FINAL

Air Quality Impact Assessment Report

Highway 413 Preliminary Design and Assessment of Environmental Impacts

March 2026

Ontario

WSP

AECOM

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Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this report carefully review the stated assumptions contained herein to understand the different factors which may impact the conclusions and recommendations provided.

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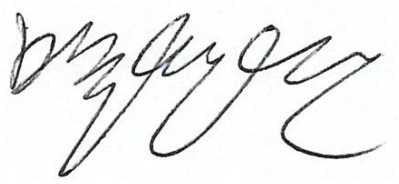

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Acronyms

407 ETR	407 Express Toll Route
AADT	Annual Average Daily Traffic
AAQC	Ambient Air Quality Criteria
AECOM	AECOM Canada ULC
CAAQS	Canadian Ambient Air Quality Standards
CCME	Canadian Council of Ministers of the Environment
CO	Carbon Monoxide
ECCC	Environment Canada and Climate Change
KM	kilometre
MECP	Ontario Ministry of Environment, Conservation and Parks
M	metres
MOVES4	Motor Vehicle Emission Simulator
MTO	Ministry of Transportation
NAD83	North American Datum 1983
NAPS	National Air Pollution Surveillance Program
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
O_3	Ozone
OLM	Ozone Limiting Method
PM_{10}	Respirable Particulate Matter
$PM_{2.5}$	Inhalable Particulate Matter
PPM	Parts per million
PPB	Parts per billion
ROW	Right of Way
US EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
WSP	WSP Canada Inc.

Executive Summary

The Ontario Ministry of Transportation has retained WSP Canada Inc. and AECOM Canada ULC in collaboration with various sub-consultant and technical firms to undertake the Highway 413 Preliminary Design and Assessment of Environmental Impacts, hereinafter referred to as “the Project”.

The Project is following the requirements of the *Highway 413 Act*, *2024*.

The focus of this report is on air quality and the objective is to predict air quality impacts as it relates to the project. The Air Quality Impact Assessment generally followed the methodology described in the MTO “Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects” (May 2020) (the “MTO Air Quality Guide”).

The air quality impact assessment was undertaken for four scenarios related to the Project:

- No-Build scenario for the project year 2041.
- Build scenario for the project year 2041.
- No-Build scenario for the project year 2051.
- Build scenario for the project year 2051.

The No-Build scenario represents the existing highways and arterial roads within the study area with no modifications of this existing road network. The No-Build scenario represents future conditions without completion of Highway 413, and in this sense represents existing conditions for the purposes of the Air Quality Impact Assessment. The Build scenario includes existing or realigned arterial roads, the 52-kilometre (km) Highway 413 corridor, a 4 km extension to Highway 410, and a 3 km extension to Highway 427 (both facilitating connections to the Highway 413 corridor), for a total of 59 km of new infrastructure (Figure 1-1). The highway will have 11 interchanges at municipal roads. Both the No-Build and Build scenarios are evaluated at project years 2041 and 2051.

The US EPA’s roadway emissions model, MOVES4, was used for emissions modeling. The US EPA’s dispersion model, AERMOD (version 22112), was used for dispersion modeling. Background concentrations were estimated using air quality monitoring data collected by the Ontario Ministry of Environment, Conservation and Parks (MECP) and Environment and Climate Change Canada (ECCC).

Representative sensitive receptors (e.g. residential dwellings) and critical receptors (e.g. retirement homes, hospitals, childcare centres, schools) within the study area were included with three thousand and thirty-four (3,034) existing and potential future receptors in total. These were chosen using a combination of interactive GIS maps and satellite imagery.

The following key contaminants were assessed in accordance with the MTO Air Quality Guide:

- Particulate Matter less than or equal to 2.5 microns ($PM_{2.5}$)
- Particulate Matter less than or equal to 10 microns (PM_{10})
- Carbon Monoxide (CO)
- Nitrogen Dioxide (NO_2)
- Benzo(a)pyrene
- Acetaldehyde
- Acrolein
- Formaldehyde
- Benzene
- 1,3-Butadiene

Traffic composition was based on future (2041 and 2051) traffic information provided by WSP. The distribution of MOVES4 vehicle types was based on current passenger vehicle registration data in Ontario (Statistics Canada, 2024a) and current MOVES fleet data for commercial trucks (US EPA, 2024). MOVES4 default data were used to represent the percentages of zero-emission electric vehicles (EVs) in the future Ontario fleet.

The project is expected to impact local air contaminant levels at receptors throughout the study area. The maximum predicted cumulative concentrations increase at most receptors within the study area. The largest increases are seen in the middle sections of the Highway 413 corridor which are currently predominantly rural areas.

While model-predicted concentrations are expected to increase, for most contaminants and averaging periods the maximum cumulative concentrations remain below current respective thresholds. Contaminants and averaging periods with modelled cumulative concentrations exceeding AAQC or CAAQS thresholds include 24-hour and annual benzo(a)pyrene, 1-hour NO_2 (CAAQS), 24-hour and annual $PM_{2.5}$, and 24-hour PM_{10}.

For all modelled scenarios, annual and 24-hour average benzo(a)pyrene cumulative concentrations exceed their respective AAQC thresholds. The frequency of exceedance is attributed in part to high ambient background concentrations. Background benzo(a)pyrene concentrations for the 24-hour and annual averaging periods exceed the AAQC on their own. Some receptors show a slight decrease in maximum concentration of benzo(a)pyrene in the Build scenario compared to No-Build, but most receptors experience increased concentrations with the Build scenario. The highest receptor sees maximum modelled benzo(a)pyrene concentrations above both the 24-hour and annual benzo(a)pyrene AAQC thresholds. Potential implications of the incremental increase in contaminant concentrations are considered in the Screening Level Human Health Risk Assessment Report (Intrinsik, 2026).

Exceedances of the 1-hour CAAQS threshold for NO_2 at receptors in the study area for the No-Build scenario are generally confined to the western and eastern ends of the Highway 413 corridor close to the existing Highways 400 and 401. Under the Build scenario, these exceedances increase in frequency and extend throughout the study area.

The location of exceedance of 24-hour PM_{10} threshold follows a similar trend to 1-hour NO_2. It expands from localized areas near Highways 400 and 401 under the No-Build scenario to most of the study area under the Build scenario.

To mitigate air quality impacts to future residential areas, municipalities and development proponents could take measures to ensure reasonable setback distances from roadways. Doing so could reduce the potential health impacts of higher concentrations of contaminants and re-entrained road dust that occur closer to the roadways.

Planting roadside vegetation within the study area can stabilize the soil adjacent to the road, reducing erosion and subsequent deposition of particulates on the road surface. Dense plantings of trees and shrubs can act as windbreaks to reduce wind velocity near the road surface and reduce the dispersion of disturbed road dust.

Continued support and investment at all levels of government for policies, technological innovations, and phased-in regulations for on-road vehicle and engine emissions should encourage evolution of the vehicle fleet in Ontario toward alternative fuels and electrification. This transition is expected to reduce NO_2 and other tailpipe emissions.

Ongoing support and investment in policies and innovations that promote the development of complete communities and transit-oriented communities, as well the local and regional public transportation infrastructure required to support them, could encourage sustainable local economies and equitable opportunities, and potentially improve level of service across the existing transportation network. Improved level of service would potentially reduce congestion and delay and therefore reduce associated local air quality impacts.

1. Introduction

1.1 Project Overview

The Ontario Ministry of Transportation has retained WSP Canada Inc. and AECOM Canada ULC in collaboration with various sub-consultant and technical firms to undertake the Highway 413 Preliminary Design and Assessment of Environmental Impacts, hereinafter referred to as “the Project”.

The Project is following the requirements of the *Highway 413 Act, 2024*.

The Project includes the 52-kilometre Highway 413 Corridor, a 4 kilometre extension to Highway 410, and a 3 kilometre extension to Highway 427 (both facilitating connections to the Highway 413 Corridor), for a total of 59 kilometres of new infrastructure (**Error! R eference source not found.**). The highway will have 11 interchanges at municipal roads. Features such as stormwater management ponds, carpool lots, Commercial Vehicle Inspection Facilities, maintenance facilities and the potential for electric vehicle charging stations have been explored as part of Preliminary Design.

Highway 413 will connect Highway 401 and Highway 407 Express Toll Route in the Regional Municipality of Halton and the Regional Municipality of Peel with Highway 400 in the Regional Municipality of York.

The typical right-of-way will be 170 metres which includes 110 metres for the typical mainline highway and 60 metres for a proposed transitway. A multi-use trail parallel to Highway 413 may be accommodated within the proposed transitway right-of-way. The right-of-way is expanded at interchanges and high fills areas to accommodate ramps to and from the crossing roads, as well as in locations with ancillary highway facilities as mentioned above. The Preliminary Design consists of a typical six-lane cross section (three lanes in each direction) with a grassed median. The right-of-way has been designed to accommodate up to ten-lanes (five lanes in each direction) should future traffic conditions warrant additional capacity. These additional lanes would be provided by widening the highway towards the median.

The proposed transitway will be a separate corridor running alongside the highway, dedicated for public transit, including stations to facilitate passenger access at key locations. The proposed transitway and stations will be subject to a separate future assessment of environmental impacts.

Highway 413 is a 400-series highway, which is a network of controlled-access highways throughout the Province of Ontario. Their primary function is to accommodate through traffic and provide links between urban centres. 400-series highways feature full grade separations (such as bridges) at most intersecting roads and railway lines. Interchanges are provided along the 400-series highways to connect to other highways and municipal roads. These highways have design standards to accommodate high speeds and various collision avoidance and traffic management systems. Highway 413 is proposed to have a posted speed limit of 110 kilometres per hour.

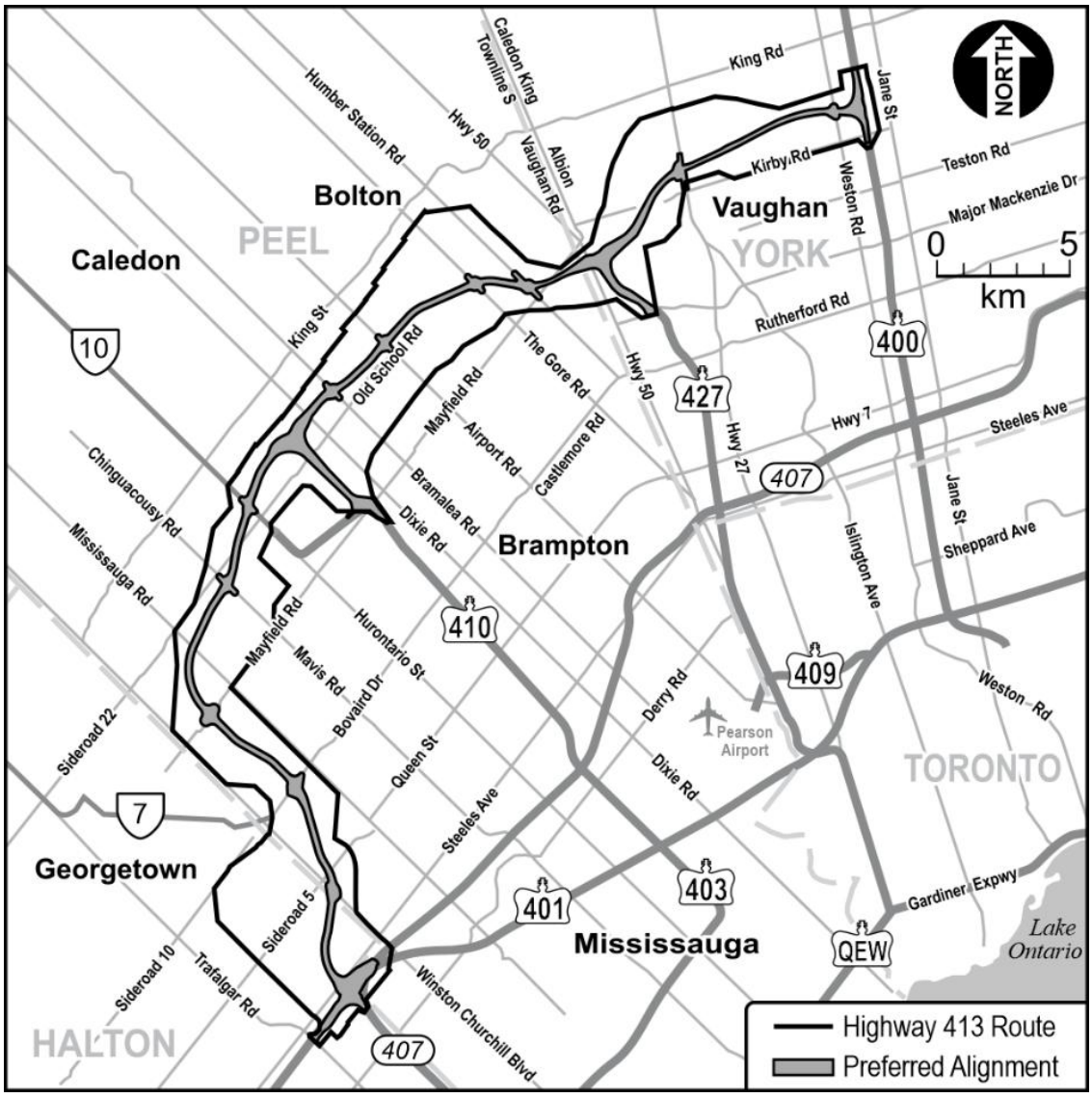

Figure 1-1: Highway 413 Route

The future Highway 413 is expected to:

- Relieve traffic on local roads and parallel highways;
- Help accommodate travel demand;
- Reduce travel times for commuters and goods movement;
- Reduce the social, environmental, and economic costs of congestion;
- Provide greater connectivity between urban growth centres;
- Provide better connections to residential and employment lands; and
- Provide an alternate route in the event of an incident or road closure on local and regional roads.

1.2 Purpose of Report

This report documents the Air Quality Impact Assessment of the Preliminary Design associated with the Highway 413. Readers are encouraged to view this report in its entirety.

1.3 Study Area

The Project includes the 52-kilometre (km) Highway 413 corridor, a 4 km extension to Highway 410, and a 3 km extension to Highway 427 (both facilitating connections to the Highway 413 corridor), for a total of 59 km of new infrastructure (**Figure 1-1**). The highway will have 11 interchanges at municipal roads.

The study area for the Air Quality Impact Assessment includes areas within 500 m on either side of the Preliminary Design ROW, including all new ramps and interchanges as well as the mainline highway. The extent of the study area is shown in a series of figures provided in **Appendix D**.

2. Methodology

2.1 Background Information Review

This assessment generally followed the methodology described in the MTO "Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects" (May 2020) (the "MTO Air Quality Guide").

2.2 Modelled Scenarios

The assessment was undertaken for the following scenarios:

- No-Build scenario for the project year 2041.
- Build scenario for the project year 2041.
- No-Build scenario for the project year 2051.
- Build scenario for the project year 2051.

The No-Build scenario represents the section of Highway 413 within the study area as it currently exists with no modifications of the existing road for the project years 2041 and 2051. The Build scenario includes the 52 km Highway 413 corridor, a 4 km extension to Highway 410, and a 3 km extension to Highway 427 (both facilitating connections to the Highway 413 corridor), for a total of 59 km of new infrastructure. The traffic data used in the No-Build and Build scenarios were based on extensive traffic modelling of future conditions and included morning and evening peak volumes (AM Peak and PM Peak), estimated medium and heavy truck percentages, estimated travel speed, and the Annual Average Daily Traffic (AADT) for every arterial road, highway segment, and ramp within the study area. These traffic parameters were different for each road segment. The details of this traffic data as used in the context of the air quality modelling are provided in **Appendix A**.

2.3 Modelled Roadways

The modelling included all existing and proposed alignments of the 52 km Highway 413 corridor, a 4 km extension to Highway 410, and a 3 km extension to Highway 427 (both facilitating connections to the Highway 413 corridor), and all arterial roads and portions

of Highways 400 and 401 within the study area. The modelled roadway segments for the 2041 and 2051 No-Build scenarios are shown in a series of figures in **Appendix D.2**, and the modelled segments for the 2041 and 2051 Build scenarios are shown in **Appendix D.3**.

2.4 Traffic Data

The traffic data used in the No-Build and Build scenarios were based on extensive traffic modelling of future conditions and included morning and evening peak traffic volumes (AM Peak and PM Peak), estimated medium and heavy truck percentages, estimated travel speed, and the AADT for every arterial road, highway segment, and ramp within the study area. These traffic parameters were different for each road segment.

The travel demand and forecasting used in the analysis included the most direct effects of induced demand as follows:

- Includes users using the new facility to travel to their destinations compared to their original route choice before the facility is built to save travel times;
- Includes users switching to use the new facility that previously used another transportation mode for the trip (e.g., transit-to-auto); and,
- Includes users adjusting their commuting patterns due to the benefits offered by new facility by adjusting the location of their place-of-work and/or place-of-school.

The forecasts do not include the effects of residents changing their place-of-residence caused by the introduction of the new facility.

The details of this traffic data as used in the context of the air quality modelling are provided in **Appendix A**.

To assign the vehicle distribution percentages to appropriate vehicle classes, the MOVES vehicle classification by source type was used (See **Section 2.8** for discussion of MOVES emissions modelling). Percentage breakdown data for truck volumes across all road segments within the study area were adopted under the No-Build and Build scenarios.

The split of passenger vehicles as Passenger Car (MOVES Source Type 21) and Passenger Truck (MOVES Source Type 31) was based on 2023 vehicle registration for Ontario (Statistics Canada 2024b), with this split assumed consistent for future scenarios. The split of Single-Unit and Combination trucks into Short-Haul and Long-Haul was based on MOVES technical guidance (US EPA, 2024).

Hourly profiles were developed to determine diurnal variation of traffic volumes, adapted from United States Environmental Protection Agency (US EPA) guidance (US EPA, 2021). The hourly profiles based on vehicle count and as a percentage of traffic peak volume are provided in **Appendix A.1**. Traffic composition on each roadway segment is provided in **Appendix A.2**. Traffic counts on each roadway segment are provided in **Appendix A.3**. Detailed traffic volumes and an estimate of fugitive particulate emissions are provided in **Appendix A.4**. The raw traffic data for 2041 and 2051 No-Build and Build scenarios can be found in **Appendix A.5**. Traffic profiles and pollutant emission rates were created and reported for each of the four future scenarios (2041 Build/No-Build and 2051 Build/No-Build).

Appendix A1. Hourly Profiles: The traffic volume distribution methodology for this analysis was adapted from the approach in Section 2.2.3 (Refined Analyses of Any Project) of *Using MOVES3 in Project-Level Carbon Monoxide Analyses* to better represent anticipated traffic patterns, particularly during overnight hours. The standard AM peak (6:00–9:00 AM) (A) and PM peak (4:00–7:00 PM) (B) periods were retained, while the treatment of non-peak hours was restructured. A dedicated overnight/late evening period (C) was defined, spanning midnight–6:00 AM and 8:00 PM–midnight (10 hours total), with volumes determined by a specified percentage. This allows flexibility to account for variable nighttime traffic such as freight or shift work. For this assessment, the hourly percentages for the overnight period were estimated based on averaged hourly percentage data from MTO's iCorridor for the sections of Highways 401, 410, 427, and 400 closest to the study area. The remaining off-peak period (D) covers 9:00 AM–4:00 PM and 7:00–8:00 PM, with volumes distributed evenly across those eight hours, and is calculated as follows:

$$\text{Off Peak Period Volume (D)} = \frac{AADT - A - B - C}{8}$$

This refined structure provides greater flexibility when representing the Highway 413 daily traffic profile within the AERMOD component of the air quality model. For the percentage-percentage-basis traffic profiles, the percentages for each hour were expressed as a percentage of the peak hour. These profiles were determined for each roadway segment and used to calculate the emission rates for each contaminant.

Sample calculation for Off-Peak Period Volume for the 2041 Build Scenario and Roadway ID "A01", Hwy 413 N of Hwy 401/407 interchange – NB (A01) at 10 AM (9:00-10:00). The vehicle counts in the following calculations are found in Appendix A.1.1 for hours of day 1-9, 17-19, 21-24.

$$Off - Peak\ Period\ Volume_{A01,10\ AM}$$

$$= \begin{matrix} 59300 - (520 + 346 + 346 + 346 + 520 + 1039 + 3965 + 3965 + 3965) \\ -(4330 + 4330 + 4330) - (1732 + 1516 + 1299 + 866) \end{matrix} /8$$

$$= 3235\ vehicles$$

$$Period\ Percentage_{A01,10\ AM}$$

$$= \frac{3235}{4330} \cdot 100\%$$

$$= 75\%$$

Appendix A2. Traffic Composition: The vehicle compositions for each MOVES vehicle type were derived from the project-specific traffic data and using 2023 vehicle registration data from Statistics Canada (Statistics Canada, 2024b) for passenger vehicles and MOVES technical guidance (US EPA, 2024) for trucks. Vehicle fuel type was based on MOVES4 defaults for vehicle age type distribution and engine type.

Appendix A3. Traffic Counts: The vehicle counts for each roadway section are summarized from the raw traffic data in this section. The values from this section are used to calculate tailpipe emissions as well as the particulate emission rate in **Appendix A.4**.

Appendix A4. Detailed Traffic Data and Fugitive Particulate Matter Emissions: Information is provided for each roadway section, including the ID, direction, peak volumes, and AADT. The project was split into five sections for modeling and the columns "Model Section for Roadway 1 and 2" identify which model section the roadway corresponds to. Roadways that were completely within one model section were given that numeric value (from 1-5) in column "Model Section for Roadway Zone 1". Roadways that were in multiple model sections were assigned values in both "Model Section for Roadway" columns.

Using the peak volumes for AM and PM, the average vehicle weights (by vehicle type), and the roadway speed, base emission rates of $PM_{2.5}$ and PM_{10} were calculated using the mobile emission equation for AP-42 Section 13.2.1 for paved roads:

$$E = k \cdot (sL)^{0.91} \cdot (W)^{1.02}$$

Where:

- E = particulate emission factor (g/VKT)
- k = particle size multiplier
    - $PM_{2.5}$ = 0.15 g/VKT
    - PM_{10} = 0.62 g/VKT
- sL = road surface silt loading (g/m²)
- W = average weight of vehicles traveling the road (US short tons)

The weighted average vehicle weight was determined for AM and PM peaks for each road segment as follows:

$$Weighted\ Average\ Vehicle\ Weight$$

$$= \frac{\sum_{MOVES\ Vehicle\ Type}(Average\ Vehicle\ Weight \cdot Peak\ Volume\ by\ Vehicle)}{Peak\ Vehicle\ Volume}$$

The following sample calculations are based on data for Model Source ID “A01” in **Appendix A.4** *Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1.1*. Vehicle composition for Passenger Cars is from **Appendix A.2.1**: *AM Traffic Composition by Source for 2041 Build Scenario*.

$$AM\ Peak\ Volume = 3965 \cdot 28\%$$

$$= 1121\ Passenger\ Cars$$

Continuing for Model Source ID “A01” on Appendix A.4, the table columns identified as AM Peak Volume by Vehicle have vehicle counts and average vehicle weight by vehicle type:

$$Weighted\ Average\ Vehicle\ Weight_{A01,AM}$$

$$= \frac{(1.76 \cdot 1121) + (1.99 \cdot 1877) + (15.51 \cdot 476) + (15.35 \cdot 21) + (22.51 \cdot 246) + (24.36 \cdot 224)}{3965}$$

$$= 6.2\ US\ short\ tons$$

Sample calculation for PM_{10} AM Emission Rate 2041 Build Scenario and Roadway Segment Hwy 413 N of Hwy 401/407 interchange – NB (A01):

$$E_{\text{A01,AM Peak PM10}} = 0.62 \cdot 0.015^{0.91} \cdot 6.2^{1.02}$$

$$= \frac{0.087g}{VKT}$$

$$= 0.154\ g/s \cdot mile$$

Appendix A5. Raw Traffic Data: Summarized raw traffic data used as the base for the air quality analysis.

2.5 Key Air Contaminants

Vehicular traffic generates a variety of air contaminants from fuel combustion inside the engine, evaporation of fuel from the tank, brake and tire wear, and re-suspension (also known as re-entrainment) of loose particles on the road surface (silt) as the vehicle travels over the road surface. The following key contaminants were assessed:

- Respirable particulate matter ($PM_{2.5}$)
- Inhalable particulate matter (PM_{10})
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Acetaldehyde
- Acrolein

- Benzene
- 1,3-Butadiene
- Benzo(a)pyrene
- Formaldehyde

These contaminants are specified in the MTO Air Quality Guide (MTO, 2020) as those most relevant for inclusion in the comprehensive local air quality analysis. Ground level ozone is not included in a local air quality assessment based on this guideline. Although the health effects and environmental effects of ground level ozone are significant, ground level ozone is not a primary pollutant emitted directly into air, but is a secondary pollutant created by chemical reactions between nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of heat and sunlight. The photochemical reactions can take at least a few hours to occur, which means the precursors and resulting ozone would be transported out of the local environment.

2.6 Air Quality Thresholds

The MECP has established Ontario Ambient Air Quality Criteria (AAQC) for airborne concentrations of the key air contaminants considered in this assessment. The Canadian Council of Ministers of the Environment (CCME) has established Canadian Ambient Air Quality Standards (CAAQS) for 1-hour and annual concentrations of NO_2, which came into effect on January 1, 2025, as well as 24-hour and annual concentrations of $PM_{2.5}$, which came into effect July 4, 2025 (CCME, 2025). The AAQC for $PM_{2.5}$ is based on the earlier CAAQS 2020 threshold value. The AAQC and CAAQS are collectively referred to as air quality thresholds in this report.

The CAAQS were developed for use by provinces and territories to guide air zone management actions. They are not project-level regulatory standards, and they are not to be considered as “pollute-up-to” levels. Increasing contaminant levels when compared to the AAQC and CAAQS may lead to increasing air quality management actions. Measures mandated to achieve the CAAQS should consider technical achievability, practicality, and implementation costs (CCME, 2019).

The thresholds are summarized in **Table 2-1**.

Table 2-1: Summary of Relevant Air Quality Thresholds

Contaminant	Averaging Period	Threshold (µg/m^3)	Source [5]
$PM_{2.5}$	24-hour	27	AAQC / CAAQS 2020 [1]
	24-hour	23	CAAQS 2030 [1]
	Annual	8.8	AAQC / CAAQS 2020 [2]
	Annual	8.0	CAAQS 2030 [2]
PM_{10}	24-hour	50	AAQC
CO	1-hour	36,200	AAQC
	8-hour	15,700	AAQC
NO_2	1-hour	400	AAQC
	1-hour	83.1	CAAQS 2025 [3]
	24-hour	200	AAQC
	Annual	23.7	CAAQS 2025 [4]
Benzo(a)pyrene	24-hour	5.0E-05	AAQC
	Annual	1.0E-05	AAQC
Acetaldehyde	0.5-hour	500	AAQC
	24-hour	500	AAQC
Acrolein	1-hour	4.5	AAQC
	24-hour	0.4	AAQC
Formaldehyde	24-hour	65	AAQC
Benzene	24-hour	2.3	AAQC
	Annual	0.45	AAQC
1,3-Butadiene	24-hour	10	AAQC
	Annual	2	AAQC

Notes:

[1] The 3-year average of the annual 98th percentile of the daily 24-hour average concentrations.

[2] The 3-year average of the annual average concentrations.

[3] The 3-year average of the annual 98th percentile daily maximum 1-hour average concentrations. Threshold converted from ppb to µg/m^3 at 10ºC and 101.325 kPa.

[4] The average over a single calendar year of all the 1-hour average concentrations. Threshold converted from ppb to µg/m^3 at 10ºC and 101.325 kPa.

[5] Ontario Ambient Air Quality Criteria (AAQC) from https://www.ontario.ca/page/ontarios-ambient-air-quality-criteria, accessed July 1, 2025

2.7 Background Air Quality Data

Ambient background data for each key contaminant were obtained from representative air quality monitoring stations within the ECCC National Air Pollution Surveillance (NAPS) Program and MECP ambient air monitoring station network.

Current land use in the study area is predominantly rural, with some sections having low- to medium-density residential, commercial developments, and industrial activities. It is expected that residential, commercial, and industrial developments will continue within the corridor in future, and the future traffic projections on arterial roads and highways that were used in the assessment already account for this future development. Ambient air quality data from ECCC National Air Pollution Surveillance (NAPS) Program and MECP ambient air monitoring stations are reflective of the existing conditions at the time of the study. Since emissions from vehicle traffic on arterial roads and highways were modelled, ambient air quality stations that are heavily impacted by the proximity of major highways were not used. Similarly, since industrial developments in the study area are expected to be primarily logistics and warehousing, NAPS stations that are influenced by the proximity of heavy industry, such as steel making, were not used. The stations that were used in calculation of background are located in urban centres, including Brampton, north and downtown Toronto, and the Town of Newmarket. The ambient concentrations of VOCs from Newmarket are comparable to the ambient VOC concentrations in the cities of Kitchener and London. This mix of stations from medium to large urban centres in southern Ontario is reflective of potential future developments in the study as it incorporates background air quality concentrations from urban residential, commercial, industrial, and road network activity.

The Brampton station (NAPS ID 60450) was used for background concentrations of $PM_{2.5}$, PM_{10}, and NO_2 for 2018 to 2022. This station is closest to the study area and is reasonably representative of local conditions.

Toronto North – Downsview station (NAPS ID 60440) was used for carbon monoxide (CO) for 2018 to 2022. Stations monitoring for this contaminant are limited and this is the closest station that is the most representative of the land use of the study area.

Data for volatile organic compounds (VOCs) are only available at select monitoring stations. For benzene and 1,3-butadiene, the Newmarket (NAPS ID 65101) station was used for 2017 to 2022, excluding 2021 when no data was available. This station is the closest available to the eastern part of the study area, and it is generally most representative of the land use characteristics throughout the study area.

Recent data for benzo(a)pyrene are only available from a very limited number of monitoring stations. Simcoe Experimental Farm (NAPS ID 62601) is the most representative of the current rural characteristics of the study area; however, it would likely underestimate future background concentrations due to anticipated development. In contrast, Roadside 401W – Toronto (NAPS ID 60438), situated approximately 10 m from Highway 401, would likely overestimate background levels for the study area. Multiple Toronto-based stations were selected, including Gage Institute (NAPS ID 60427) for 2014, Roadside – Wallberg (University of Toronto) (NAPS ID 60439) for 2015, and Toronto West-125 Resources Rd (NAPS Station 60430) for 2016 to 2018.

Similar to benzo(a)pyrene, data for carbonyls are only available from a very limited number of monitoring stations. The Simcoe Experimental Fam and Roadside 401W – Toronto NAPS stations provide data for carbonyls; however, as for benzo(a)pyrene, they were still deemed not representative of project background. Therefore, Roadside – Wallberg (University of Toronto) (NAPS ID 60439) was used for acrolein, acetaldehyde, and formaldehyde for 2014 to 2017.

The sources of background monitoring data used for this study are presented in **Table 2-2**. The locations of these ambient monitoring stations are shown in **Appendix D.1A**.

Table 2-2: Source of Background Monitoring Data

Contaminant	NAPS ID and Location	Years Included [1, 2]
$PM_{2.5}$	60450 – BRAMPTON	2018, 2019, 2020, 2021, 2022
PM_{10} [1]	60450 – BRAMPTON	2018, 2019, 2020, 2021, 2022
CO	60440 – TORONTO NORTH - DOWNSVIEW	2018, 2019, 2020, 2021, 2022
NO_2	60450 – BRAMPTON	2018, 2019, 2020, 2021, 2022
Benzo(a)pyrene [2]	60427 – GAGE INSTITUTE 60439 – ROADSIDE - WALLBERG (UofT) 60430 – TORONTO WEST-125 RESOURCES ROAD	2014 2015 2016, 2017, 2018
Acetaldehyde [2]	60439 – ROADSIDE - WALLBERG (UofT)	2014, 2015, 2016, 2017
Acrolein [2]	60439 – ROADSIDE - WALLBERG (UofT)	2014, 2015, 2016, 2017
Formaldehyde [2]	60439 – ROADSIDE - WALLBERG (UofT)	2014, 2015, 2016, 2017

Contaminant	NAPS ID and Location	Years Included [1, 2]
Benzene [3]	65101 – EAGLE ST. & McCAFFREY RD. NEWMARKET	2017, 2018, 2019, 2020, 2022
1,3-Butadiene [3]	65101 – EAGLE ST. & McCAFFREY RD. NEWMARKET	2017, 2018, 2019, 2020, 2022

Notes:

[1] PM_{10} background data is based on $PM_{2.5}$.

[2] Most recent data available at this station.

[3] No data for 2021 at this station.

For NO_2 and ozone (O_3), hourly monitoring data were available for the local Brampton monitoring station that allowed estimation of background concentration by hour of day. Project contribution of ozone was not assessed against air quality thresholds, but background ozone concentrations were used for converting NO_x to NO_2 using the Ozone Limiting Method (OLM). As background concentrations vary widely from day to day, the 90th percentile concentration was calculated for each hour of the day using 5 years of hourly monitoring data from 2019 to 2023, as this represents the most recent data set available and matches the time span of meteorological data provided by the MECP. The resulting background concentrations reflect the highest likely background levels expected to coincide with peak roadway-related concentrations. These values were applied to predict the maximum 1-hour and 24-hour cumulative concentrations of NO_2. The hourly background concentrations for NO_2 and O_3 are presented in **Appendix B**. For the annual averaging period the annual mean values were used.

PM_{10} monitoring data were not available; therefore, PM_{10} background concentrations were estimated from the $PM_{2.5}$ values using a $PM_{2.5}/PM_{10}$ ratio of 0.54, which represents the mean $PM_{2.5}/PM_{10}$ ratio for 133 Metropolitan Statistical Areas in the United States based on a multi-year historical dataset from the United States Environmental Protection Agency's Aerometric Information Retrieval System (AIRS) (Lall et. al., 2004). A similar study using ten years of sampling data from Canadian NAPS locations found a mean $PM_{2.5}/PM_{10}$ ratio of 0.6 for Toronto and 0.61 for Egbert, north of Toronto (Brook et. al., 1997). Urban areas with industrial emissions and vehicle traffic often have higher $PM_{2.5}$ due to finer particles from combustion, leading to higher ratios, while regions with more dust, such as the prairies, might show lower ratios of $PM_{2.5}/PM_{10}$. A ratio of 0.54 provides a higher, more conservative, estimate of background PM_{10} compared to a ratio of 0.6, so the ratio of 0.54 from Lall et. al. was used.

For benzene and benzo(a)pyrene, the monitoring data consisted of 24-hour average concentrations. The 90th percentile values were used as the background concentration. For 0.5-hour acetaldehyde and 1-hour acrolein, the background values were calculated from the corresponding 24-hour average background value following Section 4.4 of the MECP Air Dispersion Modelling Guideline for Ontario.

Table 2-3 presents a summary of background concentrations of the various air contaminants for averaging periods appropriate for comparison with relevant ambient air quality thresholds. These concentrations represent the 90th percentile values which were added to model-predicted concentrations from project-related emissions.

Table 2-3: Summary of Background Concentrations

Contaminant	Averaging Period	Adopted Background Concentration (µg/m^3)	Description[3]	Air Quality Threshold	% of Threshold
$PM_{2.5}$	24-hour	12.2	90th Percentile	27	45%
	24-hour	12.2	90th Percentile	23	53%
	Annual	7.0	Annual Average	8.8	80%
	Annual	7.0	Annual Average	8.0	88%
PM_{10}	24-hour	22.6	90th Percentile	50	45%
CO	1-hour	349	90th Percentile	36,200	<1%
	88-hour	362	90th Percentile	15,700	2%
NO_2	1-hour	35.0	90th Percentile	83.1	42%
	24-hour	29.4	90th Percentile	200	15%
	Annual	14.7	Annual Average	23.7	62%
Benzo(a)pyrene	24-hour	9.1E-05	90th Percentile	5.0E-05	183%
	Annual	5.1E-05	Annual Average	1.0E-05	513%
Acetaldehyde	0.5-hour [1]	4.43	90th Percentile	500	<1%
	24-hour	1.5	90th Percentile	500	<1%
Acrolein	1-hour [2]	0.15	90th Percentile	4.5	3%
	24-hour	0.06	90th Percentile	0.4	16%
Formaldehyde	24-hour	2.55	90th Percentile	65	4%
Benzene	24-hour	0.46	90th Percentile	2.3	20%
	Annual	0.31	Annual Average	0.45	68%

Contaminant	Averaging Period	Adopted Background Concentration (µg/m^3)	Description[3]	Air Quality Threshold	% of Threshold
1,3-Butadiene	24-hour	0.03	90th Percentile	10	<1%
	Annual	0.01	Annual Average	2	<1%

Notes:

[1] 0.5-hour average converted from 24-hour average background value following the method described in Section 4.4 of the Air Dispersion Modelling Guideline for Ontario.

[2] 1-hour average converted from 24-hour average background value following the method described in Section 4.4 of the Air Dispersion Modelling Guideline for Ontario

[3] The MTO Air Quality Guide considers the 90th percentile approach acceptable, however, this method does not align with the statistical form used for CAAQS.

2.8 Emissions Model

The standard approach for estimating vehicular emissions is to use computer simulation techniques that are based on extensive previous testing of a wide range of vehicles. Motor Vehicle Emission Simulator (MOVES4) is such a model that has been developed for this purpose by the US EPA. MOVES4 was used to generate vehicle emission factors for the horizon years 2041 and 2051. **Tables 2-4, 2-5, and 2-6** summarize the inputs used for the MOVES model runs for vehicle types and contaminants that were considered in this assessment.

Exhaust emissions vary widely by vehicle type and speed, and MOVES4 was configured to generate emission factors based on the vehicle type and travel speed. These individual emission factors were aggregated to produce a composite emission factor for each key air contaminant, representing the average vehicle for each road segment assessed as well as the road's vehicle volume. Aggregate MOVES emission factors by roadway segment, which are the sum of the emission factors for each roadway's various vehicle types, are provided in **Appendix F**.

The aggregate emission factors (g/s·mile) for each Source ID based on AM Peak traffic for Model Section 1 of the 2041 Build scenario are provided in **Appendix F.1.3**.

As an example, Line Area Source ID "A01" shows an aggregate emission factor of 2.84E-04 g/s-mile for acetaldehyde in the first row of **Appendix F.1.3**. Line Area Source ID "A01" is a segment of mainline Highway 413 which was modelled as Urban Restricted (MOVES Road Type ID 4) with an assumed speed of 110 km/h. This combination of road type and speed was assigned MOVES LinkID 17. The MOVES

emission factors are shown in **Appendix F.1.1**. For a Passenger Car (MOVES Source Type ID 21), Road Type ID 4, and Speed 110 km/h, the MOVES emission factor from **Appendix F.1.1** is 4.17E-05 g/mile. **Appendix F.1.2** summarizes the hourly vehicle traffic volume by vehicle type. For Source ID "A01" there are 1121 Passenger Cars per hour. The emission factor shown in **Appendix F.1.2** multiplies the hourly vehicle volume by the associated MOVES emission factor from **Appendix F.1.1** and divides by 3600 seconds per hour to calculate an intermediate emission factor in units of g/s-mile. The aggregate emission factor for each road segment in **Appendix F.1.3** is the sum of the emission factors by vehicle type for that road segment as calculated in **Appendix F.1.2**. The aggregate emission factor can be summarized with the following equation, with data for Source ID "A01" in Model Section 1 substituted in as follows:

$$EF_{A01,ACT} = \sum_{Vehicle\ Classes} \left(\frac{ER \cdot V}{3600}\right)$$

$$= \frac{(ER_{PC} \cdot V_{PC} + ER_{PT} \cdot V_{PT} + ER_{SSHT} \cdot V_{SSHT} + ER_{SLHT} \cdot V_{SLHT} + ER_{CSHT} \cdot V_{CSHT} + ER_{CLHT} \cdot V_{CLHT})}{3600}$$

$$= \frac{(4.17E^{-5} \cdot 1121 + 5.40E^{-5} \cdot 1877 + 4.76E^{-4} \cdot 476 + 4.62E^{-4} \cdot 21 + 1.36E^{-3} \cdot 246 + 1.35E^{-3} \cdot 224)}{3600}$$

$$= 2.84E^{-4} g/s \cdot mile$$

Where:

- ER = MOVES4 emission factor for the specified contaminant (g/mile)
- V = vehicle volume (vehicles/hour)
- Vehicle Classes for A01
    - Passenger Car (PC)
    - Passenger Truck (PT)
    - Single Unit Short Haul Truck (SSHT)
    - Single Unit Long Haul Truck (SLHT)
    - Combination Short Haul Truck (CSHT)
    - Combination Long Haul Truck (CLHT)

For particulate matter, it is necessary to account for the re-suspension of dust as vehicles travel over a roadway surface, in addition to tailpipe emissions. The road dust emissions were calculated based on the revised version of US EPA's AP-42, Chapter 13.2.1 (US EPA, 2011). The aggregated tailpipe emission factor for particulate matter obtained from MOVES4 (as an example, **Appendix F.1.5**) was added to the road dust emission factor as calculated in **Appendix A.4** to account for both emission sources. A sample calculation for this step is shown below for 2041 Build, Model Section 1, Source ID "A01" for PM peak. The values in the **Appendix F.1.5** and **Appendix A.4** tables are rounded, but the values shown in the sample calculation have not been rounded.

$$EF_{PM_{10}} = EF_{PM_{10,tailpipe}} + EF_{PM_{10,road\ dust}}$$

$$EF_{PM_{10}} = 0.015465 \frac{g}{s \times mile} + 0.1347 \frac{g}{s \times mile}$$

$$EF_{PM_{10}} = 0.150165 \frac{g}{s \times mile}$$

Where, for this road section:

- $EF_{PM_{10}}$ = Total emission factor for PM_{10}.
- $EF_{PM_{10,tailpipe}}$ = Tailpipe emission factor for PM_{10}.
- $EF_{PM_{10,road\ dust}}$ = Road dust emission factor for PM_{10}.

MOVES4 default data were used to represent the percentages of electric vehicles in the future Ontario fleet. MOVES4 default data represents a moderate assumption of EV adoption, with the EV percentage of new vehicle sales increasing to 44% (passenger cars) and 37% (passenger trucks) in 2030, declining slightly to 30% in 2034, and followed by a modest annual increase to 2050, (US EPA, 2023). This represents a lower rate of EV adoption, and therefore a more conservative basis for emissions estimation, than that outlined in the recently updated strategy for the Canadian auto industry which sets a goal of 75% EV sales by 2035 and 90% EV sales by 2040 (Government of Canada, 2026).

For modelling years after 2040, MOVES4 emission factors for 1,3-butadiene for all vehicle types are zero due to US EPA updates of the toxic fractions of VOCs in vehicle exhaust (US EPA, 2020); therefore, results for 1,3-butadiene were not quantified in **Appendix C** and the 1,3-butadiene ambient background concentrations are shown in these tables for all receptors.

Table 2-4: MOVES4 General Parameters

Input Parameter	Value / Setting
Scale	**Model**: On-road **Domain/Scale**: Project Scale **Calculation Type**: Inventory
Time Span [1]	**Years**: 2041, 2051 **Months**: January, July **Days**: Weekdays **Hours**: 7:00-7:59 (8 AM), 11:00-11:59 (12 PM), 2:00-2:59 (3 PM), 17:00-17:59 (18 PM)
Geographic Boundaries	NEW YORK - Erie County [22]
Road Type	Rural Restricted Access Rural Unrestricted Access Urban Restricted Access Urban Unrestricted Access
General Output	**Units**: Grams/Joules/Miles **Activity**: Distance traveled, Population
Output Emissions Detail	**Output Aggregation**: N/A **Vehicle/Equipment Categories**: Emission Process **On-road**: Road Type, Source Use Type **Nonroad**: N/A

Notes:

[1] For each modelling year, 2041 and 2051, and each model section, the maximum MOVES emission factor from these time spans was used for calculating tailpipe emission rates.

[22] NEW YORK - Erie County was selected as the United States county most closely representing the study area. MOVES model runs were completed for each of the five model sections using the site-specific meteorological data provided by MECP for these model sections.

Table 2-5: MOVES4 On-road Vehicles

Vehicle Class	Fuels Modelled	Notes / Examples
Passenger Car	MOVES4 defaults for Gasoline, Diesel, Electricity, Ethanol (E85)	Includes all light-duty 2-axle passenger cars
Passenger Truck	MOVES 4 defaults for Gasoline, Diesel, Electricity, Ethanol (E85)	Light-duty pickups, SUVs, and vans
Combination Long-haul Truck	MOVES4 defaults for Diesel, CNG, Electricity	Class 8 tractor-trailers operating long-haul

Vehicle Class	Fuels Modelled	Notes / Examples
Combination Short-haul Truck	MOVES4 defaults for Gasoline, Diesel, CNG, Electricity	Class 8 tractor-trailers local/regional
Single Unit Long-haul Truck	MOVES4 defaults for Gasoline, Diesel, CNG, Electricity	Heavy single-unit trucks for long-haul
Single Unit Short-haul Truck	MOVES4 defaults for Gasoline, Diesel, CNG, Electricity	Heavy single-unit trucks for local/regional

Table 2-6: Pollutants and Processes

Pollutant Group	Pollutants	Processes Included
Methane & Carbon Compounds	Methane (CH_4), Carbon Monoxide (CO))	Running Exhaust, Crankcase Running Exhaust
Nitrogen Compounds	Oxides of Nitrogen (NO_x), Nitrogen Dioxide (NO_2), Nitrous Oxide (N_2O)	Running Exhaust, Crankcase Running Exhaust
Particulate Matter (PM)	Primary Exhaust $PM_{2.5}$ – Total, Primary Exhaust PM_{10} – Total	Running Exhaust, Crankcase Running Exhaust
	Primary $PM_{2.5}$ – Brake wear Particulate, Primary PM_{10} – Brake wear Particulate	Brake wear
	Primary $PM_{2.5}$ – Tire wear Particulate, Primary PM_{10} – Tire wear Particulate	Tire wear
Air Toxics & Hazardous Pollutants	Benzene, 1,3-Butadiene, Formaldehyde, Acetaldehyde, Acrolein, Benzo(a)pyrene Particle	Running Exhaust, Crankcase Running Exhaust

2.9 Dispersion Model

Air contaminants emitted from vehicles on a roadway will drift downwind and disperse as they travel. The degree to which the contaminants disperse depends on the weather-related factors, such as wind speed, wind direction, atmospheric stability, surface roughness, and amount of mechanical turbulence. The typical approach to determining potential future downwind concentrations from a proposed project is to use a computer simulation that predicts the dispersal of air pollutants as they drift away from the roads. These simulations are referred to as dispersion models.

Dispersion modelling is a common approach for assessing local air quality near an emission source such as vehicular traffic. The dispersion model used in this study is the US EPA's AERMOD (version 22112). AERMOD is widely used and is an approved model for regulatory purposes in Ontario. The model predicts how emissions from the vehicles travelling within each segment disperse and contribute to air pollutant concentrations within the study area. The dispersion model requires information on emission rates for the air pollutants of interest, the layout of the project corridor, terrain elevation data, and hourly meteorological data.

Meteorological data from 2019 to 2023 was provided by the Ministry of the Environment, Conservation and Parks (MECP) for five monitoring stations. To align with these datasets, the Air Quality Study Area was divided into five corresponding subsections, each associated with one of the meteorological stations. Overlap between adjacent subsections was included to ensure that transitional meteorological influences on dispersion were appropriately captured. The model sections are shown in **Appendix D.1**. Wind roses showing the variation in wind speed and direction in each of the five meteorological datasets are provided in **Appendix H**.

To facilitate efficient model execution, sources modelled in each model section included only those sources that were whole or in part within the model section or in either of the immediately adjacent model sections. It was assumed that sources that were further away would have minimal impact on the modelled maximum concentrations at receptors. This assumption was tested for 24-hour $PM_{2.5}$ using a single receptor located at the southern end of model section #3. Results from a model run using the entire 5-year meteorological dataset were used to determine the day having the maximum concentration at that receptor. Results from two model runs, the first using all sources in the model and the second using only the sources assigned to that model section, were compared to determine the variance. With all sources, the 24-hour average concentration was 7.53123 $\mu g/m^3$ and with only the sources for that model section the concentration was 7.53101 $\mu g/m^3$, an insignificant difference of less than 0.003%.

Terrain information for the study area was obtained from the Regional Meteorological and Terrain Data for Air Dispersion Modelling website of the MECP. The terrain data are based on the North American Datum 1983 (NAD83) horizontal reference datum. The rural dispersion coefficient was used in the dispersion modelling analysis.

AERMOD was used to predict the contribution of the modelled roadways to concentrations of contaminants at nearby sensitive receptors. Roadways were modelled using the "LINE AREA" source type in AERMOD. The "LINE AREA" source type treats the roadway as an area source with a uniform pollutant emission rate per area (g/s-m^2). Emission inputs were generated by the MOVES4 model as described in Section 2.8 using the traffic data described in Section 2.4. For receptors located in an area of two overlapping model sections, the maximum of the two modelled results was used for that receptor. The predicted maximum concentrations were combined with estimated background concentrations that are due to other emission sources in the surrounding area, thus providing a prediction of maximum cumulative concentrations. **Appendix C.1 and C.2** show the maximum predicted concentrations for the 2041 Future No-Build and Future Build scenarios, respectively. **Appendix C.4 and C.5** show the results for 2051 No-Build and Build.

2.9.1 Selection of Receptors

A combination of interactive GIS maps and satellite imagery were used to determine the locations of all representative sensitive receptors (e.g. residential dwellings) and critical receptors (e.g. retirement homes, hospitals, childcare centres, schools) within the study area. The same receptors were used for the No-Build and Build scenarios. Background concentrations were assumed the same at each receptor location. Local air quality impacts are expected to be greatest at receptors closest to the modelled roadways. Figures in **Appendix D.2** and **D.3** show the sensitive receptor locations within the study area.

Future residences that have been publicly approved at the time this study commenced have been included. The analysis excludes properties that have been acquired by MTO. In future, if these properties are determined to no longer be needed to support the Highway 413 Construction or Operation, the MTO will follow Ontario's Realty Directive to dispose of surplus land (Ministry of Infrastructure, 2024). Review of potential air quality impacts can be made at that time.

Additional locations where Indigenous communities may be exercising rights can be identified through MTO consultation, and these can be assessed as part of Detail Design.

2.9.2 Conversion of NO_x to NO_2, Ozone Limiting Method

Any chemical reactions among pollutants are not considered in the assessment of local air quality impacts, except for the conversion of nitric oxide (NO) to NO_2, through reaction with ambient ground-level O_3. Vehicle exhausts initially consist mainly of NO. However, NO can convert to NO_2 once in the outside air. The Ozone Limiting Method (OLM) was used to estimate this conversion for the credible worst-case NO concentration.

The OLM assumes that the conversion of NO to NO_2 is limited only by the amount of ozone (O_3) present in the outside air. If the concentration of available O_3 (parts per million or ppm) is less than that of the NO contributed by the modelled roadway emissions, then the portion of NO that is converted to NO_2 equals the available O_3. On the other hand, if the concentration of available O_3 exceeds that of the NO contributed by the modelled roadway, then all of the NO is converted to NO_2. The OLM calculation is conditional dependent on the ambient concentration of ozone compared to the concentration of NOx from combustion. These are shown below as (a) and (b).

(a) $$If\ ambient\ O_3 > [0.9 \times NOx], then\ NO_2 = NOx$$

(b) $$If\ ambient\ O_3 < [0.9 \times NOx], then\ NO_2 = [0.1 \times NOx] +\ O_3$$

For example, the concentration of ambient ozone at 12 p.m. is 46 ppb (parts per billion) as shown in **Appendix B**. Assuming the concentration of NOx at 12 p.m. is 100 ppb, equation (b) would apply as shown below.

$$46\ ppb < [0.9 \times 100\ ppb], so\ NO_2 = [0.1 \times 100\ ppb] + 46\ ppb$$

$$= 10\ ppb + 46\ ppb = 56\ ppb$$

For the credible worst-case analysis, a fixed hourly concentration of ozone was used in the OLM, shown in **Appendix B**, corresponding to the 90th percentile of measured values from historical monitoring data recorded at the Brampton monitoring station operated by the MECP.

3. Existing Conditions

3.1 Baseline Conditions

The No-Build scenario represents traffic volumes on existing roadways and highways within the study area, and assessment of the air quality impacts under these future conditions effectively provides a baseline for comparison of the effects from the future operations of Highway 413.

The 2041 and 2051 No-Build traffic data was assessed following the methods described in Section 2 of this report.

3.2 Assessment of Maximum Cumulative Concentrations

A summary of the predicted maximum cumulative concentrations for the No-Build scenario for each contaminant (maximum modelled project contribution plus the 90th percentile 0.5-hour, 1-hour, 8-hour, or 24-hour background concentration) at the 3,034 modelled discrete receptors is presented in **Appendix C.1 and C.4** for 2041 and 2051 respectively. Five model runs were completed, one for each set of prepared meteorological data. The maximum resultant concentrations from the models at each receptor for each contaminant were compared to the applicable thresholds.

Table 3-1 and **Table 3-2** present the maximum cumulative concentrations for the No-Build 2041 and 2051 scenarios respectively.

Table 3-1: Maximum Cumulative Concentration – No-Build 2041

Contaminant	Averaging Period	Adopted Background Concentration (µg/m^3)	Maximum Cumulative Concentration	Air Quality Threshold	% of Threshold
$PM_{2.5}$	24-hour	12.2	20.7	27	77%
	24-hour	12.2	20.7	23	90%
	Annual	7.0	8.9	8.8	101%
	Annual	7.0	8.9	8.0	111%
PM_{10}	24-hour	22.6	62.8	50	126%
CO	1-hour	349	2547	36,200	7%
	8-hour	362	1006	15,700	6%

Contaminant	Averaging Period	Adopted Background Concentration (µg/m^3)	Maximum Cumulative Concentration	Air Quality Threshold	% of Threshold
NO_2	1-hour	35.0	129.4	83.1	156%
	24-hour	29.4	67.3	200	34%
	Annual	14.7	22.7	23.7	96%
Benzo(a)pyrene	24-hour	9.1E-05	1.79E-04	5.0E-05	358%
	Annual	5.1E-05	6.73E-05	1.0E-05	673%
Acetaldehyde	0.5-hour [1]	4.43	4.91	500	<1%
	24-hour	1.5	1.56	500	<1%
Acrolein	1-hour [2]	0.15	0.18	4.5	4%
	24-hour	0.06	0.07	0.4	17%
Formaldehyde	24-hour	2.55	2.61	65	4%
Benzene	24-hour	0.46	0.55	2.3	24%
	Annual	0.31	0.32	0.45	72%
1,3-Butadiene	24-hour	0.03	0.03	10	<1%
	Annual	0.01	0.01	2	<1%

Table 3-2: Maximum Cumulative Concentration – No-Build 2051

Contaminant	Averaging Period	Adopted Background Concentration (µg/m^3)	Maximum Cumulative Concentration	Air Quality Threshold	% of Threshold
$PM_{2.5}$	24-hour	12.2	21.6	27	80%
	24-hour	12.2	21.6	23	94%
	Annual	7.0	9.1	8.8	103%
	Annual	7.0	9.1	8.0	114%
PM_{10}	24-hour	22.6	67.7	50	135%
CO	1-hour	349	1971	36,200	5%
	8-hour	362	848	15,700	5%
NO_2	1-hour	35.0	125.7	83.1	151%
	24-hour	29.4	61.9	200	31%
	Annual	14.7	21.4	23.7	90%

Contaminant	Averaging Period	Adopted Background Concentration (µg/m^3)	Maximum Cumulative Concentration	Air Quality Threshold	% of Threshold
Benzo(a)pyrene	24-hour	9.1E-05	1.56E-04	5.0E-05	311%
	Annual	5.1E-05	6.36E-05	1.0E-05	636%
Acetaldehyde	0.5-hour [1]	4.43	4.79	500	<1%
	24-hour	1.5	1.54	500	<1%
Acrolein	1-hour [2]	0.15	0.17	4.5	4%
	24-hour	0.06	0.07	0.4	16%
Formaldehyde	24-hour	2.55	2.59	65	4%
Benzene	24-hour	0.46	0.54	2.3	24%
	Annual	0.31	0.32	0.45	72%
1,3-Butadiene	24-hour	0.03	0.03	10	<1%
	Annual	0.01	0.01	2	<1%

For the No-Build scenario, the cumulative maximum predicted concentrations for 24-hour and annual average benzo(a)pyrene exceeded the AAQC. This is attributed in part to high ambient background concentrations, as the background levels of benzo(a)pyrene are 183% and 513% of the AAQC for 24-hour and annual averaging periods, respectively. However, the maximum cumulative concentrations in No-Build 2041 are 358% and 673% for 24-hour and annual averaging periods, respectively. This means that the non-background contribution is 175% and 160% respectively, both of which exceed AAQC.

In 2041, the cumulative maximum predicted concentrations for all other contaminants were below their respective thresholds except annual $PM_{2.5}$ which exceeded both AAQC and CAAQS with 71 receptors showing exceedance of the CAAQS, 24-hour PM_{10} which exceeded AAQC at 31 receptors, and 1-hour NO_2 which exceeded CAAQS at 466 receptors. Most of these exceedances occur at receptors that are closest in proximity to the Highway 401 and 407 ETR interchange. In 2051, the cumulative maximum predicted concentrations for all other contaminants were below their respective thresholds except annual $PM_{2.5}$ which exceeded both AAQC and CAAQS with 91 receptors showing exceedance of the CAAQS, 24-hour PM_{10} which exceeded AAQC at 74 receptors, and 1-hour NO_2 which exceeded CAAQS at 220 receptors. Similar to 2041, most of these exceedances occur at receptors that are closest in proximity to the Highway 401 and 407 ETR interchange.

The concentration isopleths in **Appendix E.2 and E.14** show the impacts for NO_2 within the study area, with higher levels of NO_2 near Highway 401 and 407 ETR in the west and Highway 400 in the east, and much lower levels below the 1-hour NO_2 CAAQS threshold generally throughout the remainder of the study area. The concentration isopleths in **Appendix E.5 and E.17** show similar trends in impacts for 24-hour PM_{10} within the study area, while **Appendix E.8 and E.20** show similar trends for Annual $PM_{2.5}$.

3.3 Frequency Analysis for 1-Hour NO_2 and 24-Hour PM_{10}

The frequency analysis for 1-hour NO_2 presented in **Appendix G.1.1** shows exceedance at the most impacted receptor, RE110000_005, 2.4% of the time. This receptor as well as the others having frequency of exceedance greater than 1% are located directly beside Highway 401. The frequency of exceedance generally approaches zero at some point within the study area. However, the distance at which this occurs varies throughout the project. **Appendix E.2** shows the areas expected to have a non-zero frequency of exceedance in greater detail.

The frequency analysis for 24-hour PM_{10} presented in **Appendix G.2.1** shows exceedance at the most impacted receptor, RE110000_005, 1.0% of the time. This receptor is located directly beside Highway 401. Similar to NO_2, the frequency of exceedance generally approaches zero at some point within the study area. However, the distance at which this occurs varies throughout the project. **Appendix E.2** shows the areas expected to have a non-zero frequency of exceedance in greater detail.

It is not possible to configure the modelling files within AERMOD to return a count of exceedance of the CAAQS threshold. The frequency analyses are based on exceedance of standard by the maximum predicted concentration, and therefore the frequencies reported are more conservative than would be expected based on the CAAQS.

4. Potential Impacts and Mitigation

4.1 Future Build Conditions

The Build scenario represents traffic volumes on the Highway 413 and any associated ramps and interchanges as well as existing roadways and highways within the study area, and assessment of the air quality impacts under these future conditions is compared to the No-Build conditions to gauge the net impacts from future operations of Highway 413.

The Build scenario traffic data was assessed following the methods described in Section 2 of this report.

4.2 Assessment of Maximum Cumulative Concentrations

A summary of the predicted maximum cumulative concentrations for the Build scenario for each contaminant (maximum modelled project contribution plus the 90th percentile 0.5-hour, 1-hour, 8-hour, or 24-hour background concentration) at the 3,034 modelled discrete receptors is presented in **Appendix C.2 and C.5** for 2041 and 2051, respectively. Five model runs were completed, one for each set of prepared meteorological data. The maximum resultant concentrations from the models at each receptor for each contaminant were compared to the applicable thresholds in **Table 4-1** and **4-2**. The 2041 Build "% of threshold" is included in **Table 4-2** to provide a comparison between 2051 and 2041 concentrations. Although traffic volumes are predicted to increase between 2041 and 2051, tailpipe emissions for all contaminants are projected to decrease due to improved engine technology and additional fleet conversion to electric vehicles. However, the total emissions of particulate matter are predicted to increase due to re-entrainment of road dust from the increased vehicle traffic.

Table 4-1: Maximum Cumulative Concentration – Build 2041

Contaminant	Averaging Period	Adopted Background Concentration (µg/m^3)	Maximum Cumulative Concentration	Air Quality Threshold	% of Threshold
$PM_{2.5}$	24-hour	12.2	23.6	27	87%
	24-hour	12.2	23.6	23	102%
	Annual	7.0	9.1	8.8	103%
	Annual	7.0	9.1	8.0	113%
PM_{10}	24-hour	22.6	78.2	50	156%
CO	1-hour	349	3068.7	36,200	8%
	8-hour	362	1128.6	15,700	7%
NO_2	1-hour	35.0	131.1	83.1	158%
	24-hour	29.4	73.1	200	37%
	Annual	14.7	22.9	23.7	97%
Benzo(a)pyrene	24-hour	9.1E-05	1.93E-04	5.0E-05	386%
	Annual	5.1E-05	6.89E-05	1.0E-05	689%
Acetaldehyde	0.5-hour [1]	4.43	5.0	500	<1%
	24-hour	1.5	1.6	500	<1%
Acrolein	1-hour [2]	0.15	0.19	4.5	4%
	24-hour	0.06	0.07	0.4	17%
Formaldehyde	24-hour	2.55	2.62	65	4%
Benzene	24-hour	0.46	0.57	2.3	25%
	Annual	0.31	0.33	0.45	72%
1,3-Butadiene	24-hour	0.03	0.03	10	<1%
	Annual	0.01	0.01	2	<1%

Table 4-2: Maximum Cumulative Concentration – Build 2051

Contaminant	Averaging Period	Adopted Background Concentration (µg/m³)	Maximum Cumulative Concentration	Air Quality Threshold	% of Threshold	% of Threshold 2041 Build
$PM_{2.5}$	24-hour	12.2	24.5	27	91%	87%
	24-hour	12.2	24.5	23	106%	102%
	Annual	7.0	9.2	8.8	105%	103%
	Annual	7.0	9.2	8.00	115%	113%
PM_{10}	24-hour	22.6	83.1	50	166%	156%
CO	1-hour	349	2,373	36,200	7%	8%
	8-hour	362	970.7	15,700	6%	7%
NO_2	1-hour	35.0	127	83.1	153%	158%
	24-hour	29.4	65.5	200	33%	37%
	Annual	14.7	21.3	23.7	90%	97%
Benzo(a)pyrene	24-hour	9.1E-05	1.69E-04	5.0E-05	338%	386%
	Annual	5.1E-05	6.45E-05	1.0E-05	645%	689%
Acetaldehyde	0.5-hour [1]	4.43	4.8	500	<1%	<1%
	24-hour	1.5	1.5	500	<1%	<1%
Acrolein	1-hour [2]	0.15	0.2	4.5	4%	4%
	24-hour	0.06	0.1	0.4	16%	17%
Formaldehyde	24-hour	2.55	2.6	65	4%	4%
Benzene	24-hour	0.46	0.6	2.3	24%	25%
	Annual	0.31	0.3	0.45	72%	72%
1,3-Butadiene	24-hour	0.03	0.03	10	<1%	<1%
	Annual	0.01	0.01	2	<1%	<1%

Similar to the No-Build scenario, for the Build scenario the cumulative maximum predicted concentrations for 24-hour and annual average benzo(a)pyrene exceeded the AAQC. Again, this is mainly attributed to high ambient background concentrations of benzo(a)pyrene at 183% and 513% of the AAQC for 24-hour and annual averaging periods, respectively. However, at most receptors throughout the study area the maximum predicted concentrations of benzo(a)pyrene increase compared to the No-Build scenario. At the highest receptor, 2041 Build benzo(a)pyrene levels reached

386% and 689% of the 24-hour and annual averaging periods, respectively. High background levels are a large part of the cumulative maximum concentrations, but the non-background portion alone is still over the AAQC. **Appendix E.12** shows the contour plots of highest benzo(a)pyrene concentrations.

The percentage change for all contaminants and receptors are shown in **Appendix C.3** and **C.6**, with the predominant increases suggesting an overall worsening in air quality throughout the study area.

The cumulative maximum predicted concentrations for all other contaminants were below their respective thresholds in 2041 except 24-hour $PM_{2.5}$, which exceeded CAAQS at two receptors, annual $PM_{2.5}$, which exceeded both AAQC and CAAQS with 210 receptors showing exceedance of the CAAQS, 24-hour PM_{10}, which exceeded AAQC at 178 receptors, and 1-hour NO_2, which exceeded CAAQS at 1,405 receptors. In 2051, the cumulative maximum predicted concentrations for all other contaminants were below their respective thresholds except 24-hour $PM_{2.5}$, which exceeded CAAQS at four receptors, annual $PM_{2.5}$, which exceeded both AAQC and CAAQS with 281 receptors showing exceedance of the CAAQS, 24-hour PM_{10}, which exceeded AAQC at 347 receptors, and 1-hour NO_2, which exceeded CAAQS at 686 receptors. The concentration isopleths in **Appendix E.3 and E.15** show the impacts for NO_2, with higher levels of NO_2 occurring throughout the study area compared to the maximum concentrations for the No-Build scenario. The concentration isopleths in **Appendix E.6 and E.18** show similar trends in the impacts for 24-hour PM_{10}, and the concentration isopleths in **Appendix E.9 and E.21** show similar trends in the impacts for Annual $PM_{2.5}$.

Tables 4-3 and **4-4** summarize the changes in 1-hour NO_2 concentrations for the ten receptors having the highest maximum cumulative concentration in the 2041 and 2051 project years respectively. The percent change between the maximum No-Build and Build cumulative concentration was calculated for each receptor. The maximum concentrations modelled in the Build scenario are similar to each other (the 10^{th} highest is within 4% of the maximum for 2041). However, there are two different causes for these high concentrations. First, some receptors (like RW110000_024) are high in the No-Build scenario and see only minor (1% for RW110000_024) increases in NO_2 in the Build scenario. The concentrations at these receptors are predominantly affected by existing roadways such as Highway 401. On the other hand, receptors like RW312700_001 are heavily influenced by the project. RW312700_001 sees a 125% increase in NO_2 between the No-Build and Build scenarios in 2041.

Table 4-3: Summary of No-Build vs Build for 1-Hour NO_2 - 2041

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2041 No Build	2041 Build	Percent Change	2041 No Build	2041 Build
RW110000_024	Residential	129.44	131.33	1%	1.7%	2.4%
RW312700_001	Residential	57.88	130.22	125%	-	1.5%
RW110000_002	Residential	123.2	130.1	6%	1.3%	2.1%
RE110000_005	Residential	128.55	129.11	0%	2.4%	2.5%
RW311300_001	Residential	53.22	128.1	141%	-	0.9%
RE317000_001	Residential	71.33	126.99	78%	0.0%	1.0%
RW110100_001	Residential	114.8	126.88	10%	0.4%	1.3%
RW233500_001	Residential	50.00	126.33	153%	-	1.4%
RE512200_003	Residential	49.55	126.33	155%	-	1.0%
RE110000_001	Place of Worship	125.99	126.00	0%	1.7%	1.8%

Table 4-4: Summary of No-Build vs Build for 1-Hour NO_2 — 2051

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2051 No Build	2051 Build	Percent Change	2051 No Build	2051 Build
RW110000_024	Residential	124.4	127.0	2%	1.2%	1.6%
RW110000_002	Residential	120.8	125.3	4%	0.8%	1.4%
RE110000_005	Residential	125.7	124.0	-1%	1.5%	1.6%
RW312700_001	Residential	53.4	123.2	131%	-	0.9%

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2051 No Build	2051 Build	Percent Change	2051 No Build	2051 Build
RE110000_004	Residential	121.2	120.9	0%	1.0%	1.1%
RE110000_001	Place of Worship	120.6	120.2	0%	1.1%	1.2%
RE317000_001	Residential	68.4	120.1	76%	0.0%	0.6%
RW110100_001	Residential	101.7	120.1	18%	0.3%	0.8%
RW311300_001	Residential	50.4	118.9	136%	-	0.5%
RW233500_001	Residential	48.5	118.4	144%	-	0.8%

Tables **4-5** and **4-6** show the changes in maximum cumulative PM_{10} concentration in the 2041 and 2051 project years respectively. The top receptor, RW224200_001, sees its maximum modelled concentration increase 123%. This pushes it from meeting AAQC to exceeding the standard. **Tables 4-5** and **4-6** also show that 2051 has higher maximum cumulative concentrations than 2041. In 2051, the highest receptor has a concentration approximately 6% greater than it does in 2041.

Table 4-5: Summary of No-Build vs Build for 24-Hour PM_{10} — 2041

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2041 No Build	2041 Build	Percent Change	2041 No Build	2041 Build
RW224200_001	Residential	35.1	78.2	123%	-	1.0%
RW110000_017	Residential	62.8	74.0	18%	0.2%	1.0%
RW110100_001	Residential	52.1	73.1	40%	0.1%	1.5%
RW226000_001	Residential	36.3	72.0	98%	-	0.5%
RW110000_024	Residential	61.6	71.5	16%	0.5%	1.6%
RW110000_016	Residential	58.2	69.0	19%	0.1%	0.7%

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2041 No Build	2041 Build	Percent Change	2041 No Build	2041 Build
RW110000_019	Residential	48.3	67.7	40%	-	1.1%
RW312700_001	Residential	42.5	67.7	59%	-	0.7%
RW110000_015	Residential	56.7	67.2	19%	0.1%	0.8%
RW214200_004	Residential	45.8	65.1	42%	-	0.2%

Table 4-6: Summary of No-Build vs Build for 24-Hour PM_{10} — 2051

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2051 No Build	2051 Build	Percent Change	2051 No Build	2051 Build
RW224200_001	Residential	34.2	83.1	143%	-	1.4%
RW110000_017	Residential	67.7	79.8	18%	0.1%	1.5%
RW110100_001	Residential	56.0	77.5	38%	-	1.8%
RW110000_024	Residential	66.3	75.4	14%	0.2%	2.2%
RW110000_016	Residential	62.8	74.4	19%	-	1.3%
RW110000_015	Residential	60.8	71.7	18%	-	1.0%
RW110000_019	Residential	51.9	71.1	37%	-	1.4%
RW226000_001	Residential	41.4	71.0	72%	-	0.4%
RW317500_003	Residential	50.1	70.8	41%	0.1%	0.9%
RW312700_001	Residential	40.0	70.8	77%	-	1.0%

Table 4-7 and **4-8** summarize maximum cumulative concentration and frequency of exceedance for 2041 and 2051 for Annual $PM_{2.5}$. Relative to other pollutants, $PM_{2.5}$ has smaller relative increases between the No-Build and Build scenarios. Also, as mentioned in **Section 2.8**, PM is generated from two sources: tailpipe emissions and re-entrained road dust. For $PM_{2.5}$ in 2041, tailpipe emissions are approximately 10% of the re-entrained road dust. As stricter vehicle emissions standards emerge, tailpipe emissions of particulate matter decrease. In 2051, though, the decreases in tailpipe emissions are offset by increases in re-entrained road dust due to higher traffic volumes.

Table 4-7: Summary of No-Build vs Build for Annual $PM_{2.5}$ — 2041

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2041 No Build	2041 Build	Percent Change	2041 No Build	2041 Build
RE110000_005	Residential	8.89	9.06	2%	n/a	n/a
RW110000_002	Residential	8.12	8.70	7%	n/a	n/a
RW110000_024	Residential	8.25	8.68	5%	n/a	n/a
RE316600_001	Residential	8.01	8.68	8%	n/a	n/a
RE110000_001	Place of Worship	8.53	8.67	2%	n/a	n/a
RW110000_019	Residential	8.06	8.64	7%	n/a	n/a
RE110000_390	Residential	8.44	8.63	2%	n/a	n/a
RE110000_004	Residential	8.45	8.59	2%	n/a	n/a
RE110000_003	Residential	8.27	8.54	3%	n/a	n/a
RW312700_001	Residential	7.75	8.52	10%	n/a	n/a

Table 4-8: Summary of No-Build vs Build for Annual $PM_{2.5}$ — 2051

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2051 No Build	2051 Build	Percent Change	2051 No Build	2051 Build
RE110000_005	Residential	9.11	9.23	1%	n/a	n/a
RE316600_001	Residential	8.09	9.01	11%	n/a	n/a
RW110000_002	Residential	8.26	8.81	7%	n/a	n/a
RE110000_001	Place of Worship	8.70	8.80	1%	n/a	n/a
RE110000_390	Residential	8.52	8.79	3%	n/a	n/a
RW110000_024	Residential	8.38	8.77	5%	n/a	n/a
RW110000_019	Residential	8.16	8.77	8%	n/a	n/a
RE110000_004	Residential	8.63	8.73	1%	n/a	n/a
RE110000_003	Residential	8.37	8.67	4%	n/a	n/a
RE110400_002	Residential	8.42	8.62	2%	n/a	n/a

Table 4-9 shows the maximum cumulative concentrations and frequency of AAQC threshold exceedance for benzo(a)pyrene under the No-Build and Build scenarios in project year 2041. In both the Build and No-Build scenarios, the frequency of exceedance is 100% for every receptor in **Table 4-9**. As previously mentioned, this is due to the high background concentration relative to the threshold.

Table 4-9: Summary of No-Build vs Build for 24-Hour Benzo(a)pyrene — 2041

Receptor ID	Description	Maximum Cumulative Concentration (µg/m³)			Frequency of Exceedance (%)	
		2041 No Build	2041 Build	Percent Change	2041 No Build	2041 Build
RW110100_001	Residential	1.50E-04	1.93E-04	29%	100%	100%
RW110000_017	Residential	1.69E-04	1.92E-04	14%	100%	100%
RW226000_001	Residential	1.06E-04	1.86E-04	76%	100%	100%
RW110000_024	Residential	1.75E-04	1.86E-04	6%	100%	100%
RW110000_019	Residential	1.42E-04	1.84E-04	29%	100%	100%
RE521600_004	Residential	1.79E-04	1.84E-04	2%	100%	100%
RW312700_001	Residential	1.11E-04	1.83E-04	65%	100%	100%
RW110000_016	Residential	1.60E-04	1.83E-04	14%	100%	100%
RW317500_003	Residential	1.33E-04	1.82E-04	37%	100%	100%
RW317500_001	Residential	1.30E-04	1.82E-04	40%	100%	100%

It must be noted that **Tables 4-3** through **4-9** report maximum cumulative concentrations. Alone, maximum cumulative concentrations only communicate the worst-case averaging period (e.g., 1-hour, 8-hour, 24-hour, or year) for a pollutant. To help interpret how often a high concentration may occur, **Tables 4-3** through **4-9** also include the frequency that a pollutant exceeds its relevant threshold. Combined, these two parameters give an idea of how often high concentrations may occur, but they are limited in describing the full distributional changes (e.g., average, variance) in cumulative concentrations that may occur as the result of a project.

4.3 Frequency Analysis for 1-Hour NO_2 and 24-Hour PM_{10}

The frequency analysis of 1-hour NO_2 for the 2041 Build scenario is presented in **Appendix G.1.2** and shows exceedance at the most impacted receptor, RE110000_005, 2.5% of the time. This is a marginal increase at this receptor

compared to the No-Build frequency of 2.4% and may be attributed to shifts in alignment of ramps and changes in traffic volumes on Highway 401. Although the conditions at the most impacted receptor change only marginally, receptors that are near the project but not near any other highway see larger increases in frequency. In general, there is an increase in the frequency of exceedance of the 1-hour NO_2 CAAQS threshold at all receptors throughout the study area. Frequency of exceedance generally decreases where receptors are located further from major highways.

The frequency analysis of 24-hour PM_{10} for the 2041 Build scenario is presented in **Appendix G.2.2** and it shows exceedance at the most impacted receptor, RE110000_005, 1.5% of the time, an increase over the frequency of 1.0% in the No-Build scenario. The number of receptors showing an exceedance of the AAQC increased compared to the No-Build scenario, but the frequency of exceedance is generally low to zero throughout the study area where receptors are not located in close proximity to major highways.

It is not possible to configure the modelling files within AERMOD to return a count of exceedance of the CAAQS threshold. The frequency analyses are based on exceedance of standard by the maximum predicted concentration, and therefore the frequencies reported are more conservative than would be expected based on the CAAQS.

4.4 Mitigation

Effective mitigation of traffic-related air pollution requires collaborative efforts across multiple sectors at all levels of government, including municipal (e.g. official plans, transportation plans, site plans), provincial (e.g. policy guidelines and support for regional integration and connectivity), and federal (e.g. vehicle emission standards and fuel quality improvements).

The suggested mitigation strategies acknowledge the following: 1) the need to reduce vehicle emissions through improved technologies and alternative fuels; 2) the importance of maintaining reasonable separation between sensitive land uses and transportation sources; and 3) the importance of policies and guidelines, such as those established through municipal official plans, zoning, and transportation plans, that support alternative modes of travel and reduction of travel miles through community and transportation planning.

4.4.1 Setback Distance

As a mitigation to air quality impacts in proximity to future residential areas, municipalities and development proponents could take measures to ensure reasonable setback distances from roadways to reduce the potential impacts of higher concentrations of contaminants and re-entrained road dust that occur closer to the roadways.

In Ontario, municipalities have approval authority and responsibility to ensure that future development proposals are protective of health and safety. Studies have described the potential impacts of traffic-related air pollution and provide general guidelines for setbacks of sensitive land uses such as schools, hospitals, long-term care facilities, and residences from major roads to mitigate exposure to transportation-related air pollution and offer additional mitigation recommendations where appropriate setbacks are not possible (City of Toronto, 2017). These resources emphasize the importance of land-use planning at the city, neighbourhood, and site level to separate sensitive uses from sources of transportation emissions, reduce traffic congestion, minimize entrapment of contaminants at street level, and support active transportation and transit. The application of these principles would be implemented through site-specific planning and design considerations associated with individual development proposals.

4.4.2 Roadside Vegetation

Planting of roadside vegetation within the study area can stabilize the soil adjacent to the road, reducing erosion and subsequent deposition of particulates on the road surface. Studies of the reductive effects of vegetation on air-borne pollutants have especially focused on particulate matter through the mechanisms of deposition, dispersion, and modification (Diener and Mudu, 2021), noting that dense plantings of trees and shrubs can act as windbreaks to reduce wind velocity near the road surface and reduce the dispersion of disturbed road dust (Abhijith et al., 2017). The relative effects of deposition, dispersion, and modification depend on local factors, and the goals of air-pollutant reduction must also be considered in connection with other benefits of vegetative plantings such as watershed protection, biodiversity and wildlife support, climate change resilience, and aesthetic enhancement. Guidance from landscape designers and plant biologists based on consideration of plant morphology, seasonality, and diversity of native plant species can ensure resiliency and year-round effectiveness of high-density, low-porosity plantings that provide benefits of erosion

control and windbreaks. Recommendations for general vegetation enhancement in the Highway 413 corridor are discussed in the Landscape Composition Planning Phase Report (WSP, 2024). Plantings that are native species appropriate to the area are specified.

Although some studies indicate potential reductive effects of green infrastructure for NO_2 and benzo(a)pyrene (Klingberg, et. al., 2017) the research is not as extensive as for particulate matter.

4.4.3 Congestion Mitigation

Strategies to mitigate congestion and improve traffic flow, such as ramp metering, real-time traffic monitoring, and high-occupancy vehicle lanes, are used elsewhere in the Ontario highway network to alleviate congestion. Consideration of similar strategies can be made to assist in optimization of travel throughout Highway 413 Corridor. Measurable indicators of traffic congestion, such as the volume-to-capacity ratio, should be monitored and consideration given to feasible methods to improve level of service where required.

4.4.4 Construction Air Quality Management Plan

The potential air quality impacts due to construction of the Project were estimated based on modelling of a generic representative construction operation scenario and assessing the potential impacts at receptors against the MECP AAQCs and CCME CAAQS threshold concentrations. Predicted concentrations at some receptors were above the thresholds for 1-hour NO_2, annual NO_2, 24-hour TSP, annual TSP, 24-hour PM_{10}, 24-hour benzo(a)pyrene, and annual benzo(a)pyrene. In practice, air quality impacts from construction activities are temporary in nature, and the emissions are highly variable, difficult to predict, and depend on the specific, localized activities that are taking place and the effectiveness of standard mitigation measures. Best practices to reduce impacts of these emissions can include diligent implementation of operating procedures such as application of dust suppressants, reduced travel speeds for heavy vehicles, efficient staging of activities, and minimization of haul distances. To minimize potential air quality impacts during construction, it is recommended that the construction tendering process should include requirements for implementation of an air quality management plan that would establish best management practices specific to the details of construction required for the Project. The air quality management plan should include provision for meteorological monitoring (e.g. wind direction and speed), visual monitoring (e.g. opacity of dust plumes), a stakeholder communication and complaint

process, and, where applicable and feasible, any additional mitigation measures as outlined in Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities (Cheminfo, 2005) and the MECP Technical Bulletin: Management Approaches for Industrial Fugitive Dust Sources (MECP, 2017b).

4.4.5 Technological Innovation and Regulatory Policy

Benzo(a)pyrene emissions from motor vehicles have been characterized as being directly proportional to the number and types of motor vehicles powered by combustion of fuels derived from petroleum (California Air Resources Board, 1994). The introduction of catalytic converters in the 1970s reduced benzo(a)pyrene emissions from mobile sources, and the more recent introduction and development of alternative fuels including electric vehicle technology is expected to further reduce benzo(a)pyrene emissions. Technologies and policies that reduce the number of kilometres travelled by vehicles powered by petroleum derived fuels will reduce emissions of benzo(a)pyrene and NO_2 and mitigate the impacts of these contaminants.

Continued support and investment at all levels of government in policies, technological innovations, and phased-in regulations for on-road vehicle and engine emissions should encourage continued evolution of the vehicle fleet in Ontario toward alternative fuels and electrification which is expected to reduce NO_2 and other tailpipe emissions.

Continued support and investment in policies and innovations that promote the development of complete communities and transit-oriented communities, as well the local and regional public transportation infrastructure required to support them, could encourage sustainable local economies and equitable opportunities, and potentially improve level of service across the existing transportation network. Improved level of service would potentially reduce traffic congestion and delay and therefore reduce associated local air quality impacts. Regional policies that support public transportation contribute to an overall strategy of emissions reduction by reducing the number of kilometres travelled by vehicles powered by petroleum derived fuels. Municipal policies supporting active transportation, public transportation, and transit-oriented communities would be incorporated into municipal official plans and supporting transportation master plans.

5. Monitoring and Commitments for the Undertaking

5.1 Environmental Effects Monitoring

No additional air quality monitoring has been specified for the Project.

Roadside air monitoring occurs in Ontario with three dedicated roadside monitoring stations and ten additional stations from the ambient air quality monitoring network designated as supplemental roadside stations. The current roadside network includes stations representing high-traffic conditions (Highway 401 in Toronto West) and lower-traffic conditions (North Bay and Toronto Island) (MECP, 2025b). The current ambient air quality monitoring stations represent varying proximities to traffic-related air pollution, and the trends observed through this data could be reflective of the conditions in the Highway 413 corridor. Under guidance by the Ministry of the Environment, Conservation and Parks, additional stations could be considered for inclusion in future to broaden the understanding of trends in traffic-related air pollution in urbanized settings.

5.2 Commitments

The planning and design process for the Highway 413 transportation corridor has involved extensive data collection and analysis since 2007. This phase has resulted in the development of a preliminary design of the corridor, along with associated mitigation measures. However, further data collection and analysis, as well as public, agency and Indigenous community consultation and engagement are deemed necessary to finalize specific environmental design and mitigation measures.

MTO has made a number of commitments that will need to be followed through during subsequent design, construction, operation, maintenance phases of the Highway 413 corridor based on the impact assessment of the Preliminary Design and in response to issues raised and comments received during the Preliminary Design. A summary of these commitments specific to air quality is provided in **Table 5-1** below. If any permitting/registration is required, it will be completed during Detail Design.

Table 5-1: Summary of Preliminary Design Environmental Mitigation and Commitments

ID	Summary of Mitigation and Commitments
AQ.01	Ensure municipal awareness of the Highway 413 Project such that reasonable setback distances from roadways may be considered during future residential development within the study area to mitigate the potential impacts of higher concentrations of contaminants and re-entrained road dust that occur closer to the roadways.
AQ.02	Planting of vegetation within the study area to provide erosion control adjacent to the road and act as windbreaks to decrease wind-driven dispersion of resuspended particulates.
AQ.03	Apply strategies to mitigate congestion and improve traffic flow. This can include strategies such as ramp metering, real-time traffic monitoring, and high-occupancy vehicle lanes.
AQ.04	Continue support and investment for policies, technological innovations, infrastructure, and phased-in regulations for on-road vehicle and engine emissions to encourage continued evolution of the vehicle fleet in Ontario toward alternative fuels and electrification, which is expected to reduce NO_2 and other tailpipe emissions.
AQ.05	Continue support and investment in policies and innovations that promote the development of complete and transit-oriented communities, as well as the local and regional public transportation infrastructure required to support them, to encourage sustainable local economies, equitable opportunities, and potentially improve level of service across the existing transportation network.

6. Summary and Conclusions

The project is expected to impact local air contaminant levels at receptors throughout the study area, with the maximum predicted cumulative concentrations increasing with the project at most receptors, especially in the middle sections of the Highway 413 corridor which are currently predominantly rural.

Although model-predicted concentrations are expected to increase, the maximum cumulative concentrations for most contaminants and averaging periods remain below their respective current thresholds. Contaminants and averaging periods with modelled cumulative concentrations exceeding AAQC or CAAQS thresholds include 24-hour and annual benzo(a)pyrene, 1-hour NO_2 (CAAQS), 24-hour and annual $PM_{2.5}$, and 24-hour PM_{10}. Some of these exceedances can be attributed to high background concentrations as 24-hour and annual benzo(a)pyrene have background concentrations over 100% of the threshold value and annual $PM_{2.5}$ has a background level 88% of the threshold.

Exceedances of the 1-hour CAAQS threshold for NO_2 at receptors in the study area for the No-Build scenario are generally at the western and eastern ends of the Highway 413 corridor close to the existing Highways 400 and 401. Under the Build scenario, exceedances increase in frequency and extend throughout the study area.

24-hour PM_{10} threshold exceedances follow a similar trend to NO_2. Exceedances expand from localized areas in proximity to Highways 400 and 401 under the No-Build scenario to the general extent of the study area under the Build scenario.

There are a few strategies that could be pursued to mitigate the effects of air pollution resulting from the project. Future residential areas could be setback further from roadways to avoid high concentration areas. Roadside vegetation could be planted to stabilize soil and reduce travel distances of road dust that becomes airborne. To minimize potential air quality impacts during construction, an air quality management plan should be implemented that establishes best management practices specific to the details of construction required for the Project. Supporting and investing in policies for engine emissions and alternative fuels would reduce vehicle emissions through improved control technologies and a shift toward lower emissions fuels and electrification. Supporting and investing in polices for transit and active transportation would reduce traffic congestion and further reduce vehicle emissions.

7. References

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A

Traffic Data

Appendix A.1: Hourly Traffic Profiles

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 No Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
A01	Hwy 413 N of Hwy 401/407 interchange_NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A02	Hwy 413 N of Hwy 401/407 interchange_SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A03	Hwy 413 N of Winston Churchill Blvd_NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A04	Hwy 413 N of Winston Churchill Blvd_SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A05	Hwy 413 N of Bovaird Dr_NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A06	Hwy 413 N of Bovaird Dr_SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A07	Hwy 413 E of Mayfield Rd_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A08	Hwy 413 E of Mayfield Rd_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A09	Hwy 413 E of Chinguacousy Rd_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A10	Hwy 413 E of Chinguacousy Rd_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A11	Hwy 413 E of Hurontario St_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A12	Hwy 413 E of Hurontario St_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A13	Hwy 413 E of Hwy 410_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A14	Hwy 413 E of Hwy 410_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A15	Hwy 413 E of Bramalea Rd_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A16	Hwy 413 E of Bramalea Rd_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A17	Hwy 413 E of Airport Rd_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A18	Hwy 413 E of Airport Rd_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A19	Hwy 413 E of The Gore Rd_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A20	Hwy 413 E of The Gore Rd_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A21	Hwy 413 E of Humber Station Rd_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A22	Hwy 413 E of Humber Station Rd_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A23	Hwy 413 E of Hwy 427_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A24	Hwy 413 E of Hwy 427_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A25	Hwy 413 E of Hwy 27_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A26	Hwy 413 E of Hwy 27_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A27	Hwy 413 E of Pine Valley Dr_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A28	Hwy 413 E of Pine Valley Dr_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B05	Hwy 407 S of Hwy 401_NB	393	262	262	262	393	785	3271	3271	3271	1307	1307	1307	1307	1307	1307	1307	797	797	797	1307	1308	1145	981	654	29100
B06	Hwy 407 S of Hwy 401_SB	304	203	203	203	304	609	1440	1440	1440	1435	1435	1435	1435	1435	1435	1435	2536	2536	2536	1435	1014	888	761	507	28400
B07	Hwy 407 N of Hwy 401_EB	556	370	370	370	556	1111	4630	4630	4630	2236	2236	2236	2236	2236	2236	2236	1899	1899	1899	2236	1852	1621	1389	926	46600
B08	Hwy 407 N of Hwy 401_WB	402	268	268	268	402	804	2584	2584	2584	2250	2250	2250	2250	2250	2250	2250	3349	3349	3349	2250	1340	1172	1005	670	42400
B09	Hwy 410 S of Mayfield Rd_NB	418	279	279	279	418	836	1925	1925	1925	1938	1938	1938	1938	1938	1938	1938	3485	3485	3485	1938	1394	1220	1046	697	38600
B10	Hwy 410 S of Mayfield Rd_SB	529	353	353	353	529	1058	4408	4408	4408	2568	2568	2568	2568	2568	2568	2568	2649	2649	2649	2568	1763	1543	1322	882	50400
B11	Hwy 410 N of Mayfield Rd_NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B12	Hwy 410 N of Mayfield Rd_SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B13	Hwy 410 W of Mayfield Rd_EB	319	213	213	213	319	638	2657	2657	2657	1472	1472	1472	1472	1472	1472	1472	1439	1439	1439	1472	1063	930	797	531	29300
B14	Hwy 410 W of Mayfield Rd_WB	307	205	205	205	307	614	1296	1296	1296	1362	1362	1362	1362	1362	1362	1362	2558	2558	2558	1362	1023	895	767	512	27500
B15	Hwy 427 S of Major Mackenzie Dr_NB	383	255	255	255	383	766	1852	1852	1852	1822	1822	1822	1822	1822	1822	1822	3193	3193	3193	1822	1277	1118	958	639	36000
B16	Hwy 427 S of Major Mackenzie Dr_SB	397	264	264	264	397	793	3305	3305	3305	2071	2071	2071	2071	2071	2071	2071	2270	2270	2270	2071	1322	1157	992	661	39800
B17	Hwy 427 N of Major Mackenzie Dr_NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B18	Hwy 427 N of Major Mackenzie Dr_SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B19	Hwy 400 N of Teston Rd_NB	1177	785	785	785	1177	2355	5419	5419	5419	5472	5472	5472	5472	5472	5472	5472	9812	9812	9812	5472	3925	3434	2944	1962	108800
B20	Hwy 400 N of Teston Rd_SB	1098	732	732	732	1098	2196	9149	9149	9149	5111	5111	5111	5111	5111	5111	5111	5081	5081	5081	5111	3660	3202	2745	1830	101600
B21	Hwy 400 S of King Vaughan Rd_NB	1073	716	716	716	1073	2147	4084	4084	4084	4550	4550	4550	4550	4550	4550	4550	8944	8944	8944	4550	3578	3130	2683	1789	93100
B22	Hwy 400 S of King Vaughan Rd_SB	999	666	666	666	999	1998	8323	8323	8323	4336	4336	4336	4336	4336	4336	4336	4016	4016	4016	4336	3329	2913	2497	1665	88100
B23	Hwy 400 S of King Rd_NB	1099	733	733	733	1099	2198	4127	4127	4127	4626	4626	4626	4626	4626	4626	4626	9157	9157	9157	4626	3663	3205	2747	1831	94900
B24	Hwy 400 S of King Rd_SB	1145	764	764	764	1145	2291	9544	9544	9544	4876	4876	4876	4876	4876	4876	4876	4420	4420	4420	4876	3818	3340	2863	1909	99700
C11	Hwy 413 at Winston Churchill Blvd_S-E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C12	Hwy 413 at Winston Churchill Blvd_E-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C13	Hwy 413 at Winston Churchill Blvd_W-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C14	Hwy 413 at Winston Churchill Blvd_N-E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C15	Hwy 413 at Winston Churchill Blvd_E-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C16	Hwy 413 at Winston Churchill Blvd_W-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C17	Hwy 413 at Bovaird Dr_S-E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C18	Hwy 413 at Bovaird Dr_E-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C19	Hwy 413 at Bovaird Dr_W-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 No Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
C20	Hwy 413 at Bovaird Dr_N-E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C21	Hwy 413 at Bovaird Dr_E-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C22	Hwy 413 at Bovaird Dr_W-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C23	Hwy 413 at Mayfield Rd_S-E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C24	Hwy 413 at Mayfield Rd_E-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C25	Hwy 413 at Mayfield Rd_W-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C26	Hwy 413 at Mayfield Rd_N-E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C27	Hwy 413 at Mayfield Rd_E-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C28	Hwy 413 at Mayfield Rd_W-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C29	Hwy 413 at Chinguacousy Rd_W-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C30	Hwy 413 at Chinguacousy Rd_N-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C31	Hwy 413 at Chinguacousy Rd_S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C32	Hwy 413 at Chinguacousy Rd_E-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C33	Hwy 413 at Chinguacousy Rd_N-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C34	Hwy 413 at Chinguacousy Rd_S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C35	Hwy 413 at Hurontario St_W-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C36	Hwy 413 at Hurontario St_N-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C37	Hwy 413 at Hurontario St_S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C38	Hwy 413 at Hurontario St_E-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C39	Hwy 413 at Hurontario St_N-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C40	Hwy 413 at Hurontario St_S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C41	Hwy 413 at Hwy 410_W-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C42	Hwy 413 at Hwy 410_E-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C43	Hwy 413 at Hwy 410_S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C44	Hwy 413 at Hwy 410_S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C45	Hwy 413 at Bramalea Rd_W-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C46	Hwy 413 at Bramalea Rd_N-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C47	Hwy 413 at Bramalea Rd_S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C48	Hwy 413 at Bramalea Rd_E-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C49	Hwy 413 at Bramalea Rd_N-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C50	Hwy 413 at Bramalea Rd_S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C51	Hwy 413 at Airport Rd_W-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C52	Hwy 413 at Airport Rd_N-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C53	Hwy 413 at Airport Rd_S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C54	Hwy 413 at Airport Rd_E-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C55	Hwy 413 at Airport Rd_N-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C56	Hwy 413 at Airport Rd_S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C57	Hwy 413 at The Gore Rd_W-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C58	Hwy 413 at The Gore Rd_N/S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C59	Hwy 413 at The Gore Rd_E-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C60	Hwy 413 at The Gore Rd_N/S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C61	Hwy 413 at Humber Station Rd_W-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C62	Hwy 413 at Humber Station Rd_N-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C63	Hwy 413 at Humber Station Rd_S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C64	Hwy 413 at Humber Station Rd_E-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C65	Hwy 413 at Humber Station Rd_N-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C66	Hwy 413 at Humber Station Rd_S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C67	Hwy 413 at Hwy 427_W-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C68	Hwy 413 at Hwy 427_E-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C69	Hwy 413 at Hwy 427_S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C70	Hwy 413 at Hwy 427_S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C71	Hwy 413 at Hwy 27_W-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C72	Hwy 413 at Hwy 27_N/S-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C73	Hwy 413 at Hwy 27_E-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C74	Hwy 413 at Hwy 27_N/S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C81	Hwy 413 at Weston Rd_W-N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C82	Hwy 413 at Weston Rd_N/S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

[1] Annual Average Daily Traffic

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RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
C83	Hwy 413 at Hwy 400_W-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C84	Hwy 413 at Hwy 400_W-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C85	Hwy 413 at Hwy 400_N-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C86	Hwy 413 at Hwy 400_S-W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D01	Trafalgar Rd S of Hwy 401_NB	330	220	220	220	330	661	2754	2754	2754	1815	1815	1815	1815	1815	1815	1815	2064	2064	2064	1815	1102	964	826	551	34400
D02	Trafalgar Rd S of Hwy 401_SB	310	207	207	207	310	621	2179	2179	2179	1832	1832	1832	1832	1832	1832	1832	2587	2587	2587	1832	1035	905	776	517	34050
D03	Trafalgar Rd N of Hwy 401_NB	391	261	261	261	391	782	3259	3259	3259	2216	2216	2216	2216	2216	2216	2216	2575	2575	2575	2216	1304	1141	978	652	41650
D04	Trafalgar Rd N of Hwy 401_SB	373	248	248	248	373	745	2604	2604	2604	2195	2195	2195	2195	2195	2195	2195	3105	3105	3105	2195	1242	1087	932	621	40800
D05	Steeles Ave E of Trafalgar Rd_EB	383	255	255	255	383	765	3189	3189	3189	2166	2166	2166	2166	2166	2166	2166	2508	2508	2508	2166	1276	1116	957	638	40700
D06	Steeles Ave E of Trafalgar Rd_WB	468	312	312	312	468	936	2715	2715	2715	2464	2464	2464	2464	2464	2464	2464	3902	3902	3902	2464	1561	1366	1171	780	47250
D07	Steeles Ave At Hwy 413_EB	398	265	265	265	398	796	3318	3318	3318	2296	2296	2296	2296	2296	2296	2296	2697	2697	2697	2296	1327	1161	995	664	42950
D08	Steeles Ave At Hwy 413_WB	375	250	250	250	375	750	2498	2498	2498	2142	2142	2142	2142	2142	2142	2142	3123	3123	3123	2142	1249	1093	937	625	40150
D09	Steeles Ave E of Ninth Line S_EB	322	215	215	215	322	644	2685	2685	2685	1880	1880	1880	1880	1880	1880	1880	2221	2221	2221	1880	1074	940	806	537	35050
D10	Steeles Ave E of Ninth Line S_WB	372	248	248	248	372	745	2156	2156	2156	1958	1958	1958	1958	1958	1958	1958	3103	3103	3103	1958	1241	1086	931	621	37550
D11	Steeles Ave E of Tenth Line N_EB	403	269	269	269	403	806	3359	3359	3359	2000	2000	2000	2000	2000	2000	2000	2103	2103	2103	2000	1344	1176	1008	672	39000
D12	Steeles Ave E of Tenth Line N_WB	402	268	268	268	402	804	1989	1989	1989	1942	1942	1942	1942	1942	1942	1942	3349	3349	3349	1942	1340	1172	1005	670	38150
D13	Ninth Line N N of Steeles Ave_NB	152	102	102	102	152	305	783	783	783	749	749	749	749	749	749	749	1269	1269	1269	749	508	444	381	254	14650
D14	Ninth Line N N of Steeles Ave_SB	221	147	147	147	221	442	1843	1843	1843	955	955	955	955	955	955	955	883	883	883	955	737	645	553	369	19450
D15	Ninth Line S S of Steeles Ave_NB	227	151	151	151	227	454	1893	1893	1893	1276	1276	1276	1276	1276	1276	1276	1477	1477	1477	1276	757	663	568	379	24050
D16	Ninth Line S S of Steeles Ave_SB	262	175	175	175	262	525	2186	2186	2186	1592	1592	1592	1592	1592	1592	1592	1933	1933	1933	1592	874	765	656	437	29400
D17	Tenth Line At Hwy 413_NB	86	57	57	57	86	172	269	269	269	336	336	336	336	336	336	336	716	716	716	336	286	251	215	143	7050
D18	Tenth Line At Hwy 413_SB	133	89	89	89	133	266	1110	1110	1110	484	484	484	484	484	484	484	353	353	353	484	444	389	333	222	10450
D19	Derry Rd W of Hwy 407_EB	456	304	304	304	456	911	3796	3796	3796	2253	2253	2253	2253	2253	2253	2253	2354	2354	2354	2253	1518	1329	1139	759	43950
D20	Derry Rd W of Hwy 407_WB	394	263	263	263	394	789	2353	2353	2353	2113	2113	2113	2113	2113	2113	2113	3287	3287	3287	2113	1315	1150	986	657	40300
D21	Derry Rd E of Hwy 407_EB	369	246	246	246	369	738	3077	3077	3077	2187	2187	2187	2187	2187	2187	2187	2604	2604	2604	2187	1231	1077	923	615	40600
D22	Derry Rd E of Hwy 407_WB	315	210	210	210	315	630	2424	2424	2424	1971	1971	1971	1971	1971	1971	1971	2627	2627	2627	1971	1051	919	788	525	36100
D23	Winston Churchill Blvd S of Hwy 401_NB	375	250	250	250	375	750	3125	3125	3125	1877	1877	1877	1877	1877	1877	1877	1983	1983	1983	1877	1250	1094	938	625	36500
D24	Winston Churchill Blvd S of Hwy 401_SB	298	199	199	199	298	596	1737	1737	1737	1574	1574	1574	1574	1574	1574	1574	2484	2484	2484	1574	994	869	745	497	30150
D25	Winston Churchill Blvd N of Hwy 401_NB	386	257	257	257	386	772	3216	3216	3216	2133	2133	2133	2133	2133	2133	2133	2434	2434	2434	2133	1286	1126	965	643	40350
D26	Winston Churchill Blvd N of Hwy 401_SB	364	243	243	243	364	729	2600	2600	2600	2170	2170	2170	2170	2170	2170	2170	3037	3037	3037	2170	1215	1063	911	607	40250
D27	Winston Churchill Blvd S of Hwy 413_NB	243	162	162	162	243	485	656	656	656	892	892	892	892	892	892	892	2022	2022	2022	892	809	708	607	404	19150
D28	Winston Churchill Blvd S of Hwy 413_SB	252	168	168	168	252	505	2103	2103	2103	1013	1013	1013	1013	1013	1013	1013	848	848	848	1013	841	736	631	421	21100
D29	Winston Churchill Blvd N of Hwy 413_NB	243	162	162	162	243	485	656	656	656	892	892	892	892	892	892	892	2022	2022	2022	892	809	708	607	404	19150
D30	Winston Churchill Blvd N of Hwy 413_SB	252	168	168	168	252	505	2103	2103	2103	1013	1013	1013	1013	1013	1013	1013	848	848	848	1013	841	736	631	421	21100
D31	Winston Churchill Blvd N of 5 Side Rd_NB	133	88	88	88	133	265	597	597	597	608	608	608	608	608	608	608	1105	1105	1105	608	442	387	332	221	12150
D32	Winston Churchill Blvd N of 5 Side Rd_SB	146	97	97	97	146	292	1218	1218	1218	647	647	647	647	647	647	647	607	607	607	647	487	426	365	244	13050
D33	5 Side Rd W of Winston Churchill Blvd_EB	99	66	66	66	99	198	825	825	825	541	541	541	541	541	541	541	608	608	608	541	330	289	248	165	10250
D34	5 Side Rd W of Winston Churchill Blvd_WB	112	75	75	75	112	225	632	632	632	582	582	582	582	582	582	582	936	936	936	582	374	328	281	187	11200
D35	5 Side Rd At Hwy 413_EB	119	79	79	79	119	237	988	988	988	564	564	564	564	564	564	564	576	576	576	564	395	346	296	198	11150
D36	5 Side Rd At Hwy 413_WB	111	74	74	74	111	222	355	355	355	437	437	437	437	437	437	437	924	924	924	437	370	323	277	185	9150
D37	Heritage Rd At Hwy 413_NB	143	95	95	95	143	286	519	519	519	590	590	590	590	590	590	590	1192	1192	1192	590	477	417	358	238	12200
D38	Heritage Rd At Hwy 413_SB	147	98	98	98	147	294	1226	1226	1226	674	674	674	674	674	674	674	654	654	654	674	490	429	368	245	13450
D39	Heritage Rd N of Bovaird Dr_NB	84	56	56	56	84	168	355	355	355	375	375	375	375	375	375	375	702	702	702	375	281	246	211	140	7550
D40	Heritage Rd N of Bovaird Dr_SB	108	72	72	72	108	217	903	903	903	470	470	470	470	470	470	470	433	433	433	470	361	316	271	181	9550
D41	Heritage Rd S of Mayfield Rd_NB	70	47	47	47	70	140	584	584	584	229	229	229	229	229	229	229	139	139	139	229	234	204	175	117	5150
D42	Heritage Rd S of Mayfield Rd_SB	60	40	40	40	60	121	192	192	192	234	234	234	234	234	234	234	504	504	504	234	202	176	151	101	4950
D43	Heritage Rd N of Mayfield Rd_NB	88	59	59	59	88	176	732	732	732	399	399	399	399	399	399	399	390	390	390	399	293	256	220	146	8000
D44	Heritage Rd N of Mayfield Rd_SB	86	57	57	57	86	172	226	226	226	309	309	309	309	309	309	309	715	715	715	309	286	250	215	143	6700
D45	Bovaird Dr W of Heritage Rd_EB	180	120	120	120	180	360	1477	1477	1477	1170	1170	1170	1170	1170	1170	1170	1501	1501	1501	1170	600	525	450	300	21250
D46	Bovaird Dr W of Heritage Rd_WB	187	125	125	125	187	374	1558	1558	1558	1150	1150	1150	1150	1150	1150	1150	1401	1401	1401	1150	623	545	467	312	21150
D47	Bovaird Dr W of Hwy 413_EB	251	168	168	168	251	503	1725	1725	1725	1465	1465	1465	1465	1465	1465	1465	2094	2094	2094	1465	838	733	628	419	27300
D48	Bovaird Dr W of Hwy 413_WB	108	72	72	72	108	217	903	903	903	470	470	470	470	470	470	470	433	433	433	470	361	316	271	181	9550
D49	Bovaird Dr E of Hwy 413_EB	251	168	168	168	251	503	1725	1725	1725	1465	1465	1465	1465	1465	1465	1465	2094	2094	2094	1465	838	733	628	419	27300
D50	Bovaird Dr E of Hwy 413_WB	236	157	157	157	236	471	1964	1964	1964	1426	1426	1426	1426	1426	1426	1426	1726	1726	1726	1426	786	687	589	393	26350
D51	Wanless Dr W of Heritage Rd_EB	95	63	63	63	95	189	788	788	788	575	575	575	575	575	575	575	694	694	694	575	315	276	236	158	10600
D52	Wanless Dr W of Heritage Rd_WB	90	60	60	60	90	181	713	713	713	577	577	577	577	577	577	577	754	754	754	577	302	264	226	151	10500
D53	Wanless Dr At Hwy 413_EB	128	86	86	86	128	257	901	901	901	760	760	760	760	760	760	760	1070	1070	1070	760	428	375	321	214	14100

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 No Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413

GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
D54	Wanless Dr At Hwy 413_WB	147	98	98	98	147	294	1223	1223	1223	742	742	742	742	742	742	742	796	796	796	742	489	428	367	245	14400
D55	Mayfield Rd W of Heritage Rd_EB	183	122	122	122	183	366	1527	1527	1527	979	979	979	979	979	979	979	1093	1093	1093	979	611	534	458	305	18700
D56	Mayfield Rd W of Heritage Rd_WB	162	108	108	108	162	324	1010	1010	1010	890	890	890	890	890	890	890	1348	1348	1348	890	539	472	404	270	16850
D57	Mayfield Rd E of Heritage Rd_EB	192	128	128	128	192	385	1604	1604	1604	1087	1087	1087	1087	1087	1087	1087	1260	1260	1260	1087	642	561	481	321	20450
D58	Mayfield Rd E of Heritage Rd_WB	186	124	124	124	186	373	1201	1201	1201	1047	1047	1047	1047	1047	1047	1047	1554	1554	1554	1047	622	544	466	311	19700
D59	Mayfield Rd E of Hwy 413_EB	192	128	128	128	192	385	1604	1604	1604	1087	1087	1087	1087	1087	1087	1087	1260	1260	1260	1087	642	561	481	321	20450
D60	Mayfield Rd E of Hwy 413_WB	186	124	124	124	186	373	1201	1201	1201	1047	1047	1047	1047	1047	1047	1047	1554	1554	1554	1047	622	544	466	311	19700
D61	Mississauga Rd At Hwy 413_NB	46	31	31	31	46	92	179	179	179	194	194	194	194	194	194	194	384	384	384	194	154	134	115	77	4000
D62	Mississauga Rd At Hwy 413_SB	53	35	35	35	53	106	443	443	443	226	226	226	226	226	226	226	198	198	198	226	177	155	133	89	4600
D63	Creditview Rd At Hwy 413_NB	29	19	19	19	29	58	243	243	243	126	126	126	126	126	126	126	111	111	111	126	97	85	73	49	2550
D64	Creditview Rd At Hwy 413_SB	29	20	20	20	29	59	206	206	206	171	171	171	171	171	171	171	245	245	245	171	98	86	74	49	3200
D65	Chinguacousy Rd S of Hwy 413_NB	69	46	46	46	69	137	571	571	571	435	435	435	435	435	435	435	544	544	544	435	228	200	171	114	7950
D66	Chinguacousy Rd S of Hwy 413_SB	81	54	54	54	81	162	677	677	677	493	493	493	493	493	493	493	596	596	596	493	271	237	203	135	9100
D67	Chinguacousy Rd N of Hwy 413_NB	69	46	46	46	69	137	571	571	571	435	435	435	435	435	435	435	544	544	544	435	228	200	171	114	7950
D68	Chinguacousy Rd N of Hwy 413_SB	81	54	54	54	81	162	677	677	677	493	493	493	493	493	493	493	596	596	596	493	271	237	203	135	9100
D69	Chinguacousy Rd N of Old School Rd_NB	42	28	28	28	42	83	305	305	305	252	252	252	252	252	252	252	346	346	346	252	138	121	104	69	4650
D70	Chinguacousy Rd N of Old School Rd_SB	44	30	30	30	44	89	369	369	369	260	260	260	260	260	260	260	311	311	311	260	148	129	111	74	4850
D71	Old School Rd W of Chinguacousy Rd_EB	81	54	54	54	81	163	679	679	679	461	461	461	461	461	461	461	529	529	529	461	272	238	204	136	8650
D72	Old School Rd W of Chinguacousy Rd_WB	72	48	48	48	72	144	536	536	536	440	440	440	440	440	440	440	598	598	598	440	239	209	179	120	8100
D73	Old School Rd At Hwy 413_EB	60	40	40	40	60	120	499	499	499	327	327	327	327	327	327	327	367	367	367	327	200	175	150	100	6200
D74	Old School Rd At Hwy 413_WB	63	42	42	42	63	125	399	399	399	351	351	351	351	351	351	351	522	522	522	351	209	183	157	104	6600
D75	McLaughlin Rd S of Old School Rd_NB	58	39	39	39	58	116	482	482	482	292	292	292	292	292	292	292	307	307	307	292	193	169	145	96	5650
D76	McLaughlin Rd S of Old School Rd_SB	72	48	48	48	72	145	603	603	603	363	363	363	363	363	363	363	382	382	382	363	241	211	181	121	7050
D77	McLaughlin Rd At Hwy 413_NB	36	24	24	24	36	72	223	223	223	199	199	199	199	199	199	199	299	299	299	199	120	105	90	60	3750
D78	McLaughlin Rd At Hwy 413_SB	58	39	39	39	58	116	483	483	483	244	244	244	244	244	244	244	215	215	215	244	193	169	145	97	5000
D79	Old School Rd W of Hurontario St_EB	78	52	52	52	78	156	650	650	650	446	446	446	446	446	446	446	518	518	518	446	260	228	195	130	8350
D80	Old School Rd W of Hurontario St_WB	134	89	89	89	134	268	662	662	662	647	647	647	647	647	647	647	1115	1115	1115	647	446	390	335	223	12700
D81	Old School Rd E of Hurontario St_EB	79	52	52	52	79	157	655	655	655	370	370	370	370	370	370	370	377	377	377	370	262	229	197	131	7350
D82	Old School Rd E of Hurontario St_WB	64	43	43	43	64	129	375	375	375	339	339	339	339	339	339	339	536	536	536	339	214	188	161	107	6500
D83	Hurontario St S of Old School Rd_NB	322	215	215	215	322	644	1350	1350	1350	1427	1427	1427	1427	1427	1427	1427	2683	2683	2683	1427	1073	939	805	537	28800
D84	Hurontario St S of Old School Rd_SB	265	177	177	177	265	530	2209	2209	2209	1309	1309	1309	1309	1309	1309	1309	1367	1367	1367	1309	884	773	663	442	25550
D85	Hurontario St S of Hwy 413_NB	251	168	168	168	251	503	1095	1095	1095	1138	1138	1138	1138	1138	1138	1138	2094	2094	2094	1138	838	733	628	419	22800
D86	Hurontario St S of Hwy 413_SB	270	180	180	180	270	539	2246	2246	2246	1242	1242	1242	1242	1242	1242	1242	1218	1218	1218	1242	898	786	674	449	24750
D87	Hurontario St N of Hwy 413_NB	251	168	168	168	251	503	1095	1095	1095	1138	1138	1138	1138	1138	1138	1138	2094	2094	2094	1138	838	733	628	419	22800
D88	Hurontario St N of Hwy 413_SB	270	180	180	180	270	539	2246	2246	2246	1242	1242	1242	1242	1242	1242	1242	1218	1218	1218	1242	898	786	674	449	24750
D89	Kennedy Rd At Hwy 413_NB	17	11	11	11	17	33	128	128	128	103	103	103	103	103	103	103	139	139	139	103	56	49	42	28	1900
D90	Kennedy Rd At Hwy 413_SB	24	16	16	16	24	47	197	197	197	93	93	93	93	93	93	93	76	76	76	93	79	69	59	39	1950
D91	Old School Rd W of Heart Lake Rd_EB	95	63	63	63	95	190	791	791	791	375	375	375	375	375	375	375	307	307	307	375	316	277	237	158	7850
D92	Old School Rd W of Heart Lake Rd_WB	81	54	54	54	81	162	332	332	332	357	357	357	357	357	357	357	673	673	673	357	269	236	202	135	7200
D93	Old School Rd At Hwy 410_EB	92	62	62	62	92	185	770	770	770	354	354	354	354	354	354	354	281	281	281	354	308	270	231	154	7500
D94	Old School Rd At Hwy 410_WB	77	51	51	51	77	154	322	322	322	344	344	344	344	344	344	344	641	641	641	344	256	224	192	128	6900
E01	Heart Lake Rd S of Mayfield Rd_NB	70	47	47	47	70	140	364	364	364	345	345	345	345	345	345	345	583	583	583	345	233	204	175	117	6750
E02	Heart Lake Rd S of Mayfield Rd_SB	90	60	60	60	90	180	751	751	751	528	528	528	528	528	528	528	631	631	631	528	300	263	225	150	9850
E03	Heart Lake Rd At Hwy 410_NB	82	55	55	55	82	164	685	685	685	425	425	425	425	425	425	425	464	464	464	425	274	240	206	137	8200
E04	Heart Lake Rd At Hwy 410_SB	86	57	57	57	86	172	715	715	715	561	561	561	561	561	561	561	703	703	703	561	286	250	215	143	10150
E05	Heart Lake Rd At Hwy 413_NB	57	38	38	38	57	114	258	258	258	259	259	259	259	259	259	259	473	473	473	259	189	166	142	95	5200
E06	Heart Lake Rd At Hwy 413_SB	69	46	46	46	69	138	574	574	574	305	305	305	305	305	305	305	286	286	286	305	230	201	172	115	6150
E07	Mayfield Rd W of Heart Lake Rd_EB	409	273	273	273	409	819	3412	3412	3412	2160	2160	2160	2160	2160	2160	2160	2387	2387	2387	2160	1365	1194	1024	682	41400
E08	Mayfield Rd W of Heart Lake Rd_WB	355	237	237	237	355	710	1931	1931	1931	1801	1801	1801	1801	1801	1801	1801	2957	2957	2957	1801	1183	1035	887	591	34900
E09	Mayfield Rd E of Heart Lake Rd_EB	362	241	241	241	362	724	3018	3018	3018	1920	1920	1920	1920	1920	1920	1920	2130	2130	2130	1920	1207	1056	905	604	36750
E10	Mayfield Rd E of Heart Lake Rd_WB	301	201	201	201	301	602	1893	1893	1893	1664	1664	1664	1664	1664	1664	1664	2507	2507	2507	1664	1003	877	752	501	31450
E11	Mayfield Rd E of Hwy 410_EB	434	289	289	289	434	868	3615	3615	3615	2394	2394	2394	2394	2394	2394	2394	2728	2728	2728	2394	1446	1265	1085	723	45300
E12	Mayfield Rd E of Hwy 410_WB	444	296	296	296	444	888	2802	2802	2802	2456	2456	2456	2456	2456	2456	2456	3702	3702	3702	2456	1481	1296	1111	740	46450
E13	Dixie Rd S of Mayfield Rd_NB	112	75	75	75	112	225	689	689	689	610	610	610	610	610	610	610	936	936	936	610	374	328	281	187	11600
E14	Dixie Rd S of Mayfield Rd_SB	150	100	100	100	150	300	1249	1249	1249	638	638	638	638	638	638	638	580	580	580	638	500	437	375	250	13050
E15	Dixie Rd N of Mayfield Rd_NB	88	59	59	59	88	177	588	588	588	503	503	503	503	503	503	503	737	737	737	503	295	258	221	147	9450
E16	Dixie Rd N of Mayfield Rd_SB	113	75	75	75	113	225	939	939	939	641	641	641	641	641	641	641	751	751	751	641	376	329	282	188	12050

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 No Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
E17	Dixie Rd At Hwy 413_NB	67	45	45	45	67	134	341	341	341	325	325	325	325	325	325	325	558	558	558	325	223	195	167	112	6400
E18	Dixie Rd At Hwy 413_SB	80	53	53	53	80	160	666	666	666	409	409	409	409	409	409	409	438	438	438	409	266	233	200	133	7900
E19	Countryside Dr At Hwy 410_EB	201	134	134	134	201	403	1679	1679	1679	1041	1041	1041	1041	1041	1041	1041	1127	1127	1127	1041	672	588	504	336	20050
E20	Countryside Dr At Hwy 410_WB	179	119	119	119	179	357	1117	1117	1117	981	981	981	981	981	981	981	1489	1489	1489	981	596	521	447	298	18600
E21	Bramalea Rd S of Hwy 413_NB	45	30	30	30	45	90	28	28	28	113	113	113	113	113	113	113	374	374	374	113	150	131	112	75	2850
E22	Bramalea Rd S of Hwy 413_SB	47	31	31	31	47	94	392	392	392	121	121	121	121	121	121	121	29	29	29	121	157	137	118	78	3000
E23	Bramalea Rd N of Hwy 413_NB	45	30	30	30	45	90	28	28	28	113	113	113	113	113	113	113	374	374	374	113	150	131	112	75	2850
E24	Bramalea Rd N of Hwy 413_SB	47	31	31	31	47	94	392	392	392	121	121	121	121	121	121	121	29	29	29	121	157	137	118	78	3000
E25	Old School Rd E of Bramalea Rd_EB	98	66	66	66	98	197	819	819	819	541	541	541	541	541	541	541	616	616	616	541	328	287	246	164	10250
E26	Old School Rd E of Bramalea Rd_WB	93	62	62	62	93	186	594	594	594	515	515	515	515	515	515	515	774	774	774	515	310	271	232	155	9750
E27	Old School Rd E of Torbram Road_EB	95	63	63	63	95	189	682	682	682	567	567	567	567	567	567	567	788	788	788	567	315	276	236	158	10500
E28	Old School Rd E of Torbram Road_WB	81	54	54	54	81	161	421	421	421	400	400	400	400	400	400	400	671	671	671	400	268	235	201	134	7800
E29	Torbram Rd S of Old School Rd_NB	43	29	29	29	43	86	85	85	85	144	144	144	144	144	144	144	360	360	360	144	144	126	108	72	3200
E30	Torbram Rd S of Old School Rd_SB	65	44	44	44	65	131	544	544	544	235	235	235	235	235	235	235	171	171	171	235	218	190	163	109	5100
E31	Torbram Rd At Hwy 413_NB	62	42	42	42	62	125	177	177	177	236	236	236	236	236	236	236	520	520	520	236	208	182	156	104	5000
E32	Torbram Rd At Hwy 413_SB	80	53	53	53	80	160	665	665	665	347	347	347	347	347	347	347	323	323	323	347	266	233	200	133	7050
E33	Airport Rd S of Old School Rd_NB	206	137	137	137	206	411	819	819	819	891	891	891	891	891	891	891	1713	1713	1713	891	685	600	514	343	18100
E34	Airport Rd S of Old School Rd_SB	231	154	154	154	231	462	1924	1924	1924	1042	1042	1042	1042	1042	1042	1042	1001	1001	1001	1042	770	673	577	385	20900
E35	Airport Rd S of Hwy 413_NB	165	110	110	110	165	331	596	596	596	682	682	682	682	682	682	682	1379	1379	1379	682	552	483	414	276	14100
E36	Airport Rd S of Hwy 413_SB	173	115	115	115	173	346	1441	1441	1441	674	674	674	674	674	674	674	549	549	549	674	576	504	432	288	14200
E37	Airport Rd N of Hwy 413_NB	165	110	110	110	165	331	596	596	596	682	682	682	682	682	682	682	1379	1379	1379	682	552	483	414	276	14100
E38	Airport Rd N of Hwy 413_SB	173	115	115	115	173	346	1441	1441	1441	674	674	674	674	674	674	674	549	549	549	674	576	504	432	288	14200
E39	Healey Rd E of Airport Rd_EB	87	58	58	58	87	175	729	729	729	542	542	542	542	542	542	542	663	663	663	542	292	255	219	146	9950
E40	Healey Rd E of Airport Rd_WB	103	68	68	68	103	205	540	540	540	509	509	509	509	509	509	509	856	856	856	509	342	300	257	171	9950
E41	Healey Rd At Hwy 413_EB	72	48	48	48	72	144	601	601	601	462	462	462	462	462	462	462	573	573	573	462	240	210	180	120	8400
E42	Healey Rd At Hwy 413_WB	91	61	61	61	91	182	600	600	600	516	516	516	516	516	516	516	759	759	759	516	304	266	228	152	9700
E43	Healey Rd E of Centreville Creek Rd_EB	72	48	48	48	72	144	600	600	600	389	389	389	389	389	389	389	435	435	435	389	240	210	180	120	7400
E44	Healey Rd E of Centreville Creek Rd_WB	92	61	61	61	92	183	451	451	451	444	444	444	444	444	444	444	764	764	764	444	306	267	229	153	8700
E45	Innis Lake Rd S of Healey Rd_NB	71	47	47	47	71	142	279	279	279	303	303	303	303	303	303	303	592	592	592	303	237	207	178	118	6200
E46	Innis Lake Rd S of Healey Rd_SB	85	57	57	57	85	170	709	709	709	350	350	350	350	350	350	350	309	309	309	350	284	248	213	142	7250
E47	Innis Lake Rd At Hwy 413_NB	66	44	44	44	66	132	190	190	190	245	245	245	245	245	245	245	548	548	548	245	219	192	164	110	5250
E48	Innis Lake Rd At Hwy 413_SB	80	53	53	53	80	159	664	664	664	287	287	287	287	287	287	287	201	201	201	287	266	232	199	133	6200
E49	Centreville Creek Rd At Hwy 413_NB	70	47	47	47	70	140	158	158	158	242	242	242	242	242	242	242	582	582	582	242	233	204	175	116	5300
E50	Centreville Creek Rd At Hwy 413_SB	79	53	53	53	79	159	662	662	662	300	300	300	300	300	300	300	237	237	237	300	265	232	199	132	6400
E51	Centreville Creek Rd N of Healey Rd_NB	69	46	46	46	69	138	42	42	42	178	178	178	178	178	178	178	574	574	574	178	230	201	172	115	4400
E52	Centreville Creek Rd N of Healey Rd_SB	83	55	55	55	83	166	693	693	693	231	231	231	231	231	231	231	87	87	87	231	277	243	208	139	5550
E53	The Gore Rd S of Hwy 413_NB	110	73	73	73	110	219	272	272	272	386	386	386	386	386	386	386	914	914	914	386	366	320	274	183	8450
E54	The Gore Rd S of Hwy 413_SB	141	94	94	94	141	282	1177	1177	1177	431	431	431	431	431	431	431	218	218	218	431	471	412	353	235	9950
E55	The Gore Rd N of Hwy 413_NB	110	73	73	73	110	219	272	272	272	386	386	386	386	386	386	386	914	914	914	386	366	320	274	183	8450
E56	The Gore Rd N of Hwy 413_SB	141	94	94	94	141	282	1177	1177	1177	431	431	431	431	431	431	431	218	218	218	431	471	412	353	235	9950
E57	Clarkway Dr S of Mayfield Rd_NB	87	58	58	58	87	173	722	722	722	517	517	517	517	517	517	517	625	625	625	517	289	253	217	144	9600
E58	Clarkway Dr S of Mayfield Rd_SB	84	56	56	56	84	167	567	567	567	480	480	480	480	480	480	480	696	696	696	480	278	244	209	139	9000
E59	Humber Station Rd S of Hwy 413_NB	79	52	52	52	79	157	551	551	551	461	461	461	461	461	461	461	656	656	656	461	262	230	197	131	8600
E60	Humber Station Rd S of Hwy 413_SB	68	45	45	45	68	136	422	422	422	371	371	371	371	371	371	371	566	566	566	371	226	198	170	113	7050
E61	Humber Station Rd N of Hwy 413_NB	79	52	52	52	79	157	551	551	551	461	461	461	461	461	461	461	656	656	656	461	262	230	197	131	8600
E62	Humber Station Rd N of Hwy 413_SB	68	45	45	45	68	136	422	422	422	371	371	371	371	371	371	371	566	566	566	371	226	198	170	113	7050
E63	Mayfield Rd W of Humber Station Rd_EB	291	194	194	194	291	581	2421	2421	2421	1386	1386	1386	1386	1386	1386	1386	1411	1411	1411	1386	968	847	726	484	27350
E64	Mayfield Rd W of Humber Station Rd_WB	254	169	169	169	254	507	1340	1340	1340	1265	1265	1265	1265	1265	1265	1265	2114	2114	2114	1265	846	740	634	423	24650
E65	Mayfield Rd At Hwy 413_EB	309	206	206	206	309	617	2572	2572	2572	1487	1487	1487	1487	1487	1487	1487	1523	1523	1523	1487	1029	900	772	514	29250
E66	Mayfield Rd At Hwy 413_WB	286	191	191	191	286	573	1466	1466	1466	1405	1405	1405	1405	1405	1405	1405	2387	2387	2387	1405	955	835	716	477	27500
E67	Mayfield Rd E of Coleraine Dr_EB	112	75	75	75	112	224	922	922	922	731	731	731	731	731	731	731	933	933	933	731	373	327	280	187	13250
E68	Mayfield Rd E of Coleraine Dr_WB	122	81	81	81	122	244	1018	1018	1018	760	760	760	760	760	760	760	938	938	938	760	407	356	305	204	13950
E69	Coleraine Dr At Highway 413_NB	138	92	92	92	138	277	937	937	937	800	800	800	800	800	800	800	1154	1154	1154	800	462	404	346	231	14950
E70	Coleraine Dr At Highway 413_SB	159	106	106	106	159	319	1328	1328	1328	867	867	867	867	867	867	867	972	972	972	867	531	465	398	266	16450
E71	Coleraine Dr N of Mayfield Rd_NB	181	121	121	121	181	363	1512	1512	1512	1143	1143	1143	1143	1143	1143	1143	1413	1413	1413	1143	605	529	454	302	20900
E72	Coleraine Dr N of Mayfield Rd_SB	182	121	121	121	182	363	1500	1500	1500	1191	1191	1191	1191	1191	1191	1191	1514	1514	1514	1191	606	530	454	303	21550
E73	Countryside Dr W of Hwy 50_EB	91	61	61	61	91	182	757	757	757	437	437	437	437	437	437	437	448	448	448	437	303	265	227	151	8600

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 No Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	AADT[1]
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
E74	Countryside Dr W of Hwy 50_WB	75	50	50	50	75	151	562	562	562	462	462	462	462	462	462	462	628	628	628	462	251	220	188	126	8500
E75	Hwy 50 S of Countryside Dr_NB	301	201	201	201	301	603	2094	2094	2094	1767	1767	1767	1767	1767	1767	1767	2511	2511	2511	1767	1004	879	753	502	32900
E76	Hwy 50 S of Countryside Dr_SB	360	240	240	240	360	720	3001	3001	3001	1919	1919	1919	1919	1919	1919	1919	2128	2128	2128	1919	1200	1050	900	600	36650
E77	Hwy 50 At Hwy 413_NB	299	199	199	199	299	598	2166	2166	2166	1796	1796	1796	1796	1796	1796	1796	2491	2491	2491	1796	996	872	747	498	33250
E78	Hwy 50 At Hwy 413_SB	365	243	243	243	365	730	3043	3043	3043	2017	2017	2017	2017	2017	2017	2017	2298	2298	2298	2017	1217	1065	913	609	38150
E79	Hwy 50 N of Cold Creek Rd Realignment_NB	293	195	195	195	293	585	2001	2001	2001	1697	1697	1697	1697	1697	1697	1697	2439	2439	2439	1697	976	854	732	488	31700
E80	Hwy 50 N of Cold Creek Rd Realignment_SB	327	218	218	218	327	653	2722	2722	2722	1868	1868	1868	1868	1868	1868	1868	2175	2175	2175	1868	1089	953	817	544	35000
E81	Cold Creek Rd Realignment E of Hwy 50_EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E82	Cold Creek Rd Realignment E of Hwy 50_WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E83	Nashville Rd E of Hwy 50_EB	91	61	61	61	91	182	760	760	760	504	504	504	504	504	504	504	579	579	579	504	304	266	228	152	9550
E84	Nashville Rd E of Hwy 50_WB	72	48	48	48	72	143	596	596	596	460	460	460	460	460	460	460	570	570	570	460	238	209	179	119	8350
E85	Major Mackenzie Dr W of Hwy 427_EB	450	300	300	300	450	901	3753	3753	3753	2785	2785	2785	2785	2785	2785	2785	3406	3406	3406	2785	1501	1314	1126	751	51150
E86	Major Mackenzie Dr W of Hwy 427_WB	394	263	263	263	394	788	3284	3284	3284	2527	2527	2527	2527	2527	2527	2527	3155	3155	3155	2527	1314	1149	985	657	46000
E87	Major Mackenzie Dr E of Hwy 427_EB	402	268	268	268	402	805	3353	3353	3353	2285	2285	2285	2285	2285	2285	2285	2652	2652	2652	2285	1341	1174	1006	671	42900
E88	Major Mackenzie Dr E of Hwy 427_WB	430	287	287	287	430	861	2713	2713	2713	2379	2379	2379	2379	2379	2379	2379	3587	3587	3587	2379	1435	1255	1076	717	45000
E89	Huntington Rd At Hwy 413_NB	32	21	21	21	32	64	268	268	268	202	202	202	202	202	202	202	251	251	251	202	107	94	80	54	3700
E90	Huntington Rd At Hwy 413_SB	42	28	28	28	42	84	350	350	350	200	200	200	200	200	200	200	204	204	204	200	140	123	105	70	3950
E91	Huntington Rd N of Kirby Rd_NB	1	1	1	1	1	2	10	10	10	9	9	9	9	9	9	9	10	10	10	9	4	4	3	2	150
E92	Huntington Rd N of Kirby Rd_SB	1	1	1	1	1	2	10	10	10	9	9	9	9	9	9	9	10	10	10	9	4	4	3	2	150
E93	Kirby Rd W of Huntington Rd_EB	40	26	26	26	40	79	298	298	298	246	246	246	246	246	246	246	330	330	330	246	132	116	99	66	4500
E94	Kirby Rd W of Huntington Rd_WB	51	34	34	34	51	102	425	425	425	228	228	228	228	228	228	228	222	222	222	228	170	149	128	85	4600
E95	Hwy 27 S of Hwy 413_NB	232	155	155	155	232	465	1087	1087	1087	1090	1090	1090	1090	1090	1090	1090	1936	1936	1936	1090	774	678	581	387	21600
E96	Hwy 27 S of Hwy 413_SB	240	160	160	160	240	480	1998	1998	1998	1226	1226	1226	1226	1226	1226	1226	1320	1320	1320	1226	799	699	599	400	23700
E98	Hwy 27 N of Hwy 413_SB	240	160	160	160	240	480	1998	1998	1998	1226	1226	1226	1226	1226	1226	1226	1320	1320	1320	1226	799	699	599	400	23700
F01	Kirby Rd E of Hwy 27_EB	101	67	67	67	101	202	811	811	811	649	649	649	649	649	649	649	840	840	840	649	336	294	252	168	11800
F02	Kirby Rd E of Hwy 27_WB	96	64	64	64	96	192	802	802	802	596	596	596	596	596	596	596	732	732	732	596	321	281	241	160	10950
F03	Kipling Ave At Hwy 413_NB	19	13	13	13	19	38	25	25	25	54	54	54	54	54	54	54	159	159	159	54	64	56	48	32	1300
F04	Kipling Ave At Hwy 413_SB	39	26	26	26	39	77	322	322	322	91	91	91	91	91	91	91	8	8	8	91	129	113	97	64	2350
F05	King Vaughan Rd E of Hwy 27_EB	104	69	69	69	104	208	868	868	868	488	488	488	488	488	488	488	493	493	493	488	347	304	260	174	9700
F06	King Vaughan Rd E of Hwy 27_WB	85	57	57	57	85	170	380	380	380	391	391	391	391	391	391	391	710	710	710	391	284	249	213	142	7800
F07	King Vaughan Rd E of Kipling Ave_EB	127	85	85	85	127	255	1061	1061	1061	797	797	797	797	797	797	797	983	983	983	797	424	371	318	212	14600
F08	King Vaughan Rd E of Kipling Ave_WB	119	79	79	79	119	238	991	991	991	761	761	761	761	761	761	761	946	946	946	761	396	347	297	198	13850
F09	Pine Valley Dr At Hwy 413_NB	39	26	26	26	39	77	322	322	322	243	243	243	243	243	243	243	302	302	302	243	129	113	97	64	4450
F10	Pine Valley Dr At Hwy 413_SB	84	56	56	56	84	168	700	700	700	291	291	291	291	291	291	291	198	198	198	291	280	245	210	140	6400
F13	Pine Valley Dr N of King Vaughan Rd_NB	7	4	4	4	7	13	36	36	36	33	33	33	33	33	33	33	56	56	56	33	22	20	17	11	650
F14	Pine Valley Dr N of King Vaughan Rd_SB	4	2	2	2	4	7	30	30	30	18	18	18	18	18	18	18	18	18	18	18	12	11	9	6	350
F15	King Vaughan Rd W of Pine Valley Dr_EB	150	100	100	100	150	301	1253	1253	1253	819	819	819	819	819	819	819	923	923	923	819	501	439	376	251	15550
F16	King Vaughan Rd W of Pine Valley Dr_WB	124	83	83	83	124	249	846	846	846	720	720	720	720	720	720	720	1036	1036	1036	720	414	363	311	207	13450
F17	King Vaughan Rd E of Pine Valley Dr_EB	107	71	71	71	107	214	890	890	890	625	625	625	625	625	625	625	743	743	743	625	356	312	267	178	11650
F18	King Vaughan Rd E of Pine Valley Dr_WB	104	69	69	69	104	208	868	868	868	646	646	646	646	646	646	646	789	789	789	646	347	304	260	174	11850
F19	Weston Rd N of Kirby Rd_NB	110	73	73	73	110	220	916	916	916	531	531	531	531	531	531	531	550	550	550	531	366	321	275	183	10450
F20	Weston Rd N of Kirby Rd_SB	98	65	65	65	98	196	692	692	692	582	582	582	582	582	582	582	818	818	818	582	327	286	245	164	10800
F21	Weston Rd N of Hwy 413_NB	63	42	42	42	63	125	521	521	521	234	234	234	234	234	234	234	180	180	180	234	208	182	156	104	5000
F22	Weston Rd N of Hwy 413_SB	47	31	31	31	47	94	240	240	240	230	230	230	230	230	230	230	390	390	390	230	156	137	117	78	4500
F23	Weston Rd N of King Vaughan Rd_NB	27	18	18	18	27	54	225	225	225	141	141	141	141	141	141	141	152	152	152	141	90	79	68	45	2700
F24	Weston Rd N of King Vaughan Rd_SB	24	16	16	16	24	49	194	194	194	157	157	157	157	157	157	157	204	204	204	157	82	71	61	41	2850
F25	King Vaughan Rd E of Weston Rd_EB	91	61	61	61	91	183	761	761	761	508	508	508	508	508	508	508	584	584	584	508	304	266	228	152	9600
F26	King Vaughan Rd E of Weston Rd_WB	83	55	55	55	83	165	488	488	488	440	440	440	440	440	440	440	688	688	688	440	275	241	206	138	8400
F27	King Vaughan Rd W of Jane St_EB	275	184	184	184	275	551	2219	2219	2219	1774	1774	1774	1774	1774	1774	1774	2294	2294	2294	1774	918	803	688	459	32250
F28	King Vaughan Rd W of Jane St_WB	287	191	191	191	287	573	2388	2388	2388	1686	1686	1686	1686	1686	1686	1686	1999	1999	1999	1686	955	836	716	478	31350
F29	Kirby Rd At Hwy 400_EB	99	66	66	66	99	199	829	829	829	491	491	491	491	491	491	491	517	517	517	491	332	290	249	166	9600
F30	Kirby Rd At Hwy 400_WB	83	55	55	55	83	166	501	501	501	446	446	446	446	446	446	446	690	690	690	446	276	242	207	138	8500
F31	Steeles Ave W of Ninth Line N_EB	279	186	186	186	279	559	1932	1932	1932	1635	1635	1635	1635	1635	1635	1635	2329	2329	2329	1635	932	815	699	466	30450
F32	Steeles Ave W of Ninth Line N_WB	284	190	190	190	284	569	2172	2172	2172	1770	1770	1770	1770	1770	1770	1770	2369	2369	2369	1770	948	829	711	474	32450
F33	Heritage Rd S of Wanless Dr_NB	84	56	56	56	84	168	355	355	355	375	375	375	375	375	375	375	702	702	702	375	281	246	211	140	7550
F34	Heritage Rd S of Wanless Dr_SB	108	72	72	72	108	217	903	903	903	470	470	470	470	470	470	470	433	433	433	470	361	316	271	181	9550

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 No Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
F35	Heart Lake Rd S of Old School Rd_NB	60	40	40	40	60	120	259	259	259	268	268	268	268	268	268	268	499	499	499	268	200	175	150	100	5400
F36	Heart Lake Rd S of Old School Rd_SB	74	50	50	50	74	149	620	620	620	320	320	320	320	320	320	320	287	287	287	320	248	217	186	124	6500
F37	Mayfield Rd E of Dixie Rd_EB	315	210	210	210	315	631	2629	2629	2629	1781	1781	1781	1781	1781	1781	1781	2063	2063	2063	1781	1052	920	789	526	33500
F38	Mayfield Rd E of Dixie Rd_WB	306	204	204	204	306	611	1851	1851	1851	1649	1649	1649	1649	1649	1649	1649	2546	2546	2546	1649	1018	891	764	509	31400
F39	Bramalea Rd S of Old School Rd_NB	67	44	44	44	67	133	137	137	137	223	223	223	223	223	223	223	555	555	555	223	222	194	167	111	4950
F40	Bramalea Rd S of Old School Rd_SB	65	43	43	43	65	129	538	538	538	246	246	246	246	246	246	246	187	187	187	246	215	188	161	108	5200
F41	Old School Rd W of Bramalea Rd_EB	95	64	64	64	95	191	794	794	794	493	493	493	493	493	493	493	537	537	537	493	318	278	238	159	9500
F42	Old School Rd W of Bramalea Rd_WB	86	58	58	58	86	173	532	532	532	473	473	473	473	473	473	473	719	719	719	473	288	252	216	144	8950
F43	Cold Creek Rd N of Nashville Rd_NB	15	10	10	10	15	30	33	33	33	49	49	49	49	49	49	49	123	123	123	49	49	43	37	25	1100
F44	Cold Creek Rd N of Nashville Rd_SB	51	34	34	34	51	103	428	428	428	133	133	133	133	133	133	133	37	37	37	133	171	150	128	86	3300
F45	Nashville Rd At Hwy 427_EB	91	61	61	61	91	182	760	760	760	504	504	504	504	504	504	504	579	579	579	504	304	266	228	152	9550
F46	Nashville Rd At Hwy 427_WB	72	48	48	48	72	143	596	596	596	460	460	460	460	460	460	460	570	570	570	460	238	209	179	119	8350
F47	Kirby Rd W of Hwy 27_EB	3	2	2	2	3	6	23	23	23	8	8	8	8	8	8	8	7	7	7	8	9	8	7	5	200
F48	Kirby Rd W of Hwy 27_WB	9	6	6	6	9	18	6	6	6	21	21	21	21	21	21	21	73	73	73	21	29	26	22	15	550
F49	King Vaughan Rd E of Jane St_EB	273	182	182	182	273	546	2274	2274	2274	1789	1789	1789	1789	1789	1789	1789	2263	2263	2263	1789	910	796	682	455	32400
F50	King Vaughan Rd E of Jane St_WB	282	188	188	188	282	564	2348	2348	2348	1665	1665	1665	1665	1665	1665	1665	1987	1987	1987	1665	939	822	704	470	30950
F51	Jane St N of King Vaughan Rd_NB	175	117	117	117	175	350	552	552	552	680	680	680	680	680	680	680	1459	1459	1459	680	584	511	438	292	14350
F52	Jane St N of King Vaughan Rd_SB	247	165	165	165	247	494	2059	2059	2059	809	809	809	809	809	809	809	482	482	482	809	824	721	618	412	18150
F53	Jane St S of King Vaughan Rd_NB	188	125	125	125	188	375	493	493	493	681	681	681	681	681	681	681	1564	1564	1564	681	626	547	469	313	14700
F54	Jane St S of King Vaughan Rd_SB	228	152	152	152	228	457	1903	1903	1903	828	828	828	828	828	828	828	606	606	606	828	761	666	571	381	17900
F71	Hwy 400 at King Vaughan Rd N-E/W Ramp	147	98	98	98	147	293	1222	1222	1222	540	540	540	540	540	540	540	403	403	403	540	489	428	367	244	11600
F72	Hwy 400 at King Vaughan Rd E-S Ramp	83	55	55	55	83	166	693	693	693	435	435	435	435	435	435	435	475	475	475	435	277	243	208	139	8350
F73	Hwy 400 at King Vaughan Rd W-S Ramp	9	6	6	6	9	18	20	20	20	28	28	28	28	28	28	28	73	73	73	28	29	26	22	15	650
F74	Hwy 400 at King Vaughan Rd S-E/W Ramp	82	55	55	55	82	165	684	684	684	542	542	542	542	542	542	542	687	687	687	542	275	240	206	137	9800
F75	Hwy 400 at King Vaughan Rd E-N Ramp	77	51	51	51	77	154	214	214	214	284	284	284	284	284	284	284	641	641	641	284	256	224	192	128	6100
F76	Hwy 400 at King Vaughan Rd W-N Ramp	26	17	17	17	26	51	43	43	43	82	82	82	82	82	82	82	214	214	214	82	86	75	64	43	1850
F77	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F78	Hwy 427 at Major Mackenzie Dr E-S Ramp	164	110	110	110	164	329	1370	1370	1370	764	764	764	764	764	764	764	759	759	759	764	548	480	411	274	15200
F79	Hwy 427 at Major Mackenzie Dr W-S Ramp	232	155	155	155	232	464	1935	1935	1935	1307	1307	1307	1307	1307	1307	1307	1510	1510	1510	1307	774	677	581	387	24600
F80	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	383	255	255	255	383	766	1852	1852	1852	1828	1828	1828	1828	1828	1828	1828	3193	3193	3193	1828	1277	1118	958	639	36050
F81	Hwy 427 at Major Mackenzie Dr E-N Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F82	Hwy 427 at Major Mackenzie Dr W-N Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F83	Hwy 410 at Mayfield Rd N-E/W Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F84	Hwy 410 at Mayfield Rd E-S Ramp	75	50	50	50	75	150	627	627	627	479	479	479	479	479	479	479	601	601	601	479	251	219	188	125	8750
F85	Hwy 410 at Mayfield Rd W-S Ramp	135	90	90	90	135	270	1124	1124	1124	623	623	623	623	623	623	623	609	609	609	623	450	393	337	225	12400
F86	Hwy 410 at Mayfield Rd S-E/W Ramp	111	74	74	74	111	222	629	629	629	576	576	576	576	576	576	576	927	927	927	576	371	324	278	185	11100
F87	Hwy 410 at Mayfield Rd E-N Ramp	122	81	81	81	122	244	539	539	539	553	553	553	553	553	553	553	1018	1018	1018	553	407	356	305	204	11100
F88	Hwy 410 at Mayfield Rd W-N Ramp	75	50	50	50	75	150	627	627	627	479	479	479	479	479	479	479	601	601	601	479	251	219	188	125	8750
F89	Hwy 410 at Mayfield Rd W-E/W Ramp	162	108	108	108	162	324	1349	1349	1349	729	729	729	729	729	729	729	704	704	704	729	540	472	405	270	14650
G01	Hwy 413 at Hwy 401 / Hwy 407_E-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G02	Hwy 413 at Hwy 401 / Hwy 407_N-E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G03	Hwy 413 at Hwy 401 / Hwy 407_N-S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G04	Hwy 413 at Hwy 401 / Hwy 407_S-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G05	Hwy 413 at Hwy 401_E-N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G06	Hwy 407 at Hwy 413 N-N Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G07	Hwy 407 at Hwy 401 S-E Ramp	81	54	54	54	81	162	674	674	674	265	265	265	265	265	265	265	160	160	160	265	270	236	202	135	5950
G08	Hwy 407 at Hwy 413 N-E Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G09	Hwy 407 at Hwy 401 S-W Ramp	15	10	10	10	15	29	94	94	94	83	83	83	83	83	83	83	121	121	121	83	48	42	36	24	1550
G10	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	81	54	54	54	81	162	674	674	674	265	265	265	265	265	265	265	160	160	160	265	270	236	202	135	5950
H01	Hwy 401 E of Trafalgar Rd_EB	1240	827	827	827	1240	2481	10337	10337	10337	6928	6928	6928	6928	6928	6928	6928	7967	7967	7967	6928	4135	3618	3101	2067	130700
H02	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	1240	827	827	827	1240	2481	10337	10337	10337	6928	6928	6928	6928	6928	6928	6928	7967	7967	7967	6928	4135	3618	3101	2067	130700
H03	Hwy 401 W of Winston Churchill Blvd_EB	1153	769	769	769	1153	2307	9612	9612	9612	6419	6419	6419	6419	6419	6419	6419	7359	7359	7359	6419	3845	3364	2884	1922	121200
H04	Hwy 401 E of Trafalgar Rd_WB	1120	747	747	747	1120	2240	6923	6923	6923	6118	6118	6118	6118	6118	6118	6118	9333	9333	9333	6118	3733	3267	2800	1867	116100
H05	Hwy 401 Collector at Hwy 413 E-W Ramp	491	327	327	327	491	981	3399	3399	3399	2873	2873	2873	2873	2873	2873	2873	4089	4089	4089	2873	1636	1431	1227	818	53500
H06	Hwy 401 Express at Hwy 413 E-W Ramp	629	420	420	420	629	1259	3524	3524	3524	3246	3246	3246	3246	3246	3246	3246	5244	5244	5244	3246	2098	1835	1573	1049	62600
H07	Hwy 401 W of Winston Churchill Blvd_WB	1158	772	772	772	1158	2316	7021	7021	7021	6259	6259	6259	6259	6259	6259	6259	9651	9651	9651	6259	3860	3378	2895	1930	119100
H08	Hwy 401 at Trafalgar Rd N-E Ramp	105	70	70	70	105	210	751	751	751	626	626	626	626	626	626	626	873	873	873	626	349	306	262	175	11600

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 No Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
H09	Hwy 401 at Trafalgar Rd S-E Ramp	75	50	50	50	75	150	626	626	626	273	273	273	273	273	273	273	202	202	202	273	250	219	188	125	5900
H10	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H11	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H12	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H13	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H14	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	59	39	39	39	59	118	449	449	449	363	363	363	363	363	363	363	492	492	492	363	197	172	148	98	6700
H15	Hwy 401 at Hwy 413 N-W Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H16	Hwy 401 at Trafalgar Rd E-N/S Ramp	160	107	107	107	160	321	1336	1336	1336	968	968	968	968	968	968	968	1171	1171	1171	968	534	468	401	267	17900

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413

GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
A01	Hwy 413 N of Hwy 401/407 interchange_NB	520	346	346	346	520	1039	3965	3965	3965	3235	3235	3235	3235	3235	3235	3235	4330	4330	4330	3235	1732	1516	1299	866	59300
A02	Hwy 413 N of Hwy 401/407 interchange_SB	628	418	418	418	628	1255	5230	5230	5230	3581	3581	3581	3581	3581	3581	3581	4186	4186	4186	3581	2092	1830	1569	1046	67200
A03	Hwy 413 N of Winston Churchill Blvd_NB	653	436	436	436	653	1307	4380	4380	4380	3750	3750	3750	3750	3750	3750	3750	5444	5444	5444	3750	2178	1905	1633	1089	70200
A04	Hwy 413 N of Winston Churchill Blvd_SB	718	479	479	479	718	1437	5986	5986	5986	3911	3911	3911	3911	3911	3911	3911	4421	4421	4421	3911	2394	2095	1796	1197	74300
A05	Hwy 413 N of Bovaird Dr_NB	501	334	334	334	501	1003	3772	3772	3772	3091	3091	3091	3091	3091	3091	3091	4177	4177	4177	3091	1671	1462	1253	835	56800
A06	Hwy 413 N of Bovaird Dr_SB	557	371	371	371	557	1114	4643	4643	4643	3172	3172	3172	3172	3172	3172	3172	3684	3684	3684	3172	1857	1625	1393	929	59500
A07	Hwy 413 E of Mayfield Rd_EB	450	300	300	300	450	899	3612	3612	3612	2893	2893	2893	2893	2893	2893	2893	3746	3746	3746	2893	1498	1311	1124	749	52600
A08	Hwy 413 E of Mayfield Rd_WB	485	323	323	323	485	970	4043	4043	4043	2871	2871	2871	2871	2871	2871	2871	3413	3413	3413	2871	1617	1415	1213	809	53300
A09	Hwy 413 E of Chinguacousy Rd_EB	563	375	375	375	563	1126	4690	4690	4690	3362	3362	3362	3362	3362	3362	3362	4030	4030	4030	3362	1876	1642	1407	938	62300
A10	Hwy 413 E of Chinguacousy Rd_WB	513	342	342	342	513	1026	4274	4274	4274	3288	3288	3288	3288	3288	3288	3288	4119	4119	4119	3288	1709	1496	1282	855	59900
A11	Hwy 413 E of Hurontario St_EB	679	453	453	453	679	1358	5657	5657	5657	3730	3730	3730	3730	3730	3730	3730	4248	4248	4248	3730	2263	1980	1697	1131	70700
A12	Hwy 413 E of Hurontario St_WB	634	423	423	423	634	1268	4477	4477	4477	3751	3751	3751	3751	3751	3751	3751	5284	5284	5284	3751	2114	1849	1585	1057	69700
A13	Hwy 413 E of Hwy 410_EB	617	411	411	411	617	1233	5139	5139	5139	3793	3793	3793	3793	3793	3793	3793	4639	4639	4639	3793	2056	1799	1542	1028	69800
A14	Hwy 413 E of Hwy 410_WB	597	398	398	398	597	1195	4978	4978	4978	3834	3834	3834	3834	3834	3834	3834	4797	4797	4797	3834	1991	1742	1493	996	69800
A15	Hwy 413 E of Bramalea Rd_EB	602	401	401	401	602	1203	5013	5013	5013	3635	3635	3635	3635	3635	3635	3635	4402	4402	4402	3635	2005	1754	1504	1003	67200
A16	Hwy 413 E of Bramalea Rd_WB	551	367	367	367	551	1102	4523	4523	4523	3588	3588	3588	3588	3588	3588	3588	4593	4593	4593	3588	1837	1607	1378	919	65100
A17	Hwy 413 E of Airport Rd_EB	594	396	396	396	594	1188	4948	4948	4948	3421	3421	3421	3421	3421	3421	3421	4014	4014	4014	3421	1979	1732	1484	990	64000
A18	Hwy 413 E of Airport Rd_WB	555	370	370	370	555	1111	4306	4306	4306	3485	3485	3485	3485	3485	3485	3485	4628	4628	4628	3485	1851	1620	1389	926	63800
A19	Hwy 413 E of The Gore Rd_EB	542	362	362	362	542	1085	4519	4519	4519	3115	3115	3115	3115	3115	3115	3115	3641	3641	3641	3115	1808	1582	1356	904	58300
A20	Hwy 413 E of The Gore Rd_WB	514	343	343	343	514	1028	3907	3907	3907	3188	3188	3188	3188	3188	3188	3188	4282	4282	4282	3188	1713	1499	1284	856	58500
A21	Hwy 413 E of Humber Station Rd_EB	655	437	437	437	655	1311	5462	5462	5462	4091	4091	4091	4091	4091	4091	4091	5042	5042	5042	4091	2185	1912	1639	1092	75000
A22	Hwy 413 E of Humber Station Rd_WB	641	427	427	427	641	1282	4967	4967	4967	4018	4018	4018	4018	4018	4018	4018	5343	5343	5343	4018	2137	1870	1603	1069	73600
A23	Hwy 413 E of Hwy 427_EB	646	430	430	430	646	1291	4652	4652	4652	3875	3875	3875	3875	3875	3875	3875	5381	5381	5381	3875	2152	1883	1614	1076	71700
A24	Hwy 413 E of Hwy 427_WB	686	457	457	457	686	1371	5714	5714	5714	3909	3909	3909	3909	3909	3909	3909	4543	4543	4543	3909	2286	2000	1714	1143	73300
A25	Hwy 413 E of Hwy 27_EB	529	352	352	352	529	1057	4274	4274	4274	3410	3410	3410	3410	3410	3410	3410	4405	4405	4405	3410	1762	1542	1322	881	62000
A26	Hwy 413 E of Hwy 27_WB	554	370	370	370	554	1109	4619	4619	4619	3457	3457	3457	3457	3457	3457	3457	4263	4263	4263	3457	1848	1617	1386	924	63400
A27	Hwy 413 E of Pine Valley Dr_EB	529	352	352	352	529	1057	4274	4274	4274	3410	3410	3410	3410	3410	3410	3410	4405	4405	4405	3410	1762	1542	1322	881	62000
A28	Hwy 413 E of Pine Valley Dr_WB	554	370	370	370	554	1109	4619	4619	4619	3457	3457	3457	3457	3457	3457	3457	4263	4263	4263	3457	1848	1617	1386	924	63400
B05	Hwy 407 S of Hwy 401_NB	414	276	276	276	414	828	3451	3451	3451	1636	1636	1636	1636	1636	1636	1636	1353	1353	1353	1636	1380	1208	1035	690	34300
B06	Hwy 407 S of Hwy 401_SB	283	189	189	189	283	567	1656	1656	1656	1500	1500	1500	1500	1500	1500	1500	2361	2361	2361	1500	944	826	708	472	28700
B07	Hwy 407 N of Hwy 401_EB	471	314	314	314	471	941	3921	3921	3921	1724	1724	1724	1724	1724	1724	1724	1273	1273	1273	1724	1568	1372	1176	784	37100
B08	Hwy 407 N of Hwy 401_WB	306	204	204	204	306	612	1468	1468	1468	1452	1452	1452	1452	1452	1452	1452	2552	2552	2552	1452	1021	893	766	510	28700
B09	Hwy 410 S of Mayfield Rd_NB	444	296	296	296	444	888	2318	2318	2318	2207	2207	2207	2207	2207	2207	2207	3701	3701	3701	2207	1480	1295	1110	740	43000
B10	Hwy 410 S of Mayfield Rd_SB	558	372	372	372	558	1117	4652	4652	4652	2851	2851	2851	2851	2851	2851	2851	3056	3056	3056	2851	1861	1628	1396	930	55100
B11	Hwy 410 N of Mayfield Rd_NB	207	138	138	138	207	414	918	918	918	947	947	947	947	947	947	947	1724	1724	1724	947	690	604	517	345	18900
B12	Hwy 410 N of Mayfield Rd_SB	232	155	155	155	232	465	1937	1937	1937	967	967	967	967	967	967	967	847	847	847	967	775	678	581	387	19900
B13	Hwy 410 W of Mayfield Rd_EB	265	176	176	176	265	529	2206	2206	2206	1254	1254	1254	1254	1254	1254	1254	1268	1268	1268	1254	882	772	662	441	24800
B14	Hwy 410 W of Mayfield Rd_WB	202	135	135	135	202	405	928	928	928	941	941	941	941	941	941	941	1687	1687	1687	941	675	590	506	337	18700
B15	Hwy 427 S of Major Mackenzie Dr_NB	561	374	374	374	561	1121	2405	2405	2405	2508	2508	2508	2508	2508	2508	2508	4672	4672	4672	2508	1869	1635	1402	934	50500
B16	Hwy 427 S of Major Mackenzie Dr_SB	516	344	344	344	516	1033	4303	4303	4303	2637	2637	2637	2637	2637	2637	2637	2840	2840	2840	2637	1721	1506	1291	861	51000
B17	Hwy 427 N of Major Mackenzie Dr_NB	422	282	282	282	422	845	1887	1887	1887	1931	1931	1931	1931	1931	1931	1931	3520	3520	3520	1931	1408	1232	1056	704	38600
B18	Hwy 427 N of Major Mackenzie Dr_SB	413	275	275	275	413	826	3443	3443	3443	2169	2169	2169	2169	2169	2169	2169	2380	2380	2380	2169	1377	1205	1033	689	41600
B19	Hwy 400 N of Teston Rd_NB	1140	760	760	760	1140	2280	4884	4884	4884	5104	5104	5104	5104	5104	5104	5104	9501	9501	9501	5104	3800	3325	2850	1900	102700
B20	Hwy 400 N of Teston Rd_SB	1083	722	722	722	1083	2165	9023	9023	9023	4918	4918	4918	4918	4918	4918	4918	4772	4772	4772	4918	3609	3158	2707	1805	98500
B21	Hwy 400 S of King Vaughan Rd_NB	841	561	561	561	841	1683	2994	2994	2994	3459	3459	3459	3459	3459	3459	3459	7012	7012	7012	3459	2805	2454	2104	1402	71500
B22	Hwy 400 S of King Vaughan Rd_SB	834	556	556	556	834	1668	6950	6950	6950	3362	3362	3362	3362	3362	3362	3362	2853	2853	2853	3362	2780	2433	2085	1390	70000
B23	Hwy 400 S of King Rd_NB	867	578	578	578	867	1734	3031	3031	3031	3526	3526	3526	3526	3526	3526	3526	7224	7224	7224	3526	2889	2528	2167	1445	73200
B24	Hwy 400 S of King Rd_SB	1237	824	824	824	1237	2473	10305	10305	10305	5358	5358	5358	5358	5358	5358	5358	4939	4939	4939	5358	4122	3607	3092	2061	108900
C11	Hwy 413 at Winston Churchill Blvd_S-E/W	102	68	68	68	102	205	777	777	777	635	635	635	635	635	635	635	854	854	854	635	341	299	256	171	11650
C12	Hwy 413 at Winston Churchill Blvd_E-N	177	118	118	118	177	353	870	870	870	847	847	847	847	847	847	847	1472	1472	1472	847	589	515	442	294	16700
C13	Hwy 413 at Winston Churchill Blvd_W-N	59	40	40	40	59	119	322	322	322	303	303	303	303	303	303	303	495	495	495	303	198	173	149	99	5850
C14	Hwy 413 at Winston Churchill Blvd_N-E/W	181	121	121	121	181	363	1512	1512	1512	992	992	992	992	992	992	992	1117	1117	1117	992	605	529	454	302	18800
C15	Hwy 413 at Winston Churchill Blvd_E-S	72	48	48	48	72	143	371	371	371	353	353	353	353	353	353	353	597	597	597	353	239	209	179	119	6900
C16	Hwy 413 at Winston Churchill Blvd_W-S	46	31	31	31	46	92	385	385	385	254	254	254	254	254	254	254	286	286	286	254	154	135	116	77	4800
C17	Hwy 413 at Bovaird Dr_S-E/W	179	119	119	119	179	358	1111	1111	1111	982	982	982	982	982	982	982	1492	1492	1492	982	597	522	448	298	18600
C18	Hwy 413 at Bovaird Dr_E-N	46	31	31	31	46	93	386	386	386	213	213	213	213	213	213	213	209	209	209	213	154	135	116	77	4250
C19	Hwy 413 at Bovaird Dr_W-N	14	9	9	9	14	28	116	116	116	40	40	40	40	40	40	40	16	16	16	40	46	41	35	23	950

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 Build Scenario, Volume Basis

Highway 413

GTA West

RWDI Project#: 1301992

		Hour of Day																							
		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
C20	Hwy 413 at Bovaird Dr_N-E/W	44	29	29	29	44	88	212	212	212	212	212	212	212	212	212	212	365	365	365	212	146	128	110	73	4150
C21	Hwy 413 at Bovaird Dr_E-S	109	73	73	73	109	218	910	910	910	696	696	696	696	696	696	696	869	869	869	696	364	318	273	182	12700
C22	Hwy 413 at Bovaird Dr_W-S	77	52	52	52	77	155	645	645	645	299	299	299	299	299	299	299	234	234	234	299	258	226	194	129	6300
C23	Hwy 413 at Mayfield Rd_S-E/W	145	96	96	96	145	289	1118	1118	1118	907	907	907	907	907	907	907	1206	1206	1206	907	482	422	362	241	16600
C24	Hwy 413 at Mayfield Rd_E-N	22	15	15	15	22	44	185	185	185	128	128	128	128	128	128	128	152	152	152	128	74	65	56	37	2400
C25	Hwy 413 at Mayfield Rd_W-N	93	62	62	62	93	186	773	773	773	530	530	530	530	530	530	530	622	622	622	530	309	271	232	155	9950
C26	Hwy 413 at Mayfield Rd_N-E/W	107	71	71	71	107	214	829	829	829	674	674	674	674	674	674	674	890	890	890	674	356	311	267	178	12300
C27	Hwy 413 at Mayfield Rd_E-S	120	80	80	80	120	239	997	997	997	491	491	491	491	491	491	491	423	423	423	491	399	349	299	199	10150
C28	Hwy 413 at Mayfield Rd_W-S	89	59	59	59	89	177	432	432	432	423	423	423	423	423	423	423	738	738	738	423	295	258	221	148	8350
C29	Hwy 413 at Chinguacousy Rd_W-N/S	18	12	12	12	18	36	87	87	87	86	86	86	86	86	86	86	152	152	152	86	61	53	45	30	1700
C30	Hwy 413 at Chinguacousy Rd_N-E	48	32	32	32	48	95	396	396	396	212	212	212	212	212	212	212	196	196	196	212	158	139	119	79	4250
C31	Hwy 413 at Chinguacousy Rd_S-E	92	62	62	62	92	185	770	770	770	332	332	332	332	332	332	332	240	240	240	332	308	269	231	154	7200
C32	Hwy 413 at Chinguacousy Rd_E-N/S	104	69	69	69	104	208	567	567	567	529	529	529	529	529	529	529	869	869	869	529	347	304	261	174	10250
C33	Hwy 413 at Chinguacousy Rd_N-W	16	11	11	11	16	33	137	137	137	86	86	86	86	86	86	86	94	94	94	86	55	48	41	27	1650
C34	Hwy 413 at Chinguacousy Rd_S-W	24	16	16	16	24	48	199	199	199	88	88	88	88	88	88	88	68	68	68	88	80	70	60	40	1900
C35	Hwy 413 at Hurontario St_W-N/S	45	30	30	30	45	91	337	337	337	277	277	277	277	277	277	277	377	377	377	277	151	132	113	75	5100
C36	Hwy 413 at Hurontario St_N-E	117	78	78	78	117	234	974	974	974	477	477	477	477	477	477	477	415	415	415	477	389	341	292	195	9900
C37	Hwy 413 at Hurontario St_S-E	40	26	26	26	40	79	329	329	329	184	184	184	184	184	184	184	180	180	180	184	132	115	99	66	3650
C38	Hwy 413 at Hurontario St_E-N/S	169	112	112	112	169	337	512	512	512	647	647	647	647	647	647	647	1406	1406	1406	647	562	492	422	281	13700
C39	Hwy 413 at Hurontario St_N-W	37	25	25	25	37	74	310	310	310	211	211	211	211	211	211	211	241	241	241	211	124	108	93	62	3950
C40	Hwy 413 at Hurontario St_S-W	37	25	25	25	37	74	310	310	310	211	211	211	211	211	211	211	241	241	241	211	124	108	93	62	3950
C41	Hwy 413 at Hwy 410_W-S	124	83	83	83	124	248	1034	1034	1034	395	395	395	395	395	395	395	217	217	217	395	414	362	310	207	8950
C42	Hwy 413 at Hwy 410_E-S	108	72	72	72	108	217	903	903	903	572	572	572	572	572	572	572	630	630	630	572	361	316	271	181	10950
C43	Hwy 413 at Hwy 410_S-E	73	49	49	49	73	146	517	517	517	435	435	435	435	435	435	435	608	608	608	435	243	213	183	122	8050
C44	Hwy 413 at Hwy 410_S-W	134	89	89	89	134	268	402	402	402	512	512	512	512	512	512	512	1116	1116	1116	512	446	391	335	223	10850
C45	Hwy 413 at Bramalea Rd_W-N/S	70	47	47	47	70	140	542	542	542	440	440	440	440	440	440	440	584	584	584	440	234	204	175	117	8050
C46	Hwy 413 at Bramalea Rd_N-E	50	33	33	33	50	100	416	416	416	259	259	259	259	259	259	259	287	287	287	259	166	146	125	83	5000
C47	Hwy 413 at Bramalea Rd_S-E	7	5	5	5	7	15	0	0	0	19	19	19	19	19	19	19	61	61	61	19	24	21	18	12	450
C48	Hwy 413 at Bramalea Rd_E-N/S	57	38	38	38	57	115	391	391	391	331	331	331	331	331	331	331	478	478	478	331	191	167	144	96	6200
C49	Hwy 413 at Bramalea Rd_N-W	99	66	66	66	99	198	826	826	826	540	540	540	540	540	540	540	608	608	608	540	330	289	248	165	10250
C50	Hwy 413 at Bramalea Rd_S-W	9	6	6	6	9	18	20	20	20	27	27	27	27	27	27	27	75	75	75	27	30	26	22	15	650
C51	Hwy 413 at Airport Rd_W-N/S	79	53	53	53	79	158	559	559	559	468	468	468	468	468	468	468	659	659	659	468	264	231	198	132	8700
C52	Hwy 413 at Airport Rd_N-E	26	17	17	17	26	52	217	217	217	135	135	135	135	135	135	135	148	148	148	135	87	76	65	43	2600
C53	Hwy 413 at Airport Rd_S-E	33	22	22	22	33	67	278	278	278	138	138	138	138	138	138	138	123	123	123	138	111	97	83	56	2850
C54	Hwy 413 at Airport Rd_E-N/S	43	28	28	28	43	85	356	356	356	196	196	196	196	196	196	196	188	188	188	196	142	124	107	71	3900
C55	Hwy 413 at Airport Rd_N-W	67	44	44	44	67	133	556	556	556	179	179	179	179	179	179	179	51	51	51	179	222	194	167	111	4350
C56	Hwy 413 at Airport Rd_S-W	12	8	8	8	12	24	17	17	17	37	37	37	37	37	37	37	101	101	101	37	40	35	30	20	850
C57	Hwy 413 at The Gore Rd_W-N/S	69	46	46	46	69	138	574	574	574	394	394	394	394	394	394	394	463	463	463	394	230	201	172	115	7400
C58	Hwy 413 at The Gore Rd_N/S-E	17	12	12	12	17	35	145	145	145	89	89	89	89	89	89	89	90	90	90	89	58	51	44	29	1700
C59	Hwy 413 at The Gore Rd_E-N/S	36	24	24	24	36	72	127	127	127	146	146	146	146	146	146	146	301	301	301	146	121	105	90	60	3050
C60	Hwy 413 at The Gore Rd_N/S-W	78	52	52	52	78	156	527	527	527	450	450	450	450	450	450	450	648	648	648	450	259	227	194	130	8400
C61	Hwy 413 at Humber Station Rd_W-N/S	77	51	51	51	77	154	641	641	641	339	339	339	339	339	339	339	318	318	318	339	256	224	192	128	6850
C62	Hwy 413 at Humber Station Rd_N-E	103	69	69	69	103	206	545	545	545	513	513	513	513	513	513	513	857	857	857	513	343	300	257	171	10000
C63	Hwy 413 at Humber Station Rd_S-E	125	83	83	83	125	249	1039	1039	1039	725	725	725	725	725	725	725	862	862	862	725	415	363	312	208	13550
C64	Hwy 413 at Humber Station Rd_E-N/S	171	114	114	114	171	342	1286	1286	1286	1051	1051	1051	1051	1051	1051	1051	1425	1425	1425	1051	570	499	428	285	19350
C65	Hwy 413 at Humber Station Rd_N-W	3	2	2	2	3	6	26	26	26	15	15	15	15	15	15	15	17	17	17	15	10	9	8	5	300
C66	Hwy 413 at Humber Station Rd_S-W	42	28	28	28	42	83	199	199	199	198	198	198	198	198	198	198	346	346	346	198	139	121	104	69	3900
C67	Hwy 413 at Hwy 427_W-S	167	111	111	111	167	334	1390	1390	1390	1037	1037	1037	1037	1037	1037	1037	1280	1280	1280	1037	556	487	417	278	19050
C68	Hwy 413 at Hwy 427_E-S	246	164	164	164	246	493	2053	2053	2053	1125	1125	1125	1125	1125	1125	1125	1100	1100	1100	1125	821	718	616	411	22500
C69	Hwy 413 at Hwy 427_S-E	194	130	130	130	194	389	581	581	581	739	739	739	739	739	739	739	1620	1620	1620	739	648	567	486	324	15700
C70	Hwy 413 at Hwy 427_S-W	228	152	152	152	228	456	1306	1306	1306	1192	1192	1192	1192	1192	1192	1192	1900	1900	1900	1192	760	665	570	380	22900
C71	Hwy 413 at Hwy 27_W-N/S	127	85	85	85	127	254	758	758	758	678	678	678	678	678	678	678	1057	1057	1057	678	423	370	317	211	12950
C72	Hwy 413 at Hwy 27_N/S-E	46	30	30	30	46	91	380	380	380	146	146	146	146	146	146	146	81	81	81	146	152	133	114	76	3300
C73	Hwy 413 at Hwy 27_E-N/S	55	37	37	37	55	110	220	220	220	240	240	240	240	240	240	240	457	457	457	240	183	160	137	91	4850
C74	Hwy 413 at Hwy 27_N/S-W	274	183	183	183	274	548	2284	2284	2284	1254	1254	1254	1254	1254	1254	1254	1223	1223	1223	1254	913	799	685	457	25050
C81	Hwy 413 at Weston Rd_W-N/S	131	87	87	87	131	262	1090	1090	1090	841	841	841	841	841	841	841	1050	1050	1050	841	436	382	327	218	15300
C82	Hwy 413 at Weston Rd_N/S-W	157	104	104	104	157	313	1306	1306	1306	860	860	860	860	860	860	860	976	976	976	860	522	457	392	261	16300

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413

GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
C83	Hwy 413 at Hwy 400_W-N	310	206	206	206	310	619	2008	2008	2008	1738	1738	1738	1738	1738	1738	1738	2580	2580	2580	1738	1032	903	774	516	32750
C84	Hwy 413 at Hwy 400_W-S	141	94	94	94	141	282	1176	1176	1176	723	723	723	723	723	723	723	775	775	775	723	470	412	353	235	13950
C85	Hwy 413 at Hwy 400_N-W	182	121	121	121	182	364	819	819	819	838	838	838	838	838	838	838	1517	1517	1517	838	607	531	455	303	16700
C86	Hwy 413 at Hwy 400_S-W	299	200	200	200	299	599	2494	2494	2494	1593	1593	1593	1593	1593	1593	1593	1770	1770	1770	1593	998	873	748	499	30450
D01	Trafalgar Rd S of Hwy 401_NB	359	239	239	239	359	718	2993	2993	2993	1989	1989	1989	1989	1989	1989	1989	2271	2271	2271	1989	1197	1048	898	599	37600
D02	Trafalgar Rd S of Hwy 401_SB	348	232	232	232	348	696	2379	2379	2379	2018	2018	2018	2018	2018	2018	2018	2902	2902	2902	2018	1161	1016	871	580	37700
D03	Trafalgar Rd N of Hwy 401_NB	360	240	240	240	360	720	2999	2999	2999	1987	1987	1987	1987	1987	1987	1987	2266	2266	2266	1987	1200	1050	900	600	37600
D04	Trafalgar Rd N of Hwy 401_SB	333	222	222	222	333	666	2118	2118	2118	1850	1850	1850	1850	1850	1850	1850	2776	2776	2776	1850	1110	972	833	555	34950
D05	Steeles Ave E of Trafalgar Rd_EB	381	254	254	254	381	762	3173	3173	3173	2053	2053	2053	2053	2053	2053	2053	2303	2303	2303	2053	1269	1111	952	635	39100
D06	Steeles Ave E of Trafalgar Rd_WB	434	290	290	290	434	869	2498	2498	2498	2277	2277	2277	2277	2277	2277	2277	3619	3619	3619	2277	1448	1267	1086	724	43700
D07	Steeles Ave At Hwy 413_EB	397	265	265	265	397	794	3310	3310	3310	2325	2325	2325	2325	2325	2325	2325	2750	2750	2750	2325	1324	1158	993	662	43300
D08	Steeles Ave At Hwy 413_WB	360	240	240	240	360	720	2420	2420	2420	2065	2065	2065	2065	2065	2065	2065	3002	3002	3002	2065	1201	1051	901	600	38700
D09	Steeles Ave E of Ninth Line S_EB	324	216	216	216	324	648	2699	2699	2699	1816	1816	1816	1816	1816	1816	1816	2087	2087	2087	1816	1080	945	810	540	34200
D10	Steeles Ave E of Ninth Line S_WB	349	233	233	233	349	698	1949	1949	1949	1800	1800	1800	1800	1800	1800	1800	2908	2908	2908	1800	1163	1018	872	582	34700
D11	Steeles Ave E of Tenth Line N_EB	415	277	277	277	415	830	3460	3460	3460	1972	1972	1972	1972	1972	1972	1972	1993	1993	1993	1972	1384	1211	1038	692	38950
D12	Steeles Ave E of Tenth Line N_WB	390	260	260	260	390	780	1801	1801	1801	1818	1818	1818	1818	1818	1818	1818	3251	3251	3251	1818	1300	1138	975	650	36100
D13	Ninth Line N N of Steeles Ave_NB	124	83	83	83	124	248	537	537	537	557	557	557	557	557	557	557	1032	1032	1032	557	413	361	310	206	11200
D14	Ninth Line N N of Steeles Ave_SB	185	123	123	123	185	369	1539	1539	1539	795	795	795	795	795	795	795	730	730	730	795	616	539	462	308	16200
D15	Ninth Line S S of Steeles Ave_NB	226	150	150	150	226	451	1880	1880	1880	1233	1233	1233	1233	1233	1233	1233	1397	1397	1397	1233	752	658	564	376	23400
D16	Ninth Line S S of Steeles Ave_SB	242	162	162	162	242	485	2020	2020	2020	1564	1564	1564	1564	1564	1564	1564	1967	1967	1967	1564	808	707	606	404	28450
D17	Tenth Line At Hwy 413_NB	92	61	61	61	92	184	199	199	199	310	310	310	310	310	310	310	769	769	769	310	307	269	231	154	6900
D18	Tenth Line At Hwy 413_SB	133	89	89	89	133	266	1109	1109	1109	474	474	474	474	474	474	474	331	331	331	474	444	388	333	222	10300
D19	Derry Rd W of Hwy 407_EB	454	302	302	302	454	907	3780	3780	3780	2363	2363	2363	2363	2363	2363	2363	2586	2586	2586	2363	1512	1323	1134	756	45450
D20	Derry Rd W of Hwy 407_WB	382	255	255	255	382	764	2019	2019	2019	1910	1910	1910	1910	1910	1910	1910	3182	3182	3182	1910	1273	1114	955	636	37150
D21	Derry Rd E of Hwy 407_EB	361	240	240	240	361	721	3006	3006	3006	2066	2066	2066	2066	2066	2066	2066	2411	2411	2411	2066	1202	1052	902	601	38700
D22	Derry Rd E of Hwy 407_WB	300	200	200	200	300	600	2073	2073	2073	1750	1750	1750	1750	1750	1750	1750	2501	2501	2501	1750	1000	875	750	500	32650
D23	Winston Churchill Blvd S of Hwy 401_NB	407	271	271	271	407	814	3391	3391	3391	2033	2033	2033	2033	2033	2033	2033	2144	2144	2144	2033	1356	1187	1017	678	39550
D24	Winston Churchill Blvd S of Hwy 401_SB	338	225	225	225	338	675	1980	1980	1980	1791	1791	1791	1791	1791	1791	1791	2813	2813	2813	1791	1125	985	844	563	34250
D25	Winston Churchill Blvd N of Hwy 401_NB	366	244	244	244	366	732	3049	3049	3049	1994	1994	1994	1994	1994	1994	1994	2247	2247	2247	1994	1220	1067	915	610	37850
D26	Winston Churchill Blvd N of Hwy 401_SB	327	218	218	218	327	654	2316	2316	2316	1939	1939	1939	1939	1939	1939	1939	2724	2724	2724	1939	1090	953	817	545	36000
D27	Winston Churchill Blvd S of Hwy 413_NB	390	260	260	260	390	779	1520	1520	1520	1669	1669	1669	1669	1669	1669	1669	3247	3247	3247	1669	1299	1136	974	649	34050
D28	Winston Churchill Blvd S of Hwy 413_SB	359	239	239	239	359	717	2989	2989	2989	1545	1545	1545	1545	1545	1545	1545	1411	1411	1411	1545	1196	1046	897	598	31450
D29	Winston Churchill Blvd N of Hwy 413_NB	293	196	196	196	293	587	1280	1280	1280	1326	1326	1326	1326	1326	1326	1326	2445	2445	2445	1326	978	856	733	489	26600
D30	Winston Churchill Blvd N of Hwy 413_SB	289	193	193	193	289	578	2408	2408	2408	1427	1427	1427	1427	1427	1427	1427	1488	1488	1488	1427	963	843	722	482	27850
D31	Winston Churchill Blvd N of 5 Side Rd_NB	114	76	76	76	114	229	512	512	512	522	522	522	522	522	522	522	953	953	953	522	381	334	286	191	10450
D32	Winston Churchill Blvd N of 5 Side Rd_SB	121	81	81	81	121	242	1010	1010	1010	572	572	572	572	572	572	572	569	569	569	572	404	353	303	202	11300
D33	5 Side Rd W of Winston Churchill Blvd_EB	99	66	66	66	99	198	824	824	824	583	583	583	583	583	583	583	696	696	696	583	330	288	247	165	10850
D34	5 Side Rd W of Winston Churchill Blvd_WB	112	75	75	75	112	224	782	782	782	658	658	658	658	658	658	658	934	934	934	658	374	327	280	187	12250
D35	5 Side Rd At Hwy 413_EB	130	87	87	87	130	260	1085	1085	1085	674	674	674	674	674	674	674	738	738	738	674	434	380	326	217	13000
D36	5 Side Rd At Hwy 413_WB	129	86	86	86	129	257	498	498	498	547	547	547	547	547	547	547	1073	1073	1073	547	429	375	322	215	11200
D37	Heritage Rd At Hwy 413_NB	89	59	59	59	89	177	206	206	206	308	308	308	308	308	308	308	738	738	738	308	295	258	222	148	6750
D38	Heritage Rd At Hwy 413_SB	89	59	59	59	89	178	741	741	741	353	353	353	353	353	353	353	296	296	296	353	297	260	222	148	7400
D39	Heritage Rd N of Bovaird Dr_NB	90	60	60	60	90	181	280	280	280	352	352	352	352	352	352	352	754	754	754	352	301	264	226	151	7400
D40	Heritage Rd N of Bovaird Dr_SB	120	80	80	80	120	239	996	996	996	521	521	521	521	521	521	521	478	478	478	521	398	349	299	199	10550
D41	Heritage Rd S of Mayfield Rd_NB	29	20	20	20	29	59	244	244	244	144	144	144	144	144	144	144	145	145	145	144	98	86	73	49	2800
D42	Heritage Rd S of Mayfield Rd_SB	29	19	19	19	29	58	241	241	241	169	169	169	169	169	169	169	201	201	201	169	96	84	72	48	3150
D43	Heritage Rd N of Mayfield Rd_NB	111	74	74	74	111	221	922	922	922	464	464	464	464	464	464	464	418	418	418	464	369	323	277	184	9550
D44	Heritage Rd N of Mayfield Rd_SB	105	70	70	70	105	210	474	474	474	485	485	485	485	485	485	485	875	875	875	485	350	306	263	175	9650
D45	Bovaird Dr W of Heritage Rd_EB	166	111	111	111	166	332	1385	1385	1385	1068	1068	1068	1068	1068	1068	1068	1341	1341	1341	1068	554	485	416	277	19450
D46	Bovaird Dr W of Heritage Rd_WB	164	110	110	110	164	329	1369	1369	1369	1030	1030	1030	1030	1030	1030	1030	1268	1268	1268	1030	548	479	411	274	18850
D47	Bovaird Dr W of Hwy 413_EB	258	172	172	172	258	517	2154	2154	2154	1588	1588	1588	1588	1588	1588	1588	1932	1932	1932	1588	861	754	646	431	29200
D48	Bovaird Dr W of Hwy 413_WB	120	80	80	80	120	239	996	996	996	521	521	521	521	521	521	521	478	478	478	521	398	349	299	199	10550
D49	Bovaird Dr E of Hwy 413_EB	373	249	249	249	373	746	2438	2438	2438	2105	2105	2105	2105	2105	2105	2105	3107	3107	3107	2105	1243	1087	932	621	39600
D50	Bovaird Dr E of Hwy 413_WB	357	238	238	238	357	714	2976	2976	2976	2018	2018	2018	2018	2018	2018	2018	2338	2338	2338	2018	1190	1042	893	595	37950
D51	Wanless Dr W of Heritage Rd_EB	65	44	44	44	65	131	524	524	524	421	421	421	421	421	421	421	545	545	545	421	218	191	164	109	7650
D52	Wanless Dr W of Heritage Rd_WB	66	44	44	44	66	131	546	546	546	356	356	356	356	356	356	356	397	397	397	356	218	191	164	109	6750
D53	Wanless Dr At Hwy 413_EB	92	61	61	61	92	184	765	765	765	537	537	537	537	537	537	537	634	634	634	537	306	268	230	153	10000

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413

GTA West

		Hour of Day																							
		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
D54	Wanless Dr At Hwy 413_WB	101	68	68	68	101	203	845	845	845	465	465	465	465	465	465	465	459	459	459	465	338	296	254	169	9300
D55	Mayfield Rd W of Heritage Rd_EB	222	148	148	148	222	445	1854	1854	1854	1132	1132	1132	1132	1132	1132	1132	1210	1210	1210	1132	741	649	556	371	21900
D56	Mayfield Rd W of Heritage Rd_WB	202	134	134	134	202	403	1102	1102	1102	1024	1024	1024	1024	1024	1024	1024	1680	1680	1680	1024	672	588	504	336	19850
D57	Mayfield Rd E of Heritage Rd_EB	259	172	172	172	259	517	2155	2155	2155	1608	1608	1608	1608	1608	1608	1608	1976	1976	1976	1608	862	754	646	431	29500
D58	Mayfield Rd E of Heritage Rd_WB	245	164	164	164	245	491	1847	1847	1847	1512	1512	1512	1512	1512	1512	1512	2045	2045	2045	1512	818	716	613	409	27800
D59	Mayfield Rd E of Hwy 413_EB	184	123	123	123	184	368	1431	1431	1431	1160	1160	1160	1160	1160	1160	1160	1534	1534	1534	1160	614	537	460	307	21200
D60	Mayfield Rd E of Hwy 413_WB	188	125	125	125	188	375	1564	1564	1564	1169	1169	1169	1169	1169	1169	1169	1442	1442	1442	1169	626	547	469	313	21450
D61	Mississauga Rd At Hwy 413_NB	33	22	22	22	33	67	167	167	167	164	164	164	164	164	164	164	279	279	279	164	112	98	84	56	3200
D62	Mississauga Rd At Hwy 413_SB	52	35	35	35	52	104	435	435	435	227	227	227	227	227	227	227	208	208	208	227	174	152	131	87	4600
D63	Creditview Rd At Hwy 413_NB	21	14	14	14	21	43	179	179	179	54	54	54	54	54	54	54	10	10	10	54	72	63	54	36	1350
D64	Creditview Rd At Hwy 413_SB	16	11	11	11	16	33	73	73	73	76	76	76	76	76	76	76	136	136	136	76	54	48	41	27	1500
D65	Chinguacousy Rd S of Hwy 413_NB	134	90	90	90	134	269	1120	1120	1120	597	597	597	597	597	597	597	570	570	570	597	448	392	336	224	12050
D66	Chinguacousy Rd S of Hwy 413_SB	102	68	68	68	102	203	742	742	742	615	615	615	615	615	615	615	846	846	846	615	338	296	254	169	11350
D67	Chinguacousy Rd N of Hwy 413_NB	80	53	53	53	80	159	462	462	462	421	421	421	421	421	421	421	663	663	663	421	265	232	199	133	8050
D68	Chinguacousy Rd N of Hwy 413_SB	112	75	75	75	112	224	932	932	932	521	521	521	521	521	521	521	517	517	517	521	373	326	280	186	10350
D69	Chinguacousy Rd N of Old School Rd_NB	45	30	30	30	45	90	102	102	102	154	154	154	154	154	154	154	375	375	375	154	150	131	113	75	3400
D70	Chinguacousy Rd N of Old School Rd_SB	51	34	34	34	51	101	421	421	421	218	218	218	218	218	218	218	205	205	205	218	169	147	126	84	4450
D71	Old School Rd W of Chinguacousy Rd_EB	73	48	48	48	73	145	605	605	605	405	405	405	405	405	405	405	467	467	467	405	242	212	181	121	7650
D72	Old School Rd W of Chinguacousy Rd_WB	69	46	46	46	69	137	496	496	496	415	415	415	415	415	415	415	573	573	573	415	229	200	172	115	7650
D73	Old School Rd At Hwy 413_EB	37	24	24	24	37	73	306	306	306	200	200	200	200	200	200	200	227	227	227	200	122	107	92	61	3800
D74	Old School Rd At Hwy 413_WB	43	29	29	29	43	86	348	348	348	279	279	279	279	279	279	279	358	358	358	279	143	125	107	72	5050
D75	McLaughlin Rd S of Old School Rd_NB	36	24	24	24	36	72	299	299	299	206	206	206	206	206	206	206	238	238	238	206	120	105	90	60	3850
D76	McLaughlin Rd S of Old School Rd_SB	34	23	23	23	34	68	285	285	285	206	206	206	206	206	206	206	244	244	244	206	114	100	86	57	3800
D77	McLaughlin Rd At Hwy 413_NB	49	33	33	33	49	99	267	267	267	251	251	251	251	251	251	251	411	411	411	251	164	144	123	82	4850
D78	McLaughlin Rd At Hwy 413_SB	61	41	41	41	61	123	512	512	512	254	254	254	254	254	254	254	224	224	224	254	205	179	154	102	5250
D79	Old School Rd W of Hurontario St_EB	62	41	41	41	62	124	516	516	516	340	340	340	340	340	340	340	389	389	389	340	206	180	155	103	6450
D80	Old School Rd W of Hurontario St_WB	115	77	77	77	115	231	556	556	556	551	551	551	551	551	551	551	961	961	961	551	384	336	288	192	10850
D81	Old School Rd E of Hurontario St_EB	56	38	38	38	56	113	470	470	470	273	273	273	273	273	273	273	276	276	276	273	188	165	141	94	5350
D82	Old School Rd E of Hurontario St_WB	44	30	30	30	44	89	287	287	287	250	250	250	250	250	250	250	370	370	370	250	148	130	111	74	4700
D83	Hurontario St S of Old School Rd_NB	167	111	111	111	167	334	971	971	971	878	878	878	878	878	878	878	1391	1391	1391	878	556	487	417	278	16850
D84	Hurontario St S of Old School Rd_SB	128	85	85	85	128	255	1064	1064	1064	811	811	811	811	811	811	811	1009	1009	1009	811	426	372	319	213	14800
D85	Hurontario St S of Hwy 413_NB	104	70	70	70	104	209	836	836	836	672	672	672	672	672	672	672	869	869	869	672	348	304	261	174	12200
D86	Hurontario St S of Hwy 413_SB	138	92	92	92	138	277	1152	1152	1152	810	810	810	810	810	810	810	964	964	964	810	461	403	346	230	15100
D87	Hurontario St N of Hwy 413_NB	270	180	180	180	270	540	1193	1193	1193	1231	1231	1231	1231	1231	1231	1231	2249	2249	2249	1231	899	787	675	450	24600
D88	Hurontario St N of Hwy 413_SB	273	182	182	182	273	545	2272	2272	2272	1340	1340	1340	1340	1340	1340	1340	1397	1397	1397	1340	909	795	682	454	26200
D89	Kennedy Rd At Hwy 413_NB	17	11	11	11	17	33	139	139	139	97	97	97	97	97	97	97	112	112	112	97	56	49	42	28	1800
D90	Kennedy Rd At Hwy 413_SB	27	18	18	18	27	54	226	226	226	96	96	96	96	96	96	96	70	70	70	96	90	79	68	45	2100
D91	Old School Rd W of Heart Lake Rd_EB	81	54	54	54	81	163	678	678	678	260	260	260	260	260	260	260	150	150	150	260	271	237	203	136	5900
D92	Old School Rd W of Heart Lake Rd_WB	62	41	41	41	62	124	175	175	175	231	231	231	231	231	231	231	518	518	518	231	207	181	155	104	4950
D93	Old School Rd At Hwy 410_EB	74	49	49	49	74	147	614	614	614	234	234	234	234	234	234	234	125	125	125	234	246	215	184	123	5300
D94	Old School Rd At Hwy 410_WB	53	36	36	36	53	107	138	138	138	191	191	191	191	191	191	191	445	445	445	191	178	156	134	89	4150
E01	Heart Lake Rd S of Mayfield Rd_NB	66	44	44	44	66	131	326	326	326	320	320	320	320	320	320	320	546	546	546	320	218	191	164	109	6250
E02	Heart Lake Rd S of Mayfield Rd_SB	73	49	49	49	73	146	610	610	610	369	369	369	369	369	369	369	389	389	389	369	244	213	183	122	7150
E03	Heart Lake Rd At Hwy 410_NB	61	40	40	40	61	121	504	504	504	294	294	294	294	294	294	294	298	298	298	294	202	177	151	101	5750
E04	Heart Lake Rd At Hwy 410_SB	51	34	34	34	51	102	426	426	426	338	338	338	338	338	338	338	426	426	426	338	170	149	128	85	6100
E05	Heart Lake Rd At Hwy 413_NB	42	28	28	28	42	84	194	194	194	197	197	197	197	197	197	197	350	350	350	197	140	123	105	70	3900
E06	Heart Lake Rd At Hwy 413_SB	59	39	39	39	59	118	493	493	493	202	202	202	202	202	202	202	128	128	128	202	197	173	148	99	4450
E07	Mayfield Rd W of Heart Lake Rd_EB	384	256	256	256	384	767	3197	3197	3197	2099	2099	2099	2099	2099	2099	2099	2374	2374	2374	2099	1279	1119	959	639	39800
E08	Mayfield Rd W of Heart Lake Rd_WB	351	234	234	234	351	701	1980	1980	1980	1817	1817	1817	1817	1817	1817	1817	2922	2922	2922	1817	1169	1023	877	584	35000
E09	Mayfield Rd E of Heart Lake Rd_EB	355	236	236	236	355	709	2956	2956	2956	1997	1997	1997	1997	1997	1997	1997	2312	2312	2312	1997	1182	1035	887	591	37600
E10	Mayfield Rd E of Heart Lake Rd_WB	309	206	206	206	309	618	2101	2101	2101	1787	1787	1787	1787	1787	1787	1787	2575	2575	2575	1787	1030	901	773	515	33400
E11	Mayfield Rd E of Hwy 410_EB	360	240	240	240	360	720	3000	3000	3000	1930	1930	1930	1930	1930	1930	1930	2151	2151	2151	1930	1200	1050	900	600	36800
E12	Mayfield Rd E of Hwy 410_WB	368	245	245	245	368	736	2183	2183	2183	1964	1964	1964	1964	1964	1964	1964	3066	3066	3066	1964	1227	1073	920	613	37500
E13	Dixie Rd S of Mayfield Rd_NB	122	81	81	81	122	244	782	782	782	682	682	682	682	682	682	682	1016	1016	1016	682	406	356	305	203	12850
E14	Dixie Rd S of Mayfield Rd_SB	163	109	109	109	163	326	1358	1358	1358	803	803	803	803	803	803	803	842	842	842	803	543	475	407	272	15700
E15	Dixie Rd N of Mayfield Rd_NB	68	45	45	45	68	136	417	417	417	372	372	372	372	372	372	372	568	568	568	372	227	199	171	114	7050
E16	Dixie Rd N of Mayfield Rd_SB	88	59	59	59	88	176	732	732	732	497	497	497	497	497	497	497	580	580	580	497	293	256	220	146	9350

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 Build Scenario, Volume Basis

Highway 413

GTA West

RWDI Project#: 1301992

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	AADT[1]
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
E17	Dixie Rd At Hwy 413_NB	57	38	38	38	57	115	209	209	209	237	237	237	237	237	237	237	479	479	479	237	192	168	144	96	4900
E18	Dixie Rd At Hwy 413_SB	72	48	48	48	72	145	604	604	604	320	320	320	320	320	320	320	297	297	297	320	242	211	181	121	6450
E19	Countryside Dr At Hwy 410_EB	152	101	101	101	152	303	1263	1263	1263	716	716	716	716	716	716	716	716	716	716	716	505	442	379	253	14150
E20	Countryside Dr At Hwy 410_WB	137	92	92	92	137	275	707	707	707	674	674	674	674	674	674	674	1144	1144	1144	674	458	400	343	229	13200
E21	Bramalea Rd S of Hwy 413_NB	28	18	18	18	28	55	25	25	25	79	79	79	79	79	79	79	231	231	231	79	92	81	69	46	1850
E22	Bramalea Rd S of Hwy 413_SB	22	14	14	14	22	43	180	180	180	68	68	68	68	68	68	68	38	38	38	68	72	63	54	36	1550
E23	Bramalea Rd N of Hwy 413_NB	137	91	91	91	137	274	786	786	786	716	716	716	716	716	716	716	1140	1140	1140	716	456	399	342	228	13750
E24	Bramalea Rd N of Hwy 413_SB	152	102	102	102	152	305	1269	1269	1269	818	818	818	818	818	818	818	915	915	915	818	508	444	381	254	15600
E25	Old School Rd E of Bramalea Rd_EB	72	48	48	48	72	144	601	601	601	384	384	384	384	384	384	384	431	431	431	384	240	210	180	120	7350
E26	Old School Rd E of Bramalea Rd_WB	69	46	46	46	69	138	532	532	532	431	431	431	431	431	431	431	575	575	575	431	230	201	172	115	7900
E27	Old School Rd E of Torbram Road_EB	69	46	46	46	69	139	578	578	578	417	417	417	417	417	417	417	498	498	498	417	231	202	173	116	7700
E28	Old School Rd E of Torbram Road_WB	62	42	42	42	62	125	193	193	193	242	242	242	242	242	242	242	520	520	520	242	208	182	156	104	5100
E29	Torbram Rd S of Old School Rd_NB	40	27	27	27	40	80	93	93	93	139	139	139	139	139	139	139	334	334	334	139	134	117	100	67	3050
E30	Torbram Rd S of Old School Rd_SB	60	40	40	40	60	121	504	504	504	217	217	217	217	217	217	217	153	153	153	217	202	176	151	101	4700
E31	Torbram Rd At Hwy 413_NB	78	52	52	52	78	156	225	225	225	292	292	292	292	292	292	292	651	651	651	292	260	228	195	130	6250
E32	Torbram Rd At Hwy 413_SB	109	73	73	73	109	218	910	910	910	422	422	422	422	422	422	422	335	335	335	422	364	319	273	182	8900
E33	Airport Rd S of Old School Rd_NB	157	105	105	105	157	315	480	480	480	605	605	605	605	605	605	605	1311	1311	1311	605	524	459	393	262	12800
E34	Airport Rd S of Old School Rd_SB	171	114	114	114	171	343	1428	1428	1428	818	818	818	818	818	818	818	836	836	836	818	571	500	428	286	16150
E35	Airport Rd S of Hwy 413_NB	126	84	84	84	126	253	719	719	719	658	658	658	658	658	658	658	1052	1052	1052	658	421	368	316	210	12650
E36	Airport Rd S of Hwy 413_SB	154	103	103	103	154	308	1281	1281	1281	660	660	660	660	660	660	660	599	599	599	660	513	449	384	256	13450
E37	Airport Rd N of Hwy 413_NB	179	119	119	119	179	358	700	700	700	768	768	768	768	768	768	768	1491	1491	1491	768	596	522	447	298	15650
E38	Airport Rd N of Hwy 413_SB	170	113	113	113	170	340	1415	1415	1415	704	704	704	704	704	704	704	613	613	613	704	566	495	424	283	14500
E39	Healey Rd E of Airport Rd_EB	81	54	54	54	81	161	671	671	671	487	487	487	487	487	487	487	590	590	590	487	268	235	201	134	9000
E40	Healey Rd E of Airport Rd_WB	80	53	53	53	80	160	547	547	547	468	468	468	468	468	468	468	668	668	668	468	267	234	200	134	8700
E41	Healey Rd At Hwy 413_EB	69	46	46	46	69	137	572	572	572	387	387	387	387	387	387	387	452	452	452	387	229	200	172	114	7300
E42	Healey Rd At Hwy 413_WB	74	49	49	49	74	148	372	372	372	359	359	359	359	359	359	359	617	617	617	359	247	216	185	123	7050
E43	Healey Rd E of Centreville Creek Rd_EB	64	42	42	42	64	127	530	530	530	351	351	351	351	351	351	351	404	404	404	351	212	185	159	106	6650
E44	Healey Rd E of Centreville Creek Rd_WB	66	44	44	44	66	132	471	471	471	394	394	394	394	394	394	394	550	550	550	394	220	192	165	110	7300
E45	Innis Lake Rd S of Healey Rd_NB	61	41	41	41	61	122	123	123	123	201	201	201	201	201	201	201	507	507	507	201	203	177	152	101	4500
E46	Innis Lake Rd S of Healey Rd_SB	75	50	50	50	75	150	625	625	625	267	267	267	267	267	267	267	185	185	185	267	250	219	188	125	5800
E47	Innis Lake Rd At Hwy 413_NB	73	49	49	49	73	146	107	107	107	220	220	220	220	220	220	220	607	607	607	220	243	212	182	121	5100
E48	Innis Lake Rd At Hwy 413_SB	112	75	75	75	112	225	936	936	936	321	321	321	321	321	321	321	127	127	127	321	374	328	281	187	7600
E49	Centreville Creek Rd At Hwy 413_NB	81	54	54	54	81	163	121	121	121	246	246	246	246	246	246	246	677	677	677	246	271	237	203	135	5700
E50	Centreville Creek Rd At Hwy 413_SB	102	68	68	68	102	203	847	847	847	323	323	323	323	323	323	323	184	184	184	323	339	297	254	169	7350
E51	Centreville Creek Rd N of Healey Rd_NB	68	46	46	46	68	137	36	36	36	176	176	176	176	176	176	176	569	569	569	176	228	199	171	114	4350
E52	Centreville Creek Rd N of Healey Rd_SB	75	50	50	50	75	149	622	622	622	216	216	216	216	216	216	216	94	94	94	216	249	218	187	124	5100
E53	The Gore Rd S of Hwy 413_NB	98	66	66	66	98	197	429	429	429	442	442	442	442	442	442	442	821	821	821	442	328	287	246	164	8900
E54	The Gore Rd S of Hwy 413_SB	129	86	86	86	129	258	1075	1075	1075	566	566	566	566	566	566	566	528	528	528	566	430	376	322	215	11450
E55	The Gore Rd N of Hwy 413_NB	110	73	73	73	110	220	241	241	241	372	372	372	372	372	372	372	916	916	916	372	366	321	275	183	8250
E56	The Gore Rd N of Hwy 413_SB	103	69	69	69	103	206	857	857	857	544	544	544	544	544	544	544	597	597	597	544	343	300	257	171	10400
E57	Clarkway Dr S of Mayfield Rd_NB	71	48	48	48	71	143	595	595	595	381	381	381	381	381	381	381	430	430	430	381	238	208	179	119	7300
E58	Clarkway Dr S of Mayfield Rd_SB	59	39	39	39	59	118	494	494	494	387	387	387	387	387	387	387	484	484	484	387	197	173	148	99	7000
E59	Humber Station Rd S of Hwy 413_NB	185	123	123	123	185	370	1449	1449	1449	1169	1169	1169	1169	1169	1169	1169	1540	1540	1540	1169	616	539	462	308	21350
E60	Humber Station Rd S of Hwy 413_SB	185	124	124	124	185	371	1544	1544	1544	1013	1013	1013	1013	1013	1013	1013	1141	1141	1141	1013	618	540	463	309	19200
E61	Humber Station Rd N of Hwy 413_NB	113	76	76	76	113	227	727	727	727	634	634	634	634	634	634	634	946	946	946	634	378	331	284	189	11950
E62	Humber Station Rd N of Hwy 413_SB	106	71	71	71	106	212	704	704	704	605	605	605	605	605	605	605	885	885	885	605	354	310	266	177	11350
E63	Mayfield Rd W of Humber Station Rd_EB	267	178	178	178	267	534	2227	2227	2227	1416	1416	1416	1416	1416	1416	1416	1569	1569	1569	1416	891	779	668	445	27100
E64	Mayfield Rd W of Humber Station Rd_WB	235	156	156	156	235	469	1420	1420	1420	1265	1265	1265	1265	1265	1265	1265	1955	1955	1955	1265	782	684	586	391	24100
E65	Mayfield Rd At Hwy 413_EB	244	162	162	162	244	487	2030	2030	2030	1139	1139	1139	1139	1139	1139	1139	1133	1133	1133	1139	812	711	609	406	22600
E66	Mayfield Rd At Hwy 413_WB	237	158	158	158	237	473	1027	1027	1027	1071	1071	1071	1071	1071	1071	1071	1973	1973	1973	1071	789	690	592	395	21450
E67	Mayfield Rd E of Coleraine Dr_EB	83	55	55	55	83	166	670	670	670	532	532	532	532	532	532	532	691	691	691	532	276	242	207	138	9700
E68	Mayfield Rd E of Coleraine Dr_WB	92	61	61	61	92	183	752	752	752	600	600	600	600	600	600	600	764	764	764	600	306	267	229	153	10850
E69	Coleraine Dr At Highway 413_NB	120	80	80	80	120	240	726	726	726	650	650	650	650	650	650	650	1001	1001	1001	650	400	350	300	200	12350
E70	Coleraine Dr At Highway 413_SB	138	92	92	92	138	277	1153	1153	1153	741	741	741	741	741	741	741	831	831	831	741	461	404	346	231	14150
E71	Coleraine Dr N of Mayfield Rd_NB	180	120	120	120	180	360	1502	1502	1502	1059	1059	1059	1059	1059	1059	1059	1255	1255	1255	1059	601	526	451	300	19700
E72	Coleraine Dr N of Mayfield Rd_SB	174	116	116	116	174	348	1399	1399	1399	1117	1117	1117	1117	1117	1117	1117	1452	1452	1452	1117	581	508	436	290	20350
E73	Countryside Dr W of Hwy 50_EB	36	24	24	24	36	72	298	298	298	151	151	151	151	151	151	151	137	137	137	151	119	104	90	60	3100

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413

GTA West

		Hour of Day																								
		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
E74	Countryside Dr W of Hwy 50_WB	38	25	25	25	38	75	140	140	140	159	159	159	159	159	159	159	313	313	313	159	125	110	94	63	3250
E75	Hwy 50 S of Countryside Dr_NB	262	175	175	175	262	524	1809	1809	1809	1528	1528	1528	1528	1528	1528	1528	2183	2183	2183	1528	873	764	655	437	28500
E76	Hwy 50 S of Countryside Dr_SB	308	205	205	205	308	616	2565	2565	2565	1616	1616	1616	1616	1616	1616	1616	1775	1775	1775	1616	1026	898	770	513	31000
E77	Hwy 50 At Hwy 413_NB	288	192	192	192	288	575	2212	2212	2212	1794	1794	1794	1794	1794	1794	1794	2396	2396	2396	1794	958	839	719	479	32900
E78	Hwy 50 At Hwy 413_SB	341	227	227	227	341	682	2840	2840	2840	1908	1908	1908	1908	1908	1908	1908	2190	2190	2190	1908	1136	994	852	568	35950
E79	Hwy 50 N of Cold Creek Rd Realignment_NB	288	192	192	192	288	575	2059	2059	2059	1720	1720	1720	1720	1720	1720	1720	2397	2397	2397	1720	959	839	719	479	31850
E80	Hwy 50 N of Cold Creek Rd Realignment_SB	248	165	165	165	248	496	587	587	587	865	865	865	865	865	865	865	2066	2066	2066	865	826	723	620	413	18950
E81	Cold Creek Rd Realignment E of Hwy 50_EB	7	5	5	5	7	15	21	21	21	29	29	29	29	29	29	29	61	61	61	29	24	21	18	12	600
E82	Cold Creek Rd Realignment E of Hwy 50_WB	41	27	27	27	41	82	343	343	343	109	109	109	109	109	109	109	25	25	25	109	137	120	103	69	2650
E83	Nashville Rd E of Hwy 50_EB	65	43	43	43	65	130	542	542	542	426	426	426	426	426	426	426	532	532	532	426	217	190	163	108	7700
E84	Nashville Rd E of Hwy 50_WB	61	41	41	41	61	123	512	512	512	398	398	398	398	398	398	398	506	506	506	398	205	179	154	102	7250
E85	Major Mackenzie Dr W of Hwy 427_EB	361	241	241	241	361	722	2941	2941	2941	2341	2341	2341	2341	2341	2341	2341	3007	3007	3007	2341	1203	1052	902	601	42500
E86	Major Mackenzie Dr W of Hwy 427_WB	377	251	251	251	377	754	3140	3140	3140	2269	2269	2269	2269	2269	2269	2269	2731	2731	2731	2269	1256	1099	942	628	41950
E87	Major Mackenzie Dr E of Hwy 427_EB	323	215	215	215	323	645	2688	2688	2688	1847	1847	1847	1847	1847	1847	1847	2154	2154	2154	1847	1075	941	806	538	34600
E88	Major Mackenzie Dr E of Hwy 427_WB	358	238	238	238	358	715	2588	2588	2588	2146	2146	2146	2146	2146	2146	2146	2981	2981	2981	2146	1192	1043	894	596	39750
E89	Huntington Rd At Hwy 413_NB	18	12	12	12	18	36	148	148	148	53	53	53	53	53	53	53	29	29	29	53	59	52	44	30	1250
E90	Huntington Rd At Hwy 413_SB	16	11	11	11	16	32	134	134	134	91	91	91	91	91	91	91	102	102	102	91	54	47	40	27	1700
E91	Huntington Rd N of Kirby Rd_NB	1	1	1	1	1	2	10	10	10	9	9	9	9	9	9	9	10	10	10	9	4	4	3	2	150
E92	Huntington Rd N of Kirby Rd_SB	1	1	1	1	1	2	10	10	10	9	9	9	9	9	9	9	10	10	10	9	4	4	3	2	150
E93	Kirby Rd W of Huntington Rd_EB	27	18	18	18	27	54	159	159	159	143	143	143	143	143	143	143	227	227	227	143	91	79	68	45	2750
E94	Kirby Rd W of Huntington Rd_WB	36	24	24	24	36	72	298	298	298	118	118	118	118	118	118	118	74	74	74	118	119	104	89	60	2650
E95	Hwy 27 S of Hwy 413_NB	197	131	131	131	197	394	1132	1132	1132	1031	1031	1031	1031	1031	1031	1031	1642	1642	1642	1031	657	575	492	328	19800
E96	Hwy 27 S of Hwy 413_SB	223	149	149	149	223	446	1858	1858	1858	1162	1162	1162	1162	1162	1162	1162	1274	1274	1274	1162	743	650	557	372	22350
E97	Hwy 27 N of Hwy 413_NB	269	179	179	179	269	537	815	815	815	1028	1028	1028	1028	1028	1028	1028	2239	2239	2239	1028	896	784	672	448	21800
E98	Hwy 27 N of Hwy 413_SB	271	181	181	181	271	542	2259	2259	2259	1225	1225	1225	1225	1225	1225	1225	1175	1175	1175	1225	904	791	678	452	24550
F01	Kirby Rd E of Hwy 27_EB	113	75	75	75	113	226	765	765	765	654	654	654	654	654	654	654	941	941	941	654	376	329	282	188	12200
F02	Kirby Rd E of Hwy 27_WB	109	72	72	72	109	217	905	905	905	557	557	557	557	557	557	557	600	600	600	557	362	317	271	181	10750
F03	Kipling Ave At Hwy 413_NB	4	3	3	3	4	9	37	37	37	22	22	22	22	22	22	22	29	29	29	22	15	13	11	7	450
F04	Kipling Ave At Hwy 413_SB	4	3	3	3	4	8	34	34	34	12	12	12	12	12	12	12	11	11	11	12	14	12	10	7	300
F05	King Vaughan Rd E of Hwy 27_EB	83	55	55	55	83	165	689	689	689	413	413	413	413	413	413	413	441	441	441	413	276	241	207	138	8050
F06	King Vaughan Rd E of Hwy 27_WB	58	38	38	38	58	115	433	433	433	358	358	358	358	358	358	358	481	481	481	358	192	168	144	96	6550
F07	King Vaughan Rd E of Kipling Ave_EB	107	71	71	71	107	214	892	892	892	658	658	658	658	658	658	658	801	801	801	658	357	312	268	178	12100
F08	King Vaughan Rd E of Kipling Ave_WB	93	62	62	62	93	187	779	779	779	566	566	566	566	566	566	566	683	683	683	566	312	273	234	156	10450
F09	Pine Valley Dr At Hwy 413_NB	41	28	28	28	41	83	93	93	93	145	145	145	145	145	145	145	345	345	345	145	138	121	103	69	3150
F10	Pine Valley Dr At Hwy 413_SB	84	56	56	56	84	169	703	703	703	255	255	255	255	255	255	255	122	122	122	255	281	246	211	141	5900
F13	Pine Valley Dr N of King Vaughan Rd_NB	7	4	4	4	7	13	36	36	36	33	33	33	33	33	33	33	56	56	56	33	22	19	17	11	650
F14	Pine Valley Dr N of King Vaughan Rd_SB	4	2	2	2	4	7	30	30	30	18	18	18	18	18	18	18	18	18	18	18	12	11	9	6	350
F15	King Vaughan Rd W of Pine Valley Dr_EB	124	83	83	83	124	249	1036	1036	1036	615	615	615	615	615	615	615	643	643	643	615	414	363	311	207	12000
F16	King Vaughan Rd W of Pine Valley Dr_WB	85	57	57	57	85	170	564	564	564	487	487	487	487	487	487	487	707	707	707	487	283	247	212	141	9100
F17	King Vaughan Rd E of Pine Valley Dr_EB	65	43	43	43	65	129	405	405	405	357	357	357	357	357	357	357	539	539	539	357	216	189	162	108	6750
F18	King Vaughan Rd E of Pine Valley Dr_WB	66	44	44	44	66	132	549	549	549	365	365	365	365	365	365	365	417	417	417	365	220	192	165	110	6900
F19	Weston Rd N of Kirby Rd_NB	114	76	76	76	114	228	761	761	761	651	651	651	651	651	651	651	948	948	948	651	379	332	284	190	12200
F20	Weston Rd N of Kirby Rd_SB	126	84	84	84	126	253	1052	1052	1052	673	673	673	673	673	673	673	746	746	746	673	421	368	316	210	12850
F21	Weston Rd N of Hwy 413_NB	127	85	85	85	127	254	842	842	842	720	720	720	720	720	720	720	1059	1059	1059	720	423	371	318	212	13550
F22	Weston Rd N of Hwy 413_SB	156	104	104	104	156	313	1304	1304	1304	800	800	800	800	800	800	800	857	857	857	800	522	456	391	261	15450
F23	Weston Rd N of King Vaughan Rd_NB	49	33	33	33	49	98	292	292	292	261	261	261	261	261	261	261	410	410	410	261	164	143	123	82	5000
F24	Weston Rd N of King Vaughan Rd_SB	51	34	34	34	51	102	426	426	426	294	294	294	294	294	294	294	342	342	342	294	171	149	128	85	5500
F25	King Vaughan Rd E of Weston Rd_EB	132	88	88	88	132	265	1103	1103	1103	826	826	826	826	826	826	826	1021	1021	1021	826	441	386	331	221	15150
F26	King Vaughan Rd E of Weston Rd_WB	123	82	82	82	123	247	1028	1028	1028	796	796	796	796	796	796	796	992	992	992	796	411	360	308	206	14450
F27	King Vaughan Rd W of Jane St_EB	312	208	208	208	312	625	2306	2306	2306	1899	1899	1899	1899	1899	1899	1899	2604	2604	2604	1899	1042	911	781	521	35050
F28	King Vaughan Rd W of Jane St_WB	316	211	211	211	316	632	2635	2635	2635	1735	1735	1735	1735	1735	1735	1735	1974	1974	1974	1735	1054	922	791	527	32900
F29	Kirby Rd At Hwy 400_EB	134	89	89	89	134	268	1115	1115	1115	709	709	709	709	709	709	709	779	779	779	709	446	390	335	223	13550
F30	Kirby Rd At Hwy 400_WB	116	77	77	77	116	232	754	754	754	649	649	649	649	649	649	649	965	965	965	649	386	338	289	193	12250
F31	Steeles Ave W of Ninth Line N_EB	267	178	178	178	267	533	1885	1885	1885	1581	1581	1581	1581	1581	1581	1581	2223	2223	2223	1581	889	778	667	445	29350
F32	Steeles Ave W of Ninth Line N_WB	261	174	174	174	261	521	1997	1997	1997	1626	1626	1626	1626	1626	1626	1626	2172	2172	2172	1626	869	760	652	434	29800
F33	Heritage Rd S of Wanless Dr_NB	90	60	60	60	90	181	280	280	280	352	352	352	352	352	352	352	754	754	754	352	301	264	226	151	7400
F34	Heritage Rd S of Wanless Dr_SB	120	80	80	80	120	239	996	996	996	521	521	521	521	521	521	521	478	478	478	521	398	349	299	199	10550

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413

GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
F35	Heart Lake Rd S of Old School Rd_NB	45	30	30	30	45	90	144	144	144	177	177	177	177	177	177	177	373	373	373	177	149	131	112	75	3700
F36	Heart Lake Rd S of Old School Rd_SB	56	38	38	38	56	113	470	470	470	182	182	182	182	182	182	182	103	103	103	182	188	165	141	94	4100
F37	Mayfield Rd E of Dixie Rd_EB	264	176	176	176	264	529	2203	2203	2203	1491	1491	1491	1491	1491	1491	1491	1724	1724	1724	1491	881	771	661	441	28050
F38	Mayfield Rd E of Dixie Rd_WB	263	175	175	175	263	525	1583	1583	1583	1415	1415	1415	1415	1415	1415	1415	2189	2189	2189	1415	876	766	657	438	26950
F39	Bramalea Rd S of Old School Rd_NB	51	34	34	34	51	102	155	155	155	197	197	197	197	197	197	197	424	424	424	197	170	148	127	85	4150
F40	Bramalea Rd S of Old School Rd_SB	75	50	50	50	75	149	622	622	622	265	265	265	265	265	265	265	180	180	180	265	249	218	187	124	5750
F41	Old School Rd W of Bramalea Rd_EB	75	50	50	50	75	150	625	625	625	345	345	345	345	345	345	345	344	344	344	345	250	219	187	125	6900
F42	Old School Rd W of Bramalea Rd_WB	65	43	43	43	65	129	245	245	245	273	273	273	273	273	273	273	539	539	539	273	216	189	162	108	5600
F43	Cold Creek Rd N of Nashville Rd_NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F44	Cold Creek Rd N of Nashville Rd_SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F45	Nashville Rd At Hwy 427_EB	65	43	43	43	65	130	542	542	542	426	426	426	426	426	426	426	532	532	532	426	217	190	163	108	7700
F46	Nashville Rd At Hwy 427_WB	61	41	41	41	61	123	512	512	512	398	398	398	398	398	398	398	506	506	506	398	205	179	154	102	7250
F47	Kirby Rd W of Hwy 27_EB	3	2	2	2	3	6	25	25	25	13	13	13	13	13	13	13	7	7	7	13	10	9	8	5	250
F48	Kirby Rd W of Hwy 27_WB	8	6	6	6	8	17	4	4	4	23	23	23	23	23	23	23	70	70	70	23	28	25	21	14	550
F49	King Vaughan Rd E of Jane St_EB	270	180	180	180	270	540	2252	2252	2252	1773	1773	1773	1773	1773	1773	1773	2241	2241	2241	1773	901	788	676	450	32100
F50	King Vaughan Rd E of Jane St_WB	289	192	192	192	289	577	2406	2406	2406	1699	1699	1699	1699	1699	1699	1699	2016	2016	2016	1699	962	842	722	481	31600
F51	Jane St N of King Vaughan Rd_NB	177	118	118	118	177	354	824	824	824	830	830	830	830	830	830	830	1476	1476	1476	830	590	517	443	295	16450
F52	Jane St N of King Vaughan Rd_SB	255	170	170	170	255	509	2121	2121	2121	888	888	888	888	888	888	888	601	601	601	888	848	742	636	424	19450
F53	Jane St S of King Vaughan Rd_NB	163	109	109	109	163	327	633	633	633	698	698	698	698	698	698	698	1361	1361	1361	698	544	476	408	272	14250
F54	Jane St S of King Vaughan Rd_SB	210	140	140	140	210	421	1754	1754	1754	938	938	938	938	938	938	938	892	892	892	938	702	614	526	351	18900
F71	Hwy 400 at King Vaughan Rd N-E/W Ramp	103	69	69	69	103	207	861	861	861	396	396	396	396	396	396	396	316	316	316	396	344	301	258	172	8400
F72	Hwy 400 at King Vaughan Rd E-S Ramp	100	67	67	67	100	200	835	835	835	607	607	607	607	607	607	607	731	731	731	607	334	292	250	167	11200
F73	Hwy 400 at King Vaughan Rd W-S Ramp	50	33	33	33	50	99	61	61	61	145	145	145	145	145	145	145	414	414	414	145	166	145	124	83	3400
F74	Hwy 400 at King Vaughan Rd S-E/W Ramp	129	86	86	86	129	257	1071	1071	1071	795	795	795	795	795	795	795	971	971	971	795	428	375	321	214	14600
F75	Hwy 400 at King Vaughan Rd E-N Ramp	69	46	46	46	69	139	54	54	54	183	183	183	183	183	183	183	579	579	579	183	231	203	174	116	4500
F76	Hwy 400 at King Vaughan Rd W-N Ramp	25	17	17	17	25	51	37	37	37	80	80	80	80	80	80	80	211	211	211	80	85	74	63	42	1800
F77	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	143	96	96	96	143	287	1195	1195	1195	739	739	739	739	739	739	739	800	800	800	739	478	418	359	239	14250
F78	Hwy 427 at Major Mackenzie Dr E-S Ramp	97	65	65	65	97	194	809	809	809	340	340	340	340	340	340	340	237	237	237	340	324	283	243	162	7450
F79	Hwy 427 at Major Mackenzie Dr W-S Ramp	150	100	100	100	150	299	1246	1246	1246	867	867	867	867	867	867	867	1024	1024	1024	867	499	436	374	249	16200
F80	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	271	180	180	180	271	541	1492	1492	1492	1384	1384	1384	1384	1384	1384	1384	2255	2255	2255	1384	902	789	676	451	26750
F81	Hwy 427 at Major Mackenzie Dr E-N Ramp	97	64	64	64	97	193	805	805	805	611	611	611	611	611	611	611	753	753	753	611	322	282	241	161	11150
F82	Hwy 427 at Major Mackenzie Dr W-N Ramp	42	28	28	28	42	84	169	169	169	182	182	182	182	182	182	182	349	349	349	182	140	122	105	70	3700
F83	Hwy 410 at Mayfield Rd N-E/W Ramp	36	24	24	24	36	73	303	303	303	96	96	96	96	96	96	96	27	27	27	96	121	106	91	61	2350
F84	Hwy 410 at Mayfield Rd E-S Ramp	61	41	41	41	61	122	235	235	235	260	260	260	260	260	260	260	506	506	506	260	203	177	152	101	5300
F85	Hwy 410 at Mayfield Rd W-S Ramp	69	46	46	46	69	138	577	577	577	393	393	393	393	393	393	393	461	461	461	393	231	202	173	115	7400
F86	Hwy 410 at Mayfield Rd S-E/W Ramp	94	63	63	63	94	188	784	784	784	407	407	407	407	407	407	407	382	382	382	407	313	274	235	157	8300
F87	Hwy 410 at Mayfield Rd E-N Ramp	13	9	9	9	13	26	106	106	106	68	68	68	68	68	68	68	76	76	76	68	43	37	32	21	1300
F88	Hwy 410 at Mayfield Rd W-N Ramp	25	16	16	16	25	49	206	206	206	66	66	66	66	66	66	66	16	16	16	66	82	72	62	41	1600
G01	Hwy 413 at Hwy 401 / Hwy 407_E-N	102	68	68	68	102	203	466	466	466	474	474	474	474	474	474	474	847	847	847	474	339	296	254	169	9400
G02	Hwy 413 at Hwy 401 / Hwy 407_N-E	157	105	105	105	157	314	1310	1310	1310	851	851	851	851	851	851	851	959	959	959	851	524	459	393	262	16200
G03	Hwy 413 at Hwy 401 / Hwy 407_N-S	122	82	82	82	122	245	1020	1020	1020	663	663	663	663	663	663	663	741	741	741	663	408	357	306	204	12600
G04	Hwy 413 at Hwy 401 / Hwy 407_S-N	99	66	66	66	99	199	829	829	829	568	568	568	568	568	568	568	663	663	663	568	331	290	249	166	10650
G05	Hwy 413 at Hwy 401_E-N	79	53	53	53	79	158	433	433	433	403	403	403	403	403	403	403	660	660	660	403	264	231	198	132	7800
G06	Hwy 407 at Hwy 413 N-N Ramp	22	15	15	15	22	45	32	32	32	65	65	65	65	65	65	65	187	187	187	65	75	65	56	37	1550
G07	Hwy 407 at Hwy 401 S-E Ramp	78	52	52	52	78	156	649	649	649	252	252	252	252	252	252	252	151	151	151	252	260	227	195	130	5700
G08	Hwy 407 at Hwy 413 N-E Ramp	37	25	25	25	37	74	307	307	307	106	106	106	106	106	106	106	41	41	41	106	123	108	92	61	2500
G09	Hwy 407 at Hwy 401 S-W Ramp	16	11	11	11	16	32	134	134	134	96	96	96	96	96	96	96	121	121	121	96	54	47	40	27	1800
G10	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	198	132	132	132	198	397	1652	1652	1652	1004	1004	1004	1004	1004	1004	1004	1070	1070	1070	1004	661	578	496	330	19450
H01	Hwy 401 E of Trafalgar Rd_EB	1316	878	878	878	1316	2633	10971	10971	10971	7520	7520	7520	7520	7520	7520	7520	8771	8771	8771	7520	4388	3840	3291	2194	141000
H02	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	1092	728	728	728	1092	2184	9101	9101	9101	5972	5972	5972	5972	5972	5972	5972	6765	6765	6765	5972	3640	3185	2730	1820	113300
H03	Hwy 401 W of Winston Churchill Blvd_EB	1150	767	767	767	1150	2300	9584	9584	9584	6418	6418	6418	6418	6418	6418	6418	7376	7376	7376	6418	3833	3354	2875	1917	121100
H04	Hwy 401 E of Trafalgar Rd_WB	1005	670	670	670	1005	2009	6424	6424	6424	5602	5602	5602	5602	5602	5602	5602	8372	8372	8372	5602	3349	2930	2512	1674	105700
H05	Hwy 401 Collector at Hwy 413 E-W Ramp	378	252	252	252	378	755	3021	3021	3021	2424	2424	2424	2424	2424	2424	2424	3148	3148	3148	2424	1259	1102	944	630	44100
H06	Hwy 401 Express at Hwy 413 E-W Ramp	627	418	418	418	627	1254	3403	3403	3403	3178	3178	3178	3178	3178	3178	3178	5224	5224	5224	3178	2090	1828	1567	1045	61600
H07	Hwy 401 W of Winston Churchill Blvd_WB	1116	744	744	744	1116	2232	6834	6834	6834	6059	6059	6059	6059	6059	6059	6059	9301	9301	9301	6059	3721	3255	2790	1860	115200
H08	Hwy 401 at Trafalgar Rd N-E Ramp	105	70	70	70	105	210	876	876	876	606	606	606	606	606	606	606	715	715	715	606	350	307	263	175	11350
H09	Hwy 401 at Trafalgar Rd S-E Ramp	142	95	95	95	142	285	1187	1187	1187	783	783	783	783	783	783	783	895	895	895	783	475	415	356	237	14850

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2041 Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413

GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT[1]
H10	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	139	93	93	93	139	278	1158	1158	1158	694	694	694	694	694	694	694	730	730	730	694	463	405	347	232	13500
H11	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	109	72	72	72	109	217	904	904	904	702	702	702	702	702	702	702	881	881	881	702	362	317	271	181	12750
H12	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	241	160	160	160	241	481	1870	1870	1870	1515	1515	1515	1515	1515	1515	1515	2006	2006	2006	1515	802	702	602	401	27700
H13	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	338	226	226	226	338	677	2671	2671	2671	2146	2146	2146	2146	2146	2146	2146	2821	2821	2821	2146	1128	987	846	564	39200
H14	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	12	8	8	8	12	25	103	103	103	61	61	61	61	61	61	61	66	66	66	61	41	36	31	21	1200
H15	Hwy 401 at Hwy 413 N-W Ramp	348	232	232	232	348	696	2900	2900	2900	2073	2073	2073	2073	2073	2073	2073	2486	2486	2486	2073	1160	1015	870	580	38450
H16	Hwy 401 at Trafalgar Rd E-N/S Ramp	288	192	192	192	288	576	2400	2400	2400	1598	1598	1598	1598	1598	1598	1598	1828	1828	1828	1598	960	840	720	480	30200

[1] Annual Average Daily Traffic

Appendix A.1.1: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Volume Basis

Highway 413

GTA West

RWDI Project#: 1301992

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	AADT
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
A01	Hwy 413 N of Hwy 401/407 interchange NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A02	Hwy 413 N of Hwy 401/407 interchange SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A03	Hwy 413 N of Winston Churchill Blvd NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A04	Hwy 413 N of Winston Churchill Blvd SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A05	Hwy 413 N of Bovaird Dr NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A06	Hwy 413 N of Bovaird Dr SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A07	Hwy 413 E of Mayfield Rd EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A08	Hwy 413 E of Mayfield Rd WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A09	Hwy 413 E of Chinguacousy Rd EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A10	Hwy 413 E of Chinguacousy Rd WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A11	Hwy 413 E of Hurontario St EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A12	Hwy 413 E of Hurontario St WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A13	Hwy 413 E of Hwy 410 EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A14	Hwy 413 E of Hwy 410 WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A15	Hwy 413 E of Bramalea Rd EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A16	Hwy 413 E of Bramalea Rd WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A17	Hwy 413 E of Airport Rd EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A18	Hwy 413 E of Airport Rd WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A19	Hwy 413 E of The Gore Rd EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A20	Hwy 413 E of The Gore Rd WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A21	Hwy 413 E of Humber Station Rd EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A22	Hwy 413 E of Humber Station Rd WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A23	Hwy 413 E of Hwy 427 EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A24	Hwy 413 E of Hwy 427 WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A25	Hwy 413 E of Hwy 27 EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A26	Hwy 413 E of Hwy 27 WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A27	Hwy 413 E of Pine Valley Dr EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A28	Hwy 413 E of Pine Valley Dr WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B05	Hwy 407 S of Hwy 401 NB	570	380	380	380	570	1139	4746	4746	4746	2050	2050	2050	2050	2050	2050	2050	1472	1472	1472	2050	1898	1661	1424	949	44400
B06	Hwy 407 S of Hwy 401 SB	492	328	328	328	492	984	2464	2464	2464	2391	2391	2391	2391	2391	2391	2391	4100	4100	4100	2391	1640	1435	1230	820	46900
B07	Hwy 407 N of Hwy 401 EB	711	474	474	474	711	1422	5924	5924	5924	3121	3121	3121	3121	3121	3121	3121	2931	2931	2931	3121	2370	2073	1777	1185	63200
B08	Hwy 407 N of Hwy 401 WB	571	381	381	381	571	1142	3650	3650	3650	3188	3188	3188	3188	3188	3188	3188	4758	4758	4758	3188	1903	1665	1427	952	60100
B09	Hwy 410 S of Mayfield Rd NB	454	303	303	303	454	909	2323	2323	2323	2226	2226	2226	2226	2226	2226	2226	3787	3787	3787	2226	1515	1325	1136	757	43600
B10	Hwy 410 S of Mayfield Rd SB	567	378	378	378	567	1133	4721	4721	4721	2953	2953	2953	2953	2953	2953	2953	3237	3237	3237	2953	1888	1652	1416	944	56800
B11	Hwy 410 N of Mayfield Rd NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B12	Hwy 410 N of Mayfield Rd SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B13	Hwy 410 W of Mayfield Rd EB	360	240	240	240	360	720	3001	3001	3001	1829	1829	1829	1829	1829	1829	1829	1950	1950	1950	1829	1200	1050	900	600	35400
B14	Hwy 410 W of Mayfield Rd WB	351	234	234	234	351	702	1595	1595	1595	1622	1622	1622	1622	1622	1622	1622	2926	2926	2926	1622	1170	1024	878	585	32300
B15	Hwy 427 S of Major Mackenzie Dr NB	494	329	329	329	494	988	2106	2106	2106	2203	2203	2203	2203	2203	2203	2203	4117	4117	4117	2203	1647	1441	1235	823	44400
B16	Hwy 427 S of Major Mackenzie Dr SB	483	322	322	322	483	967	4028	4028	4028	2466	2466	2466	2466	2466	2466	2466	2651	2651	2651	2466	1611	1410	1208	806	47700
B17	Hwy 427 N of Major Mackenzie Dr NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B18	Hwy 427 N of Major Mackenzie Dr SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B19	Hwy 400 N of Teston Rd NB	1303	869	869	869	1303	2607	5986	5986	5986	6045	6045	6045	6045	6045	6045	6045	10861	10861	10861	6045	4344	3801	3258	2172	120300
B20	Hwy 400 N of Teston Rd SB	1245	830	830	830	1245	2491	10378	10378	10378	5766	5766	5766	5766	5766	5766	5766	5698	5698	5698	5766	4151	3632	3113	2076	114800
B21	Hwy 400 S of King Vaughan Rd NB	1188	792	792	792	1188	2376	4512	4512	4512	5020	5020	5020	5020	5020	5020	5020	9900	9900	9900	5020	3960	3465	2970	1980	102900
B22	Hwy 400 S of King Vaughan Rd SB	1133	755	755	755	1133	2266	9440	9440	9440	4897	4897	4897	4897	4897	4897	4897	4502	4502	4502	4897	3776	3304	2832	1888	99600
B23	Hwy 400 S of King Rd NB	1216	811	811	811	1216	2432	4558	4558	4558	5107	5107	5107	5107	5107	5107	5107	10135	10135	10135	5107	4054	3547	3041	2027	104900
B24	Hwy 400 S of King Rd SB	1299	866	866	866	1299	2598	10824	10824	10824	5505	5505	5505	5505	5505	5505	5505	4956	4956	4956	5505	4330	3788	3247	2165	112700
C11	Hwy 413 at Winston Churchill Blvd S E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C12	Hwy 413 at Winston Churchill Blvd E N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C13	Hwy 413 at Winston Churchill Blvd W N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C14	Hwy 413 at Winston Churchill Blvd N E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C15	Hwy 413 at Winston Churchill Blvd E S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C16	Hwy 413 at Winston Churchill Blvd W S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C17	Hwy 413 at Bovaird Dr S E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C18	Hwy 413 at Bovaird Dr E N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C19	Hwy 413 at Bovaird Dr W N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C20	Hwy 413 at Bovaird Dr N E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C21	Hwy 413 at Bovaird Dr E S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix A.1.1: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Volume Basis

Highway 413

GTA West

RWDI Project#: 1301992

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
C22	Hwy 413 at Bovaird Dr W S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C23	Hwy 413 at Mayfield Rd S E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C24	Hwy 413 at Mayfield Rd E N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C25	Hwy 413 at Mayfield Rd W N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C26	Hwy 413 at Mayfield Rd N E/W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C27	Hwy 413 at Mayfield Rd E S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C28	Hwy 413 at Mayfield Rd W S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C29	Hwy 413 at Chinguacousy Rd W N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C30	Hwy 413 at Chinguacousy Rd N E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C31	Hwy 413 at Chinguacousy Rd S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C32	Hwy 413 at Chinguacousy Rd E N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C33	Hwy 413 at Chinguacousy Rd N W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C34	Hwy 413 at Chinguacousy Rd S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C35	Hwy 413 at Hurontario St W N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C36	Hwy 413 at Hurontario St N E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C37	Hwy 413 at Hurontario St S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C38	Hwy 413 at Hurontario St E N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C39	Hwy 413 at Hurontario St N W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C40	Hwy 413 at Hurontario St S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C41	Hwy 413 at Hwy 410 W S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C42	Hwy 413 at Hwy 410 E S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C43	Hwy 413 at Hwy 410 S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C44	Hwy 413 at Hwy 410 S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C45	Hwy 413 at Bramalea Rd W N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C46	Hwy 413 at Bramalea Rd N E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C47	Hwy 413 at Bramalea Rd S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C48	Hwy 413 at Bramalea Rd E N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C49	Hwy 413 at Bramalea Rd N W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C50	Hwy 413 at Bramalea Rd S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C51	Hwy 413 at Airport Rd W N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C52	Hwy 413 at Airport Rd N E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C53	Hwy 413 at Airport Rd S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C54	Hwy 413 at Airport Rd E N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C55	Hwy 413 at Airport Rd N W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C56	Hwy 413 at Airport Rd S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C57	Hwy 413 at The Gore Rd W N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C58	Hwy 413 at The Gore Rd N/S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C59	Hwy 413 at The Gore Rd E N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C60	Hwy 413 at The Gore Rd N/S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C61	Hwy 413 at Humber Station Rd W N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C62	Hwy 413 at Humber Station Rd N E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C63	Hwy 413 at Humber Station Rd S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C64	Hwy 413 at Humber Station Rd E N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C65	Hwy 413 at Humber Station Rd N W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C66	Hwy 413 at Humber Station Rd S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C67	Hwy 413 at Hwy 427 W S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C68	Hwy 413 at Hwy 427 E S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C69	Hwy 413 at Hwy 427 S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C70	Hwy 413 at Hwy 427 S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C71	Hwy 413 at Hwy 27 W N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C72	Hwy 413 at Hwy 27 N/S E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C73	Hwy 413 at Hwy 27 E N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C74	Hwy 413 at Hwy 27 N/S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C81	Hwy 413 at Weston Rd W N/S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C82	Hwy 413 at Weston Rd N/S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C83	Hwy 413 at Hwy 400 W N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C84	Hwy 413 at Hwy 400 W S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C85	Hwy 413 at Hwy 400 N W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C86	Hwy 413 at Hwy 400 S W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix A.1.1: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Volume Basis

Highway 413

GTA West

RWDI Project#: 1301992

		Hour of Day																							
		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
D01	Trafalgar Rd S of Hwy 401 NB	404	270	270	270	404	809	3369	3369	3369	2089	2089	2089	2089	2089	2089	2089	2266	2266	2266	2089	1348	1179	1011	674	40250
D02	Trafalgar Rd S of Hwy 401 SB	375	250	250	250	375	749	2374	2374	2374	2076	2076	2076	2076	2076	2076	2076	3122	3122	3122	2076	1249	1093	937	624	39250
D03	Trafalgar Rd N of Hwy 401 NB	495	330	330	330	495	990	4123	4123	4123	2623	2623	2623	2623	2623	2623	2623	2907	2907	2907	2623	1649	1443	1237	825	50200
D04	Trafalgar Rd N of Hwy 401 SB	475	317	317	317	475	950	2908	2908	2908	2581	2581	2581	2581	2581	2581	2581	3959	3959	3959	2581	1584	1386	1188	792	49050
D05	Steeles Ave E of Trafalgar Rd EB	436	291	291	291	436	872	3635	3635	3635	2448	2448	2448	2448	2448	2448	2448	2818	2818	2818	2448	1454	1272	1091	727	46100
D06	Steeles Ave E of Trafalgar Rd WB	542	361	361	361	542	1084	3119	3119	3119	2843	2843	2843	2843	2843	2843	2843	4517	4517	4517	2843	1807	1581	1355	903	54550
D07	Steeles Ave At Hwy 413 EB	456	304	304	304	456	911	3797	3797	3797	2644	2644	2644	2644	2644	2644	2644	3110	3110	3110	2644	1519	1329	1139	759	49350
D08	Steeles Ave At Hwy 413 WB	442	294	294	294	442	883	3011	3011	3011	2560	2560	2560	2560	2560	2560	2560	3680	3680	3680	2560	1472	1288	1104	736	47800
D09	Steeles Ave E of Ninth Line S EB	366	244	244	244	366	733	3054	3054	3054	2098	2098	2098	2098	2098	2098	2098	2446	2446	2446	2098	1222	1069	916	611	39300
D10	Steeles Ave E of Ninth Line S WB	423	282	282	282	423	846	2454	2454	2454	2229	2229	2229	2229	2229	2229	2229	3523	3523	3523	2229	1409	1233	1057	705	42700
D11	Steeles Ave E of Tenth Line N EB	452	301	301	301	452	904	3765	3765	3765	2234	2234	2234	2234	2234	2234	2234	2338	2338	2338	2234	1506	1318	1130	753	43600
D12	Steeles Ave E of Tenth Line N WB	453	302	302	302	453	905	2340	2340	2340	2236	2236	2236	2236	2236	2236	2236	3771	3771	3771	2236	1508	1320	1131	754	43650
D13	Ninth Line N N of Steeles Ave NB	192	128	128	128	192	385	1011	1011	1011	956	956	956	956	956	956	956	1603	1603	1603	956	641	561	481	321	18650
D14	Ninth Line N N of Steeles Ave SB	250	167	167	167	250	500	2084	2084	2084	1165	1165	1165	1165	1165	1165	1165	1158	1158	1158	1165	834	729	625	417	23150
D15	Ninth Line S S of Steeles Ave NB	285	190	190	190	285	570	2376	2376	2376	1475	1475	1475	1475	1475	1475	1475	1597	1597	1597	1475	950	832	713	475	28400
D16	Ninth Line S S of Steeles Ave SB	275	183	183	183	275	549	2289	2289	2289	1759	1759	1759	1759	1759	1759	1759	2200	2200	2200	1759	916	801	687	458	32050
D17	Tenth Line At Hwy 413 NB	103	68	68	68	103	205	364	364	364	420	420	420	420	420	420	420	855	855	855	420	342	299	257	171	8700
D18	Tenth Line At Hwy 413 SB	144	96	96	96	144	288	1201	1201	1201	554	554	554	554	554	554	554	434	434	434	554	480	420	360	240	11700
D19	Derry Rd W of Hwy 407 EB	507	338	338	338	507	1015	4228	4228	4228	2537	2537	2537	2537	2537	2537	2537	2680	2680	2680	2537	1691	1480	1268	846	49350
D20	Derry Rd W of Hwy 407 WB	435	290	290	290	435	870	2759	2759	2759	2413	2413	2413	2413	2413	2413	2413	3625	3625	3625	2413	1450	1269	1088	725	45600
D21	Derry Rd E of Hwy 407 EB	397	265	265	265	397	794	3307	3307	3307	2362	2362	2362	2362	2362	2362	2362	2823	2823	2823	2362	1323	1157	992	661	43800
D22	Derry Rd E of Hwy 407 WB	328	219	219	219	328	656	2702	2702	2702	2139	2139	2139	2139	2139	2139	2139	2733	2733	2733	2139	1093	957	820	547	38800
D23	Winston Churchill Blvd S of Hwy 401 NB	426	284	284	284	426	852	3551	3551	3551	2066	2066	2066	2066	2066	2066	2066	2125	2125	2125	2066	1420	1243	1065	710	40550
D24	Winston Churchill Blvd S of Hwy 401 SB	335	224	224	224	335	671	1851	1851	1851	1720	1720	1720	1720	1720	1720	1720	2794	2794	2794	1720	1118	978	838	559	33200
D25	Winston Churchill Blvd N of Hwy 401 NB	423	282	282	282	423	846	3526	3526	3526	2304	2304	2304	2304	2304	2304	2304	2597	2597	2597	2304	1410	1234	1058	705	43750
D26	Winston Churchill Blvd N of Hwy 401 SB	398	265	265	265	398	795	2611	2611	2611	2250	2250	2250	2250	2250	2250	2250	3314	3314	3314	2250	1326	1160	994	663	42300
D27	Winston Churchill Blvd S of Hwy 413 NB	269	179	179	179	269	538	931	931	931	1089	1089	1089	1089	1089	1089	1089	2242	2242	2242	1089	897	785	673	448	22650
D28	Winston Churchill Blvd S of Hwy 413 SB	272	181	181	181	272	544	2265	2265	2265	1113	1113	1113	1113	1113	1113	1113	963	963	963	1113	906	793	680	453	23050
D29	Winston Churchill Blvd N of Hwy 413 NB	269	179	179	179	269	538	931	931	931	1089	1089	1089	1089	1089	1089	1089	2242	2242	2242	1089	897	785	673	448	22650
D30	Winston Churchill Blvd N of Hwy 413 SB	272	181	181	181	272	544	2265	2265	2265	1113	1113	1113	1113	1113	1113	1113	963	963	963	1113	906	793	680	453	23050
D31	Winston Churchill Blvd N of 5 Side Rd NB	156	104	104	104	156	313	874	874	874	806	806	806	806	806	806	806	1304	1304	1304	806	522	456	391	261	15550
D32	Winston Churchill Blvd N of 5 Side Rd SB	168	112	112	112	168	335	1397	1397	1397	747	747	747	747	747	747	747	710	710	710	747	559	489	419	279	15050
D33	5 Side Rd W of Winston Churchill Blvd EB	110	73	73	73	110	220	915	915	915	583	583	583	583	583	583	583	645	645	645	583	366	320	275	183	11150
D34	5 Side Rd W of Winston Churchill Blvd WB	123	82	82	82	123	246	677	677	677	628	628	628	628	628	628	628	1025	1025	1025	628	410	359	308	205	12150
D35	5 Side Rd At Hwy 413 EB	134	89	89	89	134	267	1113	1113	1113	632	632	632	632	632	632	632	637	637	637	632	445	390	334	223	12500
D36	5 Side Rd At Hwy 413 WB	131	87	87	87	131	262	369	369	369	490	490	490	490	490	490	490	1091	1091	1091	490	436	382	327	218	10450
D37	Heritage Rd At Hwy 413 NB	160	107	107	107	160	320	661	661	661	705	705	705	705	705	705	705	1333	1333	1333	705	533	467	400	267	14250
D38	Heritage Rd At Hwy 413 SB	159	106	106	106	159	318	1323	1323	1323	816	816	816	816	816	816	816	881	881	881	816	529	463	397	265	15750
D39	Heritage Rd N of Bovaird Dr NB	95	64	64	64	95	191	524	524	524	485	485	485	485	485	485	485	794	794	794	485	318	278	238	159	9400
D40	Heritage Rd N of Bovaird Dr SB	116	77	77	77	116	232	965	965	965	545	545	545	545	545	545	545	549	549	549	545	386	338	290	193	10800
D41	Heritage Rd S of Mayfield Rd NB	114	76	76	76	114	229	954	954	954	381	381	381	381	381	381	381	237	237	237	381	382	334	286	191	8500
D42	Heritage Rd S of Mayfield Rd SB	90	60	60	60	90	180	264	264	264	340	340	340	340	340	340	340	752	752	752	340	301	263	226	150	7250
D43	Heritage Rd N of Mayfield Rd NB	82	54	54	54	82	163	681	681	681	445	445	445	445	445	445	445	503	503	503	445	272	238	204	136	8450
D44	Heritage Rd N of Mayfield Rd SB	102	68	68	68	102	204	288	288	288	377	377	377	377	377	377	377	849	849	849	377	340	297	255	170	8100
D45	Bovaird Dr W of Heritage Rd EB	229	152	152	152	229	457	1905	1905	1905	1441	1441	1441	1441	1441	1441	1441	1786	1786	1786	1441	762	667	572	381	26350
D46	Bovaird Dr W of Heritage Rd WB	213	142	142	142	213	426	1678	1678	1678	1349	1349	1349	1349	1349	1349	1349	1776	1776	1776	1349	710	622	533	355	24650
D47	Bovaird Dr W of Hwy 413 EB	281	187	187	187	281	562	2090	2090	2090	1718	1718	1718	1718	1718	1718	1718	2342	2342	2342	1718	937	820	703	468	31650
D48	Bovaird Dr W of Hwy 413 WB	117	78	78	78	117	234	976	976	976	543	543	543	543	543	543	543	536	536	536	543	390	342	293	195	10800
D49	Bovaird Dr E of Hwy 413 EB	281	187	187	187	281	562	2090	2090	2090	1718	1718	1718	1718	1718	1718	1718	2342	2342	2342	1718	937	820	703	468	31650
D50	Bovaird Dr E of Hwy 413 WB	256	171	171	171	256	513	2122	2122	2122	1677	1677	1677	1677	1677	1677	1677	2137	2137	2137	1677	855	748	641	427	30400
D51	Wanless Dr W of Heritage Rd EB	103	69	69	69	103	207	861	861	861	657	657	657	657	657	657	657	821	821	821	657	344	301	258	172	12000
D52	Wanless Dr W of Heritage Rd WB	114	76	76	76	114	227	947	947	947	710	710	710	710	710	710	710	872	872	872	710	379	331	284	189	13000
D53	Wanless Dr At Hwy 413 EB	122	81	81	81	122	244	694	694	694	639	639	639	639	639	639	639	1018	1018	1018	639	407	356	305	204	12250
D54	Wanless Dr At Hwy 413 WB	156	104	104	104	156	312	1300	1300	1300	695	695	695	695	695	695	695	661	661	661	695	520	455	390	260	14000
D55	Mayfield Rd W of Heritage Rd EB	219	146	146	146	219	438	1824	1824	1824	1103	1103	1103	1103	1103	1103	1103	1169	1169	1169	1103	730	638	547	365	21400
D56	Mayfield Rd W of Heritage Rd WB	206	137	137	137	206	412	952	952	952	958	958	958	958	958	958	958	1717	1717	1717	958	687	601	515	343	19050
D57	Mayfield Rd E of Heritage Rd EB	222	148	148	148	222	444	1772	1772	1772	1418	1418	1418	1418	1418	1418	1418	1849	1849	1849	1418	740	647	555	370	25850
D58	Mayfield Rd E of Heritage Rd WB	219	146	146	146	219	438	1823	1823	1823	1430	1430	1430	1430	1430	1430	1430	1800	1800	1800	1430	729	638	547	365	25900
D59	Mayfield Rd E of Hwy 413 EB	222	148	148	148	222	444	1772	1772	1772	1418	1418	1418	1418	1418	1418	1418	1849	1849	1849	1418	740	647	555	370	25850

Appendix A.1.1: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Volume Basis

Highway 413

GTA West

RWDI Project#: 1301992

		Hour of Day																								
		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
D60	Mayfield Rd E of Hwy 413 WB	219	146	146	146	219	438	1823	1823	1823	1430	1430	1430	1430	1430	1430	1430	1800	1800	1800	1430	729	638	547	365	25900
D61	Mississauga Rd At Hwy 413 NB	87	58	58	58	87	175	222	222	222	314	314	314	314	314	314	314	729	729	729	314	292	255	219	146	6800
D62	Mississauga Rd At Hwy 413 SB	81	54	54	54	81	162	674	674	674	310	310	310	310	310	310	310	240	240	240	310	270	236	202	135	6550
D63	Creditview Rd At Hwy 413 NB	25	16	16	16	25	49	206	206	206	135	135	135	135	135	135	135	149	149	149	135	82	72	62	41	2550
D64	Creditview Rd At Hwy 413 SB	35	24	24	24	35	71	295	295	295	193	193	193	193	193	193	193	214	214	214	193	118	103	89	59	3650
D65	Chinguacousy Rd S of Hwy 413 NB	110	73	73	73	110	219	913	913	913	697	697	697	697	697	697	697	863	863	863	697	365	320	274	183	12700
D66	Chinguacousy Rd S of Hwy 413 SB	188	126	126	126	188	377	1570	1570	1570	846	846	846	846	846	846	846	809	809	809	846	628	550	471	314	17000
D67	Chinguacousy Rd N of Hwy 413 NB	110	73	73	73	110	219	913	913	913	697	697	697	697	697	697	697	863	863	863	697	365	320	274	183	12700
D68	Chinguacousy Rd N of Hwy 413 SB	188	126	126	126	188	377	1570	1570	1570	846	846	846	846	846	846	846	809	809	809	846	628	550	471	314	17000
D69	Chinguacousy Rd N of Old School Rd NB	49	32	32	32	49	97	406	406	406	301	301	301	301	301	301	301	374	374	374	301	162	142	122	81	5550
D70	Chinguacousy Rd N of Old School Rd SB	70	47	47	47	70	140	583	583	583	327	327	327	327	327	327	327	330	330	330	327	233	204	175	117	6500
D71	Old School Rd W of Chinguacousy Rd EB	116	78	78	78	116	233	779	779	779	668	668	668	668	668	668	668	970	970	970	668	388	340	291	194	12500
D72	Old School Rd W of Chinguacousy Rd WB	96	64	64	64	96	193	804	804	804	624	624	624	624	624	624	624	787	787	787	624	322	281	241	161	11350
D73	Old School Rd At Hwy 413 EB	76	50	50	50	76	151	535	535	535	451	451	451	451	451	451	451	631	631	631	451	252	221	189	126	8350
D74	Old School Rd At Hwy 413 WB	75	50	50	50	75	151	591	591	591	476	476	476	476	476	476	476	628	628	628	476	251	220	188	126	8700
D75	McLaughlin Rd S of Old School Rd NB	59	39	39	39	59	118	492	492	492	275	275	275	275	275	275	275	269	269	269	275	197	172	148	98	5450
D76	McLaughlin Rd S of Old School Rd SB	71	47	47	47	71	142	591	591	591	394	394	394	394	394	394	394	454	454	454	394	236	207	177	118	7450
D77	McLaughlin Rd At Hwy 413 NB	39	26	26	26	39	78	299	299	299	242	242	242	242	242	242	242	326	326	326	242	130	114	98	65	4450
D78	McLaughlin Rd At Hwy 413 SB	87	58	58	58	87	174	724	724	724	329	329	329	329	329	329	329	257	257	257	329	290	253	217	145	7000
D79	Old School Rd W of Hurontario St EB	97	65	65	65	97	194	687	687	687	577	577	577	577	577	577	577	809	809	809	577	324	283	243	162	10700
D80	Old School Rd W of Hurontario St WB	164	109	109	109	164	327	874	874	874	825	825	825	825	825	825	825	1363	1363	1363	825	545	477	409	273	16000
D81	Old School Rd E of Hurontario St EB	90	60	60	60	90	181	737	737	737	587	587	587	587	587	587	587	753	753	753	587	301	264	226	151	10650
D82	Old School Rd E of Hurontario St WB	91	61	61	61	91	182	560	560	560	495	495	495	495	495	495	495	757	757	757	495	303	265	227	151	9400
D83	Hurontario St S of Old School Rd NB	373	249	249	249	373	746	1647	1647	1647	1700	1700	1700	1700	1700	1700	1700	3110	3110	3110	1700	1244	1089	933	622	34000
D84	Hurontario St S of Old School Rd SB	299	199	199	199	299	597	2488	2488	2488	1547	1547	1547	1547	1547	1547	1547	1685	1685	1685	1547	995	871	746	498	29800
D85	Hurontario St S of Hwy 413 NB	290	193	193	193	290	580	1261	1261	1261	1312	1312	1312	1312	1312	1312	1312	2418	2418	2418	1312	967	846	725	484	26300
D86	Hurontario St S of Hwy 413 SB	296	197	197	197	296	592	2468	2468	2468	1430	1430	1430	1430	1430	1430	1430	1465	1465	1465	1430	987	864	740	494	28100
D87	Hurontario St N of Hwy 413 NB	290	193	193	193	290	580	1261	1261	1261	1312	1312	1312	1312	1312	1312	1312	2418	2418	2418	1312	967	846	725	484	26300
D88	Hurontario St N of Hwy 413 SB	296	197	197	197	296	592	2468	2468	2468	1430	1430	1430	1430	1430	1430	1430	1465	1465	1465	1430	987	864	740	494	28100
D89	Kennedy Rd At Hwy 413 NB	37	24	24	24	37	73	305	305	305	223	223	223	223	223	223	223	267	267	267	223	122	107	92	61	4100
D90	Kennedy Rd At Hwy 413 SB	66	44	44	44	66	132	549	549	549	216	216	216	216	216	216	216	132	132	132	216	220	192	165	110	4850
D91	Old School Rd W of Heart Lake Rd EB	101	68	68	68	101	203	844	844	844	554	554	554	554	554	554	554	624	624	624	554	338	295	253	169	10500
D92	Old School Rd W of Heart Lake Rd WB	89	59	59	59	89	178	454	454	454	438	438	438	438	438	438	438	742	742	742	438	297	260	223	148	8550
D93	Old School Rd At Hwy 410 EB	104	69	69	69	104	208	868	868	868	566	566	566	566	566	566	566	635	635	635	566	347	304	260	174	10750
D94	Old School Rd At Hwy 410 WB	90	60	60	60	90	180	581	581	581	503	503	503	503	503	503	503	751	751	751	503	300	263	225	150	9500
E01	Heart Lake Rd S of Mayfield Rd NB	82	54	54	54	82	163	680	680	680	528	528	528	528	528	528	528	666	666	666	528	272	238	204	136	9600
E02	Heart Lake Rd S of Mayfield Rd SB	110	73	73	73	110	219	812	812	812	666	666	666	666	666	666	666	913	913	913	666	365	320	274	183	12300
E03	Heart Lake Rd At Hwy 410 NB	95	63	63	63	95	190	793	793	793	468	468	468	468	468	468	468	488	488	488	468	317	278	238	159	9150
E04	Heart Lake Rd At Hwy 410 SB	101	67	67	67	101	202	758	758	758	619	619	619	619	619	619	619	840	840	840	619	336	294	252	168	11400
E05	Heart Lake Rd At Hwy 413 NB	82	55	55	55	82	164	228	228	228	303	303	303	303	303	303	303	682	682	682	303	273	239	205	136	6500
E06	Heart Lake Rd At Hwy 413 SB	107	72	72	72	107	215	894	894	894	428	428	428	428	428	428	428	360	360	360	428	358	313	268	179	8950
E07	Mayfield Rd W of Heart Lake Rd EB	440	293	293	293	440	879	3663	3663	3663	2454	2454	2454	2454	2454	2454	2454	2820	2820	2820	2454	1465	1282	1099	733	46300
E08	Mayfield Rd W of Heart Lake Rd WB	389	259	259	259	389	777	2487	2487	2487	2168	2168	2168	2168	2168	2168	2168	3238	3238	3238	2168	1295	1133	971	648	40900
E09	Mayfield Rd E of Heart Lake Rd EB	395	263	263	263	395	790	3293	3293	3293	2166	2166	2166	2166	2166	2166	2166	2451	2451	2451	2166	1317	1153	988	659	41050
E10	Mayfield Rd E of Heart Lake Rd WB	325	216	216	216	325	649	2356	2356	2356	1954	1954	1954	1954	1954	1954	1954	2706	2706	2706	1954	1082	947	812	541	36150
E11	Mayfield Rd E of Hwy 410 EB	486	324	324	324	486	971	4047	4047	4047	2754	2754	2754	2754	2754	2754	2754	3201	3201	3201	2754	1619	1416	1214	809	51750
E12	Mayfield Rd E of Hwy 410 WB	500	334	334	334	500	1001	3237	3237	3237	2808	2808	2808	2808	2808	2808	2808	4170	4170	4170	2808	1668	1460	1251	834	52900
E13	Dixie Rd S of Mayfield Rd NB	138	92	92	92	138	275	982	982	982	819	819	819	819	819	819	819	1147	1147	1147	819	459	401	344	229	15200
E14	Dixie Rd S of Mayfield Rd SB	169	113	113	113	169	339	1412	1412	1412	794	794	794	794	794	794	794	793	793	793	794	565	494	424	282	15750
E15	Dixie Rd N of Mayfield Rd NB	99	66	66	66	99	199	758	758	758	620	620	620	620	620	620	620	828	828	828	620	331	290	248	166	11350
E16	Dixie Rd N of Mayfield Rd SB	144	96	96	96	144	289	1203	1203	1203	761	761	761	761	761	761	761	844	844	844	761	481	421	361	241	14600
E17	Dixie Rd At Hwy 413 NB	81	54	54	54	81	162	414	414	414	395	395	395	395	395	395	395	674	674	674	395	270	236	202	135	7750
E18	Dixie Rd At Hwy 413 SB	96	64	64	64	96	193	804	804	804	484	484	484	484	484	484	484	511	511	511	484	322	281	241	161	9400
E19	Countryside Dr At Hwy 410 EB	224	150	150	150	224	449	1870	1870	1870	1338	1338	1338	1338	1338	1338	1338	1600	1600	1600	1338	748	655	561	374	24800
E20	Countryside Dr At Hwy 410 WB	204	136	136	136	204	408	1449	1449	1449	1214	1214	1214	1214	1214	1214	1214	1699	1699	1699	1214	680	595	510	340	22500
E21	Bramalea Rd S of Hwy 413 NB	77	51	51	51	77	153	9	9	9	175	175	175	175	175	175	175	638	638	638	175	255	223	191	128	4600
E22	Bramalea Rd S of Hwy 413 SB	63	42	42	42	63	126	524	524	524	169	169	169	169	169	169	169	47	47	47	169	210	183	157	105	4100
E23	Bramalea Rd N of Hwy 413 NB	77	51	51	51	77	153	9	9	9	175	175	175	175	175	175	175	638	638	638	175	255	223	191	128	4600
E24	Bramalea Rd N of Hwy 413 SB	63	42	42	42	63	126	524	524	524	169	169	169	169	169	169	169	47	47	47	169	210	183	157	105	4100

Appendix A.1.1: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Volume Basis

Highway 413

GTA West

RWDI Project#: 1301992

		Hour of Day																							
		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
E25	Old School Rd E of Bramalea Rd EB	99	66	66	66	99	198	823	823	823	630	630	630	630	630	630	630	789	789	789	630	329	288	247	165	11500
E26	Old School Rd E of Bramalea Rd WB	100	67	67	67	100	201	763	763	763	620	620	620	620	620	620	620	836	836	836	620	334	293	251	167	11400
E27	Old School Rd E of Torbram Road EB	132	88	88	88	132	263	674	674	674	647	647	647	647	647	647	647	1097	1097	1097	647	439	384	329	219	12650
E28	Old School Rd E of Torbram Road WB	84	56	56	56	84	168	550	550	550	472	472	472	472	472	472	472	699	699	699	472	280	245	210	140	8900
E29	Torbram Rd S of Old School Rd NB	76	51	51	51	76	152	80	80	80	214	214	214	214	214	214	214	633	633	633	214	253	222	190	127	5100
E30	Torbram Rd S of Old School Rd SB	81	54	54	54	81	162	675	675	675	290	290	290	290	290	290	290	209	209	209	290	270	236	203	135	6300
E31	Torbram Rd At Hwy 413 NB	91	61	61	61	91	182	218	218	218	321	321	321	321	321	321	321	760	760	760	321	304	266	228	152	7000
E32	Torbram Rd At Hwy 413 SB	104	69	69	69	104	208	867	867	867	363	363	363	363	363	363	363	246	246	246	363	347	303	260	173	7950
E33	Airport Rd S of Old School Rd NB	341	227	227	227	341	682	940	940	940	1258	1258	1258	1258	1258	1258	1258	2841	2841	2841	1258	1136	994	852	568	27000
E34	Airport Rd S of Old School Rd SB	328	219	219	219	328	656	2734	2734	2734	1359	1359	1359	1359	1359	1359	1359	1196	1196	1196	1359	1094	957	820	547	28050
E35	Airport Rd S of Hwy 413 NB	128	85	85	85	128	256	584	584	584	594	594	594	594	594	594	594	1065	1065	1065	594	426	373	320	213	11800
E36	Airport Rd S of Hwy 413 SB	232	155	155	155	232	464	1935	1935	1935	839	839	839	839	839	839	839	608	608	608	839	774	677	581	387	18150
E37	Airport Rd N of Hwy 413 NB	128	85	85	85	128	256	584	584	584	594	594	594	594	594	594	594	1065	1065	1065	594	426	373	320	213	11800
E38	Airport Rd N of Hwy 413 SB	232	155	155	155	232	464	1935	1935	1935	839	839	839	839	839	839	839	608	608	608	839	774	677	581	387	18150
E39	Healey Rd E of Airport Rd EB	117	78	78	78	117	233	748	748	748	654	654	654	654	654	654	654	971	971	971	654	388	340	291	194	12300
E40	Healey Rd E of Airport Rd WB	113	75	75	75	113	226	781	781	781	659	659	659	659	659	659	659	942	942	942	659	377	330	283	188	12300
E41	Healey Rd At Hwy 413 EB	91	61	61	61	91	182	597	597	597	516	516	516	516	516	516	516	760	760	760	516	304	266	228	152	9700
E42	Healey Rd At Hwy 413 WB	99	66	66	66	99	198	763	763	763	619	619	619	619	619	619	619	827	827	827	619	331	289	248	165	11350
E43	Healey Rd E of Centreville Creek Rd EB	73	48	48	48	73	145	605	605	605	443	443	443	443	443	443	443	533	533	533	443	242	212	182	121	8150
E44	Healey Rd E of Centreville Creek Rd WB	100	67	67	67	100	200	554	554	554	513	513	513	513	513	513	513	832	832	832	513	333	291	250	166	9900
E45	Innis Lake Rd S of Healey Rd NB	105	70	70	70	105	211	338	338	338	415	415	415	415	415	415	415	878	878	878	415	351	307	263	176	8700
E46	Innis Lake Rd S of Healey Rd SB	112	75	75	75	112	224	934	934	934	484	484	484	484	484	484	484	446	446	446	484	374	327	280	187	9850
E47	Innis Lake Rd At Hwy 413 NB	112	74	74	74	112	223	268	268	268	390	390	390	390	390	390	390	931	931	931	390	372	326	279	186	8550
E48	Innis Lake Rd At Hwy 413 SB	113	75	75	75	113	225	939	939	939	443	443	443	443	443	443	443	363	363	363	443	376	329	282	188	9300
E49	Centreville Creek Rd At Hwy 413 NB	105	70	70	70	105	210	139	139	139	309	309	309	309	309	309	309	877	877	877	309	351	307	263	175	7250
E50	Centreville Creek Rd At Hwy 413 SB	102	68	68	68	102	203	846	846	846	407	407	407	407	407	407	407	347	347	347	407	338	296	254	169	8500
E51	Centreville Creek Rd N of Healey Rd NB	104	70	70	70	104	209	32	32	32	254	254	254	254	254	254	254	870	870	870	254	348	305	261	174	6450
E52	Centreville Creek Rd N of Healey Rd SB	112	75	75	75	112	224	933	933	933	322	322	322	322	322	322	322	128	128	128	322	373	327	280	187	7600
E53	The Gore Rd S of Hwy 413 NB	135	90	90	90	135	270	322	322	322	475	475	475	475	475	475	475	1124	1124	1124	475	450	393	337	225	10350
E54	The Gore Rd S of Hwy 413 SB	169	113	113	113	169	339	1411	1411	1411	531	531	531	531	531	531	531	280	280	280	531	564	494	423	282	12100
E55	The Gore Rd N of Hwy 413 NB	135	90	90	90	135	270	322	322	322	475	475	475	475	475	475	475	1124	1124	1124	475	450	393	337	225	10350
E56	The Gore Rd N of Hwy 413 SB	169	113	113	113	169	339	1411	1411	1411	531	531	531	531	531	531	531	280	280	280	531	564	494	423	282	12100
E57	Clarkway Dr S of Mayfield Rd NB	92	61	61	61	92	184	765	765	765	592	592	592	592	592	592	592	738	738	738	592	306	268	230	153	10750
E58	Clarkway Dr S of Mayfield Rd SB	93	62	62	62	93	186	650	650	650	545	545	545	545	545	545	545	773	773	773	545	309	271	232	155	10150
E59	Humber Station Rd S of Hwy 413 NB	97	65	65	65	97	194	617	617	617	540	540	540	540	540	540	540	810	810	810	540	324	284	243	162	10200
E60	Humber Station Rd S of Hwy 413 SB	79	53	53	53	79	159	539	539	539	462	462	462	462	462	462	462	662	662	662	462	265	232	199	132	8600
E61	Humber Station Rd N of Hwy 413 NB	97	65	65	65	97	194	617	617	617	540	540	540	540	540	540	540	810	810	810	540	324	284	243	162	10200
E62	Humber Station Rd N of Hwy 413 SB	79	53	53	53	79	159	539	539	539	462	462	462	462	462	462	462	662	662	662	462	265	232	199	132	8600
E63	Mayfield Rd W of Humber Station Rd EB	318	212	212	212	318	636	2652	2652	2652	1791	1791	1791	1791	1791	1791	1791	2064	2064	2064	1791	1061	928	796	530	33700
E64	Mayfield Rd W of Humber Station Rd WB	285	190	190	190	285	571	1970	1970	1970	1665	1665	1665	1665	1665	1665	1665	2379	2379	2379	1665	952	833	714	476	31050
E65	Mayfield Rd At Hwy 413 EB	313	208	208	208	313	625	2605	2605	2605	1799	1799	1799	1799	1799	1799	1799	2104	2104	2104	1799	1042	912	782	521	33650
E66	Mayfield Rd At Hwy 413 WB	298	199	199	199	298	596	2059	2059	2059	1742	1742	1742	1742	1742	1742	1742	2482	2482	2482	1742	993	869	745	496	32450
E67	Mayfield Rd E of Coleraine Dr EB	222	148	148	148	222	445	1097	1097	1097	1074	1074	1074	1074	1074	1074	1074	1854	1854	1854	1074	742	649	556	371	21100
E68	Mayfield Rd E of Coleraine Dr WB	196	131	131	131	196	392	1634	1634	1634	1098	1098	1098	1098	1098	1098	1098	1265	1265	1265	1098	654	572	490	327	20700
E69	Coleraine Dr At Highway 413 NB	169	113	113	113	169	338	983	983	983	889	889	889	889	889	889	889	1407	1407	1407	889	563	492	422	281	17050
E70	Coleraine Dr At Highway 413 SB	199	133	133	133	199	398	1660	1660	1660	998	998	998	998	998	998	998	1055	1055	1055	998	664	581	498	332	19400
E71	Coleraine Dr N of Mayfield Rd NB	204	136	136	136	204	409	1513	1513	1513	1243	1243	1243	1243	1243	1243	1243	1703	1703	1703	1243	681	596	511	341	22950
E72	Coleraine Dr N of Mayfield Rd SB	244	163	163	163	244	489	2036	2036	2036	1329	1329	1329	1329	1329	1329	1329	1501	1501	1501	1329	814	713	611	407	25250
E73	Countryside Dr W of Hwy 50 EB	84	56	56	56	84	167	697	697	697	550	550	550	550	550	550	550	694	694	694	550	279	244	209	139	9950
E74	Countryside Dr W of Hwy 50 WB	118	79	79	79	118	236	982	982	982	575	575	575	575	575	575	575	591	591	591	575	393	344	295	196	11250
E75	Hwy 50 S of Countryside Dr NB	377	251	251	251	377	754	2224	2224	2224	2003	2003	2003	2003	2003	2003	2003	3140	3140	3140	2003	1256	1099	942	628	38300
E76	Hwy 50 S of Countryside Dr SB	468	312	312	312	468	936	3899	3899	3899	2263	2263	2263	2263	2263	2263	2263	2322	2322	2322	2263	1560	1365	1170	780	44450
E77	Hwy 50 At Hwy 413 NB	384	256	256	256	384	768	2322	2322	2322	2071	2071	2071	2071	2071	2071	2071	3202	3202	3202	2071	1281	1121	961	640	39450
E78	Hwy 50 At Hwy 413 SB	470	313	313	313	470	940	3915	3915	3915	2363	2363	2363	2363	2363	2363	2363	2513	2513	2513	2363	1566	1370	1175	783	45900
E79	Hwy 50 N of Cold Creek Rd Realignment NB	378	252	252	252	378	756	2172	2172	2172	1980	1980	1980	1980	1980	1980	1980	3148	3148	3148	1980	1259	1102	944	630	38000
E80	Hwy 50 N of Cold Creek Rd Realignment SB	422	282	282	282	422	845	3520	3520	3520	2201	2201	2201	2201	2201	2201	2201	2399	2399	2399	2201	1408	1232	1056	704	42300
E81	Cold Creek Rd Realignment E of Hwy 50 EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E82	Cold Creek Rd Realignment E of Hwy 50 WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E83	Nashville Rd E of Hwy 50 EB	102	68	68	68	102	204	848	848	848	647	647	647	647	647	647	647	802	802	802	647	339	297	254	170	11800

Appendix A.1.1: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

		Hour of Day																							
		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
E84	Nashville Rd E of Hwy 50 WB	110	73	73	73	110	220	915	915	915	644	644	644	644	644	644	644	768	768	768	644	366	320	275	183	12000
E85	Major Mackenzie Dr W of Hwy 427 EB	477	318	318	318	477	955	3232	3232	3232	2754	2754	2754	2754	2754	2754	2754	3979	3979	3979	2754	1592	1393	1194	796	51500
E86	Major Mackenzie Dr W of Hwy 427 WB	566	377	377	377	566	1131	4713	4713	4713	3187	3187	3187	3187	3187	3187	3187	3677	3677	3677	3187	1885	1650	1414	943	59950
E87	Major Mackenzie Dr E of Hwy 427 EB	404	270	270	270	404	809	3364	3364	3364	2657	2657	2657	2657	2657	2657	2657	3370	3370	3370	2657	1348	1180	1011	674	48100
E88	Major Mackenzie Dr E of Hwy 427 WB	479	319	319	319	479	958	3103	3103	3103	2689	2689	2689	2689	2689	2689	2689	3990	3990	3990	2689	1596	1397	1197	798	50650
E89	Huntington Rd At Hwy 413 NB	58	39	39	39	58	116	484	484	484	374	374	374	374	374	374	374	468	468	468	374	194	169	145	97	6800
E90	Huntington Rd At Hwy 413 SB	78	52	52	52	78	155	646	646	646	359	359	359	359	359	359	359	357	357	357	359	258	226	194	129	7150
E91	Huntington Rd N of Kirby Rd NB	1	1	1	1	1	2	10	10	10	9	9	9	9	9	9	9	10	10	10	9	4	4	3	2	150
E92	Huntington Rd N of Kirby Rd SB	1	1	1	1	1	2	10	10	10	9	9	9	9	9	9	9	10	10	10	9	4	4	3	2	150
E93	Kirby Rd W of Huntington Rd EB	70	47	47	47	70	140	505	505	505	423	423	423	423	423	423	423	584	584	584	423	234	204	175	117	7800
E94	Kirby Rd W of Huntington Rd WB	76	51	51	51	76	152	633	633	633	470	470	470	470	470	470	470	581	581	581	470	253	222	190	127	8650
E95	Hwy 27 S of Hwy 413 NB	262	175	175	175	262	524	967	967	967	1092	1092	1092	1092	1092	1092	1092	2185	2185	2185	1092	874	765	656	437	22500
E96	Hwy 27 S of Hwy 413 SB	276	184	184	184	276	552	2299	2299	2299	1414	1414	1414	1414	1414	1414	1414	1520	1520	1520	1414	920	805	690	460	27300
E97	Hwy 27 N of Hwy 413 NB	262	175	175	175	262	524	967	967	967	1092	1092	1092	1092	1092	1092	1092	2185	2185	2185	1092	874	765	656	437	22500
E98	Hwy 27 N of Hwy 413 SB	276	184	184	184	276	552	2299	2299	2299	1414	1414	1414	1414	1414	1414	1414	1520	1520	1520	1414	920	805	690	460	27300
F01	Kirby Rd E of Hwy 27 EB	139	93	93	93	139	279	950	950	950	810	810	810	810	810	810	810	1161	1161	1161	810	464	406	348	232	15100
F02	Kirby Rd E of Hwy 27 WB	111	74	74	74	111	221	889	889	889	713	713	713	713	713	713	713	921	921	921	713	368	322	276	184	12950
F03	Kipling Ave At Hwy 413 NB	29	20	20	20	29	59	92	92	92	113	113	113	113	113	113	113	245	245	245	113	98	86	74	49	2400
F04	Kipling Ave At Hwy 413 SB	48	32	32	32	48	97	404	404	404	139	139	139	139	139	139	139	61	61	61	139	162	141	121	81	3300
F05	King Vaughan Rd E of Hwy 27 EB	117	78	78	78	117	234	976	976	976	546	546	546	546	546	546	546	543	543	543	546	390	342	293	195	10850
F06	King Vaughan Rd E of Hwy 27 WB	107	71	71	71	107	213	518	518	518	510	510	510	510	510	510	510	888	888	888	510	355	311	266	178	10050
F07	King Vaughan Rd E of Kipling Ave EB	148	99	99	99	148	297	1236	1236	1236	968	968	968	968	968	968	968	1222	1222	1222	968	494	433	371	247	17550
F08	King Vaughan Rd E of Kipling Ave WB	149	100	100	100	149	299	1172	1172	1172	943	943	943	943	943	943	943	1245	1245	1245	943	498	436	374	249	17250
F09	Pine Valley Dr At Hwy 413 NB	59	40	40	40	59	119	495	495	495	382	382	382	382	382	382	382	479	479	479	382	198	173	149	99	6950
F10	Pine Valley Dr At Hwy 413 SB	102	68	68	68	102	205	853	853	853	369	369	369	369	369	369	369	269	269	269	369	341	299	256	171	8000
F13	Pine Valley Dr N of King Vaughan Rd NB	7	4	4	4	7	13	36	36	36	33	33	33	33	33	33	33	56	56	56	33	22	20	17	11	650
F14	Pine Valley Dr N of King Vaughan Rd SB	4	2	2	2	4	7	30	30	30	18	18	18	18	18	18	18	18	18	18	18	12	11	9	6	350
F15	King Vaughan Rd W of Pine Valley Dr EB	172	115	115	115	172	344	1434	1434	1434	971	971	971	971	971	971	971	1119	1119	1119	971	574	502	430	287	18250
F16	King Vaughan Rd W of Pine Valley Dr WB	162	108	108	108	162	325	1005	1005	1005	888	888	888	888	888	888	888	1354	1354	1354	888	542	474	406	271	16850
F17	King Vaughan Rd E of Pine Valley Dr EB	123	82	82	82	123	245	1022	1022	1022	731	731	731	731	731	731	731	873	873	873	731	409	358	307	204	13550
F18	King Vaughan Rd E of Pine Valley Dr WB	113	76	76	76	113	227	902	902	902	725	725	725	725	725	725	725	945	945	945	725	378	331	284	189	13200
F19	Weston Rd N of Kirby Rd NB	124	82	82	82	124	247	1030	1030	1030	593	593	593	593	593	593	593	611	611	611	593	412	361	309	206	11700
F20	Weston Rd N of Kirby Rd SB	125	83	83	83	125	250	796	796	796	698	698	698	698	698	698	698	1042	1042	1042	698	417	365	313	208	13150
F21	Weston Rd N of Hwy 413 NB	70	46	46	46	70	139	581	581	581	264	264	264	264	264	264	264	200	200	200	264	232	203	174	116	5600
F22	Weston Rd N of Hwy 413 SB	59	39	39	39	59	117	276	276	276	274	274	274	274	274	274	274	489	489	489	274	196	171	147	98	5450
F23	Weston Rd N of King Vaughan Rd NB	24	16	16	16	24	49	204	204	204	141	141	141	141	141	141	141	169	169	169	141	82	71	61	41	2650
F24	Weston Rd N of King Vaughan Rd SB	29	19	19	19	29	58	216	216	216	175	175	175	175	175	175	175	242	242	242	175	97	85	73	48	3250
F25	King Vaughan Rd E of Weston Rd EB	111	74	74	74	111	222	927	927	927	599	599	599	599	599	599	599	667	667	667	599	371	324	278	185	11400
F26	King Vaughan Rd E of Weston Rd WB	103	69	69	69	103	207	569	569	569	526	526	526	526	526	526	526	862	862	862	526	345	302	259	172	10200
F27	King Vaughan Rd W of Jane St EB	312	208	208	208	312	625	2576	2576	2576	2042	2042	2042	2042	2042	2042	2042	2603	2603	2603	2042	1041	911	781	521	37000
F28	King Vaughan Rd W of Jane St WB	333	222	222	222	333	666	2773	2773	2773	2036	2036	2036	2036	2036	2036	2036	2476	2476	2476	2036	1109	971	832	555	37500
F29	Kirby Rd At Hwy 400 EB	116	77	77	77	116	232	965	965	965	584	584	584	584	584	584	584	627	627	627	584	386	338	290	193	11350
F30	Kirby Rd At Hwy 400 WB	101	67	67	67	101	202	607	607	607	544	544	544	544	544	544	544	841	841	841	544	336	294	252	168	10350
F31	Steeles Ave W of Ninth Line N EB	314	209	209	209	314	628	2200	2200	2200	1849	1849	1849	1849	1849	1849	1849	2617	2617	2617	1849	1047	916	785	523	34400
F32	Steeles Ave W of Ninth Line N WB	325	217	217	217	325	650	2528	2528	2528	2045	2045	2045	2045	2045	2045	2045	2708	2708	2708	2045	1083	948	812	542	37400
F33	Heritage Rd S of Wanless Dr NB	146	98	98	98	146	293	569	569	569	629	629	629	629	629	629	629	1220	1220	1220	629	488	427	366	244	12800
F34	Heritage Rd S of Wanless Dr SB	175	116	116	116	175	349	1456	1456	1456	735	735	735	735	735	735	735	661	661	661	735	582	510	437	291	15100
F35	Heart Lake Rd S of Old School Rd NB	89	59	59	59	89	177	328	328	328	369	369	369	369	369	369	369	738	738	738	369	295	258	221	148	7600
F36	Heart Lake Rd S of Old School Rd SB	137	91	91	91	137	273	1139	1139	1139	532	532	532	532	532	532	532	429	429	429	532	456	399	342	228	11200
F37	Mayfield Rd E of Dixie Rd EB	360	240	240	240	360	720	2999	2999	2999	2043	2043	2043	2043	2043	2043	2043	2368	2368	2368	2043	1200	1050	900	600	38350
F38	Mayfield Rd E of Dixie Rd WB	338	225	225	225	338	675	2127	2127	2127	1867	1867	1867	1867	1867	1867	1867	2814	2814	2814	1867	1126	985	844	563	35300
F39	Bramalea Rd S of Old School Rd NB	111	74	74	74	111	222	73	73	73	287	287	287	287	287	287	287	923	923	923	287	369	323	277	185	7100
F40	Bramalea Rd S of Old School Rd SB	96	64	64	64	96	193	803	803	803	321	321	321	321	321	321	321	198	198	198	321	321	281	241	161	7150
F41	Old School Rd W of Bramalea Rd EB	105	70	70	70	105	211	878	878	878	589	589	589	589	589	589	589	676	676	676	589	351	307	263	176	11100
F42	Old School Rd W of Bramalea Rd WB	99	66	66	66	99	198	639	639	639	555	555	555	555	555	555	555	823	823	823	555	329	288	247	165	10450
F43	Cold Creek Rd N of Nashville Rd NB	18	12	12	12	18	36	34	34	34	57	57	57	57	57	57	57	150	150	150	57	60	53	45	30	1300
F44	Cold Creek Rd N of Nashville Rd SB	65	44	44	44	65	131	545	545	545	166	166	166	166	166	166	166	37	37	37	166	218	191	164	109	4150
F45	Nashville Rd At Hwy 427 EB	102	68	68	68	102	204	848	848	848	647	647	647	647	647	647	647	802	802	802	647	339	297	254	170	11800
F46	Nashville Rd At Hwy 427 WB	110	73	73	73	110	220	915	915	915	644	644	644	644	644	644	644	768	768	768	644	366	320	275	183	12000

Appendix A.1.1: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
F47	Kirby Rd W of Hwy 27 EB	3	2	2	2	3	6	27	27	27	11	11	11	11	11	11	11	9	9	9	11	11	9	8	5	250
F48	Kirby Rd W of Hwy 27 WB	12	8	8	8	12	24	7	7	7	28	28	28	28	28	28	28	101	101	101	28	40	35	30	20	750
F49	King Vaughan Rd E of Jane St EB	313	209	209	209	313	626	2559	2559	2559	2032	2032	2032	2032	2032	2032	2032	2609	2609	2609	2032	1044	913	783	522	36900
F50	King Vaughan Rd E of Jane St WB	333	222	222	222	333	666	2776	2776	2776	1953	1953	1953	1953	1953	1953	1953	2310	2310	2310	1953	1110	972	833	555	36350
F51	Jane St N of King Vaughan Rd NB	206	137	137	137	206	412	796	796	796	878	878	878	878	878	878	878	1718	1718	1718	878	687	601	515	344	17950
F52	Jane St N of King Vaughan Rd SB	284	189	189	189	284	568	2368	2368	2368	953	953	953	953	953	953	953	602	602	602	953	947	829	710	474	21200
F53	Jane St S of King Vaughan Rd NB	226	151	151	151	226	452	508	508	508	777	777	777	777	777	777	777	1883	1883	1883	777	753	659	565	377	17100
F54	Jane St S of King Vaughan Rd SB	252	168	168	168	252	505	2104	2104	2104	913	913	913	913	913	913	913	662	662	662	913	842	736	631	421	19750
F71	Hwy 400 at King Vaughan Rd N E/W Ramp	166	111	111	111	166	332	1385	1385	1385	608	608	608	608	608	608	608	452	452	452	608	554	485	416	277	13100
F72	Hwy 400 at King Vaughan Rd E S Ramp	94	63	63	63	94	189	787	787	787	487	487	487	487	487	487	487	532	532	532	487	315	275	236	157	9400
F73	Hwy 400 at King Vaughan Rd W S Ramp	10	7	7	7	10	20	22	22	22	35	35	35	35	35	35	35	82	82	82	35	33	29	25	16	750
F74	Hwy 400 at King Vaughan Rd S E/W Ramp	91	61	61	61	91	183	756	756	756	600	600	600	600	600	600	600	761	761	761	600	304	266	228	152	10850
F75	Hwy 400 at King Vaughan Rd E N Ramp	85	57	57	57	85	170	237	237	237	314	314	314	314	314	314	314	709	709	709	314	284	248	213	142	6750
F76	Hwy 400 at King Vaughan Rd W N Ramp	28	19	19	19	28	57	48	48	48	92	92	92	92	92	92	92	236	236	236	92	94	83	71	47	2050
F77	Hwy 427 at Major Mackenzie Dr N E/W Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F78	Hwy 427 at Major Mackenzie Dr E S Ramp	200	134	134	134	200	401	1670	1670	1670	911	911	911	911	911	911	911	887	887	887	911	668	585	501	334	18250
F79	Hwy 427 at Major Mackenzie Dr W S Ramp	283	189	189	189	283	566	2359	2359	2359	1554	1554	1554	1554	1554	1554	1554	1765	1765	1765	1554	944	826	708	472	29450
F80	Hwy 427 at Major Mackenzie Dr S E/W Ramp	494	329	329	329	494	988	2106	2106	2106	2209	2209	2209	2209	2209	2209	2209	4117	4117	4117	2209	1647	1441	1235	823	44450
F81	Hwy 427 at Major Mackenzie Dr E N Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F82	Hwy 427 at Major Mackenzie Dr W N Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F83	Hwy 410 at Mayfield Rd N E/W Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F84	Hwy 410 at Mayfield Rd E S Ramp	88	59	59	59	88	176	671	671	671	549	549	549	549	549	549	549	734	734	734	549	294	257	220	147	10050
F85	Hwy 410 at Mayfield Rd W S Ramp	144	96	96	96	144	289	1204	1204	1204	711	711	711	711	711	711	711	744	744	744	711	482	421	361	241	13900
F86	Hwy 410 at Mayfield Rd S E/W Ramp	121	81	81	81	121	242	759	759	759	665	665	665	665	665	665	665	1007	1007	1007	665	403	352	302	201	12600
F87	Hwy 410 at Mayfield Rd E N Ramp	140	93	93	93	140	279	663	663	663	659	659	659	659	659	659	659	1164	1164	1164	659	466	407	349	233	13050
F88	Hwy 410 at Mayfield Rd W N Ramp	88	59	59	59	88	176	671	671	671	549	549	549	549	549	549	549	734	734	734	549	294	257	220	147	10050
F89	Hwy 410 at Mayfield Rd W E/W Ramp	183	122	122	122	183	366	1523	1523	1523	909	909	909	909	909	909	909	954	954	954	909	609	533	457	305	17700
G01	Hwy 413 at Hwy 401 / Hwy 407 E N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G02	Hwy 413 at Hwy 401 / Hwy 407 N E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G03	Hwy 413 at Hwy 401 / Hwy 407 N S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G04	Hwy 413 at Hwy 401 / Hwy 407 S N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G05	Hwy 413 at Hwy 401 E N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G06	Hwy 407 at Hwy 413 N N Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G07	Hwy 407 at Hwy 401 S E Ramp	86	57	57	57	86	172	718	718	718	288	288	288	288	288	288	288	177	177	177	288	287	251	215	144	6400
G08	Hwy 407 at Hwy 413 N E Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G09	Hwy 407 at Hwy 401 S W Ramp	15	10	10	10	15	31	104	104	104	87	87	87	87	87	87	87	129	129	129	87	52	45	39	26	1650
G10	Hwy 413 / Hwy 407 to Hwy 401 N/S E	86	57	57	57	86	172	718	718	718	288	288	288	288	288	288	288	177	177	177	288	287	251	215	144	6400
H01	Hwy 401 E of Trafalgar Rd EB	1307	872	872	872	1307	2615	10895	10895	10895	7595	7595	7595	7595	7595	7595	7595	8965	8965	8965	7595	4358	3813	3269	2179	141800
H02	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	1307	872	872	872	1307	2615	10895	10895	10895	7595	7595	7595	7595	7595	7595	7595	8965	8965	8965	7595	4358	3813	3269	2179	141800
H03	Hwy 401 W of Winston Churchill Blvd EB	1229	820	820	820	1229	2459	10245	10245	10245	6982	6982	6982	6982	6982	6982	6982	8110	8110	8110	6982	4098	3586	3074	2049	131100
H04	Hwy 401 E of Trafalgar Rd WB	1187	792	792	792	1187	2375	7763	7763	7763	6704	6704	6704	6704	6704	6704	6704	9895	9895	9895	6704	3958	3463	2969	1979	126100
H05	Hwy 401 Collector at Hwy 413 E W Ramp	528	352	352	352	528	1056	3873	3873	3873	3202	3202	3202	3202	3202	3202	3202	4400	4400	4400	3202	1760	1540	1320	880	59100
H06	Hwy 401 Express at Hwy 413 E W Ramp	659	440	440	440	659	1319	3890	3890	3890	3502	3502	3502	3502	3502	3502	3502	5495	5495	5495	3502	2198	1923	1649	1099	67000
H07	Hwy 401 W of Winston Churchill Blvd WB	1229	819	819	819	1229	2458	7785	7785	7785	6807	6807	6807	6807	6807	6807	6807	10240	10240	10240	6807	4096	3584	3072	2048	128700
H08	Hwy 401 at Trafalgar Rd N E Ramp	118	79	79	79	118	236	792	792	792	674	674	674	674	674	674	674	982	982	982	674	393	344	295	196	12650
H09	Hwy 401 at Trafalgar Rd S E Ramp	79	53	53	53	79	158	660	660	660	299	299	299	299	299	299	299	227	227	227	299	264	231	198	132	6350
H10	Hwy 401 at Trafalgar Rd N/S E to Hwy 401 E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H11	Hwy 401 at Trafalgar Rd N/S E to Hwy 413/407 S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H12	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H13	Hwy 401 at Trafalgar Rd N/S E and Hwy 401 E to Hwy 413	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H14	Hwy 401 at Trafalgar Rd N/S E and Hwy 401 E to Hwy 407 S	66	44	44	44	66	133	473	473	473	398	398	398	398	398	398	398	553	553	553	398	221	194	166	111	7350
H15	Hwy 401 at Hwy 413 N W Ramp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H16	Hwy 401 at Trafalgar Rd E N/S Ramp	183	122	122	122	183	366	1523	1523	1523	1068	1068	1068	1068	1068	1068	1068	1261	1261	1261	1068	609	533	457	305	19900

Appendix A.1.1: Traffic Data Hourly Profiles for 2051 Build Scenario, Volume Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
A01	Hwy 413 N of Hwy 401/407 interchange NB	600	400	400	400	600	1201	5003	5003	5003	3785	3785	3785	3785	3785	3785	3785	4686	4686	4686	3785	2001	1751	1501	1001	69200
A02	Hwy 413 N of Hwy 401/407 interchange SB	649	433	433	433	649	1298	5410	5410	5410	3976	3976	3976	3976	3976	3976	3976	4834	4834	4834	3976	2164	1894	1623	1082	73200
A03	Hwy 413 N of Winston Churchill Blvd NB	705	470	470	470	705	1410	5298	5298	5298	4337	4337	4337	4337	4337	4337	4337	5877	5877	5877	4337	2351	2057	1763	1175	79800
A04	Hwy 413 N of Winston Churchill Blvd SB	745	497	497	497	745	1490	6209	6209	6209	4489	4489	4489	4489	4489	4489	4489	5409	5409	5409	4489	2484	2173	1863	1242	83000
A05	Hwy 413 N of Bovaird Dr NB	562	374	374	374	562	1123	4681	4681	4681	3680	3680	3680	3680	3680	3680	3680	4664	4664	4664	3680	1872	1638	1404	936	66700
A06	Hwy 413 N of Bovaird Dr SB	594	396	396	396	594	1187	4925	4925	4925	3892	3892	3892	3892	3892	3892	3892	4947	4947	4947	3892	1979	1731	1484	989	70500
A07	Hwy 413 E of Mayfield Rd EB	558	372	372	372	558	1116	3843	3843	3843	3246	3246	3246	3246	3246	3246	3246	4648	4648	4648	3246	1859	1627	1394	930	60600
A08	Hwy 413 E of Mayfield Rd WB	575	383	383	383	575	1150	4792	4792	4792	3329	3329	3329	3329	3329	3329	3329	3918	3918	3918	3329	1917	1677	1438	958	62200
A09	Hwy 413 E of Chinguacousy Rd EB	591	394	394	394	591	1181	4921	4921	4921	3864	3864	3864	3864	3864	3864	3864	4878	4878	4878	3864	1968	1722	1476	984	70000
A10	Hwy 413 E of Chinguacousy Rd WB	588	392	392	392	588	1175	4896	4896	4896	3680	3680	3680	3680	3680	3680	3680	4542	4542	4542	3680	1958	1714	1469	979	67400
A11	Hwy 413 E of Hurontario St EB	727	485	485	485	727	1454	6058	6058	6058	4178	4178	4178	4178	4178	4178	4178	4889	4889	4889	4178	2423	2120	1817	1212	78200
A12	Hwy 413 E of Hurontario St WB	685	457	457	457	685	1370	4982	4982	4982	4124	4124	4124	4124	4124	4124	4124	5707	5707	5707	4124	2283	1997	1712	1141	76300
A13	Hwy 413 E of Hwy 410 EB	666	444	444	444	666	1333	5553	5553	5553	4308	4308	4308	4308	4308	4308	4308	5413	5413	5413	4308	2221	1944	1666	1111	78300
A14	Hwy 413 E of Hwy 410 WB	677	452	452	452	677	1355	5644	5644	5644	4228	4228	4228	4228	4228	4228	4228	5208	5208	5208	4228	2258	1975	1693	1129	77500
A15	Hwy 413 E of Bramalea Rd EB	628	419	419	419	628	1256	5232	5232	5232	4010	4010	4010	4010	4010	4010	4010	5006	5006	5006	4010	2093	1831	1570	1046	73100
A16	Hwy 413 E of Bramalea Rd WB	601	400	400	400	601	1201	5005	5005	5005	3900	3900	3900	3900	3900	3900	3900	4908	4908	4908	3900	2002	1752	1502	1001	70800
A17	Hwy 413 E of Airport Rd EB	622	415	415	415	622	1245	5186	5186	5186	3833	3833	3833	3833	3833	3833	3833	4688	4688	4688	3833	2074	1815	1556	1037	70500
A18	Hwy 413 E of Airport Rd WB	596	397	397	397	596	1191	4963	4963	4963	3880	3880	3880	3880	3880	3880	3880	4897	4897	4897	3880	1985	1737	1489	993	70400
A19	Hwy 413 E of The Gore Rd EB	577	385	385	385	577	1154	4810	4810	4810	3498	3498	3498	3498	3498	3498	3498	4236	4236	4236	3498	1924	1684	1443	962	64600
A20	Hwy 413 E of The Gore Rd WB	550	366	366	366	550	1099	4484	4484	4484	3561	3561	3561	3561	3561	3561	3561	4580	4580	4580	3561	1832	1603	1374	916	64700
A21	Hwy 413 E of Humber Station Rd EB	700	467	467	467	700	1401	5837	5837	5837	4558	4558	4558	4558	4558	4558	4558	5741	5741	5741	4558	2335	2043	1751	1167	82700
A22	Hwy 413 E of Humber Station Rd WB	688	459	459	459	688	1376	5597	5597	5597	4451	4451	4451	4451	4451	4451	4451	5735	5735	5735	4451	2294	2007	1721	1147	80900
A23	Hwy 413 E of Hwy 427 EB	724	483	483	483	724	1448	4904	4904	4904	4174	4174	4174	4174	4174	4174	4174	6035	6035	6035	4174	2414	2112	1811	1207	78100
A24	Hwy 413 E of Hwy 427 WB	775	517	517	517	775	1550	6458	6458	6458	4259	4259	4259	4259	4259	4259	4259	4845	4845	4845	4259	2583	2260	1937	1292	80700
A25	Hwy 413 E of Hwy 27 EB	601	401	401	401	601	1203	4695	4695	4695	3788	3788	3788	3788	3788	3788	3788	5012	5012	5012	3788	2005	1754	1504	1002	69300
A26	Hwy 413 E of Hwy 27 WB	614	410	410	410	614	1229	5120	5120	5120	3787	3787	3787	3787	3787	3787	3787	4619	4619	4619	3787	2048	1792	1536	1024	69600
A27	Hwy 413 E of Pine Valley Dr EB	601	401	401	401	601	1203	4695	4695	4695	3788	3788	3788	3788	3788	3788	3788	5012	5012	5012	3788	2005	1754	1504	1002	69300
A28	Hwy 413 E of Pine Valley Dr WB	614	410	410	410	614	1229	5120	5120	5120	3787	3787	3787	3787	3787	3787	3787	4619	4619	4619	3787	2048	1792	1536	1024	69600
B05	Hwy 407 S of Hwy 401 NB	571	381	381	381	571	1142	4760	4760	4760	2242	2242	2242	2242	2242	2242	2242	1835	1835	1835	2242	1904	1666	1428	952	47100
B06	Hwy 407 S of Hwy 401 SB	440	293	293	293	440	879	2209	2209	2209	2133	2133	2133	2133	2133	2133	2133	3664	3664	3664	2133	1466	1282	1099	733	41900
B07	Hwy 407 N of Hwy 401 EB	610	407	407	407	610	1221	5086	5086	5086	2573	2573	2573	2573	2573	2573	2573	2312	2312	2312	2573	2034	1780	1526	1017	52800
B08	Hwy 407 N of Hwy 401 WB	488	325	325	325	488	975	2352	2352	2352	2319	2319	2319	2319	2319	2319	2319	4063	4063	4063	2319	1625	1422	1219	813	45800
B09	Hwy 410 S of Mayfield Rd NB	497	331	331	331	497	994	2821	2821	2821	2581	2581	2581	2581	2581	2581	2581	4142	4142	4142	2581	1657	1450	1243	828	49700
B10	Hwy 410 S of Mayfield Rd SB	618	412	412	412	618	1236	5151	5151	5151	3335	3335	3335	3335	3335	3335	3335	3741	3741	3741	3335	2060	1803	1545	1030	63500
B11	Hwy 410 N of Mayfield Rd NB	264	176	176	176	264	528	1090	1090	1090	1161	1161	1161	1161	1161	1161	1161	2201	2201	2201	1161	880	770	660	440	23500
B12	Hwy 410 N of Mayfield Rd SB	291	194	194	194	291	581	2422	2422	2422	1156	1156	1156	1156	1156	1156	1156	971	971	971	1156	969	848	727	484	24200
B13	Hwy 410 W of Mayfield Rd EB	299	199	199	199	299	598	2490	2490	2490	1706	1706	1706	1706	1706	1706	1706	1992	1992	1992	1706	996	872	747	498	32000
B14	Hwy 410 W of Mayfield Rd WB	245	164	164	164	245	491	1251	1251	1251	1199	1199	1199	1199	1199	1199	1199	2044	2044	2044	1199	818	715	613	409	23500
B15	Hwy 427 S of Major Mackenzie Dr NB	649	432	432	432	649	1297	2649	2649	2649	2836	2836	2836	2836	2836	2836	2836	5406	5406	5406	2836	2162	1892	1622	1081	57500
B16	Hwy 427 S of Major Mackenzie Dr SB	597	398	398	398	597	1194	4974	4974	4974	3060	3060	3060	3060	3060	3060	3060	3300	3300	3300	3060	1990	1741	1492	995	59100
B17	Hwy 427 N of Major Mackenzie Dr NB	459	306	306	306	459	918	2087	2087	2087	2116	2116	2116	2116	2116	2116	2116	3825	3825	3825	2116	1530	1339	1148	765	42200
B18	Hwy 427 N of Major Mackenzie Dr SB	467	312	312	312	467	935	3894	3894	3894	2419	2419	2419	2419	2419	2419	2419	2632	2632	2632	2419	1558	1363	1168	779	46600
B19	Hwy 400 N of Teston Rd NB	1257	838	838	838	1257	2514	5361	5361	5361	5621	5621	5621	5621	5621	5621	5621	10473	10473	10473	5621	4189	3666	3142	2095	113100
B20	Hwy 400 N of Teston Rd SB	1228	818	818	818	1228	2455	10231	10231	10231	5613	5613	5613	5613	5613	5613	5613	5482	5482	5482	5613	4092	3581	3069	2046	112200
B21	Hwy 400 S of King Vaughan Rd NB	939	626	626	626	939	1878	3214	3214	3214	3785	3785	3785	3785	3785	3785	3785	7823	7823	7823	3785	3129	2738	2347	1565	78800
B22	Hwy 400 S of King Vaughan Rd SB	958	638	638	638	958	1915	7980	7980	7980	3849	3849	3849	3849	3849	3849	3849	3248	3248	3248	3849	3192	2793	2394	1596	80200
B23	Hwy 400 S of King Rd NB	978	652	652	652	978	1956	3313	3313	3313	3933	3933	3933	3933	3933	3933	3933	8149	8149	8149	3933	3260	2852	2445	1630	81900
B24	Hwy 400 S of King Rd SB	1419	946	946	946	1419	2837	11822	11822	11822	6041	6041	6041	6041	6041	6041	6041	5473	5473	5473	6041	4729	4138	3547	2364	123500
C11	Hwy 413 at Winston Churchill Blvd S E/W	118	78	78	78	118	235	980	980	980	745	745	745	745	745	745	745	924	924	924	745	392	343	294	196	13600
C12	Hwy 413 at Winston Churchill Blvd E N	191	127	127	127	191	381	1052	1052	1052	975	975	975	975	975	975	975	1589	1589	1589	975	636	556	477	318	18850
C13	Hwy 413 at Winston Churchill Blvd W N	64	43	43	43	64	128	390	390	390	346	346	346	346	346	346	346	535	535	535	346	214	187	161	107	6600
C14	Hwy 413 at Winston Churchill Blvd N E/W	188	125	125	125	188	376	1568	1568	1568	1132	1132	1132	1132	1132	1132	1132	1367	1367	1367	1132	627	549	470	314	20950
C15	Hwy 413 at Winston Churchill Blvd E S	83	55	55	55	83	165	383	383	383	385	385	385	385	385	385	385	689	689	689	385	276	241	207	138	7650
C16	Hwy 413 at Winston Churchill Blvd W S	48	32	32	32	48	96	399	399	399	278	278	278	278	278	278	278	330	330	330	278	160	140	120	80	5200
C17	Hwy 413 at Bovaird Dr S E/W	193	129	129	129	193	387	1343	1343	1343	1133	1133	1133	1133	1133	1133	1133	1611	1611	1611	1133	644	564	483	322	21100
C18	Hwy 413 at Bovaird Dr E N	57	38	38	38	57	115	479	479	479	253	253	253	253	253	253	253	233	233	233	253	192	168	144	96	5100
C19	Hwy 413 at Bovaird Dr W N	17	12	12	12	17	35	144	144	144	48	48	48	48	48	48	48	18	18	18	48	58	50	43	29	1150
C20	Hwy 413 at Bovaird Dr N E/W	59	39	39	39	59	118	225	225	225	248	248	248	248	248	248	248	491	491	491	248	196	172	147	98	5100
C21	Hwy 413 at Bovaird Dr E S	128	85	85	85	128	255	944	944	944	779	779	779	779	779	779	779	1063	1063	1063	779	425	372	319	213	14350

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	AADT
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
C22	Hwy 413 at Bovaird Dr W S	80	54	54	54	80	161	669	669	669	327	327	327	327	327	327	327	286	286	286	327	268	234	201	134	6800
C23	Hwy 413 at Mayfield Rd S E/W	167	111	111	111	167	333	1388	1388	1388	1077	1077	1077	1077	1077	1077	1077	1346	1346	1346	1077	555	486	416	278	19550
C24	Hwy 413 at Mayfield Rd E N	24	16	16	16	24	47	197	197	197	151	151	151	151	151	151	151	188	188	188	151	79	69	59	39	2750
C25	Hwy 413 at Mayfield Rd W N	99	66	66	66	99	197	822	822	822	625	625	625	625	625	625	625	772	772	772	625	329	288	247	164	11400
C26	Hwy 413 at Mayfield Rd N E/W	123	82	82	82	123	245	983	983	983	784	784	784	784	784	784	784	1022	1022	1022	784	409	358	307	204	14300
C27	Hwy 413 at Mayfield Rd E S	127	85	85	85	127	254	1058	1058	1058	580	580	580	580	580	580	580	568	568	568	580	423	370	317	212	11600
C28	Hwy 413 at Mayfield Rd W S	119	79	79	79	119	238	459	459	459	506	506	506	506	506	506	506	991	991	991	506	396	347	297	198	10350
C29	Hwy 413 at Chinguacousy Rd W N/S	23	15	15	15	23	45	92	92	92	99	99	99	99	99	99	99	188	188	188	99	75	66	56	38	2000
C30	Hwy 413 at Chinguacousy Rd N E	50	33	33	33	50	100	415	415	415	235	235	235	235	235	235	235	237	237	237	235	166	145	125	83	4650
C31	Hwy 413 at Chinguacousy Rd S E	97	65	65	65	97	194	808	808	808	370	370	370	370	370	370	370	291	291	291	370	323	283	242	162	7850
C32	Hwy 413 at Chinguacousy Rd E N/S	115	77	77	77	115	230	650	650	650	599	599	599	599	599	599	599	958	958	958	599	383	335	287	192	11500
C33	Hwy 413 at Chinguacousy Rd N W	20	13	13	13	20	39	163	163	163	102	102	102	102	102	102	102	108	108	108	102	65	57	49	33	1950
C34	Hwy 413 at Chinguacousy Rd S W	28	19	19	19	28	57	236	236	236	105	105	105	105	105	105	105	78	78	78	105	94	83	71	47	2250
C35	Hwy 413 at Hurontario St W N/S	55	36	36	36	55	109	353	353	353	309	309	309	309	309	309	309	456	456	456	309	182	160	137	91	5800
C36	Hwy 413 at Hurontario St N E	125	83	83	83	125	250	1043	1043	1043	529	529	529	529	529	529	529	477	477	477	529	417	365	313	209	10850
C37	Hwy 413 at Hurontario St S E	42	28	28	28	42	85	353	353	353	203	203	203	203	203	203	203	207	207	207	203	141	124	106	71	4000
C38	Hwy 413 at Hurontario St E N/S	182	121	121	121	182	364	570	570	570	706	706	706	706	706	706	706	1518	1518	1518	706	607	531	455	304	14900
C39	Hwy 413 at Hurontario St N W	43	28	28	28	43	85	355	355	355	236	236	236	236	236	236	236	266	266	266	236	142	124	107	71	4450
C40	Hwy 413 at Hurontario St S W	43	28	28	28	43	85	355	355	355	236	236	236	236	236	236	236	266	266	266	236	142	124	107	71	4450
C41	Hwy 413 at Hwy 410 W S	133	89	89	89	133	266	1108	1108	1108	430	430	430	430	430	430	430	250	250	250	430	443	388	332	222	9700
C42	Hwy 413 at Hwy 410 E S	123	82	82	82	123	246	1023	1023	1023	633	633	633	633	633	633	633	684	684	684	633	409	358	307	205	12200
C43	Hwy 413 at Hwy 410 S E	85	57	57	57	85	170	558	558	558	481	481	481	481	481	481	481	710	710	710	481	284	249	213	142	9050
C44	Hwy 413 at Hwy 410 S W	145	96	96	96	145	289	447	447	447	559	559	559	559	559	559	559	1205	1205	1205	559	482	422	362	241	11800
C45	Hwy 413 at Bramalea Rd W N/S	82	54	54	54	82	163	586	586	586	488	488	488	488	488	488	488	681	681	681	488	272	238	204	136	9050
C46	Hwy 413 at Bramalea Rd N E	52	35	35	35	52	104	434	434	434	289	289	289	289	289	289	289	326	326	326	289	174	152	130	87	5450
C47	Hwy 413 at Bramalea Rd S E	8	6	6	6	8	17	0	0	0	20	20	20	20	20	20	20	69	69	69	20	28	24	21	14	500
C48	Hwy 413 at Bramalea Rd E N/S	61	41	41	41	61	123	432	432	432	364	364	364	364	364	364	364	511	511	511	364	204	179	153	102	6750
C49	Hwy 413 at Bramalea Rd N W	112	75	75	75	112	225	936	936	936	596	596	596	596	596	596	596	660	660	660	596	374	328	281	187	11400
C50	Hwy 413 at Bramalea Rd S W	10	6	6	6	10	19	22	22	22	35	35	35	35	35	35	35	81	81	81	35	32	28	24	16	750
C51	Hwy 413 at Airport Rd W N/S	90	60	60	60	90	180	584	584	584	509	509	509	509	509	509	509	750	750	750	509	300	263	225	150	9550
C52	Hwy 413 at Airport Rd N E	27	18	18	18	27	54	227	227	227	150	150	150	150	150	150	150	173	173	173	150	91	79	68	45	2850
C53	Hwy 413 at Airport Rd S E	35	23	23	23	35	70	291	291	291	153	153	153	153	153	153	153	143	143	143	153	116	102	87	58	3100
C54	Hwy 413 at Airport Rd E N/S	49	33	33	33	49	98	410	410	410	214	214	214	214	214	214	214	199	199	199	214	164	144	123	82	4350
C55	Hwy 413 at Airport Rd N W	74	49	49	49	74	148	615	615	615	197	197	197	197	197	197	197	55	55	55	197	246	215	185	123	4800
C56	Hwy 413 at Airport Rd S W	13	9	9	9	13	26	19	19	19	38	38	38	38	38	38	38	108	108	108	38	43	38	32	22	900
C57	Hwy 413 at The Gore Rd W N/S	72	48	48	48	72	144	602	602	602	442	442	442	442	442	442	442	541	541	541	442	241	211	181	120	8150
C58	Hwy 413 at The Gore Rd N/S E	18	12	12	12	18	37	154	154	154	96	96	96	96	96	96	96	105	105	105	96	62	54	46	31	1850
C59	Hwy 413 at The Gore Rd E N/S	39	26	26	26	39	77	146	146	146	164	164	164	164	164	164	164	322	322	322	164	129	113	97	64	3350
C60	Hwy 413 at The Gore Rd N/S W	82	55	55	55	82	165	607	607	607	502	502	502	502	502	502	502	686	686	686	502	274	240	206	137	9250
C61	Hwy 413 at Humber Station Rd W N/S	82	55	55	55	82	164	682	682	682	375	375	375	375	375	375	375	370	370	370	375	273	239	205	136	7500
C62	Hwy 413 at Humber Station Rd N E	117	78	78	78	117	234	583	583	583	569	569	569	569	569	569	569	975	975	975	569	390	341	293	195	11150
C63	Hwy 413 at Humber Station Rd S E	133	89	89	89	133	266	1110	1110	1110	811	811	811	811	811	811	811	981	981	981	811	444	389	333	222	14950
C64	Hwy 413 at Humber Station Rd E N/S	184	122	122	122	184	367	1449	1449	1449	1169	1169	1169	1169	1169	1169	1169	1530	1530	1530	1169	612	536	459	306	21300
C65	Hwy 413 at Humber Station Rd N W	4	2	2	2	4	7	30	30	30	18	18	18	18	18	18	18	18	18	18	18	12	11	9	6	350
C66	Hwy 413 at Humber Station Rd S W	44	30	30	30	44	89	228	228	228	216	216	216	216	216	216	216	370	370	370	216	148	130	111	74	4250
C67	Hwy 413 at Hwy 427 W S	178	119	119	119	178	357	1486	1486	1486	1161	1161	1161	1161	1161	1161	1161	1458	1458	1458	1161	594	520	446	297	21050
C68	Hwy 413 at Hwy 427 E S	278	186	186	186	278	557	2320	2320	2320	1238	1238	1238	1238	1238	1238	1238	1173	1173	1173	1238	928	812	696	464	24950
C69	Hwy 413 at Hwy 427 S E	218	145	145	145	218	436	612	612	612	811	811	811	811	811	811	811	1816	1816	1816	811	726	636	545	363	17350
C70	Hwy 413 at Hwy 427 S W	245	163	163	163	245	490	1472	1472	1472	1318	1318	1318	1318	1318	1318	1318	2040	2040	2040	1318	816	714	612	408	25100
C71	Hwy 413 at Hwy 27 W N/S	142	95	95	95	142	285	799	799	799	739	739	739	739	739	739	739	1186	1186	1186	739	474	415	356	237	14200
C72	Hwy 413 at Hwy 27 N/S E	50	33	33	33	50	100	418	418	418	162	162	162	162	162	162	162	93	93	93	162	167	146	125	84	3650
C73	Hwy 413 at Hwy 27 E N/S	59	40	40	40	59	119	244	244	244	263	263	263	263	263	263	263	495	495	495	263	198	173	149	99	5300
C74	Hwy 413 at Hwy 27 N/S W	310	206	206	206	310	619	2581	2581	2581	1376	1376	1376	1376	1376	1376	1376	1305	1305	1305	1376	1032	903	774	516	27750
C81	Hwy 413 at Weston Rd W N/S	144	96	96	96	144	288	1198	1198	1198	945	945	945	945	945	945	945	1195	1195	1195	945	479	419	359	240	17100
C82	Hwy 413 at Weston Rd N/S W	174	116	116	116	174	348	1448	1448	1448	942	942	942	942	942	942	942	1057	1057	1057	942	579	507	434	290	17900
C83	Hwy 413 at Hwy 400 W N	360	240	240	240	360	720	2210	2210	2210	1957	1957	1957	1957	1957	1957	1957	3001	3001	3001	1957	1200	1050	900	600	37200
C84	Hwy 413 at Hwy 400 W S	155	104	104	104	155	311	1295	1295	1295	820	820	820	820	820	820	820	902	902	902	820	518	453	389	259	15700
C85	Hwy 413 at Hwy 400 N W	193	129	129	129	193	386	945	945	945	927	927	927	927	927	927	927	1609	1609	1609	927	644	563	483	322	18250
C86	Hwy 413 at Hwy 400 S W	345	230	230	230	345	690	2877	2877	2877	1753	1753	1753	1753	1753	1753	1753	1877	1877	1877	1753	1151	1007	863	575	33950
D01	Trafalgar Rd S of Hwy 401 NB	428	285	285	285	428	856	3567	3567	3567	2265	2265	2265	2265	2265	2265	2265	2500	2500	2500	2265	1427	1248	1070	713	43350
D02	Trafalgar Rd S of Hwy 401 SB	420	280	280	280	420	840	2581	2581	2581	2284	2284	2284	2284	2284	2284	2284	3498	3498	3498	2284	1399	1224	1049	700	43400
D03	Trafalgar Rd N of Hwy 401 NB	471	314	314	314	471	942	3926	3926	3926	2454	2454	2454	2454	2454	2454	2454	2684	2684	2684	2454	1570	1374	1178	785	47200
D04	Trafalgar Rd N of Hwy 401 SB	442	295	295	295	442	884	2282	2282	2282	2182	2182	2182	2182	2182	2182	2182	3682	3682	3682	2182	1473	1289	1105	736	42600
D05	Steeles Ave E of Trafalgar Rd EB	421	281	281	281	421	842	3510	3510	3510	2307	2307	2307	2307	2307	2307	2307	2616	2616	2616	2307	1404	1229	1053	702	43750

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
D06	Steeles Ave E of Trafalgar Rd WB	500	333	333	333	500	999	2755	2755	2755	2555	2555	2555	2555	2555	2555	2555	4164	4164	4164	2555	1666	1457	1249	833	49400
D07	Steeles Ave At Hwy 413 EB	447	298	298	298	447	894	3726	3726	3726	2661	2661	2661	2661	2661	2661	2661	3182	3182	3182	2661	1490	1304	1118	745	49350
D08	Steeles Ave At Hwy 413 WB	420	280	280	280	420	840	2687	2687	2687	2343	2343	2343	2343	2343	2343	2343	3500	3500	3500	2343	1400	1225	1050	700	44200
D09	Steeles Ave E of Ninth Line S EB	364	243	243	243	364	728	3032	3032	3032	1996	1996	1996	1996	1996	1996	1996	2270	2270	2270	1996	1213	1061	910	606	37850
D10	Steeles Ave E of Ninth Line S WB	395	263	263	263	395	790	2066	2066	2066	1962	1962	1962	1962	1962	1962	1962	3291	3291	3291	1962	1316	1152	987	658	38250
D11	Steeles Ave E of Tenth Line N EB	469	312	312	312	469	937	3905	3905	3905	2218	2218	2218	2218	2218	2218	2218	2233	2233	2233	2218	1562	1367	1172	781	43850
D12	Steeles Ave E of Tenth Line N WB	447	298	298	298	447	893	1955	1955	1955	2024	2024	2024	2024	2024	2024	2024	3721	3721	3721	2024	1488	1302	1116	744	40550
D13	Ninth Line N N of Steeles Ave NB	160	107	107	107	160	320	629	629	629	685	685	685	685	685	685	685	1334	1334	1334	685	534	467	400	267	14000
D14	Ninth Line N N of Steeles Ave SB	221	148	148	148	221	443	1844	1844	1844	977	977	977	977	977	977	977	924	924	924	977	738	645	553	369	19750
D15	Ninth Line S S of Steeles Ave NB	280	186	186	186	280	559	2331	2331	2331	1391	1391	1391	1391	1391	1391	1391	1462	1462	1462	1391	932	816	699	466	27100
D16	Ninth Line S S of Steeles Ave SB	278	185	185	185	278	556	2077	2077	2077	1707	1707	1707	1707	1707	1707	1707	2316	2316	2316	1707	926	811	695	463	31400
D17	Tenth Line At Hwy 413 NB	105	70	70	70	105	210	198	198	198	338	338	338	338	338	338	338	876	876	876	338	350	307	263	175	7650
D18	Tenth Line At Hwy 413 SB	146	97	97	97	146	292	1217	1217	1217	537	537	537	537	537	537	537	401	401	401	537	487	426	365	243	11550
D19	Derry Rd W of Hwy 407 EB	503	335	335	335	503	1006	4191	4191	4191	2647	2647	2647	2647	2647	2647	2647	2914	2914	2914	2647	1676	1467	1257	838	50750
D20	Derry Rd W of Hwy 407 WB	423	282	282	282	423	846	2231	2231	2231	2112	2112	2112	2112	2112	2112	2112	3524	3524	3524	2112	1410	1233	1057	705	41100
D21	Derry Rd E of Hwy 407 EB	386	258	258	258	386	773	3219	3219	3219	2249	2249	2249	2249	2249	2249	2249	2654	2654	2654	2249	1288	1127	966	644	41950
D22	Derry Rd E of Hwy 407 WB	327	218	218	218	327	653	2375	2375	2375	1968	1968	1968	1968	1968	1968	1968	2722	2722	2722	1968	1089	953	817	544	36400
D23	Winston Churchill Blvd S of Hwy 401 NB	472	315	315	315	472	945	3937	3937	3937	2256	2256	2256	2256	2256	2256	2256	2296	2296	2296	2256	1575	1378	1181	787	44500
D24	Winston Churchill Blvd S of Hwy 401 SB	380	254	254	254	380	761	2024	2024	2024	1910	1910	1910	1910	1910	1910	1910	3169	3169	3169	1910	1268	1109	951	634	37100
D25	Winston Churchill Blvd N of Hwy 401 NB	403	269	269	269	403	806	3360	3360	3360	2127	2127	2127	2127	2127	2127	2127	2346	2346	2346	2127	1344	1176	1008	672	40750
D26	Winston Churchill Blvd N of Hwy 401 SB	365	243	243	243	365	730	2358	2358	2358	2046	2046	2046	2046	2046	2046	2046	3040	3040	3040	2046	1216	1064	912	608	38550
D27	Winston Churchill Blvd S of Hwy 413 NB	441	294	294	294	441	882	1652	1652	1652	1852	1852	1852	1852	1852	1852	1852	3677	3677	3677	1852	1471	1287	1103	735	38050
D28	Winston Churchill Blvd S of Hwy 413 SB	389	259	259	259	389	777	3239	3239	3239	1830	1830	1830	1830	1830	1830	1830	1838	1838	1838	1830	1296	1134	972	648	36250
D29	Winston Churchill Blvd N of Hwy 413 NB	334	223	223	223	334	668	1468	1468	1468	1514	1514	1514	1514	1514	1514	1514	2784	2784	2784	1514	1114	974	835	557	30350
D30	Winston Churchill Blvd N of Hwy 413 SB	307	205	205	205	307	615	2561	2561	2561	1490	1490	1490	1490	1490	1490	1490	1535	1535	1535	1490	1024	896	768	512	29250
D31	Winston Churchill Blvd N of 5 Side Rd NB	148	99	99	99	148	297	617	617	617	656	656	656	656	656	656	656	1237	1237	1237	656	495	433	371	247	13250
D32	Winston Churchill Blvd N of 5 Side Rd SB	141	94	94	94	141	281	1171	1171	1171	644	644	644	644	644	644	644	626	626	626	644	468	410	351	234	12850
D33	5 Side Rd W of Winston Churchill Blvd EB	110	73	73	73	110	220	918	918	918	640	640	640	640	640	640	640	755	755	755	640	367	321	275	184	11950
D34	5 Side Rd W of Winston Churchill Blvd WB	125	83	83	83	125	250	835	835	835	714	714	714	714	714	714	714	1043	1043	1043	714	417	365	313	209	13400
D35	5 Side Rd At Hwy 413 EB	153	102	102	102	153	307	1279	1279	1279	790	790	790	790	790	790	790	858	858	858	790	512	448	384	256	15250
D36	5 Side Rd At Hwy 413 WB	161	107	107	107	161	321	531	531	531	638	638	638	638	638	638	638	1338	1338	1338	638	535	468	401	268	13350
D37	Heritage Rd At Hwy 413 NB	100	67	67	67	100	200	281	281	281	371	371	371	371	371	371	371	833	833	833	371	333	292	250	167	7950
D38	Heritage Rd At Hwy 413 SB	98	66	66	66	98	197	820	820	820	439	439	439	439	439	439	439	420	420	420	439	328	287	246	164	8850
D39	Heritage Rd N of Bovaird Dr NB	104	69	69	69	104	207	427	427	427	454	454	454	454	454	454	454	863	863	863	454	345	302	259	173	9200
D40	Heritage Rd N of Bovaird Dr SB	122	81	81	81	122	244	1016	1016	1016	570	570	570	570	570	570	570	563	563	563	570	406	356	305	203	11300
D41	Heritage Rd S of Mayfield Rd NB	48	32	32	32	48	95	396	396	396	235	235	235	235	235	235	235	250	250	250	235	158	139	119	79	4600
D42	Heritage Rd S of Mayfield Rd SB	63	42	42	42	63	125	521	521	521	356	356	356	356	356	356	356	420	420	420	356	208	182	156	104	6700
D43	Heritage Rd N of Mayfield Rd NB	96	64	64	64	96	192	800	800	800	433	433	433	433	433	433	433	419	419	419	433	320	280	240	160	8700
D44	Heritage Rd N of Mayfield Rd SB	84	56	56	56	84	167	590	590	590	496	496	496	496	496	496	496	696	696	696	496	278	244	209	139	9200
D45	Bovaird Dr W of Heritage Rd EB	207	138	138	138	207	415	1729	1729	1729	1272	1272	1272	1272	1272	1272	1272	1544	1544	1544	1272	692	605	519	346	23400
D46	Bovaird Dr W of Heritage Rd WB	181	121	121	121	181	362	1509	1509	1509	1173	1173	1173	1173	1173	1173	1173	1473	1473	1473	1173	604	528	453	302	21300
D47	Bovaird Dr W of Hwy 413 EB	288	192	192	192	288	576	2400	2400	2400	1750	1750	1750	1750	1750	1750	1750	2124	2124	2124	1750	960	840	720	480	32300
D48	Bovaird Dr W of Hwy 413 WB	130	87	87	87	130	260	1084	1084	1084	589	589	589	589	589	589	589	568	568	568	589	434	379	325	217	11800
D49	Bovaird Dr E of Hwy 413 EB	390	260	260	260	390	780	2600	2600	2600	2232	2232	2232	2232	2232	2232	2232	3249	3249	3249	2232	1300	1137	975	650	41800
D50	Bovaird Dr E of Hwy 413 WB	366	244	244	244	366	732	3052	3052	3052	2084	2084	2084	2084	2084	2084	2084	2421	2421	2421	2084	1221	1068	916	610	39100
D51	Wanless Dr W of Heritage Rd EB	99	66	66	66	99	198	645	645	645	559	559	559	559	559	559	559	824	824	824	559	330	288	247	165	10500
D52	Wanless Dr W of Heritage Rd WB	91	61	61	61	91	183	761	761	761	552	552	552	552	552	552	552	668	668	668	552	304	266	228	152	10200
D53	Wanless Dr At Hwy 413 EB	114	76	76	76	114	227	946	946	946	656	656	656	656	656	656	656	767	767	767	656	378	331	284	189	12250
D54	Wanless Dr At Hwy 413 WB	135	90	90	90	135	269	1122	1122	1122	547	547	547	547	547	547	547	466	466	466	547	449	393	337	224	11350
D55	Mayfield Rd W of Heritage Rd EB	238	159	159	159	238	476	1982	1982	1982	1096	1096	1096	1096	1096	1096	1096	1078	1078	1078	1096	793	694	595	396	21850
D56	Mayfield Rd W of Heritage Rd WB	205	137	137	137	205	410	1060	1060	1060	1011	1011	1011	1011	1011	1011	1011	1707	1707	1707	1011	683	597	512	341	19750
D57	Mayfield Rd E of Heritage Rd EB	399	266	266	266	399	798	2397	2397	2397	2147	2147	2147	2147	2147	2147	2147	3326	3326	3326	2147	1330	1164	998	665	40900
D58	Mayfield Rd E of Heritage Rd WB	385	257	257	257	385	771	3211	3211	3211	2319	2319	2319	2319	2319	2319	2319	2797	2797	2797	2319	1284	1124	963	642	42900
D59	Mayfield Rd E of Hwy 413 EB	161	107	107	107	161	322	1309	1309	1309	1044	1044	1044	1044	1044	1044	1044	1343	1343	1343	1044	537	470	403	269	18950
D60	Mayfield Rd E of Hwy 413 WB	188	125	125	125	188	375	1413	1413	1413	1155	1155	1155	1155	1155	1155	1155	1563	1563	1563	1155	625	547	469	313	21250
D61	Mississauga Rd At Hwy 413 NB	65	43	43	43	65	129	172	172	172	233	233	233	233	233	233	233	538	538	538	233	215	188	161	108	5050
D62	Mississauga Rd At Hwy 413 SB	96	64	64	64	96	191	797	797	797	354	354	354	354	354	354	354	269	269	269	354	319	279	239	159	7600
D63	Creditview Rd At Hwy 413 NB	25	17	17	17	25	50	210	210	210	60	60	60	60	60	60	60	9	9	9	60	84	74	63	42	1550
D64	Creditview Rd At Hwy 413 SB	17	11	11	11	17	33	98	98	98	90	90	90	90	90	90	90	138	138	138	90	55	48	41	28	1700
D65	Chinguacousy Rd S of Hwy 413 NB	129	86	86	86	129	258	1076	1076	1076	615	615	615	615	615	615	615	628	628	628	615	430	377	323	215	12150
D66	Chinguacousy Rd S of Hwy 413 SB	93	62	62	62	93	186	684	684	684	567	567	567	567	567	567	567	777	777	777	567	311	272	233	155	10450
D67	Chinguacousy Rd N of Hwy 413 NB	100	67	67	67	100	200	512	512	512	489	489	489	489	489	489	489	835	835	835	489	334	292	251	167	9600
D68	Chinguacousy Rd N of Hwy 413 SB	145	97	97	97	145	291	1212	1212	1212	660	660	660	660	660	660	660	633	633	633	660	485	424	364	242	13200
D69	Chinguacousy Rd N of Old School Rd NB	88	59	59	59	88	176	159	159	159	279	279	279	279	279	279	279	732	732	732	279	293	256	220	146	6350

		Hour of Day																								
		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
D70	Chinguacousy Rd N of Old School Rd SB	80	53	53	53	80	160	668	668	668	373	373	373	373	373	373	373	366	366	366	373	267	234	200	134	7400
D71	Old School Rd W of Chinguacousy Rd EB	84	56	56	56	84	167	682	682	682	542	542	542	542	542	542	542	697	697	697	542	279	244	209	139	9850
D72	Old School Rd W of Chinguacousy Rd WB	87	58	58	58	87	173	611	611	611	510	510	510	510	510	510	510	722	722	722	510	289	253	217	144	9500
D73	Old School Rd At Hwy 413 EB	56	38	38	38	56	113	353	353	353	313	313	313	313	313	313	313	470	470	470	313	188	165	141	94	5900
D74	Old School Rd At Hwy 413 WB	75	50	50	50	75	150	627	627	627	440	440	440	440	440	440	440	522	522	522	440	251	219	188	125	8200
D75	McLaughlin Rd S of Old School Rd NB	51	34	34	34	51	102	421	421	421	335	335	335	335	335	335	335	424	424	424	335	170	148	127	85	6050
D76	McLaughlin Rd S of Old School Rd SB	48	32	32	32	48	96	398	398	398	254	254	254	254	254	254	254	281	281	281	254	159	139	119	80	4850
D77	McLaughlin Rd At Hwy 413 NB	68	45	45	45	68	136	294	294	294	307	307	307	307	307	307	307	566	566	566	307	226	198	170	113	6150
D78	McLaughlin Rd At Hwy 413 SB	76	51	51	51	76	152	634	634	634	287	287	287	287	287	287	287	218	218	218	287	254	222	190	127	6100
D79	Old School Rd W of Hurontario St EB	87	58	58	58	87	174	559	559	559	489	489	489	489	489	489	489	726	726	726	489	290	254	218	145	9200
D80	Old School Rd W of Hurontario St WB	161	107	107	107	161	321	779	779	779	770	770	770	770	770	770	770	1339	1339	1339	770	536	469	402	268	15150
D81	Old School Rd E of Hurontario St EB	156	104	104	104	156	313	1304	1304	1304	629	629	629	629	629	629	629	530	530	530	629	522	456	391	261	13100
D82	Old School Rd E of Hurontario St WB	115	77	77	77	115	230	491	491	491	514	514	514	514	514	514	514	958	958	958	514	383	335	287	192	10350
D83	Hurontario St S of Old School Rd NB	187	125	125	125	187	374	1330	1330	1330	1115	1115	1115	1115	1115	1115	1115	1558	1558	1558	1115	623	545	467	312	20650
D84	Hurontario St S of Old School Rd SB	156	104	104	104	156	312	1147	1147	1147	944	944	944	944	944	944	944	1299	1299	1299	944	520	455	390	260	17450
D85	Hurontario St S of Hwy 413 NB	140	93	93	93	140	279	1163	1163	1163	768	768	768	768	768	768	768	875	875	875	768	465	407	349	233	14550
D86	Hurontario St S of Hwy 413 SB	172	115	115	115	172	344	1434	1434	1434	949	949	949	949	949	949	949	1077	1077	1077	949	574	502	430	287	17950
D87	Hurontario St N of Hwy 413 NB	288	192	192	192	288	576	1213	1213	1213	1280	1280	1280	1280	1280	1280	1280	2399	2399	2399	1280	960	840	720	480	25800
D88	Hurontario St N of Hwy 413 SB	302	201	201	201	302	603	2513	2513	2513	1443	1443	1443	1443	1443	1443	1443	1471	1471	1471	1443	1005	880	754	503	28450
D89	Kennedy Rd At Hwy 413 NB	44	29	29	29	44	87	363	363	363	258	258	258	258	258	258	258	311	311	311	258	145	127	109	73	4800
D90	Kennedy Rd At Hwy 413 SB	66	44	44	44	66	133	554	554	554	249	249	249	249	249	249	249	186	186	186	249	222	194	166	111	5300
D91	Old School Rd W of Heart Lake Rd EB	93	62	62	62	93	187	778	778	778	315	315	315	315	315	315	315	204	204	204	315	311	272	233	156	7000
D92	Old School Rd W of Heart Lake Rd WB	85	57	57	57	85	170	267	267	267	334	334	334	334	334	334	334	710	710	710	334	284	249	213	142	7000
D93	Old School Rd At Hwy 410 EB	83	56	56	56	83	167	694	694	694	286	286	286	286	286	286	286	187	187	187	286	278	243	208	139	6300
D94	Old School Rd At Hwy 410 WB	75	50	50	50	75	150	239	239	239	296	296	296	296	296	296	296	627	627	627	296	251	219	188	125	6200
E01	Heart Lake Rd S of Mayfield Rd NB	75	50	50	50	75	151	459	459	459	406	406	406	406	406	406	406	628	628	628	406	251	220	188	126	7750
E02	Heart Lake Rd S of Mayfield Rd SB	89	59	59	59	89	178	675	675	675	548	548	548	548	548	548	548	742	742	742	548	297	260	223	148	10100
E03	Heart Lake Rd At Hwy 410 NB	76	51	51	51	76	153	636	636	636	332	332	332	332	332	332	332	311	311	311	332	254	223	191	127	6750
E04	Heart Lake Rd At Hwy 410 SB	61	41	41	41	61	122	442	442	442	369	369	369	369	369	369	369	508	508	508	369	203	178	152	102	6800
E05	Heart Lake Rd At Hwy 413 NB	63	42	42	42	63	126	308	308	308	303	303	303	303	303	303	303	523	523	523	303	209	183	157	105	5950
E06	Heart Lake Rd At Hwy 413 SB	107	71	71	71	107	214	892	892	892	336	336	336	336	336	336	336	176	176	176	336	357	312	268	178	7650
E07	Mayfield Rd W of Heart Lake Rd EB	398	265	265	265	398	796	3317	3317	3317	2276	2276	2276	2276	2276	2276	2276	2652	2652	2652	2276	1327	1161	995	663	42650
E08	Mayfield Rd W of Heart Lake Rd WB	361	240	240	240	361	721	2243	2243	2243	1979	1979	1979	1979	1979	1979	1979	3006	3006	3006	1979	1202	1052	902	601	37500
E09	Mayfield Rd E of Heart Lake Rd EB	381	254	254	254	381	761	3172	3172	3172	2107	2107	2107	2107	2107	2107	2107	2409	2409	2409	2107	1269	1110	952	634	39850
E10	Mayfield Rd E of Heart Lake Rd WB	310	206	206	206	310	619	2480	2480	2480	1986	1986	1986	1986	1986	1986	1986	2580	2580	2580	1986	1032	903	774	516	36150
E11	Mayfield Rd E of Hwy 410 EB	409	273	273	273	409	818	3407	3407	3407	2254	2254	2254	2254	2254	2254	2254	2563	2563	2563	2254	1363	1192	1022	681	42650
E12	Mayfield Rd E of Hwy 410 WB	421	280	280	280	421	841	2676	2676	2676	2337	2337	2337	2337	2337	2337	2337	3506	3506	3506	2337	1402	1227	1052	701	44150
E13	Dixie Rd S of Mayfield Rd NB	147	98	98	98	147	294	1081	1081	1081	890	890	890	890	890	890	890	1224	1224	1224	890	490	428	367	245	16450
E14	Dixie Rd S of Mayfield Rd SB	190	127	127	127	190	381	1586	1586	1586	919	919	919	919	919	919	919	938	938	938	919	634	555	476	317	18050
E15	Dixie Rd N of Mayfield Rd NB	103	69	69	69	103	206	525	525	525	506	506	506	506	506	506	506	860	860	860	506	344	301	258	172	9900
E16	Dixie Rd N of Mayfield Rd SB	120	80	80	80	120	240	1000	1000	1000	606	606	606	606	606	606	606	645	645	645	606	400	350	300	200	11750
E17	Dixie Rd At Hwy 413 NB	72	48	48	48	72	144	283	283	283	307	307	307	307	307	307	307	602	602	602	307	241	211	181	120	6300
E18	Dixie Rd At Hwy 413 SB	85	57	57	57	85	171	712	712	712	361	361	361	361	361	361	361	324	324	324	361	285	249	214	142	7400
E19	Countryside Dr At Hwy 410 EB	342	228	228	228	342	683	2846	2846	2846	1547	1547	1547	1547	1547	1547	1547	1492	1492	1492	1547	1138	996	854	569	31000
E20	Countryside Dr At Hwy 410 WB	214	143	143	143	214	429	1787	1787	1787	1219	1219	1219	1219	1219	1219	1219	1421	1421	1421	1219	715	625	536	357	22900
E21	Bramalea Rd S of Hwy 413 NB	41	27	27	27	41	81	28	28	28	105	105	105	105	105	105	105	338	338	338	105	135	118	101	68	2600
E22	Bramalea Rd S of Hwy 413 SB	42	28	28	28	42	85	353	353	353	120	120	120	120	120	120	120	44	44	44	120	141	124	106	71	2850
E23	Bramalea Rd N of Hwy 413 NB	172	115	115	115	172	345	594	594	594	698	698	698	698	698	698	698	1436	1436	1436	698	574	503	431	287	14500
E24	Bramalea Rd N of Hwy 413 SB	184	122	122	122	184	367	1531	1531	1531	885	885	885	885	885	885	885	903	903	903	885	612	536	459	306	17400
E25	Old School Rd E of Bramalea Rd EB	86	57	57	57	86	172	633	633	633	523	523	523	523	523	523	523	717	717	717	523	287	251	215	143	9650
E26	Old School Rd E of Bramalea Rd WB	116	77	77	77	116	231	963	963	963	651	651	651	651	651	651	651	753	753	753	651	385	337	289	193	12250
E27	Old School Rd E of Torbram Road EB	71	47	47	47	71	142	592	592	592	467	467	467	467	467	467	467	590	590	590	467	237	207	178	118	8450
E28	Old School Rd E of Torbram Road WB	100	67	67	67	100	200	514	514	514	495	495	495	495	495	495	495	835	835	835	495	334	292	251	167	9650
E29	Torbram Rd S of Old School Rd NB	51	34	34	34	51	101	43	43	43	134	134	134	134	134	134	134	422	422	422	134	169	148	127	84	3300
E30	Torbram Rd S of Old School Rd SB	79	53	53	53	79	158	659	659	659	229	229	229	229	229	229	229	97	97	97	229	264	231	198	132	5400
E31	Torbram Rd At Hwy 413 NB	136	90	90	90	136	271	86	86	86	353	353	353	353	353	353	353	1130	1130	1130	353	452	396	339	226	8700
E32	Torbram Rd At Hwy 413 SB	136	91	91	91	136	272	1134	1134	1134	432	432	432	432	432	432	432	237	237	237	432	454	397	340	227	9800
E33	Airport Rd S of Old School Rd NB	292	194	194	194	292	583	638	638	638	989	989	989	989	989	989	989	2430	2430	2430	989	972	851	729	486	21900
E34	Airport Rd S of Old School Rd SB	273	182	182	182	273	546	2275	2275	2275	1137	1137	1137	1137	1137	1137	1137	1000	1000	1000	1137	910	796	683	455	23400
E35	Airport Rd S of Hwy 413 NB	210	140	140	140	210	420	762	762	762	872	872	872	872	872	872	872	1748	1748	1748	872	699	612	524	350	17950
E36	Airport Rd S of Hwy 413 SB	218	145	145	145	218	436	1816	1816	1816	834	834	834	834	834	834	834	652	652	652	834	726	636	545	363	17650
E37	Airport Rd N of Hwy 413 NB	226	151	151	151	226	452	750	750	750	898	898	898	898	898	898	898	1884	1884	1884	898	754	659	565	377	18800
E38	Airport Rd N of Hwy 413 SB	213	142	142	142	213	426	1775	1775	1775	850	850	850	850	850	850	850	710	710	710	850	710	621	533	355	17750
E39	Healey Rd E of Airport Rd EB	171	114	114	114	171	342	703	703	703	750	750	750	750	750	750	750	1426	1426	1426	750	570	499	428	285	15200

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
E40	Healey Rd E of Airport Rd WB	131	87	87	87	131	261	1088	1088	1088	853	853	853	853	853	853	853	1072	1072	1072	853	435	381	326	218	15450
E41	Healey Rd At Hwy 413 EB	87	58	58	58	87	174	624	624	624	522	522	522	522	522	522	522	725	725	725	522	290	254	218	145	9650
E42	Healey Rd At Hwy 413 WB	104	69	69	69	104	208	700	700	700	598	598	598	598	598	598	598	868	868	868	598	347	304	260	174	11200
E43	Healey Rd E of Centreville Creek Rd EB	72	48	48	48	72	144	556	556	556	449	449	449	449	449	449	449	602	602	602	449	241	211	181	120	8250
E44	Healey Rd E of Centreville Creek Rd WB	124	83	83	83	124	249	627	627	627	608	608	608	608	608	608	608	1037	1037	1037	608	415	363	311	207	11900
E45	Innis Lake Rd S of Healey Rd NB	117	78	78	78	117	233	162	162	162	348	348	348	348	348	348	348	972	972	972	348	389	340	292	194	8100
E46	Innis Lake Rd S of Healey Rd SB	94	62	62	62	94	187	781	781	781	518	518	518	518	518	518	518	591	591	591	518	312	273	234	156	9800
E47	Innis Lake Rd At Hwy 413 NB	138	92	92	92	138	275	157	157	157	392	392	392	392	392	392	392	1146	1146	1146	392	458	401	344	229	9300
E48	Innis Lake Rd At Hwy 413 SB	153	102	102	102	153	306	1273	1273	1273	447	447	447	447	447	447	447	199	199	199	447	509	446	382	255	10500
E49	Centreville Creek Rd At Hwy 413 NB	114	76	76	76	114	227	101	101	101	311	311	311	311	311	311	311	947	947	947	311	379	331	284	189	7500
E50	Centreville Creek Rd At Hwy 413 SB	133	89	89	89	133	266	1107	1107	1107	405	405	405	405	405	405	405	203	203	203	405	443	387	332	221	9350
E51	Centreville Creek Rd N of Healey Rd NB	134	89	89	89	134	268	13	13	13	309	309	309	309	309	309	309	1115	1115	1115	309	446	390	335	223	8050
E52	Centreville Creek Rd N of Healey Rd SB	110	73	73	73	110	219	913	913	913	431	431	431	431	431	431	431	356	356	356	431	365	320	274	183	9050
E53	The Gore Rd S of Hwy 413 NB	130	87	87	87	130	260	586	586	586	596	596	596	596	596	596	596	1082	1082	1082	596	433	379	325	216	11900
E54	The Gore Rd S of Hwy 413 SB	157	105	105	105	157	314	1308	1308	1308	826	826	826	826	826	826	826	914	914	914	826	523	458	392	262	15850
E55	The Gore Rd N of Hwy 413 NB	127	85	85	85	127	255	282	282	282	434	434	434	434	434	434	434	1062	1062	1062	434	425	372	319	212	9600
E56	The Gore Rd N of Hwy 413 SB	130	87	87	87	130	260	1084	1084	1084	631	631	631	631	631	631	631	655	655	655	631	434	379	325	217	12400
E57	Clarkway Dr S of Mayfield Rd NB	75	50	50	50	75	150	627	627	627	426	426	426	426	426	426	426	491	491	491	426	251	219	188	125	8000
E58	Clarkway Dr S of Mayfield Rd SB	65	43	43	43	65	130	541	541	541	422	422	422	422	422	422	422	529	529	529	422	216	189	162	108	7650
E59	Humber Station Rd S of Hwy 413 NB	218	145	145	145	218	435	1708	1708	1708	1377	1377	1377	1377	1377	1377	1377	1813	1813	1813	1377	725	635	544	363	25150
E60	Humber Station Rd S of Hwy 413 SB	224	149	149	149	224	448	1866	1866	1866	1207	1207	1207	1207	1207	1207	1207	1356	1356	1356	1207	746	653	560	373	23000
E61	Humber Station Rd N of Hwy 413 NB	149	100	100	100	149	299	882	882	882	796	796	796	796	796	796	796	1244	1244	1244	796	498	435	373	249	15200
E62	Humber Station Rd N of Hwy 413 SB	134	89	89	89	134	268	909	909	909	773	773	773	773	773	773	773	1115	1115	1115	773	446	390	335	223	14450
E63	Mayfield Rd W of Humber Station Rd EB	275	183	183	183	275	549	2288	2288	2288	1734	1734	1734	1734	1734	1734	1734	2153	2153	2153	1734	915	801	686	458	31700
E64	Mayfield Rd W of Humber Station Rd WB	259	173	173	173	259	518	1889	1889	1889	1564	1564	1564	1564	1564	1564	1564	2157	2157	2157	1564	863	755	647	431	28900
E65	Mayfield Rd At Hwy 413 EB	257	172	172	172	257	515	2145	2145	2145	1492	1492	1492	1492	1492	1492	1492	1752	1752	1752	1492	858	751	644	429	27850
E66	Mayfield Rd At Hwy 413 WB	260	173	173	173	260	520	1671	1671	1671	1453	1453	1453	1453	1453	1453	1453	2166	2166	2166	1453	866	758	650	433	27400
E67	Mayfield Rd E of Coleraine Dr EB	197	131	131	131	197	394	867	867	867	898	898	898	898	898	898	898	1643	1643	1643	898	657	575	493	329	17950
E68	Mayfield Rd E of Coleraine Dr WB	225	150	150	150	225	450	1876	1876	1876	1115	1115	1115	1115	1115	1115	1115	1168	1168	1168	1115	750	657	563	375	21750
E69	Coleraine Dr At Highway 413 NB	152	101	101	101	152	304	752	752	752	732	732	732	732	732	732	732	1265	1265	1265	732	506	443	380	253	14400
E70	Coleraine Dr At Highway 413 SB	190	127	127	127	190	381	1587	1587	1587	904	904	904	904	904	904	904	909	909	909	904	635	555	476	317	17850
E71	Coleraine Dr N of Mayfield Rd NB	184	123	123	123	184	368	1502	1502	1502	1196	1196	1196	1196	1196	1196	1196	1534	1534	1534	1196	614	537	460	307	21700
E72	Coleraine Dr N of Mayfield Rd SB	215	143	143	143	215	429	1789	1789	1789	1264	1264	1264	1264	1264	1264	1264	1499	1499	1499	1264	716	626	537	358	23500
E73	Countryside Dr W of Hwy 50 EB	63	42	42	42	63	125	521	521	521	286	286	286	286	286	286	286	274	274	274	286	208	182	156	104	5700
E74	Countryside Dr W of Hwy 50 WB	53	35	35	35	53	105	439	439	439	284	284	284	284	284	284	284	316	316	316	284	176	154	132	88	5400
E75	Hwy 50 S of Countryside Dr NB	352	235	235	235	352	704	1944	1944	1944	1804	1804	1804	1804	1804	1804	1804	2935	2935	2935	1804	1174	1027	881	587	34850
E76	Hwy 50 S of Countryside Dr SB	377	252	252	252	377	755	3144	3144	3144	1897	1897	1897	1897	1897	1897	1897	2017	2017	2017	1897	1258	1100	943	629	36850
E77	Hwy 50 At Hwy 413 NB	386	257	257	257	386	771	2399	2399	2399	2116	2116	2116	2116	2116	2116	2116	3214	3214	3214	2116	1286	1125	964	643	40100
E78	Hwy 50 At Hwy 413 SB	434	289	289	289	434	868	3617	3617	3617	2253	2253	2253	2253	2253	2253	2253	2449	2449	2449	2253	1447	1266	1085	723	43350
E79	Hwy 50 N of Cold Creek Rd Realignment NB	375	250	250	250	375	751	2250	2250	2250	2013	2013	2013	2013	2013	2013	2013	3128	3128	3128	2013	1251	1095	938	626	38400
E80	Hwy 50 N of Cold Creek Rd Realignment SB	279	186	186	186	279	557	751	751	751	1020	1020	1020	1020	1020	1020	1020	2321	2321	2321	1020	928	812	696	464	21950
E81	Cold Creek Rd Realignment E of Hwy 50 EB	8	5	5	5	8	16	20	20	20	32	32	32	32	32	32	32	68	68	68	32	27	24	20	14	650
E82	Cold Creek Rd Realignment E of Hwy 50 WB	52	35	35	35	52	104	432	432	432	128	128	128	128	128	128	128	25	25	25	128	173	151	130	86	3250
E83	Nashville Rd E of Hwy 50 EB	90	60	60	60	90	180	749	749	749	468	468	468	468	468	468	468	511	511	511	468	300	262	225	150	9000
E84	Nashville Rd E of Hwy 50 WB	88	59	59	59	88	176	733	733	733	396	396	396	396	396	396	396	380	380	380	396	293	257	220	147	7950
E85	Major Mackenzie Dr W of Hwy 427 EB	430	287	287	287	430	860	3198	3198	3198	2632	2632	2632	2632	2632	2632	2632	3582	3582	3582	2632	1433	1254	1075	716	48450
E86	Major Mackenzie Dr W of Hwy 427 WB	444	296	296	296	444	888	3699	3699	3699	2619	2619	2619	2619	2619	2619	2619	3121	3121	3121	2619	1480	1295	1110	740	48700
E87	Major Mackenzie Dr E of Hwy 427 EB	351	234	234	234	351	703	2268	2268	2268	1968	1968	1968	1968	1968	1968	1968	2928	2928	2928	1968	1171	1025	878	586	37100
E88	Major Mackenzie Dr E of Hwy 427 WB	421	281	281	281	421	843	3108	3108	3108	2566	2566	2566	2566	2566	2566	2566	3511	3511	3511	2566	1404	1229	1053	702	47300
E89	Huntington Rd At Hwy 413 NB	43	29	29	29	43	87	362	362	362	216	216	216	216	216	216	216	223	223	223	216	145	127	109	72	4200
E90	Huntington Rd At Hwy 413 SB	35	23	23	23	35	69	288	288	288	226	226	226	226	226	226	226	288	288	288	226	115	101	86	58	4100
E91	Huntington Rd N of Kirby Rd NB	1	1	1	1	1	2	10	10	10	9	9	9	9	9	9	9	10	10	10	9	4	4	3	2	150
E92	Huntington Rd N of Kirby Rd SB	1	1	1	1	1	2	10	10	10	9	9	9	9	9	9	9	10	10	10	9	4	4	3	2	150
E93	Kirby Rd W of Huntington Rd EB	81	54	54	54	81	162	296	296	296	338	338	338	338	338	338	338	676	676	676	338	270	237	203	135	6950
E94	Kirby Rd W of Huntington Rd WB	76	51	51	51	76	152	633	633	633	340	340	340	340	340	340	340	327	327	327	340	253	222	190	127	6850
E95	Hwy 27 S of Hwy 413 NB	233	155	155	155	233	466	1393	1393	1393	1247	1247	1247	1247	1247	1247	1247	1941	1941	1941	1247	776	679	582	388	23800
E96	Hwy 27 S of Hwy 413 SB	232	155	155	155	232	464	1935	1935	1935	1325	1325	1325	1325	1325	1325	1325	1545	1545	1545	1325	774	677	581	387	24850
E97	Hwy 27 N of Hwy 413 NB	317	211	211	211	317	634	861	861	861	1162	1162	1162	1162	1162	1162	1162	2640	2640	2640	1162	1056	924	792	528	25000
E98	Hwy 27 N of Hwy 413 SB	337	224	224	224	337	673	2806	2806	2806	1520	1520	1520	1520	1520	1520	1520	1466	1466	1466	1520	1122	982	842	561	30500
F01	Kirby Rd E of Hwy 27 EB	142	95	95	95	142	284	905	905	905	789	789	789	789	789	789	789	1182	1182	1182	789	473	414	355	236	14900
F02	Kirby Rd E of Hwy 27 WB	138	92	92	92	138	276	1149	1149	1149	732	732	732	732	732	732	732	811	811	811	732	460	402	345	230	14000
F03	Kipling Ave At Hwy 413 NB	12	8	8	8	12	23	96	96	96	49	49	49	49	49	49	49	44	44	44	49	38	34	29	19	1000
F04	Kipling Ave At Hwy 413 SB	5	3	3	3	5	10	42	42	42	15	15	15	15	15	15	15	8	8	8	15	17	15	13	8	350
F05	King Vaughan Rd E of Hwy 27 EB	112	75	75	75	112	225	842	842	842	690	690	690	690	690	690	690	937	937	937	690	375	328	281	187	12700

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*	
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	AADT
F06	King Vaughan Rd E of Hwy 27 WB	112	75	75	75	112	224	789	789	789	661	661	661	661	661	661	661	935	935	935	661	374	327	281	187	12300
F07	King Vaughan Rd E of Kipling Ave EB	154	103	103	103	154	308	1106	1106	1106	920	920	920	920	920	920	920	1282	1282	1282	920	513	449	385	256	17050
F08	King Vaughan Rd E of Kipling Ave WB	141	94	94	94	141	282	1029	1029	1029	852	852	852	852	852	852	852	1177	1177	1177	852	471	412	353	235	15750
F09	Pine Valley Dr At Hwy 413 NB	66	44	44	44	66	132	137	137	137	221	221	221	221	221	221	221	548	548	548	221	219	192	164	110	4900
F10	Pine Valley Dr At Hwy 413 SB	99	66	66	66	99	199	828	828	828	362	362	362	362	362	362	362	263	263	263	362	331	290	248	166	7800
F13	Pine Valley Dr N of King Vaughan Rd NB	7	4	4	4	7	13	36	36	36	33	33	33	33	33	33	33	56	56	56	33	22	20	17	11	650
F14	Pine Valley Dr N of King Vaughan Rd SB	4	2	2	2	4	7	30	30	30	18	18	18	18	18	18	18	18	18	18	18	12	11	9	6	350
F15	King Vaughan Rd W of Pine Valley Dr EB	145	96	96	96	145	289	1206	1206	1206	932	932	932	932	932	932	932	1167	1167	1167	932	482	422	362	241	16950
F16	King Vaughan Rd W of Pine Valley Dr WB	121	81	81	81	121	243	933	933	933	759	759	759	759	759	759	759	1012	1012	1012	759	405	354	304	202	13900
F17	King Vaughan Rd E of Pine Valley Dr EB	93	62	62	62	93	185	505	505	505	469	469	469	469	469	469	469	772	772	772	469	309	270	232	154	9100
F18	King Vaughan Rd E of Pine Valley Dr WB	100	67	67	67	100	201	836	836	836	547	547	547	547	547	547	547	622	622	622	547	334	293	251	167	10400
F19	Weston Rd N of Kirby Rd NB	139	93	93	93	139	279	885	885	885	772	772	772	772	772	772	772	1161	1161	1161	772	464	406	348	232	14600
F20	Weston Rd N of Kirby Rd SB	158	105	105	105	158	316	1317	1317	1317	699	699	699	699	699	699	699	654	654	654	699	527	461	395	263	14100
F21	Weston Rd N of Hwy 413 NB	141	94	94	94	141	282	1010	1010	1010	841	841	841	841	841	841	841	1175	1175	1175	841	470	411	353	235	15600
F22	Weston Rd N of Hwy 413 SB	179	119	119	119	179	358	1490	1490	1490	891	891	891	891	891	891	891	939	939	939	891	596	522	447	298	17350
F23	Weston Rd N of King Vaughan Rd NB	60	40	40	40	60	121	334	334	334	312	312	312	312	312	312	312	504	504	504	312	202	176	151	101	6000
F24	Weston Rd N of King Vaughan Rd SB	60	40	40	40	60	120	500	500	500	355	355	355	355	355	355	355	425	425	425	355	200	175	150	100	6600
F25	King Vaughan Rd E of Weston Rd EB	154	103	103	103	154	308	1283	1283	1283	974	974	974	974	974	974	974	1211	1211	1211	974	513	449	385	257	17800
F26	King Vaughan Rd E of Weston Rd WB	147	98	98	98	147	293	1221	1221	1221	936	936	936	936	936	936	936	1164	1164	1164	936	488	427	366	244	17050
F27	King Vaughan Rd W of Jane St EB	367	245	245	245	367	734	2551	2551	2551	2149	2149	2149	2149	2149	2149	2149	3059	3059	3059	2149	1224	1071	918	612	40050
F28	King Vaughan Rd W of Jane St WB	374	249	249	249	374	748	3115	3115	3115	1988	1988	1988	1988	1988	1988	1988	2205	2205	2205	1988	1246	1090	935	623	38000
F29	Kirby Rd At Hwy 400 EB	156	104	104	104	156	311	1297	1297	1297	823	823	823	823	823	823	823	907	907	907	823	519	454	389	259	15750
F30	Kirby Rd At Hwy 400 WB	141	94	94	94	141	282	868	868	868	768	768	768	768	768	768	768	1177	1177	1177	768	471	412	353	235	14600
F31	Steeles Ave W of Ninth Line N EB	309	206	206	206	309	618	2104	2104	2104	1792	1792	1792	1792	1792	1792	1792	2576	2576	2576	1792	1030	902	773	515	33450
F32	Steeles Ave W of Ninth Line N WB	299	200	200	200	299	599	2245	2245	2245	1839	1839	1839	1839	1839	1839	1839	2495	2495	2495	1839	998	873	749	499	33850
F33	Heritage Rd S of Wanless Dr NB	163	109	109	109	163	326	508	508	508	634	634	634	634	634	634	634	1359	1359	1359	634	544	476	408	272	13350
F34	Heritage Rd S of Wanless Dr SB	200	134	134	134	200	401	1669	1669	1669	877	877	877	877	877	877	877	813	813	813	877	668	584	501	334	17750
F35	Heart Lake Rd S of Old School Rd NB	64	43	43	43	64	128	204	204	204	248	248	248	248	248	248	248	534	534	534	248	214	187	160	107	5250
F36	Heart Lake Rd S of Old School Rd SB	94	63	63	63	94	188	784	784	784	281	281	281	281	281	281	281	135	135	135	281	314	274	235	157	6550
F37	Mayfield Rd E of Dixie Rd EB	312	208	208	208	312	625	2603	2603	2603	1773	1773	1773	1773	1773	1773	1773	2059	2059	2059	1773	1041	911	781	521	33300
F38	Mayfield Rd E of Dixie Rd WB	309	206	206	206	309	618	1885	1885	1885	1674	1674	1674	1674	1674	1674	1674	2576	2576	2576	1674	1030	902	773	515	31850
F39	Bramalea Rd S of Old School Rd NB	99	66	66	66	99	197	216	216	216	334	334	334	334	334	334	334	821	821	821	334	328	287	246	164	7400
F40	Bramalea Rd S of Old School Rd SB	132	88	88	88	132	264	1102	1102	1102	439	439	439	439	439	439	439	271	271	271	439	441	386	331	220	9800
F41	Old School Rd W of Bramalea Rd EB	86	57	57	57	86	172	716	716	716	506	506	506	506	506	506	506	597	597	597	506	286	251	215	143	9400
F42	Old School Rd W of Bramalea Rd WB	93	62	62	62	93	186	580	580	580	512	512	512	512	512	512	512	777	777	777	512	311	272	233	155	9700
F43	Cold Creek Rd N of Nashville Rd NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F44	Cold Creek Rd N of Nashville Rd SB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F45	Nashville Rd At Hwy 427 EB	90	60	60	60	90	180	749	749	749	468	468	468	468	468	468	468	511	511	511	468	300	262	225	150	9000
F46	Nashville Rd At Hwy 427 WB	88	59	59	59	88	176	733	733	733	396	396	396	396	396	396	396	380	380	380	396	293	257	220	147	7950
F47	Kirby Rd W of Hwy 27 EB	4	3	3	3	4	8	32	32	32	14	14	14	14	14	14	14	9	9	9	14	13	11	10	6	300
F48	Kirby Rd W of Hwy 27 WB	11	8	8	8	11	23	6	6	6	26	26	26	26	26	26	26	95	95	95	26	38	33	29	19	700
F49	King Vaughan Rd E of Jane St EB	305	203	203	203	305	609	2411	2411	2411	1938	1938	1938	1938	1938	1938	1938	2538	2538	2538	1938	1015	888	761	508	35350
F50	King Vaughan Rd E of Jane St WB	332	222	222	222	332	665	2770	2770	2770	1888	1888	1888	1888	1888	1888	1888	2193	2193	2193	1888	1108	970	831	554	35450
F51	Jane St N of King Vaughan Rd NB	211	141	141	141	211	422	1002	1002	1002	1000	1000	1000	1000	1000	1000	1000	1760	1760	1760	1000	704	616	528	352	19750
F52	Jane St N of King Vaughan Rd SB	295	197	197	197	295	590	2457	2457	2457	989	989	989	989	989	989	989	626	626	626	989	983	860	737	491	22000
F53	Jane St S of King Vaughan Rd NB	204	136	136	136	204	408	785	785	785	868	868	868	868	868	868	868	1701	1701	1701	868	680	595	510	340	17750
F54	Jane St S of King Vaughan Rd SB	249	166	166	166	249	497	2071	2071	2071	1118	1118	1118	1118	1118	1118	1118	1070	1070	1070	1118	828	725	621	414	22450
F71	Hwy 400 at King Vaughan Rd N E/W Ramp	119	79	79	79	119	237	988	988	988	448	448	448	448	448	448	448	351	351	351	448	395	346	296	198	9550
F72	Hwy 400 at King Vaughan Rd E S Ramp	115	77	77	77	115	230	959	959	959	692	692	692	692	692	692	692	832	832	832	692	384	336	288	192	12800
F73	Hwy 400 at King Vaughan Rd W S Ramp	57	38	38	38	57	113	71	71	71	162	162	162	162	162	162	162	471	471	471	162	188	165	141	94	3850
F74	Hwy 400 at King Vaughan Rd S E/W Ramp	138	92	92	92	138	276	1150	1150	1150	873	873	873	873	873	873	873	1083	1083	1083	873	460	403	345	230	15950
F75	Hwy 400 at King Vaughan Rd E N Ramp	78	52	52	52	78	157	60	60	60	209	209	209	209	209	209	209	653	653	653	209	261	229	196	131	5100
F76	Hwy 400 at King Vaughan Rd W N Ramp	29	19	19	19	29	57	41	41	41	86	86	86	86	86	86	86	239	239	239	86	96	84	72	48	2000
F77	Hwy 427 at Major Mackenzie Dr N E/W Ramp	162	108	108	108	162	324	1352	1352	1352	828	828	828	828	828	828	828	885	885	885	828	541	473	406	270	16000
F78	Hwy 427 at Major Mackenzie Dr E S Ramp	112	75	75	75	112	224	935	935	935	397	397	397	397	397	397	397	275	275	275	397	374	327	281	187	8650
F79	Hwy 427 at Major Mackenzie Dr W S Ramp	173	115	115	115	173	346	1441	1441	1441	1009	1009	1009	1009	1009	1009	1009	1190	1190	1190	1009	576	504	432	288	18800
F80	Hwy 427 at Major Mackenzie Dr S E/W Ramp	313	209	209	209	313	626	1644	1644	1644	1557	1557	1557	1557	1557	1557	1557	2608	2608	2608	1557	1043	913	782	522	30350
F81	Hwy 427 at Major Mackenzie Dr E N Ramp	107	71	71	71	107	214	891	891	891	665	665	665	665	665	665	665	818	818	818	665	356	312	267	178	12200
F82	Hwy 427 at Major Mackenzie Dr W N Ramp	46	30	30	30	46	91	187	187	187	200	200	200	200	200	200	200	380	380	380	200	152	133	114	76	4050
F83	Hwy 410 at Mayfield Rd N E/W Ramp	45	30	30	30	45	91	379	379	379	122	122	122	122	122	122	122	31	31	31	122	152	133	114	76	2950
F84	Hwy 410 at Mayfield Rd E S Ramp	74	50	50	50	74	149	260	260	260	305	305	305	305	305	305	305	620	620	620	305	248	217	186	124	6300
F85	Hwy 410 at Mayfield Rd W S Ramp	77	51	51	51	77	153	639	639	639	466	466	466	466	466	466	466	565	565	565	466	256	224	192	128	8600
F86	Hwy 410 at Mayfield Rd S E/W Ramp	114	76	76	76	114	229	954	954	954	478	478	478	478	478	478	478	427	427	427	478	382	334	286	191	9850
F87	Hwy 410 at Mayfield Rd E N Ramp	15	10	10	10	15	30	126	126	126	85	85	85	85	85	85	85	97	97	97	85	50	44	38	25	1600

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	AADT
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
F88	Hwy 410 at Mayfield Rd W N Ramp	29	20	20	20	29	59	245	245	245	77	77	77	77	77	77	77	21	21	21	77	98	86	74	49	1900
G01	Hwy 413 at Hwy 401 / Hwy 407 E N	110	73	73	73	110	220	588	588	588	554	554	554	554	554	554	554	916	916	916	554	366	321	275	183	10750
G02	Hwy 413 at Hwy 401 / Hwy 407 N E	163	108	108	108	163	325	1355	1355	1355	943	943	943	943	943	943	943	1108	1108	1108	943	542	474	407	271	17600
G03	Hwy 413 at Hwy 401 / Hwy 407 N S	127	84	84	84	127	253	1055	1055	1055	730	730	730	730	730	730	730	855	855	855	730	422	369	317	211	13650
G04	Hwy 413 at Hwy 401 / Hwy 407 S N	126	84	84	84	126	251	1046	1046	1046	656	656	656	656	656	656	656	717	717	717	656	418	366	314	209	12600
G05	Hwy 413 at Hwy 401 E N	86	57	57	57	86	171	547	547	547	476	476	476	476	476	476	476	714	714	714	476	286	250	214	143	9000
G06	Hwy 407 at Hwy 413 N N Ramp	24	16	16	16	24	48	41	41	41	78	78	78	78	78	78	78	202	202	202	78	81	71	61	40	1750
G07	Hwy 407 at Hwy 401 S E Ramp	81	54	54	54	81	161	672	672	672	270	270	270	270	270	270	270	166	166	166	270	269	235	202	134	6000
G08	Hwy 407 at Hwy 413 N E Ramp	38	25	25	25	38	76	318	318	318	110	110	110	110	110	110	110	47	47	47	110	127	111	95	64	2600
G09	Hwy 407 at Hwy 401 S W Ramp	18	12	12	12	18	36	152	152	152	108	108	108	108	108	108	108	127	127	127	108	61	53	46	30	2000
G10	Hwy 413 / Hwy 407 to Hwy 401 N/S E	205	137	137	137	205	410	1709	1709	1709	1097	1097	1097	1097	1097	1097	1097	1227	1227	1227	1097	684	598	513	342	20950
H01	Hwy 401 E of Trafalgar Rd EB	1392	928	928	928	1392	2783	11596	11596	11596	8171	8171	8171	8171	8171	8171	8171	9699	9699	9699	8171	4638	4059	3479	2319	152100
H02	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	1154	770	770	770	1154	2309	9620	9620	9620	6481	6481	6481	6481	6481	6481	6481	7481	7481	7481	6481	3848	3367	2886	1924	122100
H03	Hwy 401 W of Winston Churchill Blvd EB	1191	794	794	794	1191	2383	9928	9928	9928	6901	6901	6901	6901	6901	6901	6901	8116	8116	8116	6901	3971	3475	2978	1986	128900
H04	Hwy 401 E of Trafalgar Rd WB	1042	695	695	695	1042	2084	7016	7016	7016	5988	5988	5988	5988	5988	5988	5988	8682	8682	8682	5988	3473	3039	2605	1736	112100
H05	Hwy 401 Collector at Hwy 413 E W Ramp	402	268	268	268	402	803	3347	3347	3347	2629	2629	2629	2629	2629	2629	2629	3311	3311	3311	2629	1339	1171	1004	669	47600
H06	Hwy 401 Express at Hwy 413 E W Ramp	645	430	430	430	645	1289	3669	3669	3669	3362	3362	3362	3362	3362	3362	3362	5371	5371	5371	3362	2148	1880	1611	1074	64600
H07	Hwy 401 W of Winston Churchill Blvd WB	1173	782	782	782	1173	2346	7765	7765	7765	6677	6677	6677	6677	6677	6677	6677	9777	9777	9777	6677	3911	3422	2933	1955	125300
H08	Hwy 401 at Trafalgar Rd N E Ramp	111	74	74	74	111	222	926	926	926	659	659	659	659	659	659	659	791	791	791	659	370	324	278	185	12250
H09	Hwy 401 at Trafalgar Rd S E Ramp	150	100	100	100	150	301	1254	1254	1254	856	856	856	856	856	856	856	990	990	990	856	502	439	376	251	16050
H10	Hwy 401 at Trafalgar Rd N/S E to Hwy 401 E	147	98	98	98	147	294	1224	1224	1224	749	749	749	749	749	749	749	807	807	807	749	490	428	367	245	14500
H11	Hwy 401 at Trafalgar Rd N/S E to Hwy 413/407 S	117	78	78	78	117	234	956	956	956	761	761	761	761	761	761	761	974	974	974	761	390	341	292	195	13800
H12	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	266	177	177	177	266	532	1976	1976	1976	1631	1631	1631	1631	1631	1631	1631	2218	2218	2218	1631	887	776	665	444	30000
H13	Hwy 401 at Trafalgar Rd N/S E and Hwy 401 E to Hwy 413	374	250	250	250	374	749	2823	2823	2823	2310	2310	2310	2310	2310	2310	2310	3119	3119	3119	2310	1248	1092	936	624	42450
H14	Hwy 401 at Trafalgar Rd N/S E and Hwy 401 E to Hwy 407 S	13	9	9	9	13	26	109	109	109	67	67	67	67	67	67	67	73	73	73	67	44	38	33	22	1300
H15	Hwy 401 at Hwy 413 N W Ramp	386	257	257	257	386	771	3213	3213	3213	2230	2230	2230	2230	2230	2230	2230	2615	2615	2615	2230	1285	1125	964	643	41650
H16	Hwy 401 at Trafalgar Rd E N/S Ramp	319	213	213	213	319	638	2660	2660	2660	1720	1720	1720	1720	1720	1720	1720	1922	1922	1922	1720	1064	931	798	532	32750

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 No Build, Percentage Basis

Highway 413
GTA West

RWDI Project#: 1301992

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A01	Hwy 413 N of Hwy 401/407 interchange_NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A02	Hwy 413 N of Hwy 401/407 interchange_SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A03	Hwy 413 N of Winston Churchill Blvd_NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A04	Hwy 413 N of Winston Churchill Blvd_SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A05	Hwy 413 N of Bovaird Dr_NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A06	Hwy 413 N of Bovaird Dr_SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A07	Hwy 413 E of Mayfield Rd_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A08	Hwy 413 E of Mayfield Rd_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A09	Hwy 413 E of Chinguacousy Rd_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A10	Hwy 413 E of Chinguacousy Rd_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A11	Hwy 413 E of Hurontario St_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A12	Hwy 413 E of Hurontario St_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A13	Hwy 413 E of Hwy 410_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A14	Hwy 413 E of Hwy 410_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A15	Hwy 413 E of Bramalea Rd_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A16	Hwy 413 E of Bramalea Rd_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A17	Hwy 413 E of Airport Rd_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A18	Hwy 413 E of Airport Rd_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A19	Hwy 413 E of The Gore Rd_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A20	Hwy 413 E of The Gore Rd_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A21	Hwy 413 E of Humber Station Rd_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A22	Hwy 413 E of Humber Station Rd_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A23	Hwy 413 E of Hwy 427_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A24	Hwy 413 E of Hwy 427_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A25	Hwy 413 E of Hwy 27_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A26	Hwy 413 E of Hwy 27_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A27	Hwy 413 E of Pine Valley Dr_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A28	Hwy 413 E of Pine Valley Dr_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B05	Hwy 407 S of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	24%	24%	24%	40%	40%	35%	30%	20%
B06	Hwy 407 S of Hwy 401_SB	12%	8%	8%	8%	12%	24%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
B07	Hwy 407 N of Hwy 401_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	41%	41%	41%	48%	40%	35%	30%	20%
B08	Hwy 407 N of Hwy 401_WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
B09	Hwy 410 S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
B10	Hwy 410 S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	60%	60%	60%	58%	40%	35%	30%	20%
B11	Hwy 410 N of Mayfield Rd_NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B12	Hwy 410 N of Mayfield Rd_SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B13	Hwy 410 W of Mayfield Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
B14	Hwy 410 W of Mayfield Rd_WB	12%	8%	8%	8%	12%	24%	51%	51%	51%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
B15	Hwy 427 S of Major Mackenzie Dr_NB	12%	8%	8%	8%	12%	24%	58%	58%	58%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
B16	Hwy 427 S of Major Mackenzie Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	69%	69%	69%	63%	40%	35%	30%	20%
B17	Hwy 427 N of Major Mackenzie Dr_NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B18	Hwy 427 N of Major Mackenzie Dr_SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B19	Hwy 400 N of Teston Rd_NB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
B20	Hwy 400 N of Teston Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	40%	35%	30%	20%
B21	Hwy 400 S of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	46%	46%	46%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
B22	Hwy 400 S of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
B23	Hwy 400 S of King Rd_NB	12%	8%	8%	8%	12%	24%	45%	45%	45%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
B24	Hwy 400 S of King Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	46%	46%	46%	51%	40%	35%	30%	20%
C11	Hwy 413 at Winston Churchill Blvd_S-E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C12	Hwy 413 at Winston Churchill Blvd_E-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C13	Hwy 413 at Winston Churchill Blvd_W-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C14	Hwy 413 at Winston Churchill Blvd_N-E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C15	Hwy 413 at Winston Churchill Blvd_E-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C16	Hwy 413 at Winston Churchill Blvd_W-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 No Build, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C17	Hwy 413 at Bovaird Dr_S-E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C18	Hwy 413 at Bovaird Dr_E-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C19	Hwy 413 at Bovaird Dr_W-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C20	Hwy 413 at Bovaird Dr_N-E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C21	Hwy 413 at Bovaird Dr_E-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C22	Hwy 413 at Bovaird Dr_W-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C23	Hwy 413 at Mayfield Rd_S-E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C24	Hwy 413 at Mayfield Rd_E-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C25	Hwy 413 at Mayfield Rd_W-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C26	Hwy 413 at Mayfield Rd_N-E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C27	Hwy 413 at Mayfield Rd_E-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C28	Hwy 413 at Mayfield Rd_W-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C29	Hwy 413 at Chinguacousy Rd_W-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C30	Hwy 413 at Chinguacousy Rd_N-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C31	Hwy 413 at Chinguacousy Rd_S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C32	Hwy 413 at Chinguacousy Rd_E-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C33	Hwy 413 at Chinguacousy Rd_N-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C34	Hwy 413 at Chinguacousy Rd_S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C35	Hwy 413 at Hurontario St_W-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C36	Hwy 413 at Hurontario St_N-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C37	Hwy 413 at Hurontario St_S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C38	Hwy 413 at Hurontario St_E-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C39	Hwy 413 at Hurontario St_N-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C40	Hwy 413 at Hurontario St_S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C41	Hwy 413 at Hwy 410_W-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C42	Hwy 413 at Hwy 410_E-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C43	Hwy 413 at Hwy 410_S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C44	Hwy 413 at Hwy 410_S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C45	Hwy 413 at Bramalea Rd_W-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C46	Hwy 413 at Bramalea Rd_N-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C47	Hwy 413 at Bramalea Rd_S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C48	Hwy 413 at Bramalea Rd_E-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C49	Hwy 413 at Bramalea Rd_N-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C50	Hwy 413 at Bramalea Rd_S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C51	Hwy 413 at Airport Rd_W-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C52	Hwy 413 at Airport Rd_N-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C53	Hwy 413 at Airport Rd_S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C54	Hwy 413 at Airport Rd_E-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C55	Hwy 413 at Airport Rd_N-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C56	Hwy 413 at Airport Rd_S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C57	Hwy 413 at The Gore Rd_W-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C58	Hwy 413 at The Gore Rd_N/S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C59	Hwy 413 at The Gore Rd_E-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C60	Hwy 413 at The Gore Rd_N/S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C61	Hwy 413 at Humber Station Rd_W-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C62	Hwy 413 at Humber Station Rd_N-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C63	Hwy 413 at Humber Station Rd_S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C64	Hwy 413 at Humber Station Rd_E-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C65	Hwy 413 at Humber Station Rd_N-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C66	Hwy 413 at Humber Station Rd_S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C67	Hwy 413 at Hwy 427_W-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C68	Hwy 413 at Hwy 427_E-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C69	Hwy 413 at Hwy 427_S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C70	Hwy 413 at Hwy 427_S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 No Build, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C71	Hwy 413 at Hwy 27_W-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C72	Hwy 413 at Hwy 27_N/S-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C73	Hwy 413 at Hwy 27_E-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C74	Hwy 413 at Hwy 27_N/S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C81	Hwy 413 at Weston Rd_W-N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C82	Hwy 413 at Weston Rd_N/S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C83	Hwy 413 at Hwy 400_W-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C84	Hwy 413 at Hwy 400_W-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C85	Hwy 413 at Hwy 400_N-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C86	Hwy 413 at Hwy 400_S-W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
D01	Trafalgar Rd S of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
D02	Trafalgar Rd S of Hwy 401_SB	12%	8%	8%	8%	12%	24%	84%	84%	84%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D03	Trafalgar Rd N of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
D04	Trafalgar Rd N of Hwy 401_SB	12%	8%	8%	8%	12%	24%	84%	84%	84%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D05	Steeles Ave E of Trafalgar Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
D06	Steeles Ave E of Trafalgar Rd_WB	12%	8%	8%	8%	12%	24%	70%	70%	70%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D07	Steeles Ave At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
D08	Steeles Ave At Hwy 413_WB	12%	8%	8%	8%	12%	24%	80%	80%	80%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
D09	Steeles Ave E of Ninth Line S_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
D10	Steeles Ave E of Ninth Line S_WB	12%	8%	8%	8%	12%	24%	69%	69%	69%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D11	Steeles Ave E of Tenth Line N_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
D12	Steeles Ave E of Tenth Line N_WB	12%	8%	8%	8%	12%	24%	59%	59%	59%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
D13	Ninth Line N N of Steeles Ave_NB	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
D14	Ninth Line N N of Steeles Ave_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
D15	Ninth Line S S of Steeles Ave_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	78%	78%	78%	67%	40%	35%	30%	20%
D16	Ninth Line S S of Steeles Ave_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
D17	Tenth Line At Hwy 413_NB	12%	8%	8%	8%	12%	24%	38%	38%	38%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
D18	Tenth Line At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	32%	32%	32%	44%	40%	35%	30%	20%
D19	Derry Rd W of Hwy 407_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
D20	Derry Rd W of Hwy 407_WB	12%	8%	8%	8%	12%	24%	72%	72%	72%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
D21	Derry Rd E of Hwy 407_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	85%	85%	85%	71%	40%	35%	30%	20%
D22	Derry Rd E of Hwy 407_WB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
D23	Winston Churchill Blvd S of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
D24	Winston Churchill Blvd S of Hwy 401_SB	12%	8%	8%	8%	12%	24%	70%	70%	70%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D25	Winston Churchill Blvd N of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
D26	Winston Churchill Blvd N of Hwy 401_SB	12%	8%	8%	8%	12%	24%	86%	86%	86%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D27	Winston Churchill Blvd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	32%	32%	32%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
D28	Winston Churchill Blvd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	40%	40%	40%	48%	40%	35%	30%	20%
D29	Winston Churchill Blvd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	32%	32%	32%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
D30	Winston Churchill Blvd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	40%	40%	40%	48%	40%	35%	30%	20%
D31	Winston Churchill Blvd N of 5 Side Rd_NB	12%	8%	8%	8%	12%	24%	54%	54%	54%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
D32	Winston Churchill Blvd N of 5 Side Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	50%	50%	50%	53%	40%	35%	30%	20%
D33	5 Side Rd W of Winston Churchill Blvd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
D34	5 Side Rd W of Winston Churchill Blvd_WB	12%	8%	8%	8%	12%	24%	68%	68%	68%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
D35	5 Side Rd At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	58%	58%	58%	57%	40%	35%	30%	20%
D36	5 Side Rd At Hwy 413_WB	12%	8%	8%	8%	12%	24%	38%	38%	38%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
D37	Heritage Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	44%	44%	44%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
D38	Heritage Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	53%	53%	53%	55%	40%	35%	30%	20%
D39	Heritage Rd N of Bovaird Dr_NB	12%	8%	8%	8%	12%	24%	51%	51%	51%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
D40	Heritage Rd N of Bovaird Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
D41	Heritage Rd S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	24%	24%	24%	39%	40%	35%	30%	20%
D42	Heritage Rd S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	38%	38%	38%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
D43	Heritage Rd N of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	53%	53%	53%	55%	40%	35%	30%	20%
D44	Heritage Rd N of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	32%	32%	32%	43%	43%	43%	43%	43%	43%	43%	100%	100%	100%	43%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 No Build, Percentage Basis

Highway 413
GTA West

RWDI Project#: 1301992

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
D45	Bovaird Dr W of Heritage Rd_EB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
D46	Bovaird Dr W of Heritage Rd_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	90%	90%	90%	74%	40%	35%	30%	20%
D47	Bovaird Dr W of Hwy 413_EB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
D48	Bovaird Dr W of Hwy 413_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
D49	Bovaird Dr E of Hwy 413_EB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
D50	Bovaird Dr E of Hwy 413_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
D51	Wanless Dr W of Heritage Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
D52	Wanless Dr W of Heritage Rd_WB	12%	8%	8%	8%	12%	24%	95%	95%	95%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
D53	Wanless Dr At Hwy 413_EB	12%	8%	8%	8%	12%	24%	84%	84%	84%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D54	Wanless Dr At Hwy 413_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	65%	65%	65%	61%	40%	35%	30%	20%
D55	Mayfield Rd W of Heritage Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	72%	72%	72%	64%	40%	35%	30%	20%
D56	Mayfield Rd W of Heritage Rd_WB	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
D57	Mayfield Rd E of Heritage Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
D58	Mayfield Rd E of Heritage Rd_WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D59	Mayfield Rd E of Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
D60	Mayfield Rd E of Hwy 413_WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D61	Mississauga Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	47%	47%	47%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
D62	Mississauga Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	45%	45%	45%	51%	40%	35%	30%	20%
D63	Creditview Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	46%	46%	46%	52%	40%	35%	30%	20%
D64	Creditview Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	84%	84%	84%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
D65	Chinguacousy Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	95%	95%	95%	76%	40%	35%	30%	20%
D66	Chinguacousy Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
D67	Chinguacousy Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	95%	95%	95%	76%	40%	35%	30%	20%
D68	Chinguacousy Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
D69	Chinguacousy Rd N of Old School Rd_NB	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
D70	Chinguacousy Rd N of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	84%	84%	84%	71%	40%	35%	30%	20%
D71	Old School Rd W of Chinguacousy Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
D72	Old School Rd W of Chinguacousy Rd_WB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
D73	Old School Rd At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
D74	Old School Rd At Hwy 413_WB	12%	8%	8%	8%	12%	24%	76%	76%	76%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D75	McLaughlin Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	64%	64%	64%	61%	40%	35%	30%	20%
D76	McLaughlin Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
D77	McLaughlin Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	75%	75%	75%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D78	McLaughlin Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	45%	45%	45%	51%	40%	35%	30%	20%
D79	Old School Rd W of Hurontario St_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
D80	Old School Rd W of Hurontario St_WB	12%	8%	8%	8%	12%	24%	59%	59%	59%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
D81	Old School Rd E of Hurontario St_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	58%	58%	58%	57%	40%	35%	30%	20%
D82	Old School Rd E of Hurontario St_WB	12%	8%	8%	8%	12%	24%	70%	70%	70%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D83	Hurontario St S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	50%	50%	50%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
D84	Hurontario St S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
D85	Hurontario St S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D86	Hurontario St S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
D87	Hurontario St N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D88	Hurontario St N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
D89	Kennedy Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	92%	92%	92%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
D90	Kennedy Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	39%	39%	39%	47%	40%	35%	30%	20%
D91	Old School Rd W of Heart Lake Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	39%	39%	39%	47%	40%	35%	30%	20%
D92	Old School Rd W of Heart Lake Rd_WB	12%	8%	8%	8%	12%	24%	49%	49%	49%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
D93	Old School Rd At Hwy 410_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	36%	36%	36%	46%	40%	35%	30%	20%
D94	Old School Rd At Hwy 410_WB	12%	8%	8%	8%	12%	24%	50%	50%	50%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
E01	Heart Lake Rd S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E02	Heart Lake Rd S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	84%	84%	84%	70%	40%	35%	30%	20%
E03	Heart Lake Rd At Hwy 410_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
E04	Heart Lake Rd At Hwy 410_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 No Build, Percentage Basis

Highway 413
GTA West

RWDI Project#: 1301992

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
E05	Heart Lake Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
E06	Heart Lake Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	50%	50%	50%	53%	40%	35%	30%	20%
E07	Mayfield Rd W of Heart Lake Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%	63%	40%	35%	30%	20%
E08	Mayfield Rd W of Heart Lake Rd_WB	12%	8%	8%	8%	12%	24%	65%	65%	65%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
E09	Mayfield Rd E of Heart Lake Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%
E10	Mayfield Rd E of Heart Lake Rd_WB	12%	8%	8%	8%	12%	24%	76%	76%	76%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
E11	Mayfield Rd E of Hwy 410_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
E12	Mayfield Rd E of Hwy 410_WB	12%	8%	8%	8%	12%	24%	76%	76%	76%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
E13	Dixie Rd S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	74%	74%	74%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
E14	Dixie Rd S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	46%	46%	46%	51%	40%	35%	30%	20%
E15	Dixie Rd N of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	80%	80%	80%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
E16	Dixie Rd N of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	80%	80%	80%	68%	40%	35%	30%	20%
E17	Dixie Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	61%	61%	61%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
E18	Dixie Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
E19	Countryside Dr At Hwy 410_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	67%	67%	67%	62%	40%	35%	30%	20%
E20	Countryside Dr At Hwy 410_WB	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
E21	Bramalea Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	7%	7%	7%	30%	30%	30%	30%	30%	30%	30%	100%	100%	100%	30%	40%	35%	30%	20%
E22	Bramalea Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	31%	31%	31%	31%	31%	31%	31%	7%	7%	7%	31%	40%	35%	30%	20%
E23	Bramalea Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	7%	7%	7%	30%	30%	30%	30%	30%	30%	30%	100%	100%	100%	30%	40%	35%	30%	20%
E24	Bramalea Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	31%	31%	31%	31%	31%	31%	31%	7%	7%	7%	31%	40%	35%	30%	20%
E25	Old School Rd E of Bramalea Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
E26	Old School Rd E of Bramalea Rd_WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E27	Old School Rd E of Torbram Road_EB	12%	8%	8%	8%	12%	24%	87%	87%	87%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
E28	Old School Rd E of Torbram Road_WB	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
E29	Torbram Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	24%	24%	24%	40%	40%	40%	40%	40%	40%	40%	100%	100%	100%	40%	40%	35%	30%	20%
E30	Torbram Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	31%	31%	31%	43%	40%	35%	30%	20%
E31	Torbram Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	34%	34%	34%	45%	45%	45%	45%	45%	45%	45%	100%	100%	100%	45%	40%	35%	30%	20%
E32	Torbram Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	49%	49%	49%	52%	40%	35%	30%	20%
E33	Airport Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	48%	48%	48%	52%	52%	52%	52%	52%	52%	52%	100%	100%	100%	52%	40%	35%	30%	20%
E34	Airport Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
E35	Airport Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	43%	43%	43%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
E36	Airport Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	38%	38%	38%	47%	40%	35%	30%	20%
E37	Airport Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	43%	43%	43%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
E38	Airport Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	38%	38%	38%	47%	40%	35%	30%	20%
E39	Healey Rd E of Airport Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	91%	91%	91%	74%	40%	35%	30%	20%
E40	Healey Rd E of Airport Rd_WB	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
E41	Healey Rd At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	95%	95%	95%	77%	40%	35%	30%	20%
E42	Healey Rd At Hwy 413_WB	12%	8%	8%	8%	12%	24%	79%	79%	79%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
E43	Healey Rd E of Centreville Creek Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
E44	Healey Rd E of Centreville Creek Rd_WB	12%	8%	8%	8%	12%	24%	59%	59%	59%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
E45	Innis Lake Rd S of Healey Rd_NB	12%	8%	8%	8%	12%	24%	47%	47%	47%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
E46	Innis Lake Rd S of Healey Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	49%	49%	49%	49%	49%	49%	49%	44%	44%	44%	49%	40%	35%	30%	20%
E47	Innis Lake Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	35%	35%	35%	45%	45%	45%	45%	45%	45%	45%	100%	100%	100%	45%	40%	35%	30%	20%
E48	Innis Lake Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	30%	30%	30%	43%	40%	35%	30%	20%
E49	Centreville Creek Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	27%	27%	27%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E50	Centreville Creek Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	36%	36%	36%	45%	40%	35%	30%	20%
E51	Centreville Creek Rd N of Healey Rd_NB	12%	8%	8%	8%	12%	24%	7%	7%	7%	31%	31%	31%	31%	31%	31%	31%	100%	100%	100%	31%	40%	35%	30%	20%
E52	Centreville Creek Rd N of Healey Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	33%	33%	33%	33%	33%	33%	33%	13%	13%	13%	33%	40%	35%	30%	20%
E53	The Gore Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	30%	30%	30%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E54	The Gore Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	37%	37%	37%	37%	37%	37%	37%	19%	19%	19%	37%	40%	35%	30%	20%
E55	The Gore Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	30%	30%	30%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E56	The Gore Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	37%	37%	37%	37%	37%	37%	37%	19%	19%	19%	37%	40%	35%	30%	20%
E57	Clarkway Dr S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	87%	87%	87%	72%	40%	35%	30%	20%
E58	Clarkway Dr S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 No Build, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
E59	Humber Station Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	84%	84%	84%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E60	Humber Station Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
E61	Humber Station Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	84%	84%	84%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E62	Humber Station Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
E63	Mayfield Rd W of Humber Station Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	58%	58%	58%	57%	40%	35%	30%	20%
E64	Mayfield Rd W of Humber Station Rd_WB	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
E65	Mayfield Rd At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
E66	Mayfield Rd At Hwy 413_WB	12%	8%	8%	8%	12%	24%	61%	61%	61%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E67	Mayfield Rd E of Coleraine Dr_EB	12%	8%	8%	8%	12%	24%	99%	99%	99%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
E68	Mayfield Rd E of Coleraine Dr_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
E69	Coleraine Dr At Highway 413_NB	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
E70	Coleraine Dr At Highway 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
E71	Coleraine Dr N of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	93%	93%	93%	76%	40%	35%	30%	20%
E72	Coleraine Dr N of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	99%	99%	99%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
E73	Countryside Dr W of Hwy 50_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
E74	Countryside Dr W of Hwy 50_WB	12%	8%	8%	8%	12%	24%	89%	89%	89%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
E75	Hwy 50 S of Countryside Dr_NB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E76	Hwy 50 S of Countryside Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%
E77	Hwy 50 At Hwy 413_NB	12%	8%	8%	8%	12%	24%	87%	87%	87%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
E78	Hwy 50 At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
E79	Hwy 50 N of Cold Creek Rd Realignment_NB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E80	Hwy 50 N of Cold Creek Rd Realignment_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
E81	Cold Creek Rd Realignment E of Hwy 50_EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E82	Cold Creek Rd Realignment E of Hwy 50_WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E83	Nashville Rd E of Hwy 50_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
E84	Nashville Rd E of Hwy 50_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
E85	Major Mackenzie Dr W of Hwy 427_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	91%	91%	91%	74%	40%	35%	30%	20%
E86	Major Mackenzie Dr W of Hwy 427_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
E87	Major Mackenzie Dr E of Hwy 427_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
E88	Major Mackenzie Dr E of Hwy 427_WB	12%	8%	8%	8%	12%	24%	76%	76%	76%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
E89	Huntington Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	94%	94%	94%	75%	40%	35%	30%	20%
E90	Huntington Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	58%	58%	58%	57%	40%	35%	30%	20%
E91	Huntington Rd N of Kirby Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	88%	88%	88%	88%	88%	88%	88%	100%	100%	100%	88%	40%	35%	30%	20%
E92	Huntington Rd N of Kirby Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	88%	88%	88%	88%	88%	88%	88%	100%	100%	100%	88%	40%	35%	30%	20%
E93	Kirby Rd W of Huntington Rd_EB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
E94	Kirby Rd W of Huntington Rd_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
E95	Hwy 27 S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
E96	Hwy 27 S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
E97	Hwy 27 N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
E98	Hwy 27 N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
F01	Kirby Rd E of Hwy 27_EB	12%	8%	8%	8%	12%	24%	97%	97%	97%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
F02	Kirby Rd E of Hwy 27_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	91%	91%	91%	74%	40%	35%	30%	20%
F03	Kipling Ave At Hwy 413_NB	12%	8%	8%	8%	12%	24%	16%	16%	16%	34%	34%	34%	34%	34%	34%	34%	100%	100%	100%	34%	40%	35%	30%	20%
F04	Kipling Ave At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	28%	28%	28%	28%	28%	28%	28%	2%	2%	2%	28%	40%	35%	30%	20%
F05	King Vaughan Rd E of Hwy 27_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	57%	57%	57%	56%	40%	35%	30%	20%
F06	King Vaughan Rd E of Hwy 27_WB	12%	8%	8%	8%	12%	24%	54%	54%	54%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
F07	King Vaughan Rd E of Kipling Ave_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	93%	93%	93%	75%	40%	35%	30%	20%
F08	King Vaughan Rd E of Kipling Ave_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	95%	95%	95%	77%	40%	35%	30%	20%
F09	Pine Valley Dr At Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	94%	94%	94%	75%	40%	35%	30%	20%
F10	Pine Valley Dr At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	42%	42%	42%	42%	42%	42%	42%	28%	28%	28%	42%	40%	35%	30%	20%
F13	Pine Valley Dr N of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	64%	64%	64%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
F14	Pine Valley Dr N of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	60%	60%	60%	61%	40%	35%	30%	20%
F15	King Vaughan Rd W of Pine Valley Dr_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
F16	King Vaughan Rd W of Pine Valley Dr_WB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 No Build, Percentage Basis

Highway 413
GTA West

RWDI Project#: 1301992

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F17	King Vaughan Rd E of Pine Valley Dr_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
F18	King Vaughan Rd E of Pine Valley Dr_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	91%	91%	91%	74%	40%	35%	30%	20%
F19	Weston Rd N of Kirby Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	60%	60%	60%	58%	40%	35%	30%	20%
F20	Weston Rd N of Kirby Rd_SB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
F21	Weston Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	35%	35%	35%	45%	40%	35%	30%	20%
F22	Weston Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
F23	Weston Rd N of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	68%	68%	68%	63%	40%	35%	30%	20%
F24	Weston Rd N of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	95%	95%	95%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
F25	King Vaughan Rd E of Weston Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
F26	King Vaughan Rd E of Weston Rd_WB	12%	8%	8%	8%	12%	24%	71%	71%	71%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
F27	King Vaughan Rd W of Jane St_EB	12%	8%	8%	8%	12%	24%	97%	97%	97%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
F28	King Vaughan Rd W of Jane St_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	84%	84%	84%	71%	40%	35%	30%	20%
F29	Kirby Rd At Hwy 400_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
F30	Kirby Rd At Hwy 400_WB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
F31	Steeles Ave W of Ninth Line N_EB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
F32	Steeles Ave W of Ninth Line N_WB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
F33	Heritage Rd S of Wanless Dr_NB	12%	8%	8%	8%	12%	24%	51%	51%	51%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
F34	Heritage Rd S of Wanless Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
F35	Heart Lake Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
F36	Heart Lake Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	46%	46%	46%	52%	40%	35%	30%	20%
F37	Mayfield Rd E of Dixie Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
F38	Mayfield Rd E of Dixie Rd_WB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
F39	Bramalea Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	25%	25%	25%	40%	40%	40%	40%	40%	40%	40%	100%	100%	100%	40%	40%	35%	30%	20%
F40	Bramalea Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	35%	35%	35%	46%	40%	35%	30%	20%
F41	Old School Rd W of Bramalea Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
F42	Old School Rd W of Bramalea Rd_WB	12%	8%	8%	8%	12%	24%	74%	74%	74%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
F43	Cold Creek Rd N of Nashville Rd_NB	12%	8%	8%	8%	12%	24%	27%	27%	27%	40%	40%	40%	40%	40%	40%	40%	100%	100%	100%	40%	40%	35%	30%	20%
F44	Cold Creek Rd N of Nashville Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	31%	31%	31%	31%	31%	31%	31%	9%	9%	9%	31%	40%	35%	30%	20%
F45	Nashville Rd At Hwy 427_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
F46	Nashville Rd At Hwy 427_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
F47	Kirby Rd W of Hwy 27_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	30%	30%	30%	35%	40%	35%	30%	20%
F48	Kirby Rd W of Hwy 27_WB	12%	8%	8%	8%	12%	24%	8%	8%	8%	29%	29%	29%	29%	29%	29%	29%	100%	100%	100%	29%	40%	35%	30%	20%
F49	King Vaughan Rd E of Jane St_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
F50	King Vaughan Rd E of Jane St_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	85%	85%	85%	71%	40%	35%	30%	20%
F51	Jane St N of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	38%	38%	38%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
F52	Jane St N of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	23%	23%	23%	39%	40%	35%	30%	20%
F53	Jane St S of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	32%	32%	32%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
F54	Jane St S of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	32%	32%	32%	44%	40%	35%	30%	20%
F71	Hwy 400 at King Vaughan Rd N-E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	33%	33%	33%	44%	40%	35%	30%	20%
F72	Hwy 400 at King Vaughan Rd E-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	69%	69%	69%	63%	40%	35%	30%	20%
F73	Hwy 400 at King Vaughan Rd W-S Ramp	12%	8%	8%	8%	12%	24%	27%	27%	27%	39%	39%	39%	39%	39%	39%	39%	100%	100%	100%	39%	40%	35%	30%	20%
F74	Hwy 400 at King Vaughan Rd S-E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
F75	Hwy 400 at King Vaughan Rd E-N Ramp	12%	8%	8%	8%	12%	24%	33%	33%	33%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
F76	Hwy 400 at King Vaughan Rd W-N Ramp	12%	8%	8%	8%	12%	24%	20%	20%	20%	38%	38%	38%	38%	38%	38%	38%	100%	100%	100%	38%	40%	35%	30%	20%
F77	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F78	Hwy 427 at Major Mackenzie Dr E-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
F79	Hwy 427 at Major Mackenzie Dr W-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
F80	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	12%	8%	8%	8%	12%	24%	58%	58%	58%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
F81	Hwy 427 at Major Mackenzie Dr E-N Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F82	Hwy 427 at Major Mackenzie Dr W-N Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F83	Hwy 410 at Mayfield Rd N-E/W Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F84	Hwy 410 at Mayfield Rd E-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	96%	96%	96%	76%	40%	35%	30%	20%
F85	Hwy 410 at Mayfield Rd W-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
F86	Hwy 410 at Mayfield Rd S-E/W Ramp	12%	8%	8%	8%	12%	24%	68%	68%	68%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 No Build, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F87	Hwy 410 at Mayfield Rd E-N Ramp	12%	8%	8%	8%	12%	24%	53%	53%	53%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
F88	Hwy 410 at Mayfield Rd W-N Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	96%	96%	96%	76%	40%	35%	30%	20%
F89	Hwy 410 at Mayfield Rd W-E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
G01	Hwy 413 at Hwy 401 / Hwy 407_E-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G02	Hwy 413 at Hwy 401 / Hwy 407_N-E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G03	Hwy 413 at Hwy 401 / Hwy 407_N-S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G04	Hwy 413 at Hwy 401 / Hwy 407_S-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G05	Hwy 413 at Hwy 401_E-N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G06	Hwy 407 at Hwy 413 N-N Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G07	Hwy 407 at Hwy 401 S-E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	24%	24%	24%	39%	40%	35%	30%	20%
G08	Hwy 407 at Hwy 413 N-E Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G09	Hwy 407 at Hwy 401 S-W Ramp	12%	8%	8%	8%	12%	24%	78%	78%	78%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
G10	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	24%	24%	24%	39%	40%	35%	30%	20%
H01	Hwy 401 E of Trafalgar Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
H02	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
H03	Hwy 401 W of Winston Churchill Blvd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
H04	Hwy 401 E of Trafalgar Rd_WB	12%	8%	8%	8%	12%	24%	74%	74%	74%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
H05	Hwy 401 Collector at Hwy 413 E-W Ramp	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
H06	Hwy 401 Express at Hwy 413 E-W Ramp	12%	8%	8%	8%	12%	24%	67%	67%	67%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
H07	Hwy 401 W of Winston Churchill Blvd_WB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
H08	Hwy 401 at Trafalgar Rd N-E Ramp	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
H09	Hwy 401 at Trafalgar Rd S-E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	32%	32%	32%	44%	40%	35%	30%	20%
H10	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H11	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H12	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H13	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H14	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	12%	8%	8%	8%	12%	24%	91%	91%	91%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
H15	Hwy 401 at Hwy 413 N-W Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H16	Hwy 401 at Trafalgar Rd E-N/S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	88%	88%	88%	72%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A01	Hwy 413 N of Hwy 401/407 interchange_NB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
A02	Hwy 413 N of Hwy 401/407 interchange_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	80%	80%	80%	68%	40%	35%	30%	20%
A03	Hwy 413 N of Winston Churchill Blvd_NB	12%	8%	8%	8%	12%	24%	80%	80%	80%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
A04	Hwy 413 N of Winston Churchill Blvd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
A05	Hwy 413 N of Bovaird Dr_NB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
A06	Hwy 413 N of Bovaird Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
A07	Hwy 413 E of Mayfield Rd_EB	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
A08	Hwy 413 E of Mayfield Rd_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	84%	84%	84%	71%	40%	35%	30%	20%
A09	Hwy 413 E of Chinguacousy Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	86%	86%	86%	72%	40%	35%	30%	20%
A10	Hwy 413 E of Chinguacousy Rd_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
A11	Hwy 413 E of Hurontario St_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
A12	Hwy 413 E of Hurontario St_WB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
A13	Hwy 413 E of Hwy 410_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	90%	90%	90%	74%	40%	35%	30%	20%
A14	Hwy 413 E of Hwy 410_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
A15	Hwy 413 E of Bramalea Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
A16	Hwy 413 E of Bramalea Rd_WB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
A17	Hwy 413 E of Airport Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
A18	Hwy 413 E of Airport Rd_WB	12%	8%	8%	8%	12%	24%	93%	93%	93%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
A19	Hwy 413 E of The Gore Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
A20	Hwy 413 E of The Gore Rd_WB	12%	8%	8%	8%	12%	24%	91%	91%	91%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
A21	Hwy 413 E of Humber Station Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
A22	Hwy 413 E of Humber Station Rd_WB	12%	8%	8%	8%	12%	24%	93%	93%	93%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
A23	Hwy 413 E of Hwy 427_EB	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
A24	Hwy 413 E of Hwy 427_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
A25	Hwy 413 E of Hwy 27_EB	12%	8%	8%	8%	12%	24%	97%	97%	97%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
A26	Hwy 413 E of Hwy 27_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
A27	Hwy 413 E of Pine Valley Dr_EB	12%	8%	8%	8%	12%	24%	97%	97%	97%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
A28	Hwy 413 E of Pine Valley Dr_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
B05	Hwy 407 S of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	39%	39%	39%	47%	40%	35%	30%	20%
B06	Hwy 407 S of Hwy 401_SB	12%	8%	8%	8%	12%	24%	70%	70%	70%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
B07	Hwy 407 N of Hwy 401_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	32%	32%	32%	44%	40%	35%	30%	20%
B08	Hwy 407 N of Hwy 401_WB	12%	8%	8%	8%	12%	24%	58%	58%	58%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
B09	Hwy 410 S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
B10	Hwy 410 S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
B11	Hwy 410 N of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	53%	53%	53%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
B12	Hwy 410 N of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	44%	44%	44%	50%	40%	35%	30%	20%
B13	Hwy 410 W of Mayfield Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	40%	35%	30%	20%
B14	Hwy 410 W of Mayfield Rd_WB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
B15	Hwy 427 S of Major Mackenzie Dr_NB	12%	8%	8%	8%	12%	24%	51%	51%	51%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
B16	Hwy 427 S of Major Mackenzie Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
B17	Hwy 427 N of Major Mackenzie Dr_NB	12%	8%	8%	8%	12%	24%	54%	54%	54%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
B18	Hwy 427 N of Major Mackenzie Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	69%	69%	69%	63%	40%	35%	30%	20%
B19	Hwy 400 N of Teston Rd_NB	12%	8%	8%	8%	12%	24%	51%	51%	51%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
B20	Hwy 400 N of Teston Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	53%	53%	53%	55%	40%	35%	30%	20%
B21	Hwy 400 S of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	43%	43%	43%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
B22	Hwy 400 S of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	41%	41%	41%	48%	40%	35%	30%	20%
B23	Hwy 400 S of King Rd_NB	12%	8%	8%	8%	12%	24%	42%	42%	42%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
B24	Hwy 400 S of King Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
C11	Hwy 413 at Winston Churchill Blvd_S-E/W	12%	8%	8%	8%	12%	24%	91%	91%	91%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
C12	Hwy 413 at Winston Churchill Blvd_E-N	12%	8%	8%	8%	12%	24%	59%	59%	59%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
C13	Hwy 413 at Winston Churchill Blvd_W-N	12%	8%	8%	8%	12%	24%	65%	65%	65%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
C14	Hwy 413 at Winston Churchill Blvd_N-E/W	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
C15	Hwy 413 at Winston Churchill Blvd_E-S	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
C16	Hwy 413 at Winston Churchill Blvd_W-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C17	Hwy 413 at Bovaird Dr_S-E/W	12%	8%	8%	8%	12%	24%	74%	74%	74%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
C18	Hwy 413 at Bovaird Dr_E-N	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
C19	Hwy 413 at Bovaird Dr_W-N	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	14%	14%	14%	35%	40%	35%	30%	20%
C20	Hwy 413 at Bovaird Dr_N-E/W	12%	8%	8%	8%	12%	24%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
C21	Hwy 413 at Bovaird Dr_E-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	95%	95%	95%	77%	40%	35%	30%	20%
C22	Hwy 413 at Bovaird Dr_W-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	36%	36%	36%	46%	40%	35%	30%	20%
C23	Hwy 413 at Mayfield Rd_S-E/W	12%	8%	8%	8%	12%	24%	93%	93%	93%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
C24	Hwy 413 at Mayfield Rd_E-N	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	82%	82%	82%	69%	40%	35%	30%	20%
C25	Hwy 413 at Mayfield Rd_W-N	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
C26	Hwy 413 at Mayfield Rd_N-E/W	12%	8%	8%	8%	12%	24%	93%	93%	93%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
C27	Hwy 413 at Mayfield Rd_E-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	49%	49%	49%	49%	49%	49%	49%	42%	42%	42%	49%	40%	35%	30%	20%
C28	Hwy 413 at Mayfield Rd_W-S	12%	8%	8%	8%	12%	24%	59%	59%	59%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
C29	Hwy 413 at Chinguacousy Rd_W-N/S	12%	8%	8%	8%	12%	24%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
C30	Hwy 413 at Chinguacousy Rd_N-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	50%	50%	50%	54%	40%	35%	30%	20%
C31	Hwy 413 at Chinguacousy Rd_S-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	31%	31%	31%	43%	40%	35%	30%	20%
C32	Hwy 413 at Chinguacousy Rd_E-N/S	12%	8%	8%	8%	12%	24%	65%	65%	65%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
C33	Hwy 413 at Chinguacousy Rd_N-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
C34	Hwy 413 at Chinguacousy Rd_S-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	34%	34%	34%	44%	40%	35%	30%	20%
C35	Hwy 413 at Hurontario St_W-N/S	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
C36	Hwy 413 at Hurontario St_N-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	49%	49%	49%	49%	49%	49%	49%	43%	43%	43%	49%	40%	35%	30%	20%
C37	Hwy 413 at Hurontario St_S-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
C38	Hwy 413 at Hurontario St_E-N/S	12%	8%	8%	8%	12%	24%	36%	36%	36%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
C39	Hwy 413 at Hurontario St_N-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
C40	Hwy 413 at Hurontario St_S-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
C41	Hwy 413 at Hwy 410_W-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	21%	21%	21%	38%	40%	35%	30%	20%
C42	Hwy 413 at Hwy 410_E-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%	63%	40%	35%	30%	20%
C43	Hwy 413 at Hwy 410_S-E	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
C44	Hwy 413 at Hwy 410_S-W	12%	8%	8%	8%	12%	24%	36%	36%	36%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
C45	Hwy 413 at Bramalea Rd_W-N/S	12%	8%	8%	8%	12%	24%	93%	93%	93%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
C46	Hwy 413 at Bramalea Rd_N-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	69%	69%	69%	62%	40%	35%	30%	20%
C47	Hwy 413 at Bramalea Rd_S-E	12%	8%	8%	8%	12%	24%	0%	0%	0%	31%	31%	31%	31%	31%	31%	31%	100%	100%	100%	31%	40%	35%	30%	20%
C48	Hwy 413 at Bramalea Rd_E-N/S	12%	8%	8%	8%	12%	24%	82%	82%	82%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
C49	Hwy 413 at Bramalea Rd_N-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
C50	Hwy 413 at Bramalea Rd_S-W	12%	8%	8%	8%	12%	24%	26%	26%	26%	36%	36%	36%	36%	36%	36%	36%	100%	100%	100%	36%	40%	35%	30%	20%
C51	Hwy 413 at Airport Rd_W-N/S	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
C52	Hwy 413 at Airport Rd_N-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
C53	Hwy 413 at Airport Rd_S-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	44%	44%	44%	50%	40%	35%	30%	20%
C54	Hwy 413 at Airport Rd_E-N/S	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	53%	53%	53%	55%	40%	35%	30%	20%
C55	Hwy 413 at Airport Rd_N-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	9%	9%	9%	32%	40%	35%	30%	20%
C56	Hwy 413 at Airport Rd_S-W	12%	8%	8%	8%	12%	24%	17%	17%	17%	37%	37%	37%	37%	37%	37%	37%	100%	100%	100%	37%	40%	35%	30%	20%
C57	Hwy 413 at The Gore Rd_W-N/S	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
C58	Hwy 413 at The Gore Rd_N/S-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	62%	62%	62%	61%	40%	35%	30%	20%
C59	Hwy 413 at The Gore Rd_E-N/S	12%	8%	8%	8%	12%	24%	42%	42%	42%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
C60	Hwy 413 at The Gore Rd_N/S-W	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
C61	Hwy 413 at Humber Station Rd_W-N/S	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	50%	50%	50%	53%	40%	35%	30%	20%
C62	Hwy 413 at Humber Station Rd_N-E	12%	8%	8%	8%	12%	24%	64%	64%	64%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
C63	Hwy 413 at Humber Station Rd_S-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
C64	Hwy 413 at Humber Station Rd_E-N/S	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
C65	Hwy 413 at Humber Station Rd_N-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	66%	66%	66%	57%	40%	35%	30%	20%
C66	Hwy 413 at Humber Station Rd_S-W	12%	8%	8%	8%	12%	24%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
C67	Hwy 413 at Hwy 427_W-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
C68	Hwy 413 at Hwy 427_E-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
C69	Hwy 413 at Hwy 427_S-E	12%	8%	8%	8%	12%	24%	36%	36%	36%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
C70	Hwy 413 at Hwy 427_S-W	12%	8%	8%	8%	12%	24%	69%	69%	69%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C71	Hwy 413 at Hwy 27_W-N/S	12%	8%	8%	8%	12%	24%	72%	72%	72%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
C72	Hwy 413 at Hwy 27_N/S-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	21%	21%	21%	38%	40%	35%	30%	20%
C73	Hwy 413 at Hwy 27_E-N/S	12%	8%	8%	8%	12%	24%	48%	48%	48%	52%	52%	52%	52%	52%	52%	52%	100%	100%	100%	52%	40%	35%	30%	20%
C74	Hwy 413 at Hwy 27_N/S-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
C81	Hwy 413 at Weston Rd_W-N/S	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
C82	Hwy 413 at Weston Rd_N/S-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
C83	Hwy 413 at Hwy 400_W-N	12%	8%	8%	8%	12%	24%	78%	78%	78%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
C84	Hwy 413 at Hwy 400_W-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
C85	Hwy 413 at Hwy 400_N-W	12%	8%	8%	8%	12%	24%	54%	54%	54%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
C86	Hwy 413 at Hwy 400_S-W	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%
D01	Trafalgar Rd S of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
D02	Trafalgar Rd S of Hwy 401_SB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
D03	Trafalgar Rd N of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
D04	Trafalgar Rd N of Hwy 401_SB	12%	8%	8%	8%	12%	24%	76%	76%	76%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D05	Steeles Ave E of Trafalgar Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
D06	Steeles Ave E of Trafalgar Rd_WB	12%	8%	8%	8%	12%	24%	69%	69%	69%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D07	Steeles Ave At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
D08	Steeles Ave At Hwy 413_WB	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
D09	Steeles Ave E of Ninth Line S_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
D10	Steeles Ave E of Ninth Line S_WB	12%	8%	8%	8%	12%	24%	67%	67%	67%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
D11	Steeles Ave E of Tenth Line N_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	58%	58%	58%	57%	40%	35%	30%	20%
D12	Steeles Ave E of Tenth Line N_WB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
D13	Ninth Line N N of Steeles Ave_NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D14	Ninth Line N N of Steeles Ave_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	47%	47%	47%	52%	40%	35%	30%	20%
D15	Ninth Line S S of Steeles Ave_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
D16	Ninth Line S S of Steeles Ave_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	97%	97%	97%	77%	40%	35%	30%	20%
D17	Tenth Line At Hwy 413_NB	12%	8%	8%	8%	12%	24%	26%	26%	26%	40%	40%	40%	40%	40%	40%	40%	100%	100%	100%	40%	40%	35%	30%	20%
D18	Tenth Line At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	30%	30%	30%	43%	40%	35%	30%	20%
D19	Derry Rd W of Hwy 407_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	68%	68%	68%	63%	40%	35%	30%	20%
D20	Derry Rd W of Hwy 407_WB	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
D21	Derry Rd E of Hwy 407_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
D22	Derry Rd E of Hwy 407_WB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
D23	Winston Churchill Blvd S of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
D24	Winston Churchill Blvd S of Hwy 401_SB	12%	8%	8%	8%	12%	24%	70%	70%	70%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
D25	Winston Churchill Blvd N of Hwy 401_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
D26	Winston Churchill Blvd N of Hwy 401_SB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D27	Winston Churchill Blvd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	47%	47%	47%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
D28	Winston Churchill Blvd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	47%	47%	47%	52%	40%	35%	30%	20%
D29	Winston Churchill Blvd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D30	Winston Churchill Blvd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
D31	Winston Churchill Blvd N of 5 Side Rd_NB	12%	8%	8%	8%	12%	24%	54%	54%	54%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
D32	Winston Churchill Blvd N of 5 Side Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	56%	56%	56%	57%	40%	35%	30%	20%
D33	5 Side Rd W of Winston Churchill Blvd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	84%	84%	84%	71%	40%	35%	30%	20%
D34	5 Side Rd W of Winston Churchill Blvd_WB	12%	8%	8%	8%	12%	24%	84%	84%	84%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
D35	5 Side Rd At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
D36	5 Side Rd At Hwy 413_WB	12%	8%	8%	8%	12%	24%	46%	46%	46%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
D37	Heritage Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	28%	28%	28%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
D38	Heritage Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	40%	40%	40%	48%	40%	35%	30%	20%
D39	Heritage Rd N of Bovaird Dr_NB	12%	8%	8%	8%	12%	24%	37%	37%	37%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
D40	Heritage Rd N of Bovaird Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
D41	Heritage Rd S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	59%	40%	35%	30%	20%
D42	Heritage Rd S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
D43	Heritage Rd N of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	45%	45%	45%	50%	40%	35%	30%	20%
D44	Heritage Rd N of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	54%	54%	54%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
D45	Bovaird Dr W of Heritage Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	97%	97%	97%	77%	40%	35%	30%	20%
D46	Bovaird Dr W of Heritage Rd_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	93%	93%	93%	75%	40%	35%	30%	20%
D47	Bovaird Dr W of Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	90%	90%	90%	74%	40%	35%	30%	20%
D48	Bovaird Dr W of Hwy 413_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
D49	Bovaird Dr E of Hwy 413_EB	12%	8%	8%	8%	12%	24%	78%	78%	78%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
D50	Bovaird Dr E of Hwy 413_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
D51	Wanless Dr W of Heritage Rd_EB	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
D52	Wanless Dr W of Heritage Rd_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
D53	Wanless Dr At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
D54	Wanless Dr At Hwy 413_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
D55	Mayfield Rd W of Heritage Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	65%	65%	65%	61%	40%	35%	30%	20%
D56	Mayfield Rd W of Heritage Rd_WB	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
D57	Mayfield Rd E of Heritage Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
D58	Mayfield Rd E of Heritage Rd_WB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
D59	Mayfield Rd E of Hwy 413_EB	12%	8%	8%	8%	12%	24%	93%	93%	93%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
D60	Mayfield Rd E of Hwy 413_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
D61	Mississauga Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	60%	60%	60%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
D62	Mississauga Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
D63	Creditview Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	30%	30%	30%	30%	30%	30%	30%	6%	6%	6%	30%	40%	35%	30%	20%
D64	Creditview Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	54%	54%	54%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
D65	Chinguacousy Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	51%	51%	51%	53%	40%	35%	30%	20%
D66	Chinguacousy Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
D67	Chinguacousy Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	70%	70%	70%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D68	Chinguacousy Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
D69	Chinguacousy Rd N of Old School Rd_NB	12%	8%	8%	8%	12%	24%	27%	27%	27%	41%	41%	41%	41%	41%	41%	41%	100%	100%	100%	41%	40%	35%	30%	20%
D70	Chinguacousy Rd N of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	49%	49%	49%	52%	40%	35%	30%	20%
D71	Old School Rd W of Chinguacousy Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
D72	Old School Rd W of Chinguacousy Rd_WB	12%	8%	8%	8%	12%	24%	87%	87%	87%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
D73	Old School Rd At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
D74	Old School Rd At Hwy 413_WB	12%	8%	8%	8%	12%	24%	97%	97%	97%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
D75	McLaughlin Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
D76	McLaughlin Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	86%	86%	86%	72%	40%	35%	30%	20%
D77	McLaughlin Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	65%	65%	65%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
D78	McLaughlin Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	44%	44%	44%	50%	40%	35%	30%	20%
D79	Old School Rd W of Hurontario St_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
D80	Old School Rd W of Hurontario St_WB	12%	8%	8%	8%	12%	24%	58%	58%	58%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
D81	Old School Rd E of Hurontario St_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
D82	Old School Rd E of Hurontario St_WB	12%	8%	8%	8%	12%	24%	78%	78%	78%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D83	Hurontario St S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	70%	70%	70%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D84	Hurontario St S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	95%	95%	95%	76%	40%	35%	30%	20%
D85	Hurontario St S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
D86	Hurontario St S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	84%	84%	84%	70%	40%	35%	30%	20%
D87	Hurontario St N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	53%	53%	53%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
D88	Hurontario St N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	61%	61%	61%	59%	40%	35%	30%	20%
D89	Kennedy Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	81%	81%	81%	70%	40%	35%	30%	20%
D90	Kennedy Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	42%	42%	42%	42%	42%	42%	42%	31%	31%	31%	42%	40%	35%	30%	20%
D91	Old School Rd W of Heart Lake Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	22%	22%	22%	38%	40%	35%	30%	20%
D92	Old School Rd W of Heart Lake Rd_WB	12%	8%	8%	8%	12%	24%	34%	34%	34%	45%	45%	45%	45%	45%	45%	45%	100%	100%	100%	45%	40%	35%	30%	20%
D93	Old School Rd At Hwy 410_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	20%	20%	20%	38%	40%	35%	30%	20%
D94	Old School Rd At Hwy 410_WB	12%	8%	8%	8%	12%	24%	31%	31%	31%	43%	43%	43%	43%	43%	43%	43%	100%	100%	100%	43%	40%	35%	30%	20%
E01	Heart Lake Rd S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	60%	60%	60%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E02	Heart Lake Rd S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	64%	64%	64%	61%	40%	35%	30%	20%
E03	Heart Lake Rd At Hwy 410_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
E04	Heart Lake Rd At Hwy 410_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
E05	Heart Lake Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
E06	Heart Lake Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	41%	41%	41%	41%	41%	41%	41%	26%	26%	26%	41%	40%	35%	30%	20%
E07	Mayfield Rd W of Heart Lake Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
E08	Mayfield Rd W of Heart Lake Rd_WB	12%	8%	8%	8%	12%	24%	68%	68%	68%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
E09	Mayfield Rd E of Heart Lake Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
E10	Mayfield Rd E of Heart Lake Rd_WB	12%	8%	8%	8%	12%	24%	82%	82%	82%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
E11	Mayfield Rd E of Hwy 410_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	72%	72%	72%	64%	40%	35%	30%	20%
E12	Mayfield Rd E of Hwy 410_WB	12%	8%	8%	8%	12%	24%	71%	71%	71%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
E13	Dixie Rd S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E14	Dixie Rd S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
E15	Dixie Rd N of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
E16	Dixie Rd N of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
E17	Dixie Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	44%	44%	44%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
E18	Dixie Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	49%	49%	49%	53%	40%	35%	30%	20%
E19	Countryside Dr At Hwy 410_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	40%	35%	30%	20%
E20	Countryside Dr At Hwy 410_WB	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E21	Bramalea Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	11%	11%	11%	34%	34%	34%	34%	34%	34%	34%	100%	100%	100%	34%	40%	35%	30%	20%
E22	Bramalea Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	21%	21%	21%	38%	40%	35%	30%	20%
E23	Bramalea Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	69%	69%	69%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
E24	Bramalea Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	72%	72%	72%	64%	40%	35%	30%	20%
E25	Old School Rd E of Bramalea Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	72%	72%	72%	64%	40%	35%	30%	20%
E26	Old School Rd E of Bramalea Rd_WB	12%	8%	8%	8%	12%	24%	93%	93%	93%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
E27	Old School Rd E of Torbram Road_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	86%	86%	86%	72%	40%	35%	30%	20%
E28	Old School Rd E of Torbram Road_WB	12%	8%	8%	8%	12%	24%	37%	37%	37%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
E29	Torbram Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	28%	28%	28%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E30	Torbram Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	30%	30%	30%	43%	40%	35%	30%	20%
E31	Torbram Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	35%	35%	35%	45%	45%	45%	45%	45%	45%	45%	100%	100%	100%	45%	40%	35%	30%	20%
E32	Torbram Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	37%	37%	37%	46%	40%	35%	30%	20%
E33	Airport Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	37%	37%	37%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
E34	Airport Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	59%	59%	59%	57%	40%	35%	30%	20%
E35	Airport Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	68%	68%	68%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
E36	Airport Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	47%	47%	47%	52%	40%	35%	30%	20%
E37	Airport Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	47%	47%	47%	52%	52%	52%	52%	52%	52%	52%	100%	100%	100%	52%	40%	35%	30%	20%
E38	Airport Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	43%	43%	43%	50%	40%	35%	30%	20%
E39	Healey Rd E of Airport Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
E40	Healey Rd E of Airport Rd_WB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E41	Healey Rd At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
E42	Healey Rd At Hwy 413_WB	12%	8%	8%	8%	12%	24%	60%	60%	60%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
E43	Healey Rd E of Centreville Creek Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
E44	Healey Rd E of Centreville Creek Rd_WB	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
E45	Innis Lake Rd S of Healey Rd_NB	12%	8%	8%	8%	12%	24%	24%	24%	24%	40%	40%	40%	40%	40%	40%	40%	100%	100%	100%	40%	40%	35%	30%	20%
E46	Innis Lake Rd S of Healey Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	30%	30%	30%	43%	40%	35%	30%	20%
E47	Innis Lake Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	18%	18%	18%	36%	36%	36%	36%	36%	36%	36%	100%	100%	100%	36%	40%	35%	30%	20%
E48	Innis Lake Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	34%	34%	34%	34%	34%	34%	34%	14%	14%	14%	34%	40%	35%	30%	20%
E49	Centreville Creek Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	18%	18%	18%	36%	36%	36%	36%	36%	36%	36%	100%	100%	100%	36%	40%	35%	30%	20%
E50	Centreville Creek Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	22%	22%	22%	38%	40%	35%	30%	20%
E51	Centreville Creek Rd N of Healey Rd_NB	12%	8%	8%	8%	12%	24%	6%	6%	6%	31%	31%	31%	31%	31%	31%	31%	100%	100%	100%	31%	40%	35%	30%	20%
E52	Centreville Creek Rd N of Healey Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	15%	15%	15%	35%	40%	35%	30%	20%
E53	The Gore Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
E54	The Gore Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	49%	49%	49%	53%	40%	35%	30%	20%
E55	The Gore Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	26%	26%	26%	41%	41%	41%	41%	41%	41%	41%	100%	100%	100%	41%	40%	35%	30%	20%
E56	The Gore Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	70%	70%	70%	64%	40%	35%	30%	20%
E57	Clarkway Dr S of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	72%	72%	72%	64%	40%	35%	30%	20%
E58	Clarkway Dr S of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
E59	Humber Station Rd S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	94%	94%	94%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
E60	Humber Station Rd S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
E61	Humber Station Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E62	Humber Station Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	80%	80%	80%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
E63	Mayfield Rd W of Humber Station Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	70%	70%	70%	64%	40%	35%	30%	20%
E64	Mayfield Rd W of Humber Station Rd_WB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
E65	Mayfield Rd At Hwy 413_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	40%	35%	30%	20%
E66	Mayfield Rd At Hwy 413_WB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
E67	Mayfield Rd E of Coleraine Dr_EB	12%	8%	8%	8%	12%	24%	97%	97%	97%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
E68	Mayfield Rd E of Coleraine Dr_WB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
E69	Coleraine Dr At Highway 413_NB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
E70	Coleraine Dr At Highway 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	72%	72%	72%	64%	40%	35%	30%	20%
E71	Coleraine Dr N of Mayfield Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	84%	84%	84%	70%	40%	35%	30%	20%
E72	Coleraine Dr N of Mayfield Rd_SB	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
E73	Countryside Dr W of Hwy 50_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	46%	46%	46%	51%	40%	35%	30%	20%
E74	Countryside Dr W of Hwy 50_WB	12%	8%	8%	8%	12%	24%	45%	45%	45%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
E75	Hwy 50 S of Countryside Dr_NB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E76	Hwy 50 S of Countryside Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	69%	69%	69%	63%	40%	35%	30%	20%
E77	Hwy 50 At Hwy 413_NB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
E78	Hwy 50 At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
E79	Hwy 50 N of Cold Creek Rd Realignment_NB	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
E80	Hwy 50 N of Cold Creek Rd Realignment_SB	12%	8%	8%	8%	12%	24%	28%	28%	28%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E81	Cold Creek Rd Realignment E of Hwy 50_EB	12%	8%	8%	8%	12%	24%	34%	34%	34%	48%	48%	48%	48%	48%	48%	48%	100%	100%	100%	48%	40%	35%	30%	20%
E82	Cold Creek Rd Realignment E of Hwy 50_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	7%	7%	7%	32%	40%	35%	30%	20%
E83	Nashville Rd E of Hwy 50_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	98%	98%	98%	79%	40%	35%	30%	20%
E84	Nashville Rd E of Hwy 50_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	99%	99%	99%	78%	40%	35%	30%	20%
E85	Major Mackenzie Dr W of Hwy 427_EB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
E86	Major Mackenzie Dr W of Hwy 427_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	87%	87%	87%	72%	40%	35%	30%	20%
E87	Major Mackenzie Dr E of Hwy 427_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
E88	Major Mackenzie Dr E of Hwy 427_WB	12%	8%	8%	8%	12%	24%	87%	87%	87%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
E89	Huntington Rd At Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	36%	36%	36%	36%	36%	36%	36%	20%	20%	20%	36%	40%	35%	30%	20%
E90	Huntington Rd At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	76%	76%	76%	68%	40%	35%	30%	20%
E91	Huntington Rd N of Kirby Rd_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	88%	88%	88%	88%	88%	88%	88%	100%	100%	100%	88%	40%	35%	30%	20%
E92	Huntington Rd N of Kirby Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	88%	88%	88%	88%	88%	88%	88%	100%	100%	100%	88%	40%	35%	30%	20%
E93	Kirby Rd W of Huntington Rd_EB	12%	8%	8%	8%	12%	24%	70%	70%	70%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
E94	Kirby Rd W of Huntington Rd_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
E95	Hwy 27 S of Hwy 413_NB	12%	8%	8%	8%	12%	24%	69%	69%	69%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
E96	Hwy 27 S of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	69%	69%	69%	63%	40%	35%	30%	20%
E97	Hwy 27 N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	36%	36%	36%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
E98	Hwy 27 N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
F01	Kirby Rd E of Hwy 27_EB	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
F02	Kirby Rd E of Hwy 27_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	66%	66%	66%	62%	40%	35%	30%	20%
F03	Kipling Ave At Hwy 413_NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	79%	79%	79%	60%	40%	35%	30%	20%
F04	Kipling Ave At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	36%	36%	36%	36%	36%	36%	36%	32%	32%	32%	36%	40%	35%	30%	20%
F05	King Vaughan Rd E of Hwy 27_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	64%	64%	64%	60%	40%	35%	30%	20%
F06	King Vaughan Rd E of Hwy 27_WB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
F07	King Vaughan Rd E of Kipling Ave_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	90%	90%	90%	74%	40%	35%	30%	20%
F08	King Vaughan Rd E of Kipling Ave_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
F09	Pine Valley Dr At Hwy 413_NB	12%	8%	8%	8%	12%	24%	27%	27%	27%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
F10	Pine Valley Dr At Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	36%	36%	36%	36%	36%	36%	36%	17%	17%	17%	36%	40%	35%	30%	20%
F13	Pine Valley Dr N of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	66%	66%	66%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
F14	Pine Valley Dr N of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%	40%	35%	30%	20%
F15	King Vaughan Rd W of Pine Valley Dr_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
F16	King Vaughan Rd W of Pine Valley Dr_WB	12%	8%	8%	8%	12%	24%	80%	80%	80%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F17	King Vaughan Rd E of Pine Valley Dr_EB	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
F18	King Vaughan Rd E of Pine Valley Dr_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
F19	Weston Rd N of Kirby Rd_NB	12%	8%	8%	8%	12%	24%	80%	80%	80%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
F20	Weston Rd N of Kirby Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%
F21	Weston Rd N of Hwy 413_NB	12%	8%	8%	8%	12%	24%	80%	80%	80%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
F22	Weston Rd N of Hwy 413_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
F23	Weston Rd N of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	71%	71%	71%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
F24	Weston Rd N of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
F25	King Vaughan Rd E of Weston Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	93%	93%	93%	75%	40%	35%	30%	20%
F26	King Vaughan Rd E of Weston Rd_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	97%	97%	97%	77%	40%	35%	30%	20%
F27	King Vaughan Rd W of Jane St_EB	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
F28	King Vaughan Rd W of Jane St_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
F29	Kirby Rd At Hwy 400_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	70%	70%	70%	64%	40%	35%	30%	20%
F30	Kirby Rd At Hwy 400_WB	12%	8%	8%	8%	12%	24%	78%	78%	78%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
F31	Steeles Ave W of Ninth Line N_EB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
F32	Steeles Ave W of Ninth Line N_WB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
F33	Heritage Rd S of Wanless Dr_NB	12%	8%	8%	8%	12%	24%	37%	37%	37%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
F34	Heritage Rd S of Wanless Dr_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
F35	Heart Lake Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	39%	39%	39%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
F36	Heart Lake Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	22%	22%	22%	39%	40%	35%	30%	20%
F37	Mayfield Rd E of Dixie Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
F38	Mayfield Rd E of Dixie Rd_WB	12%	8%	8%	8%	12%	24%	72%	72%	72%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
F39	Bramalea Rd S of Old School Rd_NB	12%	8%	8%	8%	12%	24%	37%	37%	37%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
F40	Bramalea Rd S of Old School Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	29%	29%	29%	43%	40%	35%	30%	20%
F41	Old School Rd W of Bramalea Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	40%	35%	30%	20%
F42	Old School Rd W of Bramalea Rd_WB	12%	8%	8%	8%	12%	24%	45%	45%	45%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
F43	Cold Creek Rd N of Nashville Rd_NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F44	Cold Creek Rd N of Nashville Rd_SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F45	Nashville Rd At Hwy 427_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	98%	98%	98%	79%	40%	35%	30%	20%
F46	Nashville Rd At Hwy 427_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	99%	99%	99%	78%	40%	35%	30%	20%
F47	Kirby Rd W of Hwy 27_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	27%	27%	27%	52%	40%	35%	30%	20%
F48	Kirby Rd W of Hwy 27_WB	12%	8%	8%	8%	12%	24%	6%	6%	6%	33%	33%	33%	33%	33%	33%	33%	100%	100%	100%	33%	40%	35%	30%	20%
F49	King Vaughan Rd E of Jane St_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
F50	King Vaughan Rd E of Jane St_WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	84%	84%	84%	71%	40%	35%	30%	20%
F51	Jane St N of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
F52	Jane St N of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	42%	42%	42%	42%	42%	42%	42%	28%	28%	28%	42%	40%	35%	30%	20%
F53	Jane St S of King Vaughan Rd_NB	12%	8%	8%	8%	12%	24%	47%	47%	47%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
F54	Jane St S of King Vaughan Rd_SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	51%	51%	51%	53%	40%	35%	30%	20%
F71	Hwy 400 at King Vaughan Rd N-E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	37%	37%	37%	46%	40%	35%	30%	20%
F72	Hwy 400 at King Vaughan Rd E-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
F73	Hwy 400 at King Vaughan Rd W-S Ramp	12%	8%	8%	8%	12%	24%	15%	15%	15%	35%	35%	35%	35%	35%	35%	35%	100%	100%	100%	35%	40%	35%	30%	20%
F74	Hwy 400 at King Vaughan Rd S-E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	91%	91%	91%	74%	40%	35%	30%	20%
F75	Hwy 400 at King Vaughan Rd E-N Ramp	12%	8%	8%	8%	12%	24%	9%	9%	9%	32%	32%	32%	32%	32%	32%	32%	100%	100%	100%	32%	40%	35%	30%	20%
F76	Hwy 400 at King Vaughan Rd W-N Ramp	12%	8%	8%	8%	12%	24%	18%	18%	18%	38%	38%	38%	38%	38%	38%	38%	100%	100%	100%	38%	40%	35%	30%	20%
F77	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	67%	67%	67%	62%	40%	35%	30%	20%
F78	Hwy 427 at Major Mackenzie Dr E-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	42%	42%	42%	42%	42%	42%	42%	29%	29%	29%	42%	40%	35%	30%	20%
F79	Hwy 427 at Major Mackenzie Dr W-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%
F80	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
F81	Hwy 427 at Major Mackenzie Dr E-N Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	94%	94%	94%	76%	40%	35%	30%	20%
F82	Hwy 427 at Major Mackenzie Dr W-N Ramp	12%	8%	8%	8%	12%	24%	48%	48%	48%	52%	52%	52%	52%	52%	52%	52%	100%	100%	100%	52%	40%	35%	30%	20%
F83	Hwy 410 at Mayfield Rd N-E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	9%	9%	9%	32%	40%	35%	30%	20%
F84	Hwy 410 at Mayfield Rd E-S Ramp	12%	8%	8%	8%	12%	24%	46%	46%	46%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
F85	Hwy 410 at Mayfield Rd W-S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	80%	80%	80%	68%	40%	35%	30%	20%
F86	Hwy 410 at Mayfield Rd S-E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	49%	49%	49%	52%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2041 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F87	Hwy 410 at Mayfield Rd E-N Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	72%	72%	72%	64%	40%	35%	30%	20%
F88	Hwy 410 at Mayfield Rd W-N Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	8%	8%	8%	32%	40%	35%	30%	20%
G01	Hwy 413 at Hwy 401 / Hwy 407_E-N	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
G02	Hwy 413 at Hwy 401 / Hwy 407_N-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
G03	Hwy 413 at Hwy 401 / Hwy 407_N-S	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
G04	Hwy 413 at Hwy 401 / Hwy 407_S-N	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
G05	Hwy 413 at Hwy 401_E-N	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
G06	Hwy 407 at Hwy 413 N-N Ramp	12%	8%	8%	8%	12%	24%	17%	17%	17%	35%	35%	35%	35%	35%	35%	35%	100%	100%	100%	35%	40%	35%	30%	20%
G07	Hwy 407 at Hwy 401 S-E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	23%	23%	23%	39%	40%	35%	30%	20%
G08	Hwy 407 at Hwy 413 N-E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	13%	13%	13%	35%	40%	35%	30%	20%
G09	Hwy 407 at Hwy 401 S-W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	90%	90%	90%	72%	40%	35%	30%	20%
G10	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	65%	65%	65%	61%	40%	35%	30%	20%
H01	Hwy 401 E of Trafalgar Rd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
H02	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
H03	Hwy 401 W of Winston Churchill Blvd_EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
H04	Hwy 401 E of Trafalgar Rd_WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
H05	Hwy 401 Collector at Hwy 413 E-W Ramp	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
H06	Hwy 401 Express at Hwy 413 E-W Ramp	12%	8%	8%	8%	12%	24%	65%	65%	65%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
H07	Hwy 401 W of Winston Churchill Blvd_WB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
H08	Hwy 401 at Trafalgar Rd N-E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	82%	82%	82%	69%	40%	35%	30%	20%
H09	Hwy 401 at Trafalgar Rd S-E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
H10	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
H11	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	97%	97%	97%	78%	40%	35%	30%	20%
H12	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	12%	8%	8%	8%	12%	24%	93%	93%	93%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
H13	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	12%	8%	8%	8%	12%	24%	95%	95%	95%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
H14	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	64%	64%	64%	59%	40%	35%	30%	20%
H15	Hwy 401 at Hwy 413 N-W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	86%	86%	86%	71%	40%	35%	30%	20%
H16	Hwy 401 at Trafalgar Rd E-N/S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	76%	76%	76%	67%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A01	Hwy 413 N of Hwy 401/407 interchange NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A02	Hwy 413 N of Hwy 401/407 interchange SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A03	Hwy 413 N of Winston Churchill Blvd NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A04	Hwy 413 N of Winston Churchill Blvd SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A05	Hwy 413 N of Bovaird Dr NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A06	Hwy 413 N of Bovaird Dr SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A07	Hwy 413 E of Mayfield Rd EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A08	Hwy 413 E of Mayfield Rd WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A09	Hwy 413 E of Chinguacousy Rd EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A10	Hwy 413 E of Chinguacousy Rd WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A11	Hwy 413 E of Hurontario St EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A12	Hwy 413 E of Hurontario St WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A13	Hwy 413 E of Hwy 410 EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A14	Hwy 413 E of Hwy 410 WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A15	Hwy 413 E of Bramalea Rd EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A16	Hwy 413 E of Bramalea Rd WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A17	Hwy 413 E of Airport Rd EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A18	Hwy 413 E of Airport Rd WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A19	Hwy 413 E of The Gore Rd EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A20	Hwy 413 E of The Gore Rd WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A21	Hwy 413 E of Humber Station Rd EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A22	Hwy 413 E of Humber Station Rd WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A23	Hwy 413 E of Hwy 427 EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A24	Hwy 413 E of Hwy 427 WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A25	Hwy 413 E of Hwy 27 EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A26	Hwy 413 E of Hwy 27 WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A27	Hwy 413 E of Pine Valley Dr EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A28	Hwy 413 E of Pine Valley Dr WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B05	Hwy 407 S of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	31%	31%	31%	43%	40%	35%	30%	20%
B06	Hwy 407 S of Hwy 401 SB	12%	8%	8%	8%	12%	24%	60%	60%	60%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
B07	Hwy 407 N of Hwy 401 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	49%	49%	49%	53%	40%	35%	30%	20%
B08	Hwy 407 N of Hwy 401 WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
B09	Hwy 410 S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	61%	61%	61%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
B10	Hwy 410 S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	69%	69%	69%	63%	40%	35%	30%	20%
B11	Hwy 410 N of Mayfield Rd NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B12	Hwy 410 N of Mayfield Rd SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B13	Hwy 410 W of Mayfield Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	65%	65%	65%	61%	40%	35%	30%	20%
B14	Hwy 410 W of Mayfield Rd WB	12%	8%	8%	8%	12%	24%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
B15	Hwy 427 S of Major Mackenzie Dr NB	12%	8%	8%	8%	12%	24%	51%	51%	51%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
B16	Hwy 427 S of Major Mackenzie Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
B17	Hwy 427 N of Major Mackenzie Dr NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B18	Hwy 427 N of Major Mackenzie Dr SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B19	Hwy 400 N of Teston Rd NB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
B20	Hwy 400 N of Teston Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
B21	Hwy 400 S of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	46%	46%	46%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
B22	Hwy 400 S of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
B23	Hwy 400 S of King Rd NB	12%	8%	8%	8%	12%	24%	45%	45%	45%	50%	50%	50%	50%	50%	50%	50%	100%	100%	100%	50%	40%	35%	30%	20%
B24	Hwy 400 S of King Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	46%	46%	46%	51%	40%	35%	30%	20%
C11	Hwy 413 at Winston Churchill Blvd S E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C12	Hwy 413 at Winston Churchill Blvd E N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C13	Hwy 413 at Winston Churchill Blvd W N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C14	Hwy 413 at Winston Churchill Blvd N E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C15	Hwy 413 at Winston Churchill Blvd E S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C16	Hwy 413 at Winston Churchill Blvd W S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C17	Hwy 413 at Bovaird Dr S E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C18	Hwy 413 at Bovaird Dr E N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C19	Hwy 413 at Bovaird Dr W N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C20	Hwy 413 at Bovaird Dr N E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C21	Hwy 413 at Bovaird Dr E S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C22	Hwy 413 at Bovaird Dr W S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C23	Hwy 413 at Mayfield Rd S E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C24	Hwy 413 at Mayfield Rd E N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C25	Hwy 413 at Mayfield Rd W N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C26	Hwy 413 at Mayfield Rd N E/W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C27	Hwy 413 at Mayfield Rd E S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C28	Hwy 413 at Mayfield Rd W S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C29	Hwy 413 at Chinguacousy Rd W N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C30	Hwy 413 at Chinguacousy Rd N E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C31	Hwy 413 at Chinguacousy Rd S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C32	Hwy 413 at Chinguacousy Rd E N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C33	Hwy 413 at Chinguacousy Rd N W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C34	Hwy 413 at Chinguacousy Rd S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C35	Hwy 413 at Hurontario St W N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C36	Hwy 413 at Hurontario St N E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C37	Hwy 413 at Hurontario St S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C38	Hwy 413 at Hurontario St E N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C39	Hwy 413 at Hurontario St N W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C40	Hwy 413 at Hurontario St S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C41	Hwy 413 at Hwy 410 W S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C42	Hwy 413 at Hwy 410 E S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C43	Hwy 413 at Hwy 410 S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C44	Hwy 413 at Hwy 410 S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C45	Hwy 413 at Bramalea Rd W N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C46	Hwy 413 at Bramalea Rd N E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C47	Hwy 413 at Bramalea Rd S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C48	Hwy 413 at Bramalea Rd E N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C49	Hwy 413 at Bramalea Rd N W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C50	Hwy 413 at Bramalea Rd S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C51	Hwy 413 at Airport Rd W N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C52	Hwy 413 at Airport Rd N E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C53	Hwy 413 at Airport Rd S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C54	Hwy 413 at Airport Rd E N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C55	Hwy 413 at Airport Rd N W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C56	Hwy 413 at Airport Rd S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C57	Hwy 413 at The Gore Rd W N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C58	Hwy 413 at The Gore Rd N/S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C59	Hwy 413 at The Gore Rd E N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C60	Hwy 413 at The Gore Rd N/S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C61	Hwy 413 at Humber Station Rd W N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C62	Hwy 413 at Humber Station Rd N E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C63	Hwy 413 at Humber Station Rd S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C64	Hwy 413 at Humber Station Rd E N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C65	Hwy 413 at Humber Station Rd N W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C66	Hwy 413 at Humber Station Rd S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C67	Hwy 413 at Hwy 427 W S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C68	Hwy 413 at Hwy 427 E S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C69	Hwy 413 at Hwy 427 S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C70	Hwy 413 at Hwy 427 S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C71	Hwy 413 at Hwy 27 W N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C72	Hwy 413 at Hwy 27 N/S E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C73	Hwy 413 at Hwy 27 E N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C74	Hwy 413 at Hwy 27 N/S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C81	Hwy 413 at Weston Rd W N/S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C82	Hwy 413 at Weston Rd N/S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C83	Hwy 413 at Hwy 400 W N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C84	Hwy 413 at Hwy 400 W S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C85	Hwy 413 at Hwy 400 N W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C86	Hwy 413 at Hwy 400 S W	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
D01	Trafalgar Rd S of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	67%	67%	67%	62%	40%	35%	30%	20%
D02	Trafalgar Rd S of Hwy 401 SB	12%	8%	8%	8%	12%	24%	76%	76%	76%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D03	Trafalgar Rd N of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%
D04	Trafalgar Rd N of Hwy 401 SB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
D05	Steeles Ave E of Trafalgar Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	78%	78%	78%	67%	40%	35%	30%	20%
D06	Steeles Ave E of Trafalgar Rd WB	12%	8%	8%	8%	12%	24%	69%	69%	69%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D07	Steeles Ave At Hwy 413 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%
D08	Steeles Ave At Hwy 413 WB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
D09	Steeles Ave E of Ninth Line S EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
D10	Steeles Ave E of Ninth Line S WB	12%	8%	8%	8%	12%	24%	70%	70%	70%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D11	Steeles Ave E of Tenth Line N EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
D12	Steeles Ave E of Tenth Line N WB	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
D13	Ninth Line N N of Steeles Ave NB	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
D14	Ninth Line N N of Steeles Ave SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	40%	35%	30%	20%
D15	Ninth Line S S of Steeles Ave NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	67%	67%	67%	62%	40%	35%	30%	20%
D16	Ninth Line S S of Steeles Ave SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
D17	Tenth Line At Hwy 413 NB	12%	8%	8%	8%	12%	24%	43%	43%	43%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
D18	Tenth Line At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	36%	36%	36%	46%	40%	35%	30%	20%
D19	Derry Rd W of Hwy 407 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
D20	Derry Rd W of Hwy 407 WB	12%	8%	8%	8%	12%	24%	76%	76%	76%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D21	Derry Rd E of Hwy 407 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	85%	85%	85%	71%	40%	35%	30%	20%
D22	Derry Rd E of Hwy 407 WB	12%	8%	8%	8%	12%	24%	99%	99%	99%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
D23	Winston Churchill Blvd S of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	60%	60%	60%	58%	40%	35%	30%	20%
D24	Winston Churchill Blvd S of Hwy 401 SB	12%	8%	8%	8%	12%	24%	66%	66%	66%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
D25	Winston Churchill Blvd N of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
D26	Winston Churchill Blvd N of Hwy 401 SB	12%	8%	8%	8%	12%	24%	79%	79%	79%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
D27	Winston Churchill Blvd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	42%	42%	42%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
D28	Winston Churchill Blvd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	49%	49%	49%	49%	49%	49%	49%	43%	43%	43%	49%	40%	35%	30%	20%
D29	Winston Churchill Blvd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	42%	42%	42%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
D30	Winston Churchill Blvd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	49%	49%	49%	49%	49%	49%	49%	43%	43%	43%	49%	40%	35%	30%	20%
D31	Winston Churchill Blvd N of 5 Side Rd NB	12%	8%	8%	8%	12%	24%	67%	67%	67%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
D32	Winston Churchill Blvd N of 5 Side Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	51%	51%	51%	53%	40%	35%	30%	20%
D33	5 Side Rd W of Winston Churchill Blvd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	70%	70%	70%	64%	40%	35%	30%	20%
D34	5 Side Rd W of Winston Churchill Blvd WB	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
D35	5 Side Rd At Hwy 413 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	40%	35%	30%	20%
D36	5 Side Rd At Hwy 413 WB	12%	8%	8%	8%	12%	24%	34%	34%	34%	45%	45%	45%	45%	45%	45%	45%	100%	100%	100%	45%	40%	35%	30%	20%
D37	Heritage Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	50%	50%	50%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
D38	Heritage Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	67%	67%	67%	62%	40%	35%	30%	20%
D39	Heritage Rd N of Bovaird Dr NB	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
D40	Heritage Rd N of Bovaird Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	57%	57%	57%	56%	40%	35%	30%	20%
D41	Heritage Rd S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
D42	Heritage Rd S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	35%	35%	35%	45%	45%	45%	45%	45%	45%	45%	100%	100%	100%	45%	40%	35%	30%	20%
D43	Heritage Rd N of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
D44	Heritage Rd N of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	34%	34%	34%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
D45	Bovaird Dr W of Heritage Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	94%	94%	94%	76%	40%	35%	30%	20%
D46	Bovaird Dr W of Heritage Rd WB	12%	8%	8%	8%	12%	24%	94%	94%	94%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
D47	Bovaird Dr W of Hwy 413 EB	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
D48	Bovaird Dr W of Hwy 413 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
D49	Bovaird Dr E of Hwy 413 EB	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
D50	Bovaird Dr E of Hwy 413 WB	12%	8%	8%	8%	12%	24%	99%	99%	99%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
D51	Wanless Dr W of Heritage Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	95%	95%	95%	76%	40%	35%	30%	20%
D52	Wanless Dr W of Heritage Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
D53	Wanless Dr At Hwy 413 EB	12%	8%	8%	8%	12%	24%	68%	68%	68%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
D54	Wanless Dr At Hwy 413 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	51%	51%	51%	53%	40%	35%	30%	20%
D55	Mayfield Rd W of Heritage Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	64%	64%	64%	60%	40%	35%	30%	20%
D56	Mayfield Rd W of Heritage Rd WB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
D57	Mayfield Rd E of Heritage Rd EB	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
D58	Mayfield Rd E of Heritage Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	99%	99%	99%	78%	40%	35%	30%	20%
D59	Mayfield Rd E of Hwy 413 EB	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
D60	Mayfield Rd E of Hwy 413 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	99%	99%	99%	78%	40%	35%	30%	20%
D61	Mississauga Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	30%	30%	30%	43%	43%	43%	43%	43%	43%	43%	100%	100%	100%	43%	40%	35%	30%	20%
D62	Mississauga Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	36%	36%	36%	46%	40%	35%	30%	20%
D63	Creditview Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	72%	72%	72%	65%	40%	35%	30%	20%
D64	Creditview Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
D65	Chinguacousy Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	95%	95%	95%	76%	40%	35%	30%	20%
D66	Chinguacousy Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
D67	Chinguacousy Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	95%	95%	95%	76%	40%	35%	30%	20%
D68	Chinguacousy Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
D69	Chinguacousy Rd N of Old School Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	92%	92%	92%	74%	40%	35%	30%	20%
D70	Chinguacousy Rd N of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	57%	57%	57%	56%	40%	35%	30%	20%
D71	Old School Rd W of Chinguacousy Rd EB	12%	8%	8%	8%	12%	24%	80%	80%	80%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
D72	Old School Rd W of Chinguacousy Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%
D73	Old School Rd At Hwy 413 EB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D74	Old School Rd At Hwy 413 WB	12%	8%	8%	8%	12%	24%	94%	94%	94%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
D75	McLaughlin Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
D76	McLaughlin Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
D77	McLaughlin Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	92%	92%	92%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
D78	McLaughlin Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	35%	35%	35%	45%	40%	35%	30%	20%
D79	Old School Rd W of Hurontario St EB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D80	Old School Rd W of Hurontario St WB	12%	8%	8%	8%	12%	24%	64%	64%	64%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
D81	Old School Rd E of Hurontario St EB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
D82	Old School Rd E of Hurontario St WB	12%	8%	8%	8%	12%	24%	74%	74%	74%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
D83	Hurontario St S of Old School Rd NB	12%	8%	8%	8%	12%	24%	53%	53%	53%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
D84	Hurontario St S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
D85	Hurontario St S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D86	Hurontario St S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
D87	Hurontario St N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D88	Hurontario St N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
D89	Kennedy Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
D90	Kennedy Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	24%	24%	24%	39%	40%	35%	30%	20%
D91	Old School Rd W of Heart Lake Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
D92	Old School Rd W of Heart Lake Rd WB	12%	8%	8%	8%	12%	24%	61%	61%	61%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
D93	Old School Rd At Hwy 410 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
D94	Old School Rd At Hwy 410 WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E01	Heart Lake Rd S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%
E02	Heart Lake Rd S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
E03	Heart Lake Rd At Hwy 410 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
E04	Heart Lake Rd At Hwy 410 SB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
E05	Heart Lake Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	33%	33%	33%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
E06	Heart Lake Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	40%	40%	40%	48%	40%	35%	30%	20%
E07	Mayfield Rd W of Heart Lake Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
E08	Mayfield Rd W of Heart Lake Rd WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E09	Mayfield Rd E of Heart Lake Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	74%	74%	74%	66%	40%	35%	30%	20%
E10	Mayfield Rd E of Heart Lake Rd WB	12%	8%	8%	8%	12%	24%	87%	87%	87%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
E11	Mayfield Rd E of Hwy 410 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
E12	Mayfield Rd E of Hwy 410 WB	12%	8%	8%	8%	12%	24%	78%	78%	78%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
E13	Dixie Rd S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	86%	86%	86%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
E14	Dixie Rd S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	40%	35%	30%	20%
E15	Dixie Rd N of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
E16	Dixie Rd N of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%	63%	40%	35%	30%	20%
E17	Dixie Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	61%	61%	61%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E18	Dixie Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	64%	64%	64%	60%	40%	35%	30%	20%
E19	Countryside Dr At Hwy 410 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	86%	86%	86%	72%	40%	35%	30%	20%
E20	Countryside Dr At Hwy 410 WB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
E21	Bramalea Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	1%	1%	1%	27%	27%	27%	27%	27%	27%	27%	100%	100%	100%	27%	40%	35%	30%	20%
E22	Bramalea Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	9%	9%	9%	32%	40%	35%	30%	20%
E23	Bramalea Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	1%	1%	1%	27%	27%	27%	27%	27%	27%	27%	100%	100%	100%	27%	40%	35%	30%	20%
E24	Bramalea Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	9%	9%	9%	32%	40%	35%	30%	20%
E25	Old School Rd E of Bramalea Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
E26	Old School Rd E of Bramalea Rd WB	12%	8%	8%	8%	12%	24%	91%	91%	91%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
E27	Old School Rd E of Torbram Road EB	12%	8%	8%	8%	12%	24%	61%	61%	61%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E28	Old School Rd E of Torbram Road WB	12%	8%	8%	8%	12%	24%	79%	79%	79%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
E29	Torbram Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	13%	13%	13%	34%	34%	34%	34%	34%	34%	34%	100%	100%	100%	34%	40%	35%	30%	20%
E30	Torbram Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	31%	31%	31%	43%	40%	35%	30%	20%
E31	Torbram Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	29%	29%	29%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E32	Torbram Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	42%	42%	42%	42%	42%	42%	42%	28%	28%	28%	42%	40%	35%	30%	20%
E33	Airport Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	33%	33%	33%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
E34	Airport Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	44%	44%	44%	50%	40%	35%	30%	20%
E35	Airport Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
E36	Airport Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	31%	31%	31%	43%	40%	35%	30%	20%
E37	Airport Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	55%	55%	55%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
E38	Airport Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	31%	31%	31%	43%	40%	35%	30%	20%
E39	Healey Rd E of Airport Rd EB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E40	Healey Rd E of Airport Rd WB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E41	Healey Rd At Hwy 413 EB	12%	8%	8%	8%	12%	24%	79%	79%	79%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
E42	Healey Rd At Hwy 413 WB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
E43	Healey Rd E of Centreville Creek Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
E44	Healey Rd E of Centreville Creek Rd WB	12%	8%	8%	8%	12%	24%	67%	67%	67%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
E45	Innis Lake Rd S of Healey Rd NB	12%	8%	8%	8%	12%	24%	38%	38%	38%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
E46	Innis Lake Rd S of Healey Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	48%	48%	48%	52%	40%	35%	30%	20%
E47	Innis Lake Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	29%	29%	29%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E48	Innis Lake Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	39%	39%	39%	47%	40%	35%	30%	20%
E49	Centreville Creek Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	16%	16%	16%	35%	35%	35%	35%	35%	35%	35%	100%	100%	100%	35%	40%	35%	30%	20%
E50	Centreville Creek Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	41%	41%	41%	48%	40%	35%	30%	20%
E51	Centreville Creek Rd N of Healey Rd NB	12%	8%	8%	8%	12%	24%	4%	4%	4%	29%	29%	29%	29%	29%	29%	29%	100%	100%	100%	29%	40%	35%	30%	20%
E52	Centreville Creek Rd N of Healey Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	14%	14%	14%	35%	40%	35%	30%	20%
E53	The Gore Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	29%	29%	29%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E54	The Gore Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	20%	20%	20%	38%	40%	35%	30%	20%
E55	The Gore Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	29%	29%	29%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
E56	The Gore Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	20%	20%	20%	38%	40%	35%	30%	20%
E57	Clarkway Dr S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
E58	Clarkway Dr S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	84%	84%	84%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E59	Humber Station Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	76%	76%	76%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E60	Humber Station Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	81%	81%	81%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E61	Humber Station Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	76%	76%	76%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E62	Humber Station Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	81%	81%	81%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E63	Mayfield Rd W of Humber Station Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
E64	Mayfield Rd W of Humber Station Rd WB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E65	Mayfield Rd At Hwy 413 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
E66	Mayfield Rd At Hwy 413 WB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
E67	Mayfield Rd E of Coleraine Dr EB	12%	8%	8%	8%	12%	24%	59%	59%	59%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
E68	Mayfield Rd E of Coleraine Dr WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
E69	Coleraine Dr At Highway 413 NB	12%	8%	8%	8%	12%	24%	70%	70%	70%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
E70	Coleraine Dr At Highway 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	64%	64%	64%	60%	40%	35%	30%	20%
E71	Coleraine Dr N of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
E72	Coleraine Dr N of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
E73	Countryside Dr W of Hwy 50 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
E74	Countryside Dr W of Hwy 50 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	60%	60%	60%	59%	40%	35%	30%	20%
E75	Hwy 50 S of Countryside Dr NB	12%	8%	8%	8%	12%	24%	71%	71%	71%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
E76	Hwy 50 S of Countryside Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	60%	60%	60%	58%	40%	35%	30%	20%
E77	Hwy 50 At Hwy 413 NB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
E78	Hwy 50 At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	64%	64%	64%	60%	40%	35%	30%	20%
E79	Hwy 50 N of Cold Creek Rd Realignment NB	12%	8%	8%	8%	12%	24%	69%	69%	69%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
E80	Hwy 50 N of Cold Creek Rd Realignment SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	68%	68%	68%	63%	40%	35%	30%	20%
E81	Cold Creek Rd Realignment E of Hwy 50 EB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E82	Cold Creek Rd Realignment E of Hwy 50 WB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E83	Nashville Rd E of Hwy 50 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	95%	95%	95%	76%	40%	35%	30%	20%
E84	Nashville Rd E of Hwy 50 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	84%	84%	84%	70%	40%	35%	30%	20%
E85	Major Mackenzie Dr W of Hwy 427 EB	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
E86	Major Mackenzie Dr W of Hwy 427 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
E87	Major Mackenzie Dr E of Hwy 427 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
E88	Major Mackenzie Dr E of Hwy 427 WB	12%	8%	8%	8%	12%	24%	78%	78%	78%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E89	Huntington Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	97%	97%	97%	77%	40%	35%	30%	20%
E90	Huntington Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
E91	Huntington Rd N of Kirby Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	88%	88%	88%	88%	88%	88%	88%	100%	100%	100%	88%	40%	35%	30%	20%
E92	Huntington Rd N of Kirby Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	88%	88%	88%	88%	88%	88%	88%	100%	100%	100%	88%	40%	35%	30%	20%
E93	Kirby Rd W of Huntington Rd EB	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
E94	Kirby Rd W of Huntington Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	92%	92%	92%	74%	40%	35%	30%	20%
E95	Hwy 27 S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	44%	44%	44%	50%	50%	50%	50%	50%	50%	50%	100%	100%	100%	50%	40%	35%	30%	20%
E96	Hwy 27 S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	66%	66%	66%	62%	40%	35%	30%	20%
E97	Hwy 27 N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	44%	44%	44%	50%	50%	50%	50%	50%	50%	50%	100%	100%	100%	50%	40%	35%	30%	20%
E98	Hwy 27 N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	66%	66%	66%	62%	40%	35%	30%	20%
F01	Kirby Rd E of Hwy 27 EB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
F02	Kirby Rd E of Hwy 27 WB	12%	8%	8%	8%	12%	24%	97%	97%	97%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
F03	Kipling Ave At Hwy 413 NB	12%	8%	8%	8%	12%	24%	38%	38%	38%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
F04	Kipling Ave At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	34%	34%	34%	34%	34%	34%	34%	15%	15%	15%	34%	40%	35%	30%	20%
F05	King Vaughan Rd E of Hwy 27 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	40%	35%	30%	20%
F06	King Vaughan Rd E of Hwy 27 WB	12%	8%	8%	8%	12%	24%	58%	58%	58%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
F07	King Vaughan Rd E of Kipling Ave EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	99%	99%	99%	78%	40%	35%	30%	20%
F08	King Vaughan Rd E of Kipling Ave WB	12%	8%	8%	8%	12%	24%	94%	94%	94%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
F09	Pine Valley Dr At Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	97%	97%	97%	77%	40%	35%	30%	20%
F10	Pine Valley Dr At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	32%	32%	32%	43%	40%	35%	30%	20%
F13	Pine Valley Dr N of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	64%	64%	64%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
F14	Pine Valley Dr N of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	60%	60%	60%	61%	40%	35%	30%	20%
F15	King Vaughan Rd W of Pine Valley Dr EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
F16	King Vaughan Rd W of Pine Valley Dr WB	12%	8%	8%	8%	12%	24%	74%	74%	74%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
F17	King Vaughan Rd E of Pine Valley Dr EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	85%	85%	85%	72%	40%	35%	30%	20%
F18	King Vaughan Rd E of Pine Valley Dr WB	12%	8%	8%	8%	12%	24%	95%	95%	95%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
F19	Weston Rd N of Kirby Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
F20	Weston Rd N of Kirby Rd SB	12%	8%	8%	8%	12%	24%	76%	76%	76%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
F21	Weston Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	34%	34%	34%	45%	40%	35%	30%	20%
F22	Weston Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
F23	Weston Rd N of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	83%	83%	83%	69%	40%	35%	30%	20%
F24	Weston Rd N of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	89%	89%	89%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
F25	King Vaughan Rd E of Weston Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	72%	72%	72%	65%	40%	35%	30%	20%
F26	King Vaughan Rd E of Weston Rd WB	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
F27	King Vaughan Rd W of Jane St EB	12%	8%	8%	8%	12%	24%	99%	99%	99%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
F28	King Vaughan Rd W of Jane St WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	89%	89%	89%	73%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F29	Kirby Rd At Hwy 400 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	65%	65%	65%	61%	40%	35%	30%	20%
F30	Kirby Rd At Hwy 400 WB	12%	8%	8%	8%	12%	24%	72%	72%	72%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
F31	Steeles Ave W of Ninth Line N EB	12%	8%	8%	8%	12%	24%	84%	84%	84%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
F32	Steeles Ave W of Ninth Line N WB	12%	8%	8%	8%	12%	24%	93%	93%	93%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
F33	Heritage Rd S of Wanless Dr NB	12%	8%	8%	8%	12%	24%	47%	47%	47%	52%	52%	52%	52%	52%	52%	52%	100%	100%	100%	52%	40%	35%	30%	20%
F34	Heritage Rd S of Wanless Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	45%	45%	45%	50%	40%	35%	30%	20%
F35	Heart Lake Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	44%	44%	44%	50%	50%	50%	50%	50%	50%	50%	100%	100%	100%	50%	40%	35%	30%	20%
F36	Heart Lake Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	38%	38%	38%	47%	40%	35%	30%	20%
F37	Mayfield Rd E of Dixie Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
F38	Mayfield Rd E of Dixie Rd WB	12%	8%	8%	8%	12%	24%	76%	76%	76%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
F39	Bramalea Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	8%	8%	8%	31%	31%	31%	31%	31%	31%	31%	100%	100%	100%	31%	40%	35%	30%	20%
F40	Bramalea Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
F41	Old School Rd W of Bramalea Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	77%	77%	77%	67%	40%	35%	30%	20%
F42	Old School Rd W of Bramalea Rd WB	12%	8%	8%	8%	12%	24%	78%	78%	78%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
F43	Cold Creek Rd N of Nashville Rd NB	12%	8%	8%	8%	12%	24%	23%	23%	23%	38%	38%	38%	38%	38%	38%	38%	100%	100%	100%	38%	40%	35%	30%	20%
F44	Cold Creek Rd N of Nashville Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	31%	31%	31%	31%	31%	31%	31%	7%	7%	7%	31%	40%	35%	30%	20%
F45	Nashville Rd At Hwy 427 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	95%	95%	95%	76%	40%	35%	30%	20%
F46	Nashville Rd At Hwy 427 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	84%	84%	84%	70%	40%	35%	30%	20%
F47	Kirby Rd W of Hwy 27 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	41%	41%	41%	41%	41%	41%	41%	33%	33%	33%	41%	40%	35%	30%	20%
F48	Kirby Rd W of Hwy 27 WB	12%	8%	8%	8%	12%	24%	7%	7%	7%	28%	28%	28%	28%	28%	28%	28%	100%	100%	100%	28%	40%	35%	30%	20%
F49	King Vaughan Rd E of Jane St EB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
F50	King Vaughan Rd E of Jane St WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
F51	Jane St N of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	46%	46%	46%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
F52	Jane St N of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
F53	Jane St S of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	27%	27%	27%	41%	41%	41%	41%	41%	41%	41%	100%	100%	100%	41%	40%	35%	30%	20%
F54	Jane St S of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	43%	43%	43%	43%	43%	43%	43%	31%	31%	31%	43%	40%	35%	30%	20%
F71	Hwy 400 at King Vaughan Rd N E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	33%	33%	33%	44%	40%	35%	30%	20%
F72	Hwy 400 at King Vaughan Rd E S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
F73	Hwy 400 at King Vaughan Rd W S Ramp	12%	8%	8%	8%	12%	24%	27%	27%	27%	42%	42%	42%	42%	42%	42%	42%	100%	100%	100%	42%	40%	35%	30%	20%
F74	Hwy 400 at King Vaughan Rd S E/W Ramp	12%	8%	8%	8%	12%	24%	99%	99%	99%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
F75	Hwy 400 at King Vaughan Rd E N Ramp	12%	8%	8%	8%	12%	24%	33%	33%	33%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
F76	Hwy 400 at King Vaughan Rd W N Ramp	12%	8%	8%	8%	12%	24%	20%	20%	20%	39%	39%	39%	39%	39%	39%	39%	100%	100%	100%	39%	40%	35%	30%	20%
F77	Hwy 427 at Major Mackenzie Dr N E/W Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F78	Hwy 427 at Major Mackenzie Dr E S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	53%	53%	53%	55%	40%	35%	30%	20%
F79	Hwy 427 at Major Mackenzie Dr W S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
F80	Hwy 427 at Major Mackenzie Dr S E/W Ramp	12%	8%	8%	8%	12%	24%	51%	51%	51%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
F81	Hwy 427 at Major Mackenzie Dr E N Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F82	Hwy 427 at Major Mackenzie Dr W N Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F83	Hwy 410 at Mayfield Rd N E/W Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F84	Hwy 410 at Mayfield Rd E S Ramp	12%	8%	8%	8%	12%	24%	91%	91%	91%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
F85	Hwy 410 at Mayfield Rd W S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%
F86	Hwy 410 at Mayfield Rd S E/W Ramp	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
F87	Hwy 410 at Mayfield Rd E N Ramp	12%	8%	8%	8%	12%	24%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
F88	Hwy 410 at Mayfield Rd W N Ramp	12%	8%	8%	8%	12%	24%	91%	91%	91%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
F89	Hwy 410 at Mayfield Rd W E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
G01	Hwy 413 at Hwy 401 / Hwy 407 E N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G02	Hwy 413 at Hwy 401 / Hwy 407 N E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G03	Hwy 413 at Hwy 401 / Hwy 407 N S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G04	Hwy 413 at Hwy 401 / Hwy 407 S N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G05	Hwy 413 at Hwy 401 E N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G06	Hwy 407 at Hwy 413 N N Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G07	Hwy 407 at Hwy 401 S E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
G08	Hwy 407 at Hwy 413 N E Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
G09	Hwy 407 at Hwy 401 S W Ramp	12%	8%	8%	8%	12%	24%	81%	81%	81%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
G10	Hwy 413 / Hwy 407 to Hwy 401 N/S E	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
H01	Hwy 401 E of Trafalgar Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 No-Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
H02	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%
H03	Hwy 401 W of Winston Churchill Blvd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
H04	Hwy 401 E of Trafalgar Rd WB	12%	8%	8%	8%	12%	24%	78%	78%	78%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
H05	Hwy 401 Collector at Hwy 413 E W Ramp	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
H06	Hwy 401 Express at Hwy 413 E W Ramp	12%	8%	8%	8%	12%	24%	71%	71%	71%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
H07	Hwy 401 W of Winston Churchill Blvd WB	12%	8%	8%	8%	12%	24%	76%	76%	76%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
H08	Hwy 401 at Trafalgar Rd N E Ramp	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
H09	Hwy 401 at Trafalgar Rd S E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	34%	34%	34%	45%	40%	35%	30%	20%
H10	Hwy 401 at Trafalgar Rd N/S E to Hwy 401 E	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H11	Hwy 401 at Trafalgar Rd N/S E to Hwy 413/407 S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H12	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H13	Hwy 401 at Trafalgar Rd N/S E and Hwy 401 E to Hwy 413	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H14	Hwy 401 at Trafalgar Rd N/S E and Hwy 401 E to Hwy 407 S	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
H15	Hwy 401 at Hwy 413 N W Ramp	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
H16	Hwy 401 at Trafalgar Rd E N/S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A01	Hwy 413 N of Hwy 401/407 interchange NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	94%	94%	94%	76%	40%	35%	30%	20%
A02	Hwy 413 N of Hwy 401/407 interchange SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	89%	89%	89%	73%	40%	35%	30%	20%
A03	Hwy 413 N of Winston Churchill Blvd NB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
A04	Hwy 413 N of Winston Churchill Blvd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	87%	87%	87%	72%	40%	35%	30%	20%
A05	Hwy 413 N of Bovaird Dr NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
A06	Hwy 413 N of Bovaird Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
A07	Hwy 413 E of Mayfield Rd EB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
A08	Hwy 413 E of Mayfield Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	82%	82%	82%	69%	40%	35%	30%	20%
A09	Hwy 413 E of Chinguacousy Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	99%	99%	99%	79%	40%	35%	30%	20%
A10	Hwy 413 E of Chinguacousy Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	93%	93%	93%	75%	40%	35%	30%	20%
A11	Hwy 413 E of Hurontario St EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
A12	Hwy 413 E of Hurontario St WB	12%	8%	8%	8%	12%	24%	87%	87%	87%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
A13	Hwy 413 E of Hwy 410 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	97%	97%	97%	78%	40%	35%	30%	20%
A14	Hwy 413 E of Hwy 410 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
A15	Hwy 413 E of Bramalea Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	96%	96%	96%	77%	40%	35%	30%	20%
A16	Hwy 413 E of Bramalea Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%
A17	Hwy 413 E of Airport Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	90%	90%	90%	74%	40%	35%	30%	20%
A18	Hwy 413 E of Airport Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	99%	99%	99%	78%	40%	35%	30%	20%
A19	Hwy 413 E of The Gore Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
A20	Hwy 413 E of The Gore Rd WB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
A21	Hwy 413 E of Humber Station Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%
A22	Hwy 413 E of Humber Station Rd WB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
A23	Hwy 413 E of Hwy 427 EB	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
A24	Hwy 413 E of Hwy 427 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
A25	Hwy 413 E of Hwy 27 EB	12%	8%	8%	8%	12%	24%	94%	94%	94%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
A26	Hwy 413 E of Hwy 27 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	90%	90%	90%	74%	40%	35%	30%	20%
A27	Hwy 413 E of Pine Valley Dr EB	12%	8%	8%	8%	12%	24%	94%	94%	94%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
A28	Hwy 413 E of Pine Valley Dr WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	90%	90%	90%	74%	40%	35%	30%	20%
B05	Hwy 407 S of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	39%	39%	39%	47%	40%	35%	30%	20%
B06	Hwy 407 S of Hwy 401 SB	12%	8%	8%	8%	12%	24%	60%	60%	60%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
B07	Hwy 407 N of Hwy 401 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	45%	45%	45%	51%	40%	35%	30%	20%
B08	Hwy 407 N of Hwy 401 WB	12%	8%	8%	8%	12%	24%	58%	58%	58%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
B09	Hwy 410 S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	68%	68%	68%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
B10	Hwy 410 S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
B11	Hwy 410 N of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	50%	50%	50%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
B12	Hwy 410 N of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	40%	40%	40%	48%	40%	35%	30%	20%
B13	Hwy 410 W of Mayfield Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
B14	Hwy 410 W of Mayfield Rd WB	12%	8%	8%	8%	12%	24%	61%	61%	61%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
B15	Hwy 427 S of Major Mackenzie Dr NB	12%	8%	8%	8%	12%	24%	49%	49%	49%	52%	52%	52%	52%	52%	52%	52%	100%	100%	100%	52%	40%	35%	30%	20%
B16	Hwy 427 S of Major Mackenzie Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	66%	66%	66%	62%	40%	35%	30%	20%
B17	Hwy 427 N of Major Mackenzie Dr NB	12%	8%	8%	8%	12%	24%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
B18	Hwy 427 N of Major Mackenzie Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
B19	Hwy 400 N of Teston Rd NB	12%	8%	8%	8%	12%	24%	51%	51%	51%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
B20	Hwy 400 N of Teston Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
B21	Hwy 400 S of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	41%	41%	41%	48%	48%	48%	48%	48%	48%	48%	100%	100%	100%	48%	40%	35%	30%	20%
B22	Hwy 400 S of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	41%	41%	41%	48%	40%	35%	30%	20%
B23	Hwy 400 S of King Rd NB	12%	8%	8%	8%	12%	24%	41%	41%	41%	48%	48%	48%	48%	48%	48%	48%	100%	100%	100%	48%	40%	35%	30%	20%
B24	Hwy 400 S of King Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	46%	46%	46%	51%	40%	35%	30%	20%
C11	Hwy 413 at Winston Churchill Blvd S E/W	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	94%	94%	94%	76%	40%	35%	30%	20%
C12	Hwy 413 at Winston Churchill Blvd E N	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
C13	Hwy 413 at Winston Churchill Blvd W N	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
C14	Hwy 413 at Winston Churchill Blvd N E/W	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	87%	87%	87%	72%	40%	35%	30%	20%
C15	Hwy 413 at Winston Churchill Blvd E S	12%	8%	8%	8%	12%	24%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	100%	100%	100%	56%	40%	35%	30%	20%
C16	Hwy 413 at Winston Churchill Blvd W S	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
C17	Hwy 413 at Bovaird Dr S E/W	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
C18	Hwy 413 at Bovaird Dr E N	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	49%	49%	49%	53%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C19	Hwy 413 at Bovaird Dr W N	12%	8%	8%	8%	12%	24%	100%	100%	100%	33%	33%	33%	33%	33%	33%	33%	13%	13%	13%	33%	40%	35%	30%	20%
C20	Hwy 413 at Bovaird Dr N E/W	12%	8%	8%	8%	12%	24%	46%	46%	46%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
C21	Hwy 413 at Bovaird Dr E S	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
C22	Hwy 413 at Bovaird Dr W S	12%	8%	8%	8%	12%	24%	100%	100%	100%	49%	49%	49%	49%	49%	49%	49%	43%	43%	43%	49%	40%	35%	30%	20%
C23	Hwy 413 at Mayfield Rd S E/W	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	97%	97%	97%	78%	40%	35%	30%	20%
C24	Hwy 413 at Mayfield Rd E N	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	95%	95%	95%	77%	40%	35%	30%	20%
C25	Hwy 413 at Mayfield Rd W N	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	94%	94%	94%	76%	40%	35%	30%	20%
C26	Hwy 413 at Mayfield Rd N E/W	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
C27	Hwy 413 at Mayfield Rd E S	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
C28	Hwy 413 at Mayfield Rd W S	12%	8%	8%	8%	12%	24%	46%	46%	46%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
C29	Hwy 413 at Chinguacousy Rd W N/S	12%	8%	8%	8%	12%	24%	49%	49%	49%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
C30	Hwy 413 at Chinguacousy Rd N E	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	40%	35%	30%	20%
C31	Hwy 413 at Chinguacousy Rd S E	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	36%	36%	36%	46%	40%	35%	30%	20%
C32	Hwy 413 at Chinguacousy Rd E N/S	12%	8%	8%	8%	12%	24%	68%	68%	68%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
C33	Hwy 413 at Chinguacousy Rd N W	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	66%	66%	66%	63%	40%	35%	30%	20%
C34	Hwy 413 at Chinguacousy Rd S W	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	33%	33%	33%	45%	40%	35%	30%	20%
C35	Hwy 413 at Hurontario St W N/S	12%	8%	8%	8%	12%	24%	77%	77%	77%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
C36	Hwy 413 at Hurontario St N E	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	46%	46%	46%	51%	40%	35%	30%	20%
C37	Hwy 413 at Hurontario St S E	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
C38	Hwy 413 at Hurontario St E N/S	12%	8%	8%	8%	12%	24%	38%	38%	38%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
C39	Hwy 413 at Hurontario St N W	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
C40	Hwy 413 at Hurontario St S W	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
C41	Hwy 413 at Hwy 410 W S	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	23%	23%	23%	39%	40%	35%	30%	20%
C42	Hwy 413 at Hwy 410 E S	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	67%	67%	67%	62%	40%	35%	30%	20%
C43	Hwy 413 at Hwy 410 S E	12%	8%	8%	8%	12%	24%	79%	79%	79%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
C44	Hwy 413 at Hwy 410 S W	12%	8%	8%	8%	12%	24%	37%	37%	37%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
C45	Hwy 413 at Bramalea Rd W N/S	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
C46	Hwy 413 at Bramalea Rd N E	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	75%	75%	75%	67%	40%	35%	30%	20%
C47	Hwy 413 at Bramalea Rd S E	12%	8%	8%	8%	12%	24%	0%	0%	0%	28%	28%	28%	28%	28%	28%	28%	100%	100%	100%	28%	40%	35%	30%	20%
C48	Hwy 413 at Bramalea Rd E N/S	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
C49	Hwy 413 at Bramalea Rd N W	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%
C50	Hwy 413 at Bramalea Rd S W	12%	8%	8%	8%	12%	24%	27%	27%	27%	43%	43%	43%	43%	43%	43%	43%	100%	100%	100%	43%	40%	35%	30%	20%
C51	Hwy 413 at Airport Rd W N/S	12%	8%	8%	8%	12%	24%	78%	78%	78%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
C52	Hwy 413 at Airport Rd N E	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
C53	Hwy 413 at Airport Rd S E	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	49%	49%	49%	53%	40%	35%	30%	20%
C54	Hwy 413 at Airport Rd E N/S	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	49%	49%	49%	52%	40%	35%	30%	20%
C55	Hwy 413 at Airport Rd N W	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	9%	9%	9%	32%	40%	35%	30%	20%
C56	Hwy 413 at Airport Rd S W	12%	8%	8%	8%	12%	24%	18%	18%	18%	35%	35%	35%	35%	35%	35%	35%	100%	100%	100%	35%	40%	35%	30%	20%
C57	Hwy 413 at The Gore Rd W N/S	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	90%	90%	90%	73%	40%	35%	30%	20%
C58	Hwy 413 at The Gore Rd N/S E	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
C59	Hwy 413 at The Gore Rd E N/S	12%	8%	8%	8%	12%	24%	45%	45%	45%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
C60	Hwy 413 at The Gore Rd N/S W	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
C61	Hwy 413 at Humber Station Rd W N/S	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
C62	Hwy 413 at Humber Station Rd N E	12%	8%	8%	8%	12%	24%	60%	60%	60%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
C63	Hwy 413 at Humber Station Rd S E	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
C64	Hwy 413 at Humber Station Rd E N/S	12%	8%	8%	8%	12%	24%	95%	95%	95%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
C65	Hwy 413 at Humber Station Rd N W	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	60%	60%	60%	61%	40%	35%	30%	20%
C66	Hwy 413 at Humber Station Rd S W	12%	8%	8%	8%	12%	24%	62%	62%	62%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
C67	Hwy 413 at Hwy 427 W S	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%
C68	Hwy 413 at Hwy 427 E S	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	51%	51%	51%	53%	40%	35%	30%	20%
C69	Hwy 413 at Hwy 427 S E	12%	8%	8%	8%	12%	24%	34%	34%	34%	45%	45%	45%	45%	45%	45%	45%	100%	100%	100%	45%	40%	35%	30%	20%
C70	Hwy 413 at Hwy 427 S W	12%	8%	8%	8%	12%	24%	72%	72%	72%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
C71	Hwy 413 at Hwy 27 W N/S	12%	8%	8%	8%	12%	24%	67%	67%	67%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
C72	Hwy 413 at Hwy 27 N/S E	12%	8%	8%	8%	12%	24%	100%	100%	100%	39%	39%	39%	39%	39%	39%	39%	22%	22%	22%	39%	40%	35%	30%	20%
C73	Hwy 413 at Hwy 27 E N/S	12%	8%	8%	8%	12%	24%	49%	49%	49%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
C74	Hwy 413 at Hwy 27 N/S W	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	51%	51%	51%	53%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
C81	Hwy 413 at Weston Rd W N/S	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
C82	Hwy 413 at Weston Rd N/S W	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
C83	Hwy 413 at Hwy 400 W N	12%	8%	8%	8%	12%	24%	74%	74%	74%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
C84	Hwy 413 at Hwy 400 W S	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%	63%	40%	35%	30%	20%
C85	Hwy 413 at Hwy 400 N W	12%	8%	8%	8%	12%	24%	59%	59%	59%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
C86	Hwy 413 at Hwy 400 S W	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	65%	65%	65%	61%	40%	35%	30%	20%
D01	Trafalgar Rd S of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	70%	70%	70%	64%	40%	35%	30%	20%
D02	Trafalgar Rd S of Hwy 401 SB	12%	8%	8%	8%	12%	24%	74%	74%	74%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
D03	Trafalgar Rd N of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	68%	68%	68%	63%	40%	35%	30%	20%
D04	Trafalgar Rd N of Hwy 401 SB	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
D05	Steeles Ave E of Trafalgar Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
D06	Steeles Ave E of Trafalgar Rd WB	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
D07	Steeles Ave At Hwy 413 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	85%	85%	85%	71%	40%	35%	30%	20%
D08	Steeles Ave At Hwy 413 WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D09	Steeles Ave E of Ninth Line S EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
D10	Steeles Ave E of Ninth Line S WB	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
D11	Steeles Ave E of Tenth Line N EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	40%	35%	30%	20%
D12	Steeles Ave E of Tenth Line N WB	12%	8%	8%	8%	12%	24%	53%	53%	53%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D13	Ninth Line N N of Steeles Ave NB	12%	8%	8%	8%	12%	24%	47%	47%	47%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
D14	Ninth Line N N of Steeles Ave SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	50%	50%	50%	53%	40%	35%	30%	20%
D15	Ninth Line S S of Steeles Ave NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
D16	Ninth Line S S of Steeles Ave SB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
D17	Tenth Line At Hwy 413 NB	12%	8%	8%	8%	12%	24%	23%	23%	23%	39%	39%	39%	39%	39%	39%	39%	100%	100%	100%	39%	40%	35%	30%	20%
D18	Tenth Line At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	33%	33%	33%	44%	40%	35%	30%	20%
D19	Derry Rd W of Hwy 407 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%	63%	40%	35%	30%	20%
D20	Derry Rd W of Hwy 407 WB	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
D21	Derry Rd E of Hwy 407 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%
D22	Derry Rd E of Hwy 407 WB	12%	8%	8%	8%	12%	24%	87%	87%	87%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
D23	Winston Churchill Blvd S of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	58%	58%	58%	57%	40%	35%	30%	20%
D24	Winston Churchill Blvd S of Hwy 401 SB	12%	8%	8%	8%	12%	24%	64%	64%	64%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
D25	Winston Churchill Blvd N of Hwy 401 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%	63%	40%	35%	30%	20%
D26	Winston Churchill Blvd N of Hwy 401 SB	12%	8%	8%	8%	12%	24%	78%	78%	78%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D27	Winston Churchill Blvd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	45%	45%	45%	50%	50%	50%	50%	50%	50%	50%	100%	100%	100%	50%	40%	35%	30%	20%
D28	Winston Churchill Blvd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	57%	57%	57%	56%	40%	35%	30%	20%
D29	Winston Churchill Blvd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	53%	53%	53%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D30	Winston Churchill Blvd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	60%	60%	60%	58%	40%	35%	30%	20%
D31	Winston Churchill Blvd N of 5 Side Rd NB	12%	8%	8%	8%	12%	24%	50%	50%	50%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
D32	Winston Churchill Blvd N of 5 Side Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	53%	53%	53%	55%	40%	35%	30%	20%
D33	5 Side Rd W of Winston Churchill Blvd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%
D34	5 Side Rd W of Winston Churchill Blvd WB	12%	8%	8%	8%	12%	24%	80%	80%	80%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
D35	5 Side Rd At Hwy 413 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	67%	67%	67%	62%	40%	35%	30%	20%
D36	5 Side Rd At Hwy 413 WB	12%	8%	8%	8%	12%	24%	40%	40%	40%	48%	48%	48%	48%	48%	48%	48%	100%	100%	100%	48%	40%	35%	30%	20%
D37	Heritage Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	34%	34%	34%	45%	45%	45%	45%	45%	45%	45%	100%	100%	100%	45%	40%	35%	30%	20%
D38	Heritage Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	51%	51%	51%	54%	40%	35%	30%	20%
D39	Heritage Rd N of Bovaird Dr NB	12%	8%	8%	8%	12%	24%	49%	49%	49%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
D40	Heritage Rd N of Bovaird Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
D41	Heritage Rd S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	63%	63%	63%	59%	40%	35%	30%	20%
D42	Heritage Rd S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	81%	81%	81%	68%	40%	35%	30%	20%
D43	Heritage Rd N of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
D44	Heritage Rd N of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D45	Bovaird Dr W of Heritage Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	74%	74%	74%	74%	74%	74%	74%	89%	89%	89%	74%	40%	35%	30%	20%
D46	Bovaird Dr W of Heritage Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%
D47	Bovaird Dr W of Hwy 413 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	89%	89%	89%	73%	40%	35%	30%	20%
D48	Bovaird Dr W of Hwy 413 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
D49	Bovaird Dr E of Hwy 413 EB	12%	8%	8%	8%	12%	24%	80%	80%	80%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
D50	Bovaird Dr E of Hwy 413 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
D51	Wanless Dr W of Heritage Rd EB	12%	8%	8%	8%	12%	24%	78%	78%	78%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
D52	Wanless Dr W of Heritage Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
D53	Wanless Dr At Hwy 413 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
D54	Wanless Dr At Hwy 413 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	49%	49%	49%	49%	49%	49%	49%	42%	42%	42%	49%	40%	35%	30%	20%
D55	Mayfield Rd W of Heritage Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	54%	54%	54%	55%	40%	35%	30%	20%
D56	Mayfield Rd W of Heritage Rd WB	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
D57	Mayfield Rd E of Heritage Rd EB	12%	8%	8%	8%	12%	24%	72%	72%	72%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
D58	Mayfield Rd E of Heritage Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	87%	87%	87%	72%	40%	35%	30%	20%
D59	Mayfield Rd E of Hwy 413 EB	12%	8%	8%	8%	12%	24%	97%	97%	97%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
D60	Mayfield Rd E of Hwy 413 WB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
D61	Mississauga Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	32%	32%	32%	43%	43%	43%	43%	43%	43%	43%	100%	100%	100%	43%	40%	35%	30%	20%
D62	Mississauga Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	34%	34%	34%	44%	40%	35%	30%	20%
D63	Creditview Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	29%	29%	29%	29%	29%	29%	29%	4%	4%	4%	29%	40%	35%	30%	20%
D64	Creditview Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	71%	71%	71%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
D65	Chinguacousy Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	58%	58%	58%	57%	40%	35%	30%	20%
D66	Chinguacousy Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
D67	Chinguacousy Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	61%	61%	61%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
D68	Chinguacousy Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
D69	Chinguacousy Rd N of Old School Rd NB	12%	8%	8%	8%	12%	24%	22%	22%	22%	38%	38%	38%	38%	38%	38%	38%	100%	100%	100%	38%	40%	35%	30%	20%
D70	Chinguacousy Rd N of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	56%	56%	56%	56%	56%	56%	56%	55%	55%	55%	56%	40%	35%	30%	20%
D71	Old School Rd W of Chinguacousy Rd EB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
D72	Old School Rd W of Chinguacousy Rd WB	12%	8%	8%	8%	12%	24%	85%	85%	85%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
D73	Old School Rd At Hwy 413 EB	12%	8%	8%	8%	12%	24%	75%	75%	75%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D74	Old School Rd At Hwy 413 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
D75	McLaughlin Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	99%	99%	99%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
D76	McLaughlin Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%
D77	McLaughlin Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	52%	52%	52%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D78	McLaughlin Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	34%	34%	34%	45%	40%	35%	30%	20%
D79	Old School Rd W of Hurontario St EB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
D80	Old School Rd W of Hurontario St WB	12%	8%	8%	8%	12%	24%	58%	58%	58%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
D81	Old School Rd E of Hurontario St EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	41%	41%	41%	48%	40%	35%	30%	20%
D82	Old School Rd E of Hurontario St WB	12%	8%	8%	8%	12%	24%	51%	51%	51%	54%	54%	54%	54%	54%	54%	54%	100%	100%	100%	54%	40%	35%	30%	20%
D83	Hurontario St S of Old School Rd NB	12%	8%	8%	8%	12%	24%	85%	85%	85%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
D84	Hurontario St S of Old School Rd SB	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
D85	Hurontario St S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
D86	Hurontario St S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
D87	Hurontario St N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	51%	51%	51%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
D88	Hurontario St N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	59%	59%	59%	57%	40%	35%	30%	20%
D89	Kennedy Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	86%	86%	86%	71%	40%	35%	30%	20%
D90	Kennedy Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	34%	34%	34%	45%	40%	35%	30%	20%
D91	Old School Rd W of Heart Lake Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	41%	41%	41%	41%	41%	41%	41%	26%	26%	26%	41%	40%	35%	30%	20%
D92	Old School Rd W of Heart Lake Rd WB	12%	8%	8%	8%	12%	24%	38%	38%	38%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
D93	Old School Rd At Hwy 410 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	41%	41%	41%	41%	41%	41%	41%	27%	27%	27%	41%	40%	35%	30%	20%
D94	Old School Rd At Hwy 410 WB	12%	8%	8%	8%	12%	24%	38%	38%	38%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
E01	Heart Lake Rd S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
E02	Heart Lake Rd S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	91%	91%	91%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
E03	Heart Lake Rd At Hwy 410 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	52%	52%	52%	52%	52%	52%	52%	49%	49%	49%	52%	40%	35%	30%	20%
E04	Heart Lake Rd At Hwy 410 SB	12%	8%	8%	8%	12%	24%	87%	87%	87%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
E05	Heart Lake Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	59%	59%	59%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
E06	Heart Lake Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	20%	20%	20%	38%	40%	35%	30%	20%
E07	Mayfield Rd W of Heart Lake Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	80%	80%	80%	69%	40%	35%	30%	20%
E08	Mayfield Rd W of Heart Lake Rd WB	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
E09	Mayfield Rd E of Heart Lake Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
E10	Mayfield Rd E of Heart Lake Rd WB	12%	8%	8%	8%	12%	24%	96%	96%	96%	77%	77%	77%	77%	77%	77%	77%	100%	100%	100%	77%	40%	35%	30%	20%
E11	Mayfield Rd E of Hwy 410 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	75%	75%	75%	66%	40%	35%	30%	20%
E12	Mayfield Rd E of Hwy 410 WB	12%	8%	8%	8%	12%	24%	76%	76%	76%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
E13	Dixie Rd S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
E14	Dixie Rd S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
E15	Dixie Rd N of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	61%	61%	61%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E16	Dixie Rd N of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	65%	65%	65%	61%	40%	35%	30%	20%
E17	Dixie Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	47%	47%	47%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
E18	Dixie Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	46%	46%	46%	51%	40%	35%	30%	20%
E19	Countryside Dr At Hwy 410 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
E20	Countryside Dr At Hwy 410 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	80%	80%	80%	68%	40%	35%	30%	20%
E21	Bramalea Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	8%	8%	8%	31%	31%	31%	31%	31%	31%	31%	100%	100%	100%	31%	40%	35%	30%	20%
E22	Bramalea Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	34%	34%	34%	34%	34%	34%	34%	12%	12%	12%	34%	40%	35%	30%	20%
E23	Bramalea Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	41%	41%	41%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
E24	Bramalea Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	59%	59%	59%	58%	40%	35%	30%	20%
E25	Old School Rd E of Bramalea Rd EB	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
E26	Old School Rd E of Bramalea Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
E27	Old School Rd E of Torbram Road EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	100%	100%	100%	79%	40%	35%	30%	20%
E28	Old School Rd E of Torbram Road WB	12%	8%	8%	8%	12%	24%	62%	62%	62%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E29	Torbram Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	10%	10%	10%	32%	32%	32%	32%	32%	32%	32%	100%	100%	100%	32%	40%	35%	30%	20%
E30	Torbram Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	15%	15%	15%	35%	40%	35%	30%	20%
E31	Torbram Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	8%	8%	8%	31%	31%	31%	31%	31%	31%	31%	100%	100%	100%	31%	40%	35%	30%	20%
E32	Torbram Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	38%	38%	38%	38%	38%	38%	38%	21%	21%	21%	38%	40%	35%	30%	20%
E33	Airport Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	26%	26%	26%	41%	41%	41%	41%	41%	41%	41%	100%	100%	100%	41%	40%	35%	30%	20%
E34	Airport Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	44%	44%	44%	50%	40%	35%	30%	20%
E35	Airport Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	44%	44%	44%	50%	50%	50%	50%	50%	50%	50%	100%	100%	100%	50%	40%	35%	30%	20%
E36	Airport Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	46%	46%	46%	46%	46%	46%	46%	36%	36%	36%	46%	40%	35%	30%	20%
E37	Airport Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	40%	40%	40%	48%	48%	48%	48%	48%	48%	48%	100%	100%	100%	48%	40%	35%	30%	20%
E38	Airport Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	48%	48%	48%	48%	48%	48%	48%	40%	40%	40%	48%	40%	35%	30%	20%
E39	Healey Rd E of Airport Rd EB	12%	8%	8%	8%	12%	24%	49%	49%	49%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
E40	Healey Rd E of Airport Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	99%	99%	99%	78%	40%	35%	30%	20%
E41	Healey Rd At Hwy 413 EB	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
E42	Healey Rd At Hwy 413 WB	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
E43	Healey Rd E of Centreville Creek Rd EB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
E44	Healey Rd E of Centreville Creek Rd WB	12%	8%	8%	8%	12%	24%	60%	60%	60%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
E45	Innis Lake Rd S of Healey Rd NB	12%	8%	8%	8%	12%	24%	17%	17%	17%	36%	36%	36%	36%	36%	36%	36%	100%	100%	100%	36%	40%	35%	30%	20%
E46	Innis Lake Rd S of Healey Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	66%	66%	66%	66%	66%	66%	66%	76%	76%	76%	66%	40%	35%	30%	20%
E47	Innis Lake Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	14%	14%	14%	34%	34%	34%	34%	34%	34%	34%	100%	100%	100%	34%	40%	35%	30%	20%
E48	Innis Lake Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	16%	16%	16%	35%	40%	35%	30%	20%
E49	Centreville Creek Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	11%	11%	11%	33%	33%	33%	33%	33%	33%	33%	100%	100%	100%	33%	40%	35%	30%	20%
E50	Centreville Creek Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	37%	37%	37%	37%	37%	37%	37%	18%	18%	18%	37%	40%	35%	30%	20%
E51	Centreville Creek Rd N of Healey Rd NB	12%	8%	8%	8%	12%	24%	1%	1%	1%	28%	28%	28%	28%	28%	28%	28%	100%	100%	100%	28%	40%	35%	30%	20%
E52	Centreville Creek Rd N of Healey Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	47%	47%	47%	47%	47%	47%	47%	39%	39%	39%	47%	40%	35%	30%	20%
E53	The Gore Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	54%	54%	54%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
E54	The Gore Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%	63%	40%	35%	30%	20%
E55	The Gore Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	27%	27%	27%	41%	41%	41%	41%	41%	41%	41%	100%	100%	100%	41%	40%	35%	30%	20%
E56	The Gore Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	58%	58%	58%	58%	58%	58%	58%	60%	60%	60%	58%	40%	35%	30%	20%
E57	Clarkway Dr S of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	78%	78%	78%	68%	40%	35%	30%	20%
E58	Clarkway Dr S of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	98%	98%	98%	78%	40%	35%	30%	20%
E59	Humber Station Rd S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	94%	94%	94%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
E60	Humber Station Rd S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	73%	73%	73%	65%	40%	35%	30%	20%
E61	Humber Station Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	71%	71%	71%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
E62	Humber Station Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	82%	82%	82%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
E63	Mayfield Rd W of Humber Station Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	94%	94%	94%	76%	40%	35%	30%	20%
E64	Mayfield Rd W of Humber Station Rd WB	12%	8%	8%	8%	12%	24%	88%	88%	88%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
E65	Mayfield Rd At Hwy 413 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%
E66	Mayfield Rd At Hwy 413 WB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E67	Mayfield Rd E of Coleraine Dr EB	12%	8%	8%	8%	12%	24%	53%	53%	53%	55%	55%	55%	55%	55%	55%	55%	100%	100%	100%	55%	40%	35%	30%	20%
E68	Mayfield Rd E of Coleraine Dr WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	59%	59%	59%	59%	59%	59%	59%	62%	62%	62%	59%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
E69	Coleraine Dr At Highway 413 NB	12%	8%	8%	8%	12%	24%	59%	59%	59%	58%	58%	58%	58%	58%	58%	58%	100%	100%	100%	58%	40%	35%	30%	20%
E70	Coleraine Dr At Highway 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	40%	35%	30%	20%
E71	Coleraine Dr N of Mayfield Rd NB	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
E72	Coleraine Dr N of Mayfield Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	84%	84%	84%	71%	40%	35%	30%	20%
E73	Countryside Dr W of Hwy 50 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	55%	55%	55%	55%	55%	55%	55%	53%	53%	53%	55%	40%	35%	30%	20%
E74	Countryside Dr W of Hwy 50 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	72%	72%	72%	65%	40%	35%	30%	20%
E75	Hwy 50 S of Countryside Dr NB	12%	8%	8%	8%	12%	24%	66%	66%	66%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
E76	Hwy 50 S of Countryside Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	64%	64%	64%	60%	40%	35%	30%	20%
E77	Hwy 50 At Hwy 413 NB	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
E78	Hwy 50 At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
E79	Hwy 50 N of Cold Creek Rd Realignment NB	12%	8%	8%	8%	12%	24%	72%	72%	72%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
E80	Hwy 50 N of Cold Creek Rd Realignment SB	12%	8%	8%	8%	12%	24%	32%	32%	32%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
E81	Cold Creek Rd Realignment E of Hwy 50 EB	12%	8%	8%	8%	12%	24%	29%	29%	29%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
E82	Cold Creek Rd Realignment E of Hwy 50 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	30%	30%	30%	30%	30%	30%	30%	6%	6%	6%	30%	40%	35%	30%	20%
E83	Nashville Rd E of Hwy 50 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
E84	Nashville Rd E of Hwy 50 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
E85	Major Mackenzie Dr W of Hwy 427 EB	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
E86	Major Mackenzie Dr W of Hwy 427 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	84%	84%	84%	71%	40%	35%	30%	20%
E87	Major Mackenzie Dr E of Hwy 427 EB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
E88	Major Mackenzie Dr E of Hwy 427 WB	12%	8%	8%	8%	12%	24%	89%	89%	89%	73%	73%	73%	73%	73%	73%	73%	100%	100%	100%	73%	40%	35%	30%	20%
E89	Huntington Rd At Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	62%	62%	62%	60%	40%	35%	30%	20%
E90	Huntington Rd At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
E91	Huntington Rd N of Kirby Rd NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	88%	88%	88%	88%	88%	88%	88%	100%	100%	100%	88%	40%	35%	30%	20%
E92	Huntington Rd N of Kirby Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	88%	88%	88%	88%	88%	88%	88%	100%	100%	100%	88%	40%	35%	30%	20%
E93	Kirby Rd W of Huntington Rd EB	12%	8%	8%	8%	12%	24%	44%	44%	44%	50%	50%	50%	50%	50%	50%	50%	100%	100%	100%	50%	40%	35%	30%	20%
E94	Kirby Rd W of Huntington Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
E95	Hwy 27 S of Hwy 413 NB	12%	8%	8%	8%	12%	24%	72%	72%	72%	64%	64%	64%	64%	64%	64%	64%	100%	100%	100%	64%	40%	35%	30%	20%
E96	Hwy 27 S of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	80%	80%	80%	68%	40%	35%	30%	20%
E97	Hwy 27 N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	33%	33%	33%	44%	44%	44%	44%	44%	44%	44%	100%	100%	100%	44%	40%	35%	30%	20%
E98	Hwy 27 N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
F01	Kirby Rd E of Hwy 27 EB	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
F02	Kirby Rd E of Hwy 27 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%
F03	Kipling Ave At Hwy 413 NB	12%	8%	8%	8%	12%	24%	100%	100%	100%	51%	51%	51%	51%	51%	51%	51%	46%	46%	46%	51%	40%	35%	30%	20%
F04	Kipling Ave At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	19%	19%	19%	35%	40%	35%	30%	20%
F05	King Vaughan Rd E of Hwy 27 EB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
F06	King Vaughan Rd E of Hwy 27 WB	12%	8%	8%	8%	12%	24%	84%	84%	84%	71%	71%	71%	71%	71%	71%	71%	100%	100%	100%	71%	40%	35%	30%	20%
F07	King Vaughan Rd E of Kipling Ave EB	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
F08	King Vaughan Rd E of Kipling Ave WB	12%	8%	8%	8%	12%	24%	87%	87%	87%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
F09	Pine Valley Dr At Hwy 413 NB	12%	8%	8%	8%	12%	24%	25%	25%	25%	40%	40%	40%	40%	40%	40%	40%	100%	100%	100%	40%	40%	35%	30%	20%
F10	Pine Valley Dr At Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	44%	44%	44%	44%	44%	44%	44%	32%	32%	32%	44%	40%	35%	30%	20%
F13	Pine Valley Dr N of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	64%	64%	64%	59%	59%	59%	59%	59%	59%	59%	100%	100%	100%	59%	40%	35%	30%	20%
F14	Pine Valley Dr N of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	60%	60%	60%	61%	40%	35%	30%	20%
F15	King Vaughan Rd W of Pine Valley Dr EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	97%	97%	97%	77%	40%	35%	30%	20%
F16	King Vaughan Rd W of Pine Valley Dr WB	12%	8%	8%	8%	12%	24%	92%	92%	92%	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	75%	40%	35%	30%	20%
F17	King Vaughan Rd E of Pine Valley Dr EB	12%	8%	8%	8%	12%	24%	65%	65%	65%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
F18	King Vaughan Rd E of Pine Valley Dr WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	74%	74%	74%	65%	40%	35%	30%	20%
F19	Weston Rd N of Kirby Rd NB	12%	8%	8%	8%	12%	24%	76%	76%	76%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
F20	Weston Rd N of Kirby Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	50%	50%	50%	53%	40%	35%	30%	20%
F21	Weston Rd N of Hwy 413 NB	12%	8%	8%	8%	12%	24%	86%	86%	86%	72%	72%	72%	72%	72%	72%	72%	100%	100%	100%	72%	40%	35%	30%	20%
F22	Weston Rd N of Hwy 413 SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	60%	60%	60%	60%	60%	60%	60%	63%	63%	63%	60%	40%	35%	30%	20%
F23	Weston Rd N of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	66%	66%	66%	62%	62%	62%	62%	62%	62%	62%	100%	100%	100%	62%	40%	35%	30%	20%
F24	Weston Rd N of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	85%	85%	85%	71%	40%	35%	30%	20%
F25	King Vaughan Rd E of Weston Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	94%	94%	94%	76%	40%	35%	30%	20%
F26	King Vaughan Rd E of Weston Rd WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	77%	77%	77%	77%	77%	77%	77%	95%	95%	95%	77%	40%	35%	30%	20%
F27	King Vaughan Rd W of Jane St EB	12%	8%	8%	8%	12%	24%	83%	83%	83%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
F28	King Vaughan Rd W of Jane St WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	71%	71%	71%	64%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

		0-1	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*	*16-17*	*17-18*	*18-19*	*19-20*	*20-21*	*21-22*	*22-23*	*23-24*
Roadway ID	**Roadway Segment**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F29	Kirby Rd At Hwy 400 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	70%	70%	70%	63%	40%	35%	30%	20%
F30	Kirby Rd At Hwy 400 WB	12%	8%	8%	8%	12%	24%	74%	74%	74%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
F31	Steeles Ave W of Ninth Line N EB	12%	8%	8%	8%	12%	24%	82%	82%	82%	70%	70%	70%	70%	70%	70%	70%	100%	100%	100%	70%	40%	35%	30%	20%
F32	Steeles Ave W of Ninth Line N WB	12%	8%	8%	8%	12%	24%	90%	90%	90%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
F33	Heritage Rd S of Wanless Dr NB	12%	8%	8%	8%	12%	24%	37%	37%	37%	47%	47%	47%	47%	47%	47%	47%	100%	100%	100%	47%	40%	35%	30%	20%
F34	Heritage Rd S of Wanless Dr SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	53%	53%	53%	53%	53%	53%	53%	49%	49%	49%	53%	40%	35%	30%	20%
F35	Heart Lake Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	38%	38%	38%	46%	46%	46%	46%	46%	46%	46%	100%	100%	100%	46%	40%	35%	30%	20%
F36	Heart Lake Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	36%	36%	36%	36%	36%	36%	36%	17%	17%	17%	36%	40%	35%	30%	20%
F37	Mayfield Rd E of Dixie Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
F38	Mayfield Rd E of Dixie Rd WB	12%	8%	8%	8%	12%	24%	73%	73%	73%	65%	65%	65%	65%	65%	65%	65%	100%	100%	100%	65%	40%	35%	30%	20%
F39	Bramalea Rd S of Old School Rd NB	12%	8%	8%	8%	12%	24%	26%	26%	26%	41%	41%	41%	41%	41%	41%	41%	100%	100%	100%	41%	40%	35%	30%	20%
F40	Bramalea Rd S of Old School Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
F41	Old School Rd W of Bramalea Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	83%	83%	83%	71%	40%	35%	30%	20%
F42	Old School Rd W of Bramalea Rd WB	12%	8%	8%	8%	12%	24%	75%	75%	75%	66%	66%	66%	66%	66%	66%	66%	100%	100%	100%	66%	40%	35%	30%	20%
F43	Cold Creek Rd N of Nashville Rd NB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F44	Cold Creek Rd N of Nashville Rd SB	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
F45	Nashville Rd At Hwy 427 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	68%	68%	68%	62%	40%	35%	30%	20%
F46	Nashville Rd At Hwy 427 WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
F47	Kirby Rd W of Hwy 27 EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	28%	28%	28%	45%	40%	35%	30%	20%
F48	Kirby Rd W of Hwy 27 WB	12%	8%	8%	8%	12%	24%	6%	6%	6%	28%	28%	28%	28%	28%	28%	28%	100%	100%	100%	28%	40%	35%	30%	20%
F49	King Vaughan Rd E of Jane St EB	12%	8%	8%	8%	12%	24%	95%	95%	95%	76%	76%	76%	76%	76%	76%	76%	100%	100%	100%	76%	40%	35%	30%	20%
F50	King Vaughan Rd E of Jane St WB	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
F51	Jane St N of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	57%	57%	57%	57%	57%	57%	57%	57%	57%	57%	100%	100%	100%	57%	40%	35%	30%	20%
F52	Jane St N of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
F53	Jane St S of King Vaughan Rd NB	12%	8%	8%	8%	12%	24%	46%	46%	46%	51%	51%	51%	51%	51%	51%	51%	100%	100%	100%	51%	40%	35%	30%	20%
F54	Jane St S of King Vaughan Rd SB	12%	8%	8%	8%	12%	24%	100%	100%	100%	54%	54%	54%	54%	54%	54%	54%	52%	52%	52%	54%	40%	35%	30%	20%
F71	Hwy 400 at King Vaughan Rd N E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	45%	45%	45%	45%	45%	45%	45%	36%	36%	36%	45%	40%	35%	30%	20%
F72	Hwy 400 at King Vaughan Rd E S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	72%	72%	72%	72%	72%	72%	72%	87%	87%	87%	72%	40%	35%	30%	20%
F73	Hwy 400 at King Vaughan Rd W S Ramp	12%	8%	8%	8%	12%	24%	15%	15%	15%	34%	34%	34%	34%	34%	34%	34%	100%	100%	100%	34%	40%	35%	30%	20%
F74	Hwy 400 at King Vaughan Rd S E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	76%	76%	76%	76%	76%	76%	76%	94%	94%	94%	76%	40%	35%	30%	20%
F75	Hwy 400 at King Vaughan Rd E N Ramp	12%	8%	8%	8%	12%	24%	9%	9%	9%	32%	32%	32%	32%	32%	32%	32%	100%	100%	100%	32%	40%	35%	30%	20%
F76	Hwy 400 at King Vaughan Rd W N Ramp	12%	8%	8%	8%	12%	24%	17%	17%	17%	36%	36%	36%	36%	36%	36%	36%	100%	100%	100%	36%	40%	35%	30%	20%
F77	Hwy 427 at Major Mackenzie Dr N E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	65%	65%	65%	61%	40%	35%	30%	20%
F78	Hwy 427 at Major Mackenzie Dr E S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	42%	42%	42%	42%	42%	42%	42%	29%	29%	29%	42%	40%	35%	30%	20%
F79	Hwy 427 at Major Mackenzie Dr W S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	83%	83%	83%	70%	40%	35%	30%	20%
F80	Hwy 427 at Major Mackenzie Dr S E/W Ramp	12%	8%	8%	8%	12%	24%	63%	63%	63%	60%	60%	60%	60%	60%	60%	60%	100%	100%	100%	60%	40%	35%	30%	20%
F81	Hwy 427 at Major Mackenzie Dr E N Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	75%	75%	75%	75%	75%	75%	75%	92%	92%	92%	75%	40%	35%	30%	20%
F82	Hwy 427 at Major Mackenzie Dr W N Ramp	12%	8%	8%	8%	12%	24%	49%	49%	49%	53%	53%	53%	53%	53%	53%	53%	100%	100%	100%	53%	40%	35%	30%	20%
F83	Hwy 410 at Mayfield Rd N E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	8%	8%	8%	32%	40%	35%	30%	20%
F84	Hwy 410 at Mayfield Rd E S Ramp	12%	8%	8%	8%	12%	24%	42%	42%	42%	49%	49%	49%	49%	49%	49%	49%	100%	100%	100%	49%	40%	35%	30%	20%
F85	Hwy 410 at Mayfield Rd W S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	73%	73%	73%	73%	73%	73%	73%	88%	88%	88%	73%	40%	35%	30%	20%
F86	Hwy 410 at Mayfield Rd S E/W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	45%	45%	45%	50%	40%	35%	30%	20%
F87	Hwy 410 at Mayfield Rd E N Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	77%	77%	77%	68%	40%	35%	30%	20%
F88	Hwy 410 at Mayfield Rd W N Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	32%	32%	32%	32%	32%	32%	32%	9%	9%	9%	32%	40%	35%	30%	20%
G01	Hwy 413 at Hwy 401 / Hwy 407 E N	12%	8%	8%	8%	12%	24%	64%	64%	64%	61%	61%	61%	61%	61%	61%	61%	100%	100%	100%	61%	40%	35%	30%	20%
G02	Hwy 413 at Hwy 401 / Hwy 407 N E	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%
G03	Hwy 413 at Hwy 401 / Hwy 407 N S	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
G04	Hwy 413 at Hwy 401 / Hwy 407 S N	12%	8%	8%	8%	12%	24%	100%	100%	100%	63%	63%	63%	63%	63%	63%	63%	69%	69%	69%	63%	40%	35%	30%	20%
G05	Hwy 413 at Hwy 401 E N	12%	8%	8%	8%	12%	24%	77%	77%	77%	67%	67%	67%	67%	67%	67%	67%	100%	100%	100%	67%	40%	35%	30%	20%
G06	Hwy 407 at Hwy 413 N N Ramp	12%	8%	8%	8%	12%	24%	20%	20%	20%	39%	39%	39%	39%	39%	39%	39%	100%	100%	100%	39%	40%	35%	30%	20%
G07	Hwy 407 at Hwy 401 S E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	40%	40%	40%	40%	40%	40%	40%	25%	25%	25%	40%	40%	35%	30%	20%
G08	Hwy 407 at Hwy 413 N E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	35%	35%	35%	35%	35%	35%	35%	15%	15%	15%	35%	40%	35%	30%	20%
G09	Hwy 407 at Hwy 401 S W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	84%	84%	84%	71%	40%	35%	30%	20%
G10	Hwy 413 / Hwy 407 to Hwy 401 N/S E	12%	8%	8%	8%	12%	24%	100%	100%	100%	64%	64%	64%	64%	64%	64%	64%	72%	72%	72%	64%	40%	35%	30%	20%
H01	Hwy 401 E of Trafalgar Rd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	84%	84%	84%	70%	40%	35%	30%	20%
H02	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	12%	8%	8%	8%	12%	24%	100%	100%	100%	67%	67%	67%	67%	67%	67%	67%	78%	78%	78%	67%	40%	35%	30%	20%

Appendix A.1.2: Traffic Data Hourly Profiles for 2051 Build Scenario, Percentage Basis

RWDI Project#: 1301992

Highway 413
GTA West

Hour of Day

Roadway ID	Roadway Segment	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
H03	Hwy 401 W of Winston Churchill Blvd EB	12%	8%	8%	8%	12%	24%	100%	100%	100%	70%	70%	70%	70%	70%	70%	70%	82%	82%	82%	70%	40%	35%	30%	20%
H04	Hwy 401 E of Trafalgar Rd WB	12%	8%	8%	8%	12%	24%	81%	81%	81%	69%	69%	69%	69%	69%	69%	69%	100%	100%	100%	69%	40%	35%	30%	20%
H05	Hwy 401 Collector at Hwy 413 E W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	79%	79%	79%	79%	79%	79%	79%	99%	99%	99%	79%	40%	35%	30%	20%
H06	Hwy 401 Express at Hwy 413 E W Ramp	12%	8%	8%	8%	12%	24%	68%	68%	68%	63%	63%	63%	63%	63%	63%	63%	100%	100%	100%	63%	40%	35%	30%	20%
H07	Hwy 401 W of Winston Churchill Blvd WB	12%	8%	8%	8%	12%	24%	79%	79%	79%	68%	68%	68%	68%	68%	68%	68%	100%	100%	100%	68%	40%	35%	30%	20%
H08	Hwy 401 at Trafalgar Rd N E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	71%	71%	71%	71%	71%	71%	71%	85%	85%	85%	71%	40%	35%	30%	20%
H09	Hwy 401 at Trafalgar Rd S E Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	68%	68%	68%	68%	68%	68%	68%	79%	79%	79%	68%	40%	35%	30%	20%
H10	Hwy 401 at Trafalgar Rd N/S E to Hwy 401 E	12%	8%	8%	8%	12%	24%	100%	100%	100%	61%	61%	61%	61%	61%	61%	61%	66%	66%	66%	61%	40%	35%	30%	20%
H11	Hwy 401 at Trafalgar Rd N/S E to Hwy 413/407 S	12%	8%	8%	8%	12%	24%	98%	98%	98%	78%	78%	78%	78%	78%	78%	78%	100%	100%	100%	78%	40%	35%	30%	20%
H12	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	12%	8%	8%	8%	12%	24%	89%	89%	89%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
H13	Hwy 401 at Trafalgar Rd N/S E and Hwy 401 E to Hwy 413	12%	8%	8%	8%	12%	24%	91%	91%	91%	74%	74%	74%	74%	74%	74%	74%	100%	100%	100%	74%	40%	35%	30%	20%
H14	Hwy 401 at Trafalgar Rd N/S E and Hwy 401 E to Hwy 407 S	12%	8%	8%	8%	12%	24%	100%	100%	100%	62%	62%	62%	62%	62%	62%	62%	67%	67%	67%	62%	40%	35%	30%	20%
H15	Hwy 401 at Hwy 413 N W Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	69%	69%	69%	69%	69%	69%	69%	81%	81%	81%	69%	40%	35%	30%	20%
H16	Hwy 401 at Trafalgar Rd E N/S Ramp	12%	8%	8%	8%	12%	24%	100%	100%	100%	65%	65%	65%	65%	65%	65%	65%	72%	72%	72%	65%	40%	35%	30%	20%

Appendix A.2: Traffic Composition by Source

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	110	NB	A01		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	110	SB	A02		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	110	NB	A03		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	110	SB	A04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Bovaird Dr_NB	110	NB	A05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Bovaird Dr_SB	110	SB	A06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Mayfield Rd_EB	110	EB	A07		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Mayfield Rd_WB	110	WB	A08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	110	EB	A09		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	110	WB	A10		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hurontario St_EB	110	EB	A11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hurontario St_WB	110	WB	A12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 410_EB	110	EB	A13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 410_WB	110	WB	A14		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Bramalea Rd_EB	110	EB	A15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Bramalea Rd_WB	110	WB	A16		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Airport Rd_EB	110	EB	A17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Airport Rd_WB	110	WB	A18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of The Gore Rd_EB	110	EB	A19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of The Gore Rd_WB	110	WB	A20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Humber Station Rd_EB	110	EB	A21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Humber Station Rd_WB	110	WB	A22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 427_EB	110	EB	A23		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 427_WB	110	WB	A24		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 27_EB	110	EB	A25		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 27_WB	110	WB	A26		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Pine Valley Dr_EB	110	EB	A27		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Pine Valley Dr_WB	110	WB	A28		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 S of Hwy 401_NB	100	NB	B05		33%	55%	4%	0%	4%	4%	100%	2.02	3.43	1.72	3.21	1.61
Highway 407	Hwy 407 S of Hwy 401_SB	100	SB	B06		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.05	1.52
Highway 407	Hwy 407 N of Hwy 401_EB	100	EB	B07		27%	46%	11%	0%	8%	7%	100%	2.36	4.02	2.01	3.51	1.76
Highway 407	Hwy 407 N of Hwy 401_WB	100	WB	B08		26%	44%	12%	1%	9%	8%	100%	2.43	4.13	2.07	3.75	1.88
Highway 410	Hwy 410 S of Mayfield Rd_NB	100	NB	B09		31%	52%	8%	0%	5%	4%	100%	2.14	3.64	1.82	3.43	1.71
Highway 410	Hwy 410 S of Mayfield Rd_SB	100	SB	B10		33%	55%	2%	0%	5%	4%	100%	2.03	3.44	1.72	3.34	1.67
Highway 410	Hwy 410 N of Mayfield Rd_NB	100	NB	B11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 N of Mayfield Rd_SB	100	SB	B12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 W of Mayfield Rd_EB	100	EB	B13		33%	54%	3%	0%	5%	5%	100%	2.05	3.49	1.74	3.37	1.69
Highway 410	Hwy 410 W of Mayfield Rd_WB	100	WB	B14		30%	51%	9%	0%	5%	5%	100%	2.19	3.73	1.86	3.47	1.74
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	100	NB	B15		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.55	3.09	1.54
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	100	SB	B16		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.08	1.54
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	100	NB	B17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	100	SB	B18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 400	Hwy 400 N of Teston Rd_NB	100	NB	B19		30%	50%	9%	0%	6%	5%	100%	2.21	3.76	1.88	3.46	1.73
Highway 400	Hwy 400 N of Teston Rd_SB	100	SB	B20		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.65	3.34	1.67
Highway 400	Hwy 400 S of King Vaughan Rd_NB	100	NB	B21		29%	49%	9%	0%	7%	6%	100%	2.26	3.84	1.92	3.49	1.74
Highway 400	Hwy 400 S of King Vaughan Rd_SB	100	SB	B22		34%	57%	3%	0%	3%	2%	100%	1.94	3.31	1.65	3.36	1.68
Highway 400	Hwy 400 S of King Rd_NB	100	NB	B23		29%	49%	9%	0%	7%	6%	100%	2.26	3.84	1.92	3.48	1.74
Highway 400	Hwy 400 S of King Rd_SB	100	SB	B24		35%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.35	1.67
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	70	S-E/W	C11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	60	E-N	C12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	40	W-N	C13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	70	N-E/W	C14		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	40	E-S	C15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	60	W-S	C16		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	70	S-E/W	C17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_E-N	60	E-N	C18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_W-N	40	W-N	C19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	70	N-E/W	C20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_E-S	40	E-S	C21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_W-S	60	W-S	C22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	70	S-E/W	C23		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_E-N	60	E-N	C24		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_W-N	40	W-N	C25		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	70	N-E/W	C26		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_E-S	40	E-S	C27		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_W-S	60	W-S	C28		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	70	W-N/S	C29		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	40	N-E	C30		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	60	S-E	C31		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	70	E-N/S	C32		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	60	N-W	C33		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	40	S-W	C34		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_W-N/S	70	W-N/S	C35		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_N-E	40	N-E	C36		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_S-E	60	S-E	C37		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_E-N/S	70	E-N/S	C38		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_N-W	60	N-W	C39		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_S-W	40	S-W	C40		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_W-S	90	W-S	C41		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_E-S	90	E-S	C42		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_S-E	90	S-E	C43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_S-W	90	S-W	C44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	70	W-N/S	C45		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_N-E	40	N-E	C46		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_S-E	60	S-E	C47		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	70	E-N/S	C48		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_N-W	60	N-W	C49		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_S-W	40	S-W	C50		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_W-N/S	70	W-N/S	C51		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_N-E	40	N-E	C52		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_S-E	60	S-E	C53		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_E-N/S	70	E-N/S	C54		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_N-W	60	N-W	C55		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_S-W	40	S-W	C56		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_W-N/S	70	W-N/S	C57		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_N/S-E	40	N/S-E	C58		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_E-N/S	70	E-N/S	C59		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_N/S-W	60	N/S-W	C60		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	70	W-N/S	C61		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_N-E	40	N-E	C62		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-E	60	S-E	C63		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	70	E-N/S	C64		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_N-W	60	N-W	C65		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-W	40	S-W	C66		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_W-S	90	W-S	C67		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_E-S	90	E-S	C68		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_S-E	80	S-E	C69		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_S-W	90	S-W	C70		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_W-N/S	70	W-N/S	C71		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_N/S-E	40	N/S-E	C72		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_E-N/S	50	E-N/S	C73		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_N/S-W	60	N/S-W	C74		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Weston Rd_W-N/S	70	W-N/S	C81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Weston Rd_N/S-W	60	N/S-W	C82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_W-N	100	W-N	C83		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_W-S	90	W-S	C84		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_N-W	90	N-W	C85		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_S-W	90	S-W	C86		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	60	NB	D01		34%	57%	1%	0%	4%	4%	100%	1.97	3.34	1.67	3.26	1.63
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	60	SB	D02		35%	58%	3%	0%	3%	2%	100%	1.93	3.28	1.64	3.19	1.59
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	60	NB	D03		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.16	1.58
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	60	SB	D04		34%	57%	3%	0%	3%	3%	100%	1.95	3.32	1.66	3.23	1.62
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	60	EB	D05		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.20	1.60
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	60	WB	D06		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.18	1.59
Steeles Ave	Steeles Ave At Hwy 413_EB	80	EB	D07		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.24	1.62
Steeles Ave	Steeles Ave At Hwy 413_WB	80	WB	D08		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.17	1.59
Steeles Ave	Steeles Ave E of Ninth Line S_EB	80	EB	D09		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.17	1.59
Steeles Ave	Steeles Ave E of Ninth Line S_WB	80	WB	D10		36%	60%	3%	0%	1%	1%	100%	1.87	3.18	1.59	3.12	1.56
Steeles Ave	Steeles Ave E of Tenth Line N_EB	80	EB	D11		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.20	1.60
Steeles Ave	Steeles Ave E of Tenth Line N_WB	80	WB	D12		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.14	1.57
Ninth Line N	Ninth Line N N of Steeles Ave_NB	60	NB	D13		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.72	3.31	1.65
Ninth Line N	Ninth Line N N of Steeles Ave_SB	60	SB	D14		34%	58%	3%	0%	2%	2%	100%	1.94	3.30	1.65	3.29	1.64
Ninth Line S	Ninth Line S S of Steeles Ave_NB	60	NB	D15		34%	57%	4%	0%	2%	2%	100%	1.96	3.32	1.66	3.26	1.63
Ninth Line S	Ninth Line S S of Steeles Ave_SB	60	SB	D16		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.27	1.63
Tenth Line	Tenth Line At Hwy 413_NB	70	NB	D17		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.25	1.62
Tenth Line	Tenth Line At Hwy 413_SB	70	SB	D18		34%	57%	3%	0%	3%	3%	100%	1.97	3.34	1.67	3.21	1.61
Derry Rd	Derry Rd W of Hwy 407_EB	80	EB	D19		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.33	1.67
Derry Rd	Derry Rd W of Hwy 407_WB	80	WB	D20		33%	55%	7%	0%	2%	2%	100%	2.02	3.44	1.72	3.28	1.64
Derry Rd	Derry Rd E of Hwy 407_EB	80	EB	D21		36%	61%	1%	0%	1%	0%	100%	1.82	3.09	1.54	3.26	1.63
Derry Rd	Derry Rd E of Hwy 407_WB	80	WB	D22		30%	50%	9%	0%	6%	5%	100%	2.20	3.74	1.87	3.45	1.73
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	60	NB	D23		35%	59%	3%	0%	1%	1%	100%	1.87	3.19	1.59	3.21	1.60
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	60	SB	D24		34%	56%	5%	0%	2%	2%	100%	1.98	3.37	1.68	3.24	1.62
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	60	NB	D25		36%	60%	2%	0%	1%	1%	100%	1.84	3.12	1.56	3.13	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	60	SB	D26		35%	59%	3%	0%	1%	1%	100%	1.89	3.21	1.60	3.13	1.56
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	80	NB	D27		34%	58%	3%	0%	2%	2%	100%	1.94	3.29	1.65	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	80	SB	D28		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.17	1.59
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	80	NB	D29		34%	58%	3%	0%	2%	2%	100%	1.94	3.29	1.65	3.20	1.60

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	80	SB	D30		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.17	1.59
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	80	NB	D31		34%	57%	5%	0%	2%	2%	100%	1.98	3.36	1.68	3.25	1.63
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	80	SB	D32		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.66	3.22	1.61
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	60	EB	D33		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.26	1.63
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	60	WB	D34		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.11	1.55
5 Side Rd	5 Side Rd At Hwy 413_EB	60	EB	D35		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.09	1.55
5 Side Rd	5 Side Rd At Hwy 413_WB	60	WB	D36		31%	53%	6%	0%	5%	4%	100%	2.11	3.60	1.80	3.34	1.67
Heritage Rd	Heritage Rd At Hwy 413_NB	60	NB	D37		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.10	1.55
Heritage Rd	Heritage Rd At Hwy 413_SB	60	SB	D38		35%	59%	1%	0%	2%	2%	100%	1.88	3.19	1.60	3.12	1.56
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	60	NB	D39		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.05	1.52
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	60	SB	D40		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.10	1.55
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	60	NB	D41		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.08	1.54
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	60	SB	D42		34%	56%	2%	0%	4%	4%	100%	1.98	3.37	1.69	3.19	1.60
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	60	NB	D43		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.16	1.58
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	60	SB	D44		27%	46%	13%	1%	7%	6%	100%	2.37	4.02	2.01	3.52	1.76
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	60	EB	D45		33%	55%	5%	0%	4%	3%	100%	2.05	3.48	1.74	3.37	1.69
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	60	WB	D46		32%	54%	7%	0%	4%	4%	100%	2.08	3.54	1.77	3.43	1.71
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	60	EB	D47		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.71	3.31	1.66
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	60	WB	D48		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.10	1.55
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	60	EB	D49		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.71	3.31	1.66
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	60	WB	D50		33%	55%	6%	0%	3%	3%	100%	2.03	3.45	1.73	3.35	1.68
Wanless Dr	Wanless Dr W of Heritage Rd_EB	60	EB	D51		33%	56%	5%	0%	3%	2%	100%	2.00	3.40	1.70	3.28	1.64
Wanless Dr	Wanless Dr W of Heritage Rd_WB	60	WB	D52		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.23	1.62
Wanless Dr	Wanless Dr At Hwy 413_EB	60	EB	D53		34%	56%	5%	0%	3%	2%	100%	1.98	3.37	1.68	3.24	1.62
Wanless Dr	Wanless Dr At Hwy 413_WB	60	WB	D54		36%	60%	3%	0%	1%	1%	100%	1.86	3.16	1.58	3.20	1.60
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	80	EB	D55		33%	55%	5%	0%	3%	3%	100%	2.02	3.44	1.72	3.35	1.67
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	80	WB	D56		32%	53%	7%	0%	4%	4%	100%	2.10	3.57	1.79	3.41	1.70
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	80	EB	D57		32%	54%	7%	0%	4%	3%	100%	2.08	3.54	1.77	3.39	1.70
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	80	WB	D58		32%	54%	6%	0%	4%	3%	100%	2.07	3.52	1.76	3.40	1.70
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	80	EB	D59		32%	54%	7%	0%	4%	3%	100%	2.08	3.54	1.77	3.39	1.70
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	80	WB	D60		32%	54%	6%	0%	4%	3%	100%	2.07	3.52	1.76	3.40	1.70
Mississauga Rd	Mississauga Rd At Hwy 413_NB	80	NB	D61		33%	56%	5%	0%	3%	2%	100%	2.00	3.40	1.70	3.27	1.64
Mississauga Rd	Mississauga Rd At Hwy 413_SB	80	SB	D62		35%	58%	4%	0%	2%	2%	100%	1.92	3.26	1.63	3.24	1.62
Creditview Rd	Creditview Rd At Hwy 413_NB	70	NB	D63		29%	48%	11%	1%	6%	5%	100%	2.29	3.89	1.94	3.53	1.76
Creditview Rd	Creditview Rd At Hwy 413_SB	70	SB	D64		35%	58%	4%	0%	2%	1%	100%	1.91	3.25	1.63	3.40	1.70
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	80	NB	D65		30%	50%	11%	0%	5%	5%	100%	2.23	3.79	1.89	3.67	1.84
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	80	SB	D66		32%	53%	7%	0%	4%	4%	100%	2.11	3.58	1.79	3.59	1.79
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	80	NB	D67		30%	50%	11%	0%	5%	5%	100%	2.23	3.79	1.89	3.67	1.84
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	80	SB	D68		32%	53%	7%	0%	4%	4%	100%	2.11	3.58	1.79	3.59	1.79
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	80	NB	D69		28%	47%	13%	1%	6%	6%	100%	2.33	3.97	1.98	3.72	1.86
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	80	SB	D70		31%	51%	8%	0%	5%	5%	100%	2.17	3.69	1.84	3.62	1.81
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	70	EB	D71		35%	59%	3%	0%	2%	1%	100%	1.90	3.24	1.62	3.33	1.67
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	70	WB	D72		32%	53%	7%	0%	4%	4%	100%	2.10	3.58	1.79	3.40	1.70
Old School Rd	Old School Rd At Hwy 413_EB	70	EB	D73		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.15	1.57
Old School Rd	Old School Rd At Hwy 413_WB	70	WB	D74		33%	55%	5%	0%	4%	3%	100%	2.03	3.45	1.73	3.25	1.62
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	80	NB	D75		34%	58%	4%	0%	2%	2%	100%	1.94	3.29	1.65	3.29	1.64
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	80	SB	D76		33%	55%	6%	0%	3%	3%	100%	2.02	3.44	1.72	3.34	1.67
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	80	NB	D77		32%	53%	8%	0%	4%	3%	100%	2.10	3.57	1.79	3.47	1.73
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	80	SB	D78		32%	54%	7%	0%	4%	3%	100%	2.09	3.55	1.77	3.49	1.75

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Old School Rd	Old School Rd W of Hurontario St_EB	70	EB	D79		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.23	1.62
Old School Rd	Old School Rd W of Hurontario St_WB	70	WB	D80		34%	57%	4%	0%	3%	2%	100%	1.98	3.36	1.68	3.26	1.63
Old School Rd	Old School Rd E of Hurontario St_EB	70	EB	D81		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.03	1.52
Old School Rd	Old School Rd E of Hurontario St_WB	70	WB	D82		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.00	1.50
Hurontario St	Hurontario St S of Old School Rd_NB	80	NB	D83		28%	46%	12%	1%	7%	7%	100%	2.35	3.99	2.00	3.63	1.81
Hurontario St	Hurontario St S of Old School Rd_SB	80	SB	D84		32%	53%	4%	0%	6%	5%	100%	2.09	3.56	1.78	3.52	1.76
Hurontario St	Hurontario St S of Hwy 413_NB	80	NB	D85		27%	46%	12%	1%	8%	7%	100%	2.36	4.02	2.01	3.64	1.82
Hurontario St	Hurontario St S of Hwy 413_SB	80	SB	D86		32%	54%	3%	0%	5%	5%	100%	2.07	3.51	1.76	3.47	1.73
Hurontario St	Hurontario St N of Hwy 413_NB	80	NB	D87		27%	46%	12%	1%	8%	7%	100%	2.36	4.02	2.01	3.64	1.82
Hurontario St	Hurontario St N of Hwy 413_SB	80	SB	D88		32%	54%	3%	0%	5%	5%	100%	2.07	3.51	1.76	3.47	1.73
Kennedy Rd	Kennedy Rd At Hwy 413_NB	60	NB	D89		34%	57%	3%	0%	3%	3%	100%	1.95	3.32	1.66	3.27	1.63
Kennedy Rd	Kennedy Rd At Hwy 413_SB	60	SB	D90		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.28	1.64
Old School Rd	Old School Rd W of Heart Lake Rd_EB	70	EB	D91		37%	61%	1%	0%	0%	0%	100%	1.81	3.08	1.54	3.17	1.58
Old School Rd	Old School Rd W of Heart Lake Rd_WB	70	WB	D92		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.15	1.57
Old School Rd	Old School Rd At Hwy 410_EB	70	EB	D93		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.13	1.57
Old School Rd	Old School Rd At Hwy 410_WB	70	WB	D94		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.17	1.59
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	60	NB	E01		34%	57%	5%	0%	2%	2%	100%	1.96	3.34	1.67	3.28	1.64
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	60	SB	E02		33%	55%	5%	0%	4%	3%	100%	2.03	3.45	1.73	3.30	1.65
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	80	NB	E03		34%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.34	1.67
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	80	SB	E04		34%	57%	4%	0%	3%	2%	100%	1.96	3.34	1.67	3.26	1.63
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	80	NB	E05		30%	51%	10%	0%	4%	4%	100%	2.19	3.72	1.86	3.54	1.77
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	80	SB	E06		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.35	1.68
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	60	EB	E07		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.66	3.26	1.63
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	60	WB	E08		34%	57%	4%	0%	3%	2%	100%	1.97	3.35	1.68	3.26	1.63
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	60	EB	E09		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.22	1.61
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	60	WB	E10		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.23	1.62
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	60	EB	E11		34%	57%	4%	0%	3%	2%	100%	1.97	3.35	1.67	3.35	1.68
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	60	WB	E12		32%	54%	5%	0%	5%	4%	100%	2.08	3.54	1.77	3.39	1.70
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	80	NB	E13		35%	58%	4%	0%	2%	2%	100%	1.92	3.27	1.64	3.24	1.62
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	80	SB	E14		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.72	3.32	1.66
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	80	NB	E15		33%	55%	6%	0%	3%	3%	100%	2.02	3.43	1.71	3.31	1.66
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	80	SB	E16		34%	57%	1%	0%	4%	4%	100%	1.96	3.33	1.67	3.26	1.63
Dixie Rd	Dixie Rd At Hwy 413_NB	80	NB	E17		30%	51%	11%	0%	4%	3%	100%	2.18	3.70	1.85	3.45	1.72
Dixie Rd	Dixie Rd At Hwy 413_SB	80	SB	E18		36%	60%	2%	0%	1%	1%	100%	1.87	3.17	1.59	3.27	1.63
Countryside Dr	Countryside Dr At Hwy 410_EB	60	EB	E19		35%	59%	3%	0%	2%	1%	100%	1.90	3.22	1.61	3.20	1.60
Countryside Dr	Countryside Dr At Hwy 410_WB	60	WB	E20		35%	58%	4%	0%	1%	1%	100%	1.92	3.27	1.63	3.22	1.61
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	80	NB	E21		32%	54%	3%	0%	6%	5%	100%	2.08	3.54	1.77	3.36	1.68
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	80	SB	E22		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.68	3.37	1.69
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	80	NB	E23		32%	54%	3%	0%	6%	5%	100%	2.08	3.54	1.77	3.36	1.68
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	80	SB	E24		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.68	3.37	1.69
Old School Rd	Old School Rd E of Bramalea Rd_EB	70	EB	E25		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.06	1.53
Old School Rd	Old School Rd E of Bramalea Rd_WB	70	WB	E26		36%	60%	2%	0%	2%	1%	100%	1.87	3.17	1.59	3.10	1.55
Old School Rd	Old School Rd E of Torbram Road_EB	70	EB	E27		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.08	1.54
Old School Rd	Old School Rd E of Torbram Road_WB	70	WB	E28		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.10	1.55
Torbram Rd	Torbram Rd S of Old School Rd_NB	70	NB	E29		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.56	3.12	1.56
Torbram Rd	Torbram Rd S of Old School Rd_SB	70	SB	E30		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.11	1.56
Torbram Rd	Torbram Rd At Hwy 413_NB	70	NB	E31		32%	53%	8%	0%	3%	3%	100%	2.09	3.55	1.78	3.36	1.68
Torbram Rd	Torbram Rd At Hwy 413_SB	70	SB	E32		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.61	3.22	1.61
Airport Rd	Airport Rd S of Old School Rd_NB	60	NB	E33		33%	55%	6%	0%	3%	3%	100%	2.05	3.48	1.74	3.29	1.64

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Airport Rd	Airport Rd S of Old School Rd_SB	60	SB	E34		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.20	1.60
Airport Rd	Airport Rd S of Hwy 413_NB	60	NB	E35		31%	52%	8%	0%	4%	4%	100%	2.13	3.63	1.81	3.39	1.70
Airport Rd	Airport Rd S of Hwy 413_SB	60	SB	E36		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.31	1.65
Airport Rd	Airport Rd N of Hwy 413_NB	60	NB	E37		31%	52%	8%	0%	4%	4%	100%	2.13	3.63	1.81	3.39	1.70
Airport Rd	Airport Rd N of Hwy 413_SB	60	SB	E38		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.31	1.65
Healey Rd	Healey Rd E of Airport Rd_EB	70	EB	E39		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.15	1.57
Healey Rd	Healey Rd E of Airport Rd_WB	70	WB	E40		32%	54%	6%	0%	4%	4%	100%	2.06	3.50	1.75	3.26	1.63
Healey Rd	Healey Rd At Hwy 413_EB	70	EB	E41		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.05	1.52
Healey Rd	Healey Rd At Hwy 413_WB	70	WB	E42		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.07	1.54
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	70	EB	E43		37%	61%	1%	0%	0%	0%	100%	1.81	3.07	1.54	3.05	1.52
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	70	WB	E44		36%	61%	0%	0%	1%	1%	100%	1.82	3.10	1.55	3.05	1.53
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	80	NB	E45		27%	45%	13%	1%	7%	7%	100%	2.39	4.06	2.03	3.76	1.88
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	80	SB	E46		33%	55%	6%	0%	3%	3%	100%	2.04	3.46	1.73	3.55	1.78
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	80	NB	E47		34%	57%	5%	0%	2%	2%	100%	1.96	3.34	1.67	3.40	1.70
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	80	SB	E48		33%	55%	6%	0%	3%	3%	100%	2.02	3.44	1.72	3.34	1.67
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	80	NB	E49		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.36	1.68
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	80	SB	E50		31%	52%	7%	0%	5%	5%	100%	2.15	3.66	1.83	3.38	1.69
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	80	NB	E51		36%	61%	0%	0%	1%	1%	100%	1.81	3.09	1.54	3.30	1.65
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	80	SB	E52		31%	52%	7%	0%	5%	5%	100%	2.15	3.66	1.83	3.35	1.67
The Gore Rd	The Gore Rd S of Hwy 413_NB	80	NB	E53		30%	50%	11%	0%	5%	5%	100%	2.22	3.78	1.89	3.50	1.75
The Gore Rd	The Gore Rd S of Hwy 413_SB	80	SB	E54		33%	56%	4%	0%	3%	3%	100%	2.00	3.40	1.70	3.37	1.69
The Gore Rd	The Gore Rd N of Hwy 413_NB	80	NB	E55		30%	50%	11%	0%	5%	5%	100%	2.22	3.78	1.89	3.50	1.75
The Gore Rd	The Gore Rd N of Hwy 413_SB	80	SB	E56		33%	56%	4%	0%	3%	3%	100%	2.00	3.40	1.70	3.37	1.69
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	70	NB	E57		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.10	1.55
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	70	SB	E58		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.16	1.58
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	80	NB	E59		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.12	1.56
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	80	SB	E60		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.15	1.58
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	80	NB	E61		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.12	1.56
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	80	SB	E62		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.15	1.58
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	70	EB	E63		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.28	1.64
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	70	WB	E64		34%	57%	4%	0%	3%	2%	100%	1.96	3.34	1.67	3.29	1.64
Mayfield Rd	Mayfield Rd At Hwy 413_EB	70	EB	E65		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.26	1.63
Mayfield Rd	Mayfield Rd At Hwy 413_WB	70	WB	E66		34%	57%	4%	0%	2%	2%	100%	1.96	3.33	1.66	3.27	1.64
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	80	NB	E67		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.29	1.65
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	80	SB	E68		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.27	1.63
Coleraine Dr	Coleraine Dr At Highway 413_NB	70	NB	E69		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.55	3.09	1.55
Coleraine Dr	Coleraine Dr At Highway 413_SB	70	SB	E70		36%	61%	2%	0%	1%	0%	100%	1.83	3.10	1.55	3.10	1.55
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	70	NB	E71		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.04	1.52
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	70	SB	E72		36%	61%	2%	0%	1%	0%	100%	1.83	3.11	1.55	3.06	1.53
Countryside Dr	Countryside Dr W of Hwy 50_EB	60	EB	E73		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.17	1.59
Countryside Dr	Countryside Dr W of Hwy 50_WB	60	WB	E74		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.17	1.59
Highway 50	Hwy 50 S of Countryside Dr_NB	70	NB	E75		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.17	1.59
Highway 50	Hwy 50 S of Countryside Dr_SB	70	SB	E76		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.16	1.58
Highway 50	Hwy 50 At Hwy 413_NB	70	NB	E77		35%	59%	2%	0%	2%	2%	100%	1.90	3.24	1.62	3.18	1.59
Highway 50	Hwy 50 At Hwy 413_SB	70	SB	E78		35%	58%	2%	0%	3%	2%	100%	1.91	3.25	1.63	3.16	1.58
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	70	NB	E79		35%	59%	3%	0%	1%	1%	100%	1.88	3.19	1.60	3.14	1.57
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	70	SB	E80		36%	60%	2%	0%	1%	1%	100%	1.84	3.12	1.56	3.12	1.56
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	60	EB	E81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	60	WB	E82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Nashville Rd	Nashville Rd E of Hwy 50_EB	70	EB	E83		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.19	1.60
Nashville Rd	Nashville Rd E of Hwy 50_WB	70	WB	E84		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.20	1.60
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	60	EB	E85		35%	59%	2%	0%	1%	1%	100%	1.88	3.19	1.60	3.17	1.58
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	60	WB	E86		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.24	1.62
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	60	EB	E87		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.27	1.63
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	60	WB	E88		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.20	1.60
Huntington Rd	Huntington Rd At Hwy 413_NB	60	NB	E89		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.03	1.52
Huntington Rd	Huntington Rd At Hwy 413_SB	60	SB	E90		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.06	1.53
Huntington Rd	Huntington Rd N of Kirby Rd_NB	60	NB	E91		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Huntington Rd	Huntington Rd N of Kirby Rd_SB	60	SB	E92		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Kirby Rd	Kirby Rd W of Huntington Rd_EB	60	EB	E93		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.08	1.54
Kirby Rd	Kirby Rd W of Huntington Rd_WB	60	WB	E94		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.03	1.52
Highway 27	Hwy 27 S of Hwy 413_NB	80	NB	E95		33%	55%	6%	0%	4%	3%	100%	2.04	3.47	1.74	3.34	1.67
Highway 27	Hwy 27 S of Hwy 413_SB	80	SB	E96		34%	57%	3%	0%	3%	3%	100%	1.98	3.36	1.68	3.29	1.64
Highway 27	Hwy 27 N of Hwy 413_NB	80	NB	E97		33%	55%	6%	0%	4%	3%	100%	2.04	3.47	1.74	3.34	1.67
Highway 27	Hwy 27 N of Hwy 413_SB	80	SB	E98		34%	57%	3%	0%	3%	3%	100%	1.98	3.36	1.68	3.29	1.64
Kirby Rd	Kirby Rd E of Hwy 27_EB	60	EB	F01		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.14	1.57
Kirby Rd	Kirby Rd E of Hwy 27_WB	60	WB	F02		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.15	1.57
Kipling Ave	Kipling Ave At Hwy 413_NB	80	NB	F03		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.28	1.64
Kipling Ave	Kipling Ave At Hwy 413_SB	80	SB	F04		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.14	1.57
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	60	EB	F05		34%	57%	4%	0%	3%	3%	100%	1.98	3.36	1.68	3.31	1.66
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	60	WB	F06		34%	57%	4%	0%	3%	3%	100%	1.98	3.37	1.68	3.33	1.66
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	60	EB	F07		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.27	1.64
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	60	WB	F08		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.30	1.65
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	80	NB	F09		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.13	1.57
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	80	SB	F10		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.13	1.56
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	80	NB	F13		34%	57%	3%	0%	3%	3%	100%	1.95	3.31	1.66	3.26	1.63
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	80	SB	F14		34%	56%	3%	0%	3%	3%	100%	1.99	3.38	1.69	3.29	1.65
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	70	EB	F15		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.23	1.62
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	70	WB	F16		35%	58%	3%	0%	2%	2%	100%	1.93	3.27	1.64	3.25	1.62
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	70	EB	F17		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.68	3.30	1.65
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	70	WB	F18		34%	56%	3%	0%	3%	3%	100%	1.99	3.38	1.69	3.32	1.66
Weston Rd	Weston Rd N of Kirby Rd_NB	70	NB	F19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.07	1.54
Weston Rd	Weston Rd N of Kirby Rd_SB	70	SB	F20		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.05	1.52
Weston Rd	Weston Rd N of Hwy 413_NB	70	NB	F21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Weston Rd	Weston Rd N of Hwy 413_SB	70	SB	F22		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.00	1.50
Weston Rd	Weston Rd N of King Vaughan Rd_NB	70	NB	F23		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.61	3.18	1.59
Weston Rd	Weston Rd N of King Vaughan Rd_SB	70	SB	F24		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.20	1.60
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	60	EB	F25		36%	60%	2%	0%	2%	1%	100%	1.87	3.18	1.59	3.20	1.60
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	60	WB	F26		34%	57%	4%	0%	3%	3%	100%	1.97	3.35	1.68	3.27	1.64
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	60	EB	F27		32%	54%	7%	0%	4%	3%	100%	2.07	3.51	1.76	3.47	1.73
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	60	WB	F28		33%	56%	6%	0%	2%	2%	100%	2.00	3.41	1.70	3.48	1.74
Kirby Rd	Kirby Rd At Hwy 400_EB	60	EB	F29		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.07	1.54
Kirby Rd	Kirby Rd At Hwy 400_WB	60	WB	F30		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.24	1.62
Steeles Ave	Steeles Ave W of Ninth Line N_EB	60	EB	F31		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.17	1.59
Steeles Ave	Steeles Ave W of Ninth Line N_WB	60	WB	F32		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.10	1.55
Heritage Rd	Heritage Rd S of Wanless Dr_NB	60	NB	F33		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.05	1.52
Heritage Rd	Heritage Rd S of Wanless Dr_SB	60	SB	F34		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.10	1.55
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	80	NB	F35		32%	53%	8%	0%	4%	3%	100%	2.10	3.57	1.78	3.44	1.72

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	80	SB	F36		34%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.33	1.67
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	60	EB	F37		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.33	1.66
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	60	WB	F38		31%	52%	7%	0%	5%	5%	100%	2.13	3.62	1.81	3.44	1.72
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	80	NB	F39		32%	54%	4%	0%	5%	5%	100%	2.07	3.52	1.76	3.34	1.67
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	80	SB	F40		34%	57%	4%	0%	3%	3%	100%	1.97	3.34	1.67	3.28	1.64
Old School Rd	Old School Rd W of Bramalea Rd_EB	70	EB	F41		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.01	1.51
Old School Rd	Old School Rd W of Bramalea Rd_WB	70	WB	F42		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.05	1.53
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	60	NB	F43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.03	1.51
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	60	SB	F44		37%	61%	1%	0%	0%	0%	100%	1.80	3.07	1.53	3.03	1.52
Nashville Rd	Nashville Rd At Hwy 427_EB	70	EB	F45		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.19	1.60
Nashville Rd	Nashville Rd At Hwy 427_WB	70	WB	F46		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.20	1.60
Kirby Rd	Kirby Rd W of Hwy 27_EB	60	EB	F47		36%	60%	0%	0%	2%	2%	100%	1.86	3.16	1.58	3.08	1.54
Kirby Rd	Kirby Rd W of Hwy 27_WB	60	WB	F48		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.07	1.54
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	60	EB	F49		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.41	1.71
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	60	WB	F50		33%	56%	6%	0%	2%	2%	100%	2.01	3.41	1.71	3.48	1.74
Jane St	Jane St N of King Vaughan Rd_NB	70	NB	F51		31%	52%	9%	0%	4%	3%	100%	2.13	3.62	1.81	3.41	1.71
Jane St	Jane St N of King Vaughan Rd_SB	70	SB	F52		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.14	1.57
Jane St	Jane St S of King Vaughan Rd_NB	70	NB	F53		36%	60%	3%	0%	1%	1%	100%	1.86	3.16	1.58	3.14	1.57
Jane St	Jane St S of King Vaughan Rd_SB	70	SB	F54		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.06	1.53
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	70	N-E/W	F71		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.31	1.65
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	40	E-S	F72		33%	55%	7%	0%	3%	2%	100%	2.03	3.46	1.73	3.71	1.86
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	60	W-S	F73		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.05	1.52
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	70	S-E/W	F74		27%	45%	14%	1%	7%	6%	100%	2.40	4.08	2.04	3.87	1.93
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	60	E-N	F75		23%	39%	22%	1%	8%	7%	100%	2.61	4.44	2.22	3.99	1.99
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	40	W-N	F76		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	70	N-E/W	F77		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	40	E-S	F78		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.10	1.55
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	60	W-S	F79		36%	61%	1%	0%	1%	1%	100%	1.81	3.09	1.54	3.07	1.54
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	70	S-E/W	F80		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.55	3.09	1.54
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	60	E-N	F81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	40	W-N	F82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	70	N-E/W	F83		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	40	E-S	F84		32%	54%	1%	0%	7%	6%	100%	2.08	3.54	1.77	3.39	1.69
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	60	W-S	F85		35%	58%	1%	0%	3%	3%	100%	1.92	3.27	1.64	3.23	1.62
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	70	S-E/W	F86		33%	55%	5%	0%	4%	3%	100%	2.04	3.46	1.73	3.33	1.67
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	60	E-N	F87		25%	42%	15%	1%	9%	8%	100%	2.50	4.24	2.12	3.82	1.91
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	40	W-N	F88		32%	54%	1%	0%	7%	6%	100%	2.08	3.54	1.77	3.39	1.69
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	40	W-E/W	F89		33%	56%	5%	0%	3%	3%	100%	2.00	3.40	1.70	3.61	1.81
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	80	E-N	G01		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	80	N-E	G02		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	100	N-S	G03		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	100	S-N	G04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401_E-N	100	E-N	G05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	100	E-N	G06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	70	S-E	G07		27%	46%	12%	1%	8%	7%	100%	2.37	4.03	2.01	3.62	1.81
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	80	N-E	G08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	40	S-W	G09		28%	47%	4%	0%	11%	10%	100%	2.31	3.93	1.96	3.81	1.90
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	70	N-E	G10		27%	46%	12%	1%	8%	7%	100%	2.37	4.03	2.01	3.62	1.81
Highway 401	Hwy 401 E of Trafalgar Rd_EB	100	EB	H01		30%	50%	7%	0%	6%	6%	100%	2.20	3.74	1.87	3.66	1.83

Appendix A.2.1: AM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Total %	Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck						
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	100	EB	H02		30%	50%	7%	0%	6%	6%	100%	2.20	3.74	1.87	3.66	1.83
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	100	EB	H03		31%	52%	5%	0%	6%	5%	100%	2.13	3.61	1.81	3.60	1.80
Highway 401	Hwy 401 E of Trafalgar Rd_WB	100	WB	H04		29%	48%	8%	0%	8%	7%	100%	2.27	3.86	1.93	3.68	1.84
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	100	WB	H05		30%	50%	8%	0%	6%	6%	100%	2.22	3.78	1.89	3.67	1.84
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	100	WB	H06		28%	47%	7%	0%	9%	8%	100%	2.31	3.93	1.97	3.70	1.85
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	100	WB	H07		29%	49%	8%	0%	8%	7%	100%	2.26	3.84	1.92	3.67	1.84
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	60	N-E	H08		33%	55%	3%	0%	5%	4%	100%	2.04	3.46	1.73	3.34	1.67
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	40	S-E	H09		29%	49%	0%	0%	12%	11%	100%	2.27	3.85	1.93	3.52	1.76
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	70	0	H10		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	70	0	H11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	100	EB	H12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	80	0	H13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.08	1.54
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	70	0	H14		33%	55%	4%	0%	4%	4%	100%	2.04	3.46	1.73	3.31	1.66
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	80	0	H15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	70	E-N/S	H16		35%	58%	2%	0%	2%	2%	100%	1.92	3.27	1.63	3.22	1.61

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	110	NB	A01		28%	47%	12%	1%	6%	6%	100%	2.31	3.92	1.96	3.78	1.89
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	110	SB	A02		31%	52%	8%	0%	4%	4%	100%	2.13	3.63	1.81	3.67	1.84
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	110	NB	A03		30%	49%	10%	0%	5%	5%	100%	2.23	3.80	1.90	3.65	1.82
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	110	SB	A04		32%	54%	7%	0%	3%	3%	100%	2.08	3.54	1.77	3.61	1.80
Highway 413	Hwy 413 N of Bovaird Dr_NB	110	NB	A05		30%	50%	10%	0%	5%	5%	100%	2.21	3.76	1.88	3.65	1.83
Highway 413	Hwy 413 N of Bovaird Dr_SB	110	SB	A06		32%	53%	8%	0%	4%	3%	100%	2.09	3.56	1.78	3.64	1.82
Highway 413	Hwy 413 E of Mayfield Rd_EB	110	EB	A07		29%	49%	10%	0%	6%	5%	100%	2.24	3.81	1.91	3.73	1.87
Highway 413	Hwy 413 E of Mayfield Rd_WB	110	WB	A08		31%	52%	9%	0%	4%	4%	100%	2.15	3.66	1.83	3.74	1.87
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	110	EB	A09		30%	50%	10%	0%	5%	5%	100%	2.22	3.78	1.89	3.74	1.87
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	110	WB	A10		30%	50%	9%	0%	5%	5%	100%	2.20	3.74	1.87	3.78	1.89
Highway 413	Hwy 413 E of Hurontario St_EB	110	EB	A11		30%	50%	9%	0%	6%	5%	100%	2.22	3.78	1.89	3.79	1.89
Highway 413	Hwy 413 E of Hurontario St_WB	110	WB	A12		29%	49%	10%	0%	6%	5%	100%	2.26	3.84	1.92	3.78	1.89
Highway 413	Hwy 413 E of Hwy 410_EB	110	EB	A13		29%	49%	10%	0%	6%	5%	100%	2.25	3.82	1.91	3.78	1.89
Highway 413	Hwy 413 E of Hwy 410_WB	110	WB	A14		30%	50%	9%	0%	5%	5%	100%	2.20	3.75	1.87	3.79	1.89
Highway 413	Hwy 413 E of Bramalea Rd_EB	110	EB	A15		29%	48%	11%	0%	6%	6%	100%	2.28	3.87	1.93	3.86	1.93
Highway 413	Hwy 413 E of Bramalea Rd_WB	110	WB	A16		28%	47%	12%	1%	7%	6%	100%	2.32	3.95	1.97	3.93	1.97
Highway 413	Hwy 413 E of Airport Rd_EB	110	EB	A17		29%	48%	11%	0%	6%	6%	100%	2.28	3.88	1.94	3.89	1.94
Highway 413	Hwy 413 E of Airport Rd_WB	110	WB	A18		28%	46%	12%	1%	7%	6%	100%	2.34	3.98	1.99	3.94	1.97
Highway 413	Hwy 413 E of The Gore Rd_EB	110	EB	A19		28%	47%	11%	1%	7%	6%	100%	2.31	3.92	1.96	3.93	1.96
Highway 413	Hwy 413 E of The Gore Rd_WB	110	WB	A20		27%	46%	13%	1%	7%	7%	100%	2.37	4.03	2.01	3.99	2.00
Highway 413	Hwy 413 E of Humber Station Rd_EB	110	EB	A21		28%	47%	11%	1%	7%	6%	100%	2.31	3.92	1.96	3.86	1.93
Highway 413	Hwy 413 E of Humber Station Rd_WB	110	WB	A22		28%	48%	11%	1%	6%	6%	100%	2.30	3.90	1.95	3.86	1.93
Highway 413	Hwy 413 E of Hwy 427_EB	110	EB	A23		27%	45%	13%	1%	7%	7%	100%	2.38	4.05	2.02	3.89	1.94
Highway 413	Hwy 413 E of Hwy 427_WB	110	WB	A24		31%	51%	9%	0%	5%	4%	100%	2.17	3.68	1.84	3.78	1.89
Highway 413	Hwy 413 E of Hwy 27_EB	110	EB	A25		27%	45%	14%	1%	7%	7%	100%	2.40	4.08	2.04	3.93	1.96
Highway 413	Hwy 413 E of Hwy 27_WB	110	WB	A26		30%	50%	10%	0%	5%	4%	100%	2.20	3.74	1.87	3.81	1.91
Highway 413	Hwy 413 E of Pine Valley Dr_EB	110	EB	A27		27%	45%	14%	1%	7%	7%	100%	2.40	4.08	2.04	3.93	1.96
Highway 413	Hwy 413 E of Pine Valley Dr_WB	110	WB	A28		30%	50%	10%	0%	5%	4%	100%	2.20	3.74	1.87	3.81	1.91
Highway 407	Hwy 407 S of Hwy 401_NB	100	NB	B05		30%	51%	8%	0%	5%	5%	100%	2.18	3.71	1.86	3.65	1.83
Highway 407	Hwy 407 S of Hwy 401_SB	100	SB	B06		23%	38%	20%	1%	10%	9%	100%	2.64	4.49	2.25	4.01	2.01
Highway 407	Hwy 407 N of Hwy 401_EB	100	EB	B07		32%	53%	7%	0%	4%	3%	100%	2.09	3.56	1.78	3.28	1.64
Highway 407	Hwy 407 N of Hwy 401_WB	100	WB	B08		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.13	1.57
Highway 410	Hwy 410 S of Mayfield Rd_NB	100	NB	B09		33%	55%	6%	0%	3%	3%	100%	2.05	3.49	1.74	3.35	1.67
Highway 410	Hwy 410 S of Mayfield Rd_SB	100	SB	B10		33%	55%	2%	0%	5%	4%	100%	2.02	3.43	1.72	3.35	1.68
Highway 410	Hwy 410 N of Mayfield Rd_NB	100	NB	B11		31%	52%	9%	0%	4%	4%	100%	2.15	3.66	1.83	3.41	1.71
Highway 410	Hwy 410 N of Mayfield Rd_SB	100	SB	B12		34%	56%	3%	0%	4%	3%	100%	1.99	3.39	1.69	3.41	1.71
Highway 410	Hwy 410 W of Mayfield Rd_EB	100	EB	B13		33%	55%	3%	0%	4%	4%	100%	2.02	3.44	1.72	3.36	1.68
Highway 410	Hwy 410 W of Mayfield Rd_WB	100	WB	B14		32%	53%	8%	0%	4%	3%	100%	2.11	3.58	1.79	3.40	1.70
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	100	NB	B15		33%	55%	6%	0%	3%	3%	100%	2.02	3.43	1.72	3.33	1.66
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	100	SB	B16		35%	59%	3%	0%	1%	1%	100%	1.90	3.22	1.61	3.23	1.62
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	100	NB	B17		27%	46%	14%	1%	6%	6%	100%	2.36	4.01	2.01	3.73	1.86
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	100	SB	B18		33%	55%	6%	0%	3%	2%	100%	2.02	3.44	1.72	3.47	1.73
Highway 400	Hwy 400 N of Teston Rd_NB	100	NB	B19		30%	49%	9%	0%	6%	6%	100%	2.23	3.79	1.90	3.50	1.75
Highway 400	Hwy 400 N of Teston Rd_SB	100	SB	B20		34%	57%	4%	0%	3%	2%	100%	1.96	3.34	1.67	3.37	1.69
Highway 400	Hwy 400 S of King Vaughan Rd_NB	100	NB	B21		31%	52%	7%	0%	6%	5%	100%	2.16	3.67	1.83	3.36	1.68
Highway 400	Hwy 400 S of King Vaughan Rd_SB	100	SB	B22		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.26	1.63
Highway 400	Hwy 400 S of King Rd_NB	100	NB	B23		31%	52%	6%	0%	6%	5%	100%	2.15	3.66	1.83	3.36	1.68
Highway 400	Hwy 400 S of King Rd_SB	100	SB	B24		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.45	1.72
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	70	S-E/W	C11		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.38	1.69

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	60	E-N	C12		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.06	1.53
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	40	W-N	C13		34%	57%	4%	0%	2%	2%	100%	1.96	3.33	1.67	3.30	1.65
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	70	N-E/W	C14		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.22	1.61
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	40	E-S	C15		32%	53%	5%	0%	5%	5%	100%	2.10	3.57	1.78	3.55	1.77
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	60	W-S	C16		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.60	3.14	1.57
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	70	S-E/W	C17		30%	51%	10%	0%	4%	4%	100%	2.18	3.71	1.86	3.51	1.76
Highway 413	Hwy 413 at Bovaird Dr_E-N	60	E-N	C18		34%	57%	5%	0%	2%	2%	100%	1.97	3.34	1.67	3.32	1.66
Highway 413	Hwy 413 at Bovaird Dr_W-N	40	W-N	C19		35%	58%	4%	0%	2%	2%	100%	1.92	3.27	1.64	3.20	1.60
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	70	N-E/W	C20		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.13	1.57
Highway 413	Hwy 413 at Bovaird Dr_E-S	40	E-S	C21		32%	53%	9%	0%	3%	3%	100%	2.11	3.59	1.80	3.51	1.76
Highway 413	Hwy 413 at Bovaird Dr_W-S	60	W-S	C22		36%	60%	3%	0%	1%	1%	100%	1.87	3.18	1.59	3.13	1.56
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	70	S-E/W	C23		34%	56%	6%	0%	2%	2%	100%	1.98	3.37	1.69	3.29	1.64
Highway 413	Hwy 413 at Mayfield Rd_E-N	60	E-N	C24		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.05	1.53
Highway 413	Hwy 413 at Mayfield Rd_W-N	40	W-N	C25		31%	52%	8%	0%	4%	4%	100%	2.13	3.62	1.81	3.62	1.81
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	70	N-E/W	C26		32%	53%	7%	0%	4%	3%	100%	2.09	3.55	1.78	3.50	1.75
Highway 413	Hwy 413 at Mayfield Rd_E-S	40	E-S	C27		34%	57%	6%	0%	2%	2%	100%	1.97	3.35	1.67	3.41	1.70
Highway 413	Hwy 413 at Mayfield Rd_W-S	60	W-S	C28		36%	61%	1%	0%	1%	1%	100%	1.83	3.10	1.55	3.06	1.53
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	70	W-N/S	C29		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.61	3.17	1.59
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	40	N-E	C30		27%	45%	11%	0%	9%	8%	100%	2.39	4.06	2.03	4.14	2.07
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	60	S-E	C31		33%	56%	6%	0%	2%	2%	100%	2.00	3.40	1.70	3.55	1.77
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	70	E-N/S	C32		28%	46%	11%	0%	8%	7%	100%	2.34	3.98	1.99	3.81	1.91
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	60	N-W	C33		37%	62%	2%	0%	0%	0%	100%	1.80	3.06	1.53	3.06	1.53
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	40	S-W	C34		35%	59%	3%	0%	1%	1%	100%	1.89	3.22	1.61	3.29	1.64
Highway 413	Hwy 413 at Hurontario St_W-N/S	70	W-N/S	C35		33%	55%	5%	0%	4%	3%	100%	2.04	3.46	1.73	3.34	1.67
Highway 413	Hwy 413 at Hurontario St_N-E	40	N-E	C36		31%	52%	5%	0%	6%	5%	100%	2.13	3.62	1.81	3.86	1.93
Highway 413	Hwy 413 at Hurontario St_S-E	60	S-E	C37		28%	46%	11%	0%	8%	7%	100%	2.34	3.98	1.99	3.95	1.97
Highway 413	Hwy 413 at Hurontario St_E-N/S	70	E-N/S	C38		24%	40%	15%	1%	10%	9%	100%	2.55	4.34	2.17	3.88	1.94
Highway 413	Hwy 413 at Hurontario St_N-W	60	N-W	C39		34%	57%	3%	0%	3%	3%	100%	1.96	3.33	1.66	3.41	1.71
Highway 413	Hwy 413 at Hurontario St_S-W	40	S-W	C40		34%	57%	3%	0%	3%	3%	100%	1.96	3.33	1.66	3.41	1.71
Highway 413	Hwy 413 at Hwy 410_W-S	90	W-S	C41		32%	54%	4%	0%	5%	5%	100%	2.06	3.51	1.75	3.32	1.66
Highway 413	Hwy 413 at Hwy 410_E-S	90	E-S	C42		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.39	1.70
Highway 413	Hwy 413 at Hwy 410_S-E	90	S-E	C43		31%	52%	10%	0%	4%	4%	100%	2.16	3.66	1.83	3.40	1.70
Highway 413	Hwy 413 at Hwy 410_S-W	90	S-W	C44		31%	52%	8%	0%	4%	4%	100%	2.14	3.64	1.82	3.42	1.71
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	70	W-N/S	C45		31%	52%	9%	0%	4%	3%	100%	2.13	3.62	1.81	3.44	1.72
Highway 413	Hwy 413 at Bramalea Rd_N-E	40	N-E	C46		27%	45%	13%	1%	8%	7%	100%	2.41	4.09	2.05	4.37	2.19
Highway 413	Hwy 413 at Bramalea Rd_S-E	60	S-E	C47		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.09	1.54
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	70	E-N/S	C48		15%	26%	26%	1%	17%	15%	100%	3.08	5.23	2.62	4.67	2.34
Highway 413	Hwy 413 at Bramalea Rd_N-W	60	N-W	C49		34%	57%	4%	0%	3%	2%	100%	1.97	3.35	1.68	3.42	1.71
Highway 413	Hwy 413 at Bramalea Rd_S-W	40	S-W	C50		32%	54%	1%	0%	7%	6%	100%	2.06	3.50	1.75	3.27	1.64
Highway 413	Hwy 413 at Airport Rd_W-N/S	70	W-N/S	C51		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.34	1.67
Highway 413	Hwy 413 at Airport Rd_N-E	40	N-E	C52		34%	57%	5%	0%	2%	2%	100%	1.96	3.34	1.67	3.41	1.71
Highway 413	Hwy 413 at Airport Rd_S-E	60	S-E	C53		34%	57%	4%	0%	2%	2%	100%	1.96	3.33	1.67	3.18	1.59
Highway 413	Hwy 413 at Airport Rd_E-N/S	70	E-N/S	C54		32%	54%	7%	0%	3%	3%	100%	2.08	3.53	1.77	3.44	1.72
Highway 413	Hwy 413 at Airport Rd_N-W	60	N-W	C55		33%	55%	5%	0%	3%	3%	100%	2.03	3.45	1.72	3.51	1.76
Highway 413	Hwy 413 at Airport Rd_S-W	40	S-W	C56		28%	47%	16%	1%	5%	4%	100%	2.33	3.97	1.98	3.88	1.94
Highway 413	Hwy 413 at The Gore Rd_W-N/S	70	W-N/S	C57		34%	57%	5%	0%	2%	2%	100%	1.97	3.35	1.67	3.39	1.70
Highway 413	Hwy 413 at The Gore Rd_N/S-E	40	N/S-E	C58		37%	61%	1%	0%	0%	0%	100%	1.81	3.07	1.54	3.12	1.56
Highway 413	Hwy 413 at The Gore Rd_E-N/S	70	E-N/S	C59		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.18	1.59
Highway 413	Hwy 413 at The Gore Rd_N/S-W	60	N/S-W	C60		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.71	3.32	1.66

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	70	W-N/S	C61		36%	60%	2%	0%	1%	1%	100%	1.84	3.12	1.56	3.23	1.61
Highway 413	Hwy 413 at Humber Station Rd_N-E	40	N-E	C62		36%	60%	3%	0%	1%	1%	100%	1.87	3.18	1.59	3.11	1.56
Highway 413	Hwy 413 at Humber Station Rd_S-E	60	S-E	C63		29%	49%	10%	0%	6%	5%	100%	2.24	3.81	1.91	3.80	1.90
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	70	E-N/S	C64		33%	55%	7%	0%	3%	3%	100%	2.05	3.48	1.74	3.38	1.69
Highway 413	Hwy 413 at Humber Station Rd_N-W	60	N-W	C65		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Highway 413	Hwy 413 at Humber Station Rd_S-W	40	S-W	C66		30%	50%	9%	0%	5%	5%	100%	2.20	3.75	1.87	3.45	1.72
Highway 413	Hwy 413 at Hwy 427_W-S	90	W-S	C67		32%	54%	7%	0%	3%	3%	100%	2.07	3.52	1.76	3.52	1.76
Highway 413	Hwy 413 at Hwy 427_E-S	90	E-S	C68		34%	56%	6%	0%	2%	2%	100%	1.99	3.38	1.69	3.43	1.71
Highway 413	Hwy 413 at Hwy 427_S-E	80	S-E	C69		28%	47%	15%	1%	5%	5%	100%	2.34	3.97	1.99	3.67	1.84
Highway 413	Hwy 413 at Hwy 427_S-W	90	S-W	C70		27%	46%	13%	1%	7%	6%	100%	2.37	4.03	2.02	3.76	1.88
Highway 413	Hwy 413 at Hwy 27_W-N/S	70	W-N/S	C71		32%	54%	7%	0%	3%	3%	100%	2.06	3.51	1.75	3.50	1.75
Highway 413	Hwy 413 at Hwy 27_N/S-E	40	N/S-E	C72		34%	58%	5%	0%	2%	1%	100%	1.94	3.31	1.65	3.24	1.62
Highway 413	Hwy 413 at Hwy 27_E-N/S	50	E-N/S	C73		31%	52%	10%	0%	3%	3%	100%	2.13	3.62	1.81	3.43	1.71
Highway 413	Hwy 413 at Hwy 27_N/S-W	60	N/S-W	C74		32%	54%	7%	0%	3%	3%	100%	2.07	3.52	1.76	3.50	1.75
Highway 413	Hwy 413 at Weston Rd_W-N/S	70	W-N/S	C81		32%	53%	7%	0%	4%	4%	100%	2.11	3.59	1.79	3.66	1.83
Highway 413	Hwy 413 at Weston Rd_N/S-W	60	N/S-W	C82		31%	52%	9%	0%	4%	4%	100%	2.15	3.65	1.83	3.71	1.85
Highway 413	Hwy 413 at Hwy 400_W-N	100	W-N	C83		23%	39%	18%	1%	10%	9%	100%	2.62	4.46	2.23	4.08	2.04
Highway 413	Hwy 413 at Hwy 400_W-S	90	W-S	C84		29%	48%	11%	0%	6%	6%	100%	2.28	3.88	1.94	3.98	1.99
Highway 413	Hwy 413 at Hwy 400_N-W	90	N-W	C85		25%	42%	15%	1%	9%	8%	100%	2.49	4.23	2.12	3.97	1.98
Highway 413	Hwy 413 at Hwy 400_S-W	90	S-W	C86		31%	52%	9%	0%	4%	4%	100%	2.13	3.62	1.81	3.86	1.93
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	60	NB	D01		35%	59%	1%	0%	3%	2%	100%	1.90	3.23	1.61	3.15	1.58
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	60	SB	D02		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.58	3.12	1.56
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	60	NB	D03		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.17	1.58
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	60	SB	D04		34%	56%	3%	0%	4%	3%	100%	1.98	3.37	1.68	3.30	1.65
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	60	EB	D05		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.18	1.59
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	60	WB	D06		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.30	1.65
Steeles Ave	Steeles Ave At Hwy 413_EB	80	EB	D07		35%	58%	2%	0%	2%	2%	100%	1.92	3.27	1.63	3.21	1.61
Steeles Ave	Steeles Ave At Hwy 413_WB	80	WB	D08		33%	56%	5%	0%	3%	2%	100%	2.00	3.40	1.70	3.31	1.65
Steeles Ave	Steeles Ave E of Ninth Line S_EB	80	EB	D09		36%	60%	1%	0%	2%	2%	100%	1.87	3.17	1.59	3.14	1.57
Steeles Ave	Steeles Ave E of Ninth Line S_WB	80	WB	D10		34%	57%	5%	0%	2%	2%	100%	1.97	3.34	1.67	3.24	1.62
Steeles Ave	Steeles Ave E of Tenth Line N_EB	80	EB	D11		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.16	1.58
Steeles Ave	Steeles Ave E of Tenth Line N_WB	80	WB	D12		33%	56%	6%	0%	2%	2%	100%	2.01	3.41	1.71	3.28	1.64
Ninth Line N	Ninth Line N N of Steeles Ave_NB	60	NB	D13		33%	56%	5%	0%	3%	3%	100%	2.00	3.41	1.70	3.31	1.66
Ninth Line N	Ninth Line N N of Steeles Ave_SB	60	SB	D14		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.66	3.27	1.64
Ninth Line S	Ninth Line S S of Steeles Ave_NB	60	NB	D15		35%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.26	1.63
Ninth Line S	Ninth Line S S of Steeles Ave_SB	60	SB	D16		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.24	1.62
Tenth Line	Tenth Line At Hwy 413_NB	70	NB	D17		31%	52%	7%	0%	5%	4%	100%	2.13	3.62	1.81	3.40	1.70
Tenth Line	Tenth Line At Hwy 413_SB	70	SB	D18		34%	57%	3%	0%	3%	3%	100%	1.95	3.31	1.65	3.19	1.60
Derry Rd	Derry Rd W of Hwy 407_EB	80	EB	D19		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.33	1.66
Derry Rd	Derry Rd W of Hwy 407_WB	80	WB	D20		24%	40%	18%	1%	9%	9%	100%	2.59	4.40	2.20	3.88	1.94
Derry Rd	Derry Rd E of Hwy 407_EB	80	EB	D21		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.28	1.64
Derry Rd	Derry Rd E of Hwy 407_WB	80	WB	D22		25%	42%	15%	1%	10%	9%	100%	2.51	4.27	2.14	3.76	1.88
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	60	NB	D23		36%	61%	2%	0%	1%	1%	100%	1.82	3.10	1.55	3.18	1.59
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	60	SB	D24		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.21	1.61
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	60	NB	D25		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.16	1.58
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	60	SB	D26		35%	59%	3%	0%	1%	1%	100%	1.90	3.23	1.62	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	80	NB	D27		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.13	1.56
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	80	SB	D28		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.60	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	80	NB	D29		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.23	1.61

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	80	SB	D30		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	80	NB	D31		34%	57%	4%	0%	3%	2%	100%	1.97	3.36	1.68	3.24	1.62
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	80	SB	D32		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.18	1.59
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	60	EB	D33		33%	55%	5%	0%	3%	3%	100%	2.02	3.44	1.72	3.32	1.66
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	60	WB	D34		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.25	1.62
5 Side Rd	5 Side Rd At Hwy 413_EB	60	EB	D35		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.12	1.56
5 Side Rd	5 Side Rd At Hwy 413_WB	60	WB	D36		33%	55%	5%	0%	4%	3%	100%	2.03	3.46	1.73	3.26	1.63
Heritage Rd	Heritage Rd At Hwy 413_NB	60	NB	D37		36%	60%	1%	0%	2%	2%	100%	1.87	3.17	1.59	3.13	1.56
Heritage Rd	Heritage Rd At Hwy 413_SB	60	SB	D38		35%	59%	1%	0%	2%	2%	100%	1.89	3.22	1.61	3.15	1.57
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	60	NB	D39		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.06	1.53
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	60	SB	D40		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.14	1.57
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	60	NB	D41		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.18	1.59
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	60	SB	D42		34%	57%	2%	0%	3%	3%	100%	1.95	3.32	1.66	3.21	1.61
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	60	NB	D43		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.12	1.56
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	60	SB	D44		34%	57%	4%	0%	3%	2%	100%	1.98	3.36	1.68	3.18	1.59
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	60	EB	D45		33%	56%	4%	0%	3%	3%	100%	2.00	3.40	1.70	3.31	1.65
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	60	WB	D46		33%	55%	5%	0%	4%	3%	100%	2.03	3.44	1.72	3.38	1.69
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	60	EB	D47		34%	58%	3%	0%	2%	2%	100%	1.94	3.30	1.65	3.23	1.62
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	60	WB	D48		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.14	1.57
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	60	EB	D49		32%	54%	7%	0%	4%	3%	100%	2.08	3.53	1.77	3.39	1.69
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	60	WB	D50		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.71	3.39	1.70
Wanless Dr	Wanless Dr W of Heritage Rd_EB	60	EB	D51		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.21	1.60
Wanless Dr	Wanless Dr W of Heritage Rd_WB	60	WB	D52		35%	59%	3%	0%	2%	1%	100%	1.89	3.22	1.61	3.16	1.58
Wanless Dr	Wanless Dr At Hwy 413_EB	60	EB	D53		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.21	1.60
Wanless Dr	Wanless Dr At Hwy 413_WB	60	WB	D54		35%	58%	4%	0%	2%	1%	100%	1.91	3.25	1.62	3.20	1.60
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	80	EB	D55		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.71	3.40	1.70
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	80	WB	D56		32%	54%	7%	0%	4%	3%	100%	2.07	3.52	1.76	3.40	1.70
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	80	EB	D57		33%	55%	5%	0%	3%	3%	100%	2.02	3.44	1.72	3.33	1.67
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	80	WB	D58		34%	57%	4%	0%	2%	2%	100%	1.96	3.33	1.66	3.30	1.65
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	80	EB	D59		32%	54%	7%	0%	3%	3%	100%	2.07	3.52	1.76	3.35	1.67
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	80	WB	D60		35%	58%	4%	0%	2%	2%	100%	1.92	3.27	1.63	3.25	1.63
Mississauga Rd	Mississauga Rd At Hwy 413_NB	80	NB	D61		33%	55%	6%	0%	3%	3%	100%	2.03	3.45	1.73	3.34	1.67
Mississauga Rd	Mississauga Rd At Hwy 413_SB	80	SB	D62		33%	55%	6%	0%	3%	2%	100%	2.02	3.44	1.72	3.37	1.69
Creditview Rd	Creditview Rd At Hwy 413_NB	70	NB	D63		28%	47%	13%	1%	6%	5%	100%	2.32	3.95	1.98	3.55	1.77
Creditview Rd	Creditview Rd At Hwy 413_SB	70	SB	D64		33%	56%	7%	0%	2%	2%	100%	2.01	3.41	1.71	3.48	1.74
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	80	NB	D65		33%	56%	6%	0%	2%	2%	100%	2.00	3.41	1.70	3.45	1.72
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	80	SB	D66		32%	53%	6%	0%	4%	4%	100%	2.09	3.56	1.78	3.47	1.73
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	80	NB	D67		27%	46%	12%	1%	8%	7%	100%	2.37	4.03	2.02	3.87	1.93
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	80	SB	D68		31%	51%	8%	0%	5%	5%	100%	2.17	3.69	1.85	3.69	1.85
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	80	NB	D69		26%	44%	15%	1%	7%	7%	100%	2.43	4.13	2.07	3.74	1.87
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	80	SB	D70		30%	50%	9%	0%	6%	5%	100%	2.21	3.75	1.88	3.67	1.84
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	70	EB	D71		31%	52%	6%	0%	6%	5%	100%	2.14	3.65	1.82	3.65	1.82
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	70	WB	D72		29%	49%	9%	0%	7%	6%	100%	2.24	3.81	1.91	3.75	1.87
Old School Rd	Old School Rd At Hwy 413_EB	70	EB	D73		34%	57%	1%	0%	4%	3%	100%	1.95	3.31	1.66	3.28	1.64
Old School Rd	Old School Rd At Hwy 413_WB	70	WB	D74		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.17	1.58
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	80	NB	D75		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.24	1.62
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	80	SB	D76		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.70	3.32	1.66
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	80	NB	D77		30%	50%	10%	0%	5%	5%	100%	2.22	3.78	1.89	3.57	1.78
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	80	SB	D78		32%	53%	7%	0%	4%	4%	100%	2.11	3.58	1.79	3.53	1.76

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Old School Rd	Old School Rd W of Hurontario St_EB	70	EB	D79		30%	51%	8%	0%	5%	5%	100%	2.19	3.72	1.86	3.66	1.83
Old School Rd	Old School Rd W of Hurontario St_WB	70	WB	D80		32%	54%	7%	0%	3%	3%	100%	2.07	3.51	1.76	3.35	1.68
Old School Rd	Old School Rd E of Hurontario St_EB	70	EB	D81		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.09	1.54
Old School Rd	Old School Rd E of Hurontario St_WB	70	WB	D82		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.04	1.52
Hurontario St	Hurontario St S of Old School Rd_NB	80	NB	D83		31%	52%	8%	0%	4%	4%	100%	2.14	3.63	1.82	3.44	1.72
Hurontario St	Hurontario St S of Old School Rd_SB	80	SB	D84		31%	52%	4%	0%	6%	6%	100%	2.12	3.61	1.81	3.45	1.72
Hurontario St	Hurontario St S of Hwy 413_NB	80	NB	D85		30%	50%	8%	0%	6%	5%	100%	2.20	3.75	1.87	3.56	1.78
Hurontario St	Hurontario St S of Hwy 413_SB	80	SB	D86		32%	54%	3%	0%	6%	5%	100%	2.07	3.52	1.76	3.39	1.69
Hurontario St	Hurontario St N of Hwy 413_NB	80	NB	D87		28%	47%	10%	0%	7%	6%	100%	2.31	3.93	1.96	3.64	1.82
Hurontario St	Hurontario St N of Hwy 413_SB	80	SB	D88		32%	53%	4%	0%	6%	5%	100%	2.09	3.56	1.78	3.56	1.78
Kennedy Rd	Kennedy Rd At Hwy 413_NB	60	NB	D89		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.24	1.62
Kennedy Rd	Kennedy Rd At Hwy 413_SB	60	SB	D90		34%	56%	5%	0%	3%	3%	100%	1.99	3.38	1.69	3.35	1.68
Old School Rd	Old School Rd W of Heart Lake Rd_EB	70	EB	D91		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.13	1.56
Old School Rd	Old School Rd W of Heart Lake Rd_WB	70	WB	D92		36%	60%	2%	0%	1%	1%	100%	1.86	3.17	1.58	3.10	1.55
Old School Rd	Old School Rd At Hwy 410_EB	70	EB	D93		36%	60%	2%	0%	1%	1%	100%	1.86	3.17	1.58	3.11	1.56
Old School Rd	Old School Rd At Hwy 410_WB	70	WB	D94		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.10	1.55
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	60	NB	E01		34%	57%	5%	0%	2%	2%	100%	1.95	3.32	1.66	3.26	1.63
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	60	SB	E02		33%	55%	5%	0%	4%	3%	100%	2.04	3.47	1.74	3.33	1.67
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	80	NB	E03		36%	60%	2%	0%	1%	1%	100%	1.87	3.17	1.59	3.24	1.62
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	80	SB	E04		34%	57%	3%	0%	3%	3%	100%	1.96	3.33	1.66	3.20	1.60
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	80	NB	E05		33%	56%	5%	0%	3%	2%	100%	2.00	3.41	1.70	3.32	1.66
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	80	SB	E06		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.20	1.60
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	60	EB	E07		34%	57%	4%	0%	3%	3%	100%	1.97	3.35	1.68	3.28	1.64
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	60	WB	E08		34%	57%	5%	0%	2%	2%	100%	1.98	3.36	1.68	3.23	1.62
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	60	EB	E09		34%	57%	3%	0%	3%	2%	100%	1.95	3.32	1.66	3.25	1.62
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	60	WB	E10		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.21	1.61
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	60	EB	E11		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.25	1.63
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	60	WB	E12		33%	56%	4%	0%	4%	3%	100%	2.02	3.43	1.71	3.27	1.63
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	80	NB	E13		35%	58%	4%	0%	2%	2%	100%	1.92	3.27	1.63	3.22	1.61
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	80	SB	E14		34%	57%	4%	0%	2%	2%	100%	1.96	3.33	1.66	3.22	1.61
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	80	NB	E15		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.19	1.60
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	80	SB	E16		34%	57%	1%	0%	4%	4%	100%	1.97	3.36	1.68	3.24	1.62
Dixie Rd	Dixie Rd At Hwy 413_NB	80	NB	E17		32%	54%	9%	0%	3%	3%	100%	2.08	3.54	1.77	3.34	1.67
Dixie Rd	Dixie Rd At Hwy 413_SB	80	SB	E18		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.21	1.61
Countryside Dr	Countryside Dr At Hwy 410_EB	60	EB	E19		34%	56%	5%	0%	2%	2%	100%	1.98	3.37	1.69	3.34	1.67
Countryside Dr	Countryside Dr At Hwy 410_WB	60	WB	E20		34%	57%	5%	0%	2%	2%	100%	1.95	3.32	1.66	3.23	1.61
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	80	NB	E21		31%	52%	4%	0%	7%	6%	100%	2.14	3.63	1.82	3.40	1.70
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	80	SB	E22		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.32	1.66
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	80	NB	E23		23%	38%	19%	1%	10%	10%	100%	2.64	4.50	2.25	4.06	2.03
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	80	SB	E24		31%	52%	7%	0%	5%	4%	100%	2.12	3.61	1.81	3.73	1.86
Old School Rd	Old School Rd E of Bramalea Rd_EB	70	EB	E25		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.10	1.55
Old School Rd	Old School Rd E of Bramalea Rd_WB	70	WB	E26		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.07	1.53
Old School Rd	Old School Rd E of Torbram Road_EB	70	EB	E27		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.18	1.59
Old School Rd	Old School Rd E of Torbram Road_WB	70	WB	E28		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.08	1.54
Torbram Rd	Torbram Rd S of Old School Rd_NB	70	NB	E29		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.15	1.57
Torbram Rd	Torbram Rd S of Old School Rd_SB	70	SB	E30		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.17	1.59
Torbram Rd	Torbram Rd At Hwy 413_NB	70	NB	E31		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.19	1.59
Torbram Rd	Torbram Rd At Hwy 413_SB	70	SB	E32		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.13	1.57
Airport Rd	Airport Rd S of Old School Rd_NB	60	NB	E33		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.19	1.59

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Airport Rd	Airport Rd S of Old School Rd_SB	60	SB	E34		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.19	1.60
Airport Rd	Airport Rd S of Hwy 413_NB	60	NB	E35		34%	57%	4%	0%	2%	2%	100%	1.95	3.31	1.65	3.25	1.62
Airport Rd	Airport Rd S of Hwy 413_SB	60	SB	E36		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.22	1.61
Airport Rd	Airport Rd N of Hwy 413_NB	60	NB	E37		33%	55%	6%	0%	3%	3%	100%	2.05	3.48	1.74	3.36	1.68
Airport Rd	Airport Rd N of Hwy 413_SB	60	SB	E38		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.68	3.31	1.66
Healey Rd	Healey Rd E of Airport Rd_EB	70	EB	E39		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.14	1.57
Healey Rd	Healey Rd E of Airport Rd_WB	70	WB	E40		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.11	1.56
Healey Rd	Healey Rd At Hwy 413_EB	70	EB	E41		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.04	1.52
Healey Rd	Healey Rd At Hwy 413_WB	70	WB	E42		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.11	1.55
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	70	EB	E43		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.02	1.51
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	70	WB	E44		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.06	1.53
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	80	NB	E45		35%	58%	3%	0%	2%	2%	100%	1.93	3.27	1.64	3.28	1.64
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	80	SB	E46		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.27	1.64
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	80	NB	E47		34%	57%	4%	0%	2%	2%	100%	1.97	3.35	1.68	3.28	1.64
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	80	SB	E48		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.20	1.60
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	80	NB	E49		35%	59%	1%	0%	2%	2%	100%	1.89	3.20	1.60	3.23	1.61
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	80	SB	E50		31%	52%	6%	0%	5%	5%	100%	2.13	3.61	1.81	3.35	1.67
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	80	NB	E51		36%	60%	0%	0%	2%	2%	100%	1.87	3.18	1.59	3.22	1.61
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	80	SB	E52		29%	49%	8%	0%	7%	6%	100%	2.24	3.81	1.91	3.43	1.71
The Gore Rd	The Gore Rd S of Hwy 413_NB	80	NB	E53		31%	51%	7%	0%	5%	5%	100%	2.16	3.68	1.84	3.46	1.73
The Gore Rd	The Gore Rd S of Hwy 413_SB	80	SB	E54		33%	55%	5%	0%	4%	3%	100%	2.03	3.46	1.73	3.46	1.73
The Gore Rd	The Gore Rd N of Hwy 413_NB	80	NB	E55		30%	50%	9%	0%	5%	5%	100%	2.21	3.76	1.88	3.47	1.74
The Gore Rd	The Gore Rd N of Hwy 413_SB	80	SB	E56		33%	55%	5%	0%	4%	4%	100%	2.04	3.47	1.73	3.32	1.66
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	70	NB	E57		36%	60%	2%	0%	2%	1%	100%	1.87	3.18	1.59	3.15	1.58
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	70	SB	E58		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.21	1.60
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	80	NB	E59		31%	51%	9%	0%	5%	4%	100%	2.17	3.69	1.85	3.60	1.80
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	80	SB	E60		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.41	1.70
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	80	NB	E61		37%	61%	1%	0%	0%	0%	100%	1.81	3.08	1.54	3.10	1.55
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	80	SB	E62		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.61	3.13	1.56
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	70	EB	E63		33%	55%	6%	0%	4%	3%	100%	2.04	3.47	1.74	3.45	1.73
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	70	WB	E64		33%	54%	6%	0%	3%	3%	100%	2.05	3.49	1.74	3.34	1.67
Mayfield Rd	Mayfield Rd At Hwy 413_EB	70	EB	E65		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.10	1.55
Mayfield Rd	Mayfield Rd At Hwy 413_WB	70	WB	E66		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.16	1.58
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	80	NB	E67		36%	61%	2%	0%	1%	0%	100%	1.82	3.10	1.55	3.10	1.55
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	80	SB	E68		35%	59%	3%	0%	2%	1%	100%	1.90	3.22	1.61	3.15	1.57
Coleraine Dr	Coleraine Dr At Highway 413_NB	70	NB	E69		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.04	1.52
Coleraine Dr	Coleraine Dr At Highway 413_SB	70	SB	E70		36%	61%	2%	0%	1%	0%	100%	1.83	3.11	1.56	3.06	1.53
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	70	NB	E71		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.04	1.52
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	70	SB	E72		36%	61%	2%	0%	1%	0%	100%	1.83	3.11	1.55	3.06	1.53
Countryside Dr	Countryside Dr W of Hwy 50_EB	60	EB	E73		35%	58%	2%	0%	3%	2%	100%	1.93	3.28	1.64	3.14	1.57
Countryside Dr	Countryside Dr W of Hwy 50_WB	60	WB	E74		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.01	1.51
Highway 50	Hwy 50 S of Countryside Dr_NB	70	NB	E75		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.17	1.58
Highway 50	Hwy 50 S of Countryside Dr_SB	70	SB	E76		35%	58%	2%	0%	3%	3%	100%	1.93	3.28	1.64	3.17	1.59
Highway 50	Hwy 50 At Hwy 413_NB	70	NB	E77		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.16	1.58
Highway 50	Hwy 50 At Hwy 413_SB	70	SB	E78		35%	58%	2%	0%	3%	3%	100%	1.93	3.28	1.64	3.17	1.59
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	70	NB	E79		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.11	1.56
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	70	SB	E80		31%	52%	7%	0%	5%	4%	100%	2.13	3.62	1.81	3.36	1.68
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	60	EB	E81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.03	1.51
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	60	WB	E82		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.04	1.52

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Nashville Rd	Nashville Rd E of Hwy 50_EB	70	EB	E83		34%	57%	3%	0%	3%	3%	100%	1.95	3.31	1.66	3.18	1.59
Nashville Rd	Nashville Rd E of Hwy 50_WB	70	WB	E84		36%	61%	0%	0%	1%	1%	100%	1.83	3.11	1.55	3.07	1.53
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	60	EB	E85		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.11	1.56
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	60	WB	E86		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.12	1.56
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	60	EB	E87		33%	55%	6%	0%	3%	3%	100%	2.02	3.43	1.71	3.39	1.69
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	60	WB	E88		34%	57%	4%	0%	2%	2%	100%	1.96	3.34	1.67	3.28	1.64
Huntington Rd	Huntington Rd At Hwy 413_NB	60	NB	E89		36%	60%	3%	0%	0%	0%	100%	1.84	3.12	1.56	3.13	1.57
Huntington Rd	Huntington Rd At Hwy 413_SB	60	SB	E90		35%	59%	2%	0%	2%	1%	100%	1.88	3.19	1.60	3.13	1.57
Huntington Rd	Huntington Rd N of Kirby Rd_NB	60	NB	E91		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Huntington Rd	Huntington Rd N of Kirby Rd_SB	60	SB	E92		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Kirby Rd	Kirby Rd W of Huntington Rd_EB	60	EB	E93		36%	59%	2%	0%	2%	1%	100%	1.87	3.19	1.59	3.12	1.56
Kirby Rd	Kirby Rd W of Huntington Rd_WB	60	WB	E94		36%	61%	2%	0%	1%	0%	100%	1.82	3.10	1.55	3.10	1.55
Highway 27	Hwy 27 S of Hwy 413_NB	80	NB	E95		33%	56%	5%	0%	3%	3%	100%	2.01	3.42	1.71	3.32	1.66
Highway 27	Hwy 27 S of Hwy 413_SB	80	SB	E96		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.67	3.34	1.67
Highway 27	Hwy 27 N of Hwy 413_NB	80	NB	E97		31%	53%	8%	0%	4%	4%	100%	2.12	3.60	1.80	3.42	1.71
Highway 27	Hwy 27 N of Hwy 413_SB	80	SB	E98		33%	56%	4%	0%	3%	3%	100%	2.00	3.40	1.70	3.36	1.68
Kirby Rd	Kirby Rd E of Hwy 27_EB	60	EB	F01		33%	56%	5%	0%	3%	3%	100%	2.00	3.41	1.70	3.36	1.68
Kirby Rd	Kirby Rd E of Hwy 27_WB	60	WB	F02		36%	60%	2%	0%	1%	1%	100%	1.84	3.14	1.57	3.16	1.58
Kipling Ave	Kipling Ave At Hwy 413_NB	80	NB	F03		34%	58%	3%	0%	3%	3%	100%	1.94	3.30	1.65	3.23	1.62
Kipling Ave	Kipling Ave At Hwy 413_SB	80	SB	F04		35%	59%	0%	0%	3%	3%	100%	1.89	3.22	1.61	3.11	1.55
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	60	EB	F05		34%	58%	3%	0%	3%	2%	100%	1.94	3.30	1.65	3.22	1.61
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	60	WB	F06		34%	57%	5%	0%	2%	2%	100%	1.98	3.36	1.68	3.39	1.69
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	60	EB	F07		35%	59%	3%	0%	1%	1%	100%	1.89	3.22	1.61	3.19	1.59
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	60	WB	F08		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.32	1.66
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	80	NB	F09		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.61	3.15	1.57
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	80	SB	F10		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.12	1.56
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	80	NB	F13		34%	57%	2%	0%	4%	3%	100%	1.95	3.32	1.66	3.25	1.63
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	80	SB	F14		34%	57%	2%	0%	4%	3%	100%	1.95	3.32	1.66	3.25	1.63
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	70	EB	F15		36%	60%	1%	0%	2%	2%	100%	1.86	3.17	1.58	3.12	1.56
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	70	WB	F16		36%	60%	1%	0%	2%	2%	100%	1.86	3.16	1.58	3.12	1.56
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	70	EB	F17		35%	58%	0%	0%	3%	3%	100%	1.91	3.25	1.63	3.16	1.58
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	70	WB	F18		35%	59%	1%	0%	3%	3%	100%	1.90	3.23	1.62	3.16	1.58
Weston Rd	Weston Rd N of Kirby Rd_NB	70	NB	F19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.00	1.50
Weston Rd	Weston Rd N of Kirby Rd_SB	70	SB	F20		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.00	1.50
Weston Rd	Weston Rd N of Hwy 413_NB	70	NB	F21		30%	50%	10%	0%	5%	5%	100%	2.21	3.76	1.88	3.75	1.87
Weston Rd	Weston Rd N of Hwy 413_SB	70	SB	F22		31%	52%	9%	0%	4%	4%	100%	2.15	3.66	1.83	3.76	1.88
Weston Rd	Weston Rd N of King Vaughan Rd_NB	70	NB	F23		32%	53%	7%	0%	4%	4%	100%	2.10	3.58	1.79	3.53	1.77
Weston Rd	Weston Rd N of King Vaughan Rd_SB	70	SB	F24		32%	54%	6%	0%	3%	3%	100%	2.06	3.50	1.75	3.46	1.73
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	60	EB	F25		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.72	3.50	1.75
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	60	WB	F26		31%	52%	8%	0%	5%	4%	100%	2.15	3.65	1.83	3.64	1.82
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	60	EB	F27		31%	52%	8%	0%	4%	4%	100%	2.14	3.64	1.82	3.55	1.78
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	60	WB	F28		33%	56%	5%	0%	3%	2%	100%	2.00	3.41	1.70	3.49	1.75
Kirby Rd	Kirby Rd At Hwy 400_EB	60	EB	F29		35%	59%	2%	0%	2%	1%	100%	1.89	3.21	1.60	3.26	1.63
Kirby Rd	Kirby Rd At Hwy 400_WB	60	WB	F30		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.16	1.58
Steeles Ave	Steeles Ave W of Ninth Line N_EB	60	EB	F31		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.60	3.16	1.58
Steeles Ave	Steeles Ave W of Ninth Line N_WB	60	WB	F32		34%	56%	5%	0%	2%	2%	100%	1.99	3.38	1.69	3.29	1.64
Heritage Rd	Heritage Rd S of Wanless Dr_NB	60	NB	F33		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.06	1.53
Heritage Rd	Heritage Rd S of Wanless Dr_SB	60	SB	F34		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.14	1.57
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	80	NB	F35		34%	57%	5%	0%	2%	2%	100%	1.95	3.31	1.66	3.26	1.63

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	80	SB	F36		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.19	1.59
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	60	EB	F37		35%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.27	1.63
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	60	WB	F38		33%	56%	4%	0%	3%	3%	100%	2.00	3.39	1.70	3.25	1.63
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	80	NB	F39		34%	56%	4%	0%	3%	3%	100%	1.99	3.39	1.69	3.25	1.63
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	80	SB	F40		36%	60%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.16	1.58
Old School Rd	Old School Rd W of Bramalea Rd_EB	70	EB	F41		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.02	1.51
Old School Rd	Old School Rd W of Bramalea Rd_WB	70	WB	F42		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.00	1.50
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	60	NB	F43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	60	SB	F44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Nashville Rd	Nashville Rd At Hwy 427_EB	70	EB	F45		34%	57%	3%	0%	3%	3%	100%	1.95	3.31	1.66	3.18	1.59
Nashville Rd	Nashville Rd At Hwy 427_WB	70	WB	F46		36%	61%	0%	0%	1%	1%	100%	1.83	3.11	1.55	3.07	1.53
Kirby Rd	Kirby Rd W of Hwy 27_EB	60	EB	F47		35%	59%	1%	0%	3%	2%	100%	1.90	3.23	1.62	3.23	1.62
Kirby Rd	Kirby Rd W of Hwy 27_WB	60	WB	F48		32%	54%	3%	0%	5%	5%	100%	2.06	3.50	1.75	3.34	1.67
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	60	EB	F49		32%	54%	6%	0%	4%	3%	100%	2.06	3.51	1.75	3.48	1.74
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	60	WB	F50		33%	56%	5%	0%	3%	2%	100%	2.00	3.40	1.70	3.47	1.74
Jane St	Jane St N of King Vaughan Rd_NB	70	NB	F51		30%	51%	10%	0%	4%	4%	100%	2.19	3.72	1.86	3.46	1.73
Jane St	Jane St N of King Vaughan Rd_SB	70	SB	F52		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.19	1.59
Jane St	Jane St S of King Vaughan Rd_NB	70	NB	F53		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.55	3.07	1.54
Jane St	Jane St S of King Vaughan Rd_SB	70	SB	F54		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.05	1.53
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	70	N-E/W	F71		37%	62%	1%	0%	1%	0%	100%	1.80	3.05	1.53	3.19	1.60
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	40	E-S	F72		34%	56%	5%	0%	2%	2%	100%	1.99	3.38	1.69	3.39	1.70
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	60	W-S	F73		37%	62%	1%	0%	0%	0%	100%	1.78	3.02	1.51	3.04	1.52
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	70	S-E/W	F74		29%	49%	11%	0%	5%	5%	100%	2.24	3.81	1.91	3.65	1.82
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	60	E-N	F75		34%	57%	5%	0%	2%	2%	100%	1.95	3.31	1.66	3.26	1.63
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	40	W-N	F76		37%	62%	0%	0%	1%	1%	100%	1.79	3.04	1.52	3.02	1.51
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	70	N-E/W	F77		32%	54%	7%	0%	3%	3%	100%	2.08	3.54	1.77	3.64	1.82
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	40	E-S	F78		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.03	1.52
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	60	W-S	F79		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.07	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	70	S-E/W	F80		37%	61%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.06	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	60	E-N	F81		27%	45%	15%	1%	7%	6%	100%	2.41	4.09	2.05	3.94	1.97
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	40	W-N	F82		32%	54%	7%	0%	3%	3%	100%	2.07	3.52	1.76	3.28	1.64
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	70	N-E/W	F83		31%	52%	8%	0%	5%	5%	100%	2.16	3.67	1.84	3.45	1.73
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	40	E-S	F84		26%	44%	0%	0%	15%	14%	100%	2.43	4.12	2.06	3.62	1.81
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	60	W-S	F85		34%	56%	1%	0%	5%	4%	100%	1.99	3.38	1.69	3.26	1.63
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	70	S-E/W	F86		34%	58%	3%	0%	3%	2%	100%	1.94	3.29	1.64	3.29	1.64
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	60	E-N	F87		31%	51%	10%	0%	4%	4%	100%	2.17	3.69	1.85	3.49	1.74
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	40	W-N	F88		29%	49%	10%	0%	6%	5%	100%	2.24	3.80	1.90	3.48	1.74
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	80	E-N	G01		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.25	1.62
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	80	N-E	G02		34%	58%	3%	0%	2%	2%	100%	1.94	3.30	1.65	3.27	1.63
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	100	N-S	G03		14%	24%	30%	1%	15%	14%	100%	3.13	5.33	2.66	4.98	2.49
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	100	S-N	G04		17%	29%	22%	1%	16%	15%	100%	2.97	5.06	2.53	4.61	2.31
Highway 413	Hwy 413 at Hwy 401_E-N	100	E-N	G05		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.31	1.65
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	100	E-N	G06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	70	S-E	G07		26%	44%	13%	1%	8%	8%	100%	2.43	4.13	2.07	3.68	1.84
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	80	N-E	G08		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.04	1.52
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	40	S-W	G09		31%	52%	3%	0%	7%	7%	100%	2.14	3.64	1.82	3.67	1.84
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	70	N-E	G10		31%	52%	8%	0%	5%	5%	100%	2.16	3.67	1.83	3.45	1.73
Highway 401	Hwy 401 E of Trafalgar Rd_EB	100	EB	H01		30%	51%	8%	0%	6%	5%	100%	2.19	3.72	1.86	3.68	1.84

Appendix A.2.1: AM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	100	EB	H02		31%	51%	6%	0%	6%	6%	100%	2.16	3.67	1.84	3.63	1.81
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	100	EB	H03		31%	52%	6%	0%	6%	5%	100%	2.14	3.64	1.82	3.58	1.79
Highway 401	Hwy 401 E of Trafalgar Rd_WB	100	WB	H04		28%	47%	8%	0%	9%	8%	100%	2.32	3.94	1.97	3.72	1.86
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	100	WB	H05		29%	49%	8%	0%	7%	7%	100%	2.26	3.84	1.92	3.69	1.84
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	100	WB	H06		27%	46%	8%	0%	10%	9%	100%	2.37	4.03	2.02	3.75	1.88
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	100	WB	H07		29%	48%	8%	0%	8%	7%	100%	2.29	3.89	1.94	3.69	1.85
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	60	N-E	H08		33%	55%	3%	0%	5%	4%	100%	2.04	3.48	1.74	3.37	1.68
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	40	S-E	H09		34%	57%	0%	0%	4%	4%	100%	1.96	3.34	1.67	3.19	1.59
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	70	0	H10		33%	55%	3%	0%	5%	5%	100%	2.05	3.49	1.74	3.39	1.70
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	70	0	H11		35%	58%	0%	0%	4%	3%	100%	1.93	3.28	1.64	3.14	1.57
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	100	EB	H12		28%	47%	15%	1%	5%	4%	100%	2.31	3.93	1.97	3.89	1.94
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	80	0	H13		30%	51%	11%	0%	4%	4%	100%	2.19	3.72	1.86	3.65	1.82
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	70	0	H14		31%	52%	2%	0%	8%	7%	100%	2.15	3.65	1.82	3.95	1.98
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	80	0	H15		36%	60%	3%	0%	1%	1%	100%	1.87	3.18	1.59	3.40	1.70
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	70	E-N/S	H16		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.14	1.57

Appendix A.2.1: AM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	110	NB	A01		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	110	SB	A02		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	110	NB	A03		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	110	SB	A04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Bovaird Dr_NB	110	NB	A05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Bovaird Dr_SB	110	SB	A06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Mayfield Rd_EB	110	EB	A07		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Mayfield Rd_WB	110	WB	A08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	110	EB	A09		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	110	WB	A10		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hurontario St_EB	110	EB	A11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hurontario St_WB	110	WB	A12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 410_EB	110	EB	A13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 410_WB	110	WB	A14		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Bramalea Rd_EB	110	EB	A15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Bramalea Rd_WB	110	WB	A16		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Airport Rd_EB	110	EB	A17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Airport Rd_WB	110	WB	A18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of The Gore Rd_EB	110	EB	A19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of The Gore Rd_WB	110	WB	A20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Humber Station Rd_EB	110	EB	A21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Humber Station Rd_WB	110	WB	A22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 427_EB	110	EB	A23		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 427_WB	110	WB	A24		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 27_EB	110	EB	A25		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 27_WB	110	WB	A26		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Pine Valley Dr_EB	110	EB	A27		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Pine Valley Dr_WB	110	WB	A28		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 S of Hwy 401_NB	100	NB	B05		33%	56%	4%	0%	4%	3%	100%	2.01	3.41	1.71	3.20	1.60
Highway 407	Hwy 407 S of Hwy 401_SB	100	SB	B06		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.19	1.59
Highway 407	Hwy 407 N of Hwy 401_EB	100	EB	B07		28%	47%	10%	0%	7%	7%	100%	2.32	3.95	1.97	3.48	1.74
Highway 407	Hwy 407 N of Hwy 401_WB	100	WB	B08		22%	38%	16%	1%	12%	11%	100%	2.65	4.51	2.26	3.96	1.98
Highway 410	Hwy 410 S of Mayfield Rd_NB	100	NB	B09		32%	53%	7%	0%	4%	4%	100%	2.10	3.57	1.79	3.39	1.69
Highway 410	Hwy 410 S of Mayfield Rd_SB	100	SB	B10		34%	56%	2%	0%	4%	4%	100%	1.99	3.38	1.69	3.30	1.65
Highway 410	Hwy 410 N of Mayfield Rd_NB	100	NB	B11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 N of Mayfield Rd_SB	100	SB	B12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 W of Mayfield Rd_EB	100	EB	B13		33%	55%	3%	0%	5%	4%	100%	2.04	3.46	1.73	3.34	1.67
Highway 410	Hwy 410 W of Mayfield Rd_WB	100	WB	B14		31%	52%	8%	0%	4%	4%	100%	2.14	3.64	1.82	3.43	1.72
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	100	NB	B15		36%	61%	2%	0%	1%	0%	100%	1.82	3.09	1.55	3.07	1.53
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	100	SB	B16		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.06	1.53
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	100	NB	B17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	100	SB	B18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 400	Hwy 400 N of Teston Rd_NB	100	NB	B19		31%	51%	8%	0%	5%	5%	100%	2.17	3.69	1.85	3.42	1.71
Highway 400	Hwy 400 N of Teston Rd_SB	100	SB	B20		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.66	3.34	1.67
Highway 400	Hwy 400 S of King Vaughan Rd_NB	100	NB	B21		30%	50%	8%	0%	6%	6%	100%	2.22	3.77	1.89	3.45	1.72
Highway 400	Hwy 400 S of King Vaughan Rd_SB	100	SB	B22		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.66	3.35	1.68
Highway 400	Hwy 400 S of King Rd_NB	100	NB	B23		30%	50%	8%	0%	6%	6%	100%	2.21	3.76	1.88	3.44	1.72
Highway 400	Hwy 400 S of King Rd_SB	100	SB	B24		34%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.34	1.67
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	70	S-E/W	C11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	60	E-N	C12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	40	W-N	C13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	70	N-E/W	C14		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	40	E-S	C15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	60	W-S	C16		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	70	S-E/W	C17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_E-N	60	E-N	C18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.1: AM Traffic Composition by Source for 2051 No-Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
				MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
				MOVES SourceTypeID >>	21	31	52	53	61	62						
				Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Bovaird Dr_W-N	40	W-N	C19	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	70	N-E/W	C20	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_E-S	40	E-S	C21	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_W-S	60	W-S	C22	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	70	S-E/W	C23	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_E-N	60	E-N	C24	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_W-N	40	W-N	C25	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	70	N-E/W	C26	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_E-S	40	E-S	C27	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_W-S	60	W-S	C28	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	70	W-N/S	C29	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	40	N-E	C30	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	60	S-E	C31	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	70	E-N/S	C32	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	60	N-W	C33	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	40	S-W	C34	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_W-N/S	70	W-N/S	C35	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_N-E	40	N-E	C36	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_S-E	60	S-E	C37	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_E-N/S	70	E-N/S	C38	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_N-W	60	N-W	C39	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_S-W	40	S-W	C40	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_W-S	90	W-S	C41	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_E-S	90	E-S	C42	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_S-E	90	S-E	C43	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_S-W	90	S-W	C44	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	70	W-N/S	C45	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_N-E	40	N-E	C46	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_S-E	60	S-E	C47	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	70	E-N/S	C48	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_N-W	60	N-W	C49	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_S-W	40	S-W	C50	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_W-N/S	70	W-N/S	C51	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_N-E	40	N-E	C52	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_S-E	60	S-E	C53	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_E-N/S	70	E-N/S	C54	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_N-W	60	N-W	C55	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_S-W	40	S-W	C56	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_W-N/S	70	W-N/S	C57	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_N/S-E	40	N/S-E	C58	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_E-N/S	70	E-N/S	C59	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_N/S-W	60	N/S-W	C60	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	70	W-N/S	C61	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_N-E	40	N-E	C62	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-E	60	S-E	C63	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	70	E-N/S	C64	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_N-W	60	N-W	C65	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-W	40	S-W	C66	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_W-S	90	W-S	C67	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_E-S	90	E-S	C68	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_S-E	80	S-E	C69	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_S-W	90	S-W	C70	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_W-N/S	70	W-N/S	C71	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_N/S-E	40	N/S-E	C72	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_E-N/S	50	E-N/S	C73	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_N/S-W	60	N/S-W	C74	37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.1: AM Traffic Composition by Source for 2051 No-Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Weston Rd_W-N/S	70	W-N/S	C81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Weston Rd_N/S-W	60	N/S-W	C82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_W-N	100	W-N	C83		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_W-S	90	W-S	C84		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_N-W	90	N-W	C85		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_S-W	90	S-W	C86		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	60	NB	D01		36%	60%	1%	0%	2%	2%	100%	1.87	3.17	1.59	3.18	1.59
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	60	SB	D02		36%	60%	2%	0%	2%	1%	100%	1.87	3.18	1.59	3.10	1.55
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	60	NB	D03		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.13	1.57
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	60	SB	D04		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.14	1.57
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	60	EB	D05		36%	60%	2%	0%	2%	1%	100%	1.87	3.17	1.59	3.15	1.58
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	60	WB	D06		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.11	1.55
Steeles Ave	Steeles Ave At Hwy 413_EB	80	EB	D07		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.20	1.60
Steeles Ave	Steeles Ave At Hwy 413_WB	80	WB	D08		36%	60%	2%	0%	1%	1%	100%	1.86	3.17	1.59	3.10	1.55
Steeles Ave	Steeles Ave E of Ninth Line S_EB	80	EB	D09		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.14	1.57
Steeles Ave	Steeles Ave E of Ninth Line S_WB	80	WB	D10		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.56	3.07	1.54
Steeles Ave	Steeles Ave E of Tenth Line N_EB	80	EB	D11		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.60	3.16	1.58
Steeles Ave	Steeles Ave E of Tenth Line N_WB	80	WB	D12		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.08	1.54
Ninth Line N	Ninth Line N N of Steeles Ave_NB	60	NB	D13		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.20	1.60
Ninth Line N	Ninth Line N N of Steeles Ave_SB	60	SB	D14		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.26	1.63
Ninth Line S	Ninth Line S S of Steeles Ave_NB	60	NB	D15		35%	59%	2%	0%	1%	1%	100%	1.88	3.19	1.60	3.20	1.60
Ninth Line S	Ninth Line S S of Steeles Ave_SB	60	SB	D16		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.64	3.21	1.61
Tenth Line	Tenth Line At Hwy 413_NB	70	NB	D17		35%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.24	1.62
Tenth Line	Tenth Line At Hwy 413_SB	70	SB	D18		34%	57%	3%	0%	3%	3%	100%	1.96	3.33	1.67	3.19	1.59
Derry Rd	Derry Rd W of Hwy 407_EB	80	EB	D19		35%	59%	3%	0%	1%	1%	100%	1.89	3.21	1.61	3.35	1.67
Derry Rd	Derry Rd W of Hwy 407_WB	80	WB	D20		28%	46%	16%	1%	5%	5%	100%	2.35	4.00	2.00	3.60	1.80
Derry Rd	Derry Rd E of Hwy 407_EB	80	EB	D21		36%	61%	1%	0%	1%	0%	100%	1.82	3.09	1.54	3.27	1.64
Derry Rd	Derry Rd E of Hwy 407_WB	80	WB	D22		31%	52%	7%	0%	5%	4%	100%	2.13	3.62	1.81	3.37	1.69
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	60	NB	D23		36%	60%	3%	0%	1%	1%	100%	1.86	3.17	1.58	3.22	1.61
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	60	SB	D24		33%	55%	6%	0%	3%	3%	100%	2.02	3.44	1.72	3.27	1.64
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	60	NB	D25		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	60	SB	D26		35%	58%	4%	0%	2%	1%	100%	1.92	3.26	1.63	3.15	1.58
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	80	NB	D27		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	80	SB	D28		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.18	1.59
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	80	NB	D29		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	80	SB	D30		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.18	1.59
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	80	NB	D31		34%	57%	4%	0%	2%	2%	100%	1.96	3.33	1.67	3.23	1.62
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	80	SB	D32		34%	57%	3%	0%	3%	2%	100%	1.95	3.32	1.66	3.22	1.61
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	60	EB	D33		34%	56%	5%	0%	3%	3%	100%	1.99	3.38	1.69	3.25	1.62
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	60	WB	D34		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.55	3.11	1.55
5 Side Rd	5 Side Rd At Hwy 413_EB	60	EB	D35		37%	61%	1%	0%	1%	0%	100%	1.80	3.07	1.53	3.09	1.54
5 Side Rd	5 Side Rd At Hwy 413_WB	60	WB	D36		32%	53%	6%	0%	5%	4%	100%	2.11	3.59	1.80	3.33	1.66
Heritage Rd	Heritage Rd At Hwy 413_NB	60	NB	D37		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.06	1.53
Heritage Rd	Heritage Rd At Hwy 413_SB	60	SB	D38		35%	59%	1%	0%	2%	2%	100%	1.88	3.19	1.60	3.12	1.56
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	60	NB	D39		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.02	1.51
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	60	SB	D40		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.11	1.56
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	60	NB	D41		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.01	1.51
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	60	SB	D42		36%	60%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.06	1.53
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	60	NB	D43		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.23	1.62
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	60	SB	D44		28%	46%	13%	1%	7%	6%	100%	2.34	3.99	1.99	3.51	1.75
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	60	EB	D45		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.72	3.35	1.67
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	60	WB	D46		32%	53%	7%	0%	4%	4%	100%	2.10	3.56	1.78	3.44	1.72
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	60	EB	D47		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.31	1.66
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	60	WB	D48		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.10	1.55
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	60	EB	D49		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.31	1.66
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	60	WB	D50		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.37	1.68

Appendix A.2.1: AM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Wanless Dr	Wanless Dr W of Heritage Rd_EB	60	EB	D51		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.18	1.59
Wanless Dr	Wanless Dr W of Heritage Rd_WB	60	WB	D52		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.09	1.55
Wanless Dr	Wanless Dr At Hwy 413_EB	60	EB	D53		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.15	1.58
Wanless Dr	Wanless Dr At Hwy 413_WB	60	WB	D54		36%	61%	2%	0%	1%	1%	100%	1.84	3.12	1.56	3.08	1.54
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	80	EB	D55		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.22	1.61
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	80	WB	D56		34%	56%	5%	0%	3%	2%	100%	1.98	3.37	1.69	3.26	1.63
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	80	EB	D57		32%	54%	6%	0%	3%	3%	100%	2.06	3.50	1.75	3.30	1.65
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	80	WB	D58		35%	59%	3%	0%	2%	1%	100%	1.90	3.22	1.61	3.23	1.62
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	80	EB	D59		32%	54%	6%	0%	3%	3%	100%	2.06	3.50	1.75	3.30	1.65
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	80	WB	D60		35%	59%	3%	0%	2%	1%	100%	1.90	3.22	1.61	3.23	1.62
Mississauga Rd	Mississauga Rd At Hwy 413_NB	80	NB	D61		32%	54%	7%	0%	3%	3%	100%	2.06	3.51	1.75	3.44	1.72
Mississauga Rd	Mississauga Rd At Hwy 413_SB	80	SB	D62		35%	58%	4%	0%	2%	2%	100%	1.92	3.27	1.64	3.32	1.66
Creditview Rd	Creditview Rd At Hwy 413_NB	70	NB	D63		27%	46%	13%	1%	7%	6%	100%	2.36	4.01	2.01	3.57	1.78
Creditview Rd	Creditview Rd At Hwy 413_SB	70	SB	D64		31%	53%	9%	0%	4%	3%	100%	2.12	3.60	1.80	3.64	1.82
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	80	NB	D65		29%	48%	11%	1%	6%	5%	100%	2.27	3.85	1.93	3.66	1.83
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	80	SB	D66		34%	56%	5%	0%	3%	3%	100%	1.99	3.39	1.69	3.39	1.70
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	80	NB	D67		29%	48%	11%	1%	6%	5%	100%	2.27	3.85	1.93	3.66	1.83
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	80	SB	D68		34%	56%	5%	0%	3%	3%	100%	1.99	3.39	1.69	3.39	1.70
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	80	NB	D69		30%	50%	10%	0%	5%	4%	100%	2.21	3.76	1.88	3.57	1.79
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	80	SB	D70		33%	55%	5%	0%	3%	3%	100%	2.03	3.45	1.72	3.40	1.70
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	70	EB	D71		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.24	1.62
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	70	WB	D72		34%	57%	4%	0%	3%	2%	100%	1.96	3.34	1.67	3.25	1.62
Old School Rd	Old School Rd At Hwy 413_EB	70	EB	D73		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.09	1.55
Old School Rd	Old School Rd At Hwy 413_WB	70	WB	D74		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.14	1.57
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	80	NB	D75		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.26	1.63
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	80	SB	D76		32%	54%	6%	0%	3%	3%	100%	2.06	3.50	1.75	3.37	1.68
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	80	NB	D77		31%	52%	9%	0%	4%	4%	100%	2.14	3.64	1.82	3.58	1.79
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	80	SB	D78		28%	47%	12%	1%	6%	6%	100%	2.31	3.92	1.96	3.73	1.87
Old School Rd	Old School Rd W of Hurontario St_EB	70	EB	D79		36%	60%	2%	0%	1%	1%	100%	1.87	3.17	1.59	3.18	1.59
Old School Rd	Old School Rd W of Hurontario St_WB	70	WB	D80		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.18	1.59
Old School Rd	Old School Rd E of Hurontario St_EB	70	EB	D81		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.02	1.51
Old School Rd	Old School Rd E of Hurontario St_WB	70	WB	D82		37%	63%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.00	1.50
Hurontario St	Hurontario St S of Old School Rd_NB	80	NB	D83		28%	47%	11%	0%	7%	6%	100%	2.31	3.93	1.97	3.61	1.80
Hurontario St	Hurontario St S of Old School Rd_SB	80	SB	D84		32%	53%	4%	0%	6%	5%	100%	2.10	3.56	1.78	3.51	1.76
Hurontario St	Hurontario St S of Hwy 413_NB	80	NB	D85		27%	45%	12%	1%	8%	7%	100%	2.37	4.04	2.02	3.66	1.83
Hurontario St	Hurontario St S of Hwy 413_SB	80	SB	D86		32%	54%	3%	0%	5%	5%	100%	2.06	3.50	1.75	3.48	1.74
Hurontario St	Hurontario St N of Hwy 413_NB	80	NB	D87		27%	45%	12%	1%	8%	7%	100%	2.37	4.04	2.02	3.66	1.83
Hurontario St	Hurontario St N of Hwy 413_SB	80	SB	D88		32%	54%	3%	0%	5%	5%	100%	2.06	3.50	1.75	3.48	1.74
Kennedy Rd	Kennedy Rd At Hwy 413_NB	60	NB	D89		32%	54%	5%	0%	5%	4%	100%	2.07	3.52	1.76	3.37	1.69
Kennedy Rd	Kennedy Rd At Hwy 413_SB	60	SB	D90		32%	54%	6%	0%	3%	3%	100%	2.06	3.50	1.75	3.75	1.88
Old School Rd	Old School Rd W of Heart Lake Rd_EB	70	EB	D91		36%	61%	2%	0%	1%	1%	100%	1.83	3.10	1.55	3.13	1.56
Old School Rd	Old School Rd W of Heart Lake Rd_WB	70	WB	D92		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.08	1.54
Old School Rd	Old School Rd At Hwy 410_EB	70	EB	D93		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.08	1.54
Old School Rd	Old School Rd At Hwy 410_WB	70	WB	D94		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.56	3.07	1.54
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	60	NB	E01		33%	55%	6%	0%	3%	3%	100%	2.04	3.46	1.73	3.33	1.67
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	60	SB	E02		33%	55%	5%	0%	4%	3%	100%	2.03	3.45	1.72	3.29	1.65
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	80	NB	E03		36%	59%	2%	0%	1%	1%	100%	1.87	3.19	1.59	3.28	1.64
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	80	SB	E04		34%	58%	3%	0%	2%	2%	100%	1.94	3.29	1.65	3.26	1.63
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	80	NB	E05		31%	52%	8%	0%	4%	4%	100%	2.12	3.61	1.81	3.41	1.71
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	80	SB	E06		36%	60%	2%	0%	1%	1%	100%	1.84	3.14	1.57	3.27	1.63
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	60	EB	E07		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.19	1.60
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	60	WB	E08		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.19	1.60
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	60	EB	E09		35%	58%	3%	0%	2%	2%	100%	1.93	3.27	1.64	3.20	1.60
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	60	WB	E10		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.62	3.19	1.59
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	60	EB	E11		34%	57%	4%	0%	3%	2%	100%	1.98	3.36	1.68	3.31	1.65
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	60	WB	E12		33%	55%	4%	0%	4%	4%	100%	2.03	3.46	1.73	3.34	1.67

Appendix A.2.1: AM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	80	NB	E13		34%	57%	5%	0%	2%	2%	100%	1.97	3.34	1.67	3.29	1.64
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	80	SB	E14		32%	53%	6%	0%	4%	4%	100%	2.09	3.55	1.77	3.39	1.70
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	80	NB	E15		32%	54%	7%	0%	3%	3%	100%	2.07	3.52	1.76	3.32	1.66
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	80	SB	E16		33%	55%	2%	0%	5%	5%	100%	2.02	3.43	1.71	3.29	1.65
Dixie Rd	Dixie Rd At Hwy 413_NB	80	NB	E17		30%	50%	12%	1%	4%	4%	100%	2.22	3.78	1.89	3.47	1.73
Dixie Rd	Dixie Rd At Hwy 413_SB	80	SB	E18		36%	60%	2%	0%	1%	1%	100%	1.86	3.17	1.58	3.21	1.61
Countryside Dr	Countryside Dr At Hwy 410_EB	60	EB	E19		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.17	1.59
Countryside Dr	Countryside Dr At Hwy 410_WB	60	WB	E20		34%	57%	5%	0%	2%	2%	100%	1.95	3.32	1.66	3.21	1.61
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	80	NB	E21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.08	1.54
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	80	SB	E22		32%	53%	5%	0%	5%	4%	100%	2.09	3.55	1.78	3.84	1.92
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	80	NB	E23		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.08	1.54
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	80	SB	E24		32%	53%	5%	0%	5%	4%	100%	2.09	3.55	1.78	3.84	1.92
Old School Rd	Old School Rd E of Bramalea Rd_EB	70	EB	E25		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.06	1.53
Old School Rd	Old School Rd E of Bramalea Rd_WB	70	WB	E26		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.06	1.53
Old School Rd	Old School Rd E of Torbram Road_EB	70	EB	E27		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.08	1.54
Old School Rd	Old School Rd E of Torbram Road_WB	70	WB	E28		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.05	1.53
Torbram Rd	Torbram Rd S of Old School Rd_NB	70	NB	E29		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.15	1.58
Torbram Rd	Torbram Rd S of Old School Rd_SB	70	SB	E30		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.17	1.58
Torbram Rd	Torbram Rd At Hwy 413_NB	70	NB	E31		31%	52%	9%	0%	4%	4%	100%	2.15	3.66	1.83	3.39	1.70
Torbram Rd	Torbram Rd At Hwy 413_SB	70	SB	E32		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.56	3.21	1.60
Airport Rd	Airport Rd S of Old School Rd_NB	60	NB	E33		33%	56%	5%	0%	3%	3%	100%	2.01	3.42	1.71	3.25	1.62
Airport Rd	Airport Rd S of Old School Rd_SB	60	SB	E34		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.19	1.60
Airport Rd	Airport Rd S of Hwy 413_NB	60	NB	E35		32%	53%	7%	0%	4%	4%	100%	2.10	3.57	1.79	3.35	1.67
Airport Rd	Airport Rd S of Hwy 413_SB	60	SB	E36		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.32	1.66
Airport Rd	Airport Rd N of Hwy 413_NB	60	NB	E37		32%	53%	7%	0%	4%	4%	100%	2.10	3.57	1.79	3.35	1.67
Airport Rd	Airport Rd N of Hwy 413_SB	60	SB	E38		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.32	1.66
Healey Rd	Healey Rd E of Airport Rd_EB	70	EB	E39		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.10	1.55
Healey Rd	Healey Rd E of Airport Rd_WB	70	WB	E40		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.13	1.57
Healey Rd	Healey Rd At Hwy 413_EB	70	EB	E41		37%	61%	1%	0%	1%	0%	100%	1.80	3.06	1.53	3.05	1.52
Healey Rd	Healey Rd At Hwy 413_WB	70	WB	E42		37%	61%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.04	1.52
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	70	EB	E43		37%	61%	1%	0%	1%	0%	100%	1.81	3.08	1.54	3.04	1.52
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	70	WB	E44		37%	62%	0%	0%	1%	1%	100%	1.79	3.04	1.52	3.03	1.51
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	80	NB	E45		22%	36%	20%	1%	11%	10%	100%	2.70	4.59	2.30	3.96	1.98
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	80	SB	E46		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.52	1.76
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	80	NB	E47		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.30	1.65
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	80	SB	E48		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.25	1.63
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	80	NB	E49		36%	59%	1%	0%	2%	2%	100%	1.87	3.19	1.59	3.23	1.62
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	80	SB	E50		32%	54%	5%	0%	4%	4%	100%	2.07	3.52	1.76	3.31	1.66
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	80	NB	E51		36%	61%	0%	0%	2%	1%	100%	1.83	3.11	1.56	3.19	1.59
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	80	SB	E52		33%	54%	5%	0%	4%	4%	100%	2.05	3.49	1.74	3.26	1.63
The Gore Rd	The Gore Rd S of Hwy 413_NB	80	NB	E53		32%	53%	8%	0%	4%	3%	100%	2.10	3.57	1.79	3.39	1.70
The Gore Rd	The Gore Rd S of Hwy 413_SB	80	SB	E54		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.24	1.62
The Gore Rd	The Gore Rd N of Hwy 413_NB	80	NB	E55		32%	53%	8%	0%	4%	3%	100%	2.10	3.57	1.79	3.39	1.70
The Gore Rd	The Gore Rd N of Hwy 413_SB	80	SB	E56		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.24	1.62
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	70	NB	E57		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.11	1.56
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	70	SB	E58		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.62	3.14	1.57
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	80	NB	E59		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.11	1.56
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	80	SB	E60		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.12	1.56
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	80	NB	E61		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.11	1.56
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	80	SB	E62		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.12	1.56
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	70	EB	E63		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.27	1.63
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	70	WB	E64		35%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.27	1.63
Mayfield Rd	Mayfield Rd At Hwy 413_EB	70	EB	E65		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.28	1.64
Mayfield Rd	Mayfield Rd At Hwy 413_WB	70	WB	E66		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.29	1.64
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	80	NB	E67		34%	58%	3%	0%	2%	2%	100%	1.94	3.29	1.64	3.54	1.77
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	80	SB	E68		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.27	1.63

Appendix A.2.1: AM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Coleraine Dr	Coleraine Dr At Highway 413_NB	70	NB	E69		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.11	1.55
Coleraine Dr	Coleraine Dr At Highway 413_SB	70	SB	E70		36%	61%	2%	0%	1%	0%	100%	1.83	3.10	1.55	3.14	1.57
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	70	NB	E71		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.03	1.52
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	70	SB	E72		37%	61%	1%	0%	0%	0%	100%	1.81	3.08	1.54	3.05	1.53
Countryside Dr	Countryside Dr W of Hwy 50_EB	60	EB	E73		36%	61%	1%	0%	1%	1%	100%	1.83	3.10	1.55	3.09	1.54
Countryside Dr	Countryside Dr W of Hwy 50_WB	60	WB	E74		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.08	1.54
Highway 50	Hwy 50 S of Countryside Dr_NB	70	NB	E75		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.15	1.57
Highway 50	Hwy 50 S of Countryside Dr_SB	70	SB	E76		36%	59%	1%	0%	2%	2%	100%	1.87	3.19	1.59	3.12	1.56
Highway 50	Hwy 50 At Hwy 413_NB	70	NB	E77		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.15	1.58
Highway 50	Hwy 50 At Hwy 413_SB	70	SB	E78		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.13	1.56
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	70	NB	E79		36%	60%	3%	0%	1%	1%	100%	1.86	3.17	1.59	3.12	1.56
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	70	SB	E80		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.09	1.55
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	60	EB	E81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	60	WB	E82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Nashville Rd	Nashville Rd E of Hwy 50_EB	70	EB	E83		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.09	1.54
Nashville Rd	Nashville Rd E of Hwy 50_WB	70	WB	E84		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.08	1.54
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	60	EB	E85		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.10	1.55
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	60	WB	E86		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.18	1.59
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	60	EB	E87		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.26	1.63
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	60	WB	E88		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.20	1.60
Huntington Rd	Huntington Rd At Hwy 413_NB	60	NB	E89		37%	62%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.02	1.51
Huntington Rd	Huntington Rd At Hwy 413_SB	60	SB	E90		37%	62%	0%	0%	0%	0%	100%	1.79	3.05	1.52	3.04	1.52
Huntington Rd	Huntington Rd N of Kirby Rd_NB	60	NB	E91		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Huntington Rd	Huntington Rd N of Kirby Rd_SB	60	SB	E92		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Kirby Rd	Kirby Rd W of Huntington Rd_EB	60	EB	E93		36%	61%	1%	0%	1%	1%	100%	1.81	3.09	1.54	3.07	1.53
Kirby Rd	Kirby Rd W of Huntington Rd_WB	60	WB	E94		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.03	1.51
Highway 27	Hwy 27 S of Hwy 413_NB	80	NB	E95		32%	54%	6%	0%	4%	3%	100%	2.06	3.49	1.75	3.36	1.68
Highway 27	Hwy 27 S of Hwy 413_SB	80	SB	E96		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.69	3.27	1.64
Highway 27	Hwy 27 N of Hwy 413_NB	80	NB	E97		32%	54%	6%	0%	4%	3%	100%	2.06	3.49	1.75	3.36	1.68
Highway 27	Hwy 27 N of Hwy 413_SB	80	SB	E98		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.69	3.27	1.64
Kirby Rd	Kirby Rd E of Hwy 27_EB	60	EB	F01		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.13	1.57
Kirby Rd	Kirby Rd E of Hwy 27_WB	60	WB	F02		35%	59%	3%	0%	2%	2%	100%	1.89	3.22	1.61	3.13	1.57
Kipling Ave	Kipling Ave At Hwy 413_NB	80	NB	F03		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.22	1.61
Kipling Ave	Kipling Ave At Hwy 413_SB	80	SB	F04		35%	59%	3%	0%	2%	1%	100%	1.91	3.24	1.62	3.12	1.56
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	60	EB	F05		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.60	3.21	1.60
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	60	WB	F06		33%	56%	5%	0%	3%	3%	100%	2.00	3.40	1.70	3.25	1.63
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	60	EB	F07		35%	59%	2%	0%	1%	1%	100%	1.88	3.19	1.60	3.21	1.60
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	60	WB	F08		35%	58%	4%	0%	2%	2%	100%	1.92	3.26	1.63	3.21	1.60
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	80	NB	F09		34%	57%	3%	0%	3%	3%	100%	1.97	3.34	1.67	3.20	1.60
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	80	SB	F10		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.12	1.56
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	80	NB	F13		34%	57%	3%	0%	3%	3%	100%	1.95	3.31	1.66	3.26	1.63
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	80	SB	F14		34%	56%	3%	0%	3%	3%	100%	1.99	3.38	1.69	3.29	1.65
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	70	EB	F15		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.60	3.20	1.60
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	70	WB	F16		34%	58%	3%	0%	2%	2%	100%	1.94	3.29	1.65	3.20	1.60
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	70	EB	F17		34%	57%	3%	0%	3%	3%	100%	1.95	3.31	1.65	3.27	1.63
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	70	WB	F18		34%	57%	3%	0%	3%	3%	100%	1.97	3.34	1.67	3.24	1.62
Weston Rd	Weston Rd N of Kirby Rd_NB	70	NB	F19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.07	1.53
Weston Rd	Weston Rd N of Kirby Rd_SB	70	SB	F20		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.05	1.52
Weston Rd	Weston Rd N of Hwy 413_NB	70	NB	F21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Weston Rd	Weston Rd N of Hwy 413_SB	70	SB	F22		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.00	1.50
Weston Rd	Weston Rd N of King Vaughan Rd_NB	70	NB	F23		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.16	1.58
Weston Rd	Weston Rd N of King Vaughan Rd_SB	70	SB	F24		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.17	1.59
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	60	EB	F25		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.19	1.59
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	60	WB	F26		34%	57%	4%	0%	3%	3%	100%	1.98	3.36	1.68	3.24	1.62
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	60	EB	F27		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.44	1.72
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	60	WB	F28		33%	56%	6%	0%	3%	2%	100%	2.01	3.42	1.71	3.40	1.70

Appendix A.2.1: AM Traffic Composition by Source for 2051 No-Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Kirby Rd	Kirby Rd At Hwy 400_EB	60	EB	F29		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.03	1.51
Kirby Rd	Kirby Rd At Hwy 400_WB	60	WB	F30		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.62	3.21	1.61
Steeles Ave	Steeles Ave W of Ninth Line N_EB	60	EB	F31		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.57	3.14	1.57
Steeles Ave	Steeles Ave W of Ninth Line N_WB	60	WB	F32		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.06	1.53
Heritage Rd	Heritage Rd S of Wanless Dr_NB	60	NB	F33		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.01	1.51
Heritage Rd	Heritage Rd S of Wanless Dr_SB	60	SB	F34		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.07	1.54
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	80	NB	F35		34%	57%	5%	0%	2%	2%	100%	1.97	3.34	1.67	3.27	1.63
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	80	SB	F36		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.28	1.64
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	60	EB	F37		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.25	1.62
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	60	WB	F38		32%	54%	5%	0%	4%	4%	100%	2.07	3.52	1.76	3.36	1.68
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	80	NB	F39		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.14	1.57
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	80	SB	F40		34%	57%	3%	0%	3%	2%	100%	1.95	3.32	1.66	3.21	1.60
Old School Rd	Old School Rd W of Bramalea Rd_EB	70	EB	F41		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.01	1.50
Old School Rd	Old School Rd W of Bramalea Rd_WB	70	WB	F42		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.03	1.51
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	60	NB	F43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	60	SB	F44		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.53	3.02	1.51
Nashville Rd	Nashville Rd At Hwy 427_EB	70	EB	F45		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.09	1.54
Nashville Rd	Nashville Rd At Hwy 427_WB	70	WB	F46		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.08	1.54
Kirby Rd	Kirby Rd W of Hwy 27_EB	60	EB	F47		36%	60%	0%	0%	2%	2%	100%	1.84	3.14	1.57	3.07	1.53
Kirby Rd	Kirby Rd W of Hwy 27_WB	60	WB	F48		32%	54%	0%	0%	7%	7%	100%	2.08	3.54	1.77	3.34	1.67
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	60	EB	F49		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.71	3.39	1.70
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	60	WB	F50		32%	54%	8%	0%	3%	3%	100%	2.07	3.51	1.76	3.46	1.73
Jane St	Jane St N of King Vaughan Rd_NB	70	NB	F51		28%	47%	13%	1%	6%	5%	100%	2.32	3.94	1.97	3.55	1.78
Jane St	Jane St N of King Vaughan Rd_SB	70	SB	F52		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.11	1.55
Jane St	Jane St S of King Vaughan Rd_NB	70	NB	F53		36%	60%	3%	0%	1%	1%	100%	1.87	3.18	1.59	3.12	1.56
Jane St	Jane St S of King Vaughan Rd_SB	70	SB	F54		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.02	1.51
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	70	N-E/W	F71		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.30	1.65
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	40	E-S	F72		33%	55%	7%	0%	3%	2%	100%	2.03	3.46	1.73	3.70	1.85
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	60	W-S	F73		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.06	1.53
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	70	S-E/W	F74		28%	46%	13%	1%	6%	6%	100%	2.34	3.98	1.99	3.80	1.90
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	60	E-N	F75		24%	41%	21%	1%	7%	6%	100%	2.54	4.31	2.16	3.91	1.95
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	40	W-N	F76		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	70	N-E/W	F77		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	40	E-S	F78		37%	61%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.07	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	60	W-S	F79		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.05	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	70	S-E/W	F80		36%	61%	2%	0%	1%	0%	100%	1.82	3.09	1.55	3.07	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	60	E-N	F81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	40	W-N	F82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	70	N-E/W	F83		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	40	E-S	F84		33%	55%	1%	0%	6%	6%	100%	2.05	3.48	1.74	3.34	1.67
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	60	W-S	F85		35%	59%	1%	0%	3%	2%	100%	1.90	3.24	1.62	3.21	1.60
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	70	S-E/W	F86		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.30	1.65
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	60	E-N	F87		27%	44%	13%	1%	8%	7%	100%	2.41	4.10	2.05	3.76	1.88
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	40	W-N	F88		33%	55%	1%	0%	6%	6%	100%	2.05	3.48	1.74	3.34	1.67
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	40	W-E/W	F89		34%	56%	5%	0%	3%	2%	100%	1.99	3.38	1.69	3.56	1.78
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	80	E-N	G01		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	80	N-E	G02		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	100	N-S	G03		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	100	S-N	G04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401_E-N	100	E-N	G05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	100	E-N	G06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	70	S-E	G07		26%	44%	13%	1%	9%	8%	100%	2.43	4.12	2.06	3.67	1.83
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	80	N-E	G08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	40	S-W	G09		29%	49%	4%	0%	10%	9%	100%	2.26	3.84	1.92	3.77	1.88
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	70	N-E	G10		26%	44%	13%	1%	9%	8%	100%	2.43	4.12	2.06	3.67	1.83
Highway 401	Hwy 401 E of Trafalgar Rd_EB	100	EB	H01		28%	47%	9%	0%	8%	7%	100%	2.32	3.94	1.97	3.77	1.88

Appendix A.2.1: AM Traffic Composition by Source for 2051 No-Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	100	EB	H02		28%	47%	9%	0%	8%	7%	100%	2.32	3.94	1.97	3.77	1.88
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	100	EB	H03		31%	52%	6%	0%	6%	6%	100%	2.16	3.67	1.83	3.62	1.81
Highway 401	Hwy 401 E of Trafalgar Rd_WB	100	WB	H04		30%	50%	7%	0%	7%	6%	100%	2.21	3.76	1.88	3.63	1.81
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	100	WB	H05		31%	52%	7%	0%	5%	5%	100%	2.14	3.63	1.81	3.58	1.79
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	100	WB	H06		29%	48%	7%	0%	8%	8%	100%	2.29	3.88	1.94	3.68	1.84
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	100	WB	H07		30%	50%	7%	0%	7%	6%	100%	2.21	3.76	1.88	3.62	1.81
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	60	N-E	H08		32%	53%	4%	0%	6%	6%	100%	2.11	3.59	1.79	3.40	1.70
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	40	S-E	H09		27%	45%	0%	0%	15%	13%	100%	2.40	4.08	2.04	3.64	1.82
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	70	0	H10		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	70	0	H11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	100	EB	H12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	80	0	H13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.08	1.54
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	70	0	H14		32%	53%	5%	0%	5%	5%	100%	2.11	3.58	1.79	3.37	1.69
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	80	0	H15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	70	E-N/S	H16		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.19	1.59

Appendix A.2.1: AM Traffic Composition by Source for 2051 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	110	NB	A01		30%	50%	10%	0%	5%	4%	100%	2.20	3.73	1.87	3.68	1.84
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	110	SB	A02		31%	52%	9%	0%	4%	4%	100%	2.14	3.65	1.82	3.63	1.82
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	110	NB	A03		31%	52%	9%	0%	4%	4%	100%	2.15	3.65	1.83	3.55	1.78
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	110	SB	A04		32%	53%	8%	0%	4%	3%	100%	2.09	3.56	1.78	3.55	1.77
Highway 413	Hwy 413 N of Bovaird Dr_NB	110	NB	A05		32%	53%	8%	0%	4%	4%	100%	2.11	3.59	1.79	3.53	1.76
Highway 413	Hwy 413 N of Bovaird Dr_SB	110	SB	A06		32%	54%	7%	0%	3%	3%	100%	2.07	3.52	1.76	3.52	1.76
Highway 413	Hwy 413 E of Mayfield Rd_EB	110	EB	A07		30%	50%	10%	0%	5%	5%	100%	2.22	3.77	1.89	3.63	1.82
Highway 413	Hwy 413 E of Mayfield Rd_WB	110	WB	A08		32%	54%	7%	0%	4%	3%	100%	2.08	3.54	1.77	3.62	1.81
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	110	EB	A09		30%	50%	10%	0%	5%	5%	100%	2.22	3.77	1.88	3.66	1.83
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	110	WB	A10		31%	52%	8%	0%	4%	4%	100%	2.13	3.63	1.81	3.68	1.84
Highway 413	Hwy 413 E of Hurontario St_EB	110	EB	A11		30%	50%	9%	0%	5%	5%	100%	2.20	3.74	1.87	3.70	1.85
Highway 413	Hwy 413 E of Hurontario St_WB	110	WB	A12		30%	51%	9%	0%	5%	5%	100%	2.19	3.72	1.86	3.70	1.85
Highway 413	Hwy 413 E of Hwy 410_EB	110	EB	A13		30%	49%	10%	0%	5%	5%	100%	2.23	3.79	1.90	3.70	1.85
Highway 413	Hwy 413 E of Hwy 410_WB	110	WB	A14		31%	52%	8%	0%	4%	4%	100%	2.12	3.61	1.81	3.69	1.85
Highway 413	Hwy 413 E of Bramalea Rd_EB	110	EB	A15		29%	48%	11%	0%	6%	6%	100%	2.27	3.86	1.93	3.79	1.90
Highway 413	Hwy 413 E of Bramalea Rd_WB	110	WB	A16		29%	49%	10%	0%	6%	5%	100%	2.25	3.82	1.91	3.85	1.93
Highway 413	Hwy 413 E of Airport Rd_EB	110	EB	A17		29%	48%	11%	0%	6%	6%	100%	2.27	3.86	1.93	3.81	1.90
Highway 413	Hwy 413 E of Airport Rd_WB	110	WB	A18		29%	48%	11%	0%	6%	6%	100%	2.27	3.85	1.93	3.86	1.93
Highway 413	Hwy 413 E of The Gore Rd_EB	110	EB	A19		29%	48%	11%	0%	6%	6%	100%	2.28	3.87	1.94	3.84	1.92
Highway 413	Hwy 413 E of The Gore Rd_WB	110	WB	A20		28%	47%	12%	1%	7%	6%	100%	2.33	3.97	1.98	3.93	1.96
Highway 413	Hwy 413 E of Humber Station Rd_EB	110	EB	A21		29%	48%	11%	0%	6%	6%	100%	2.28	3.88	1.94	3.78	1.89
Highway 413	Hwy 413 E of Humber Station Rd_WB	110	WB	A22		29%	49%	10%	0%	6%	5%	100%	2.25	3.82	1.91	3.79	1.89
Highway 413	Hwy 413 E of Hwy 427_EB	110	EB	A23		27%	45%	13%	1%	7%	7%	100%	2.38	4.05	2.03	3.87	1.93
Highway 413	Hwy 413 E of Hwy 427_WB	110	WB	A24		31%	52%	8%	0%	4%	4%	100%	2.14	3.64	1.82	3.72	1.86
Highway 413	Hwy 413 E of Hwy 27_EB	110	EB	A25		27%	46%	13%	1%	7%	7%	100%	2.37	4.03	2.01	3.87	1.94
Highway 413	Hwy 413 E of Hwy 27_WB	110	WB	A26		31%	51%	9%	0%	5%	4%	100%	2.17	3.69	1.84	3.73	1.87
Highway 413	Hwy 413 E of Pine Valley Dr_EB	110	EB	A27		27%	46%	13%	1%	7%	7%	100%	2.37	4.03	2.01	3.87	1.94
Highway 413	Hwy 413 E of Pine Valley Dr_WB	110	WB	A28		31%	51%	9%	0%	5%	4%	100%	2.17	3.69	1.84	3.73	1.87
Highway 407	Hwy 407 S of Hwy 401_NB	100	NB	B05		31%	52%	7%	0%	5%	4%	100%	2.13	3.63	1.81	3.55	1.77
Highway 407	Hwy 407 S of Hwy 401_SB	100	SB	B06		18%	30%	26%	1%	13%	12%	100%	2.93	4.98	2.49	4.28	2.14
Highway 407	Hwy 407 N of Hwy 401_EB	100	EB	B07		32%	53%	7%	0%	4%	4%	100%	2.10	3.57	1.79	3.28	1.64
Highway 407	Hwy 407 N of Hwy 401_WB	100	WB	B08		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.13	1.57
Highway 410	Hwy 410 S of Mayfield Rd_NB	100	NB	B09		33%	55%	6%	0%	3%	3%	100%	2.05	3.48	1.74	3.33	1.67
Highway 410	Hwy 410 S of Mayfield Rd_SB	100	SB	B10		34%	57%	2%	0%	4%	4%	100%	1.98	3.36	1.68	3.30	1.65
Highway 410	Hwy 410 N of Mayfield Rd_NB	100	NB	B11		31%	51%	9%	0%	4%	4%	100%	2.16	3.68	1.84	3.39	1.70
Highway 410	Hwy 410 N of Mayfield Rd_SB	100	SB	B12		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.60	3.28	1.64
Highway 410	Hwy 410 W of Mayfield Rd_EB	100	EB	B13		34%	57%	3%	0%	4%	3%	100%	1.98	3.36	1.68	3.30	1.65
Highway 410	Hwy 410 W of Mayfield Rd_WB	100	WB	B14		32%	54%	7%	0%	4%	3%	100%	2.08	3.54	1.77	3.38	1.69
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	100	NB	B15		34%	57%	5%	0%	2%	2%	100%	1.98	3.36	1.68	3.26	1.63
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	100	SB	B16		36%	60%	3%	0%	1%	1%	100%	1.87	3.17	1.59	3.18	1.59
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	100	NB	B17		29%	48%	12%	1%	6%	5%	100%	2.29	3.89	1.95	3.65	1.83
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	100	SB	B18		34%	57%	5%	0%	2%	2%	100%	1.97	3.35	1.68	3.36	1.68
Highway 400	Hwy 400 N of Teston Rd_NB	100	NB	B19		30%	50%	8%	0%	6%	5%	100%	2.20	3.75	1.87	3.47	1.73
Highway 400	Hwy 400 N of Teston Rd_SB	100	SB	B20		34%	57%	3%	0%	3%	2%	100%	1.95	3.32	1.66	3.37	1.68
Highway 400	Hwy 400 S of King Vaughan Rd_NB	100	NB	B21		31%	52%	6%	0%	5%	5%	100%	2.15	3.65	1.82	3.35	1.68
Highway 400	Hwy 400 S of King Vaughan Rd_SB	100	SB	B22		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.26	1.63
Highway 400	Hwy 400 S of King Rd_NB	100	NB	B23		31%	52%	6%	0%	5%	5%	100%	2.15	3.65	1.82	3.35	1.68
Highway 400	Hwy 400 S of King Rd_SB	100	SB	B24		34%	57%	4%	0%	2%	2%	100%	1.95	3.31	1.66	3.43	1.72
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	70	S-E/W	C11		34%	58%	3%	0%	2%	2%	100%	1.94	3.30	1.65	3.34	1.67
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	60	E-N	C12		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.05	1.52
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	40	W-N	C13		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.26	1.63
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	70	N-E/W	C14		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.19	1.60
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	40	E-S	C15		32%	53%	5%	0%	5%	5%	100%	2.11	3.58	1.79	3.52	1.76
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	60	W-S	C16		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.13	1.56
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	70	S-E/W	C17		32%	53%	8%	0%	4%	3%	100%	2.11	3.58	1.79	3.44	1.72
Highway 413	Hwy 413 at Bovaird Dr_E-N	60	E-N	C18		35%	58%	4%	0%	2%	1%	100%	1.92	3.26	1.63	3.26	1.63

Appendix A.2.1: AM Traffic Composition by Source for 2051 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Bovaird Dr_W-N	40	W-N	C19		35%	59%	3%	0%	1%	1%	100%	1.89	3.21	1.60	3.10	1.55
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	70	N-E/W	C20		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.12	1.56
Highway 413	Hwy 413 at Bovaird Dr_E-S	40	E-S	C21		31%	52%	9%	0%	4%	3%	100%	2.12	3.61	1.81	3.48	1.74
Highway 413	Hwy 413 at Bovaird Dr_W-S	60	W-S	C22		36%	60%	3%	0%	1%	1%	100%	1.87	3.18	1.59	3.12	1.56
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	70	S-E/W	C23		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.23	1.61
Highway 413	Hwy 413 at Mayfield Rd_E-N	60	E-N	C24		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.54	3.04	1.52
Highway 413	Hwy 413 at Mayfield Rd_W-N	40	W-N	C25		32%	53%	8%	0%	4%	4%	100%	2.11	3.59	1.79	3.53	1.76
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	70	N-E/W	C26		33%	55%	6%	0%	3%	3%	100%	2.03	3.45	1.72	3.41	1.71
Highway 413	Hwy 413 at Mayfield Rd_E-S	40	E-S	C27		34%	57%	5%	0%	2%	1%	100%	1.95	3.32	1.66	3.33	1.66
Highway 413	Hwy 413 at Mayfield Rd_W-S	60	W-S	C28		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.05	1.53
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	70	W-N/S	C29		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.15	1.57
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	40	N-E	C30		27%	45%	11%	0%	8%	8%	100%	2.38	4.05	2.02	4.00	2.00
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	60	S-E	C31		33%	56%	6%	0%	2%	2%	100%	2.00	3.40	1.70	3.47	1.74
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	70	E-N/S	C32		29%	49%	9%	0%	7%	6%	100%	2.25	3.83	1.91	3.71	1.85
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	60	N-W	C33		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.04	1.52
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	40	S-W	C34		35%	59%	3%	0%	1%	1%	100%	1.88	3.19	1.59	3.24	1.62
Highway 413	Hwy 413 at Hurontario St_W-N/S	70	W-N/S	C35		33%	55%	5%	0%	4%	3%	100%	2.03	3.46	1.73	3.31	1.66
Highway 413	Hwy 413 at Hurontario St_N-E	40	N-E	C36		32%	53%	4%	0%	6%	5%	100%	2.11	3.59	1.79	3.75	1.88
Highway 413	Hwy 413 at Hurontario St_S-E	60	S-E	C37		28%	47%	10%	0%	7%	7%	100%	2.31	3.93	1.97	3.85	1.92
Highway 413	Hwy 413 at Hurontario St_E-N/S	70	E-N/S	C38		26%	44%	13%	1%	9%	8%	100%	2.44	4.14	2.07	3.77	1.89
Highway 413	Hwy 413 at Hurontario St_N-W	60	N-W	C39		35%	58%	2%	0%	3%	2%	100%	1.93	3.27	1.64	3.36	1.68
Highway 413	Hwy 413 at Hurontario St_S-W	40	S-W	C40		35%	58%	2%	0%	3%	2%	100%	1.93	3.27	1.64	3.36	1.68
Highway 413	Hwy 413 at Hwy 410_W-S	90	W-S	C41		33%	55%	3%	0%	5%	4%	100%	2.05	3.48	1.74	3.30	1.65
Highway 413	Hwy 413 at Hwy 410_E-S	90	E-S	C42		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.35	1.68
Highway 413	Hwy 413 at Hwy 410_S-E	90	S-E	C43		31%	52%	9%	0%	4%	3%	100%	2.14	3.64	1.82	3.38	1.69
Highway 413	Hwy 413 at Hwy 410_S-W	90	S-W	C44		32%	54%	7%	0%	4%	3%	100%	2.08	3.54	1.77	3.36	1.68
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	70	W-N/S	C45		31%	53%	9%	0%	4%	3%	100%	2.12	3.60	1.80	3.40	1.70
Highway 413	Hwy 413 at Bramalea Rd_N-E	40	N-E	C46		27%	45%	13%	1%	8%	7%	100%	2.40	4.08	2.04	4.24	2.12
Highway 413	Hwy 413 at Bramalea Rd_S-E	60	S-E	C47		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.05	1.52
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	70	E-N/S	C48		18%	31%	22%	1%	14%	13%	100%	2.90	4.92	2.46	4.50	2.25
Highway 413	Hwy 413 at Bramalea Rd_N-W	60	N-W	C49		35%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.37	1.69
Highway 413	Hwy 413 at Bramalea Rd_S-W	40	S-W	C50		34%	57%	0%	0%	5%	4%	100%	1.97	3.34	1.67	3.19	1.60
Highway 413	Hwy 413 at Airport Rd_W-N/S	70	W-N/S	C51		34%	58%	4%	0%	2%	2%	100%	1.94	3.29	1.65	3.31	1.65
Highway 413	Hwy 413 at Airport Rd_N-E	40	N-E	C52		34%	57%	5%	0%	2%	2%	100%	1.97	3.35	1.67	3.37	1.68
Highway 413	Hwy 413 at Airport Rd_S-E	60	S-E	C53		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.17	1.59
Highway 413	Hwy 413 at Airport Rd_E-N/S	70	E-N/S	C54		33%	55%	6%	0%	3%	3%	100%	2.04	3.47	1.73	3.40	1.70
Highway 413	Hwy 413 at Airport Rd_N-W	60	N-W	C55		34%	56%	5%	0%	3%	3%	100%	1.99	3.38	1.69	3.47	1.73
Highway 413	Hwy 413 at Airport Rd_S-W	40	S-W	C56		28%	46%	15%	1%	6%	5%	100%	2.35	4.00	2.00	3.87	1.93
Highway 413	Hwy 413 at The Gore Rd_W-N/S	70	W-N/S	C57		34%	57%	5%	0%	2%	2%	100%	1.97	3.34	1.67	3.36	1.68
Highway 413	Hwy 413 at The Gore Rd_N/S-E	40	N/S-E	C58		37%	61%	1%	0%	0%	0%	100%	1.81	3.07	1.53	3.10	1.55
Highway 413	Hwy 413 at The Gore Rd_E-N/S	70	E-N/S	C59		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.56	3.17	1.58
Highway 413	Hwy 413 at The Gore Rd_N/S-W	60	N/S-W	C60		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.69	3.28	1.64
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	70	W-N/S	C61		36%	61%	2%	0%	1%	1%	100%	1.83	3.12	1.56	3.20	1.60
Highway 413	Hwy 413 at Humber Station Rd_N-E	40	N-E	C62		36%	60%	3%	0%	1%	1%	100%	1.87	3.17	1.59	3.10	1.55
Highway 413	Hwy 413 at Humber Station Rd_S-E	60	S-E	C63		30%	50%	10%	0%	5%	5%	100%	2.22	3.78	1.89	3.73	1.86
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	70	E-N/S	C64		33%	55%	6%	0%	3%	2%	100%	2.02	3.44	1.72	3.34	1.67
Highway 413	Hwy 413 at Humber Station Rd_N-W	60	N-W	C65		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-W	40	S-W	C66		31%	51%	8%	0%	5%	5%	100%	2.17	3.70	1.85	3.42	1.71
Highway 413	Hwy 413 at Hwy 427_W-S	90	W-S	C67		32%	54%	7%	0%	3%	3%	100%	2.06	3.50	1.75	3.47	1.74
Highway 413	Hwy 413 at Hwy 427_E-S	90	E-S	C68		34%	57%	6%	0%	2%	2%	100%	1.97	3.36	1.68	3.39	1.70
Highway 413	Hwy 413 at Hwy 427_S-E	80	S-E	C69		28%	46%	15%	1%	5%	5%	100%	2.34	3.98	1.99	3.66	1.83
Highway 413	Hwy 413 at Hwy 427_S-W	90	S-W	C70		28%	47%	12%	1%	6%	6%	100%	2.31	3.93	1.97	3.69	1.85
Highway 413	Hwy 413 at Hwy 27_W-N/S	70	W-N/S	C71		32%	54%	7%	0%	3%	3%	100%	2.06	3.51	1.75	3.48	1.74
Highway 413	Hwy 413 at Hwy 27_N/S-E	40	N/S-E	C72		34%	58%	5%	0%	2%	1%	100%	1.94	3.30	1.65	3.23	1.61
Highway 413	Hwy 413 at Hwy 27_E-N/S	50	E-N/S	C73		32%	53%	9%	0%	3%	3%	100%	2.11	3.59	1.79	3.40	1.70
Highway 413	Hwy 413 at Hwy 27_N/S-W	60	N/S-W	C74		33%	55%	7%	0%	3%	3%	100%	2.05	3.49	1.74	3.46	1.73

Appendix A.2.1: AM Traffic Composition by Source for 2051 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Weston Rd_W-N/S	70	W-N/S	C81		32%	53%	7%	0%	4%	4%	100%	2.09	3.56	1.78	3.62	1.81
Highway 413	Hwy 413 at Weston Rd_N/S-W	60	N/S-W	C82		31%	52%	8%	0%	4%	4%	100%	2.13	3.62	1.81	3.64	1.82
Highway 413	Hwy 413 at Hwy 400_W-N	100	W-N	C83		24%	39%	18%	1%	10%	9%	100%	2.59	4.40	2.20	4.03	2.02
Highway 413	Hwy 413 at Hwy 400_W-S	90	W-S	C84		29%	49%	11%	0%	6%	5%	100%	2.26	3.84	1.92	3.93	1.96
Highway 413	Hwy 413 at Hwy 400_N-W	90	N-W	C85		26%	44%	14%	1%	8%	7%	100%	2.43	4.13	2.06	3.87	1.94
Highway 413	Hwy 413 at Hwy 400_S-W	90	S-W	C86		32%	53%	8%	0%	4%	3%	100%	2.10	3.56	1.78	3.77	1.89
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	60	NB	D01		36%	59%	1%	0%	2%	2%	100%	1.87	3.19	1.59	3.13	1.57
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	60	SB	D02		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.07	1.54
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	60	NB	D03		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.12	1.56
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	60	SB	D04		34%	56%	3%	0%	4%	4%	100%	1.99	3.39	1.70	3.25	1.63
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	60	EB	D05		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.60	3.17	1.59
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	60	WB	D06		33%	56%	5%	0%	3%	3%	100%	2.00	3.40	1.70	3.26	1.63
Steeles Ave	Steeles Ave At Hwy 413_EB	80	EB	D07		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.20	1.60
Steeles Ave	Steeles Ave At Hwy 413_WB	80	WB	D08		34%	56%	5%	0%	2%	2%	100%	1.99	3.38	1.69	3.27	1.63
Steeles Ave	Steeles Ave E of Ninth Line S_EB	80	EB	D09		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.13	1.57
Steeles Ave	Steeles Ave E of Ninth Line S_WB	80	WB	D10		34%	57%	5%	0%	2%	2%	100%	1.96	3.34	1.67	3.22	1.61
Steeles Ave	Steeles Ave E of Tenth Line N_EB	80	EB	D11		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.60	3.16	1.58
Steeles Ave	Steeles Ave E of Tenth Line N_WB	80	WB	D12		33%	56%	6%	0%	2%	2%	100%	2.00	3.40	1.70	3.26	1.63
Ninth Line N	Ninth Line N N of Steeles Ave_NB	60	NB	D13		34%	56%	5%	0%	3%	3%	100%	1.99	3.38	1.69	3.33	1.66
Ninth Line N	Ninth Line N N of Steeles Ave_SB	60	SB	D14		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.66	3.29	1.64
Ninth Line S	Ninth Line S S of Steeles Ave_NB	60	NB	D15		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.25	1.62
Ninth Line S	Ninth Line S S of Steeles Ave_SB	60	SB	D16		34%	57%	4%	0%	3%	2%	100%	1.96	3.32	1.66	3.25	1.63
Tenth Line	Tenth Line At Hwy 413_NB	70	NB	D17		30%	51%	8%	0%	6%	5%	100%	2.18	3.71	1.85	3.45	1.72
Tenth Line	Tenth Line At Hwy 413_SB	70	SB	D18		33%	55%	4%	0%	4%	4%	100%	2.04	3.47	1.74	3.28	1.64
Derry Rd	Derry Rd W of Hwy 407_EB	80	EB	D19		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.32	1.66
Derry Rd	Derry Rd W of Hwy 407_WB	80	WB	D20		22%	37%	20%	1%	10%	9%	100%	2.67	4.53	2.27	3.92	1.96
Derry Rd	Derry Rd E of Hwy 407_EB	80	EB	D21		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.26	1.63
Derry Rd	Derry Rd E of Hwy 407_WB	80	WB	D22		24%	41%	15%	1%	10%	9%	100%	2.55	4.33	2.17	3.81	1.90
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	60	NB	D23		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.18	1.59
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	60	SB	D24		34%	57%	4%	0%	2%	2%	100%	1.96	3.33	1.66	3.23	1.61
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	60	NB	D25		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	60	SB	D26		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.17	1.59
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	80	NB	D27		36%	60%	2%	0%	1%	1%	100%	1.87	3.17	1.59	3.13	1.56
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	80	SB	D28		35%	59%	3%	0%	2%	1%	100%	1.89	3.22	1.61	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	80	NB	D29		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.22	1.61
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	80	SB	D30		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	80	NB	D31		33%	56%	5%	0%	3%	3%	100%	2.01	3.42	1.71	3.27	1.63
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	80	SB	D32		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.16	1.58
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	60	EB	D33		33%	55%	5%	0%	4%	3%	100%	2.04	3.47	1.73	3.32	1.66
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	60	WB	D34		36%	61%	2%	0%	1%	1%	100%	1.83	3.12	1.56	3.21	1.60
5 Side Rd	5 Side Rd At Hwy 413_EB	60	EB	D35		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.11	1.56
5 Side Rd	5 Side Rd At Hwy 413_WB	60	WB	D36		33%	55%	5%	0%	4%	3%	100%	2.04	3.46	1.73	3.26	1.63
Heritage Rd	Heritage Rd At Hwy 413_NB	60	NB	D37		36%	61%	1%	0%	1%	1%	100%	1.83	3.10	1.55	3.09	1.54
Heritage Rd	Heritage Rd At Hwy 413_SB	60	SB	D38		35%	59%	1%	0%	2%	2%	100%	1.89	3.22	1.61	3.14	1.57
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	60	NB	D39		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.06	1.53
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	60	SB	D40		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.11	1.55
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	60	NB	D41		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.04	1.52
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	60	SB	D42		34%	57%	2%	0%	4%	3%	100%	1.97	3.35	1.68	3.17	1.59
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	60	NB	D43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.13	1.57
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	60	SB	D44		34%	56%	5%	0%	3%	3%	100%	1.99	3.39	1.69	3.20	1.60
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	60	EB	D45		34%	57%	4%	0%	3%	3%	100%	1.98	3.36	1.68	3.29	1.64
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	60	WB	D46		33%	55%	5%	0%	4%	3%	100%	2.03	3.46	1.73	3.37	1.69
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	60	EB	D47		34%	58%	3%	0%	2%	2%	100%	1.94	3.30	1.65	3.23	1.61
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	60	WB	D48		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.13	1.57
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	60	EB	D49		32%	53%	7%	0%	4%	4%	100%	2.11	3.59	1.80	3.43	1.72
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	60	WB	D50		32%	54%	7%	0%	4%	3%	100%	2.08	3.53	1.76	3.45	1.72

Appendix A.2.1: AM Traffic Composition by Source for 2051 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Wanless Dr	Wanless Dr W of Heritage Rd_EB	60	EB	D51		34%	57%	4%	0%	2%	2%	100%	1.95	3.31	1.65	3.19	1.59
Wanless Dr	Wanless Dr W of Heritage Rd_WB	60	WB	D52		31%	52%	8%	0%	4%	4%	100%	2.14	3.63	1.82	3.35	1.68
Wanless Dr	Wanless Dr At Hwy 413_EB	60	EB	D53		33%	56%	5%	0%	3%	3%	100%	2.00	3.41	1.70	3.26	1.63
Wanless Dr	Wanless Dr At Hwy 413_WB	60	WB	D54		33%	56%	6%	0%	3%	2%	100%	2.00	3.41	1.70	3.25	1.63
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	80	EB	D55		34%	56%	5%	0%	3%	3%	100%	1.99	3.39	1.70	3.35	1.67
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	80	WB	D56		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.29	1.64
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	80	EB	D57		34%	56%	5%	0%	3%	3%	100%	1.99	3.38	1.69	3.24	1.62
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	80	WB	D58		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.15	1.58
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	80	EB	D59		33%	55%	6%	0%	3%	3%	100%	2.02	3.44	1.72	3.30	1.65
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	80	WB	D60		35%	59%	3%	0%	1%	1%	100%	1.88	3.19	1.59	3.20	1.60
Mississauga Rd	Mississauga Rd At Hwy 413_NB	80	NB	D61		33%	55%	6%	0%	3%	2%	100%	2.02	3.44	1.72	3.43	1.71
Mississauga Rd	Mississauga Rd At Hwy 413_SB	80	SB	D62		31%	51%	10%	0%	4%	4%	100%	2.17	3.68	1.84	3.46	1.73
Creditview Rd	Creditview Rd At Hwy 413_NB	70	NB	D63		23%	38%	21%	1%	9%	8%	100%	2.65	4.50	2.25	3.75	1.87
Creditview Rd	Creditview Rd At Hwy 413_SB	70	SB	D64		33%	56%	7%	0%	2%	2%	100%	2.01	3.42	1.71	3.58	1.79
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	80	NB	D65		32%	54%	7%	0%	3%	3%	100%	2.06	3.50	1.75	3.47	1.74
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	80	SB	D66		31%	52%	7%	0%	5%	5%	100%	2.15	3.65	1.83	3.56	1.78
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	80	NB	D67		28%	48%	10%	0%	7%	6%	100%	2.30	3.91	1.95	4.06	2.03
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	80	SB	D68		31%	52%	8%	0%	5%	4%	100%	2.15	3.65	1.83	3.66	1.83
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	80	NB	D69		27%	46%	14%	1%	7%	6%	100%	2.37	4.02	2.01	3.64	1.82
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	80	SB	D70		31%	52%	7%	0%	5%	4%	100%	2.14	3.64	1.82	3.81	1.90
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	70	EB	D71		32%	53%	6%	0%	5%	5%	100%	2.11	3.59	1.79	3.58	1.79
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	70	WB	D72		30%	50%	8%	0%	6%	5%	100%	2.20	3.75	1.87	3.70	1.85
Old School Rd	Old School Rd At Hwy 413_EB	70	EB	D73		35%	58%	1%	0%	3%	3%	100%	1.93	3.28	1.64	3.52	1.76
Old School Rd	Old School Rd At Hwy 413_WB	70	WB	D74		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.40	1.70
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	80	NB	D75		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.23	1.61
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	80	SB	D76		34%	56%	5%	0%	3%	2%	100%	1.99	3.39	1.69	3.31	1.65
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	80	NB	D77		31%	52%	9%	0%	4%	4%	100%	2.15	3.65	1.83	3.46	1.73
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	80	SB	D78		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.44	1.72
Old School Rd	Old School Rd W of Hurontario St_EB	70	EB	D79		31%	52%	8%	0%	5%	5%	100%	2.15	3.66	1.83	3.64	1.82
Old School Rd	Old School Rd W of Hurontario St_WB	70	WB	D80		32%	54%	7%	0%	3%	3%	100%	2.06	3.50	1.75	3.36	1.68
Old School Rd	Old School Rd E of Hurontario St_EB	70	EB	D81		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.15	1.57
Old School Rd	Old School Rd E of Hurontario St_WB	70	WB	D82		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.02	1.51
Hurontario St	Hurontario St S of Old School Rd_NB	80	NB	D83		31%	53%	7%	0%	4%	4%	100%	2.12	3.60	1.80	3.43	1.72
Hurontario St	Hurontario St S of Old School Rd_SB	80	SB	D84		32%	53%	3%	0%	6%	5%	100%	2.09	3.55	1.77	3.42	1.71
Hurontario St	Hurontario St S of Hwy 413_NB	80	NB	D85		30%	51%	8%	0%	5%	5%	100%	2.18	3.70	1.85	3.55	1.78
Hurontario St	Hurontario St S of Hwy 413_SB	80	SB	D86		31%	53%	3%	0%	7%	6%	100%	2.12	3.60	1.80	3.41	1.70
Hurontario St	Hurontario St N of Hwy 413_NB	80	NB	D87		29%	48%	10%	0%	7%	6%	100%	2.28	3.88	1.94	3.62	1.81
Hurontario St	Hurontario St N of Hwy 413_SB	80	SB	D88		33%	55%	3%	0%	5%	4%	100%	2.04	3.47	1.74	3.48	1.74
Kennedy Rd	Kennedy Rd At Hwy 413_NB	60	NB	D89		33%	56%	3%	0%	4%	3%	100%	2.00	3.40	1.70	3.35	1.68
Kennedy Rd	Kennedy Rd At Hwy 413_SB	60	SB	D90		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.70	1.85
Old School Rd	Old School Rd W of Heart Lake Rd_EB	70	EB	D91		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.17	1.58
Old School Rd	Old School Rd W of Heart Lake Rd_WB	70	WB	D92		36%	60%	2%	0%	2%	1%	100%	1.87	3.18	1.59	3.12	1.56
Old School Rd	Old School Rd At Hwy 410_EB	70	EB	D93		33%	55%	6%	0%	4%	3%	100%	2.05	3.48	1.74	3.26	1.63
Old School Rd	Old School Rd At Hwy 410_WB	70	WB	D94		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.12	1.56
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	60	NB	E01		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.21	1.61
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	60	SB	E02		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.68	3.26	1.63
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	80	NB	E03		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.16	1.58
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	80	SB	E04		31%	51%	7%	0%	6%	5%	100%	2.17	3.69	1.85	3.41	1.71
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	80	NB	E05		35%	59%	3%	0%	1%	1%	100%	1.89	3.20	1.60	3.16	1.58
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	80	SB	E06		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.25	1.63
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	60	EB	E07		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.20	1.60
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	60	WB	E08		35%	58%	4%	0%	2%	2%	100%	1.92	3.26	1.63	3.18	1.59
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	60	EB	E09		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.22	1.61
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	60	WB	E10		35%	59%	3%	0%	1%	1%	100%	1.89	3.22	1.61	3.16	1.58
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	60	EB	E11		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.22	1.61
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	60	WB	E12		34%	57%	4%	0%	3%	3%	100%	1.98	3.36	1.68	3.23	1.61

Appendix A.2.1: AM Traffic Composition by Source for 2051 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	80	NB	E13		35%	58%	4%	0%	2%	1%	100%	1.91	3.25	1.62	3.21	1.61
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	80	SB	E14		35%	58%	3%	0%	2%	2%	100%	1.93	3.27	1.64	3.20	1.60
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	80	NB	E15		34%	57%	4%	0%	2%	2%	100%	1.94	3.31	1.65	3.23	1.62
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	80	SB	E16		34%	57%	2%	0%	4%	4%	100%	1.98	3.36	1.68	3.24	1.62
Dixie Rd	Dixie Rd At Hwy 413_NB	80	NB	E17		32%	53%	9%	0%	3%	3%	100%	2.10	3.57	1.79	3.34	1.67
Dixie Rd	Dixie Rd At Hwy 413_SB	80	SB	E18		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.53	3.18	1.59
Countryside Dr	Countryside Dr At Hwy 410_EB	60	EB	E19		35%	59%	3%	0%	1%	1%	100%	1.88	3.19	1.60	3.24	1.62
Countryside Dr	Countryside Dr At Hwy 410_WB	60	WB	E20		33%	55%	6%	0%	3%	3%	100%	2.03	3.45	1.72	3.28	1.64
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	80	NB	E21		32%	54%	3%	0%	6%	5%	100%	2.08	3.54	1.77	3.36	1.68
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	80	SB	E22		32%	54%	5%	0%	4%	4%	100%	2.07	3.51	1.76	3.34	1.67
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	80	NB	E23		21%	35%	20%	1%	12%	11%	100%	2.74	4.65	2.33	4.06	2.03
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	80	SB	E24		34%	57%	4%	0%	2%	2%	100%	1.95	3.31	1.65	3.50	1.75
Old School Rd	Old School Rd E of Bramalea Rd_EB	70	EB	E25		32%	54%	5%	0%	4%	4%	100%	2.06	3.51	1.75	3.28	1.64
Old School Rd	Old School Rd E of Bramalea Rd_WB	70	WB	E26		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.09	1.55
Old School Rd	Old School Rd E of Torbram Road_EB	70	EB	E27		29%	48%	10%	0%	7%	6%	100%	2.27	3.86	1.93	3.57	1.79
Old School Rd	Old School Rd E of Torbram Road_WB	70	WB	E28		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.13	1.57
Torbram Rd	Torbram Rd S of Old School Rd_NB	70	NB	E29		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.03	1.51
Torbram Rd	Torbram Rd S of Old School Rd_SB	70	SB	E30		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.12	1.56
Torbram Rd	Torbram Rd At Hwy 413_NB	70	NB	E31		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Torbram Rd	Torbram Rd At Hwy 413_SB	70	SB	E32		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.07	1.53
Airport Rd	Airport Rd S of Old School Rd_NB	60	NB	E33		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.14	1.57
Airport Rd	Airport Rd S of Old School Rd_SB	60	SB	E34		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.16	1.58
Airport Rd	Airport Rd S of Hwy 413_NB	60	NB	E35		34%	57%	4%	0%	2%	2%	100%	1.95	3.31	1.66	3.26	1.63
Airport Rd	Airport Rd S of Hwy 413_SB	60	SB	E36		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.20	1.60
Airport Rd	Airport Rd N of Hwy 413_NB	60	NB	E37		34%	57%	5%	0%	2%	2%	100%	1.97	3.35	1.67	3.27	1.63
Airport Rd	Airport Rd N of Hwy 413_SB	60	SB	E38		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.24	1.62
Healey Rd	Healey Rd E of Airport Rd_EB	70	EB	E39		35%	59%	3%	0%	1%	1%	100%	1.90	3.22	1.61	3.14	1.57
Healey Rd	Healey Rd E of Airport Rd_WB	70	WB	E40		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.08	1.54
Healey Rd	Healey Rd At Hwy 413_EB	70	EB	E41		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.04	1.52
Healey Rd	Healey Rd At Hwy 413_WB	70	WB	E42		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.16	1.58
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	70	EB	E43		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.02	1.51
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	70	WB	E44		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.07	1.53
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	80	NB	E45		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.69	3.31	1.66
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	80	SB	E46		33%	55%	7%	0%	3%	3%	100%	2.05	3.48	1.74	3.40	1.70
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	80	NB	E47		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.72	3.30	1.65
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	80	SB	E48		35%	59%	3%	0%	1%	1%	100%	1.89	3.22	1.61	3.30	1.65
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	80	NB	E49		36%	60%	1%	0%	2%	1%	100%	1.85	3.15	1.57	3.21	1.61
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	80	SB	E50		33%	55%	5%	0%	4%	3%	100%	2.03	3.46	1.73	3.32	1.66
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	80	NB	E51		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.11	1.55
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	80	SB	E52		33%	54%	5%	0%	4%	4%	100%	2.05	3.49	1.75	3.34	1.67
The Gore Rd	The Gore Rd S of Hwy 413_NB	80	NB	E53		31%	52%	7%	0%	5%	4%	100%	2.12	3.61	1.81	3.40	1.70
The Gore Rd	The Gore Rd S of Hwy 413_SB	80	SB	E54		34%	57%	4%	0%	3%	2%	100%	1.96	3.34	1.67	3.45	1.73
The Gore Rd	The Gore Rd N of Hwy 413_NB	80	NB	E55		22%	38%	18%	1%	11%	10%	100%	2.66	4.52	2.26	3.81	1.91
The Gore Rd	The Gore Rd N of Hwy 413_SB	80	SB	E56		35%	59%	2%	0%	2%	1%	100%	1.88	3.19	1.59	3.19	1.59
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	70	NB	E57		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.08	1.54
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	70	SB	E58		33%	55%	5%	0%	4%	4%	100%	2.05	3.49	1.74	3.33	1.67
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	80	NB	E59		27%	45%	14%	1%	8%	7%	100%	2.41	4.10	2.05	3.74	1.87
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	80	SB	E60		34%	57%	5%	0%	2%	2%	100%	1.98	3.36	1.68	3.39	1.70
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	80	NB	E61		37%	61%	1%	0%	0%	0%	100%	1.81	3.08	1.54	3.06	1.53
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	80	SB	E62		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.08	1.54
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	70	EB	E63		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.38	1.69
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	70	WB	E64		33%	56%	5%	0%	3%	3%	100%	2.01	3.42	1.71	3.30	1.65
Mayfield Rd	Mayfield Rd At Hwy 413_EB	70	EB	E65		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.10	1.55
Mayfield Rd	Mayfield Rd At Hwy 413_WB	70	WB	E66		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.65	3.19	1.59
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	80	NB	E67		36%	61%	2%	0%	1%	0%	100%	1.82	3.10	1.55	3.12	1.56
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	80	SB	E68		31%	52%	8%	0%	5%	4%	100%	2.15	3.65	1.83	3.35	1.68

Appendix A.2.1: AM Traffic Composition by Source for 2051 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Coleraine Dr	Coleraine Dr At Highway 413_NB	70	NB	E69		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.04	1.52
Coleraine Dr	Coleraine Dr At Highway 413_SB	70	SB	E70		36%	61%	2%	0%	0%	0%	100%	1.82	3.09	1.55	3.06	1.53
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	70	NB	E71		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.02	1.51
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	70	SB	E72		37%	61%	1%	0%	0%	0%	100%	1.80	3.07	1.53	3.04	1.52
Countryside Dr	Countryside Dr W of Hwy 50_EB	60	EB	E73		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.10	1.55
Countryside Dr	Countryside Dr W of Hwy 50_WB	60	WB	E74		37%	62%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.01	1.50
Highway 50	Hwy 50 S of Countryside Dr_NB	70	NB	E75		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.16	1.58
Highway 50	Hwy 50 S of Countryside Dr_SB	70	SB	E76		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.14	1.57
Highway 50	Hwy 50 At Hwy 413_NB	70	NB	E77		35%	59%	1%	0%	2%	2%	100%	1.88	3.19	1.60	3.14	1.57
Highway 50	Hwy 50 At Hwy 413_SB	70	SB	E78		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.14	1.57
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	70	NB	E79		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.10	1.55
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	70	SB	E80		33%	55%	6%	0%	3%	3%	100%	2.04	3.47	1.74	3.28	1.64
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	60	EB	E81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	60	WB	E82		37%	61%	1%	0%	0%	0%	100%	1.80	3.07	1.53	3.03	1.52
Nashville Rd	Nashville Rd E of Hwy 50_EB	70	EB	E83		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.03	1.52
Nashville Rd	Nashville Rd E of Hwy 50_WB	70	WB	E84		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.01	1.51
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	60	EB	E85		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.11	1.55
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	60	WB	E86		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.09	1.54
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	60	EB	E87		32%	53%	8%	0%	4%	4%	100%	2.11	3.59	1.80	3.41	1.71
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	60	WB	E88		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.25	1.62
Huntington Rd	Huntington Rd At Hwy 413_NB	60	NB	E89		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.03	1.51
Huntington Rd	Huntington Rd At Hwy 413_SB	60	SB	E90		37%	61%	1%	0%	1%	0%	100%	1.81	3.07	1.54	3.05	1.52
Huntington Rd	Huntington Rd N of Kirby Rd_NB	60	NB	E91		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Huntington Rd	Huntington Rd N of Kirby Rd_SB	60	SB	E92		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Kirby Rd	Kirby Rd W of Huntington Rd_EB	60	EB	E93		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.05	1.53
Kirby Rd	Kirby Rd W of Huntington Rd_WB	60	WB	E94		35%	59%	3%	0%	1%	1%	100%	1.87	3.19	1.59	3.10	1.55
Highway 27	Hwy 27 S of Hwy 413_NB	80	NB	E95		33%	56%	5%	0%	3%	2%	100%	2.00	3.40	1.70	3.30	1.65
Highway 27	Hwy 27 S of Hwy 413_SB	80	SB	E96		34%	57%	3%	0%	3%	3%	100%	1.97	3.34	1.67	3.30	1.65
Highway 27	Hwy 27 N of Hwy 413_NB	80	NB	E97		30%	51%	9%	0%	5%	4%	100%	2.18	3.70	1.85	3.46	1.73
Highway 27	Hwy 27 N of Hwy 413_SB	80	SB	E98		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.33	1.66
Kirby Rd	Kirby Rd E of Hwy 27_EB	60	EB	F01		34%	57%	4%	0%	3%	3%	100%	1.98	3.36	1.68	3.30	1.65
Kirby Rd	Kirby Rd E of Hwy 27_WB	60	WB	F02		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.16	1.58
Kipling Ave	Kipling Ave At Hwy 413_NB	80	NB	F03		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.68	3.22	1.61
Kipling Ave	Kipling Ave At Hwy 413_SB	80	SB	F04		35%	58%	0%	0%	4%	3%	100%	1.92	3.27	1.63	3.13	1.57
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	60	EB	F05		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.14	1.57
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	60	WB	F06		34%	57%	5%	0%	2%	2%	100%	1.97	3.35	1.68	3.37	1.68
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	60	EB	F07		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.12	1.56
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	60	WB	F08		34%	57%	4%	0%	2%	2%	100%	1.96	3.34	1.67	3.30	1.65
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	80	NB	F09		35%	58%	1%	0%	3%	2%	100%	1.91	3.24	1.62	3.16	1.58
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	80	SB	F10		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.09	1.54
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	80	NB	F13		34%	57%	3%	0%	3%	3%	100%	1.95	3.31	1.66	3.26	1.63
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	80	SB	F14		34%	56%	3%	0%	3%	3%	100%	1.99	3.38	1.69	3.29	1.65
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	70	EB	F15		36%	61%	0%	0%	1%	1%	100%	1.82	3.09	1.55	3.08	1.54
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	70	WB	F16		35%	59%	1%	0%	3%	3%	100%	1.90	3.23	1.62	3.15	1.57
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	70	EB	F17		36%	60%	0%	0%	2%	2%	100%	1.87	3.18	1.59	3.12	1.56
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	70	WB	F18		34%	57%	1%	0%	4%	4%	100%	1.96	3.33	1.67	3.22	1.61
Weston Rd	Weston Rd N of Kirby Rd_NB	70	NB	F19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Weston Rd	Weston Rd N of Kirby Rd_SB	70	SB	F20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Weston Rd	Weston Rd N of Hwy 413_NB	70	NB	F21		31%	51%	9%	0%	5%	4%	100%	2.16	3.68	1.84	3.65	1.82
Weston Rd	Weston Rd N of Hwy 413_SB	70	SB	F22		32%	53%	8%	0%	4%	4%	100%	2.11	3.58	1.79	3.69	1.84
Weston Rd	Weston Rd N of King Vaughan Rd_NB	70	NB	F23		32%	54%	6%	0%	4%	3%	100%	2.06	3.50	1.75	3.44	1.72
Weston Rd	Weston Rd N of King Vaughan Rd_SB	70	SB	F24		33%	55%	6%	0%	3%	3%	100%	2.03	3.44	1.72	3.40	1.70
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	60	EB	F25		34%	56%	5%	0%	3%	2%	100%	1.99	3.39	1.69	3.43	1.71
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	60	WB	F26		31%	52%	8%	0%	4%	4%	100%	2.13	3.62	1.81	3.58	1.79
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	60	EB	F27		31%	53%	8%	0%	4%	4%	100%	2.12	3.61	1.80	3.50	1.75
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	60	WB	F28		34%	56%	5%	0%	3%	2%	100%	1.99	3.39	1.69	3.46	1.73

Appendix A.2.1: AM Traffic Composition by Source for 2051 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Kirby Rd	Kirby Rd At Hwy 400_EB	60	EB	F29		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.17	1.59
Kirby Rd	Kirby Rd At Hwy 400_WB	60	WB	F30		34%	57%	4%	0%	2%	2%	100%	1.94	3.31	1.65	3.17	1.58
Steeles Ave	Steeles Ave W of Ninth Line N_EB	60	EB	F31		35%	59%	1%	0%	2%	2%	100%	1.88	3.19	1.60	3.15	1.58
Steeles Ave	Steeles Ave W of Ninth Line N_WB	60	WB	F32		34%	57%	5%	0%	2%	2%	100%	1.98	3.36	1.68	3.25	1.62
Heritage Rd	Heritage Rd S of Wanless Dr_NB	60	NB	F33		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.04	1.52
Heritage Rd	Heritage Rd S of Wanless Dr_SB	60	SB	F34		33%	56%	4%	0%	3%	3%	100%	2.00	3.40	1.70	3.20	1.60
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	80	NB	F35		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.56	3.12	1.56
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	80	SB	F36		35%	58%	4%	0%	2%	2%	100%	1.92	3.26	1.63	3.24	1.62
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	60	EB	F37		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.22	1.61
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	60	WB	F38		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.20	1.60
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	80	NB	F39		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.14	1.57
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	80	SB	F40		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.14	1.57
Old School Rd	Old School Rd W of Bramalea Rd_EB	70	EB	F41		36%	60%	1%	0%	2%	2%	100%	1.85	3.15	1.57	3.08	1.54
Old School Rd	Old School Rd W of Bramalea Rd_WB	70	WB	F42		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.00	1.50
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	60	NB	F43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	60	SB	F44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Nashville Rd	Nashville Rd At Hwy 427_EB	70	EB	F45		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.03	1.52
Nashville Rd	Nashville Rd At Hwy 427_WB	70	WB	F46		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.01	1.51
Kirby Rd	Kirby Rd W of Hwy 27_EB	60	EB	F47		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.68	3.17	1.59
Kirby Rd	Kirby Rd W of Hwy 27_WB	60	WB	F48		31%	52%	0%	0%	9%	8%	100%	2.13	3.63	1.81	3.37	1.69
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	60	EB	F49		33%	55%	6%	0%	3%	3%	100%	2.05	3.48	1.74	3.43	1.72
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	60	WB	F50		34%	56%	5%	0%	2%	2%	100%	1.98	3.37	1.69	3.44	1.72
Jane St	Jane St N of King Vaughan Rd_NB	70	NB	F51		29%	48%	12%	1%	5%	5%	100%	2.28	3.88	1.94	3.52	1.76
Jane St	Jane St N of King Vaughan Rd_SB	70	SB	F52		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.16	1.58
Jane St	Jane St S of King Vaughan Rd_NB	70	NB	F53		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.05	1.52
Jane St	Jane St S of King Vaughan Rd_SB	70	SB	F54		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.03	1.51
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	70	N-E/W	F71		37%	62%	0%	0%	1%	0%	100%	1.80	3.05	1.53	3.19	1.60
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	40	E-S	F72		34%	56%	5%	0%	2%	2%	100%	1.98	3.37	1.69	3.40	1.70
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	60	W-S	F73		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.03	1.52
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	70	S-E/W	F74		30%	50%	10%	0%	5%	5%	100%	2.23	3.79	1.89	3.62	1.81
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	60	E-N	F75		34%	57%	5%	0%	2%	2%	100%	1.95	3.31	1.66	3.26	1.63
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	40	W-N	F76		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	70	N-E/W	F77		33%	55%	6%	0%	3%	3%	100%	2.02	3.44	1.72	3.48	1.74
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	40	E-S	F78		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.02	1.51
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	60	W-S	F79		37%	61%	1%	0%	1%	0%	100%	1.80	3.06	1.53	3.05	1.52
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	70	S-E/W	F80		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.04	1.52
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	60	E-N	F81		28%	47%	13%	1%	6%	5%	100%	2.33	3.96	1.98	3.85	1.92
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	40	W-N	F82		33%	55%	6%	0%	3%	3%	100%	2.04	3.46	1.73	3.25	1.62
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	70	N-E/W	F83		34%	57%	4%	0%	2%	2%	100%	1.96	3.34	1.67	3.29	1.64
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	40	E-S	F84		28%	47%	0%	0%	13%	12%	100%	2.32	3.95	1.97	3.53	1.76
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	60	W-S	F85		34%	57%	1%	0%	4%	4%	100%	1.95	3.32	1.66	3.22	1.61
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	70	S-E/W	F86		35%	58%	3%	0%	3%	2%	100%	1.93	3.29	1.64	3.27	1.64
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	60	E-N	F87		30%	51%	11%	0%	4%	4%	100%	2.19	3.72	1.86	3.46	1.73
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	40	W-N	F88		29%	49%	10%	0%	6%	5%	100%	2.26	3.83	1.92	3.41	1.71
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	80	E-N	G01		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.24	1.62
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	80	N-E	G02		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.66	3.26	1.63
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	100	N-S	G03		14%	23%	31%	1%	16%	14%	100%	3.17	5.39	2.70	4.91	2.45
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	100	S-N	G04		21%	36%	18%	1%	13%	12%	100%	2.72	4.63	2.32	4.39	2.19
Highway 413	Hwy 413 at Hwy 401_E-N	100	E-N	G05		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.29	1.65
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	100	E-N	G06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	70	S-E	G07		25%	42%	15%	1%	9%	8%	100%	2.49	4.23	2.11	3.73	1.86
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	80	N-E	G08		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.04	1.52
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	40	S-W	G09		32%	53%	3%	0%	7%	6%	100%	2.10	3.57	1.79	3.66	1.83
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	70	N-E	G10		30%	51%	8%	0%	5%	5%	100%	2.18	3.71	1.86	3.46	1.73
Highway 401	Hwy 401 E of Trafalgar Rd_EB	100	EB	H01		30%	50%	8%	0%	6%	6%	100%	2.23	3.79	1.89	3.72	1.86
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	100	EB	H02		30%	50%	7%	0%	7%	6%	100%	2.20	3.74	1.87	3.66	1.83

Appendix A.2.1: AM Traffic Composition by Source for 2051 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension AM Peak (m)	AERMOD Source Release Height (Relhgt) AM Peak (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	100	EB	H03		31%	51%	6%	0%	6%	6%	100%	2.17	3.69	1.84	3.59	1.80
Highway 401	Hwy 401 E of Trafalgar Rd_WB	100	WB	H04		29%	49%	7%	0%	8%	7%	100%	2.26	3.85	1.92	3.68	1.84
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	100	WB	H05		30%	51%	7%	0%	6%	5%	100%	2.17	3.70	1.85	3.61	1.81
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	100	WB	H06		28%	46%	8%	0%	9%	9%	100%	2.34	3.99	1.99	3.75	1.87
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	100	WB	H07		29%	49%	7%	0%	7%	7%	100%	2.24	3.80	1.90	3.66	1.83
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	60	N-E	H08		32%	54%	4%	0%	5%	5%	100%	2.07	3.52	1.76	3.39	1.70
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	40	S-E	H09		34%	56%	0%	0%	5%	4%	100%	1.98	3.37	1.69	3.20	1.60
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	70	0	H10		32%	54%	3%	0%	6%	5%	100%	2.08	3.53	1.76	3.42	1.71
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	70	0	H11		34%	57%	1%	0%	4%	4%	100%	1.95	3.31	1.66	3.16	1.58
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	100	EB	H12		27%	46%	17%	1%	5%	5%	100%	2.37	4.02	2.01	3.94	1.97
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	80	0	H13		30%	49%	12%	1%	5%	4%	100%	2.23	3.79	1.90	3.69	1.84
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	70	0	H14		30%	51%	3%	0%	9%	8%	100%	2.19	3.73	1.86	4.01	2.01
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	80	0	H15		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.38	1.69
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	70	E-N/S	H16		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.13	1.56

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	110	NB	A01		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	110	SB	A02		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	110	NB	A03		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	110	SB	A04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Bovaird Dr_NB	110	NB	A05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Bovaird Dr_SB	110	SB	A06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Mayfield Rd_EB	110	EB	A07		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Mayfield Rd_WB	110	WB	A08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	110	EB	A09		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	110	WB	A10		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hurontario St_EB	110	EB	A11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hurontario St_WB	110	WB	A12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 410_EB	110	EB	A13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 410_WB	110	WB	A14		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Bramalea Rd_EB	110	EB	A15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Bramalea Rd_WB	110	WB	A16		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Airport Rd_EB	110	EB	A17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Airport Rd_WB	110	WB	A18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of The Gore Rd_EB	110	EB	A19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of The Gore Rd_WB	110	WB	A20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Humber Station Rd_EB	110	EB	A21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Humber Station Rd_WB	110	WB	A22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 427_EB	110	EB	A23		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 427_WB	110	WB	A24		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 27_EB	110	EB	A25		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 27_WB	110	WB	A26		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Pine Valley Dr_EB	110	EB	A27		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Pine Valley Dr_WB	110	WB	A28		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 S of Hwy 401_NB	100	NB	B05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.21	1.61
Highway 407	Hwy 407 S of Hwy 401_SB	100	SB	B06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.05	1.52
Highway 407	Hwy 407 N of Hwy 401_EB	100	EB	B07		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.51	1.76
Highway 407	Hwy 407 N of Hwy 401_WB	100	WB	B08		34%	56%	7%	0%	1%	1%	100%	1.98	3.37	1.69	3.75	1.88
Highway 410	Hwy 410 S of Mayfield Rd_NB	100	NB	B09		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.43	1.71
Highway 410	Hwy 410 S of Mayfield Rd_SB	100	SB	B10		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.34	1.67
Highway 410	Hwy 410 N of Mayfield Rd_NB	100	NB	B11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 N of Mayfield Rd_SB	100	SB	B12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 W of Mayfield Rd_EB	100	EB	B13		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.37	1.69
Highway 410	Hwy 410 W of Mayfield Rd_WB	100	WB	B14		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.47	1.74
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	100	NB	B15		37%	61%	1%	0%	1%	0%	100%	1.80	3.07	1.53	3.09	1.54
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	100	SB	B16		37%	61%	1%	0%	1%	0%	100%	1.81	3.07	1.54	3.08	1.54
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	100	NB	B17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	100	SB	B18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 400	Hwy 400 N of Teston Rd_NB	100	NB	B19		36%	60%	2%	0%	1%	1%	100%	1.86	3.17	1.58	3.46	1.73
Highway 400	Hwy 400 N of Teston Rd_SB	100	SB	B20		34%	56%	3%	0%	4%	3%	100%	1.99	3.38	1.69	3.34	1.67
Highway 400	Hwy 400 S of King Vaughan Rd_NB	100	NB	B21		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.49	1.74
Highway 400	Hwy 400 S of King Vaughan Rd_SB	100	SB	B22		33%	56%	3%	0%	4%	4%	100%	2.00	3.40	1.70	3.36	1.68
Highway 400	Hwy 400 S of King Rd_NB	100	NB	B23		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.48	1.74
Highway 400	Hwy 400 S of King Rd_SB	100	SB	B24		33%	56%	3%	0%	4%	4%	100%	2.01	3.41	1.70	3.35	1.67
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	70	S-E/W	C11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	60	E-N	C12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	40	W-N	C13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	70	N-E/W	C14		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	40	E-S	C15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	60	W-S	C16		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	70	S-E/W	C17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_E-N	60	E-N	C18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_W-N	40	W-N	C19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	70	N-E/W	C20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_E-S	40	E-S	C21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_W-S	60	W-S	C22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	70	S-E/W	C23		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_E-N	60	E-N	C24		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_W-N	40	W-N	C25		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	70	N-E/W	C26		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_E-S	40	E-S	C27		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_W-S	60	W-S	C28		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	70	W-N/S	C29		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	40	N-E	C30		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	60	S-E	C31		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	70	E-N/S	C32		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	60	N-W	C33		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	40	S-W	C34		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_W-N/S	70	W-N/S	C35		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_N-E	40	N-E	C36		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_S-E	60	S-E	C37		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_E-N/S	70	E-N/S	C38		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_N-W	60	N-W	C39		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_S-W	40	S-W	C40		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_W-S	90	W-S	C41		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_E-S	90	E-S	C42		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_S-E	90	S-E	C43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_S-W	90	S-W	C44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	70	W-N/S	C45		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_N-E	40	N-E	C46		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_S-E	60	S-E	C47		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	70	E-N/S	C48		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_N-W	60	N-W	C49		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_S-W	40	S-W	C50		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_W-N/S	70	W-N/S	C51		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_N-E	40	N-E	C52		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_S-E	60	S-E	C53		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_E-N/S	70	E-N/S	C54		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_N-W	60	N-W	C55		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_S-W	40	S-W	C56		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_W-N/S	70	W-N/S	C57		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_N/S-E	40	N/S-E	C58		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_E-N/S	70	E-N/S	C59		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_N/S-W	60	N/S-W	C60		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	70	W-N/S	C61		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_N-E	40	N-E	C62		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-E	60	S-E	C63		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	70	E-N/S	C64		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_N-W	60	N-W	C65		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-W	40	S-W	C66		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_W-S	90	W-S	C67		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_E-S	90	E-S	C68		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_S-E	80	S-E	C69		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_S-W	90	S-W	C70		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_W-N/S	70	W-N/S	C71		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_N/S-E	40	N/S-E	C72		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_E-N/S	50	E-N/S	C73		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_N/S-W	60	N/S-W	C74		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Weston Rd_W-N/S	70	W-N/S	C81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Weston Rd_N/S-W	60	N/S-W	C82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_W-N	100	W-N	C83		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_W-S	90	W-S	C84		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_N-W	90	N-W	C85		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_S-W	90	S-W	C86		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	60	NB	D01		36%	60%	1%	0%	2%	2%	100%	1.87	3.17	1.59	3.26	1.63
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	60	SB	D02		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.19	1.59
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	60	NB	D03		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.57	3.16	1.58
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	60	SB	D04		36%	60%	1%	0%	2%	1%	100%	1.85	3.15	1.57	3.23	1.62
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	60	EB	D05		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.20	1.60
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	60	WB	D06		36%	61%	0%	0%	1%	1%	100%	1.82	3.09	1.55	3.18	1.59
Steeles Ave	Steeles Ave At Hwy 413_EB	80	EB	D07		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.60	3.24	1.62
Steeles Ave	Steeles Ave At Hwy 413_WB	80	WB	D08		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.17	1.59
Steeles Ave	Steeles Ave E of Ninth Line S_EB	80	EB	D09		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.17	1.59
Steeles Ave	Steeles Ave E of Ninth Line S_WB	80	WB	D10		37%	62%	0%	0%	1%	1%	100%	1.79	3.05	1.53	3.12	1.56
Steeles Ave	Steeles Ave E of Tenth Line N_EB	80	EB	D11		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.20	1.60
Steeles Ave	Steeles Ave E of Tenth Line N_WB	80	WB	D12		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.54	3.14	1.57
Ninth Line N	Ninth Line N N of Steeles Ave_NB	60	NB	D13		36%	60%	2%	0%	2%	1%	100%	1.87	3.18	1.59	3.31	1.65
Ninth Line N	Ninth Line N N of Steeles Ave_SB	60	SB	D14		35%	58%	3%	0%	2%	2%	100%	1.93	3.27	1.64	3.29	1.64
Ninth Line S	Ninth Line S S of Steeles Ave_NB	60	NB	D15		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.26	1.63
Ninth Line S	Ninth Line S S of Steeles Ave_SB	60	SB	D16		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.27	1.63
Tenth Line	Tenth Line At Hwy 413_NB	70	NB	D17		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.25	1.62
Tenth Line	Tenth Line At Hwy 413_SB	70	SB	D18		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.21	1.61
Derry Rd	Derry Rd W of Hwy 407_EB	80	EB	D19		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.33	1.67
Derry Rd	Derry Rd W of Hwy 407_WB	80	WB	D20		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.28	1.64
Derry Rd	Derry Rd E of Hwy 407_EB	80	EB	D21		33%	56%	6%	0%	3%	3%	100%	2.01	3.42	1.71	3.26	1.63
Derry Rd	Derry Rd E of Hwy 407_WB	80	WB	D22		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.45	1.73
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	60	NB	D23		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.21	1.60
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	60	SB	D24		36%	61%	2%	0%	1%	1%	100%	1.83	3.12	1.56	3.24	1.62
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	60	NB	D25		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.13	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	60	SB	D26		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.13	1.56
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	80	NB	D27		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	80	SB	D28		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.17	1.59
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	80	NB	D29		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.20	1.60

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	80	SB	D30		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.17	1.59
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	80	NB	D31		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.25	1.63
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	80	SB	D32		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.22	1.61
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	60	EB	D33		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.26	1.63
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	60	WB	D34		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.11	1.55
5 Side Rd	5 Side Rd At Hwy 413_EB	60	EB	D35		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.09	1.55
5 Side Rd	5 Side Rd At Hwy 413_WB	60	WB	D36		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.34	1.67
Heritage Rd	Heritage Rd At Hwy 413_NB	60	NB	D37		37%	61%	0%	0%	1%	1%	100%	1.80	3.07	1.53	3.10	1.55
Heritage Rd	Heritage Rd At Hwy 413_SB	60	SB	D38		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.12	1.56
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	60	NB	D39		37%	61%	0%	0%	1%	1%	100%	1.80	3.07	1.53	3.05	1.52
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	60	SB	D40		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.10	1.55
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	60	NB	D41		36%	60%	1%	0%	2%	2%	100%	1.86	3.16	1.58	3.08	1.54
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	60	SB	D42		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.19	1.60
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	60	NB	D43		34%	57%	4%	0%	2%	2%	100%	1.95	3.31	1.65	3.16	1.58
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	60	SB	D44		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.52	1.76
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	60	EB	D45		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.37	1.69
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	60	WB	D46		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.65	3.43	1.71
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	60	EB	D47		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.31	1.66
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	60	WB	D48		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.10	1.55
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	60	EB	D49		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.31	1.66
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	60	WB	D50		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.35	1.68
Wanless Dr	Wanless Dr W of Heritage Rd_EB	60	EB	D51		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.28	1.64
Wanless Dr	Wanless Dr W of Heritage Rd_WB	60	WB	D52		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.23	1.62
Wanless Dr	Wanless Dr At Hwy 413_EB	60	EB	D53		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.55	3.24	1.62
Wanless Dr	Wanless Dr At Hwy 413_WB	60	WB	D54		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.20	1.60
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	80	EB	D55		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.35	1.67
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	80	WB	D56		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.41	1.70
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	80	EB	D57		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.39	1.70
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	80	WB	D58		35%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.40	1.70
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	80	EB	D59		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.39	1.70
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	80	WB	D60		35%	58%	3%	0%	2%	2%	100%	1.93	3.29	1.64	3.40	1.70
Mississauga Rd	Mississauga Rd At Hwy 413_NB	80	NB	D61		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.27	1.64
Mississauga Rd	Mississauga Rd At Hwy 413_SB	80	SB	D62		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.24	1.62
Creditview Rd	Creditview Rd At Hwy 413_NB	70	NB	D63		36%	60%	3%	0%	1%	1%	100%	1.86	3.17	1.58	3.53	1.76
Creditview Rd	Creditview Rd At Hwy 413_SB	70	SB	D64		32%	53%	6%	0%	4%	4%	100%	2.09	3.55	1.78	3.40	1.70
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	80	NB	D65		32%	53%	7%	0%	4%	4%	100%	2.09	3.56	1.78	3.67	1.84
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	80	SB	D66		31%	53%	6%	0%	5%	5%	100%	2.11	3.59	1.80	3.59	1.79
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	80	NB	D67		32%	53%	7%	0%	4%	4%	100%	2.09	3.56	1.78	3.67	1.84
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	80	SB	D68		31%	53%	6%	0%	5%	5%	100%	2.11	3.59	1.80	3.59	1.79
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	80	NB	D69		33%	55%	5%	0%	4%	3%	100%	2.05	3.48	1.74	3.72	1.86
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	80	SB	D70		32%	54%	6%	0%	4%	4%	100%	2.09	3.55	1.77	3.62	1.81
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	70	EB	D71		33%	55%	3%	0%	4%	4%	100%	2.02	3.43	1.72	3.33	1.67
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	70	WB	D72		35%	59%	3%	0%	2%	2%	100%	1.90	3.22	1.61	3.40	1.70
Old School Rd	Old School Rd At Hwy 413_EB	70	EB	D73		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.15	1.57
Old School Rd	Old School Rd At Hwy 413_WB	70	WB	D74		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.25	1.62
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	80	NB	D75		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.29	1.64
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	80	SB	D76		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.34	1.67
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	80	NB	D77		34%	57%	5%	0%	2%	2%	100%	1.98	3.36	1.68	3.47	1.73
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	80	SB	D78		33%	55%	5%	0%	3%	3%	100%	2.02	3.44	1.72	3.49	1.75

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Old School Rd	Old School Rd W of Hurontario St_EB	70	EB	D79		34%	58%	3%	0%	3%	2%	100%	1.94	3.30	1.65	3.23	1.62
Old School Rd	Old School Rd W of Hurontario St_WB	70	WB	D80		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.58	3.26	1.63
Old School Rd	Old School Rd E of Hurontario St_EB	70	EB	D81		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.03	1.52
Old School Rd	Old School Rd E of Hurontario St_WB	70	WB	D82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.00	1.50
Hurontario St	Hurontario St S of Old School Rd_NB	80	NB	D83		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.63	1.81
Hurontario St	Hurontario St S of Old School Rd_SB	80	SB	D84		33%	55%	4%	0%	4%	4%	100%	2.05	3.48	1.74	3.52	1.76
Hurontario St	Hurontario St S of Hwy 413_NB	80	NB	D85		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.64	1.82
Hurontario St	Hurontario St S of Hwy 413_SB	80	SB	D86		33%	56%	4%	0%	4%	4%	100%	2.01	3.42	1.71	3.47	1.73
Hurontario St	Hurontario St N of Hwy 413_NB	80	NB	D87		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.64	1.82
Hurontario St	Hurontario St N of Hwy 413_SB	80	SB	D88		33%	56%	4%	0%	4%	4%	100%	2.01	3.42	1.71	3.47	1.73
Kennedy Rd	Kennedy Rd At Hwy 413_NB	60	NB	D89		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.27	1.63
Kennedy Rd	Kennedy Rd At Hwy 413_SB	60	SB	D90		35%	58%	4%	0%	1%	1%	100%	1.91	3.25	1.62	3.28	1.64
Old School Rd	Old School Rd W of Heart Lake Rd_EB	70	EB	D91		35%	58%	2%	0%	2%	2%	100%	1.91	3.26	1.63	3.17	1.58
Old School Rd	Old School Rd W of Heart Lake Rd_WB	70	WB	D92		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.53	3.15	1.57
Old School Rd	Old School Rd At Hwy 410_EB	70	EB	D93		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.13	1.57
Old School Rd	Old School Rd At Hwy 410_WB	70	WB	D94		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.17	1.59
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	60	NB	E01		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.28	1.64
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	60	SB	E02		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.30	1.65
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	80	NB	E03		34%	56%	5%	0%	3%	3%	100%	1.99	3.39	1.69	3.34	1.67
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	80	SB	E04		36%	59%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.26	1.63
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	80	NB	E05		34%	57%	4%	0%	3%	2%	100%	1.97	3.36	1.68	3.54	1.77
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	80	SB	E06		33%	56%	5%	0%	3%	3%	100%	2.01	3.42	1.71	3.35	1.68
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	60	EB	E07		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.26	1.63
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	60	WB	E08		36%	60%	1%	0%	2%	2%	100%	1.86	3.17	1.58	3.26	1.63
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	60	EB	E09		36%	60%	2%	0%	2%	2%	100%	1.87	3.18	1.59	3.22	1.61
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	60	WB	E10		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.23	1.62
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	60	EB	E11		34%	57%	3%	0%	3%	3%	100%	1.97	3.36	1.68	3.35	1.68
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	60	WB	E12		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.39	1.70
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	80	NB	E13		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.61	3.24	1.62
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	80	SB	E14		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.32	1.66
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	80	NB	E15		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.31	1.66
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	80	SB	E16		35%	59%	1%	0%	2%	2%	100%	1.87	3.19	1.59	3.26	1.63
Dixie Rd	Dixie Rd At Hwy 413_NB	80	NB	E17		35%	59%	2%	0%	2%	1%	100%	1.88	3.19	1.60	3.45	1.72
Dixie Rd	Dixie Rd At Hwy 413_SB	80	SB	E18		34%	57%	4%	0%	3%	2%	100%	1.98	3.36	1.68	3.27	1.63
Countryside Dr	Countryside Dr At Hwy 410_EB	60	EB	E19		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.20	1.60
Countryside Dr	Countryside Dr At Hwy 410_WB	60	WB	E20		36%	60%	2%	0%	1%	1%	100%	1.86	3.17	1.58	3.22	1.61
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	80	NB	E21		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.36	1.68
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	80	SB	E22		34%	56%	3%	0%	4%	3%	100%	1.99	3.39	1.69	3.37	1.69
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	80	NB	E23		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.36	1.68
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	80	SB	E24		34%	56%	3%	0%	4%	3%	100%	1.99	3.39	1.69	3.37	1.69
Old School Rd	Old School Rd E of Bramalea Rd_EB	70	EB	E25		37%	62%	0%	0%	1%	0%	100%	1.79	3.04	1.52	3.06	1.53
Old School Rd	Old School Rd E of Bramalea Rd_WB	70	WB	E26		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.10	1.55
Old School Rd	Old School Rd E of Torbram Road_EB	70	EB	E27		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.08	1.54
Old School Rd	Old School Rd E of Torbram Road_WB	70	WB	E28		37%	63%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.10	1.55
Torbram Rd	Torbram Rd S of Old School Rd_NB	70	NB	E29		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.12	1.56
Torbram Rd	Torbram Rd S of Old School Rd_SB	70	SB	E30		37%	62%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.11	1.56
Torbram Rd	Torbram Rd At Hwy 413_NB	70	NB	E31		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.36	1.68
Torbram Rd	Torbram Rd At Hwy 413_SB	70	SB	E32		35%	59%	3%	0%	2%	1%	100%	1.89	3.22	1.61	3.22	1.61
Airport Rd	Airport Rd S of Old School Rd_NB	60	NB	E33		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.29	1.64

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Airport Rd	Airport Rd S of Old School Rd_SB	60	SB	E34		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.20	1.60
Airport Rd	Airport Rd S of Hwy 413_NB	60	NB	E35		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.39	1.70
Airport Rd	Airport Rd S of Hwy 413_SB	60	SB	E36		34%	57%	3%	0%	3%	3%	100%	1.96	3.33	1.67	3.31	1.65
Airport Rd	Airport Rd N of Hwy 413_NB	60	NB	E37		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.39	1.70
Airport Rd	Airport Rd N of Hwy 413_SB	60	SB	E38		34%	57%	3%	0%	3%	3%	100%	1.96	3.33	1.67	3.31	1.65
Healey Rd	Healey Rd E of Airport Rd_EB	70	EB	E39		35%	59%	2%	0%	2%	2%	100%	1.90	3.22	1.61	3.15	1.57
Healey Rd	Healey Rd E of Airport Rd_WB	70	WB	E40		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.26	1.63
Healey Rd	Healey Rd At Hwy 413_EB	70	EB	E41		37%	62%	0%	0%	1%	0%	100%	1.79	3.05	1.52	3.05	1.52
Healey Rd	Healey Rd At Hwy 413_WB	70	WB	E42		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.07	1.54
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	70	EB	E43		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.05	1.52
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	70	WB	E44		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.05	1.53
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	80	NB	E45		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.76	1.88
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	80	SB	E46		31%	52%	6%	0%	6%	5%	100%	2.15	3.65	1.82	3.55	1.78
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	80	NB	E47		33%	55%	6%	0%	3%	3%	100%	2.04	3.46	1.73	3.40	1.70
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	80	SB	E48		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.34	1.67
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	80	NB	E49		32%	54%	6%	0%	4%	3%	100%	2.06	3.50	1.75	3.36	1.68
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	80	SB	E50		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.38	1.69
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	80	NB	E51		32%	54%	6%	0%	4%	3%	100%	2.06	3.51	1.75	3.30	1.65
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	80	SB	E52		37%	62%	0%	0%	1%	1%	100%	1.79	3.04	1.52	3.35	1.67
The Gore Rd	The Gore Rd S of Hwy 413_NB	80	NB	E53		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.50	1.75
The Gore Rd	The Gore Rd S of Hwy 413_SB	80	SB	E54		34%	57%	2%	0%	4%	3%	100%	1.97	3.34	1.67	3.37	1.69
The Gore Rd	The Gore Rd N of Hwy 413_NB	80	NB	E55		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.50	1.75
The Gore Rd	The Gore Rd N of Hwy 413_SB	80	SB	E56		34%	57%	2%	0%	4%	3%	100%	1.97	3.34	1.67	3.37	1.69
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	70	NB	E57		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.10	1.55
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	70	SB	E58		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.16	1.58
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	80	NB	E59		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.12	1.56
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	80	SB	E60		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.15	1.58
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	80	NB	E61		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.12	1.56
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	80	SB	E62		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.15	1.58
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	70	EB	E63		35%	58%	3%	0%	2%	2%	100%	1.93	3.27	1.64	3.28	1.64
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	70	WB	E64		35%	59%	2%	0%	2%	2%	100%	1.90	3.24	1.62	3.29	1.64
Mayfield Rd	Mayfield Rd At Hwy 413_EB	70	EB	E65		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.26	1.63
Mayfield Rd	Mayfield Rd At Hwy 413_WB	70	WB	E66		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.27	1.64
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	80	NB	E67		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.29	1.65
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	80	SB	E68		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.27	1.63
Coleraine Dr	Coleraine Dr At Highway 413_NB	70	NB	E69		37%	61%	1%	0%	0%	0%	100%	1.81	3.08	1.54	3.09	1.55
Coleraine Dr	Coleraine Dr At Highway 413_SB	70	SB	E70		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.10	1.55
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	70	NB	E71		37%	61%	1%	0%	0%	0%	100%	1.81	3.07	1.54	3.04	1.52
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	70	SB	E72		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.06	1.53
Countryside Dr	Countryside Dr W of Hwy 50_EB	60	EB	E73		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.17	1.59
Countryside Dr	Countryside Dr W of Hwy 50_WB	60	WB	E74		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.17	1.59
Highway 50	Hwy 50 S of Countryside Dr_NB	70	NB	E75		36%	60%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.17	1.59
Highway 50	Hwy 50 S of Countryside Dr_SB	70	SB	E76		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.53	3.16	1.58
Highway 50	Hwy 50 At Hwy 413_NB	70	NB	E77		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.18	1.59
Highway 50	Hwy 50 At Hwy 413_SB	70	SB	E78		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.16	1.58
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	70	NB	E79		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.14	1.57
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	70	SB	E80		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.12	1.56
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	60	EB	E81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	60	WB	E82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Nashville Rd	Nashville Rd E of Hwy 50_EB	70	EB	E83		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.19	1.60
Nashville Rd	Nashville Rd E of Hwy 50_WB	70	WB	E84		37%	61%	0%	0%	1%	1%	100%	1.80	3.07	1.53	3.20	1.60
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	60	EB	E85		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.17	1.58
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	60	WB	E86		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.24	1.62
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	60	EB	E87		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.27	1.63
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	60	WB	E88		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.20	1.60
Huntington Rd	Huntington Rd At Hwy 413_NB	60	NB	E89		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.03	1.52
Huntington Rd	Huntington Rd At Hwy 413_SB	60	SB	E90		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.06	1.53
Huntington Rd	Huntington Rd N of Kirby Rd_NB	60	NB	E91		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Huntington Rd	Huntington Rd N of Kirby Rd_SB	60	SB	E92		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Kirby Rd	Kirby Rd W of Huntington Rd_EB	60	EB	E93		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.08	1.54
Kirby Rd	Kirby Rd W of Huntington Rd_WB	60	WB	E94		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.03	1.52
Highway 27	Hwy 27 S of Hwy 413_NB	80	NB	E95		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.34	1.67
Highway 27	Hwy 27 S of Hwy 413_SB	80	SB	E96		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.29	1.64
Highway 27	Hwy 27 N of Hwy 413_NB	80	NB	E97		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.34	1.67
Highway 27	Hwy 27 N of Hwy 413_SB	80	SB	E98		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.29	1.64
Kirby Rd	Kirby Rd E of Hwy 27_EB	60	EB	F01		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.14	1.57
Kirby Rd	Kirby Rd E of Hwy 27_WB	60	WB	F02		37%	62%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.15	1.57
Kipling Ave	Kipling Ave At Hwy 413_NB	80	NB	F03		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.28	1.64
Kipling Ave	Kipling Ave At Hwy 413_SB	80	SB	F04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.14	1.57
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	60	EB	F05		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.31	1.66
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	60	WB	F06		34%	58%	3%	0%	3%	2%	100%	1.94	3.29	1.64	3.33	1.66
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	60	EB	F07		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.27	1.64
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	60	WB	F08		34%	57%	3%	0%	3%	2%	100%	1.96	3.32	1.66	3.30	1.65
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	80	NB	F09		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.13	1.57
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	80	SB	F10		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.13	1.56
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	80	NB	F13		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.26	1.63
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	80	SB	F14		35%	59%	0%	0%	3%	3%	100%	1.89	3.21	1.60	3.29	1.65
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	70	EB	F15		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.23	1.62
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	70	WB	F16		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.25	1.62
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	70	EB	F17		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.30	1.65
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	70	WB	F18		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.32	1.66
Weston Rd	Weston Rd N of Kirby Rd_NB	70	NB	F19		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.07	1.54
Weston Rd	Weston Rd N of Kirby Rd_SB	70	SB	F20		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.05	1.52
Weston Rd	Weston Rd N of Hwy 413_NB	70	NB	F21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Weston Rd	Weston Rd N of Hwy 413_SB	70	SB	F22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.00	1.50
Weston Rd	Weston Rd N of King Vaughan Rd_NB	70	NB	F23		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.57	3.18	1.59
Weston Rd	Weston Rd N of King Vaughan Rd_SB	70	SB	F24		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.20	1.60
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	60	EB	F25		35%	59%	2%	0%	2%	2%	100%	1.90	3.22	1.61	3.20	1.60
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	60	WB	F26		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.27	1.64
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	60	EB	F27		33%	56%	5%	0%	3%	3%	100%	2.01	3.42	1.71	3.47	1.73
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	60	WB	F28		32%	53%	7%	0%	4%	4%	100%	2.09	3.56	1.78	3.48	1.74
Kirby Rd	Kirby Rd At Hwy 400_EB	60	EB	F29		37%	62%	1%	0%	1%	0%	100%	1.80	3.06	1.53	3.07	1.54
Kirby Rd	Kirby Rd At Hwy 400_WB	60	WB	F30		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.24	1.62
Steeles Ave	Steeles Ave W of Ninth Line N_EB	60	EB	F31		36%	60%	1%	0%	1%	1%	100%	1.84	3.14	1.57	3.17	1.59
Steeles Ave	Steeles Ave W of Ninth Line N_WB	60	WB	F32		37%	62%	0%	0%	1%	1%	100%	1.79	3.05	1.53	3.10	1.55
Heritage Rd	Heritage Rd S of Wanless Dr_NB	60	NB	F33		37%	61%	0%	0%	1%	1%	100%	1.80	3.07	1.53	3.05	1.52
Heritage Rd	Heritage Rd S of Wanless Dr_SB	60	SB	F34		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.10	1.55
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	80	NB	F35		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.44	1.72

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	80	SB	F36		34%	56%	5%	0%	3%	2%	100%	1.99	3.38	1.69	3.33	1.67
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	60	EB	F37		34%	56%	3%	0%	4%	3%	100%	1.99	3.39	1.69	3.33	1.66
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	60	WB	F38		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.44	1.72
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	80	NB	F39		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.34	1.67
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	80	SB	F40		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.28	1.64
Old School Rd	Old School Rd W of Bramalea Rd_EB	70	EB	F41		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.01	1.51
Old School Rd	Old School Rd W of Bramalea Rd_WB	70	WB	F42		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.05	1.53
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	60	NB	F43		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.03	1.51
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	60	SB	F44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.03	1.52
Nashville Rd	Nashville Rd At Hwy 427_EB	70	EB	F45		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.19	1.60
Nashville Rd	Nashville Rd At Hwy 427_WB	70	WB	F46		37%	61%	0%	0%	1%	1%	100%	1.80	3.07	1.53	3.20	1.60
Kirby Rd	Kirby Rd W of Hwy 27_EB	60	EB	F47		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.08	1.54
Kirby Rd	Kirby Rd W of Hwy 27_WB	60	WB	F48		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.58	3.07	1.54
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	60	EB	F49		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.68	3.41	1.71
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	60	WB	F50		32%	54%	7%	0%	4%	4%	100%	2.08	3.54	1.77	3.48	1.74
Jane St	Jane St N of King Vaughan Rd_NB	70	NB	F51		35%	59%	2%	0%	2%	1%	100%	1.89	3.21	1.60	3.41	1.71
Jane St	Jane St N of King Vaughan Rd_SB	70	SB	F52		36%	61%	2%	0%	1%	1%	100%	1.84	3.12	1.56	3.14	1.57
Jane St	Jane St S of King Vaughan Rd_NB	70	NB	F53		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.14	1.57
Jane St	Jane St S of King Vaughan Rd_SB	70	SB	F54		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.06	1.53
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	70	N-E/W	F71		33%	55%	5%	0%	4%	4%	100%	2.04	3.47	1.73	3.31	1.65
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	40	E-S	F72		28%	47%	11%	0%	7%	7%	100%	2.33	3.96	1.98	3.71	1.86
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	60	W-S	F73		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.05	1.52
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	70	S-E/W	F74		31%	52%	9%	0%	4%	4%	100%	2.15	3.65	1.83	3.87	1.93
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	60	E-N	F75		32%	54%	8%	0%	3%	3%	100%	2.08	3.54	1.77	3.99	1.99
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	40	W-N	F76		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	70	N-E/W	F77		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	40	E-S	F78		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.10	1.55
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	60	W-S	F79		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.07	1.54
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	70	S-E/W	F80		37%	61%	1%	0%	1%	0%	100%	1.80	3.07	1.53	3.09	1.54
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	60	E-N	F81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	40	W-N	F82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	70	N-E/W	F83		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	40	E-S	F84		35%	59%	1%	0%	2%	2%	100%	1.90	3.23	1.61	3.39	1.69
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	60	W-S	F85		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.23	1.62
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	70	S-E/W	F86		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.33	1.67
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	60	E-N	F87		33%	56%	5%	0%	3%	3%	100%	2.00	3.40	1.70	3.82	1.91
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	40	W-N	F88		35%	59%	1%	0%	2%	2%	100%	1.90	3.23	1.61	3.39	1.69
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	40	W-E/W	F89		29%	49%	7%	0%	7%	7%	100%	2.24	3.82	1.91	3.61	1.81
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	80	E-N	G01		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	80	N-E	G02		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	100	N-S	G03		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	100	S-N	G04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401_E-N	100	E-N	G05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	100	E-N	G06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	70	S-E	G07		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.60	3.62	1.81
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	80	N-E	G08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	40	S-W	G09		31%	51%	2%	0%	8%	7%	100%	2.17	3.69	1.84	3.81	1.90
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	70	N-E	G10		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.60	3.62	1.81
Highway 401	Hwy 401 E of Trafalgar Rd_EB	100	EB	H01		32%	53%	5%	0%	6%	5%	100%	2.11	3.58	1.79	3.66	1.83

Appendix A.2.2: PM Traffic Composition by Source for 2041 No Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	100	EB	H02		32%	53%	5%	0%	6%	5%	100%	2.11	3.58	1.79	3.66	1.83
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	100	EB	H03		32%	53%	5%	0%	6%	5%	100%	2.11	3.59	1.79	3.60	1.80
Highway 401	Hwy 401 E of Trafalgar Rd_WB	100	WB	H04		32%	54%	3%	0%	5%	5%	100%	2.07	3.51	1.76	3.68	1.84
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	100	WB	H05		32%	53%	4%	0%	6%	5%	100%	2.10	3.56	1.78	3.67	1.84
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	100	WB	H06		33%	55%	2%	0%	5%	5%	100%	2.04	3.47	1.74	3.70	1.85
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	100	WB	H07		32%	54%	3%	0%	5%	5%	100%	2.06	3.50	1.75	3.67	1.84
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	60	N-E	H08		35%	59%	1%	0%	2%	2%	100%	1.89	3.22	1.61	3.34	1.67
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	40	S-E	H09		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.52	1.76
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	70	0	H10		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	70	0	H11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	100	EB	H12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	80	0	H13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	70	0	H14		36%	60%	1%	0%	2%	2%	100%	1.86	3.16	1.58	3.31	1.66
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	80	0	H15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	70	E-N/S	H16		36%	60%	1%	0%	2%	1%	100%	1.86	3.17	1.58	3.22	1.61

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	110	NB	A01		31%	52%	7%	0%	5%	5%	100%	2.14	3.64	1.82	3.78	1.89
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	110	SB	A02		30%	51%	9%	0%	5%	5%	100%	2.18	3.71	1.86	3.67	1.84
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	110	NB	A03		32%	54%	6%	0%	4%	4%	100%	2.06	3.50	1.75	3.65	1.82
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	110	SB	A04		31%	51%	8%	0%	5%	4%	100%	2.16	3.67	1.84	3.61	1.80
Highway 413	Hwy 413 N of Bovaird Dr_NB	110	NB	A05		32%	53%	6%	0%	4%	4%	100%	2.09	3.55	1.77	3.65	1.83
Highway 413	Hwy 413 N of Bovaird Dr_SB	110	SB	A06		30%	51%	8%	0%	5%	5%	100%	2.18	3.71	1.86	3.64	1.82
Highway 413	Hwy 413 E of Mayfield Rd_EB	110	EB	A07		31%	52%	7%	0%	5%	5%	100%	2.15	3.65	1.83	3.73	1.87
Highway 413	Hwy 413 E of Mayfield Rd_WB	110	WB	A08		29%	49%	9%	0%	6%	6%	100%	2.25	3.83	1.91	3.74	1.87
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	110	EB	A09		30%	51%	7%	0%	6%	5%	100%	2.18	3.70	1.85	3.74	1.87
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	110	WB	A10		29%	49%	9%	0%	6%	6%	100%	2.24	3.81	1.91	3.78	1.89
Highway 413	Hwy 413 E of Hurontario St_EB	110	EB	A11		30%	49%	8%	0%	7%	6%	100%	2.23	3.79	1.90	3.79	1.89
Highway 413	Hwy 413 E of Hurontario St_WB	110	WB	A12		30%	51%	8%	0%	6%	5%	100%	2.19	3.73	1.86	3.78	1.89
Highway 413	Hwy 413 E of Hwy 410_EB	110	EB	A13		30%	50%	7%	0%	6%	6%	100%	2.20	3.74	1.87	3.78	1.89
Highway 413	Hwy 413 E of Hwy 410_WB	110	WB	A14		29%	49%	9%	0%	7%	6%	100%	2.25	3.83	1.91	3.79	1.89
Highway 413	Hwy 413 E of Bramalea Rd_EB	110	EB	A15		29%	48%	9%	0%	7%	7%	100%	2.27	3.85	1.93	3.86	1.93
Highway 413	Hwy 413 E of Bramalea Rd_WB	110	WB	A16		28%	47%	10%	0%	7%	7%	100%	2.30	3.91	1.96	3.93	1.97
Highway 413	Hwy 413 E of Airport Rd_EB	110	EB	A17		29%	48%	9%	0%	7%	7%	100%	2.29	3.89	1.95	3.89	1.94
Highway 413	Hwy 413 E of Airport Rd_WB	110	WB	A18		29%	48%	10%	0%	7%	7%	100%	2.29	3.90	1.95	3.94	1.97
Highway 413	Hwy 413 E of The Gore Rd_EB	110	EB	A19		28%	47%	9%	0%	8%	7%	100%	2.31	3.93	1.97	3.93	1.96
Highway 413	Hwy 413 E of The Gore Rd_WB	110	WB	A20		28%	47%	10%	0%	8%	7%	100%	2.33	3.96	1.98	3.99	2.00
Highway 413	Hwy 413 E of Humber Station Rd_EB	110	EB	A21		30%	49%	8%	0%	7%	6%	100%	2.23	3.80	1.90	3.86	1.93
Highway 413	Hwy 413 E of Humber Station Rd_WB	110	WB	A22		29%	49%	9%	0%	7%	6%	100%	2.25	3.83	1.91	3.86	1.93
Highway 413	Hwy 413 E of Hwy 427_EB	110	EB	A23		30%	50%	7%	0%	6%	6%	100%	2.20	3.73	1.87	3.89	1.94
Highway 413	Hwy 413 E of Hwy 427_WB	110	WB	A24		29%	48%	9%	0%	7%	7%	100%	2.28	3.88	1.94	3.78	1.89
Highway 413	Hwy 413 E of Hwy 27_EB	110	EB	A25		30%	50%	7%	0%	7%	6%	100%	2.23	3.78	1.89	3.93	1.96
Highway 413	Hwy 413 E of Hwy 27_WB	110	WB	A26		29%	48%	9%	0%	7%	6%	100%	2.29	3.88	1.94	3.81	1.91
Highway 413	Hwy 413 E of Pine Valley Dr_EB	110	EB	A27		30%	50%	7%	0%	7%	6%	100%	2.23	3.78	1.89	3.93	1.96
Highway 413	Hwy 413 E of Pine Valley Dr_WB	110	WB	A28		29%	48%	9%	0%	7%	6%	100%	2.29	3.88	1.94	3.81	1.91
Highway 407	Hwy 407 S of Hwy 401_NB	100	NB	B05		32%	53%	9%	0%	3%	3%	100%	2.11	3.59	1.80	3.65	1.83
Highway 407	Hwy 407 S of Hwy 401_SB	100	SB	B06		32%	54%	11%	0%	1%	1%	100%	2.08	3.53	1.76	4.01	2.01
Highway 407	Hwy 407 N of Hwy 401_EB	100	EB	B07		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.28	1.64
Highway 407	Hwy 407 N of Hwy 401_WB	100	WB	B08		37%	63%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.13	1.57
Highway 410	Hwy 410 S of Mayfield Rd_NB	100	NB	B09		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.35	1.67
Highway 410	Hwy 410 S of Mayfield Rd_SB	100	SB	B10		35%	58%	2%	0%	3%	2%	100%	1.93	3.28	1.64	3.35	1.68
Highway 410	Hwy 410 N of Mayfield Rd_NB	100	NB	B11		36%	60%	1%	0%	2%	2%	100%	1.87	3.17	1.59	3.41	1.71
Highway 410	Hwy 410 N of Mayfield Rd_SB	100	SB	B12		33%	55%	5%	0%	3%	3%	100%	2.02	3.44	1.72	3.41	1.71
Highway 410	Hwy 410 W of Mayfield Rd_EB	100	EB	B13		35%	58%	2%	0%	3%	2%	100%	1.93	3.28	1.64	3.36	1.68
Highway 410	Hwy 410 W of Mayfield Rd_WB	100	WB	B14		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.40	1.70
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	100	NB	B15		35%	59%	2%	0%	2%	2%	100%	1.90	3.22	1.61	3.33	1.66
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	100	SB	B16		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.23	1.62
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	100	NB	B17		33%	55%	5%	0%	4%	3%	100%	2.02	3.44	1.72	3.73	1.86
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	100	SB	B18		32%	54%	5%	0%	4%	4%	100%	2.06	3.50	1.75	3.47	1.73
Highway 400	Hwy 400 N of Teston Rd_NB	100	NB	B19		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.60	3.50	1.75
Highway 400	Hwy 400 N of Teston Rd_SB	100	SB	B20		33%	56%	3%	0%	4%	3%	100%	2.00	3.40	1.70	3.37	1.69
Highway 400	Hwy 400 S of King Vaughan Rd_NB	100	NB	B21		37%	61%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.36	1.68
Highway 400	Hwy 400 S of King Vaughan Rd_SB	100	SB	B22		35%	58%	1%	0%	3%	3%	100%	1.92	3.26	1.63	3.26	1.63
Highway 400	Hwy 400 S of King Rd_NB	100	NB	B23		37%	62%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.36	1.68
Highway 400	Hwy 400 S of King Rd_SB	100	SB	B24		32%	53%	5%	0%	5%	5%	100%	2.10	3.57	1.79	3.45	1.72
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	70	S-E/W	C11		34%	56%	3%	0%	4%	3%	100%	1.99	3.38	1.69	3.38	1.69

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	60	E-N	C12		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.06	1.53
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	40	W-N	C13		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.30	1.65
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	70	N-E/W	C14		34%	58%	3%	0%	3%	2%	100%	1.94	3.29	1.65	3.22	1.61
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	40	E-S	C15		32%	54%	4%	0%	5%	5%	100%	2.07	3.52	1.76	3.55	1.77
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	60	W-S	C16		37%	61%	1%	0%	0%	0%	100%	1.81	3.08	1.54	3.14	1.57
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	70	S-E/W	C17		34%	57%	4%	0%	2%	2%	100%	1.95	3.31	1.66	3.51	1.76
Highway 413	Hwy 413 at Bovaird Dr_E-N	60	E-N	C18		34%	57%	4%	0%	2%	2%	100%	1.94	3.31	1.65	3.32	1.66
Highway 413	Hwy 413 at Bovaird Dr_W-N	40	W-N	C19		36%	60%	2%	0%	1%	1%	100%	1.84	3.12	1.56	3.20	1.60
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	70	N-E/W	C20		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.13	1.57
Highway 413	Hwy 413 at Bovaird Dr_E-S	40	E-S	C21		33%	55%	8%	0%	2%	2%	100%	2.02	3.44	1.72	3.51	1.76
Highway 413	Hwy 413 at Bovaird Dr_W-S	60	W-S	C22		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.13	1.56
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	70	S-E/W	C23		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.29	1.64
Highway 413	Hwy 413 at Mayfield Rd_E-N	60	E-N	C24		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.05	1.53
Highway 413	Hwy 413 at Mayfield Rd_W-N	40	W-N	C25		31%	52%	6%	0%	5%	5%	100%	2.13	3.62	1.81	3.62	1.81
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	70	N-E/W	C26		33%	55%	5%	0%	3%	3%	100%	2.03	3.45	1.73	3.50	1.75
Highway 413	Hwy 413 at Mayfield Rd_E-S	40	E-S	C27		33%	55%	7%	0%	3%	2%	100%	2.04	3.46	1.73	3.41	1.70
Highway 413	Hwy 413 at Mayfield Rd_W-S	60	W-S	C28		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.06	1.53
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	70	W-N/S	C29		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.17	1.59
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	40	N-E	C30		25%	42%	11%	0%	11%	10%	100%	2.48	4.22	2.11	4.14	2.07
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	60	S-E	C31		31%	51%	7%	0%	6%	5%	100%	2.17	3.69	1.85	3.55	1.77
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	70	E-N/S	C32		31%	52%	7%	0%	5%	5%	100%	2.14	3.64	1.82	3.81	1.91
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	60	N-W	C33		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.53	3.06	1.53
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	40	S-W	C34		34%	57%	6%	0%	2%	2%	100%	1.98	3.36	1.68	3.29	1.64
Highway 413	Hwy 413 at Hurontario St_W-N/S	70	W-N/S	C35		35%	59%	3%	0%	1%	1%	100%	1.89	3.21	1.61	3.34	1.67
Highway 413	Hwy 413 at Hurontario St_N-E	40	N-E	C36		27%	44%	10%	0%	10%	9%	100%	2.41	4.10	2.05	3.86	1.93
Highway 413	Hwy 413 at Hurontario St_S-E	60	S-E	C37		28%	47%	9%	0%	8%	7%	100%	2.31	3.92	1.96	3.95	1.97
Highway 413	Hwy 413 at Hurontario St_E-N/S	70	E-N/S	C38		33%	56%	4%	0%	4%	4%	100%	2.02	3.43	1.71	3.88	1.94
Highway 413	Hwy 413 at Hurontario St_N-W	60	N-W	C39		32%	54%	7%	0%	3%	3%	100%	2.06	3.50	1.75	3.41	1.71
Highway 413	Hwy 413 at Hurontario St_S-W	40	S-W	C40		32%	54%	7%	0%	3%	3%	100%	2.06	3.50	1.75	3.41	1.71
Highway 413	Hwy 413 at Hwy 410_W-S	90	W-S	C41		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.32	1.66
Highway 413	Hwy 413 at Hwy 410_E-S	90	E-S	C42		32%	54%	6%	0%	4%	4%	100%	2.08	3.54	1.77	3.39	1.70
Highway 413	Hwy 413 at Hwy 410_S-E	90	S-E	C43		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.40	1.70
Highway 413	Hwy 413 at Hwy 410_S-W	90	S-W	C44		35%	59%	1%	0%	2%	2%	100%	1.88	3.19	1.59	3.42	1.71
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	70	W-N/S	C45		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.44	1.72
Highway 413	Hwy 413 at Bramalea Rd_N-E	40	N-E	C46		21%	35%	16%	1%	14%	13%	100%	2.74	4.65	2.33	4.37	2.19
Highway 413	Hwy 413 at Bramalea Rd_S-E	60	S-E	C47		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.09	1.54
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	70	E-N/S	C48		26%	44%	12%	1%	9%	8%	100%	2.42	4.12	2.06	4.67	2.34
Highway 413	Hwy 413 at Bramalea Rd_N-W	60	N-W	C49		33%	55%	6%	0%	3%	3%	100%	2.05	3.48	1.74	3.42	1.71
Highway 413	Hwy 413 at Bramalea Rd_S-W	40	S-W	C50		37%	62%	0%	0%	1%	1%	100%	1.79	3.05	1.53	3.27	1.64
Highway 413	Hwy 413 at Airport Rd_W-N/S	70	W-N/S	C51		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.34	1.67
Highway 413	Hwy 413 at Airport Rd_N-E	40	N-E	C52		33%	55%	5%	0%	4%	4%	100%	2.05	3.48	1.74	3.41	1.71
Highway 413	Hwy 413 at Airport Rd_S-E	60	S-E	C53		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.18	1.59
Highway 413	Hwy 413 at Airport Rd_E-N/S	70	E-N/S	C54		34%	57%	4%	0%	2%	2%	100%	1.97	3.34	1.67	3.44	1.72
Highway 413	Hwy 413 at Airport Rd_N-W	60	N-W	C55		32%	53%	8%	0%	4%	3%	100%	2.10	3.57	1.79	3.51	1.76
Highway 413	Hwy 413 at Airport Rd_S-W	40	S-W	C56		30%	50%	11%	0%	5%	5%	100%	2.23	3.79	1.89	3.88	1.94
Highway 413	Hwy 413 at The Gore Rd_W-N/S	70	W-N/S	C57		33%	55%	4%	0%	4%	3%	100%	2.02	3.44	1.72	3.39	1.70
Highway 413	Hwy 413 at The Gore Rd_N/S-E	40	N/S-E	C58		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.12	1.56
Highway 413	Hwy 413 at The Gore Rd_E-N/S	70	E-N/S	C59		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.18	1.59
Highway 413	Hwy 413 at The Gore Rd_N/S-W	60	N/S-W	C60		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.60	3.32	1.66

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	70	W-N/S	C61		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.23	1.61
Highway 413	Hwy 413 at Humber Station Rd_N-E	40	N-E	C62		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.11	1.56
Highway 413	Hwy 413 at Humber Station Rd_S-E	60	S-E	C63		30%	49%	8%	0%	7%	6%	100%	2.23	3.79	1.90	3.80	1.90
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	70	E-N/S	C64		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.64	3.38	1.69
Highway 413	Hwy 413 at Humber Station Rd_N-W	60	N-W	C65		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.02	1.51
Highway 413	Hwy 413 at Humber Station Rd_S-W	40	S-W	C66		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.45	1.72
Highway 413	Hwy 413 at Hwy 427_W-S	90	W-S	C67		32%	54%	5%	0%	4%	4%	100%	2.07	3.52	1.76	3.52	1.76
Highway 413	Hwy 413 at Hwy 427_E-S	90	E-S	C68		33%	55%	5%	0%	4%	3%	100%	2.05	3.48	1.74	3.43	1.71
Highway 413	Hwy 413 at Hwy 427_S-E	80	S-E	C69		34%	56%	3%	0%	3%	3%	100%	1.98	3.37	1.69	3.67	1.84
Highway 413	Hwy 413 at Hwy 427_S-W	90	S-W	C70		32%	54%	6%	0%	4%	3%	100%	2.06	3.49	1.75	3.76	1.88
Highway 413	Hwy 413 at Hwy 27_W-N/S	70	W-N/S	C71		33%	55%	5%	0%	4%	3%	100%	2.05	3.48	1.74	3.50	1.75
Highway 413	Hwy 413 at Hwy 27_N/S-E	40	N/S-E	C72		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.24	1.62
Highway 413	Hwy 413 at Hwy 27_E-N/S	50	E-N/S	C73		35%	59%	3%	0%	2%	1%	100%	1.91	3.24	1.62	3.43	1.71
Highway 413	Hwy 413 at Hwy 27_N/S-W	60	N/S-W	C74		33%	55%	5%	0%	4%	4%	100%	2.05	3.48	1.74	3.50	1.75
Highway 413	Hwy 413 at Weston Rd_W-N/S	70	W-N/S	C81		30%	50%	7%	0%	6%	6%	100%	2.20	3.74	1.87	3.66	1.83
Highway 413	Hwy 413 at Weston Rd_N/S-W	60	N/S-W	C82		30%	50%	7%	0%	7%	6%	100%	2.21	3.76	1.88	3.71	1.85
Highway 413	Hwy 413 at Hwy 400_W-N	100	W-N	C83		30%	51%	7%	0%	6%	6%	100%	2.18	3.71	1.86	4.08	2.04
Highway 413	Hwy 413 at Hwy 400_W-S	90	W-S	C84		27%	45%	11%	0%	9%	8%	100%	2.40	4.09	2.04	3.98	1.99
Highway 413	Hwy 413 at Hwy 400_N-W	90	N-W	C85		30%	51%	8%	0%	5%	5%	100%	2.18	3.70	1.85	3.97	1.98
Highway 413	Hwy 413 at Hwy 400_S-W	90	S-W	C86		26%	44%	12%	1%	9%	8%	100%	2.42	4.11	2.06	3.86	1.93
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	60	NB	D01		37%	61%	0%	0%	1%	1%	100%	1.81	3.08	1.54	3.15	1.58
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	60	SB	D02		37%	61%	0%	0%	1%	1%	100%	1.81	3.08	1.54	3.12	1.56
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	60	NB	D03		36%	59%	2%	0%	2%	2%	100%	1.87	3.18	1.59	3.17	1.58
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	60	SB	D04		35%	59%	1%	0%	2%	2%	100%	1.90	3.23	1.62	3.30	1.65
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	60	EB	D05		36%	60%	1%	0%	1%	1%	100%	1.84	3.14	1.57	3.18	1.59
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	60	WB	D06		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.30	1.65
Steeles Ave	Steeles Ave At Hwy 413_EB	80	EB	D07		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.21	1.61
Steeles Ave	Steeles Ave At Hwy 413_WB	80	WB	D08		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.31	1.65
Steeles Ave	Steeles Ave E of Ninth Line S_EB	80	EB	D09		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.14	1.57
Steeles Ave	Steeles Ave E of Ninth Line S_WB	80	WB	D10		36%	60%	1%	0%	1%	1%	100%	1.84	3.14	1.57	3.24	1.62
Steeles Ave	Steeles Ave E of Tenth Line N_EB	80	EB	D11		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.16	1.58
Steeles Ave	Steeles Ave E of Tenth Line N_WB	80	WB	D12		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.28	1.64
Ninth Line N	Ninth Line N N of Steeles Ave_NB	60	NB	D13		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.31	1.66
Ninth Line N	Ninth Line N N of Steeles Ave_SB	60	SB	D14		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.27	1.64
Ninth Line S	Ninth Line S S of Steeles Ave_NB	60	NB	D15		35%	59%	2%	0%	2%	2%	100%	1.90	3.24	1.62	3.26	1.63
Ninth Line S	Ninth Line S S of Steeles Ave_SB	60	SB	D16		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.24	1.62
Tenth Line	Tenth Line At Hwy 413_NB	70	NB	D17		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.40	1.70
Tenth Line	Tenth Line At Hwy 413_SB	70	SB	D18		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.54	3.19	1.60
Derry Rd	Derry Rd W of Hwy 407_EB	80	EB	D19		33%	56%	6%	0%	2%	2%	100%	2.01	3.41	1.70	3.33	1.66
Derry Rd	Derry Rd W of Hwy 407_WB	80	WB	D20		34%	57%	8%	0%	1%	1%	100%	1.98	3.36	1.68	3.88	1.94
Derry Rd	Derry Rd E of Hwy 407_EB	80	EB	D21		33%	56%	5%	0%	3%	2%	100%	2.00	3.40	1.70	3.28	1.64
Derry Rd	Derry Rd E of Hwy 407_WB	80	WB	D22		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.76	1.88
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	60	NB	D23		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.18	1.59
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	60	SB	D24		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.21	1.61
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	60	NB	D25		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.16	1.58
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	60	SB	D26		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	80	NB	D27		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.13	1.56
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	80	SB	D28		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	80	NB	D29		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.23	1.61

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	80	SB	D30		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.57	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	80	NB	D31		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.24	1.62
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	80	SB	D32		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.53	3.18	1.59
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	60	EB	D33		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.60	3.32	1.66
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	60	WB	D34		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.67	3.25	1.62
5 Side Rd	5 Side Rd At Hwy 413_EB	60	EB	D35		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.12	1.56
5 Side Rd	5 Side Rd At Hwy 413_WB	60	WB	D36		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.26	1.63
Heritage Rd	Heritage Rd At Hwy 413_NB	60	NB	D37		37%	61%	0%	0%	1%	1%	100%	1.81	3.08	1.54	3.13	1.56
Heritage Rd	Heritage Rd At Hwy 413_SB	60	SB	D38		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.15	1.57
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	60	NB	D39		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.54	3.06	1.53
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	60	SB	D40		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.14	1.57
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	60	NB	D41		35%	59%	1%	0%	3%	2%	100%	1.89	3.22	1.61	3.18	1.59
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	60	SB	D42		36%	61%	1%	0%	1%	1%	100%	1.83	3.10	1.55	3.21	1.61
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	60	NB	D43		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.62	3.12	1.56
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	60	SB	D44		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.18	1.59
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	60	EB	D45		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.31	1.65
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	60	WB	D46		34%	57%	2%	0%	3%	3%	100%	1.95	3.32	1.66	3.38	1.69
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	60	EB	D47		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.23	1.62
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	60	WB	D48		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.14	1.57
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	60	EB	D49		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.39	1.69
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	60	WB	D50		34%	57%	4%	0%	3%	2%	100%	1.97	3.35	1.68	3.39	1.70
Wanless Dr	Wanless Dr W of Heritage Rd_EB	60	EB	D51		36%	61%	2%	0%	0%	0%	100%	1.82	3.09	1.55	3.21	1.60
Wanless Dr	Wanless Dr W of Heritage Rd_WB	60	WB	D52		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.55	3.16	1.58
Wanless Dr	Wanless Dr At Hwy 413_EB	60	EB	D53		36%	61%	2%	0%	1%	1%	100%	1.83	3.11	1.56	3.21	1.60
Wanless Dr	Wanless Dr At Hwy 413_WB	60	WB	D54		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.20	1.60
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	80	EB	D55		34%	57%	4%	0%	3%	3%	100%	1.98	3.36	1.68	3.40	1.70
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	80	WB	D56		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.40	1.70
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	80	EB	D57		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.33	1.67
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	80	WB	D58		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.30	1.65
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	80	EB	D59		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.35	1.67
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	80	WB	D60		35%	59%	3%	0%	1%	1%	100%	1.90	3.23	1.62	3.25	1.63
Mississauga Rd	Mississauga Rd At Hwy 413_NB	80	NB	D61		35%	59%	4%	0%	1%	1%	100%	1.90	3.23	1.61	3.34	1.67
Mississauga Rd	Mississauga Rd At Hwy 413_SB	80	SB	D62		34%	57%	4%	0%	2%	2%	100%	1.94	3.31	1.65	3.37	1.69
Creditview Rd	Creditview Rd At Hwy 413_NB	70	NB	D63		36%	60%	1%	0%	2%	1%	100%	1.85	3.14	1.57	3.55	1.77
Creditview Rd	Creditview Rd At Hwy 413_SB	70	SB	D64		32%	53%	6%	0%	5%	4%	100%	2.09	3.55	1.78	3.48	1.74
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	80	NB	D65		33%	55%	5%	0%	4%	4%	100%	2.05	3.49	1.74	3.45	1.72
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	80	SB	D66		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.69	3.47	1.73
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	80	NB	D67		30%	51%	7%	0%	6%	5%	100%	2.18	3.71	1.85	3.87	1.93
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	80	SB	D68		31%	51%	6%	0%	6%	6%	100%	2.17	3.69	1.85	3.69	1.85
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	80	NB	D69		34%	57%	3%	0%	3%	3%	100%	1.96	3.34	1.67	3.74	1.87
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	80	SB	D70		31%	53%	6%	0%	5%	5%	100%	2.11	3.60	1.80	3.67	1.84
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	70	EB	D71		31%	52%	5%	0%	6%	6%	100%	2.15	3.65	1.82	3.65	1.82
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	70	WB	D72		31%	51%	7%	0%	5%	5%	100%	2.16	3.68	1.84	3.75	1.87
Old School Rd	Old School Rd At Hwy 413_EB	70	EB	D73		35%	58%	1%	0%	3%	3%	100%	1.91	3.25	1.63	3.28	1.64
Old School Rd	Old School Rd At Hwy 413_WB	70	WB	D74		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.17	1.58
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	80	NB	D75		35%	59%	4%	0%	1%	1%	100%	1.89	3.22	1.61	3.24	1.62
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	80	SB	D76		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.32	1.66
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	80	NB	D77		34%	57%	5%	0%	2%	2%	100%	1.97	3.36	1.68	3.57	1.78
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	80	SB	D78		33%	55%	5%	0%	4%	3%	100%	2.04	3.47	1.74	3.53	1.76

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Total %	Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck						
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Old School Rd	Old School Rd W of Hurontario St_EB	70	EB	D79		31%	53%	6%	0%	5%	5%	100%	2.12	3.61	1.80	3.66	1.83
Old School Rd	Old School Rd W of Hurontario St_WB	70	WB	D80		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.35	1.68
Old School Rd	Old School Rd E of Hurontario St_EB	70	EB	D81		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.53	3.09	1.54
Old School Rd	Old School Rd E of Hurontario St_WB	70	WB	D82		37%	62%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.04	1.52
Hurontario St	Hurontario St S of Old School Rd_NB	80	NB	D83		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.44	1.72
Hurontario St	Hurontario St S of Old School Rd_SB	80	SB	D84		35%	58%	2%	0%	3%	2%	100%	1.93	3.28	1.64	3.45	1.72
Hurontario St	Hurontario St S of Hwy 413_NB	80	NB	D85		34%	56%	3%	0%	4%	3%	100%	1.99	3.38	1.69	3.56	1.78
Hurontario St	Hurontario St S of Hwy 413_SB	80	SB	D86		35%	58%	2%	0%	3%	2%	100%	1.91	3.25	1.62	3.39	1.69
Hurontario St	Hurontario St N of Hwy 413_NB	80	NB	D87		34%	57%	3%	0%	3%	3%	100%	1.98	3.36	1.68	3.64	1.82
Hurontario St	Hurontario St N of Hwy 413_SB	80	SB	D88		32%	53%	5%	0%	5%	4%	100%	2.09	3.56	1.78	3.56	1.78
Kennedy Rd	Kennedy Rd At Hwy 413_NB	60	NB	D89		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.62	3.24	1.62
Kennedy Rd	Kennedy Rd At Hwy 413_SB	60	SB	D90		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.35	1.68
Old School Rd	Old School Rd W of Heart Lake Rd_EB	70	EB	D91		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.13	1.56
Old School Rd	Old School Rd W of Heart Lake Rd_WB	70	WB	D92		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.10	1.55
Old School Rd	Old School Rd At Hwy 410_EB	70	EB	D93		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.11	1.56
Old School Rd	Old School Rd At Hwy 410_WB	70	WB	D94		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.10	1.55
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	60	NB	E01		35%	59%	2%	0%	2%	1%	100%	1.88	3.19	1.60	3.26	1.63
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	60	SB	E02		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.33	1.67
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	80	NB	E03		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.24	1.62
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	80	SB	E04		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.20	1.60
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	80	NB	E05		35%	59%	3%	0%	2%	1%	100%	1.90	3.23	1.62	3.32	1.66
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	80	SB	E06		36%	60%	3%	0%	0%	0%	100%	1.85	3.14	1.57	3.20	1.60
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	60	EB	E07		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.28	1.64
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	60	WB	E08		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.23	1.62
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	60	EB	E09		36%	60%	2%	0%	2%	1%	100%	1.87	3.18	1.59	3.25	1.62
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	60	WB	E10		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.21	1.61
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	60	EB	E11		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.25	1.63
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	60	WB	E12		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.27	1.63
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	80	NB	E13		36%	60%	2%	0%	1%	1%	100%	1.87	3.17	1.59	3.22	1.61
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	80	SB	E14		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.22	1.61
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	80	NB	E15		36%	60%	1%	0%	2%	2%	100%	1.85	3.15	1.57	3.19	1.60
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	80	SB	E16		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.24	1.62
Dixie Rd	Dixie Rd At Hwy 413_NB	80	NB	E17		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.34	1.67
Dixie Rd	Dixie Rd At Hwy 413_SB	80	SB	E18		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.21	1.61
Countryside Dr	Countryside Dr At Hwy 410_EB	60	EB	E19		34%	58%	3%	0%	2%	2%	100%	1.94	3.30	1.65	3.34	1.67
Countryside Dr	Countryside Dr At Hwy 410_WB	60	WB	E20		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.23	1.61
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	80	NB	E21		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.40	1.70
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	80	SB	E22		35%	58%	1%	0%	3%	3%	100%	1.92	3.26	1.63	3.32	1.66
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	80	NB	E23		31%	52%	7%	0%	5%	5%	100%	2.13	3.63	1.81	4.06	2.03
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	80	SB	E24		29%	49%	9%	0%	7%	6%	100%	2.26	3.85	1.92	3.73	1.86
Old School Rd	Old School Rd E of Bramalea Rd_EB	70	EB	E25		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.10	1.55
Old School Rd	Old School Rd E of Bramalea Rd_WB	70	WB	E26		37%	62%	0%	0%	1%	1%	100%	1.79	3.05	1.52	3.07	1.53
Old School Rd	Old School Rd E of Torbram Road_EB	70	EB	E27		37%	61%	0%	0%	1%	1%	100%	1.81	3.08	1.54	3.18	1.59
Old School Rd	Old School Rd E of Torbram Road_WB	70	WB	E28		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.08	1.54
Torbram Rd	Torbram Rd S of Old School Rd_NB	70	NB	E29		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.15	1.57
Torbram Rd	Torbram Rd S of Old School Rd_SB	70	SB	E30		36%	61%	2%	0%	1%	1%	100%	1.83	3.12	1.56	3.17	1.59
Torbram Rd	Torbram Rd At Hwy 413_NB	70	NB	E31		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.19	1.59
Torbram Rd	Torbram Rd At Hwy 413_SB	70	SB	E32		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.13	1.57
Airport Rd	Airport Rd S of Old School Rd_NB	60	NB	E33		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.19	1.59

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Total %	Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck						
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Airport Rd	Airport Rd S of Old School Rd_SB	60	SB	E34		36%	60%	1%	0%	1%	1%	100%	1.84	3.14	1.57	3.19	1.60
Airport Rd	Airport Rd S of Hwy 413_NB	60	NB	E35		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.25	1.62
Airport Rd	Airport Rd S of Hwy 413_SB	60	SB	E36		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.22	1.61
Airport Rd	Airport Rd N of Hwy 413_NB	60	NB	E37		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.36	1.68
Airport Rd	Airport Rd N of Hwy 413_SB	60	SB	E38		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.31	1.66
Healey Rd	Healey Rd E of Airport Rd_EB	70	EB	E39		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.14	1.57
Healey Rd	Healey Rd E of Airport Rd_WB	70	WB	E40		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.56	3.11	1.56
Healey Rd	Healey Rd At Hwy 413_EB	70	EB	E41		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.04	1.52
Healey Rd	Healey Rd At Hwy 413_WB	70	WB	E42		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.11	1.55
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	70	EB	E43		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.02	1.51
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	70	WB	E44		37%	62%	0%	0%	0%	0%	100%	1.79	3.05	1.52	3.06	1.53
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	80	NB	E45		34%	58%	4%	0%	2%	2%	100%	1.94	3.30	1.65	3.28	1.64
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	80	SB	E46		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.27	1.64
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	80	NB	E47		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.61	3.28	1.64
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	80	SB	E48		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.20	1.60
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	80	NB	E49		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.23	1.61
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	80	SB	E50		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.35	1.67
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	80	NB	E51		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.22	1.61
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	80	SB	E52		37%	62%	0%	0%	1%	1%	100%	1.79	3.04	1.52	3.43	1.71
The Gore Rd	The Gore Rd S of Hwy 413_NB	80	NB	E53		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.46	1.73
The Gore Rd	The Gore Rd S of Hwy 413_SB	80	SB	E54		33%	55%	4%	0%	4%	4%	100%	2.04	3.47	1.73	3.46	1.73
The Gore Rd	The Gore Rd N of Hwy 413_NB	80	NB	E55		35%	59%	2%	0%	2%	1%	100%	1.88	3.19	1.59	3.47	1.74
The Gore Rd	The Gore Rd N of Hwy 413_SB	80	SB	E56		36%	60%	2%	0%	2%	1%	100%	1.86	3.17	1.58	3.32	1.66
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	70	NB	E57		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.15	1.58
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	70	SB	E58		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.21	1.60
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	80	NB	E59		32%	54%	5%	0%	4%	4%	100%	2.06	3.50	1.75	3.60	1.80
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	80	SB	E60		34%	57%	4%	0%	3%	3%	100%	1.97	3.36	1.68	3.41	1.70
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	80	NB	E61		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.10	1.55
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	80	SB	E62		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.13	1.56
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	70	EB	E63		33%	55%	4%	0%	4%	3%	100%	2.02	3.44	1.72	3.45	1.73
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	70	WB	E64		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.34	1.67
Mayfield Rd	Mayfield Rd At Hwy 413_EB	70	EB	E65		37%	62%	0%	0%	0%	0%	100%	1.79	3.05	1.52	3.10	1.55
Mayfield Rd	Mayfield Rd At Hwy 413_WB	70	WB	E66		37%	61%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.16	1.58
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	80	NB	E67		36%	61%	2%	0%	1%	0%	100%	1.82	3.09	1.55	3.10	1.55
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	80	SB	E68		37%	61%	1%	0%	1%	0%	100%	1.81	3.07	1.54	3.15	1.57
Coleraine Dr	Coleraine Dr At Highway 413_NB	70	NB	E69		37%	61%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.04	1.52
Coleraine Dr	Coleraine Dr At Highway 413_SB	70	SB	E70		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.06	1.53
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	70	NB	E71		37%	61%	1%	0%	0%	0%	100%	1.81	3.07	1.54	3.04	1.52
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	70	SB	E72		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.06	1.53
Countryside Dr	Countryside Dr W of Hwy 50_EB	60	EB	E73		37%	62%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.14	1.57
Countryside Dr	Countryside Dr W of Hwy 50_WB	60	WB	E74		37%	62%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.01	1.51
Highway 50	Hwy 50 S of Countryside Dr_NB	70	NB	E75		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.17	1.58
Highway 50	Hwy 50 S of Countryside Dr_SB	70	SB	E76		37%	61%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.17	1.59
Highway 50	Hwy 50 At Hwy 413_NB	70	NB	E77		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.16	1.58
Highway 50	Hwy 50 At Hwy 413_SB	70	SB	E78		37%	61%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.17	1.59
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	70	NB	E79		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.11	1.56
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	70	SB	E80		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.36	1.68
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	60	EB	E81		37%	62%	2%	0%	0%	0%	100%	1.80	3.06	1.53	3.03	1.51
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	60	WB	E82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.04	1.52

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Total %	Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck						
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Nashville Rd	Nashville Rd E of Hwy 50_EB	70	EB	E83		37%	62%	0%	0%	1%	0%	100%	1.79	3.04	1.52	3.18	1.59
Nashville Rd	Nashville Rd E of Hwy 50_WB	70	WB	E84		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.07	1.53
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	60	EB	E85		37%	61%	1%	0%	1%	0%	100%	1.81	3.07	1.53	3.11	1.56
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	60	WB	E86		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.12	1.56
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	60	EB	E87		34%	57%	4%	0%	3%	2%	100%	1.97	3.34	1.67	3.39	1.69
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	60	WB	E88		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.28	1.64
Huntington Rd	Huntington Rd At Hwy 413_NB	60	NB	E89		36%	60%	3%	0%	0%	0%	100%	1.85	3.14	1.57	3.13	1.57
Huntington Rd	Huntington Rd At Hwy 413_SB	60	SB	E90		37%	61%	1%	0%	1%	0%	100%	1.81	3.07	1.53	3.13	1.57
Huntington Rd	Huntington Rd N of Kirby Rd_NB	60	NB	E91		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Huntington Rd	Huntington Rd N of Kirby Rd_SB	60	SB	E92		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Kirby Rd	Kirby Rd W of Huntington Rd_EB	60	EB	E93		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.12	1.56
Kirby Rd	Kirby Rd W of Huntington Rd_WB	60	WB	E94		36%	61%	3%	0%	0%	0%	100%	1.83	3.10	1.55	3.10	1.55
Highway 27	Hwy 27 S of Hwy 413_NB	80	NB	E95		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.32	1.66
Highway 27	Hwy 27 S of Hwy 413_SB	80	SB	E96		34%	57%	3%	0%	3%	3%	100%	1.96	3.33	1.67	3.34	1.67
Highway 27	Hwy 27 N of Hwy 413_NB	80	NB	E97		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.42	1.71
Highway 27	Hwy 27 N of Hwy 413_SB	80	SB	E98		34%	57%	3%	0%	3%	3%	100%	1.95	3.31	1.66	3.36	1.68
Kirby Rd	Kirby Rd E of Hwy 27_EB	60	EB	F01		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.66	3.36	1.68
Kirby Rd	Kirby Rd E of Hwy 27_WB	60	WB	F02		35%	59%	2%	0%	2%	1%	100%	1.88	3.19	1.59	3.16	1.58
Kipling Ave	Kipling Ave At Hwy 413_NB	80	NB	F03		36%	60%	1%	0%	2%	2%	100%	1.86	3.16	1.58	3.23	1.62
Kipling Ave	Kipling Ave At Hwy 413_SB	80	SB	F04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.11	1.55
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	60	EB	F05		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.22	1.61
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	60	WB	F06		33%	56%	4%	0%	4%	4%	100%	2.01	3.42	1.71	3.39	1.69
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	60	EB	F07		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.19	1.59
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	60	WB	F08		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.69	3.32	1.66
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	80	NB	F09		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.15	1.57
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	80	SB	F10		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.12	1.56
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	80	NB	F13		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.25	1.63
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	80	SB	F14		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.25	1.63
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	70	EB	F15		37%	61%	0%	0%	1%	1%	100%	1.80	3.07	1.53	3.12	1.56
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	70	WB	F16		37%	61%	0%	0%	1%	1%	100%	1.81	3.08	1.54	3.12	1.56
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	70	EB	F17		37%	61%	0%	0%	1%	1%	100%	1.80	3.07	1.53	3.16	1.58
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	70	WB	F18		36%	61%	0%	0%	1%	1%	100%	1.82	3.09	1.55	3.16	1.58
Weston Rd	Weston Rd N of Kirby Rd_NB	70	NB	F19		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.00	1.50
Weston Rd	Weston Rd N of Kirby Rd_SB	70	SB	F20		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.00	1.50
Weston Rd	Weston Rd N of Hwy 413_NB	70	NB	F21		30%	51%	7%	0%	6%	6%	100%	2.19	3.73	1.87	3.75	1.87
Weston Rd	Weston Rd N of Hwy 413_SB	70	SB	F22		29%	48%	8%	0%	7%	7%	100%	2.27	3.86	1.93	3.76	1.88
Weston Rd	Weston Rd N of King Vaughan Rd_NB	70	NB	F23		33%	54%	4%	0%	4%	4%	100%	2.05	3.49	1.75	3.53	1.77
Weston Rd	Weston Rd N of King Vaughan Rd_SB	70	SB	F24		33%	55%	4%	0%	4%	3%	100%	2.02	3.43	1.71	3.46	1.73
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	60	EB	F25		32%	53%	5%	0%	5%	5%	100%	2.10	3.57	1.78	3.50	1.75
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	60	WB	F26		31%	52%	6%	0%	5%	5%	100%	2.13	3.62	1.81	3.64	1.82
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	60	EB	F27		33%	55%	5%	0%	4%	3%	100%	2.04	3.47	1.73	3.55	1.78
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	60	WB	F28		32%	53%	6%	0%	5%	4%	100%	2.10	3.58	1.79	3.49	1.75
Kirby Rd	Kirby Rd At Hwy 400_EB	60	EB	F29		34%	57%	3%	0%	3%	2%	100%	1.95	3.32	1.66	3.26	1.63
Kirby Rd	Kirby Rd At Hwy 400_WB	60	WB	F30		37%	61%	1%	0%	1%	0%	100%	1.80	3.07	1.53	3.16	1.58
Steeles Ave	Steeles Ave W of Ninth Line N_EB	60	EB	F31		36%	60%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.16	1.58
Steeles Ave	Steeles Ave W of Ninth Line N_WB	60	WB	F32		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.60	3.29	1.64
Heritage Rd	Heritage Rd S of Wanless Dr_NB	60	NB	F33		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.54	3.06	1.53
Heritage Rd	Heritage Rd S of Wanless Dr_SB	60	SB	F34		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.14	1.57
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	80	NB	F35		35%	59%	3%	0%	1%	1%	100%	1.89	3.21	1.60	3.26	1.63

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	80	SB	F36		36%	60%	3%	0%	1%	1%	100%	1.87	3.18	1.59	3.19	1.59
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	60	EB	F37		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.27	1.63
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	60	WB	F38		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.25	1.63
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	80	NB	F39		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.25	1.63
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	80	SB	F40		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.16	1.58
Old School Rd	Old School Rd W of Bramalea Rd_EB	70	EB	F41		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.02	1.51
Old School Rd	Old School Rd W of Bramalea Rd_WB	70	WB	F42		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.00	1.50
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	60	NB	F43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	60	SB	F44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Nashville Rd	Nashville Rd At Hwy 427_EB	70	EB	F45		37%	62%	0%	0%	1%	0%	100%	1.79	3.04	1.52	3.18	1.59
Nashville Rd	Nashville Rd At Hwy 427_WB	70	WB	F46		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.07	1.53
Kirby Rd	Kirby Rd W of Hwy 27_EB	60	EB	F47		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.23	1.62
Kirby Rd	Kirby Rd W of Hwy 27_WB	60	WB	F48		36%	59%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.34	1.67
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	60	EB	F49		33%	55%	5%	0%	4%	3%	100%	2.03	3.45	1.72	3.48	1.74
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	60	WB	F50		32%	53%	6%	0%	4%	4%	100%	2.09	3.55	1.77	3.47	1.74
Jane St	Jane St N of King Vaughan Rd_NB	70	NB	F51		35%	59%	3%	0%	1%	1%	100%	1.88	3.20	1.60	3.46	1.73
Jane St	Jane St N of King Vaughan Rd_SB	70	SB	F52		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.19	1.59
Jane St	Jane St S of King Vaughan Rd_NB	70	NB	F53		37%	62%	1%	0%	0%	0%	100%	1.78	3.03	1.52	3.07	1.54
Jane St	Jane St S of King Vaughan Rd_SB	70	SB	F54		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.05	1.53
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	70	N-E/W	F71		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.19	1.60
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	40	E-S	F72		33%	56%	5%	0%	3%	3%	100%	2.00	3.41	1.70	3.39	1.70
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	60	W-S	F73		37%	62%	1%	0%	1%	0%	100%	1.80	3.06	1.53	3.04	1.52
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	70	S-E/W	F74		33%	55%	7%	0%	3%	3%	100%	2.05	3.49	1.74	3.65	1.82
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	60	E-N	F75		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.61	3.26	1.63
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	40	W-N	F76		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	70	N-E/W	F77		30%	51%	8%	0%	6%	5%	100%	2.19	3.73	1.87	3.64	1.82
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	40	E-S	F78		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.03	1.52
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	60	W-S	F79		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.07	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	70	S-E/W	F80		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.06	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	60	E-N	F81		30%	49%	9%	0%	6%	5%	100%	2.23	3.79	1.90	3.94	1.97
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	40	W-N	F82		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.28	1.64
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	70	N-E/W	F83		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.45	1.73
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	40	E-S	F84		36%	61%	0%	0%	1%	1%	100%	1.84	3.12	1.56	3.62	1.81
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	60	W-S	F85		36%	60%	1%	0%	2%	2%	100%	1.85	3.14	1.57	3.26	1.63
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	70	S-E/W	F86		35%	58%	1%	0%	3%	3%	100%	1.93	3.28	1.64	3.29	1.64
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	60	E-N	F87		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.49	1.74
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	40	W-N	F88		36%	60%	1%	0%	2%	2%	100%	1.86	3.17	1.58	3.48	1.74
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	80	E-N	G01		33%	55%	3%	0%	4%	4%	100%	2.03	3.45	1.72	3.25	1.62
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	80	N-E	G02		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.62	3.27	1.63
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	100	N-S	G03		21%	36%	34%	1%	4%	4%	100%	2.73	4.63	2.32	4.98	2.49
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	100	S-N	G04		26%	43%	19%	1%	6%	5%	100%	2.45	4.17	2.08	4.61	2.31
Highway 413	Hwy 413 at Hwy 401_E-N	100	E-N	G05		32%	53%	4%	0%	5%	5%	100%	2.09	3.56	1.78	3.31	1.65
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	100	E-N	G06		37%	62%	0%	0%	1%	1%	100%	1.80	3.05	1.53	3.02	1.51
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	70	S-E	G07		35%	59%	1%	0%	3%	2%	100%	1.90	3.23	1.61	3.68	1.84
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	80	N-E	G08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.04	1.52
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	40	S-W	G09		30%	51%	3%	0%	8%	8%	100%	2.18	3.70	1.85	3.67	1.84
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	70	N-E	G10		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.45	1.73
Highway 401	Hwy 401 E of Trafalgar Rd_EB	100	EB	H01		31%	52%	5%	0%	6%	6%	100%	2.14	3.64	1.82	3.68	1.84

Appendix A.2.2: PM Traffic Composition by Source for 2041 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition								Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM (m)
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	100	EB	H02		32%	53%	4%	0%	6%	5%	100%	2.11	3.58	1.79	3.63	1.81
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	100	EB	H03		32%	54%	4%	0%	5%	5%	100%	2.07	3.52	1.76	3.58	1.79
Highway 401	Hwy 401 E of Trafalgar Rd_WB	100	WB	H04		32%	54%	3%	0%	5%	5%	100%	2.06	3.50	1.75	3.72	1.86
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	100	WB	H05		32%	54%	4%	0%	5%	5%	100%	2.08	3.53	1.77	3.69	1.84
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	100	WB	H06		33%	55%	2%	0%	5%	5%	100%	2.04	3.47	1.74	3.75	1.88
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	100	WB	H07		32%	54%	3%	0%	5%	5%	100%	2.06	3.49	1.75	3.69	1.85
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	60	N-E	H08		35%	58%	1%	0%	3%	3%	100%	1.92	3.26	1.63	3.37	1.68
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	40	S-E	H09		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.19	1.59
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	70	0	H10		34%	58%	2%	0%	3%	3%	100%	1.94	3.30	1.65	3.39	1.70
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	70	0	H11		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.14	1.57
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	100	EB	H12		29%	49%	7%	0%	8%	7%	100%	2.26	3.84	1.92	3.89	1.94
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	80	0	H13		32%	53%	5%	0%	5%	5%	100%	2.10	3.57	1.79	3.65	1.82
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	70	0	H14		25%	42%	6%	0%	14%	13%	100%	2.51	4.26	2.13	3.95	1.98
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	80	0	H15		31%	52%	3%	0%	7%	6%	100%	2.13	3.62	1.81	3.40	1.70
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	70	E-N/S	H16		35%	59%	1%	0%	2%	2%	100%	1.88	3.19	1.60	3.14	1.57

Appendix A.2.2: PM Traffic Composition by Source for 2051 No-Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %						
					MOVES SourceTypeID >>	21	31	52	53	61	62							
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00							
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	110	NB	A01		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	110	SB	A02		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	110	NB	A03		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	110	SB	A04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Bovaird Dr_NB	110	NB	A05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 N of Bovaird Dr_SB	110	SB	A06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Mayfield Rd_EB	110	EB	A07		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Mayfield Rd_WB	110	WB	A08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	110	EB	A09		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	110	WB	A10		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hurontario St_EB	110	EB	A11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hurontario St_WB	110	WB	A12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 410_EB	110	EB	A13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 410_WB	110	WB	A14		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Bramalea Rd_EB	110	EB	A15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Bramalea Rd_WB	110	WB	A16		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Airport Rd_EB	110	EB	A17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Airport Rd_WB	110	WB	A18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of The Gore Rd_EB	110	EB	A19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of The Gore Rd_WB	110	WB	A20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Humber Station Rd_EB	110	EB	A21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Humber Station Rd_WB	110	WB	A22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 427_EB	110	EB	A23		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 427_WB	110	WB	A24		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 27_EB	110	EB	A25		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Hwy 27_WB	110	WB	A26		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Pine Valley Dr_EB	110	EB	A27		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 E of Pine Valley Dr_WB	110	WB	A28		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 S of Hwy 401_NB	100	NB	B05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.20	1.60
Highway 407	Hwy 407 S of Hwy 401_SB	100	SB	B06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.19	1.59
Highway 407	Hwy 407 N of Hwy 401_EB	100	EB	B07		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.48	1.74
Highway 407	Hwy 407 N of Hwy 401_WB	100	WB	B08		33%	56%	7%	0%	2%	1%	100%	2.00	3.40	1.70	3.96	1.98
Highway 410	Hwy 410 S of Mayfield Rd_NB	100	NB	B09		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.39	1.69
Highway 410	Hwy 410 S of Mayfield Rd_SB	100	SB	B10		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.30	1.65
Highway 410	Hwy 410 N of Mayfield Rd_NB	100	NB	B11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 N of Mayfield Rd_SB	100	SB	B12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 W of Mayfield Rd_EB	100	EB	B13		35%	59%	2%	0%	2%	2%	100%	1.90	3.22	1.61	3.34	1.67
Highway 410	Hwy 410 W of Mayfield Rd_WB	100	WB	B14		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.43	1.72
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	100	NB	B15		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.07	1.53
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	100	SB	B16		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.06	1.53
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	100	NB	B17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	100	SB	B18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 400	Hwy 400 N of Teston Rd_NB	100	NB	B19		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.42	1.71
Highway 400	Hwy 400 N of Teston Rd_SB	100	SB	B20		34%	57%	3%	0%	3%	3%	100%	1.98	3.37	1.68	3.34	1.67
Highway 400	Hwy 400 S of King Vaughan Rd_NB	100	NB	B21		36%	60%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.45	1.72
Highway 400	Hwy 400 S of King Vaughan Rd_SB	100	SB	B22		33%	56%	3%	0%	4%	3%	100%	1.99	3.39	1.70	3.35	1.68
Highway 400	Hwy 400 S of King Rd_NB	100	NB	B23		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.44	1.72
Highway 400	Hwy 400 S of King Rd_SB	100	SB	B24		33%	56%	3%	0%	4%	3%	100%	2.00	3.40	1.70	3.34	1.67
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	70	S-E/W	C11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	60	E-N	C12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	40	W-N	C13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	70	N-E/W	C14		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	40	E-S	C15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	60	W-S	C16		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	70	S-E/W	C17		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_E-N	60	E-N	C18		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.2: PM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Bovaird Dr_W-N	40	W-N	C19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	70	N-E/W	C20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_E-S	40	E-S	C21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bovaird Dr_W-S	60	W-S	C22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	70	S-E/W	C23		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_E-N	60	E-N	C24		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_W-N	40	W-N	C25		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	70	N-E/W	C26		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_E-S	40	E-S	C27		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Mayfield Rd_W-S	60	W-S	C28		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	70	W-N/S	C29		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	40	N-E	C30		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	60	S-E	C31		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	70	E-N/S	C32		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	60	N-W	C33		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	40	S-W	C34		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_W-N/S	70	W-N/S	C35		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_N-E	40	N-E	C36		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_S-E	60	S-E	C37		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_E-N/S	70	E-N/S	C38		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_N-W	60	N-W	C39		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hurontario St_S-W	40	S-W	C40		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_W-S	90	W-S	C41		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_E-S	90	E-S	C42		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_S-E	90	S-E	C43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 410_S-W	90	S-W	C44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	70	W-N/S	C45		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_N-E	40	N-E	C46		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_S-E	60	S-E	C47		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	70	E-N/S	C48		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_N-W	60	N-W	C49		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Bramalea Rd_S-W	40	S-W	C50		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_W-N/S	70	W-N/S	C51		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_N-E	40	N-E	C52		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_S-E	60	S-E	C53		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_E-N/S	70	E-N/S	C54		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_N-W	60	N-W	C55		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Airport Rd_S-W	40	S-W	C56		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_W-N/S	70	W-N/S	C57		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_N/S-E	40	N/S-E	C58		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_E-N/S	70	E-N/S	C59		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at The Gore Rd_N/S-W	60	N/S-W	C60		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	70	W-N/S	C61		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_N-E	40	N-E	C62		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-E	60	S-E	C63		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	70	E-N/S	C64		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_N-W	60	N-W	C65		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-W	40	S-W	C66		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_W-S	90	W-S	C67		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_E-S	90	E-S	C68		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_S-E	80	S-E	C69		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 427_S-W	90	S-W	C70		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_W-N/S	70	W-N/S	C71		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_N/S-E	40	N/S-E	C72		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_E-N/S	50	E-N/S	C73		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 27_N/S-W	60	N/S-W	C74		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50

Appendix A.2.2: PM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %						
					MOVES SourceTypeID >>	21	31	52	53	61	62							
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00							
Highway 413	Hwy 413 at Weston Rd_W-N/S	70	W-N/S	C81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Weston Rd_N/S-W	60	N/S-W	C82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_W-N	100	W-N	C83		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_W-S	90	W-S	C84		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_N-W	90	N-W	C85		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 400_S-W	90	S-W	C86		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	60	NB	D01		35%	59%	1%	0%	2%	2%	100%	1.88	3.19	1.60	3.18	1.59
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	60	SB	D02		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.10	1.55
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	60	NB	D03		36%	60%	1%	0%	1%	1%	100%	1.84	3.14	1.57	3.13	1.57
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	60	SB	D04		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.14	1.57
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	60	EB	D05		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.15	1.58
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	60	WB	D06		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.11	1.55
Steeles Ave	Steeles Ave At Hwy 413_EB	80	EB	D07		36%	59%	2%	0%	2%	2%	100%	1.87	3.19	1.59	3.20	1.60
Steeles Ave	Steeles Ave At Hwy 413_WB	80	WB	D08		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.10	1.55
Steeles Ave	Steeles Ave E of Ninth Line S_EB	80	EB	D09		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.14	1.57
Steeles Ave	Steeles Ave E of Ninth Line S_WB	80	WB	D10		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.07	1.54
Steeles Ave	Steeles Ave E of Tenth Line N_EB	80	EB	D11		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.16	1.58
Steeles Ave	Steeles Ave E of Tenth Line N_WB	80	WB	D12		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.08	1.54
Ninth Line N	Ninth Line N N of Steeles Ave_NB	60	NB	D13		36%	60%	2%	0%	2%	1%	100%	1.87	3.18	1.59	3.20	1.60
Ninth Line N	Ninth Line N N of Steeles Ave_SB	60	SB	D14		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.26	1.63
Ninth Line S	Ninth Line S S of Steeles Ave_NB	60	NB	D15		35%	59%	2%	0%	2%	2%	100%	1.89	3.20	1.60	3.20	1.60
Ninth Line S	Ninth Line S S of Steeles Ave_SB	60	SB	D16		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.21	1.61
Tenth Line	Tenth Line At Hwy 413_NB	70	NB	D17		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.24	1.62
Tenth Line	Tenth Line At Hwy 413_SB	70	SB	D18		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.19	1.59
Derry Rd	Derry Rd W of Hwy 407_EB	80	EB	D19		33%	55%	6%	0%	3%	3%	100%	2.05	3.49	1.74	3.35	1.67
Derry Rd	Derry Rd W of Hwy 407_WB	80	WB	D20		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.60	1.80
Derry Rd	Derry Rd E of Hwy 407_EB	80	EB	D21		33%	55%	6%	0%	3%	3%	100%	2.04	3.46	1.73	3.27	1.64
Derry Rd	Derry Rd E of Hwy 407_WB	80	WB	D22		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.37	1.69
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	60	NB	D23		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.22	1.61
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	60	SB	D24		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.27	1.64
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	60	NB	D25		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	60	SB	D26		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.15	1.58
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	80	NB	D27		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	80	SB	D28		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.18	1.59
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	80	NB	D29		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	80	SB	D30		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.18	1.59
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	80	NB	D31		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.23	1.62
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	80	SB	D32		36%	60%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.22	1.61
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	60	EB	D33		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.25	1.62
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	60	WB	D34		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.11	1.55
5 Side Rd	5 Side Rd At Hwy 413_EB	60	EB	D35		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.09	1.54
5 Side Rd	5 Side Rd At Hwy 413_WB	60	WB	D36		37%	61%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.33	1.66
Heritage Rd	Heritage Rd At Hwy 413_NB	60	NB	D37		37%	62%	0%	0%	1%	1%	100%	1.80	3.05	1.53	3.06	1.53
Heritage Rd	Heritage Rd At Hwy 413_SB	60	SB	D38		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.12	1.56
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	60	NB	D39		37%	62%	0%	0%	1%	0%	100%	1.78	3.03	1.52	3.02	1.51
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	60	SB	D40		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.11	1.56
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	60	NB	D41		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.01	1.51
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	60	SB	D42		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.06	1.53
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	60	NB	D43		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.23	1.62
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	60	SB	D44		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.51	1.75
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	60	EB	D45		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.35	1.67
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	60	WB	D46		34%	57%	3%	0%	3%	2%	100%	1.96	3.33	1.66	3.44	1.72
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	60	EB	D47		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.31	1.66
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	60	WB	D48		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.10	1.55
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	60	EB	D49		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.31	1.66
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	60	WB	D50		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.37	1.68

Appendix A.2.2: PM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %						
					MOVES SourceTypeID >>	21	31	52	53	61	62							
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00							
Wanless Dr	Wanless Dr W of Heritage Rd_EB	60	EB	D51		37%	61%	1%	0%	1%	0%	100%	1.81	3.08	1.54	3.18	1.59
Wanless Dr	Wanless Dr W of Heritage Rd_WB	60	WB	D52		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.09	1.55
Wanless Dr	Wanless Dr At Hwy 413_EB	60	EB	D53		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.15	1.58
Wanless Dr	Wanless Dr At Hwy 413_WB	60	WB	D54		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.08	1.54
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	80	EB	D55		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.22	1.61
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	80	WB	D56		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.26	1.63
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	80	EB	D57		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.30	1.65
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	80	WB	D58		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.23	1.62
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	80	EB	D59		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.30	1.65
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	80	WB	D60		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.23	1.62
Mississauga Rd	Mississauga Rd At Hwy 413_NB	80	NB	D61		34%	56%	6%	0%	2%	2%	100%	1.98	3.37	1.69	3.44	1.72
Mississauga Rd	Mississauga Rd At Hwy 413_SB	80	SB	D62		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.32	1.66
Creditview Rd	Creditview Rd At Hwy 413_NB	70	NB	D63		36%	61%	2%	0%	1%	1%	100%	1.84	3.12	1.56	3.57	1.78
Creditview Rd	Creditview Rd At Hwy 413_SB	70	SB	D64		31%	51%	8%	0%	5%	5%	100%	2.16	3.67	1.84	3.64	1.82
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	80	NB	D65		33%	55%	6%	0%	3%	3%	100%	2.04	3.47	1.73	3.66	1.83
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	80	SB	D66		33%	56%	4%	0%	3%	3%	100%	2.00	3.40	1.70	3.39	1.70
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	80	NB	D67		33%	55%	6%	0%	3%	3%	100%	2.04	3.47	1.73	3.66	1.83
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	80	SB	D68		33%	56%	4%	0%	3%	3%	100%	2.00	3.40	1.70	3.39	1.70
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	80	NB	D69		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.57	1.79
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	80	SB	D70		34%	57%	4%	0%	3%	3%	100%	1.97	3.35	1.68	3.40	1.70
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	70	EB	D71		35%	58%	2%	0%	3%	3%	100%	1.93	3.28	1.64	3.24	1.62
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	70	WB	D72		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.25	1.62
Old School Rd	Old School Rd At Hwy 413_EB	70	EB	D73		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.09	1.55
Old School Rd	Old School Rd At Hwy 413_WB	70	WB	D74		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.14	1.57
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	80	NB	D75		35%	59%	3%	0%	1%	1%	100%	1.88	3.19	1.60	3.26	1.63
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	80	SB	D76		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.37	1.68
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	80	NB	D77		32%	54%	7%	0%	3%	3%	100%	2.06	3.51	1.75	3.58	1.79
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	80	SB	D78		32%	54%	6%	0%	4%	4%	100%	2.08	3.54	1.77	3.73	1.87
Old School Rd	Old School Rd W of Hurontario St_EB	70	EB	D79		36%	60%	2%	0%	2%	2%	100%	1.87	3.18	1.59	3.18	1.59
Old School Rd	Old School Rd W of Hurontario St_WB	70	WB	D80		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.18	1.59
Old School Rd	Old School Rd E of Hurontario St_EB	70	EB	D81		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.02	1.51
Old School Rd	Old School Rd E of Hurontario St_WB	70	WB	D82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.00	1.50
Hurontario St	Hurontario St S of Old School Rd_NB	80	NB	D83		35%	58%	2%	0%	3%	2%	100%	1.93	3.29	1.64	3.61	1.80
Hurontario St	Hurontario St S of Old School Rd_SB	80	SB	D84		33%	55%	4%	0%	4%	4%	100%	2.04	3.46	1.73	3.51	1.76
Hurontario St	Hurontario St S of Hwy 413_NB	80	NB	D85		35%	58%	2%	0%	3%	2%	100%	1.93	3.28	1.64	3.66	1.83
Hurontario St	Hurontario St S of Hwy 413_SB	80	SB	D86		33%	55%	4%	0%	4%	4%	100%	2.03	3.45	1.72	3.48	1.74
Hurontario St	Hurontario St N of Hwy 413_NB	80	NB	D87		35%	58%	2%	0%	3%	2%	100%	1.93	3.28	1.64	3.66	1.83
Hurontario St	Hurontario St N of Hwy 413_SB	80	SB	D88		33%	55%	4%	0%	4%	4%	100%	2.03	3.45	1.72	3.48	1.74
Kennedy Rd	Kennedy Rd At Hwy 413_NB	60	NB	D89		35%	59%	2%	0%	2%	2%	100%	1.90	3.22	1.61	3.37	1.69
Kennedy Rd	Kennedy Rd At Hwy 413_SB	60	SB	D90		27%	46%	15%	1%	6%	5%	100%	2.36	4.00	2.00	3.75	1.88
Old School Rd	Old School Rd W of Heart Lake Rd_EB	70	EB	D91		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.13	1.56
Old School Rd	Old School Rd W of Heart Lake Rd_WB	70	WB	D92		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.08	1.54
Old School Rd	Old School Rd At Hwy 410_EB	70	EB	D93		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.08	1.54
Old School Rd	Old School Rd At Hwy 410_WB	70	WB	D94		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.07	1.54
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	60	NB	E01		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.33	1.67
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	60	SB	E02		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.29	1.65
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	80	NB	E03		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.68	3.28	1.64
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	80	SB	E04		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.62	3.26	1.63
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	80	NB	E05		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.61	3.41	1.71
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	80	SB	E06		33%	56%	5%	0%	3%	3%	100%	2.00	3.40	1.70	3.27	1.63
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	60	EB	E07		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.19	1.60
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	60	WB	E08		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.19	1.60
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	60	EB	E09		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.20	1.60
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	60	WB	E10		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.19	1.59
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	60	EB	E11		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.31	1.65
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	60	WB	E12		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.34	1.67

Appendix A.2.2: PM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	80	NB	E13		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.29	1.64
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	80	SB	E14		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.39	1.70
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	80	NB	E15		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.32	1.66
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	80	SB	E16		36%	60%	1%	0%	2%	1%	100%	1.86	3.16	1.58	3.29	1.65
Dixie Rd	Dixie Rd At Hwy 413_NB	80	NB	E17		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.47	1.73
Dixie Rd	Dixie Rd At Hwy 413_SB	80	SB	E18		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.21	1.61
Countryside Dr	Countryside Dr At Hwy 410_EB	60	EB	E19		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.17	1.59
Countryside Dr	Countryside Dr At Hwy 410_WB	60	WB	E20		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.21	1.61
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	80	NB	E21		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.08	1.54
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	80	SB	E22		26%	44%	8%	0%	11%	10%	100%	2.43	4.13	2.06	3.84	1.92
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	80	NB	E23		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.08	1.54
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	80	SB	E24		26%	44%	8%	0%	11%	10%	100%	2.43	4.13	2.06	3.84	1.92
Old School Rd	Old School Rd E of Bramalea Rd_EB	70	EB	E25		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.06	1.53
Old School Rd	Old School Rd E of Bramalea Rd_WB	70	WB	E26		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.06	1.53
Old School Rd	Old School Rd E of Torbram Road_EB	70	EB	E27		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.08	1.54
Old School Rd	Old School Rd E of Torbram Road_WB	70	WB	E28		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.05	1.53
Torbram Rd	Torbram Rd S of Old School Rd_NB	70	NB	E29		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.15	1.58
Torbram Rd	Torbram Rd S of Old School Rd_SB	70	SB	E30		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.17	1.58
Torbram Rd	Torbram Rd At Hwy 413_NB	70	NB	E31		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.39	1.70
Torbram Rd	Torbram Rd At Hwy 413_SB	70	SB	E32		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.21	1.60
Airport Rd	Airport Rd S of Old School Rd_NB	60	NB	E33		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.25	1.62
Airport Rd	Airport Rd S of Old School Rd_SB	60	SB	E34		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.19	1.60
Airport Rd	Airport Rd S of Hwy 413_NB	60	NB	E35		36%	60%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.35	1.67
Airport Rd	Airport Rd S of Hwy 413_SB	60	SB	E36		33%	55%	4%	0%	4%	4%	100%	2.02	3.43	1.72	3.32	1.66
Airport Rd	Airport Rd N of Hwy 413_NB	60	NB	E37		36%	60%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.35	1.67
Airport Rd	Airport Rd N of Hwy 413_SB	60	SB	E38		33%	55%	4%	0%	4%	4%	100%	2.02	3.43	1.72	3.32	1.66
Healey Rd	Healey Rd E of Airport Rd_EB	70	EB	E39		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.10	1.55
Healey Rd	Healey Rd E of Airport Rd_WB	70	WB	E40		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.13	1.57
Healey Rd	Healey Rd At Hwy 413_EB	70	EB	E41		37%	62%	0%	0%	0%	0%	100%	1.79	3.03	1.52	3.05	1.52
Healey Rd	Healey Rd At Hwy 413_WB	70	WB	E42		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.04	1.52
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	70	EB	E43		37%	62%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.04	1.52
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	70	WB	E44		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.03	1.51
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	80	NB	E45		34%	57%	4%	0%	2%	2%	100%	1.96	3.33	1.66	3.96	1.98
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	80	SB	E46		30%	50%	7%	0%	6%	6%	100%	2.20	3.74	1.87	3.52	1.76
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	80	NB	E47		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.30	1.65
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	80	SB	E48		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.25	1.63
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	80	NB	E49		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.23	1.62
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	80	SB	E50		36%	61%	1%	0%	1%	1%	100%	1.83	3.10	1.55	3.31	1.66
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	80	NB	E51		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.19	1.59
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	80	SB	E52		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.26	1.63
The Gore Rd	The Gore Rd S of Hwy 413_NB	80	NB	E53		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.60	3.39	1.70
The Gore Rd	The Gore Rd S of Hwy 413_SB	80	SB	E54		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.24	1.62
The Gore Rd	The Gore Rd N of Hwy 413_NB	80	NB	E55		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.60	3.39	1.70
The Gore Rd	The Gore Rd N of Hwy 413_SB	80	SB	E56		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.24	1.62
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	70	NB	E57		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.11	1.56
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	70	SB	E58		37%	62%	0%	0%	0%	0%	100%	1.79	3.05	1.52	3.14	1.57
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	80	NB	E59		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.11	1.56
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	80	SB	E60		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.12	1.56
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	80	NB	E61		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.11	1.56
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	80	SB	E62		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.12	1.56
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	70	EB	E63		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.27	1.63
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	70	WB	E64		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.27	1.63
Mayfield Rd	Mayfield Rd At Hwy 413_EB	70	EB	E65		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.28	1.64
Mayfield Rd	Mayfield Rd At Hwy 413_WB	70	WB	E66		35%	58%	2%	0%	3%	2%	100%	1.93	3.28	1.64	3.29	1.64
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	80	NB	E67		30%	50%	9%	0%	6%	5%	100%	2.23	3.79	1.89	3.54	1.77
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	80	SB	E68		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.27	1.63

Appendix A.2.2: PM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Coleraine Dr	Coleraine Dr At Highway 413_NB	70	NB	E69		37%	61%	1%	0%	0%	0%	100%	1.81	3.08	1.54	3.11	1.55
Coleraine Dr	Coleraine Dr At Highway 413_SB	70	SB	E70		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.14	1.57
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	70	NB	E71		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.03	1.52
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	70	SB	E72		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.05	1.53
Countryside Dr	Countryside Dr W of Hwy 50_EB	60	EB	E73		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.09	1.54
Countryside Dr	Countryside Dr W of Hwy 50_WB	60	WB	E74		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.08	1.54
Highway 50	Hwy 50 S of Countryside Dr_NB	70	NB	E75		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.15	1.57
Highway 50	Hwy 50 S of Countryside Dr_SB	70	SB	E76		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.12	1.56
Highway 50	Hwy 50 At Hwy 413_NB	70	NB	E77		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.15	1.58
Highway 50	Hwy 50 At Hwy 413_SB	70	SB	E78		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.13	1.56
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	70	NB	E79		37%	61%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.12	1.56
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	70	SB	E80		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.09	1.55
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	60	EB	E81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	60	WB	E82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Nashville Rd	Nashville Rd E of Hwy 50_EB	70	EB	E83		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.09	1.54
Nashville Rd	Nashville Rd E of Hwy 50_WB	70	WB	E84		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.08	1.54
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	60	EB	E85		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.10	1.55
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	60	WB	E86		36%	60%	2%	0%	2%	1%	100%	1.87	3.18	1.59	3.18	1.59
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	60	EB	E87		35%	59%	2%	0%	2%	2%	100%	1.90	3.24	1.62	3.26	1.63
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	60	WB	E88		36%	61%	1%	0%	1%	1%	100%	1.84	3.12	1.56	3.20	1.60
Huntington Rd	Huntington Rd At Hwy 413_NB	60	NB	E89		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.02	1.51
Huntington Rd	Huntington Rd At Hwy 413_SB	60	SB	E90		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.04	1.52
Huntington Rd	Huntington Rd N of Kirby Rd_NB	60	NB	E91		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Huntington Rd	Huntington Rd N of Kirby Rd_SB	60	SB	E92		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Kirby Rd	Kirby Rd W of Huntington Rd_EB	60	EB	E93		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.07	1.53
Kirby Rd	Kirby Rd W of Huntington Rd_WB	60	WB	E94		37%	62%	1%	0%	0%	0%	100%	1.78	3.03	1.52	3.03	1.51
Highway 27	Hwy 27 S of Hwy 413_NB	80	NB	E95		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.36	1.68
Highway 27	Hwy 27 S of Hwy 413_SB	80	SB	E96		36%	60%	1%	0%	2%	1%	100%	1.86	3.17	1.59	3.27	1.64
Highway 27	Hwy 27 N of Hwy 413_NB	80	NB	E97		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.36	1.68
Highway 27	Hwy 27 N of Hwy 413_SB	80	SB	E98		36%	60%	1%	0%	2%	1%	100%	1.86	3.17	1.59	3.27	1.64
Kirby Rd	Kirby Rd E of Hwy 27_EB	60	EB	F01		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.13	1.57
Kirby Rd	Kirby Rd E of Hwy 27_WB	60	WB	F02		37%	62%	0%	0%	1%	0%	100%	1.79	3.05	1.52	3.13	1.57
Kipling Ave	Kipling Ave At Hwy 413_NB	80	NB	F03		35%	59%	2%	0%	1%	1%	100%	1.88	3.20	1.60	3.22	1.61
Kipling Ave	Kipling Ave At Hwy 413_SB	80	SB	F04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.12	1.56
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	60	EB	F05		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.21	1.60
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	60	WB	F06		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.25	1.63
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	60	EB	F07		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.21	1.60
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	60	WB	F08		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.21	1.60
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	80	NB	F09		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.20	1.60
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	80	SB	F10		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.12	1.56
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	80	NB	F13		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.26	1.63
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	80	SB	F14		35%	59%	0%	0%	3%	3%	100%	1.89	3.21	1.60	3.29	1.65
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	70	EB	F15		36%	59%	2%	0%	2%	2%	100%	1.87	3.19	1.59	3.20	1.60
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	70	WB	F16		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.20	1.60
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	70	EB	F17		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.27	1.63
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	70	WB	F18		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.24	1.62
Weston Rd	Weston Rd N of Kirby Rd_NB	70	NB	F19		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.07	1.53
Weston Rd	Weston Rd N of Kirby Rd_SB	70	SB	F20		37%	62%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.05	1.52
Weston Rd	Weston Rd N of Hwy 413_NB	70	NB	F21		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Weston Rd	Weston Rd N of Hwy 413_SB	70	SB	F22		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.00	1.50
Weston Rd	Weston Rd N of King Vaughan Rd_NB	70	NB	F23		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.16	1.58
Weston Rd	Weston Rd N of King Vaughan Rd_SB	70	SB	F24		36%	61%	1%	0%	1%	1%	100%	1.83	3.10	1.55	3.17	1.59
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	60	EB	F25		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.19	1.59
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	60	WB	F26		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.24	1.62
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	60	EB	F27		33%	56%	5%	0%	3%	3%	100%	2.01	3.42	1.71	3.44	1.72
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	60	WB	F28		34%	56%	5%	0%	3%	3%	100%	1.99	3.38	1.69	3.40	1.70

Appendix A.2.2: PM Traffic Composition by Source for 2051 No-Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %						
					MOVES SourceTypeID >>	21	31	52	53	61	62							
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00							
Kirby Rd	Kirby Rd At Hwy 400_EB	60	EB	F29		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.03	1.51
Kirby Rd	Kirby Rd At Hwy 400_WB	60	WB	F30		35%	59%	2%	0%	1%	1%	100%	1.88	3.19	1.60	3.21	1.61
Steeles Ave	Steeles Ave W of Ninth Line N_EB	60	EB	F31		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.14	1.57
Steeles Ave	Steeles Ave W of Ninth Line N_WB	60	WB	F32		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.06	1.53
Heritage Rd	Heritage Rd S of Wanless Dr_NB	60	NB	F33		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.01	1.51
Heritage Rd	Heritage Rd S of Wanless Dr_SB	60	SB	F34		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.07	1.54
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	80	NB	F35		35%	59%	2%	0%	1%	1%	100%	1.88	3.19	1.60	3.27	1.63
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	80	SB	F36		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.28	1.64
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	60	EB	F37		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.25	1.62
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	60	WB	F38		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.36	1.68
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	80	NB	F39		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.53	3.14	1.57
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	80	SB	F40		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.21	1.60
Old School Rd	Old School Rd W of Bramalea Rd_EB	70	EB	F41		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.01	1.50
Old School Rd	Old School Rd W of Bramalea Rd_WB	70	WB	F42		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.03	1.51
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	60	NB	F43		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.02	1.51
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	60	SB	F44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Nashville Rd	Nashville Rd At Hwy 427_EB	70	EB	F45		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.09	1.54
Nashville Rd	Nashville Rd At Hwy 427_WB	70	WB	F46		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.08	1.54
Kirby Rd	Kirby Rd W of Hwy 27_EB	60	EB	F47		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.07	1.53
Kirby Rd	Kirby Rd W of Hwy 27_WB	60	WB	F48		36%	60%	1%	0%	2%	1%	100%	1.85	3.15	1.57	3.34	1.67
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	60	EB	F49		34%	57%	4%	0%	3%	2%	100%	1.97	3.36	1.68	3.39	1.70
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	60	WB	F50		33%	56%	5%	0%	3%	3%	100%	2.00	3.40	1.70	3.46	1.73
Jane St	Jane St N of King Vaughan Rd_NB	70	NB	F51		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.55	1.78
Jane St	Jane St N of King Vaughan Rd_SB	70	SB	F52		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.11	1.55
Jane St	Jane St S of King Vaughan Rd_NB	70	NB	F53		37%	61%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.12	1.56
Jane St	Jane St S of King Vaughan Rd_SB	70	SB	F54		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.02	1.51
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	70	N-E/W	F71		33%	55%	4%	0%	4%	3%	100%	2.03	3.45	1.72	3.30	1.65
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	40	E-S	F72		28%	47%	10%	0%	7%	7%	100%	2.31	3.93	1.97	3.70	1.85
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	60	W-S	F73		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.06	1.53
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	70	S-E/W	F74		31%	52%	8%	0%	4%	4%	100%	2.12	3.61	1.80	3.80	1.90
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	60	E-N	F75		32%	54%	7%	0%	3%	3%	100%	2.06	3.50	1.75	3.91	1.95
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	40	W-N	F76		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	70	N-E/W	F77		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	40	E-S	F78		37%	61%	1%	0%	1%	0%	100%	1.81	3.08	1.54	3.07	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	60	W-S	F79		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.05	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	70	S-E/W	F80		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.07	1.53
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	60	E-N	F81		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	40	W-N	F82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	70	N-E/W	F83		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	40	E-S	F84		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.61	3.34	1.67
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	60	W-S	F85		36%	60%	1%	0%	2%	2%	100%	1.87	3.17	1.59	3.21	1.60
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	70	S-E/W	F86		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.30	1.65
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	60	E-N	F87		33%	56%	5%	0%	3%	3%	100%	2.01	3.41	1.71	3.76	1.88
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	40	W-N	F88		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.61	3.34	1.67
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	40	W-E/W	F89		30%	51%	7%	0%	6%	6%	100%	2.19	3.73	1.86	3.56	1.78
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	80	E-N	G01		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	80	N-E	G02		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	100	N-S	G03		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	100	S-N	G04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Hwy 401_E-N	100	E-N	G05		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	100	E-N	G06		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	70	S-E	G07		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.60	3.67	1.83
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	80	N-E	G08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	40	S-W	G09		30%	51%	3%	0%	8%	7%	100%	2.18	3.70	1.85	3.77	1.88
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	70	N-E	G10		35%	59%	1%	0%	2%	2%	100%	1.89	3.21	1.60	3.67	1.83
Highway 401	Hwy 401 E of Trafalgar Rd_EB	100	EB	H01		32%	53%	5%	0%	6%	5%	100%	2.11	3.59	1.80	3.77	1.88

Appendix A.2.2: PM Traffic Composition by Source for 2051 No-Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	100	EB	H02		32%	53%	5%	0%	6%	5%	100%	2.11	3.59	1.80	3.77	1.88
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	100	EB	H03		32%	53%	5%	0%	5%	5%	100%	2.10	3.57	1.78	3.62	1.81
Highway 401	Hwy 401 E of Trafalgar Rd_WB	100	WB	H04		32%	54%	3%	0%	5%	5%	100%	2.06	3.50	1.75	3.63	1.81
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	100	WB	H05		32%	54%	4%	0%	5%	5%	100%	2.08	3.54	1.77	3.58	1.79
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	100	WB	H06		33%	55%	2%	0%	5%	5%	100%	2.04	3.47	1.74	3.68	1.84
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	100	WB	H07		33%	55%	3%	0%	5%	5%	100%	2.05	3.49	1.74	3.62	1.81
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	60	N-E	H08		35%	59%	1%	0%	2%	2%	100%	1.90	3.22	1.61	3.40	1.70
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	40	S-E	H09		35%	59%	1%	0%	2%	2%	100%	1.88	3.20	1.60	3.64	1.82
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	70	0	H10		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	70	0	H11		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	100	EB	H12		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	80	0	H13		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	70	0	H14		36%	60%	1%	0%	2%	2%	100%	1.86	3.17	1.58	3.37	1.69
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	80	0	H15		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	70	E-N/S	H16		36%	60%	1%	0%	1%	1%	100%	1.86	3.16	1.58	3.19	1.59

Appendix A.2.2: PM Traffic Composition by Source for 2051 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	110	NB	A01		31%	52%	7%	0%	5%	5%	100%	2.13	3.62	1.81	3.68	1.84
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	110	SB	A02		31%	52%	7%	0%	5%	4%	100%	2.13	3.62	1.81	3.63	1.82
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	110	NB	A03		33%	55%	5%	0%	4%	3%	100%	2.03	3.46	1.73	3.55	1.78
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	110	SB	A04		32%	54%	7%	0%	4%	4%	100%	2.08	3.54	1.77	3.55	1.77
Highway 413	Hwy 413 N of Bovaird Dr_NB	110	NB	A05		33%	55%	5%	0%	4%	3%	100%	2.04	3.47	1.74	3.53	1.76
Highway 413	Hwy 413 N of Bovaird Dr_SB	110	SB	A06		32%	54%	6%	0%	4%	4%	100%	2.07	3.51	1.76	3.52	1.76
Highway 413	Hwy 413 E of Mayfield Rd_EB	110	EB	A07		33%	54%	5%	0%	4%	4%	100%	2.05	3.49	1.75	3.63	1.82
Highway 413	Hwy 413 E of Mayfield Rd_WB	110	WB	A08		30%	51%	8%	0%	5%	5%	100%	2.18	3.70	1.85	3.62	1.81
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	110	EB	A09		32%	53%	6%	0%	5%	4%	100%	2.09	3.55	1.78	3.66	1.83
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	110	WB	A10		30%	50%	8%	0%	6%	5%	100%	2.20	3.74	1.87	3.68	1.84
Highway 413	Hwy 413 E of Hurontario St_EB	110	EB	A11		31%	52%	7%	0%	6%	5%	100%	2.15	3.66	1.83	3.70	1.85
Highway 413	Hwy 413 E of Hurontario St_WB	110	WB	A12		31%	51%	7%	0%	6%	5%	100%	2.17	3.69	1.84	3.70	1.85
Highway 413	Hwy 413 E of Hwy 410_EB	110	EB	A13		31%	53%	6%	0%	5%	5%	100%	2.12	3.60	1.80	3.70	1.85
Highway 413	Hwy 413 E of Hwy 410_WB	110	WB	A14		30%	50%	8%	0%	6%	6%	100%	2.22	3.78	1.89	3.69	1.85
Highway 413	Hwy 413 E of Bramalea Rd_EB	110	EB	A15		30%	51%	7%	0%	6%	6%	100%	2.19	3.73	1.86	3.79	1.90
Highway 413	Hwy 413 E of Bramalea Rd_WB	110	WB	A16		29%	48%	10%	0%	7%	6%	100%	2.29	3.89	1.94	3.85	1.93
Highway 413	Hwy 413 E of Airport Rd_EB	110	EB	A17		30%	50%	7%	0%	6%	6%	100%	2.21	3.75	1.88	3.81	1.90
Highway 413	Hwy 413 E of Airport Rd_WB	110	WB	A18		29%	48%	9%	0%	7%	6%	100%	2.27	3.87	1.93	3.86	1.93
Highway 413	Hwy 413 E of The Gore Rd_EB	110	EB	A19		29%	49%	8%	0%	7%	6%	100%	2.23	3.80	1.90	3.84	1.92
Highway 413	Hwy 413 E of The Gore Rd_WB	110	WB	A20		29%	48%	9%	0%	7%	6%	100%	2.28	3.88	1.94	3.93	1.96
Highway 413	Hwy 413 E of Humber Station Rd_EB	110	EB	A21		31%	51%	7%	0%	6%	5%	100%	2.17	3.68	1.84	3.78	1.89
Highway 413	Hwy 413 E of Humber Station Rd_WB	110	WB	A22		30%	50%	8%	0%	6%	6%	100%	2.21	3.76	1.88	3.79	1.89
Highway 413	Hwy 413 E of Hwy 427_EB	110	EB	A23		31%	51%	7%	0%	6%	5%	100%	2.16	3.68	1.84	3.87	1.93
Highway 413	Hwy 413 E of Hwy 427_WB	110	WB	A24		30%	49%	8%	0%	6%	6%	100%	2.23	3.79	1.90	3.72	1.86
Highway 413	Hwy 413 E of Hwy 27_EB	110	EB	A25		30%	51%	7%	0%	6%	6%	100%	2.19	3.72	1.86	3.87	1.94
Highway 413	Hwy 413 E of Hwy 27_WB	110	WB	A26		30%	50%	8%	0%	6%	6%	100%	2.22	3.78	1.89	3.73	1.87
Highway 413	Hwy 413 E of Pine Valley Dr_EB	110	EB	A27		30%	51%	7%	0%	6%	6%	100%	2.19	3.72	1.86	3.87	1.94
Highway 413	Hwy 413 E of Pine Valley Dr_WB	110	WB	A28		30%	50%	8%	0%	6%	6%	100%	2.22	3.78	1.89	3.73	1.87
Highway 407	Hwy 407 S of Hwy 401_NB	100	NB	B05		33%	55%	7%	0%	2%	2%	100%	2.04	3.47	1.73	3.55	1.77
Highway 407	Hwy 407 S of Hwy 401_SB	100	SB	B06		32%	53%	12%	1%	1%	1%	100%	2.11	3.59	1.79	4.28	2.14
Highway 407	Hwy 407 N of Hwy 401_EB	100	EB	B07		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.28	1.64
Highway 407	Hwy 407 N of Hwy 401_WB	100	WB	B08		37%	63%	0%	0%	0%	0%	100%	1.77	3.00	1.50	3.13	1.57
Highway 410	Hwy 410 S of Mayfield Rd_NB	100	NB	B09		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.33	1.67
Highway 410	Hwy 410 S of Mayfield Rd_SB	100	SB	B10		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.63	3.30	1.65
Highway 410	Hwy 410 N of Mayfield Rd_NB	100	NB	B11		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.39	1.70
Highway 410	Hwy 410 N of Mayfield Rd_SB	100	SB	B12		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.69	3.28	1.64
Highway 410	Hwy 410 W of Mayfield Rd_EB	100	EB	B13		35%	58%	2%	0%	2%	2%	100%	1.91	3.25	1.62	3.30	1.65
Highway 410	Hwy 410 W of Mayfield Rd_WB	100	WB	B14		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.38	1.69
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	100	NB	B15		36%	60%	2%	0%	1%	1%	100%	1.86	3.17	1.58	3.26	1.63
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	100	SB	B16		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.18	1.59
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	100	NB	B17		33%	56%	4%	0%	3%	3%	100%	2.01	3.41	1.70	3.65	1.83
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	100	SB	B18		34%	57%	4%	0%	3%	3%	100%	1.98	3.36	1.68	3.36	1.68
Highway 400	Hwy 400 N of Teston Rd_NB	100	NB	B19		35%	59%	2%	0%	1%	1%	100%	1.88	3.19	1.59	3.47	1.73
Highway 400	Hwy 400 N of Teston Rd_SB	100	SB	B20		33%	56%	4%	0%	4%	3%	100%	2.01	3.41	1.71	3.37	1.68
Highway 400	Hwy 400 S of King Vaughan Rd_NB	100	NB	B21		37%	62%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.35	1.68
Highway 400	Hwy 400 S of King Vaughan Rd_SB	100	SB	B22		35%	58%	1%	0%	3%	3%	100%	1.93	3.28	1.64	3.26	1.63
Highway 400	Hwy 400 S of King Rd_NB	100	NB	B23		37%	62%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.35	1.68
Highway 400	Hwy 400 S of King Rd_SB	100	SB	B24		32%	53%	5%	0%	5%	5%	100%	2.09	3.56	1.78	3.43	1.72
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	70	S-E/W	C11		34%	56%	3%	0%	4%	3%	100%	1.98	3.37	1.69	3.34	1.67
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	60	E-N	C12		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.05	1.52
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	40	W-N	C13		35%	59%	2%	0%	2%	2%	100%	1.91	3.24	1.62	3.26	1.63
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	70	N-E/W	C14		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.19	1.60
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	40	E-S	C15		33%	55%	3%	0%	4%	4%	100%	2.03	3.45	1.73	3.52	1.76
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	60	W-S	C16		37%	61%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.13	1.56
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	70	S-E/W	C17		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.44	1.72
Highway 413	Hwy 413 at Bovaird Dr_E-N	60	E-N	C18		35%	58%	4%	0%	2%	1%	100%	1.92	3.26	1.63	3.26	1.63

Appendix A.2.2: PM Traffic Composition by Source for 2051 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 413	Hwy 413 at Bovaird Dr_W-N	40	W-N	C19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.10	1.55
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	70	N-E/W	C20		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.12	1.56
Highway 413	Hwy 413 at Bovaird Dr_E-S	40	E-S	C21		34%	57%	6%	0%	2%	1%	100%	1.97	3.35	1.67	3.48	1.74
Highway 413	Hwy 413 at Bovaird Dr_W-S	60	W-S	C22		37%	62%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.12	1.56
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	70	S-E/W	C23		36%	60%	2%	0%	1%	1%	100%	1.86	3.17	1.58	3.23	1.61
Highway 413	Hwy 413 at Mayfield Rd_E-N	60	E-N	C24		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.04	1.52
Highway 413	Hwy 413 at Mayfield Rd_W-N	40	W-N	C25		33%	55%	5%	0%	4%	4%	100%	2.04	3.46	1.73	3.53	1.76
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	70	N-E/W	C26		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.41	1.71
Highway 413	Hwy 413 at Mayfield Rd_E-S	40	E-S	C27		34%	57%	5%	0%	2%	2%	100%	1.96	3.33	1.66	3.33	1.66
Highway 413	Hwy 413 at Mayfield Rd_W-S	60	W-S	C28		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.05	1.53
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	70	W-N/S	C29		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.15	1.57
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	40	N-E	C30		28%	47%	8%	0%	9%	8%	100%	2.33	3.96	1.98	4.00	2.00
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	60	S-E	C31		32%	54%	6%	0%	4%	4%	100%	2.08	3.54	1.77	3.47	1.74
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	70	E-N/S	C32		32%	53%	6%	0%	5%	4%	100%	2.11	3.59	1.79	3.71	1.85
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	60	N-W	C33		37%	62%	1%	0%	0%	0%	100%	1.78	3.03	1.52	3.04	1.52
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	40	S-W	C34		35%	58%	5%	0%	1%	1%	100%	1.93	3.29	1.64	3.24	1.62
Highway 413	Hwy 413 at Hurontario St_W-N/S	70	W-N/S	C35		36%	60%	3%	0%	1%	1%	100%	1.86	3.17	1.59	3.31	1.66
Highway 413	Hwy 413 at Hurontario St_N-E	40	N-E	C36		28%	47%	9%	0%	8%	7%	100%	2.31	3.92	1.96	3.75	1.88
Highway 413	Hwy 413 at Hurontario St_S-E	60	S-E	C37		30%	50%	7%	0%	7%	6%	100%	2.22	3.77	1.88	3.85	1.92
Highway 413	Hwy 413 at Hurontario St_E-N/S	70	E-N/S	C38		33%	56%	4%	0%	4%	3%	100%	2.00	3.40	1.70	3.77	1.89
Highway 413	Hwy 413 at Hurontario St_N-W	60	N-W	C39		33%	55%	6%	0%	3%	3%	100%	2.03	3.45	1.73	3.36	1.68
Highway 413	Hwy 413 at Hurontario St_S-W	40	S-W	C40		33%	55%	6%	0%	3%	3%	100%	2.03	3.45	1.73	3.36	1.68
Highway 413	Hwy 413 at Hwy 410_W-S	90	W-S	C41		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.30	1.65
Highway 413	Hwy 413 at Hwy 410_E-S	90	E-S	C42		32%	54%	6%	0%	4%	3%	100%	2.06	3.51	1.75	3.35	1.68
Highway 413	Hwy 413 at Hwy 410_S-E	90	S-E	C43		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.38	1.69
Highway 413	Hwy 413 at Hwy 410_S-W	90	S-W	C44		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.36	1.68
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	70	W-N/S	C45		35%	59%	2%	0%	2%	1%	100%	1.89	3.21	1.60	3.40	1.70
Highway 413	Hwy 413 at Bramalea Rd_N-E	40	N-E	C46		24%	39%	14%	1%	12%	11%	100%	2.59	4.41	2.20	4.24	2.12
Highway 413	Hwy 413 at Bramalea Rd_S-E	60	S-E	C47		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.05	1.52
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	70	E-N/S	C48		27%	45%	12%	1%	8%	8%	100%	2.40	4.08	2.04	4.50	2.25
Highway 413	Hwy 413 at Bramalea Rd_N-W	60	N-W	C49		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.37	1.69
Highway 413	Hwy 413 at Bramalea Rd_S-W	40	S-W	C50		37%	62%	0%	0%	1%	1%	100%	1.79	3.04	1.52	3.19	1.60
Highway 413	Hwy 413 at Airport Rd_W-N/S	70	W-N/S	C51		34%	57%	4%	0%	3%	2%	100%	1.95	3.32	1.66	3.31	1.65
Highway 413	Hwy 413 at Airport Rd_N-E	40	N-E	C52		33%	56%	4%	0%	3%	3%	100%	1.99	3.39	1.70	3.37	1.68
Highway 413	Hwy 413 at Airport Rd_S-E	60	S-E	C53		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.17	1.59
Highway 413	Hwy 413 at Airport Rd_E-N/S	70	E-N/S	C54		34%	57%	4%	0%	2%	2%	100%	1.96	3.34	1.67	3.40	1.70
Highway 413	Hwy 413 at Airport Rd_N-W	60	N-W	C55		32%	54%	7%	0%	4%	3%	100%	2.09	3.55	1.77	3.47	1.73
Highway 413	Hwy 413 at Airport Rd_S-W	40	S-W	C56		30%	50%	10%	0%	5%	4%	100%	2.20	3.73	1.87	3.87	1.93
Highway 413	Hwy 413 at The Gore Rd_W-N/S	70	W-N/S	C57		34%	56%	4%	0%	3%	3%	100%	1.98	3.37	1.68	3.36	1.68
Highway 413	Hwy 413 at The Gore Rd_N/S-E	40	N/S-E	C58		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.10	1.55
Highway 413	Hwy 413 at The Gore Rd_E-N/S	70	E-N/S	C59		35%	59%	2%	0%	2%	1%	100%	1.89	3.21	1.60	3.17	1.58
Highway 413	Hwy 413 at The Gore Rd_N/S-W	60	N/S-W	C60		35%	59%	2%	0%	1%	1%	100%	1.88	3.19	1.60	3.28	1.64
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	70	W-N/S	C61		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.20	1.60
Highway 413	Hwy 413 at Humber Station Rd_N-E	40	N-E	C62		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.10	1.55
Highway 413	Hwy 413 at Humber Station Rd_S-E	60	S-E	C63		31%	51%	7%	0%	6%	5%	100%	2.17	3.68	1.84	3.73	1.86
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	70	E-N/S	C64		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.62	3.34	1.67
Highway 413	Hwy 413 at Humber Station Rd_N-W	60	N-W	C65		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 413	Hwy 413 at Humber Station Rd_S-W	40	S-W	C66		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.42	1.71
Highway 413	Hwy 413 at Hwy 427_W-S	90	W-S	C67		33%	55%	5%	0%	4%	3%	100%	2.03	3.45	1.72	3.47	1.74
Highway 413	Hwy 413 at Hwy 427_E-S	90	E-S	C68		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.72	3.39	1.70
Highway 413	Hwy 413 at Hwy 427_S-E	80	S-E	C69		34%	57%	3%	0%	3%	3%	100%	1.97	3.34	1.67	3.66	1.83
Highway 413	Hwy 413 at Hwy 427_S-W	90	S-W	C70		33%	55%	5%	0%	3%	3%	100%	2.03	3.45	1.73	3.69	1.85
Highway 413	Hwy 413 at Hwy 27_W-N/S	70	W-N/S	C71		33%	55%	5%	0%	3%	3%	100%	2.03	3.45	1.72	3.48	1.74
Highway 413	Hwy 413 at Hwy 27_N/S-E	40	N/S-E	C72		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.23	1.61
Highway 413	Hwy 413 at Hwy 27_E-N/S	50	E-N/S	C73		35%	59%	3%	0%	1%	1%	100%	1.89	3.21	1.61	3.40	1.70
Highway 413	Hwy 413 at Hwy 27_N/S-W	60	N/S-W	C74		33%	55%	4%	0%	4%	3%	100%	2.02	3.43	1.72	3.46	1.73

Appendix A.2.2: PM Traffic Composition by Source for 2051 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %						
					MOVES SourceTypeID >>	21	31	52	53	61	62							
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00							
Highway 413	Hwy 413 at Weston Rd_W-N/S	70	W-N/S	C81		31%	51%	6%	0%	6%	5%	100%	2.16	3.68	1.84	3.62	1.81
Highway 413	Hwy 413 at Weston Rd_N/S-W	60	N/S-W	C82		31%	52%	6%	0%	6%	5%	100%	2.16	3.67	1.83	3.64	1.82
Highway 413	Hwy 413 at Hwy 400_W-N	100	W-N	C83		31%	52%	6%	0%	6%	5%	100%	2.15	3.66	1.83	4.03	2.02
Highway 413	Hwy 413 at Hwy 400_W-S	90	W-S	C84		27%	46%	10%	0%	8%	8%	100%	2.36	4.01	2.00	3.93	1.96
Highway 413	Hwy 413 at Hwy 400_N-W	90	N-W	C85		31%	52%	7%	0%	5%	4%	100%	2.13	3.62	1.81	3.87	1.94
Highway 413	Hwy 413 at Hwy 400_S-W	90	S-W	C86		28%	46%	11%	0%	8%	7%	100%	2.34	3.98	1.99	3.77	1.89
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	60	NB	D01		37%	61%	0%	0%	1%	1%	100%	1.81	3.08	1.54	3.13	1.57
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	60	SB	D02		37%	62%	0%	0%	1%	1%	100%	1.79	3.04	1.52	3.07	1.54
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	60	NB	D03		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.12	1.56
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	60	SB	D04		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.25	1.63
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	60	EB	D05		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.57	3.17	1.59
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	60	WB	D06		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.26	1.63
Steeles Ave	Steeles Ave At Hwy 413_EB	80	EB	D07		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.58	3.20	1.60
Steeles Ave	Steeles Ave At Hwy 413_WB	80	WB	D08		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.58	3.27	1.63
Steeles Ave	Steeles Ave E of Ninth Line S_EB	80	EB	D09		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.13	1.57
Steeles Ave	Steeles Ave E of Ninth Line S_WB	80	WB	D10		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.22	1.61
Steeles Ave	Steeles Ave E of Tenth Line N_EB	80	EB	D11		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.16	1.58
Steeles Ave	Steeles Ave E of Tenth Line N_WB	80	WB	D12		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.26	1.63
Ninth Line N	Ninth Line N N of Steeles Ave_NB	60	NB	D13		35%	58%	3%	0%	3%	2%	100%	1.93	3.28	1.64	3.33	1.66
Ninth Line N	Ninth Line N N of Steeles Ave_SB	60	SB	D14		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.29	1.64
Ninth Line S	Ninth Line S S of Steeles Ave_NB	60	NB	D15		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.25	1.62
Ninth Line S	Ninth Line S S of Steeles Ave_SB	60	SB	D16		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.25	1.63
Tenth Line	Tenth Line At Hwy 413_NB	70	NB	D17		36%	59%	2%	0%	2%	2%	100%	1.87	3.19	1.59	3.45	1.72
Tenth Line	Tenth Line At Hwy 413_SB	70	SB	D18		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.28	1.64
Derry Rd	Derry Rd W of Hwy 407_EB	80	EB	D19		34%	56%	6%	0%	2%	2%	100%	1.99	3.39	1.69	3.32	1.66
Derry Rd	Derry Rd W of Hwy 407_WB	80	WB	D20		34%	57%	7%	0%	1%	1%	100%	1.95	3.31	1.65	3.92	1.96
Derry Rd	Derry Rd E of Hwy 407_EB	80	EB	D21		34%	56%	5%	0%	3%	2%	100%	1.99	3.39	1.69	3.26	1.63
Derry Rd	Derry Rd E of Hwy 407_WB	80	WB	D22		35%	58%	3%	0%	2%	2%	100%	1.93	3.28	1.64	3.81	1.90
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	60	NB	D23		35%	58%	3%	0%	2%	2%	100%	1.91	3.26	1.63	3.18	1.59
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	60	SB	D24		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.57	3.23	1.61
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	60	NB	D25		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	60	SB	D26		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.17	1.59
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	80	NB	D27		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.13	1.56
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	80	SB	D28		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.14	1.57
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	80	NB	D29		36%	60%	2%	0%	2%	1%	100%	1.87	3.17	1.59	3.22	1.61
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	80	SB	D30		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.20	1.60
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	80	NB	D31		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.27	1.63
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	80	SB	D32		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.54	3.16	1.58
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	60	EB	D33		36%	60%	2%	0%	2%	1%	100%	1.87	3.17	1.59	3.32	1.66
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	60	WB	D34		34%	58%	3%	0%	3%	3%	100%	1.94	3.30	1.65	3.21	1.60
5 Side Rd	5 Side Rd At Hwy 413_EB	60	EB	D35		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.11	1.56
5 Side Rd	5 Side Rd At Hwy 413_WB	60	WB	D36		37%	62%	1%	0%	1%	0%	100%	1.80	3.06	1.53	3.26	1.63
Heritage Rd	Heritage Rd At Hwy 413_NB	60	NB	D37		37%	61%	0%	0%	1%	1%	100%	1.80	3.07	1.53	3.09	1.54
Heritage Rd	Heritage Rd At Hwy 413_SB	60	SB	D38		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.14	1.57
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	60	NB	D39		36%	61%	0%	0%	1%	1%	100%	1.82	3.09	1.55	3.06	1.53
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	60	SB	D40		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.11	1.55
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	60	NB	D41		36%	61%	0%	0%	1%	1%	100%	1.82	3.09	1.54	3.04	1.52
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	60	SB	D42		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.17	1.59
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	60	NB	D43		35%	58%	3%	0%	2%	2%	100%	1.92	3.27	1.63	3.13	1.57
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	60	SB	D44		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.20	1.60
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	60	EB	D45		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.29	1.64
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	60	WB	D46		35%	58%	2%	0%	3%	3%	100%	1.93	3.29	1.64	3.37	1.69
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	60	EB	D47		36%	60%	2%	0%	1%	1%	100%	1.86	3.15	1.58	3.23	1.61
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	60	WB	D48		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.13	1.57
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	60	EB	D49		35%	58%	3%	0%	2%	2%	100%	1.93	3.27	1.64	3.43	1.72
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	60	WB	D50		34%	57%	4%	0%	3%	2%	100%	1.98	3.36	1.68	3.45	1.72

Appendix A.2.2: PM Traffic Composition by Source for 2051 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %						
					MOVES SourceTypeID >>	21	31	52	53	61	62							
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00							
Wanless Dr	Wanless Dr W of Heritage Rd_EB	60	EB	D51		37%	61%	1%	0%	0%	0%	100%	1.81	3.07	1.53	3.19	1.59
Wanless Dr	Wanless Dr W of Heritage Rd_WB	60	WB	D52		37%	61%	1%	0%	0%	0%	100%	1.81	3.07	1.53	3.35	1.68
Wanless Dr	Wanless Dr At Hwy 413_EB	60	EB	D53		36%	60%	2%	0%	1%	1%	100%	1.84	3.12	1.56	3.26	1.63
Wanless Dr	Wanless Dr At Hwy 413_WB	60	WB	D54		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.25	1.63
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	80	EB	D55		34%	57%	3%	0%	3%	2%	100%	1.95	3.31	1.65	3.35	1.67
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	80	WB	D56		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.29	1.64
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	80	EB	D57		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.24	1.62
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	80	WB	D58		35%	59%	2%	0%	1%	1%	100%	1.88	3.20	1.60	3.15	1.58
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	80	EB	D59		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.30	1.65
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	80	WB	D60		35%	59%	3%	0%	1%	1%	100%	1.89	3.22	1.61	3.20	1.60
Mississauga Rd	Mississauga Rd At Hwy 413_NB	80	NB	D61		33%	56%	7%	0%	2%	2%	100%	2.01	3.42	1.71	3.43	1.71
Mississauga Rd	Mississauga Rd At Hwy 413_SB	80	SB	D62		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.46	1.73
Creditview Rd	Creditview Rd At Hwy 413_NB	70	NB	D63		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.75	1.87
Creditview Rd	Creditview Rd At Hwy 413_SB	70	SB	D64		30%	50%	8%	0%	6%	6%	100%	2.20	3.74	1.87	3.58	1.79
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	80	NB	D65		33%	55%	5%	0%	4%	3%	100%	2.03	3.44	1.72	3.47	1.74
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	80	SB	D66		33%	55%	5%	0%	4%	3%	100%	2.04	3.46	1.73	3.56	1.78
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	80	NB	D67		26%	43%	13%	1%	10%	9%	100%	2.47	4.20	2.10	4.06	2.03
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	80	SB	D68		31%	52%	6%	0%	6%	5%	100%	2.15	3.66	1.83	3.66	1.83
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	80	NB	D69		35%	58%	2%	0%	2%	2%	100%	1.92	3.27	1.63	3.64	1.82
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	80	SB	D70		28%	47%	12%	1%	7%	7%	100%	2.34	3.97	1.99	3.81	1.90
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	70	EB	D71		32%	53%	5%	0%	5%	5%	100%	2.10	3.57	1.78	3.58	1.79
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	70	WB	D72		31%	52%	7%	0%	5%	5%	100%	2.14	3.64	1.82	3.70	1.85
Old School Rd	Old School Rd At Hwy 413_EB	70	EB	D73		30%	50%	4%	0%	8%	8%	100%	2.21	3.76	1.88	3.52	1.76
Old School Rd	Old School Rd At Hwy 413_WB	70	WB	D74		31%	52%	5%	0%	6%	5%	100%	2.13	3.61	1.81	3.40	1.70
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	80	NB	D75		35%	59%	4%	0%	1%	1%	100%	1.89	3.22	1.61	3.23	1.61
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	80	SB	D76		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.31	1.65
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	80	NB	D77		35%	58%	4%	0%	2%	2%	100%	1.92	3.27	1.64	3.46	1.73
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	80	SB	D78		33%	55%	5%	0%	3%	3%	100%	2.02	3.43	1.72	3.44	1.72
Old School Rd	Old School Rd W of Hurontario St_EB	70	EB	D79		31%	52%	6%	0%	5%	5%	100%	2.13	3.62	1.81	3.64	1.82
Old School Rd	Old School Rd W of Hurontario St_WB	70	WB	D80		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.36	1.68
Old School Rd	Old School Rd E of Hurontario St_EB	70	EB	D81		37%	61%	1%	0%	1%	1%	100%	1.81	3.07	1.54	3.15	1.57
Old School Rd	Old School Rd E of Hurontario St_WB	70	WB	D82		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.02	1.51
Hurontario St	Hurontario St S of Old School Rd_NB	80	NB	D83		35%	58%	2%	0%	3%	2%	100%	1.92	3.26	1.63	3.43	1.72
Hurontario St	Hurontario St S of Old School Rd_SB	80	SB	D84		35%	58%	2%	0%	3%	2%	100%	1.93	3.29	1.64	3.42	1.71
Hurontario St	Hurontario St S of Hwy 413_NB	80	NB	D85		33%	56%	3%	0%	4%	3%	100%	2.00	3.40	1.70	3.55	1.78
Hurontario St	Hurontario St S of Hwy 413_SB	80	SB	D86		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.41	1.70
Hurontario St	Hurontario St N of Hwy 413_NB	80	NB	D87		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.68	3.62	1.81
Hurontario St	Hurontario St N of Hwy 413_SB	80	SB	D88		33%	55%	5%	0%	4%	4%	100%	2.05	3.49	1.74	3.48	1.74
Kennedy Rd	Kennedy Rd At Hwy 413_NB	60	NB	D89		34%	58%	3%	0%	2%	2%	100%	1.94	3.30	1.65	3.35	1.68
Kennedy Rd	Kennedy Rd At Hwy 413_SB	60	SB	D90		28%	46%	12%	1%	7%	6%	100%	2.34	3.98	1.99	3.70	1.85
Old School Rd	Old School Rd W of Heart Lake Rd_EB	70	EB	D91		37%	61%	0%	0%	1%	1%	100%	1.81	3.07	1.53	3.17	1.58
Old School Rd	Old School Rd W of Heart Lake Rd_WB	70	WB	D92		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.12	1.56
Old School Rd	Old School Rd At Hwy 410_EB	70	EB	D93		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.26	1.63
Old School Rd	Old School Rd At Hwy 410_WB	70	WB	D94		36%	61%	1%	0%	1%	0%	100%	1.82	3.09	1.54	3.12	1.56
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	60	NB	E01		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.57	3.21	1.61
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	60	SB	E02		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.26	1.63
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	80	NB	E03		35%	59%	3%	0%	2%	2%	100%	1.90	3.23	1.61	3.16	1.58
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	80	SB	E04		36%	60%	2%	0%	1%	1%	100%	1.84	3.13	1.56	3.41	1.71
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	80	NB	E05		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.16	1.58
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	80	SB	E06		35%	59%	4%	0%	1%	1%	100%	1.88	3.19	1.59	3.25	1.63
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	60	EB	E07		36%	60%	2%	0%	2%	1%	100%	1.87	3.17	1.59	3.20	1.60
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	60	WB	E08		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.18	1.59
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	60	EB	E09		36%	59%	2%	0%	2%	2%	100%	1.87	3.18	1.59	3.22	1.61
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	60	WB	E10		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.16	1.58
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	60	EB	E11		35%	59%	2%	0%	2%	2%	100%	1.88	3.19	1.59	3.22	1.61
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	60	WB	E12		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.55	3.23	1.61

Appendix A.2.2: PM Traffic Composition by Source for 2051 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	80	NB	E13		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.21	1.61
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	80	SB	E14		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.20	1.60
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	80	NB	E15		36%	60%	1%	0%	2%	2%	100%	1.86	3.15	1.58	3.23	1.62
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	80	SB	E16		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.24	1.62
Dixie Rd	Dixie Rd At Hwy 413_NB	80	NB	E17		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.34	1.67
Dixie Rd	Dixie Rd At Hwy 413_SB	80	SB	E18		35%	58%	4%	0%	2%	2%	100%	1.93	3.29	1.64	3.18	1.59
Countryside Dr	Countryside Dr At Hwy 410_EB	60	EB	E19		34%	58%	3%	0%	2%	2%	100%	1.94	3.29	1.65	3.24	1.62
Countryside Dr	Countryside Dr At Hwy 410_WB	60	WB	E20		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.55	3.28	1.64
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	80	NB	E21		36%	59%	1%	0%	2%	2%	100%	1.87	3.19	1.59	3.36	1.68
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	80	SB	E22		36%	60%	0%	0%	2%	2%	100%	1.86	3.17	1.58	3.34	1.67
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	80	NB	E23		33%	55%	5%	0%	4%	3%	100%	2.04	3.46	1.73	4.06	2.03
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	80	SB	E24		31%	51%	8%	0%	5%	5%	100%	2.17	3.69	1.84	3.50	1.75
Old School Rd	Old School Rd E of Bramalea Rd_EB	70	EB	E25		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.28	1.64
Old School Rd	Old School Rd E of Bramalea Rd_WB	70	WB	E26		37%	62%	0%	0%	1%	1%	100%	1.79	3.05	1.52	3.09	1.55
Old School Rd	Old School Rd E of Torbram Road_EB	70	EB	E27		34%	58%	2%	0%	3%	3%	100%	1.94	3.29	1.65	3.57	1.79
Old School Rd	Old School Rd E of Torbram Road_WB	70	WB	E28		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.13	1.57
Torbram Rd	Torbram Rd S of Old School Rd_NB	70	NB	E29		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.03	1.51
Torbram Rd	Torbram Rd S of Old School Rd_SB	70	SB	E30		37%	62%	1%	0%	0%	0%	100%	1.78	3.03	1.52	3.12	1.56
Torbram Rd	Torbram Rd At Hwy 413_NB	70	NB	E31		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.02	1.51
Torbram Rd	Torbram Rd At Hwy 413_SB	70	SB	E32		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.51	3.07	1.53
Airport Rd	Airport Rd S of Old School Rd_NB	60	NB	E33		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.14	1.57
Airport Rd	Airport Rd S of Old School Rd_SB	60	SB	E34		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.16	1.58
Airport Rd	Airport Rd S of Hwy 413_NB	60	NB	E35		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.26	1.63
Airport Rd	Airport Rd S of Hwy 413_SB	60	SB	E36		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.58	3.20	1.60
Airport Rd	Airport Rd N of Hwy 413_NB	60	NB	E37		36%	59%	2%	0%	2%	2%	100%	1.87	3.19	1.59	3.27	1.63
Airport Rd	Airport Rd N of Hwy 413_SB	60	SB	E38		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.62	3.24	1.62
Healey Rd	Healey Rd E of Airport Rd_EB	70	EB	E39		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.14	1.57
Healey Rd	Healey Rd E of Airport Rd_WB	70	WB	E40		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.08	1.54
Healey Rd	Healey Rd At Hwy 413_EB	70	EB	E41		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.04	1.52
Healey Rd	Healey Rd At Hwy 413_WB	70	WB	E42		35%	59%	3%	0%	2%	1%	100%	1.89	3.21	1.60	3.16	1.58
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	70	EB	E43		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.02	1.51
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	70	WB	E44		37%	61%	1%	0%	1%	1%	100%	1.80	3.06	1.53	3.07	1.53
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	80	NB	E45		35%	58%	3%	0%	2%	2%	100%	1.91	3.25	1.63	3.31	1.66
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	80	SB	E46		34%	57%	4%	0%	2%	2%	100%	1.95	3.32	1.66	3.40	1.70
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	80	NB	E47		36%	60%	2%	0%	1%	1%	100%	1.87	3.17	1.59	3.30	1.65
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	80	SB	E48		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.30	1.65
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	80	NB	E49		35%	58%	4%	0%	2%	2%	100%	1.93	3.28	1.64	3.21	1.61
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	80	SB	E50		36%	60%	1%	0%	2%	2%	100%	1.87	3.18	1.59	3.32	1.66
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	80	NB	E51		35%	59%	3%	0%	2%	1%	100%	1.90	3.22	1.61	3.11	1.55
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	80	SB	E52		35%	59%	0%	0%	3%	2%	100%	1.88	3.20	1.60	3.34	1.67
The Gore Rd	The Gore Rd S of Hwy 413_NB	80	NB	E53		36%	60%	2%	0%	1%	1%	100%	1.87	3.18	1.59	3.40	1.70
The Gore Rd	The Gore Rd S of Hwy 413_SB	80	SB	E54		32%	53%	5%	0%	5%	5%	100%	2.10	3.57	1.78	3.45	1.73
The Gore Rd	The Gore Rd N of Hwy 413_NB	80	NB	E55		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.81	1.91
The Gore Rd	The Gore Rd N of Hwy 413_SB	80	SB	E56		36%	59%	2%	0%	2%	2%	100%	1.87	3.19	1.59	3.19	1.59
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	70	NB	E57		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.08	1.54
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	70	SB	E58		36%	60%	2%	0%	2%	1%	100%	1.87	3.17	1.59	3.33	1.67
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	80	NB	E59		34%	56%	4%	0%	3%	3%	100%	1.99	3.37	1.69	3.74	1.87
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	80	SB	E60		33%	55%	5%	0%	4%	3%	100%	2.02	3.43	1.71	3.39	1.70
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	80	NB	E61		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.06	1.53
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	80	SB	E62		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.08	1.54
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	70	EB	E63		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.67	3.38	1.69
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	70	WB	E64		36%	60%	2%	0%	2%	2%	100%	1.87	3.18	1.59	3.30	1.65
Mayfield Rd	Mayfield Rd At Hwy 413_EB	70	EB	E65		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.10	1.55
Mayfield Rd	Mayfield Rd At Hwy 413_WB	70	WB	E66		37%	61%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.19	1.59
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	80	NB	E67		36%	60%	2%	0%	1%	1%	100%	1.85	3.14	1.57	3.12	1.56
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	80	SB	E68		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.52	3.35	1.68

Appendix A.2.2: PM Traffic Composition by Source for 2051 Build Scenario

Highway 413

GTA West

RWDI Project#: 1301992

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %						
					MOVES SourceTypeID >>	21	31	52	53	61	62							
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00							
Coleraine Dr	Coleraine Dr At Highway 413_NB	70	NB	E69		37%	62%	1%	0%	0%	0%	100%	1.80	3.05	1.53	3.04	1.52	
Coleraine Dr	Coleraine Dr At Highway 413_SB	70	SB	E70		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.06	1.53	
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	70	NB	E71		37%	62%	1%	0%	0%	0%	100%	1.78	3.03	1.52	3.02	1.51	
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	70	SB	E72		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.04	1.52	
Countryside Dr	Countryside Dr W of Hwy 50_EB	60	EB	E73		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.10	1.55	
Countryside Dr	Countryside Dr W of Hwy 50_WB	60	WB	E74		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.50	3.01	1.50	
Highway 50	Hwy 50 S of Countryside Dr_NB	70	NB	E75		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.16	1.58	
Highway 50	Hwy 50 S of Countryside Dr_SB	70	SB	E76		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.14	1.57	
Highway 50	Hwy 50 At Hwy 413_NB	70	NB	E77		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.14	1.57	
Highway 50	Hwy 50 At Hwy 413_SB	70	SB	E78		37%	62%	1%	0%	1%	0%	100%	1.80	3.06	1.53	3.14	1.57	
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	70	NB	E79		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.10	1.55	
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	70	SB	E80		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.28	1.64	
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	60	EB	E81		37%	62%	1%	0%	0%	0%	100%	1.79	3.05	1.53	3.02	1.51	
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	60	WB	E82		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.03	1.52	
Nashville Rd	Nashville Rd E of Hwy 50_EB	70	EB	E83		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.03	1.52	
Nashville Rd	Nashville Rd E of Hwy 50_WB	70	WB	E84		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.01	1.51	
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	60	EB	E85		37%	62%	1%	0%	0%	0%	100%	1.80	3.06	1.53	3.11	1.55	
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	60	WB	E86		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.09	1.54	
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	60	EB	E87		35%	59%	3%	0%	2%	2%	100%	1.90	3.24	1.62	3.41	1.71	
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	60	WB	E88		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.25	1.62	
Huntington Rd	Huntington Rd At Hwy 413_NB	60	NB	E89		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.03	1.51	
Huntington Rd	Huntington Rd At Hwy 413_SB	60	SB	E90		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.05	1.52	
Huntington Rd	Huntington Rd N of Kirby Rd_NB	60	NB	E91		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50	
Huntington Rd	Huntington Rd N of Kirby Rd_SB	60	SB	E92		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50	
Kirby Rd	Kirby Rd W of Huntington Rd_EB	60	EB	E93		37%	62%	0%	0%	0%	0%	100%	1.77	3.02	1.51	3.05	1.53	
Kirby Rd	Kirby Rd W of Huntington Rd_WB	60	WB	E94		37%	62%	1%	0%	0%	0%	100%	1.78	3.02	1.51	3.10	1.55	
Highway 27	Hwy 27 S of Hwy 413_NB	80	NB	E95		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.30	1.65	
Highway 27	Hwy 27 S of Hwy 413_SB	80	SB	E96		35%	58%	2%	0%	2%	2%	100%	1.92	3.26	1.63	3.30	1.65	
Highway 27	Hwy 27 N of Hwy 413_NB	80	NB	E97		35%	59%	2%	0%	2%	2%	100%	1.89	3.22	1.61	3.46	1.73	
Highway 27	Hwy 27 N of Hwy 413_SB	80	SB	E98		35%	58%	2%	0%	3%	2%	100%	1.93	3.28	1.64	3.33	1.66	
Kirby Rd	Kirby Rd E of Hwy 27_EB	60	EB	F01		35%	59%	2%	0%	2%	2%	100%	1.90	3.24	1.62	3.30	1.65	
Kirby Rd	Kirby Rd E of Hwy 27_WB	60	WB	F02		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.16	1.58	
Kipling Ave	Kipling Ave At Hwy 413_NB	80	NB	F03		37%	61%	0%	0%	1%	1%	100%	1.81	3.08	1.54	3.22	1.61	
Kipling Ave	Kipling Ave At Hwy 413_SB	80	SB	F04		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.13	1.57	
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	60	EB	F05		36%	60%	1%	0%	1%	1%	100%	1.85	3.15	1.58	3.14	1.57	
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	60	WB	F06		34%	56%	3%	0%	4%	3%	100%	1.99	3.39	1.69	3.37	1.68	
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	60	EB	F07		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.12	1.56	
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	60	WB	F08		35%	58%	3%	0%	2%	2%	100%	1.92	3.26	1.63	3.30	1.65	
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	80	NB	F09		37%	61%	1%	0%	1%	1%	100%	1.81	3.08	1.54	3.16	1.58	
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	80	SB	F10		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.09	1.54	
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	80	NB	F13		35%	59%	2%	0%	2%	2%	100%	1.88	3.20	1.60	3.26	1.63	
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	80	SB	F14		35%	59%	0%	0%	3%	3%	100%	1.89	3.21	1.60	3.29	1.65	
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	70	EB	F15		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.08	1.54	
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	70	WB	F16		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.15	1.57	
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	70	EB	F17		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.12	1.56	
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	70	WB	F18		36%	61%	0%	0%	1%	1%	100%	1.83	3.10	1.55	3.22	1.61	
Weston Rd	Weston Rd N of Kirby Rd_NB	70	NB	F19		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50	
Weston Rd	Weston Rd N of Kirby Rd_SB	70	SB	F20		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50	
Weston Rd	Weston Rd N of Hwy 413_NB	70	NB	F21		31%	52%	6%	0%	5%	5%	100%	2.13	3.62	1.81	3.65	1.82	
Weston Rd	Weston Rd N of Hwy 413_SB	70	SB	F22		30%	50%	8%	0%	7%	6%	100%	2.23	3.79	1.89	3.69	1.84	
Weston Rd	Weston Rd N of King Vaughan Rd_NB	70	NB	F23		34%	56%	3%	0%	4%	3%	100%	1.99	3.39	1.69	3.44	1.72	
Weston Rd	Weston Rd N of King Vaughan Rd_SB	70	SB	F24		34%	57%	3%	0%	3%	3%	100%	1.97	3.35	1.68	3.40	1.70	
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	60	EB	F25		33%	55%	4%	0%	4%	4%	100%	2.04	3.47	1.73	3.43	1.71	
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	60	WB	F26		32%	54%	5%	0%	5%	4%	100%	2.09	3.55	1.77	3.58	1.79	
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	60	EB	F27		34%	56%	4%	0%	3%	3%	100%	1.99	3.39	1.69	3.50	1.75	
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	60	WB	F28		32%	54%	6%	0%	4%	4%	100%	2.08	3.53	1.76	3.46	1.73	

Appendix A.2.2: PM Traffic Composition by Source for 2051 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID		Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Kirby Rd	Kirby Rd At Hwy 400_EB	60	EB	F29		35%	59%	2%	0%	2%	2%	100%	1.90	3.23	1.61	3.17	1.59
Kirby Rd	Kirby Rd At Hwy 400_WB	60	WB	F30		37%	62%	0%	0%	0%	0%	100%	1.78	3.03	1.52	3.17	1.58
Steeles Ave	Steeles Ave W of Ninth Line N_EB	60	EB	F31		36%	61%	1%	0%	1%	1%	100%	1.83	3.12	1.56	3.15	1.58
Steeles Ave	Steeles Ave W of Ninth Line N_WB	60	WB	F32		36%	60%	1%	0%	1%	1%	100%	1.85	3.14	1.57	3.25	1.62
Heritage Rd	Heritage Rd S of Wanless Dr_NB	60	NB	F33		37%	62%	0%	0%	1%	1%	100%	1.80	3.06	1.53	3.04	1.52
Heritage Rd	Heritage Rd S of Wanless Dr_SB	60	SB	F34		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.20	1.60
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	80	NB	F35		36%	61%	2%	0%	1%	1%	100%	1.83	3.12	1.56	3.12	1.56
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	80	SB	F36		35%	59%	4%	0%	1%	1%	100%	1.89	3.22	1.61	3.24	1.62
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	60	EB	F37		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.22	1.61
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	60	WB	F38		36%	61%	1%	0%	1%	1%	100%	1.82	3.09	1.54	3.20	1.60
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	80	NB	F39		36%	61%	1%	0%	1%	1%	100%	1.82	3.10	1.55	3.14	1.57
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	80	SB	F40		36%	60%	1%	0%	2%	2%	100%	1.86	3.16	1.58	3.14	1.57
Old School Rd	Old School Rd W of Bramalea Rd_EB	70	EB	F41		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.08	1.54
Old School Rd	Old School Rd W of Bramalea Rd_WB	70	WB	F42		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.00	1.50
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	60	NB	F43		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	60	SB	F44		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Nashville Rd	Nashville Rd At Hwy 427_EB	70	EB	F45		37%	62%	0%	0%	0%	0%	100%	1.78	3.02	1.51	3.03	1.52
Nashville Rd	Nashville Rd At Hwy 427_WB	70	WB	F46		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.01	1.51
Kirby Rd	Kirby Rd W of Hwy 27_EB	60	EB	F47		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.17	1.59
Kirby Rd	Kirby Rd W of Hwy 27_WB	60	WB	F48		36%	61%	1%	0%	1%	1%	100%	1.83	3.11	1.56	3.37	1.69
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	60	EB	F49		34%	56%	4%	0%	3%	3%	100%	1.99	3.38	1.69	3.43	1.72
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	60	WB	F50		32%	54%	6%	0%	4%	4%	100%	2.07	3.51	1.76	3.44	1.72
Jane St	Jane St N of King Vaughan Rd_NB	70	NB	F51		36%	60%	2%	0%	1%	1%	100%	1.85	3.15	1.58	3.52	1.76
Jane St	Jane St N of King Vaughan Rd_SB	70	SB	F52		36%	60%	2%	0%	1%	1%	100%	1.86	3.16	1.58	3.16	1.58
Jane St	Jane St S of King Vaughan Rd_NB	70	NB	F53		37%	62%	0%	0%	0%	0%	100%	1.77	3.01	1.51	3.05	1.52
Jane St	Jane St S of King Vaughan Rd_SB	70	SB	F54		37%	62%	1%	0%	0%	0%	100%	1.78	3.03	1.52	3.03	1.51
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	70	N-E/W	F71		34%	57%	4%	0%	3%	2%	100%	1.96	3.33	1.67	3.19	1.60
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	40	E-S	F72		33%	55%	6%	0%	3%	3%	100%	2.02	3.43	1.71	3.40	1.70
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	60	W-S	F73		37%	61%	1%	0%	1%	1%	100%	1.80	3.07	1.53	3.03	1.52
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	70	S-E/W	F74		33%	55%	6%	0%	3%	3%	100%	2.03	3.46	1.73	3.62	1.81
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	60	E-N	F75		35%	59%	2%	0%	1%	1%	100%	1.88	3.20	1.60	3.26	1.63
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	40	W-N	F76		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	2.99	1.50
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	70	N-E/W	F77		32%	54%	6%	0%	4%	4%	100%	2.08	3.53	1.76	3.48	1.74
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	40	E-S	F78		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.02	1.51
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	60	W-S	F79		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.05	1.52
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	70	S-E/W	F80		37%	62%	1%	0%	0%	0%	100%	1.79	3.04	1.52	3.04	1.52
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	60	E-N	F81		30%	50%	8%	0%	6%	5%	100%	2.20	3.74	1.87	3.85	1.92
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	40	W-N	F82		37%	62%	1%	0%	0%	0%	100%	1.79	3.03	1.52	3.25	1.62
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	70	N-E/W	F83		35%	59%	3%	0%	2%	2%	100%	1.91	3.24	1.62	3.29	1.64
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	40	E-S	F84		36%	61%	0%	0%	1%	1%	100%	1.83	3.11	1.56	3.53	1.76
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	60	W-S	F85		36%	60%	1%	0%	1%	1%	100%	1.84	3.13	1.56	3.22	1.61
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	70	S-E/W	F86		35%	58%	1%	0%	3%	3%	100%	1.92	3.26	1.63	3.27	1.64
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	60	E-N	F87		35%	59%	2%	0%	2%	1%	100%	1.88	3.19	1.60	3.46	1.73
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	40	W-N	F88		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.41	1.71
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	80	E-N	G01		33%	55%	3%	0%	4%	4%	100%	2.02	3.43	1.72	3.24	1.62
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	80	N-E	G02		35%	59%	2%	0%	2%	1%	100%	1.88	3.20	1.60	3.26	1.63
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	100	N-S	G03		23%	39%	30%	1%	3%	3%	100%	2.60	4.42	2.21	4.91	2.45
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	100	S-N	G04		26%	44%	18%	1%	6%	5%	100%	2.44	4.14	2.07	4.39	2.19
Highway 413	Hwy 413 at Hwy 401_E-N	100	E-N	G05		32%	54%	4%	0%	5%	5%	100%	2.08	3.54	1.77	3.29	1.65
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	100	E-N	G06		37%	62%	0%	0%	1%	1%	100%	1.79	3.05	1.53	3.02	1.51
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	70	S-E	G07		35%	59%	1%	0%	3%	2%	100%	1.90	3.22	1.61	3.73	1.86
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	80	N-E	G08		37%	63%	0%	0%	0%	0%	100%	1.76	2.99	1.50	3.04	1.52
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	40	S-W	G09		30%	50%	3%	0%	9%	8%	100%	2.20	3.74	1.87	3.66	1.83
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	70	N-E	G10		35%	59%	2%	0%	2%	2%	100%	1.89	3.21	1.61	3.46	1.73
Highway 401	Hwy 401 E of Trafalgar Rd_EB	100	EB	H01		31%	52%	5%	0%	6%	6%	100%	2.15	3.65	1.82	3.72	1.86
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	100	EB	H02		32%	53%	4%	0%	6%	5%	100%	2.11	3.59	1.79	3.66	1.83

Appendix A.2.2: PM Traffic Composition by Source for 2051 Build Scenario

RWDI Project#: 1301992

Highway 413

GTA West

Road	Description	Average Speed (km/h)	Direction	Model Source ID	Vehicle Composition							Weighted Average Vehicle Height (m)	AERMOD Initial Vertical Dimension (m)	AERMOD Source Release Height (Relhgt) (m)	AERMOD Initial Vertical Dimension Average AM + PM (m)	AERMOD Source Release Height (Relhgt) Average AM + PM
					MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total %					
					MOVES SourceTypeID >>	21	31	52	53	61	62						
					Average Vehicle Height (m) >>	1.53	1.90	4.00	4.00	4.00	4.00						
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	100	EB	H03		32%	54%	4%	0%	5%	4%	100%	2.06	3.49	1.75	3.59	1.80
Highway 401	Hwy 401 E of Trafalgar Rd_WB	100	WB	H04		32%	54%	3%	0%	5%	5%	100%	2.07	3.51	1.76	3.68	1.84
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	100	WB	H05		32%	54%	4%	0%	5%	5%	100%	2.08	3.53	1.76	3.61	1.81
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	100	WB	H06		32%	54%	3%	0%	6%	5%	100%	2.06	3.51	1.75	3.75	1.87
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	100	WB	H07		32%	54%	3%	0%	5%	5%	100%	2.07	3.52	1.76	3.66	1.83
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	60	N-E	H08		35%	58%	1%	0%	3%	3%	100%	1.92	3.26	1.63	3.39	1.70
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	40	S-E	H09		37%	62%	0%	0%	0%	0%	100%	1.79	3.04	1.52	3.20	1.60
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	70	0	H10		34%	57%	2%	0%	3%	3%	100%	1.94	3.31	1.65	3.42	1.71
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	70	0	H11		37%	63%	0%	0%	0%	0%	100%	1.76	3.00	1.50	3.16	1.58
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	100	EB	H12		29%	48%	8%	0%	8%	7%	100%	2.27	3.85	1.93	3.94	1.97
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	80	0	H13		32%	53%	5%	0%	5%	5%	100%	2.10	3.58	1.79	3.69	1.84
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	70	0	H14		25%	41%	7%	0%	14%	13%	100%	2.53	4.30	2.15	4.01	2.01
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	80	0	H15		31%	52%	3%	0%	7%	6%	100%	2.13	3.62	1.81	3.38	1.69
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	70	E-N/S	H16		35%	59%	1%	0%	2%	2%	100%	1.88	3.19	1.60	3.13	1.56

Appendix A.3: Traffic Counts

Appendix A3: Year 2041 AM and PM Peak Traffic Counts, No-Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description/Traffic Profile	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	0	0	0
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	0	0	0
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	0	0	0
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	0	0	0
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	0	0	0
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	0	0	0
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	0	0	0
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	0	0	0
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	0	0	0
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	0	0	0
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	0	0	0
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	0	0	0
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	0	0	0
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	0	0	0
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	0	0	0
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	0	0	0
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	0	0	0
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	0	0	0
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	0	0	0
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	0	0	0
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	0	0	0
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	0	0	0
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	0	0	0
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	0	0	0
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	0	0	0
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	0	0	0
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	0	0	0
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	0	0	0
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	3271	797	29100
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1440	2536	28400
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	4630	1899	46600
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	2584	3349	42400
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	1925	3485	38600
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	4408	2649	50400
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	0	0	0
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	0	0	0
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	2657	1439	29300
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	1296	2558	27500
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	1852	3193	36000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	3305	2270	39800
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	0	0	0
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	0	0	0
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5419	9812	108800
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	9149	5081	101600
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	4084	8944	93100
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	8323	4016	88100
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	4127	9157	94900
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	9544	4420	99700
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	0	0	0
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	0	0	0
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	0	0	0
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	0	0	0
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	0	0	0
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	0	0	0
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	0	0	0
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	0	0	0
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	0	0	0
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	0	0	0
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	C45	W-N/S	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_N-E	C46	N-E	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_S-E	C47	S-E	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	C48	E-N/S	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_N-W	C49	N-W	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_S-W	C50	S-W	0	0	0
Highway 413	Hwy 413 at Airport Rd_W-N/S	C51	W-N/S	0	0	0
Highway 413	Hwy 413 at Airport Rd_N-E	C52	N-E	0	0	0
Highway 413	Hwy 413 at Airport Rd_S-E	C53	S-E	0	0	0
Highway 413	Hwy 413 at Airport Rd_E-N/S	C54	E-N/S	0	0	0
Highway 413	Hwy 413 at Airport Rd_N-W	C55	N-W	0	0	0
Highway 413	Hwy 413 at Airport Rd_S-W	C56	S-W	0	0	0
Highway 413	Hwy 413 at The Gore Rd_W-N/S	C57	W-N/S	0	0	0
Highway 413	Hwy 413 at The Gore Rd_N/S-E	C58	N/S-E	0	0	0
Highway 413	Hwy 413 at The Gore Rd_E-N/S	C59	E-N/S	0	0	0
Highway 413	Hwy 413 at The Gore Rd_N/S-W	C60	N/S-W	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	C61	W-N/S	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_N-E	C62	N-E	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_S-E	C63	S-E	0	0	0

[1] Annual Average Daily Traffic

Appendix A3: Year 2041 AM and PM Peak Traffic Counts, No-Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description/Traffic Profile	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	C64	E-N/S	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_N-W	C65	N-W	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_S-W	C66	S-W	0	0	0
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	0	0	0
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	0	0	0
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	0	0	0
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	0	0	0
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	0	0	0
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	0	0	0
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	0	0	0
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	0	0	0
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	0	0	0
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	0	0	0
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	0	0	0
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	0	0	0
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	0	0	0
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	0	0	0
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	2754	2064	34400
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	2179	2587	34050
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	3259	2575	41650
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	2604	3105	40800
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	3189	2508	40700
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	2715	3902	47250
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	3318	2697	42950
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	2498	3123	40150
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	2685	2221	35050
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	2156	3103	37550
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	3359	2103	39000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1989	3349	38150
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	783	1269	14650
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1843	883	19450
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1893	1477	24050
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	2186	1933	29400
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	269	716	7050
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1110	353	10450
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	3796	2354	43950
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	2353	3287	40300
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	3077	2604	40600
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	2424	2627	36100
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	3125	1983	36500
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1737	2484	30150
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	3216	2434	40350
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	2600	3037	40250
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	656	2022	19150
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	2103	848	21100
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	656	2022	19150
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	2103	848	21100
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	597	1105	12150
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1218	607	13050
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	825	608	10250
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	632	936	11200
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	988	576	11150
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	355	924	9150
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	519	1192	12200
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	1226	654	13450
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	355	702	7550
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	903	433	9550
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	584	139	5150
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	192	504	4950
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	732	390	8000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	226	715	6700
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	1477	1501	21250
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	1558	1401	21150
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	1725	2094	27300
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	903	433	9550
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	1725	2094	27300
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	1964	1726	26350
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	788	694	10600
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	713	754	10500
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	901	1070	14100
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	1223	796	14400
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	1527	1093	18700
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	1010	1348	16850
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	1604	1260	20450
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	1201	1554	19700
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	1604	1260	20450
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	1201	1554	19700
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	179	384	4000
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	443	198	4600
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	243	111	2550
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	206	245	3200
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	571	544	7950
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	677	596	9100
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	571	544	7950
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	677	596	9100
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	305	346	4650
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	369	311	4850
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	D71	EB	679	529	8650
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	D72	WB	536	598	8100
Old School Rd	Old School Rd At Hwy 413_EB	D73	EB	499	367	6200
Old School Rd	Old School Rd At Hwy 413_WB	D74	WB	399	522	6600
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	D75	NB	482	307	5650
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	D76	SB	603	382	7050
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	D77	NB	223	299	3750
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	D78	SB	483	215	5000
Old School Rd	Old School Rd W of Hurontario St_EB	D79	EB	650	518	8350
Old School Rd	Old School Rd W of Hurontario St_WB	D80	WB	662	1115	12700
Old School Rd	Old School Rd E of Hurontario St_EB	D81	EB	655	377	7350
Old School Rd	Old School Rd E of Hurontario St_WB	D82	WB	375	536	6500
Hurontario St	Hurontario St S of Old School Rd_NB	D83	NB	1350	2683	28800
Hurontario St	Hurontario St S of Old School Rd_SB	D84	SB	2209	1367	25550

[1] Annual Average Daily Traffic

Appendix A3: Year 2041 AM and PM Peak Traffic Counts, No-Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description/Traffic Profile	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Hurontario St	Hurontario St S of Hwy 413_NB	D85	NB	1095	2094	22800
Hurontario St	Hurontario St S of Hwy 413_SB	D86	SB	2246	1218	24750
Hurontario St	Hurontario St N of Hwy 413_NB	D87	NB	1095	2094	22800
Hurontario St	Hurontario St N of Hwy 413_SB	D88	SB	2246	1218	24750
Kennedy Rd	Kennedy Rd At Hwy 413_NB	D89	NB	128	139	1900
Kennedy Rd	Kennedy Rd At Hwy 413_SB	D90	SB	197	76	1950
Old School Rd	Old School Rd W of Heart Lake Rd_EB	D91	EB	791	307	7850
Old School Rd	Old School Rd W of Heart Lake Rd_WB	D92	WB	332	673	7200
Old School Rd	Old School Rd At Hwy 410_EB	D93	EB	770	281	7500
Old School Rd	Old School Rd At Hwy 410_WB	D94	WB	322	641	6900
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	364	583	6750
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	751	631	9850
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	685	464	8200
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	715	703	10150
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	258	473	5200
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	574	286	6150
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3412	2387	41400
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	1931	2957	34900
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3018	2130	36750
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	1893	2507	31450
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3615	2728	45300
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	2802	3702	46450
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	689	936	11600
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	1249	580	13050
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	588	737	9450
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	939	751	12050
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	341	558	6400
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	666	438	7900
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	1679	1127	20050
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	1117	1489	18600
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	28	374	2850
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	392	29	3000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	28	374	2850
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	392	29	3000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	819	616	10250
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	594	774	9750
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	682	788	10500
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	421	671	7800
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	85	360	3200
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	544	171	5100
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	177	520	5000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	665	323	7050
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	819	1713	18100
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	1924	1001	20900
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	596	1379	14100
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	1441	549	14200
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	596	1379	14100
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	1441	549	14200
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	729	663	9950
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	540	856	9950
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	601	573	8400
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	600	759	9700
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	600	435	7400
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	451	764	8700
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	279	592	6200
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	709	309	7250
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	190	548	5250
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	664	201	6200
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	158	582	5300
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	662	237	6400
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	42	574	4400
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	693	87	5550
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	272	914	8450
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	1177	218	9950
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	272	914	8450
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	1177	218	9950
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	722	625	9600
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	567	696	9000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	551	656	8600
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	422	566	7050
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	551	656	8600
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	422	566	7050
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	2421	1411	27350
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	1340	2114	24650
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	2572	1523	29250
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	1466	2387	27500
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	922	933	13250
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	1018	938	13950
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	937	1154	14950
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	1328	972	16450
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	1512	1413	20900
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	1500	1514	21550
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	757	448	8600
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	562	628	8500
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	2094	2511	32900
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	3001	2128	36650
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	2166	2491	33250
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	3043	2298	38150
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	2001	2439	31700
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	2722	2175	35000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	0	0	0
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	0	0	0
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	760	579	9550
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	596	570	8350
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	3753	3406	51150
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	E86	WB	3284	3155	46000
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	E87	EB	3353	2652	42900
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	E88	WB	2713	3587	45000
Huntington Rd	Huntington Rd At Hwy 413_NB	E89	NB	268	251	3700
Huntington Rd	Huntington Rd At Hwy 413_SB	E90	SB	350	204	3950
Huntington Rd	Huntington Rd N of Kirby Rd_NB	E91	NB	10	10	150

[1] Annual Average Daily Traffic

Appendix A3: Year 2041 AM and PM Peak Traffic Counts, No-Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description/Traffic Profile	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Huntington Rd	Huntington Rd N of Kirby Rd_SB	E92	SB	10	10	150
Kirby Rd	Kirby Rd W of Huntington Rd_EB	E93	EB	298	330	4500
Kirby Rd	Kirby Rd W of Huntington Rd_WB	E94	WB	425	222	4600
Highway 27	Hwy 27 S of Hwy 413_NB	E95	NB	1087	1936	21600
Highway 27	Hwy 27 S of Hwy 413_SB	E96	SB	1998	1320	23700
Highway 27	Hwy 27 N of Hwy 413_NB	E97	NB	1087	1936	21600
Highway 27	Hwy 27 N of Hwy 413_SB	E98	SB	1998	1320	23700
Kirby Rd	Kirby Rd E of Hwy 27_EB	F01	EB	811	840	11800
Kirby Rd	Kirby Rd E of Hwy 27_WB	F02	WB	802	732	10950
Kipling Ave	Kipling Ave At Hwy 413_NB	F03	NB	25	159	1300
Kipling Ave	Kipling Ave At Hwy 413_SB	F04	SB	322	8	2350
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	F05	EB	868	493	9700
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	F06	WB	380	710	7800
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	F07	EB	1061	983	14600
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	F08	WB	991	946	13850
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	F09	NB	322	302	4450
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	700	198	6400
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	36	56	650
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	30	18	350
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	1253	923	15550
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	846	1036	13450
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	890	743	11650
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	868	789	11850
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	916	550	10450
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	692	818	10800
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	521	180	5000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	240	390	4500
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	225	152	2700
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	194	204	2850
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	761	584	9600
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	488	688	8400
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	2219	2294	32250
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	2388	1999	31350
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	829	517	9600
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	501	690	8500
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1932	2329	30450
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	2172	2369	32450
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	355	702	7550
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	903	433	9550
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	259	499	5400
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	620	287	6500
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	2629	2063	33500
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	1851	2546	31400
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	137	555	4950
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	538	187	5200
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	794	537	9500
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	532	719	8950
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	33	123	1100
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	428	37	3300
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	760	579	9550
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	596	570	8350
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	23	7	200
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	6	73	550
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	2274	2263	32400
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	2348	1987	30950
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	552	1459	14350
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	2059	482	18150
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	493	1564	14700
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	1903	606	17900
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	1222	403	11600
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	693	475	8350
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	20	73	650
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	684	687	9800
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	214	641	6100
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	43	214	1850
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	0	0	0
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	1370	759	15200
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	1935	1510	24600
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	1852	3193	36050
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	0	0	0
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	0	0	0
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	0	0	0
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	627	601	8750
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	1124	609	12400
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	629	927	11100
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	539	1018	11100
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	627	601	8750
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	1349	704	14650
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	0	0	0
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	0	0	0
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	0	0	0
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	0	0	0
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	0	0	0
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	0	0	0
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	674	160	5950
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	0	0	0
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	94	121	1550
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	674	160	5950
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	10337	7967	130700
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	10337	7967	130700
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	9612	7359	121200
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	6923	9333	116100
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	3399	4089	53500
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	3524	5244	62600
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	7021	9651	119100
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	751	873	11600
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	626	202	5900
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	0	0	0
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	0	0	0
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	0	0	0
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	0	0	0

[1] Annual Average Daily Traffic

Appendix A3: Year 2041 AM and PM Peak Traffic Counts, No-Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description/Traffic Profile	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	H14	0	449	492	6700
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	H15	0	0	0	0
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	H16	E-N/S	1336	1171	17900

[1] Annual Average Daily Traffic

Appendix A.3: Year 2041 AM and PM Peak Traffic Counts, Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	3965	4330	59300
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	5230	4186	67200
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	4380	5444	70200
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	5986	4421	74300
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	3772	4177	56800
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	4643	3684	59500
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	3612	3746	52600
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	4043	3413	53300
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	4690	4030	62300
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	4274	4119	59900
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	5657	4248	70700
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	4477	5284	69700
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	5139	4639	69800
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	4978	4797	69800
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	5013	4402	67200
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	4523	4593	65100
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	4948	4014	64000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	4306	4628	63800
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	4519	3641	58300
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3907	4282	58500
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	5462	5042	75000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4967	5343	73600
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4652	5381	71700
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	5714	4543	73300
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	4274	4405	62000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	4619	4263	63400
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	4274	4405	62000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	4619	4263	63400
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	3451	1353	34300
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1656	2361	28700
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	3921	1273	37100
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1468	2552	28700
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	2318	3701	43000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	4652	3056	55100
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	918	1724	18900
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	1937	847	19900
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	2206	1268	24800
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	928	1687	18700
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	2405	4672	50500
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4303	2840	51000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	1887	3520	38600
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	3443	2380	41600
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	4884	9501	102700
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	9023	4772	98500
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	2994	7012	71500
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	6950	2853	70000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	3031	7224	73200
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	10305	4939	108900
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	777	854	11650
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	870	1472	16700
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	322	495	5850
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1512	1117	18800
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	371	597	6900
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	385	286	4800
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	1111	1492	18600
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	386	209	4250
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	116	16	950
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	212	365	4150
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	910	869	12700
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	645	234	6300
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	1118	1206	16600
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	185	152	2400
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	773	622	9950
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	829	890	12300
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	997	423	10150
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	432	738	8350
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	87	152	1700
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	396	196	4250
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	770	240	7200
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	567	869	10250
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	137	94	1650
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	199	68	1900
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	337	377	5100
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	974	415	9900
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	329	180	3650
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	512	1406	13700
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	310	241	3950
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	310	241	3950
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	1034	217	8950
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	903	630	10950
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	517	608	8050
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	402	1116	10850
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	C45	W-N/S	542	584	8050
Highway 413	Hwy 413 at Bramalea Rd_N-E	C46	N-E	416	287	5000
Highway 413	Hwy 413 at Bramalea Rd_S-E	C47	S-E	0	61	450
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	C48	E-N/S	391	478	6200
Highway 413	Hwy 413 at Bramalea Rd_N-W	C49	N-W	826	608	10250
Highway 413	Hwy 413 at Bramalea Rd_S-W	C50	S-W	20	75	650
Highway 413	Hwy 413 at Airport Rd_W-N/S	C51	W-N/S	559	659	8700
Highway 413	Hwy 413 at Airport Rd_N-E	C52	N-E	217	148	2600
Highway 413	Hwy 413 at Airport Rd_S-E	C53	S-E	278	123	2850
Highway 413	Hwy 413 at Airport Rd_E-N/S	C54	E-N/S	356	188	3900
Highway 413	Hwy 413 at Airport Rd_N-W	C55	N-W	556	51	4350
Highway 413	Hwy 413 at Airport Rd_S-W	C56	S-W	17	101	850
Highway 413	Hwy 413 at The Gore Rd_W-N/S	C57	W-N/S	574	463	7400
Highway 413	Hwy 413 at The Gore Rd_N/S-E	C58	N/S-E	145	90	1700
Highway 413	Hwy 413 at The Gore Rd_E-N/S	C59	E-N/S	127	301	3050
Highway 413	Hwy 413 at The Gore Rd_N/S-W	C60	N/S-W	527	648	8400
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	C61	W-N/S	641	318	6850
Highway 413	Hwy 413 at Humber Station Rd_N-E	C62	N-E	545	857	10000
Highway 413	Hwy 413 at Humber Station Rd_S-E	C63	S-E	1039	862	13550

[1] Annual Average Daily Traffic

Appendix A.3: Year 2041 AM and PM Peak Traffic Counts, Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	C64	E-N/S	1286	1425	19350
Highway 413	Hwy 413 at Humber Station Rd_N-W	C65	N-W	26	17	300
Highway 413	Hwy 413 at Humber Station Rd_S-W	C66	S-W	199	346	3900
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	1390	1280	19050
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	2053	1100	22500
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	581	1620	15700
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	1306	1900	22900
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	758	1057	12950
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	380	81	3300
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	220	457	4850
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	2284	1223	25050
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	1090	1050	15300
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	1306	976	16300
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	2008	2580	32750
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	1176	775	13950
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	819	1517	16700
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	2494	1770	30450
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	2993	2271	37600
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	2379	2902	37700
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	2999	2266	37600
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	2118	2776	34950
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	3173	2303	39100
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	2498	3619	43700
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	3310	2750	43300
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	2420	3002	38700
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	2699	2087	34200
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1949	2908	34700
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	3460	1993	38950
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1801	3251	36100
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	537	1032	11200
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1539	730	16200
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1880	1397	23400
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	2020	1967	28450
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	199	769	6900
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1109	331	10300
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	3780	2586	45450
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	2019	3182	37150
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	3006	2411	38700
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	2073	2501	32650
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	3391	2144	39550
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1980	2813	34250
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	3049	2247	37850
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	2316	2724	36000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1520	3247	34050
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	2989	1411	31450
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1280	2445	26600
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	2408	1488	27850
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	512	953	10450
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1010	569	11300
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	824	696	10850
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	782	934	12250
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1085	738	13000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	498	1073	11200
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	206	738	6750
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	741	296	7400
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	280	754	7400
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	996	478	10550
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	244	145	2800
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	241	201	3150
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	922	418	9550
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	474	875	9650
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	1385	1341	19450
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	1369	1268	18850
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2154	1932	29200
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	996	478	10550
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2438	3107	39600
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2976	2338	37950
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	524	545	7650
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	546	397	6750
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	765	634	10000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	845	459	9300
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	1854	1210	21900
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	1102	1680	19850
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2155	1976	29500
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	1847	2045	27800
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	1431	1534	21200
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	1564	1442	21450
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	167	279	3200
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	435	208	4600
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	179	10	1350
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	73	136	1500
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	1120	570	12050
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	742	846	11350
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	462	663	8050
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	932	517	10350
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	102	375	3400
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	421	205	4450
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	D71	EB	605	467	7650
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	D72	WB	496	573	7650
Old School Rd	Old School Rd At Hwy 413_EB	D73	EB	306	227	3800
Old School Rd	Old School Rd At Hwy 413_WB	D74	WB	348	358	5050
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	D75	NB	299	238	3850
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	D76	SB	285	244	3800
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	D77	NB	267	411	4850
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	D78	SB	512	224	5250
Old School Rd	Old School Rd W of Hurontario St_EB	D79	EB	516	389	6450
Old School Rd	Old School Rd W of Hurontario St_WB	D80	WB	556	961	10850
Old School Rd	Old School Rd E of Hurontario St_EB	D81	EB	470	276	5350
Old School Rd	Old School Rd E of Hurontario St_WB	D82	WB	287	370	4700
Hurontario St	Hurontario St S of Old School Rd_NB	D83	NB	971	1391	16850
Hurontario St	Hurontario St S of Old School Rd_SB	D84	SB	1064	1009	14800

[1] Annual Average Daily Traffic

Appendix A.3: Year 2041 AM and PM Peak Traffic Counts, Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Hurontario St	Hurontario St S of Hwy 413_NB	D85	NB	836	869	12200
Hurontario St	Hurontario St S of Hwy 413_SB	D86	SB	1152	964	15100
Hurontario St	Hurontario St N of Hwy 413_NB	D87	NB	1193	2249	24600
Hurontario St	Hurontario St N of Hwy 413_SB	D88	SB	2272	1397	26200
Kennedy Rd	Kennedy Rd At Hwy 413_NB	D89	NB	139	112	1800
Kennedy Rd	Kennedy Rd At Hwy 413_SB	D90	SB	226	70	2100
Old School Rd	Old School Rd W of Heart Lake Rd_EB	D91	EB	678	150	5900
Old School Rd	Old School Rd W of Heart Lake Rd_WB	D92	WB	175	518	4950
Old School Rd	Old School Rd At Hwy 410_EB	D93	EB	614	125	5300
Old School Rd	Old School Rd At Hwy 410_WB	D94	WB	138	445	4150
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	326	546	6250
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	610	389	7150
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	504	298	5750
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	426	426	6100
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	194	350	3900
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	493	128	4450
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3197	2374	39800
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	1980	2922	35000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	2956	2312	37600
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	2101	2575	33400
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3000	2151	36800
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	2183	3066	37500
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	782	1016	12850
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	1358	842	15700
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	417	568	7050
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	732	580	9350
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	209	479	4900
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	604	297	6450
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	1263	716	14150
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	707	1144	13200
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	25	231	1850
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	180	38	1550
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	786	1140	13750
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	1269	915	15600
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	601	431	7350
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	532	575	7900
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	578	498	7700
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	193	520	5100
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	93	334	3050
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	504	153	4700
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	225	651	6250
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	910	335	8900
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	480	1311	12800
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	1428	836	16150
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	719	1052	12650
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	1281	599	13450
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	700	1491	15650
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	1415	613	14500
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	671	590	9000
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	547	668	8700
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	572	452	7300
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	372	617	7050
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	530	404	6650
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	471	550	7300
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	123	507	4500
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	625	185	5800
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	107	607	5100
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	936	127	7600
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	121	677	5700
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	847	184	7350
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	36	569	4350
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	622	94	5100
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	429	821	8900
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	1075	528	11450
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	241	916	8250
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	857	597	10400
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	595	430	7300
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	494	484	7000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	1449	1540	21350
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	1544	1141	19200
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	727	946	11950
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	704	885	11350
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	2227	1569	27100
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	1420	1955	24100
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	2030	1133	22600
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	1027	1973	21450
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	670	691	9700
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	752	764	10850
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	726	1001	12350
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	1153	831	14150
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	1502	1255	19700
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	1399	1452	20350
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	298	137	3100
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	140	313	3250
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	1809	2183	28500
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	2565	1775	31000
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	2212	2396	32900
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	2840	2190	35950
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	2059	2397	31850
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	587	2066	18950
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	21	61	600
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	343	25	2650
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	542	532	7700
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	512	506	7250
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	2941	3007	42500
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	E86	WB	3140	2731	41950
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	E87	EB	2688	2154	34600
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	E88	WB	2588	2981	39750
Huntington Rd	Huntington Rd At Hwy 413_NB	E89	NB	148	29	1250
Huntington Rd	Huntington Rd At Hwy 413_SB	E90	SB	134	102	1700
Huntington Rd	Huntington Rd N of Kirby Rd_NB	E91	NB	10	10	150

[1] Annual Average Daily Traffic

Appendix A.3: Year 2041 AM and PM Peak Traffic Counts, Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Huntington Rd	Huntington Rd N of Kirby Rd_SB	E92	SB	10	10	150
Kirby Rd	Kirby Rd W of Huntington Rd_EB	E93	EB	159	227	2750
Kirby Rd	Kirby Rd W of Huntington Rd_WB	E94	WB	298	74	2650
Highway 27	Hwy 27 S of Hwy 413_NB	E95	NB	1132	1642	19800
Highway 27	Hwy 27 S of Hwy 413_SB	E96	SB	1858	1274	22350
Highway 27	Hwy 27 N of Hwy 413_NB	E97	NB	815	2239	21800
Highway 27	Hwy 27 N of Hwy 413_SB	E98	SB	2259	1175	24550
Kirby Rd	Kirby Rd E of Hwy 27_EB	F01	EB	765	941	12200
Kirby Rd	Kirby Rd E of Hwy 27_WB	F02	WB	905	600	10750
Kipling Ave	Kipling Ave At Hwy 413_NB	F03	NB	37	29	450
Kipling Ave	Kipling Ave At Hwy 413_SB	F04	SB	34	11	300
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	F05	EB	689	441	8050
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	F06	WB	433	481	6550
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	F07	EB	892	801	12100
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	F08	WB	779	683	10450
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	F09	NB	93	345	3150
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	703	122	5900
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	36	56	650
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	30	18	350
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	1036	643	12000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	564	707	9100
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	405	539	6750
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	549	417	6900
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	761	948	12200
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	1052	746	12850
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	842	1059	13550
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	1304	857	15450
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	292	410	5000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	426	342	5500
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	1103	1021	15150
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	1028	992	14450
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	2306	2604	35050
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	2635	1974	32900
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	1115	779	13550
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	754	965	12250
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1885	2223	29350
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1997	2172	29800
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	280	754	7400
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	996	478	10550
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	144	373	3700
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	470	103	4100
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	2203	1724	28050
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	1583	2189	26950
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	155	424	4150
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	622	180	5750
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	625	344	6900
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	245	539	5600
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	0	0	0
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	0	0	0
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	542	532	7700
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	512	506	7250
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	25	7	250
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	70	550
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	2252	2241	32100
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	2406	2016	31600
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	824	1476	16450
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	2121	601	19450
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	633	1361	14250
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	1754	892	18900
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	861	316	8400
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	835	731	11200
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	61	414	3400
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	1071	971	14600
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	54	579	4500
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	37	211	1800
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	1195	800	14250
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	809	237	7450
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	1246	1024	16200
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	1492	2255	26750
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	805	753	11150
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	169	349	3700
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	303	27	2350
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	235	506	5300
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	577	461	7400
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	784	382	8300
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	106	76	1300
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	206	16	1600
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	466	847	9400
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1310	959	16200
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1020	741	12600
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	829	663	10650
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	433	660	7800
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	32	187	1550
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	649	151	5700
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	307	41	2500
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	134	121	1800
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1652	1070	19450
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	10971	8771	141000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	9101	6765	113300
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	9584	7376	121100
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	6424	8372	105700
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	3021	3148	44100
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	3403	5224	61600
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	6834	9301	115200
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	876	715	11350
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1187	895	14850
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1158	730	13500
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	904	881	12750
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1870	2006	27700
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	2671	2821	39200
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	H14	0	103	66	1200

[1] Annual Average Daily Traffic

Appendix A.3: Year 2041 AM and PM Peak Traffic Counts, Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT[1]
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	H15	0	2900	2486	38450
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	H16	E-N/S	2400	1828	30200

[1] Annual Average Daily Traffic

Appendix A.3: Year 2051 AM and PM Peak Traffic Counts, No-Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	0	0	0
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	0	0	0
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	0	0	0
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	0	0	0
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	0	0	0
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	0	0	0
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	0	0	0
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	0	0	0
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	0	0	0
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	0	0	0
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	0	0	0
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	0	0	0
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	0	0	0
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	0	0	0
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	0	0	0
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	0	0	0
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	0	0	0
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	0	0	0
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	0	0	0
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	0	0	0
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	0	0	0
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	0	0	0
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	0	0	0
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	0	0	0
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	0	0	0
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	0	0	0
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	0	0	0
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	0	0	0
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	4746	1472	44400
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	2464	4100	46900
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	5924	2931	63200
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	3650	4758	60100
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	2323	3787	43600
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	4721	3237	56800
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	0	0	0
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	0	0	0
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3001	1950	35400
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	1595	2926	32300
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	2106	4117	44400
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4028	2651	47700
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	0	0	0
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	0	0	0
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5986	10861	120300
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	10378	5698	114800
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	4512	9900	102900
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	9440	4502	99600
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	4558	10135	104900
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	10824	4956	112700
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	0	0	0
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	0	0	0
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	0	0	0
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	0	0	0
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	0	0	0
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	0	0	0
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	0	0	0
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	0	0	0
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	0	0	0
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	0	0	0
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	0	0	0
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	0	0	0
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	0	0	0
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	0	0	0
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	C45	W-N/S	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_N-E	C46	N-E	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_S-E	C47	S-E	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	C48	E-N/S	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_N-W	C49	N-W	0	0	0
Highway 413	Hwy 413 at Bramalea Rd_S-W	C50	S-W	0	0	0
Highway 413	Hwy 413 at Airport Rd_W-N/S	C51	W-N/S	0	0	0
Highway 413	Hwy 413 at Airport Rd_N-E	C52	N-E	0	0	0
Highway 413	Hwy 413 at Airport Rd_S-E	C53	S-E	0	0	0
Highway 413	Hwy 413 at Airport Rd_E-N/S	C54	E-N/S	0	0	0
Highway 413	Hwy 413 at Airport Rd_N-W	C55	N-W	0	0	0
Highway 413	Hwy 413 at Airport Rd_S-W	C56	S-W	0	0	0
Highway 413	Hwy 413 at The Gore Rd_W-N/S	C57	W-N/S	0	0	0
Highway 413	Hwy 413 at The Gore Rd_N/S-E	C58	N/S-E	0	0	0
Highway 413	Hwy 413 at The Gore Rd_E-N/S	C59	E-N/S	0	0	0
Highway 413	Hwy 413 at The Gore Rd_N/S-W	C60	N/S-W	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	C61	W-N/S	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_N-E	C62	N-E	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_S-E	C63	S-E	0	0	0

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	C64	E-N/S	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_N-W	C65	N-W	0	0	0
Highway 413	Hwy 413 at Humber Station Rd_S-W	C66	S-W	0	0	0
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	0	0	0
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	0	0	0
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	0	0	0
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	0	0	0
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	0	0	0
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	0	0	0
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	0	0	0
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	0	0	0
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	0	0	0
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	0	0	0
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	0	0	0
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	0	0	0
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	0	0	0
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	0	0	0
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	3369	2266	40250
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	2374	3122	39250
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	4123	2907	50200
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	2908	3959	49050
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	3635	2818	46100
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	3119	4517	54550
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	3797	3110	49350
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	3011	3680	47800
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	3054	2446	39300
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	2454	3523	42700
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	3765	2338	43600
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	2340	3771	43650
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1011	1603	18650
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	2084	1158	23150
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	2376	1597	28400
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	2289	2200	32050
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	364	855	8700
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1201	434	11700
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	4228	2680	49350
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	2759	3625	45600
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	3307	2823	43800
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	2702	2733	38800
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	3551	2125	40550
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1851	2794	33200
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	3526	2597	43750
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	2611	3314	42300
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	931	2242	22650
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	2265	963	23050
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	931	2242	22650
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	2265	963	23050
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	874	1304	15550
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1397	710	15050
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	915	645	11150
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	677	1025	12150
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1113	637	12500
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	369	1091	10450
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	661	1333	14250
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	1323	881	15750
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	524	794	9400
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	965	549	10800
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	954	237	8500
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	264	752	7250
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	681	503	8450
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	288	849	8100
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	1905	1786	26350
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	1678	1776	24650
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2090	2342	31650
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	976	536	10800
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2090	2342	31650
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2122	2137	30400
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	861	821	12000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	947	872	13000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	694	1018	12250
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	1300	661	14000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	1824	1169	21400
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	952	1717	19050
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	1772	1849	25850
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	1823	1800	25900
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	1772	1849	25850
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	1823	1800	25900
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	222	729	6800
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	674	240	6550
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	206	149	2550
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	295	214	3650
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	913	863	12700
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	1570	809	17000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	913	863	12700
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	1570	809	17000
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	406	374	5550
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	583	330	6500
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	D71	EB	779	970	12500
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	D72	WB	804	787	11350
Old School Rd	Old School Rd At Hwy 413_EB	D73	EB	535	631	8350
Old School Rd	Old School Rd At Hwy 413_WB	D74	WB	591	628	8700
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	D75	NB	492	269	5450
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	D76	SB	591	454	7450
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	D77	NB	299	326	4450
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	D78	SB	724	257	7000
Old School Rd	Old School Rd W of Hurontario St_EB	D79	EB	687	809	10700
Old School Rd	Old School Rd W of Hurontario St_WB	D80	WB	874	1363	16000
Old School Rd	Old School Rd E of Hurontario St_EB	D81	EB	737	753	10650
Old School Rd	Old School Rd E of Hurontario St_WB	D82	WB	560	757	9400
Hurontario St	Hurontario St S of Old School Rd_NB	D83	NB	1647	3110	34000
Hurontario St	Hurontario St S of Old School Rd_SB	D84	SB	2488	1685	29800
Hurontario St	Hurontario St S of Hwy 413_NB	D85	NB	1261	2418	26300
Hurontario St	Hurontario St S of Hwy 413_SB	D86	SB	2468	1465	28100
Hurontario St	Hurontario St N of Hwy 413_NB	D87	NB	1261	2418	26300
Hurontario St	Hurontario St N of Hwy 413_SB	D88	SB	2468	1465	28100
Kennedy Rd	Kennedy Rd At Hwy 413_NB	D89	NB	305	267	4100

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT
Kennedy Rd	Kennedy Rd At Hwy 413_SB	D90	SB	549	132	4850
Old School Rd	Old School Rd W of Heart Lake Rd_EB	D91	EB	844	624	10500
Old School Rd	Old School Rd W of Heart Lake Rd_WB	D92	WB	454	742	8550
Old School Rd	Old School Rd At Hwy 410_EB	D93	EB	868	635	10750
Old School Rd	Old School Rd At Hwy 410_WB	D94	WB	581	751	9500
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	680	666	9600
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	812	913	12300
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	793	488	9150
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	758	840	11400
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	228	682	6500
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	894	360	8950
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3663	2820	46300
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	2487	3238	40900
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3293	2451	41050
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	2356	2706	36150
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	4047	3201	51750
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3237	4170	52900
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	982	1147	15200
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	1412	793	15750
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	758	828	11350
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	1203	844	14600
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	414	674	7750
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	804	511	9400
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	1870	1600	24800
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	1449	1699	22500
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	9	638	4600
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	524	47	4100
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	9	638	4600
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	524	47	4100
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	823	789	11500
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	674	1097	12650
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	550	699	8900
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	80	633	5100
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	675	209	6300
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	218	760	7000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	867	246	7950
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	940	2841	27000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	2734	1196	28050
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	584	1065	11800
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	1935	608	18150
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	584	1065	11800
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	1935	608	18150
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	748	971	12300
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	781	942	12300
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	597	760	9700
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	763	827	11350
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	605	533	8150
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	554	832	9900
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	338	878	8700
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	934	446	9850
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	268	931	8550
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	939	363	9300
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	139	877	7250
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	846	347	8500
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	32	870	6450
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	933	128	7600
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	322	1124	10350
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	1411	280	12100
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	322	1124	10350
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	1411	280	12100
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	765	738	10750
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	650	773	10150
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	617	810	10200
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	539	662	8600
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	617	810	10200
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	539	662	8600
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	2652	2064	33700
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	1970	2379	31050
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	2605	2104	33650
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	2059	2482	32450
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	1097	1854	21100
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	1634	1265	20700
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	983	1407	17050
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	1660	1055	19400
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	1513	1703	22950
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	2036	1501	25250
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	697	694	9950
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	982	591	11250
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	2224	3140	38300
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	3899	2322	44450
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	2322	3202	39450
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	3915	2513	45900
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	2172	3148	38000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	3520	2399	42300
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	0	0	0
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	0	0	0
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	848	802	11800
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	915	768	12000
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	3232	3979	51500
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	E86	WB	4713	3677	59950
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	E87	EB	3364	3370	48100
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	E88	WB	3103	3990	50650
Huntington Rd	Huntington Rd At Hwy 413_NB	E89	NB	484	468	6800
Huntington Rd	Huntington Rd At Hwy 413_SB	E90	SB	646	357	7150
Huntington Rd	Huntington Rd N of Kirby Rd_NB	E91	NB	10	10	150
Huntington Rd	Huntington Rd N of Kirby Rd_SB	E92	SB	10	10	150
Kirby Rd	Kirby Rd W of Huntington Rd_EB	E93	EB	505	584	7800
Kirby Rd	Kirby Rd W of Huntington Rd_WB	E94	WB	633	581	8650
Highway 27	Hwy 27 S of Hwy 413_NB	E95	NB	967	2185	22500
Highway 27	Hwy 27 S of Hwy 413_SB	E96	SB	2299	1520	27300
Highway 27	Hwy 27 N of Hwy 413_NB	E97	NB	967	2185	22500
Highway 27	Hwy 27 N of Hwy 413_SB	E98	SB	2299	1520	27300
Kirby Rd	Kirby Rd E of Hwy 27_EB	F01	EB	950	1161	15100
Kirby Rd	Kirby Rd E of Hwy 27_WB	F02	WB	889	921	12950
Kipling Ave	Kipling Ave At Hwy 413_NB	F03	NB	92	245	2400

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT
Kipling Ave	Kipling Ave At Hwy 413_SB	F04	SB	404	61	3300
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	F05	EB	976	543	10850
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	F06	WB	518	888	10050
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	F07	EB	1236	1222	17550
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	F08	WB	1172	1245	17250
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	F09	NB	495	479	6950
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	853	269	8000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	36	56	650
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	30	18	350
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	1434	1119	18250
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	1005	1354	16850
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	1022	873	13550
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	902	945	13200
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	1030	611	11700
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	796	1042	13150
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	581	200	5600
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	276	489	5450
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	204	169	2650
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	216	242	3250
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	927	667	11400
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	569	862	10200
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	2576	2603	37000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	2773	2476	37500
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	965	627	11350
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	607	841	10350
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	2200	2617	34400
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	2528	2708	37400
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	569	1220	12800
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	1456	661	15100
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	328	738	7600
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	1139	429	11200
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	2999	2368	38350
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	2127	2814	35300
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	73	923	7100
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	803	198	7150
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	878	676	11100
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	639	823	10450
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	34	150	1300
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	545	37	4150
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	848	802	11800
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	915	768	12000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	27	9	250
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	7	101	750
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	2559	2609	36900
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	2776	2310	36350
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	796	1718	17950
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	2368	602	21200
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	508	1883	17100
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	2104	662	19750
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	1385	452	13100
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	787	532	9400
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	22	82	750
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	756	761	10850
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	237	709	6750
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	48	236	2050
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	0	0	0
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	1670	887	18250
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	2359	1765	29450
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	2106	4117	44450
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	0	0	0
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	0	0	0
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	0	0	0
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	671	734	10050
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	1204	744	13900
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	759	1007	12600
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	663	1164	13050
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	671	734	10050
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	1523	954	17700
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	0	0	0
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	0	0	0
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	0	0	0
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	0	0	0
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	0	0	0
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	0	0	0
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	718	177	6400
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	0	0	0
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	104	129	1650

Appendix A.3: Year 2051 AM and PM Peak Traffic Counts, Build

RWDI Project#: 1301992

Highway 413
GTA West

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	5003	4686	69200
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	5410	4834	73200
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	5298	5877	79800
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	6209	5409	83000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	4681	4664	66700
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	4925	4947	70500
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	3843	4648	60600
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	4792	3918	62200
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	4921	4878	70000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	4896	4542	67400
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	6058	4889	78200
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	4982	5707	76300
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	5553	5413	78300
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	5644	5208	77500
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	5232	5006	73100
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	5005	4908	70800
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	5186	4688	70500
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	4963	4897	70400
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	4810	4236	64600
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	4484	4580	64700
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	5837	5741	82700
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	5597	5735	80900
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4904	6035	78100
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	6458	4845	80700
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	4695	5012	69300
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5120	4619	69600
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	4695	5012	69300
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5120	4619	69600
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	4760	1835	47100
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	2209	3664	41900
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	5086	2312	52800
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	2352	4063	45800
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	2821	4142	49700
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	5151	3741	63500
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	1090	2201	23500
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	2422	971	24200
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	2490	1992	32000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	1251	2044	23500
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	2649	5406	57500
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4974	3300	59100
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	2087	3825	42200
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	3894	2632	46600
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5361	10473	113100
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	10231	5482	112200
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	3214	7823	78800
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	7980	3248	80200
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	3313	8149	81900
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	11822	5473	123500
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	980	924	13600
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1052	1589	18850
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	390	535	6600
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1568	1367	20950
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	383	689	7650
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	399	330	5200
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	1343	1611	21100
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	479	233	5100
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	144	18	1150
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	225	491	5100
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	944	1063	14350
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	669	286	6800
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	1388	1346	19550
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	197	188	2750
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	822	772	11400
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	983	1022	14300
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	1058	568	11600
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	459	991	10350
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	92	188	2000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	415	237	4650
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	808	291	7850
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	650	958	11500
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	163	108	1950
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	236	78	2250
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	353	456	5800
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	1043	477	10850
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	353	207	4000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	570	1518	14900
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	355	266	4450
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	355	266	4450
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	1108	250	9700
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	1023	684	12200
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	558	710	9050
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	447	1205	11800
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	C45	W-N/S	586	681	9050
Highway 413	Hwy 413 at Bramalea Rd_N-E	C46	N-E	434	326	5450
Highway 413	Hwy 413 at Bramalea Rd_S-E	C47	S-E	0	69	500
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	C48	E-N/S	432	511	6750
Highway 413	Hwy 413 at Bramalea Rd_N-W	C49	N-W	936	660	11400
Highway 413	Hwy 413 at Bramalea Rd_S-W	C50	S-W	22	81	750
Highway 413	Hwy 413 at Airport Rd_W-N/S	C51	W-N/S	584	750	9550
Highway 413	Hwy 413 at Airport Rd_N-E	C52	N-E	227	173	2850
Highway 413	Hwy 413 at Airport Rd_S-E	C53	S-E	291	143	3100
Highway 413	Hwy 413 at Airport Rd_E-N/S	C54	E-N/S	410	199	4350
Highway 413	Hwy 413 at Airport Rd_N-W	C55	N-W	615	55	4800
Highway 413	Hwy 413 at Airport Rd_S-W	C56	S-W	19	108	900
Highway 413	Hwy 413 at The Gore Rd_W-N/S	C57	W-N/S	602	541	8150
Highway 413	Hwy 413 at The Gore Rd_N/S-E	C58	N/S-E	154	105	1850
Highway 413	Hwy 413 at The Gore Rd_E-N/S	C59	E-N/S	146	322	3350
Highway 413	Hwy 413 at The Gore Rd_N/S-W	C60	N/S-W	607	686	9250
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	C61	W-N/S	682	370	7500
Highway 413	Hwy 413 at Humber Station Rd_N-E	C62	N-E	583	975	11150
Highway 413	Hwy 413 at Humber Station Rd_S-E	C63	S-E	1110	981	14950

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	C64	E-N/S	1449	1530	21300
Highway 413	Hwy 413 at Humber Station Rd_N-W	C65	N-W	30	18	350
Highway 413	Hwy 413 at Humber Station Rd_S-W	C66	S-W	228	370	4250
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	1486	1458	21050
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	2320	1173	24950
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	612	1816	17350
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	1472	2040	25100
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	799	1186	14200
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	418	93	3650
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	244	495	5300
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	2581	1305	27750
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	1198	1195	17100
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	1448	1057	17900
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	2210	3001	37200
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	1295	902	15700
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	945	1609	18250
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	2877	1877	33950
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	3567	2500	43350
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	2581	3498	43400
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	3926	2684	47200
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	2282	3682	42600
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	3510	2616	43750
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	2755	4164	49400
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	3726	3182	49350
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	2687	3500	44200
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	3032	2270	37850
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	2066	3291	38250
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	3905	2233	43850
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1955	3721	40550
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	629	1334	14000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1844	924	19750
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	2331	1462	27100
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	2077	2316	31400
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	198	876	7650
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1217	401	11550
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	4191	2914	50750
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	2231	3524	41100
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	3219	2654	41950
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	2375	2722	36400
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	3937	2296	44500
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	2024	3169	37100
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	3360	2346	40750
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	2358	3040	38550
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1652	3677	38050
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	3239	1838	36250
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1468	2784	30350
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	2561	1535	29250
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	617	1237	13250
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1171	626	12850
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	918	755	11950
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	835	1043	13400
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1279	858	15250
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	531	1338	13350
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	281	833	7950
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	820	420	8850
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	427	863	9200
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	1016	563	11300
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	396	250	4600
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	521	420	6700
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	800	419	8700
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	590	696	9200
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	1729	1544	23400
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	1509	1473	21300
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2400	2124	32300
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	1084	568	11800
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2600	3249	41800
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	3052	2421	39100
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	645	824	10500
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	761	668	10200
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	946	767	12250
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	1122	466	11350
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	1982	1078	21850
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	1060	1707	19750
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2397	3326	40900
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	3211	2797	42900
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	1309	1343	18950
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	1413	1563	21250
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	172	538	5050
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	797	269	7600
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	210	9	1550
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	98	138	1700
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	1076	628	12150
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	684	777	10450
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	512	835	9600
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	1212	633	13200
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	159	732	6350
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	668	366	7400
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	D71	EB	682	697	9850
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	D72	WB	611	722	9500
Old School Rd	Old School Rd At Hwy 413_EB	D73	EB	353	470	5900
Old School Rd	Old School Rd At Hwy 413_WB	D74	WB	627	522	8200
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	D75	NB	421	424	6050
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	D76	SB	398	281	4850
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	D77	NB	294	566	6150
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	D78	SB	634	218	6100
Old School Rd	Old School Rd W of Hurontario St_EB	D79	EB	559	726	9200
Old School Rd	Old School Rd W of Hurontario St_WB	D80	WB	779	1339	15150
Old School Rd	Old School Rd E of Hurontario St_EB	D81	EB	1304	530	13100
Old School Rd	Old School Rd E of Hurontario St_WB	D82	WB	491	958	10350
Hurontario St	Hurontario St S of Old School Rd_NB	D83	NB	1330	1558	20650
Hurontario St	Hurontario St S of Old School Rd_SB	D84	SB	1147	1299	17450
Hurontario St	Hurontario St S of Hwy 413_NB	D85	NB	1163	875	14550
Hurontario St	Hurontario St S of Hwy 413_SB	D86	SB	1434	1077	17950
Hurontario St	Hurontario St N of Hwy 413_NB	D87	NB	1213	2399	25800
Hurontario St	Hurontario St N of Hwy 413_SB	D88	SB	2513	1471	28450
Kennedy Rd	Kennedy Rd At Hwy 413_NB	D89	NB	363	311	4800

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT
Kennedy Rd	Kennedy Rd At Hwy 413_SB	D90	SB	554	186	5300
Old School Rd	Old School Rd W of Heart Lake Rd_EB	D91	EB	778	204	7000
Old School Rd	Old School Rd W of Heart Lake Rd_WB	D92	WB	267	710	7000
Old School Rd	Old School Rd At Hwy 410_EB	D93	EB	694	187	6300
Old School Rd	Old School Rd At Hwy 410_WB	D94	WB	239	627	6200
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	459	628	7750
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	675	742	10100
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	636	311	6750
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	442	508	6800
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	308	523	5950
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	892	176	7650
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3317	2652	42650
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	2243	3006	37500
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3172	2409	39850
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	2480	2580	36150
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3407	2563	42650
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	2676	3506	44150
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	1081	1224	16450
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	1586	938	18050
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	525	860	9900
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	1000	645	11750
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	283	602	6300
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	712	324	7400
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	2846	1492	31000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	1787	1421	22900
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	28	338	2600
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	353	44	2850
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	594	1436	14500
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	1531	903	17400
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	633	717	9650
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	963	753	12250
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	592	590	8450
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	514	835	9650
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	43	422	3300
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	659	97	5400
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	86	1130	8700
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	1134	237	9800
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	638	2430	21900
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	2275	1000	23400
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	762	1748	17950
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	1816	652	17650
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	750	1884	18800
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	1775	710	17750
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	703	1426	15200
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	1088	1072	15450
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	624	725	9650
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	700	868	11200
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	556	602	8250
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	627	1037	11900
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	162	972	8100
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	781	591	9800
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	157	1146	9300
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	1273	199	10500
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	101	947	7500
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	1107	203	9350
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	13	1115	8050
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	913	356	9050
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	586	1082	11900
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	1308	914	15850
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	282	1062	9600
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	1084	655	12400
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	627	491	8000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	541	529	7650
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	1708	1813	25150
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	1866	1356	23000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	882	1244	15200
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	909	1115	14450
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	2288	2153	31700
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	1889	2157	28900
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	2145	1752	27850
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	1671	2166	27400
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	867	1643	17950
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	1876	1168	21750
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	752	1265	14400
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	1587	909	17850
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	1502	1534	21700
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	1789	1499	23500
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	521	274	5700
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	439	316	5400
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	1944	2935	34850
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	3144	2017	36850
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	2399	3214	40100
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	3617	2449	43350
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	2250	3128	38400
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	751	2321	21950
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	20	68	650
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	432	25	3250
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	749	511	9000
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	733	380	7950
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	3198	3582	48450
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	E86	WB	3699	3121	48700
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	E87	EB	2268	2928	37100
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	E88	WB	3108	3511	47300
Huntington Rd	Huntington Rd At Hwy 413_NB	E89	NB	362	223	4200
Huntington Rd	Huntington Rd At Hwy 413_SB	E90	SB	288	288	4100
Huntington Rd	Huntington Rd N of Kirby Rd_NB	E91	NB	10	10	150
Huntington Rd	Huntington Rd N of Kirby Rd_SB	E92	SB	10	10	150
Kirby Rd	Kirby Rd W of Huntington Rd_EB	E93	EB	296	676	6950
Kirby Rd	Kirby Rd W of Huntington Rd_WB	E94	WB	633	327	6850
Highway 27	Hwy 27 S of Hwy 413_NB	E95	NB	1393	1941	23800
Highway 27	Hwy 27 S of Hwy 413_SB	E96	SB	1935	1545	24850
Highway 27	Hwy 27 N of Hwy 413_NB	E97	NB	861	2640	25000
Highway 27	Hwy 27 N of Hwy 413_SB	E98	SB	2806	1466	30500
Kirby Rd	Kirby Rd E of Hwy 27_EB	F01	EB	905	1182	14900
Kirby Rd	Kirby Rd E of Hwy 27_WB	F02	WB	1149	811	14000
Kipling Ave	Kipling Ave At Hwy 413_NB	F03	NB	96	44	1000

Road	Description	Model Source ID	Direction	AM Peak Volume	PM Peak Volume	AADT
Kipling Ave	Kipling Ave At Hwy 413_SB	F04	SB	42	8	350
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	F05	EB	842	937	12700
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	F06	WB	789	935	12300
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	F07	EB	1106	1282	17050
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	F08	WB	1029	1177	15750
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	F09	NB	137	548	4900
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	828	263	7800
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	36	56	650
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	30	18	350
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	1206	1167	16950
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	933	1012	13900
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	505	772	9100
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	836	622	10400
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	885	1161	14600
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	1317	654	14100
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	1010	1175	15600
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	1490	939	17350
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	334	504	6000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	500	425	6600
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	1283	1211	17800
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	1221	1164	17050
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	2551	3059	40050
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	3115	2205	38000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	1297	907	15750
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	868	1177	14600
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	2104	2576	33450
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	2245	2495	33850
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	508	1359	13350
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	1669	813	17750
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	204	534	5250
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	784	135	6550
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	2603	2059	33300
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	1885	2576	31850
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	216	821	7400
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	1102	271	9800
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	716	597	9400
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	580	777	9700
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	0	0	0
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	0	0	0
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	749	511	9000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	733	380	7950
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	32	9	300
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	6	95	700
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	2411	2538	35350
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	2770	2193	35450
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	1002	1760	19750
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	2457	626	22000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	785	1701	17750
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	2071	1070	22450
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	988	351	9550
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	959	832	12800
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	71	471	3850
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	1150	1083	15950
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	60	653	5100
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	41	239	2000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	1352	885	16000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	935	275	8650
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	1441	1190	18800
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	1644	2608	30350
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	891	818	12200
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	187	380	4050
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	379	31	2950
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	260	620	6300
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	639	565	8600
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	954	427	9850
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	126	97	1600
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	245	21	1900
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	588	916	10750
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1355	1108	17600
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1055	855	13650
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1046	717	12600
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	547	714	9000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	41	202	1750
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	672	166	6000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	318	47	2600
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	152	127	2000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1709	1227	20950

Appendix A.4: Detailed Traffic Data and Fugitive Particulate Matter Emissions

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		3,271	797	29,100		1082	1812	125	6	129	117	3271	298	499	0	0	0	0	797	100	4.1	1.9	0.015	0.057	0.014	0.083	0.020	0.026	0.006	0.009	0.002
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		1,440	2,536	28,400		524	878	15	1	12	10	1440	948	1588	0	0	0	0	2536	100	2.4	1.9	0.015	0.033	0.008	0.021	0.005	0.026	0.006	0.030	0.007
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		4,630	1,899	46,600		1265	2119	510	22	373	341	4630	707	1185	5	0	1	1	1899	100	6.8	2.0	0.015	0.096	0.023	0.198	0.048	0.027	0.007	0.023	0.006
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		2,584	3,349	42,400		678	1135	308	14	235	214	2584	1128	1890	231	10	47	43	3349	100	7.3	3.5	0.015	0.104	0.025	0.120	0.029	0.048	0.012	0.072	0.017
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	C45	W-N/S	3		0	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		2,754	2,064	34,400	935	1567	34	1	114	103	2754	736	1232	12	1	43	40	2064	60	3.8	2.9	0.030	0.099	0.024	0.122	0.029	0.074	0.018	0.069	0.017
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		2,179	2,587	34,050	753	1260	58	3	55	50	2179	944	1581	20	1	21	20	2587	60	3.3	2.4	0.030	0.087	0.021	0.084	0.020	0.061	0.015	0.071	0.017
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		3,259	2,575	41,650	1161	1943	63	3	47	42	3259	925	1548	28	1	38	35	2575	60	2.8	2.7	0.030	0.072	0.017	0.105	0.025	0.069	0.017	0.080	0.019
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		2,604	3,105	40,800	891	1491	73	3	76	70	2604	1114	1866	27	1	51	46	3105	60	3.5	2.7	0.030	0.092	0.022	0.107	0.026	0.070	0.017	0.097	0.024
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		3,189	2,508	40,700	1111	1860	72	3	75	68	3189	903	1511	31	1	32	30	2508	60	3.2	2.6	0.030	0.083	0.020	0.119	0.029	0.068	0.016	0.076	0.018
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		2,715	3,902	47,250	943	1579	84	4	55	50	2715	1421	2380	16	1	44	40	3902	60	3.2	2.4	0.030	0.083	0.020	0.101	0.024	0.063	0.015	0.110	0.027
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		3,318	2,697	42,950	1148	1923	89	4	81	73	3318	956	1601	47	2	48	43	2697	80	3.3	2.9	0.030	0.086	0.021	0.127	0.031	0.075	0.018	0.090	0.022
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		2,498	3,123	40,150	873	1461	77	3	44	40	2498	1135	1902	24	1	32	29	3123	80	3.1	2.4	0.030	0.080	0.019	0.089	0.022	0.063	0.015	0.088	0.021
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		2,685	2,221	35,050	946	1583	61	3	48	44	2685	802	1342	23	1	28	25	2221	80	3.0	2.6	0.030	0.077	0.019	0.093	0.022	0.067	0.016	0.066	0.016
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		2,156	3,103	37,550	766	1284	58	3	24	21	2156	1143	1914	11	0	18	17	3103	80	2.7	2.2	0.030	0.071	0.017	0.069	0.017	0.057	0.014	0.079	0.019
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		3,359	2,103	39,000	1168	1957	86	4	75	69	3359	757	1269	23	1	28	25	2103	80	3.2	2.6	0.030	0.083	0.020	0.125	0.030	0.068	0.016	0.064	0.015
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		1,989	3,349	38,150	704	1179	57	2	25	22	1989	1226	2053	16	1	28	25	3349	80	2.8	2.3	0.030	0.073	0.018	0.065	0.016	0.060	0.015	0.090	0.022
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		783	1,269	14,650	259	434	41	2	25	22	783	451	756	22	1	20	19	1269	60	3.9	2.8	0.030	0.103	0.025	0.036	0.009	0.073	0.018	0.042	0.010
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		1,843	883	19,450	633	1061	62	3	44	40	1843	306	512	26	1	20	18	883	60	3.4	3.2	0.030	0.088	0.021	0.072	0.018	0.085	0.020	0.033	0.008
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		1,893	1,477	24,050	646	1083	76	3	44	41	1893	523	875	30	1	25	23	1477	60	3.4	2.9	0.030	0.090	0.022	0.076	0.018	0.075	0.018	0.050	0.012
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		2,186	1,933	29,400	744	1247	84	4	56	51	2186	684	1146	41	2	31	29	1933	60	3.5	2.9	0.030	0.092	0.022	0.090	0.022	0.075	0.018	0.065	0.016
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		269	716	7,050	92	153	10	0	7	7	269	256	429	9	0	12	10	716	70	3.5	2.7	0.060	0.173	0.042	0.021	0.005	0.134	0.032	0.043	0.010
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		1,110	353	10,450	377	632	35	2	33	31	1110	129	216	4	0	2	2	353	70	3.6	2.3	0.030	0.094	0.023	0.047	0.011	0.060	0.014	0.009	0.002
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		3,796	2,354	43,950	1342	2247	103	5	52	47	3796	773	1294	44	6	72	65	2354	80	2.9	4.0	0.030	0.074	0.018	0.126	0.030	0.105	0.026	0.111	0.027
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		2,353	3,287	40,300	778	1302	167	7	52	47	2353	1186	1987	43	2	36	33	3287	80	3.8	2.5	0.030	0.100	0.024	0.105	0.025	0.066	0.016	0.097	0.023
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		3,077	2,604	40,600	1123	1880	42	2	16	14	3077	864	1446	150	7	72	65	2604	80	2.3	3.9	0.030	0.060	0.014	0.082	0.020	0.101	0.024	0.118	0.028
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		2,424	2,627	36,100	728	1219	211	9	134	123	2424	940	1573	43	2	36	33	2627	80	5.4	2.7	0.030	0.143	0.035	0.155	0.037	0.070	0.017	0.083	0.020
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		3,125	1,983	36,500	1109	1858	88	4	35	31	3125	697	1166	55	2	33	30	1983	60	2.8	3.0	0.030	0.072	0.017	0.100	0.024	0.078	0.019	0.069	0.017
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		1,737	2,484	30,150	586	981	87	4	41	38	1737	898	1505	37	2	22	20	2484	60	3.6	2.5	0.030	0.094	0.023	0.073	0.018	0.064	0.016	0.072	0.017
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		3,216	2,434	40,350	1161	1945	67	3	21	19	3216	875	1465	45	2	25	22	2434	60	2.5	2.6	0.030	0.064	0.015	0.092	0.022	0.067	0.016	0.073	0.018
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		2,600	3,037	40,250	918	1536	80	4	32	30	2600	1120	1876	19	1	11	10	3037	60	2.9	2.1	0.030	0.074	0.018	0.086	0.021	0.055	0.013	0.075	0.018
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	656	2,022	19,150	226	379	22	1	15	13	656	731	1225	26	1	20	19	2022	80	3.3	2.5	0.030	0.086	0.021	0.025	0.006	0.065	0.016	0.059	0.014
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,103	848	21,100	734	1228	57	3	42	39	2103	309	517	7	0	8	7	848	80	3.1	2.4	0.030	0.081	0.020	0.077	0.019	0.062	0.015	0.024	0.006
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	656	2,022	19,150	226	379	22	1	15	13	656	731	1225	26	1	20	19	2022	80	3.3	2.5	0.030	0.086	0.021	0.025	0.006	0.065	0.016	0.059	0.014
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,103	848	21,100	734	1228	57	3	42	39	2103	309	517	7	0	8	7	848	80	3.1	2.4	0.030	0.081	0.020	0.077	0.019	0.062	0.015	0.024	0.006
Winston Churchill Blvd	Winston Churchill Blvd N of S Side Rd_NB	D31	NB	1	2	597	1,105	12,150	202	338	28	1	15	13	597	396	664	17	1	14	13	1105	80	3.6	2.7	0.030	0.093	0.023	0.025	0.006	0.069	0.017	0.034	0.008
Winston Churchill Blvd	Winston Churchill Blvd N of S Side Rd_SB	D32	SB	1	2	1,218	607	13,050	416	696	43	2	32	29	1218	220	368	6	0	7	6	607	80	3.5	2.5	0.030	0.091	0.022	0.050	0.012	0.065	0.016	0.018	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	825	608	10,250	274	460	40	2	26	23	825	221	369	6	0	6	6	608	60	3.9	2.5	0.030	0.101	0.025	0.037	0.009	0.064	0.015	0.017	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	632	936	11,200	230	386	9	0	4	3	632	338	567	11	1	10	9	936	60	2.3	2.5	0.030	0.061	0.015	0.017	0.004	0.065	0.016	0.027	0.007
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	988	576	11,150	361	604	11	0	6	6	988	209	351	6	0	5	5	576	60	2.3	2.4	0.030	0.060	0.015	0.027	0.006	0.063	0.015	0.016	0.004
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	355	924	9,150	112	187	22	1	17	16	355	338	566	7	0	7	6	924	60	4.8	2.3	0.060	0.236	0.057	0.038	0.009	0.113	0.027	0.046	0.011
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		519	1,192	12,200	187	312	6	0	7	7	519	437	733	2	0	10	10	1192	60	2.6	2.3	0.030	0.069	0.017	0.016	0.004	0.059	0.014	0.032	0.008
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		1,226	654	13,450	434	728	17	1	24	22	1226	241	403	4	0	3	3	654	60	2.9	2.2	0.030	0.076	0.018	0.042	0.010	0.057	0.014	0.017	0.004
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		355	702	7,550	132	220	0	0	2	1	355	258	431	0	0	7	6	702	60	2.1	2.3	0.060	0.101	0.025	0.016	0.004	0.112	0.027	0.035	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		903	433	9,550	321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		584	139	5,150	218	364	0	0	1	1	584	50	83	1	0	3	2	139	60	2.0	2.8	0.060	0.096	0.023	0.025	0.006	0.136	0.033	0.008	0.002
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		192	504	4,950	65	108	4	0	8	7	192	187	314	1	0	1	1	504	60	3.9	2.0	0.200	0.569	0.138	0.049	0.012	0.293	0.071	0.066	0.016
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		732	390	8,000	272	456	0	0	2	2	732	134	224	16	1	8	7	390	60	2.0	3.3	0.060	0.098	0.024	0.032	0.008	0.163	0.039	0.028	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		226	715	6,700	62	103	30	1	16	14	226	266	445	1	0	2	1	715	60	6.6	2.0	0.060	0.330	0.080	0.033	0.008	0.098	0.024	0.031	0.008
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,477	1,501	21,250	482	807	80	4	54	50	1477	521	872	46	2	31	29	1501	60	4.2	3.2	0.030	0.110	0.027	0.073	0.018	0.083	0.020	0.056	0.014
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,558	1,401	21,150	498	835	105	5	60	55	1558	481	805	44	2	36	33	1401	60	4.5	3.4	0.030	0.117	0.028	0.081	0.020	0.089	0.022	0.056	0.013
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		1,725	2,094	27,300	572	957	85	4	56	51	1725	741	1240	47	2	33	31	2094	60	3.9	2.9	0.030	0.103	0.025	0.080	0.019	0.075	0.018	0.070	0.017
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		903	433	9,550	321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		1,725	2,094	27,300	572	957	85	4	56	51	1725	741	1240	47	2	33	31	2094	60	3.9	2.9	0.030	0.103	0.025	0.080	0.019	0.075	0.018	0.070	0.017
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		1,964	1,726	26,350	646	1082	109	5	64	58	1964	601	1007	47	2	36	33	1726	60	4.0	3.1	0.030	0.106	0.026	0.093	0.022	0.082	0.020	0.063	0.015
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		788	694	10,600	264	441	41	2	21	19	788	248	416	16	1	7	6	694	60	3.7	2.6	0.030	0.098	0.024	0.034	0.008	0.069	0.017	0.021	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		713	754	10,500	252	422	22	1	8	8	713	262	439	25	1	14	13	754	60	2.8	3.1	0.030	0.074	0.018	0.023	0.006	0.082	0.020	0.028	0.007
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		901	1,070	14,100	304	509	42	2	23	21	901	388	650	17	1	7	7	1070	60	3.6	2.4	0.030	0.095	0.023	0.038	0.009	0.063	0.015	0.030	0.007
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		1,223	796	14,400	437	733	31	1	11	10	1223	278	465	25	1	14	13	796	60	2.6	3.1	0.030	0.068	0.017	0.037	0.009	0.080	0.019	0.029	0.007
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,527	1,093	18,700	505	845	82	4	48	43	1527	380	636	31	1	24	21	1093	80	4.0	3.2	0.030	0.104	0.025	0.071	0.017	0.083	0.020	0.041	0.010
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,010	1,348	16,850	320	537	74	3	40	36	1010	471	788	34	2	28	25	1348	80	4.6	3.1	0.030	0.120	0.029	0.054	0.013	0.081	0.020	0.049	0.012
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		1,604	1,260	20,450	513	860	111	5	60	55	1604	440	737	32	1	26	24	1260	80	4.4	3.1	0.030	0.116	0.028	0.083	0.020	0.081	0.020	0.046	0.011
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,201	1,554	19,700	387	648	77	3	45	41	1201	536	898	51	2	35	32	1554	80	4.3	3.3	0.030	0.114	0.028	0.061	0.015	0.086	0.021	0.060	0.014
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,604	1,260	20,450	513	860	111	5	60	55	1604	440	737	32	1	26	24	1260	80	4.4	3.1	0.030	0.116	0.028	0.083	0.020	0.081	0.020	0.046	0.011
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,201	1,554	19,700	387	648	77	3	45	41	1201	536	898	51	2	35	32	1554	80	4.3	3.3	0.030	0.114	0.028	0.061	0.015	0.086	0.021	0.060	0.014
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		179	384	4,000	60	100	10	0	5	4	179	138	231	9	0	3	3	384	80	3.7	2.6	0.200	0.551	0.133	0.044	0.011	0.374	0.090	0.064	0.016
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		443	198	4,600	154	258	16	1	7	7	443	70	116	5	0	4	3	198	80	3.1	3.0	0.200	0.455	0.110	0.090	0.022	0.441	0.107	0.039	0.009
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	243	111	2,550	70	116	28	1	15	13	243	40	66	3	0	1	1	111	70	6.0	2.7	0.200	0.892	0.216	0.097	0.023	0.389	0.094	0.019	0.005
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	206	245	3,200	72	120	8	0	3	3	206	78	131	15	1	10	10	245	70	3.1	4.5	0.200	0.448	0.108	0.041	0.010	0.672	0.163	0.074	0.018
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	571	544	7,950	169	283	60	3	29	27	571	173	290	36	2	22	21	544	80	5.5	4.6	0.060	0.273	0.066	0.070	0.017	0.225	0.054	0.055	0.013
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	677	596	9,100	214	359	49	2	28	25	677	188	314	34	2	30	28	596	80	4.6	4.8	0.060	0.228	0.055	0.069	0.017	0.238	0.058	0.063	0.015
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	571	544	7,950	169	283	60	3	29	27	571	173	290	36	2	22	21	544	80	5.5	4.6	0.060	0.273	0.066	0.070	0.017	0.225	0.054	0.055	0.013
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	677	596	9,100	214	359	49	2	28	25	677	188

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62											
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		1,932	2,329	30,450		681	1140	35	2	39	35	1932	839	1404	26	1	31	28	2329	60	3.0	2.6	0.030	0.078	0.019	0.067	0.016	0.068	0.016	0.071	0.017
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		2,172	2,369	32,450		779	1305	43	2	22	21	2172	873	1461	7	0	15	13	2369	60	2.6	2.2	0.030	0.068	0.016	0.066	0.016	0.057	0.014	0.060	0.015
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		355	702	7,550		132	220	0	0	2	1	355	258	431	0	0	7	6	702	60	2.1	2.3	0.060	0.101	0.025	0.016	0.004	0.112	0.027	0.035	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		903	433	9,550		321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		674	160	5,950		184	307	79	3	53	48	674	56	95	2	0	4	3	160	70	6.8	3.0	0.060	0.338	0.082	0.102	0.025	0.148	0.036	0.011	0.003
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		94	121	1,550		27	44	4	0	10	9	94	37	62	3	0	10	9	121	40	6.8	5.6	0.200	1.017	0.246	0.043	0.010	0.833	0.202	0.045	0.011
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		674	160	5,950		184	307	79	3	53	48	674	56	95	2	0	4	3	160	70	6.8	3.0	0.060	0.338	0.082	0.102	0.025	0.148	0.036	0.011	0.003
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		10,337	7,967	130,700		3105	5199	734	32	663	604	10337	2518	4216	362	16	447	408	7967	100	5.5	4.9	0.015	0.078	0.019	0.360	0.087	0.068	0.016	0.242	0.059
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		10,337	7,967	130,700		3105	5199	734	32	663	604	10337	2518	4216	362	16	447	408	7967	100	5.5	4.9	0.015	0.078	0.019	0.360	0.087	0.068	0.016	0.242	0.059
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		9,612	7,359	121,200		3008	5038	518	23	536	489	9612	2322	3889	344	15	413	376	7359	100	5.0	4.9	0.015	0.070	0.017	0.299	0.072	0.068	0.017	0.225	0.054
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		6,923	9,333	116,100		2001	3351	534	24	530	483	6923	3016	5051	280	12	509	465	9333	100	6.1	4.6	0.015	0.086	0.021	0.268	0.065	0.064	0.015	0.267	0.065
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		3,399	4,089	53,500		1008	1688	274	12	218	199	3399	1301	2178	166	7	229	208	4089	100	5.7	4.8	0.015	0.080	0.019	0.121	0.029	0.067	0.016	0.122	0.030
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		3,524	5,244	62,600		993	1663	261	11	312	284	3524	1715	2873	114	5	281	256	5244	100	6.6	4.4	0.015	0.093	0.022	0.146	0.035	0.062	0.015	0.145	0.035
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		7,021	9,651	119,100		2040	3417	533	24	527	480	7021	3128	5239	283	12	517	472	9651	100	6.1	4.5	0.015	0.085	0.021	0.268	0.065	0.063	0.015	0.273	0.066
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		751	873	11,600		246	413	21	1	37	33	751	307	515	11	0	21	19	873	60	4.3	3.1	0.030	0.113	0.027	0.038	0.009	0.080	0.019	0.031	0.008
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		626	202	5,900		181	304	2	0	73	66	626	72	120	2	0	4	4	202	40	6.7	2.9	0.060	0.334	0.081	0.094	0.023	0.141	0.034	0.013	0.003
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle									Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)			AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		3,271	797	29,100		1082	1812	125	6	129	117	3271	298	499	0	0	0	0	797	100	4.1	1.9	0.015	0.057	0.014	0.083	0.020	0.026	0.006	0.009	0.002
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		1,440	2,536	28,400		524	878	15	1	12	10	1440	948	1588	0	0	0	0	2536	100	2.4	1.9	0.015	0.033	0.008	0.021	0.005	0.026	0.006	0.030	0.007
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		4,630	1,899	46,600		1265	2119	510	22	373	341	4630	707	1185	5	0	1	1	1899	100	6.8	2.0	0.015	0.096	0.023	0.198	0.048	0.027	0.007	0.023	0.006
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		2,584	3,349	42,400		678	1135	308	14	235	214	2584	1128	1890	231	10	47	43	3349	100	7.3	3.5	0.015	0.104	0.025	0.120	0.029	0.048	0.012	0.072	0.017
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		1,925	3,485	38,600		598	1002	152	7	87	79	1925	1227	2056	59	3	73	67	3485	100	4.9	3.0	0.015	0.068	0.017	0.059	0.014	0.042	0.010	0.065	0.016
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,408	2,649	50,400		1454	2435	103	5	215	196	4408	929	1555	47	2	61	55	2649	100	4.2	3.1	0.015	0.059	0.014	0.117	0.028	0.043	0.010	0.051	0.012
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,657	1,439	29,300		864	1448	80	4	137	124	2657	502	840	29	1	35	32	1439	100	4.4	3.2	0.015	0.062	0.015	0.074	0.018	0.044	0.011	0.028	0.007
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,296	2,558	27,500		391	656	120	5	65	59	1296	900	1507	48	2	53	48	2558	100	5.3	3.0	0.015	0.074	0.018	0.043	0.010	0.042	0.010	0.048	0.012
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		2,754	2,064	34,400		935	1567	34	1	114	103	2754	736	1232	12	1	43	40	2064	60	3.8	2.9	0.030	0.099	0.024	0.122	0.029	0.074	0.018	0.069	0.017
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		2,179	2,587	34,050		753	1260	58	3	55	50	2179	944	1581	20	1	21	20	2587	60	3.3	2.4	0.030	0.087	0.021	0.084	0.020	0.061	0.015	0.071	0.017
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		3,259	2,575	41,650		1161	1943	63	3	47	42	3259	925	1548	28	1	38	35	2575	60	2.8	2.7	0.030	0.072	0.017	0.105	0.025	0.069	0.017	0.080	0.019
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		2,604	3,105	40,800		891	1491	73	3	76	70	2604	1114	1866	27	1	51	46	3105	60	3.5	2.7	0.030	0.092	0.022	0.107	0.026	0.070	0.017	0.097	0.024
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		3,189	2,508	40,700		1111	1860	72	3	75	68	3189	903	1511	31	1	32	30	2508	60	3.2	2.6	0.030	0.083	0.020	0.119	0.029	0.068	0.016	0.076	0.018
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		2,715	3,902	47,250		943	1579	84	4	55	50	2715	1421	2380	16	1	44	40	3902	60	3.2	2.4	0.030	0.083	0.020	0.101	0.024	0.063	0.015	0.110	0.027
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		3,318	2,697	42,950		1148	1923	89	4	81	73	3318	956	1601	47	2	48	43	2697	80	3.3	2.9	0.030	0.086	0.021	0.127	0.031	0.075	0.018	0.090	0.022
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		2,498	3,123	40,150		872	1461	77	3	44	40	2498	1135	1902	24	1	32	29	3123	80	3.1	2.4	0.030	0.080	0.019	0.089	0.022	0.063	0.015	0.088	0.021
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		2,685	2,221	35,050		946	1583	61	3	48	44	2685	802	1342	23	1	28	25	2221	80	3.0	2.6	0.030	0.077	0.019	0.093	0.022	0.067	0.016	0.066	0.016
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		2,156	3,103	37,550		766	1284	58	3	24	21	2156	1143	1914	11	0	18	17	3103	80	2.7	2.2	0.030	0.071	0.017	0.069	0.017	0.057	0.014	0.079	0.019
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		3,359	2,103	39,000		1168	1957	86	4	75	69	3359	757	1269	23	1	28	25	2103	80	3.2	2.6	0.030	0.083	0.020	0.125	0.030	0.068	0.016	0.064	0.015
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		1,989	3,349	38,150		704	1179	57	2	25	22	1989	1226	2053	16	1	28	25	3349	80	2.8	2.3	0.030	0.073	0.018	0.065	0.016	0.060	0.015	0.090	0.022
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		783	1,269	14,650		259	434	41	2	25	22	783	451	756	22	1	20	19	1269	60	3.9	2.8	0.030	0.103	0.025	0.036	0.009	0.073	0.018	0.042	0.010
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		1,843	883	19,450		633	1061	62	3	44	40	1843	306	512	26	1	20	18	883	60	3.4	3.2	0.030	0.088	0.021	0.072	0.018	0.085	0.020	0.033	0.008
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		1,893	1,477	24,050		646	1083	76	3	44	41	1893	523	875	30	1	25	23	1477	60	3.4	2.9	0.030	0.090	0.022	0.076	0.018	0.075	0.018	0.050	0.012
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		2,186	1,933	29,400		744	1247	84	4	56	51	2186	684	1146	41	2	31	29	1933	60	3.5	2.9	0.030	0.092	0.022	0.090	0.022	0.075	0.018	0.065	0.016
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		269	716	7,050		92	153	10	0	7	7	269	256	429	9	0	12	10	716	70	3.5	2.7	0.060	0.173	0.042	0.021	0.005	0.134	0.032	0.043	0.010
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		1,110	353	10,450		377	632	35	2	33	31	1110	129	216	4	0	2	2	353	70	3.6	2.3	0.030	0.094	0.023	0.047	0.011	0.060	0.014	0.009	0.002
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		3,796	2,354	43,950		1342	2247	103	5	52	47	3796	773	1294	44	6	72	65	2354	80	2.9	4.0	0.030	0.074	0.018	0.126	0.030	0.105	0.026	0.111	0.027
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		2,353	3,287	40,300		778	1302	167	7	52	47	2353	1186	1987	43	2	36	33	3287	80	3.8	2.5	0.030	0.100	0.024	0.105	0.025	0.066	0.016	0.097	0.023
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		3,077	2,604	40,600		1123	1880	42	2	16	14	3077	864	1446	150	7	72	65	2604	80	2.3	3.9	0.030	0.060	0.014	0.082	0.020	0.101	0.024	0.118	0.028
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		2,424	2,627	36,100		728	1219	211	9	134	123	2424	940	1573	43	2	36	33	2627	80	5.4	2.7	0.030	0.143	0.035	0.155	0.037	0.070	0.017	0.083	0.020
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		3,125	1,983	36,500		1109	1858	88	4	35	31	3125	697	1166	55	2	33	30	1983	60	2.8	3.0	0.030	0.072	0.017	0.100	0.024	0.078	0.019	0.069	0.017
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		1,737	2,484	30,150		586	981	87	4	41	38	1737	898	1505	37	2	22	20	2484	60	3.6	2.5	0.030	0.094	0.023	0.073	0.018	0.064	0.016	0.072	0.017
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		3,216	2,434	40,350		1161	1945	67	3	21	19	3216	875	1465	45	2	25	22	2434	60	2.5	2.6	0.030	0.064	0.015	0.092	0.022	0.067	0.016	0.073	0.018
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		2,600	3,037	40,250		918	1536	80	4	32	30	2600	1120	1876	19	1	11	10	3037	60	2.9	2.1	0.030	0.074	0.018	0.086	0.021	0.055	0.013	0.075	0.018
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	656	2,022	19,150		226	379	22	1	15	13	656	731	1225	26	1	20	19	2022	80	3.3	2.5	0.030	0.086	0.021	0.025	0.006	0.065	0.016	0.059	0.014
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,103	848	21,100		734	1228	57	3	42	39	2103	309	517	7	0	8	7	848	80	3.1	2.4	0.030	0.081	0.020	0.077	0.019	0.062	0.015	0.024	0.006
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	656	2,022	19,150		226	379	22	1	15	13	656	731	1225	26	1	20	19	2022	80	3.3	2.5	0.030	0.086	0.021	0.025	0.006	0.065	0.016	0.059	0.014
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,103	848	21,100		734	1228	57	3	42	39	2103	309	517	7	0	8	7	848	80	3.1	2.4	0.030	0.081	0.020	0.077	0.019	0.062	0.015	0.024	0.006
Winston Churchill Blvd	Winston Churchill Blvd N of S Side Rd_NB	D31	NB	1	2	597	1,105	12,150		202	338	28	1	15	13	597	396	664	17	1	14	13	1105	80	3.6	2.7	0.030	0.093	0.023	0.025	0.006	0.069	0.017	0.034	0.008
Winston Churchill Blvd	Winston Churchill Blvd N of S Side Rd_SB	D32	SB	1	2	1,218	607	13,050		416	696	43	2	32	29	1218	220	368	6	0	7	6	607	80	3.5	2.5	0.030	0.091	0.022	0.050	0.012	0.065	0.016	0.018	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	825	608	10,250		274	460	40	2	26	23	825	221	369	6	0	6	6	608	60	3.9	2.5	0.030	0.101	0.025	0.037	0.009	0.064	0.015	0.017	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	632	936	11,200		230	386	9	0	4	3	632	338	567	11	1	10	9	936	60	2.3	2.5	0.030	0.061	0.015	0.017	0.004	0.065	0.016	0.027	0.007
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	988	576	11,150		361	604	11	0	6	6	988	209	351	6	0	5	5	576	60	2.3	2.4	0.030	0.060	0.015	0.027	0.006	0.063	0.015	0.016	0.004
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	355	924	9,150		112	187	22	1	17	16	355	338	566	7	0	7	6	924	60	4.8	2.3	0.060	0.236	0.057	0.038	0.009	0.113	0.027	0.046	0.011
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		519	1,192	12,200		187	312	6	0	7	7	519	437	733	2	0	10	10	1192	60	2.6	2.3	0.030	0.069	0.017	0.016	0.004	0.059	0.014	0.032	0.008
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		1,226	654	13,450		434	728	17	1	24	22	1226	241	403	4	0	3	3	654	60	2.9	2.2	0.030	0.076	0.018	0.042	0.010	0.057	0.014	0.017	0.004
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		355	702	7,550		132	220	0	0	2	1	355	258	431	0	0	7	6	702	60	2.1	2.3	0.060	0.101	0.025	0.016	0.004	0.112	0.027	0.035	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		903	433	9,550		321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		584	139	5,150		218	364	0	0	1	1	584	50	83	1	0	3	2	139	60	2.0	2.8	0.060	0.096	0.023	0.025	0.006	0.136	0.033	0.008	0.002
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		192	504	4,950		65	108	4	0	8	7	192	187	314	1	0	1	1	504	60	3.9	2.0	0.200	0.569	0.138	0.049	0.012	0.293	0.071	0.066	0.016
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		732	390	8,000		272	456	0	0	2	2	732	134	224	16	1	8	7	390	60	2.0	3.3	0.060	0.098	0.024	0.032	0.008	0.163	0.039	0.028	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		226	715	6,700		62	103	30	1	16	14	226	266	445	1	0	2	1	715	60	6.6	2.0	0.060	0.330	0.080	0.033	0.008	0.098	0.024	0.031	0.008
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,477	1,501	21,250		482	807	80	4	54	50	1477	521	872	46	2	31	29	1501	60	4.2	3.2	0.030	0.110	0.027	0.073	0.018	0.083	0.020	0.056	0.014
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,558	1,401	21,150		498	835	105	5	60	55	1558	481	805	44	2	36	33	1401	60	4.5	3.4	0.030	0.117	0.028	0.081	0.020	0.089	0.022	0.056	0.013
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		1,725	2,094	27,300		572	957	85	4	56	51	1725	741	1240	47	2	33	31	2094	60	3.9	2.9	0.030	0.103	0.025	0.080	0.019	0.075	0.018	0.070	0.017
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		903	433	9,550		321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		1,725	2,094	27,300		572	957	85	4	56	51	1725	741	1240	47	2	33	31	2094	60	3.9	2.9	0.030	0.103	0.025	0.080	0.019	0.075	0.018	0.070	0.017
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		1,964	1,726	26,350		646	1082	109	5	64	58	1964	601	1007	47	2	36	33	1726	60	4.0	3.1	0.030	0.106	0.026	0.093	0.022	0.082	0.020	0.063	0.015
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		788	694	10,600		264	441	41	2	21	19	788	248	416	16	1	7	6	694	60	3.7	2.6	0.030	0.098	0.024	0.034	0.008	0.069	0.017	0.021	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		713	754	10,500		252	422	22	1	8	8	713	262	439	25	1	14	13	754	60	2.8	3.1	0.030	0.074	0.018	0.023	0.006	0.082	0.020	0.028	0.007
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		901	1,070	14,100		304	509	42	2	23	21	901	388	650	17	1	7	7	1070	60	3.6	2.4	0.030	0.095	0.023	0.038	0.009	0.063	0.015	0.030	0.007
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		1,223	796	14,400		437	733	31	1	11	10	1223	278	465	25	1	14	13	796	60	2.6	3.1	0.030	0.068	0.017	0.037	0.009	0.080	0.019	0.029	0.007
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,527	1,093	18,700		505	845	82	4	48	43	1527	380	636	31	1	24	21	1093	80	4.0	3.2	0.030	0.104	0.025	0.071	0.017	0.083	0.020	0.041	0.010
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,010	1,348	16,850		320	537	74	3	40	36	1010	471	788	34	2	28	25	1348	80	4.6	3.1	0.030	0.120	0.029	0.054	0.013	0.081	0.020	0.049	0.012
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		1,604	1,260	20,450		513	860	111	5	60	55	1604	440	737	32	1	26	24	1260	80	4.4	3.1	0.030	0.116	0.028	0.083	0.020	0.081	0.020	0.046	0.011
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,201	1,554	19,700		387	648	77	3	45	41	1201	536	898	51	2	35	32	1554	80	4.3	3.3	0.030	0.114	0.028	0.061	0.015	0.086	0.021	0.060	0.014
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,604	1,260	20,450		513	860	111	5	60	55	1604	440	737	32	1	26	24	1260	80	4.4	3.1	0.030	0.116	0.028	0.083	0.020	0.081	0.020	0.046	0.011
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,201	1,554	19,700		387	648	77	3	45	41	1201	536	898	51	2	35	32	1554	80	4.3	3.3	0.030	0.114	0.028	0.061	0.015	0.086	0.021	0.060	0.014
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		179	384	4,000		60	100	10	0	5	4	179	138	231	9	0	3	3	384	80	3.7	2.6	0.200	0.551	0.133	0.044	0.011	0.374	0.090	0.064	0.016
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		443	198	4,600		154	258	16	1	7	7	443	70	116	5	0	4	3	198	80	3.1	3.0	0.200	0.455	0.110	0.090	0.022	0.441	0.107	0.039	0.009
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	243	111	2,550		70	116	28	1	15	13	243	40	66	3	0	1	1	111	70	6.0	2.7	0.200	0.892	0.216	0.097	0.023	0.389	0.094	0.019	0.005
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	206	245	3,200		72	120	8	0	3	3	206	78	131	15	1	10	10	245	70	3.1	4.5	0.200	0.448	0.108	0.041	0.010	0.672	0.163	0.074	0.018
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	571	544	7,950		169	283	60	3	29	27	571	173	290	36	2	22	21	544	80	5.5	4.6	0.060	0.273	0.066	0.070	0.017	0.225	0.054	0.055	0.013
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	677	596	9,100		214	359	49	2	28	25	677	188	314	34	2	30	28	596	80	4.6	4.8	0.060	0.228	0.055	0.069	0.017	0.238	0.058	0.063	0.015
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	571	544	7,950		169	283	60	3	29	27	571	173	290	36	2	22	21	544	80	5.5	4.6	0.060	0.273	0.066	0.070	0.017	0.225	0.054	0.055	0.013
Chinguacousy Rd	Chin

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		364	583	6,750		124	207	17	1	8	7	364	206	344	13	1	10	9	583	60	3.5	2.9	0.060	0.170	0.041	0.028	0.007	0.143	0.035	0.037	0.009
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		751	631	9,850		247	414	37	2	27	24	751	226	379	10	0	8	8	631	60	4.1	2.7	0.060	0.201	0.049	0.067	0.016	0.130	0.031	0.037	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		685	464	8,200		236	396	26	1	14	12	685	156	260	21	1	14	12	464	80	3.3	3.8	0.060	0.160	0.039	0.049	0.012	0.185	0.045	0.038	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		715	703	10,150		243	408	27	1	19	17	715	250	418	16	1	9	9	703	80	3.5	2.8	0.030	0.092	0.022	0.029	0.007	0.072	0.018	0.023	0.006
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		258	473	5,200		78	131	26	1	12	10	258	160	268	20	1	13	11	473	80	5.2	3.6	0.060	0.256	0.062	0.029	0.007	0.177	0.043	0.037	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		574	286	6,150		198	332	20	1	12	11	574	95	159	15	1	8	8	286	80	3.3	3.9	0.060	0.160	0.039	0.041	0.010	0.190	0.046	0.024	0.006
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,412	2,387	41,400		1168	1957	107	5	92	83	3412	841	1409	45	2	47	43	2387	60	3.5	3.0	0.030	0.090	0.022	0.138	0.033	0.078	0.019	0.083	0.020
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		1,931	2,957	34,900		654	1096	83	4	49	45	1931	1055	1766	40	2	49	45	2957	60	3.6	2.8	0.030	0.093	0.023	0.080	0.019	0.072	0.018	0.096	0.023
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,018	2,130	36,750		1050	1758	72	3	71	64	3018	757	1269	34	1	36	33	2130	60	3.2	2.8	0.030	0.084	0.020	0.113	0.027	0.074	0.018	0.070	0.017
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		1,893	2,507	31,450		651	1091	67	3	42	39	1893	896	1500	32	1	41	37	2507	60	3.3	2.8	0.030	0.087	0.021	0.074	0.018	0.072	0.017	0.080	0.019
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,615	2,728	45,300		1227	2054	148	7	94	85	3615	923	1545	84	4	90	82	2728	60	3.6	3.7	0.030	0.093	0.022	0.150	0.036	0.097	0.023	0.118	0.029
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,802	3,702	46,450		897	1502	145	6	132	120	2802	1294	2167	85	4	80	72	3702	60	4.6	3.1	0.030	0.120	0.029	0.150	0.036	0.081	0.020	0.134	0.033
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		689	936	11,600		239	400	27	1	12	10	689	330	553	24	1	15	13	936	80	3.1	2.9	0.030	0.082	0.020	0.025	0.006	0.076	0.018	0.032	0.008
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,249	580	13,050		414	692	60	3	42	38	1249	204	342	11	1	12	10	580	80	4.0	3.0	0.030	0.104	0.025	0.058	0.014	0.078	0.019	0.020	0.005
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		588	737	9,450		195	326	34	2	16	15	588	261	437	10	0	15	14	737	80	3.9	2.9	0.060	0.191	0.046	0.050	0.012	0.144	0.035	0.047	0.011
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		939	751	12,050		320	536	12	1	37	33	939	267	446	10	0	15	13	751	80	3.7	2.9	0.030	0.097	0.023	0.041	0.010	0.075	0.018	0.025	0.006
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		341	558	6,400		104	174	36	2	13	12	341	198	331	11	1	9	8	558	80	5.0	2.9	0.060	0.247	0.060	0.038	0.009	0.140	0.034	0.035	0.008
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		666	438	7,900		237	398	12	1	9	9	666	148	248	19	1	12	10	438	80	2.8	3.6	0.060	0.134	0.033	0.040	0.010	0.177	0.043	0.035	0.008
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,679	1,127	20,050		590	988	50	2	26	23	1679	401	671	27	1	14	13	1127	60	3.0	2.8	0.030	0.077	0.019	0.058	0.014	0.072	0.017	0.036	0.009
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,117	1,489	18,600		388	649	47	2	16	15	1117	532	890	28	1	20	18	1489	60	3.1	2.7	0.030	0.081	0.020	0.040	0.010	0.071	0.017	0.047	0.011
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		28	374	2,850		9	15	1	0	2	1	28	133	222	7	0	6	6	374	80	4.7	2.8	0.200	0.694	0.168	0.009	0.002	0.417	0.101	0.070	0.017
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		392	29	3,000		133	222	13	1	12	11	392	10	16	1	0	1	1	29	80	3.7	3.9	0.200	0.537	0.130	0.094	0.023	0.568	0.137	0.007	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		28	374	2,850		9	15	1	0	2	1	28	133	222	7	0	6	6	374	80	4.7	2.8	0.200	0.694	0.168	0.009	0.002	0.417	0.101	0.070	0.017
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		392	29	3,000		133	222	13	1	12	11	392	10	16	1	0	1	1	29	80	3.7	3.9	0.200	0.537	0.130	0.094	0.023	0.568	0.137	0.007	0.002
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		819	616	10,250		300	502	6	0	6	5	819	227	381	2	0	3	3	616	70	2.3	2.2	0.030	0.059	0.014	0.022	0.005	0.056	0.014	0.015	0.004
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		594	774	9,750		212	354	10	0	9	9	594	286	480	3	0	3	2	774	70	2.8	2.1	0.060	0.136	0.033	0.036	0.009	0.102	0.025	0.035	0.009
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		682	788	10,500		249	418	6	0	5	4	682	287	481	5	0	8	7	788	70	2.3	2.4	0.030	0.060	0.014	0.018	0.004	0.062	0.015	0.022	0.005
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		421	671	7,800		149	249	9	0	7	7	421	250	420	0	0	1	0	671	70	2.9	1.9	0.060	0.142	0.034	0.027	0.006	0.094	0.023	0.028	0.007
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		85	360	3,200		31	51	2	0	1	0	85	130	219	5	0	3	3	360	70	2.5	2.5	0.200	0.361	0.087	0.014	0.003	0.358	0.087	0.058	0.014
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		544	171	5,100		194	326	11	0	7	6	544	63	105	1	0	1	1	171	70	2.7	2.2	0.060	0.132	0.032	0.032	0.008	0.109	0.026	0.008	0.002
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		177	520	5,000		56	95	14	1	6	5	177	186	311	11	0	6	6	520	70	4.4	2.7	0.060	0.217	0.052	0.017	0.004	0.131	0.032	0.031	0.007
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		665	323	7,050		234	393	17	1	10	10	665	114	190	9	0	5	5	323	70	2.9	2.9	0.060	0.143	0.035	0.042	0.010	0.144	0.035	0.021	0.005
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		819	1,713	18,100		267	447	49	2	28	26	819	624	1046	13	1	15	14	1713	60	4.2	2.4	0.030	0.109	0.026	0.040	0.010	0.062	0.015	0.047	0.011
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		1,924	1,001	20,900		680	1139	42	2	32	29	1924	355	595	16	1	18	16	1001	60	2.9	2.9	0.030	0.075	0.018	0.065	0.016	0.075	0.018	0.033	0.008
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		596	1,379	14,100		186	311	48	2	26	23	596	494	826	18	1	21	19	1379	60	4.8	2.7	0.030	0.127	0.031	0.034	0.008	0.071	0.017	0.044	0.011
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,441	549	14,200		498	834	45	2	32	30	1441	187	313	16	1	17	15	549	60	3.3	3.6	0.030	0.085	0.021	0.055	0.013	0.094	0.023	0.023	0.006
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		596	1,379	14,100		186	311	48	2	26	23	596	494	826	18	1	21	19	1379	60	4.8	2.7	0.030	0.127	0.031	0.034	0.008	0.071	0.017	0.044	0.011
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,441	549	14,200		498	834	45	2	32	30	1441	187	313	16	1	17	15	549	60	3.3	3.6	0.030	0.085	0.021	0.055	0.013	0.094	0.023	0.023	0.006
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	729	663	9,950		267	447	6	0	5	4	729	233	390	13	1	14	12	663	70	2.3	3.0	0.060	0.111	0.027	0.036	0.009	0.149	0.036	0.044	0.011
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	540	856	9,950		175	293	31	1	21	19	540	318	532	1	0	3	2	856	70	4.3	2.0	0.060	0.212	0.051	0.051	0.012	0.099	0.024	0.038	0.009
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	601	573	8,400		221	371	4	0	3	2	601	211	354	2	0	3	3	573	70	2.2	2.2	0.060	0.106	0.026	0.028	0.007	0.106	0.026	0.027	0.007
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	600	759	9,700		217	363	5	0	8	7	600	282	471	1	0	3	2	759	70	2.6	2.1	0.060	0.125	0.030	0.033	0.008	0.100	0.024	0.034	0.008
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	600	435	7,400		220	368	7	0	3	2	600	162	270	1	0	1	1	435	70	2.2	2.0	0.060	0.109	0.026	0.029	0.007	0.099	0.024	0.019	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	451	764	8,700		164	275	2	0	5	5	451	285	476	1	0	1	1	764	70	2.4	2.0	0.060	0.119	0.029	0.024	0.006	0.096	0.023	0.033	0.008
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	279	592	6,200		75	126	37	2	20	19	279	194	326	33	1	20	18	592	80	6.8	4.1	0.060	0.339	0.082	0.042	0.010	0.200	0.048	0.053	0.013
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	709	309	7,250		233	389	43	2	22	20	709	96	160	19	1	17	16	309	60	4.0	5.1	0.060	0.199	0.048	0.063	0.015	0.251	0.061	0.035	0.008
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	190	548	5,250		65	108	9	0	4	4	190	180	301	31	1	18	17	548	80	3.5	4.1	0.060	0.170	0.041	0.014	0.003	0.201	0.049	0.049	0.012
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	664	201	6,200		219	368	38	2	19	18	664	70	118	5	0	4	4	201	80	3.9	3.1	0.060	0.193	0.047	0.057	0.014	0.152	0.037	0.014	0.003
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	158	582	5,300		56	93	3	0	3	3	158	188	316	34	2	22	20	582	80	3.0	4.3	0.060	0.146	0.035	0.010	0.002	0.212	0.051	0.055	0.013
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	662	237	6,400		204	342	45	2	36	33	662	86	145	2	0	2	2	237	80	5.1	2.4	0.060	0.253	0.061	0.075	0.018	0.116	0.028	0.012	0.003
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	42	574	4,400		15	26	0	0	1	0	42	186	311	34	2	21	20	574	80	2.4	4.3	0.200	0.352	0.085	0.007	0.002	0.633	0.153	0.163	0.039
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	693	87	5,550		214	358	48	2	37	34	693	32	54	0	0	1	0	87	80	5.1	2.2	0.060	0.252	0.061	0.078	0.019	0.105	0.025	0.004	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	272	914	8,450		81	135	29	1	14	12	272	322	538	21	1	17	15	914	80	5.5	3.0	0.060	0.271	0.065	0.033	0.008	0.146	0.035	0.060	0.014
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,177	218	9,950		393	658	50	2	39	35	1177	74	124	5	0	8	7	218	80	3.9	3.7	0.060	0.190	0.046	0.100	0.024	0.182	0.044	0.018	0.004
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	272	914	8,450		81	135	29	1	14	12	272	322	538	21	1	17	15	914	80	5.5	3.0	0.060	0.271	0.065	0.033	0.008	0.146	0.035	0.060	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,177	218	9,950		393	658	50	2	39	35	1177	74	124	5	0	8	7	218	80	3.9	3.7	0.060	0.190	0.046	0.100	0.024	0.182	0.044	0.018	0.004
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		1,932	2,329	30,450		681	1140	35	2	39	35	1932	839	1404	26	1	31	28	2329	60	3.0	2.6	0.030	0.078	0.019	0.067	0.016	0.068	0.016	0.071	0.017
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		2,172	2,369	32,450		779	1305	43	2	22	21	2172	873	1461	7	0	15	13	2369	60	2.6	2.2	0.030	0.068	0.016	0.066	0.016	0.057	0.014	0.060	0.015
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		355	702	7,550		132	220	0	0	2	1	355	258	431	0	0	7	6	702	60	2.1	2.3	0.060	0.101	0.025	0.016	0.004	0.112	0.027	0.035	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		903	433	9,550		321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		259	499	5,400		82	138	20	1	9	9	259	171	286	19	1	12	10	499	80	4.5	3.4	0.060	0.222	0.054	0.026	0.006	0.167	0.040	0.037	0.009
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		620	287	6,500		214	358	23	1	13	11	620	96	162	14	1	7	7	287	80	3.3	3.7	0.060	0.160	0.039	0.044	0.011	0.180	0.044	0.023	0.006
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,629	2,063	33,500		913	1529	78	3	55	51	2629	692	1158	70	3	73	67	2063	60	3.2	3.8	0.030	0.083	0.020	0.098	0.024	0.101	0.024	0.093	0.022
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,851	2,546	31,400		578	968	122	5	93	85	1851	888	1486	57	3	59	53	2546	60	4.9	3.2	0.030	0.129	0.031	0.107	0.026	0.083	0.020	0.094	0.023
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		137	555	4,950		44	74	6	0	7	6	137	199	332	8	0	8	8	555	80	4.5	2.7	0.200	0.671	0.162	0.041	0.010	0.398	0.096	0.099	0.024
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		538	187	5,200		183	306	19	1	15	14	538	66	110	4	0	4	3	187	80	3.6	3.0	0.060	0.175	0.042	0.042	0.010	0.147	0.036	0.012	0.003
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		794	537	9,500		297	497	0	0	0	0	794	199	333	2	0	2	1	537	70	1.9	2.1	0.060	0.092	0.022	0.033	0.008	0.101	0.024	0.024	0.006
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		532	719	8,950		193	324	4	0	6	5	532	268	450	1	0	0	0	719	70	2.5	1.9	0.060	0.120	0.029	0.028	0.007	0.093	0.023	0.030	0.007
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		627	601	8,750		201	336	6	0	44	40	627	211	353	9	0	15	13	601	40	4.9	3.1	0.060	0.243	0.059	0.068	0.016	0.152	0.037	0.041	0.010
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		1,124	609	12,400		390	652	16	1	34	31	1124	216	362	10	0	11	10	609	60	3.4	2.9	0.030	0.088	0.021	0.044	0.011	0.075	0.018	0.020	0.005
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		629	927	11,100		206	346	33	1	22	21	629	328	549	11	1	20	18	927	70	4.1	3.0	0.030	0.108	0.026	0.030	0.007	0.077	0.019	0.032	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		539	1,018	11,100		135	227	79	3	50	45	539	340	569	50	2	30	27	1018	60	7.8	3.8	0.030	0.206	0.050	0.050	0.012	0.100	0.024	0.045	0.011
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		627	601	8,750		201	336	6	0	44	40	627	211	353	9	0	15	13	601	40	4.9	3.1	0.060	0.243	0.059	0.068	0.016	0.152	0.037	0.041	0.010
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		1,349	704	14,650		450	754	68	3	39	35	1349	206	346	53	2	51	46	704	40	3.8	5.9	0.030	0.099	0.024	0.060	0.015	0.157	0.038	0.049	0.012
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		674	160	5,950		184	307	79	3	53	48	674	56	95	2	0	4	3	160	70	6.8	3.0	0.060	0.338	0.082	0.102	0.025	0.148	0.036	0.011	0.003
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		94	121	1,550		27	44	4	0	10	9	94	37	62	3	0	10	9	121	40	6.8	5.6	0.200	1.017	0.246	0.043	0.010	0.833	0.202	0.045	0.011
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		674	160	5,950		184	307	79	3	53	48	674	56	95	2	0	4	3	160	70	6.8	3.0	0.060	0.338	0.082	0.102	0.025	0.148	0.036	0.011	0.003
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		10,337	7,967	130,700		3105	5199	734	32	663	604	10337	2518	4216	362	16	447	408	7967	100	5.5	4.9	0.015	0.078	0.019	0.360	0.087	0.068	0.016	0.242	0.059
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		10,337	7,967	130,700		3105	5199	734	32	663	604	10337	2518	4216	362	16	447	408	7967	100	5.5	4.9	0.015	0.078	0.019	0.360	0.087	0.068	0.016	0.242	0.059
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		9,612	7,359	121,200		3008	5038	518	23	536	489	9612	2322	3889	344	15	413	376	7359	100	5.0	4.9	0.015	0.070	0.017	0.299	0.072	0.068	0.017	0.225	0.054
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		6,923	9,333	116,100		2001	3351	534	24	530	483	6923	3016	5051	280	12	509	465	9333	100	6.1	4.6	0.015	0.086	0.021	0.268	0.065	0.064	0.015	0.267	0.065
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		3,399	4,089	53,500		1008	1688	274	12	218	199	3399	1301	2178	166	7	229	208	4089	100	5.7	4.8	0.015	0.080	0.019	0.121	0.029	0.067	0.016	0.122	0.030
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		3,524	5,244	62,600		993	1663	261	11	312	284	3524	1715	2873	114	5	281	256	5244	100	6.6	4.4	0.015	0.093	0.022	0.146	0.035	0.062	0.015	0.145	0.035
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		7,021	9,651	119,100		2040	3417	533	24	527	480	7021	3128	5239	283	12	517	472	9651	100	6.1	4.5	0.015	0.085	0.021	0.268	0.065	0.063	0.015	0.273	0.066
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		751	873	11,600		246	413	21	1	37	33	751	307	515	11	0	21	19	873	60	4.3	3.1	0.030	0.113	0.027	0.038	0.009	0.080	0.019	0.031	0.008
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		626	202	5,900		181	304	2	0	73	66	626	72	120	2	0	4	4	202	40	6.7	2.9	0.060	0.334	0.081	0.094	0.023	0.141	0.034	0.013	0.003

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		1,925	3,485	38,600		598	1002	152	7	87	79	1925	1227	2056	59	3	73	67	3485	100	4.9	3.0	0.015	0.068	0.017	0.059	0.014	0.042	0.010	0.065	0.016
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,408	2,649	50,400		1454	2435	103	5	215	196	4408	929	1555	47	2	61	55	2649	100	4.2	3.1	0.015	0.059	0.014	0.117	0.028	0.043	0.010	0.051	0.012
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,657	1,439	29,300		864	1448	80	4	137	124	2657	502	840	29	1	35	32	1439	100	4.4	3.2	0.015	0.062	0.015	0.074	0.018	0.044	0.011	0.028	0.007
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,296	2,558	27,500		391	656	120	5	65	59	1296	900	1507	48	2	53	48	2558	100	5.3	3.0	0.015	0.074	0.018	0.043	0.010	0.042	0.010	0.048	0.012
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		1,852	3,193	36,000		672	1125	33	1	11	10	1852	1172	1962	25	1	17	16	3193	100	2.4	2.2	0.015	0.033	0.008	0.027	0.007	0.031	0.007	0.044	0.011
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		3,305	2,270	39,800		1205	2019	38	2	21	20	3305	832	1393	22	1	12	10	2270	100	2.3	2.2	0.015	0.032	0.008	0.048	0.012	0.031	0.008	0.031	0.008
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bramalea Rd_W-N

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62											
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	656	2,022	19,150		226	379	22	1	15	13	656	731	1225	26	1	20	19	2022	80	3.3	2.5	0.030	0.086	0.021	0.025	0.006	0.065	0.016	0.059	0.014
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,103	848	21,100		734	1228	57	3	42	39	2103	309	517	7	0	8	7	848	80	3.1	2.4	0.030	0.081	0.020	0.077	0.019	0.062	0.015	0.024	0.006
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	656	2,022	19,150		226	379	22	1	15	13	656	731	1225	26	1	20	19	2022	80	3.3	2.5	0.030	0.086	0.021	0.025	0.006	0.065	0.016	0.059	0.014
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,103	848	21,100		734	1228	57	3	42	39	2103	309	517	7	0	8	7	848	80	3.1	2.4	0.030	0.081	0.020	0.077	0.019	0.062	0.015	0.024	0.006
Winston Churchill Blvd	Winston Churchill Blvd N of S Side Rd_NB	D31	NB	1	2	597	1,105	12,150		202	338	28	1	15	13	597	396	664	17	1	14	13	1105	80	3.6	2.7	0.030	0.093	0.023	0.025	0.006	0.069	0.017	0.034	0.008
Winston Churchill Blvd	Winston Churchill Blvd N of S Side Rd_SB	D32	SB	1	2	1,218	607	13,050		416	696	43	2	32	29	1218	220	368	6	0	7	6	607	80	3.5	2.5	0.030	0.091	0.022	0.050	0.012	0.065	0.016	0.018	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	825	608	10,250		274	460	40	2	26	23	825	221	369	6	0	6	6	608	60	3.9	2.5	0.030	0.101	0.025	0.037	0.009	0.064	0.015	0.017	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	632	936	11,200		230	386	9	0	4	3	632	338	567	11	1	10	9	936	60	2.3	2.5	0.030	0.061	0.015	0.017	0.004	0.065	0.016	0.027	0.007
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	988	576	11,150		361	604	11	0	6	6	988	209	351	6	0	5	5	576	60	2.3	2.4	0.030	0.060	0.015	0.027	0.006	0.063	0.015	0.016	0.004
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	355	924	9,150		112	187	22	1	17	16	355	338	566	7	0	7	6	924	60	4.8	2.3	0.060	0.236	0.057	0.038	0.009	0.113	0.027	0.046	0.011
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		519	1,192	12,200		187	312	6	0	7	7	519	437	733	2	0	10	10	1192	60	2.6	2.3	0.030	0.069	0.017	0.016	0.004	0.059	0.014	0.032	0.008
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		1,226	654	13,450		434	728	17	1	24	22	1226	241	403	4	0	3	3	654	60	2.9	2.2	0.030	0.076	0.018	0.042	0.010	0.057	0.014	0.017	0.004
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		355	702	7,550		132	220	0	0	2	1	355	258	431	0	0	7	6	702	60	2.1	2.3	0.060	0.101	0.025	0.016	0.004	0.112	0.027	0.035	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		903	433	9,550		321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		584	139	5,150		218	364	0	0	1	1	584	50	83	1	0	3	2	139	60	2.0	2.8	0.060	0.096	0.023	0.025	0.006	0.136	0.033	0.008	0.002
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		192	504	4,950		65	108	4	0	8	7	192	187	314	1	0	1	1	504	60	3.9	2.0	0.200	0.569	0.138	0.049	0.012	0.293	0.071	0.066	0.016
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		732	390	8,000		272	456	0	0	2	2	732	134	224	16	1	8	7	390	60	2.0	3.3	0.060	0.098	0.024	0.032	0.008	0.163	0.039	0.028	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		226	715	6,700		62	103	30	1	16	14	226	266	445	1	0	2	1	715	60	6.6	2.0	0.060	0.330	0.080	0.033	0.008	0.098	0.024	0.031	0.008
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,477	1,501	21,250		482	807	80	4	54	50	1477	521	872	46	2	31	29	1501	60	4.2	3.2	0.030	0.110	0.027	0.073	0.018	0.083	0.020	0.056	0.014
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,558	1,401	21,150		498	835	105	5	60	55	1558	481	805	44	2	36	33	1401	60	4.5	3.4	0.030	0.117	0.028	0.081	0.020	0.089	0.022	0.056	0.013
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		1,725	2,094	27,300		572	957	85	4	56	51	1725	741	1240	47	2	33	31	2094	60	3.9	2.9	0.030	0.103	0.025	0.080	0.019	0.075	0.018	0.070	0.017
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		903	433	9,550		321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		1,725	2,094	27,300		572	957	85	4	56	51	1725	741	1240	47	2	33	31	2094	60	3.9	2.9	0.030	0.103	0.025	0.080	0.019	0.075	0.018	0.070	0.017
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		1,964	1,726	26,350		646	1082	109	5	64	58	1964	601	1007	47	2	36	33	1726	60	4.0	3.1	0.030	0.106	0.026	0.093	0.022	0.082	0.020	0.063	0.015
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		788	694	10,600		264	441	41	2	21	19	788	248	416	16	1	7	6	694	60	3.7	2.6	0.030	0.098	0.024	0.034	0.008	0.069	0.017	0.021	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		713	754	10,500		252	422	22	1	8	8	713	262	439	25	1	14	13	754	60	2.8	3.1	0.030	0.074	0.018	0.023	0.006	0.082	0.020	0.028	0.007
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		901	1,070	14,100		304	509	42	2	23	21	901	388	650	17	1	7	7	1070	60	3.6	2.4	0.030	0.095	0.023	0.038	0.009	0.063	0.015	0.030	0.007
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		1,223	796	14,400		437	733	31	1	11	10	1223	278	465	25	1	14	13	796	60	2.6	3.1	0.030	0.068	0.017	0.037	0.009	0.080	0.019	0.029	0.007
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,527	1,093	18,700		505	845	82	4	48	43	1527	380	636	31	1	24	21	1093	80	4.0	3.2	0.030	0.104	0.025	0.071	0.017	0.083	0.020	0.041	0.010
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,010	1,348	16,850		320	537	74	3	40	36	1010	471	788	34	2	28	25	1348	80	4.6	3.1	0.030	0.120	0.029	0.054	0.013	0.081	0.020	0.049	0.012
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		1,604	1,260	20,450		513	860	111	5	60	55	1604	440	737	32	1	26	24	1260	80	4.4	3.1	0.030	0.116	0.028	0.083	0.020	0.081	0.020	0.046	0.011
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,201	1,554	19,700		387	648	77	3	45	41	1201	536	898	51	2	35	32	1554	80	4.3	3.3	0.030	0.114	0.028	0.061	0.015	0.086	0.021	0.060	0.014
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,604	1,260	20,450		513	860	111	5	60	55	1604	440	737	32	1	26	24	1260	80	4.4	3.1	0.030	0.116	0.028	0.083	0.020	0.081	0.020	0.046	0.011
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,201	1,554	19,700		387	648	77	3	45	41	1201	536	898	51	2	35	32	1554	80	4.3	3.3	0.030	0.114	0.028	0.061	0.015	0.086	0.021	0.060	0.014
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		179	384	4,000		60	100	10	0	5	4	179	138	231	9	0	3	3	384	80	3.7	2.6	0.200	0.551	0.133	0.044	0.011	0.374	0.090	0.064	0.016
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		443	198	4,600		154	258	16	1	7	7	443	70	116	5	0	4	3	198	80	3.1	3.0	0.200	0.455	0.110	0.090	0.022	0.441	0.107	0.039	0.009
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	243	111	2,550		70	116	28	1	15	13	243	40	66	3	0	1	1	111	70	6.0	2.7	0.200	0.892	0.216	0.097	0.023	0.389	0.094	0.019	0.005
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	206	245	3,200		72	120	8	0	3	3	206	78	131	15	1	10	10	245	70	3.1	4.5	0.200	0.448	0.108	0.041	0.010	0.672	0.163	0.074	0.018
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	571	544	7,950		169	283	60	3	29	27	571	173	290	36	2	22	21	544	80	5.5	4.6	0.060	0.273	0.066	0.070	0.017	0.225	0.054	0.055	0.013
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	677	596	9,100		214	359	49	2	28	25	677	188	314	34	2	30	28	596	80	4.6	4.8	0.060	0.228	0.055	0.069	0.017	0.238	0.058	0.063	0.015
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	571	544	7,950		169	283	60	3	29	27	571	173	290	36	2	22	21	544	80	5.5	4.6	0.060	0.273	0.066	0.070	0.017	0.225	0.054	0.055	0.013
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	677	596	9,100		214	359	49	2	28	25	677	188	314	34	2	30	28	596	80	4.6	4.8	0.060	0.228	0.055	0.069	0.017	0.238	0.058	0.063	0.015
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	305	346	4,650		85	142

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		364	583	6,750		124	207	17	1	8	7	364	206	344	13	1	10	9	583	60	3.5	2.9	0.060	0.170	0.041	0.028	0.007	0.143	0.035	0.037	0.009
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		751	631	9,850		247	414	37	2	27	24	751	226	379	10	0	8	8	631	60	4.1	2.7	0.060	0.201	0.049	0.067	0.016	0.130	0.031	0.037	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		685	464	8,200		236	396	26	1	14	12	685	156	260	21	1	14	12	464	80	3.3	3.8	0.060	0.160	0.039	0.049	0.012	0.185	0.045	0.038	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		715	703	10,150		243	408	27	1	19	17	715	250	418	16	1	9	9	703	80	3.5	2.8	0.030	0.092	0.022	0.029	0.007	0.072	0.018	0.023	0.006
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		258	473	5,200		78	131	26	1	12	10	258	160	268	20	1	13	11	473	80	5.2	3.6	0.060	0.256	0.062	0.029	0.007	0.177	0.043	0.037	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		574	286	6,150		198	332	20	1	12	11	574	95	159	15	1	8	8	286	80	3.3	3.9	0.060	0.160	0.039	0.041	0.010	0.190	0.046	0.024	0.006
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,412	2,387	41,400		1168	1957	107	5	92	83	3412	841	1409	45	2	47	43	2387	60	3.5	3.0	0.030	0.090	0.022	0.138	0.033	0.078	0.019	0.083	0.020
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		1,931	2,957	34,900		654	1096	83	4	49	45	1931	1055	1766	40	2	49	45	2957	60	3.6	2.8	0.030	0.093	0.023	0.080	0.019	0.072	0.018	0.096	0.023
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,018	2,130	36,750		1050	1758	72	3	71	64	3018	757	1269	34	1	36	33	2130	60	3.2	2.8	0.030	0.084	0.020	0.113	0.027	0.074	0.018	0.070	0.017
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		1,893	2,507	31,450		651	1091	67	3	42	39	1893	896	1500	32	1	41	37	2507	60	3.3	2.8	0.030	0.087	0.021	0.074	0.018	0.072	0.017	0.080	0.019
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,615	2,728	45,300		1227	2054	148	7	94	85	3615	923	1545	84	4	90	82	2728	60	3.6	3.7	0.030	0.093	0.022	0.150	0.036	0.097	0.023	0.118	0.029
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,802	3,702	46,450		897	1502	145	6	132	120	2802	1294	2167	85	4	80	72	3702	60	4.6	3.1	0.030	0.120	0.029	0.150	0.036	0.081	0.020	0.134	0.033
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		689	936	11,600		239	400	27	1	12	10	689	330	553	24	1	15	13	936	80	3.1	2.9	0.030	0.082	0.020	0.025	0.006	0.076	0.018	0.032	0.008
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,249	580	13,050		414	692	60	3	42	38	1249	204	342	11	1	12	10	580	80	4.0	3.0	0.030	0.104	0.025	0.058	0.014	0.078	0.019	0.020	0.005
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		588	737	9,450		195	326	34	2	16	15	588	261	437	10	0	15	14	737	80	3.9	2.9	0.060	0.191	0.046	0.050	0.012	0.144	0.035	0.047	0.011
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		939	751	12,050		320	536	12	1	37	33	939	267	446	10	0	15	13	751	80	3.7	2.9	0.030	0.097	0.023	0.041	0.010	0.075	0.018	0.025	0.006
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		341	558	6,400		104	174	36	2	13	12	341	198	331	11	1	9	8	558	80	5.0	2.9	0.060	0.247	0.060	0.038	0.009	0.140	0.034	0.035	0.008
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		666	438	7,900		237	398	12	1	9	9	666	148	248	19	1	12	10	438	80	2.8	3.6	0.060	0.134	0.033	0.040	0.010	0.177	0.043	0.035	0.008
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,679	1,127	20,050		590	988	50	2	26	23	1679	401	671	27	1	14	13	1127	60	3.0	2.8	0.030	0.077	0.019	0.058	0.014	0.072	0.017	0.036	0.009
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,117	1,489	18,600		388	649	47	2	16	15	1117	532	890	28	1	20	18	1489	60	3.1	2.7	0.030	0.081	0.020	0.040	0.010	0.071	0.017	0.047	0.011
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		28	374	2,850		9	15	1	0	2	1	28	133	222	7	0	6	6	374	80	4.7	2.8	0.200	0.694	0.168	0.009	0.002	0.417	0.101	0.070	0.017
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		392	29	3,000		133	222	13	1	12	11	392	10	16	1	0	1	1	29	80	3.7	3.9	0.200	0.537	0.130	0.094	0.023	0.568	0.137	0.007	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		28	374	2,850		9	15	1	0	2	1	28	133	222	7	0	6	6	374	80	4.7	2.8	0.200	0.694	0.168	0.009	0.002	0.417	0.101	0.070	0.017
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		392	29	3,000		133	222	13	1	12	11	392	10	16	1	0	1	1	29	80	3.7	3.9	0.200	0.537	0.130	0.094	0.023	0.568	0.137	0.007	0.002
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		819	616	10,250		300	502	6	0	6	5	819	227	381	2	0	3	3	616	70	2.3	2.2	0.030	0.059	0.014	0.022	0.005	0.056	0.014	0.015	0.004
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		594	774	9,750		212	354	10	0	9	9	594	286	480	3	0	3	2	774	70	2.8	2.1	0.060	0.136	0.033	0.036	0.009	0.102	0.025	0.035	0.009
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		682	788	10,500		249	418	6	0	5	4	682	287	481	5	0	8	7	788	70	2.3	2.4	0.030	0.060	0.014	0.018	0.004	0.062	0.015	0.022	0.005
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		421	671	7,800		149	249	9	0	7	7	421	250	420	0	0	1	0	671	70	2.9	1.9	0.060	0.142	0.034	0.027	0.006	0.094	0.023	0.028	0.007
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		85	360	3,200		31	51	2	0	1	0	85	130	219	5	0	3	3	360	70	2.5	2.5	0.200	0.361	0.087	0.014	0.003	0.358	0.087	0.058	0.014
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		544	171	5,100		194	326	11	0	7	6	544	63	105	1	0	1	1	171	70	2.7	2.2	0.060	0.132	0.032	0.032	0.008	0.109	0.026	0.008	0.002
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		177	520	5,000		56	95	14	1	6	5	177	186	311	11	0	6	6	520	70	4.4	2.7	0.060	0.217	0.052	0.017	0.004	0.131	0.032	0.031	0.007
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		665	323	7,050		234	393	17	1	10	10	665	114	190	9	0	5	5	323	70	2.9	2.9	0.060	0.143	0.035	0.042	0.010	0.144	0.035	0.021	0.005
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		819	1,713	18,100		267	447	49	2	28	26	819	624	1046	13	1	15	14	1713	60	4.2	2.4	0.030	0.109	0.026	0.040	0.010	0.062	0.015	0.047	0.011
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		1,924	1,001	20,900		680	1139	42	2	32	29	1924	355	595	16	1	18	16	1001	60	2.9	2.9	0.030	0.075	0.018	0.065	0.016	0.075	0.018	0.033	0.008
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		596	1,379	14,100		186	311	48	2	26	23	596	494	826	18	1	21	19	1379	60	4.8	2.7	0.030	0.127	0.031	0.034	0.008	0.071	0.017	0.044	0.011
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,441	549	14,200		498	834	45	2	32	30	1441	187	313	16	1	17	15	549	60	3.3	3.6	0.030	0.085	0.021	0.055	0.013	0.094	0.023	0.023	0.006
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		596	1,379	14,100		186	311	48	2	26	23	596	494	826	18	1	21	19	1379	60	4.8	2.7	0.030	0.127	0.031	0.034	0.008	0.071	0.017	0.044	0.011
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,441	549	14,200		498	834	45	2	32	30	1441	187	313	16	1	17	15	549	60	3.3	3.6	0.030	0.085	0.021	0.055	0.013	0.094	0.023	0.023	0.006
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	729	663	9,950		267	447	6	0	5	4	729	233	390	13	1	14	12	663	70	2.3	3.0	0.060	0.111	0.027	0.036	0.009	0.149	0.036	0.044	0.011
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	540	856	9,950		175	293	31	1	21	19	540	318	532	1	0	3	2	856	70	4.3	2.0	0.060	0.212	0.051	0.051	0.012	0.099	0.024	0.038	0.009
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	601	573	8,400		221	371	4	0	3	2	601	211	354	2	0	3	3	573	70	2.2	2.2	0.060	0.106	0.026	0.028	0.007	0.106	0.026	0.027	0.007
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	600	759	9,700		217	363	5	0	8	7	600	282	471	1	0	3	2	759	70	2.6	2.1	0.060	0.125	0.030	0.033	0.008	0.100	0.024	0.034	0.008
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	600	435	7,400		220	368	7	0	3	2	600	162	270	1	0	1	1	435	70	2.2	2.0	0.060	0.109	0.026	0.029	0.007	0.099	0.024	0.019	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	451	764	8,700		164	275	2	0	5	5	451	285	476	1	0	1	1	764	70	2.4	2.0	0.060	0.119	0.029	0.024	0.006	0.096	0.023	0.033	0.008
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	279	592	6,200		75	126	37	2	20	19	279	194	326	33	1	20	18	592	80	6.8	4.1	0.060	0.339	0.082	0.042	0.010	0.200	0.048	0.053	0.013
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	709	309	7,250		233	389	43	2	22	20	709	96	160	19	1	17	16	309	80	4.0	5.1	0.060	0.199	0.048	0.063	0.015	0.251	0.061	0.035	0.008
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	190	548	5,250		65	108	9	0	4	4	190	180	301	31	1	18	17	548	80	3.5	4.1	0.060	0.170	0.041	0.014	0.003	0.201	0.049	0.049	0.012
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	664	201	6,200		219	368	38	2	19	18	664	70	118	5	0	4	4	201	80	3.9	3.1	0.060	0.193	0.047	0.057	0.014	0.152	0.037	0.014	0.003
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	158	582	5,300		56	93	3	0	3	3	158	188	316	34	2	22	20	582	80	3.0	4.3	0.060	0.146	0.035	0.010	0.002	0.212	0.051	0.055	0.013
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	662	237	6,400		204	342	45	2	36	33	662	86	145	2	0	2	2	237	80	5.1	2.4	0.060	0.253	0.061	0.075	0.018	0.116	0.028	0.012	0.003
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	42	574	4,400		15	26	0	0	1	0	42	186	311	34	2	21	20	574	80	2.4	4.3	0.200	0.352	0.085	0.007	0.002	0.633	0.153	0.163	0.039
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	693	87	5,550		214	358	48	2	37	34	693	32	54	0	0	1	0	87	80	5.1	2.2	0.060	0.252	0.061	0.078	0.019	0.105	0.025	0.004	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	272	914	8,450		81	135	29	1	14	12	272	322	538	21	1	17	15	914	80	5.5	3.0	0.060	0.271	0.065	0.033	0.008	0.146	0.035	0.060	0.014
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,177	218	9,950		393	658	50	2	39	35	1177	74	124	5	0	8	7	218	80	3.9	3.7	0.060	0.190	0.046	0.100	0.024	0.182	0.044	0.018	0.004
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	272	914	8,450		81	135	29	1	14	12	272	322	538	21	1	17	15	914	80	5.5	3.0	0.060	0.271	0.065	0.033	0.008	0.146	0.035	0.060	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,177	218	9,950		393	658	50	2	39	35	1177	74	124	5	0	8	7	218	80	3.9	3.7	0.060	0.190	0.046	0.100	0.024	0.182	0.044	0.018	0.004
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		722	625	9,600		262	439	9	0	6	6	722	228	381	5	0	6	5	625	70	2.4	2.4	0.060	0.119	0.029	0.038	0.009	0.117	0.028	0.033	0.008
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		567	696	9,000		196	329	18	1	12	11	567	257	431	3	0	3	2	696	70	3.2	2.1	0.060	0.159	0.038	0.040	0.010	0.103	0.025	0.032	0.008
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		551	656	8,600		199	332	9	0	6	5	551	238	398	6	0	7	7	656	80	2.6	2.5	0.060	0.125	0.030	0.031	0.007	0.121	0.029	0.036	0.009
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		422	566	7,050		147	246	12	1	8	8	422	209	349	3	0	3	2	566	80	3.1	2.2	0.060	0.154	0.037	0.029	0.007	0.105	0.025	0.027	0.006
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		551	656	8,600		199	332	9	0	6	5	551	238	398	6	0	7	7	656	80	2.6	2.5	0.060	0.125	0.030	0.031	0.007	0.121	0.029	0.036	0.009
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		422	566	7,050		147	246	12	1	8	8	422	209	349	3	0	3	2	566	80	3.1	2.2	0.060	0.154	0.037	0.029	0.007	0.105	0.025	0.027	0.006
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,421	1,411	27,350		837	1403	78	3	52	48	2421	489	819	36	2	34	31	1411	70	3.2	3.3	0.030	0.085	0.021	0.092	0.022	0.085	0.021	0.054	0.013
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,340	2,114	24,650		456	764	53	2	34	31	1340	740	1240	44	2	46	42	2114	70	3.5	3.1	0.030	0.092	0.022	0.055	0.013	0.081	0.020	0.076	0.018
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,572	1,523	29,250		895	1499	77	3	51	47	2572	530	887	38	2	35	31	1523	70	3.1	3.2	0.030	0.082	0.020	0.094	0.023	0.083	0.020	0.057	0.014
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		1,466	2,387	27,500		500	838	57	2	36	33	1466	840	1406	47	2	48	44	2387	70	3.5	3.0	0.030	0.091	0.022	0.059	0.014	0.079	0.019	0.084	0.020
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		922	933	13,250		319	535	31	1	19	17	922	320	537	34	1	21	20	933	80	3.2	3.4	0.030	0.084	0.020	0.035	0.008	0.088	0.021	0.037	0.009
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,018	938	13,950		352	589	38	2	19	18	1018	327	548	27	1	18	17	938	80	3.2	3.1	0.030	0.084	0.020	0.038	0.009	0.081	0.020	0.034	0.008
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		937	1,154	14,950		340	569	14	1	7	6	937	422	706	15	1	5	5	1154	70	2.4	2.3	0.030	0.063	0.015	0.026	0.006	0.059	0.014	0.030	0.007
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,328	972	16,450		482	808	24	1	7	6	1328	354	593	10	0	8	7	972	70	2.4	2.4	0.030	0.061	0.015	0.037	0.009	0.062	0.015	0.027	0.006
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		1,512	1,413	20,900		563	942	3	0	2	2	1512	518	867	16	1	6	5	1413	70	2.0	2.2	0.030	0.051	0.012	0.035	0.008	0.058	0.014	0.037	0.009
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		1,500	1,514	21,550		544	911	29	1	8	7	1500	563	943	3	0	3	2	1514	70	2.4	2.0	0.030	0.062	0.015	0.042	0.010	0.052	0.013	0.035	0.008
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		757	448	8,600		268	448	15	1	13	12	757	161	270	7	0	5	5	448	60	2.9	2.6	0.060	0.142	0.034	0.048	0.012	0.127	0.031	0.025	0.006
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		562	628	8,500		194	326	22	1	10	9	562	231	386	2	0	5	4	628	60	3.2	2.3	0.060	0.156	0.038	0.039	0.010	0.110	0.027	0.031	0.007
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		2,094	2,511	32,900		737	1233	44	2	41	37	2094	907	1519	30	1	28	26	2511	70	3.0	2.5	0.030	0.078	0.019	0.073	0.018	0.066	0.016	0.074	0.018
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,001	2,128	36,650		1049	1757	55	2	72	66	3001	780	1306	18	1	12	11	2128	70	3.2	2.3	0.030	0.082	0.020	0.110	0.027	0.059	0.014	0.056	0.013
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,166	2,491	33,250		758	1270	44	2	48	44	2166	899	1505	30	1	29	27	2491	70	3.1	2.6	0.030	0.081	0.020	0.078	0.019	0.066	0.016	0.074	0.018
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,043	2,298	38,150		1060	1775	57	2	78	71	3043	842	1410	18	1	14	13	2298	70	3.2	2.3	0.030	0.084	0.020	0.114	0.028	0.059	0.014	0.060	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,001	2,439	31,700		710	1188	61	3	20	19	2001	889	1488	30	1	16	15	2439	70	2.8	2.3	0.030	0.072	0.017	0.064	0.016	0.061	0.015	0.066	0.016
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		2,722	2,175	35,000		983	1646	41	2	26	24	2722	789	1321	28	1	19	17	2175	70	2.5	2.4	0.030	0.065	0.016	0.079	0.019	0.063	0.015	0.062	0.015
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		355	702	7,550		132	220	0	0	2	1	355	258	431	0	0	7	6	702	60	2.1	2.3	0.060	0.101	0.025	0.016	0.004	0.112	0.027	0.035	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		903	433	9,550		321	538	13	1	16	14	903	161	270	0	0	1	1	433	60	2.8	2.0	0.060	0.138	0.033	0.056	0.014	0.097	0.024	0.019	0.005
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		259	499	5,400		82	138	20	1	9	9	259	171	286	19	1	12	10	499	80	4.5	3.4	0.060	0.222	0.054	0.026	0.006	0.167	0.040	0.037	0.009
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		620	287	6,500		214	358	23	1	13	11	620	96	162	14	1	7	7	287	80	3.3	3.7	0.060	0.160	0.039	0.044	0.011	0.180	0.044	0.023	0.006
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,629	2,063	33,500		913	1529	78	3	55	51	2629	692	1158	70	3	73	67	2063	60	3.2	3.8	0.030	0.083	0.020	0.098	0.024	0.101	0.024	0.093	0.022
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,851	2,546	31,400		578	968	122	5	93	85	1851	888	1486	57	3	59	53	2546	60	4.9	3.2	0.030	0.129	0.031	0.107	0.026	0.083	0.020	0.094	0.023
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		137	555	4,950		44	74	6	0	7	6	137	199	332	8	0	8	8	555	80	4.5	2.7	0.200	0.671	0.162	0.041	0.010	0.398	0.096	0.099	0.024
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		538	187	5,200		183	306	19	1	15	14	538	66	110	4	0	4	3	187	80	3.6	3.0	0.060	0.175	0.042	0.042	0.010	0.147	0.036	0.012	0.003
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		794	537	9,500		297	497	0	0	0	0	794	199	333	2	0	2	1	537	70	1.9	2.1	0.060	0.092	0.022	0.033	0.008	0.101	0.024	0.024	0.006
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		532	719	8,950		193	324	4	0	6	5	532	268	450	1	0	0	0	719	70	2.5	1.9	0.060	0.120	0.029	0.028	0.007	0.093	0.023	0.030	0.007
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		33	123	1,100		12	21	0	0	0	0	33	45	76	1	0	1	0	123	60	1.9	2.2	0.200	0.276	0.067	0.004	0.001	0.319	0.077	0.018	0.004
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		428	37	3,300		157	263	4	0	2	2	428	14	23	0	0	0	0	37	60	2.2	1.9	0.200	0.325	0.079	0.062	0.015	0.276	0.067	0.005	0.001
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		760	579	9,550		264	443	17	1	18	17	760	209	350	7	0	7	6	579	70	3.2	2.6	0.060	0.158	0.038	0.054	0.013	0.125	0.030	0.032	0.008
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		596	570	8,350		203	340	21	1	16	15	596	209	350	2	0	5	4	570	70	3.5	2.3	0.060	0.173	0.042	0.046	0.011	0.112	0.027	0.028	0.007
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	23	7	200		8	14	0	0	1	0	23	3	4	0	0	0	0	7	60	2.8	1.9	0.600	1.129	0.273	0.012	0.003	0.751	0.182	0.002	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	6	73	550		2	4	0	0	0	0	6	26	44	1	0	1	1	73	60	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.392	0.095	0.013	0.003
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		1,370	759	15,200		499	835	17	1	9	9	1370	276	462	11	0	5	5	759	40	2.4	2.4	0.030	0.061	0.015	0.038	0.009	0.062	0.015	0.021	0.005
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		1,935	1,510	24,600		706	1183	21	1	13	11	1935	556	930	11	1	6	6	1510	60	2.3	2.2	0.030	0.060	0.015	0.052	0.013	0.057	0.014	0.038	0.009
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		1,852	3,193	36,050		672	1125	33	1	11	10	1852	1172	1962	25	1	17	16	3193	70	2.4	2.2	0.030	0.062	0.015	0.052	0.012	0.058	0.014	0.083	0.020
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		627	601	8,750		201	336	6	0	44	40	627	211	353	9	0	15	13	601	40	4.9	3.1	0.060	0.243	0.059	0.068	0.016	0.152	0.037	0.041	0.010
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		1,124	609	12,400		390	652	16	1	34	31	1124	216	362	10	0	11	10	609	60	3.4	2.9	0.030	0.088	0.021	0.044	0.011	0.075	0.018	0.020	0.005
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		629	927	11,100		206	346	33	1	22	21	629	328	549	11	1	20	18	927	70	4.1	3.0	0.030	0.108	0.026	0.030	0.007	0.077	0.019	0.032	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		539	1,018	11,100		135	227	79	3	50	45	539	340	569	50	2	30	27	1018	60	7.8	3.8	0.030	0.206	0.050	0.050	0.012	0.100	0.024	0.045	0.011
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		627	601	8,750		201	336	6	0	44	40	627	211	353	9	0	15	13	601	40	4.9	3.1	0.060	0.243	0.059	0.068	0.016	0.152	0.037	0.041	0.010
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		1,349	704	14,650		450	754	68	3	39	35	1349	206	346	53	2	51	46	704	40	3.8	5.9	0.030	0.099	0.024	0.060	0.015	0.157	0.038	0.049	0.012
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	1	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		1,925	3,485	38,600		598	1002	152	7	87	79	1925	1227	2056	59	3	73	67	3485	100	4.9	3.0	0.015	0.068	0.017	0.059	0.014	0.042	0.010	0.065	0.016
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,408	2,649	50,400		1454	2435	103	5	215	196	4408	929	1555	47	2	61	55	2649	100	4.2	3.1	0.015	0.059	0.014	0.117	0.028	0.043	0.010	0.051	0.012
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,657	1,439	29,300		864	1448	80	4	137	124	2657	502	840	29	1	35	32	1439	100	4.4	3.2	0.015	0.062	0.015	0.074	0.018	0.044	0.011	0.028	0.007
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,296	2,558	27,500		391	656	120	5	65	59	1296	900	1507	48	2	53	48	2558	100	5.3	3.0	0.015	0.074	0.018	0.043	0.010	0.042	0.010	0.048	0.012
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		1,852	3,193	36,000		672	1125	33	1	11	10	1852	1172	1962	25	1	17	16	3193	100	2.4	2.2	0.015	0.033	0.008	0.027	0.007	0.031	0.007	0.044	0.011
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		3,305	2,270	39,800		1205	2019	38	2	21	20	3305	832	1393	22	1	12	10	2270	100	2.3	2.2	0.015	0.032	0.008	0.048	0.012	0.031	0.008	0.031	0.008
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		5,419	9,812	108,800		1620	2712	461	20	317	289	5419	3501	5863	174	8	139	127	9812	100	5.5	2.7	0.015	0.077	0.019	0.188	0.045	0.038	0.009	0.166	0.040
Highway 400	Hwy 400 S of Teston Rd_SB	B20	SB	5		9,149	5,081	101,600		3140	5259	299	13	229	209	9149	1708	2860	157	7	183	166	5081	100	3.4	3.8	0.015	0.047	0.011	0.193	0.047	0.053	0.013	0.121	0.029
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		4,084	8,944	93,100		1186	1987	370	16	275	250	4084	3221	5395	116	5	108	99	8944	100	6.0	2.6	0.015	0.084	0.020	0.153	0.037	0.036	0.009	0.143	0.035
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		8,323	4,016	88,100		2857	4785	259	11	215	196	8323	1340	2244	123	5	159	145	4016	100	3.4	4.0	0.015	0.047	0.011	0.176	0.043	0.055	0.013	0.099	0.024
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		4,127	9,157	94,900		1202	2013	370	16	275	251	4127	3301	5528	116	5	108	99	9157	100	5.9	2.6	0.015	0.083	0.020	0.153	0.037	0.036	0.009	0.145	0.035
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		9,544	4,420	99,700		3296	5519	277	12	230	210	9544	1472	2466	141	6	175	160	4420	100	3.3	4.0	0.015	0.046	0.011	0.196	0.047	0.056	0.013	0.110	0.027
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	243	111	2,550		70	116	28	1	15	13	243	40	66	3	0	1	1	111	70	6.0	2.7	0.200	0.892	0.216	0.097	0.023	0.389	0.094	0.019	0.005
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	206	245	3,200		72	120	8	0	3	3	206	78	131	15	1	10	10	245	70	3.1	4.5	0.200	0.448	0.108	0.041	0.010	0.672	0.163	0.074	0.018
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	571	544	7,950		169	283	60	3	29	27	571	173	290	36	2	22	21	544	80	5.5	4.6	0.060	0.273	0.066	0.070	0.017	0.225	0.054	0.055	0.013
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	677	596	9,100		214	359	49	2	28	25	677	188	314	34	2	30	28	596	80	4.6	4.8	0.060	0.228	0.055	0.069	0.017	0.238	0.058	0.063	0.015
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	571	544	7,950		169	283	60	3	29	27	571	173	290	36	2	22	21	544	80	5.5	4.6	0.060	0.273	0.066	0.070	0.017	0.225	0.054	0.055	0.013
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	677	596	9,100		214	359	49	2	28	25	677	188	314	34	2	30	28	596	80	4.6	4.8	0.060	0.228	0.055	0.069	0.017	0.238	0.058	0.063	0.015
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	305	346	4,650

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
Old School Rd	Old School Rd At Hwy 410_EB	D93	EB	3		770	281	7,500		285	478	4	0	2	1	770	98	165	7	0	6	5	281	70	2.1	3.1	0.060	0.100	0.024	0.034	0.008	0.151	0.037	0.019	0.005
Old School Rd	Old School Rd At Hwy 410_WB	D94	WB	3		322	641	6,900		111	185	13	1	6	6	322	237	396	5	0	2	1	641	70	3.3	2.1	0.060	0.162	0.039	0.023	0.006	0.103	0.025	0.029	0.007
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		364	583	6,750		124	207	17	1	8	7	364	206	344	13	1	10	9	583	60	3.5	2.9	0.060	0.170	0.041	0.028	0.007	0.143	0.035	0.037	0.009
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		751	631	9,850		247	414	37	2	27	24	751	226	379	10	0	8	8	631	60	4.1	2.7	0.060	0.201	0.049	0.067	0.016	0.130	0.031	0.037	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		685	464	8,200		236	396	26	1	14	12	685	156	260	21	1	14	12	464	80	3.3	3.8	0.060	0.160	0.039	0.049	0.012	0.185	0.045	0.038	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		715	703	10,150		243	408	27	1	19	17	715	250	418	16	1	9	9	703	80	3.5	2.8	0.030	0.092	0.022	0.029	0.007	0.072	0.018	0.023	0.006
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		258	473	5,200		78	131	26	1	12	10	258	160	268	20	1	13	11	473	80	5.2	3.6	0.060	0.256	0.062	0.029	0.007	0.177	0.043	0.037	0.009
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		574	286	6,150		198	332	20	1	12	11	574	95	159	15	1	8	8	286	80	3.3	3.9	0.060	0.160	0.039	0.041	0.010	0.190	0.046	0.024	0.006
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,412	2,387	41,400		1168	1957	107	5	92	83	3412	841	1409	45	2	47	43	2387	60	3.5	3.0	0.030	0.090	0.022	0.138	0.033	0.078	0.019	0.083	0.020
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		1,931	2,957	34,900		654	1096	83	4	49	45	1931	1055	1766	40	2	49	45	2957	60	3.6	2.8	0.030	0.093	0.023	0.080	0.019	0.072	0.018	0.096	0.023
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,018	2,130	36,750		1050	1758	72	3	71	64	3018	757	1269	34	1	36	33	2130	60	3.2	2.8	0.030	0.084	0.020	0.113	0.027	0.074	0.018	0.070	0.017
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		1,893	2,507	31,450		651	1091	67	3	42	39	1893	896	1500	32	1	41	37	2507	60	3.3	2.8	0.030	0.087	0.021	0.074	0.018	0.072	0.017	0.080	0.019
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,615	2,728	45,300		1227	2054	148	7	94	85	3615	923	1545	84	4	90	82	2728	60	3.6	3.7	0.030	0.093	0.022	0.150	0.036	0.097	0.023	0.118	0.029
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,802	3,702	46,450		897	1502	145	6	132	120	2802	1294	2167	85	4	80	72	3702	60	4.6	3.1	0.030	0.120	0.029	0.150	0.036	0.081	0.020	0.134	0.033
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		689	936	11,600		239	400	27	1	12	10	689	330	553	24	1	15	13	936	80	3.1	2.9	0.030	0.082	0.020	0.025	0.006	0.076	0.018	0.032	0.008
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,249	580	13,050		414	692	60	3	42	38	1249	204	342	11	1	12	10	580	80	4.0	3.0	0.030	0.104	0.025	0.058	0.014	0.078	0.019	0.020	0.005
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		588	737	9,450		195	326	34	2	16	15	588	261	437	10	0	15	14	737	80	3.9	2.9	0.060	0.191	0.046	0.050	0.012	0.144	0.035	0.047	0.011
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		939	751	12,050		320	536	12	1	37	33	939	267	446	10	0	15	13	751	80	3.7	2.9	0.030	0.097	0.023	0.041	0.010	0.075	0.018	0.025	0.006
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		341	558	6,400		104	174	36	2	13	12	341	198	331	11	1	9	8	558	80	5.0	2.9	0.060	0.247	0.060	0.038	0.009	0.140	0.034	0.035	0.008
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		666	438	7,900		237	398	12	1	9	9	666	148	248	19	1	12	10	438	80	2.8	3.6	0.060	0.134	0.033	0.040	0.010	0.177	0.043	0.035	0.008
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,679	1,127	20,050		590	988	50	2	26	23	1679	401	671	27	1	14	13	1127	60	3.0	2.8	0.030	0.077	0.019	0.058	0.014	0.072	0.017	0.036	0.009
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,117	1,489	18,600		388	649	47	2	16	15	1117	532	890	28	1	20	18	1489	60	3.1	2.7	0.030	0.081	0.020	0.040	0.010	0.071	0.017	0.047	0.011
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		28	374	2,850		9	15	1	0	2	1	28	133	222	7	0	6	6	374	80	4.7	2.8	0.200	0.694	0.168	0.009	0.002	0.417	0.101	0.070	0.017
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		392	29	3,000		133	222	13	1	12	11	392	10	16	1	0	1	1	29	80	3.7	3.9	0.200	0.537	0.130	0.094	0.023	0.568	0.137	0.007	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		28	374	2,850		9	15	1	0	2	1	28	133	222	7	0	6	6	374	80	4.7	2.8	0.200	0.694	0.168	0.009	0.002	0.417	0.101	0.070	0.017
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		392	29	3,000		133	222	13	1	12	11	392	10	16	1	0	1	1	29	80	3.7	3.9	0.200	0.537	0.130	0.094	0.023	0.568	0.137	0.007	0.002
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		819	616	10,250		300	502	6	0	6	5	819	227	381	2	0	3	3	616	70	2.3	2.2	0.030	0.059	0.014	0.022	0.005	0.056	0.014	0.015	0.004
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		594	774	9,750		212	354	10	0	9	9	594	286	480	3	0	3	2	774	70	2.8	2.1	0.060	0.136	0.033	0.036	0.009	0.102	0.025	0.035	0.009
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		682	788	10,500		249	418	6	0	5	4	682	287	481	5	0	8	7	788	70	2.3	2.4	0.030	0.060	0.014	0.018	0.004	0.062	0.015	0.022	0.005
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		421	671	7,800		149	249	9	0	7	7	421	250	420	0	0	1	0	671	70	2.9	1.9	0.060	0.142	0.034	0.027	0.006	0.094	0.023	0.028	0.007
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		85	360	3,200		31	51	2	0	1	0	85	130	219	5	0	3	3	360	70	2.5	2.5	0.200	0.361	0.087	0.014	0.003	0.358	0.087	0.058	0.014
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		544	171	5,100		194	326	11	0	7	6	544	63	105	1	0	1	1	171	70	2.7	2.2	0.060	0.132	0.032	0.032	0.008	0.109	0.026	0.008	0.002
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		177	520	5,000		56	95	14	1	6	5	177	186	311	11	0	6	6	520	70	4.4	2.7	0.060	0.217	0.052	0.017	0.004	0.131	0.032	0.031	0.007
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		665	323	7,050		234	393	17	1	10	10	665	114	190	9	0	5	5	323	70	2.9	2.9	0.060	0.143	0.035	0.042	0.010	0.144	0.035	0.021	0.005
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		819	1,713	18,100		267	447	49	2	28	26	819	624	1046	13	1	15	14	1713	60	4.2	2.4	0.030	0.109	0.026	0.040	0.010	0.062	0.015	0.047	0.011
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		1,924	1,001	20,900		680	1139	42	2	32	29	1924	355	595	16	1	18	16	1001	60	2.9	2.9	0.030	0.075	0.018	0.065	0.016	0.075	0.018	0.033	0.008
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		596	1,379	14,100		186	311	48	2	26	23	596	494	826	18	1	21	19	1379	60	4.8	2.7	0.030	0.127	0.031	0.034	0.008	0.071	0.017	0.044	0.011
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,441	549	14,200		498	834	45	2	32	30	1441	187	313	16	1	17	15	549	60	3.3	3.6	0.030	0.085	0.021	0.055	0.013	0.094	0.023	0.023	0.006
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		596	1,379	14,100		186	311	48	2	26	23	596	494	826	18	1	21	19	1379	60	4.8	2.7	0.030	0.127	0.031	0.034	0.008	0.071	0.017	0.044	0.011
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,441	549	14,200		498	834	45	2	32	30	1441	187	313	16	1	17	15	549	60	3.3	3.6	0.030	0.085	0.021	0.055	0.013	0.094	0.023	0.023	0.006
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	729	663	9,950		267	447	6	0	5	4	729	233	390	13	1	14	12	663	70	2.3	3.0	0.060	0.111	0.027	0.036	0.009	0.149	0.036	0.044	0.011
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	540	856	9,950		175	293	31	1	21	19	540	318	532	1	0	3	2	856	70	4.3	2.0	0.060	0.212	0.051	0.051	0.012	0.099	0.024	0.038	0.009
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	601	573	8,400		221	371	4	0	3	2	601	211	354	2	0	3	3	573	70	2.2	2.2	0.060	0.106	0.026	0.028	0.007	0.106	0.026	0.027	0.007
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	600	759	9,700		217	363	5	0	8	7	600	282	471	1	0	3	2	759	70	2.6	2.1	0.060	0.125	0.030	0.033	0.008	0.100	0.024	0.034	0.008
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	600	435	7,400		220	368	7	0	3	2	600	162	270	1	0	1	1	435	70	2.2	2.0	0.060	0.109	0.026	0.029	0.007	0.099	0.024	0.019	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	451	764	8,700		164	275	2	0	5	5	451	285	476	1	0	1	1	764	70	2.4	2.0	0.060	0.119	0.029	0.024	0.006	0.096	0.023	0.033	0.008
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	279	592	6,200		75	126	37	2	20	19	279	194	326	33	1	20	18	592	80	6.8	4.1	0.060	0.339	0.082	0.042	0.010	0.200	0.048	0.053	0.013
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	709	309	7,250		233	389	43	2	22	20	709	96	160	19	1	17	16	309	80	4.0	5.1	0.060	0.199	0.048	0.063	0.015	0.251	0.061	0.035	0.008
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	190	548	5,250		65	108	9	0	4	4	190	180	301	31	1	18	17	548	80	3.5	4.1	0.060	0.170	0.041	0.014	0.003	0.201	0.049	0.049	0.012
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	664	201	6,200		219	368	38	2	19	18	664	70	118	5	0	4	4	201	80	3.9	3.1	0.060	0.193	0.047	0.057	0.014	0.152	0.037	0.014	0.003
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	158	582	5,300		56	93	3	0	3	3	158	188	316	34	2	22	20	582	80	3.0	4.3	0.060	0.146	0.035	0.010	0.002	0.212	0.051	0.055	0.013
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	662	237	6,400		204	342	45	2	36	33	662	86	145	2	0	2	2	237	80	5.1	2.4	0.060	0.253	0.061	0.075	0.018	0.116	0.028	0.012	0.003
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	42	574	4,400		15	26	0	0	1	0	42	186	311	34	2	21	20	574	80	2.4	4.3	0.200	0.352	0.085	0.007	0.002	0.633	0.153	0.163	0.039
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	693	87	5,550		214	358	48	2	37	34	693	32	54	0	0	1	0	87	80	5.1	2.2	0.060	0.252	0.061	0.078	0.019	0.105	0.025	0.004	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	272	914	8,450		81	135	29	1	14	12	272	322	538	21	1	17	15	914	80	5.5	3.0	0.060	0.271	0.065	0.033	0.008	0.146	0.035	0.060	0.014
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,177	218	9,950		393	658	50	2	39	35	1177	74	124	5	0	8	7	218	80	3.9	3.7	0.060	0.190	0.046	0.100	0.024	0.182	0.044	0.018	0.004
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	272	914	8,450		81	135	29	1	14	12	272	322	538	21	1	17	15	914	80	5.5	3.0	0.060	0.271	0.065	0.033	0.008	0.146	0.035	0.060	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,177	218	9,950		393	658	50	2	39	35	1177	74	124	5	0	8	7	218	80	3.9	3.7	0.060	0.190	0.046	0.100	0.024	0.182	0.044	0.018	0.004
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		723	625	9,600		262	439	9	0	6	6	722	228	381	5	0	6	5	625	70	2.4	2.4	0.060	0.119	0.029	0.038	0.009	0.117	0.028	0.033	0.008
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		567	696	9,000		196	329	18	1	12	11	567	257	431	3	0	3	2	696	70	3.2	2.1	0.060	0.159	0.038	0.040	0.010	0.103	0.025	0.032	0.008
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		551	656	8,600		199	332	9	0	6	5	551	238	398	6	0	7	7	656	80	2.6	2.5	0.060	0.125	0.030	0.031	0.007	0.121	0.029	0.036	0.009
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		422	566	7,050		147	246	12	1	8	8	422	209	349	3	0	3	2	566	80	3.1	2.2	0.060	0.154	0.037	0.029	0.007	0.105	0.025	0.027	0.006
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		551	656	8,600		199	332	9	0	6	5	551	238	398	6	0	7	7	656	80	2.6	2.5	0.060	0.125	0.030	0.031	0.007	0.121	0.029	0.036	0.009
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		422	566	7,050		147	246	12	1	8	8	422	209	349	3	0	3	2	566	80	3.1	2.2	0.060	0.154	0.037	0.029	0.007	0.105	0.025	0.027	0.006
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,421	1,411	27,350		837	1403	78	3	52	48	2421	489	819	36	2	34	31	1411	70	3.2	3.3	0.030	0.085	0.021	0.092	0.022	0.085	0.021	0.054	0.013
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,340	2,114	24,650		456	764	53	2	34	31	1340	740	1240	44	2	46	42	2114	70	3.5	3.1	0.030	0.092	0.022	0.055	0.013	0.081	0.020	0.076	0.018
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,572	1,523	29,250		895	1499	77	3	51	47	2572	530	887	38	2	35	31	1523	70	3.1	3.2	0.030	0.082	0.020	0.094	0.023	0.083	0.020	0.057	0.014
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		1,466	2,387	27,500		500	838	57	2	36	33	1466	840	1406	47	2	48	44	2387	70	3.5	3.0	0.030	0.091	0.022	0.059	0.014	0.079	0.019	0.084	0.020
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		922	933	13,250		319	535	31	1	19	17	922	320	537	34	1	21	20	933	80	3.2	3.4	0.030	0.084	0.020	0.035	0.008	0.088	0.021	0.037	0.009
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,018	938	13,950		352	589	38	2	19	18	1018	327	548	27	1	18	17	938	80	3.2	3.1	0.030	0.084	0.020	0.038	0.009	0.081	0.020	0.034	0.008
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		937	1,154	14,950		340	569	14	1	7	6	937	422	706	15	1	5	5	1154	70	2.4	2.3	0.030	0.063	0.015	0.026	0.006	0.059	0.014	0.030	0.007
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,328	972	16,450		482	808	24	1	7	6	1328	354	593	10	0	8	7	972	70	2.4	2.4	0.030	0.061	0.015	0.037	0.009	0.062	0.015	0.027	0.006
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		1,512	1,413	20,900		563	942	3	0	2	2	1512	518	867	16	1	6	5	1413	70	2.0	2.2	0.030	0.051	0.012	0.035	0.008	0.058	0.014	0.037	0.009
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		1,500	1,514	21,550		544	911	29	1	8	7	1500	563	943	3	0	3	2	1514	70	2.4	2.0	0.030	0.062	0.015	0.042	0.010	0.052	0.013	0.035	0.008
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		757	448	8,600		268	448	15	1	13	12	757	161	270	7	0	5	5	448	60	2.9	2.6	0.060	0.142	0.034	0.048	0.012	0.127	0.031	0.025	0.006
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		562	628	8,500		194	326	22	1	10	9	562	231	386	2	0	5	4	628	60	3.2	2.3	0.060	0.156	0.038	0.039	0.010	0.110	0.027	0.031	0.007
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		2,094	2,511	32,900		737	1233	44	2	41	37	2094	907	1519	30	1	28	26	2511	70	3.0	2.5	0.030	0.078	0.019	0.073	0.018	0.066	0.016	0.074	0.018
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,001	2,128	36,650		1049	1757	55	2	72	66	3001	780	1306	18	1	12	11	2128	70	3.2	2.3	0.030	0.082	0.020	0.110	0.027	0.059	0.014	0.056	0.013
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,166	2,491	33,250		758	1270	44	2	48	44	2166	899	1505	30	1	29	27	2491	70	3.1	2.6	0.030	0.081	0.020	0.078	0.019	0.066	0.016	0.074	0.018
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,043	2,298	38,150		1060	1775	57	2	78	71	3043	842	1410	18	1	14	13	2298	70	3.2	2.3	0.030	0.084	0.020	0.114	0.028	0.059	0.014	0.060	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,001	2,439	31,700		710	1188	61	3	20	19	2001	889	1488	30	1	16	15	2439	70	2.8	2.3	0.030	0.072	0.017	0.064	0.016	0.061	0.015	0.066	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	F07	EB	5		1,061	983	14,600		366	614	38	2	21	20	1061	342	573	26	1	21	20	983	60	3.2	3.2	0.030	0.085	0.021	0.040	0.010	0.083	0.020	0.036	0.009
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	F08	WB	5		991	946	13,850		343	575	36	2	18	17	991	323	541	33	1	25	23	946	60	3.2	3.5	0.030	0.083	0.020	0.037	0.009	0.091	0.022	0.039	0.009
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	F09	NB	5		322	302	4,450		114	191	7	0	5	5	322	111	185	2	0	2	2	302	80	2.9	2.3	0.200	0.420	0.102	0.060	0.015	0.332	0.080	0.045	0.011
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		700	198	6,400		245	410	14	1	16	14	700	74	123	0	0	1	0	198	80	3.1	2.0	0.060	0.153	0.037	0.048	0.012	0.098	0.024	0.009	0.002
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		36	56	650		12	21	1	0	1	1	36	20	33	1	0	1	1	56	80	3.5	2.9	0.200	0.511	0.124	0.008	0.002	0.427	0.103	0.011	0.003
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		30	18	350		10	17	1	0	1	1	30	6	11	0	0	1	0	18	80	3.8	3.1	0.600	1.516	0.367	0.020	0.005	1.234	0.299	0.010	0.002
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		1,253	923	15,550		436	729	28	1	31	28	1253	326	547	16	1	17	16	923	70	3.2	2.9	0.030	0.084	0.020	0.047	0.011	0.076	0.018	0.031	0.008
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		846	1,036	13,450		293	491	23	1	20	18	846	365	610	21	1	20	19	1036	70	3.3	3.0	0.030	0.085	0.021	0.032	0.008	0.078	0.019	0.036	0.009
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		890	743	11,650		301	505	27	1	29	27	890	259	434	16	1	17	16	743	70	3.7	3.2	0.030	0.096	0.023	0.038	0.009	0.083	0.020	0.027	0.007
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		868	789	11,850		292	489	30	1	29	27	868	274	459	19	1	19	17	789	70	3.8	3.2	0.030	0.099	0.024	0.038	0.009	0.084	0.020	0.030	0.007
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		916	550	10,450		342	574	0	0	0	0	916	197	331	10	0	6	6	550	70	1.9	2.6	0.030	0.049	0.012	0.020	0.005	0.068	0.016	0.017	0.004
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		692	818	10,800		252	421	10	0	5	4	692	305	512	1	0	0	0	818	70	2.4	1.9	0.030	0.062	0.015	0.019	0.005	0.050	0.012	0.018	0.004
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		521	180	5,000		195	326	0	0	0	0	521	67	113	0	0	0	0	180	70	1.9	1.9	0.060	0.092	0.022	0.022	0.005	0.092	0.022	0.007	0.002
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		240	390	4,500		89	150	0	0	1	0	240	146	244	0	0	0	0	390	70	2.0	1.9	0.200	0.290	0.070	0.031	0.008	0.276	0.067	0.048	0.012
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		225	152	2,700		79	133	6	0	4	3	225	55	91	2	0	2	2	152	70	2.9	2.6	0.200	0.430	0.104	0.043	0.010	0.387	0.094	0.026	0.006
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		194	204	2,850		67	113	6	0	4	4	194	74	123	3	0	2	2	204	70	3.2	2.5	0.200	0.471	0.114	0.041	0.010	0.369	0.089	0.034	0.008
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		761	584	9,600		271	453	14	1	12	10	761	205	344	11	1	12	11	584	60	2.8	3.0	0.060	0.137	0.033	0.046	0.011	0.148	0.036	0.039	0.009
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		488	688	8,400		165	277	18	1	14	13	488	244	409	12	1	12	10	688	60	3.6	2.8	0.060	0.178	0.043	0.039	0.009	0.139	0.034	0.043	0.010
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		2,219	2,294	32,250		717	1201	145	6	78	72	2219	761	1275	112	5	74	67	2294	60	4.3	3.9	0.030	0.112	0.027	0.112	0.027	0.103	0.025	0.105	0.025
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		2,388	1,999	31,350		796	1333	143	6	58	52	2388	636	1066	135	6	82	74	1999	60	3.7	4.5	0.030	0.098	0.024	0.105	0.025	0.119	0.029	0.107	0.026
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		829	517	9,600		302	507	7	0	7	6	829	190	318	4	0	3	2	517	60	2.4	2.2	0.060	0.115	0.028	0.043	0.010	0.108	0.026	0.025	0.006
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		501	690	8,500		175	293	13	1	10	9	501	242	404	19	1	13	11	690	60	3.1	3.0	0.060	0.152	0.037	0.034	0.008	0.149	0.036	0.046	0.011
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		259	499	5,400		82	138	20	1	9	9	259	171	286	19	1	12	10	499	80	4.5	3.4	0.060	0.222	0.054	0.026	0.006	0.167	0.040	0.037	0.009
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		620	287	6,500		214	358	23	1	13	11	620	96	162	14	1	7	7	287	80	3.3	3.7	0.060	0.160	0.039	0.044	0.011	0.180	0.044	0.023	0.006
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,629	2,063	33,500		913	1529	78	3	55	51	2629	692	1158	70	3	73	67	2063	60	3.2	3.8	0.030	0.083	0.020	0.098	0.024	0.101	0.024	0.093	0.022
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,851	2,546	31,400		578	968	122	5	93	85	1851	888	1486	57	3	59	53	2546	60	4.9	3.2	0.030	0.129	0.031	0.107	0.026	0.083	0.020	0.094	0.023
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		137	555	4,950		44	74	6	0	7	6	137	199	332	8	0	8	8	555	80	4.5	2.7	0.200	0.671	0.162	0.041	0.010	0.398	0.096	0.099	0.024
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		538	187	5,200		183	306	19	1	15	14	538	66	110	4	0	4	3	187	80	3.6	3.0	0.060	0.175	0.042	0.042	0.010	0.147	0.036	0.012	0.003
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		794	537	9,500		297	497	0	0	0	0	794	199	333	2	0	2	1	537	70	1.9	2.1	0.060	0.092	0.022	0.033	0.008	0.101	0.024	0.024	0.006
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		532	719	8,950		193	324	4	0	6	5	532	268	450	1	0	0	0	719	70	2.5	1.9	0.060	0.120	0.029	0.028	0.007	0.093	0.023	0.030	0.007
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		33	123	1,100		12	21	0	0	0	0	33	45	76	1	0	1	0	123	60	1.9	2.2	0.200	0.276	0.067	0.004	0.001	0.319	0.077	0.018	0.004
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		428	37	3,300		157	263	4	0	2	2	428	14	23	0	0	0	0	37	60	2.2	1.9	0.200	0.325	0.079	0.062	0.015	0.276	0.067	0.005	0.001
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		760	579	9,550		264	443	17	1	18	17	760	209	350	7	0	7	6	579	70	3.2	2.6	0.060	0.158	0.038	0.054	0.013	0.125	0.030	0.032	0.008
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		596	570	8,350		203	340	21	1	16	15	596	209	350	2	0	5	4	570	70	3.5	2.3	0.060	0.173	0.042	0.046	0.011	0.112	0.027	0.028	0.007
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	23	7	200		8	14	0	0	1	0	23	3	4	0	0	0	0	7	60	2.8	1.9	0.600	1.129	0.273	0.012	0.003	0.751	0.182	0.002	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	6	73	550		2	4	0	0	0	0	6	26	44	1	0	1	1	73	60	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.392	0.095	0.013	0.003
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		2,274	2,263	32,400		747	1251	132	6	72	66	2274	763	1277	97	4	64	58	2263	60	4.0	3.7	0.030	0.106	0.026	0.108	0.026	0.096	0.023	0.097	0.024
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		2,348	1,987	30,950		782	1309	143	6	56	52	2348	636	1065	130	6	78	72	1987	60	3.8	4.5	0.030	0.098	0.024	0.103	0.025	0.117	0.028	0.104	0.025
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		552	1,459	14,350		173	289	49	2	20	19	552	515	863	36	2	22	21	1459	70	4.7	2.9	0.030	0.123	0.030	0.030	0.007	0.075	0.018	0.049	0.012
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		2,059	482	18,150		738	1235	44	2	21	19	2059	174	292	8	0	4	4	482	70	2.6	2.5	0.030	0.068	0.017	0.063	0.015	0.065	0.016	0.014	0.003
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		493	1,564	14,700		176	295	12	1	5	4	493	567	949	22	1	13	12	1564	70	2.7	2.4	0.030	0.069	0.017	0.015	0.004	0.064	0.015	0.044	0.011
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		1,903	606	17,900		697	1166	19	1	10	10	1903	224	375	4	0	2	1	606	70	2.3	2.1	0.030	0.059	0.014	0.050	0.012	0.054	0.013	0.015	0.004
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		1,222	403	11,600		439	734	19	1	15	14	1222	132	221	18	1	16	15	403	70	2.6	4.2	0.030	0.069	0.017	0.037	0.009	0.110	0.027	0.020	0.005
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		693	475	8,350		228	381	48	2	18	16	693	132	222	51	2	36	32	475	40	3.9	6.5	0.060	0.194	0.047	0.060	0.015	0.323	0.078	0.069	0.017
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		20	73	650		7	13	0	0	0	0	20	27	44	1	0	1	0	73	60	1.9	2.4	0.200	0.276	0.067	0.002	0.001	0.348	0.084	0.011	0.003
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		684	687	9,800		183	306	99	4	48	44	684	212	356	58	3	30	28	687	70	6.8	4.9	0.060	0.341	0.082	0.104	0.025	0.244	0.059	0.075	0.018
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		214	641	6,100		50	83	48	2	16	15	214	205	344	50	2	21	19	641	60	8.2	4.3	0.060	0.410	0.099	0.039	0.009	0.215	0.052	0.061	0.015
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		43	214	1,850		16	27	0	0	0	0	43	80	134	0	0	0	0	214	40	1.9	1.9	0.200	0.276	0.067	0.005	0.001	0.276	0.067	0.026	0.006
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		1,370	759	15,200		499	835	17	1	9	9	1370	276	462	11	0	5	5	759	40	2.4	2.4	0.030	0.061	0.015	0.038	0.009	0.062	0.015	0.021	0.005
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		1,935	1,510	24,600		706	1183	21	1	13	11	1935	556	930	11	1	6	6	1510	60	2.3	2.2	0.030	0.060	0.015	0.052	0.013	0.057	0.014	0.038	0.009
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		1,852	3,193	36,050		672	1125	33	1	11	10	1852	1172	1962	25	1	17	16	3193	70	2.4	2.2	0.030	0.062	0.015	0.052	0.012	0.058	0.014	0.083	0.020
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		627	601	8,750		201	336	6	0	44	40	627	211	353	9	0	15	13	601	40	4.9	3.1	0.060	0.243	0.059	0.068	0.016	0.152	0.037	0.041	0.010
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		1,124	609	12,400		390	652	16	1	34	31	1124	216	362	10	0	11	10	609	60	3.4	2.9	0.030	0.088	0.021	0.044	0.011	0.075	0.018	0.020	0.005
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		629	927	11,100		206	346	33	1	22	21	629	328	549	11	1	20	18	927	70	4.1	3.0	0.030	0.108	0.026	0.030	0.007	0.077	0.019	0.032	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		539	1,018	11,100		135	227	79	3	50	45	539	340	569	50	2	30	27	1018	60	7.8	3.8	0.030	0.206	0.050	0.050	0.012	0.100	0.024	0.045	0.011
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		627	601	8,750		201	336	6	0	44	40	627	211	353	9	0	15	13	601	40	4.9	3.1	0.060	0.243	0.059	0.068	0.016	0.152	0.037	0.041	0.010
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		1,349	704	14,650		450	754	68	3	39	35	1349	206	346	53	2	51	46	704	40	3.8	5.9	0.030	0.099	0.024	0.060	0.015	0.157	0.038	0.049	0.012
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	1	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		1,852	3,193	36,000		672	1125	33	1	11	10	1852	1172	1962	25	1	17	16	3193	100	2.4	2.2	0.015	0.033	0.008	0.027	0.007	0.031	0.007	0.044	0.011
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		3,305	2,270	39,800		1205	2019	38	2	21	20	3305	832	1393	22	1	12	10	2270	100	2.3	2.2	0.015	0.032	0.008	0.048	0.012	0.031	0.008	0.031	0.008
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		5,419	9,812	108,800		1620	2712	461	20	317	289	5419	3501	5863	174	8	139	127	9812	100	5.5	2.7	0.015	0.077	0.019	0.188	0.045	0.038	0.009	0.166	0.040
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		9,149	5,081	101,600		3140	5259	299	13	229	209	9149	1708	2860	157	7	183	166	5081	100	3.4	3.8	0.015	0.047	0.011	0.193	0.047	0.053	0.013	0.121	0.029
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		4,084	8,944	93,100		1186	1987	370	16	275	250	4084	3221	5395	116	5	108	99	8944	100	6.0	2.6	0.015	0.084	0.020	0.153	0.037	0.036	0.009	0.143	0.035
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		8,323	4,016	88,100		2857	4785	259	11	215	196	8323	1340	2244	123	5	159	145	4016	100	3.4	4.0	0.015	0.047	0.011	0.176	0.043	0.055	0.013	0.099	0.024
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		4,127	9,157	94,900		1202	2013	370	16	275	251	4127	3301	5528	116	5	108	99	9157	100	5.9	2.6	0.015	0.083	0.020	0.153	0.037	0.036	0.009	0.145	0.035
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		9,544	4,420	99,700		3296	5519	277	12	230	210	9544	1472	2466	141	6	175	160	4420	100	3.3	4.0	0.015	0.046	0.011	0.196	0.047	0.056	0.013	0.110	0.027
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	0	0	0		0	0	0	0	0	0	0	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
Old School Rd	Old School Rd At Hwy 410_EB	D93	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd At Hwy 410_WB	D94	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	729	663	9,950		267	447	6	0	5	4	729	233	390	13	1	14	12	663	70	2.3	3.0	0.060	0.111	0.027	0.036	0.009	0.149	0.036	0.044	0.011
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	540	856	9,950		175	293	31	1	21	19	540	318	532	1	0	3	2	856	70	4.3	2.0	0.060	0.212	0.051	0.051	0.012	0.099	0.024	0.038	0.009
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	601	573	8,400		221	371	4	0	3	2	601	211	354	2	0	3	3	573	70	2.2	2.2	0.060	0.106	0.026	0.028	0.007	0.106	0.026	0.027	0.007
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	600	759	9,700		217	363	5	0	8	7	600	282	471	1	0	3	2	759	70	2.6	2.1	0.060	0.125	0.030	0.033	0.008	0.100	0.024	0.034	0.008
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	600	435	7,400		220	368	7	0	3	2	600	162	270	1	0	1	1	435	70	2.2	2.0	0.060	0.109	0.026	0.029	0.007	0.099	0.024	0.019	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	451	764	8,700		164	275	2	0	5	5	451	285	476	1	0	1	1	764	70	2.4	2.0	0.060	0.119	0.029	0.024	0.006	0.096	0.023	0.033	0.008
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	279	592	6,200		75	126	37	2	20	19	279	194	326	33	1	20	18	592	80	6.8	4.1	0.060	0.339	0.082	0.042	0.010	0.200	0.048	0.053	0.013
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	709	309	7,250		233	389	43	2	22	20	709	96	160	19	1	17	16	309	80	4.0	5.1	0.060	0.199	0.048	0.063	0.015	0.251	0.061	0.035	0.008
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	190	548	5,250		65	108	9	0	4	4	190	180	301	31	1	18	17	548	80	3.5	4.1	0.060	0.170	0.041	0.014	0.003	0.201	0.049	0.049	0.012
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	664	201	6,200		219	368	38	2	19	18	664	70	118	5	0	4	4	201	80	3.9	3.1	0.060	0.193	0.047	0.057	0.014	0.152	0.037	0.014	0.003
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	158	582	5,300		56	93	3	0	3	3	158	188	316	34	2	22	20	582	80	3.0	4.3	0.060	0.146	0.035	0.010	0.002	0.212	0.051	0.055	0.013
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	662	237	6,400		204	342	45	2	36	33	662	86	145	2	0	2	2	237	80	5.1	2.4	0.060	0.253	0.061	0.075	0.018	0.116	0.028	0.012	0.003
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	42	574	4,400		15	26	0	0	1	0	42	186	311	34	2	21	20	574	80	2.4	4.3	0.200	0.352	0.085	0.007	0.002	0.633	0.153	0.163	0.039
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	693	87	5,550		214	358	48	2	37	34	693	32	54	0	0	1	0	87	80	5.1	2.2	0.060	0.252	0.061	0.078	0.019	0.105	0.025	0.004	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	272	914	8,450		81	135	29	1	14	12	272	322	538	21	1	17	15	914	80	5.5	3.0	0.060	0.271	0.065	0.033	0.008	0.146	0.035	0.060	0.014
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,177	218	9,950		393	658	50	2	39	35	1177	74	124	5	0	8	7	218	80	3.9	3.7	0.060	0.190	0.046	0.100	0.024	0.182	0.044	0.018	0.004
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	272	914	8,450		81	135	29	1	14	12	272	322	538	21	1	17	15	914	80	5.5	3.0	0.060	0.271	0.065	0.033	0.008	0.146	0.035	0.060	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,177	218	9,950		393	658	50	2	39	35	1177	74	124	5	0	8	7	218	80	3.9	3.7	0.060	0.190	0.046	0.100	0.024	0.182	0.044	0.018	0.004
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		723	625	9,600		262	439	9	0	6	6	722	228	381	5	0	6	5	625	70	2.4	2.4	0.060	0.119	0.029	0.038	0.009	0.117	0.028	0.033	0.008
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		567	696	9,000		196	329	18	1	12	11	567	257	431	3	0	3	2	696	70	3.2	2.1	0.060	0.159	0.038	0.040	0.010	0.103	0.025	0.032	0.008
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		551	656	8,600		199	332	9	0	6	5	551	238	398	6	0	7	7	656	80	2.6	2.5	0.060	0.125	0.030	0.031	0.007	0.121	0.029	0.036	0.009
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		422	566	7,050		147	246	12	1	8	8	422	209	349	3	0	3	2	566	80	3.1	2.2	0.060	0.154	0.037	0.029	0.007	0.105	0.025	0.027	0.006
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		551	656	8,600		199	332	9	0	6	5	551	238	398	6	0	7	7	656	80	2.6	2.5	0.060	0.125	0.030	0.031	0.007	0.121	0.029	0.036	0.009
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		422	566	7,050		147	246	12	1	8	8	422	209	349	3	0	3	2	566	80	3.1	2.2	0.060	0.154	0.037	0.029	0.007	0.105	0.025	0.027	0.006
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,421	1,411	27,350		837	1403	78	3	52	48	2421	489	819	36	2	34	31	1411	70	3.2	3.3	0.030	0.085	0.021	0.092	0.022	0.085	0.021	0.054	0.013
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,340	2,114	24,650		456	764	53	2	34	31	1340	740	1240	44	2	46	42	2114	70	3.5	3.1	0.030	0.092	0.022	0.055	0.013	0.081	0.020	0.076	0.018
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,572	1,523	29,250		895	1499	77	3	51	47	2572	530	887	38	2	35	31	1523	70	3.1	3.2	0.030	0.082	0.020	0.094	0.023	0.083	0.020	0.057	0.014
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		1,466	2,387	27,500		500	838	57	2	36	33	1466	840	1406	47	2	48	44	2387	70	3.5	3.0	0.030	0.091	0.022	0.059	0.014	0.079	0.019	0.084	0.020
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		922	933	13,250		319	535	31	1	19	17	922	320	537	34	1	21	20	933	80	3.2	3.4	0.030	0.084	0.020	0.035	0.008	0.088	0.021	0.037	0.009
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,018	938	13,950		352	589	38	2	19	18	1018	327	548	27	1	18	17	938	80	3.2	3.1	0.030	0.084	0.020	0.038	0.009	0.081	0.020	0.034	0.008
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		937	1,154	14,950		340	569	14	1	7	6	937	422	706	15	1	5	5	1154	70	2.4	2.3	0.030	0.063	0.015	0.026	0.006	0.059	0.014	0.030	0.007
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,328	972	16,450		482	808	24	1	7	6	1328	354	593	10	0	8	7	972	70	2.4	2.4	0.030	0.061	0.015	0.037	0.009	0.062	0.015	0.027	0.006
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		1,512	1,413	20,900		563	942	3	0	2	2	1512	518	867	16	1	6	5	1413	70	2.0	2.2	0.030	0.051	0.012	0.035	0.008	0.058	0.014	0.037	0.009
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		1,500	1,514	21,550		544	911	29	1	8	7	1500	563	943	3	0	3	2	1514	70	2.4	2.0	0.030	0.062	0.015	0.042	0.010	0.052	0.013	0.035	0.008
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		757	448	8,600		268	448	15	1	13	12	757	161	270	7	0	5	5	448	60	2.9	2.6	0.060	0.142	0.034	0.048	0.012	0.127	0.031	0.025	0.006
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		562	628	8,500		194	326	22	1	10	9	562	231	386	2	0	5	4	628	60	3.2	2.3	0.060	0.156	0.038	0.039	0.010	0.110	0.027	0.031	0.007
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		2,094	2,511	32,900		737	1233	44	2	41	37	2094	907	1519	30	1	28	26	2511	70	3.0	2.5	0.030	0.078	0.019	0.073	0.018	0.066	0.016	0.074	0.018
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,001	2,128	36,650		1049	1757	55	2	72	66	3001	780	1306	18	1	12	11	2128	70	3.2	2.3	0.030	0.082	0.020	0.110	0.027	0.059	0.014	0.056	0.013
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,166	2,491	33,250		758	1270	44	2	48	44	2166	899	1505	30	1	29	27	2491	70	3.1	2.6	0.030	0.081	0.020	0.078	0.019	0.066	0.016	0.074	0.018
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,043	2,298	38,150		1060	1775	57	2	78	71	3043	842	1410	18	1	14	13	2298	70	3.2	2.3	0.030	0.084	0.020	0.114	0.028	0.059	0.014	0.060	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,001	2,439	31,700		710	1188	61	3	20	19	2001	889	1488	30	1	16	15	2439	70	2.8	2.3	0.030	0.072	0.017	0.064	0.016	0.061	0.015	0.066	0.016
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		2,722	2,175	35,000		983	1646	41	2	26	24	2722	789	1321	28	1	19	17	2175	70	2.5	2.4	0.030	0.065	0.016	0.079	0.019	0.063	0.015	0.

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	F07	EB	5		1,061	983	14,600		366	614	38	2	21	20	1061	342	573	26	1	21	20	983	60	3.2	3.2	0.030	0.085	0.021	0.040	0.010	0.083	0.020	0.036	0.009
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	F08	WB	5		991	946	13,850		343	575	36	2	18	17	991	323	541	33	1	25	23	946	60	3.2	3.5	0.030	0.083	0.020	0.037	0.009	0.091	0.022	0.039	0.009
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	F09	NB	5		322	302	4,450		114	191	7	0	5	5	322	111	185	2	0	2	2	302	80	2.9	2.3	0.200	0.420	0.102	0.060	0.015	0.332	0.080	0.045	0.011
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		700	198	6,400		245	410	14	1	16	14	700	74	123	0	0	1	0	198	80	3.1	2.0	0.060	0.153	0.037	0.048	0.012	0.098	0.024	0.009	0.002
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		36	56	650		12	21	1	0	1	1	36	20	33	1	0	1	1	56	80	3.5	2.9	0.200	0.511	0.124	0.008	0.002	0.427	0.103	0.011	0.003
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		30	18	350		10	17	1	0	1	1	30	6	11	0	0	1	0	18	80	3.8	3.1	0.600	1.516	0.367	0.020	0.005	1.234	0.299	0.010	0.002
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		1,253	923	15,550		436	729	28	1	31	28	1253	326	547	16	1	17	16	923	70	3.2	2.9	0.030	0.084	0.020	0.047	0.011	0.076	0.018	0.031	0.008
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		846	1,036	13,450		293	491	23	1	20	18	846	365	610	21	1	20	19	1036	70	3.3	3.0	0.030	0.085	0.021	0.032	0.008	0.078	0.019	0.036	0.009
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		890	743	11,650		301	505	27	1	29	27	890	259	434	16	1	17	16	743	70	3.7	3.2	0.030	0.096	0.023	0.038	0.009	0.083	0.020	0.027	0.007
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		868	789	11,850		292	489	30	1	29	27	868	274	459	19	1	19	17	789	70	3.8	3.2	0.030	0.099	0.024	0.038	0.009	0.084	0.020	0.030	0.007
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		916	550	10,450		342	574	0	0	0	0	916	197	331	10	0	6	6	550	70	1.9	2.6	0.030	0.049	0.012	0.020	0.005	0.068	0.016	0.017	0.004
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		692	818	10,800		252	421	10	0	5	4	692	305	512	1	0	0	0	818	70	2.4	1.9	0.030	0.062	0.015	0.019	0.005	0.050	0.012	0.018	0.004
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		521	180	5,000		195	326	0	0	0	0	521	67	113	0	0	0	0	180	70	1.9	1.9	0.060	0.092	0.022	0.022	0.005	0.092	0.022	0.007	0.002
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		240	390	4,500		89	150	0	0	1	0	240	146	244	0	0	0	0	390	70	2.0	1.9	0.200	0.290	0.070	0.031	0.008	0.276	0.067	0.048	0.012
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		225	152	2,700		79	133	6	0	4	3	225	55	91	2	0	2	2	152	70	2.9	2.6	0.200	0.430	0.104	0.043	0.010	0.387	0.094	0.026	0.006
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		194	204	2,850		67	113	6	0	4	4	194	74	123	3	0	2	2	204	70	3.2	2.5	0.200	0.471	0.114	0.041	0.010	0.369	0.089	0.034	0.008
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		761	584	9,600		271	453	14	1	12	10	761	205	344	11	1	12	11	584	60	2.8	3.0	0.060	0.137	0.033	0.046	0.011	0.148	0.036	0.039	0.009
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		488	688	8,400		165	277	18	1	14	13	488	244	409	12	1	12	10	688	60	3.6	2.8	0.060	0.178	0.043	0.039	0.009	0.139	0.034	0.043	0.010
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		2,219	2,294	32,250		717	1201	145	6	78	72	2219	761	1275	112	5	74	67	2294	60	4.3	3.9	0.030	0.112	0.027	0.112	0.027	0.103	0.025	0.105	0.025
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		2,388	1,999	31,350		796	1333	143	6	58	52	2388	636	1066	135	6	82	74	1999	60	3.7	4.5	0.030	0.098	0.024	0.105	0.025	0.119	0.029	0.107	0.026
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		829	517	9,600		302	507	7	0	7	6	829	190	318	4	0	3	2	517	60	2.4	2.2	0.060	0.115	0.028	0.043	0.010	0.108	0.026	0.025	0.006
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		501	690	8,500		175	293	13	1	10	9	501	242	404	19	1	13	11	690	60	3.1	3.0	0.060	0.152	0.037	0.034	0.008	0.149	0.036	0.046	0.011
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		33	123	1,100		12	21	0	0	0	0	33	45	76	1	0	1	0	123	60	1.9	2.2	0.200	0.276	0.067	0.004	0.001	0.319	0.077	0.018	0.004
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		428	37	3,300		157	263	4	0	2	2	428	14	23	0	0	0	0	37	60	2.2	1.9	0.200	0.325	0.079	0.062	0.015	0.276	0.067	0.005	0.001
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		760	579	9,550		264	443	17	1	18	17	760	209	350	7	0	7	6	579	70	3.2	2.6	0.060	0.158	0.038	0.054	0.013	0.125	0.030	0.032	0.008
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		596	570	8,350		203	340	21	1	16	15	596	209	350	2	0	5	4	570	70	3.5	2.3	0.060	0.173	0.042	0.046	0.011	0.112	0.027	0.028	0.007
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	23	7	200		8	14	0	0	1	0	23	3	4	0	0	0	0	7	60	2.8	1.9	0.600	1.129	0.273	0.012	0.003	0.751	0.182	0.002	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	6	73	550		2	4	0	0	0	0	6	26	44	1	0	1	1	73	60	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.392	0.095	0.013	0.003
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		2,274	2,263	32,400		747	1251	132	6	72	66	2274	763	1277	97	4	64	58	2263	60	4.0	3.7	0.030	0.106	0.026	0.108	0.026	0.096	0.023	0.097	0.024
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		2,348	1,987	30,950		782	1309	143	6	56	52	2348	636	1065	130	6	78	72	1987	60	3.8	4.5	0.030	0.098	0.024	0.103	0.025	0.117	0.028	0.104	0.025
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		552	1,459	14,350		173	289	49	2	20	19	552	515	863	36	2	22	21	1459	70	4.7	2.9	0.030	0.123	0.030	0.030	0.007	0.075	0.018	0.049	0.012
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		2,059	482	18,150		738	1235	44	2	21	19	2059	174	292	8	0	4	4	482	70	2.6	2.5	0.030	0.068	0.017	0.063	0.015	0.065	0.016	0.014	0.003
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		493	1,564	14,700		176	295	12	1	5	4	493	567	949	22	1	13	12	1564	70	2.7	2.4	0.030	0.069	0.017	0.015	0.004	0.064	0.015	0.044	0.011
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		1,903	606	17,900		697	1166	19	1	10	10	1903	224	375	4	0	2	1	606	70	2.3	2.1	0.030	0.059	0.014	0.050	0.012	0.054	0.013	0.015	0.004
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		1,222	403	11,600		439	734	19	1	15	14	1222	132	221	18	1	16	15	403	70	2.6	4.2	0.030	0.069	0.017	0.037	0.009	0.110	0.027	0.020	0.005
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		693	475	8,350		228	381	48	2	18	16	693	132	222	51	2	36	32	475	40	3.9	6.5	0.060	0.194	0.047	0.060	0.015	0.323	0.078	0.069	0.017
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		20	73	650		7	13	0	0	0	0	20	27	44	1	0	1	0	73	60	1.9	2.4	0.200	0.276	0.067	0.002	0.001	0.348	0.084	0.011	0.003
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		684	687	9,800		183	306	99	4	48	44	684	212	356	58	3	30	28	687	70	6.8	4.9	0.060	0.341	0.082	0.104	0.025	0.244	0.059	0.075	0.018
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		214	641	6,100		50	83	48	2	16	15	214	205	344	50	2	21	19	641	60	8.2	4.3	0.060	0.410	0.099	0.039	0.009	0.215	0.052	0.061	0.015
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		43	214	1,850		16	27	0	0	0	0	43	80	134	0	0	0	0	214	40	1.9	1.9	0.200	0.276	0.067	0.005	0.001	0.276	0.067	0.026	0.006
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		1,370	759	15,200		499	835	17	1	9	9	1370	276	462	11	0	5	5	759	40	2.4	2.4	0.030	0.061	0.015	0.038	0.009	0.062	0.015	0.021	0.005
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		1,935	1,510	24,600		706	1183	21	1	13	11	1935	556	930	11	1	6	6	1510	60	2.3	2.2	0.030	0.060	0.015	0.052	0.013	0.057	0.014	0.038	0.009
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		1,852	3,193	36,050		672	1125	33	1	11	10	1852	1172	1962	25	1	17	16	3193	70	2.4	2.2	0.030	0.062	0.015	0.052	0.012	0.058	0.014	0.083	0.020
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle									AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak		PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	3,965	4,330	59,300		1121	1877	476	21	246	224	3965	1346	2254	298	13	220	200	4330	110	6.2	5.0	0.015	0.087	0.021	0.154	0.037	0.070	0.017	0.135	0.033
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	5,230	4,186	67,200		1630	2729	438	19	216	197	5230	1269	2126	357	16	218	199	4186	110	4.8	5.3	0.015	0.067	0.016	0.157	0.038	0.074	0.018	0.138	0.033
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	4,380	5,444	70,200		1293	2165	460	20	232	211	4380	1768	2960	301	13	210	191	5444	110	5.6	4.3	0.015	0.078	0.019	0.153	0.037	0.060	0.014	0.145	0.035
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	5,986	4,421	74,300		1918	3212	442	19	206	188	5986	1358	2274	360	16	216	197	4421	110	4.4	5.1	0.015	0.061	0.015	0.163	0.040	0.071	0.017	0.140	0.034
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		3,772	4,177	56,800		1127	1887	372	16	193	176	3772	1334	2234	249	11	182	166	4177	110	5.4	4.5	0.015	0.076	0.018	0.128	0.031	0.064	0.015	0.119	0.029
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		4,643	3,684	59,500		1478	2475	350	15	170	155	4643	1117	1871	297	13	201	184	3684	110	4.5	5.3	0.015	0.063	0.015	0.130	0.031	0.074	0.018	0.122	0.030
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	3,612	3,746	52,600		1060	1775	371	16	203	186	3612	1158	1940	256	11	199	181	3746	110	5.7	5.1	0.015	0.080	0.019	0.129	0.031	0.071	0.017	0.119	0.029
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	4,043	3,413	53,300		1247	2089	347	15	180	164	4043	997	1669	313	14	219	200	3413	110	5.0	5.8	0.015	0.069	0.017	0.125	0.030	0.082	0.020	0.125	0.030
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	4,690	4,030	62,300		1393	2332	460	20	254	231	4690	1227	2055	292	13	232	212	4030	110	5.5	5.3	0.015	0.078	0.019	0.163	0.039	0.074	0.018	0.134	0.032
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	4,274	4,119	59,900		1284	2150	399	18	222	202	4274	1209	2024	369	16	263	239	4119	110	5.4	5.8	0.015	0.075	0.018	0.144	0.035	0.081	0.020	0.150	0.036
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		3,451	1,353	34,300		1047	1754	282	12	186	170	3451	426	714	128	6	41	38	1353	100	5.3	4.5	0.015	0.074	0.018	0.114	0.028	0.063	0.015	0.038	0.009
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		1,656	2,361	28,700		376	629	324	14	164	149	1656	759	1270	261	12	31	28	2361	100	8.7	4.0	0.015	0.124	0.030	0.092	0.022	0.056	0.014	0.059	0.014
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		3,921	1,273	37,100		1248	2091	283	12	150	137	3921	476	797	0	0	0	0	1273	100	4.5	1.9	0.015	0.063	0.015	0.110	0.027	0.026	0.006	0.015	0.004
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		1,468	2,552	28,700		511	855	37	2	33	30	1468	953	1595	3	0	1	0	2552	100	3.2	1.9	0.015	0.044	0.011	0.029	0.007	0.027	0.006	0.030	0.007
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		777	854	11,650		261	437	33	1	23	21	777	287	480	24	1	33	30	854	70	3.7	3.9	0.030	0.098	0.024	0.034	0.008	0.101	0.024	0.039	0.009
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	870	1,472	16,700		323	541	3	0	1	1	870	537	899	14	1	12	11	1472	60	2.0	2.4	0.030	0.052	0.013	0.020	0.005	0.061	0.015	0.040	0.010
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	322	495	5,850		110	184	13	1	8	7	322	172	288	13	1	11	10	495	40	3.5	3.2	0.060	0.170	0.041	0.024	0.006	0.157	0.038	0.035	0.008
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	1,512	1,117	18,800		543	909	30	1	15	14	1512	385	644	30	1	29	27	1117	70	2.6	3.4	0.030	0.067	0.016	0.046	0.011	0.088	0.021	0.044	0.011
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	371	597	6,900		118	197	19	1	19	17	371	192	322	23	1	31	28	597	40	4.7	4.6	0.060	0.234	0.056	0.039	0.009	0.226	0.055	0.060	0.015
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	385	286	4,800		137	229	7	0	6	6	385	104	175	4	0	1	1	286	60	2.9	2.3	0.200	0.418	0.101	0.072	0.017	0.331	0.080	0.042	0.010
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		1,111	1,492	18,600		337	564	111	5	49	45	1111	511	856	61	3	32	29	1492	70	5.1	3.4	0.030	0.135	0.033	0.067	0.016	0.088	0.021	0.059	0.014
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		386	209	4,250		131	219	19	1	8	7	386	72	120	9	0	4	4	209	60	3.5	3.3	0.200	0.507	0.123	0.087	0.021	0.485	0.117	0.045	0.011
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		116	16	950		40	67	4	0	2	2	116	6	10	0	0	0	0	16	40	3.2	2.5	0.200	0.465	0.112	0.024	0.006	0.365	0.088	0.003	0.001
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		212	365	4,150		76	128	5	0	2	2	212	132	221	5	0	4	3	365	70	2.6	2.5	0.200	0.376	0.091	0.036	0.009	0.365	0.088	0.060	0.014
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		910	869	12,700		287	480	79	4	31	29	910	287	481	66	3	16	15	869	40	4.6	3.8	0.030	0.120	0.029	0.049	0.012	0.099	0.024	0.038	0.009
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		645	234	6,300		230	385	18	1	6	6	645	86	143	2	0	1	1	234	60	2.7	2.3	0.060	0.132	0.032	0.038	0.009	0.111	0.027	0.012	0.003
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		1,118	1,206	16,600		376	630	63	3	24	22	1118	427	715	32	1	16	14	1206	70	3.6	2.8	0.030	0.094	0.023	0.047	0.011	0.074	0.018	0.040	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		185	152	2,400		68	113	1	0	1	1	185	56	94	0	0	0	0	152	60	2.3	2.1	0.200	0.338	0.082	0.028	0.007	0.299	0.072	0.020	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		773	622	9,950		242	405	61	3	33	30	773	195	326	39	2	32	29	622	40	4.8	4.9	0.060	0.235	0.057	0.081	0.020	0.242	0.059	0.067	0.016
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		829	890	12,300		265	443	59	3	31	28	829	293	490	47	2	30	27	890	70	4.5	4.0	0.030	0.117	0.028	0.043	0.010	0.106	0.026	0.042	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		997	423	10,150		338	566	56	2	18	16	997	139	232	30	1	11	10	423	40	3.4	4.0	0.030	0.090	0.022	0.040	0.010	0.104	0.025	0.020	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		432	738	8,350		157	263	5	0	4	3	432	274	460	2	0	1	1	738	60	2.4	2.0	0.060	0.118	0.029	0.023	0.006	0.097	0.023	0.032	0.008
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	87	152	1,700		31	51	1	0	2	2	87	55	91	2	0	2	2	152	70	3.1	2.6	0.200	0.448	0.108	0.017	0.004	0.376	0.091	0.026	0.006
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	396	196	4,250		106	178	44	2	34	31	396	50	83	21	1	22	20	196	40	7.0	8.0	0.200	1.045	0.253	0.185	0.045	1.188	0.287	0.104	0.025
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	770	240	7,200		257	430	45	2	19	17	770	73	123	17	1	14	13	240	60	3.7	5.3	0.060	0.183	0.044	0.063	0.015	0.261	0.063	0.028	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	567	869	10,250		157	263	60	3	44	40	567	269	451	61	3	44	41	869	70	6.6	5.0	0.030	0.175	0.042	0.044	0.011	0.132	0.032	0.051	0.012
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	137	94	1,650		51	85	2	0	0	0	137	34	58	1	0	0	0	94	60	2.1	2.1	0.200	0.311	0.075	0.019	0.005	0.310	0.075	0.013	0.003
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	199	68	1,900		70	117	7	0	3	2	199	23	39	4	0	1	1	68	40	2.9	3.5	0.200	0.424	0.103	0.038	0.009	0.508	0.123	0.015	0.004
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	337	377	5,100		110	185	16	1	13	12	337	133	223	12	1	5	4	377	70	4.1	2.9	0.060	0.204	0.049	0.031	0.007	0.140	0.034	0.024	0.006
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	310	241	3,950		106	177	8	0	10	9	310	78	131	17	1	7	7	241	60	3.6	4.1	0.200	0.522	0.126	0.072	0.017	0.610	0.148	0.066	0.016
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		2,993	2,271	37,600		1051	1760	25	1	81	74	2993	829	1389	3	0	26	24	2271	60	3.1	2.4	0.030	0.082	0.020	0.110	0.027	0.062	0.015	0.063	0.015
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		2,379	2,902	37,700		853	1429	29	1	35	32	2379	1060	1774	7	0	32	29	2902	60	2.7	2.4	0.030	0.070	0.017	0.074	0.018	0.062	0.015	0.080	0.019
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		2,999	2,266	37,600		1074	1799	47	2	40	36	2999	805	1348	36	2	39	36	2266	60	2.7	2.8	0.030	0.070	0.017	0.093	0.023	0.074	0.018	0.075	0.018
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		2,118	2,776	34,950		714	1196	57	2	77	71	2118	974	1630	40	2	68	62	2776	60	3.8	3.1	0.030	0.099	0.024	0.094	0.023	0.081	0.020	0.101	0.024
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		3,173	2,303	39,100		1114	1865	57	3	70	64	3173	829	1388	32	1	27	25	2303	60	3.1	2.6	0.030	0.080	0.019	0.114	0.027	0.067	0.016	0.069	0.017
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		2,498	3,619	43,700		831	1392	128	6	74	67	2498	1287	2155	48	2	67	61	3619	60	3.8	2.8	0.030	0.101	0.024	0.112	0.027	0.074	0.018	0.120	0.029
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		3,310	2,750	43,300		1149	1923	82	4	80	73	3310	984	1648	42	2	38	35	2750	80	3.2	2.7	0.030	0.085	0.020	0.125	0.030	0.070	0.017	0.086	0.021
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		2,420	3,002	38,700		808	1354	131	6	63	58	2420	1058	1772	58	3	59	53	3002	80	3.7	3.0	0.030	0.098	0.024	0.106	0.026	0.078	0.019	0.104	0.025
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		2,699	2,087	34,200		962	1612	37	2	45	41	2699	757	1268	19	1	21	19	2087	80	2.8	2.5	0.030	0.072	0.018	0.087	0.021	0.064	0.015	0.059	0.014
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		1,949	2,908	34,700		662	1109	103	5	37	34	1949	1047	1753	35	2	37	34	2908	80	3.4	2.6	0.030	0.090	0.022	0.078	0.019	0.068	0.016	0.088	0.021
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		3,460	1,993	38,950		1218	2040	62	3	71	65	3460	722	1209	19	1	22	20	1993	80	3.0	2.5	0.030	0.078	0.019	0.121	0.029	0.065	0.016	0.057	0.014
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		1,801	3,251	36,100		600	1004	112	5	42	38	1801	1163	1948	45	2	49	45	3251	80	3.7	2.7	0.030	0.098	0.024	0.079	0.019	0.071	0.017	0.103	0.025
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		537	1,032	11,200		179	300	26	1	16	15	537	364	609	20	1	20	18	1032	60	3.8	3.0	0.030	0.101	0.024	0.024	0.006	0.078	0.019	0.036	0.009
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		1,539	730	16,200		525	879	54	2	41	37	1539	257	431	17	1	13	12	730	60	3.5	3.0	0.030	0.092	0.022	0.063	0.015	0.077	0.019	0.025	0.006
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		1,880	1,397	23,400		649	1086	58	3	44	40	1880	489	819	32	1	29	26	1397	60	3.3	3.1	0.030	0.086	0.021	0.073	0.018	0.080	0.019	0.050	0.012
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		2,020	1,967	28,450		688	1152	75	3	53	48	2020	705	1181	32	1	25	22	1967	60	3.5	2.6	0.030	0.092	0.022	0.083	0.020	0.069	0.017	0.061	0.015
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		199	769	6,900		62	104	13	1	10	9	199	273	457	12	1	14	13	769	70	4.9	2.9	0.060	0.242	0.058	0.022	0.005	0.140	0.034	0.048	0.012
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		1,109	331	10,300		381	637	31	1	31	28	1109	121	203	2	0	3	2	331	70	3.4	2.3	0.030	0.090	0.022	0.045	0.011	0.060	0.014	0.009	0.002
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		3,780	2,586	45,450		1319	2208	126	6	63	58	3780	861	1443	163	7	59	53	2586	80	3.1	3.7	0.030	0.080	0.019	0.135	0.033	0.098	0.024	0.113	0.027
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		2,019	3,182	37,150		477	798	362	16	191	175	2019	1075	1799	243	11	28	26	3182	80	8.3	3.4	0.030	0.222	0.054	0.200	0.048	0.088	0.021	0.125	0.030
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		3,006	2,411	38,700		1076	1802	69	3	29	27	3006	805	1347	127	6	66	60	2411	80	2.6	3.8	0.030	0.068	0.017	0.092	0.022	0.099	0.024	0.107	0.026
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		2,073	2,501	32,650		515	862	301	13	200	182	2073	873	1461	76	3	46	42	2501	80	7.9	3.1	0.030	0.211	0.051	0.195	0.047	0.081	0.019	0.090	0.022
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		3,391	2,144	39,550		1232	2064	52	2	21	20	3391	748	1252	63	3	41	37	2144	60	2.4	3.1	0.030	0.062	0.015	0.094	0.023	0.081	0.020	0.078	0.019
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		1,980	2,813	34,250		684	1145	77	3	37	34	1980	1012	1696	49	2	28	26	2813	60	3.2	2.6	0.030	0.084	0.020	0.074	0.018	0.067	0.016	0.084	0.020
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		3,049	2,247	37,850		1098	1840	59	3	26	23	3049	800	1339	48	2	30	28	2247	60	2.5	2.8	0.030	0.066	0.016	0.089	0.022	0.072	0.017	0.072	0.017
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		2,316	2,724	36,000		811	1359	78	3	34	31	2316	1005	1682	15	1	11	10	2724	60	3.0	2.1	0.030	0.078	0.019	0.080	0.019	0.056	0.013	0.068	0.016
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	1,520	3,247	34,050		544	911	30	1	18	16	1520	1181	1978	33	1	28	25	3247	80	2.7	2.4	0.030	0.069	0.017	0.047	0.011	0.062	0.015	0.090	0.022
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,989	1,411	31,450		1054	1766	75	3	47	43	2989	516	864	9	0	11	10	1411	80	2.9	2.3	0.030	0.076	0.018	0.101	0.025	0.060	0.015	0.038	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	1,280	2,445	26,600		445	746	42	2	24	22	1280	866	1450	45	2	43	40	2445	80	3.1	2.9	0.030	0.082	0.020	0.047	0.011	0.075	0.018	0.082	0.020
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,408	1,488	27,850		839	1405	67	3	49	45	2408	534	894	22	1	20	18	1488	80	3.1	2.7	0.030	0.082	0.020	0.088	0.021	0.069	0.017	0.046	0.011
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	512	953	10,450		173	290	22	1	13	12	512	345	578	12	1	9	8	953	80	3.6	2.5	0.030	0.094	0.023	0.021	0.005	0.064	0.016	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	1,010	569	11,300		349	584	29	1	25	22	1010	208	349	2	0	5	4	569	80	3.3	2.3	0.030	0.086	0.021	0.039	0.009	0.060	0.014	0.015	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	824	696	10,850		272	455	42	2	27	25	824	247	414	13	1	12	11	696	60	4.0	2.9	0.030	0.105	0.025	0.039	0.009	0.074	0.018	0.023	0.006
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	782	934	12,250		280	469	16	1	8	7	782	317	530	28	1	30	27	934	60	2.6	3.7	0.030	0.068	0.016	0.024	0.006	0.096	0.023	0.040	0.010
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,085	738	13,000		390	653	17	1	13	12	1085	268	449	10	0	5	5	738	60	2.6	2.4	0.030	0.068	0.016	0.033	0.008	0.062	0.015	0.020	0.005
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	498	1,073	11,200		164	274	25	1	18	16	498	394	659	7	0	6	6	1073	60	4.1	2.2	0.030	0.107	0.026	0.024	0.006	0.058	0.014	0.028	0.007
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		206	738	6,750		73	123	2	0	4	4	206	270	452	1	0	8	7	738	60	2.8	2.4	0.060	0.138	0.033	0.013	0.003	0.115	0.028	0.038	0.009
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		741	296	7,400		261	437	8	0	18	17	741	108	181	3	0	2	2	296	60	3.1	2.3	0.060	0.150	0.036	0.050	0.012	0.113	0.027	0.015	0.004
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		280	754	7,400		103	172	1	0	2	2	280	276	462	1	0	7	7	754	60	2.2	2.3	0.060	0.109	0.026	0.014	0.003	0.113	0.027	0.038	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		244	145	2,800		88	147	4	0	3	3	244	51	86	1	0	4	3	145	60	2.6	3.1	0.200	0.385	0.093	0.042	0.010	0.454	0.110	0.029	0.007
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		241	201	3,150		82	138	5	0	8	8	241	73	122	2	0	2	2	201	60	3.6	2.4	0.200	0.528	0.128	0.057	0.014	0.357	0.086	0.032	0.008
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		922	418	9,550		344	575	0	0	1	1	922	146	245	12	1	7	6	418	60	2.0	3.0	0.060	0.096	0.023	0.039	0.010	0.147	0.036	0.027	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		474	875	9,650		160	268	21	1	12	11	474	326	546	0	0	1	1	875	60	3.6	2.0	0.060	0.177	0.043	0.038	0.009	0.096	0.023	0.038	0.009
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,385	1,341	19,450		463	775	56	2	46	42	1385	473	792	30	1	23	21	1341	60	3.9	2.9	0.030	0.101	0.024	0.063	0.015	0.076	0.019	0.046	0.011
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,369	1,268	18,850		452	756	63	3	50	46	1369	433	725	26	1	43	39	1268	60	4.1	3.6	0.030	0.107	0.026	0.065	0.016	0.094	0.023	0.053	0.013
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,154	1,932	29,200		740	1239	75	3	51	46	2154	692	1159	34	1	24	22	1932	60	3.4	2.7	0.030	0.088	0.021	0.085	0.021	0.069	0.017	0.060	0.014
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,438	3,107	39,600		782	1310	164	7	91	83	2438	1086	1818	93	4	56	51	3107	60	4.4	3.1	0.030	0.116	0.028	0.126	0.030	0.080	0.019	0.111	0.027
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		2,976	2,338	37,950		986	1652	161	7	89	81	2976	791	1325	98	4	62	56	2338	60	3.9	3.6	0.030	0.102	0.025	0.136	0.033	0.094	0.023	0.098	0.024
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		524	545	7,650		179	300	22	1	12	10	524	199	332	9	0	3	2	545	60	3.4	2.3	0.060	0.167	0.040	0.039	0.009	0.113	0.027	0.028	0.007
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		546	397	6,750		192	322	15	1	8	8	546	144	241	7	0	3	2	397	60	2.9	2.4	0.060	0.144	0.035	0.035	0.008	0.118	0.028	0.021	0.005
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		765	634	10,000		263	441	29	1	16	15	765	230	384	10	0	5	5	634	60	3.3	2.5	0.030	0.086	0.021	0.030	0.007	0.064	0.015	0.018	0.004
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		845	459	9,300		295	494	30	1	13	12	845	165	275	9	0	5	5	459	60	3.0	2.6	0.060	0.149	0.036	0.056	0.014	0.129	0.031	0.026	0.006
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,854	1,210	21,900		614	1029	95	4	58	53	1854	408	684	47	2	36	33	1210	80	3.9	3.7	0.030	0.103	0.025	0.085	0.021	0.096	0.023	0.052	0.013
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,102	1,680	19,850		355	594	73	3	41	37	1102	581	972	58	3	35	32	1680	80	4.4	3.2	0.030	0.114	0.028	0.056	0.014	0.085	0.021	0.064	0.015
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		2,155	1,976	29,500		712	1193	115	5	68	62	2155	693	1160	47	2	38	35	1976	80	4.0	3.0	0.030	0.104	0.025	0.100	0.024	0.079	0.019	0.070	0.017
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,847	2,045	27,800		630	1056	73	3	44	40	1847	707	1184	71	3	41	38	2045	80	3.5	3.2	0.030	0.090	0.022	0.075	0.018	0.084	0.020	0.077	0.019
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,431	1,534	21,200		461	772	98	4	50	46	1431	546	915	33	1	20	19	1534	80	4.3	2.8	0.030	0.113	0.027	0.072	0.018	0.072	0.017	0.049	0.012
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,564	1,442	21,450		543	909	58	3	27	24	1564	505	846	48	2	21	20	1442	80	3.1	3.0	0.030	0.082	0.020	0.057	0.014	0.078	0.019	0.050	0.012
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		167	279	3,200		55	92	11	0	5	4	167	98	164	11	0	3	3	279	80	4.0	2.9	0.200	0.583	0.141	0.044	0.011	0.425	0.103	0.053	0.013
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		435	208	4,600		144	240	28	1	12	10	435	71	120	8	0	5	4	208	80	3.9	3.4	0.200	0.574	0.139	0.112	0.027	0.493	0.119	0.046	0.011
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	179	10	1,350		50	84	24	1	10	10	179	4	6	0	0	0	0	10	70	6.2	2.7	0.200	0.922	0.223	0.074	0.018	0.388	0.094	0.002	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	73	136	1,500		24	41	5	0	2	1	73	43	73	8	0	6	6	136	70	3.7	4.6	0.200	0.547	0.132	0.018	0.004	0.680	0.164	0.041	0.010
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	1,120	570	12,050		373	625	65	3	28	25	1120	186	311	29	1	22	20	570	80	3.7	4.3	0.030	0.098	0.024	0.049	0.012	0.112	0.027	0.028	0.007
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	742	846	11,350		236	395	48	2	32	29	742	285	477	33	1	26	24	846	80	4.6	3.7	0.030	0.120	0.029	0.040	0.010	0.097	0.023	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	462	663	8,050		126	211	55	2	36	33	462	202	338	49	2	38	35	663	80	6.8	5.3	0.060	0.337	0.082	0.070	0.017	0.263	0.064	0.078

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle										AM Peak		PM Peak	
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AP 42 Emission Factor	Base Emission Rate	AP 42 Emission Factor	Base Emission Rate
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak						
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle										AM Peak		PM Peak	
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AP 42 Emission Factor	Base Emission Rate	AP 42 Emission Factor	Base Emission Rate
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak					
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		1,885	2,223	29,350		666	1115	28	1	40	36	1885	803	1345	25	1	26	24	2223	60	3.0	2.5	0.030	0.078	0.019	0.065	0.016	0.066	0.016	0.066	0.016
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		1,997	2,172	29,800		672	1125	105	5	48	44	1997	770	1289	38	2	39	35	2172	60	3.6	2.9	0.030	0.095	0.023	0.085	0.021	0.075	0.018	0.073	0.018
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		280	754	7,400		103	172	1	0	2	2	280	276	462	1	0	7	7	754	60	2.2	2.3	0.060	0.109	0.026	0.014	0.003	0.113	0.027	0.038	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	S	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	S	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		466	847	9,400		171	287	4	0	2	2	466	279	467	29	1	37	34	847	80	2.2	4.2	0.060	0.106	0.026	0.022	0.005	0.206	0.050	0.078	0.019
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		1,310	959	16,200		450	754	43	2	32	29	1310	336	563	26	1	17	16	959	80	3.4	3.0	0.030	0.088	0.021	0.052	0.012	0.079	0.019	0.034	0.008
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		1,020	741	12,600		148	247	311	14	157	144	1020	158	264	251	11	30	27	741	100	12.6	8.4	0.015	0.179	0.043	0.082	0.020	0.119	0.029	0.039	0.009
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		829	663	10,650		142	238	184	8	134	122	829	171	287	123	5	40	36	663	100	11.7	7.0	0.015	0.167	0.040	0.062	0.015	0.099	0.024	0.029	0.007
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		433	660	7,800		159	267	4	0	2	2	433	210	352	28	1	35	32	660	100	2.2	4.7	0.060	0.107	0.026	0.021	0.005	0.233	0.056	0.069	0.017
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		32	187	1,550		12	20	0	0	0	0	32	69	115	0	0	1	1	187	100	1.9	2.2	0.200	0.276	0.067	0.004	0.001	0.324	0.078	0.027	0.007
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		649	151	5,700		170	285	88	4	54	49	649	53	89	2	0	4	3	151	70	7.2	3.1	0.060	0.359	0.087	0.104	0.025	0.152	0.037	0.010	0.002
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		307	41	2,500		112	187	3	0	3	2	307	15	25	0	0	0	0	41	80	2.4	1.9	0.200	0.347	0.084	0.048	0.012	0.276	0.067	0.005	0.001
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		134	121	1,800		42	70	4	0	10	9	134	37	62	3	0	10	9	121	40	5.3	5.7	0.200	0.784	0.190	0.047	0.011	0.844	0.204	0.046	0.011
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		1,652	1,070	19,450		509	852	128	6	83	75	1652	374	627	28	1	21	19	1070	70	5.1	3.1	0.030	0.133	0.032	0.098	0.024	0.080	0.019	0.038	0.009
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		10,971	8,771	141,000		3322	5564	829	37	638	581	10971	2723	4560	438	19	539	492	8771	100	5.4	5.1	0.015	0.075	0.018	0.369	0.089	0.072	0.017	0.283	0.068
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		9,101	6,765	113,300		2796	4682	542	24	553	504	9101	2140	3584	288	13	387	353	6765	100	5.2	4.9	0.015	0.074	0.018	0.299	0.072	0.068	0.016	0.206	0.050
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		9,584	7,376	121,100		2980	4990	544	24	547	499	9584	2376	3980	299	13	370	338	7376	100	5.1	4.5	0.015	0.071	0.017	0.304	0.073	0.064	0.015	0.210	0.051
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		6,424	8,372	105,700		1804	3020	528	23	548	500	6424	2717	4550	251	11	441	402	8372	100	6.6	4.5	0.015	0.093	0.022	0.266	0.064	0.063	0.015	0.235	0.057
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		3,021	3,148	44,100		878	1470	249	11	216	197	3021	1010	1691	127	6	164	150	3148	100	6.0	4.6	0.015	0.085	0.020	0.114	0.028	0.065	0.016	0.091	0.022
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		3,403	5,224	61,600		926	1551	280	12	332	303	3403	1707	2858	124	5	277	253	5224	100	7.1	4.4	0.015	0.100	0.024	0.152	0.037	0.062	0.015	0.144	0.035
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		6,834	9,301	115,200		1957	3277	531	23	547	499	6834	3021	5060	282	12	484	441	9301	100	6.3	4.5	0.015	0.089	0.021	0.271	0.066	0.063	0.015	0.260	0.063
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		876	715	11,350		286	479	30	1	42	38	876	249	417	10	0	20	19	715	60	4.3	3.3	0.030	0.114	0.028	0.045	0.011	0.086	0.021	0.027	0.007
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		1,187	895	14,850		403	676	5	0	53	49	1187	331	554	2	0	4	4	895	40	3.8	2.1	0.030	0.100	0.024	0.053	0.013	0.055	0.013	0.022	0.005
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		1,158	730	13,500		377	632	31	1	61	56	1158	251	420	12	1	24	22	730	70	4.5	3.5	0.030	0.117	0.028	0.061	0.015	0.092	0.022	0.030	0.007
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		904	881

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	3,965	4,330	59,300		1121	1877	476	21	246	224	3965	1346	2254	298	13	220	200	4330	110	6.2	5.0	0.015	0.087	0.021	0.154	0.037	0.070	0.017	0.135	0.033
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	5,230	4,186	67,200		1630	2729	438	19	216	197	5230	1269	2126	357	16	218	199	4186	110	4.8	5.3	0.015	0.067	0.016	0.157	0.038	0.074	0.018	0.138	0.033
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	4,380	5,444	70,200		1293	2165	460	20	232	211	4380	1768	2960	301	13	210	191	5444	110	5.6	4.3	0.015	0.078	0.019	0.153	0.037	0.060	0.014	0.145	0.035
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	5,986	4,421	74,300		1918	3212	442	19	206	188	5986	1358	2274	360	16	216	197	4421	110	4.4	5.1	0.015	0.061	0.015	0.163	0.040	0.071	0.017	0.140	0.034
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		3,772	4,177	56,800		1127	1887	372	16	193	176	3772	1334	2234	249	11	182	166	4177	110	5.4	4.5	0.015	0.076	0.018	0.128	0.031	0.064	0.015	0.119	0.029
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		4,643	3,684	59,500		1478	2475	350	15	170	155	4643	1117	1871	297	13	201	184	3684	110	4.5	5.3	0.015	0.063	0.015	0.130	0.031	0.074	0.018	0.122	0.030
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	3,612	3,746	52,600		1060	1775	371	16	203	186	3612	1158	1940	256	11	199	181	3746	110	5.7	5.1	0.015	0.080	0.019	0.129	0.031	0.071	0.017	0.119	0.029
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	4,043	3,413	53,300		1247	2089	347	15	180	164	4043	997	1669	313	14	219	200	3413	110	5.0	5.8	0.015	0.069	0.017	0.125	0.030	0.082	0.020	0.125	0.030
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	4,690	4,030	62,300		1393	2332	460	20	254	231	4690	1227	2055	292	13	232	212	4030	110	5.5	5.3	0.015	0.078	0.019	0.163	0.039	0.074	0.018	0.134	0.032
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	4,274	4,119	59,900		1284	2150	399	18	222	202	4274	1209	2024	369	16	263	239	4119	110	5.4	5.8	0.015	0.075	0.018	0.144	0.035	0.081	0.020	0.150	0.036
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		5,657	4,248	70,700		1678	2810	524	23	325	296	5657	1255	2101	338	15	282	257	4248	110	5.6	5.8	0.015	0.078	0.019	0.198	0.048	0.081	0.020	0.154	0.037
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		4,477	5,284	69,700		1302	2180	467	21	265	241	4477	1596	2673	405	18	309	282	5284	110	5.8	5.4	0.015	0.082	0.020	0.164	0.040	0.076	0.018	0.179	0.043
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		5,139	4,639	69,800		1503	2516	538	24	292	266	5139	1395	2336	347	15	285	260	4639	110	5.7	5.5	0.015	0.080	0.019	0.185	0.045	0.077	0.019	0.160	0.039
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		4,978	4,797	69,800		1492	2499	461	20	264	241	4978	1402	2348	431	19	313	285	4797	110	5.4	5.9	0.015	0.076	0.018	0.169	0.041	0.082	0.020	0.177	0.043
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		5,013	4,402	67,200		1444	2418	543	24	305	279	5013	1275	2135	376	17	314	286	4402	110	5.9	6.0	0.015	0.084	0.020	0.187	0.045	0.085	0.021	0.167	0.041
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		4,523	4,593	65,100		1267	2121	527	23	306	279	4523	1302	2181	450	20	335	305	4593	110	6.3	6.3	0.015	0.089	0.022	0.180	0.044	0.089	0.021	0.182	0.044
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	4,948	4,014	64,000		1420	2378	539	24	307	280	4948	1147	1920	356	16	301	274	4014	110	6.0	6.2	0.015	0.084	0.020	0.187	0.045	0.088	0.021	0.158	0.038
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	4,306	4,628	63,800		1193	1998	520	23	299	273	4306	1320	2210	444	20	332	303	4628	110	6.5	6.2	0.015	0.091	0.022	0.175	0.042	0.087	0.021	0.181	0.044
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	4,519	3,641	58,300		1278	2140	513	23	296	269	4519	1026	1718	337	15	285	260	3641	110	6.2	6.4	0.015	0.087	0.021	0.176	0.043	0.091	0.022	0.148	0.036
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	3,907	4,282	58,500		1065	1783	496	22	283	258	3907	1197	2004	435	19	327	299	4282	110	6.7	6.5	0.015	0.094	0.023	0.165	0.040	0.091	0.022	0.175	0.042
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		3,451	1,353	34,300		1047	1754	282	12	186	170	3451	426	714	128	6	41	38	1353	100	5.3	4.5	0.015	0.074	0.018	0.114	0.028	0.063	0.015	0.038	0.009
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		1,656	2,361	28,700		376	629	324	14	164	149	1656	759	1270	261	12	31	28	2361	100	8.7	4.0	0.015	0.124	0.030	0.092	0.022	0.056	0.014	0.059	0.014
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		3,921	1,273	37,100		1248	2091	283	12	150	137	3921	476	797	0	0	0	0	1273	100	4.5	1.9	0.015	0.063	0.015	0.110	0.027	0.026	0.006	0.015	0.004
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		1,468	2,552	28,700		511	855	37	2	33	30	1468	953	1595	3	0	1	0	2552	100	3.2	1.9	0.015	0.044	0.011	0.029	0.007	0.027	0.006	0.030	0.007
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,318	3,701	43,000		754	1263	146	6	77	71	2318	1308	2190	62	3	72	65	3701	100	4.2	2.9	0.015	0.058	0.014	0.060	0.015	0.041	0.010	0.067	0.016
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,652	3,056	55,100		1540	2580	115	5	216	197	4652	1058	1772	76	3	77	70	3056	100	4.2	3.3	0.015	0.058	0.014	0.121	0.029	0.046	0.011	0.063	0.015
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		918	1,724	18,900		284	475	83	4	38	35	918	615	1030	24	1	29	26	1724	100	4.9	2.8	0.015	0.069	0.017	0.028	0.007	0.039	0.009	0.030	0.007
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		1,937	847	19,900		650	1088	63	3	70	64	1937	280	469	41	2	29	26	847	100	3.8	4.0	0.015	0.054	0.013	0.046	0.011	0.056	0.013	0.021	0.005
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,206	1,268	24,800		728	1219	70	3	97	89	2206	438	734	30	1	34	31	1268	100	4.2	3.3	0.015	0.058	0.014	0.057	0.014	0.046	0.011	0.026	0.006
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		928	1,687	18,700		294	492	72	3	35	32	928	593	994	36	2	33	30	1687	100	4.6	3.0	0.015	0.064	0.015	0.027	0.006	0.042	0.010	0.031	0.008
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		777	854	11,650		261	437	33	1	23	21	777	287	480	24	1	33	30	854	70	3.7	3.9	0.030	0.098	0.024	0.034	0.008	0.101	0.024	0.039	0.009
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	870	1,472	16,700		323	541	3	0	1	1	870	537	899	14	1	12	11	1472	60	2.0	2.4	0.030	0.052	0.013	0.020	0.005	0.061	0.015	0.040	0.010
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	322	495	5,850		110	184	13	1	8	7	322	172	288	13	1	11	10	495	40	3.5	3.2	0.060	0.170	0.041	0.024	0.006	0.157	0.038	0.035	0.008
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	1,512	1,117	18,800		543	909	30	1	15	14	1512	385	644	30	1	29	27	1117	70	2.6	3.4	0.030	0.067	0.016	0.046	0.011	0.088	0.021	0.044	0.011
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	371	597	6,900		118	197	19	1	19	17	371	192	322	23	1	31	28	597	40	4.7	4.6	0.060	0.234	0.056	0.039	0.009	0.226	0.055	0.060	0.015
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	385	286	4,800		137	229	7	0	6	6	385	104	175	4	0	1	1	286	60	2.9	2.3	0.200	0.418	0.101	0.072	0.017	0.331	0.080	0.042	0.010
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		1,111	1,492	18,600		337	564	111	5	49	45	1111	511	856	61	3	32	29	1492	70	5.1	3.4	0.030	0.135	0.033	0.067	0.016	0.088	0.021	0.059	0.014
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		386	209	4,250		131	219	19	1	8	7	386	72	120	9	0	4	4	209	60	3.5	3.3	0.200	0.507	0.123	0.087	0.021	0.485	0.117	0.045	0.011
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		116	16	950		40	67	4	0	2	2	116	6	10	0	0	0	0	16	40	3.2	2.5	0.200	0.465	0.112	0.024	0.006	0.365	0.088	0.003	0.001
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		212	365	4,150		76	128	5	0	2	2	212	132	221	5	0	4	3	365	70	2.6	2.5	0.200	0.376	0.091	0.036	0.009	0.365	0.088	0.060	0.014
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		910	869	12,700		287	480	79	4	31	29	910	287	481	66	3	16	15	869	40	4.6	3.8	0.030	0.120	0.029	0.049	0.012	0.099	0.024	0.038	0.009
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		645	234	6,300		230	385	18	1	6	6	645	86	143	2	0	1	1	234	60	2.7	2.3	0.060	0.132	0.032	0.038	0.009	0.111	0.027	0.012	0.003
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		1,118	1,206	16,600		376	630	63	3	24	22	1118	427	715	32	1	16	14	1206	70	3.6	2.8	0.030	0.094	0.023	0.047	0.011	0.074	0.018	0.040	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		185	152	2,400		68	113	1	0	1	1	185	56	94	0	0	0	0	152	60	2.3	2.1	0.200	0.338	0.082	0.028	0.007	0.299	0.072	0.020	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		773	622	9,950		242	405	61	3	33	30	773	195	326	39	2	32	29	622	40	4.8	4.9	0.060	0.235	0.057	0.081	0.020	0.242	0.059	0.067	0.016
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		829	890	12,300		265	443	59	3	31	28	829	293	490	47	2	30	27	890	70	4.5	4.0	0.030	0.117	0.028	0.043	0.010	0.106	0.026	0.042	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		997	423	10,150		338	566	56	2	18	16	997	139	232	30	1	11	10	423	40	3.4	4.0	0.030	0.090	0.022	0.040	0.010	0.104	0.025	0.020	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		432	738	8,350		157	263	5	0	4	3	432	274	460	2	0	1	1	738	60	2.4	2.0	0.060	0.118	0.029	0.023	0.006	0.097	0.023	0.032	0.008
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	87	152	1,700		31	51	1	0	2	2	87	55	91	2	0	2	2	152	70	3.1	2.6	0.200	0.448	0.108	0.017	0.004	0.376	0.091	0.026	0.006
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	396	196	4,250		106	178	44	2	34	31	396	50	83	21	1	22	20	196	40	7.0	8.0	0.200	1.045	0.253	0.185	0.045	1.188	0.287	0.104	0.025
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	770	240	7,200		257	430	45	2	19	17	770	73	123	17	1	14	13	240	60	3.7	5.3	0.060	0.183	0.044	0.063	0.015	0.261	0.063	0.028	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	567	869	10,250		157	263	60	3	44	40	567	269	451	61	3	44	41	869	70	6.6	5.0	0.030	0.175	0.042	0.044	0.011	0.132	0.032	0.051	0.012
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	137	94	1,650		51	85	2	0	0	0	137	34	58	1	0	0	0	94	60	2.1	2.1	0.200	0.311	0.075	0.019	0.005	0.310	0.075	0.013	0.003
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	199	68	1,900		70	117	7	0	3	2	199	23	39	4	0	1	1	68	40	2.9	3.5	0.200	0.424	0.103	0.038	0.009	0.508	0.123	0.015	0.004
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	337	377	5,100		110	185	16	1	13	12	337	133	223	12	1	5	4	377	70	4.1	2.9	0.060	0.204	0.049	0.031	0.007	0.140	0.034	0.024	0.006
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		974	415	9,900		305	510	45	2	59	53	974	110	184	43	2	40	36	415	40	5.0	7.3	0.060	0.249	0.060	0.108	0.026	0.364	0.088	0.068	0.016
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		329	180	3,650		91	153	36	2	25	23	329	51	85	16	1	14	13	180	60	6.6	6.4	0.200	0.975	0.236	0.144	0.035	0.953	0.231	0.077	0.019
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		512	1,406	13,700		124	207	77	3	53	48	512	466	780	54	2	54	49	1406	70	8.3	4.0	0.030	0.220	0.053	0.050	0.012	0.106	0.026	0.066	0.016
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	310	241	3,950		106	177	8	0	10	9	310	78	131	17	1	7	7	241	60	3.6	4.1	0.200	0.522	0.126	0.072	0.017	0.610	0.148	0.066	0.016
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		310	241	3,950		106	177	8	0	10	9	310	78	131	17	1	7	7	241	40	3.6	4.1	0.200	0.522	0.126	0.072	0.017	0.610	0.148	0.066	0.016
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		1,034	217	8,950		335	561	37	2	53	48	1034	78	131	2	0	3	3	217	90	4.5	2.6	0.060	0.222	0.054	0.103	0.025	0.127	0.031	0.012	0.003
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		903	630	10,950		315	528	26	1	17	16	903	202	338	39	2	26	24	630	90	3.1	4.5	0.030	0.081	0.020	0.033	0.008	0.118	0.028	0.033	0.008
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		2,993	2,271	37,600		1051	1760	25	1	81	74	2993	829	1389	3	0	26	24	2271	60	3.1	2.4	0.030	0.082	0.020	0.110	0.027	0.062	0.015	0.063	0.015
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		2,379	2,902	37,700		853	1429	29	1	35	32	2379	1060	1774	7	0	32	29	2902	60	2.7	2.4	0.030	0.070	0.017	0.074	0.018	0.062	0.015	0.080	0.019
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		2,999	2,266	37,600		1074	1799	47	2	40	36	2999	805	1348	36	2	39	36	2266	60	2.7	2.8	0.030	0.070	0.017	0.093	0.023	0.074	0.018	0.075	0.018
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		2,118	2,776	34,950		714	1196	57	2	77	71	2118	974	1630	40	2	68	62	2776	60	3.8	3.1	0.030	0.099	0.024	0.094	0.023	0.081	0.020	0.101	0.024
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		3,173	2,303	39,100		1114	1865	57	3	70	64	3173	829	1388	32	1	27	25	2303	60	3.1	2.6	0.030	0.080	0.019	0.114	0.027	0.067	0.016	0.069	0.017
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		2,498	3,619	43,700		831	1392	128	6	74	67	2498	1287	2155	48	2	67	61	3619	60	3.8	2.8	0.030	0.101	0.024	0.112	0.027	0.074	0.018	0.120	0.029
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		3,310	2,750	43,300		1149	1923	82	4	80	73	3310	984	1648	42	2	38	35	2750	80	3.2	2.7	0.030	0.085	0.020	0.125	0.030	0.070	0.017	0.086	0.021
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		2,420	3,002	38,700		808	1354	131	6	63	58	2420	1058	1772	58	3	59	53	3002	80	3.7	3.0	0.030	0.098	0.024	0.106	0.026	0.078	0.019	0.104	0.025
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		2,699	2,087	34,200		962	1612	37	2	45	41	2699	757	1268	19	1	21	19	2087	80	2.8	2.5	0.030	0.072	0.018	0.087	0.021	0.064	0.015	0.059	0.014
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		1,949	2,908	34,700		662	1109	103	5	37	34	1949	1047	1753	35	2	37	34	2908	80	3.4	2.6	0.030	0.090	0.022	0.078	0.019	0.068	0.016	0.088	0.021
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		3,460	1,993	38,950		1218	2040	62	3	71	65	3460	722	1209	19	1	22	20	1993	80	3.0	2.5	0.030	0.078	0.019	0.121	0.029	0.065	0.016	0.057	0.014
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		1,801	3,251	36,100		600	1004	112	5	42	38	1801	1163	1948	45	2	49	45	3251	80	3.7	2.7	0.030	0.098	0.024	0.079	0.019	0.071	0.017	0.103	0.025
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		537	1,032	11,200		179	300	26	1	16	15	537	364	609	20	1	20	18	1032	60	3.8	3.0	0.030	0.101	0.024	0.024	0.006	0.078	0.019	0.036	0.009
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		1,539	730	16,200		525	879	54	2	41	37	1539	257	431	17	1	13	12	730	60	3.5	3.0	0.030	0.092	0.022	0.063	0.015	0.077	0.019	0.025	0.006
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		1,880	1,397	23,400		649	1086	58	3	44	40	1880	489	819	32	1	29	26	1397	60	3.3	3.1	0.030	0.086	0.021	0.073	0.018	0.080	0.019	0.050	0.012
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		2,020	1,967	28,450		688	1152	75	3	53	48	2020	705	1181	32	1	25	22	1967	60	3.5	2.6	0.030	0.092	0.022	0.083	0.020	0.069	0.017	0.061	0.015
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		199	769	6,900		62	104	13	1	10	9	199	273	457	12	1	14	13	769	70	4.9	2.9	0.060	0.242	0.058	0.022	0.005	0.140	0.034	0.048	0.012
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		1,109	331	10,300		381	637	31	1	31	28	1109	121	203	2	0	3	2	331	70	3.4	2.3	0.030	0.090	0.022	0.045	0.011	0.060	0.014	0.009	0.002
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		3,780	2,586	45,450		1319	2208	126	6	63	58	3780	861	1443	163	7	59	53	2586	80	3.1	3.7	0.030	0.080	0.019	0.135	0.033	0.098	0.024	0.113	0.027
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		2,019	3,182	37,150		477	798	362	16	191	175	2019	1075	1799	243	11	28	26	3182	80	8.3	3.4	0.030	0.222	0.054	0.200	0.048	0.088	0.021	0.125	0.030
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		3,006	2,411	38,700		1076	1802	69	3	29	27	3006	805	1347	127	6	66	60	2411	80	2.6	3.8	0.030	0.068	0.017	0.092	0.022	0.099	0.024	0.107	0.026
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		2,073	2,501	32,650		515	862	301	13	200	182	2073	873	1461	76	3	46	42	2501	80	7.9	3.1	0.030	0.211	0.051	0.195	0.047	0.081	0.019	0.090	0.022
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		3,391	2,144	39,550		1232	2064	52	2	21	20	3391	748	1252	63	3	41	37	2144	60	2.4	3.1	0.030	0.062	0.015	0.094	0.023	0.081	0.020	0.078	0.019
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		1,980	2,813	34,250		684	1145	77	3	37	34	1980	1012	1696	49	2	28	26	2813	60	3.2	2.6	0.030	0.084	0.020	0.074	0.018	0.067	0.016	0.084	0.020
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		3,049	2,247	37,850		1098	1840	59	3	26	23	3049	800	1339	48	2	30	28	2247	60	2.5	2.8	0.030	0.066	0.016	0.089	0.022	0.072	0.017	0.072	0.017
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		2,316	2,724	36,000		811	1359	78	3	34	31	2316	1005	1682	15	1	11	10	2724	60	3.0	2.1	0.030	0.078	0.019	0.080	0.019	0.056	0.013	0.068	0.016
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	1,520	3,247	34,050		544	911	30	1	18	16	1520	1181	1978	33	1	28	25	3247	80	2.7	2.4	0.030	0.069	0.017	0.047	0.011	0.062	0.015	0.090	0.022
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,989	1,411	31,450		1054	1766	75	3	47	43	2989	516	864	9	0	11	10	1411	80	2.9	2.3	0.030	0.076	0.018	0.101	0.025	0.060	0.015	0.038	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	1,280	2,445	26,600		445	746	42	2	24	22	1280	866	1450	45	2	43	40	2445	80	3.1	2.9	0.030	0.082	0.020	0.047	0.011	0.075	0.018	0.082	0.020
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,408	1,488	27,850		839	1405	67	3	49	45	2408	534	894	22	1	20	18	1488	80	3.1	2.7	0.030	0.082	0.020	0.088	0.021	0.069	0.017	0.046	0.011
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	512	953	10,450		173	290	22	1	13	12	512	345	578	12	1	9	8	953	80	3.6	2.5	0.030	0.094	0.023	0.021	0.005	0.064	0.016	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	1,010	569	11,300		349	584	29	1	25	22	1010	208	349	2	0	5	4	569	80	3.3	2.3	0.030	0.086	0.021	0.039	0.009	0.060	0.014	0.015	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	824	696	10,850		272	455	42	2	27	25	824	247	414	13	1	12	11	696	60	4.0	2.9	0.030	0.105	0.025	0.039	0.009	0.074	0.018	0.023	0.006
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	782	934	12,250		280	469	16	1	8	7	782	317	530	28	1	30	27	934	60	2.6	3.7	0.030	0.068	0.016	0.024	0.006	0.096	0.023	0.040	0.010
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,085	738	13,000		390	653	17	1	13	12	1085	268	449	10	0	5	5	738	60	2.6	2.4	0.030	0.068	0.016	0.033	0.008	0.062	0.015	0.020	0.005
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	498	1,073	11,200		164	274	25	1	18	16	498	394	659	7	0	6	6	1073	60	4.1	2.2	0.030	0.107	0.026	0.024	0.006	0.058	0.014	0.028	0.007
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		206	738	6,750		73	123	2	0	4	4	206	270	452	1	0	8	7	738	60	2.8	2.4	0.060	0.138	0.033	0.013	0.003	0.115	0.028	0.038	0.009
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		741	296	7,400		261	437	8	0	18	17	741	108	181	3	0	2	2	296	60	3.1	2.3	0.060	0.150	0.036	0.050	0.012	0.113	0.027	0.015	0.004
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		280	754	7,400		103	172	1	0	2	2	280	276	462	1	0	7	7	754	60	2.2	2.3	0.060	0.109	0.026	0.014	0.003	0.113	0.027	0.038	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		244	145	2,800		88	147	4	0	3	3	244	51	86	1	0	4	3	145	60	2.6	3.1	0.200	0.385	0.093	0.042	0.010	0.454	0.110	0.029	0.007
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		241	201	3,150		82	138	5	0	8	8	241	73	122	2	0	2	2	201	60	3.6	2.4	0.200	0.528	0.128	0.057	0.014	0.357	0.086	0.032	0.008
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		922	418	9,550		344	575	0	0	1	1	922	146	245	12	1	7	6	418	60	2.0	3.0	0.060	0.096	0.023	0.039	0.010	0.147	0.036	0.027	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		474	875	9,650		160	268	21	1	12	11	474	326	546	0	0	1	1	875	60	3.6	2.0	0.060	0.177	0.043	0.038	0.009	0.096	0.023	0.038	0.009
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,385	1,341	19,450		463	775	56	2	46	42	1385	473	792	30	1	23	21	1341	60	3.9	2.9	0.030	0.101	0.024	0.063	0.015	0.076	0.019	0.046	0.011
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,369	1,268	18,850		452	756	63	3	50	46	1369	433	725	26	1	43	39	1268	60	4.1	3.6	0.030	0.107	0.026	0.065	0.016	0.094	0.023	0.053	0.013
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,154	1,932	29,200		740	1239	75	3	51	46	2154	692	1159	34	1	24	22	1932	60	3.4	2.7	0.030	0.088	0.021	0.085	0.021	0.069	0.017	0.060	0.014
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,438	3,107	39,600		782	1310	164	7	91	83	2438	1086	1818	93	4	56	51	3107	60	4.4	3.1	0.030	0.116	0.028	0.126	0.030	0.080	0.019	0.111	0.027
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		2,976	2,338	37,950		986	1652	161	7	89	81	2976	791	1325	98	4	62	56	2338	60	3.9	3.6	0.030	0.102	0.025	0.136	0.033	0.094	0.023	0.098	0.024
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		524	545	7,650		179	300	22	1	12	10	524	199	332	9	0	3	2	545	60	3.4	2.3	0.060	0.167	0.040	0.039	0.009	0.113	0.027	0.028	0.007
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		546	397	6,750		192	322	15	1	8	8	546	144	241	7	0	3	2	397	60	2.9	2.4	0.060	0.144	0.035	0.035	0.008	0.118	0.028	0.021	0.005
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		765	634	10,000		263	441	29	1	16	15	765	230	384	10	0	5	5	634	60	3.3	2.5	0.030	0.086	0.021	0.030	0.007	0.064	0.015	0.018	0.004
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		845	459	9,300		295	494	30	1	13	12	845	165	275	9	0	5	5	459	60	3.0	2.6	0.060	0.149	0.036	0.056	0.014	0.129	0.031	0.026	0.006
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,854	1,210	21,900		614	1029	95	4	58	53	1854	408	684	47	2	36	33	1210	80	3.9	3.7	0.030	0.103	0.025	0.085	0.021	0.096	0.023	0.052	0.013
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,102	1,680	19,850		355	594	73	3	41	37	1102	581	972	58	3	35	32	1680	80	4.4	3.2	0.030	0.114	0.028	0.056	0.014	0.085	0.021	0.064	0.015
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		2,155	1,976	29,500		712	1193	115	5	68	62	2155	693	1160	47	2	38	35	1976	80	4.0	3.0	0.030	0.104	0.025	0.100	0.024	0.079	0.019	0.070	0.017
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,847	2,045	27,800		630	1056	73	3	44	40	1847	707	1184	71	3	41	38	2045	80	3.5	3.2	0.030	0.090	0.022	0.075	0.018	0.084	0.020	0.077	0.019
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,431	1,534	21,200		461	772	98	4	50	46	1431	546	915	33	1	20	19	1534	80	4.3	2.8	0.030	0.113	0.027	0.072	0.018	0.072	0.017	0.049	0.012
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,564	1,442	21,450		543	909	58	3	27	24	1564	505	846	48	2	21	20	1442	80	3.1	3.0	0.030	0.082	0.020	0.057	0.014	0.078	0.019	0.050	0.012
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		167	279	3,200		55	92	11	0	5	4	167	98	164	11	0	3	3	279	80	4.0	2.9	0.200	0.583	0.141	0.044	0.011	0.425	0.103	0.053	0.013
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		435	208	4,600		144	240	28	1	12	10	435	71	120	8	0	5	4	208	80	3.9	3.4	0.200	0.574	0.139	0.112	0.027	0.493	0.119	0.046	0.011
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	179	10	1,350		50	84	24	1	10	10	179	4	6	0	0	0	0	10	70	6.2	2.7	0.200	0.922	0.223	0.074	0.018	0.388	0.094	0.002	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	73	136	1,500		24	41	5	0	2	1	73	43	73	8	0	6	6	136	70	3.7	4.6	0.200	0.547	0.132	0.018	0.004	0.680	0.164	0.041	0.010
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	1,120	570	12,050		373	625	65	3	28	25	1120	186	311	29	1	22	20	570	80	3.7	4.3	0.030	0.098	0.024	0.049	0.012	0.112	0.027	0.028	0.007
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	742	846	11,350		236	395	48	2	32	29	742	285	477	33	1	26	24	846	80	4.6	3.7	0.030	0.120	0.029	0.040	0.010	0.097	0.023	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	462	663	8,050		126	211	55	2	36	33	462	202	338	49	2	38	35	663	80	6.8	5.3	0.060	0.337	0.082	0.070	0.017	0.263	0.064	0.078

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		326	546	6,250		112	187	15	1	6	6	326	194	324	12	1	8	8	546	60	3.4	2.8	0.060	0.165	0.040	0.024	0.006	0.139	0.034	0.034	0.008
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		610	389	7,150		199	334	32	1	23	21	610	138	231	8	0	7	6	389	60	4.2	2.9	0.060	0.206	0.050	0.056	0.014	0.141	0.034	0.025	0.006
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		504	298	5,750		180	301	11	0	7	6	504	103	172	11	1	6	6	298	80	2.7	3.3	0.060	0.134	0.032	0.030	0.007	0.163	0.040	0.022	0.005
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		426	426	6,100		145	243	14	1	12	11	426	156	261	4	0	3	2	426	80	3.5	2.3	0.060	0.173	0.042	0.033	0.008	0.111	0.027	0.021	0.005
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		194	350	3,900		65	108	11	0	5	5	194	123	205	11	0	6	5	350	80	3.8	3.0	0.200	0.557	0.135	0.048	0.012	0.441	0.107	0.069	0.017
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		493	128	4,450		172	287	16	1	9	8	493	46	77	4	0	1	0	128	80	3.1	2.5	0.200	0.457	0.110	0.101	0.024	0.364	0.088	0.021	0.005
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,197	2,374	39,800		1083	1813	121	5	91	83	3197	840	1407	43	2	43	39	2374	60	3.6	2.9	0.030	0.094	0.023	0.135	0.033	0.076	0.018	0.080	0.019
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		1,980	2,922	35,000		668	1119	98	4	47	43	1980	1061	1776	29	1	29	26	2922	60	3.6	2.4	0.030	0.094	0.023	0.083	0.020	0.064	0.015	0.083	0.020
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		2,956	2,312	37,600		1011	1692	99	4	78	71	2956	823	1379	37	2	37	34	2312	60	3.5	2.8	0.030	0.091	0.022	0.120	0.029	0.073	0.018	0.075	0.018
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,101	2,575	33,400		718	1203	89	4	46	42	2101	935	1565	27	1	25	23	2575	60	3.4	2.4	0.030	0.089	0.021	0.083	0.020	0.063	0.015	0.073	0.018
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,000	2,151	36,800		1030	1726	110	5	68	62	3000	761	1275	38	2	39	36	2151	60	3.3	2.9	0.030	0.087	0.021	0.117	0.028	0.076	0.018	0.073	0.018
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,183	3,066	37,500		724	1212	91	4	80	73	2183	1112	1863	29	1	32	29	3066	60	4.0	2.5	0.030	0.105	0.025	0.102	0.025	0.064	0.015	0.088	0.021
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		782	1,016	12,850		272	455	30	1	13	12	782	362	606	20	1	14	13	1016	80	3.1	2.8	0.030	0.081	0.020	0.028	0.007	0.072	0.017	0.033	0.008
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,358	842	15,700		464	776	55	2	32	29	1358	305	511	9	0	9	8	842	80	3.4	2.5	0.030	0.090	0.022	0.055	0.013	0.064	0.015	0.024	0.006
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		417	568	7,050		146	244	12	1	7	7	417	204	342	4	0	9	9	568	80	3.0	2.7	0.060	0.149	0.036	0.028	0.007	0.132	0.032	0.034	0.008
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		732	580	9,350		248	414	11	0	31	28	732	210	351	5	0	7	7	580	80	3.8	2.6	0.060	0.189	0.046	0.062	0.015	0.125	0.030	0.032	0.008
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		209	479	4,900		67	112	18	1	6	5	209	172	288	9	0	5	5	479	80	4.3	2.6	0.200	0.630	0.152	0.059	0.014	0.381	0.092	0.082	0.020
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		604	297	6,450		219	367	8	0	5	5	604	102	170	11	1	7	6	297	80	2.4	3.4	0.060	0.119	0.029	0.032	0.008	0.167	0.040	0.022	0.005
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,263	716	14,150		425	712	65	3	30	28	1263	246	412	24	1	17	16	716	60	3.6	3.4	0.030	0.095	0.023	0.054	0.013	0.088	0.021	0.028	0.007
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		707	1,144	13,200		242	404	35	2	13	11	707	412	690	20	1	11	10	1144	60	3.3	2.5	0.030	0.087	0.021	0.028	0.007	0.066	0.016	0.034	0.008
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		25	231	1,850		8	13	1	0	2	2	25	82	138	3	0	4	4	231	80	5.2	2.8	0.200	0.770	0.186	0.008	0.002	0.412	0.100	0.043	0.010
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		180	38	1,550		60	101	7	0	6	5	180	13	22	0	0	1	1	38	80	3.8	3.3	0.200	0.559	0.135	0.045	0.011	0.488	0.118	0.008	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		786	1,140	13,750		178	298	146	6	82	75	786	355	595	78	3	57	52	1140	80	8.9	4.9	0.030	0.236	0.057	0.083	0.020	0.129	0.031	0.066	0.016
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		1,269	915	15,600		398	666	91	4	58	53	1269	266	445	85	4	61	55	915	80	4.8	6.0	0.030	0.126	0.031	0.072	0.017	0.157	0.038	0.064	0.016
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		601	431	7,350		215	360	10	0	8	8	601	159	267	1	0	2	2	431	70	2.7	2.1	0.060	0.132	0.032	0.035	0.009	0.103	0.025	0.020	0.005
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		532	575	7,900		194	325	3	0	5	4	532	212	355	2	0	3	3	575	70	2.4	2.2	0.060	0.115	0.028	0.027	0.007	0.106	0.026	0.027	0.007
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		578	498	7,700		200	335	18	1	13	11	578	182	305	2	0	5	4	498	70	3.2	2.4	0.060	0.159	0.038	0.041	0.010	0.115	0.028	0.026	0.006
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		193	520	5,100		69	116	3	0	2	2	193	193	324	1	0	1	1	520	70	2.6	2.0	0.060	0.125	0.030	0.011	0.003	0.099	0.024	0.023	0.006
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		93	334	3,050		33	55	2	0	2	1	93	122	203	4	0	3	2	334	70	2.9	2.4	0.200	0.423	0.102	0.018	0.004	0.348	0.084	0.052	0.013
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		504	153	4,700		177	296	13	1	9	8	504	55	93	3	0	1	1	153	70	3.0	2.5	0.200	0.440	0.107	0.099	0.024	0.358	0.087	0.024	0.006
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		225	651	6,250		77	130	10	0	4	4	225	238	399	6	0	4	4	651	70	3.3	2.3	0.060	0.161	0.039	0.016	0.004	0.112	0.027	0.033	0.008
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		910	335	8,900		327	548	15	1	10	9	910	121	203	5	0	3	3	335	70	2.6	2.5	0.060	0.127	0.031	0.051	0.012	0.122	0.029	0.018	0.004
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		480	1,311	12,800		168	281	15	1	8	8	480	473	792	16	1	16	14	1311	60	3.1	2.6	0.030	0.080	0.019	0.017	0.004	0.066	0.016	0.039	0.009
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		1,428	836	16,150		497	833	41	2	29	26	1428	301	504	11	0	10	10	836	60	3.1	2.6	0.030	0.082	0.020	0.052	0.013	0.067	0.016	0.025	0.006
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		719	1,052	12,650		247	413	27	1	17	15	719	373	625	17	1	19	17	1052	60	3.4	2.9	0.030	0.088	0.021	0.028	0.007	0.074	0.018	0.035	0.008
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,281	599	13,450		446	746	38	2	26	24	1281	213	356	11	0	10	9	599	60	3.2	2.8	0.030	0.083	0.020	0.047	0.011	0.074	0.018	0.020	0.005
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		700	1,491	15,650		228	383	43	2	23	21	700	520	871	34	2	33	30	1491	60	4.1	3.1	0.030	0.108	0.026	0.034	0.008	0.082	0.020	0.055	0.013
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,415	613	14,500		477	799	57	3	41	38	1415	214	358	14	1	14	13	613	60	3.7	3.2	0.030	0.096	0.023	0.061	0.015	0.083	0.020	0.023	0.005
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	671	590	9,000		239	399	17	1	8	8	671	215	360	7	0	5	4	590	70	2.8	2.4	0.060	0.135	0.033	0.041	0.010	0.117	0.028	0.031	0.007
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	547	668	8,700		199	333	6	0	4	4	547	241	404	10	0	6	6	668	70	2.4	2.5	0.060	0.116	0.028	0.028	0.007	0.123	0.030	0.037	0.009
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	572	452	7,300		212	356	1	0	2	2	572	166	279	2	0	3	3	452	70	2.1	2.2	0.060	0.100	0.024	0.025	0.006	0.108	0.026	0.022	0.005
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	372	617	7,050		134	225	4	0	5	5	372	226	378	5	0	4	4	617	70	2.6	2.3	0.060	0.127	0.031	0.021	0.005	0.112	0.027	0.031	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	530	404	6,650		198	331	1	0	0	0	530	150	251	1	0	1	1	404	70	2.0	2.1	0.060	0.095	0.023	0.022	0.005	0.101	0.024	0.018	0.004
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	471	550	7,300		172	289	4	0	3	3	471	203	340	2	0	3	2	550	70	2.3	2.2	0.060	0.112	0.027	0.023	0.006	0.105	0.025	0.026	0.006
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	123	507	4,500		43	71	4	0	3	2	123	175	292	19	1	10	10	507	80	3.2	3.3	0.200	0.472	0.114	0.026	0.006	0.483	0.117	0.109	0.026
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	625	185	5,800		216	362	25	1	11	10	625	64	108	6	0	4	3	185	80	3.2	3.2	0.060	0.157	0.038	0.044	0.011	0.155	0.037	0.013	0.003
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	107	607	5,100		36	61	5	0	3	2	107	214	358	16	1	9	9	607	80	3.5	2.9	0.060	0.174	0.042	0.008	0.002	0.143	0.035	0.039	0.009
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	936	127	7,600		337	565	17	1	8	8	936	44	74	4	0	3	2	127	80	2.5	3.2	0.060	0.124	0.030	0.052	0.013	0.156	0.038	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	121	677	5,700		43	71	1	0	3	3	121	236	396	22	1	12	11	677	80	3.0	3.1	0.060	0.148	0.036	0.008	0.002	0.151	0.037	0.046	0.011
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	847	184	7,350		265	444	53	2	43	39	847	67	113	1	0	1	1	184	80	4.9	2.3	0.060	0.241	0.058	0.091	0.022	0.113	0.027	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	36	569	4,350		13	22	0	0	1	1	36	198	331	19	1	11	10	569	80	2.9	3.2	0.200	0.429	0.104	0.007	0.002	0.463	0.112	0.118	0.029
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	622	94	5,100		183	306	52	2	42	38	622	35	58	0	0	1	1	94	80	5.8	2.2	0.060	0.290	0.070	0.080	0.019	0.105	0.025	0.004	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	429	821	8,900		131	220	32	1	23	21	429	287	481	21	1	16	15	821	80	5.2	3.1	0.060	0.255	0.062	0.049	0.012	0.151	0.037	0.055	0.013
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,075	528	11,450		353	591	54	2	39	35	1075	173	289	22	1	22	20	528	80	4.1	4.2	0.030	0.108	0.026	0.052	0.013	0.111	0.027	0.026	0.006
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	241	916	8,250		72	121	22	1	13	12	241	325	544	18	1	15	13	916	80	5.5	2.8	0.060	0.271	0.065	0.029	0.007	0.139	0.034	0.057	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	857	597	10,400		280	470	41	2	33	31	857	213	357	9	0	9	8	597	80	4.2	2.7	0.030	0.110	0.027	0.042	0.010	0.071	0.017	0.019	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		1,885	2,223	29,350		666	1115	28	1	40	36	1885	803	1345	25	1	26	24	2223	60	3.0	2.5	0.030	0.078	0.019	0.065	0.016	0.066	0.016	0.066	0.016
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		1,997	2,172	29,800		672	1125	105	5	48	44	1997	770	1289	38	2	39	35	2172	60	3.6	2.9	0.030	0.095	0.023	0.085	0.021	0.075	0.018	0.073	0.018
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		280	754	7,400		103	172	1	0	2	2	280	276	462	1	0	7	7	754	60	2.2	2.3	0.060	0.109	0.026	0.014	0.003	0.113	0.027	0.038	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		144	373	3,700		49	83	7	0	3	2	144	132	220	11	0	5	5	373	80	3.3	2.9	0.200	0.486	0.118	0.031	0.008	0.422	0.102	0.070	0.017
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		470	103	4,100		166	279	12	1	6	6	470	37	61	3	0	1	1	103	80	2.8	2.7	0.200	0.414	0.100	0.087	0.021	0.397	0.096	0.018	0.004
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,203	1,724	28,050		760	1273	69	3	51	46	2203	601	1007	41	2	38	35	1724	60	3.3	3.2	0.030	0.086	0.021	0.085	0.021	0.082	0.020	0.063	0.015
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,583	2,189	26,950		530	887	70	3	48	44	1583	793	1327	20	1	25	23	2189	60	3.8	2.5	0.030	0.099	0.024	0.070	0.017	0.065	0.016	0.064	0.015
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		155	424	4,150		52	87	6	0	5	5	155	153	257	4	0	5	5	424	80	3.8	2.5	0.200	0.562	0.136	0.039	0.009	0.369	0.089	0.070	0.017
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		622	180	5,750		225	376	6	0	8	7	622	64	107	2	0	4	4	180	80	2.6	3.0	0.060	0.125	0.030	0.035	0.008	0.146	0.035	0.012	0.003
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		625	344	6,900		232	388	1	0	2	2	625	128	215	1	0	0	0	344	70	2.1	2.0	0.060	0.100	0.024	0.028	0.007	0.096	0.023	0.015	0.004
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		245	539	5,600		92	153	0	0	0	0	245	201	337	0	0	0	0	539	70	1.9	1.9	0.060	0.093	0.022	0.010	0.002	0.093	0.023	0.022	0.005
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		303	27	2,350		93	156	24	1	15	14	303	9	16	1	0	0	0	27	70	5.1	3.0	0.200	0.751	0.182	0.102	0.025	0.443	0.107	0.005	0.001
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		235	506	5,300		62	104	1	0	36	33	235	183	307	2	0	7	7	506	40	8.3	2.6	0.060	0.413	0.100	0.043	0.010	0.126	0.030	0.029	0.007
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		577	461	7,400		194	325	5	0	28	25	577	166	278	3	0	8	7	461	60	4.0	2.7	0.060	0.197	0.048	0.051	0.012	0.131	0.032	0.027	0.007
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		784	382	8,300		270	453	22	1	20	18	784	132	221	5	0	12	11	382	70	3.3	3.4	0.060	0.164	0.040	0.057	0.014	0.168	0.041	0.029	0.007
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		106	76	1,300		33	54	11	0	4	4	106	26	44	2	0	2	2	76	60	5.0	3.3	0.200	0.740	0.179	0.035	0.009	0.485	0.117	0.017	0.004
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		206	16	1,600		61	102	20	1	12	11	206	6	10	0	0	0	0	16	40	5.6	2.8	0.200	0.837	0.203	0.077	0.019	0.411	0.099	0.003	0.001
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		466	847	9,400		171	287	4	0	2	2	466	279	467	29	1	37	34	847	80	2.2	4.2	0.060	0.106	0.026	0.022	0.005	0.206	0.050	0.078	0.019
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		1,310	959	16,200		450	754	43	2	32	29	1310	336	563	26	1	17	16	959	80	3.4	3.0	0.030	0.088	0.021	0.052	0.012	0.079	0.019	0.034	0.008
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		1,020	741	12,600		148	247	311	14	157	144	1020	158	264	251	11	30	27	741	100	12.6	8.4	0.015	0.179	0.043	0.082	0.020	0.119	0.029	0.039	0.009
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		829	663	10,650		142	238	184	8	134	122	829	171	287	123	5	40	36	663	100	11.7	7.0	0.015	0.167	0.040	0.062	0.015	0.099	0.024	0.029	0.007
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		433	660	7,800		159	267	4	0	2	2	433	210	352	28	1	35	32	660	100	2.2	4.7	0.060	0.107	0.026	0.021	0.005	0.233	0.056	0.069	0.017
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		32	187	1,550		12	20	0	0	0	0	32	69	115	0	0	1	1	187	100	1.9	2.2	0.200	0.276	0.067	0.004	0.001	0.324	0.078	0.027	0.007
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		649	151	5,700		170	285	88	4	54	49	649	53	89	2	0	4	3	151	70	7.2	3.1	0.060	0.359	0.087	0.104	0.025	0.152	0.037	0.010	0.002
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		307	41	2,500		112	187	3	0	3	2	307	15	25	0	0	0	0	41	80	2.4	1.9	0.200	0.347	0.084	0.048	0.012	0.276	0.067	0.005	0.001
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		134	121	1,800		42	70	4	0	10	9	134	37	62	3	0	10	9	121	40	5.3	5.7	0.200	0.784	0.190	0.047	0.011	0.844	0.204	0.046	0.011
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		1,652	1,070	19,450		509	852	128	6	83	75	1652	374	627	28	1	21	19	1070	70	5.1	3.1	0.030	0.133	0.032	0.098	0.024	0.080	0.019	0.038	0.009
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		10,971	8,771	141,000		3322	5564	829	37	638	581	10971	2723	4560	438	19	539	492	8771	100	5.4	5.1	0.015	0.075	0.018	0.369	0.089	0.072	0.017	0.283	0.068
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		9,101	6,765	113,300		2796	4682	542	24	553	504	9101	2140	3584	288	13	387	353	6765	100	5.2	4.9	0.015	0.074	0.018	0.299	0.072	0.068	0.016	0.206	0.050
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		9,584	7,376	121,100		2980	4990	544	24	547	499	9584	2376	3980	299	13	370	338	7376	100	5.1	4.5	0.015	0.071	0.017	0.304	0.073	0.064	0.015	0.210	0.051
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		6,424	8,372	105,700		1804	3020	528	23	548	500	6424	2717	4550	251	11	441	402	8372	100	6.6	4.5	0.015	0.093	0.022	0.266	0.064	0.063	0.015	0.235	0.057
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		3,021	3,148	44,100		878	1470	249	11	216	197	3021	1010	1691	127	6	164	150	3148	100	6.0	4.6	0.015	0.085	0.020	0.114	0.028	0.065	0.016	0.091	0.022
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		3,403	5,224	61,600		926	1551	280	12	332	303	3403	1707	2858	124	5	277	253	5224	100	7.1	4.4	0.015	0.100	0.024	0.152	0.037	0.062	0.015	0.144	0.035
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		6,834	9,301	115,200		1957	3277	531	23	547	499	6834	3021	5060	282	12	484	441	9301	100	6.3	4.5	0.015	0.089	0.021	0.271	0.066	0.063	0.015	0.260	0.063
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		876	715	11,350		286	479	30	1	42	38	876	249	417	10	0	20	19	715	60	4.3	3.3	0.030	0.114	0.028	0.045	0.011	0.086	0.021	0.027	0.007
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		1,187	895	14,850		403	676	5	0	53	49	1187	331	554	2	0	4	4	895	40	3.8	2.1	0.030	0.100	0.024	0.053	0.013	0.055	0.013	0.022	0.005
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		1,158	730	13,500		377	632	31	1	61	56	1158	251	420	12	1	24	22	730	70	4.5	3.5	0.030	0.117	0.028	0.061	0.015

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT		AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36													
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	3,965	4,330	59,300		1121	1877	476	21	246	224	3965	1346	2254	298	13	220	200	4330	110	6.2	5.0	0.015	0.087	0.021	0.154	0.037	0.070	0.017	0.135	0.033
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	5,230	4,186	67,200		1630	2729	438	19	216	197	5230	1269	2126	357	16	218	199	4186	110	4.8	5.3	0.015	0.067	0.016	0.157	0.038	0.074	0.018	0.138	0.033
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	4,380	5,444	70,200		1293	2165	460	20	232	211	4380	1768	2960	301	13	210	191	5444	110	5.6	4.3	0.015	0.078	0.019	0.153	0.037	0.060	0.014	0.145	0.035
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	5,986	4,421	74,300		1918	3212	442	19	206	188	5986	1358	2274	360	16	216	197	4421	110	4.4	5.1	0.015	0.061	0.015	0.163	0.040	0.071	0.017	0.140	0.034
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		3,772	4,177	56,800		1127	1887	372	16	193	176	3772	1334	2234	249	11	182	166	4177	110	5.4	4.5	0.015	0.076	0.018	0.128	0.031	0.064	0.015	0.119	0.029
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		4,643	3,684	59,500		1478	2475	350	15	170	155	4643	1117	1871	297	13	201	184	3684	110	4.5	5.3	0.015	0.063	0.015	0.130	0.031	0.074	0.018	0.122	0.030
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	3,612	3,746	52,600		1060	1775	371	16	203	186	3612	1158	1940	256	11	199	181	3746	110	5.7	5.1	0.015	0.080	0.019	0.129	0.031	0.071	0.017	0.119	0.029
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	4,043	3,413	53,300		1247	2089	347	15	180	164	4043	997	1669	313	14	219	200	3413	110	5.0	5.8	0.015	0.069	0.017	0.125	0.030	0.082	0.020	0.125	0.030
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	4,690	4,030	62,300		1393	2332	460	20	254	231	4690	1227	2055	292	13	232	212	4030	110	5.5	5.3	0.015	0.078	0.019	0.163	0.039	0.074	0.018	0.134	0.032
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	4,274	4,119	59,900		1284	2150	399	18	222	202	4274	1209	2024	369	16	263	239	4119	110	5.4	5.8	0.015	0.075	0.018	0.144	0.035	0.081	0.020	0.150	0.036
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		5,657	4,248	70,700		1678	2810	524	23	325	296	5657	1255	2101	338	15	282	257	4248	110	5.6	5.8	0.015	0.078	0.019	0.198	0.048	0.081	0.020	0.154	0.037
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		4,477	5,284	69,700		1302	2180	467	21	265	241	4477	1596	2673	405	18	309	282	5284	110	5.8	5.4	0.015	0.082	0.020	0.164	0.040	0.076	0.018	0.179	0.043
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		5,139	4,639	69,800		1503	2516	538	24	292	266	5139	1395	2336	347	15	285	260	4639	110	5.7	5.5	0.015	0.080	0.019	0.185	0.045	0.077	0.019	0.160	0.039
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		4,978	4,797	69,800		1492	2499	461	20	264	241	4978	1402	2348	431	19	313	285	4797	110	5.4	5.9	0.015	0.076	0.018	0.169	0.041	0.082	0.020	0.177	0.043
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		5,013	4,402	67,200		1444	2418	543	24	305	279	5013	1275	2135	376	17	314	286	4402	110	5.9	6.0	0.015	0.084	0.020	0.187	0.045	0.085	0.021	0.167	0.041
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		4,523	4,593	65,100		1267	2121	527	23	306	279	4523	1302	2181	450	20	335	305	4593	110	6.3	6.3	0.015	0.089	0.022	0.180	0.044	0.089	0.021	0.182	0.044
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	4,948	4,014	64,000		1420	2378	539	24	307	280	4948	1147	1920	356	16	301	274	4014	110	6.0	6.2	0.015	0.084	0.020	0.187	0.045	0.088	0.021	0.158	0.038
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	4,306	4,628	63,800		1193	1998	520	23	299	273	4306	1320	2210	444	20	332	303	4628	110	6.5	6.2	0.015	0.091	0.022	0.175	0.042	0.087	0.021	0.181	0.044
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	4,519	3,641	58,300		1278	2140	513	23	296	269	4519	1026	1718	337	15	285	260	3641	110	6.2	6.4	0.015	0.087	0.021	0.176	0.043	0.091	0.022	0.148	0.036
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	3,907	4,282	58,500		1065	1783	496	22	283	258	3907	1197	2004	435	19	327	299	4282	110	6.7	6.5	0.015	0.094	0.023	0.165	0.040	0.091	0.022	0.175	0.042
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		5,462	5,042	75,000		1546	2588	621	27	355	324	5462	1489	2493	400	18	336	307	5042	110	6.2	5.8	0.015	0.087	0.021	0.213	0.051	0.081	0.020	0.183	0.044
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		4,967	5,343	73,600		1414	2369	568	25	309	282	4967	1561	2614	474	21	353	322	5343	110	6.1	5.9	0.015	0.086	0.021	0.190	0.046	0.083	0.020	0.197	0.048
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	4,652	5,381	71,700		1259	2108	610	27	339	309	4652	1621	2715	385	17	336	307	5381	110	6.8	5.5	0.015	0.095	0.023	0.198	0.048	0.077	0.019	0.185	0.045
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	5,714	4,543	73,300		1749	2929	517	23	260	237	5714	1302	2180	420	19	325	296	4543	110	5.1	6.2	0.015	0.071	0.017	0.181	0.044	0.087	0.021	0.176	0.043
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,318	3,701	43,000		754	1263	146	6	77	71	2318	1308	2190	62	3	72	65	3701	100	4.2	2.9	0.015	0.058	0.014	0.060	0.015	0.041	0.010	0.067	0.016
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,652	3,056	55,100		1540	2580	115	5	216	197	4652	1058	1772	76	3	77	70	3056	100	4.2	3.3	0.015	0.058	0.014	0.121	0.029	0.046	0.011	0.063	0.015
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		918	1,724	18,900		284	475	83	4	38	35	918	615	1030	24	1	29	26	1724	100	4.9	2.8	0.015	0.069	0.017	0.028	0.007	0.039	0.009	0.030	0.007
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		1,937	847	19,900		650	1088	63	3	70	64	1937	280	469	41	2	29	26	847	100	3.8	4.0	0.015	0.054	0.013	0.046	0.011	0.056	0.013	0.021	0.005
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,206	1,268	24,800		728	1219	70	3	97	89	2206	438	734	30	1	34	31	1268	100	4.2	3.3	0.015	0.058	0.014	0.057	0.014	0.046	0.011	0.026	0.006
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		928	1,687	18,700		294	492	72	3	35	32	928	593	994	36	2	33	30	1687	100	4.6	3.0	0.015	0.064	0.015	0.027	0.006	0.042	0.010	0.031	0.008
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,405	4,672	50,500		796	1332	139	6	69	63	2405	1642	2750	110	5	87	79	4672	100	3.9	3.0	0.015	0.054	0.013	0.058	0.014	0.042	0.010	0.087	0.021
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,303	2,840	51,000		1512	2531	145	6	57	52	4303	994	1665	72	3	55	50	2840	100	2.9	3.1	0.015	0.041	0.010	0.078	0.019	0.042	0.010	0.054	0.013
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		1,887	3,520	38,600		517	865	259	11	122	111	1887	1163	1947	164	7	125	114	3520	100	6.5	4.0	0.015	0.092	0.022	0.077	0.019	0.056	0.014	0.088	0.021
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		3,443	2,380	41,600		1138	1905	219	10	90	82	3443	772	1292	125	5	97	89	2380	100	3.9	4.3	0.015	0.054	0.013	0.083	0.020	0.060	0.015	0.064	0.016
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	870	1,472	16,700		323	541	3	0	1	1	870	537	899	14	1	12	11	1472	60	2.0	2.4	0.030	0.052	0.013	0.020	0.005	0.061	0.015	0.040	0.010
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	322	495	5,850		110	184	13	1	8	7	322	172	288	13	1	11	10	495	40	3.5	3.2	0.060	0.170	0.041	0.024	0.006	0.157	0.038	0.035	0.008
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	1,512	1,117	18,800		543	909	30	1	15	14	1512	385	644	30	1	29	27	1117	70	2.6	3.4	0.030	0.067	0.016	0.046	0.011	0.088	0.021	0.044	0.011
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	371	597	6,900		118	197	19	1	19	17	371	192	322	23	1	31	28	597	40	4.7	4.6	0.060	0.234	0.056	0.039	0.009	0.226	0.055	0.060	0.015
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	385	286	4,800		137	229	7	0	6	6	385	104	175	4	0	1	1	286	60	2.9	2.3	0.200	0.418	0.101	0.072	0.017	0.331	0.080	0.042	0.010
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		1,111	1,492	18,600		337	564	111	5	49	45	1111	511	856	61	3	32	29	1492	70	5.1	3.4	0.030	0.135	0.033	0.067	0.016	0.088	0.021	0.059	0.014
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		386	209	4,250		131	219	19	1	8	7	386	72	120	9	0	4	4	209	60	3.5	3.3	0.200	0.507	0.123	0.087	0.021	0.485	0.117	0.045	0.011
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		116	16	950		40	67	4	0	2	2	116	6	10	0	0	0	0	16	40	3.2	2.5	0.200	0.465	0.112	0.024	0.006	0.365	0.088	0.003	0.001
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		212	365	4,150		76	128	5	0	2	2	212	132	221	5	0	4	3	365	70	2.6	2.5	0.200	0.376	0.091	0.036	0.009	0.365	0.088	0.060	0.014
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		910	869	12,700		287	480	79	4	31	29	910	287	481	66	3	16	15	869	40	4.6	3.8	0.030	0.120	0.029	0.049	0.012	0.099	0.024	0.038	0.009
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		645	234	6,300		230	385	18	1	6	6	645	86	143	2	0	1	1	234	60	2.7	2.3	0.060	0.132	0.032	0.038	0.009	0.111	0.027	0.012	0.003
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		1,118	1,206	16,600		376	630	63	3	24	22	1118	427	715	32	1	16	14	1206	70	3.6	2.8	0.030	0.094	0.023	0.047	0.011	0.074	0.018	0.040	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		185	152	2,400		68	113	1	0	1	1	185	56	94	0	0	0	0	152	60	2.3	2.1	0.200	0.338	0.082	0.028	0.007	0.299	0.072	0.020	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		773	622	9,950		242	405	61	3	33	30	773	195	326	39	2	32	29	622	40	4.8	4.9	0.060	0.235	0.057	0.081	0.020	0.242	0.059	0.067	0.016
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		829	890	12,300		265	443	59	3	31	28	829	293	490	47	2	30	27	890	70	4.5	4.0	0.030	0.117	0.028	0.043	0.010	0.106	0.026	0.042	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		997	423	10,150		338	566	56	2	18	16	997	139	232	30	1	11	10	423	40	3.4	4.0	0.030	0.090	0.022	0.040	0.010	0.104	0.025	0.020	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		432	738	8,350		157	263	5	0	4	3	432	274	460	2	0	1	1	738	60	2.4	2.0	0.060	0.118	0.029	0.023	0.006	0.097	0.023	0.032	0.008
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	87	152	1,700		31	51	1	0	2	2	87	55	91	2	0	2	2	152	70	3.1	2.6	0.200	0.448	0.108	0.017	0.004	0.376	0.091	0.026	0.006
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	396	196	4,250		106	178	44	2	34	31	396	50	83	21	1	22	20	196	40	7.0	8.0	0.200	1.045	0.253	0.185	0.045	1.188	0.287	0.104	0.025
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	770	240	7,200		257	430	45	2	19	17	770	73	123	17	1	14	13	240	60	3.7	5.3	0.060	0.183	0.044	0.063	0.015	0.261	0.063	0.028	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	567	869	10,250		157	263	60	3	44	40	567	269	451	61	3	44	41	869	70	6.6	5.0	0.030	0.175	0.042	0.044	0.011	0.132	0.032	0.051	0.012
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	137	94	1,650		51	85	2	0	0	0	137	34	58	1	0	0	0	94	60	2.1	2.1	0.200	0.311	0.075	0.019	0.005	0.310	0.075	0.013	0.003
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	199	68	1,900		70	117	7	0	3	2	199	23	39	4	0	1	1	68	40	2.9	3.5	0.200	0.424	0.103	0.038	0.009	0.508	0.123	0.015	0.004
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	337	377	5,100		110	185	16	1	13	12	337	133	223	12	1	5	4	377	70	4.1	2.9	0.060	0.204	0.049	0.031	0.007	0.140	0.034	0.024	0.006
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		974	415	9,900		305	510	45	2	59	53	974	110	184	43	2	40	36	415	40	5.0	7.3	0.060	0.249	0.060	0.108	0.026	0.364	0.088	0.068	0.016
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		329	180	3,650		91	153	36	2	25	23	329	51	85	16	1	14	13	180	60	6.6	6.4	0.200	0.975	0.236	0.144	0.035	0.953	0.231	0.077	0.019
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		512	1,406	13,700		124	207	77	3	53	48	512	466	780	54	2	54	49	1406	70	8.3	4.0	0.030	0.220	0.053	0.050	0.012	0.106	0.026	0.066	0.016
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	310	241	3,950		106	177	8	0	10	9	310	78	131	17	1	7	7	241	60	3.6	4.1	0.200	0.522	0.126	0.072	0.017	0.610	0.148	0.066	0.016
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		310	241	3,950		106	177	8	0	10	9	310	78	131	17	1	7	7	241	40	3.6	4.1	0.200	0.522	0.126	0.072	0.017	0.610	0.148	0.066	0.016
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		1,034	217	8,950		335	561	37	2	53	48	1034	78	131	2	0	3	3	217	90	4.5	2.6	0.060	0.222	0.054	0.103	0.025	0.127	0.031	0.012	0.003
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		903	630	10,950		315	528	26	1	17	16	903	202	338	39	2	26	24	630	90	3.1	4.5	0.030	0.081	0.020	0.033	0.008	0.118	0.028	0.033	0.008
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		517	608	8,050		159	267	50	2	20	18	517	219	366	11	0	6	6	608	90	4.9	2.6	0.060	0.242	0.059	0.056	0.014	0.126	0.030	0.034	0.008
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		402	1,116	10,850		125	209	33	1	18	16	402	396	663	13	1	23	21	1116	90	4.9	2.9	0.030	0.129	0.031	0.023	0.006	0.076	0.018	0.038	0.009
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	C45	W-N/S	3		542	584	8,050		170	284	49	2	20	18	542	203	340	17	1	12	11	584	70	4.7	3.2	0.060	0.232	0.056	0.056	0.014	0.155	0.037	0.040	0.010
Highway 413	Hwy 413 at Bramalea Rd_N-E	C46	N-E	3		416	287	5,000		111	185	54	2	33	30	416	61	102	46	2	40	37	287	40	7.0	9.9	0.060	0.350	0.085	0.065	0.016	0.499	0.121	0.064	0.015
Highway 413	Hwy 413 at Bramalea Rd_S-E	C47	S-E	3		0	61	450		0	0	0	0	0	0	0	22	37	1	0	0	0	61	60	2.3	2.4	0.600	0.925	0.224	0.000	0.000	0.938	0.227	0.025	0.006
Highway 413	Hwy 413 at Bramalea Rd_E-N/S	C48	E-N/S	3		391	478	6,200		60	101	101	4	65	59	391	126	211	59	3	42	38	478	70	12.4	7.2	0.060	0.625	0.151	0.109	0.026	0.360	0.087	0.077	0.019
Highway 413	Hwy 413 at Bramalea Rd_N-W	C49	N-W	3		826	608	10,250		280	468	35	2	21	20	826	198	332	39	2	19	18	608	60	3.6	4.1	0.030	0.094	0.023	0.035	0.008	0.108	0.026	0.029	0.007
Highway 413	Hwy 413 at Bramalea Rd_S-W	C50	S-W	3		20	75	650		6	11	0	0	1	1	20	28	46	0	0	0	0	75	40	4.7	2.2	0.200	0.693	0.168	0.006	0.001	0.319	0.077	0.011	0.003
Highway 413	Hwy 413 at Airport Rd_W-N/S	C51	W-N/S	3		559	659	8,700		192	322	25	1	10	9	559	222	371	28	1	20	18	659	70	3.3	3.7	0.060	0.160	0.039	0.040	0.010	0.183	0.044	0.054	0.013
Highway 413	Hwy 413 at Airport Rd_N-E	C52	N-E	3		217	148	2,600		74	123	10	0	5	4	217	48	81	7	0	6	6	148	40	3.5	4.3	0.200	0.511	0.124	0.050	0.012	0.628	0.152	0.042	0.010
Highway 413	Hwy 413 at Airport Rd_S-E	C53	S-E	3	4	278	123	2,850		95	158	11	0	7	6	278	45	76	0	0	0	0	123	60	3.5	2.1	0.200	0.511	0.124	0.063	0.015	0.304	0.074	0.017	0.004
Highway 413	Hwy 413 at Airport Rd_E-N/S	C54	E-N/S	3	4	356	188	3,900		114	191	25	1	12	11	356	64	107	8	0	5	4	188	70	4.3	3.5	0.200	0.642	0.155	0.102	0.025	0.517	0.125	0.044	0.011
Highway 413	Hwy 413 at Airport Rd_N-W	C55	N-W	3		556	51	4,350		183	306	29	1	19	17	556	16	27	4	0	2	2	51	60	4.0	4.5	0.200	0.595	0.144	0.148	0.036	0.670	0.162	0.015	0.004
Highway 413	Hwy 413 at Airport Rd_S-W	C56	S-W	3		17	101	850		5	8	3	0	1	1	17	30	50	11	0	5	5	101	40	6.1	5.5	0.200	0.907	0.219	0.007	0.002	0.817	0.198	0.037	0.009
Highway 413	Hwy 413 at The Gore Rd_W-N/S	C57	W-N/S	3	4	574	463	7,400		195	326	28	1	13	11	574	153	256	19	1	18	16	463	70	3.5	4.1	0.060	0.172	0.042	0.044	0.011	0.200	0.048	0.041	0.010
Highway 413	Hwy 413 at The Gore Rd_N/S-E	C58	N/S-E	3	4	145	90	1,700		53	89	2	0	1	1	145	32	54	1	0	1	1	90	40	2.3	2.8	0.200	0.329	0.080	0.021	0.005	0.403	0.097	0.016	0.004
Highway 413	Hwy 413 at The Gore Rd_E-N/S	C59	E-N/S	3	4	127	301	3,050		46	77	3	0	1	1	127	106	177	8	0	5	5	301	70	2.5	3.0	0.200	0.370	0.089	0.021	0.005	0.439	0.106	0.059	0.014
Highway 413	Hwy 413 at The Gore Rd_N/S-W	C60	N/S-W	3	4	527	648	8,400		174	292	27	1	17	15	527	229	383	16	1	10	9	648	60	3.9	2.9	0.060	0.194	0.047	0.046	0.011	0.142	0.034	0.041	0.010
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	C61	W-N/S	4		641	318	6,850		231	388	13	1	4	4	641	108	181	11	1	9	8	318	70	2.5	3.5	0.060	0.120	0.029	0.034	0.008	0.173	0.042	0.025	0.006
Highway 413	Hwy 413 at Humber Station Rd_N-E	C62	N-E	4		545	857	10,000		194	325	15	1	6	5	545	316	529	5	0	3	3	857	40	2.7	2.1	0.030	0.071	0.017	0.017	0.004	0.055	0.013	0.021	0.005
Highway 413	Hwy 413 at Humber Station Rd_S-E	C63	S-E	4		1,039	862	13,550		305	511	107	5	58	53	1039	255	426	68	3	57	52	862	60	5.7	5.8	0.030	0.150	0.036	0.070	0.017	0.152	0.037	0.059	0.014
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	C64	E-N/S	4		1,286	1,425	19,350		419	702	90	4	37	34	1286	494	828	44	2	30	27	1425	70	4.1	3.2	0.030	0.107	0.026	0.061	0.015	0.084	0.020	0.053	0.013
Highway 413	Hwy 413 at Humber Station Rd_N-W	C65	N-W	4		26	17	300		10	16	0	0	0	0	26	6	11	0	0	0	0	17	60	1.9	2.1	0.600	0.751	0.182	0.009	0.002	0.838	0.203	0.006	0.002
Highway 413	Hwy 413 at Humber Station Rd_S-W	C66	S-W	4		199	346	3,900		60	100	18	1	11	10	199	124	208	6	0	4	4	346	40	5.4	2.6	0.200	0.801	0.194	0.071	0.017	0.385	0.093	0.060	0.014
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	4		1,390	1,280	19,050		448	750	96	4	48	44	1390	413	691	67	3	55	51	1280	90	4.3	4.4	0.030	0.113	0.027	0.070	0.017	0.116	0.028	0.067	0.016
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		2,053	1,100	22,500		690	1155	122	5	42	38	2053	359	601	57	3	42	38	1100	90	3.6	4.2	0.030	0.094	0.023	0.086	0.021	0.110	0.027	0.054	0.013
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		581	1,620	15,700		161	270	86	4	31	28	581	545	913	53	2	55	51	1620	80	6.2	3.8	0.030	0.164	0.040	0.043	0.010	0.099	0.024	0.072	0.017

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2 5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2 5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2 5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2 5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		1,306	1,900	22,900		355	595	174	8	91	83	1306	617	1034	111	5	70	64	1900	90	6.7	4.2	0.030	0.176	0.043	0.103	0.025	0.111	0.027	0.095	0.023
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	758	1,057	12,950		245	411	51	2	25	23	758	344	577	58	3	40	36	1057	70	4.2	4.2	0.030	0.111	0.027	0.038	0.009	0.111	0.027	0.052	0.013
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	2,284	1,223	25,050		736	1233	166	7	74	67	2284	399	668	60	3	50	45	1223	60	4.3	4.3	0.030	0.112	0.027	0.114	0.028	0.112	0.027	0.061	0.015
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	1,520	3,247	34,050		544	911	30	1	18	16	1520	1181	1978	33	1	28	25	3247	80	2.7	2.4	0.030	0.069	0.017	0.047	0.011	0.062	0.015	0.090	0.022
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,989	1,411	31,450		1054	1766	75	3	47	43	2989	516	864	9	0	11	10	1411	80	2.9	2.3	0.030	0.076	0.018	0.101	0.025	0.060	0.015	0.038	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	1,280	2,445	26,600		445	746	42	2	24	22	1280	866	1450	45	2	43	40	2445	80	3.1	2.9	0.030	0.082	0.020	0.047	0.011	0.075	0.018	0.082	0.020
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,408	1,488	27,850		839	1405	67	3	49	45	2408	534	894	22	1	20	18	1488	80	3.1	2.7	0.030	0.082	0.020	0.088	0.021	0.069	0.017	0.046	0.011
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	512	953	10,450		173	290	22	1	13	12	512	345	578	12	1	9	8	953	80	3.6	2.5	0.030	0.094	0.023	0.021	0.005	0.064	0.016	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	1,010	569	11,300		349	584	29	1	25	22	1010	208	349	2	0	5	4	569	80	3.3	2.3	0.030	0.086	0.021	0.039	0.009	0.060	0.014	0.015	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	824	696	10,850		272	455	42	2	27	25	824	247	414	13	1	12	11	696	60	4.0	2.9	0.030	0.105	0.025	0.039	0.009	0.074	0.018	0.023	0.006
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	782	934	12,250		280	469	16	1	8	7	782	317	530	28	1	30	27	934	60	2.6	3.7	0.030	0.068	0.016	0.024	0.006	0.096	0.023	0.040	0.010
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,085	738	13,000		390	653	17	1	13	12	1085	268	449	10	0	5	5	738	60	2.6	2.4	0.030	0.068	0.016	0.033	0.008	0.062	0.015	0.020	0.005
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	498	1,073	11,200		164	274	25	1	18	16	498	394	659	7	0	6	6	1073	60	4.1	2.2	0.030	0.107	0.026	0.024	0.006	0.058	0.014	0.028	0.007
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		206	738	6,750		73	123	2	0	4	4	206	270	452	1	0	8	7	738	60	2.8	2.4	0.060	0.138	0.033	0.013	0.003	0.115	0.028	0.038	0.009
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		741	296	7,400		261	437	8	0	18	17	741	108	181	3	0	2	2	296	60	3.1	2.3	0.060	0.150	0.036	0.050	0.012	0.113	0.027	0.015	0.004
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		280	754	7,400		103	172	1	0	2	2	280	276	462	1	0	7	7	754	60	2.2	2.3	0.060	0.109	0.026	0.014	0.003	0.113	0.027	0.038	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		244	145	2,800		88	147	4	0	3	3	244	51	86	1	0	4	3	145	60	2.6	3.1	0.200	0.385	0.093	0.042	0.010	0.454	0.110	0.029	0.007
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		241	201	3,150		82	138	5	0	8	8	241	73	122	2	0	2	2	201	60	3.6	2.4	0.200	0.528	0.128	0.057	0.014	0.357	0.086	0.032	0.008
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		922	418	9,550		344	575	0	0	1	1	922	146	245	12	1	7	6	418	60	2.0	3.0	0.060	0.096	0.023	0.039	0.010	0.147	0.036	0.027	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		474	875	9,650		160	268	21	1	12	11	474	326	546	0	0	1	1	875	60	3.6	2.0	0.060	0.177	0.043	0.038	0.009	0.096	0.023	0.038	0.009
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,385	1,341	19,450		463	775	56	2	46	42	1385	473	792	30	1	23	21	1341	60	3.9	2.9	0.030	0.101	0.024	0.063	0.015	0.076	0.019	0.046	0.011
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,369	1,268	18,850		452	756	63	3	50	46	1369	433	725	26	1	43	39	1268	60	4.1	3.6	0.030	0.107	0.026	0.065	0.016	0.094	0.023	0.053	0.013
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,154	1,932	29,200		740	1239	75	3	51	46	2154	692	1159	34	1	24	22	1932	60	3.4	2.7	0.030	0.088	0.021	0.085	0.021	0.069	0.017	0.060	0.014
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,438	3,107	39,600		782	1310	164	7	91	83	2438	1086	1818	93	4	56	51	3107	60	4.4	3.1	0.030	0.116	0.028	0.126	0.030	0.080	0.019	0.111	0.027
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		2,976	2,338	37,950		986	1652	161	7	89	81	2976	791	1325	98	4	62	56	2338	60	3.9	3.6	0.030	0.102	0.025	0.136	0.033	0.094	0.023	0.098	0.024
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		524	545	7,650		179	300	22	1	12	10	524	199	332	9	0	3	2	545	60	3.4	2.3	0.060	0.167	0.040	0.039	0.009	0.113	0.027	0.028	0.007
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		546	397	6,750		192	322	15	1	8	8	546	144	241	7	0	3	2	397	60	2.9	2.4	0.060	0.144	0.035	0.035	0.008	0.118	0.028	0.021	0.005
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		765	634	10,000		263	441	29	1	16	15	765	230	384	10	0	5	5	634	60	3.3	2.5	0.030	0.086	0.021	0.030	0.007	0.064	0.015	0.018	0.004
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		845	459	9,300		295	494	30	1	13	12	845	165	275	9	0	5	5	459	60	3.0	2.6	0.060	0.149	0.036	0.056	0.014	0.129	0.031	0.026	0.006
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,854	1,210	21,900		614	1029	95	4	58	53	1854	408	684	47	2	36	33	1210	80	3.9	3.7	0.030	0.103	0.025	0.085	0.021	0.096	0.023	0.052	0.013
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,102	1,680	19,850		355	594	73	3	41	37	1102	581	972	58	3	35	32	1680	80	4.4	3.2	0.030	0.114	0.028	0.056	0.014	0.085	0.021	0.064	0.015
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		2,155	1,976	29,500		712	1193	115	5	68	62	2155	693	1160	47	2	38	35	1976	80	4.0	3.0	0.030	0.104	0.025	0.100	0.024	0.079	0.019	0.070	0.017
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,847	2,045	27,800		630	1056	73	3	44	40	1847	707	1184	71	3	41	38	2045	80	3.5	3.2	0.030	0.090	0.022	0.075	0.018	0.084	0.020	0.077	0.019
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,431	1,534	21,200		461	772	98	4	50	46	1431	546	915	33	1	20	19	1534	80	4.3	2.8	0.030	0.113	0.027	0.072	0.018	0.072	0.017	0.049	0.012
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,564	1,442	21,450		543	909	58	3	27	24	1564	505	846	48	2	21	20	1442	80	3.1	3.0	0.030	0.082	0.020	0.057	0.014	0.078	0.019	0.050	0.012
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		167	279	3,200		55	92	11	0	5	4	167	98	164	11	0	3	3	279	80	4.0	2.9	0.200	0.583	0.141	0.044	0.011	0.425	0.103	0.053	0.013
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		435	208	4,600		144	240	28	1	12	10	435	71	120	8	0	5	4	208	80	3.9	3.4	0.200	0.574	0.139	0.112	0.027	0.493	0.119	0.046	0.011
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	179	10	1,350		50	84	24	1	10	10	179	4	6	0	0	0	0	10	70	6.2	2.7	0.200	0.922	0.223	0.074	0.018	0.388	0.094	0.002	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	73	136	1,500		24	41	5	0	2	1	73	43	73	8	0	6	6	136	70	3.7	4.6	0.200	0.547	0.132	0.018	0.004	0.680	0.164	0.041	0.010
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	1,120	570	12,050		373	625	65	3	28	25	1120	186	311	29	1	22	20	570	80	3.7	4.3	0.030	0.098	0.024	0.049	0.012	0.112	0.027	0.028	0.007
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	742	846	11,350		236	395	48	2	32	29	742	285	477	33	1	26	24	846	80	4.6	3.7	0.030	0.120	0.029	0.040	0.010	0.097	0.023	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	462	663	8,050		126	211	55	2	36	33	462	202	338	49	2	38	35	663	80	6.8	5.3	0.060	0.337	0.082	0.070	0.017	0.263	0.064	0.078	0.019
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	932	517	10,350		285	477	75	3	48	44	932	158	264	33	1	32	29	517	80	5.2	5.3	0.030	0.136	0.033	0.053	0.014	0.141	0.034	0.033	0.008
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	102	375	3,400		27	45	15	1	8	7	102	128	214	12	1	11	10	375	80	7.1	3.6	0.200	1.057	0.256	0.048	0.012	0.526	0.127	0.088	0.021
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	2	3	421	205	4,450		126	211	37	2	24	22	421	64	108	12	1	10	9	205	80	5.5	4.8	0.200	0.810	0.196	0.153	0.037	0.709	0.172	0.065	0.016
Old School R

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36			AM Peak	PM Peak									
																											PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		426	426	6,100		145	243	14	1	12	11	426	156	261	4	0	3	2	426	80	3.5	2.3	0.060	0.173	0.042	0.033	0.008	0.111	0.027	0.021	0.005
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		194	350	3,900		65	108	11	0	5	5	194	123	205	11	0	6	5	350	80	3.8	3.0	0.200	0.557	0.135	0.048	0.012	0.441	0.107	0.069	0.017
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		493	128	4,450		172	287	16	1	9	8	493	46	77	4	0	1	0	128	80	3.1	2.5	0.200	0.457	0.110	0.101	0.024	0.364	0.088	0.021	0.005
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,197	2,374	39,800		1083	1813	121	5	91	83	3197	840	1407	43	2	43	39	2374	60	3.6	2.9	0.030	0.094	0.023	0.135	0.033	0.076	0.018	0.080	0.019
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		1,980	2,922	35,000		668	1119	98	4	47	43	1980	1061	1776	29	1	29	26	2922	60	3.6	2.4	0.030	0.094	0.023	0.083	0.020	0.064	0.015	0.083	0.020
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		2,956	2,312	37,600		1011	1692	99	4	78	71	2956	823	1379	37	2	37	34	2312	60	3.5	2.8	0.030	0.091	0.022	0.120	0.029	0.073	0.018	0.075	0.018
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,101	2,575	33,400		718	1203	89	4	46	42	2101	935	1565	27	1	25	23	2575	60	3.4	2.4	0.030	0.089	0.021	0.083	0.020	0.063	0.015	0.073	0.018
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,000	2,151	36,800		1030	1726	110	5	68	62	3000	761	1275	38	2	39	36	2151	60	3.3	2.9	0.030	0.087	0.021	0.117	0.028	0.076	0.018	0.073	0.018
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,183	3,066	37,500		724	1212	91	4	80	73	2183	1112	1863	29	1	32	29	3066	60	4.0	2.5	0.030	0.105	0.025	0.102	0.025	0.064	0.015	0.088	0.021
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		782	1,016	12,850		272	455	30	1	13	12	782	362	606	20	1	14	13	1016	80	3.1	2.8	0.030	0.081	0.020	0.028	0.007	0.072	0.017	0.033	0.008
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,358	842	15,700		464	776	55	2	32	29	1358	305	511	9	0	9	8	842	80	3.4	2.5	0.030	0.090	0.022	0.055	0.013	0.064	0.015	0.024	0.006
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		417	568	7,050		146	244	12	1	7	7	417	204	342	4	0	9	9	568	80	3.0	2.7	0.060	0.149	0.036	0.028	0.007	0.132	0.032	0.034	0.008
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		732	580	9,350		248	414	11	0	31	28	732	210	351	5	0	7	7	580	80	3.8	2.6	0.060	0.189	0.046	0.062	0.015	0.125	0.030	0.032	0.008
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		209	479	4,900		67	112	18	1	6	5	209	172	288	9	0	5	5	479	80	4.3	2.6	0.200	0.630	0.152	0.059	0.014	0.381	0.092	0.082	0.020
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		604	297	6,450		219	367	8	0	5	5	604	102	170	11	1	7	6	297	80	2.4	3.4	0.060	0.119	0.029	0.032	0.008	0.167	0.040	0.022	0.005
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,263	716	14,150		425	712	65	3	30	28	1263	246	412	24	1	17	16	716	60	3.6	3.4	0.030	0.095	0.023	0.054	0.013	0.088	0.021	0.028	0.007
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		707	1,144	13,200		242	404	35	2	13	11	707	412	690	20	1	11	10	1144	60	3.3	2.5	0.030	0.087	0.021	0.028	0.007	0.066	0.016	0.034	0.008
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		25	231	1,850		8	13	1	0	2	2	25	82	138	3	0	4	4	231	80	5.2	2.8	0.200	0.770	0.186	0.008	0.002	0.412	0.100	0.043	0.010
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		180	38	1,550		60	101	7	0	6	5	180	13	22	0	0	1	1	38	80	3.8	3.3	0.200	0.559	0.135	0.045	0.011	0.488	0.118	0.008	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		786	1,140	13,750		178	298	146	6	82	75	786	355	595	78	3	57	52	1140	80	8.9	4.9	0.030	0.236	0.057	0.083	0.020	0.129	0.031	0.066	0.016
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		1,269	915	15,600		398	666	91	4	58	53	1269	266	445	85	4	61	55	915	80	4.8	6.0	0.030	0.126	0.031	0.072	0.017	0.157	0.038	0.064	0.016
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		601	431	7,350		215	360	10	0	8	8	601	159	267	1	0	2	2	431	70	2.7	2.1	0.060	0.132	0.032	0.035	0.009	0.103	0.025	0.020	0.005
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		532	575	7,900		194	325	3	0	5	4	532	212	355	2	0	3	3	575	70	2.4	2.2	0.060	0.115	0.028	0.027	0.007	0.106	0.026	0.027	0.007
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		578	498	7,700		200	335	18	1	13	11	578	182	305	2	0	5	4	498	70	3.2	2.4	0.060	0.159	0.038	0.041	0.010	0.115	0.028	0.026	0.006
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		193	520	5,100		69	116	3	0	2	2	193	193	324	1	0	1	1	520	70	2.6	2.0	0.060	0.125	0.030	0.011	0.003	0.099	0.024	0.023	0.006
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		93	334	3,050		33	55	2	0	2	1	93	122	203	4	0	3	2	334	70	2.9	2.4	0.200	0.423	0.102	0.018	0.004	0.348	0.084	0.052	0.013
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		504	153	4,700		177	296	13	1	9	8	504	55	93	3	0	1	1	153	70	3.0	2.5	0.200	0.440	0.107	0.099	0.024	0.358	0.087	0.024	0.006
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		225	651	6,250		77	130	10	0	4	4	225	238	399	6	0	4	4	651	70	3.3	2.3	0.060	0.161	0.039	0.016	0.004	0.112	0.027	0.033	0.008
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		910	335	8,900		327	548	15	1	10	9	910	121	203	5	0	3	3	335	70	2.6	2.5	0.060	0.127	0.031	0.051	0.012	0.122	0.029	0.018	0.004
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		480	1,311	12,800		168	281	15	1	8	8	480	473	792	16	1	16	14	1311	60	3.1	2.6	0.030	0.080	0.019	0.017	0.004	0.066	0.016	0.039	0.009
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		1,428	836	16,150		497	833	41	2	29	26	1428	301	504	11	0	10	10	836	60	3.1	2.6	0.030	0.082	0.020	0.052	0.013	0.067	0.016	0.025	0.006
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		719	1,052	12,650		247	413	27	1	17	15	719	373	625	17	1	19	17	1052	60	3.4	2.9	0.030	0.088	0.021	0.028	0.007	0.074	0.018	0.035	0.008
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,281	599	13,450		446	746	38	2	26	24	1281	213	356	11	0	10	9	599	60	3.2	2.8	0.030	0.083	0.020	0.047	0.011	0.074	0.018	0.020	0.005
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		700	1,491	15,650		228	383	43	2	23	21	700	520	871	34	2	33	30	1491	60	4.1	3.1	0.030	0.108	0.026	0.034	0.008	0.082	0.020	0.025	0.013
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,415	613	14,500		477	799	57	3	41	38	1415	214	358	14	1	14	13	613	60	3.7	3.2	0.030	0.096	0.023	0.061	0.015	0.083	0.020	0.023	0.005
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	671	590	9,000		239	399	17	1	8	8	671	215	360	7	0	5	4	590	70	2.8	2.4	0.060	0.135	0.033	0.041	0.010	0.117	0.028	0.031	0.007
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	547	668	8,700		199	333	6	0	4	4	547	241	404	10	0	6	6	668	70	2.4	2.5	0.060	0.116	0.028	0.028	0.007	0.123	0.030	0.037	0.009
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	572	452	7,300		212	356	1	0	2	2	572	166	279	2	0	3	3	452	70	2.1	2.2	0.060	0.100	0.024	0.025	0.006	0.108	0.026	0.022	0.005
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	372	617	7,050		134	225	4	0	5	5	372	226	378	5	0	4	4	617	70	2.6	2.3	0.060	0.127	0.031	0.021	0.005	0.112	0.027	0.031	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	530	404	6,650		198	331	1	0	0	0	530	150	251	1	0	1	1	404	70	2.0	2.1	0.060	0.095	0.023	0.022	0.005	0.101	0.024	0.018	0.004
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	471	550	7,300		172	289	4	0	3	3	471	203	340	2	0	3	2	550	70	2.3	2.2	0.060	0.112	0.027	0.023	0.006	0.105	0.025	0.026	0.006
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	123	507	4,500		43	71	4	0	3	2	123	175	292	19	1	10	10	507	80	3.2	3.3	0.200	0.472	0.114	0.026	0.006	0.483	0.117	0.109	0.026
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	625	185	5,800		216	362	25	1	11	10	625	64	108	6	0	4	3	185	80	3.2	3.2	0.060	0.157	0.038	0.044	0.011	0.155	0.037	0.013	0.003
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	107	607	5,100		36	61	5	0	3	2	107	214	358	16	1	9	9	607	80	3.5	2.9	0.060	0.174	0.042	0.008	0.002	0.143	0.035	0.039	0.009
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	936	127	7,600		337	565	17	1	8	8	936	44	74	4	0	3	2	127	80	2.5	3.2	0.060	0.124	0.030	0.052	0.013	0.156	0.038	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	121	677	5,700		43	71	1	0	3	3	121	236	396	22	1	12	11	677	80	3.0	3.1	0.060	0.148	0.036	0.008	0.002	0.151	0.037	0.046	0.011
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	847	184	7,350		265	444	53	2	43	39	847	67	113	1	0	1	1	184	80	4.9	2.3	0.060	0.241	0.058	0.091	0.022	0.113	0.027	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	36	569	4,350		13	22	0	0	1	1	36	198	331	19	1	11	10	569	80	2.9	3.2	0.200	0.429	0.104	0.007	0.002	0.463	0.112	0.118	0.029
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	622	94	5,100		183	306	52	2	42	38	622	35	58	0	0	1	1	94	80	5.8	2.2	0.060	0.290	0.070	0.080	0.019	0.105	0.025	0.004	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	429	821	8,900		131	220	32	1	23	21	429	287	481	21	1	16	15	821	80	5.2	3.1	0.060	0.255	0.062	0.049	0.012	0.151	0.037	0.055	0.013
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,075	528	11,450		353	591	54	2	39	35	1075	173	289	22	1	22	20	528	80	4.1	4.2	0.030	0.108	0.026	0.052	0.013	0.111	0.027	0.026	0.006
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	241	916	8,250		72	121	22	1	13	12	241	325	544	18	1	15	13	916	80	5.5	2.8	0.060	0.271	0.065	0.029	0.007	0.139	0.034	0.057	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	857	597	10,400		280	470	41	2	33	31	857	213	357	9	0	9	8	597	80	4.2	2.7	0.030	0.110	0.027	0.042	0.010	0.071	0.017	0.019	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		595	430	7,300		212	354	11	0	9	8	595	155	260	4	0	5	5	430	70	2.8	2.5	0.060	0.137	0.033	0.037	0.009	0.124	0.030	0.024	0.006
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		494	484	7,000		172	288	13	1	11	10	494	173	290	7	0	7	7	484	70	3.2	2.7	0.060	0.155	0.038	0.034	0.008	0.133	0.032	0.029	0.007
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		1,449	1,540	21,350		442	740	126	6	70	64	1449	500	837	76	3	65	60	1540	80	5.1	4.3	0.030	0.135	0.033	0.088	0.021	0.114	0.028	0.079	0.019
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		1,544	1,141	19,200		507	849	99	4	44	40	1544	386	647	43	2	33	30	1141	80	4.0	3.6	0.030	0.105	0.025	0.072	0.017	0.095	0.023	0.048	0.012
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		727	946	11,950		266	445	9	0	3	3	727	342	572	12	1	10	9	946	80	2.3	2.5	0.030	0.059	0.014	0.019	0.005	0.065	0.016	0.028	0.007
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		704	885	11,350		248	416	18	1	11	10	704	327	548	4	0	3	3	885	80	2.9	2.1	0.030	0.076	0.018	0.024	0.006	0.055	0.013	0.022	0.005
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,227	1,569	27,100		728	1220	123	5	78	72	2227	518	868	68	3	58	53	1569	70	4.1	4.0	0.030	0.109	0.026	0.108	0.026	0.106	0.026	0.074	0.018
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,420	1,955	24,100		462	774	88	4	48	44	1420	694	1162	32	1	34	31	1955	70	4.2	2.9	0.030	0.110	0.027	0.070	0.017	0.074	0.018	0.065	0.016
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,030	1,133	22,600		790	1222	30	1	25	23	2030	418	700	6	0	5	5	1133	70	2.6	2.2	0.030	0.068	0.016	0.062	0.015	0.056	0.014	0.028	0.007
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		1,027	1,973	21,450		359	601	24	1	22	20	1027	724	1213	6	0	15	14	1973	70	3.1	2.3	0.030	0.082	0.020	0.037	0.009	0.059	0.014	0.052	0.013
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		670	691	9,700		244	408	11	0	4	3	670	252	421	11	0	4	3	691	80	2.4	2.3	0.060	0.115	0.028	0.034	0.008	0.114	0.028	0.035	0.009
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		752	764	10,850		264	443	21	1	12	11	752	280	468	8	0	4	4	764	80	3.0	2.3	0.030	0.077	0.019	0.026	0.006	0.059	0.014	0.020	0.005
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		726	1,001	12,350		270	453	2	0	1	0	726	368	615	11	1	3	3	1001	70	2.0	2.2	0.030	0.051	0.012	0.017	0.004	0.057	0.014	0.025	0.006
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,153	831	14,150		418	700	22	1	6	6	1153	309	517	2	0	2	1	831	70	2.4	2.0	0.030	0.062	0.015	0.032	0.008	0.052	0.013	0.019	0.005
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		1,502	1,255	19,700		560	937	2	0	2	1	1502	460	770	14	1	5	5	1255	70	2.0	2.2	0.030	0.051	0.012	0.034	0.008	0.058	0.014	0.033	0.008
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		1,399	1,452	20,350		508	850	26	1	7	7	1399	541	906	1	0	2	2	1452	70	2.4	2.0	0.030	0.062	0.015	0.039	0.009	0.051	0.012	0.033	0.008
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		298	137	3,100		103	173	7	0	8	7	298	51	86	0	0	0	0	137	60	3.3	2.0	0.200	0.488	0.118	0.065	0.016	0.283	0.069	0.017	0.004
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		140	313	3,250		52	87	0	0	0	0	140	117	196	0	0	0	0	313	60	2.0	1.9	0.200	0.296	0.072	0.019	0.004	0.283	0.068	0.040	0.010
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		1,809	2,183	28,500		637	1067	31	1	38	34	1809	789	1321	23	1	26	23	2183	70	3.0	2.5	0.030	0.078	0.019	0.063	0.015	0.066	0.016	0.064	0.016
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		2,565	1,775	31,000		888	1486	53	2	71	65	2565	652	1091	13	1	10	9	1775	70	3.3	2.2	0.030	0.087	0.021	0.100	0.024	0.058	0.014	0.046	0.011
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,212	2,396	32,900		782	1310	33	1	45	41	2212	867	1452	24	1	27	24	2396	70	2.9	2.5	0.030	0.077	0.019	0.076	0.018	0.065	0.016	0.070	0.017
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		2,840	2,190	35,950		982	1644	61	3	79	72	2840	804	1347	14	1	13	12	2190	70	3.4	2.2	0.030	0.088	0.021	0.111	0.027	0.058	0.014	0.057	0.014
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,059	2,397	31,850		739	1238	47	2	17	16	2059	877	1468	24	1	14	13	2397	70	2.6	2.3	0.030	0.067	0.016	0.062	0.015	0.059	0.014	0.064	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		587	2,066	18,950		184	307	43	2	27	24	587	751	1258	23	1	17	16	2066	70	4.8	2.4	0.030	0.127	0.031	0.033	0.008	0.062	0.015	0.058	0.014
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		21	61	600		8	13	0	0	0	0	21	22	38	1	0	0	0	61	60	1.9	2.1	0.200	0.276	0.067	0.003	0.001	0.309	0.075	0.008	0.002
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		343	25	2,650		125	210	4	0	2	2	343	9	16	0	0	0	0	25	60	2.3	1.9	0.200	0.337	0.082	0.052	0.013	0.276	0.067	0.003	0.001
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		542	532	7,700		186	311	15	1	15	14	542	197	329	1	0	3	2	532	70	3.5	2.2	0.060	0.170	0.041	0.041	0.010	0.105	0.025	0.025	0.006
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		512	506	7,250		186	311	2	0	7	6	512	188	315	2	0	1	1	506	70	2.5	2

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		280	754	7,400		103	172	1	0	2	2	280	276	462	1	0	7	7	754	60	2.2	2.3	0.060	0.109	0.026	0.014	0.003	0.113	0.027	0.038	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		996	478	10,550		350	586	21	1	19	18	996	176	294	3	0	2	2	478	60	3.0	2.2	0.030	0.078	0.019	0.035	0.008	0.057	0.014	0.012	0.003
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		144	373	3,700		49	83	7	0	3	2	144	132	220	11	0	5	5	373	80	3.3	2.9	0.200	0.486	0.118	0.031	0.008	0.422	0.102	0.070	0.017
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		470	103	4,100		166	279	12	1	6	6	470	37	61	3	0	1	1	103	80	2.8	2.7	0.200	0.414	0.100	0.087	0.021	0.397	0.096	0.018	0.004
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,203	1,724	28,050		760	1273	69	3	51	46	2203	601	1007	41	2	38	35	1724	60	3.3	3.2	0.030	0.086	0.021	0.085	0.021	0.082	0.020	0.063	0.015
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,583	2,189	26,950		530	887	70	3	48	44	1583	793	1327	20	1	25	23	2189	60	3.8	2.5	0.030	0.099	0.024	0.070	0.017	0.065	0.016	0.064	0.015
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		155	424	4,150		52	87	6	0	5	5	155	153	257	4	0	5	5	424	80	3.8	2.5	0.200	0.562	0.136	0.039	0.009	0.369	0.089	0.070	0.017
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		622	180	5,750		225	376	6	0	8	7	622	64	107	2	0	4	4	180	80	2.6	3.0	0.060	0.125	0.030	0.035	0.008	0.146	0.035	0.012	0.003
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		625	344	6,900		232	388	1	0	2	2	625	128	215	1	0	0	0	344	70	2.1	2.0	0.060	0.100	0.024	0.028	0.007	0.096	0.023	0.015	0.004
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		245	539	5,600		92	153	0	0	0	0	245	201	337	0	0	0	0	539	70	1.9	1.9	0.060	0.093	0.022	0.010	0.002	0.093	0.023	0.022	0.005
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		542	532	7,700		186	311	15	1	15	14	542	197	329	1	0	3	2	532	70	3.5	2.2	0.060	0.170	0.041	0.041	0.010	0.105	0.025	0.025	0.006
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		512	506	7,250		186	311	2	0	7	6	512	188	315	2	0	1	1	506	70	2.5	2.0	0.060	0.123	0.030	0.028	0.007	0.099	0.024	0.022	0.005
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	25	7	250		9	15	0	0	1	1	25	2	4	0	0	0	0	7	60	3.1	3.0	0.600	1.254	0.303	0.014	0.003	1.201	0.291	0.004	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	4	70	550		1	2	0	0	0	0	4	25	42	1	0	1	1	70	60	4.5	2.9	0.200	0.668	0.162	0.001	0.000	0.418	0.101	0.013	0.003
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		1,195	800	14,250		382	640	89	4	42	38	1195	241	404	61	3	48	44	800	70	4.4	5.4	0.030	0.115	0.028	0.062	0.015	0.143	0.035	0.051	0.012
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		809	237	7,450		301	504	2	0	1	1	809	87	146	1	0	1	1	237	40	2.0	2.2	0.060	0.096	0.023	0.035	0.008	0.106	0.026	0.011	0.003
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		1,246	1,024	16,200		455	762	13	1	8	7	1246	377	631	7	0	4	4	1024	60	2.3	2.2	0.030	0.060	0.015	0.033	0.008	0.056	0.014	0.026	0.006
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		1,492	2,255	26,750		548	917	14	1	6	6	1492	831	1391	16	1	8	7	2255	70	2.2	2.2	0.030	0.057	0.014	0.038	0.009	0.056	0.013	0.056	0.014
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		805	753	11,150		214	359	123	5	54	50	805	222	373	68	3	45	41	753	60	6.8	5.7	0.030	0.181	0.044	0.065	0.016	0.149	0.036	0.050	0.012
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		169	349	3,700		55	91	12	1	6	5	169	129	216	2	0	1	1	349	40	4.3	2.1	0.200	0.632	0.153	0.048	0.012	0.305	0.074	0.048	0.012
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		303	27	2,350		93	156	24	1	15	14	303	9	16	1	0	0	0	27	70	5.1	3.0	0.200	0.751	0.182	0.102	0.025	0.443	0.107	0.005	0.001
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		235	506	5,300		62	104	1	0	36	33	235	183	307	2	0	7	7	506	40	8.3	2.6	0.060	0.413	0.100	0.043	0.010	0.126	0.030	0.029	0.007
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		577	461	7,400		194	325	5	0	28	25	577	166	278	3	0	8	7	461	60	4.0	2.7	0.060	0.197	0.048	0.051	0.012	0.131	0.032	0.027	0.007
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		784	382	8,300		270	453	22	1	20	18	784	132	221	5	0	12	11	382	70	3.3	3.4	0.060	0.164	0.040	0.057	0.014	0.168	0.041	0.029	0.007
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		106	76	1,300		33	54	11	0	4	4	106	26	44	2	0	2	2	76	60	5.0	3.3	0.200	0.740	0.179	0.035	0.009	0.485	0.117	0.017	0.004
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		206	16	1,600		61	102	20	1	12	11	206	6	10	0	0	0	0	16	40	5.6	2.8	0.200	0.837	0.203	0.077	0.019	0.411	0.099	0.003	0.001
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	H14	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	H15	0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Descr pt on	Mode Source D	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e	PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	3,612	3,746	52,600		1060	1775	371	16	203	186	3612	1158	1940	256	11	199	181	3746	110	5.7	5.1	0.015	0.080	0.019	0.129	0.031	0.071	0.017	0.119	0.029
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	4,043	3,413	53,300		1247	2089	347	15	180	164	4043	997	1669	313	14	219	200	3413	110	5.0	5.8	0.015	0.069	0.017	0.125	0.030	0.082	0.020	0.125	0.030
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	4,690	4,030	62,300		1393	2332	460	20	254	231	4690	1227	2055	292	13	232	212	4030	110	5.5	5.3	0.015	0.078	0.019	0.163	0.039	0.074	0.018	0.134	0.032
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	4,274	4,119	59,900		1284	2150	399	18	222	202	4274	1209	2024	369	16	263	239	4119	110	5.4	5.8	0.015	0.075	0.018	0.144	0.035	0.081	0.020	0.150	0.036
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		5,657	4,248	70,700		1678	2810	524	23	325	296	5657	1255	2101	338	15	282	257	4248	110	5.6	5.8	0.015	0.078	0.019	0.198	0.048	0.081	0.020	0.154	0.037
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		4,477	5,284	69,700		1302	2180	467	21	265	241	4477	1596	2673	405	18	309	282	5284	110	5.8	5.4	0.015	0.082	0.020	0.164	0.040	0.076	0.018	0.179	0.043
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		5,139	4,639	69,800		1503	2516	538	24	292	266	5139	1395	2336	347	15	285	260	4639	110	5.7	5.5	0.015	0.080	0.019	0.185	0.045	0.077	0.019	0.160	0.039
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		4,978	4,797	69,800		1492	2499	461	20	264	241	4978	1402	2348	431	19	313	285	4797	110	5.4	5.9	0.015	0.076	0.018	0.169	0.041	0.082	0.020	0.177	0.043
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		5,013	4,402	67,200		1444	2418	543	24	305	279	5013	1275	2135	376	17	314	286	4402	110	5.9	6.0	0.015	0.084	0.020	0.187	0.045	0.085	0.021	0.167	0.041
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		4,523	4,593	65,100		1267	2121	527	23	306	279	4523	1302	2181	450	20	335	305	4593	110	6.3	6.3	0.015	0.089	0.022	0.180	0.044	0.089	0.021	0.182	0.044
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	4,948	4,014	64,000		1420	2378	539	24	307	280	4948	1147	1920	356	16	301	274	4014	110	6.0	6.2	0.015	0.084	0.020	0.187	0.045	0.088	0.021	0.158	0.038
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	4,306	4,628	63,800		1193	1998	520	23	299	273	4306	1320	2210	444	20	332	303	4628	110	6.5	6.2	0.015	0.091	0.022	0.175	0.042	0.087	0.021	0.181	0.044
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	4,519	3,641	58,300		1278	2140	513	23	296	269	4519	1026	1718	337	15	285	260	3641	110	6.2	6.4	0.015	0.087	0.021	0.176	0.043	0.091	0.022	0.148	0.036
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	3,907	4,282	58,500		1065	1783	496	22	283	258	3907	1197	2004	435	19	327	299	4282	110	6.7	6.5	0.015	0.094	0.023	0.165	0.040	0.091	0.022	0.175	0.042
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		5,462	5,042	75,000		1546	2588	621	27	355	324	5462	1489	2493	400	18	336	307	5042	110	6.2	5.8	0.015	0.087	0.021	0.213	0.051	0.081	0.020	0.183	0.044
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		4,967	5,343	73,600		1414	2369	568	25	309	282	4967	1561	2614	474	21	353	322	5343	110	6.1	5.9	0.015	0.086	0.021	0.190	0.046	0.083	0.020	0.197	0.048
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	4,652	5,381	71,700		1259	2108	610	27	339	309	4652	1621	2715	385	17	336	307	5381	110	6.8	5.5	0.015	0.095	0.023	0.198	0.048	0.077	0.019	0.185	0.045
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	5,714	4,543	73,300		1749	2929	517	23	260	237	5714	1302	2180	420	19	325	296	4543	110	5.1	6.2	0.015	0.071	0.017	0.181	0.044	0.087	0.021	0.176	0.043
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		4,274	4,405	62,000		1144	1916	578	26	319	291	4274	1306	2187	329	15	298	271	4405	110	6.9	5.7	0.015	0.097	0.024	0.186	0.045	0.081	0.020	0.159	0.038
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		4,619	4,263	63,400		1391	2329	447	20	227	207	4619	1221	2045	400	18	303	276	4263	110	5.3	6.2	0.015	0.074	0.018	0.153	0.037	0.087	0.021	0.165	0.040
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		4,274	4,405	62,000		1144	1916	578	26	319	291	4274	1306	2187	329	15	298	271	4405	110	6.9	5.7	0.015	0.097	0.024	0.186	0.045	0.081	0.020	0.159	0.038
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		4,619	4,263	63,400		1391	2329	447	20	227	207	4619	1221	2045	400	18	303	276	4263	110	5.3	6.2	0.015	0.074	0.018	0.153	0.037	0.087	0.021	0.165	0.040
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,318	3,701	43,000		754	1263	146	6	77	71	2318	1308	2190	62	3	72	65	3701	100	4.2	2.9	0.015	0.058	0.014	0.060	0.015	0.041	0.010	0.067	0.016
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,652	3,056	55,100		1540	2580	115	5	216	197	4652	1058	1772	76	3	77	70	3056	100	4.2	3.3	0.015	0.058	0.014	0.121	0.029	0.046	0.011	0.063	0.015
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		918	1,724	18,900		284	475	83	4	38	35	918	615	1030	24	1	29	26	1724	100	4.9	2.8	0.015	0.069	0.017	0.028	0.007	0.039	0.009	0.030	0.007
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		1,937	847	19,900		650	1088	63	3	70	64	1937	280	469	41	2	29	26	847	100	3.8	4.0	0.015	0.054	0.013	0.046	0.011	0.056	0.013	0.021	0.005
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,206	1,268	24,800		728	1219	70	3	97	89	2206	438	734	30	1	34	31	1268	100	4.2	3.3	0.015	0.058	0.014	0.057	0.014	0.046	0.011	0.026	0.006
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		928	1,687	18,700		294	492	72	3	35	32	928	593	994	36	2	33	30	1687	100	4.6	3.0	0.015	0.064	0.015	0.027	0.006	0.042	0.010	0.031	0.008
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,405	4,672	50,500		796	1332	139	6	69	63	2405	1642	2750	110	5	87	79	4672	100	3.9	3.0	0.015	0.054	0.013	0.058	0.014	0.042	0.010	0.087	0.021
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,303	2,840	51,000		1512	2531	145	6	57	52	4303	994	1665	72	3	55	50	2840	100	2.9	3.1	0.015	0.041	0.010	0.078	0.019	0.042	0.010	0.054	0.013
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		1,887	3,520	38,600		517	865	259	11	122	111	1887	1163	1947	164	7	125	114	3520	100	6.5	4.0	0.015	0.092	0.022	0.077	0.019	0.056	0.014	0.088	0.021
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		3,443	2,380	41,600		1138	1905	219	10	90	82	3443	772	1292	125	5	97	89	2380	100	3.9	4.3	0.015	0.054	0.013	0.083	0.020	0.060	0.015	0.064	0.016
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		4,884	9,501	102,700		1443	2416	434	19	299	272	4884	3352	5614	225	10	157	143	9501	100	5.7	2.9	0.015	0.080	0.019	0.174	0.042	0.040	0.010	0.172	0.042
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		9,023	4,772	98,500		3068	5137	333	15	246	224	9023	1594	2669	165	7	177	161	4772	100	3.5	3.9	0.015	0.049	0.012	0.199	0.048	0.055	0.013	0.117	0.028
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		2,994	7,012	71,500		922	1544	196	9	169	154	2994	2574	4311	42	2	44	40	7012	100	5.2	2.2	0.015	0.072	0.017	0.097	0.023	0.031	0.007	0.097	0.023
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		6,950	2,853	70,000		2427	4064	157	7	155	141	6950	991	1660	38	2	84	77	2853	100	3.1	3.3	0.015	0.044	0.011	0.135	0.033	0.046	0.011	0.059	0.014
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		3,031	7,224	73,200		936	1567	196	9	169	154	3031	2653	4443	42	2	44	40	7224	100	5.1	2.2	0.015	0.072	0.017	0.097	0.024	0.031	0.007	0.100	0.024
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		10,305	4,939	108,900		3524	5901	374	16	256	233	10305	1567	2623	259	11	250	228	4939	100	3.4	4.7	0.015	0.048	0.012	0.220	0.053	0.066	0.016	0.146	0.035
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	87	152	1,700		31	51	1	0	2	2	87	55	91	2	0	2	2	152	70	3.1	2.6	0.200	0.448	0.108	0.017	0.004	0.376	0.091	0.026	0.006
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	396	196	4,250		106	178	44	2	34	31	396	50	83	21	1	22	20	196	40	7.0	8.0	0.200	1.045	0.253	0.185	0.045	1.188	0.287	0.104	0.025
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	770	240	7,200		257	430	45	2	19	17	770	73	123	17	1	14	13	240	60	3.7	5.3	0.060	0.183	0.044	0.063	0.015	0.261	0.063	0.028	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	567	869	10,250		157	263	60	3	44	40	567	269	451	61	3	44	41	869	70	6.6	5.0	0.030	0.175	0.042	0.044	0.011	0.132	0.032	0.051	0.012
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	137	94	1,650		51	85	2	0	0	0	137	34	58	1	0	0	0	94	60	2.1	2.1	0.200	0.311	0.075	0.019	0.005	0.310	0.075	0.013	0.003
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	199	68	1,900		70	117	7	0	3	2	199	23	39	4	0	1	1	68	40	2.9	3.5	0.200	0.424	0.103	0.038	0.009	0.508	0.123	0.015	0.004
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	337	377	5,100		110	185	16	1	13	12	337	133	223	12	1	5	4	377	70	4.1	2.9	0.060	0.204	0.049	0.031	0.007	0.140	0.034	0.024	0.006
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		974	415	9,900		305	510	45	2	59	53	974	110	184	43	2	40	36	415	40	5.0	7.3	0.060	0.249	0.060	0.108	0.026	0.364	0.088	0.068	0.016
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		329	180	3,650		91	153	36	2	25	23	329	51	85	16	1	14	13	180	60	6.6	6.4	0.200	0.975	0.236	0.144	0.035	0.953	0.231	0.077	0.019
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		512	1,406	13,700		124	207	77	3	53	48	512	466	780	54	2	54	49	1406	70	8.3	4.0	0.030	0.220	0.053	0.050	0.012	0.106	0.026	0.066	0.016
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	310	241	3,950		106	177	8	0	10	9	310	78	131	17	1	7	7	241	60	3.6	4.1	0.200	0.522	0.126	0.072	0.017	0.610	0.148	0.066	0.016
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		310	241	3,950		106	177	8	0	10	9	310	78	131	17	1	7	7	241	40	3.6	4.1	0.200	0.522	0.126	0.072	0.017	0.610	0.148	0.066	0.016
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		1,034	217	8,950		335	561	37	2	53	48	1034	78	131	2	0	3	3	217	90	4.5	2.6	0.060	0.222	0.054	0.103	0.025	0.127	0.031	0.012	0.003
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		903	630	10,950		315	528	26	1	17	16	903	202	338	39	2	26	24	630	90	3.1	4.5	0.030	0.081	0.020	0.033	0.008	0.118

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Descr pt on	Mode Source ID	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62						PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e	PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36													
Highway 413	Hwy 413 at The Gore Rd_N/S-E	C58	N/S-E	3	4	145	90	1,700		53	89	2	0	1	1	145	32	54	1	0	1	1	90	40	2.3	2.8	0.200	0.329	0.080	0.021	0.005	0.403	0.097	0.016	0.004
Highway 413	Hwy 413 at The Gore Rd_E-N/S	C59	E-N/S	3	4	127	301	3,050		46	77	3	0	1	1	127	106	177	8	0	5	5	301	70	2.5	3.0	0.200	0.370	0.089	0.021	0.005	0.439	0.106	0.059	0.014
Highway 413	Hwy 413 at The Gore Rd_N/S-W	C60	N/S-W	3	4	527	648	8,400		174	292	27	1	17	15	527	229	383	16	1	10	9	648	60	3.9	2.9	0.060	0.194	0.047	0.046	0.011	0.142	0.034	0.041	0.010
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	C61	W-N/S	4		641	318	6,850		231	388	13	1	4	4	641	108	181	11	1	9	8	318	70	2.5	3.5	0.060	0.120	0.029	0.034	0.008	0.173	0.042	0.025	0.006
Highway 413	Hwy 413 at Humber Station Rd_N-E	C62	N-E	4		545	857	10,000		194	325	15	1	6	5	545	316	529	5	0	3	3	857	40	2.7	2.1	0.030	0.071	0.017	0.017	0.004	0.055	0.013	0.021	0.005
Highway 413	Hwy 413 at Humber Station Rd_S-E	C63	S-E	4		1,039	862	13,550		305	511	107	5	58	53	1039	255	426	68	3	57	52	862	60	5.7	5.8	0.030	0.150	0.036	0.070	0.017	0.152	0.037	0.059	0.014
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	C64	E-N/S	4		1,286	1,425	19,350		419	702	90	4	37	34	1286	494	828	44	2	30	27	1425	70	4.1	3.2	0.030	0.107	0.026	0.061	0.015	0.084	0.020	0.053	0.013
Highway 413	Hwy 413 at Humber Station Rd_N-W	C65	N-W	4		26	17	300		10	16	0	0	0	0	26	6	11	0	0	0	0	17	60	1.9	2.1	0.600	0.751	0.182	0.009	0.002	0.838	0.203	0.006	0.002
Highway 413	Hwy 413 at Humber Station Rd_S-W	C66	S-W	4		199	346	3,900		60	100	18	1	11	10	199	124	208	6	0	4	4	346	40	5.4	2.6	0.200	0.801	0.194	0.071	0.017	0.385	0.093	0.060	0.014
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	4		1,390	1,280	19,050		448	750	96	4	48	44	1390	413	691	67	3	55	51	1280	90	4.3	4.4	0.030	0.113	0.027	0.070	0.017	0.116	0.028	0.067	0.016
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		2,053	1,100	22,500		690	1155	122	5	42	38	2053	359	601	57	3	42	38	1100	90	3.6	4.2	0.030	0.094	0.023	0.086	0.021	0.110	0.027	0.054	0.013
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		581	1,620	15,700		161	270	86	4	31	28	581	545	913	53	2	55	51	1620	80	6.2	3.8	0.030	0.164	0.040	0.043	0.010	0.099	0.024	0.072	0.017
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		1,306	1,900	22,900		355	595	174	8	91	83	1306	617	1034	111	5	70	64	1900	90	6.7	4.2	0.030	0.176	0.043	0.103	0.025	0.111	0.027	0.095	0.023
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	758	1,057	12,950		245	411	51	2	25	23	758	344	577	58	3	40	36	1057	70	4.2	4.2	0.030	0.111	0.027	0.038	0.009	0.111	0.027	0.052	0.013
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		380	81	3,300		131	219	19	1	6	5	380	29	49	2	0	1	1	81	40	3.3	2.7	0.200	0.477	0.115	0.081	0.020	0.398	0.096	0.015	0.004
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		220	457	4,850		69	115	22	1	7	6	220	160	268	15	1	7	7	457	50	4.6	3.0	0.200	0.682	0.165	0.067	0.016	0.442	0.107	0.090	0.022
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	2,284	1,223	25,050		736	1233	166	7	74	67	2284	399	668	60	3	50	45	1223	60	4.3	4.3	0.030	0.112	0.027	0.114	0.028	0.112	0.027	0.061	0.015
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		1,090	1,050	15,300		344	576	81	4	45	41	1090	316	530	72	3	68	62	1050	70	4.6	5.5	0.030	0.122	0.030	0.060	0.014	0.146	0.035	0.068	0.017
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		1,306	976	16,300		404	676	112	5	57	52	1306	292	488	71	3	64	58	976	60	4.9	5.6	0.030	0.130	0.031	0.076	0.018	0.148	0.036	0.065	0.016
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		2,008	2,580	32,750		463	775	366	16	203	185	2008	783	1311	172	8	160	146	2580	100	8.7	5.4	0.015	0.123	0.030	0.110	0.027	0.076	0.018	0.087	0.021
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		1,176	775	13,950		337	565	131	6	71	65	1176	207	346	85	4	70	64	775	90	6.0	7.2	0.030	0.158	0.038	0.083	0.020	0.190	0.046	0.066	0.016
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		819	1,517	16,700		207	346	122	5	72	66	819	462	774	119	5	82	75	1517	90	7.7	5.2	0.030	0.203	0.049	0.074	0.018	0.138	0.033	0.094	0.023
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		2,494	1,770	30,450		780	1307	212	9	97	88	2494	468	783	210	9	157	143	1770	90	4.7	7.2	0.030	0.124	0.030	0.138	0.033	0.192	0.046	0.152	0.037
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Descr pt on	Mode Source ID	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e	PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Old School Rd	Old School Rd At Hwy 413_WB	D74	WB	2	3	348	358	5,050		122	205	8	0	6	6	348	130	217	4	0	4	4	358	70	3.0	2.5	0.060	0.146	0.035	0.023	0.006	0.122	0.029	0.019	0.005
McLaughlin Rd	McLaughlin Rd S of Old School Rd_NB	D75	NB	2	3	299	238	3,850		104	174	10	0	6	5	299	84	140	9	0	3	2	238	80	3.1	2.9	0.200	0.462	0.112	0.062	0.015	0.420	0.102	0.045	0.011
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	D76	SB	2	3	285	244	3,800		95	159	15	1	8	7	285	86	143	7	0	4	4	244	80	3.8	3.0	0.200	0.559	0.135	0.071	0.017	0.439	0.106	0.048	0.012
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	D77	NB	2	3	267	411	4,850		79	133	28	1	14	12	267	139	233	19	1	10	9	411	80	5.5	3.6	0.200	0.812	0.196	0.097	0.023	0.523	0.127	0.096	0.023
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	D78	SB	2	3	512	224	5,250		162	271	37	2	21	19	512	73	123	11	1	8	8	224	80	4.6	4.2	0.060	0.228	0.055	0.052	0.013	0.205	0.050	0.021	0.005
Old School Rd	Old School Rd W of Hurontario St_EB	D79	EB	2	3	516	389	6,450		156	261	43	2	28	26	516	122	204	22	1	20	19	389	70	5.3	4.9	0.060	0.264	0.064	0.061	0.015	0.241	0.058	0.042	0.010
Old School Rd	Old School Rd W of Hurontario St_WB	D80	WB	2	3	556	961	10,850		180	301	38	2	19	17	556	340	570	15	1	18	17	961	70	4.3	2.9	0.030	0.112	0.027	0.028	0.007	0.076	0.018	0.033	0.008
Old School Rd	Old School Rd E of Hurontario St_EB	D81	EB	3		470	276	5,350		171	286	5	0	4	4	470	101	169	1	0	2	2	276	70	2.4	2.3	0.060	0.119	0.029	0.025	0.006	0.111	0.027	0.014	0.003
Old School Rd	Old School Rd E of Hurontario St_WB	D82	WB	3		287	370	4,700		105	176	2	0	2	2	287	138	231	1	0	0	0	370	70	2.3	1.9	0.200	0.331	0.080	0.043	0.010	0.282	0.068	0.047	0.011
Hurontario St	Hurontario St S of Old School Rd_NB	D83	NB	3		971	1,391	16,850		302	506	75	3	44	40	971	485	812	28	1	34	31	1391	80	4.9	3.2	0.030	0.128	0.031	0.055	0.013	0.083	0.020	0.052	0.012
Hurontario St	Hurontario St S of Old School Rd_SB	D84	SB	3		1,064	1,009	14,800		333	558	39	2	69	63	1064	349	584	23	1	27	25	1009	80	5.1	3.3	0.030	0.134	0.032	0.064	0.015	0.087	0.021	0.039	0.009
Hurontario St	Hurontario St S of Hwy 413_NB	D85	NB	3		836	869	12,200		251	420	69	3	48	44	836	292	489	27	1	31	29	869	80	5.5	3.8	0.030	0.144	0.035	0.054	0.013	0.100	0.024	0.039	0.009
Hurontario St	Hurontario St S of Hwy 413_SB	D86	SB	3		1,152	964	15,100		371	621	32	1	67	61	1152	337	564	17	1	24	22	964	80	4.7	3.2	0.030	0.123	0.030	0.063	0.015	0.083	0.020	0.036	0.009
Hurontario St	Hurontario St N of Hwy 413_NB	D87	NB	3		1,193	2,249	24,600		337	564	124	5	85	77	1193	760	1273	75	3	72	66	2249	80	6.3	3.7	0.030	0.167	0.040	0.089	0.022	0.097	0.023	0.097	0.024
Hurontario St	Hurontario St N of Hwy 413_SB	D88	SB	3		2,272	1,397	26,200		724	1212	82	4	131	119	2272	445	745	74	3	68	62	1397	80	4.8	4.6	0.030	0.126	0.030	0.128	0.031	0.122	0.030	0.076	0.018
Kennedy Rd	Kennedy Rd At Hwy 413_NB	D89	NB	3		139	112	1,800		49	81	3	0	3	3	139	39	66	3	0	2	2	112	60	3.1	3.0	0.200	0.458	0.111	0.028	0.007	0.445	0.108	0.022	0.005
Kennedy Rd	Kennedy Rd At Hwy 413_SB	D90	SB	3		226	70	2,100		76	127	11	0	6	6	226	24	40	3	0	2	1	70	60	3.7	3.4	0.200	0.545	0.132	0.055	0.013	0.501	0.121	0.016	0.004
Old School Rd	Old School Rd W of Heart Lake Rd_EB	D91	EB	3		678	150	5,900		243	406	12	1	8	8	678	55	91	1	0	2	1	150	70	2.7	2.4	0.060	0.131	0.032	0.040	0.010	0.118	0.029	0.008	0.002
Old School Rd	Old School Rd W of Heart Lake Rd_WB	D92	WB	3		175	518	4,950		62	105	3	0	3	2	175	191	321	5	0	1	0	518	70	2.8	2.1	0.200	0.402	0.097	0.031	0.008	0.302	0.073	0.070	0.017
Old School Rd	Old School Rd At Hwy 410_EB	D93	EB	3		614	125	5,300		219	367	12	1	8	7	614	46	77	1	0	1	0	125	70	2.7	2.2	0.060	0.133	0.032	0.036	0.009	0.106	0.026	0.006	0.001
Old School Rd	Old School Rd At Hwy 410_WB	D94	WB	3		138	445	4,150		49	83	3	0	2	1	138	165	275	3	0	1	1	445	70	2.7	2.1	0.200	0.390	0.094	0.024	0.006	0.304	0.074	0.061	0.015
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		326	546	6,250		112	187	15	1	6	6	326	194	324	12	1	8	8	546	60	3.4	2.8	0.060	0.165	0.040	0.024	0.006	0.139	0.034	0.034	0.008
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		610	389	7,150		199	334	32	1	23	21	610	138	231	8	0	7	6	389	60	4.2	2.9	0.060	0.206	0.050	0.056	0.014	0.141	0.034	0.025	0.006
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		504	298	5,750		180	301	11	0	7	6	504	103	172	11	1	6	6	298	80	2.7	3.3	0.060	0.134	0.032	0.030	0.007	0.163	0.040	0.022	0.005
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		426	426	6,100		145	243	14	1	12	11	426	156	261	4	0	3	2	426	80	3.5	2.3	0.060	0.173	0.042	0.033	0.008	0.111	0.027	0.021	0.005
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		194	350	3,900		65	108	11	0	5	5	194	123	205	11	0	6	5	350	80	3.8	3.0	0.200	0.557	0.135	0.048	0.012	0.441	0.107	0.069	0.017
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		493	128	4,450		172	287	16	1	9	8	493	46	77	4	0	1	0	128	80	3.1	2.5	0.200	0.457	0.110	0.101	0.024	0.364	0.088	0.021	0.005
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,197	2,374	39,800		1083	1813	121	5	91	83	3197	840	1407	43	2	43	39	2374	60	3.6	2.9	0.030	0.094	0.023	0.135	0.033	0.076	0.018	0.080	0.019
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		1,980	2,922	35,000		668	1119	98	4	47	43	1980	1061	1776	29	1	29	26	2922	60	3.6	2.4	0.030	0.094	0.023	0.083	0.020	0.064	0.015	0.083	0.020
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		2,956	2,312	37,600		1011	1692	99	4	78	71	2956	823	1379	37	2	37	34	2312	60	3.5	2.8	0.030	0.091	0.022	0.120	0.029	0.073	0.018	0.075	0.018
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,101	2,575	33,400		718	1203	89	4	46	42	2101	935	1565	27	1	25	23	2575	60	3.4	2.4	0.030	0.089	0.021	0.083	0.020	0.063	0.015	0.073	0.018
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,000	2,151	36,800		1030	1726	110	5	68	62	3000	761	1275	38	2	39	36	2151	60	3.3	2.9	0.030	0.087	0.021	0.117	0.028	0.076	0.018	0.073	0.018
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,183	3,066	37,500		724	1212	91	4	80	73	2183	1112	1863	29	1	32	29	3066	60	4.0	2.5	0.030	0.105	0.025	0.102	0.025	0.064	0.015	0.088	0.021
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		782	1,016	12,850		272	455	30	1	13	12	782	362	606	20	1	14	13	1016	80	3.1	2.8	0.030	0.081	0.020	0.028	0.007	0.072	0.017	0.033	0.008
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,358	842	15,700		464	776	55	2	32	29	1358	305	511	9	0	9	8	842	80	3.4	2.5	0.030	0.090	0.022	0.055	0.013	0.064	0.015	0.024	0.006
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		417	568	7,050		146	244	12	1	7	7	417	204	342	4	0	9	9	568	80	3.0	2.7	0.060	0.149	0.036	0.028	0.007	0.132	0.032	0.034	0.008
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		732	580	9,350		248	414	11	0	31	28	732	210	351	5	0	7	7	580	80	3.8	2.6	0.060	0.189	0.046	0.062	0.015	0.125	0.030	0.032	0.008
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		209	479	4,900		67	112	18	1	6	5	209	172	288	9	0	5	5	479	80	4.3	2.6	0.200	0.630	0.152	0.059	0.014	0.381	0.092	0.082	0.020
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		604	297	6,450		219	367	8	0	5	5	604	102	170	11	1	7	6	297	80	2.4	3.4	0.060	0.119	0.029	0.032	0.008	0.167	0.040	0.022	0.005
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,263	716	14,150		425	712	65	3	30	28	1263	246	412	24	1	17	16	716	60	3.6	3.4	0.030	0.095	0.023	0.054	0.013	0.088	0.021	0.028	0.007
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		707	1,144	13,200		242	404	35	2	13	11	707	412	690	20	1	11	10	1144	60	3.3	2.5	0.030	0.087	0.021	0.028	0.007	0.066	0.016	0.034	0.008
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		25	231	1,850		8	13	1	0	2	2	25	82	138	3	0	4	4	231	80	5.2	2.8	0.200	0.770	0.186	0.008	0.002	0.412	0.100	0.043	0.010
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		180	38	1,550		60	101	7	0	6	5	180	13	22	0	0	1	1	38	80	3.8	3.3	0.200	0.559	0.135	0.045	0.011	0.488	0.118	0.008	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		786	1,140	13,750		178	298	146	6	82	75	786	355	595	78	3	57	52	1140	80	8.9	4.9	0.030	0.236	0.057	0.083	0.020	0.129	0.031	0.066	0.016
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		1,269	915	15,600		398	666	91	4	58	53	1269	266	445	85	4	61	55	915	80	4.8	6.0	0.030	0.126	0.031	0.072	0.017	0.157	0.038	0.064	0.016
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		601	431	7,350		215	360	10	0	8	8	601	159	267	1	0	2	2	431	70	2.7	2.1	0.060	0.132	0.032	0.035	0.009	0.103	0.025	0.020	0.005
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		532	575	7,900		194	325	3	0	5	4	532	212	355	2	0	3	3	575	70	2.4	2.2	0.060	0.115	0.028	0.027	0.007	0.106	0.026	0.027	0.007
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		578	498	7,700		200	335	18	1	13	11	578	182	305	2	0	5	4	498	70	3.2	2.4	0.060	0.159	0.038	0.041	0.010	0.115	0.028	0.026	0.006
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		193	520	5,100		69	116	3	0	2	2	193	193	324	1	0	1	1	520	70	2.6	2.0	0.060	0.125	0.030	0.011	0.003	0.099	0.024	0.023	0.006
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		93	334	3,050		33	55	2	0	2	1	93	122	203	4	0	3	2	334	70	2.9	2.4	0.200	0.423	0.102	0.018	0.004	0.348	0.084	0.052	0.013
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		504	153	4,700		177	296	13	1	9	8	504	55	93	3	0	1	1	153	70	3.0	2.5	0.200	0.440	0.107	0.099	0.024	0.358	0.087	0.024	0.006
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		225	651	6,250		77	130	10	0	4	4	225	238	399	6	0	4	4	651	70	3.3	2.3	0.060	0.161	0.039	0.016	0.004	0.112	0.027	0.033	0.008
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		910	335	8,900		327	548	15	1	10	9	910	121	203	5	0	3	3	335	70	2.6	2.5	0.060	0.127	0.031	0.051	0.012	0.122	0.029	0.018	0.004
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		480	1,311	12,800		168	281	15	1	8	8	480	473	792	16	1	16	14	1311	60	3.1	2.6	0.030	0.080	0.019	0.017	0.004	0.066	0.016	0.039	0.009
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		1,428	836	16,150		497	833	41	2	29	26	1428	301	504	11	0	10	10	836	60	3.1	2.6	0.030	0.082	0.020	0.052	0.013	0.067	0.016	0.025	0.006
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		719	1,052	12,650		247	413	27	1	17	15	719	373	625	17	1	19	17	1052	60	3.4	2.9	0.030	0.088	0.021	0.028	0.007	0.074	0.018	0.035	0.008
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,281	599	13,450		446	746	38	2	26	24	1281	213	356	11	0	10	9	599	60	3.2	2.8	0.030	0.083	0.020	0.047	0.011	0.074	0.018	0.020	0.005
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		700	1,491	15,650		228	383	43	2	23	21	700	520	871	34	2	33	30	1491	60	4.1	3.1	0.030	0.108	0.026	0.034	0.008	0.082	0.020	0.055	0.013
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,415	613	14,500		477	799	57	3	41	38	1415	214	358	14	1	14	13	613	60	3.7	3.2	0.030	0.096	0.023	0.061	0.015	0.083	0.020	0.023	0.005
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	671	590	9,000		239	399	17	1	8	8	671	215	360	7	0	5	4	590	70	2.8	2.4	0.060	0.135	0.033	0.041	0.010	0.117	0.028	0.031	0.007
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	547	668	8,700		199	333	6	0	4	4	547	241	404	10	0	6	6	668	70	2.4	2.5	0.060	0.116	0.028	0.028	0.007	0.123	0.030	0.037	0.009
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	572	452	7,300		212	356	1	0	2	2	572	166	279	2	0	3	3	452	70	2.1	2.2	0.060	0.100	0.024	0.025	0.006	0.108	0.026	0.022	0.005
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	372	617	7,050		134	225	4	0	5	5	372	226	378	5	0	4	4	617	70	2.6	2.3	0.060	0.127	0.031	0.021	0.005	0.112	0.027	0.031	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	530	404	6,650		198	331	1	0	0	0	530	150	251	1	0	1	1	404	70	2.0	2.1	0.060	0.095	0.023	0.022	0.005	0.101	0.024	0.018	0.004
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	471	550	7,300		172	289	4	0	3	3	471	203	340	2	0	3	2	550	70	2.3	2.2	0.060	0.112	0.027	0.023	0.006	0.105	0.025	0.026	0.006
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	123	507	4,500		43	71	4	0	3	2	123	175	292	19	1	10	10	507	80	3.2	3.3	0.200	0.472	0.114	0.026	0.006	0.483	0.117	0.109	0.026
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	625	185	5,800		216	362	25	1	11	10	625	64	108	6	0	4	3	185	80	3.2	3.2	0.060	0.157	0.038	0.044	0.011	0.155	0.037	0.013	0.003
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	107	607	5,100		36	61	5	0	3	2	107	214	358	16	1	9	9	607	80	3.5	2.9	0.060	0.174	0.042	0.008	0.002	0.143	0.035	0.039	0.009
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	936	127	7,600		337	565	17	1	8	8	936	44	74	4	0	3	2	127	80	2.5	3.2	0.060	0.124	0.030	0.052	0.013	0.156	0.038	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	121	677	5,700		43	71	1	0	3	3	121	236	396	22	1	12	11	677	80	3.0	3.1	0.060	0.148	0.036	0.008	0.002	0.151	0.037	0.046	0.011
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	847	184	7,350		265	444	53	2	43	39	847	67	113	1	0	1	1	184	80	4.9	2.3	0.060	0.241	0.058	0.091	0.022	0.113	0.027	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	36	569	4,350		13	22	0	0	1	1	36	198	331	19	1	11	10	569	80	2.9	3.2	0.200	0.429	0.104	0.007	0.002	0.463	0.112	0.118	0.029
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	622	364	6,100		183	306	52	2	42	38	622	35	58	0	0	1	1	94	80	5.8	2.2	0.060	0.290	0.070	0.080	0.019	0.105	0.025	0.004	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	429	821	8,900		131	220	32	1	23	21	429	287	481	21	1	16	15	821	80	5.2	3.1	0.060	0.255	0.062	0.049	0.012	0.151	0.037	0.055	0.013
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,075	528	11,450		353	591	54	2	39	35	1075	173	289	22	1	22	20	528	80	4.1	4.2	0.030	0.108	0.026	0.052	0.013	0.111	0.027	0.026	0.006
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	241	916	8,250		72	121	22	1	13	12	241	325	544	18	1	15	13	916	80	5.5	2.8	0.060	0.271	0.065	0.029	0.007	0.139	0.034	0.057	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	857	597	10,400		280	470	41	2	33	31	857	213	357	9	0	9	8	597	80	4.2	2.7	0.030	0.110	0.027	0.042	0.010	0.071	0.017	0.019	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		595	430	7,300		212	354	11	0	9	8	595	155	260	4	0	5	5	430	70	2.8	2.5	0.060	0.137	0.033	0.037	0.009	0.124	0.030	0.024	0.006
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		494	484	7,000		172	288	13	1	11	10	494	173	290	7	0	7	7	484	70	3.2	2.7	0.060	0.155	0.038	0.034	0.008	0.133	0.032	0.029	0.007
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		1,449	1,540	21,350		442	740	126	6	70	64	1449	500	837	76	3	65	60	1540	80	5.1	4.3	0.030	0.135	0.033	0.088	0.021	0.114	0.028	0.079	0.019
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		1,544	1,141	19,200		507	849	99	4	44	40	1544	386	647	43	2	33	30	1141	80	4.0	3.6	0.030	0.105	0.025	0.072	0.017	0.095	0.023	0.048	0.012
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		727	946	11,950	

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Descr pt on	Mode Source ID	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e	PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		2,565	1,775	31,000		888	1486	53	2	71	65	2565	652	1091	13	1	10	9	1775	70	3.3	2.2	0.030	0.087	0.021	0.100	0.024	0.058	0.014	0.046	0.011
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,212	2,396	32,900		782	1310	33	1	45	41	2212	867	1452	24	1	27	24	2396	70	2.9	2.5	0.030	0.077	0.019	0.076	0.018	0.065	0.016	0.070	0.017
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		2,840	2,190	35,950		982	1644	61	3	79	72	2840	804	1347	14	1	13	12	2190	70	3.4	2.2	0.030	0.088	0.021	0.111	0.027	0.058	0.014	0.057	0.014
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,059	2,397	31,850		739	1238	47	2	17	16	2059	877	1468	24	1	14	13	2397	70	2.6	2.3	0.030	0.067	0.016	0.062	0.015	0.059	0.014	0.064	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		587	2,066	18,950		184	307	43	2	27	24	587	751	1258	23	1	17	16	2066	70	4.8	2.4	0.030	0.127	0.031	0.033	0.008	0.062	0.015	0.058	0.014
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		21	61	600		8	13	0	0	0	0	21	22	38	1	0	0	0	61	60	1.9	2.1	0.200	0.276	0.067	0.003	0.001	0.309	0.075	0.008	0.002
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		343	25	2,650		125	210	4	0	2	2	343	9	16	0	0	0	0	25	60	2.3	1.9	0.200	0.337	0.082	0.052	0.013	0.276	0.067	0.003	0.001
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		542	532	7,700		186	311	15	1	15	14	542	197	329	1	0	3	2	532	70	3.5	2.2	0.060	0.170	0.041	0.041	0.010	0.105	0.025	0.025	0.006
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		512	506	7,250		186	311	2	0	7	6	512	188	315	2	0	1	1	506	70	2.5	2.0	0.060	0.123	0.030	0.028	0.007	0.099	0.024	0.022	0.005
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	4		2,941	3,007	42,500		1053	1764	55	2	34	31	2941	1102	1846	26	1	16	15	3007	60	2.7	2.3	0.030	0.069	0.017	0.091	0.022	0.058	0.014	0.078	0.019
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	E86	WB	4		3,140	2,731	41,950		1132	1895	49	2	33	30	3140	991	1659	38	2	22	20	2731	60	2.6	2.4	0.030	0.066	0.016	0.093	0.023	0.063	0.015	0.077	0.019
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	E87	EB	4		2,688	2,154	34,600		890	1491	154	7	77	70	2688	732	1225	85	4	57	52	2154	60	3.9	3.5	0.030	0.102	0.025	0.123	0.030	0.093	0.022	0.089	0.022
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	E88	WB	4		2,588	2,981	39,750		881	1475	114	5	59	54	2588	1046	1751	73	3	57	52	2981	60	3.5	3.0	0.030	0.091	0.022	0.105	0.025	0.079	0.019	0.105	0.025
Huntington Rd	Huntington Rd At Hwy 413_NB	E89	NB	4	5	148	29	1,250		53	90	4	0	1	0	148	10	18	1	0	0	0	29	60	2.4	2.4	0.200	0.353	0.085	0.023	0.006	0.357	0.086	0.005	0.001
Huntington Rd	Huntington Rd At Hwy 413_SB	E90	SB	4	5	134	102	1,700		47	80	3	0	2	2	134	37	63	1	0	1	0	102	60	2.8	2.2	0.200	0.417	0.101	0.025	0.006	0.327	0.079	0.015	0.004
Huntington Rd	Huntington Rd N of Kirby Rd_NB	E91	NB	4	5	10	10	150		4	6	0	0	0	0	10	4	6	0	0	0	0	10	60	1.9	1.9	0.600	0.751	0.182	0.003	0.001	0.751	0.182	0.003	0.001
Huntington Rd	Huntington Rd N of Kirby Rd_SB	E92	SB	4	5	10	10	150		4	6	0	0	0	0	10	4	6	0	0	0	0	10	60	1.9	1.9	0.600	0.751	0.182	0.003	0.001	0.751	0.182	0.003	0.001
Kirby Rd	Kirby Rd W of Huntington Rd_EB	E93	EB	4	5	159	227	2,750		56	95	3	0	3	2	159	83	140	2	0	1	1	227	60	2.8	2.2	0.200	0.415	0.100	0.030	0.007	0.322	0.078	0.033	0.008
Kirby Rd	Kirby Rd W of Huntington Rd_WB	E94	WB	4	5	298	74	2,650		108	182	5	0	2	1	298	27	45	2	0	0	0	74	60	2.3	2.3	0.200	0.342	0.083	0.046	0.011	0.335	0.081	0.011	0.003
Highway 27	Hwy 27 S of Hwy 413_NB	E95	NB	4	5	1,132	1,642	19,800		376	630	62	3	32	29	1132	578	969	31	1	32	30	1642	80	3.8	3.0	0.030	0.101	0.024	0.051	0.012	0.078	0.019	0.057	0.014
Highway 27	Hwy 27 S of Hwy 413_SB	E96	SB	4	5	1,858	1,274	22,350		630	1055	60	3	57	52	1858	434	727	39	2	38	34	1274	80	3.6	3.6	0.030	0.095	0.023	0.079	0.019	0.093	0.023	0.053	0.013
Highway 27	Hwy 27 N of Hwy 413_NB	E97	NB	4	5	815	2,239	21,800		256	429	64	3	33	30	815	782	1309	59	3	45	41	2239	80	4.7	3.1	0.030	0.123	0.030	0.045	0.011	0.081	0.020	0.081	0.020
Highway 27	Hwy 27 N of Hwy 413_SB	E98	SB	5		2,259	1,175	24,550		754	1262	101	4	72	65	2259	403	675	31	1	34	31	1175	80	3.8	3.5	0.030	0.101	0.024	0.102	0.025	0.091	0.022	0.048	0.012
Kirby Rd	Kirby Rd E of Hwy 27_EB	F01	EB	4	5	765	941	12,200		255	427	36	2	24	22	765	322	540	31	1	24	22	941	60	3.8	3.4	0.030	0.101	0.024	0.034	0.008	0.090	0.022	0.038	0.009
Kirby Rd	Kirby Rd E of Hwy 27_WB	F02	WB	4	5	905	600	10,750		326	546	16	1	9	8	905	213	356	11	1	10	9	600	60	2.6	2.8	0.030	0.066	0.016	0.027	0.006	0.074	0.018	0.020	0.005
Kipling Ave	Kipling Ave At Hwy 413_NB	F03	NB	5		37	29	450		13	21	1	0	1	1	37	10	18	0	0	1	0	29	80	3.4	2.8	0.600	1.371	0.332	0.023	0.005	1.104	0.267	0.014	0.003
Kipling Ave	Kipling Ave At Hwy 413_SB	F04	SB	5		34	11	300		12	20	0	0	1	1	34	4	7	0	0	0	0	11	80	3.2	1.9	0.600	1.263	0.305	0.019	0.005	0.751	0.182	0.004	0.001
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	F05	EB	5		689	441	8,050		237	396	21	1	17	16	689	159	265	6	0	6	5	441	60	3.4	2.6	0.060	0.166	0.040	0.051	0.012	0.128	0.031	0.025	0.006
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	F06	WB	5		433	481	6,550		146	245	20	1	11	10	433	160	268	17	1	19	17	481	60	3.6	4.0	0.060	0.176	0.043	0.034	0.008	0.197	0.048	0.042	0.010
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	F07	EB	5		892	801	12,100		314	526	29	1	12	10	892	287	480	13	1	10	10	801	60	2.9	2.7	0.030	0.075	0.018	0.030	0.007	0.070	0.017	0.025	0.006
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	F08	WB	5		779	683	10,450		271	454	26	1	14	13	779	230	385	26	1	21	20	683	60	3.1	3.7	0.030	0.081	0.020	0.028	0.007	0.098	0.024	0.030	0.007
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	F09	NB	5		93	345	3,150		33	55	1	0	2	2	93	126	211	3	0	2	2	345	80	3.0	2.3	0.200	0.445	0.108	0.018	0.004	0.338	0.082	0.052	0.013
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		703	122	5,900		250	419	9	0	12	11	703	45	75	1	0	1	1	122	80	2.8	2.3	0.060	0.138	0.033	0.043	0.010	0.111	0.027	0.006	0.001
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		36	56	650		12	21	1	0	1	1	36	20	33	1	0	1	1	56	80	3.6	2.8	0.200	0.530	0.128	0.009	0.002	0.417	0.101	0.010	0.003
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		30	18	350		10	17	1	0	1	1	30	6	11	0	0	0	0	18	80	3.6	2.8	0.600	1.440	0.348	0.019	0.005	1.134	0.274	0.009	0.002
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		1,036	643	12,000		370	619	9	0	20	18	1036	236	395	3	0	5	4	643	70	2.8	2.3	0.030	0.073	0.018	0.034	0.008	0.059	0.014	0.017	0.004
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		564	707	9,100		202	338	3	0	11	10	564	258	433	3	0	6	6	707	70	2.8	2.3	0.060	0.137	0.033	0.035	0.008	0.114	0.028	0.036	0.009
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		405	539	6,750		141	236	1	0	14	13	405	198	331	2	0	4	4	539	70	3.4	2.3	0.060	0.165	0.040	0.030	0.007	0.111	0.027	0.027	0.006
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		549	417	6,900		193	322	3	0	16	15	549	152	255	1	0	5	5	417	70	3.2	2.4	0.060	0.157	0.038	0.038	0.009	0.118	0.029	0.022	0.005
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		761	948	12,200		285	477	0	0	0	0	761	354	593	0	0	0	0	948	70	1.9	1.9	0.030	0.049	0.012	0.017	0.004	0.049	0.012	0.021	0.005
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		1,052	746	12,850		393	659	0	0	0	0	1052	279	467	0	0	0	0	746	70	1.9	1.9	0.030	0.049	0.012	0.023	0.006	0.049	0.012	0.016	0.004
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		842	1,059	13,550		251	421	81	4	45	41	842	319	535	72	3	68	62	1059	70	5.5	5.5	0.030	0.144	0.035	0.054	0.013	0.145	0.035	0.069	0.017
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		1,304	857	15,450		403	675	112	5	57	52	1304	247	414	71	3	64	58	857	70	4.9	6.1	0.030	0.130	0.031	0.076	0.018	0.162	0.039	0.062	0.015
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		292	410	5,000		93	155	20	1	12	11	292	133	223	18	1	18	17	410	70	4.6	4.4	0.060	0.228	0.055	0.030	0.007	0.215	0.052	0.039	0.010
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		426	342	5,500		138	232	27	1	15	13	426	113	190	14	1	13	12	342	70	4.2	4.0	0.060	0.208	0.050	0.040	0.010	0.198	0.048	0.030	0.007
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		1,103	1,021	15,150		365	611	61	3	33	30	1103	324	543	55	2	51	46	1021	60	3.9	4.7	0.030	0.103	0.025	0.051	0.012	0.124	0.030	0.056	0.014
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		1,028	992	14,450		318	532	86	4	46	42	1028	310	520	59	3	53	48	992	60	4.9	4.9	0.030	0.130	0.031	0.060	0.014	0.130	0.031	0.058	0.014
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		2,306	2,604	35,050		717	1201	190	8	99	91	2306	853	1428	137	6	94	86	2604	60	4.8	4.1	0.030	0.127	0.031	0.131	0.032	0.109	0.026	0.126	0.031
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		2,635	1,974	32,900		879	1471	143	6	71	65	2635	625	1047	124	5	90	83	1974	60	3.8	4.7	0.030	0.099	0.024	0.117	0.028	0.123	0.030	0.109	0.026
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		1,115	779	13,550		394	659	27	1	18	16	1115	267	447	26	1	20	18	779	60	2.9	3.4	0.030	0.076	0.018	0.038	0.009	0.090	0.022	0.031	0.008
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		754	965	12,250		263	441	22	1	14	13	754	354	593	8	0	5	5	965	60	3.1	2.2	0.030	0.081	0.020	0.027	0.007	0.058	0.014	0.025	0.006
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		144	373	3,700		49	83	7	0	3	2	144	132	220	11	0	5	5	373	80	3.3	2.9	0.200	0.486	0.118	0.031	0.008	0.422	0.102	0.070	0.017
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		470	103	4,100		166	279	12	1	6	6	470	37	61	3	0	1	1	103	80	2.8	2.7	0.200	0.414	0.100	0.087	0.021	0.397	0.096	0.018	0.004
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,203	1,724	28,050		760	1273	69	3	51	46	2203	601	1007	41	2	38	35	1724	60	3.3	3.2	0.030	0.086	0.021	0.085	0.021	0.082	0.020	0.063	0.015
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,583	2,189	26,950		530	887	70	3	48	44	1583	793	1327	20	1	25	23	2189	60	3.8	2.5	0.030	0.099	0.024	0.070	0.017	0.065	0.016	0.064	0.015
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		155	424	4,150		52	87	6	0	5	5	155	153	257	4	0	5	5	424	80	3.8	2.5	0.200	0.562	0.136	0.039	0.009	0.369	0.089	0.070	0.017
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		622	180	5,750		225	376	6	0	8	7	622	64	107	2	0	4	4	180	80	2.6	3.0	0.060	0.125	0.030	0.035	0.008	0.146	0.035	0.012	0.003
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		625	344	6,900		232	388	1	0	2	2	625	128	215	1	0	4	0	344	70	2.1	2.0	0.060	0.100	0.024	0.028	0.007	0.096	0.023	0.015	0.004
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		245	539	5,600		92	153	0	0	0	0	245	201	337	0	0	0	0	539	70	1.9	1.9	0.060	0.093	0.022	0.010	0.002	0.093	0.023	0.022	0.005
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		542	532	7,700		186	311	15	1	15	14	542	197	329	1	0	3	2	532	70	3.5	2.2	0.060	0.170	0.041	0.041	0.010	0.105	0.025	0.025	0.006
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		512	506	7,250		186	311	2	0	7	6	512	188	315	2	0	1	1	506	70	2.5	2.0	0.060	0.123	0.030	0.028	0.007	0.099	0.024	0.022	0.005
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	25	7	250		9	15	0	0	1	1	25	2	4	0	0	0	0	7	60	3.1	3.0	0.600	1.254	0.303	0.014	0.003	1.201	0.291	0.004	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	4	70	550		1	2	0	0	0	0	4	25	42	1	0	1	1	70	60	4.5	2.9	0.200	0.668	0.162	0.001	0.000	0.418	0.101	0.013	0.003
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		2,252	2,241	32,100		729	1221	144	6	80	72	2252	738	1235	109	5	81	73	2241	60	4.3	4.1	0.030	0.112	0.027	0.113	0.027	0.107	0.026	0.107	0.026
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F50	WB	5		2,406	2,016	31,600		804	1347	129	6	63	57	2406	644	1078	120	5	88	81	2016	60	3.7	4.5	0.030	0.098	0.024	0.105	0.025	0.120	0.029	0.108	0.026
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		824	1,476	16,450		250	418	82	4	37	33	824	522	874	41	2	19	18	1476	70	5.1	2.8	0.030	0.136	0.033	0.050	0.012	0.074	0.018	0.049	0.012
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		2,121	601	19,450		751	1257	56	2	29	26	2121	214	358	14	1	7	7	601	70	2.8	2.7	0.030	0.074	0.018	0.070	0.017	0.071	0.017	0.019	0.005
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		633	1,361	14,250		230	384	10	0	5	4	633	504	843	8	0	3	3	1361	70	2.4	2.1	0.030	0.063	0.015	0.018	0.004	0.054	0.013	0.033	0.008
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		644	1079	15		1,754	892	18,900		754	644	1079	15	1	8	7	1754	329	552	6	0	3	2	892	70	2.2	2.1	0.030	0.057	0.014	0.045	0.011	0.055	0.013	0.022	0.005
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		861	316	8,400		317	531	5	0	4	4	861	108	180	11	0	9	8	316	70	2.2	3.5	0.060	0.107	0.026	0.041	0.010	0.173	0.042	0.025	0.006
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		835	731	11,200		281	470	44	2	20	18	835	244	408	38	2	21	19	731	40	3.6	3.8	0.030	0.095	0.023	0.035	0.009	0.099	0.024	0.032	0.008
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		61	414	3,400		23	38	0	0	0	0	61	152	255	3	0	2	2	414	60	2.0	2.2	0.200	0.289	0.070	0.008	0.002	0.323	0.078	0.060	0.014
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		1,071	971	14,600		314	527	115	5	57	52	1071	316	529	65	3	30	28	971	70	5.6	4.1	0.030	0.149	0.036	0.071	0.017	0.108	0.026	0.047	0.011
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		54	579	4,500		19	31	3	0	1	1	54	204	342	16	1	9	8	579	60	3.3	2.9	0.200	0.484	0.117	0.012	0.003	0.427	0.103	0.110	0.027
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		37	211	1,800		14	23	0	0	0	0	37	79	132	0	0	0	0	211	40

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Descr pt on	Mode Source D	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e	PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	H14	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	H15	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	H16	E-N/S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	4,948	4,014	64,000		1420	2378	539	24	307	280	4948	1147	1920	356	16	301	274	4014	110	6.0	6.2	0.015	0.084	0.020	0.187	0.045	0.088	0.021	0.158	0.038
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	4,306	4,628	63,800		1193	1998	520	23	299	273	4306	1320	2210	444	20	332	303	4628	110	6.5	6.2	0.015	0.091	0.022	0.175	0.042	0.087	0.021	0.181	0.044
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	4,519	3,641	58,300		1278	2140	513	23	296	269	4519	1026	1718	337	15	285	260	3641	110	6.2	6.4	0.015	0.087	0.021	0.176	0.043	0.091	0.022	0.148	0.036
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	3,907	4,282	58,500		1065	1783	496	22	283	258	3907	1197	2004	435	19	327	299	4282	110	6.7	6.5	0.015	0.094	0.023	0.165	0.040	0.091	0.022	0.175	0.042
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		5,462	5,042	75,000		1546	2588	621	27	355	324	5462	1489	2493	400	18	336	307	5042	110	6.2	5.8	0.015	0.087	0.021	0.213	0.051	0.081	0.020	0.183	0.044
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		4,967	5,343	73,600		1414	2369	568	25	309	282	4967	1561	2614	474	21	353	322	5343	110	6.1	5.9	0.015	0.086	0.021	0.190	0.046	0.083	0.020	0.197	0.048
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	4,652	5,381	71,700		1259	2108	610	27	339	309	4652	1621	2715	385	17	336	307	5381	110	6.8	5.5	0.015	0.095	0.023	0.198	0.048	0.077	0.019	0.185	0.045
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	5,714	4,543	73,300		1749	2929	517	23	260	237	5714	1302	2180	420	19	325	296	4543	110	5.1	6.2	0.015	0.071	0.017	0.181	0.044	0.087	0.021	0.176	0.043
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		4,274	4,405	62,000		1144	1916	578	26	319	291	4274	1306	2187	329	15	298	271	4405	110	6.9	5.7	0.015	0.097	0.024	0.186	0.045	0.081	0.020	0.159	0.038
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		4,619	4,263	63,400		1391	2329	447	20	227	207	4619	1221	2045	400	18	303	276	4263	110	5.3	6.2	0.015	0.074	0.018	0.153	0.037	0.087	0.021	0.165	0.040
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		4,274	4,405	62,000		1144	1916	578	26	319	291	4274	1306	2187	329	15	298	271	4405	110	6.9	5.7	0.015	0.097	0.024	0.186	0.045	0.081	0.020	0.159	0.038
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		4,619	4,263	63,400		1391	2329	447	20	227	207	4619	1221	2045	400	18	303	276	4263	110	5.3	6.2	0.015	0.074	0.018	0.153	0.037	0.087	0.021	0.165	0.040
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,405	4,672	50,500		796	1332	139	6	69	63	2405	1642	2750	110	5	87	79	4672	100	3.9	3.0	0.015	0.054	0.013	0.058	0.014	0.042	0.010	0.087	0.021
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,303	2,840	51,000		1512	2531	145	6	57	52	4303	994	1665	72	3	55	50	2840	100	2.9	3.1	0.015	0.041	0.010	0.078	0.019	0.042	0.010	0.054	0.013
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		1,887	3,520	38,600		517	865	259	11	122	111	1887	1163	1947	164	7	125	114	3520	100	6.5	4.0	0.015	0.092	0.022	0.077	0.019	0.056	0.014	0.088	0.021
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		3,443	2,380	41,600		1138	1905	219	10	90	82	3443	772	1292	125	5	97	89	2380	100	3.9	4.3	0.015	0.054	0.013	0.083	0.020	0.060	0.015	0.064	0.016
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		4,884	9,501	102,700		1443	2416	434	19	299	272	4884	3352	5614	225	10	157	143	9501	100	5.7	2.9	0.015	0.080	0.019	0.174	0.042	0.040	0.010	0.172	0.042
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		9,023	4,772	98,500		3068	5137	333	15	246	224	9023	1594	2669	165	7	177	161	4772	100	3.5	3.9	0.015	0.049	0.012	0.199	0.048	0.055	0.013	0.117	0.028
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		2,994	7,012	71,500		922	1544	196	9	169	154	2994	2574	4311	42	2	44	40	7012	100	5.2	2.2	0.015	0.072	0.017	0.097	0.023	0.031	0.007	0.097	0.023
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		6,950	2,853	70,000		2427	4064	157	7	155	141	6950	991	1660	38	2	84	77	2853	100	3.1	3.3	0.015	0.044	0.011	0.135	0.033	0.046	0.011	0.059	0.014
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		3,031	7,224	73,200		936	1567	196	9	169	154	3031	2653	4443	42	2	44	40	7224	100	5.1	2.2	0.015	0.072	0.017	0.097	0.024	0.031	0.007	0.100	0.024
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		10,305	4,939	108,900		3524	5901	374	16	256	233	10305	1567	2623	259	11	250	228	4939	100	3.4	4.7	0.015	0.048	0.012	0.220	0.053	0.066	0.016	0.146	0.035
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		2,053	1,100	22,500		690	1155	122	5	42	38	2053	359	601	57	3	42	38	1100	90	3.6	4.2	0.030	0.094	0.023	0.086	0.021	0.110	0.027	0.054	0.013
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		581	1,620	15,700		161	270	86	4	31	28	581	545	913	53	2	55	51	1620	80	6.2	3.8	0.030	0.164	0.040	0.043	0.010	0.099	0.024	0.072	0.017
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		1,306	1,900	22,900		355	595	174	8	91	83	1306	617	1034	111	5	70	64	1900	90	6.7	4.2	0.030	0.176	0.043	0.103	0.025	0.111	0.027	0.095	0.023
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	758	1,057	12,950		245	411	51	2	25	23	758	344	577	58	3	40	36	1057	70	4.2	4.2	0.030	0.111	0.027	0.038	0.009	0.111	0.027	0.052	0.013
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		380	81	3,300		131	219	19	1	6	5	380	29	49	2	0	1	1	81	40	3.3	2.7	0.200	0.477	0.115	0.081	0.020	0.398	0.096	0.015	0.004
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		220	457	4,850		69	115	22	1	7	6	220	160	268	15	1	7	7	457	50	4.6	3.0	0.200	0.682	0.165	0.067	0.016	0.442	0.107	0.090	0.022
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	2,284	1,223	25,050		736	1233	166	7	74	67	2284	399	668	60	3	50	45	1223	60	4.3	4.3	0.030	0.112	0.027	0.114	0.028	0.112	0.027	0.061	0.015
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		1,090	1,050	15,300		344	576	81	4	45	41	1090	316	530	72	3	68	62	1050	70	4.6	5.5	0.030	0.122	0.030	0.060	0.014	0.146	0.035	0.068	0.017
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		1,306	976	16,300		404	676	112	5	57	52	1306	292	488	71	3	64	58	976	60	4.9	5.6	0.030	0.130	0.031	0.076	0.018	0.148	0.036	0.065	0.016
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		2,008	2,580	32,750		463	775	366	16	203	185	2008	783	1311	172	8	160	146	2580	100	8.7	5.4	0.015	0.123	0.030	0.110	0.027	0.076	0.018	0.087	0.021
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		1,176	775	13,950		337	565	131	6	71	65	1176	207	346	85	4	70	64	775	90	6.0	7.2	0.030	0.158	0.038	0.083	0.020	0.190	0.046	0.066	0.016
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		819	1,517	16,700		207	346	122	5	72	66	819	462	774	119	5	82	75	1517	90	7.7	5.2	0.030	0.203	0.049	0.074	0.018	0.138	0.033	0.094	0.023
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		2,494	1,770	30,450		780	1307	212	9	97	88	2494	468	783	210	9	157	143	1770	90	4.7	7.2	0.030	0.124	0.030	0.138	0.033	0.192	0.046	0.152	0.037
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle										AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak		PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36													
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	671	590	9,000		239	399	17	1	8	8	671	215	360	7	0	5	4	590	70	2.8	2.4	0.060	0.135	0.033	0.041	0.010	0.117	0.028	0.031	0.007
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	547	668	8,700		199	333	6	0	4	4	547	241	404	10	0	6	6	668	70	2.4	2.5	0.060	0.116	0.028	0.028	0.007	0.123	0.030	0.037	0.009
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	572	452	7,300		212	356	1	0	2	2	572	166	279	2	0	3	3	452	70	2.1	2.2	0.060	0.100	0.024	0.025	0.006	0.108	0.026	0.022	0.005
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	372	617	7,050		134	225	4	0	5	5	372	226	378	5	0	4	4	617	70	2.6	2.3	0.060	0.127	0.031	0.021	0.005	0.112	0.027	0.031	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	530	404	6,650		198	331	1	0	0	0	530	150	251	1	0	1	1	404	70	2.0	2.1	0.060	0.095	0.023	0.022	0.005	0.101	0.024	0.018	0.004
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	471	550	7,300		172	289	4	0	3	3	471	203	340	2	0	3	2	550	70	2.3	2.2	0.060	0.112	0.027	0.023	0.006	0.105	0.025	0.026	0.006
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	123	507	4,500		43	71	4	0	3	2	123	175	292	19	1	10	10	507	80	3.2	3.3	0.200	0.472	0.114	0.026	0.006	0.483	0.117	0.109	0.026
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	625	185	5,800		216	362	25	1	11	10	625	64	108	6	0	4	3	185	80	3.2	3.2	0.060	0.157	0.038	0.044	0.011	0.155	0.037	0.013	0.003
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	107	607	5,100		36	61	5	0	3	2	107	214	358	16	1	9	9	607	80	3.5	2.9	0.060	0.174	0.042	0.008	0.002	0.143	0.035	0.039	0.009
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	936	127	7,600		337	565	17	1	8	8	936	44	74	4	0	3	2	127	80	2.5	3.2	0.060	0.124	0.030	0.052	0.013	0.156	0.038	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	121	677	5,700		43	71	1	0	3	3	121	236	396	22	1	12	11	677	80	3.0	3.1	0.060	0.148	0.036	0.008	0.002	0.151	0.037	0.046	0.011
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	847	184	7,350		265	444	53	2	43	39	847	67	113	1	0	1	1	184	80	4.9	2.3	0.060	0.241	0.058	0.091	0.022	0.113	0.027	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	36	569	4,350		13	22	0	0	1	1	36	198	331	19	1	11	10	569	80	2.9	3.2	0.200	0.429	0.104	0.007	0.002	0.463	0.112	0.118	0.029
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	622	94	5,100		183	306	52	2	42	38	622	35	58	0	0	1	1	94	80	5.8	2.2	0.060	0.290	0.070	0.080	0.019	0.105	0.025	0.004	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	429	821	8,900		131	220	32	1	23	21	429	287	481	21	1	16	15	821	80	5.2	3.1	0.060	0.255	0.062	0.049	0.012	0.151	0.037	0.055	0.013
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,075	528	11,450		353	591	54	2	39	35	1075	173	289	22	1	22	20	528	80	4.1	4.2	0.030	0.108	0.026	0.052	0.013	0.111	0.027	0.026	0.006
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	241	916	8,250		72	121	22	1	13	12	241	325	544	18	1	15	13	916	80	5.5	2.8	0.060	0.271	0.065	0.029	0.007	0.139	0.034	0.057	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	857	597	10,400		280	470	41	2	33	31	857	213	357	9	0	9	8	597	80	4.2	2.7	0.030	0.110	0.027	0.042	0.010	0.071	0.017	0.019	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		595	430	7,300		212	354	11	0	9	8	595	155	260	4	0	5	5	430	70	2.8	2.5	0.060	0.137	0.033	0.037	0.009	0.124	0.030	0.024	0.006
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		494	484	7,000		172	288	13	1	11	10	494	173	290	7	0	7	7	484	70	3.2	2.7	0.060	0.155	0.038	0.034	0.008	0.133	0.032	0.029	0.007
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		1,449	1,540	21,350		442	740	126	6	70	64	1449	500	837	76	3	65	60	1540	80	5.1	4.3	0.030	0.135	0.033	0.088	0.021	0.114	0.028	0.079	0.019
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		1,544	1,141	19,200		507	849	99	4	44	40	1544	386	647	43	2	33	30	1141	80	4.0	3.6	0.030	0.105	0.025	0.072	0.017	0.095	0.023	0.048	0.012
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		727	946	11,950		266	445	9	0	3	3	727	342	572	12	1	10	9	946	80	2.3	2.5	0.030	0.059	0.014	0.019	0.005	0.065	0.016	0.028	0.007
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		704	885	11,350		248	416	18	1	11	10	704	327	548	4	0	3	3	885	80	2.9	2.1	0.030	0.076	0.018	0.024	0.006	0.055	0.013	0.022	0.005
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,227	1,569	27,100		728	1220	123	5	78	72	2227	518	868	68	3	58	53	1569	70	4.1	4.0	0.030	0.109	0.026	0.108	0.026	0.106	0.026	0.074	0.018
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,420	1,955	24,100		462	774	88	4	48	44	1420	694	1162	32	1	34	31	1955	70	4.2	2.9	0.030	0.110	0.027	0.070	0.017	0.074	0.018	0.065	0.016
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,030	1,133	22,600		730	1222	30	1	25	23	2030	418	700	6	0	5	5	1133	70	2.6	2.2	0.030	0.068	0.016	0.062	0.015	0.056	0.014	0.028	0.007
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		1,027	1,973	21,450		359	601	24	1	22	20	1027	724	1213	6	0	15	14	1973	70	3.1	2.3	0.030	0.082	0.020	0.037	0.009	0.059	0.014	0.052	0.013
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		670	691	9,700		244	408	11	0	4	3	670	252	421	11	0	4	3	691	80	2.4	2.3	0.060	0.115	0.028	0.034	0.008	0.114	0.028	0.035	0.009
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		752	764	10,850		264	443	21	1	12	11	752	280	468	8	0	4	4	764	80	3.0	2.3	0.030	0.077	0.019	0.026	0.006	0.059	0.014	0.020	0.005
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		726	1,001	12,350		270	453	2	0	1	0	726	368	615	11	1	3	3	1001	70	2.0	2.2	0.030	0.051	0.012	0.017	0.004	0.057	0.014	0.025	0.006
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,153	831	14,150		418	700	22	1	6	6	1153	309	517	2	0	2	1	831	70	2.4	2.0	0.030	0.062	0.015	0.032	0.008	0.052	0.013	0.019	0.005
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		1,502	1,255	19,700		560	937	2	0	2	1	1502	460	770	14	1	5	5	1255	70	2.0	2.2	0.030	0.051	0.012	0.034	0.008	0.058	0.014	0.033	0.008
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		1,399	1,452	20,350		508	850	26	1	7	7	1399	541	906	1	0	2	2	1452	70	2.4	2.0	0.030	0.062	0.015	0.039	0.009	0.051	0.012	0.033	0.008
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		298	137	3,100		103	173	7	0	8	7	298	51	86	0	0	0	0	137	60	3.3	2.0	0.200	0.488	0.118	0.065	0.016	0.283	0.069	0.017	0.004
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		140	313	3,250		52	87	0	0	0	0	140	117	196	0	0	0	0	313	60	2.0	1.9	0.200	0.296	0.072	0.019	0.004	0.283	0.068	0.040	0.010
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		1,809	2,183	28,500		637	1067	31	1	38	34	1809	789	1321	23	1	26	23	2183	70	3.0	2.5	0.030	0.078	0.019	0.063	0.015	0.066	0.016	0.064	0.016
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		2,565	1,775	31,000		888	1486	53	2	71	65	2565	652	1091	13	1	10	9	1775	70	3.3	2.2	0.030	0.087	0.021	0.100	0.024	0.058	0.014	0.046	0.011
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,212	2,396	32,900		782	1310	33	1	45	41	2212	867	1452	24	1	27	24	2396	70	2.9	2.5	0.030	0.077	0.019	0.076	0.018	0.065	0.016	0.070	0.017
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		2,840	2,190	35,950		982	1644	61	3	79	72	2840	804	1347	14	1	13	12	2190	70	3.4	2.2	0.030	0.088	0.021	0.111	0.027	0.082	0.020	0.057	0.014
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,059	2,397	31,850		739	1238	47	2	17	16	2059	877	1468	24	1	14	13	2397	70	2.6	2.3	0.030	0.067	0.016	0.062	0.015	0.059	0.014	0.064	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		587	2,066	18,950		184	307	43	2	27	24	587	751	1258	23	1	17	16	2066	70	4.8	2.4	0.030	0.127	0.031	0.033	0.008	0.062	0.015	0.058	0.014
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		21	61	600		8	13	0	0	0	0	21	22	38	1	0	0	0	61	60	1.9	2.1	0.200	0.276	0.067	0.003	0.001	0.309	0.075

Appendix A.4: Year 2041 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceTypeID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		703	122	5,900		250	419	9	0	12	11	703	45	75	1	0	1	1	122	80	2.8	2.3	0.060	0.138	0.033	0.043	0.010	0.111	0.027	0.006	0.001
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		36	56	650		12	21	1	0	1	1	36	20	33	1	0	1	1	56	80	3.6	2.8	0.200	0.530	0.128	0.009	0.002	0.417	0.101	0.010	0.003
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		30	18	350		10	17	1	0	1	1	30	6	11	0	0	0	0	18	80	3.6	2.8	0.600	1.440	0.348	0.019	0.005	1.134	0.274	0.009	0.002
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		1,036	643	12,000		370	619	9	0	20	18	1036	236	395	3	0	5	4	643	70	2.8	2.3	0.030	0.073	0.018	0.034	0.008	0.059	0.014	0.017	0.004
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		564	707	9,100		202	338	3	0	11	10	564	258	433	3	0	6	6	707	70	2.8	2.3	0.060	0.137	0.033	0.035	0.008	0.114	0.028	0.036	0.009
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		405	539	6,750		141	236	1	0	14	13	405	198	331	2	0	4	4	539	70	3.4	2.3	0.060	0.165	0.040	0.030	0.007	0.111	0.027	0.027	0.006
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		549	417	6,900		193	322	3	0	16	15	549	152	255	1	0	5	5	417	70	3.2	2.4	0.060	0.157	0.038	0.038	0.009	0.118	0.029	0.022	0.005
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		761	948	12,200		285	477	0	0	0	0	761	354	593	0	0	0	0	948	70	1.9	1.9	0.030	0.049	0.012	0.017	0.004	0.049	0.012	0.021	0.005
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		1,052	746	12,850		393	659	0	0	0	0	1052	279	467	0	0	0	0	746	70	1.9	1.9	0.030	0.049	0.012	0.023	0.006	0.049	0.012	0.016	0.004
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		842	1,059	13,550		251	421	81	4	45	41	842	319	535	72	3	68	62	1059	70	5.5	5.5	0.030	0.144	0.035	0.054	0.013	0.145	0.035	0.069	0.017
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		1,304	857	15,450		403	675	112	5	57	52	1304	247	414	71	3	64	58	857	70	4.9	6.1	0.030	0.130	0.031	0.076	0.018	0.162	0.039	0.062	0.015
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		292	410	5,000		93	155	20	1	12	11	292	133	223	18	1	18	17	410	70	4.6	4.4	0.060	0.228	0.055	0.030	0.007	0.215	0.052	0.039	0.010
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		426	342	5,500		138	232	27	1	15	13	426	113	190	14	1	13	12	342	70	4.2	4.0	0.060	0.208	0.050	0.040	0.010	0.198	0.048	0.030	0.007
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		1,103	1,021	15,150		365	611	61	3	33	30	1103	324	543	55	2	51	46	1021	60	3.9	4.7	0.030	0.103	0.025	0.051	0.012	0.124	0.030	0.056	0.014
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		1,028	992	14,450		318	532	86	4	46	42	1028	310	520	59	3	53	48	992	60	4.9	4.9	0.030	0.130	0.031	0.060	0.014	0.130	0.031	0.058	0.014
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		2,306	2,604	35,050		717	1201	190	8	99	91	2306	853	1428	137	6	94	86	2604	60	4.8	4.1	0.030	0.127	0.031	0.131	0.032	0.109	0.026	0.126	0.031
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		2,635	1,974	32,900		879	1471	143	6	71	65	2635	625	1047	124	5	90	83	1974	60	3.8	4.7	0.030	0.099	0.024	0.117	0.028	0.123	0.030	0.109	0.026
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		1,115	779	13,550		394	659	27	1	18	16	1115	267	447	26	1	20	18	779	60	2.9	3.4	0.030	0.076	0.018	0.038	0.009	0.090	0.022	0.031	0.008
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		754	965	12,250		263	441	22	1	14	13	754	354	593	8	0	5	5	965	60	3.1	2.2	0.030	0.081	0.020	0.027	0.007	0.058	0.014	0.025	0.006
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		542	532	7,700		186	311	15	1	15	14	542	197	329	1	0	3	2	532	70	3.5	2.2	0.060	0.170	0.041	0.041	0.010	0.105	0.025	0.025	0.006
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		512	506	7,250		186	311	2	0	7	6	512	188	315	2	0	1	1	506	70	2.5	2.0	0.060	0.123	0.030	0.028	0.007	0.099	0.024	0.022	0.005
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	25	7	250		9	15	0	0	1	1	25	2	4	0	0	0	0	7	60	3.1	3.0	0.600	1.254	0.303	0.014	0.003	1.201	0.291	0.004	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	4	70	550		1	2	0	0	0	0	4	25	42	1	0	1	1	70	60	4.5	2.9	0.200	0.668	0.162	0.001	0.000	0.418	0.101	0.013	0.003
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		2,252	2,241	32,100		729	1221	144	6	80	72	2252	738	1235	109	5	81	73	2241	60	4.3	4.1	0.030	0.112	0.027	0.113	0.027	0.107	0.026	0.107	0.026
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		2,406	2,016	31,600		804	1347	129	6	63	57	2406	644	1078	120	5	88	81	2016	60	3.7	4.5	0.030	0.098	0.024	0.105	0.025	0.120	0.029	0.108	0.026
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		824	1,476	16,450		250	418	82	4	37	33	824	522	874	41	2	19	18	1476	70	5.1	2.8	0.030	0.136	0.033	0.050	0.012	0.074	0.018	0.049	0.012
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		2,121	601	19,450		751	1257	56	2	29	26	2121	214	358	14	1	7	7	601	70	2.8	2.7	0.030	0.074	0.018	0.070	0.017	0.071	0.017	0.019	0.005
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		633	1,361	14,250		230	384	10	0	5	4	633	504	843	8	0	3	3	1361	70	2.4	2.1	0.030	0.063	0.015	0.018	0.004	0.054	0.013	0.033	0.008
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		1,754	892	18,900		644	1079	15	1	8	7	1754	329	552	6	0	3	2	892	70	2.2	2.1	0.030	0.057	0.014	0.045	0.011	0.055	0.013	0.022	0.005
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		861	316	8,400		317	531	5	0	4	4	861	108	180	11	0	9	8	316	70	2.2	3.5	0.060	0.107	0.026	0.041	0.010	0.173	0.042	0.025	0.006
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		835	731	11,200		281	470	44	2	20	18	835	244	408	38	2	21	19	731	40	3.6	3.8	0.030	0.095	0.023	0.035	0.009	0.099	0.024	0.032	0.008
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		61	414	3,400		23	38	0	0	0	0	61	152	255	3	0	2	2	414	60	2.0	2.2	0.200	0.289	0.070	0.008	0.002	0.323	0.078	0.060	0.014
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		1,071	971	14,600		314	527	115	5	57	52	1071	316	529	65	3	30	28	971	70	5.6	4.1	0.030	0.149	0.036	0.071	0.017	0.108	0.026	0.047	0.011
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		54	579	4,500		19	31	3	0	1	1	54	204	342	16	1	9	8	579	60	3.3	2.9	0.200	0.484	0.117	0.012	0.003	0.427	0.103	0.110	0.027
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		37	211	1,800		14	23	0	0	0	0	37	79	132	0	0	0	0	211	40	2.1	1.9	0.200	0.310	0.075	0.005	0.001	0.276	0.067	0.026	0.006
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		1,195	800	14,250		382	640	89	4	42	38	1195	241	404	61	3	48	44	800	70	4.4	5.4	0.030	0.115	0.028	0.062	0.015	0.143	0.035	0.051	0.012
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		809	237	7,450		301	504	2	0	1	1	809	87	146	1	0	1	1	237	40	2.0	2.2	0.060	0.096	0.023	0.035	0.008	0.106	0.026	0.011	0.003
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		1,246	1,024	16,200		455	762	13	1	8	7	1246	377	631	7	0	4	4	1024	60	2.3	2.2	0.030	0.060	0.015	0.033	0.008	0.056	0.014	0.026	0.006
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		1,492	2,255	26,750		548	917	14	1	6	6	1492	831	1391	16	1	8	7	2255	70	2.2	2.2	0.030	0.057	0.014	0.038	0.009	0.056	0.013	0.056	0.014
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		805	753	11,150		214	359	123	5	54	50	805	222	373	68	3	45	41	753	60	6.8	5.7	0.030	0.181	0.044	0.065	0.016	0.149	0.036	0.050	0.012
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		169	349	3,700		55	91	12	1	6	5	169	129	216	2	0	1	1	349	40	4.3	2.1	0.200	0.632	0.153	0.048	0.012	0.305	0.074	0.048	0.012
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36			AM Peak	PM Peak		PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		4,746	1,472	44,400		1580	2645	173	8	178	162	4746	550	922	0	0	0	0	1472	100	4.0	1.9	0.015	0.055	0.013	0.117	0.028	0.026	0.006	0.017	0.004
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		2,464	4,100	46,900		829	1387	100	4	75	69	2464	1533	2567	0	0	0	0	4100	100	3.7	1.9	0.015	0.052	0.013	0.057	0.014	0.026	0.006	0.048	0.012
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		5,924	2,931	63,200		1661	2782	605	27	444	405	5924	1092	1828	8	0	2	1	2931	100	6.4	2.0	0.015	0.091	0.022	0.240	0.058	0.027	0.007	0.035	0.009
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		3,650	4,758	60,100		821	1374	582	26	443	404	3650	1588	2660	355	16	73	66	4758	100	9.2	3.6	0.015	0.130	0.031	0.212	0.051	0.050	0.012	0.106	0.026
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bramalea Rd_W-N/S	C45	W-N/S	3		0	0	0		0

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		3,369	2,266	40,250		1201	2010	21	1	71	65	3369	803	1344	15	1	54	49	2266	60	2.9	3.0	0.030	0.074	0.018	0.112	0.027	0.078	0.019	0.079	0.019
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		2,374	3,122	39,250		844	1414	41	2	38	35	2374	1157	1938	9	0	9	9	3122	60	2.8	2.1	0.030	0.073	0.018	0.078	0.019	0.053	0.013	0.075	0.018
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		4,123	2,907	50,200		1486	2489	60	3	44	41	4123	1046	1753	30	1	40	37	2907	60	2.6	2.6	0.030	0.066	0.016	0.122	0.030	0.068	0.016	0.088	0.021
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		2,908	3,959	49,050		1023	1713	57	2	59	54	2908	1454	2436	15	1	28	25	3959	60	3.0	2.2	0.030	0.079	0.019	0.102	0.025	0.058	0.014	0.103	0.025
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		3,635	2,818	46,100		1296	2171	56	2	58	52	3635	1016	1702	33	1	35	31	2818	60	2.8	2.6	0.030	0.072	0.017	0.117	0.028	0.067	0.016	0.084	0.020
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		3,119	4,517	54,550		1110	1858	66	3	43	39	3119	1671	2799	8	0	20	19	4517	60	2.8	2.1	0.030	0.072	0.017	0.101	0.024	0.055	0.013	0.110	0.027
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		3,797	3,110	49,350		1339	2243	78	3	70	64	3797	1104	1850	53	2	53	48	3110	80	3.0	2.8	0.030	0.077	0.019	0.131	0.032	0.074	0.018	0.103	0.025
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		3,011	3,680	47,800		1074	1798	64	3	38	34	3011	1360	2278	11	1	16	14	3680	80	2.7	2.1	0.030	0.071	0.017	0.095	0.023	0.055	0.013	0.090	0.022
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		3,054	2,446	39,300		1094	1833	50	2	39	36	3054	883	1479	25	1	30	28	2446	80	2.7	2.6	0.030	0.069	0.017	0.095	0.023	0.066	0.016	0.073	0.018
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		2,454	3,523	42,700		886	1483	47	2	19	17	2454	1309	2193	5	0	8	8	3523	80	2.5	2.0	0.030	0.065	0.016	0.071	0.017	0.052	0.013	0.082	0.020
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		3,765	2,338	43,600		1335	2235	72	3	63	57	3765	843	1412	25	1	30	27	2338	80	2.9	2.6	0.030	0.074	0.018	0.125	0.030	0.067	0.016	0.070	0.017
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		2,340	3,771	43,650		843	1411	46	2	20	18	2340	1397	2340	8	0	14	12	3771	80	2.5	2.1	0.030	0.066	0.016	0.069	0.017	0.054	0.013	0.091	0.022
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		1,011	1,603	18,650		355	594	29	1	17	15	1011	571	956	27	1	25	23	1603	60	3.0	2.8	0.030	0.078	0.019	0.035	0.009	0.072	0.018	0.052	0.013
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		2,084	1,158	23,150		729	1222	56	2	39	36	2084	400	670	35	2	27	24	1158	60	3.1	3.3	0.030	0.080	0.019	0.074	0.018	0.086	0.021	0.044	0.011
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		2,376	1,597	28,400		842	1410	57	3	33	31	2376	564	945	33	1	28	26	1597	60	2.8	2.9	0.030	0.074	0.018	0.078	0.019	0.076	0.018	0.054	0.013
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		2,289	2,200	32,050		794	1329	72	3	48	43	2289	788	1320	37	2	28	25	2200	60	3.2	2.7	0.030	0.084	0.020	0.086	0.021	0.069	0.017	0.068	0.016
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		364	855	8,700		126	210	11	1	8	8	364	303	507	12	1	17	15	855	70	3.3	2.9	0.060	0.162	0.039	0.026	0.006	0.143	0.035	0.055	0.013
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		1,201	434	11,700		409	686	37	2	35	32	1201	160	268	3	0	2	1	434	70	3.5	2.1	0.030	0.093	0.022	0.050	0.012	0.056	0.013	0.011	0.003
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		4,228	2,680	49,350		1491	2496	121	5	60	55	4228	872	1461	173	8	87	79	2680	80	2.9	4.2	0.030	0.075	0.018	0.142	0.034	0.109	0.026	0.131	0.032
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		2,759	3,625	45,600		760	1272	443	20	138	126	2759	1282	2146	75	3	62	57	3625	80	6.2	2.9	0.030	0.165	0.040	0.204	0.049	0.076	0.018	0.123	0.030
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		3,307	2,823	43,800		1207	2021	45	2	17	15	3307	926	1552	176	8	84	77	2823	80	2.3	4.0	0.030	0.060	0.014	0.088	0.021	0.105	0.025	0.133	0.032
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		2,702	2,733	38,800		843	1412	197	9	126	115	2702	989	1655	34	1	28	26	2733	80	4.9	2.5	0.030	0.128	0.031	0.154	0.037	0.065	0.016	0.079	0.019
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		3,551	2,125	40,550		1267	2121	91	4	36	32	3551	738	1237	68	3	41	38	2125	60	2.7	3.2	0.030	0.070	0.017	0.111	0.027	0.082	0.020	0.078	0.019
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		1,851	2,794	33,200		611	1024	111	5	52	48	1851	1015	1700	36	2	21	20	2794	60	3.9	2.4	0.030	0.103	0.025	0.085	0.021	0.062	0.015	0.078	0.019
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		3,526	2,597	43,750		1266	2120	85	4	27	24	3526	934	1563	48	2	26	24	2597	60	2.6	2.6	0.030	0.066	0.016	0.105	0.025	0.067	0.016	0.078	0.019
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		2,611	3,314	42,300		908	1521	101	4	40	37	2611	1224	2049	19	1	11	10	3314	60	3.1	2.1	0.030	0.080	0.019	0.094	0.023	0.055	0.013	0.081	0.020
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	931	2,242	22,650		322	539	30	1	20	19	931	812	1359	28	1	22	20	2242	80	3.3	2.5	0.030	0.085	0.021	0.035	0.009	0.064	0.016	0.065	0.016
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,265	963	23,050		787	1318	65	3	48	44	2265	350	585	9	0	10	9	963	80	3.2	2.5	0.030	0.083	0.020	0.084	0.020	0.064	0.015	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	931	2,242	22,650		322	539	30	1	20	19	931	812	1359	28	1	22	20	2242	80	3.3	2.5	0.030	0.085	0.021	0.035	0.009	0.064	0.016	0.065	0.016
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,265	963	23,050		787	1318	65	3	48	44	2265	350	585	9	0	10	9	963	80	3.2	2.5	0.030	0.083	0.020	0.084	0.020	0.064	0.015	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	874	1,304	15,550		298	499	38	2	19	18	874	469	786	19	1	15	14	1304	80	3.4	2.6	0.030	0.090	0.022	0.035	0.008	0.067	0.016	0.039	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	1,397	710	15,050		478	800	49	2	36	32	1397	256	430	8	0	8	8	710	80	3.4	2.5	0.030	0.090	0.022	0.056	0.014	0.066	0.016	0.021	0.005
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	915	645	11,150		308	515	41	2	26	23	915	233	391	7	0	7	7	645	60	3.7	2.5	0.030	0.097	0.023	0.040	0.010	0.065	0.016	0.019	0.005
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	677	1,025	12,150		246	411	11	0	5	4	677	372	622	11	1	10	9	1025	60	2.4	2.5	0.030	0.063	0.015	0.019	0.005	0.064	0.015	0.029	0.007
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,113	637	12,500		408	684	10	0	6	5	1113	231	387	7	0	6	6	637	60	2.2	2.5	0.030	0.058	0.014	0.029	0.007	0.064	0.015	0.018	0.004
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	369	1,091	10,450		116	195	23	1	18	16	369	400	671	7	0	7	6	1091	60	4.8	2.2	0.030	0.125	0.030	0.021	0.005	0.058	0.014	0.028	0.007
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		661	1,333	14,250		243	407	3	0	4	4	661	491	822	2	0	9	9	1333	60	2.2	2.2	0.030	0.058	0.014	0.017	0.004	0.057	0.014	0.034	0.008
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		1,323	881	15,750		469	785	19	1	26	23	1323	326	545	4	0	3	3	881	60	2.9	2.1	0.030	0.076	0.018	0.045	0.011	0.055	0.013	0.022	0.005
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		524	794	9,400		195	327	0	0	1	1	524	294	492	0	0	4	4	794	60	2.0	2.1	0.060	0.096	0.023	0.023	0.005	0.103	0.025	0.037	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		965	549	10,800		340	570	16	1	20	18	965	205	342	0	0	1	1	549	60	3.0	2.0	0.030	0.078	0.019	0.034	0.008	0.051	0.012	0.013	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		954	237	8,500		357	597	0	0	0	0	954	88	147	0	0	1	1	237	60	1.9	2.1	0.060	0.092	0.022	0.039	0.010	0.101	0.025	0.011	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		264	752	7,250		95	160	2	0	4	3	264	281	470	0	0	1	0	752	60	2.6	1.9	0.060	0.126	0.030	0.015	0.004	0.094	0.023	0.032	0.008
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		681	503	8,450		253	425	0	0	2	1	681	165	277	31	1	15	14	503	60	2.0	4.0	0.060	0.097	0.023	0.030	0.007	0.197	0.048	0.044	0.011
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		288	849	8,100		80	133	36	2	19	18	288	315	527	2	0	3	2	849	60	6.5	2.1	0.060	0.321	0.078	0.041	0.010	0.100	0.024	0.038	0.009
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,905	1,786	26,350		630	1056	94	4	63	58	1905	621	1039	54	2	37	33	1786	60	4.0	3.2	0.030	0.104	0.025	0.089	0.021	0.083	0.020	0.066	0.016
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,678	1,776	24,650		534	894	117	5	67	61	1678	606	1015	59	3	49	44	1776	60	4.5	3.5	0.030	0.119	0.029	0.089	0.022	0.092	0.022	0.073	0.018
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,090	2,342	31,650		695	1165	101	4	65	60	2090	826	1383	56	2	39	36	2342	60	3.9	2.9	0.030	0.101	0.025	0.095	0.023	0.076	0.018	0.080	0.019
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		976	536	10,800		347	581	14	1	17	16	976	200	334	0	0	1	1	536	60	2.8	2.0	0.030	0.074	0.018	0.032	0.008	0.051	0.012	0.012	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,090	2,342	31,650		695	1165	101	4	65	60	2090	826	1383	56	2	39	36	2342	60	3.9	2.9	0.030	0.101	0.025	0.095	0.023	0.076	0.018	0.080	0.019
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		2,122	2,137	30,400		697	1166	120	5	70	64	2122	740	1239	62	3	49	44	2137	60	4.1	3.3	0.030	0.107	0.026	0.101	0.024	0.085	0.021	0.081	0.020
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		861	821	12,000		297	498	33	1	17	15	861	300	503	10	0	4	4	821	60	3.2	2.3	0.030	0.085	0.020	0.033	0.008	0.059	0.014	0.022	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		947	872	13,000		341	570	20	1	8	7	947	322	538	6	0	3	3	872	60	2.5	2.1	0.030	0.066	0.016	0.028	0.007	0.056	0.013	0.022	0.005
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		694	1,018	12,250		242	406	22	1	12	11	694	374	627	10	0	4	3	1018	60	3.1	2.2	0.030	0.080	0.019	0.025	0.006	0.057	0.014	0.026	0.006
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		1,300	661	14,000		470	787	25	1	9	8	1300	244	408	4	0	3	2	661	60	2.5	2.1	0.030	0.064	0.015	0.037	0.009	0.056	0.013	0.016	0.004
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,824	1,169	21,400		630	1056	64	3	37	34	1824	419	702	19	1	15	13	1169	80	3.2	2.7	0.030	0.085	0.020	0.069	0.017	0.069	0.017	0.036	0.009
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		952	1,717	19,050		321	537	45	2	25	22	952	617	1034	26	1	20	19	1717	80	3.6	2.6	0.030	0.095	0.023	0.040	0.010	0.068	0.016	0.052	0.013
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		1,772	1,849	25,850		575	964	112	5	61	55	1772	670	1123	21	1	18	16	1849	80	4.2	2.5	0.030	0.110	0.027	0.088	0.021	0.064	0.015	0.053	0.013
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,823	1,800	25,900		641	1073	51	2	29	27	1823	629	1053	50	2	35	31	1800	80	3.0	3.1	0.030	0.077	0.019	0.063	0.015	0.080	0.019	0.065	0.016
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,772	1,849	25,850		575	964	112	5	61	55	1772	670	1123	21	1	18	16	1849	80	4.2	2.5	0.030	0.110	0.027	0.088	0.021	0.064	0.015	0.053	0.013
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,823	1,800	25,900		641	1073	51	2	29	27	1823	629	1053	50	2	35	31	1800	80	3.0	3.1	0.030	0.077	0.019	0.063	0.015	0.080	0.019	0.065	0.016
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		222	729	6,800		72	120	15	1	7	7	222	246	411	41	2	15	14	729	80	4.2	3.6	0.060	0.209	0.051	0.021	0.005	0.175	0.042	0.057	0.014
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		674	240	6,550		234	391	26	1	12	10	674	81	135	10	0	7	7	240	80	3.2	3.7	0.060	0.154	0.037	0.047	0.011	0.183	0.044	0.020	0.005
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	206	149	2,550		56	95	27	1	14	13	206	54	90	3	0	1	1	149	70	6.6	2.5	0.200	0.978	0.237	0.090	0.022	0.360	0.087	0.024	0.006
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	295	214	3,650		93	155	26	1	10	10	295	66	110	16	1	11	10	214	70	4.6	5.1	0.200	0.681	0.165	0.090	0.022	0.754	0.182	0.072	0.017
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	913	863	12,700		264	443	104	5	51	46	913	283	473	48	2	30	27	863	80	5.8	4.1	0.030	0.154	0.037	0.063	0.015	0.108	0.026	0.042	0.010
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	1,570	809	17,000		526	882	76	3	43	40	1570	270	453	32	1	28	25	809	80	3.7	3.9	0.030	0.098	0.024	0.068	0.017	0.101	0.025	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	913	863	12,700		264	443	104	5	51	46	913	283	473	48	2	30	27	863	80	5.8	4.1	0.030	0.154	0.037	0.063	0.015	0.108	0.026	0.042	0.010
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	1,570	809	17,000		526	882	76	3	43	40	1570	270	453	32	1	28	25	809	80	3.7	3.9	0.030	0.098	0.024	0.068	0.017	0.101	0.025	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	406	374	5,550		121	203	42	2	20	18	406	126	210	16	1	11	10	374	80	5.4	3.7	0.060	0.267	0

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	E86	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 1

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		2,200	2,617	34,400		790	1322	28	1	31	28	2200	944	1580	28	1	33	31	2617	60	2.7	2.6	0.030	0.069	0.017	0.068	0.016	0.067	0.016	0.078	0.019
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		2,528	2,708	37,400		919	1539	34	2	18	16	2528	1007	1686	3	0	6	6	2708	60	2.4	2.0	0.030	0.062	0.015	0.070	0.017	0.052	0.013	0.063	0.015
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		569	1,220	12,800		212	355	0	0	1	1	569	453	759	0	0	4	4	1220	60	2.0	2.0	0.030	0.051	0.012	0.013	0.003	0.053	0.013	0.029	0.007
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		1,456	661	15,100		524	877	16	1	20	18	1456	246	413	0	0	1	1	661	60	2.6	2.0	0.030	0.068	0.017	0.044	0.011	0.051	0.012	0.015	0.004
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		718	177	6,400		189	316	92	4	61	56	718	62	105	2	0	4	4	177	70	7.2	3.0	0.060	0.360	0.087	0.116	0.028	0.148	0.036	0.012	0.003
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		104	129	1,650		30	51	4	0	10	9	104	39	66	4	0	10	10	129	40	6.4	5.7	0.200	0.945	0.229	0.044	0.011	0.839	0.203	0.048	0.012
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		718	177	6,400		189	316	92	4	61	56	718	62	105	2	0	4	4	177	70	7.2	3.0	0.060	0.360	0.087	0.116	0.028	0.148	0.036	0.012	0.003
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		10,895	8,965	141,800		3059	5123	979	43	884	807	10895	2825	4730	415	18	511	466	8965	100	6.5	4.9	0.015	0.092	0.022	0.447	0.108	0.069	0.017	0.275	0.067
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		10,895	8,965	141,800		3059	5123	979	43	884	807	10895	2825	4730	415	18	511	466	8965	100	6.5	4.9	0.015	0.092	0.022	0.447	0.108	0.069	0.017	0.275	0.067
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		10,245	8,110	131,100		3153	5279	600	26	621	566	10245	2576	4313	366	16	439	400	8110	100	5.2	4.8	0.015	0.073	0.018	0.336	0.081	0.067	0.016	0.242	0.059
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		7,763	9,895	126,100		2321	3886	525	23	527	481	7763	3208	5371	290	13	530	483	9895	100	5.7	4.5	0.015	0.079	0.019	0.276	0.067	0.063	0.015	0.280	0.068
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		3,873	4,400	59,100		1207	2020	252	11	200	183	3873	1411	2362	170	8	235	214	4400	100	5.0	4.6	0.015	0.069	0.017	0.120	0.029	0.065	0.016	0.128	0.031
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		3,890	5,495	67,000		1114	1866	273	12	327	298	3890	1797	3009	120	5	295	269	5495	100	6.4	4.4	0.015	0.089	0.022	0.156	0.038	0.062	0.015	0.152	0.037
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		7,785	10,240	128,700		2326	3894	533	24	527	481	7785	3334	5584	291	13	532	486	10240	100	5.7	4.4	0.015	0.080	0.019	0.277	0.067	0.062	0.015	0.284	0.069
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		792	982	12,650		250	419	28	1	49	45	792	345	578	12	1	24	22	982	60	5.0	3.1	0.030	0.130	0.032	0.046	0.011	0.081	0.020	0.035	0.009
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		660	227	6,350		176	296	3	0	97	88	660	80	135	3	0	5	4	227	40	8.0	2.9	0.060	0.399	0.097	0.118	0.028	0.144	0.035	0.015	0.004
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36			AM Peak	PM Peak									
																											PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		4,746	1,472	44,400		1580	2645	173	8	178	162	4746	550	922	0	0	0	0	1472	100	4.0	1.9	0.015	0.055	0.013	0.117	0.028	0.026	0.006	0.017	0.004
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		2,464	4,100	46,900		829	1387	100	4	75	69	2464	1533	2567	0	0	0	0	4100	100	3.7	1.9	0.015	0.052	0.013	0.057	0.014	0.026	0.006	0.048	0.012
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		5,924	2,931	63,200		1661	2782	605	27	444	405	5924	1092	1828	8	0	2	1	2931	100	6.4	2.0	0.015	0.091	0.022	0.240	0.058	0.027	0.007	0.035	0.009
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		3,650	4,758	60,100		821	1374	582	26	443	404	3650	1588	2660	355	16	73	66	4758	100	9.2	3.6	0.015	0.130	0.031	0.212	0.051	0.050	0.012	0.106	0.026
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,323	3,787	43,600		736	1233	166	7	95	86	2323	1340	2245	59	3	73	67	3787	100	4.6	2.9	0.015	0.064	0.016	0.067	0.016	0.041	0.010	0.069	0.017
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,721	3,237	56,800		1584	2653	97	4	200	183	4721	1141	1911	53	2	68	62	3237	100	3.9	3.0	0.015	0.055	0.013	0.116	0.028	0.042	0.010	0.060	0.015
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		3,001	1,950	35,400		985	1649	85	4	145	133	3001	685	1148	35	2	42	38	1950	100	4.3	3.0	0.015	0.060	0.015	0.081	0.019	0.042	0.010	0.037	0.009
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,595	2,926	32,300		495	830	130	6	70	64	1595	1027	1721	57	2	62	57	2926	100	4.9	3.1	0.015	0.068	0.017	0.049	0.012	0.042	0.010	0.055	0.013
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		3,369	2,266	40,250		1201	2010	21	1	71	65	3369	803	1344	15	1	54	49	2266	60	2.9	3.0	0.030	0.074	0.018	0.112	0.027	0.078	0.019	0.079	0.019
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		2,374	3,122	39,250		844	1414	41	2	38	35	2374	1157	1938	9	0	9	9	3122	60	2.8	2.1	0.030	0.073	0.018	0.078	0.019	0.053	0.013	0.075	0.018
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		4,123	2,907	50,200		1486	2489	60	3	44	41	4123	1046	1753	30	1	40	37	2907	60	2.6	2.6	0.030	0.066	0.016	0.122	0.030	0.068	0.016	0.088	0.021
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		2,908	3,959	49,050		1023	1713	57	2	59	54	2908	1454	2436	15	1	28	25	3959	60	3.0	2.2	0.030	0.079	0.019	0.102	0.025	0.058	0.014	0.103	0.025
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		3,635	2,818	46,100		1296	2171	56	2	58	52	3635	1016	1702	33	1	35	31	2818	60	2.8	2.6	0.030	0.072	0.017	0.117	0.028	0.067	0.016	0.084	0.020
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		3,119	4,517	54,550		1110	1858	66	3	43	39	3119	1671	2799	8	0	20	19	4517	60	2.8	2.1	0.030	0.072	0.017	0.101	0.024	0.055	0.013	0.110	0.027
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		3,797	3,110	49,350		1339	2243	78	3	70	64	3797	1104	1850	53	2	53	48	3110	80	3.0	2.8	0.030	0.077	0.019	0.131	0.032	0.074	0.018	0.103	0.025
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		3,011	3,680	47,800		1074	1798	64	3	38	34	3011	1360	2278	11	1	16	14	3680	80	2.7	2.1	0.030	0.071	0.017	0.095	0.023	0.055	0.013	0.090	0.022
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		3,054	2,446	39,300		1094	1833	50	2	39	36	3054	883	1479	25	1	30	28	2446	80	2.7	2.6	0.030	0.069	0.017	0.095	0.023	0.066	0.016	0.073	0.018
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		2,454	3,523	42,700		886	1483	47	2	19	17	2454	1309	2193	5	0	8	8	3523	80	2.5	2.0	0.030	0.065	0.016	0.071	0.017	0.052	0.013	0.082	0.020
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		3,765	2,338	43,600		1335	2235	72	3	63	57	3765	843	1412	25	1	30	27	2338	80	2.9	2.6	0.030	0.074	0.018	0.125	0.030	0.067	0.016	0.070	0.017
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		2,340	3,771	43,650		843	1411	46	2	20	18	2340	1397	2340	8	0	14	12	3771	80	2.5	2.1	0.030	0.066	0.016	0.069	0.017	0.054	0.013	0.091	0.022
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		1,011	1,603	18,650		355	594	29	1	17	15	1011	571	956	27	1	25	23	1603	60	3.0	2.8	0.030	0.078	0.019	0.035	0.009	0.072	0.018	0.052	0.013
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		2,084	1,158	23,150		729	1222	56	2	39	36	2084	400	670	35	2	27	24	1158	60	3.1	3.3	0.030	0.080	0.019	0.074	0.018	0.086	0.021	0.044	0.011
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		2,376	1,597	28,400		842	1410	57	3	33	31	2376	564	945	33	1	28	26	1597	60	2.8	2.9	0.030	0.074	0.018	0.078	0.019	0.076	0.018	0.054	0.013
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		2,289	2,200	32,050		794	1329	72	3	48	43	2289	788	1320	37	2	28	25	2200	60	3.2	2.7	0.030	0.084	0.020	0.086	0.021	0.069	0.017	0.068	0.016
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		364	855	8,700		126	210	11	1	8	8	364	303	507	12	1	17	15	855	70	3.3	2.9	0.060	0.162	0.039	0.026	0.006	0.143	0.035	0.055	0.013
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		1,201	434	11,700		409	686	37	2	35	32	1201	160	268	3	0	2	1	434	70	3.5	2.1	0.030	0.093	0.022	0.050	0.012	0.056	0.013	0.011	0.003
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		4,228	2,680	49,350		1491	2496	121	5	60	55	4228	872	1461	173	8	87	79	2680	80	2.9	4.2	0.030	0.075	0.018	0.142	0.034	0.109	0.026	0.131	0.032
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		2,759	3,625	45,600		760	1272	443	20	138	126	2759	1282	2146	75	3	62	57	3625	80	6.2	2.9	0.030	0.165	0.040	0.204	0.049	0.076	0.018	0.123	0.030
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		3,307	2,823	43,800		1207	2021	45	2	17	15	3307	926	1552	176	8	84	77	2823	80	2.3	4.0	0.030	0.060	0.014	0.088	0.021	0.105	0.025	0.133	0.032
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		2,702	2,733	38,800		843	1412	197	9	126	115	2702	989	1655	34	1	28	26	2733	80	4.9	2.5	0.030	0.128	0.031	0.154	0.037	0.065	0.016	0.079	0.019
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		3,551	2,125	40,550		1267	2121	91	4	36	32	3551	738	1237	68	3	41	38	2125	60	2.7	3.2	0.030	0.070	0.017	0.111	0.027	0.082	0.020	0.078	0.019
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		1,851	2,794	33,200		611	1024	111	5	52	48	1851	1015	1700	36	2	21	20	2794	60	3.9	2.4	0.030	0.103	0.025	0.085	0.021	0.062	0.015	0.078	0.019
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		3,526	2,597	43,750		1266	2120	85	4	27	24	3526	934	1563	48	2	26	24	2597	60	2.6	2.6	0.030	0.066	0.016	0.105	0.025	0.067	0.016	0.078	0.019
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		2,611	3,314	42,300		908	1521	101	4	40	37	2611	1224	2049	19	1	11	10	3314	60	3.1	2.1	0.030	0.080	0.019	0.094	0.023	0.055	0.013	0.081	0.020
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	931	2,242	22,650		322	539	30	1	20	19	931	812	1359	28	1	22	20	2242	80	3.3	2.5	0.030	0.085	0.021	0.035	0.009	0.064	0.016	0.065	0.016
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,265	963	23,050		787	1318	65	3	48	44	2265	350	585	9	0	10	9	963	80	3.2	2.5	0.030	0.083	0.020	0.084	0.020	0.064	0.015	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	931	2,242	22,650		322	539	30	1	20	19	931	812	1359	28	1	22	20	2242	80	3.3	2.5	0.030	0.085	0.021	0.035	0.009	0.064	0.016	0.065	0.016
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,265	963	23,050		787	1318	65	3	48	44	2265	350	585	9	0	10	9	963	80	3.2	2.5	0.030	0.083	0.020	0.084	0.020	0.064	0.015	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	874	1,304	15,550		298	499	38	2	19	18	874	469	786	19	1	15	14	1304	80	3.4	2.6	0.030	0.090	0.022	0.035	0.008	0.067	0.016	0.039	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	1,397	710	15,050		478	800	49	2	36	32	1397	256	430	8	0	8	8	710	80	3.4	2.5	0.030	0.090	0.022	0.056	0.014	0.066	0.016	0.021	0.005
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	915	645	11,150		308	515	41	2	26	23	915	233	391	7	0	7	7	645	60	3.7	2.5	0.030	0.097	0.023	0.040	0.010	0.065	0.016	0.019	0.005
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	677	1,025	12,150		246	411	11	0	5	4	677	372	622	11	1	10	9	1025	60	2.4	2.5	0.030	0.063	0.015	0.019	0.005	0.064	0.015	0.029	0.007
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,113	637	12,500		408	684	10	0	6	5	1113	231	387	7	0	6	6	637	60	2.2	2.5	0.030	0.058	0.014	0.029	0.007	0.064	0.015	0.018	0.004
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	369	1,091	10,450		116	195	23	1	18	16	369	400	671	7	0	7	6	1091	60	4.8	2.2	0.030	0.125	0.030	0.021	0.005	0.058	0.014	0.028	0.007
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		661	1,333	14,250		243	407	3	0	4	4	661	491	822	2	0	9	9	1333	60	2.2	2.2	0.030	0.058	0.014	0.017	0.004	0.057	0.014	0.034	0.008
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		1,323	881	15,750		469	785	19	1	26	23	1323	326	545	4	0	3	3	881	60	2.9	2.1	0.030	0.076	0.018	0.045	0.011	0.055	0.013	0.022	0.005
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		524	794	9,400		195	327	0	0	1	1	524	294	492	0	0	4	4	794	60	2.0	2.1	0.060	0.096	0.023	0.023	0.005	0.103	0.025	0.037	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		965	549	10,800		340	570	16	1	20	18	965	205	342	0	0	1	1	549	60	3.0	2.0	0.030	0.078	0.019	0.034	0.008	0.051	0.012	0.013	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		954	237	8,500		357	597	0	0	0	0	954	88	147	0	0	1	1	237	60	1.9	2.1	0.060	0.092	0.022	0.039	0.010	0.101	0.025	0.011	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		264	752	7,250		95	160	2	0	4	3	264	281	470	0	0	1	0	752	60	2.6	1.9	0.060	0.126	0.030	0.015	0.004	0.094	0.023	0.032	0.008
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		681	503	8,450		253	425	0	0	2	1	681	165	277	31	1	15	14	503	60	2.0	4.0	0.060	0.097	0.023	0.030	0.007	0.197	0.048	0.044	0.011
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		288	849	8,100		80	133	36	2	19	18	288	315	527	2	0	3	2	849	60	6.5	2.1	0.060	0.321	0.078	0.041	0.010	0.100	0.024	0.038	0.009
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,905	1,786	26,350		630	1056	94	4	63	58	1905	621	1039	54	2	37	33	1786	60	4.0	3.2	0.030	0.104	0.025	0.089	0.021	0.083	0.020	0.066	0.016
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,678	1,776	24,650		534	894	117	5	67	61	1678	606	1015	59	3	49	44	1776	60	4.5	3.5	0.030	0.119	0.029	0.089	0.022	0.092	0.022	0.073	0.018
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,090	2,342	31,650		695	1165	101	4	65	60	2090	826	1383	56	2	39	36	2342	60	3.9	2.9	0.030	0.101	0.025	0.095	0.023	0.076	0.018	0.080	0.019
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		976	536	10,800		347	581	14	1	17	16	976	200	334	0	0	1	1	536	60	2.8	2.0	0.030	0.074	0.018	0.032	0.008	0.051	0.012	0.012	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,090	2,342	31,650		695	1165	101	4	65	60	2090	826	1383	56	2	39	36	2342	60	3.9	2.9	0.030	0.101	0.025	0.095	0.023	0.076	0.018	0.080	0.019
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		2,122	2,137	30,400		697	1166	120	5	70	64	2122	740	1239	62	3	49	44	2137	60	4.1	3.3	0.030	0.107	0.026	0.101	0.024	0.085	0.021	0.081	0.020
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		861	821	12,000		297	498	33	1	17	15	861	300	503	10	0	4	4	821	60	3.2	2.3	0.030	0.085	0.020	0.033	0.008	0.059	0.014	0.022	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		947	872	13,000		341	570	20	1	8	7	947	322	538	6	0	3	3	872	60	2.5	2.1	0.030	0.066	0.016	0.028	0.007	0.056	0.013	0.022	0.005
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		694	1,018	12,250		242	406	22	1	12	11	694	374	627	10	0	4	3	1018	60	3.1	2.2	0.030	0.080	0.019	0.025	0.006	0.057	0.014	0.026	0.006
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		1,300	661	14,000		470	787	25	1	9	8	1300	244	408	4	0	3	2	661	60	2.5	2.1	0.030	0.064	0.015	0.037	0.009	0.056	0.013	0.016	0.004
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,824	1,169	21,400		630	1056	64	3	37	34	1824	419	702	19	1	15	13	1169	80	3.2	2.7	0.030	0.085	0.020	0.069	0.017	0.069	0.017	0.036	0.009
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		952	1,717	19,050		321	537	45	2	25	22	952	617	1034	26	1	20	19	1717	80	3.6	2.6	0.030	0.095	0.023	0.040	0.010	0.068	0.016	0.052	0.013
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		1,772	1,849	25,850		575	964	112	5	61	55	1772	670	1123	21	1	18	16	1849	80	4.2	2.5	0.030	0.110	0.027	0.088	0.021	0.064	0.015	0.053	0.013
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,823	1,800	25,900		641	1073	51	2	29	27	1823	629	1053	50	2	35	31	1800	80	3.0	3.1	0.030	0.077	0.019	0.063	0.015	0.080	0.019	0.065	0.016
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,772	1,849	25,850		575	964	112	5	61	55	1772	670	1123	21	1	18	16	1849	80	4.2	2.5	0.030	0.110	0.027	0.088	0.021	0.064	0.015	0.053	0.013
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,823	1,800	25,900		641	1073	51	2	29	27	1823	629	1053	50	2	35	31	1800	80	3.0	3.1	0.030	0.077	0.019	0.063	0.015	0.080	0.019	0.065	0.016
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		222	729	6,800		72	120	15	1	7	7	222	246	411	41	2	15	14	729	80	4.2	3.6	0.060	0.209	0.051	0.021	0.005	0.175	0.042	0.057	0.014
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		674	240	6,550		234	391	26	1	12	10	674	81	135	10	0	7	7	240	80	3.2	3.7	0.060	0.154	0.037	0.047	0.011	0.183	0.044	0.020	0.005
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	206	149	2,550		56	95	27	1	14	13	206	54	90	3	0	1	1	149	70	6.6	2.5	0.200	0.978	0.237	0.090	0.022	0.360	0.087	0.024	0.006
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	295	214	3,650		93	155	26	1	10	10	295	66	110	16	1	11	10	214	70	4.6	5.1	0.200	0.681	0.165	0.090	0.022	0.754	0.182	0.072	0.017
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	913	863	12,700		264	443	104	5	51	46	913	283	473	48	2	30	27	863	80	5.8	4.1	0.030	0.154	0.037	0.063	0.015	0.108	0.026	0.042	0.010
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	1,570	809	17,000		526	882	76	3	43	40	1570	270	453	32	1	28	25	809	80	3.7	3.9	0.030	0.098	0.024	0.068	0.017	0.101	0.025	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	913	863	12,700		264	443	104	5	51	46	913	283	473	48	2	30	27	863	80	5.8	4.1	0.030	0.154	0.037	0.063	0.015	0.108	0.026	0.042	0.010
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	1,570	809	17,000		526	882	76	3	43	40	1570	270	453	32	1	28	25	809	80	3.7	3.9	0.030	0.098	0.024	0.068	0.017	0.101	0.025	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	406	374	5,550		121	203	42	2	20	18	406	126	210	16	1	11	10	374	80	5.4	3.7	0.060	0.267	0

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	MOVES Veh c e Type >>	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
										Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		758	840	11,400		261	438	25	1	17	16	758	295	493	24	1	14	13	840	80	3.3	3.0	0.030	0.086	0.021	0.029	0.007	0.078	0.019	0.029	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		228	682	6,500		71	120	19	1	9	8	228	240	403	17	1	11	10	682	80	4.7	2.9	0.060	0.232	0.056	0.024	0.006	0.143	0.035	0.044	0.011
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		894	360	8,950		322	539	15	1	9	8	894	120	202	18	1	10	9	360	80	2.6	3.8	0.060	0.125	0.030	0.050	0.012	0.185	0.045	0.030	0.007
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,663	2,820	46,300		1272	2129	98	4	84	76	3663	1021	1709	30	1	31	28	2820	60	3.2	2.5	0.030	0.084	0.020	0.138	0.033	0.065	0.016	0.082	0.020
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		2,487	3,238	40,900		867	1452	78	3	46	41	2487	1167	1953	34	2	43	39	3238	60	3.1	2.6	0.030	0.081	0.020	0.090	0.022	0.068	0.016	0.098	0.024
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,293	2,451	41,050		1141	1910	83	4	81	74	3293	887	1486	25	1	27	25	2451	60	3.3	2.5	0.030	0.086	0.021	0.126	0.030	0.065	0.016	0.071	0.017
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,356	2,706	36,150		826	1382	66	3	41	38	2356	974	1630	29	1	38	34	2706	60	3.0	2.6	0.030	0.079	0.019	0.083	0.020	0.068	0.017	0.083	0.020
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		4,047	3,201	51,750		1366	2288	174	8	110	101	4047	1116	1870	70	3	74	68	3201	60	3.6	3.2	0.030	0.095	0.023	0.172	0.042	0.083	0.020	0.118	0.029
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		3,237	4,170	52,900		1064	1781	141	6	128	117	3237	1469	2460	85	4	80	72	4170	60	4.1	3.0	0.030	0.109	0.026	0.157	0.038	0.078	0.019	0.145	0.035
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		982	1,147	15,200		334	558	49	2	20	19	982	403	674	32	1	19	18	1147	80	3.5	3.0	0.030	0.091	0.022	0.040	0.010	0.078	0.019	0.040	0.010
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,412	793	15,750		451	755	87	4	60	55	1412	277	465	18	1	17	15	793	80	4.5	3.1	0.030	0.119	0.029	0.075	0.018	0.081	0.020	0.029	0.007
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		758	828	11,350		245	409	54	2	25	23	758	298	500	7	0	12	11	828	80	4.3	2.6	0.030	0.112	0.027	0.038	0.009	0.068	0.016	0.025	0.006
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		1,203	844	14,600		399	667	21	1	60	55	1203	302	506	10	0	14	12	844	80	4.2	2.7	0.030	0.110	0.027	0.059	0.014	0.071	0.017	0.027	0.006
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		414	674	7,750		123	206	49	2	18	16	414	241	404	11	1	9	8	674	80	5.3	2.7	0.060	0.265	0.064	0.049	0.012	0.131	0.032	0.040	0.010
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		804	511	9,400		287	481	14	1	11	10	804	178	297	16	1	10	9	511	80	2.7	3.2	0.060	0.133	0.032	0.048	0.012	0.155	0.037	0.035	0.009
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,870	1,600	24,800		661	1106	51	2	26	24	1870	575	964	30	1	16	14	1600	60	2.9	2.6	0.030	0.075	0.018	0.062	0.015	0.067	0.016	0.048	0.012
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,449	1,699	22,500		496	831	72	3	25	22	1449	615	1031	22	1	16	14	1699	60	3.3	2.5	0.030	0.086	0.021	0.056	0.014	0.064	0.016	0.049	0.012
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		9	638	4,600		3	6	0	0	0	0	9	228	383	10	0	9	8	638	80	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.393	0.095	0.112	0.027
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		524	47	4,100		167	280	28	1	25	23	524	12	21	4	0	5	5	47	80	4.6	7.6	0.200	0.684	0.165	0.160	0.039	1.140	0.276	0.024	0.006
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		9	638	4,600		3	6	0	0	0	0	9	228	383	10	0	9	8	638	80	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.393	0.095	0.112	0.027
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		524	47	4,100		167	280	28	1	25	23	524	12	21	4	0	5	5	47	80	4.6	7.6	0.200	0.684	0.165	0.160	0.039	1.140	0.276	0.024	0.006
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		823	789	11,500		299	502	8	0	7	7	823	292	489	2	0	3	3	789	70	2.4	2.1	0.030	0.062	0.015	0.023	0.006	0.054	0.013	0.019	0.005
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		763	836	11,400		279	466	7	0	6	5	763	309	517	4	0	3	3	836	70	2.3	2.1	0.030	0.061	0.015	0.021	0.005	0.055	0.013	0.021	0.005
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		674	1,097	12,650		245	411	7	0	6	5	674	403	675	5	0	7	7	1097	70	2.4	2.2	0.030	0.062	0.015	0.019	0.005	0.058	0.014	0.028	0.007
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		550	699	8,900		200	334	6	0	5	5	550	261	437	0	0	1	0	699	70	2.4	1.9	0.060	0.119	0.029	0.029	0.007	0.094	0.023	0.029	0.007
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		80	633	5,100		29	48	2	0	1	0	80	226	379	12	1	8	7	633	70	2.5	2.7	0.060	0.123	0.030	0.004	0.001	0.132	0.032	0.037	0.009
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		675	209	6,300		244	409	10	0	6	6	675	74	123	4	0	4	4	209	70	2.5	3.0	0.060	0.121	0.029	0.037	0.009	0.146	0.035	0.014	0.003
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		218	760	7,000		67	113	20	1	9	8	218	274	459	12	1	7	7	760	70	4.9	2.5	0.060	0.242	0.059	0.024	0.006	0.124	0.030	0.042	0.010
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		867	246	7,950		313	524	13	1	8	8	867	85	142	9	0	5	5	246	70	2.5	3.3	0.060	0.123	0.030	0.048	0.012	0.161	0.039	0.018	0.004
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		940	2,841	27,000		312	523	49	2	28	26	940	1041	1742	18	1	20	19	2841	60	3.9	2.3	0.030	0.102	0.025	0.043	0.010	0.059	0.014	0.075	0.018
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		2,734	1,196	28,050		978	1639	47	2	36	32	2734	420	703	23	1	26	23	1196	60	2.7	3.1	0.030	0.070	0.017	0.085	0.021	0.080	0.019	0.043	0.010
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		584	1,065	11,800		185	310	43	2	23	21	584	385	644	11	1	13	11	1065	60	4.6	2.5	0.030	0.120	0.029	0.031	0.008	0.066	0.016	0.031	0.008
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,935	608	18,150		681	1141	47	2	33	31	1935	201	337	23	1	24	22	608	60	3.0	4.1	0.030	0.077	0.019	0.067	0.016	0.107	0.026	0.029	0.007
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		584	1,065	11,800		185	310	43	2	23	21	584	385	644	11	1	13	11	1065	60	4.6	2.5	0.030	0.120	0.029	0.031	0.008	0.066	0.016	0.031	0.008
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,935	608	18,150		681	1141	47	2	33	31	1935	201	337	23	1	24	22	608	60	3.0	4.1	0.030	0.077	0.019	0.067	0.016	0.107	0.026	0.029	0.007
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	748	971	12,300		273	458	7	0	5	5	748	350	587	11	1	12	10	971	70	2.3	2.6	0.030	0.060	0.015	0.020	0.005	0.066	0.016	0.029	0.007
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	781	942	12,300		272	456	23	1	15	14	781	350	587	1	0	2	2	942	70	3.1	2.0	0.030	0.081	0.020	0.028	0.007	0.052	0.013	0.022	0.005
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	597	760	9,700		219	367	5	0	3	3	597	281	471	2	0	3	3	760	70	2.2	2.1	0.060	0.109	0.026	0.029	0.007	0.103	0.025	0.035	0.008
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	763	827	11,350		280	469	3	0	6	5	763	307	515	1	0	2	2	827	70	2.3	2.0	0.030	0.059	0.014	0.020	0.005	0.052	0.013	0.019	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	605	533	8,150		221	370	8	0	3	3	605	199	333	0	0	1	0	533	70	2.3	1.9	0.060	0.112	0.027	0.030	0.007	0.094	0.023	0.022	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	554	832	9,900		205	342	1	0	3	3	554	310	519	1	0	1	1	832	70	2.2	2.0	0.060	0.105	0.025	0.026	0.006	0.096	0.023	0.036	0.009
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	338	878	8,700		73	123	68	3	37	34	338	299	502	34	2	21	20	878	80	9.3	3.5	0.060	0.465	0.112	0.070	0.017	0.170	0.041	0.067	0.016
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	934	446	9,850		322	538	36	2	19	17	934	134	225	32	1	28	26	446	80	3.3	5.5	0.060	0.161	0.039	0.067	0.016	0.273	0.066	0.054	0.013
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	268	931	8,550		92	153	11	1	6	5	268	323	541	31	1	18	17	931	80	3.4	3.2	0.060	0.167	0.040	0.020	0.005	0.156	0.038	0.065	0.016
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	939	363	9,300		327	548	32	1	16	15	939	127	212	9	0	8	7	363	80	3.1	3.1	0.060	0.152	0.037	0.064	0.015	0.153	0.037	0.025	0.006
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	139	877	7,250		49	83	2	0	3	2	139	304	508	29	1	18	17	877	80	2.9	3.2	0.060	0.141	0.034	0.009	0.002	0.158	0.038	0.062	0.015
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	846	347	8,500		273	457	45	2	36	33	846	126	211	3	0	4	3	347	80	4.4	2.5	0.060	0.218	0.053	0.082	0.020	0.120	0.029	0.019	0.004
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	32	870	6,450		12	19	0	0	1	0	32	303	507	27	1	17	15	870	80	2.6	3.1	0.060	0.126	0.030	0.002	0.000	0.154	0.037	0.060	0.014
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	933	128	7,600		304	508	48	2	37	34	933	47	80	0	0	1	0	128	80	4.3	2.1	0.060	0.211	0.051	0.088	0.021	0.101	0.024	0.006	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	322	1,124	10,350		102	171	25	1	12	11	322	397	664	25	1	19	18	1124	80	4.5	2.9	0.030	0.119	0.029	0.017	0.004	0.076	0.018	0.038	0.009
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,411	280	12,100		492	825	37	2	29	26	1411	98	164	5	0	7	6	280	80	3.1	3.1	0.030	0.081	0.020	0.051	0.012	0.082	0.020	0.010	0.002
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	322	1,124	10,350		102	171	25	1	12	11	322	397	664	25	1	19	18	1124	80	4.5	2.9	0.030	0.119	0.029	0.017	0.004	0.076	0.018	0.038	0.009
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,411	280	12,100		492	825	37	2	29	26	1411	98	164	5	0	7	6	280	80	3.1	3.1	0.030	0.081	0.020	0.051	0.012	0.082	0.020	0.010	0.002
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		2,200	2,617	34,400		790	1322	28	1	31	28	2200	944	1580	28	1	33	31	2617	60	2.7	2.6	0.030	0.069	0.017	0.068	0.016	0.067	0.016	0.078	0.019
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		2,528	2,708	37,400		919	1539	34	2	18	16	2528	1007	1686	3	0	6	6	2708	60	2.4	2.0	0.030	0.062	0.015	0.070	0.017	0.052	0.013	0.063	0.015
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		569	1,220	12,800		212	355	0	0	1	1	569	453	759	0	0	4	4	1220	60	2.0	2.0	0.030	0.051	0.012	0.013	0.003	0.053	0.013	0.029	0.007
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		1,456	661	15,100		524	877	16	1	20	18	1456	246	413	0	0	1	1	661	60	2.6	2.0	0.030	0.068	0.017	0.044	0.011	0.051	0.012	0.015	0.004
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		328	738	7,600		111	187	15	1	7	7	328	262	438	17	1	10	10	738	80	3.5	2.8	0.060	0.171	0.041	0.025	0.006	0.138	0.033	0.045	0.011
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		1,139	429	11,200		409	686	21	1	12	10	1139	143	239	23	1	12	11	429	80	2.6	3.8	0.030	0.067	0.016	0.034	0.008	0.100	0.024	0.019	0.005
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,999	2,368	38,350		1045	1749	85	4	61	55	2999	829	1387	50	2	52	48	2368	60	3.1	3.1	0.030	0.082	0.020	0.110	0.027	0.081	0.020	0.086	0.021
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		2,127	2,814	35,300		685	1148	117	5	90	82	2127	995	1666	51	2	52	48	2814	60	4.4	2.9	0.030	0.116	0.028	0.110	0.027	0.076	0.018	0.096	0.023
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		73	923	7,100		26	43	1	0	2	1	73	338	567	6	0	6	6	923	80	3.0	2.3	0.060	0.146	0.035	0.005	0.001	0.111	0.027	0.046	0.011
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		803	198	7,150		274	460	27	1	21	20	803	72	121	2	0	2	1	198	80	3.5	2.4	0.060	0.171	0.041	0.061	0.015	0.115	0.028	0.010	0.002
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		878	676	11,100		328	550	0	0	0	0	878	251	421	2	0	1	1	676	70	1.9	2.0	0.030	0.049	0.012	0.019	0.005	0.052	0.013	0.016	0.004
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		639	823	10,450		235	393	3	0	4	4	639	307	515	1	0	0	0	823	70	2.2	1.9	0.030	0.058	0.014	0.017	0.004	0.050	0.012	0.018	0.004
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		671	734	10,050		219	367	6	0	41	38	671	259	433	10	0	17	15	734	40	4.6	3.0	0.030	0.120	0.029	0.036	0.009	0.079	0.019	0.026	0.006
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		1,204	744	13,900		421	706	15	1	32	29	1204	265	444	11	0	13	11	744	60	3.2	2.8	0.030	0.083	0.020	0.045	0.011	0.073	0.018	0.024	0.006
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		759	1,007	12,600		253	423	35	2	24	22	759	358	599	11	1	20	18	1007	70	3.9	2.9	0.030	0.101	0.025	0.034	0.008	0.075	0.018	0.034	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		663	1,164	13,050		176	295	85	4	54	49	663	387	649	58	3	35	32	1164	60	7.1	3.9	0.030	0.187	0.045	0.056	0.013	0.101	0.024	0.053	0.013
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		671	734	10,050		219	367	6	0	41	38	671	259	433	10	0	17	15	734	40	4.6	3.0	0.030	0.120	0.029	0.036	0.009	0.079	0.019	0.026	0.006
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		1,523	954	17,700		511	857	73	3	41	38	1523	288	482	64	3	61	56	954	40	3.7	5.5	0.030	0.097	0.023	0.066	0.016	0.145	0.035	0.062	0.015
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		718	177	6,400		189	316	92	4	61	56	718	62	105	2	0	4	4	177	70	7.2	3.0	0.060	0.360	0.087	0.116	0.028	0.148	0.036	0.012	0.003
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		104	129	1,650		30	51	4	0	10	9	104	39	66	4	0	10	10	129	40	6.4	5.7	0.200	0.945	0.229	0.044	0.011	0.839	0.203	0.048	0.012
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		718	177	6,400		189	316	92	4	61	56	718	62	105	2	0	4	4	177	70	7.2	3.0	0.060	0.360	0.087	0.116	0.028	0.148	0.036	0.012	0.003
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		10,895	8,965	141,800		3059	5123	979	43	884	807	10895	2825	4730	415	18	511	466	8965	100	6.5	4.9	0.015	0.092	0.022	0.447	0.108	0.069	0.017	0.275	0.067
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		10,895	8,965	141,800		3059	5123	979	43	884	807	10895	2825	4730	415	18	511	466	8965	100	6.5	4.9	0.015	0.092	0.022	0.447	0.108	0.069	0.017	0.275	0.067
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		10,245	8,110	131,100		3153	5279	600	26	621	566	10245	2576	4313	366	16	439	400	8110	100	5.2	4.8	0.015	0.073	0.018	0.336	0.081	0.067	0.016	0.242	0.059
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		7,763	9,895	126,100		2321	3886	525	23	527	481	7763	3208	5371	290	13	530	483	9895	100	5.7	4.5	0.015	0.079	0.019	0.276	0.067	0.063	0.015	0.280	0.068
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		3,873	4,400	59,100		1207	2020	252	11	200	183	3873	1411	2362	170	8	235	214	4400	100	5.0	4.6	0.015	0.069	0.017	0.120	0.029	0.065	0.016	0.128	0.031
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		3,890	5,495	67,000		1114	1866	273	12	327	298	3890	1797	3009	120	5	295	269	5495	100	6.4	4.4	0.015	0.089	0.022	0.156	0.038	0.062	0.015	0.152	0.037
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		7,785	10,240	128,700		2326	3894	533	24	527	481	7785	3334	5584	291	13	532	486	10240	100	5.7	4.4	0.015	0.080	0.019	0.277	0.067	0.062	0.015	0.284	0.069
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		792	982	12,650		250	419	28	1	49	45	792	345	578	12	1	24	22	982	60	5.0	3.1	0.030	0.130	0.032	0.046	0.011	0.081	0.020	0.035	0.009
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		660	227	6,350		176	296	3	0	97	88	660	80	135	3	0	5	4	227	40	8.0	2.9	0.060	0.399	0.097	0.118	0.028	0.144	0.035	0.015	0.004
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total				AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,323	3,787	43,600		736	1233	166	7	95	86	2323	1340	2245	59	3	73	67	3787	100	4.6	2.9	0.015	0.064	0.016	0.067	0.016	0.041	0.010	0.069	0.017
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,721	3,237	56,800		1584	2653	97	4	200	183	4721	1141	1911	53	2	68	62	3237	100	3.9	3.0	0.015	0.055	0.013	0.116	0.028	0.042	0.010	0.060	0.015
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		3,001	1,950	35,400		985	1649	85	4	145	133	3001	685	1148	35	2	42	38	1950	100	4.3	3.0	0.015	0.060	0.015	0.081	0.019	0.042	0.010	0.037	0.009
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,595	2,926	32,300		495	830	130	6	70	64	1595	1027	1721	57	2	62	57	2926	100	4.9	3.1	0.015	0.068	0.017	0.049	0.012	0.042	0.010	0.055	0.013
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,106	4,117	44,400		767	1285	32	1	11	10	2106	1518	2542	24	1	17	15	4117	100	2.3	2.2	0.015	0.032	0.008	0.030	0.007	0.030	0.007	0.055	0.013
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,028	2,651	47,700		1480	2479	33	1	18	17	4028	975	1633	21	1	11	10	2651	100	2.2	2.2	0.015	0.030	0.007	0.055	0.013	0.030	0.007	0.036	0.009
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bramalea Rd_W

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	931	2,242	22,650		322	539	30	1	20	19	931	812	1359	28	1	22	20	2242	80	3.3	2.5	0.030	0.085	0.021	0.035	0.009	0.064	0.016	0.065	0.016
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	2,265	963	23,050		787	1318	65	3	48	44	2265	350	585	9	0	10	9	963	80	3.2	2.5	0.030	0.083	0.020	0.084	0.020	0.064	0.015	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	931	2,242	22,650		322	539	30	1	20	19	931	812	1359	28	1	22	20	2242	80	3.3	2.5	0.030	0.085	0.021	0.035	0.009	0.064	0.016	0.065	0.016
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,265	963	23,050		787	1318	65	3	48	44	2265	350	585	9	0	10	9	963	80	3.2	2.5	0.030	0.083	0.020	0.084	0.020	0.064	0.015	0.027	0.007
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	874	1,304	15,550		298	499	38	2	19	18	874	469	786	19	1	15	14	1304	80	3.4	2.6	0.030	0.090	0.022	0.035	0.008	0.067	0.016	0.039	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	1,397	710	15,050		478	800	49	2	36	32	1397	256	430	8	0	8	8	710	80	3.4	2.5	0.030	0.090	0.022	0.056	0.014	0.066	0.016	0.021	0.005
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	915	645	11,150		308	515	41	2	26	23	915	233	391	7	0	7	7	645	60	3.7	2.5	0.030	0.097	0.023	0.040	0.010	0.065	0.016	0.019	0.005
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	677	1,025	12,150		246	411	11	0	5	4	677	372	622	11	1	10	9	1025	60	2.4	2.5	0.030	0.063	0.015	0.019	0.005	0.064	0.015	0.029	0.007
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,113	637	12,500		408	684	10	0	6	5	1113	231	387	7	0	6	6	637	60	2.2	2.5	0.030	0.058	0.014	0.029	0.007	0.064	0.015	0.018	0.004
Heritage Rd	Heritage Rd At Hwy 413_NB	D36	WB	1	2	369	1,091	10,450		116	195	23	1	18	16	369	400	671	7	0	7	6	1091	60	4.8	2.2	0.030	0.125	0.030	0.021	0.005	0.058	0.014	0.028	0.007
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		661	1,333	14,250		243	407	3	0	4	4	661	491	822	2	0	9	9	1333	60	2.2	2.2	0.030	0.058	0.014	0.017	0.004	0.057	0.014	0.034	0.008
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		1,323	881	15,750		469	785	19	1	26	23	1323	326	545	4	0	3	3	881	60	2.9	2.1	0.030	0.076	0.018	0.045	0.011	0.055	0.013	0.022	0.005
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		524	794	9,400		195	327	0	0	1	1	524	294	492	0	0	4	4	794	60	2.0	2.1	0.060	0.096	0.023	0.023	0.005	0.103	0.025	0.037	0.009
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		965	549	10,800		340	570	16	1	20	18	965	205	342	0	0	1	1	549	60	3.0	2.0	0.030	0.078	0.019	0.034	0.008	0.051	0.012	0.013	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		954	237	8,500		357	597	0	0	0	0	954	88	147	0	0	1	1	237	60	1.9	2.1	0.060	0.092	0.022	0.039	0.010	0.101	0.025	0.011	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		264	752	7,250		95	160	2	0	4	3	264	281	470	0	0	1	0	752	60	2.6	1.9	0.060	0.126	0.030	0.015	0.004	0.094	0.023	0.032	0.008
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		681	503	8,450		253	425	0	0	2	1	681	165	277	31	1	15	14	503	60	2.0	4.0	0.060	0.097	0.023	0.030	0.007	0.197	0.048	0.044	0.011
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		288	849	8,100		80	133	36	2	19	18	288	315	527	2	0	3	2	849	60	6.5	2.1	0.060	0.321	0.078	0.041	0.010	0.100	0.024	0.038	0.009
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,905	1,786	26,350		630	1056	94	4	63	58	1905	621	1039	54	2	37	33	1786	60	4.0	3.2	0.030	0.104	0.025	0.089	0.021	0.083	0.020	0.066	0.016
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,678	1,776	24,650		534	894	117	5	67	61	1678	606	1015	59	3	49	44	1776	60	4.5	3.5	0.030	0.119	0.029	0.089	0.022	0.092	0.022	0.073	0.018
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,090	2,342	31,650		695	1165	101	4	65	60	2090	826	1383	56	2	39	36	2342	60	3.9	2.9	0.030	0.101	0.025	0.095	0.023	0.076	0.018	0.080	0.019
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		976	536	10,800		347	581	14	1	17	16	976	200	334	0	0	1	1	536	60	2.8	2.0	0.030	0.074	0.018	0.032	0.008	0.051	0.012	0.012	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,090	2,342	31,650		695	1165	101	4	65	60	2090	826	1383	56	2	39	36	2342	60	3.9	2.9	0.030	0.101	0.025	0.095	0.023	0.076	0.018	0.080	0.019
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		2,122	2,137	30,400		697	1166	120	5	70	64	2122	740	1239	62	3	49	44	2137	60	4.1	3.3	0.030	0.107	0.026	0.101	0.024	0.085	0.021	0.081	0.020
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		861	821	12,000		297	498	33	1	17	15	861	300	503	10	0	4	4	821	60	3.2	2.3	0.030	0.085	0.020	0.033	0.008	0.059	0.014	0.022	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		947	872	13,000		341	570	20	1	8	7	947	322	538	6	0	3	3	872	60	2.5	2.1	0.030	0.066	0.016	0.028	0.007	0.056	0.013	0.022	0.005
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		694	1,018	12,250		242	406	22	1	12	11	694	374	627	10	0	4	3	1018	60	3.1	2.2	0.030	0.080	0.019	0.025	0.006	0.057	0.014	0.026	0.006
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		1,300	661	14,000		470	787	25	1	9	8	1300	244	408	4	0	3	2	661	60	2.5	2.1	0.030	0.064	0.015	0.037	0.009	0.056	0.013	0.016	0.004
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,824	1,169	21,400		630	1056	64	3	37	34	1824	419	702	19	1	15	13	1169	80	3.2	2.7	0.030	0.085	0.020	0.069	0.017	0.069	0.017	0.036	0.009
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		952	1,717	19,050		321	537	45	2	25	22	952	617	1034	26	1	20	19	1717	80	3.6	2.6	0.030	0.095	0.023	0.040	0.010	0.068	0.016	0.052	0.013
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		1,772	1,849	25,850		575	964	112	5	61	55	1772	670	1123	21	1	18	16	1849	80	4.2	2.5	0.030	0.110	0.027	0.088	0.021	0.064	0.015	0.053	0.013
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		1,823	1,800	25,900		641	1073	51	2	29	27	1823	629	1053	50	2	35	31	1800	80	3.0	3.1	0.030	0.077	0.019	0.063	0.015	0.080	0.019	0.065	0.016
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,772	1,849	25,850		575	964	112	5	61	55	1772	670	1123	21	1	18	16	1849	80	4.2	2.5	0.030	0.110	0.027	0.088	0.021	0.064	0.015	0.053	0.013
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,823	1,800	25,900		641	1073	51	2	29	27	1823	629	1053	50	2	35	31	1800	80	3.0	3.1	0.030	0.077	0.019	0.063	0.015	0.080	0.019	0.065	0.016
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		222	729	6,800		72	120	15	1	7	7	222	246	411	41	2	15	14	729	80	4.2	3.6	0.060	0.209	0.051	0.021	0.005	0.175	0.042	0.057	0.014
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		674	240	6,550		234	391	26	1	12	10	674	81	135	10	0	7	7	240	80	3.2	3.7	0.060	0.154	0.037	0.047	0.011	0.183	0.044	0.020	0.005
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	206	149	2,550		56	95	27	1	14	13	206	54	90	3	0	1	1	149	70	6.6	2.5	0.200	0.978	0.237	0.090	0.022	0.360	0.087	0.024	0.006
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	295	214	3,650		93	155	26	1	10	10	295	66	110	16	1	11	10	214	70	4.6	5.1	0.200	0.681	0.165	0.090	0.022	0.754	0.182	0.072	0.017
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	913	863	12,700		264	443	104	5	51	46	913	283	473	48	2	30	27	863	80	5.8	4.1	0.030	0.154	0.037	0.063	0.015	0.108	0.026	0.042	0.010
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	1,570	809	17,000		526	882	76	3	43	40	1570	270	453	32	1	28	25	809	80	3.7	3.9	0.030	0.098	0.024	0.068	0.017	0.101	0.025	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	913	863	12,700		264	443	104	5	51	46	913	283	473	48	2	30	27	863	80	5.8	4.1	0.030	0.154	0.037	0.063	0.015	0.108	0.026	0.042	0.010
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	1,570	809	17,000		526	882	76	3	43	40	1570	270	453	32	1	28	25	809	80	3.7	3.9	0.030	0.098	0.024	0.068	0.017	0.101	0.025	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	406	374	5,550		121	203	42	2	20	18	406	126	210	16	1	11	10	374	80	5.4	3.7	0.060	0.267	0.065	0.108	0.026	0.183	0.044	0.031	0.007
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	2	3	583	330	6,500		192	322	32	1	19	17	583	112	187	12	1	9	9	330	80	4.0	3.6	0.060	0.197	0.048	0.051	0.012	0.178	0.043	0.026	0.006
Old School Rd	Old School Rd W of Chin

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	MOVES Veh c e Type >>	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
										Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		758	840	11,400		261	438	25	1	17	16	758	295	493	24	1	14	13	840	80	3.3	3.0	0.030	0.086	0.021	0.029	0.007	0.078	0.019	0.029	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		228	682	6,500		71	120	19	1	9	8	228	240	403	17	1	11	10	682	80	4.7	2.9	0.060	0.232	0.056	0.024	0.006	0.143	0.035	0.044	0.011
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		894	360	8,950		322	539	15	1	9	8	894	120	202	18	1	10	9	360	80	2.6	3.8	0.060	0.125	0.030	0.050	0.012	0.185	0.045	0.030	0.007
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,663	2,820	46,300		1272	2129	98	4	84	76	3663	1021	1709	30	1	31	28	2820	60	3.2	2.5	0.030	0.084	0.020	0.138	0.033	0.065	0.016	0.082	0.020
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		2,487	3,238	40,900		867	1452	78	3	46	41	2487	1167	1953	34	2	43	39	3238	60	3.1	2.6	0.030	0.081	0.020	0.090	0.022	0.068	0.016	0.098	0.024
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,293	2,451	41,050		1141	1910	83	4	81	74	3293	887	1486	25	1	27	25	2451	60	3.3	2.5	0.030	0.086	0.021	0.126	0.030	0.065	0.016	0.071	0.017
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,356	2,706	36,150		826	1382	66	3	41	38	2356	974	1630	29	1	38	34	2706	60	3.0	2.6	0.030	0.079	0.019	0.083	0.020	0.068	0.017	0.083	0.020
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		4,047	3,201	51,750		1366	2288	174	8	110	101	4047	1116	1870	70	3	74	68	3201	60	3.6	3.2	0.030	0.095	0.023	0.172	0.042	0.083	0.020	0.118	0.029
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		3,237	4,170	52,900		1064	1781	141	6	128	117	3237	1469	2460	85	4	80	72	4170	60	4.1	3.0	0.030	0.109	0.026	0.157	0.038	0.078	0.019	0.145	0.035
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		982	1,147	15,200		334	558	49	2	20	19	982	403	674	32	1	19	18	1147	80	3.5	3.0	0.030	0.091	0.022	0.040	0.010	0.078	0.019	0.040	0.010
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,412	793	15,750		451	755	87	4	60	55	1412	277	465	18	1	17	15	793	80	4.5	3.1	0.030	0.119	0.029	0.075	0.018	0.081	0.020	0.029	0.007
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		758	828	11,350		245	409	54	2	25	23	758	298	500	7	0	12	11	828	80	4.3	2.6	0.030	0.112	0.027	0.038	0.009	0.068	0.016	0.025	0.006
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		1,203	844	14,600		399	667	21	1	60	55	1203	302	506	10	0	14	12	844	80	4.2	2.7	0.030	0.110	0.027	0.059	0.014	0.071	0.017	0.027	0.006
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		414	674	7,750		123	206	49	2	18	16	414	241	404	11	1	9	8	674	80	5.3	2.7	0.060	0.265	0.064	0.049	0.012	0.131	0.032	0.040	0.010
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		804	511	9,400		287	481	14	1	11	10	804	178	297	16	1	10	9	511	80	2.7	3.2	0.060	0.133	0.032	0.048	0.012	0.155	0.037	0.035	0.009
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,870	1,600	24,800		661	1106	51	2	26	24	1870	575	964	30	1	16	14	1600	60	2.9	2.6	0.030	0.075	0.018	0.062	0.015	0.067	0.016	0.048	0.012
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,449	1,699	22,500		496	831	72	3	25	22	1449	615	1031	22	1	16	14	1699	60	3.3	2.5	0.030	0.086	0.021	0.056	0.014	0.064	0.016	0.049	0.012
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		9	638	4,600		3	6	0	0	0	0	9	228	383	10	0	9	8	638	80	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.393	0.095	0.112	0.027
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		524	47	4,100		167	280	28	1	25	23	524	12	21	4	0	5	5	47	80	4.6	7.6	0.200	0.684	0.165	0.160	0.039	1.140	0.276	0.024	0.006
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		9	638	4,600		3	6	0	0	0	0	9	228	383	10	0	9	8	638	80	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.393	0.095	0.112	0.027
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		524	47	4,100		167	280	28	1	25	23	524	12	21	4	0	5	5	47	80	4.6	7.6	0.200	0.684	0.165	0.160	0.039	1.140	0.276	0.024	0.006
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		823	789	11,500		299	502	8	0	7	7	823	292	489	2	0	3	3	789	70	2.4	2.1	0.030	0.062	0.015	0.023	0.006	0.054	0.013	0.019	0.005
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		763	836	11,400		279	466	7	0	6	5	763	309	517	4	0	3	3	836	70	2.3	2.1	0.030	0.061	0.015	0.021	0.005	0.055	0.013	0.021	0.005
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		674	1,097	12,650		245	411	7	0	6	5	674	403	675	5	0	7	7	1097	70	2.4	2.2	0.030	0.062	0.015	0.019	0.005	0.058	0.014	0.028	0.007
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		550	699	8,900		200	334	6	0	5	5	550	261	437	0	0	1	0	699	70	2.4	1.9	0.060	0.119	0.029	0.029	0.007	0.094	0.023	0.029	0.007
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		80	633	5,100		29	48	2	0	1	0	80	226	379	12	1	8	7	633	70	2.5	2.7	0.060	0.123	0.030	0.004	0.001	0.132	0.032	0.037	0.009
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		675	209	6,300		244	409	10	0	6	6	675	74	123	4	0	4	4	209	70	2.5	3.0	0.060	0.121	0.029	0.037	0.009	0.146	0.035	0.014	0.003
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		218	760	7,000		67	113	20	1	9	8	218	274	459	12	1	7	7	760	70	4.9	2.5	0.060	0.242	0.059	0.024	0.006	0.124	0.030	0.042	0.010
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		867	246	7,950		313	524	13	1	8	8	867	85	142	9	0	5	5	246	70	2.5	3.3	0.060	0.123	0.030	0.048	0.012	0.161	0.039	0.018	0.004
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		940	2,841	27,000		312	523	49	2	28	26	940	1041	1742	18	1	20	19	2841	60	3.9	2.3	0.030	0.102	0.025	0.043	0.010	0.059	0.014	0.075	0.018
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		2,734	1,196	28,050		978	1639	47	2	36	32	2734	420	703	23	1	26	23	1196	60	2.7	3.1	0.030	0.070	0.017	0.085	0.021	0.080	0.019	0.043	0.010
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		584	1,065	11,800		185	310	43	2	23	21	584	385	644	11	1	13	11	1065	60	4.6	2.5	0.030	0.120	0.029	0.031	0.008	0.066	0.016	0.031	0.008
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,935	608	18,150		681	1141	47	2	33	31	1935	201	337	23	1	24	22	608	60	3.0	4.1	0.030	0.077	0.019	0.067	0.016	0.107	0.026	0.029	0.007
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		584	1,065	11,800		185	310	43	2	23	21	584	385	644	11	1	13	11	1065	60	4.6	2.5	0.030	0.120	0.029	0.031	0.008	0.066	0.016	0.031	0.008
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,935	608	18,150		681	1141	47	2	33	31	1935	201	337	23	1	24	22	608	60	3.0	4.1	0.030	0.077	0.019	0.067	0.016	0.107	0.026	0.029	0.007
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	748	971	12,300		273	458	7	0	5	5	748	350	587	11	1	12	10	971	70	2.3	2.6	0.030	0.060	0.015	0.020	0.005	0.066	0.016	0.029	0.007
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	781	942	12,300		272	456	23	1	15	14	781	350	587	1	0	2	2	942	70	3.1	2.0	0.030	0.081	0.020	0.028	0.007	0.052	0.013	0.022	0.005
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	597	760	9,700		219	367	5	0	3	3	597	281	471	2	0	3	3	760	70	2.2	2.1	0.060	0.109	0.026	0.029	0.007	0.103	0.025	0.035	0.008
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	763	827	11,350		280	469	3	0	6	5	763	307	515	1	0	2	2	827	70	2.3	2.0	0.030	0.059	0.014	0.020	0.005	0.052	0.013	0.019	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	605	533	8,150		221	370	8	0	3	3	605	199	333	0	0	1	0	533	70	2.3	1.9	0.060	0.112	0.027	0.030	0.007	0.094	0.023	0.022	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	554	832	9,900		205	342	1	0	3	3	554	310	519	1	0	1	1	832	70	2.2	2.0	0.060	0.105	0.025	0.026	0.006	0.096	0.023	0.036	0.009
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	338	878	8,700		73	123	68	3	37	34	338	299	502	34	2	21	20	878	80	9.3	3.5	0.060	0.465	0.112	0.070	0.017	0.170	0.041	0.067	0.016
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	934	446	9,850		322	538	36	2	19	17	934	134	225	32	1	28	26	446	80	3.3	5.5	0.060	0.161	0.039	0.067	0.016	0.273	0.066	0.054	0.013
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	268	931	8,550		92	153	11	1	6	5	268	323	541	31	1	18	17	931	80	3.4	3.2	0.060	0.167	0.040	0.020	0.005	0.156	0.038	0.065	0.016
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	939	363	9,300		327	548	32	1	16	15	939	127	212	9	0	8	7	363	80	3.1	3.1	0.060	0.152	0.037	0.064	0.015	0.153	0.037	0.025	0.006
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	139	877	7,250		49	83	2	0	3	2	139	304	508	29	1	18	17	877	80	2.9	3.2	0.060	0.141	0.034	0.009	0.002	0.158	0.038	0.062	0.015
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	846	347	8,500		273	457	45	2	36	33	846	126	211	3	0	4	3	347	80	4.4	2.5	0.060	0.218	0.053	0.082	0.020	0.120	0.029	0.019	0.004
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	32	870	6,450		12	19	0	0	1	0	32	303	507	27	1	17	15	870	80	2.6	3.1	0.060	0.126	0.030	0.002	0.000	0.154	0.037	0.060	0.014
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	933	128	7,600		304	508	48	2	37	34	933	47	80	0	0	1	0	128	80	4.3	2.1	0.060	0.211	0.051	0.088	0.021	0.101	0.024	0.006	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	322	1,124	10,350		102	171	25	1	12	11	322	397	664	25	1	19	18	1124	80	4.5	2.9	0.030	0.119	0.029	0.017	0.004	0.076	0.018	0.038	0.009
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,411	280	12,100		492	825	37	2	29	26	1411	98	164	5	0	7	6	280	80	3.1	3.1	0.030	0.081	0.020	0.051	0.012	0.082	0.020	0.010	0.002
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	322	1,124	10,350		102	171	25	1	12	11	322	397	664	25	1	19	18	1124	80	4.5	2.9	0.030	0.119	0.029	0.017	0.004	0.076	0.018	0.038	0.009
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,411	280	12,100		492	825	37	2	29	26	1411	98	164	5	0	7	6	280	80	3.1	3.1	0.030	0.081	0.020	0.051	0.012	0.082	0.020	0.010	0.002
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		765	738	10,750		277	465	10	0	7	6	765	267	448	7	0	8	8	738	70	2.4	2.5	0.030	0.064	0.015	0.022	0.005	0.065	0.016	0.021	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		650	773	10,150		228	381	17	1	12	11	650	285	477	4	0	4	3	773	70	3.0	2.2	0.030	0.079	0.019	0.023	0.006	0.056	0.014	0.019	0.005
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		617	810	10,200		222	373	10	0	6	6	617	295	493	7	0	8	7	810	80	2.5	2.4	0.030	0.066	0.016	0.018	0.004	0.063	0.015	0.023	0.006
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		539	662	8,600		191	319	12	1	8	8	539	245	410	2	0	3	2	662	80	2.9	2.1	0.060	0.140	0.034	0.034	0.008	0.102	0.025	0.030	0.007
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		617	810	10,200		222	373	10	0	6	6	617	295	493	7	0	8	7	810	80	2.5	2.4	0.030	0.066	0.016	0.018	0.004	0.063	0.015	0.023	0.006
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		539	662	8,600		191	319	12	1	8	8	539	245	410	2	0	3	2	662	80	2.9	2.1	0.060	0.140	0.034	0.034	0.008	0.102	0.025	0.030	0.007
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,652	2,064	33,700		907	1518	98	4	65	60	2652	726	1217	43	2	40	36	2064	70	3.4	3.0	0.030	0.090	0.022	0.107	0.026	0.078	0.019	0.072	0.017
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,970	2,379	31,050		680	1139	66	3	43	39	1970	831	1391	52	2	54	49	2379	70	3.3	3.1	0.030	0.086	0.021	0.075	0.018	0.082	0.020	0.087	0.021
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,605	2,104	33,650		887	1486	100	4	67	61	2605	738	1237	46	2	42	39	2104	70	3.5	3.0	0.030	0.092	0.022	0.107	0.026	0.079	0.019	0.075	0.018
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		2,059	2,482	32,450		709	1186	73	3	46	42	2059	859	1438	61	3	63	58	2482	70	3.3	3.3	0.030	0.087	0.021	0.080	0.019	0.086	0.021	0.096	0.023
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		1,097	1,854	21,100		378	634	38	2	24	21	1097	549	919	170	8	109	99	1854	80	3.3	5.6	0.030	0.086	0.021	0.042	0.010	0.148	0.036	0.123	0.030
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,634	1,265	20,700		563	942	64	3	32	30	1634	442	740	35	2	24	22	1265	80	3.3	3.1	0.030	0.086	0.021	0.063	0.015	0.080	0.019	0.045	0.011
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		983	1,407	17,050		354	593	18	1	9	8	983	514	862	18	1	6	6	1407	70	2.5	2.3	0.030	0.066	0.016	0.029	0.007	0.059	0.014	0.037	0.009
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,660	1,055	19,400		603	1010	30	1	8	8	1660	376	629	19	1	16	14	1055	70	2.4	2.8	0.030	0.061	0.015	0.046	0.011	0.072	0.017	0.034	0.008
Coleraine Dr	Coleraine Dr At Mayfield Rd_NB	E71	NB	4		1,513	1,703	22,950		562	942	4	0	3	2	1513	628	1052	13	1	5	4	1703	70	2.0	2.1	0.030	0.052	0.013	0.035	0.009	0.055	0.013	0.042	0.010
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		2,036	1,501	25,250		745	1248	28	1	7	7	2036	556	932	5	0	4	4	1501	70	2.2	2.1	0.030	0.058	0.014	0.053	0.013	0.053	0.013	0.036	0.009
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		697	694	9,950		253	424	8	0	6	6	697	255	426	5	0	4	4	694	60	2.4	2.2	0.060	0.119	0.029	0.037	0.009	0.110	0.027	0.034	0.008
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		982	591	11,250		354	592	19	1	8	8	982	219	367	1	0	2	2	591	60	2.5	2.1	0.030	0.066	0.016	0.029	0.007	0.054	0.013	0.014	0.003
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		2,224	3,140	38,300		786	1316	43	2	40	37	2224	1144	1915	29	1	27	24	3140	70	2.9	2.4	0.030	0.076	0.018	0.076	0.018	0.062	0.015	0.087	0.021
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,899	2,322	44,450		1385	2319	55	2	72	66	3899	854	1430	16	1	11	10	2322	70	2.9	2.2	0.030	0.075	0.018	0.130	0.031	0.057	0.014	0.059	0.014
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,322	3,202	39,450		819	1371	42	2	46	42	2322	1167	1954	28	1	27	25	3202	70	3.0	2.4	0.030	0.078	0.019	0.081	0.019	0.062	0.015	0.088	0.021
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,915	2,513	45,900		1386	2321	57	2	78	71	3915	924	1548	16	1	13	11	2513	70	2.9	2.2	0.030	0.076	0.018	0.133	0.032	0.057	0.014	0.064	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,172	3,148	38,000		775	1297	59	3	20	18	2172	1155	1935	28	1	15	14	3148	70	2.7	2.2	0.030	0.069	0.017	0.067	0.016	0.058	0.014	0.081	0.020
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		3,520	2,399	42,300		1281	2146	41	2	26	24	3520	875	1465	25	1	17	16	2399	70	2.4	2.3	0.030	0.062	0.015	0.097	0.023	0.061	0.015	0.065	0.016
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		848	802	11,800		307	515	9	0	9	8	848	294	493	5	0	5	5	802	70	2.5	2.3	0.030	0.064	0.016	0.024	0.006	0.058	0.014	0.021	0.005
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		915	768	12,000		330	552	13	1	10	9	915	285	476	1	0	3	3	768

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		569	1,220	12,800		212	355	0	0	1	1	569	453	759	0	0	4	4	1220	60	2.0	2.0	0.030	0.051	0.012	0.013	0.003	0.053	0.013	0.029	0.007
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		1,456	661	15,100		524	877	16	1	20	18	1456	246	413	0	0	1	1	661	60	2.6	2.0	0.030	0.068	0.017	0.044	0.011	0.051	0.012	0.015	0.004
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		328	738	7,600		111	187	15	1	7	7	328	262	438	17	1	10	10	738	80	3.5	2.8	0.060	0.171	0.041	0.025	0.006	0.138	0.033	0.045	0.011
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		1,139	429	11,200		409	686	21	1	12	10	1139	143	239	23	1	12	11	429	80	2.6	3.8	0.030	0.067	0.016	0.034	0.008	0.100	0.024	0.019	0.005
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,999	2,368	38,350		1045	1749	85	4	61	55	2999	829	1387	50	2	52	48	2368	60	3.1	3.1	0.030	0.082	0.020	0.110	0.027	0.081	0.020	0.086	0.021
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		2,127	2,814	35,300		685	1148	117	5	90	82	2127	995	1666	51	2	52	48	2814	60	4.4	2.9	0.030	0.116	0.028	0.110	0.027	0.076	0.018	0.096	0.023
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		73	923	7,100		26	43	1	0	2	1	73	338	567	6	0	6	6	923	80	3.0	2.3	0.060	0.146	0.035	0.005	0.001	0.111	0.027	0.046	0.011
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		803	198	7,150		274	460	27	1	21	20	803	72	121	2	0	2	1	198	80	3.5	2.4	0.060	0.171	0.041	0.061	0.015	0.115	0.028	0.010	0.002
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		878	676	11,100		328	550	0	0	0	0	878	251	421	2	0	1	1	676	70	1.9	2.0	0.030	0.049	0.012	0.019	0.005	0.052	0.013	0.016	0.004
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		639	823	10,450		235	393	3	0	4	4	639	307	515	1	0	0	0	823	70	2.2	1.9	0.030	0.058	0.014	0.017	0.004	0.050	0.012	0.018	0.004
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		34	150	1,300		13	21	0	0	0	0	34	55	93	1	0	1	0	150	60	1.9	2.1	0.200	0.276	0.067	0.004	0.001	0.311	0.075	0.021	0.005
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		545	37	4,150		201	336	4	0	2	2	545	14	23	0	0	0	0	37	60	2.2	1.9	0.200	0.315	0.076	0.077	0.019	0.276	0.067	0.005	0.001
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		848	802	11,800		307	515	9	0	9	8	848	294	493	5	0	5	5	802	70	2.5	2.3	0.030	0.064	0.016	0.024	0.006	0.058	0.014	0.021	0.005
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		915	768	12,000		330	552	13	1	10	9	915	285	476	1	0	3	3	768	70	2.6	2.1	0.030	0.066	0.016	0.027	0.007	0.054	0.013	0.019	0.004
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	27	9	250		10	16	0	0	1	0	27	3	6	0	0	0	0	9	60	2.7	1.9	0.600	1.073	0.260	0.013	0.003	0.751	0.182	0.003	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	7	101	750		2	4	0	0	1	0	7	36	61	1	0	2	1	101	60	5.0	2.7	0.200	0.736	0.178	0.002	0.001	0.391	0.095	0.018	0.004
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		1,670	887	18,250		613	1027	14	1	8	7	1670	325	543	10	0	5	4	887	40	2.2	2.3	0.030	0.057	0.014	0.043	0.010	0.059	0.014	0.023	0.006
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		2,359	1,765	29,450		867	1453	18	1	10	10	2359	651	1090	11	1	6	6	1765	60	2.2	2.1	0.030	0.057	0.014	0.060	0.015	0.055	0.013	0.044	0.011
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		2,106	4,117	44,450		767	1285	32	1	11	10	2106	1518	2542	24	1	17	15	4117	70	2.3	2.2	0.030	0.060	0.015	0.057	0.014	0.056	0.013	0.103	0.025
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		671	734	10,050		219	367	6	0	41	38	671	259	433	10	0	17	15	734	40	4.6	3.0	0.030	0.120	0.029	0.036	0.009	0.079	0.019	0.026	0.006
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		1,204	744	13,900		421	706	15	1	32	29	1204	265	444	11	0	13	11	744	60	3.2	2.8	0.030	0.083	0.020	0.045	0.011	0.073	0.018	0.024	0.006
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		759	1,007	12,600		253	423	35	2	24	22	759	358	599	11	1	20	18	1007	70	3.9	2.9	0.030	0.101	0.025	0.034	0.008	0.075	0.018	0.034	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		663	1,164	13,050		176	295	85	4	54	49	663	387	649	58	3	35	32	1164	60	7.1	3.9	0.030	0.187	0.045	0.056	0.013	0.101	0.024	0.053	0.013
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		671	734	10,050		219	367	6	0	41	38	671	259	433	10	0	17	15	734	40	4.6	3.0	0.030	0.120	0.029	0.036	0.009	0.079	0.019	0.026	0.006
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		1,523	954	17,700		511	857	73	3	41	38	1523	288	482	64	3	61	56	954	40	3.7	5.5	0.030	0.097	0.023	0.066	0.016	0.145	0.035	0.062	0.015
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar R

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36			AM Peak	PM Peak		$PM_{2.5}$		$PM_{2.5}$		$PM_{2.5}$		$PM_{2.5}$
																											PM_{10} (g/VKT)	(g/VKT)	PM_{10} (g/s mile)	(g/s mile)	PM_{10} (g/VKT)	(g/VKT)	PM_{10} (g/s mile)	(g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,323	3,787	43,600		736	1233	166	7	95	86	2323	1340	2245	59	3	73	67	3787	100	4.6	2.9	0.015	0.064	0.016	0.067	0.016	0.041	0.010	0.069	0.017
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		4,721	3,237	56,800		1584	2653	97	4	200	183	4721	1141	1911	53	2	68	62	3237	100	3.9	3.0	0.015	0.055	0.013	0.116	0.028	0.042	0.010	0.060	0.015
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		3,001	1,950	35,400		985	1649	85	4	145	133	3001	685	1148	35	2	42	38	1950	100	4.3	3.0	0.015	0.060	0.015	0.081	0.019	0.042	0.010	0.037	0.009
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,595	2,926	32,300		495	830	130	6	70	64	1595	1027	1721	57	2	62	57	2926	100	4.9	3.1	0.015	0.068	0.017	0.049	0.012	0.042	0.010	0.055	0.013
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,106	4,117	44,400		767	1285	32	1	11	10	2106	1518	2542	24	1	17	15	4117	100	2.3	2.2	0.015	0.032	0.008	0.030	0.007	0.030	0.007	0.055	0.013
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,028	2,651	47,700		1480	2479	33	1	18	17	4028	975	1633	21	1	11	10	2651	100	2.2	2.2	0.015	0.030	0.007	0.055	0.013	0.030	0.007	0.036	0.009
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		5,986	10,861	120,300		1828	3061	465	20	320	292	5986	3889	6514	178	8	142	130	10861	100	5.2	2.7	0.015	0.073	0.018	0.195	0.047	0.037	0.009	0.180	0.043
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		10,378	5,698	114,800		3558	5958	344	15	263	240	10378	1922	3220	170	8	198	180	5698	100	3.4	3.8	0.015	0.048	0.011	0.220	0.053	0.052	0.013	0.133	0.032
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		4,512	9,900	102,900		1343	2249	374	16	277	253	4512	3576	5988	119	5	111	101	9900	100	5.6	2.5	0.015	0.079	0.019	0.159	0.038	0.035	0.008	0.155	0.038
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		9,440	4,502	99,600		3237	5420	297	13	247	226	9440	1508	2525	133	6	173	157	4502	100	3.4	3.9	0.015	0.048	0.012	0.201	0.049	0.054	0.013	0.109	0.026
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		4,558	10,135	104,900		1360	2277	374	16	278	253	4558	3664	6135	119	5	111	101	10135	100	5.6	2.5	0.015	0.078	0.019	0.159	0.039	0.035	0.008	0.158	0.038
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		10,824	4,956	112,700		3734	6253	318	14	264	241	10824	1658	2776	152	7	190	173	4956	100	3.3	3.9	0.015	0.046	0.011	0.224	0.054	0.055	0.013	0.121	0.029
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle										AM Peak		PM Peak	
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AP 42 Emission Factor	Base Emission Rate	AP 42 Emission Factor	Base Emission Rate
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak						
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	206	149	2,550		56	95	27	1	14	13	206	54	90	3	0	1	1	149	70	6.6	2.5	0.200	0.978	0.237	0.090	0.022	0.360	0.087	0.024	0.006
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	295	214	3,650		93	155	26	1	10	10	295	66	110	16	1	11	10	214	70	4.6	5.1	0.200	0.681	0.165	0.090	0.022	0.754	0.182	0.072	0.017
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	913	863	12,700		264	443	104	5	51	46	913	283	473	48	2	30	27	863	80	5.8	4.1	0.030	0.154	0.037	0.063	0.015	0.108	0.026	0.042	0.010
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	1,570	809	17,000		526	882	76	3	43	40	1570	270	453	32	1	28	25	809	80	3.7	3.9	0.030	0.098	0.024	0.068	0.017	0.101	0.025	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	913	863	12,700		264	443	104	5	51	46	913	283	473	48	2	30	27	863	80	5.8	4.1	0.030	0.154	0.037	0.063	0.015	0.108	0.026	0.042	0.010
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	1,570	809	17,000		526	882	76	3	43	40	1570	270	453	32	1	28	25	809	80	3.7	3.9	0.030	0.098	0.024	0.068	0.017	0.101	0.025	0.037	0.009
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	406	374	5,550		121	203	42	2	20	18	406	126	210	16	1	11	10	374	80	5.4	3.7	0.060	0.267	0.065	0.048	0.012	0.183	0.044	0.031	0.007
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	2	3	583	330	6,500		192	322	32	1	19	17	583	112	187	12	1	9	9	330	80	4.0	3.6	0.060	0.197	0.

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36			AM Peak	PM Peak									
																											PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		758	840	11,400		261	438	25	1	17	16	758	295	493	24	1	14	13	840	80	3.3	3.0	0.030	0.086	0.021	0.029	0.007	0.078	0.019	0.029	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		228	682	6,500		71	120	19	1	9	8	228	240	403	17	1	11	10	682	80	4.7	2.9	0.060	0.232	0.056	0.024	0.006	0.143	0.035	0.044	0.011
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		894	360	8,950		322	539	15	1	9	8	894	120	202	18	1	10	9	360	80	2.6	3.8	0.060	0.125	0.030	0.050	0.012	0.185	0.045	0.030	0.007
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,663	2,820	46,300		1272	2129	98	4	84	76	3663	1021	1709	30	1	31	28	2820	60	3.2	2.5	0.030	0.084	0.020	0.138	0.033	0.065	0.016	0.082	0.020
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		2,487	3,238	40,900		867	1452	78	3	46	41	2487	1167	1953	34	2	43	39	3238	60	3.1	2.6	0.030	0.081	0.020	0.090	0.022	0.068	0.016	0.098	0.024
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,293	2,451	41,050		1141	1910	83	4	81	74	3293	887	1486	25	1	27	25	2451	60	3.3	2.5	0.030	0.086	0.021	0.126	0.030	0.065	0.016	0.071	0.017
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,356	2,706	36,150		826	1382	66	3	41	38	2356	974	1630	29	1	38	34	2706	60	3.0	2.6	0.030	0.079	0.019	0.083	0.020	0.068	0.017	0.083	0.020
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		4,047	3,201	51,750		1366	2288	174	8	110	101	4047	1116	1870	70	3	74	68	3201	60	3.6	3.2	0.030	0.095	0.023	0.172	0.042	0.083	0.020	0.118	0.029
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		3,237	4,170	52,900		1064	1781	141	6	128	117	3237	1469	2460	85	4	80	72	4170	60	4.1	3.0	0.030	0.109	0.026	0.157	0.038	0.078	0.019	0.145	0.035
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		982	1,147	15,200		334	558	49	2	20	19	982	403	674	32	1	19	18	1147	80	3.5	3.0	0.030	0.091	0.022	0.040	0.010	0.078	0.019	0.040	0.010
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,412	793	15,750		451	755	87	4	60	55	1412	277	465	18	1	17	15	793	80	4.5	3.1	0.030	0.119	0.029	0.075	0.018	0.081	0.020	0.029	0.007
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		758	828	11,350		245	409	54	2	25	23	758	298	500	7	0	12	11	828	80	4.3	2.6	0.030	0.112	0.027	0.038	0.009	0.068	0.016	0.025	0.006
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		1,203	844	14,600		399	667	21	1	60	55	1203	302	506	10	0	14	12	844	80	4.2	2.7	0.030	0.110	0.027	0.059	0.014	0.071	0.017	0.027	0.006
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		414	674	7,750		123	206	49	2	18	16	414	241	404	11	1	9	8	674	80	5.3	2.7	0.060	0.265	0.064	0.049	0.012	0.131	0.032	0.040	0.010
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		804	511	9,400		287	481	14	1	11	10	804	178	297	16	1	10	9	511	80	2.7	3.2	0.060	0.133	0.032	0.048	0.012	0.155	0.037	0.035	0.009
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		1,870	1,600	24,800		661	1106	51	2	26	24	1870	575	964	30	1	16	14	1600	60	2.9	2.6	0.030	0.075	0.018	0.062	0.015	0.067	0.016	0.048	0.012
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,449	1,699	22,500		496	831	72	3	25	22	1449	615	1031	22	1	16	14	1699	60	3.3	2.5	0.030	0.086	0.021	0.056	0.014	0.064	0.016	0.049	0.012
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		9	638	4,600		3	6	0	0	0	0	9	228	383	10	0	9	8	638	80	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.393	0.095	0.112	0.027
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		524	47	4,100		167	280	28	1	25	23	524	12	21	4	0	5	5	47	80	4.6	7.6	0.200	0.684	0.165	0.160	0.039	1.140	0.276	0.024	0.006
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		9	638	4,600		3	6	0	0	0	0	9	228	383	10	0	9	8	638	80	1.9	2.7	0.200	0.276	0.067	0.001	0.000	0.393	0.095	0.112	0.027
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		524	47	4,100		167	280	28	1	25	23	524	12	21	4	0	5	5	47	80	4.6	7.6	0.200	0.684	0.165	0.160	0.039	1.140	0.276	0.024	0.006
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		823	789	11,500		299	502	8	0	7	7	823	292	489	2	0	3	3	789	70	2.4	2.1	0.030	0.062	0.015	0.023	0.006	0.054	0.013	0.019	0.005
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		763	836	11,400		279	466	7	0	6	5	763	309	517	4	0	3	3	836	70	2.3	2.1	0.030	0.061	0.015	0.021	0.005	0.055	0.013	0.021	0.005
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		674	1,097	12,650		245	411	7	0	6	5	674	403	675	5	0	7	7	1097	70	2.4	2.2	0.030	0.062	0.015	0.019	0.005	0.058	0.014	0.028	0.007
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		550	699	8,900		200	334	6	0	5	5	550	261	437	0	0	1	0	699	70	2.4	1.9	0.060	0.119	0.029	0.029	0.007	0.094	0.023	0.029	0.007
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		80	633	5,100		29	48	2	0	1	0	80	226	379	12	1	8	7	633	70	2.5	2.7	0.060	0.123	0.030	0.004	0.001	0.132	0.032	0.037	0.009
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		675	209	6,300		244	409	10	0	6	6	675	74	123	4	0	4	4	209	70	2.5	3.0	0.060	0.121	0.029	0.037	0.009	0.146	0.035	0.014	0.003
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		218	760	7,000		67	113	20	1	9	8	218	274	459	12	1	7	7	760	70	4.9	2.5	0.060	0.242	0.059	0.024	0.006	0.124	0.030	0.042	0.010
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		867	246	7,950		313	524	13	1	8	8	867	85	142	9	0	5	5	246	70	2.5	3.3	0.060	0.123	0.030	0.048	0.012	0.161	0.039	0.018	0.004
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		940	2,841	27,000		312	523	49	2	28	26	940	1041	1742	18	1	20	19	2841	60	3.9	2.3	0.030	0.102	0.025	0.043	0.010	0.059	0.014	0.075	0.018
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		2,734	1,196	28,050		978	1639	47	2	36	32	2734	420	703	23	1	26	23	1196	60	2.7	3.1	0.030	0.070	0.017	0.085	0.021	0.080	0.019	0.043	0.010
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		584	1,065	11,800		185	310	43	2	23	21	584	385	644	11	1	13	11	1065	60	4.6	2.5	0.030	0.120	0.029	0.031	0.008	0.066	0.016	0.031	0.008
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,935	608	18,150		681	1141	47	2	33	31	1935	201	337	23	1	24	22	608	60	3.0	4.1	0.030	0.077	0.019	0.067	0.016	0.107	0.026	0.029	0.007
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		584	1,065	11,800		185	310	43	2	23	21	584	385	644	11	1	13	11	1065	60	4.6	2.5	0.030	0.120	0.029	0.031	0.008	0.066	0.016	0.031	0.008
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,935	608	18,150		681	1141	47	2	33	31	1935	201	337	23	1	24	22	608	60	3.0	4.1	0.030	0.077	0.019	0.067	0.016	0.107	0.026	0.029	0.007
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	748	971	12,300		273	458	7	0	5	5	748	350	587	11	1	12	10	971	70	2.3	2.6	0.030	0.060	0.015	0.020	0.005	0.066	0.016	0.029	0.007
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	781	942	12,300		272	456	23	1	15	14	781	350	587	1	0	2	2	942	70	3.1	2.0	0.030	0.081	0.020	0.028	0.007	0.052	0.013	0.022	0.005
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	597	760	9,700		219	367	5	0	3	3	597	281	471	2	0	3	3	760	70	2.2	2.1	0.060	0.109	0.026	0.029	0.007	0.103	0.025	0.035	0.008
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	763	827	11,350		280	469	3	0	6	5	763	307	515	1	0	2	2	827	70	2.3	2.0	0.030	0.059	0.014	0.020	0.005	0.052	0.013	0.019	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	605	533	8,150		221	370	8	0	3	3	605	199	333	0	0	1	0	533	70	2.3	1.9	0.060	0.112	0.027	0.030	0.007	0.094	0.023	0.022	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	554	832	9,900		205	342	1	0	3	3	554	310	519	1	0	1	1	832	70	2.2	2.0	0.060	0.105	0.025	0.026	0.006	0.096	0.023	0.036	0.009
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	338	878	8,700		73	123	68	3	37	34	338	299	502	34	2	21	20	878	80	9.3	3.5	0.060	0.465	0.112	0.070	0.017	0.170	0.041	0.067	0.016
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	934	446	9,850		322	538	36	2	19	17	934	134	225	32	1	28	26	446	80	3.3	5.5	0.060	0.161	0.039	0.067	0.016	0.273	0.066	0.054	0.013
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	268	931	8,550		92	153	11	1	6	5	268	323	541	31	1	18	17	931	80	3.4	3.2	0.060	0.167	0.040	0.020	0.005	0.156	0.038	0.065	0.016
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	939	363	9,300		327	548	32	1	16	15	939	127	212	9	0	8	7	363	80	3.1	3.1	0.060	0.152	0.037	0.064	0.015	0.153	0.037	0.025	0.006
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	139	877	7,250		49	83	2	0	3	2	139	304	508	29	1	18	17	877	80	2.9	3.2	0.060	0.141	0.034	0.009	0.002	0.158	0.038	0.062	0.015
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	846	347	8,500		273	457	45	2	36	33	846	126	211	3	0	4	3	347	80	4.4	2.5	0.060	0.218	0.053	0.082	0.020	0.120	0.029	0.019	0.004
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	32	870	6,450		12	19	0	0	1	0	32	303	507	27	1	17	15	870	80	2.6	3.1	0.060	0.126	0.030	0.002	0.000	0.154	0.037	0.060	0.014
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	933	128	7,600		304	508	48	2	37	34	933	47	80	0	0	1	0	128	80	4.3	2.1	0.060	0.211	0.051	0.088	0.021	0.101	0.024	0.006	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	322	1,124	10,350		102	171	25	1	12	11	322	397	664	25	1	19	18	1124	80	4.5	2.9	0.030	0.119	0.029	0.017	0.004	0.076	0.018	0.038	0.009
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,411	280	12,100		492	825	37	2	29	26	1411	98	164	5	0	7	6	280	80	3.1	3.1	0.030	0.081	0.020	0.051	0.012	0.082	0.020	0.010	0.002
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	322	1,124	10,350		102	171	25	1	12	11	322	397	664	25	1	19	18	1124	80	4.5	2.9	0.030	0.119	0.029	0.017	0.004	0.076	0.018	0.038	0.009
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,411	280	12,100		492	825	37	2	29	26	1411	98	164	5	0	7	6	280	80	3.1	3.1	0.030	0.081	0.020	0.051	0.012	0.082	0.020	0.010	0.002
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		765	738	10,750		277	465	10	0	7	6	765	267	448	7	0	8	8	738	70	2.4	2.5	0.030	0.064	0.015	0.022	0.005	0.065	0.016	0.021	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		650	773	10,150		228	381	17	1	12	11	650	285	477	4	0	4	3	773	70	3.0	2.2	0.030	0.079	0.019	0.023	0.006	0.056	0.014	0.019	0.005
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		617	810	10,200		222	373	10	0	6	6	617	295	493	7	0	8	7	810	80	2.5	2.4	0.030	0.066	0.016	0.018	0.004	0.063	0.015	0.023	0.006
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		539	662	8,600		191	319	12	1	8	8	539	245	410	2	0	3	2	662	80	2.9	2.1	0.060	0.140	0.034	0.034	0.008	0.102	0.025	0.030	0.007
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		617	810	10,200		222	373	10	0	6	6	617	295	493	7	0	8	7	810	80	2.5	2.4	0.030	0.066	0.016	0.018	0.004	0.063	0.015	0.023	0.006
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		539	662	8,600		191	319	12	1	8	8	539	245	410	2	0	3	2	662	80	2.9	2.1	0.060	0.140	0.034	0.034	0.008	0.102	0.025	0.030	0.007
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,652	2,064	33,700		907	1518	98	4	65	60	2652	726	1217	43	2	40	36	2064	70	3.4	3.0	0.030	0.090	0.022	0.107	0.026	0.078	0.019	0.072	0.017
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,970	2,379	31,050		680	1139	66	3	43	39	1970	831	1391	52	2	54	49	2379	70	3.3	3.1	0.030	0.086	0.021	0.075	0.018	0.082	0.020	0.087	0.021
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,605	2,104	33,650		887	1486	100	4	67	61	2605	738	1237	46	2	42	39	2104	70	3.5	3.0	0.030	0.092	0.022	0.107	0.026	0.079	0.019	0.075	0.018
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		2,059	2,482	32,450		709	1186	73	3	46	42	2059	859	1438	61	3	63	58	2482	70	3.3	3.3	0.030	0.087	0.021	0.080	0.019	0.086	0.021	0.096	0.023
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		1,097	1,854	21,100		378	634	38	2	24	21	1097	549	919	170	8	109	99	1854	80	3.3	5.6	0.030	0.086	0.021	0.042	0.010	0.148	0.036	0.123	0.030
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,634	1,265	20,700		563	942	64	3	32	30	1634	442	740	35	2	24	22	1265	80	3.3	3.1	0.030	0.086	0.021	0.063	0.015	0.080	0.019	0.045	0.011
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		983	1,407	17,050		354	593	18	1	9	8	983	514	862	18	1	6	6	1407	70	2.5	2.3	0.030	0.066	0.016	0.029	0.007	0.059	0.014	0.037	0.009
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,660	1,055	19,400		603	1010	30	1	8	8	1660	376	629	19	1	16	14	1055	70	2.4	2.8	0.030	0.061	0.015	0.046	0.011	0.072	0.017	0.034	0.008
Coleraine Dr	Coleraine Dr At Mayfield Rd_NB	E71	NB	4		1,513	1,703	22,950		562	942	4	0	3	2	1513	628	1052	13	1	5	4	1703	70	2.0	2.1	0.030	0.052	0.013	0.035	0.009	0.055	0.013	0.042	0.010
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		2,036	1,501	25,250		745	1248	28	1	7	7	2036	556	932	5	0	4	4	1501	70	2.2	2.1	0.030	0.058	0.014	0.053	0.013	0.053	0.013	0.036	0.009
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		697	694	9,950		253	424	8	0	6	6	697	255	426	5	0	4	4	694	60	2.4	2.2	0.060	0.119	0.029	0.037	0.009	0.110	0.027	0.034	0.008
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		982	591	11,250		354	592	19	1	8	8	982	219	367	1	0	2	2	591	60	2.5	2.1	0.030	0.066	0.016	0.029	0.007	0.054	0.013	0.014	0.003
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		2,224	3,140	38,300		786	1316	43	2	40	37	2224	1144	1915	29	1	27	24	3140	70	2.9	2.4	0.030	0.076	0.018	0.076	0.018	0.062	0.015	0.087	0.021
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,899	2,322	44,450		1385	2319	55	2	72	66	3899	854	1430	16	1	11	10	2322	70	2.9	2.2	0.030	0.075	0.018	0.130	0.031	0.057	0.014	0.059	0.014
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,322	3,202	39,450		819	1371	42	2	46	42	2322	1167	1954	28	1	27	25	3202	70	3.0	2.4	0.030	0.078	0.019	0.081	0.019	0.062	0.015	0.088	0.021
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,915	2,513	45,900		1386	2321	57	2	78	71	3915	924	1548	16	1	13	11	2513	70	2.9	2.2	0.030	0.076	0.018	0.133	0.032	0.057	0.014	0.064	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,172	3,148	38,000		775	1297	59	3	20	18	2172	1155	1935	28	1	15	14	3148	70	2.7	2.2	0.030	0.069	0.017	0.067	0.016	0.058	0.014	0.081	0.020
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		3,520	2,399	42,300		1281	2146	41	2	26	24	3520	875	1465	25	1	17	16	2399	70	2.4	2.3	0.030	0.062	0.015	0.097	0.023	0.061	0.015	0.065	0.016
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		848	802	11,800		307	515	9	0	9	8	848	294	493	5	0	5	5	802	70	2.5	2.3	0.030	0.064	0.016	0.024	0.006	0.058	0.014	0.021	0.005
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		915	768	12,000		330	552	13	1	10

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	MOVES Veh c e Type >>	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
										Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		1,005	1,354	16,850		347	580	29	1	25	23	1005	491	822	14	1	14	12	1354	70	3.3	2.5	0.030	0.087	0.021	0.039	0.009	0.064	0.015	0.039	0.009
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		1,022	873	13,550		351	587	27	1	29	27	1022	307	513	17	1	18	17	873	70	3.5	3.0	0.030	0.090	0.022	0.041	0.010	0.079	0.019	0.031	0.007
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		902	945	13,200		306	513	29	1	28	25	902	340	569	12	1	12	11	945	70	3.6	2.6	0.030	0.095	0.023	0.038	0.009	0.068	0.016	0.029	0.007
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		1,030	611	11,700		385	645	0	0	0	0	1030	220	368	10	0	7	6	611	70	1.9	2.6	0.030	0.049	0.012	0.023	0.005	0.067	0.016	0.018	0.004
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		796	1,042	13,150		290	485	11	0	5	5	796	389	651	1	0	1	0	1042	70	2.4	1.9	0.030	0.061	0.015	0.022	0.005	0.050	0.012	0.023	0.006
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		581	200	5,600		217	364	0	0	0	0	581	75	125	0	0	0	0	200	70	1.9	1.9	0.060	0.092	0.022	0.024	0.006	0.092	0.022	0.008	0.002
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		276	489	5,450		103	172	0	0	1	0	276	183	306	0	0	0	0	489	70	2.0	1.9	0.060	0.096	0.023	0.012	0.003	0.092	0.022	0.020	0.005
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		204	169	2,650		72	121	5	0	3	3	204	61	102	2	0	2	2	169	70	2.9	2.6	0.200	0.420	0.102	0.038	0.009	0.376	0.091	0.028	0.007
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		216	242	3,250		76	126	6	0	4	4	216	88	147	3	0	2	2	242	70	3.1	2.4	0.200	0.451	0.109	0.044	0.011	0.354	0.086	0.038	0.009
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		927	667	11,400		332	556	15	1	12	11	927	235	393	12	1	14	12	667	60	2.7	3.0	0.030	0.069	0.017	0.029	0.007	0.078	0.019	0.023	0.006
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		569	862	10,200		192	322	22	1	17	15	569	311	521	11	0	10	9	862	60	3.7	2.6	0.030	0.096	0.023	0.024	0.006	0.066	0.016	0.026	0.006
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		2,576	2,603	37,000		846	1417	150	7	82	74	2576	864	1446	127	6	84	76	2603	60	4.0	3.9	0.030	0.106	0.026	0.122	0.029	0.103	0.025	0.120	0.029
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		2,773	2,476	37,500		920	1540	172	8	70	63	2773	833	1395	113	5	68	62	2476	60	3.8	3.7	0.030	0.100	0.024	0.124	0.030	0.096	0.023	0.107	0.026
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		965	627	11,350		361	604	0	0	0	0	965	231	386	5	0	3	2	627	60	1.9	2.2	0.030	0.049	0.012	0.021	0.005	0.057	0.014	0.016	0.004
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		607	841	10,350		213	356	15	1	12	10	607	298	499	19	1	13	11	841	60	3.0	2.8	0.030	0.079	0.019	0.022	0.005	0.074	0.018	0.028	0.007
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		328	738	7,600		111	187	15	1	7	7	328	262	438	17	1	10	10	738	80	3.5	2.8	0.060	0.171	0.041	0.025	0.006	0.138	0.033	0.045	0.011
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		1,139	429	11,200		409	686	21	1	12	10	1139	143	239	23	1	12	11	429	80	2.6	3.8	0.030	0.067	0.016	0.034	0.008	0.100	0.024	0.019	0.005
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,999	2,368	38,350		1045	1749	85	4	61	55	2999	829	1387	50	2	52	48	2368	60	3.1	3.1	0.030	0.082	0.020	0.110	0.027	0.081	0.020	0.086	0.021
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		2,127	2,814	35,300		685	1148	117	5	90	82	2127	995	1666	51	2	52	48	2814	60	4.4	2.9	0.030	0.116	0.028	0.110	0.027	0.076	0.018	0.096	0.023
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		73	923	7,100		26	43	1	0	2	1	73	338	567	6	0	6	6	923	80	3.0	2.3	0.060	0.146	0.035	0.005	0.001	0.111	0.027	0.046	0.011
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		803	198	7,150		274	460	27	1	21	20	803	72	121	2	0	2	1	198	80	3.5	2.4	0.060	0.171	0.041	0.061	0.015	0.115	0.028	0.010	0.002
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		878	676	11,100		328	550	0	0	0	0	878	251	421	2	0	1	1	676	70	1.9	2.0	0.030	0.049	0.012	0.019	0.005	0.052	0.013	0.016	0.004
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		639	823	10,450		235	393	3	0	4	4	639	307	515	1	0	0	0	823	70	2.2	1.9	0.030	0.058	0.014	0.017	0.004	0.050	0.012	0.018	0.004
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		34	150	1,300		13	21	0	0	0	0	34	55	93	1	0	1	0	150	60	1.9	2.1	0.200	0.276	0.067	0.004	0.001	0.311	0.075	0.021	0.005
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		545	37	4,150		201	336	4	0	2	2	545	14	23	0	0	0	0	37	60	2.2	1.9	0.200	0.315	0.076	0.077	0.019	0.276	0.067	0.005	0.001
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		848	802	11,800		307	515	9	0	9	8	848	294	493	5	0	5	5	802	70	2.5	2.3	0.030	0.064	0.016	0.024	0.006	0.058	0.014	0.021	0.005
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		915	768	12,000		330	552	13	1	10	9	915	285	476	1	0	3	3	768	70	2.6	2.1	0.030	0.066	0.016	0.027	0.007	0.054	0.013	0.019	0.004
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	27	9	250		10	16	0	0	1	0	27	3	6	0	0	0	0	9	60	2.7	1.9	0.600	1.073	0.260	0.013	0.003	0.751	0.182	0.003	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	7	101	750		2	4	0	0	0	0	7	36	61	1	0	2	1	101	60	5.0	2.7	0.200	0.736	0.178	0.002	0.001	0.391	0.095	0.018	0.004
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		2,559	2,609	36,900		848	1419	140	6	76	70	2559	883	1479	107	5	71	64	2609	60	3.9	3.6	0.030	0.102	0.025	0.117	0.028	0.094	0.023	0.110	0.027
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		2,776	2,310	36,350		897	1501	210	9	83	76	2776	771	1291	113	5	68	62	2310	60	4.2	3.8	0.030	0.110	0.027	0.137	0.033	0.100	0.024	0.103	0.025
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		796	1,718	17,950		224	374	107	5	45	41	796	614	1028	34	2	21	19	1718	70	6.1	2.7	0.030	0.162	0.039	0.058	0.014	0.070	0.017	0.054	0.013
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		2,368	602	21,200		853	1429	44	2	21	19	2368	220	368	7	0	4	3	602	70	2.5	2.3	0.030	0.066	0.016	0.070	0.017	0.060	0.015	0.016	0.004
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		508	1,883	17,100		181	302	14	1	5	5	508	691	1158	15	1	9	9	1883	70	2.7	2.2	0.030	0.071	0.017	0.016	0.004	0.058	0.014	0.049	0.012
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		2,104	662	19,750		777	1301	12	1	7	6	2104	248	414	0	0	0	0	662	70	2.1	1.9	0.030	0.055	0.013	0.052	0.012	0.049	0.012	0.015	0.004
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		1,385	452	13,100		497	833	21	1	17	16	1385	149	249	20	1	17	16	452	70	2.6	4.1	0.030	0.068	0.017	0.042	0.010	0.108	0.026	0.022	0.005
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		787	532	9,400		258	433	55	2	20	19	787	150	251	56	2	38	35	532	40	4.0	6.3	0.060	0.195	0.047	0.069	0.017	0.315	0.076	0.075	0.018
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		22	82	750		8	14	0	0	0	0	22	30	49	1	0	1	1	82	60	1.9	2.6	0.200	0.276	0.067	0.003	0.001	0.379	0.092	0.014	0.003
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		756	761	10,850		209	351	100	4	48	44	756	239	399	60	3	31	29	761	70	6.4	4.7	0.030	0.169	0.041	0.057	0.014	0.124	0.030	0.042	0.010
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		237	709	6,750		58	97	49	2	16	15	237	230	385	51	2	21	20	709	60	7.6	4.2	0.060	0.381	0.092	0.040	0.010	0.205	0.050	0.065	0.016
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		48	236	2,050		18	30	0	0	0	0	48	88	148	0	0	0	0	236	40	1.9	1.9	0.200	0.276	0.067	0.006	0.001	0.276	0.067	0.029	0.007
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		1,670	887	18,250		613	1027	14	1	8	7	1670	325	543	10	0	5	4	887	40	2.2	2.3	0.030	0.057	0.014	0.043	0.010	0.059	0.014	0.023	0.006
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		2,359	1,765	29,450		867	1453	18	1	10	10	2359	651	1090	11	1	6	6	1765	60	2.2	2.1	0.030	0.057	0.014	0.060	0.015	0.055	0.013	0.044	0.011
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		2,106	4,117	44,450		767	1285	32	1	11	10	2106	1518	2542	24	1	17	15	4117	70	2.3	2.2	0.030	0.060	0.015	0.057	0.014	0.056	0.013	0.103	0.025
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		671	734	10,050		219	367	6	0	41	38	671	259	433	10	0	17	15	734	40	4.6	3.0	0.030	0.120	0.029	0.036	0.009	0.079	0.019	0.026	0.006
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		1,204	744	13,900		421	706	15	1	32	29	1204	265	444	11	0	13	11	744	60	3.2	2.8	0.030	0.083	0.020	0.045	0.011	0.073	0.018	0.024	0.006
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		759	1,007	12,600		253	423	35	2	24	22	759	358	599	11	1	20	18	1007	70	3.9	2.9	0.030	0.101	0.025	0.034	0.008	0.075	0.018	0.034	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		663	1,164	13,050		176	295	85	4	54	49	663	387	649	58	3	35	32	1164	60	7.1	3.9	0.030	0.187	0.045	0.056	0.013	0.101	0.024	0.053	0.013
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		671	734	10,050		219	367	6	0	41	38	671	259	433	10	0	17	15	734	40	4.6	3.0	0.030	0.120	0.029	0.036	0.009	0.079	0.019	0.026	0.006
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		1,523	954	17,700		511	857	73	3	41	38	1523	288	482	64	3	61	56	954	40	3.7	5.5	0.030	0.097	0.023	0.066	0.016	0.145	0.035	0.062	0.015
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total				AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,106	4,117	44,400		767	1285	32	1	11	10	2106	1518	2542	24	1	17	15	4117	100	2.3	2.2	0.015	0.032	0.008	0.030	0.007	0.030	0.007	0.055	0.013
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,028	2,651	47,700		1480	2479	33	1	18	17	4028	975	1633	21	1	11	10	2651	100	2.2	2.2	0.015	0.030	0.007	0.055	0.013	0.030	0.007	0.036	0.009
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		5,986	10,861	120,300		1828	3061	465	20	320	292	5986	3889	6514	178	8	142	130	10861	100	5.2	2.7	0.015	0.073	0.018	0.195	0.047	0.037	0.009	0.180	0.043
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		10,378	5,698	114,800		3558	5958	344	15	263	240	10378	1922	3220	170	8	198	180	5698	100	3.4	3.8	0.015	0.048	0.011	0.220	0.053	0.052	0.013	0.133	0.032
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		4,512	9,900	102,900		1343	2249	374	16	277	253	4512	3576	5988	119	5	111	101	9900	100	5.6	2.5	0.015	0.079	0.019	0.159	0.038	0.035	0.008	0.155	0.038
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		9,440	4,502	99,600		3237	5420	297	13	247	226	9440	1508	2525	133	6	173	157	4502	100	3.4	3.9	0.015	0.048	0.012	0.201	0.049	0.054	0.013	0.109	0.026
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		4,558	10,135	104,900		1360	2277	374	16	278	253	4558	3664	6135	119	5	111	101	10135	100	5.6	2.5	0.015	0.078	0.019	0.159	0.039	0.035	0.008	0.158	0.038
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		10,824	4,956	112,700		3734	6253	318	14	264	241	10824	1658	2776	152	7	190	173	4956	100	3.3	3.9	0.015	0.046	0.011	0.224	0.054	0.055	0.013	0.121	0.029
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-W	C44	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	D71	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Chinguacousy Rd_WB	D72	WB	2	3	0

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	748	971	12,300		273	458	7	0	5	5	748	350	587	11	1	12	10	971	70	2.3	2.6	0.030	0.060	0.015	0.020	0.005	0.066	0.016	0.029	0.007
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	781	942	12,300		272	456	23	1	15	14	781	350	587	1	0	2	2	942	70	3.1	2.0	0.030	0.081	0.020	0.028	0.007	0.052	0.013	0.022	0.005
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	597	760	9,700		219	367	5	0	3	3	597	281	471	2	0	3	3	760	70	2.2	2.1	0.060	0.109	0.026	0.029	0.007	0.103	0.025	0.035	0.008
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	763	827	11,350		280	469	3	0	6	5	763	307	515	1	0	2	2	827	70	2.3	2.0	0.030	0.059	0.014	0.020	0.005	0.052	0.013	0.019	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	605	533	8,150		221	370	8	0	3	3	605	199	333	0	0	1	0	533	70	2.3	1.9	0.060	0.112	0.027	0.030	0.007	0.094	0.023	0.022	0.005
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	554	832	9,900		205	342	1	0	3	3	554	310	519	1	0	1	1	832	70	2.2	2.0	0.060	0.105	0.025	0.026	0.006	0.096	0.023	0.036	0.009
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	338	878	8,700		73	123	68	3	37	34	338	299	502	34	2	21	20	878	80	9.3	3.5	0.060	0.465	0.112	0.070	0.017	0.170	0.041	0.067	0.016
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	934	446	9,850		322	538	36	2	19	17	934	134	225	32	1	28	26	446	80	3.3	5.5	0.060	0.161	0.039	0.067	0.016	0.273	0.066	0.054	0.013
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	268	931	8,550		92	153	11	1	6	5	268	323	541	31	1	18	17	931	80	3.4	3.2	0.060	0.167	0.040	0.020	0.005	0.156	0.038	0.065	0.016
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	939	363	9,300		327	548	32	1	16	15	939	127	212	9	0	8	7	363	80	3.1	3.1	0.060	0.152	0.037	0.064	0.015	0.153	0.037	0.025	0.006
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	139	877	7,250		49	83	2	0	3	2	139	304	508	29	1	18	17	877	80	2.9	3.2	0.060	0.141	0.034	0.009	0.002	0.158	0.038	0.062	0.015
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	846	347	8,500		273	457	45	2	36	33	846	126	211	3	0	4	3	347	80	4.4	2.5	0.060	0.218	0.053	0.082	0.020	0.120	0.029	0.019	0.004
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	32	870	6,450		12	19	0	0	1	0	32	303	507	27	1	17	15	870	80	2.6	3.1	0.060	0.126	0.030	0.002	0.000	0.154	0.037	0.060	0.014
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	933	128	7,600		304	508	48	2	37	34	933	47	80	0	0	1	0	128	80	4.3	2.1	0.060	0.211	0.051	0.088	0.021	0.101	0.024	0.006	0.001
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	322	1,124	10,350		102	171	25	1	12	11	322	397	664	25	1	19	18	1124	80	4.5	2.9	0.030	0.119	0.029	0.017	0.004	0.076	0.018	0.038	0.009
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,411	280	12,100		492	825	37	2	29	26	1411	98	164	5	0	7	6	280	80	3.1	3.1	0.030	0.081	0.020	0.051	0.012	0.082	0.020	0.010	0.002
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	322	1,124	10,350		102	171	25	1	12	11	322	397	664	25	1	19	18	1124	80	4.5	2.9	0.030	0.119	0.029	0.017	0.004	0.076	0.018	0.038	0.009
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,411	280	12,100		492	825	37	2	29	26	1411	98	164	5	0	7	6	280	80	3.1	3.1	0.030	0.081	0.020	0.051	0.012	0.082	0.020	0.010	0.002
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		765	738	10,750		277	465	10	0	7	6	765	267	448	7	0	8	8	738	70	2.4	2.5	0.030	0.064	0.015	0.022	0.005	0.065	0.016	0.021	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		650	773	10,150		228	381	17	1	12	11	650	285	477	4	0	4	3	773	70	3.0	2.2	0.030	0.079	0.019	0.023	0.006	0.056	0.014	0.019	0.005
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		617	810	10,200		222	373	10	0	6	6	617	295	493	7	0	8	7	810	80	2.5	2.4	0.030	0.066	0.016	0.018	0.004	0.063	0.015	0.023	0.006
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		539	662	8,600		191	319	12	1	8	8	539	245	410	2	0	3	2	662	80	2.9	2.1	0.060	0.140	0.034	0.034	0.008	0.102	0.025	0.030	0.007
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		617	810	10,200		222	373	10	0	6	6	617	295	493	7	0	8	7	810	80	2.5	2.4	0.030	0.066	0.016	0.018	0.004	0.063	0.015	0.023	0.006
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		539	662	8,600		191	319	12	1	8	8	539	245	410	2	0	3	2	662	80	2.9	2.1	0.060	0.140	0.034	0.034	0.008	0.102	0.025	0.030	0.007
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,652	2,064	33,700		907	1518	98	4	65	60	2652	726	1217	43	2	40	36	2064	70	3.4	3.0	0.030	0.090	0.022	0.107	0.026	0.078	0.019	0.072	0.017
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,970	2,379	31,050		680	1139	66	3	43	39	1970	831	1391	52	2	54	49	2379	70	3.3	3.1	0.030	0.086	0.021	0.075	0.018	0.082	0.020	0.087	0.021
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,605	2,104	33,650		887	1486	100	4	67	61	2605	738	1237	46	2	42	39	2104	70	3.5	3.0	0.030	0.092	0.022	0.107	0.026	0.079	0.019	0.075	0.018
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		2,059	2,482	32,450		709	1186	73	3	46	42	2059	859	1438	61	3	63	58	2482	70	3.3	3.3	0.030	0.087	0.021	0.080	0.019	0.086	0.021	0.096	0.023
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		1,097	1,854	21,100		378	634	38	2	24	21	1097	549	919	170	8	109	99	1854	80	3.3	5.6	0.030	0.086	0.021	0.042	0.010	0.148	0.036	0.123	0.030
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,634	1,265	20,700		563	942	64	3	32	30	1634	442	740	35	2	24	22	1265	80	3.3	3.1	0.030	0.086	0.021	0.063	0.015	0.080	0.019	0.045	0.011
Coleraine Dr	Coleraine Dr At Hwy 413_NB	E69	NB	4		983	1,407	17,050		354	593	18	1	9	8	983	514	862	18	1	6	6	1407	70	2.5	2.3	0.030	0.066	0.016	0.029	0.007	0.059	0.014	0.037	0.009
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,660	1,055	19,400		603	1010	30	1	8	8	1660	376	629	19	1	16	14	1055	70	2.4	2.8	0.030	0.061	0.015	0.046	0.011	0.072	0.017	0.034	0.008
Coleraine Dr	Coleraine Dr At Mayfield Rd_NB	E71	NB	4		1,513	1,703	22,950		562	942	4	0	3	2	1513	628	1052	13	1	5	4	1703	70	2.0	2.1	0.030	0.052	0.013	0.035	0.009	0.055	0.013	0.042	0.010
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		2,036	1,501	25,250		745	1248	28	1	7	7	2036	556	932	5	0	4	4	1501	70	2.2	2.1	0.030	0.058	0.014	0.053	0.013	0.053	0.013	0.036	0.009
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		697	694	9,950		253	424	8	0	6	6	697	255	426	5	0	4	4	694	60	2.4	2.2	0.060	0.119	0.029	0.037	0.009	0.110	0.027	0.034	0.008
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		982	591	11,250		354	592	19	1	8	8	982	219	367	1	0	2	2	591	60	2.5	2.1	0.030	0.066	0.016	0.029	0.007	0.054	0.013	0.014	0.003
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		2,224	3,140	38,300		786	1316	43	2	40	37	2224	1144	1915	29	1	27	24	3140	70	2.9	2.4	0.030	0.076	0.018	0.076	0.018	0.062	0.015	0.087	0.021
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,899	2,322	44,450		1385	2319	55	2	72	66	3899	854	1430	16	1	11	10	2322	70	2.9	2.2	0.030	0.075	0.018	0.130	0.031	0.057	0.014	0.059	0.014
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,322	3,202	39,450		819	1371	42	2	46	42	2322	1167	1954	28	1	27	25	3202	70	3.0	2.4	0.030	0.078	0.019	0.081	0.019	0.062	0.015	0.088	0.021
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,915	2,513	45,900		1386	2321	57	2	78	71	3915	924	1548	16	1	13	11	2513	70	2.9	2.2	0.030	0.076	0.018	0.133	0.032	0.057	0.014	0.064	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,172	3,148	38,000		775	1297	59	3	20	18	2172	1155	1935	28	1	15	14	3148	70	2.7	2.2	0.030	0.069	0.017	0.067	0.016	0.058	0.014	0.081	0.020
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		3,520	2,399	42,300		1281	2146	41	2	26	24	3520	875	1465	25	1	17	16	2399	70	2.4	2.3	0.030	0.062	0.015	0.097	0.023	0.061	0.015	0.065	0.016
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		848	802	11,800		307	515	9	0	9	8	848	294	493	5	0	5	5	802	70	2.5	2.3	0.030	0.064	0.016	0.024	0.006	0.058	0.014	0.021	0.005
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		915	768	12,000		330	552	13	1	10	9	915	285	476	1	0	3	3	768	70	2.6	2.1	0.030	0.066	0.016	0.027	0.007	0.054	0.013	0.019	0.004
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	4		3,232	3,979	51,500		1178	1974	35	2	22	21	3232	1442	2415	48	2	38	34	3979

Appendix A.4.3: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, No-Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
																											PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		1,005	1,354	16,850		347	580	29	1	25	23	1005	491	822	14	1	14	12	1354	70	3.3	2.5	0.030	0.087	0.021	0.039	0.009	0.064	0.015	0.039	0.009
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		1,022	873	13,550		351	587	27	1	29	27	1022	307	513	17	1	18	17	873	70	3.5	3.0	0.030	0.090	0.022	0.041	0.010	0.079	0.019	0.031	0.007
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		902	945	13,200		306	513	29	1	28	25	902	340	569	12	1	12	11	945	70	3.6	2.6	0.030	0.095	0.023	0.038	0.009	0.068	0.016	0.029	0.007
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		1,030	611	11,700		385	645	0	0	0	0	1030	220	368	10	0	7	6	611	70	1.9	2.6	0.030	0.049	0.012	0.023	0.005	0.067	0.016	0.018	0.004
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		796	1,042	13,150		290	485	11	0	5	5	796	389	651	1	0	1	0	1042	70	2.4	1.9	0.030	0.061	0.015	0.022	0.005	0.050	0.012	0.023	0.006
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		581	200	5,600		217	364	0	0	0	0	581	75	125	0	0	0	0	200	70	1.9	1.9	0.060	0.092	0.022	0.024	0.006	0.092	0.022	0.008	0.002
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		276	489	5,450		103	172	0	0	1	0	276	183	306	0	0	0	0	489	70	2.0	1.9	0.060	0.096	0.023	0.012	0.003	0.092	0.022	0.020	0.005
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		204	169	2,650		72	121	5	0	3	3	204	61	102	2	0	2	2	169	70	2.9	2.6	0.200	0.420	0.102	0.038	0.009	0.376	0.091	0.028	0.007
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		216	242	3,250		76	126	6	0	4	4	216	88	147	3	0	2	2	242	70	3.1	2.4	0.200	0.451	0.109	0.044	0.011	0.354	0.086	0.038	0.009
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		927	667	11,400		332	556	15	1	12	11	927	235	393	12	1	14	12	667	60	2.7	3.0	0.030	0.069	0.017	0.029	0.007	0.078	0.019	0.023	0.006
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		569	862	10,200		192	322	22	1	17	15	569	311	521	11	0	10	9	862	60	3.7	2.6	0.030	0.096	0.023	0.024	0.006	0.066	0.016	0.026	0.006
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		2,576	2,603	37,000		846	1417	150	7	82	74	2576	864	1446	127	6	84	76	2603	60	4.0	3.9	0.030	0.106	0.026	0.122	0.029	0.103	0.025	0.120	0.029
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		2,773	2,476	37,500		920	1540	172	8	70	63	2773	833	1395	113	5	68	62	2476	60	3.8	3.7	0.030	0.100	0.024	0.124	0.030	0.096	0.023	0.107	0.026
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		965	627	11,350		361	604	0	0	0	0	965	231	386	5	0	3	2	627	60	1.9	2.2	0.030	0.049	0.012	0.021	0.005	0.057	0.014	0.016	0.004
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		607	841	10,350		213	356	15	1	12	10	607	298	499	19	1	13	11	841	60	3.0	2.8	0.030	0.079	0.019	0.022	0.005	0.074	0.018	0.028	0.007
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		34	150	1,300		13	21	0	0	0	0	34	55	93	1	0	1	0	150	60	1.9	2.1	0.200	0.276	0.067	0.004	0.001	0.311	0.075	0.021	0.005
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		545	37	4,150		201	336	4	0	2	2	545	14	23	0	0	0	0	37	60	2.2	1.9	0.200	0.315	0.076	0.077	0.019	0.276	0.067	0.005	0.001
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		848	802	11,800		307	515	9	0	9	8	848	294	493	5	0	5	5	802	70	2.5	2.3	0.030	0.064	0.016	0.024	0.006	0.058	0.014	0.021	0.005
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		915	768	12,000		330	552	13	1	10	9	915	285	476	1	0	3	3	768	70	2.6	2.1	0.030	0.066	0.016	0.027	0.007	0.054	0.013	0.019	0.004
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	27	9	250		10	16	0	0	1	0	27	3	6	0	0	0	0	9	60	2.7	1.9	0.600	1.073	0.260	0.013	0.003	0.751	0.182	0.003	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	7	101	750		2	4	0	0	1	0	7	36	61	1	0	2	1	101	60	5.0	2.7	0.200	0.736	0.178	0.002	0.001	0.391	0.095	0.018	0.004
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		2,559	2,609	36,900		848	1419	140	6	76	70	2559	883	1479	107	5	71	64	2609	60	3.9	3.6	0.030	0.102	0.025	0.117	0.028	0.094	0.023	0.110	0.027
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		2,776	2,310	36,350		897	1501	210	9	83	76	2776	771	1291	113	5	68	62	2310	60	4.2	3.8	0.030	0.110	0.027	0.137	0.033	0.100	0.024	0.103	0.025
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		796	1,718	17,950		224	374	107	5	45	41	796	614	1028	34	2	21	19	1718	70	6.1	2.7	0.030	0.162	0.039	0.058	0.014	0.070	0.017	0.054	0.013
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		2,368	602	21,200		853	1429	44	2	21	19	2368	220	368	7	0	4	3	602	70	2.5	2.3	0.030	0.066	0.016	0.070	0.017	0.060	0.015	0.016	0.004
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		508	1,883	17,100		181	302	14	1	5	5	508	691	1158	15	1	9	9	1883	70	2.7	2.2	0.030	0.071	0.017	0.016	0.004	0.058	0.014	0.049	0.012
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		2,104	662	19,750		777	1301	12	1	7	6	2104	248	414	0	0	0	0	662	70	2.1	1.9	0.030	0.055	0.013	0.052	0.012	0.049	0.012	0.015	0.004
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		1,385	452	13,100		497	833	21	1	17	16	1385	149	249	20	1	17	16	452	70	2.6	4.1	0.030	0.068	0.017	0.042	0.010	0.108	0.026	0.022	0.005
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		787	532	9,400		258	433	55	2	20	19	787	150	251	56	2	38	35	532	40	4.0	6.3	0.060	0.195	0.047	0.069	0.017	0.315	0.076	0.075	0.018
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		22	82	750		8	14	0	0	0	0	22	30	49	1	0	1	1	82	60	1.9	2.6	0.200	0.276	0.067	0.003	0.001	0.379	0.092	0.014	0.003
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		756	761	10,850		209	351	100	4	48	44	756	239	399	60	3	31	29	761	70	6.4	4.7	0.030	0.169	0.041	0.057	0.014	0.124	0.030	0.042	0.010
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		237	709	6,750		58	97	49	2	16	15	237	230	385	51	2	21	20	709	60	7.6	4.2	0.060	0.381	0.092	0.040	0.010	0.205	0.050	0.065	0.016
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		48	236	2,050		18	30	0	0	0	0	48	88	148	0	0	0	0	236	40	1.9	1.9	0.200	0.276	0.067	0.006	0.001	0.276	0.067	0.029	0.007
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		1,670	887	18,250		613	1027	14	1	8	7	1670	325	543	10	0	5	4	887	40	2.2	2.3	0.030	0.057	0.014	0.043	0.010	0.059	0.014	0.023	0.006
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		2,359	1,765	29,450		867	1453	18	1	10	10	2359	651	1090	11	1	6	6	1765	60	2.2	2.1	0.030	0.057	0.014	0.060	0.015	0.055	0.013	0.044	0.011
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		2,106	4,117	44,450		767	1285	32	1	11	10	2106	1518	2542	24	1	17	15	4117	70	2.3	2.2	0.030	0.060	0.015	0.057	0.014	0.056	0.013	0.103	0.025
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-E/W Ramp	F89	W-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Descr pt on	Mode Source D	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62											
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM$_{10}$ g/VKT	PM$_{2 5}$ g/VKT	PM$_{10}$ g/s m e	PM$_{2 5}$ g/s m e	PM$_{10}$ g/VKT	PM$_{2 5}$ g/VKT	PM$_{10}$ g/s m e	PM$_{2 5}$ g/s m e
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	5,003	4,686	69,200		1508	2526	477	21	246	225	5003	1464	2451	314	14	232	211	4686	110	5.3	4.9	0.015	0.074	0.018	0.166	0.040	0.068	0.017	0.143	0.035
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	5,410	4,834	73,200		1676	2808	465	21	230	210	5410	1510	2528	360	16	220	200	4834	110	4.9	4.8	0.015	0.068	0.017	0.165	0.040	0.068	0.016	0.146	0.035
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	5,298	5,877	79,800		1638	2744	456	20	230	210	5298	1931	3234	300	13	209	190	5877	110	4.9	4.1	0.015	0.069	0.017	0.163	0.039	0.057	0.014	0.150	0.036
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	6,209	5,409	83,000		1977	3312	475	21	222	202	6209	1734	2904	352	16	211	192	5409	110	4.5	4.4	0.015	0.062	0.015	0.173	0.042	0.062	0.015	0.150	0.036
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		4,681	4,664	66,700		1478	2474	358	16	186	169	4681	1526	2555	238	11	175	159	4664	110	4.6	4.2	0.015	0.065	0.016	0.135	0.033	0.058	0.014	0.121	0.029
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		4,925	4,947	70,500		1587	2657	345	15	168	153	4925	1597	2674	289	13	196	178	4947	110	4.3	4.4	0.015	0.060	0.015	0.132	0.032	0.061	0.015	0.135	0.033
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	3,843	4,648	60,600		1144	1915	374	17	206	187	3843	1511	2531	239	11	186	170	4648	110	5.5	4.3	0.015	0.077	0.019	0.132	0.032	0.060	0.014	0.124	0.030
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	4,792	3,918	62,200		1536	2572	336	15	174	159	4792	1192	1997	306	13	214	196	3918	110	4.4	5.3	0.015	0.061	0.015	0.132	0.032	0.074	0.018	0.129	0.031
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	4,921	4,878	70,000		1465	2454	477	21	264	240	4921	1556	2605	280	12	222	203	4878	110	5.5	4.6	0.015	0.077	0.019	0.169	0.041	0.064	0.016	0.140	0.034
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	4,896	4,542	67,400		1527	2558	385	17	214	195	4896	1366	2288	369	16	263	240	4542	110	4.8	5.4	0.015	0.067	0.016	0.148	0.036	0.076	0.018	0.155	0.037
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		4,760	1,835	47,100		1483	2484	344	15	227	207	4760	601	1007	137	6	44	40	1835	100	4.9	3.9	0.015	0.068	0.017	0.146	0.035	0.055	0.013	0.045	0.011
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		2,209	3,664	41,900		396	662	573	25	289	264	2209	1156	1936	450	20	53	49	3664	100	11.0	4.2	0.015	0.156	0.038	0.154	0.037	0.059	0.014	0.097	0.024
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		5,086	2,312	52,800		1614	2703	374	16	198	181	5086	864	1448	0	0	0	0	2312	100	4.5	1.9	0.015	0.064	0.015	0.145	0.035	0.026	0.006	0.027	0.007
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		2,352	4,063	45,800		816	1367	62	3	54	50	2352	1516	2540	5	0	1	1	4063	100	3.2	1.9	0.015	0.045	0.011	0.047	0.011	0.027	0.006	0.048	0.012
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of Kirby Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of Kirby Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		980	924	13,600		337	564	34	1	23	21	980	311	521	25	1	35	31	924	70	3.4	3.8	0.030	0.088	0.021	0.038	0.009	0.100	0.024	0.041	0.010
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	1,052	1,589	18,850		391	655	3	0	2	1	1052	580	972	14	1	12	10	1589	60	2.0	2.3	0.030	0.052	0.013	0.024	0.006	0.060	0.015	0.043	0.010
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	390	535	6,600		135	227	13	1	7	7	390	187	313	12	1	12	10	535	40	3.2	3.1	0.060	0.155	0.038	0.027	0.007	0.153	0.037	0.037	0.009
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	1,568	1,367	20,950		562	941	33	1	16	15	1568	479	802	30	1	29	26	1367	70	2.6	3.1	0.030	0.068	0.017	0.048	0.012	0.080	0.019	0.049	0.012
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	383	689	7,650		121	203	20	1	20	18	383	227	379	23	1	31	28	689	40	4.8	4.2	0.060	0.236	0.057	0.040	0.010	0.208	0.050	0.064	0.016
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	399	330	5,200		141	237	8	0	7	6	399	121	203	4	0	1	1	330	60	2.9	2.2	0.060	0.141	0.034	0.025	0.006	0.107	0.026	0.016	0.004
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		1,343	1,611	21,100		424	711	110	5	49	44	1343	556	931	61	3	31	29	1611	70	4.6	3.2	0.030	0.120	0.029	0.072	0.017	0.085	0.020	0.061	0.015
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		479	233	5,100		166	279	18	1	8	7	479	81	136	9	0	4	3	233	60	3.1	3.1	0.060	0.153	0.037	0.033	0.008	0.151	0.036	0.016	0.004
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		144	18	1,150		51	85	4	0	2	2	144	7	11	0	0	0	0	18	40	2.9	1.9	0.200	0.421	0.102	0.027	0.007	0.276	0.067	0.002	0.001
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		225	491	5,100		81	135	5	0	2	2	225	179	300	5	0	4	3	491	70	2.6	2.3	0.060	0.126	0.031	0.013	0.003	0.114	0.028	0.025	0.006
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		944	1,063	14,350		296	495	85	4	33	31	944	360	604	65	3	16	15	1063	40	4.6	3.4	0.030	0.122	0.030	0.052	0.012	0.089	0.022	0.042	0.010
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		669	286	6,800		238	398	19	1	7	6	669	105	176	2	0	2	1	286	60	2.7	2.2	0.060	0.133	0.032	0.040	0.010	0.108	0.026	0.014	0.003
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		1,388	1,346	19,550		479	802	60	3	23	21	1388	480	805	31	1	15	14	1346	70	3.2	2.7	0.030	0.084	0.020	0.052	0.013	0.070	0.017	0.042	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		197	188	2,750		72	121	1	0	2	1	197	70	117	0	0	1	0	188	60	2.3	2.0	0.200	0.335	0.081	0.030	0.007	0.293	0.071	0.025	0.006
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		822	772	11,400		259	435	62	3	33	30	822	253	424	36	2	30	27	772	40	4.6	4.2	0.030	0.122	0.029	0.045	0.011	0.109	0.026	0.038	0.009
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		983	1,022	14,300		324	542	57	3	30	27	983	343	575	46	2	29	27	1022	70	4.0	3.7	0.030	0.104	0.025	0.046	0.011	0.097	0.024	0.044	0.011
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		1,058	568	11,600		362	605	56	2	17	16	1058	194	324	29	1	10	10	568	40	3.3	3.4	0.030	0.087	0.021	0.041	0.010	0.088	0.021	0.022	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		459	991	10,350		167	280	5	0	4	3	459	369	618	2	0	1	1	991	60	2.4	2.0	0.030	0.062	0.015	0.013	0.003	0.051	0.012	0.023	0.005
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	92	188	2,000		33	54	1	0	2	2	92	68	115	2	0	2	1	188	70	3.0	2.4	0.200	0.437	0.106	0.018	0.004	0.349	0.084	0.029	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	415	237	4,650		112	188	46	2	35	32	415	66	111	20	1	20	19	237	40	6.9	6.6	0.200	1.035	0.250	0.192	0.046	0.989	0.239	0.105	0.025
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	808	291	7,850		270	452	47	2	19	18	808	93	156	16	1	13	12	291	60	3.7	4.5	0.060	0.183	0.044	0.066	0.016	0.224	0.054	0.029	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	650	958	11,500		190	318	58	3	42	39	650	302	507	61	3	44	41	958	70	5.9	4.7	0.030	0.155	0.037	0.045	0.011	0.124	0.030	0.053	0.013
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	163	108	1,950		60	101	2	0	0	0	163	40	67	1	0	0	0	108	60	2.1	2.0	0.200	0.301	0.073	0.022	0.005	0.295	0.071	0.014	0.003
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	236	78	2,250		84	140	7	0	3	2	236	27	45	4	0	1	1	78	40	2.8	3.2	0.200	0.404	0.098	0.043	0.010	0.462	0.112	0.016	0.004
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	353	456	5,800		116	194	17	1	13	12	353	163	272	11	1	5	4	456	70	4.1	2.7	0.060	0.203	0.049	0.032	0.008	0.131	0.032	0.027	0.006
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	355	266	4,450		123	206	8	0	9	9	355	87	147	17	1	7	7	266	60	3.3	4.0	0.200	0.484	0.117	0.077	0.019	0.583	0.141	0.069	0.017
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Descr pt on	Mode Source D	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62											
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM10 g/VKT	PM2 5 g/VKT	PM10 g/s m e	PM2 5 g/s m e	PM10 g/VKT	PM2 5 g/VKT	PM10 g/s m e	PM2 5 g/s m e
Highway 413	Hwy 413 at The Gore Rd_E-N/S	C59	E-N/S	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at The Gore Rd_N/S-W	C60	N/S-W	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Humber Station Rd_W-N/S	C61	W-N/S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Humber Station Rd_N-E	C62	N-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Humber Station Rd_S-E	C63	S-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Humber Station Rd_E-N/S	C64	E-N/S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Humber Station Rd_N-W	C65	N-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Humber Station Rd_S-W	C66	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_W-S	C67	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_E-S	C68	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-E	C69	S-E	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		3,567	2,500	43,350		1267	2121	25	1	80	73	3567	914	1531	3	0	27	25	2500	60	2.9	2.4	0.030	0.076	0.018	0.122	0.029	0.061	0.015	0.069	0.017
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		2,581	3,498	43,400		936	1568	23	1	28	25	2581	1292	2164	5	0	19	18	3498	60	2.5	2.2	0.030	0.064	0.016	0.074	0.018	0.056	0.013	0.087	0.021
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		3,926	2,684	47,200		1414	2369	54	2	46	41	3926	976	1634	24	1	26	23	2684	60	2.6	2.4	0.030	0.067	0.016	0.117	0.028	0.063	0.015	0.075	0.018
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		2,282	3,682	42,600		765	1280	65	3	88	81	2282	1332	2231	28	1	47	43	3682	60	3.9	2.5	0.030	0.102	0.025	0.104	0.025	0.066	0.016	0.108	0.026
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		3,510	2,616	43,750		1239	2074	57	3	72	65	3510	942	1578	36	2	30	28	2616	60	3.0	2.6	0.030	0.078	0.019	0.122	0.029	0.067	0.016	0.078	0.019
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		2,755	4,164	49,400		922	1543	135	6	78	71	2755	1503	2516	39	2	54	50	4164	60	3.8	2.6	0.030	0.099	0.024	0.121	0.029	0.067	0.016	0.125	0.030
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		3,726	3,182	49,350		1300	2176	86	4	84	76	3726	1140	1910	47	2	43	40	3182	80	3.2	2.7	0.030	0.082	0.020	0.137	0.033	0.070	0.017	0.099	0.024
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		2,687	3,500	44,200		903	1511	139	6	67	61	2687	1254	2101	49	2	49	45	3500	80	3.7	2.7	0.030	0.096	0.023	0.115	0.028	0.070	0.017	0.109	0.026
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		3,032	2,270	37,850		1085	1818	38	2	47	42	3032	824	1379	21	1	24	21	2270	80	2.7	2.5	0.030	0.071	0.017	0.096	0.023	0.064	0.015	0.065	0.016
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		2,066	3,291	38,250		703	1177	107	5	39	35	2066	1198	2005	29	1	30	28	3291	80	3.4	2.4	0.030	0.089	0.022	0.082	0.020	0.062	0.015	0.092	0.022
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		3,905	2,233	43,850		1379	2310	67	3	76	70	3905	809	1356	21	1	24	22	2233	80	3.0	2.5	0.030	0.077	0.019	0.134	0.032	0.064	0.016	0.064	0.016
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		1,955	3,721	40,550		653	1094	118	5	44	41	1955	1347	2257	37	2	41	37	3721	80	3.7	2.5	0.030	0.097	0.023	0.085	0.020	0.065	0.016	0.108	0.026
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		629	1,334	14,000		211	354	29	1	18	16	629	462	773	34	1	33	31	1334	60	3.7	3.3	0.030	0.097	0.024	0.027	0.007	0.086	0.021	0.051	0.012
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		631	1058	19,750		1,844	924	19,750		631	1058	62	3	47	43	1844	322	538	26	1	19	18	924	60	3.4	3.2	0.030	0.090	0.022	0.074	0.018	0.083	0.020	0.034	0.008
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		2,331	1,462	27,100		817	1369	57	3	44	41	2331	507	850	38	2	34	31	1462	60	3.0	3.2	0.030	0.079	0.019	0.083	0.020	0.084	0.020	0.055	0.013
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		2,077	2,316	31,400		709	1188	76	3	53	48	2077	825	1381	44	2	33	31	2316	60	3.5	2.8	0.030	0.091	0.022	0.084	0.020	0.072	0.017	0.075	0.018
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		198	876	7,650		60	101	15	1	11	10	198	311	521	13	1	16	14	876	70	5.3	2.9	0.060	0.262	0.063	0.023	0.006	0.140	0.034	0.055	0.013
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		1,217	401	11,550		398	667	51	2	52	47	1217	146	244	3	0	4	4	401	70	4.2	2.4	0.030	0.111	0.027	0.061	0.015	0.063	0.015	0.011	0.003
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		4,191	2,914	50,750		1461	2448	141	6	71	64	4191	977	1635	174	8	63	57	2914	80	3.1	3.6	0.030	0.080	0.019	0.150	0.036	0.095	0.023	0.124	0.030
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		2,231	3,524	41,100		497	831	440	19	232	212	2231	1209	2024	230	10	27	24	3524	80	9.0	3.1	0.030	0.239	0.058	0.239	0.058	0.082	0.020	0.129	0.031
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		3,219	2,654	41,950		1159	1942	63	3	27	25	3219	890	1491	134	6	70	63	2654	80	2.5	3.7	0.030	0.066	0.016	0.095	0.023	0.097	0.023	0.115	0.028
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		2,375	2,722	36,400		576	965	360	16	240	218	2375	941	1576	93	4	56	52	2722	80	8.2	3.2	0.030	0.218	0.053	0.232	0.056	0.085	0.020	0.103	0.025
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		3,937	2,296	44,500		1432	2398	58	3	24	22	3937	800	1339	69	3	44	41	2296	60	2.4	3.1	0.030	0.061	0.015	0.108	0.026	0.082	0.020	0.084	0.020
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		2,024	3,169	37,100		690	1156	90	4	44	40	2024	1143	1913	53	2	30	28	3169	60	3.4	2.5	0.030	0.090	0.022	0.081	0.020	0.066	0.016	0.093	0.023
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		3,360	2,346	40,750		1211	2029	64	3	28	25	3360	843	1413	40	2	25	23	2346	60	2.5	2.6	0.030	0.065	0.016	0.098	0.024	0.067	0.016	0.071	0.017
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		2,358	3,040	38,550		814	1362	97	4	42	39	2358	1119	1875	19	1	14	12	3040	60	3.2	2.2	0.030	0.084	0.020	0.089	0.021	0.056	0.014	0.077	0.019
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	1,652	3,677	38,050		588	986	35	2	21	20	1652	1345	2252	30	1	26	23	3677	80	2.7	2.3	0.030	0.071	0.017	0.053	0.013	0.060	0.014	0.098	0.024
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	3,239	1,838	36,250		1140	1910	84	4	53	48	3239	674	1129	11	0	13	11	1838	80	2.9	2.3	0.030	0.077	0.019	0.111	0.027	0.059	0.014	0.048	0.012
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	1,468	2,784	30,350		511	855	48	2	27	25	1468	992	1661	45	2	44	40	2784	80	3.1	2.8	0.030	0.082	0.020	0.054	0.013	0.072	0.018	0.090	0.022
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,561	1,535	29,250		897	1501	66	3	49	45	2561	549	919	24	1	22	20	1535	80	3.1	2.7	0.030	0.080	0.019	0.091	0.022	0.071	0.017	0.048	0.012
Winston Churchill Blvd	Winston Churchill Blvd N of S Side Rd_NB	D31	NB	1	2	617	1,237	13,250		205	343	32	1	19	17	617	448	751	15	1	12	10	1237	80	3.9	2.5	0.030	0.102	0.025	0.028	0.007	0.064	0.015	0.035	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of S Side Rd_SB	D32	SB	1	2	1,171	626	12,850		409	684	29	1	25	23	1171	229	384	2	0	6	5	626	80	3.1	2.3	0.030	0.082	0.020	0.043	0.010	0.060	0.015	0.017	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	918	755	11,950		301	503	50	2	32	30	918	269	451	12	1	12	10	755	60	4.1	2.8	0.030	0.108	0.026	0.044	0.011	0.072	0.017	0.024	0.006
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	835	1,043	13,400		302	506	13	1	7	6	835	359	600	27	1	29	27	1043	60	2.5	3.4	0.030	0.064	0.015	0.024	0.006	0.089	0.022	0.042	0.010
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,279	858	15,250		459	770	20	1	15	14	1279	313	525	10	0	5	5	858	60	2.6	2.3	0.030	0.068	0.016	0.039	0.009	0.060	0.015	0.023	0.006
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	531	1,338	13,350		174	292	27	1	19	18	531	492	823	9	0	7	7	1338	60	4.1	2.2	0.030	0.108	0.026	0.026	0.006	0.058	0.014	0.034	0.008
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		281	833	7,950		102	171	2	0	3	3	281	305	512	11	0	8	7	833	60	2.5	2.3	0.060	0.120	0.029	0.015	0.004	0.112	0.027	0.042	0.010
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		820	420	8,850		289	483	9	0	20	19	820	154	259	3	0	2	2	420	60	3.1	2.2	0.060	0.151	0.036	0.055	0.013	0.107	0.026	0.020	0.005
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		427	863	9,200		158	265	1	0	2	1	427	314	527	1	0	11	10	863	60	2.1	2.4	0.060	0.101	0.025	0.019	0.005	0.119	0.029	0.046	0.011
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		1,016	563	11,300		358	599	21	1	19	18	1016	210	353	0	0	0	0	563	60	3.0	1.9	0.030	0.078	0.019	0.035	0.009	0.049	0.012	0.012	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		396	250	4,600		148	248	0	0	0	0	396	91	153	1	0	3	2	250	60	1.9	2.4	0.200	0.276	0.067	0.049	0.012	0.348	0.084	0.039	0.009
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		521	420	6,700		176	296	11	1	19	18	521	157	263	0	0	0	0	420	60	3.7	1.9	0.060	0.184	0.045	0.043	0.010	0.092	0.022	0.022	0.017	0.004
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		800	419	8,700		299	501	0	0	0	0	800	145	244	14	1	8	7	419	60	1.9	3.2	0.060	0.092	0.022	0.033	0.008	0.155	0.037	0.029	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		590	696	9,200		198	331	28	1	17	15	590	259	435	0	0	1	1	696	60	3.7	2.0	0.060	0.184	0.044	0.049	0.012	0.095	0.023	0.030	0.007
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,729	1,544	23,400		584	977	64	3	53	48	1729	544	912	35	2	27	24	1544	60	3.7	2.9	0.030	0.096	0.023	0.075	0.018	0.077	0.019	0.053	0.013
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,509	1,473	21,300		495	830	72	3	57	52	1509	508	852	27	1	44	41	1473	60	4.1	3.4	0.030	0.108	0.026	0.073	0.018	0.089	0.022	0.059	0.014
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,400	2,124	32,300		824	1381	83	4	56	52	2400	761	1274	36	2	27	24	2124	60	3.4	2.7	0.030	0.088	0.021	0.094	0.023	0.069	0.017	0.066	0.016
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		1,084	568	11,800		381	637	24	1	21	20	1084	210	351	3	0	2	2	568	60	3.0	2.1	0.030	0.079	0.019	0.038	0.009	0.055	0.013	0.014	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,600	3,249	41,800		819	1372	194	9	108	98	2600	1125	1885	109	5	65	60	3249	60	4.7	3.2	0.030	0.123	0.030	0.143	0.035	0.084	0.020	0.122	0.029
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		3,052	2,421	39,100		981	1643	204	9	112	103	3052	818	1369	104	5	65	60	2421	60	4.4	3.6	0.030	0.115	0.028	0.156	0.038	0.095	0.023	0.103	0.025
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		645	824	10,500		221	371	26	1	14	12	645	302	506	10	0	3	3	824	60	3.3	2.2	0.030	0.087	0.021	0.025	0.006	0.058	0.014	0.021	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		761	668	9,300		237	396	61	3	33	31	761	245	410	8	0	3	2	668	60	4.9	2.2	0.030	0.128	0.031	0.043	0.011	0.058	0.014	0.017	0.004
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		946	767	12,250		316	528	48	2	27	25	946	277	464	12	1	7	6	767	60	3.8	2.5	0.030	0.100	0.024	0.042	0.010	0.065	0.016	0.022	0.005
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		374	627	64	3	28	26	1122	169	284	6	0	4	3	466	60	3.8	2.4	0.030	0.098	0.024	0.049	0.012	0.062	0.015	0.013	0.003
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,982	1,078	21,850		664	1112	93	4	57	52	1982	370	619	35	2	27	25	1078	80	3.8	3.4	0.030	0.098	0.024	0.087	0.021	0.089	0.022	0.043	0.010
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,060	1,707	19,750		362	607	43	2	24	22	1060	595	997	53	2	31	29	1707	80	3.4	3.1	0.030	0.089	0.022	0.042	0.010	0.081	0.020	0.062	0.015
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		2,397	3,326	40,900		805	1347	113	5	66	61	2397	1208	2024	36	2	29	27	3326	80	3.7	2.4	0.030	0.097	0.024	0.104	0.025	0.063	0.015	0.093	0.023
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		3,211	2,797	42,900		1166	1952	42	2	26	23	3211	990	1659	69	3	40	36	2797	80	2.4	2.8	0.030	0.063	0.015	0.090	0.022	0.074	0.018	0.092	0.022
Mayfield Rd	Mayfield Rd E of Hwy 413_EB

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Descr pt on	Mode Source D	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62											
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM10 g/VKT	PM2 5 g/VKT	PM10 g/s m e	PM2 5 g/s m e	PM10 g/VKT	PM2 5 g/VKT	PM10 g/s m e	PM2 5 g/s m e
McLaughlin Rd	McLaughlin Rd S of Old School Rd_SB	D76	SB	2	3	398	281	4,850		133	224	20	1	10	10	398	99	165	8	0	5	4	281	80	3.7	3.0	0.200	0.545	0.132	0.097	0.023	0.436	0.106	0.055	0.013
McLaughlin Rd	McLaughlin Rd At Hwy 413_NB	D77	NB	2	3	294	566	6,150		91	152	26	1	13	11	294	196	329	20	1	10	10	566	80	4.9	3.2	0.060	0.243	0.059	0.032	0.008	0.155	0.038	0.039	0.010
McLaughlin Rd	McLaughlin Rd At Hwy 413_SB	D78	SB	2	3	634	218	6,100		208	349	36	2	20	19	634	72	121	11	0	7	7	218	80	4.0	4.0	0.060	0.199	0.048	0.056	0.014	0.196	0.047	0.019	0.005
Old School Rd	Old School Rd W of Hurontario St_EB	D79	EB	2	3	559	726	9,200		172	289	42	2	28	26	559	227	379	43	2	39	36	726	70	5.1	5.0	0.060	0.250	0.060	0.062	0.015	0.246	0.059	0.080	0.019
Old School Rd	Old School Rd W of Hurontario St_WB	D80	WB	2	3	779	1,339	15,150		252	423	53	2	26	23	779	471	789	24	1	28	26	1339	70	4.2	3.0	0.030	0.111	0.027	0.039	0.009	0.079	0.019	0.047	0.011
Old School Rd	Old School Rd E of Hurontario St_EB	D81	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Hurontario St_WB	D82	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hurontario St	Hurontario St S of Old School Rd_NB	D83	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hurontario St	Hurontario St S of Old School Rd_SB	D84	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hurontario St	Hurontario St S of Hwy 413_NB	D85	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hurontario St	Hurontario St S of Hwy 413_SB	D86	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hurontario St	Hurontario St N of Hwy 413_NB	D87	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hurontario St	Hurontario St N of Hwy 413_SB	D88	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kennedy Rd	Kennedy Rd At Hwy 413_NB	D89	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kennedy Rd	Kennedy Rd At Hwy 413_SB	D90	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Heart Lake Rd_EB	D91	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Heart Lake Rd_WB	D92	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd At Hwy 410_EB	D93	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd At Hwy 410_WB	D94	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_NB	E01	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Mayfield Rd_SB	E02	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_NB	E03	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	M

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Descr pt on	Mode Source ID	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e	PM_{10} g/VKT	$PM_{2.5}$ g/VKT	PM_{10} g/s m e	$PM_{2.5}$ g/s m e
									Average Veh c e We ght US short ons >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_WB	E86	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_EB	E87	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Major Mackenzie Dr	Major Mackenzie Dr E of Hwy 427_WB	E88	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Huntington Rd	Huntington Rd At Hwy 413_NB	E89	NB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Huntington Rd	Huntington Rd At Hwy 413_SB	E90	SB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Huntington Rd	Huntington Rd N of Kirby Rd_NB	E91	NB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Huntington Rd	Huntington Rd N of Kirby Rd_SB	E92	SB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Huntington Rd_EB	E93	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Huntington Rd_WB	E94	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 27	Hwy 27 S of Hwy 413_NB	E95	NB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 27	Hwy 27 S of Hwy 413_SB	E96	SB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 27	Hwy 27 N of Hwy 413_NB	E97	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 27	Hwy 27 N of Hwy 413_SB	E98	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd E of Hwy 27_EB	F01	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd E of Hwy 27_WB	F02	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kipling Ave	Kipling Ave At Hwy 413_NB	F03	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kipling Ave	Kipling Ave At Hwy 413_SB	F04	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Hwy 27_EB	F05	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Hwy 27_WB	F06	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_EB	F07	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Kipling Ave_WB	F08	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr At Hwy 413_NB	F09	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr At Hwy 413_SB	F10	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_NB	F13	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pine Valley Dr	Pine Valley Dr N of King Vaughan Rd_SB	F14	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_EB	F15	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		2,104	2,576	33,450		746	1250	29	1	41	37	2104	932	1560	28	1	29	26	2576	60	2.9	2.5	0.030	0.075	0.018	0.071	0.017	0.065	0.016	0.075	0.018
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		2,245	2,495	33,850		759	1270	113	5	51	47	2245	898	1503	32	1	32	29	2495	60	3.6	2.6	0.030	0.093	0.023	0.093	0.023	0.068	0.016	0.076	0.018
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		508	1,359	13,350		188	316	1	0	2	1	508	500	837	1	0	11	10	1359	60	2.1	2.2	0.030	0.053	0.013	0.012	0.003	0.058	0.014	0.035	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		1,669	813	17,750		557	934	64	3	58	53	1669	304	509	0	0	0	0	813	60	3.9	1.9	0.030	0.102	0.025	0.076	0.018	0.049	0.012	0.018	0.004
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 1

Highway 413

GTA West

Road	Descr pt on	Mode Source D	D rect on	Mode Sect on for Roadway Zone 1	Mode Sect on for Roadway Zone 2	AM Peak Vo ume	PM Peak Vo ume	AADT	AM Peak Vo ume by Veh c e							PM Peak Vo ume by Veh c e							Peak Hour Network Speed km/hour	We ghted Average Veh c e We ght US short tons		S t Load ng g/m2	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota	Passenger Car	Passenger Truck	S ng e Un Short Hau Truck	S ng e Un Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Tota		AM Peak	PM Peak		AP 42 Em ss on Factor		Base Em ss on Rate		AP 42 Em ss on Factor		Base Em ss on Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Veh c e We gh US short ons >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} g/VKT	$PM_{2 5}$ g/VKT	PM_{10} g/s m e	$PM_{2 5}$ g/s m e	PM_{10} g/VKT	$PM_{2 5}$ g/VKT	PM_{10} g/s m e	$PM_{2 5}$ g/s m e
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		318	47	2,600		116	194	3	0	3	2	318	18	29	0	0	0	0	47	80	2.4	1.9	0.200	0.346	0.084	0.049	0.012	0.276	0.067	0.006	0.001
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		152	127	2,000		48	81	4	0	10	9	152	38	64	4	0	11	10	127	40	4.9	5.9	0.200	0.732	0.177	0.050	0.012	0.874	0.211	0.050	0.012
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		1,709	1,227	20,950		518	868	142	6	92	83	1709	433	724	28	1	21	20	1227	70	5.3	2.9	0.030	0.139	0.034	0.106	0.026	0.077	0.019	0.042	0.010
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		11,596	9,699	152,100		3434	5751	959	42	737	673	11596	3003	5030	490	22	604	550	9699	100	5.7	5.2	0.015	0.080	0.019	0.415	0.100	0.073	0.018	0.315	0.076
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		9,620	7,481	122,100		2895	4847	627	28	640	583	9620	2361	3955	322	14	434	395	7481	100	5.6	4.9	0.015	0.078	0.019	0.336	0.081	0.069	0.017	0.229	0.056
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		9,928	8,116	128,900		3036	5083	610	27	613	559	9928	2636	4414	312	14	387	353	8116	100	5.3	4.4	0.015	0.075	0.018	0.331	0.080	0.062	0.015	0.224	0.054
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		7,016	8,682	112,100		2035	3408	516	23	541	493	7016	2803	4693	268	12	474	432	8682	100	6.1	4.6	0.015	0.086	0.021	0.270	0.065	0.064	0.016	0.249	0.060
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		3,347	3,311	47,600		1021	1709	228	10	198	181	3347	1064	1782	132	6	171	156	3311	100	5.3	4.6	0.015	0.074	0.018	0.111	0.027	0.064	0.016	0.095	0.023
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		3,669	5,371	64,600		1014	1699	288	13	343	312	3669	1739	2911	136	6	303	276	5371	100	6.9	4.6	0.015	0.097	0.023	0.159	0.038	0.064	0.016	0.154	0.037
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		7,765	9,777	125,300		2288	3831	546	24	563	513	7765	3152	5279	311	14	534	487	9777	100	5.9	4.6	0.015	0.083	0.020	0.287	0.069	0.064	0.016	0.281	0.068
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		926	791	12,250		298	500	34	2	48	44	926	275	460	11	1	23	21	791	60	4.6	3.3	0.030	0.120	0.029	0.050	0.012	0.086	0.021	0.031	0.007
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		1,254	990	16,050		422	708	6	0	62	56	1254	366	613	2	0	5	4	990	40	4.0	2.1	0.030	0.105	0.025	0.059	0.014	0.055	0.013	0.024	0.006
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		1,224	807	14,500		393	659	35	2	71	64	1224	277	464	13	1	27	25	807	70	4.7	3.5	0.030	0.123	0.030	0.067	0.016	0.092	0.022	0.033	0.008
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		956	974	13,800		328	548	5	0	39	36	956	364	609	0	0	1	0	974	70	3.7	1.9	0.030	0.096	0.023	0.041	0.010	0.050	0.012	0.022	0.005
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		1,976	2,218	30,000		540	903	331	15	98	89	1976	642	1075	169	7	170	155	2218	100	6.3	6.1	0.015	0.089	0.022	0.079	0.019	0.086	0.021	0.086	0.021
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		2,823	3,119	42,450		834	1396	334	15	128	116	2823	988	1654	164	7	160	146	3119	80	5.4	4.8	0.030	0.144	0.035	0.181	0.044	0.125	0.030	0.175	0.042
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	H14	0	1		109	73	1,300		33	55	3	0	9	9	109	18	30	5	0	10	10	73	70	5.8	8.7	0.200	0.865	0.209	0.042	0.010	1.306	0.316	0.043	0.010
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	H15	0	1		3,213	2,615	41,650		1153	1932	77	3	25	23	3213	817	1368	84	4	179	163	2615	80	2.6	5.2	0.030	0.067	0.016	0.096	0.023	0.136	0.033	0.159	0.039
Highway 401	Hwy 401 at Trafalgar Rd E-N/S Ramp	H16	E-N/S	1		2,660	1,922	32,750		976	1634	17	1	17	15	2660	681	1141	22	1	40	37	1922	70	2.3	2.9	0.030	0.058	0.014	0.069	0.017	0.076	0.018	0.066	0.016

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	5,003	4,686	69,200		1508	2526	477	21	246	225	5003	1464	2451	314	14	232	211	4686	110	5.3	4.9	0.015	0.074	0.018	0.166	0.040	0.068	0.017	0.143	0.035
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	5,410	4,834	73,200		1676	2808	465	21	230	210	5410	1510	2528	360	16	220	200	4834	110	4.9	4.8	0.015	0.068	0.017	0.165	0.040	0.068	0.016	0.146	0.035
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	5,298	5,877	79,800		1638	2744	456	20	230	210	5298	1931	3234	300	13	209	190	5877	110	4.9	4.1	0.015	0.069	0.017	0.163	0.039	0.057	0.014	0.150	0.036
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	6,209	5,409	83,000		1977	3312	475	21	222	202	6209	1734	2904	352	16	211	192	5409	110	4.5	4.4	0.015	0.062	0.015	0.173	0.042	0.062	0.015	0.150	0.036
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		4,681	4,664	66,700		1478	2474	358	16	186	169	4681	1526	2555	238	11	175	159	4664	110	4.6	4.2	0.015	0.065	0.016	0.135	0.033	0.058	0.014	0.121	0.029
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		4,925	4,947	70,500		1587	2657	345	15	168	153	4925	1597	2674	289	13	196	178	4947	110	4.3	4.4	0.015	0.060	0.015	0.132	0.032	0.061	0.015	0.135	0.033
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	3,843	4,648	60,600		1144	1915	374	17	206	187	3843	1511	2531	239	11	186	170	4648	110	5.5	4.3	0.015	0.077	0.019	0.132	0.032	0.060	0.014	0.124	0.030
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	4,792	3,918	62,200		1536	2572	336	15	174	159	4792	1192	1997	306	13	214	196	3918	110	4.4	5.3	0.015	0.061	0.015	0.132	0.032	0.074	0.018	0.129	0.031
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	4,921	4,878	70,000		1465	2454	477	21	264	240	4921	1556	2605	280	12	222	203	4878	110	5.5	4.6	0.015	0.077	0.019	0.169	0.041	0.064	0.016	0.140	0.034
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	4,896	4,542	67,400		1527	2558	385	17	214	195	4896	1366	2288	369	16	263	240	4542	110	4.8	5.4	0.015	0.067	0.016	0.148	0.036	0.076	0.018	0.155	0.037
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		6,058	4,889	78,200		1819	3046	535	24	332	302	6058	1507	2525	325	14	271	247	4889	110	5.4	5.1	0.015	0.076	0.018	0.206	0.050	0.072	0.017	0.157	0.038
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		4,982	5,707	76,300		1510	2529	443	20	251	229	4982	1746	2924	414	18	316	289	5707	110	5.2	5.2	0.015	0.073	0.018	0.164	0.040	0.073	0.018	0.187	0.045
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		5,553	5,413	78,300		1640	2747	560	25	304	277	5553	1702	2849	329	15	271	247	5413	110	5.6	4.8	0.015	0.078	0.019	0.195	0.047	0.068	0.016	0.164	0.040
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		5,644	5,208	77,500		1768	2960	428	19	245	224	5644	1547	2590	441	19	320	291	5208	110	4.8	5.6	0.015	0.067	0.016	0.168	0.041	0.079	0.019	0.184	0.045
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		5,232	5,006	73,100		1511	2530	562	25	316	288	5232	1512	2533	364	16	304	277	5006	110	5.9	5.4	0.015	0.083	0.020	0.194	0.047	0.076	0.018	0.171	0.041
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		5,005	4,908	70,800		1466	2455	503	22	292	267	5005	1405	2354	466	21	346	316	4908	110	5.7	6.2	0.015	0.081	0.019	0.180	0.044	0.087	0.021	0.190	0.046
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	5,186	4,688	70,500		1497	2508	554	24	315	288	5186	1404	2350	351	15	297	271	4688	110	5.9	5.6	0.015	0.083	0.020	0.193	0.047	0.078	0.019	0.164	0.040
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	4,963	4,897	70,400		1436	2406	523	23	301	274	4963	1412	2364	453	20	339	309	4897	110	5.9	6.1	0.015	0.083	0.020	0.184	0.044	0.085	0.021	0.187	0.045
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	4,810	4,236	64,600		1383	2315	518	23	299	272	4810	1250	2092	336	15	284	259	4236	110	6.0	5.8	0.015	0.084	0.020	0.181	0.044	0.081	0.020	0.154	0.037
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	4,484	4,580	64,700		1247	2089	538	24	307	279	4484	1313	2200	430	19	323	295	4580	110	6.4	6.1	0.015	0.090	0.022	0.181	0.044	0.086	0.021	0.177	0.043
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		4,760	1,835	47,100		1483	2484	344	15	227	207	4760	601	1007	137	6	44	40	1835	100	4.9	3.9	0.015	0.068	0.017	0.146	0.035	0.055	0.013	0.045	0.011
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		2,209	3,664	41,900		396	662	573	25	289	264	2209	1156	1936	450	20	53	49	3664	100	11.0	4.2	0.015	0.156	0.038	0.154	0.037	0.059	0.014	0.097	0.024
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		5,086	2,312	52,800		1614	2703	374	16	198	181	5086	864	1448	0	0	0	0	2312	100	4.5	1.9	0.015	0.064	0.015	0.145	0.035	0.026	0.006	0.027	0.007
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		2,352	4,063	45,800		816	1367	62	3	54	50	2352	1516	2540	5	0	1	1	4063	100	3.2	1.9	0.015	0.045	0.011	0.047	0.011	0.027	0.006	0.048	0.012
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,821	4,142	49,700		920	1542	174	8	93	84	2821	1470	2461	65	3	75	68	4142	100	4.1	2.9	0.015	0.058	0.014	0.073	0.018	0.040	0.010	0.074	0.018
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		5,151	3,741	63,500		1742	2916	106	5	200	182	5151	1305	2185	84	4	85	78	3741	100	3.8	3.2	0.015	0.053	0.013	0.122	0.029	0.044	0.011	0.073	0.018
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		1,090	2,201	23,500		335	560	102	4	47	42	1090	798	1336	20	1	24	22	2201	100	5.0	2.5	0.015	0.070	0.017	0.034	0.008	0.034	0.008	0.034	0.008
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		2,422	971	24,200		859	1438	39	2	44	40	2422	327	548	40	2	28	26	971	100	2.9	3.7	0.015	0.040	0.010	0.043	0.010	0.051	0.012	0.022	0.005
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,490	1,992	32,000		842	1410	64	3	89	82	2490	695	1165	41	2	47	42	1992	100	3.7	3.2	0.015	0.052	0.013	0.058	0.014	0.044	0.011	0.039	0.009
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,251	2,044	23,500		401	671	90	4	44	41	1251	717	1202	45	2	41	37	2044	100	4.4	3.0	0.015	0.061	0.015	0.034	0.008	0.042	0.010	0.039	0.009
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		980	924	13,600		337	564	34	1	23	21	980	311	521	25	1	35	31	924	70	3.4	3.8	0.030	0.088	0.021	0.038	0.009	0.100	0.024	0.041	0.010
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	1,052	1,589	18,850		391	655	3	0	2	1	1052	580	972	14	1	12	10	1589	60	2.0	2.3	0.030	0.052	0.013	0.024	0.006	0.060	0.015	0.043	0.010
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	390	535	6,600		135	227	13	1	7	7	390	187	313	12	1	12	10	535	40	3.2	3.1	0.060	0.155	0.038	0.027	0.007	0.153	0.037	0.037	0.009
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	1,568	1,367	20,950		562	941	33	1	16	15	1568	479	802	30	1	29	26	1367	70	2.6	3.1	0.030	0.068	0.017	0.048	0.012	0.080	0.019	0.049	0.012
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	383	689	7,650		121	203	20	1	20	18	383	227	379	23	1	31	28	689	40	4.8	4.2	0.060	0.236	0.057	0.040	0.010	0.208	0.050	0.064	0.016
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	399	330	5,200		141	237	8	0	7	6	399	121	203	4	0	1	1	330	60	2.9	2.2	0.060	0.141	0.034	0.025	0.006	0.107	0.026	0.016	0.004
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		1,343	1,611	21,100		424	711	110	5	49	44	1343	556	931	61	3	31	29	1611	70	4.6	3.2	0.030	0.120	0.029	0.072	0.017	0.085	0.020	0.061	0.015
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		479	233	5,100		166	279	18	1	8	7	479	81	136	9	0	4	3	233	60	3.1	3.1	0.060	0.153	0.037	0.033	0.008	0.151	0.036	0.016	0.004
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		144	18	1,150		51	85	4	0	2	2	144	7	11	0	0	0	0	18	40	2.9	1.9	0.200	0.421	0.102	0.027	0.007	0.276	0.067	0.002	0.001
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		225	491	5,100		81	135	5	0	2	2	225	179	300	5	0	4	3	491	70	2.6	2.3	0.060	0.126	0.031	0.013	0.003	0.114	0.028	0.025	0.006
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		944	1,063	14,350		296	495	85	4	33	31	944	360	604	65	3	16	15	1063	40	4.6	3.4	0.030	0.122	0.030	0.052	0.012	0.089	0.022	0.042	0.010
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		669	286	6,800		238	398	19	1	7	6	669	105	176	2	0	2	1	286	60	2.7	2.2	0.060	0.133	0.032	0.040	0.010	0.108	0.026	0.014	0.003
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		1,388	1,346	19,550		479	802	60	3	23	21	1388	480	805	31	1	15	14	1346	70	3.2	2.7	0.030	0.084	0.020	0.052	0.013	0.070	0.017	0.042	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		197	188	2,750		72	121	1	0	2	1	197	70	117	0	0	1	0	188	60	2.3	2.0	0.200	0.335	0.081	0.030	0.007	0.293	0.071	0.025	0.006
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		822	772	11,400		259	435	62	3	33	30	822	253	424	36	2	30	27	772	40	4.6	4.2	0.030	0.122	0.029	0.045	0.011	0.109	0.026	0.038	0.009
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		983	1,022	14,300		324	542	57	3	30	27	983	343	575	46	2	29	27	1022	70	4.0	3.7	0.030	0.104	0.025	0.046	0.011	0.097	0.024	0.044	0.011
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		1,058	568	11,600		362	605	56	2	17	16	1058	194	324	29	1	10	10	568	40	3.3	3.4	0.030	0.087	0.021	0.041	0.010	0.088	0.021	0.022	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		459	991	10,350		167	280	5	0	4	3	459	369	618	2	0	1	1	991	60	2.4	2.0	0.030	0.062	0.015	0.013	0.003	0.051	0.012	0.023	0.005
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	92	188	2,000		33	54	1	0	2	2	92	68	115	2	0	2	1	188	70	3.0	2.4	0.200	0.437	0.106	0.018	0.004	0.349	0.084	0.029	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	415	237	4,650		112	188	46	2	35	32	415	66	111	20	1	20	19	237	40	6.9	6.6	0.200	1.035	0.250	0.192	0.046	0.989	0.239	0.105	0.025
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	808	291	7,850		270	452	47	2	19	18	808	93	156	16	1	13	12	291	60	3.7	4.5	0.060	0.183	0.044	0.066	0.016	0.224	0.054	0.029	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	650	958	11,500		190	318	58	3	42	39	650	302	507	61	3	44	41	958	70	5.9	4.7	0.030	0.155	0.037	0.045	0.011	0.124	0.030	0.053	0.013
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	163	108	1,950		60	101	2	0	0	0	163	40	67	1	0	0	0	108	60	2.1	2.0	0.200	0.301	0.073	0.022	0.005	0.295	0.071	0.014	0.003
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	236	78	2,250		84	140	7	0	3	2	236	27	45	4	0	1	1	78	40	2.8	3.2	0.200	0.404	0.098	0.043	0.010	0.462	0.112	0.016	0.004
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	353	456	5,800		116	194	17	1	13	12	353	163	272	11	1	5	4	456	70	4.1	2.7	0.060	0.203	0.049	0.032	0.008	0.131	0.032	0.027	0.006
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		1,043	477	10,850		329	552	46	2	60	54	1043	135	226	41	2	38	35	477	40	4.9	6.4	0.030	0.128	0.031	0.060	0.014	0.170	0.041	0.036	0.009
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		353	207	4,000		99	167	36	2	26	23	353	62	103	15	1	14	12	207	60	6.4	5.7	0.200	0.945	0.229	0.149	0.036	0.839	0.203	0.078	0.019
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		570	1,518	14,900		149	249	73	3	50	46	570	507	848	55	2	55	51	1518	70	7.3	3.9	0.030	0.195	0.047	0.050	0.012	0.103	0.025	0.070	0.017
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	355	266	4,450		123	206	8	0	9	9	355	87	147	17	1	7	7	266	60	3.3	4.0	0.200	0.484	0.117	0.077	0.019	0.583	0.141	0.069	0.017
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		355	266	4,450		123	206	8	0	9	9	355	87	147	17	1	7	7	266	40	3.3	4.0	0.200	0.484	0.117	0.077	0.019	0.583	0.141	0.069	0.017
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		1,108	250	9,700		361	605	37	2	54	49	1108	90	152	2	0	3	3	250	90	4.4	2.5	0.060	0.216	0.052	0.107	0.026	0.123	0.030	0.014	0.003
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		1,023	684	12,200		362	605	24	1	16	15	1023	221	371	40	2	26	24	684	90	2.9	4.3	0.030	0.075	0.018	0.034	0.008	0.113	0.027	0.035	0.008
High

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	MOVES Veh c e Type >>	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
										Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36						PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		3,567	2,500	43,350		1267	2121	25	1	80	73	3567	914	1531	3	0	27	25	2500	60	2.9	2.4	0.030	0.076	0.018	0.122	0.029	0.061	0.015	0.069	0.017
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		2,581	3,498	43,400		936	1568	23	1	28	25	2581	1292	2164	5	0	19	18	3498	60	2.5	2.2	0.030	0.064	0.016	0.074	0.018	0.056	0.013	0.087	0.021
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		3,926	2,684	47,200		1414	2369	54	2	46	41	3926	976	1634	24	1	26	23	2684	60	2.6	2.4	0.030	0.067	0.016	0.117	0.028	0.063	0.015	0.075	0.018
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		2,282	3,682	42,600		765	1280	65	3	88	81	2282	1332	2231	28	1	47	43	3682	60	3.9	2.5	0.030	0.102	0.025	0.104	0.025	0.066	0.016	0.108	0.026
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		3,510	2,616	43,750		1239	2074	57	3	72	65	3510	942	1578	36	2	30	28	2616	60	3.0	2.6	0.030	0.078	0.019	0.122	0.029	0.067	0.016	0.078	0.019
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		2,755	4,164	49,400		922	1543	135	6	78	71	2755	1503	2516	39	2	54	50	4164	60	3.8	2.6	0.030	0.099	0.024	0.121	0.029	0.067	0.016	0.125	0.030
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		3,726	3,182	49,350		1300	2176	86	4	84	76	3726	1140	1910	47	2	43	40	3182	80	3.2	2.7	0.030	0.082	0.020	0.137	0.033	0.070	0.017	0.099	0.024
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		2,687	3,500	44,200		903	1511	139	6	67	61	2687	1254	2101	49	2	49	45	3500	80	3.7	2.7	0.030	0.096	0.023	0.115	0.028	0.070	0.017	0.109	0.026
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		3,032	2,270	37,850		1085	1818	38	2	47	42	3032	824	1379	21	1	24	21	2270	80	2.7	2.5	0.030	0.071	0.017	0.096	0.023	0.064	0.015	0.065	0.016
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		2,066	3,291	38,250		703	1177	107	5	39	35	2066	1198	2005	29	1	30	28	3291	80	3.4	2.4	0.030	0.089	0.022	0.082	0.020	0.062	0.015	0.092	0.022
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		3,905	2,233	43,850		1379	2310	67	3	76	70	3905	809	1356	21	1	24	22	2233	80	3.0	2.5	0.030	0.077	0.019	0.134	0.032	0.064	0.016	0.064	0.016
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		1,955	3,721	40,550		653	1094	118	5	44	41	1955	1347	2257	37	2	41	37	3721	80	3.7	2.5	0.030	0.097	0.023	0.085	0.020	0.065	0.016	0.108	0.026
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		629	1,334	14,000		211	354	29	1	18	16	629	462	773	34	1	33	31	1334	60	3.7	3.3	0.030	0.097	0.024	0.027	0.007	0.086	0.021	0.051	0.012
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		1,844	924	19,750		631	1058	62	3	47	43	1844	322	538	26	1	19	18	924	60	3.4	3.2	0.030	0.090	0.022	0.074	0.018	0.083	0.020	0.034	0.008
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		2,331	1,462	27,100		817	1369	57	3	44	41	2331	507	850	38	2	34	31	1462	60	3.0	3.2	0.030	0.079	0.019	0.083	0.020	0.084	0.020	0.055	0.013
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		2,077	2,316	31,400		709	1188	76	3	53	48	2077	825	1381	44	2	33	31	2316	60	3.5	2.8	0.030	0.091	0.022	0.084	0.020	0.072	0.017	0.075	0.018
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		198	876	7,650		60	101	15	1	11	10	198	311	521	13	1	16	14	876	70	5.3	2.9	0.060	0.262	0.063	0.023	0.006	0.140	0.034	0.055	0.013
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		1,217	401	11,550		398	667	51	2	52	47	1217	146	244	3	0	4	4	401	70	4.2	2.4	0.030	0.111	0.027	0.061	0.015	0.063	0.015	0.011	0.003
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		4,191	2,914	50,750		1461	2448	141	6	71	64	4191	977	1635	174	8	63	57	2914	80	3.1	3.6	0.030	0.080	0.019	0.150	0.036	0.095	0.023	0.124	0.030
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		2,231	3,524	41,100		497	831	440	19	232	212	2231	1209	2024	230	10	27	24	3524	80	9.0	3.1	0.030	0.239	0.058	0.239	0.058	0.082	0.020	0.129	0.031
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		3,219	2,654	41,950		1159	1942	63	3	27	25	3219	890	1491	134	6	70	63	2654	80	2.5	3.7	0.030	0.066	0.016	0.095	0.023	0.097	0.023	0.115	0.028
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		2,375	2,722	36,400		576	965	360	16	240	218	2375	941	1576	93	4	56	52	2722	80	8.2	3.2	0.030	0.218	0.053	0.232	0.056	0.085	0.020	0.103	0.025
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		3,937	2,296	44,500		1432	2398	58	3	24	22	3937	800	1339	69	3	44	41	2296	60	2.4	3.1	0.030	0.061	0.015	0.108	0.026	0.082	0.020	0.084	0.020
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		2,024	3,169	37,100		690	1156	90	4	44	40	2024	1143	1913	53	2	30	28	3169	60	3.4	2.5	0.030	0.090	0.022	0.081	0.020	0.066	0.016	0.093	0.023
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		3,360	2,346	40,750		1211	2029	64	3	28	25	3360	843	1413	40	2	25	23	2346	60	2.5	2.6	0.030	0.065	0.016	0.098	0.024	0.067	0.016	0.071	0.017
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		2,358	3,040	38,550		814	1362	97	4	42	39	2358	1119	1875	19	1	14	12	3040	60	3.2	2.2	0.030	0.084	0.020	0.089	0.021	0.056	0.014	0.077	0.019
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	1,652	3,677	38,050		588	986	35	2	21	20	1652	1345	2252	30	1	26	23	3677	80	2.7	2.3	0.030	0.071	0.017	0.053	0.013	0.060	0.014	0.098	0.024
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	3,239	1,838	36,250		1140	1910	84	4	53	48	3239	674	1129	11	0	13	11	1838	80	2.9	2.3	0.030	0.077	0.019	0.111	0.027	0.059	0.014	0.048	0.012
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	1,468	2,784	30,350		511	855	48	2	27	25	1468	992	1661	45	2	44	40	2784	80	3.1	2.8	0.030	0.082	0.020	0.054	0.013	0.072	0.018	0.090	0.022
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,561	1,535	29,250		897	1501	66	3	49	45	2561	549	919	24	1	22	20	1535	80	3.1	2.7	0.030	0.080	0.019	0.091	0.022	0.071	0.017	0.048	0.012
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	617	1,237	13,250		205	343	32	1	19	17	617	448	751	15	1	12	10	1237	80	3.9	2.5	0.030	0.102	0.025	0.028	0.007	0.064	0.015	0.035	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	1,171	626	12,850		409	684	29	1	25	23	1171	229	384	2	0	6	5	626	80	3.1	2.3	0.030	0.082	0.020	0.043	0.010	0.060	0.015	0.017	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	918	755	11,950		301	503	50	2	32	30	918	269	451	12	1	12	10	755	60	4.1	2.8	0.030	0.108	0.026	0.044	0.011	0.072	0.017	0.024	0.006
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	835	1,043	13,400		302	506	13	1	7	6	835	359	600	27	1	29	27	1043	60	2.5	3.4	0.030	0.064	0.015	0.024	0.006	0.089	0.022	0.042	0.010
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,279	858	15,250		459	770	20	1	15	14	1279	313	525	10	0	5	5	858	60	2.6	2.3	0.030	0.068	0.016	0.039	0.009	0.060	0.015	0.023	0.006
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	531	1,338	13,350		174	292	27	1	19	18	531	492	823	9	0	7	7	1338	60	4.1	2.2	0.030	0.108	0.026	0.026	0.006	0.058	0.014	0.034	0.008
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		281	833	7,950		102	171	2	0	3	3	281	305	512	1	0	8	7	833	60	2.5	2.3	0.060	0.120	0.029	0.015	0.004	0.112	0.027	0.042	0.010
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		820	420	8,850		289	483	9	0	20	19	820	154	259	3	0	2	2	420	60	3.1	2.2	0.060	0.151	0.036	0.055	0.013	0.107	0.026	0.020	0.005
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		427	863	9,200		158	265	1	0	2	1	427	314	527	1	0	11	10	863	60	2.1	2.4	0.060	0.101	0.025	0.019	0.005	0.119	0.029	0.046	0.011
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		1,016	563	11,300		358	599	21	1	19	18	1016	210	353	0	0	0	0	563	60	3.0	1.9	0.030	0.078	0.019	0.035	0.009	0.049	0.012	0.012	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		396	250	4,600		148	248	0	0	0	0	396	91	153	1	0	3	2	250	60	1.9	2.4	0.200	0.276	0.067	0.049	0.012	0.348	0.084	0.039	0.009
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		521	420	6,700		176	296	11	1	19	18	521	157	263	0	0	0	0	420	60	3.7	1.9	0.060	0.184	0.045	0.043	0.010	0.092	0.022	0.017	0.004
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		800	419	8,700		299	501	0	0	0	0	800	145	244	14	1	8	7	419	60	1.9	3.2	0.060	0.092	0.022	0.033	0.008	0.155	0.037	0.029	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		590	696	9,200		198	331	28	1	17	15	590	259	435	0	0	1	1	696	60	3.7	2.0	0.060	0.184	0.044	0.049	0.012	0.095	0.023	0.030	0.007
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,729	1,544	23,400		584	977	64	3	53	48	1729	544	912	35	2	27	24	1544	60	3.7	2.9	0.030	0.096	0.023	0.075	0.018	0.077	0.019	0.053	0.013
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,509	1,473	21,300		495	830	72	3	57	52	1509	508	852	27	1	44	41	1473	60	4.1	3.4	0.030	0.108	0.026	0.073	0.018	0.089	0.022	0.059	0.014
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,400	2,124	32,300		824	1381	83	4	56	52	2400	761	1274	36	2	27	24	2124	60	3.4	2.7	0.030	0.088	0.021	0.094	0.023	0.069	0.017	0.066	0.016
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		1,084	568	11,800		381	637	24	1	21	20	1084	210	351	3	0	2	2	568	60	3.0	2.1	0.030	0.079	0.019	0.038	0.009	0.055	0.013	0.014	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,600	3,249	41,800		819	1372	194	9	108	98	2600	1125	1885	109	5	65	60	3249	60	4.7	3.2	0.030	0.123	0.030	0.143	0.035	0.084	0.020	0.122	0.029
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		3,052	2,421	39,100		981	1643	204	9	103	3052	818	1369	104	5	65	60	2421	60	4.4	3.6	0.030	0.115	0.028	0.156	0.038	0.095	0.023	0.103	0.025
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		645	824	10,500		212	371	26	1	14	12	645	302	506	10	0	3	3	824	60	3.3	2.2	0.030	0.087	0.021	0.025	0.006	0.058	0.014	0.021	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		761	668	10,200		237	396	61	3	33	31	761	245	410	8	0	3	2	668	60	4.9	2.2	0.030	0.128	0.031	0.043	0.011	0.058	0.014	0.017	0.004
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		946	767	12,250		316	528	48	2	27	25	946	277	464	12	1	7	6	767	60	3.8	2.5	0.030	0.100	0.024	0.042	0.010	0.065	0.016	0.022	0.005
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		1,122	466	11,350		374	627	64	3	28	26	1122	169	284	6	0	4	3	466	60	3.8	2.4	0.030	0.098	0.024	0.049	0.012	0.062	0.015	0.013	0.003
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,982	1,078	21,850		664	1112	93	4	57	52	1982	370	619	35	2	27	25	1078	80	3.8	3.4	0.030	0.098	0.024	0.087	0.021	0.089	0.022	0.043	0.010
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,060	1,707	19,750		362	607	43	2	24	22	1060	595	997	53	2	31	29	1707	80	3.4	3.1	0.030	0.089	0.022	0.042	0.010	0.081	0.020	0.062	0.015
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		2,397	3,326	40,900		805	1347	113	5	66	61	2397	1208	2024	36	2	29	27	3326	80	3.7	2.4	0.030	0.097	0.024	0.104	0.025	0.063	0.015	0.093	0.023
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		3,211	2,797	42,900		1166	1952	42	2	26	23	3211	990	1659	69	3	40	36	2797	80	2.4	2.8	0.030	0.063	0.015	0.090	0.022	0.074	0.018	0.092	0.022
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,309	1,343	18,950		432	723	77	3	39	35	1309	480	804	27	1	16	15	1343	80	3.9	2.7	0.030	0.104	0.025	0.061	0.015	0.070	0.017	0.042	0.010
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,413	1,563	21,250		501	840	37	2	17	16	1413	550	922	48	2	21	20	1563	80	2.8	2.9	0.030	0.072	0.018	0.046	0.011	0.076	0.018	0.053	0.013
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		172	538	5,050		57	95	11	0	5	4	172	179	299	37	2	11	10	538	80	3.9	3.7	0.060	0.192	0.046	0.015	0.004	0.183	0.044	0.044	0.011
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		797	269	7,600		244	409	79	3	32	30	797	94	158	8	0	5	4	269	80	5.0	3.0	0.060	0.246	0.060	0.088	0.021	0.148	0.036	0.018	0.004
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	210	9	1,550		47	80	44	2	19	18	210	3	6	0	0	0	0	9	70	8.7	1.9	0.200	1.298	0.314	0.122	0.029	0.276	0.067	0.001	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	98	138	1,700		33	54	7	0	2	2	98	42	69	11	0	8	8	138	70	3.8	5.5	0.200	0.552	0.134	0.024	0.006	0.813	0.197	0.050	0.012
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	1,076	628	12,150		348	584	78	3	33	30	1076	207	347	30	1	22	21	628	80	4.2	4.0	0.030	0.110	0.027	0.053	0.013	0.106	0.026	0.030	0.007
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	684	777	10,450		212	354	51	2	34	31	684	255	427	37	2	29	27	777	80	5.0	4.1	0.030	0.132	0.032	0.040	0.010	0.108	0.026	0.038	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	512	835	9,600		145	244	54	2	35	32	512	213	357	105	5	81	74	835	80	6.2	7.7	0.060	0.308	0.075	0.071	0.017	0.384	0.093	0.143	0.035
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	1,212	633	13,200		375	627	92	4	60	54	1212	195	327	38	2	37	34	633	80	5.0	5.2	0.030	0.132	0.032	0.071	0.017	0.136	0.033	0.039	0.009
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	159	732	6,350		43	73	22	1	10	10	159	254	426	18	1	17	16	732	80	6.6	3.2

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36			AM Peak	PM Peak		PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		442	508	6,800		135	226	31	1	26	23	442	183	307	8	0	5	5	508	80	5.3	2.5	0.060	0.261	0.063	0.052	0.012	0.124	0.030	0.028	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		308	523	5,950		109	182	9	0	4	4	308	190	317	8	0	4	4	523	80	2.9	2.4	0.060	0.140	0.034	0.019	0.005	0.119	0.029	0.028	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		892	176	7,650		305	511	36	2	20	18	892	62	105	7	0	1	1	176	80	3.4	2.7	0.060	0.167	0.040	0.067	0.016	0.131	0.032	0.010	0.003
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,317	2,652	42,650		1162	1945	85	4	63	58	3317	945	1583	42	2	42	38	2652	60	3.1	2.8	0.030	0.080	0.019	0.118	0.029	0.072	0.017	0.086	0.021
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		2,243	3,006	37,500		780	1305	80	4	39	35	2243	1096	1836	25	1	25	23	3006	60	3.1	2.4	0.030	0.081	0.020	0.082	0.020	0.061	0.015	0.082	0.020
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,172	2,409	39,850		1107	1854	82	4	65	60	3172	856	1433	41	2	40	37	2409	60	3.1	2.8	0.030	0.081	0.020	0.115	0.028	0.074	0.018	0.079	0.019
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,480	2,580	36,150		873	1462	72	3	37	33	2480	939	1573	24	1	22	21	2580	60	2.9	2.4	0.030	0.076	0.018	0.084	0.020	0.062	0.015	0.072	0.017
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,407	2,563	42,650		1186	1985	106	5	65	60	3407	909	1523	43	2	45	41	2563	60	3.1	2.9	0.030	0.082	0.020	0.125	0.030	0.075	0.018	0.085	0.021
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,676	3,506	44,150		904	1513	96	4	83	76	2676	1277	2138	30	1	31	29	3506	60	3.7	2.4	0.030	0.097	0.023	0.116	0.028	0.062	0.015	0.097	0.024
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		1,081	1,224	16,450		377	632	38	2	17	15	1081	436	729	25	1	17	16	1224	80	3.0	2.8	0.030	0.079	0.019	0.038	0.009	0.072	0.017	0.039	0.010
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,586	938	18,050		550	920	54	2	31	29	1586	338	567	11	1	11	10	938	80	3.2	2.6	0.030	0.083	0.020	0.059	0.014	0.066	0.016	0.028	0.007
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		525	860	9,900		180	302	20	1	12	10	525	308	516	7	0	15	14	860	80	3.3	2.7	0.060	0.164	0.040	0.039	0.009	0.134	0.032	0.051	0.012
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		1,000	645	11,750		338	565	15	1	42	39	1000	234	392	5	0	7	7	645	80	3.9	2.5	0.030	0.101	0.024	0.045	0.011	0.064	0.016	0.019	0.004
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		283	602	6,300		90	150	26	1	8	8	283	218	365	9	0	5	5	602	80	4.4	2.5	0.060	0.218	0.053	0.028	0.007	0.120	0.029	0.032	0.008
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		712	324	7,400		261	437	6	0	4	4	712	112	187	11	1	7	6	324	80	2.3	3.3	0.060	0.110	0.027	0.035	0.008	0.160	0.039	0.023	0.006
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		2,846	1,492	31,000		1009	1689	77	3	36	32	2846	514	862	48	2	35	31	1492	60	2.8	3.3	0.030	0.073	0.018	0.093	0.022	0.086	0.021	0.058	0.014
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,787	1,421	22,900		588	986	108	5	52	48	1787	516	863	20	1	11	10	1421	60	4.0	2.4	0.030	0.104	0.025	0.083	0.020	0.063	0.015	0.040	0.010
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		28	338	2,600		9	15	1	0	2	1	28	120	201	5	0	6	6	338	80	4.7	2.9	0.200	0.694	0.168	0.009	0.002	0.420	0.102	0.063	0.015
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		353	44	2,850		114	191	17	1	16	14	353	16	26	0	0	1	1	44	80	4.4	2.9	0.200	0.653	0.158	0.103	0.025	0.422	0.102	0.008	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		594	1,436	14,500		125	210	122	5	69	63	594	471	788	73	3	53	48	1436	80	9.6	4.1	0.030	0.256	0.062	0.068	0.016	0.108	0.026	0.070	0.017
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		1,531	903	17,400		525	880	56	2	36	32	1531	276	463	68	3	49	44	903	80	3.4	5.2	0.030	0.088	0.021	0.060	0.015	0.137	0.033	0.055	0.013
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		633	717	9,650		205	343	32	1	27	25	633	264	441	2	0	5	5	717	70	4.4	2.2	0.060	0.216	0.052	0.061	0.015	0.109	0.026	0.035	0.008
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		963	753	12,250		346	580	11	0	14	12	963	278	465	2	0	4	4	753	70	2.6	2.2	0.030	0.069	0.017	0.030	0.007	0.056	0.014	0.019	0.005
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		592	590	8,450		171	287	57	2	39	36	592	203	341	10	0	19	17	590	70	6.0	3.4	0.060	0.297	0.072	0.079	0.019	0.169	0.041	0.045	0.011
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		514	835	9,650		179	301	15	1	9	9	514	310	520	2	0	2	1	835	70	3.1	2.0	0.060	0.151	0.037	0.035	0.008	0.098	0.024	0.037	0.009
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		43	422	3,300		16	27	0	0	0	0	43	155	260	3	0	2	2	422	70	1.9	2.2	0.200	0.276	0.067	0.005	0.001	0.321	0.078	0.061	0.015
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		659	97	5,400		232	389	16	1	11	10	659	36	60	1	0	0	0	97	70	2.9	2.0	0.060	0.144	0.035	0.042	0.010	0.099	0.024	0.004	0.001
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		86	1,130	8,700		32	54	0	0	0	0	86	418	699	6	0	4	3	1130	70	1.9	2.1	0.060	0.092	0.022	0.004	0.001	0.103	0.025	0.052	0.013
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		1,134	237	9,800		411	688	15	1	10	9	1134	88	147	1	0	1	0	237	70	2.5	2.1	0.060	0.120	0.029	0.061	0.015	0.100	0.024	0.011	0.003
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		638	2,430	21,900		228	383	12	1	7	7	638	879	1472	27	1	27	24	2430	60	2.7	2.5	0.030	0.069	0.017	0.020	0.005	0.065	0.016	0.071	0.017
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		2,275	1,000	23,400		799	1337	58	3	41	37	2275	363	609	10	0	9	9	1000	60	3.0	2.4	0.030	0.078	0.019	0.080	0.019	0.063	0.015	0.028	0.007
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		762	1,748	17,950		261	437	29	1	18	16	762	618	1035	30	1	33	31	1748	60	3.4	2.9	0.030	0.089	0.021	0.030	0.007	0.076	0.018	0.060	0.014
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,816	652	17,650		632	1059	53	2	37	33	1816	234	391	10	0	9	8	652	60	3.1	2.7	0.030	0.082	0.020	0.067	0.016	0.070	0.017	0.020	0.005
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		750	1,884	18,800		254	426	34	2	18	16	750	669	1120	33	1	32	29	1884	60	3.5	2.8	0.030	0.092	0.022	0.031	0.007	0.074	0.018	0.062	0.015
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,775	710	17,750		620	1039	48	2	35	31	1775	249	417	15	1	15	13	710	60	3.1	3.1	0.030	0.080	0.019	0.064	0.015	0.080	0.019	0.025	0.006
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	703	1,426	15,200		247	414	21	1	10	10	703	525	879	9	0	7	6	1426	70	2.9	2.2	0.030	0.077	0.019	0.024	0.006	0.057	0.014	0.036	0.009
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	1,088	1,072	15,450		402	672	6	0	4	4	1088	388	650	15	1	9	9	1072	70	2.1	2.5	0.030	0.055	0.013	0.027	0.007	0.064	0.016	0.031	0.007
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	624	725	9,650		231	387	1	0	3	2	624	267	446	3	0	5	4	725	70	2.1	2.2	0.060	0.102	0.025	0.028	0.007	0.108	0.026	0.035	0.009
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	700	868	11,200		253	424	7	0	8	8	700	306	513	22	1	14	12	868	70	2.5	2.9	0.030	0.066	0.016	0.021	0.005	0.076	0.018	0.029	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	556	602	8,250		207	347	1	0	1	0	556	223	373	1	0	3	2	602	70	2.0	2.1	0.060	0.096	0.023	0.024	0.006	0.102	0.025	0.028	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	627	1,037	11,900		230	385	5	0	4	3	627	381	637	6	0	7	6	1037	70	2.3	2.3	0.030	0.058	0.014	0.016	0.004	0.058	0.014	0.027	0.007
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	162	972	8,100		55	91	7	0	5	4	162	339	567	32	1	17	16	972	80	3.7	3.1	0.060	0.181	0.044	0.013	0.003	0.152	0.037	0.066	0.016
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	781	591	9,800		255	427	53	2	23	21	781	202	338	24	1	14	12	591	80	4.1	3.4	0.060	0.201	0.049	0.070	0.017	0.168	0.041	0.044	0.011
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	157	1,146	9,300		52	87	9	0	5	4	157	409	684	25	1	14	13	1146	80	3.9	2.7	0.060	0.193	0.047	0.014	0.003	0.133	0.032	0.068	0.016
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	1,273	199	10,500		448	751	37	2	18	17	1273	67	112	9	0	6	5	199	80	2.9	3.7	0.030	0.076	0.018	0.043	0.010	0.097	0.023	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	101	947	7,500		36	61	1	0	2	1	101	328	549	34	1	18	17	947	80	2.7	3.2	0.060	0.131	0.032	0.006	0.001	0.157	0.038	0.066	0.016
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	1,107	203	9,350		364	609	52	2	42	38	1107	72	121	3	0	4	3	203	80	4.1	2.8	0.060	0.203	0.049	0.101	0.024	0.139	0.034	0.013	0.003
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	13	1,115	8,050		5	8	0	0	0	0	13	392	656	31	1	18	17	1115	80	1.9	3.0	0.060	0.092	0.022	0.001	0.000	0.145	0.035	0.072	0.018
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	913	356	9,050		297	497	46	2	37	34	913	126	211	1	0	9	9	356	80	4.3	3.0	0.060	0.212	0.051	0.086	0.021	0.148	0.036	0.024	0.006
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	586	1,082	11,900		184	307	39	2	28	26	586	385	644	21	1	16	15	1082	80	4.8	2.8	0.030	0.127	0.031	0.033	0.008	0.073	0.018	0.035	0.009
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,308	914	15,850		445	745	49	2	35	32	1308	291	486	46	2	47	42	914	80	3.5	4.7	0.030	0.092	0.022	0.054	0.013	0.124	0.030	0.051	0.012
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	282	1,062	9,600		63	106	52	2	31	28	282	386	646	11	1	9	9	1062	80	9.0	2.4	0.060	0.451	0.109	0.057	0.014	0.118	0.029	0.056	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,084	655	12,400		385	644	21	1	17	16	1084	233	389	11	1	11	10	655	80	2.8	2.8	0.030	0.074	0.018	0.036	0.009	0.074	0.018	0.022	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_NB	E71	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	4		0	0	0		0	0	0	0	0	0	0	0

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 2

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	MOVES Veh c e Type >>	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
										Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36													
																												PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		2,104	2,576	33,450		746	1250	29	1	41	37	2104	932	1560	28	1	29	26	2576	60	2.9	2.5	0.030	0.075	0.018	0.071	0.017	0.065	0.016	0.075	0.018
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		2,245	2,495	33,850		759	1270	113	5	51	47	2245	898	1503	32	1	32	29	2495	60	3.6	2.6	0.030	0.093	0.023	0.093	0.023	0.068	0.016	0.076	0.018
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		508	1,359	13,350		188	316	1	0	2	1	508	500	837	1	0	11	10	1359	60	2.1	2.2	0.030	0.053	0.013	0.012	0.003	0.058	0.014	0.035	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		1,669	813	17,750		557	934	64	3	58	53	1669	304	509	0	0	0	0	813	60	3.9	1.9	0.030	0.102	0.025	0.076	0.018	0.049	0.012	0.018	0.004
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		204	534	5,250		74	123	4	0	2	1	204	193	324	9	0	4	4	534	80	2.5	2.5	0.060	0.121	0.029	0.011	0.003	0.120	0.029	0.029	0.007
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		784	135	6,550		273	456	28	1	14	12	784	47	80	5	0	2	1	135	80	3.1	2.9	0.060	0.153	0.037	0.054	0.013	0.141	0.034	0.009	0.002
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,603	2,059	33,300		916	1533	62	3	47	42	2603	726	1215	41	2	39	36	2059	60	3.0	3.0	0.030	0.078	0.019	0.090	0.022	0.077	0.019	0.071	0.017
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,885	2,576	31,850		645	1081	67	3	47	42	1885	939	1573	18	1	24	21	2576	60	3.4	2.4	0.030	0.089	0.022	0.075	0.018	0.062	0.015	0.071	0.017
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		216	821	7,400		77	128	4	0	4	3	216	299	500	6	0	8	8	821	80	2.9	2.4	0.060	0.140	0.034	0.013	0.003	0.118	0.029	0.043	0.010
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		1,102	271	9,800		399	668	10	0	13	12	1102	97	162	2	0	5	5	271	80	2.5	2.8	0.060	0.123	0.030	0.060	0.015	0.137	0.033	0.017	0.004
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		716	597	9,400		257	430	4	0	13	12	716	222	371	2	0	1	1	597	70	2.7	2.0	0.060	0.133	0.032	0.043	0.010	0.098	0.024	0.026	0.006
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		580	777	9,700		217	363	0	0	0	0	580	290	486	1	0	0	0	777	70	1.9	1.9	0.060	0.092	0.022	0.024	0.006	0.093	0.023	0.032	0.008
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		379	31	2,950		129	216	15	1	9	9	379	11	18	1	0	1	0	31	70	3.5	3.0	0.200	0.514	0.124	0.087	0.021	0.445	0.108	0.006	0.001
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		260	620	6,300		73	122	1	0	33	31	260	225	376	3	0	8	8	620	40	7.2	2.5	0.060	0.361	0.087	0.042	0.010	0.123	0.030	0.034	0.008
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		639	565	8,600		219	366	5	0	26	23	639	204	341	4	0	8	8	565	60	3.7	2.6	0.060	0.180	0.044	0.051	0.012	0.127	0.031	0.032	0.008
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		954	427	9,850		329	552	26	1	24	22	954	148	249	5	0	13	12	427	70	3.3	3.3	0.060	0.163	0.039	0.070	0.017	0.163	0.039	0.031	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		126	97	1,600		38	64	13	1	5	5	126	34	58	2	0	2	1	97	60	5.1	2.8	0.200	0.758	0.183	0.043	0.010	0.417	0.101	0.018	0.004
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		245	21	1,900		71	120	25	1	15	13	245	8	13	0	0	0	0	21	40	5.8	1.9	0.200	0.862	0.208	0.094	0.023	0.276	0.067	0.003	0.001
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		588	916	10,750		217	364	4	0	2	1	588	303	508	30	1	39	35	916	80	2.1	4.1	0.030	0.055	0.013	0.014	0.003	0.108	0.026	0.044	0.011
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		1,355	1,108	17,600		464	778	46	2	34	31	1355	392	656	26	1	17	16	1108	80	3.4	2.9	0.030	0.089	0.022	0.054	0.013	0.075	0.018	0.037	0.009
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		1,055	855	13,650		146	244	330	15	167	153	1055	200	334	253	11	30	27	855	100	12.9	7.5	0.015	0.184	0.044	0.087	0.021	0.107	0.026	0.041	0.010
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		1,046	717	12,600		223	373	185	8	134	123	1046	187	314	130	6	42	38	717	100	9.7	6.9	0.015	0.138	0.033	0.064	0.016	0.097	0.023	0.031	0.008
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		547	714	9,000		202	338	4	0	2	1	547	229	383	30	1	37	34	714	100	2.1	4.6	0.060	0.103	0.025	0.025	0.006	0.229	0.055	0.073	0.018
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		41	202	1,750		15	26	0	0	0	0	41	74	125	0	0	2	1	202	100	1.9	2.2	0.200	0.276	0.067	0.005	0.001	0.324	0.078	0.029	0.007
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		672	166	6,000		170	284	99	4	60	55	672	58	98	2	0	4	4	166	70	7.7	3.1	0.060	0.383	0.093	0.115	0.028	0.152	0.037	0.011	0.003
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		318	47	2,600		116	194	3	0	3	2	318	18	29	0	0	0	0	47	80	2.4	1.9	0.200	0.346	0.084	0.049	0.012	0.276	0.067	0.006	0.001
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		152	127	2,000		48	81	4	0	10	9	152	38	64	4	0	11	10	127	40	4.9	5.9	0.200	0.732	0.177	0.050	0.012	0.874	0.211	0.050	0.012
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		1,709	1,227	20,950		518	868	142	6	92	83	1709	433	724	28	1	21	20	1227	70	5.3	2.9	0.030	0.139	0.034	0.106	0.026	0.077	0.019	0.042	0.010
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		11,596	9,699	152,100		3434	5751	959	42	737	673	11596	3003	5030	490	22	604	550	9699	100	5.7	5.2	0.015	0.080	0.019	0.415	0.100	0.073	0.018	0.315	0.076
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		9,620	7,481	122,100		2895	4847	627	28	640	583	9620	2361	3955	322	14	434	395	7481	100	5.6	4.9	0.015	0.078	0.019	0.336	0.081	0.069	0.017	0.229	0.056
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		9,928	8,116	128,900		3036	5083	610	27	613	559	9928	2636	4414	312	14	387	353	8116	100	5.3	4.4	0.015	0.075	0.018	0.331	0.080	0.062	0.015	0.224	0.054
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		7,016	8,682	112,100		2035	3408	516	23	541	493	7016	2803	4693	268	12	474	432	8682	100	6.1	4.6	0.015	0.086	0.021	0.270	0.065	0.064	0.016	0.249	0.060
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		3,347	3,311	47,600		1021	1709	228	10	198	181	3347	1064	1782	132	6	171	156	3311	100	5.3	4.6	0.015	0.074	0.018	0.111	0.027	0.064	0.016	0.095	0.023
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		3,669	5,371	64,600		1014	1699	288	13	343	312	3669	1739	2911	136	6	303	276	5371	100	6.9	4.6	0.015	0.097	0.023	0.159	0.038	0.064	0.016	0.154	0.037
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		7,765	9,777	125,300		2288	3831	546	24	563	513	7765	3152	5279	311	14	534	487	9777	100	5.9	4.6	0.015	0.083	0.020	0.287	0.069	0.064	0.016	0.281	0.068
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		926	791	12,250		298	500	34	2	48	44	926	275	460	11	1	23	21	791	60	4.6	3.3	0.030	0.120	0.029	0.050	0.012	0.086	0.021	0.031	0.007
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		1,254	990	16,050		422	708	6	0	62	56	1254	366	613	2	0	5	4	990	40	4.0	2.1	0.030	0.105	0.025	0.059	0.014	0.055	0.013	0.024	0.006
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		1,224	807	14,500		393	659	35	2	71	64	1224	277	464	13	1	27	25	807	70	4.7	3.5	0.030	0.123	0.030	0.067	0.016	0.092	0.022	0.033	0.008
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		956	974	13,800		328	548	5	0	39	36	956	364	609	0	0	1	0	974	70	3.7	1.9	0.030	0.096	0.023	0.041	0.010	0.050	0.012	0.022	0.005
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		1,976	2,218	30,000		540	903	331	15	98	89	1976	642	1075	169	7	170	155	2218	100	6.3	6.1	0.015	0.089	0.022	0.079	0.019	0.086	0.021	0.086	0.021
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		2,823	3,119	42,450		834	1396	334	15	128	116	2823	988	1654	164	7	160	146	3119	80	5.4	4.8	0.030	0.144	0.035	0.181	0.044	0.125	0.030	0.175	0.042
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36			AM Peak	PM Peak									
																											PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	5,003	4,686	69,200		1508	2526	477	21	246	225	5003	1464	2451	314	14	232	211	4686	110	5.3	4.9	0.015	0.074	0.018	0.166	0.040	0.068	0.017	0.143	0.035
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	5,410	4,834	73,200		1676	2808	465	21	230	210	5410	1510	2528	360	16	220	200	4834	110	4.9	4.8	0.015	0.068	0.017	0.165	0.040	0.068	0.016	0.146	0.035
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	5,298	5,877	79,800		1638	2744	456	20	230	210	5298	1931	3234	300	13	209	190	5877	110	4.9	4.1	0.015	0.069	0.017	0.163	0.039	0.057	0.014	0.150	0.036
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	6,209	5,409	83,000		1977	3312	475	21	222	202	6209	1734	2904	352	16	211	192	5409	110	4.5	4.4	0.015	0.062	0.015	0.173	0.042	0.062	0.015	0.150	0.036
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		4,681	4,664	66,700		1478	2474	358	16	186	169	4681	1526	2555	238	11	175	159	4664	110	4.6	4.2	0.015	0.065	0.016	0.135	0.033	0.058	0.014	0.121	0.029
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		4,925	4,947	70,500		1587	2657	345	15	168	153	4925	1597	2674	289	13	196	178	4947	110	4.3	4.4	0.015	0.060	0.015	0.132	0.032	0.061	0.015	0.135	0.033
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	3,843	4,648	60,600		1144	1915	374	17	206	187	3843	1511	2531	239	11	186	170	4648	110	5.5	4.3	0.015	0.077	0.019	0.132	0.032	0.060	0.014	0.124	0.030
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	4,792	3,918	62,200		1536	2572	336	15	174	159	4792	1192	1997	306	13	214	196	3918	110	4.4	5.3	0.015	0.061	0.015	0.132	0.032	0.074	0.018	0.129	0.031
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	4,921	4,878	70,000		1465	2454	477	21	264	240	4921	1556	2605	280	12	222	203	4878	110	5.5	4.6	0.015	0.077	0.019	0.169	0.041	0.064	0.016	0.140	0.034
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	4,896	4,542	67,400		1527	2558	385	17	214	195	4896	1366	2288	369	16	263	240	4542	110	4.8	5.4	0.015	0.067	0.016	0.148	0.036	0.076	0.018	0.155	0.037
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		6,058	4,889	78,200		1819	3046	535	24	332	302	6058	1507	2525	325	14	271	247	4889	110	5.4	5.1	0.015	0.076	0.018	0.206	0.050	0.072	0.017	0.157	0.038
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		4,982	5,707	76,300		1510	2529	443	20	251	229	4982	1746	2924	414	18	316	289	5707	110	5.2	5.2	0.015	0.073	0.018	0.164	0.040	0.073	0.018	0.187	0.045
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		5,553	5,413	78,300		1640	2747	560	25	304	277	5553	1702	2849	329	15	271	247	5413	110	5.6	4.8	0.015	0.078	0.019	0.195	0.047	0.068	0.016	0.164	0.040
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		5,644	5,208	77,500		1768	2960	428	19	245	224	5644	1547	2590	441	19	320	291	5208	110	4.8	5.6	0.015	0.067	0.016	0.168	0.041	0.079	0.019	0.184	0.045
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		5,232	5,006	73,100		1511	2530	562	25	316	288	5232	1512	2533	364	16	304	277	5006	110	5.9	5.4	0.015	0.083	0.020	0.194	0.047	0.076	0.018	0.171	0.041
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		5,005	4,908	70,800		1466	2455	503	22	292	267	5005	1405	2354	466	21	346	316	4908	110	5.7	6.2	0.015	0.081	0.019	0.180	0.044	0.087	0.021	0.190	0.046
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	5,186	4,688	70,500		1497	2508	554	24	315	288	5186	1404	2350	351	15	297	271	4688	110	5.9	5.6	0.015	0.083	0.020	0.193	0.047	0.078	0.019	0.164	0.040
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	4,963	4,897	70,400		1436	2406	523	23	301	274	4963	1412	2364	453	20	339	309	4897	110	5.9	6.1	0.015	0.083	0.020	0.184	0.044	0.085	0.021	0.187	0.045
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	4,810	4,236	64,600		1383	2315	518	23	299	272	4810	1250	2092	336	15	284	259	4236	110	6.0	5.8	0.015	0.084	0.020	0.181	0.044	0.081	0.020	0.154	0.037
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	4,484	4,580	64,700		1247	2089	538	24	307	279	4484	1313	2200	430	19	323	295	4580	110	6.4	6.1	0.015	0.090	0.022	0.181	0.044	0.086	0.021	0.177	0.043
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		5,837	5,741	82,700		1674	2803	636	28	364	332	5837	1759	2945	391	17	329	300	5741	110	6.0	5.2	0.015	0.085	0.020	0.221	0.053	0.073	0.018	0.188	0.046
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		5,597	5,735	80,900		1641	2747	580	26	315	288	5597	1715	2873	465	20	346	316	5735	110	5.7	5.5	0.015	0.080	0.019	0.200	0.048	0.078	0.019	0.199	0.048
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	4,904	6,035	78,100		1324	2216	648	29	359	328	4904	1851	3100	399	18	349	318	6035	110	6.8	5.2	0.015	0.096	0.023	0.210	0.051	0.073	0.018	0.198	0.048
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	6,458	4,845	80,700		2004	3356	548	24	275	251	6458	1431	2397	403	18	312	284	4845	110	4.9	5.7	0.015	0.068	0.016	0.196	0.048	0.081	0.019	0.174	0.042
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,821	4,142	49,700		920	1542	174	8	93	84	2821	1470	2461	65	3	75	68	4142	100	4.1	2.9	0.015	0.058	0.014	0.073	0.018	0.040	0.010	0.074	0.018
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		5,151	3,741	63,500		1742	2916	106	5	200	182	5151	1305	2185	84	4	85	78	3741	100	3.8	3.2	0.015	0.053	0.013	0.122	0.029	0.044	0.011	0.073	0.018
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		1,090	2,201	23,500		335	560	102	4	47	42	1090	798	1336	20	1	24	22	2201	100	5.0	2.5	0.015	0.070	0.017	0.034	0.008	0.034	0.008	0.034	0.008
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		2,422	971	24,200		859	1438	39	2	44	40	2422	327	548	40	2	28	26	971	100	2.9	3.7	0.015	0.040	0.010	0.043	0.010	0.051	0.012	0.022	0.005
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,490	1,992	32,000		842	1410	64	3	89	82	2490	695	1165	41	2	47	42	1992	100	3.7	3.2	0.015	0.052	0.013	0.058	0.014	0.044	0.011	0.039	0.009
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,251	2,044	23,500		401	671	90	4	44	41	1251	717	1202	45	2	41	37	2044	100	4.4	3.0	0.015	0.061	0.015	0.034	0.008	0.042	0.010	0.039	0.009
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,649	5,406	57,500		895	1499	128	6	63	58	2649	1929	3231	96	4	76	70	5406	100	3.6	2.7	0.015	0.050	0.012	0.059	0.014	0.038	0.009	0.092	0.022
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,974	3,300	59,100		1772	2967	131	6	51	47	4974	1175	1968	63	3	48	43	3300	100	2.7	2.8	0.015	0.037	0.009	0.083	0.020	0.038	0.009	0.057	0.014
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		2,087	3,825	42,200		596	999	253	11	119	109	2087	1275	2134	166	7	127	116	3825	100	6.0	3.9	0.015	0.084	0.020	0.078	0.019	0.054	0.013	0.093	0.022
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		3,894	2,632	46,600		1318	2208	201	9	83	75	3894	889	1490	100	4	78	71	2632	100	3.5	3.7	0.015	0.049	0.012	0.085	0.021	0.051	0.012	0.060	0.015
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	1,052	1,589	18,850		391	655	3	0	2	1	1052	580	972	14	1	12	10	1589	60	2.0	2.3	0.030	0.052	0.013	0.024	0.006	0.060	0.015	0.043	0.010
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	390	535	6,600		135	227	13	1	7	7	390	187	313	12	1	12	10	535	40	3.2	3.1	0.060	0.155	0.038	0.027	0.007	0.153	0.037	0.037	0.009
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	1,568	1,367	20,950		562	941	33	1	16	15	1568	479	802	30	1	29	26	1367	70	2.6	3.1	0.030	0.068	0.017	0.048	0.012	0.080	0.019	0.049	0.012
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	383	689	7,650		121	203	20	1	20	18	383	227	379	23	1	31	28	689	40	4.8	4.2	0.060	0.236	0.057	0.040	0.010	0.208	0.050	0.064	0.016
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	399	330	5,200		141	237	8	0	7	6	399	121	203	4	0	1	1	330	60	2.9	2.2	0.060	0.141	0.034	0.025	0.006	0.107	0.026	0.016	0.004
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		1,343	1,611	21,100		424	711	110	5	49	44	1343	556	931	61	3	31	29	1611	70	4.6	3.2	0.030	0.120	0.029	0.072	0.017	0.085	0.020	0.061	0.015
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		479	233	5,100		166	279	18	1	8	7	479	81	136	9	0	4	3	233	60	3.1	3.1	0.060	0.153	0.037	0.033	0.008	0.151	0.036	0.016	0.004
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		144	18	1,150		51	85	4	0	2	2	144	7	11	0	0	0	0	18	40	2.9	1.9	0.200	0.421	0.102	0.027	0.007	0.276	0.067	0.002	0.001
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		225	491	5,100		81	135	5	0	2	2	225	179	300	5	0	4	3	491	70	2.6	2.3	0.060	0.126	0.031	0.013	0.003	0.114	0.028	0.025	0.006
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		944	1,063	14,350		296	495	85	4	33	31	944	360	604	65	3	16	15	1063	40	4.6	3.4	0.030	0.122	0.030	0.052	0.012	0.089	0.022	0.042	0.010
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		669	286	6,800		238	398	19	1	7	6	669	105	176	2	0	2	1	286	60	2.7	2.2	0.060	0.133	0.032	0.040	0.010	0.108	0.026	0.014	0.003
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		1,388	1,346	19,550		479	802	60	3	23	21	1388	480	805	31	1	15	14	1346	70	3.2	2.7	0.030	0.084	0.020	0.052	0.013	0.070	0.017	0.042	0.010
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		197	188	2,750		72	121	1	0	2	1	197	70	117	0	0	1	0	188	60	2.3	2.0	0.200	0.335	0.081	0.030	0.007	0.293	0.071	0.025	0.006
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		822	772	11,400		259	435	62	3	33	30	822	253	424	36	2	30	27	772	40	4.6	4.2	0.030	0.122	0.029	0.045	0.011	0.109	0.026	0.038	0.009
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		983	1,022	14,300		324	542	57	3	30	27	983	343	575	46	2	29	27	1022	70	4.0	3.7	0.030	0.104	0.025	0.046	0.011	0.097	0.024	0.044	0.011
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		1,058	568	11,600		362	605	56	2	17	16	1058	194	324	29	1	10	10	568	40	3.3	3.4	0.030	0.087	0.021	0.041	0.010	0.088	0.021	0.022	0.005
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		459	991	10,350		167	280	5	0	4	3	459	369	618	2	0	1	1	991	60	2.4	2.0	0.030	0.062	0.015	0.013	0.003	0.051	0.012	0.023	0.005
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	92	188	2,000		33	54	1	0	2	2	92	68	115	2	0	2	1	188	70	3.0	2.4	0.200	0.437	0.106	0.018	0.004	0.349	0.084	0.029	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	415	237	4,650		112	188	46	2	35	32	415	66	111	20	1	20	19	237	40	6.9	6.6	0.200	1.035	0.250	0.192	0.046	0.989	0.239	0.105	0.025
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	808	291	7,850		270	452	47	2	19	18	808	93	156	16	1	13	12	291	60	3.7	4.5	0.060	0.183	0.044	0.066	0.016	0.224	0.054	0.029	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	650	958	11,500		190	318	58	3	42	39	650	302	507	61	3	44	41	958	70	5.9	4.7	0.030	0.155	0.037	0.045	0.011	0.124	0.030	0.053	0.013
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	163	108	1,950		60	101	2	0	0	0	163	40	67	1	0	0	0	108	60	2.1	2.0	0.200	0.301	0.073	0.022	0.005	0.295	0.071	0.014	0.003
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	236	78	2,250		84	140	7	0	3	2	236	27	45	4	0	1	1	78	40	2.8	3.2	0.200	0.404	0.098	0.043	0.010	0.462	0.112	0.016	0.004
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	353	456	5,800		116	194	17	1	13	12	353	163	272	11	1	5	4	456	70	4.1	2.7	0.060	0.203	0.049	0.032	0.008	0.131	0.032	0.027	0.006
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		1,043	477	10,850		329	552	46	2	60	54	1043	135	226	41	2	38	35	477	40	4.9	6.4	0.030	0.128	0.031	0.060	0.014	0.170	0.041	0.036	0.009
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		353	207	4,000		99	167	36	2	26	23	353	62	103	15	1	14	12	207	60	6.4	5.7	0.200	0.945	0.229	0.149	0.036	0.839	0.203	0.078	0.019
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		570	1,518	14,900		149	249	73	3	50	46	570	507	848	55	2	55	51	1518	70	7.3	3.9	0.030	0.195	0.047	0.050	0.012	0.103	0.025	0.070	0.017
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	355	266	4,450		123	206	8	0	9	9	355	87	147	17	1	7	7	266	60	3.3	4.0	0.200	0.484	0.117	0.077	0.019	0.583	0.141	0.069	0.017
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		355	266	4,450		123	206	8	0	9	9	355	87	147	17	1	7	7	266	40	3.3	4.0	0.200	0.484	0.117	0.077	0.019	0.583	0.141	0.069	0.017
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		1,108	250	9,700		361	605	37	2	54	49	1108	90	152	2	0	3	3	250	90	4.4	2.5	0.060	0.216	0.052	0.107	0.026	0.123	0.030	0.014	0.003
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		1,023	684	12,200		362	605	24	1	16	15	1023	221	371	40	2

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		1,472	2,040	25,100		415	694	177	8	93	85	1472	671	1124	109	5	69	62	2040	90	6.2	4.0	0.030	0.164	0.040	0.108	0.026	0.106	0.026	0.097	0.023
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	799	1,186	14,200		258	433	54	2	27	25	799	391	654	60	3	41	37	1186	70	4.3	4.0	0.030	0.112	0.027	0.040	0.010	0.106	0.026	0.056	0.014
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	2,581	1,305	27,750		840	1408	176	8	78	71	2581	432	723	57	2	48	43	1305	60	4.1	4.0	0.030	0.108	0.026	0.125	0.030	0.105	0.025	0.061	0.015
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	1,652	3,677	38,050		588	986	35	2	21	20	1652	1345	2252	30	1	26	23	3677	80	2.7	2.3	0.030	0.071	0.017	0.053	0.013	0.060	0.014	0.098	0.024
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	3,239	1,838	36,250		1140	1910	84	4	53	48	3239	674	1129	11	0	13	11	1838	80	2.9	2.3	0.030	0.077	0.019	0.111	0.027	0.059	0.014	0.048	0.012
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	1,468	2,784	30,350		511	855	48	2	27	25	1468	992	1661	45	2	44	40	2784	80	3.1	2.8	0.030	0.082	0.020	0.054	0.013	0.072	0.018	0.090	0.022
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	2,561	1,535	29,250		897	1501	66	3	49	45	2561	549	919	24	1	22	20	1535	80	3.1	2.7	0.030	0.080	0.019	0.091	0.022	0.071	0.017	0.048	0.012
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	617	1,237	13,250		205	343	32	1	19	17	617	448	751	15	1	12	10	1237	80	3.9	2.5	0.030	0.102	0.025	0.028	0.007	0.064	0.015	0.035	0.009
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	1,171	626	12,850		409	684	29	1	25	23	1171	229	384	2	0	6	5	626	80	3.1	2.3	0.030	0.082	0.020	0.043	0.010	0.060	0.015	0.017	0.004
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	918	755	11,950		301	503	50	2	32	30	918	269	451	12	1	12	10	755	60	4.1	2.8	0.030	0.108	0.026	0.044	0.011	0.072	0.017	0.024	0.006
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	835	1,043	13,400		302	506	13	1	7	6	835	359	600	27	1	29	27	1043	60	2.5	3.4	0.030	0.064	0.015	0.024	0.006	0.089	0.022	0.042	0.010
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	1,279	858	15,250		459	770	20	1	15	14	1279	313	525	10	0	5	5	858	60	2.6	2.3	0.030	0.068	0.016	0.039	0.009	0.060	0.015	0.023	0.006
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	531	1,338	13,350		174	292	27	1	19	18	531	492	823	9	0	7	7	1338	60	4.1	2.2	0.030	0.108	0.026	0.026	0.006	0.058	0.014	0.034	0.008
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		281	833	7,950		102	171	2	0	3	3	281	305	512	1	0	8	7	833	60	2.5	2.3	0.060	0.120	0.029	0.015	0.004	0.112	0.027	0.042	0.010
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		820	420	8,850		289	483	9	0	20	19	820	154	259	3	0	2	2	420	60	3.1	2.2	0.060	0.151	0.036	0.055	0.013	0.107	0.026	0.020	0.005
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		427	863	9,200		158	265	1	0	2	1	427	314	527	1	0	11	10	863	60	2.1	2.4	0.060	0.101	0.025	0.019	0.005	0.119	0.029	0.046	0.011
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		1,016	563	11,300		358	599	21	1	19	18	1016	210	353	0	0	0	0	563	60	3.0	1.9	0.030	0.078	0.019	0.035	0.009	0.049	0.012	0.012	0.003
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		396	250	4,600		148	248	0	0	0	0	396	91	153	1	0	3	2	250	60	1.9	2.4	0.200	0.276	0.067	0.049	0.012	0.348	0.084	0.039	0.009
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		521	420	6,700		176	296	11	1	19	18	521	157	263	0	0	0	0	420	60	3.7	1.9	0.060	0.184	0.045	0.043	0.010	0.092	0.022	0.017	0.004
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		800	419	8,700		299	501	0	0	0	0	800	145	244	14	1	8	7	419	60	1.9	3.2	0.060	0.092	0.022	0.033	0.008	0.155	0.037	0.029	0.007
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		590	696	9,200		198	331	28	1	17	15	590	259	435	0	0	1	1	696	60	3.7	2.0	0.060	0.184	0.044	0.049	0.012	0.095	0.023	0.030	0.007
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		1,729	1,544	23,400		564	977	64	3	53	48	1729	544	912	35	2	27	24	1544	60	3.7	2.9	0.030	0.096	0.023	0.075	0.018	0.077	0.019	0.053	0.013
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		1,509	1,473	21,300		495	830	72	3	57	52	1509	508	852	27	1	44	41	1473	60	4.1	3.4	0.030	0.108	0.026	0.073	0.018	0.089	0.022	0.059	0.014
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		2,400	2,124	32,300		824	1381	83	4	56	52	2400	761	1274	36	2	27	24	2124	60	3.4	2.7	0.030	0.088	0.021	0.094	0.023	0.069	0.017	0.066	0.016
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		1,084	568	11,800		381	637	24	1	21	20	1084	210	351	3	0	2	2	568	60	3.0	2.1	0.030	0.079	0.019	0.038	0.009	0.055	0.013	0.014	0.003
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		2,600	3,249	41,800		819	1372	194	9	108	98	2600	1125	1885	109	5	65	60	3249	60	4.7	3.2	0.030	0.123	0.030	0.143	0.035	0.084	0.020	0.122	0.029
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		3,052	2,421	39,100		981	1643	204	9	103	3052	818	1369	104	5	65	60	2421	60	4.4	3.6	0.030	0.115	0.028	0.156	0.038	0.095	0.023	0.103	0.025
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		645	824	10,500		212	371	26	1	14	12	645	302	506	10	0	3	3	824	60	3.3	2.2	0.030	0.087	0.021	0.025	0.006	0.058	0.014	0.021	0.005
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		761	668	10,200		237	396	61	3	33	31	761	245	410	8	0	3	2	668	60	4.9	2.2	0.030	0.128	0.031	0.043	0.011	0.058	0.014	0.017	0.004
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		946	767	12,250		316	528	48	2	27	25	946	277	464	12	1	7	6	767	60	3.8	2.5	0.030	0.100	0.024	0.042	0.010	0.065	0.016	0.022	0.005
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		1,122	466	11,350		374	627	64	3	28	26	1122	169	284	6	0	4	3	466	60	3.8	2.4	0.030	0.098	0.024	0.049	0.012	0.062	0.015	0.013	0.003
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		1,982	1,078	21,850		664	1112	93	4	57	52	1982	370	619	35	2	27	25	1078	80	3.8	3.4	0.030	0.098	0.024	0.087	0.021	0.089	0.022	0.043	0.010
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		1,060	1,707	19,750		362	607	43	2	24	22	1060	595	997	53	2	31	29	1707	80	3.4	3.1	0.030	0.089	0.022	0.042	0.010	0.081	0.020	0.062	0.015
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		2,397	3,326	40,900		805	1347	113	5	66	61	2397	1208	2024	36	2	29	27	3326	80	3.7	2.4	0.030	0.097	0.024	0.104	0.025	0.063	0.015	0.093	0.023
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		3,211	2,797	42,900		1166	1952	42	2	26	23	3211	990	1659	69	3	40	36	2797	80	2.4	2.8	0.030	0.063	0.015	0.090	0.022	0.074	0.018	0.092	0.022
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		1,309	1,343	18,950		432	723	77	3	39	35	1309	480	804	27	1	16	15	1343	80	3.9	2.7	0.030	0.104	0.025	0.061	0.015	0.070	0.017	0.042	0.010
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		1,413	1,563	21,250		501	840	37	2	17	16	1413	550	922	48	2	21	20	1563	80	2.8	2.9	0.030	0.072	0.018	0.046	0.011	0.076	0.018	0.053	0.013
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		172	538	5,050		57	95	11	0	5	4	172	179	299	37	2	11	10	538	80	3.9	3.7	0.060	0.192	0.046	0.015	0.004	0.183	0.044	0.044	0.011
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		797	269	7,600		244	409	79	3	32	30	797	94	158	8	0	5	4	269	80	5.0	3.0	0.060	0.246	0.060	0.088	0.021	0.148	0.036	0.018	0.004
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	210	9	1,550		47	80	44	2	19	18	210	3	6	0	0	0	0	9	70	8.7	1.9	0.200	1.298	0.314	0.122	0.029	0.276	0.067	0.001	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	98	138	1,700		33	54	7	0	2	2	98	42	69	11	0	8	8	138	70	3.8	5.5	0.200	0.552	0.134	0.024	0.006	0.813	0.197	0.050	0.012
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	1,076	628	12,150		348	584	78	3	33	30	1076	207	347	30	1	22	21	628	80	4.2	4.0	0.030	0.110	0.027	0.053	0.013	0.106	0.026	0.030	0.007
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	684	777	10,450		212	354	51	2	34	31	684	255	427	37	2	29	27	777	80	5.0	4.1	0.030	0.132	0.032	0.040	0.010	0.108	0.026	0.038	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	512	835	9,600		145	244	54	2	35	32	512	213	357	105	5	81	74	835	80	6.2	7.7	0.060	0.308	0.075	0.071	0.017	0.384	0.093	0.143	0.035
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	1,212	633	13,200		375	627	92	4	60	54	1212	195	327	38	2	37	34	633	80	5.0	5.2	0.030	0.132	0.032	0.071	0.017	0.136	0.033	0.039	0.009
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	159	732	6,350		43	73	22	1	10	10	159	254	426	18	1	17	16	732	80	6.6	3.2	0.060	0.327	0.079	0.023	0.006	0.158	0.038	0.052	0.013
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	2	3	668	366	7,400		208	347	50	2	32	29	668	102	170	42	2	26	24	366	80	4.9	6.5	0.060	0.244	0.059	0.073	0.018	0.322	0.078	0

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36												
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		442	508	6,800		135	226	31	1	26	23	442	183	307	8	0	5	5	508	80	5.3	2.5	0.060	0.261	0.063	0.052	0.012	0.124	0.030	0.028	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		308	523	5,950		109	182	9	0	4	4	308	190	317	8	0	4	4	523	80	2.9	2.4	0.060	0.140	0.034	0.019	0.005	0.119	0.029	0.028	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		892	176	7,650		305	511	36	2	20	18	892	62	105	7	0	1	1	176	80	3.4	2.7	0.060	0.167	0.040	0.067	0.016	0.131	0.032	0.010	0.003
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,317	2,652	42,650		1162	1945	85	4	63	58	3317	945	1583	42	2	42	38	2652	60	3.1	2.8	0.030	0.080	0.019	0.118	0.029	0.072	0.017	0.086	0.021
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		2,243	3,006	37,500		780	1305	80	4	39	35	2243	1096	1836	25	1	25	23	3006	60	3.1	2.4	0.030	0.081	0.020	0.082	0.020	0.061	0.015	0.082	0.020
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,172	2,409	39,850		1107	1854	82	4	65	60	3172	856	1433	41	2	40	37	2409	60	3.1	2.8	0.030	0.081	0.020	0.115	0.028	0.074	0.018	0.079	0.019
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,480	2,580	36,150		873	1462	72	3	37	33	2480	939	1573	24	1	22	21	2580	60	2.9	2.4	0.030	0.076	0.018	0.084	0.020	0.062	0.015	0.072	0.017
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,407	2,563	42,650		1186	1985	106	5	65	60	3407	909	1523	43	2	45	41	2563	60	3.1	2.9	0.030	0.082	0.020	0.125	0.030	0.075	0.018	0.085	0.021
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,676	3,506	44,150		904	1513	96	4	83	76	2676	1277	2138	30	1	31	29	3506	60	3.7	2.4	0.030	0.097	0.023	0.116	0.028	0.062	0.015	0.097	0.024
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		1,081	1,224	16,450		377	632	38	2	17	15	1081	436	729	25	1	17	16	1224	80	3.0	2.8	0.030	0.079	0.019	0.038	0.009	0.072	0.017	0.039	0.010
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,586	938	18,050		550	920	54	2	31	29	1586	338	567	11	1	11	10	938	80	3.2	2.6	0.030	0.083	0.020	0.059	0.014	0.066	0.016	0.028	0.007
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		525	860	9,900		180	302	20	1	12	10	525	308	516	7	0	15	14	860	80	3.3	2.7	0.060	0.164	0.040	0.039	0.009	0.134	0.032	0.051	0.012
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		1,000	645	11,750		338	565	15	1	42	39	1000	234	392	5	0	7	7	645	80	3.9	2.5	0.030	0.101	0.024	0.045	0.011	0.064	0.016	0.019	0.004
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		283	602	6,300		90	150	26	1	8	8	283	218	365	9	0	5	5	602	80	4.4	2.5	0.060	0.218	0.053	0.028	0.007	0.120	0.029	0.032	0.008
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		712	324	7,400		261	437	6	0	4	4	712	112	187	11	1	7	6	324	80	2.3	3.3	0.060	0.110	0.027	0.035	0.008	0.160	0.039	0.023	0.006
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		2,846	1,492	31,000		1009	1689	77	3	36	32	2846	514	862	48	2	35	31	1492	60	2.8	3.3	0.030	0.073	0.018	0.093	0.022	0.086	0.021	0.058	0.014
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,787	1,421	22,900		588	986	108	5	52	48	1787	516	863	20	1	11	10	1421	60	4.0	2.4	0.030	0.104	0.025	0.083	0.020	0.063	0.015	0.040	0.010
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		28	338	2,600		9	15	1	0	2	1	28	120	201	5	0	6	6	338	80	4.7	2.9	0.200	0.694	0.168	0.009	0.002	0.420	0.102	0.063	0.015
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		353	44	2,850		114	191	17	1	16	14	353	16	26	0	0	1	1	44	80	4.4	2.9	0.200	0.653	0.158	0.103	0.025	0.422	0.102	0.008	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		594	1,436	14,500		125	210	122	5	69	63	594	471	788	73	3	53	48	1436	80	9.6	4.1	0.030	0.256	0.062	0.068	0.016	0.108	0.026	0.070	0.017
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		1,531	903	17,400		525	880	56	2	36	32	1531	276	463	68	3	49	44	903	80	3.4	5.2	0.030	0.088	0.021	0.060	0.015	0.137	0.033	0.055	0.013
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		633	717	9,650		205	343	32	1	27	25	633	264	441	2	0	5	5	717	70	4.4	2.2	0.060	0.216	0.052	0.061	0.015	0.109	0.026	0.035	0.008
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		963	753	12,250		346	580	11	0	14	12	963	278	465	2	0	4	4	753	70	2.6	2.2	0.030	0.069	0.017	0.030	0.007	0.056	0.014	0.019	0.005
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		592	590	8,450		171	287	57	2	39	36	592	203	341	10	0	19	17	590	70	6.0	3.4	0.060	0.297	0.072	0.079	0.019	0.169	0.041	0.045	0.011
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		514	835	9,650		179	301	15	1	9	9	514	310	520	2	0	2	1	835	70	3.1	2.0	0.060	0.151	0.037	0.035	0.008	0.098	0.024	0.037	0.009
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		43	422	3,300		16	27	0	0	0	0	43	155	260	3	0	2	2	422	70	1.9	2.2	0.200	0.276	0.067	0.005	0.001	0.321	0.078	0.061	0.015
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		659	97	5,400		232	389	16	1	11	10	659	36	60	1	0	0	0	97	70	2.9	2.0	0.060	0.144	0.035	0.042	0.010	0.099	0.024	0.004	0.001
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		86	1,130	8,700		32	54	0	0	0	0	86	418	699	6	0	4	3	1130	70	1.9	2.1	0.060	0.092	0.022	0.004	0.001	0.103	0.025	0.052	0.013
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		1,134	237	9,800		411	688	15	1	10	9	1134	88	147	1	0	1	0	237	70	2.5	2.1	0.060	0.120	0.029	0.061	0.015	0.100	0.024	0.011	0.003
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		638	2,430	21,900		228	383	12	1	7	7	638	879	1472	27	1	27	24	2430	60	2.7	2.5	0.030	0.069	0.017	0.020	0.005	0.065	0.016	0.071	0.017
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		2,275	1,000	23,400		799	1337	58	3	41	37	2275	363	609	10	0	9	9	1000	60	3.0	2.4	0.030	0.078	0.019	0.080	0.019	0.063	0.015	0.028	0.007
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		762	1,748	17,950		261	437	29	1	18	16	762	618	1035	30	1	33	31	1748	60	3.4	2.9	0.030	0.089	0.021	0.030	0.007	0.076	0.018	0.060	0.014
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,816	652	17,650		632	1059	53	2	37	33	1816	234	391	10	0	9	8	652	60	3.1	2.7	0.030	0.082	0.020	0.067	0.016	0.070	0.017	0.020	0.005
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		750	1,884	18,800		254	426	34	2	18	16	750	669	1120	33	1	32	29	1884	60	3.5	2.8	0.030	0.092	0.022	0.031	0.007	0.074	0.018	0.062	0.015
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,775	710	17,750		620	1039	48	2	35	31	1775	249	417	15	1	15	13	710	60	3.1	3.1	0.030	0.080	0.019	0.064	0.015	0.080	0.019	0.025	0.006
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	703	1,426	15,200		247	414	21	1	10	10	703	525	879	9	0	7	6	1426	70	2.9	2.2	0.030	0.077	0.019	0.024	0.006	0.057	0.014	0.036	0.009
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	1,088	1,072	15,450		402	672	6	0	4	4	1088	388	650	15	1	9	9	1072	70	2.1	2.5	0.030	0.055	0.013	0.027	0.007	0.064	0.016	0.031	0.007
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	624	725	9,650		231	387	1	0	3	2	624	267	446	3	0	5	4	725	70	2.1	2.2	0.060	0.102	0.025	0.028	0.007	0.108	0.026	0.035	0.009
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	700	868	11,200		253	424	7	0	8	8	700	306	513	22	1	14	12	868	70	2.5	2.9	0.030	0.066	0.016	0.021	0.005	0.076	0.018	0.029	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	556	602	8,250		207	347	1	0	1	0	556	223	373	1	0	3	2	602	70	2.0	2.1	0.060	0.096	0.023	0.024	0.006	0.102	0.025	0.028	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	627	1,037	11,900		230	385	5	0	4	3	627	381	637	6	0	7	6	1037	70	2.3	2.3	0.030	0.058	0.014	0.016	0.004	0.058	0.014	0.027	0.007
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	162	972	8,100		55	91	7	0	5	4	162	339	567	32	1	17	16	972	80	3.7	3.1	0.060	0.181	0.044	0.013	0.003	0.152	0.037	0.066	0.016
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	781	591	9,800		255	427	53	2	23	21	781	202	338	24	1	14	12	591	80	4.1	3.4	0.060	0.201	0.049	0.070	0.017	0.168	0.041	0.044	0.011
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	157	1,146	9,300		52	87	9	0	5	4	157	409	684	25	1	14	13	1146	80	3.9	2.7	0.060	0.193	0.047	0.014	0.003	0.133	0.032	0.068	0.016
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	1,273	199	10,500		448	751	37	2	18	17	1273	67	112	9	0	6	5	199	80	2.9	3.7	0.030	0.076	0.018	0.043	0.010	0.097	0.023	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	101	947	7,500		36	61	1	0	2	1	101	328	549	34	1	18	17	947	80	2.7	3.2	0.060	0.131	0.032	0.006	0.001	0.157	0.038	0.066	0.016
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	1,107	203	9,350		364	609	52	2	42	38	1107	72	121	3	0	4	3	203	80	4.1	2.8	0.060	0.203	0.049	0.101	0.024	0.139	0.034	0.013	0.003
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	13	1,115	8,050		5	8	0	0	0	0	13	392	656	31	0	18	17	1115	80	1.9	3.0	0.060	0.092	0.022	0.001	0.000	0.145	0.035	0.072	0.018
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	913	356	9,050		297	497	46	2	37	34	913	126	211	1	0	9	9	356	80	4.3	3.0	0.060	0.212	0.051	0.086	0.021	0.148	0.036	0.024	0.006
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	586	1,082	11,900		184	307	39	2	28	26	586	385	644	21	1	16	15	1082	80	4.8	2.8	0.030	0.127	0.031	0.033	0.008	0.073	0.018	0.035	0.009
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,308	914	15,850		445	745	49	2	35	32	1308	291	486	46	2	47	42	914	80	3.5	4.7	0.030	0.092	0.022	0.054	0.013	0.124	0.030	0.051	0.012
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	282	1,062	9,600		63	106	52	2	31	28	282	386	646	11	1	9	9	1062	80	9.0	2.4	0.060	0.451	0.109	0.057	0.014	0.118	0.029	0.056	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,084	655	12,400		385	644	21	1	17	16	1084	233	389	11	1	11	10	655	80	2.8	2.8	0.030	0.074	0.018	0.036	0.009	0.074	0.018	0.022	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		627	491	8,000		231	388	3	0	3	2	627	178	298	4	0	6	5	491	70	2.1	2.5	0.060	0.104	0.025	0.029	0.007	0.122	0.029	0.027	0.006
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		541	529	7,650		176	295	27	1	22	20	541	188	316	9	0	8	8	529	70	4.3	2.8	0.060	0.211	0.051	0.051	0.012	0.136	0.033	0.032	0.008
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		1,708	1,813	25,150		454	760	235	10	130	119	1708	610	1022	67	3	58	53	1813	80	7.0	3.7	0.030	0.185	0.045	0.141	0.034	0.098	0.024	0.079	0.019
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		1,866	1,356	23,000		631	1056	95	4	42	38	1866	449	752	61	3	48	43	1356	80	3.5	4.0	0.030	0.093	0.022	0.077	0.019	0.105	0.025	0.063	0.015
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		882	1,244	15,200		323	540	11	0	4	4	882	459	768	7	0	5	5	1244	80	2.3	2.2	0.030	0.059	0.014	0.023	0.006	0.056	0.013	0.031	0.008
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		909	1,115	14,450		329	550	13	1	8	8	909	413	691	4	0	4	3	1115	80	2.5	2.1	0.030	0.065	0.016	0.026	0.006	0.054	0.013	0.027	0.007
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,288	2,153	31,700		762	1275	111	5	71	64	2288	730	1223	75	3	64	58	2153	70	3.9	3.6	0.030	0.101	0.024	0.103	0.025	0.095	0.023	0.091	0.022
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,889	2,157	28,900		628	1051	101	4	55	50	1889	767	1284	34	2	37	33	2157	70	3.9	2.8	0.030	0.101	0.024	0.085	0.021	0.074	0.018	0.071	0.017
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,145	1,752	27,850		748	1287	34	2	28	26	2145	647	1084	8	0	7	6	1752	70	2.7	2.1	0.030	0.070	0.017	0.067	0.016	0.055	0.013	0.043	0.010
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		1,671	2,166	27,400		574	960	49	2	45	41	1671	795	1332	7	0	17	15	2166	70	3.4	2.3	0.030	0.090	0.022	0.067	0.016	0.059	0.014	0.057	0.014
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		867	1,643	17,950		316	528	13	1	5	4	867	591	990	36	2	13	11	1643	80	2.3	2.5	0.030	0.061	0.015	0.024	0.006	0.066	0.016	0.048	0.012
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,876	1,168	21,750		580	971	152	7	87	79	1876	431	721	8	0	4	4	1168	80	5.0	2.1	0.030	0.131	0.032	0.109	0.026	0.056	0.013	0.029	0.007
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		752	1,265	14,400		279	468	3	0	1	1	752	465	780	12	1	4	3	1265	70	2.0	2.2	0.030	0.052	0.013	0.018	0.004	0.056	0.014	0.032	0.008
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,587	909	17,850		578	968	26	1	7	7	1587	337	565	3	0	2	2	909	70	2.3	2.0	0.030	0.060	0.015	0.043	0.010	0.053	0.013	0.021	0.005
Coleraine Dr	Coleraine Dr At Mayfield Rd_NB	E71	NB	4		1,502	1,534	21,700		559	937	2	0	2	2	1502	568	951	9	0	3	3	1534	70	2.0	2.1	0.030	0.051	0.012	0.034	0.008	0.053	0.013	0.037	0.009
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		1,789	1,499	23,500		657	1099	21	1	6	5	1789	558	935	1	0	3	2	1499	70	2.2	2.0	0.030	0.057	0.014	0.046	0.011	0.051	0.012	0.034	0.008
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		521	274	5,700		184	307	10	0	10	10	521	102	172	0	0	0	0	274	60	3.0	1.9	0.060	0.146	0.035	0.034	0.008	0.092	0.022	0.011	0.003
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		439	316	5,400		164	274	0	0	1	0	439	118	197	0	0	1	0	316	60	2.0	2.0	0.060	0.095	0.023	0.019	0.005	0.096	0.023	0.014	0.003
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		1,944	2,935	34,850		685	1147	34	1	40	37	1944	1068	1789	24	1	28	25	2935	70	3.0	2.4	0.030	0.078	0.019	0.068	0.016	0.062	0.015	0.082	0.020
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,144	2,017	36,850		1102	1846	55	2	73	66	3144	742	1242	13	1	10	9	2017	70	3.1	2.2	0.030	0.081	0.020	0.114	0.028	0.057	0.014	0.051	0.012
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,399	3,214	40,100		850	1423	34	2	47	43	2399	1172	1964	25	1	27	25	3214	70	2.9	2.4	0.030	0.076	0.018	0.081	0.020	0.061	0.015	0.088	0.021
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,617	2,449	43,350		1273	2131	60	3	78	72	3617	901	1509	14	1	13	11	2449	70	3.0	2.2	0.030	0.079	0.019	0.128	0.031	0.057	0.014	0.062	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,250	3,128	38,400		809	1355	49	2	18	17	2250	1150	1926	24	1	14	13	3128	70	2.5	2.2	0.030	0.066	0.016	0.067	0.016	0.057	0.014	0.080	0.019
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		751	2,321	21,950		246	411	42	2	26	24	751	846	1418	23	1	17	16	2321	70	4.1	2.3	0.030	0.108	0.026	0.036	0.009	0.061	0.015	0.063	0.015
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		20	68	650		7	13	0	0	0	0	20	25	42	1	0	0	0	68	60	1.9	2.1	0.200	0.276	0.067	0.002	0.001	0.306	0.074	0.009	0.002
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		432	25	3,250		159	265	4	0	2	2	432	9	16	0	0	2	0	25	60	2.2	1.9	0.200	0.325	0.079	0.063	0.015	0.276	0.067	0.003	0.001
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		749	511	9,000		277	463	3	0	3	3	749	190	317	1	0	2	1	511	70	2.1	2.1	0.060	0.104	0.025	0.035	0.008	0.100	0.024	0.023	0.006
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		733	380	7,950		273	457	0	0	2

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 3

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36			AM Peak	PM Peak									
																											PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		508	1,359	13,350		188	316	1	0	2	1	508	500	837	1	0	11	10	1359	60	2.1	2.2	0.030	0.053	0.013	0.012	0.003	0.058	0.014	0.035	0.009
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		1,669	813	17,750		557	934	64	3	58	53	1669	304	509	0	0	0	0	813	60	3.9	1.9	0.030	0.102	0.025	0.076	0.018	0.049	0.012	0.018	0.004
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		204	534	5,250		74	123	4	0	2	1	204	193	324	9	0	4	4	534	80	2.5	2.5	0.060	0.121	0.029	0.011	0.003	0.120	0.029	0.029	0.007
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		784	135	6,550		273	456	28	1	14	12	784	47	80	5	0	2	1	135	80	3.1	2.9	0.060	0.153	0.037	0.054	0.013	0.141	0.034	0.009	0.002
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,603	2,059	33,300		916	1533	62	3	47	42	2603	726	1215	41	2	39	36	2059	60	3.0	3.0	0.030	0.078	0.019	0.090	0.022	0.077	0.019	0.071	0.017
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,885	2,576	31,850		645	1081	67	3	47	42	1885	939	1573	18	1	24	21	2576	60	3.4	2.4	0.030	0.089	0.022	0.075	0.018	0.062	0.015	0.071	0.017
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		216	821	7,400		77	128	4	0	4	3	216	299	500	6	0	8	8	821	80	2.9	2.4	0.060	0.140	0.034	0.013	0.003	0.118	0.029	0.043	0.010
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		1,102	271	9,800		399	668	10	0	13	12	1102	97	162	2	0	5	5	271	80	2.5	2.8	0.060	0.123	0.030	0.060	0.015	0.137	0.033	0.017	0.004
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		716	597	9,400		257	430	4	0	13	12	716	222	371	2	0	1	1	597	70	2.7	2.0	0.060	0.133	0.032	0.043	0.010	0.098	0.024	0.026	0.006
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		580	777	9,700		217	363	0	0	0	0	580	290	486	1	0	0	0	777	70	1.9	1.9	0.060	0.092	0.022	0.024	0.006	0.093	0.023	0.032	0.008
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		749	511	9,000		277	463	3	0	3	3	749	190	317	1	0	2	1	511	70	2.1	2.1	0.060	0.104	0.025	0.035	0.008	0.100	0.024	0.023	0.006
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		733	380	7,950		273	457	0	0	2	1	733	141	237	1	0	1	0	380	70	2.0	2.0	0.060	0.097	0.023	0.032	0.008	0.097	0.023	0.016	0.004
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	32	9	300		11	18	1	0	1	1	32	3	6	0	0	0	0	9	60	3.7	1.9	0.600	1.468	0.355	0.021	0.005	0.751	0.182	0.003	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	6	95	700		2	3	0	0	1	0	6	34	58	1	0	1	1	95	60	5.5	2.5	0.200	0.813	0.197	0.002	0.001	0.365	0.088	0.015	0.004
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 at Major Mackenzie Dr E-N/W Ramp	F77	N-E/W	4		1,352	885	16,000		446	748	81	4	38	35	1352	285	476	49	2	38	35	885	70	3.9	4.5	0.030	0.103	0.025	0.062	0.015	0.117	0.028	0.046	0.011
Highway 427	Hwy 427 at Major Mackenzie Dr S-E Ramp	F78	E-S	4		935	275	8,650		348	584	2	0	1	0	935	102	170	1	0	1	1	275	40	2.0	2.1	0.060	0.095	0.023	0.040	0.010	0.103	0.025	0.013	0.003
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		1,644	2,608	30,350		605	1014	13	1	6	5	1644	964	1615	14	1	7	7	2608	70	2.2	2.1	0.030	0.056	0.014	0.041	0.010	0.054	0.013	0.063	0.015
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		891	818	12,200		249	416	120	5	53	48	891	246	412	69	3	46	42	818	60	6.2	5.4	0.030	0.165	0.040	0.066	0.016	0.143	0.035	0.052	0.013
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		187	380	4,050		61	103	11	1	6	5	187	141	235	2	0	1	1	380	40	4.0	2.1	0.200	0.596	0.144	0.050	0.012	0.304	0.073	0.052	0.012
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		379	31	2,950		129	216	15	1	9	9	379	11	18	1	0	1	0	31	70	3.5	3.0	0.200	0.514	0.124	0.087	0.021	0.445	0.108	0.006	0.001
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		260	620	6,300		73	122	1	0	33	31	260	225	376	3	0	8	8	620	40	7.2	2.5	0.060	0.361	0.087	0.042	0.010	0.123	0.030	0.034	0.008
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		639	565	8,600		219	366	5	0	26	23	639	204	341	4	0	8	8	565	60	3.7	2.6	0.060	0.180	0.044	0.051	0.012	0.127	0.031	0.032	0.008
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		954	427	9,850		329	552	26	1	24	22	954	148	249	5	0	13	12	427	70	3.3	3.3	0.060	0.163	0.039	0.070	0.017	0.163	0.039	0.031	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		126	97	1,600		38	64	13	1	5	5	126	34	58	2	0	2	1	97	60	5.1	2.8	0.200	0.758	0.183	0.043	0.010	0.417	0.101	0.018	0.004
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		245	21	1,900		71	120	25	1	15	13	245	8	13	0	0	0	0	21	40	5.8	1.9	0.200	0.862	0.208	0.094	0.023	0.276	0.067	0.003	0.001
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	H14	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Hwy 413 N-W Ramp	H15	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total				AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	3,843	4,648	60,600		1144	1915	374	17	206	187	3843	1511	2531	239	11	186	170	4648	110	5.5	4.3	0.015	0.077	0.019	0.132	0.032	0.060	0.014	0.124	0.030
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	4,792	3,918	62,200		1536	2572	336	15	174	159	4792	1192	1997	306	13	214	196	3918	110	4.4	5.3	0.015	0.061	0.015	0.132	0.032	0.074	0.018	0.129	0.031
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	4,921	4,878	70,000		1465	2454	477	21	264	240	4921	1556	2605	280	12	222	203	4878	110	5.5	4.6	0.015	0.077	0.019	0.169	0.041	0.064	0.016	0.140	0.034
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	4,896	4,542	67,400		1527	2558	385	17	214	195	4896	1366	2288	369	16	263	240	4542	110	4.8	5.4	0.015	0.067	0.016	0.148	0.036	0.076	0.018	0.155	0.037
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		6,058	4,889	78,200		1819	3046	535	24	332	302	6058	1507	2525	325	14	271	247	4889	110	5.4	5.1	0.015	0.076	0.018	0.206	0.050	0.072	0.017	0.157	0.038
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		4,982	5,707	76,300		1510	2529	443	20	251	229	4982	1746	2924	414	18	316	289	5707	110	5.2	5.2	0.015	0.073	0.018	0.164	0.040	0.073	0.018	0.187	0.045
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		5,553	5,413	78,300		1640	2747	560	25	304	277	5553	1702	2849	329	15	271	247	5413	110	5.6	4.8	0.015	0.078	0.019	0.195	0.047	0.068	0.016	0.164	0.040
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		5,644	5,208	77,500		1768	2960	428	19	245	224	5644	1547	2590	441	19	320	291	5208	110	4.8	5.6	0.015	0.067	0.016	0.168	0.041	0.079	0.019	0.184	0.045
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		5,232	5,006	73,100		1511	2530	562	25	316	288	5232	1512	2533	364	16	304	277	5006	110	5.9	5.4	0.015	0.083	0.020	0.194	0.047	0.076	0.018	0.171	0.041
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		5,005	4,908	70,800		1466	2455	503	22	292	267	5005	1405	2354	466	21	346	316	4908	110	5.7	6.2	0.015	0.081	0.019	0.180	0.044	0.087	0.021	0.190	0.046
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	5,186	4,688	70,500		1497	2508	554	24	315	288	5186	1404	2350	351	15	297	271	4688	110	5.9	5.6	0.015	0.083	0.020	0.193	0.047	0.078	0.019	0.164	0.040
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	4,963	4,897	70,400		1436	2406	523	23	301	274	4963	1412	2364	453	20	339	309	4897	110	5.9	6.1	0.015	0.083	0.020	0.184	0.044	0.085	0.021	0.187	0.045
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	4,810	4,236	64,600		1383	2315	518	23	299	272	4810	1250	2092	336	15	284	259	4236	110	6.0	5.8	0.015	0.084	0.020	0.181	0.044	0.081	0.020	0.154	0.037
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	4,484	4,580	64,700		1247	2089	538	24	307	279	4484	1313	2200	430	19	323	295	4580	110	6.4	6.1	0.015	0.090	0.022	0.181	0.044	0.086	0.021	0.177	0.043
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		5,837	5,741	82,700		1674	2803	636	28	364	332	5837	1759	2945	391	17	329	300	5741	110	6.0	5.2	0.015	0.085	0.020	0.221	0.053	0.073	0.018	0.188	0.046
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		5,597	5,735	80,900		1641	2747	580	26	315	288	5597	1715	2873	465	20	346	316	5735	110	5.7	5.5	0.015	0.080	0.019	0.200	0.048	0.078	0.019	0.199	0.048
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	4,904	6,035	78,100		1324	2216	648	29	359	328	4904	1851	3100	399	18	349	318	6035	110	6.8	5.2	0.015	0.096	0.023	0.210	0.051	0.073	0.018	0.198	0.048
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	6,458	4,845	80,700		2004	3356	548	24	275	251	6458	1431	2397	403	18	312	284	4845	110	4.9	5.7	0.015	0.068	0.016	0.196	0.048	0.081	0.019	0.174	0.042
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		4,695	5,012	69,300		1279	2143	606	27	335	305	4695	1516	2538	346	15	312	285	5012	110	6.7	5.4	0.015	0.094	0.023	0.197	0.048	0.076	0.018	0.171	0.041
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		5,120	4,619	69,600		1565	2620	465	20	235	215	5120	1371	2297	381	17	289	264	4619	110	5.1	5.6	0.015	0.071	0.017	0.163	0.039	0.079	0.019	0.164	0.040
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		4,695	5,012	69,300		1279	2143	606	27	335	305	4695	1516	2538	346	15	312	285	5012	110	6.7	5.4	0.015	0.094	0.023	0.197	0.048	0.076	0.018	0.171	0.041
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		5,120	4,619	69,600		1565	2620	465	20	235	215	5120	1371	2297	381	17	289	264	4619	110	5.1	5.6	0.015	0.071	0.017	0.163	0.039	0.079	0.019	0.164	0.040
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		2,821	4,142	49,700		920	1542	174	8	93	84	2821	1470	2461	65	3	75	68	4142	100	4.1	2.9	0.015	0.058	0.014	0.073	0.018	0.040	0.010	0.074	0.018
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		5,151	3,741	63,500		1742	2916	106	5	200	182	5151	1305	2185	84	4	85	78	3741	100	3.8	3.2	0.015	0.053	0.013	0.122	0.029	0.044	0.011	0.073	0.018
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		1,090	2,201	23,500		335	560	102	4	47	42	1090	798	1336	20	1	24	22	2201	100	5.0	2.5	0.015	0.070	0.017	0.034	0.008	0.034	0.008	0.034	0.008
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		2,422	971	24,200		859	1438	39	2	44	40	2422	327	548	40	2	28	26	971	100	2.9	3.7	0.015	0.040	0.010	0.043	0.010	0.051	0.012	0.022	0.005
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		2,490	1,992	32,000		842	1410	64	3	89	82	2490	695	1165	41	2	47	42	1992	100	3.7	3.2	0.015	0.052	0.013	0.058	0.014	0.044	0.011	0.039	0.009
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		1,251	2,044	23,500		401	671	90	4	44	41	1251	717	1202	45	2	41	37	2044	100	4.4	3.0	0.015	0.061	0.015	0.034	0.008	0.042	0.010	0.039	0.009
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,649	5,406	57,500		895	1499	128	6	63	58	2649	1929	3231	96	4	76	70	5406	100	3.6	2.7	0.015	0.050	0.012	0.059	0.014	0.038	0.009	0.092	0.022
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,974	3,300	59,100		1772	2967	131	6	51	47	4974	1175	1968	63	3	48	43	3300	100	2.7	2.8	0.015	0.037	0.009	0.083	0.020	0.038	0.009	0.057	0.014
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		2,087	3,825	42,200		596	999	253	11	119	109	2087	1275	2134	166	7	127	116	3825	100	6.0	3.9	0.015	0.084	0.020	0.078	0.019	0.054	0.013	0.093	0.022
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		3,894	2,632	46,600		1318	2208	201	9	83	75	3894	889	1490	100	4	78	71	2632	100	3.5	3.7	0.015	0.049	0.012	0.085	0.021	0.051	0.012	0.060	0.015
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		5,361	10,473	113,100		1609	2695	448	20	308	281	5361	3716	6223	225	10	156	143	10473	100	5.5	2.8	0.015	0.077	0.019	0.183	0.044	0.039	0.009	0.183	0.044
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		10,231	5,482	112,200		3499	5859	355	16	263	239	10231	1825	3055	194	9	209	190	5482	100	3.5	4.0	0.015	0.048	0.012	0.220	0.053	0.055	0.013	0.136	0.033
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		3,214	7,823	78,800		996	1667	205	9	176	161	3214	2875	4814	44	2	46	42	7823	100	5.1	2.2	0.015	0.071	0.017	0.102	0.025	0.031	0.007	0.107	0.026
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		7,980	3,248	80,200		2787	4668	179	8	177	161	7980	1124	1882	46	2	101	93	3248	100	3.1	3.4	0.015	0.043	0.011	0.155	0.038	0.047	0.011	0.068	0.017
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		3,313	8,149	81,900		1026	1719	211	9	182	166	3313	2997	5020	43	2	46	41	8149	100	5.1	2.2	0.015	0.071	0.017	0.105	0.025	0.030	0.007	0.111	0.027
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		11,822	5,473	123,500		4052	6785	419	18	287	261	11822	1743	2920	281	12	270	247	5473	100	3.4	4.7	0.015	0.047	0.011	0.250	0.061	0.065	0.016	0.160	0.039
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	92	188	2,000		33	54	1	0	2	2	92	68	115	2	0	2	1	188	70	3.0	2.4	0.200	0.437	0.106	0.018	0.004	0.349	0.084	0.029	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	415	237	4,650		112	188	46	2	35	32	415	66	111	20	1	20	19	237	40	6.9	6.6	0.200	1.035	0.250	0.192	0.046	0.989	0.239	0.105	0.025
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	808	291	7,850		270	452	47	2	19	18	808	93	156	16	1	13	12	291	60	3.7	4.5	0.060	0.183	0.044	0.066	0.016	0.224	0.054	0.029	0.007
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	650	958	11,500		190	318	58	3	42	39	650	302	507	61	3	44	41	958	70	5.9	4.7	0.030	0.155	0.037	0.045	0.011	0.124	0.030	0.053	0.013
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	163	108	1,950		60	101	2	0	0	0	163	40	67	1	0	0	0	108	60	2.1	2.0	0.200	0.301	0.073	0.022	0.005	0.295	0.071	0.014	0.003
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	236	78	2,250		84	140	7	0	3	2	236	27	45	4	0	2	1	78	40	2.8	3.2	0.200	0.404	0.098	0.043	0.010	0.462	0.112	0.016	0.004
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	353	456	5,800		116	194	17	1	13	12	353	163	272	11	1	5	4	456	70	4.1	2.7	0.060	0.203	0.049	0.032	0.008	0.131	0.032	0.027	0.006
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		1,043	477	10,850		329	552	46	2	60	54	1043	135	226	41	2	38	35	477	40	4.9	6.4	0.030	0.128	0.031	0.060	0.014	0.170	0.041	0.036	0.009
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		353	207	4,000		99	167	36	2	26	23	353	62	103	15	1	14	12	207	60	6.4	5.7	0.200	0.945	0.229	0.149	0.036	0.839	0.203	0.078	0.019
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		570	1,518	14,900		149	249	73	3	50	46	570	507	848	55	2	55	51	1518	70	7.3	3.9	0.030	0.195	0.047	0.050	0.012	0.103	0.025	0.070	0.017
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	355	266	4,450		123	206	8	0	9	9	355	87	147	17	1	7	7	266	60	3.3	4.0	0.200	0.484	0.117	0.077	0.019	0.583	0.141	0.069	0.017
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		355	266	4,450		123	206	8	0	9	9	355	87	147	17	1	7	7	266	40	3.3	4.0	0.200	0.484	0.117	0.077	0.019	0.583	0.141	0.069	0.017
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		1,108	250	9,700		361	605	37	2	54	49	1108	90	152	2	0	3	3	250	90	4.4	2.5	0.060	0.216	0.052	0.107	0.026	0.123	0.030	0.014	0.003
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		1,023	684	12,200		362	605	24	1	16	15	1023	221	371	40	2	26	24	684	90	2.9	4.3	0.030	0.075	0.018	0.034	0.008	0

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62												
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		1,472	2,040	25,100		415	694	177	8	93	85	1472	671	1124	109	5	69	62	2040	90	6.2	4.0	0.030	0.164	0.040	0.108	0.026	0.106	0.026	0.097	0.023
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	799	1,186	14,200		258	433	54	2	27	25	799	391	654	60	3	41	37	1186	70	4.3	4.0	0.030	0.112	0.027	0.040	0.010	0.106	0.026	0.056	0.014
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		418	93	3,650		144	241	20	1	6	6	418	33	56	2	0	1	1	93	40	3.2	2.7	0.200	0.470	0.114	0.088	0.021	0.389	0.094	0.016	0.004
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		244	495	5,300		77	129	23	1	7	7	244	175	292	14	1	7	6	495	50	4.5	2.9	0.060	0.221	0.053	0.024	0.006	0.141	0.034	0.031	0.008
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	2,581	1,305	27,750		840	1408	176	8	78	71	2581	432	723	57	2	48	43	1305	60	4.1	4.0	0.030	0.108	0.026	0.125	0.030	0.105	0.025	0.061	0.015
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		1,198	1,195	17,100		381	639	84	4	47	43	1198	366	614	76	3	71	65	1195	70	4.5	5.2	0.030	0.119	0.029	0.064	0.015	0.138	0.033	0.074	0.018
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		1,448	1,057	17,900		453	759	117	5	60	54	1448	325	545	68	3	61	55	1057	60	4.7	5.2	0.030	0.125	0.030	0.081	0.020	0.136	0.033	0.064	0.016
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		2,210	3,001	37,200		521	872	388	17	215	197	2210	926	1550	186	8	173	158	3001	100	8.4	5.2	0.015	0.119	0.029	0.118	0.028	0.072	0.017	0.097	0.023
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		1,295	902	15,700		376	630	139	6	75	69	1295	248	414	92	4	75	69	902	90	5.8	6.8	0.030	0.154	0.037	0.089	0.022	0.180	0.043	0.072	0.018
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		945	1,609	18,250		248	416	129	6	76	70	945	502	842	112	5	77	71	1609	90	7.2	4.9	0.030	0.190	0.046	0.080	0.019	0.128	0.031	0.092	0.022
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		2,877	1,877	33,950		915	1533	224	10	102	93	2877	519	870	197	9	147	135	1877	90	4.5	6.6	0.030	0.117	0.028	0.151	0.037	0.175	0.042	0.147	0.036
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	210	9	1,550		47	80	44	2	19	18	210	3	6	0	0	0	0	9	70	8.7	1.9	0.200	1.298	0.314	0.122	0.029	0.276	0.067	0.001	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	98	138	1,700		33	54	7	0	2	2	98	42	69	11	0	8	8	138	70	3.8	5.5	0.200	0.552	0.134	0.024	0.006	0.813	0.197	0.050	0.012
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	1,076	628	12,150		348	584	78	3	33	30	1076	207	347	30	1	22	21	628	80	4.2	4.0	0.030	0.110	0.027	0.053	0.013	0.106	0.026	0.030	0.007
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	684	777	10,450		212	354	51	2	34	31	684	255	427	37	2	29	27	777	80	5.0	4.1	0.030	0.132	0.032	0.040	0.010	0.108	0.026	0.038	0.009
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	512	835	9,600		145	244	54	2	35	32	512	213	357	105	5	81	74	835	80	6.2	7.7	0.060	0.308	0.075	0.071	0.017	0.384	0.093	0.143	0.035
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	1,212	633	13,200		375	627	92	4	60	54	1212	195	327	38	2	37	34	633	80	5.0	5.2	0.030	0.132	0.032	0.071	0.017	0.136	0.033	0.039	0.009
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	159	732	6,350		43	73	22	1	10	10	159	254	426	18	1	17	16	732	80	6.6	3.2	0.060	0.327	0.079	0.023	0.006	0.158	0.038	0.052	0.013
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	2	3	668	366	7,400		208	347	50	2	32	29	668	102	170	42	2	26	24	366	80	4.9	6.5	0.060	0.244	0.059	0.073	0.018	0.322	0.078	0.053	0.013
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	D71	EB	2	3	682	697	9,850		215	361	38	2	35	31	682	221	371	32	1	38	34	697	70	4.8	4.8	0.060	0.236	0.057	0.072	0.017

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36			AM Peak	PM Peak		PM42 (g/s mile)	PM2 5 (g/s mile)		PM2 5 (g/VKT)		PM42 (g/s mile)	PM2 5 (g/s mile)
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		442	508	6,800		135	226	31	1	26	23	442	183	307	8	0	5	5	508	80	5.3	2.5	0.060	0.261	0.063	0.052	0.012	0.124	0.030	0.028	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		308	523	5,950		109	182	9	0	4	4	308	190	317	8	0	4	4	523	80	2.9	2.4	0.060	0.140	0.034	0.019	0.005	0.119	0.029	0.028	0.007
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		892	176	7,650		305	511	36	2	20	18	892	62	105	7	0	1	1	176	80	3.4	2.7	0.060	0.167	0.040	0.067	0.016	0.131	0.032	0.010	0.003
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		3,317	2,652	42,650		1162	1945	85	4	63	58	3317	945	1583	42	2	42	38	2652	60	3.1	2.8	0.030	0.080	0.019	0.118	0.029	0.072	0.017	0.086	0.021
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		2,243	3,006	37,500		780	1305	80	4	39	35	2243	1096	1836	25	1	25	23	3006	60	3.1	2.4	0.030	0.081	0.020	0.082	0.020	0.061	0.015	0.082	0.020
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		3,172	2,409	39,850		1107	1854	82	4	65	60	3172	856	1433	41	2	40	37	2409	60	3.1	2.8	0.030	0.081	0.020	0.115	0.028	0.074	0.018	0.079	0.019
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		2,480	2,580	36,150		873	1462	72	3	37	33	2480	939	1573	24	1	22	21	2580	60	2.9	2.4	0.030	0.076	0.018	0.084	0.020	0.062	0.015	0.072	0.017
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		3,407	2,563	42,650		1186	1985	106	5	65	60	3407	909	1523	43	2	45	41	2563	60	3.1	2.9	0.030	0.082	0.020	0.125	0.030	0.075	0.018	0.085	0.021
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		2,676	3,506	44,150		904	1513	96	4	83	76	2676	1277	2138	30	1	31	29	3506	60	3.7	2.4	0.030	0.097	0.023	0.116	0.028	0.062	0.015	0.097	0.024
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		1,081	1,224	16,450		377	632	38	2	17	15	1081	436	729	25	1	17	16	1224	80	3.0	2.8	0.030	0.079	0.019	0.038	0.009	0.072	0.017	0.039	0.010
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		1,586	938	18,050		550	920	54	2	31	29	1586	338	567	11	1	11	10	938	80	3.2	2.6	0.030	0.083	0.020	0.059	0.014	0.066	0.016	0.028	0.007
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		525	860	9,900		180	302	20	1	12	10	525	308	516	7	0	15	14	860	80	3.3	2.7	0.060	0.164	0.040	0.039	0.009	0.134	0.032	0.051	0.012
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		1,000	645	11,750		338	565	15	1	42	39	1000	234	392	5	0	7	7	645	80	3.9	2.5	0.030	0.101	0.024	0.045	0.011	0.064	0.016	0.019	0.004
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		283	602	6,300		90	150	26	1	8	8	283	218	365	9	0	5	5	602	80	4.4	2.5	0.060	0.218	0.053	0.028	0.007	0.120	0.029	0.032	0.008
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		712	324	7,400		261	437	6	0	4	4	712	112	187	11	1	7	6	324	80	2.3	3.3	0.060	0.110	0.027	0.035	0.008	0.160	0.039	0.023	0.006
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		2,846	1,492	31,000		1009	1689	77	3	36	32	2846	514	862	48	2	35	31	1492	60	2.8	3.3	0.030	0.073	0.018	0.093	0.022	0.086	0.021	0.058	0.014
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		1,787	1,421	22,900		588	986	108	5	52	48	1787	516	863	20	1	11	10	1421	60	4.0	2.4	0.030	0.104	0.025	0.083	0.020	0.063	0.015	0.040	0.010
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		28	338	2,600		9	15	1	0	2	1	28	120	201	5	0	6	6	338	80	4.7	2.9	0.200	0.694	0.168	0.009	0.002	0.420	0.102	0.063	0.015
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		353	44	2,850		114	191	17	1	16	14	353	16	26	0	0	1	1	44	80	4.4	2.9	0.200	0.653	0.158	0.103	0.025	0.422	0.102	0.008	0.002
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		594	1,436	14,500		125	210	122	5	69	63	594	471	788	73	3	53	48	1436	80	9.6	4.1	0.030	0.256	0.062	0.068	0.016	0.108	0.026	0.070	0.017
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		1,531	903	17,400		525	880	56	2	36	32	1531	276	463	68	3	49	44	903	80	3.4	5.2	0.030	0.088	0.021	0.060	0.015	0.137	0.033	0.055	0.013
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		633	717	9,650		205	343	32	1	27	25	633	264	441	2	0	5	5	717	70	4.4	2.2	0.060	0.216	0.052	0.061	0.015	0.109	0.026	0.035	0.008
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		963	753	12,250		346	580	11	0	14	12	963	278	465	2	0	4	4	753	70	2.6	2.2	0.030	0.069	0.017	0.030	0.007	0.056	0.014	0.019	0.005
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		592	590	8,450		171	287	57	2	39	36	592	203	341	10	0	19	17	590	70	6.0	3.4	0.060	0.297	0.072	0.079	0.019	0.169	0.041	0.045	0.011
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		514	835	9,650		179	301	15	1	9	9	514	310	520	2	0	2	1	835	70	3.1	2.0	0.060	0.151	0.037	0.035	0.008	0.098	0.024	0.037	0.009
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		43	422	3,300		16	27	0	0	0	0	43	155	260	3	0	2	2	422	70	1.9	2.2	0.200	0.276	0.067	0.005	0.001	0.321	0.078	0.061	0.015
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		659	97	5,400		232	389	16	1	11	10	659	36	60	1	0	0	0	97	70	2.9	2.0	0.060	0.144	0.035	0.042	0.010	0.099	0.024	0.004	0.001
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		86	1,130	8,700		32	54	0	0	0	0	86	418	699	6	0	4	3	1130	70	1.9	2.1	0.060	0.092	0.022	0.004	0.001	0.103	0.025	0.052	0.013
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		1,134	237	9,800		411	688	15	1	10	9	1134	88	147	1	0	1	0	237	70	2.5	2.1	0.060	0.120	0.029	0.061	0.015	0.100	0.024	0.011	0.003
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		638	2,430	21,900		228	383	12	1	7	7	638	879	1472	27	1	27	24	2430	60	2.7	2.5	0.030	0.069	0.017	0.020	0.005	0.065	0.016	0.071	0.017
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		2,275	1,000	23,400		799	1337	58	3	41	37	2275	363	609	10	0	9	9	1000	60	3.0	2.4	0.030	0.078	0.019	0.080	0.019	0.063	0.015	0.028	0.007
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		762	1,748	17,950		261	437	29	1	18	16	762	618	1035	30	1	33	31	1748	60	3.4	2.9	0.030	0.089	0.021	0.030	0.007	0.076	0.018	0.060	0.014
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		1,816	652	17,650		632	1059	53	2	37	33	1816	234	391	10	0	9	8	652	60	3.1	2.7	0.030	0.082	0.020	0.067	0.016	0.070	0.017	0.020	0.005
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		750	1,884	18,800		254	426	34	2	18	16	750	669	1120	33	1	32	29	1884	60	3.5	2.8	0.030	0.092	0.022	0.031	0.007	0.074	0.018	0.062	0.015
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		1,775	710	17,750		620	1039	48	2	35	31	1775	249	417	15	1	15	13	710	60	3.1	3.1	0.030	0.080	0.019	0.064	0.015	0.080	0.019	0.025	0.006
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	703	1,426	15,200		247	414	21	1	10	10	703	525	879	9	0	7	6	1426	70	2.9	2.2	0.030	0.077	0.019	0.024	0.006	0.057	0.014	0.036	0.009
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	1,088	1,072	15,450		402	672	6	0	4	4	1088	388	650	15	1	9	9	1072	70	2.1	2.5	0.030	0.055	0.013	0.027	0.007	0.064	0.016	0.031	0.007
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	624	725	9,650		231	387	1	0	3	2	624	267	446	3	0	5	4	725	70	2.1	2.2	0.060	0.102	0.025	0.028	0.007	0.108	0.026	0.035	0.009
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	700	868	11,200		253	424	7	0	8	8	700	306	513	22	1	14	12	868	70	2.5	2.9	0.030	0.066	0.016	0.021	0.005	0.076	0.018	0.029	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	556	602	8,250		207	347	1	0	1	0	556	223	373	1	0	3	2	602	70	2.0	2.1	0.060	0.096	0.023	0.024	0.006	0.102	0.025	0.028	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	627	1,037	11,900		230	385	5	0	4	3	627	381	637	6	0	7	6	1037	70	2.3	2.3	0.030	0.058	0.014	0.016	0.004	0.058	0.014	0.027	0.007
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	162	972	8,100		55	91	7	0	5	4	162	339	567	32	1	17	16	972	80	3.7	3.1	0.060	0.181	0.044	0.013	0.003	0.152	0.037	0.066	0.016
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	781	591	9,800		255	427	53	2	23	21	781	202	338	24	1	14	12	591	80	4.1	3.4	0.060	0.201	0.049	0.070	0.017	0.168	0.041	0.044	0.011
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	157	1,146	9,300		52	87	9	0	5	4	157	409	684	25	1	14	13	1146	80	3.9	2.7	0.060	0.193	0.047	0.014	0.003	0.133	0.032	0.068	0.016
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	1,273	199	10,500		448	751	37	2	18	17	1273	67	112	9	0	6	5	199	80	2.9	3.7	0.030	0.076	0.018	0.043	0.010	0.097	0.023	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	101	947	7,500		36	61	1	0	2	1	101	328	549	34	1	18	17	947	80	2.7	3.2	0.060	0.131	0.032	0.006	0.001	0.157	0.038	0.066	0.016
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	1,107	203	9,350		364	609	52	2	42	38	1107	72	121	3	0	4	3	203	80	4.1	2.8	0.060	0.203	0.049	0.101	0.024	0.139	0.034	0.013	0.003
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	13	1,115	8,050		5	8	0	0	0	0	13	392	656	31	1	18	17	1115	80	1.9	3.0	0.060	0.092	0.022	0.001	0.000	0.145	0.035	0.072	0.018
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	913	356	9,050		297	497	46	2	37	34	913	126	211	1	0	9	9	356	80	4.3	3.0	0.060	0.212	0.051	0.086	0.021	0.148	0.036	0.024	0.006
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	586	1,082	11,900		184	307	39	2	28	26	586	385	644	21	1	16	15	1082	80	4.8	2.8	0.030	0.127	0.031	0.033	0.008	0.073	0.018	0.035	0.009
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,308	914	15,850		445	745	49	2	35	32	1308	291	486	46	2	47	42	914	80	3.5	4.7	0.030	0.092	0.022	0.054	0.013	0.124	0.030	0.051	0.012
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	282	1,062	9,600		63	106	52	2	31	28	282	386	646	11	1	9	9	1062	80	9.0	2.4	0.060	0.451	0.109	0.057	0.014	0.118	0.029	0.056	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,084	655	12,400		385	644	21	1	17	16	1084	233	389	11	1	11	10	655	80	2.8	2.8	0.030	0.074	0.018	0.036	0.009	0.074	0.018	0.022	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		627	491	8,000		231	388	3	0	3	2	627	178	298	4	0	6	5	491	70	2.1	2.5	0.060	0.104	0.025	0.029	0.007	0.122	0.029	0.027	0.006
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		541	529	7,650		176	295	27	1	22	20	541	188	316	9	0	8	8	529	70	4.3	2.8	0.060	0.211	0.051	0.051	0.012	0.136	0.033	0.032	0.008
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		1,708	1,813	25,150		644	760	235	10	130	119	1708	610	1022	67	3	58	53	1813	80	7.0	3.7	0.030	0.185	0.045	0.141	0.034	0.098	0.024	0.079	0.019
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		1,866	1,356	23,000		631	1056	95	4	42	38	1866	449	752	61	3	48	43	1356	80	3.5	4.0	0.030	0.093	0.022	0.077	0.019	0.105	0.025	0.063	0.015
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		882	1,244	15,200		323	540	11	0	4	4	882	459	768	7	0	5	5	1244	80	2.3	2.2	0.030	0.059	0.014	0.023	0.006	0.056	0.013	0.031	0.008
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		909	1,115	14,450		329	550	13	1	8	8	909	413	691	4	0	4	3	1115	80	2.5	2.1	0.030	0.065	0.016	0.026	0.006	0.054	0.013	0.027	0.007
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,288	2,153	31,700		762	1275	111	5	71	64	2288	730	1223	75	3	64	58	2153	70	3.9	3.6	0.030	0.101	0.024	0.103	0.025	0.095	0.023	0.091	0.022
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,889	2,157	28,900		628	1051	101	4	55	50	1889	767	1284	34	2	37	33	2157	70	3.9	2.8	0.030	0.101	0.024	0.085	0.021	0.074	0.018	0.071	0.017
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,145	1,752	27,850		748	1287	34	2	28	26	2145	647	1084	8	0	7	6	1752	70	2.7	2.1	0.030	0.070	0.017	0.067	0.016	0.055	0.013	0.043	0.010
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		1,671	2,166	27,400		574	960	49	2	45	41	1671	795	1332	7	0	17	15	2166	70	3.4	2.3	0.030	0.090	0.022	0.067	0.016	0.059	0.014	0.057	0.014
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		867	1,643	17,950		316	528	13	1	5	4	867	591	990	36	2	13	11	1643	80	2.3	2.5	0.030	0.061	0.015	0.024	0.006	0.066	0.016	0.048	0.012
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,876	1,168	21,750		580	971	152	7	87	79	1876	431	721	8	0	4	4	1168	80	5.0	2.1	0.030	0.131	0.032	0.109	0.026	0.056	0.013	0.029	0.007
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		752	1,265	14,400		279	468	3	0	1	1	752	465	780	12	1	4	3	1265	70	2.0	2.2	0.030	0.052	0.013	0.018	0.004	0.056	0.014	0.032	0.008
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,587	909	17,850		578	968	26	1	7	7	1587	337	565	3	0	2	2	909	70	2.3	2.0	0.030	0.060	0.015	0.043	0.010	0.053	0.013	0.021	0.005
Coleraine Dr	Coleraine Dr At Mayfield Rd_NB	E71	NB	4		1,502	1,534	21,700		559	937	2	0	2	2	1502	568	951	9	0	3	3	1534	70	2.0	2.1	0.030	0.051	0.012	0.034	0.008	0.053	0.013	0.037	0.009
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		1,789	1,499	23,500		657	1099	21	1	6	5	1789	558	935	1	0	3	2	1499	70	2.2	2.0	0.030	0.057	0.014	0.046	0.011	0.051	0.012	0.034	0.008
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		521	274	5,700		184	307	10	0	10	10	521	102	172	0	0	0	0	274	60	3.0	1.9	0.060	0.146	0.035	0.034	0.008	0.092	0.022	0.011	0.003
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		439	316	5,400		164	274	0	0	1	0	439	118	197	0	0	1	0	316	60	2.0	2.0	0.060	0.095	0.023	0.019	0.005	0.096	0.023	0.014	0.003
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		1,944	2,935	34,850		685	1147	34	1	40	37	1944	1068	1789	24	1	28	25	2935	70	3.0	2.4	0.030	0.078	0.019	0.068	0.016	0.062	0.015	0.082	0.020
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,144	2,017	36,850		1102	1846	55	2	73	66	3144	742	1242	13	1	10	9	2017	70	3.1	2.2	0.030	0.081	0.020	0.114	0.028	0.057	0.014	0.051	0.012
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,399	3,214	40,100		850	1423	34	2	47	43	2399	1172	1964	25	1	27	25	3214	70	2.9	2.4	0.030	0.076	0.018	0.081	0.020	0.061	0.015	0.088	0.021
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,617	2,449	43,350		1273	2131	60	3	78	72	3617	901	1509	14	1	13	11	2449	70	3.0	2.2	0.030	0.079	0.019	0.128	0.031	0.057	0.014	0.062	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,250	3,128	38,400		809	1355	49	2	18	17	2250	1150	1926	24	1	14	13	3128	70	2.5	2.2	0.030	0.066	0.016	0.067	0.016	0.057	0.014	0.080	0.019
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		751	2,321	21,950		246	411	42	2	26	24	751	846	1418	23	1	17	16	2321	70	4.1	2.3	0.030	0.108	0.026	0.036	0.009	0.061	0.015	0.063	0.015
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		20	68	650		7	13	0	0	0	0	20	25	42	1	0	0	0	68	60	1.9	2.1	0.200	0.276	0.067	0.002	0.001	0.306	0.074	0.009	0.002
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		432	25	3,250		159	265	4	0	2	2	432	9	16	0	0	0	0	25	60	2.2	1.9	0.200	0.325	0.079	0.063	0.015	0.276	0.067	0.003	0.001
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		749	511	9,000		277	463	3	0	3	3	749	190	317	1	0	2	1	511	70	2.1	2.1	0.060	0.104	0.025	0.035	0.008	0.100	0.024	0.023	0.006
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		733	380	7,950		273	457	0	0	2	1	733	141	237	1	0	1	0	380	70	2.0	2.0	0.060	0.097	0.023	0.032

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 4

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36			AM Peak	PM Peak		PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		933	1,012	13,900		327	548	8	0	26	24	933	372	623	4	0	7	6	1012	70	3.2	2.2	0.030	0.083	0.020	0.035	0.008	0.058	0.014	0.026	0.006
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		505	772	9,100		179	301	1	0	13	11	505	284	475	3	0	5	5	772	70	3.0	2.2	0.060	0.145	0.035	0.033	0.008	0.109	0.026	0.038	0.009
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		836	622	10,400		285	477	7	0	35	32	836	226	378	2	0	8	8	622	70	3.7	2.5	0.030	0.098	0.024	0.037	0.009	0.065	0.016	0.018	0.004
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		885	1,161	14,600		331	554	0	0	0	0	885	434	727	0	0	0	0	1161	70	1.9	1.9	0.030	0.049	0.012	0.019	0.005	0.049	0.012	0.026	0.006
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		1,317	654	14,100		492	825	0	0	0	0	1317	245	409	0	0	0	0	654	70	1.9	1.9	0.030	0.049	0.012	0.029	0.007	0.049	0.012	0.014	0.003
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		1,010	1,175	15,600		310	519	86	4	48	43	1010	367	614	68	3	64	59	1175	70	5.1	5.0	0.030	0.133	0.032	0.060	0.015	0.131	0.032	0.069	0.017
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		1,490	939	17,350		471	788	114	5	59	53	1490	278	465	71	3	64	58	939	70	4.6	5.8	0.030	0.121	0.029	0.081	0.020	0.152	0.037	0.064	0.015
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		334	504	6,000		108	182	20	1	12	11	334	169	283	17	1	18	16	504	70	4.2	3.8	0.060	0.209	0.051	0.031	0.008	0.189	0.046	0.043	0.010
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		500	425	6,600		165	276	28	1	16	14	500	144	241	14	1	13	12	425	70	4.0	3.6	0.060	0.196	0.047	0.044	0.011	0.179	0.043	0.034	0.008
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		1,283	1,211	17,800		430	721	63	3	35	31	1283	396	664	54	2	50	45	1211	60	3.7	4.2	0.030	0.097	0.023	0.056	0.013	0.111	0.027	0.060	0.015
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		1,221	1,164	17,050		381	639	97	4	52	48	1221	372	623	61	3	55	50	1164	60	4.8	4.6	0.030	0.126	0.030	0.069	0.017	0.121	0.029	0.063	0.015
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		2,551	3,059	40,050		800	1341	200	9	105	96	2551	1025	1717	134	6	93	84	3059	60	4.7	3.8	0.030	0.124	0.030	0.141	0.034	0.099	0.024	0.135	0.033
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		3,115	2,205	38,000		1045	1750	160	7	80	73	3115	709	1187	126	6	93	84	2205	60	3.7	4.4	0.030	0.097	0.023	0.134	0.033	0.117	0.028	0.115	0.028
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		1,297	907	15,750		470	786	18	1	12	10	1297	318	533	22	1	17	16	907	60	2.5	3.0	0.030	0.064	0.016	0.037	0.009	0.079	0.019	0.032	0.008
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		868	1,177	14,600		298	499	32	1	20	18	868	436	729	5	0	4	3	1177	60	3.4	2.1	0.030	0.088	0.021	0.034	0.008	0.054	0.013	0.028	0.007
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		204	534	5,250		74	123	4	0	2	1	204	193	324	9	0	4	4	534	80	2.5	2.5	0.060	0.121	0.029	0.011	0.003	0.120	0.029	0.029	0.007
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		784	135	6,550		273	456	28	1	14	12	784	47	80	5	0	2	1	135	80	3.1	2.9	0.060	0.153	0.037	0.054	0.013	0.141	0.034	0.009	0.002
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		2,603	2,059	33,300		916	1533	62	3	47	42	2603	726	1215	41	2	39	36	2059	60	3.0	3.0	0.030	0.078	0.019	0.090	0.022	0.077	0.019	0.071	0.017
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		1,885	2,576	31,850		645	1081	67	3	47	42	1885	939	1573	18	1	24	21	2576	60	3.4	2.4	0.030	0.089	0.022	0.075	0.018	0.062	0.015	0.071	0.017
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		216	821	7,400		77	128	4	0	4	3	216	299	500	6	0	8	8	821	80	2.9	2.4	0.060	0.140	0.034	0.013	0.003	0.118	0.029	0.043	0.010
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		1,102	271	9,800		399	668	10	0	13	12	1102	97	162	2	0	5	5	271	80	2.5	2.8	0.060	0.123	0.030	0.060	0.015	0.137	0.033	0.017	0.004
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		716	597	9,400		257	430	4	0	13	12	716	222	371	2	0	1	1	597	70	2.7	2.0	0.060	0.133	0.032	0.043	0.010	0.098	0.024	0.026	0.006
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		580	777	9,700		217	363	0	0	0	0	580	290	486	1	0	0	0	777	70	1.9	1.9	0.060	0.092	0.022	0.024	0.006	0.093	0.023	0.032	0.008
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		749	511	9,000		277	463	3	0	3	3	749	190	317	1	0	2	1	511	70	2.1	2.1	0.060	0.104	0.025	0.035	0.008	0.100	0.024	0.023	0.006
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		733	380	7,950		273	457	0	0	2	1	733	141	237	1	0	1	0	380	70	2.0	2.0	0.060	0.097	0.023	0.032	0.008	0.097	0.023	0.016	0.004
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	32	9	300		11	18	1	0	1	1	32	3	6	0	0	0	0	9	60	3.7	1.9	0.600	1.468	0.355	0.021	0.005	0.751	0.182	0.003	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	6	95	700		2	3	0	0	1	0	6	34	58	1	0	1	1	95	60	5.5	2.5	0.200	0.813	0.197	0.002	0.001	0.365	0.088	0.015	0.004
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		2,411	2,538	35,350		786	1317	147	6	81	74	2411	852	1427	105	5	78	71	2538	60	4.1	3.8	0.030	0.109	0.026	0.117	0.028	0.098	0.024	0.112	0.027
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		2,770	2,193	35,450		933	1563	139	6	67	62	2770	708	1186	122	5	90	82	2193	60	3.6	4.4	0.030	0.095	0.023	0.117	0.028	0.115	0.028	0.113	0.027
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		1,002	1,760	19,750		287	481	124	5	55	50	1002	631	1057	37	2	17	16	1760	70	5.9	2.6	0.030	0.156	0.038	0.070	0.017	0.068	0.016	0.053	0.013
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		2,457	626	22,000		879	1473	52	2	27	24	2457	224	375	13	1	7	6	626	70	2.6	2.7	0.030	0.069	0.017	0.076	0.018	0.069	0.017	0.019	0.005
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		785	1,701	17,750		286	480	10	0	5	4	785	633	1061	4	0	2	1	1701	70	2.3	2.0	0.030	0.060	0.015	0.021	0.005	0.051	0.012	0.039	0.009
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		2,071	1,070	22,450		769	1287	8	0	4	3	2071	396	663	6	0	3	2	1070	70	2.0	2.1	0.030	0.052	0.013	0.049	0.012	0.054	0.013	0.026	0.006
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		988	351	9,550		364	609	5	0	5	5	988	120	200	12	1	9	9	351	70	2.2	3.5	0.060	0.107	0.026	0.047	0.011	0.172	0.042	0.027	0.007
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		959	832	12,800		323	541	50	2	22	21	959	276	461	46	2	25	22	832	40	3.6	3.9	0.030	0.094	0.023	0.040	0.010	0.102	0.025	0.038	0.009
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		71	471	3,850		27	44	0	0	0	0	71	173	289	4	0	3	2	471	60	1.9	2.2	0.200	0.276	0.067	0.009	0.002	0.327	0.079	0.069	0.017
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		1,150	1,083	15,950		340	570	121	5	60	54	1150	356	595	68	3	32	29	1083	70	5.5	4.0	0.030	0.146	0.035	0.075	0.018	0.105	0.025	0.051	0.012
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		60	653	5,100		21	34	3	0	1	1	60	231	387	16	1	9	9	653	60	3.3	2.9	0.060	0.162	0.039	0.004	0.001	0.139	0.034	0.041	0.010
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		41	239	2,000		15	26	0	0	0	0	41	89	150	0	0	0	0	239	40	1.9	1.9	0.200	0.276	0.067	0.005	0.001	0.276	0.067	0.030	0.007
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		1,352	885	16,000		446	748	81	4	38	35	1352	285	476	49	2	38	35	885	70	3.9	4.5	0.030	0.103	0.025	0.062	0.015	0.117	0.028	0.046	0.011
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		935	275	8,650		348	584	2	0	1	0	935	102	170	1	0	1	1	275	40	2.0	2.1	0.060	0.095	0.023	0.040	0.010	0.103	0.025	0.013	0.003
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		1,441	1,190	18,800		529	886	11	1	7	7	1441	440	737	6	0	4	3	1190	60	2.2	2.1	0.030	0.058	0.014	0.037	0.009	0.054	0.013	0.029	0.007
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		1,644	2,608	30,350		605	1014	13	1	6	5	1644	964	1615	14	1	7	7	2608	70	2.2	2.1	0.030	0.056	0.014	0.041	0.010	0.054	0.013	0.063	0.015
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		891	818	12,200		249	416	120	5	53	48	891	246	412	69	3	46	42	818	60	6.2	5.4	0.030	0.165	0.040	0.066	0.016	0.143	0.035	0.052	0.013
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		187	380	4,050		61	103	11	1	6	5	187	141	235	2	0	1	1	380	40	4.0	2.1	0.200	0.596	0.144	0.050	0.012	0.304	0.073	0.052	0.012
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		379	31	2,950		129	216	15	1	9	9	379	11	18	1	0	1	0	31	70	3.5	3.0	0.200	0.514	0.124	0.087	0.021	0.445	0.108	0.006	0.001
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		260	620	6,300		73	122	1	0	33	31	260	225	376	3	0	8	8	620	40	7.2	2.5	0.060	0.361	0.087	0.042	0.010	0.123	0.030	0.034	0.008
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		639	565	8,600		219	366	5	0	26	23	639	204	341	4	0	8	8	565	60	3.7	2.6	0.060	0.180	0.044	0.051	0.012	0.127	0.031	0.032	0.008
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		954	427	9,850		329	552	26	1	24	22	954	148	249	5	0	13	12	427	70	3.3	3.3	0.060	0.163	0.039	0.070	0.017	0.163	0.039	0.031	0.008
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		126	97	1,600		38	64	13	1	5	5	126	34	58	2	0	2	1	97	60	5.1	2.8	0.200	0.758	0.183	0.043	0.010	0.417	0.101	0.018	0.004
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		245	21	1,900		71	120	25	1	15	13	245	8	13	0	0	0	0	21	40	5.8	1.9	0.200	0.862	0.208	0.094	0.023	0.276	0.067	0.003	0.001
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	H14	0	1		0	0	0		0	0	0

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total					AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62			AM Peak	PM Peak								
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Highway 413	Hwy 413 N of Hwy 401/407 interchange_NB	A01	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Hwy 401/407 interchange_SB	A02	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_NB	A03	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Winston Churchill Blvd_SB	A04	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_NB	A05	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 N of Bovaird Dr_SB	A06	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_EB	A07	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Mayfield Rd_WB	A08	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_EB	A09	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Chinguacousy Rd_WB	A10	WB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_EB	A11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hurontario St_WB	A12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_EB	A13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Hwy 410_WB	A14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_EB	A15	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Bramalea Rd_WB	A16	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 E of Airport Rd_EB	A17	EB	3	4	5,186	4,688	70,500		1497	2508	554	24	315	288	5186	1404	2350	351	15	297	271	4688	110	5.9	5.6	0.015	0.083	0.020	0.193	0.047	0.078	0.019	0.164	0.040
Highway 413	Hwy 413 E of Airport Rd_WB	A18	WB	3	4	4,963	4,897	70,400		1436	2406	523	23	301	274	4963	1412	2364	453	20	339	309	4897	110	5.9	6.1	0.015	0.083	0.020	0.184	0.044	0.085	0.021	0.187	0.045
Highway 413	Hwy 413 E of The Gore Rd_EB	A19	EB	3	4	4,810	4,236	64,600		1383	2315	518	23	299	272	4810	1250	2092	336	15	284	259	4236	110	6.0	5.8	0.015	0.084	0.020	0.181	0.044	0.081	0.020	0.154	0.037
Highway 413	Hwy 413 E of The Gore Rd_WB	A20	WB	3	4	4,484	4,580	64,700		1247	2089	538	24	307	279	4484	1313	2200	430	19	323	295	4580	110	6.4	6.1	0.015	0.090	0.022	0.181	0.044	0.086	0.021	0.177	0.043
Highway 413	Hwy 413 E of Humber Station Rd_EB	A21	EB	4		5,837	5,741	82,700		1674	2803	636	28	364	332	5837	1759	2945	391	17	329	300	5741	110	6.0	5.2	0.015	0.085	0.020	0.221	0.053	0.073	0.018	0.188	0.046
Highway 413	Hwy 413 E of Humber Station Rd_WB	A22	WB	4		5,597	5,735	80,900		1641	2747	580	26	315	288	5597	1715	2873	465	20	346	316	5735	110	5.7	5.5	0.015	0.080	0.019	0.200	0.048	0.078	0.019	0.199	0.048
Highway 413	Hwy 413 E of Hwy 427_EB	A23	EB	4	5	4,904	6,035	78,100		1324	2216	648	29	359	328	4904	1851	3100	399	18	349	318	6035	110	6.8	5.2	0.015	0.096	0.023	0.210	0.051	0.073	0.018	0.198	0.048
Highway 413	Hwy 413 E of Hwy 427_WB	A24	WB	4	5	6,458	4,845	80,700		2004	3356	548	24	275	251	6458	1431	2397	403	18	312	284	4845	110	4.9	5.7	0.015	0.068	0.016	0.196	0.048	0.081	0.019	0.174	0.042
Highway 413	Hwy 413 E of Hwy 27_EB	A25	EB	5		4,695	5,012	69,300		1279	2143	606	27	335	305	4695	1516	2538	346	15	312	285	5012	110	6.7	5.4	0.015	0.094	0.023	0.197	0.048	0.076	0.018	0.171	0.041
Highway 413	Hwy 413 E of Hwy 27_WB	A26	WB	5		5,120	4,619	69,600		1565	2620	465	20	235	215	5120	1371	2297	381	17	289	264	4619	110	5.1	5.6	0.015	0.071	0.017	0.163	0.039	0.079	0.019	0.164	0.040
Highway 413	Hwy 413 E of Pine Valley Dr_EB	A27	EB	5		4,695	5,012	69,300		1279	2143	606	27	335	305	4695	1516	2538	346	15	312	285	5012	110	6.7	5.4	0.015	0.094	0.023	0.197	0.048	0.076	0.018	0.171	0.041
Highway 413	Hwy 413 E of Pine Valley Dr_WB	A28	WB	5		5,120	4,619	69,600		1565	2620	465	20	235	215	5120	1371	2297	381	17	289	264	4619	110	5.1	5.6	0.015	0.071	0.017	0.163	0.039	0.079	0.019	0.164	0.040
Highway 407	Hwy 407 S of Hwy 401_NB	B05	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 S of Hwy 401_SB	B06	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_EB	B07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 N of Hwy 401_WB	B08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_NB	B09	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 S of Mayfield Rd_SB	B10	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_NB	B11	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 N of Mayfield Rd_SB	B12	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_EB	B13	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 W of Mayfield Rd_WB	B14	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 427	Hwy 427 S of Major Mackenzie Dr_NB	B15	NB	4		2,649	5,406	57,500		895	1499	128	6	63	58	2649	1929	3231	96	4	76	70	5406	100	3.6	2.7	0.015	0.050	0.012	0.059	0.014	0.038	0.009	0.092	0.022
Highway 427	Hwy 427 S of Major Mackenzie Dr_SB	B16	SB	4		4,974	3,300	59,100		1772	2967	131	6	51	47	4974	1175	1968	63	3	48	43	3300	100	2.7	2.8	0.015	0.037	0.009	0.083	0.020	0.038	0.009	0.057	0.014
Highway 427	Hwy 427 N of Major Mackenzie Dr_NB	B17	NB	4		2,087	3,825	42,200		596	999	253	11	119	109	2087	1275	2134	166	7	127	116	3825	100	6.0	3.9	0.015	0.084	0.020	0.078	0.019	0.054	0.013	0.093	0.022
Highway 427	Hwy 427 N of Major Mackenzie Dr_SB	B18	SB	4		3,894	2,632	46,600		1318	2208	201	9	83	75	3894	889	1490	100	4	78	71	2632	100	3.5	3.7	0.015	0.049	0.012	0.085	0.021	0.051	0.012	0.060	0.015
Highway 400	Hwy 400 N of Teston Rd_NB	B19	NB	5		5,361	10,473	113,100		1609	2695	448	20	308	281	5361	3716	6223	225	10	156	143	10473	100	5.5	2.8	0.015	0.077	0.019	0.183	0.044	0.039	0.009	0.183	0.044
Highway 400	Hwy 400 N of Teston Rd_SB	B20	SB	5		10,231	5,482	112,200		3499	5859	355	16	263	239	10231	1825	3055	194	9	209	190	5482	100	3.5	4.0	0.015	0.048	0.012	0.220	0.053	0.055	0.013	0.136	0.033
Highway 400	Hwy 400 S of King Vaughan Rd_NB	B21	NB	5		3,214	7,823	78,800		996	1667	205	9	176	161	3214	2875	4814	44	2	46	42	7823	100	5.1	2.2	0.015	0.071	0.017	0.102	0.025	0.031	0.007	0.107	0.026
Highway 400	Hwy 400 S of King Vaughan Rd_SB	B22	SB	5		7,980	3,248	80,200		2787	4668	179	8	177	161	7980	1124	1882	46	2	101	93	3248	100	3.1	3.4	0.015	0.043	0.011	0.155	0.038	0.047	0.011	0.068	0.017
Highway 400	Hwy 400 S of King Rd_NB	B23	NB	5		3,313	8,149	81,900		1026	1719	211	9	182	166	3313	2997	5020	43	2	46	41	8149	100	5.1	2.2	0.015	0.071	0.017	0.105	0.025	0.030	0.007	0.111	0.027
Highway 400	Hwy 400 S of King Rd_SB	B24	SB	5		11,822	5,473	123,500		4052	6785	419	18	287	261	11822	1743	2920	281	12	270	247	5473	100	3.4	4.7	0.015	0.047	0.011	0.250	0.061	0.065	0.016	0.160	0.039
Highway 413	Hwy 413 at Winston Churchill Blvd_S-E/W	C11	S-E/W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-N	C12	E-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-N	C13	W-N	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_N-E/W	C14	N-E/W	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_E-S	C15	E-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Winston Churchill Blvd_W-S	C16	W-S	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_S-E/W	C17	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-N	C18	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-N	C19	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_N-E/W	C20	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_E-S	C21	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Bovaird Dr_W-S	C22	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_S-E/W	C23	S-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-N	C24	E-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-N	C25	W-N	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_N-E/W	C26	N-E/W	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_E-S	C27	E-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Mayfield Rd_W-S	C28	W-S	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_W-N/S	C29	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-E	C30	N-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-E	C31	S-E	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_E-N/S	C32	E-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_N-W	C33	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Chinguacousy Rd_S-W	C34	S-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_W-N/S	C35	W-N/S	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-E	C36	N-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-E	C37	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_E-N/S	C38	E-N/S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_N-W	C39	N-W	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hurontario St_S-W	C40	S-W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_W-S	C41	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_E-S	C42	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 410_S-E	C43	S-E	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Vehicle Type >>	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total	Passenger Car	Passenger Truck	Single Unit Short Haul Truck	Single Unit Long Haul Truck	Combination Short Haul Truck	Combination Long Haul Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType ID >>	21	31	52	53	61	62		21	31	52	53	61	62					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
									Average Vehicle Weight (US short tons) >>	1.76	1.99	15.51	15.35	22.51	24.36		1.76	1.99	15.51	15.35	22.51	24.36												
Highway 413	Hwy 413 at Hwy 427_S-W	C70	S-W	4		1,472	2,040	25,100		415	694	177	8	93	85	1472	671	1124	109	5	69	62	2040	90	6.2	4.0	0.030	0.164	0.040	0.108	0.026	0.106	0.026	0.097	0.023
Highway 413	Hwy 413 at Hwy 27_W-N/S	C71	W-N/S	4	5	799	1,186	14,200		258	433	54	2	27	25	799	391	654	60	3	41	37	1186	70	4.3	4.0	0.030	0.112	0.027	0.040	0.010	0.106	0.026	0.056	0.014
Highway 413	Hwy 413 at Hwy 27_N/S-E	C72	N/S-E	5		418	93	3,650		144	241	20	1	6	6	418	33	56	2	0	1	1	93	40	3.2	2.7	0.200	0.470	0.114	0.088	0.021	0.389	0.094	0.016	0.004
Highway 413	Hwy 413 at Hwy 27_E-N/S	C73	E-N/S	5		244	495	5,300		77	129	23	1	7	7	244	175	292	14	1	7	6	495	50	4.5	2.9	0.060	0.221	0.053	0.024	0.006	0.141	0.034	0.031	0.008
Highway 413	Hwy 413 at Hwy 27_N/S-W	C74	N/S-W	4	5	2,581	1,305	27,750		840	1408	176	8	78	71	2581	432	723	57	2	48	43	1305	60	4.1	4.0	0.030	0.108	0.026	0.125	0.030	0.105	0.025	0.061	0.015
Highway 413	Hwy 413 at Weston Rd_W-N/S	C81	W-N/S	5		1,198	1,195	17,100		381	639	84	4	47	43	1198	366	614	76	3	71	65	1195	70	4.5	5.2	0.030	0.119	0.029	0.064	0.015	0.138	0.033	0.074	0.018
Highway 413	Hwy 413 at Weston Rd_N/S-W	C82	N/S-W	5		1,448	1,057	17,900		453	759	117	5	60	54	1448	325	545	68	3	61	55	1057	60	4.7	5.2	0.030	0.125	0.030	0.081	0.020	0.136	0.033	0.064	0.016
Highway 413	Hwy 413 at Hwy 400_W-N	C83	W-N	5		2,210	3,001	37,200		521	872	388	17	215	197	2210	926	1550	186	8	173	158	3001	100	8.4	5.2	0.015	0.119	0.029	0.118	0.028	0.072	0.017	0.097	0.023
Highway 413	Hwy 413 at Hwy 400_W-S	C84	W-S	5		1,295	902	15,700		376	630	139	6	75	69	1295	248	414	92	4	75	69	902	90	5.8	6.8	0.030	0.154	0.037	0.089	0.022	0.180	0.043	0.072	0.018
Highway 413	Hwy 413 at Hwy 400_N-W	C85	N-W	5		945	1,609	18,250		248	416	129	6	76	70	945	502	842	112	5	77	71	1609	90	7.2	4.9	0.030	0.190	0.046	0.080	0.019	0.128	0.031	0.092	0.022
Highway 413	Hwy 413 at Hwy 400_S-W	C86	S-W	5		2,877	1,877	33,950		915	1533	224	10	102	93	2877	519	870	197	9	147	135	1877	90	4.5	6.6	0.030	0.117	0.028	0.151	0.037	0.175	0.042	0.147	0.036
Trafalgar Rd	Trafalgar Rd S of Hwy 401_NB	D01	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd S of Hwy 401_SB	D02	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_NB	D03	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Trafalgar Rd	Trafalgar Rd N of Hwy 401_SB	D04	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_EB	D05	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Trafalgar Rd_WB	D06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_EB	D07	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave At Hwy 413_WB	D08	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_EB	D09	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Ninth Line S_WB	D10	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_EB	D11	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave E of Tenth Line N_WB	D12	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_NB	D13	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line N	Ninth Line N N of Steeles Ave_SB	D14	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_NB	D15	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ninth Line S	Ninth Line S S of Steeles Ave_SB	D16	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_NB	D17	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tenth Line	Tenth Line At Hwy 413_SB	D18	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_EB	D19	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd W of Hwy 407_WB	D20	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_EB	D21	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Derry Rd	Derry Rd E of Hwy 407_WB	D22	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_NB	D23	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 401_SB	D24	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_NB	D25	NB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 401_SB	D26	SB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_NB	D27	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd S of Hwy 413_SB	D28	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_NB	D29	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of Hwy 413_SB	D30	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_NB	D31	NB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Winston Churchill Blvd	Winston Churchill Blvd N of 5 Side Rd_SB	D32	SB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_EB	D33	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd W of Winston Churchill Blvd_WB	D34	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_EB	D35	EB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 Side Rd	5 Side Rd At Hwy 413_WB	D36	WB	1	2	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_NB	D37	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd At Hwy 413_SB	D38	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_NB	D39	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Bovaird Dr_SB	D40	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_NB	D41	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Mayfield Rd_SB	D42	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_NB	D43	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd N of Mayfield Rd_SB	D44	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_EB	D45	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Heritage Rd_WB	D46	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_EB	D47	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr W of Hwy 413_WB	D48	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_EB	D49	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bovaird Dr	Bovaird Dr E of Hwy 413_WB	D50	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_EB	D51	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr W of Heritage Rd_WB	D52	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_EB	D53	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wanless Dr	Wanless Dr At Hwy 413_WB	D54	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_EB	D55	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heritage Rd_WB	D56	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_EB	D57	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heritage Rd_WB	D58	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_EB	D59	EB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 413_WB	D60	WB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_NB	D61	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mississauga Rd	Mississauga Rd At Hwy 413_SB	D62	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_NB	D63	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Creditview Rd	Creditview Rd At Hwy 413_SB	D64	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_NB	D65	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd S of Hwy 413_SB	D66	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_NB	D67	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Hwy 413_SB	D68	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_NB	D69	NB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Chinguacousy Rd	Chinguacousy Rd N of Old School Rd_SB	D70	SB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Chinguacousy Rd_EB	D71	EB	2	3	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	MOVES Veh c e Type >>	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
										Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62													
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
Heart Lake Rd	Heart Lake Rd At Hwy 410_SB	E04	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_NB	E05	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd At Hwy 413_SB	E06	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_EB	E07	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd W of Heart Lake Rd_WB	E08	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_EB	E09	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Heart Lake Rd_WB	E10	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_EB	E11	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Hwy 410_WB	E12	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_NB	E13	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd S of Mayfield Rd_SB	E14	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_NB	E15	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd N of Mayfield Rd_SB	E16	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_NB	E17	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dixie Rd	Dixie Rd At Hwy 413_SB	E18	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_EB	E19	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Countryside Dr	Countryside Dr At Hwy 410_WB	E20	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_NB	E21	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Hwy 413_SB	E22	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_NB	E23	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd N of Hwy 413_SB	E24	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_EB	E25	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Bramalea Rd_WB	E26	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_EB	E27	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd E of Torbram Road_WB	E28	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_NB	E29	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd S of Old School Rd_SB	E30	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_NB	E31	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Torbram Rd	Torbram Rd At Hwy 413_SB	E32	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_NB	E33	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Old School Rd_SB	E34	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_NB	E35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd S of Hwy 413_SB	E36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_NB	E37	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Airport Rd	Airport Rd N of Hwy 413_SB	E38	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Healey Rd	Healey Rd E of Airport Rd_EB	E39	EB	3	4	703	1,426	15,200		247	414	21	1	10	10	703	525	879	9	0	7	6	1426	70	2.9	2.2	0.030	0.077	0.019	0.024	0.006	0.057	0.014	0.036	0.009
Healey Rd	Healey Rd E of Airport Rd_WB	E40	WB	3	4	1,088	1,072	15,450		402	672	6	0	4	4	1088	388	650	15	1	9	9	1072	70	2.1	2.5	0.030	0.055	0.013	0.027	0.007	0.064	0.016	0.031	0.007
Healey Rd	Healey Rd At Hwy 413_EB	E41	EB	3	4	624	725	9,650		231	387	1	0	3	2	624	267	446	3	0	5	4	725	70	2.1	2.2	0.060	0.102	0.025	0.028	0.007	0.108	0.026	0.035	0.009
Healey Rd	Healey Rd At Hwy 413_WB	E42	WB	3	4	700	868	11,200		253	424	7	0	8	8	700	306	513	22	1	14	12	868	70	2.5	2.9	0.030	0.066	0.016	0.021	0.005	0.076	0.018	0.029	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_EB	E43	EB	3	4	556	602	8,250		207	347	1	0	1	0	556	223	373	1	0	3	2	602	70	2.0	2.1	0.060	0.096	0.023	0.024	0.006	0.102	0.025	0.028	0.007
Healey Rd	Healey Rd E of Centreville Creek Rd_WB	E44	WB	3	4	627	1,037	11,900		230	385	5	0	4	3	627	381	637	6	0	7	6	1037	70	2.3	2.3	0.030	0.058	0.014	0.016	0.004	0.058	0.014	0.027	0.007
Innis Lake Rd	Innis Lake Rd S of Healey Rd_NB	E45	NB	3	4	162	972	8,100		55	91	7	0	5	4	162	339	567	32	1	17	16	972	80	3.7	3.1	0.060	0.181	0.044	0.013	0.003	0.152	0.037	0.066	0.016
Innis Lake Rd	Innis Lake Rd S of Healey Rd_SB	E46	SB	3	4	781	591	9,800		255	427	53	2	23	21	781	202	338	24	1	14	12	591	80	4.1	3.4	0.060	0.201	0.049	0.070	0.017	0.168	0.041	0.044	0.011
Innis Lake Rd	Innis Lake Rd At Hwy 413_NB	E47	NB	3	4	157	1,146	9,300		52	87	9	0	5	4	157	409	684	25	1	14	13	1146	80	3.9	2.7	0.060	0.193	0.047	0.014	0.003	0.133	0.032	0.068	0.016
Innis Lake Rd	Innis Lake Rd At Hwy 413_SB	E48	SB	3	4	1,273	199	10,500		448	751	37	2	18	17	1273	67	112	9	0	6	5	199	80	2.9	3.7	0.030	0.076	0.018	0.043	0.010	0.097	0.023	0.009	0.002
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_NB	E49	NB	3	4	101	947	7,500		36	61	1	0	2	1	101	328	549	34	1	18	17	947	80	2.7	3.2	0.060	0.131	0.032	0.006	0.001	0.157	0.038	0.066	0.016
Centreville Creek Rd	Centreville Creek Rd At Hwy 413_SB	E50	SB	3	4	1,107	203	9,350		364	609	52	2	42	38	1107	72	121	3	0	4	3	203	80	4.1	2.8	0.060	0.203	0.049	0.101	0.024	0.139	0.034	0.013	0.003
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_NB	E51	NB	3	4	13	1,115	8,050		5	8	0	0	0	0	13	392	656	31	1	18	17	1115	80	1.9	3.0	0.060	0.092	0.022	0.001	0.000	0.145	0.035	0.072	0.018
Centreville Creek Rd	Centreville Creek Rd N of Healey Rd_SB	E52	SB	3	4	913	356	9,050		297	497	46	2	37	34	913	126	211	1	0	9	9	356	80	4.3	3.0	0.060	0.212	0.051	0.086	0.021	0.148	0.036	0.024	0.006
The Gore Rd	The Gore Rd S of Hwy 413_NB	E53	NB	3	4	586	1,082	11,900		184	307	39	2	28	26	586	385	644	21	1	16	15	1082	80	4.8	2.8	0.030	0.127	0.031	0.033	0.008	0.073	0.018	0.035	0.009
The Gore Rd	The Gore Rd S of Hwy 413_SB	E54	SB	3	4	1,308	914	15,850		445	745	49	2	35	32	1308	291	486	46	2	47	42	914	80	3.5	4.7	0.030	0.092	0.022	0.054	0.013	0.124	0.030	0.051	0.012
The Gore Rd	The Gore Rd N of Hwy 413_NB	E55	NB	3	4	282	1,062	9,600		63	106	52	2	31	28	282	386	646	11	1	9	9	1062	80	9.0	2.4	0.060	0.451	0.109	0.057	0.014	0.118	0.029	0.056	0.014
The Gore Rd	The Gore Rd N of Hwy 413_SB	E56	SB	3	4	1,084	655	12,400		385	644	21	1	17	16	1084	233	389	11	1	11	10	655	80	2.8	2.8	0.030	0.074	0.018	0.036	0.009	0.074	0.018	0.022	0.005
Clarkway Dr	Clarkway Dr S of Mayfield Rd_NB	E57	NB	4		627	491	8,000		231	388	3	0	3	2	627	178	298	4	0	6	5	491	70	2.1	2.5	0.060	0.104	0.025	0.029	0.007	0.122	0.029	0.027	0.006
Clarkway Dr	Clarkway Dr S of Mayfield Rd_SB	E58	SB	4		541	529	7,650		176	295	27	1	22	20	541	188	316	9	0	8	8	529	70	4.3	2.8	0.060	0.211	0.051	0.051	0.012	0.136	0.033	0.032	0.008
Humber Station Rd	Humber Station Rd S of Hwy 413_NB	E59	NB	4		1,708	1,813	25,150		644	760	235	10	130	119	1708	610	1022	67	3	58	53	1813	80	7.0	3.7	0.030	0.185	0.045	0.141	0.034	0.098	0.024	0.079	0.019
Humber Station Rd	Humber Station Rd S of Hwy 413_SB	E60	SB	4		1,866	1,356	23,000		631	1056	95	4	42	38	1866	449	752	61	3	48	43	1356	80	3.5	4.0	0.030	0.093	0.022	0.077	0.019	0.105	0.025	0.063	0.015
Humber Station Rd	Humber Station Rd N of Hwy 413_NB	E61	NB	4		882	1,244	15,200		323	540	11	0	4	4	882	459	768	7	0	5	5	1244	80	2.3	2.2	0.030	0.059	0.014	0.023	0.006	0.056	0.013	0.031	0.008
Humber Station Rd	Humber Station Rd N of Hwy 413_SB	E62	SB	4		909	1,115	14,450		329	550	13	1	8	8	909	413	691	4	0	4	3	1115	80	2.5	2.1	0.030	0.065	0.016	0.026	0.006	0.054	0.013	0.027	0.007
Mayfield Rd	Mayfield Rd W of Humber Station Rd_EB	E63	EB	4		2,288	2,153	31,700		762	1275	111	5	71	64	2288	730	1223	75	3	64	58	2153	70	3.9	3.6	0.030	0.101	0.024	0.103	0.025	0.095	0.023	0.091	0.022
Mayfield Rd	Mayfield Rd W of Humber Station Rd_WB	E64	WB	4		1,889	2,157	28,900		628	1051	101	4	55	50	1889	767	1284	34	2	37	33	2157	70	3.9	2.8	0.030	0.101	0.024	0.085	0.021	0.074	0.018	0.071	0.017
Mayfield Rd	Mayfield Rd At Hwy 413_EB	E65	EB	4		2,145	1,752	27,850		748	1287	34	2	28	26	2145	647	1084	8	0	7	6	1752	70	2.7	2.1	0.030	0.070	0.017	0.067	0.016	0.055	0.013	0.043	0.010
Mayfield Rd	Mayfield Rd At Hwy 413_WB	E66	WB	4		1,671	2,166	27,400		574	960	49	2	45	41	1671	795	1332	7	0	17	15	2166	70	3.4	2.3	0.030	0.090	0.022	0.067	0.016	0.059	0.014	0.057	0.014
Mayfield Rd	Mayfield Rd E of Coleraine Dr_EB	E67	NB	4		867	1,643	17,950		316	528	13	1	5	4	867	591	990	36	2	13	11	1643	80	2.3	2.5	0.030	0.061	0.015	0.024	0.006	0.066	0.016	0.048	0.012
Mayfield Rd	Mayfield Rd E of Coleraine Dr_WB	E68	SB	4		1,876	1,168	21,750		580	971	152	7	87	79	1876	431	721	8	0	4	4	1168	80	5.0	2.1	0.030	0.131	0.032	0.109	0.026	0.056	0.013	0.029	0.007
Coleraine Dr	Coleraine Dr At Highway 413_NB	E69	NB	4		752	1,265	14,400		279	468	3	0	1	1	752	465	780	12	1	4	3	1265	70	2.0	2.2	0.030	0.052	0.013	0.018	0.004	0.056	0.014	0.032	0.008
Coleraine Dr	Coleraine Dr At Highway 413_SB	E70	SB	4		1,587	909	17,850		578	968	26	1	7	7	1587	337	565	3	0	2	2	909	70	2.3	2.0	0.030	0.060	0.015	0.043	0.010	0.053	0.013	0.021	0.005
Coleraine Dr	Coleraine Dr At Mayfield Rd_NB	E71	NB	4		1,502	1,534	21,700		559	937	2	0	2	2	1502	568	951	9	0	3	3	1534	70	2.0	2.1	0.030	0.051	0.012	0.034	0.008	0.053	0.013	0.037	0.009
Coleraine Dr	Coleraine Dr N of Mayfield Rd_SB	E72	SB	4		1,789	1,499	23,500		657	1099	21	1	6	5	1789	558	935	1	0	3	2	1499	70	2.2	2.0	0.030	0.057	0.014	0.046	0.011	0.051	0.012	0.034	0.008
Countryside Dr	Countryside Dr W of Hwy 50_EB	E73	EB	4		521	274	5,700		184	307	10	0	10	10	521	102	172	0	0	0	0	274	60	3.0	1.9	0.060	0.146	0.035	0.034	0.008	0.092	0.022	0.011	0.003
Countryside Dr	Countryside Dr W of Hwy 50_WB	E74	WB	4		439	316	5,400		164	274	0	0	1	0	439	118	197	0	0	1	0	316	60	2.0	2.0	0.060	0.095	0.023	0.019	0.005	0.096	0.023	0.014	0.003
Highway 50	Hwy 50 S of Countryside Dr_NB	E75	NB	4		1,944	2,935	34,850		685	1147	34	1	40	37	1944	1068	1789	24	1	28	25	2935	70	3.0	2.4	0.030	0.078	0.019	0.068	0.016	0.062	0.015	0.082	0.020
Highway 50	Hwy 50 S of Countryside Dr_SB	E76	SB	4		3,144	2,017	36,850		1102	1846	55	2	73	66	3144	742	1242	13	1	10	9	2017	70	3.1	2.2	0.030	0.081	0.020	0.114	0.028	0.057	0.014	0.051	0.012
Highway 50	Hwy 50 At Hwy 413_NB	E77	NB	4		2,399	3,214	40,100		850	1423	34	2	47	43	2399	1172	1964	25	1	27	25	3214	70	2.9	2.4	0.030	0.076	0.018	0.081	0.020	0.061	0.015	0.088	0.021
Highway 50	Hwy 50 At Hwy 413_SB	E78	SB	4		3,617	2,449	43,350		1273	2131	60	3	78	72	3617	901	1509	14	1	13	11	2449	70	3.0	2.2	0.030	0.079	0.019	0.128	0.031	0.057	0.014	0.062	0.015
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_NB	E79	NB	4		2,250	3,128	38,400		809	1355	49	2	18	17	2250	1150	1926	24	1	14	13	3128	70	2.5	2.2	0.030	0.066	0.016	0.067	0.016	0.057	0.014	0.080	0.019
Highway 50	Hwy 50 N of Cold Creek Rd Realignment_SB	E80	SB	4		751	2,321	21,950		246	411	42	2	26	24	751	846	1418	23	1	17	16	2321	70	4.1	2.3	0.030	0.108	0.026	0.036	0.009	0.061	0.015	0.063	0.015
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_EB	E81	EB	4		20	68	650		7	13	0	0	0	0	20	25	42	1	0	0	0	68	60	1.9	2.1	0.200	0.276	0.067	0.002	0.001	0.306	0.074	0.009	0.002
Cold Creek Rd	Cold Creek Rd Realignment E of Hwy 50_WB	E82	WB	4		432	25	3,250		159	265	4	0	2	2	432	9	16	0	0	2	0	25	60	2.2	1.9	0.200	0.325	0.079	0.063	0.015	0.276	0.067	0.003	0.001
Nashville Rd	Nashville Rd E of Hwy 50_EB	E83	EB	4		749	511	9,000		277	463	3	0	3	3	749	190	317	1	0	2	1	511	70	2.1	2.1	0.060	0.104	0.025	0.035	0.008	0.100	0.024	0.023	0.006
Nashville Rd	Nashville Rd E of Hwy 50_WB	E84	WB	4		733	380	7,950		273	457	0	0	2	1	733	141	237	1	0	1	0	380	70	2.0	2.0	0.060	0.097	0.023	0.032	0.008	0.097	0.023	0.016	0.004
Major Mackenzie Dr	Major Mackenzie Dr W of Hwy 427_EB	E85	EB	4		3,198	3,582	48,450		1146	1918

Appendix A.4.4: Year 2051 Detailed Traffic Data and Fugitive Particulate Matter Emissions, Build Scenario, Model Section 5

Highway 413

GTA West

Road	Description	Model Source ID	Direction	Model Section for Roadway Zone 1	Model Section for Roadway Zone 2	AM Peak Volume	PM Peak Volume	AADT	AM Peak Volume by Vehicle							PM Peak Volume by Vehicle							Peak Hour Network Speed (km/hour)	Weighted Average Vehicle Weight (US short tons)		Silt Loading (g/m2)	AM Peak				PM Peak			
									MOVES Veh c e Type >>	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total	Passenger Car	Passenger Truck	S ng e Un t Short Hau Truck	S ng e Un t Long Hau Truck	Comb nat on Short Hau Truck	Comb nat on Long Hau Truck	Total		AM Peak	PM Peak		AP 42 Emission Factor		Base Emission Rate		AP 42 Emission Factor		Base Emission Rate	
									MOVES SourceType D >>	21	31	52	53	61	62		21	31	52	53	61	62											
									Average Veh c e We ght (US short tons) >>	1 76	1 99	15 51	15 35	22 51	24 36		1 76	1 99	15 51	15 35	22 51	24 36					PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)	PM_{10} (g/VKT)	$PM_{2.5}$ (g/VKT)	PM_{10} (g/s mile)	$PM_{2.5}$ (g/s mile)
King Vaughan Rd	King Vaughan Rd W of Pine Valley Dr_WB	F16	WB	5		933	1,012	13,900		327	548	8	0	26	24	933	372	623	4	0	7	6	1012	70	3.2	2.2	0.030	0.083	0.020	0.035	0.008	0.058	0.014	0.026	0.006
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_EB	F17	EB	5		505	772	9,100		179	301	1	0	13	11	505	284	475	3	0	5	5	772	70	3.0	2.2	0.060	0.145	0.035	0.033	0.008	0.109	0.026	0.038	0.009
King Vaughan Rd	King Vaughan Rd E of Pine Valley Dr_WB	F18	WB	5		836	622	10,400		285	477	7	0	35	32	836	226	378	2	0	8	8	622	70	3.7	2.5	0.030	0.098	0.024	0.037	0.009	0.065	0.016	0.018	0.004
Weston Rd	Weston Rd N of Kirby Rd_NB	F19	NB	5		885	1,161	14,600		331	554	0	0	0	0	885	434	727	0	0	0	0	1161	70	1.9	1.9	0.030	0.049	0.012	0.019	0.005	0.049	0.012	0.026	0.006
Weston Rd	Weston Rd N of Kirby Rd_SB	F20	SB	5		1,317	654	14,100		492	825	0	0	0	0	1317	245	409	0	0	0	0	654	70	1.9	1.9	0.030	0.049	0.012	0.029	0.007	0.049	0.012	0.014	0.003
Weston Rd	Weston Rd N of Hwy 413_NB	F21	NB	5		1,010	1,175	15,600		310	519	86	4	48	43	1010	367	614	68	3	64	59	1175	70	5.1	5.0	0.030	0.133	0.032	0.060	0.015	0.131	0.032	0.069	0.017
Weston Rd	Weston Rd N of Hwy 413_SB	F22	SB	5		1,490	939	17,350		471	788	114	5	59	53	1490	278	465	71	3	64	58	939	70	4.6	5.8	0.030	0.121	0.029	0.081	0.020	0.152	0.037	0.064	0.015
Weston Rd	Weston Rd N of King Vaughan Rd_NB	F23	NB	5		334	504	6,000		108	182	20	1	12	11	334	169	283	17	1	18	16	504	70	4.2	3.8	0.060	0.209	0.051	0.031	0.008	0.189	0.046	0.043	0.010
Weston Rd	Weston Rd N of King Vaughan Rd_SB	F24	SB	5		500	425	6,600		165	276	28	1	16	14	500	144	241	14	1	13	12	425	70	4.0	3.6	0.060	0.196	0.047	0.044	0.011	0.179	0.043	0.034	0.008
King Vaughan Rd	King Vaughan Rd E of Weston Rd_EB	F25	EB	5		1,283	1,211	17,800		430	721	63	3	35	31	1283	396	664	54	2	50	45	1211	60	3.7	4.2	0.030	0.097	0.023	0.056	0.013	0.111	0.027	0.060	0.015
King Vaughan Rd	King Vaughan Rd E of Weston Rd_WB	F26	WB	5		1,221	1,164	17,050		381	639	97	4	52	48	1221	372	623	61	3	55	50	1164	60	4.8	4.6	0.030	0.126	0.030	0.069	0.017	0.121	0.029	0.063	0.015
King Vaughan Rd	King Vaughan Rd W of Jane St_EB	F27	EB	5		2,551	3,059	40,050		800	1341	200	9	105	96	2551	1025	1717	134	6	93	84	3059	60	4.7	3.8	0.030	0.124	0.030	0.141	0.034	0.099	0.024	0.135	0.033
King Vaughan Rd	King Vaughan Rd W of Jane St_WB	F28	WB	5		3,115	2,205	38,000		1045	1750	160	7	80	73	3115	709	1187	126	6	93	84	2205	60	3.7	4.4	0.030	0.097	0.023	0.134	0.033	0.117	0.028	0.115	0.028
Kirby Rd	Kirby Rd At Hwy 400_EB	F29	EB	5		1,297	907	15,750		470	786	18	1	12	10	1297	318	533	22	1	17	16	907	60	2.5	3.0	0.030	0.064	0.016	0.037	0.009	0.079	0.019	0.032	0.008
Kirby Rd	Kirby Rd At Hwy 400_WB	F30	WB	5		868	1,177	14,600		298	499	32	1	20	18	868	436	729	5	0	4	3	1177	60	3.4	2.1	0.030	0.088	0.021	0.034	0.008	0.054	0.013	0.028	0.007
Steeles Ave	Steeles Ave W of Ninth Line N_EB	F31	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Steeles Ave	Steeles Ave W of Ninth Line N_WB	F32	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_NB	F33	NB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heritage Rd	Heritage Rd S of Wanless Dr_SB	F34	SB	2		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_NB	F35	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Heart Lake Rd	Heart Lake Rd S of Old School Rd_SB	F36	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_EB	F37	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mayfield Rd	Mayfield Rd E of Dixie Rd_WB	F38	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_NB	F39	NB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bramalea Rd	Bramalea Rd S of Old School Rd_SB	F40	SB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_EB	F41	EB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Old School Rd	Old School Rd W of Bramalea Rd_WB	F42	WB	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_NB	F43	NB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cold Creek Rd	Cold Creek Rd N of Nashville Rd_SB	F44	SB	4		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nashville Rd	Nashville Rd At Hwy 427_EB	F45	EB	4		749	511	9,000		277	463	3	0	3	3	749	190	317	1	0	2	1	511	70	2.1	2.1	0.060	0.104	0.025	0.035	0.008	0.100	0.024	0.023	0.006
Nashville Rd	Nashville Rd At Hwy 427_WB	F46	WB	4		733	380	7,950		273	457	0	0	2	1	733	141	237	1	0	1	0	380	70	2.0	2.0	0.060	0.097	0.023	0.032	0.008	0.097	0.023	0.016	0.004
Kirby Rd	Kirby Rd W of Hwy 27_EB	F47	EB	4	5	32	9	300		11	18	1	0	1	1	32	3	6	0	0	0	0	9	60	3.7	1.9	0.600	1.468	0.355	0.021	0.005	0.751	0.182	0.003	0.001
Kirby Rd	Kirby Rd W of Hwy 27_WB	F48	WB	4	5	6	95	700		2	3	0	0	1	0	6	34	58	1	0	1	1	95	60	5.5	2.5	0.200	0.813	0.197	0.002	0.001	0.365	0.088	0.015	0.004
King Vaughan Rd	King Vaughan Rd E of Jane St_EB	F49	EB	5		2,411	2,538	35,350		786	1317	147	6	81	74	2411	852	1427	105	5	78	71	2538	60	4.1	3.8	0.030	0.109	0.026	0.117	0.028	0.098	0.024	0.112	0.027
King Vaughan Rd	King Vaughan Rd E of Jane St_WB	F50	WB	5		2,770	2,193	35,450		933	1563	139	6	67	62	2770	708	1186	122	5	90	82	2193	60	3.6	4.4	0.030	0.095	0.023	0.117	0.028	0.115	0.028	0.113	0.027
Jane St	Jane St N of King Vaughan Rd_NB	F51	NB	5		1,002	1,760	19,750		287	481	124	5	55	50	1002	631	1057	37	2	17	16	1760	70	5.9	2.6	0.030	0.156	0.038	0.070	0.017	0.068	0.016	0.053	0.013
Jane St	Jane St N of King Vaughan Rd_SB	F52	SB	5		2,457	626	22,000		879	1473	52	2	27	24	2457	224	375	13	1	7	6	626	70	2.6	2.7	0.030	0.069	0.017	0.076	0.018	0.069	0.017	0.019	0.005
Jane St	Jane St S of King Vaughan Rd_NB	F53	NB	5		785	1,701	17,750		286	480	10	0	5	4	785	633	1061	4	0	2	1	1701	70	2.3	2.0	0.030	0.060	0.015	0.021	0.005	0.051	0.012	0.039	0.009
Jane St	Jane St S of King Vaughan Rd_SB	F54	SB	5		2,071	1,070	22,450		769	1287	8	0	4	3	2071	396	663	6	0	3	2	1070	70	2.0	2.1	0.030	0.052	0.013	0.049	0.012	0.054	0.013	0.026	0.006
Highway 400	Hwy 400 at King Vaughan Rd N-E/W Ramp	F71	N-E/W	5		988	351	9,550		364	609	5	0	5	5	988	120	200	12	1	9	9	351	70	2.2	3.5	0.060	0.107	0.026	0.047	0.011	0.172	0.042	0.027	0.007
Highway 400	Hwy 400 at King Vaughan Rd E-S Ramp	F72	E-S	5		959	832	12,800		323	541	50	2	22	21	959	276	461	46	2	25	22	832	40	3.6	3.9	0.030	0.094	0.023	0.040	0.010	0.102	0.025	0.038	0.009
Highway 400	Hwy 400 at King Vaughan Rd W-S Ramp	F73	W-S	5		71	471	3,850		27	44	0	0	0	0	71	173	289	4	0	3	2	471	60	1.9	2.2	0.200	0.276	0.067	0.009	0.002	0.327	0.079	0.069	0.017
Highway 400	Hwy 400 at King Vaughan Rd S-E/W Ramp	F74	S-E/W	5		1,150	1,083	15,950		340	570	121	5	60	54	1150	356	595	68	3	32	29	1083	70	5.5	4.0	0.030	0.146	0.035	0.075	0.018	0.105	0.025	0.051	0.012
Highway 400	Hwy 400 at King Vaughan Rd E-N Ramp	F75	E-N	5		60	653	5,100		21	34	3	0	1	1	60	231	387	16	1	9	9	653	60	3.3	2.9	0.060	0.162	0.039	0.004	0.001	0.139	0.034	0.041	0.010
Highway 400	Hwy 400 at King Vaughan Rd W-N Ramp	F76	W-N	5		41	239	2,000		15	26	0	0	0	0	41	89	150	0	0	0	0	239	40	1.9	1.9	0.200	0.276	0.067	0.005	0.001	0.276	0.067	0.030	0.007
Highway 427	Hwy 427 at Major Mackenzie Dr N-E/W Ramp	F77	N-E/W	4		1,352	885	16,000		446	748	81	4	38	35	1352	285	476	49	2	38	35	885	70	3.9	4.5	0.030	0.103	0.025	0.062	0.015	0.117	0.028	0.046	0.011
Highway 427	Hwy 427 at Major Mackenzie Dr E-S Ramp	F78	E-S	4		935	275	8,650		348	584	2	0	1	0	935	102	170	1	0	1	1	275	40	2.0	2.1	0.060	0.095	0.023	0.040	0.010	0.103	0.025	0.013	0.003
Highway 427	Hwy 427 at Major Mackenzie Dr W-S Ramp	F79	W-S	4		1,441	1,190	18,800		529	886	11	1	7	7	1441	440	737	6	0	4	3	1190	60	2.2	2.1	0.030	0.058	0.014	0.037	0.009	0.054	0.013	0.029	0.007
Highway 427	Hwy 427 at Major Mackenzie Dr S-E/W Ramp	F80	S-E/W	4		1,644	2,608	30,350		605	1014	13	1	6	5	1644	964	1615	14	1	7	7	2608	70	2.2	2.1	0.030	0.056	0.014	0.041	0.010	0.054	0.013	0.063	0.015
Highway 427	Hwy 427 at Major Mackenzie Dr E-N Ramp	F81	E-N	4		891	818	12,200		249	416	120	5	53	48	891	246	412	69	3	46	42	818	60	6.2	5.4	0.030	0.165	0.040	0.066	0.016	0.143	0.035	0.052	0.013
Highway 427	Hwy 427 at Major Mackenzie Dr W-N Ramp	F82	W-N	4		187	380	4,050		61	103	11	1	6	5	187	141	235	2	0	1	1	380	40	4.0	2.1	0.200	0.596	0.144	0.050	0.012	0.304	0.073	0.052	0.012
Highway 410	Hwy 410 at Mayfield Rd N-E/W Ramp	F83	N-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-S Ramp	F84	E-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-S Ramp	F85	W-S	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd S-E/W Ramp	F86	S-E/W	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd E-N Ramp	F87	E-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 410	Hwy 410 at Mayfield Rd W-N Ramp	F88	W-N	3		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_E-N	G01	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-E	G02	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_N-S	G03	N-S	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401 / Hwy 407_S-N	G04	S-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 at Hwy 401_E-N	G05	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-N Ramp	G06	E-N	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-E Ramp	G07	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 413 N-E Ramp	G08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 407	Hwy 407 at Hwy 401 S-W Ramp	G09	S-W	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 413	Hwy 413 / Hwy 407 to Hwy 401_N/S-E	G10	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_EB	H01	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to East of Hwy 413/407 S	H02	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_EB	H03	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 E of Trafalgar Rd_WB	H04	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Collector at Hwy 413 E-W Ramp	H05	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 Express at Hwy 413 E-W Ramp	H06	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 W of Winston Churchill Blvd_WB	H07	WB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N-E Ramp	H08	N-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd S-E Ramp	H09	S-E	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 401 E	H10	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E to Hwy 413/407 S	H11	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd Hwy 401 E to Hwy 413/407 S	H12	EB	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 413	H13	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0.0	0.0	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Highway 401	Hwy 401 at Trafalgar Rd N/S-E and Hwy 401 E to Hwy 407 S	H14	0	1		0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	70

Appendix A.5: Raw Traffic Data for 2041 No-Build and Build Scenarios

Appendix A.5 : Raw Traffic Data for 2041 No-Build Scenario
Highway 413
GTA West

MAINLINE																					
			2041																		
Section / Location			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
		Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Highway 413																				
Hwy 413 N of Hwy 401/407 interchange		NB																		
		SB																		
Hwy 413 N of Winston Churchill Blvd		NB																		
		SB																		
Hwy 413 N of Bovaird Dr		NB																		
		SB																		
Hwy 413 E of Mayfield Rd		EB																		
		WB																		
Hwy 413 E of Chinguacousy Rd		EB																		
		WB																		
Hwy 413 E of Hurontario St		EB																		
		WB																		
Hwy 413 E of Hwy 410		EB																		
		WB																		
Hwy 413 E of Bramalea Rd		EB																		
		WB																		
Hwy 413 E of Airport Rd		EB																		
		WB																		
Hwy 413 E of The Gore Rd		EB																		
		WB																		
Hwy 413 E of Humber Station Rd		EB																		
		WB																		
Hwy 413 E of Hwy 427		EB																		
		WB																		
Hwy 413 E of Hwy 27		EB																		
		WB																		
Connecting Freeways																				
Highway 407	Immediately east of Highway 401/Highway 413	EB	4,630	532	714	11%	15%	1,899	5	2	0%	0%	38,255	4,030	5,775	46,600	3,785	6,363	8%	14%
		WB	2,584	322	449	12%	17%	3,349	241	90	7%	3%	34,763	4,225	4,348	42,400	3,969	4,790	9%	11%
Highway 407	Immediately south of Highway 401	NB	3,271	131	246	4%	8%	797	0	0	0%	0%	23,835	983	1,984	29,100	923	2,186	3%	8%
		SB	1,440	16	22	1%	2%	2,536	0	0	0%	0%	23,296	120	177	28,400	113	196	0%	1%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 EB mainline (at Trafalgar Road) to Highway 413/Highway 407 S	EB																		
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 EB mainline (at Trafalgar Road) to East of Highway 413/Highway 407 S	EB	10,337	766	1,267	7%	12%	7,967	378	855	5%	11%	107,248	8,592	17,117	130,700	8,070	18,859	6%	14%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 WB Collector upstream of Highway 413 N to Highway 401 W Ramp	WB	3,399	286	417	8%	12%	4,089	173	437	4%	11%	43,869	3,446	6,888	53,500	3,237	7,589	6%	14%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 WB Express upstream of Highway 413 N to Highway 401 W Ramp	WB	3,524	272	596	8%	17%	5,244	119	537	2%	10%	51,372	2,938	9,139	62,600	2,759	10,069	4%	16%
Highway 401	Between Highway 407/Highway 413 and Winston Churchill Boulevard	EB	9,612	541	1,025	6%	11%	7,359	359	789	5%	11%	99,434	6,751	14,634	121,200	6,341	16,123	5%	13%
		WB	7,021	557	1,007	8%	14%	9,651	295	989	3%	10%	97,686	6,394	16,097	119,100	6,006	17,736	5%	15%
Highway 410 Extension	Between Mayfield Road and Highway 413	NB																		
		SB																		
Highway 410	Immediately west of Mayfield Road	EB	2,657	84	261	3%	10%	1,439	30	67	2%	5%	24,001	857	2,645	29,300	805	2,914	3%	10%
		WB	1,296	125	124	10%	10%	2,558	50	101	2%	4%	22,584	1,318	1,813	27,500	1,238	1,998	5%	7%
Highway 410	Between Mayfield Road and Sandalwood Parkway East	NB	1,925	159	166	8%	9%	3,485	62	140	2%	4%	31,701	1,657	2,465	38,600	1,556	2,716	4%	7%
		SB	4,408	108	411	2%	9%	2,649	49	116	2%	4%	41,349	1,174	4,249	50,400	1,103	4,682	2%	9%
Highway 427	Between Major Mackenzie Drive and Rutherford Road	NB	1,852	34	21	2%	1%	3,193	26	33	1%	1%	29,558	448	441	36,000	421	486	1%	1%
		SB	3,305	40	41	1%	1%	2,270	23	22	1%	1%	32,662	476	509	39,800	447	561	1%	1%
Highway 427	Between Major Mackenzie Drive and Highway 413	NB																		
		SB																		
Highway 400	South of King Road	NB	4,127	386	526	9%	13%	9,157	121	207	1%	2%	77,836	3,803	5,908	94,900	3,572	6,509	4%	7%
		SB	9,544	289	440	3%	5%	4,420	147	335	3%	8%	81,818	3,273	6,250	99,700	3,074	6,886	3%	7%
Highway 400	Between King Vaughan Road and Kirby Road i.e., not including freeway to freeway ramps	NB	4,084	386	525	9%	13%	8,944	121	207	1%	2%	76,332	3,803	5,904	93,100	3,572	6,505	4%	7%
		SB	8,323	270	411	3%	5%	4,016	128	304	3%	8%	72,297	2,983	5,773	88,100	2,802	6,361	3%	7%
Highway 400	North of Teston Road	NB	5,419	481	606	9%	11%	9,812	182	266	2%	3%	89,238	4,974	7,038	108,800	4,672	7,755	4%	7%
		SB	9,149	312	438	3%	5%	5,081	164	349	3%	7%	83,381	3,571	6,348	101,600	3,354	6,994	3%	7%
Connecting Freeway Ramps																				
Highway 407 at Highway 401	Highway 407 NB to Highway 401 EB	S-E	674	82	101	12%	15%	160	2	7	1%	5%	4,887	633	875	5,950	594	964	10%	16%
Highway 407 at Highway 401	Highway 407 NB to Highway 401 WB	S-W	94	4	19	4%	20%	121	3	19	3%	16%	1,262	56	305	1,550	52	336	3%	22%
Highway 407 at Highway 413	Highway 407 SB to Highway 413 NB	E-N																		

Appendix A.5 : Raw Traffic Data for 2041 No-Build Scenario

Highway 413

GTA West

Highway 407 at Highway 413	Highway 413 SB to Highway 407 EB	N-E																	
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N-E Ramp	N-E	751	22	70	3%	9%	873	11	40	1%	5%	9,515	246	892	11,600	231	983	2%	8%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road S-E Ramp	S-E	626	2	139	0%	22%	202	2	8	1%	4%	4,854	31	1,181	5,900	29	1,301	0%	22%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N/S-E (combined) to Highway 401 E																			
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N/S-E (combined) to Highway 413/Highway 407 S																			
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar N/S-E (combined) and Highway 401 EB (at Trafalgar Road) to Highway 413																			
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar N/S-E (combined) and Highway 401 EB (at Trafalgar Road) to Highway 407 S		449	18	37	4%	8%	492	4	18	1%	4%	5,511	169	436	6,700	159	480	2%	7%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 413 N to Highway 401 W Ramp																			
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road E-N/S Ramp	E-N/S	1,336	34	62	3%	5%	1,171	18	35	2%	3%	14,691	396	785	17,900	372	865	2%	5%
Highway 400 at King Vaughan Road	N-E/W Ramp	N-E/W	1,222	20	29	2%	2%	403	19	31	5%	8%	9,521	290	477	11,600	273	525	2%	5%
Highway 400 at King Vaughan Road	E-S Ramp	E-S	693	50	34	7%	5%	475	53	68	11%	14%	6,844	775	820	8,350	728	903	9%	11%
Highway 400 at King Vaughan Road	W-S Ramp	W-S	20	0	0	0%	2%	73	1	1	1%	2%	544	7	15	650	7	16	1%	3%
Highway 400 at King Vaughan Road	S-E/W Ramp	S-E/W	684	103	92	15%	13%	687	61	58	9%	8%	8,037	1,232	1,209	9,800	1,157	1,332	12%	14%
Highway 400 at King Vaughan Road	E-N Ramp	E-N	214	50	31	24%	14%	641	52	40	8%	6%	5,012	768	571	6,100	721	629	12%	10%
Highway 400 at King Vaughan Road	W-N Ramp	W-N	43	0	0	0%	1%	214	0	0	0%	0%	1,504	0	3	1,850	0	4	0%	0%
Highway 427 at Major Mackenzie Drive	N-E/W Ramp	N-E/W																		
Highway 427 at Major Mackenzie Drive	E-S Ramp	E-S	1,370	18	18	1%	1%	759	11	10	1%	1%	12,473	216	219	15,200	203	241	1%	2%
Highway 427 at Major Mackenzie Drive	W-S Ramp	W-S	1,935	22	24	1%	1%	1,510	12	12	1%	1%	20,188	260	290	24,600	244	320	1%	1%
Highway 427 at Major Mackenzie Drive	S-E/W Ramp	S-E/W	1,852	34	21	2%	1%	3,193	26	33	1%	1%	29,558	448	441	36,050	421	486	1%	1%
Highway 427 at Major Mackenzie Drive	E-N Ramp	E-N																		
Highway 427 at Major Mackenzie Drive	W-N Ramp	W-N																		
Highway 410/Highway 410 Extension at Mayfield Road	N-E/W Ramp	N-E/W																		
Highway 410/Highway 410 Extension at Mayfield Road	E-S Ramp	E-S	627	6	84	1%	13%	601	9	28	1%	5%	7,194	114	910	8,750	107	1,002	1%	11%
Highway 410/Highway 410 Extension at Mayfield Road	W-S Ramp	W-S	1,124	17	65	2%	6%	609	10	21	2%	3%	10,154	203	695	12,400	190	766	2%	6%
Highway 410/Highway 410 Extension at Mayfield Road	S-E/W Ramp	S-E/W	629	34	43	5%	7%	927	12	38	1%	4%	9,117	340	652	11,100	319	718	3%	6%
Highway 410/Highway 410 Extension at Mayfield Road	E-N Ramp	E-N																		
Highway 410/Highway 410 Extension at Mayfield Road	W-N Ramp	W-N																		
Highway 410/Highway 410 Extension at Mayfield Road	W-E/W Ramp	W-E/W	1,349	71	74	5%	6%	704	55	97	8%	14%	12,026	950	1,379	14,650	893	1,519	6%	10%
Highway 410/Highway 410 Extension at Mayfield Road	E-N Ramp	E-N	539	82	95	15%	18%	1,018	52	57	5%	6%	9,122	1,009	1,226	11,100	947	1,351	9%	12%

Appendix A.5 : Raw Traffic Data for 2041 No-Build Scenario
Highway 413
GTA West

HIGHWAY 413 RAMPS																					
			2041																		
			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
Interchange	On/Off	Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Hwy 413 at Hwy 401 / Hwy 407	Hwy to Hwy ramps	E-N																		
		N-E																		
		N-S																		
		S-N																		
Hwy 413 at Winston Churchill Blvd	Off	S-E/W																		
	On	E-N																		
	On	W-N																		
	Off	N-E/W																		
	On	E-S																		
	On	W-S																		
Hwy 413 at Bovalrd Dr	Off	S-E/W																		
	On	E-N																		
	On	W-N																		
	Off	N-E/W																		
	On	E-S																		
	On	W-S																		
Hwy 413 at Mayfield Rd	Off	S-E/W																		
	On	E-N																		
	On	W-N																		
	Off	N-E/W																		
	On	E-S																		
	On	W-S																		
Hwy 413 at Chinguacousy Rd	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Hurontario St	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Hwy 410	Hwy to Hwy ramps	W-S																		
		E-S																		
		S-E																		
		S-W																		
Hwy 413 at Bramalea Rd	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Airport Rd	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at The Gore Rd	Off	W-N/S																		
	On	N/S-E																		
	Off	E-N/S																		
	On	N/S-W																		
Hwy 413 at Humber Station Rd	Off	W-N/S																		
	On	N-E																		
	On	S-E																		

Appendix A.5 : Raw Traffic Data for 2041 No-Build Scenario

Highway 413

GTA West

	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Hwy 427	Hwy to Hwy ramps	W-S																		
		E-S																		
		S-E																		
		S-W																		
Hwy 413 at Hwy 27	Off	W-N/S																		
	On	N/S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Weston Rd	Off	W-N/S																		
	On	N/S-W																		
Hwy 413 at Hwy 400	Hwy to Hwy ramps	W-N																		
		W-S																		
		N-W																		
		S-W																		

Appendix A.5 : Raw Traffic Data for 2041 No-Build Scenario
Highway 413
GTA West

ARTERIALS																				
			2041																	
			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
Arterial	Location	Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Trafalgar Road	Immediately north of Highway 401	NB	3,259	66	89	2%	3%	2,575	29	73	1%	3%	34,182	715	1,309	41,650	671	1,442	2%	3%
		SB	2,604	76	146	3%	6%	3,105	28	97	1%	3%	33,449	786	1,958	40,750	739	2,157	2%	5%
Trafalgar Road	Immediately south of Highway 401	NB	2,754	35	217	1%	8%	2,064	13	83	1%	4%	28,225	363	2,413	34,400	341	2,659	1%	8%
		SB	2,179	61	105	3%	5%	2,587	21	41	1%	2%	27,924	616	1,179	34,050	579	1,299	2%	4%
Steeles Avenue	Immediately east of Trafalgar Road	EB	3,189	75	143	2%	4%	2,508	32	62	1%	2%	33,383	802	1,654	40,700	754	1,822	2%	4%
		WB	2,715	88	105	3%	4%	3,902	17	84	0%	2%	38,771	791	1,523	47,250	743	1,678	2%	4%
Steeles Avenue	Immediately west of Ninth Line N	EB	1,932	37	74	2%	4%	2,329	27	59	1%	3%	24,965	478	1,076	30,450	449	1,186	1%	4%
		WB	2,172	45	43	2%	2%	2,369	7	28	0%	1%	26,606	389	570	32,450	366	628	1%	2%
Steeles Avenue	At Highway 413	EB	3,318	93	154	3%	5%	2,697	49	91	2%	3%	35,243	1,069	1,974	42,950	1,004	2,175	2%	5%
		WB	2,498	80	84	3%	3%	3,123	25	61	1%	2%	32,933	782	1,174	40,150	734	1,294	2%	3%
Steeles Avenue	Immediately east of Ninth Line S	EB	2,685	64	92	2%	3%	2,221	24	53	1%	2%	28,743	662	1,172	35,050	622	1,292	2%	4%
		WB	2,156	61	45	3%	2%	3,103	11	35	0%	1%	30,818	541	642	37,550	508	708	1%	2%
Steeles Avenue	Immediately east of Tenth Line N	EB	3,359	90	144	3%	4%	2,103	24	53	1%	3%	32,003	856	1,589	39,000	804	1,751	2%	4%
		WB	1,989	59	47	3%	2%	3,349	17	53	1%	2%	31,275	572	810	38,100	537	892	1%	2%
Ninth Line N	Immediately north of Steeles Avenue	NB	783	43	47	6%	6%	1,269	23	39	2%	3%	12,023	497	695	14,650	466	765	3%	5%
		SB	1,843	65	84	4%	5%	883	27	38	3%	4%	15,973	695	988	19,450	653	1,089	3%	6%
Ninth Line S	Immediately south of Steeles Avenue	NB	1,893	79	85	4%	4%	1,477	31	48	2%	3%	19,747	820	1,072	24,050	770	1,181	3%	5%
		SB	2,186	88	107	4%	5%	1,933	43	60	2%	3%	24,132	987	1,342	29,400	927	1,479	3%	5%
Tenth Line	At Highway 413	NB	269	10	14	4%	5%	716	9	22	1%	3%	5,769	146	293	7,050	137	323	2%	5%
		SB	1,110	37	64	3%	6%	353	4	4	1%	1%	8,570	309	542	10,450	291	597	3%	6%
Derry Road	Immediately east of Highway 407	EB	3,077	44	30	1%	1%	2,604	157	137	6%	5%	33,286	1,509	1,347	40,600	1,417	1,484	3%	4%
		WB	2,424	220	257	9%	11%	2,627	45	69	2%	3%	29,595	1,989	2,630	36,100	1,868	2,897	5%	8%
Derry Road	Immediately west of Highway 407	EB	3,796	108	99	3%	3%	2,354	150	137	6%	6%	36,034	1,936	1,904	43,950	1,819	2,097	4%	5%
		WB	2,353	174	99	7%	4%	3,287	45	69	1%	2%	33,046	1,644	1,355	40,300	1,544	1,493	4%	4%
Winston Churchill Boulevard	Immediately north of Highway 401	NB	3,216	70	40	2%	1%	2,434	47	47	2%	2%	33,105	878	702	40,350	825	773	2%	2%
		SB	2,600	84	62	3%	2%	3,037	20	21	1%	1%	33,028	781	669	40,250	733	738	2%	2%
Winston Churchill Boulevard	Immediately south of Highway 401	NB	3,125	92	66	3%	2%	1,983	57	63	3%	3%	29,929	1,118	1,041	36,500	1,050	1,146	3%	3%
		SB	1,737	91	79	5%	5%	2,484	39	42	2%	2%	24,732	976	976	30,150	916	1,075	3%	4%
Winston Churchill Boulevard	Immediately south of Highway 413	NB	656	23	28	3%	4%	2,022	27	39	1%	2%	15,690	370	542	19,150	348	598	2%	3%
		SB	2,103	60	81	3%	4%	848	7	15	1%	2%	17,295	503	780	21,100	473	860	2%	4%
Winston Churchill Boulevard	Between Highway 413 and 5 Side Road	NB	656	23	28	3%	4%	2,022	27	39	1%	2%	15,690	370	542	19,150	348	598	2%	3%
		SB	2,103	60	81	3%	4%	848	7	15	1%	2%	17,295	503	780	21,100	473	860	2%	4%
Winston Churchill Boulevard	Immediately north of 5 Side Road	NB	597	29	28	5%	5%	1,105	18	27	2%	2%	9,969	360	439	12,150	338	483	3%	4%
		SB	1,218	45	61	4%	5%	607	6	13	1%	2%	10,693	389	593	13,050	365	654	3%	5%
5 Side Road	Immediately west of Winston Churchill Boulevard	EB	825	42	49	5%	6%	608	6	12	1%	2%	8,395	361	488	10,250	339	537	3%	5%
		WB	632	9	7	1%	1%	936	12	19	1%	2%	9,189	164	208	11,200	154	229	1%	2%
5 Side Road	At Highway 413	EB	988	11	12	1%	1%	576	6	10	1%	2%	9,168	132	176	11,200	124	194	1%	2%
		WB	355	23	33	6%	9%	924	7	13	1%	1%	7,495	225	373	9,150	212	411	2%	4%
Bovaird Drive	Immediately west of Heritage Road	EB	1,477	84	104	6%	7%	1,501	48	60	3%	4%	17,448	993	1,321	21,250	933	1,455	4%	7%
		WB	1,558	110	115	7%	7%	1,401	46	69	3%	5%	17,333	1,172	1,484	21,150	1,100	1,635	5%	8%
Bovaird Drive	Between Heritage Road and Highway 413	EB	1,725	89	107	5%	6%	2,094	49	64	2%	3%	22,375	1,040	1,373	27,300	977	1,513	4%	6%
		WB	903	14	30	2%	3%	433	0	2	0%	0%	7,828	105	259	9,550	99	285	1%	3%
Bovaird Drive	Immediately east of Highway 413	EB	1,725	89	107	5%	6%	2,094	49	64	2%	3%	22,375	1,040	1,373	27,300	977	1,513	4%	6%
		WB	1,964	114	122	6%	6%	1,726	49	69	3%	4%	21,620	1,220	1,546	26,350	1,146	1,703	4%	6%
Heritage Road	At Highway 413	NB	519	6	14	1%	3%	1,192	2	20	0%	2%	10,025	61	273	12,200	58	301	0%	2%
		SB	1,226	18	46	1%	4%	654	4	6	1%	1%	11,017	165	415	13,450	155	457	1%	3%
Heritage Road	Immediately north of Bovaird Drive	NB	355	0	3	0%	1%	702	0	13	0%	2%	6,195	3	126	7,550	3	139	0%	2%
		SB	903	14	30	2%	3%	433	0	2	0%	0%	7,828	105	259	9,550	99	285	1%	3%
Heritage Road	Immediately south of Wanless Drive	NB	355	0	3	0%	1%	702	0	13	0%	2%	6,195	3	126	7,550	3	139	0%	2%
		SB	903	14	30	2%	3%	433	0	2	0%	0%	7,828	105	259	9,550	99	285	1%	3%
Wanless Drive	Immediately West of Heritage Road	EB	788	43	40	5%	5%	694	17	13	2%	2%	8,683	450	427	10,600	423	471	4%	4%
		WB	713	23	16	3%	2%	754	26	27	3%	4%	8,595	368	347	10,500	345	382	3%	4%
Wanless Drive	At Highway 413	EB	901	44	44	5%	5%	1,070	18	14	2%	1%	11,549	465	468	14,100	437	515	3%	4%
		WB	1,223	32	21	3%	2%	796	26	27	3%	3%	11,830	435	387	14,400	409	427	3%	3%

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Highway 413

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Heritage Road	Between Wanless Drive and Mayfield Road	NB	584	0	2	0%	0%	139	1	5	0%	4%	4,236	6	58	5,150	6	64	0%	1%
		SB	192	4	15	2%	8%	504	1	2	0%	0%	4,077	32	140	4,950	30	155	1%	3%
Heritage Road	Immediately north of Mayfield Road	NB	732	0	4	0%	0%	390	17	15	4%	4%	6,578	129	149	8,000	122	164	2%	2%
		SB	226	31	30	14%	13%	715	1	3	0%	0%	5,519	237	262	6,750	223	288	3%	4%
Mayfield Road	Immediately west of Heritage Road	EB	1,527	86	91	6%	6%	1,093	32	45	3%	4%	15,349	880	1,102	18,700	827	1,215	4%	6%
		WB	1,010	77	76	8%	8%	1,348	36	53	3%	4%	13,814	847	1,038	16,850	796	1,144	5%	7%
Mayfield Road	Between Heritage Road and Highway 413	EB	1,604	116	115	7%	7%	1,260	33	50	3%	4%	16,782	1,114	1,331	20,450	1,047	1,467	5%	7%
		WB	1,201	80	86	7%	7%	1,554	53	67	3%	4%	16,146	1,000	1,237	19,700	940	1,362	5%	7%
Mayfield Road	Immediately east of Highway 413	EB	1,604	116	115	7%	7%	1,260	33	50	3%	4%	16,782	1,114	1,331	20,450	1,047	1,467	5%	7%
		WB	1,201	80	86	7%	7%	1,554	53	67	3%	4%	16,146	1,000	1,237	19,700	940	1,362	5%	7%
Mississauga Road	At Highway 413	NB	179	10	9	6%	5%	384	9	6	2%	2%	3,299	143	121	4,000	134	133	3%	3%
		SB	443	17	14	4%	3%	198	5	7	3%	4%	3,756	165	169	4,600	155	187	3%	4%
Creditview Road	At Highway 413	NB	243	29	28	12%	12%	111	3	2	3%	2%	2,074	240	242	2,550	226	267	9%	10%
		SB	206	8	6	4%	3%	245	16	20	7%	8%	2,643	180	210	3,200	169	231	5%	7%
Chinguacousy Road	Immediately south of Highway 413	NB	571	63	56	11%	10%	544	38	43	7%	8%	6,535	757	798	7,950	711	879	9%	11%
		SB	677	51	53	7%	8%	596	36	58	6%	10%	7,456	649	894	9,100	610	986	7%	11%
Chinguacousy Road	Between Highway 413 and Old School Road	NB	571	63	56	11%	10%	544	38	43	7%	8%	6,535	757	798	7,950	711	879	9%	11%
		SB	677	51	53	7%	8%	596	36	58	6%	10%	7,456	649	894	9,100	610	986	7%	11%
Chinguacousy Road	Immediately north of Old School Road	NB	305	42	36	14%	12%	346	19	25	6%	7%	3,813	461	496	4,650	433	546	9%	12%
		SB	369	32	35	9%	10%	311	19	26	6%	8%	3,987	379	496	4,850	356	547	7%	11%
Old School Road	Immediately west of Chinguacousy Road	EB	679	22	21	3%	3%	529	17	44	3%	8%	7,073	296	520	8,600	278	573	3%	7%
		WB	536	37	45	7%	8%	598	17	19	3%	3%	6,645	403	512	8,100	378	564	5%	7%
Old School Road	At Highway 413	EB	499	6	7	1%	1%	367	4	16	1%	4%	5,077	77	179	6,200	72	197	1%	3%
		WB	399	19	29	5%	7%	522	2	4	0%	1%	5,396	158	267	6,600	149	294	2%	4%
McLaughlin Road	Immediately south of Old School Road	NB	482	20	18	4%	4%	307	13	10	4%	3%	4,623	248	226	5,650	233	249	4%	4%
		SB	603	35	35	6%	6%	382	11	14	3%	4%	5,771	345	395	7,050	324	435	5%	6%
McLaughlin Road	At Highway 413	NB	223	18	16	8%	7%	299	16	13	5%	4%	3,059	255	234	3,750	240	258	6%	7%
		SB	483	35	35	7%	7%	215	11	14	5%	7%	4,090	345	395	5,000	324	435	6%	9%
Old School Road	Between McLaughlin Road and Hurontario Street	EB	650	15	14	2%	2%	518	14	27	3%	5%	6,844	218	330	8,350	205	364	2%	4%
		WB	662	30	34	5%	5%	1,115	15	31	1%	3%	10,414	333	523	12,700	313	576	2%	5%
Hurontario Street	Immediately north of Highway 413	NB	1,095	135	159	12%	14%	2,094	48	97	2%	5%	18,686	1,371	2,060	22,800	1,288	2,269	6%	10%
		SB	2,246	75	232	3%	10%	1,218	46	90	4%	7%	20,292	909	2,591	24,750	854	2,854	3%	12%
Hurontario Street	Between Highway 413 and Old School Road	NB	1,095	135	159	12%	14%	2,094	48	97	2%	5%	18,686	1,371	2,060	22,800	1,288	2,269	6%	10%
		SB	2,246	75	232	3%	10%	1,218	46	90	4%	7%	20,292	909	2,591	24,750	854	2,854	3%	12%
Hurontario Street	Immediately south of Old School Road	NB	1,350	165	189	12%	14%	2,683	62	127	2%	5%	23,629	1,708	2,545	28,800	1,605	2,804	6%	10%
		SB	2,209	87	239	4%	11%	1,367	60	114	4%	8%	20,952	1,104	2,851	25,550	1,037	3,141	4%	12%
Old School Road	Between Hurontario Street and Kennedy Road	EB	655	3	4	0%	1%	377	1	2	0%	1%	6,047	28	48	7,350	27	53	0%	1%
		WB	375	0	2	0%	0%	536	0	0	0%	0%	5,335	1	16	6,500	1	17	0%	0%
Kennedy Road	At Highway 413	NB	128	4	7	3%	5%	139	3	5	2%	4%	1,564	53	97	1,900	49	107	3%	6%
		SB	197	9	8	5%	4%	76	3	2	4%	3%	1,600	90	81	1,950	85	89	4%	5%
Heart Lake Road	At Highway 413	NB	258	27	22	10%	9%	473	21	24	4%	5%	4,283	360	371	5,200	338	409	7%	8%
		SB	574	21	23	4%	4%	286	16	16	6%	6%	5,039	278	315	6,150	261	347	4%	6%
Heart Lake Road	At Highway 410	NB	685	27	26	4%	4%	464	22	26	5%	6%	6,728	369	420	8,200	346	463	4%	6%
		SB	715	28	36	4%	5%	703	17	18	2%	3%	8,312	336	435	10,150	316	479	3%	5%
Heart Lake Road	Immediately south of Mayfield Road	NB	364	18	15	5%	4%	583	14	19	2%	3%	5,550	240	278	6,750	225	306	3%	5%
		SB	751	39	51	5%	7%	631	10	16	2%	3%	8,095	370	544	9,850	348	599	4%	6%
Heart Lake Road	Immediately south of Old School Road	NB	259	21	18	8%	7%	499	20	22	4%	4%	4,441	308	323	5,400	289	355	5%	7%
		SB	620	24	24	4%	4%	287	15	14	5%	5%	5,314	293	307	6,500	275	338	4%	5%
Old School Road	Immediately west of Heart Lake Road	EB	791	10	7	1%	1%	307	8	13	3%	4%	6,433	135	161	7,850	127	178	2%	2%
		WB	332	11	11	3%	3%	673	6	4	1%	1%	5,889	128	121	7,200	120	133	2%	2%
Old School Road	At Highway 410 Extension	EB	770	4	3	1%	0%	281	7	11	2%	4%	6,158	83	113	7,500	78	124	1%	2%
		WB	322	14	12	4%	4%	641	5	3	1%	0%	5,642	143	121	6,900	134	133	2%	2%
Mayfield Road	Immediately west of Heart Lake Road	EB	3,412	112	175	3%	5%	2,387	47	90	2%	4%	33,977	1,191	2,136	41,400	1,118	2,353	3%	6%
		WB	1,931	87	94	5%	5%	2,957	42	94	1%	3%	28,636	968	1,516	34,900	909	1,671	3%	5%
Mayfield Road	Between Heart Lake Road and Highway 410	EB	3,018	75	135	2%	4%	2,130	35	69	2%	3%	30,163	832	1,649	36,750	782	1,817	2%	5%
		WB	1,893	70	81	4%	4%	2,507	33	78	1%	3%	25,784	772	1,280	31,450	725	1,410	2%	4%
Mayfield Road	Immediately east of Highway 410	EB	3,615	155	179	4%	5%	2,728	88	172	3%	6%	37,162	1,824	2,831	45,300	1,713	3,119	4%	7%
		WB	2,802	151	252	5%	9%	3,702	89	152	2%	4%	38,108	1,800	3,261	46,450	1,690	3,593	4%	8%
Mayfield Road	Immediately east of Dixie Road	EB	2,629	81	106	3%	4%	2,063	73	140	4%	7%	27,494	1,154	1,983	33,500	1,084	2,185	3%	7%
		WB	1,851	127	178	7%	10%	2,546	60	112	2%	4%	25,765	1,400	2,345	31,400	1,315	2,584	4%	8%
Countryside Drive	At Highway 410	EB	1,679	52	49	3%	3%	1,127	28	27	2%	2%	16,441	600	613	20,050	564	675	3%	3%
		WB	1,117	49	31	4%	3%	1,489	29	38	2%	3%	15,269	585	557	18,600	550	613	3%	3%

Appendix A.5 : Raw Traffic Data for 2041 No-Build Scenario

Highway 413

GTA West

Dixie Road	At Highway 413	NB	341	38	25	11%	7%	558	12	17	2%	3%	5,267	375	339	6,400	352	373	6%	6%
		SB	666	13	18	2%	3%	438	20	22	5%	5%	6,469	248	323	7,900	233	355	3%	4%
Dixie Road	Immediately north of Mayfield Road	NB	588	36	31	6%	5%	737	10	29	1%	4%	7,760	346	488	9,450	325	538	3%	6%
		SB	939	13	70	1%	7%	751	10	28	1%	4%	9,901	175	784	12,050	165	864	1%	7%
Dixie Road	Immediately south of Mayfield Road	NB	689	28	22	4%	3%	936	25	28	3%	3%	9,519	402	401	11,600	378	442	3%	4%
		SB	1,249	63	80	5%	6%	580	12	22	2%	4%	10,714	564	815	13,050	530	898	4%	7%
Bramalea Road	North of Highway 413	NB	28	1	3	4%	11%	374	7	12	2%	3%	2,354	62	126	2,850	58	139	2%	5%
		SB	392	14	23	4%	6%	29	1	2	4%	8%	2,467	112	206	3,000	105	227	3%	8%
Bramalea Road	South of Highway 413	NB	28	1	3	4%	11%	374	7	12	2%	3%	2,354	62	126	2,850	58	139	2%	5%
		SB	392	14	23	4%	6%	29	1	2	4%	8%	2,467	112	206	3,000	105	227	3%	8%
Bramalea Road	Immediately south of Old School Road	NB	137	6	13	5%	9%	555	8	16	1%	3%	4,056	106	231	4,950	99	255	2%	5%
		SB	538	20	29	4%	5%	187	4	7	2%	4%	4,248	181	290	5,200	170	319	3%	6%
Old School Road	Immediately west of Bramalea Road	EB	794	0	0	0%	0%	537	2	3	0%	0%	7,797	16	22	9,500	15	24	0%	0%
		WB	532	4	11	1%	2%	719	1	0	0%	0%	7,326	35	89	8,950	33	98	0%	1%
Torbram Road	At Highway 413	NB	177	15	11	8%	6%	520	11	12	2%	2%	4,084	195	186	5,000	183	204	4%	4%
		SB	665	18	20	3%	3%	323	9	10	3%	3%	5,789	203	242	7,050	190	267	3%	4%
Torbram Road	Immediately south of Old School Road	NB	85	2	1	2%	1%	360	5	6	1%	2%	2,607	53	56	3,200	49	62	2%	2%
		SB	544	11	13	2%	2%	171	1	2	1%	1%	4,189	90	121	5,100	85	133	2%	3%
Old School Road	Between Bramalea Road and Torbram Road	EB	819	6	11	1%	1%	616	2	6	0%	1%	8,407	61	136	10,250	57	150	1%	1%
		WB	594	10	18	2%	3%	774	3	5	0%	1%	8,015	105	182	9,750	98	201	1%	2%
Old School Road	Between Torbram Road and Airport Road	EB	682	6	9	1%	1%	788	5	15	1%	2%	8,613	80	191	10,500	75	211	1%	2%
		WB	421	9	14	2%	3%	671	0	1	0%	0%	6,399	68	125	7,800	64	138	1%	2%
Airport Road	Immediately north of Highway 413	NB	596	50	49	8%	8%	1,379	19	40	1%	3%	11,574	520	715	14,100	489	788	3%	6%
		SB	1,441	47	62	3%	4%	549	17	32	3%	6%	11,661	484	760	14,200	454	838	3%	6%
Airport Road	Between Highway 413 and Old School Road	NB	596	50	49	8%	8%	1,379	19	40	1%	3%	11,574	520	715	14,100	489	788	3%	6%
		SB	1,441	47	62	3%	4%	549	17	32	3%	6%	11,661	484	760	14,200	454	838	3%	6%
Airport Road	Immediately south of Old School Road	NB	819	51	54	6%	7%	1,713	14	29	1%	2%	14,839	486	662	18,100	457	729	3%	4%
		SB	1,924	44	61	2%	3%	1,001	17	34	2%	3%	17,140	461	773	20,900	433	852	2%	4%
Healey Road	Between Airport Road and Innis Lake Road	EB	729	6	9	1%	1%	663	14	26	2%	4%	8,155	154	280	9,950	144	308	1%	3%
		WB	540	32	40	6%	7%	856	1	5	0%	1%	8,183	253	361	10,000	237	398	2%	4%
Innis Lake Road	At Highway 413	NB	190	9	8	5%	4%	548	32	35	6%	6%	4,324	308	347	5,250	289	382	6%	7%
		SB	664	40	37	6%	6%	201	5	8	2%	4%	5,068	338	363	6,200	317	400	5%	6%
Innis Lake Road	Immediately south of Healey Road	NB	279	39	39	14%	14%	592	34	38	6%	6%	5,103	548	621	6,200	515	684	8%	11%
		SB	709	45	42	6%	6%	309	20	33	6%	11%	5,965	488	605	7,250	458	667	6%	9%
Healey Road	At Highway 413	EB	601	4	5	1%	1%	573	2	6	0%	1%	6,881	43	87	8,400	40	96	0%	1%
		WB	600	5	15	1%	3%	759	1	5	0%	1%	7,961	46	161	9,700	44	178	0%	2%
Centreville Creek Road	Immediately north of Healey Road	NB	42	0	1	0%	2%	574	36	41	6%	7%	3,609	270	340	4,400	254	374	6%	9%
		SB	693	50	71	7%	10%	87	0	1	0%	1%	4,574	379	576	5,600	356	635	6%	11%
Centreville Creek Road	At Highway 413	NB	158	3	6	2%	4%	582	36	42	6%	7%	4,337	291	389	5,300	273	429	5%	8%
		SB	662	47	69	7%	10%	237	2	4	1%	2%	5,273	365	591	6,450	342	651	5%	10%
Healey Road	Between Centreville Creek Road and The Gore Road	EB	600	7	5	1%	1%	435	1	2	0%	0%	6,064	54	55	7,400	50	61	1%	1%
		WB	451	2	10	0%	2%	764	1	2	0%	0%	7,115	22	95	8,650	20	104	0%	1%
The Gore Road	Between Highway 413 and Healey Road	NB	272	30	26	11%	10%	914	22	32	2%	3%	6,947	394	468	8,450	370	516	4%	6%
		SB	1,177	52	74	4%	6%	218	5	15	2%	7%	8,171	432	713	9,950	406	785	4%	8%
The Gore Road	Immediately south of Highway 413	NB	272	30	26	11%	10%	914	22	32	2%	3%	6,947	394	468	8,450	370	516	4%	6%
		SB	1,177	52	74	4%	6%	218	5	15	2%	7%	8,171	432	713	9,950	406	785	4%	8%
Humber Station Road	Immediately north of Highway 413	NB	551	9	11	2%	2%	656	6	14	1%	2%	7,071	117	199	8,600	110	219	1%	3%
		SB	422	13	16	3%	4%	566	3	5	0%	1%	5,787	116	172	7,050	109	189	2%	3%
Humber Station Road	Between Highway 413 and Mayfield Road	NB	551	9	11	2%	2%	656	6	14	1%	2%	7,071	117	199	8,600	110	219	1%	3%
		SB	422	13	16	3%	4%	566	3	5	0%	1%	5,787	116	172	7,050	109	189	2%	3%
Clarkway Drive	Immediately south of Mayfield Road	NB	722	9	12	1%	2%	625	5	11	1%	2%	7,892	104	191	9,600	97	210	1%	2%
		SB	567	19	23	3%	4%	696	3	5	0%	1%	7,404	164	232	9,050	154	256	2%	3%
Mayfield Road	Immediately west of Humber Station Road	EB	2,421	81	100	3%	4%	1,411	38	65	3%	5%	22,450	898	1,327	27,350	844	1,462	3%	5%
		WB	1,340	55	65	4%	5%	2,114	46	88	2%	4%	20,236	754	1,231	24,650	708	1,356	3%	6%
Mayfield Road	At Highway 413	EB	2,572	80	98	3%	4%	1,523	40	66	3%	4%	23,994	896	1,327	29,250	841	1,462	3%	5%
		WB	1,466	59	69	4%	5%	2,387	49	92	2%	4%	22,577	812	1,300	27,500	763	1,432	3%	5%
Coleraine Drive	Immediately north of Mayfield Road	NB	1,512	3	4	0%	0%	1,413	17	11	1%	1%	17,138	150	121	20,900	141	133	1%	1%
		SB	1,500	30	15	2%	1%	1,514	3	5	0%	0%	17,660	248	161	21,550	233	178	1%	1%
Coleraine Drive	At Highway 413	NB	937	15	13	2%	1%	1,154	16	10	1%	1%	12,252	233	186	14,950	219	204	1%	1%
		SB	1,328	25	13	2%	1%	972	10	15	1%	2%	13,476	263	226	16,450	247	249	1%	2%
Mayfield Road	Immediately east of Coleraine Drive	NB	922	32	36	3%	4%	933	35	41	4%	4%	10,869	503	621	13,250	472	684	4%	5%
		SB	1,018	40	37	4%	4%	938	28	35	3%	4%	11,461	510	581	13,950	479	640	3%	5%

Appendix A.5 : Raw Traffic Data for 2041 No-Build Scenario

Highway 413

GTA West

Highway 50	Immediately north of Cold Creek Road Realignment	NB	2,001	64	39	3%	2%	2,439	31	31	1%	1%	26,015	713	565	31,700	670	622	2%	2%
		SB	2,722	43	50	2%	2%	2,175	29	36	1%	2%	28,693	540	694	35,000	508	764	1%	2%
Cold Creek Road Realignment	Immediately east of Highway 50	EB																		
		WB																		
Cold Creek Road	Immediately north of Nashville Road	NB	33	0	0	0%	0%	123	1	1	1%	1%	914	8	8	1,100	7	9	1%	1%
		SB	428	4	4	1%	1%	37	0	0	0%	0%	2,725	30	32	3,300	28	36	1%	1%
Highway 50	At Highway 413	NB	2,166	46	92	2%	4%	2,491	31	56	1%	2%	27,289	582	1,187	33,250	547	1,308	2%	4%
		SB	3,043	59	149	2%	5%	2,298	19	27	1%	1%	31,290	587	1,418	38,150	551	1,562	1%	4%
Highway 50	Immediately south of Countryside Drive	NB	2,094	46	78	2%	4%	2,511	31	54	1%	2%	26,981	579	1,072	32,900	544	1,181	2%	4%
		SB	3,001	57	138	2%	5%	2,128	19	23	1%	1%	30,054	570	1,304	36,650	535	1,437	1%	4%
Countryside Drive	Immediately west of Highway 50	EB	757	16	25	2%	3%	448	7	10	1%	2%	7,057	169	282	8,600	159	311	2%	4%
		WB	562	23	19	4%	3%	628	2	9	0%	1%	6,973	184	221	8,500	172	244	2%	3%
Nashville Road	Immediately east of Highway 50	EB	760	18	35	2%	5%	579	7	13	1%	2%	7,842	182	383	9,550	171	422	2%	4%
		WB	596	22	31	4%	5%	570	2	9	0%	2%	6,830	183	324	8,350	172	357	2%	4%
Nashville Road	At Highway 427 Extension	EB	760	18	35	2%	5%	579	7	13	1%	2%	7,842	182	383	9,550	171	422	2%	4%
		WB	596	22	31	4%	5%	570	2	9	0%	2%	6,830	183	324	8,350	172	357	2%	4%
Huntington Road	Immediately north of Kirby Road	NB	10	0	0	0%	0%	10	0	0	0%	0%	117	0	0	150	0	0	0%	0%
		SB	10	0	0	0%	0%	10	0	0	0%	0%	117	0	0	150	0	0	0%	0%
Huntington Road	At Highway 413	NB	268	1	0	0%	0%	251	2	2	1%	1%	3,041	23	16	3,700	21	18	1%	0%
		SB	350	3	6	1%	2%	204	1	1	0%	0%	3,246	30	56	3,950	28	62	1%	2%
Kirby Road	Immediately west of Huntington Road	EB	298	3	6	1%	2%	330	2	2	1%	1%	3,680	38	65	4,500	35	71	1%	2%
		WB	425	2	1	0%	0%	222	2	1	1%	0%	3,791	30	16	4,600	28	18	1%	0%
Highway 27	Immediately north of Highway 413	NB	1,087	63	73	6%	7%	1,936	36	68	2%	4%	17,712	740	1,135	21,600	695	1,251	3%	6%
		SB	1,998	73	121	4%	6%	1,320	25	50	2%	4%	19,444	736	1,376	23,700	692	1,516	3%	6%
Highway 27	Immediately south of Highway 413	NB	1,087	63	73	6%	7%	1,936	36	68	2%	4%	17,712	740	1,135	21,600	695	1,251	3%	6%
		SB	1,998	73	121	4%	6%	1,320	25	50	2%	4%	19,444	736	1,376	23,700	692	1,516	3%	6%
Kirby Road	Immediately east of Highway 27	EB	811	11	18	1%	2%	840	14	22	2%	3%	9,675	182	322	11,800	171	354	1%	3%
		WB	802	24	27	3%	3%	732	4	9	1%	1%	8,989	208	286	10,950	195	315	2%	3%
Kirby Road	Immediately west of Highway 27	EB	23	0	1	1%	5%	7	0	0	3%	4%	175	4	12	200	4	13	2%	7%
		WB	6	0	0	2%	8%	73	1	2	1%	3%	461	9	23	550	8	26	2%	5%
Kipling Avenue	At Highway 413	NB	25	1	1	4%	4%	159	5	6	3%	4%	1,078	45	56	1,300	42	62	3%	5%
		SB	322	13	11	4%	3%	8	0	0	0%	0%	1,934	98	89	2,350	92	98	4%	4%
King Vaughan Road	Between Highway 27 and Kipling Avenue	EB	868	33	51	4%	6%	493	12	23	2%	5%	7,972	333	597	9,700	313	658	3%	7%
		WB	380	17	20	4%	5%	710	21	34	3%	5%	6,391	285	438	7,800	267	483	3%	6%
King Vaughan Road	Immediately east of Kipling Avenue	EB	1,061	40	41	4%	4%	983	27	41	3%	4%	11,976	503	661	14,600	472	729	3%	5%
		WB	991	38	35	4%	4%	946	34	48	4%	5%	11,349	540	669	13,850	508	738	4%	5%
Pine Valley Drive	At Highway 413	NB	322	7	10	2%	3%	302	2	4	1%	1%	3,656	67	111	4,450	63	122	1%	3%
		SB	700	15	30	2%	4%	198	0	1	0%	0%	5,261	116	250	6,400	109	276	2%	4%
Pine Valley Drive	Immediately north of King Vaughan Road	NB	36	1	2	2%	7%	56	1	2	1%	3%	540	11	35	650	11	39	2%	6%
		SB	30	1	2	2%	7%	18	0	1	1%	3%	284	6	21	350	6	24	2%	7%
King Vaughan Road	Immediately west of Pine Valley Drive	EB	1,253	29	59	2%	5%	923	17	33	2%	4%	12,753	346	744	15,550	325	820	2%	5%
		WB	846	24	38	3%	4%	1,036	22	39	2%	4%	11,027	340	618	13,450	319	681	2%	5%
King Vaughan Road	Immediately east of Pine Valley Drive	EB	890	28	56	3%	6%	743	17	33	2%	4%	9,570	339	719	11,650	318	792	3%	7%
		WB	868	31	56	4%	6%	789	20	36	3%	5%	9,705	388	746	11,850	364	822	3%	7%
Weston Road	Immediately north of King Vaughan Road	NB	225	6	7	3%	3%	152	2	4	1%	3%	2,206	56	84	2,700	52	93	2%	3%
		SB	194	6	8	3%	4%	204	3	4	1%	2%	2,335	67	97	2,850	63	107	2%	4%
Weston Road	Immediately north of Highway 413	NB	521	0	0	0%	0%	180	0	0	0%	0%	4,107	4	6	5,000	4	7	0%	0%
		SB	240	0	1	0%	0%	390	0	0	0%	0%	3,689	2	7	4,500	2	8	0%	0%
Weston Road	Immediately north of Kirby Road	NB	916	0	0	0%	0%	550	10	12	2%	2%	8,590	74	101	10,450	69	111	1%	1%
		SB	692	10	9	1%	1%	818	1	0	0%	0%	8,848	79	77	10,800	74	85	1%	1%
King Vaughan Road	Immediately east of Weston Road	EB	761	15	22	2%	3%	584	12	23	2%	4%	7,880	204	361	9,600	191	397	2%	4%
		WB	488	19	27	4%	5%	688	13	22	2%	3%	6,889	244	395	8,400	229	435	3%	5%
King Vaughan Road	Immediately west of Jane Street	EB	2,219	151	150	7%	7%	2,294	117	141	5%	6%	26,443	2,011	2,347	32,250	1,889	2,586	6%	8%
		WB	2,388	149	110	6%	5%	1,999	141	156	7%	8%	25,704	2,177	2,146	31,350	2,044	2,364	7%	8%
King Vaughan Road	Immediately east of Jane Street	EB	2,274	138	138	6%	6%	2,263	101	122	4%	5%	26,583	1,794	2,097	32,400	1,685	2,311	5%	7%
		WB	2,348	149	108	6%	5%	1,987	136	150	7%	8%	25,400	2,139	2,081	30,950	2,009	2,293	6%	7%
Jane Street	Immediately north of King Vaughan Road	NB	552	51	39	9%	7%	1,459	38	43	3%	3%	11,783	668	661	14,350	627	729	4%	5%
		SB	2,059	46	40	2%	2%	482	8	8	2%	2%	14,888	405	387	18,150	381	427	2%	2%
Jane Street	Immediately south of King Vaughan Road	NB	493	13	9	3%	2%	1,564	23	25	1%	2%	12,052	270	274	14,700	254	302	2%	2%
		SB	1,903	20	20	1%	1%	606	4	3	1%	0%	14,701	180	186	17,900	169	204	1%	1%
Kirby Road	At Highway 400	EB	829	7	13	1%	2%	517	4	5	1%	1%	7,889	83	140	9,600	78	154	1%	2%
		WB	501	14	19	3%	4%	690	20	24	3%	3%	6,979	253	343	8,500	237	378	3%	4%

Appendix A.5 : Raw Traffic Data for 2041 No-Build Scenario

Highway 413

GTA West

Major Mackenzie Drive	Immediately west of Highway 427	EB	3,753	91	106	2%	3%	3,406	53	76	2%	2%	41,948	1,075	1,465	51,150	1,009	1,615	2%	3%
		WB	3,284	99	118	3%	4%	3,155	77	120	2%	4%	37,723	1,324	1,919	46,000	1,243	2,114	3%	5%
Major Mackenzie Drive	Immediately east of Highway 427	EB	3,353	111	128	3%	4%	2,652	76	115	3%	4%	35,188	1,403	1,962	42,900	1,318	2,162	3%	5%
		WB	2,713	95	98	4%	4%	3,587	55	82	2%	2%	36,913	1,125	1,451	45,000	1,057	1,598	2%	4%

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario
Highway 413
GTA West

MAINLINE			MAINLINE																			
			2051																			
Section / Location		Direction	AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
			Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Highway 413																				
Hwy 413 N of Hwy 401/407 interchange		NB																		
		SB																		
Hwy 413 N of Winston Churchill Blvd		NB																		
		SB																		
Hwy 413 N of Bovaird Dr		NB																		
		SB																		
Hwy 413 E of Mayfield Rd		EB																		
		WB																		
Hwy 413 E of Chinguacousy Rd		EB																		
		WB																		
Hwy 413 E of Hurontario St		EB																		
		WB																		
Hwy 413 E of Hwy 410		EB																		
		WB																		
Hwy 413 E of Bramalea Rd		EB																		
		WB																		
Hwy 413 E of Airport Rd		EB																		
		WB																		
Hwy 413 E of The Gore Rd		EB																		
		WB																		
Hwy 413 E of Humber Station Rd		EB																		
		WB																		
Hwy 413 E of Hwy 427		EB																		
		WB																		
Hwy 413 E of Hwy 27		EB																		
		WB																		
Connecting Freeways																				
Highway 407	Immediately east of Highway 401/Highway 413	EB	5,924	632	849	11%	14%	2,931	8	3	0%	0%	51,883	4,803	6,872	63,200	4,512	7,572	7%	12%
		WB	3,650	608	847	17%	23%	4,758	371	139	8%	3%	49,264	7,348	7,953	60,100	6,901	8,763	11%	15%
Highway 407	Immediately south of Highway 401	NB	4,746	181	340	4%	7%	1,472	0	0	0%	0%	36,433	1,358	2,742	44,400	1,276	3,022	3%	7%
		SB	2,464	104	144	4%	6%	4,100	0	0	0%	0%	38,460	781	1,161	46,900	733	1,280	2%	3%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 EB mainline (at Trafalgar Road) to Highway 413/Highway 407 S	EB																		
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 EB mainline (at Trafalgar Road) to East of Highway 413/Highway 407 S	EB	10,895	1,022	1,691	9%	16%	8,965	433	977	5%	11%	116,364	10,920	21,520	141,800	10,257	23,710	7%	17%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 WB Collector upstream of Highway 413 N to Highway 401 W Ramp	WB	3,873	263	383	7%	10%	4,400	178	449	4%	10%	48,473	3,310	6,711	59,100	3,109	7,394	5%	13%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 WB Express upstream of Highway 413 N to Highway 401 W Ramp	WB	3,890	285	625	7%	16%	5,495	125	564	2%	10%	54,989	3,077	9,590	67,000	2,890	10,567	4%	16%
Highway 401	Between Highway 407/Highway 413 and Winston Churchill Boulevard	EB	10,245	626	1,187	6%	12%	8,110	382	839	5%	10%	107,546	7,565	16,342	131,100	7,106	18,005	5%	14%
		WB	7,785	557	1,008	7%	13%	10,240	304	1,018	3%	10%	105,612	6,462	16,342	128,700	6,069	18,005	5%	14%
Highway 410 Extension	Between Mayfield Road and Highway 413	NB																		
		SB																		
Highway 410	Immediately west of Mayfield Road	EB	3,001	89	278	3%	9%	1,950	37	80	2%	4%	29,009	946	2,888	35,400	888	3,182	3%	9%
		WB	1,595	136	134	9%	8%	2,926	59	119	2%	4%	26,490	1,464	2,041	32,300	1,375	2,248	4%	7%
Highway 410	Between Mayfield Road and Sandalwood Parkway East	NB	2,323	173	181	7%	8%	3,787	62	140	2%	4%	35,800	1,764	2,589	43,600	1,657	2,853	4%	7%
		SB	4,721	101	383	2%	8%	3,237	55	130	2%	4%	46,628	1,171	4,138	56,800	1,100	4,559	2%	8%
Highway 427	Between Major Mackenzie Drive and Rutherford Road	NB	2,106	33	21	2%	1%	4,117	25	32	1%	1%	36,462	435	427	44,400	409	471	1%	1%
		SB	4,028	34	35	1%	1%	2,651	22	21	1%	1%	39,134	420	452	47,700	395	498	1%	1%
Highway 427	Between Major Mackenzie Drive and Highway 413	NB																		
		SB																		
Highway 400	South of King Road	NB	4,558	390	531	9%	12%	10,135	124	212	1%	2%	86,089	3,858	5,993	104,900	3,623	6,603	3%	6%
		SB	10,824	332	505	3%	5%	4,956	159	363	3%	7%	92,458	3,685	7,001	112,700	3,461	7,714	3%	7%
Highway 400	Between King Vaughan Road and Kirby Road i.e., not including freeway to freeway ramps	NB	4,512	390	530	9%	12%	9,900	124	212	1%	2%	84,443	3,858	5,985	102,900	3,623	6,594	4%	6%
		SB	9,440	310	473	3%	5%	4,502	139	330	3%	7%	81,689	3,370	6,477	99,600	3,165	7,136	3%	7%
Highway 400	North of Teston Road	NB	5,986	485	612	8%	10%	10,861	186	272	2%	3%	98,710	5,036	7,130	120,300	4,730	7,856	4%	7%
		SB	10,378	359	503	3%	5%	5,698	178	378	3%	7%	94,193	4,030	7,106	114,800	3,785	7,829	3%	7%
Connecting Freeway Ramps																				
Highway 407 at Highway 401	Highway 407 NB to Highway 401 EB	S-E	718	96	117	13%	16%	177	2	8	1%	5%	5,244	736	1,008	6,400	691	1,111	11%	17%
Highway 407 at Highway 401	Highway 407 NB to Highway 401 WB	S-W	104	4	19	4%	18%	129	4	20	3%	16%	1,365	60	315	1,650	56	347	3%	21%
Highway 407 at Highway 413	Highway 407 SB to Highway 413 NB	E-N																		

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario

Highway 413

GTA West

Highway 407 at Highway 413	Highway 413 SB to Highway 407 EB	N-E																	
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N-E Ramp	N-E	792	29	94	4%	12%	982	13	46	1%	5%	10,394	315	1,129	12,650	296	1,244	2%	10%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road S-E Ramp	S-E	660	3	185	0%	28%	227	3	9	1%	4%	5,197	45	1,565	6,350	42	1,724	1%	27%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N/S-E (combined) to Highway 401 E																			
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N/S-E (combined) to Highway 413/Highway 407 S																			
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar N/S-E (combined) and Highway 401 EB (at Trafalgar Road) to Highway 413																			
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar N/S-E (combined) and Highway 401 EB (at Trafalgar Road) to Highway 407 S		473	24	49	5%	10%	553	5	20	1%	4%	6,012	218	557	7,350	204	613	3%	8%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 413 N to Highway 401 W Ramp																			
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road E-N/S Ramp	E-N/S	1,523	32	57	2%	4%	1,261	19	36	2%	3%	16,312	383	750	19,900	360	826	2%	4%
Highway 400 at King Vaughan Road	N-E/W Ramp	N-E/W	1,385	22	33	2%	2%	452	21	33	5%	7%	10,763	323	532	13,100	303	587	2%	4%
Highway 400 at King Vaughan Road	E-S Ramp	E-S	787	57	39	7%	5%	532	58	73	11%	14%	7,728	863	903	9,400	811	995	9%	11%
Highway 400 at King Vaughan Road	W-S Ramp	W-S	22	0	0	0%	0%	82	1	2	1%	2%	609	8	16	750	7	18	1%	2%
Highway 400 at King Vaughan Road	S-E/W Ramp	S-E/W	756	104	92	14%	12%	761	63	60	8%	8%	8,888	1,253	1,226	10,850	1,177	1,351	11%	12%
Highway 400 at King Vaughan Road	E-N Ramp	E-N	237	51	31	22%	13%	709	53	41	7%	6%	5,543	781	581	6,750	733	640	11%	9%
Highway 400 at King Vaughan Road	W-N Ramp	W-N	48	0	0	0%	0%	236	0	0	0%	0%	1,664	0	0	2,050	0	0	0%	0%
Highway 427 at Major Mackenzie Drive	N-E/W Ramp	N-E/W																		
Highway 427 at Major Mackenzie Drive	E-S Ramp	E-S	1,670	15	15	1%	1%	887	10	9	1%	1%	14,982	188	194	18,250	176	213	1%	1%
Highway 427 at Major Mackenzie Drive	W-S Ramp	W-S	2,359	19	20	1%	1%	1,765	12	12	1%	1%	24,163	233	258	29,450	219	284	1%	1%
Highway 427 at Major Mackenzie Drive	S-E/W Ramp	S-E/W	2,106	33	21	2%	1%	4,117	25	32	1%	1%	36,462	435	427	44,450	409	471	1%	1%
Highway 427 at Major Mackenzie Drive	E-N Ramp	E-N																		
Highway 427 at Major Mackenzie Drive	W-N Ramp	W-N																		
Highway 410/Highway 410 Extension at Mayfield Road	N-E/W Ramp	N-E/W																		
Highway 410/Highway 410 Extension at Mayfield Road	E-S Ramp	E-S	671	6	79	1%	12%	734	10	32	1%	4%	8,232	120	895	10,050	113	986	1%	10%
Highway 410/Highway 410 Extension at Mayfield Road	W-S Ramp	W-S	1,204	16	61	1%	5%	744	11	24	1%	3%	11,414	203	686	13,900	190	755	1%	5%
Highway 410/Highway 410 Extension at Mayfield Road	S-E/W Ramp	S-E/W	759	37	46	5%	6%	1,007	12	38	1%	4%	10,347	368	678	12,600	345	747	3%	6%
Highway 410/Highway 410 Extension at Mayfield Road	E-N Ramp	E-N																		
Highway 410/Highway 410 Extension at Mayfield Road	W-N Ramp	W-N																		
Highway 410/Highway 410 Extension at Mayfield Road	W-E/W Ramp	W-E/W	1,523	76	79	5%	5%	954	67	117	7%	12%	14,513	1,073	1,581	17,700	1,008	1,742	6%	10%
Highway 410/Highway 410 Extension at Mayfield Road	E-N Ramp	E-N	663	89	103	13%	16%	1,164	61	67	5%	6%	10,705	1,126	1,371	13,050	1,057	1,511	8%	12%

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario
Highway 413
GTA West

HIGHWAY 413 RAMPS			RAMPS																			
			2051																			
			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
Interchange	On/Off	Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Hwy 413 at Hwy 401 / Hwy 407	Hwy to Hwy ramps	E-N																		
		N-E																		
		N-S																		
		S-N																		
Hwy 413 at Winston Churchill Blvd	Off	S-E/W																		
	On	E-N																		
	On	W-N																		
	Off	N-E/W																		
	On	E-S																		
	On	W-S																		
Hwy 413 at Bovaird Dr	Off	S-E/W																		
	On	E-N																		
	On	W-N																		
	Off	N-E/W																		
	On	E-S																		
	On	W-S																		
Hwy 413 at Mayfield Rd	Off	S-E/W																		
	On	E-N																		
	On	W-N																		
	Off	N-E/W																		
	On	E-S																		
	On	W-S																		
Hwy 413 at Chinguacousy Rd	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Hurontario St	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Hwy 410	Hwy to Hwy ramps	W-S																		
		E-S																		
		S-E																		
		S-W																		
Hwy 413 at Bramalea Rd	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Airport Rd	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at The Gore Rd	Off	W-N/S																		
	On	N/S-E																		
	Off	E-N/S																		
	On	N/S-W																		

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario

Highway 413

GTA West

Hwy 413 at Humber Station Rd	Off	W-N/S																		
	On	N-E																		
	On	S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Hwy 427	Hwy to Hwy ramps	W-S																		
		E-S																		
		S-E																		
		S-W																		
Hwy 413 at Hwy 27	Off	W-N/S																		
	On	N/S-E																		
	Off	E-N/S																		
	On	N-W																		
	On	S-W																		
Hwy 413 at Weston Rd	Off	W-N/S																		
	On	N/S-W																		
Hwy 413 at Hwy 400	Hwy to Hwy ramps	W-N																		
		W-S																		
		N-W																		
		S-W																		

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario
Highway 413
GTA West

ARTERIALS			ARTERIALS																		
			2051																		
			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
Arterial	Location	Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Trafalgar Road	Immediately north of Highway 401	NB	4,123	63	85	2%	2%	2,907	31	77	1%	3%	41,190	705	1,307	50,200	663	1,440	1%	3%
		SB	2,908	59	113	2%	4%	3,959	16	53	0%	1%	40,235	563	1,339	49,050	529	1,475	1%	3%
Trafalgar Road	Immediately south of Highway 401	NB	3,369	22	136	1%	4%	2,266	16	103	1%	5%	33,017	285	1,928	40,250	268	2,124	1%	5%
		SB	2,374	43	73	2%	3%	3,122	9	18	0%	1%	32,202	390	734	39,250	367	809	1%	2%
Steeles Avenue	Immediately east of Trafalgar Road	EB	3,635	58	110	2%	3%	2,818	34	66	1%	2%	37,810	690	1,420	46,100	649	1,564	1%	3%
		WB	3,119	69	82	2%	3%	4,517	8	39	0%	1%	44,741	578	976	54,550	543	1,075	1%	2%
Steeles Avenue	Immediately west of Ninth Line N	EB	2,200	29	59	1%	3%	2,617	29	64	1%	2%	28,224	435	992	34,400	409	1,093	1%	3%
		WB	2,528	36	34	1%	1%	2,708	3	12	0%	0%	30,679	293	371	37,400	275	409	1%	1%
Steeles Avenue	At Highway 413	EB	3,797	81	134	2%	4%	3,110	55	101	2%	3%	40,470	1,021	1,895	49,350	959	2,088	2%	4%
		WB	3,011	67	72	2%	2%	3,680	12	30	0%	1%	39,204	593	823	47,800	557	906	1%	2%
Steeles Avenue	Immediately east of Ninth Line S	EB	3,054	52	75	2%	2%	2,446	26	58	1%	2%	32,226	585	1,073	39,300	550	1,182	1%	3%
		WB	2,454	49	36	2%	1%	3,523	5	16	0%	0%	35,021	405	419	42,700	381	462	1%	1%
Steeles Avenue	Immediately east of Tenth Line N	EB	3,765	75	120	2%	3%	2,338	26	57	1%	2%	35,759	758	1,428	43,600	712	1,573	2%	4%
		WB	2,340	48	38	2%	2%	3,771	8	26	0%	1%	35,806	420	516	43,650	395	569	1%	1%
Ninth Line N	Immediately north of Steeles Avenue	NB	1,011	30	32	3%	3%	1,603	28	48	2%	3%	15,316	435	645	18,650	409	711	2%	4%
		SB	2,084	58	75	3%	4%	1,158	37	51	3%	4%	18,996	713	1,016	23,150	670	1,120	3%	5%
Ninth Line S	Immediately south of Steeles Avenue	NB	2,376	60	64	3%	3%	1,597	34	54	2%	3%	23,279	705	952	28,400	663	1,049	2%	4%
		SB	2,289	75	91	3%	4%	2,200	39	53	2%	2%	26,302	856	1,161	32,050	804	1,280	3%	4%
Tenth Line	At Highway 413	NB	364	12	16	3%	4%	855	13	32	2%	4%	7,142	188	387	8,700	176	427	2%	5%
		SB	1,201	39	67	3%	6%	434	3	3	1%	1%	9,580	315	565	11,700	296	622	3%	5%
Derry Road	Immediately east of Highway 407	EB	3,307	47	32	1%	1%	2,823	184	161	7%	6%	35,917	1,734	1,557	43,800	1,628	1,715	4%	4%
		WB	2,702	206	241	8%	9%	2,733	35	54	1%	2%	31,845	1,809	2,379	38,800	1,699	2,622	4%	7%
Derry Road	Immediately west of Highway 407	EB	4,228	126	115	3%	3%	2,680	181	166	7%	6%	40,475	2,304	2,267	49,350	2,164	2,497	4%	5%
		WB	2,759	463	264	17%	10%	3,625	78	119	2%	3%	37,405	4,060	3,089	45,600	3,814	3,404	8%	7%
Winston Churchill Boulevard	Immediately north of Highway 401	NB	3,526	89	51	3%	1%	2,597	50	50	2%	2%	35,876	1,043	815	43,750	980	898	2%	2%
		SB	2,611	105	77	4%	3%	3,314	20	21	1%	1%	34,716	938	790	42,300	881	871	2%	2%
Winston Churchill Boulevard	Immediately south of Highway 401	NB	3,551	95	68	3%	2%	2,125	71	79	3%	4%	33,257	1,246	1,186	40,550	1,170	1,306	3%	3%
		SB	1,851	116	100	6%	5%	2,794	38	41	1%	1%	27,216	1,156	1,137	33,200	1,086	1,253	3%	4%
Winston Churchill Boulevard	Immediately south of Highway 413	NB	931	31	39	3%	4%	2,242	29	42	1%	2%	18,591	450	653	22,650	423	720	2%	3%
		SB	2,265	68	92	3%	4%	963	9	19	1%	2%	18,914	578	895	23,050	543	986	2%	4%
Winston Churchill Boulevard	Between Highway 413 and 5 Side Road	NB	931	31	39	3%	4%	2,242	29	42	1%	2%	18,591	450	653	22,650	423	720	2%	3%
		SB	2,265	68	92	3%	4%	963	9	19	1%	2%	18,914	578	895	23,050	543	986	2%	4%
Winston Churchill Boulevard	Immediately north of 5 Side Road	NB	874	40	37	5%	4%	1,304	20	29	2%	2%	12,761	450	532	15,550	423	587	3%	4%
		SB	1,397	51	68	4%	5%	710	8	16	1%	2%	12,345	443	678	15,050	416	747	3%	5%
5 Side Road	Immediately west of Winston Churchill Boulevard	EB	915	43	49	5%	5%	645	7	14	1%	2%	9,140	375	508	11,150	352	560	3%	5%
		WB	677	11	9	2%	1%	1,025	12	19	1%	2%	9,972	173	226	12,150	162	249	1%	2%
5 Side Road	At Highway 413	EB	1,113	10	11	1%	1%	637	7	12	1%	2%	10,254	128	186	12,500	120	204	1%	2%
		WB	369	24	34	7%	9%	1,091	7	13	1%	1%	8,554	233	379	10,450	219	418	2%	4%
Bovaird Drive	Immediately west of Heritage Road	EB	1,905	98	121	5%	6%	1,786	56	70	3%	4%	21,626	1,156	1,541	26,350	1,086	1,697	4%	6%
		WB	1,678	122	128	7%	8%	1,776	62	93	3%	5%	20,238	1,381	1,783	24,650	1,297	1,964	5%	8%
Bovaird Drive	Between Heritage Road and Highway 413	EB	2,090	105	125	5%	6%	2,342	58	75	2%	3%	25,968	1,223	1,613	31,650	1,149	1,777	4%	6%
		WB	976	15	33	2%	3%	536	0	2	0%	0%	8,859	113	282	10,800	106	311	1%	3%
Bovaird Drive	Immediately east of Highway 413	EB	2,090	105	125	5%	6%	2,342	58	75	2%	3%	25,968	1,223	1,613	31,650	1,149	1,777	4%	6%
		WB	2,122	125	134	6%	6%	2,137	65	93	3%	4%	24,954	1,426	1,831	30,400	1,339	2,017	4%	7%
Heritage Road	At Highway 413	NB	661	3	8	0%	1%	1,333	2	18	0%	1%	11,683	38	210	14,250	35	231	0%	2%
		SB	1,323	20	49	2%	4%	881	4	6	0%	1%	12,914	180	444	15,750	169	489	1%	3%
Heritage Road	Immediately north of Bovaird Drive	NB	524	0	2	0%	0%	794	0	8	0%	1%	7,722	0	81	9,400	0	89	0%	1%
		SB	965	17	38	2%	4%	549	0	2	0%	0%	8,871	128	323	10,800	120	355	1%	3%
Heritage Road	Immediately south of Wanless Drive	NB	569	0	2	0%	0%	1,220	0	8	0%	1%	10,482	0	81	12,800	0	89	0%	1%
		SB	1,456	17	38	1%	3%	661	0	2	0%	0%	12,404	128	323	15,100	120	355	1%	2%
Wanless Drive	Immediately West of Heritage Road	EB	861	34	32	4%	4%	821	10	8	1%	1%	9,855	330	323	12,000	310	355	3%	3%
		WB	947	21	15	2%	2%	872	6	6	1%	1%	10,658	203	169	13,000	190	187	1%	1%
Wanless Drive	At Highway 413	EB	694	23	23	3%	3%	1,018	10	7	1%	1%	10,031	248	242	12,250	233	267	2%	2%
		WB	1,300	26	17	2%	1%	661	4	5	1%	1%	11,490	225	177	14,000	211	196	2%	1%
Heritage Road	Between Wanless Drive and Mayfield Road	NB	954	0	0	0%	0%	237	0	2	0%	1%	6,978	0	16	8,500	0	18	0%	0%
		SB	264	2	7	1%	3%	752	0	1	0%	0%	5,953	15	65	7,250	14	71	0%	1%

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario

Highway 413

GTA West

Heritage Road	Immediately north of Mayfield Road	NB	681	0	3	0%	0%	503	32	29	6%	6%	6,937	240	258	8,450	226	284	3%	3%
		SB	288	38	37	13%	13%	849	2	5	0%	1%	6,662	300	339	8,100	282	373	3%	5%
Mayfield Road	Immediately west of Heritage Road	EB	1,824	67	71	4%	4%	1,169	20	28	2%	2%	17,537	653	799	21,400	613	880	3%	4%
		WB	952	47	47	5%	5%	1,717	27	39	2%	2%	15,638	555	694	19,050	522	764	3%	4%
Mayfield Road	Between Heritage Road and Highway 413	EB	1,772	117	116	7%	7%	1,849	22	34	1%	2%	21,216	1,043	1,210	25,850	980	1,333	4%	5%
		WB	1,823	53	56	3%	3%	1,800	52	66	3%	4%	21,228	788	984	25,900	740	1,084	3%	4%
Mayfield Road	Immediately east of Highway 413	EB	1,772	117	116	7%	7%	1,849	22	34	1%	2%	21,216	1,043	1,210	25,850	980	1,333	4%	5%
		WB	1,823	53	56	3%	3%	1,800	52	66	3%	4%	21,228	788	984	25,900	740	1,084	3%	4%
Mississauga Road	At Highway 413	NB	222	16	14	7%	6%	729	43	29	6%	4%	5,572	443	347	6,800	416	382	6%	6%
		SB	674	27	22	4%	3%	240	10	14	4%	6%	5,355	278	290	6,550	261	320	4%	5%
Creditview Road	At Highway 413	NB	206	28	27	14%	13%	149	3	2	2%	1%	2,080	233	234	2,550	219	258	9%	10%
		SB	295	27	20	9%	7%	214	17	21	8%	10%	2,982	330	331	3,650	310	364	8%	10%
Chinguacousy Road	Immediately south of Highway 413	NB	913	109	97	12%	11%	863	50	57	6%	7%	10,406	1,193	1,242	12,700	1,121	1,369	9%	11%
		SB	1,570	79	83	5%	5%	809	33	53	4%	7%	13,939	841	1,097	17,000	790	1,209	5%	7%
Chinguacousy Road	Between Highway 413 and Old School Road	NB	913	109	97	12%	11%	863	50	57	6%	7%	10,406	1,193	1,242	12,700	1,121	1,369	9%	11%
		SB	1,570	79	83	5%	5%	809	33	53	4%	7%	13,939	841	1,097	17,000	790	1,209	5%	7%
Chinguacousy Road	Immediately north of Old School Road	NB	406	44	38	11%	9%	374	17	21	5%	6%	4,570	458	476	5,550	430	524	8%	9%
		SB	583	33	36	6%	6%	330	13	18	4%	5%	5,349	345	436	6,500	324	480	5%	7%
Old School Road	Immediately west of Chinguacousy Road	EB	779	21	20	3%	3%	970	21	52	2%	5%	10,248	315	581	12,500	296	640	2%	5%
		WB	804	33	40	4%	5%	787	16	18	2%	2%	9,322	368	468	11,350	345	515	3%	5%
Old School Road	At Highway 413	EB	535	6	6	1%	1%	631	4	15	1%	2%	6,832	75	169	8,350	70	187	1%	2%
		WB	591	15	23	3%	4%	628	2	4	0%	1%	7,142	128	218	8,700	120	240	1%	3%
McLaughlin Road	Immediately south of Old School Road	NB	492	22	20	4%	4%	269	8	6	3%	2%	4,459	225	210	5,450	211	231	4%	4%
		SB	591	39	39	7%	7%	454	13	16	3%	4%	6,123	390	444	7,450	367	489	5%	7%
McLaughlin Road	At Highway 413	NB	299	27	24	9%	8%	326	24	20	7%	6%	3,662	383	355	4,450	360	391	8%	9%
		SB	724	88	88	12%	12%	257	16	21	6%	8%	5,748	781	879	7,000	733	969	10%	14%
Old School Road	Between McLaughlin Road and Hurontario Street	EB	687	16	16	2%	2%	809	14	26	2%	3%	8,765	225	339	10,700	211	373	2%	3%
		WB	874	25	28	3%	3%	1,363	16	35	1%	3%	13,107	308	508	16,000	289	560	2%	3%
Hurontario Street	Immediately north of Highway 413	NB	1,261	159	186	13%	15%	2,418	60	122	2%	5%	21,556	1,644	2,484	26,300	1,544	2,737	6%	10%
		SB	2,468	81	249	3%	10%	1,465	59	115	4%	8%	23,044	1,051	2,936	28,100	987	3,235	4%	12%
Hurontario Street	Between Highway 413 and Old School Road	NB	1,261	159	186	13%	15%	2,418	60	122	2%	5%	21,556	1,644	2,484	26,300	1,544	2,737	6%	10%
		SB	2,468	81	249	3%	10%	1,465	59	115	4%	8%	23,044	1,051	2,936	28,100	987	3,235	4%	12%
Hurontario Street	Immediately south of Old School Road	NB	1,647	189	216	11%	13%	3,110	78	160	3%	5%	27,872	2,004	3,033	34,000	1,882	3,342	6%	10%
		SB	2,488	99	272	4%	11%	1,685	71	136	4%	8%	24,451	1,276	3,291	29,800	1,198	3,626	4%	12%
Old School Road	Between Hurontario Street and Kennedy Road	EB	737	3	4	0%	1%	753	1	2	0%	0%	8,730	30	48	10,650	28	53	0%	1%
		WB	560	0	1	0%	0%	757	0	0	0%	0%	7,717	0	8	9,400	0	9	0%	0%
Kennedy Road	At Highway 413	NB	305	15	27	5%	9%	267	6	10	2%	4%	3,351	158	298	4,100	148	329	4%	8%
		SB	549	37	36	7%	7%	132	21	14	16%	11%	3,990	435	403	4,850	409	444	8%	9%
Heart Lake Road	At Highway 413	NB	228	20	17	9%	7%	682	18	21	3%	3%	5,332	285	307	6,500	268	338	4%	5%
		SB	894	16	17	2%	2%	360	19	19	5%	5%	7,347	263	290	8,950	247	320	3%	4%
Heart Lake Road	At Highway 410	NB	793	20	20	3%	3%	488	22	26	5%	5%	7,506	315	371	9,150	296	409	3%	4%
		SB	758	26	33	3%	4%	840	25	27	3%	3%	9,363	383	484	11,400	360	533	3%	5%
Heart Lake Road	Immediately south of Mayfield Road	NB	680	46	38	7%	6%	666	15	21	2%	3%	7,887	458	476	9,600	430	524	4%	5%
		SB	812	42	55	5%	7%	913	13	21	1%	2%	10,107	413	613	12,300	388	675	3%	5%
Heart Lake Road	Immediately south of Old School Road	NB	328	16	14	5%	4%	738	18	20	2%	3%	6,246	255	274	7,600	240	302	3%	4%
		SB	1,139	22	22	2%	2%	429	24	23	6%	5%	9,187	345	363	11,200	324	400	3%	4%
Old School Road	Immediately west of Heart Lake Road	EB	844	14	10	2%	1%	624	10	16	2%	3%	8,601	180	210	10,500	169	231	2%	2%
		WB	454	7	7	2%	2%	742	6	4	1%	1%	7,008	98	89	8,550	92	98	1%	1%
Old School Road	At Highway 410 Extension	EB	868	6	4	1%	0%	635	8	13	1%	2%	8,806	105	137	10,750	99	151	1%	1%
		WB	581	10	8	2%	1%	751	5	3	1%	0%	7,804	113	89	9,500	106	98	1%	1%
Mayfield Road	Immediately west of Heart Lake Road	EB	3,663	102	160	3%	4%	2,820	31	59	1%	2%	37,985	998	1,766	46,300	938	1,946	2%	4%
		WB	2,487	81	87	3%	3%	3,238	36	82	1%	3%	33,544	878	1,363	40,900	825	1,502	2%	4%
Mayfield Road	Between Heart Lake Road and Highway 410	EB	3,293	87	155	3%	5%	2,451	26	52	1%	2%	33,655	848	1,670	41,050	797	1,840	2%	4%
		WB	2,356	69	79	3%	3%	2,706	30	72	1%	3%	29,659	743	1,218	36,150	698	1,342	2%	4%
Mayfield Road	Immediately east of Highway 410	EB	4,047	182	211	4%	5%	3,201	73	142	2%	4%	42,468	1,914	2,847	51,750	1,798	3,137	3%	6%
		WB	3,237	147	245	5%	8%	4,170	89	152	2%	4%	43,399	1,771	3,202	52,900	1,664	3,528	3%	7%
Mayfield Road	Immediately east of Dixie Road	EB	2,999	89	116	3%	4%	2,368	52	100	2%	4%	31,446	1,058	1,742	38,350	994	1,920	3%	5%
		WB	2,127	122	172	6%	8%	2,814	53	100	2%	4%	28,950	1,313	2,194	35,300	1,234	2,417	3%	7%
Countryside Drive	At Highway 410	EB	1,870	53	50	3%	3%	1,600	31	30	2%	2%	20,331	630	645	24,800	592	711	2%	3%
		WB	1,449	75	47	5%	3%	1,699	23	30	1%	2%	18,445	736	621	22,500	691	684	3%	3%
Dixie Road	At Highway 413	NB	414	51	34	12%	8%	674	12	17	2%	3%	6,375	473	411	7,750	444	453	6%	6%
		SB	804	15	21	2%	3%	511	17	19	3%	4%	7,705	240	323	9,400	226	355	2%	4%

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario

Highway 413

GTA West

Dixie Road	Immediately north of Mayfield Road	NB	758	56	48	7%	6%	828	7	23	1%	3%	9,293	473	573	11,350	444	631	4%	6%
		SB	1,203	22	115	2%	10%	844	10	26	1%	3%	11,994	240	1,137	14,600	226	1,253	2%	9%
Dixie Road	Immediately south of Mayfield Road	NB	982	51	39	5%	4%	1,147	33	37	3%	3%	12,474	630	613	15,200	592	675	4%	4%
		SB	1,412	91	115	6%	8%	793	19	32	2%	4%	12,920	826	1,186	15,750	775	1,306	5%	8%
Bramalea Road	North of Highway 413	NB	9	0	0	0%	0%	638	10	17	2%	3%	3,791	75	137	4,600	70	151	2%	3%
		SB	524	29	48	6%	9%	47	4	10	9%	21%	3,346	248	468	4,100	233	515	6%	13%
Bramalea Road	South of Highway 413	NB	9	0	0	0%	0%	638	10	17	2%	3%	3,791	75	137	4,600	70	151	2%	3%
		SB	524	29	48	6%	9%	47	4	10	9%	21%	3,346	248	468	4,100	233	515	6%	13%
Bramalea Road	Immediately south of Old School Road	NB	73	1	3	1%	4%	923	6	12	1%	1%	5,836	53	121	7,100	49	133	1%	2%
		SB	803	28	41	3%	5%	198	2	3	1%	2%	5,865	225	355	7,150	211	391	3%	5%
Old School Road	Immediately west of Bramalea Road	EB	878	0	0	0%	0%	676	2	2	0%	0%	9,105	15	16	11,100	14	18	0%	0%
		WB	639	3	8	0%	1%	823	1	0	0%	0%	8,566	30	65	10,450	28	71	0%	1%
Torbram Road	At Highway 413	NB	218	21	17	10%	8%	760	13	14	2%	2%	5,730	255	250	7,000	240	275	3%	4%
		SB	867	14	16	2%	2%	246	9	10	4%	4%	6,521	173	210	7,950	162	231	2%	3%
Torbram Road	Immediately south of Old School Road	NB	80	2	1	3%	1%	633	13	15	2%	2%	4,178	113	129	5,100	106	142	2%	3%
		SB	675	10	12	1%	2%	209	4	8	2%	4%	5,180	105	161	6,300	99	178	2%	3%
Old School Road	Between Bramalea Road and Torbram Road	EB	823	8	14	1%	2%	789	2	6	0%	1%	9,445	75	161	11,500	70	178	1%	2%
		WB	763	7	11	1%	1%	836	4	6	0%	1%	9,369	83	137	11,400	78	151	1%	1%
Old School Road	Between Torbram Road and Airport Road	EB	674	7	11	1%	2%	1,097	5	14	0%	1%	10,377	90	202	12,650	85	222	1%	2%
		WB	550	6	10	1%	2%	699	0	1	0%	0%	7,318	45	89	8,900	42	98	0%	1%
Airport Road	Immediately north of Highway 413	NB	584	45	44	8%	8%	1,065	12	24	1%	2%	9,662	428	548	11,800	402	604	3%	5%
		SB	1,935	49	64	3%	3%	608	24	46	4%	8%	14,900	548	887	18,150	515	978	3%	5%
Airport Road	Between Highway 413 and Old School Road	NB	584	45	44	8%	8%	1,065	12	24	1%	2%	9,662	428	548	11,800	402	604	3%	5%
		SB	1,935	49	64	3%	3%	608	24	46	4%	8%	14,900	548	887	18,150	515	978	3%	5%
Airport Road	Immediately south of Old School Road	NB	940	51	54	5%	6%	2,841	19	39	1%	1%	22,154	525	750	27,000	493	826	2%	3%
		SB	2,734	49	68	2%	2%	1,196	24	49	2%	4%	23,027	548	944	28,050	515	1,040	2%	4%
Healey Road	Between Airport Road and Innis Lake Road	EB	748	7	10	1%	1%	971	12	22	1%	2%	10,072	143	258	12,300	134	284	1%	2%
		WB	781	24	29	3%	4%	942	1	4	0%	0%	10,095	188	266	12,300	176	293	1%	2%
Innis Lake Road	At Highway 413	NB	268	12	11	4%	4%	931	32	35	3%	4%	7,025	330	371	8,550	310	409	4%	5%
		SB	939	33	31	4%	3%	363	9	15	2%	4%	7,629	315	371	9,300	296	409	3%	4%
Innis Lake Road	Immediately south of Healey Road	NB	338	71	71	21%	21%	878	36	41	4%	5%	7,125	803	903	8,700	754	995	9%	11%
		SB	934	38	36	4%	4%	446	33	54	7%	12%	8,086	533	726	9,850	501	800	5%	8%
Healey Road	At Highway 413	EB	597	5	6	1%	1%	760	2	6	0%	1%	7,951	53	97	9,700	49	107	1%	1%
		WB	763	3	11	0%	1%	827	1	4	0%	0%	9,316	30	121	11,350	28	133	0%	1%
Centreville Creek Road	Immediately north of Healey Road	NB	32	0	1	0%	3%	870	28	32	3%	4%	5,285	210	266	6,450	197	293	3%	5%
		SB	933	50	71	5%	8%	128	0	1	0%	1%	6,217	375	581	7,600	352	640	5%	8%
Centreville Creek Road	At Highway 413	NB	139	2	5	1%	4%	877	30	35	3%	4%	5,953	240	323	7,250	226	355	3%	5%
		SB	846	47	69	6%	8%	347	3	7	1%	2%	6,990	375	613	8,500	352	675	4%	8%
Healey Road	Between Centreville Creek Road and The Gore Road	EB	605	8	6	1%	1%	533	0	1	0%	0%	6,668	60	56	8,150	56	62	1%	1%
		WB	554	1	6	0%	1%	832	1	2	0%	0%	8,121	15	65	9,900	14	71	0%	1%
The Gore Road	Between Highway 413 and Healey Road	NB	322	26	23	8%	7%	1,124	26	37	2%	3%	8,472	390	484	10,350	367	533	4%	5%
		SB	1,411	39	55	3%	4%	280	5	13	2%	5%	9,908	330	548	12,100	310	604	3%	5%
The Gore Road	Immediately south of Highway 413	NB	322	26	23	8%	7%	1,124	26	37	2%	3%	8,472	390	484	10,350	367	533	4%	5%
		SB	1,411	39	55	3%	4%	280	5	13	2%	5%	9,908	330	548	12,100	310	604	3%	5%
Humber Station Road	Immediately north of Highway 413	NB	617	10	12	2%	2%	810	7	15	1%	2%	8,361	128	218	10,200	120	240	1%	2%
		SB	539	13	16	2%	3%	662	2	5	0%	1%	7,037	113	169	8,600	106	187	1%	2%
Humber Station Road	Between Highway 413 and Mayfield Road	NB	617	10	12	2%	2%	810	7	15	1%	2%	8,361	128	218	10,200	120	240	1%	2%
		SB	539	13	16	2%	3%	662	2	5	0%	1%	7,037	113	169	8,600	106	187	1%	2%
Clarkway Drive	Immediately south of Mayfield Road	NB	765	10	13	1%	2%	738	7	16	1%	2%	8,806	128	234	10,750	120	258	1%	2%
		SB	650	18	23	3%	4%	773	4	7	1%	1%	8,338	165	242	10,150	155	267	2%	3%
Mayfield Road	Immediately west of Humber Station Road	EB	2,652	102	125	4%	5%	2,064	45	76	2%	4%	27,632	1,103	1,621	33,700	1,036	1,786	3%	5%
		WB	1,970	69	82	4%	4%	2,379	54	103	2%	4%	25,482	923	1,492	31,050	867	1,644	3%	5%
Mayfield Road	At Highway 413	EB	2,605	104	128	4%	5%	2,104	48	81	2%	4%	27,591	1,141	1,686	33,650	1,071	1,857	3%	6%
		WB	2,059	76	88	4%	4%	2,482	64	121	3%	5%	26,607	1,051	1,686	32,450	987	1,857	3%	6%
Coleraine Drive	Immediately north of Mayfield Road	NB	1,513	4	5	0%	0%	1,703	14	9	1%	1%	18,843	135	113	22,950	127	124	1%	1%
		SB	2,036	29	14	1%	1%	1,501	5	8	0%	1%	20,724	255	177	25,250	240	196	1%	1%
Coleraine Drive	At Highway 413	NB	983	19	17	2%	2%	1,407	19	12	1%	1%	14,004	285	234	17,050	268	258	2%	2%
		SB	1,660	31	16	2%	1%	1,055	20	30	2%	3%	15,908	383	371	19,400	360	409	2%	2%
Mayfield Road	Immediately east of Coleraine Drive	NB	1,097	40	45	4%	4%	1,854	178	208	10%	11%	17,291	1,636	2,041	21,100	1,537	2,248	7%	11%
		SB	1,634	67	62	4%	4%	1,265	37	46	3%	4%	16,986	781	871	20,700	733	960	4%	5%

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario

Highway 413

GTA West

Highway 50	Immediately north of Cold Creek Road Realignment	NB	2,172	62	38	3%	2%	3,148	29	29	1%	1%	31,171	683	540	38,000	641	595	2%	2%
		SB	3,520	43	50	1%	1%	2,399	26	33	1%	1%	34,681	518	669	42,300	486	738	1%	2%
Cold Creek Road Realignment	Immediately east of Highway 50	EB																		
		WB																		
Cold Creek Road	Immediately north of Nashville Road	NB	34	0	0	0%	0%	150	1	1	1%	1%	1,078	8	8	1,300	7	9	1%	1%
		SB	545	4	4	1%	1%	37	0	0	0%	0%	3,410	30	32	4,150	28	36	1%	1%
Highway 50	At Highway 413	NB	2,322	44	88	2%	4%	3,202	29	52	1%	2%	32,366	548	1,129	39,450	515	1,244	1%	3%
		SB	3,915	59	149	2%	4%	2,513	17	24	1%	1%	37,663	570	1,395	45,900	536	1,537	1%	3%
Highway 50	Immediately south of Countryside Drive	NB	2,224	45	77	2%	3%	3,140	30	51	1%	2%	31,429	563	1,032	38,300	529	1,138	1%	3%
		SB	3,899	57	138	1%	4%	2,322	17	21	1%	1%	36,450	555	1,282	44,450	522	1,413	1%	3%
Countryside Drive	Immediately west of Highway 50	EB	697	8	12	1%	2%	694	5	8	1%	1%	8,150	98	161	9,950	92	178	1%	2%
		WB	982	20	16	2%	2%	591	1	4	0%	1%	9,217	158	161	11,250	148	178	1%	2%
Nashville Road	Immediately east of Highway 50	EB	848	9	17	1%	2%	802	5	10	1%	1%	9,668	105	218	11,800	99	240	1%	2%
		WB	915	14	19	2%	2%	768	1	6	0%	1%	9,861	113	202	12,000	106	222	1%	2%
Nashville Road	At Highway 427 Extension	EB	848	9	17	1%	2%	802	5	10	1%	1%	9,668	105	218	11,800	99	240	1%	2%
		WB	915	14	19	2%	2%	768	1	6	0%	1%	9,861	113	202	12,000	106	222	1%	2%
Huntington Road	Immediately north of Kirby Road	NB	10	0	0	0%	0%	10	0	0	0%	0%	117	0	0	150	0	0	0%	0%
		SB	10	0	0	0%	0%	10	0	0	0%	0%	117	0	0	150	0	0	0%	0%
Huntington Road	At Highway 413	NB	484	1	0	0%	0%	468	3	3	1%	1%	5,578	30	24	6,800	28	27	0%	0%
		SB	646	3	6	0%	1%	357	2	2	1%	1%	5,877	38	65	7,150	35	71	0%	1%
Kirby Road	Immediately west of Huntington Road	EB	505	4	8	1%	2%	584	4	4	1%	1%	6,381	60	97	7,800	56	107	1%	1%
		WB	633	3	1	0%	0%	581	4	2	1%	0%	7,113	53	24	8,650	49	27	1%	0%
Highway 27	Immediately north of Highway 413	NB	967	59	68	6%	7%	2,185	44	83	2%	4%	18,468	773	1,218	22,500	726	1,342	3%	6%
		SB	2,299	86	142	4%	6%	1,520	23	47	2%	3%	22,376	818	1,524	27,300	768	1,680	3%	6%
Highway 27	Immediately south of Highway 413	NB	967	59	68	6%	7%	2,185	44	83	2%	4%	18,468	773	1,218	22,500	726	1,342	3%	6%
		SB	2,299	86	142	4%	6%	1,520	23	47	2%	3%	22,376	818	1,524	27,300	768	1,680	3%	6%
Kirby Road	Immediately east of Highway 27	EB	950	12	20	1%	2%	1,161	17	27	1%	2%	12,369	218	379	15,100	204	418	1%	3%
		WB	889	24	28	3%	3%	921	4	9	0%	1%	10,605	210	298	12,950	197	329	2%	3%
Kirby Road	Immediately west of Highway 27	EB	27	0	1	0%	4%	9	0	0	0%	0%	211	0	8	250	0	9	0%	4%
		WB	7	0	1	0%	14%	101	1	3	1%	3%	633	8	32	750	7	36	1%	5%
Kipling Avenue	At Highway 413	NB	92	3	3	3%	3%	245	6	7	2%	3%	1,975	68	81	2,400	63	89	3%	4%
		SB	404	14	12	3%	3%	61	0	0	0%	0%	2,725	105	97	3,300	99	107	3%	3%
King Vaughan Road	Between Highway 27 and Kipling Avenue	EB	976	20	31	2%	3%	543	11	21	2%	4%	8,900	233	419	10,850	219	462	2%	4%
		WB	518	25	30	5%	6%	888	10	17	1%	2%	8,238	263	379	10,050	247	418	2%	4%
King Vaughan Road	Immediately east of Kipling Avenue	EB	1,236	32	33	3%	3%	1,222	28	43	2%	4%	14,402	450	613	17,550	423	675	2%	4%
		WB	1,172	43	40	4%	3%	1,245	22	30	2%	2%	14,162	488	565	17,250	458	622	3%	4%
Pine Valley Drive	At Highway 413	NB	495	18	27	4%	5%	479	3	6	1%	1%	5,707	158	266	6,950	148	293	2%	4%
		SB	853	18	35	2%	4%	269	0	1	0%	0%	6,574	135	290	8,000	127	320	2%	4%
Pine Valley Drive	Immediately north of King Vaughan Road	NB	36	1	2	3%	6%	56	1	2	2%	4%	539	15	32	650	14	36	2%	5%
		SB	30	1	2	3%	7%	18	0	1	0%	6%	281	8	24	350	7	27	2%	8%
King Vaughan Road	Immediately west of Pine Valley Drive	EB	1,434	26	54	2%	4%	1,119	19	37	2%	3%	14,959	338	734	18,250	317	809	2%	4%
		WB	1,005	30	48	3%	5%	1,354	15	26	1%	2%	13,822	338	597	16,850	317	658	2%	4%
King Vaughan Road	Immediately east of Pine Valley Drive	EB	1,022	28	56	3%	5%	873	18	35	2%	4%	11,103	345	734	13,550	324	809	2%	6%
		WB	902	30	53	3%	6%	945	13	23	1%	2%	10,822	323	613	13,200	303	675	2%	5%
Weston Road	Immediately north of King Vaughan Road	NB	204	5	6	2%	3%	169	2	4	1%	2%	2,185	53	81	2,650	49	89	2%	3%
		SB	216	6	8	3%	4%	242	3	4	1%	2%	2,684	68	97	3,250	63	107	2%	3%
Weston Road	Immediately north of Highway 413	NB	581	0	0	0%	0%	200	0	0	0%	0%	4,576	0	0	5,600	0	0	0%	0%
		SB	276	0	1	0%	0%	489	0	0	0%	0%	4,482	0	8	5,450	0	9	0%	0%
Weston Road	Immediately north of Kirby Road	NB	1,030	0	0	0%	0%	611	10	13	2%	2%	9,615	75	105	11,700	70	116	1%	1%
		SB	796	11	10	1%	1%	1,042	1	1	0%	0%	10,769	90	89	13,150	85	98	1%	1%
King Vaughan Road	Immediately east of Weston Road	EB	927	16	23	2%	2%	667	13	26	2%	4%	9,340	218	395	11,400	204	435	2%	4%
		WB	569	23	32	4%	6%	862	11	19	1%	2%	8,385	255	411	10,200	240	453	2%	4%
King Vaughan Road	Immediately west of Jane Street	EB	2,576	157	156	6%	6%	2,603	133	160	5%	6%	30,345	2,177	2,549	37,000	2,044	2,808	6%	8%
		WB	2,773	180	133	6%	5%	2,476	118	130	5%	5%	30,755	2,237	2,121	37,500	2,101	2,337	6%	6%
King Vaughan Road	Immediately east of Jane Street	EB	2,559	146	146	6%	6%	2,609	112	135	4%	5%	30,280	1,936	2,267	36,900	1,819	2,497	5%	7%
		WB	2,776	219	159	8%	6%	2,310	118	130	5%	6%	29,800	2,529	2,331	36,350	2,376	2,568	7%	7%
Jane Street	Immediately north of King Vaughan Road	NB	796	112	86	14%	11%	1,718	36	40	2%	2%	14,730	1,111	1,016	17,950	1,043	1,120	6%	6%
		SB	2,368	46	40	2%	2%	602	7	7	1%	1%	17,402	398	379	21,200	374	418	2%	2%
Jane Street	Immediately south of King Vaughan Road	NB	508	15	10	3%	2%	1,883	16	18	1%	1%	14,009	233	226	17,100	219	249	1%	1%
		SB	2,104	13	13	1%	1%	662	0	0	0%	0%	16,207	98	105	19,750	92	116	0%	1%
Kirby Road	At Highway 400	EB	965	0	0	0%	0%	627	5	5	1%	1%	9,328	38	40	11,350	35	44	0%	0%
		WB	607	16	22	3%	4%	841	20	24	2%	3%	8,484	270	371	10,350	254	409	2%	4%
Major Mackenzie Drive	Immediately west of Highway 427	EB	3,232	37	43	1%	1%	3,979	50	72	1%	2%	42,251	653	928	51,500	613	1,022	1%	2%

Appendix A.5 : Raw Traffic Data for 2051 No-Build Scenario

Highway 413

GTA West

		WB	4,713	107	127	2%	3%	3,677	70	109	2%	3%	49,159	1,328	1,904	59,950	1,248	2,097	2%	3%
Major Mackenzie Drive	Immediately east of Highway 427	EB	3,364	118	137	4%	4%	3,370	85	129	3%	4%	39,456	1,524	2,146	48,100	1,431	2,364	3%	5%
		WB	3,103	115	117	4%	4%	3,990	53	79	1%	2%	41,559	1,261	1,581	50,650	1,184	1,742	2%	3%

Appendix A.5 : Raw Traffic Data for 2041 Build Scenario
Highway 413
GTA West

MAINLINE																				
			2041																	
Section / Location			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
		Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Highway 413																				
Hwy 413 N of Hwy 401/407 interchange		NB	3,965	497	470	13%	12%	4,330	311	420	7%	10%	48,605	6,070	7,181	59,300	5,701	7,912	10%	13%
		SB	5,230	457	414	9%	8%	4,186	373	417	9%	10%	55,167	6,232	6,703	67,200	5,854	7,385	9%	11%
Hwy 413 N of Winston Churchill Blvd		NB	4,380	480	443	11%	10%	5,444	315	401	6%	7%	57,564	5,964	6,813	70,200	5,602	7,506	8%	11%
		SB	5,986	462	394	8%	7%	4,421	376	412	9%	9%	60,975	6,287	6,504	74,300	5,905	7,166	8%	10%
Hwy 413 N of Bovaird Dr		NB	3,772	388	369	10%	10%	4,177	260	349	6%	8%	46,573	4,867	5,791	56,800	4,572	6,380	8%	11%
		SB	4,643	365	325	8%	7%	3,684	310	385	8%	10%	48,788	5,066	5,728	59,500	4,758	6,311	8%	11%
Hwy 413 E of Mayfield Rd		EB	3,612	388	389	11%	11%	3,746	268	380	7%	10%	43,110	4,918	6,202	52,600	4,619	6,834	9%	13%
		WB	4,043	363	344	9%	9%	3,413	327	419	10%	12%	43,683	5,174	6,158	53,300	4,860	6,784	9%	13%
Hwy 413 E of Chinguacousy Rd		EB	4,690	480	485	10%	10%	4,030	305	444	8%	11%	51,098	5,892	7,496	62,300	5,534	8,260	9%	13%
		WB	4,274	416	424	10%	10%	4,119	385	502	9%	12%	49,177	6,011	7,465	59,900	5,646	8,224	9%	14%
Hwy 413 E of Hurontario St		EB	5,657	548	620	10%	11%	4,248	353	539	8%	13%	58,033	6,757	9,351	70,700	6,347	10,303	9%	15%
		WB	4,477	488	506	11%	11%	5,284	423	591	8%	11%	57,188	6,834	8,853	69,700	6,419	9,754	9%	14%
Hwy 413 E of Hwy 410		EB	5,139	562	559	11%	11%	4,639	362	545	8%	12%	57,291	6,933	8,901	69,800	6,512	9,807	9%	14%
		WB	4,978	481	505	10%	10%	4,797	450	598	9%	12%	57,273	6,989	8,892	69,800	6,564	9,797	9%	14%
Hwy 413 E of Bramalea Rd		EB	5,013	567	584	11%	12%	4,402	392	600	9%	14%	55,166	7,200	9,554	67,200	6,762	10,526	10%	16%
		WB	4,523	550	585	12%	13%	4,593	470	640	10%	14%	53,411	7,656	9,878	65,100	7,191	10,884	11%	17%
Hwy 413 E of Airport Rd		EB	4,948	563	588	11%	12%	4,014	371	575	9%	14%	52,511	7,014	9,380	64,000	6,588	10,334	10%	16%
		WB	4,306	543	571	13%	13%	4,628	464	635	10%	14%	52,347	7,553	9,730	63,800	7,095	10,720	11%	17%
Hwy 413 E of The Gore Rd		EB	4,519	535	565	12%	13%	3,641	352	544	10%	15%	47,809	6,663	8,948	58,300	6,258	9,859	11%	17%
		WB	3,907	518	541	13%	14%	4,282	455	626	11%	15%	47,976	7,302	9,411	58,500	6,858	10,369	12%	18%
Hwy 413 E of Humber Station Rd		EB	5,462	648	680	12%	12%	5,042	417	643	8%	13%	61,541	7,999	10,666	75,000	7,513	11,752	10%	16%
		WB	4,967	594	591	12%	12%	5,343	494	675	9%	13%	60,413	8,166	10,207	73,600	7,669	11,246	10%	15%
Hwy 413 E of Hwy 427		EB	4,652	637	647	14%	14%	5,381	402	643	7%	12%	58,786	7,803	10,407	71,700	7,329	11,466	10%	16%
		WB	5,714	540	496	9%	9%	4,543	439	621	10%	14%	60,095	7,345	9,015	73,300	6,899	9,933	9%	14%
Hwy 413 E of Hwy 27		EB	4,274	604	610	14%	14%	4,405	344	569	8%	13%	50,856	7,112	9,512	62,000	6,680	10,480	11%	17%
		WB	4,619	466	433	10%	9%	4,263	417	580	10%	14%	52,041	6,633	8,168	63,400	6,230	8,999	10%	14%
Connecting Freeways																				
Highway 407	Immediately east of Highway 401/Highway 413	EB	3,921	295	287	8%	7%	1,273	0	0	0%	0%	30,433	2,214	2,315	37,100	2,080	2,551	6%	7%
		WB	1,468	39	63	3%	4%	2,552	3	1	0%	0%	23,554	315	516	28,700	296	569	1%	2%
Highway 407	Immediately south of Highway 401	NB	3,451	294	356	9%	10%	1,353	134	79	10%	6%	28,148	3,212	3,509	34,300	3,017	3,866	9%	11%
		SB	1,656	338	313	20%	19%	2,361	273	59	12%	2%	23,536	4,586	3,001	28,700	4,307	3,306	15%	12%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 EB mainline (at Trafalgar Road) to Highway 413/Highway 407 S	EB	1,870	299	161	16%	9%	2,006	157	290	8%	14%	22,707	3,424	3,644	27,700	3,216	4,015	12%	14%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 EB mainline (at Trafalgar Road) to East of Highway 413/Highway 407 S	EB	9,101	566	1,057	6%	12%	6,765	300	740	4%	11%	92,963	6,504	14,500	113,300	6,109	15,976	5%	14%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 WB Collector upstream of Highway 413 N to Highway 401 W Ramp	WB	3,021	260	413	9%	14%	3,148	133	314	4%	10%	36,144	2,945	5,866	44,100	2,766	6,463	6%	15%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 WB Express upstream of Highway 413 N to Highway 401 W Ramp	WB	3,403	292	635	9%	19%	5,224	130	529	2%	10%	50,552	3,165	9,392	61,600	2,973	10,348	5%	17%
Highway 401	Between Highway 407/Highway 413 and Winston Churchill Boulevard	EB	9,584	568	1,045	6%	11%	7,376	312	708	4%	10%	99,371	6,607	14,141	121,100	6,205	15,580	5%	13%
		WB	6,834	554	1,046	8%	15%	9,301	295	926	3%	10%	94,538	6,372	15,903	115,200	5,985	17,522	5%	15%
Highway 410 Extension	Between Mayfield Road and Highway 413	NB	918	86	73	9%	8%	1,724	25	55	1%	3%	15,484	836	1,031	18,900	786	1,136	4%	6%
		SB	1,937	66	133	3%	7%	847	43	55	5%	7%	16,311	815	1,520	19,900	766	1,675	4%	8%
Highway 410	Immediately west of Mayfield Road	EB	2,206	73	186	3%	8%	1,268	31	64	2%	5%	20,357	782	2,020	24,800	735	2,225	3%	9%
		WB	928	75	68	8%	7%	1,687	37	63	2%	4%	15,324	846	1,054	18,700	794	1,161	4%	6%
Highway 410	Between Mayfield Road and Sandalwood Parkway East	NB	2,318	152	148	7%	6%	3,701	65	137	2%	4%	35,265	1,630	2,302	43,000	1,531	2,536	4%	6%
		SB	4,652	120	413	3%	9%	3,056	79	148	3%	5%	45,166	1,494	4,518	55,100	1,403	4,978	3%	9%
Highway 427	Between Major Mackenzie Drive and Rutherford Road	NB	2,405	145	131	6%	5%	4,672	114	167	2%	4%	41,466	1,950	2,401	50,500	1,832	2,645	4%	5%
		SB	4,303	151	109	4%	3%	2,840	75	105	3%	4%	41,853	1,703	1,722	51,000	1,599	1,898	3%	4%
Highway 427	Between Major Mackenzie Drive and Highway 413	NB	1,887	271	234	14%	12%	3,520	171	239	5%	7%	31,679	3,314	3,817	38,600	3,113	4,205	8%	11%
		SB	3,443	228	172	7%	5%	2,380	130	186	5%	8%	34,117	2,690	2,884	41,600	2,527	3,178	6%	8%
Highway 400	South of King Road	NB	3,031	205	323	7%	11%	7,224	43	84	1%	1%	60,085	1,865	3,284	73,200	1,752	3,618	2%	5%
		SB	10,305	390	490	4%	5%	4,939	271	478	5%	10%	89,320	4,962	7,806	108,900	4,661	8,601	4%	8%
Highway 400	Between King Vaughan Road and Kirby Road i.e., not including freeway to freeway ramps	NB	2,994	205	323	7%	11%	7,012	43	84	1%	1%	58,626	1,865	3,281	71,500	1,752	3,614	2%	5%
		SB	6,950	164	296	2%	4%	2,853	40	161	1%	6%	57,439	1,531	3,688	70,000	1,438	4,064	2%	6%
Highway 400	North of Teston Road	NB	4,884	453	571	9%	12%	9,501	235	299	2%	3%	84,280	5,169	7,018	102,700	4,855	7,733	5%	8%
		SB	9,023	347	470	4%	5%	4,772	172	338	4%	7%	80,828	3,897	6,516	98,500	3,660	7,180	4%	7%

Appendix A.5 : Raw Traffic Data for 2041 Build Scenario

Highway 413

GTA West

Connecting Freeway Ramps																				
Highway 407 at Highway 401	Highway 407 NB to Highway 401 EB	S-E	649	91	102	14%	16%	151	2	7	1%	5%	4,690	700	884	5,700	657	974	12%	17%
Highway 407 at Highway 401	Highway 407 NB to Highway 401 WB	S-W	134	4	19	3%	14%	121	3	19	3%	16%	1,496	56	305	1,800	52	336	3%	19%
Highway 407 at Highway 413	Highway 407 SB to Highway 413 NB	E-N	32	0	0	0%	0%	187	0	3	0%	1%	1,285	0	22	1,550	0	25	0%	2%
Highway 407 at Highway 413	Highway 413 SB to Highway 407 EB	N-E	307	3	5	1%	2%	41	0	0	0%	0%	2,038	21	40	2,500	20	45	1%	2%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N-E Ramp	N-E	876	31	80	4%	9%	715	10	39	1%	5%	9,323	313	957	11,350	294	1,054	3%	9%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road S-E Ramp	S-E	1,187	5	102	0%	9%	895	2	8	0%	1%	12,197	58	889	14,850	54	980	0%	7%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N/S-E (combined) to Highway 401 E		1,158	32	117	3%	10%	730	12	47	2%	6%	11,061	334	1,320	13,500	314	1,454	2%	11%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N/S-E (combined) to Highway 413/Highway 407 S		904	4	65	0%	7%	881	0	1	0%	0%	10,459	36	526	12,750	34	579	0%	5%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar N/S-E (combined) and Highway 401 EB (at Trafalgar Road) to Highway 413		2,671	301	211	11%	8%	2,821	153	274	5%	10%	32,175	3,409	3,905	39,200	3,202	4,302	8%	11%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar N/S-E (combined) and Highway 401 EB (at Trafalgar Road) to Highway 407 S		103	2	15	2%	15%	66	4	18	7%	27%	991	51	265	1,200	48	292	4%	24%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 413 N to Highway 401 W Ramp		2,900	87	52	3%	2%	2,486	84	327	3%	13%	31,554	1,287	3,061	38,450	1,209	3,373	3%	9%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road E-N/S Ramp	E-N/S	2,400	20	35	1%	1%	1,828	22	74	1%	4%	24,773	318	878	30,200	298	968	1%	3%
Highway 400 at King Vaughan Road	N-E/W Ramp	N-E/W	861	5	9	1%	1%	316	12	17	4%	5%	6,899	124	202	8,400	116	223	1%	3%
Highway 400 at King Vaughan Road	E-S Ramp	E-S	835	46	38	5%	5%	731	40	39	5%	5%	9,172	640	623	11,200	601	686	5%	6%
Highway 400 at King Vaughan Road	W-S Ramp	W-S	61	0	0	1%	0%	414	3	4	1%	1%	2,785	27	32	3,400	25	36	1%	1%
Highway 400 at King Vaughan Road	S-E/W Ramp	S-E/W	1,071	121	109	11%	10%	971	68	58	7%	6%	11,965	1,413	1,350	14,600	1,327	1,487	9%	10%
Highway 400 at King Vaughan Road	E-N Ramp	E-N	54	3	2	5%	3%	579	16	17	3%	3%	3,710	144	149	4,500	136	165	3%	4%
Highway 400 at King Vaughan Road	W-N Ramp	W-N	37	0	0	0%	1%	211	0	0	0%	0%	1,458	0	3	1,800	0	4	0%	0%
Highway 427 at Major Mackenzie Drive	N-E/W Ramp	N-E/W	1,195	93	80	8%	7%	800	63	91	8%	11%	11,693	1,173	1,380	14,250	1,102	1,520	8%	11%
Highway 427 at Major Mackenzie Drive	E-S Ramp	E-S	809	2	1	0%	0%	237	1	2	1%	1%	6,127	28	28	7,450	27	30	0%	0%
Highway 427 at Major Mackenzie Drive	W-S Ramp	W-S	1,246	14	15	1%	1%	1,024	7	8	1%	1%	13,302	157	190	16,200	148	210	1%	1%
Highway 427 at Major Mackenzie Drive	S-E/W Ramp	S-E/W	1,492	15	12	1%	1%	2,255	17	16	1%	1%	21,951	237	223	26,750	223	246	1%	1%
Highway 427 at Major Mackenzie Drive	E-N Ramp	E-N	805	128	104	16%	13%	753	71	86	9%	11%	9,127	1,496	1,534	11,150	1,405	1,690	13%	15%
Highway 427 at Major Mackenzie Drive	W-N Ramp	W-N	169	12	11	7%	7%	349	2	2	1%	1%	3,037	105	105	3,700	99	116	3%	3%
Highway 410/Highway 410 Extension at Mayfield Road	N-E/W Ramp	N-E/W	303	25	29	8%	10%	27	1	1	3%	3%	1,932	193	240	2,350	181	265	8%	11%
Highway 410/Highway 410 Extension at Mayfield Road	E-S Ramp	E-S	235	1	69	0%	29%	506	3	14	1%	3%	4,345	25	672	5,300	23	740	0%	14%
Highway 410/Highway 410 Extension at Mayfield Road	W-S Ramp	W-S	577	5	53	1%	9%	461	3	15	1%	3%	6,085	65	546	7,400	61	602	1%	8%
Highway 410/Highway 410 Extension at Mayfield Road	S-E/W Ramp	S-E/W	784	23	38	3%	5%	382	5	24	1%	6%	6,829	207	499	8,300	194	549	2%	7%
Highway 410/Highway 410 Extension at Mayfield Road	E-N Ramp	E-N	106	11	8	11%	8%	76	2	4	3%	5%	1,070	100	96	1,300	94	105	7%	8%
Highway 410/Highway 410 Extension at Mayfield Road	W-N Ramp	W-N	206	21	23	10%	11%	16	0	1	1%	4%	1,302	159	186	1,600	149	205	9%	13%

Appendix A.5 : Raw Traffic Data for 2041 Build Scenario
Highway 413
GTA West

HIGHWAY 413 RAMPS																				
			2041																	
			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
Interchange	On/Off	Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Hwy 413 at Hwy 401 / Hwy 407	Hwy to Hwy ramps	E-N	466	4	3	1%	1%	847	30	70	4%	8%	7,691	252	596	9,400	236	657	3%	7%
		N-E	1,310	45	61	3%	5%	959	27	33	3%	3%	13,296	542	755	16,200	509	832	3%	5%
		N-S	1,020	325	301	32%	29%	741	262	57	35%	8%	10,317	4,403	2,887	12,600	4,135	3,181	33%	25%
		S-N	829	192	256	23%	31%	663	129	76	19%	11%	8,739	2,409	2,679	10,650	2,263	2,952	21%	28%
Hwy 413 at Winston Churchill Blvd	Off	S-E/W	777	35	44	4%	6%	854	25	62	3%	7%	9,552	446	859	11,650	419	947	4%	8%
	On	E-N	870	3	3	0%	0%	1,472	15	22	1%	1%	13,719	136	201	16,700	127	221	1%	1%
	On	W-N	322	14	14	4%	4%	495	13	22	3%	4%	4,792	205	291	5,850	193	320	3%	5%
	Off	N-E/W	1,512	32	28	2%	2%	1,117	32	56	3%	5%	15,406	476	682	18,800	447	752	2%	4%
	On	E-S	371	20	36	5%	10%	597	24	59	4%	10%	5,666	329	766	6,900	309	844	4%	12%
	On	W-S	385	8	12	2%	3%	286	4	2	2%	1%	3,931	91	115	4,800	86	127	2%	3%
Hwy 413 at Bovaird Dr	Off	S-E/W	1,111	116	93	10%	8%	1,492	64	61	4%	4%	15,250	1,351	1,241	18,600	1,269	1,368	7%	7%
	On	E-N	386	20	15	5%	4%	209	9	8	4%	4%	3,483	220	184	4,250	207	203	5%	5%
	On	W-N	116	4	4	4%	4%	16	0	0	2%	2%	777	34	35	950	32	39	3%	4%
	Off	N-E/W	212	5	4	2%	2%	365	5	7	1%	2%	3,385	77	83	4,150	72	92	2%	2%
	On	E-S	910	83	60	9%	7%	869	69	31	8%	4%	10,421	1,143	737	12,700	1,073	813	8%	6%
	On	W-S	645	18	12	3%	2%	234	2	3	1%	1%	5,151	155	121	6,300	145	134	2%	2%
Hwy 413 at Mayfield Rd	Off	S-E/W	1,118	66	45	6%	4%	1,206	34	30	3%	3%	13,614	747	611	16,600	702	673	4%	4%
	On	E-N	185	1	3	1%	2%	152	0	1	0%	1%	1,975	11	30	2,400	11	33	0%	1%
	On	W-N	773	64	62	8%	8%	622	41	61	7%	10%	8,176	787	992	9,950	739	1,093	7%	11%
	Off	N-E/W	829	62	59	7%	7%	890	50	57	6%	6%	10,072	838	941	12,300	787	1,036	6%	8%
	On	E-S	997	59	34	6%	3%	423	31	21	7%	5%	8,321	676	440	10,150	635	485	6%	5%
	On	W-S	432	5	7	1%	2%	738	2	2	0%	0%	6,857	54	71	8,350	51	78	1%	1%
Hwy 413 at Chinguacousy Rd	Off	W-N/S	87	1	4	1%	5%	152	2	3	1%	2%	1,397	23	60	1,700	22	66	1%	4%
	On	N-E	396	46	65	12%	16%	196	22	41	11%	21%	3,468	513	855	4,250	482	942	11%	22%
	On	S-E	770	47	35	6%	5%	240	17	26	7%	11%	5,917	485	499	7,200	455	550	6%	8%
	Off	E-N/S	567	63	84	11%	15%	869	63	85	7%	10%	8,414	947	1,366	10,250	890	1,505	9%	15%
	On	N-W	137	2	0	2%	0%	94	1	0	1%	0%	1,354	26	2	1,650	25	2	1%	0%
	On	S-W	199	7	5	3%	2%	68	4	2	6%	3%	1,566	84	57	1,900	79	62	4%	3%
Hwy 413 at Hurontario St	Off	W-N/S	337	17	24	5%	7%	377	13	9	3%	2%	4,183	224	267	5,100	210	294	4%	6%
	On	N-E	974	47	112	5%	11%	415	44	76	11%	18%	8,135	687	1,517	9,900	645	1,671	7%	17%
	On	S-E	329	37	48	11%	14%	180	16	27	9%	15%	2,983	402	605	3,650	378	667	10%	18%
	Off	E-N/S	512	80	101	16%	20%	1,406	56	103	4%	7%	11,238	1,023	1,646	13,700	961	1,814	7%	13%
	On	N-W	310	9	18	3%	6%	241	18	14	8%	6%	3,227	200	258	3,950	188	284	5%	7%
	On	S-W	0	0	0	0%	0%	0	0	0	1%	0%	0	0	0	0	0	0	0%	0%
Hwy 413 at Hwy 410	Hwy to Hwy ramps	W-S	1,034	38	101	4%	10%	217	2	6	1%	3%	7,334	303	857	8,950	284	945	3%	11%
		E-S	903	27	33	3%	4%	630	41	49	7%	8%	8,977	512	663	10,950	481	730	4%	7%
		S-E	517	52	39	10%	7%	608	11	12	2%	2%	6,591	478	408	8,050	449	449	6%	6%
		S-W	402	34	34	8%	9%	1,116	14	43	1%	4%	8,893	358	624	10,850	336	687	3%	6%
Hwy 413 at Bramalea Rd	Off	W-N/S	542	51	38	9%	7%	584	18	23	3%	4%	6,600	519	490	8,050	487	540	6%	7%
	On	N-E	416	56	64	14%	15%	287	48	77	17%	27%	4,120	781	1,136	5,000	734	1,251	15%	25%
	On	S-E	0	0	0	1%	1%	61	1	1	1%	2%	355	5	7	450	4	8	1%	2%
	Off	E-N/S	391	106	124	27%	32%	478	61	80	13%	17%	5,093	1,253	1,642	6,200	1,177	1,809	19%	29%
	On	N-W	826	37	41	4%	5%	608	41	37	7%	6%	8,401	582	629	10,250	547	693	5%	7%
	On	S-W	20	0	2	1%	12%	75	0	1	0%	1%	554	3	26	650	3	29	0%	4%
Hwy 413 at Airport Rd	Off	W-N/S	559	26	19	5%	3%	659	29	37	4%	6%	7,139	410	453	8,700	385	499	4%	6%
	On	N-E	217	10	9	5%	4%	148	7	12	5%	8%	2,138	132	169	2,600	124	186	5%	7%
	On	S-E	278	12	13	4%	5%	123	1	1	0%	1%	2,346	92	110	2,850	87	121	3%	4%
	Off	E-N/S	356	27	24	7%	7%	188	8	9	5%	5%	3,185	263	262	3,900	247	288	6%	7%
	On	N-W	556	31	36	6%	6%	51	4	4	8%	7%	3,556	261	317	4,350	245	350	6%	8%
	On	S-W	17	3	2	16%	9%	101	11	10	11%	10%	693	104	93	850	98	102	12%	12%
Hwy 413 at The Gore Rd	Off	W-N/S	574	29	24	5%	4%	463	20	34	4%	7%	6,080	373	465	7,400	350	512	5%	7%
	On	N/S-E	145	2	1	1%	1%	90	1	3	1%	3%	1,378	21	34	1,700	20	37	1%	2%
	Off	E-N/S	127	3	2	3%	1%	301	8	10	3%	3%	2,512	85	96	3,050	80	105	3%	3%
	On	N/S-W	527	28	32	5%	6%	648	17	19	3%	3%	6,882	336	414	8,400	316	456	4%	5%
Hwy 413 at Humber Station Rd	Off	W-N/S	641	14	8	2%	1%	318	12	16	4%	5%	5,615	195	195	6,850	183	214	3%	3%
	On	N-E	545	15	11	3%	2%	857	6	6	1%	1%	8,213	157	132	10,000	148	146	1%	1%
	On	S-E	1,039	112	111	11%	11%	862	71	109	8%	13%	11,134	1,373	1,780	13,550	1,290	1,961	10%	14%
	Off	E-N/S	1,286	94	70	7%	5%	1,425	46	57	3%	4%	15,883	1,052	1,025	19,350	989	1,129	5%	6%

Appendix A.5 : Raw Traffic Data for 2041 Build Scenario

Highway 413

GTA West

	On	N-W	26	0	0	0%	0%	17	0	0	0%	1%	253	1	1	300	1	1	0%	0%
	On	S-W	199	19	21	9%	10%	346	6	8	2%	2%	3,194	188	228	3,900	177	251	5%	6%
Hwy 413 at Hwy 427		W-S	1,390	101	92	7%	7%	1,280	70	106	5%	8%	15,647	1,281	1,594	19,050	1,203	1,756	6%	9%
	Hwy to Hwy ramps	E-S	2,053	128	80	6%	4%	1,100	60	80	5%	7%	18,470	1,409	1,291	22,500	1,323	1,422	6%	6%
		S-E	581	90	59	15%	10%	1,620	55	106	3%	7%	12,891	1,085	1,334	15,700	1,019	1,470	6%	9%
		S-W	1,306	181	174	14%	13%	1,900	116	133	6%	7%	18,788	2,229	2,482	22,900	2,094	2,735	9%	12%
Hwy 413 at Hwy 27	Off	W-N/S	758	53	49	7%	6%	1,057	60	76	6%	7%	10,634	853	1,002	12,950	801	1,104	6%	9%
	On	N/S-E	380	20	11	5%	3%	81	2	2	2%	2%	2,704	162	107	3,300	152	118	5%	4%
	Off	E-N/S	220	23	13	10%	6%	457	15	14	3%	3%	3,966	288	218	4,850	270	241	6%	5%
	On	N-W	969	77	64	8%	7%	487	25	39	5%	8%	8,527	769	836	10,400	722	921	7%	9%
	On	S-W	1,315	97	76	7%	6%	737	37	56	5%	8%	12,020	1,000	1,066	14,650	940	1,174	6%	8%
Hwy 413 at Weston Rd	Off	W-N/S	1,090	84	86	8%	8%	1,050	75	130	7%	12%	12,544	1,196	1,736	15,300	1,123	1,912	7%	12%
	On	N/S-W	1,306	117	109	9%	8%	976	74	122	8%	12%	13,370	1,434	1,864	16,300	1,347	2,054	8%	13%
Hwy 413 at Hwy 400		W-N	2,008	382	388	19%	19%	2,580	180	306	7%	12%	26,880	4,218	5,604	32,750	3,962	6,174	12%	19%
	Hwy to Hwy ramps	W-S	1,176	137	136	12%	12%	775	89	133	11%	17%	11,432	1,699	2,173	13,950	1,595	2,394	11%	17%
		N-W	819	128	138	16%	17%	1,517	124	158	8%	10%	13,689	1,892	2,388	16,700	1,777	2,631	11%	16%
		S-W	2,494	222	185	9%	7%	1,770	219	300	12%	17%	24,982	3,307	3,916	30,450	3,106	4,314	10%	14%

Appendix A.5 : Raw Traffic Data for 2041 Build Scenario
Highway 413
GTA West

ARTERIALS																				
			2041																	
			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
Arterial	Location	Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Trafalgar Road	Immediately north of Highway 401	NB	2,999	49	76	2%	3%	2,266	38	75	2%	3%	30,847	650	1,220	37,600	611	1,345	2%	4%
		SB	2,118	59	148	3%	7%	2,776	42	130	2%	5%	28,673	761	2,240	34,950	714	2,469	2%	7%
Trafalgar Road	Immediately south of Highway 401	NB	2,993	26	155	1%	5%	2,271	3	49	0%	2%	30,842	221	1,653	37,600	207	1,821	1%	5%
		SB	2,379	30	67	1%	3%	2,902	7	60	0%	2%	30,942	281	1,030	37,700	264	1,135	1%	3%
Steeles Avenue	Immediately east of Trafalgar Road	EB	3,173	59	135	2%	4%	2,303	33	52	1%	2%	32,083	697	1,505	39,100	655	1,658	2%	4%
		WB	2,498	134	141	5%	6%	3,619	50	127	1%	4%	35,844	1,380	2,163	43,700	1,296	2,383	3%	5%
Steeles Avenue	Immediately west of Ninth Line N	EB	1,885	29	76	2%	4%	2,223	26	49	1%	2%	24,069	411	1,009	29,350	386	1,112	1%	4%
		WB	1,997	110	91	5%	5%	2,172	39	74	2%	3%	24,431	1,119	1,334	29,800	1,051	1,470	4%	5%
Steeles Avenue	At Highway 413	EB	3,310	86	152	3%	5%	2,750	43	73	2%	3%	35,504	968	1,821	43,300	909	2,006	2%	5%
		WB	2,420	137	121	6%	5%	3,002	60	112	2%	4%	31,765	1,478	1,877	38,700	1,388	2,068	4%	5%
Steeles Avenue	Immediately east of Ninth Line S	EB	2,699	39	86	1%	3%	2,087	20	41	1%	2%	28,040	441	1,023	34,200	414	1,127	1%	3%
		WB	1,949	108	71	6%	4%	2,908	37	71	1%	2%	28,459	1,087	1,144	34,700	1,021	1,260	3%	4%
Steeles Avenue	Immediately east of Tenth Line N	EB	3,460	65	136	2%	4%	1,993	20	42	1%	2%	31,950	635	1,435	38,950	597	1,581	2%	4%
		WB	1,801	116	80	6%	4%	3,251	47	94	1%	3%	29,599	1,226	1,403	36,100	1,152	1,546	3%	4%
Ninth Line N	Immediately north of Steeles Avenue	NB	537	27	31	5%	6%	1,032	21	38	2%	4%	9,198	361	563	11,200	339	620	3%	6%
		SB	1,539	57	79	4%	5%	730	18	25	2%	3%	13,299	560	832	16,200	526	917	3%	6%
Ninth Line S	Immediately south of Steeles Avenue	NB	1,880	60	85	3%	5%	1,397	34	55	2%	4%	19,200	703	1,127	23,400	661	1,242	3%	5%
		SB	2,020	79	101	4%	5%	1,967	33	47	2%	2%	23,359	840	1,192	28,450	789	1,314	3%	5%
Tenth Line	At Highway 413	NB	199	14	19	7%	9%	769	12	27	2%	3%	5,672	197	367	6,900	185	404	3%	6%
		SB	1,109	32	59	3%	5%	331	2	5	0%	2%	8,442	253	521	10,300	237	574	2%	6%
Derry Road	Immediately east of Highway 407	EB	3,006	72	56	2%	2%	2,411	133	126	6%	5%	31,739	1,539	1,468	38,700	1,445	1,617	4%	4%
		WB	2,073	314	382	15%	18%	2,501	79	88	3%	4%	26,800	2,950	3,791	32,650	2,770	4,177	8%	13%
Derry Road	Immediately west of Highway 407	EB	3,780	132	121	3%	3%	2,586	170	112	7%	4%	37,300	2,267	1,879	45,450	2,129	2,071	5%	5%
		WB	2,019	378	366	19%	18%	3,182	254	54	8%	2%	30,474	4,743	3,388	37,150	4,455	3,733	12%	10%
Winston Churchill Boulevard	Immediately north of Highway 401	NB	3,049	62	49	2%	2%	2,247	50	58	2%	3%	31,030	841	863	37,850	790	951	2%	3%
		SB	2,316	81	65	3%	3%	2,724	16	21	1%	1%	29,530	728	694	36,000	684	764	2%	2%
Winston Churchill Boulevard	Immediately south of Highway 401	NB	3,391	54	41	2%	1%	2,144	66	78	3%	4%	32,431	901	960	39,550	846	1,058	2%	3%
		SB	1,980	80	71	4%	4%	2,813	51	54	2%	2%	28,083	983	1,008	34,250	923	1,111	3%	3%
Winston Churchill Boulevard	Immediately south of Highway 413	NB	1,520	31	34	2%	2%	3,247	34	53	1%	2%	27,929	487	705	34,050	457	777	1%	2%
		SB	2,989	79	90	3%	3%	1,411	10	22	1%	2%	25,781	662	903	31,450	622	995	2%	3%
Winston Churchill Boulevard	Between Highway 413 and 5 Side Road	NB	1,280	44	45	3%	4%	2,445	46	83	2%	3%	21,825	676	1,037	26,600	635	1,143	2%	4%
		SB	2,408	70	95	3%	4%	1,488	22	38	2%	3%	22,827	692	1,067	27,850	650	1,175	2%	4%
Winston Churchill Boulevard	Immediately north of 5 Side Road	NB	512	23	25	5%	5%	953	12	18	1%	2%	8,582	267	347	10,450	251	383	2%	4%
		SB	1,010	30	47	3%	5%	569	2	9	0%	2%	9,250	238	455	11,300	223	501	2%	4%
5 Side Road	Immediately west of Winston Churchill Boulevard	EB	824	44	53	5%	6%	696	13	23	2%	3%	8,908	431	606	10,850	405	668	4%	6%
		WB	782	17	15	2%	2%	934	29	58	3%	6%	10,051	345	585	12,250	324	644	3%	5%
5 Side Road	At Highway 413	EB	1,085	18	24	2%	2%	738	10	10	1%	1%	10,680	211	278	13,000	198	306	2%	2%
		WB	498	26	34	5%	7%	1,073	8	12	1%	1%	9,203	253	377	11,200	237	416	2%	4%
Bovaird Drive	Immediately west of Heritage Road	EB	1,385	59	89	4%	6%	1,341	32	44	2%	3%	15,974	681	1,072	19,450	640	1,182	3%	6%
		WB	1,369	66	96	5%	7%	1,268	27	82	2%	6%	15,452	699	1,436	18,850	657	1,582	3%	8%
Bovaird Drive	Between Heritage Road and Highway 413	EB	2,154	78	97	4%	5%	1,932	35	46	2%	2%	23,938	851	1,158	29,200	799	1,276	3%	4%
		WB	996	22	37	2%	4%	478	3	4	1%	1%	8,634	190	333	10,550	179	367	2%	3%
Bovaird Drive	Immediately east of Highway 413	EB	2,438	171	174	7%	7%	3,107	97	106	3%	3%	32,492	2,013	2,265	39,600	1,890	2,496	5%	6%
		WB	2,976	168	170	6%	6%	2,338	103	118	4%	5%	31,133	2,033	2,326	37,950	1,910	2,563	5%	7%
Heritage Road	At Highway 413	NB	206	2	7	1%	4%	738	1	15	0%	2%	5,534	26	180	6,750	25	199	0%	3%
		SB	741	8	35	1%	5%	296	3	4	1%	1%	6,081	82	313	7,400	77	345	1%	5%
Heritage Road	Immediately north of Bovaird Drive	NB	280	1	4	0%	1%	754	1	14	0%	2%	6,053	13	144	7,400	12	159	0%	2%
		SB	996	22	37	2%	4%	478	3	4	1%	1%	8,634	190	333	10,550	179	367	2%	3%
Heritage Road	Immediately south of Wanless Drive	NB	280	1	4	0%	1%	754	1	14	0%	2%	6,053	13	144	7,400	12	159	0%	2%
		SB	996	22	37	2%	4%	478	3	4	1%	1%	8,634	190	333	10,550	179	367	2%	3%
Wanless Drive	Immediately West of Heritage Road	EB	524	23	22	4%	4%	545	9	5	2%	1%	6,264	240	218	7,650	226	240	3%	3%
		WB	546	16	16	3%	3%	397	7	5	2%	1%	5,525	173	169	6,750	162	187	2%	3%
Wanless Drive	At Highway 413	EB	765	30	31	4%	4%	634	10	10	2%	2%	8,197	300	331	10,000	282	364	3%	4%
		WB	845	31	25	4%	3%	459	9	10	2%	2%	7,640	300	282	9,300	282	311	3%	3%
Heritage Road	Between Wanless Drive and Mayfield Road	NB	244	4	6	2%	2%	145	1	7	1%	5%	2,282	42	103	2,800	39	114	1%	4%
		SB	241	5	16	2%	7%	201	2	4	1%	2%	2,587	52	158	3,150	49	174	2%	6%
Heritage Road	Immediately north of Mayfield Road	NB	922	0	3	0%	0%	418	13	13	3%	3%	7,852	100	128	9,550	94	141	1%	1%
		SB	474	22	24	5%	5%	875	0	3	0%	0%	7,907	168	212	9,650	158	233	2%	2%

Appendix A.5 : Raw Traffic Data for 2041 Build Scenario

Highway 413

GTA West

Mayfield Road	Immediately west of Heritage Road	EB	1,854	99	112	5%	6%	1,210	49	69	4%	6%	17,951	1,110	1,456	21,900	1,042	1,604	5%	7%
		WB	1,102	76	78	7%	7%	1,680	61	67	4%	4%	16,302	1,025	1,164	19,850	963	1,283	5%	6%
Mayfield Road	Between Heritage Road and Highway 413	EB	2,155	120	130	6%	6%	1,976	49	74	3%	4%	24,204	1,274	1,641	29,500	1,196	1,808	4%	6%
		WB	1,847	76	85	4%	5%	2,045	74	79	4%	4%	22,805	1,130	1,320	27,800	1,061	1,454	4%	5%
Mayfield Road	Immediately east of Highway 413	EB	1,431	102	95	7%	7%	1,534	34	39	2%	3%	17,372	1,026	1,085	21,200	964	1,195	5%	6%
		WB	1,564	60	51	4%	3%	1,442	50	41	3%	3%	17,615	825	745	21,450	775	821	4%	4%
Mississauga Road	At Highway 413	NB	167	11	9	7%	5%	279	11	6	4%	2%	2,613	165	121	3,200	155	133	5%	4%
		SB	435	29	22	7%	5%	208	8	9	4%	4%	3,767	278	250	4,600	261	275	6%	6%
Creditview Road	At Highway 413	NB	179	25	20	14%	11%	10	0	0	1%	3%	1,110	188	164	1,350	177	180	13%	13%
		SB	73	5	3	7%	4%	136	8	12	6%	9%	1,225	98	121	1,500	92	133	6%	9%
Chinguacousy Road	Immediately south of Highway 413	NB	1,120	68	53	6%	5%	570	31	43	5%	8%	9,899	741	774	12,050	696	853	6%	7%
		SB	742	50	61	7%	8%	846	34	49	4%	6%	9,305	632	888	11,350	593	978	5%	9%
Chinguacousy Road	Between Highway 413 and Old School Road	NB	462	57	68	12%	15%	663	51	73	8%	11%	6,592	816	1,137	8,050	766	1,253	10%	16%
		SB	932	78	93	8%	10%	517	34	61	7%	12%	8,493	843	1,238	10,350	792	1,364	8%	13%
Chinguacousy Road	Immediately north of Old School Road	NB	102	16	14	16%	14%	375	12	21	3%	6%	2,797	215	288	3,400	202	317	6%	9%
		SB	421	39	45	9%	11%	205	13	19	6%	9%	3,669	386	522	4,450	363	575	8%	13%
Old School Road	Immediately west of Chinguacousy Road	EB	605	39	64	6%	11%	467	25	55	5%	12%	6,279	483	961	7,650	453	1,059	6%	14%
		WB	496	45	62	9%	12%	573	43	60	8%	10%	6,260	664	979	7,650	624	1,079	8%	14%
Old School Road	At Highway 413	EB	306	4	22	1%	7%	227	3	12	1%	5%	3,124	53	274	3,800	50	302	1%	8%
		WB	348	8	12	2%	4%	358	4	7	1%	2%	4,134	91	159	5,050	85	175	2%	3%
McLaughlin Road	Immediately south of Old School Road	NB	299	10	11	3%	4%	238	9	5	4%	2%	3,146	143	129	3,850	134	142	3%	4%
		SB	285	16	15	6%	5%	244	7	8	3%	3%	3,100	173	186	3,800	162	204	4%	5%
McLaughlin Road	At Highway 413	NB	267	29	26	11%	10%	411	20	19	5%	5%	3,973	368	363	4,850	345	400	7%	8%
		SB	512	39	40	8%	8%	224	12	16	5%	7%	4,312	383	452	5,250	360	498	7%	9%
Old School Road	Between McLaughlin Road and Hurontario Street	EB	516	44	54	9%	10%	389	23	39	6%	10%	5,300	510	751	6,450	479	828	7%	13%
		WB	556	40	36	7%	6%	961	16	35	2%	4%	8,887	420	569	10,850	394	627	4%	6%
Hurontario Street	Immediately north of Highway 413	NB	1,193	130	162	11%	14%	2,249	78	138	3%	6%	20,162	1,560	2,419	24,600	1,466	2,665	6%	11%
		SB	2,272	86	250	4%	11%	1,397	77	129	6%	9%	21,498	1,225	3,057	26,200	1,150	3,368	4%	13%
Hurontario Street	Between Highway 413 and Old School Road	NB	836	72	93	9%	11%	869	28	60	3%	7%	9,988	755	1,231	12,200	709	1,357	6%	11%
		SB	1,152	33	127	3%	11%	964	17	46	2%	5%	12,400	377	1,402	15,100	354	1,545	2%	10%
Hurontario Street	Immediately south of Old School Road	NB	971	79	84	8%	9%	1,391	29	64	2%	5%	13,838	806	1,193	16,850	757	1,315	4%	8%
		SB	1,064	41	132	4%	12%	1,009	24	51	2%	5%	12,145	488	1,480	14,800	458	1,631	3%	11%
Old School Road	Between Hurontario Street and Kennedy Road	EB	470	6	8	1%	2%	276	1	4	1%	1%	4,370	53	97	5,350	50	107	1%	2%
		WB	287	2	3	1%	1%	370	1	0	0%	0%	3,853	22	30	4,700	21	33	0%	1%
Kennedy Road	At Highway 413	NB	139	3	6	2%	4%	112	3	4	3%	4%	1,471	45	81	1,800	42	89	2%	5%
		SB	226	11	12	5%	5%	70	3	3	4%	4%	1,734	105	121	2,100	99	133	5%	6%
Heart Lake Road	At Highway 413	NB	194	11	10	6%	5%	350	11	11	3%	3%	3,187	165	169	3,900	155	187	4%	5%
		SB	493	17	17	3%	3%	128	4	1	3%	1%	3,639	158	145	4,450	148	160	3%	4%
Heart Lake Road	At Highway 410	NB	504	11	13	2%	2%	298	12	12	4%	4%	4,703	174	200	5,750	163	221	3%	4%
		SB	426	15	23	3%	5%	426	4	5	1%	1%	4,988	138	224	6,100	130	247	2%	4%
Heart Lake Road	Immediately south of Mayfield Road	NB	326	16	12	5%	4%	546	12	16	2%	3%	5,111	209	228	6,250	197	251	3%	4%
		SB	610	34	43	6%	7%	389	8	13	2%	3%	5,853	313	449	7,150	294	495	4%	7%
Heart Lake Road	Immediately south of Old School Road	NB	144	7	5	5%	3%	373	11	10	3%	3%	3,029	135	121	3,700	127	133	3%	4%
		SB	470	13	12	3%	3%	103	3	2	3%	2%	3,357	120	113	4,100	113	124	3%	3%
Old School Road	Immediately west of Heart Lake Road	EB	678	13	16	2%	2%	150	1	3	1%	2%	4,851	105	153	5,900	99	169	2%	3%
		WB	175	3	5	2%	3%	518	5	1	1%	0%	4,060	60	48	4,950	56	53	1%	1%
Old School Road	At Highway 410 Extension	EB	614	13	15	2%	2%	125	1	1	1%	1%	4,330	105	129	5,300	99	142	2%	3%
		WB	138	3	3	2%	2%	445	3	2	1%	0%	3,416	45	40	4,150	42	44	1%	1%
Mayfield Road	Immediately west of Heart Lake Road	EB	3,197	127	174	4%	5%	2,374	45	82	2%	3%	32,642	1,290	2,062	39,800	1,211	2,272	3%	6%
		WB	1,980	102	90	5%	5%	2,922	30	55	1%	2%	28,721	992	1,171	35,000	931	1,290	3%	4%
Mayfield Road	Between Heart Lake Road and Highway 410	EB	2,956	103	150	3%	5%	2,312	39	71	2%	3%	30,864	1,068	1,778	37,600	1,003	1,959	3%	5%
		WB	2,101	93	87	4%	4%	2,575	28	47	1%	2%	27,401	909	1,085	33,400	853	1,195	3%	4%
Mayfield Road	Immediately east of Highway 410	EB	3,000	114	129	4%	4%	2,151	39	75	2%	4%	30,179	1,155	1,649	36,800	1,085	1,817	3%	5%
		WB	2,183	95	152	4%	7%	3,066	31	60	1%	2%	30,757	945	1,717	37,500	888	1,892	2%	5%
Mayfield Road	Immediately east of Dixie Road	EB	2,203	72	97	3%	4%	1,724	42	73	2%	4%	23,010	859	1,377	28,050	807	1,517	3%	5%
		WB	1,583	73	93	5%	6%	2,189	21	48	1%	2%	22,104	706	1,137	26,950	663	1,253	2%	5%
Countryside Drive	At Highway 410	EB	1,263	68	58	5%	5%	716	25	33	3%	5%	11,595	698	734	14,150	656	809	5%	6%
		WB	707	37	24	5%	3%	1,144	21	21	2%	2%	10,845	435	363	13,200	409	400	3%	3%
Dixie Road	At Highway 413	NB	209	19	11	9%	5%	479	9	10	2%	2%	4,031	210	169	4,900	197	187	4%	4%
		SB	604	8	10	1%	2%	297	12	13	4%	4%	5,279	150	186	6,450	141	204	2%	3%
Dixie Road	Immediately north of Mayfield Road	NB	417	13	14	3%	3%	568	5	18	1%	3%	5,772	132	256	7,050	124	283	2%	4%
		SB	732	11	59	2%	8%	580	5	14	1%	2%	7,685	121	587	9,350	114	647	1%	7%
Dixie Road	Immediately south of Mayfield Road	NB	782	31	25	4%	3%	1,016	21	27	2%	3%	10,535	390	416	12,850	366	458	3%	4%
		SB	1,358	57	61	4%	5%	842	9	16	1%	2%	12,890	498	625	15,700	468	688	3%	4%

Appendix A.5 : Raw Traffic Data for 2041 Build Scenario

Highway 413

GTA West

Bramalea Road	North of Highway 413	NB	786	152	158	19%	20%	1,140	82	108	7%	9%	11,282	1,756	2,143	13,750	1,650	2,361	12%	17%
		SB	1,269	95	111	7%	9%	915	89	116	10%	13%	12,799	1,379	1,831	15,600	1,296	2,018	8%	13%
Bramalea Road	South of Highway 413	NB	25	1	3	4%	13%	231	3	8	1%	3%	1,497	31	88	1,850	29	97	2%	5%
		SB	180	7	11	4%	6%	38	0	2	1%	6%	1,277	55	111	1,550	51	122	3%	8%
Bramalea Road	Immediately south of Old School Road	NB	155	6	10	4%	6%	424	4	10	1%	2%	3,392	75	159	4,150	71	176	2%	4%
		SB	622	6	15	1%	2%	180	2	8	1%	4%	4,698	60	184	5,750	57	202	1%	4%
Old School Road	Immediately west of Bramalea Road	EB	625	1	4	0%	1%	344	1	1	0%	0%	5,677	9	39	6,900	9	43	0%	1%
		WB	245	0	0	0%	0%	539	0	0	0%	0%	4,594	4	1	5,600	4	1	0%	0%
Torbram Road	At Highway 413	NB	225	10	8	4%	4%	651	6	8	1%	1%	5,133	120	129	6,250	113	142	2%	2%
		SB	910	16	19	2%	2%	335	5	6	1%	2%	7,295	158	202	8,900	148	222	2%	2%
Torbram Road	Immediately south of Old School Road	NB	93	2	3	2%	3%	334	4	5	1%	1%	2,502	45	65	3,050	42	71	1%	2%
		SB	504	14	17	3%	3%	153	3	2	2%	1%	3,850	128	153	4,700	120	169	3%	4%
Old School Road	Between Bramalea Road and Torbram Road	EB	601	10	16	2%	3%	431	1	4	0%	1%	6,043	83	159	7,350	78	175	1%	2%
		WB	532	4	9	1%	2%	575	2	6	0%	1%	6,486	39	123	7,900	37	135	0%	2%
Old School Road	Between Torbram Road and Airport Road	EB	578	19	24	3%	4%	498	3	9	1%	2%	6,304	162	265	7,700	152	292	2%	4%
		WB	193	3	4	2%	2%	520	1	2	0%	0%	4,179	34	50	5,100	32	55	1%	1%
Airport Road	Immediately north of Highway 413	NB	700	45	44	6%	6%	1,491	36	63	2%	4%	12,832	608	861	15,650	571	949	4%	6%
		SB	1,415	60	79	4%	6%	613	15	27	2%	4%	11,882	562	854	14,500	528	941	4%	6%
Airport Road	Between Highway 413 and Old School Road	NB	719	28	32	4%	4%	1,052	18	36	2%	3%	10,379	341	543	12,650	320	599	3%	5%
		SB	1,281	39	50	3%	4%	599	11	19	2%	3%	11,020	378	562	13,450	355	619	3%	5%
Airport Road	Immediately south of Old School Road	NB	480	15	16	3%	3%	1,311	16	30	1%	2%	10,497	237	368	12,800	223	405	2%	3%
		SB	1,428	42	55	3%	4%	836	11	20	1%	2%	13,263	402	602	16,150	378	663	2%	4%
Healey Road	Between Airport Road and Innis Lake Road	EB	671	17	16	3%	2%	590	7	9	1%	2%	7,391	182	201	9,000	171	221	2%	2%
		WB	547	6	8	1%	1%	668	11	12	2%	2%	7,117	130	165	8,700	122	182	1%	2%
Innis Lake Road	At Highway 413	NB	107	5	5	5%	5%	607	17	18	3%	3%	4,183	165	186	5,100	155	204	3%	4%
		SB	936	18	16	2%	2%	127	4	5	3%	4%	6,228	165	169	7,600	155	187	2%	2%
Innis Lake Road	Immediately south of Healey Road	NB	123	4	5	3%	4%	507	20	20	4%	4%	3,691	180	202	4,500	169	222	4%	5%
		SB	625	26	21	4%	3%	185	6	7	3%	4%	4,746	240	226	5,800	226	249	4%	4%
Healey Road	At Highway 413	EB	572	1	3	0%	1%	452	2	6	0%	1%	6,003	19	73	7,300	18	81	0%	1%
		WB	372	4	10	1%	3%	617	5	8	1%	1%	5,793	71	142	7,050	66	156	1%	2%
Centreville Creek Road	Immediately north of Healey Road	NB	36	0	2	0%	5%	569	19	21	3%	4%	3,550	147	183	4,350	138	201	3%	5%
		SB	622	54	79	9%	13%	94	0	1	0%	1%	4,195	406	650	5,100	382	716	7%	14%
Centreville Creek Road	At Highway 413	NB	121	1	6	1%	5%	677	23	23	3%	3%	4,677	180	228	5,700	169	251	3%	4%
		SB	847	55	82	7%	10%	184	1	3	1%	2%	6,041	426	685	7,350	400	754	5%	10%
Healey Road	Between Centreville Creek Road and The Gore Road	EB	530	1	1	0%	0%	404	1	3	0%	1%	5,471	11	29	6,650	10	32	0%	0%
		WB	471	4	6	1%	1%	550	2	5	0%	1%	5,979	48	88	7,300	45	97	1%	1%
The Gore Road	Between Highway 413 and Healey Road	NB	241	23	25	10%	11%	916	19	28	2%	3%	6,776	312	428	8,250	293	472	4%	6%
		SB	857	43	64	5%	7%	597	10	17	2%	3%	8,515	391	656	10,400	368	723	4%	7%
The Gore Road	Immediately south of Highway 413	NB	429	33	44	8%	10%	821	22	31	3%	4%	7,320	416	603	8,900	390	665	4%	7%
		SB	1,075	56	74	5%	7%	528	23	43	4%	8%	9,390	595	944	11,450	559	1,040	5%	9%
Humber Station Road	Immediately north of Highway 413	NB	727	9	7	1%	1%	946	13	19	1%	2%	9,800	166	206	11,950	156	227	1%	2%
		SB	704	19	21	3%	3%	885	4	6	0%	1%	9,314	171	223	11,350	161	246	1%	2%
Humber Station Road	Between Highway 413 and Mayfield Road	NB	1,449	132	134	9%	9%	1,540	79	125	5%	8%	17,514	1,584	2,092	21,350	1,487	2,305	7%	11%
		SB	1,544	104	84	7%	5%	1,141	45	63	4%	6%	15,732	1,116	1,188	19,200	1,048	1,309	5%	7%
Clarkway Drive	Immediately south of Mayfield Road	NB	595	12	18	2%	3%	430	4	10	1%	2%	6,006	116	226	7,300	109	249	1%	3%
		SB	494	14	20	3%	4%	484	8	14	2%	3%	5,728	159	275	7,000	150	303	2%	4%
Mayfield Road	Immediately west of Humber Station Road	EB	2,227	128	150	6%	7%	1,569	71	111	5%	7%	22,238	1,497	2,107	27,100	1,406	2,321	5%	9%
		WB	1,420	92	92	6%	6%	1,955	34	66	2%	3%	19,775	943	1,273	24,100	886	1,403	4%	6%
Mayfield Road	At Highway 413	EB	2,030	32	47	2%	2%	1,133	6	10	1%	1%	18,536	281	464	22,600	264	511	1%	2%
		WB	1,027	25	43	2%	4%	1,973	7	30	0%	2%	17,576	238	582	21,450	223	642	1%	3%
Coleraine Drive	Immediately north of Mayfield Road	NB	1,502	2	3	0%	0%	1,255	15	10	1%	1%	16,154	128	105	19,700	120	116	1%	1%
		SB	1,399	27	14	2%	1%	1,452	1	4	0%	0%	16,705	210	145	20,350	197	160	1%	1%
Coleraine Drive	At Highway 413	NB	726	2	1	0%	0%	1,001	12	6	1%	1%	10,119	105	56	12,350	99	62	1%	1%
		SB	1,153	23	12	2%	1%	831	2	3	0%	0%	11,625	188	121	14,150	176	133	1%	1%
Mayfield Road	Immediately east of Coleraine Drive	NB	670	11	7	2%	1%	691	11	7	2%	1%	7,974	165	113	9,700	155	124	2%	1%
		SB	752	22	23	3%	3%	764	8	8	1%	1%	8,883	225	250	10,850	211	275	2%	3%
Highway 50	Immediately north of Cold Creek Road Realignment	NB	2,059	49	33	2%	2%	2,397	25	27	1%	1%	26,109	555	484	31,850	522	533	2%	2%
		SB	587	45	51	8%	9%	2,066	24	33	1%	2%	15,545	518	678	18,950	486	747	3%	4%
Cold Creek Road Realignment	Immediately east of Highway 50	EB	21	0	0	0%	0%	61	1	0	2%	0%	480	8	0	600	7	0	1%	0%
		WB	343	4	4	1%	1%	25	0	0	0%	0%	2,156	30	32	2,650	28	36	1%	1%
Cold Creek Road	Immediately north of Nashville Road	NB	0	0	0	0%	0%	0	0	0	0%	0%	0	0	0	0	0	0	0%	0%
		SB	0	0	0	0%	0%	0	0	0	0%	0%	0	0	0	0	0	0	0%	0%
Highway 50	At Highway 413	NB	2,212	34	86	2%	4%	2,396	25	51	1%	2%	27,000	450	1,101	32,900	422	1,213	1%	4%
		SB	2,840	64	151	2%	5%	2,190	15	25	1%	1%	29,476	592	1,416	35,950	556	1,560	2%	4%

Appendix A.5 : Raw Traffic Data for 2041 Build Scenario

Highway 413

GTA West

Highway 50	Immediately south of Countryside Drive	NB	1,809	33	72	2%	4%	2,183	24	49	1%	2%	23,390	421	977	28,500	395	1,076	1%	4%
		SB	2,565	56	136	2%	5%	1,775	13	19	1%	1%	25,430	517	1,249	31,000	485	1,376	2%	4%
Countryside Drive	Immediately west of Highway 50	EB	298	8	15	3%	5%	137	0	0	0%	0%	2,551	58	122	3,100	54	135	2%	4%
		WB	140	0	1	0%	1%	313	0	1	0%	0%	2,656	2	11	3,250	1	13	0%	0%
Nashville Road	Immediately east of Highway 50	EB	542	16	29	3%	5%	532	1	5	0%	1%	6,297	130	277	7,700	122	305	2%	4%
		WB	512	2	13	0%	3%	506	2	2	0%	0%	5,966	27	124	7,250	25	136	0%	2%
Nashville Road	At Highway 427 Extension	EB	542	16	29	3%	5%	532	1	5	0%	1%	6,297	130	277	7,700	122	305	2%	4%
		WB	512	2	13	0%	3%	506	2	2	0%	0%	5,966	27	124	7,250	25	136	0%	2%
Huntington Road	Immediately north of Kirby Road	NB	10	0	0	0%	0%	10	0	0	0%	0%	117	0	0	150	0	0	0%	0%
		SB	10	0	0	0%	0%	10	0	0	0%	0%	117	0	0	150	0	0	0%	0%
Huntington Road	At Highway 413	NB	148	4	1	3%	1%	29	1	0	3%	0%	1,038	38	9	1,250	35	10	3%	1%
		SB	134	3	4	2%	3%	102	1	1	1%	1%	1,383	30	40	1,700	28	44	2%	3%
Kirby Road	Immediately west of Huntington Road	EB	159	3	5	2%	3%	227	2	2	1%	1%	2,262	38	56	2,750	35	62	1%	2%
		WB	298	5	3	2%	1%	74	2	0	3%	0%	2,180	53	25	2,650	49	28	2%	1%
Highway 27	Immediately north of Highway 413	NB	815	67	63	8%	8%	2,239	61	87	3%	4%	17,896	963	1,211	21,800	904	1,334	4%	6%
		SB	2,259	105	137	5%	6%	1,175	32	65	3%	6%	20,122	1,033	1,632	24,550	971	1,799	4%	7%
Highway 27	Immediately south of Highway 413	NB	1,132	64	62	6%	5%	1,642	33	62	2%	4%	16,248	729	997	19,800	684	1,099	3%	6%
		SB	1,858	63	110	3%	6%	1,274	41	72	3%	6%	18,350	778	1,466	22,350	730	1,616	3%	7%
Kirby Road	Immediately east of Highway 27	EB	765	38	45	5%	6%	941	32	47	3%	5%	9,995	521	739	12,200	490	815	4%	7%
		WB	905	16	17	2%	2%	600	12	19	2%	3%	8,815	212	287	10,750	199	317	2%	3%
Kirby Road	Immediately west of Highway 27	EB	25	0	1	1%	5%	7	0	0	3%	4%	188	4	12	250	4	13	1%	5%
		WB	4	0	0	3%	10%	70	1	2	2%	3%	437	9	23	550	8	26	2%	5%
Kipling Avenue	At Highway 413	NB	37	1	2	3%	5%	29	0	1	1%	3%	388	10	24	450	9	27	2%	6%
		SB	34	0	2	0%	6%	11	0	0	0%	0%	264	0	16	300	0	18	0%	6%
King Vaughan Road	Between Highway 27 and Kipling Avenue	EB	689	22	33	3%	5%	441	6	11	1%	2%	6,619	214	354	8,050	201	390	2%	5%
		WB	433	21	20	5%	5%	481	18	35	4%	7%	5,353	295	448	6,550	277	494	4%	8%
King Vaughan Road	Immediately east of Kipling Avenue	EB	892	30	22	3%	2%	801	14	20	2%	2%	9,920	330	339	12,100	310	373	3%	3%
		WB	779	27	27	3%	3%	683	27	41	4%	6%	8,566	405	548	10,450	381	604	4%	6%
Pine Valley Drive	At Highway 413	NB	93	1	4	1%	5%	345	3	5	1%	1%	2,564	31	72	3,150	29	79	1%	3%
		SB	703	9	24	1%	3%	122	1	1	1%	1%	4,831	79	203	5,900	74	224	1%	4%
Pine Valley Drive	Immediately north of King Vaughan Road	NB	36	1	2	2%	7%	56	1	2	1%	3%	540	11	35	650	11	39	2%	6%
		SB	30	1	2	2%	7%	18	0	1	1%	3%	284	6	21	350	6	24	2%	7%
King Vaughan Road	Immediately west of Pine Valley Drive	EB	1,036	9	37	1%	4%	643	3	9	1%	1%	9,836	95	372	12,000	89	410	1%	3%
		WB	564	3	21	1%	4%	707	3	12	0%	2%	7,446	50	272	9,100	47	299	1%	3%
King Vaughan Road	Immediately east of Pine Valley Drive	EB	405	1	27	0%	7%	539	2	8	0%	1%	5,530	22	283	6,750	21	312	0%	5%
		WB	549	3	31	1%	6%	417	1	9	0%	2%	5,663	30	327	6,900	28	361	0%	5%
Weston Road	Immediately north of King Vaughan Road	NB	292	21	23	7%	8%	410	19	35	5%	9%	4,113	300	470	5,000	282	518	6%	10%
		SB	426	28	28	7%	7%	342	14	25	4%	7%	4,500	319	424	5,500	299	467	5%	8%
Weston Road	Immediately north of Highway 413	NB	842	84	86	10%	10%	1,059	75	130	7%	12%	11,136	1,196	1,736	13,550	1,123	1,912	8%	14%
		SB	1,304	117	109	9%	8%	857	74	122	9%	14%	12,663	1,434	1,864	15,450	1,347	2,054	9%	13%
Weston Road	Immediately north of Kirby Road	NB	761	0	0	0%	0%	948	0	0	0%	0%	10,016	2	2	12,200	2	3	0%	0%
		SB	1,052	0	0	0%	0%	746	0	0	0%	0%	10,536	5	1	12,850	4	1	0%	0%
King Vaughan Road	Immediately east of Weston Road	EB	1,103	63	63	6%	6%	1,021	57	97	6%	9%	12,442	904	1,291	15,150	849	1,422	6%	9%
		WB	1,028	90	89	9%	9%	992	62	101	6%	10%	11,836	1,135	1,527	14,450	1,066	1,683	7%	12%
King Vaughan Road	Immediately west of Jane Street	EB	2,306	198	190	9%	8%	2,604	143	180	5%	7%	28,769	2,559	2,984	35,050	2,404	3,288	7%	9%
		WB	2,635	149	136	6%	5%	1,974	129	173	7%	9%	27,005	2,086	2,492	32,900	1,960	2,746	6%	8%
King Vaughan Road	Immediately east of Jane Street	EB	2,252	150	152	7%	7%	2,241	114	154	5%	7%	26,325	1,981	2,468	32,100	1,861	2,719	6%	8%
		WB	2,406	135	120	6%	5%	2,016	125	169	6%	8%	25,909	1,951	2,331	31,600	1,833	2,568	6%	8%
Jane Street	Immediately north of King Vaughan Road	NB	824	86	70	10%	8%	1,476	43	37	3%	3%	13,476	968	863	16,450	909	951	6%	6%
		SB	2,121	58	55	3%	3%	601	15	14	2%	2%	15,949	548	557	19,450	515	613	3%	3%
Jane Street	Immediately south of King Vaughan Road	NB	633	10	9	2%	1%	1,361	8	6	1%	0%	11,683	135	121	14,250	127	133	1%	1%
		SB	1,754	16	15	1%	1%	892	6	5	1%	1%	15,503	165	161	18,900	155	178	1%	1%
Kirby Road	At Highway 400	EB	1,115	28	34	3%	3%	779	27	39	3%	5%	11,099	415	584	13,550	390	643	3%	5%
		WB	754	23	27	3%	4%	965	8	10	1%	1%	10,069	235	298	12,250	221	328	2%	3%
Major Mackenzie Drive	Immediately west of Highway 427	EB	2,941	58	66	2%	2%	3,007	27	31	1%	1%	34,852	640	783	42,500	601	863	1%	2%
		WB	3,140	51	62	2%	2%	2,731	40	41	1%	2%	34,401	682	837	41,950	641	922	2%	2%
Major Mackenzie Drive	Immediately east of Highway 427	EB	2,688	160	147	6%	5%	2,154	89	108	4%	5%	28,371	1,868	2,059	34,600	1,755	2,269	5%	7%
		WB	2,588	119	112	5%	4%	2,981	76	109	3%	4%	32,628	1,462	1,782	39,750	1,373	1,963	3%	5%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario
Highway 413
GTA West

MAINLINE																				
			2051																	
Section / Location			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
		Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Highway 413																				
Hwy 413 N of Hwy 401/407 interchange		NB	5,003	498	471	10%	9%	4,686	328	443	7%	9%	56,770	6,199	7,372	69,200	5,823	8,123	8%	12%
		SB	5,410	486	440	9%	8%	4,834	376	420	8%	9%	60,022	6,470	6,937	73,200	6,076	7,643	8%	10%
Hwy 413 N of Winston Churchill Blvd		NB	5,298	476	440	9%	8%	5,877	313	399	5%	7%	65,477	5,922	6,767	79,800	5,562	7,456	7%	9%
		SB	6,209	496	424	8%	7%	5,409	368	403	7%	7%	68,072	6,485	6,671	83,000	6,091	7,350	7%	9%
Hwy 413 N of Bovaird Dr		NB	4,681	374	355	8%	8%	4,664	249	334	5%	7%	54,754	4,676	5,557	66,700	4,392	6,123	7%	9%
		SB	4,925	360	321	7%	7%	4,947	302	374	6%	8%	57,842	4,968	5,606	70,500	4,667	6,176	7%	9%
Hwy 413 E of Mayfield Rd		EB	3,843	391	393	10%	10%	4,648	250	356	5%	8%	49,751	4,811	6,041	60,600	4,519	6,656	7%	11%
		WB	4,792	351	333	7%	7%	3,918	319	410	8%	10%	51,034	5,029	5,993	62,200	4,723	6,603	8%	11%
Hwy 413 E of Chinguacousy Rd		EB	4,921	498	504	10%	10%	4,878	292	425	6%	9%	57,414	5,929	7,493	70,000	5,569	8,256	8%	12%
		WB	4,896	402	409	8%	8%	4,542	385	503	8%	11%	55,299	5,907	7,356	67,400	5,548	8,105	8%	12%
Hwy 413 E of Hurontario St		EB	6,058	559	634	9%	10%	4,889	339	518	7%	11%	64,141	6,740	9,292	78,200	6,330	10,238	8%	13%
		WB	4,982	463	480	9%	10%	5,707	432	605	8%	11%	62,629	6,717	8,752	76,300	6,309	9,642	8%	13%
Hwy 413 E of Hwy 410		EB	5,553	585	581	11%	10%	5,413	344	518	6%	10%	64,252	6,972	8,864	78,300	6,549	9,767	8%	12%
		WB	5,644	447	469	8%	8%	5,208	460	611	9%	12%	63,584	6,807	8,711	77,500	6,394	9,598	8%	12%
Hwy 413 E of Bramalea Rd		EB	5,232	587	604	11%	12%	5,006	380	581	8%	12%	59,987	7,258	9,558	73,100	6,817	10,531	9%	14%
		WB	5,005	525	559	10%	11%	4,908	487	662	10%	13%	58,082	7,595	9,849	70,800	7,134	10,851	10%	15%
Hwy 413 E of Airport Rd		EB	5,186	578	603	11%	12%	4,688	366	568	8%	12%	57,854	7,085	9,445	70,500	6,655	10,407	9%	15%
		WB	4,963	546	575	11%	12%	4,897	473	648	10%	13%	57,772	7,648	9,865	70,400	7,183	10,869	10%	15%
Hwy 413 E of The Gore Rd		EB	4,810	541	571	11%	12%	4,236	351	543	8%	13%	53,002	6,695	8,985	64,600	6,288	9,900	10%	15%
		WB	4,484	562	586	13%	13%	4,580	449	618	10%	13%	53,108	7,588	9,711	64,700	7,127	10,700	11%	17%
Hwy 413 E of Humber Station Rd		EB	5,837	664	696	11%	12%	5,741	408	629	7%	11%	67,838	8,046	10,687	82,700	7,557	11,775	9%	14%
		WB	5,597	606	603	11%	11%	5,735	485	662	8%	12%	66,397	8,188	10,203	80,900	7,691	11,242	10%	14%
Hwy 413 E of Hwy 427		EB	4,904	677	687	14%	14%	6,035	417	667	7%	11%	64,094	8,211	10,921	78,100	7,712	12,033	10%	15%
		WB	6,458	572	526	9%	8%	4,845	421	596	9%	12%	66,227	7,453	9,050	80,700	7,000	9,971	9%	12%
Hwy 413 E of Hwy 27		EB	4,695	633	640	13%	14%	5,012	361	597	7%	12%	56,875	7,460	9,978	69,300	7,007	10,993	10%	16%
		WB	5,120	485	450	9%	9%	4,619	398	553	9%	12%	57,063	6,627	8,090	69,600	6,225	8,914	9%	13%
Connecting Freeways																				
Highway 407	Immediately east of Highway 401/Highway 413	EB	5,086	390	379	8%	7%	2,312	0	0	0%	0%	43,346	2,927	3,057	52,800	2,749	3,368	5%	6%
		WB	2,352	65	104	3%	4%	4,063	5	2	0%	0%	37,587	525	855	45,800	493	942	1%	2%
Highway 407	Immediately south of Highway 401	NB	4,760	359	434	8%	9%	1,835	143	84	8%	5%	38,642	3,768	4,178	47,100	3,539	4,603	8%	10%
		SB	2,209	598	553	27%	25%	3,664	470	102	13%	3%	34,411	8,016	5,283	41,900	7,529	5,821	18%	14%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 EB mainline (at Trafalgar Road) to Highway 413/Highway 407 S	EB	1,976	346	187	18%	9%	2,218	176	325	8%	15%	24,574	3,918	4,130	30,000	3,680	4,550	12%	15%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 EB mainline (at Trafalgar Road) to East of Highway 413/Highway 407 S	EB	9,620	655	1,223	7%	13%	7,481	336	829	4%	11%	100,198	7,438	16,551	122,100	6,986	18,236	6%	15%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 WB Collector upstream of Highway 413 N to Highway 401 W Ramp	WB	3,347	238	379	7%	11%	3,311	138	327	4%	10%	39,011	2,822	5,695	47,600	2,651	6,274	6%	13%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 401 WB Express upstream of Highway 413 N to Highway 401 W Ramp	WB	3,669	301	655	8%	18%	5,371	142	579	3%	11%	52,967	3,325	9,953	64,600	3,123	10,967	5%	17%
Highway 401	Between Highway 407/Highway 413 and Winston Churchill Boulevard	EB	9,928	637	1,172	6%	12%	8,116	326	740	4%	9%	105,724	7,228	15,422	128,900	6,788	16,992	5%	13%
		WB	7,765	570	1,076	7%	14%	9,777	325	1,021	3%	10%	102,782	6,717	16,914	125,300	6,309	18,636	5%	15%
Highway 410 Extension	Between Mayfield Road and Highway 413	NB	1,090	106	89	10%	8%	2,201	21	46	1%	2%	19,283	953	1,089	23,500	895	1,200	4%	5%
		SB	2,422	41	84	2%	3%	971	42	54	4%	6%	19,880	623	1,113	24,200	585	1,226	2%	5%
Highway 410	Immediately west of Mayfield Road	EB	2,490	67	171	3%	7%	1,992	43	89	2%	4%	26,261	826	2,097	32,000	775	2,311	2%	7%
		WB	1,251	94	85	8%	7%	2,044	47	78	2%	4%	19,306	1,058	1,315	23,500	994	1,449	4%	6%
Highway 410	Between Mayfield Road and Sandalwood Parkway East	NB	2,821	182	177	6%	6%	4,142	68	143	2%	3%	40,798	1,876	2,581	49,700	1,762	2,844	4%	6%
		SB	5,151	111	382	2%	7%	3,741	88	163	2%	4%	52,100	1,494	4,396	63,500	1,403	4,843	2%	8%
Highway 427	Between Major Mackenzie Drive and Rutherford Road	NB	2,649	134	121	5%	5%	5,406	100	146	2%	3%	47,196	1,756	2,154	57,500	1,650	2,373	3%	4%
		SB	4,974	137	98	3%	2%	3,300	66	91	2%	3%	48,479	1,524	1,524	59,100	1,431	1,680	2%	3%
Highway 427	Between Major Mackenzie Drive and Highway 413	NB	2,087	264	228	13%	11%	3,825	173	243	5%	6%	34,640	3,280	3,799	42,200	3,081	4,186	7%	10%
		SB	3,894	210	158	5%	4%	2,632	104	149	4%	6%	38,237	2,357	2,476	46,600	2,213	2,728	5%	6%
Highway 400	South of King Road	NB	3,313	220	348	7%	11%	8,149	45	87	1%	1%	67,158	1,989	3,509	81,900	1,868	3,866	2%	5%
		SB	11,822	437	548	4%	5%	5,473	293	517	5%	9%	101,335	5,479	8,590	123,500	5,146	9,465	4%	8%
Highway 400	Between King Vaughan Road and Kirby Road i.e., not including freeway to freeway ramps	NB	3,214	214	337	7%	10%	7,823	46	88	1%	1%	64,668	1,951	3,428	78,800	1,833	3,777	2%	5%
		SB	7,980	187	338	2%	4%	3,248	48	194	1%	6%	65,787	1,764	4,291	80,200	1,657	4,728	2%	6%
Highway 400	North of Teston Road	NB	5,361	468	589	9%	11%	10,473	235	299	2%	3%	92,775	5,276	7,163	113,100	4,956	7,892	4%	7%
		SB	10,231	371	502	4%	5%	5,482	203	399	4%	7%	92,066	4,308	7,267	112,200	4,046	8,007	4%	7%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario

Highway 413

GTA West

Connecting Freeway Ramps																				
Highway 407 at Highway 401	Highway 407 NB to Highway 401 EB	S-E	672	103	115	15%	17%	166	2	8	1%	5%	4,910	788	992	6,000	740	1,093	12%	18%
Highway 407 at Highway 401	Highway 407 NB to Highway 401 WB	S-W	152	4	19	3%	13%	127	4	21	3%	17%	1,635	60	323	2,000	56	355	3%	18%
Highway 407 at Highway 413	Highway 407 SB to Highway 413 NB	E-N	41	0	0	0%	0%	202	0	3	0%	1%	1,424	0	24	1,750	0	27	0%	2%
Highway 407 at Highway 413	Highway 413 SB to Highway 407 EB	N-E	318	3	5	1%	2%	47	0	0	0%	0%	2,139	23	40	2,600	21	44	1%	2%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N-E Ramp	N-E	926	36	92	4%	10%	791	12	44	2%	6%	10,060	360	1,097	12,250	338	1,209	3%	10%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road S-E Ramp	S-E	1,254	6	118	0%	9%	990	2	9	0%	1%	13,148	60	1,024	16,050	56	1,129	0%	7%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N/S-E (combined) to Highway 401 E		1,224	37	135	3%	11%	807	14	52	2%	6%	11,900	383	1,508	14,500	360	1,662	2%	11%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road N/S-E (combined) to Highway 413/Highway 407 S		956	5	75	1%	8%	974	0	1	0%	0%	11,308	38	613	13,800	35	675	0%	5%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar N/S-E (combined) and Highway 401 EB (at Trafalgar Road) to Highway 413		2,823	349	244	12%	9%	3,119	171	306	5%	10%	34,815	3,903	4,436	42,450	3,666	4,888	9%	12%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar N/S-E (combined) and Highway 401 EB (at Trafalgar Road) to Highway 407 S		109	3	18	3%	17%	73	5	20	7%	27%	1,066	60	307	1,300	56	338	4%	26%
Highway 401 Between Trafalgar Road and Highway 407/413	Highway 413 N to Highway 401 W Ramp		3,213	80	48	2%	1%	2,615	88	342	3%	13%	34,148	1,261	3,146	41,650	1,184	3,466	3%	8%
Highway 401 Between Trafalgar Road and Highway 407/413	Trafalgar Road E-N/S Ramp	E-N/S	2,660	18	32	1%	1%	1,922	23	77	1%	4%	26,847	308	879	32,750	289	969	1%	3%
Highway 400 at King Vaughan Road	N-E/W Ramp	N-E/W	988	5	10	1%	1%	351	13	18	4%	5%	7,845	135	226	9,550	127	249	1%	3%
Highway 400 at King Vaughan Road	E-S Ramp	E-S	959	52	43	5%	4%	832	48	47	6%	6%	10,494	751	726	12,800	705	800	6%	6%
Highway 400 at King Vaughan Road	W-S Ramp	W-S	71	0	0	0%	0%	471	4	5	1%	1%	3,176	30	40	3,850	28	44	1%	1%
Highway 400 at King Vaughan Road	S-E/W Ramp	S-E/W	1,150	126	114	11%	10%	1,083	71	61	7%	6%	13,084	1,479	1,412	15,950	1,389	1,555	9%	10%
Highway 400 at King Vaughan Road	E-N Ramp	E-N	60	3	2	5%	3%	653	17	18	3%	3%	4,178	150	161	5,100	141	178	3%	3%
Highway 400 at King Vaughan Road	W-N Ramp	W-N	41	0	0	0%	0%	239	0	0	0%	0%	1,641	0	0	2,000	0	0	0%	0%
Highway 427 at Major Mackenzie Drive	N-E/W Ramp	N-E/W	1,352	85	73	6%	5%	885	51	73	6%	8%	13,107	1,021	1,178	16,000	959	1,297	6%	8%
Highway 427 at Major Mackenzie Drive	E-S Ramp	E-S	935	2	1	0%	0%	275	1	2	0%	1%	7,090	23	24	8,650	21	27	0%	0%
Highway 427 at Major Mackenzie Drive	W-S Ramp	W-S	1,441	12	14	1%	1%	1,190	6	7	1%	1%	15,416	135	169	18,800	127	187	1%	1%
Highway 427 at Major Mackenzie Drive	S-E/W Ramp	S-E/W	1,644	14	11	1%	1%	2,608	15	14	1%	1%	24,913	218	202	30,350	204	222	1%	1%
Highway 427 at Major Mackenzie Drive	E-N Ramp	E-N	891	125	101	14%	11%	818	72	88	9%	11%	10,013	1,479	1,524	12,200	1,389	1,680	11%	14%
Highway 427 at Major Mackenzie Drive	W-N Ramp	W-N	187	12	11	6%	6%	380	2	2	1%	1%	3,322	105	105	4,050	99	116	2%	3%
Highway 410/Highway 410 Extension at Mayfield Road	N-E/W Ramp	N-E/W	379	16	18	4%	5%	31	1	1	3%	3%	2,402	128	153	2,950	120	169	4%	6%
Highway 410/Highway 410 Extension at Mayfield Road	E-S Ramp	E-S	260	1	64	0%	25%	620	3	16	0%	3%	5,156	30	645	6,300	28	711	0%	11%
Highway 410/Highway 410 Extension at Mayfield Road	W-S Ramp	W-S	639	5	49	1%	8%	565	4	16	1%	3%	7,054	68	524	8,600	63	578	1%	7%
Highway 410/Highway 410 Extension at Mayfield Road	S-E/W Ramp	S-E/W	954	27	46	3%	5%	427	5	25	1%	6%	8,092	240	573	9,850	226	631	2%	6%
Highway 410/Highway 410 Extension at Mayfield Road	E-N Ramp	E-N	126	14	10	11%	8%	97	2	3	2%	3%	1,307	120	105	1,600	113	116	7%	7%
Highway 410/Highway 410 Extension at Mayfield Road	W-N Ramp	W-N	245	26	28	11%	11%	21	0	0	0%	0%	1,559	195	226	1,900	183	249	10%	13%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario
Highway 413
GTA West

HIGHWAY 413 RAMPS																				
			2051																	
			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
Interchange	On/Off	Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Hwy 413 at Hwy 401 / Hwy 407	Hwy to Hwy ramps	E-N	588	4	3	1%	1%	916	31	74	3%	8%	8,812	263	621	10,750	247	684	2%	6%
		N-E	1,355	48	65	4%	5%	1,108	27	33	2%	3%	14,431	563	790	17,600	529	871	3%	5%
		N-S	1,055	345	320	33%	30%	855	264	57	31%	7%	11,191	4,571	3,041	13,650	4,293	3,350	31%	25%
		S-N	1,046	193	257	18%	25%	717	136	80	19%	11%	10,330	2,469	2,718	12,600	2,319	2,995	18%	24%
Hwy 413 at Winston Churchill Blvd	Off	S-E/W	980	35	44	4%	4%	924	26	66	3%	7%	11,156	458	887	13,600	430	978	3%	7%
	On	E-N	1,052	3	3	0%	0%	1,589	15	22	1%	1%	15,474	135	202	18,850	127	222	1%	1%
	On	W-N	390	14	14	4%	4%	535	13	22	2%	4%	5,420	203	290	6,600	190	320	3%	5%
	Off	N-E/W	1,568	34	31	2%	2%	1,367	31	55	2%	4%	17,197	488	694	20,950	458	764	2%	4%
	On	E-S	383	21	38	5%	10%	689	24	59	3%	9%	6,281	338	782	7,650	317	862	4%	11%
	On	W-S	399	8	13	2%	3%	330	4	2	1%	1%	4,271	90	121	5,200	85	133	2%	3%
Hwy 413 at Bovaird Dr	Off	S-E/W	1,343	115	93	9%	7%	1,611	64	60	4%	4%	17,308	1,343	1,234	21,100	1,262	1,360	6%	6%
	On	E-N	479	19	15	4%	3%	233	9	7	4%	3%	4,172	210	177	5,100	197	196	4%	4%
	On	W-N	144	4	4	3%	3%	18	0	0	0%	0%	949	30	32	1,150	28	36	2%	3%
	Off	N-E/W	225	5	4	2%	2%	491	5	7	1%	1%	4,195	75	89	5,100	70	98	1%	2%
	On	E-S	944	89	64	9%	7%	1,063	68	31	6%	3%	11,759	1,178	766	14,350	1,107	844	8%	6%
	On	W-S	669	20	13	3%	2%	286	2	3	1%	1%	5,596	165	129	6,800	155	142	2%	2%
Hwy 413 at Mayfield Rd	Off	S-E/W	1,388	63	44	5%	3%	1,346	32	29	2%	2%	16,019	713	589	19,550	670	649	3%	3%
	On	E-N	197	1	3	1%	2%	188	0	1	0%	1%	2,256	8	32	2,750	7	36	0%	1%
	On	W-N	822	65	63	8%	8%	772	38	57	5%	7%	9,340	773	968	11,400	726	1,066	6%	9%
	Off	N-E/W	983	60	57	6%	6%	1,022	48	56	5%	5%	11,748	811	911	14,300	761	1,004	5%	7%
	On	E-S	1,058	58	33	5%	3%	568	30	20	5%	4%	9,527	660	427	11,600	620	471	5%	4%
	On	W-S	459	5	7	1%	2%	991	2	2	0%	0%	8,496	53	73	10,350	49	80	0%	1%
Hwy 413 at Chinguacousy Rd	Off	W-N/S	92	1	4	1%	4%	188	2	3	1%	2%	1,641	23	56	2,000	21	62	1%	3%
	On	N-E	415	48	67	12%	16%	237	21	39	9%	16%	3,820	518	855	4,650	486	942	10%	20%
	On	S-E	808	49	37	6%	5%	291	17	25	6%	9%	6,439	495	500	7,850	465	551	6%	7%
	Off	E-N/S	650	61	81	9%	12%	958	64	85	7%	9%	9,422	938	1,339	11,500	881	1,475	8%	13%
	On	N-W	163	2	0	1%	0%	108	1	0	1%	0%	1,588	23	0	1,950	21	0	1%	0%
	On	S-W	236	7	5	3%	2%	78	4	2	5%	3%	1,840	83	56	2,250	78	62	3%	3%
Hwy 413 at Hurontario St	Off	W-N/S	353	18	25	5%	7%	456	12	9	3%	2%	4,740	225	274	5,800	211	302	4%	5%
	On	N-E	1,043	48	114	5%	11%	477	43	73	9%	15%	8,906	683	1,508	10,850	641	1,662	6%	15%
	On	S-E	353	38	49	11%	14%	207	16	26	8%	13%	3,281	405	605	4,000	381	667	10%	17%
	Off	E-N/S	570	76	96	13%	17%	1,518	57	106	4%	7%	12,234	998	1,629	14,900	938	1,795	6%	12%
	On	N-W	355	8	18	2%	5%	266	18	14	7%	5%	3,639	195	258	4,450	183	284	4%	6%
	On	S-W	0	0	0	0%	0%	0	0	0	0%	0%	0	0	0	0	0	0	0%	0%
Hwy 413 at Hwy 410	Hwy to Hwy ramps	W-S	1,108	39	103	4%	9%	250	2	6	1%	2%	7,957	308	879	9,700	289	969	3%	10%
		E-S	1,023	25	31	2%	3%	684	42	50	6%	7%	10,002	503	653	12,200	472	720	4%	6%
		S-E	558	55	40	10%	7%	710	11	11	2%	2%	7,429	495	411	9,050	465	453	5%	5%
		S-W	447	32	32	7%	7%	1,205	14	44	1%	4%	9,679	345	613	11,800	324	675	3%	6%
Hwy 413 at Bramalea Rd	Off	W-N/S	586	53	40	9%	7%	681	17	21	2%	3%	7,424	525	492	9,050	493	542	5%	6%
	On	N-E	434	58	66	13%	15%	326	46	75	14%	23%	4,453	781	1,137	5,450	733	1,253	13%	23%
	On	S-E	0	0	0	0%	0%	69	1	1	1%	1%	404	8	8	500	7	9	1%	2%
	Off	E-N/S	432	101	118	23%	27%	511	63	83	12%	16%	5,525	1,231	1,621	6,750	1,156	1,786	17%	26%
	On	N-W	936	34	38	4%	4%	660	42	38	6%	6%	9,351	570	613	11,400	536	675	5%	6%
	On	S-W	22	0	2	0%	9%	81	0	1	0%	1%	603	0	24	750	0	27	0%	4%
Hwy 413 at Airport Rd	Off	W-N/S	584	27	19	5%	3%	750	28	36	4%	5%	7,816	413	444	9,550	388	489	4%	5%
	On	N-E	227	11	10	5%	4%	173	7	11	4%	6%	2,344	135	169	2,850	127	187	4%	7%
	On	S-E	291	12	13	4%	4%	143	0	1	0%	1%	2,543	90	113	3,100	85	124	3%	4%
	Off	E-N/S	410	27	24	7%	6%	199	9	9	5%	5%	3,568	270	266	4,350	254	293	6%	7%
	On	N-W	615	29	34	5%	6%	55	4	4	7%	7%	3,926	248	307	4,800	233	338	5%	7%
	On	S-W	19	3	2	16%	11%	108	11	10	10%	9%	744	105	97	900	99	107	11%	12%
Hwy 413 at The Gore Rd	Off	W-N/S	602	30	25	5%	4%	541	20	33	4%	6%	6,697	375	468	8,150	352	515	4%	6%
	On	N/S-E	154	2	1	1%	1%	105	1	3	1%	3%	1,518	23	32	1,850	21	36	1%	2%
	Off	E-N/S	146	3	2	2%	1%	322	8	10	2%	3%	2,742	83	97	3,350	78	107	2%	3%
	On	N/S-W	607	28	32	5%	5%	686	17	19	2%	3%	7,576	338	411	9,250	317	453	3%	5%
Hwy 413 at Humber Station Rd	Off	W-N/S	682	14	8	2%	1%	370	12	16	3%	4%	6,164	195	194	7,500	183	213	2%	3%
	On	N-E	583	16	11	3%	2%	975	5	6	1%	1%	9,129	158	137	11,150	148	151	1%	1%
	On	S-E	1,110	114	114	10%	10%	981	70	107	7%	11%	12,252	1,381	1,783	14,950	1,297	1,964	9%	13%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario

Highway 413

GTA West

	Off	E-N/S	1,449	96	72	7%	5%	1,530	45	56	3%	4%	17,455	1,058	1,032	21,300	994	1,138	5%	5%
	On	N-W	30	0	0	0%	0%	18	0	0	0%	0%	281	0	0	350	0	0	0%	0%
	On	S-W	228	20	22	9%	10%	370	6	8	2%	2%	3,504	195	242	4,250	183	267	4%	6%
Hwy 413 at Hwy 427	Hwy to Hwy ramps	W-S	1,486	103	94	7%	6%	1,458	69	104	5%	7%	17,250	1,291	1,597	21,050	1,212	1,760	6%	8%
		E-S	2,320	135	85	6%	4%	1,173	58	77	5%	7%	20,466	1,449	1,307	24,950	1,361	1,440	5%	6%
		S-E	612	95	63	16%	10%	1,816	57	110	3%	6%	14,226	1,141	1,395	17,350	1,071	1,537	6%	9%
		S-W	1,472	185	178	13%	12%	2,040	114	131	6%	6%	20,578	2,244	2,492	25,100	2,108	2,746	8%	11%
Hwy 413 at Hwy 27	Off	W-N/S	799	56	52	7%	7%	1,186	63	78	5%	7%	11,631	893	1,049	14,200	839	1,155	6%	8%
	On	N/S-E	418	21	12	5%	3%	93	2	2	2%	2%	2,994	173	113	3,650	162	124	4%	3%
	Off	E-N/S	244	24	14	10%	6%	495	15	13	3%	3%	4,330	293	218	5,300	275	240	5%	5%
	On	N-W	1,095	82	68	7%	6%	519	24	38	5%	7%	9,457	796	855	11,550	747	942	6%	8%
	On	S-W	1,486	102	81	7%	5%	786	35	53	4%	7%	13,312	1,028	1,081	16,250	966	1,191	6%	7%
Hwy 413 at Weston Rd	Off	W-N/S	1,198	88	90	7%	8%	1,195	79	136	7%	11%	14,021	1,253	1,823	17,100	1,177	2,008	7%	12%
	On	N/S-W	1,448	122	114	8%	8%	1,057	71	116	7%	11%	14,677	1,449	1,855	17,900	1,361	2,044	8%	11%
Hwy 413 at Hwy 400	Hwy to Hwy ramps	W-N	2,210	405	412	18%	19%	3,001	194	331	6%	11%	30,532	4,496	5,993	37,200	4,223	6,603	11%	18%
		W-S	1,295	145	144	11%	11%	902	96	144	11%	16%	12,873	1,809	2,323	15,700	1,699	2,559	11%	16%
		N-W	945	135	146	14%	15%	1,609	117	148	7%	9%	14,964	1,891	2,371	18,250	1,776	2,613	10%	14%
		S-W	2,877	234	195	8%	7%	1,877	206	282	11%	15%	27,855	3,302	3,847	33,950	3,102	4,239	9%	12%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario
Highway 413
GTA West

ARTERIALS																					
			2051																		
			AM peak					PM peak					14-hour			AADT	ADT		ADT-based Truck %	
Arterial	Location	Direction	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	MT%	HT%	Total veh	MT	HT	Total veh	MT	HT	MT%	HT%
Trafalgar Road	Immediately north of Highway 401	NB	3,926	56	87	1%	2%	2,684	25	49	1%	2%	38,729	608	1,097	47,200	571	1,209	1%	3%
		SB	2,282	68	169	3%	7%	3,682	29	90	1%	2%	34,944	728	2,089	42,600	684	2,302	2%	5%
Trafalgar Road	Immediately south of Highway 401	NB	3,567	26	153	1%	4%	2,500	3	52	0%	2%	35,548	218	1,654	43,350	204	1,822	0%	4%
		SB	2,581	24	53	1%	2%	3,498	5	37	0%	1%	35,618	218	726	43,400	204	800	0%	2%
Steeles Avenue	Immediately east of Trafalgar Road	EB	3,510	60	137	2%	4%	2,616	38	58	1%	2%	35,894	736	1,573	43,750	691	1,733	2%	4%
		WB	2,755	141	149	5%	5%	4,164	41	104	1%	2%	40,540	1,366	2,041	49,400	1,283	2,248	3%	5%
Steeles Avenue	Immediately west of Ninth Line N	EB	2,104	30	78	1%	4%	2,576	29	55	1%	2%	27,421	443	1,073	33,450	416	1,182	1%	4%
		WB	2,245	118	98	5%	4%	2,495	33	61	1%	2%	27,773	1,133	1,282	33,850	1,064	1,413	3%	4%
Steeles Avenue	At Highway 413	EB	3,726	90	160	2%	4%	3,182	49	83	2%	3%	40,475	1,043	1,960	49,350	980	2,160	2%	4%
		WB	2,687	145	128	5%	5%	3,500	51	94	1%	3%	36,251	1,471	1,791	44,200	1,382	1,973	3%	4%
Steeles Avenue	Immediately east of Ninth Line S	EB	3,032	40	89	1%	3%	2,270	22	45	1%	2%	31,066	465	1,081	37,850	437	1,191	1%	3%
		WB	2,066	112	74	5%	4%	3,291	30	58	1%	2%	31,388	1,066	1,065	38,250	1,001	1,173	3%	3%
Steeles Avenue	Immediately east of Tenth Line N	EB	3,905	70	146	2%	4%	2,233	22	46	1%	2%	35,964	690	1,549	43,850	649	1,706	1%	4%
		WB	1,955	123	85	6%	4%	3,721	39	78	1%	2%	33,257	1,216	1,315	40,550	1,142	1,449	3%	4%
Ninth Line N	Immediately north of Steeles Avenue	NB	629	30	34	5%	5%	1,334	35	64	3%	5%	11,502	488	790	14,000	458	871	3%	6%
		SB	1,844	65	90	4%	5%	924	27	37	3%	4%	16,218	690	1,024	19,750	649	1,129	3%	6%
Ninth Line S	Immediately south of Steeles Avenue	NB	2,331	60	85	3%	4%	1,462	40	65	3%	4%	22,224	751	1,210	27,100	705	1,333	3%	5%
		SB	2,077	79	101	4%	5%	2,316	46	64	2%	3%	25,740	938	1,331	31,400	881	1,466	3%	5%
Tenth Line	At Highway 413	NB	198	16	21	8%	11%	876	14	30	2%	3%	6,293	225	411	7,650	211	453	3%	6%
		SB	1,217	53	99	4%	8%	401	3	8	1%	2%	9,480	420	863	11,550	395	951	3%	8%
Derry Road	Immediately east of Highway 407	EB	3,219	66	52	2%	2%	2,654	140	133	5%	5%	34,411	1,546	1,492	41,950	1,452	1,644	3%	4%
		WB	2,375	376	458	16%	19%	2,722	97	108	4%	4%	29,864	3,550	4,565	36,400	3,334	5,030	9%	14%
Derry Road	Immediately west of Highway 407	EB	4,191	147	135	4%	3%	2,914	182	120	6%	4%	41,630	2,469	2,057	50,750	2,319	2,266	5%	4%
		WB	2,231	459	444	21%	20%	3,524	240	51	7%	1%	33,720	5,246	3,993	41,100	4,927	4,399	12%	11%
Winston Churchill Boulevard	Immediately north of Highway 401	NB	3,360	67	53	2%	2%	2,346	42	48	2%	2%	33,433	818	815	40,750	768	898	2%	2%
		SB	2,358	101	81	4%	3%	3,040	20	26	1%	1%	31,628	908	863	38,550	853	951	2%	2%
Winston Churchill Boulevard	Immediately south of Highway 401	NB	3,937	61	46	2%	1%	2,296	72	85	3%	4%	36,521	998	1,057	44,500	938	1,164	2%	3%
		SB	2,024	94	84	5%	4%	3,169	55	58	2%	2%	30,427	1,118	1,145	37,100	1,050	1,262	3%	3%
Winston Churchill Boulevard	Immediately south of Highway 413	NB	1,652	37	41	2%	2%	3,677	31	49	1%	1%	31,224	510	726	38,050	479	800	1%	2%
		SB	3,239	88	101	3%	3%	1,838	11	24	1%	1%	29,747	743	1,008	36,250	698	1,111	2%	3%
Winston Churchill Boulevard	Between Highway 413 and 5 Side Road	NB	1,468	50	52	3%	4%	2,784	47	84	2%	3%	24,913	728	1,097	30,350	684	1,209	2%	4%
		SB	2,561	69	94	3%	4%	1,535	25	42	2%	3%	23,999	705	1,097	29,250	663	1,209	2%	4%
Winston Churchill Boulevard	Immediately north of 5 Side Road	NB	617	33	36	5%	6%	1,237	16	22	1%	2%	10,863	368	468	13,250	345	515	3%	4%
		SB	1,171	30	48	3%	4%	626	2	11	0%	2%	10,529	240	476	12,850	226	524	2%	4%
5 Side Road	Immediately west of Winston Churchill Boulevard	EB	918	52	62	6%	7%	755	13	22	2%	3%	9,802	488	678	11,950	458	747	4%	6%
		WB	835	14	13	2%	2%	1,043	28	56	3%	5%	11,004	315	557	13,400	296	613	2%	5%
5 Side Road	At Highway 413	EB	1,279	21	29	2%	2%	858	10	10	1%	1%	12,521	233	315	15,250	219	347	1%	2%
		WB	531	28	37	5%	7%	1,338	9	14	1%	1%	10,951	278	411	13,350	261	453	2%	3%
Bovaird Drive	Immediately west of Heritage Road	EB	1,729	67	101	4%	6%	1,544	37	51	2%	3%	19,177	781	1,226	23,400	733	1,351	3%	6%
		WB	1,509	75	109	5%	7%	1,473	28	85	2%	6%	17,472	773	1,565	21,300	726	1,724	3%	8%
Bovaird Drive	Between Heritage Road and Highway 413	EB	2,400	87	108	4%	5%	2,124	38	51	2%	2%	26,507	938	1,282	32,300	881	1,413	3%	4%
		WB	1,084	25	41	2%	4%	568	3	4	1%	1%	9,679	210	363	11,800	197	400	2%	3%
Bovaird Drive	Immediately east of Highway 413	EB	2,600	203	206	8%	8%	3,249	114	125	4%	4%	34,271	2,379	2,670	41,800	2,235	2,942	5%	7%
		WB	3,052	213	215	7%	7%	2,421	109	125	5%	5%	32,068	2,417	2,742	39,100	2,270	3,022	6%	8%
Heritage Road	At Highway 413	NB	281	2	6	1%	2%	833	1	15	0%	2%	6,527	23	169	7,950	21	187	0%	2%
		SB	820	9	39	1%	5%	420	3	4	1%	1%	7,265	90	347	8,850	85	382	1%	4%
Heritage Road	Immediately north of Bovaird Drive	NB	427	1	3	0%	1%	863	1	21	0%	2%	7,558	15	194	9,200	14	213	0%	2%
		SB	1,016	22	37	2%	4%	563	0	0	0%	0%	9,252	165	298	11,300	155	329	1%	3%
Heritage Road	Immediately south of Wanless Drive	NB	508	1	3	0%	1%	1,359	1	21	0%	2%	10,939	15	194	13,350	14	213	0%	2%
		SB	1,669	67	111	4%	7%	813	0	0	0%	0%	14,543	503	895	17,750	472	986	3%	6%
Wanless Drive	Immediately West of Heritage Road	EB	645	27	26	4%	4%	824	10	6	1%	1%	8,607	278	258	10,500	261	284	2%	3%
		WB	761	64	64	8%	8%	668	8	5	1%	1%	8,373	540	557	10,200	508	613	5%	6%
Wanless Drive	At Highway 413	EB	946	50	52	5%	5%	767	13	13	2%	2%	10,037	473	524	12,250	444	578	4%	5%
		WB	1,122	67	54	6%	5%	466	6	7	1%	2%	9,304	548	492	11,350	515	542	5%	5%
Heritage Road	Between Wanless Drive and Mayfield Road	NB	396	0	0	0%	0%	250	1	5	0%	2%	3,785	8	40	4,600	7	44	0%	1%
		SB	521	12	37	2%	7%	420	0	0	0%	0%	5,514	90	298	6,700	85	329	1%	5%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario

Highway 413

GTA West

Heritage Road	Immediately north of Mayfield Road	NB	800	0	0	0%	0%	419	15	15	4%	4%	7,142	113	121	8,700	106	133	1%	2%
		SB	590	29	32	5%	5%	696	0	2	0%	0%	7,535	218	274	9,200	204	302	2%	3%
Mayfield Road	Immediately west of Heritage Road	EB	1,982	97	109	5%	5%	1,078	37	52	3%	5%	17,929	1,006	1,299	21,850	945	1,431	4%	7%
		WB	1,060	45	46	4%	4%	1,707	55	60	3%	4%	16,212	751	855	19,750	705	942	4%	5%
Mayfield Road	Between Heritage Road and Highway 413	EB	2,397	118	127	5%	5%	3,326	38	56	1%	2%	33,532	1,171	1,476	40,900	1,100	1,626	3%	4%
		WB	3,211	44	49	1%	2%	2,797	72	76	3%	3%	35,202	871	1,008	42,900	818	1,111	2%	3%
Mayfield Road	Immediately east of Highway 413	EB	1,309	80	74	6%	6%	1,343	28	31	2%	2%	15,539	811	847	18,950	761	933	4%	5%
		WB	1,413	39	33	3%	2%	1,563	50	41	3%	3%	17,437	668	597	21,250	627	658	3%	3%
Mississauga Road	At Highway 413	NB	172	11	9	6%	5%	538	39	21	7%	4%	4,160	375	242	5,050	352	267	7%	5%
		SB	797	82	62	10%	8%	269	8	9	3%	3%	6,246	675	573	7,600	634	631	8%	8%
Creditview Road	At Highway 413	NB	210	46	37	22%	18%	9	0	0	0%	0%	1,283	345	298	1,550	324	329	21%	21%
		SB	98	7	4	7%	4%	138	11	16	8%	12%	1,383	135	161	1,700	127	178	7%	10%
Chinguacousy Road	Immediately south of Highway 413	NB	1,076	81	63	8%	6%	628	31	43	5%	7%	9,984	841	855	12,150	790	942	6%	8%
		SB	684	53	65	8%	10%	777	39	56	5%	7%	8,560	690	976	10,450	649	1,075	6%	10%
Chinguacousy Road	Between Highway 413 and Old School Road	NB	512	56	67	11%	13%	835	110	155	13%	19%	7,892	1,246	1,791	9,600	1,170	1,973	12%	21%
		SB	1,212	96	114	8%	9%	633	40	71	6%	11%	10,810	1,021	1,492	13,200	959	1,644	7%	12%
Chinguacousy Road	Immediately north of Old School Road	NB	159	23	20	14%	13%	732	19	33	3%	5%	5,221	315	427	6,350	296	471	5%	7%
		SB	668	52	61	8%	9%	366	44	50	12%	14%	6,058	721	895	7,400	677	986	9%	13%
Old School Road	Immediately west of Chinguacousy Road	EB	682	40	66	6%	10%	697	33	72	5%	10%	8,080	548	1,113	9,850	515	1,226	5%	12%
		WB	611	51	70	8%	11%	722	52	71	7%	10%	7,810	773	1,137	9,500	726	1,253	8%	13%
Old School Road	At Highway 413	EB	353	4	22	1%	6%	470	18	76	4%	16%	4,822	165	790	5,900	155	871	3%	15%
		WB	627	13	20	2%	3%	522	28	57	5%	11%	6,732	308	621	8,200	289	684	4%	8%
McLaughlin Road	Immediately south of Old School Road	NB	421	13	14	3%	3%	424	16	9	4%	2%	4,951	218	186	6,050	204	204	3%	3%
		SB	398	21	20	5%	5%	281	8	9	3%	3%	3,978	218	234	4,850	204	258	4%	5%
McLaughlin Road	At Highway 413	NB	294	27	24	9%	8%	566	21	20	4%	4%	5,039	360	355	6,150	338	391	6%	6%
		SB	634	38	39	6%	6%	218	11	14	5%	6%	4,992	368	427	6,100	345	471	6%	8%
Old School Road	Between McLaughlin Road and Hurontario Street	EB	559	44	54	8%	10%	726	45	75	6%	10%	7,529	668	1,041	9,200	627	1,146	7%	12%
		WB	779	55	49	7%	6%	1,339	25	54	2%	4%	12,410	600	831	15,150	564	915	4%	6%
Hurontario Street	Immediately north of Highway 413	NB	1,213	126	157	10%	13%	2,399	81	143	3%	6%	21,163	1,554	2,420	25,800	1,459	2,666	6%	10%
		SB	2,513	81	235	3%	9%	1,471	71	119	5%	8%	23,343	1,141	2,855	28,450	1,071	3,146	4%	11%
Hurontario Street	Between Highway 413 and Old School Road	NB	1,163	95	122	8%	10%	875	30	64	3%	7%	11,941	938	1,500	14,550	881	1,653	6%	11%
		SB	1,434	47	180	3%	13%	1,077	17	47	2%	4%	14,712	480	1,831	17,950	451	2,017	3%	11%
Hurontario Street	Immediately south of Old School Road	NB	1,330	102	109	8%	8%	1,558	34	76	2%	5%	16,921	1,021	1,492	20,650	959	1,644	5%	8%
		SB	1,147	39	128	3%	11%	1,299	32	68	2%	5%	14,332	533	1,581	17,450	501	1,742	3%	10%
Old School Road	Between Hurontario Street and Kennedy Road	EB	1,304	33	46	3%	4%	530	3	8	1%	2%	10,746	270	436	13,100	254	480	2%	4%
		WB	491	2	3	0%	1%	958	2	1	0%	0%	8,490	30	32	10,350	28	36	0%	0%
Kennedy Road	At Highway 413	NB	363	13	26	4%	7%	311	11	14	4%	5%	3,949	180	323	4,800	169	355	4%	7%
		SB	554	30	31	5%	6%	186	24	24	13%	13%	4,336	405	444	5,300	381	489	7%	9%
Heart Lake Road	At Highway 413	NB	308	9	8	3%	3%	523	8	8	2%	2%	4,869	128	129	5,950	120	142	2%	2%
		SB	892	38	38	4%	4%	176	7	2	4%	1%	6,258	338	323	7,650	317	355	4%	5%
Heart Lake Road	At Highway 410	NB	636	7	8	1%	1%	311	9	10	3%	3%	5,549	120	145	6,750	113	160	2%	2%
		SB	442	32	49	7%	11%	508	8	10	2%	2%	5,566	300	476	6,800	282	524	4%	8%
Heart Lake Road	Immediately south of Mayfield Road	NB	459	19	15	4%	3%	628	11	14	2%	2%	6,369	225	234	7,750	211	258	3%	3%
		SB	675	29	37	4%	5%	742	11	18	1%	2%	8,303	300	444	10,100	282	489	3%	5%
Heart Lake Road	Immediately south of Old School Road	NB	204	4	3	2%	1%	534	9	8	2%	1%	4,324	98	89	5,250	92	98	2%	2%
		SB	784	29	26	4%	3%	135	5	3	4%	2%	5,385	255	234	6,550	240	258	4%	4%
Old School Road	Immediately west of Heart Lake Road	EB	778	26	29	3%	4%	204	1	3	0%	1%	5,754	203	258	7,000	190	284	3%	4%
		WB	267	5	8	2%	3%	710	10	2	1%	0%	5,724	113	81	7,000	106	89	2%	1%
Old School Road	At Highway 410 Extension	EB	694	41	47	6%	7%	187	1	1	1%	1%	5,162	315	387	6,300	296	427	5%	7%
		WB	239	5	5	2%	2%	627	9	6	1%	1%	5,074	105	89	6,200	99	98	2%	2%
Mayfield Road	Immediately west of Heart Lake Road	EB	3,317	89	121	3%	4%	2,652	44	80	2%	3%	34,974	998	1,621	42,650	938	1,786	2%	4%
		WB	2,243	84	74	4%	3%	3,006	26	48	1%	2%	30,755	826	984	37,500	775	1,084	2%	3%
Mayfield Road	Between Heart Lake Road and Highway 410	EB	3,172	86	125	3%	4%	2,409	43	77	2%	3%	32,700	968	1,629	39,850	909	1,795	2%	5%
		WB	2,480	75	70	3%	3%	2,580	25	43	1%	2%	29,648	751	911	36,150	705	1,004	2%	3%
Mayfield Road	Immediately east of Highway 410	EB	3,407	111	125	3%	4%	2,563	45	86	2%	3%	34,980	1,171	1,702	42,650	1,100	1,875	3%	4%
		WB	2,676	100	159	4%	6%	3,506	31	60	1%	2%	36,222	983	1,766	44,150	923	1,946	2%	4%
Mayfield Road	Immediately east of Dixie Road	EB	2,603	65	89	2%	3%	2,059	43	75	2%	4%	27,316	811	1,323	33,300	761	1,457	2%	4%
		WB	1,885	70	89	4%	5%	2,576	19	45	1%	2%	26,138	668	1,081	31,850	627	1,191	2%	4%
Countryside Drive	At Highway 410	EB	2,846	80	68	3%	2%	1,492	50	66	3%	4%	25,417	976	1,081	31,000	916	1,191	3%	4%
		WB	1,787	113	100	6%	6%	1,421	21	21	1%	1%	18,796	1,006	976	22,900	945	1,075	4%	5%
Dixie Road	At Highway 413	NB	283	27	16	10%	6%	602	9	10	1%	2%	5,185	270	210	6,300	254	231	4%	4%
		SB	712	6	8	1%	1%	324	12	13	4%	4%	6,070	135	169	7,400	127	187	2%	3%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario

Highway 413

GTA West

Dixie Road	Immediately north of Mayfield Road	NB	525	21	22	4%	4%	860	7	29	1%	3%	8,115	210	411	9,900	197	453	2%	5%
		SB	1,000	16	81	2%	8%	645	5	14	1%	2%	9,638	158	766	11,750	148	844	1%	7%
Dixie Road	Immediately south of Mayfield Road	NB	1,081	40	32	4%	3%	1,224	26	33	2%	3%	13,505	495	524	16,450	465	578	3%	4%
		SB	1,586	56	60	4%	4%	938	12	21	1%	2%	14,789	510	653	18,050	479	720	3%	4%
Bramalea Road	North of Highway 413	NB	594	127	132	21%	22%	1,436	76	101	5%	7%	11,894	1,524	1,879	14,500	1,431	2,071	10%	14%
		SB	1,531	58	68	4%	4%	903	71	93	8%	10%	14,261	968	1,299	17,400	909	1,431	5%	8%
Bramalea Road	South of Highway 413	NB	28	1	3	4%	11%	338	5	12	1%	4%	2,144	45	121	2,600	42	133	2%	5%
		SB	353	18	30	5%	8%	44	0	2	0%	5%	2,326	135	258	2,850	127	284	4%	10%
Bramalea Road	Immediately south of Old School Road	NB	216	4	7	2%	3%	821	6	16	1%	2%	6,076	75	186	7,400	70	204	1%	3%
		SB	1,102	10	25	1%	2%	271	2	10	1%	4%	8,045	90	282	9,800	85	311	1%	3%
Old School Road	Immediately west of Bramalea Road	EB	716	4	25	1%	3%	597	2	2	0%	0%	7,693	45	218	9,400	42	240	0%	3%
		WB	580	0	0	0%	0%	777	1	0	0%	0%	7,951	8	0	9,700	7	0	0%	0%
Torbram Road	At Highway 413	NB	86	0	0	0%	0%	1,130	6	7	1%	1%	7,125	45	56	8,700	42	62	0%	1%
		SB	1,134	16	19	1%	2%	237	1	1	0%	0%	8,033	128	161	9,800	120	178	1%	2%
Torbram Road	Immediately south of Old School Road	NB	43	0	0	0%	0%	422	3	4	1%	1%	2,725	23	32	3,300	21	36	1%	1%
		SB	659	17	21	3%	3%	97	1	0	1%	0%	4,430	135	169	5,400	127	187	2%	3%
Old School Road	Between Bramalea Road and Torbram Road	EB	633	33	52	5%	8%	717	2	10	0%	1%	7,910	263	500	9,650	247	551	3%	6%
		WB	963	11	26	1%	3%	753	2	8	0%	1%	10,054	98	274	12,250	92	302	1%	2%
Old School Road	Between Torbram Road and Airport Road	EB	592	59	75	10%	13%	590	10	36	2%	6%	6,926	518	895	8,450	486	986	6%	12%
		WB	514	16	18	3%	4%	835	2	3	0%	0%	7,904	135	169	9,650	127	187	1%	2%
Airport Road	Immediately north of Highway 413	NB	750	36	34	5%	5%	1,884	34	61	2%	3%	15,433	525	766	18,800	493	844	3%	4%
		SB	1,775	50	66	3%	4%	710	16	28	2%	4%	14,560	495	758	17,750	465	835	3%	5%
Airport Road	Between Highway 413 and Old School Road	NB	762	30	34	4%	4%	1,748	31	64	2%	4%	14,707	458	790	17,950	430	871	2%	5%
		SB	1,816	55	70	3%	4%	652	10	17	2%	3%	14,461	488	702	17,650	458	773	3%	4%
Airport Road	Immediately south of Old School Road	NB	638	13	14	2%	2%	2,430	28	51	1%	2%	17,976	308	524	21,900	289	578	1%	3%
		SB	2,275	61	78	3%	3%	1,000	10	18	1%	2%	19,189	533	774	23,400	501	853	2%	4%
Healey Road	Between Airport Road and Innis Lake Road	EB	703	22	20	3%	3%	1,426	9	13	1%	1%	12,474	233	266	15,200	219	293	1%	2%
		WB	1,088	6	8	1%	1%	1,072	16	18	1%	2%	12,656	165	210	15,450	155	231	1%	1%
Innis Lake Road	At Highway 413	NB	157	9	9	6%	6%	1,146	26	27	2%	2%	7,635	263	290	9,300	247	320	3%	3%
		SB	1,273	39	35	3%	3%	199	9	11	5%	6%	8,625	360	371	10,500	338	409	3%	4%
Innis Lake Road	Immediately south of Healey Road	NB	162	7	9	4%	6%	972	33	33	3%	3%	6,644	300	339	8,100	282	373	3%	5%
		SB	781	55	44	7%	6%	591	25	26	4%	4%	8,039	600	565	9,800	564	622	6%	6%
Healey Road	At Highway 413	EB	624	1	5	0%	1%	725	3	9	0%	1%	7,904	30	113	9,650	28	124	0%	1%
		WB	700	7	16	1%	2%	868	23	26	3%	3%	9,187	225	339	11,200	211	373	2%	3%
Centreville Creek Road	Immediately north of Healey Road	NB	13	0	0	0%	0%	1,115	32	35	3%	3%	6,609	240	282	8,050	226	311	3%	4%
		SB	913	48	71	5%	8%	356	1	18	0%	5%	7,435	368	718	9,050	345	791	4%	9%
Centreville Creek Road	At Highway 413	NB	101	1	3	1%	3%	947	35	35	4%	4%	6,140	270	307	7,500	254	338	3%	5%
		SB	1,107	54	80	5%	7%	203	3	7	1%	3%	7,676	428	702	9,350	402	773	4%	8%
Healey Road	Between Centreville Creek Road and The Gore Road	EB	556	1	1	0%	0%	602	1	5	0%	1%	6,785	15	48	8,250	14	53	0%	1%
		WB	627	5	7	1%	1%	1,037	6	13	1%	1%	9,750	83	161	11,900	78	178	1%	1%
The Gore Road	Between Highway 413 and Healey Road	NB	282	54	59	19%	21%	1,062	12	18	1%	2%	7,875	495	621	9,600	465	684	5%	7%
		SB	1,084	22	33	2%	3%	655	12	21	2%	3%	10,189	255	436	12,400	240	480	2%	4%
The Gore Road	Immediately south of Highway 413	NB	586	41	54	7%	9%	1,082	22	31	2%	3%	9,773	473	686	11,900	444	755	4%	6%
		SB	1,308	51	67	4%	5%	914	48	89	5%	10%	13,019	743	1,258	15,850	698	1,386	4%	9%
Humber Station Road	Immediately north of Highway 413	NB	882	11	8	1%	1%	1,244	7	10	1%	1%	12,457	135	145	15,200	127	160	1%	1%
		SB	909	14	16	2%	2%	1,115	4	7	0%	1%	11,859	135	186	14,450	127	204	1%	1%
Humber Station Road	Between Highway 413 and Mayfield Road	NB	1,708	245	249	14%	15%	1,813	70	111	4%	6%	20,630	2,364	2,904	25,150	2,221	3,199	9%	13%
		SB	1,866	99	80	5%	4%	1,356	64	91	5%	7%	18,878	1,223	1,379	23,000	1,149	1,520	5%	7%
Clarkway Drive	Immediately south of Mayfield Road	NB	627	3	5	0%	1%	491	4	11	1%	2%	6,551	53	129	8,000	49	142	1%	2%
		SB	541	28	42	5%	8%	529	9	16	2%	3%	6,269	278	468	7,650	261	515	3%	7%
Mayfield Road	Immediately west of Humber Station Road	EB	2,288	116	135	5%	6%	2,153	78	122	4%	6%	26,021	1,456	2,073	31,700	1,368	2,284	4%	7%
		WB	1,889	105	105	6%	6%	2,157	36	70	2%	3%	23,706	1,058	1,412	28,900	994	1,555	3%	5%
Mayfield Road	At Highway 413	EB	2,145	36	54	2%	3%	1,752	8	13	0%	1%	22,833	330	540	27,850	310	595	1%	2%
		WB	1,671	51	86	3%	5%	2,166	7	32	0%	1%	22,482	435	952	27,400	409	1,049	1%	4%
Coleraine Drive	Immediately north of Mayfield Road	NB	1,502	2	4	0%	0%	1,534	9	6	1%	0%	17,789	83	81	21,700	78	89	0%	0%
		SB	1,789	22	11	1%	1%	1,499	1	5	0%	0%	19,265	173	129	23,500	162	142	1%	1%
Coleraine Drive	At Highway 413	NB	752	3	2	0%	0%	1,265	13	7	1%	1%	11,818	120	73	14,400	113	80	1%	1%
		SB	1,587	27	14	2%	1%	909	3	4	0%	0%	14,625	225	145	17,850	211	160	1%	1%
Mayfield Road	Immediately east of Coleraine Drive	NB	867	14	9	2%	1%	1,643	38	24	2%	1%	14,707	390	266	17,950	367	293	2%	2%
		SB	1,876	159	166	8%	9%	1,168	8	8	1%	1%	17,835	1,253	1,403	21,750	1,177	1,546	5%	7%
Highway 50	Immediately north of Cold Creek Road Realignment	NB	2,250	51	35	2%	2%	3,128	25	27	1%	1%	31,511	570	500	38,400	536	551	1%	1%
		SB	751	44	50	6%	7%	2,321	24	33	1%	1%	18,000	510	669	21,950	479	738	2%	3%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario

Highway 413

GTA West

Cold Creek Road Realignment	Immediately east of Highway 50	EB	20	0	0	0%	0%	68	1	0	1%	0%	516	8	0	650	7	0	1%	0%
		WB	432	4	4	1%	1%	25	0	0	0%	0%	2,678	30	32	3,250	28	36	1%	1%
Cold Creek Road	Immediately north of Nashville Road	NB	0	0	0	0%	0%	0	0	0	0%	0%	0	0	0	0	0	0	0%	0%
		SB	0	0	0	0%	0%	0	0	0	0%	0%	0	0	0	0	0	0	0%	0%
Highway 50	At Highway 413	NB	2,399	36	90	2%	4%	3,214	26	52	1%	2%	32,888	465	1,145	40,100	437	1,262	1%	3%
		SB	3,617	63	150	2%	4%	2,449	15	24	1%	1%	35,542	585	1,403	43,350	550	1,546	1%	4%
Highway 50	Immediately south of Countryside Drive	NB	1,944	35	77	2%	4%	2,935	25	53	1%	2%	28,587	450	1,049	34,850	423	1,155	1%	3%
		SB	3,144	57	139	2%	4%	2,017	14	19	1%	1%	30,239	533	1,274	36,850	501	1,404	1%	4%
Countryside Drive	Immediately west of Highway 50	EB	521	10	20	2%	4%	274	0	0	0%	0%	4,658	75	161	5,700	70	178	1%	3%
		WB	439	0	1	0%	0%	316	0	1	0%	0%	4,424	0	16	5,400	0	18	0%	0%
Nashville Road	Immediately east of Highway 50	EB	749	3	6	0%	1%	511	1	3	0%	1%	7,383	30	73	9,000	28	80	0%	1%
		WB	733	0	3	0%	0%	380	1	1	0%	0%	6,521	8	32	7,950	7	36	0%	0%
Nashville Road	At Highway 427 Extension	EB	749	3	6	0%	1%	511	1	3	0%	1%	7,383	30	73	9,000	28	80	0%	1%
		WB	733	0	3	0%	0%	380	1	1	0%	0%	6,521	8	32	7,950	7	36	0%	0%
Huntington Road	Immediately north of Kirby Road	NB	10	0	0	0%	0%	10	0	0	0%	0%	117	0	0	150	0	0	0%	0%
		SB	10	0	0	0%	0%	10	0	0	0%	0%	117	0	0	150	0	0	0%	0%
Huntington Road	At Highway 413	NB	362	4	1	1%	0%	223	1	0	0%	0%	3,428	38	8	4,200	35	9	1%	0%
		SB	288	3	3	1%	1%	288	1	1	0%	0%	3,375	30	32	4,100	28	36	1%	1%
Kirby Road	Immediately west of Huntington Road	EB	296	3	4	1%	1%	676	2	2	0%	0%	5,695	38	48	6,950	35	53	1%	1%
		WB	633	20	12	3%	2%	327	2	0	1%	0%	5,625	165	97	6,850	155	107	2%	2%
Highway 27	Immediately north of Highway 413	NB	861	82	77	10%	9%	2,640	64	91	2%	3%	20,513	1,096	1,355	25,000	1,029	1,493	4%	6%
		SB	2,806	122	160	4%	6%	1,466	37	73	3%	5%	25,031	1,193	1,879	30,500	1,121	2,071	4%	7%
Highway 27	Immediately south of Highway 413	NB	1,393	76	72	5%	5%	1,941	38	72	2%	4%	19,535	856	1,161	23,800	804	1,280	3%	5%
		SB	1,935	65	113	3%	6%	1,545	39	69	3%	4%	20,390	781	1,468	24,850	733	1,617	3%	7%
Kirby Road	Immediately east of Highway 27	EB	905	40	48	4%	5%	1,182	30	45	3%	4%	12,228	525	750	14,900	493	826	3%	6%
		WB	1,149	27	28	2%	2%	811	12	19	1%	2%	11,484	293	379	14,000	275	418	2%	3%
Kirby Road	Immediately west of Highway 27	EB	32	1	2	3%	6%	9	0	0	0%	0%	240	8	16	300	7	18	2%	6%
		WB	6	0	1	0%	17%	95	1	2	1%	2%	592	8	24	700	7	27	1%	4%
Kipling Avenue	At Highway 413	NB	96	3	6	3%	6%	44	0	1	0%	2%	820	23	56	1,000	21	62	2%	6%
		SB	42	0	3	0%	7%	8	0	0	0%	0%	293	0	24	350	0	27	0%	8%
King Vaughan Road	Between Highway 27 and Kipling Avenue	EB	842	11	16	1%	2%	937	14	25	1%	3%	10,424	188	331	12,700	176	364	1%	3%
		WB	789	38	36	5%	5%	935	32	64	3%	7%	10,101	525	807	12,300	493	889	4%	7%
King Vaughan Road	Immediately east of Kipling Avenue	EB	1,106	17	12	2%	1%	1,282	20	29	2%	2%	13,992	278	331	17,050	261	364	2%	2%
		WB	1,029	46	46	4%	4%	1,177	32	49	3%	4%	12,925	585	766	15,750	550	844	3%	5%
Pine Valley Drive	At Highway 413	NB	137	2	7	1%	5%	548	5	7	1%	1%	4,014	53	113	4,900	49	124	1%	3%
		SB	828	10	25	1%	3%	263	1	1	0%	0%	6,392	83	210	7,800	78	231	1%	3%
Pine Valley Drive	Immediately north of King Vaughan Road	NB	36	1	2	3%	6%	56	1	2	2%	4%	539	15	32	650	14	36	2%	5%
		SB	30	1	2	3%	7%	18	0	1	0%	6%	281	8	24	350	7	27	2%	8%
King Vaughan Road	Immediately west of Pine Valley Drive	EB	1,206	6	25	0%	2%	1,167	5	15	0%	1%	13,904	83	323	16,950	78	355	0%	2%
		WB	933	8	50	1%	5%	1,012	4	13	0%	1%	11,396	90	508	13,900	85	560	1%	4%
King Vaughan Road	Immediately east of Pine Valley Drive	EB	505	1	24	0%	5%	772	3	10	0%	1%	7,482	30	274	9,100	28	302	0%	3%
		WB	836	7	67	1%	8%	622	2	16	0%	3%	8,543	68	669	10,400	63	738	1%	7%
Weston Road	Immediately north of King Vaughan Road	NB	334	21	23	6%	7%	504	18	34	4%	7%	4,910	293	460	6,000	275	507	5%	8%
		SB	500	29	30	6%	6%	425	15	25	4%	6%	5,420	330	444	6,600	310	489	5%	7%
Weston Road	Immediately north of Highway 413	NB	1,010	90	91	9%	9%	1,175	71	123	6%	10%	12,802	1,208	1,726	15,600	1,135	1,902	7%	12%
		SB	1,490	119	112	8%	8%	939	74	122	8%	13%	14,232	1,449	1,887	17,350	1,361	2,080	8%	12%
Weston Road	Immediately north of Kirby Road	NB	885	0	0	0%	0%	1,161	0	0	0%	0%	11,988	0	0	14,600	0	0	0%	0%
		SB	1,317	0	0	0%	0%	654	0	0	0%	0%	11,549	0	0	14,100	0	0	0%	0%
King Vaughan Road	Immediately east of Weston Road	EB	1,283	66	66	5%	5%	1,211	56	95	5%	8%	14,613	916	1,299	17,800	860	1,431	5%	8%
		WB	1,221	101	100	8%	8%	1,164	64	105	5%	9%	13,974	1,238	1,654	17,050	1,163	1,822	7%	11%
King Vaughan Road	Immediately west of Jane Street	EB	2,551	209	201	8%	8%	3,059	140	177	5%	6%	32,870	2,619	3,049	40,050	2,460	3,359	6%	8%
		WB	3,115	167	153	5%	5%	2,205	132	177	6%	8%	31,171	2,244	2,662	38,000	2,108	2,933	6%	8%
King Vaughan Road	Immediately east of Jane Street	EB	2,411	153	155	6%	6%	2,538	110	149	4%	6%	28,997	1,974	2,452	35,350	1,854	2,702	5%	8%
		WB	2,770	145	129	5%	5%	2,193	127	172	6%	8%	29,079	2,041	2,428	35,450	1,917	2,675	5%	8%
Jane Street	Immediately north of King Vaughan Road	NB	1,002	129	105	13%	10%	1,760	39	33	2%	2%	16,183	1,261	1,113	19,750	1,184	1,226	6%	6%
		SB	2,457	54	51	2%	2%	626	14	13	2%	2%	18,064	510	516	22,000	479	569	2%	3%
Jane Street	Immediately south of King Vaughan Road	NB	785	10	9	1%	1%	1,701	4	3	0%	0%	14,566	105	97	17,750	99	107	1%	1%
		SB	2,071	8	7	0%	0%	1,070	6	5	1%	0%	18,404	105	97	22,450	99	107	0%	0%
Kirby Road	At Highway 400	EB	1,297	19	22	1%	2%	907	23	33	3%	4%	12,914	315	444	15,750	296	489	2%	3%
		WB	868	33	38	4%	4%	1,177	5	7	0%	1%	11,982	285	363	14,600	268	400	2%	3%
Major Mackenzie Drive	Immediately west of Highway 427	EB	3,198	63	71	2%	2%	3,582	29	34	1%	1%	39,725	690	847	48,450	649	933	1%	2%
		WB	3,699	44	55	1%	1%	3,121	34	35	1%	1%	39,960	585	726	48,700	550	800	1%	2%

Appendix A.5 : Raw Traffic Data for 2051 Build Scenario

Highway 413

GTA West

Major Mackenzie Drive	Immediately east of Highway 427	EB	2,268	186	170	8%	7%	2,928	84	103	3%	4%	30,444	2,026	2,202	37,100	1,903	2,426	5%	7%
		WB	3,108	122	115	4%	4%	3,511	83	119	2%	3%	38,782	1,539	1,887	47,300	1,445	2,080	3%	4%

B

90th Percentile Background NO_2 and Ozone by Hour of Day

Appendix B: 90th Percentile Background NO_2 and Ozone by Hour of Day

Hour of Day	NO_2 (ppb)	O_3 (ppb)
1	20.5	38.0
2	20.1	37.0
3	18.9	37.0
4	18.6	36.0
5	19.7	35.0
6	21.3	34.0
7	23.4	33.0
8	23.7	34.0
9	21.7	37.0
10	17.6	40.0
11	14.0	43.0
12	11.5	46.0
13	9.9	48.0
14	9.8	50.0
15	9.7	51.0
16	10.6	51.0
17	11.7	50.0
18	13.1	49.1
19	15.2	47.0
20	16.9	44.0
21	17.9	41.0
22	19.0	40.0
23	20.7	39.0
24	20.7	38.0

Notes:

(MECP, 2025a) MECP Historical Air Quality Data, five-year hourly data for years 2019 – 2023 for the Brampton air quality station (Station ID 46090), downloaded from https://www.airqualityontario.com/history/index.php, May 2025.

C

Results Tables

Appendix C.1: Maximum Predicted Concentrations, 2041 No-Build Scenario with Background

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110000_001	19.5	8.53	55.6	1622	932	125.9	125.9	65.2	21.2	1.60E-04	6.43E-05	4.71	1.54	0.17	6.62E-02	2.60	0.53	0.32	2.54E-02	1.37E-02
RE110000_002	15.9	7.79	39.9	1137	670	103.9	103.9	46.7	17.5	1.26E-04	5.79E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_003	17.7	8.27	50.1	1605	832	116.3	116.3	54.0	19.1	1.44E-04	6.15E-05	4.67	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_004	19.1	8.45	55.1	1688	900	125.2	125.2	62.1	20.9	1.57E-04	6.36E-05	4.72	1.54	0.17	6.61E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_005	20.6	8.89	61.4	2064	1006	128.5	128.5	67.3	22.7	1.69E-04	6.73E-05	4.81	1.55	0.18	6.68E-02	2.60	0.53	0.32	2.54E-02	1.37E-02
RE110000_006	18.1	8.03	50.8	2368	798	125.7	125.7	59.5	19.0	1.50E-04	6.05E-05	4.91	1.54	0.18	6.58E-02	2.59	0.51	0.32	2.54E-02	1.37E-02
RE110000_007	16.8	8.06	45.3	1537	748	108.8	108.8	48.9	18.1	1.35E-04	5.98E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_008	16.5	7.95	44.0	1426	726	105.2	105.2	48.1	17.8	1.33E-04	5.90E-05	4.63	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_009	16.2	7.87	43.0	1338	711	102.0	102.0	47.5	17.6	1.31E-04	5.84E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_010	16.1	7.82	42.1	1273	700	100.1	100.1	47.0	17.5	1.30E-04	5.79E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_011	15.9	7.77	41.4	1220	690	99.2	99.2	46.6	17.3	1.28E-04	5.76E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_020	16.6	7.97	44.3	1464	734	106.3	106.3	48.1	17.9	1.33E-04	5.92E-05	4.64	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_021	16.4	7.92	43.5	1402	721	103.5	103.5	47.7	17.7	1.32E-04	5.87E-05	4.63	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_022	16.2	7.86	42.7	1336	707	101.7	101.7	47.2	17.6	1.31E-04	5.83E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_023	16.1	7.82	42.2	1287	698	100.3	100.3	46.8	17.5	1.30E-04	5.80E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_024	15.9	7.78	41.6	1244	691	99.3	99.3	46.5	17.4	1.29E-04	5.77E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_025	15.8	7.75	41.1	1204	683	98.5	98.5	46.2	17.3	1.28E-04	5.74E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_028	16.7	8.01	44.8	1495	747	108.3	108.3	48.3	18.0	1.34E-04	5.95E-05	4.64	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_029	16.4	7.93	43.6	1415	726	103.7	103.7	47.6	17.7	1.32E-04	5.88E-05	4.63	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_030	16.2	7.86	42.6	1341	708	101.5	101.5	47.0	17.5	1.30E-04	5.82E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_031	16.0	7.81	42.0	1287	696	100.1	100.1	46.6	17.4	1.29E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_032	15.9	7.77	41.4	1237	686	99.1	99.1	46.3	17.3	1.28E-04	5.76E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_045	16.8	8.06	45.0	1557	757	108.9	108.9	48.3	18.1	1.35E-04	5.98E-05	4.65	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_046	16.5	7.96	43.9	1455	738	105.4	105.4	47.7	17.8	1.33E-04	5.91E-05	4.64	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_047	16.3	7.89	42.9	1372	720	102.6	102.6	47.1	17.6	1.31E-04	5.85E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_048	16.1	7.83	42.1	1316	706	100.7	100.7	46.6	17.5	1.30E-04	5.81E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_049	15.9	7.79	41.4	1272	692	99.6	99.6	46.2	17.3	1.28E-04	5.77E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_050	16.6	8.00	44.3	1504	746	107.1	107.1	47.8	17.9	1.33E-04	5.94E-05	4.64	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_051	16.6	8.00	44.2	1498	746	107.2	107.2	47.8	17.9	1.33E-04	5.93E-05	4.64	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_052	16.6	8.01	44.4	1515	749	107.8	107.8	47.8	18.0	1.34E-04	5.95E-05	4.65	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_053	16.6	8.02	44.4	1526	750	107.5	107.5	47.8	18.0	1.33E-04	5.95E-05	4.65	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_054	16.7	8.02	44.4	1540	750	107.3	107.3	47.8	18.0	1.34E-04	5.95E-05	4.65	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_055	16.7	8.03	44.4	1541	750	107.2	107.2	47.8	18.0	1.34E-04	5.96E-05	4.65	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_056	16.0	7.80	41.4	1299	701	99.7	99.7	45.9	17.4	1.28E-04	5.78E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_057	16.0	7.81	41.6	1303	703	100.3	100.3	46.1	17.4	1.29E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_058	16.0	7.81	41.7	1300	703	100.3	100.3	46.1	17.4	1.29E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_059	16.0	7.81	41.6	1297	701	100.2	100.2	46.2	17.4	1.29E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_060	16.0	7.81	41.7	1297	702	100.3	100.3	46.2	17.4	1.29E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_061	17.4	8.31	48.1	1901	796	113.5	113.5	49.3	18.8	1.38E-04	6.17E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_062	16.9	8.13	45.5	1684	767	109.0	109.0	48.3	18.3	1.35E-04	6.04E-05	4.67	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_063	16.6	8.02	44.2	1549	748	106.7	106.7	47.6	18.0	1.33E-04	5.95E-05	4.65	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_064	16.4	7.94	43.2	1457	731	103.7	103.7	46.9	17.7	1.31E-04	5.89E-05	4.64	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_065	16.1	7.85	42.1	1366	713	101.1	101.1	46.3	17.5	1.29E-04	5.82E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_066	15.9	7.80	41.3	1299	700	99.5	99.5	45.8	17.3	1.28E-04	5.78E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_067	15.8	7.75	40.5	1236	686	97.6	97.6	45.3	17.2	1.27E-04	5.74E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_069	17.1	8.18	46.3	1767	772	110.1	110.1	48.4	18.4	1.36E-04	6.08E-05	4.69	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_070	16.6	8.02	44.1	1562	746	105.7	105.7	47.4	18.0	1.33E-04	5.95E-05	4.65	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_071	16.4	7.93	43.1	1455	729	103.1	103.1	46.8	17.7	1.31E-04	5.88E-05	4.63	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_072	16.1	7.85	42.1	1361	713	100.7	100.7	46.2	17.5	1.29E-04	5.82E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_073	15.9	7.79	41.1	1286	697	99.0	99.0	45.6	17.3	1.28E-04	5.77E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_112	16.9	8.12	45.3	1696	761	107.9	107.9	47.9	18.2	1.35E-04	6.03E-05	4.67	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_113	16.6	8.00	43.8	1537	742	105.1	105.1	47.2	17.9	1.32E-04	5.94E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_114	16.3	7.91	42.6	1426	723	102.2	102.2	46.5	17.6	1.30E-04	5.86E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_115	16.1	7.83	41.7	1341	706	99.9	99.9	45.9	17.4	1.29E-04	5.80E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_123	17.1	8.23	46.9	1815	780	111.0	111.0	48.4	18.5	1.36E-04	6.11E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_124	16.7	8.05	44.3	1593	750	106.3	106.3	47.4	18.0	1.33E-04	5.97E-05	4.66	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_125	16.3	7.92	42.7	1445	725	102.4	102.4	46.5	17.7	1.31E-04	5.87E-05	4.63	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_132	16.7	8.03	44.0	1576	746	106.0	106.0	47.2	18.0	1.33E-04	5.96E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_133	16.3	7.90	42.5	1430	721	101.8	101.8	46.3	17.6	1.30E-04	5.86E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_139	16.7	8.04	44.0	1577	746	106.0	106.0	47.2	18.0	1.33E-04	5.96E-05	4.65	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_140	16.3	7.91	42.6	1425	723	102.0	102.0	46.3	17.6	1.30E-04	5.87E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_145	17.0	8.19	46.2	1766	771	109.0	109.0	48.0	18.4	1.35E-04	6.08E-05	4.68	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_146	16.6	8.02	43.7	1546	741	105.6	105.6	46.9	17.9	1.32E-04	5.95E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_147	16.3	7.89	42.2	1406	717	101.2	101.2	46.0	17.5	1.30E-04	5.85E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE110000_149	17.1	8.24	46.8	1840	779	110.4	110.4	48.0	18.5	1.36E-04	6.12E-05	4.70	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_150	16.7	8.05	44.2	1604	746	106.1	106.1	47.1	18.0	1.33E-04	5.98E-05	4.66	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_151	16.4	7.94	42.7	1463	726	102.1	102.1	46.3	17.7	1.31E-04	5.89E-05	4.63	1.52	0.17	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_165	16.3	7.92	42.3	1441	720	100.9	100.9	46.0	17.6	1.30E-04	5.87E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_167	16.4	7.93	42.5	1447	721	101.1	101.1	46.0	17.6	1.30E-04	5.88E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_173	17.2	8.25	46.9	1817	780	109.8	109.8	48.1	18.6	1.36E-04	6.13E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_177	16.2	7.86	41.6	1362	706	98.9	98.9	45.5	17.4	1.29E-04	5.82E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_178	16.7	8.04	43.8	1576	741	103.9	103.9	46.8	17.9	1.33E-04	5.96E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_189	16.7	8.05	44.0	1614	742	105.8	105.8	46.9	18.0	1.33E-04	5.97E-05	4.66	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_190	16.7	8.05	44.0	1595	743	105.3	105.3	46.9	18.0	1.33E-04	5.97E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_191	16.4	7.93	42.5	1456	721	100.9	100.9	46.1	17.6	1.30E-04	5.88E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_239	17.7	7.95	50.6	1551	821	106.4	106.4	50.0	17.4	1.44E-04	5.85E-05	4.64	1.53	0.17	6.49E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_240	18.2	8.12	53.3	1591	846	108.8	108.8	51.7	17.9	1.48E-04	5.98E-05	4.64	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_241	17.8	7.98	49.6	1827	832	109.7	109.7	49.3	17.5	1.42E-04	5.87E-05	4.68	1.53	0.17	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_242	17.6	7.91	48.6	1719	820	107.8	107.8	48.7	17.3	1.40E-04	5.82E-05	4.67	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_243	17.9	8.00	51.5	1565	829	107.2	107.2	50.5	17.6	1.45E-04	5.89E-05	4.64	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_244	17.1	7.79	46.8	1574	794	103.7	103.7	47.6	17.0	1.37E-04	5.74E-05	4.64	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_245	18.0	8.05	52.2	1576	836	107.8	107.8	51.0	17.7	1.46E-04	5.92E-05	4.64	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_246	17.7	7.94	49.2	1771	827	108.8	108.8	49.1	17.4	1.41E-04	5.85E-05	4.68	1.53	0.17	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_247	17.3	7.85	47.9	1608	808	104.9	104.9	48.3	17.2	1.39E-04	5.78E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_248	17.2	7.82	47.4	1593	801	104.3	104.3	48.0	17.1	1.38E-04	5.76E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_249	17.9	8.01	49.8	1911	842	109.9	109.9	49.4	17.6	1.42E-04	5.90E-05	4.70	1.53	0.17	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_253	16.1	7.84	41.2	1335	701	97.8	97.8	45.4	17.4	1.28E-04	5.81E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_254	16.5	7.99	42.9	1485	725	102.2	102.2	46.2	17.7	1.31E-04	5.92E-05	4.63	1.52	0.17	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_255	16.1	7.85	41.0	1331	697	97.6	97.6	45.2	17.3	1.28E-04	5.81E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_256	16.5	7.98	43.3	1452	721	101.7	101.7	46.3	17.7	1.31E-04	5.91E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_257	16.2	7.87	41.9	1336	700	98.4	98.4	45.4	17.4	1.28E-04	5.83E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_265	16.5	7.96	42.6	1463	722	101.3	101.3	46.0	17.7	1.31E-04	5.90E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_267	16.8	8.09	44.4	1640	747	104.4	104.4	46.9	18.1	1.33E-04	6.00E-05	4.66	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_276	16.3	7.92	42.6	1385	710	100.1	100.1	45.9	17.6	1.29E-04	5.87E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_277	16.3	7.89	41.7	1381	708	99.6	99.6	45.6	17.5	1.29E-04	5.85E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_278	16.1	7.83	40.9	1315	695	97.0	97.0	45.2	17.3	1.27E-04	5.80E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_279	16.3	7.89	41.8	1388	711	100.0	100.0	45.7	17.5	1.29E-04	5.85E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_280	17.2	8.27	46.9	1839	778	109.8	109.8	47.9	18.6	1.36E-04	6.14E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_281	16.7	8.05	43.6	1561	738	103.3	103.3	46.6	17.9	1.32E-04	5.97E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_292	16.8	8.08	44.0	1584	741	104.2	104.2	46.8	18.0	1.33E-04	5.99E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_293	16.4	7.95	42.5	1456	721	101.0	101.0	46.0	17.6	1.30E-04	5.89E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_294	16.3	7.91	41.9	1402	711	100.2	100.2	45.7	17.5	1.29E-04	5.86E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_305	16.7	8.05	44.1	1532	733	103.9	103.9	46.8	17.9	1.32E-04	5.96E-05	4.64	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_309	16.6	8.01	43.2	1540	734	102.2	102.2	46.4	17.8	1.32E-04	5.94E-05	4.64	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_310	16.9	8.14	45.0	1643	747	105.6	105.6	47.4	18.2	1.34E-04	6.03E-05	4.66	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_316	17.2	8.26	46.3	1786	766	107.2	107.2	48.2	18.5	1.36E-04	6.12E-05	4.68	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_325	16.4	7.94	42.6	1439	722	101.3	101.3	46.1	17.6	1.31E-04	5.89E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_329	16.4	7.94	42.5	1444	721	100.9	100.9	46.0	17.6	1.30E-04	5.88E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_331	17.1	8.23	46.5	1789	775	109.2	109.2	47.9	18.5	1.36E-04	6.11E-05	4.69	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_332	16.6	8.03	43.6	1563	738	102.8	102.8	46.6	17.9	1.32E-04	5.96E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_333	16.2	7.86	41.6	1356	706	98.8	98.8	45.5	17.4	1.29E-04	5.83E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_342	16.9	8.15	45.3	1708	758	107.5	107.5	47.3	18.2	1.34E-04	6.05E-05	4.67	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_344	16.7	8.03	43.6	1555	740	102.9	102.9	46.7	17.9	1.32E-04	5.96E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_345	16.2	7.86	41.6	1357	707	99.0	99.0	45.6	17.4	1.29E-04	5.83E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_353	16.8	8.09	44.8	1566	737	104.5	104.5	47.3	18.0	1.32E-04	5.99E-05	4.65	1.52	0.17	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_355	16.5	8.00	43.8	1459	721	102.1	102.1	46.6	17.8	1.31E-04	5.92E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_378	17.3	8.31	47.4	1731	756	109.6	109.6	48.9	18.6	1.36E-04	6.15E-05	4.67	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_387	17.3	8.29	46.7	1797	767	107.9	107.9	48.4	18.6	1.36E-04	6.14E-05	4.69	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_390	17.6	8.44	48.4	1726	755	110.8	110.8	49.6	18.9	1.37E-04	6.23E-05	4.67	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_394	17.0	8.18	46.1	1582	737	107.4	107.4	48.1	18.2	1.33E-04	6.05E-05	4.65	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_397	16.4	7.94	43.1	1390	710	100.9	100.9	46.1	17.6	1.29E-04	5.88E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_401	17.3	8.18	48.0	1567	812	113.8	113.8	51.9	18.7	1.41E-04	6.08E-05	4.66	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110200_001	19.8	8.01	59.5	2398	939	119.9	119.9	53.0	17.7	1.58E-04	6.01E-05	4.80	1.54	0.18	6.58E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110300_001	18.3	7.94	50.2	1631	849	116.7	116.7	53.2	17.5	1.49E-04	5.97E-05	4.66	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_002	18.2	7.95	50.2	1579	823	116.5	116.5	53.4	17.5	1.49E-04	5.97E-05	4.67	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_003	18.3	8.03	50.9	1600	822	116.6	116.6	53.7	17.6	1.51E-04	6.05E-05	4.67	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_004	18.6	8.13	52.1	1655	839	117.0	117.0	54.0	17.8	1.53E-04	6.14E-05	4.68	1.53	0.17	6.53E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110400_001	18.8	8.20	52.7	1711	846	116.9	116.9	54.1	17.9	1.55E-04	6.19E-05	4.68	1.53	0.17	6.54E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110400_002	19.1	8.30	54.7	1732	851	117.5	117.5	54.3	18.1	1.56E-04	6.25E-05	4.69	1.53	0.17	6.55E-02	2.59	0.53	0.32	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE110500_001	18.0	7.95	50.1	1475	780	116.3	116.3	52.6	17.5	1.47E-04	5.93E-05	4.65	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110500_002	17.6	7.86	48.6	1406	756	115.8	115.8	51.7	17.3	1.43E-04	5.84E-05	4.64	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110600_001	17.2	7.76	46.4	1354	730	110.0	110.0	50.5	17.0	1.38E-04	5.75E-05	4.63	1.53	0.16	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE110600_002	17.5	7.83	47.9	1391	746	113.0	113.0	51.2	17.2	1.41E-04	5.80E-05	4.64	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110700_001	17.0	7.72	45.6	1325	720	106.8	106.8	49.9	16.9	1.36E-04	5.71E-05	4.63	1.53	0.16	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE110700_002	16.7	7.60	43.1	1253	707	104.7	104.7	49.1	16.7	1.33E-04	5.63E-05	4.61	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE110800_001	16.8	7.74	45.4	1279	710	104.8	104.8	49.5	16.9	1.35E-04	5.71E-05	4.62	1.53	0.16	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE110800_002	16.7	7.72	44.9	1269	701	103.2	103.2	49.1	16.9	1.34E-04	5.69E-05	4.61	1.52	0.16	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE110900_001	16.6	7.70	44.5	1247	692	100.6	100.6	48.8	16.8	1.33E-04	5.67E-05	4.61	1.52	0.16	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE110900_002	16.4	7.67	43.9	1216	682	98.6	98.6	48.4	16.7	1.32E-04	5.64E-05	4.60	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE111100_001	15.9	7.57	41.6	1064	656	93.7	93.7	47.0	16.4	1.27E-04	5.57E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE111200_001	15.7	7.55	40.8	1041	646	92.7	92.7	46.3	16.4	1.26E-04	5.55E-05	4.57	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111200_002	15.8	7.59	41.2	1090	644	92.8	92.8	46.3	16.5	1.26E-04	5.57E-05	4.58	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_001	15.7	7.56	40.5	1061	640	91.9	91.9	45.9	16.4	1.25E-04	5.55E-05	4.57	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_002	15.6	7.53	39.8	1031	636	91.0	91.0	45.5	16.3	1.23E-04	5.53E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_003	15.6	7.53	39.5	1035	632	90.4	90.4	45.2	16.3	1.23E-04	5.52E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111400_001	15.5	7.52	38.9	1026	625	89.0	89.0	44.8	16.2	1.22E-04	5.51E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111400_002	15.5	7.52	38.7	1028	621	87.0	87.0	44.7	16.2	1.21E-04	5.51E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111500_001	15.4	7.50	38.0	1014	613	85.1	85.1	44.1	16.2	1.20E-04	5.50E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111500_002	15.1	7.42	36.4	1017	600	81.9	81.9	43.1	16.0	1.17E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111600_001	15.0	7.40	35.8	1011	592	81.1	81.1	42.5	15.9	1.16E-04	5.43E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111600_002	14.9	7.39	35.3	1008	585	79.9	79.9	42.1	15.9	1.15E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111700_001	15.6	7.52	37.5	1175	631	82.9	82.9	43.1	16.1	1.18E-04	5.50E-05	4.59	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111700_002	15.1	7.44	35.6	983	584	80.2	80.2	42.5	16.0	1.15E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111800_001	18.2	8.19	51.4	2005	846	117.4	117.4	51.8	17.7	1.54E-04	6.20E-05	4.71	1.53	0.17	6.51E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE111800_002	15.6	7.51	37.4	1172	627	82.6	82.6	43.0	16.1	1.17E-04	5.49E-05	4.59	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111800_003	15.6	7.54	38.1	1192	627	82.9	82.9	43.3	16.2	1.18E-04	5.51E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_004	15.6	7.54	38.1	1190	624	82.8	82.8	43.2	16.2	1.18E-04	5.51E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_005	15.1	7.44	35.5	976	579	79.7	79.7	42.5	16.0	1.14E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111800_006	15.1	7.44	35.5	973	575	79.6	79.6	42.6	16.0	1.14E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111800_007	15.0	7.43	35.3	970	570	78.3	78.3	42.4	15.9	1.14E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111800_008	15.0	7.44	35.6	966	568	78.3	78.3	42.6	15.9	1.14E-04	5.44E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE112100_001	17.4	8.33	47.2	1579	733	106.2	106.2	46.7	17.9	1.41E-04	6.30E-05	4.64	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE112200_001	16.4	8.01	42.9	1265	659	106.6	106.6	45.8	17.3	1.33E-04	6.02E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE113100_001	13.6	7.18	29.1	728	495	64.2	64.2	37.5	15.3	1.05E-04	5.28E-05	4.51	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE113200_001	14.0	7.35	31.8	935	526	69.2	69.2	37.2	15.6	1.10E-04	5.43E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE113200_002	14.2	7.39	31.8	942	537	68.4	68.4	37.2	15.7	1.11E-04	5.47E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE113300_001	14.0	7.36	31.0	844	538	65.8	65.8	37.2	15.6	1.09E-04	5.44E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE210700_001	13.2	7.19	27.8	671	455	55.2	55.2	35.7	15.2	1.01E-04	5.28E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210700_002	13.2	7.20	28.1	674	456	55.3	55.3	35.8	15.2	1.01E-04	5.29E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210700_003	13.1	7.15	27.2	655	451	55.0	55.0	35.5	15.1	1.00E-04	5.25E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210900_001	14.2	7.47	33.8	778	497	60.5	60.5	36.1	15.6	1.10E-04	5.49E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE210900_003	13.7	7.24	30.5	766	506	58.2	58.2	36.2	15.2	1.06E-04	5.31E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE210900_004	13.8	7.39	31.5	713	481	58.0	58.0	35.8	15.5	1.06E-04	5.43E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE210900_005	13.5	7.34	30.0	666	468	56.9	56.9	35.7	15.4	1.03E-04	5.39E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210900_006	14.0	7.45	32.4	777	488	59.2	59.2	35.7	15.6	1.07E-04	5.47E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE210900_007	13.6	7.36	30.4	690	473	57.0	57.0	35.6	15.4	1.04E-04	5.40E-05	4.49	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE210900_008	13.6	7.35	30.3	675	472	56.7	56.7	35.6	15.4	1.04E-04	5.40E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_001	13.6	7.22	30.0	754	500	57.7	57.7	36.1	15.2	1.05E-04	5.30E-05	4.50	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211000_002	13.8	7.30	31.3	775	516	59.8	59.8	36.3	15.3	1.08E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE211000_003	13.8	7.30	31.0	760	510	59.6	59.6	36.1	15.3	1.07E-04	5.36E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE211000_004	13.6	7.25	30.0	716	493	57.1	57.1	35.8	15.2	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_005	13.4	7.17	29.1	731	488	56.7	56.7	35.9	15.1	1.04E-04	5.26E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_006	13.6	7.26	30.1	728	495	57.1	57.1	35.8	15.3	1.04E-04	5.33E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_007	13.7	7.36	30.6	675	478	57.4	57.4	35.4	15.4	1.04E-04	5.41E-05	4.49	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211000_008	13.6	7.35	30.1	689	473	57.5	57.5	35.3	15.4	1.04E-04	5.40E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_009	13.5	7.32	29.6	670	462	57.1	57.1	35.2	15.3	1.03E-04	5.37E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_010	13.5	7.32	29.6	668	461	57.2	57.2	35.2	15.3	1.03E-04	5.37E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211100_001	13.6	7.24	29.5	734	495	57.1	57.1	35.9	15.2	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211100_002	13.2	7.15	27.9	680	468	55.3	55.3	35.5	15.1	1.02E-04	5.24E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211100_003	13.9	7.34	31.3	773	514	60.3	60.3	36.4	15.4	1.07E-04	5.38E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE211100_004	13.6	7.35	30.3	698	468	58.1	58.1	35.3	15.4	1.04E-04	5.39E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211100_005	13.6	7.34	30.3	692	472	58.3	58.3	35.2	15.4	1.04E-04	5.38E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211100_006	13.6	7.32	30.5	704	479	58.2	58.2	35.2	15.3	1.05E-04	5.37E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211100_009	13.8	7.31	30.9	769	510	59.1	59.1	36.2	15.3	1.07E-04	5.36E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE211200_001	13.2	7.14	27.8	692	466	54.8	54.8	35.5	15.1	1.01E-04	5.24E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211200_002	13.2	7.14	27.9	696	469	55.1	55.1	35.5	15.1	1.02E-04	5.24E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211200_003	13.8	7.30	30.8	748	509	59.8	59.8	36.3	15.3	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE211200_004	13.9	7.31	31.5	759	509	61.3	61.3	36.3	15.3	1.07E-04	5.36E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE211200_005	13.6	7.25	30.0	743	501	57.7	57.7	36.0	15.2	1.05E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211400_001	13.1	7.10	27.2	667	452	56.0	56.0	35.4	15.0	9.99E-05	5.21E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211500_002	13.0	7.09	26.8	659	452	55.0	55.0	35.3	15.0	9.97E-05	5.20E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211500_003	13.0	7.09	26.9	659	449	55.4	55.4	35.3	15.0	9.95E-05	5.20E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211500_004	13.0	7.10	26.8	660	453	55.0	55.0	35.3	15.0	9.99E-05	5.21E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211900_001	12.9	7.08	26.5	624	443	53.8	53.8	35.0	15.0	9.87E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE212600_001	13.3	7.25	28.4	714	467	55.6	55.6	35.5	15.3	1.02E-04	5.34E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE212700_001	13.5	7.28	29.6	798	486	57.1	57.1	35.7	15.4	1.04E-04	5.38E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE212700_002	13.5	7.24	29.6	689	491	56.0	56.0	35.5	15.3	1.05E-04	5.33E-05	4.48	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE212800_001	13.8	7.38	31.4	945	510	60.7	60.7	36.6	15.6	1.08E-04	5.47E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE212800_002	13.9	7.39	32.2	1046	515	61.6	61.6	36.6	15.6	1.10E-04	5.48E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE212900_001	13.8	7.35	32.0	1073	508	61.4	61.4	36.4	15.5	1.09E-04	5.44E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE213000_001	13.5	7.23	28.8	728	485	57.7	57.7	35.4	15.3	1.02E-04	5.32E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214400_001	14.1	7.40	33.0	748	514	68.0	68.0	38.7	16.0	1.08E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_002	14.0	7.23	32.2	709	485	60.7	60.7	38.7	15.4	1.07E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_003	14.2	7.27	33.6	738	498	64.6	64.6	39.7	15.5	1.09E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_004	14.3	7.28	33.8	751	501	65.2	65.2	39.8	15.6	1.10E-04	5.33E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_005	14.3	7.29	33.8	758	502	65.5	65.5	39.9	15.6	1.10E-04	5.33E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_006	14.4	7.29	33.8	761	503	65.7	65.7	39.9	15.6	1.10E-04	5.33E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_007	13.8	7.22	30.7	708	478	60.2	60.2	37.7	15.3	1.05E-04	5.28E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_008	13.9	7.23	31.7	720	484	62.0	62.0	38.3	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_009	13.9	7.23	31.6	711	483	60.7	60.7	38.3	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_010	13.9	7.22	31.5	707	481	60.3	60.3	38.2	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_011	13.8	7.21	30.6	700	476	59.5	59.5	37.6	15.3	1.04E-04	5.28E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214600_012	13.8	7.20	30.8	694	476	59.3	59.3	37.7	15.3	1.05E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_013	14.1	7.24	32.8	719	491	61.4	61.4	39.1	15.4	1.08E-04	5.30E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_014	14.2	7.26	33.4	728	495	63.0	63.0	39.5	15.5	1.09E-04	5.31E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_015	14.2	7.26	33.4	731	495	63.6	63.6	39.5	15.5	1.09E-04	5.31E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_016	14.3	7.27	33.7	744	499	64.9	64.9	39.8	15.5	1.09E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_017	14.3	7.28	33.7	747	499	65.0	65.0	39.7	15.5	1.09E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_018	14.3	7.28	33.7	753	501	65.2	65.2	39.8	15.6	1.09E-04	5.33E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_019	14.4	7.29	33.9	767	505	66.1	66.1	39.9	15.6	1.10E-04	5.34E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_020	14.4	7.30	34.0	771	507	66.4	66.4	40.0	15.6	1.10E-04	5.34E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_021	14.5	7.30	34.2	776	508	67.1	67.1	40.1	15.6	1.10E-04	5.35E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_022	13.9	7.23	31.7	716	484	61.5	61.5	38.3	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_023	13.9	7.23	31.2	723	482	62.5	62.5	37.9	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_024	13.9	7.23	31.4	728	482	62.6	62.6	38.0	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_025	13.9	7.23	31.5	732	483	62.8	62.8	38.1	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_026	14.0	7.24	31.6	734	484	62.8	62.8	38.1	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_027	14.0	7.24	31.6	736	484	62.9	62.9	38.1	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_028	14.0	7.24	31.6	737	484	62.9	62.9	38.2	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_029	14.0	7.24	31.6	737	484	62.9	62.9	38.2	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_030	14.0	7.24	31.7	738	484	63.0	63.0	38.2	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_031	14.0	7.24	31.7	739	484	63.0	63.0	38.2	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_032	14.0	7.24	31.7	740	483	62.8	62.8	38.2	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_033	14.1	7.26	32.3	752	490	64.1	64.1	38.6	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_034	14.1	7.26	32.3	752	491	64.1	64.1	38.7	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_035	14.1	7.26	32.3	752	491	64.0	64.0	38.6	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_036	14.1	7.26	32.3	752	492	64.1	64.1	38.6	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_037	13.9	7.23	31.2	722	482	62.5	62.5	38.0	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_038	13.9	7.23	31.2	724	481	62.5	62.5	37.9	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_039	13.9	7.23	31.3	726	482	62.6	62.6	37.9	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_040	13.9	7.23	31.5	731	483	62.8	62.8	38.0	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_041	14.0	7.24	31.7	739	483	62.9	62.9	38.2	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_042	14.0	7.24	31.8	742	484	63.0	63.0	38.3	15.4	1.07E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_043	14.1	7.26	32.3	752	490	64.2	64.2	38.6	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_044	14.1	7.26	32.2	750	491	63.9	63.9	38.6	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_045	14.1	7.26	32.2	748	491	63.8	63.8	38.6	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_046	14.1	7.25	31.9	741	489	63.4	63.4	38.5	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_047	14.1	7.25	31.9	739	488	63.3	63.3	38.5	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_048	14.1	7.25	31.9	736	488	63.3	63.3	38.5	15.5	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214600_049	14.0	7.25	31.9	734	488	63.3	63.3	38.5	15.4	1.07E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_050	14.0	7.24	31.9	732	487	63.2	63.2	38.5	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_051	14.0	7.27	32.4	748	495	65.5	65.5	38.7	15.5	1.07E-04	5.32E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_052	14.0	7.26	32.0	741	492	64.9	64.9	38.4	15.5	1.07E-04	5.31E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_053	14.1	7.26	32.2	751	491	64.0	64.0	38.6	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_054	14.1	7.25	32.0	744	490	63.6	63.6	38.5	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_055	14.1	7.25	31.9	738	488	63.3	63.3	38.5	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_056	14.0	7.24	32.0	731	487	63.3	63.3	38.5	15.4	1.07E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_057	13.9	7.24	31.4	730	487	63.8	63.8	38.0	15.4	1.06E-04	5.30E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_058	13.8	7.24	31.2	730	485	63.7	63.7	37.8	15.4	1.05E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_059	13.9	7.25	31.5	735	487	64.2	64.2	38.1	15.5	1.06E-04	5.30E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_060	14.0	7.26	32.0	744	492	65.1	65.1	38.4	15.5	1.07E-04	5.32E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_061	14.0	7.27	32.3	749	494	65.5	65.5	38.6	15.5	1.07E-04	5.32E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_062	13.9	7.25	31.7	735	489	64.3	64.3	38.2	15.5	1.06E-04	5.31E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_063	13.9	7.25	31.8	740	490	64.6	64.6	38.2	15.5	1.06E-04	5.31E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_064	13.9	7.24	31.5	730	487	63.4	63.4	38.1	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_065	13.9	7.24	31.7	733	489	63.8	63.8	38.2	15.5	1.06E-04	5.30E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_066	13.9	7.25	31.9	736	491	64.2	64.2	38.4	15.5	1.07E-04	5.31E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_067	14.0	7.26	32.2	740	493	64.7	64.7	38.5	15.5	1.07E-04	5.31E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_068	14.1	7.27	32.5	745	496	65.3	65.3	38.8	15.5	1.08E-04	5.32E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_069	14.2	7.27	32.6	754	495	64.7	64.7	38.9	15.5	1.08E-04	5.32E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_070	13.8	7.23	31.5	735	482	62.4	62.4	38.0	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_071	13.9	7.23	31.6	738	484	62.7	62.7	38.2	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_072	13.9	7.24	31.8	741	486	63.0	63.0	38.3	15.4	1.07E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_073	14.0	7.25	32.1	745	489	63.5	63.5	38.5	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_074	14.1	7.26	32.3	749	492	64.1	64.1	38.7	15.5	1.07E-04	5.31E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_075	14.2	7.26	32.5	756	493	64.7	64.7	38.8	15.5	1.08E-04	5.32E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_076	14.0	7.25	32.1	748	488	63.7	63.7	38.5	15.5	1.07E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_077	14.1	7.26	32.3	752	491	64.2	64.2	38.7	15.5	1.07E-04	5.31E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_078	14.0	7.24	31.9	745	486	63.3	63.3	38.4	15.4	1.07E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_079	13.9	7.24	31.7	741	484	62.9	62.9	38.2	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_080	13.8	7.23	31.5	736	481	62.4	62.4	38.0	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_081	14.2	7.26	33.6	732	497	62.7	62.7	39.7	15.5	1.09E-04	5.31E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_082	13.8	7.22	30.9	715	479	61.3	61.3	37.7	15.4	1.05E-04	5.28E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_083	13.9	7.22	31.5	700	480	59.9	59.9	38.2	15.3	1.06E-04	5.28E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_002	13.3	7.17	28.7	665	461	57.0	57.0	36.0	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_003	13.4	7.17	28.9	667	462	57.2	57.2	36.1	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_004	13.4	7.17	29.0	669	463	57.4	57.4	36.2	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_005	13.5	7.18	29.1	671	464	57.6	57.6	36.3	15.2	1.02E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_006	13.5	7.18	29.3	673	466	57.9	57.9	36.6	15.3	1.02E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_007	13.6	7.19	29.7	679	469	58.4	58.4	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_008	13.7	7.20	30.2	688	472	58.8	58.8	37.3	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_009	13.6	7.19	30.3	711	470	59.6	59.6	37.2	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_010	13.7	7.21	30.9	724	475	61.0	61.0	37.6	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_011	13.7	7.21	30.9	722	475	60.9	60.9	37.6	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_012	13.7	7.21	30.8	721	475	61.0	61.0	37.6	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_013	13.7	7.21	30.8	720	475	61.0	61.0	37.6	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_014	13.7	7.20	30.4	707	473	60.1	60.1	37.3	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_015	13.6	7.19	29.8	690	470	58.6	58.6	36.9	15.3	1.03E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_016	13.6	7.19	29.7	689	469	58.2	58.2	36.7	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_017	13.5	7.19	29.7	687	468	57.9	57.9	36.7	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_018	13.5	7.19	29.8	694	469	58.2	58.2	36.8	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_019	13.5	7.19	29.9	697	469	58.3	58.3	36.9	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_020	13.6	7.19	30.2	708	470	59.5	59.5	37.1	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_021	13.6	7.19	30.2	710	470	59.5	59.5	37.2	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_022	13.4	7.18	29.5	698	466	57.8	57.8	36.6	15.2	1.03E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_023	13.4	7.17	29.3	693	465	57.6	57.6	36.5	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_024	13.4	7.17	29.2	691	465	57.5	57.5	36.4	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_025	13.4	7.17	29.1	682	464	57.4	57.4	36.3	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_026	13.3	7.16	28.6	663	460	56.8	56.8	35.9	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_027	13.4	7.17	29.4	699	465	57.9	57.9	36.6	15.2	1.03E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_028	13.7	7.21	30.7	717	475	61.0	61.0	37.5	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_029	13.7	7.21	30.6	712	474	60.8	60.8	37.4	15.3	1.05E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_030	13.7	7.20	30.4	705	473	59.7	59.7	37.2	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_031	13.7	7.20	30.3	702	473	59.4	59.4	37.2	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214700_032	13.7	7.21	30.3	702	474	59.3	59.3	37.2	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_033	13.7	7.20	30.0	694	473	58.9	58.9	37.2	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_034	13.5	7.18	29.5	684	467	57.7	57.7	36.6	15.2	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_035	13.5	7.19	29.8	691	469	58.1	58.1	36.8	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_036	13.6	7.19	30.0	703	470	58.6	58.6	37.0	15.3	1.04E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_037	13.6	7.19	30.1	707	470	59.3	59.3	37.1	15.3	1.04E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_038	13.4	7.17	29.2	688	465	57.5	57.5	36.4	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_039	13.4	7.17	29.1	679	464	57.3	57.3	36.3	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_040	13.4	7.17	29.0	677	463	57.2	57.2	36.2	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_041	13.7	7.21	30.5	716	478	61.9	61.9	37.3	15.4	1.04E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_042	13.7	7.21	30.3	714	476	61.3	61.3	37.2	15.3	1.04E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_043	13.5	7.19	29.4	702	467	59.2	59.2	36.6	15.3	1.02E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_044	13.5	7.18	29.2	700	465	58.8	58.8	36.5	15.2	1.02E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_045	13.5	7.18	29.0	698	463	58.5	58.5	36.4	15.2	1.02E-04	5.25E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_046	13.5	7.17	28.9	696	462	58.3	58.3	36.3	15.2	1.02E-04	5.25E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_047	13.4	7.17	28.8	693	460	58.0	58.0	36.2	15.2	1.02E-04	5.25E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_048	13.4	7.17	28.7	689	459	57.9	57.9	36.1	15.2	1.01E-04	5.25E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_049	13.5	7.18	29.1	698	466	58.9	58.9	36.4	15.2	1.02E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_050	13.6	7.19	29.5	703	469	59.9	59.9	36.7	15.3	1.03E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_051	13.6	7.20	29.8	708	473	60.9	60.9	36.9	15.3	1.03E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_052	13.7	7.22	30.4	718	478	62.4	62.4	37.3	15.4	1.04E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_053	13.8	7.22	30.7	722	480	62.9	62.9	37.5	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_054	13.8	7.23	31.1	725	484	63.3	63.3	37.8	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_055	13.8	7.23	30.9	722	482	62.9	62.9	37.6	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_056	13.7	7.22	30.7	720	480	62.5	62.5	37.5	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_057	13.6	7.20	30.1	711	474	60.9	60.9	37.1	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_058	13.6	7.20	29.9	709	472	60.4	60.4	36.9	15.3	1.03E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_059	13.6	7.19	29.7	706	470	60.0	60.0	36.8	15.3	1.03E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_060	13.6	7.19	29.5	704	469	59.6	59.6	36.7	15.3	1.03E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_061	13.4	7.17	28.7	691	459	57.8	57.8	36.1	15.2	1.01E-04	5.25E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_062	13.4	7.17	28.7	691	461	58.1	58.1	36.1	15.2	1.01E-04	5.25E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_063	13.5	7.17	28.9	693	462	58.4	58.4	36.2	15.2	1.02E-04	5.25E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_064	13.5	7.18	29.0	696	464	58.6	58.6	36.3	15.2	1.02E-04	5.25E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_065	13.5	7.19	29.3	701	468	59.4	59.4	36.6	15.3	1.02E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_066	13.6	7.20	29.6	706	471	60.3	60.3	36.8	15.3	1.03E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_067	13.7	7.21	30.1	712	475	61.5	61.5	37.1	15.3	1.04E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_068	13.7	7.21	30.2	715	476	62.0	62.0	37.2	15.3	1.04E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_069	13.8	7.23	31.0	726	482	63.3	63.3	37.7	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_070	13.4	7.17	28.8	694	459	57.8	57.8	36.2	15.2	1.01E-04	5.25E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_071	13.5	7.18	29.2	702	463	58.6	58.6	36.5	15.2	1.02E-04	5.25E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_072	13.5	7.18	29.4	703	464	58.8	58.8	36.6	15.2	1.02E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_073	13.5	7.19	29.7	707	468	59.4	59.4	36.8	15.3	1.03E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_074	13.6	7.20	30.0	711	471	59.9	59.9	37.0	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_075	13.7	7.21	30.4	716	475	60.8	60.8	37.3	15.3	1.04E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_076	13.8	7.23	31.1	724	483	62.3	62.3	37.8	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_077	13.4	7.17	28.9	697	460	58.0	58.0	36.3	15.2	1.02E-04	5.25E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_078	13.5	7.17	29.1	700	461	58.4	58.4	36.4	15.2	1.02E-04	5.25E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_079	13.5	7.18	29.5	705	466	59.0	59.0	36.6	15.3	1.03E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_080	13.6	7.19	29.8	709	469	59.6	59.6	36.9	15.3	1.03E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_081	13.6	7.20	30.2	713	473	60.4	60.4	37.2	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_082	13.7	7.21	30.6	718	477	61.2	61.2	37.4	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_083	13.7	7.22	30.8	720	479	61.5	61.5	37.5	15.4	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_084	13.8	7.22	31.0	722	481	62.0	62.0	37.7	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_085	13.8	7.23	31.3	727	484	62.8	62.8	37.9	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_086	13.6	7.19	30.1	715	468	59.3	59.3	37.1	15.3	1.04E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_087	13.5	7.19	30.0	713	467	59.1	59.1	37.0	15.3	1.04E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_088	13.6	7.20	30.3	717	469	59.7	59.7	37.2	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_089	13.6	7.20	30.4	719	471	60.0	60.0	37.3	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_090	13.6	7.20	30.6	722	473	60.3	60.3	37.4	15.3	1.05E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_091	13.7	7.21	30.8	724	474	60.6	60.6	37.5	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_092	13.7	7.21	30.9	726	476	60.8	60.8	37.6	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_093	13.5	7.18	29.7	709	465	58.7	58.7	36.8	15.2	1.03E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_094	13.4	7.18	29.4	704	463	58.3	58.3	36.6	15.2	1.03E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_095	13.4	7.17	29.3	702	463	58.1	58.1	36.5	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_096	13.8	7.22	31.1	730	478	61.7	61.7	37.8	15.4	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214700_097	13.8	7.22	31.3	732	480	62.1	62.1	37.9	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_098	13.5	7.18	29.6	706	464	58.5	58.5	36.7	15.2	1.03E-04	5.25E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_099	13.4	7.17	29.1	699	462	57.9	57.9	36.4	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_100	13.8	7.22	31.3	733	479	62.0	62.0	37.9	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_101	13.7	7.21	30.8	725	474	60.6	60.6	37.6	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_102	13.6	7.20	30.7	722	473	60.3	60.3	37.5	15.3	1.05E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_103	13.6	7.20	30.4	717	470	59.6	59.6	37.3	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_104	13.6	7.19	30.3	715	470	59.4	59.4	37.2	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_105	13.5	7.19	30.1	713	469	59.2	59.2	37.1	15.3	1.04E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_106	13.4	7.18	29.5	704	465	58.3	58.3	36.6	15.2	1.03E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_107	13.4	7.17	29.4	701	464	58.1	58.1	36.5	15.2	1.03E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_108	13.7	7.22	31.0	729	476	61.3	61.3	37.7	15.4	1.05E-04	5.28E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_109	13.6	7.20	30.6	720	472	60.1	60.1	37.4	15.3	1.04E-04	5.27E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_110	13.5	7.19	30.0	711	467	58.9	58.9	36.9	15.3	1.04E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_111	13.5	7.18	29.8	709	467	58.7	58.7	36.9	15.3	1.03E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_112	13.5	7.18	29.7	707	466	58.5	58.5	36.8	15.2	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_113	13.4	7.17	29.3	700	464	58.0	58.0	36.5	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_114	13.4	7.17	29.1	697	462	57.7	57.7	36.3	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_004	13.3	7.14	28.3	672	454	56.9	56.9	35.6	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_005	13.3	7.16	28.8	678	462	56.9	56.9	36.1	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_006	13.3	7.16	28.8	683	462	56.9	56.9	36.1	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_007	13.4	7.16	28.9	691	462	57.0	57.0	36.2	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_012	13.3	7.15	28.3	665	458	56.5	56.5	35.7	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_013	13.3	7.16	28.4	662	458	56.6	56.6	35.7	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_014	13.3	7.16	28.4	661	459	56.7	56.7	35.8	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_015	13.3	7.16	28.7	674	461	56.8	56.8	36.0	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_016	13.3	7.16	28.8	681	462	56.9	56.9	36.1	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_017	13.4	7.16	28.8	685	462	56.9	56.9	36.1	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_018	13.4	7.16	28.9	689	462	57.0	57.0	36.2	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_019	13.4	7.16	28.6	690	457	57.6	57.6	36.0	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_020	13.4	7.16	28.5	688	456	57.4	57.4	36.0	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_021	13.4	7.16	28.5	686	457	57.5	57.5	35.9	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_022	13.4	7.16	28.6	687	458	57.7	57.7	36.0	15.2	1.01E-04	5.24E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_023	13.3	7.15	28.1	680	453	56.5	56.5	35.7	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_024	13.3	7.15	28.1	678	452	56.6	56.6	35.6	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_025	13.2	7.14	27.8	675	450	56.1	56.1	35.4	15.1	9.98E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_026	13.1	7.13	27.5	669	448	55.7	55.7	35.3	15.1	9.93E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_027	13.2	7.14	27.7	671	448	56.0	56.0	35.3	15.1	9.95E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_028	13.2	7.14	27.9	674	450	56.2	56.2	35.4	15.1	9.99E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_029	13.2	7.14	28.0	675	451	56.3	56.3	35.5	15.1	1.00E-04	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_030	13.3	7.15	28.0	676	451	56.4	56.4	35.5	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_031	13.3	7.14	28.0	672	450	56.4	56.4	35.5	15.1	9.99E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_032	13.3	7.15	28.0	679	452	56.4	56.4	35.6	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_033	13.2	7.14	27.9	678	451	56.3	56.3	35.5	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_034	13.2	7.14	27.9	676	451	56.2	56.2	35.5	15.1	9.99E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_035	13.2	7.14	27.7	673	449	56.0	56.0	35.3	15.1	9.96E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_036	13.2	7.14	27.7	672	449	56.0	56.0	35.3	15.1	9.95E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_037	13.2	7.13	27.6	671	448	55.8	55.8	35.3	15.1	9.94E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_038	13.2	7.13	27.6	668	447	55.8	55.8	35.3	15.1	9.93E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_039	13.2	7.13	27.6	670	448	55.9	55.9	35.3	15.1	9.94E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_040	13.2	7.14	27.8	672	449	56.0	56.0	35.3	15.1	9.96E-05	5.22E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_041	13.2	7.14	27.8	673	450	56.1	56.1	35.4	15.1	9.98E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_042	13.3	7.15	28.2	675	453	56.8	56.8	35.6	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_043	13.3	7.15	28.1	673	451	56.6	56.6	35.5	15.1	1.00E-04	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_044	13.2	7.14	27.9	671	449	56.2	56.2	35.4	15.1	9.98E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_045	13.2	7.14	27.9	670	449	56.1	56.1	35.4	15.1	9.97E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_046	13.2	7.14	27.8	668	448	55.9	55.9	35.3	15.1	9.95E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_052	13.3	7.14	28.0	669	450	56.3	56.3	35.4	15.1	9.98E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_053	13.3	7.14	28.1	670	451	56.5	56.5	35.5	15.1	9.99E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_056	13.2	7.14	27.9	668	449	56.2	56.2	35.4	15.1	9.97E-05	5.22E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_057	13.3	7.14	28.1	672	452	56.7	56.7	35.5	15.1	1.00E-04	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_058	13.3	7.15	28.2	674	453	56.9	56.9	35.6	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_059	13.4	7.16	28.7	693	458	57.5	57.5	36.1	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_060	13.4	7.16	28.5	691	457	57.3	57.3	36.0	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_061	13.4	7.16	28.8	695	460	57.5	57.5	36.2	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE214800_062	13.3	7.15	28.1	682	453	56.4	56.4	35.7	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_063	13.2	7.14	27.9	679	452	56.2	56.2	35.5	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_064	13.2	7.14	27.7	675	451	55.9	55.9	35.4	15.1	9.97E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_065	13.4	7.17	28.9	697	461	57.7	57.7	36.2	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_066	13.3	7.16	28.7	694	460	57.4	57.4	36.1	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_067	13.3	7.15	28.0	681	453	56.4	56.4	35.6	15.1	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_068	13.2	7.14	27.8	677	451	56.1	56.1	35.5	15.1	9.99E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_069	13.2	7.14	27.8	676	451	56.0	56.0	35.4	15.1	9.98E-05	5.23E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_070	13.2	7.13	27.5	672	449	55.7	55.7	35.3	15.1	9.94E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_071	13.1	7.13	27.4	670	449	55.5	55.5	35.3	15.1	9.94E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_072	13.2	7.14	27.6	673	450	55.8	55.8	35.3	15.1	9.95E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_073	13.4	7.16	28.9	693	461	57.3	57.3	36.2	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_074	13.3	7.16	28.8	691	460	57.1	57.1	36.1	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_075	13.3	7.15	28.1	683	454	56.5	56.5	35.7	15.2	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_076	13.3	7.15	28.2	664	458	56.3	56.3	35.6	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214900_001	13.1	7.13	27.4	667	447	55.5	55.5	35.3	15.1	9.92E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214900_008	13.1	7.13	27.4	669	448	55.3	55.3	35.3	15.1	9.93E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214900_009	13.1	7.13	27.3	668	448	55.2	55.2	35.3	15.1	9.93E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214900_010	13.1	7.13	27.3	666	447	55.1	55.1	35.3	15.1	9.92E-05	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE217600_001	13.1	7.14	27.4	587	441	53.4	53.4	34.1	15.0	9.96E-05	5.23E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE217600_002	13.1	7.13	26.7	618	435	52.7	52.7	33.8	15.0	9.91E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE218700_001	14.5	7.48	34.2	935	516	69.2	69.2	38.7	16.0	1.10E-04	5.45E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE218700_002	14.7	7.46	33.6	960	520	70.0	70.0	38.4	15.9	1.10E-04	5.44E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE220800_001	14.2	7.29	31.8	506	403	50.2	50.2	33.5	14.9	9.69E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE220900_001	13.7	7.18	29.9	516	402	49.9	49.9	33.6	14.9	9.71E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE220900_002	14.4	7.43	33.4	502	402	49.7	49.7	33.4	15.0	9.60E-05	5.22E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE220900_003	14.3	7.32	33.0	506	403	50.2	50.2	33.6	14.9	9.74E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE221000_001	14.6	7.53	33.7	529	413	50.5	50.5	33.6	15.0	9.71E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE221000_002	14.6	7.52	33.2	556	420	50.8	50.8	33.7	15.0	9.72E-05	5.24E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE221300_001	14.0	7.36	30.4	551	416	50.2	50.2	33.6	14.9	9.66E-05	5.21E-05	4.47	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE221300_002	13.8	7.33	29.9	547	414	50.1	50.1	33.5	14.9	9.64E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE221300_003	13.2	7.21	27.3	492	398	49.5	49.5	33.3	14.9	9.55E-05	5.18E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222600_001	14.1	7.23	32.2	528	411	50.5	50.5	34.7	15.0	9.78E-05	5.18E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_001	14.8	7.41	35.2	562	411	51.2	51.2	34.8	15.1	9.78E-05	5.19E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_002	14.8	7.40	35.3	564	409	51.1	51.1	34.8	15.1	9.77E-05	5.19E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_003	15.0	7.46	36.0	565	411	51.4	51.4	34.9	15.1	9.79E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_004	15.0	7.44	35.6	563	411	51.3	51.3	34.8	15.1	9.78E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_005	15.0	7.45	35.8	567	412	51.3	51.3	34.8	15.1	9.78E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_006	14.5	7.31	33.8	571	410	50.2	50.2	34.4	15.0	9.72E-05	5.18E-05	4.48	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222800_001	14.8	7.60	33.8	539	403	51.4	51.4	33.9	15.2	9.61E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222800_002	14.9	7.60	33.9	540	404	51.5	51.5	34.0	15.2	9.60E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222800_003	14.9	7.61	34.2	539	405	51.6	51.6	34.0	15.2	9.59E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222800_004	15.3	7.49	37.1	602	415	51.7	51.7	35.1	15.1	9.83E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222800_005	13.9	7.34	30.7	507	403	49.5	49.5	34.0	15.0	9.66E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222900_001	14.7	7.55	33.1	542	404	51.1	51.1	33.9	15.2	9.59E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE223100_001	13.3	7.21	27.5	582	402	49.2	49.2	33.6	14.9	9.58E-05	5.17E-05	4.48	1.50	0.16	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE224000_001	15.1	7.50	36.7	653	436	59.9	59.9	37.8	15.6	1.04E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_002	14.5	7.31	34.3	647	428	54.9	54.9	37.0	15.2	1.03E-04	5.24E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224000_003	15.2	7.57	37.5	632	441	61.1	61.1	38.0	15.7	1.05E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_004	13.9	7.22	31.3	628	412	57.7	57.7	35.2	15.1	9.90E-05	5.21E-05	4.50	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224000_005	15.0	7.47	36.3	635	440	60.5	60.5	37.5	15.5	1.04E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_006	13.8	7.21	31.1	551	418	56.2	56.2	35.6	15.1	1.00E-04	5.20E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224000_007	13.9	7.22	31.5	542	410	53.7	53.7	35.2	15.1	9.82E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224000_008	15.1	7.53	36.7	644	436	60.5	60.5	37.8	15.6	1.04E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224100_001	15.2	7.64	35.5	607	442	59.8	59.8	36.8	15.8	1.01E-04	5.34E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224200_001	14.2	7.39	31.4	557	419	55.1	55.1	35.4	15.4	9.89E-05	5.26E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE225600_001	14.3	7.33	32.9	600	447	55.4	55.4	36.2	15.2	1.04E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE225700_001	13.8	7.34	30.2	536	415	52.8	52.8	34.7	15.2	9.96E-05	5.28E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE225700_002	14.0	7.29	32.4	611	462	53.8	53.8	35.9	15.2	1.04E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE225800_001	14.4	7.49	32.7	555	431	54.3	54.3	35.1	15.4	1.01E-04	5.34E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE226500_001	14.9	7.39	37.1	791	496	59.5	59.5	39.2	15.5	1.14E-04	5.36E-05	4.49	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE226500_002	14.3	7.40	33.6	711	506	57.9	57.9	36.9	15.5	1.07E-04	5.38E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE226600_001	14.6	7.45	35.0	781	530	60.7	60.7	37.6	15.6	1.09E-04	5.41E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE226700_001	15.2	7.41	38.7	771	513	61.3	61.3	40.3	15.5	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE226800_001	15.2	7.37	38.7	730	521	60.9	60.9	40.7	15.5	1.16E-04	5.36E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE227000_001	14.8	7.45	36.0	723	522	64.6	64.6	40.5	15.7	1.11E-04	5.41E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE227100_001	15.6	7.61	39.2	811	569	71.3	71.3	43.4	16.1	1.15E-04	5.51E-05	4.51	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE227100_002	16.2	7.77	42.1	887	608	77.5	77.5	45.0	16.5	1.19E-04	5.61E-05	4.53	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE227300_001	14.4	7.40	32.6	659	510	70.4	70.4	39.0	15.9	1.05E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE227800_001	13.7	7.31	30.0	693	461	56.2	56.2	34.9	15.2	1.02E-04	5.32E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE227900_001	13.9	7.28	31.1	637	449	56.7	56.7	34.9	15.2	1.04E-04	5.30E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228000_001	14.0	7.18	32.6	1155	515	69.3	69.3	38.9	15.3	1.08E-04	5.27E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_002	14.0	7.19	32.8	1169	517	69.4	69.4	38.9	15.3	1.08E-04	5.28E-05	4.58	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_003	14.0	7.19	33.4	1231	523	69.8	69.8	39.0	15.3	1.09E-04	5.28E-05	4.60	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_004	14.1	7.20	33.6	1224	529	71.0	71.0	39.2	15.3	1.09E-04	5.28E-05	4.60	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_005	14.2	7.21	34.4	1344	545	72.8	72.8	40.6	15.4	1.09E-04	5.29E-05	4.61	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_006	14.3	7.21	35.7	1389	580	70.5	70.5	41.1	15.4	1.12E-04	5.29E-05	4.63	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_007	14.4	7.21	36.6	1423	605	69.4	69.4	41.1	15.4	1.13E-04	5.29E-05	4.64	1.51	0.17	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228000_008	14.5	7.51	33.8	942	509	65.9	65.9	38.7	15.9	1.10E-04	5.43E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_009	14.4	7.20	35.7	1110	544	65.6	65.6	41.0	15.4	1.14E-04	5.29E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228100_001	14.5	7.21	36.5	1165	558	66.9	66.9	41.6	15.4	1.16E-04	5.30E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_028	14.9	7.21	36.9	885	533	64.9	64.9	43.9	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228300_029	14.9	7.21	37.0	885	533	64.9	64.9	43.9	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228300_030	14.9	7.21	37.0	884	534	64.9	64.9	43.9	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228300_031	14.9	7.21	36.9	884	531	64.7	64.7	43.8	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228300_032	14.9	7.21	36.8	884	530	64.5	64.5	43.8	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228300_033	14.9	7.21	36.8	884	529	64.4	64.4	43.7	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228300_034	14.9	7.21	36.8	883	528	64.3	64.3	43.7	15.4	1.17E-04	5.29E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228300_035	14.9	7.21	36.7	881	527	64.3	64.3	43.6	15.4	1.16E-04	5.29E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_004	14.9	7.22	36.6	884	557	65.2	65.2	43.5	15.4	1.16E-04	5.30E-05	4.55	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_005	14.9	7.22	36.6	889	558	65.4	65.4	43.5	15.4	1.16E-04	5.30E-05	4.55	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_006	14.9	7.22	36.6	894	560	65.5	65.5	43.5	15.4	1.16E-04	5.30E-05	4.55	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_007	14.9	7.21	37.0	882	535	64.8	64.8	44.0	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_008	14.9	7.21	37.0	881	536	64.8	64.8	44.0	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_009	14.9	7.21	37.0	879	537	64.7	64.7	44.0	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_010	14.9	7.21	37.1	879	539	64.7	64.7	44.1	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_011	14.9	7.21	37.1	878	540	64.8	64.8	44.1	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_013	14.8	7.20	36.1	834	539	63.3	63.3	43.2	15.4	1.15E-04	5.29E-05	4.54	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_014	14.8	7.20	36.1	839	540	63.2	63.2	43.2	15.4	1.15E-04	5.29E-05	4.54	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_015	14.8	7.20	36.1	844	542	63.3	63.3	43.2	15.4	1.15E-04	5.29E-05	4.54	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_045	14.6	7.20	35.4	874	548	62.5	62.5	42.1	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_046	14.6	7.20	35.4	875	549	62.5	62.5	42.1	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_047	14.6	7.20	35.4	876	549	62.5	62.5	42.0	15.4	1.12E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_048	14.7	7.20	35.4	877	550	62.8	62.8	42.1	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_049	14.7	7.20	35.4	877	551	63.0	63.0	42.3	15.4	1.14E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_050	14.7	7.21	35.5	877	551	63.1	63.1	42.5	15.4	1.14E-04	5.29E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_051	14.8	7.21	35.7	877	551	63.3	63.3	42.7	15.4	1.14E-04	5.29E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_052	14.8	7.21	35.9	876	551	63.9	63.9	42.9	15.4	1.15E-04	5.29E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_053	14.8	7.21	36.1	874	551	64.0	64.0	43.1	15.4	1.15E-04	5.29E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_054	14.8	7.21	36.5	865	550	64.1	64.1	43.5	15.4	1.16E-04	5.30E-05	4.54	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_055	14.9	7.21	36.7	860	549	64.4	64.4	43.7	15.4	1.16E-04	5.30E-05	4.55	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_056	14.9	7.21	36.8	855	548	64.5	64.5	43.8	15.4	1.16E-04	5.30E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_057	14.9	7.22	37.1	858	546	65.0	65.0	44.0	15.4	1.17E-04	5.30E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_058	15.0	7.22	37.2	870	546	65.2	65.2	44.2	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228400_059	15.0	7.22	37.4	883	544	65.4	65.4	44.3	15.4	1.17E-04	5.30E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE228500_009	14.7	7.21	35.1	870	526	64.4	64.4	42.0	15.3	1.12E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_010	14.7	7.21	35.6	873	533	64.8	64.8	42.4	15.4	1.12E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_011	14.7	7.21	35.8	874	536	64.9	64.9	42.5	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_012	14.7	7.21	36.0	874	540	65.0	65.0	42.7	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_013	14.8	7.21	36.2	872	544	64.8	64.8	42.9	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_014	14.8	7.22	36.4	865	551	65.0	65.0	43.1	15.4	1.14E-04	5.30E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_015	14.8	7.22	36.5	881	555	65.3	65.3	43.2	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_016	14.8	7.22	36.6	894	559	65.9	65.9	43.2	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_017	14.8	7.22	36.7	903	562	65.8	65.8	43.2	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_018	14.9	7.23	36.7	915	566	65.7	65.7	43.1	15.4	1.14E-04	5.31E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_019	14.9	7.23	36.7	918	567	65.5	65.5	43.1	15.4	1.14E-04	5.31E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_020	14.9	7.23	36.6	914	568	65.6	65.6	43.0	15.5	1.15E-04	5.31E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_021	15.0	7.23	36.7	912	568	66.4	66.4	43.5	15.5	1.16E-04	5.31E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_022	14.9	7.22	36.5	898	561	65.5	65.5	43.4	15.4	1.16E-04	5.30E-05	4.55	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_023	14.9	7.22	36.3	902	563	65.1	65.1	43.2	15.4	1.16E-04	5.30E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE228500_024	14.9	7.22	36.3	904	563	64.9	64.9	43.1	15.4	1.15E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_025	14.9	7.22	36.3	906	564	64.8	64.8	43.0	15.4	1.15E-04	5.31E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_026	14.8	7.22	36.2	904	561	64.4	64.4	42.8	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_027	14.7	7.22	36.2	900	560	64.4	64.4	42.8	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_028	14.7	7.21	36.1	889	556	64.4	64.4	42.7	15.4	1.13E-04	5.29E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_029	14.7	7.21	36.1	882	553	64.5	64.5	42.8	15.4	1.13E-04	5.29E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_030	14.7	7.21	35.9	866	549	64.2	64.2	42.7	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_031	14.7	7.21	35.8	853	545	63.9	63.9	42.6	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_032	14.7	7.20	35.7	842	541	63.6	63.6	42.5	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_033	14.6	7.20	35.6	847	537	63.5	63.5	42.4	15.3	1.12E-04	5.28E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_034	14.6	7.20	35.4	854	531	63.6	63.6	42.2	15.3	1.12E-04	5.28E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_035	14.6	7.20	35.2	857	529	63.8	63.8	42.1	15.3	1.12E-04	5.28E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_049	14.6	7.20	35.4	832	537	62.8	62.8	42.2	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_050	14.6	7.20	35.5	852	543	63.2	63.2	42.3	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_051	14.6	7.20	35.6	861	546	63.5	63.5	42.4	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_052	14.6	7.20	35.7	874	549	63.6	63.6	42.4	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_053	14.6	7.21	35.8	881	552	63.6	63.6	42.5	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_054	14.7	7.21	35.9	892	556	63.6	63.6	42.6	15.4	1.13E-04	5.29E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_055	14.7	7.21	36.0	895	557	63.6	63.6	42.6	15.4	1.13E-04	5.29E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_056	14.8	7.21	36.0	897	558	63.5	63.5	42.6	15.4	1.13E-04	5.29E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_057	14.8	7.21	36.0	898	559	63.7	63.7	42.6	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_060	15.0	7.24	37.0	929	573	66.5	66.5	43.3	15.5	1.16E-04	5.32E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_061	15.0	7.24	37.0	931	573	66.4	66.4	43.3	15.5	1.15E-04	5.32E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_062	15.0	7.24	37.0	930	572	66.4	66.4	43.3	15.5	1.15E-04	5.32E-05	4.57	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_063	14.9	7.24	37.0	927	571	66.5	66.5	43.3	15.5	1.15E-04	5.31E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_064	14.9	7.23	37.0	923	569	66.6	66.6	43.3	15.5	1.15E-04	5.31E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_065	14.9	7.23	36.9	917	568	66.6	66.6	43.3	15.5	1.15E-04	5.31E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_066	14.9	7.23	36.9	910	565	66.6	66.6	43.3	15.4	1.15E-04	5.31E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_067	14.9	7.23	36.8	904	564	66.7	66.7	43.3	15.4	1.14E-04	5.31E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_013	14.4	7.21	33.7	825	490	65.3	65.3	40.8	15.3	1.10E-04	5.28E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_014	14.5	7.21	34.2	816	493	65.4	65.4	41.3	15.3	1.11E-04	5.28E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_015	14.6	7.21	34.5	820	496	65.3	65.3	41.5	15.4	1.12E-04	5.29E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_016	14.6	7.21	34.8	834	500	65.3	65.3	41.8	15.4	1.12E-04	5.29E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_017	14.7	7.22	35.1	857	506	65.5	65.5	42.0	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_018	14.8	7.22	35.4	875	512	65.7	65.7	42.2	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_019	14.8	7.22	35.6	891	518	66.1	66.1	42.3	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_020	14.9	7.22	35.7	902	526	66.5	66.5	42.4	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_021	14.9	7.23	36.0	909	535	66.1	66.1	42.6	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_022	14.9	7.23	36.4	910	542	66.4	66.4	43.0	15.4	1.14E-04	5.31E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_023	14.9	7.23	36.6	901	548	66.9	66.9	43.2	15.4	1.14E-04	5.31E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_024	14.9	7.23	36.7	887	554	66.7	66.7	43.4	15.5	1.14E-04	5.31E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_025	14.9	7.24	36.9	888	561	66.6	66.6	43.5	15.5	1.15E-04	5.31E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_026	15.0	7.24	37.1	910	567	67.3	67.3	43.5	15.5	1.15E-04	5.32E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_027	15.0	7.24	37.3	926	572	67.7	67.7	43.5	15.5	1.15E-04	5.32E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_036	14.6	7.20	34.5	866	514	64.2	64.2	41.7	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_037	14.6	7.20	34.8	868	520	64.1	64.1	41.7	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_038	14.6	7.20	34.9	869	523	64.2	64.2	41.8	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_039	14.9	7.23	36.7	891	560	66.0	66.0	43.3	15.4	1.14E-04	5.31E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_040	14.9	7.23	36.7	883	557	65.9	65.9	43.3	15.4	1.14E-04	5.31E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_041	14.8	7.23	36.6	873	555	65.6	65.6	43.2	15.4	1.14E-04	5.30E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_042	14.8	7.22	36.5	873	553	65.5	65.5	43.2	15.4	1.14E-04	5.30E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_043	14.8	7.22	36.5	879	551	65.5	65.5	43.2	15.4	1.14E-04	5.30E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_044	14.8	7.22	36.4	883	548	65.7	65.7	43.1	15.4	1.14E-04	5.30E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_045	14.8	7.22	36.4	885	546	65.9	65.9	43.0	15.4	1.14E-04	5.30E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_046	14.8	7.22	36.3	887	544	65.9	65.9	43.0	15.4	1.13E-04	5.30E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_047	14.8	7.22	36.1	888	539	65.7	65.7	42.8	15.4	1.13E-04	5.30E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_048	14.8	7.22	35.9	887	536	65.6	65.6	42.6	15.4	1.13E-04	5.30E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_049	14.8	7.22	35.8	887	534	65.6	65.6	42.5	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_050	14.8	7.22	35.6	887	532	65.4	65.4	42.4	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_051	14.8	7.21	35.5	886	530	65.1	65.1	42.3	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_052	14.7	7.21	35.4	885	528	64.9	64.9	42.2	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_053	14.7	7.21	35.3	885	526	64.9	64.9	42.0	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_054	14.7	7.21	35.2	883	524	64.9	64.9	42.0	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_055	14.7	7.21	35.0	882	521	64.9	64.9	42.0	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_056	14.7	7.21	35.0	880	519	64.9	64.9	42.0	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE228600_057	14.7	7.21	35.0	878	517	65.0	65.0	42.0	15.4	1.13E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_058	14.7	7.21	34.9	875	515	65.0	65.0	41.9	15.4	1.12E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_059	14.7	7.21	34.9	873	513	65.1	65.1	41.9	15.4	1.12E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_060	14.7	7.21	34.9	870	511	64.9	64.9	41.9	15.3	1.12E-04	5.29E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_061	14.7	7.21	34.9	867	508	64.7	64.7	41.9	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_062	14.6	7.21	34.8	863	507	64.6	64.6	41.9	15.3	1.12E-04	5.28E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_063	14.7	7.41	34.8	628	445	55.3	55.3	35.0	15.1	1.03E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228700_010	14.1	7.35	31.5	632	452	55.0	55.0	35.1	15.1	1.04E-04	5.30E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228800_001	13.9	7.36	30.5	570	420	53.2	53.2	35.1	15.1	9.93E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228800_002	13.9	7.38	30.7	573	424	53.7	53.7	35.1	15.1	9.95E-05	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228800_003	13.5	7.24	28.8	587	425	54.0	54.0	35.0	15.0	9.93E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228900_001	13.9	7.36	30.4	566	418	53.0	53.0	35.0	15.1	9.91E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228900_002	13.6	7.27	29.5	568	417	52.7	52.7	34.9	15.0	9.86E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE229000_001	13.8	7.28	30.8	633	449	54.5	54.5	35.4	15.1	1.03E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE229100_001	13.7	7.23	29.4	635	440	54.1	54.1	35.5	15.0	1.01E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230200_001	13.5	7.24	29.0	642	466	53.7	53.7	34.9	15.1	1.01E-04	5.26E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230300_001	14.7	7.39	33.7	772	505	55.7	55.7	35.6	15.3	1.05E-04	5.33E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230300_002	14.1	7.27	31.0	710	477	54.2	54.2	35.0	15.1	1.02E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230300_003	13.7	7.20	29.5	743	484	58.1	58.1	35.5	15.1	1.02E-04	5.24E-05	4.51	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230300_004	13.8	7.20	31.2	731	506	63.1	63.1	37.9	15.2	1.05E-04	5.25E-05	4.51	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE230300_005	14.6	7.28	33.5	799	521	70.6	70.6	39.1	15.5	1.10E-04	5.33E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_001	14.0	7.33	31.5	616	456	54.0	54.0	35.6	15.2	1.02E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230400_002	14.1	7.36	32.1	631	462	54.6	54.6	35.7	15.2	1.02E-04	5.29E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230400_006	13.9	7.34	31.3	738	500	57.6	57.6	35.8	15.2	1.04E-04	5.30E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230400_007	14.4	7.35	33.2	804	522	63.0	63.0	36.7	15.3	1.06E-04	5.31E-05	4.52	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE230400_008	14.3	7.35	33.2	798	521	63.0	63.0	36.6	15.3	1.05E-04	5.31E-05	4.52	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE230400_009	14.2	7.31	32.3	784	512	61.7	61.7	36.4	15.3	1.04E-04	5.29E-05	4.52	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230400_010	15.4	7.48	37.9	903	585	79.0	79.0	40.9	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230400_011	16.1	7.59	40.4	968	622	89.3	89.3	44.3	16.3	1.21E-04	5.55E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230500_001	14.2	7.40	32.5	650	450	54.2	54.2	35.3	15.2	1.04E-04	5.35E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_002	13.9	7.32	31.6	620	461	53.7	53.7	35.7	15.2	1.02E-04	5.29E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_003	13.7	7.28	30.7	628	456	53.1	53.1	35.7	15.2	1.01E-04	5.27E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_004	14.1	7.39	32.7	664	481	56.3	56.3	36.3	15.3	1.04E-04	5.32E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_005	14.1	7.37	32.4	656	477	56.5	56.5	36.3	15.3	1.03E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_006	14.1	7.36	32.4	700	483	59.6	59.6	36.6	15.3	1.04E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE230500_007	14.5	7.42	33.7	764	504	65.9	65.9	37.8	15.6	1.08E-04	5.39E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_008	14.4	7.39	33.1	742	495	65.4	65.4	37.5	15.5	1.07E-04	5.37E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_009	14.4	7.39	33.0	735	493	65.1	65.1	37.4	15.5	1.07E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_010	15.1	7.54	37.1	872	574	84.6	84.6	42.9	16.2	1.16E-04	5.51E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_011	15.8	7.71	40.8	1001	604	91.0	91.0	44.4	16.6	1.21E-04	5.62E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230500_012	16.9	8.06	47.7	1063	636	101.7	101.7	53.7	18.5	1.32E-04	5.94E-05	4.59	1.53	0.16	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230500_013	18.0	8.05	54.2	1366	779	96.3	96.3	51.4	17.4	1.35E-04	5.80E-05	4.66	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230500_014	15.7	7.70	38.4	837	536	75.2	75.2	40.9	16.4	1.13E-04	5.53E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230600_001	13.5	7.22	29.1	685	460	55.0	55.0	36.0	15.1	1.01E-04	5.25E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230600_002	13.8	7.25	29.7	630	469	59.7	59.7	36.2	15.2	1.03E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230600_003	18.5	8.40	61.9	1848	952	114.9	114.9	54.8	18.7	1.52E-04	6.19E-05	4.72	1.54	0.17	6.58E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE230600_004	15.8	7.67	41.8	966	589	87.1	87.1	47.0	16.6	1.20E-04	5.58E-05	4.57	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230600_005	15.2	7.58	36.8	840	525	76.4	76.4	42.1	16.3	1.13E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230600_006	15.0	7.52	35.8	817	514	75.1	75.1	40.5	16.1	1.12E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_001	15.9	7.70	41.4	1479	684	99.9	99.9	48.1	17.4	1.35E-04	5.88E-05	4.63	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_002	15.6	7.61	40.0	1330	660	93.4	93.4	46.9	17.0	1.31E-04	5.77E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_003	15.3	7.55	38.9	1243	642	89.7	89.7	46.0	16.8	1.28E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_004	15.1	7.50	38.1	1192	626	87.1	87.1	45.1	16.6	1.26E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_005	15.1	7.48	37.7	1165	618	85.8	85.8	44.7	16.5	1.25E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_006	14.9	7.45	37.1	1119	605	83.5	83.5	44.1	16.3	1.23E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_007	14.8	7.43	36.7	1086	595	81.1	81.1	43.7	16.3	1.22E-04	5.56E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_008	14.7	7.41	36.2	1064	585	78.5	78.5	43.2	16.2	1.21E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_009	14.7	7.39	36.0	1051	580	77.7	77.7	42.9	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_010	14.6	7.38	35.6	1031	574	76.7	76.7	42.6	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_011	14.6	7.36	35.4	1009	569	75.6	75.6	42.3	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_012	16.1	7.75	42.4	1572	698	103.4	103.4	48.7	17.6	1.37E-04	5.93E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_013	15.9	7.69	41.4	1475	683	98.9	98.9	48.1	17.3	1.35E-04	5.85E-05	4.63	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_014	15.6	7.62	40.3	1360	666	94.4	94.4	47.2	17.1	1.32E-04	5.78E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_015	15.5	7.58	39.5	1282	652	91.6	91.6	46.5	16.9	1.29E-04	5.73E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_016	15.4	7.56	39.0	1253	642	90.0	90.0	46.0	16.8	1.28E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_017	15.2	7.52	38.4	1215	630	88.1	88.1	45.4	16.6	1.26E-04	5.66E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_018	15.1	7.50	38.0	1186	621	86.8	86.8	45.0	16.5	1.25E-04	5.63E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_019	15.0	7.47	37.6	1154	612	85.1	85.1	44.6	16.4	1.24E-04	5.60E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_020	14.9	7.45	37.3	1122	605	83.1	83.1	44.2	16.3	1.23E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_021	14.9	7.44	37.0	1100	599	81.2	81.2	43.9	16.3	1.22E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_022	14.8	7.42	36.7	1088	592	79.9	79.9	43.6	16.2	1.22E-04	5.54E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_023	14.8	7.41	36.4	1075	586	78.7	78.7	43.3	16.2	1.21E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_024	14.7	7.39	36.1	1056	580	77.8	77.8	43.0	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_025	14.7	7.38	35.9	1042	576	77.1	77.1	42.7	16.1	1.19E-04	5.50E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_026	14.6	7.38	35.7	1026	573	76.4	76.4	42.6	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_027	16.4	7.84	44.8	1547	736	102.6	102.6	49.3	17.6	1.40E-04	5.97E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_028	16.2	7.80	44.2	1488	726	100.3	100.3	48.8	17.4	1.38E-04	5.92E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_029	16.1	7.77	43.8	1439	717	98.9	98.9	48.5	17.3	1.37E-04	5.88E-05	4.62	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_030	16.0	7.75	43.4	1405	711	96.2	96.2	48.2	17.2	1.36E-04	5.86E-05	4.62	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_031	15.3	7.54	38.9	1244	636	89.4	89.4	45.8	16.7	1.28E-04	5.67E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_032	15.3	7.54	39.0	1250	637	89.7	89.7	45.9	16.7	1.28E-04	5.68E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_033	15.3	7.54	39.1	1259	638	90.0	90.0	46.0	16.7	1.28E-04	5.68E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_034	15.4	7.55	39.2	1266	639	90.3	90.3	46.1	16.7	1.28E-04	5.69E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_035	15.4	7.55	39.3	1270	639	90.5	90.5	46.1	16.7	1.28E-04	5.69E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_036	15.4	7.55	39.3	1275	640	90.7	90.7	46.2	16.7	1.29E-04	5.69E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_037	15.4	7.56	39.4	1279	640	90.8	90.8	46.2	16.7	1.29E-04	5.69E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_038	15.4	7.56	39.5	1285	641	91.1	91.1	46.3	16.8	1.29E-04	5.70E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_039	15.4	7.56	39.6	1291	643	91.5	91.5	46.3	16.8	1.29E-04	5.70E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_040	15.5	7.57	39.7	1295	643	91.7	91.7	46.4	16.8	1.29E-04	5.70E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_041	15.5	7.57	39.8	1302	645	92.0	92.0	46.4	16.8	1.29E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_042	15.5	7.57	39.8	1302	645	92.0	92.0	46.4	16.8	1.29E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_043	15.5	7.57	39.7	1297	644	91.7	91.7	46.4	16.8	1.29E-04	5.70E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_044	15.5	7.57	39.8	1304	645	92.0	92.0	46.4	16.8	1.30E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_045	15.5	7.57	39.9	1304	645	91.9	91.9	46.4	16.8	1.30E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_046	15.5	7.57	39.9	1306	646	92.0	92.0	46.5	16.8	1.30E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_047	15.5	7.58	40.0	1308	647	92.1	92.1	46.5	16.8	1.30E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_048	15.5	7.58	40.1	1312	648	92.3	92.3	46.6	16.8	1.30E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_049	15.5	7.58	40.2	1314	649	92.4	92.4	46.6	16.8	1.30E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_050	15.5	7.58	40.2	1317	651	92.5	92.5	46.6	16.8	1.30E-04	5.72E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_051	15.5	7.59	40.3	1316	652	92.5	92.5	46.6	16.8	1.30E-04	5.72E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_052	15.6	7.59	40.4	1320	653	92.7	92.7	46.7	16.8	1.30E-04	5.72E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_053	15.6	7.59	40.5	1320	654	92.7	92.7	46.7	16.8	1.31E-04	5.72E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_054	15.6	7.60	40.6	1325	656	92.9	92.9	46.8	16.8	1.31E-04	5.72E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_055	15.6	7.61	40.9	1332	664	93.3	93.3	46.9	16.9	1.31E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_056	15.6	7.61	41.0	1336	666	93.5	93.5	47.0	16.9	1.32E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_057	15.6	7.62	41.1	1335	667	93.5	93.5	47.0	16.9	1.32E-04	5.75E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_058	15.7	7.62	41.2	1338	670	93.6	93.6	47.1	16.9	1.32E-04	5.75E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_059	15.7	7.63	41.2	1337	672	93.6	93.6	47.1	16.9	1.32E-04	5.75E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_060	15.7	7.64	41.4	1341	675	93.8	93.8	47.2	16.9	1.32E-04	5.76E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_061	15.7	7.64	41.5	1344	678	93.9	93.9	47.2	16.9	1.32E-04	5.77E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_062	15.7	7.65	41.7	1347	680	94.0	94.0	47.3	16.9	1.33E-04	5.77E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_063	15.8	7.66	41.9	1353	684	94.3	94.3	47.4	17.0	1.33E-04	5.78E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_064	15.8	7.67	42.1	1360	688	94.6	94.6	47.5	17.0	1.34E-04	5.79E-05	4.61	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_065	15.9	7.68	42.4	1366	693	94.8	94.8	47.6	17.0	1.34E-04	5.80E-05	4.61	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_066	15.9	7.69	42.6	1372	696	95.0	95.0	47.7	17.0	1.34E-04	5.81E-05	4.61	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_067	16.3	7.81	44.4	1508	729	100.8	100.8	49.0	17.4	1.39E-04	5.93E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_068	16.1	7.77	43.8	1449	718	99.3	99.3	48.5	17.3	1.37E-04	5.89E-05	4.63	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_069	16.3	7.79	44.1	1517	723	101.2	101.2	49.0	17.4	1.39E-04	5.92E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_070	16.2	7.78	43.9	1513	721	101.0	101.0	48.9	17.4	1.38E-04	5.92E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_071	16.2	7.77	43.8	1510	719	100.9	100.9	48.9	17.4	1.38E-04	5.91E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_072	16.2	7.76	43.7	1504	716	100.7	100.7	48.8	17.4	1.38E-04	5.90E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_073	16.2	7.76	43.5	1499	712	100.6	100.6	48.7	17.4	1.38E-04	5.89E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_074	16.1	7.75	43.4	1495	710	100.5	100.5	48.7	17.4	1.37E-04	5.89E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_075	16.1	7.74	43.3	1490	708	100.5	100.5	48.6	17.3	1.37E-04	5.88E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_076	16.1	7.74	43.1	1487	705	100.4	100.4	48.6	17.3	1.37E-04	5.88E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_077	16.1	7.73	43.0	1484	703	100.3	100.3	48.6	17.3	1.37E-04	5.87E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_078	16.1	7.73	42.9	1479	700	100.1	100.1	48.5	17.3	1.37E-04	5.87E-05	4.63	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_079	16.1	7.72	42.8	1475	698	100.0	100.0	48.5	17.3	1.36E-04	5.86E-05	4.63	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_080	16.0	7.71	42.7	1469	695	99.7	99.7	48.4	17.3	1.36E-04	5.86E-05	4.63	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_081	16.0	7.71	42.6	1466	693	99.6	99.6	48.3	17.3	1.36E-04	5.85E-05	4.63	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_082	16.0	7.69	42.2	1451	685	99.6	99.6	48.2	17.2	1.35E-04	5.84E-05	4.63	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_083	15.9	7.69	42.1	1447	683	99.4	99.4	48.1	17.2	1.35E-04	5.84E-05	4.63	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_084	15.9	7.69	42.0	1445	682	99.5	99.5	48.1	17.2	1.35E-04	5.84E-05	4.63	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_085	15.9	7.69	42.0	1442	680	99.4	99.4	48.0	17.2	1.35E-04	5.83E-05	4.63	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_086	15.9	7.68	41.9	1443	679	99.4	99.4	48.0	17.2	1.35E-04	5.83E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_087	15.9	7.68	41.8	1444	678	99.3	99.3	48.0	17.2	1.35E-04	5.83E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_088	15.9	7.68	41.8	1445	678	99.3	99.3	48.0	17.2	1.35E-04	5.83E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_089	15.9	7.68	41.7	1445	676	99.2	99.2	47.9	17.2	1.34E-04	5.83E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_090	15.9	7.68	41.6	1446	675	99.1	99.1	47.9	17.2	1.34E-04	5.83E-05	4.62	1.52	0.16	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_091	15.9	7.68	41.6	1446	675	99.1	99.1	47.9	17.2	1.34E-04	5.83E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_092	15.9	7.67	41.5	1443	674	98.9	98.9	47.8	17.2	1.34E-04	5.82E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_093	15.9	7.67	41.5	1452	674	99.1	99.1	47.8	17.2	1.34E-04	5.83E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_094	15.9	7.67	41.5	1450	673	98.9	98.9	47.8	17.2	1.34E-04	5.83E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_095	15.9	7.67	41.4	1450	673	98.8	98.8	47.8	17.2	1.34E-04	5.82E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_096	15.9	7.67	41.4	1447	673	98.7	98.7	47.8	17.2	1.34E-04	5.82E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_097	15.9	7.67	41.4	1448	673	98.6	98.6	47.8	17.2	1.34E-04	5.82E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_098	15.9	7.68	41.5	1476	676	99.4	99.4	47.9	17.2	1.34E-04	5.84E-05	4.63	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_099	15.9	7.68	41.4	1470	676	99.2	99.2	47.9	17.2	1.34E-04	5.83E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_100	15.8	7.67	41.3	1456	675	98.7	98.7	47.8	17.2	1.34E-04	5.83E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_101	15.8	7.67	41.3	1452	675	98.5	98.5	47.8	17.2	1.34E-04	5.83E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_102	15.8	7.66	41.0	1428	673	97.6	97.6	47.6	17.2	1.33E-04	5.81E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_103	15.8	7.66	41.0	1425	673	97.4	97.4	47.6	17.2	1.33E-04	5.81E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_104	15.8	7.65	40.9	1416	672	97.1	97.1	47.6	17.1	1.33E-04	5.81E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_105	15.8	7.65	40.9	1413	672	96.9	96.9	47.5	17.1	1.33E-04	5.81E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_106	15.7	7.65	40.8	1409	672	96.7	96.7	47.5	17.1	1.33E-04	5.80E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_107	15.7	7.65	40.8	1405	672	96.5	96.5	47.5	17.1	1.33E-04	5.80E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_108	15.7	7.64	40.7	1401	671	96.2	96.2	47.5	17.1	1.33E-04	5.80E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_109	15.7	7.64	40.7	1400	671	96.1	96.1	47.4	17.1	1.33E-04	5.80E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_110	15.0	7.46	37.5	1131	606	83.0	83.0	44.3	16.3	1.24E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_111	14.9	7.44	37.2	1117	600	81.4	81.4	44.1	16.3	1.23E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_112	14.9	7.43	36.9	1103	595	80.0	80.0	43.7	16.2	1.22E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_113	14.8	7.41	36.6	1087	589	79.2	79.2	43.4	16.2	1.21E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_114	14.8	7.40	36.4	1073	585	78.2	78.2	43.2	16.1	1.21E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_115	14.8	7.41	36.7	1088	590	78.8	78.8	43.5	16.2	1.21E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_116	14.8	7.42	36.9	1098	592	79.5	79.5	43.6	16.2	1.22E-04	5.54E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_117	14.9	7.43	37.1	1111	596	80.2	80.2	43.8	16.2	1.22E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_118	14.9	7.44	37.2	1117	598	80.5	80.5	43.9	16.2	1.23E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_119	15.0	7.46	37.6	1138	607	83.1	83.1	44.4	16.4	1.24E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_120	15.0	7.47	37.7	1142	608	83.3	83.3	44.5	16.4	1.24E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_121	15.0	7.47	37.8	1146	609	83.3	83.3	44.5	16.4	1.24E-04	5.59E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_122	15.0	7.47	37.8	1150	610	83.4	83.4	44.6	16.4	1.24E-04	5.59E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_123	15.1	7.48	38.1	1164	613	83.4	83.4	44.7	16.4	1.25E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_124	15.1	7.48	38.2	1168	614	83.5	83.5	44.8	16.4	1.25E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_125	15.0	7.45	37.6	1138	604	81.4	81.4	44.2	16.3	1.23E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_126	14.9	7.43	37.2	1111	597	80.0	80.0	43.8	16.2	1.22E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_127	15.1	7.48	38.2	1170	614	83.4	83.4	44.8	16.4	1.25E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_128	15.1	7.48	38.3	1173	615	83.5	83.5	44.8	16.4	1.25E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_129	15.1	7.48	38.3	1177	616	83.5	83.5	44.9	16.4	1.25E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_130	15.1	7.49	38.4	1180	617	83.5	83.5	44.9	16.4	1.25E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_131	15.1	7.49	38.5	1184	618	83.7	83.7	45.0	16.4	1.25E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_132	15.2	7.49	38.5	1187	619	83.8	83.8	45.0	16.4	1.26E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_133	15.2	7.50	38.6	1192	621	84.1	84.1	45.1	16.4	1.26E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_134	15.2	7.50	38.7	1195	622	84.2	84.2	45.1	16.4	1.26E-04	5.62E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_135	15.2	7.50	38.8	1199	624	84.4	84.4	45.2	16.5	1.26E-04	5.62E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_136	15.2	7.51	38.9	1203	626	84.6	84.6	45.2	16.5	1.26E-04	5.62E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_137	15.2	7.51	39.0	1207	627	84.6	84.6	45.3	16.5	1.26E-04	5.63E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_138	15.2	7.51	39.1	1210	629	84.8	84.8	45.3	16.5	1.26E-04	5.63E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_139	15.3	7.52	39.2	1214	631	85.0	85.0	45.4	16.5	1.27E-04	5.63E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_140	15.3	7.52	39.3	1217	633	85.1	85.1	45.4	16.5	1.27E-04	5.63E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_141	15.3	7.52	39.3	1220	635	85.2	85.2	45.5	16.5	1.27E-04	5.64E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_142	15.3	7.53	39.4	1224	637	85.4	85.4	45.6	16.5	1.27E-04	5.64E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_143	15.3	7.53	39.6	1228	639	85.6	85.6	45.6	16.5	1.27E-04	5.65E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_144	15.3	7.54	39.7	1233	641	85.8	85.8	45.7	16.5	1.28E-04	5.65E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_145	15.0	7.45	37.7	1135	604	81.1	81.1	44.2	16.3	1.23E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_146	15.0	7.45	37.6	1132	603	81.0	81.0	44.1	16.3	1.23E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE230900_147	15.0	7.44	37.5	1129	602	80.8	80.8	44.1	16.2	1.23E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_148	14.9	7.44	37.4	1128	601	81.1	81.1	44.0	16.3	1.23E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_149	14.6	7.39	35.2	983	587	78.3	78.3	42.7	16.2	1.19E-04	5.52E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_150	14.7	7.42	35.7	1009	597	79.7	79.7	43.2	16.3	1.20E-04	5.55E-05	4.55	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_151	14.8	7.44	36.2	1032	606	81.2	81.2	43.7	16.4	1.22E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_152	15.0	7.48	36.9	1071	621	84.1	84.1	44.5	16.5	1.24E-04	5.63E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_153	15.0	7.49	37.1	1080	623	84.5	84.5	44.6	16.6	1.24E-04	5.64E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_154	15.0	7.50	37.1	1087	624	84.8	84.8	44.7	16.6	1.24E-04	5.64E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_155	15.1	7.50	37.2	1096	627	85.3	85.3	44.8	16.6	1.24E-04	5.65E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_156	15.0	7.50	37.2	1097	625	85.2	85.2	44.7	16.6	1.24E-04	5.65E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_157	15.0	7.49	36.9	1090	620	84.4	84.4	44.4	16.5	1.24E-04	5.63E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_158	14.9	7.46	36.3	1062	608	82.1	82.1	43.8	16.4	1.22E-04	5.59E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_159	14.7	7.43	35.9	1038	598	80.5	80.5	43.3	16.3	1.21E-04	5.57E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_160	14.6	7.41	35.5	1014	589	79.5	79.5	42.9	16.2	1.20E-04	5.54E-05	4.55	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_161	14.6	7.38	35.0	974	581	77.3	77.3	42.4	16.1	1.18E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_162	14.7	7.42	35.7	1016	596	79.8	79.8	43.2	16.3	1.20E-04	5.55E-05	4.55	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_163	14.7	7.43	35.8	1026	598	80.1	80.1	43.3	16.3	1.20E-04	5.56E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_164	14.6	7.40	35.2	994	585	78.4	78.4	42.7	16.2	1.19E-04	5.52E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_165	14.5	7.37	34.8	960	579	77.0	77.0	42.3	16.1	1.18E-04	5.50E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_166	14.4	7.34	34.1	911	569	75.1	75.1	41.7	15.9	1.16E-04	5.46E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_167	14.4	7.35	34.4	919	575	75.8	75.8	42.0	16.0	1.17E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_168	14.5	7.36	34.7	936	581	76.9	76.9	42.3	16.0	1.18E-04	5.49E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_169	14.5	7.37	35.0	950	587	77.8	77.8	42.6	16.1	1.19E-04	5.50E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_170	14.7	7.40	35.4	971	596	79.3	79.3	43.0	16.2	1.20E-04	5.53E-05	4.54	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_171	14.8	7.43	36.1	999	609	81.5	81.5	43.7	16.3	1.22E-04	5.57E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_172	14.9	7.45	36.6	1031	619	83.0	83.0	44.3	16.4	1.23E-04	5.60E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_173	14.9	7.45	36.7	1036	620	83.1	83.1	44.3	16.4	1.23E-04	5.60E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_174	14.9	7.45	36.7	1037	620	83.0	83.0	44.3	16.4	1.23E-04	5.59E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_175	14.9	7.44	36.6	1034	619	82.7	82.7	44.3	16.4	1.23E-04	5.59E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_176	14.9	7.44	36.6	1033	619	82.5	82.5	44.2	16.4	1.23E-04	5.58E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_177	14.9	7.44	36.6	1035	619	82.2	82.2	44.2	16.4	1.23E-04	5.58E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_178	14.8	7.43	36.5	1033	618	82.1	82.1	44.2	16.4	1.23E-04	5.57E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_179	14.8	7.43	36.5	1032	617	82.0	82.0	44.2	16.3	1.23E-04	5.56E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_180	14.8	7.43	36.5	1033	617	82.1	82.1	44.2	16.3	1.23E-04	5.56E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_181	14.8	7.42	36.5	1031	616	82.0	82.0	44.1	16.3	1.23E-04	5.55E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_182	14.8	7.42	36.5	1030	616	82.1	82.1	44.1	16.3	1.23E-04	5.55E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_192	14.3	7.33	34.1	904	568	74.9	74.9	41.6	15.9	1.16E-04	5.45E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_193	14.4	7.35	34.5	920	578	76.2	76.2	42.1	16.0	1.17E-04	5.47E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_194	14.6	7.38	35.1	951	591	78.1	78.1	42.7	16.1	1.19E-04	5.51E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_198	14.6	7.36	35.3	1012	569	75.9	75.9	42.3	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_199	14.6	7.38	35.6	1028	574	76.6	76.6	42.6	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_200	14.7	7.39	35.8	1042	579	77.6	77.6	42.8	16.1	1.20E-04	5.51E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_201	14.7	7.41	36.1	1054	585	78.5	78.5	43.1	16.2	1.20E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_202	14.8	7.42	36.4	1068	592	80.4	80.4	43.4	16.2	1.21E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_203	14.8	7.44	36.7	1094	598	82.4	82.4	43.7	16.3	1.22E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_204	14.9	7.46	37.1	1129	607	84.3	84.3	44.1	16.4	1.23E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_205	14.5	7.35	35.1	991	565	74.8	74.8	42.1	15.9	1.18E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_206	15.7	7.64	40.3	1370	666	94.9	94.9	47.2	17.1	1.32E-04	5.80E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_207	15.9	7.70	41.3	1469	682	99.4	99.4	48.0	17.4	1.35E-04	5.87E-05	4.63	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_208	15.7	7.64	40.5	1379	669	95.3	95.3	47.4	17.1	1.32E-04	5.81E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_209	15.7	7.64	40.4	1370	669	95.0	95.0	47.4	17.1	1.32E-04	5.80E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_210	15.6	7.64	40.2	1359	668	94.8	94.8	47.3	17.1	1.32E-04	5.80E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_211	15.6	7.64	40.1	1352	666	94.9	94.9	47.2	17.1	1.32E-04	5.80E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_212	15.6	7.64	40.0	1337	665	94.4	94.4	47.1	17.1	1.31E-04	5.80E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_213	15.6	7.64	40.0	1336	666	94.5	94.5	47.1	17.1	1.31E-04	5.80E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_214	15.6	7.64	40.0	1333	667	94.5	94.5	47.1	17.1	1.31E-04	5.80E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_215	15.6	7.63	39.9	1327	666	94.4	94.4	47.1	17.1	1.31E-04	5.80E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_216	15.6	7.64	40.0	1340	665	94.4	94.4	47.1	17.1	1.31E-04	5.80E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_217	15.6	7.65	40.0	1306	670	95.6	95.6	47.3	17.2	1.32E-04	5.82E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_218	15.6	7.64	40.1	1336	669	95.0	95.0	47.2	17.2	1.32E-04	5.81E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_219	15.6	7.64	39.9	1321	667	94.7	94.7	47.1	17.1	1.31E-04	5.80E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_220	15.6	7.64	39.9	1317	668	94.9	94.9	47.1	17.2	1.31E-04	5.81E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_221	15.6	7.65	39.9	1314	669	95.0	95.0	47.1	17.2	1.31E-04	5.82E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_222	15.6	7.65	39.9	1307	669	95.1	95.1	47.2	17.2	1.31E-04	5.82E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_223	15.6	7.65	39.9	1293	669	95.3	95.3	47.2	17.2	1.32E-04	5.81E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_224	15.6	7.65	40.0	1292	670	95.6	95.6	47.2	17.2	1.32E-04	5.82E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_225	15.6	7.65	39.8	1273	669	95.0	95.0	47.1	17.2	1.31E-04	5.82E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_226	15.6	7.65	39.8	1264	669	94.8	94.8	47.1	17.2	1.31E-04	5.82E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_227	15.6	7.65	39.8	1262	671	95.1	95.1	47.1	17.2	1.31E-04	5.82E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_228	15.6	7.65	39.9	1262	671	95.4	95.4	47.2	17.2	1.32E-04	5.83E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_229	15.6	7.66	39.9	1262	672	95.8	95.8	47.2	17.2	1.32E-04	5.83E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_230	15.6	7.66	40.0	1259	672	96.0	96.0	47.2	17.2	1.32E-04	5.83E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_231	15.7	7.66	40.0	1260	673	96.3	96.3	47.3	17.2	1.32E-04	5.83E-05	4.59	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_232	15.7	7.66	40.0	1255	673	96.4	96.4	47.3	17.2	1.32E-04	5.83E-05	4.59	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_233	15.6	7.65	39.9	1239	670	95.8	95.8	47.2	17.2	1.32E-04	5.82E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_234	15.6	7.66	40.0	1239	672	96.4	96.4	47.2	17.2	1.32E-04	5.83E-05	4.59	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_235	15.6	7.65	40.0	1234	671	96.3	96.3	47.2	17.2	1.32E-04	5.83E-05	4.59	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_236	15.6	7.65	39.9	1227	670	95.9	95.9	47.2	17.2	1.32E-04	5.82E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_237	15.6	7.64	39.8	1216	668	95.3	95.3	47.1	17.2	1.31E-04	5.81E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_238	15.6	7.65	39.9	1225	671	96.0	96.0	47.2	17.2	1.32E-04	5.82E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_239	15.6	7.64	39.9	1221	670	95.8	95.8	47.2	17.2	1.32E-04	5.82E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_240	15.6	7.64	39.9	1217	670	95.7	95.7	47.1	17.2	1.32E-04	5.81E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_241	15.6	7.64	39.9	1300	668	95.0	95.0	47.1	17.2	1.31E-04	5.81E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_242	15.6	7.63	39.7	1210	668	95.2	95.2	47.0	17.1	1.31E-04	5.80E-05	4.58	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_243	15.6	7.63	39.6	1204	669	94.7	94.7	47.0	17.1	1.31E-04	5.80E-05	4.58	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_244	15.5	7.62	39.5	1192	667	94.0	94.0	46.9	17.1	1.31E-04	5.79E-05	4.58	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_245	15.5	7.62	39.4	1188	667	93.7	93.7	46.8	17.1	1.30E-04	5.79E-05	4.58	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_246	15.5	7.61	39.4	1189	667	93.6	93.6	46.8	17.1	1.30E-04	5.78E-05	4.58	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_247	15.5	7.61	39.3	1188	666	93.4	93.4	46.8	17.1	1.30E-04	5.78E-05	4.58	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_257	14.2	7.29	33.3	892	540	70.5	70.5	40.6	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_258	14.2	7.30	33.4	898	542	70.6	70.6	40.7	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_259	14.2	7.30	33.4	901	542	70.7	70.7	40.7	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_260	14.2	7.30	33.2	897	541	70.8	70.8	40.6	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_261	14.2	7.30	33.2	894	540	70.7	70.7	40.6	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_262	14.1	7.29	33.2	891	540	70.5	70.5	40.6	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_263	14.3	7.31	33.7	918	545	71.2	71.2	40.9	15.8	1.15E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_264	14.3	7.31	33.7	925	547	71.8	71.8	41.0	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_265	14.3	7.32	33.8	932	550	72.3	72.3	41.1	15.8	1.15E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_266	14.3	7.32	33.9	937	552	72.6	72.6	41.2	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_272	14.0	7.27	32.7	851	539	69.7	69.7	40.3	15.7	1.13E-04	5.37E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_273	14.1	7.27	32.8	856	540	70.0	70.0	40.3	15.7	1.13E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_274	14.1	7.27	32.8	860	541	70.2	70.2	40.4	15.7	1.13E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_275	14.1	7.28	32.9	864	542	70.4	70.4	40.4	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_276	14.1	7.28	32.9	867	542	70.5	70.5	40.4	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_277	14.1	7.28	32.9	871	543	70.6	70.6	40.5	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_278	14.1	7.28	33.0	873	543	70.7	70.7	40.5	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_279	14.1	7.28	33.0	875	543	70.9	70.9	40.5	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_280	14.1	7.29	33.0	878	544	71.0	71.0	40.6	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_281	14.1	7.29	33.1	880	544	71.1	71.1	40.6	15.8	1.14E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_282	14.1	7.29	33.1	883	545	71.1	71.1	40.6	15.8	1.14E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_283	14.3	7.32	33.9	928	556	72.9	72.9	41.3	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_285	14.3	7.33	34.0	941	555	73.1	73.1	41.4	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_286	14.3	7.33	34.0	940	556	73.2	73.2	41.4	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_287	14.3	7.33	34.0	940	557	73.3	73.3	41.4	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_288	14.1	7.29	33.1	886	539	70.3	70.3	40.5	15.7	1.13E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_289	14.1	7.29	33.0	881	539	70.0	70.0	40.5	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_290	14.1	7.29	33.0	879	539	69.9	69.9	40.4	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_291	14.1	7.28	32.9	875	538	69.8	69.8	40.4	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_292	14.1	7.28	32.9	873	538	69.6	69.6	40.4	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_293	14.1	7.28	32.9	870	538	69.6	69.6	40.3	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_294	14.2	7.30	33.4	899	550	71.9	71.9	40.9	15.8	1.14E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_295	14.2	7.31	33.5	903	551	72.0	72.0	41.0	15.8	1.14E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_296	14.2	7.31	33.5	907	551	72.1	72.1	41.0	15.8	1.15E-04	5.43E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_297	14.2	7.31	33.6	911	551	72.2	72.2	41.0	15.8	1.15E-04	5.43E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_298	14.3	7.32	33.7	916	552	72.4	72.4	41.1	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_299	14.3	7.32	33.8	923	554	72.7	72.7	41.2	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_300	14.3	7.33	34.0	935	557	73.2	73.2	41.4	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_301	14.3	7.33	34.0	938	557	73.3	73.3	41.4	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_302	14.1	7.28	32.8	863	537	69.3	69.3	40.3	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_303	14.1	7.27	32.7	860	537	69.2	69.2	40.2	15.7	1.13E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_304	14.0	7.27	32.6	853	536	69.1	69.1	40.2	15.7	1.12E-04	5.38E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_305	14.0	7.27	32.6	850	535	69.0	69.0	40.1	15.7	1.12E-04	5.37E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_306	14.0	7.26	32.6	847	535	68.9	68.9	40.1	15.7	1.12E-04	5.37E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_307	14.0	7.26	32.4	838	533	68.6	68.6	40.0	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_310	14.0	7.26	32.5	843	534	68.8	68.8	40.1	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_312	14.3	7.32	33.9	927	547	71.5	71.5	41.1	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_313	14.1	7.27	32.7	857	536	69.2	69.2	40.2	15.7	1.13E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_315	14.3	7.33	34.0	940	553	72.9	72.9	41.3	15.9	1.15E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_317	14.4	7.34	34.2	957	557	73.3	73.3	41.5	15.9	1.16E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_318	14.3	7.33	33.9	916	562	74.1	74.1	41.5	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_319	14.3	7.34	34.0	922	564	74.4	74.4	41.5	15.9	1.16E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_320	14.4	7.34	34.1	925	564	74.3	74.3	41.6	15.9	1.16E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_321	14.4	7.35	34.2	933	566	74.7	74.7	41.7	16.0	1.16E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_322	14.4	7.35	34.3	940	567	74.9	74.9	41.8	16.0	1.17E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_323	14.4	7.35	34.4	947	569	75.3	75.3	41.9	16.0	1.17E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_324	14.4	7.36	34.5	951	569	75.3	75.3	41.9	16.0	1.17E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_325	14.5	7.36	34.6	955	570	75.5	75.5	42.0	16.0	1.17E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_326	14.5	7.37	34.7	961	572	75.8	75.8	42.1	16.0	1.17E-04	5.49E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_327	14.5	7.37	34.7	966	572	75.9	75.9	42.1	16.1	1.18E-04	5.49E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_328	14.5	7.37	34.8	970	572	76.1	76.1	42.2	16.1	1.18E-04	5.50E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_329	14.5	7.37	34.7	972	570	76.1	76.1	42.1	16.0	1.18E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_330	14.4	7.36	34.6	969	566	75.5	75.5	41.9	16.0	1.17E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_331	14.4	7.35	34.5	966	563	75.1	75.1	41.8	16.0	1.17E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_332	14.4	7.35	34.3	962	559	74.1	74.1	41.6	15.9	1.16E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_333	14.3	7.33	34.2	952	554	73.0	73.0	41.4	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_334	14.3	7.32	33.9	930	556	73.0	73.0	41.3	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_335	14.2	7.30	33.4	902	543	71.0	71.0	40.7	15.8	1.14E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_337	14.2	7.29	33.4	874	556	72.6	72.6	41.0	15.8	1.14E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_338	14.2	7.30	33.5	878	557	72.9	72.9	41.0	15.8	1.15E-04	5.41E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_339	14.2	7.30	33.5	882	558	73.2	73.2	41.1	15.8	1.15E-04	5.41E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_340	14.2	7.30	33.6	885	558	73.3	73.3	41.1	15.8	1.15E-04	5.42E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_341	14.2	7.31	33.6	889	559	73.6	73.6	41.2	15.8	1.15E-04	5.42E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_342	14.2	7.31	33.6	891	559	73.6	73.6	41.2	15.8	1.15E-04	5.42E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_343	14.3	7.31	33.7	894	560	73.7	73.7	41.2	15.8	1.15E-04	5.43E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_344	14.3	7.31	33.7	897	560	73.8	73.8	41.3	15.9	1.15E-04	5.43E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_345	14.3	7.32	33.8	900	561	73.9	73.9	41.3	15.9	1.15E-04	5.44E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_346	14.3	7.32	33.8	902	561	73.9	73.9	41.3	15.9	1.15E-04	5.44E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_347	14.3	7.32	33.8	904	561	74.0	74.0	41.4	15.9	1.15E-04	5.44E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_348	14.3	7.32	33.9	908	562	74.1	74.1	41.4	15.9	1.16E-04	5.45E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_349	14.3	7.33	33.9	912	563	74.2	74.2	41.5	15.9	1.16E-04	5.45E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_350	14.7	7.41	36.2	1057	590	79.8	79.8	43.3	16.2	1.21E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_351	14.8	7.44	36.5	1088	597	82.3	82.3	43.6	16.3	1.22E-04	5.56E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_352	14.9	7.46	36.9	1115	604	83.5	83.5	44.0	16.4	1.23E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_353	14.8	7.43	36.2	1071	593	81.6	81.6	43.4	16.3	1.21E-04	5.56E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_354	14.9	7.45	36.8	1108	605	83.4	83.4	44.0	16.4	1.23E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_355	15.2	7.52	38.0	1178	628	87.1	87.1	45.2	16.6	1.26E-04	5.66E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_356	15.2	7.52	38.1	1188	629	87.5	87.5	45.3	16.7	1.26E-04	5.67E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_357	15.0	7.48	37.4	1143	616	85.1	85.1	44.6	16.5	1.24E-04	5.62E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_358	15.2	7.53	38.2	1197	630	88.0	88.0	45.4	16.7	1.26E-04	5.67E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_359	15.2	7.54	38.4	1207	632	88.5	88.5	45.5	16.7	1.27E-04	5.68E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_360	15.3	7.54	38.6	1221	636	88.9	88.9	45.7	16.7	1.27E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_361	14.5	7.35	34.8	983	561	74.7	74.7	41.9	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_362	14.5	7.36	35.1	1001	566	75.3	75.3	42.1	16.0	1.18E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_363	14.6	7.37	35.3	1015	571	76.0	76.0	42.4	16.0	1.18E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_364	14.6	7.38	35.6	1030	577	77.2	77.2	42.7	16.1	1.19E-04	5.50E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_365	14.7	7.40	35.9	1044	584	78.1	78.1	43.0	16.1	1.20E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_366	14.6	7.40	35.6	1027	583	78.6	78.6	42.9	16.2	1.20E-04	5.53E-05	4.55	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_367	14.7	7.42	35.9	1050	588	80.4	80.4	43.2	16.2	1.20E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_368	14.8	7.44	36.3	1079	597	81.9	81.9	43.6	16.3	1.21E-04	5.57E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_369	14.9	7.47	36.8	1109	607	83.6	83.6	44.1	16.4	1.23E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_370	15.1	7.50	37.4	1143	620	85.8	85.8	44.7	16.6	1.24E-04	5.64E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_371	15.3	7.55	38.3	1189	639	89.0	89.0	45.7	16.8	1.27E-04	5.70E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_372	14.6	7.41	35.4	1016	586	79.4	79.4	42.8	16.2	1.19E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_373	14.7	7.43	35.9	1045	596	80.5	80.5	43.3	16.3	1.21E-04	5.57E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_374	14.9	7.47	36.6	1082	611	83.2	83.2	44.0	16.5	1.23E-04	5.61E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE230900_375	15.1	7.51	37.3	1117	624	85.9	85.9	44.7	16.6	1.24E-04	5.65E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_376	15.1	7.52	37.6	1141	629	86.6	86.6	45.1	16.7	1.25E-04	5.66E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_377	15.1	7.52	37.6	1143	628	86.5	86.5	45.0	16.6	1.25E-04	5.66E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_378	14.6	7.39	35.2	995	578	77.7	77.7	42.5	16.1	1.19E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_379	14.7	7.42	35.8	1038	590	80.3	80.3	43.1	16.2	1.20E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_380	14.8	7.45	36.3	1075	603	82.1	82.1	43.7	16.4	1.22E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_381	14.8	7.45	36.4	1081	602	82.2	82.2	43.7	16.4	1.22E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_382	14.7	7.42	35.9	1050	591	80.6	80.6	43.2	16.3	1.20E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_383	14.6	7.40	35.6	1022	584	78.8	78.8	42.8	16.2	1.20E-04	5.53E-05	4.55	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_384	14.6	7.38	35.2	1000	576	77.3	77.3	42.5	16.1	1.19E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_385	14.5	7.37	34.9	987	570	76.3	76.3	42.2	16.0	1.18E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_386	14.5	7.37	35.0	939	589	77.4	77.4	42.6	16.1	1.19E-04	5.49E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_387	14.4	7.34	34.5	914	579	76.3	76.3	42.1	16.0	1.17E-04	5.46E-05	4.53	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_388	14.3	7.32	34.1	899	569	74.9	74.9	41.7	15.9	1.16E-04	5.44E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_389	14.3	7.31	33.9	889	567	74.6	74.6	41.5	15.9	1.16E-04	5.43E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_390	14.4	7.33	34.4	902	576	75.7	75.7	42.0	15.9	1.17E-04	5.45E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_391	14.5	7.36	35.0	939	589	77.4	77.4	42.6	16.0	1.19E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_394	15.1	7.52	37.6	1146	627	86.6	86.6	45.0	16.6	1.25E-04	5.66E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_395	15.2	7.53	38.0	1113	644	88.4	88.4	45.7	16.8	1.27E-04	5.69E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_396	15.0	7.49	37.1	1056	628	84.9	84.9	44.8	16.6	1.24E-04	5.64E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_397	14.9	7.45	36.4	1018	614	82.2	82.2	44.0	16.4	1.22E-04	5.59E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_398	14.7	7.41	35.7	989	600	79.9	79.9	43.3	16.3	1.20E-04	5.55E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_399	14.6	7.38	35.1	961	588	78.0	78.0	42.7	16.1	1.19E-04	5.52E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_400	14.5	7.36	34.5	932	576	76.2	76.2	42.1	16.0	1.17E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_401	14.5	7.37	34.6	944	577	76.5	76.5	42.2	16.1	1.18E-04	5.49E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_402	14.6	7.40	35.2	975	589	78.3	78.3	42.7	16.2	1.19E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_403	14.7	7.42	35.7	1002	601	80.1	80.1	43.3	16.3	1.21E-04	5.56E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_404	14.8	7.45	36.2	1023	611	81.6	81.6	43.8	16.4	1.22E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_405	15.0	7.48	36.8	1048	622	83.9	83.9	44.4	16.5	1.23E-04	5.63E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_406	15.2	7.53	37.8	1093	640	87.6	87.6	45.4	16.7	1.26E-04	5.68E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_001	14.8	7.37	35.9	1056	582	73.3	73.3	42.2	15.9	1.16E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_002	14.2	7.43	32.2	741	457	53.7	53.7	35.7	15.2	1.05E-04	5.39E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231000_003	14.5	7.35	35.1	980	563	73.7	73.7	42.0	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_004	14.5	7.34	34.8	956	559	73.4	73.4	41.8	15.9	1.17E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_005	14.4	7.33	34.6	926	555	73.1	73.1	41.5	15.9	1.16E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_006	14.4	7.32	34.3	924	551	72.6	72.6	41.3	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_007	14.4	7.32	34.2	922	549	72.3	72.3	41.1	15.8	1.15E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_008	14.3	7.31	33.9	929	545	71.7	71.7	40.9	15.8	1.14E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_009	14.3	7.30	33.7	934	541	70.6	70.6	40.7	15.7	1.13E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_010	14.3	7.29	33.5	937	537	69.9	69.9	40.6	15.7	1.13E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_011	14.6	7.37	35.5	1005	569	74.7	74.7	42.3	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_012	14.6	7.36	35.3	982	566	74.3	74.3	42.1	15.9	1.18E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_013	14.5	7.35	35.1	956	563	74.2	74.2	42.0	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_014	14.5	7.34	34.9	944	560	73.9	73.9	41.8	15.9	1.17E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_015	14.4	7.33	34.7	939	556	73.3	73.3	41.6	15.9	1.16E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_016	14.4	7.33	34.5	934	552	72.9	72.9	41.4	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_017	14.4	7.32	34.3	937	550	72.6	72.6	41.3	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_018	14.4	7.31	34.2	942	548	72.3	72.3	41.1	15.8	1.15E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_019	14.4	7.31	34.1	947	546	71.6	71.6	41.0	15.8	1.14E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_020	14.3	7.30	34.0	953	544	71.0	71.0	40.9	15.7	1.14E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_021	14.3	7.30	33.9	956	542	70.5	70.5	40.8	15.7	1.13E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_022	14.3	7.29	33.7	958	539	69.9	69.9	40.7	15.7	1.13E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_023	14.3	7.29	33.6	960	537	69.3	69.3	40.6	15.7	1.13E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_024	14.3	7.29	33.5	962	536	69.2	69.2	40.6	15.7	1.12E-04	5.39E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_025	14.3	7.28	33.5	963	535	68.9	68.9	40.5	15.7	1.12E-04	5.38E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_026	14.3	7.28	33.4	959	533	68.6	68.6	40.5	15.6	1.12E-04	5.38E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_027	14.7	7.39	36.1	1048	579	77.3	77.3	42.9	16.1	1.20E-04	5.50E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_028	14.7	7.38	35.9	1027	575	75.8	75.8	42.7	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_029	14.6	7.37	35.7	1004	572	75.2	75.2	42.5	16.0	1.19E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_030	14.6	7.36	35.5	974	568	75.0	75.0	42.3	16.0	1.18E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_031	14.6	7.36	35.3	964	566	74.8	74.8	42.1	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_032	14.5	7.35	35.2	962	564	74.4	74.4	42.0	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_033	14.5	7.34	34.9	954	558	73.7	73.7	41.7	15.9	1.16E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_034	14.5	7.33	34.7	955	555	73.3	73.3	41.5	15.8	1.16E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_035	14.4	7.33	34.6	960	553	73.0	73.0	41.4	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_036	14.4	7.32	34.5	967	551	72.3	72.3	41.3	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_037	14.4	7.32	34.4	974	549	71.7	71.7	41.2	15.8	1.14E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_038	14.4	7.31	34.3	979	547	71.3	71.3	41.1	15.8	1.14E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_039	14.4	7.31	34.2	984	545	70.8	70.8	41.1	15.7	1.14E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_040	14.4	7.30	34.0	984	543	70.2	70.2	40.9	15.7	1.13E-04	5.40E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_041	14.4	7.30	33.9	982	540	69.8	69.8	40.8	15.7	1.13E-04	5.40E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_042	14.3	7.29	33.8	981	539	69.5	69.5	40.8	15.7	1.13E-04	5.39E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_043	14.3	7.29	33.7	976	538	69.3	69.3	40.7	15.7	1.12E-04	5.39E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_044	14.4	7.30	33.9	987	541	69.7	69.7	40.9	15.7	1.13E-04	5.40E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_045	14.4	7.30	34.0	994	542	70.0	70.0	41.0	15.7	1.13E-04	5.40E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_046	14.4	7.31	34.1	997	544	70.3	70.3	41.0	15.7	1.13E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_047	14.4	7.31	34.3	1000	547	70.9	70.9	41.2	15.8	1.14E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_048	14.4	7.32	34.4	999	549	71.3	71.3	41.3	15.8	1.14E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_049	14.5	7.32	34.5	995	551	71.8	71.8	41.3	15.8	1.15E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_050	14.5	7.32	34.6	991	552	72.0	72.0	41.4	15.8	1.15E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_051	14.5	7.33	34.7	985	553	72.3	72.3	41.5	15.8	1.15E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_052	14.5	7.33	34.7	982	554	72.7	72.7	41.5	15.8	1.15E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_053	14.5	7.33	34.8	978	556	73.4	73.4	41.6	15.8	1.16E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_054	14.5	7.34	34.9	974	557	73.7	73.7	41.7	15.9	1.16E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_055	14.5	7.34	35.0	971	559	73.9	73.9	41.8	15.9	1.16E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_056	14.5	7.35	35.2	971	562	74.3	74.3	41.9	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_057	14.6	7.35	35.3	973	565	74.6	74.6	42.0	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_058	14.6	7.36	35.4	976	567	74.9	74.9	42.2	15.9	1.18E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_059	14.6	7.36	35.5	977	569	75.1	75.1	42.3	15.9	1.18E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_060	14.6	7.37	35.6	978	570	75.3	75.3	42.4	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_061	14.6	7.37	35.8	987	572	75.6	75.6	42.5	16.0	1.19E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_062	14.7	7.38	35.9	1002	574	75.7	75.7	42.6	16.0	1.19E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_063	14.7	7.38	36.0	1022	576	75.9	75.9	42.7	16.0	1.19E-04	5.49E-05	4.55	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_064	14.7	7.39	36.1	1039	579	76.3	76.3	42.9	16.1	1.20E-04	5.50E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_065	14.7	7.40	36.4	1059	583	77.7	77.7	43.1	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_066	14.8	7.40	36.5	1072	586	78.2	78.2	43.2	16.1	1.21E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_067	15.4	7.55	39.8	1239	645	86.0	86.0	45.8	16.6	1.28E-04	5.66E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_068	15.4	7.55	39.9	1241	646	86.1	86.1	45.8	16.6	1.28E-04	5.66E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_069	15.4	7.56	40.0	1244	649	86.3	86.3	45.8	16.6	1.28E-04	5.67E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_070	15.4	7.56	40.2	1247	651	86.4	86.4	45.9	16.6	1.28E-04	5.67E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_071	15.5	7.57	40.3	1253	654	86.6	86.6	46.0	16.6	1.29E-04	5.68E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_072	15.5	7.58	40.5	1256	656	86.8	86.8	46.0	16.6	1.29E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_073	15.5	7.59	40.6	1261	659	87.1	87.1	46.1	16.6	1.29E-04	5.69E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_074	15.5	7.59	40.8	1264	662	87.3	87.3	46.1	16.7	1.30E-04	5.70E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_075	15.6	7.61	41.1	1276	668	87.8	87.8	46.3	16.7	1.30E-04	5.71E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_076	15.7	7.62	41.4	1287	673	88.3	88.3	46.5	16.7	1.31E-04	5.73E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_077	15.9	7.69	42.6	1349	693	90.8	90.8	47.3	17.0	1.33E-04	5.80E-05	4.61	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_078	15.8	7.68	42.4	1332	689	90.0	90.0	47.1	16.9	1.33E-04	5.78E-05	4.61	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_079	15.8	7.68	42.2	1316	686	89.4	89.4	46.9	16.9	1.32E-04	5.77E-05	4.60	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_080	15.8	7.67	42.1	1298	684	88.9	88.9	46.8	16.8	1.32E-04	5.77E-05	4.60	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_081	15.7	7.66	41.9	1265	679	87.1	87.1	46.5	16.8	1.31E-04	5.75E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_082	15.7	7.65	41.8	1242	677	86.7	86.7	46.3	16.8	1.31E-04	5.74E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_083	15.7	7.65	41.7	1223	675	86.6	86.6	46.2	16.7	1.31E-04	5.74E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_084	15.7	7.64	41.5	1212	673	86.3	86.3	46.0	16.7	1.30E-04	5.73E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_085	15.5	7.58	40.5	1182	656	84.5	84.5	45.6	16.6	1.28E-04	5.68E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_086	15.5	7.59	40.8	1191	661	85.0	85.0	45.7	16.6	1.29E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_087	15.4	7.56	40.0	1173	647	83.5	83.5	45.4	16.5	1.27E-04	5.66E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_088	15.5	7.57	40.3	1179	652	84.0	84.0	45.5	16.5	1.28E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_089	15.4	7.55	39.9	1168	645	83.3	83.3	45.3	16.5	1.27E-04	5.65E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_090	15.3	7.54	39.7	1167	642	83.0	83.0	45.2	16.5	1.27E-04	5.64E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_091	15.3	7.53	39.6	1168	640	82.8	82.8	45.2	16.5	1.27E-04	5.63E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_092	15.3	7.52	39.5	1169	637	82.6	82.6	45.2	16.4	1.26E-04	5.63E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_093	15.3	7.52	39.3	1166	635	82.3	82.3	45.1	16.4	1.26E-04	5.62E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_094	15.3	7.51	39.2	1166	632	82.3	82.3	45.1	16.4	1.26E-04	5.62E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_095	15.2	7.51	39.1	1167	630	82.5	82.5	45.0	16.4	1.26E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_096	15.2	7.50	39.0	1165	628	82.4	82.4	45.0	16.4	1.26E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_097	15.2	7.50	38.8	1160	625	82.2	82.2	44.9	16.4	1.25E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_098	15.2	7.49	38.7	1157	623	82.1	82.1	44.8	16.4	1.25E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_099	15.1	7.49	38.6	1155	620	82.2	82.2	44.7	16.3	1.25E-04	5.59E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_100	15.1	7.48	38.5	1155	619	82.3	82.3	44.7	16.3	1.25E-04	5.59E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_101	15.1	7.48	38.4	1152	617	82.2	82.2	44.6	16.3	1.25E-04	5.59E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_102	15.1	7.47	38.3	1149	615	82.2	82.2	44.6	16.3	1.24E-04	5.58E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_103	15.1	7.47	38.2	1145	612	82.0	82.0	44.5	16.3	1.24E-04	5.58E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_104	15.0	7.46	38.0	1141	609	81.8	81.8	44.4	16.3	1.24E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_105	15.0	7.46	38.0	1140	608	81.6	81.6	44.3	16.3	1.24E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_106	15.0	7.46	37.9	1141	608	81.6	81.6	44.3	16.3	1.24E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_107	15.0	7.46	37.9	1141	607	81.5	81.5	44.3	16.3	1.24E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_108	15.0	7.46	37.9	1140	607	81.4	81.4	44.3	16.3	1.24E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_109	15.0	7.45	37.8	1137	605	81.2	81.2	44.2	16.3	1.23E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_110	14.9	7.42	37.1	1099	594	79.5	79.5	43.7	16.2	1.22E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_111	14.7	7.39	36.2	1008	578	76.5	76.5	42.8	16.0	1.19E-04	5.50E-05	4.55	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_112	14.7	7.39	36.3	1012	580	76.7	76.7	42.9	16.0	1.20E-04	5.50E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_113	14.8	7.40	36.4	1016	581	76.9	76.9	43.0	16.1	1.20E-04	5.50E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_114	14.8	7.40	36.5	1019	582	77.0	77.0	43.0	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_115	14.8	7.41	36.8	1038	587	77.7	77.7	43.3	16.1	1.21E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_116	14.8	7.41	36.7	1020	585	77.3	77.3	43.2	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_117	14.8	7.40	36.5	1018	582	76.9	76.9	43.0	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_118	14.8	7.39	36.4	1015	580	76.6	76.6	42.9	16.0	1.19E-04	5.50E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_119	14.7	7.38	36.2	1011	577	76.3	76.3	42.7	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_120	14.7	7.38	36.1	1011	576	76.0	76.0	42.6	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_121	14.7	7.37	35.9	1016	574	75.8	75.8	42.5	16.0	1.18E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_122	14.7	7.37	35.8	1018	572	75.4	75.4	42.4	15.9	1.18E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_123	14.6	7.37	35.7	1020	569	75.0	75.0	42.2	15.9	1.17E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_124	14.6	7.36	35.5	1022	566	74.5	74.5	42.1	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_125	14.6	7.36	35.4	1026	564	73.8	73.8	42.0	15.9	1.17E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_126	14.6	7.35	35.3	1033	562	73.3	73.3	41.9	15.9	1.16E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_127	14.6	7.34	35.2	1039	561	72.7	72.7	41.8	15.9	1.16E-04	5.45E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_128	14.6	7.34	35.1	1042	559	72.5	72.5	41.8	15.8	1.15E-04	5.44E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_129	14.6	7.33	35.0	1041	558	72.1	72.1	41.7	15.8	1.15E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_130	14.5	7.33	34.8	1035	556	71.5	71.5	41.6	15.8	1.15E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_131	14.5	7.32	34.7	1022	553	71.3	71.3	41.4	15.8	1.14E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_132	14.7	7.38	36.0	999	575	75.9	75.9	42.6	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_133	14.7	7.37	35.9	997	573	75.7	75.7	42.5	16.0	1.18E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_134	14.7	7.37	35.8	995	571	75.5	75.5	42.4	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_135	14.6	7.36	35.7	998	569	75.2	75.2	42.3	15.9	1.18E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_136	14.6	7.36	35.5	1001	567	74.9	74.9	42.2	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_137	14.6	7.35	35.4	1002	565	74.6	74.6	42.0	15.9	1.17E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_138	14.6	7.35	35.2	1004	562	74.0	74.0	41.9	15.9	1.16E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_139	14.6	7.35	35.1	1006	560	73.4	73.4	41.8	15.9	1.16E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_140	14.5	7.34	35.1	1012	559	73.1	73.1	41.8	15.9	1.16E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_141	14.5	7.34	35.0	1016	558	72.8	72.8	41.7	15.8	1.16E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_142	14.5	7.33	34.9	1020	556	72.4	72.4	41.6	15.8	1.15E-04	5.44E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_143	14.5	7.33	34.9	1023	556	72.1	72.1	41.6	15.8	1.15E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_144	14.5	7.33	34.8	1025	554	71.9	71.9	41.5	15.8	1.15E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_145	14.5	7.32	34.7	1025	553	71.5	71.5	41.4	15.8	1.15E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_146	14.5	7.32	34.5	1019	550	70.8	70.8	41.3	15.8	1.14E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_147	14.5	7.31	34.4	1007	548	70.6	70.6	41.2	15.8	1.14E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_148	14.9	7.43	37.3	1046	596	78.4	78.4	43.6	16.2	1.22E-04	5.54E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_149	14.9	7.42	37.1	1044	592	78.1	78.1	43.4	16.1	1.21E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_150	14.9	7.41	36.9	1041	590	77.5	77.5	43.3	16.1	1.21E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_151	14.8	7.41	36.8	1037	588	77.3	77.3	43.1	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_152	14.8	7.40	36.6	1040	585	77.1	77.1	43.0	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_153	14.8	7.40	36.5	1044	583	76.8	76.8	42.9	16.0	1.19E-04	5.50E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_154	14.8	7.39	36.4	1048	581	76.4	76.4	42.8	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_155	14.8	7.39	36.2	1050	579	75.9	75.9	42.6	16.0	1.18E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_156	14.8	7.40	36.7	1060	587	77.0	77.0	43.0	16.0	1.19E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_157	14.9	7.41	36.8	1065	590	77.3	77.3	43.1	16.1	1.20E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_158	14.9	7.43	37.3	1055	597	78.5	78.5	43.6	16.2	1.21E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_159	14.9	7.43	37.4	1059	598	78.4	78.4	43.6	16.2	1.22E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_160	15.0	7.44	37.4	1063	600	78.5	78.5	43.7	16.2	1.22E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_161	15.0	7.44	37.5	1066	601	78.6	78.6	43.7	16.2	1.22E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_162	15.0	7.45	37.7	1073	604	78.8	78.8	43.8	16.2	1.22E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_163	15.0	7.45	37.7	1076	606	78.9	78.9	43.8	16.2	1.22E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_164	15.0	7.46	37.8	1083	608	79.2	79.2	43.8	16.2	1.22E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_165	15.0	7.46	37.9	1090	610	79.4	79.4	43.9	16.2	1.22E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_166	15.1	7.47	38.1	1100	614	79.7	79.7	43.9	16.2	1.23E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_167	15.1	7.48	38.3	1112	618	80.1	80.1	44.0	16.3	1.23E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_168	15.2	7.48	38.5	1124	622	80.4	80.4	44.1	16.3	1.23E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_169	15.2	7.49	38.7	1136	625	80.6	80.6	44.1	16.3	1.24E-04	5.59E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_170	15.2	7.50	38.9	1145	628	81.0	81.0	44.2	16.3	1.24E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_171	15.3	7.51	39.0	1154	630	81.2	81.2	44.2	16.3	1.24E-04	5.60E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_172	15.3	7.52	39.2	1164	634	81.6	81.6	44.3	16.4	1.24E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_173	15.3	7.53	39.3	1176	636	81.9	81.9	44.4	16.4	1.25E-04	5.62E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_174	15.4	7.54	39.6	1188	641	82.3	82.3	44.5	16.4	1.25E-04	5.63E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_175	15.4	7.56	39.8	1196	645	82.8	82.8	44.6	16.5	1.26E-04	5.65E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_176	15.6	7.62	40.9	1223	663	84.6	84.6	45.3	16.6	1.28E-04	5.71E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_177	15.6	7.62	40.7	1231	660	84.3	84.3	45.1	16.6	1.28E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_178	15.6	7.61	40.6	1236	658	84.2	84.2	44.9	16.6	1.27E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_179	15.6	7.61	40.5	1243	657	83.9	83.9	44.8	16.6	1.27E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_180	15.6	7.61	40.5	1250	656	83.6	83.6	44.7	16.6	1.27E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_181	15.6	7.61	40.4	1256	656	82.9	82.9	44.6	16.5	1.26E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_182	15.6	7.60	40.4	1261	655	82.3	82.3	44.6	16.5	1.26E-04	5.68E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_183	15.6	7.60	40.3	1264	654	82.2	82.2	44.5	16.5	1.26E-04	5.68E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_184	15.5	7.60	40.1	1263	652	81.7	81.7	44.3	16.5	1.25E-04	5.67E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_185	15.5	7.59	40.0	1260	650	81.5	81.5	44.3	16.5	1.25E-04	5.67E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_186	15.5	7.59	39.9	1256	649	81.2	81.2	44.2	16.5	1.25E-04	5.67E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_187	15.5	7.59	39.8	1250	648	81.2	81.2	44.2	16.5	1.24E-04	5.67E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_188	15.5	7.59	39.8	1245	648	81.4	81.4	44.2	16.5	1.24E-04	5.67E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_189	15.5	7.59	39.8	1237	649	81.1	81.1	44.1	16.5	1.24E-04	5.67E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_190	15.3	7.51	38.6	1187	630	78.5	78.5	43.6	16.3	1.22E-04	5.59E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_191	15.3	7.51	38.7	1200	630	79.1	79.1	43.6	16.3	1.22E-04	5.60E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_192	15.3	7.51	38.7	1209	630	79.5	79.5	43.6	16.3	1.22E-04	5.60E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_193	15.3	7.52	38.8	1215	630	79.2	79.2	43.7	16.3	1.22E-04	5.60E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_194	15.3	7.52	38.9	1218	630	79.2	79.2	43.7	16.3	1.23E-04	5.60E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_195	15.3	7.52	39.0	1220	632	79.4	79.4	43.8	16.3	1.23E-04	5.61E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_196	15.3	7.52	39.0	1212	632	79.7	79.7	43.9	16.3	1.23E-04	5.61E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_197	15.3	7.51	38.9	1204	631	79.8	79.8	43.9	16.3	1.23E-04	5.60E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_198	15.2	7.50	38.8	1192	628	79.8	79.8	43.8	16.3	1.23E-04	5.59E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_199	15.2	7.49	38.6	1183	626	79.8	79.8	43.8	16.3	1.23E-04	5.58E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_200	15.2	7.48	38.4	1171	621	79.4	79.4	43.6	16.2	1.22E-04	5.57E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_201	15.1	7.47	38.2	1159	617	79.3	79.3	43.6	16.2	1.22E-04	5.57E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_202	15.1	7.47	38.0	1147	614	79.1	79.1	43.5	16.2	1.22E-04	5.56E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_203	15.1	7.46	37.8	1135	610	78.8	78.8	43.4	16.2	1.21E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_204	15.0	7.45	37.7	1126	608	78.6	78.6	43.4	16.2	1.21E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_205	15.0	7.45	37.6	1119	606	78.5	78.5	43.4	16.2	1.21E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_206	15.0	7.44	37.5	1110	604	78.3	78.3	43.3	16.1	1.21E-04	5.54E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_207	15.0	7.44	37.4	1102	602	78.2	78.2	43.3	16.1	1.21E-04	5.54E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_208	14.9	7.43	37.3	1094	599	78.0	78.0	43.3	16.1	1.21E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_209	14.9	7.43	37.2	1087	597	77.9	77.9	43.2	16.1	1.20E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_210	14.9	7.42	37.1	1080	595	77.7	77.7	43.2	16.1	1.20E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_211	14.9	7.42	37.0	1073	593	77.5	77.5	43.1	16.1	1.20E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_212	14.7	7.36	35.6	1059	568	73.5	73.5	42.1	15.9	1.17E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_213	14.7	7.37	35.7	1064	570	73.8	73.8	42.1	15.9	1.17E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_214	14.7	7.37	35.8	1070	573	73.9	73.9	42.2	15.9	1.17E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_215	14.7	7.37	35.9	1076	575	74.1	74.1	42.2	15.9	1.17E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_216	14.7	7.38	36.0	1082	577	74.3	74.3	42.3	15.9	1.17E-04	5.48E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_217	14.8	7.38	36.1	1087	579	74.4	74.4	42.4	16.0	1.18E-04	5.48E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_218	14.8	7.39	36.3	1096	583	74.9	74.9	42.5	16.0	1.18E-04	5.49E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_219	14.8	7.39	36.5	1106	586	75.2	75.2	42.5	16.0	1.18E-04	5.49E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_220	14.9	7.40	36.6	1115	589	75.5	75.5	42.6	16.0	1.18E-04	5.50E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_221	14.9	7.40	36.7	1123	592	75.7	75.7	42.6	16.0	1.19E-04	5.50E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_222	14.9	7.41	36.9	1129	594	75.9	75.9	42.7	16.0	1.19E-04	5.51E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_223	14.9	7.41	36.9	1134	596	76.0	76.0	42.7	16.0	1.19E-04	5.51E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_224	14.9	7.42	37.0	1139	598	76.1	76.1	42.8	16.1	1.19E-04	5.51E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_225	15.0	7.43	37.2	1147	601	76.4	76.4	42.8	16.1	1.19E-04	5.52E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_226	15.0	7.43	37.3	1153	604	76.6	76.6	42.9	16.1	1.20E-04	5.53E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_227	15.0	7.44	37.4	1157	606	76.8	76.8	43.0	16.1	1.20E-04	5.53E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_228	15.1	7.45	37.6	1164	608	77.0	77.0	43.0	16.1	1.20E-04	5.54E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_229	15.1	7.45	37.7	1168	611	77.4	77.4	43.1	16.1	1.20E-04	5.54E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_230	15.0	7.44	37.2	1131	605	75.8	75.8	42.9	16.1	1.19E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_231	15.0	7.43	37.0	1109	603	74.9	74.9	42.8	16.1	1.19E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_232	15.0	7.43	36.9	1078	604	75.2	75.2	42.8	16.0	1.18E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_233	15.0	7.43	36.8	1072	605	75.0	75.0	42.8	16.0	1.18E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_234	15.0	7.44	36.9	1084	609	75.3	75.3	42.7	16.1	1.18E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_235	15.1	7.45	36.9	1093	612	75.3	75.3	42.7	16.1	1.18E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_236	15.1	7.46	37.2	1103	617	75.8	75.8	42.8	16.1	1.19E-04	5.55E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_237	15.2	7.48	37.5	1112	621	76.3	76.3	43.0	16.2	1.19E-04	5.56E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_238	15.2	7.49	37.7	1119	625	76.9	76.9	43.1	16.2	1.20E-04	5.57E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_239	15.3	7.51	38.0	1126	629	77.4	77.4	43.3	16.2	1.20E-04	5.59E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_240	15.3	7.53	38.2	1135	633	77.8	77.8	43.4	16.3	1.21E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_241	15.4	7.55	38.5	1143	638	78.4	78.4	43.5	16.3	1.21E-04	5.62E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_242	15.4	7.56	38.7	1150	642	78.7	78.7	43.6	16.4	1.22E-04	5.63E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_243	15.5	7.58	39.0	1158	646	79.5	79.5	43.7	16.4	1.22E-04	5.65E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_244	15.5	7.61	39.4	1170	652	81.1	81.1	43.9	16.5	1.23E-04	5.68E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_245	15.6	7.64	39.9	1187	661	82.6	82.6	44.1	16.6	1.24E-04	5.70E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_246	15.7	7.67	40.2	1200	667	83.6	83.6	44.2	16.6	1.25E-04	5.73E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_247	15.8	7.71	40.7	1214	674	85.2	85.2	44.4	16.7	1.26E-04	5.77E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_248	14.4	7.30	33.9	939	544	69.8	69.8	40.8	15.7	1.12E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_249	14.4	7.30	34.0	938	546	70.0	70.0	40.8	15.7	1.13E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_250	14.5	7.31	34.1	944	548	70.2	70.2	40.9	15.7	1.13E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_251	14.5	7.31	34.2	946	551	70.6	70.6	41.0	15.7	1.13E-04	5.41E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_252	14.3	7.28	33.3	928	533	68.7	68.7	40.4	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_253	14.3	7.28	33.2	903	531	68.3	68.3	40.2	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_254	14.3	7.29	33.6	938	538	69.4	69.4	40.6	15.7	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_255	14.3	7.28	33.4	910	536	68.9	68.9	40.4	15.7	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_256	13.9	7.24	31.8	816	514	66.1	66.1	39.2	15.5	1.10E-04	5.34E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_257	13.9	7.23	31.7	847	511	65.9	65.9	39.1	15.5	1.09E-04	5.33E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_276	14.0	7.24	32.1	870	514	65.6	65.6	39.4	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_277	14.0	7.24	32.2	883	516	65.8	65.8	39.5	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_278	14.2	7.27	33.0	913	527	68.0	68.0	40.1	15.6	1.11E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_279	14.2	7.26	32.9	889	526	67.5	67.5	40.0	15.6	1.10E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_280	14.3	7.31	34.0	911	547	72.0	72.0	41.1	15.8	1.15E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_281	14.4	7.32	34.2	912	550	72.3	72.3	41.2	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_282	14.1	7.26	32.8	927	525	67.3	67.3	40.0	15.6	1.11E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_283	14.2	7.28	33.4	947	534	69.0	69.0	40.5	15.7	1.12E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_284	14.2	7.28	33.3	919	535	69.8	69.8	40.4	15.7	1.12E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_285	14.3	7.29	33.4	943	536	69.4	69.4	40.5	15.7	1.12E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_286	14.2	7.29	33.5	914	538	70.3	70.3	40.5	15.7	1.13E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_287	14.2	7.27	33.1	944	529	68.0	68.0	40.2	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_288	14.2	7.27	33.2	950	531	68.3	68.3	40.3	15.6	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_289	14.3	7.30	33.7	913	542	71.2	71.2	40.7	15.7	1.14E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_290	14.3	7.30	33.9	910	545	71.6	71.6	40.9	15.8	1.14E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_291	14.2	7.27	32.9	933	527	67.6	67.6	40.1	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_292	14.2	7.27	33.1	935	530	68.1	68.1	40.2	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_293	14.2	7.28	33.3	950	532	68.4	68.4	40.4	15.6	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_294	14.2	7.28	33.1	930	532	68.7	68.7	40.3	15.6	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_295	14.2	7.28	33.3	949	533	68.7	68.7	40.4	15.7	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_296	14.2	7.28	33.2	925	533	69.2	69.2	40.3	15.7	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_297	14.1	7.25	32.4	896	520	66.4	66.4	39.7	15.5	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_298	14.1	7.24	32.3	878	518	66.2	66.2	39.6	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_299	14.4	7.33	34.5	930	554	72.6	72.6	41.5	15.9	1.16E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_300	14.2	7.30	33.5	884	539	70.7	70.7	40.6	15.7	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_301	14.1	7.26	32.7	921	523	67.0	67.0	39.9	15.6	1.10E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_302	14.1	7.26	32.7	921	524	67.1	67.1	39.9	15.6	1.11E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_303	14.1	7.27	32.8	922	527	67.6	67.6	40.0	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_304	14.2	7.27	33.0	922	529	68.3	68.3	40.1	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_305	14.3	7.31	33.8	917	545	71.4	71.4	41.0	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_306	14.3	7.31	33.7	904	544	71.2	71.2	40.9	15.8	1.14E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_307	14.3	7.30	33.7	890	542	71.0	71.0	40.8	15.8	1.14E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_308	14.3	7.30	33.6	880	542	70.9	70.9	40.8	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_309	14.2	7.29	33.3	884	536	70.3	70.3	40.5	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_310	14.2	7.28	33.1	914	532	69.2	69.2	40.3	15.7	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_311	14.2	7.28	33.2	910	534	69.5	69.5	40.3	15.7	1.12E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_312	14.2	7.28	33.3	905	535	69.9	69.9	40.4	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_313	14.2	7.29	33.4	901	537	70.6	70.6	40.5	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413

GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_314	14.3	7.30	33.6	900	540	71.0	71.0	40.7	15.7	1.14E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_315	14.3	7.30	33.7	900	543	71.2	71.2	40.8	15.7	1.14E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_316	14.3	7.31	34.1	903	548	71.9	71.9	41.1	15.8	1.15E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_317	14.2	7.28	33.2	888	534	70.0	70.0	40.3	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_318	14.2	7.27	32.9	899	530	68.9	68.9	40.1	15.6	1.12E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_319	14.1	7.27	32.8	903	528	68.3	68.3	40.0	15.6	1.11E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_320	14.1	7.26	32.6	904	524	67.6	67.6	39.9	15.6	1.11E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_321	14.1	7.25	32.5	910	522	66.6	66.6	39.8	15.6	1.10E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_322	14.1	7.25	32.5	909	521	66.4	66.4	39.7	15.6	1.10E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_332	13.9	7.23	31.7	788	517	66.9	66.9	39.3	15.5	1.10E-04	5.34E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_333	13.9	7.24	31.8	789	517	67.0	67.0	39.3	15.5	1.10E-04	5.34E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_334	13.9	7.24	31.8	792	518	67.1	67.1	39.4	15.6	1.10E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_335	13.9	7.24	31.9	794	518	67.2	67.2	39.4	15.6	1.10E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_336	13.9	7.24	31.9	796	519	67.2	67.2	39.4	15.6	1.10E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_337	13.9	7.24	31.9	797	519	67.2	67.2	39.4	15.6	1.10E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_338	13.9	7.24	32.0	801	523	67.5	67.5	39.5	15.6	1.11E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_339	13.9	7.24	32.0	803	523	67.5	67.5	39.6	15.6	1.11E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_340	13.9	7.25	32.1	806	523	67.6	67.6	39.6	15.6	1.11E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_341	13.9	7.25	32.2	813	524	67.7	67.7	39.7	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_342	14.0	7.25	32.2	818	525	67.9	67.9	39.7	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_343	14.1	7.27	32.9	878	531	69.2	69.2	40.1	15.7	1.12E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_345	14.1	7.27	32.9	866	531	69.1	69.1	40.1	15.7	1.12E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_346	14.0	7.25	32.3	898	518	65.9	65.9	39.6	15.5	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_347	14.0	7.25	32.3	897	520	66.3	66.3	39.6	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_348	14.1	7.25	32.4	895	521	66.9	66.9	39.7	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_350	14.1	7.27	32.9	862	531	69.2	69.2	40.1	15.7	1.12E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_351	14.2	7.29	33.2	875	538	70.3	70.3	40.5	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_353	13.9	7.25	32.1	809	524	67.6	67.6	39.6	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_354	14.1	7.26	32.5	886	524	67.8	67.8	39.8	15.6	1.11E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_355	14.1	7.26	32.6	881	525	68.1	68.1	39.8	15.6	1.11E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_356	14.1	7.27	32.8	879	528	68.6	68.6	40.0	15.6	1.12E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_357	14.2	7.28	33.1	874	533	69.6	69.6	40.3	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_358	14.2	7.28	33.2	871	535	69.7	69.7	40.4	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_359	14.2	7.29	33.2	869	536	70.1	70.1	40.4	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_360	14.2	7.29	33.3	867	537	70.2	70.2	40.5	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_361	14.2	7.29	33.4	864	538	70.5	70.5	40.6	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_362	14.2	7.30	33.5	888	541	70.8	70.8	40.7	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_363	14.0	7.24	32.1	887	516	65.5	65.5	39.4	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_364	14.0	7.25	32.2	885	519	66.7	66.7	39.5	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_365	14.0	7.25	32.3	882	520	67.2	67.2	39.6	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_366	14.0	7.25	32.4	877	522	67.5	67.5	39.6	15.6	1.10E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_367	14.1	7.26	32.5	872	523	67.9	67.9	39.7	15.6	1.11E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_368	14.1	7.26	32.6	869	525	68.2	68.2	39.8	15.6	1.11E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_369	14.1	7.28	33.0	858	533	69.7	69.7	40.3	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_370	14.1	7.28	33.1	856	534	70.0	70.0	40.3	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_371	14.1	7.28	33.1	853	535	70.2	70.2	40.4	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_374	14.1	7.28	33.0	859	532	69.2	69.2	40.2	15.7	1.12E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_377	14.0	7.26	32.3	822	526	68.0	68.0	39.8	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_378	14.2	7.27	33.0	919	531	68.8	68.8	40.2	15.6	1.12E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_379	14.2	7.30	33.6	881	540	70.7	70.7	40.7	15.7	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_380	14.2	7.28	33.1	893	532	69.3	69.3	40.2	15.7	1.12E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_381	14.1	7.26	32.4	891	522	67.4	67.4	39.7	15.6	1.10E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_382	14.1	7.26	32.6	907	523	67.0	67.0	39.8	15.6	1.11E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_383	13.9	7.24	31.8	791	517	67.0	67.0	39.3	15.5	1.10E-04	5.34E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_384	14.1	7.26	32.8	921	525	67.3	67.3	40.0	15.6	1.11E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_385	14.3	7.31	33.9	903	546	71.6	71.6	41.0	15.8	1.14E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_386	14.2	7.29	33.4	876	539	70.6	70.6	40.6	15.7	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_387	14.0	7.24	32.2	888	518	66.0	66.0	39.5	15.5	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_388	14.2	7.29	33.3	885	539	70.4	70.4	40.6	15.7	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_390	14.4	7.33	34.4	935	553	72.4	72.4	41.4	15.9	1.16E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_391	14.4	7.34	34.6	961	557	72.9	72.9	41.6	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_392	14.1	7.26	32.5	845	525	68.5	68.5	39.8	15.6	1.11E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_393	14.0	7.26	32.5	829	525	68.9	68.9	39.8	15.6	1.11E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_394	14.0	7.23	31.8	874	512	65.0	65.0	39.2	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_395	14.0	7.24	31.9	874	513	65.4	65.4	39.3	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_396	14.0	7.24	32.0	874	515	65.9	65.9	39.3	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_397	14.0	7.24	32.1	875	517	66.5	66.5	39.4	15.5	1.10E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_398	14.0	7.25	32.1	872	518	66.9	66.9	39.5	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_399	14.0	7.25	32.2	867	520	67.3	67.3	39.5	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_400	14.0	7.25	32.3	862	522	67.6	67.6	39.6	15.6	1.11E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_401	14.0	7.26	32.4	856	523	67.8	67.8	39.7	15.6	1.11E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_402	14.1	7.26	32.5	849	525	68.5	68.5	39.8	15.6	1.11E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_403	14.1	7.27	32.6	843	526	68.5	68.5	39.9	15.6	1.12E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_404	14.1	7.27	32.6	841	526	68.4	68.4	39.9	15.6	1.12E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_405	14.1	7.27	32.6	841	527	68.7	68.7	39.9	15.6	1.12E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_406	13.9	7.23	31.7	865	511	65.1	65.1	39.1	15.5	1.09E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_407	13.9	7.24	31.8	860	513	66.0	66.0	39.2	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_408	14.0	7.24	31.9	857	514	66.3	66.3	39.2	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_409	14.0	7.24	32.0	855	517	66.9	66.9	39.4	15.5	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_410	14.0	7.25	32.1	855	519	67.1	67.1	39.4	15.6	1.10E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_411	14.0	7.25	32.3	844	521	67.5	67.5	39.6	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_412	14.0	7.25	32.3	839	522	67.9	67.9	39.6	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_413	14.1	7.27	32.7	836	529	69.3	69.3	40.0	15.7	1.12E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_414	14.1	7.27	32.8	834	530	69.4	69.4	40.1	15.7	1.12E-04	5.38E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_415	14.1	7.28	32.8	845	531	69.5	69.5	40.1	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_416	14.1	7.28	32.9	857	532	69.6	69.6	40.2	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_417	14.1	7.28	32.8	859	533	69.6	69.6	40.2	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_418	14.1	7.28	32.8	854	532	69.4	69.4	40.2	15.7	1.12E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_419	14.0	7.26	32.4	831	524	68.1	68.1	39.7	15.6	1.11E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_420	14.0	7.26	32.4	830	524	68.5	68.5	39.8	15.6	1.11E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_421	14.0	7.26	32.4	822	525	68.8	68.8	39.8	15.6	1.11E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_422	14.0	7.26	32.4	818	525	68.3	68.3	39.8	15.6	1.11E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_423	14.0	7.26	32.3	816	524	68.2	68.2	39.7	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_424	14.0	7.25	32.2	812	523	68.0	68.0	39.7	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_425	14.0	7.25	32.1	807	521	67.7	67.7	39.6	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_426	13.9	7.25	32.0	803	520	67.5	67.5	39.5	15.6	1.11E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_427	14.1	7.27	32.7	849	531	69.3	69.3	40.1	15.7	1.12E-04	5.38E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_428	14.1	7.27	32.7	846	530	69.2	69.2	40.1	15.7	1.12E-04	5.38E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_429	14.0	7.27	32.6	842	530	68.7	68.7	40.0	15.7	1.12E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_430	14.0	7.25	32.3	841	522	67.7	67.7	39.6	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_431	14.0	7.26	32.5	835	529	68.4	68.4	39.9	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_432	14.0	7.25	32.2	847	521	67.3	67.3	39.6	15.6	1.10E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_433	14.0	7.26	32.4	820	525	68.4	68.4	39.8	15.6	1.11E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_434	14.0	7.27	32.5	838	529	68.5	68.5	40.0	15.7	1.12E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_435	14.0	7.24	31.9	856	515	66.6	66.6	39.3	15.5	1.10E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_436	14.0	7.26	32.5	827	526	69.0	69.0	39.8	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_437	14.0	7.26	32.3	837	522	68.0	68.0	39.6	15.6	1.11E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_438	14.0	7.26	32.4	831	528	68.3	68.3	39.9	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_439	13.9	7.23	31.7	865	510	64.7	64.7	39.1	15.5	1.09E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_440	13.9	7.23	31.8	862	512	65.6	65.6	39.2	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_441	14.0	7.26	32.5	824	526	68.9	68.9	39.9	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_443	14.0	7.23	31.9	863	512	64.9	64.9	39.3	15.5	1.09E-04	5.33E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_444	14.0	7.23	31.8	859	510	64.5	64.5	39.2	15.5	1.08E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_445	14.0	7.23	31.8	867	511	64.6	64.6	39.2	15.5	1.09E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_446	14.0	7.24	32.0	875	513	65.2	65.2	39.3	15.5	1.09E-04	5.33E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_450	13.9	7.23	31.7	863	509	64.3	64.3	39.1	15.5	1.08E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_452	14.1	7.25	32.5	891	521	66.8	66.8	39.8	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_453	14.1	7.25	32.6	904	522	66.9	66.9	39.8	15.6	1.10E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_454	14.2	7.26	32.8	910	525	67.5	67.5	40.0	15.6	1.10E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_455	14.1	7.25	32.4	876	520	66.7	66.7	39.7	15.5	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_456	14.2	7.26	32.7	896	524	67.4	67.4	39.9	15.6	1.10E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_001	15.3	7.59	37.8	1221	675	79.5	79.5	41.7	16.4	1.22E-04	5.65E-05	4.59	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231100_002	14.9	7.41	35.5	1052	602	74.0	74.0	41.4	16.0	1.15E-04	5.50E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_003	13.8	7.30	30.5	621	442	53.1	53.1	35.4	15.1	1.03E-04	5.31E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231100_004	18.7	8.05	52.9	1588	835	118.1	118.1	54.9	18.4	1.40E-04	5.86E-05	4.68	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231100_005	14.4	7.30	33.8	952	549	70.3	70.3	40.6	15.7	1.12E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_006	14.4	7.30	33.6	952	547	69.9	69.9	40.4	15.7	1.12E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_007	14.4	7.30	33.4	954	547	69.9	69.9	40.3	15.7	1.11E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_008	14.4	7.29	33.6	934	542	69.8	69.8	40.5	15.7	1.12E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_009	14.4	7.29	33.4	938	541	69.5	69.5	40.3	15.7	1.11E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE231100_010	14.4	7.29	33.2	940	541	69.4	69.4	40.1	15.7	1.11E-04	5.38E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_011	14.3	7.28	33.1	940	542	69.0	69.0	40.0	15.6	1.11E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_012	14.3	7.28	32.9	937	542	68.9	68.9	39.8	15.6	1.10E-04	5.37E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_018	14.4	7.29	33.2	952	548	69.4	69.4	40.1	15.7	1.11E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_019	14.4	7.29	33.1	947	548	69.4	69.4	39.9	15.7	1.11E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_020	14.4	7.29	32.9	938	549	69.2	69.2	39.7	15.6	1.10E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_027	14.5	7.32	34.0	984	561	70.9	70.9	40.7	15.7	1.12E-04	5.41E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_028	14.5	7.31	33.7	974	559	70.4	70.4	40.4	15.7	1.12E-04	5.40E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_029	14.5	7.31	33.5	967	559	70.3	70.3	40.2	15.7	1.11E-04	5.40E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_030	14.5	7.31	33.3	958	560	70.1	70.1	40.0	15.7	1.11E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_031	14.5	7.31	33.1	959	560	69.9	69.9	39.8	15.7	1.11E-04	5.39E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_032	14.4	7.30	32.9	966	561	69.6	69.6	39.6	15.7	1.10E-04	5.39E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_033	14.4	7.30	32.6	970	561	69.3	69.3	39.5	15.7	1.10E-04	5.39E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_041	14.4	7.31	32.6	987	568	69.6	69.6	39.6	15.7	1.10E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_042	14.5	7.31	32.9	992	570	70.2	70.2	39.7	15.7	1.11E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_043	14.5	7.32	33.1	987	569	70.3	70.3	39.8	15.7	1.11E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_044	14.5	7.32	33.3	979	568	70.4	70.4	40.0	15.7	1.11E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_045	14.5	7.32	33.6	970	568	70.7	70.7	40.2	15.7	1.12E-04	5.41E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_046	14.6	7.33	33.8	981	567	70.9	70.9	40.4	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_047	14.6	7.33	34.0	992	568	71.1	71.1	40.6	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_048	14.6	7.34	34.4	1003	570	71.6	71.6	40.9	15.8	1.13E-04	5.43E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_049	14.7	7.36	34.9	1028	583	72.6	72.6	41.3	15.9	1.14E-04	5.45E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_050	14.7	7.36	34.7	1022	583	72.3	72.3	41.1	15.8	1.14E-04	5.45E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_051	14.7	7.35	34.4	1009	582	72.0	72.0	40.8	15.8	1.13E-04	5.44E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_052	14.7	7.35	34.0	1003	581	71.6	71.6	40.5	15.8	1.13E-04	5.44E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_053	14.6	7.34	33.7	1005	579	71.3	71.3	40.2	15.8	1.12E-04	5.43E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_054	14.6	7.34	33.5	1013	580	71.2	71.2	40.0	15.8	1.12E-04	5.43E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_055	14.6	7.34	33.2	1018	580	71.2	71.2	40.1	15.8	1.12E-04	5.42E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_056	14.6	7.34	33.2	1023	583	70.8	70.8	40.1	15.8	1.12E-04	5.42E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_057	14.6	7.34	33.3	1031	588	71.3	71.3	40.1	15.8	1.12E-04	5.42E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_077	15.3	7.63	39.0	1084	683	80.5	80.5	41.7	16.4	1.24E-04	5.68E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231100_078	15.5	7.73	40.7	1127	697	82.7	82.7	42.6	16.7	1.27E-04	5.77E-05	4.57	1.52	0.16	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231100_079	14.3	7.27	33.1	895	531	68.4	68.4	40.1	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_080	14.2	7.27	32.9	902	531	68.5	68.5	40.0	15.6	1.10E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_081	14.2	7.27	32.8	907	530	68.2	68.2	39.9	15.6	1.10E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_082	14.3	7.28	33.3	909	535	69.0	69.0	40.3	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_083	14.3	7.28	33.1	915	534	68.9	68.9	40.1	15.6	1.11E-04	5.37E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_084	14.3	7.27	33.0	919	534	68.7	68.7	40.0	15.6	1.10E-04	5.37E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_085	14.3	7.27	32.8	922	534	68.5	68.5	39.9	15.6	1.10E-04	5.37E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_090	14.0	7.24	32.1	855	516	66.1	66.1	39.4	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_091	14.0	7.24	32.0	852	513	65.3	65.3	39.3	15.5	1.09E-04	5.33E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_116	14.2	7.26	32.6	886	526	67.7	67.7	39.7	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_120	14.2	7.26	32.7	879	526	67.7	67.7	39.9	15.6	1.10E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_121	14.2	7.26	32.6	908	530	68.0	68.0	39.7	15.6	1.10E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_161	14.1	7.25	32.4	868	521	67.1	67.1	39.6	15.5	1.09E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_164	14.1	7.25	32.3	859	518	66.4	66.4	39.6	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_165	14.1	7.24	32.2	847	517	66.2	66.2	39.5	15.5	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_167	14.2	7.26	32.7	881	524	67.1	67.1	39.9	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_171	14.1	7.25	32.6	865	523	67.0	67.0	39.8	15.6	1.10E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_175	12.2	7.00	22.6	349	362	35.0	35.0	0.0	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE231400_001	16.0	7.62	41.8	1330	665	96.8	96.8	45.7	16.7	1.21E-04	5.58E-05	4.64	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_002	16.3	7.72	43.2	1360	678	99.8	99.8	46.6	16.9	1.24E-04	5.66E-05	4.64	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_003	15.8	7.57	40.0	1269	646	92.8	92.8	44.2	16.5	1.19E-04	5.55E-05	4.62	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_004	15.9	7.61	40.5	1277	650	93.7	93.7	44.5	16.6	1.20E-04	5.57E-05	4.62	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_005	16.1	7.71	41.5	1288	658	96.0	96.0	45.1	16.8	1.22E-04	5.65E-05	4.62	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_006	16.0	7.67	40.4	1238	645	93.7	93.7	44.7	16.7	1.20E-04	5.62E-05	4.62	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_007	15.7	7.57	39.2	1218	635	91.6	91.6	43.9	16.5	1.18E-04	5.54E-05	4.61	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_008	15.5	7.55	38.7	1141	619	90.0	90.0	43.8	16.4	1.16E-04	5.53E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_009	15.8	7.65	39.7	1161	632	92.0	92.0	44.3	16.6	1.19E-04	5.61E-05	4.61	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_010	15.1	7.46	36.5	1018	592	81.0	81.0	42.0	16.1	1.13E-04	5.47E-05	4.59	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231400_011	17.3	7.86	47.3	1510	706	112.6	112.6	49.1	17.3	1.29E-04	5.71E-05	4.68	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231500_002	13.1	7.11	27.5	625	436	51.3	51.3	34.7	14.9	9.92E-05	5.19E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231600_001	13.7	7.28	29.8	581	432	52.4	52.4	34.4	15.1	9.95E-05	5.27E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231600_004	13.6	7.25	29.7	589	437	52.5	52.5	34.3	15.1	9.94E-05	5.26E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231600_005	13.2	7.20	27.5	591	439	51.7	51.7	34.1	15.0	9.86E-05	5.23E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231700_002	13.0	7.12	26.2	601	432	50.6	50.6	34.0	14.9	9.77E-05	5.19E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231700_003	12.9	7.11	26.1	605	432	50.6	50.6	34.1	14.9	9.77E-05	5.19E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231700_004	13.3	7.17	27.7	593	429	50.7	50.7	34.1	15.0	9.77E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231800_001	13.8	7.30	29.3	602	448	52.4	52.4	34.9	15.2	1.01E-04	5.28E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231800_002	13.9	7.35	30.4	644	463	53.2	53.2	35.3	15.2	1.02E-04	5.30E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE232700_002	13.1	7.12	26.9	630	416	51.3	51.3	33.8	14.9	9.71E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233200_001	14.9	7.50	37.0	826	534	52.7	52.7	35.1	15.1	1.10E-04	5.37E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE233500_001	13.7	7.35	30.4	655	473	52.3	52.3	34.1	15.1	1.04E-04	5.33E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233600_001	13.8	7.34	30.8	658	472	52.8	52.8	34.2	15.1	1.05E-04	5.34E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE233600_002	13.8	7.35	31.1	665	478	53.3	53.3	34.3	15.1	1.05E-04	5.35E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE233700_001	13.6	7.30	29.5	634	443	52.4	52.4	33.8	15.1	1.02E-04	5.32E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233900_001	13.8	7.34	30.1	771	460	53.8	53.8	34.0	15.2	1.03E-04	5.36E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233900_002	14.0	7.29	32.0	842	475	53.8	53.8	35.0	15.1	1.07E-04	5.32E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE233900_003	14.1	7.32	32.4	834	476	54.9	54.9	35.3	15.1	1.07E-04	5.34E-05	4.48	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE234000_001	14.0	7.29	31.4	785	483	54.3	54.3	34.8	15.1	1.06E-04	5.32E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE234100_001	13.7	7.29	30.0	632	475	52.4	52.4	34.1	15.1	1.03E-04	5.32E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE235000_001	13.7	7.23	30.3	643	448	52.4	52.4	34.6	15.1	1.04E-04	5.29E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE235100_001	13.7	7.24	30.6	682	452	53.1	53.1	34.8	15.1	1.05E-04	5.30E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235100_002	13.8	7.26	30.8	744	461	53.6	53.6	34.9	15.1	1.05E-04	5.31E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235100_003	13.5	7.20	29.1	702	484	51.6	51.6	34.4	15.1	1.02E-04	5.27E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE235200_001	13.9	7.27	31.3	853	465	54.3	54.3	35.1	15.1	1.06E-04	5.33E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235200_002	13.9	7.27	30.8	858	510	53.1	53.1	34.9	15.1	1.04E-04	5.33E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE235500_001	13.9	7.32	31.4	715	500	54.3	54.3	35.6	15.2	1.05E-04	5.37E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE235500_002	14.4	7.29	34.4	766	507	55.0	55.0	36.5	15.2	1.11E-04	5.35E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE235700_001	14.3	7.30	33.9	683	512	59.0	59.0	37.6	15.4	1.12E-04	5.36E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE235700_002	15.0	7.32	37.2	674	501	58.5	58.5	38.4	15.4	1.15E-04	5.37E-05	4.48	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235800_001	15.2	7.59	38.1	981	578	70.2	70.2	39.9	16.1	1.20E-04	5.61E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235900_002	14.4	7.47	33.6	873	553	65.8	65.8	38.1	15.8	1.11E-04	5.52E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE235900_003	14.9	7.67	35.8	798	533	63.9	63.9	37.4	16.0	1.10E-04	5.56E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE235900_004	15.4	7.71	38.6	1072	565	68.5	68.5	38.6	16.1	1.17E-04	5.60E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE310100_001	14.7	7.61	35.0	792	524	62.7	62.7	36.9	15.9	1.09E-04	5.52E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310100_002	14.7	7.59	35.0	822	518	61.0	61.0	36.7	15.8	1.08E-04	5.49E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310100_003	15.2	7.61	37.0	926	520	64.2	64.2	37.5	15.9	1.10E-04	5.51E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310200_001	15.0	7.51	36.5	810	498	60.7	60.7	36.5	15.6	1.08E-04	5.42E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310500_001	14.4	7.35	34.2	716	456	57.0	57.0	35.6	15.3	1.05E-04	5.33E-05	4.49	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE310600_001	13.7	7.28	31.0	678	453	53.9	53.9	34.9	15.2	1.02E-04	5.29E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE310600_002	15.0	7.52	36.3	826	479	57.6	57.6	36.7	15.5	1.08E-04	5.40E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310700_001	15.1	7.51	36.2	849	480	56.9	56.9	36.6	15.5	1.07E-04	5.40E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310700_002	14.5	7.38	33.6	699	456	57.8	57.8	35.5	15.3	1.04E-04	5.33E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE310900_001	14.8	7.43	34.8	923	476	57.9	57.9	35.8	15.4	1.06E-04	5.35E-05	4.49	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE311000_001	14.7	7.52	36.2	802	521	56.9	56.9	36.1	15.5	1.07E-04	5.40E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311100_001	14.6	7.31	34.5	682	461	54.7	54.7	35.6	15.2	1.05E-04	5.29E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311200_001	15.3	7.46	38.2	716	488	57.7	57.7	36.9	15.4	1.09E-04	5.36E-05	4.47	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311200_002	14.7	7.52	35.5	749	510	56.5	56.5	35.8	15.5	1.06E-04	5.39E-05	4.49	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE311300_001	15.0	7.63	36.7	762	521	56.8	56.8	36.5	15.7	1.08E-04	5.43E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311300_002	14.2	7.30	32.0	528	429	51.8	51.8	34.8	15.2	1.02E-04	5.27E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311400_001	14.6	7.55	34.0	647	462	57.8	57.8	35.9	15.5	1.03E-04	5.37E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311400_002	15.8	7.90	39.3	875	512	62.9	62.9	37.3	16.0	1.10E-04	5.55E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311400_003	14.3	7.43	31.8	580	436	54.2	54.2	35.4	15.4	1.02E-04	5.32E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311400_006	13.4	7.17	28.6	537	404	51.1	51.1	33.9	15.0	9.75E-05	5.22E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311800_001	14.0	7.36	31.5	764	463	53.3	53.3	34.4	15.1	1.03E-04	5.33E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311900_001	14.0	7.35	31.2	782	460	52.4	52.4	34.2	15.1	1.03E-04	5.34E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312200_001	14.1	7.38	31.6	944	484	51.8	51.8	34.1	15.1	1.04E-04	5.35E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312200_002	13.8	7.32	30.2	871	470	51.1	51.1	33.9	15.1	1.02E-04	5.31E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312200_003	13.6	7.28	29.1	812	458	50.8	50.8	33.8	15.0	1.00E-04	5.29E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312300_001	14.0	7.35	31.2	802	466	50.9	50.9	34.0	15.1	1.02E-04	5.33E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312400_001	13.8	7.30	30.0	727	444	50.5	50.5	34.0	15.1	1.00E-04	5.29E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312800_001	14.3	7.37	33.0	512	423	53.8	53.8	35.7	15.3	1.01E-04	5.28E-05	4.46	1.51	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312800_002	13.6	7.20	30.2	499	418	50.4	50.4	34.6	15.0	9.93E-05	5.22E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312900_001	14.3	7.38	33.4	518	426	54.0	54.0	35.9	15.3	1.02E-04	5.28E-05	4.47	1.51	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312900_002	14.1	7.31	32.5	513	427	53.1	53.1	35.6	15.2	1.01E-04	5.25E-05	4.46	1.51	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_001	14.2	7.47	31.3	523	431	55.1	55.1	35.3	15.5	9.96E-05	5.31E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_002	14.2	7.47	31.1	519	429	55.1	55.1	35.2	15.5	9.95E-05	5.31E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_003	14.3	7.49	31.6	527	432	55.4	55.4	35.3	15.5	9.99E-05	5.31E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_004	14.3	7.50	32.3	542	435	55.6	55.6	35.4	15.5	9.98E-05	5.31E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413

GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE313000_005	14.2	7.46	32.0	537	433	55.2	55.2	35.4	15.5	9.97E-05	5.30E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_006	13.5	7.23	29.2	516	410	52.1	52.1	34.3	15.1	9.74E-05	5.23E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_007	14.0	7.29	31.9	516	429	53.2	53.2	35.3	15.2	1.01E-04	5.25E-05	4.47	1.50	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313100_001	14.1	7.35	32.2	542	431	54.5	54.5	35.4	15.3	9.93E-05	5.26E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE314400_001	13.6	7.17	30.4	531	425	50.6	50.6	34.6	15.0	1.01E-04	5.21E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE314800_001	14.0	7.21	32.3	571	446	52.5	52.5	35.4	15.1	1.04E-04	5.23E-05	4.47	1.51	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE314900_001	14.2	7.41	31.6	573	436	56.0	56.0	34.9	15.3	1.00E-04	5.31E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE316400_001	16.6	7.51	45.1	1198	652	71.9	71.9	43.5	15.9	1.30E-04	5.52E-05	4.55	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE316500_001	17.3	7.71	48.9	1350	704	77.3	77.3	45.5	16.4	1.37E-04	5.66E-05	4.58	1.52	0.16	6.45E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE316600_001	17.3	8.01	47.1	1333	699	79.2	79.2	44.9	16.7	1.35E-04	5.85E-05	4.58	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE316600_002	17.0	7.88	46.4	1326	694	78.3	78.3	44.6	16.6	1.34E-04	5.77E-05	4.58	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE316700_001	17.0	7.84	46.5	1333	696	78.8	78.8	44.7	16.6	1.35E-04	5.76E-05	4.58	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE316700_002	16.7	7.77	45.3	1264	672	76.8	76.8	43.9	16.4	1.32E-04	5.70E-05	4.56	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE317000_001	15.2	7.64	39.1	1019	620	71.3	71.3	40.7	16.2	1.22E-04	5.62E-05	4.53	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE410200_001	14.0	7.24	32.4	649	507	52.3	52.3	35.5	15.1	1.10E-04	5.33E-05	4.47	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE410200_002	14.0	7.25	32.5	653	499	53.1	53.1	35.5	15.2	1.11E-04	5.34E-05	4.47	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE411100_001	15.9	7.44	40.5	866	562	67.0	67.0	39.6	15.6	1.19E-04	5.44E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE411200_001	16.6	7.82	45.1	1379	662	83.1	83.1	42.9	16.5	1.32E-04	5.77E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE510000_001	14.7	7.48	35.5	886	526	66.9	66.9	38.5	15.8	1.15E-04	5.52E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE510000_002	14.7	7.48	34.9	799	525	65.8	65.8	38.1	15.8	1.14E-04	5.51E-05	4.49	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE510100_001	14.1	7.33	32.2	669	493	60.5	60.5	36.7	15.5	1.09E-04	5.39E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511200_001	17.6	7.83	48.9	1717	892	90.8	90.8	44.5	16.6	1.52E-04	5.91E-05	4.60	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_002	17.6	7.84	48.9	1730	877	92.7	92.7	44.6	16.6	1.51E-04	5.91E-05	4.60	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_003	17.6	7.84	48.9	1729	863	94.3	94.3	44.6	16.6	1.50E-04	5.92E-05	4.60	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_004	17.5	7.84	48.9	1758	850	94.0	94.0	44.6	16.6	1.50E-04	5.92E-05	4.61	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_005	16.8	7.67	46.2	1635	828	82.9	82.9	43.3	16.2	1.44E-04	5.76E-05	4.57	1.52	0.16	6.45E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_006	16.8	7.68	46.2	1639	816	82.9	82.9	43.3	16.2	1.43E-04	5.76E-05	4.57	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_001	15.1	7.51	36.9	1178	625	65.1	65.1	38.5	15.7	1.21E-04	5.66E-05	4.52	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_002	13.2	7.13	28.1	875	474	52.2	52.2	34.4	15.0	1.04E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511300_003	13.4	7.15	29.2	899	491	54.0	54.0	34.9	15.0	1.07E-04	5.26E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_004	13.5	7.17	30.6	1027	526	55.4	55.4	35.6	15.1	1.10E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_005	13.5	7.17	29.7	972	494	55.4	55.4	35.2	15.1	1.08E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_006	13.5	7.18	30.2	956	513	55.7	55.7	35.4	15.1	1.09E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_007	13.6	7.18	31.1	1057	534	55.8	55.8	35.8	15.1	1.11E-04	5.29E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_008	13.5	7.17	30.0	947	507	55.5	55.5	35.3	15.1	1.09E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_009	13.7	7.20	31.9	1074	545	57.1	57.1	36.2	15.2	1.13E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_010	13.6	7.18	30.1	1005	502	55.9	55.9	35.4	15.1	1.09E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_011	13.7	7.20	30.9	1014	522	56.6	56.6	35.8	15.1	1.11E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_012	13.6	7.18	29.9	1008	500	55.8	55.8	35.3	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_013	13.5	7.18	30.7	1033	528	55.5	55.5	35.6	15.1	1.10E-04	5.29E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_014	13.5	7.18	30.8	1039	529	55.6	55.6	35.7	15.1	1.10E-04	5.29E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_015	13.8	7.21	31.9	1056	543	57.3	57.3	36.2	15.2	1.13E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_016	13.7	7.20	31.8	1075	544	56.9	56.9	36.2	15.2	1.13E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_017	13.6	7.19	31.4	1071	540	56.4	56.4	36.0	15.1	1.12E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_018	13.8	7.21	31.6	1039	532	57.3	57.3	36.1	15.2	1.12E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_019	13.8	7.21	31.8	1036	539	57.3	57.3	36.2	15.2	1.13E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_020	13.5	7.17	30.1	956	508	55.6	55.6	35.3	15.1	1.09E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_021	13.6	7.18	30.9	1045	531	55.6	55.6	35.7	15.1	1.11E-04	5.29E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_022	13.7	7.20	31.8	1075	545	57.0	57.0	36.2	15.2	1.13E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_023	13.6	7.19	31.4	1068	538	56.2	56.2	36.0	15.1	1.12E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_024	13.8	7.21	31.7	1027	536	57.3	57.3	36.1	15.2	1.12E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_025	13.6	7.18	30.6	975	520	56.1	56.1	35.6	15.1	1.10E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_026	13.6	7.18	29.9	999	497	55.7	55.7	35.3	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_027	13.6	7.18	30.0	994	501	55.8	55.8	35.4	15.1	1.09E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_028	13.6	7.19	30.7	982	522	56.2	56.2	35.7	15.1	1.10E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_029	13.6	7.19	31.3	1067	537	56.1	56.1	35.9	15.1	1.11E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_030	13.6	7.19	30.8	984	523	56.3	56.3	35.7	15.1	1.10E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_031	13.7	7.20	31.0	1021	522	56.7	56.7	35.8	15.1	1.11E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_032	13.5	7.17	30.2	954	512	55.5	55.5	35.4	15.1	1.09E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_033	13.7	7.19	30.8	1001	522	56.4	56.4	35.7	15.1	1.10E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_034	13.7	7.19	30.9	1007	522	56.5	56.5	35.8	15.1	1.11E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_035	13.5	7.17	29.8	956	501	55.4	55.4	35.2	15.1	1.08E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_036	13.5	7.17	29.7	963	495	55.3	55.3	35.2	15.1	1.08E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_037	13.6	7.18	30.5	971	519	56.0	56.0	35.6	15.1	1.10E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_038	13.7	7.19	31.5	1075	542	56.5	56.5	36.0	15.1	1.12E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_039	13.7	7.20	31.7	1075	543	56.8	56.8	36.1	15.1	1.12E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_040	13.6	7.18	31.0	1051	533	55.7	55.7	35.8	15.1	1.11E-04	5.29E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_041	13.7	7.19	31.6	1076	543	56.6	56.6	36.1	15.1	1.12E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_042	13.5	7.17	29.9	965	501	55.5	55.5	35.3	15.1	1.08E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_043	17.5	7.84	49.0	1806	835	93.3	93.3	44.6	16.6	1.50E-04	5.92E-05	4.62	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_044	17.5	7.84	49.1	1840	818	93.1	93.1	44.6	16.6	1.50E-04	5.92E-05	4.62	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_045	17.4	7.84	49.2	1890	812	93.8	93.8	44.6	16.6	1.50E-04	5.91E-05	4.63	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_046	17.4	7.84	49.3	1936	820	93.5	93.5	44.6	16.6	1.50E-04	5.91E-05	4.63	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_047	17.4	7.84	49.3	1965	826	94.2	94.2	44.7	16.6	1.50E-04	5.91E-05	4.63	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_048	17.4	7.84	49.2	1985	831	94.1	94.1	44.7	16.6	1.50E-04	5.91E-05	4.63	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_049	17.5	7.84	49.1	1994	835	94.1	94.1	44.7	16.6	1.50E-04	5.91E-05	4.64	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_050	17.5	7.84	49.0	2053	837	94.5	94.5	44.6	16.6	1.49E-04	5.91E-05	4.65	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_051	17.5	7.84	48.8	2148	837	95.4	95.4	44.6	16.6	1.49E-04	5.91E-05	4.66	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_052	17.5	7.83	48.6	2218	836	94.5	94.5	44.5	16.6	1.49E-04	5.90E-05	4.66	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_053	17.5	7.83	48.5	2297	834	94.1	94.1	44.4	16.6	1.48E-04	5.90E-05	4.67	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_054	17.5	7.83	48.4	2369	832	93.2	93.2	44.3	16.6	1.48E-04	5.90E-05	4.68	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_055	17.5	7.82	48.3	2441	829	92.2	92.2	44.2	16.6	1.48E-04	5.89E-05	4.69	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_056	17.5	7.81	48.1	2486	826	92.4	92.4	44.1	16.6	1.48E-04	5.89E-05	4.70	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_057	17.5	7.81	48.5	2519	823	93.0	93.0	44.2	16.5	1.48E-04	5.88E-05	4.70	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_058	17.5	7.80	48.9	2537	818	94.3	94.3	44.2	16.5	1.47E-04	5.87E-05	4.70	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_059	17.7	7.85	51.4	2547	807	98.1	98.1	44.7	16.6	1.50E-04	5.91E-05	4.72	1.52	0.17	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_060	17.5	7.79	50.0	2520	802	97.9	97.9	44.3	16.5	1.48E-04	5.87E-05	4.70	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_061	17.3	7.75	48.7	2471	797	94.5	94.5	43.9	16.4	1.45E-04	5.83E-05	4.70	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_062	17.0	7.71	47.1	2382	790	89.7	89.7	43.5	16.3	1.43E-04	5.79E-05	4.68	1.52	0.17	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_063	16.8	7.68	45.8	2292	784	86.4	86.4	43.0	16.2	1.42E-04	5.76E-05	4.67	1.52	0.17	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_064	16.7	7.65	45.0	2198	777	85.6	85.6	42.4	16.2	1.41E-04	5.74E-05	4.66	1.52	0.17	6.44E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_065	16.5	7.62	44.4	2079	768	83.9	83.9	42.0	16.1	1.40E-04	5.71E-05	4.65	1.52	0.17	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_066	15.8	7.52	41.8	1603	718	80.5	80.5	40.8	15.9	1.34E-04	5.61E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_067	15.7	7.50	41.2	1536	707	79.2	79.2	40.5	15.8	1.32E-04	5.60E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_068	15.6	7.49	40.6	1512	698	78.0	78.0	40.3	15.8	1.31E-04	5.58E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_069	15.5	7.47	40.1	1486	694	77.5	77.5	40.1	15.8	1.30E-04	5.57E-05	4.57	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_070	15.4	7.46	39.5	1454	689	76.9	76.9	39.8	15.7	1.29E-04	5.56E-05	4.57	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_071	15.2	7.44	38.7	1396	680	75.8	75.8	39.4	15.7	1.27E-04	5.54E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_072	15.2	7.42	38.2	1346	675	75.4	75.4	39.2	15.7	1.26E-04	5.52E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_073	15.1	7.41	37.8	1311	671	74.9	74.9	39.1	15.6	1.25E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_074	14.1	7.25	33.7	1142	555	61.2	61.2	37.2	15.3	1.16E-04	5.36E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_075	14.1	7.26	33.6	1157	550	61.3	61.3	37.1	15.3	1.16E-04	5.36E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_076	14.1	7.26	33.4	1165	552	61.2	61.2	37.1	15.3	1.16E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_077	14.1	7.26	33.4	1173	555	61.2	61.2	37.1	15.3	1.15E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_078	14.2	7.26	33.2	1179	559	61.5	61.5	37.0	15.3	1.15E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_079	14.2	7.27	33.2	1184	565	61.8	61.8	37.0	15.3	1.16E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_080	14.2	7.27	33.3	1185	570	62.2	62.2	37.0	15.3	1.16E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_081	14.2	7.27	33.4	1183	574	62.7	62.7	37.0	15.3	1.16E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_082	14.3	7.27	33.5	1180	578	63.1	63.1	37.0	15.3	1.16E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_083	14.3	7.28	33.6	1178	583	63.6	63.6	37.0	15.3	1.16E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_084	14.3	7.28	33.7	1174	588	64.1	64.1	37.0	15.3	1.16E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_085	14.4	7.29	33.8	1164	597	64.6	64.6	37.1	15.3	1.17E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_086	14.4	7.29	33.9	1158	602	64.6	64.6	37.1	15.4	1.17E-04	5.40E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_087	14.5	7.30	34.0	1162	606	64.9	64.9	37.2	15.4	1.17E-04	5.40E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_088	14.5	7.30	34.1	1165	610	65.4	65.4	37.2	15.4	1.17E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_089	14.5	7.30	34.2	1168	615	65.8	65.8	37.3	15.4	1.17E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_090	14.6	7.31	34.3	1170	619	66.4	66.4	37.3	15.4	1.18E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_091	14.6	7.32	34.4	1172	625	66.6	66.6	37.4	15.4	1.18E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_092	14.7	7.32	34.6	1176	630	67.2	67.2	37.5	15.4	1.18E-04	5.43E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_093	14.7	7.33	34.8	1180	634	67.7	67.7	37.6	15.4	1.19E-04	5.43E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_094	14.7	7.33	34.9	1185	637	68.4	68.4	37.7	15.5	1.19E-04	5.44E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_095	14.8	7.34	35.2	1195	643	68.9	68.9	37.9	15.5	1.19E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_096	14.8	7.35	35.5	1207	647	69.6	69.6	38.1	15.5	1.20E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_097	14.9	7.36	35.9	1220	651	70.2	70.2	38.3	15.5	1.21E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_098	15.1	7.39	39.6	1417	643	68.5	68.5	40.2	15.6	1.29E-04	5.49E-05	4.53	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_099	15.0	7.38	39.3	1406	639	67.9	67.9	40.0	15.5	1.28E-04	5.48E-05	4.53	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_100	15.0	7.37	39.0	1396	635	67.4	67.4	39.9	15.5	1.28E-04	5.47E-05	4.52	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_101	14.9	7.36	38.8	1385	631	66.9	66.9	39.7	15.5	1.27E-04	5.46E-05	4.52	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_102	14.8	7.35	38.5	1373	627	66.4	66.4	39.6	15.5	1.27E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_103	14.8	7.34	38.3	1365	624	65.8	65.8	39.5	15.5	1.26E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_104	14.7	7.33	38.0	1355	620	65.4	65.4	39.3	15.4	1.26E-04	5.44E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_105	14.7	7.33	37.8	1346	617	65.1	65.1	39.2	15.4	1.25E-04	5.43E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_106	14.6	7.32	37.6	1338	614	64.7	64.7	39.1	15.4	1.25E-04	5.43E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_107	14.6	7.31	37.4	1330	612	64.3	64.3	39.0	15.4	1.24E-04	5.42E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_108	14.5	7.31	37.2	1322	609	64.1	64.1	38.9	15.4	1.24E-04	5.41E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_109	14.5	7.30	37.0	1313	607	63.7	63.7	38.8	15.4	1.24E-04	5.41E-05	4.52	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_110	14.4	7.29	36.7	1302	603	63.2	63.2	38.7	15.4	1.23E-04	5.40E-05	4.52	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_111	14.4	7.29	36.5	1293	601	62.8	62.8	38.6	15.4	1.23E-04	5.40E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_112	14.4	7.28	36.3	1285	598	62.5	62.5	38.5	15.3	1.22E-04	5.39E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_113	14.3	7.28	36.1	1277	596	62.1	62.1	38.4	15.3	1.22E-04	5.39E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_114	14.3	7.27	35.9	1266	593	61.6	61.6	38.3	15.3	1.21E-04	5.38E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_115	14.2	7.27	35.7	1255	590	61.2	61.2	38.1	15.3	1.21E-04	5.38E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_116	14.2	7.26	35.3	1236	585	60.7	60.7	37.9	15.3	1.20E-04	5.37E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_117	14.1	7.26	35.0	1222	582	60.2	60.2	37.8	15.3	1.19E-04	5.36E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_118	14.1	7.25	34.8	1213	580	60.0	60.0	37.7	15.3	1.19E-04	5.36E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_119	14.1	7.25	34.5	1200	577	59.7	59.7	37.6	15.3	1.18E-04	5.36E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_120	14.0	7.24	34.3	1187	574	59.4	59.4	37.4	15.3	1.18E-04	5.35E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_121	14.0	7.24	34.0	1170	571	59.1	59.1	37.3	15.2	1.17E-04	5.35E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_122	15.2	7.39	39.7	1363	633	68.1	68.1	40.2	15.6	1.29E-04	5.49E-05	4.53	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_123	15.1	7.38	39.4	1352	628	67.5	67.5	40.1	15.5	1.28E-04	5.48E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_124	15.1	7.37	39.1	1343	624	67.1	67.1	40.0	15.5	1.28E-04	5.47E-05	4.52	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_125	15.0	7.36	38.9	1331	619	66.6	66.6	39.8	15.5	1.27E-04	5.46E-05	4.52	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_126	15.0	7.35	38.6	1321	615	66.1	66.1	39.7	15.5	1.27E-04	5.46E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_127	14.9	7.34	38.3	1310	610	65.5	65.5	39.6	15.5	1.26E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_128	14.8	7.33	38.1	1297	607	64.9	64.9	39.4	15.4	1.26E-04	5.44E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_129	14.8	7.33	37.9	1287	604	64.7	64.7	39.3	15.4	1.25E-04	5.43E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_130	14.7	7.32	37.7	1278	602	64.4	64.4	39.2	15.4	1.25E-04	5.43E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_131	14.7	7.31	37.5	1267	599	64.2	64.2	39.1	15.4	1.24E-04	5.42E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_132	14.6	7.31	37.3	1261	597	63.9	63.9	39.0	15.4	1.24E-04	5.41E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_133	14.6	7.30	37.1	1257	595	63.7	63.7	38.9	15.4	1.24E-04	5.41E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_134	14.5	7.30	36.9	1252	592	63.4	63.4	38.8	15.4	1.23E-04	5.40E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_135	14.5	7.29	36.7	1248	590	63.1	63.1	38.7	15.4	1.23E-04	5.40E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_136	14.4	7.29	36.5	1245	588	62.9	62.9	38.6	15.3	1.22E-04	5.39E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_137	14.4	7.28	36.4	1241	586	62.6	62.6	38.6	15.3	1.22E-04	5.39E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_138	14.4	7.28	36.2	1237	584	62.3	62.3	38.5	15.3	1.22E-04	5.38E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_139	14.3	7.27	35.9	1230	582	61.8	61.8	38.3	15.3	1.21E-04	5.38E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_140	14.3	7.26	35.7	1222	579	61.4	61.4	38.2	15.3	1.21E-04	5.37E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_141	14.2	7.26	35.5	1216	577	61.0	61.0	38.1	15.3	1.20E-04	5.37E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_142	14.2	7.26	35.3	1210	575	60.5	60.5	38.0	15.3	1.20E-04	5.36E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_143	14.1	7.25	35.0	1204	572	60.0	60.0	37.9	15.3	1.19E-04	5.36E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_144	14.1	7.24	34.8	1201	571	59.6	59.6	37.7	15.3	1.19E-04	5.35E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_145	14.1	7.24	34.6	1197	570	59.3	59.3	37.6	15.2	1.18E-04	5.35E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_146	14.0	7.24	34.4	1194	569	59.0	59.0	37.5	15.2	1.18E-04	5.35E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_147	14.0	7.23	34.3	1192	569	58.7	58.7	37.4	15.2	1.18E-04	5.34E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_148	14.0	7.23	34.0	1187	568	58.5	58.5	37.3	15.2	1.17E-04	5.34E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_149	16.8	7.68	46.3	1642	804	83.1	83.1	43.3	16.2	1.43E-04	5.77E-05	4.57	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_150	16.8	7.68	46.3	1640	791	83.2	83.2	43.4	16.2	1.43E-04	5.77E-05	4.58	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_151	16.7	7.68	46.3	1632	777	83.8	83.8	43.4	16.2	1.43E-04	5.76E-05	4.58	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_152	16.7	7.68	46.3	1621	764	84.2	84.2	43.4	16.2	1.43E-04	5.77E-05	4.58	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_153	16.7	7.68	46.3	1604	751	85.4	85.4	43.4	16.2	1.43E-04	5.76E-05	4.58	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_154	16.6	7.68	46.3	1608	754	86.0	86.0	43.4	16.2	1.43E-04	5.76E-05	4.59	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_155	16.6	7.68	46.3	1605	755	85.5	85.5	43.4	16.2	1.43E-04	5.76E-05	4.59	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_156	16.6	7.68	46.3	1628	755	85.5	85.5	43.4	16.2	1.43E-04	5.76E-05	4.59	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_157	16.6	7.68	46.2	1649	754	86.1	86.1	43.4	16.2	1.43E-04	5.76E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_158	16.6	7.67	46.1	1675	755	86.3	86.3	43.3	16.2	1.43E-04	5.76E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_159	16.6	7.67	45.9	1708	760	86.6	86.6	43.2	16.2	1.42E-04	5.75E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_160	16.6	7.67	45.8	1742	766	86.5	86.5	43.2	16.2	1.42E-04	5.76E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_161	16.6	7.67	45.6	1759	770	86.2	86.2	43.1	16.2	1.42E-04	5.75E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_162	16.6	7.67	45.4	1773	776	86.1	86.1	43.0	16.2	1.42E-04	5.75E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_163	16.6	7.66	45.5	1773	780	86.9	86.9	42.8	16.2	1.42E-04	5.75E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_164	16.6	7.66	45.6	1817	784	88.1	88.1	42.7	16.2	1.42E-04	5.75E-05	4.62	1.52	0.17	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_165	16.6	7.66	45.7	1865	786	88.3	88.3	42.6	16.2	1.42E-04	5.74E-05	4.62	1.52	0.17	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_166	16.6	7.66	45.7	1921	788	87.3	87.3	42.6	16.2	1.42E-04	5.74E-05	4.63	1.52	0.17	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_167	16.6	7.65	45.7	1981	788	86.2	86.2	42.5	16.2	1.42E-04	5.74E-05	4.63	1.52	0.17	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_168	16.1	7.52	43.1	1529	740	75.2	75.2	41.8	15.9	1.36E-04	5.62E-05	4.54	1.52	0.16	6.43E-02	2.57	0.52	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_169	16.1	7.52	43.1	1524	727	75.6	75.6	41.9	15.9	1.36E-04	5.62E-05	4.54	1.52	0.16	6.43E-02	2.57	0.52	0.31	2.54E-02	1.37E-02
RE511300_170	16.0	7.52	43.1	1515	717	75.9	75.9	41.9	15.9	1.36E-04	5.62E-05	4.54	1.52	0.16	6.43E-02	2.57	0.52	0.31	2.54E-02	1.37E-02
RE511300_171	16.0	7.52	43.1	1503	708	76.2	76.2	41.9	15.9	1.36E-04	5.62E-05	4.54	1.52	0.16	6.43E-02	2.57	0.52	0.31	2.54E-02	1.37E-02
RE511300_172	16.0	7.52	43.2	1495	699	76.4	76.4	41.9	15.9	1.36E-04	5.62E-05	4.54	1.52	0.16	6.43E-02	2.57	0.52	0.31	2.54E-02	1.37E-02
RE511300_173	16.0	7.53	43.2	1499	688	76.5	76.5	41.9	15.9	1.36E-04	5.62E-05	4.55	1.52	0.16	6.43E-02	2.57	0.52	0.31	2.54E-02	1.37E-02
RE511300_174	15.9	7.53	43.2	1496	688	76.7	76.7	41.9	15.9	1.36E-04	5.62E-05	4.55	1.52	0.16	6.43E-02	2.57	0.52	0.31	2.54E-02	1.37E-02
RE511300_175	15.9	7.52	43.1	1517	691	76.9	76.9	41.9	15.9	1.36E-04	5.62E-05	4.55	1.52	0.16	6.43E-02	2.57	0.52	0.31	2.54E-02	1.37E-02
RE511300_176	15.9	7.52	43.0	1535	693	77.0	77.0	41.8	15.9	1.36E-04	5.62E-05	4.55	1.52	0.16	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_177	15.8	7.52	43.0	1550	696	77.1	77.1	41.8	15.9	1.36E-04	5.62E-05	4.55	1.52	0.16	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_178	15.8	7.52	42.9	1563	698	77.3	77.3	41.8	15.9	1.36E-04	5.62E-05	4.55	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_179	15.8	7.52	42.8	1571	699	77.2	77.2	41.7	15.9	1.36E-04	5.62E-05	4.56	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_180	15.8	7.52	42.6	1574	700	77.1	77.1	41.6	15.9	1.35E-04	5.61E-05	4.55	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_181	15.8	7.52	42.5	1569	699	76.9	76.9	41.6	15.9	1.35E-04	5.61E-05	4.55	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_182	15.8	7.52	42.3	1559	696	77.0	77.0	41.5	15.9	1.35E-04	5.61E-05	4.56	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_183	15.8	7.51	42.2	1544	693	77.8	77.8	41.4	15.9	1.34E-04	5.61E-05	4.56	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_184	15.8	7.51	42.0	1522	688	78.4	78.4	41.3	15.9	1.34E-04	5.61E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_185	15.8	7.51	41.7	1489	687	78.7	78.7	41.2	15.9	1.33E-04	5.61E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_186	15.8	7.51	41.4	1483	693	79.2	79.2	41.1	15.9	1.33E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_187	15.8	7.51	41.3	1498	697	79.5	79.5	40.9	15.8	1.33E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_188	15.8	7.50	41.4	1505	701	79.4	79.4	40.8	15.8	1.33E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_189	15.7	7.50	41.5	1504	705	79.0	79.0	40.7	15.8	1.33E-04	5.60E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_190	15.7	7.50	41.5	1512	707	78.8	78.8	40.6	15.8	1.33E-04	5.60E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_191	15.7	7.45	41.4	1456	687	71.6	71.6	41.1	15.7	1.32E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_192	15.6	7.45	41.4	1443	677	71.8	71.8	41.1	15.7	1.33E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_193	15.6	7.45	41.4	1429	669	72.2	72.2	41.1	15.7	1.33E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_194	15.6	7.45	41.4	1433	661	72.5	72.5	41.1	15.7	1.33E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_195	15.6	7.45	41.5	1435	661	72.8	72.8	41.1	15.7	1.33E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_196	15.5	7.45	41.4	1433	662	72.6	72.6	41.1	15.7	1.33E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_197	15.5	7.45	41.4	1457	665	73.0	73.0	41.0	15.7	1.33E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_198	15.5	7.45	41.4	1475	668	73.0	73.0	41.0	15.7	1.33E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_199	15.5	7.45	41.3	1489	670	73.1	73.1	41.0	15.7	1.33E-04	5.55E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_200	15.4	7.45	41.2	1498	672	73.3	73.3	40.9	15.7	1.32E-04	5.55E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_201	15.4	7.45	41.2	1505	673	73.2	73.2	40.9	15.7	1.32E-04	5.55E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_202	15.4	7.45	41.1	1507	674	73.3	73.3	40.8	15.7	1.32E-04	5.55E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_203	15.4	7.45	40.9	1501	673	73.4	73.4	40.8	15.7	1.32E-04	5.55E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_204	15.4	7.45	40.8	1491	671	73.2	73.2	40.7	15.7	1.32E-04	5.55E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_205	15.4	7.44	40.7	1473	667	73.3	73.3	40.6	15.7	1.31E-04	5.54E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_206	15.4	7.44	40.5	1452	662	73.8	73.8	40.6	15.7	1.31E-04	5.54E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_207	15.4	7.44	40.3	1424	656	73.9	73.9	40.5	15.7	1.30E-04	5.54E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_208	15.3	7.44	40.0	1405	648	73.9	73.9	40.4	15.7	1.29E-04	5.54E-05	4.54	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_209	15.4	7.44	39.7	1424	642	74.1	74.1	40.2	15.7	1.29E-04	5.54E-05	4.54	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_210	15.4	7.44	39.4	1433	644	74.6	74.6	40.1	15.7	1.28E-04	5.54E-05	4.54	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_211	15.3	7.44	39.1	1434	646	74.8	74.8	40.0	15.7	1.28E-04	5.54E-05	4.55	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_212	15.3	7.43	38.9	1427	648	75.0	75.0	39.9	15.7	1.28E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_213	15.3	7.43	38.9	1412	651	75.3	75.3	39.8	15.7	1.28E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_214	15.3	7.43	38.8	1387	659	75.3	75.3	39.7	15.7	1.27E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_001	13.5	7.17	28.8	838	512	55.8	55.8	34.8	15.1	1.06E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_002	13.5	7.16	28.8	831	512	55.3	55.3	34.7	15.1	1.06E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_003	13.4	7.16	28.6	818	505	55.1	55.1	34.7	15.1	1.05E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_004	13.6	7.18	29.5	855	532	56.4	56.4	35.0	15.1	1.08E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_005	13.5	7.17	29.0	833	520	55.5	55.5	34.8	15.1	1.07E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_006	13.7	7.18	30.1	906	545	56.1	56.1	35.2	15.1	1.09E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_007	13.6	7.18	29.9	875	541	55.9	55.9	35.1	15.1	1.08E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_008	13.6	7.17	29.7	871	538	55.9	55.9	35.0	15.1	1.08E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_009	13.6	7.17	29.6	861	534	55.8	55.8	35.0	15.1	1.08E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_010	13.4	7.16	28.7	825	508	55.2	55.2	34.7	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_011	13.5	7.17	29.2	834	524	55.7	55.7	34.9	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_012	13.7	7.19	30.2	895	548	56.9	56.9	35.2	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_013	13.5	7.17	29.0	848	517	55.9	55.9	34.9	15.1	1.07E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_014	13.5	7.17	28.9	833	516	55.4	55.4	34.8	15.1	1.06E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_015	13.7	7.19	30.1	892	545	57.2	57.2	35.2	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_016	13.7	7.19	30.2	896	548	57.0	57.0	35.2	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_017	13.5	7.16	29.1	834	522	54.7	54.7	34.7	15.1	1.07E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_018	13.4	7.16	28.7	808	513	54.5	54.5	34.7	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_019	13.5	7.16	28.9	818	516	54.5	54.5	34.7	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_020	13.4	7.15	28.6	807	510	54.4	54.4	34.6	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_021	13.6	7.17	29.7	901	524	54.9	54.9	35.0	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_022	13.6	7.17	29.6	891	527	54.8	54.8	35.0	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_023	13.5	7.16	29.2	839	525	54.8	54.8	34.8	15.1	1.07E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_024	13.5	7.16	29.0	826	519	54.6	54.6	34.7	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_025	13.6	7.17	29.5	880	528	54.7	54.7	35.0	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_026	13.6	7.17	29.4	869	529	54.8	54.8	34.9	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_027	13.4	7.15	28.5	808	506	54.5	54.5	34.6	15.0	1.05E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_028	13.6	7.16	29.4	855	529	54.9	54.9	34.9	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_029	13.5	7.16	29.3	844	528	54.9	54.9	34.9	15.1	1.07E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_030	13.5	7.16	29.3	843	527	54.9	54.9	34.8	15.1	1.07E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_031	14.0	7.24	31.4	972	541	62.3	62.3	36.0	15.2	1.10E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_032	13.8	7.21	30.6	925	556	59.3	59.3	35.6	15.2	1.10E-04	5.32E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_033	13.8	7.22	30.7	941	545	60.6	60.6	35.8	15.2	1.10E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_034	13.8	7.21	30.7	932	559	59.2	59.2	35.6	15.2	1.11E-04	5.32E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_035	13.9	7.23	31.1	947	542	61.9	61.9	35.9	15.2	1.10E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_036	15.2	7.39	38.0	1727	603	72.5	72.5	39.7	15.6	1.21E-04	5.49E-05	4.60	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_037	13.4	7.17	28.6	813	502	56.0	56.0	34.7	15.1	1.05E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_038	13.6	7.17	29.4	847	528	55.8	55.8	34.9	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_039	13.7	7.18	30.2	892	548	56.6	56.6	35.2	15.1	1.09E-04	5.30E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_040	13.8	7.22	30.5	937	549	59.6	59.6	35.7	15.2	1.10E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_041	13.8	7.22	30.5	929	552	59.4	59.4	35.6	15.2	1.10E-04	5.33E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_042	13.8	7.22	30.6	941	547	59.9	59.9	35.7	15.2	1.10E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_043	14.0	7.24	31.2	961	542	62.0	62.0	36.0	15.2	1.10E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_044	13.9	7.23	31.0	938	543	61.7	61.7	35.9	15.2	1.10E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_045	13.9	7.23	30.9	940	544	61.2	61.2	35.8	15.2	1.10E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_046	14.2	7.26	32.6	1145	522	63.7	63.7	36.7	15.3	1.12E-04	5.37E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_047	14.3	7.28	33.1	1150	537	64.3	64.3	36.9	15.3	1.14E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_048	14.8	7.34	36.4	1587	576	69.4	69.4	38.9	15.5	1.18E-04	5.45E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_049	14.5	7.28	34.4	1439	536	64.8	64.8	37.9	15.3	1.14E-04	5.39E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_050	14.8	7.33	36.2	1580	569	68.7	68.7	38.8	15.5	1.18E-04	5.44E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_051	13.8	7.20	30.8	934	563	58.4	58.4	35.5	15.2	1.11E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_052	13.8	7.20	30.8	945	562	58.1	58.1	35.5	15.2	1.10E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_053	13.8	7.20	30.7	951	559	57.7	57.7	35.5	15.2	1.10E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_054	13.8	7.20	30.7	955	555	57.3	57.3	35.5	15.1	1.10E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_055	13.8	7.20	30.7	957	550	56.9	56.9	35.5	15.1	1.09E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_056	13.8	7.19	30.7	964	545	56.7	56.7	35.5	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_057	13.7	7.18	30.3	958	527	55.9	55.9	35.3	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_058	13.7	7.19	30.6	967	538	56.4	56.4	35.4	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_059	13.7	7.19	30.5	964	533	56.1	56.1	35.4	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_060	14.7	7.31	34.9	1508	586	67.7	67.7	38.1	15.4	1.16E-04	5.42E-05	4.59	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_061	14.6	7.31	34.4	1521	592	66.9	66.9	37.8	15.4	1.15E-04	5.41E-05	4.59	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_062	14.6	7.31	34.1	1517	594	66.9	66.9	37.7	15.4	1.15E-04	5.41E-05	4.59	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_063	14.6	7.31	34.6	1518	589	67.1	67.1	37.9	15.4	1.15E-04	5.42E-05	4.59	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_064	14.6	7.30	34.8	1466	550	66.3	66.3	38.1	15.4	1.15E-04	5.41E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_065	15.0	7.36	36.6	1636	622	69.3	69.3	38.9	15.5	1.19E-04	5.46E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_066	14.4	7.27	33.7	1366	530	64.3	64.3	37.5	15.3	1.13E-04	5.38E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_067	14.1	7.25	32.2	1143	513	62.9	62.9	36.5	15.3	1.11E-04	5.36E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_068	15.0	7.36	36.8	1627	619	70.4	70.4	39.0	15.5	1.20E-04	5.47E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_069	14.7	7.32	35.8	1557	563	66.6	66.6	38.6	15.4	1.17E-04	5.43E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_070	14.5	7.29	34.2	1398	544	65.6	65.6	37.8	15.4	1.14E-04	5.40E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_071	14.8	7.34	36.0	1544	587	69.3	69.3	38.6	15.5	1.18E-04	5.44E-05	4.59	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_072	14.7	7.32	35.5	1508	559	67.6	67.6	38.5	15.4	1.17E-04	5.42E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_073	14.6	7.31	35.4	1511	553	67.6	67.6	38.4	15.4	1.16E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_074	14.2	7.25	32.4	1143	517	63.2	63.2	36.6	15.3	1.12E-04	5.36E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_075	14.2	7.27	32.9	1147	531	64.0	64.0	36.8	15.3	1.13E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_076	15.0	7.37	37.0	1616	596	70.1	70.1	39.2	15.5	1.20E-04	5.47E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_077	14.4	7.28	33.4	1301	537	64.6	64.6	37.3	15.3	1.14E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_078	14.3	7.26	33.0	1284	524	63.7	63.7	37.2	15.3	1.13E-04	5.37E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_079	14.2	7.27	32.8	1147	527	63.9	63.9	36.8	15.3	1.13E-04	5.37E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_080	15.0	7.37	36.9	1605	614	71.2	71.2	39.1	15.5	1.20E-04	5.47E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_081	14.6	7.30	35.2	1501	547	66.5	66.5	38.3	15.4	1.16E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_082	14.6	7.29	34.9	1478	542	64.6	64.6	38.1	15.4	1.15E-04	5.40E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_083	14.7	7.31	35.4	1520	557	66.3	66.3	38.4	15.4	1.16E-04	5.42E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_084	14.7	7.33	35.6	1521	572	67.8	67.8	38.6	15.4	1.17E-04	5.43E-05	4.59	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_085	15.0	7.37	37.0	1611	606	71.0	71.0	39.1	15.5	1.20E-04	5.47E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_086	14.4	7.27	34.3	1425	532	65.3	65.3	37.9	15.3	1.14E-04	5.38E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_087	13.3	7.14	28.0	882	468	53.0	53.0	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_088	13.3	7.13	27.9	863	464	52.6	52.6	34.2	15.0	1.04E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_089	13.2	7.13	27.7	859	458	52.5	52.5	34.2	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_090	13.4	7.14	28.4	861	478	53.1	53.1	34.5	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_091	13.2	7.13	27.6	855	457	52.4	52.4	34.2	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_092	13.4	7.15	28.7	842	501	53.3	53.3	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_093	13.2	7.13	27.8	868	460	52.8	52.8	34.3	15.0	1.04E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_094	13.4	7.15	28.7	934	480	54.1	54.1	34.6	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_095	13.2	7.12	27.4	839	454	52.1	52.1	34.1	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_096	13.3	7.14	28.7	871	477	53.6	53.6	34.7	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_097	13.4	7.14	28.6	833	503	53.2	53.2	34.5	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_098	13.4	7.14	28.4	850	480	52.9	52.9	34.5	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_099	13.7	7.18	30.1	898	548	56.3	56.3	35.2	15.1	1.09E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_100	13.7	7.18	30.0	905	541	55.8	55.8	35.2	15.1	1.08E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_101	13.5	7.17	28.7	826	507	55.9	55.9	34.7	15.1	1.06E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_102	13.5	7.18	29.2	855	524	56.2	56.2	34.9	15.1	1.07E-04	5.29E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_103	13.2	7.13	27.7	852	462	52.4	52.4	34.2	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_104	13.3	7.13	27.9	866	465	52.7	52.7	34.2	15.0	1.04E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_105	13.4	7.15	28.8	871	494	53.3	53.3	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_106	13.4	7.15	28.9	900	478	54.0	54.0	34.8	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_107	13.4	7.14	28.5	827	504	53.2	53.2	34.5	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_108	13.3	7.14	28.1	851	471	52.7	52.7	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_109	13.4	7.15	29.1	888	486	54.0	54.0	34.9	15.0	1.06E-04	5.26E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_110	13.4	7.15	28.7	931	481	54.0	54.0	34.6	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_111	13.3	7.14	28.0	876	462	53.0	53.0	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_112	13.3	7.14	28.6	883	470	53.6	53.6	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_113	13.3	7.13	27.9	872	461	52.9	52.9	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_114	13.4	7.15	28.8	905	485	53.8	53.8	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_115	13.4	7.15	28.7	932	477	54.2	54.2	34.6	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_116	13.3	7.14	28.1	879	463	53.1	53.1	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_117	13.2	7.13	27.8	864	459	52.6	52.6	34.2	15.0	1.04E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_118	13.4	7.15	28.8	874	492	53.4	53.4	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_119	13.4	7.15	28.8	874	489	53.4	53.4	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_120	13.4	7.14	28.6	838	502	53.2	53.2	34.5	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_121	13.3	7.14	28.3	902	468	53.6	53.6	34.5	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_122	13.3	7.14	28.4	894	467	53.5	53.5	34.6	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_123	13.3	7.14	28.3	906	469	53.6	53.6	34.5	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_124	13.4	7.14	28.3	901	473	53.5	53.5	34.5	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_125	13.3	7.13	27.8	859	463	52.5	52.5	34.2	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_126	13.4	7.15	28.8	913	473	54.1	54.1	34.7	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_127	13.3	7.14	28.1	869	469	52.9	52.9	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_128	13.4	7.14	28.4	876	476	53.3	53.3	34.5	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_129	13.4	7.15	28.7	928	476	54.2	54.2	34.7	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_130	13.4	7.15	28.8	885	488	53.6	53.6	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_131	13.2	7.13	27.5	848	456	52.2	52.2	34.1	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_132	13.3	7.14	28.0	888	466	53.1	53.1	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_133	13.4	7.15	28.7	919	483	53.9	53.9	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_134	13.3	7.14	28.3	907	471	53.6	53.6	34.5	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_135	13.4	7.14	28.4	892	474	53.4	53.4	34.4	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_136	13.3	7.14	28.4	834	488	52.7	52.7	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_137	14.8	7.33	35.2	1461	566	68.0	68.0	38.2	15.5	1.18E-04	5.44E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_138	14.7	7.33	34.9	1389	559	67.4	67.4	37.9	15.4	1.17E-04	5.43E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_139	14.6	7.32	34.6	1315	556	67.1	67.1	37.6	15.4	1.17E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_140	14.5	7.31	34.2	1229	556	66.9	66.9	37.4	15.4	1.16E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_141	14.4	7.30	33.9	1183	556	66.0	66.0	37.2	15.4	1.15E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_142	14.3	7.29	33.0	1151	554	65.4	65.4	36.8	15.4	1.14E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_143	14.4	7.29	33.5	1172	555	65.4	65.4	37.0	15.4	1.14E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_144	14.3	7.28	32.6	1119	553	65.2	65.2	36.6	15.3	1.13E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_145	14.2	7.28	32.2	1087	552	64.7	64.7	36.4	15.3	1.12E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_146	14.1	7.27	31.7	1039	549	63.5	63.5	36.2	15.3	1.11E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_147	14.2	7.27	31.9	1067	551	64.2	64.2	36.3	15.3	1.11E-04	5.38E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_148	14.1	7.26	31.6	1004	547	63.5	63.5	36.1	15.3	1.11E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_149	15.0	7.36	36.8	1670	623	73.7	73.7	39.0	15.5	1.20E-04	5.46E-05	4.59	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_150	15.0	7.36	36.6	1696	629	72.2	72.2	38.9	15.5	1.19E-04	5.46E-05	4.59	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_151	15.0	7.36	36.7	1685	626	73.2	73.2	38.9	15.5	1.20E-04	5.46E-05	4.59	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_152	15.0	7.36	36.4	1700	630	71.3	71.3	38.8	15.5	1.19E-04	5.46E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_153	15.0	7.35	36.9	1604	622	71.9	71.9	39.1	15.5	1.20E-04	5.45E-05	4.59	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_154	14.9	7.35	36.9	1633	621	72.8	72.8	39.1	15.5	1.20E-04	5.45E-05	4.59	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_155	15.0	7.35	36.8	1589	624	70.9	70.9	39.0	15.5	1.20E-04	5.45E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_156	15.0	7.35	36.9	1583	623	71.1	71.1	39.1	15.5	1.20E-04	5.45E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_157	14.9	7.35	36.9	1655	620	73.4	73.4	39.0	15.5	1.20E-04	5.46E-05	4.59	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_158	15.0	7.34	36.7	1590	625	71.0	71.0	39.0	15.5	1.20E-04	5.44E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_159	13.9	7.22	31.4	1002	568	59.3	59.3	35.8	15.2	1.11E-04	5.33E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_160	13.9	7.21	31.4	1011	559	58.8	58.8	35.8	15.2	1.11E-04	5.32E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_161	13.8	7.21	31.1	1005	544	57.7	57.7	35.7	15.2	1.10E-04	5.32E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_162	13.9	7.21	31.3	1012	555	58.5	58.5	35.8	15.2	1.11E-04	5.32E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_163	13.7	7.20	30.5	1034	521	56.4	56.4	35.5	15.1	1.10E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_164	13.7	7.19	30.3	1028	514	56.1	56.1	35.4	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_165	13.9	7.21	31.4	1008	564	59.1	59.1	35.8	15.2	1.11E-04	5.32E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_166	13.8	7.20	30.8	1023	532	57.0	57.0	35.6	15.2	1.10E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_167	13.9	7.22	31.4	999	572	59.5	59.5	35.8	15.2	1.12E-04	5.33E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_168	13.7	7.19	30.4	1033	518	56.3	56.3	35.5	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_169	13.8	7.21	31.2	1010	550	58.2	58.2	35.7	15.2	1.10E-04	5.32E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_170	13.8	7.20	30.7	1029	527	56.7	56.7	35.6	15.2	1.10E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_171	13.7	7.19	30.4	1031	516	56.2	56.2	35.4	15.1	1.09E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_172	13.8	7.20	31.0	1011	538	57.4	57.4	35.6	15.2	1.10E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_173	13.5	7.15	28.8	822	517	54.1	54.1	34.6	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_174	13.4	7.15	28.7	817	515	54.0	54.0	34.6	15.0	1.06E-04	5.26E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_175	13.5	7.15	28.9	825	520	54.3	54.3	34.7	15.0	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_176	13.5	7.16	29.3	891	511	54.2	54.2	34.9	15.1	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_177	13.5	7.16	29.3	882	513	54.2	54.2	34.8	15.1	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_178	13.5	7.16	29.3	875	515	54.1	54.1	34.8	15.1	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_179	13.5	7.16	29.2	872	516	54.2	54.2	34.8	15.1	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_180	13.5	7.16	29.1	858	519	54.2	54.2	34.8	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_181	13.5	7.16	29.0	850	520	54.2	54.2	34.8	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_182	13.5	7.16	29.0	840	520	54.3	54.3	34.7	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_183	13.5	7.15	29.0	832	520	54.3	54.3	34.7	15.1	1.06E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_184	13.5	7.15	28.9	824	519	54.2	54.2	34.7	15.0	1.06E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_185	13.5	7.16	29.2	865	518	54.2	54.2	34.8	15.1	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_186	14.1	7.25	31.5	1003	564	63.2	63.2	36.1	15.3	1.12E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_187	14.1	7.26	31.6	1006	563	63.5	63.5	36.2	15.3	1.12E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_188	14.0	7.25	31.3	996	566	62.9	62.9	36.1	15.3	1.12E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_189	14.0	7.25	31.2	989	567	62.4	62.4	36.0	15.3	1.12E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_190	14.0	7.24	31.3	975	570	61.7	61.7	36.0	15.2	1.12E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_191	14.0	7.24	31.3	975	572	61.5	61.5	36.0	15.2	1.12E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_192	14.0	7.23	31.4	978	574	61.1	61.1	35.9	15.2	1.12E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_193	14.0	7.23	31.5	982	577	60.9	60.9	35.9	15.2	1.12E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_194	14.0	7.23	31.5	981	578	60.6	60.6	35.9	15.2	1.12E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_195	14.0	7.23	31.5	977	579	60.4	60.4	35.8	15.2	1.12E-04	5.34E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_196	15.2	7.40	37.1	1650	599	71.6	71.6	39.2	15.6	1.22E-04	5.50E-05	4.59	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_197	15.0	7.37	36.3	1502	586	70.2	70.2	38.5	15.5	1.20E-04	5.48E-05	4.58	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_198	14.9	7.36	35.9	1425	581	69.8	69.8	38.2	15.5	1.19E-04	5.47E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_199	15.1	7.38	36.6	1564	591	71.0	71.0	38.8	15.6	1.21E-04	5.49E-05	4.58	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_200	14.8	7.35	35.5	1362	580	69.5	69.5	38.0	15.5	1.19E-04	5.46E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_201	14.7	7.34	35.1	1309	578	69.4	69.4	37.8	15.5	1.18E-04	5.45E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_202	14.6	7.33	34.1	1234	576	67.8	67.8	37.3	15.4	1.16E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_203	14.6	7.33	34.5	1246	577	68.4	68.4	37.5	15.5	1.17E-04	5.44E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_204	14.5	7.32	33.7	1218	575	67.6	67.6	37.2	15.4	1.15E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_205	14.5	7.31	33.4	1199	574	67.5	67.5	37.1	15.4	1.14E-04	5.42E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_206	14.4	7.31	32.9	1162	574	67.1	67.1	37.0	15.4	1.14E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_207	14.4	7.30	32.7	1133	573	66.6	66.6	36.8	15.4	1.13E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_208	14.3	7.30	32.6	1108	570	66.0	66.0	36.7	15.4	1.13E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_209	14.3	7.29	32.4	1074	568	65.5	65.5	36.6	15.4	1.13E-04	5.40E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_210	14.3	7.28	32.2	1030	564	65.0	65.0	36.4	15.3	1.12E-04	5.39E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_211	14.2	7.28	32.1	1014	562	64.5	64.5	36.4	15.3	1.12E-04	5.39E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_212	15.1	7.38	37.6	1703	596	70.6	70.6	39.5	15.6	1.20E-04	5.48E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_213	15.0	7.36	36.5	1602	580	69.5	69.5	38.9	15.5	1.19E-04	5.46E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_214	15.1	7.37	37.0	1657	588	69.7	69.7	39.2	15.5	1.19E-04	5.47E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_215	14.9	7.35	35.8	1541	573	69.0	69.0	38.6	15.5	1.18E-04	5.45E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_216	13.6	7.18	29.8	874	539	56.6	56.6	35.1	15.1	1.08E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_217	13.5	7.17	29.4	977	494	55.1	55.1	35.0	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_218	13.6	7.18	29.8	1006	504	55.6	55.6	35.2	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_219	13.6	7.18	29.9	942	514	55.2	55.2	35.1	15.1	1.07E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_220	13.5	7.17	29.3	973	492	55.0	55.0	34.9	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_221	13.5	7.17	29.3	974	491	55.1	55.1	35.0	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_222	13.6	7.17	29.9	938	517	55.1	55.1	35.1	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_223	13.5	7.16	29.3	930	497	54.5	54.5	34.9	15.1	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_224	13.6	7.18	29.9	1010	502	55.7	55.7	35.2	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_225	13.5	7.17	29.5	969	489	55.3	55.3	35.1	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_226	13.5	7.16	29.3	931	496	54.4	54.4	34.8	15.1	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_227	13.5	7.16	29.4	929	499	54.5	54.5	34.9	15.1	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_228	13.6	7.17	29.7	982	504	55.3	55.3	35.1	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_229	13.6	7.18	29.9	972	510	55.4	55.4	35.1	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_230	13.5	7.17	29.3	968	493	54.9	54.9	34.9	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_231	13.6	7.18	29.9	1010	501	55.7	55.7	35.3	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_232	13.5	7.17	29.5	927	503	54.6	54.6	34.9	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_233	13.5	7.17	29.4	974	490	55.2	55.2	35.0	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_234	13.5	7.17	29.4	980	493	55.1	55.1	35.0	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_235	13.6	7.17	29.8	957	508	55.1	55.1	35.1	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_236	13.6	7.18	29.8	1003	500	55.6	55.6	35.2	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_237	13.6	7.18	29.8	1002	498	55.6	55.6	35.2	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_238	13.6	7.18	29.9	986	508	55.4	55.4	35.1	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_239	13.6	7.17	29.8	932	513	55.0	55.0	35.1	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_240	13.6	7.17	29.7	970	506	55.2	55.2	35.1	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_241	13.6	7.18	29.7	993	503	55.4	55.4	35.1	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_242	13.6	7.18	29.8	996	506	55.5	55.5	35.1	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_243	13.6	7.18	29.7	1002	501	55.5	55.5	35.1	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_244	13.5	7.17	29.4	971	496	55.0	55.0	35.0	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_245	13.6	7.17	29.8	943	511	55.1	55.1	35.1	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_246	13.5	7.17	29.4	927	501	54.6	54.6	34.9	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_247	13.5	7.17	29.5	976	491	55.4	55.4	35.1	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_248	13.5	7.17	29.5	980	492	55.2	55.2	35.0	15.1	1.07E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_249	13.6	7.18	29.9	957	512	55.3	55.3	35.1	15.1	1.08E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_250	13.4	7.15	28.7	811	512	54.0	54.0	34.6	15.0	1.06E-04	5.26E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_251	13.4	7.15	28.6	804	510	53.9	53.9	34.5	15.0	1.05E-04	5.26E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_252	13.4	7.15	28.5	797	507	53.8	53.8	34.5	15.0	1.05E-04	5.26E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_265	13.1	7.11	27.0	743	454	51.0	51.0	33.8	15.0	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_266	13.1	7.12	27.1	754	453	51.1	51.1	33.8	15.0	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_267	13.1	7.12	27.1	758	452	51.1	51.1	33.8	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_268	13.1	7.12	27.1	755	451	51.2	51.2	33.8	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_269	13.1	7.12	27.0	765	449	51.2	51.2	33.8	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_270	13.1	7.12	27.0	783	448	51.2	51.2	33.8	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_271	13.1	7.12	27.0	798	445	51.2	51.2	33.9	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_272	13.1	7.12	27.0	804	447	51.4	51.4	33.9	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_273	13.1	7.12	27.1	813	448	51.5	51.5	33.9	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_274	13.1	7.12	27.2	821	450	51.7	51.7	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_275	13.1	7.12	27.2	751	461	51.2	51.2	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_276	13.1	7.12	27.2	762	459	51.3	51.3	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_277	13.1	7.12	27.3	768	458	51.3	51.3	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_278	13.1	7.12	27.3	770	456	51.3	51.3	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_279	13.1	7.12	27.2	768	454	51.3	51.3	33.9	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_280	13.1	7.12	27.2	785	453	51.3	51.3	33.9	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_281	13.1	7.12	27.2	805	451	51.4	51.4	33.9	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_282	13.3	7.13	28.0	804	488	52.5	52.5	34.3	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_283	13.3	7.13	28.0	800	485	52.4	52.4	34.3	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_284	13.3	7.13	27.9	794	482	52.2	52.2	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_285	13.2	7.13	27.8	790	479	52.0	52.0	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_286	13.2	7.13	27.7	786	477	51.8	51.8	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_287	13.2	7.12	27.7	780	474	51.6	51.6	34.1	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_288	13.2	7.12	27.6	773	471	51.4	51.4	34.1	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_289	13.2	7.12	27.5	768	469	51.3	51.3	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_290	13.3	7.13	28.2	828	480	52.3	52.3	34.3	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_291	13.3	7.13	28.1	823	477	52.2	52.2	34.3	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE511400_292	13.3	7.13	28.0	817	474	52.0	52.0	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_293	13.3	7.13	27.9	814	472	51.8	51.8	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_294	13.2	7.13	27.9	811	471	51.7	51.7	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_295	13.2	7.13	27.8	808	469	51.6	51.6	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_296	13.2	7.13	27.8	805	468	51.5	51.5	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_297	13.2	7.13	27.7	802	467	51.5	51.5	34.1	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_298	13.2	7.12	27.6	795	464	51.4	51.4	34.1	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_299	13.2	7.12	27.5	787	462	51.4	51.4	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_300	13.2	7.13	27.6	844	460	52.2	52.2	34.1	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_301	13.2	7.13	27.6	839	458	52.1	52.1	34.1	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_302	13.2	7.13	27.5	834	458	52.0	52.0	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_303	13.2	7.12	27.4	827	456	51.9	51.9	34.0	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_304	13.3	7.14	28.4	827	490	52.7	52.7	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_305	13.3	7.14	28.3	821	492	52.8	52.8	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_306	13.3	7.14	28.3	817	494	52.8	52.8	34.4	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_307	13.3	7.14	28.2	811	496	52.9	52.9	34.4	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_308	13.3	7.14	28.1	804	497	52.9	52.9	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_309	13.3	7.14	28.1	794	497	52.8	52.8	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_310	13.3	7.13	28.0	782	498	52.8	52.8	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_311	13.3	7.13	27.9	775	497	52.8	52.8	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_312	13.4	7.14	28.4	819	504	53.3	53.3	34.5	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_313	13.4	7.14	28.4	813	504	53.3	53.3	34.5	15.0	1.05E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_314	13.4	7.14	28.3	802	505	53.3	53.3	34.4	15.0	1.05E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_315	13.4	7.14	28.3	793	505	53.3	53.3	34.4	15.0	1.05E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_316	13.4	7.14	28.3	791	504	53.3	53.3	34.4	15.0	1.05E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_317	13.4	7.14	28.2	791	504	53.4	53.4	34.4	15.0	1.05E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_318	13.3	7.14	28.2	790	503	53.4	53.4	34.4	15.0	1.05E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_319	13.3	7.14	28.1	788	501	53.4	53.4	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_001	13.3	7.15	28.1	794	485	55.9	55.9	34.4	15.0	1.03E-04	5.27E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_002	13.9	7.19	31.3	1185	509	61.3	61.3	36.3	15.1	1.09E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_003	13.9	7.19	31.4	1187	502	60.6	60.6	36.4	15.1	1.09E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_004	13.9	7.19	31.5	1183	496	60.3	60.3	36.4	15.1	1.09E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_005	13.9	7.18	31.5	1182	492	59.1	59.1	36.5	15.1	1.09E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_006	13.9	7.18	31.5	1186	490	58.6	58.6	36.4	15.1	1.09E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_007	13.9	7.18	31.4	1182	487	58.3	58.3	36.4	15.1	1.08E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_008	13.9	7.18	31.3	1171	484	58.5	58.5	36.3	15.1	1.08E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_009	13.8	7.18	31.1	1153	480	58.7	58.7	36.2	15.1	1.08E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_010	13.9	7.20	30.9	1239	529	60.7	60.7	36.1	15.2	1.08E-04	5.31E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_011	13.9	7.19	31.2	1201	517	61.1	61.1	36.3	15.1	1.08E-04	5.31E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_012	14.0	7.21	32.5	1321	550	62.6	62.6	36.8	15.2	1.11E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_013	14.0	7.21	32.1	1318	549	62.3	62.3	36.6	15.2	1.11E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_014	13.9	7.20	31.7	1306	547	61.7	61.7	36.4	15.2	1.10E-04	5.32E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_015	13.9	7.20	31.3	1282	544	61.4	61.4	36.1	15.2	1.09E-04	5.31E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_016	13.9	7.20	30.9	1253	540	61.2	61.2	36.0	15.2	1.08E-04	5.31E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_017	13.9	7.19	31.5	1174	492	60.1	60.1	36.5	15.1	1.09E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_018	13.9	7.19	31.6	1171	493	59.8	59.8	36.5	15.1	1.09E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_019	13.5	7.17	29.0	896	469	57.3	57.3	35.0	15.1	1.04E-04	5.28E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_020	14.1	7.21	32.5	1276	504	60.4	60.4	37.0	15.2	1.11E-04	5.33E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_021	14.0	7.20	31.7	1192	488	60.3	60.3	36.5	15.2	1.09E-04	5.32E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_022	14.2	7.24	32.4	1374	563	63.7	63.7	36.6	15.3	1.11E-04	5.35E-05	4.57	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_023	14.1	7.22	32.5	1269	511	62.0	62.0	37.0	15.2	1.11E-04	5.33E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_024	14.1	7.22	32.6	1272	506	61.6	61.6	37.0	15.2	1.11E-04	5.33E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_025	13.4	7.16	28.5	810	501	55.0	55.0	34.6	15.1	1.05E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_026	13.3	7.15	28.1	745	474	55.0	55.0	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_027	13.2	7.15	28.0	736	471	55.1	55.1	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_028	13.3	7.15	28.2	757	481	55.9	55.9	34.5	15.1	1.03E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_029	13.3	7.16	28.3	761	481	55.9	55.9	34.6	15.1	1.04E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_030	13.4	7.16	28.4	772	486	55.9	55.9	34.6	15.1	1.04E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_031	13.4	7.16	28.3	790	493	54.9	54.9	34.6	15.1	1.04E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_032	13.4	7.16	28.6	853	467	56.2	56.2	34.8	15.1	1.03E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_033	13.3	7.16	28.2	758	480	55.9	55.9	34.5	15.1	1.03E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_034	13.3	7.15	28.1	753	477	55.0	55.0	34.5	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_035	13.3	7.16	28.3	780	489	54.9	54.9	34.5	15.1	1.04E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_036	13.3	7.16	28.3	757	479	55.8	55.8	34.5	15.1	1.04E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_037	13.5	7.16	29.0	896	469	57.1	57.1	34.9	15.1	1.04E-04	5.28E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_038	13.4	7.16	28.5	836	467	55.9	55.9	34.7	15.1	1.03E-04	5.27E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_039	13.4	7.15	28.4	822	468	55.6	55.6	34.7	15.1	1.03E-04	5.27E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_040	13.3	7.16	28.2	758	481	55.9	55.9	34.5	15.1	1.03E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_041	13.4	7.16	28.6	843	467	56.1	56.1	34.7	15.1	1.03E-04	5.27E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_042	13.4	7.16	28.9	894	469	57.0	57.0	34.9	15.1	1.04E-04	5.28E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_043	13.4	7.16	28.8	889	468	56.9	56.9	34.9	15.1	1.04E-04	5.28E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_044	13.3	7.15	28.2	797	496	54.5	54.5	34.5	15.0	1.04E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_045	14.7	7.23	36.3	1411	604	66.6	66.6	38.7	15.2	1.19E-04	5.34E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_046	14.4	7.22	33.3	1293	577	63.8	63.8	37.1	15.2	1.14E-04	5.33E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_047	14.4	7.21	33.9	1401	594	63.8	63.8	37.4	15.2	1.15E-04	5.32E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_048	14.4	7.21	33.8	1381	589	63.0	63.0	37.3	15.2	1.14E-04	5.32E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_049	13.4	7.15	28.4	806	503	54.5	54.5	34.6	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_050	13.4	7.15	28.3	803	500	54.6	54.6	34.5	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_051	14.4	7.23	33.5	1320	579	64.1	64.1	37.2	15.2	1.14E-04	5.34E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_052	14.5	7.23	34.6	1455	613	64.6	64.6	37.7	15.2	1.16E-04	5.35E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_053	14.4	7.23	33.8	1361	585	63.7	63.7	37.3	15.2	1.14E-04	5.34E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_054	13.2	7.15	28.1	755	484	55.7	55.7	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_055	14.5	7.23	35.4	1399	605	65.8	65.8	38.2	15.2	1.17E-04	5.34E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_056	13.9	7.20	30.9	1110	484	60.1	60.1	36.1	15.2	1.07E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_057	13.8	7.20	30.5	1066	482	60.1	60.1	35.9	15.2	1.07E-04	5.31E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_058	14.1	7.23	31.9	1337	548	62.7	62.7	36.7	15.2	1.10E-04	5.34E-05	4.57	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_059	14.3	7.25	33.7	1431	571	65.6	65.6	37.4	15.3	1.14E-04	5.36E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_060	14.2	7.25	33.3	1427	570	64.9	64.9	37.2	15.3	1.13E-04	5.36E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_061	13.4	7.16	28.7	869	467	56.5	56.5	34.8	15.1	1.04E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_062	13.4	7.15	28.2	793	469	55.5	55.5	34.6	15.0	1.03E-04	5.27E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_063	13.4	7.16	28.5	784	491	56.0	56.0	34.6	15.1	1.04E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_064	13.3	7.15	28.2	771	485	55.0	55.0	34.5	15.1	1.04E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_065	14.5	7.29	34.6	1522	589	67.3	67.3	37.9	15.4	1.15E-04	5.39E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_066	14.4	7.27	34.2	1488	582	66.5	66.5	37.7	15.3	1.15E-04	5.38E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_067	14.6	7.30	34.3	1538	596	67.4	67.4	37.6	15.4	1.15E-04	5.41E-05	4.59	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_068	14.5	7.29	34.6	1536	592	67.6	67.6	37.9	15.4	1.15E-04	5.40E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_069	14.5	7.30	34.6	1546	594	67.6	67.6	37.8	15.4	1.16E-04	5.40E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_070	14.6	7.30	34.2	1522	595	67.1	67.1	37.6	15.4	1.15E-04	5.41E-05	4.59	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_071	14.0	7.23	31.5	1130	500	61.9	61.9	36.3	15.2	1.10E-04	5.34E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_072	14.3	7.26	32.8	1373	553	64.5	64.5	37.2	15.3	1.12E-04	5.37E-05	4.57	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_073	14.1	7.23	32.5	1276	504	61.6	61.6	37.0	15.2	1.10E-04	5.34E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_074	14.3	7.24	33.0	1319	513	62.6	62.6	37.2	15.3	1.11E-04	5.35E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_075	14.2	7.24	33.3	1324	521	63.3	63.3	37.4	15.3	1.12E-04	5.35E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_076	14.0	7.22	31.2	1121	494	61.2	61.2	36.3	15.2	1.09E-04	5.33E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_077	14.2	7.24	33.3	1341	514	62.3	62.3	37.3	15.2	1.12E-04	5.35E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_078	14.2	7.23	33.1	1332	510	61.6	61.6	37.3	15.2	1.12E-04	5.34E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_079	14.4	7.27	34.2	1400	532	65.2	65.2	37.8	15.3	1.14E-04	5.38E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_080	14.0	7.22	31.2	1124	496	61.3	61.3	36.3	15.2	1.09E-04	5.33E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_081	14.3	7.25	32.7	1349	547	64.2	64.2	37.1	15.3	1.11E-04	5.36E-05	4.57	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_082	14.4	7.27	34.0	1381	533	64.7	64.7	37.7	15.3	1.14E-04	5.38E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_083	14.2	7.24	33.3	1335	516	63.5	63.5	37.4	15.3	1.12E-04	5.35E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_084	14.4	7.26	33.4	1368	547	65.8	65.8	37.4	15.3	1.13E-04	5.37E-05	4.57	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_085	14.3	7.25	33.5	1363	517	62.8	62.8	37.4	15.3	1.12E-04	5.36E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_086	14.1	7.23	31.7	1135	504	62.3	62.3	36.3	15.2	1.10E-04	5.34E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_087	14.4	7.27	33.8	1382	538	64.7	64.7	37.7	15.3	1.13E-04	5.38E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_088	14.1	7.22	32.1	1232	501	61.4	61.4	36.8	15.2	1.10E-04	5.33E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_089	14.0	7.22	31.3	1126	498	61.6	61.6	36.3	15.2	1.10E-04	5.33E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_090	14.3	7.26	33.1	1370	552	65.1	65.1	37.3	15.3	1.12E-04	5.37E-05	4.57	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_091	14.4	7.27	33.6	1378	542	65.0	65.0	37.5	15.3	1.13E-04	5.37E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_092	14.2	7.24	32.5	1258	509	62.2	62.2	36.9	15.2	1.11E-04	5.35E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_093	14.5	7.28	34.5	1506	586	67.1	67.1	37.8	15.3	1.15E-04	5.39E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_094	14.6	7.30	34.4	1549	596	67.3	67.3	37.7	15.4	1.15E-04	5.41E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_095	14.4	7.26	34.6	1398	583	66.5	66.5	37.9	15.3	1.15E-04	5.37E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_096	14.6	7.27	34.8	1433	595	67.1	67.1	37.9	15.3	1.16E-04	5.38E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_097	14.1	7.23	32.1	1310	539	63.0	63.0	36.8	15.2	1.10E-04	5.34E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_098	14.1	7.23	32.4	1279	521	62.8	62.8	36.9	15.2	1.11E-04	5.34E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_099	14.1	7.21	32.4	1268	500	60.0	60.0	36.9	15.2	1.10E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_100	14.0	7.21	32.2	1251	496	60.2	60.2	36.8	15.2	1.10E-04	5.32E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_101	14.2	7.24	32.0	1351	556	63.3	63.3	36.6	15.2	1.11E-04	5.35E-05	4.57	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_102	13.9	7.20	31.3	1154	486	60.1	60.1	36.3	15.2	1.08E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_103	14.5	7.27	34.7	1423	589	67.1	67.1	37.9	15.3	1.16E-04	5.37E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_104	14.4	7.26	34.4	1404	576	67.1	67.1	37.8	15.3	1.15E-04	5.37E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_105	14.2	7.24	32.8	1408	567	64.1	64.1	36.9	15.3	1.12E-04	5.35E-05	4.57	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_106	14.1	7.23	32.3	1275	530	63.4	63.4	36.9	15.2	1.11E-04	5.34E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_107	14.0	7.21	31.9	1226	491	60.4	60.4	36.7	15.2	1.09E-04	5.32E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_108	14.3	7.25	34.1	1423	571	67.4	67.4	37.6	15.3	1.14E-04	5.36E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_109	14.0	7.21	31.1	1121	492	61.0	61.0	36.2	15.2	1.09E-04	5.32E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_110	14.2	7.23	32.9	1310	507	61.6	61.6	37.1	15.2	1.11E-04	5.34E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_111	14.6	7.24	35.4	1426	618	65.7	65.7	38.3	15.3	1.17E-04	5.35E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_112	14.5	7.23	34.0	1395	592	63.6	63.6	37.4	15.2	1.15E-04	5.34E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_113	14.5	7.23	34.2	1420	598	64.2	64.2	37.5	15.2	1.15E-04	5.34E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_114	14.4	7.22	34.2	1400	604	63.9	63.9	37.5	15.2	1.15E-04	5.33E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_115	14.4	7.22	34.1	1408	602	63.7	63.7	37.5	15.2	1.15E-04	5.33E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_116	14.9	7.25	37.6	1442	619	67.5	67.5	39.4	15.3	1.21E-04	5.36E-05	4.57	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_117	14.7	7.24	36.2	1438	619	66.4	66.4	38.7	15.3	1.19E-04	5.35E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_118	14.8	7.25	36.9	1442	619	66.8	66.8	39.1	15.3	1.20E-04	5.36E-05	4.57	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_119	14.5	7.24	34.7	1441	617	65.4	65.4	37.9	15.3	1.16E-04	5.35E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_120	14.4	7.22	34.2	1384	605	64.4	64.4	37.6	15.2	1.15E-04	5.33E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_121	14.5	7.23	34.5	1451	609	64.5	64.5	37.7	15.2	1.16E-04	5.34E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_122	13.4	7.16	28.7	861	467	56.3	56.3	34.8	15.1	1.04E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_123	14.5	7.24	34.7	1450	615	64.8	64.8	37.7	15.2	1.16E-04	5.35E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_124	14.5	7.23	34.4	1439	604	64.8	64.8	37.6	15.2	1.15E-04	5.34E-05	4.58	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_125	14.4	7.21	34.1	1409	599	63.6	63.6	37.4	15.2	1.15E-04	5.33E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_126	14.4	7.22	34.7	1395	606	65.1	65.1	37.9	15.2	1.16E-04	5.33E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_127	14.3	7.21	33.5	1350	581	62.8	62.8	37.2	15.2	1.14E-04	5.32E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_128	13.6	7.17	29.2	935	466	58.0	58.0	35.1	15.1	1.05E-04	5.28E-05	4.51	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_129	13.4	7.16	28.8	878	467	56.7	56.7	34.8	15.1	1.04E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_130	13.5	7.17	29.1	908	468	57.6	57.6	35.0	15.1	1.05E-04	5.28E-05	4.51	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_131	13.4	7.15	28.3	812	468	55.6	55.6	34.6	15.1	1.03E-04	5.27E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_132	13.4	7.17	28.6	798	497	56.1	56.1	34.7	15.1	1.05E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_133	13.4	7.16	28.4	800	497	54.9	54.9	34.6	15.1	1.05E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_134	13.3	7.15	28.2	761	481	55.0	55.0	34.5	15.1	1.03E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_135	13.9	7.20	30.8	1250	534	60.9	60.9	36.1	15.2	1.08E-04	5.31E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_136	13.8	7.18	30.9	1133	476	58.7	58.7	36.1	15.1	1.07E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_137	13.8	7.18	30.7	1111	473	58.6	58.6	36.0	15.1	1.07E-04	5.29E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_138	13.8	7.17	30.5	1085	469	58.5	58.5	35.9	15.1	1.06E-04	5.29E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_139	13.7	7.17	30.2	1048	468	58.3	58.3	35.8	15.1	1.06E-04	5.29E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_140	13.9	7.19	31.0	1223	523	60.7	60.7	36.2	15.1	1.08E-04	5.31E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_141	14.1	7.22	32.6	1257	507	62.0	62.0	37.0	15.2	1.11E-04	5.33E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_142	14.3	7.26	33.8	1394	522	62.8	62.8	37.6	15.3	1.13E-04	5.37E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_143	15.0	7.34	36.7	1582	627	71.0	71.0	38.8	15.5	1.20E-04	5.44E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_144	15.0	7.34	36.7	1589	626	71.5	71.5	38.9	15.5	1.20E-04	5.44E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_145	15.0	7.33	36.5	1561	624	70.7	70.7	38.8	15.5	1.20E-04	5.43E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_146	14.9	7.32	36.3	1548	621	70.4	70.4	38.7	15.4	1.20E-04	5.43E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_147	14.9	7.31	36.0	1518	616	69.6	69.6	38.5	15.4	1.19E-04	5.42E-05	4.59	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_148	14.8	7.31	35.8	1507	613	69.3	69.3	38.4	15.4	1.19E-04	5.41E-05	4.59	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_149	14.9	7.32	36.1	1528	619	69.9	69.9	38.6	15.4	1.19E-04	5.42E-05	4.59	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_150	14.8	7.30	35.7	1497	611	69.2	69.2	38.4	15.4	1.18E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_151	14.3	7.24	33.9	1337	569	65.3	65.3	37.5	15.2	1.14E-04	5.35E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_152	14.3	7.24	34.0	1359	574	65.2	65.2	37.6	15.3	1.14E-04	5.35E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_153	14.2	7.23	33.5	1367	560	66.0	66.0	37.3	15.2	1.13E-04	5.34E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_154	14.2	7.24	33.7	1352	564	65.8	65.8	37.4	15.2	1.14E-04	5.35E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_155	14.4	7.24	34.1	1377	580	65.7	65.7	37.6	15.3	1.15E-04	5.35E-05	4.57	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_156	14.1	7.23	33.3	1376	560	64.7	64.7	37.2	15.2	1.13E-04	5.34E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_157	14.1	7.23	32.9	1378	560	63.9	63.9	37.0	15.2	1.12E-04	5.34E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_158	14.1	7.23	32.5	1370	559	63.4	63.4	36.8	15.2	1.11E-04	5.34E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_159	14.1	7.22	31.9	1341	555	62.7	62.7	36.5	15.2	1.10E-04	5.33E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_160	14.0	7.22	31.6	1311	551	62.5	62.5	36.3	15.2	1.10E-04	5.33E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_161	14.0	7.22	31.3	1301	544	61.9	61.9	36.3	15.2	1.09E-04	5.33E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_162	14.0	7.22	31.5	1288	538	61.7	61.7	36.4	15.2	1.09E-04	5.33E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_163	14.0	7.21	31.7	1247	525	62.2	62.2	36.6	15.2	1.09E-04	5.32E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_164	14.0	7.21	31.6	1273	533	61.9	61.9	36.5	15.2	1.09E-04	5.33E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_165	14.0	7.21	31.8	1233	517	62.5	62.5	36.6	15.2	1.10E-04	5.32E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_166	14.0	7.21	32.0	1234	510	61.6	61.6	36.7	15.2	1.10E-04	5.32E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_167	14.0	7.21	32.0	1229	504	61.2	61.2	36.7	15.2	1.10E-04	5.32E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_168	14.0	7.21	32.1	1217	500	61.1	61.1	36.8	15.2	1.10E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_169	14.0	7.20	32.1	1224	500	60.8	60.8	36.8	15.2	1.10E-04	5.31E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_170	14.0	7.20	32.1	1233	498	60.0	60.0	36.7	15.2	1.10E-04	5.31E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_171	14.0	7.20	32.0	1232	496	59.4	59.4	36.7	15.2	1.10E-04	5.31E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_172	14.0	7.20	31.9	1223	492	59.3	59.3	36.6	15.2	1.09E-04	5.31E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_173	13.9	7.19	31.4	1180	484	59.6	59.6	36.4	15.1	1.08E-04	5.31E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_174	13.9	7.19	31.2	1154	480	59.5	59.5	36.3	15.1	1.08E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_175	13.9	7.19	31.0	1128	477	59.4	59.4	36.2	15.1	1.07E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_176	13.8	7.19	30.7	1098	476	59.1	59.1	36.0	15.1	1.07E-04	5.30E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_177	13.9	7.19	31.7	1205	488	59.5	59.5	36.5	15.1	1.09E-04	5.31E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_178	13.8	7.19	30.4	1065	474	59.4	59.4	35.9	15.1	1.06E-04	5.30E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_179	14.1	7.21	33.1	1293	552	64.1	64.1	37.1	15.2	1.12E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_180	14.1	7.21	32.9	1308	549	64.1	64.1	37.0	15.2	1.12E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_181	14.1	7.21	33.2	1277	556	63.8	63.8	37.2	15.2	1.13E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_182	14.2	7.21	33.3	1297	560	63.7	63.7	37.2	15.2	1.13E-04	5.33E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_183	14.0	7.21	32.7	1316	549	63.2	63.2	36.9	15.2	1.12E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_184	13.3	7.15	28.1	790	493	54.4	54.4	34.5	15.0	1.04E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_185	13.3	7.15	28.1	782	489	54.3	54.3	34.4	15.0	1.04E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_186	13.3	7.15	28.0	774	485	54.2	54.2	34.4	15.0	1.04E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_187	13.3	7.15	27.9	765	482	54.0	54.0	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_188	13.2	7.14	27.9	754	478	53.9	53.9	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_189	13.2	7.14	27.8	741	473	53.7	53.7	34.3	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_190	13.4	7.15	28.4	788	504	53.8	53.8	34.5	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_191	13.4	7.15	28.2	788	501	53.7	53.7	34.5	15.0	1.05E-04	5.26E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_192	13.3	7.14	28.1	788	498	53.6	53.6	34.4	15.0	1.04E-04	5.26E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_193	13.3	7.14	28.1	786	495	53.4	53.4	34.4	15.0	1.04E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_194	13.3	7.14	28.0	783	492	53.4	53.4	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_195	13.3	7.14	27.9	779	489	53.4	53.4	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_196	13.3	7.14	27.9	773	486	53.4	53.4	34.3	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_197	13.3	7.14	27.8	769	483	53.4	53.4	34.3	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_198	13.2	7.14	27.8	764	481	53.4	53.4	34.3	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_199	13.2	7.14	27.7	759	479	53.4	53.4	34.3	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_200	13.2	7.14	27.7	753	477	53.4	53.4	34.3	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_201	13.2	7.14	27.7	748	475	53.4	53.4	34.3	15.0	1.03E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_202	13.2	7.15	28.0	752	481	55.5	55.5	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_203	13.2	7.15	28.0	747	479	55.5	55.5	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_204	13.2	7.15	27.9	740	476	55.4	55.4	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_205	13.2	7.14	27.8	733	473	55.1	55.1	34.3	15.0	1.02E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_206	13.2	7.14	27.8	724	469	55.0	55.0	34.3	15.0	1.02E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_207	13.2	7.14	27.8	714	466	54.7	54.7	34.3	15.0	1.02E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_208	13.2	7.14	27.7	712	462	54.5	54.5	34.3	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_209	13.2	7.14	27.7	709	462	54.2	54.2	34.3	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_210	13.2	7.14	27.6	707	462	54.0	54.0	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_211	13.2	7.14	27.6	708	463	53.7	53.7	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_212	13.2	7.14	27.5	710	464	53.3	53.3	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_213	13.2	7.14	27.5	712	465	53.1	53.1	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_214	13.2	7.13	27.5	714	465	53.1	53.1	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_215	13.1	7.13	27.5	716	466	53.1	53.1	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_216	13.2	7.14	27.9	755	482	55.2	55.2	34.3	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_217	13.2	7.14	27.9	749	481	55.1	55.1	34.3	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_218	13.2	7.14	27.8	742	480	55.1	55.1	34.3	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_219	13.2	7.14	27.8	739	479	55.1	55.1	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_220	13.2	7.14	27.8	736	477	54.9	54.9	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_221	13.2	7.14	27.7	733	475	54.8	54.8	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_222	13.2	7.14	27.7	730	474	54.8	54.8	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_223	13.2	7.14	27.7	726	472	54.8	54.8	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_224	13.1	7.14	27.6	719	469	54.7	54.7	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_225	13.1	7.14	27.6	713	466	54.6	54.6	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_226	13.1	7.14	27.6	703	463	54.4	54.4	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_227	13.1	7.13	27.5	696	460	54.2	54.2	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_228	13.1	7.13	27.5	690	457	53.9	53.9	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_229	13.1	7.13	27.5	688	454	53.8	53.8	34.2	15.0	1.02E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_230	13.1	7.13	27.4	687	454	53.5	53.5	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_231	13.1	7.13	27.4	688	454	53.3	53.3	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_232	13.1	7.13	27.4	689	455	53.1	53.1	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413

GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE511500_233	13.1	7.13	27.3	691	456	52.8	52.8	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_234	13.3	7.15	28.2	778	470	55.4	55.4	34.6	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_235	13.3	7.15	28.1	763	470	55.4	55.4	34.5	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_236	13.3	7.15	28.0	768	471	55.5	55.5	34.5	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_237	13.3	7.15	27.9	773	471	55.7	55.7	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_238	13.3	7.15	27.9	775	473	55.8	55.8	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_239	13.2	7.14	27.8	776	474	55.9	55.9	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_240	13.2	7.14	27.8	776	475	55.6	55.6	34.3	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_241	13.2	7.14	27.8	774	476	55.2	55.2	34.3	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_242	13.2	7.14	27.8	772	477	54.9	54.9	34.3	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_243	13.2	7.14	27.7	751	479	54.6	54.6	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_244	13.2	7.14	27.7	745	477	54.4	54.4	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_245	13.2	7.14	27.7	740	477	54.3	54.3	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_246	13.2	7.14	27.6	737	476	54.3	54.3	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_247	13.2	7.13	27.6	730	475	54.3	54.3	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_259	13.1	7.12	27.1	695	460	52.1	52.1	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_260	13.1	7.12	27.0	694	459	52.0	52.0	34.0	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_261	13.1	7.12	27.0	696	459	52.0	52.0	34.0	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_262	13.1	7.12	27.0	698	460	52.0	52.0	34.0	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_263	13.1	7.12	27.0	699	459	52.0	52.0	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_264	13.1	7.12	26.9	700	459	51.9	51.9	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_265	13.1	7.12	26.9	703	459	51.9	51.9	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_266	13.1	7.12	26.9	704	458	51.9	51.9	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_267	13.0	7.12	26.9	706	458	51.8	51.8	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_268	13.0	7.12	26.8	707	457	51.7	51.7	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_269	13.0	7.12	26.8	705	455	51.6	51.6	33.8	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_270	13.0	7.12	26.7	702	454	51.6	51.6	33.8	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_288	13.1	7.11	27.0	731	458	50.9	50.9	33.8	15.0	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_289	13.1	7.11	27.0	734	456	50.9	50.9	33.8	15.0	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_313	13.1	7.11	27.0	707	466	51.8	51.8	33.9	15.0	1.01E-04	5.23E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_314	13.1	7.11	27.0	712	468	51.8	51.8	33.9	15.0	1.01E-04	5.23E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_315	13.1	7.11	27.0	714	469	51.6	51.6	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_316	13.1	7.12	27.0	714	470	51.5	51.5	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_317	13.1	7.12	27.1	711	471	51.4	51.4	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_318	13.1	7.12	27.1	715	470	51.3	51.3	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_319	13.1	7.12	27.0	729	469	51.1	51.1	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_320	13.1	7.12	27.1	719	471	52.3	52.3	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_321	13.1	7.12	27.2	726	473	52.3	52.3	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_322	13.1	7.12	27.2	731	475	52.3	52.3	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_323	13.2	7.12	27.2	734	477	52.2	52.2	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_324	13.2	7.12	27.3	735	479	52.1	52.1	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_325	13.1	7.13	27.3	730	466	52.3	52.3	34.1	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_326	13.1	7.13	27.2	729	465	52.3	52.3	34.1	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_327	13.1	7.13	27.2	728	465	52.2	52.2	34.0	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_328	13.1	7.12	27.1	727	464	52.1	52.1	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_329	13.1	7.12	27.1	727	464	52.1	52.1	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_330	13.1	7.12	27.1	728	465	52.0	52.0	34.0	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_331	13.1	7.12	27.0	728	465	52.0	52.0	34.0	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_332	13.1	7.12	27.0	727	465	51.9	51.9	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_333	13.1	7.12	27.0	726	465	52.0	52.0	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_334	13.1	7.12	27.0	724	465	52.0	52.0	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_335	13.1	7.12	27.0	720	464	52.0	52.0	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_336	13.1	7.12	26.9	716	463	52.0	52.0	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_337	13.1	7.12	26.9	710	462	51.9	51.9	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_338	13.1	7.12	26.9	708	461	51.9	51.9	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_339	13.1	7.12	27.2	746	463	51.0	51.0	33.9	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_340	13.3	7.13	27.7	761	491	52.6	52.6	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_341	13.2	7.13	27.6	755	489	52.5	52.5	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_342	13.2	7.13	27.5	753	486	52.3	52.3	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_343	13.2	7.12	27.5	751	484	52.2	52.2	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_344	13.2	7.12	27.4	750	483	52.1	52.1	34.1	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_345	13.2	7.12	27.4	744	481	51.9	51.9	34.1	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_346	13.2	7.12	27.3	736	478	51.8	51.8	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_347	13.3	7.13	27.9	776	496	52.9	52.9	34.2	15.0	1.04E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_348	13.3	7.13	27.8	775	495	52.9	52.9	34.2	15.0	1.04E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RE511500_349	13.3	7.13	27.8	772	493	52.9	52.9	34.2	15.0	1.04E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_350	13.3	7.13	27.7	768	492	52.9	52.9	34.2	15.0	1.04E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_351	13.2	7.13	27.7	763	489	52.9	52.9	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_352	13.2	7.13	27.6	758	487	52.8	52.8	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_353	13.2	7.13	27.5	750	485	52.7	52.7	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_354	13.2	7.13	27.4	743	482	52.6	52.6	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_355	13.2	7.13	27.3	740	479	52.5	52.5	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_356	13.2	7.13	27.3	741	476	52.4	52.4	34.0	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_357	13.3	7.14	28.1	783	499	53.3	53.3	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_358	13.3	7.14	28.0	778	497	53.2	53.2	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_359	13.3	7.14	27.9	773	495	53.2	53.2	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_360	13.3	7.14	27.9	767	493	53.1	53.1	34.3	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_361	13.3	7.13	27.8	762	491	53.0	53.0	34.2	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_362	13.3	7.13	27.7	756	489	52.9	52.9	34.2	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_363	13.2	7.13	27.7	756	487	52.8	52.8	34.2	15.0	1.03E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_364	13.2	7.13	27.6	757	485	52.7	52.7	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_365	13.2	7.13	27.6	757	483	52.7	52.7	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_366	13.2	7.13	27.5	757	481	52.6	52.6	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_367	13.2	7.13	27.5	755	479	52.6	52.6	34.2	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_368	13.2	7.13	27.5	754	477	52.5	52.5	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_369	13.2	7.13	27.4	754	486	52.6	52.6	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_370	13.2	7.12	27.4	751	484	52.7	52.7	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_371	13.2	7.12	27.4	748	482	52.7	52.7	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_372	13.2	7.12	27.3	743	480	52.6	52.6	34.1	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_373	13.2	7.12	27.3	736	478	52.5	52.5	34.1	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_374	13.1	7.12	27.2	728	475	52.4	52.4	34.0	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_376	13.1	7.11	26.9	718	464	51.0	51.0	33.9	15.0	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_001	14.1	7.20	32.8	1258	552	62.9	62.9	37.0	15.2	1.12E-04	5.31E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_002	13.8	7.18	30.9	1154	502	60.3	60.3	36.2	15.1	1.08E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_003	13.8	7.18	30.7	1189	516	59.9	59.9	36.0	15.1	1.08E-04	5.30E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_004	13.8	7.17	30.8	1130	477	58.0	58.0	36.1	15.1	1.07E-04	5.28E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_005	13.6	7.16	29.1	941	462	57.6	57.6	35.2	15.1	1.05E-04	5.27E-05	4.51	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_006	13.5	7.16	28.9	880	464	57.0	57.0	34.9	15.1	1.04E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_007	13.8	7.18	31.2	1236	532	60.0	60.0	36.1	15.1	1.09E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_008	13.7	7.16	30.6	1115	489	58.6	58.6	36.0	15.1	1.07E-04	5.28E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_009	13.9	7.18	32.0	1223	531	61.7	61.7	36.5	15.1	1.10E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_010	13.9	7.18	32.2	1194	539	61.9	61.9	36.7	15.1	1.11E-04	5.29E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_011	13.7	7.17	30.2	1152	509	58.4	58.4	35.8	15.1	1.07E-04	5.28E-05	4.54	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_012	13.7	7.17	30.1	1173	518	58.7	58.7	35.7	15.1	1.06E-04	5.28E-05	4.54	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_013	13.8	7.17	30.7	1218	530	59.4	59.4	35.9	15.1	1.08E-04	5.29E-05	4.54	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_014	13.7	7.17	30.4	1115	499	58.9	58.9	35.9	15.1	1.07E-04	5.28E-05	4.54	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_015	13.8	7.18	31.6	1237	532	61.0	61.0	36.4	15.1	1.10E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_016	13.8	7.17	30.1	1179	525	59.1	59.1	35.6	15.1	1.07E-04	5.29E-05	4.54	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_017	13.4	7.15	28.7	871	465	56.5	56.5	34.8	15.1	1.04E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_018	14.5	7.20	35.4	1379	584	65.6	65.6	38.2	15.2	1.17E-04	5.32E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_019	14.2	7.20	33.5	1333	588	62.7	62.7	37.3	15.2	1.14E-04	5.31E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_020	14.2	7.20	33.5	1347	588	62.7	62.7	37.1	15.2	1.14E-04	5.31E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_021	14.1	7.19	32.1	1228	556	61.8	61.8	36.6	15.1	1.11E-04	5.30E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_022	14.2	7.19	33.4	1358	584	62.7	62.7	37.1	15.1	1.14E-04	5.31E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_023	14.2	7.19	33.0	1302	569	61.7	61.7	36.9	15.1	1.13E-04	5.30E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_024	14.3	7.21	32.9	1263	570	63.4	63.4	36.9	15.2	1.12E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_025	14.3	7.20	34.3	1346	587	64.6	64.6	37.8	15.2	1.15E-04	5.31E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_026	14.2	7.19	32.7	1262	561	61.9	61.9	36.8	15.1	1.12E-04	5.30E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_027	14.2	7.19	33.5	1356	587	62.7	62.7	37.1	15.2	1.14E-04	5.31E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_028	14.0	7.20	32.7	1252	545	63.2	63.2	36.9	15.2	1.12E-04	5.31E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_029	14.0	7.20	32.5	1271	541	63.0	63.0	36.8	15.2	1.11E-04	5.31E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_030	13.9	7.19	32.2	1282	542	61.9	61.9	36.6	15.1	1.11E-04	5.31E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_031	13.9	7.19	31.8	1282	542	61.1	61.1	36.4	15.1	1.10E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_032	13.5	7.16	29.0	909	462	57.4	57.4	35.0	15.1	1.04E-04	5.27E-05	4.51	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_033	13.4	7.16	28.8	872	465	56.7	56.7	34.8	15.1	1.04E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_034	14.4	7.20	34.7	1344	586	65.1	65.1	38.0	15.2	1.16E-04	5.32E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_035	13.8	7.16	30.8	1101	482	58.4	58.4	36.1	15.1	1.07E-04	5.28E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_036	14.2	7.19	33.2	1331	576	61.8	61.8	37.0	15.1	1.13E-04	5.30E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_037	14.2	7.19	32.4	1220	560	62.1	62.1	36.7	15.1	1.11E-04	5.30E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_038	14.3	7.21	33.2	1309	573	63.0	63.0	37.1	15.2	1.13E-04	5.32E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413

GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511600_039	14.1	7.19	32.1	1211	559	62.1	62.1	36.5	15.1	1.11E-04	5.30E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_040	14.3	7.20	33.9	1343	588	63.5	63.5	37.6	15.2	1.14E-04	5.31E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_041	13.9	7.19	31.0	1251	538	60.2	60.2	36.0	15.1	1.08E-04	5.30E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_042	13.9	7.19	30.5	1219	534	60.1	60.1	35.8	15.1	1.08E-04	5.30E-05	4.55	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_043	13.8	7.18	30.8	1164	509	60.3	60.3	36.1	15.1	1.08E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_044	13.8	7.19	30.4	1217	528	59.9	59.9	35.9	15.1	1.07E-04	5.30E-05	4.55	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_045	13.8	7.18	30.6	1206	522	59.8	59.8	36.0	15.1	1.07E-04	5.30E-05	4.55	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_046	14.7	7.21	36.7	1439	583	66.1	66.1	38.9	15.2	1.20E-04	5.32E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_047	14.2	7.19	33.3	1350	581	62.6	62.6	37.1	15.1	1.13E-04	5.31E-05	4.56	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_048	14.3	7.21	32.6	1266	568	63.1	63.1	36.9	15.2	1.12E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_049	14.6	7.21	36.0	1409	582	65.5	65.5	38.5	15.2	1.18E-04	5.32E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_050	13.8	7.18	31.0	1155	495	59.9	59.9	36.2	15.1	1.08E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_051	13.8	7.18	31.1	1150	488	59.6	59.6	36.3	15.1	1.08E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_052	13.8	7.18	31.2	1138	488	59.5	59.5	36.3	15.1	1.08E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_053	13.8	7.17	31.2	1144	488	58.8	58.8	36.3	15.1	1.08E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_054	13.8	7.17	31.2	1153	486	58.2	58.2	36.3	15.1	1.08E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_055	13.8	7.17	31.1	1154	484	57.8	57.8	36.2	15.1	1.08E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_056	13.8	7.17	31.0	1145	481	57.8	57.8	36.2	15.1	1.08E-04	5.28E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_057	13.8	7.17	30.6	1109	473	58.2	58.2	36.0	15.1	1.07E-04	5.28E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_058	13.7	7.17	30.4	1082	469	58.0	58.0	35.9	15.1	1.06E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_059	13.7	7.16	30.1	1043	464	57.6	57.6	35.7	15.1	1.06E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_060	13.9	7.19	31.4	1273	541	60.5	60.5	36.2	15.1	1.09E-04	5.30E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_061	13.7	7.16	30.7	1091	481	58.0	58.0	36.0	15.1	1.07E-04	5.27E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_062	13.7	7.16	30.6	1083	479	57.6	57.6	36.0	15.1	1.07E-04	5.27E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_085	13.2	7.13	27.7	754	459	54.1	54.1	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_086	13.2	7.13	27.7	753	461	54.2	54.2	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_087	13.3	7.14	27.7	751	462	54.3	54.3	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_091	13.6	7.15	29.5	994	457	56.5	56.5	35.4	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_092	13.5	7.14	29.1	951	457	56.6	56.6	35.2	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_093	13.5	7.14	28.7	918	456	56.6	56.6	35.0	15.0	1.04E-04	5.26E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_094	13.4	7.14	28.6	884	456	56.4	56.4	34.8	15.0	1.03E-04	5.26E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_095	13.4	7.14	28.5	848	456	56.2	56.2	34.7	15.0	1.03E-04	5.25E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_096	13.3	7.14	28.3	832	457	55.9	55.9	34.6	15.0	1.03E-04	5.25E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_097	13.3	7.14	28.2	830	457	55.6	55.6	34.6	15.0	1.03E-04	5.25E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_098	13.3	7.14	28.2	822	456	55.1	55.1	34.5	15.0	1.03E-04	5.25E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_099	13.3	7.14	28.1	810	453	54.9	54.9	34.5	15.0	1.02E-04	5.25E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_100	13.3	7.13	28.0	797	453	54.6	54.6	34.4	15.0	1.02E-04	5.25E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_101	13.7	7.16	30.5	1101	474	57.2	57.2	35.9	15.1	1.07E-04	5.27E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_102	13.7	7.16	30.3	1082	469	57.4	57.4	35.8	15.1	1.06E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_103	13.7	7.15	30.1	1060	466	57.5	57.5	35.7	15.1	1.06E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_104	13.6	7.15	29.9	1034	462	57.3	57.3	35.6	15.1	1.05E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_105	13.6	7.15	29.6	1001	460	56.8	56.8	35.5	15.1	1.05E-04	5.27E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_106	13.6	7.15	29.2	960	459	57.1	57.1	35.3	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_107	13.5	7.15	28.9	932	459	57.0	57.0	35.1	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_108	13.5	7.15	28.8	901	458	56.8	56.8	34.9	15.0	1.04E-04	5.26E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_109	13.4	7.15	28.6	868	458	56.6	56.6	34.8	15.0	1.04E-04	5.26E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_110	13.4	7.15	28.5	847	460	56.3	56.3	34.7	15.0	1.03E-04	5.26E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_111	13.3	7.14	28.4	846	460	55.9	55.9	34.7	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_112	13.3	7.14	28.3	840	459	55.7	55.7	34.6	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_113	13.3	7.14	28.3	832	458	55.5	55.5	34.6	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_114	13.3	7.14	28.2	820	455	55.1	55.1	34.6	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_115	13.3	7.14	28.1	801	457	54.9	54.9	34.5	15.0	1.02E-04	5.25E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_116	13.4	7.15	28.6	867	464	56.4	56.4	34.8	15.1	1.03E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_117	13.4	7.15	28.6	860	463	56.3	56.3	34.7	15.1	1.03E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_118	13.4	7.15	28.5	849	462	55.9	55.9	34.7	15.0	1.03E-04	5.27E-05	4.50	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_119	13.4	7.15	28.4	838	462	55.7	55.7	34.7	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_120	13.4	7.15	28.4	827	463	55.6	55.6	34.6	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_121	13.3	7.15	28.3	821	463	55.4	55.4	34.6	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_122	13.3	7.15	28.2	812	463	55.1	55.1	34.6	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_123	13.3	7.15	28.1	801	464	54.9	54.9	34.5	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_124	13.3	7.14	28.1	787	465	54.9	54.9	34.5	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_125	13.3	7.14	28.0	772	465	54.8	54.8	34.5	15.0	1.03E-04	5.26E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_126	13.3	7.14	27.9	755	466	54.7	54.7	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_127	13.3	7.14	27.8	749	467	54.6	54.6	34.4	15.0	1.03E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_128	13.2	7.14	27.8	754	467	54.8	54.8	34.3	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511600_129	13.2	7.14	27.7	757	468	55.0	55.0	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_130	13.2	7.14	27.6	759	469	55.1	55.1	34.3	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_131	13.2	7.14	27.6	759	470	54.8	54.8	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_132	13.2	7.13	27.5	741	463	54.4	54.4	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_133	13.2	7.13	27.4	734	462	54.2	54.2	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_134	13.2	7.13	27.4	728	461	54.0	54.0	34.2	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_142	13.1	7.13	27.4	736	470	53.6	53.6	34.1	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_143	13.1	7.13	27.4	735	468	53.5	53.5	34.1	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_144	13.1	7.13	27.3	733	467	53.5	53.5	34.0	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_163	13.1	7.12	27.3	714	468	53.0	53.0	34.0	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_164	13.1	7.12	27.3	716	469	53.2	53.2	34.0	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_185	13.2	7.13	27.6	724	474	54.2	54.2	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_186	13.1	7.13	27.6	722	473	54.2	54.2	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_187	13.1	7.13	27.5	720	473	54.2	54.2	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_188	13.1	7.13	27.5	717	470	54.2	54.2	34.1	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_189	13.1	7.13	27.4	714	469	54.1	54.1	34.1	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_190	13.1	7.13	27.4	707	466	54.1	54.1	34.1	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_191	13.1	7.13	27.4	701	464	54.0	54.0	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_192	13.1	7.13	27.3	699	462	53.9	53.9	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_193	13.1	7.13	27.3	692	459	53.8	53.8	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_194	13.1	7.13	27.3	684	456	53.6	53.6	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_195	13.1	7.13	27.3	676	454	53.5	53.5	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_196	13.1	7.13	27.3	668	451	53.3	53.3	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_197	13.1	7.12	27.2	666	449	53.1	53.1	34.1	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_198	13.2	7.13	27.6	747	474	54.2	54.2	34.2	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_199	13.2	7.13	27.5	739	474	53.9	53.9	34.1	15.0	1.02E-04	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_200	13.1	7.13	27.5	731	473	53.8	53.8	34.1	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_201	13.1	7.13	27.5	726	473	53.8	53.8	34.1	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_202	13.1	7.13	27.4	720	472	53.8	53.8	34.1	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_203	13.1	7.13	27.4	714	471	53.7	53.7	34.1	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_204	13.1	7.13	27.4	709	470	53.7	53.7	34.1	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_205	13.1	7.13	27.3	707	468	53.7	53.7	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_206	13.1	7.13	27.3	704	466	53.7	53.7	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_207	13.1	7.13	27.2	699	464	53.6	53.6	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_208	13.1	7.12	27.2	700	463	53.3	53.3	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_209	13.1	7.12	27.1	694	461	53.3	53.3	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_210	13.1	7.12	27.1	686	458	53.3	53.3	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_211	13.0	7.12	27.1	678	455	53.2	53.2	34.0	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_212	13.0	7.12	27.1	667	451	53.0	53.0	34.0	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_228	13.7	7.16	31.2	1162	518	59.9	59.9	36.1	15.1	1.09E-04	5.27E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_242	13.3	7.14	28.1	811	456	55.0	55.0	34.5	15.0	1.02E-04	5.25E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511800_001	12.9	7.10	26.4	557	408	49.7	49.7	33.6	14.9	9.77E-05	5.19E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512000_002	14.1	7.33	31.5	531	417	49.6	49.6	33.5	14.9	9.77E-05	5.24E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512000_003	14.0	7.34	31.5	536	417	49.5	49.5	33.5	14.9	9.78E-05	5.24E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512100_001	14.0	7.39	31.3	540	422	50.1	50.1	33.7	14.9	9.89E-05	5.25E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512100_002	14.0	7.42	31.6	538	422	50.0	50.0	33.7	14.9	9.88E-05	5.26E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512200_001	14.0	7.41	31.4	535	421	50.0	50.0	33.7	14.9	9.87E-05	5.25E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512200_002	14.0	7.32	31.2	554	416	49.6	49.6	33.6	14.9	9.80E-05	5.23E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512200_003	13.8	7.27	30.4	536	412	49.5	49.5	33.6	14.9	9.78E-05	5.22E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512300_001	13.8	7.37	30.3	529	417	49.8	49.8	33.7	14.9	9.80E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512400_001	13.6	7.28	29.0	522	413	49.6	49.6	33.7	14.9	9.75E-05	5.22E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514400_001	13.2	7.11	27.3	579	457	50.8	50.8	34.1	14.9	9.93E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514400_003	12.9	7.08	26.9	573	421	51.7	51.7	34.0	14.9	9.87E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514400_006	12.9	7.08	26.5	573	417	51.7	51.7	33.9	14.9	9.82E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514400_007	12.9	7.08	26.7	569	419	51.6	51.6	33.9	14.9	9.85E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_001	13.2	7.12	27.6	582	466	51.2	51.2	34.3	14.9	1.00E-04	5.20E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_002	13.3	7.12	27.7	592	469	51.8	51.8	34.4	14.9	1.00E-04	5.20E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_003	13.4	7.13	28.2	617	480	52.6	52.6	34.7	15.0	1.01E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_006	13.1	7.08	27.2	652	425	52.3	52.3	34.4	14.9	9.92E-05	5.19E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_007	13.1	7.09	27.4	654	424	52.7	52.7	34.5	14.9	9.95E-05	5.19E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_008	13.0	7.08	27.1	576	422	51.7	51.7	34.1	14.9	9.90E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_009	13.0	7.09	27.2	572	421	51.3	51.3	34.2	14.9	9.92E-05	5.19E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_010	13.0	7.09	27.2	569	421	51.2	51.2	34.2	14.9	9.95E-05	5.19E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_001	13.5	7.16	29.1	697	490	53.7	53.7	35.1	15.0	1.03E-04	5.22E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_002	13.1	7.09	27.5	657	424	52.9	52.9	34.6	14.9	9.98E-05	5.19E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE514600_003	13.1	7.09	27.8	662	424	53.3	53.3	34.6	14.9	1.00E-04	5.19E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_004	13.1	7.09	28.0	663	424	53.6	53.6	34.7	14.9	1.01E-04	5.20E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_005	13.1	7.10	28.1	672	422	54.0	54.0	34.8	14.9	1.01E-04	5.20E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_006	13.2	7.10	28.4	680	424	54.2	54.2	34.9	14.9	1.01E-04	5.20E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514700_001	13.5	7.12	29.8	845	457	56.6	56.6	36.0	15.0	1.03E-04	5.22E-05	4.52	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514800_001	14.5	7.36	34.8	724	501	61.9	61.9	38.2	15.4	1.13E-04	5.36E-05	4.49	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515000_001	14.7	7.60	35.8	815	529	67.5	67.5	39.0	16.1	1.14E-04	5.58E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515100_001	13.9	7.40	30.6	631	460	58.9	58.9	36.1	15.6	1.05E-04	5.44E-05	4.48	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515200_001	13.6	7.30	29.4	623	435	54.3	54.3	35.0	15.4	1.03E-04	5.38E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515200_002	13.7	7.33	29.9	612	440	56.7	56.7	35.4	15.5	1.03E-04	5.39E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515200_003	13.7	7.31	30.2	615	457	58.4	58.4	36.0	15.5	1.04E-04	5.36E-05	4.48	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515300_001	13.5	7.26	29.1	660	448	54.0	54.0	34.9	15.3	1.03E-04	5.34E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515300_002	13.1	7.16	26.7	529	411	52.6	52.6	33.9	15.1	9.80E-05	5.25E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515300_003	13.4	7.23	27.9	608	426	55.4	55.4	34.8	15.3	1.01E-04	5.30E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE516200_001	12.7	7.07	24.9	471	392	48.7	48.7	33.0	14.9	9.54E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE517200_001	13.7	7.30	29.8	483	401	49.5	49.5	33.7	15.0	9.77E-05	5.21E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE517200_002	13.7	7.29	29.7	483	401	49.5	49.5	33.7	15.0	9.77E-05	5.21E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE517200_003	13.0	7.17	26.5	464	395	48.4	48.4	33.4	14.9	9.63E-05	5.19E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE517400_001	12.7	7.10	25.2	468	397	48.3	48.3	33.5	14.9	9.63E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE519100_001	12.9	7.08	26.1	502	419	50.2	50.2	34.2	14.9	9.85E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE519500_001	13.1	7.18	27.0	537	428	51.2	51.2	34.6	15.0	9.96E-05	5.23E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE519500_002	13.4	7.27	28.6	547	426	51.1	51.1	34.5	15.1	9.96E-05	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE521400_001	13.5	7.17	28.5	669	520	59.0	59.0	35.9	15.2	1.07E-04	5.30E-05	4.48	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE521600_001	15.4	7.43	37.0	1196	695	89.3	89.3	44.9	16.4	1.34E-04	5.69E-05	4.57	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_002	13.9	7.21	30.4	740	548	61.0	61.0	36.8	15.3	1.11E-04	5.36E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_003	14.4	7.34	32.7	844	583	64.2	64.2	37.5	15.5	1.17E-04	5.49E-05	4.49	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_004	17.8	7.93	49.9	2136	987	116.9	116.9	56.4	18.2	1.79E-04	6.35E-05	4.70	1.54	0.17	6.57E-02	2.59	0.55	0.32	2.54E-02	1.37E-02
RE521600_005	16.2	7.62	40.6	1472	772	103.7	103.7	48.4	17.0	1.49E-04	5.91E-05	4.61	1.52	0.16	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE521600_006	15.9	7.55	38.8	1312	726	96.3	96.3	46.2	16.7	1.42E-04	5.82E-05	4.59	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE521600_007	15.8	7.55	38.4	1296	712	94.7	94.7	45.8	16.7	1.41E-04	5.80E-05	4.58	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE521600_008	15.4	7.53	37.5	931	621	80.1	80.1	42.7	16.1	1.26E-04	5.62E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_009	16.0	7.59	40.3	1347	726	93.1	93.1	45.6	16.6	1.41E-04	5.77E-05	4.58	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE521600_010	14.9	7.50	34.7	944	563	75.0	75.0	40.4	16.0	1.19E-04	5.58E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_011	14.1	7.33	31.5	851	515	66.3	66.3	38.5	15.6	1.13E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_012	14.1	7.25	31.2	764	539	68.0	68.0	38.8	15.5	1.13E-04	5.40E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_013	14.2	7.23	32.1	1007	605	71.5	71.5	40.4	15.6	1.21E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_017	13.8	7.26	29.6	647	507	63.1	63.1	37.3	15.4	1.09E-04	5.41E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_018	13.9	7.17	30.8	889	573	67.5	67.5	39.0	15.4	1.16E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_019	14.0	7.21	31.3	844	577	67.9	67.9	39.5	15.5	1.16E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_020	14.0	7.20	31.2	896	589	68.4	68.4	39.4	15.5	1.17E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_023	14.5	7.28	33.1	1063	642	75.0	75.0	41.5	15.8	1.23E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_026	14.1	7.22	31.4	867	583	68.6	68.6	39.6	15.5	1.17E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_028	14.1	7.22	31.5	922	599	69.6	69.6	39.9	15.6	1.18E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_030	14.0	7.22	31.1	861	565	69.8	69.8	39.4	15.5	1.17E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_032	14.4	7.25	32.6	1058	627	73.8	73.8	41.1	15.7	1.23E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_035	13.8	7.18	30.6	850	573	66.5	66.5	39.0	15.4	1.16E-04	5.35E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_036	14.1	7.23	31.8	865	576	70.3	70.3	40.0	15.6	1.18E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_037	14.0	7.18	31.3	967	569	68.5	68.5	39.5	15.4	1.18E-04	5.36E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_038	14.1	7.22	31.9	992	602	71.4	71.4	40.1	15.5	1.20E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_039	14.1	7.24	31.6	903	566	72.9	72.9	40.0	15.6	1.18E-04	5.44E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_041	14.0	7.20	31.3	942	588	69.5	69.5	39.6	15.5	1.18E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_043	13.9	7.20	31.0	866	581	68.0	68.0	39.3	15.5	1.17E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_044	14.1	7.22	31.7	969	606	70.6	70.6	40.2	15.6	1.20E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_045	14.4	7.26	32.8	1074	633	75.1	75.1	41.3	15.7	1.24E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_046	14.3	7.24	33.0	1091	604	73.1	73.1	40.9	15.6	1.23E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_047	13.4	7.15	28.9	876	518	62.4	62.4	37.4	15.3	1.09E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_048	13.4	7.15	28.9	876	517	62.6	62.6	37.4	15.3	1.09E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_049	13.4	7.14	28.9	874	517	62.8	62.8	37.4	15.3	1.09E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_050	13.5	7.15	29.2	922	536	65.0	65.0	37.9	15.3	1.10E-04	5.31E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_051	13.5	7.15	29.2	912	532	64.6	64.6	37.7	15.3	1.10E-04	5.31E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_052	13.5	7.15	29.2	908	531	64.4	64.4	37.7	15.3	1.10E-04	5.32E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_053	13.5	7.15	29.2	909	531	64.4	64.4	37.7	15.3	1.10E-04	5.32E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_054	13.5	7.16	29.3	913	533	64.6	64.6	37.8	15.3	1.11E-04	5.32E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_055	13.6	7.17	30.0	979	559	66.8	66.8	38.4	15.4	1.13E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_056	13.6	7.17	30.0	975	559	67.0	67.0	38.4	15.4	1.13E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE521600_057	13.6	7.17	29.9	970	556	67.0	67.0	38.4	15.4	1.12E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_058	13.6	7.16	29.8	965	555	66.9	66.9	38.3	15.3	1.12E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_059	13.5	7.16	29.7	965	554	66.6	66.6	38.3	15.3	1.12E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_060	13.6	7.17	30.1	999	568	67.8	67.8	38.7	15.4	1.13E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_061	13.6	7.18	30.2	1014	575	68.5	68.5	38.8	15.4	1.14E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_062	13.6	7.18	30.4	1037	584	69.4	69.4	39.0	15.4	1.14E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_063	13.7	7.18	30.6	1056	591	70.1	70.1	39.2	15.4	1.15E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_064	13.7	7.19	30.7	1077	600	70.9	70.9	39.3	15.4	1.15E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_065	13.7	7.19	30.8	1094	607	71.6	71.6	39.4	15.4	1.15E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_066	13.7	7.19	31.0	1117	616	72.6	72.6	39.5	15.4	1.16E-04	5.37E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_067	13.7	7.19	31.2	1139	625	73.6	73.6	39.6	15.5	1.17E-04	5.37E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_068	13.8	7.19	31.4	1170	634	74.6	74.6	39.7	15.5	1.17E-04	5.37E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_069	13.8	7.19	31.5	1196	640	75.3	75.3	39.7	15.5	1.18E-04	5.37E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_070	13.8	7.19	31.5	1223	645	76.1	76.1	39.7	15.4	1.18E-04	5.37E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_071	13.8	7.19	31.5	1240	647	76.5	76.5	39.7	15.4	1.18E-04	5.36E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_072	13.9	7.19	31.6	1267	653	77.2	77.2	39.8	15.4	1.18E-04	5.36E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_073	13.9	7.19	31.6	1295	659	78.0	78.0	40.0	15.4	1.18E-04	5.36E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_074	13.9	7.18	31.6	1316	663	78.7	78.7	40.1	15.4	1.18E-04	5.36E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_075	13.8	7.18	31.5	1314	663	78.7	78.7	40.1	15.4	1.18E-04	5.35E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_076	13.7	7.17	30.4	1110	611	72.4	72.4	39.1	15.4	1.14E-04	5.33E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_077	13.7	7.17	30.4	1094	606	71.7	71.7	39.1	15.4	1.14E-04	5.33E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_078	13.7	7.17	30.4	1081	601	71.2	71.2	39.1	15.4	1.14E-04	5.34E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_079	13.6	7.17	30.4	1063	595	70.2	70.2	39.0	15.4	1.14E-04	5.34E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_080	13.6	7.17	30.3	1044	587	69.2	69.2	39.0	15.3	1.14E-04	5.33E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_081	13.6	7.16	30.2	1025	579	68.3	68.3	38.8	15.3	1.13E-04	5.33E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_082	13.6	7.16	30.0	1008	572	67.4	67.4	38.7	15.3	1.13E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_083	13.5	7.16	29.7	973	557	66.0	66.0	38.4	15.3	1.12E-04	5.32E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_084	14.4	7.18	34.6	1262	619	77.2	77.2	42.3	15.4	1.27E-04	5.36E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_085	14.4	7.18	34.5	1273	611	77.2	77.2	42.2	15.4	1.27E-04	5.35E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE521600_086	14.3	7.17	34.8	1335	604	76.8	76.8	42.3	15.4	1.28E-04	5.35E-05	4.58	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_087	14.3	7.17	34.9	1330	605	76.8	76.8	42.4	15.4	1.28E-04	5.34E-05	4.58	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_088	14.3	7.17	35.0	1321	614	77.5	77.5	42.5	15.4	1.29E-04	5.34E-05	4.58	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_089	16.8	7.59	45.8	2226	856	111.4	111.4	50.4	17.0	1.64E-04	5.92E-05	4.71	1.53	0.17	6.52E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE521600_090	14.7	7.33	34.4	887	580	74.3	74.3	41.2	15.8	1.20E-04	5.49E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW110000_001	15.5	7.53	39.7	1187	640	103.0	103.0	46.9	17.0	1.25E-04	5.59E-05	4.61	1.52	0.16	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW110000_002	17.9	8.12	49.0	2069	931	123.2	123.2	59.3	19.8	1.48E-04	6.12E-05	4.82	1.54	0.18	6.57E-02	2.59	0.51	0.32	2.54E-02	1.37E-02
RW110000_008	17.9	7.55	51.2	2100	771	114.3	114.3	52.4	16.6	1.45E-04	5.60E-05	4.67	1.53	0.17	6.52E-02	2.58	0.52	0.31	2.54E-02	1.37E-02
RW110000_009	18.8	7.77	54.0	1973	855	117.2	117.2	54.5	17.3	1.52E-04	5.79E-05	4.67	1.54	0.17	6.55E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW110000_010	16.2	7.85	41.1	1187	650	99.5	99.5	49.1	17.5	1.30E-04	5.88E-05	4.60	1.52	0.16	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW110000_011	17.0	7.71	45.3	1379	666	116.2	116.2	52.3	17.6	1.38E-04	5.77E-05	4.67	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_012	17.6	7.79	47.8	1552	703	118.5	118.5	53.2	17.9	1.42E-04	5.83E-05	4.70	1.53	0.17	6.53E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_013	17.3	8.06	48.6	1364	766	108.9	108.9	52.8	18.0	1.43E-04	6.06E-05	4.65	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_014	18.9	7.89	55.0	1812	851	115.2	115.2	52.9	17.4	1.56E-04	5.94E-05	4.69	1.54	0.17	6.56E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW110000_015	19.1	7.92	56.7	1866	855	115.8	115.8	53.5	17.5	1.59E-04	5.96E-05	4.69	1.54	0.17	6.57E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RW110000_016	18.7	7.85	58.2	1743	793	114.5	114.5	54.7	17.4	1.60E-04	5.86E-05	4.70	1.54	0.17	6.58E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW110000_017	19.8	7.98	62.8	1840	864	116.1	116.1	55.8	17.7	1.69E-04	5.98E-05	4.70	1.54	0.17	6.61E-02	2.60	0.54	0.32	2.54E-02	1.37E-02
RW110000_018	16.2	7.80	41.5	1153	632	103.3	103.3	49.4	17.4	1.30E-04	5.85E-05	4.61	1.52	0.16	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW110000_019	17.3	8.06	48.3	1357	666	109.8	109.8	52.7	18.0	1.42E-04	6.05E-05	4.66	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_020	15.8	7.61	40.5	1324	723	109.7	109.7	49.0	17.4	1.27E-04	5.66E-05	4.64	1.52	0.17	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW110000_021	15.5	7.38	41.1	1363	697	79.0	79.0	43.1	15.8	1.29E-04	5.46E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW110000_022	16.7	7.88	45.0	1561	786	117.2	117.2	50.5	18.2	1.30E-04	5.78E-05	4.69	1.53	0.17	6.49E-02	2.58	0.50	0.32	2.54E-02	1.37E-02
RW110000_023	17.5	7.59	51.1	1675	943	119.7	119.7	55.9	17.1	1.43E-04	5.59E-05	4.73	1.54	0.17	6.55E-02	2.59	0.52	0.31	2.54E-02	1.37E-02
RW110000_024	20.7	8.25	61.6	2387	923	129.4	129.4	65.8	20.3	1.75E-04	6.25E-05	4.88	1.56	0.18	6.71E-02	2.61	0.54	0.32	2.54E-02	1.37E-02
RW110100_001	18.1	7.80	52.1	1747	740	114.8	114.8	51.9	17.2	1.50E-04	5.82E-05	4.71	1.53	0.17	6.54E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW112100_001	14.4	7.33	33.3	908	517	71.4	71.4	40.9	15.6	1.11E-04	5.36E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112100_002	14.4	7.33	33.1	893	510	70.2	70.2	40.7	15.6	1.10E-04	5.36E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112100_003	14.4	7.35	33.2	887	512	70.1	70.1	40.7	15.7	1.10E-04	5.37E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112200_001	14.4	7.35	33.0	877	509	70.0	70.0	40.6	15.7	1.10E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112300_001	13.9	7.20	30.7	778	481	64.4	64.4	38.9	15.3	1.06E-04	5.28E-05	4.51	1.51	0.16	6.35E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW112300_002	14.0	7.24	31.4	779	487	65.6	65.6	39.3	15.4	1.07E-04	5.30E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112300_003	15.0	7.45	36.9	1072	539	70.8	70.8	42.2	15.8	1.15E-04	5.43E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112400_001	14.9	7.41	36.3	1058	534	69.6	69.6	41.9	15.7	1.14E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112400_002	14.8	7.40	36.1	1054	533	69.2	69.2	41.8	15.7	1.14E-04	5.39E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112400_003	14.5	7.30	34.6	1012	523	67.7	67.7	41.0	15.5	1.12E-04	5.34E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112500_001	14.1	7.22	32.6	963	512	66.4	66.4	40.0	15.4	1.09E-04	5.29E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RW112500_002	14.1	7.20	32.7	968	512	65.8	65.8	40.0	15.3	1.09E-04	5.28E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112600_001	14.0	7.16	32.3	953	504	64.3	64.3	39.7	15.2	1.08E-04	5.25E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW113300_001	13.4	7.14	28.2	709	465	62.1	62.1	37.2	15.2	1.03E-04	5.25E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW113700_001	13.3	7.17	27.7	677	468	60.1	60.1	36.1	15.2	1.02E-04	5.27E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW210600_001	14.1	7.50	32.5	763	507	62.2	62.2	37.0	15.7	1.09E-04	5.52E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210600_002	15.1	7.57	36.2	1059	621	70.7	70.7	39.0	15.9	1.18E-04	5.58E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW210700_001	16.1	7.77	41.4	1513	690	76.2	76.2	42.2	16.4	1.28E-04	5.76E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW210700_002	14.3	7.32	32.2	899	560	66.7	66.7	38.0	15.4	1.11E-04	5.39E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210700_003	14.1	7.49	33.0	776	501	61.8	61.8	36.7	15.7	1.09E-04	5.51E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210800_001	13.2	7.13	27.5	678	456	57.8	57.8	36.1	15.1	1.01E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW210800_002	14.1	7.28	31.4	848	546	64.7	64.7	37.4	15.3	1.09E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210800_003	14.0	7.26	31.1	829	539	63.9	63.9	37.1	15.3	1.09E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210800_004	13.9	7.23	30.5	810	530	63.0	63.0	36.8	15.2	1.07E-04	5.31E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210900_001	14.3	7.29	32.4	989	551	65.7	65.7	38.3	15.4	1.10E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW211000_001	14.1	7.32	31.5	992	594	60.6	60.6	37.6	15.5	1.11E-04	5.39E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW213300_001	14.3	7.38	34.4	914	544	61.8	61.8	37.9	15.6	1.13E-04	5.46E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW213500_001	13.8	7.32	30.8	740	492	59.6	59.6	36.2	15.5	1.05E-04	5.40E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW213500_002	13.9	7.28	31.6	727	494	58.1	58.1	36.5	15.4	1.07E-04	5.36E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW213500_003	13.9	7.33	30.9	747	497	59.8	59.8	36.3	15.5	1.06E-04	5.40E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW213900_001	14.8	7.50	36.1	1105	573	66.3	66.3	39.2	16.0	1.14E-04	5.53E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW213900_002	15.8	7.50	41.8	1043	564	78.7	78.7	45.7	16.4	1.20E-04	5.46E-05	4.58	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW213900_003	15.6	7.38	40.3	963	543	73.4	73.4	44.8	16.0	1.18E-04	5.39E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW214000_001	15.2	7.62	40.7	1067	558	83.5	83.5	43.7	16.7	1.19E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW214000_002	15.3	7.42	38.8	898	531	74.1	74.1	43.4	16.1	1.16E-04	5.41E-05	4.54	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW214200_001	15.0	7.41	36.5	745	514	70.7	70.7	40.5	15.9	1.13E-04	5.40E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW214200_002	15.9	7.60	41.4	872	552	79.5	79.5	43.5	16.5	1.20E-04	5.53E-05	4.54	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW214200_003	16.4	7.68	43.8	917	590	82.3	82.3	43.8	16.6	1.24E-04	5.58E-05	4.54	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW214200_004	16.2	7.87	45.8	1341	586	99.3	99.3	45.9	17.0	1.27E-04	5.73E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW214400_001	14.5	7.39	33.4	753	516	67.4	67.4	38.4	15.7	1.09E-04	5.39E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW214400_002	15.2	7.40	36.9	861	507	65.4	65.4	38.5	15.6	1.12E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW214500_001	13.9	7.20	30.7	626	458	58.2	58.2	36.0	15.3	1.04E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW214700_001	13.9	7.36	31.3	768	486	58.4	58.4	36.1	15.3	1.03E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW214800_001	13.5	7.25	29.2	754	470	56.3	56.3	35.5	15.2	1.01E-04	5.28E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW214900_001	13.6	7.25	29.3	762	471	56.3	56.3	35.6	15.2	1.01E-04	5.28E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW215500_001	14.3	7.33	32.8	706	486	55.8	55.8	35.3	15.2	1.05E-04	5.32E-05	4.47	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW215500_002	13.8	7.34	30.5	693	467	55.1	55.1	35.1	15.2	1.02E-04	5.33E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW215500_003	14.3	7.31	32.4	679	481	55.4	55.4	35.2	15.2	1.04E-04	5.31E-05	4.47	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW215600_001	14.3	7.32	32.7	689	485	55.6	55.6	35.3	15.2	1.05E-04	5.32E-05	4.47	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW215600_002	14.3	7.31	32.4	674	482	55.3	55.3	35.2	15.2	1.04E-04	5.31E-05	4.47	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW215600_003	13.8	7.35	30.7	700	469	55.1	55.1	35.2	15.2	1.02E-04	5.33E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW216000_001	14.1	7.42	32.6	753	498	56.4	56.4	35.7	15.3	1.05E-04	5.37E-05	4.49	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW216300_001	14.0	7.29	31.5	674	469	54.6	54.6	34.8	15.2	1.03E-04	5.30E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW217300_001	13.3	7.09	30.2	748	430	50.7	50.7	35.8	14.9	1.04E-04	5.19E-05	4.50	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW217300_003	13.1	7.08	28.5	735	419	50.5	50.5	34.8	14.9	1.01E-04	5.18E-05	4.50	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW217400_001	14.2	7.25	33.1	752	484	54.9	54.9	37.1	15.3	1.09E-04	5.32E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW217400_003	13.0	7.07	26.9	579	421	50.4	50.4	33.8	14.9	9.86E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW217600_001	14.9	7.41	35.2	782	511	55.1	55.1	35.5	15.2	1.07E-04	5.34E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW218600_001	13.2	7.07	28.2	686	436	51.7	51.7	34.7	14.9	1.01E-04	5.17E-05	4.50	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW218700_001	14.8	7.28	34.9	642	475	60.0	60.0	38.2	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW219300_001	14.0	7.23	30.8	617	466	53.9	53.9	35.4	15.1	1.03E-04	5.27E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219600_001	13.8	7.30	31.3	679	466	53.9	53.9	35.8	15.2	1.04E-04	5.31E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219800_001	13.9	7.31	31.8	704	472	54.2	54.2	35.9	15.3	1.04E-04	5.32E-05	4.49	1.51	0.16	6.33E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219800_002	13.9	7.31	31.7	703	470	54.1	54.1	35.9	15.3	1.04E-04	5.32E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219800_003	14.0	7.33	32.0	720	476	54.6	54.6	36.0	15.3	1.05E-04	5.33E-05	4.49	1.51	0.16	6.33E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW219900_001	13.8	7.29	31.4	692	464	53.7	53.7	35.7	15.2	1.04E-04	5.31E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219900_002	13.8	7.29	31.2	686	460	53.4	53.4	35.7	15.2	1.04E-04	5.30E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219900_003	13.8	7.29	31.3	692	461	53.5	53.5	35.7	15.2	1.04E-04	5.30E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219900_004	13.3	7.10	28.2	541	421	50.1	50.1	34.1	14.9	9.85E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW220100_001	13.8	7.18	30.8	642	474	52.4	52.4	34.7	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW220200_001	13.8	7.17	30.8	650	471	52.5	52.5	34.8	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW220200_002	13.6	7.15	29.5	707	480	52.5	52.5	35.0	15.0	1.01E-04	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221500_001	15.0	7.40	35.7	503	407	50.3	50.3	33.9	15.0	9.86E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221600_001	14.7	7.51	34.6	571	426	50.8	50.8	33.8	15.0	9.80E-05	5.23E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221600_002	14.7	7.50	34.3	566	425	50.7	50.7	33.8	15.0	9.78E-05	5.23E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221600_003	14.8	7.53	35.3	568	427	50.9	50.9	33.8	15.0	9.80E-05	5.24E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	90%	111%	126%	7%	6%	32%	156%	34%	96%	358%	673%	<1%	<1%	4%	17%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW110000_024	RE110000_005	RW110000_017	RE511300_059	RE110000_005	RW110000_024	RW110000_024	RE110000_005	RE110000_005	RE521600_004	RE110000_005	RE110000_006	RW110000_024	RE110000_006	RW110000_024	RW110000_024	RE521600_004	RE110000_005	RE110000_001	RE110000_001
RW221600_004	15.2	7.42	36.3	519	407	50.5	50.5	33.9	15.0	9.86E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221600_005	15.1	7.39	35.9	525	406	50.3	50.3	33.9	14.9	9.85E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221700_001	14.2	7.36	32.0	551	422	50.2	50.2	33.5	14.9	9.72E-05	5.21E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW222900_001	15.2	7.41	36.9	540	412	51.6	51.6	35.1	15.1	9.85E-05	5.20E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223000_001	14.5	7.49	33.0	532	402	50.9	50.9	33.8	15.1	9.58E-05	5.20E-05	4.47	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW223000_002	13.5	7.11	29.0	525	398	49.5	49.5	33.7	14.9	9.59E-05	5.16E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW223100_001	14.1	7.35	31.9	525	406	50.6	50.6	33.8	15.0	9.59E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW223600_001	13.4	7.11	29.5	649	421	50.5	50.5	34.6	14.9	9.83E-05	5.17E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223700_001	13.5	7.11	29.9	658	426	50.7	50.7	34.8	14.9	9.87E-05	5.17E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223700_002	13.6	7.12	30.5	677	434	50.8	50.8	35.1	14.9	9.93E-05	5.17E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223800_001	13.7	7.13	31.6	669	440	51.4	51.4	35.5	14.9	9.97E-05	5.18E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223800_002	13.9	7.14	33.1	657	445	51.8	51.8	35.7	14.9	1.00E-04	5.18E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW224200_001	14.8	7.35	35.1	562	435	55.7	55.7	37.3	15.3	1.03E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW225200_001	13.6	7.25	30.4	638	452	52.2	52.2	34.8	15.1	1.00E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW225300_001	13.8	7.30	31.5	670	465	54.0	54.0	35.1	15.2	1.01E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW225300_002	13.8	7.29	31.5	676	465	53.9	53.9	35.2	15.2	1.01E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW225300_003	13.9	7.29	32.0	690	470	54.0	54.0	35.3	15.2	1.02E-04	5.27E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW226000_001	15.0	7.35	36.3	567	452	53.8	53.8	37.0	15.2	1.06E-04	5.24E-05	4.47	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW226200_001	14.4	7.43	32.1	543	436	52.9	52.9	36.0	15.2	1.02E-04	5.25E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW226300_001	14.4	7.43	32.3	544	437	53.2	53.2	36.0	15.2	1.02E-04	5.25E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW226300_002	14.2	7.37	31.8	543	438	52.8	52.8	36.0	15.2	1.02E-04	5.24E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW227700_001	14.1	7.16	31.2	670	474	68.1	68.1	37.7	15.2	1.04E-04	5.22E-05	4.51	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW227800_001	14.9	7.48	35.1	789	512	77.6	77.6	41.1	16.2	1.09E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW227800_002	15.5	7.62	38.8	988	556	85.2	85.2	44.0	16.7	1.14E-04	5.50E-05	4.58	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW227800_003	14.6	7.21	33.5	736	512	76.1	76.1	39.4	15.3	1.07E-04	5.26E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW228900_001	13.4	7.14	28.2	550	414	51.5	51.5	34.5	14.9	9.73E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229000_005	13.6	7.18	29.0	538	414	51.4	51.4	34.4	14.9	9.71E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229100_003	13.8	7.22	29.7	549	410	51.4	51.4	34.1	15.0	9.69E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW229100_004	14.0	7.28	30.7	557	415	52.0	52.0	34.4	15.0	9.76E-05	5.20E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_001	14.0	7.27	30.3	551	413	51.3	51.3	34.2	15.0	9.70E-05	5.20E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_002	13.6	7.25	28.9	510	409	51.4	51.4	34.0	15.0	9.68E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW229200_003	13.7	7.26	28.9	504	409	51.4	51.4	34.0	15.0	9.67E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW229200_004	13.6	7.26	29.1	498	408	51.3	51.3	33.9	15.0	9.65E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW229200_005	13.6	7.25	28.7	505	408	51.3	51.3	34.0	15.0	9.66E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW229200_006	14.0	7.28	30.5	554	414	51.5	51.5	34.2	15.0	9.71E-05	5.20E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_007	13.9	7.24	30.0	546	411	51.2	51.2	34.1	15.0	9.69E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW229300_001	13.5	7.22	28.9	495	408	51.1	51.1	33.8	14.9	9.64E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW230300_001	14.0	7.25	30.1	673	448	52.2	52.2	34.6	15.1	9.99E-05	5.24E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230300_002	13.2	7.08	27.5	629	431	51.0	51.0	34.1	14.9	9.74E-05	5.17E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230400_003	13.8	7.27	30.0	573	430	52.2	52.2	35.2	15.1	1.00E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230400_004	14.0	7.33	31.4	606	441	53.6	53.6	35.5	15.2	1.01E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230400_005	13.1	7.07	27.6	546	408	49.9	49.9	34.2	14.9	9.78E-05	5.17E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231500_001	13.3	7.11	27.8	556	407	49.2	49.2	34.0	14.9	9.79E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231500_002	13.2	7.10	27.4	575	411	49.4	49.4	34.2	14.9	9.81E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231800_002	13.1	7.09	27.7	537	408	49.7	49.7	34.3	14.9	9.81E-05	5.17E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231800_003	13.2	7.12	28.0	527	427	50.1	50.1	34.1	14.9	9.82E-05	5.19E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_001	13.3	7.16	28.5	597	442	50.3	50.3	34.4	15.0	9.97E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_002	13.7	7.18	30.6	682	457	51.8	51.8	35.1	15.0	1.02E-04	5.22E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_003	13.7	7.14	31.0	696	453	51.8	51.8	35.3	14.9	1.03E-04	5.20E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_004	13.6	7.11	31.1	707	449	50.9	50.9	35.3	14.9	1.03E-04	5.19E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_005	13.4	7.09	30.2	713	445	50.3	50.3	35.0	14.9	1.02E-04	5.18E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_006	13.3	7.09	29.4	686	436	49.7	49.7	34.7	14.9	1.01E-04	5.17E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW232900_001	13.9	7.20	30.4	497	396	49.2	49.2	33.5	14.9	9.68E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW232900_002	14.5	7.33	32.5	506	401	49.9	49.9	33.6	15.0	9.77E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW232900_003	14.3	7.24	31.7	503	399	49.5	49.5	33.6	14.9	9.75E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233000_001	14.2	7.31	31.8	503	399	50.0	50.0	33.4	14.9	9.75E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233000_002	14.3	7.32	32.2	506	399	49.9	49.9	33.5	15.0	9.75E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233000_003	14.2	7.29	31.6	505	399	49.5	49.5	33.5	14.9	9.73E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233000_004	13.6	7.17	29.9	545	399	50.1	50.1	33.6	14.9	9.66E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW233100_001	14.6	7.47	33.9	555	406	50.9	50.9	34.2	15.0	9.81E-05	5.22E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233100_002	14.6	7.48	34.1	554	406	51.1	51.1	34.2	15.0	9.81E-05	5.23E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233100_003	14.5	7.46	33.8	553	405	51.1	51.1	34.1	15.0	9.79E-05	5.22E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233100_004	13.4	7.17	28.7	535	395	49.8	49.8	33.4	14.9	9.61E-05	5.18E-05	4.47	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW233300_001	13.0	7.13	26.7	506	394	50.0	50.0	33.3	14.9	9.56E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW233500_001	13.0	7.13	26.7	549	395	50.0	50.0	33.4	14.9	9.62E-05	5.18E-05	4.47	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413

GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW233600_001	13.0	7.12	26.4	548	396	49.6	49.6	33.5	14.9	9.66E-05	5.18E-05	4.47	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW233700_001	13.0	7.11	26.4	535	400	50.0	50.0	33.7	14.9	9.70E-05	5.18E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233800_001	13.0	7.10	26.4	525	401	49.8	49.8	33.7	14.9	9.71E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234400_001	13.7	7.16	29.8	517	417	50.3	50.3	34.4	15.0	1.01E-04	5.21E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234400_002	13.1	7.10	27.8	507	422	49.7	49.7	34.3	14.9	9.86E-05	5.18E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234400_003	13.3	7.12	28.2	507	422	50.0	50.0	34.4	14.9	9.92E-05	5.20E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234500_001	14.2	7.43	31.9	607	446	53.8	53.8	34.8	15.3	1.02E-04	5.35E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234500_002	13.8	7.33	29.7	599	439	52.7	52.7	34.5	15.2	1.00E-04	5.30E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234600_001	13.6	7.23	29.7	597	436	51.6	51.6	34.5	15.0	1.00E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234600_002	13.3	7.12	28.6	579	423	50.4	50.4	34.2	14.9	9.93E-05	5.19E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234600_003	13.3	7.10	28.5	533	418	49.5	49.5	33.9	14.9	9.91E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW235800_001	14.4	7.32	33.6	729	505	62.9	62.9	37.9	15.6	1.09E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235800_002	14.5	7.31	33.6	745	509	63.4	63.4	38.0	15.6	1.09E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235800_003	14.5	7.34	33.7	794	523	63.9	63.9	38.1	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235800_004	14.4	7.29	33.0	750	507	62.5	62.5	37.7	15.5	1.08E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235900_003	14.8	7.53	35.8	931	548	70.3	70.3	40.1	16.2	1.14E-04	5.54E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW235900_004	14.7	7.41	34.6	868	546	67.5	67.5	38.7	15.9	1.11E-04	5.44E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235900_008	14.8	7.56	36.0	929	564	70.8	70.8	40.2	16.3	1.14E-04	5.56E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW310200_001	13.5	7.20	28.5	623	452	55.6	55.6	35.3	15.2	1.01E-04	5.28E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311300_001	14.5	7.39	33.1	536	433	53.2	53.2	35.2	15.3	1.02E-04	5.30E-05	4.47	1.50	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311300_002	14.4	7.36	32.8	541	429	52.6	52.6	35.1	15.3	1.02E-04	5.29E-05	4.47	1.50	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311300_003	14.4	7.35	32.7	546	428	52.3	52.3	35.1	15.2	1.02E-04	5.28E-05	4.47	1.50	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311300_004	14.3	7.32	32.4	551	426	52.0	52.0	35.0	15.2	1.01E-04	5.27E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_001	14.3	7.43	32.5	593	434	54.4	54.4	35.7	15.4	1.02E-04	5.31E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_002	14.3	7.43	32.6	600	435	54.4	54.4	35.8	15.4	1.02E-04	5.31E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_003	14.4	7.44	32.7	609	437	54.4	54.4	35.8	15.4	1.02E-04	5.32E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_004	14.4	7.45	32.9	618	440	54.3	54.3	35.9	15.4	1.03E-04	5.32E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_005	13.8	7.28	30.1	604	424	52.9	52.9	34.9	15.2	9.99E-05	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_006	13.7	7.24	29.6	605	423	52.6	52.6	34.6	15.1	9.94E-05	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_008	13.5	7.13	28.5	589	416	51.4	51.4	34.2	14.9	9.84E-05	5.19E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_009	13.4	7.11	28.9	548	421	51.0	51.0	34.2	14.9	9.82E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312300_001	13.8	7.16	30.3	491	406	49.9	49.9	33.9	14.9	9.85E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312400_001	14.8	7.30	33.9	507	420	53.8	53.8	34.5	15.1	9.91E-05	5.22E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312400_002	14.3	7.22	32.7	497	419	52.9	52.9	34.4	15.0	9.78E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312500_001	15.4	7.56	37.0	520	430	54.9	54.9	35.4	15.3	1.02E-04	5.27E-05	4.47	1.50	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312500_002	15.5	7.55	37.1	521	430	55.0	55.0	35.4	15.3	1.02E-04	5.27E-05	4.47	1.50	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312500_003	15.2	7.41	35.8	510	423	54.2	54.2	35.1	15.2	1.00E-04	5.24E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312500_004	14.9	7.34	36.3	534	420	54.5	54.5	34.9	15.1	9.89E-05	5.22E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312600_001	15.6	7.59	38.0	528	436	55.5	55.5	35.6	15.4	1.03E-04	5.29E-05	4.47	1.51	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312600_002	15.3	7.50	36.7	517	427	54.4	54.4	35.3	15.3	1.02E-04	5.27E-05	4.46	1.50	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312700_001	16.3	7.75	42.5	701	483	57.8	57.8	36.8	15.5	1.11E-04	5.42E-05	4.47	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW312900_001	13.1	7.16	26.8	509	399	49.9	49.9	33.5	14.9	9.64E-05	5.20E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW313100_001	13.7	7.25	29.8	599	433	50.9	50.9	33.5	15.0	1.02E-04	5.27E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW313400_001	13.9	7.24	30.8	563	435	50.9	50.9	33.7	15.0	1.03E-04	5.27E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW313900_001	14.0	7.23	31.6	670	455	55.5	55.5	34.7	15.0	1.01E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW314100_001	13.4	7.19	28.2	553	409	51.1	51.1	33.9	15.0	9.76E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW314300_001	13.7	7.30	29.4	522	410	53.9	53.9	34.1	15.2	9.83E-05	5.26E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW315400_001	12.8	7.08	25.8	539	411	49.1	49.1	33.5	14.9	9.67E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW317500_001	16.4	7.57	43.7	1003	585	71.1	71.1	42.2	16.0	1.30E-04	5.59E-05	4.53	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW317500_003	16.7	7.64	45.0	1084	605	73.1	73.1	42.9	16.2	1.33E-04	5.65E-05	4.54	1.52	0.16	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW410100_001	15.3	7.60	37.6	945	591	61.8	61.8	37.6	15.6	1.23E-04	5.70E-05	4.50	1.51	0.16	6.37E-02	2.56	0.50	0.32	2.54E-02	1.37E-02
RW410100_002	15.3	7.59	36.8	941	603	59.5	59.5	37.1	15.6	1.22E-04	5.71E-05	4.49	1.51	0.16	6.37E-02	2.56	0.50	0.32	2.54E-02	1.37E-02
RW410200_001	15.3	7.59	37.9	1065	583	64.2	64.2	38.1	15.7	1.23E-04	5.68E-05	4.52	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RW410400_001	14.7	7.40	34.6	1099	553	61.4	61.4	37.7	15.5	1.13E-04	5.45E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW410800_002	14.8	7.36	34.8	934	511	61.2	61.2	37.1	15.5	1.14E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW510000_001	15.8	7.59	43.2	1336	621	68.6	68.6	40.0	15.7	1.32E-04	5.66E-05	4.57	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW510100_001	16.2	7.82	40.8	1485	624	68.5	68.5	39.3	16.1	1.29E-04	5.88E-05	4.59	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW510100_002	15.0	7.44	35.6	1092	540	63.1	63.1	37.3	15.5	1.17E-04	5.52E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW510400_001	13.9	7.28	30.6	706	462	55.9	55.9	34.5	15.1	1.04E-04	5.30E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW512600_001	14.7	7.45	35.0	641	427	49.1	49.1	33.5	14.9	9.99E-05	5.26E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW512600_002	12.8	7.13	25.4	520	393	48.5	48.5	33.4	14.9	9.55E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW512700_001	13.3	7.17	28.0	516	399	48.7	48.7	33.4	14.9	9.63E-05	5.19E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW515200_001	14.3	7.35	33.2	678	516	62.9	62.9	37.7	15.6	1.10E-04	5.39E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW515200_002	13.1	7.10	27.2	507	422	53.4	53.4	34.4	15.0	9.93E-05	5.21E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW515500_001	13.1	7.14	26.5	574	414	52.5	52.5	33.9	15.1	9.79E-05	5.24E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.1: Maximum Predicted Concentrations (µg/m³), 2041 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**90%**	**111%**	**126%**	**7%**	**6%**	**32%**	**156%**	**34%**	**96%**	**358%**	**673%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE511300_059**	**RE110000_005**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RE521600_004**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW515500_002	13.0	7.13	26.2	553	407	53.1	53.1	33.9	15.0	9.76E-05	5.23E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW515500_003	13.0	7.07	26.2	749	428	53.2	53.2	33.9	14.9	9.72E-05	5.18E-05	4.49	1.50	0.16	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW515600_001	12.9	7.11	26.0	552	403	51.5	51.5	33.6	15.0	9.71E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW515600_002	13.0	7.12	26.4	562	412	53.9	53.9	33.9	15.0	9.81E-05	5.22E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW515600_003	12.9	7.10	25.6	548	402	52.2	52.2	33.5	15.0	9.67E-05	5.21E-05	4.47	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW515700_001	12.9	7.09	25.6	550	404	52.1	52.1	33.5	14.9	9.65E-05	5.20E-05	4.47	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW516700_001	13.2	7.11	27.8	596	431	50.5	50.5	34.5	14.9	9.91E-05	5.19E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW517400_001	13.5	7.25	28.5	504	409	49.9	49.9	34.0	15.0	9.85E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW517500_001	13.6	7.32	29.2	489	402	49.5	49.5	33.9	15.0	9.79E-05	5.23E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW517500_002	13.8	7.24	30.6	605	434	55.2	55.2	35.2	15.2	1.01E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW517600_001	14.0	7.36	31.6	688	471	58.8	58.8	37.2	15.6	1.07E-04	5.37E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519300_001	13.5	7.16	29.6	632	464	53.1	53.1	35.5	15.1	1.03E-04	5.23E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW519300_002	15.6	7.64	38.9	1187	585	80.7	80.7	40.9	16.3	1.19E-04	5.61E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW519600_001	13.5	7.28	29.4	582	443	51.7	51.7	35.1	15.1	1.01E-04	5.26E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW519600_002	13.7	7.34	30.6	600	450	52.1	52.1	35.4	15.2	1.02E-04	5.29E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW519600_003	14.0	7.41	32.5	649	473	54.0	54.0	36.6	15.3	1.05E-04	5.33E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW519600_004	14.1	7.33	32.3	740	469	62.2	62.2	37.5	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519900_001	14.1	7.35	33.6	822	541	64.6	64.6	39.2	15.7	1.10E-04	5.37E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520000_001	14.0	7.32	33.0	790	533	63.5	63.5	38.8	15.6	1.09E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520100_001	14.1	7.33	33.3	799	539	63.9	63.9	39.0	15.7	1.10E-04	5.37E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520200_001	14.0	7.30	32.5	763	526	62.3	62.3	38.4	15.6	1.08E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520300_001	13.9	7.28	32.1	754	521	61.7	61.7	38.2	15.6	1.08E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520400_001	14.0	7.30	33.0	793	539	61.5	61.5	38.7	15.6	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520600_001	14.2	7.33	34.1	836	562	63.1	63.1	39.5	15.7	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520600_002	13.6	7.19	29.8	691	510	56.0	56.0	36.6	15.3	1.05E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW520800_001	14.3	7.33	34.4	838	576	63.5	63.5	39.7	15.7	1.12E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520800_002	14.2	7.30	33.6	801	567	61.6	61.6	39.1	15.6	1.11E-04	5.36E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520900_001	14.2	7.31	34.0	818	576	61.8	61.8	39.3	15.6	1.12E-04	5.37E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521000_001	14.3	7.31	34.3	834	583	61.9	61.9	39.4	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_001	16.7	8.05	44.8	1241	635	81.3	81.3	42.6	16.5	1.26E-04	5.67E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521500_002	14.5	7.40	33.7	914	530	69.1	69.1	38.8	15.6	1.13E-04	5.39E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_003	14.3	7.35	32.7	808	518	66.9	66.9	38.4	15.5	1.12E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_004	14.3	7.34	33.0	751	511	65.6	65.6	38.3	15.5	1.12E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_005	14.3	7.28	33.8	720	513	64.1	64.1	38.7	15.4	1.12E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_006	14.3	7.26	33.8	704	515	64.5	64.5	38.9	15.4	1.13E-04	5.34E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_001	15.7	7.45	38.2	912	637	84.9	84.9	44.1	16.2	1.29E-04	5.58E-05	4.53	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521600_002	13.7	7.24	30.5	702	465	62.3	62.3	38.1	15.5	1.07E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_009	13.7	7.24	30.7	716	459	62.5	62.5	37.9	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_010	14.8	7.33	35.7	998	601	77.5	77.5	42.5	15.9	1.26E-04	5.50E-05	4.54	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW521600_011	14.5	7.29	34.0	912	571	73.7	73.7	41.1	15.7	1.21E-04	5.45E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521600_012	14.5	7.36	32.7	1241	573	81.4	81.4	40.2	16.0	1.20E-04	5.56E-05	4.59	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521600_013	13.9	7.22	30.2	958	506	71.9	71.9	38.2	15.5	1.12E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_014	13.7	7.23	30.5	694	456	61.4	61.4	37.8	15.5	1.07E-04	5.33E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_016	15.1	7.33	36.9	1295	646	84.9	84.9	44.1	15.9	1.33E-04	5.55E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521600_017	13.8	7.26	31.1	734	486	66.6	66.6	38.5	15.6	1.09E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Notes:
[1] Conversion of NO_x to NO_2 using the Ozone Limiting Method and hourly concentrations of NO_2 and ozone. The ambient background concentrations measured at local monitoring stations are not added directly to the 1-hour and 24-hour modelled concentrations without background.

Appendix C.2: Maximum Predicted Concentrations, 2041 Build Scenario with Background

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110000_001	20.2	8.67	59.1	1968	1012	126.0	126.0	66.3	21.4	1.68E-04	6.56E-05	4.73	1.55	0.17	6.63E-02	2.60	0.54	0.32	2.54E-02	1.37E-02
RE110000_002	17.8	8.25	49.9	1681	787	119.9	119.9	58.1	19.7	1.42E-04	6.06E-05	4.72	1.53	0.17	6.53E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_003	19.3	8.54	58.4	1928	1016	121.5	121.5	61.9	20.1	1.59E-04	6.33E-05	4.72	1.54	0.17	6.59E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110000_004	19.6	8.59	57.6	1894	969	125.0	125.0	63.3	21.1	1.64E-04	6.50E-05	4.73	1.54	0.17	6.61E-02	2.60	0.53	0.32	2.54E-02	1.37E-02
RE110000_005	21.2	9.06	64.3	2288	1082	129.1	129.1	68.3	22.9	1.79E-04	6.89E-05	4.82	1.55	0.18	6.68E-02	2.61	0.55	0.33	2.54E-02	1.37E-02
RE110000_006	17.9	8.05	48.7	2433	796	122.0	122.0	55.3	18.5	1.47E-04	6.08E-05	4.85	1.53	0.18	6.53E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_007	18.0	8.25	52.2	1810	845	117.7	117.7	56.2	19.1	1.46E-04	6.10E-05	4.70	1.53	0.17	6.54E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_008	17.7	8.15	50.9	1750	826	116.6	116.6	55.4	18.8	1.44E-04	6.02E-05	4.69	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_009	17.4	8.07	49.8	1707	811	114.3	114.3	54.8	18.6	1.42E-04	5.96E-05	4.69	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_010	17.2	8.02	48.9	1672	799	113.5	113.5	54.3	18.4	1.41E-04	5.92E-05	4.68	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_011	17.1	7.97	48.2	1637	788	113.4	113.4	53.7	18.3	1.39E-04	5.89E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_020	17.8	8.17	51.0	1755	826	116.7	116.7	55.4	18.8	1.44E-04	6.04E-05	4.70	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_021	17.6	8.11	50.3	1719	815	115.6	115.6	55.0	18.7	1.43E-04	5.99E-05	4.69	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_022	17.4	8.06	49.4	1685	804	114.0	114.0	54.5	18.5	1.41E-04	5.95E-05	4.68	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_023	17.2	8.01	48.8	1661	796	112.8	112.8	54.1	18.4	1.40E-04	5.92E-05	4.68	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_024	17.1	7.98	48.3	1639	788	112.5	112.5	53.7	18.3	1.39E-04	5.89E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_025	17.0	7.95	47.7	1616	780	112.1	112.1	53.3	18.2	1.38E-04	5.87E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_028	17.9	8.21	51.4	1796	829	116.8	116.8	55.5	18.9	1.45E-04	6.07E-05	4.70	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_029	17.6	8.12	50.3	1723	813	115.6	115.6	54.9	18.7	1.43E-04	6.00E-05	4.69	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_030	17.4	8.05	49.3	1676	800	113.8	113.8	54.3	18.5	1.41E-04	5.95E-05	4.68	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_031	17.2	8.00	48.6	1648	791	112.5	112.5	53.8	18.3	1.40E-04	5.91E-05	4.68	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_032	17.1	7.97	48.0	1624	782	112.0	112.0	53.4	18.2	1.39E-04	5.88E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_045	18.0	8.25	51.6	1852	830	117.4	117.4	55.5	19.0	1.45E-04	6.10E-05	4.71	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_046	17.7	8.15	50.5	1764	814	116.5	116.5	54.9	18.8	1.43E-04	6.02E-05	4.69	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_047	17.5	8.08	49.5	1694	800	114.2	114.2	54.3	18.5	1.41E-04	5.97E-05	4.68	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_048	17.3	8.02	48.7	1658	789	112.9	112.9	53.8	18.4	1.40E-04	5.92E-05	4.68	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_049	17.1	7.98	48.0	1622	779	112.1	112.1	53.3	18.2	1.39E-04	5.89E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_050	17.8	8.19	50.8	1807	817	116.7	116.7	55.0	18.9	1.44E-04	6.05E-05	4.70	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_051	17.8	8.18	50.7	1801	815	116.7	116.7	54.9	18.8	1.44E-04	6.05E-05	4.70	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_052	17.8	8.20	50.8	1813	816	116.8	116.8	55.0	18.9	1.44E-04	6.06E-05	4.70	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_053	17.8	8.20	50.8	1821	815	116.9	116.9	54.9	18.9	1.44E-04	6.06E-05	4.70	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_054	17.8	8.21	50.7	1832	815	116.9	116.9	54.9	18.9	1.44E-04	6.07E-05	4.70	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_055	17.8	8.21	50.7	1830	814	117.1	117.1	54.9	18.9	1.44E-04	6.07E-05	4.70	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_056	17.1	7.99	47.8	1624	772	111.6	111.6	53.0	18.3	1.38E-04	5.90E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_057	17.2	8.00	48.0	1629	776	111.9	111.9	53.1	18.3	1.39E-04	5.90E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_058	17.2	8.00	48.1	1631	777	112.0	112.0	53.2	18.3	1.39E-04	5.91E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_059	17.2	8.00	48.1	1633	778	112.0	112.0	53.2	18.3	1.39E-04	5.90E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_060	17.2	8.00	48.2	1637	780	112.6	112.6	53.4	18.3	1.39E-04	5.91E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_061	18.5	8.48	53.1	2150	859	119.1	119.1	56.2	19.7	1.48E-04	6.27E-05	4.75	1.53	0.17	6.54E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_062	18.1	8.31	51.6	1965	826	118.3	118.3	55.3	19.2	1.45E-04	6.14E-05	4.72	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_063	17.8	8.20	50.4	1835	809	117.0	117.0	54.6	18.9	1.43E-04	6.06E-05	4.70	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_064	17.5	8.12	49.4	1757	795	115.4	115.4	54.0	18.6	1.41E-04	6.00E-05	4.69	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_065	17.3	8.04	48.3	1682	779	113.4	113.4	53.2	18.4	1.39E-04	5.93E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_066	17.1	7.98	47.5	1623	768	111.8	111.8	52.7	18.2	1.38E-04	5.89E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_067	16.9	7.93	46.7	1567	757	110.4	110.4	52.2	18.1	1.37E-04	5.85E-05	4.66	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_069	18.2	8.36	51.8	2037	834	118.5	118.5	55.4	19.3	1.46E-04	6.18E-05	4.73	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_070	17.8	8.20	50.2	1854	805	117.1	117.1	54.4	18.9	1.43E-04	6.06E-05	4.70	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_071	17.5	8.11	49.2	1747	791	114.8	114.8	53.7	18.6	1.41E-04	5.99E-05	4.69	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_072	17.3	8.03	48.2	1672	777	113.0	113.0	53.1	18.4	1.39E-04	5.93E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_073	17.0	7.97	47.3	1609	764	111.2	111.2	52.5	18.2	1.38E-04	5.88E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_112	18.0	8.29	50.9	1976	819	118.1	118.1	54.7	19.1	1.44E-04	6.13E-05	4.72	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_113	17.7	8.18	49.7	1832	798	116.6	116.6	54.0	18.8	1.42E-04	6.04E-05	4.70	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_114	17.4	8.08	48.6	1709	782	113.8	113.8	53.3	18.5	1.40E-04	5.97E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_115	17.2	8.01	47.7	1645	768	112.2	112.2	52.7	18.3	1.38E-04	5.91E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_123	18.2	8.40	51.8	2073	838	118.4	118.4	55.2	19.4	1.46E-04	6.21E-05	4.73	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_124	17.8	8.22	50.2	1883	803	117.9	117.9	54.2	18.9	1.43E-04	6.08E-05	4.70	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_125	17.4	8.10	48.7	1734	781	114.0	114.0	53.2	18.5	1.40E-04	5.98E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_132	17.7	8.20	49.8	1867	798	117.8	117.8	53.9	18.9	1.42E-04	6.06E-05	4.70	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_133	17.4	8.08	48.3	1722	775	113.7	113.7	52.9	18.5	1.40E-04	5.96E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_139	17.7	8.21	49.7	1867	796	117.8	117.8	53.8	18.9	1.42E-04	6.06E-05	4.70	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_140	17.4	8.08	48.3	1720	775	114.0	114.0	52.9	18.5	1.40E-04	5.97E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_145	18.1	8.36	50.9	2030	823	118.1	118.1	54.5	19.3	1.44E-04	6.18E-05	4.73	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_146	17.7	8.19	49.3	1838	788	117.4	117.4	53.4	18.8	1.41E-04	6.05E-05	4.70	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_147	17.3	8.06	47.8	1704	767	113.7	113.7	52.5	18.4	1.39E-04	5.95E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110000_149	18.2	8.40	51.1	2092	830	118.3	118.3	54.6	19.4	1.45E-04	6.21E-05	4.74	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_150	17.7	8.22	49.5	1891	795	117.7	117.7	53.6	18.9	1.42E-04	6.07E-05	4.70	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_151	17.4	8.11	48.3	1765	773	115.1	115.1	52.8	18.6	1.40E-04	5.99E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_165	17.4	8.09	47.9	1747	767	114.6	114.6	52.5	18.5	1.39E-04	5.97E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_167	17.4	8.09	47.9	1752	766	114.5	114.5	52.4	18.5	1.39E-04	5.97E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_173	18.2	8.41	51.1	2073	826	118.2	118.2	54.4	19.4	1.45E-04	6.21E-05	4.74	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_177	17.2	8.02	47.0	1667	753	112.3	112.3	51.8	18.3	1.37E-04	5.92E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_178	17.7	8.20	49.1	1866	785	117.4	117.4	53.2	18.8	1.41E-04	6.05E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_189	17.7	8.22	49.3	1901	792	117.5	117.5	53.4	18.9	1.41E-04	6.07E-05	4.71	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_190	17.7	8.21	49.3	1883	790	117.6	117.6	53.3	18.9	1.41E-04	6.07E-05	4.70	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_191	17.4	8.10	48.0	1760	768	114.8	114.8	52.5	18.5	1.39E-04	5.98E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_239	18.9	8.15	57.0	1812	853	119.6	119.6	58.3	18.5	1.51E-04	5.92E-05	4.71	1.54	0.17	6.55E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_240	19.4	8.33	59.8	1857	881	120.4	120.4	60.4	19.0	1.55E-04	6.05E-05	4.71	1.54	0.17	6.57E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110000_241	19.0	8.19	56.2	2101	857	119.8	119.8	58.0	18.7	1.49E-04	5.95E-05	4.76	1.54	0.17	6.55E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_242	18.7	8.11	55.2	2006	843	119.2	119.2	57.2	18.4	1.48E-04	5.90E-05	4.74	1.54	0.17	6.54E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_243	19.0	8.20	57.9	1830	863	119.8	119.8	59.0	18.7	1.52E-04	5.96E-05	4.71	1.54	0.17	6.56E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_244	18.3	7.99	53.1	1857	817	117.3	117.3	55.7	18.1	1.45E-04	5.82E-05	4.71	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_245	19.2	8.25	58.7	1842	870	119.9	119.9	59.6	18.8	1.53E-04	5.99E-05	4.71	1.54	0.17	6.57E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_246	18.9	8.15	55.7	2053	850	119.7	119.7	57.7	18.6	1.49E-04	5.93E-05	4.75	1.54	0.17	6.54E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_247	18.5	8.04	54.3	1893	831	118.1	118.1	56.6	18.2	1.46E-04	5.86E-05	4.72	1.53	0.17	6.53E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_248	18.4	8.02	53.7	1878	824	117.8	117.8	56.1	18.2	1.45E-04	5.84E-05	4.72	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_249	19.1	8.22	56.5	2173	868	120.0	120.0	58.2	18.8	1.50E-04	5.98E-05	4.77	1.54	0.17	6.55E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_253	17.1	8.01	46.5	1644	745	111.7	111.7	51.4	18.2	1.36E-04	5.90E-05	4.66	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_254	17.5	8.15	48.1	1790	765	115.0	115.0	52.3	18.6	1.39E-04	6.00E-05	4.69	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_255	17.1	8.01	46.3	1642	740	111.0	111.0	51.2	18.2	1.36E-04	5.90E-05	4.66	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_256	17.5	8.14	47.9	1762	761	114.3	114.3	52.2	18.6	1.39E-04	5.99E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_257	17.2	8.04	46.5	1647	742	111.3	111.3	51.3	18.3	1.36E-04	5.92E-05	4.67	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_265	17.5	8.12	47.9	1770	762	114.5	114.5	52.2	18.6	1.39E-04	5.99E-05	4.69	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_267	17.8	8.25	49.4	1925	788	117.4	117.4	53.2	18.9	1.41E-04	6.09E-05	4.71	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_276	17.3	8.09	47.2	1700	751	112.8	112.8	51.7	18.4	1.38E-04	5.95E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_277	17.2	8.05	47.0	1696	750	112.6	112.6	51.7	18.4	1.37E-04	5.93E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_278	17.0	7.99	46.1	1622	739	111.1	111.1	51.1	18.2	1.36E-04	5.88E-05	4.66	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_279	17.3	8.05	47.1	1700	753	113.1	113.1	51.8	18.4	1.38E-04	5.94E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_280	18.2	8.43	50.9	2096	821	118.3	118.3	54.2	19.4	1.44E-04	6.22E-05	4.74	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_281	17.7	8.21	48.8	1858	776	116.8	116.8	52.8	18.8	1.40E-04	6.05E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_292	17.8	8.24	49.1	1879	779	116.8	116.8	53.0	18.9	1.41E-04	6.07E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_293	17.4	8.11	47.8	1763	763	114.5	114.5	52.2	18.5	1.39E-04	5.98E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_294	17.3	8.08	47.2	1716	752	113.0	113.0	51.8	18.4	1.38E-04	5.95E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_305	17.7	8.21	48.6	1835	772	115.9	115.9	52.7	18.8	1.40E-04	6.04E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_309	17.6	8.17	48.5	1837	773	116.0	116.0	52.7	18.7	1.40E-04	6.03E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_310	17.9	8.30	49.5	1931	785	116.8	116.8	53.3	19.1	1.42E-04	6.11E-05	4.71	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_316	18.2	8.42	50.6	2054	806	117.6	117.6	53.9	19.4	1.44E-04	6.20E-05	4.73	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_325	17.4	8.10	47.9	1743	765	114.4	114.4	52.4	18.5	1.39E-04	5.98E-05	4.68	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_329	17.4	8.10	47.8	1750	763	114.3	114.3	52.2	18.5	1.39E-04	5.97E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_331	18.1	8.38	50.8	2051	820	118.1	118.1	54.2	19.3	1.44E-04	6.19E-05	4.73	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_332	17.7	8.19	48.9	1857	779	116.7	116.7	52.9	18.8	1.41E-04	6.05E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_333	17.2	8.03	46.9	1665	750	112.5	112.5	51.7	18.3	1.37E-04	5.92E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_342	17.9	8.31	50.0	1983	802	117.9	117.9	53.7	19.1	1.43E-04	6.13E-05	4.72	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_344	17.7	8.19	49.0	1846	782	116.7	116.7	53.0	18.8	1.41E-04	6.05E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_345	17.2	8.03	47.0	1664	752	112.5	112.5	51.8	18.3	1.37E-04	5.92E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_353	17.8	8.25	48.9	1865	775	116.9	116.9	52.8	18.9	1.41E-04	6.07E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_355	17.5	8.17	47.9	1769	761	115.8	115.8	52.2	18.7	1.39E-04	6.01E-05	4.69	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_378	18.2	8.48	51.0	2007	794	118.3	118.3	53.8	19.6	1.43E-04	6.22E-05	4.73	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_387	18.2	8.44	50.7	2063	806	118.0	118.0	54.0	19.5	1.44E-04	6.22E-05	4.74	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_390	18.5	8.63	51.9	2002	797	118.4	118.4	54.1	20.0	1.43E-04	6.30E-05	4.73	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_394	17.9	8.36	49.6	1878	776	117.3	117.3	53.0	19.2	1.41E-04	6.13E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_397	17.4	8.11	47.2	1705	751	114.2	114.2	51.7	18.5	1.38E-04	5.96E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_401	18.8	8.43	55.7	1932	976	120.3	120.3	59.4	19.7	1.53E-04	6.24E-05	4.72	1.54	0.17	6.57E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110200_001	20.8	8.43	62.4	2335	996	123.1	123.1	58.3	19.2	1.63E-04	6.33E-05	4.80	1.54	0.18	6.60E-02	2.60	0.54	0.32	2.54E-02	1.37E-02
RE110300_001	18.7	8.17	52.4	2039	865	117.9	117.9	53.3	18.2	1.51E-04	6.14E-05	4.71	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_002	18.5	8.16	51.0	1965	836	116.5	116.5	52.5	18.2	1.49E-04	6.14E-05	4.70	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_003	18.6	8.23	51.2	1935	831	116.7	116.7	52.6	18.3	1.50E-04	6.20E-05	4.69	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_004	18.9	8.33	52.5	2004	849	117.1	117.1	53.0	18.5	1.53E-04	6.28E-05	4.70	1.53	0.17	6.52E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE110400_001	19.1	8.39	52.9	2054	860	117.3	117.3	53.3	18.6	1.55E-04	6.33E-05	4.71	1.53	0.17	6.52E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE110400_002	19.4	8.49	55.0	2073	862	118.1	118.1	53.7	18.8	1.55E-04	6.38E-05	4.71	1.53	0.17	6.53E-02	2.59	0.53	0.32	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110500_001	18.2	8.14	49.8	1805	791	115.4	115.4	51.6	18.1	1.46E-04	6.08E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110500_002	17.9	8.05	48.3	1716	770	113.7	113.7	50.8	17.9	1.42E-04	6.00E-05	4.66	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110600_001	17.5	7.95	46.3	1598	747	111.5	111.5	49.8	17.7	1.38E-04	5.91E-05	4.65	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110600_002	17.8	8.02	47.6	1671	761	112.8	112.8	50.4	17.9	1.40E-04	5.97E-05	4.66	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110700_001	17.3	7.91	45.5	1528	737	110.2	110.2	49.3	17.6	1.36E-04	5.88E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110700_002	17.1	7.81	43.4	1468	726	109.0	109.0	48.3	17.4	1.33E-04	5.81E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110800_001	17.2	7.93	45.5	1429	729	108.7	108.7	49.1	17.7	1.35E-04	5.88E-05	4.62	1.52	0.16	6.47E-02	2.58	0.50	0.32	2.54E-02	1.37E-02
RE110800_002	17.1	7.92	45.2	1360	720	108.2	108.2	48.9	17.6	1.34E-04	5.86E-05	4.61	1.52	0.16	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110900_001	16.9	7.90	44.7	1288	711	107.0	107.0	48.7	17.6	1.33E-04	5.85E-05	4.60	1.52	0.16	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110900_002	16.8	7.87	44.2	1255	702	105.2	105.2	48.3	17.5	1.32E-04	5.83E-05	4.59	1.52	0.16	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE111100_001	16.3	7.78	42.0	1327	676	101.4	101.4	46.8	17.3	1.28E-04	5.76E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE111200_001	16.1	7.77	41.3	1343	667	100.1	100.1	46.2	17.2	1.27E-04	5.75E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE111200_002	16.1	7.81	41.7	1380	665	100.2	100.2	46.3	17.3	1.27E-04	5.77E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE111300_001	16.0	7.78	41.1	1395	661	99.3	99.3	45.9	17.3	1.26E-04	5.76E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_002	16.0	7.75	40.5	1395	658	97.9	97.9	45.7	17.2	1.25E-04	5.74E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_003	15.9	7.76	40.3	1404	654	97.7	97.7	45.5	17.2	1.25E-04	5.74E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111400_001	15.9	7.75	39.9	1406	649	97.3	97.3	45.2	17.2	1.25E-04	5.74E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111400_002	15.9	7.75	39.7	1408	646	97.8	97.8	45.0	17.2	1.25E-04	5.74E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111500_001	15.8	7.74	39.2	1403	640	98.0	98.0	44.7	17.2	1.25E-04	5.73E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111500_002	15.6	7.68	37.8	1367	631	95.9	95.9	44.3	17.1	1.24E-04	5.70E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111600_001	15.5	7.67	37.7	1397	625	93.9	93.9	44.4	17.1	1.24E-04	5.70E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111600_002	15.5	7.67	37.6	1408	619	93.0	93.0	44.6	17.1	1.25E-04	5.71E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111700_001	16.1	7.78	40.6	1299	657	93.6	93.6	46.2	17.3	1.28E-04	5.75E-05	4.59	1.52	0.16	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111700_002	15.8	7.76	38.6	1500	620	96.5	96.5	45.3	17.4	1.27E-04	5.77E-05	4.62	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_001	18.5	8.32	53.3	2272	837	117.4	117.4	52.8	18.2	1.55E-04	6.28E-05	4.74	1.53	0.17	6.52E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE111800_002	16.1	7.78	40.5	1305	654	93.7	93.7	46.2	17.3	1.28E-04	5.76E-05	4.59	1.52	0.16	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_003	16.2	7.82	41.0	1333	656	94.9	94.9	46.5	17.4	1.29E-04	5.78E-05	4.59	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE111800_004	16.2	7.83	41.1	1348	653	94.8	94.8	46.6	17.4	1.29E-04	5.79E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE111800_005	15.8	7.77	38.9	1529	622	96.0	96.0	45.5	17.5	1.28E-04	5.79E-05	4.63	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_006	15.9	7.79	39.2	1540	626	96.8	96.8	45.8	17.5	1.29E-04	5.81E-05	4.63	1.52	0.17	6.44E-02	2.57	0.49	0.32	2.54E-02	1.37E-02
RE111800_007	15.9	7.80	39.3	1535	627	97.6	97.6	46.1	17.6	1.29E-04	5.82E-05	4.63	1.52	0.17	6.44E-02	2.57	0.49	0.32	2.54E-02	1.37E-02
RE111800_008	16.0	7.83	39.7	1542	638	98.1	98.1	46.5	17.7	1.30E-04	5.85E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE112100_001	18.0	8.44	49.6	1679	797	105.2	105.2	48.5	18.4	1.46E-04	6.38E-05	4.63	1.53	0.17	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE112200_001	17.0	8.12	45.0	1410	691	101.2	101.2	46.9	17.7	1.38E-04	6.11E-05	4.64	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE113100_001	15.1	7.50	36.8	2194	686	88.6	88.6	42.7	16.5	1.23E-04	5.59E-05	4.69	1.52	0.17	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE113200_001	15.8	7.67	39.7	2002	757	90.6	90.6	42.4	16.6	1.29E-04	5.76E-05	4.66	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE113200_002	15.9	7.75	40.1	2081	779	91.3	91.3	42.6	16.7	1.31E-04	5.83E-05	4.67	1.52	0.17	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE113300_001	16.0	7.78	40.9	2326	822	96.8	96.8	43.7	16.9	1.35E-04	5.85E-05	4.71	1.52	0.17	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210700_001	15.9	7.64	40.7	1940	801	99.9	99.9	46.7	17.1	1.34E-04	5.82E-05	4.70	1.52	0.17	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210700_002	16.6	7.72	43.4	2180	879	109.1	109.1	48.8	17.5	1.41E-04	5.92E-05	4.74	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE210700_003	14.8	7.47	35.2	1428	600	90.0	90.0	43.5	16.5	1.23E-04	5.62E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE210900_001	17.2	7.92	45.0	2148	890	108.6	108.6	49.0	17.9	1.46E-04	6.11E-05	4.73	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE210900_003	17.2	7.75	46.2	2379	939	113.4	113.4	50.0	17.6	1.51E-04	5.97E-05	4.76	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE210900_004	16.1	7.75	40.5	1930	806	100.0	100.0	46.4	17.3	1.35E-04	5.92E-05	4.70	1.52	0.17	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210900_005	16.2	7.72	41.1	1987	823	100.8	100.8	46.9	17.2	1.36E-04	5.89E-05	4.71	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210900_006	15.6	7.75	38.3	1682	728	94.3	94.3	44.6	17.1	1.29E-04	5.90E-05	4.66	1.52	0.17	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210900_007	15.2	7.64	36.7	1556	676	89.1	89.1	44.2	16.8	1.27E-04	5.78E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.32	2.54E-02	1.37E-02
RE210900_008	15.1	7.62	36.4	1502	650	87.9	87.9	44.0	16.8	1.26E-04	5.76E-05	4.63	1.52	0.17	6.41E-02	2.57	0.49	0.32	2.54E-02	1.37E-02
RE211000_001	16.7	7.65	44.7	2222	911	108.6	108.6	48.3	17.2	1.44E-04	5.85E-05	4.73	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE211000_002	16.5	7.67	45.6	2186	916	106.1	106.1	48.4	17.1	1.45E-04	5.85E-05	4.73	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE211000_003	15.9	7.61	43.7	2060	860	99.6	99.6	47.4	16.9	1.40E-04	5.78E-05	4.72	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE211000_004	15.4	7.54	41.1	1892	797	94.7	94.7	46.3	16.6	1.34E-04	5.70E-05	4.69	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211000_005	16.5	7.57	43.0	2127	876	105.6	105.6	47.6	17.0	1.41E-04	5.77E-05	4.72	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE211000_006	15.1	7.51	39.2	1734	741	89.0	89.0	44.7	16.5	1.29E-04	5.66E-05	4.66	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211000_007	14.9	7.58	35.4	1366	609	86.8	86.8	42.9	16.6	1.23E-04	5.72E-05	4.61	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211000_008	14.9	7.56	35.2	1287	607	84.8	84.8	42.2	16.5	1.22E-04	5.69E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211000_009	14.8	7.52	34.7	1243	599	82.4	82.4	41.9	16.4	1.21E-04	5.65E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211000_010	14.7	7.51	34.6	1227	598	82.7	82.7	41.6	16.4	1.20E-04	5.64E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_001	15.1	7.48	38.5	1688	725	88.3	88.3	44.3	16.4	1.27E-04	5.63E-05	4.65	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211100_002	15.2	7.42	39.2	1845	772	92.6	92.6	45.5	16.3	1.30E-04	5.57E-05	4.68	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211100_003	15.0	7.52	37.9	1507	636	90.6	90.6	44.2	16.4	1.27E-04	5.65E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211100_004	14.8	7.53	35.1	1205	606	83.4	83.4	41.5	16.4	1.21E-04	5.66E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_005	14.7	7.51	34.9	1156	604	81.6	81.6	41.0	16.3	1.21E-04	5.64E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_006	14.6	7.48	34.9	1094	605	78.6	78.6	40.8	16.2	1.20E-04	5.60E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_009	15.0	7.50	37.9	1542	657	90.2	90.2	44.5	16.4	1.28E-04	5.64E-05	4.63	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE211200_001	14.8	7.39	37.7	1711	730	88.9	88.9	44.3	16.2	1.26E-04	5.53E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE211200_002	14.7	7.37	36.5	1591	690	83.7	83.7	43.3	16.1	1.23E-04	5.52E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE211200_003	14.8	7.46	35.5	1382	604	87.0	87.0	42.1	16.2	1.21E-04	5.59E-05	4.61	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211200_004	14.6	7.46	34.8	1352	614	86.0	86.0	41.1	16.2	1.19E-04	5.59E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211200_005	14.8	7.43	36.0	1406	607	87.8	87.8	42.8	16.2	1.23E-04	5.56E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE211400_001	16.8	7.87	47.6	2297	864	117.8	117.8	54.1	18.6	1.61E-04	6.17E-05	4.74	1.54	0.17	6.55E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE211500_002	15.4	7.40	38.3	1716	666	98.9	98.9	45.7	16.4	1.31E-04	5.57E-05	4.65	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211500_003	15.8	7.59	40.9	1926	763	103.4	103.4	49.3	17.3	1.42E-04	5.82E-05	4.69	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE211500_004	15.4	7.40	38.4	1750	687	100.0	100.0	45.4	16.3	1.31E-04	5.57E-05	4.66	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211900_001	15.5	7.61	40.3	1673	695	104.5	104.5	48.9	17.4	1.41E-04	5.85E-05	4.65	1.52	0.17	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE212600_001	15.2	7.54	37.6	1338	603	89.5	89.5	45.1	16.5	1.26E-04	5.62E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE212700_001	15.4	7.61	39.0	1431	622	91.8	91.8	46.4	16.7	1.29E-04	5.69E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE212700_002	16.0	7.72	39.6	1762	683	108.8	108.8	48.6	17.5	1.35E-04	5.89E-05	4.66	1.52	0.17	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE212800_001	16.1	7.77	41.3	1502	670	98.4	98.4	47.9	17.2	1.34E-04	5.82E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE212800_002	16.4	7.83	43.1	1605	697	105.6	105.6	48.4	17.4	1.37E-04	5.88E-05	4.64	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE212900_001	16.5	7.81	43.5	1674	701	106.7	106.7	48.7	17.4	1.38E-04	5.88E-05	4.65	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE213000_001	16.0	7.66	40.6	1831	669	101.8	101.8	47.8	17.1	1.34E-04	5.78E-05	4.67	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214400_001	16.1	7.78	43.7	1115	707	96.8	96.8	47.8	17.4	1.28E-04	5.74E-05	4.58	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE214600_002	17.2	7.82	49.0	2369	806	108.1	108.1	50.7	17.5	1.46E-04	5.80E-05	4.74	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_003	17.4	7.82	50.2	2146	813	112.7	112.7	51.0	17.4	1.47E-04	5.79E-05	4.76	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_004	17.4	7.80	49.9	2022	794	106.0	106.0	50.6	17.4	1.44E-04	5.77E-05	4.73	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_005	17.4	7.79	49.5	1977	801	104.7	104.7	50.4	17.4	1.43E-04	5.76E-05	4.72	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_006	17.4	7.79	49.4	1959	804	104.7	104.7	50.4	17.4	1.43E-04	5.76E-05	4.72	1.53	0.17	6.51E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_007	16.9	7.70	47.0	2095	794	109.1	109.1	49.0	17.1	1.42E-04	5.71E-05	4.75	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_008	17.0	7.73	48.0	2075	792	109.0	109.0	49.6	17.2	1.43E-04	5.73E-05	4.74	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_009	17.0	7.75	48.0	2187	811	108.4	108.4	49.7	17.2	1.44E-04	5.74E-05	4.76	1.53	0.17	6.51E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_010	17.0	7.76	47.9	2208	810	108.3	108.3	49.7	17.3	1.44E-04	5.75E-05	4.75	1.53	0.17	6.51E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_011	16.8	7.72	46.9	2173	801	105.4	105.4	49.0	17.2	1.42E-04	5.73E-05	4.75	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_012	16.9	7.76	47.1	2307	779	103.8	103.8	49.6	17.3	1.43E-04	5.76E-05	4.74	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_013	17.4	7.86	50.1	2413	821	110.6	110.6	51.3	17.6	1.48E-04	5.83E-05	4.75	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_014	17.5	7.83	50.4	2278	835	112.6	112.6	51.1	17.5	1.48E-04	5.80E-05	4.77	1.53	0.17	6.53E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_015	17.4	7.82	50.0	2220	828	112.7	112.7	51.0	17.5	1.47E-04	5.79E-05	4.77	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_016	17.4	7.81	50.3	2068	796	107.7	107.7	50.9	17.4	1.46E-04	5.78E-05	4.74	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_017	17.4	7.80	50.1	2035	785	106.6	106.6	50.7	17.4	1.44E-04	5.77E-05	4.73	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_018	17.3	7.79	49.6	2000	796	104.4	104.4	50.5	17.4	1.43E-04	5.76E-05	4.73	1.53	0.17	6.51E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_019	17.4	7.79	49.4	1945	810	104.9	104.9	50.5	17.4	1.43E-04	5.76E-05	4.72	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_020	17.4	7.79	49.3	1918	813	105.8	105.8	50.5	17.4	1.42E-04	5.76E-05	4.71	1.53	0.17	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_021	17.4	7.79	48.9	1876	812	106.8	106.8	50.4	17.4	1.41E-04	5.76E-05	4.70	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE214600_022	17.0	7.74	47.9	2128	804	110.6	110.6	49.6	17.2	1.44E-04	5.73E-05	4.75	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_023	16.9	7.69	47.4	1951	761	100.5	100.5	49.0	17.1	1.40E-04	5.70E-05	4.72	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_024	16.9	7.69	47.3	1935	772	100.3	100.3	48.9	17.0	1.40E-04	5.69E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_025	16.9	7.68	47.3	1926	778	100.1	100.1	48.9	17.0	1.39E-04	5.69E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_026	16.9	7.68	47.3	1918	780	100.0	100.0	48.9	17.0	1.39E-04	5.69E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_027	16.9	7.68	47.1	1902	782	100.0	100.0	48.8	17.0	1.39E-04	5.68E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_028	16.9	7.67	46.9	1884	782	99.9	99.9	48.8	17.0	1.39E-04	5.68E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_029	16.9	7.67	46.8	1869	782	99.9	99.9	48.7	17.0	1.38E-04	5.68E-05	4.70	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_030	16.9	7.67	46.5	1847	781	99.8	99.8	48.6	17.0	1.38E-04	5.68E-05	4.70	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_031	16.8	7.67	46.3	1828	780	99.7	99.7	48.5	17.0	1.38E-04	5.67E-05	4.70	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_032	16.8	7.66	45.8	1790	777	99.6	99.6	48.4	17.0	1.37E-04	5.67E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_033	16.9	7.69	46.2	1787	783	102.2	102.2	48.9	17.1	1.37E-04	5.69E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_034	16.9	7.70	46.5	1798	785	102.2	102.2	48.9	17.1	1.37E-04	5.69E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_035	17.0	7.70	46.8	1814	787	101.9	101.9	49.0	17.1	1.38E-04	5.70E-05	4.69	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_036	17.0	7.70	47.0	1825	789	101.8	101.8	49.1	17.1	1.39E-04	5.70E-05	4.69	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_037	16.9	7.70	47.6	1958	759	101.3	101.3	49.1	17.1	1.40E-04	5.70E-05	4.72	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_038	16.9	7.69	47.3	1942	764	100.4	100.4	48.9	17.1	1.40E-04	5.69E-05	4.72	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_039	16.9	7.69	47.3	1938	768	100.4	100.4	48.9	17.0	1.39E-04	5.69E-05	4.72	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_040	16.9	7.69	47.3	1930	775	100.3	100.3	48.9	17.0	1.40E-04	5.69E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_041	16.8	7.66	46.1	1805	779	99.6	99.6	48.5	17.0	1.37E-04	5.67E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_042	16.8	7.66	45.7	1782	777	100.1	100.1	48.4	17.0	1.36E-04	5.67E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_043	16.9	7.69	46.0	1778	782	102.3	102.3	48.8	17.0	1.37E-04	5.69E-05	4.69	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_044	17.0	7.71	47.5	1864	792	101.6	101.6	49.2	17.1	1.39E-04	5.70E-05	4.70	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_045	17.1	7.71	47.6	1881	791	101.6	101.6	49.3	17.1	1.40E-04	5.71E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_046	17.0	7.71	47.6	1904	783	101.3	101.3	49.2	17.1	1.40E-04	5.71E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_047	17.0	7.71	47.6	1914	781	101.3	101.3	49.2	17.1	1.40E-04	5.71E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_048	17.0	7.72	47.9	1943	778	101.2	101.2	49.4	17.1	1.40E-04	5.71E-05	4.72	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214600_049	17.0	7.72	48.0	1957	776	101.5	101.5	49.4	17.1	1.41E-04	5.71E-05	4.72	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_050	17.0	7.72	48.1	1968	772	101.8	101.8	49.5	17.2	1.41E-04	5.72E-05	4.72	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_051	16.3	7.64	42.6	1516	723	97.4	97.4	47.5	16.9	1.29E-04	5.65E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_052	16.2	7.62	42.1	1512	719	96.9	96.9	47.3	16.9	1.28E-04	5.63E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_053	17.0	7.70	47.2	1845	791	101.5	101.5	49.2	17.1	1.39E-04	5.70E-05	4.70	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_054	17.0	7.71	47.6	1898	787	101.4	101.4	49.2	17.1	1.40E-04	5.71E-05	4.71	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_055	17.0	7.71	47.8	1929	780	101.3	101.3	49.3	17.1	1.40E-04	5.71E-05	4.71	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_056	17.0	7.73	48.2	1976	770	101.8	101.8	49.6	17.2	1.41E-04	5.72E-05	4.72	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_057	16.0	7.59	41.5	1507	713	94.0	94.0	47.0	16.8	1.27E-04	5.61E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_058	16.0	7.58	41.0	1487	704	94.1	94.1	46.8	16.7	1.26E-04	5.60E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_059	16.0	7.59	41.4	1490	707	95.6	95.6	47.0	16.8	1.27E-04	5.61E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_060	16.1	7.62	42.0	1495	713	96.9	96.9	47.2	16.8	1.28E-04	5.63E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_061	16.2	7.63	42.4	1499	717	97.3	97.3	47.3	16.9	1.28E-04	5.64E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_062	16.1	7.61	41.8	1510	716	95.5	95.5	47.2	16.8	1.28E-04	5.62E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_063	16.1	7.61	41.7	1493	710	96.6	96.6	47.1	16.8	1.27E-04	5.62E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_064	16.1	7.60	41.9	1534	727	94.5	94.5	47.2	16.8	1.29E-04	5.62E-05	4.64	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_065	16.2	7.61	42.2	1537	728	95.0	95.0	47.4	16.8	1.29E-04	5.63E-05	4.64	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_066	16.2	7.62	42.4	1540	730	95.3	95.3	47.6	16.8	1.29E-04	5.63E-05	4.64	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_067	16.3	7.63	42.8	1543	732	96.5	96.5	47.8	16.9	1.29E-04	5.64E-05	4.64	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_068	16.4	7.65	43.2	1547	735	98.0	98.0	47.9	16.9	1.30E-04	5.65E-05	4.64	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_069	16.7	7.67	44.5	1647	765	99.5	99.5	48.7	17.0	1.34E-04	5.68E-05	4.66	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_070	16.4	7.61	43.5	1678	757	98.0	98.0	47.6	16.8	1.32E-04	5.63E-05	4.67	1.52	0.17	6.46E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_071	16.4	7.62	43.7	1675	758	98.0	98.0	47.8	16.9	1.33E-04	5.64E-05	4.67	1.52	0.17	6.46E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_072	16.5	7.63	43.9	1671	760	97.8	97.8	47.9	16.9	1.33E-04	5.65E-05	4.67	1.52	0.17	6.46E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_073	16.5	7.65	44.1	1664	761	97.5	97.5	48.2	16.9	1.33E-04	5.66E-05	4.67	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_074	16.6	7.66	44.3	1657	763	97.9	97.9	48.4	17.0	1.33E-04	5.67E-05	4.67	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_075	16.8	7.68	45.3	1721	777	100.6	100.6	48.8	17.0	1.35E-04	5.68E-05	4.68	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_076	16.7	7.66	45.0	1728	773	100.1	100.1	48.4	17.0	1.35E-04	5.67E-05	4.68	1.53	0.17	6.47E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_077	16.7	7.67	45.1	1724	775	100.3	100.3	48.6	17.0	1.35E-04	5.67E-05	4.68	1.53	0.17	6.47E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_078	16.6	7.65	44.8	1728	771	99.9	99.9	48.2	16.9	1.35E-04	5.66E-05	4.68	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_079	16.6	7.64	44.6	1732	769	99.8	99.8	48.0	16.9	1.34E-04	5.65E-05	4.68	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_080	16.5	7.62	44.5	1737	768	99.6	99.6	47.9	16.9	1.34E-04	5.64E-05	4.68	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214600_081	17.6	7.87	51.2	2331	844	113.5	113.5	51.6	17.6	1.50E-04	5.83E-05	4.78	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE214600_082	16.9	7.69	47.2	1998	772	103.4	103.4	48.9	17.1	1.40E-04	5.70E-05	4.73	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_083	17.0	7.79	47.9	2326	790	106.0	106.0	50.1	17.4	1.44E-04	5.78E-05	4.73	1.53	0.17	6.51E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_002	16.2	7.64	43.2	2144	737	96.4	96.4	47.0	16.9	1.35E-04	5.67E-05	4.70	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_003	16.3	7.65	43.5	2154	741	97.3	97.3	47.2	17.0	1.36E-04	5.68E-05	4.70	1.52	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_004	16.4	7.67	43.9	2170	743	97.9	97.9	47.5	17.0	1.37E-04	5.69E-05	4.71	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_005	16.4	7.68	44.3	2184	747	98.5	98.5	47.8	17.1	1.37E-04	5.70E-05	4.71	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_006	16.5	7.70	44.8	2202	750	99.1	99.1	48.2	17.1	1.38E-04	5.72E-05	4.71	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_007	16.6	7.72	45.5	2240	758	100.1	100.1	48.7	17.2	1.40E-04	5.73E-05	4.72	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_008	16.8	7.74	46.4	2283	769	101.9	101.9	49.2	17.2	1.41E-04	5.75E-05	4.73	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_009	16.4	7.59	44.4	1826	756	95.9	95.9	47.3	16.7	1.35E-04	5.62E-05	4.69	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_010	16.6	7.62	45.1	1810	768	97.5	97.5	47.8	16.8	1.36E-04	5.64E-05	4.69	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_011	16.6	7.62	45.4	1837	767	97.4	97.4	47.8	16.8	1.36E-04	5.64E-05	4.70	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_012	16.6	7.63	45.7	1863	767	97.5	97.5	47.9	16.9	1.37E-04	5.65E-05	4.70	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_013	16.7	7.63	46.0	1889	765	98.1	98.1	48.0	16.9	1.37E-04	5.65E-05	4.71	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_014	16.6	7.64	46.0	1908	748	97.8	97.8	48.0	16.9	1.38E-04	5.66E-05	4.71	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_015	16.6	7.68	45.6	2118	786	101.7	101.7	48.1	17.0	1.40E-04	5.70E-05	4.74	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_016	16.5	7.67	45.3	2115	784	100.8	100.8	47.8	17.0	1.39E-04	5.69E-05	4.74	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_017	16.5	7.65	45.1	2106	783	101.3	101.3	47.6	17.0	1.39E-04	5.68E-05	4.74	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_018	16.5	7.63	44.9	1992	767	99.3	99.3	47.5	16.9	1.37E-04	5.65E-05	4.73	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_019	16.4	7.62	45.0	1920	751	96.9	96.9	47.4	16.8	1.36E-04	5.65E-05	4.71	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_020	16.5	7.60	45.1	1877	751	97.0	97.0	47.5	16.8	1.36E-04	5.63E-05	4.70	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_021	16.4	7.59	44.8	1852	754	96.5	96.5	47.4	16.8	1.35E-04	5.62E-05	4.70	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_022	16.2	7.57	44.0	1863	735	94.0	94.0	46.9	16.7	1.34E-04	5.61E-05	4.70	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_023	16.2	7.57	43.8	1860	735	93.8	93.8	46.8	16.7	1.34E-04	5.61E-05	4.70	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_024	16.2	7.58	43.7	1931	751	95.8	95.8	46.8	16.7	1.35E-04	5.62E-05	4.72	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_025	16.2	7.59	43.8	2005	766	97.1	97.1	46.7	16.8	1.36E-04	5.63E-05	4.73	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_026	16.2	7.63	42.9	2130	733	95.0	95.0	46.7	16.9	1.34E-04	5.66E-05	4.70	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_027	16.2	7.56	43.7	1852	739	94.1	94.1	46.9	16.6	1.34E-04	5.60E-05	4.70	1.52	0.17	6.46E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_028	16.7	7.64	46.2	1914	760	98.6	98.6	48.1	16.9	1.38E-04	5.66E-05	4.71	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_029	16.6	7.64	46.1	1912	748	98.0	98.0	48.0	16.9	1.38E-04	5.66E-05	4.71	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_030	16.6	7.65	46.0	1970	764	99.5	99.5	48.1	16.9	1.38E-04	5.67E-05	4.72	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_031	16.7	7.66	45.9	2030	777	103.4	103.4	48.2	17.0	1.39E-04	5.68E-05	4.74	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214700_032	16.7	7.68	46.3	2082	790	106.5	106.5	48.5	17.0	1.40E-04	5.69E-05	4.74	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_033	16.7	7.70	46.1	2140	791	103.3	103.3	48.5	17.1	1.41E-04	5.71E-05	4.74	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214700_034	16.4	7.64	44.6	2091	778	100.1	100.1	47.3	16.9	1.38E-04	5.67E-05	4.73	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_035	16.5	7.64	44.9	2048	778	101.4	101.4	47.5	16.9	1.38E-04	5.66E-05	4.74	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_036	16.4	7.61	45.2	1887	738	95.6	95.6	47.5	16.8	1.36E-04	5.64E-05	4.71	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_037	16.5	7.61	45.2	1892	744	96.7	96.7	47.5	16.8	1.36E-04	5.64E-05	4.71	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_038	16.3	7.59	43.8	1988	763	97.6	97.6	46.8	16.7	1.36E-04	5.62E-05	4.73	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_039	16.2	7.60	43.8	2038	769	97.9	97.9	46.7	16.8	1.36E-04	5.64E-05	4.73	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_040	16.2	7.61	43.8	2058	769	97.8	97.8	46.7	16.8	1.36E-04	5.65E-05	4.73	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_041	15.9	7.55	40.6	1500	710	91.9	91.9	46.4	16.6	1.26E-04	5.58E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_042	15.8	7.54	40.4	1498	710	91.8	91.8	46.2	16.6	1.25E-04	5.58E-05	4.63	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_043	15.7	7.51	39.4	1506	708	90.8	90.8	45.8	16.5	1.24E-04	5.55E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_044	15.7	7.50	39.1	1514	708	90.6	90.6	45.7	16.5	1.24E-04	5.55E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_045	15.6	7.49	38.9	1522	708	90.4	90.4	45.6	16.4	1.24E-04	5.54E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_046	15.6	7.49	38.8	1525	707	90.2	90.2	45.6	16.4	1.24E-04	5.54E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_047	15.6	7.48	38.6	1526	705	90.0	90.0	45.4	16.4	1.23E-04	5.54E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_048	15.5	7.47	38.2	1483	693	88.8	88.8	45.0	16.4	1.22E-04	5.53E-05	4.63	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_049	15.6	7.49	38.8	1469	697	89.8	89.8	45.4	16.4	1.23E-04	5.54E-05	4.63	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_050	15.7	7.51	39.4	1476	698	90.4	90.4	45.6	16.5	1.24E-04	5.56E-05	4.63	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_051	15.7	7.53	39.8	1480	699	90.9	90.9	45.9	16.6	1.24E-04	5.57E-05	4.63	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_052	15.8	7.55	40.4	1485	701	91.8	91.8	46.2	16.6	1.25E-04	5.58E-05	4.62	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_053	15.9	7.56	40.6	1484	701	92.4	92.4	46.4	16.7	1.26E-04	5.59E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_054	16.0	7.58	41.2	1507	712	93.1	93.1	46.8	16.7	1.27E-04	5.60E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_055	15.9	7.57	41.0	1506	713	92.8	92.8	46.7	16.7	1.26E-04	5.60E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_056	15.9	7.56	40.8	1505	712	92.2	92.2	46.6	16.7	1.26E-04	5.59E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_057	15.8	7.54	40.2	1495	709	91.6	91.6	46.1	16.6	1.25E-04	5.57E-05	4.63	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_058	15.8	7.53	39.9	1492	709	91.4	91.4	46.0	16.6	1.25E-04	5.57E-05	4.63	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_059	15.7	7.52	39.7	1493	709	91.2	91.2	45.9	16.5	1.24E-04	5.56E-05	4.64	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_060	15.7	7.51	39.5	1501	709	91.0	91.0	45.8	16.5	1.24E-04	5.56E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_061	15.5	7.48	38.4	1529	704	89.7	89.7	45.4	16.4	1.23E-04	5.53E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_062	15.5	7.48	38.3	1482	694	89.1	89.1	45.1	16.4	1.23E-04	5.53E-05	4.63	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_063	15.5	7.48	38.5	1479	696	89.5	89.5	45.2	16.4	1.23E-04	5.53E-05	4.63	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_064	15.6	7.49	38.6	1475	697	89.7	89.7	45.3	16.4	1.23E-04	5.54E-05	4.63	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_065	15.6	7.50	39.1	1473	698	89.9	89.9	45.5	16.5	1.23E-04	5.55E-05	4.63	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_066	15.7	7.52	39.6	1478	699	90.5	90.5	45.7	16.5	1.24E-04	5.56E-05	4.63	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_067	15.8	7.53	40.0	1483	700	91.3	91.3	46.0	16.6	1.25E-04	5.57E-05	4.63	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_068	15.8	7.54	40.2	1484	701	91.6	91.6	46.1	16.6	1.25E-04	5.58E-05	4.62	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_069	15.9	7.57	40.8	1486	702	93.0	93.0	46.6	16.7	1.26E-04	5.60E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_070	15.7	7.49	39.0	1595	719	91.0	91.0	45.8	16.4	1.25E-04	5.54E-05	4.65	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_071	15.7	7.51	39.5	1589	724	92.2	92.2	46.2	16.5	1.26E-04	5.55E-05	4.65	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_072	15.8	7.51	39.6	1585	724	92.2	92.2	46.2	16.5	1.26E-04	5.56E-05	4.65	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_073	15.8	7.52	39.9	1574	725	92.1	92.1	46.3	16.5	1.26E-04	5.57E-05	4.65	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_074	15.9	7.54	40.3	1563	725	92.6	92.6	46.4	16.6	1.27E-04	5.58E-05	4.65	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_075	15.9	7.55	40.6	1544	724	92.9	92.9	46.6	16.6	1.27E-04	5.59E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_076	16.0	7.58	41.4	1527	724	93.7	93.7	46.9	16.7	1.28E-04	5.61E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_077	15.7	7.49	39.1	1591	720	91.9	91.9	45.9	16.4	1.25E-04	5.54E-05	4.65	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_078	15.7	7.50	39.4	1591	723	92.1	92.1	46.1	16.5	1.25E-04	5.55E-05	4.65	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_079	15.8	7.51	39.7	1581	725	92.1	92.1	46.2	16.5	1.26E-04	5.56E-05	4.65	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_080	15.8	7.53	40.1	1570	725	92.3	92.3	46.4	16.6	1.26E-04	5.57E-05	4.65	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_081	15.9	7.54	40.4	1554	725	92.7	92.7	46.5	16.6	1.27E-04	5.58E-05	4.65	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_082	16.0	7.56	40.8	1535	724	93.0	93.0	46.6	16.7	1.27E-04	5.59E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_083	16.0	7.56	41.0	1529	724	93.3	93.3	46.7	16.7	1.27E-04	5.60E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_084	16.0	7.57	41.2	1524	724	93.4	93.4	46.8	16.7	1.28E-04	5.60E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_085	16.1	7.59	41.6	1530	725	94.0	94.0	47.1	16.8	1.28E-04	5.61E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_086	16.2	7.56	42.6	1712	754	95.8	95.8	47.0	16.6	1.31E-04	5.59E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_087	16.2	7.55	42.5	1713	753	95.4	95.4	46.9	16.6	1.31E-04	5.59E-05	4.67	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_088	16.2	7.56	42.7	1712	755	96.1	96.1	47.0	16.7	1.32E-04	5.60E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_089	16.2	7.57	42.8	1706	755	96.4	96.4	47.1	16.7	1.32E-04	5.60E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_090	16.2	7.57	42.9	1701	755	96.9	96.9	47.1	16.7	1.32E-04	5.61E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_091	16.3	7.58	42.9	1694	755	97.0	97.0	47.2	16.7	1.32E-04	5.61E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_092	16.3	7.59	43.0	1690	755	96.9	96.9	47.3	16.7	1.32E-04	5.62E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_093	16.1	7.54	42.3	1716	751	94.1	94.1	46.8	16.6	1.31E-04	5.58E-05	4.67	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_094	16.1	7.53	42.0	1733	747	93.0	93.0	46.6	16.6	1.31E-04	5.58E-05	4.68	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_095	16.0	7.52	41.9	1738	745	92.8	92.8	46.5	16.5	1.30E-04	5.57E-05	4.68	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_096	16.3	7.60	43.2	1681	755	97.3	97.3	47.4	16.8	1.32E-04	5.62E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214700_097	16.4	7.61	43.3	1679	756	97.7	97.7	47.5	16.8	1.32E-04	5.63E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_098	16.1	7.54	42.2	1725	749	93.4	93.4	46.7	16.6	1.31E-04	5.58E-05	4.68	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_099	16.0	7.52	41.8	1746	743	92.5	92.5	46.5	16.5	1.30E-04	5.57E-05	4.68	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_100	16.5	7.62	44.3	1738	767	98.7	98.7	47.7	16.8	1.34E-04	5.64E-05	4.68	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_101	16.4	7.59	43.9	1742	763	97.2	97.2	47.5	16.8	1.34E-04	5.62E-05	4.68	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_102	16.4	7.59	43.8	1742	762	96.8	96.8	47.4	16.7	1.33E-04	5.62E-05	4.68	1.52	0.17	6.46E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_103	16.3	7.58	43.6	1744	759	96.0	96.0	47.2	16.7	1.33E-04	5.61E-05	4.68	1.52	0.17	6.46E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_104	16.3	7.57	43.5	1756	758	95.8	95.8	47.2	16.7	1.33E-04	5.61E-05	4.68	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_105	16.3	7.57	43.5	1769	758	95.2	95.2	47.1	16.7	1.33E-04	5.60E-05	4.68	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_106	16.2	7.54	43.0	1802	750	94.0	94.0	46.8	16.6	1.33E-04	5.59E-05	4.69	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_107	16.2	7.54	42.9	1804	747	94.0	94.0	46.7	16.6	1.32E-04	5.58E-05	4.69	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_108	16.5	7.60	44.1	1740	765	97.7	97.7	47.6	16.8	1.34E-04	5.63E-05	4.68	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_109	16.4	7.58	43.7	1743	761	96.5	96.5	47.3	16.7	1.33E-04	5.61E-05	4.68	1.52	0.17	6.46E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE214700_110	16.3	7.56	43.4	1780	756	94.7	94.7	47.0	16.7	1.33E-04	5.60E-05	4.69	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_111	16.2	7.55	43.3	1790	755	94.3	94.3	47.0	16.6	1.33E-04	5.59E-05	4.69	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_112	16.2	7.55	43.2	1799	753	94.1	94.1	46.9	16.6	1.33E-04	5.59E-05	4.69	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_113	16.1	7.54	42.8	1804	745	93.9	93.9	46.7	16.6	1.32E-04	5.58E-05	4.69	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_114	16.1	7.53	42.6	1809	741	93.8	93.8	46.6	16.6	1.32E-04	5.58E-05	4.69	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_004	15.1	7.42	36.7	1398	654	85.5	85.5	43.7	16.2	1.19E-04	5.49E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_005	16.1	7.58	43.4	2023	766	97.1	97.1	46.4	16.7	1.35E-04	5.62E-05	4.73	1.52	0.17	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_006	16.1	7.56	43.2	1951	753	95.4	95.4	46.4	16.7	1.35E-04	5.61E-05	4.72	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_007	16.1	7.54	42.9	1840	723	92.3	92.3	46.5	16.6	1.33E-04	5.59E-05	4.69	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_012	16.1	7.60	42.6	2129	735	93.6	93.6	46.3	16.8	1.34E-04	5.64E-05	4.70	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_013	16.1	7.61	42.6	2116	733	94.1	94.1	46.4	16.8	1.34E-04	5.65E-05	4.70	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_014	16.1	7.62	42.7	2117	731	94.9	94.9	46.5	16.9	1.34E-04	5.66E-05	4.70	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_015	16.2	7.59	43.3	2035	764	97.5	97.5	46.3	16.7	1.35E-04	5.63E-05	4.72	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_016	16.2	7.57	43.4	1995	762	95.7	95.7	46.4	16.7	1.35E-04	5.61E-05	4.73	1.52	0.17	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_017	16.1	7.55	42.9	1890	741	93.6	93.6	46.4	16.6	1.34E-04	5.60E-05	4.71	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_018	16.1	7.54	43.0	1841	728	92.3	92.3	46.5	16.6	1.33E-04	5.59E-05	4.70	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_019	15.5	7.47	38.3	1533	703	89.4	89.4	45.3	16.4	1.23E-04	5.53E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_020	15.5	7.47	38.2	1536	702	89.2	89.2	45.3	16.4	1.23E-04	5.52E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_021	15.4	7.46	38.0	1499	693	88.9	88.9	45.0	16.3	1.22E-04	5.52E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_022	15.5	7.47	38.1	1491	693	88.8	88.8	45.0	16.4	1.22E-04	5.52E-05	4.63	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_023	15.4	7.45	37.8	1544	697	87.5	87.5	45.0	16.3	1.23E-04	5.51E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_024	15.3	7.44	37.5	1513	689	87.6	87.6	44.7	16.3	1.22E-04	5.51E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_025	15.4	7.44	37.7	1566	696	87.3	87.3	45.0	16.3	1.23E-04	5.50E-05	4.65	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_026	15.3	7.42	37.5	1574	691	86.7	86.7	44.7	16.2	1.23E-04	5.49E-05	4.65	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_027	15.3	7.42	37.2	1540	688	86.0	86.0	44.6	16.2	1.22E-04	5.49E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_028	15.3	7.43	37.3	1525	688	86.5	86.5	44.6	16.2	1.22E-04	5.50E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_029	15.3	7.43	37.4	1520	688	86.7	86.7	44.6	16.3	1.22E-04	5.50E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_030	15.3	7.44	37.4	1514	688	87.0	87.0	44.7	16.3	1.22E-04	5.50E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_031	15.2	7.43	37.0	1461	675	86.8	86.8	44.2	16.2	1.20E-04	5.49E-05	4.63	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_032	15.4	7.45	37.7	1549	696	87.3	87.3	45.0	16.3	1.23E-04	5.51E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_033	15.4	7.44	37.7	1558	697	87.2	87.2	45.0	16.3	1.23E-04	5.51E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_034	15.4	7.44	37.7	1561	696	87.2	87.2	45.0	16.3	1.23E-04	5.51E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_035	15.3	7.43	37.6	1569	694	87.2	87.2	44.9	16.2	1.23E-04	5.50E-05	4.65	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_036	15.3	7.43	37.6	1573	694	87.1	87.1	44.9	16.2	1.23E-04	5.50E-05	4.65	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_037	15.3	7.42	37.6	1574	693	86.9	86.9	44.8	16.2	1.23E-04	5.50E-05	4.65	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_038	15.2	7.42	37.1	1549	687	86.3	86.3	44.6	16.2	1.22E-04	5.49E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_039	15.2	7.42	37.2	1544	688	85.9	85.9	44.6	16.2	1.22E-04	5.49E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_040	15.3	7.42	37.2	1538	688	86.1	86.1	44.6	16.2	1.22E-04	5.50E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_041	15.3	7.43	37.3	1532	689	86.4	86.4	44.7	16.2	1.22E-04	5.50E-05	4.64	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_042	15.3	7.43	37.2	1452	676	87.1	87.1	44.3	16.3	1.21E-04	5.50E-05	4.63	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_043	15.2	7.43	37.0	1455	675	86.9	86.9	44.2	16.2	1.21E-04	5.50E-05	4.63	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_044	15.2	7.42	36.9	1467	676	86.5	86.5	44.1	16.2	1.20E-04	5.49E-05	4.63	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_045	15.2	7.42	36.8	1475	676	86.2	86.2	44.1	16.2	1.20E-04	5.49E-05	4.63	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_046	15.2	7.41	36.7	1483	676	85.9	85.9	44.1	16.2	1.20E-04	5.49E-05	4.63	1.52	0.17	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_052	15.1	7.42	36.6	1427	667	86.1	86.1	43.9	16.2	1.20E-04	5.49E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_053	15.2	7.42	36.7	1420	666	86.2	86.2	43.9	16.2	1.20E-04	5.49E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_056	15.1	7.41	36.6	1437	668	85.9	85.9	43.8	16.2	1.20E-04	5.48E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_057	15.2	7.42	36.8	1415	667	86.1	86.1	44.0	16.2	1.20E-04	5.49E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_058	15.2	7.43	37.0	1415	668	86.2	86.2	44.0	16.2	1.20E-04	5.49E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_059	15.6	7.48	39.0	1600	719	90.2	90.2	45.8	16.4	1.25E-04	5.54E-05	4.65	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_060	15.6	7.48	38.9	1603	718	89.6	89.6	45.7	16.4	1.25E-04	5.53E-05	4.65	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_061	16.0	7.51	41.5	1758	738	92.2	92.2	46.3	16.5	1.30E-04	5.56E-05	4.68	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214800_062	15.5	7.46	38.5	1607	709	88.8	88.8	45.4	16.3	1.24E-04	5.52E-05	4.65	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_063	15.5	7.45	38.5	1611	707	88.6	88.6	45.3	16.3	1.24E-04	5.52E-05	4.65	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_064	15.5	7.44	38.4	1616	703	88.1	88.1	45.2	16.3	1.25E-04	5.51E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_065	16.0	7.51	41.6	1752	740	92.2	92.2	46.4	16.5	1.30E-04	5.56E-05	4.68	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_066	15.9	7.51	41.4	1758	736	92.1	92.1	46.3	16.5	1.30E-04	5.56E-05	4.68	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_067	15.5	7.45	38.5	1609	708	88.7	88.7	45.3	16.3	1.24E-04	5.52E-05	4.65	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_068	15.5	7.45	38.5	1613	705	88.4	88.4	45.2	16.3	1.24E-04	5.51E-05	4.65	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_069	15.5	7.45	38.4	1613	704	88.3	88.3	45.2	16.3	1.25E-04	5.51E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_070	15.4	7.44	38.4	1632	698	87.1	87.1	45.0	16.3	1.25E-04	5.50E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_071	15.4	7.43	38.4	1636	697	86.6	86.6	45.0	16.2	1.25E-04	5.50E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_072	15.5	7.44	38.4	1627	700	87.6	87.6	45.1	16.3	1.25E-04	5.51E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_073	16.1	7.52	42.3	1809	735	92.5	92.5	46.5	16.5	1.31E-04	5.57E-05	4.69	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_074	16.0	7.52	42.1	1808	730	91.5	91.5	46.3	16.5	1.31E-04	5.57E-05	4.69	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_075	15.5	7.46	38.6	1607	711	89.0	89.0	45.4	16.3	1.24E-04	5.52E-05	4.65	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_076	16.1	7.59	42.4	2113	735	93.2	93.2	46.1	16.8	1.33E-04	5.63E-05	4.70	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214900_001	15.3	7.41	37.4	1572	689	86.5	86.5	44.7	16.2	1.23E-04	5.49E-05	4.65	1.52	0.17	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214900_008	15.4	7.43	38.4	1643	694	85.9	85.9	45.0	16.2	1.25E-04	5.50E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214900_009	15.4	7.43	38.3	1645	693	85.6	85.6	44.9	16.2	1.25E-04	5.50E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214900_010	15.4	7.42	38.3	1646	690	85.1	85.1	44.9	16.2	1.25E-04	5.50E-05	4.66	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE217600_001	14.4	7.37	32.5	1006	544	72.1	72.1	40.5	16.0	1.13E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE217600_002	14.3	7.35	31.7	949	543	71.3	71.3	39.6	15.9	1.12E-04	5.44E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE218700_001	16.1	7.71	40.3	1323	639	86.4	86.4	44.4	16.8	1.26E-04	5.70E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE218700_002	16.0	7.66	39.5	1317	631	83.3	83.3	43.8	16.7	1.24E-04	5.66E-05	4.60	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE220800_001	15.3	7.50	36.5	1042	483	63.8	63.8	38.4	15.9	1.07E-04	5.41E-05	4.57	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE220900_001	15.2	7.44	37.1	985	485	66.7	66.7	40.7	16.1	1.10E-04	5.45E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE220900_002	15.3	7.63	37.6	956	477	65.1	65.1	38.1	15.9	1.07E-04	5.42E-05	4.56	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE220900_003	15.3	7.54	36.8	1041	485	64.6	64.6	38.4	16.0	1.07E-04	5.42E-05	4.57	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE221000_001	15.7	7.76	38.1	1002	482	66.2	66.2	38.5	16.0	1.08E-04	5.44E-05	4.57	1.51	0.16	6.35E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE221000_002	15.8	7.76	37.9	1007	486	66.4	66.4	38.6	16.0	1.08E-04	5.45E-05	4.57	1.51	0.16	6.35E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE221300_001	15.2	7.63	36.0	986	484	68.3	68.3	41.0	16.2	1.10E-04	5.47E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE221300_002	15.1	7.60	35.6	997	486	69.1	69.1	41.9	16.2	1.12E-04	5.47E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE221300_003	14.2	7.42	31.7	1054	480	64.8	64.8	38.1	15.9	1.06E-04	5.39E-05	4.57	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE222600_001	14.8	7.35	37.5	1009	499	66.6	66.6	43.7	15.8	1.15E-04	5.35E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_001	15.2	7.48	37.2	1356	531	71.7	71.7	43.3	16.0	1.15E-04	5.41E-05	4.64	1.51	0.17	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_002	15.3	7.49	37.5	1409	540	75.7	75.7	42.8	16.1	1.14E-04	5.42E-05	4.65	1.51	0.17	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_003	15.5	7.52	38.8	1420	543	76.4	76.4	42.7	16.2	1.14E-04	5.44E-05	4.65	1.51	0.17	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_004	15.6	7.53	39.5	1405	544	77.6	77.6	42.6	16.2	1.14E-04	5.45E-05	4.64	1.51	0.17	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_005	15.8	7.54	40.7	1375	551	77.8	77.8	44.0	16.3	1.16E-04	5.47E-05	4.64	1.52	0.17	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_006	16.4	7.54	45.1	1355	592	80.8	80.8	46.7	16.6	1.27E-04	5.52E-05	4.63	1.52	0.16	6.45E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE222800_001	14.8	7.59	36.2	1291	521	71.0	71.0	44.1	16.1	1.16E-04	5.42E-05	4.63	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222800_002	14.9	7.60	35.8	1361	530	73.5	73.5	43.8	16.2	1.16E-04	5.43E-05	4.64	1.52	0.17	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222800_003	14.9	7.62	35.3	1430	541	76.0	76.0	43.3	16.2	1.15E-04	5.44E-05	4.65	1.51	0.17	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222800_004	17.9	7.80	53.5	1739	692	97.0	97.0	52.0	17.5	1.45E-04	5.72E-05	4.70	1.53	0.17	6.53E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE222800_005	14.5	7.39	34.7	984	497	65.5	65.5	42.5	15.8	1.13E-04	5.35E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222900_001	14.9	7.60	35.3	1460	547	77.0	77.0	43.0	16.3	1.14E-04	5.45E-05	4.66	1.51	0.17	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE223100_001	16.0	7.53	43.3	1492	603	83.7	83.7	47.0	16.7	1.28E-04	5.55E-05	4.65	1.52	0.17	6.45E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE224000_001	15.3	7.53	37.0	1009	526	79.9	79.9	42.6	16.4	1.16E-04	5.51E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_002	15.2	7.48	36.4	1102	512	82.3	82.3	43.1	16.3	1.16E-04	5.48E-05	4.57	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_003	15.2	7.53	36.2	988	526	78.5	78.5	41.6	16.4	1.14E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_004	14.3	7.30	31.8	957	485	73.8	73.8	38.8	15.7	1.07E-04	5.36E-05	4.55	1.51	0.16	6.35E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_005	14.9	7.46	35.9	977	510	75.9	75.9	41.4	16.2	1.13E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_006	14.3	7.30	33.2	851	482	71.5	71.5	39.8	15.7	1.09E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_007	14.4	7.30	33.7	778	474	66.4	66.4	39.5	15.7	1.09E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_008	15.3	7.54	37.0	1019	528	80.4	80.4	42.5	16.4	1.16E-04	5.52E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224100_001	16.2	7.72	42.1	1025	559	79.5	79.5	44.4	16.9	1.18E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE224200_001	16.6	7.69	43.4	1006	566	84.8	84.8	45.3	16.9	1.18E-04	5.59E-05	4.55	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE225600_001	16.3	7.80	41.9	1428	656	88.9	88.9	44.2	16.8	1.21E-04	5.57E-05	4.63	1.52	0.17	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE225700_001	16.0	7.80	40.1	1358	649	84.4	84.4	42.7	16.6	1.20E-04	5.54E-05	4.62	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE225700_002	16.7	7.88	43.9	1713	674	103.4	103.4	48.5	17.7	1.34E-04	5.76E-05	4.70	1.53	0.17	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE225800_001	17.1	8.07	44.7	1466	613	91.4	91.4	45.0	17.0	1.20E-04	5.64E-05	4.64	1.52	0.17	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE226500_001	16.6	7.83	41.5	1426	589	95.2	95.2	46.3	17.4	1.22E-04	5.69E-05	4.64	1.52	0.17	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE226500_002	16.2	7.78	41.5	1163	597	94.1	94.1	46.5	17.2	1.20E-04	5.63E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE226600_001	16.5	7.84	43.0	1114	616	95.8	95.8	46.7	17.3	1.20E-04	5.66E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE226700_001	16.6	7.82	42.3	1324	562	92.3	92.3	46.3	17.3	1.20E-04	5.66E-05	4.62	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE226800_001	16.4	7.77	41.4	1262	565	89.9	89.9	45.7	17.2	1.19E-04	5.64E-05	4.61	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE227000_001	16.2	7.76	42.4	962	603	89.5	89.5	45.8	17.1	1.18E-04	5.61E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE227100_001	16.7	7.90	45.5	949	639	94.9	94.9	46.8	17.4	1.21E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE227100_002	17.2	8.04	48.0	1063	665	99.1	99.1	47.8	17.7	1.24E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE227300_001	15.3	7.53	37.7	871	531	77.4	77.4	43.1	16.4	1.11E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE227800_001	15.4	7.64	38.2	857	550	78.2	78.2	41.6	16.3	1.12E-04	5.50E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE227900_001	15.4	7.65	37.5	951	528	79.0	79.0	42.0	16.5	1.13E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_001	14.2	7.25	33.4	1230	519	67.6	67.6	39.3	15.6	1.10E-04	5.34E-05	4.60	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_002	14.3	7.26	33.5	1255	521	68.5	68.5	39.3	15.6	1.11E-04	5.34E-05	4.60	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_003	14.3	7.26	34.0	1325	528	70.4	70.4	39.4	15.6	1.11E-04	5.34E-05	4.61	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_004	14.4	7.26	34.3	1322	532	70.0	70.0	39.5	15.6	1.12E-04	5.34E-05	4.61	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_005	14.3	7.27	34.3	1292	551	69.2	69.2	39.7	15.6	1.12E-04	5.35E-05	4.59	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_006	14.5	7.27	35.7	1334	585	70.9	70.9	40.1	15.6	1.13E-04	5.35E-05	4.61	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_007	14.5	7.27	36.5	1356	609	68.6	68.6	40.2	15.6	1.14E-04	5.35E-05	4.61	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228000_008	14.6	7.51	34.1	1128	543	71.0	71.0	40.3	16.1	1.15E-04	5.47E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_009	14.5	7.27	35.8	1109	553	67.8	67.8	40.6	15.6	1.17E-04	5.35E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228100_001	14.7	7.28	36.6	1160	565	68.4	68.4	41.1	15.7	1.18E-04	5.36E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_028	14.6	7.30	36.0	735	516	61.3	61.3	41.4	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_029	14.6	7.30	36.0	735	516	61.3	61.3	41.4	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_030	14.6	7.30	36.1	736	516	61.3	61.3	41.4	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_031	14.6	7.29	35.9	733	515	61.2	61.2	41.4	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_032	14.6	7.29	35.9	731	515	61.3	61.3	41.4	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_033	14.6	7.29	35.9	730	514	61.3	61.3	41.3	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_034	14.6	7.29	35.8	728	514	61.2	61.2	41.3	15.7	1.16E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_035	14.6	7.29	35.8	727	513	61.2	61.2	41.3	15.7	1.16E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_004	14.7	7.30	36.2	740	518	61.2	61.2	41.5	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_005	14.7	7.30	36.2	741	518	61.3	61.3	41.5	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_006	14.7	7.30	36.3	742	519	61.3	61.3	41.5	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_007	14.6	7.30	36.1	736	516	61.4	61.4	41.4	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_008	14.6	7.30	36.1	736	516	61.4	61.4	41.4	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_009	14.6	7.30	36.1	736	516	61.5	61.5	41.5	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_010	14.6	7.30	36.1	738	517	61.5	61.5	41.5	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_011	14.6	7.30	36.2	739	517	61.6	61.6	41.5	15.7	1.17E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_013	14.5	7.29	35.6	732	512	61.3	61.3	41.1	15.7	1.15E-04	5.36E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_014	14.5	7.29	35.6	733	513	61.2	61.2	41.1	15.7	1.15E-04	5.36E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_015	14.5	7.29	35.7	734	513	61.2	61.2	41.1	15.7	1.15E-04	5.36E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_045	14.5	7.29	35.3	718	510	60.6	60.6	40.8	15.7	1.14E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_046	14.5	7.29	35.4	721	511	60.8	60.8	40.9	15.7	1.14E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_047	14.5	7.29	35.4	723	511	60.9	60.9	40.9	15.7	1.15E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_048	14.5	7.29	35.5	726	512	60.9	60.9	41.0	15.7	1.15E-04	5.36E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_049	14.6	7.29	35.6	730	513	60.9	60.9	41.1	15.7	1.15E-04	5.36E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_050	14.6	7.29	35.7	733	514	60.9	60.9	41.1	15.7	1.15E-04	5.36E-05	4.51	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_051	14.6	7.30	35.8	735	515	61.0	61.0	41.2	15.7	1.15E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_052	14.6	7.30	35.9	738	515	61.0	61.0	41.2	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_053	14.6	7.30	35.9	740	516	61.0	61.0	41.3	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_054	14.6	7.30	36.0	740	516	61.1	61.1	41.4	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_055	14.6	7.30	36.1	740	517	61.1	61.1	41.4	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_056	14.6	7.30	36.1	741	517	61.2	61.2	41.4	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_057	14.7	7.30	36.2	743	518	61.5	61.5	41.5	15.7	1.17E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_058	14.7	7.30	36.3	744	519	61.7	61.7	41.6	15.7	1.17E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_059	14.7	7.30	36.4	744	519	61.9	61.9	41.6	15.7	1.17E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_009	14.5	7.30	34.5	719	497	62.1	62.1	40.0	15.7	1.12E-04	5.36E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_010	14.5	7.30	34.9	726	502	62.0	62.0	40.3	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_011	14.6	7.30	35.0	729	504	62.0	62.0	40.4	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_012	14.6	7.30	35.2	732	506	62.0	62.0	40.5	15.7	1.14E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_013	14.6	7.30	35.3	733	508	61.9	61.9	40.7	15.7	1.14E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_014	14.6	7.31	35.6	733	511	61.9	61.9	40.8	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_015	14.6	7.31	35.7	732	513	61.8	61.8	41.0	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_016	14.7	7.31	35.8	731	514	61.7	61.7	41.1	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_017	14.7	7.31	35.9	730	515	61.7	61.7	41.1	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_018	14.7	7.31	36.1	725	516	61.8	61.8	41.3	15.7	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_019	14.7	7.31	36.1	726	516	62.0	62.0	41.3	15.7	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_020	14.7	7.31	36.1	725	516	62.3	62.3	41.3	15.7	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_021	14.7	7.31	36.3	729	517	62.5	62.5	41.5	15.7	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_022	14.7	7.30	36.3	742	519	61.3	61.3	41.5	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_023	14.7	7.31	36.2	737	518	61.4	61.4	41.4	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE228500_024	14.7	7.31	36.1	734	517	61.5	61.5	41.4	15.7	1.16E-04	5.38E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_025	14.7	7.31	36.1	733	517	61.7	61.7	41.4	15.7	1.16E-04	5.38E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_026	14.6	7.30	35.9	726	515	61.4	61.4	41.2	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_027	14.6	7.30	35.8	723	514	61.2	61.2	41.1	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_028	14.6	7.30	35.6	718	512	61.0	61.0	40.9	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_029	14.6	7.30	35.5	719	511	61.0	61.0	40.9	15.7	1.14E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_030	14.6	7.30	35.3	720	509	61.0	61.0	40.7	15.7	1.14E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_031	14.5	7.30	35.2	721	507	61.0	61.0	40.6	15.7	1.14E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_032	14.5	7.30	35.1	722	506	61.0	61.0	40.5	15.7	1.14E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_033	14.5	7.30	34.9	722	504	61.1	61.1	40.4	15.7	1.13E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_034	14.5	7.29	34.7	723	502	61.2	61.2	40.3	15.7	1.13E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_035	14.5	7.29	34.6	723	500	61.2	61.2	40.2	15.7	1.13E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_049	14.5	7.29	34.8	714	504	60.6	60.6	40.4	15.6	1.13E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_050	14.5	7.29	35.0	713	506	60.5	60.5	40.5	15.7	1.14E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_051	14.5	7.29	35.1	711	507	60.5	60.5	40.6	15.7	1.14E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_052	14.5	7.29	35.3	712	509	60.6	60.6	40.8	15.7	1.14E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_053	14.5	7.30	35.4	714	511	60.7	60.7	40.9	15.7	1.14E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_054	14.6	7.30	35.7	725	514	60.9	60.9	41.1	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_055	14.6	7.30	35.8	728	515	61.1	61.1	41.1	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_056	14.6	7.30	35.9	731	515	61.1	61.1	41.2	15.7	1.15E-04	5.37E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_057	14.6	7.30	35.9	734	516	61.1	61.1	41.3	15.7	1.16E-04	5.37E-05	4.51	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_060	14.8	7.32	36.4	729	518	63.0	63.0	41.5	15.7	1.17E-04	5.39E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_061	14.8	7.32	36.4	730	518	62.8	62.8	41.5	15.7	1.16E-04	5.39E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_062	14.8	7.32	36.3	727	517	62.6	62.6	41.4	15.7	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_063	14.7	7.32	36.2	725	517	62.4	62.4	41.3	15.7	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_064	14.7	7.32	36.1	725	516	62.3	62.3	41.3	15.7	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_065	14.7	7.31	36.1	726	515	62.1	62.1	41.2	15.7	1.16E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_066	14.7	7.31	36.0	726	514	62.1	62.1	41.1	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_067	14.7	7.31	35.9	726	514	62.2	62.2	41.1	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_013	14.4	7.30	33.4	699	485	61.7	61.7	38.7	15.7	1.10E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_014	14.4	7.30	33.6	695	485	61.8	61.8	38.9	15.7	1.10E-04	5.37E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_015	14.4	7.31	33.8	694	486	62.0	62.0	39.1	15.7	1.11E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_016	14.5	7.31	34.0	699	486	62.4	62.4	39.3	15.7	1.11E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_017	14.5	7.31	34.3	710	487	62.6	62.6	39.5	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_018	14.6	7.31	34.5	719	491	62.5	62.5	39.7	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_019	14.6	7.31	34.8	727	495	62.7	62.7	39.9	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_020	14.6	7.31	35.0	731	499	62.8	62.8	40.2	15.7	1.13E-04	5.38E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_021	14.7	7.32	35.3	735	503	63.1	63.1	40.4	15.7	1.14E-04	5.38E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_022	14.7	7.32	35.5	736	507	63.2	63.2	40.6	15.7	1.14E-04	5.38E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_023	14.7	7.32	35.6	730	508	63.0	63.0	40.7	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_024	14.7	7.32	35.7	722	509	62.8	62.8	40.8	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_025	14.7	7.32	35.8	722	511	62.7	62.7	40.9	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_026	14.7	7.32	36.0	723	513	62.7	62.7	41.1	15.7	1.16E-04	5.39E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_027	14.8	7.32	36.2	723	515	62.7	62.7	41.2	15.7	1.16E-04	5.39E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_036	14.4	7.30	34.2	716	491	61.8	61.8	39.7	15.7	1.12E-04	5.36E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_037	14.5	7.30	34.3	717	494	62.1	62.1	39.8	15.7	1.12E-04	5.36E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_038	14.5	7.30	34.4	718	495	62.1	62.1	39.9	15.7	1.12E-04	5.36E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_039	14.7	7.31	35.8	727	512	62.3	62.3	41.0	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_040	14.7	7.31	35.7	727	511	62.3	62.3	40.9	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_041	14.7	7.31	35.6	728	510	62.3	62.3	40.8	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_042	14.7	7.31	35.6	729	510	62.3	62.3	40.8	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_043	14.7	7.31	35.5	731	510	62.4	62.4	40.8	15.7	1.15E-04	5.38E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_044	14.6	7.31	35.5	732	509	62.4	62.4	40.7	15.7	1.14E-04	5.38E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_045	14.6	7.31	35.4	732	508	62.4	62.4	40.7	15.7	1.14E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_046	14.6	7.31	35.4	732	507	62.4	62.4	40.6	15.7	1.14E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_047	14.6	7.31	35.2	731	505	62.5	62.5	40.5	15.7	1.14E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_048	14.6	7.31	35.1	728	503	62.5	62.5	40.4	15.7	1.14E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_049	14.6	7.31	35.0	727	502	62.5	62.5	40.3	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_050	14.6	7.31	34.9	726	501	62.6	62.6	40.2	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_051	14.6	7.31	34.9	726	500	62.6	62.6	40.2	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_052	14.5	7.31	34.8	725	499	62.6	62.6	40.1	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_053	14.5	7.30	34.7	724	498	62.6	62.6	40.1	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_054	14.5	7.30	34.7	724	497	62.5	62.5	40.0	15.7	1.13E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_055	14.5	7.30	34.6	722	495	62.3	62.3	39.9	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_056	14.5	7.30	34.5	722	494	62.2	62.2	39.9	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE228600_057	14.5	7.30	34.5	720	493	62.2	62.2	39.8	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_058	14.5	7.30	34.4	719	492	62.1	62.1	39.7	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_059	14.5	7.30	34.3	718	491	62.1	62.1	39.7	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_060	14.5	7.30	34.3	717	490	62.0	62.0	39.6	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_061	14.5	7.30	34.2	716	489	62.0	62.0	39.6	15.7	1.12E-04	5.37E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_062	14.5	7.30	34.1	714	488	61.9	61.9	39.5	15.7	1.11E-04	5.36E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_063	15.9	7.71	40.2	856	517	73.9	73.9	41.2	16.3	1.12E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228700_010	15.6	7.68	38.7	907	522	72.5	72.5	40.9	16.2	1.13E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228800_001	15.7	7.75	38.9	819	529	81.1	81.1	43.2	16.6	1.14E-04	5.53E-05	4.53	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228800_002	15.6	7.75	38.3	818	522	79.9	79.9	42.6	16.5	1.13E-04	5.52E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228800_003	15.1	7.57	36.7	839	512	76.3	76.3	41.3	16.3	1.11E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228900_001	15.8	7.77	39.5	879	544	85.9	85.9	44.1	16.8	1.16E-04	5.56E-05	4.54	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228900_002	15.8	7.74	39.8	999	581	93.4	93.4	45.6	17.0	1.19E-04	5.60E-05	4.56	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE229000_001	15.3	7.60	37.2	877	513	71.8	71.8	40.6	16.1	1.12E-04	5.47E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE229100_001	15.1	7.54	36.2	855	509	71.6	71.6	40.8	16.1	1.11E-04	5.45E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230200_001	15.3	7.55	37.9	797	522	69.0	69.0	40.6	15.9	1.12E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_001	17.3	7.88	46.0	906	550	73.1	73.1	42.0	16.2	1.15E-04	5.53E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_002	16.6	7.73	43.3	880	551	75.8	75.8	42.7	16.3	1.15E-04	5.50E-05	4.54	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_003	14.9	7.44	35.4	844	484	65.3	65.3	38.7	15.7	1.09E-04	5.38E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_004	14.6	7.36	34.4	781	512	62.9	62.9	38.9	15.7	1.11E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_005	14.7	7.37	34.3	723	512	64.3	64.3	39.2	15.8	1.12E-04	5.40E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_001	16.7	7.99	42.1	873	558	80.7	80.7	44.7	16.7	1.19E-04	5.60E-05	4.53	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_002	17.1	8.08	43.9	914	567	82.4	82.4	45.5	16.8	1.21E-04	5.63E-05	4.54	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE230400_006	15.7	7.70	40.0	830	517	68.3	68.3	39.6	15.9	1.11E-04	5.44E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_007	16.0	7.65	40.5	907	510	65.7	65.7	39.3	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_008	16.0	7.66	40.6	912	510	65.8	65.8	39.3	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_009	15.7	7.59	39.2	904	504	65.8	65.8	39.2	15.8	1.12E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_010	15.5	7.53	37.7	792	546	68.5	68.5	40.3	15.9	1.16E-04	5.48E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_011	15.8	7.58	39.3	794	552	71.8	71.8	41.1	16.1	1.19E-04	5.54E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_001	16.3	7.89	41.8	919	585	75.6	75.6	42.6	16.3	1.18E-04	5.58E-05	4.53	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_002	15.6	7.71	37.6	830	510	69.8	69.8	40.2	16.0	1.11E-04	5.48E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_003	15.3	7.63	35.9	849	506	69.4	69.4	39.8	16.0	1.11E-04	5.46E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_004	15.8	7.78	39.0	792	505	67.0	67.0	39.2	15.9	1.10E-04	5.47E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_005	15.7	7.75	38.5	798	506	66.8	66.8	39.1	15.9	1.10E-04	5.46E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_006	15.4	7.69	36.9	854	503	65.5	65.5	39.1	15.8	1.11E-04	5.44E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_007	15.0	7.52	36.0	809	504	63.8	63.8	39.3	15.9	1.12E-04	5.47E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_008	15.0	7.50	35.8	814	497	64.2	64.2	39.2	15.9	1.12E-04	5.46E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_009	15.0	7.50	35.8	827	493	64.5	64.5	39.1	15.9	1.12E-04	5.45E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_010	15.2	7.59	36.5	799	528	68.4	68.4	40.8	16.2	1.17E-04	5.54E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_011	15.5	7.70	37.7	793	537	70.5	70.5	41.3	16.4	1.19E-04	5.61E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_012	16.0	7.80	41.2	865	554	78.3	78.3	45.0	17.0	1.24E-04	5.76E-05	4.52	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230500_013	17.9	8.02	52.0	1235	758	96.4	96.4	49.8	17.4	1.34E-04	5.82E-05	4.60	1.53	0.16	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230500_014	15.7	7.70	38.1	819	536	76.9	76.9	41.5	16.5	1.15E-04	5.57E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230600_001	14.6	7.50	33.0	943	526	67.3	67.3	39.6	15.9	1.11E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230600_002	14.7	7.47	33.1	881	510	64.9	64.9	39.1	15.8	1.10E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230600_003	18.8	8.47	61.7	1680	932	116.1	116.1	53.4	18.9	1.51E-04	6.23E-05	4.68	1.54	0.17	6.56E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE230600_004	15.9	7.70	40.7	941	610	88.3	88.3	44.6	16.7	1.21E-04	5.64E-05	4.54	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230600_005	15.4	7.61	37.6	859	557	79.2	79.2	42.3	16.4	1.17E-04	5.56E-05	4.53	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230600_006	15.2	7.56	36.7	845	542	76.3	76.3	41.8	16.3	1.16E-04	5.53E-05	4.52	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_001	16.4	7.80	44.5	1886	724	106.1	106.1	50.0	17.7	1.44E-04	6.00E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_002	16.1	7.70	43.2	1681	697	102.3	102.3	49.0	17.3	1.40E-04	5.88E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_003	15.9	7.64	42.2	1570	679	98.0	98.0	48.2	17.1	1.37E-04	5.80E-05	4.63	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_004	15.7	7.59	41.4	1498	664	95.2	95.2	47.5	16.9	1.35E-04	5.74E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_005	15.6	7.56	41.0	1459	658	94.0	94.0	47.1	16.8	1.34E-04	5.71E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_006	15.5	7.53	40.4	1410	647	90.1	90.1	46.6	16.7	1.32E-04	5.67E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_007	15.4	7.51	40.0	1383	638	87.8	87.8	46.2	16.6	1.30E-04	5.65E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_008	15.3	7.49	39.5	1349	627	86.4	86.4	45.8	16.5	1.29E-04	5.62E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_009	15.3	7.47	39.3	1324	623	85.8	85.8	45.5	16.4	1.28E-04	5.60E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_010	15.2	7.45	39.0	1286	617	83.9	83.9	45.2	16.3	1.27E-04	5.58E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_011	15.2	7.44	38.8	1248	611	82.6	82.6	44.9	16.3	1.27E-04	5.56E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_012	16.7	7.85	45.7	2011	741	109.1	109.1	50.7	17.9	1.47E-04	6.06E-05	4.70	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_013	16.5	7.78	44.8	1879	723	106.1	106.1	50.0	17.6	1.45E-04	5.98E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_014	16.2	7.72	43.8	1720	704	103.0	103.0	49.2	17.4	1.42E-04	5.89E-05	4.65	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_015	16.1	7.67	43.0	1621	691	100.2	100.2	48.7	17.2	1.39E-04	5.84E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_016	16.0	7.64	42.5	1581	682	98.3	98.3	48.3	17.1	1.38E-04	5.81E-05	4.63	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_017	15.8	7.60	41.8	1527	672	96.2	96.2	47.8	16.9	1.36E-04	5.76E-05	4.63	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_018	15.7	7.58	41.4	1485	665	94.9	94.9	47.4	16.8	1.35E-04	5.73E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_019	15.6	7.56	41.0	1445	657	93.2	93.2	47.1	16.7	1.33E-04	5.70E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_020	15.6	7.53	40.7	1421	650	91.1	91.1	46.8	16.7	1.32E-04	5.67E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_021	15.5	7.52	40.4	1402	644	89.1	89.1	46.5	16.6	1.31E-04	5.65E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_022	15.4	7.50	40.2	1380	638	88.3	88.3	46.2	16.5	1.31E-04	5.64E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_023	15.4	7.49	39.9	1357	632	87.4	87.4	46.0	16.5	1.30E-04	5.62E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_024	15.3	7.47	39.6	1324	625	85.8	85.8	45.7	16.4	1.29E-04	5.60E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_025	15.3	7.46	39.4	1299	621	85.1	85.1	45.5	16.4	1.28E-04	5.59E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_026	15.3	7.45	39.3	1270	617	83.8	83.8	45.3	16.3	1.28E-04	5.58E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_027	17.3	7.98	49.8	1939	809	112.3	112.3	52.0	18.2	1.54E-04	6.14E-05	4.69	1.53	0.17	6.53E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_028	17.1	7.93	49.1	1848	794	110.4	110.4	51.5	18.0	1.52E-04	6.08E-05	4.68	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_029	17.0	7.89	48.6	1791	781	108.5	108.5	51.1	17.9	1.50E-04	6.03E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_030	16.9	7.86	48.2	1759	771	106.4	106.4	50.7	17.8	1.49E-04	6.00E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_031	15.9	7.63	42.5	1564	683	97.3	97.3	48.3	17.0	1.37E-04	5.78E-05	4.63	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_032	16.0	7.63	42.6	1573	685	97.5	97.5	48.4	17.0	1.38E-04	5.79E-05	4.63	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_033	16.0	7.64	42.8	1584	689	97.8	97.8	48.5	17.0	1.38E-04	5.79E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_034	16.0	7.64	43.0	1594	692	98.2	98.2	48.6	17.1	1.39E-04	5.80E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_035	16.0	7.65	43.1	1599	695	98.6	98.6	48.7	17.1	1.39E-04	5.80E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_036	16.1	7.65	43.3	1604	697	99.0	99.0	48.8	17.1	1.39E-04	5.81E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_037	16.1	7.65	43.4	1610	699	99.4	99.4	48.9	17.1	1.40E-04	5.81E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_038	16.1	7.66	43.6	1617	701	99.9	99.9	49.1	17.1	1.40E-04	5.82E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_039	16.2	7.66	43.8	1625	703	100.4	100.4	49.2	17.2	1.41E-04	5.82E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_040	16.2	7.67	44.0	1630	705	100.7	100.7	49.3	17.2	1.41E-04	5.83E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_041	16.2	7.67	44.2	1638	707	101.1	101.1	49.5	17.2	1.41E-04	5.83E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_042	16.2	7.68	44.2	1638	706	101.2	101.2	49.5	17.2	1.41E-04	5.83E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_043	16.2	7.67	44.2	1631	705	101.1	101.1	49.5	17.2	1.41E-04	5.83E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_044	16.2	7.68	44.4	1639	706	101.2	101.2	49.6	17.2	1.42E-04	5.83E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_045	16.2	7.68	44.4	1638	706	101.2	101.2	49.6	17.2	1.42E-04	5.84E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_046	16.3	7.68	44.5	1641	706	101.2	101.2	49.6	17.2	1.42E-04	5.84E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_047	16.3	7.69	44.6	1643	707	101.2	101.2	49.6	17.2	1.42E-04	5.84E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_048	16.3	7.69	44.7	1646	708	101.3	101.3	49.7	17.2	1.42E-04	5.85E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_049	16.3	7.70	44.8	1649	710	101.3	101.3	49.7	17.3	1.42E-04	5.85E-05	4.65	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_050	16.3	7.70	44.8	1651	712	101.4	101.4	49.7	17.3	1.42E-04	5.85E-05	4.65	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_051	16.3	7.70	44.9	1649	713	101.5	101.5	49.7	17.3	1.43E-04	5.86E-05	4.65	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_052	16.3	7.71	45.0	1654	716	101.7	101.7	49.8	17.3	1.43E-04	5.86E-05	4.65	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_053	16.3	7.71	45.1	1652	718	101.7	101.7	49.8	17.3	1.43E-04	5.86E-05	4.65	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_054	16.3	7.72	45.2	1657	721	102.0	102.0	49.8	17.3	1.43E-04	5.87E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_055	16.4	7.73	45.6	1661	729	102.6	102.6	49.9	17.4	1.44E-04	5.88E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_056	16.4	7.74	45.7	1664	731	102.8	102.8	50.0	17.4	1.44E-04	5.89E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_057	16.4	7.74	45.7	1665	732	102.8	102.8	50.0	17.4	1.44E-04	5.89E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_058	16.5	7.75	45.8	1670	733	103.0	103.0	50.0	17.4	1.44E-04	5.90E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_059	16.5	7.75	45.9	1673	735	103.1	103.1	50.0	17.4	1.44E-04	5.90E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_060	16.5	7.76	46.1	1679	737	103.3	103.3	50.1	17.5	1.45E-04	5.91E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_061	16.5	7.77	46.2	1685	740	103.5	103.5	50.1	17.5	1.45E-04	5.91E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_062	16.5	7.77	46.4	1691	742	103.7	103.7	50.2	17.5	1.45E-04	5.92E-05	4.65	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_063	16.6	7.78	46.6	1700	745	104.0	104.0	50.2	17.5	1.45E-04	5.93E-05	4.66	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_064	16.6	7.79	46.8	1709	749	104.3	104.3	50.3	17.6	1.46E-04	5.94E-05	4.66	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_065	16.7	7.80	47.1	1719	753	104.5	104.5	50.4	17.6	1.46E-04	5.94E-05	4.66	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_066	16.7	7.81	47.3	1727	756	104.7	104.7	50.4	17.6	1.47E-04	5.95E-05	4.66	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_067	17.1	7.94	49.3	1880	799	111.0	111.0	51.6	18.1	1.52E-04	6.10E-05	4.68	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_068	17.0	7.90	48.7	1799	783	108.9	108.9	51.1	17.9	1.50E-04	6.04E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_069	17.2	7.93	49.1	1906	795	110.7	110.7	51.7	18.1	1.52E-04	6.10E-05	4.69	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_070	17.1	7.93	48.9	1902	792	110.3	110.3	51.6	18.1	1.52E-04	6.09E-05	4.69	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_071	17.1	7.92	48.8	1899	790	110.0	110.0	51.6	18.1	1.52E-04	6.09E-05	4.69	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_072	17.1	7.91	48.6	1893	787	109.4	109.4	51.5	18.0	1.51E-04	6.08E-05	4.68	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_073	17.1	7.90	48.5	1887	784	109.1	109.1	51.5	18.0	1.51E-04	6.07E-05	4.68	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_074	17.0	7.90	48.4	1882	782	109.0	109.0	51.4	18.0	1.51E-04	6.07E-05	4.68	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_075	17.0	7.89	48.2	1878	779	108.9	108.9	51.4	18.0	1.51E-04	6.06E-05	4.68	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_076	17.0	7.89	48.1	1874	777	108.5	108.5	51.4	18.0	1.50E-04	6.06E-05	4.68	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_077	17.0	7.88	48.0	1872	775	108.4	108.4	51.3	18.0	1.50E-04	6.05E-05	4.68	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_078	17.0	7.88	47.9	1866	773	108.3	108.3	51.3	17.9	1.50E-04	6.05E-05	4.68	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_079	16.9	7.87	47.8	1861	771	108.2	108.2	51.3	17.9	1.50E-04	6.04E-05	4.68	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_080	16.9	7.86	47.6	1854	768	108.0	108.0	51.2	17.9	1.50E-04	6.03E-05	4.68	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_081	16.9	7.86	47.5	1850	767	108.0	108.0	51.2	17.9	1.49E-04	6.03E-05	4.68	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_082	16.8	7.84	47.1	1835	757	108.0	108.0	51.1	17.8	1.49E-04	6.01E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_083	16.8	7.83	47.0	1829	754	107.9	107.9	51.0	17.8	1.49E-04	6.01E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_084	16.8	7.83	47.0	1827	753	107.9	107.9	51.0	17.8	1.49E-04	6.00E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_085	16.8	7.82	46.9	1824	751	107.9	107.9	51.0	17.8	1.48E-04	6.00E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_086	16.8	7.82	46.8	1820	750	107.9	107.9	51.0	17.8	1.48E-04	6.00E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_087	16.8	7.82	46.8	1820	748	107.9	107.9	51.0	17.7	1.48E-04	5.99E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_088	16.8	7.81	46.7	1823	747	107.9	107.9	50.9	17.7	1.48E-04	5.99E-05	4.67	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_089	16.8	7.81	46.7	1824	745	107.9	107.9	50.9	17.7	1.48E-04	5.99E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_090	16.7	7.80	46.6	1826	744	107.8	107.8	50.9	17.7	1.48E-04	5.98E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_091	16.7	7.80	46.5	1827	744	107.8	107.8	50.8	17.7	1.48E-04	5.98E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_092	16.7	7.79	46.4	1823	743	107.7	107.7	50.8	17.7	1.48E-04	5.97E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_093	16.7	7.79	46.4	1837	744	107.6	107.6	50.8	17.7	1.48E-04	5.97E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_094	16.7	7.79	46.3	1834	743	106.9	106.9	50.7	17.6	1.47E-04	5.97E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_095	16.7	7.79	46.2	1834	743	106.0	106.0	50.6	17.6	1.47E-04	5.97E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_096	16.7	7.79	46.0	1832	742	105.9	105.9	50.5	17.6	1.47E-04	5.97E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_097	16.6	7.78	45.9	1834	741	105.9	105.9	50.5	17.6	1.46E-04	5.96E-05	4.67	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_098	16.7	7.79	45.9	1872	741	106.5	106.5	50.4	17.7	1.47E-04	5.98E-05	4.68	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_099	16.6	7.79	45.7	1865	739	106.3	106.3	50.4	17.6	1.46E-04	5.97E-05	4.68	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_100	16.6	7.78	45.5	1846	735	105.9	105.9	50.3	17.6	1.46E-04	5.96E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_101	16.6	7.78	45.4	1841	733	105.9	105.9	50.2	17.6	1.45E-04	5.96E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_102	16.5	7.76	45.1	1809	727	105.2	105.2	50.0	17.5	1.45E-04	5.94E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_103	16.5	7.76	45.0	1805	724	105.1	105.1	49.9	17.5	1.44E-04	5.94E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_104	16.5	7.75	44.9	1793	721	104.8	104.8	49.8	17.5	1.44E-04	5.93E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_105	16.5	7.75	44.8	1790	719	104.7	104.7	49.8	17.5	1.44E-04	5.93E-05	4.66	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_106	16.4	7.75	44.7	1785	718	104.6	104.6	49.7	17.5	1.44E-04	5.93E-05	4.66	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_107	16.4	7.74	44.6	1779	716	104.4	104.4	49.6	17.5	1.43E-04	5.92E-05	4.66	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_108	16.4	7.74	44.5	1774	715	104.3	104.3	49.6	17.5	1.43E-04	5.92E-05	4.66	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_109	16.4	7.74	44.5	1773	714	104.2	104.2	49.6	17.5	1.43E-04	5.92E-05	4.66	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_110	15.6	7.54	41.2	1439	657	91.9	91.9	47.1	16.7	1.33E-04	5.68E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_111	15.6	7.53	41.0	1419	651	90.6	90.6	46.9	16.6	1.33E-04	5.66E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_112	15.5	7.51	40.7	1392	644	89.1	89.1	46.6	16.6	1.32E-04	5.64E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_113	15.5	7.50	40.5	1364	637	88.1	88.1	46.3	16.5	1.31E-04	5.63E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_114	15.4	7.49	40.2	1338	632	86.6	86.6	46.0	16.5	1.30E-04	5.61E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_115	15.5	7.50	40.7	1353	637	87.4	87.4	46.3	16.5	1.31E-04	5.63E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_116	15.5	7.51	40.8	1371	640	88.1	88.1	46.5	16.5	1.32E-04	5.63E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_117	15.6	7.52	41.0	1396	645	89.7	89.7	46.7	16.6	1.32E-04	5.65E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_118	15.6	7.52	41.2	1408	648	90.1	90.1	46.9	16.6	1.33E-04	5.66E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_119	15.7	7.55	41.5	1449	660	92.3	92.3	47.3	16.7	1.34E-04	5.69E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_120	15.7	7.55	41.7	1454	661	92.6	92.6	47.4	16.7	1.34E-04	5.69E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_121	15.7	7.56	41.8	1459	662	92.8	92.8	47.5	16.7	1.35E-04	5.70E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_122	15.7	7.56	41.9	1462	662	92.9	92.9	47.6	16.7	1.35E-04	5.70E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_123	15.8	7.57	42.3	1477	665	93.5	93.5	47.8	16.8	1.36E-04	5.71E-05	4.62	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_124	15.8	7.58	42.4	1481	666	93.7	93.7	47.8	16.8	1.36E-04	5.71E-05	4.62	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_125	15.7	7.54	41.7	1429	653	91.4	91.4	47.2	16.7	1.34E-04	5.67E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_126	15.6	7.52	41.3	1379	643	88.4	88.4	46.7	16.6	1.32E-04	5.65E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_127	15.8	7.58	42.4	1481	666	93.7	93.7	47.8	16.8	1.36E-04	5.71E-05	4.62	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_128	15.8	7.58	42.5	1485	667	93.8	93.8	47.8	16.8	1.36E-04	5.72E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_129	15.8	7.58	42.6	1487	668	93.9	93.9	47.9	16.8	1.36E-04	5.72E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_130	15.9	7.59	42.7	1489	669	94.0	94.0	47.9	16.8	1.36E-04	5.72E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_131	15.9	7.59	42.8	1493	670	94.1	94.1	47.9	16.8	1.36E-04	5.72E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_132	15.9	7.59	42.8	1495	671	94.1	94.1	47.9	16.8	1.37E-04	5.73E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_133	15.9	7.60	43.0	1501	674	94.3	94.3	48.0	16.9	1.37E-04	5.73E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_134	15.9	7.60	43.0	1503	675	94.4	94.4	48.1	16.9	1.37E-04	5.73E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_135	15.9	7.60	43.1	1504	677	94.4	94.4	48.1	16.9	1.37E-04	5.74E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_136	16.0	7.61	43.2	1508	678	94.6	94.6	48.1	16.9	1.37E-04	5.74E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_137	16.0	7.61	43.4	1511	680	94.7	94.7	48.2	16.9	1.38E-04	5.75E-05	4.62	1.52	0.16	6.46E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE230900_138	16.0	7.62	43.5	1512	681	94.8	94.8	48.2	16.9	1.38E-04	5.75E-05	4.63	1.52	0.16	6.46E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE230900_139	16.0	7.62	43.6	1515	683	94.9	94.9	48.2	16.9	1.38E-04	5.75E-05	4.63	1.52	0.16	6.47E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE230900_140	16.0	7.62	43.7	1516	684	95.0	95.0	48.3	16.9	1.38E-04	5.75E-05	4.63	1.52	0.16	6.47E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE230900_141	16.0	7.63	43.8	1517	685	95.0	95.0	48.3	17.0	1.38E-04	5.76E-05	4.63	1.52	0.16	6.47E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE230900_142	16.1	7.63	43.9	1519	686	95.2	95.2	48.3	17.0	1.38E-04	5.76E-05	4.63	1.52	0.16	6.47E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE230900_143	16.1	7.64	44.0	1522	688	95.4	95.4	48.4	17.0	1.39E-04	5.77E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_144	16.1	7.64	44.1	1524	690	95.6	95.6	48.5	17.0	1.39E-04	5.77E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_145	15.7	7.54	41.9	1407	652	89.5	89.5	47.0	16.7	1.34E-04	5.67E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_146	15.7	7.54	41.8	1405	651	89.5	89.5	47.0	16.6	1.34E-04	5.67E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_147	15.7	7.54	41.7	1402	649	89.4	89.4	46.9	16.6	1.33E-04	5.66E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_148	15.7	7.53	41.5	1409	649	90.4	90.4	47.0	16.6	1.33E-04	5.66E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_149	15.0	7.46	37.4	1237	614	84.0	84.0	44.4	16.4	1.25E-04	5.61E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_150	15.1	7.49	37.9	1259	625	86.1	86.1	44.9	16.5	1.27E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_151	15.2	7.52	38.3	1287	635	87.6	87.6	45.3	16.6	1.28E-04	5.67E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_152	15.4	7.56	39.1	1336	651	90.1	90.1	46.1	16.8	1.30E-04	5.72E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_153	15.4	7.57	39.3	1349	653	90.4	90.4	46.2	16.8	1.31E-04	5.73E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_154	15.4	7.57	39.3	1358	654	90.5	90.5	46.3	16.8	1.31E-04	5.74E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_155	15.5	7.58	39.5	1371	657	90.9	90.9	46.5	16.9	1.31E-04	5.75E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_156	15.5	7.58	39.4	1373	655	90.5	90.5	46.4	16.9	1.31E-04	5.74E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_157	15.4	7.56	39.2	1365	649	89.6	89.6	46.2	16.8	1.30E-04	5.73E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_158	15.3	7.53	38.7	1328	635	87.7	87.7	45.6	16.7	1.29E-04	5.68E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_159	15.2	7.50	38.3	1295	625	86.2	86.2	45.2	16.6	1.28E-04	5.65E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_160	15.1	7.48	37.9	1274	615	84.7	84.7	44.8	16.5	1.26E-04	5.62E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_161	15.0	7.45	37.3	1235	607	82.5	82.5	44.2	16.4	1.25E-04	5.59E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_162	15.1	7.49	37.9	1268	624	86.1	86.1	44.9	16.5	1.27E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_163	15.1	7.50	38.1	1279	625	86.3	86.3	45.0	16.5	1.27E-04	5.65E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_164	15.0	7.47	37.6	1253	611	83.7	83.7	44.5	16.4	1.26E-04	5.61E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_165	14.9	7.44	37.0	1218	605	81.9	81.9	44.0	16.3	1.24E-04	5.58E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_166	14.7	7.40	36.3	1163	595	80.4	80.4	43.3	16.2	1.22E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_167	14.8	7.41	36.5	1173	601	81.2	81.2	43.6	16.2	1.23E-04	5.55E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_168	14.9	7.43	36.8	1185	609	82.1	82.1	43.9	16.3	1.24E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_169	14.9	7.44	37.0	1196	615	83.0	83.0	44.1	16.3	1.25E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_170	15.0	7.47	37.5	1213	626	84.8	84.8	44.6	16.4	1.26E-04	5.61E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_171	15.2	7.50	38.1	1239	640	87.5	87.5	45.2	16.6	1.28E-04	5.66E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_172	15.3	7.53	38.7	1262	651	89.1	89.1	45.8	16.7	1.29E-04	5.69E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_173	15.3	7.52	38.7	1260	653	89.0	89.0	45.8	16.7	1.30E-04	5.69E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_174	15.3	7.52	38.7	1256	653	88.9	88.9	45.8	16.7	1.30E-04	5.68E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_175	15.3	7.51	38.6	1249	652	88.5	88.5	45.7	16.6	1.29E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_176	15.2	7.51	38.6	1243	651	88.2	88.2	45.7	16.6	1.29E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_177	15.2	7.51	38.6	1241	651	88.2	88.2	45.7	16.6	1.29E-04	5.66E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_178	15.2	7.50	38.5	1237	650	87.9	87.9	45.6	16.6	1.29E-04	5.66E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_179	15.2	7.49	38.5	1233	650	87.6	87.6	45.6	16.6	1.29E-04	5.65E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_180	15.2	7.49	38.5	1231	650	87.5	87.5	45.6	16.5	1.29E-04	5.64E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_181	15.2	7.49	38.4	1226	649	87.1	87.1	45.6	16.5	1.29E-04	5.63E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_182	15.2	7.48	38.4	1223	649	86.8	86.8	45.6	16.5	1.29E-04	5.63E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_192	14.7	7.39	36.1	1152	594	80.0	80.0	43.2	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_193	14.8	7.41	36.6	1171	605	81.4	81.4	43.7	16.2	1.23E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_194	14.9	7.44	37.1	1194	619	83.5	83.5	44.3	16.3	1.25E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_198	15.1	7.44	38.5	1263	609	82.2	82.2	44.9	16.3	1.26E-04	5.57E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_199	15.2	7.45	38.8	1292	614	84.1	84.1	45.1	16.3	1.27E-04	5.58E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_200	15.2	7.47	39.0	1317	618	84.9	84.9	45.4	16.4	1.28E-04	5.60E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_201	15.3	7.48	39.2	1340	624	85.3	85.3	45.6	16.5	1.29E-04	5.62E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_202	15.4	7.50	39.5	1361	631	86.2	86.2	45.9	16.5	1.29E-04	5.64E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_203	15.4	7.52	39.8	1380	637	88.4	88.4	46.2	16.6	1.30E-04	5.66E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_204	15.5	7.54	40.2	1410	645	91.3	91.3	46.6	16.7	1.32E-04	5.69E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_205	15.1	7.43	38.3	1227	605	80.9	80.9	44.6	16.2	1.26E-04	5.55E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_206	16.2	7.73	43.5	1736	704	103.4	103.4	49.2	17.4	1.41E-04	5.91E-05	4.66	1.52	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_207	16.4	7.79	44.4	1872	722	105.9	105.9	49.9	17.7	1.44E-04	5.99E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_208	16.2	7.73	43.5	1749	705	103.5	103.5	49.3	17.5	1.41E-04	5.92E-05	4.66	1.52	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_209	16.2	7.73	43.3	1737	703	103.4	103.4	49.3	17.4	1.41E-04	5.92E-05	4.66	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_210	16.2	7.73	43.1	1723	702	103.3	103.3	49.2	17.4	1.41E-04	5.92E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_211	16.1	7.73	43.0	1713	700	103.3	103.3	49.1	17.4	1.40E-04	5.92E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_212	16.1	7.72	42.8	1693	698	102.9	102.9	49.0	17.4	1.40E-04	5.91E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_213	16.1	7.72	42.7	1692	698	102.8	102.8	49.0	17.4	1.40E-04	5.91E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_214	16.1	7.72	42.7	1687	698	102.7	102.7	48.9	17.4	1.40E-04	5.91E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_215	16.1	7.72	42.6	1679	697	102.5	102.5	48.9	17.4	1.39E-04	5.91E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_216	16.1	7.72	42.8	1696	698	103.0	103.0	49.0	17.4	1.40E-04	5.91E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_217	16.1	7.74	42.5	1648	703	102.0	102.0	48.9	17.5	1.40E-04	5.93E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_218	16.1	7.73	42.7	1691	700	102.7	102.7	49.0	17.4	1.40E-04	5.92E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_219	16.1	7.72	42.5	1671	698	102.3	102.3	48.9	17.4	1.39E-04	5.92E-05	4.65	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_220	16.1	7.73	42.4	1665	700	102.3	102.3	48.9	17.5	1.39E-04	5.92E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_221	16.1	7.73	42.4	1661	701	102.2	102.2	48.9	17.5	1.39E-04	5.93E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_222	16.1	7.73	42.4	1651	701	102.0	102.0	48.9	17.5	1.39E-04	5.93E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_223	16.1	7.73	42.4	1631	701	101.5	101.5	48.8	17.5	1.39E-04	5.93E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_224	16.1	7.73	42.4	1629	703	101.5	101.5	48.8	17.5	1.39E-04	5.93E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_225	16.1	7.73	42.2	1604	703	100.8	100.8	48.7	17.5	1.39E-04	5.93E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_226	16.1	7.73	42.1	1591	703	100.6	100.6	48.7	17.5	1.39E-04	5.93E-05	4.63	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_227	16.1	7.74	42.2	1587	704	100.5	100.5	48.7	17.5	1.39E-04	5.93E-05	4.63	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_228	16.1	7.74	42.2	1586	705	100.5	100.5	48.7	17.5	1.39E-04	5.94E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_229	16.1	7.74	42.3	1585	706	100.5	100.5	48.7	17.5	1.39E-04	5.94E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_230	16.1	7.74	42.3	1582	707	100.4	100.4	48.7	17.5	1.39E-04	5.94E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_231	16.1	7.75	42.3	1582	708	100.5	100.5	48.8	17.5	1.40E-04	5.95E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_232	16.1	7.74	42.3	1574	708	100.3	100.3	48.7	17.5	1.40E-04	5.95E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_233	16.1	7.73	42.2	1554	705	99.6	99.6	48.6	17.5	1.39E-04	5.93E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_234	16.1	7.74	42.3	1553	707	99.7	99.7	48.7	17.5	1.40E-04	5.94E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_235	16.1	7.74	42.3	1543	707	99.4	99.4	48.7	17.5	1.39E-04	5.94E-05	4.63	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_236	16.0	7.73	42.2	1529	705	99.1	99.1	48.6	17.5	1.39E-04	5.93E-05	4.62	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_237	16.0	7.72	42.0	1509	703	98.6	98.6	48.5	17.4	1.39E-04	5.92E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_238	16.0	7.73	42.2	1519	706	99.0	99.0	48.6	17.5	1.39E-04	5.93E-05	4.62	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_239	16.0	7.73	42.2	1509	706	98.9	98.9	48.6	17.5	1.39E-04	5.93E-05	4.62	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_240	16.0	7.72	42.1	1497	705	98.8	98.8	48.5	17.4	1.39E-04	5.92E-05	4.62	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_241	16.1	7.73	42.4	1641	700	101.7	101.7	48.8	17.5	1.39E-04	5.92E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230900_242	16.0	7.72	42.0	1482	704	98.5	98.5	48.5	17.4	1.39E-04	5.92E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_243	16.0	7.71	41.8	1467	704	98.1	98.1	48.4	17.4	1.38E-04	5.91E-05	4.61	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_244	15.9	7.70	41.6	1448	703	97.3	97.3	48.3	17.4	1.38E-04	5.90E-05	4.61	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_245	15.9	7.70	41.6	1437	703	97.0	97.0	48.2	17.3	1.38E-04	5.90E-05	4.61	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_246	15.9	7.70	41.5	1433	703	96.9	96.9	48.2	17.3	1.38E-04	5.89E-05	4.61	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_247	15.9	7.69	41.5	1426	702	96.7	96.7	48.2	17.3	1.37E-04	5.89E-05	4.61	1.52	0.16	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_257	14.7	7.36	36.1	1106	567	76.3	76.3	42.7	16.0	1.20E-04	5.48E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_258	14.7	7.36	36.1	1110	568	76.3	76.3	42.8	16.0	1.21E-04	5.49E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_259	14.7	7.37	36.1	1117	567	76.3	76.3	42.8	16.0	1.21E-04	5.49E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_260	14.7	7.36	35.9	1115	565	76.0	76.0	42.7	16.0	1.20E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_261	14.6	7.36	35.8	1112	564	75.8	75.8	42.6	16.0	1.20E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_262	14.6	7.36	35.8	1108	564	75.7	75.7	42.6	16.0	1.20E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_263	14.8	7.38	36.5	1137	573	77.2	77.2	43.1	16.1	1.21E-04	5.50E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_264	14.8	7.38	36.5	1150	574	77.4	77.4	43.2	16.1	1.22E-04	5.51E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_265	14.8	7.39	36.6	1165	576	77.3	77.3	43.3	16.1	1.22E-04	5.51E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_266	14.8	7.39	36.6	1175	577	77.7	77.7	43.4	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_272	14.4	7.32	34.9	1064	563	73.2	73.2	42.0	15.9	1.19E-04	5.44E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_273	14.4	7.33	35.0	1071	564	73.5	73.5	42.0	15.9	1.19E-04	5.44E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_274	14.5	7.33	35.1	1077	565	73.8	73.8	42.1	15.9	1.19E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_275	14.5	7.33	35.1	1082	565	74.0	74.0	42.2	15.9	1.19E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_276	14.5	7.34	35.2	1087	566	74.2	74.2	42.2	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_277	14.5	7.34	35.3	1091	566	74.5	74.5	42.3	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_278	14.5	7.34	35.3	1094	566	74.7	74.7	42.3	15.9	1.19E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_279	14.5	7.34	35.3	1097	566	74.9	74.9	42.3	16.0	1.20E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_280	14.5	7.35	35.4	1101	567	75.2	75.2	42.4	16.0	1.20E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_281	14.5	7.35	35.4	1104	568	75.3	75.3	42.4	16.0	1.20E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_282	14.5	7.35	35.5	1108	568	75.4	75.4	42.5	16.0	1.20E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_283	14.8	7.39	36.4	1172	580	77.9	77.9	43.3	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_285	14.8	7.40	36.7	1187	580	78.4	78.4	43.5	16.2	1.23E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_286	14.8	7.40	36.7	1187	581	78.3	78.3	43.5	16.2	1.23E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_287	14.8	7.40	36.7	1188	582	78.3	78.3	43.5	16.2	1.23E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_288	14.6	7.36	35.7	1102	563	75.4	75.4	42.5	16.0	1.20E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_289	14.6	7.35	35.6	1095	562	75.2	75.2	42.4	16.0	1.20E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_290	14.6	7.35	35.5	1092	562	75.0	75.0	42.4	16.0	1.20E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_291	14.5	7.35	35.4	1088	561	74.9	74.9	42.3	16.0	1.19E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_292	14.5	7.34	35.4	1085	561	74.8	74.8	42.3	16.0	1.19E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_293	14.5	7.34	35.3	1082	561	74.6	74.6	42.3	15.9	1.19E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_294	14.6	7.37	35.8	1133	573	76.9	76.9	42.8	16.1	1.21E-04	5.50E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_295	14.6	7.37	35.9	1139	574	77.0	77.0	42.8	16.1	1.21E-04	5.50E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_296	14.7	7.38	36.0	1145	575	77.1	77.1	42.9	16.1	1.21E-04	5.51E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_297	14.7	7.38	36.0	1149	575	77.1	77.1	42.9	16.1	1.21E-04	5.51E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_298	14.7	7.39	36.1	1156	576	77.3	77.3	43.0	16.1	1.22E-04	5.51E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_299	14.7	7.39	36.3	1165	578	77.6	77.6	43.2	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_300	14.8	7.40	36.6	1183	581	78.1	78.1	43.4	16.2	1.22E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_301	14.8	7.40	36.6	1186	582	78.2	78.2	43.4	16.2	1.23E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_302	14.5	7.33	35.2	1073	560	74.2	74.2	42.1	15.9	1.19E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_303	14.5	7.33	35.1	1070	560	74.1	74.1	42.1	15.9	1.19E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_304	14.5	7.33	35.0	1060	559	73.5	73.5	42.0	15.9	1.19E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_305	14.4	7.32	34.9	1055	558	73.0	73.0	41.9	15.9	1.18E-04	5.44E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_306	14.4	7.32	34.9	1053	558	72.8	72.8	41.9	15.9	1.18E-04	5.44E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_307	14.4	7.31	34.7	1040	556	72.4	72.4	41.8	15.8	1.18E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_310	14.4	7.32	34.8	1047	557	72.6	72.6	41.8	15.9	1.18E-04	5.43E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_312	14.8	7.39	36.7	1146	578	77.8	77.8	43.3	16.1	1.22E-04	5.51E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_313	14.5	7.33	35.1	1065	559	73.8	73.8	42.0	15.9	1.19E-04	5.45E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_315	14.8	7.40	36.7	1181	578	78.0	78.0	43.4	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_317	14.9	7.41	37.0	1204	584	78.7	78.7	43.7	16.2	1.23E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_318	14.7	7.40	36.2	1166	587	78.9	78.9	43.2	16.2	1.22E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_319	14.8	7.40	36.3	1174	588	79.1	79.1	43.3	16.2	1.22E-04	5.54E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_320	14.8	7.41	36.4	1178	588	79.0	79.0	43.4	16.2	1.22E-04	5.54E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_321	14.8	7.41	36.5	1189	590	79.3	79.3	43.5	16.2	1.23E-04	5.55E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_322	14.8	7.42	36.7	1200	592	79.5	79.5	43.6	16.2	1.23E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_323	14.9	7.42	36.9	1210	594	79.8	79.8	43.8	16.3	1.24E-04	5.56E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_324	14.9	7.42	36.9	1214	594	79.7	79.7	43.8	16.3	1.24E-04	5.56E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_325	14.9	7.43	37.0	1221	596	79.9	79.9	43.9	16.3	1.24E-04	5.56E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_326	14.9	7.44	37.2	1228	598	80.2	80.2	44.0	16.3	1.24E-04	5.57E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_327	14.9	7.44	37.3	1234	599	80.2	80.2	44.1	16.3	1.25E-04	5.58E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_328	14.9	7.44	37.4	1240	600	80.4	80.4	44.2	16.3	1.25E-04	5.58E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_329	14.9	7.44	37.4	1240	599	80.0	80.0	44.2	16.3	1.25E-04	5.57E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_330	14.9	7.43	37.3	1232	595	79.6	79.6	44.1	16.3	1.24E-04	5.56E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_331	14.9	7.42	37.2	1224	591	79.4	79.4	43.9	16.2	1.24E-04	5.55E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_332	14.9	7.42	37.1	1214	587	79.0	79.0	43.8	16.2	1.24E-04	5.55E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_333	14.9	7.40	37.0	1192	581	78.5	78.5	43.6	16.2	1.23E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_334	14.8	7.39	36.4	1174	579	77.9	77.9	43.3	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_335	14.7	7.37	36.0	1122	567	76.2	76.2	42.8	16.0	1.21E-04	5.49E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_337	14.6	7.35	35.4	1108	581	77.5	77.5	42.6	16.0	1.20E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_338	14.6	7.35	35.5	1114	582	77.9	77.9	42.6	16.0	1.21E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_339	14.6	7.36	35.6	1120	583	78.2	78.2	42.7	16.0	1.21E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_340	14.6	7.36	35.7	1124	584	78.2	78.2	42.7	16.0	1.21E-04	5.49E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_341	14.6	7.37	35.7	1130	585	78.5	78.5	42.8	16.0	1.21E-04	5.49E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_342	14.6	7.37	35.7	1132	584	78.4	78.4	42.8	16.1	1.21E-04	5.50E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_343	14.6	7.37	35.8	1136	585	78.6	78.6	42.9	16.1	1.21E-04	5.50E-05	4.56	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_344	14.7	7.38	35.9	1141	586	78.7	78.7	42.9	16.1	1.21E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_345	14.7	7.38	35.9	1144	586	78.8	78.8	43.0	16.1	1.21E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_346	14.7	7.38	35.9	1147	586	78.8	78.8	43.0	16.1	1.22E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_347	14.7	7.38	36.0	1151	586	78.9	78.9	43.0	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_348	14.7	7.39	36.1	1156	587	79.1	79.1	43.1	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_349	14.7	7.39	36.1	1161	588	79.1	79.1	43.2	16.2	1.22E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_350	15.3	7.49	39.3	1347	627	85.5	85.5	45.8	16.5	1.29E-04	5.63E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_351	15.4	7.51	39.6	1370	634	88.2	88.2	46.1	16.6	1.30E-04	5.65E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_352	15.4	7.53	40.0	1392	641	90.3	90.3	46.4	16.7	1.31E-04	5.68E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_353	15.3	7.51	39.2	1348	628	87.5	87.5	45.8	16.6	1.29E-04	5.65E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_354	15.4	7.53	39.8	1385	638	89.5	89.5	46.3	16.7	1.31E-04	5.68E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_355	15.6	7.60	40.8	1484	660	93.3	93.3	47.3	16.9	1.34E-04	5.76E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_356	15.7	7.60	41.0	1497	662	93.9	93.9	47.4	16.9	1.34E-04	5.77E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_357	15.5	7.56	40.3	1435	649	90.9	90.9	46.8	16.8	1.32E-04	5.72E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_358	15.7	7.61	41.2	1509	665	94.5	94.5	47.5	17.0	1.35E-04	5.77E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_359	15.8	7.62	41.4	1523	668	95.2	95.2	47.7	17.0	1.35E-04	5.78E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_360	15.8	7.63	41.7	1541	672	96.3	96.3	47.9	17.0	1.36E-04	5.79E-05	4.63	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_361	15.0	7.42	38.0	1219	599	80.3	80.3	44.3	16.2	1.25E-04	5.55E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_362	15.1	7.43	38.2	1250	604	81.6	81.6	44.6	16.3	1.26E-04	5.56E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_363	15.1	7.44	38.4	1276	608	83.3	83.3	44.8	16.3	1.26E-04	5.57E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_364	15.2	7.46	38.7	1303	613	83.8	83.8	45.1	16.4	1.27E-04	5.59E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_365	15.3	7.48	39.0	1328	621	84.4	84.4	45.5	16.4	1.28E-04	5.61E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_366	15.2	7.48	38.5	1309	616	84.4	84.4	45.2	16.5	1.27E-04	5.61E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_367	15.2	7.49	38.8	1325	622	86.3	86.3	45.5	16.5	1.28E-04	5.63E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_368	15.3	7.52	39.1	1347	630	87.4	87.4	45.8	16.6	1.29E-04	5.66E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_369	15.4	7.54	39.6	1390	639	88.9	88.9	46.3	16.7	1.31E-04	5.70E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_370	15.5	7.58	40.1	1437	651	91.1	91.1	46.8	16.9	1.32E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_371	15.7	7.64	40.9	1501	668	95.4	95.4	47.5	17.1	1.35E-04	5.81E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_372	15.1	7.48	38.0	1279	614	84.4	84.4	44.8	16.5	1.26E-04	5.62E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_373	15.2	7.51	38.4	1303	623	86.0	86.0	45.2	16.6	1.28E-04	5.65E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_374	15.3	7.55	39.0	1355	638	88.4	88.4	45.9	16.7	1.30E-04	5.70E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_375	15.5	7.58	39.7	1403	653	90.9	90.9	46.5	16.9	1.32E-04	5.75E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_376	15.6	7.60	40.1	1435	658	92.4	92.4	46.9	16.9	1.33E-04	5.76E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_377	15.6	7.59	40.1	1438	656	92.3	92.3	46.9	16.9	1.33E-04	5.76E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_378	15.0	7.46	37.9	1270	607	82.3	82.3	44.6	16.4	1.26E-04	5.59E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_379	15.1	7.49	38.4	1306	619	85.7	85.7	45.2	16.5	1.28E-04	5.63E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_380	15.3	7.52	38.9	1344	630	87.6	87.6	45.7	16.6	1.29E-04	5.67E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_381	15.3	7.52	39.1	1351	631	87.7	87.7	45.8	16.6	1.29E-04	5.67E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_382	15.2	7.50	38.7	1319	622	86.1	86.1	45.4	16.5	1.28E-04	5.64E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_383	15.1	7.47	38.3	1298	615	84.4	84.4	45.1	16.4	1.27E-04	5.61E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_384	15.1	7.45	38.0	1276	607	81.9	81.9	44.7	16.4	1.26E-04	5.59E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_385	15.0	7.44	37.7	1254	600	80.5	80.5	44.4	16.3	1.25E-04	5.57E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_386	14.9	7.43	37.0	1181	618	83.0	83.0	44.1	16.3	1.25E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_387	14.8	7.40	36.5	1163	606	81.4	81.4	43.6	16.2	1.23E-04	5.54E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_388	14.7	7.38	36.1	1145	596	79.9	79.9	43.2	16.1	1.22E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_389	14.7	7.37	35.9	1131	594	79.4	79.4	43.1	16.1	1.22E-04	5.49E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_390	14.7	7.39	36.3	1148	604	80.8	80.8	43.5	16.1	1.23E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_391	14.9	7.42	36.9	1170	618	82.8	82.8	44.1	16.2	1.25E-04	5.55E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_394	15.6	7.59	40.1	1443	655	92.2	92.2	46.9	16.9	1.33E-04	5.76E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_395	15.6	7.61	40.1	1346	678	92.8	92.8	47.2	17.0	1.34E-04	5.79E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_396	15.4	7.56	39.2	1302	661	90.6	90.6	46.3	16.8	1.31E-04	5.73E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_397	15.2	7.52	38.4	1264	645	88.5	88.5	45.5	16.7	1.29E-04	5.68E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_398	15.1	7.48	37.7	1230	630	86.2	86.2	44.8	16.5	1.27E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_399	15.0	7.45	37.2	1208	616	83.5	83.5	44.2	16.4	1.25E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_400	14.8	7.42	36.7	1186	603	81.5	81.5	43.7	16.3	1.24E-04	5.56E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_401	14.9	7.43	36.8	1200	603	81.4	81.4	43.8	16.3	1.24E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_402	15.0	7.47	37.3	1223	617	84.3	84.3	44.4	16.4	1.25E-04	5.61E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230900_403	15.1	7.50	37.9	1246	630	86.4	86.4	44.9	16.5	1.27E-04	5.65E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_404	15.2	7.52	38.3	1273	641	87.9	87.9	45.4	16.7	1.28E-04	5.68E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_405	15.3	7.55	38.9	1303	653	89.9	89.9	46.0	16.8	1.30E-04	5.72E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_406	15.6	7.61	39.9	1351	673	92.4	92.4	47.0	17.0	1.33E-04	5.78E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_001	15.5	7.45	39.3	1311	626	81.3	81.3	44.0	16.2	1.24E-04	5.55E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_002	16.3	7.85	41.2	877	544	76.1	76.1	41.0	16.3	1.17E-04	5.58E-05	4.53	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_003	15.1	7.43	38.5	1223	605	82.1	82.1	44.6	16.2	1.26E-04	5.55E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_004	15.1	7.42	38.3	1215	600	81.7	81.7	44.4	16.2	1.25E-04	5.54E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_005	15.0	7.41	38.0	1203	595	81.2	81.2	44.1	16.2	1.24E-04	5.53E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_006	15.0	7.40	37.8	1188	590	79.9	79.9	43.8	16.1	1.23E-04	5.51E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_007	15.0	7.39	37.7	1192	587	79.6	79.6	43.6	16.1	1.23E-04	5.51E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_008	15.0	7.38	37.4	1206	583	78.9	78.9	43.3	16.1	1.22E-04	5.49E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_009	14.9	7.37	37.2	1214	578	78.2	78.2	43.1	16.0	1.21E-04	5.48E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_010	14.9	7.36	37.0	1216	574	77.5	77.5	42.9	16.0	1.21E-04	5.47E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_011	15.2	7.44	39.1	1245	613	83.3	83.3	45.0	16.3	1.27E-04	5.57E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_012	15.2	7.43	38.9	1239	609	83.0	83.0	44.8	16.3	1.26E-04	5.56E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_013	15.2	7.43	38.7	1233	605	82.8	82.8	44.6	16.2	1.26E-04	5.55E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_014	15.1	7.42	38.5	1223	600	82.5	82.5	44.4	16.2	1.25E-04	5.54E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_015	15.1	7.41	38.3	1208	596	81.0	81.0	44.1	16.2	1.24E-04	5.53E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_016	15.1	7.40	38.0	1210	591	80.3	80.3	43.8	16.1	1.24E-04	5.52E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_017	15.0	7.40	37.9	1216	589	79.9	79.9	43.7	16.1	1.23E-04	5.51E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_018	15.0	7.39	37.8	1224	586	79.7	79.7	43.5	16.1	1.23E-04	5.50E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_019	15.0	7.38	37.6	1231	584	79.3	79.3	43.4	16.1	1.22E-04	5.50E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_020	15.0	7.38	37.5	1238	582	78.9	78.9	43.2	16.0	1.22E-04	5.49E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_021	15.0	7.37	37.4	1240	579	78.5	78.5	43.1	16.0	1.21E-04	5.48E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_022	15.0	7.37	37.2	1239	576	77.9	77.9	42.9	16.0	1.21E-04	5.48E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_023	14.9	7.36	37.0	1239	574	77.0	77.0	42.8	16.0	1.20E-04	5.47E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_024	14.9	7.36	36.9	1238	572	76.4	76.4	42.7	16.0	1.20E-04	5.47E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_025	14.9	7.35	36.8	1235	571	75.7	75.7	42.7	15.9	1.20E-04	5.46E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_026	14.9	7.35	36.7	1225	570	75.1	75.1	42.6	15.9	1.19E-04	5.46E-05	4.58	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_027	15.4	7.47	39.9	1296	624	85.1	85.1	45.7	16.4	1.29E-04	5.60E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_028	15.3	7.46	39.6	1268	619	84.5	84.5	45.4	16.4	1.28E-04	5.58E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_029	15.3	7.45	39.5	1263	615	84.2	84.2	45.2	16.3	1.28E-04	5.57E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_030	15.2	7.44	39.2	1254	610	83.8	83.8	44.9	16.3	1.27E-04	5.56E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_031	15.2	7.43	39.1	1247	607	83.6	83.6	44.7	16.3	1.26E-04	5.55E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_032	15.2	7.43	38.9	1236	604	82.5	82.5	44.5	16.2	1.26E-04	5.54E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_033	15.2	7.42	38.6	1239	598	81.5	81.5	44.2	16.2	1.25E-04	5.53E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_034	15.1	7.41	38.4	1242	594	81.0	81.0	43.9	16.2	1.24E-04	5.53E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_035	15.1	7.40	38.2	1249	591	80.6	80.6	43.8	16.1	1.24E-04	5.52E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_036	15.1	7.40	38.1	1258	589	80.1	80.1	43.6	16.1	1.23E-04	5.51E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_037	15.1	7.39	37.9	1265	587	79.8	79.8	43.5	16.1	1.23E-04	5.50E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_038	15.1	7.39	37.8	1268	585	79.4	79.4	43.3	16.1	1.22E-04	5.50E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_039	15.1	7.38	37.7	1271	583	78.8	78.8	43.2	16.0	1.22E-04	5.49E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_040	15.0	7.38	37.5	1267	580	77.9	77.9	43.1	16.0	1.21E-04	5.48E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_041	15.0	7.37	37.3	1260	578	77.1	77.1	43.0	16.0	1.21E-04	5.48E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_042	15.0	7.37	37.2	1253	577	76.3	76.3	42.9	16.0	1.20E-04	5.47E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_043	15.0	7.36	37.1	1243	576	76.3	76.3	42.8	16.0	1.20E-04	5.47E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_044	15.0	7.37	37.3	1254	580	76.8	76.8	43.0	16.0	1.20E-04	5.48E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_045	15.1	7.38	37.5	1268	581	76.9	76.9	43.0	16.0	1.21E-04	5.48E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_046	15.1	7.38	37.6	1276	583	77.7	77.7	43.1	16.0	1.21E-04	5.49E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_047	15.1	7.39	37.8	1286	586	78.7	78.7	43.3	16.1	1.22E-04	5.50E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_048	15.1	7.39	38.0	1289	588	79.5	79.5	43.4	16.1	1.22E-04	5.50E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_049	15.1	7.40	38.1	1287	589	80.0	80.0	43.5	16.1	1.23E-04	5.51E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_050	15.1	7.40	38.2	1285	590	80.2	80.2	43.6	16.1	1.23E-04	5.51E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_051	15.1	7.40	38.3	1280	592	80.5	80.5	43.7	16.1	1.23E-04	5.52E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_052	15.1	7.41	38.4	1277	593	80.7	80.7	43.8	16.1	1.24E-04	5.52E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_053	15.2	7.41	38.5	1272	594	81.0	81.0	43.9	16.2	1.24E-04	5.53E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_054	15.2	7.42	38.6	1268	596	81.6	81.6	44.0	16.2	1.24E-04	5.53E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_055	15.2	7.42	38.7	1265	598	81.8	81.8	44.1	16.2	1.25E-04	5.54E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_056	15.2	7.43	38.9	1264	602	82.1	82.1	44.3	16.2	1.25E-04	5.54E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_057	15.2	7.43	39.1	1262	605	82.5	82.5	44.5	16.2	1.26E-04	5.55E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_058	15.3	7.44	39.2	1259	607	82.9	82.9	44.7	16.3	1.27E-04	5.56E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_059	15.3	7.44	39.3	1257	609	83.9	83.9	44.8	16.3	1.27E-04	5.56E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_060	15.3	7.45	39.4	1263	611	84.3	84.3	44.9	16.3	1.27E-04	5.57E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_061	15.3	7.45	39.6	1270	614	84.6	84.6	45.1	16.3	1.28E-04	5.57E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_062	15.3	7.46	39.7	1275	616	84.8	84.8	45.2	16.3	1.28E-04	5.58E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_063	15.4	7.47	39.9	1280	620	85.0	85.0	45.4	16.4	1.29E-04	5.59E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_064	15.4	7.47	40.0	1285	623	85.2	85.2	45.6	16.4	1.29E-04	5.60E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_065	15.4	7.48	40.3	1304	628	85.7	85.7	45.9	16.4	1.30E-04	5.61E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_066	15.5	7.49	40.4	1327	632	86.6	86.6	46.1	16.5	1.30E-04	5.61E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_067	16.1	7.65	44.3	1530	693	96.0	96.0	48.5	17.0	1.39E-04	5.78E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_068	16.2	7.65	44.4	1529	694	96.0	96.0	48.6	17.0	1.39E-04	5.78E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_069	16.2	7.66	44.5	1528	695	95.9	95.9	48.6	17.1	1.39E-04	5.79E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_070	16.2	7.66	44.6	1528	697	95.9	95.9	48.6	17.1	1.40E-04	5.79E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_071	16.2	7.67	44.8	1532	700	96.1	96.1	48.7	17.1	1.40E-04	5.80E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_072	16.3	7.68	44.9	1532	701	96.1	96.1	48.7	17.1	1.40E-04	5.80E-05	4.63	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_073	16.3	7.69	45.1	1534	704	96.2	96.2	48.7	17.1	1.41E-04	5.81E-05	4.63	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_074	16.3	7.69	45.3	1533	706	96.6	96.6	48.8	17.1	1.41E-04	5.82E-05	4.63	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_075	16.4	7.71	45.6	1545	712	97.3	97.3	48.9	17.2	1.41E-04	5.83E-05	4.63	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_076	16.5	7.72	45.9	1556	717	97.8	97.8	49.1	17.2	1.42E-04	5.84E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_077	16.7	7.79	47.1	1642	737	101.2	101.2	49.8	17.5	1.45E-04	5.91E-05	4.65	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_078	16.7	7.78	46.9	1611	733	99.8	99.8	49.6	17.4	1.44E-04	5.90E-05	4.64	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_079	16.6	7.77	46.7	1582	730	99.2	99.2	49.4	17.4	1.44E-04	5.88E-05	4.64	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_080	16.6	7.76	46.5	1551	728	98.5	98.5	49.2	17.3	1.43E-04	5.87E-05	4.64	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_081	16.5	7.74	46.2	1542	724	98.0	98.0	48.9	17.3	1.42E-04	5.85E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_082	16.5	7.74	46.0	1544	722	97.8	97.8	48.6	17.2	1.41E-04	5.84E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_083	16.5	7.73	45.9	1545	721	97.6	97.6	48.5	17.2	1.41E-04	5.84E-05	4.64	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_084	16.5	7.72	45.7	1547	719	97.3	97.3	48.3	17.2	1.40E-04	5.83E-05	4.63	1.53	0.17	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_085	16.3	7.67	44.8	1502	701	95.3	95.3	48.0	17.0	1.39E-04	5.78E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_086	16.3	7.68	45.0	1512	706	95.8	95.8	48.1	17.1	1.39E-04	5.79E-05	4.63	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_087	16.2	7.65	44.3	1476	692	94.2	94.2	47.8	17.0	1.38E-04	5.76E-05	4.63	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_088	16.2	7.66	44.5	1488	696	94.7	94.7	47.9	17.0	1.38E-04	5.77E-05	4.63	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_089	16.2	7.64	44.1	1468	689	93.9	93.9	47.8	16.9	1.37E-04	5.75E-05	4.62	1.52	0.16	6.47E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE231000_090	16.1	7.63	44.0	1459	686	93.9	93.9	47.7	16.9	1.37E-04	5.75E-05	4.62	1.52	0.16	6.46E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE231000_091	16.1	7.63	43.9	1449	684	93.9	93.9	47.7	16.9	1.37E-04	5.74E-05	4.62	1.52	0.16	6.46E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE231000_092	16.1	7.62	43.8	1443	682	93.7	93.7	47.7	16.9	1.37E-04	5.74E-05	4.62	1.52	0.16	6.46E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE231000_093	16.0	7.61	43.6	1438	680	93.4	93.4	47.6	16.9	1.37E-04	5.73E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_094	16.0	7.61	43.5	1433	677	93.1	93.1	47.6	16.9	1.36E-04	5.73E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_095	16.0	7.60	43.4	1429	676	92.8	92.8	47.6	16.8	1.36E-04	5.72E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_096	16.0	7.60	43.3	1424	674	92.5	92.5	47.5	16.8	1.36E-04	5.72E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_097	15.9	7.59	43.1	1419	671	92.2	92.2	47.5	16.8	1.36E-04	5.71E-05	4.62	1.52	0.16	6.46E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_098	15.9	7.59	43.0	1413	669	91.9	91.9	47.4	16.8	1.36E-04	5.71E-05	4.62	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_099	15.9	7.58	42.9	1408	667	91.6	91.6	47.4	16.8	1.35E-04	5.71E-05	4.62	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_100	15.9	7.58	42.8	1406	666	91.4	91.4	47.3	16.8	1.35E-04	5.70E-05	4.62	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_101	15.9	7.57	42.7	1405	665	91.3	91.3	47.3	16.8	1.35E-04	5.70E-05	4.61	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_102	15.8	7.57	42.6	1405	662	91.1	91.1	47.2	16.7	1.35E-04	5.69E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_103	15.8	7.56	42.4	1403	660	90.7	90.7	47.2	16.7	1.35E-04	5.69E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_104	15.8	7.56	42.3	1400	658	90.2	90.2	47.1	16.7	1.34E-04	5.69E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_105	15.8	7.56	42.2	1400	656	90.0	90.0	47.1	16.7	1.34E-04	5.68E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_106	15.7	7.55	42.1	1404	656	90.0	90.0	47.1	16.7	1.34E-04	5.68E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_107	15.7	7.55	42.1	1407	656	90.0	90.0	47.1	16.7	1.34E-04	5.68E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_108	15.7	7.55	42.1	1409	655	89.9	89.9	47.1	16.7	1.34E-04	5.68E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_109	15.7	7.55	41.9	1407	653	89.7	89.7	47.0	16.7	1.34E-04	5.67E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_110	15.6	7.51	41.1	1359	640	88.0	88.0	46.5	16.5	1.32E-04	5.64E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_111	15.4	7.47	40.1	1293	621	85.6	85.6	45.4	16.4	1.29E-04	5.59E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_112	15.4	7.48	40.2	1297	622	85.8	85.8	45.5	16.4	1.29E-04	5.60E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_113	15.4	7.48	40.3	1302	624	86.0	86.0	45.6	16.4	1.29E-04	5.60E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_114	15.5	7.48	40.4	1306	625	86.2	86.2	45.6	16.4	1.30E-04	5.60E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_115	15.5	7.50	40.8	1322	631	86.9	86.9	45.9	16.5	1.30E-04	5.62E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_116	15.5	7.49	40.7	1315	629	86.5	86.5	45.7	16.5	1.30E-04	5.61E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_117	15.5	7.48	40.5	1309	625	86.0	86.0	45.5	16.4	1.29E-04	5.60E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_118	15.5	7.48	40.3	1312	623	85.4	85.4	45.3	16.4	1.29E-04	5.59E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_119	15.4	7.47	40.1	1315	620	84.7	84.7	45.1	16.4	1.28E-04	5.58E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_120	15.4	7.46	39.9	1319	618	84.6	84.6	44.9	16.3	1.28E-04	5.58E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_121	15.4	7.46	39.8	1324	616	84.5	84.5	44.8	16.3	1.27E-04	5.57E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_122	15.4	7.45	39.6	1326	613	83.9	83.9	44.6	16.3	1.27E-04	5.57E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_123	15.3	7.45	39.5	1327	611	83.3	83.3	44.4	16.3	1.26E-04	5.56E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_124	15.3	7.44	39.3	1327	608	82.9	82.9	44.3	16.3	1.26E-04	5.55E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_125	15.3	7.44	39.1	1329	606	82.5	82.5	44.1	16.2	1.25E-04	5.55E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_126	15.3	7.43	38.9	1333	604	82.1	82.1	44.0	16.2	1.24E-04	5.54E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_127	15.3	7.42	38.8	1334	603	81.5	81.5	43.8	16.2	1.24E-04	5.53E-05	4.60	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_128	15.3	7.42	38.7	1332	602	80.7	80.7	43.7	16.2	1.23E-04	5.52E-05	4.60	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_129	15.2	7.41	38.5	1326	601	79.8	79.8	43.6	16.1	1.23E-04	5.52E-05	4.60	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_130	15.2	7.40	38.3	1311	599	78.9	78.9	43.5	16.1	1.22E-04	5.51E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_131	15.2	7.40	38.1	1291	596	78.3	78.3	43.4	16.1	1.22E-04	5.50E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_132	15.4	7.46	39.9	1288	616	84.7	84.7	45.1	16.3	1.28E-04	5.58E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_133	15.4	7.46	39.8	1292	614	83.9	83.9	44.9	16.3	1.28E-04	5.57E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_134	15.3	7.45	39.6	1297	612	83.6	83.6	44.8	16.3	1.27E-04	5.57E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_135	15.3	7.45	39.5	1301	610	83.4	83.4	44.6	16.3	1.27E-04	5.56E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_136	15.3	7.44	39.3	1304	607	83.2	83.2	44.4	16.3	1.26E-04	5.55E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_137	15.3	7.43	39.1	1305	605	82.4	82.4	44.3	16.2	1.26E-04	5.55E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_138	15.3	7.43	38.9	1305	602	81.9	81.9	44.1	16.2	1.25E-04	5.54E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_139	15.2	7.42	38.8	1307	600	81.6	81.6	44.0	16.2	1.25E-04	5.54E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_140	15.2	7.42	38.7	1311	599	81.3	81.3	43.9	16.2	1.24E-04	5.53E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_141	15.2	7.42	38.6	1314	598	81.2	81.2	43.8	16.2	1.24E-04	5.53E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_142	15.2	7.41	38.5	1316	597	80.9	80.9	43.7	16.2	1.23E-04	5.52E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_143	15.2	7.41	38.4	1316	596	80.4	80.4	43.6	16.1	1.23E-04	5.52E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_144	15.2	7.40	38.3	1314	595	79.7	79.7	43.5	16.1	1.23E-04	5.51E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_145	15.2	7.40	38.2	1309	594	79.0	79.0	43.5	16.1	1.22E-04	5.51E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_146	15.2	7.39	38.0	1295	592	78.0	78.0	43.3	16.1	1.22E-04	5.50E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_147	15.1	7.39	37.8	1275	589	77.7	77.7	43.2	16.1	1.21E-04	5.49E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_148	15.6	7.52	41.3	1344	640	87.9	87.9	46.1	16.6	1.31E-04	5.64E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_149	15.6	7.51	41.1	1346	637	87.3	87.3	45.8	16.5	1.31E-04	5.63E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_150	15.6	7.50	40.9	1348	634	86.9	86.9	45.6	16.5	1.30E-04	5.62E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_151	15.5	7.49	40.7	1351	632	86.6	86.6	45.5	16.5	1.30E-04	5.61E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_152	15.5	7.49	40.5	1355	629	86.4	86.4	45.2	16.4	1.29E-04	5.60E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_153	15.5	7.48	40.4	1359	627	86.2	86.2	45.1	16.4	1.28E-04	5.59E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_154	15.5	7.47	40.2	1362	625	85.3	85.3	44.9	16.4	1.28E-04	5.59E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_155	15.5	7.47	40.0	1363	622	84.8	84.8	44.7	16.4	1.27E-04	5.58E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_156	15.6	7.49	40.6	1377	631	86.1	86.1	45.1	16.4	1.29E-04	5.60E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_157	15.6	7.49	40.7	1384	634	86.3	86.3	45.2	16.4	1.29E-04	5.61E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_158	15.7	7.52	41.4	1363	641	87.9	87.9	46.0	16.5	1.31E-04	5.64E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_159	15.7	7.52	41.4	1370	643	88.0	88.0	46.0	16.6	1.31E-04	5.64E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_160	15.7	7.53	41.5	1378	644	88.2	88.2	46.0	16.6	1.31E-04	5.64E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_161	15.7	7.53	41.5	1385	645	88.4	88.4	46.0	16.6	1.31E-04	5.64E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_162	15.7	7.54	41.7	1394	648	88.7	88.7	46.1	16.6	1.32E-04	5.65E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_163	15.7	7.54	41.8	1401	650	88.9	88.9	46.1	16.6	1.32E-04	5.65E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_164	15.8	7.54	41.9	1410	652	89.2	89.2	46.1	16.6	1.32E-04	5.66E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_165	15.8	7.55	42.0	1418	655	89.4	89.4	46.1	16.6	1.32E-04	5.66E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_166	15.8	7.56	42.2	1429	659	89.8	89.8	46.2	16.7	1.32E-04	5.67E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_167	15.9	7.56	42.4	1443	663	90.2	90.2	46.3	16.7	1.33E-04	5.67E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_168	15.9	7.57	42.5	1456	668	90.7	90.7	46.4	16.7	1.33E-04	5.68E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_169	15.9	7.58	42.7	1468	671	90.9	90.9	46.4	16.7	1.33E-04	5.68E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_170	16.0	7.59	42.9	1478	675	91.3	91.3	46.5	16.7	1.33E-04	5.69E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_171	16.0	7.59	42.9	1487	677	91.2	91.2	46.5	16.7	1.34E-04	5.70E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_172	16.0	7.60	43.1	1496	680	91.6	91.6	46.5	16.8	1.34E-04	5.70E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_173	16.1	7.61	43.2	1507	683	91.9	91.9	46.5	16.8	1.34E-04	5.71E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_174	16.1	7.62	43.5	1520	688	92.5	92.5	46.6	16.8	1.34E-04	5.72E-05	4.63	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_175	16.2	7.64	43.7	1529	692	93.1	93.1	46.8	16.9	1.35E-04	5.74E-05	4.63	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_176	16.4	7.69	44.8	1561	710	95.7	95.7	47.4	17.1	1.38E-04	5.79E-05	4.64	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_177	16.3	7.69	44.6	1564	707	95.2	95.2	47.1	17.0	1.37E-04	5.78E-05	4.64	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_178	16.3	7.68	44.5	1566	705	94.8	94.8	47.0	17.0	1.36E-04	5.78E-05	4.64	1.52	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231000_179	16.3	7.68	44.3	1569	703	94.5	94.5	46.8	17.0	1.36E-04	5.77E-05	4.64	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_180	16.3	7.67	44.2	1572	702	94.2	94.2	46.7	17.0	1.35E-04	5.76E-05	4.64	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_181	16.3	7.67	44.1	1574	701	94.1	94.1	46.6	16.9	1.35E-04	5.76E-05	4.64	1.52	0.17	6.46E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_182	16.3	7.67	44.1	1575	700	93.8	93.8	46.5	16.9	1.35E-04	5.76E-05	4.64	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_183	16.3	7.66	44.0	1574	698	93.5	93.5	46.4	16.9	1.34E-04	5.75E-05	4.64	1.52	0.17	6.46E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_184	16.3	7.66	43.7	1563	695	92.4	92.4	46.2	16.9	1.34E-04	5.74E-05	4.64	1.52	0.17	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_185	16.2	7.65	43.6	1553	692	91.6	91.6	46.1	16.9	1.33E-04	5.74E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_186	16.2	7.65	43.4	1544	690	91.0	91.0	46.0	16.9	1.33E-04	5.73E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_187	16.2	7.65	43.3	1532	689	90.3	90.3	45.9	16.8	1.32E-04	5.73E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_188	16.2	7.65	43.3	1523	688	89.9	89.9	45.8	16.8	1.32E-04	5.73E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_189	16.2	7.64	43.2	1508	688	90.4	90.4	45.8	16.8	1.32E-04	5.73E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_190	16.0	7.58	42.1	1454	671	86.8	86.8	45.3	16.6	1.30E-04	5.66E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_191	16.0	7.58	42.2	1474	672	87.2	87.2	45.3	16.6	1.30E-04	5.67E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_192	16.0	7.58	42.3	1492	673	87.5	87.5	45.4	16.7	1.30E-04	5.67E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_193	16.0	7.59	42.4	1505	674	88.5	88.5	45.5	16.7	1.31E-04	5.68E-05	4.63	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_194	16.0	7.59	42.5	1514	675	89.2	89.2	45.6	16.7	1.31E-04	5.68E-05	4.63	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_195	16.0	7.59	42.6	1522	677	90.0	90.0	45.7	16.7	1.31E-04	5.69E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_196	16.0	7.59	42.7	1524	678	91.0	91.0	45.9	16.7	1.32E-04	5.69E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_197	16.0	7.59	42.7	1520	677	90.9	90.9	45.9	16.7	1.32E-04	5.69E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_198	16.0	7.58	42.6	1511	674	90.7	90.7	45.9	16.7	1.32E-04	5.68E-05	4.63	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_199	16.0	7.57	42.4	1504	672	90.4	90.4	45.9	16.7	1.32E-04	5.67E-05	4.63	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_200	15.9	7.56	42.2	1491	668	89.7	89.7	45.8	16.6	1.31E-04	5.66E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_201	15.9	7.55	42.0	1479	664	89.2	89.2	45.7	16.6	1.31E-04	5.66E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_202	15.8	7.55	41.8	1467	660	88.7	88.7	45.7	16.6	1.31E-04	5.65E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_203	15.8	7.54	41.7	1456	656	88.3	88.3	45.6	16.6	1.30E-04	5.65E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_204	15.8	7.53	41.6	1448	654	88.0	88.0	45.6	16.6	1.30E-04	5.64E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_205	15.7	7.53	41.5	1440	652	87.8	87.8	45.5	16.5	1.30E-04	5.64E-05	4.62	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_206	15.7	7.53	41.4	1432	649	87.7	87.7	45.5	16.5	1.30E-04	5.63E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_207	15.7	7.52	41.3	1424	647	87.5	87.5	45.5	16.5	1.30E-04	5.63E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_208	15.7	7.52	41.2	1415	644	87.2	87.2	45.4	16.5	1.30E-04	5.63E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_209	15.7	7.51	41.1	1408	642	87.1	87.1	45.4	16.5	1.30E-04	5.62E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_210	15.6	7.51	41.0	1401	640	86.8	86.8	45.3	16.5	1.29E-04	5.62E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_211	15.6	7.50	40.9	1393	637	86.6	86.6	45.3	16.5	1.29E-04	5.61E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_212	15.4	7.44	39.2	1358	612	82.8	82.8	44.1	16.2	1.25E-04	5.55E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_213	15.4	7.45	39.4	1364	614	83.1	83.1	44.2	16.3	1.25E-04	5.55E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_214	15.4	7.45	39.5	1370	617	83.4	83.4	44.2	16.3	1.25E-04	5.56E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_215	15.4	7.45	39.6	1376	619	83.5	83.5	44.3	16.3	1.25E-04	5.56E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_216	15.5	7.46	39.7	1382	622	83.7	83.7	44.3	16.3	1.26E-04	5.57E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_217	15.5	7.46	39.8	1387	624	83.9	83.9	44.4	16.3	1.26E-04	5.57E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_218	15.5	7.47	40.0	1398	628	84.3	84.3	44.5	16.3	1.26E-04	5.58E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_219	15.5	7.47	40.1	1407	631	84.4	84.4	44.6	16.4	1.27E-04	5.58E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_220	15.6	7.48	40.3	1416	635	84.6	84.6	44.7	16.4	1.27E-04	5.58E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_221	15.6	7.48	40.4	1423	638	84.8	84.8	44.7	16.4	1.27E-04	5.59E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_222	15.6	7.49	40.5	1428	640	85.0	85.0	44.8	16.4	1.27E-04	5.59E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_223	15.6	7.49	40.6	1432	642	85.1	85.1	44.8	16.4	1.27E-04	5.60E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_224	15.7	7.50	40.7	1435	644	85.1	85.1	44.8	16.4	1.27E-04	5.60E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_225	15.7	7.50	40.8	1441	646	85.3	85.3	44.8	16.4	1.28E-04	5.60E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_226	15.7	7.51	40.9	1446	649	85.4	85.4	44.9	16.4	1.28E-04	5.61E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_227	15.7	7.51	41.0	1448	651	85.4	85.4	44.9	16.5	1.28E-04	5.61E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_228	15.8	7.52	41.2	1452	654	85.3	85.3	44.9	16.5	1.28E-04	5.62E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_229	15.8	7.53	41.3	1453	656	85.3	85.3	45.0	16.5	1.28E-04	5.62E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_230	15.7	7.51	40.7	1398	649	83.9	83.9	44.6	16.4	1.27E-04	5.60E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_231	15.7	7.50	40.5	1368	646	83.5	83.5	44.5	16.4	1.26E-04	5.60E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_232	15.7	7.50	40.3	1325	645	83.4	83.4	44.4	16.4	1.26E-04	5.59E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_233	15.7	7.50	40.2	1292	646	83.4	83.4	44.4	16.4	1.26E-04	5.59E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_234	15.7	7.50	40.2	1297	648	83.1	83.1	44.4	16.4	1.26E-04	5.60E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_235	15.8	7.51	40.3	1308	651	83.4	83.4	44.4	16.4	1.26E-04	5.60E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_236	15.8	7.53	40.6	1319	655	84.1	84.1	44.6	16.5	1.26E-04	5.62E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_237	15.9	7.54	40.8	1327	659	84.6	84.6	44.7	16.5	1.27E-04	5.63E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_238	15.9	7.55	41.0	1334	662	85.1	85.1	44.8	16.5	1.27E-04	5.64E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_239	16.0	7.57	41.3	1339	665	85.6	85.6	44.9	16.6	1.28E-04	5.65E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_240	16.0	7.58	41.5	1349	669	86.4	86.4	45.0	16.6	1.28E-04	5.66E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_241	16.1	7.60	41.7	1357	673	87.3	87.3	45.1	16.7	1.29E-04	5.68E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_242	16.1	7.61	41.9	1364	675	87.8	87.8	45.1	16.7	1.29E-04	5.69E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_243	16.1	7.63	42.2	1371	679	88.5	88.5	45.3	16.8	1.29E-04	5.70E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_244	16.2	7.65	42.5	1383	685	89.5	89.5	45.4	16.8	1.30E-04	5.72E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_245	16.3	7.68	43.0	1400	692	91.1	91.1	45.6	16.9	1.31E-04	5.75E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_246	16.4	7.70	43.3	1413	698	92.0	92.0	45.8	17.0	1.32E-04	5.77E-05	4.61	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_247	16.5	7.74	43.8	1429	704	93.6	93.6	45.9	17.1	1.33E-04	5.80E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_248	15.1	7.37	37.2	1176	586	76.8	76.8	43.1	16.0	1.20E-04	5.47E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_249	15.1	7.37	37.3	1172	588	77.0	77.0	43.2	16.0	1.20E-04	5.47E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_250	15.1	7.38	37.4	1179	591	77.3	77.3	43.2	16.0	1.20E-04	5.48E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_251	15.2	7.38	37.5	1176	594	77.7	77.7	43.3	16.0	1.20E-04	5.48E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_252	14.9	7.35	36.6	1168	571	75.4	75.4	42.7	15.9	1.18E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_253	14.9	7.35	36.4	1134	570	75.1	75.1	42.6	15.9	1.18E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_254	15.0	7.36	36.9	1178	578	76.1	76.1	42.9	15.9	1.19E-04	5.46E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_255	15.0	7.35	36.7	1139	576	75.6	75.6	42.8	15.9	1.18E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_256	14.4	7.30	34.4	1034	542	70.6	70.6	41.2	15.8	1.16E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_257	14.4	7.29	34.5	1092	542	70.5	70.5	41.2	15.7	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_276	14.6	7.30	35.2	1102	548	71.9	71.9	41.7	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_277	14.6	7.31	35.3	1121	550	72.1	72.1	41.8	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_278	14.9	7.34	36.2	1152	565	74.6	74.6	42.4	15.9	1.18E-04	5.44E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_279	14.8	7.33	36.0	1117	564	74.3	74.3	42.4	15.9	1.17E-04	5.43E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_280	14.9	7.38	37.4	1172	586	78.7	78.7	43.5	16.1	1.23E-04	5.50E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_281	15.0	7.39	37.6	1184	589	80.4	80.4	43.8	16.1	1.23E-04	5.51E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_282	14.8	7.33	36.0	1188	560	73.7	73.7	42.2	15.9	1.18E-04	5.44E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_283	14.9	7.35	36.8	1224	571	76.6	76.6	42.7	16.0	1.20E-04	5.46E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_284	14.9	7.36	36.7	1193	572	77.1	77.1	42.8	16.0	1.20E-04	5.47E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_285	14.9	7.36	36.9	1221	572	77.3	77.3	42.7	16.0	1.20E-04	5.47E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_286	14.9	7.36	36.8	1185	574	77.4	77.4	42.9	16.0	1.21E-04	5.48E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_287	14.8	7.34	36.4	1207	565	74.4	74.4	42.4	15.9	1.18E-04	5.45E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_288	14.9	7.34	36.6	1218	567	75.0	75.0	42.5	15.9	1.19E-04	5.45E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_289	14.9	7.37	37.1	1182	579	78.1	78.1	43.1	16.0	1.21E-04	5.48E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_290	14.9	7.38	37.3	1174	583	78.4	78.4	43.3	16.1	1.22E-04	5.49E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_291	14.8	7.34	36.2	1199	563	74.5	74.5	42.3	15.9	1.18E-04	5.44E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_292	14.8	7.34	36.4	1206	566	75.3	75.3	42.4	15.9	1.19E-04	5.45E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_293	14.9	7.35	36.6	1222	568	75.5	75.5	42.6	15.9	1.19E-04	5.46E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_294	14.8	7.34	36.5	1204	567	76.2	76.2	42.5	15.9	1.19E-04	5.46E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_295	14.9	7.35	36.7	1224	569	76.1	76.1	42.6	15.9	1.19E-04	5.46E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_296	14.8	7.35	36.6	1199	569	76.8	76.8	42.6	15.9	1.20E-04	5.46E-05	4.58	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_297	14.7	7.31	35.6	1136	555	72.8	72.8	42.0	15.8	1.16E-04	5.42E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_298	14.7	7.31	35.4	1111	552	72.6	72.6	41.9	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_299	15.0	7.40	37.8	1193	593	80.4	80.4	44.0	16.2	1.24E-04	5.52E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_300	14.8	7.37	36.6	1140	575	76.9	76.9	43.0	16.0	1.21E-04	5.48E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_301	14.7	7.33	35.9	1181	558	73.5	73.5	42.1	15.8	1.18E-04	5.43E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_302	14.7	7.33	36.0	1184	559	73.7	73.7	42.2	15.9	1.18E-04	5.44E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_303	14.8	7.33	36.1	1190	562	74.8	74.8	42.3	15.9	1.18E-04	5.44E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_304	14.8	7.34	36.3	1193	565	75.7	75.7	42.4	15.9	1.19E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_305	14.8	7.38	36.7	1142	577	77.4	77.4	43.2	16.1	1.22E-04	5.50E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_306	14.8	7.38	36.7	1143	577	77.2	77.2	43.1	16.1	1.21E-04	5.50E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_307	14.8	7.37	36.6	1144	577	77.2	77.2	43.1	16.1	1.21E-04	5.49E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_308	14.8	7.37	36.6	1145	577	77.3	77.3	43.1	16.0	1.21E-04	5.49E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_309	14.8	7.36	36.5	1135	573	76.2	76.2	42.9	16.0	1.20E-04	5.47E-05	4.57	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_310	14.8	7.35	36.4	1186	568	76.3	76.3	42.6	15.9	1.19E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_311	14.8	7.35	36.5	1180	570	76.5	76.5	42.7	16.0	1.20E-04	5.46E-05	4.57	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_312	14.8	7.36	36.6	1173	572	76.7	76.7	42.8	16.0	1.20E-04	5.47E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_313	14.8	7.36	36.7	1166	574	76.8	76.8	42.9	16.0	1.21E-04	5.47E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_314	14.9	7.37	36.9	1160	578	77.2	77.2	43.1	16.0	1.21E-04	5.48E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_315	14.9	7.37	37.0	1157	581	77.6	77.6	43.2	16.0	1.22E-04	5.49E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_316	14.9	7.39	37.3	1174	586	79.7	79.7	43.6	16.1	1.23E-04	5.50E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_317	14.8	7.35	36.4	1146	570	76.1	76.1	42.7	16.0	1.20E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_318	14.7	7.34	36.2	1165	566	75.3	75.3	42.4	15.9	1.19E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_319	14.7	7.33	36.0	1170	563	75.0	75.0	42.3	15.9	1.18E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_320	14.7	7.33	35.9	1169	559	74.5	74.5	42.1	15.9	1.18E-04	5.44E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_321	14.7	7.32	35.7	1171	556	73.3	73.3	42.0	15.8	1.17E-04	5.43E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_322	14.7	7.32	35.6	1167	555	73.0	73.0	42.0	15.8	1.17E-04	5.42E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_332	14.3	7.29	34.2	1017	540	71.2	71.2	41.1	15.8	1.16E-04	5.40E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_333	14.3	7.29	34.2	1019	540	71.2	71.2	41.1	15.8	1.16E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_334	14.3	7.30	34.3	1025	541	71.4	71.4	41.2	15.8	1.16E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_335	14.4	7.30	34.3	1027	541	71.5	71.5	41.3	15.8	1.16E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_336	14.4	7.30	34.4	1029	542	71.6	71.6	41.3	15.8	1.16E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_337	14.4	7.30	34.4	1032	542	71.7	71.7	41.3	15.8	1.16E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_338	14.3	7.30	34.4	1017	545	71.6	71.6	41.3	15.8	1.17E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_339	14.3	7.30	34.4	1019	545	71.6	71.6	41.4	15.8	1.17E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_340	14.4	7.30	34.5	1023	546	71.8	71.8	41.4	15.8	1.17E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_341	14.4	7.31	34.6	1032	547	72.0	72.0	41.5	15.8	1.17E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_342	14.4	7.31	34.7	1035	548	72.3	72.3	41.6	15.8	1.17E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_343	14.7	7.34	36.0	1131	566	75.2	75.2	42.5	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_345	14.7	7.34	35.9	1108	565	74.7	74.7	42.4	15.9	1.19E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_346	14.6	7.31	35.4	1155	552	72.6	72.6	41.8	15.8	1.17E-04	5.42E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_347	14.6	7.31	35.5	1157	554	72.8	72.8	41.9	15.8	1.17E-04	5.42E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_348	14.6	7.32	35.5	1155	555	73.2	73.2	41.9	15.8	1.17E-04	5.43E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_350	14.7	7.34	35.9	1102	565	74.8	74.8	42.4	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_351	14.7	7.36	36.0	1111	566	75.4	75.4	42.6	16.0	1.20E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_353	14.4	7.31	34.5	1027	546	71.8	71.8	41.5	15.8	1.17E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_354	14.7	7.33	35.7	1146	558	73.7	73.7	42.1	15.9	1.18E-04	5.44E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_355	14.7	7.33	35.7	1139	559	74.1	74.1	42.1	15.9	1.18E-04	5.44E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_356	14.7	7.34	35.9	1135	563	74.6	74.6	42.3	15.9	1.19E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_357	14.7	7.35	36.2	1119	569	75.5	75.5	42.6	16.0	1.20E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_358	14.7	7.35	36.2	1120	570	75.6	75.6	42.7	16.0	1.20E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_359	14.7	7.36	36.2	1124	570	75.8	75.8	42.7	16.0	1.20E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_360	14.7	7.36	36.2	1126	570	76.5	76.5	42.7	16.0	1.20E-04	5.48E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_361	14.7	7.36	36.3	1128	571	76.4	76.4	42.8	16.0	1.20E-04	5.48E-05	4.57	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_362	14.7	7.37	36.3	1126	571	76.3	76.3	42.9	16.0	1.21E-04	5.49E-05	4.57	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_363	14.6	7.30	35.2	1141	549	72.1	72.1	41.7	15.8	1.16E-04	5.41E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_364	14.6	7.31	35.3	1143	552	72.5	72.5	41.8	15.8	1.17E-04	5.42E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_365	14.6	7.31	35.4	1139	554	72.6	72.6	41.8	15.8	1.17E-04	5.43E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_366	14.6	7.32	35.4	1134	555	72.9	72.9	41.9	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_367	14.6	7.32	35.5	1125	557	73.4	73.4	42.0	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_368	14.6	7.33	35.6	1119	559	73.9	73.9	42.1	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_369	14.7	7.35	35.9	1111	565	75.1	75.1	42.4	15.9	1.19E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_370	14.7	7.35	35.9	1112	566	75.7	75.7	42.5	16.0	1.19E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_371	14.7	7.35	35.9	1113	566	75.6	75.6	42.5	16.0	1.20E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_374	14.7	7.34	35.9	1107	565	74.8	74.8	42.4	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_377	14.4	7.31	34.8	1040	549	72.6	72.6	41.7	15.8	1.18E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_378	14.8	7.34	36.3	1190	566	76.0	76.0	42.5	15.9	1.19E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_379	14.8	7.37	36.6	1143	576	77.4	77.4	43.0	16.0	1.21E-04	5.49E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_380	14.8	7.35	36.3	1156	568	75.7	75.7	42.6	15.9	1.19E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_381	14.6	7.32	35.6	1152	556	73.4	73.4	42.0	15.8	1.17E-04	5.43E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_382	14.7	7.32	35.8	1171	557	74.0	74.0	42.1	15.9	1.18E-04	5.43E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_383	14.3	7.29	34.2	1022	540	71.3	71.3	41.2	15.8	1.16E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_384	14.8	7.33	36.0	1187	560	74.2	74.2	42.2	15.9	1.18E-04	5.44E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_385	14.9	7.38	37.2	1165	584	78.4	78.4	43.4	16.1	1.22E-04	5.50E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_386	14.7	7.36	36.3	1127	571	76.4	76.4	42.8	16.0	1.20E-04	5.48E-05	4.57	1.51	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_387	14.6	7.31	35.2	1145	551	72.4	72.4	41.7	15.8	1.16E-04	5.42E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_388	14.7	7.36	36.0	1108	567	75.7	75.7	42.7	16.0	1.20E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_390	15.0	7.40	37.6	1185	592	79.6	79.6	43.9	16.1	1.24E-04	5.52E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_391	15.0	7.41	37.8	1190	595	79.6	79.6	44.1	16.2	1.24E-04	5.53E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_392	14.6	7.33	35.4	1077	557	73.6	73.6	42.0	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_393	14.5	7.33	35.2	1074	553	73.4	73.4	41.8	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_394	14.5	7.30	34.9	1124	545	71.4	71.4	41.5	15.8	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_395	14.5	7.30	34.9	1125	546	71.5	71.5	41.5	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_396	14.5	7.30	35.0	1128	547	71.7	71.7	41.6	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_397	14.5	7.31	35.1	1129	550	71.9	71.9	41.6	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_398	14.5	7.31	35.1	1126	551	72.0	72.0	41.7	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_399	14.6	7.31	35.2	1119	553	72.3	72.3	41.8	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_400	14.6	7.32	35.3	1111	555	72.5	72.5	41.9	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_401	14.6	7.32	35.4	1099	556	73.1	73.1	41.9	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_402	14.6	7.33	35.4	1083	557	73.3	73.3	42.0	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_403	14.6	7.33	35.4	1081	557	73.6	73.6	42.0	15.9	1.18E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_404	14.6	7.33	35.4	1083	557	73.6	73.6	42.0	15.9	1.18E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_405	14.6	7.33	35.4	1086	557	73.7	73.7	42.0	15.9	1.18E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_406	14.5	7.29	34.7	1113	543	70.8	70.8	41.4	15.7	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_407	14.5	7.30	34.7	1110	545	71.0	71.0	41.4	15.8	1.15E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_408	14.5	7.30	34.8	1105	546	71.1	71.1	41.4	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_409	14.5	7.31	34.9	1103	549	71.6	71.6	41.6	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_410	14.5	7.31	35.0	1101	551	71.8	71.8	41.6	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_411	14.5	7.32	35.1	1077	552	72.1	72.1	41.7	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_412	14.5	7.32	35.1	1066	552	72.4	72.4	41.7	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_413	14.6	7.34	35.4	1088	557	74.3	74.3	42.1	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_414	14.6	7.34	35.5	1088	557	74.3	74.3	42.1	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_415	14.6	7.34	35.5	1087	558	74.2	74.2	42.2	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_416	14.6	7.34	35.5	1085	558	74.5	74.5	42.3	16.0	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_417	14.6	7.34	35.5	1082	558	74.5	74.5	42.3	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_418	14.6	7.34	35.4	1077	557	74.2	74.2	42.2	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_419	14.5	7.32	35.1	1071	553	73.1	73.1	41.8	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_420	14.5	7.32	35.1	1072	553	73.2	73.2	41.8	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_421	14.5	7.32	35.1	1068	552	73.3	73.3	41.8	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_422	14.5	7.32	35.0	1063	550	73.2	73.2	41.7	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_423	14.5	7.32	34.9	1059	549	73.0	73.0	41.7	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_424	14.4	7.31	34.8	1054	548	72.8	72.8	41.6	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_425	14.4	7.31	34.7	1047	546	72.5	72.5	41.5	15.8	1.17E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_426	14.4	7.31	34.6	1041	544	72.1	72.1	41.4	15.8	1.17E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_427	14.5	7.34	35.3	1073	556	74.1	74.1	42.1	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_428	14.5	7.33	35.3	1069	555	74.0	74.0	42.1	15.9	1.19E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_429	14.5	7.33	35.2	1065	554	73.8	73.8	42.0	15.9	1.18E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_430	14.5	7.32	35.1	1072	552	72.2	72.2	41.7	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_431	14.5	7.32	35.0	1057	552	73.6	73.6	41.9	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_432	14.5	7.32	35.1	1084	552	72.2	72.2	41.7	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_433	14.5	7.32	35.0	1066	551	73.3	73.3	41.8	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_434	14.5	7.33	35.1	1061	553	73.7	73.7	41.9	15.9	1.18E-04	5.45E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_435	14.5	7.30	34.8	1104	547	71.3	71.3	41.5	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_436	14.5	7.33	35.2	1074	553	73.6	73.6	41.9	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_437	14.5	7.32	35.1	1061	552	72.5	72.5	41.7	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_438	14.5	7.32	35.0	1053	552	73.3	73.3	41.8	15.9	1.18E-04	5.44E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_439	14.5	7.29	34.6	1113	542	70.8	70.8	41.3	15.7	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_440	14.5	7.30	34.7	1112	544	71.0	71.0	41.4	15.7	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_441	14.5	7.33	35.1	1072	552	73.5	73.5	41.9	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_443	14.6	7.30	35.0	1094	546	71.5	71.5	41.5	15.7	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_444	14.5	7.29	34.8	1092	544	71.2	71.2	41.4	15.7	1.15E-04	5.39E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_445	14.6	7.29	34.9	1104	544	71.3	71.3	41.5	15.7	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_446	14.6	7.30	35.1	1113	547	71.6	71.6	41.6	15.8	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_450	14.5	7.29	34.7	1100	542	70.9	70.9	41.3	15.7	1.15E-04	5.39E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_452	14.7	7.32	35.7	1127	557	73.3	73.3	42.1	15.8	1.17E-04	5.42E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_453	14.7	7.32	35.8	1146	557	73.3	73.3	42.1	15.8	1.17E-04	5.42E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_454	14.8	7.33	36.0	1150	561	74.1	74.1	42.3	15.9	1.17E-04	5.43E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_455	14.7	7.32	35.5	1106	555	73.2	73.2	42.0	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_456	14.8	7.33	35.9	1130	561	74.0	74.0	42.3	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_001	15.8	7.62	38.5	1396	696	86.2	86.2	43.4	16.6	1.23E-04	5.67E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231100_002	15.6	7.48	38.5	1271	638	81.3	81.3	43.2	16.3	1.22E-04	5.56E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231100_003	15.7	7.67	38.4	805	525	73.9	73.9	40.3	16.2	1.14E-04	5.52E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_004	17.7	7.99	47.7	1796	846	112.9	112.9	48.8	17.6	1.39E-04	5.88E-05	4.68	1.52	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE231100_005	15.1	7.37	37.1	1152	590	76.4	76.4	42.9	16.0	1.19E-04	5.47E-05	4.57	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_006	15.1	7.37	36.7	1155	589	75.8	75.8	42.6	16.0	1.18E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_007	15.1	7.37	36.5	1158	588	75.6	75.6	42.4	16.0	1.18E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231100_008	15.0	7.36	36.8	1130	583	75.9	75.9	42.8	16.0	1.19E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_009	15.0	7.36	36.6	1136	582	75.3	75.3	42.6	15.9	1.18E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_010	15.0	7.36	36.3	1141	582	75.0	75.0	42.3	15.9	1.17E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_011	15.0	7.35	36.2	1142	582	74.9	74.9	42.1	15.9	1.17E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_012	15.0	7.35	35.9	1141	583	74.4	74.4	41.9	15.9	1.17E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_018	15.0	7.36	36.3	1158	589	75.4	75.4	42.2	15.9	1.17E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_019	15.0	7.36	36.1	1153	589	75.0	75.0	42.0	15.9	1.17E-04	5.46E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_020	15.0	7.36	35.9	1143	589	74.8	74.8	41.8	15.9	1.16E-04	5.45E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_027	15.2	7.39	37.2	1193	602	77.0	77.0	42.7	16.0	1.19E-04	5.49E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_028	15.1	7.38	36.8	1184	599	76.4	76.4	42.4	16.0	1.18E-04	5.48E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_029	15.1	7.38	36.5	1176	599	76.2	76.2	42.2	16.0	1.18E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_030	15.1	7.38	36.3	1166	600	76.3	76.3	42.0	16.0	1.17E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_031	15.1	7.37	36.0	1150	599	76.3	76.3	41.8	16.0	1.17E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_032	15.1	7.37	35.8	1130	600	75.9	75.9	41.6	16.0	1.16E-04	5.46E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_033	15.0	7.37	35.4	1136	599	74.8	74.8	41.4	15.9	1.16E-04	5.46E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_041	15.0	7.37	35.2	1164	605	74.7	74.7	41.4	16.0	1.15E-04	5.47E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_042	15.1	7.38	35.7	1164	607	74.9	74.9	41.5	16.0	1.16E-04	5.47E-05	4.57	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_043	15.1	7.38	36.0	1153	607	76.5	76.5	41.7	16.0	1.17E-04	5.48E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_044	15.2	7.39	36.3	1160	607	77.2	77.2	41.9	16.0	1.17E-04	5.48E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_045	15.2	7.39	36.6	1180	607	77.3	77.3	42.1	16.0	1.18E-04	5.49E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_046	15.2	7.39	36.8	1192	606	77.2	77.2	42.3	16.0	1.18E-04	5.49E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_047	15.2	7.40	37.2	1205	608	77.5	77.5	42.6	16.1	1.19E-04	5.49E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_048	15.3	7.40	37.6	1215	610	78.0	78.0	43.0	16.1	1.20E-04	5.50E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231100_049	15.4	7.43	38.1	1244	622	79.5	79.5	43.2	16.2	1.21E-04	5.53E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231100_050	15.4	7.43	37.8	1238	622	79.2	79.2	42.9	16.1	1.20E-04	5.52E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231100_051	15.3	7.42	37.5	1224	620	79.0	79.0	42.7	16.1	1.20E-04	5.51E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231100_052	15.3	7.41	37.0	1200	618	78.7	78.7	42.4	16.1	1.19E-04	5.51E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_053	15.3	7.41	36.7	1176	616	78.3	78.3	42.1	16.1	1.18E-04	5.50E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_054	15.2	7.41	36.3	1185	616	76.8	76.8	41.9	16.1	1.17E-04	5.50E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_055	15.2	7.40	36.0	1195	617	76.3	76.3	41.8	16.1	1.17E-04	5.49E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_056	15.2	7.40	35.8	1205	619	76.5	76.5	41.8	16.0	1.17E-04	5.49E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_057	15.2	7.40	36.0	1219	624	76.8	76.8	41.9	16.0	1.17E-04	5.49E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_077	15.5	7.64	38.8	1227	701	86.8	86.8	43.1	16.7	1.25E-04	5.69E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231100_078	15.6	7.72	40.1	1226	712	89.9	89.9	43.9	16.9	1.27E-04	5.75E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231100_079	14.9	7.34	36.3	1102	570	74.9	74.9	42.5	15.9	1.18E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_080	14.9	7.34	36.1	1091	570	74.3	74.3	42.3	15.9	1.17E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_081	14.9	7.34	35.9	1099	569	73.8	73.8	42.2	15.9	1.17E-04	5.43E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_082	15.0	7.35	36.5	1106	574	75.5	75.5	42.6	15.9	1.18E-04	5.45E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_083	14.9	7.35	36.3	1108	574	74.5	74.5	42.5	15.9	1.17E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_084	14.9	7.34	36.1	1115	574	74.2	74.2	42.3	15.9	1.17E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_085	14.9	7.34	35.9	1120	574	74.1	74.1	42.1	15.9	1.17E-04	5.44E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_090	14.7	7.31	35.2	1078	551	72.5	72.5	41.7	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_091	14.6	7.30	35.0	1075	548	71.9	71.9	41.6	15.8	1.15E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_116	14.8	7.33	35.7	1073	563	73.3	73.3	42.0	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_120	14.8	7.33	35.9	1080	564	74.1	74.1	42.2	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_121	14.9	7.33	35.7	1103	569	73.4	73.4	42.0	15.9	1.16E-04	5.43E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_161	14.7	7.32	35.5	1053	558	73.1	73.1	41.9	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_164	14.7	7.31	35.4	1082	553	72.8	72.8	41.8	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_165	14.7	7.31	35.3	1056	553	72.5	72.5	41.7	15.8	1.16E-04	5.41E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_167	14.8	7.32	35.8	1109	560	73.9	73.9	42.2	15.8	1.17E-04	5.43E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_171	14.8	7.32	35.7	1082	560	73.5	73.5	42.1	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_175	12.2	7.00	22.6	349	362	35.0	35.0	0.0	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE231400_001	15.9	7.64	41.1	1223	652	88.4	88.4	43.6	16.5	1.23E-04	5.63E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_002	16.2	7.74	42.5	1253	663	90.4	90.4	44.3	16.8	1.26E-04	5.72E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_003	15.8	7.61	39.9	1160	636	84.1	84.1	43.1	16.4	1.22E-04	5.61E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_004	15.9	7.64	40.4	1171	640	84.7	84.7	43.3	16.5	1.23E-04	5.64E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_005	16.1	7.74	41.5	1188	670	87.0	87.0	43.9	16.7	1.25E-04	5.73E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_006	16.0	7.71	40.7	1145	664	85.7	85.7	43.7	16.7	1.24E-04	5.70E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_007	15.7	7.61	39.4	1122	635	83.0	83.0	43.1	16.4	1.21E-04	5.61E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_008	15.7	7.60	38.8	1107	642	82.9	82.9	42.7	16.4	1.21E-04	5.61E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_009	15.9	7.70	40.3	1125	665	84.3	84.3	43.3	16.6	1.24E-04	5.69E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_010	15.3	7.51	37.3	981	631	77.4	77.4	41.0	16.2	1.17E-04	5.54E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_011	16.8	7.83	45.4	1297	666	96.2	96.2	46.3	16.9	1.29E-04	5.72E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231500_002	14.5	7.38	33.1	776	503	69.6	69.6	40.2	15.9	1.07E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE231600_001	15.5	7.66	38.0	939	570	79.8	79.8	43.3	16.5	1.16E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231600_004	15.5	7.62	38.2	956	572	77.1	77.1	42.9	16.4	1.15E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231600_005	14.9	7.53	35.1	894	554	75.4	75.4	42.2	16.3	1.12E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231700_002	14.4	7.40	33.0	790	519	72.8	72.8	41.1	16.1	1.09E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE231700_003	14.4	7.39	32.7	779	514	71.7	71.7	40.9	16.0	1.08E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE231700_004	15.0	7.50	34.8	868	534	74.9	74.9	41.9	16.2	1.12E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231800_001	16.0	7.78	39.4	908	571	85.6	85.6	45.2	16.8	1.20E-04	5.61E-05	4.55	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE231800_002	16.4	7.88	40.5	1003	594	88.5	88.5	46.3	17.0	1.23E-04	5.67E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE232700_002	14.5	7.38	33.8	844	535	73.2	73.2	42.7	16.1	1.12E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE233200_001	15.9	7.64	43.9	1093	619	73.3	73.3	44.0	16.2	1.23E-04	5.54E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE233500_001	15.4	7.59	40.1	990	577	76.4	76.4	44.0	16.3	1.20E-04	5.52E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE233600_001	15.5	7.61	40.6	940	573	77.1	77.1	44.0	16.4	1.21E-04	5.54E-05	4.54	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE233600_002	15.5	7.62	40.9	974	579	77.5	77.5	44.1	16.4	1.21E-04	5.54E-05	4.54	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE233700_001	15.4	7.58	39.2	874	553	78.3	78.3	43.7	16.4	1.18E-04	5.53E-05	4.53	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE233900_001	15.7	7.65	40.3	943	585	82.6	82.6	44.9	16.6	1.21E-04	5.57E-05	4.54	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE233900_002	15.7	7.66	38.5	934	573	84.2	84.2	45.8	16.8	1.19E-04	5.59E-05	4.55	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE233900_003	15.8	7.70	39.0	944	576	85.9	85.9	46.0	16.8	1.19E-04	5.62E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE234000_001	15.9	7.68	39.7	980	584	88.5	88.5	46.7	16.9	1.21E-04	5.61E-05	4.56	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE234100_001	15.8	7.63	42.2	1010	606	83.7	83.7	45.8	16.6	1.23E-04	5.57E-05	4.56	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235000_001	16.1	7.75	40.6	1142	598	101.5	101.5	48.4	17.3	1.24E-04	5.68E-05	4.61	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235100_001	16.1	7.75	40.9	1109	589	100.4	100.4	48.0	17.3	1.24E-04	5.67E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235100_002	16.1	7.74	41.3	1057	581	97.3	97.3	47.9	17.2	1.25E-04	5.66E-05	4.59	1.52	0.16	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235100_003	15.6	7.57	39.3	930	585	86.8	86.8	44.9	16.6	1.19E-04	5.54E-05	4.56	1.52	0.16	6.41E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235200_001	16.1	7.74	41.5	1028	567	94.8	94.8	47.5	17.1	1.24E-04	5.65E-05	4.59	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235200_002	16.1	7.66	41.1	987	612	90.8	90.8	45.7	16.8	1.22E-04	5.59E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235500_001	16.1	7.70	41.4	1089	600	90.4	90.4	46.1	16.8	1.24E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235500_002	16.2	7.75	44.0	1062	585	94.5	94.5	48.1	17.1	1.28E-04	5.65E-05	4.59	1.52	0.16	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235700_001	15.2	7.53	38.6	929	577	78.2	78.2	44.2	16.4	1.21E-04	5.54E-05	4.54	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235700_002	16.7	7.81	45.1	1112	597	100.4	100.4	49.4	17.3	1.30E-04	5.70E-05	4.60	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE235800_001	16.3	7.80	43.0	1184	642	86.4	86.4	47.1	17.1	1.29E-04	5.74E-05	4.58	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE235900_002	15.4	7.64	38.6	1002	611	78.7	78.7	42.9	16.7	1.18E-04	5.63E-05	4.54	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235900_003	16.9	7.99	44.1	1315	678	94.7	94.7	46.3	17.3	1.26E-04	5.80E-05	4.61	1.52	0.16	6.43E-02	2.57	0.49	0.32	2.54E-02	1.37E-02
RE235900_004	17.2	8.07	44.8	1180	649	97.0	97.0	47.3	17.6	1.28E-04	5.86E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE310100_001	16.7	7.94	43.6	1309	668	93.8	93.8	46.0	17.2	1.25E-04	5.77E-05	4.61	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE310100_002	16.6	7.92	44.3	1328	657	92.4	92.4	46.1	17.1	1.25E-04	5.75E-05	4.61	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE310100_003	17.0	7.99	43.8	1155	624	94.5	94.5	46.6	17.4	1.26E-04	5.80E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.32	2.54E-02	1.37E-02
RE310200_001	16.7	7.90	43.3	1137	597	90.2	90.2	46.0	17.2	1.25E-04	5.73E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE310500_001	16.3	7.78	41.8	1246	600	91.3	91.3	46.4	17.2	1.24E-04	5.67E-05	4.62	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE310600_001	15.7	7.61	39.9	1100	593	83.4	83.4	44.0	16.6	1.20E-04	5.56E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE310600_002	17.0	7.84	45.8	1252	635	90.0	90.0	46.1	17.0	1.28E-04	5.69E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE310700_001	16.8	7.81	45.2	1173	618	86.7	86.7	45.9	16.9	1.27E-04	5.67E-05	4.59	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE310700_002	16.2	7.78	40.9	1218	589	91.3	91.3	45.9	17.1	1.23E-04	5.67E-05	4.61	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE310900_001	16.4	7.75	43.0	1246	599	86.3	86.3	45.5	16.9	1.25E-04	5.64E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311000_001	16.4	7.78	43.4	1109	625	84.5	84.5	45.0	16.7	1.24E-04	5.65E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311100_001	16.1	7.68	41.6	1235	612	89.1	89.1	46.1	16.9	1.24E-04	5.61E-05	4.61	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311200_001	16.6	7.77	43.2	1181	632	87.0	87.0	46.0	16.9	1.25E-04	5.66E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311200_002	16.5	7.79	43.8	1296	628	85.0	85.0	45.1	16.7	1.24E-04	5.64E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311300_001	16.9	7.90	46.3	1299	631	85.7	85.7	45.5	16.8	1.26E-04	5.68E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311300_002	17.9	8.03	52.0	1923	753	118.7	118.7	56.0	19.0	1.47E-04	5.98E-05	4.76	1.54	0.17	6.56E-02	2.59	0.51	0.32	2.54E-02	1.37E-02
RE311400_001	16.3	7.86	41.6	1147	595	81.7	81.7	44.1	16.6	1.19E-04	5.60E-05	4.58	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311400_002	17.6	8.20	46.5	1414	649	89.6	89.6	45.8	17.0	1.28E-04	5.79E-05	4.61	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311400_003	16.8	7.86	45.0	1536	637	102.2	102.2	49.5	17.6	1.32E-04	5.77E-05	4.67	1.53	0.17	6.47E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311400_006	14.6	7.40	33.8	937	524	73.0	73.0	42.7	16.1	1.14E-04	5.41E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311800_001	15.9	7.65	41.3	1300	624	85.7	85.7	45.7	16.7	1.24E-04	5.62E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311900_001	16.0	7.66	41.5	1312	621	87.7	87.7	46.2	16.8	1.25E-04	5.63E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312200_001	16.4	7.77	43.3	1372	659	94.3	94.3	50.4	17.3	1.31E-04	5.74E-05	4.62	1.52	0.16	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312200_002	16.3	7.72	42.5	1340	657	94.4	94.4	50.5	17.3	1.30E-04	5.71E-05	4.61	1.52	0.16	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312200_003	16.2	7.69	41.9	1313	655	93.7	93.7	50.5	17.3	1.29E-04	5.69E-05	4.61	1.52	0.16	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312300_001	16.9	7.86	45.0	1329	718	106.1	106.1	55.5	18.0	1.38E-04	5.83E-05	4.62	1.53	0.16	6.50E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE312400_001	17.2	7.91	47.1	1358	747	113.9	113.9	59.2	18.4	1.43E-04	5.89E-05	4.65	1.53	0.17	6.54E-02	2.58	0.50	0.32	2.54E-02	1.37E-02
RE312800_001	16.7	7.79	44.7	974	655	97.2	97.2	52.1	17.5	1.30E-04	5.69E-05	4.56	1.53	0.16	6.47E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312800_002	15.4	7.51	38.2	1053	622	81.3	81.3	46.5	16.6	1.21E-04	5.51E-05	4.56	1.52	0.16	6.42E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE312900_001	16.5	7.75	43.9	984	648	91.2	91.2	50.0	17.3	1.27E-04	5.65E-05	4.55	1.52	0.16	6.45E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312900_002	15.8	7.60	40.3	1093	632	82.4	82.4	47.0	16.7	1.22E-04	5.54E-05	4.57	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE313000_001	15.8	7.79	39.1	991	605	89.3	89.3	47.7	17.1	1.22E-04	5.63E-05	4.55	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE313000_002	15.8	7.80	39.3	973	608	90.4	90.4	48.0	17.2	1.22E-04	5.64E-05	4.55	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE313000_003	16.0	7.85	40.2	958	615	94.1	94.1	48.9	17.4	1.24E-04	5.68E-05	4.55	1.52	0.16	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE313000_004	15.6	7.78	39.2	1074	600	86.8	86.8	47.1	17.0	1.21E-04	5.60E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE313000_005	15.4	7.73	39.0	1098	602	84.9	84.9	46.9	16.8	1.21E-04	5.57E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE313000_006	15.2	7.49	37.8	1064	610	78.5	78.5	45.9	16.4	1.20E-04	5.47E-05	4.57	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE313000_007	15.7	7.57	39.9	1114	633	81.2	81.2	46.8	16.6	1.22E-04	5.51E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE313100_001	15.3	7.60	39.0	1089	600	82.8	82.8	46.6	16.6	1.21E-04	5.52E-05	4.57	1.52	0.16	6.42E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE314400_001	16.1	7.45	44.0	1461	658	82.9	82.9	50.1	16.5	1.33E-04	5.48E-05	4.65	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE314800_001	16.4	7.42	48.2	1553	688	85.4	85.4	51.7	16.2	1.41E-04	5.45E-05	4.68	1.53	0.17	6.51E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE314900_001	16.2	7.62	42.5	1457	694	92.1	92.1	50.5	16.8	1.32E-04	5.57E-05	4.65	1.53	0.17	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE316400_001	18.4	7.80	54.9	2054	833	105.1	105.1	56.7	17.4	1.50E-04	5.73E-05	4.76	1.54	0.17	6.55E-02	2.59	0.52	0.31	2.54E-02	1.37E-02
RE316500_001	19.3	8.05	58.9	2182	889	110.5	110.5	58.4	18.2	1.57E-04	5.91E-05	4.78	1.54	0.17	6.57E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE316600_001	19.3	8.68	55.1	2302	913	119.6	119.6	58.8	19.9	1.60E-04	6.36E-05	4.77	1.54	0.17	6.58E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE316600_002	18.9	8.36	55.0	2339	920	119.3	119.3	59.1	19.0	1.60E-04	6.19E-05	4.78	1.54	0.17	6.58E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE316700_001	18.8	8.26	55.1	2382	933	118.7	118.7	59.3	18.7	1.61E-04	6.14E-05	4.79	1.54	0.18	6.58E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE316700_002	18.6	8.18	54.8	2407	929	118.6	118.6	59.5	18.5	1.61E-04	6.09E-05	4.80	1.54	0.18	6.58E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE317000_001	19.7	8.23	62.7	2286	899	126.9	126.9	67.8	19.3	1.79E-04	6.22E-05	4.82	1.55	0.18	6.69E-02	2.61	0.54	0.32	2.54E-02	1.37E-02
RE410200_001	16.7	7.60	47.7	1681	676	105.1	105.1	55.2	17.0	1.47E-04	5.66E-05	4.72	1.53	0.17	6.52E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE410200_002	16.9	7.66	48.7	1765	701	111.6	111.6	56.4	17.2	1.49E-04	5.71E-05	4.74	1.53	0.17	6.53E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE411100_001	17.7	7.84	52.1	1672	734	112.0	112.0	52.0	17.5	1.48E-04	5.81E-05	4.68	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE411200_001	17.9	8.03	52.1	1713	841	106.1	106.1	51.4	17.7	1.47E-04	5.95E-05	4.66	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE510000_001	15.8	7.65	39.9	1038	579	84.0	84.0	44.5	16.7	1.26E-04	5.67E-05	4.57	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE510000_002	15.9	7.68	40.3	1153	599	86.4	86.4	45.6	16.8	1.25E-04	5.69E-05	4.59	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE510100_001	15.5	7.56	37.9	1086	598	83.4	83.4	44.6	16.5	1.21E-04	5.61E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511200_001	20.2	8.42	59.2	1790	902	114.1	114.1	54.9	18.8	1.60E-04	6.27E-05	4.62	1.54	0.16	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511200_002	20.1	8.41	59.4	1788	880	113.4	113.4	54.9	18.8	1.60E-04	6.26E-05	4.62	1.54	0.16	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511200_003	20.1	8.40	59.6	1783	861	113.3	113.3	54.9	18.7	1.60E-04	6.25E-05	4.62	1.54	0.16	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511200_004	20.0	8.39	59.7	1775	845	113.4	113.4	54.9	18.7	1.61E-04	6.24E-05	4.62	1.54	0.16	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511200_005	19.3	8.20	54.4	1702	836	107.8	107.8	52.5	18.2	1.51E-04	6.11E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511200_006	19.2	8.19	54.2	1695	819	107.6	107.6	52.4	18.2	1.51E-04	6.10E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_001	17.1	7.67	44.1	1312	709	87.2	87.2	45.9	16.5	1.35E-04	5.77E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_002	14.3	7.35	32.4	927	495	69.7	69.7	39.3	15.9	1.12E-04	5.43E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_003	14.6	7.38	33.9	918	507	71.0	71.0	40.1	16.0	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_004	14.8	7.42	34.9	1030	526	73.6	73.6	40.7	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_005	14.8	7.41	35.0	976	525	72.7	72.7	40.6	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_006	14.8	7.42	35.0	958	527	73.2	73.2	40.6	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_007	14.9	7.44	35.3	1063	533	75.1	75.1	40.9	16.2	1.17E-04	5.51E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_008	14.8	7.41	34.9	957	525	72.8	72.8	40.6	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_009	15.1	7.46	36.1	1070	546	76.8	76.8	41.2	16.2	1.19E-04	5.53E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_010	14.9	7.42	35.4	1007	532	73.7	73.7	40.8	16.1	1.18E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_011	15.0	7.44	35.8	1019	540	75.2	75.2	41.0	16.2	1.18E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_012	14.9	7.42	35.4	1008	531	73.4	73.4	40.7	16.1	1.18E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_013	14.9	7.42	35.0	1036	527	74.0	74.0	40.7	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_014	14.9	7.43	35.1	1042	529	74.4	74.4	40.8	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_015	15.1	7.46	36.2	1048	548	77.1	77.1	41.2	16.2	1.19E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_016	15.1	7.45	36.0	1073	544	76.4	76.4	41.1	16.2	1.18E-04	5.53E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_017	15.0	7.45	35.6	1075	539	75.7	75.7	41.0	16.2	1.18E-04	5.52E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_018	15.1	7.46	36.3	1043	547	76.9	76.9	41.2	16.2	1.19E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_019	15.1	7.46	36.2	1026	547	77.0	77.0	41.2	16.2	1.19E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_020	14.8	7.41	35.0	965	527	73.1	73.1	40.6	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_021	14.9	7.43	35.1	1049	530	74.7	74.7	40.8	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_022	15.1	7.46	36.0	1073	545	76.6	76.6	41.2	16.2	1.19E-04	5.53E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_023	15.0	7.44	35.5	1073	538	75.6	75.6	41.0	16.2	1.18E-04	5.52E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_024	15.1	7.46	36.3	1034	547	77.0	77.0	41.2	16.2	1.19E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_025	14.9	7.43	35.4	978	533	74.3	74.3	40.8	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_026	14.8	7.41	35.2	1000	530	73.2	73.2	40.7	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_027	14.8	7.42	35.3	998	531	73.4	73.4	40.7	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_028	14.9	7.43	35.5	985	534	74.4	74.4	40.8	16.1	1.18E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_029	15.0	7.44	35.4	1073	537	75.3	75.3	40.9	16.2	1.17E-04	5.51E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_030	14.9	7.43	35.6	992	536	74.6	74.6	40.9	16.1	1.18E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_031	15.0	7.44	35.9	1026	541	75.4	75.4	41.0	16.2	1.19E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_032	14.8	7.41	34.9	954	525	73.0	73.0	40.6	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_033	15.0	7.44	35.7	1007	538	74.8	74.8	40.9	16.1	1.18E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_034	15.0	7.44	35.8	1013	539	75.0	75.0	41.0	16.2	1.18E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_035	14.8	7.41	34.9	963	524	72.6	72.6	40.5	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_036	14.8	7.40	34.9	968	524	72.4	72.4	40.5	16.1	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_037	14.9	7.43	35.3	971	532	74.1	74.1	40.8	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_038	15.0	7.45	35.7	1078	540	76.0	76.0	41.0	16.2	1.18E-04	5.52E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_039	15.1	7.45	35.9	1075	543	76.3	76.3	41.1	16.2	1.18E-04	5.52E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_040	14.9	7.43	35.2	1056	532	74.9	74.9	40.8	16.2	1.17E-04	5.51E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_041	15.0	7.45	35.8	1078	541	76.2	76.2	41.1	16.2	1.18E-04	5.52E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_042	14.8	7.41	35.0	971	526	72.9	72.9	40.6	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_043	20.0	8.38	59.8	1792	847	113.1	113.1	54.9	18.7	1.61E-04	6.23E-05	4.62	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_044	19.9	8.36	59.7	1830	847	112.2	112.2	54.9	18.6	1.61E-04	6.22E-05	4.63	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_045	19.8	8.35	59.7	1878	847	111.6	111.6	54.9	18.6	1.61E-04	6.21E-05	4.63	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_046	19.8	8.34	59.6	1905	846	111.0	111.0	54.9	18.6	1.61E-04	6.20E-05	4.64	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_047	19.7	8.33	59.4	1920	844	111.4	111.4	54.9	18.5	1.61E-04	6.19E-05	4.64	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_048	19.6	8.32	59.3	1926	842	111.6	111.6	54.9	18.5	1.61E-04	6.18E-05	4.64	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_049	19.6	8.31	59.2	1958	840	111.5	111.5	54.9	18.5	1.60E-04	6.17E-05	4.64	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_050	19.6	8.30	59.0	2017	837	111.5	111.5	54.9	18.5	1.60E-04	6.16E-05	4.65	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_051	19.6	8.29	58.8	2104	836	111.3	111.3	54.8	18.4	1.60E-04	6.15E-05	4.66	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_052	19.6	8.27	58.6	2170	833	111.0	111.0	54.8	18.4	1.59E-04	6.14E-05	4.67	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_053	19.5	8.26	58.3	2229	830	111.0	111.0	54.7	18.4	1.59E-04	6.14E-05	4.68	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_054	19.5	8.25	58.0	2280	826	110.9	110.9	54.6	18.3	1.58E-04	6.13E-05	4.68	1.53	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_055	19.5	8.24	57.5	2329	820	111.5	111.5	54.4	18.3	1.57E-04	6.12E-05	4.69	1.53	0.17	6.54E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_056	19.5	8.23	57.0	2358	814	110.7	110.7	54.2	18.3	1.56E-04	6.11E-05	4.70	1.53	0.17	6.54E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_057	19.5	8.22	56.7	2379	813	109.6	109.6	54.1	18.2	1.55E-04	6.10E-05	4.70	1.53	0.17	6.54E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_058	19.4	8.20	56.2	2385	811	109.0	109.0	53.9	18.2	1.54E-04	6.09E-05	4.71	1.53	0.17	6.54E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_059	19.7	8.25	57.5	2368	834	113.5	113.5	54.6	18.4	1.56E-04	6.13E-05	4.72	1.53	0.17	6.54E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE511300_060	19.4	8.18	55.9	2349	814	109.9	109.9	53.6	18.2	1.53E-04	6.08E-05	4.71	1.53	0.17	6.53E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_061	19.1	8.13	54.4	2313	798	106.9	106.9	52.7	18.0	1.51E-04	6.04E-05	4.70	1.53	0.17	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_062	18.8	8.07	52.6	2245	781	104.7	104.7	51.7	17.8	1.48E-04	5.99E-05	4.69	1.53	0.17	6.51E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_063	18.6	8.03	51.5	2176	771	103.3	103.3	51.0	17.7	1.46E-04	5.96E-05	4.68	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_064	18.4	7.99	50.6	2102	762	101.1	101.1	50.4	17.6	1.44E-04	5.94E-05	4.66	1.53	0.17	6.49E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_065	18.1	7.95	49.6	2008	753	100.0	100.0	49.7	17.5	1.43E-04	5.91E-05	4.65	1.53	0.17	6.49E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_066	17.4	7.82	46.0	1593	724	95.6	95.6	47.4	17.1	1.37E-04	5.81E-05	4.60	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_067	17.2	7.80	45.4	1525	719	94.7	94.7	47.0	17.1	1.36E-04	5.79E-05	4.59	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_068	17.1	7.78	44.8	1471	714	94.0	94.0	46.6	17.0	1.35E-04	5.78E-05	4.59	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_069	17.0	7.76	44.3	1452	709	93.3	93.3	46.3	17.0	1.34E-04	5.76E-05	4.58	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_070	16.9	7.74	43.7	1428	704	92.8	92.8	45.9	16.9	1.33E-04	5.75E-05	4.58	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_071	16.7	7.71	42.9	1384	695	91.7	91.7	45.4	16.8	1.31E-04	5.73E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE511300_072	16.6	7.70	42.4	1347	689	90.5	90.5	45.1	16.8	1.31E-04	5.72E-05	4.57	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_073	16.5	7.69	42.0	1307	683	89.3	89.3	44.9	16.8	1.30E-04	5.71E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_074	15.5	7.52	38.0	1139	575	79.6	79.6	42.2	16.3	1.22E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_075	15.5	7.52	38.1	1149	575	79.6	79.6	42.1	16.3	1.23E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_076	15.5	7.52	38.2	1155	576	79.6	79.6	42.1	16.3	1.23E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_077	15.5	7.52	38.3	1161	577	79.6	79.6	42.2	16.3	1.23E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_078	15.5	7.52	38.3	1164	577	79.8	79.8	42.2	16.3	1.23E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_079	15.5	7.52	38.5	1166	579	80.1	80.1	42.3	16.4	1.24E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_080	15.5	7.53	38.6	1165	581	80.3	80.3	42.3	16.4	1.24E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_081	15.5	7.53	38.6	1162	582	80.4	80.4	42.4	16.4	1.24E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_082	15.6	7.53	38.7	1158	584	80.5	80.5	42.4	16.4	1.24E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_083	15.6	7.53	38.8	1155	585	80.4	80.4	42.5	16.4	1.24E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_084	15.6	7.54	38.9	1151	588	80.2	80.2	42.5	16.4	1.24E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_085	15.6	7.54	39.0	1140	593	80.2	80.2	42.6	16.4	1.25E-04	5.60E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_086	15.7	7.55	39.1	1135	597	80.3	80.3	42.7	16.4	1.25E-04	5.60E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_087	15.7	7.55	39.2	1130	600	80.4	80.4	42.7	16.4	1.25E-04	5.60E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_088	15.7	7.55	39.2	1133	603	80.7	80.7	42.8	16.4	1.25E-04	5.60E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_089	15.7	7.56	39.3	1135	606	81.1	81.1	42.8	16.4	1.25E-04	5.61E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_090	15.8	7.56	39.4	1136	609	81.5	81.5	42.9	16.4	1.26E-04	5.61E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_091	15.8	7.57	39.5	1138	614	82.2	82.2	43.0	16.5	1.26E-04	5.62E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_092	15.9	7.58	39.6	1142	617	82.7	82.7	43.1	16.5	1.26E-04	5.62E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_093	15.9	7.59	39.7	1144	620	83.3	83.3	43.2	16.5	1.26E-04	5.63E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_094	16.0	7.59	39.8	1146	626	83.6	83.6	43.3	16.5	1.26E-04	5.64E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_095	16.0	7.61	40.0	1152	635	84.0	84.0	43.4	16.6	1.27E-04	5.64E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_096	16.1	7.62	40.3	1163	642	84.3	84.3	43.6	16.6	1.27E-04	5.65E-05	4.55	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_097	16.2	7.63	40.6	1175	650	85.0	85.0	43.8	16.6	1.28E-04	5.66E-05	4.55	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_098	16.8	7.73	44.1	1442	648	90.5	90.5	46.6	16.9	1.34E-04	5.75E-05	4.57	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_099	16.7	7.71	43.6	1430	644	89.8	89.8	46.4	16.9	1.33E-04	5.73E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_100	16.6	7.70	43.3	1418	641	89.4	89.4	46.2	16.9	1.33E-04	5.72E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_101	16.6	7.69	42.9	1406	638	89.0	89.0	46.0	16.8	1.32E-04	5.71E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_102	16.5	7.68	42.5	1393	634	88.5	88.5	45.8	16.8	1.31E-04	5.70E-05	4.56	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_103	16.4	7.67	42.2	1384	631	88.2	88.2	45.6	16.8	1.31E-04	5.70E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_104	16.3	7.65	41.8	1372	627	87.6	87.6	45.3	16.7	1.30E-04	5.69E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_105	16.3	7.64	41.4	1362	623	86.9	86.9	45.1	16.7	1.30E-04	5.68E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_106	16.2	7.63	41.2	1353	620	86.3	86.3	45.0	16.7	1.29E-04	5.67E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_107	16.1	7.63	40.8	1344	617	85.6	85.6	44.8	16.7	1.29E-04	5.66E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_108	16.1	7.62	40.6	1335	614	85.1	85.1	44.6	16.6	1.28E-04	5.66E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_109	16.0	7.61	40.3	1325	611	84.4	84.4	44.4	16.6	1.28E-04	5.65E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_110	16.0	7.60	39.9	1313	607	83.7	83.7	44.2	16.6	1.27E-04	5.64E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_111	15.9	7.59	39.7	1303	603	83.1	83.1	44.1	16.6	1.27E-04	5.63E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_112	15.9	7.58	39.4	1294	600	82.6	82.6	43.9	16.5	1.26E-04	5.63E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_113	15.8	7.58	39.2	1285	597	82.3	82.3	43.8	16.5	1.26E-04	5.62E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_114	15.8	7.57	39.0	1273	595	81.9	81.9	43.6	16.5	1.25E-04	5.62E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_115	15.7	7.56	38.7	1260	592	81.6	81.6	43.4	16.5	1.25E-04	5.61E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_116	15.6	7.55	38.4	1240	587	81.3	81.3	43.2	16.5	1.24E-04	5.60E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_117	15.6	7.54	38.1	1224	583	81.1	81.1	43.0	16.4	1.24E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_118	15.5	7.53	38.0	1213	580	80.9	80.9	42.9	16.4	1.23E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_119	15.5	7.53	37.8	1199	577	80.6	80.6	42.7	16.4	1.23E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_120	15.5	7.52	37.7	1184	575	80.3	80.3	42.5	16.4	1.22E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_121	15.4	7.51	37.5	1165	571	80.1	80.1	42.4	16.4	1.22E-04	5.57E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_122	17.1	7.77	44.6	1399	658	93.0	93.0	47.3	17.1	1.35E-04	5.78E-05	4.57	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_123	17.0	7.75	44.2	1387	654	92.2	92.2	47.1	17.0	1.35E-04	5.76E-05	4.57	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_124	16.9	7.74	43.9	1375	650	91.5	91.5	46.9	17.0	1.34E-04	5.75E-05	4.57	1.52	0.16	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE511300_125	16.8	7.72	43.5	1363	647	90.9	90.9	46.7	16.9	1.34E-04	5.74E-05	4.57	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_126	16.7	7.71	43.2	1351	644	90.3	90.3	46.6	16.9	1.33E-04	5.73E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_127	16.7	7.70	42.8	1338	640	89.6	89.6	46.4	16.9	1.33E-04	5.72E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_128	16.6	7.69	42.4	1324	636	89.0	89.0	46.1	16.8	1.32E-04	5.71E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_129	16.5	7.68	42.1	1313	633	88.4	88.4	45.9	16.8	1.31E-04	5.70E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_130	16.4	7.67	41.8	1308	630	87.9	87.9	45.8	16.8	1.31E-04	5.70E-05	4.57	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_131	16.4	7.66	41.5	1305	627	87.3	87.3	45.6	16.8	1.30E-04	5.69E-05	4.57	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_132	16.3	7.65	41.2	1300	624	86.8	86.8	45.4	16.7	1.30E-04	5.68E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_133	16.2	7.64	40.9	1295	621	86.2	86.2	45.2	16.7	1.29E-04	5.67E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_134	16.2	7.63	40.6	1289	618	85.4	85.4	45.0	16.7	1.29E-04	5.67E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_135	16.1	7.62	40.4	1284	615	84.9	84.9	44.8	16.7	1.28E-04	5.66E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_136	16.1	7.61	40.1	1280	612	84.4	84.4	44.7	16.6	1.28E-04	5.65E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_137	16.0	7.60	39.9	1274	609	83.9	83.9	44.5	16.6	1.28E-04	5.65E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_138	16.0	7.59	39.7	1270	607	83.2	83.2	44.3	16.6	1.27E-04	5.64E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_139	15.9	7.58	39.4	1261	603	82.5	82.5	44.1	16.6	1.27E-04	5.63E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_140	15.8	7.58	39.1	1253	600	81.9	81.9	44.0	16.5	1.26E-04	5.63E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_141	15.8	7.57	38.9	1245	597	81.7	81.7	43.8	16.5	1.26E-04	5.62E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_142	15.7	7.56	38.7	1238	593	81.6	81.6	43.6	16.5	1.25E-04	5.61E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_143	15.7	7.55	38.3	1230	589	81.4	81.4	43.4	16.5	1.25E-04	5.60E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_144	15.6	7.54	38.1	1225	585	81.1	81.1	43.2	16.4	1.24E-04	5.60E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_145	15.6	7.53	37.9	1220	582	80.8	80.8	43.0	16.4	1.24E-04	5.59E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_146	15.5	7.53	37.7	1215	579	80.6	80.6	42.9	16.4	1.23E-04	5.59E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_147	15.5	7.52	37.5	1210	577	80.4	80.4	42.7	16.4	1.23E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_148	15.4	7.51	37.2	1203	572	79.9	79.9	42.5	16.4	1.22E-04	5.57E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_149	19.2	8.18	54.3	1686	803	107.5	107.5	52.3	18.1	1.52E-04	6.09E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_150	19.1	8.17	54.3	1673	787	107.7	107.7	52.3	18.1	1.52E-04	6.08E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_151	19.1	8.16	54.2	1656	780	107.2	107.2	52.2	18.1	1.52E-04	6.07E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_152	19.0	8.15	54.2	1635	783	106.6	106.6	52.2	18.1	1.52E-04	6.06E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_153	18.9	8.13	54.2	1631	786	105.7	105.7	52.1	18.0	1.52E-04	6.05E-05	4.59	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_154	18.9	8.13	54.2	1628	788	105.9	105.9	52.1	18.0	1.52E-04	6.04E-05	4.59	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_155	18.8	8.12	54.2	1639	790	105.7	105.7	52.1	18.0	1.53E-04	6.04E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_156	18.8	8.11	54.3	1659	791	104.9	104.9	52.1	17.9	1.53E-04	6.03E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_157	18.7	8.10	54.2	1675	792	104.4	104.4	52.1	17.9	1.53E-04	6.02E-05	4.60	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_158	18.7	8.09	54.2	1687	792	104.2	104.2	52.1	17.9	1.53E-04	6.01E-05	4.61	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_159	18.6	8.08	54.1	1694	791	104.2	104.2	52.0	17.8	1.52E-04	6.00E-05	4.61	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_160	18.6	8.07	54.0	1713	790	104.2	104.2	52.0	17.8	1.52E-04	6.00E-05	4.61	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_161	18.6	8.06	53.8	1720	788	104.0	104.0	51.9	17.8	1.52E-04	5.99E-05	4.62	1.53	0.16	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_162	18.6	8.05	53.6	1722	786	103.8	103.8	51.8	17.8	1.51E-04	5.98E-05	4.62	1.53	0.16	6.51E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE511300_163	18.6	8.04	53.2	1743	782	103.6	103.6	51.6	17.7	1.50E-04	5.98E-05	4.62	1.53	0.16	6.51E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_164	18.5	8.03	52.8	1795	779	104.0	104.0	51.5	17.7	1.49E-04	5.97E-05	4.62	1.53	0.17	6.51E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_165	18.5	8.02	52.4	1836	776	103.5	103.5	51.3	17.7	1.49E-04	5.96E-05	4.63	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_166	18.5	8.02	52.1	1894	775	103.2	103.2	51.2	17.7	1.48E-04	5.96E-05	4.63	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_167	18.4	8.01	51.7	1946	771	102.5	102.5	50.9	17.7	1.47E-04	5.95E-05	4.64	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_168	18.2	7.98	49.9	1575	750	98.9	98.9	49.9	17.6	1.43E-04	5.94E-05	4.59	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_169	18.1	7.97	49.7	1559	734	98.3	98.3	49.8	17.6	1.43E-04	5.93E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_170	18.1	7.96	49.5	1542	722	97.9	97.9	49.7	17.6	1.43E-04	5.93E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_171	18.1	7.95	49.4	1526	711	97.7	97.7	49.6	17.5	1.43E-04	5.92E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_172	18.0	7.95	49.3	1529	712	97.5	97.5	49.6	17.5	1.43E-04	5.91E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_173	18.0	7.94	49.1	1526	713	97.1	97.1	49.5	17.5	1.43E-04	5.91E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_174	17.9	7.93	48.9	1534	713	96.8	96.8	49.4	17.5	1.43E-04	5.90E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_175	17.9	7.92	48.7	1552	714	96.6	96.6	49.4	17.4	1.43E-04	5.89E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_176	17.8	7.91	48.5	1565	715	96.4	96.4	49.3	17.4	1.43E-04	5.88E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_177	17.8	7.90	48.5	1576	716	96.3	96.3	49.2	17.4	1.43E-04	5.88E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_178	17.7	7.90	48.4	1583	718	96.3	96.3	49.2	17.4	1.43E-04	5.87E-05	4.58	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_179	17.7	7.89	48.4	1583	720	96.0	96.0	49.1	17.3	1.43E-04	5.87E-05	4.57	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_180	17.7	7.88	48.2	1575	721	95.7	95.7	48.9	17.3	1.42E-04	5.86E-05	4.57	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_181	17.7	7.87	48.1	1560	723	95.7	95.7	48.8	17.3	1.42E-04	5.85E-05	4.57	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_182	17.7	7.87	48.0	1540	725	95.7	95.7	48.7	17.3	1.42E-04	5.85E-05	4.57	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_183	17.6	7.86	47.8	1516	726	96.0	96.0	48.6	17.3	1.42E-04	5.84E-05	4.57	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_184	17.6	7.85	47.7	1485	727	96.2	96.2	48.5	17.2	1.41E-04	5.84E-05	4.57	1.53	0.16	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_185	17.6	7.85	47.4	1444	728	96.0	96.0	48.3	17.2	1.41E-04	5.83E-05	4.57	1.53	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_186	17.5	7.84	47.2	1452	729	95.4	95.4	48.1	17.2	1.40E-04	5.83E-05	4.58	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_187	17.5	7.83	46.9	1457	728	95.0	95.0	47.9	17.2	1.40E-04	5.82E-05	4.58	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_188	17.5	7.82	46.7	1465	728	95.0	95.0	47.8	17.2	1.39E-04	5.81E-05	4.58	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_189	17.4	7.82	46.5	1480	727	94.8	94.8	47.7	17.1	1.39E-04	5.81E-05	4.58	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_190	17.4	7.81	46.3	1491	725	94.7	94.7	47.5	17.1	1.38E-04	5.80E-05	4.59	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_191	17.6	7.87	47.3	1488	698	96.8	96.8	48.7	17.3	1.39E-04	5.86E-05	4.58	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_192	17.6	7.86	47.2	1467	686	96.4	96.4	48.6	17.3	1.39E-04	5.85E-05	4.58	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_193	17.6	7.86	47.1	1467	683	96.0	96.0	48.5	17.3	1.39E-04	5.85E-05	4.58	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_194	17.5	7.85	46.9	1466	682	95.6	95.6	48.4	17.3	1.39E-04	5.84E-05	4.58	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_195	17.5	7.84	46.8	1461	682	95.3	95.3	48.3	17.2	1.39E-04	5.84E-05	4.58	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_196	17.4	7.84	46.7	1473	681	94.9	94.9	48.2	17.2	1.39E-04	5.83E-05	4.57	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_197	17.4	7.83	46.6	1491	680	94.5	94.5	48.1	17.2	1.39E-04	5.82E-05	4.57	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_198	17.3	7.82	46.4	1505	679	94.0	94.0	48.0	17.2	1.38E-04	5.82E-05	4.57	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_199	17.3	7.81	46.3	1514	679	93.4	93.4	47.9	17.1	1.38E-04	5.81E-05	4.57	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_200	17.3	7.81	46.2	1517	679	93.0	93.0	47.8	17.1	1.38E-04	5.80E-05	4.57	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_201	17.2	7.80	46.1	1517	680	92.5	92.5	47.7	17.1	1.38E-04	5.80E-05	4.57	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_202	17.2	7.79	45.9	1511	680	92.4	92.4	47.5	17.1	1.37E-04	5.79E-05	4.57	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_203	17.2	7.79	45.8	1494	681	92.4	92.4	47.3	17.1	1.37E-04	5.79E-05	4.57	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_204	17.2	7.78	45.7	1476	682	92.3	92.3	47.2	17.0	1.37E-04	5.78E-05	4.57	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_205	17.1	7.77	45.5	1450	683	92.1	92.1	47.0	17.0	1.36E-04	5.78E-05	4.57	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE511300_206	17.1	7.77	45.4	1422	684	91.9	91.9	46.9	17.0	1.36E-04	5.77E-05	4.57	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_207	17.1	7.76	45.3	1386	685	91.8	91.8	46.7	17.0	1.36E-04	5.77E-05	4.56	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_208	17.1	7.76	45.1	1385	686	91.8	91.8	46.6	17.0	1.35E-04	5.76E-05	4.56	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_209	17.0	7.75	45.0	1394	688	91.3	91.3	46.4	17.0	1.35E-04	5.76E-05	4.56	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_210	17.0	7.74	44.7	1396	689	90.3	90.3	46.3	16.9	1.34E-04	5.75E-05	4.56	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_211	17.0	7.74	44.5	1393	690	90.4	90.4	46.1	16.9	1.34E-04	5.75E-05	4.56	1.52	0.16	6.45E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_212	16.9	7.73	44.3	1383	691	90.9	90.9	46.0	16.9	1.33E-04	5.74E-05	4.56	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_213	16.9	7.73	44.1	1367	691	91.2	91.2	45.9	16.9	1.33E-04	5.74E-05	4.56	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_214	16.8	7.72	43.8	1343	691	91.0	91.0	45.8	16.9	1.33E-04	5.74E-05	4.56	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511400_001	14.3	7.36	33.0	886	518	69.4	69.4	39.3	15.9	1.13E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_002	14.3	7.35	32.9	880	513	68.9	68.9	39.2	15.9	1.13E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_003	14.2	7.34	32.6	874	512	68.6	68.6	39.0	15.8	1.12E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_004	14.4	7.37	33.7	895	531	70.3	70.3	39.7	15.9	1.14E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_005	14.3	7.36	33.2	886	520	69.2	69.2	39.4	15.9	1.13E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_006	14.6	7.39	34.7	906	545	71.0	71.0	40.2	16.0	1.17E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_007	14.5	7.38	34.2	899	541	70.4	70.4	39.9	15.9	1.16E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_008	14.4	7.37	33.9	896	537	70.1	70.1	39.8	15.9	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_009	14.4	7.37	33.7	894	533	69.8	69.8	39.7	15.9	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_010	14.2	7.35	32.7	877	512	68.7	68.7	39.1	15.9	1.12E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_011	14.3	7.36	33.3	889	524	69.4	69.4	39.4	15.9	1.14E-04	5.45E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_012	14.6	7.39	34.5	904	546	71.1	71.1	40.1	16.0	1.16E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_013	14.3	7.36	33.2	889	519	69.6	69.6	39.4	15.9	1.13E-04	5.45E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_014	14.3	7.35	33.0	883	517	69.1	69.1	39.3	15.9	1.13E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_015	14.5	7.39	34.3	902	543	71.3	71.3	40.0	16.0	1.16E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_016	14.5	7.39	34.4	903	545	71.3	71.3	40.1	16.0	1.16E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_017	14.3	7.35	33.1	880	523	69.0	69.0	39.4	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_018	14.2	7.34	32.7	871	515	68.5	68.5	39.1	15.8	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_019	14.2	7.34	32.9	873	518	68.7	68.7	39.2	15.9	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_020	14.2	7.34	32.6	869	512	68.3	68.3	39.0	15.8	1.12E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_021	14.5	7.38	34.5	906	530	70.7	70.7	40.1	16.0	1.17E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_022	14.5	7.37	34.3	902	531	70.3	70.3	40.0	15.9	1.16E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_023	14.3	7.35	33.3	883	526	69.1	69.1	39.5	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_024	14.3	7.35	33.0	877	521	68.9	68.9	39.3	15.9	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_025	14.4	7.37	34.1	899	531	70.0	70.0	39.9	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_026	14.4	7.37	33.9	896	531	69.8	69.8	39.8	15.9	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_027	14.2	7.34	32.5	866	509	68.1	68.1	39.0	15.8	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_028	14.4	7.36	33.8	893	531	69.6	69.6	39.7	15.9	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_029	14.3	7.36	33.6	890	530	69.4	69.4	39.6	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_030	14.3	7.36	33.5	887	528	69.3	69.3	39.5	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_031	14.9	7.45	35.0	957	566	75.0	75.0	40.4	16.1	1.16E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_032	14.7	7.42	35.0	900	550	73.6	73.6	40.4	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_033	14.8	7.43	34.9	912	548	73.6	73.6	40.4	16.1	1.16E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_034	14.8	7.42	35.1	902	554	73.6	73.6	40.5	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_035	14.9	7.44	34.9	946	557	74.4	74.4	40.4	16.1	1.16E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_036	16.2	7.60	41.3	1652	650	84.7	84.7	43.9	16.5	1.26E-04	5.64E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_037	14.2	7.35	32.7	879	517	68.9	68.9	39.1	15.9	1.12E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_038	14.3	7.36	33.5	892	528	69.6	69.6	39.5	15.9	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_039	14.6	7.39	34.5	905	546	71.0	71.0	40.1	16.0	1.17E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_040	14.8	7.42	34.9	895	545	73.6	73.6	40.4	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_041	14.8	7.42	35.0	898	548	73.6	73.6	40.4	16.1	1.17E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_042	14.8	7.43	34.9	902	547	73.7	73.7	40.4	16.1	1.17E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_043	14.9	7.44	34.9	953	561	74.7	74.7	40.4	16.1	1.16E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_044	14.8	7.44	34.9	936	554	74.2	74.2	40.4	16.1	1.16E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_045	14.8	7.43	34.9	922	550	73.9	73.9	40.4	16.1	1.16E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_046	15.0	7.44	34.8	1164	582	76.7	76.7	40.1	16.1	1.16E-04	5.51E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_047	15.1	7.47	35.7	1170	593	77.4	77.4	40.7	16.2	1.17E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_048	15.8	7.53	39.8	1524	627	81.1	81.1	42.6	16.3	1.23E-04	5.59E-05	4.60	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_049	15.2	7.46	36.7	1405	588	77.3	77.3	40.8	16.1	1.18E-04	5.53E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_050	15.7	7.52	39.3	1520	619	80.5	80.5	42.3	16.3	1.22E-04	5.58E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_051	14.8	7.42	35.4	918	559	73.4	73.4	40.6	16.1	1.18E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_052	14.8	7.42	35.4	927	558	73.2	73.2	40.6	16.1	1.18E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_053	14.8	7.42	35.5	932	557	73.1	73.1	40.6	16.1	1.18E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_054	14.8	7.42	35.5	936	555	72.9	72.9	40.7	16.1	1.19E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_055	14.8	7.41	35.6	943	552	72.9	72.9	40.7	16.1	1.19E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_056	14.8	7.41	35.6	950	548	73.0	73.0	40.7	16.1	1.19E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_057	14.7	7.41	35.4	946	535	73.1	73.1	40.6	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_058	14.8	7.41	35.5	953	543	73.3	73.3	40.7	16.1	1.19E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_059	14.8	7.41	35.5	951	539	73.3	73.3	40.7	16.0	1.18E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_060	15.5	7.49	38.4	1481	628	78.7	78.7	41.7	16.2	1.20E-04	5.55E-05	4.60	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_061	15.4	7.48	37.9	1487	632	78.3	78.3	41.4	16.2	1.19E-04	5.54E-05	4.60	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_062	15.4	7.47	37.6	1485	633	78.1	78.1	41.3	16.2	1.19E-04	5.54E-05	4.60	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_063	15.4	7.48	38.1	1487	630	78.5	78.5	41.6	16.2	1.20E-04	5.54E-05	4.60	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_064	15.4	7.49	37.5	1437	599	79.4	79.4	41.3	16.2	1.19E-04	5.55E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_065	15.9	7.54	40.3	1591	658	81.4	81.4	42.9	16.3	1.24E-04	5.59E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_066	15.1	7.45	35.9	1352	583	77.2	77.2	40.4	16.1	1.16E-04	5.52E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_067	14.9	7.42	34.4	1162	575	76.2	76.2	39.8	16.0	1.15E-04	5.50E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_068	15.9	7.55	40.6	1588	656	81.9	81.9	43.1	16.4	1.24E-04	5.60E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_069	15.6	7.51	38.7	1505	611	79.9	79.9	42.0	16.3	1.21E-04	5.57E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_070	15.3	7.48	36.8	1385	594	79.1	79.1	41.0	16.2	1.18E-04	5.54E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_071	15.7	7.52	39.7	1496	634	80.3	80.3	42.5	16.3	1.23E-04	5.58E-05	4.60	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_072	15.5	7.50	38.9	1453	615	79.1	79.1	42.0	16.2	1.21E-04	5.56E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_073	15.5	7.49	38.4	1456	607	78.7	78.7	41.7	16.2	1.21E-04	5.55E-05	4.59	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_074	14.9	7.43	34.6	1162	578	76.3	76.3	39.9	16.1	1.15E-04	5.51E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_075	15.1	7.46	35.4	1166	589	77.2	77.2	40.4	16.1	1.16E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_076	16.0	7.57	40.9	1565	646	83.2	83.2	43.3	16.4	1.25E-04	5.61E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_077	15.2	7.47	36.1	1310	591	78.0	78.0	40.7	16.2	1.17E-04	5.53E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_078	15.0	7.44	35.3	1289	580	76.8	76.8	40.1	16.1	1.16E-04	5.51E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_079	15.0	7.45	35.1	1165	586	77.0	77.0	40.3	16.1	1.16E-04	5.52E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_080	16.0	7.55	40.8	1572	653	82.6	82.6	43.2	16.4	1.25E-04	5.60E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_081	15.4	7.48	37.9	1450	600	78.5	78.5	41.4	16.2	1.20E-04	5.54E-05	4.58	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_082	15.3	7.47	37.3	1434	594	77.6	77.6	41.1	16.2	1.19E-04	5.53E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_083	15.5	7.50	38.1	1477	605	79.6	79.6	41.7	16.2	1.20E-04	5.56E-05	4.59	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_084	15.6	7.51	39.3	1479	624	79.9	79.9	42.2	16.3	1.22E-04	5.57E-05	4.60	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_085	16.0	7.56	40.9	1556	650	82.5	82.5	43.3	16.4	1.25E-04	5.61E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_086	15.1	7.44	36.6	1380	587	76.7	76.7	40.6	16.1	1.17E-04	5.51E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_087	14.3	7.34	33.2	881	496	69.1	69.1	39.6	15.9	1.14E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_088	14.2	7.34	32.9	898	492	68.8	68.8	39.4	15.9	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_089	14.3	7.34	32.7	911	496	68.9	68.9	39.3	15.9	1.12E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_090	14.3	7.35	33.4	884	499	69.4	69.4	39.7	15.9	1.14E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_091	14.2	7.33	32.6	916	495	68.8	68.8	39.3	15.9	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_092	14.3	7.34	33.3	875	509	69.0	69.0	39.5	15.9	1.14E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_093	14.3	7.34	32.9	898	498	69.1	69.1	39.5	15.9	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_094	14.5	7.37	34.0	933	508	70.5	70.5	40.0	16.0	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_095	14.2	7.33	32.3	927	492	68.4	68.4	39.1	15.9	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_096	14.5	7.37	33.6	904	504	70.3	70.3	39.9	16.0	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_097	14.2	7.34	33.1	872	509	68.8	68.8	39.4	15.9	1.14E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_098	14.3	7.34	33.4	881	500	69.2	69.2	39.6	15.9	1.14E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_099	14.6	7.39	34.6	906	546	71.1	71.1	40.2	16.0	1.17E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_100	14.5	7.38	34.6	905	542	70.9	70.9	40.2	16.0	1.17E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_101	14.3	7.35	32.8	883	518	69.1	69.1	39.2	15.9	1.12E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_102	14.4	7.37	33.4	892	523	69.9	69.9	39.5	15.9	1.14E-04	5.45E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_103	14.2	7.33	32.7	908	491	68.7	68.7	39.3	15.9	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_104	14.3	7.34	32.9	893	493	68.9	68.9	39.4	15.9	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_105	14.4	7.35	33.7	883	507	69.4	69.4	39.8	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_106	14.6	7.38	33.9	913	508	70.9	70.9	40.1	16.0	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_107	14.2	7.34	33.0	871	509	68.7	68.7	39.3	15.8	1.14E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_108	14.3	7.34	33.1	883	495	68.9	68.9	39.5	15.9	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_109	14.6	7.38	33.9	916	507	71.0	71.0	40.1	16.0	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_110	14.5	7.37	34.0	928	506	70.4	70.4	40.0	16.0	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_111	14.4	7.35	33.1	887	501	69.3	69.3	39.6	15.9	1.13E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_112	14.5	7.37	33.6	902	505	70.3	70.3	39.9	16.0	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_113	14.3	7.35	33.0	891	500	69.1	69.1	39.5	15.9	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_114	14.5	7.36	34.0	899	505	70.2	70.2	39.9	15.9	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_115	14.5	7.37	34.0	934	509	70.8	70.8	40.1	16.0	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_116	14.4	7.35	33.2	892	502	69.6	69.6	39.7	15.9	1.13E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_117	14.3	7.34	32.8	904	497	69.0	69.0	39.4	15.9	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_118	14.4	7.35	33.8	886	506	69.5	69.5	39.8	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_119	14.4	7.36	33.8	888	506	70.0	70.0	39.9	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_120	14.3	7.34	33.2	873	509	68.9	68.9	39.4	15.9	1.14E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_121	14.5	7.36	33.6	904	504	70.0	70.0	39.8	15.9	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_122	14.5	7.36	33.6	900	505	70.1	70.1	39.9	15.9	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_123	14.4	7.36	33.6	907	504	70.0	70.0	39.8	15.9	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_124	14.4	7.35	33.6	897	500	69.8	69.8	39.8	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_125	14.2	7.33	32.8	903	491	68.7	68.7	39.3	15.9	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_126	14.6	7.37	33.9	918	509	70.9	70.9	40.1	16.0	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_127	14.3	7.34	33.1	881	494	69.0	69.0	39.5	15.9	1.14E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_128	14.4	7.35	33.5	886	499	69.5	69.5	39.7	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_129	14.6	7.37	34.0	931	509	70.9	70.9	40.1	16.0	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_130	14.4	7.36	33.9	890	505	70.1	70.1	39.9	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_131	14.2	7.33	32.4	921	494	68.7	68.7	39.2	15.9	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_132	14.3	7.35	33.2	887	499	69.2	69.2	39.6	15.9	1.14E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_133	14.5	7.36	34.0	914	504	70.3	70.3	40.0	15.9	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_134	14.4	7.36	33.6	906	502	69.9	69.9	39.8	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_135	14.4	7.35	33.5	889	499	69.6	69.6	39.7	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_136	14.2	7.33	33.0	870	502	68.5	68.5	39.4	15.9	1.14E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_137	15.7	7.54	38.3	1450	619	82.0	82.0	42.5	16.3	1.22E-04	5.59E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_138	15.6	7.53	38.0	1393	616	81.3	81.3	42.3	16.3	1.21E-04	5.58E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_139	15.5	7.52	37.7	1326	613	79.7	79.7	42.1	16.3	1.21E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_140	15.5	7.51	37.4	1242	611	78.6	78.6	41.8	16.3	1.20E-04	5.57E-05	4.55	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_141	15.4	7.50	37.2	1193	610	78.7	78.7	41.7	16.3	1.20E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_142	15.3	7.49	36.7	1140	605	77.6	77.6	41.3	16.2	1.19E-04	5.55E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_143	15.3	7.50	37.0	1152	608	78.4	78.4	41.5	16.2	1.19E-04	5.56E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_144	15.2	7.48	36.4	1119	602	77.2	77.2	41.1	16.2	1.19E-04	5.55E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_145	15.2	7.48	36.1	1093	599	77.1	77.1	41.0	16.2	1.18E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_146	15.1	7.47	35.5	1040	590	76.2	76.2	40.6	16.2	1.17E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_147	15.1	7.47	35.8	1066	595	76.7	76.7	40.8	16.2	1.18E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_148	15.1	7.46	35.3	1016	585	75.9	75.9	40.5	16.2	1.17E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_149	15.8	7.53	39.6	1628	668	83.6	83.6	42.5	16.3	1.24E-04	5.58E-05	4.60	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_150	15.8	7.53	39.5	1653	669	84.7	84.7	42.7	16.3	1.24E-04	5.59E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_151	15.8	7.53	39.6	1642	669	84.2	84.2	42.6	16.3	1.24E-04	5.58E-05	4.61	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_152	15.8	7.54	39.6	1658	669	84.6	84.6	42.8	16.3	1.24E-04	5.59E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_153	15.8	7.51	39.6	1565	664	83.4	83.4	42.6	16.3	1.24E-04	5.57E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_154	15.8	7.52	39.6	1592	666	83.6	83.6	42.6	16.3	1.24E-04	5.57E-05	4.61	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_155	15.7	7.51	39.6	1550	660	82.7	82.7	42.7	16.2	1.24E-04	5.56E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_156	15.8	7.51	39.6	1548	662	82.7	82.7	42.7	16.3	1.24E-04	5.57E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_157	15.8	7.52	39.6	1613	667	83.1	83.1	42.5	16.3	1.24E-04	5.58E-05	4.61	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_158	15.7	7.50	39.6	1549	659	82.8	82.8	42.7	16.2	1.24E-04	5.56E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_159	15.0	7.44	36.4	985	566	75.4	75.4	41.1	16.1	1.20E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_160	15.0	7.44	36.4	993	561	75.6	75.6	41.1	16.1	1.20E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_161	14.9	7.44	36.3	990	550	75.8	75.8	41.1	16.1	1.20E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_162	15.0	7.44	36.4	995	558	75.9	75.9	41.1	16.1	1.20E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_163	14.9	7.43	35.9	1024	537	74.7	74.7	41.0	16.1	1.19E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_164	14.9	7.42	35.7	1021	534	74.1	74.1	40.9	16.1	1.19E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_165	15.0	7.44	36.4	991	564	75.4	75.4	41.1	16.1	1.20E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_166	14.9	7.43	36.1	1011	541	75.3	75.3	41.0	16.1	1.19E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_167	15.0	7.44	36.3	978	569	75.4	75.4	41.1	16.1	1.20E-04	5.52E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_168	14.9	7.43	35.9	1024	536	74.5	74.5	40.9	16.1	1.19E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_169	15.0	7.44	36.3	993	555	76.0	76.0	41.1	16.1	1.20E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_170	14.9	7.43	36.1	1018	538	75.1	75.1	41.0	16.1	1.19E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_171	14.9	7.43	35.8	1023	535	74.3	74.3	40.9	16.1	1.19E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_172	14.9	7.44	36.2	998	546	75.7	75.7	41.1	16.1	1.20E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_173	14.2	7.34	32.9	871	519	68.7	68.7	39.2	15.9	1.13E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_174	14.2	7.34	32.8	868	517	68.6	68.6	39.2	15.8	1.13E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_175	14.3	7.35	33.2	876	522	69.0	69.0	39.4	15.9	1.14E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_176	14.5	7.37	34.2	898	519	70.1	70.1	40.0	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_177	14.4	7.36	34.1	895	520	69.9	69.9	39.9	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_178	14.4	7.36	34.0	893	521	69.7	69.7	39.9	15.9	1.16E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_179	14.4	7.36	33.9	891	522	69.6	69.6	39.8	15.9	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_180	14.3	7.36	33.6	885	524	69.4	69.4	39.7	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_181	14.3	7.35	33.5	882	524	69.3	69.3	39.6	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_182	14.3	7.35	33.4	880	523	69.2	69.2	39.5	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_183	14.3	7.35	33.3	879	523	69.1	69.1	39.5	15.9	1.14E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_184	14.2	7.34	33.0	874	521	68.8	68.8	39.3	15.9	1.14E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_185	14.4	7.36	33.8	888	523	69.5	69.5	39.8	15.9	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_186	15.1	7.47	35.9	981	570	76.9	76.9	41.0	16.2	1.19E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_187	15.1	7.47	35.9	988	573	77.2	77.2	41.0	16.2	1.19E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_188	15.1	7.47	35.9	966	565	76.5	76.5	41.0	16.2	1.19E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_189	15.0	7.46	35.9	955	562	76.1	76.1	40.9	16.2	1.19E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_190	15.0	7.46	35.9	941	563	75.7	75.7	40.9	16.2	1.19E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_191	15.0	7.46	35.9	936	565	75.8	75.8	40.9	16.2	1.19E-04	5.53E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_192	15.0	7.45	35.9	938	566	75.8	75.8	40.9	16.1	1.19E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_193	15.0	7.45	36.0	942	569	75.9	75.9	41.0	16.1	1.19E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_194	15.0	7.45	36.1	948	570	75.8	75.8	41.0	16.1	1.19E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_195	15.0	7.45	36.1	957	571	75.7	75.7	41.0	16.1	1.20E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_196	16.2	7.62	40.6	1613	652	84.9	84.9	44.0	16.6	1.26E-04	5.66E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_197	16.0	7.60	39.9	1496	644	83.4	83.4	43.6	16.5	1.25E-04	5.64E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_198	15.9	7.58	39.6	1432	640	83.0	83.0	43.3	16.5	1.24E-04	5.63E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_199	16.1	7.61	40.2	1546	647	84.3	84.3	43.8	16.5	1.25E-04	5.65E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_200	15.8	7.57	39.3	1366	636	82.1	82.1	43.1	16.4	1.24E-04	5.62E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_201	15.8	7.56	39.0	1316	633	81.5	81.5	42.9	16.4	1.23E-04	5.61E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_202	15.6	7.54	38.4	1211	628	81.0	81.0	42.5	16.4	1.22E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_203	15.7	7.55	38.7	1245	630	81.4	81.4	42.6	16.4	1.23E-04	5.60E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_204	15.6	7.54	38.2	1202	625	80.2	80.2	42.3	16.3	1.22E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_205	15.5	7.53	38.0	1189	623	79.9	79.9	42.2	16.3	1.21E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_206	15.5	7.52	37.7	1164	620	79.7	79.7	42.0	16.3	1.21E-04	5.58E-05	4.54	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_207	15.4	7.52	37.4	1136	616	79.7	79.7	41.8	16.3	1.21E-04	5.58E-05	4.54	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_208	15.4	7.51	37.0	1104	611	79.6	79.6	41.6	16.3	1.20E-04	5.57E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_209	15.3	7.51	36.7	1076	605	79.1	79.1	41.4	16.3	1.19E-04	5.56E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_210	15.3	7.50	36.3	1045	599	78.7	78.7	41.2	16.3	1.19E-04	5.56E-05	4.54	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_211	15.3	7.49	36.1	1017	594	78.2	78.2	41.1	16.2	1.18E-04	5.56E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_212	16.1	7.59	40.7	1635	643	84.5	84.5	43.7	16.5	1.25E-04	5.63E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_213	15.9	7.56	39.4	1559	629	82.4	82.4	43.1	16.4	1.23E-04	5.61E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_214	16.0	7.58	40.0	1601	635	83.2	83.2	43.3	16.4	1.24E-04	5.62E-05	4.60	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_215	15.8	7.55	38.8	1512	624	82.2	82.2	42.8	16.4	1.22E-04	5.60E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511400_216	14.5	7.38	34.0	898	537	70.6	70.6	39.8	16.0	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_217	14.7	7.40	34.8	973	521	72.0	72.0	40.4	16.0	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_218	14.8	7.41	35.3	1001	528	72.9	72.9	40.6	16.1	1.18E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_219	14.7	7.39	35.0	933	525	72.1	72.1	40.5	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_220	14.7	7.39	34.7	969	520	71.8	71.8	40.4	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_221	14.7	7.40	34.8	973	521	71.9	71.9	40.4	16.0	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_222	14.6	7.39	35.0	927	526	72.0	72.0	40.4	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_223	14.6	7.38	34.5	922	512	71.3	71.3	40.2	16.0	1.16E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_224	14.8	7.41	35.3	1006	529	73.0	73.0	40.7	16.1	1.18E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_225	14.7	7.40	34.8	972	523	72.3	72.3	40.5	16.1	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_226	14.6	7.38	34.5	923	512	71.1	71.1	40.2	16.0	1.16E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_227	14.6	7.38	34.5	920	513	71.4	71.4	40.2	16.0	1.16E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_228	14.7	7.40	35.1	975	523	72.2	72.2	40.5	16.0	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_229	14.7	7.40	35.1	964	522	72.3	72.3	40.5	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_230	14.7	7.39	34.7	964	518	71.7	71.7	40.4	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_231	14.8	7.42	35.3	1008	530	73.2	73.2	40.7	16.1	1.18E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_232	14.6	7.38	34.6	918	515	71.5	71.5	40.3	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_233	14.7	7.40	34.8	974	522	72.1	72.1	40.4	16.0	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_234	14.7	7.40	34.9	977	522	72.1	72.1	40.5	16.0	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_235	14.7	7.39	35.0	949	519	71.9	71.9	40.5	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_236	14.8	7.41	35.2	1001	528	72.8	72.8	40.6	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_237	14.8	7.41	35.2	1002	529	73.0	73.0	40.6	16.1	1.17E-04	5.49E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_238	14.7	7.40	35.2	978	524	72.5	72.5	40.6	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_239	14.6	7.39	34.9	923	523	71.8	71.8	40.4	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_240	14.7	7.40	35.0	962	521	72.0	72.0	40.5	16.0	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_241	14.7	7.40	35.1	987	524	72.5	72.5	40.6	16.0	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_242	14.8	7.41	35.2	989	526	72.6	72.6	40.6	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_243	14.8	7.41	35.2	998	527	72.7	72.7	40.6	16.1	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_244	14.7	7.39	34.8	966	520	71.8	71.8	40.4	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_245	14.7	7.39	34.9	934	522	71.8	71.8	40.4	16.0	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_246	14.6	7.38	34.6	919	514	71.5	71.5	40.3	16.0	1.17E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_247	14.8	7.41	34.9	978	525	72.5	72.5	40.5	16.1	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_248	14.7	7.40	34.9	979	523	72.3	72.3	40.5	16.0	1.17E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_249	14.7	7.40	35.1	948	523	72.2	72.2	40.5	16.0	1.18E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_250	14.2	7.34	32.6	866	515	68.5	68.5	39.1	15.8	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_251	14.2	7.33	32.5	864	512	68.3	68.3	39.0	15.8	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_252	14.2	7.33	32.4	861	510	68.1	68.1	38.9	15.8	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_265	14.0	7.30	31.2	940	482	66.2	66.2	38.7	15.8	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_266	14.0	7.30	31.3	939	483	66.2	66.2	38.7	15.8	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_267	14.0	7.30	31.4	940	484	66.3	66.3	38.7	15.8	1.10E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_268	14.0	7.30	31.5	941	484	66.4	66.4	38.7	15.8	1.10E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_269	14.1	7.31	31.5	942	485	66.6	66.6	38.8	15.8	1.10E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_270	14.1	7.31	31.5	943	486	66.7	66.7	38.8	15.8	1.10E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_271	14.1	7.31	31.5	947	489	67.1	67.1	38.8	15.8	1.10E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_272	14.1	7.31	31.6	944	489	67.2	67.2	38.9	15.8	1.10E-04	5.41E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_273	14.1	7.32	31.8	941	490	67.3	67.3	38.9	15.8	1.11E-04	5.41E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_274	14.1	7.32	31.9	938	490	67.5	67.5	38.9	15.8	1.11E-04	5.41E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_275	14.0	7.30	31.4	932	484	66.4	66.4	38.7	15.8	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_276	14.0	7.30	31.5	933	484	66.5	66.5	38.7	15.8	1.10E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_277	14.0	7.31	31.6	933	484	66.6	66.6	38.7	15.8	1.11E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_278	14.1	7.31	31.7	934	485	66.7	66.7	38.7	15.8	1.11E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_279	14.1	7.31	31.7	935	486	66.9	66.9	38.8	15.8	1.11E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_280	14.1	7.31	31.8	936	486	67.0	67.0	38.8	15.8	1.11E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_281	14.1	7.31	31.8	937	488	67.2	67.2	38.8	15.8	1.11E-04	5.41E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_282	14.1	7.32	32.4	893	499	68.1	68.1	39.0	15.8	1.12E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_283	14.1	7.32	32.4	897	498	68.1	68.1	39.0	15.8	1.12E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_284	14.1	7.32	32.2	902	496	68.0	68.0	38.9	15.8	1.12E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_285	14.1	7.32	32.2	907	495	67.9	67.9	38.9	15.8	1.12E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_286	14.1	7.31	32.1	911	494	67.5	67.5	38.8	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_287	14.1	7.31	32.0	916	492	67.2	67.2	38.7	15.8	1.11E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_288	14.1	7.31	31.9	919	491	67.0	67.0	38.7	15.8	1.11E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_289	14.1	7.31	31.8	922	490	66.8	66.8	38.7	15.8	1.11E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_290	14.2	7.33	32.8	887	498	68.4	68.4	39.3	15.8	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_291	14.2	7.33	32.7	893	496	68.4	68.4	39.2	15.8	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_292	14.2	7.33	32.6	898	495	68.5	68.5	39.1	15.8	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_293	14.2	7.32	32.5	903	494	68.3	68.3	39.1	15.8	1.13E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_294	14.2	7.32	32.5	907	493	68.2	68.2	39.1	15.8	1.12E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_295	14.1	7.32	32.4	910	492	68.1	68.1	39.0	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_296	14.1	7.32	32.3	913	491	67.9	67.9	39.0	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_297	14.1	7.32	32.2	916	490	67.7	67.7	38.9	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_298	14.1	7.32	32.1	921	489	67.4	67.4	38.9	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_299	14.1	7.31	32.0	924	487	67.2	67.2	38.8	15.8	1.11E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_300	14.2	7.33	32.5	913	490	68.6	68.6	39.2	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_301	14.2	7.33	32.4	917	490	68.5	68.5	39.1	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_302	14.2	7.32	32.3	921	489	68.3	68.3	39.1	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_303	14.2	7.32	32.2	926	489	68.0	68.0	39.0	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_304	14.2	7.33	33.0	871	502	68.4	68.4	39.3	15.8	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_305	14.2	7.33	32.8	873	502	68.3	68.3	39.3	15.8	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_306	14.2	7.33	32.7	874	502	68.2	68.2	39.2	15.8	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_307	14.2	7.33	32.6	876	503	68.1	68.1	39.1	15.8	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_308	14.2	7.32	32.5	877	503	68.1	68.1	39.0	15.8	1.13E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_309	14.1	7.32	32.3	878	503	68.0	68.0	39.0	15.8	1.12E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_310	14.1	7.32	32.2	880	503	67.9	67.9	38.9	15.8	1.12E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_311	14.1	7.32	32.1	882	502	67.8	67.8	38.8	15.8	1.12E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_312	14.2	7.33	32.9	869	509	68.6	68.6	39.3	15.8	1.13E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_313	14.2	7.33	32.8	868	509	68.5	68.5	39.2	15.8	1.13E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_314	14.2	7.33	32.6	865	509	68.3	68.3	39.1	15.8	1.13E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_315	14.2	7.33	32.5	863	509	68.1	68.1	39.1	15.8	1.13E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_316	14.2	7.33	32.4	861	508	68.1	68.1	39.0	15.8	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_317	14.1	7.33	32.4	860	508	68.0	68.0	38.9	15.8	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_318	14.1	7.32	32.2	862	506	67.9	67.9	38.9	15.8	1.12E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_319	14.1	7.32	32.1	864	505	67.8	67.8	38.8	15.8	1.12E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_001	14.1	7.31	31.3	842	512	67.1	67.1	38.5	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_002	14.5	7.33	33.7	1179	559	72.7	72.7	39.1	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_003	14.5	7.33	33.7	1172	555	73.3	73.3	39.1	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_004	14.5	7.33	33.7	1172	551	73.0	73.0	39.0	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_005	14.4	7.33	33.4	1159	540	72.5	72.5	38.8	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_006	14.4	7.33	33.3	1165	537	72.6	72.6	38.7	15.8	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_007	14.4	7.32	33.2	1165	535	72.4	72.4	38.6	15.8	1.11E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_008	14.4	7.32	33.0	1159	533	72.2	72.2	38.5	15.8	1.11E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_009	14.4	7.32	32.8	1147	531	72.0	72.0	38.5	15.7	1.11E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_010	14.6	7.34	33.5	1229	570	73.4	73.4	39.0	15.8	1.12E-04	5.42E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_011	14.5	7.33	33.6	1202	563	72.7	72.7	39.1	15.8	1.12E-04	5.42E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_012	14.7	7.34	34.5	1303	588	73.6	73.6	39.2	15.8	1.14E-04	5.43E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_013	14.7	7.34	34.3	1303	587	73.6	73.6	39.2	15.8	1.14E-04	5.43E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_014	14.6	7.34	34.1	1295	584	74.3	74.3	39.1	15.8	1.14E-04	5.43E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_015	14.6	7.34	33.9	1278	581	74.8	74.8	39.0	15.8	1.13E-04	5.43E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_016	14.6	7.34	33.7	1252	578	74.5	74.5	39.0	15.8	1.13E-04	5.42E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_017	14.5	7.33	33.6	1166	547	72.2	72.2	39.0	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_018	14.5	7.33	33.5	1155	544	72.3	72.3	38.9	15.8	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_019	14.2	7.31	31.6	922	530	69.1	69.1	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_020	14.7	7.37	34.4	1248	554	74.4	74.4	39.3	15.9	1.13E-04	5.45E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_021	14.5	7.36	33.5	1192	546	73.4	73.4	38.8	15.9	1.12E-04	5.44E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_022	14.9	7.39	35.2	1366	601	76.5	76.5	39.7	15.9	1.16E-04	5.47E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_023	14.7	7.37	34.8	1251	568	74.7	74.7	39.7	15.9	1.14E-04	5.45E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_024	14.7	7.37	34.6	1241	558	74.4	74.4	39.4	15.9	1.14E-04	5.45E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_025	14.2	7.34	32.5	871	511	68.4	68.4	39.0	15.8	1.11E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_026	14.1	7.32	31.7	852	508	67.4	67.4	38.6	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_027	14.1	7.32	31.6	849	508	67.3	67.3	38.6	15.8	1.09E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_028	14.1	7.32	31.7	853	511	67.6	67.6	38.6	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_029	14.2	7.33	32.1	865	514	68.0	68.0	38.8	15.8	1.10E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_030	14.2	7.34	32.2	868	514	68.2	68.2	38.9	15.8	1.11E-04	5.43E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_031	14.2	7.34	32.2	865	510	68.1	68.1	38.8	15.8	1.11E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_032	14.1	7.31	31.3	869	527	68.2	68.2	38.3	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_033	14.1	7.33	31.9	859	512	67.8	67.8	38.7	15.8	1.10E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_034	14.1	7.32	31.8	855	509	67.5	67.5	38.7	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_035	14.1	7.33	32.1	862	510	68.0	68.0	38.8	15.8	1.11E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_036	14.1	7.33	32.0	862	513	67.9	67.9	38.8	15.8	1.10E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_037	14.2	7.31	31.5	906	530	68.8	68.8	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_038	14.1	7.30	31.3	851	525	67.5	67.5	38.3	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_039	14.1	7.30	31.3	837	523	67.3	67.3	38.3	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_040	14.1	7.33	31.8	856	512	67.7	67.7	38.7	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_041	14.1	7.30	31.3	860	526	67.8	67.8	38.3	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_042	14.1	7.31	31.5	892	530	68.7	68.7	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_043	14.1	7.31	31.4	889	529	68.7	68.7	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_044	14.1	7.33	32.1	859	505	67.9	67.9	38.7	15.8	1.11E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_045	15.3	7.35	40.0	1400	603	76.5	76.5	42.8	15.8	1.24E-04	5.44E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_046	15.0	7.35	36.1	1275	605	74.5	74.5	40.4	15.8	1.18E-04	5.44E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_047	15.0	7.34	36.5	1370	593	72.6	72.6	40.7	15.8	1.19E-04	5.43E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_048	14.9	7.34	36.4	1359	592	72.8	72.8	40.5	15.8	1.19E-04	5.42E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_049	14.2	7.33	32.4	864	506	68.0	68.0	38.9	15.8	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_050	14.1	7.33	32.3	861	505	68.0	68.0	38.8	15.8	1.11E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_051	15.0	7.36	36.4	1323	605	74.2	74.2	40.4	15.8	1.18E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_052	15.2	7.36	37.8	1410	608	73.6	73.6	41.9	15.8	1.20E-04	5.45E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511500_053	15.0	7.36	36.6	1354	604	74.5	74.5	40.5	15.8	1.19E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_054	14.1	7.31	31.3	845	509	67.3	67.3	38.5	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_055	15.2	7.35	39.3	1359	603	74.6	74.6	42.5	15.8	1.23E-04	5.43E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511500_056	14.5	7.35	32.9	1131	544	73.0	73.0	38.8	15.8	1.11E-04	5.44E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_057	14.4	7.35	32.7	1092	544	73.3	73.3	38.8	15.8	1.11E-04	5.44E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_058	14.9	7.38	34.7	1320	591	75.8	75.8	39.8	15.9	1.15E-04	5.46E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_059	15.0	7.40	36.1	1406	612	76.5	76.5	40.1	15.9	1.17E-04	5.47E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_060	15.0	7.39	35.8	1405	609	76.1	76.1	40.0	15.9	1.17E-04	5.47E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_061	14.1	7.31	31.4	878	528	68.3	68.3	38.3	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_062	14.1	7.30	31.2	832	519	67.1	67.1	38.3	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_063	14.2	7.34	32.3	872	515	68.4	68.4	38.9	15.8	1.11E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_064	14.1	7.33	32.0	860	509	67.8	67.8	38.7	15.8	1.10E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_065	15.3	7.44	37.2	1492	630	78.9	78.9	41.1	16.1	1.19E-04	5.51E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_066	15.2	7.42	36.8	1460	623	78.2	78.2	40.8	16.0	1.19E-04	5.50E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_067	15.4	7.46	37.3	1514	635	79.0	79.0	41.2	16.1	1.20E-04	5.53E-05	4.60	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_068	15.3	7.45	37.3	1506	633	79.3	79.3	41.2	16.1	1.20E-04	5.52E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_069	15.3	7.45	37.4	1517	635	79.4	79.4	41.3	16.1	1.20E-04	5.52E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_070	15.4	7.47	37.3	1503	634	78.3	78.3	41.2	16.1	1.20E-04	5.53E-05	4.60	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_071	14.7	7.40	33.8	1152	562	74.7	74.7	39.4	16.0	1.13E-04	5.47E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_072	15.0	7.41	36.0	1358	598	76.1	76.1	40.3	16.0	1.16E-04	5.49E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_073	14.7	7.39	34.4	1264	558	74.6	74.6	39.3	15.9	1.13E-04	5.47E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_074	14.9	7.41	35.0	1304	567	74.9	74.9	39.7	16.0	1.14E-04	5.48E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_075	14.9	7.40	35.6	1302	578	75.6	75.6	40.0	16.0	1.16E-04	5.48E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_076	14.6	7.38	33.4	1146	555	73.9	73.9	39.1	15.9	1.12E-04	5.46E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_077	14.8	7.40	35.3	1306	567	75.1	75.1	39.8	16.0	1.15E-04	5.47E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_078	14.8	7.39	35.1	1302	563	74.7	74.7	39.6	15.9	1.14E-04	5.47E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_079	15.1	7.44	36.6	1355	589	76.1	76.1	40.6	16.1	1.17E-04	5.51E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_080	14.6	7.38	33.5	1147	557	74.1	74.1	39.2	15.9	1.13E-04	5.46E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_081	15.0	7.40	35.7	1337	594	75.6	75.6	40.1	16.0	1.16E-04	5.48E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_082	15.1	7.43	36.5	1355	591	76.4	76.4	40.6	16.1	1.17E-04	5.51E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_083	14.9	7.40	35.4	1298	571	74.7	74.7	39.9	16.0	1.15E-04	5.48E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_084	15.1	7.42	36.3	1342	596	75.8	75.8	40.5	16.0	1.17E-04	5.50E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_085	14.9	7.41	35.4	1335	570	75.0	75.0	39.9	16.0	1.15E-04	5.49E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_086	14.8	7.40	33.9	1156	565	75.2	75.2	39.5	16.0	1.14E-04	5.48E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_087	15.1	7.43	36.5	1353	592	76.2	76.2	40.5	16.0	1.17E-04	5.50E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_088	14.7	7.38	34.0	1232	556	74.4	74.4	39.2	15.9	1.13E-04	5.46E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_089	14.7	7.39	33.6	1149	559	74.4	74.4	39.3	15.9	1.13E-04	5.47E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_090	15.1	7.42	36.2	1358	599	76.3	76.3	40.4	16.0	1.16E-04	5.49E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_091	15.1	7.43	36.4	1347	594	75.7	75.7	40.5	16.0	1.17E-04	5.50E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_092	14.8	7.40	34.4	1258	565	75.1	75.1	39.5	16.0	1.14E-04	5.48E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_093	15.2	7.43	37.0	1477	627	78.8	78.8	41.0	16.0	1.19E-04	5.50E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_094	15.4	7.46	37.4	1521	636	79.4	79.4	41.3	16.1	1.20E-04	5.53E-05	4.60	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_095	15.1	7.41	36.8	1373	617	76.6	76.6	40.6	16.0	1.19E-04	5.48E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_096	15.2	7.41	37.2	1394	626	77.4	77.4	40.9	16.0	1.19E-04	5.49E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_097	14.8	7.38	34.8	1300	585	75.2	75.2	39.8	15.9	1.14E-04	5.46E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_098	14.8	7.38	34.8	1256	573	74.2	74.2	39.7	15.9	1.14E-04	5.46E-05	4.57	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_099	14.6	7.36	34.3	1245	551	74.1	74.1	39.2	15.9	1.13E-04	5.45E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_100	14.6	7.36	34.1	1234	549	74.2	74.2	39.0	15.9	1.13E-04	5.45E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_101	14.9	7.39	34.9	1329	596	76.4	76.4	39.7	15.9	1.15E-04	5.47E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_102	14.5	7.36	33.1	1164	545	72.8	72.8	38.8	15.8	1.12E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_103	15.2	7.41	37.0	1390	622	76.7	76.7	40.8	16.0	1.19E-04	5.48E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_104	15.1	7.40	36.6	1375	615	76.6	76.6	40.4	16.0	1.18E-04	5.48E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_105	14.9	7.39	35.5	1392	606	76.3	76.3	39.9	15.9	1.16E-04	5.47E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_106	14.8	7.38	34.9	1271	579	73.8	73.8	39.8	15.9	1.14E-04	5.46E-05	4.57	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_107	14.6	7.36	33.8	1217	547	74.2	74.2	38.9	15.9	1.12E-04	5.44E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_108	15.0	7.40	36.4	1395	613	76.6	76.6	40.3	16.0	1.18E-04	5.48E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_109	14.6	7.37	33.3	1145	552	73.7	73.7	39.0	15.9	1.12E-04	5.45E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_110	14.8	7.39	34.8	1288	560	74.7	74.7	39.5	15.9	1.14E-04	5.47E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_111	15.3	7.37	39.6	1394	611	74.2	74.2	42.8	15.9	1.23E-04	5.45E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_112	15.1	7.36	36.8	1379	603	74.1	74.1	40.7	15.8	1.19E-04	5.44E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_113	15.1	7.36	36.9	1396	601	73.9	73.9	41.0	15.8	1.20E-04	5.44E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_114	15.0	7.34	37.4	1354	600	72.8	72.8	41.5	15.8	1.19E-04	5.43E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_115	15.0	7.34	36.8	1366	598	72.8	72.8	41.3	15.8	1.19E-04	5.43E-05	4.58	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_116	15.5	7.38	41.4	1430	612	78.0	78.0	43.7	15.9	1.26E-04	5.46E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_117	15.3	7.37	40.2	1400	612	75.1	75.1	43.2	15.9	1.24E-04	5.45E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_118	15.4	7.38	40.8	1399	612	76.3	76.3	43.4	15.9	1.25E-04	5.46E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_119	15.2	7.37	38.9	1390	610	74.0	74.0	42.5	15.9	1.22E-04	5.45E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511500_120	15.1	7.34	38.0	1354	601	72.8	72.8	41.9	15.8	1.20E-04	5.43E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511500_121	15.1	7.36	37.3	1411	606	73.6	73.6	41.6	15.8	1.20E-04	5.44E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_122	14.1	7.31	31.3	873	528	68.2	68.2	38.3	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_123	15.2	7.36	38.3	1403	609	74.0	74.0	42.2	15.9	1.21E-04	5.45E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511500_124	15.1	7.36	37.0	1407	602	73.7	73.7	41.3	15.8	1.20E-04	5.44E-05	4.59	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_125	15.0	7.34	36.6	1372	596	72.3	72.3	41.0	15.8	1.19E-04	5.43E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_126	15.1	7.35	38.7	1361	603	73.6	73.6	42.2	15.8	1.22E-04	5.43E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511500_127	14.9	7.34	36.2	1338	594	73.0	73.0	40.4	15.8	1.18E-04	5.42E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_128	14.2	7.31	31.7	964	529	70.1	70.1	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_129	14.1	7.31	31.4	884	529	68.4	68.4	38.3	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_130	14.2	7.31	31.6	941	530	69.4	69.4	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_131	14.1	7.30	31.2	833	521	67.2	67.2	38.3	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_132	14.2	7.35	32.5	876	516	68.7	68.7	39.0	15.8	1.11E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_133	14.2	7.34	32.3	868	511	68.3	68.3	38.9	15.8	1.11E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_134	14.1	7.33	31.9	857	509	67.7	67.7	38.7	15.8	1.10E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_135	14.6	7.34	33.5	1236	574	74.0	74.0	39.0	15.8	1.13E-04	5.42E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_136	14.3	7.32	32.7	1134	530	71.7	71.7	38.5	15.7	1.10E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_137	14.3	7.32	32.5	1117	529	71.7	71.7	38.5	15.7	1.10E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_138	14.3	7.32	32.2	1098	529	71.5	71.5	38.5	15.7	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_139	14.3	7.32	32.0	1071	529	71.7	71.7	38.5	15.7	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_140	14.5	7.33	33.6	1219	567	73.1	73.1	39.1	15.8	1.12E-04	5.42E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_141	14.7	7.37	34.6	1237	562	74.6	74.6	39.6	15.9	1.14E-04	5.45E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_142	15.0	7.42	35.9	1358	576	75.7	75.7	40.1	16.0	1.16E-04	5.50E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_143	15.7	7.49	39.8	1535	658	81.7	81.7	42.7	16.2	1.24E-04	5.55E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_144	15.7	7.50	39.7	1545	659	82.5	82.5	42.7	16.2	1.24E-04	5.56E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_145	15.7	7.48	39.7	1512	654	81.2	81.2	42.6	16.2	1.24E-04	5.55E-05	4.60	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_146	15.6	7.48	39.5	1499	652	80.9	80.9	42.5	16.2	1.24E-04	5.54E-05	4.60	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_147	15.6	7.46	39.0	1470	646	79.9	79.9	42.2	16.1	1.23E-04	5.53E-05	4.60	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_148	15.5	7.45	38.7	1460	643	79.6	79.6	42.0	16.1	1.22E-04	5.52E-05	4.60	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_149	15.6	7.47	39.3	1479	648	80.2	80.2	42.4	16.1	1.23E-04	5.53E-05	4.60	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_150	15.5	7.45	38.5	1452	641	79.4	79.4	41.9	16.1	1.22E-04	5.52E-05	4.60	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511500_151	14.9	7.38	36.0	1318	604	74.8	74.8	40.0	15.9	1.17E-04	5.46E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_152	15.0	7.38	36.1	1334	608	74.4	74.4	40.1	15.9	1.17E-04	5.46E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_153	14.9	7.37	35.6	1343	602	74.6	74.6	39.8	15.9	1.16E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_154	14.9	7.38	35.8	1327	603	75.1	75.1	39.9	15.9	1.17E-04	5.46E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_155	15.0	7.38	36.3	1345	612	75.0	75.0	40.3	15.9	1.18E-04	5.46E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_156	14.9	7.37	35.4	1353	601	74.7	74.7	39.7	15.9	1.16E-04	5.45E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_157	14.8	7.37	35.1	1358	599	74.7	74.7	39.5	15.9	1.16E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_158	14.8	7.37	35.0	1354	597	74.8	74.8	39.4	15.9	1.15E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_159	14.8	7.37	34.6	1332	593	75.5	75.5	39.3	15.9	1.15E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_160	14.8	7.36	34.4	1309	590	75.7	75.7	39.3	15.9	1.14E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_161	14.7	7.36	34.2	1283	585	75.3	75.3	39.4	15.9	1.14E-04	5.44E-05	4.57	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_162	14.7	7.36	34.1	1275	580	75.1	75.1	39.4	15.8	1.14E-04	5.44E-05	4.57	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_163	14.7	7.36	34.3	1245	573	73.6	73.6	39.4	15.8	1.13E-04	5.44E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_164	14.7	7.36	34.2	1265	577	74.6	74.6	39.4	15.8	1.13E-04	5.44E-05	4.57	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_165	14.6	7.36	34.3	1218	568	73.5	73.5	39.4	15.8	1.13E-04	5.44E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_166	14.6	7.35	34.3	1216	563	73.9	73.9	39.4	15.8	1.13E-04	5.44E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_167	14.6	7.35	34.2	1214	560	74.2	74.2	39.4	15.8	1.13E-04	5.44E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_168	14.6	7.35	34.2	1206	556	73.5	73.5	39.3	15.8	1.13E-04	5.44E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_169	14.6	7.35	34.0	1197	552	73.6	73.6	39.2	15.8	1.13E-04	5.43E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_170	14.6	7.35	34.0	1207	548	73.8	73.8	39.1	15.8	1.13E-04	5.43E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_171	14.5	7.35	33.9	1209	545	73.4	73.4	39.0	15.8	1.12E-04	5.43E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_172	14.5	7.34	33.7	1205	543	73.0	73.0	38.9	15.8	1.12E-04	5.43E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_173	14.5	7.34	33.2	1176	539	73.0	73.0	38.7	15.8	1.11E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_174	14.4	7.34	33.0	1157	538	72.4	72.4	38.7	15.8	1.11E-04	5.43E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_175	14.4	7.34	32.8	1138	538	72.2	72.2	38.7	15.8	1.11E-04	5.43E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_176	14.4	7.34	32.5	1116	537	72.4	72.4	38.7	15.8	1.11E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_177	14.5	7.34	33.5	1193	540	73.0	73.0	38.7	15.8	1.12E-04	5.43E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_178	14.4	7.34	32.4	1091	537	72.5	72.5	38.7	15.8	1.11E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_179	14.7	7.35	34.9	1271	591	73.5	73.5	39.6	15.8	1.15E-04	5.43E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_180	14.7	7.35	34.8	1287	590	73.5	73.5	39.4	15.8	1.15E-04	5.43E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_181	14.8	7.35	35.1	1263	591	73.7	73.7	39.7	15.8	1.15E-04	5.43E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_182	14.8	7.35	35.2	1277	594	73.3	73.3	39.8	15.8	1.16E-04	5.43E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_183	14.7	7.34	34.6	1297	590	73.6	73.6	39.3	15.8	1.15E-04	5.43E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_184	14.1	7.33	32.0	856	505	67.8	67.8	38.7	15.8	1.11E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_185	14.1	7.32	31.9	854	504	67.7	67.7	38.6	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_186	14.1	7.32	31.8	851	503	67.6	67.6	38.6	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_187	14.1	7.32	31.7	849	502	67.5	67.5	38.6	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_188	14.1	7.31	31.6	847	502	67.5	67.5	38.5	15.8	1.09E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_189	14.0	7.31	31.5	845	502	67.4	67.4	38.5	15.8	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_190	14.1	7.33	32.3	859	507	67.9	67.9	38.9	15.8	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_191	14.1	7.33	32.2	858	504	67.8	67.8	38.8	15.8	1.11E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_192	14.1	7.32	32.1	856	501	67.8	67.8	38.7	15.8	1.11E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_193	14.1	7.32	32.0	855	499	67.6	67.6	38.7	15.8	1.11E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_194	14.1	7.32	31.9	853	499	67.5	67.5	38.6	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_195	14.1	7.32	31.8	852	499	67.4	67.4	38.6	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_196	14.1	7.32	31.7	849	498	67.4	67.4	38.6	15.8	1.10E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_197	14.0	7.31	31.6	847	498	67.3	67.3	38.5	15.8	1.10E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_198	14.0	7.31	31.5	846	498	67.3	67.3	38.5	15.8	1.10E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_199	14.0	7.31	31.5	848	498	67.2	67.2	38.5	15.8	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_200	14.0	7.31	31.4	849	498	67.2	67.2	38.4	15.8	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_201	14.0	7.31	31.3	850	497	67.2	67.2	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_202	14.0	7.31	31.3	843	509	67.2	67.2	38.5	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_203	14.0	7.31	31.3	842	508	67.1	67.1	38.5	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_204	14.0	7.31	31.3	841	507	67.1	67.1	38.5	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_205	14.0	7.31	31.3	840	506	67.0	67.0	38.5	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_206	14.0	7.31	31.3	839	505	66.9	66.9	38.5	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_207	14.0	7.31	31.2	838	504	66.9	66.9	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_208	14.0	7.30	31.2	838	503	66.9	66.9	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_209	14.0	7.30	31.2	837	502	66.9	66.9	38.4	15.7	1.08E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_210	14.0	7.30	31.2	837	501	66.9	66.9	38.4	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_211	14.0	7.30	31.1	842	500	66.9	66.9	38.4	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_212	14.0	7.30	31.1	846	499	66.9	66.9	38.4	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_213	14.0	7.30	31.1	850	498	66.8	66.8	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_214	14.0	7.30	31.1	854	497	66.8	66.8	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_215	14.0	7.30	31.0	859	496	66.8	66.8	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_216	14.0	7.30	31.1	834	507	66.9	66.9	38.4	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_217	14.0	7.30	31.1	834	506	66.9	66.9	38.4	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_218	14.0	7.30	31.1	833	506	66.8	66.8	38.4	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_219	14.0	7.30	31.1	833	505	66.7	66.7	38.4	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_220	14.0	7.30	31.1	832	505	66.7	66.7	38.4	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_221	14.0	7.30	31.1	831	504	66.7	66.7	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_222	14.0	7.30	31.1	830	504	66.7	66.7	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_223	14.0	7.30	31.1	829	503	66.6	66.6	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_224	14.0	7.30	31.0	831	502	66.4	66.4	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_225	14.0	7.30	31.0	835	502	66.3	66.3	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_226	14.0	7.29	31.0	839	501	66.2	66.2	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_227	14.0	7.29	31.0	842	500	66.2	66.2	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_228	14.0	7.29	30.9	847	499	66.1	66.1	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_229	13.9	7.29	30.9	851	498	66.2	66.2	38.2	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_230	13.9	7.29	30.9	855	497	66.1	66.1	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_231	13.9	7.29	30.9	858	497	66.2	66.2	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_232	13.9	7.29	30.9	860	496	66.2	66.2	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_233	13.9	7.29	30.9	863	495	66.1	66.1	38.2	15.7	1.08E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_234	14.0	7.30	31.2	831	518	66.9	66.9	38.3	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_235	14.0	7.30	31.2	831	516	66.7	66.7	38.3	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_236	14.0	7.30	31.1	830	515	66.6	66.6	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_237	14.0	7.30	31.1	829	513	66.6	66.6	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_238	14.0	7.30	31.1	828	512	66.6	66.6	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_239	14.0	7.30	31.1	828	510	66.5	66.5	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_240	14.0	7.29	31.0	828	509	66.5	66.5	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_241	14.0	7.29	31.0	827	508	66.5	66.5	38.2	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_242	14.0	7.29	31.0	826	507	66.5	66.5	38.2	15.7	1.08E-04	5.39E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_243	13.9	7.29	30.9	823	504	66.4	66.4	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_244	13.9	7.29	30.9	823	504	66.3	66.3	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_245	13.9	7.29	30.9	822	503	66.2	66.2	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_246	13.9	7.29	30.9	824	503	66.1	66.1	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_247	13.9	7.29	30.9	828	502	66.0	66.0	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_259	13.9	7.28	30.6	887	489	65.5	65.5	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_260	13.9	7.28	30.6	889	488	65.3	65.3	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_261	13.9	7.28	30.5	891	487	65.2	65.2	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_262	13.9	7.28	30.5	893	487	65.1	65.1	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_263	13.9	7.28	30.5	894	486	65.0	65.0	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_264	13.9	7.28	30.4	895	486	65.0	65.0	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_265	13.9	7.28	30.4	897	485	64.9	64.9	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_266	13.9	7.28	30.3	899	484	64.9	64.9	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_267	13.9	7.28	30.3	900	484	64.9	64.9	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_268	13.9	7.28	30.2	902	483	64.8	64.8	38.2	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_269	13.9	7.28	30.2	904	482	64.8	64.8	38.2	15.7	1.07E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_270	13.9	7.28	30.1	905	481	64.8	64.8	38.2	15.7	1.07E-04	5.37E-05	4.55	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_288	14.0	7.29	31.0	937	481	66.0	66.0	38.6	15.7	1.09E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_289	14.0	7.30	31.1	938	482	66.1	66.1	38.7	15.8	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_313	13.9	7.28	30.4	920	479	65.3	65.3	38.4	15.7	1.08E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_314	13.9	7.29	30.5	921	479	65.4	65.4	38.4	15.7	1.08E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_315	13.9	7.29	30.6	923	480	65.4	65.4	38.4	15.7	1.08E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_316	13.9	7.29	30.7	924	481	65.5	65.5	38.5	15.7	1.08E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_317	13.9	7.29	30.8	925	483	65.6	65.6	38.5	15.7	1.09E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_318	14.0	7.29	30.9	926	484	65.6	65.6	38.5	15.7	1.09E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_319	14.0	7.29	31.0	928	485	65.8	65.8	38.5	15.7	1.09E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_320	13.9	7.29	30.6	913	482	65.4	65.4	38.4	15.7	1.08E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_321	13.9	7.29	30.7	914	482	65.5	65.5	38.4	15.7	1.08E-04	5.39E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_322	13.9	7.29	30.8	915	483	65.5	65.5	38.4	15.7	1.09E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_323	14.0	7.29	30.9	916	484	65.6	65.6	38.5	15.7	1.09E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_324	14.0	7.30	31.1	916	487	65.9	65.9	38.5	15.7	1.09E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_325	13.9	7.29	30.8	882	490	66.3	66.3	38.3	15.7	1.08E-04	5.39E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_326	13.9	7.29	30.8	885	489	66.3	66.3	38.3	15.7	1.08E-04	5.39E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_327	13.9	7.29	30.7	889	489	66.0	66.0	38.3	15.7	1.08E-04	5.39E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_328	13.9	7.29	30.7	891	488	65.9	65.9	38.3	15.7	1.08E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_329	13.9	7.29	30.6	894	487	65.7	65.7	38.3	15.7	1.08E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_330	13.9	7.29	30.6	896	487	65.6	65.6	38.3	15.7	1.08E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_331	13.9	7.29	30.6	898	486	65.4	65.4	38.3	15.7	1.08E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_332	13.9	7.29	30.6	900	485	65.3	65.3	38.3	15.7	1.08E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_333	13.9	7.29	30.5	902	485	65.1	65.1	38.3	15.7	1.08E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_334	13.9	7.29	30.5	904	484	65.2	65.2	38.3	15.7	1.08E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_335	13.9	7.29	30.4	906	483	65.2	65.2	38.3	15.7	1.07E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_336	13.9	7.28	30.4	908	482	65.1	65.1	38.3	15.7	1.07E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_337	13.9	7.28	30.3	910	481	65.1	65.1	38.3	15.7	1.07E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_338	13.9	7.28	30.3	911	481	65.0	65.0	38.3	15.7	1.07E-04	5.38E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_339	14.0	7.30	31.3	931	485	66.3	66.3	38.6	15.8	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_340	14.1	7.31	31.7	898	497	67.5	67.5	38.6	15.8	1.11E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_341	14.0	7.31	31.7	901	495	67.4	67.4	38.6	15.8	1.11E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_342	14.0	7.31	31.6	906	493	67.0	67.0	38.6	15.8	1.11E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_343	14.0	7.31	31.6	909	492	66.8	66.8	38.6	15.8	1.10E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_344	14.0	7.30	31.5	912	492	66.5	66.5	38.6	15.8	1.10E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_345	14.0	7.30	31.4	915	490	66.4	66.4	38.6	15.8	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_346	14.0	7.30	31.3	919	489	66.3	66.3	38.6	15.7	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_347	14.1	7.32	31.9	883	501	67.7	67.7	38.7	15.8	1.11E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_348	14.1	7.31	31.8	884	500	67.6	67.6	38.6	15.8	1.11E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_349	14.0	7.31	31.7	885	498	67.5	67.5	38.6	15.8	1.11E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_350	14.0	7.31	31.6	886	497	67.3	67.3	38.5	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_351	14.0	7.31	31.5	887	495	67.2	67.2	38.5	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_352	14.0	7.31	31.4	888	493	67.0	67.0	38.5	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_353	14.0	7.30	31.3	889	490	66.9	66.9	38.4	15.7	1.09E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_354	14.0	7.30	31.2	890	489	66.8	66.8	38.4	15.7	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_355	14.0	7.30	31.1	891	489	66.7	66.7	38.4	15.7	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_356	14.0	7.30	31.0	892	488	66.5	66.5	38.4	15.7	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_357	14.1	7.32	32.0	866	503	67.7	67.7	38.7	15.8	1.11E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_358	14.1	7.32	31.9	867	501	67.6	67.6	38.6	15.8	1.11E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_359	14.1	7.31	31.8	869	499	67.4	67.4	38.6	15.8	1.11E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_360	14.1	7.31	31.7	870	497	67.3	67.3	38.6	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_361	14.0	7.31	31.6	871	496	67.2	67.2	38.5	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_362	14.0	7.31	31.5	872	494	67.1	67.1	38.5	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_363	14.0	7.31	31.5	874	493	67.1	67.1	38.5	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_364	14.0	7.31	31.4	875	492	67.0	67.0	38.5	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_365	14.0	7.31	31.3	876	492	66.9	66.9	38.4	15.7	1.09E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_366	14.0	7.30	31.3	877	492	66.9	66.9	38.4	15.7	1.09E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_367	14.0	7.30	31.2	877	492	66.8	66.8	38.4	15.7	1.09E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_368	14.0	7.30	31.1	878	492	66.8	66.8	38.4	15.7	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_369	14.0	7.30	31.4	903	492	66.8	66.8	38.5	15.8	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_370	14.0	7.30	31.2	904	490	66.4	66.4	38.5	15.7	1.10E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_371	14.0	7.30	31.1	904	488	66.2	66.2	38.5	15.7	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_372	14.0	7.30	31.0	904	486	66.0	66.0	38.4	15.7	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_373	14.0	7.30	30.9	904	485	65.8	65.8	38.4	15.7	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_374	13.9	7.29	30.8	905	485	65.6	65.6	38.4	15.7	1.08E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_376	13.9	7.29	30.8	932	482	65.7	65.7	38.5	15.7	1.09E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_001	14.7	7.33	34.5	1241	586	72.5	72.5	39.6	15.8	1.15E-04	5.42E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_002	14.4	7.32	33.3	1145	551	72.0	72.0	38.9	15.7	1.11E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_003	14.4	7.32	33.2	1187	560	72.3	72.3	38.8	15.7	1.11E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_004	14.3	7.31	32.5	1124	526	71.7	71.7	38.4	15.7	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_005	14.1	7.30	31.4	970	524	70.1	70.1	38.3	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_006	14.1	7.30	31.3	916	524	68.5	68.5	38.3	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_007	14.4	7.30	33.0	1226	570	72.2	72.2	38.8	15.7	1.12E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_008	14.3	7.30	32.8	1106	540	70.5	70.5	38.6	15.7	1.11E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_009	14.5	7.31	33.4	1206	573	72.1	72.1	39.1	15.7	1.12E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_010	14.5	7.31	33.6	1185	574	72.1	72.1	39.3	15.7	1.13E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_011	14.3	7.30	32.7	1152	552	71.6	71.6	38.5	15.7	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_012	14.4	7.30	32.5	1166	558	72.5	72.5	38.5	15.7	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_013	14.4	7.30	32.8	1215	567	72.3	72.3	38.7	15.7	1.11E-04	5.40E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_014	14.3	7.30	32.8	1125	546	70.4	70.4	38.6	15.7	1.10E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_015	14.5	7.31	33.2	1223	572	72.0	72.0	39.0	15.7	1.12E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_016	14.4	7.30	32.6	1186	563	72.6	72.6	38.6	15.7	1.11E-04	5.39E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_017	14.1	7.30	31.2	875	524	67.9	67.9	38.2	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_018	15.1	7.32	38.9	1366	589	74.3	74.3	42.1	15.8	1.22E-04	5.41E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511600_019	14.9	7.32	36.6	1309	591	71.6	71.6	41.0	15.7	1.18E-04	5.41E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_020	14.9	7.32	36.0	1304	589	71.5	71.5	40.7	15.7	1.18E-04	5.41E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_021	14.7	7.31	34.5	1198	585	71.8	71.8	39.9	15.7	1.15E-04	5.40E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_022	14.8	7.32	35.9	1325	584	70.8	70.8	40.2	15.7	1.18E-04	5.41E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_023	14.7	7.31	35.6	1292	584	71.8	71.8	40.2	15.7	1.17E-04	5.40E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_024	14.9	7.34	35.8	1268	596	73.1	73.1	40.3	15.8	1.17E-04	5.42E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_025	15.0	7.32	37.8	1312	591	72.6	72.6	41.6	15.7	1.20E-04	5.41E-05	4.57	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511600_026	14.7	7.31	35.4	1263	586	71.6	71.6	40.2	15.7	1.17E-04	5.40E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_027	14.8	7.32	35.9	1318	587	71.2	71.2	40.4	15.7	1.18E-04	5.41E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_028	14.6	7.33	34.3	1231	583	72.7	72.7	39.4	15.8	1.14E-04	5.42E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_029	14.6	7.33	34.1	1252	582	72.9	72.9	39.3	15.8	1.14E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_030	14.6	7.33	34.0	1265	581	73.1	73.1	39.2	15.8	1.13E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_031	14.6	7.32	33.8	1269	580	73.1	73.1	39.0	15.7	1.13E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_032	14.1	7.30	31.4	938	524	69.2	69.2	38.3	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_033	14.1	7.30	31.2	894	524	68.2	68.2	38.3	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_034	15.1	7.32	38.4	1339	590	74.1	74.1	41.8	15.8	1.21E-04	5.41E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511600_035	14.3	7.30	32.8	1101	533	71.1	71.1	38.5	15.7	1.11E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_036	14.8	7.31	35.8	1312	582	71.6	71.6	40.2	15.7	1.17E-04	5.40E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511600_037	14.7	7.31	35.2	1227	586	72.0	72.0	40.1	15.7	1.16E-04	5.40E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_038	14.9	7.34	36.0	1308	596	73.1	73.1	40.4	15.8	1.18E-04	5.42E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_039	14.7	7.31	34.9	1189	586	71.9	71.9	40.0	15.7	1.16E-04	5.40E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_040	14.9	7.32	37.2	1313	591	72.1	72.1	41.3	15.7	1.19E-04	5.41E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_041	14.5	7.32	33.4	1248	574	73.7	73.7	38.8	15.7	1.12E-04	5.41E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_042	14.5	7.32	33.2	1224	571	73.5	73.5	38.8	15.7	1.12E-04	5.41E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_043	14.4	7.32	33.3	1169	555	71.9	71.9	38.9	15.7	1.11E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_044	14.5	7.32	33.0	1205	567	73.3	73.3	38.8	15.7	1.12E-04	5.41E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_045	14.5	7.32	33.1	1199	564	72.8	72.8	38.8	15.7	1.11E-04	5.41E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_046	15.3	7.33	39.9	1406	596	76.0	76.0	42.5	15.8	1.24E-04	5.42E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511600_047	14.8	7.31	35.8	1323	581	71.3	71.3	40.2	15.7	1.18E-04	5.40E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_048	14.8	7.33	35.4	1229	596	73.0	73.0	40.2	15.8	1.16E-04	5.42E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_049	15.2	7.33	39.3	1386	589	74.6	74.6	42.3	15.8	1.23E-04	5.42E-05	4.58	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511600_050	14.4	7.32	33.3	1144	547	72.1	72.1	38.8	15.7	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_051	14.4	7.31	33.3	1142	543	71.7	71.7	38.8	15.7	1.11E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_052	14.4	7.31	33.2	1135	540	71.5	71.5	38.8	15.7	1.11E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_053	14.4	7.31	33.1	1124	536	71.8	71.8	38.7	15.7	1.11E-04	5.40E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_054	14.4	7.31	33.0	1134	533	72.1	72.1	38.6	15.7	1.11E-04	5.40E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_055	14.3	7.31	32.9	1137	530	71.7	71.7	38.5	15.7	1.11E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_056	14.3	7.31	32.7	1133	528	71.7	71.7	38.4	15.7	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_057	14.3	7.31	32.3	1110	525	71.1	71.1	38.4	15.7	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_058	14.2	7.31	32.1	1091	524	70.9	70.9	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_059	14.2	7.30	31.8	1062	523	70.9	70.9	38.4	15.7	1.09E-04	5.40E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_060	14.6	7.32	33.6	1264	577	73.4	73.4	38.9	15.7	1.13E-04	5.41E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_061	14.2	7.29	32.7	1092	531	70.9	70.9	38.4	15.7	1.10E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_062	14.2	7.29	32.6	1085	529	70.7	70.7	38.4	15.7	1.10E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_085	13.9	7.27	30.6	805	509	65.6	65.6	37.9	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_086	13.9	7.27	30.6	808	510	65.8	65.8	37.9	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_087	13.9	7.28	30.7	811	510	65.9	65.9	38.0	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_091	14.1	7.28	31.1	1015	513	69.1	69.1	38.1	15.6	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_092	14.1	7.28	31.0	983	513	69.4	69.4	38.1	15.6	1.08E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_093	14.0	7.28	30.9	948	513	69.0	69.0	38.1	15.6	1.08E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_094	14.0	7.28	30.8	913	514	68.1	68.1	38.0	15.6	1.08E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_095	14.0	7.28	30.7	883	515	67.2	67.2	38.0	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_096	14.0	7.27	30.7	856	515	66.9	66.9	38.0	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_097	13.9	7.27	30.6	833	515	66.9	66.9	37.9	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_098	13.9	7.27	30.6	828	515	66.7	66.7	37.9	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_099	13.9	7.27	30.6	822	515	66.7	66.7	37.9	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_100	13.9	7.27	30.6	815	514	66.5	66.5	37.9	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_101	14.2	7.29	32.2	1095	521	70.7	70.7	38.3	15.7	1.10E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_102	14.2	7.29	32.0	1083	519	70.4	70.4	38.2	15.7	1.09E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_103	14.2	7.29	31.8	1068	518	69.7	69.7	38.2	15.7	1.09E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_104	14.1	7.29	31.6	1049	517	69.7	69.7	38.2	15.7	1.09E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_105	14.1	7.29	31.3	1024	517	69.8	69.8	38.2	15.7	1.09E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_106	14.1	7.29	31.2	994	517	69.9	69.9	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_107	14.1	7.29	31.1	962	517	69.6	69.6	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_108	14.0	7.29	31.0	930	518	68.7	68.7	38.1	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_109	14.0	7.28	31.0	902	518	67.9	67.9	38.1	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_110	14.0	7.28	30.9	876	519	67.3	67.3	38.1	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_111	14.0	7.28	30.8	853	519	67.2	67.2	38.1	15.6	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_112	14.0	7.28	30.8	844	519	67.1	67.1	38.1	15.6	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_113	14.0	7.28	30.8	839	519	67.1	67.1	38.0	15.6	1.08E-04	5.38E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_114	14.0	7.28	30.7	834	518	67.1	67.1	38.0	15.6	1.08E-04	5.38E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_115	14.0	7.28	30.7	820	516	66.6	66.6	38.0	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_116	14.1	7.30	31.1	869	524	67.9	67.9	38.2	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_117	14.1	7.30	31.1	865	524	67.8	67.8	38.2	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_118	14.1	7.29	31.1	858	523	67.7	67.7	38.2	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_119	14.0	7.29	31.0	853	523	67.6	67.6	38.2	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_120	14.0	7.29	31.0	846	522	67.3	67.3	38.2	15.7	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_121	14.0	7.29	31.0	838	520	67.0	67.0	38.1	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_122	14.0	7.29	31.0	828	519	66.9	66.9	38.1	15.7	1.08E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_123	14.0	7.29	31.0	823	518	66.7	66.7	38.1	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_124	14.0	7.29	31.0	823	516	66.5	66.5	38.1	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_125	14.0	7.29	30.9	821	515	66.4	66.4	38.1	15.7	1.08E-04	5.38E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_126	14.0	7.29	30.9	820	513	66.3	66.3	38.1	15.7	1.08E-04	5.38E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511600_127	14.0	7.29	30.9	819	511	66.2	66.2	38.1	15.7	1.08E-04	5.38E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_128	14.0	7.29	30.9	818	510	66.1	66.1	38.1	15.7	1.08E-04	5.38E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_129	13.9	7.29	30.9	817	508	66.1	66.1	38.1	15.7	1.08E-04	5.38E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_130	13.9	7.28	30.8	817	507	66.0	66.0	38.1	15.7	1.08E-04	5.38E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_131	13.9	7.28	30.8	817	506	66.0	66.0	38.1	15.7	1.08E-04	5.38E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_132	13.9	7.28	30.7	809	505	65.4	65.4	38.0	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_133	13.9	7.27	30.6	812	505	65.3	65.3	37.9	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_134	13.9	7.27	30.5	814	504	65.2	65.2	37.9	15.6	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_142	13.9	7.27	30.6	832	500	65.4	65.4	38.0	15.6	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_143	13.9	7.27	30.5	833	499	65.3	65.3	37.9	15.6	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_144	13.9	7.27	30.5	835	499	65.3	65.3	37.9	15.6	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_163	13.9	7.27	30.5	848	497	65.1	65.1	37.9	15.6	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_164	13.9	7.27	30.5	846	498	65.2	65.2	38.0	15.6	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_185	13.9	7.29	30.9	831	502	65.9	65.9	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_186	13.9	7.29	30.8	834	501	65.8	65.8	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_187	13.9	7.29	30.8	836	501	65.8	65.8	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_188	13.9	7.29	30.8	840	500	65.7	65.7	38.2	15.7	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_189	13.9	7.28	30.8	842	500	65.7	65.7	38.2	15.7	1.07E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_190	13.9	7.28	30.8	847	499	65.8	65.8	38.1	15.7	1.07E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_191	13.9	7.28	30.8	850	498	65.7	65.7	38.1	15.7	1.07E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_192	13.9	7.28	30.7	855	497	65.6	65.6	38.1	15.7	1.07E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_193	13.9	7.28	30.7	859	497	65.5	65.5	38.1	15.7	1.07E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_194	13.9	7.28	30.7	862	496	65.4	65.4	38.1	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_195	13.9	7.28	30.7	864	495	65.4	65.4	38.1	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_196	13.9	7.28	30.7	867	495	65.3	65.3	38.1	15.7	1.07E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_197	13.9	7.28	30.6	869	494	65.3	65.3	38.1	15.7	1.07E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_198	13.9	7.28	30.7	821	502	65.8	65.8	38.1	15.7	1.07E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_199	13.9	7.28	30.7	827	501	65.7	65.7	38.1	15.7	1.07E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_200	13.9	7.28	30.7	832	501	65.5	65.5	38.1	15.7	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_201	13.9	7.28	30.7	836	500	65.4	65.4	38.1	15.7	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_202	13.9	7.28	30.7	840	500	65.3	65.3	38.1	15.7	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_203	13.9	7.28	30.7	843	499	65.4	65.4	38.1	15.7	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_204	13.9	7.28	30.6	847	498	65.4	65.4	38.1	15.7	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_205	13.9	7.28	30.6	850	498	65.4	65.4	38.0	15.7	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_206	13.9	7.28	30.6	853	497	65.3	65.3	38.0	15.7	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_207	13.9	7.28	30.6	857	496	65.2	65.2	38.0	15.6	1.07E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_208	13.9	7.27	30.5	860	496	65.1	65.1	38.0	15.6	1.07E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_209	13.9	7.27	30.5	864	495	65.0	65.0	38.0	15.6	1.07E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_210	13.9	7.27	30.5	867	494	64.9	64.9	38.0	15.6	1.07E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_211	13.9	7.27	30.5	870	493	64.8	64.8	38.0	15.6	1.07E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_212	13.9	7.27	30.5	873	492	64.8	64.8	38.0	15.6	1.07E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_228	14.3	7.28	32.2	1148	561	70.6	70.6	38.9	15.6	1.10E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_242	14.0	7.28	30.7	829	517	66.9	66.9	38.0	15.6	1.08E-04	5.38E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511800_001	15.2	7.41	38.9	1410	581	90.0	90.0	44.6	16.4	1.26E-04	5.49E-05	4.65	1.52	0.17	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512000_002	15.4	7.55	39.1	1541	621	97.4	97.4	45.6	16.6	1.28E-04	5.55E-05	4.67	1.52	0.17	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512000_003	15.8	7.59	40.2	1690	666	106.2	106.2	47.1	16.8	1.30E-04	5.59E-05	4.71	1.52	0.17	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512100_001	15.9	7.59	41.6	1669	659	102.5	102.5	46.7	16.7	1.29E-04	5.57E-05	4.70	1.52	0.17	6.45E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512100_002	16.2	7.64	41.9	1900	692	105.6	105.6	47.5	16.9	1.31E-04	5.60E-05	4.75	1.52	0.17	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512200_001	16.4	7.66	42.1	2043	709	108.7	108.7	47.8	17.0	1.32E-04	5.63E-05	4.78	1.52	0.17	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512200_002	17.4	7.87	47.7	2923	894	124.4	124.4	55.4	18.4	1.50E-04	5.89E-05	4.95	1.54	0.19	6.55E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE512200_003	17.9	7.98	48.5	3069	973	126.3	126.3	56.2	19.0	1.52E-04	6.02E-05	4.98	1.54	0.19	6.56E-02	2.59	0.51	0.32	2.54E-02	1.37E-02
RE512300_001	16.8	7.73	45.5	2421	782	121.1	121.1	51.9	17.5	1.41E-04	5.72E-05	4.85	1.53	0.18	6.51E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE512400_001	17.1	7.78	45.3	2711	861	120.2	120.2	53.4	18.0	1.41E-04	5.81E-05	4.91	1.53	0.18	6.51E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE514400_001	14.5	7.35	34.0	1287	542	81.1	81.1	41.8	16.1	1.15E-04	5.42E-05	4.62	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514400_003	14.2	7.27	31.7	1415	517	79.1	79.1	40.1	15.8	1.10E-04	5.36E-05	4.64	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514400_006	14.2	7.26	31.4	1414	519	76.3	76.3	39.9	15.8	1.10E-04	5.35E-05	4.64	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514400_007	14.2	7.26	31.6	1422	518	77.2	77.2	40.0	15.8	1.10E-04	5.36E-05	4.64	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_001	14.5	7.35	34.0	1303	539	81.7	81.7	41.7	16.1	1.14E-04	5.42E-05	4.62	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_002	14.5	7.35	34.0	1303	539	81.9	81.9	41.7	16.1	1.14E-04	5.42E-05	4.62	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_003	14.7	7.37	34.3	1300	546	81.3	81.3	41.8	16.1	1.13E-04	5.42E-05	4.62	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_006	14.2	7.26	32.3	1351	516	76.5	76.5	39.9	15.8	1.10E-04	5.35E-05	4.63	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_007	14.2	7.26	32.5	1371	516	76.1	76.1	40.1	15.8	1.10E-04	5.36E-05	4.63	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_008	14.2	7.27	31.9	1408	519	80.8	80.8	40.1	15.8	1.09E-04	5.36E-05	4.64	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_009	14.2	7.27	31.8	1396	523	80.2	80.2	40.2	15.8	1.09E-04	5.36E-05	4.64	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_010	14.2	7.28	31.9	1374	528	82.1	82.1	40.2	15.9	1.09E-04	5.37E-05	4.63	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE514600_001	14.8	7.40	34.8	1289	554	81.0	81.0	42.1	16.1	1.14E-04	5.43E-05	4.62	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_002	14.2	7.27	32.7	1381	516	75.5	75.5	40.3	15.8	1.10E-04	5.36E-05	4.64	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_003	14.3	7.27	33.0	1391	515	76.4	76.4	40.5	15.8	1.11E-04	5.36E-05	4.64	1.51	0.17	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_004	14.3	7.28	33.2	1393	514	77.7	77.7	40.7	15.8	1.11E-04	5.36E-05	4.64	1.51	0.17	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_005	14.3	7.28	33.4	1389	516	79.7	79.7	40.8	15.8	1.11E-04	5.37E-05	4.64	1.51	0.17	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_006	14.3	7.29	33.5	1375	520	79.8	79.8	40.9	15.9	1.12E-04	5.37E-05	4.64	1.51	0.17	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514700_001	14.5	7.31	35.5	1313	527	82.2	82.2	42.0	15.9	1.15E-04	5.39E-05	4.62	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514800_001	15.3	7.59	37.0	1213	558	84.0	84.0	43.5	16.5	1.19E-04	5.55E-05	4.60	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE515000_001	16.0	7.82	41.4	1359	593	92.2	92.2	45.2	17.3	1.26E-04	5.78E-05	4.62	1.52	0.16	6.43E-02	2.57	0.49	0.32	2.54E-02	1.37E-02
RE515100_001	15.2	7.63	37.7	1271	548	84.1	84.1	44.3	16.8	1.21E-04	5.64E-05	4.60	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE515200_001	14.9	7.53	36.1	1178	539	78.6	78.6	43.4	16.5	1.19E-04	5.57E-05	4.58	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE515200_002	15.0	7.56	36.9	1246	542	81.7	81.7	43.9	16.6	1.20E-04	5.59E-05	4.60	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE515200_003	15.0	7.57	36.1	1291	542	88.2	88.2	43.1	16.7	1.19E-04	5.59E-05	4.61	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515300_001	14.8	7.47	35.3	1171	543	77.6	77.6	42.7	16.4	1.17E-04	5.52E-05	4.58	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515300_002	14.4	7.42	33.5	1189	521	82.8	82.8	41.8	16.3	1.15E-04	5.48E-05	4.59	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515300_003	15.4	7.64	37.3	1114	554	93.9	93.9	45.8	17.2	1.19E-04	5.66E-05	4.58	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE516200_001	14.2	7.32	31.9	1030	500	79.6	79.6	42.1	16.2	1.11E-04	5.42E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE517200_001	14.2	7.39	31.9	882	479	73.0	73.0	40.4	16.0	1.09E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE517200_002	14.2	7.38	31.7	889	476	72.6	72.6	40.2	16.0	1.09E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE517200_003	13.9	7.29	30.9	854	464	71.8	71.8	39.8	15.8	1.08E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE517400_001	13.8	7.25	30.6	857	464	71.8	71.8	39.8	15.8	1.08E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE519100_001	13.8	7.24	30.5	858	476	70.2	70.2	39.9	15.8	1.08E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE519500_001	15.0	7.45	37.0	918	608	80.2	80.2	47.0	16.6	1.21E-04	5.51E-05	4.55	1.52	0.16	6.42E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RE519500_002	15.6	7.60	40.2	983	658	86.9	86.9	50.8	17.1	1.28E-04	5.61E-05	4.57	1.52	0.16	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE521400_001	15.2	7.40	36.3	870	589	73.7	73.7	43.4	16.2	1.17E-04	5.48E-05	4.54	1.52	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_001	16.1	7.51	40.0	1300	700	91.3	91.3	46.3	16.7	1.37E-04	5.73E-05	4.58	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_002	15.1	7.39	35.5	911	599	70.1	70.1	41.2	16.0	1.18E-04	5.49E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_003	16.2	7.60	40.7	1061	668	79.5	79.5	44.2	16.5	1.26E-04	5.69E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_004	19.5	8.24	55.9	2098	1002	119.2	119.2	60.0	19.2	1.84E-04	6.50E-05	4.71	1.54	0.17	6.60E-02	2.60	0.55	0.32	2.54E-02	1.37E-02
RE521600_005	17.6	7.84	45.8	1427	783	109.5	109.5	51.5	17.7	1.53E-04	6.03E-05	4.61	1.53	0.16	6.49E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE521600_006	17.1	7.73	43.9	1332	769	104.2	104.2	49.5	17.4	1.45E-04	5.92E-05	4.60	1.52	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE521600_007	16.9	7.76	43.4	1321	742	101.2	101.2	49.0	17.4	1.44E-04	5.91E-05	4.60	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE521600_008	15.9	7.66	39.8	1046	654	91.2	91.2	45.4	16.9	1.31E-04	5.77E-05	4.55	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE521600_009	16.9	7.76	44.7	1359	759	104.3	104.3	49.4	17.3	1.46E-04	5.89E-05	4.59	1.53	0.16	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE521600_010	15.9	7.62	40.0	1261	637	88.8	88.8	44.9	16.7	1.29E-04	5.72E-05	4.58	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_011	14.9	7.43	35.2	1073	569	78.8	78.8	42.4	16.2	1.19E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_012	15.1	7.45	36.1	925	562	76.7	76.7	43.1	16.3	1.19E-04	5.53E-05	4.54	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_013	14.5	7.28	34.5	1096	596	73.8	73.8	42.2	15.8	1.23E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_017	14.7	7.44	33.9	814	560	69.2	69.2	40.9	16.1	1.15E-04	5.55E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_018	14.1	7.23	32.9	956	566	70.4	70.4	40.6	15.6	1.18E-04	5.38E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_019	14.4	7.27	33.0	903	574	69.4	69.4	40.7	15.8	1.18E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_020	14.2	7.25	33.2	965	581	70.6	70.6	40.9	15.7	1.19E-04	5.42E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_023	14.8	7.33	35.0	1155	631	77.2	77.2	42.9	16.0	1.26E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE521600_026	14.4	7.27	33.3	920	576	70.2	70.2	40.9	15.8	1.18E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_028	14.3	7.27	33.8	995	590	71.9	71.9	41.4	15.8	1.20E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_030	14.2	7.27	33.0	907	557	70.5	70.5	40.6	15.8	1.17E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_032	14.6	7.30	34.6	1140	617	76.2	76.2	42.6	15.9	1.25E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_035	14.1	7.23	32.7	905	566	69.0	69.0	40.4	15.6	1.17E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_036	14.5	7.28	33.4	916	571	70.9	70.9	41.0	15.8	1.20E-04	5.46E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_037	14.2	7.23	32.9	1042	566	71.7	71.7	41.0	15.6	1.20E-04	5.39E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_038	14.3	7.27	33.7	1071	593	73.6	73.6	41.7	15.8	1.22E-04	5.44E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_039	14.4	7.29	33.2	959	559	73.2	73.2	40.9	15.9	1.19E-04	5.47E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_041	14.2	7.25	33.2	1019	580	72.1	72.1	41.2	15.7	1.20E-04	5.41E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_043	14.2	7.25	33.1	920	573	69.7	69.7	40.7	15.7	1.18E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_044	14.3	7.27	33.8	1051	597	73.0	73.0	41.7	15.8	1.22E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_045	14.6	7.31	34.7	1145	623	77.9	77.9	42.6	15.9	1.25E-04	5.50E-05	4.56	1.51	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE521600_046	14.5	7.28	34.8	1165	602	76.3	76.3	42.3	15.8	1.25E-04	5.47E-05	4.57	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_047	13.8	7.20	31.3	977	532	69.2	69.2	39.3	15.5	1.12E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_048	13.8	7.20	31.3	976	532	68.7	68.7	39.3	15.5	1.12E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_049	13.8	7.20	31.3	973	531	68.2	68.2	39.3	15.5	1.12E-04	5.34E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_050	13.8	7.20	31.7	1012	551	69.9	69.9	39.7	15.5	1.13E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_051	13.9	7.20	31.7	1006	547	69.4	69.4	39.7	15.5	1.13E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_052	13.9	7.20	31.7	1004	546	69.3	69.3	39.7	15.5	1.13E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_053	13.9	7.21	31.8	1006	546	69.5	69.5	39.7	15.5	1.14E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_054	13.9	7.21	31.9	1010	548	70.4	70.4	39.8	15.6	1.14E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE521600_055	14.0	7.22	32.5	1062	575	72.6	72.6	40.5	15.6	1.16E-04	5.38E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_056	14.0	7.22	32.5	1058	574	72.5	72.5	40.4	15.6	1.16E-04	5.38E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_057	14.0	7.22	32.4	1052	572	72.2	72.2	40.3	15.6	1.16E-04	5.37E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_058	13.9	7.21	32.2	1048	570	72.0	72.0	40.2	15.6	1.15E-04	5.37E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_059	13.9	7.21	32.1	1047	570	72.0	72.0	40.1	15.6	1.15E-04	5.36E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_060	14.0	7.22	32.5	1077	584	74.0	74.0	40.5	15.6	1.16E-04	5.38E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_061	14.0	7.23	32.6	1090	591	75.2	75.2	40.6	15.6	1.17E-04	5.38E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_062	14.0	7.23	32.7	1109	601	76.4	76.4	40.8	15.6	1.17E-04	5.39E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_063	14.1	7.23	32.8	1124	608	76.8	76.8	41.0	15.6	1.18E-04	5.39E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_064	14.1	7.23	32.9	1140	617	76.7	76.7	41.1	15.6	1.18E-04	5.40E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_065	14.1	7.24	32.9	1157	624	76.5	76.5	41.2	15.7	1.18E-04	5.40E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_066	14.1	7.24	33.1	1188	634	77.2	77.2	41.3	15.7	1.19E-04	5.40E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_067	14.1	7.24	33.2	1217	642	78.2	78.2	41.4	15.7	1.19E-04	5.40E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_068	14.1	7.24	33.4	1247	651	79.3	79.3	41.5	15.7	1.20E-04	5.41E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_069	14.2	7.24	33.4	1267	657	80.0	80.0	41.5	15.7	1.20E-04	5.40E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_070	14.2	7.24	33.4	1287	661	80.8	80.8	41.5	15.7	1.20E-04	5.40E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_071	14.2	7.24	33.4	1300	664	81.2	81.2	41.5	15.7	1.20E-04	5.40E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_072	14.2	7.24	33.4	1320	669	82.0	82.0	41.5	15.6	1.20E-04	5.40E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_073	14.2	7.23	33.4	1344	675	82.7	82.7	41.7	15.6	1.20E-04	5.39E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_074	14.2	7.23	33.4	1364	679	83.2	83.2	41.8	15.6	1.20E-04	5.39E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_075	14.2	7.23	33.3	1362	678	83.1	83.1	41.8	15.6	1.20E-04	5.39E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_076	14.0	7.22	32.4	1180	628	77.0	77.0	40.9	15.6	1.17E-04	5.37E-05	4.57	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_077	14.0	7.22	32.3	1159	623	76.3	76.3	40.8	15.6	1.17E-04	5.37E-05	4.57	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_078	14.0	7.22	32.3	1141	618	75.7	75.7	40.8	15.6	1.16E-04	5.37E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_079	14.0	7.22	32.3	1124	611	75.2	75.2	40.8	15.6	1.16E-04	5.37E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_080	14.0	7.21	32.2	1110	604	74.8	74.8	40.7	15.6	1.16E-04	5.37E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_081	14.0	7.21	32.1	1094	595	73.8	73.8	40.6	15.6	1.16E-04	5.37E-05	4.56	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_082	14.0	7.21	32.0	1081	588	73.1	73.1	40.5	15.5	1.15E-04	5.36E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_083	13.9	7.20	31.8	1052	573	71.9	71.9	40.2	15.5	1.14E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_084	14.6	7.23	36.1	1317	618	80.0	80.0	43.2	15.6	1.28E-04	5.39E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_085	14.6	7.23	36.0	1327	610	79.7	79.7	43.1	15.6	1.28E-04	5.39E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_086	14.5	7.23	36.3	1381	607	80.9	80.9	43.2	15.6	1.29E-04	5.38E-05	4.60	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_087	14.5	7.23	36.3	1375	608	80.7	80.7	43.3	15.6	1.29E-04	5.38E-05	4.60	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_088	14.5	7.22	36.4	1365	612	80.5	80.5	43.4	15.6	1.30E-04	5.38E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_089	16.9	7.63	46.8	2279	836	112.5	112.5	51.2	17.2	1.63E-04	5.93E-05	4.73	1.53	0.17	6.53E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE521600_090	15.4	7.49	37.3	1016	587	83.4	83.4	43.9	16.4	1.23E-04	5.59E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW110000_001	16.8	7.76	48.1	1677	756	115.9	115.9	52.2	17.8	1.41E-04	5.74E-05	4.68	1.53	0.17	6.52E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW110000_002	20.9	8.70	65.0	2552	1074	130.1	130.1	66.6	21.9	1.76E-04	6.53E-05	4.85	1.56	0.18	6.69E-02	2.61	0.54	0.32	2.54E-02	1.37E-02
RW110000_008	18.9	7.65	54.6	2122	797	116.7	116.7	56.1	17.0	1.50E-04	5.66E-05	4.71	1.54	0.17	6.56E-02	2.59	0.53	0.31	2.54E-02	1.37E-02
RW110000_009	19.8	7.86	58.2	1967	889	119.0	119.0	58.4	17.7	1.59E-04	5.83E-05	4.67	1.54	0.17	6.59E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RW110000_010	17.4	8.01	47.1	1295	693	111.7	111.7	53.7	18.3	1.39E-04	5.97E-05	4.62	1.53	0.16	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_011	18.7	7.98	53.2	1609	768	119.4	119.4	56.8	18.6	1.50E-04	5.94E-05	4.69	1.54	0.17	6.57E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW110000_012	20.1	8.19	60.2	1934	817	121.8	121.8	59.9	19.3	1.65E-04	6.10E-05	4.75	1.55	0.17	6.64E-02	2.60	0.53	0.32	2.54E-02	1.37E-02
RW110000_013	20.2	8.46	62.0	2229	899	118.9	118.9	61.1	19.6	1.71E-04	6.33E-05	4.74	1.55	0.17	6.64E-02	2.60	0.54	0.32	2.54E-02	1.37E-02
RW110000_014	21.0	8.18	64.8	2035	945	120.0	120.0	59.5	18.7	1.74E-04	6.11E-05	4.71	1.55	0.17	6.65E-02	2.60	0.55	0.32	2.54E-02	1.37E-02
RW110000_015	21.4	8.23	67.2	2113	962	120.4	120.4	60.1	18.9	1.79E-04	6.15E-05	4.71	1.55	0.17	6.67E-02	2.61	0.55	0.32	2.54E-02	1.37E-02
RW110000_016	21.3	8.15	69.0	2065	957	122.6	122.6	60.7	18.7	1.83E-04	6.08E-05	4.74	1.55	0.17	6.67E-02	2.61	0.55	0.32	2.54E-02	1.37E-02
RW110000_017	22.3	8.31	74.0	2148	999	122.6	122.6	62.1	19.1	1.92E-04	6.20E-05	4.75	1.56	0.17	6.71E-02	2.61	0.57	0.32	2.54E-02	1.37E-02
RW110000_018	17.4	7.99	47.3	1352	715	113.9	113.9	53.7	18.3	1.39E-04	5.95E-05	4.63	1.53	0.16	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_019	21.3	8.64	67.7	2234	941	122.7	122.7	63.8	20.2	1.84E-04	6.48E-05	4.74	1.55	0.17	6.68E-02	2.61	0.55	0.32	2.54E-02	1.37E-02
RW110000_020	17.2	7.85	48.1	1973	790	118.7	118.7	53.0	18.3	1.43E-04	5.83E-05	4.73	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_021	16.9	7.53	47.9	1346	780	109.5	109.5	49.8	16.5	1.35E-04	5.52E-05	4.65	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW110000_022	17.6	7.95	48.8	1706	845	118.8	118.8	53.4	18.2	1.40E-04	5.90E-05	4.68	1.53	0.17	6.52E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_023	18.4	7.69	56.6	2103	1040	123.7	123.7	58.8	17.3	1.58E-04	5.69E-05	4.75	1.54	0.17	6.60E-02	2.59	0.53	0.31	2.54E-02	1.37E-02
RW110000_024	23.2	8.68	71.5	2603	1007	131.3	131.3	73.1	21.8	1.86E-04	6.51E-05	4.90	1.57	0.18	6.77E-02	2.62	0.55	0.32	2.54E-02	1.37E-02
RW110100_001	22.6	8.43	73.1	2333	1031	126.8	126.8	66.0	19.6	1.93E-04	6.33E-05	4.79	1.56	0.17	6.72E-02	2.61	0.56	0.32	2.54E-02	1.37E-02
RW112100_001	17.2	7.87	48.6	1915	820	116.4	116.4	56.8	18.1	1.53E-04	5.95E-05	4.71	1.54	0.17	6.55E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW112100_002	16.7	7.74	45.2	1784	780	110.1	110.1	53.5	17.5	1.43E-04	5.80E-05	4.69	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW112100_003	16.6	7.72	44.6	1711	768	108.1	108.1	52.5	17.4	1.41E-04	5.77E-05	4.67	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW112200_001	16.3	7.68	43.2	1642	750	106.0	106.0	51.0	17.2	1.36E-04	5.72E-05	4.66	1.53	0.17	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW112300_001	14.9	7.38	34.8	1307	620	83.7	83.7	42.9	16.1	1.16E-04	5.46E-05	4.60	1.52	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112300_002	15.1	7.43	35.4	1289	631	86.1	86.1	43.3	16.2	1.18E-04	5.49E-05	4.60	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112300_003	16.4	7.68	41.4	1492	747	99.8	99.8	47.2	16.9	1.28E-04	5.67E-05	4.64	1.52	0.17	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW112400_001	16.2	7.64	40.6	1444	734	97.6	97.6	46.4	16.8	1.26E-04	5.63E-05	4.64	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW112400_002	16.1	7.61	40.3	1421	727	95.6	95.6	45.9	16.7	1.25E-04	5.61E-05	4.63	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW112400_003	15.8	7.52	38.7	1383	711	92.2	92.2	45.3	16.5	1.23E-04	5.55E-05	4.62	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW112500_001	15.5	7.43	36.6	1336	693	88.1	88.1	44.4	16.2	1.21E-04	5.50E-05	4.61	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW112500_002	15.3	7.39	36.3	1310	672	86.4	86.4	43.0	16.1	1.19E-04	5.46E-05	4.61	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW112600_001	15.1	7.33	35.7	1247	649	82.8	82.8	42.7	15.9	1.17E-04	5.42E-05	4.60	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW113300_001	17.0	7.81	46.4	1671	761	113.1	113.1	53.6	17.8	1.44E-04	5.87E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW113700_001	17.3	7.56	46.8	1283	643	86.8	86.8	50.3	16.7	1.42E-04	5.64E-05	4.59	1.53	0.16	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW210600_001	16.7	7.95	44.8	2011	780	105.7	105.7	50.5	17.8	1.50E-04	6.09E-05	4.70	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW210600_002	17.4	7.90	48.6	1845	833	102.5	102.5	50.4	17.4	1.50E-04	6.00E-05	4.63	1.53	0.17	6.49E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW210700_001	18.2	7.99	53.4	2267	904	104.0	104.0	52.2	17.5	1.55E-04	6.04E-05	4.69	1.53	0.17	6.52E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RW210700_002	16.4	7.64	42.0	1612	759	94.3	94.3	47.3	16.9	1.37E-04	5.76E-05	4.62	1.52	0.16	6.45E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW210700_003	17.0	8.02	46.7	2218	808	113.3	113.3	52.3	18.1	1.55E-04	6.18E-05	4.74	1.53	0.17	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW210800_001	14.2	7.30	32.6	898	553	71.9	71.9	40.3	15.8	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210800_002	16.3	7.63	40.7	1705	766	95.9	95.9	46.6	16.9	1.36E-04	5.77E-05	4.66	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW210800_003	16.3	7.65	40.9	1859	779	99.8	99.8	46.7	17.0	1.36E-04	5.79E-05	4.68	1.52	0.17	6.45E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW210800_004	16.1	7.63	40.2	1925	776	99.9	99.9	46.9	17.0	1.37E-04	5.79E-05	4.69	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW210900_001	15.9	7.54	40.1	1598	699	86.9	86.9	45.1	16.5	1.30E-04	5.65E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW211000_001	15.7	7.49	39.8	1446	801	80.5	80.5	43.7	16.3	1.28E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW213300_001	18.5	7.93	51.4	1503	785	110.4	110.4	56.7	17.8	1.61E-04	5.99E-05	4.63	1.53	0.16	6.55E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW213500_001	17.5	7.93	46.8	1677	776	109.3	109.3	56.3	18.0	1.58E-04	6.02E-05	4.64	1.53	0.17	6.54E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW213500_002	17.1	7.66	45.5	1174	677	93.9	93.9	51.1	16.9	1.44E-04	5.72E-05	4.58	1.53	0.16	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW213500_003	17.3	7.88	45.8	1573	750	105.4	105.4	55.2	17.8	1.54E-04	5.96E-05	4.63	1.53	0.16	6.52E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW213900_001	17.4	7.79	47.7	1338	728	88.0	88.0	49.9	17.0	1.40E-04	5.74E-05	4.61	1.53	0.16	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW213900_002	16.9	7.58	47.4	1339	644	84.6	84.6	50.6	16.7	1.36E-04	5.57E-05	4.62	1.53	0.16	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW213900_003	16.6	7.47	45.9	1234	622	81.6	81.6	49.7	16.4	1.33E-04	5.50E-05	4.60	1.53	0.16	6.47E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW214000_001	16.7	7.76	49.3	1670	676	87.5	87.5	49.9	17.3	1.37E-04	5.71E-05	4.68	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW214000_002	16.6	7.51	45.4	1215	619	80.4	80.4	49.5	16.5	1.33E-04	5.53E-05	4.60	1.53	0.16	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW214200_001	16.9	7.57	46.8	1152	624	83.1	83.1	50.1	16.6	1.37E-04	5.59E-05	4.59	1.53	0.16	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW214200_002	18.1	7.77	52.7	1364	698	89.9	89.9	53.6	17.2	1.47E-04	5.73E-05	4.62	1.53	0.16	6.53E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW214200_003	18.7	7.86	55.9	1431	740	93.9	93.9	54.9	17.4	1.54E-04	5.80E-05	4.64	1.54	0.17	6.55E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW214200_004	19.2	8.29	65.1	2345	811	107.5	107.5	55.5	18.5	1.64E-04	6.18E-05	4.81	1.54	0.18	6.60E-02	2.60	0.54	0.32	2.54E-02	1.37E-02
RW214400_001	18.3	7.77	53.6	1323	708	95.5	95.5	55.3	17.2	1.52E-04	5.77E-05	4.64	1.54	0.17	6.54E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW214400_002	17.6	7.60	48.8	1046	661	83.7	83.7	50.7	16.6	1.43E-04	5.62E-05	4.57	1.53	0.16	6.49E-02	2.58	0.52	0.31	2.54E-02	1.37E-02
RW214500_001	15.8	7.36	40.4	891	569	73.6	73.6	45.5	15.9	1.27E-04	5.44E-05	4.53	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW214700_001	16.8	7.63	46.7	1084	600	79.3	79.3	51.3	16.6	1.37E-04	5.65E-05	4.55	1.53	0.16	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW214800_001	16.7	7.57	45.1	1051	592	79.0	79.0	50.2	16.5	1.35E-04	5.61E-05	4.55	1.52	0.16	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW214900_001	16.7	7.57	44.9	1055	591	78.6	78.6	50.0	16.5	1.35E-04	5.61E-05	4.55	1.52	0.16	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW215500_001	16.3	7.51	42.3	1383	621	79.3	79.3	45.9	16.2	1.30E-04	5.56E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW215500_002	15.4	7.53	37.3	1308	562	76.1	76.1	44.6	16.4	1.23E-04	5.59E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW215500_003	16.2	7.49	41.8	1370	617	79.0	79.0	45.6	16.2	1.30E-04	5.55E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW215600_001	16.2	7.50	41.7	1389	620	79.6	79.6	45.6	16.2	1.30E-04	5.56E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW215600_002	16.2	7.49	41.3	1384	617	79.5	79.5	45.5	16.2	1.29E-04	5.55E-05	4.59	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW215600_003	15.4	7.54	37.4	1333	567	76.8	76.8	44.6	16.4	1.23E-04	5.60E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW216000_001	15.3	7.58	38.4	1435	614	82.4	82.4	44.8	16.5	1.26E-04	5.64E-05	4.60	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW216300_001	16.0	7.49	40.1	1599	644	87.4	87.4	47.1	16.3	1.33E-04	5.58E-05	4.63	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW217300_001	14.7	7.25	36.5	873	521	70.5	70.5	41.3	15.6	1.17E-04	5.34E-05	4.52	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW217300_003	14.4	7.23	34.5	846	495	68.1	68.1	40.7	15.5	1.15E-04	5.33E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW217400_001	16.6	7.52	44.2	1060	607	77.4	77.4	47.1	16.1	1.34E-04	5.52E-05	4.56	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW217400_003	14.3	7.22	32.9	837	509	65.7	65.7	40.8	15.5	1.14E-04	5.32E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW217600_001	18.3	7.97	50.1	2702	917	123.2	123.2	59.2	18.3	1.62E-04	6.09E-05	4.82	1.54	0.18	6.56E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW218600_001	15.0	7.21	37.6	1058	551	72.5	72.5	43.0	15.4	1.19E-04	5.30E-05	4.56	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW218700_001	19.3	7.83	58.2	1392	709	100.7	100.7	58.3	17.2	1.55E-04	5.76E-05	4.61	1.54	0.16	6.56E-02	2.59	0.53	0.31	2.54E-02	1.37E-02
RW219300_001	18.1	7.88	49.9	2183	890	118.4	118.4	56.3	17.7	1.52E-04	5.88E-05	4.75	1.53	0.17	6.54E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW219600_001	18.5	7.91	52.6	2500	1129	119.3	119.3	58.9	17.9	1.58E-04	5.93E-05	4.81	1.54	0.18	6.58E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW219800_001	17.4	7.77	49.0	2184	1032	116.3	116.3	53.2	17.1	1.50E-04	5.78E-05	4.75	1.53	0.17	6.54E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW219800_002	17.2	7.74	48.4	2134	1017	115.1	115.1	52.4	17.0	1.48E-04	5.75E-05	4.74	1.53	0.17	6.53E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW219800_003	17.1	7.74	48.3	2089	1011	110.4	110.4	51.7	16.9	1.48E-04	5.74E-05	4.73	1.53	0.17	6.53E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW219900_001	16.8	7.69	47.4	2064	994	109.2	109.2	51.3	16.8	1.46E-04	5.70E-05	4.72	1.53	0.17	6.52E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW219900_002	16.7	7.67	46.9	2032	982	107.5	107.5	51.0	16.7	1.45E-04	5.68E-05	4.72	1.53	0.17	6.52E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW219900_003	16.6	7.65	46.4	1992	968	106.0	106.0	50.7	16.6	1.44E-04	5.67E-05	4.71	1.53	0.17	6.51E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW219900_004	15.9	7.32	42.9	1541	609	88.3	88.3	46.8	15.8	1.33E-04	5.40E-05	4.64	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW220100_001	16.5	7.40	44.8	1715	826	91.4	91.4	48.0	15.9	1.36E-04	5.46E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW220200_001	16.5	7.38	44.9	1701	822	90.8	90.8	47.9	15.9	1.36E-04	5.44E-05	4.66	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW220200_002	16.1	7.35	43.2	1710	840	90.5	90.5	47.2	15.8	1.34E-04	5.42E-05	4.66	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW221500_001	18.3	7.77	52.2	1430	691	101.9	101.9	53.6	16.7	1.40E-04	5.58E-05	4.63	1.53	0.17	6.49E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW221600_001	16.9	7.85	48.0	1395	669	98.1	98.1	52.4	16.6	1.37E-04	5.56E-05	4.62	1.53	0.16	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413

GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]			Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
24-hour	-		-	-		-			-		-		-		-	-		-	
23										-									
CAAQS 2030																			
12.2										-				-					
53%																			
	–	–	–			–	–	–	–		–	–				–		–	–
							95.1	50.3	16.4	-	-				-			-	-
							89.1	48.8	16.3	-	-				-			-	-
							86.0	48.6	16.1	-	-				-			-	-
							84.9	48.1	16.0	-	-				-			-	-
RW221700_001	15.7	7.55	38.8	1086	572	77.7	77.7	44.2	15.7	-	-	4.57	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW222900_001	16.8	7.53	46.6	1042	602	89.3	89.3	49.9	16.3	-	-				-				-	-
RW223000_001	17.8	7.92	49.5	1802	740	117.0	117.0	59.1	18.1	-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
RW223800_002	16.4	7.37	47.3	1221	588	85.1	85.1	49.7	16.0	1.30E-04	5.39E-05	4.62	1.53	0.16	6.47E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW224200_001	23.6	8.36	78.2	1498	839	119.5	119.5	69.1	18.9	-	-	4.67	1.55	0.17	6.68E-02	2.60	0.53	0.32	2.54E-02	1.37E-02
RW225200_001	19.1	7.96	59.1	1991	880	115.8	115.8	61.7	18.1	-	-				-				-	-
RW225300_001	19.3	7.98	61.8	2116	883	114.6	114.6	60.0	17.9	-	-				-				-	-
RW225300_002	19.6	8.04	62.9	2126	914	117.7	117.7	62.6	18.3	-	-				-				-	-
RW225300_003	20.1	8.13	65.0	2216	944	120.5	120.5	64.3	18.8	-	-				-				-	-
RW226000_001	20.9	8.10	72.0	2364	902	123.7	123.7	66.7	18.6	-	-				-				-	-
RW226200_001	17.5	7.90		1607	651	110.5		57.2	17.0	1.46E-04	5.61E-05	4.70	1.53	0.17	6.53E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
							106.5	54.8	16.8	-	-				-				-	-
							103.0	53.3	16.7	-	-				-				-	-
							100.0	47.8	16.1	-	-				-				-	-
RW227800_001	18.2	7.92	50.7	1779	658	117.3	117.3	53.8	17.8	-	-				-				-	-
RW227800_002	18.2	7.99	52.5	1755	701	116.4	116.4	53.7	18.0	-	-				-				-	-
							105.6	49.7	16.4	-	-				-				-	-
							111.6	51.3	16.6	-	-				-				-	-
							111.5	50.3	16.6	-	-				-				-	-
							92.2	47.1	16.0	-	-				-				-	-
							107.0	49.9	16.6	-	-				-				-	-
							83.8	45.1	15.9	-	-				-				-	-
							85.6	45.3	16.0	-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
RW229200_006	16.5	7.52	42.7	1112	571	85.8		45.4	15.9	-	-	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
										-	-				-				-	-
										-	-				-				-	-
							92.3	46.7	16.0	-	-				-				-	-
							83.2	44.3	15.7	-	-				-				-	-
							111.0	49.6	16.8	-	-				-				-	-
							102.2	48.0	16.5	-	-				-				-	-
RW230400_005	15.1	7.28	36.5	1085	524	79.0	79.0	44.7	15.6	-	-	4.59	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW231500_001	16.7	7.46	45.7	1379	601	101.8	101.8	52.4	16.4	-	-				-				-	-
RW231500_002	16.9	7.51	46.2	1510	643	107.6	107.6	54.1	16.6	-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
RW231900_001	16.3	7.48	42.2	1218	589	90.0	90.0	50.9	16.2	-	-				-				-	-
RW231900_002	16.2	7.47	40.3	1310	571	83.9	83.9	48.7	16.0	-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
										-	-				-				-	-
							93.2	51.8	16.6	-	-				-				-	-
							100.4	53.7	17.2	-	-				-				-	-
							96.0	52.5	16.7	-	-				-				-	-
RW233000_001	18.9	7.88	54.5	1356	657	115.4	115.4	59.7	18.1	-	-				-				-	-
RW233000_002	18.2	7.80	50.4	1175	618	110.3	110.3	56.6	17.7	-	-				-				-	-
RW233000_003	17.3	7.66	46.6	1016	584	98.8	98.8	53.7	17.1	-	-				-				-	-
RW233000_004	16.0	7.45	40.2	1045	575	93.7	93.7	48.1	16.4	-	-				-				-	-
RW233100_001	18.9	8.19	51.7	1707	764	118.6	118.6	58.1	19.1	-	-				-				-	-
RW233100_002	18.4	8.06	50.0	1402	680	117.0	117.0	56.4	18.6	-	-				-				-	-
RW233100_003	18.1	7.99	48.7	1333	661	114.3	114.3	55.3	18.3	-	-				-				-	-
RW233100_004	15.8	7.46	38.7	1032	557	91.8	91.8	46.2	16.4	-	-				-				-	-

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW233300_001	15.8	7.47	39.2	1164	598	98.2	98.2	47.0	16.6	1.21E-04	5.46E-05	4.60	1.52	0.16	6.42E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW233500_001	19.6	8.18	55.2	2707	841	126.3	126.3	63.4	19.7	1.55E-04	5.98E-05	4.91	1.55	0.18	6.61E-02	2.59	0.51	0.32	2.54E-02	1.37E-02
RW233600_001	16.9	7.68	44.1	1764	651	116.8	116.8	54.1	17.6	1.36E-04	5.63E-05	4.72	1.53	0.17	6.50E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW233700_001	17.6	7.79	47.8	2070	689	119.3	119.3	58.1	18.0	1.44E-04	5.72E-05	4.78	1.54	0.17	6.54E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW233800_001	16.6	7.58	43.5	1605	622	114.6	114.6	52.9	17.1	1.34E-04	5.57E-05	4.68	1.53	0.17	6.49E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW234400_001	16.4	7.47	45.1	1268	574	95.2	95.2	50.5	16.4	1.32E-04	5.48E-05	4.61	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW234400_002	15.5	7.35	38.1	1126	587	89.2	89.2	46.0	16.0	1.19E-04	5.39E-05	4.58	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW234400_003	15.7	7.38	39.9	1160	591	89.7	89.7	47.0	16.1	1.22E-04	5.41E-05	4.59	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW234500_001	17.4	7.87	46.4	1577	616	110.5	110.5	54.6	17.3	1.37E-04	5.75E-05	4.68	1.53	0.17	6.50E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW234500_002	18.5	7.99	53.2	1764	720	119.8	119.8	61.4	18.3	1.54E-04	5.90E-05	4.72	1.54	0.17	6.59E-02	2.59	0.51	0.32	2.54E-02	1.37E-02
RW234600_001	16.0	7.53	39.8	1293	598	93.0	93.0	48.3	16.3	1.23E-04	5.50E-05	4.61	1.52	0.16	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW234600_002	15.5	7.37	38.3	1135	582	88.7	88.7	46.4	16.1	1.20E-04	5.41E-05	4.58	1.52	0.16	6.42E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW234600_003	15.4	7.35	37.7	1115	581	87.5	87.5	45.7	16.0	1.19E-04	5.39E-05	4.58	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW235800_001	19.7	7.86	58.8	1446	685	115.0	115.0	61.1	17.5	1.52E-04	5.70E-05	4.66	1.54	0.17	6.58E-02	2.59	0.52	0.31	2.54E-02	1.37E-02
RW235800_002	17.6	7.61	49.1	1416	620	97.1	97.1	53.7	16.9	1.41E-04	5.58E-05	4.66	1.53	0.17	6.52E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW235800_003	17.3	7.60	46.5	1212	619	96.0	96.0	52.9	16.8	1.36E-04	5.58E-05	4.61	1.53	0.16	6.50E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW235800_004	16.9	7.54	44.1	1198	616	93.8	93.8	50.9	16.6	1.32E-04	5.54E-05	4.61	1.53	0.16	6.48E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW235900_003	17.3	7.90	46.3	1326	660	109.7	109.7	51.0	17.7	1.31E-04	5.79E-05	4.64	1.53	0.17	6.47E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW235900_004	17.7	7.71	49.3	1345	653	99.7	99.7	54.1	17.1	1.41E-04	5.65E-05	4.64	1.53	0.17	6.52E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW235900_008	17.7	8.00	50.4	1201	670	113.3	113.3	53.4	18.1	1.35E-04	5.85E-05	4.62	1.53	0.16	6.50E-02	2.58	0.50	0.32	2.54E-02	1.37E-02
RW310200_001	18.5	7.85	50.5	1433	630	117.2	117.2	58.6	17.6	1.44E-04	5.70E-05	4.66	1.54	0.17	6.55E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW311300_001	20.2	7.95	64.4	2391	793	128.1	128.1	62.2	18.3	1.81E-04	5.88E-05	4.87	1.56	0.18	6.72E-02	2.61	0.53	0.31	2.54E-02	1.37E-02
RW311300_002	19.6	7.86	59.9	2253	760	124.2	124.2	59.5	17.9	1.70E-04	5.80E-05	4.84	1.55	0.18	6.67E-02	2.60	0.53	0.31	2.54E-02	1.37E-02
RW311300_003	19.0	7.79	54.4	2016	776	121.9	121.9	57.4	17.5	1.57E-04	5.74E-05	4.78	1.54	0.17	6.60E-02	2.59	0.52	0.31	2.54E-02	1.37E-02
RW311300_004	18.2	7.70	52.7	1880	740	116.3	116.3	56.0	17.2	1.55E-04	5.66E-05	4.75	1.54	0.17	6.59E-02	2.59	0.51	0.31	2.54E-02	1.37E-02
RW311400_001	18.8	7.94	54.3	2188	778	124.9	124.9	58.7	18.1	1.63E-04	5.86E-05	4.83	1.55	0.18	6.64E-02	2.60	0.52	0.31	2.54E-02	1.37E-02
RW311400_002	18.0	7.85	50.2	1934	764	122.2	122.2	57.1	17.7	1.54E-04	5.78E-05	4.77	1.54	0.17	6.59E-02	2.59	0.51	0.31	2.54E-02	1.37E-02
RW311400_003	17.3	7.78	48.9	1817	719	116.3	116.3	55.4	17.3	1.50E-04	5.71E-05	4.75	1.54	0.17	6.58E-02	2.59	0.51	0.31	2.54E-02	1.37E-02
RW311400_004	16.9	7.72	45.7	1604	729	111.2	111.2	53.0	17.0	1.42E-04	5.66E-05	4.70	1.53	0.17	6.54E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW311400_005	16.1	7.56	41.0	1401	707	103.5	103.5	50.2	16.6	1.31E-04	5.55E-05	4.66	1.53	0.17	6.48E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW311400_006	15.7	7.48	39.0	1292	674	94.6	94.6	49.1	16.3	1.26E-04	5.48E-05	4.63	1.52	0.16	6.45E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW311400_008	15.4	7.35	37.7	1192	618	89.1	89.1	47.9	16.0	1.22E-04	5.40E-05	4.61	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW311400_009	15.2	7.33	37.6	1162	613	86.6	86.6	47.4	16.0	1.22E-04	5.38E-05	4.60	1.52	0.16	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW312300_001	16.6	7.50	43.6	1779	673	111.6	111.6	50.9	16.8	1.29E-04	5.53E-05	4.74	1.52	0.17	6.47E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW312400_001	16.2	7.48	41.6	1191	585	97.8	97.8	45.6	16.3	1.20E-04	5.44E-05	4.61	1.52	0.16	6.42E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW312400_002	15.6	7.41	37.5	1173	567	95.9	95.9	43.0	16.1	1.14E-04	5.41E-05	4.60	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW312500_001	17.9	7.78	49.8	1888	688	110.5	110.5	49.0	16.9	1.35E-04	5.57E-05	4.76	1.53	0.17	6.49E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW312500_002	17.7	7.76	49.4	1733	650	108.2	108.2	48.2	16.8	1.34E-04	5.55E-05	4.73	1.53	0.17	6.49E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW312500_003	16.8	7.59	44.7	1318	589	101.0	101.0	46.9	16.4	1.25E-04	5.47E-05	4.64	1.52	0.17	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW312500_004	16.0	7.54	39.3	1196	564	96.4	96.4	44.1	16.3	1.15E-04	5.44E-05	4.62	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW312600_001	18.4	7.88	51.4	1979	716	121.0	121.0	53.3	17.4	1.38E-04	5.65E-05	4.78	1.53	0.17	6.51E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW312600_002	18.0	7.78	49.7	2016	722	116.9	116.9	51.4	17.1	1.36E-04	5.60E-05	4.79	1.53	0.17	6.50E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW312700_001	21.7	8.52	67.7	2433	1005	130.2	130.2	67.3	20.0	1.83E-04	6.24E-05	4.87	1.56	0.18	6.74E-02	2.61	0.54	0.32	2.54E-02	1.37E-02
RW312900_001	15.2	7.41	36.2	1674	619	97.5	97.5	45.0	16.2	1.17E-04	5.44E-05	4.71	1.52	0.17	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW313100_001	16.5	7.58	43.4	1672	666	110.8	110.8	49.6	16.8	1.33E-04	5.58E-05	4.71	1.53	0.17	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW313400_001	15.2	7.44	36.4	1400	565	95.0	95.0	43.6	16.1	1.17E-04	5.47E-05	4.65	1.52	0.17	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW313900_001	14.9	7.37	35.4	1286	537	85.1	85.1	42.3	15.9	1.13E-04	5.40E-05	4.63	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW314100_001	15.0	7.40	34.8	1404	528	88.4	88.4	43.0	16.2	1.15E-04	5.44E-05	4.64	1.51	0.17	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW314300_001	17.3	7.82	44.6	1654	672	119.5	119.5	53.0	17.9	1.36E-04	5.76E-05	4.72	1.53	0.17	6.50E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW315400_001	14.7	7.31	34.4	1113	514	82.6	82.6	42.3	16.0	1.15E-04	5.38E-05	4.60	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW317500_001	21.0	8.14	64.8	1805	938	121.4	121.4	62.4	18.9	1.82E-04	6.16E-05	4.69	1.55	0.17	6.66E-02	2.60	0.55	0.32	2.54E-02	1.37E-02
RW317500_003	21.1	8.17	65.1	1815	940	121.0	121.0	62.2	18.9	1.82E-04	6.19E-05	4.68	1.55	0.17	6.66E-02	2.60	0.55	0.32	2.54E-02	1.37E-02
RW410100_001	17.8	7.96	47.4	1216	723	103.4	103.4	51.8	17.5	1.44E-04	6.04E-05	4.59	1.53	0.16	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW410100_002	17.5	7.93	46.1	1214	727	98.1	98.1	50.3	17.3	1.42E-04	6.02E-05	4.59	1.53	0.16	6.48E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW410200_001	18.0	7.98	48.6	1338	737	109.0	109.0	53.3	17.7	1.46E-04	6.04E-05	4.58	1.53	0.16	6.51E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW410400_001	17.4	7.76	44.8	1302	685	99.7	99.7	50.1	17.2	1.37E-04	5.78E-05	4.59	1.52	0.16	6.47E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW410800_002	16.8	7.65	44.9	1218	696	93.2	93.2	48.8	16.8	1.37E-04	5.67E-05	4.58	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW510000_001	17.5	7.81	50.0	1522	780	102.1	102.1	50.9	17.1	1.47E-04	5.85E-05	4.61	1.53	0.16	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW510100_001	18.1	8.04	50.3	1664	751	105.2	105.2	52.0	17.6	1.48E-04	6.08E-05	4.65	1.53	0.17	6.51E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW510100_002	16.9	7.69	43.4	1314	660	98.0	98.0	47.8	16.9	1.33E-04	5.74E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW510400_001	16.8	7.72	43.0	1255	690	107.5	107.5	49.9	17.3	1.33E-04	5.73E-05	4.60	1.52	0.16	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW512600_001	17.3	7.89	47.7	1401	704	114.8	114.8	58.2	18.3	1.46E-04	5.89E-05	4.64	1.53	0.17	6.54E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW512600_002	14.6	7.34	33.8	1274	556	82.8	82.8	44.3	16.1	1.16E-04	5.42E-05	4.61	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW512700_001	15.6	7.50	41.6	1358	639	98.5	98.5	53.0	16.8	1.35E-04	5.57E-05	4.64	1.53	0.17	6.49E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW515200_001	16.9	7.79	45.0	1537	633	103.0	103.0	49.9	17.4	1.31E-04	5.71E-05	4.67	1.52	0.17	6.46E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.2: Maximum Predicted Concentrations (µg/m³), 2041 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**102%**	**113%**	**156%**	**8%**	**7%**	**33%**	**158%**	**37%**	**97%**	**386%**	**689%**	**<1%**	**<1%**	**4%**	**17%**	**4%**	**25%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW515200_002	14.4	7.28	32.1	755	490	71.0	71.0	40.6	15.8	1.10E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW515500_001	18.2	8.07	49.7	2643	717	121.9	121.9	56.7	19.0	1.46E-04	5.98E-05	4.88	1.54	0.18	6.54E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW515500_002	15.1	7.47	36.1	1783	592	100.8	100.8	44.2	16.6	1.18E-04	5.52E-05	4.71	1.52	0.17	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW515500_003	13.8	7.21	30.0	883	488	69.2	69.2	38.8	15.6	1.06E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW515600_001	17.5	7.85	46.4	2420	678	118.8	118.8	53.6	18.3	1.40E-04	5.83E-05	4.84	1.53	0.18	6.51E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW515600_002	15.0	7.34	35.7	1537	625	85.3	85.3	43.2	16.1	1.18E-04	5.42E-05	4.66	1.52	0.17	6.40E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW515600_003	14.9	7.35	34.7	1430	563	88.8	88.8	42.1	16.1	1.15E-04	5.42E-05	4.65	1.52	0.17	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW515700_001	14.8	7.32	34.8	1516	588	86.2	86.2	42.3	16.0	1.16E-04	5.40E-05	4.66	1.52	0.17	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW516700_001	14.6	7.35	33.4	1484	535	87.6	87.6	44.4	16.3	1.15E-04	5.43E-05	4.65	1.52	0.17	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW517400_001	17.7	7.97	48.0	2078	719	123.7	123.7	57.0	19.3	1.52E-04	6.00E-05	4.77	1.54	0.17	6.57E-02	2.59	0.51	0.32	2.54E-02	1.37E-02
RW517500_001	16.6	7.80	41.8	1745	661	116.5	116.5	53.8	18.2	1.37E-04	5.78E-05	4.71	1.53	0.17	6.50E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW517500_002	15.0	7.40	34.7	1389	521	84.5	84.5	44.3	16.3	1.16E-04	5.45E-05	4.63	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW517600_001	15.1	7.50	36.8	1210	565	89.5	89.5	46.3	16.6	1.21E-04	5.54E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW519300_001	14.8	7.40	34.7	1201	579	85.1	85.1	44.2	16.4	1.17E-04	5.47E-05	4.62	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519300_002	16.6	7.72	44.9	1222	642	89.3	89.3	47.6	16.6	1.31E-04	5.66E-05	4.59	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW519600_001	16.0	7.68	39.7	1540	670	108.2	108.2	50.5	17.5	1.29E-04	5.70E-05	4.69	1.52	0.17	6.46E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW519600_002	15.4	7.61	36.5	1290	590	95.7	95.7	47.5	16.9	1.23E-04	5.60E-05	4.64	1.52	0.17	6.43E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW519600_003	15.0	7.58	36.4	1043	545	85.1	85.1	46.6	16.5	1.21E-04	5.53E-05	4.58	1.52	0.16	6.42E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW519600_004	15.2	7.47	37.8	913	535	79.7	79.7	43.8	16.1	1.17E-04	5.44E-05	4.54	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519900_001	14.7	7.50	34.0	971	519	76.6	76.6	42.4	16.4	1.13E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520000_001	14.7	7.48	33.7	978	513	77.2	77.2	42.1	16.3	1.13E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520100_001	14.7	7.49	33.9	984	519	77.3	77.3	42.2	16.3	1.13E-04	5.48E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520200_001	14.6	7.47	33.7	986	522	78.2	78.2	42.2	16.3	1.13E-04	5.47E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520300_001	14.7	7.47	34.3	984	538	81.5	81.5	42.9	16.3	1.14E-04	5.47E-05	4.56	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520400_001	15.1	7.50	35.9	986	570	88.1	88.1	44.3	16.4	1.17E-04	5.49E-05	4.56	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520600_001	15.3	7.53	37.0	1083	576	87.5	87.5	46.0	16.5	1.20E-04	5.51E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW520600_002	15.5	7.48	37.9	1360	617	97.2	97.2	48.7	16.7	1.25E-04	5.52E-05	4.63	1.52	0.17	6.44E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW520800_001	15.4	7.53	37.9	1013	567	85.0	85.0	45.2	16.5	1.19E-04	5.51E-05	4.57	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW520800_002	15.3	7.51	37.8	1078	566	85.0	85.0	45.1	16.5	1.18E-04	5.50E-05	4.58	1.52	0.16	6.41E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW520900_001	15.4	7.51	37.5	1161	584	84.7	84.7	44.7	16.5	1.17E-04	5.50E-05	4.59	1.52	0.16	6.40E-02	2.57	0.48	0.31	2.54E-02	1.37E-02
RW521000_001	15.4	7.52	37.3	1154	596	85.1	85.1	44.2	16.5	1.16E-04	5.50E-05	4.59	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_001	18.8	8.46	55.8	1507	721	117.6	117.6	57.2	19.7	1.42E-04	6.00E-05	4.70	1.54	0.17	6.55E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RW521500_002	15.5	7.58	38.8	973	568	85.1	85.1	44.9	16.7	1.20E-04	5.53E-05	4.56	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW521500_003	15.1	7.51	37.1	914	551	81.3	81.3	43.4	16.4	1.18E-04	5.49E-05	4.54	1.52	0.16	6.40E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521500_004	15.1	7.48	37.0	922	540	82.1	82.1	43.3	16.3	1.18E-04	5.47E-05	4.54	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521500_005	15.1	7.41	37.8	954	539	79.5	79.5	43.7	16.1	1.19E-04	5.44E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW521500_006	15.1	7.38	37.7	970	539	79.3	79.3	43.6	16.1	1.19E-04	5.43E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW521600_001	16.5	7.60	42.3	990	675	94.2	94.2	47.3	16.8	1.34E-04	5.67E-05	4.55	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521600_002	14.6	7.33	34.6	1185	555	84.5	84.5	41.9	15.9	1.15E-04	5.41E-05	4.61	1.51	0.16	6.39E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_009	14.5	7.33	33.8	1038	546	82.6	82.6	41.7	15.9	1.13E-04	5.40E-05	4.58	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_010	15.5	7.44	39.7	1095	624	86.0	86.0	45.4	16.3	1.29E-04	5.57E-05	4.56	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521600_011	15.1	7.39	38.7	1010	596	85.0	85.0	44.5	16.1	1.25E-04	5.51E-05	4.55	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW521600_012	15.5	7.47	37.5	1352	607	98.5	98.5	45.1	16.5	1.27E-04	5.64E-05	4.61	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW521600_013	14.7	7.30	33.0	1032	542	84.0	84.0	41.3	15.9	1.17E-04	5.45E-05	4.56	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_014	14.4	7.32	33.8	1048	542	81.4	81.4	41.5	15.9	1.13E-04	5.40E-05	4.58	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_016	15.6	7.41	39.0	1341	652	90.8	90.8	45.9	16.2	1.35E-04	5.59E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521600_017	14.9	7.38	35.7	1252	577	91.6	91.6	42.5	16.1	1.18E-04	5.46E-05	4.62	1.52	0.16	6.40E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Notes:
[1] Conversion of NO_x to NO_2 using the Ozone Limiting Method and hourly concentrations of NO_2 and ozone. The ambient background concentrations measured at local monitoring stations are not added directly to the 1-hour and 24-hour modelled concentrations without background.

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build with Background

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE110000_001	3%	2%	6%	21%	9%	0%	0%	2%	1%	5%	2%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE110000_002	12%	6%	25%	48%	17%	15%	15%	25%	12%	12%	5%	3%	1%	4%	1%	1%	2%	1%	0%	0%
RE110000_003	9%	3%	17%	20%	22%	5%	5%	15%	6%	10%	3%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_004	3%	2%	5%	12%	8%	0%	0%	2%	1%	5%	2%	0%	0%	0%	0%	0%	2%	0%	0%	0%
RE110000_005	3%	2%	5%	11%	8%	0%	0%	2%	1%	6%	2%	0%	0%	0%	0%	0%	2%	1%	0%	0%
RE110000_006	-1%	0%	-4%	3%	0%	-3%	-3%	-7%	-3%	-2%	1%	-1%	0%	-2%	-1%	0%	0%	0%	0%	0%
RE110000_007	7%	2%	15%	18%	13%	8%	8%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_008	7%	3%	16%	23%	14%	11%	11%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_009	7%	3%	16%	28%	14%	12%	12%	15%	5%	8%	2%	1%	1%	3%	1%	0%	2%	0%	0%	0%
RE110000_010	7%	3%	16%	31%	14%	13%	13%	16%	5%	8%	2%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE110000_011	7%	3%	16%	34%	14%	14%	14%	15%	5%	8%	2%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE110000_020	7%	2%	15%	20%	12%	10%	10%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_021	7%	2%	15%	23%	13%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_022	7%	3%	16%	26%	14%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_023	7%	3%	16%	29%	14%	13%	13%	15%	5%	8%	2%	1%	1%	3%	1%	0%	2%	0%	0%	0%
RE110000_024	7%	3%	16%	32%	14%	13%	13%	15%	5%	8%	2%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE110000_025	7%	3%	16%	34%	14%	14%	14%	15%	5%	8%	2%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE110000_028	7%	2%	15%	20%	11%	8%	8%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_029	7%	2%	15%	22%	12%	11%	11%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_030	7%	2%	16%	25%	13%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_031	7%	2%	16%	28%	14%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_032	7%	2%	16%	31%	14%	13%	13%	15%	5%	8%	2%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE110000_045	7%	2%	15%	19%	10%	8%	8%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_046	7%	2%	15%	21%	10%	11%	11%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_047	7%	2%	15%	23%	11%	11%	11%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_048	7%	2%	15%	26%	12%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_049	7%	2%	16%	28%	12%	13%	13%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_050	7%	2%	15%	20%	10%	9%	9%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_051	7%	2%	15%	20%	9%	9%	9%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_052	7%	2%	14%	20%	9%	8%	8%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_053	7%	2%	14%	19%	9%	9%	9%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_054	7%	2%	14%	19%	9%	9%	9%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_055	7%	2%	14%	19%	8%	9%	9%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_056	7%	2%	15%	25%	10%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_057	7%	2%	15%	25%	10%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_058	7%	2%	15%	25%	11%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_059	7%	2%	15%	26%	11%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_060	7%	2%	15%	26%	11%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_061	7%	2%	10%	13%	8%	5%	5%	14%	5%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_062	7%	2%	13%	17%	8%	8%	8%	15%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_063	7%	2%	14%	18%	8%	10%	10%	15%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_064	7%	2%	14%	21%	9%	11%	11%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_065	7%	2%	15%	23%	9%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_066	7%	2%	15%	25%	10%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_067	7%	2%	15%	27%	10%	13%	13%	15%	5%	8%	2%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110000_069	7%	2%	12%	15%	8%	8%	8%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE110000_070	7%	2%	14%	19%	8%	11%	11%	15%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_071	7%	2%	14%	20%	8%	11%	11%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_072	7%	2%	15%	23%	9%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_073	7%	2%	15%	25%	10%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_112	7%	2%	12%	16%	8%	9%	9%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_113	7%	2%	14%	19%	7%	11%	11%	15%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_114	7%	2%	14%	20%	8%	11%	11%	15%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_115	7%	2%	14%	23%	9%	12%	12%	15%	5%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_123	6%	2%	10%	14%	7%	7%	7%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_124	7%	2%	13%	18%	7%	11%	11%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_125	7%	2%	14%	20%	8%	11%	11%	15%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_132	6%	2%	13%	18%	7%	11%	11%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_133	7%	2%	14%	20%	7%	12%	12%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_139	6%	2%	13%	18%	7%	11%	11%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_140	6%	2%	13%	21%	7%	12%	12%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_145	6%	2%	10%	15%	7%	8%	8%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_146	6%	2%	13%	19%	6%	11%	11%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_147	6%	2%	13%	21%	7%	12%	12%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_149	6%	2%	9%	14%	7%	7%	7%	14%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_150	6%	2%	12%	18%	6%	11%	11%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_151	6%	2%	13%	21%	6%	13%	13%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_165	6%	2%	13%	21%	6%	14%	14%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_167	6%	2%	13%	21%	6%	13%	13%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_173	6%	2%	9%	14%	6%	8%	8%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_177	6%	2%	13%	22%	7%	14%	14%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_178	6%	2%	12%	18%	6%	13%	13%	14%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_189	6%	2%	12%	18%	7%	11%	11%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_190	6%	2%	12%	18%	6%	12%	12%	14%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_191	6%	2%	13%	21%	6%	14%	14%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_239	6%	2%	13%	17%	4%	12%	12%	17%	6%	5%	1%	2%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_240	6%	3%	12%	17%	4%	11%	11%	17%	6%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_241	7%	3%	13%	15%	3%	9%	9%	18%	7%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_242	7%	3%	13%	17%	3%	11%	11%	17%	6%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_243	6%	3%	12%	17%	4%	12%	12%	17%	6%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_244	7%	3%	13%	18%	3%	13%	13%	17%	6%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_245	6%	3%	12%	17%	4%	11%	11%	17%	6%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_246	7%	3%	13%	16%	3%	10%	10%	18%	7%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_247	7%	3%	13%	18%	3%	13%	13%	17%	6%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_248	7%	3%	13%	18%	3%	13%	13%	17%	6%	5%	1%	2%	1%	3%	1%	0%	1%	0%	0%	0%
RE110000_249	7%	3%	13%	14%	3%	9%	9%	18%	7%	5%	1%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_253	6%	2%	13%	23%	6%	14%	14%	13%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_254	6%	2%	12%	21%	6%	12%	12%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_255	6%	2%	13%	23%	6%	14%	14%	13%	5%	6%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_256	6%	2%	11%	21%	6%	12%	12%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_257	6%	2%	11%	23%	6%	13%	13%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_265	6%	2%	12%	21%	6%	13%	13%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE110000_267	6%	2%	11%	17%	5%	12%	12%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_276	6%	2%	11%	23%	6%	13%	13%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_277	6%	2%	13%	23%	6%	13%	13%	13%	5%	6%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_278	6%	2%	13%	23%	6%	15%	15%	13%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_279	6%	2%	13%	22%	6%	13%	13%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_280	6%	2%	9%	14%	5%	8%	8%	13%	4%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_281	6%	2%	12%	19%	5%	13%	13%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_292	6%	2%	11%	19%	5%	12%	12%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_293	6%	2%	12%	21%	6%	13%	13%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_294	6%	2%	13%	22%	6%	13%	13%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_305	6%	2%	10%	20%	5%	12%	12%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_309	6%	2%	12%	19%	5%	13%	13%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_310	6%	2%	10%	18%	5%	11%	11%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_316	6%	2%	9%	15%	5%	10%	10%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_325	6%	2%	13%	21%	6%	13%	13%	14%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_329	6%	2%	13%	21%	6%	13%	13%	14%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_331	6%	2%	9%	15%	6%	8%	8%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_332	6%	2%	12%	19%	5%	14%	14%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_333	6%	2%	13%	23%	6%	14%	14%	13%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_342	6%	2%	10%	16%	6%	10%	10%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_344	6%	2%	12%	19%	6%	13%	13%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_345	6%	2%	13%	23%	6%	14%	14%	14%	5%	7%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE110000_353	6%	2%	9%	19%	5%	12%	12%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_355	6%	2%	10%	21%	6%	13%	13%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_378	5%	2%	8%	16%	5%	8%	8%	10%	5%	5%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_387	6%	2%	9%	15%	5%	9%	9%	11%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_390	5%	2%	7%	16%	6%	7%	7%	9%	6%	5%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_394	6%	2%	8%	19%	5%	9%	9%	10%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_397	6%	2%	10%	23%	6%	13%	13%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_401	8%	3%	16%	23%	20%	6%	6%	14%	6%	9%	3%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE110200_001	5%	5%	5%	-3%	6%	3%	3%	10%	9%	3%	5%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE110300_001	2%	3%	4%	25%	2%	1%	1%	0%	5%	2%	3%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE110300_002	2%	3%	2%	24%	2%	0%	0%	-2%	4%	0%	3%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE110300_003	1%	3%	0%	21%	1%	0%	0%	-2%	4%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110300_004	1%	2%	1%	21%	1%	0%	0%	-2%	4%	0%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE110400_001	1%	2%	0%	20%	2%	0%	0%	-2%	4%	0%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE110400_002	1%	2%	0%	20%	1%	0%	0%	-1%	4%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110500_001	1%	2%	-1%	22%	1%	-1%	-1%	-2%	4%	-1%	3%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE110500_002	2%	2%	-1%	22%	2%	-2%	-2%	-2%	4%	-1%	3%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE110600_001	2%	3%	0%	18%	2%	1%	1%	-1%	4%	0%	3%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110600_002	2%	2%	0%	20%	2%	0%	0%	-1%	4%	-1%	3%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110700_001	2%	3%	0%	15%	2%	3%	3%	-1%	4%	0%	3%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110700_002	2%	3%	1%	17%	3%	4%	4%	-2%	5%	0%	3%	0%	0%	1%	0%	0%	0%	1%	0%	0%
RE110800_001	2%	3%	0%	12%	3%	4%	4%	-1%	4%	0%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE110800_002	2%	3%	0%	7%	3%	5%	5%	0%	4%	0%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE110900_001	2%	3%	1%	3%	3%	6%	6%	0%	4%	0%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE110900_002	2%	3%	1%	3%	3%	7%	7%	0%	5%	0%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE111100_001	2%	3%	1%	25%	3%	8%	8%	0%	5%	1%	4%	0%	0%	1%	0%	0%	0%	1%	0%	0%
RE111200_001	2%	3%	1%	29%	3%	8%	8%	0%	5%	1%	4%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE111200_002	2%	3%	1%	27%	3%	8%	8%	0%	5%	1%	4%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE111300_001	2%	3%	1%	31%	3%	8%	8%	0%	5%	1%	4%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE111300_002	2%	3%	2%	35%	3%	8%	8%	0%	6%	1%	4%	1%	0%	2%	0%	0%	0%	1%	0%	0%
RE111300_003	2%	3%	2%	36%	4%	8%	8%	1%	6%	2%	4%	1%	0%	2%	0%	0%	0%	1%	0%	0%
RE111400_001	3%	3%	2%	37%	4%	9%	9%	1%	6%	3%	4%	1%	0%	2%	0%	0%	0%	1%	0%	0%
RE111400_002	3%	3%	3%	37%	4%	12%	12%	1%	6%	4%	4%	1%	0%	2%	0%	0%	0%	1%	0%	0%
RE111500_001	3%	3%	3%	38%	4%	15%	15%	1%	6%	5%	4%	1%	0%	2%	0%	0%	1%	1%	0%	0%
RE111500_002	3%	3%	4%	34%	5%	17%	17%	3%	7%	6%	5%	1%	0%	2%	0%	0%	1%	1%	0%	0%
RE111600_001	3%	4%	5%	38%	6%	16%	16%	4%	7%	7%	5%	1%	0%	2%	0%	0%	1%	1%	0%	0%
RE111600_002	4%	4%	7%	40%	6%	16%	16%	6%	8%	9%	5%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE111700_001	4%	3%	8%	11%	4%	13%	13%	7%	7%	9%	5%	0%	0%	0%	1%	0%	1%	1%	0%	0%
RE111700_002	5%	4%	8%	53%	6%	20%	20%	7%	9%	11%	6%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE111800_001	2%	2%	4%	13%	-1%	0%	0%	2%	3%	1%	1%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE111800_002	4%	4%	8%	11%	4%	13%	13%	7%	7%	9%	5%	0%	0%	0%	1%	0%	1%	1%	0%	0%
RE111800_003	4%	4%	8%	12%	5%	14%	14%	8%	7%	10%	5%	0%	0%	0%	1%	0%	2%	1%	0%	0%
RE111800_004	4%	4%	8%	13%	5%	15%	15%	8%	8%	10%	5%	0%	0%	0%	1%	0%	2%	1%	0%	0%
RE111800_005	5%	4%	10%	57%	7%	20%	20%	7%	9%	12%	6%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE111800_006	6%	5%	10%	58%	9%	22%	22%	8%	10%	13%	7%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE111800_007	6%	5%	11%	58%	10%	25%	25%	9%	11%	14%	7%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE111800_008	7%	5%	12%	60%	12%	25%	25%	9%	11%	14%	7%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE112100_001	3%	1%	5%	6%	9%	-1%	-1%	4%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE112200_001	3%	1%	5%	12%	5%	-5%	-5%	3%	2%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE113100_001	11%	4%	27%	201%	39%	38%	38%	14%	8%	18%	6%	4%	1%	8%	1%	0%	4%	1%	0%	0%
RE113200_001	13%	4%	25%	114%	44%	31%	31%	14%	7%	17%	6%	3%	1%	6%	1%	0%	4%	1%	0%	0%
RE113200_002	12%	5%	26%	121%	45%	33%	33%	14%	7%	19%	7%	4%	1%	7%	1%	0%	4%	1%	0%	0%
RE113300_001	15%	6%	32%	176%	53%	47%	47%	17%	9%	23%	7%	5%	1%	8%	1%	1%	5%	1%	0%	0%
RE210700_001	20%	6%	46%	189%	76%	81%	81%	31%	13%	32%	10%	5%	1%	8%	2%	1%	6%	2%	0%	0%
RE210700_002	25%	7%	55%	223%	93%	97%	97%	37%	15%	39%	12%	6%	1%	10%	3%	1%	8%	2%	0%	0%
RE210700_003	13%	4%	29%	118%	33%	63%	63%	23%	9%	23%	7%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE210900_001	21%	6%	33%	176%	79%	80%	80%	36%	15%	33%	11%	5%	1%	10%	2%	1%	6%	2%	0%	0%
RE210900_003	26%	7%	52%	211%	86%	95%	95%	38%	16%	42%	12%	6%	2%	10%	3%	1%	8%	2%	0%	0%
RE210900_004	17%	5%	29%	171%	68%	72%	72%	30%	12%	27%	9%	5%	1%	8%	2%	1%	5%	1%	0%	0%
RE210900_005	20%	5%	37%	198%	76%	77%	77%	31%	12%	31%	9%	5%	1%	9%	2%	1%	6%	2%	0%	0%
RE210900_006	11%	4%	18%	116%	49%	59%	59%	25%	10%	20%	8%	4%	1%	7%	1%	1%	4%	1%	0%	0%
RE210900_007	12%	4%	21%	126%	43%	56%	56%	24%	9%	22%	7%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE210900_008	11%	4%	20%	123%	38%	55%	55%	24%	9%	21%	7%	3%	1%	6%	1%	0%	4%	1%	0%	0%
RE211000_001	23%	6%	49%	194%	82%	88%	88%	34%	13%	37%	10%	5%	1%	9%	3%	1%	8%	2%	0%	0%
RE211000_002	19%	5%	45%	182%	77%	77%	77%	33%	12%	35%	9%	5%	1%	9%	2%	1%	8%	1%	0%	0%
RE211000_003	15%	4%	41%	171%	69%	67%	67%	31%	10%	31%	8%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE211000_004	13%	4%	37%	164%	62%	66%	66%	29%	9%	28%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE211000_005	23%	6%	48%	191%	80%	86%	86%	33%	12%	36%	10%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE211000_006	11%	3%	30%	138%	50%	56%	56%	25%	8%	23%	6%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE211000_007	9%	3%	16%	102%	27%	51%	51%	21%	8%	18%	6%	3%	1%	5%	1%	0%	4%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE211000_008	9%	3%	17%	87%	28%	47%	47%	20%	7%	18%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE211000_009	9%	3%	17%	86%	30%	44%	44%	19%	7%	17%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE211000_010	9%	3%	17%	84%	30%	45%	45%	18%	7%	17%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE211100_001	11%	3%	31%	130%	46%	55%	55%	23%	8%	22%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE211100_002	15%	4%	41%	171%	65%	68%	68%	28%	8%	27%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE211100_003	8%	2%	21%	95%	24%	50%	50%	22%	7%	19%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RE211100_004	8%	2%	16%	73%	29%	44%	44%	18%	7%	17%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE211100_005	8%	2%	15%	67%	28%	40%	40%	16%	6%	16%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE211100_006	7%	2%	15%	56%	26%	35%	35%	16%	6%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE211100_009	9%	3%	23%	101%	29%	53%	53%	23%	7%	20%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RE211200_001	12%	3%	36%	147%	57%	62%	62%	25%	8%	24%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE211200_002	11%	3%	31%	128%	47%	52%	52%	22%	7%	21%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE211200_003	7%	2%	15%	85%	19%	45%	45%	16%	6%	14%	4%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE211200_004	5%	2%	10%	78%	21%	40%	40%	13%	6%	11%	4%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE211200_005	8%	2%	20%	89%	21%	52%	52%	19%	6%	17%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE211400_001	29%	11%	75%	244%	91%	110%	110%	53%	24%	61%	19%	6%	2%	10%	4%	1%	12%	3%	0%	0%
RE211500_002	18%	4%	43%	160%	47%	80%	80%	29%	9%	32%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE211500_003	21%	7%	52%	192%	70%	87%	87%	40%	15%	42%	12%	4%	1%	8%	3%	1%	8%	2%	0%	0%
RE211500_004	18%	4%	43%	165%	52%	82%	82%	29%	9%	31%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE211900_001	20%	7%	52%	168%	57%	94%	94%	40%	16%	43%	13%	4%	1%	7%	3%	1%	8%	2%	0%	0%
RE212600_001	14%	4%	32%	87%	29%	61%	61%	27%	8%	23%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE212700_001	15%	4%	32%	79%	28%	61%	61%	30%	9%	24%	6%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RE212700_002	18%	7%	34%	156%	39%	94%	94%	37%	15%	29%	10%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE212800_001	16%	5%	32%	59%	31%	62%	62%	31%	10%	24%	6%	3%	1%	4%	2%	1%	4%	1%	0%	0%
RE212800_002	18%	6%	34%	53%	35%	71%	71%	32%	11%	25%	7%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RE212900_001	19%	6%	36%	56%	38%	74%	74%	34%	12%	27%	8%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE213000_001	18%	6%	41%	151%	38%	76%	76%	35%	12%	31%	9%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214400_001	14%	5%	32%	49%	37%	42%	42%	23%	9%	19%	6%	2%	1%	3%	1%	1%	4%	1%	0%	0%
RE214600_002	23%	8%	52%	234%	66%	78%	78%	31%	14%	37%	10%	5%	1%	10%	3%	1%	7%	2%	0%	0%
RE214600_003	22%	8%	49%	191%	63%	75%	75%	28%	12%	34%	9%	6%	1%	10%	2%	1%	7%	1%	0%	0%
RE214600_004	22%	7%	48%	169%	58%	62%	62%	27%	12%	31%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_005	21%	7%	46%	161%	59%	60%	60%	27%	11%	30%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214600_006	21%	7%	46%	157%	60%	59%	59%	26%	11%	30%	8%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_007	22%	7%	53%	196%	66%	81%	81%	30%	11%	35%	8%	6%	1%	10%	2%	1%	7%	1%	0%	0%
RE214600_008	22%	7%	51%	188%	64%	76%	76%	29%	12%	35%	8%	6%	1%	10%	2%	1%	7%	1%	0%	0%
RE214600_009	22%	7%	52%	207%	68%	79%	79%	30%	12%	36%	9%	6%	1%	10%	3%	1%	7%	1%	0%	0%
RE214600_010	22%	7%	52%	212%	68%	80%	80%	30%	12%	36%	9%	6%	1%	10%	3%	1%	7%	1%	0%	0%
RE214600_011	22%	7%	53%	210%	68%	77%	77%	30%	12%	36%	9%	6%	1%	10%	3%	1%	7%	1%	0%	0%
RE214600_012	23%	8%	53%	233%	64%	75%	75%	32%	13%	36%	9%	5%	1%	10%	2%	1%	7%	1%	0%	0%
RE214600_013	24%	9%	53%	235%	67%	80%	80%	31%	14%	37%	10%	6%	1%	10%	3%	1%	7%	2%	0%	0%
RE214600_014	23%	8%	51%	213%	69%	79%	79%	29%	13%	36%	9%	6%	1%	11%	3%	1%	7%	2%	0%	0%
RE214600_015	23%	8%	50%	204%	67%	77%	77%	29%	13%	35%	9%	6%	1%	11%	3%	1%	7%	1%	0%	0%
RE214600_016	22%	7%	49%	178%	60%	66%	66%	28%	12%	33%	9%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_017	22%	7%	49%	172%	57%	64%	64%	28%	12%	32%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_018	21%	7%	47%	166%	59%	60%	60%	27%	12%	31%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_019	21%	7%	46%	154%	60%	59%	59%	26%	11%	30%	8%	5%	1%	8%	2%	1%	6%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214600_020	21%	7%	45%	149%	60%	59%	59%	26%	11%	29%	8%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_021	20%	7%	43%	142%	60%	59%	59%	26%	11%	28%	8%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_022	22%	7%	51%	197%	66%	80%	80%	30%	12%	35%	8%	6%	1%	10%	2%	1%	7%	1%	0%	0%
RE214600_023	21%	6%	52%	170%	58%	61%	61%	29%	11%	32%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_024	21%	6%	51%	166%	60%	60%	60%	29%	11%	32%	8%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_025	21%	6%	50%	163%	61%	60%	60%	28%	11%	32%	7%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_026	21%	6%	50%	161%	61%	59%	59%	28%	11%	31%	7%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_027	21%	6%	49%	159%	62%	59%	59%	28%	10%	31%	7%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_028	21%	6%	48%	156%	62%	59%	59%	28%	10%	31%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_029	21%	6%	48%	153%	62%	59%	59%	28%	10%	30%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_030	21%	6%	47%	150%	62%	59%	59%	27%	10%	30%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_031	21%	6%	46%	147%	61%	58%	58%	27%	10%	29%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_032	20%	6%	45%	142%	61%	59%	59%	27%	10%	28%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_033	19%	6%	43%	138%	60%	59%	59%	26%	10%	28%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_034	20%	6%	44%	139%	60%	59%	59%	27%	10%	28%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_035	20%	6%	45%	141%	60%	59%	59%	27%	10%	29%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_036	20%	6%	46%	143%	61%	59%	59%	27%	10%	29%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_037	21%	7%	53%	171%	58%	62%	62%	29%	11%	33%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_038	21%	6%	51%	168%	59%	61%	61%	29%	11%	32%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_039	21%	6%	51%	167%	59%	60%	60%	29%	11%	32%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_040	21%	6%	50%	164%	61%	60%	60%	29%	11%	32%	7%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_041	20%	6%	45%	144%	61%	58%	58%	27%	10%	29%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_042	20%	6%	44%	140%	60%	59%	59%	26%	10%	28%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_043	19%	6%	43%	136%	60%	59%	59%	26%	10%	28%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_044	21%	6%	47%	148%	61%	59%	59%	28%	11%	30%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_045	21%	6%	48%	151%	61%	59%	59%	28%	11%	30%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_046	21%	6%	49%	157%	60%	60%	60%	28%	11%	31%	8%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_047	21%	6%	49%	159%	60%	60%	60%	28%	11%	31%	8%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_048	21%	6%	50%	164%	60%	60%	60%	28%	11%	32%	8%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_049	21%	7%	50%	167%	59%	60%	60%	28%	11%	32%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_050	21%	7%	51%	169%	59%	61%	61%	29%	11%	32%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_051	16%	5%	32%	103%	46%	49%	49%	23%	9%	20%	6%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RE214600_052	16%	5%	32%	104%	46%	49%	49%	23%	9%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214600_053	20%	6%	47%	146%	61%	59%	59%	27%	10%	30%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214600_054	21%	6%	49%	155%	61%	59%	59%	28%	11%	31%	7%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_055	21%	6%	50%	162%	60%	60%	60%	28%	11%	31%	8%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_056	21%	7%	51%	170%	58%	61%	61%	29%	11%	32%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_057	16%	5%	32%	106%	47%	47%	47%	24%	9%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214600_058	15%	5%	32%	104%	45%	48%	48%	24%	8%	20%	6%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_059	15%	5%	31%	103%	45%	49%	49%	23%	8%	20%	6%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_060	15%	5%	31%	101%	45%	49%	49%	23%	9%	19%	6%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_061	16%	5%	31%	100%	45%	48%	48%	23%	9%	19%	6%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_062	16%	5%	32%	105%	46%	48%	48%	24%	9%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214600_063	15%	5%	31%	102%	45%	49%	49%	23%	9%	20%	6%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_064	16%	5%	33%	110%	49%	49%	49%	24%	9%	21%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214600_065	16%	5%	33%	110%	49%	49%	49%	24%	9%	21%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214600_066	16%	5%	33%	109%	49%	49%	49%	24%	9%	21%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214600_067	16%	5%	33%	109%	48%	49%	49%	24%	9%	21%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214600_068	16%	5%	33%	108%	48%	50%	50%	24%	9%	21%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214600_069	18%	6%	36%	118%	54%	54%	54%	25%	10%	24%	7%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_070	19%	5%	38%	128%	57%	57%	57%	25%	9%	25%	6%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_071	18%	5%	38%	127%	57%	56%	56%	25%	9%	25%	7%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_072	18%	5%	38%	125%	56%	55%	55%	25%	9%	25%	7%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_073	18%	5%	37%	123%	56%	54%	54%	25%	9%	25%	7%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_074	18%	6%	37%	121%	55%	53%	53%	25%	10%	24%	7%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_075	18%	6%	39%	128%	57%	55%	55%	26%	10%	26%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_076	19%	6%	40%	131%	58%	57%	57%	26%	10%	26%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_077	19%	6%	40%	129%	58%	56%	56%	26%	10%	26%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_078	19%	6%	40%	132%	59%	58%	58%	26%	10%	26%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_079	19%	6%	41%	134%	59%	59%	59%	26%	10%	26%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_080	19%	5%	41%	136%	60%	60%	60%	26%	10%	27%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_081	24%	8%	52%	218%	70%	81%	81%	30%	14%	37%	10%	6%	1%	11%	3%	1%	7%	2%	0%	0%
RE214600_082	22%	7%	53%	179%	61%	69%	69%	30%	11%	34%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214600_083	23%	8%	52%	232%	65%	77%	77%	31%	13%	36%	9%	5%	1%	10%	3%	1%	7%	2%	0%	0%
RE214700_002	22%	7%	51%	223%	60%	69%	69%	30%	11%	33%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_003	22%	7%	51%	223%	60%	70%	70%	31%	12%	33%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_004	22%	7%	51%	225%	61%	71%	71%	31%	12%	34%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_005	22%	7%	52%	226%	61%	71%	71%	32%	12%	34%	9%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214700_006	22%	7%	53%	227%	61%	71%	71%	32%	12%	35%	9%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214700_007	22%	7%	53%	230%	62%	71%	71%	32%	13%	36%	9%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214700_008	23%	8%	53%	232%	63%	73%	73%	32%	13%	36%	9%	5%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_009	21%	5%	47%	157%	61%	61%	61%	27%	10%	29%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_010	21%	6%	46%	150%	62%	60%	60%	27%	10%	29%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_011	21%	6%	47%	154%	61%	60%	60%	27%	10%	30%	7%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_012	21%	6%	48%	158%	61%	60%	60%	27%	10%	30%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_013	21%	6%	49%	162%	61%	61%	61%	28%	10%	31%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_014	21%	6%	51%	170%	58%	63%	63%	29%	10%	32%	7%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214700_015	22%	7%	53%	207%	67%	74%	74%	30%	11%	35%	8%	5%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_016	22%	7%	52%	207%	67%	73%	73%	30%	11%	35%	8%	5%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_017	22%	7%	52%	206%	67%	75%	75%	30%	11%	34%	8%	5%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_018	22%	6%	50%	187%	64%	71%	71%	29%	10%	33%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_019	21%	6%	50%	175%	60%	66%	66%	29%	10%	32%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_020	21%	6%	49%	165%	60%	63%	63%	28%	10%	31%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_021	21%	6%	48%	161%	60%	62%	62%	28%	10%	30%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_022	21%	5%	49%	167%	58%	63%	63%	28%	9%	31%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_023	21%	6%	49%	168%	58%	63%	63%	28%	10%	31%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_024	21%	6%	50%	180%	62%	67%	67%	29%	10%	32%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_025	21%	6%	50%	194%	65%	69%	69%	29%	10%	33%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_026	22%	7%	50%	222%	60%	67%	67%	30%	11%	33%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_027	21%	5%	48%	165%	59%	63%	63%	28%	9%	30%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_028	22%	6%	50%	167%	60%	62%	62%	28%	10%	32%	7%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RE214700_029	21%	6%	51%	169%	58%	61%	61%	29%	10%	32%	7%	5%	1%	8%	2%	1%	7%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214700_030	22%	6%	52%	180%	61%	67%	67%	29%	11%	33%	8%	5%	1%	9%	2%	1%	7%	1%	0%	0%
RE214700_031	22%	6%	52%	189%	64%	74%	74%	30%	11%	34%	8%	5%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_032	22%	7%	53%	197%	66%	80%	80%	30%	11%	35%	8%	6%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_033	22%	7%	54%	208%	67%	75%	75%	30%	12%	36%	8%	6%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_034	22%	6%	51%	206%	67%	73%	73%	29%	11%	34%	8%	5%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_035	22%	6%	51%	197%	66%	75%	75%	29%	11%	34%	8%	5%	1%	10%	2%	1%	7%	1%	0%	0%
RE214700_036	21%	6%	50%	169%	57%	63%	63%	28%	10%	31%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_037	21%	6%	50%	168%	58%	63%	63%	28%	10%	31%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_038	21%	6%	50%	189%	64%	70%	70%	29%	10%	33%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_039	21%	6%	51%	200%	66%	71%	71%	29%	10%	33%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_040	22%	6%	51%	204%	66%	71%	71%	29%	11%	33%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214700_041	16%	5%	33%	109%	49%	49%	49%	24%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_042	16%	5%	33%	110%	49%	50%	50%	24%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_043	16%	4%	34%	114%	52%	53%	53%	25%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_044	16%	4%	34%	116%	52%	54%	54%	25%	8%	21%	6%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214700_045	16%	4%	34%	118%	53%	54%	54%	25%	8%	21%	6%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214700_046	16%	4%	34%	119%	53%	55%	55%	26%	8%	21%	6%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214700_047	16%	4%	34%	120%	53%	55%	55%	26%	8%	21%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214700_048	15%	4%	33%	115%	51%	53%	53%	25%	8%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_049	15%	4%	33%	110%	50%	53%	53%	25%	8%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_050	15%	4%	34%	110%	49%	51%	51%	24%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_051	16%	4%	33%	109%	48%	49%	49%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_052	15%	5%	33%	107%	47%	47%	47%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_053	15%	5%	32%	106%	46%	47%	47%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_054	16%	5%	32%	108%	47%	47%	47%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_055	16%	5%	33%	109%	48%	48%	48%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_056	16%	5%	33%	109%	48%	48%	48%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_057	16%	5%	34%	110%	50%	50%	50%	24%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_058	16%	5%	34%	111%	50%	51%	51%	25%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_059	16%	5%	34%	111%	51%	52%	52%	25%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_060	16%	5%	34%	113%	51%	53%	53%	25%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_061	16%	4%	34%	121%	54%	55%	55%	26%	8%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214700_062	15%	4%	33%	114%	51%	53%	53%	25%	8%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_063	15%	4%	33%	113%	50%	53%	53%	25%	8%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_064	15%	4%	33%	112%	50%	53%	53%	25%	8%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_065	15%	4%	34%	110%	49%	51%	51%	25%	8%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_066	15%	4%	34%	109%	48%	50%	50%	24%	8%	21%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_067	16%	5%	33%	108%	47%	48%	48%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_068	15%	5%	33%	108%	47%	48%	48%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_069	15%	5%	32%	105%	46%	47%	47%	24%	8%	20%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214700_070	17%	4%	36%	130%	57%	57%	57%	27%	8%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_071	17%	5%	35%	126%	56%	57%	57%	26%	8%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_072	17%	5%	35%	125%	56%	57%	57%	26%	8%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_073	17%	5%	35%	123%	55%	55%	55%	26%	8%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_074	17%	5%	34%	120%	54%	54%	54%	25%	8%	22%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_075	17%	5%	34%	116%	52%	53%	53%	25%	8%	22%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214700_076	16%	5%	33%	111%	50%	50%	50%	24%	9%	21%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214700_077	17%	4%	35%	128%	57%	58%	58%	27%	8%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_078	17%	5%	35%	127%	57%	58%	58%	27%	8%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_079	17%	5%	35%	124%	56%	56%	56%	26%	8%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_080	17%	5%	34%	121%	54%	55%	55%	26%	8%	22%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_081	17%	5%	34%	118%	53%	54%	54%	25%	8%	22%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_082	16%	5%	33%	114%	52%	52%	52%	25%	9%	22%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_083	16%	5%	33%	112%	51%	52%	52%	24%	9%	22%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_084	16%	5%	33%	111%	51%	51%	51%	24%	9%	21%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214700_085	16%	5%	33%	110%	50%	50%	50%	24%	9%	21%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214700_086	19%	5%	41%	139%	61%	61%	61%	27%	9%	27%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214700_087	19%	5%	42%	140%	61%	61%	61%	27%	9%	27%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214700_088	19%	5%	41%	139%	61%	61%	61%	26%	9%	27%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214700_089	19%	5%	41%	137%	60%	61%	61%	26%	9%	26%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214700_090	19%	5%	40%	136%	60%	61%	61%	26%	9%	26%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214700_091	19%	5%	40%	134%	59%	60%	60%	26%	9%	26%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214700_092	19%	5%	39%	133%	59%	59%	59%	26%	9%	26%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214700_093	19%	5%	42%	142%	61%	60%	60%	27%	9%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_094	20%	5%	43%	146%	61%	60%	60%	27%	9%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_095	20%	5%	43%	148%	61%	60%	60%	28%	9%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_096	19%	5%	39%	130%	58%	58%	58%	25%	9%	25%	6%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214700_097	19%	5%	38%	129%	57%	57%	57%	25%	9%	25%	6%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_098	19%	5%	43%	144%	61%	60%	60%	27%	9%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_099	20%	5%	44%	150%	61%	60%	60%	28%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_100	20%	5%	42%	137%	60%	59%	59%	26%	9%	27%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_101	20%	5%	43%	140%	61%	60%	60%	26%	9%	27%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_102	20%	5%	43%	141%	61%	60%	60%	26%	9%	27%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_103	20%	5%	43%	143%	61%	61%	61%	27%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_104	20%	5%	44%	145%	62%	61%	61%	27%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_105	20%	5%	44%	148%	62%	61%	61%	27%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_106	20%	5%	46%	156%	61%	61%	61%	28%	9%	29%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_107	20%	5%	46%	157%	61%	62%	62%	28%	9%	29%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_108	20%	5%	42%	139%	61%	60%	60%	26%	9%	27%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_109	20%	5%	43%	142%	61%	61%	61%	27%	9%	28%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_110	20%	5%	45%	150%	62%	61%	61%	27%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_111	20%	5%	45%	153%	62%	61%	61%	27%	9%	29%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_112	20%	5%	46%	155%	62%	61%	61%	28%	9%	29%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_113	20%	5%	46%	158%	61%	62%	62%	28%	9%	29%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214700_114	20%	5%	46%	160%	60%	63%	63%	28%	9%	29%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214800_004	14%	4%	30%	108%	44%	50%	50%	23%	7%	19%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RE214800_005	21%	6%	51%	199%	66%	71%	71%	29%	10%	33%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214800_006	21%	6%	50%	186%	63%	68%	68%	29%	10%	32%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214800_007	20%	5%	48%	166%	56%	62%	62%	28%	9%	30%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214800_012	22%	6%	50%	220%	60%	66%	66%	30%	11%	33%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214800_013	21%	6%	50%	220%	60%	66%	66%	30%	11%	33%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214800_014	22%	6%	50%	220%	59%	67%	67%	30%	11%	33%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214800_015	21%	6%	51%	202%	66%	72%	72%	29%	10%	33%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214800_016	21%	6%	50%	193%	65%	68%	68%	29%	10%	33%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214800_017	21%	5%	49%	176%	60%	65%	65%	29%	9%	32%	7%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214800_018	20%	5%	49%	167%	57%	62%	62%	28%	9%	31%	7%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RE214800_019	16%	4%	34%	122%	54%	55%	55%	26%	8%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_020	16%	4%	34%	123%	54%	55%	55%	26%	8%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_021	15%	4%	33%	118%	52%	55%	55%	25%	8%	21%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_022	15%	4%	33%	117%	51%	54%	54%	25%	8%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214800_023	16%	4%	35%	127%	54%	55%	55%	26%	8%	22%	5%	3%	1%	6%	2%	1%	4%	1%	0%	0%
RE214800_024	16%	4%	33%	123%	52%	55%	55%	26%	8%	21%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_025	16%	4%	35%	132%	55%	56%	56%	27%	8%	23%	5%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_026	16%	4%	36%	135%	54%	56%	56%	27%	7%	24%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_027	16%	4%	34%	130%	53%	54%	54%	26%	7%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_028	16%	4%	34%	126%	53%	54%	54%	26%	7%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_029	16%	4%	34%	125%	53%	54%	54%	26%	7%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_030	16%	4%	33%	124%	53%	54%	54%	26%	7%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_031	15%	4%	32%	117%	50%	54%	54%	25%	7%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214800_032	16%	4%	35%	128%	54%	55%	55%	26%	8%	22%	5%	3%	1%	6%	2%	1%	4%	1%	0%	0%
RE214800_033	16%	4%	35%	130%	54%	55%	55%	27%	8%	23%	5%	3%	1%	6%	2%	1%	4%	1%	0%	0%
RE214800_034	16%	4%	35%	131%	54%	55%	55%	27%	8%	23%	5%	3%	1%	6%	2%	1%	4%	1%	0%	0%
RE214800_035	16%	4%	36%	133%	55%	56%	56%	27%	7%	23%	5%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_036	16%	4%	36%	134%	55%	56%	56%	27%	7%	23%	5%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_037	16%	4%	36%	135%	55%	56%	56%	27%	7%	23%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_038	16%	4%	35%	132%	54%	55%	55%	26%	7%	23%	5%	3%	1%	6%	2%	1%	4%	1%	0%	0%
RE214800_039	16%	4%	34%	131%	54%	54%	54%	26%	7%	22%	5%	3%	1%	6%	2%	1%	4%	1%	0%	0%
RE214800_040	16%	4%	34%	129%	53%	54%	54%	26%	7%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_041	16%	4%	34%	127%	53%	54%	54%	26%	7%	22%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_042	15%	4%	32%	115%	49%	53%	53%	25%	7%	20%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214800_043	15%	4%	32%	116%	50%	54%	54%	25%	7%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214800_044	15%	4%	32%	119%	50%	54%	54%	25%	7%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214800_045	15%	4%	32%	120%	51%	54%	54%	25%	7%	21%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE214800_046	15%	4%	32%	122%	51%	54%	54%	25%	7%	21%	5%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE214800_052	14%	4%	31%	113%	48%	53%	53%	24%	7%	20%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RE214800_053	14%	4%	31%	112%	48%	53%	53%	24%	7%	20%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RE214800_056	14%	4%	31%	115%	49%	53%	53%	24%	7%	20%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RE214800_057	14%	4%	31%	111%	47%	52%	52%	24%	7%	20%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RE214800_058	14%	4%	31%	110%	47%	52%	52%	24%	7%	20%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RE214800_059	17%	4%	36%	131%	57%	57%	57%	27%	8%	23%	6%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_060	17%	4%	36%	132%	57%	56%	56%	27%	8%	23%	6%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_061	20%	5%	44%	153%	60%	60%	60%	28%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214800_062	17%	4%	37%	136%	57%	57%	57%	27%	8%	24%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_063	17%	4%	38%	137%	56%	57%	57%	27%	8%	24%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_064	17%	4%	39%	139%	56%	57%	57%	28%	8%	25%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214800_065	20%	5%	44%	151%	61%	60%	60%	28%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214800_066	20%	5%	44%	153%	60%	61%	61%	28%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214800_067	17%	4%	38%	136%	57%	57%	57%	27%	8%	24%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214800_068	17%	4%	38%	138%	56%	58%	58%	28%	8%	25%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_069	17%	4%	39%	138%	56%	58%	58%	28%	8%	25%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214800_070	17%	4%	40%	143%	55%	56%	56%	28%	8%	25%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214800_071	17%	4%	40%	144%	55%	56%	56%	27%	8%	25%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214800_072	17%	4%	39%	142%	56%	57%	57%	28%	8%	25%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214800_073	20%	5%	46%	161%	59%	61%	61%	28%	9%	29%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214800_074	20%	5%	46%	162%	59%	60%	60%	28%	9%	29%	6%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RE214800_075	17%	4%	37%	135%	57%	57%	57%	27%	8%	24%	6%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214800_076	21%	6%	50%	218%	60%	65%	65%	29%	11%	32%	8%	5%	1%	9%	2%	1%	6%	1%	0%	0%
RE214900_001	16%	4%	36%	136%	54%	56%	56%	27%	7%	24%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214900_008	18%	4%	40%	146%	55%	55%	55%	27%	8%	26%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214900_009	18%	4%	40%	146%	55%	55%	55%	27%	8%	26%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE214900_010	18%	4%	40%	147%	54%	54%	54%	27%	7%	26%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE217600_001	10%	3%	18%	71%	23%	35%	35%	19%	7%	13%	4%	2%	1%	3%	1%	0%	2%	1%	0%	0%
RE217600_002	9%	3%	19%	53%	25%	35%	35%	17%	6%	13%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE218700_001	11%	3%	18%	42%	24%	25%	25%	15%	5%	15%	5%	1%	1%	3%	1%	0%	3%	1%	0%	0%
RE218700_002	9%	3%	17%	37%	21%	19%	19%	14%	5%	13%	4%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE220800_001	8%	3%	15%	106%	20%	27%	27%	15%	7%	10%	4%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE220900_001	11%	4%	24%	91%	21%	34%	34%	21%	8%	14%	5%	2%	1%	4%	1%	0%	2%	1%	0%	0%
RE220900_002	7%	3%	13%	91%	19%	31%	31%	14%	6%	11%	4%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE220900_003	7%	3%	12%	106%	20%	29%	29%	14%	7%	10%	4%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE221000_001	7%	3%	13%	90%	17%	31%	31%	15%	7%	11%	4%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE221000_002	8%	3%	14%	81%	16%	31%	31%	14%	7%	12%	4%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE221300_001	9%	4%	18%	79%	16%	36%	36%	22%	8%	14%	5%	2%	1%	4%	1%	0%	2%	1%	0%	0%
RE221300_002	9%	4%	19%	82%	17%	38%	38%	25%	9%	16%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE221300_003	8%	3%	16%	114%	21%	31%	31%	14%	7%	11%	4%	3%	0%	5%	1%	0%	2%	1%	0%	0%
RE222600_001	5%	2%	17%	91%	21%	32%	32%	26%	5%	17%	3%	2%	1%	4%	1%	0%	3%	0%	0%	0%
RE222700_001	2%	1%	6%	141%	29%	40%	40%	24%	7%	17%	4%	4%	1%	6%	1%	0%	3%	1%	0%	0%
RE222700_002	3%	1%	6%	150%	32%	48%	48%	23%	7%	16%	4%	4%	1%	7%	1%	0%	3%	1%	0%	0%
RE222700_003	3%	1%	8%	151%	32%	48%	48%	22%	7%	16%	5%	4%	1%	7%	1%	0%	3%	1%	0%	0%
RE222700_004	4%	1%	11%	149%	32%	51%	51%	22%	8%	17%	5%	4%	1%	7%	1%	0%	3%	1%	0%	0%
RE222700_005	5%	1%	14%	142%	34%	52%	52%	26%	8%	19%	5%	4%	1%	6%	1%	0%	3%	1%	0%	0%
RE222700_006	13%	3%	33%	137%	44%	61%	61%	36%	11%	31%	7%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE222800_001	0%	0%	7%	139%	29%	38%	38%	30%	6%	21%	4%	4%	1%	6%	2%	1%	4%	1%	0%	0%
RE222800_002	0%	0%	6%	152%	31%	43%	43%	29%	6%	20%	4%	4%	1%	7%	1%	1%	4%	1%	0%	0%
RE222800_003	0%	0%	3%	165%	34%	47%	47%	27%	7%	20%	4%	4%	1%	7%	1%	0%	3%	1%	0%	0%
RE222800_004	17%	4%	44%	189%	67%	88%	88%	48%	16%	48%	10%	5%	2%	9%	4%	1%	9%	1%	0%	0%
RE222800_005	4%	1%	13%	94%	24%	32%	32%	25%	5%	16%	3%	2%	1%	4%	1%	0%	3%	0%	0%	0%
RE222900_001	2%	1%	6%	169%	36%	51%	51%	27%	7%	19%	5%	4%	1%	7%	1%	0%	3%	1%	0%	0%
RE223100_001	21%	4%	58%	157%	50%	70%	70%	40%	12%	33%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE224000_001	2%	0%	1%	55%	21%	33%	33%	13%	5%	11%	4%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE224000_002	5%	2%	6%	70%	20%	50%	50%	16%	7%	13%	5%	2%	1%	3%	1%	0%	2%	1%	0%	0%
RE224000_003	0%	-1%	-3%	56%	19%	28%	28%	10%	4%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE224000_004	3%	1%	2%	52%	18%	28%	28%	10%	4%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE224000_005	0%	0%	-1%	54%	16%	25%	25%	10%	4%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE224000_006	3%	1%	7%	54%	15%	27%	27%	12%	4%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE224000_007	3%	1%	7%	43%	16%	24%	24%	12%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE224000_008	2%	0%	1%	58%	21%	33%	33%	12%	5%	11%	4%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE224100_001	7%	1%	19%	69%	27%	33%	33%	21%	7%	17%	6%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE224200_001	17%	4%	38%	81%	35%	54%	54%	28%	10%	20%	6%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RE225600_001	14%	6%	28%	138%	47%	60%	60%	22%	10%	17%	5%	3%	1%	6%	1%	0%	3%	1%	0%	0%
RE225700_001	16%	6%	33%	153%	56%	60%	60%	23%	9%	21%	5%	3%	1%	6%	2%	1%	3%	1%	0%	0%
RE225700_002	19%	8%	36%	180%	46%	92%	92%	35%	17%	29%	9%	5%	1%	9%	2%	1%	5%	1%	0%	0%
RE225800_001	19%	8%	37%	164%	42%	68%	68%	28%	10%	19%	6%	4%	1%	7%	1%	0%	3%	1%	0%	0%
RE226500_001	12%	6%	12%	80%	19%	60%	60%	18%	13%	7%	6%	3%	1%	6%	1%	0%	1%	1%	0%	0%
RE226500_002	14%	5%	24%	64%	18%	63%	63%	26%	11%	12%	5%	2%	1%	4%	1%	0%	2%	1%	0%	0%
RE226600_001	14%	5%	23%	43%	16%	58%	58%	24%	11%	10%	4%	2%	1%	3%	1%	0%	2%	1%	0%	0%
RE226700_001	10%	6%	9%	72%	9%	51%	51%	15%	11%	4%	5%	3%	0%	5%	1%	0%	0%	1%	0%	0%
RE226800_001	8%	5%	7%	73%	8%	48%	48%	12%	11%	3%	5%	2%	0%	4%	1%	0%	0%	1%	0%	0%
RE227000_001	9%	4%	18%	33%	15%	39%	39%	13%	8%	6%	4%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE227100_001	7%	4%	16%	17%	12%	33%	33%	8%	8%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE227100_002	6%	4%	14%	20%	10%	28%	28%	6%	7%	4%	2%	2%	0%	3%	0%	0%	0%	0%	0%	0%
RE227300_001	6%	2%	16%	32%	4%	10%	10%	11%	4%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE227800_001	12%	5%	27%	24%	19%	39%	39%	19%	8%	10%	3%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RE227900_001	11%	5%	20%	49%	18%	39%	39%	20%	8%	9%	4%	1%	1%	2%	1%	0%	1%	1%	0%	0%
RE228000_001	2%	1%	2%	7%	1%	-2%	-2%	1%	2%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE228000_002	2%	1%	2%	7%	1%	-1%	-1%	1%	2%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE228000_003	2%	1%	2%	8%	1%	1%	1%	1%	2%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE228000_004	2%	1%	2%	8%	1%	-1%	-1%	1%	2%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE228000_005	1%	1%	0%	-4%	1%	-5%	-5%	-2%	2%	3%	1%	0%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228000_006	1%	1%	0%	-4%	1%	1%	1%	-3%	2%	1%	1%	0%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228000_007	1%	1%	0%	-5%	1%	-1%	-1%	-2%	2%	1%	1%	0%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228000_008	1%	0%	1%	20%	7%	8%	8%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE228000_009	1%	1%	0%	0%	2%	3%	3%	-1%	2%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE228100_001	1%	1%	0%	0%	1%	2%	2%	-1%	2%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE228300_028	-2%	1%	-3%	-17%	-3%	-6%	-6%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228300_029	-2%	1%	-3%	-17%	-3%	-6%	-6%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228300_030	-2%	1%	-3%	-17%	-3%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228300_031	-2%	1%	-3%	-17%	-3%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228300_032	-2%	1%	-3%	-17%	-3%	-5%	-5%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228300_033	-2%	1%	-3%	-17%	-3%	-5%	-5%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228300_034	-2%	1%	-3%	-17%	-3%	-5%	-5%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228300_035	-2%	1%	-2%	-18%	-3%	-5%	-5%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_004	-2%	1%	-1%	-16%	-7%	-6%	-6%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_005	-2%	1%	-1%	-17%	-7%	-6%	-6%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_006	-2%	1%	-1%	-17%	-7%	-6%	-6%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_007	-2%	1%	-3%	-17%	-4%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_008	-2%	1%	-3%	-16%	-4%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_009	-2%	1%	-3%	-16%	-4%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_010	-2%	1%	-3%	-16%	-4%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_011	-2%	1%	-2%	-16%	-4%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_013	-1%	1%	-1%	-12%	-5%	-3%	-3%	-5%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE228400_014	-1%	1%	-1%	-13%	-5%	-3%	-3%	-5%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_015	-1%	1%	-1%	-13%	-5%	-3%	-3%	-5%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_045	-1%	1%	0%	-18%	-7%	-3%	-3%	-3%	2%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_046	-1%	1%	0%	-18%	-7%	-3%	-3%	-3%	2%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_047	-1%	1%	0%	-18%	-7%	-3%	-3%	-3%	2%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_048	-1%	1%	0%	-17%	-7%	-3%	-3%	-3%	2%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_049	-1%	1%	1%	-17%	-7%	-3%	-3%	-3%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_050	-1%	1%	1%	-17%	-7%	-3%	-3%	-3%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_051	-1%	1%	0%	-16%	-7%	-4%	-4%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_052	-1%	1%	0%	-16%	-7%	-4%	-4%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_053	-1%	1%	-1%	-15%	-6%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_054	-2%	1%	-1%	-14%	-6%	-5%	-5%	-5%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_055	-2%	1%	-2%	-14%	-6%	-5%	-5%	-5%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_056	-2%	1%	-2%	-13%	-6%	-5%	-5%	-5%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_057	-2%	1%	-2%	-13%	-5%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_058	-2%	1%	-2%	-15%	-5%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228400_059	-2%	1%	-3%	-16%	-5%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_009	-1%	1%	-2%	-17%	-5%	-4%	-4%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_010	-1%	1%	-2%	-17%	-6%	-4%	-4%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_011	-1%	1%	-2%	-17%	-6%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_012	-1%	1%	-2%	-16%	-6%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_013	-1%	1%	-2%	-16%	-7%	-4%	-4%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_014	-1%	1%	-2%	-15%	-7%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_015	-1%	1%	-2%	-17%	-8%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_016	-1%	1%	-2%	-18%	-8%	-6%	-6%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_017	-1%	1%	-2%	-19%	-8%	-6%	-6%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_018	-1%	1%	-2%	-21%	-9%	-6%	-6%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_019	-1%	1%	-2%	-21%	-9%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_020	-1%	1%	-1%	-21%	-9%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_021	-2%	1%	-1%	-20%	-9%	-6%	-6%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_022	-2%	1%	-1%	-17%	-8%	-6%	-6%	-4%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_023	-1%	1%	0%	-18%	-8%	-6%	-6%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_024	-1%	1%	0%	-19%	-8%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_025	-1%	1%	-1%	-19%	-8%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_026	-1%	1%	-1%	-20%	-8%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_027	-1%	1%	-1%	-20%	-8%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_028	-1%	1%	-1%	-19%	-8%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_029	-1%	1%	-2%	-18%	-8%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_030	-1%	1%	-2%	-17%	-7%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_031	-1%	1%	-2%	-16%	-7%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_032	-1%	1%	-2%	-14%	-6%	-4%	-4%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_033	-1%	1%	-2%	-15%	-6%	-4%	-4%	-5%	2%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_034	-1%	1%	-2%	-15%	-6%	-4%	-4%	-5%	2%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_035	-1%	1%	-2%	-16%	-5%	-4%	-4%	-5%	2%	1%	2%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_049	-1%	1%	-2%	-14%	-6%	-4%	-4%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_050	-1%	1%	-1%	-16%	-7%	-4%	-4%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE228500_051	-1%	1%	-1%	-17%	-7%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_052	-1%	1%	-1%	-18%	-7%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_053	-1%	1%	-1%	-19%	-7%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_054	-1%	1%	-1%	-19%	-8%	-4%	-4%	-4%	2%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_055	-1%	1%	-1%	-19%	-8%	-4%	-4%	-3%	2%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_056	-1%	1%	0%	-18%	-8%	-4%	-4%	-3%	2%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_057	-1%	1%	0%	-18%	-8%	-4%	-4%	-3%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_060	-2%	1%	-2%	-22%	-10%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_061	-2%	1%	-2%	-22%	-10%	-5%	-5%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_062	-1%	1%	-2%	-22%	-10%	-6%	-6%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_063	-1%	1%	-2%	-22%	-10%	-6%	-6%	-4%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_064	-1%	1%	-2%	-21%	-9%	-6%	-6%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_065	-1%	1%	-2%	-21%	-9%	-7%	-7%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_066	-1%	1%	-2%	-20%	-9%	-7%	-7%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_067	-1%	1%	-2%	-20%	-9%	-7%	-7%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_013	0%	1%	-1%	-15%	-1%	-5%	-5%	-5%	2%	0%	2%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_014	-1%	1%	-2%	-15%	-2%	-6%	-6%	-6%	2%	-1%	2%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_015	-1%	1%	-2%	-15%	-2%	-5%	-5%	-6%	2%	-1%	2%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE228600_016	-1%	1%	-2%	-16%	-3%	-5%	-5%	-6%	2%	-1%	2%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE228600_017	-1%	1%	-2%	-17%	-4%	-5%	-5%	-6%	2%	-1%	2%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE228600_018	-1%	1%	-2%	-18%	-4%	-5%	-5%	-6%	2%	-1%	1%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE228600_019	-1%	1%	-2%	-18%	-4%	-5%	-5%	-6%	2%	-1%	1%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE228600_020	-2%	1%	-2%	-19%	-5%	-6%	-6%	-5%	2%	-1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_021	-2%	1%	-2%	-19%	-6%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_022	-2%	1%	-2%	-19%	-6%	-5%	-5%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_023	-1%	1%	-3%	-19%	-7%	-6%	-6%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_024	-1%	1%	-3%	-19%	-8%	-6%	-6%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_025	-1%	1%	-3%	-19%	-9%	-6%	-6%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_026	-1%	1%	-3%	-21%	-10%	-7%	-7%	-6%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_027	-1%	1%	-3%	-22%	-10%	-7%	-7%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_036	-1%	1%	-1%	-17%	-5%	-4%	-4%	-5%	2%	0%	2%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_037	-1%	1%	-1%	-17%	-5%	-3%	-3%	-4%	2%	0%	2%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_038	-1%	1%	-1%	-17%	-5%	-3%	-3%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_039	-1%	1%	-3%	-18%	-8%	-6%	-6%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_040	-1%	1%	-3%	-18%	-8%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_041	-1%	1%	-3%	-17%	-8%	-5%	-5%	-6%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_042	-1%	1%	-3%	-17%	-8%	-5%	-5%	-6%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_043	-1%	1%	-3%	-17%	-7%	-5%	-5%	-6%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_044	-1%	1%	-3%	-17%	-7%	-5%	-5%	-6%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_045	-1%	1%	-3%	-17%	-7%	-5%	-5%	-6%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_046	-1%	1%	-2%	-17%	-7%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_047	-1%	1%	-2%	-18%	-6%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_048	-1%	1%	-2%	-18%	-6%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_049	-1%	1%	-2%	-18%	-6%	-5%	-5%	-5%	2%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_050	-1%	1%	-2%	-18%	-6%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_051	-1%	1%	-2%	-18%	-6%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE228600_052	-1%	1%	-2%	-18%	-6%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_053	-1%	1%	-2%	-18%	-5%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_054	-1%	1%	-1%	-18%	-5%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_055	-1%	1%	-1%	-18%	-5%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_056	-1%	1%	-1%	-18%	-5%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_057	-1%	1%	-1%	-18%	-5%	-4%	-4%	-5%	2%	0%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_058	-1%	1%	-2%	-18%	-4%	-4%	-4%	-5%	2%	0%	2%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_059	-1%	1%	-2%	-18%	-4%	-5%	-5%	-5%	2%	-1%	2%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_060	-1%	1%	-2%	-18%	-4%	-4%	-4%	-5%	2%	-1%	2%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_061	-1%	1%	-2%	-17%	-4%	-4%	-4%	-5%	2%	-1%	2%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_062	-1%	1%	-2%	-17%	-4%	-4%	-4%	-6%	2%	-1%	2%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_063	8%	4%	16%	36%	16%	34%	34%	18%	8%	9%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE228700_010	11%	5%	23%	43%	15%	32%	32%	17%	7%	9%	4%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE228800_001	13%	5%	27%	44%	26%	52%	52%	23%	10%	15%	6%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE228800_002	12%	5%	25%	43%	23%	49%	49%	21%	10%	14%	5%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE228800_003	12%	5%	27%	43%	21%	41%	41%	18%	8%	12%	5%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE228900_001	14%	6%	30%	55%	30%	62%	62%	26%	11%	17%	6%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE228900_002	16%	7%	35%	76%	39%	77%	77%	31%	13%	21%	7%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RE229000_001	10%	4%	20%	39%	14%	32%	32%	15%	7%	9%	4%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE229100_001	10%	4%	23%	35%	16%	33%	33%	15%	7%	10%	4%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE230200_001	14%	4%	31%	24%	12%	28%	28%	16%	6%	10%	3%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230300_001	17%	7%	37%	17%	9%	31%	31%	18%	6%	10%	4%	1%	1%	1%	1%	0%	2%	1%	0%	0%
RE230300_002	17%	6%	40%	24%	16%	40%	40%	22%	8%	13%	5%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE230300_003	9%	3%	20%	14%	0%	12%	12%	9%	4%	7%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE230300_004	5%	2%	10%	7%	1%	0%	0%	3%	3%	6%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230300_005	1%	1%	3%	-10%	-2%	-9%	-9%	0%	2%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE230400_001	19%	9%	34%	42%	22%	49%	49%	26%	10%	17%	6%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE230400_002	21%	10%	37%	45%	23%	51%	51%	27%	10%	18%	6%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE230400_006	13%	5%	28%	13%	3%	19%	19%	10%	4%	8%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE230400_007	11%	4%	22%	13%	-2%	4%	4%	7%	3%	7%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230400_008	11%	4%	22%	14%	-2%	4%	4%	7%	3%	7%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230400_009	11%	4%	21%	15%	-1%	7%	7%	8%	3%	7%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230400_010	0%	1%	0%	-12%	-7%	-13%	-13%	-1%	1%	1%	1%	0%	0%	-1%	0%	0%	0%	0%	0%	0%
RE230400_011	-2%	0%	-3%	-18%	-11%	-20%	-20%	-7%	-1%	-2%	0%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE230500_001	15%	7%	29%	41%	30%	39%	39%	21%	7%	13%	4%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE230500_002	12%	5%	19%	34%	11%	30%	30%	13%	5%	9%	4%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE230500_003	11%	5%	17%	35%	11%	31%	31%	12%	5%	10%	4%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE230500_004	12%	5%	19%	19%	5%	19%	19%	8%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230500_005	11%	5%	19%	22%	6%	18%	18%	8%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230500_006	9%	5%	14%	22%	4%	10%	10%	7%	3%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230500_007	4%	1%	7%	6%	0%	-3%	-3%	4%	2%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230500_008	4%	1%	8%	10%	0%	-2%	-2%	4%	2%	5%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230500_009	5%	2%	8%	12%	0%	-1%	-1%	4%	2%	5%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230500_010	1%	1%	-2%	-8%	-8%	-19%	-19%	-5%	0%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE230500_011	-2%	0%	-7%	-21%	-11%	-23%	-23%	-7%	-1%	-2%	0%	-1%	0%	-2%	0%	0%	0%	-1%	0%	0%
RE230500_012	-5%	-3%	-14%	-19%	-13%	-23%	-23%	-16%	-8%	-6%	-3%	-1%	-1%	-2%	-1%	0%	-3%	-1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230500_013	0%	0%	-4%	-10%	-3%	0%	0%	-3%	0%	-1%	0%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE230500_014	0%	0%	-1%	-2%	0%	2%	2%	1%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE230600_001	8%	4%	14%	38%	14%	22%	22%	10%	5%	10%	4%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE230600_002	7%	3%	11%	40%	9%	9%	9%	8%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230600_003	1%	1%	0%	-9%	-2%	1%	1%	-2%	1%	-1%	1%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE230600_004	1%	0%	-3%	-3%	4%	1%	1%	-5%	0%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE230600_005	1%	0%	2%	2%	6%	4%	4%	1%	1%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE230600_006	2%	1%	2%	3%	5%	2%	2%	3%	1%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE230900_001	3%	1%	7%	27%	6%	6%	6%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_002	4%	1%	8%	26%	6%	9%	9%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_003	4%	1%	8%	26%	6%	9%	9%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_004	4%	1%	9%	26%	6%	9%	9%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_005	4%	1%	9%	25%	6%	10%	10%	5%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_006	4%	1%	9%	26%	7%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_007	4%	1%	9%	27%	7%	8%	8%	6%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_008	4%	1%	9%	27%	7%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_009	4%	1%	9%	26%	7%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_010	4%	1%	10%	25%	7%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_011	4%	1%	10%	24%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_012	4%	1%	8%	28%	6%	6%	6%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_013	4%	1%	8%	27%	6%	7%	7%	4%	2%	7%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_014	4%	1%	9%	26%	6%	9%	9%	4%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_015	4%	1%	9%	27%	6%	9%	9%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_016	4%	1%	9%	26%	6%	9%	9%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_017	4%	1%	9%	26%	7%	9%	9%	5%	2%	7%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_018	4%	1%	9%	25%	7%	9%	9%	5%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_019	4%	1%	9%	25%	7%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_020	4%	1%	9%	27%	7%	10%	10%	6%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_021	4%	1%	9%	27%	8%	10%	10%	6%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_022	4%	1%	9%	27%	8%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_023	4%	1%	10%	26%	8%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_024	4%	1%	10%	25%	8%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_025	4%	1%	10%	25%	8%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_026	4%	1%	10%	24%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_027	6%	2%	11%	25%	10%	9%	9%	5%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_028	5%	2%	11%	24%	9%	10%	10%	5%	4%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_029	5%	2%	11%	25%	9%	10%	10%	5%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_030	5%	1%	11%	25%	8%	11%	11%	5%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_031	4%	1%	9%	26%	7%	9%	9%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_032	4%	1%	9%	26%	8%	9%	9%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_033	4%	1%	10%	26%	8%	9%	9%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_034	4%	1%	10%	26%	8%	9%	9%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_035	4%	1%	10%	26%	9%	9%	9%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_036	4%	1%	10%	26%	9%	9%	9%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_037	4%	1%	10%	26%	9%	9%	9%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_038	4%	1%	10%	26%	9%	10%	10%	6%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_039	5%	1%	11%	26%	9%	10%	10%	6%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_040	5%	1%	11%	26%	10%	10%	10%	6%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_041	5%	1%	11%	26%	10%	10%	10%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_042	5%	1%	11%	26%	10%	10%	10%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_043	5%	1%	11%	26%	9%	10%	10%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_044	5%	1%	11%	26%	9%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_045	5%	1%	11%	26%	9%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_046	5%	1%	11%	26%	9%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_047	5%	1%	11%	26%	9%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_048	5%	1%	11%	25%	9%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_049	5%	2%	11%	25%	9%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_050	5%	2%	11%	25%	9%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_051	5%	2%	11%	25%	9%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_052	5%	2%	11%	25%	10%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_053	5%	2%	11%	25%	10%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_054	5%	2%	11%	25%	10%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_055	5%	2%	11%	25%	10%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_056	5%	2%	11%	25%	10%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_057	5%	2%	11%	25%	10%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_058	5%	2%	11%	25%	10%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_059	5%	2%	11%	25%	9%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_060	5%	2%	11%	25%	9%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_061	5%	2%	11%	25%	9%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_062	5%	2%	11%	26%	9%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_063	5%	2%	11%	26%	9%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_064	5%	2%	11%	26%	9%	10%	10%	6%	3%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_065	5%	2%	11%	26%	9%	10%	10%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_066	5%	2%	11%	26%	9%	10%	10%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_067	5%	2%	11%	25%	10%	10%	10%	5%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_068	5%	2%	11%	24%	9%	10%	10%	5%	4%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_069	6%	2%	11%	26%	10%	9%	9%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_070	6%	2%	11%	26%	10%	9%	9%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_071	6%	2%	11%	26%	10%	9%	9%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_072	6%	2%	11%	26%	10%	9%	9%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_073	6%	2%	11%	26%	10%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_074	6%	2%	11%	26%	10%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_075	6%	2%	11%	26%	10%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_076	6%	2%	12%	26%	10%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE230900_077	6%	2%	12%	26%	10%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE230900_078	5%	2%	12%	26%	10%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE230900_079	5%	2%	12%	26%	10%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE230900_080	5%	2%	12%	26%	11%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE230900_081	5%	2%	12%	26%	11%	8%	8%	6%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_082	5%	2%	12%	26%	11%	8%	8%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_083	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_084	5%	2%	12%	26%	10%	8%	8%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_085	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_086	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_087	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_088	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_089	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_090	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_091	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_092	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_093	5%	2%	12%	26%	10%	9%	9%	6%	3%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_094	5%	2%	12%	27%	10%	8%	8%	6%	3%	10%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_095	5%	2%	11%	27%	10%	7%	7%	6%	3%	10%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_096	5%	1%	11%	27%	10%	7%	7%	6%	3%	10%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_097	5%	1%	11%	27%	10%	7%	7%	6%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_098	5%	1%	11%	27%	10%	7%	7%	5%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_099	5%	1%	10%	27%	9%	7%	7%	5%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_100	5%	1%	10%	27%	9%	7%	7%	5%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_101	5%	1%	10%	27%	9%	7%	7%	5%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_102	5%	1%	10%	27%	8%	8%	8%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_103	4%	1%	10%	27%	8%	8%	8%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_104	4%	1%	10%	27%	7%	8%	8%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_105	4%	1%	10%	27%	7%	8%	8%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_106	4%	1%	9%	27%	7%	8%	8%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_107	4%	1%	9%	27%	7%	8%	8%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_108	4%	1%	9%	27%	6%	8%	8%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_109	4%	1%	9%	27%	6%	8%	8%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_110	4%	1%	10%	27%	8%	11%	11%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_111	4%	1%	10%	27%	8%	11%	11%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_112	4%	1%	10%	26%	8%	11%	11%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_113	4%	1%	10%	25%	8%	11%	11%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_114	4%	1%	10%	25%	8%	11%	11%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_115	5%	1%	11%	24%	8%	11%	11%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_116	5%	1%	11%	25%	8%	11%	11%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_117	5%	1%	11%	26%	8%	12%	12%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_118	5%	1%	11%	26%	8%	12%	12%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_119	4%	1%	10%	27%	9%	11%	11%	7%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_120	5%	1%	11%	27%	9%	11%	11%	7%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_121	5%	1%	11%	27%	9%	11%	11%	7%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_122	5%	1%	11%	27%	9%	11%	11%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_123	5%	1%	11%	27%	8%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_124	5%	1%	11%	27%	8%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_125	5%	1%	11%	26%	8%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_126	5%	1%	11%	24%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_127	5%	1%	11%	27%	8%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_128	5%	1%	11%	27%	8%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_129	5%	1%	11%	26%	8%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_130	5%	1%	11%	26%	8%	12%	12%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_131	5%	1%	11%	26%	8%	12%	12%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_132	5%	1%	11%	26%	8%	12%	12%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_133	5%	1%	11%	26%	8%	12%	12%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_134	5%	1%	11%	26%	8%	12%	12%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_135	5%	1%	11%	25%	8%	12%	12%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_136	5%	1%	11%	25%	8%	12%	12%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_137	5%	1%	11%	25%	8%	12%	12%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_138	5%	1%	11%	25%	8%	12%	12%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_139	5%	1%	11%	25%	8%	12%	12%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_140	5%	1%	11%	25%	8%	12%	12%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_141	5%	1%	11%	24%	8%	12%	12%	6%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE230900_142	5%	1%	11%	24%	8%	12%	12%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_143	5%	1%	11%	24%	8%	12%	12%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_144	5%	1%	11%	24%	8%	12%	12%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_145	5%	1%	11%	24%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_146	5%	1%	11%	24%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_147	5%	1%	11%	24%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_148	5%	1%	11%	25%	8%	11%	11%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_149	3%	1%	6%	26%	5%	7%	7%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_150	3%	1%	6%	25%	5%	8%	8%	4%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_151	3%	1%	6%	25%	5%	8%	8%	4%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_152	3%	1%	6%	25%	5%	7%	7%	4%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_153	3%	1%	6%	25%	5%	7%	7%	4%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_154	3%	1%	6%	25%	5%	7%	7%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_155	3%	1%	6%	25%	5%	7%	7%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_156	3%	1%	6%	25%	5%	6%	6%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_157	3%	1%	6%	25%	5%	6%	6%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_158	3%	1%	6%	25%	5%	7%	7%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_159	3%	1%	7%	25%	4%	7%	7%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_160	3%	1%	7%	26%	4%	6%	6%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_161	3%	1%	7%	27%	4%	7%	7%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_162	3%	1%	6%	25%	5%	8%	8%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_163	3%	1%	6%	25%	5%	8%	8%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_164	3%	1%	7%	26%	4%	7%	7%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_165	3%	1%	7%	27%	4%	6%	6%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_166	3%	1%	6%	28%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_167	3%	1%	6%	28%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_168	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_169	3%	1%	6%	26%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_170	3%	1%	6%	25%	5%	7%	7%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_171	2%	1%	6%	24%	5%	7%	7%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_172	2%	1%	6%	22%	5%	7%	7%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_173	2%	1%	6%	22%	5%	7%	7%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_174	2%	1%	5%	21%	5%	7%	7%	3%	1%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_175	2%	1%	5%	21%	5%	7%	7%	3%	1%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_176	2%	1%	5%	20%	5%	7%	7%	3%	1%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_177	2%	1%	5%	20%	5%	7%	7%	3%	1%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_178	3%	1%	5%	20%	5%	7%	7%	3%	1%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_179	3%	1%	5%	20%	5%	7%	7%	3%	1%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_180	3%	1%	5%	19%	5%	6%	6%	3%	1%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_181	3%	1%	5%	19%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_182	3%	1%	5%	19%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_192	3%	1%	6%	28%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_193	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_194	3%	1%	6%	26%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_198	4%	1%	9%	25%	7%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_199	4%	1%	9%	26%	7%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_200	4%	1%	9%	26%	7%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_201	4%	1%	9%	27%	7%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_202	4%	1%	9%	27%	7%	7%	7%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_203	4%	1%	9%	26%	7%	7%	7%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_204	4%	1%	9%	25%	6%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_205	4%	1%	9%	24%	7%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_206	3%	1%	8%	27%	6%	9%	9%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_207	3%	1%	8%	27%	6%	7%	7%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_208	3%	1%	7%	27%	5%	9%	9%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_209	3%	1%	7%	27%	5%	9%	9%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_210	3%	1%	7%	27%	5%	9%	9%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_211	3%	1%	7%	27%	5%	9%	9%	4%	2%	6%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_212	3%	1%	7%	27%	5%	9%	9%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_213	3%	1%	7%	27%	5%	9%	9%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_214	3%	1%	7%	27%	5%	9%	9%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_215	3%	1%	7%	27%	5%	9%	9%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_216	3%	1%	7%	27%	5%	9%	9%	4%	2%	6%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_217	3%	1%	6%	26%	5%	7%	7%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_218	3%	1%	7%	27%	5%	8%	8%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_219	3%	1%	7%	27%	5%	8%	8%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_220	3%	1%	6%	26%	5%	8%	8%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_221	3%	1%	6%	26%	5%	8%	8%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_222	3%	1%	6%	26%	5%	7%	7%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_223	3%	1%	6%	26%	5%	6%	6%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_224	3%	1%	6%	26%	5%	6%	6%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_225	3%	1%	6%	26%	5%	6%	6%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_226	3%	1%	6%	26%	5%	6%	6%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_227	3%	1%	6%	26%	5%	6%	6%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_228	3%	1%	6%	26%	5%	5%	5%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_229	3%	1%	6%	26%	5%	5%	5%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_230	3%	1%	6%	26%	5%	5%	5%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_231	3%	1%	6%	26%	5%	4%	4%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_232	3%	1%	6%	25%	5%	4%	4%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_233	3%	1%	6%	25%	5%	4%	4%	3%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_234	3%	1%	6%	25%	5%	3%	3%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_235	3%	1%	6%	25%	5%	3%	3%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_236	3%	1%	6%	25%	5%	3%	3%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_237	3%	1%	6%	24%	5%	3%	3%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_238	3%	1%	6%	24%	5%	3%	3%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_239	3%	1%	6%	24%	5%	3%	3%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_240	3%	1%	6%	23%	5%	3%	3%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_241	3%	1%	6%	26%	5%	7%	7%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_242	3%	1%	6%	23%	5%	3%	3%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_243	3%	1%	6%	22%	5%	4%	4%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_244	3%	1%	6%	22%	5%	4%	4%	3%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_245	3%	1%	6%	21%	5%	4%	4%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_246	3%	1%	6%	21%	5%	4%	4%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_247	3%	1%	5%	20%	5%	4%	4%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_257	4%	1%	8%	24%	5%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_258	4%	1%	8%	24%	5%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_259	4%	1%	8%	24%	5%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_260	3%	1%	8%	24%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_261	3%	1%	8%	24%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_262	3%	1%	8%	24%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_263	4%	1%	8%	24%	5%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_264	4%	1%	8%	24%	5%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_265	4%	1%	8%	25%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_266	4%	1%	8%	25%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_272	3%	1%	7%	25%	4%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_273	3%	1%	7%	25%	4%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_274	3%	1%	7%	25%	4%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_275	3%	1%	7%	25%	4%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_276	3%	1%	7%	25%	4%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_277	3%	1%	7%	25%	4%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_278	3%	1%	7%	25%	4%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_279	3%	1%	7%	25%	4%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_280	3%	1%	7%	25%	4%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_281	3%	1%	7%	25%	4%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_282	3%	1%	7%	26%	4%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_283	3%	1%	8%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_285	3%	1%	8%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_286	3%	1%	8%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_287	3%	1%	8%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_288	3%	1%	8%	24%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_289	3%	1%	8%	24%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_290	3%	1%	8%	24%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_291	3%	1%	8%	24%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_292	3%	1%	8%	24%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_293	3%	1%	8%	24%	4%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_294	3%	1%	7%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_295	3%	1%	7%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_296	3%	1%	7%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_297	3%	1%	7%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_298	3%	1%	7%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_299	3%	1%	7%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_300	3%	1%	8%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_301	3%	1%	8%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_302	3%	1%	7%	24%	4%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_303	3%	1%	7%	24%	4%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_304	3%	1%	7%	24%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_305	3%	1%	7%	24%	4%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_306	3%	1%	7%	24%	4%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_307	3%	1%	7%	24%	4%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_310	3%	1%	7%	24%	4%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_312	4%	1%	8%	24%	6%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_313	3%	1%	7%	24%	4%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_315	3%	1%	8%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_317	4%	1%	8%	26%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_318	3%	1%	7%	27%	4%	6%	6%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_319	3%	1%	7%	27%	4%	6%	6%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_320	3%	1%	7%	27%	4%	6%	6%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_321	3%	1%	7%	28%	4%	6%	6%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_322	3%	1%	7%	28%	4%	6%	6%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_323	3%	1%	7%	28%	4%	6%	6%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_324	3%	1%	7%	28%	4%	6%	6%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_325	3%	1%	7%	28%	5%	6%	6%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_326	3%	1%	7%	28%	5%	6%	6%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_327	3%	1%	7%	28%	5%	6%	6%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_328	3%	1%	7%	28%	5%	6%	6%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_329	3%	1%	8%	28%	5%	5%	5%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_330	3%	1%	8%	27%	5%	5%	5%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_331	3%	1%	8%	27%	5%	6%	6%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_332	4%	1%	8%	26%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_333	4%	1%	8%	25%	5%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_334	3%	1%	8%	26%	4%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_335	4%	1%	8%	24%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_337	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_338	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_339	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_340	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_341	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_342	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_343	3%	1%	6%	27%	4%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_344	3%	1%	6%	27%	4%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_345	3%	1%	6%	27%	4%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_346	3%	1%	6%	27%	4%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_347	3%	1%	6%	27%	4%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_348	3%	1%	7%	27%	4%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_349	3%	1%	7%	27%	4%	7%	7%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_350	4%	1%	9%	27%	6%	7%	7%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_351	4%	1%	8%	26%	6%	7%	7%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_352	4%	1%	8%	25%	6%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_353	4%	1%	8%	26%	6%	7%	7%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_354	3%	1%	8%	25%	6%	7%	7%	5%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_355	3%	1%	8%	26%	5%	7%	7%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_356	3%	1%	8%	26%	5%	7%	7%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_357	3%	1%	8%	26%	5%	7%	7%	5%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_358	3%	1%	8%	26%	6%	7%	7%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_359	3%	1%	8%	26%	6%	8%	8%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_360	3%	1%	8%	26%	6%	8%	8%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_361	4%	1%	9%	24%	7%	7%	7%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_362	4%	1%	9%	25%	7%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_363	4%	1%	9%	26%	6%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_364	4%	1%	9%	26%	6%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_365	4%	1%	9%	27%	6%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_366	4%	1%	8%	27%	6%	7%	7%	5%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_367	3%	1%	8%	26%	6%	7%	7%	5%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_368	3%	1%	8%	25%	6%	7%	7%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_369	3%	1%	8%	25%	5%	6%	6%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_370	3%	1%	7%	26%	5%	6%	6%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_371	3%	1%	7%	26%	5%	7%	7%	4%	2%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE230900_372	3%	1%	7%	26%	5%	6%	6%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_373	3%	1%	7%	25%	5%	7%	7%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_374	3%	1%	7%	25%	4%	6%	6%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_375	3%	1%	6%	26%	5%	6%	6%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_376	3%	1%	7%	26%	5%	7%	7%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_377	3%	1%	7%	26%	5%	7%	7%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_378	3%	1%	8%	28%	5%	6%	6%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_379	3%	1%	7%	26%	5%	7%	7%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_380	3%	1%	7%	25%	5%	7%	7%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_381	3%	1%	7%	25%	5%	7%	7%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_382	3%	1%	8%	26%	5%	7%	7%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_383	3%	1%	8%	27%	5%	7%	7%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_384	3%	1%	8%	28%	5%	6%	6%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_385	4%	1%	8%	27%	5%	5%	5%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_386	3%	1%	6%	26%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_387	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_388	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_389	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_390	3%	1%	6%	27%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_391	3%	1%	6%	25%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_394	3%	1%	7%	26%	4%	6%	6%	4%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_395	3%	1%	6%	21%	5%	5%	5%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_396	3%	1%	6%	23%	5%	7%	7%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_397	3%	1%	6%	24%	5%	8%	8%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_398	3%	1%	6%	24%	5%	8%	8%	4%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_399	3%	1%	6%	26%	5%	7%	7%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_400	3%	1%	6%	27%	5%	7%	7%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_401	3%	1%	6%	27%	5%	6%	6%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_402	3%	1%	6%	25%	5%	8%	8%	4%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_403	3%	1%	6%	24%	5%	8%	8%	4%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_404	3%	1%	6%	24%	5%	8%	8%	4%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_405	3%	1%	6%	24%	5%	7%	7%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_406	3%	1%	6%	24%	5%	5%	5%	3%	2%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_001	5%	1%	10%	24%	7%	11%	11%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_002	15%	6%	28%	18%	19%	42%	42%	15%	7%	11%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE231000_003	4%	1%	10%	25%	7%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_004	4%	1%	10%	27%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_005	4%	1%	10%	30%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_006	4%	1%	10%	29%	7%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_007	4%	1%	10%	29%	7%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_008	4%	1%	10%	30%	7%	10%	10%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_009	4%	1%	10%	30%	7%	11%	11%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_010	4%	1%	10%	30%	7%	11%	11%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_011	4%	1%	10%	24%	8%	12%	12%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_012	4%	1%	10%	26%	8%	12%	12%	6%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE231000_013	4%	1%	10%	29%	7%	12%	12%	6%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE231000_014	4%	1%	10%	30%	7%	12%	12%	6%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE231000_015	4%	1%	10%	29%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_016	4%	1%	10%	29%	7%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_017	4%	1%	10%	30%	7%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_018	5%	1%	10%	30%	7%	10%	10%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_019	5%	1%	10%	30%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_020	5%	1%	10%	30%	7%	11%	11%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_021	5%	1%	10%	30%	7%	11%	11%	5%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_022	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_023	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_024	5%	1%	10%	29%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_025	5%	1%	10%	28%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_026	5%	1%	10%	28%	7%	9%	9%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_027	4%	1%	11%	24%	8%	10%	10%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_028	4%	1%	11%	23%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_029	5%	1%	11%	26%	8%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_030	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_031	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_032	5%	1%	11%	28%	7%	11%	11%	6%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE231000_033	5%	1%	11%	30%	7%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_034	5%	1%	11%	30%	7%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_035	5%	1%	11%	30%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_036	5%	1%	10%	30%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_037	5%	1%	10%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_038	5%	1%	10%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_039	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_040	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_041	5%	1%	10%	28%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_042	5%	1%	10%	28%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_043	5%	1%	10%	27%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_044	5%	1%	10%	27%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_045	5%	1%	10%	28%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_046	5%	1%	10%	28%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_047	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_048	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_049	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_050	5%	1%	10%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_051	5%	1%	10%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_052	5%	1%	10%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_053	5%	1%	11%	30%	7%	10%	10%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_054	5%	1%	11%	30%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_055	5%	1%	11%	30%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_056	5%	1%	11%	30%	7%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_057	5%	1%	11%	30%	7%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_058	5%	1%	11%	29%	7%	11%	11%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_059	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_060	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_061	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_062	5%	1%	11%	27%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_063	5%	1%	11%	25%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_064	5%	1%	11%	24%	8%	12%	12%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_065	5%	1%	11%	23%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_066	5%	1%	11%	24%	8%	11%	11%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_067	5%	1%	11%	23%	7%	12%	12%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_068	5%	1%	11%	23%	7%	11%	11%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_069	5%	1%	11%	23%	7%	11%	11%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_070	5%	1%	11%	23%	7%	11%	11%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_071	5%	1%	11%	22%	7%	11%	11%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_072	5%	1%	11%	22%	7%	11%	11%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_073	5%	1%	11%	22%	7%	10%	10%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_074	5%	1%	11%	21%	7%	11%	11%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_075	5%	1%	11%	21%	7%	11%	11%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_076	5%	1%	11%	21%	7%	11%	11%	6%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_077	5%	1%	11%	22%	6%	11%	11%	5%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_078	5%	1%	11%	21%	6%	11%	11%	5%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_079	5%	1%	11%	20%	6%	11%	11%	5%	3%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_080	5%	1%	10%	19%	6%	11%	11%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_081	5%	1%	10%	22%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_082	5%	1%	10%	24%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_083	5%	1%	10%	26%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_084	5%	1%	10%	28%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_085	5%	1%	10%	27%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_086	5%	1%	10%	27%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_087	5%	1%	11%	26%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_088	5%	1%	11%	26%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_089	5%	1%	11%	26%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_090	5%	1%	11%	25%	7%	13%	13%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_091	5%	1%	11%	24%	7%	13%	13%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_092	5%	1%	11%	23%	7%	14%	14%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_093	5%	1%	11%	23%	7%	13%	13%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_094	5%	1%	11%	23%	7%	13%	13%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_095	5%	1%	11%	22%	7%	13%	13%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_096	5%	1%	11%	22%	7%	12%	12%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_097	5%	1%	11%	22%	7%	12%	12%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_098	5%	1%	11%	22%	7%	12%	12%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_099	5%	1%	11%	22%	8%	11%	11%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_100	5%	1%	11%	22%	8%	11%	11%	6%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_101	5%	1%	11%	22%	8%	11%	11%	6%	3%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_102	5%	1%	11%	22%	8%	11%	11%	6%	3%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_103	5%	1%	11%	22%	8%	11%	11%	6%	3%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_104	5%	1%	11%	23%	8%	10%	10%	6%	3%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_105	5%	1%	11%	23%	8%	10%	10%	6%	3%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_106	5%	1%	11%	23%	8%	10%	10%	6%	3%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_107	5%	1%	11%	23%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_108	5%	1%	11%	24%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_109	5%	1%	11%	24%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_110	5%	1%	11%	24%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_111	5%	1%	11%	28%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_112	5%	1%	11%	28%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_113	5%	1%	11%	28%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_114	5%	1%	11%	28%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_115	5%	1%	11%	27%	8%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_116	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_117	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_118	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_119	5%	1%	11%	30%	7%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_120	5%	1%	11%	30%	7%	11%	11%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_121	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_122	5%	1%	11%	30%	7%	11%	11%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_123	5%	1%	11%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_124	5%	1%	11%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_125	5%	1%	10%	30%	7%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_126	5%	1%	10%	29%	7%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_127	5%	1%	10%	28%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_128	5%	1%	10%	28%	8%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_129	5%	1%	10%	27%	8%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_130	5%	1%	10%	27%	8%	10%	10%	5%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_131	5%	1%	10%	26%	8%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_132	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_133	5%	1%	11%	30%	7%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_134	5%	1%	11%	30%	7%	11%	11%	6%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_135	5%	1%	11%	30%	7%	11%	11%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_136	5%	1%	11%	30%	7%	11%	11%	5%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE231000_137	5%	1%	11%	30%	7%	10%	10%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_138	5%	1%	11%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_139	5%	1%	11%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_140	5%	1%	10%	30%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_141	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_142	5%	1%	10%	29%	7%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_143	5%	1%	10%	29%	7%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_144	5%	1%	10%	28%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_145	5%	1%	10%	28%	7%	10%	10%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_146	5%	1%	10%	27%	8%	10%	10%	5%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_147	5%	1%	10%	27%	8%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_148	5%	1%	11%	28%	8%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_149	5%	1%	11%	29%	7%	12%	12%	6%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_150	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_151	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_152	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_153	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_154	5%	1%	11%	30%	8%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_155	5%	1%	11%	30%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_156	5%	1%	11%	30%	8%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_157	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_158	5%	1%	11%	29%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_159	5%	1%	11%	29%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_160	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_161	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_162	5%	1%	11%	30%	7%	13%	13%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_163	5%	1%	11%	30%	7%	13%	13%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_164	5%	1%	11%	30%	7%	13%	13%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_165	5%	1%	11%	30%	7%	13%	13%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_166	5%	1%	11%	30%	7%	13%	13%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_167	5%	1%	10%	30%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_168	5%	1%	10%	30%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_169	5%	1%	10%	29%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_170	5%	1%	10%	29%	7%	13%	13%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_171	5%	1%	10%	29%	7%	12%	12%	5%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_172	5%	1%	10%	29%	7%	12%	12%	5%	3%	8%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_173	5%	1%	10%	28%	7%	12%	12%	5%	3%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_174	5%	1%	10%	28%	7%	12%	12%	5%	3%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_175	5%	1%	10%	28%	7%	12%	12%	5%	3%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_176	5%	1%	10%	28%	7%	13%	13%	5%	3%	7%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_177	5%	1%	9%	27%	7%	13%	13%	5%	3%	7%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_178	5%	1%	9%	27%	7%	13%	13%	5%	2%	7%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_179	5%	1%	9%	26%	7%	13%	13%	5%	2%	7%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_180	5%	1%	9%	26%	7%	13%	13%	4%	2%	7%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_181	5%	1%	9%	25%	7%	13%	13%	4%	2%	7%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_182	5%	1%	9%	25%	7%	14%	14%	4%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_183	5%	1%	9%	24%	7%	14%	14%	4%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_184	5%	1%	9%	24%	7%	13%	13%	4%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_185	5%	1%	9%	23%	6%	12%	12%	4%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_186	5%	1%	9%	23%	6%	12%	12%	4%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_187	5%	1%	9%	23%	6%	11%	11%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_188	5%	1%	9%	22%	6%	10%	10%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_189	5%	1%	9%	22%	6%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_190	5%	1%	9%	23%	7%	11%	11%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_191	5%	1%	9%	23%	7%	10%	10%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_192	5%	1%	9%	23%	7%	10%	10%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_193	5%	1%	9%	24%	7%	12%	12%	4%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_194	5%	1%	9%	24%	7%	13%	13%	4%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_195	5%	1%	9%	25%	7%	13%	13%	4%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_196	5%	1%	10%	26%	7%	14%	14%	5%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_197	5%	1%	10%	26%	7%	14%	14%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_198	5%	1%	10%	27%	7%	14%	14%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_199	5%	1%	10%	27%	7%	13%	13%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_200	5%	1%	10%	27%	8%	13%	13%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_201	5%	1%	10%	28%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_202	5%	1%	10%	28%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_203	5%	1%	10%	28%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_204	5%	1%	10%	29%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_205	5%	1%	10%	29%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_206	5%	1%	10%	29%	7%	12%	12%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_207	5%	1%	10%	29%	7%	12%	12%	5%	2%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_208	5%	1%	10%	29%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE231000_209	5%	1%	10%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_210	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_211	5%	1%	11%	30%	7%	12%	12%	5%	2%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_212	5%	1%	10%	28%	8%	13%	13%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_213	5%	1%	10%	28%	8%	13%	13%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_214	5%	1%	10%	28%	8%	13%	13%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_215	5%	1%	10%	28%	8%	13%	13%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_216	5%	1%	10%	28%	8%	13%	13%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_217	5%	1%	10%	28%	8%	13%	13%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_218	5%	1%	10%	28%	8%	13%	13%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_219	5%	1%	10%	27%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_220	5%	1%	10%	27%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_221	5%	1%	10%	27%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_222	5%	1%	10%	27%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_223	5%	1%	10%	26%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_224	5%	1%	10%	26%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_225	5%	1%	10%	26%	8%	12%	12%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_226	5%	1%	10%	25%	8%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_227	5%	1%	10%	25%	7%	11%	11%	5%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_228	5%	1%	10%	25%	7%	11%	11%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_229	5%	1%	10%	24%	7%	10%	10%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_230	5%	1%	9%	24%	7%	11%	11%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_231	5%	1%	9%	23%	7%	12%	12%	4%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_232	5%	1%	9%	23%	7%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_233	5%	1%	9%	21%	7%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_234	5%	1%	9%	20%	6%	10%	10%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_235	5%	1%	9%	20%	6%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_236	5%	1%	9%	20%	6%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_237	5%	1%	9%	19%	6%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_238	5%	1%	9%	19%	6%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_239	5%	1%	9%	19%	6%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_240	5%	1%	9%	19%	6%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_241	4%	1%	8%	19%	5%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_242	4%	1%	8%	19%	5%	12%	12%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_243	4%	1%	8%	18%	5%	11%	11%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_244	4%	1%	8%	18%	5%	10%	10%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_245	4%	1%	8%	18%	5%	10%	10%	3%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_246	4%	0%	8%	18%	5%	10%	10%	3%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_247	4%	0%	8%	18%	4%	10%	10%	3%	2%	6%	0%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_248	5%	1%	10%	25%	8%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_249	5%	1%	10%	25%	8%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_250	5%	1%	10%	25%	8%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_251	5%	1%	10%	24%	8%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_252	5%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_253	5%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_254	5%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_255	5%	1%	10%	25%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_256	4%	1%	8%	27%	5%	7%	7%	5%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_257	4%	1%	9%	29%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_276	4%	1%	10%	27%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_277	4%	1%	10%	27%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_278	5%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_279	5%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_280	4%	1%	10%	29%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_281	4%	1%	10%	30%	7%	11%	11%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_282	4%	1%	10%	28%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_283	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_284	4%	1%	10%	30%	7%	10%	10%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_285	4%	1%	10%	29%	7%	11%	11%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_286	4%	1%	10%	30%	7%	10%	10%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_287	5%	1%	10%	28%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_288	5%	1%	10%	28%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_289	4%	1%	10%	29%	7%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_290	4%	1%	10%	29%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_291	4%	1%	10%	29%	7%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_292	4%	1%	10%	29%	7%	11%	11%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_293	5%	1%	10%	29%	7%	10%	10%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_294	4%	1%	10%	29%	7%	11%	11%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_295	5%	1%	10%	29%	7%	11%	11%	5%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_296	4%	1%	10%	30%	7%	11%	11%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_297	4%	1%	10%	27%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_298	4%	1%	10%	27%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_299	4%	1%	10%	28%	7%	11%	11%	6%	2%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_300	4%	1%	9%	29%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_301	4%	1%	10%	28%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_302	4%	1%	10%	29%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_303	4%	1%	10%	29%	7%	11%	11%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_304	4%	1%	10%	29%	7%	11%	11%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_305	4%	1%	9%	25%	6%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_306	4%	1%	9%	26%	6%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_307	4%	1%	9%	29%	6%	9%	9%	6%	2%	6%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_308	4%	1%	9%	30%	6%	9%	9%	6%	2%	6%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_309	4%	1%	10%	28%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_310	4%	1%	10%	30%	7%	10%	10%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_311	4%	1%	10%	30%	7%	10%	10%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_312	4%	1%	10%	30%	7%	10%	10%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_313	4%	1%	10%	29%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_314	4%	1%	10%	29%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_315	4%	1%	10%	29%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_316	4%	1%	10%	30%	7%	11%	11%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_317	4%	1%	10%	29%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_318	4%	1%	10%	30%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_319	4%	1%	10%	30%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_320	4%	1%	10%	29%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_321	4%	1%	10%	29%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_322	4%	1%	10%	28%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_332	3%	1%	8%	29%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_333	3%	1%	8%	29%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_334	3%	1%	8%	29%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_335	3%	1%	8%	29%	4%	7%	7%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_336	3%	1%	8%	29%	4%	7%	7%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_337	3%	1%	8%	29%	5%	7%	7%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_338	3%	1%	7%	27%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_339	3%	1%	7%	27%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_340	3%	1%	7%	27%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_341	3%	1%	8%	27%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_342	3%	1%	8%	27%	4%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_343	4%	1%	9%	29%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_345	4%	1%	9%	28%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_346	4%	1%	10%	29%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_347	4%	1%	10%	29%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_348	4%	1%	10%	29%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_350	4%	1%	9%	28%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_351	4%	1%	8%	27%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_353	3%	1%	8%	27%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_354	4%	1%	10%	29%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_355	4%	1%	10%	29%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_356	4%	1%	9%	29%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_357	4%	1%	9%	28%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_358	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_359	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_360	4%	1%	9%	30%	6%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_361	4%	1%	9%	31%	6%	8%	8%	5%	2%	6%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_362	4%	1%	8%	27%	6%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_363	4%	1%	10%	29%	6%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_364	4%	1%	10%	29%	6%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_365	4%	1%	10%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_366	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_367	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_368	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_369	4%	1%	9%	29%	6%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_370	4%	1%	9%	30%	6%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_371	4%	1%	8%	30%	6%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_374	4%	1%	9%	29%	6%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_377	3%	1%	8%	26%	4%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_378	4%	1%	10%	30%	7%	11%	11%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_379	4%	1%	9%	30%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_380	4%	1%	10%	29%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_381	4%	1%	10%	29%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_382	4%	1%	10%	29%	7%	11%	11%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_383	3%	1%	8%	29%	4%	6%	6%	5%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_384	4%	1%	10%	29%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_385	4%	1%	10%	29%	7%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_386	4%	1%	9%	29%	6%	8%	8%	5%	2%	6%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_387	4%	1%	10%	29%	6%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_388	4%	1%	8%	25%	5%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_390	4%	1%	9%	27%	7%	10%	10%	6%	2%	7%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE231000_391	4%	1%	9%	24%	7%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_392	4%	1%	9%	27%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_393	3%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_394	4%	1%	9%	29%	6%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_395	4%	1%	9%	29%	6%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_396	4%	1%	9%	29%	6%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_397	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_398	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_399	4%	1%	9%	29%	6%	7%	7%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_400	4%	1%	9%	29%	6%	7%	7%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_401	4%	1%	9%	28%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_402	4%	1%	9%	28%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_403	4%	1%	9%	28%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_404	4%	1%	9%	29%	6%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_405	4%	1%	8%	29%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_406	4%	1%	9%	29%	6%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_407	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_408	4%	1%	9%	29%	6%	7%	7%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_409	4%	1%	9%	29%	6%	7%	7%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_410	4%	1%	9%	29%	6%	7%	7%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_411	4%	1%	9%	28%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_412	4%	1%	9%	27%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_413	4%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_414	4%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_415	4%	1%	8%	29%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_416	4%	1%	8%	27%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_417	3%	1%	8%	26%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_418	3%	1%	8%	26%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_419	4%	1%	8%	29%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_420	4%	1%	8%	29%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_421	3%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_422	3%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_423	3%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_424	3%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_425	3%	1%	8%	30%	5%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_426	3%	1%	8%	30%	5%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_427	3%	1%	8%	26%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_428	3%	1%	8%	26%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_429	3%	1%	8%	26%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_430	4%	1%	9%	27%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_431	3%	1%	8%	27%	4%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_432	4%	1%	9%	28%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_433	3%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_434	3%	1%	8%	27%	5%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_435	4%	1%	9%	29%	6%	7%	7%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_436	3%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_437	4%	1%	9%	27%	6%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_438	3%	1%	8%	27%	4%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_439	4%	1%	9%	29%	6%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_440	4%	1%	9%	29%	6%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_441	3%	1%	8%	30%	5%	7%	7%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_443	4%	1%	10%	27%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_444	4%	1%	10%	27%	6%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_445	4%	1%	10%	27%	6%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_446	4%	1%	10%	27%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_450	4%	1%	9%	28%	6%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_452	4%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_453	4%	1%	10%	27%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_454	5%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_455	4%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_456	4%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_001	3%	0%	2%	14%	3%	8%	8%	4%	2%	1%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE231100_002	4%	1%	9%	21%	6%	10%	10%	4%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_003	14%	5%	26%	30%	19%	39%	39%	14%	7%	11%	4%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231100_004	-5%	-1%	-10%	13%	1%	-4%	-4%	-11%	-4%	-1%	0%	0%	-1%	0%	-1%	0%	-1%	0%	0%	0%
RE231100_005	5%	1%	10%	21%	8%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_006	5%	1%	9%	21%	8%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_007	4%	1%	9%	21%	8%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_008	5%	1%	10%	21%	8%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_009	5%	1%	10%	21%	8%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_010	5%	1%	9%	21%	8%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_011	4%	1%	9%	22%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_012	4%	1%	9%	22%	7%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_018	4%	1%	9%	22%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_019	4%	1%	9%	22%	7%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_020	4%	1%	9%	22%	7%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_027	4%	1%	9%	21%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_028	4%	1%	9%	21%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_029	4%	1%	9%	22%	7%	8%	8%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_030	4%	1%	9%	22%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_031	4%	1%	9%	20%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_032	4%	1%	9%	17%	7%	9%	9%	5%	2%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_033	4%	1%	9%	17%	7%	8%	8%	5%	2%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_041	4%	1%	8%	18%	7%	7%	7%	4%	2%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_042	4%	1%	8%	17%	7%	7%	7%	5%	2%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_043	4%	1%	9%	17%	7%	9%	9%	5%	2%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_044	4%	1%	9%	19%	7%	10%	10%	5%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_045	4%	1%	9%	22%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_046	4%	1%	9%	22%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_047	4%	1%	9%	21%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_048	4%	1%	9%	21%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_049	4%	1%	9%	21%	7%	9%	9%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_050	4%	1%	9%	21%	7%	10%	10%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_051	4%	1%	9%	21%	7%	10%	10%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231100_052	4%	1%	9%	20%	6%	10%	10%	5%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_053	4%	1%	9%	17%	6%	10%	10%	5%	2%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_054	4%	1%	8%	17%	6%	8%	8%	5%	2%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_055	4%	1%	8%	17%	6%	7%	7%	4%	2%	4%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_056	4%	1%	8%	18%	6%	8%	8%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_057	4%	1%	8%	18%	6%	8%	8%	4%	2%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_077	2%	0%	-1%	13%	3%	8%	8%	3%	2%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE231100_078	1%	0%	-1%	9%	2%	9%	9%	3%	1%	0%	0%	0%	0%	1%	0%	0%	-1%	0%	0%	0%
RE231100_079	5%	1%	10%	23%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_080	5%	1%	10%	21%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_081	4%	1%	9%	21%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_082	5%	1%	10%	22%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_083	5%	1%	10%	21%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_084	5%	1%	9%	21%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_085	4%	1%	9%	21%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_090	4%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_091	4%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_116	4%	1%	10%	21%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_120	4%	1%	10%	23%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_121	4%	1%	9%	21%	7%	8%	8%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_161	4%	1%	10%	21%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_164	4%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_165	4%	1%	10%	25%	7%	9%	9%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_167	4%	1%	10%	26%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_171	4%	1%	10%	25%	7%	10%	10%	6%	2%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_175	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE231400_001	-1%	0%	-2%	-8%	-2%	-9%	-9%	-5%	-1%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE231400_002	-1%	0%	-2%	-8%	-2%	-9%	-9%	-5%	-1%	2%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE231400_003	0%	0%	0%	-9%	-1%	-9%	-9%	-3%	0%	3%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE231400_004	0%	0%	0%	-8%	-1%	-10%	-10%	-3%	0%	3%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE231400_005	0%	0%	0%	-8%	2%	-9%	-9%	-3%	-1%	3%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE231400_006	0%	1%	1%	-7%	3%	-9%	-9%	-2%	0%	3%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_007	0%	1%	1%	-8%	0%	-9%	-9%	-2%	0%	3%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_008	1%	1%	0%	-3%	4%	-8%	-8%	-3%	0%	4%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_009	1%	1%	1%	-3%	5%	-8%	-8%	-2%	0%	4%	2%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_010	2%	1%	2%	-4%	7%	-4%	-4%	-2%	0%	3%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_011	-2%	0%	-4%	-14%	-6%	-15%	-15%	-6%	-2%	0%	0%	-2%	0%	-2%	0%	0%	0%	0%	0%	0%
RE231500_002	11%	4%	21%	24%	16%	36%	36%	16%	7%	8%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE231600_001	13%	5%	28%	62%	32%	52%	52%	26%	9%	17%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE231600_004	14%	5%	29%	62%	31%	47%	47%	25%	9%	15%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE231600_005	13%	5%	28%	51%	26%	46%	46%	24%	8%	14%	5%	1%	1%	3%	1%	0%	2%	1%	0%	0%
RE231700_002	11%	4%	26%	32%	20%	44%	44%	21%	8%	12%	4%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE231700_003	11%	4%	25%	29%	19%	42%	42%	20%	7%	11%	4%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE231700_004	13%	5%	25%	46%	24%	48%	48%	23%	8%	14%	5%	1%	1%	3%	1%	0%	2%	1%	0%	0%
RE231800_001	16%	7%	34%	51%	27%	63%	63%	29%	11%	19%	6%	2%	1%	3%	2%	1%	3%	1%	0%	0%
RE231800_002	17%	7%	33%	56%	28%	66%	66%	31%	12%	20%	7%	2%	1%	3%	2%	1%	3%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE232700_002	11%	4%	26%	34%	29%	43%	43%	26%	8%	15%	4%	1%	1%	3%	1%	0%	2%	1%	0%	0%
RE233200_001	7%	2%	19%	32%	16%	39%	39%	25%	7%	12%	3%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE233500_001	12%	3%	32%	51%	22%	46%	46%	29%	8%	15%	4%	2%	1%	3%	1%	0%	3%	0%	0%	0%
RE233600_001	12%	4%	32%	43%	22%	46%	46%	29%	8%	15%	4%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE233600_002	12%	4%	32%	46%	21%	45%	45%	29%	8%	15%	4%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE233700_001	13%	4%	33%	38%	25%	49%	49%	29%	8%	16%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE233900_001	14%	4%	34%	22%	27%	53%	53%	32%	9%	17%	4%	1%	1%	2%	2%	1%	3%	1%	0%	0%
RE233900_002	12%	5%	20%	11%	21%	56%	56%	31%	11%	11%	5%	2%	1%	3%	1%	0%	2%	1%	0%	0%
RE233900_003	12%	5%	20%	13%	21%	57%	57%	30%	11%	11%	5%	2%	1%	3%	1%	0%	2%	1%	0%	0%
RE234000_001	14%	5%	26%	25%	21%	63%	63%	34%	12%	14%	5%	2%	1%	3%	2%	0%	2%	1%	0%	0%
RE234100_001	16%	5%	41%	60%	28%	60%	60%	34%	10%	19%	5%	2%	1%	3%	2%	1%	3%	1%	0%	0%
RE235000_001	18%	7%	34%	78%	34%	94%	94%	40%	15%	19%	7%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RE235100_001	17%	7%	33%	63%	30%	89%	89%	38%	14%	18%	7%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RE235100_002	16%	7%	34%	42%	26%	82%	82%	37%	14%	18%	7%	2%	1%	4%	2%	1%	3%	1%	0%	0%
RE235100_003	16%	5%	35%	33%	21%	68%	68%	30%	10%	17%	5%	2%	1%	3%	2%	0%	3%	1%	0%	0%
RE235200_001	16%	6%	33%	20%	22%	75%	75%	35%	13%	17%	6%	2%	1%	4%	2%	1%	3%	1%	0%	0%
RE235200_002	16%	5%	33%	15%	20%	71%	71%	31%	11%	17%	5%	2%	1%	3%	2%	1%	3%	1%	0%	0%
RE235500_001	15%	5%	32%	52%	20%	67%	67%	29%	10%	17%	4%	2%	1%	4%	2%	1%	3%	1%	0%	0%
RE235500_002	13%	6%	28%	39%	15%	72%	72%	32%	12%	15%	6%	3%	1%	4%	2%	1%	2%	1%	0%	0%
RE235700_001	7%	3%	14%	36%	13%	33%	33%	17%	7%	8%	3%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE235700_002	11%	7%	21%	65%	19%	72%	72%	29%	13%	13%	6%	3%	1%	5%	1%	0%	2%	1%	0%	0%
RE235800_001	7%	3%	13%	21%	11%	23%	23%	18%	6%	8%	2%	1%	1%	2%	1%	0%	1%	0%	0%	0%
RE235900_002	7%	2%	15%	15%	11%	20%	20%	13%	5%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE235900_003	13%	4%	23%	65%	27%	48%	48%	24%	8%	14%	4%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE235900_004	12%	5%	16%	10%	15%	42%	42%	23%	9%	10%	5%	2%	1%	3%	1%	0%	1%	1%	0%	0%
RE310100_001	14%	4%	24%	65%	28%	50%	50%	25%	8%	15%	5%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE310100_002	13%	4%	27%	62%	27%	52%	52%	26%	9%	16%	5%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE310100_003	12%	5%	18%	25%	20%	47%	47%	24%	10%	14%	5%	2%	1%	4%	1%	0%	2%	1%	0%	0%
RE310200_001	11%	5%	19%	40%	20%	49%	49%	26%	10%	16%	6%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE310500_001	13%	6%	22%	74%	32%	60%	60%	30%	12%	18%	7%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RE310600_001	14%	5%	29%	62%	31%	55%	55%	26%	9%	17%	5%	3%	1%	4%	1%	0%	3%	1%	0%	0%
RE310600_002	13%	4%	26%	52%	33%	56%	56%	26%	9%	19%	5%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RE310700_001	12%	4%	25%	38%	29%	52%	52%	25%	9%	18%	5%	2%	1%	4%	1%	1%	3%	1%	0%	0%
RE310700_002	12%	5%	21%	74%	29%	58%	58%	29%	12%	18%	6%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RE310900_001	11%	4%	23%	35%	26%	49%	49%	27%	9%	18%	5%	2%	1%	4%	2%	1%	3%	1%	0%	0%
RE311000_001	11%	3%	20%	38%	20%	49%	49%	25%	8%	16%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE311100_001	11%	5%	21%	81%	33%	63%	63%	30%	11%	18%	6%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RE311200_001	8%	4%	13%	65%	30%	51%	51%	25%	10%	15%	6%	3%	1%	5%	1%	0%	2%	1%	0%	0%
RE311200_002	12%	4%	23%	73%	23%	51%	51%	26%	8%	16%	5%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE311300_001	13%	4%	26%	71%	21%	51%	51%	25%	8%	17%	5%	3%	1%	4%	1%	1%	3%	1%	0%	0%
RE311300_002	26%	10%	62%	264%	75%	129%	129%	61%	25%	45%	14%	7%	2%	12%	4%	1%	8%	2%	0%	0%
RE311400_001	12%	4%	22%	77%	29%	41%	41%	23%	7%	15%	4%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE311400_002	12%	4%	18%	62%	27%	43%	43%	23%	7%	17%	4%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE311400_003	18%	6%	41%	165%	46%	89%	89%	40%	14%	30%	8%	4%	1%	8%	2%	1%	5%	1%	0%	0%
RE311400_006	8%	3%	18%	75%	30%	43%	43%	26%	7%	17%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE311800_001	14%	4%	31%	70%	35%	61%	61%	33%	11%	20%	5%	3%	1%	5%	2%	1%	3%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE311900_001	14%	4%	33%	68%	35%	67%	67%	35%	11%	22%	6%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RE312200_001	17%	5%	37%	45%	36%	82%	82%	48%	15%	26%	7%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RE312200_002	18%	6%	41%	54%	40%	85%	85%	49%	15%	27%	7%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE312200_003	18%	6%	44%	62%	43%	84%	84%	49%	15%	28%	8%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE312300_001	21%	7%	44%	66%	54%	109%	109%	63%	19%	35%	9%	3%	2%	5%	3%	1%	6%	1%	0%	0%
RE312400_001	25%	8%	57%	87%	68%	126%	126%	74%	22%	43%	11%	4%	2%	7%	4%	1%	7%	2%	0%	0%
RE312800_001	17%	6%	36%	90%	55%	81%	81%	46%	15%	28%	8%	2%	1%	4%	2%	1%	5%	1%	0%	0%
RE312800_002	13%	4%	27%	111%	49%	61%	61%	34%	10%	21%	6%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE312900_001	15%	5%	31%	90%	52%	69%	69%	39%	13%	25%	7%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RE312900_002	12%	4%	24%	113%	48%	55%	55%	32%	10%	20%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE313000_001	11%	4%	25%	89%	40%	62%	62%	35%	11%	22%	6%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE313000_002	11%	4%	26%	88%	42%	64%	64%	36%	11%	23%	6%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RE313000_003	12%	5%	27%	82%	42%	70%	70%	39%	12%	24%	7%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RE313000_004	9%	4%	21%	98%	38%	56%	56%	33%	9%	21%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE313000_005	9%	4%	22%	104%	39%	54%	54%	33%	9%	21%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE313000_006	12%	4%	29%	106%	49%	51%	51%	34%	9%	23%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE313000_007	12%	4%	25%	116%	48%	53%	53%	32%	9%	21%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE313100_001	9%	3%	21%	101%	39%	52%	52%	32%	9%	21%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE314400_001	18%	4%	44%	175%	55%	64%	64%	45%	10%	31%	5%	4%	1%	7%	3%	1%	6%	1%	0%	0%
RE314800_001	17%	3%	49%	172%	54%	63%	63%	46%	8%	36%	4%	5%	2%	8%	3%	1%	7%	1%	0%	0%
RE314900_001	14%	3%	35%	154%	59%	64%	64%	45%	10%	31%	5%	4%	1%	7%	3%	1%	6%	1%	0%	0%
RE316400_001	11%	4%	22%	71%	28%	46%	46%	30%	9%	16%	4%	4%	1%	7%	2%	1%	3%	1%	0%	0%
RE316500_001	11%	4%	20%	62%	26%	43%	43%	28%	11%	15%	4%	4%	1%	7%	2%	1%	3%	1%	0%	0%
RE316600_001	11%	8%	17%	73%	31%	51%	51%	31%	19%	18%	9%	4%	1%	7%	2%	1%	3%	1%	0%	0%
RE316600_002	11%	6%	19%	76%	32%	52%	52%	33%	14%	19%	7%	5%	1%	8%	2%	1%	3%	1%	0%	0%
RE316700_001	11%	5%	18%	79%	34%	51%	51%	33%	13%	20%	7%	5%	1%	8%	2%	1%	4%	1%	0%	0%
RE316700_002	11%	5%	21%	91%	38%	54%	54%	36%	13%	21%	7%	5%	1%	9%	2%	1%	4%	1%	0%	0%
RE317000_001	29%	8%	60%	124%	45%	78%	78%	67%	19%	47%	11%	6%	3%	11%	5%	2%	9%	2%	0%	0%
RE410200_001	20%	5%	47%	159%	33%	101%	101%	55%	12%	33%	6%	6%	2%	10%	3%	1%	6%	1%	0%	0%
RE410200_002	21%	6%	50%	170%	40%	110%	110%	59%	13%	34%	7%	6%	2%	10%	3%	1%	6%	1%	0%	0%
RE411100_001	11%	5%	29%	93%	31%	67%	67%	31%	12%	24%	7%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RE411200_001	8%	3%	16%	24%	27%	28%	28%	20%	7%	11%	3%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE510000_001	7%	2%	12%	17%	10%	26%	26%	15%	5%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE510000_002	9%	3%	16%	44%	14%	31%	31%	20%	6%	10%	3%	2%	1%	4%	1%	0%	2%	0%	0%	0%
RE510100_001	10%	3%	18%	62%	21%	38%	38%	22%	7%	12%	4%	2%	1%	4%	1%	0%	2%	1%	0%	0%
RE511200_001	15%	8%	21%	4%	1%	26%	26%	23%	13%	5%	6%	1%	1%	1%	1%	0%	1%	1%	0%	0%
RE511200_002	15%	7%	22%	3%	0%	22%	22%	23%	13%	6%	6%	0%	1%	1%	1%	0%	1%	1%	0%	0%
RE511200_003	14%	7%	22%	3%	0%	20%	20%	23%	13%	7%	6%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511200_004	14%	7%	22%	1%	-1%	21%	21%	23%	13%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511200_005	15%	7%	18%	4%	1%	30%	30%	21%	12%	5%	6%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511200_006	14%	7%	17%	3%	0%	30%	30%	21%	12%	6%	6%	1%	1%	1%	1%	0%	1%	1%	0%	0%
RE511300_001	13%	2%	20%	11%	14%	34%	34%	19%	5%	11%	2%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE511300_002	9%	3%	15%	6%	4%	34%	34%	14%	6%	7%	4%	2%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_003	9%	3%	16%	2%	3%	32%	32%	15%	6%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_004	10%	3%	14%	0%	0%	33%	33%	14%	7%	6%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_005	9%	3%	18%	0%	6%	31%	31%	15%	6%	8%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_006	9%	3%	16%	0%	3%	32%	32%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_007	10%	4%	14%	1%	0%	34%	34%	14%	7%	6%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_008	9%	3%	16%	1%	3%	31%	31%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_009	10%	4%	13%	0%	0%	35%	35%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_010	9%	3%	18%	0%	6%	32%	32%	15%	7%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_011	9%	3%	16%	1%	4%	33%	33%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_012	9%	3%	18%	0%	6%	32%	32%	15%	6%	8%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511300_013	10%	3%	14%	0%	0%	33%	33%	14%	7%	6%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_014	10%	3%	14%	0%	0%	34%	34%	14%	7%	6%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_015	10%	4%	14%	-1%	1%	35%	35%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_016	10%	4%	13%	0%	0%	34%	34%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_017	10%	4%	13%	0%	0%	34%	34%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_018	10%	3%	15%	0%	3%	34%	34%	14%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_019	10%	4%	14%	-1%	1%	34%	34%	14%	7%	6%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_020	9%	3%	16%	1%	4%	31%	31%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_021	10%	3%	14%	0%	0%	34%	34%	14%	7%	6%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_022	10%	4%	13%	0%	0%	34%	34%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_023	10%	4%	13%	0%	0%	34%	34%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_024	10%	4%	14%	1%	2%	34%	34%	14%	7%	6%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_025	10%	3%	16%	0%	3%	32%	32%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_026	9%	3%	18%	0%	7%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511300_027	9%	3%	17%	0%	6%	32%	32%	15%	7%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_028	10%	3%	15%	0%	2%	32%	32%	14%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_029	10%	4%	13%	1%	0%	34%	34%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_030	10%	3%	15%	1%	2%	32%	32%	14%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_031	9%	3%	16%	0%	4%	33%	33%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_032	9%	3%	16%	0%	2%	31%	31%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_033	10%	3%	16%	1%	3%	33%	33%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_034	9%	3%	16%	1%	3%	33%	33%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_035	9%	3%	17%	1%	5%	31%	31%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_036	9%	3%	17%	1%	6%	31%	31%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_037	10%	3%	16%	0%	3%	32%	32%	15%	7%	7%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_038	10%	4%	13%	0%	0%	34%	34%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_039	10%	4%	13%	0%	0%	34%	34%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_040	10%	4%	14%	0%	0%	34%	34%	14%	7%	6%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_041	10%	4%	13%	0%	0%	35%	35%	14%	7%	5%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_042	9%	3%	17%	1%	5%	31%	31%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511300_043	14%	7%	22%	-1%	1%	21%	21%	23%	12%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_044	14%	7%	22%	-1%	4%	21%	21%	23%	12%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_045	14%	6%	21%	-1%	4%	19%	19%	23%	12%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_046	14%	6%	21%	-2%	3%	19%	19%	23%	12%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_047	13%	6%	21%	-2%	2%	18%	18%	23%	12%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_048	13%	6%	21%	-3%	1%	19%	19%	23%	11%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_049	12%	6%	20%	-2%	1%	18%	18%	23%	11%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_050	12%	6%	20%	-2%	0%	18%	18%	23%	11%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_051	12%	6%	21%	-2%	0%	17%	17%	23%	11%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_052	12%	6%	21%	-2%	0%	18%	18%	23%	11%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_053	12%	6%	20%	-3%	-1%	18%	18%	23%	11%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_054	12%	5%	20%	-4%	-1%	19%	19%	23%	11%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_055	12%	5%	19%	-5%	-1%	21%	21%	23%	10%	6%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_056	11%	5%	18%	-5%	-1%	20%	20%	23%	10%	6%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_057	11%	5%	17%	-6%	-1%	18%	18%	22%	10%	5%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_058	11%	5%	15%	-6%	-1%	16%	16%	22%	10%	5%	4%	0%	1%	0%	1%	0%	1%	0%	0%	0%
RE511300_059	11%	5%	12%	-7%	3%	16%	16%	22%	10%	4%	4%	0%	1%	0%	1%	0%	0%	0%	0%	0%
RE511300_060	11%	5%	12%	-7%	1%	12%	12%	21%	10%	4%	4%	0%	1%	0%	1%	0%	0%	0%	0%	0%
RE511300_061	10%	5%	12%	-6%	0%	13%	13%	20%	10%	4%	4%	0%	1%	0%	1%	0%	0%	0%	0%	0%
RE511300_062	10%	5%	12%	-6%	-1%	17%	17%	19%	9%	4%	4%	0%	1%	0%	1%	0%	0%	0%	0%	0%
RE511300_063	10%	5%	12%	-5%	-2%	20%	20%	19%	9%	3%	4%	0%	1%	0%	1%	0%	0%	0%	0%	0%
RE511300_064	10%	4%	12%	-4%	-2%	18%	18%	19%	9%	3%	3%	0%	1%	0%	1%	0%	0%	0%	0%	0%
RE511300_065	10%	4%	12%	-3%	-2%	19%	19%	19%	9%	2%	3%	0%	1%	0%	1%	0%	0%	0%	0%	0%
RE511300_066	10%	4%	10%	-1%	1%	19%	19%	16%	8%	2%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_067	10%	4%	10%	-1%	2%	20%	20%	16%	8%	3%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_068	10%	4%	10%	-3%	2%	21%	21%	16%	8%	3%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_069	10%	4%	10%	-2%	2%	20%	20%	16%	8%	3%	4%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_070	10%	4%	11%	-2%	2%	21%	21%	15%	7%	3%	4%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_071	10%	4%	11%	-1%	2%	21%	21%	15%	7%	4%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_072	9%	4%	11%	0%	2%	20%	20%	15%	7%	4%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_073	9%	4%	11%	0%	2%	19%	19%	15%	7%	4%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_074	10%	4%	13%	0%	4%	30%	30%	13%	7%	5%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_075	10%	4%	14%	-1%	5%	30%	30%	13%	7%	6%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_076	10%	4%	14%	-1%	4%	30%	30%	14%	7%	6%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_077	10%	4%	15%	-1%	4%	30%	30%	14%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_078	9%	4%	15%	-1%	3%	30%	30%	14%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_079	9%	4%	16%	-2%	2%	30%	30%	14%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_080	9%	4%	16%	-2%	2%	29%	29%	14%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_081	9%	4%	16%	-2%	1%	28%	28%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_082	9%	4%	16%	-2%	1%	27%	27%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_083	9%	4%	16%	-2%	0%	26%	26%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_084	9%	4%	15%	-2%	0%	25%	25%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_085	9%	4%	15%	-2%	-1%	24%	24%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_086	9%	4%	15%	-2%	-1%	24%	24%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_087	9%	4%	15%	-3%	-1%	24%	24%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_088	8%	4%	15%	-3%	-1%	23%	23%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_089	8%	4%	15%	-3%	-1%	23%	23%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_090	8%	4%	15%	-3%	-2%	23%	23%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_091	8%	4%	15%	-3%	-2%	23%	23%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_092	8%	4%	15%	-3%	-2%	23%	23%	15%	7%	7%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_093	8%	4%	14%	-3%	-2%	23%	23%	15%	7%	6%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_094	8%	4%	14%	-3%	-2%	22%	22%	15%	7%	6%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_095	8%	4%	14%	-4%	-1%	22%	22%	14%	7%	6%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_096	8%	4%	13%	-4%	-1%	21%	21%	14%	7%	6%	4%	1%	0%	1%	1%	0%	1%	1%	0%	0%
RE511300_097	9%	4%	13%	-4%	0%	21%	21%	14%	7%	5%	4%	0%	0%	0%	1%	0%	1%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_098	11%	5%	11%	2%	1%	32%	32%	16%	9%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_099	11%	5%	11%	2%	1%	32%	32%	16%	9%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_100	11%	5%	11%	2%	1%	33%	33%	16%	9%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_101	11%	5%	11%	1%	1%	33%	33%	16%	9%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_102	11%	4%	10%	1%	1%	33%	33%	16%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_103	11%	4%	10%	1%	1%	34%	34%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_104	11%	4%	10%	1%	1%	34%	34%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_105	11%	4%	10%	1%	1%	34%	34%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_106	11%	4%	9%	1%	1%	33%	33%	15%	8%	3%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_107	11%	4%	9%	1%	1%	33%	33%	15%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_108	11%	4%	9%	1%	1%	33%	33%	15%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_109	11%	4%	9%	1%	1%	33%	33%	15%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_110	11%	4%	9%	1%	1%	32%	32%	14%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_111	10%	4%	9%	1%	0%	32%	32%	14%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_112	10%	4%	9%	1%	0%	32%	32%	14%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_113	10%	4%	9%	1%	0%	33%	33%	14%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_114	10%	4%	9%	1%	0%	33%	33%	14%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_115	10%	4%	9%	0%	0%	33%	33%	14%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_116	10%	4%	9%	0%	0%	34%	34%	14%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_117	10%	4%	9%	0%	0%	35%	35%	14%	8%	3%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_118	10%	4%	9%	0%	0%	35%	35%	14%	7%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_119	10%	4%	9%	0%	0%	35%	35%	14%	7%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_120	10%	4%	10%	0%	0%	35%	35%	14%	7%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_121	10%	4%	10%	0%	0%	36%	36%	14%	7%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_122	12%	5%	13%	3%	4%	36%	36%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_123	12%	5%	12%	3%	4%	37%	37%	17%	9%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_124	12%	5%	12%	2%	4%	36%	36%	17%	9%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_125	12%	5%	12%	2%	4%	36%	36%	17%	9%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_126	12%	5%	12%	2%	5%	37%	37%	17%	9%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_127	12%	5%	12%	2%	5%	37%	37%	17%	9%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_128	12%	5%	11%	2%	5%	37%	37%	17%	9%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_129	12%	5%	11%	2%	5%	37%	37%	17%	9%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_130	12%	5%	11%	2%	5%	36%	36%	17%	9%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_131	12%	5%	11%	3%	5%	36%	36%	16%	9%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_132	11%	5%	10%	3%	5%	36%	36%	16%	9%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_133	11%	5%	10%	3%	4%	35%	35%	16%	9%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_134	11%	5%	10%	3%	4%	35%	35%	16%	9%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_135	11%	4%	10%	3%	4%	34%	34%	16%	8%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_136	11%	4%	10%	3%	4%	34%	34%	16%	8%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_137	11%	4%	10%	3%	4%	34%	34%	15%	8%	5%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_138	11%	4%	10%	3%	4%	34%	34%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_139	11%	4%	10%	3%	4%	33%	33%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_140	11%	4%	10%	2%	4%	33%	33%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_141	11%	4%	10%	2%	3%	34%	34%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_142	11%	4%	10%	2%	3%	35%	35%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_143	11%	4%	10%	2%	3%	36%	36%	15%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_144	11%	4%	9%	2%	2%	36%	36%	14%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_145	10%	4%	9%	2%	2%	36%	36%	14%	8%	4%	5%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_146	10%	4%	9%	2%	2%	37%	37%	14%	8%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_147	10%	4%	9%	2%	1%	37%	37%	14%	8%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_148	10%	4%	9%	1%	1%	37%	37%	14%	8%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_149	14%	7%	17%	3%	0%	29%	29%	21%	12%	6%	6%	1%	1%	1%	1%	0%	1%	1%	0%	0%
RE511300_150	14%	6%	17%	2%	0%	29%	29%	21%	12%	6%	5%	1%	1%	1%	1%	0%	1%	1%	0%	0%
RE511300_151	14%	6%	17%	1%	0%	28%	28%	20%	11%	6%	5%	0%	1%	1%	1%	0%	1%	1%	0%	0%
RE511300_152	14%	6%	17%	1%	3%	27%	27%	20%	11%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_153	14%	6%	17%	2%	5%	24%	24%	20%	11%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_154	14%	6%	17%	1%	5%	23%	23%	20%	11%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_155	13%	6%	17%	2%	5%	24%	24%	20%	11%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_156	13%	6%	17%	2%	5%	23%	23%	20%	11%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_157	13%	6%	17%	2%	5%	21%	21%	20%	10%	7%	5%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_158	12%	5%	18%	1%	5%	21%	21%	20%	10%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_159	12%	5%	18%	-1%	4%	20%	20%	20%	10%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_160	12%	5%	18%	-2%	3%	20%	20%	20%	10%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_161	12%	5%	18%	-2%	2%	21%	21%	20%	10%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_162	12%	5%	18%	-3%	1%	21%	21%	21%	10%	7%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_163	11%	5%	17%	-2%	0%	19%	19%	21%	10%	6%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_164	11%	5%	16%	-1%	-1%	18%	18%	21%	9%	5%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_165	11%	5%	15%	-2%	-1%	17%	17%	21%	9%	4%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_166	11%	5%	14%	-1%	-2%	18%	18%	20%	9%	4%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_167	11%	5%	13%	-2%	-2%	19%	19%	20%	9%	3%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_168	13%	6%	16%	3%	1%	32%	32%	19%	11%	5%	6%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_169	13%	6%	15%	2%	1%	30%	30%	19%	11%	5%	6%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_170	13%	6%	15%	2%	1%	29%	29%	19%	11%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_171	13%	6%	15%	2%	1%	28%	28%	19%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_172	13%	6%	14%	2%	2%	28%	28%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_173	13%	5%	14%	2%	4%	27%	27%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_174	13%	5%	13%	3%	4%	26%	26%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_175	12%	5%	13%	2%	3%	26%	26%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_176	12%	5%	13%	2%	3%	25%	25%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_177	12%	5%	13%	2%	3%	25%	25%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_178	12%	5%	13%	1%	3%	25%	25%	18%	9%	5%	5%	0%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_179	12%	5%	13%	1%	3%	24%	24%	18%	9%	5%	4%	0%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_180	12%	5%	13%	0%	3%	24%	24%	18%	9%	5%	4%	0%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_181	12%	5%	13%	-1%	4%	25%	25%	18%	9%	5%	4%	0%	1%	1%	1%	0%	1%	1%	0%	0%
RE511300_182	12%	5%	13%	-1%	4%	24%	24%	17%	9%	5%	4%	0%	1%	1%	1%	0%	1%	1%	0%	0%
RE511300_183	12%	5%	13%	-2%	5%	23%	23%	17%	9%	5%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_184	12%	5%	14%	-2%	6%	23%	23%	17%	9%	6%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_185	11%	4%	14%	-3%	6%	22%	22%	17%	9%	6%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_186	11%	4%	14%	-2%	5%	21%	21%	17%	8%	6%	4%	0%	1%	0%	1%	0%	1%	1%	0%	0%
RE511300_187	11%	4%	14%	-3%	4%	19%	19%	17%	8%	5%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_188	11%	4%	13%	-3%	4%	20%	20%	17%	8%	5%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_189	11%	4%	12%	-2%	3%	20%	20%	17%	8%	4%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_190	10%	4%	11%	-1%	3%	20%	20%	17%	8%	4%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_191	13%	6%	14%	2%	2%	35%	35%	19%	10%	5%	6%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_192	12%	6%	14%	2%	1%	34%	34%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_193	12%	5%	14%	3%	2%	33%	33%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_194	12%	5%	13%	2%	3%	32%	32%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_195	12%	5%	13%	2%	3%	31%	31%	18%	10%	5%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_196	12%	5%	13%	3%	3%	31%	31%	17%	10%	4%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_197	12%	5%	12%	2%	2%	29%	29%	17%	9%	4%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_198	12%	5%	12%	2%	2%	29%	29%	17%	9%	4%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_199	12%	5%	12%	2%	1%	28%	28%	17%	9%	4%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_200	12%	5%	12%	1%	1%	27%	27%	17%	9%	4%	5%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_201	12%	5%	12%	1%	1%	26%	26%	17%	9%	4%	4%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_202	12%	5%	12%	0%	1%	26%	26%	16%	9%	4%	4%	1%	1%	1%	1%	0%	0%	1%	0%	0%
RE511300_203	12%	5%	12%	0%	1%	26%	26%	16%	9%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_204	12%	4%	12%	-1%	2%	26%	26%	16%	9%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_205	11%	4%	12%	-2%	2%	26%	26%	16%	8%	4%	4%	1%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_206	11%	4%	12%	-2%	3%	25%	25%	16%	8%	4%	4%	0%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_207	11%	4%	12%	-3%	4%	24%	24%	15%	8%	4%	4%	0%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_208	11%	4%	13%	-1%	6%	24%	24%	15%	8%	4%	4%	0%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_209	11%	4%	13%	-2%	7%	23%	23%	15%	8%	5%	4%	0%	0%	1%	1%	0%	0%	1%	0%	0%
RE511300_210	11%	4%	14%	-3%	7%	21%	21%	15%	8%	5%	4%	0%	0%	0%	1%	0%	1%	1%	0%	0%
RE511300_211	11%	4%	14%	-3%	7%	21%	21%	15%	8%	5%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_212	10%	4%	14%	-3%	7%	21%	21%	15%	8%	5%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_213	10%	4%	13%	-3%	6%	21%	21%	15%	8%	4%	4%	0%	1%	0%	1%	0%	0%	1%	0%	0%
RE511300_214	10%	4%	13%	-3%	5%	21%	21%	15%	8%	4%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511400_001	6%	3%	14%	6%	1%	24%	24%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_002	6%	3%	14%	6%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_003	6%	3%	14%	7%	1%	24%	24%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_004	6%	3%	14%	5%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_005	6%	3%	14%	6%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_006	6%	3%	15%	0%	0%	27%	27%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_007	6%	3%	14%	3%	0%	26%	26%	14%	6%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_008	6%	3%	14%	3%	0%	25%	25%	14%	6%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_009	6%	3%	14%	4%	0%	25%	25%	13%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_010	6%	3%	14%	6%	1%	24%	24%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_011	6%	3%	14%	7%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_012	6%	3%	14%	1%	0%	25%	25%	14%	6%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_013	6%	3%	14%	5%	0%	24%	24%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_014	6%	3%	14%	6%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_015	6%	3%	14%	1%	-1%	25%	25%	14%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_016	6%	3%	14%	1%	0%	25%	25%	14%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_017	6%	3%	14%	6%	0%	26%	26%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_018	6%	3%	14%	8%	0%	26%	26%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_019	6%	3%	14%	7%	0%	26%	26%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_020	6%	3%	14%	8%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_021	7%	3%	16%	1%	1%	29%	29%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_022	7%	3%	16%	1%	1%	28%	28%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_023	6%	3%	14%	5%	0%	26%	26%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_024	6%	3%	14%	6%	0%	26%	26%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_025	6%	3%	16%	2%	1%	28%	28%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_026	6%	3%	15%	3%	0%	27%	27%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_027	6%	3%	14%	7%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_028	6%	3%	15%	4%	0%	27%	27%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_029	6%	3%	15%	5%	0%	26%	26%	14%	6%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_030	6%	3%	14%	5%	0%	26%	26%	14%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_031	7%	3%	11%	-2%	5%	20%	20%	12%	6%	5%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_032	7%	3%	15%	-3%	-1%	24%	24%	14%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_033	7%	3%	13%	-3%	1%	22%	22%	13%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_034	7%	3%	14%	-3%	-1%	24%	24%	14%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_035	7%	3%	12%	0%	3%	20%	20%	13%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_036	7%	3%	9%	-4%	8%	17%	17%	11%	6%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_037	6%	3%	14%	8%	3%	23%	23%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_038	6%	3%	14%	5%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_039	6%	3%	14%	1%	0%	26%	26%	14%	6%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_040	7%	3%	14%	-4%	-1%	24%	24%	13%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_041	7%	3%	15%	-3%	-1%	24%	24%	13%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_042	7%	3%	14%	-4%	0%	23%	23%	13%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_043	7%	3%	12%	-1%	3%	20%	20%	12%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_044	7%	3%	13%	0%	2%	20%	20%	13%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_045	7%	3%	13%	-2%	1%	21%	21%	13%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_046	6%	3%	7%	2%	12%	20%	20%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_047	6%	3%	8%	2%	10%	20%	20%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_048	6%	3%	9%	-4%	9%	17%	17%	9%	5%	4%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_049	5%	2%	7%	-2%	10%	19%	19%	8%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_050	6%	3%	9%	-4%	9%	17%	17%	9%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_051	7%	3%	15%	-2%	-1%	26%	26%	14%	6%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_052	7%	3%	15%	-2%	-1%	26%	26%	14%	6%	7%	3%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_053	7%	3%	16%	-2%	0%	27%	27%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_054	7%	3%	16%	-2%	0%	27%	27%	15%	6%	8%	3%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_055	7%	3%	16%	-1%	0%	28%	28%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_056	7%	3%	16%	-1%	1%	29%	29%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_057	8%	3%	17%	-1%	1%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_058	8%	3%	16%	-1%	1%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_059	8%	3%	16%	-1%	1%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_060	6%	2%	10%	-2%	7%	16%	16%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_061	5%	2%	10%	-2%	7%	17%	17%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_062	5%	2%	10%	-2%	7%	17%	17%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_063	5%	2%	10%	-2%	7%	17%	17%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_064	5%	3%	8%	-2%	9%	20%	20%	8%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_065	6%	2%	10%	-3%	6%	17%	17%	10%	5%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_066	5%	2%	7%	-1%	10%	20%	20%	8%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_067	5%	2%	7%	2%	12%	21%	21%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_068	6%	3%	10%	-2%	6%	16%	16%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_069	6%	3%	8%	-3%	9%	20%	20%	9%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_070	5%	3%	8%	-1%	9%	21%	21%	8%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_071	6%	2%	10%	-3%	8%	16%	16%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_072	6%	2%	9%	-4%	10%	17%	17%	9%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_073	6%	2%	8%	-4%	10%	16%	16%	9%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_074	5%	2%	7%	2%	12%	21%	21%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_075	6%	3%	7%	2%	11%	21%	21%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_076	7%	3%	11%	-3%	8%	19%	19%	11%	6%	4%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_077	5%	3%	8%	1%	10%	21%	21%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_078	5%	2%	7%	0%	11%	21%	21%	8%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_079	6%	3%	7%	2%	11%	20%	20%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_080	6%	3%	10%	-2%	6%	16%	16%	10%	5%	4%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_081	5%	2%	8%	-3%	10%	18%	18%	8%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_082	5%	2%	7%	-3%	10%	20%	20%	8%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_083	6%	3%	8%	-3%	9%	20%	20%	8%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_084	6%	2%	10%	-3%	9%	18%	18%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_085	7%	3%	11%	-3%	7%	16%	16%	11%	6%	4%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_086	5%	2%	7%	-3%	10%	17%	17%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_087	8%	3%	18%	0%	6%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_088	7%	3%	18%	4%	6%	31%	31%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_089	8%	3%	18%	6%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_090	7%	3%	18%	3%	5%	31%	31%	15%	6%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_091	8%	3%	18%	7%	8%	31%	31%	15%	6%	9%	4%	2%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_092	6%	3%	16%	4%	2%	29%	29%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_093	8%	3%	18%	3%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_094	8%	3%	19%	0%	6%	30%	30%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_095	8%	3%	18%	10%	8%	31%	31%	15%	6%	9%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE511400_096	9%	3%	17%	4%	6%	31%	31%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_097	6%	3%	16%	5%	1%	29%	29%	14%	5%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_098	7%	3%	17%	4%	4%	31%	31%	15%	6%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_099	6%	3%	15%	1%	0%	26%	26%	14%	6%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_100	6%	3%	15%	0%	0%	27%	27%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_101	6%	3%	14%	7%	2%	24%	24%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_102	6%	3%	14%	4%	0%	24%	24%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_103	7%	3%	18%	6%	6%	31%	31%	15%	6%	9%	3%	2%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_104	7%	3%	18%	3%	6%	31%	31%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_105	7%	3%	17%	1%	3%	30%	30%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_106	9%	3%	17%	1%	6%	31%	31%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_107	6%	3%	16%	5%	1%	29%	29%	14%	5%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_108	7%	3%	18%	4%	5%	31%	31%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_109	9%	3%	17%	3%	4%	31%	31%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_110	8%	3%	19%	0%	5%	30%	30%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_111	8%	3%	18%	1%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_112	9%	3%	17%	2%	7%	31%	31%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_113	8%	3%	18%	2%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_114	8%	3%	18%	-1%	4%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_115	8%	3%	19%	0%	7%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_116	8%	3%	18%	1%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_117	8%	3%	18%	5%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_118	7%	3%	17%	1%	3%	30%	30%	15%	6%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_119	7%	3%	17%	2%	3%	31%	31%	15%	6%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_120	6%	3%	16%	4%	1%	29%	29%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_121	8%	3%	19%	0%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_122	9%	3%	18%	1%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_123	8%	3%	19%	0%	7%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_124	8%	3%	18%	0%	6%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_125	7%	3%	18%	5%	6%	31%	31%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_126	9%	3%	18%	1%	8%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_127	7%	3%	18%	1%	5%	30%	30%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_128	8%	3%	18%	1%	5%	30%	30%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_129	9%	3%	19%	0%	7%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_130	7%	3%	18%	1%	4%	31%	31%	15%	6%	10%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_131	8%	3%	18%	9%	8%	32%	32%	15%	6%	9%	4%	2%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_132	8%	3%	19%	0%	7%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_133	8%	3%	18%	-1%	4%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_134	8%	3%	19%	0%	7%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_135	8%	3%	18%	0%	5%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_136	7%	3%	16%	4%	3%	30%	30%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_137	6%	3%	9%	-1%	10%	21%	21%	11%	6%	3%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_138	6%	3%	9%	0%	10%	21%	21%	12%	6%	3%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_139	6%	3%	9%	1%	10%	19%	19%	12%	6%	3%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_140	7%	3%	9%	1%	10%	17%	17%	12%	6%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_141	7%	3%	10%	1%	10%	19%	19%	12%	6%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_142	7%	3%	11%	-1%	9%	19%	19%	12%	6%	5%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_143	7%	3%	10%	-2%	10%	20%	20%	12%	6%	4%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_144	7%	3%	12%	0%	9%	18%	18%	12%	6%	5%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_145	7%	3%	12%	1%	9%	19%	19%	12%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_146	7%	3%	12%	0%	7%	20%	20%	12%	6%	5%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_147	7%	3%	12%	0%	8%	19%	19%	13%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_148	7%	3%	11%	1%	7%	20%	20%	12%	6%	5%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_149	6%	2%	8%	-3%	7%	13%	13%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_150	6%	2%	8%	-3%	6%	17%	17%	10%	5%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_151	6%	2%	8%	-3%	7%	15%	15%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_152	5%	2%	9%	-2%	6%	19%	19%	10%	5%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_153	5%	2%	7%	-2%	7%	16%	16%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_154	6%	2%	7%	-2%	7%	15%	15%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_155	5%	2%	7%	-2%	6%	17%	17%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_156	5%	2%	7%	-2%	6%	16%	16%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_157	6%	2%	7%	-3%	8%	13%	13%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_158	5%	2%	8%	-3%	5%	17%	17%	10%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_159	7%	3%	16%	-2%	0%	27%	27%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_160	8%	3%	16%	-2%	0%	29%	29%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_161	8%	3%	17%	-2%	1%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_162	8%	3%	16%	-2%	1%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_163	9%	3%	18%	-1%	3%	32%	32%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_164	9%	3%	18%	-1%	4%	32%	32%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_165	8%	3%	16%	-2%	0%	28%	28%	15%	6%	8%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_166	8%	3%	17%	-1%	2%	32%	32%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_167	7%	3%	16%	-2%	-1%	27%	27%	15%	6%	8%	4%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_168	9%	3%	18%	-1%	3%	32%	32%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_169	8%	3%	16%	-2%	1%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_170	9%	3%	17%	-1%	2%	32%	32%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_171	9%	3%	18%	-1%	4%	32%	32%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_172	8%	3%	17%	-1%	1%	32%	32%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_173	6%	3%	14%	6%	0%	27%	27%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_174	6%	3%	14%	6%	0%	27%	27%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_175	6%	3%	15%	6%	0%	27%	27%	14%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_176	7%	3%	16%	1%	2%	29%	29%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_177	7%	3%	16%	1%	1%	29%	29%	15%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_178	7%	3%	16%	2%	1%	29%	29%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_179	6%	3%	16%	2%	1%	29%	29%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_180	6%	3%	16%	3%	1%	28%	28%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_181	6%	3%	15%	4%	1%	28%	28%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_182	6%	3%	15%	5%	1%	27%	27%	14%	6%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_183	6%	3%	15%	6%	1%	27%	27%	14%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_184	6%	3%	14%	6%	0%	27%	27%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_185	6%	3%	16%	3%	1%	28%	28%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_186	7%	3%	14%	-2%	1%	22%	22%	13%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_187	7%	3%	14%	-2%	2%	22%	22%	13%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_188	7%	3%	14%	-3%	0%	22%	22%	14%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_189	7%	3%	15%	-4%	-1%	22%	22%	14%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_190	7%	3%	15%	-3%	-1%	23%	23%	14%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_191	7%	3%	15%	-4%	-1%	23%	23%	14%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_192	7%	3%	14%	-4%	-1%	24%	24%	14%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_193	7%	3%	14%	-4%	-1%	25%	25%	14%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_194	7%	3%	14%	-3%	-1%	25%	25%	14%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_195	7%	3%	15%	-2%	-1%	25%	25%	14%	6%	6%	3%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE511400_196	7%	3%	9%	-2%	9%	19%	19%	12%	6%	3%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_197	7%	3%	10%	0%	10%	19%	19%	13%	6%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_198	7%	3%	10%	0%	10%	19%	19%	13%	6%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_199	7%	3%	10%	-1%	9%	19%	19%	13%	6%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_200	7%	3%	11%	0%	10%	18%	18%	13%	6%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_201	7%	3%	11%	1%	10%	17%	17%	13%	6%	4%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_202	7%	3%	13%	-2%	9%	19%	19%	14%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_203	7%	3%	12%	0%	9%	19%	19%	14%	6%	5%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_204	7%	3%	13%	-1%	9%	19%	19%	14%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_205	7%	3%	14%	-1%	8%	18%	18%	14%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_206	7%	3%	14%	0%	8%	19%	19%	14%	6%	7%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_207	7%	3%	14%	0%	8%	20%	20%	14%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_208	7%	3%	14%	0%	7%	21%	21%	13%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_209	7%	3%	13%	0%	7%	21%	21%	13%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_210	7%	3%	13%	1%	6%	21%	21%	13%	6%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511400_211	7%	3%	12%	0%	6%	21%	21%	13%	6%	6%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511400_212	6%	3%	8%	-4%	8%	20%	20%	10%	6%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_213	6%	3%	8%	-3%	8%	19%	19%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_214	6%	3%	8%	-3%	8%	19%	19%	10%	6%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_215	6%	3%	8%	-2%	9%	19%	19%	11%	6%	3%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511400_216	6%	3%	14%	3%	0%	25%	25%	13%	6%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_217	9%	3%	19%	0%	5%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_218	9%	3%	18%	0%	5%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_219	8%	3%	17%	-1%	2%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_220	9%	3%	19%	0%	6%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_221	9%	3%	19%	0%	6%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_222	8%	3%	17%	-1%	2%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_223	8%	3%	18%	-1%	3%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_224	9%	3%	18%	0%	5%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_225	9%	3%	18%	0%	7%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_226	8%	3%	18%	-1%	3%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_227	8%	3%	18%	-1%	3%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_228	8%	3%	18%	-1%	4%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_229	8%	3%	18%	-1%	2%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_230	8%	3%	18%	0%	5%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_231	9%	3%	18%	0%	6%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_232	8%	3%	17%	-1%	2%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_233	9%	3%	19%	0%	7%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_234	9%	3%	19%	0%	6%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_235	8%	3%	18%	-1%	2%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_236	9%	3%	18%	0%	6%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_237	9%	3%	18%	0%	6%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_238	8%	3%	18%	-1%	3%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_239	8%	3%	17%	-1%	2%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_240	8%	3%	18%	-1%	3%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_241	8%	3%	18%	-1%	4%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_242	8%	3%	18%	-1%	4%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_243	9%	3%	18%	0%	5%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_244	8%	3%	18%	-1%	5%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_245	8%	3%	17%	-1%	2%	30%	30%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_246	8%	3%	18%	-1%	3%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_247	9%	3%	18%	0%	7%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_248	9%	3%	18%	0%	6%	31%	31%	16%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_249	8%	3%	17%	-1%	2%	31%	31%	15%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_250	6%	3%	14%	7%	1%	27%	27%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_251	6%	3%	14%	7%	1%	27%	27%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_252	6%	3%	14%	8%	1%	27%	27%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_265	7%	3%	16%	26%	6%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_266	7%	3%	16%	25%	7%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_267	7%	3%	16%	24%	7%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_268	7%	3%	16%	25%	7%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_269	7%	3%	17%	23%	8%	30%	30%	15%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_270	8%	3%	17%	21%	9%	30%	30%	15%	6%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_271	8%	3%	17%	19%	10%	31%	31%	15%	6%	8%	3%	2%	0%	3%	1%	0%	1%	1%	0%	0%
RE511400_272	8%	3%	17%	17%	10%	31%	31%	15%	6%	8%	3%	2%	0%	3%	1%	0%	1%	1%	0%	0%
RE511400_273	8%	3%	17%	16%	9%	31%	31%	15%	6%	8%	3%	2%	0%	3%	1%	0%	1%	1%	0%	0%
RE511400_274	8%	3%	17%	14%	9%	31%	31%	14%	6%	8%	3%	2%	0%	3%	1%	0%	1%	1%	0%	0%
RE511400_275	7%	3%	15%	24%	5%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_276	7%	3%	16%	22%	5%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_277	7%	3%	16%	22%	6%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_278	7%	3%	16%	21%	6%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_279	7%	3%	16%	22%	7%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_280	7%	3%	17%	19%	7%	31%	31%	14%	6%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_281	7%	3%	17%	16%	8%	31%	31%	15%	6%	9%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE511400_282	6%	3%	16%	11%	2%	30%	30%	14%	5%	9%	3%	2%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_283	6%	3%	16%	12%	3%	30%	30%	14%	5%	9%	3%	2%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_284	6%	3%	16%	14%	3%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_285	7%	3%	16%	15%	3%	31%	31%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_286	7%	3%	16%	16%	4%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_287	7%	3%	16%	17%	4%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_288	7%	3%	16%	19%	4%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_289	7%	3%	16%	20%	4%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_290	7%	3%	17%	7%	4%	31%	31%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_291	7%	3%	17%	8%	4%	31%	31%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_292	7%	3%	17%	10%	4%	32%	32%	14%	6%	9%	3%	2%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_293	7%	3%	17%	11%	5%	32%	32%	14%	6%	9%	3%	2%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_294	7%	3%	17%	12%	5%	32%	32%	14%	6%	9%	3%	2%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_295	7%	3%	16%	13%	5%	32%	32%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_296	7%	3%	16%	13%	5%	32%	32%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_297	7%	3%	16%	14%	5%	32%	32%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_298	7%	3%	16%	16%	5%	31%	31%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_299	7%	3%	16%	17%	5%	31%	31%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511400_300	7%	3%	18%	8%	7%	31%	31%	15%	6%	9%	3%	2%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_301	7%	3%	18%	9%	7%	31%	31%	15%	6%	9%	3%	2%	0%	2%	1%	0%	2%	1%	0%	0%
RE511400_302	7%	3%	18%	10%	7%	31%	31%	15%	6%	9%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE511400_303	7%	3%	17%	12%	7%	31%	31%	15%	6%	9%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE511400_304	7%	3%	16%	5%	3%	30%	30%	14%	6%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_305	6%	3%	16%	6%	2%	29%	29%	14%	5%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_306	6%	3%	16%	7%	2%	29%	29%	14%	5%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_307	6%	3%	16%	8%	1%	29%	29%	14%	5%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_308	6%	3%	15%	9%	1%	29%	29%	14%	5%	8%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE511400_309	6%	3%	15%	11%	1%	29%	29%	13%	5%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_310	6%	3%	15%	12%	1%	29%	29%	13%	5%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_311	6%	3%	15%	14%	1%	28%	28%	13%	5%	7%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_312	6%	3%	16%	6%	1%	29%	29%	14%	5%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_313	6%	3%	15%	7%	1%	29%	29%	14%	5%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_314	6%	3%	15%	8%	1%	28%	28%	14%	5%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_315	6%	3%	15%	9%	1%	28%	28%	13%	5%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_316	6%	3%	15%	9%	1%	28%	28%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_317	6%	3%	15%	9%	1%	28%	28%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_318	6%	3%	14%	9%	1%	27%	27%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511400_319	6%	3%	14%	10%	1%	27%	27%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_001	6%	2%	11%	6%	6%	20%	20%	12%	5%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_002	4%	2%	8%	-1%	10%	19%	19%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_003	4%	2%	7%	-1%	10%	21%	21%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_004	4%	2%	7%	-1%	11%	21%	21%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_005	4%	2%	6%	-2%	10%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_006	4%	2%	6%	-2%	10%	24%	24%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_007	4%	2%	6%	-1%	10%	24%	24%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_008	4%	2%	6%	-1%	10%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_009	4%	2%	6%	0%	11%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_010	5%	2%	8%	-1%	8%	21%	21%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_011	4%	2%	8%	0%	9%	19%	19%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_012	5%	2%	6%	-1%	7%	18%	18%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_013	5%	2%	7%	-1%	7%	18%	18%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_014	5%	2%	7%	-1%	7%	20%	20%	7%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_015	5%	2%	8%	0%	7%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_016	5%	2%	9%	0%	7%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_017	4%	2%	7%	-1%	11%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_018	4%	2%	6%	-1%	10%	21%	21%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_019	5%	2%	9%	3%	13%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_020	4%	2%	6%	-2%	10%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_021	4%	2%	6%	0%	12%	22%	22%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_022	5%	2%	9%	-1%	7%	20%	20%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_023	5%	2%	7%	-1%	11%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_024	4%	2%	6%	-2%	10%	21%	21%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_025	6%	3%	14%	8%	2%	24%	24%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_026	6%	2%	13%	14%	7%	23%	23%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_027	6%	2%	13%	15%	8%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_028	6%	2%	13%	13%	6%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_029	6%	2%	13%	14%	7%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_030	6%	2%	13%	13%	6%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_031	6%	2%	14%	9%	4%	24%	24%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_032	5%	2%	9%	2%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_033	6%	2%	13%	13%	7%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_034	6%	2%	13%	14%	7%	23%	23%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_035	6%	2%	14%	11%	4%	24%	24%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_036	6%	2%	13%	14%	7%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_037	5%	2%	9%	1%	13%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_038	5%	2%	10%	2%	12%	21%	21%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_039	5%	2%	10%	2%	12%	21%	21%	11%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_040	6%	2%	13%	13%	7%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_041	5%	2%	10%	2%	13%	21%	21%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_042	5%	2%	9%	0%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_043	5%	2%	9%	0%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_044	6%	2%	14%	8%	2%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_045	4%	2%	10%	-1%	0%	15%	15%	11%	4%	4%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511500_046	4%	2%	8%	-1%	5%	17%	17%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_047	4%	2%	8%	-2%	0%	14%	14%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_048	4%	2%	8%	-2%	1%	16%	16%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_049	6%	3%	14%	7%	0%	25%	25%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_050	6%	3%	14%	7%	1%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_051	4%	2%	9%	0%	4%	16%	16%	9%	4%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_052	5%	2%	9%	-3%	-1%	14%	14%	11%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_053	4%	2%	8%	-1%	3%	17%	17%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_054	6%	2%	12%	12%	5%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_055	5%	2%	11%	-3%	0%	13%	13%	11%	4%	5%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511500_056	4%	2%	6%	2%	12%	22%	22%	7%	5%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_057	4%	2%	7%	2%	13%	22%	22%	8%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_058	5%	2%	9%	-1%	8%	21%	21%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_059	5%	2%	7%	-2%	7%	17%	17%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_060	5%	2%	8%	-2%	7%	17%	17%	8%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_061	5%	2%	9%	1%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_062	5%	2%	11%	5%	11%	21%	21%	11%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511500_063	6%	2%	13%	11%	5%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_064	6%	2%	13%	12%	5%	23%	23%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_065	5%	2%	8%	-2%	7%	17%	17%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_066	5%	2%	7%	-2%	7%	18%	18%	8%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_067	5%	2%	9%	-2%	7%	17%	17%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_068	6%	2%	8%	-2%	7%	17%	17%	9%	5%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_069	6%	2%	8%	-2%	7%	17%	17%	9%	5%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_070	5%	2%	9%	-1%	7%	17%	17%	10%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_071	5%	2%	7%	2%	12%	21%	21%	8%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_072	5%	2%	9%	-1%	8%	18%	18%	8%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_073	4%	2%	6%	-1%	11%	21%	21%	6%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_074	4%	2%	6%	-1%	10%	20%	20%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_075	5%	2%	7%	-2%	11%	19%	19%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_076	5%	2%	7%	2%	12%	21%	21%	8%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_077	4%	2%	6%	-3%	10%	20%	20%	6%	5%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_078	4%	2%	6%	-2%	10%	21%	21%	6%	5%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_079	5%	2%	7%	-3%	11%	17%	17%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_080	5%	2%	7%	2%	12%	21%	21%	8%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_081	5%	2%	9%	-1%	8%	18%	18%	8%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_082	5%	2%	7%	-2%	11%	18%	18%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_083	4%	2%	6%	-3%	11%	18%	18%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_084	5%	2%	9%	-2%	9%	15%	15%	8%	5%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_085	4%	2%	6%	-2%	10%	20%	20%	7%	5%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_086	5%	2%	7%	2%	12%	21%	21%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_087	5%	2%	8%	-2%	10%	18%	18%	8%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_088	4%	2%	6%	0%	11%	21%	21%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_089	5%	2%	7%	2%	12%	21%	21%	8%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_090	5%	2%	9%	-1%	9%	17%	17%	8%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_091	5%	2%	8%	-2%	10%	16%	16%	8%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_092	4%	2%	6%	0%	11%	21%	21%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_093	5%	2%	7%	-2%	7%	17%	17%	8%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_094	6%	2%	9%	-2%	7%	18%	18%	9%	5%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_095	5%	2%	7%	-2%	6%	15%	15%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_096	5%	2%	7%	-3%	5%	15%	15%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_097	5%	2%	8%	-1%	8%	19%	19%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_098	5%	2%	7%	-2%	10%	18%	18%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_099	4%	2%	6%	-2%	10%	24%	24%	6%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_100	4%	2%	6%	-1%	11%	23%	23%	6%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_101	5%	2%	9%	-2%	7%	21%	21%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_102	4%	2%	6%	1%	12%	21%	21%	7%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_103	5%	2%	7%	-2%	6%	14%	14%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_104	5%	2%	6%	-2%	7%	14%	14%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_105	5%	2%	8%	-1%	7%	19%	19%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_106	5%	2%	8%	0%	9%	16%	16%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_107	4%	2%	6%	-1%	12%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_108	5%	2%	7%	-2%	8%	14%	14%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_109	5%	2%	7%	2%	12%	21%	21%	8%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_110	4%	2%	6%	-2%	11%	21%	21%	6%	5%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_111	5%	2%	12%	-2%	-1%	13%	13%	12%	4%	5%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511500_112	4%	2%	8%	-1%	2%	17%	17%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_113	4%	2%	8%	-2%	0%	15%	15%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_114	5%	2%	9%	-3%	-1%	14%	14%	11%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_115	4%	2%	8%	-3%	-1%	14%	14%	10%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_116	4%	2%	10%	-1%	-1%	16%	16%	11%	4%	4%	2%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511500_117	5%	2%	11%	-3%	-1%	13%	13%	12%	4%	5%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511500_118	5%	2%	11%	-3%	-1%	14%	14%	11%	4%	4%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511500_119	5%	2%	12%	-4%	-1%	13%	13%	12%	4%	5%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511500_120	5%	2%	11%	-2%	-1%	13%	13%	11%	4%	4%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511500_121	5%	2%	8%	-3%	-1%	14%	14%	10%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_122	5%	2%	9%	1%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_123	5%	2%	11%	-3%	-1%	14%	14%	12%	4%	4%	2%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511500_124	4%	2%	8%	-2%	0%	14%	14%	10%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_125	4%	2%	7%	-3%	0%	14%	14%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_126	5%	2%	11%	-2%	-1%	13%	13%	11%	4%	5%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511500_127	4%	2%	8%	-1%	2%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_128	4%	2%	8%	3%	14%	21%	21%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_129	5%	2%	9%	1%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_130	5%	2%	9%	4%	13%	21%	21%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_131	5%	2%	10%	3%	11%	21%	21%	11%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_132	6%	3%	14%	10%	4%	22%	22%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_133	6%	3%	14%	8%	3%	24%	24%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_134	6%	2%	13%	13%	6%	23%	23%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_135	5%	2%	9%	-1%	7%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_136	4%	2%	6%	0%	11%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_137	4%	2%	6%	1%	12%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_138	4%	2%	6%	1%	13%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_139	4%	2%	6%	2%	13%	23%	23%	8%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_140	4%	2%	8%	0%	8%	20%	20%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_141	4%	2%	6%	-2%	11%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_142	4%	2%	6%	-3%	10%	21%	21%	7%	5%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_143	5%	2%	9%	-3%	5%	15%	15%	10%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_144	5%	2%	8%	-3%	5%	15%	15%	10%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_145	5%	2%	9%	-3%	5%	15%	15%	10%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_146	5%	2%	9%	-3%	5%	15%	15%	10%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_147	5%	2%	8%	-3%	5%	15%	15%	10%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_148	5%	2%	8%	-3%	5%	15%	15%	9%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_149	5%	2%	9%	-3%	5%	15%	15%	10%	5%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_150	5%	2%	8%	-3%	5%	15%	15%	9%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_151	5%	2%	6%	-1%	6%	15%	15%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_152	5%	2%	6%	-2%	6%	14%	14%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_153	5%	2%	6%	-2%	8%	13%	13%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_154	5%	2%	6%	-2%	7%	14%	14%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_155	5%	2%	7%	-2%	6%	14%	14%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_156	5%	2%	6%	-2%	7%	15%	15%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_157	5%	2%	7%	-1%	7%	17%	17%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_158	5%	2%	7%	-1%	7%	18%	18%	7%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_159	5%	2%	9%	-1%	7%	20%	20%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_160	5%	2%	9%	0%	7%	21%	21%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_161	5%	2%	9%	-1%	7%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_162	5%	2%	9%	-1%	8%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_163	4%	2%	8%	0%	9%	18%	18%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_164	5%	2%	8%	-1%	8%	21%	21%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_165	4%	2%	8%	-1%	10%	18%	18%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_166	4%	2%	7%	-1%	10%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_167	4%	2%	7%	-1%	11%	21%	21%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_168	4%	2%	6%	-1%	11%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_169	4%	2%	6%	-2%	10%	21%	21%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_170	4%	2%	6%	-2%	10%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_171	4%	2%	6%	-2%	10%	24%	24%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_172	4%	2%	6%	-1%	10%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_173	4%	2%	6%	0%	11%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_174	4%	2%	6%	0%	12%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_175	4%	2%	6%	1%	13%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_176	4%	2%	6%	2%	13%	22%	22%	7%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_177	4%	2%	6%	-1%	11%	23%	23%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_178	4%	2%	6%	2%	13%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_179	5%	2%	6%	-2%	7%	15%	15%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_180	5%	2%	6%	-2%	8%	15%	15%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_181	5%	2%	6%	-1%	6%	16%	16%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_182	4%	2%	6%	-2%	6%	15%	15%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_183	5%	2%	6%	-2%	7%	16%	16%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_184	6%	2%	14%	8%	2%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_185	6%	2%	14%	9%	3%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_186	6%	2%	14%	10%	4%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_187	6%	2%	13%	11%	4%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_188	6%	2%	13%	12%	5%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_189	6%	2%	13%	14%	6%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_190	6%	3%	14%	9%	1%	26%	26%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_191	6%	3%	14%	9%	1%	26%	26%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_192	6%	3%	14%	9%	1%	27%	27%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_193	6%	2%	14%	9%	1%	27%	27%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_194	6%	2%	14%	9%	2%	27%	27%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_195	6%	2%	14%	9%	2%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_196	6%	2%	14%	10%	3%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_197	6%	2%	14%	10%	3%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_198	6%	2%	14%	11%	3%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_199	6%	2%	13%	12%	4%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_200	6%	2%	13%	13%	4%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_201	6%	2%	13%	14%	5%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_202	6%	2%	12%	12%	6%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_203	6%	2%	12%	13%	6%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_204	6%	2%	12%	14%	7%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_205	6%	2%	12%	15%	7%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_206	6%	2%	12%	16%	8%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_207	6%	2%	12%	17%	8%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_208	6%	2%	13%	18%	9%	23%	23%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_209	6%	2%	13%	18%	9%	23%	23%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_210	6%	2%	13%	18%	8%	24%	24%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_211	6%	2%	13%	19%	8%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_212	6%	2%	13%	19%	8%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_213	6%	2%	13%	19%	7%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_214	6%	2%	13%	20%	7%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_215	6%	2%	13%	20%	6%	26%	26%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_216	6%	2%	12%	10%	5%	21%	21%	12%	5%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_217	6%	2%	12%	11%	5%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_218	6%	2%	12%	12%	5%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_219	6%	2%	12%	13%	6%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_220	6%	2%	12%	13%	6%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
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	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_221	6%	2%	12%	13%	6%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_222	6%	2%	12%	14%	6%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_223	6%	2%	12%	14%	7%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_224	6%	2%	12%	16%	7%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_225	6%	2%	12%	17%	8%	21%	21%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_226	6%	2%	12%	19%	8%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_227	6%	2%	12%	21%	9%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_228	6%	2%	13%	23%	9%	23%	23%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_229	6%	2%	13%	24%	10%	23%	23%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_230	6%	2%	13%	24%	10%	24%	24%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_231	6%	2%	13%	25%	9%	24%	24%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_232	6%	2%	13%	25%	9%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_233	6%	2%	13%	25%	9%	25%	25%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_234	5%	2%	11%	7%	10%	21%	21%	11%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511500_235	5%	2%	11%	9%	10%	21%	21%	11%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511500_236	5%	2%	11%	8%	9%	20%	20%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_237	5%	2%	11%	7%	9%	20%	20%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_238	6%	2%	12%	7%	8%	19%	19%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_239	6%	2%	12%	7%	8%	19%	19%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_240	6%	2%	12%	7%	7%	20%	20%	11%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511500_241	6%	2%	12%	7%	7%	20%	20%	12%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511500_242	6%	2%	12%	7%	6%	21%	21%	12%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511500_243	6%	2%	11%	10%	5%	22%	22%	12%	4%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_244	6%	2%	12%	10%	6%	22%	22%	12%	4%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_245	6%	2%	12%	11%	6%	22%	22%	12%	4%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_246	6%	2%	12%	12%	6%	22%	22%	12%	4%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_247	6%	2%	12%	13%	6%	22%	22%	12%	4%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_259	6%	2%	13%	28%	6%	26%	26%	12%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_260	6%	2%	13%	28%	6%	25%	25%	12%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_261	6%	2%	13%	28%	6%	25%	25%	12%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_262	6%	2%	13%	28%	6%	25%	25%	12%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_263	6%	2%	13%	28%	6%	25%	25%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_264	6%	2%	13%	28%	6%	25%	25%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_265	6%	2%	13%	28%	6%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_266	6%	2%	13%	28%	6%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_267	6%	2%	13%	27%	6%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_268	6%	2%	13%	28%	6%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_269	6%	2%	13%	28%	6%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_270	6%	2%	13%	29%	6%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_288	7%	3%	15%	28%	5%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511500_289	7%	3%	15%	28%	6%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511500_313	6%	2%	13%	30%	3%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_314	6%	2%	13%	29%	3%	26%	26%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_315	6%	2%	13%	29%	2%	27%	27%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_316	6%	2%	13%	29%	2%	27%	27%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_317	6%	2%	14%	30%	3%	28%	28%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_318	6%	2%	14%	30%	3%	28%	28%	13%	5%	8%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_319	6%	3%	15%	27%	3%	29%	29%	14%	5%	8%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_320	6%	2%	13%	27%	2%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_321	6%	2%	13%	26%	2%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_322	6%	2%	13%	25%	2%	25%	25%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_323	6%	2%	14%	25%	1%	26%	26%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_324	6%	2%	14%	25%	2%	27%	27%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_325	6%	2%	13%	21%	5%	27%	27%	12%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_326	6%	2%	13%	21%	5%	27%	27%	12%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_327	6%	2%	13%	22%	5%	27%	27%	12%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_328	6%	2%	13%	23%	5%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_329	6%	2%	13%	23%	5%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_330	6%	2%	13%	23%	5%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_331	6%	2%	13%	23%	5%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_332	6%	2%	13%	24%	4%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_333	6%	2%	13%	24%	4%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_334	6%	2%	13%	25%	4%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_335	6%	2%	13%	26%	4%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_336	6%	2%	13%	27%	4%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_337	6%	2%	13%	28%	4%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_338	6%	2%	13%	29%	4%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_339	7%	3%	15%	25%	5%	30%	30%	14%	5%	9%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE511500_340	6%	3%	15%	18%	1%	28%	28%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_341	6%	3%	15%	19%	1%	28%	28%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_342	6%	3%	15%	20%	1%	28%	28%	13%	5%	8%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_343	6%	3%	15%	21%	2%	28%	28%	13%	5%	8%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_344	6%	3%	15%	22%	2%	28%	28%	13%	5%	8%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_345	6%	3%	15%	23%	2%	28%	28%	13%	5%	8%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_346	6%	3%	15%	25%	2%	28%	28%	13%	5%	8%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_347	6%	3%	14%	14%	1%	28%	28%	13%	5%	7%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_348	6%	3%	14%	14%	1%	28%	28%	13%	5%	7%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_349	6%	3%	14%	15%	1%	27%	27%	13%	5%	7%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_350	6%	2%	14%	15%	1%	27%	27%	13%	5%	7%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_351	6%	2%	14%	16%	1%	27%	27%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_352	6%	2%	14%	17%	1%	27%	27%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_353	6%	2%	14%	18%	1%	27%	27%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_354	6%	2%	14%	20%	1%	27%	27%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_355	6%	2%	14%	20%	2%	27%	27%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_356	6%	2%	14%	20%	3%	27%	27%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_357	6%	3%	14%	10%	1%	27%	27%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_358	6%	3%	14%	11%	1%	27%	27%	13%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_359	6%	3%	14%	12%	1%	27%	27%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_360	6%	2%	14%	13%	1%	27%	27%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_361	6%	2%	14%	14%	1%	27%	27%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_362	6%	2%	14%	15%	1%	27%	27%	13%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_363	6%	2%	14%	16%	1%	27%	27%	13%	5%	6%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_364	6%	2%	14%	16%	2%	27%	27%	12%	5%	6%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_365	6%	2%	14%	16%	2%	27%	27%	12%	5%	6%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_366	6%	2%	14%	16%	2%	27%	27%	12%	5%	6%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_367	6%	2%	13%	16%	3%	27%	27%	12%	5%	6%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_368	6%	2%	13%	17%	3%	27%	27%	12%	5%	6%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511500_369	6%	2%	14%	20%	1%	27%	27%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_370	6%	2%	14%	20%	1%	26%	26%	13%	5%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_371	6%	2%	14%	21%	1%	26%	26%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_372	6%	2%	14%	22%	1%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_373	6%	2%	13%	23%	2%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_374	6%	2%	13%	24%	2%	25%	25%	13%	5%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511500_376	7%	2%	15%	30%	4%	29%	29%	14%	5%	8%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511600_001	4%	2%	5%	-1%	6%	15%	15%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_002	4%	2%	8%	-1%	10%	19%	19%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_003	4%	2%	8%	0%	8%	21%	21%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_004	4%	2%	6%	-1%	10%	24%	24%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_005	4%	2%	8%	3%	13%	22%	22%	9%	4%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_006	5%	2%	8%	4%	13%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_007	5%	2%	6%	-1%	7%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_008	4%	2%	7%	-1%	11%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_009	5%	2%	4%	-1%	8%	17%	17%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_010	4%	2%	4%	-1%	6%	16%	16%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_011	4%	2%	8%	0%	8%	22%	22%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_012	5%	2%	8%	-1%	8%	24%	24%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_013	5%	2%	7%	0%	7%	22%	22%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_014	4%	2%	8%	1%	9%	19%	19%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_015	5%	2%	5%	-1%	8%	18%	18%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_016	5%	2%	8%	1%	7%	23%	23%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_017	5%	2%	9%	0%	13%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_018	4%	2%	10%	-1%	1%	13%	13%	10%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_019	5%	2%	9%	-2%	0%	14%	14%	10%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_020	4%	2%	8%	-3%	0%	14%	14%	10%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_021	4%	2%	7%	-2%	5%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_022	4%	2%	7%	-2%	0%	13%	13%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_023	4%	2%	8%	-1%	3%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_024	4%	2%	9%	0%	5%	15%	15%	9%	4%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_025	5%	2%	10%	-3%	1%	12%	12%	10%	4%	5%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511600_026	4%	2%	8%	0%	4%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_027	4%	2%	7%	-3%	0%	14%	14%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_028	4%	2%	5%	-2%	7%	15%	15%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_029	5%	2%	5%	-1%	8%	16%	16%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_030	5%	2%	6%	-1%	7%	18%	18%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_031	5%	2%	6%	-1%	7%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_032	4%	2%	8%	3%	13%	21%	21%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_033	5%	2%	9%	3%	13%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_034	5%	2%	10%	0%	1%	14%	14%	10%	4%	5%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511600_035	4%	2%	7%	0%	10%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_036	4%	2%	8%	-1%	1%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_037	4%	2%	8%	1%	5%	16%	16%	9%	4%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_038	4%	2%	8%	0%	4%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_039	4%	2%	9%	-2%	5%	16%	16%	10%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_040	5%	2%	10%	-2%	1%	13%	13%	10%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_041	5%	2%	8%	0%	7%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_042	5%	2%	9%	0%	7%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_043	4%	2%	8%	0%	9%	19%	19%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_044	5%	2%	8%	-1%	7%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_045	5%	2%	8%	-1%	8%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_046	4%	2%	9%	-2%	2%	15%	15%	9%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_047	4%	2%	7%	-2%	0%	14%	14%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_048	4%	2%	8%	-3%	5%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_049	4%	2%	9%	-2%	1%	14%	14%	10%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_050	4%	2%	7%	-1%	11%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_051	4%	2%	7%	-1%	11%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_052	4%	2%	7%	0%	11%	20%	20%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_053	4%	2%	6%	-2%	10%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_054	4%	2%	6%	-2%	10%	24%	24%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_055	4%	2%	6%	-1%	10%	24%	24%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_056	4%	2%	6%	-1%	10%	24%	24%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_057	4%	2%	6%	0%	11%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_058	4%	2%	6%	1%	12%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_059	4%	2%	6%	2%	13%	23%	23%	7%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_060	5%	2%	7%	-1%	7%	21%	21%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_061	4%	2%	7%	0%	10%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_062	4%	2%	7%	0%	10%	23%	23%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_085	5%	2%	10%	7%	11%	21%	21%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_086	5%	2%	11%	7%	11%	21%	21%	11%	4%	6%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511600_087	5%	2%	11%	8%	10%	21%	21%	11%	4%	6%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511600_091	4%	2%	6%	2%	12%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_092	4%	2%	6%	3%	12%	23%	23%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_093	4%	2%	8%	3%	12%	22%	22%	9%	4%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_094	4%	2%	8%	3%	13%	21%	21%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_095	4%	2%	8%	4%	13%	20%	20%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_096	5%	2%	8%	3%	13%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_097	5%	2%	8%	0%	13%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_098	5%	2%	9%	1%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_099	5%	2%	9%	1%	14%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_100	5%	2%	9%	2%	13%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_101	4%	2%	6%	-1%	10%	24%	24%	6%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_102	4%	2%	6%	0%	11%	23%	23%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_103	4%	2%	6%	1%	11%	21%	21%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_104	4%	2%	6%	1%	12%	22%	22%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_105	4%	2%	6%	2%	12%	23%	23%	8%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511600_106	4%	2%	7%	3%	13%	22%	22%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_107	4%	2%	8%	3%	13%	22%	22%	9%	4%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_108	4%	2%	8%	3%	13%	21%	21%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_109	4%	2%	8%	4%	13%	20%	20%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_110	5%	2%	8%	3%	13%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_111	5%	2%	8%	1%	13%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_112	5%	2%	9%	0%	13%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_113	5%	2%	9%	1%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_114	5%	2%	9%	2%	14%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_115	5%	2%	9%	2%	13%	21%	21%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_116	5%	2%	9%	0%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_117	5%	2%	9%	1%	13%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_118	5%	2%	9%	1%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_119	5%	2%	9%	2%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_120	5%	2%	9%	2%	13%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_121	5%	2%	10%	2%	12%	21%	21%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_122	5%	2%	10%	2%	12%	21%	21%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_123	5%	2%	10%	3%	12%	21%	21%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_124	5%	2%	10%	5%	11%	21%	21%	11%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_125	5%	2%	11%	6%	11%	21%	21%	11%	4%	6%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511600_126	5%	2%	11%	9%	10%	21%	21%	11%	4%	6%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511600_127	5%	2%	11%	9%	10%	21%	21%	11%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511600_128	5%	2%	11%	9%	9%	21%	21%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_129	5%	2%	12%	8%	9%	20%	20%	11%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511600_130	6%	2%	12%	8%	8%	20%	20%	11%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511600_131	6%	2%	12%	8%	7%	21%	21%	11%	4%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE511600_132	5%	2%	12%	9%	9%	20%	20%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_133	5%	2%	11%	11%	9%	20%	20%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_134	5%	2%	11%	12%	9%	21%	21%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_142	6%	2%	11%	13%	6%	22%	22%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_143	6%	2%	11%	13%	7%	22%	22%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_144	6%	2%	11%	14%	7%	22%	22%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_163	6%	2%	12%	19%	6%	23%	23%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_164	6%	2%	12%	18%	6%	23%	23%	11%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_185	6%	2%	12%	15%	6%	22%	22%	12%	4%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_186	6%	2%	12%	16%	6%	21%	21%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_187	6%	2%	12%	16%	6%	21%	21%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_188	6%	2%	12%	17%	6%	21%	21%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_189	6%	2%	12%	18%	7%	21%	21%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_190	6%	2%	12%	20%	7%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_191	6%	2%	12%	21%	7%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_192	6%	2%	12%	22%	8%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_193	6%	2%	12%	24%	8%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_194	6%	2%	12%	26%	9%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_195	6%	2%	12%	28%	9%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_196	6%	2%	12%	30%	10%	22%	22%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511600_197	6%	2%	13%	31%	10%	23%	23%	12%	5%	6%	3%	2%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_198	6%	2%	11%	10%	6%	22%	22%	12%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_199	6%	2%	12%	12%	6%	22%	22%	12%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_200	6%	2%	12%	14%	6%	22%	22%	12%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_201	6%	2%	12%	15%	6%	22%	22%	12%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_202	6%	2%	12%	17%	6%	22%	22%	12%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_203	6%	2%	12%	18%	6%	22%	22%	12%	4%	5%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_204	6%	2%	12%	20%	6%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_205	6%	2%	12%	20%	6%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_206	6%	2%	12%	21%	7%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_207	6%	2%	12%	23%	7%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_208	6%	2%	12%	23%	7%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_209	6%	2%	12%	25%	7%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_210	6%	2%	12%	26%	8%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_211	6%	2%	12%	28%	9%	22%	22%	12%	4%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE511600_212	6%	2%	12%	31%	9%	22%	22%	12%	4%	6%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RE511600_228	4%	2%	3%	-1%	8%	18%	18%	8%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_242	5%	2%	9%	2%	13%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511800_001	17%	4%	47%	153%	42%	81%	81%	33%	10%	28%	6%	4%	1%	8%	2%	1%	5%	1%	0%	0%
RE512000_002	10%	3%	24%	190%	49%	96%	96%	36%	12%	31%	6%	5%	1%	8%	2%	1%	5%	1%	0%	0%
RE512000_003	13%	3%	27%	215%	60%	115%	115%	41%	13%	33%	7%	6%	1%	10%	3%	1%	6%	1%	0%	0%
RE512100_001	14%	3%	33%	209%	56%	105%	105%	39%	12%	31%	6%	6%	1%	10%	2%	1%	5%	1%	0%	0%
RE512100_002	16%	3%	32%	253%	64%	111%	111%	41%	13%	33%	7%	7%	1%	12%	3%	1%	6%	1%	0%	0%
RE512200_001	17%	3%	34%	282%	68%	117%	117%	42%	14%	34%	7%	7%	2%	13%	3%	1%	6%	1%	0%	0%
RE512200_002	25%	8%	53%	428%	115%	151%	151%	65%	23%	53%	13%	11%	2%	20%	4%	1%	9%	2%	0%	0%
RE512200_003	30%	10%	60%	472%	136%	155%	155%	67%	28%	55%	15%	12%	2%	21%	4%	1%	10%	2%	0%	0%
RE512300_001	21%	5%	50%	357%	87%	143%	143%	54%	17%	43%	9%	9%	2%	15%	3%	1%	8%	1%	0%	0%
RE512400_001	26%	7%	56%	419%	109%	143%	143%	59%	21%	45%	11%	10%	2%	18%	3%	1%	8%	2%	0%	0%
RE514400_001	10%	3%	24%	122%	19%	60%	60%	23%	8%	15%	4%	3%	1%	6%	1%	0%	2%	1%	0%	0%
RE514400_003	10%	3%	18%	147%	23%	53%	53%	18%	6%	11%	3%	4%	1%	7%	1%	0%	2%	0%	0%	0%
RE514400_006	10%	3%	18%	147%	25%	48%	48%	18%	6%	12%	3%	4%	1%	7%	1%	0%	2%	0%	0%	0%
RE514400_007	10%	3%	18%	150%	24%	49%	49%	18%	6%	11%	3%	4%	1%	7%	1%	0%	2%	0%	0%	0%
RE514500_001	10%	3%	23%	124%	16%	60%	60%	22%	8%	14%	4%	3%	1%	6%	1%	0%	2%	1%	0%	0%
RE514500_002	10%	3%	23%	120%	15%	58%	58%	21%	8%	13%	4%	3%	1%	6%	1%	0%	2%	1%	0%	0%
RE514500_003	10%	3%	22%	111%	14%	55%	55%	21%	8%	12%	4%	3%	1%	6%	1%	0%	2%	1%	0%	0%
RE514500_006	9%	2%	19%	107%	21%	46%	46%	16%	6%	11%	3%	3%	0%	6%	1%	0%	2%	0%	0%	0%
RE514500_007	9%	3%	19%	110%	22%	45%	45%	16%	6%	11%	3%	3%	0%	6%	1%	0%	2%	0%	0%	0%
RE514500_008	10%	3%	18%	145%	23%	56%	56%	18%	6%	11%	3%	4%	0%	7%	1%	0%	2%	0%	0%	0%
RE514500_009	10%	3%	17%	144%	24%	56%	56%	18%	6%	10%	3%	4%	0%	7%	1%	0%	2%	0%	0%	0%
RE514500_010	9%	3%	17%	142%	25%	60%	60%	18%	6%	10%	3%	4%	0%	7%	1%	0%	2%	0%	0%	0%
RE514600_001	10%	3%	20%	85%	13%	51%	51%	20%	8%	11%	4%	3%	1%	6%	1%	0%	2%	1%	0%	0%
RE514600_002	9%	3%	19%	110%	22%	43%	43%	17%	6%	10%	3%	3%	0%	6%	1%	0%	2%	0%	0%	0%
RE514600_003	9%	3%	19%	110%	21%	43%	43%	17%	6%	11%	3%	3%	0%	6%	1%	0%	2%	0%	0%	0%
RE514600_004	9%	3%	19%	110%	21%	45%	45%	17%	6%	11%	3%	3%	1%	6%	1%	0%	2%	0%	0%	0%
RE514600_005	9%	3%	19%	107%	22%	48%	48%	17%	6%	10%	3%	3%	1%	6%	1%	0%	2%	0%	0%	0%
RE514600_006	9%	3%	18%	102%	23%	47%	47%	17%	6%	10%	3%	3%	1%	6%	1%	0%	2%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE514700_001	7%	3%	19%	55%	15%	45%	45%	17%	6%	11%	3%	2%	1%	4%	1%	0%	2%	0%	0%	0%
RE514800_001	6%	3%	6%	68%	11%	36%	36%	14%	7%	5%	4%	2%	0%	4%	1%	0%	1%	1%	0%	0%
RE515000_001	9%	3%	16%	67%	12%	36%	36%	16%	7%	10%	4%	2%	1%	4%	1%	0%	2%	1%	0%	0%
RE515100_001	9%	3%	23%	101%	19%	43%	43%	23%	7%	15%	4%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE515200_001	10%	3%	23%	89%	24%	45%	45%	24%	7%	15%	4%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE515200_002	10%	3%	23%	104%	23%	44%	44%	24%	7%	16%	4%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE515200_003	10%	4%	19%	110%	19%	51%	51%	20%	8%	14%	4%	3%	1%	5%	1%	0%	2%	1%	0%	0%
RE515300_001	10%	3%	21%	78%	21%	44%	44%	22%	7%	14%	3%	2%	1%	4%	1%	0%	3%	0%	0%	0%
RE515300_002	10%	4%	26%	125%	27%	57%	57%	23%	8%	17%	4%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE515300_003	15%	6%	34%	83%	30%	69%	69%	32%	13%	19%	7%	2%	1%	4%	2%	1%	3%	1%	0%	0%
RE516200_001	12%	4%	28%	119%	28%	64%	64%	27%	9%	16%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE517200_001	4%	1%	7%	83%	19%	47%	47%	20%	7%	11%	3%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE517200_002	4%	1%	7%	84%	19%	47%	47%	19%	7%	11%	3%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE517200_003	7%	2%	17%	84%	17%	48%	48%	19%	6%	12%	3%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE517400_001	8%	2%	22%	83%	17%	49%	49%	19%	6%	12%	3%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE519100_001	7%	2%	17%	71%	14%	40%	40%	17%	6%	10%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE519500_001	15%	4%	37%	71%	42%	57%	57%	36%	11%	21%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RE519500_002	17%	5%	41%	80%	55%	70%	70%	47%	13%	28%	7%	2%	1%	4%	2%	1%	5%	1%	0%	0%
RE521400_001	12%	3%	27%	30%	13%	25%	25%	21%	7%	9%	3%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE521600_001	5%	1%	8%	9%	1%	2%	2%	3%	2%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_002	9%	2%	17%	23%	9%	15%	15%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE521600_003	12%	4%	24%	26%	15%	24%	24%	18%	6%	8%	4%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE521600_004	10%	4%	12%	-2%	2%	2%	2%	7%	5%	2%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE521600_005	8%	3%	13%	-3%	1%	6%	6%	6%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_006	8%	3%	13%	1%	6%	8%	8%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_007	6%	3%	13%	2%	4%	7%	7%	7%	4%	2%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE521600_008	3%	2%	6%	12%	5%	14%	14%	6%	5%	4%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_009	5%	2%	11%	1%	5%	12%	12%	8%	4%	4%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE521600_010	7%	2%	15%	34%	13%	18%	18%	11%	4%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE521600_011	6%	1%	12%	26%	10%	19%	19%	10%	3%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE521600_012	7%	3%	16%	21%	4%	13%	13%	11%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE521600_013	2%	1%	8%	9%	-1%	3%	3%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_017	7%	3%	15%	26%	10%	10%	10%	10%	4%	5%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE521600_018	2%	1%	7%	8%	-1%	4%	4%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_019	2%	1%	6%	7%	0%	2%	2%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_020	2%	1%	7%	8%	-1%	3%	3%	4%	1%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_023	2%	1%	6%	9%	-2%	3%	3%	3%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_026	2%	1%	6%	6%	-1%	2%	2%	3%	2%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_028	2%	1%	7%	8%	-1%	3%	3%	4%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_030	2%	1%	6%	5%	-1%	1%	1%	3%	2%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_032	1%	1%	6%	8%	-2%	3%	3%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_035	2%	1%	7%	7%	-1%	4%	4%	4%	1%	1%	1%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_036	2%	1%	5%	6%	-1%	1%	1%	3%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_037	2%	1%	5%	8%	-1%	5%	5%	4%	1%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_038	2%	1%	6%	8%	-1%	3%	3%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_039	2%	1%	5%	6%	-1%	0%	0%	2%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE521600_041	2%	1%	6%	8%	-1%	4%	4%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_043	2%	1%	7%	6%	-1%	3%	3%	4%	2%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_044	2%	1%	7%	8%	-1%	3%	3%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_045	1%	1%	6%	7%	-2%	4%	4%	3%	1%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_046	1%	1%	6%	7%	0%	4%	4%	3%	1%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_047	3%	1%	8%	12%	3%	11%	11%	5%	2%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_048	3%	1%	8%	11%	3%	10%	10%	5%	2%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_049	3%	1%	8%	11%	3%	9%	9%	5%	2%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_050	3%	1%	9%	10%	3%	7%	7%	5%	1%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_051	3%	1%	9%	10%	3%	8%	8%	5%	1%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_052	3%	1%	9%	11%	3%	8%	8%	5%	2%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_053	3%	1%	9%	11%	3%	8%	8%	5%	2%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_054	3%	1%	9%	11%	3%	9%	9%	5%	2%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_055	3%	1%	8%	9%	3%	9%	9%	5%	2%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_056	3%	1%	8%	8%	3%	8%	8%	5%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_057	3%	1%	8%	9%	3%	8%	8%	5%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_058	3%	1%	8%	9%	3%	8%	8%	5%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_059	3%	1%	8%	8%	3%	8%	8%	5%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_060	3%	1%	8%	8%	3%	9%	9%	5%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_061	3%	1%	8%	7%	3%	10%	10%	5%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_062	3%	1%	7%	7%	3%	10%	10%	5%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_063	3%	1%	7%	6%	3%	10%	10%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_064	3%	1%	7%	6%	3%	8%	8%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_065	3%	1%	7%	6%	3%	7%	7%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_066	3%	1%	7%	6%	3%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_067	3%	1%	6%	7%	3%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_068	3%	1%	6%	7%	3%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_069	3%	1%	6%	6%	3%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_070	3%	1%	6%	5%	3%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_071	3%	1%	6%	5%	3%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_072	3%	1%	6%	4%	2%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_073	3%	1%	6%	4%	2%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_074	3%	1%	6%	4%	2%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_075	3%	1%	6%	4%	2%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_076	3%	1%	6%	6%	3%	6%	6%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_077	3%	1%	6%	6%	3%	6%	6%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_078	3%	1%	6%	6%	3%	6%	6%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_079	3%	1%	6%	6%	3%	7%	7%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_080	3%	1%	6%	6%	3%	8%	8%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_081	3%	1%	6%	7%	3%	8%	8%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_082	3%	1%	6%	7%	3%	8%	8%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_083	3%	1%	7%	8%	3%	9%	9%	5%	1%	2%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_084	2%	1%	4%	4%	0%	4%	4%	2%	1%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_085	2%	1%	4%	4%	0%	3%	3%	2%	1%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_086	1%	1%	4%	3%	0%	5%	5%	2%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_087	1%	1%	4%	3%	0%	5%	5%	2%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE521600_088	1%	1%	4%	3%	0%	4%	4%	2%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_089	0%	0%	2%	2%	-2%	1%	1%	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_090	5%	2%	8%	15%	1%	12%	12%	6%	4%	3%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW110000_001	8%	3%	21%	41%	18%	13%	13%	11%	5%	13%	3%	1%	1%	3%	1%	0%	3%	0%	0%	0%
RW110000_002	17%	7%	33%	23%	15%	6%	6%	12%	10%	19%	7%	1%	1%	1%	2%	1%	5%	1%	0%	0%
RW110000_008	5%	1%	7%	1%	3%	2%	2%	7%	2%	3%	1%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RW110000_009	5%	1%	8%	0%	4%	1%	1%	7%	2%	5%	1%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RW110000_010	7%	2%	15%	9%	7%	12%	12%	9%	5%	7%	2%	0%	0%	1%	1%	0%	2%	0%	0%	0%
RW110000_011	10%	3%	17%	17%	15%	3%	3%	9%	6%	8%	3%	1%	1%	1%	1%	0%	2%	1%	0%	0%
RW110000_012	14%	5%	26%	25%	16%	3%	3%	12%	8%	16%	5%	1%	1%	2%	2%	1%	4%	1%	0%	0%
RW110000_013	17%	5%	27%	63%	17%	9%	9%	16%	9%	20%	4%	2%	1%	4%	2%	1%	6%	1%	0%	0%
RW110000_014	11%	4%	18%	12%	11%	4%	4%	13%	8%	11%	3%	0%	1%	1%	1%	0%	3%	0%	0%	0%
RW110000_015	12%	4%	19%	13%	13%	4%	4%	12%	8%	12%	3%	0%	1%	1%	1%	1%	3%	0%	0%	0%
RW110000_016	14%	4%	19%	19%	21%	7%	7%	11%	7%	14%	4%	1%	1%	2%	1%	1%	4%	1%	0%	0%
RW110000_017	13%	4%	18%	17%	16%	6%	6%	11%	8%	14%	4%	1%	1%	2%	1%	1%	4%	1%	0%	0%
RW110000_018	8%	2%	14%	17%	13%	10%	10%	9%	5%	6%	2%	0%	0%	1%	1%	0%	2%	0%	0%	0%
RW110000_019	23%	7%	40%	65%	41%	12%	12%	21%	12%	29%	7%	2%	1%	4%	2%	1%	8%	1%	0%	0%
RW110000_020	9%	3%	19%	49%	9%	8%	8%	8%	5%	12%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW110000_021	9%	2%	16%	-1%	12%	39%	39%	16%	4%	5%	1%	2%	1%	3%	1%	0%	0%	0%	0%	0%
RW110000_022	5%	1%	8%	9%	8%	1%	1%	6%	0%	8%	2%	0%	0%	0%	1%	0%	2%	0%	0%	0%
RW110000_023	5%	1%	11%	25%	10%	3%	3%	5%	1%	11%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RW110000_024	12%	5%	16%	9%	9%	1%	1%	11%	7%	6%	4%	0%	1%	1%	1%	0%	2%	1%	0%	0%
RW110100_001	25%	8%	40%	33%	39%	10%	10%	27%	14%	29%	9%	2%	2%	3%	3%	1%	8%	1%	0%	0%
RW112100_001	19%	7%	46%	111%	59%	63%	63%	39%	16%	38%	11%	4%	2%	7%	3%	1%	8%	2%	0%	0%
RW112100_002	16%	6%	37%	100%	53%	57%	57%	31%	12%	30%	8%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RW112100_003	15%	5%	34%	93%	50%	54%	54%	29%	11%	27%	7%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RW112200_001	13%	4%	31%	87%	47%	51%	51%	26%	9%	24%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW112300_001	8%	2%	13%	68%	29%	30%	30%	10%	5%	10%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RW112300_002	7%	3%	13%	65%	30%	31%	31%	10%	5%	10%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RW112300_003	9%	3%	12%	39%	39%	41%	41%	12%	7%	11%	5%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RW112400_001	9%	3%	12%	36%	37%	40%	40%	11%	6%	10%	4%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RW112400_002	9%	3%	12%	35%	36%	38%	38%	10%	6%	10%	4%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RW112400_003	9%	3%	12%	37%	36%	36%	36%	10%	6%	10%	4%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RW112500_001	9%	3%	12%	39%	35%	33%	33%	11%	6%	11%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RW112500_002	8%	3%	11%	35%	31%	31%	31%	8%	5%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RW112600_001	8%	2%	11%	31%	29%	29%	29%	7%	5%	8%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RW113300_001	27%	9%	65%	136%	64%	82%	82%	44%	17%	41%	12%	4%	2%	7%	3%	1%	8%	2%	0%	0%
RW113700_001	30%	5%	69%	90%	38%	44%	44%	39%	10%	40%	7%	2%	1%	4%	3%	1%	8%	1%	0%	0%
RW210600_001	18%	6%	38%	164%	54%	70%	70%	36%	13%	37%	10%	4%	1%	8%	3%	1%	8%	2%	0%	0%
RW210600_002	16%	4%	34%	74%	34%	45%	45%	29%	10%	27%	8%	2%	1%	4%	2%	1%	6%	1%	0%	0%
RW210700_001	13%	3%	29%	50%	31%	36%	36%	24%	7%	22%	5%	2%	1%	4%	2%	1%	5%	1%	0%	0%
RW210700_002	15%	4%	30%	79%	36%	41%	41%	25%	9%	24%	7%	2%	1%	4%	2%	1%	5%	1%	0%	0%
RW210700_003	21%	7%	42%	186%	61%	83%	83%	43%	16%	43%	12%	5%	2%	10%	3%	1%	9%	2%	0%	0%
RW210800_001	8%	2%	18%	32%	21%	24%	24%	12%	5%	13%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RW210800_002	15%	5%	30%	101%	40%	48%	48%	25%	10%	24%	8%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RW210800_003	16%	5%	31%	124%	45%	56%	56%	26%	11%	25%	9%	4%	1%	7%	2%	1%	5%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW210800_004	16%	6%	32%	138%	47%	59%	59%	27%	12%	27%	9%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RW210900_001	11%	3%	24%	62%	27%	32%	32%	18%	7%	18%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW211000_001	11%	2%	26%	46%	35%	33%	33%	16%	5%	15%	4%	1%	1%	2%	1%	0%	4%	1%	0%	0%
RW213300_001	29%	7%	49%	64%	44%	79%	79%	50%	14%	42%	10%	3%	2%	5%	3%	1%	8%	1%	0%	0%
RW213500_001	26%	8%	52%	127%	58%	83%	83%	55%	16%	50%	12%	3%	2%	6%	3%	1%	9%	2%	0%	0%
RW213500_002	23%	5%	44%	61%	37%	62%	62%	40%	10%	35%	7%	2%	1%	4%	2%	1%	6%	1%	0%	0%
RW213500_003	25%	8%	48%	110%	51%	76%	76%	52%	14%	46%	10%	3%	2%	5%	3%	1%	8%	1%	0%	0%
RW213900_001	17%	4%	32%	21%	27%	33%	33%	27%	6%	22%	4%	2%	1%	3%	2%	1%	4%	0%	0%	0%
RW213900_002	7%	1%	14%	28%	14%	7%	7%	11%	2%	13%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RW213900_003	7%	1%	14%	28%	14%	11%	11%	11%	2%	13%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RW214000_001	10%	2%	21%	57%	21%	5%	5%	14%	3%	15%	3%	2%	1%	4%	1%	0%	4%	0%	0%	0%
RW214000_002	8%	1%	17%	35%	17%	8%	8%	14%	3%	15%	2%	1%	1%	2%	1%	0%	3%	0%	0%	0%
RW214200_001	13%	2%	28%	55%	21%	18%	18%	24%	4%	21%	3%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RW214200_002	14%	2%	27%	56%	26%	13%	13%	23%	4%	22%	4%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RW214200_003	14%	2%	28%	56%	25%	14%	14%	25%	5%	24%	4%	2%	1%	4%	2%	1%	6%	1%	0%	0%
RW214200_004	19%	5%	42%	75%	39%	8%	8%	21%	9%	29%	8%	4%	1%	7%	3%	1%	8%	1%	0%	0%
RW214400_001	26%	5%	61%	76%	37%	42%	42%	44%	10%	40%	7%	3%	2%	5%	3%	1%	9%	1%	0%	0%
RW214400_002	16%	3%	32%	21%	30%	28%	28%	32%	6%	27%	4%	1%	1%	2%	2%	1%	6%	1%	0%	0%
RW214500_001	14%	2%	31%	42%	24%	26%	26%	26%	5%	23%	3%	1%	1%	2%	2%	1%	5%	1%	0%	0%
RW214700_001	20%	4%	49%	41%	23%	36%	36%	42%	8%	33%	6%	1%	1%	2%	2%	1%	7%	1%	0%	0%
RW214800_001	23%	4%	54%	39%	26%	40%	40%	41%	9%	33%	6%	1%	1%	2%	2%	1%	7%	1%	0%	0%
RW214900_001	23%	4%	53%	38%	25%	40%	40%	41%	9%	33%	6%	1%	1%	2%	2%	1%	7%	1%	0%	0%
RW215500_001	14%	2%	29%	96%	28%	42%	42%	30%	7%	24%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW215500_002	11%	3%	22%	89%	20%	38%	38%	27%	7%	21%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RW215500_003	14%	2%	29%	102%	28%	43%	43%	30%	7%	25%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW215600_001	13%	2%	28%	102%	28%	43%	43%	29%	7%	24%	5%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW215600_002	13%	2%	28%	105%	28%	44%	44%	29%	7%	24%	5%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW215600_003	11%	3%	22%	90%	21%	39%	39%	27%	7%	21%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RW216000_001	8%	2%	18%	91%	23%	46%	46%	25%	8%	20%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RW216300_001	14%	3%	27%	137%	37%	60%	60%	35%	8%	29%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RW217300_001	10%	2%	21%	17%	21%	39%	39%	15%	4%	12%	3%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RW217300_003	10%	2%	21%	15%	18%	35%	35%	17%	4%	14%	3%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RW217400_001	17%	4%	34%	41%	25%	41%	41%	27%	5%	23%	4%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RW217400_003	11%	2%	22%	44%	21%	30%	30%	21%	4%	16%	3%	1%	1%	2%	1%	0%	3%	0%	0%	0%
RW217600_001	23%	8%	42%	245%	79%	123%	123%	67%	20%	51%	14%	7%	2%	13%	4%	1%	9%	2%	0%	0%
RW218600_001	14%	2%	34%	54%	27%	40%	40%	24%	4%	18%	2%	1%	1%	3%	1%	0%	4%	0%	0%	0%
RW218700_001	31%	8%	67%	117%	49%	68%	68%	53%	12%	41%	8%	3%	2%	5%	3%	1%	10%	1%	0%	0%
RW219300_001	29%	9%	62%	254%	91%	120%	120%	59%	17%	47%	12%	6%	2%	11%	3%	1%	9%	2%	0%	0%
RW219600_001	34%	8%	68%	268%	142%	121%	121%	65%	17%	52%	12%	7%	2%	13%	4%	1%	10%	2%	0%	0%
RW219800_001	25%	6%	54%	210%	119%	115%	115%	48%	12%	43%	9%	6%	2%	11%	3%	1%	8%	1%	0%	0%
RW219800_002	23%	6%	53%	204%	116%	113%	113%	46%	11%	42%	8%	6%	2%	10%	3%	1%	8%	1%	0%	0%
RW219800_003	22%	6%	51%	190%	112%	102%	102%	44%	11%	41%	8%	5%	2%	10%	3%	1%	8%	1%	0%	0%
RW219900_001	22%	5%	51%	198%	114%	103%	103%	44%	10%	41%	7%	5%	2%	10%	3%	1%	8%	1%	0%	0%
RW219900_002	21%	5%	50%	196%	113%	101%	101%	43%	10%	40%	7%	5%	2%	10%	3%	1%	8%	1%	0%	0%
RW219900_003	20%	5%	48%	188%	110%	98%	98%	42%	9%	39%	7%	5%	2%	9%	3%	1%	7%	1%	0%	0%
RW219900_004	20%	3%	52%	185%	45%	76%	76%	38%	6%	35%	4%	4%	1%	7%	3%	1%	6%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW220100_001	20%	3%	45%	167%	74%	74%	74%	38%	6%	34%	4%	4%	1%	8%	2%	1%	6%	1%	0%	0%
RW220200_001	20%	3%	46%	162%	74%	73%	73%	38%	6%	34%	4%	4%	1%	8%	2%	1%	7%	1%	0%	0%
RW220200_002	18%	3%	46%	142%	75%	72%	72%	35%	5%	33%	4%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RW221500_001	22%	5%	46%	185%	70%	102%	102%	58%	12%	42%	7%	4%	2%	7%	3%	1%	7%	1%	0%	0%
RW221600_001	15%	4%	39%	144%	57%	93%	93%	55%	11%	39%	6%	3%	2%	6%	3%	1%	7%	1%	0%	0%
RW221600_002	13%	4%	34%	138%	47%	88%	88%	49%	10%	34%	6%	3%	1%	6%	3%	1%	6%	1%	0%	0%
RW221600_003	12%	4%	25%	117%	46%	75%	75%	44%	9%	30%	5%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW221600_004	16%	3%	36%	132%	44%	70%	70%	43%	7%	30%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW221600_005	15%	3%	35%	125%	44%	69%	69%	42%	7%	30%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW221700_001	10%	3%	21%	97%	36%	55%	55%	32%	6%	21%	3%	2%	1%	4%	2%	1%	3%	0%	0%	0%
RW222900_001	10%	2%	26%	93%	46%	73%	73%	42%	8%	32%	5%	2%	1%	4%	2%	1%	6%	1%	0%	0%
RW223000_001	22%	6%	50%	239%	84%	130%	130%	75%	19%	60%	12%	5%	2%	9%	4%	1%	10%	2%	0%	0%
RW223000_002	10%	2%	29%	99%	27%	45%	45%	32%	5%	22%	3%	2%	1%	4%	2%	1%	4%	0%	0%	0%
RW223100_001	10%	1%	25%	90%	31%	63%	63%	39%	6%	29%	4%	2%	1%	4%	2%	1%	5%	1%	0%	0%
RW223600_001	17%	3%	46%	71%	31%	62%	62%	39%	6%	27%	4%	2%	1%	4%	2%	1%	5%	1%	0%	0%
RW223700_001	17%	3%	46%	71%	31%	61%	61%	39%	6%	28%	4%	3%	1%	4%	2%	1%	5%	1%	0%	0%
RW223700_002	17%	3%	47%	69%	32%	60%	60%	39%	7%	28%	4%	3%	1%	4%	2%	1%	5%	1%	0%	0%
RW223800_001	18%	3%	47%	73%	32%	60%	60%	39%	7%	29%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW223800_002	18%	3%	43%	86%	32%	64%	64%	39%	7%	29%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW224200_001	60%	14%	123%	167%	93%	114%	114%	85%	24%	66%	14%	4%	3%	8%	6%	2%	13%	2%	0%	0%
RW225200_001	40%	10%	95%	212%	95%	122%	122%	77%	20%	60%	11%	6%	3%	11%	5%	2%	11%	2%	0%	0%
RW225300_001	40%	9%	96%	216%	90%	112%	112%	71%	18%	61%	10%	7%	3%	12%	5%	2%	11%	1%	0%	0%
RW225300_002	42%	10%	99%	215%	96%	118%	118%	78%	21%	64%	12%	7%	3%	12%	5%	2%	12%	2%	0%	0%
RW225300_003	44%	12%	104%	221%	101%	123%	123%	82%	23%	68%	13%	7%	3%	12%	5%	2%	12%	2%	0%	0%
RW226000_001	40%	10%	98%	317%	99%	130%	130%	80%	22%	76%	13%	8%	3%	14%	6%	2%	14%	2%	0%	0%
RW226200_001	21%	6%	59%	196%	49%	109%	109%	59%	12%	43%	7%	5%	2%	9%	3%	1%	8%	1%	0%	0%
RW226300_001	20%	6%	52%	172%	45%	100%	100%	52%	11%	38%	6%	4%	2%	8%	3%	1%	7%	1%	0%	0%
RW226300_002	20%	5%	51%	166%	42%	95%	95%	48%	10%	35%	6%	4%	2%	7%	3%	1%	6%	1%	0%	0%
RW227700_001	19%	3%	35%	108%	37%	47%	47%	27%	6%	19%	3%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW227800_001	23%	6%	44%	125%	29%	51%	51%	31%	10%	25%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RW227800_002	18%	5%	35%	78%	26%	37%	37%	22%	8%	18%	5%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW227800_003	19%	4%	34%	101%	29%	39%	39%	26%	7%	19%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW228900_001	28%	6%	61%	224%	88%	117%	117%	49%	12%	39%	7%	6%	2%	10%	3%	1%	7%	1%	0%	0%
RW229000_005	26%	5%	57%	224%	85%	117%	117%	46%	11%	39%	6%	6%	2%	10%	3%	1%	7%	1%	0%	0%
RW229100_003	20%	4%	45%	122%	41%	79%	79%	38%	7%	28%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW229100_004	24%	5%	52%	169%	74%	106%	106%	45%	10%	33%	6%	4%	1%	8%	3%	1%	6%	1%	0%	0%
RW229200_001	17%	3%	39%	96%	37%	63%	63%	32%	6%	24%	3%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RW229200_002	14%	3%	32%	123%	39%	66%	66%	33%	7%	24%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW229200_003	13%	3%	30%	109%	37%	59%	59%	31%	6%	22%	4%	3%	1%	4%	2%	1%	4%	1%	0%	0%
RW229200_004	12%	3%	27%	105%	34%	55%	55%	29%	6%	21%	3%	2%	1%	4%	2%	1%	4%	0%	0%	0%
RW229200_005	13%	3%	30%	117%	38%	61%	61%	31%	6%	23%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW229200_006	18%	3%	40%	101%	38%	67%	67%	33%	6%	25%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW229200_007	17%	3%	38%	95%	37%	59%	59%	31%	6%	23%	3%	2%	1%	4%	2%	1%	4%	0%	0%	0%
RW229300_001	12%	3%	27%	101%	32%	51%	51%	29%	6%	21%	3%	2%	1%	4%	1%	1%	3%	0%	0%	0%
RW230300_001	25%	6%	54%	86%	29%	77%	77%	35%	6%	24%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW230300_002	15%	3%	37%	76%	26%	63%	63%	30%	5%	20%	3%	2%	1%	4%	2%	1%	3%	0%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW230400_003	29%	8%	61%	245%	71%	113%	113%	41%	11%	32%	7%	6%	1%	11%	2%	1%	6%	1%	0%	0%
RW230400_004	26%	8%	52%	199%	56%	91%	91%	35%	9%	27%	5%	6%	1%	10%	2%	1%	5%	1%	0%	0%
RW230400_005	15%	3%	32%	99%	28%	59%	59%	31%	5%	20%	3%	3%	1%	5%	2%	1%	3%	0%	0%	0%
RW231500_001	26%	5%	65%	148%	48%	107%	107%	54%	10%	38%	6%	4%	2%	7%	3%	1%	7%	1%	0%	0%
RW231500_002	29%	6%	69%	163%	56%	118%	118%	58%	11%	41%	7%	4%	2%	8%	3%	1%	7%	1%	0%	0%
RW231800_002	17%	3%	33%	151%	44%	57%	57%	35%	6%	22%	4%	4%	1%	7%	2%	1%	4%	1%	0%	0%
RW231800_003	20%	4%	40%	153%	37%	64%	64%	40%	7%	25%	4%	4%	1%	6%	2%	1%	4%	1%	0%	0%
RW231900_001	23%	5%	48%	104%	33%	79%	79%	48%	8%	30%	5%	3%	1%	5%	3%	1%	5%	1%	0%	0%
RW231900_002	18%	4%	32%	92%	25%	62%	62%	39%	7%	21%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW231900_003	17%	4%	31%	82%	24%	60%	60%	36%	7%	19%	4%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RW231900_004	15%	4%	31%	83%	27%	62%	62%	35%	7%	18%	4%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RW231900_005	16%	3%	30%	85%	31%	61%	61%	34%	6%	18%	4%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RW231900_006	16%	3%	30%	94%	34%	57%	57%	34%	6%	19%	4%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RW232900_001	20%	4%	46%	100%	38%	89%	89%	55%	12%	31%	6%	2%	2%	4%	3%	1%	6%	1%	0%	0%
RW232900_002	21%	5%	44%	91%	49%	101%	101%	60%	15%	33%	7%	3%	2%	5%	3%	1%	6%	1%	0%	0%
RW232900_003	20%	4%	43%	92%	44%	94%	94%	56%	12%	31%	6%	3%	2%	4%	3%	1%	6%	1%	0%	0%
RW233000_001	34%	8%	71%	170%	65%	131%	131%	79%	21%	47%	10%	4%	2%	7%	4%	1%	9%	2%	0%	0%
RW233000_002	27%	7%	57%	132%	55%	121%	121%	69%	18%	40%	9%	3%	2%	5%	4%	1%	7%	1%	0%	0%
RW233000_003	22%	5%	47%	101%	46%	99%	99%	61%	15%	34%	7%	3%	2%	4%	3%	1%	6%	1%	0%	0%
RW233000_004	18%	4%	34%	92%	44%	87%	87%	43%	10%	24%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RW233100_001	30%	10%	53%	208%	88%	133%	133%	70%	27%	44%	13%	5%	2%	9%	4%	1%	8%	2%	0%	0%
RW233100_002	26%	8%	47%	153%	68%	129%	129%	65%	24%	38%	11%	4%	2%	7%	3%	1%	7%	2%	0%	0%
RW233100_003	25%	7%	44%	141%	63%	124%	124%	62%	22%	36%	10%	4%	2%	7%	3%	1%	7%	2%	0%	0%
RW233100_004	18%	4%	35%	93%	41%	84%	84%	38%	10%	23%	5%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RW233300_001	21%	5%	47%	130%	52%	97%	97%	41%	11%	27%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW233500_001	50%	15%	107%	393%	113%	153%	153%	90%	32%	61%	15%	10%	3%	18%	5%	2%	10%	2%	0%	0%
RW233600_001	30%	8%	67%	222%	65%	135%	135%	62%	18%	40%	9%	6%	2%	10%	3%	1%	7%	1%	0%	0%
RW233700_001	35%	9%	81%	287%	72%	139%	139%	72%	21%	48%	10%	7%	2%	13%	4%	1%	8%	1%	0%	0%
RW233800_001	27%	7%	64%	206%	55%	130%	130%	57%	15%	38%	8%	5%	2%	9%	3%	1%	7%	1%	0%	0%
RW234400_001	20%	4%	52%	145%	38%	89%	89%	47%	9%	30%	5%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RW234400_002	18%	3%	37%	122%	39%	80%	80%	34%	8%	21%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW234400_003	18%	4%	42%	129%	40%	79%	79%	37%	8%	23%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW234500_001	23%	6%	45%	160%	38%	106%	106%	57%	13%	34%	8%	5%	2%	8%	3%	1%	6%	1%	0%	0%
RW234500_002	34%	9%	79%	195%	64%	128%	128%	78%	21%	53%	11%	5%	3%	10%	4%	1%	9%	2%	0%	0%
RW234600_001	17%	4%	34%	117%	37%	80%	80%	40%	8%	23%	5%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW234600_002	16%	4%	34%	96%	37%	76%	76%	35%	8%	21%	4%	3%	1%	4%	2%	1%	3%	1%	0%	0%
RW234600_003	16%	3%	32%	109%	39%	77%	77%	35%	8%	20%	4%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RW235800_001	37%	7%	75%	98%	36%	83%	83%	61%	13%	40%	6%	3%	2%	6%	4%	1%	8%	1%	0%	0%
RW235800_002	22%	4%	46%	90%	22%	53%	53%	41%	8%	30%	4%	3%	2%	6%	3%	1%	6%	1%	0%	0%
RW235800_003	19%	4%	38%	53%	19%	50%	50%	39%	8%	24%	4%	2%	1%	4%	2%	1%	5%	1%	0%	0%
RW235800_004	18%	4%	34%	60%	22%	50%	50%	35%	7%	22%	4%	2%	1%	4%	2%	1%	4%	1%	0%	0%
RW235900_003	17%	5%	29%	42%	20%	56%	56%	27%	10%	15%	4%	2%	1%	4%	2%	0%	3%	1%	0%	0%
RW235900_004	20%	4%	43%	55%	20%	48%	48%	40%	8%	28%	4%	3%	2%	4%	3%	1%	5%	1%	0%	0%
RW235900_008	20%	6%	40%	29%	19%	60%	60%	33%	11%	19%	5%	2%	1%	3%	2%	1%	3%	1%	0%	0%
RW310200_001	37%	9%	77%	130%	39%	111%	111%	66%	15%	42%	8%	4%	2%	7%	4%	1%	7%	1%	0%	0%
RW311300_001	40%	8%	95%	346%	83%	141%	141%	77%	19%	77%	11%	9%	4%	16%	6%	2%	14%	2%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW311300_002	36%	7%	83%	316%	77%	136%	136%	70%	17%	67%	10%	8%	3%	14%	6%	2%	12%	1%	0%	0%
RW311300_003	32%	6%	66%	269%	81%	133%	133%	64%	15%	55%	9%	7%	3%	12%	4%	1%	10%	1%	0%	0%
RW311300_004	27%	5%	63%	241%	74%	124%	124%	60%	13%	52%	7%	6%	2%	11%	4%	1%	9%	1%	0%	0%
RW311400_001	31%	7%	67%	269%	79%	129%	129%	64%	17%	59%	10%	8%	3%	14%	5%	2%	10%	1%	0%	0%
RW311400_002	26%	6%	54%	222%	76%	125%	125%	60%	15%	50%	9%	7%	2%	12%	4%	1%	9%	1%	0%	0%
RW311400_003	20%	5%	49%	198%	64%	114%	114%	55%	12%	46%	7%	6%	2%	11%	4%	1%	8%	1%	0%	0%
RW311400_004	17%	4%	39%	159%	66%	105%	105%	48%	10%	39%	6%	5%	2%	9%	3%	1%	7%	1%	0%	0%
RW311400_005	16%	4%	36%	132%	67%	96%	96%	44%	10%	31%	6%	4%	1%	7%	3%	1%	5%	1%	0%	0%
RW311400_006	15%	3%	31%	114%	59%	80%	80%	42%	8%	26%	5%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RW311400_008	14%	3%	32%	102%	49%	73%	73%	40%	7%	24%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW311400_009	14%	3%	30%	112%	46%	70%	70%	39%	7%	24%	4%	3%	1%	5%	2%	1%	4%	1%	0%	0%
RW312300_001	20%	5%	44%	262%	66%	124%	124%	50%	12%	31%	6%	6%	1%	11%	3%	1%	6%	1%	0%	0%
RW312400_001	10%	3%	23%	135%	39%	82%	82%	32%	8%	21%	4%	3%	1%	6%	2%	1%	4%	1%	0%	0%
RW312400_002	9%	3%	15%	136%	35%	81%	81%	25%	8%	17%	4%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RW312500_001	16%	3%	35%	263%	60%	101%	101%	38%	11%	33%	6%	7%	2%	12%	3%	1%	6%	1%	0%	0%
RW312500_002	15%	3%	33%	233%	51%	97%	97%	36%	10%	32%	5%	6%	2%	10%	3%	1%	6%	1%	0%	0%
RW312500_003	10%	2%	25%	158%	39%	86%	86%	34%	9%	24%	4%	4%	1%	7%	2%	1%	4%	1%	0%	0%
RW312500_004	7%	3%	8%	124%	34%	77%	77%	26%	8%	16%	4%	3%	1%	6%	1%	0%	3%	1%	0%	0%
RW312600_001	18%	4%	35%	275%	64%	118%	118%	50%	13%	34%	7%	7%	2%	13%	3%	1%	6%	1%	0%	0%
RW312600_002	17%	4%	36%	290%	69%	115%	115%	46%	12%	33%	6%	7%	2%	13%	3%	1%	6%	1%	0%	0%
RW312700_001	33%	10%	59%	247%	108%	125%	125%	83%	29%	65%	15%	9%	4%	15%	6%	2%	12%	2%	0%	0%
RW312900_001	16%	3%	35%	229%	55%	95%	95%	34%	9%	21%	5%	6%	1%	10%	2%	1%	4%	1%	0%	0%
RW313100_001	20%	5%	46%	179%	54%	118%	118%	48%	12%	30%	6%	6%	2%	10%	3%	1%	5%	1%	0%	0%
RW313400_001	9%	3%	18%	149%	30%	87%	87%	30%	8%	14%	4%	4%	1%	8%	1%	0%	2%	0%	0%	0%
RW313900_001	6%	2%	12%	92%	18%	53%	53%	22%	6%	12%	3%	4%	1%	6%	1%	0%	2%	0%	0%	0%
RW314100_001	12%	3%	24%	154%	29%	73%	73%	27%	8%	18%	4%	4%	1%	7%	1%	0%	3%	1%	0%	0%
RW314300_001	26%	7%	52%	217%	64%	122%	122%	55%	18%	38%	9%	6%	2%	10%	3%	1%	7%	1%	0%	0%
RW315400_001	15%	3%	34%	106%	25%	68%	68%	26%	8%	19%	4%	3%	1%	6%	1%	1%	3%	1%	0%	0%
RW317500_001	28%	8%	48%	80%	60%	71%	71%	48%	18%	40%	10%	3%	2%	6%	4%	1%	8%	1%	0%	0%
RW317500_003	27%	7%	44%	67%	55%	65%	65%	45%	17%	37%	10%	3%	2%	5%	4%	1%	8%	1%	0%	0%
RW410100_001	16%	5%	26%	29%	22%	67%	67%	38%	12%	17%	6%	2%	1%	3%	2%	1%	3%	1%	0%	0%
RW410100_002	14%	4%	25%	29%	21%	65%	65%	36%	11%	16%	5%	2%	1%	4%	2%	1%	3%	1%	0%	0%
RW410200_001	18%	5%	28%	26%	26%	70%	70%	40%	13%	19%	6%	1%	1%	2%	2%	1%	3%	1%	0%	0%
RW410400_001	19%	5%	30%	18%	24%	62%	62%	33%	11%	20%	6%	1%	1%	2%	2%	1%	4%	1%	0%	0%
RW410800_002	14%	4%	29%	30%	36%	52%	52%	32%	9%	21%	5%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RW510000_001	11%	3%	16%	14%	26%	49%	49%	27%	9%	11%	3%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RW510100_001	12%	3%	23%	12%	20%	54%	54%	32%	9%	15%	3%	1%	1%	2%	2%	1%	3%	0%	0%	0%
RW510100_002	13%	3%	22%	20%	22%	55%	55%	28%	9%	14%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RW510400_001	20%	6%	41%	78%	49%	92%	92%	45%	15%	28%	8%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW512600_001	18%	6%	36%	119%	65%	134%	134%	74%	23%	46%	12%	4%	2%	7%	4%	1%	8%	2%	0%	0%
RW512600_002	14%	3%	33%	145%	41%	70%	70%	33%	8%	22%	5%	4%	1%	6%	2%	1%	4%	1%	0%	0%
RW512700_001	17%	5%	49%	163%	60%	102%	102%	59%	13%	40%	7%	4%	2%	7%	3%	1%	7%	1%	0%	0%
RW515200_001	18%	6%	36%	127%	22%	64%	64%	32%	11%	19%	6%	4%	1%	7%	2%	1%	4%	1%	0%	0%
RW515200_002	9%	3%	18%	49%	16%	33%	33%	18%	5%	10%	3%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RW515500_001	39%	13%	87%	360%	73%	132%	132%	67%	26%	49%	14%	9%	2%	16%	4%	1%	9%	2%	0%	0%
RW515500_002	16%	5%	38%	223%	45%	90%	90%	30%	10%	21%	6%	6%	1%	10%	2%	1%	4%	1%	0%	0%

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW515500_003	6%	2%	15%	18%	14%	30%	30%	14%	5%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RW515600_001	35%	10%	78%	338%	68%	131%	131%	59%	22%	44%	12%	8%	2%	15%	3%	1%	8%	2%	0%	0%
RW515600_002	15%	3%	35%	173%	52%	58%	58%	28%	7%	21%	4%	4%	1%	8%	2%	1%	4%	1%	0%	0%
RW515600_003	15%	3%	36%	161%	40%	70%	70%	26%	8%	19%	4%	4%	1%	7%	2%	1%	3%	1%	0%	0%
RW515700_001	15%	3%	36%	175%	45%	65%	65%	26%	7%	20%	4%	4%	1%	8%	2%	1%	4%	1%	0%	0%
RW516700_001	11%	3%	20%	149%	24%	74%	74%	29%	9%	16%	5%	4%	1%	7%	1%	0%	2%	1%	0%	0%
RW517400_001	31%	10%	68%	313%	76%	148%	148%	67%	29%	54%	15%	7%	2%	12%	4%	1%	9%	2%	0%	0%
RW517500_001	22%	6%	43%	257%	65%	135%	135%	59%	21%	40%	11%	6%	2%	10%	3%	1%	7%	1%	0%	0%
RW517500_002	9%	2%	13%	130%	20%	53%	53%	26%	7%	15%	3%	4%	1%	6%	1%	0%	2%	0%	0%	0%
RW517600_001	8%	2%	16%	76%	20%	52%	52%	24%	6%	13%	3%	3%	1%	5%	1%	0%	2%	0%	0%	0%
RW519300_001	10%	3%	17%	90%	25%	60%	60%	25%	9%	14%	4%	3%	1%	5%	1%	0%	2%	1%	0%	0%
RW519300_002	7%	1%	15%	3%	10%	11%	11%	16%	2%	10%	1%	0%	1%	1%	1%	0%	2%	0%	0%	0%
RW519600_001	19%	6%	35%	165%	51%	109%	109%	44%	16%	27%	8%	5%	1%	8%	2%	1%	4%	1%	0%	0%
RW519600_002	12%	4%	19%	115%	31%	84%	84%	34%	11%	20%	6%	4%	1%	6%	2%	1%	3%	1%	0%	0%
RW519600_003	7%	2%	12%	61%	15%	57%	57%	28%	7%	15%	4%	2%	1%	4%	1%	0%	2%	1%	0%	0%
RW519600_004	8%	2%	17%	23%	14%	28%	28%	17%	4%	10%	2%	1%	1%	1%	1%	0%	2%	0%	0%	0%
RW519900_001	4%	2%	1%	18%	-4%	19%	19%	8%	4%	3%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RW520000_001	4%	2%	2%	24%	-4%	22%	22%	9%	4%	4%	2%	1%	0%	2%	0%	0%	0%	0%	0%	0%
RW520100_001	4%	2%	2%	23%	-4%	21%	21%	8%	4%	3%	2%	1%	0%	2%	0%	0%	0%	0%	0%	0%
RW520200_001	5%	2%	4%	29%	-1%	26%	26%	10%	5%	4%	2%	1%	0%	2%	0%	0%	0%	0%	0%	0%
RW520300_001	6%	3%	7%	30%	3%	32%	32%	12%	5%	6%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RW520400_001	7%	3%	9%	24%	6%	43%	43%	14%	5%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RW520600_001	7%	3%	8%	30%	3%	39%	39%	16%	5%	8%	2%	1%	0%	3%	1%	0%	1%	0%	0%	0%
RW520600_002	14%	4%	27%	97%	21%	73%	73%	33%	9%	19%	5%	3%	1%	5%	2%	1%	3%	1%	0%	0%
RW520800_001	7%	3%	10%	21%	-2%	34%	34%	14%	5%	6%	2%	1%	0%	2%	1%	0%	0%	0%	0%	0%
RW520800_002	8%	3%	12%	35%	0%	38%	38%	15%	6%	7%	3%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RW520900_001	8%	3%	10%	42%	1%	37%	37%	14%	6%	5%	3%	2%	0%	3%	1%	0%	0%	0%	0%	0%
RW521000_001	7%	3%	9%	38%	2%	38%	38%	12%	5%	4%	2%	2%	0%	3%	1%	0%	0%	0%	0%	0%
RW521500_001	12%	5%	25%	21%	13%	45%	45%	34%	20%	13%	6%	3%	1%	4%	2%	1%	3%	1%	0%	0%
RW521500_002	7%	2%	15%	7%	7%	23%	23%	16%	7%	6%	3%	0%	1%	1%	1%	0%	2%	0%	0%	0%
RW521500_003	6%	2%	13%	13%	6%	22%	22%	13%	6%	6%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RW521500_004	6%	2%	12%	23%	6%	25%	25%	13%	5%	5%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RW521500_005	6%	2%	12%	32%	5%	24%	24%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RW521500_006	6%	2%	11%	38%	5%	23%	23%	12%	4%	5%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RW521600_001	5%	2%	11%	9%	6%	11%	11%	7%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW521600_002	6%	1%	13%	69%	19%	36%	36%	10%	3%	7%	1%	2%	0%	4%	1%	0%	1%	0%	0%	0%
RW521600_009	5%	1%	10%	45%	19%	32%	32%	10%	3%	5%	1%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RW521600_010	5%	1%	11%	10%	4%	11%	11%	7%	3%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RW521600_011	4%	1%	14%	11%	4%	15%	15%	8%	3%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW521600_012	7%	2%	15%	9%	6%	21%	21%	12%	3%	7%	1%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RW521600_013	5%	1%	9%	8%	7%	17%	17%	8%	2%	4%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RW521600_014	5%	1%	11%	51%	19%	33%	33%	10%	3%	6%	1%	2%	0%	3%	1%	0%	1%	0%	0%	0%
RW521600_016	3%	1%	6%	4%	1%	7%	7%	4%	2%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RW521600_017	8%	2%	15%	71%	19%	37%	37%	11%	3%	8%	2%	3%	0%	5%	1%	0%	1%	0%	0%	0%

Notes

Appendix C.3: Percent Change in Maximum Predicted Concentrations from 2041 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	

[1] Conversion of NOx to NO_2 using the Ozone Limiting Method.
[2] Red cells represent an increase in concentration from the No-Build to Build scenario.
[3] Green cells represent a decrease in concentration from the No-Build to Build scenario.
[4] Grey cells represent 0% change from the No-Build to Build scenario.

Appendix C.4: Maximum Predicted Concentrations from 2051 No-Build Scenario with Background

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110000_001	20.3	8.70	59.6	1336	794	120.6	120.6	59.3	20.1	1.44E-04	6.12E-05	4.63	1.53	0.16	6.50E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_002	16.5	7.94	43.3	960	615	95.5	95.5	45.1	17.2	1.20E-04	5.68E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_003	18.1	8.37	52.8	1312	719	105.2	105.2	48.6	18.0	1.32E-04	5.91E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_004	19.9	8.63	59.8	1387	769	121.2	121.2	57.1	19.9	1.42E-04	6.08E-05	4.64	1.53	0.16	6.50E-02	2.59	0.52	0.32	2.54E-02	1.37E-02
RE110000_005	21.5	9.11	67.0	1671	848	125.7	125.7	61.9	21.4	1.52E-04	6.36E-05	4.70	1.54	0.17	6.55E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110000_006	19.2	8.24	56.8	1971	703	122.3	122.3	56.1	18.6	1.40E-04	5.88E-05	4.79	1.53	0.17	6.49E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_007	17.2	8.13	47.6	1258	661	94.4	94.4	44.5	17.2	1.25E-04	5.78E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_008	16.9	8.02	46.2	1175	644	92.0	92.0	44.0	17.0	1.23E-04	5.72E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_009	16.6	7.94	45.1	1108	630	90.2	90.2	43.6	16.9	1.22E-04	5.67E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_010	16.4	7.88	44.3	1058	622	88.6	88.6	43.3	16.8	1.21E-04	5.64E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_011	16.3	7.84	43.5	1019	615	87.3	87.3	43.1	16.7	1.20E-04	5.62E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_020	16.9	8.04	46.5	1203	651	92.3	92.3	44.0	17.0	1.24E-04	5.73E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_021	16.7	7.98	45.7	1156	641	91.2	91.2	43.7	16.9	1.23E-04	5.70E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_022	16.6	7.93	44.9	1106	630	89.8	89.8	43.4	16.8	1.22E-04	5.67E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_023	16.4	7.89	44.3	1069	622	88.7	88.7	43.2	16.8	1.21E-04	5.64E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_024	16.3	7.85	43.7	1037	615	87.7	87.7	43.0	16.7	1.20E-04	5.62E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_025	16.2	7.82	43.2	1006	610	86.6	86.6	42.8	16.6	1.19E-04	5.60E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_028	17.0	8.08	47.0	1226	661	92.7	92.7	44.0	17.1	1.24E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_029	16.8	7.99	45.7	1166	645	90.9	90.9	43.6	16.9	1.23E-04	5.70E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_030	16.5	7.92	44.7	1110	631	89.6	89.6	43.2	16.8	1.21E-04	5.66E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_031	16.4	7.88	44.1	1069	622	88.6	88.6	43.0	16.7	1.21E-04	5.64E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_032	16.2	7.84	43.4	1031	614	87.5	87.5	42.8	16.7	1.20E-04	5.62E-05	4.55	1.52	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_045	17.1	8.13	47.2	1273	669	93.2	93.2	44.0	17.1	1.25E-04	5.78E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_046	16.9	8.03	46.1	1196	654	91.1	91.1	43.5	17.0	1.23E-04	5.73E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_047	16.6	7.95	45.0	1133	640	89.7	89.7	43.2	16.8	1.22E-04	5.68E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_048	16.4	7.90	44.2	1090	630	88.8	88.8	42.9	16.7	1.21E-04	5.65E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_049	16.3	7.85	43.5	1057	619	87.9	87.9	42.6	16.7	1.20E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_050	17.0	8.07	46.4	1232	661	91.7	91.7	43.6	17.0	1.24E-04	5.75E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_051	16.9	8.06	46.4	1228	660	91.4	91.4	43.6	17.0	1.24E-04	5.75E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_052	17.0	8.08	46.6	1241	663	91.5	91.5	43.6	17.0	1.24E-04	5.75E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_053	17.0	8.08	46.5	1249	664	91.4	91.4	43.5	17.0	1.24E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_054	17.0	8.09	46.5	1260	664	91.5	91.5	43.5	17.1	1.24E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_055	17.0	8.09	46.5	1261	664	91.2	91.2	43.5	17.0	1.24E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_056	16.3	7.87	43.4	1077	627	87.3	87.3	42.4	16.7	1.20E-04	5.63E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_057	16.3	7.87	43.6	1080	628	87.6	87.6	42.5	16.7	1.20E-04	5.64E-05	4.56	1.52	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_058	16.3	7.88	43.7	1079	628	87.8	87.8	42.5	16.7	1.20E-04	5.64E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_059	16.3	7.87	43.7	1076	627	87.9	87.9	42.5	16.7	1.20E-04	5.64E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_060	16.4	7.88	43.8	1076	627	88.1	88.1	42.6	16.7	1.20E-04	5.64E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_061	17.7	8.37	49.9	1535	697	96.5	96.5	45.0	17.5	1.27E-04	5.92E-05	4.62	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_062	17.3	8.20	47.6	1370	677	92.8	92.8	44.1	17.2	1.25E-04	5.82E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_063	17.0	8.09	46.3	1267	663	90.7	90.7	43.4	17.0	1.24E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_064	16.7	8.00	45.3	1198	650	88.7	88.7	42.9	16.9	1.22E-04	5.71E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_065	16.5	7.92	44.1	1128	636	87.0	87.0	42.5	16.7	1.21E-04	5.66E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_066	16.3	7.86	43.3	1077	626	86.4	86.4	42.2	16.6	1.20E-04	5.63E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_067	16.1	7.81	42.5	1030	615	85.8	85.8	41.9	16.6	1.19E-04	5.60E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_069	17.4	8.25	48.1	1433	681	93.2	93.2	44.4	17.3	1.25E-04	5.85E-05	4.61	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_070	16.9	8.09	46.2	1278	662	90.4	90.4	43.4	17.0	1.23E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_071	16.7	7.99	45.1	1196	649	88.3	88.3	42.8	16.9	1.22E-04	5.71E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_072	16.5	7.92	44.0	1125	636	86.7	86.7	42.4	16.7	1.21E-04	5.66E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_073	16.2	7.85	43.0	1068	624	85.2	85.2	42.1	16.6	1.19E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_112	17.2	8.18	47.1	1379	673	91.4	91.4	43.9	17.2	1.25E-04	5.82E-05	4.60	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_113	16.9	8.07	45.8	1258	659	88.9	88.9	43.2	17.0	1.23E-04	5.75E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_114	16.6	7.97	44.6	1174	644	87.4	87.4	42.6	16.8	1.21E-04	5.69E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_115	16.4	7.89	43.6	1109	631	85.8	85.8	42.2	16.7	1.20E-04	5.65E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_123	17.5	8.29	48.7	1469	685	93.0	93.0	44.4	17.3	1.26E-04	5.88E-05	4.61	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_124	17.0	8.11	46.3	1301	665	89.8	89.8	43.4	17.0	1.24E-04	5.77E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_125	16.7	7.98	44.7	1189	646	87.4	87.4	42.7	16.8	1.22E-04	5.70E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_132	17.0	8.10	46.0	1287	662	89.0	89.0	43.3	17.0	1.23E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_133	16.6	7.97	44.4	1177	643	86.9	86.9	42.6	16.8	1.21E-04	5.69E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_139	17.0	8.10	46.0	1288	662	88.9	88.9	43.3	17.0	1.23E-04	5.77E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_140	16.7	7.97	44.5	1173	644	86.8	86.8	42.6	16.8	1.21E-04	5.70E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_145	17.4	8.25	48.0	1432	679	91.2	91.2	44.1	17.2	1.25E-04	5.85E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_146	17.0	8.08	45.7	1264	658	88.2	88.2	43.2	17.0	1.23E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_147	16.6	7.95	44.1	1159	640	86.1	86.1	42.5	16.7	1.21E-04	5.68E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110000_149	17.5	8.30	48.6	1488	685	91.7	91.7	44.3	17.3	1.25E-04	5.88E-05	4.61	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_150	17.0	8.11	45.9	1309	662	88.7	88.7	43.3	17.0	1.23E-04	5.78E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_151	16.7	8.00	44.7	1201	647	86.4	86.4	42.7	16.8	1.22E-04	5.71E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_165	16.7	7.98	44.3	1185	642	85.5	85.5	42.6	16.8	1.21E-04	5.70E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_167	16.7	7.99	44.4	1189	643	85.6	85.6	42.6	16.8	1.21E-04	5.70E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_173	17.6	8.31	48.6	1470	686	92.2	92.2	44.2	17.3	1.26E-04	5.89E-05	4.61	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_177	16.5	7.92	43.5	1125	632	84.2	84.2	42.3	16.6	1.20E-04	5.66E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_178	17.0	8.10	45.7	1286	659	87.7	87.7	43.2	16.9	1.23E-04	5.77E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_189	17.0	8.11	45.7	1316	659	88.0	88.0	43.2	17.0	1.23E-04	5.77E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_190	17.0	8.11	45.9	1301	660	88.0	88.0	43.2	17.0	1.23E-04	5.77E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_191	16.7	7.99	44.4	1195	644	85.6	85.6	42.7	16.8	1.21E-04	5.71E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_239	18.1	8.02	53.6	1283	712	92.5	92.5	45.5	16.8	1.31E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_240	18.6	8.21	56.3	1312	730	95.1	95.1	46.6	17.1	1.34E-04	5.77E-05	4.58	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_241	18.2	8.06	52.7	1465	721	91.6	91.6	45.2	16.8	1.30E-04	5.69E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_242	18.0	7.98	51.7	1388	712	90.4	90.4	44.8	16.7	1.29E-04	5.65E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_243	18.3	8.08	54.4	1293	717	93.3	93.3	45.9	16.9	1.32E-04	5.70E-05	4.58	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_244	17.6	7.86	49.7	1296	693	88.6	88.6	44.0	16.5	1.27E-04	5.59E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE110000_245	18.4	8.13	55.2	1302	722	94.1	94.1	46.2	16.9	1.33E-04	5.73E-05	4.58	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_246	18.1	8.02	52.2	1423	717	91.1	91.1	45.0	16.8	1.30E-04	5.67E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_247	17.8	7.92	50.9	1316	703	90.3	90.3	44.5	16.6	1.28E-04	5.62E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_248	17.7	7.89	50.3	1307	698	89.4	89.4	44.2	16.5	1.27E-04	5.61E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_249	18.3	8.09	52.9	1529	725	91.9	91.9	45.3	16.9	1.30E-04	5.71E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_253	16.4	7.90	43.1	1118	628	83.7	83.7	42.0	16.6	1.20E-04	5.65E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_254	16.8	8.05	44.8	1217	647	86.5	86.5	42.5	16.8	1.22E-04	5.73E-05	4.57	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_255	16.4	7.90	42.9	1114	625	83.8	83.8	41.8	16.6	1.20E-04	5.65E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_256	16.8	8.04	45.0	1193	643	86.2	86.2	42.3	16.8	1.22E-04	5.73E-05	4.57	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_257	16.5	7.93	43.6	1121	627	84.0	84.0	41.8	16.6	1.20E-04	5.67E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_265	16.8	8.02	44.6	1201	644	85.6	85.6	42.5	16.8	1.22E-04	5.72E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_267	17.1	8.15	46.1	1335	663	88.3	88.3	43.2	17.0	1.24E-04	5.79E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_276	16.7	7.98	44.3	1149	635	85.0	85.0	42.1	16.7	1.21E-04	5.69E-05	4.56	1.51	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_277	16.6	7.95	43.6	1141	634	84.3	84.3	42.1	16.7	1.20E-04	5.68E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_278	16.4	7.88	42.7	1107	624	83.3	83.3	41.8	16.6	1.19E-04	5.64E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_279	16.6	7.95	43.8	1144	636	84.6	84.6	42.2	16.7	1.21E-04	5.68E-05	4.56	1.51	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_280	17.6	8.33	48.6	1487	685	91.2	91.2	44.1	17.3	1.26E-04	5.89E-05	4.61	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_281	17.0	8.11	45.6	1275	656	87.4	87.4	42.9	16.9	1.23E-04	5.77E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_292	17.1	8.14	45.9	1293	658	88.0	88.0	42.9	17.0	1.23E-04	5.78E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_293	16.7	8.00	44.4	1196	644	85.6	85.6	42.5	16.8	1.22E-04	5.71E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_294	16.6	7.97	43.8	1154	636	85.2	85.2	42.1	16.7	1.21E-04	5.69E-05	4.56	1.51	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_305	17.0	8.11	45.8	1253	652	87.2	87.2	42.7	16.9	1.23E-04	5.76E-05	4.58	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_309	16.9	8.07	45.2	1259	653	86.8	86.8	42.8	16.9	1.22E-04	5.75E-05	4.58	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_310	17.2	8.20	46.8	1337	664	88.9	88.9	43.1	17.1	1.24E-04	5.81E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_316	17.5	8.32	48.1	1447	677	91.0	91.0	43.7	17.3	1.25E-04	5.88E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_325	16.7	8.00	44.5	1183	644	85.6	85.6	42.6	16.8	1.22E-04	5.71E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_329	16.7	8.00	44.4	1186	643	85.4	85.4	42.6	16.8	1.21E-04	5.71E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_331	17.5	8.29	48.2	1449	682	91.6	91.6	44.0	17.3	1.25E-04	5.87E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_332	17.0	8.09	45.6	1277	656	87.2	87.2	43.0	16.9	1.23E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_333	16.5	7.92	43.5	1128	632	84.0	84.0	42.2	16.6	1.20E-04	5.66E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_342	17.3	8.21	47.0	1387	671	89.0	89.0	43.5	17.1	1.24E-04	5.83E-05	4.60	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_344	17.0	8.09	45.6	1270	658	87.4	87.4	43.1	16.9	1.23E-04	5.76E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_345	16.5	7.92	43.5	1125	633	84.2	84.2	42.3	16.6	1.20E-04	5.67E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_353	17.1	8.15	46.6	1279	655	87.8	87.8	42.7	17.0	1.23E-04	5.78E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_355	16.9	8.06	45.5	1198	644	86.4	86.4	42.4	16.8	1.22E-04	5.73E-05	4.57	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_378	17.6	8.38	49.2	1405	671	89.9	89.9	43.8	17.4	1.25E-04	5.90E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_387	17.6	8.34	48.6	1456	677	90.4	90.4	43.7	17.3	1.26E-04	5.89E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_390	17.9	8.52	50.2	1401	670	92.0	92.0	44.3	17.6	1.26E-04	5.96E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_394	17.3	8.25	47.8	1291	656	87.8	87.8	43.3	17.2	1.23E-04	5.83E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_397	16.7	8.00	44.8	1152	635	85.3	85.3	42.1	16.7	1.21E-04	5.70E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_401	17.7	8.27	50.5	1282	705	100.8	100.8	46.9	17.7	1.29E-04	5.85E-05	4.59	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110200_001	20.4	8.09	63.1	1920	809	112.8	112.8	49.1	17.0	1.43E-04	5.79E-05	4.69	1.53	0.17	6.49E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110300_001	19.0	8.03	54.1	1305	736	109.8	109.8	50.6	16.9	1.36E-04	5.76E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_002	18.8	8.04	54.1	1283	715	109.2	109.2	50.6	16.9	1.36E-04	5.77E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_003	18.9	8.13	54.8	1308	713	110.4	110.4	50.6	17.0	1.38E-04	5.82E-05	4.61	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_004	19.3	8.23	56.0	1337	725	112.7	112.7	50.8	17.1	1.39E-04	5.89E-05	4.61	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110400_001	19.5	8.31	56.7	1366	735	113.7	113.7	50.9	17.2	1.40E-04	5.93E-05	4.61	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110400_002	19.8	8.42	58.3	1402	740	114.5	114.5	51.2	17.3	1.42E-04	5.97E-05	4.62	1.53	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110500_001	18.7	8.06	54.0	1217	681	109.8	109.8	49.8	16.9	1.35E-04	5.74E-05	4.59	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110500_002	18.3	7.97	52.4	1161	663	106.4	106.4	49.2	16.8	1.32E-04	5.67E-05	4.58	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110600_001	17.8	7.85	50.1	1120	644	100.2	100.2	48.2	16.6	1.28E-04	5.60E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE110600_002	18.1	7.93	51.6	1149	656	104.8	104.8	48.8	16.7	1.31E-04	5.64E-05	4.58	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110700_001	17.6	7.81	49.1	1097	637	96.4	96.4	47.7	16.5	1.27E-04	5.57E-05	4.57	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE110700_002	17.2	7.67	46.2	1046	629	93.4	93.4	46.7	16.3	1.24E-04	5.51E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE110800_001	17.4	7.83	48.9	1063	630	93.0	93.0	47.4	16.5	1.26E-04	5.57E-05	4.57	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE110800_002	17.3	7.81	48.3	1055	623	92.2	92.2	47.1	16.5	1.25E-04	5.56E-05	4.57	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE110900_001	17.1	7.79	47.8	1038	616	90.9	90.9	46.7	16.4	1.24E-04	5.54E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE110900_002	16.9	7.76	47.1	1014	609	89.7	89.7	46.3	16.4	1.23E-04	5.52E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE111100_001	16.4	7.65	44.5	915	590	84.8	84.8	44.9	16.1	1.20E-04	5.46E-05	4.54	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111200_001	16.2	7.63	43.6	902	583	83.9	83.9	44.3	16.1	1.18E-04	5.45E-05	4.53	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111200_002	16.3	7.68	44.1	922	582	84.8	84.8	44.4	16.1	1.18E-04	5.47E-05	4.54	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_001	16.1	7.64	43.2	900	578	83.8	83.8	43.9	16.1	1.17E-04	5.45E-05	4.54	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_002	16.0	7.60	42.5	883	576	83.0	83.0	43.6	16.0	1.17E-04	5.43E-05	4.53	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_003	16.0	7.60	42.2	880	573	82.7	82.7	43.3	16.0	1.16E-04	5.43E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111400_001	15.9	7.59	41.5	876	567	81.5	81.5	42.8	16.0	1.15E-04	5.42E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111400_002	15.9	7.59	41.2	873	564	79.8	79.8	42.6	15.9	1.14E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111500_001	15.8	7.57	40.4	871	558	78.0	78.0	42.1	15.9	1.13E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111500_002	15.5	7.48	38.5	882	548	75.0	75.0	41.2	15.7	1.11E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111600_001	15.4	7.46	37.9	879	541	74.4	74.4	40.8	15.7	1.10E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111600_002	15.3	7.44	37.2	878	534	74.0	74.0	40.4	15.7	1.10E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111700_001	16.1	7.60	39.9	993	573	74.4	74.4	41.5	15.9	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111700_002	15.5	7.51	37.7	858	531	73.5	73.5	40.6	15.7	1.09E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111800_001	18.8	8.26	54.2	1608	727	112.5	112.5	47.0	16.9	1.38E-04	5.92E-05	4.64	1.52	0.17	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE111800_002	16.0	7.59	39.7	991	569	74.3	74.3	41.4	15.9	1.12E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111800_003	16.2	7.63	40.5	1007	570	74.6	74.6	41.7	15.9	1.12E-04	5.42E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111800_004	16.1	7.63	40.5	1007	567	74.5	74.5	41.6	15.9	1.12E-04	5.42E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111800_005	15.4	7.51	37.5	854	527	73.3	73.3	40.6	15.7	1.09E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111800_006	15.4	7.51	37.4	852	524	73.2	73.2	40.7	15.7	1.09E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111800_007	15.4	7.49	37.2	850	520	72.2	72.2	40.6	15.7	1.09E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE111800_008	15.4	7.50	37.5	847	518	72.3	72.3	40.6	15.7	1.09E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE112100_001	17.7	8.39	49.3	1262	634	97.9	97.9	43.9	16.9	1.29E-04	5.99E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE112200_001	16.8	8.07	44.9	1087	586	98.6	98.6	43.6	16.6	1.22E-04	5.79E-05	4.59	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE113100_001	13.8	7.20	29.9	656	461	60.4	60.4	36.7	15.2	1.01E-04	5.25E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE113200_001	14.2	7.39	32.8	797	482	64.4	64.4	36.3	15.4	1.05E-04	5.35E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE113200_002	14.4	7.44	32.9	802	490	63.9	63.9	36.4	15.5	1.05E-04	5.38E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE113300_001	14.2	7.40	32.1	727	491	61.5	61.5	36.3	15.4	1.04E-04	5.36E-05	4.49	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE210700_001	13.3	7.18	28.1	607	431	53.4	53.4	35.1	15.1	9.87E-05	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210700_002	13.3	7.19	28.2	610	431	53.5	53.5	35.1	15.1	9.89E-05	5.25E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210700_003	13.2	7.15	27.6	595	428	53.2	53.2	34.9	15.0	9.81E-05	5.22E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210900_001	13.9	7.41	32.4	668	463	56.4	56.4	35.2	15.4	1.05E-04	5.39E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE210900_003	13.6	7.22	30.3	676	470	55.3	55.3	35.4	15.1	1.02E-04	5.27E-05	4.49	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE210900_004	13.6	7.35	30.4	621	450	54.8	54.8	35.1	15.3	1.02E-04	5.35E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE210900_005	13.5	7.30	29.1	600	441	54.3	54.3	35.1	15.2	1.00E-04	5.32E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210900_006	13.8	7.40	31.2	668	456	55.0	55.0	35.0	15.3	1.03E-04	5.38E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE210900_007	13.5	7.32	29.4	603	444	54.5	54.5	35.0	15.2	1.01E-04	5.33E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE210900_008	13.4	7.31	29.3	591	444	54.2	54.2	34.9	15.2	1.00E-04	5.32E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_001	13.6	7.20	29.9	668	466	54.9	54.9	35.3	15.1	1.02E-04	5.25E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_002	13.7	7.27	31.0	682	478	55.9	55.9	35.4	15.2	1.03E-04	5.29E-05	4.49	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211000_003	13.7	7.27	30.7	671	473	55.8	55.8	35.3	15.2	1.03E-04	5.30E-05	4.49	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211000_004	13.5	7.23	29.4	638	460	54.5	54.5	35.1	15.1	1.01E-04	5.27E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_005	13.4	7.16	29.1	651	457	54.4	54.4	35.2	15.0	1.01E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_006	13.5	7.24	29.3	647	462	54.3	54.3	35.1	15.1	1.01E-04	5.27E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_007	13.5	7.32	29.6	592	449	54.3	54.3	34.8	15.2	1.01E-04	5.33E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_008	13.5	7.31	29.2	602	445	54.4	54.4	34.7	15.2	1.00E-04	5.32E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_009	13.4	7.28	28.8	588	436	53.7	53.7	34.6	15.2	9.99E-05	5.31E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211000_010	13.4	7.28	28.8	587	435	53.6	53.6	34.6	15.2	1.00E-04	5.31E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211100_001	13.5	7.22	29.4	651	462	54.2	54.2	35.1	15.1	1.01E-04	5.26E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211100_002	13.2	7.14	28.0	612	442	53.4	53.4	34.9	15.0	9.90E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211100_003	13.8	7.29	30.8	676	476	56.2	56.2	35.4	15.2	1.03E-04	5.31E-05	4.49	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211100_004	13.5	7.31	29.4	608	442	54.2	54.2	34.6	15.2	1.01E-04	5.32E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211100_005	13.5	7.30	29.4	604	444	54.2	54.2	34.5	15.2	1.01E-04	5.31E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211100_006	13.4	7.28	29.7	615	450	54.5	54.5	34.4	15.2	1.01E-04	5.30E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211100_009	13.7	7.27	30.5	673	473	55.4	55.4	35.3	15.2	1.02E-04	5.30E-05	4.49	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE211200_001	13.2	7.13	27.8	620	440	52.9	52.9	34.9	15.0	9.88E-05	5.21E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211200_002	13.2	7.14	27.9	623	442	53.0	53.0	34.9	15.0	9.89E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211200_003	13.7	7.26	30.3	657	472	56.1	56.1	35.4	15.2	1.02E-04	5.29E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211200_004	13.8	7.27	30.8	659	472	57.1	57.1	35.3	15.2	1.03E-04	5.30E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE211200_005	13.6	7.22	29.6	653	467	54.7	54.7	35.2	15.1	1.01E-04	5.27E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211400_001	13.1	7.10	27.7	601	431	53.9	53.9	34.8	14.9	9.81E-05	5.19E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211500_002	13.1	7.10	27.3	596	430	53.2	53.2	34.7	14.9	9.77E-05	5.19E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211500_003	13.1	7.10	27.5	596	429	53.6	53.6	34.7	14.9	9.78E-05	5.18E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211500_004	13.1	7.10	27.4	597	431	53.2	53.2	34.7	14.9	9.77E-05	5.19E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE211900_001	13.0	7.09	27.0	567	424	52.1	52.1	34.4	14.9	9.71E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE212600_001	13.4	7.27	29.0	635	441	53.1	53.1	34.8	15.2	9.95E-05	5.29E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE212700_001	13.6	7.31	30.2	700	455	53.9	53.9	34.9	15.2	1.01E-04	5.31E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE212700_002	13.7	7.26	30.5	614	459	53.2	53.2	34.5	15.1	1.02E-04	5.28E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE212800_001	14.0	7.42	32.3	813	473	56.0	56.0	35.5	15.4	1.04E-04	5.38E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE212800_002	14.1	7.43	33.1	892	479	56.8	56.8	35.5	15.4	1.05E-04	5.39E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE212900_001	14.0	7.38	32.9	912	472	56.9	56.9	35.3	15.3	1.05E-04	5.36E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE213000_001	13.6	7.25	29.3	642	455	54.6	54.6	34.7	15.1	9.97E-05	5.27E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214400_001	14.4	7.45	34.4	658	480	62.9	62.9	37.4	15.7	1.04E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_002	14.2	7.25	33.8	630	456	57.1	57.1	37.4	15.3	1.03E-04	5.25E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_003	14.5	7.30	35.5	653	466	59.9	59.9	38.2	15.4	1.05E-04	5.27E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_004	14.6	7.31	35.6	664	468	60.4	60.4	38.3	15.4	1.05E-04	5.28E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_005	14.6	7.32	35.7	669	469	60.6	60.6	38.4	15.4	1.05E-04	5.28E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_006	14.7	7.32	35.7	672	470	60.7	60.7	38.4	15.4	1.05E-04	5.29E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_007	14.0	7.24	32.1	629	451	56.5	56.5	36.6	15.2	1.02E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214600_008	14.2	7.26	33.2	638	455	58.0	58.0	37.1	15.3	1.03E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_009	14.2	7.25	33.1	632	454	57.0	57.0	37.1	15.3	1.03E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_010	14.1	7.24	33.0	629	453	56.8	56.8	37.0	15.2	1.03E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_011	14.0	7.23	31.9	623	450	56.1	56.1	36.5	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214600_012	14.0	7.22	32.1	619	449	55.9	55.9	36.6	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214600_013	14.4	7.26	34.5	638	461	57.6	57.6	37.8	15.3	1.04E-04	5.26E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_014	14.5	7.28	35.2	645	463	58.7	58.7	38.1	15.3	1.05E-04	5.27E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_015	14.5	7.29	35.2	647	464	59.2	59.2	38.1	15.3	1.05E-04	5.27E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_016	14.6	7.30	35.5	657	467	60.2	60.2	38.3	15.4	1.05E-04	5.28E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_017	14.6	7.31	35.5	660	467	60.3	60.3	38.3	15.4	1.05E-04	5.28E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_018	14.6	7.31	35.5	666	468	60.4	60.4	38.3	15.4	1.05E-04	5.28E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_019	14.7	7.33	35.8	676	471	61.1	61.1	38.4	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_020	14.7	7.33	35.9	680	472	61.3	61.3	38.5	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_021	14.8	7.34	36.1	683	474	61.9	61.9	38.6	15.5	1.06E-04	5.29E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_022	14.2	7.25	33.2	635	455	57.6	57.6	37.1	15.3	1.03E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_023	14.2	7.25	32.6	641	454	58.2	58.2	36.8	15.3	1.02E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_024	14.2	7.26	32.8	646	454	58.5	58.5	36.8	15.3	1.03E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_025	14.2	7.26	32.9	649	455	58.6	58.6	36.9	15.3	1.03E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_026	14.2	7.26	33.0	651	455	58.7	58.7	36.9	15.3	1.03E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_027	14.2	7.26	33.0	652	455	58.8	58.8	36.9	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_028	14.2	7.26	33.1	653	455	58.8	58.8	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_029	14.2	7.26	33.1	653	455	58.8	58.8	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_030	14.2	7.26	33.1	654	455	58.7	58.7	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_031	14.2	7.26	33.1	654	455	58.6	58.6	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_032	14.2	7.26	33.2	655	455	58.4	58.4	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_033	14.4	7.29	33.8	664	460	59.8	59.8	37.3	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_034	14.4	7.29	33.9	665	461	59.8	59.8	37.4	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_035	14.4	7.29	33.8	664	461	59.7	59.7	37.3	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_036	14.4	7.29	33.8	664	461	59.8	59.8	37.3	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_037	14.2	7.25	32.6	640	454	58.0	58.0	36.8	15.3	1.02E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_038	14.2	7.25	32.6	642	454	58.3	58.3	36.7	15.3	1.02E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_039	14.2	7.25	32.7	644	454	58.4	58.4	36.8	15.3	1.02E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_040	14.2	7.26	32.9	648	455	58.6	58.6	36.9	15.3	1.03E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_041	14.2	7.26	33.2	654	455	58.5	58.5	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_042	14.2	7.27	33.3	657	456	58.6	58.6	37.1	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_043	14.4	7.29	33.8	664	460	59.8	59.8	37.3	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_044	14.4	7.29	33.8	663	461	59.7	59.7	37.3	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_045	14.4	7.28	33.7	662	461	59.6	59.6	37.3	15.3	1.03E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_046	14.4	7.28	33.4	656	459	59.2	59.2	37.3	15.3	1.03E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_047	14.3	7.28	33.4	654	459	59.1	59.1	37.2	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_048	14.3	7.27	33.5	652	458	59.1	59.1	37.3	15.3	1.03E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214600_049	14.3	7.27	33.5	651	458	59.1	59.1	37.3	15.3	1.03E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_050	14.3	7.27	33.4	648	458	59.0	59.0	37.2	15.3	1.03E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_051	14.3	7.30	34.0	660	464	60.7	60.7	37.4	15.4	1.04E-04	5.28E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_052	14.2	7.29	33.6	655	461	60.2	60.2	37.2	15.4	1.03E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_053	14.4	7.29	33.8	663	461	59.7	59.7	37.3	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_054	14.4	7.28	33.5	658	460	59.4	59.4	37.3	15.3	1.03E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_055	14.3	7.28	33.5	653	459	59.1	59.1	37.3	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_056	14.3	7.27	33.5	647	458	59.2	59.2	37.3	15.3	1.03E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_057	14.1	7.27	32.9	646	457	59.4	59.4	36.8	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_058	14.1	7.26	32.6	646	456	59.3	59.3	36.7	15.3	1.02E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_059	14.1	7.27	32.9	650	458	59.7	59.7	36.9	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_060	14.2	7.29	33.5	657	461	60.4	60.4	37.2	15.4	1.03E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_061	14.3	7.30	33.9	661	463	60.7	60.7	37.3	15.4	1.04E-04	5.28E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_062	14.2	7.28	33.2	650	459	59.8	59.8	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_063	14.2	7.28	33.2	654	459	60.0	60.0	37.0	15.3	1.03E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_064	14.1	7.26	33.0	647	457	59.2	59.2	36.9	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_065	14.2	7.27	33.2	649	459	59.5	59.5	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_066	14.2	7.28	33.4	651	460	59.8	59.8	37.1	15.3	1.03E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_067	14.3	7.29	33.7	654	462	60.2	60.2	37.3	15.4	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_068	14.4	7.30	34.1	658	464	60.7	60.7	37.5	15.4	1.04E-04	5.28E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_069	14.5	7.30	34.2	666	464	60.0	60.0	37.5	15.4	1.04E-04	5.28E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_070	14.1	7.25	32.9	651	454	58.0	58.0	36.9	15.3	1.03E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_071	14.1	7.26	33.1	653	455	58.2	58.2	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_072	14.2	7.27	33.3	656	457	58.6	58.6	37.1	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_073	14.3	7.28	33.6	659	459	59.0	59.0	37.2	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_074	14.4	7.29	33.9	662	461	59.4	59.4	37.4	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_075	14.4	7.29	34.1	668	463	60.0	60.0	37.5	15.4	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_076	14.3	7.28	33.6	661	459	59.0	59.0	37.2	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_077	14.4	7.29	33.9	664	461	59.4	59.4	37.4	15.3	1.04E-04	5.27E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_078	14.2	7.27	33.4	659	457	58.7	58.7	37.1	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_079	14.2	7.26	33.2	655	455	58.3	58.3	37.0	15.3	1.03E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_080	14.1	7.25	32.9	652	453	58.0	58.0	36.9	15.3	1.03E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_081	14.5	7.28	35.4	648	465	58.7	58.7	38.2	15.3	1.05E-04	5.27E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214600_082	14.1	7.24	32.2	635	452	57.4	57.4	36.6	15.2	1.02E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214600_083	14.1	7.23	33.0	623	452	56.5	56.5	37.0	15.2	1.03E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_002	13.5	7.18	29.6	596	438	54.3	54.3	35.2	15.1	9.92E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_003	13.5	7.18	29.8	598	439	54.5	54.5	35.3	15.1	9.94E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_004	13.6	7.19	30.0	599	439	54.6	54.6	35.4	15.1	9.95E-05	5.22E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_005	13.7	7.19	30.1	601	440	54.8	54.8	35.4	15.1	9.97E-05	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_006	13.7	7.20	30.3	603	442	54.9	54.9	35.7	15.1	9.99E-05	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_007	13.8	7.21	30.9	607	444	55.2	55.2	36.0	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_008	13.9	7.21	31.5	614	446	55.5	55.5	36.3	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_009	13.7	7.21	31.5	633	445	55.8	55.8	36.1	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_010	13.9	7.23	32.2	643	449	56.7	56.7	36.5	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_011	13.9	7.23	32.2	641	449	56.6	56.6	36.5	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_012	13.9	7.23	32.2	640	449	56.7	56.7	36.5	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_013	14.0	7.23	32.1	639	449	56.8	56.8	36.5	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_014	13.9	7.22	31.7	628	447	56.3	56.3	36.2	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_015	13.8	7.21	31.0	616	445	55.4	55.4	35.9	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_016	13.8	7.21	30.8	614	444	55.2	55.2	35.8	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_017	13.7	7.20	30.8	613	444	55.1	55.1	35.8	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_018	13.7	7.20	31.0	618	444	55.3	55.3	35.9	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_019	13.7	7.21	31.1	621	444	55.4	55.4	35.9	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_020	13.8	7.21	31.4	631	445	55.7	55.7	36.1	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_021	13.8	7.21	31.5	632	445	55.7	55.7	36.1	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_022	13.6	7.19	30.6	622	442	55.0	55.0	35.7	15.1	1.00E-04	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_023	13.6	7.19	30.4	618	441	54.7	54.7	35.6	15.1	9.99E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_024	13.6	7.19	30.3	616	441	54.7	54.7	35.5	15.1	9.98E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_025	13.5	7.18	30.1	609	440	54.6	54.6	35.5	15.1	9.97E-05	5.22E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_026	13.4	7.18	29.5	594	437	54.2	54.2	35.1	15.1	9.90E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_027	13.6	7.19	30.5	623	441	55.0	55.0	35.7	15.1	1.00E-04	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_028	13.9	7.23	32.0	637	449	56.9	56.9	36.4	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_029	13.9	7.23	31.8	632	448	56.8	56.8	36.3	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_030	13.9	7.22	31.6	626	447	56.2	56.2	36.2	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_031	13.9	7.22	31.5	624	447	55.8	55.8	36.1	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214700_032	13.9	7.22	31.6	625	448	55.9	55.9	36.2	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_033	13.9	7.22	31.2	618	447	55.6	55.6	36.2	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_034	13.7	7.19	30.5	611	442	54.9	54.9	35.6	15.1	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_035	13.7	7.20	30.9	616	444	55.2	55.2	35.8	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_036	13.7	7.21	31.2	625	445	55.5	55.5	36.0	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_037	13.8	7.21	31.3	628	445	55.6	55.6	36.1	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_038	13.6	7.19	30.2	614	441	54.7	54.7	35.5	15.1	9.98E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_039	13.5	7.18	30.1	607	440	54.6	54.6	35.4	15.1	9.97E-05	5.22E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_040	13.5	7.18	30.0	605	440	54.5	54.5	35.4	15.1	9.96E-05	5.22E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_041	13.9	7.24	31.7	636	450	58.0	58.0	36.3	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_042	13.9	7.23	31.5	634	449	57.5	57.5	36.2	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_043	13.7	7.20	30.5	625	442	55.8	55.8	35.7	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_044	13.7	7.20	30.2	623	441	55.4	55.4	35.6	15.1	9.97E-05	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_045	13.6	7.19	30.1	622	440	55.2	55.2	35.5	15.1	9.95E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_046	13.6	7.19	29.9	621	439	55.1	55.1	35.4	15.1	9.94E-05	5.22E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_047	13.6	7.19	29.8	619	437	55.0	55.0	35.3	15.1	9.92E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_048	13.6	7.18	29.6	615	436	54.9	54.9	35.2	15.1	9.90E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_049	13.7	7.20	30.1	622	441	55.6	55.6	35.5	15.1	9.96E-05	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_050	13.7	7.21	30.6	626	444	56.4	56.4	35.7	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_051	13.8	7.22	31.0	630	447	57.3	57.3	35.9	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_052	13.9	7.24	31.7	636	451	58.3	58.3	36.3	15.2	1.01E-04	5.25E-05	4.49	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_053	14.0	7.25	32.0	640	452	58.7	58.7	36.4	15.3	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_054	14.0	7.26	32.5	643	455	59.0	59.0	36.7	15.3	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_055	14.0	7.25	32.3	641	453	58.7	58.7	36.5	15.3	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_056	14.0	7.24	32.1	639	452	58.4	58.4	36.4	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_057	13.8	7.23	31.3	632	448	57.2	57.2	36.1	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_058	13.8	7.22	31.0	630	446	56.7	56.7	36.0	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_059	13.8	7.21	30.8	628	445	56.4	56.4	35.8	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_060	13.7	7.21	30.6	627	443	56.0	56.0	35.8	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_061	13.6	7.18	29.6	617	436	54.8	54.8	35.3	15.1	9.91E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_062	13.6	7.18	29.7	617	437	55.0	55.0	35.3	15.1	9.91E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_063	13.6	7.19	29.8	618	439	55.1	55.1	35.4	15.1	9.93E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_064	13.6	7.19	30.0	620	440	55.3	55.3	35.4	15.1	9.94E-05	5.22E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_065	13.7	7.21	30.4	624	443	56.0	56.0	35.6	15.2	9.99E-05	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_066	13.8	7.22	30.8	628	445	56.8	56.8	35.8	15.2	1.00E-04	5.23E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_067	13.9	7.23	31.3	632	448	57.7	57.7	36.1	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_068	13.9	7.23	31.5	634	449	58.0	58.0	36.2	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_069	14.0	7.26	32.3	643	454	59.0	59.0	36.6	15.3	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_070	13.6	7.18	29.7	619	436	54.7	54.7	35.3	15.1	9.92E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_071	13.6	7.20	30.3	625	439	55.5	55.5	35.6	15.1	9.98E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_072	13.7	7.20	30.4	626	440	55.6	55.6	35.7	15.1	9.99E-05	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_073	13.7	7.21	30.8	629	443	55.9	55.9	35.8	15.2	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_074	13.8	7.22	31.2	632	446	56.3	56.3	36.0	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_075	13.9	7.23	31.7	636	448	56.9	56.9	36.2	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_076	14.0	7.25	32.5	643	454	58.3	58.3	36.7	15.3	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_077	13.6	7.19	29.9	621	437	54.9	54.9	35.4	15.1	9.94E-05	5.22E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_078	13.6	7.19	30.1	623	438	55.2	55.2	35.5	15.1	9.96E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_079	13.7	7.20	30.6	627	441	55.7	55.7	35.7	15.1	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_080	13.8	7.21	31.0	631	444	56.1	56.1	35.9	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_081	13.8	7.22	31.4	634	447	56.5	56.5	36.1	15.2	1.01E-04	5.24E-05	4.49	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_082	13.9	7.23	31.9	637	450	57.2	57.2	36.4	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_083	13.9	7.24	32.1	639	451	57.5	57.5	36.4	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_084	14.0	7.25	32.3	641	453	58.0	58.0	36.6	15.3	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_085	14.1	7.26	32.7	645	456	58.8	58.8	36.8	15.3	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_086	13.8	7.21	31.4	635	443	55.8	55.8	36.1	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_087	13.7	7.21	31.2	634	443	55.7	55.7	36.0	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_088	13.8	7.21	31.5	637	444	56.0	56.0	36.2	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_089	13.8	7.22	31.7	639	445	56.3	56.3	36.3	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_090	13.8	7.22	31.9	641	447	56.6	56.6	36.3	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_091	13.9	7.23	32.1	642	448	56.8	56.8	36.4	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_092	13.9	7.23	32.2	644	449	57.0	57.0	36.5	15.2	1.02E-04	5.24E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_093	13.7	7.20	30.9	631	441	55.4	55.4	35.8	15.1	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_094	13.6	7.19	30.5	627	440	55.0	55.0	35.7	15.1	1.00E-04	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_095	13.6	7.19	30.3	625	439	54.9	54.9	35.6	15.1	9.99E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_096	14.0	7.24	32.5	647	451	57.5	57.5	36.7	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214700_097	14.0	7.25	32.7	649	452	57.7	57.7	36.8	15.3	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_098	13.6	7.20	30.7	629	441	55.2	55.2	35.8	15.1	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_099	13.6	7.18	30.1	623	439	54.7	54.7	35.5	15.1	9.96E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_100	14.0	7.24	32.7	649	451	57.6	57.6	36.7	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_101	13.9	7.23	32.1	643	448	56.7	56.7	36.5	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_102	13.8	7.22	32.0	641	447	56.4	56.4	36.4	15.2	1.02E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_103	13.8	7.22	31.6	637	445	56.1	56.1	36.2	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_104	13.8	7.21	31.5	636	445	55.9	55.9	36.1	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_105	13.7	7.21	31.3	634	444	55.7	55.7	36.1	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_106	13.6	7.19	30.6	627	441	55.0	55.0	35.7	15.1	1.00E-04	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_107	13.6	7.19	30.5	625	440	54.9	54.9	35.6	15.1	1.00E-04	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_108	13.9	7.24	32.4	646	449	57.1	57.1	36.6	15.2	1.02E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE214700_109	13.8	7.22	31.8	639	446	56.3	56.3	36.3	15.2	1.01E-04	5.24E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE214700_110	13.7	7.20	31.1	632	443	55.5	55.5	36.0	15.2	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_111	13.7	7.20	31.0	631	442	55.3	55.3	35.9	15.1	1.01E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_112	13.6	7.20	30.8	629	442	55.2	55.2	35.8	15.1	1.00E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_113	13.6	7.19	30.4	624	440	54.8	54.8	35.6	15.1	9.99E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214700_114	13.5	7.18	30.1	622	439	54.6	54.6	35.5	15.1	9.96E-05	5.22E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_004	13.4	7.16	28.9	601	432	54.2	54.2	34.8	15.0	9.82E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_005	13.5	7.18	29.7	606	439	54.3	54.3	35.2	15.1	9.93E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_006	13.5	7.18	29.8	610	439	54.3	54.3	35.3	15.1	9.94E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_007	13.5	7.18	29.9	616	439	54.4	54.4	35.4	15.1	9.95E-05	5.22E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_012	13.4	7.17	29.2	596	436	53.9	53.9	34.9	15.1	9.87E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_013	13.4	7.17	29.2	594	436	54.0	54.0	35.0	15.1	9.88E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_014	13.4	7.17	29.3	593	436	54.1	54.1	35.0	15.1	9.88E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_015	13.5	7.17	29.7	603	438	54.2	54.2	35.2	15.1	9.92E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_016	13.5	7.18	29.8	609	439	54.3	54.3	35.3	15.1	9.93E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_017	13.5	7.18	29.8	612	439	54.4	54.4	35.3	15.1	9.94E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_018	13.5	7.18	29.9	614	439	54.4	54.4	35.3	15.1	9.94E-05	5.22E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_019	13.5	7.18	29.5	615	435	54.7	54.7	35.2	15.1	9.89E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_020	13.5	7.17	29.4	614	434	54.6	54.6	35.1	15.1	9.88E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_021	13.5	7.17	29.3	613	435	54.7	54.7	35.1	15.1	9.88E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_022	13.5	7.18	29.4	614	436	54.8	54.8	35.2	15.1	9.89E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_023	13.4	7.16	28.9	608	432	54.0	54.0	34.9	15.1	9.83E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_024	13.4	7.16	28.8	607	431	54.0	54.0	34.9	15.1	9.82E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_025	13.3	7.15	28.5	604	430	53.7	53.7	34.7	15.0	9.79E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_026	13.3	7.14	28.1	600	428	53.3	53.3	34.6	15.0	9.75E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_027	13.3	7.15	28.3	601	428	53.5	53.5	34.6	15.0	9.77E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_028	13.4	7.15	28.6	604	430	53.8	53.8	34.7	15.0	9.79E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_029	13.4	7.16	28.6	604	430	53.8	53.8	34.8	15.0	9.80E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_030	13.4	7.16	28.7	605	431	53.9	53.9	34.8	15.1	9.81E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_031	13.4	7.15	28.7	602	430	53.9	53.9	34.7	15.0	9.80E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_032	13.4	7.16	28.8	607	431	53.9	53.9	34.9	15.1	9.82E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_033	13.4	7.16	28.7	606	431	53.8	53.8	34.8	15.1	9.81E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_034	13.4	7.15	28.6	605	430	53.8	53.8	34.8	15.0	9.80E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_035	13.3	7.15	28.4	603	429	53.5	53.5	34.6	15.0	9.78E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_036	13.3	7.15	28.3	602	429	53.5	53.5	34.6	15.0	9.77E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_037	13.3	7.14	28.2	601	428	53.4	53.4	34.6	15.0	9.76E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_038	13.3	7.14	28.2	599	427	53.3	53.3	34.6	15.0	9.75E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_039	13.3	7.14	28.2	600	428	53.4	53.4	34.6	15.0	9.76E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_040	13.3	7.15	28.4	602	429	53.6	53.6	34.6	15.0	9.77E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_041	13.3	7.15	28.5	603	429	53.7	53.7	34.7	15.0	9.79E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_042	13.4	7.16	28.9	604	431	54.1	54.1	34.8	15.1	9.82E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_043	13.4	7.16	28.8	603	430	54.0	54.0	34.8	15.1	9.81E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_044	13.4	7.15	28.6	601	429	53.7	53.7	34.7	15.0	9.79E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_045	13.3	7.15	28.5	600	428	53.6	53.6	34.7	15.0	9.78E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_046	13.3	7.15	28.4	599	428	53.6	53.6	34.6	15.0	9.77E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_052	13.4	7.15	28.6	599	429	53.8	53.8	34.7	15.0	9.79E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_053	13.4	7.15	28.7	600	430	53.9	53.9	34.7	15.0	9.80E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_056	13.3	7.15	28.5	599	428	53.7	53.7	34.7	15.0	9.78E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_057	13.4	7.16	28.8	601	431	54.0	54.0	34.8	15.0	9.81E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_058	13.4	7.16	28.9	603	432	54.1	54.1	34.8	15.1	9.82E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_059	13.5	7.18	29.6	618	436	54.6	54.6	35.3	15.1	9.90E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_060	13.5	7.17	29.5	617	435	54.4	54.4	35.2	15.1	9.89E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_061	13.5	7.18	29.8	620	437	54.5	54.5	35.3	15.1	9.93E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214800_062	13.4	7.16	28.9	610	432	53.9	53.9	34.9	15.1	9.83E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_063	13.4	7.16	28.7	607	431	53.7	53.7	34.8	15.1	9.81E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_064	13.3	7.15	28.5	604	430	53.6	53.6	34.7	15.0	9.78E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_065	13.5	7.18	29.9	622	438	54.6	54.6	35.4	15.1	9.94E-05	5.22E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_066	13.5	7.18	29.7	619	437	54.5	54.5	35.3	15.1	9.91E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_067	13.4	7.16	28.8	609	432	53.8	53.8	34.9	15.1	9.82E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_068	13.3	7.15	28.6	606	431	53.6	53.6	34.7	15.0	9.80E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_069	13.3	7.15	28.5	606	430	53.6	53.6	34.7	15.0	9.79E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_070	13.3	7.14	28.2	602	429	53.3	53.3	34.6	15.0	9.76E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_071	13.3	7.14	28.2	601	429	53.2	53.2	34.6	15.0	9.75E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_072	13.3	7.15	28.3	603	429	53.4	53.4	34.6	15.0	9.77E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_073	13.5	7.18	29.9	619	438	54.5	54.5	35.4	15.1	9.94E-05	5.22E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_074	13.5	7.17	29.7	617	438	54.4	54.4	35.3	15.1	9.92E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_075	13.4	7.16	29.0	611	432	54.0	54.0	35.0	15.1	9.84E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214800_076	13.4	7.16	29.1	595	436	53.8	53.8	34.9	15.1	9.86E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214900_001	13.2	7.14	28.0	598	427	53.2	53.2	34.6	15.0	9.74E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214900_008	13.2	7.14	28.0	600	428	53.0	53.0	34.6	15.0	9.75E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214900_009	13.2	7.14	28.0	599	428	52.9	52.9	34.6	15.0	9.75E-05	5.20E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE214900_010	13.2	7.14	27.9	598	428	52.8	52.8	34.6	15.0	9.74E-05	5.20E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE217600_001	13.0	7.13	26.9	507	415	49.7	49.7	33.4	14.9	9.70E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE217600_002	13.0	7.12	26.4	525	411	49.4	49.4	33.2	14.9	9.65E-05	5.19E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE218700_001	14.8	7.52	35.4	843	489	59.7	59.7	36.4	15.6	1.07E-04	5.39E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE218700_002	15.0	7.50	35.1	863	493	59.7	59.7	36.2	15.5	1.07E-04	5.38E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE220800_001	13.6	7.20	29.6	476	396	49.5	49.5	33.5	14.9	9.66E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE220900_001	13.4	7.14	28.8	488	397	48.7	48.7	33.5	14.9	9.65E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE220900_002	13.6	7.29	29.0	469	402	48.9	48.9	33.5	15.0	9.60E-05	5.22E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE220900_003	13.7	7.23	29.7	476	399	49.5	49.5	33.6	15.0	9.70E-05	5.20E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE221000_001	13.8	7.36	29.8	496	405	49.5	49.5	33.5	15.1	9.70E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE221000_002	13.8	7.36	29.7	522	413	49.7	49.7	33.6	15.1	9.70E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE221300_001	13.4	7.25	28.0	519	409	49.2	49.2	33.4	15.0	9.61E-05	5.21E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE221300_002	13.3	7.23	27.7	515	407	49.1	49.1	33.4	14.9	9.59E-05	5.20E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE221300_003	13.0	7.16	26.4	462	390	48.1	48.1	33.3	14.9	9.48E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222600_001	14.4	7.25	33.5	487	400	49.7	49.7	34.1	14.9	9.66E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_001	15.2	7.46	37.0	520	401	50.8	50.8	34.3	15.0	9.67E-05	5.18E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_002	15.2	7.45	37.1	522	400	50.7	50.7	34.3	15.0	9.67E-05	5.18E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_003	15.5	7.52	37.9	523	401	51.1	51.1	34.3	15.0	9.68E-05	5.19E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_004	15.4	7.50	37.5	521	401	51.0	51.0	34.3	15.0	9.68E-05	5.19E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_005	15.4	7.51	37.7	524	402	50.9	50.9	34.3	15.0	9.68E-05	5.19E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222700_006	14.8	7.34	35.3	526	401	49.6	49.6	34.0	14.9	9.63E-05	5.17E-05	4.47	1.50	0.15	6.30E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222800_001	15.2	7.66	36.0	503	393	50.6	50.6	33.6	15.1	9.53E-05	5.20E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222800_002	15.3	7.67	35.9	504	393	50.7	50.7	33.6	15.1	9.53E-05	5.20E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222800_003	15.3	7.67	36.1	503	394	50.8	50.8	33.7	15.1	9.53E-05	5.20E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222800_004	15.7	7.55	38.9	550	404	51.1	51.1	34.5	15.0	9.71E-05	5.19E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222800_005	14.3	7.37	32.5	470	394	49.0	49.0	33.5	15.0	9.56E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE222900_001	15.0	7.60	34.8	504	393	50.3	50.3	33.5	15.1	9.53E-05	5.20E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE223100_001	13.4	7.23	28.1	535	396	48.2	48.2	33.3	14.9	9.52E-05	5.17E-05	4.47	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE224000_001	14.8	7.45	35.6	682	442	61.9	61.9	37.7	15.6	1.05E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_002	14.3	7.28	33.6	613	425	56.3	56.3	36.7	15.2	1.03E-04	5.25E-05	4.48	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_003	14.9	7.52	36.3	724	450	63.0	63.0	38.0	15.7	1.06E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_004	13.7	7.21	30.5	719	423	59.4	59.4	35.3	15.1	9.95E-05	5.22E-05	4.51	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224000_005	14.7	7.43	35.1	728	441	62.1	62.1	37.4	15.5	1.05E-04	5.31E-05	4.51	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_006	13.7	7.20	30.7	615	419	57.0	57.0	35.3	15.1	9.97E-05	5.21E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224000_007	13.8	7.21	30.9	594	416	54.9	54.9	35.5	15.1	9.98E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224000_008	14.8	7.48	35.6	703	445	62.3	62.3	37.6	15.6	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224100_001	14.9	7.58	34.4	682	438	62.2	62.2	37.1	15.8	1.03E-04	5.37E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224200_001	14.0	7.36	30.8	537	416	56.3	56.3	35.4	15.4	9.96E-05	5.28E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE225600_001	14.5	7.36	33.8	535	429	53.5	53.5	35.2	15.1	1.01E-04	5.25E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE225700_001	14.1	7.37	32.0	492	407	51.4	51.4	34.1	15.1	9.79E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE225700_002	14.3	7.33	33.5	572	447	51.9	51.9	35.0	15.1	1.01E-04	5.24E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE225800_001	14.7	7.53	35.3	523	421	52.6	52.6	34.6	15.3	9.91E-05	5.29E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE226500_001	14.9	7.40	37.5	736	475	55.1	55.1	37.4	15.3	1.09E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE226500_002	14.4	7.41	34.2	672	487	53.8	53.8	35.7	15.3	1.04E-04	5.33E-05	4.47	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE226600_001	14.6	7.45	35.6	733	507	55.4	55.4	36.3	15.4	1.05E-04	5.36E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE226700_001	15.2	7.41	39.4	722	484	56.3	56.3	38.2	15.3	1.11E-04	5.33E-05	4.48	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE226800_001	15.3	7.38	39.7	671	490	56.3	56.3	38.7	15.3	1.10E-04	5.31E-05	4.48	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE227000_001	15.1	7.46	37.6	694	502	59.5	59.5	38.8	15.5	1.07E-04	5.35E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE227100_001	16.0	7.63	41.3	779	543	65.1	65.1	41.2	15.8	1.10E-04	5.43E-05	4.49	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE227100_002	16.6	7.80	44.6	854	577	70.4	70.4	42.6	16.1	1.13E-04	5.51E-05	4.50	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE227300_001	14.7	7.45	33.8	598	479	65.0	65.0	37.6	15.6	1.02E-04	5.32E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE227800_001	13.9	7.35	30.6	665	448	54.1	54.1	34.3	15.1	9.99E-05	5.29E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE227900_001	14.1	7.32	32.5	593	442	54.1	54.1	34.2	15.1	1.02E-04	5.27E-05	4.47	1.50	0.15	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE228000_001	14.1	7.20	33.1	953	478	58.0	58.0	37.3	15.2	1.04E-04	5.24E-05	4.54	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_002	14.1	7.20	33.2	965	480	58.4	58.4	37.3	15.2	1.04E-04	5.24E-05	4.55	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_003	14.1	7.20	33.8	1019	484	59.6	59.6	37.6	15.2	1.05E-04	5.24E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_004	14.2	7.21	34.0	1013	489	59.9	59.9	37.7	15.2	1.05E-04	5.25E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_005	14.3	7.22	34.8	1095	501	61.3	61.3	38.1	15.2	1.05E-04	5.25E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_006	14.3	7.22	36.2	1140	527	61.5	61.5	38.5	15.2	1.07E-04	5.25E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_007	14.4	7.22	37.1	1164	545	60.6	60.6	38.7	15.2	1.08E-04	5.25E-05	4.58	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_008	14.7	7.53	35.0	799	474	61.3	61.3	37.4	15.7	1.05E-04	5.37E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_009	14.4	7.22	36.5	929	499	59.2	59.2	38.6	15.2	1.09E-04	5.26E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228100_001	14.6	7.23	37.3	971	510	60.0	60.0	39.0	15.3	1.10E-04	5.26E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_028	15.1	7.23	37.7	764	494	59.3	59.3	41.0	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_029	15.1	7.23	37.7	764	495	59.4	59.4	41.1	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_030	15.1	7.23	37.7	763	496	59.3	59.3	41.1	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_031	15.0	7.22	37.6	763	493	59.3	59.3	41.0	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_032	15.0	7.22	37.5	762	492	59.2	59.2	40.9	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_033	15.0	7.22	37.5	762	491	59.2	59.2	40.9	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_034	15.0	7.22	37.4	761	490	59.1	59.1	40.9	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_035	15.0	7.22	37.4	760	490	59.1	59.1	40.8	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_004	15.0	7.23	37.5	758	514	59.2	59.2	40.7	15.3	1.10E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_005	15.0	7.24	37.5	762	515	59.2	59.2	40.7	15.3	1.10E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_006	15.0	7.24	37.4	766	517	59.1	59.1	40.6	15.3	1.10E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_007	15.1	7.23	37.8	762	496	59.3	59.3	41.1	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_008	15.1	7.23	37.8	761	497	59.3	59.3	41.1	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_009	15.1	7.23	37.8	760	498	59.2	59.2	41.1	15.2	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_010	15.1	7.23	37.9	760	499	59.2	59.2	41.1	15.3	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_011	15.1	7.23	37.9	759	500	59.2	59.2	41.1	15.3	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_013	14.9	7.22	36.9	724	500	58.2	58.2	40.4	15.2	1.10E-04	5.25E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_014	14.9	7.22	36.9	724	501	58.2	58.2	40.4	15.2	1.10E-04	5.25E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_015	14.9	7.22	36.9	726	502	58.1	58.1	40.4	15.2	1.10E-04	5.25E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_045	14.7	7.21	36.0	752	507	57.0	57.0	39.5	15.2	1.07E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_046	14.7	7.22	36.0	753	508	57.0	57.0	39.5	15.2	1.07E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_047	14.7	7.22	36.0	753	508	57.2	57.2	39.5	15.2	1.07E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_048	14.8	7.22	36.1	753	509	57.6	57.6	39.5	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_049	14.8	7.22	36.1	753	509	57.8	57.8	39.7	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_050	14.8	7.22	36.3	753	510	57.9	57.9	39.9	15.2	1.09E-04	5.25E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_051	14.9	7.22	36.5	753	510	58.1	58.1	40.1	15.2	1.09E-04	5.25E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_052	14.9	7.22	36.8	751	510	58.1	58.1	40.2	15.2	1.09E-04	5.26E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_053	14.9	7.23	37.0	750	510	58.4	58.4	40.4	15.2	1.10E-04	5.26E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_054	15.0	7.23	37.3	743	508	58.7	58.7	40.6	15.2	1.10E-04	5.26E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_055	15.0	7.23	37.5	738	507	58.7	58.7	40.8	15.2	1.10E-04	5.26E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_056	15.0	7.23	37.7	743	507	59.1	59.1	40.9	15.3	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_057	15.1	7.23	37.9	747	506	59.3	59.3	41.1	15.3	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_058	15.1	7.23	38.0	754	505	59.3	59.3	41.2	15.3	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_059	15.1	7.24	38.2	763	504	59.5	59.5	41.3	15.3	1.11E-04	5.26E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_009	14.7	7.22	35.6	747	489	59.1	59.1	39.5	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_010	14.8	7.22	36.1	749	495	59.2	59.2	39.8	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_011	14.8	7.23	36.3	750	497	59.2	59.2	39.9	15.2	1.08E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_012	14.8	7.23	36.5	750	501	59.2	59.2	40.1	15.2	1.08E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_013	14.9	7.23	36.7	748	504	59.2	59.2	40.2	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_014	14.9	7.23	37.0	757	510	59.3	59.3	40.4	15.2	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_015	14.9	7.24	37.1	766	513	59.2	59.2	40.4	15.2	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_016	14.9	7.24	37.2	772	516	59.1	59.1	40.5	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_017	14.9	7.24	37.3	777	518	59.5	59.5	40.5	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_018	15.0	7.24	37.4	785	522	59.4	59.4	40.5	15.3	1.09E-04	5.27E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_019	15.0	7.24	37.3	787	523	59.2	59.2	40.4	15.3	1.09E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_020	15.0	7.25	37.3	783	523	59.4	59.4	40.3	15.3	1.10E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_021	15.1	7.25	37.6	781	524	60.2	60.2	40.7	15.3	1.10E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_022	15.0	7.24	37.4	769	518	59.2	59.2	40.6	15.3	1.10E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_023	15.0	7.24	37.2	773	519	59.4	59.4	40.4	15.3	1.10E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE228500_024	15.0	7.24	37.0	774	519	59.3	59.3	40.3	15.3	1.10E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_025	15.0	7.24	37.0	776	520	59.1	59.1	40.2	15.3	1.10E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_026	14.9	7.23	36.9	776	518	58.4	58.4	40.1	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_027	14.9	7.23	36.8	773	516	58.4	58.4	40.1	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_028	14.8	7.23	36.7	765	514	58.5	58.5	40.1	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_029	14.8	7.23	36.6	760	511	58.4	58.4	40.1	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_030	14.8	7.22	36.5	752	508	58.3	58.3	40.0	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_031	14.8	7.22	36.4	745	505	58.4	58.4	40.0	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_032	14.8	7.22	36.3	736	501	58.4	58.4	39.9	15.2	1.08E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_033	14.7	7.22	36.1	728	498	58.5	58.5	39.8	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_034	14.7	7.22	35.9	734	494	58.5	58.5	39.7	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_035	14.7	7.21	35.7	737	492	58.5	58.5	39.6	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_049	14.7	7.21	35.9	729	498	57.8	57.8	39.7	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_050	14.7	7.22	36.1	740	503	57.7	57.7	39.8	15.2	1.07E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_051	14.7	7.22	36.1	744	505	57.6	57.6	39.8	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_052	14.7	7.22	36.3	753	508	57.8	57.8	39.8	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_053	14.8	7.22	36.4	759	510	57.8	57.8	39.9	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_054	14.8	7.22	36.5	766	513	57.8	57.8	39.9	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_055	14.8	7.23	36.6	769	514	57.8	57.8	39.9	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_056	14.9	7.23	36.6	769	515	57.9	57.9	39.9	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_057	14.9	7.23	36.7	770	516	58.2	58.2	39.9	15.2	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_060	15.1	7.26	37.7	795	528	60.2	60.2	40.6	15.3	1.10E-04	5.28E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_061	15.1	7.26	37.7	797	528	59.9	59.9	40.7	15.3	1.10E-04	5.27E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_062	15.1	7.25	37.7	796	527	59.9	59.9	40.7	15.3	1.09E-04	5.27E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_063	15.0	7.25	37.6	794	526	60.0	60.0	40.7	15.3	1.09E-04	5.27E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_064	15.0	7.25	37.6	791	524	60.0	60.0	40.7	15.3	1.09E-04	5.27E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_065	15.0	7.25	37.6	787	523	60.2	60.2	40.7	15.3	1.09E-04	5.27E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_066	15.0	7.25	37.5	782	521	60.1	60.1	40.6	15.3	1.09E-04	5.27E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_067	15.0	7.25	37.4	779	520	59.9	59.9	40.6	15.3	1.09E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_013	14.5	7.22	34.1	711	462	58.6	58.6	38.5	15.2	1.06E-04	5.25E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_014	14.6	7.22	34.5	709	464	58.7	58.7	38.9	15.2	1.06E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_015	14.6	7.23	34.9	720	466	58.9	58.9	39.1	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_016	14.7	7.23	35.2	732	469	59.1	59.1	39.4	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_017	14.8	7.23	35.5	743	474	59.4	59.4	39.6	15.2	1.08E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_018	14.8	7.23	35.8	753	478	59.8	59.8	39.8	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_019	14.9	7.24	36.0	765	483	60.0	60.0	39.9	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_020	14.9	7.24	36.2	773	490	59.9	59.9	40.0	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_021	15.0	7.24	36.6	778	497	60.5	60.5	40.1	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_022	15.0	7.25	37.0	779	502	60.7	60.7	40.3	15.3	1.09E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_023	15.0	7.25	37.2	771	507	60.7	60.7	40.5	15.3	1.09E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_024	15.0	7.25	37.4	761	512	60.5	60.5	40.6	15.3	1.09E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_025	15.1	7.25	37.6	775	518	60.3	60.3	40.7	15.3	1.09E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_026	15.1	7.26	37.8	787	523	60.4	60.4	40.8	15.3	1.10E-04	5.27E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_027	15.1	7.26	37.9	795	527	61.0	61.0	40.9	15.3	1.10E-04	5.28E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_036	14.7	7.22	34.9	745	481	58.6	58.6	39.3	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_037	14.7	7.22	35.3	746	485	58.8	58.8	39.3	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_038	14.7	7.22	35.5	747	487	59.0	59.0	39.4	15.2	1.07E-04	5.25E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_039	15.0	7.24	37.3	773	517	59.7	59.7	40.6	15.3	1.09E-04	5.27E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_040	15.0	7.24	37.3	769	515	59.7	59.7	40.5	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_041	15.0	7.24	37.2	763	513	59.6	59.6	40.5	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_042	15.0	7.24	37.1	760	511	59.6	59.6	40.5	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_043	14.9	7.24	37.1	754	509	59.7	59.7	40.4	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_044	14.9	7.24	37.0	756	507	59.7	59.7	40.4	15.3	1.09E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_045	14.9	7.24	36.9	758	505	59.8	59.8	40.3	15.3	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_046	14.9	7.24	36.8	760	504	59.9	59.9	40.3	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_047	14.9	7.23	36.6	761	500	59.9	59.9	40.1	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_048	14.9	7.23	36.4	760	498	59.9	59.9	40.0	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_049	14.8	7.23	36.3	760	496	59.8	59.8	39.9	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_050	14.8	7.23	36.2	760	495	59.8	59.8	39.8	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_051	14.8	7.23	36.1	760	493	59.8	59.8	39.7	15.2	1.08E-04	5.26E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_052	14.8	7.23	35.9	760	491	59.7	59.7	39.6	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_053	14.8	7.23	35.8	759	490	59.5	59.5	39.6	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_054	14.8	7.23	35.7	758	488	59.3	59.3	39.6	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_055	14.8	7.23	35.5	757	486	59.2	59.2	39.6	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_056	14.8	7.23	35.4	756	485	59.2	59.2	39.6	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE228600_057	14.8	7.22	35.4	754	483	59.1	59.1	39.6	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_058	14.7	7.22	35.4	753	481	59.1	59.1	39.6	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_059	14.7	7.22	35.3	751	479	59.1	59.1	39.5	15.2	1.08E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_060	14.7	7.22	35.3	749	478	59.1	59.1	39.5	15.2	1.07E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_061	14.7	7.22	35.3	747	476	59.0	59.0	39.5	15.2	1.07E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_062	14.7	7.22	35.2	744	474	59.1	59.1	39.5	15.2	1.07E-04	5.25E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_063	16.9	7.92	46.2	597	435	56.5	56.5	35.7	15.3	1.02E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228700_010	14.9	7.58	35.9	596	437	53.0	53.0	34.7	15.2	1.01E-04	5.28E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228800_001	16.4	7.91	41.5	523	409	54.4	54.4	35.0	15.3	9.84E-05	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228800_002	16.4	7.95	41.4	526	412	54.5	54.5	35.0	15.3	9.86E-05	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228800_003	14.7	7.49	34.2	537	411	51.9	51.9	34.6	15.1	9.80E-05	5.22E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228900_001	16.3	7.90	40.9	520	407	54.3	54.3	35.0	15.3	9.82E-05	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE228900_002	15.5	7.64	37.3	515	406	53.0	53.0	34.6	15.2	9.76E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE229000_001	14.1	7.35	32.1	576	434	51.9	51.9	34.5	15.0	1.01E-04	5.25E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE229100_001	14.0	7.30	31.3	565	427	51.6	51.6	34.6	15.0	9.90E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230200_001	13.6	7.25	29.5	589	446	51.0	51.0	34.2	15.0	9.93E-05	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230300_001	14.9	7.42	34.6	713	484	52.2	52.2	34.7	15.1	1.03E-04	5.30E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE230300_002	14.2	7.30	31.7	656	459	51.2	51.2	34.2	15.0	1.00E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230300_003	13.7	7.21	29.8	667	459	54.2	54.2	34.5	15.0	9.96E-05	5.23E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230300_004	13.9	7.21	31.4	636	472	57.7	57.7	36.1	15.1	1.02E-04	5.23E-05	4.48	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230300_005	14.7	7.30	34.3	690	484	64.2	64.2	37.3	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_001	14.1	7.38	32.6	585	443	50.4	50.4	34.4	15.0	1.00E-04	5.26E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230400_002	14.3	7.42	33.2	599	449	50.7	50.7	34.5	15.1	1.01E-04	5.27E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230400_006	14.0	7.35	31.8	687	478	53.2	53.2	34.9	15.1	1.02E-04	5.29E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230400_007	14.3	7.35	33.2	721	493	57.3	57.3	35.4	15.2	1.03E-04	5.29E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE230400_008	14.3	7.35	33.2	723	493	57.3	57.3	35.3	15.2	1.03E-04	5.29E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE230400_009	14.2	7.31	32.3	712	484	56.6	56.6	35.2	15.1	1.02E-04	5.27E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230400_010	15.5	7.49	38.4	764	533	69.3	69.3	38.5	15.5	1.09E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_011	16.3	7.61	41.6	817	561	76.9	76.9	41.2	15.9	1.14E-04	5.44E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_001	14.4	7.42	33.4	624	442	51.5	51.5	34.4	15.1	1.02E-04	5.32E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_002	14.0	7.34	32.1	558	444	51.1	51.1	34.7	15.1	1.01E-04	5.27E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_003	13.8	7.30	31.2	559	439	50.7	50.7	34.7	15.0	1.00E-04	5.26E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_004	14.2	7.40	33.1	619	464	53.2	53.2	35.1	15.1	1.02E-04	5.30E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_005	14.1	7.38	32.8	608	461	53.2	53.2	35.1	15.1	1.02E-04	5.30E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_006	14.2	7.36	33.0	623	463	54.1	54.1	35.4	15.1	1.02E-04	5.29E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230500_007	14.6	7.43	34.4	664	476	59.3	59.3	36.2	15.3	1.04E-04	5.32E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_008	14.5	7.40	33.9	649	470	58.9	58.9	36.0	15.3	1.03E-04	5.31E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE230500_009	14.4	7.40	33.7	643	468	58.7	58.7	35.9	15.3	1.03E-04	5.31E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE230500_010	15.3	7.56	38.2	761	526	73.8	73.8	40.3	15.8	1.10E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_011	16.0	7.74	41.9	853	550	77.9	77.9	41.4	16.1	1.14E-04	5.50E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_012	17.1	8.13	49.0	900	578	86.7	86.7	49.1	17.7	1.23E-04	5.75E-05	4.55	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230500_013	18.0	8.06	54.8	1135	681	83.6	83.6	48.0	16.8	1.25E-04	5.64E-05	4.60	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE230500_014	15.8	7.73	38.9	745	502	68.1	68.1	38.9	16.1	1.08E-04	5.45E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230600_001	13.5	7.23	29.4	602	436	52.3	52.3	34.9	15.0	9.92E-05	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230600_002	13.8	7.26	30.4	568	443	55.1	55.1	35.1	15.1	1.00E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE230600_003	18.7	8.48	63.4	1478	804	99.5	99.5	50.9	17.7	1.37E-04	5.91E-05	4.65	1.53	0.17	6.50E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE230600_004	15.8	7.69	42.0	820	533	75.9	75.9	43.0	16.2	1.13E-04	5.47E-05	4.54	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE230600_005	15.3	7.60	37.5	724	490	68.0	68.0	39.4	16.0	1.08E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230600_006	15.1	7.54	36.4	706	481	67.0	67.0	38.4	15.8	1.07E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_001	16.1	7.73	42.7	1197	604	84.1	84.1	44.2	16.7	1.24E-04	5.67E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_002	15.8	7.64	41.1	1086	586	79.6	79.6	43.1	16.4	1.21E-04	5.60E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_003	15.5	7.58	40.0	1019	573	77.1	77.1	42.3	16.2	1.19E-04	5.55E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_004	15.3	7.53	39.1	981	561	75.4	75.4	41.6	16.1	1.17E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_005	15.2	7.50	38.7	961	555	74.4	74.4	41.3	16.0	1.16E-04	5.49E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_006	15.1	7.47	38.1	928	545	72.6	72.6	40.9	15.9	1.15E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_007	15.0	7.45	37.6	909	538	71.1	71.1	40.6	15.9	1.14E-04	5.44E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_008	14.9	7.43	37.1	886	531	69.5	69.5	40.3	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_009	14.8	7.41	36.9	876	527	68.8	68.8	40.1	15.8	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_010	14.8	7.39	36.5	861	522	67.8	67.8	39.8	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_011	14.7	7.38	36.2	845	519	67.2	67.2	39.6	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_012	16.3	7.78	43.7	1266	615	86.6	86.6	44.8	16.8	1.26E-04	5.71E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_013	16.1	7.72	42.6	1194	604	83.4	83.4	44.1	16.6	1.24E-04	5.66E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_014	15.8	7.65	41.5	1108	591	80.3	80.3	43.3	16.5	1.21E-04	5.61E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_015	15.7	7.61	40.6	1048	580	78.4	78.4	42.7	16.3	1.20E-04	5.57E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_016	15.5	7.58	40.1	1026	573	77.3	77.3	42.3	16.2	1.19E-04	5.55E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_017	15.4	7.54	39.5	998	564	76.1	76.1	41.8	16.1	1.18E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_018	15.3	7.52	39.0	976	558	75.0	75.0	41.5	16.1	1.17E-04	5.50E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_019	15.2	7.49	38.6	953	551	73.8	73.8	41.2	16.0	1.16E-04	5.48E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_020	15.1	7.47	38.3	934	546	72.5	72.5	41.0	15.9	1.15E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_021	15.0	7.46	37.9	919	541	71.6	71.6	40.8	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_022	15.0	7.44	37.6	903	536	70.2	70.2	40.5	15.8	1.14E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_023	14.9	7.43	37.3	894	532	69.6	69.6	40.3	15.8	1.14E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_024	14.9	7.41	37.0	880	527	68.7	68.7	40.1	15.8	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_025	14.8	7.40	36.7	870	524	68.2	68.2	39.9	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_026	14.8	7.39	36.5	858	522	67.7	67.7	39.8	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_027	16.7	7.89	46.5	1248	646	87.5	87.5	45.4	16.9	1.28E-04	5.75E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_028	16.5	7.86	45.9	1205	639	85.6	85.6	44.9	16.7	1.27E-04	5.72E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_029	16.4	7.83	45.5	1171	633	83.9	83.9	44.6	16.6	1.26E-04	5.69E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_030	16.3	7.80	45.1	1151	628	82.0	82.0	44.3	16.6	1.25E-04	5.67E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_031	15.5	7.56	40.0	1020	569	77.0	77.0	42.1	16.2	1.18E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_032	15.5	7.56	40.1	1025	569	77.2	77.2	42.2	16.2	1.19E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_033	15.5	7.57	40.2	1031	570	77.5	77.5	42.3	16.2	1.19E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_034	15.6	7.57	40.3	1036	571	77.7	77.7	42.3	16.2	1.19E-04	5.54E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_035	15.6	7.58	40.4	1040	571	77.9	77.9	42.4	16.2	1.19E-04	5.54E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_036	15.6	7.58	40.5	1043	572	78.0	78.0	42.4	16.2	1.19E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_037	15.6	7.58	40.6	1046	572	78.1	78.1	42.5	16.2	1.19E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_038	15.6	7.59	40.6	1050	573	78.3	78.3	42.5	16.2	1.19E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_039	15.6	7.59	40.8	1055	574	78.4	78.4	42.6	16.2	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_040	15.6	7.59	40.8	1058	574	78.6	78.6	42.6	16.3	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_041	15.7	7.60	40.9	1063	575	78.7	78.7	42.6	16.3	1.20E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_042	15.7	7.60	41.0	1063	575	78.8	78.8	42.6	16.3	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_043	15.6	7.60	40.9	1060	575	78.7	78.7	42.6	16.2	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_044	15.7	7.60	41.0	1065	576	78.9	78.9	42.7	16.3	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_045	15.7	7.60	41.1	1065	576	78.9	78.9	42.7	16.3	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_046	15.7	7.60	41.1	1067	577	78.9	78.9	42.7	16.3	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_047	15.7	7.61	41.2	1069	578	79.0	79.0	42.7	16.3	1.20E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_048	15.7	7.61	41.3	1071	578	79.1	79.1	42.8	16.3	1.20E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_049	15.7	7.61	41.4	1073	579	79.2	79.2	42.8	16.3	1.20E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_050	15.7	7.61	41.5	1075	580	79.3	79.3	42.9	16.3	1.21E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_051	15.7	7.62	41.5	1075	581	79.3	79.3	42.9	16.3	1.21E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_052	15.8	7.62	41.7	1078	582	79.5	79.5	42.9	16.3	1.21E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_053	15.8	7.62	41.7	1078	583	79.5	79.5	42.9	16.3	1.21E-04	5.56E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_054	15.8	7.63	41.8	1081	585	79.6	79.6	43.0	16.3	1.21E-04	5.57E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_055	15.8	7.65	42.2	1087	591	80.0	80.0	43.2	16.3	1.21E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_056	15.9	7.65	42.3	1090	592	80.1	80.1	43.2	16.3	1.22E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_057	15.9	7.66	42.4	1089	594	80.0	80.0	43.2	16.3	1.22E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_058	15.9	7.66	42.5	1092	595	80.1	80.1	43.3	16.3	1.22E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_059	15.9	7.67	42.6	1092	597	80.0	80.0	43.3	16.3	1.22E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_060	15.9	7.68	42.8	1096	599	80.2	80.2	43.4	16.4	1.22E-04	5.60E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_061	15.9	7.68	42.9	1100	602	80.2	80.2	43.4	16.4	1.22E-04	5.60E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_062	16.0	7.69	43.1	1104	604	80.4	80.4	43.5	16.4	1.22E-04	5.61E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_063	16.0	7.71	43.3	1109	607	80.7	80.7	43.6	16.4	1.23E-04	5.61E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_064	16.1	7.72	43.6	1115	610	81.0	81.0	43.7	16.4	1.23E-04	5.62E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_065	16.1	7.73	43.9	1123	614	81.1	81.1	43.8	16.4	1.23E-04	5.63E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_066	16.2	7.74	44.1	1128	616	81.2	81.2	43.9	16.5	1.24E-04	5.63E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_067	16.5	7.87	46.1	1220	641	86.1	86.1	45.1	16.8	1.27E-04	5.73E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_068	16.4	7.83	45.5	1177	633	84.4	84.4	44.6	16.7	1.26E-04	5.69E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_069	16.5	7.84	45.7	1226	636	86.3	86.3	45.1	16.8	1.27E-04	5.72E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_070	16.5	7.83	45.6	1223	635	86.2	86.2	45.0	16.7	1.27E-04	5.71E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_071	16.5	7.82	45.4	1220	633	86.1	86.1	45.0	16.7	1.27E-04	5.71E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_072	16.4	7.81	45.2	1216	630	85.9	85.9	44.9	16.7	1.26E-04	5.70E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_073	16.4	7.80	45.1	1212	628	85.7	85.7	44.8	16.7	1.26E-04	5.69E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_074	16.4	7.80	44.9	1209	626	85.6	85.6	44.8	16.7	1.26E-04	5.69E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_075	16.4	7.79	44.8	1205	624	85.5	85.5	44.7	16.7	1.26E-04	5.68E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_076	16.3	7.78	44.6	1202	622	85.3	85.3	44.6	16.7	1.26E-04	5.68E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_077	16.3	7.78	44.5	1201	620	85.3	85.3	44.6	16.7	1.26E-04	5.68E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_078	16.3	7.77	44.4	1197	618	85.1	85.1	44.5	16.6	1.25E-04	5.67E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_079	16.3	7.76	44.3	1193	616	84.9	84.9	44.5	16.6	1.25E-04	5.67E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_080	16.3	7.76	44.1	1189	614	84.7	84.7	44.4	16.6	1.25E-04	5.67E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_081	16.2	7.75	44.0	1186	613	84.5	84.5	44.4	16.6	1.25E-04	5.66E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_082	16.2	7.73	43.6	1175	606	84.2	84.2	44.2	16.6	1.24E-04	5.65E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_083	16.2	7.73	43.5	1172	604	84.0	84.0	44.2	16.6	1.24E-04	5.65E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_084	16.2	7.72	43.4	1172	603	84.1	84.1	44.1	16.6	1.24E-04	5.65E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_085	16.2	7.72	43.3	1172	602	84.0	84.0	44.1	16.6	1.24E-04	5.65E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_086	16.1	7.72	43.2	1172	602	84.0	84.0	44.1	16.6	1.24E-04	5.65E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_087	16.1	7.72	43.2	1173	601	83.9	83.9	44.0	16.6	1.24E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_088	16.1	7.72	43.1	1174	600	83.9	83.9	44.0	16.6	1.24E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_089	16.1	7.71	43.0	1174	599	83.8	83.8	44.0	16.6	1.24E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_090	16.1	7.71	42.9	1174	598	83.7	83.7	43.9	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_091	16.1	7.71	42.9	1174	598	83.6	83.6	43.9	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_092	16.1	7.71	42.8	1172	597	83.5	83.5	43.9	16.6	1.23E-04	5.64E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_093	16.1	7.71	42.8	1179	597	83.6	83.6	43.9	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_094	16.1	7.71	42.8	1177	597	83.5	83.5	43.9	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_095	16.1	7.70	42.7	1177	597	83.4	83.4	43.9	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_096	16.1	7.70	42.7	1175	596	83.3	83.3	43.8	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_097	16.1	7.70	42.6	1175	596	83.3	83.3	43.8	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_098	16.1	7.71	42.8	1196	599	83.8	83.8	44.0	16.6	1.23E-04	5.65E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_099	16.1	7.71	42.7	1192	599	83.6	83.6	43.9	16.6	1.23E-04	5.65E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_100	16.1	7.70	42.6	1181	598	83.3	83.3	43.8	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_101	16.1	7.70	42.5	1178	598	83.2	83.2	43.8	16.6	1.23E-04	5.64E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_102	16.0	7.69	42.3	1160	596	82.5	82.5	43.7	16.5	1.23E-04	5.63E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_103	16.0	7.69	42.3	1158	596	82.4	82.4	43.7	16.5	1.23E-04	5.63E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_104	16.0	7.68	42.2	1151	595	82.1	82.1	43.6	16.5	1.22E-04	5.63E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_105	16.0	7.68	42.1	1149	595	82.0	82.0	43.6	16.5	1.22E-04	5.62E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_106	16.0	7.68	42.1	1146	595	81.9	81.9	43.6	16.5	1.22E-04	5.62E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_107	15.9	7.67	42.0	1143	595	81.7	81.7	43.5	16.5	1.22E-04	5.62E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_108	15.9	7.67	42.0	1140	595	81.6	81.6	43.5	16.5	1.22E-04	5.62E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_109	15.9	7.67	41.9	1139	595	81.6	81.6	43.5	16.5	1.22E-04	5.62E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_110	15.2	7.48	38.5	943	546	72.6	72.6	41.1	15.9	1.16E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_111	15.1	7.47	38.2	928	543	71.8	71.8	40.9	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_112	15.0	7.45	37.9	915	538	70.2	70.2	40.6	15.8	1.14E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_113	15.0	7.43	37.6	903	534	69.6	69.6	40.4	15.8	1.14E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_114	14.9	7.42	37.3	892	531	69.0	69.0	40.3	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_115	15.0	7.43	37.7	904	535	69.5	69.5	40.4	15.8	1.14E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_116	15.0	7.44	37.8	911	537	69.9	69.9	40.5	15.8	1.14E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_117	15.1	7.45	38.0	921	539	70.5	70.5	40.7	15.8	1.15E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_118	15.1	7.46	38.2	926	541	70.7	70.7	40.8	15.9	1.15E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_119	15.2	7.49	38.6	949	548	72.6	72.6	41.2	15.9	1.16E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_120	15.2	7.49	38.7	952	548	72.8	72.8	41.2	16.0	1.16E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_121	15.2	7.49	38.8	955	549	72.8	72.8	41.2	16.0	1.16E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_122	15.2	7.49	38.9	956	550	72.8	72.8	41.3	16.0	1.16E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_123	15.3	7.50	39.1	964	552	73.1	73.1	41.4	16.0	1.16E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_124	15.3	7.51	39.2	966	553	73.2	73.2	41.4	16.0	1.17E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_125	15.2	7.47	38.6	941	545	71.4	71.4	41.0	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_126	15.1	7.45	38.2	922	540	70.3	70.3	40.7	15.8	1.15E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_127	15.3	7.51	39.3	966	553	73.2	73.2	41.4	16.0	1.17E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_128	15.3	7.51	39.3	968	554	73.3	73.3	41.5	16.0	1.17E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_129	15.3	7.51	39.4	971	555	73.4	73.4	41.5	16.0	1.17E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_130	15.3	7.51	39.5	973	555	73.5	73.5	41.5	16.0	1.17E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_131	15.3	7.52	39.6	976	556	73.6	73.6	41.6	16.0	1.17E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_132	15.3	7.52	39.6	978	557	73.5	73.5	41.6	16.0	1.17E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_133	15.4	7.52	39.8	982	558	73.7	73.7	41.7	16.0	1.17E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_134	15.4	7.53	39.8	984	559	73.7	73.7	41.7	16.0	1.17E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_135	15.4	7.53	39.9	987	560	73.5	73.5	41.7	16.0	1.17E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_136	15.4	7.53	40.0	990	562	73.6	73.6	41.8	16.0	1.18E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_137	15.4	7.54	40.2	993	563	73.7	73.7	41.8	16.0	1.18E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_138	15.4	7.54	40.2	996	565	73.8	73.8	41.9	16.0	1.18E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_139	15.5	7.55	40.4	999	566	73.9	73.9	41.9	16.0	1.18E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_140	15.5	7.55	40.4	1001	567	74.0	74.0	41.9	16.1	1.18E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_141	15.5	7.56	40.5	1003	569	74.1	74.1	42.0	16.1	1.18E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_142	15.5	7.56	40.7	1006	571	74.2	74.2	42.0	16.1	1.18E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_143	15.5	7.57	40.8	1010	573	74.4	74.4	42.1	16.1	1.19E-04	5.51E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_144	15.6	7.57	40.9	1013	574	74.5	74.5	42.1	16.1	1.19E-04	5.52E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_145	15.2	7.47	38.7	939	545	71.2	71.2	41.0	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_146	15.2	7.47	38.7	937	545	71.0	71.0	41.0	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_147	15.1	7.47	38.6	935	544	70.9	70.9	40.9	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_148	15.1	7.47	38.4	934	543	71.1	71.1	40.9	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_149	14.8	7.41	36.0	824	532	68.9	68.9	39.9	15.8	1.12E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_150	14.9	7.43	36.5	844	539	69.8	69.8	40.2	15.9	1.13E-04	5.44E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_151	15.0	7.46	37.0	861	546	71.0	71.0	40.6	15.9	1.14E-04	5.46E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_152	15.1	7.50	37.9	890	557	73.0	73.0	41.2	16.1	1.16E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_153	15.2	7.51	38.0	897	558	73.4	73.4	41.3	16.1	1.16E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_154	15.2	7.52	38.1	902	559	73.5	73.5	41.3	16.1	1.16E-04	5.51E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_155	15.2	7.52	38.2	909	561	74.0	74.0	41.4	16.1	1.16E-04	5.51E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_156	15.2	7.52	38.1	909	560	73.8	73.8	41.3	16.1	1.16E-04	5.51E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_157	15.1	7.51	37.8	904	556	73.1	73.1	41.1	16.1	1.15E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_158	15.0	7.47	37.2	883	547	71.7	71.7	40.7	16.0	1.14E-04	5.47E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_159	14.9	7.45	36.7	866	540	70.6	70.6	40.3	15.9	1.13E-04	5.45E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_160	14.8	7.43	36.3	848	533	69.6	69.6	40.0	15.8	1.12E-04	5.43E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_161	14.7	7.40	35.7	820	528	68.3	68.3	39.7	15.8	1.12E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_162	14.9	7.44	36.5	849	539	69.8	69.8	40.2	15.9	1.13E-04	5.44E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_163	14.9	7.44	36.6	856	540	70.1	70.1	40.3	15.9	1.13E-04	5.44E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_164	14.7	7.41	36.0	833	531	68.8	68.8	39.9	15.8	1.12E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_165	14.7	7.39	35.6	810	526	67.9	67.9	39.6	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_166	14.5	7.35	34.9	775	519	66.7	66.7	39.2	15.6	1.10E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_167	14.6	7.36	35.1	783	522	67.3	67.3	39.3	15.7	1.11E-04	5.38E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_168	14.6	7.38	35.5	792	527	68.1	68.1	39.6	15.7	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_169	14.7	7.39	35.8	800	532	68.7	68.7	39.8	15.8	1.12E-04	5.40E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_170	14.8	7.41	36.3	815	538	69.7	69.7	40.1	15.8	1.13E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_171	15.0	7.44	37.0	841	548	71.3	71.3	40.6	15.9	1.14E-04	5.45E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_172	15.1	7.47	37.5	865	555	72.4	72.4	41.0	16.0	1.15E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_173	15.1	7.47	37.6	869	556	72.4	72.4	41.1	16.0	1.15E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_174	15.1	7.47	37.6	870	556	72.3	72.3	41.1	16.0	1.15E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_175	15.1	7.46	37.5	868	555	72.1	72.1	41.0	16.0	1.15E-04	5.46E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_176	15.0	7.46	37.5	867	555	72.0	72.0	41.0	15.9	1.15E-04	5.46E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_177	15.0	7.45	37.5	869	555	71.8	71.8	41.0	15.9	1.15E-04	5.46E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_178	15.0	7.45	37.4	867	554	71.5	71.5	41.0	15.9	1.15E-04	5.45E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_179	15.0	7.45	37.4	866	554	71.4	71.4	40.9	15.9	1.15E-04	5.45E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_180	15.0	7.44	37.4	867	554	71.4	71.4	41.0	15.9	1.15E-04	5.44E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_181	15.0	7.44	37.4	865	553	71.4	71.4	40.9	15.9	1.15E-04	5.44E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_182	15.0	7.43	37.4	865	553	71.4	71.4	40.9	15.9	1.15E-04	5.44E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_192	14.5	7.34	34.8	769	518	66.3	66.3	39.1	15.6	1.10E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_193	14.6	7.36	35.3	782	525	67.6	67.6	39.4	15.7	1.11E-04	5.38E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_194	14.7	7.39	35.9	800	534	69.0	69.0	39.9	15.8	1.12E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_198	14.7	7.38	36.2	847	519	67.3	67.3	39.6	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_199	14.8	7.39	36.4	859	523	67.8	67.8	39.8	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_200	14.8	7.41	36.7	869	527	68.7	68.7	40.0	15.8	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_201	14.9	7.42	37.0	880	531	69.4	69.4	40.2	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_202	14.9	7.44	37.3	896	536	70.6	70.6	40.4	15.8	1.14E-04	5.44E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_203	15.0	7.46	37.6	909	540	71.5	71.5	40.6	15.9	1.14E-04	5.45E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_204	15.1	7.48	38.0	934	547	73.0	73.0	40.9	16.0	1.15E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_205	14.7	7.37	35.9	832	516	66.8	66.8	39.4	15.6	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_206	15.9	7.66	41.5	1116	591	80.7	80.7	43.3	16.5	1.22E-04	5.62E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_207	16.1	7.73	42.6	1189	603	83.8	83.8	44.1	16.7	1.24E-04	5.67E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_208	15.9	7.67	41.7	1122	593	81.0	81.0	43.5	16.5	1.22E-04	5.63E-05	4.56	1.51	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_209	15.9	7.67	41.6	1115	592	80.8	80.8	43.5	16.5	1.22E-04	5.62E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_210	15.8	7.67	41.4	1107	592	80.6	80.6	43.4	16.5	1.22E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_211	15.8	7.67	41.3	1102	591	80.5	80.5	43.3	16.5	1.21E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_212	15.8	7.66	41.1	1091	590	80.3	80.3	43.2	16.5	1.21E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_213	15.8	7.66	41.1	1090	591	80.3	80.3	43.2	16.5	1.21E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_214	15.8	7.66	41.1	1087	591	80.3	80.3	43.3	16.5	1.21E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_215	15.8	7.66	41.1	1083	591	80.2	80.2	43.2	16.5	1.21E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_216	15.8	7.66	41.1	1093	589	80.3	80.3	43.2	16.5	1.21E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_217	15.8	7.68	41.2	1067	593	81.0	81.0	43.4	16.6	1.22E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_218	15.8	7.67	41.2	1090	592	80.6	80.6	43.4	16.5	1.21E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_219	15.8	7.66	41.0	1079	591	80.4	80.4	43.2	16.5	1.21E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_220	15.8	7.67	41.0	1076	592	80.6	80.6	43.2	16.5	1.21E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_221	15.8	7.67	41.0	1073	592	80.8	80.8	43.3	16.5	1.21E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_222	15.8	7.67	41.0	1068	592	80.8	80.8	43.3	16.5	1.21E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_223	15.8	7.67	41.1	1057	592	80.8	80.8	43.3	16.5	1.21E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_224	15.8	7.67	41.1	1057	593	81.0	81.0	43.4	16.6	1.21E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_225	15.8	7.67	40.9	1043	593	80.8	80.8	43.3	16.5	1.21E-04	5.63E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_226	15.8	7.67	40.9	1036	593	80.8	80.8	43.3	16.5	1.21E-04	5.63E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_227	15.8	7.68	40.9	1034	594	81.1	81.1	43.3	16.6	1.21E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_228	15.8	7.68	41.0	1034	594	81.3	81.3	43.3	16.6	1.21E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_229	15.8	7.68	41.0	1034	595	81.5	81.5	43.4	16.6	1.21E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_230	15.8	7.68	41.1	1032	595	81.6	81.6	43.4	16.6	1.22E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_231	15.8	7.69	41.2	1033	595	81.9	81.9	43.5	16.6	1.22E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_232	15.8	7.68	41.2	1029	595	81.9	81.9	43.5	16.6	1.22E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_233	15.8	7.67	41.0	1017	593	81.4	81.4	43.4	16.6	1.21E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_234	15.8	7.68	41.1	1017	594	81.8	81.8	43.5	16.6	1.22E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_235	15.8	7.68	41.1	1013	594	81.7	81.7	43.5	16.6	1.22E-04	5.64E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_236	15.8	7.67	41.0	1008	593	81.5	81.5	43.4	16.6	1.22E-04	5.63E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_237	15.8	7.66	40.9	1000	591	81.0	81.0	43.3	16.5	1.21E-04	5.63E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_238	15.8	7.67	41.1	1008	594	81.5	81.5	43.5	16.6	1.22E-04	5.63E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_239	15.8	7.67	41.0	1005	593	81.4	81.4	43.4	16.5	1.21E-04	5.63E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_240	15.8	7.66	41.0	1005	593	81.3	81.3	43.4	16.5	1.21E-04	5.63E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_241	15.8	7.67	41.0	1063	592	80.6	80.6	43.3	16.5	1.21E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_242	15.7	7.66	40.8	1000	592	81.0	81.0	43.3	16.5	1.21E-04	5.62E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_243	15.7	7.65	40.7	995	592	80.8	80.8	43.2	16.5	1.21E-04	5.62E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_244	15.7	7.64	40.5	986	590	80.1	80.1	43.1	16.5	1.21E-04	5.61E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_245	15.7	7.64	40.5	983	590	79.8	79.8	43.1	16.5	1.21E-04	5.61E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_246	15.7	7.64	40.5	984	590	79.7	79.7	43.1	16.5	1.20E-04	5.61E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_247	15.7	7.63	40.4	983	590	79.4	79.4	43.0	16.5	1.20E-04	5.60E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_257	14.3	7.31	34.0	757	497	63.8	63.8	38.4	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_258	14.3	7.31	34.1	762	498	63.8	63.8	38.4	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_259	14.3	7.31	34.1	764	499	63.8	63.8	38.4	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_260	14.3	7.31	33.9	760	498	63.7	63.7	38.4	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_261	14.3	7.31	33.9	759	497	63.6	63.6	38.3	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_262	14.3	7.31	33.8	756	497	63.5	63.5	38.3	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_263	14.4	7.32	34.4	776	501	64.4	64.4	38.6	15.5	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_264	14.4	7.33	34.5	782	502	64.6	64.6	38.7	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_265	14.4	7.33	34.6	787	504	65.1	65.1	38.7	15.6	1.09E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_266	14.4	7.34	34.6	791	506	65.3	65.3	38.8	15.6	1.09E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_272	14.2	7.28	33.3	726	496	63.0	63.0	38.1	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_273	14.2	7.28	33.4	730	497	63.1	63.1	38.1	15.4	1.08E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_274	14.2	7.28	33.5	733	498	63.3	63.3	38.2	15.4	1.08E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_275	14.2	7.29	33.5	736	498	63.4	63.4	38.2	15.5	1.08E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_276	14.2	7.29	33.6	738	498	63.5	63.5	38.2	15.5	1.08E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_277	14.2	7.29	33.6	741	499	63.6	63.6	38.2	15.5	1.08E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_278	14.2	7.30	33.6	742	499	63.7	63.7	38.3	15.5	1.08E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_279	14.2	7.30	33.7	744	499	63.7	63.7	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_280	14.3	7.30	33.7	746	500	63.9	63.9	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_281	14.3	7.30	33.7	748	500	63.9	63.9	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_282	14.3	7.30	33.8	750	500	64.0	64.0	38.4	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_283	14.4	7.34	34.6	784	509	65.4	65.4	38.8	15.6	1.09E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_285	14.5	7.34	34.7	794	508	65.7	65.7	38.9	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_286	14.5	7.34	34.7	793	509	65.7	65.7	38.9	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_287	14.5	7.35	34.8	793	510	65.7	65.7	38.9	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_288	14.3	7.30	33.8	752	496	63.3	63.3	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_289	14.2	7.30	33.7	749	496	63.2	63.2	38.2	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_290	14.2	7.30	33.6	747	496	63.1	63.1	38.2	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_291	14.2	7.30	33.6	744	495	63.0	63.0	38.2	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_292	14.2	7.29	33.6	743	495	62.9	62.9	38.2	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_293	14.2	7.29	33.5	741	495	62.8	62.8	38.2	15.5	1.08E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_294	14.3	7.32	34.1	762	504	64.6	64.6	38.6	15.5	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_295	14.3	7.32	34.2	765	505	64.7	64.7	38.6	15.5	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_296	14.4	7.32	34.2	768	505	64.8	64.8	38.6	15.6	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_297	14.4	7.33	34.3	771	505	64.9	64.9	38.7	15.6	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_298	14.4	7.33	34.4	775	506	65.0	65.0	38.7	15.6	1.09E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_299	14.4	7.33	34.5	780	507	65.3	65.3	38.8	15.6	1.09E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_300	14.5	7.34	34.7	789	510	65.6	65.6	38.9	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_301	14.5	7.35	34.7	791	510	65.7	65.7	38.9	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_302	14.2	7.29	33.4	735	494	62.7	62.7	38.1	15.5	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_303	14.2	7.29	33.4	733	494	62.7	62.7	38.1	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_304	14.2	7.28	33.3	728	494	62.6	62.6	38.0	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_305	14.2	7.28	33.2	725	493	62.5	62.5	38.0	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_306	14.1	7.28	33.2	723	493	62.5	62.5	38.0	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_307	14.1	7.27	33.1	717	492	62.3	62.3	37.9	15.4	1.07E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_310	14.1	7.27	33.1	720	493	62.4	62.4	37.9	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_312	14.4	7.33	34.6	784	503	64.7	64.7	38.7	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_313	14.2	7.28	33.3	731	494	62.7	62.7	38.0	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_315	14.4	7.34	34.7	792	507	65.5	65.5	38.9	15.6	1.09E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_317	14.5	7.35	35.0	806	509	65.9	65.9	39.0	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_318	14.5	7.34	34.7	775	514	66.2	66.2	39.0	15.6	1.10E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_319	14.5	7.35	34.8	780	515	66.3	66.3	39.0	15.6	1.10E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_320	14.5	7.35	34.8	783	514	66.4	66.4	39.0	15.6	1.10E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_321	14.5	7.36	34.9	789	516	66.6	66.6	39.1	15.6	1.10E-04	5.38E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_322	14.5	7.36	35.1	795	517	66.7	66.7	39.2	15.7	1.10E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_323	14.6	7.37	35.2	802	519	67.0	67.0	39.3	15.7	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_324	14.6	7.37	35.2	804	519	67.0	67.0	39.3	15.7	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_325	14.6	7.38	35.3	809	520	67.2	67.2	39.4	15.7	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_326	14.6	7.38	35.4	814	521	67.5	67.5	39.4	15.7	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_327	14.6	7.38	35.5	818	521	67.7	67.7	39.5	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_328	14.6	7.39	35.5	821	521	67.9	67.9	39.5	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_329	14.6	7.38	35.5	821	519	67.9	67.9	39.4	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_330	14.6	7.38	35.4	814	516	67.5	67.5	39.3	15.7	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_331	14.6	7.37	35.2	812	514	67.0	67.0	39.2	15.7	1.10E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_332	14.5	7.36	35.1	809	511	66.3	66.3	39.1	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_333	14.5	7.35	34.9	802	507	65.5	65.5	38.9	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_334	14.4	7.34	34.6	785	509	65.5	65.5	38.8	15.6	1.09E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_335	14.3	7.31	34.1	765	499	63.9	63.9	38.4	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_337	14.3	7.30	34.1	743	508	64.9	64.9	38.6	15.5	1.09E-04	5.33E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_338	14.3	7.31	34.1	746	509	65.1	65.1	38.7	15.5	1.09E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_339	14.3	7.31	34.2	749	510	65.2	65.2	38.7	15.5	1.09E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_340	14.4	7.32	34.3	752	510	65.2	65.2	38.7	15.5	1.09E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_341	14.4	7.32	34.3	755	511	65.3	65.3	38.8	15.6	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_342	14.4	7.32	34.3	756	511	65.3	65.3	38.8	15.6	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_343	14.4	7.32	34.4	758	511	65.4	65.4	38.8	15.6	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_344	14.4	7.33	34.4	760	512	65.5	65.5	38.8	15.6	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_345	14.4	7.33	34.5	762	512	65.6	65.6	38.9	15.6	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_346	14.4	7.33	34.5	764	512	65.6	65.6	38.9	15.6	1.09E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_347	14.4	7.33	34.5	766	513	65.7	65.7	38.9	15.6	1.09E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_348	14.4	7.34	34.6	769	513	66.0	66.0	38.9	15.6	1.10E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_349	14.4	7.34	34.6	772	514	66.2	66.2	39.0	15.6	1.10E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_350	14.9	7.43	37.1	887	534	70.3	70.3	40.3	15.8	1.13E-04	5.43E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_351	15.0	7.45	37.5	903	540	71.5	71.5	40.6	15.9	1.14E-04	5.45E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_352	15.1	7.47	37.8	924	545	72.5	72.5	40.8	16.0	1.15E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_353	14.9	7.45	37.1	891	536	71.0	71.0	40.4	15.9	1.14E-04	5.44E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_354	15.0	7.47	37.7	918	545	72.4	72.4	40.8	16.0	1.15E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_355	15.3	7.54	39.0	970	562	75.2	75.2	41.7	16.1	1.17E-04	5.52E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_356	15.4	7.55	39.1	977	563	75.5	75.5	41.8	16.2	1.17E-04	5.52E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_357	15.2	7.51	38.3	944	554	73.8	73.8	41.3	16.0	1.16E-04	5.49E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_358	15.4	7.55	39.3	984	564	75.9	75.9	41.9	16.2	1.18E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_359	15.4	7.56	39.4	992	565	76.2	76.2	41.9	16.2	1.18E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_360	15.5	7.57	39.7	1002	569	76.5	76.5	42.1	16.2	1.18E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_361	14.6	7.36	35.6	825	513	66.5	66.5	39.3	15.6	1.11E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_362	14.7	7.37	35.9	839	517	67.0	67.0	39.5	15.7	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_363	14.7	7.39	36.2	849	521	67.4	67.4	39.7	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_364	14.8	7.40	36.5	860	525	68.4	68.4	39.9	15.7	1.12E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_365	14.8	7.42	36.8	873	530	69.2	69.2	40.1	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_366	14.8	7.42	36.5	864	529	69.6	69.6	40.0	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_367	14.9	7.44	36.8	876	533	70.4	70.4	40.2	15.9	1.13E-04	5.44E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_368	15.0	7.46	37.2	897	539	71.3	71.3	40.5	15.9	1.14E-04	5.45E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_369	15.1	7.49	37.7	919	547	72.8	72.8	40.9	16.0	1.15E-04	5.48E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_370	15.2	7.52	38.4	944	556	74.3	74.3	41.3	16.1	1.16E-04	5.51E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_371	15.4	7.58	39.3	978	570	76.7	76.7	42.0	16.3	1.18E-04	5.55E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_372	14.8	7.42	36.2	849	531	69.7	69.7	40.0	15.8	1.12E-04	5.43E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_373	14.9	7.45	36.7	871	538	70.7	70.7	40.3	15.9	1.13E-04	5.45E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_374	15.1	7.49	37.5	898	549	72.4	72.4	40.8	16.0	1.15E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_375	15.2	7.53	38.2	924	559	74.4	74.4	41.4	16.1	1.16E-04	5.51E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_376	15.3	7.54	38.6	942	563	74.9	74.9	41.6	16.2	1.17E-04	5.52E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_377	15.3	7.54	38.6	944	562	74.9	74.9	41.6	16.1	1.17E-04	5.52E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_378	14.7	7.40	36.0	840	525	68.8	68.8	39.7	15.8	1.12E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_379	14.8	7.43	36.6	866	534	70.4	70.4	40.2	15.8	1.13E-04	5.43E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_380	15.0	7.46	37.2	893	543	71.5	71.5	40.6	15.9	1.14E-04	5.46E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_381	15.0	7.47	37.3	898	543	71.6	71.6	40.6	15.9	1.14E-04	5.46E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_382	14.9	7.44	36.8	875	535	70.8	70.8	40.3	15.9	1.13E-04	5.44E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_383	14.8	7.42	36.4	858	530	69.6	69.6	40.0	15.8	1.12E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_384	14.7	7.40	36.0	843	524	68.6	68.6	39.7	15.7	1.12E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_385	14.6	7.38	35.7	828	519	68.0	68.0	39.5	15.7	1.11E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_386	14.7	7.38	35.8	795	533	68.4	68.4	39.8	15.7	1.12E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_387	14.6	7.36	35.3	778	525	67.4	67.4	39.4	15.7	1.11E-04	5.38E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_388	14.5	7.34	34.8	765	518	66.4	66.4	39.1	15.6	1.10E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_389	14.4	7.32	34.7	756	517	66.2	66.2	39.0	15.6	1.10E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_390	14.5	7.34	35.1	769	523	67.2	67.2	39.3	15.6	1.11E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230900_391	14.6	7.37	35.8	797	533	68.4	68.4	39.8	15.7	1.12E-04	5.39E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_394	15.3	7.54	38.6	946	562	74.9	74.9	41.5	16.1	1.17E-04	5.52E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_395	15.4	7.55	39.0	927	574	75.8	75.8	42.1	16.2	1.18E-04	5.54E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_396	15.2	7.51	38.1	885	562	73.7	73.7	41.4	16.1	1.16E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_397	15.0	7.47	37.2	851	551	72.0	72.0	40.8	16.0	1.14E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_398	14.9	7.43	36.5	829	541	70.4	70.4	40.3	15.9	1.13E-04	5.44E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_399	14.7	7.40	35.9	808	533	68.9	68.9	39.8	15.8	1.12E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_400	14.6	7.37	35.3	791	524	67.6	67.6	39.4	15.7	1.11E-04	5.39E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_401	14.6	7.38	35.4	799	525	67.7	67.7	39.5	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_402	14.8	7.41	36.0	819	533	69.1	69.1	39.9	15.8	1.12E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_403	14.9	7.44	36.6	838	542	70.4	70.4	40.3	15.9	1.13E-04	5.45E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_404	15.0	7.47	37.1	854	549	71.6	71.6	40.7	16.0	1.14E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_405	15.1	7.50	37.7	873	558	73.0	73.0	41.2	16.1	1.15E-04	5.49E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_406	15.3	7.55	38.8	912	571	75.6	75.6	41.9	16.2	1.17E-04	5.54E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_001	15.0	7.40	36.7	885	530	65.7	65.7	39.5	15.6	1.10E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_002	14.3	7.44	33.0	708	448	50.7	50.7	34.8	15.1	1.03E-04	5.35E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE231000_003	14.7	7.37	35.9	824	515	66.1	66.1	39.4	15.6	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_004	14.6	7.36	35.7	806	512	65.6	65.6	39.2	15.6	1.11E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_005	14.6	7.35	35.3	784	508	65.1	65.1	39.0	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_006	14.5	7.34	35.1	784	505	64.7	64.7	38.8	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_007	14.5	7.33	34.9	786	504	64.5	64.5	38.7	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_008	14.5	7.32	34.7	791	501	64.4	64.4	38.6	15.5	1.09E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_009	14.4	7.31	34.4	794	498	63.9	63.9	38.4	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_010	14.4	7.31	34.2	796	495	63.1	63.1	38.3	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_011	14.8	7.38	36.3	843	519	66.7	66.7	39.6	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_012	14.7	7.37	36.1	825	517	66.3	66.3	39.5	15.6	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_013	14.7	7.37	35.9	807	515	65.9	65.9	39.4	15.6	1.11E-04	5.37E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_014	14.6	7.36	35.7	797	512	65.5	65.5	39.2	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_015	14.6	7.35	35.4	794	509	65.2	65.2	39.0	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_016	14.6	7.34	35.2	795	506	64.9	64.9	38.9	15.6	1.10E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_017	14.5	7.34	35.1	797	505	64.7	64.7	38.8	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_018	14.5	7.33	34.9	800	504	64.8	64.8	38.7	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_019	14.5	7.33	34.8	804	502	64.8	64.8	38.6	15.5	1.09E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_020	14.5	7.32	34.7	808	501	63.9	63.9	38.6	15.5	1.08E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_021	14.5	7.32	34.5	810	499	63.6	63.6	38.5	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_022	14.4	7.31	34.4	811	496	63.1	63.1	38.4	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_023	14.4	7.31	34.2	813	495	63.0	63.0	38.3	15.5	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_024	14.4	7.30	34.1	814	494	62.8	62.8	38.3	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_025	14.4	7.30	34.1	815	493	62.8	62.8	38.2	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_026	14.4	7.30	34.0	812	492	62.6	62.6	38.2	15.4	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_027	14.9	7.41	37.0	874	526	68.4	68.4	40.0	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_028	14.8	7.40	36.8	859	524	67.4	67.4	39.9	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_029	14.8	7.39	36.6	842	521	66.8	66.8	39.7	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_030	14.8	7.38	36.3	820	519	66.4	66.4	39.6	15.6	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_031	14.7	7.37	36.2	812	517	66.2	66.2	39.5	15.6	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_032	14.7	7.37	36.0	811	515	66.0	66.0	39.3	15.6	1.11E-04	5.37E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_033	14.6	7.36	35.7	810	511	65.5	65.5	39.1	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_034	14.6	7.35	35.5	810	509	65.3	65.3	39.0	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_035	14.6	7.34	35.3	814	507	65.4	65.4	38.9	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_036	14.6	7.34	35.2	819	505	65.2	65.2	38.8	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_037	14.6	7.33	35.1	824	504	64.4	64.4	38.8	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_038	14.5	7.33	34.9	827	503	64.1	64.1	38.7	15.5	1.09E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_039	14.5	7.32	34.8	830	501	63.9	63.9	38.6	15.5	1.08E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_040	14.5	7.32	34.7	830	499	63.6	63.6	38.6	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_041	14.5	7.32	34.5	829	497	63.4	63.4	38.5	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_042	14.5	7.31	34.4	828	496	63.2	63.2	38.4	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_043	14.5	7.31	34.3	824	495	63.1	63.1	38.4	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_044	14.5	7.32	34.6	833	498	63.4	63.4	38.5	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_045	14.5	7.32	34.7	838	499	63.6	63.6	38.6	15.5	1.08E-04	5.33E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_046	14.5	7.33	34.8	840	500	63.8	63.8	38.6	15.5	1.08E-04	5.34E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_047	14.6	7.33	35.0	842	502	64.1	64.1	38.7	15.5	1.09E-04	5.34E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_048	14.6	7.33	35.1	842	504	64.4	64.4	38.8	15.5	1.09E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_049	14.6	7.34	35.2	839	505	64.5	64.5	38.9	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_050	14.6	7.34	35.3	836	506	64.7	64.7	38.9	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_051	14.6	7.35	35.4	832	507	65.0	65.0	39.0	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_052	14.6	7.35	35.5	830	508	65.4	65.4	39.0	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_053	14.6	7.35	35.6	827	509	65.8	65.8	39.1	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_054	14.7	7.36	35.7	824	510	65.9	65.9	39.1	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_055	14.7	7.36	35.8	822	512	65.8	65.8	39.2	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_056	14.7	7.37	36.0	822	514	66.0	66.0	39.3	15.6	1.11E-04	5.37E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_057	14.7	7.37	36.1	822	516	66.1	66.1	39.4	15.6	1.11E-04	5.37E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_058	14.8	7.38	36.3	822	518	66.5	66.5	39.5	15.6	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_059	14.8	7.38	36.4	822	519	66.6	66.6	39.6	15.6	1.11E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_060	14.8	7.39	36.5	822	520	66.7	66.7	39.6	15.7	1.12E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_061	14.8	7.39	36.6	829	522	66.9	66.9	39.7	15.7	1.12E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_062	14.8	7.40	36.7	841	523	67.0	67.0	39.8	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_063	14.9	7.40	36.9	856	525	67.2	67.2	39.9	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_064	14.9	7.41	37.1	868	526	67.8	67.8	40.0	15.7	1.13E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_065	14.9	7.42	37.3	882	529	68.8	68.8	40.2	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_066	15.0	7.42	37.5	892	532	69.1	69.1	40.3	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_067	15.6	7.58	41.1	1018	577	74.7	74.7	42.2	16.1	1.19E-04	5.52E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_068	15.6	7.59	41.2	1019	578	74.8	74.8	42.2	16.1	1.19E-04	5.52E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_069	15.6	7.59	41.3	1022	580	74.9	74.9	42.3	16.1	1.19E-04	5.53E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_070	15.7	7.60	41.5	1024	582	75.0	75.0	42.3	16.1	1.19E-04	5.53E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_071	15.7	7.61	41.7	1029	584	75.2	75.2	42.4	16.1	1.20E-04	5.54E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_072	15.7	7.62	41.8	1031	586	75.4	75.4	42.5	16.2	1.20E-04	5.54E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_073	15.8	7.63	42.0	1035	588	75.6	75.6	42.6	16.2	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_074	15.8	7.64	42.2	1037	590	75.7	75.7	42.6	16.2	1.20E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_075	15.9	7.65	42.6	1047	595	76.1	76.1	42.8	16.2	1.21E-04	5.56E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_076	15.9	7.67	42.9	1055	599	76.5	76.5	42.9	16.2	1.21E-04	5.57E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_077	16.2	7.75	44.2	1101	614	78.3	78.3	43.6	16.4	1.23E-04	5.63E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_078	16.1	7.74	44.0	1089	612	77.9	77.9	43.5	16.4	1.23E-04	5.62E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_079	16.1	7.73	43.8	1077	609	77.6	77.6	43.3	16.3	1.22E-04	5.61E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_080	16.1	7.73	43.7	1065	608	77.3	77.3	43.2	16.3	1.22E-04	5.61E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_081	16.0	7.71	43.4	1040	604	76.3	76.3	43.0	16.3	1.22E-04	5.59E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_082	16.0	7.71	43.3	1023	603	76.0	76.0	42.9	16.3	1.21E-04	5.59E-05	4.54	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_083	16.0	7.70	43.2	1009	601	75.8	75.8	42.8	16.3	1.21E-04	5.59E-05	4.54	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_084	16.0	7.70	43.1	999	600	75.6	75.6	42.8	16.2	1.21E-04	5.58E-05	4.54	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_085	15.8	7.62	41.9	978	587	74.2	74.2	42.3	16.1	1.19E-04	5.54E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_086	15.8	7.64	42.2	985	590	74.5	74.5	42.4	16.1	1.20E-04	5.55E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_087	15.7	7.60	41.3	971	580	73.4	73.4	42.1	16.1	1.19E-04	5.52E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_088	15.7	7.61	41.6	975	583	73.8	73.8	42.2	16.1	1.19E-04	5.53E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_089	15.6	7.59	41.1	967	577	73.2	73.2	42.0	16.1	1.18E-04	5.52E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_090	15.6	7.58	41.0	966	575	73.0	73.0	41.9	16.0	1.18E-04	5.51E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_091	15.6	7.57	40.8	966	573	72.8	72.8	41.9	16.0	1.18E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_092	15.5	7.56	40.7	967	572	72.7	72.7	41.8	16.0	1.18E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_093	15.5	7.55	40.5	965	570	72.5	72.5	41.7	16.0	1.18E-04	5.50E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_094	15.5	7.55	40.4	965	568	72.3	72.3	41.7	16.0	1.17E-04	5.49E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_095	15.5	7.54	40.3	965	566	72.4	72.4	41.7	16.0	1.17E-04	5.49E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_096	15.4	7.53	40.1	963	564	72.3	72.3	41.6	16.0	1.17E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_097	15.4	7.53	40.0	960	562	72.2	72.2	41.5	16.0	1.17E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_098	15.4	7.52	39.9	957	560	72.1	72.1	41.5	16.0	1.17E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_099	15.4	7.52	39.7	956	558	72.1	72.1	41.4	15.9	1.17E-04	5.47E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_100	15.3	7.51	39.6	955	557	72.2	72.2	41.4	15.9	1.17E-04	5.47E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_101	15.3	7.51	39.5	953	556	72.1	72.1	41.3	15.9	1.16E-04	5.47E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_102	15.3	7.50	39.4	951	554	72.0	72.0	41.3	15.9	1.16E-04	5.47E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_103	15.3	7.50	39.3	948	552	71.8	71.8	41.2	15.9	1.16E-04	5.46E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_104	15.2	7.49	39.1	945	550	71.7	71.7	41.1	15.9	1.16E-04	5.46E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_105	15.2	7.49	39.0	943	548	71.6	71.6	41.1	15.9	1.16E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_106	15.2	7.49	39.0	944	548	71.5	71.5	41.1	15.9	1.16E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_107	15.2	7.48	39.0	944	548	71.5	71.5	41.1	15.9	1.16E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_108	15.2	7.48	38.9	944	547	71.4	71.4	41.1	15.9	1.16E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_109	15.2	7.48	38.8	941	546	71.3	71.3	41.0	15.9	1.16E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_110	15.1	7.45	38.1	913	538	70.0	70.0	40.6	15.8	1.14E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_111	14.9	7.41	37.1	846	526	67.6	67.6	40.0	15.7	1.13E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_112	14.9	7.41	37.2	849	527	67.7	67.7	40.0	15.7	1.13E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_113	14.9	7.42	37.3	852	528	67.9	67.9	40.1	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_114	14.9	7.42	37.4	854	529	68.0	68.0	40.1	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_115	15.0	7.43	37.8	868	533	68.5	68.5	40.3	15.8	1.14E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_116	15.0	7.43	37.6	854	531	68.3	68.3	40.2	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_117	14.9	7.42	37.4	852	529	68.1	68.1	40.1	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_118	14.9	7.41	37.3	851	527	67.9	67.9	40.0	15.7	1.13E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_119	14.9	7.41	37.1	851	525	67.6	67.6	39.9	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_120	14.9	7.40	36.9	853	524	67.3	67.3	39.8	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_121	14.9	7.40	36.8	856	523	67.3	67.3	39.7	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_122	14.8	7.39	36.7	858	521	67.1	67.1	39.6	15.6	1.11E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_123	14.8	7.39	36.5	859	519	66.9	66.9	39.5	15.6	1.11E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_124	14.8	7.38	36.3	860	517	66.6	66.6	39.4	15.6	1.11E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_125	14.8	7.38	36.2	863	515	66.1	66.1	39.4	15.6	1.10E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_126	14.7	7.37	36.0	868	514	65.7	65.7	39.3	15.6	1.10E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_127	14.7	7.36	35.9	872	513	65.4	65.4	39.2	15.6	1.10E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_128	14.7	7.36	35.8	874	512	65.1	65.1	39.2	15.6	1.10E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_129	14.7	7.36	35.7	874	511	64.7	64.7	39.1	15.5	1.09E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_130	14.7	7.35	35.5	868	509	64.4	64.4	39.0	15.5	1.09E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_131	14.7	7.35	35.3	859	507	64.1	64.1	38.9	15.5	1.09E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_132	14.9	7.40	36.9	839	523	67.4	67.4	39.8	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_133	14.8	7.39	36.8	839	522	67.2	67.2	39.7	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_134	14.8	7.39	36.6	841	521	66.8	66.8	39.6	15.7	1.12E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_135	14.8	7.38	36.5	843	519	66.8	66.8	39.6	15.6	1.11E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_136	14.8	7.38	36.3	845	517	66.7	66.7	39.5	15.6	1.11E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_137	14.8	7.38	36.2	845	516	66.5	66.5	39.4	15.6	1.11E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_138	14.7	7.37	36.0	846	513	66.2	66.2	39.3	15.6	1.10E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_139	14.7	7.37	35.9	848	512	65.8	65.8	39.2	15.6	1.10E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_140	14.7	7.36	35.8	852	511	65.5	65.5	39.2	15.6	1.10E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_141	14.7	7.36	35.7	855	510	65.3	65.3	39.1	15.6	1.10E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_142	14.7	7.35	35.6	858	510	65.1	65.1	39.1	15.6	1.10E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_143	14.7	7.35	35.6	860	509	65.0	65.0	39.0	15.5	1.09E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_144	14.7	7.35	35.5	861	508	64.7	64.7	39.0	15.5	1.09E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_145	14.6	7.34	35.4	861	507	64.4	64.4	38.9	15.5	1.09E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_146	14.6	7.34	35.2	857	505	64.1	64.1	38.8	15.5	1.09E-04	5.34E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_147	14.6	7.33	35.0	848	503	63.9	63.9	38.7	15.5	1.08E-04	5.34E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_148	15.1	7.46	38.3	874	539	69.2	69.2	40.6	15.8	1.14E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_149	15.1	7.45	38.1	872	537	68.9	68.9	40.4	15.8	1.14E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_150	15.0	7.44	37.9	870	535	68.7	68.7	40.3	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_151	15.0	7.43	37.7	871	533	68.4	68.4	40.2	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_152	15.0	7.43	37.5	874	531	68.2	68.2	40.1	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_153	15.0	7.42	37.4	877	530	68.1	68.1	40.0	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_154	14.9	7.42	37.2	880	529	67.9	67.9	39.9	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_155	14.9	7.41	37.1	881	527	67.6	67.6	39.8	15.7	1.12E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_156	15.0	7.43	37.6	889	533	68.3	68.3	40.1	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_157	15.0	7.44	37.7	893	535	68.4	68.4	40.2	15.7	1.13E-04	5.41E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_158	15.1	7.46	38.3	881	541	69.2	69.2	40.5	15.8	1.14E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_159	15.1	7.46	38.4	884	542	69.3	69.3	40.6	15.8	1.14E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_160	15.1	7.47	38.5	887	543	69.4	69.4	40.6	15.8	1.14E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_161	15.2	7.47	38.5	892	544	69.4	69.4	40.6	15.8	1.14E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_162	15.2	7.48	38.7	897	546	69.6	69.6	40.7	15.8	1.15E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_163	15.2	7.48	38.8	901	548	69.7	69.7	40.7	15.8	1.15E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_164	15.2	7.49	38.9	907	549	69.9	69.9	40.8	15.8	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_165	15.2	7.49	39.0	912	551	70.1	70.1	40.8	15.9	1.15E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_166	15.3	7.50	39.2	919	554	70.4	70.4	40.9	15.9	1.15E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_167	15.3	7.51	39.4	929	557	70.7	70.7	41.0	15.9	1.15E-04	5.46E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_168	15.4	7.52	39.7	938	560	71.0	71.0	41.1	15.9	1.16E-04	5.47E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_169	15.4	7.53	39.8	946	563	71.1	71.1	41.2	15.9	1.16E-04	5.47E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_170	15.5	7.54	40.0	954	565	71.4	71.4	41.3	15.9	1.16E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_171	15.5	7.55	40.1	960	567	71.5	71.5	41.3	15.9	1.16E-04	5.48E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_172	15.5	7.56	40.4	967	569	71.7	71.7	41.4	16.0	1.16E-04	5.49E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_173	15.6	7.57	40.5	976	571	71.8	71.8	41.5	16.0	1.17E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_174	15.6	7.59	40.8	986	575	72.2	72.2	41.6	16.0	1.17E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_175	15.7	7.60	41.1	992	578	72.5	72.5	41.7	16.0	1.17E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_176	15.9	7.67	42.4	1013	593	74.3	74.3	42.3	16.2	1.19E-04	5.56E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_177	15.9	7.67	42.2	1018	590	73.8	73.8	42.1	16.2	1.19E-04	5.56E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_178	15.8	7.67	42.0	1022	589	73.6	73.6	42.1	16.1	1.19E-04	5.56E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_179	15.8	7.66	41.9	1027	588	73.5	73.5	42.0	16.1	1.18E-04	5.55E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_180	15.8	7.66	41.8	1032	587	73.4	73.4	41.9	16.1	1.18E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_181	15.8	7.66	41.8	1036	587	73.1	73.1	41.9	16.1	1.18E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_182	15.8	7.66	41.7	1040	587	72.9	72.9	41.9	16.1	1.18E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_183	15.8	7.66	41.6	1042	586	72.7	72.7	41.8	16.1	1.18E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_184	15.8	7.65	41.4	1041	584	72.3	72.3	41.7	16.1	1.17E-04	5.54E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_185	15.8	7.65	41.3	1039	583	72.1	72.1	41.6	16.1	1.17E-04	5.54E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_186	15.8	7.65	41.2	1036	582	71.8	71.8	41.6	16.1	1.17E-04	5.54E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_187	15.7	7.64	41.1	1032	581	71.6	71.6	41.5	16.1	1.17E-04	5.53E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_188	15.8	7.65	41.1	1028	582	71.7	71.7	41.5	16.1	1.16E-04	5.53E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_189	15.8	7.65	41.1	1022	582	71.9	71.9	41.5	16.1	1.16E-04	5.53E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_190	15.5	7.56	39.8	984	567	69.2	69.2	40.9	15.9	1.15E-04	5.48E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_191	15.5	7.56	39.8	994	567	69.6	69.6	40.9	15.9	1.15E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_192	15.5	7.56	39.9	1001	567	70.0	70.0	41.0	15.9	1.15E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_193	15.5	7.56	40.0	1005	567	70.2	70.2	41.0	15.9	1.15E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_194	15.5	7.56	40.0	1007	568	70.4	70.4	41.1	15.9	1.15E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_195	15.5	7.57	40.1	1009	568	70.6	70.6	41.1	15.9	1.15E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_196	15.5	7.56	40.2	1003	568	70.9	70.9	41.2	15.9	1.16E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_197	15.5	7.55	40.1	996	567	70.9	70.9	41.2	15.9	1.16E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_198	15.5	7.54	39.9	988	565	70.7	70.7	41.1	15.9	1.15E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_199	15.4	7.53	39.7	981	563	70.6	70.6	41.0	15.9	1.15E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_200	15.4	7.52	39.5	972	560	70.3	70.3	40.9	15.9	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_201	15.3	7.51	39.3	963	557	70.2	70.2	40.8	15.9	1.15E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_202	15.3	7.50	39.1	954	554	70.0	70.0	40.7	15.8	1.14E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_203	15.3	7.49	38.8	945	551	69.8	69.8	40.6	15.8	1.14E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_204	15.2	7.48	38.7	938	549	69.7	69.7	40.6	15.8	1.14E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_205	15.2	7.48	38.6	933	548	69.5	69.5	40.6	15.8	1.14E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_206	15.2	7.47	38.5	926	546	69.4	69.4	40.5	15.8	1.14E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_207	15.2	7.47	38.4	920	545	69.3	69.3	40.5	15.8	1.14E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_208	15.1	7.46	38.3	914	543	69.1	69.1	40.4	15.8	1.14E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_209	15.1	7.46	38.2	909	541	68.9	68.9	40.4	15.8	1.13E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_210	15.1	7.45	38.0	904	539	68.8	68.8	40.3	15.8	1.13E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_211	15.1	7.44	37.9	899	538	68.7	68.7	40.2	15.7	1.13E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_212	14.8	7.38	36.4	887	519	66.0	66.0	39.4	15.6	1.10E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_213	14.8	7.39	36.5	891	520	66.1	66.1	39.5	15.6	1.11E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_214	14.9	7.39	36.6	895	522	66.3	66.3	39.6	15.6	1.11E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_215	14.9	7.40	36.7	899	524	66.4	66.4	39.6	15.6	1.11E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_216	14.9	7.40	36.8	904	526	66.6	66.6	39.7	15.7	1.11E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_217	14.9	7.41	37.0	908	527	66.7	66.7	39.7	15.7	1.11E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_218	15.0	7.42	37.2	915	530	67.0	67.0	39.8	15.7	1.12E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_219	15.0	7.42	37.3	922	533	67.3	67.3	39.9	15.7	1.12E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_220	15.0	7.43	37.5	929	535	67.5	67.5	40.0	15.7	1.12E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_221	15.1	7.43	37.6	935	537	67.6	67.6	40.0	15.7	1.12E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_222	15.1	7.44	37.8	940	539	67.8	67.8	40.1	15.7	1.12E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_223	15.1	7.44	37.8	944	540	67.8	67.8	40.1	15.7	1.12E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_224	15.1	7.45	37.9	948	542	67.9	67.9	40.2	15.7	1.12E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_225	15.2	7.46	38.1	953	544	68.1	68.1	40.2	15.7	1.13E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_226	15.2	7.46	38.3	958	546	68.2	68.2	40.3	15.8	1.13E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_227	15.2	7.47	38.4	961	548	68.2	68.2	40.3	15.8	1.13E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_228	15.3	7.48	38.5	966	550	68.3	68.3	40.4	15.8	1.13E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_229	15.3	7.49	38.7	969	552	68.4	68.4	40.5	15.8	1.13E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_230	15.2	7.47	38.2	942	548	67.2	67.2	40.2	15.7	1.12E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_231	15.2	7.46	38.0	926	546	67.0	67.0	40.1	15.7	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_232	15.2	7.46	37.8	902	547	66.9	66.9	40.0	15.7	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_233	15.2	7.46	37.8	899	548	67.1	67.1	39.9	15.7	1.12E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_234	15.2	7.47	37.8	908	551	67.3	67.3	39.9	15.7	1.12E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_235	15.3	7.48	37.9	915	554	67.3	67.3	39.9	15.8	1.12E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_236	15.3	7.50	38.2	923	558	67.7	67.7	40.1	15.8	1.12E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_237	15.4	7.52	38.5	930	561	68.0	68.0	40.2	15.8	1.13E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_238	15.4	7.54	38.8	935	564	68.4	68.4	40.3	15.8	1.13E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_239	15.5	7.55	39.1	940	567	68.8	68.8	40.5	15.9	1.13E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_240	15.5	7.58	39.4	947	571	69.2	69.2	40.6	15.9	1.14E-04	5.49E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_241	15.6	7.60	39.7	953	574	70.0	70.0	40.7	15.9	1.14E-04	5.50E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_242	15.6	7.62	39.9	958	577	70.3	70.3	40.8	16.0	1.14E-04	5.51E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_243	15.7	7.64	40.2	964	580	71.0	71.0	40.9	16.0	1.15E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_244	15.8	7.67	40.7	974	585	71.7	71.7	41.1	16.1	1.15E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_245	15.9	7.71	41.3	987	592	72.6	72.6	41.4	16.1	1.16E-04	5.56E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_246	16.0	7.74	41.7	997	597	73.4	73.4	41.6	16.2	1.17E-04	5.58E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_247	16.1	7.79	42.3	1008	603	74.7	74.7	41.8	16.3	1.18E-04	5.62E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_248	14.5	7.32	34.5	797	500	62.6	62.6	38.4	15.5	1.07E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_249	14.6	7.32	34.6	796	502	62.8	62.8	38.5	15.5	1.07E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_250	14.6	7.33	34.7	801	504	63.0	63.0	38.5	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_251	14.6	7.33	34.8	804	506	63.2	63.2	38.6	15.5	1.08E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_252	14.4	7.30	33.9	788	491	62.0	62.0	38.1	15.4	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_253	14.4	7.29	33.7	770	490	61.6	61.6	38.0	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_254	14.5	7.31	34.2	796	496	62.4	62.4	38.3	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_255	14.4	7.30	34.0	775	494	61.9	61.9	38.2	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_256	14.0	7.25	32.3	706	478	60.3	60.3	37.3	15.3	1.05E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_257	14.0	7.24	32.2	728	476	59.8	59.8	37.2	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_276	14.1	7.25	32.6	744	478	60.1	60.1	37.4	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_277	14.1	7.25	32.7	754	479	60.2	60.2	37.5	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_278	14.3	7.28	33.5	777	487	61.6	61.6	37.9	15.4	1.06E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_279	14.3	7.28	33.4	759	487	61.1	61.1	37.8	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_280	14.5	7.33	34.8	775	503	64.3	64.3	38.7	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_281	14.5	7.33	35.0	774	505	64.7	64.7	38.8	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_282	14.3	7.28	33.3	788	486	61.5	61.5	37.8	15.4	1.06E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_283	14.4	7.30	34.0	803	493	62.6	62.6	38.2	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_284	14.4	7.30	34.0	783	494	62.9	62.9	38.2	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_285	14.4	7.30	34.1	800	494	62.7	62.7	38.2	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_286	14.4	7.31	34.1	779	495	63.8	63.8	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_287	14.3	7.29	33.7	800	489	62.1	62.1	38.0	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_288	14.3	7.29	33.8	805	491	62.3	62.3	38.1	15.4	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_289	14.4	7.31	34.4	778	499	63.8	63.8	38.4	15.5	1.08E-04	5.33E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_290	14.5	7.32	34.6	777	501	64.0	64.0	38.5	15.5	1.09E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_291	14.3	7.28	33.5	792	488	61.8	61.8	37.9	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_292	14.3	7.29	33.6	793	490	62.1	62.1	38.0	15.4	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_293	14.3	7.29	33.9	805	491	62.4	62.4	38.1	15.4	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_294	14.3	7.29	33.7	790	491	62.2	62.2	38.1	15.4	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_295	14.4	7.30	33.9	804	492	62.5	62.5	38.2	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_296	14.3	7.30	33.8	787	492	62.5	62.5	38.1	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_297	14.2	7.26	32.9	764	482	60.8	60.8	37.6	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_298	14.2	7.26	32.8	751	480	60.5	60.5	37.5	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_299	14.6	7.35	35.2	786	507	65.1	65.1	39.0	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_300	14.4	7.31	34.2	755	497	63.5	63.5	38.4	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_301	14.2	7.27	33.2	783	484	61.3	61.3	37.8	15.4	1.06E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_302	14.2	7.28	33.3	783	485	61.4	61.4	37.8	15.4	1.06E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_303	14.3	7.28	33.4	784	487	61.7	61.7	37.9	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_304	14.3	7.28	33.6	784	489	62.0	62.0	38.0	15.4	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_305	14.4	7.33	34.6	776	501	64.5	64.5	38.6	15.5	1.09E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_306	14.4	7.32	34.5	766	500	64.4	64.4	38.6	15.5	1.09E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_307	14.4	7.32	34.4	757	499	64.2	64.2	38.5	15.5	1.09E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_308	14.4	7.32	34.4	750	498	64.1	64.1	38.5	15.5	1.09E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_309	14.3	7.30	34.0	757	495	63.1	63.1	38.2	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_310	14.3	7.29	33.7	779	491	62.4	62.4	38.1	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_311	14.3	7.30	33.8	776	492	62.8	62.8	38.1	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_312	14.3	7.30	34.0	772	494	63.5	63.5	38.2	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_313	14.4	7.30	34.1	769	495	63.4	63.4	38.2	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_314	14.4	7.31	34.3	769	498	63.5	63.5	38.4	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_315	14.4	7.31	34.5	769	499	63.8	63.8	38.5	15.5	1.08E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_316	14.5	7.33	34.8	768	503	64.5	64.5	38.7	15.5	1.09E-04	5.35E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_317	14.3	7.30	33.8	760	493	63.0	63.0	38.1	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_318	14.3	7.29	33.6	768	490	62.2	62.2	38.0	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_319	14.3	7.28	33.4	770	488	61.9	61.9	37.9	15.4	1.06E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_320	14.2	7.28	33.2	771	485	61.4	61.4	37.8	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_321	14.2	7.27	33.1	774	483	61.1	61.1	37.7	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_322	14.2	7.27	33.0	774	483	60.9	60.9	37.7	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_332	14.0	7.25	32.3	685	480	60.9	60.9	37.4	15.3	1.05E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_333	14.0	7.25	32.3	686	480	60.9	60.9	37.4	15.3	1.06E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_334	14.0	7.25	32.4	688	480	61.0	61.0	37.4	15.3	1.06E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_335	14.0	7.25	32.5	690	481	61.0	61.0	37.4	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_336	14.0	7.25	32.5	691	481	61.1	61.1	37.5	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_337	14.0	7.25	32.5	692	481	61.1	61.1	37.5	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_338	14.0	7.25	32.6	690	484	61.3	61.3	37.6	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_339	14.0	7.26	32.6	691	484	61.3	61.3	37.6	15.4	1.06E-04	5.29E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_340	14.0	7.26	32.7	693	485	61.4	61.4	37.6	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_341	14.1	7.26	32.8	698	485	61.4	61.4	37.6	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_342	14.1	7.26	32.8	702	486	61.5	61.5	37.7	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_343	14.3	7.29	33.6	752	490	62.6	62.6	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_345	14.3	7.29	33.5	744	490	62.4	62.4	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_346	14.2	7.26	32.8	766	481	60.5	60.5	37.6	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_347	14.2	7.26	32.9	765	482	60.7	60.7	37.6	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_348	14.2	7.27	32.9	763	483	61.0	61.0	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_350	14.3	7.29	33.6	741	491	62.7	62.7	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_351	14.3	7.30	33.9	745	495	63.5	63.5	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_353	14.1	7.26	32.7	696	485	61.4	61.4	37.6	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_354	14.2	7.27	33.1	757	485	61.6	61.6	37.7	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_355	14.2	7.28	33.2	754	486	61.8	61.8	37.8	15.4	1.06E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_356	14.2	7.28	33.4	753	488	62.6	62.6	37.9	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_357	14.3	7.29	33.8	749	492	62.7	62.7	38.1	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_358	14.3	7.30	33.9	746	493	63.1	63.1	38.2	15.5	1.08E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_359	14.3	7.30	33.9	744	494	63.4	63.4	38.2	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_360	14.3	7.30	34.0	742	495	63.5	63.5	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_361	14.3	7.31	34.1	741	496	63.7	63.7	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_362	14.3	7.31	34.2	755	498	63.9	63.9	38.4	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_363	14.1	7.25	32.6	757	479	60.1	60.1	37.4	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_364	14.1	7.26	32.8	756	481	60.7	60.7	37.5	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_365	14.2	7.26	32.8	754	482	61.0	61.0	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_366	14.2	7.27	32.9	751	483	61.3	61.3	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_367	14.2	7.27	33.1	747	485	61.5	61.5	37.7	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_368	14.2	7.28	33.2	745	486	62.3	62.3	37.8	15.4	1.06E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_369	14.3	7.29	33.7	736	492	63.1	63.1	38.1	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_370	14.3	7.29	33.8	735	493	63.2	63.2	38.1	15.5	1.08E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_371	14.3	7.30	33.8	734	494	63.3	63.3	38.2	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_374	14.3	7.29	33.6	738	491	62.8	62.8	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_377	14.1	7.27	32.9	705	487	61.6	61.6	37.7	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_378	14.3	7.29	33.6	782	490	62.1	62.1	38.0	15.4	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_379	14.4	7.31	34.3	752	497	63.8	63.8	38.4	15.5	1.08E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_380	14.3	7.29	33.7	764	491	63.1	63.1	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_381	14.2	7.27	33.0	761	484	61.3	61.3	37.7	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_382	14.2	7.27	33.1	773	484	61.2	61.2	37.7	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_383	14.0	7.25	32.4	687	480	60.9	60.9	37.4	15.3	1.06E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_384	14.2	7.28	33.3	783	486	61.5	61.5	37.8	15.4	1.06E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_385	14.5	7.32	34.6	769	501	64.2	64.2	38.6	15.5	1.09E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_386	14.3	7.31	34.1	745	497	63.8	63.8	38.4	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_387	14.1	7.26	32.7	758	480	60.4	60.4	37.5	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_388	14.3	7.31	34.0	752	496	63.7	63.7	38.3	15.5	1.08E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_390	14.5	7.34	35.2	790	507	65.2	65.2	39.0	15.6	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_391	14.6	7.35	35.4	809	510	65.7	65.7	39.1	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_392	14.2	7.28	33.2	728	486	61.9	61.9	37.8	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_393	14.2	7.27	33.1	715	486	62.3	62.3	37.8	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_394	14.1	7.25	32.3	748	476	59.5	59.5	37.3	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_395	14.1	7.25	32.4	748	477	59.7	59.7	37.3	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_396	14.1	7.25	32.5	748	478	60.1	60.1	37.4	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_397	14.1	7.26	32.6	749	480	60.4	60.4	37.4	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_398	14.1	7.26	32.7	747	481	60.7	60.7	37.5	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_399	14.1	7.26	32.8	743	482	61.0	61.0	37.5	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_400	14.2	7.27	32.9	740	483	61.4	61.4	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_401	14.2	7.27	33.0	736	485	61.9	61.9	37.7	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_402	14.2	7.28	33.1	731	486	61.8	61.8	37.7	15.4	1.06E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_403	14.2	7.28	33.2	727	487	62.2	62.2	37.8	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_404	14.2	7.28	33.2	725	487	62.2	62.2	37.8	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_405	14.2	7.28	33.3	724	487	62.4	62.4	37.8	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_406	14.0	7.24	32.2	741	475	59.5	59.5	37.2	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_407	14.1	7.25	32.3	738	477	60.0	60.0	37.3	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_408	14.1	7.25	32.4	735	478	60.2	60.2	37.3	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_409	14.1	7.26	32.6	735	480	60.6	60.6	37.4	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_410	14.1	7.26	32.7	734	481	60.8	60.8	37.5	15.4	1.06E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_411	14.1	7.27	32.9	726	483	61.4	61.4	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_412	14.1	7.27	32.9	723	484	61.5	61.5	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_413	14.2	7.28	33.4	721	489	62.7	62.7	37.9	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_414	14.2	7.29	33.4	720	489	62.7	62.7	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_415	14.2	7.29	33.5	723	490	62.7	62.7	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_416	14.2	7.29	33.5	731	491	62.8	62.8	38.1	15.5	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_417	14.2	7.29	33.5	733	491	62.7	62.7	38.1	15.5	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_418	14.2	7.29	33.4	729	491	62.5	62.5	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_419	14.1	7.27	33.0	717	485	61.9	61.9	37.7	15.4	1.06E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_420	14.1	7.27	33.1	716	485	62.1	62.1	37.7	15.4	1.06E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_421	14.1	7.27	33.1	711	486	62.1	62.1	37.8	15.4	1.07E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_422	14.1	7.27	33.0	708	486	61.9	61.9	37.7	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_423	14.1	7.27	32.9	706	485	61.7	61.7	37.7	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_424	14.1	7.27	32.8	703	484	61.6	61.6	37.6	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_425	14.1	7.26	32.7	700	483	61.4	61.4	37.6	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_426	14.1	7.26	32.6	696	482	61.2	61.2	37.5	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_427	14.2	7.29	33.4	725	490	62.4	62.4	38.0	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_428	14.2	7.28	33.3	723	490	62.3	62.3	37.9	15.4	1.07E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_429	14.2	7.28	33.2	720	489	62.2	62.2	37.9	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_430	14.1	7.27	32.9	725	483	61.4	61.4	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_431	14.1	7.28	33.1	715	488	61.9	61.9	37.9	15.4	1.07E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_432	14.1	7.26	32.8	728	483	61.4	61.4	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_433	14.1	7.27	33.0	709	486	62.0	62.0	37.7	15.4	1.07E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_434	14.2	7.28	33.2	717	489	62.0	62.0	37.9	15.4	1.07E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_435	14.1	7.25	32.5	735	479	60.4	60.4	37.4	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_436	14.2	7.28	33.1	714	486	62.2	62.2	37.8	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_437	14.1	7.27	32.9	721	484	61.5	61.5	37.6	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_438	14.1	7.27	33.1	712	488	61.8	61.8	37.8	15.4	1.07E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_439	14.0	7.24	32.2	741	475	59.2	59.2	37.2	15.3	1.04E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_440	14.0	7.25	32.3	739	476	59.7	59.7	37.3	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_441	14.1	7.28	33.1	712	487	62.2	62.2	37.8	15.4	1.07E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_443	14.1	7.25	32.4	739	476	59.6	59.6	37.3	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_444	14.1	7.24	32.3	736	475	59.1	59.1	37.2	15.3	1.04E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_445	14.1	7.24	32.3	742	475	59.3	59.3	37.3	15.3	1.04E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_446	14.1	7.25	32.5	748	477	59.8	59.8	37.4	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_450	14.0	7.24	32.2	739	474	58.9	58.9	37.2	15.3	1.04E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_452	14.2	7.27	33.0	761	483	60.9	60.9	37.7	15.4	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_453	14.2	7.27	33.1	770	483	61.1	61.1	37.7	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_454	14.3	7.28	33.3	774	486	61.4	61.4	37.8	15.4	1.06E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_455	14.2	7.26	32.9	749	482	60.5	60.5	37.6	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_456	14.3	7.27	33.3	764	485	61.1	61.1	37.8	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_001	15.6	7.65	39.8	1011	603	70.7	70.7	39.2	16.0	1.15E-04	5.52E-05	4.55	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE231100_002	15.1	7.45	36.4	884	546	66.5	66.5	39.0	15.7	1.10E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_003	13.9	7.31	31.2	587	426	50.6	50.6	34.5	15.0	1.01E-04	5.28E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231100_004	19.0	8.09	56.2	1285	717	111.3	111.3	49.5	17.5	1.28E-04	5.68E-05	4.60	1.53	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231100_005	14.6	7.32	34.5	808	504	63.0	63.0	38.3	15.5	1.07E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_006	14.5	7.32	34.2	808	503	62.9	62.9	38.2	15.5	1.07E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_007	14.5	7.32	34.0	809	503	63.1	63.1	38.1	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_008	14.5	7.31	34.2	794	499	62.5	62.5	38.2	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_009	14.5	7.31	34.0	797	498	62.3	62.3	38.1	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231100_010	14.5	7.31	33.8	799	498	62.6	62.6	38.0	15.4	1.06E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_011	14.5	7.30	33.7	799	499	62.6	62.6	37.9	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_012	14.5	7.30	33.5	797	499	62.5	62.5	37.7	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_018	14.5	7.31	33.9	808	503	63.0	63.0	37.9	15.4	1.06E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_019	14.5	7.31	33.7	804	504	62.9	62.9	37.8	15.4	1.06E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_020	14.5	7.31	33.5	798	504	62.7	62.7	37.7	15.4	1.06E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_027	14.7	7.34	34.7	832	514	63.9	63.9	38.4	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_028	14.6	7.34	34.4	825	512	63.7	63.7	38.2	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_029	14.6	7.33	34.2	820	512	63.6	63.6	38.0	15.5	1.07E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_030	14.6	7.33	34.0	813	513	63.5	63.5	37.9	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_031	14.6	7.33	33.8	812	513	63.2	63.2	37.8	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_032	14.6	7.32	33.6	818	514	62.9	62.9	37.6	15.4	1.06E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_033	14.5	7.32	33.3	821	513	62.7	62.7	37.4	15.4	1.06E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_041	14.6	7.33	33.3	834	519	62.9	62.9	37.5	15.5	1.06E-04	5.33E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_042	14.6	7.34	33.7	837	520	63.4	63.4	37.6	15.5	1.06E-04	5.33E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_043	14.6	7.34	33.9	833	520	63.4	63.4	37.7	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_044	14.7	7.34	34.1	827	519	63.6	63.6	37.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_045	14.7	7.35	34.3	822	519	64.0	64.0	38.0	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_046	14.7	7.35	34.5	830	518	64.1	64.1	38.2	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_047	14.7	7.35	34.7	839	519	64.2	64.2	38.3	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_048	14.8	7.36	35.1	846	521	64.4	64.4	38.6	15.5	1.08E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_049	14.9	7.39	35.7	866	531	65.2	65.2	38.8	15.6	1.09E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_050	14.9	7.39	35.5	861	531	65.1	65.1	38.7	15.6	1.08E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_051	14.8	7.38	35.2	851	530	64.9	64.9	38.5	15.6	1.08E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_052	14.8	7.38	34.8	846	529	64.6	64.6	38.2	15.5	1.08E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_053	14.8	7.37	34.5	847	528	64.4	64.4	38.1	15.5	1.07E-04	5.36E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_054	14.7	7.37	34.3	853	528	64.2	64.2	37.9	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_055	14.7	7.36	34.1	857	529	64.1	64.1	37.9	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_056	14.7	7.36	33.9	861	531	63.8	63.8	37.9	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_057	14.7	7.36	34.0	868	535	64.0	64.0	37.9	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_077	15.6	7.71	41.2	919	610	71.1	71.1	39.4	16.0	1.17E-04	5.55E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231100_078	15.9	7.82	43.1	962	622	72.9	72.9	40.1	16.2	1.19E-04	5.62E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231100_079	14.4	7.29	33.6	765	490	61.5	61.5	37.9	15.4	1.06E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_080	14.4	7.29	33.5	770	490	61.6	61.6	37.9	15.4	1.06E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_081	14.4	7.28	33.4	774	490	61.4	61.4	37.8	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_082	14.4	7.30	33.8	775	493	61.8	61.8	38.0	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_083	14.4	7.29	33.7	780	493	61.9	61.9	37.9	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_084	14.4	7.29	33.6	783	493	61.7	61.7	37.8	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_085	14.4	7.29	33.4	785	493	62.0	62.0	37.8	15.4	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_090	14.2	7.26	32.6	733	479	60.0	60.0	37.4	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_091	14.1	7.25	32.5	731	477	59.8	59.8	37.4	15.3	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_116	14.3	7.27	33.1	758	486	61.1	61.1	37.7	15.4	1.05E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_120	14.3	7.28	33.3	753	486	61.0	61.0	37.8	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_121	14.3	7.28	33.2	775	489	61.5	61.5	37.6	15.4	1.05E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_161	14.2	7.27	32.9	744	483	60.6	60.6	37.6	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_164	14.2	7.26	32.8	736	480	60.2	60.2	37.5	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_165	14.2	7.26	32.7	729	480	60.0	60.0	37.5	15.3	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_167	14.3	7.27	33.2	753	485	60.8	60.8	37.7	15.4	1.06E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_171	14.3	7.27	33.1	742	484	60.6	60.6	37.7	15.4	1.05E-04	5.30E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_175	12.2	7.00	22.6	349	362	35.0	35.0	0.0	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE231400_001	16.4	7.68	43.3	1116	596	84.5	84.5	42.3	16.2	1.14E-04	5.47E-05	4.59	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_002	16.8	7.81	45.2	1140	606	86.5	86.5	43.1	16.5	1.16E-04	5.54E-05	4.59	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_003	16.2	7.64	41.6	1069	581	81.3	81.3	42.0	16.1	1.12E-04	5.45E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_004	16.3	7.68	42.2	1075	585	82.5	82.5	42.3	16.2	1.13E-04	5.47E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_005	16.6	7.81	43.6	1084	591	84.1	84.1	42.9	16.4	1.15E-04	5.54E-05	4.57	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231400_006	16.4	7.76	42.4	1045	581	82.9	82.9	42.4	16.3	1.14E-04	5.51E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_007	16.1	7.63	40.8	1029	573	80.9	80.9	41.7	16.1	1.12E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_008	15.8	7.62	40.6	968	560	78.4	78.4	41.3	16.1	1.11E-04	5.44E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_009	16.3	7.74	41.9	984	575	80.8	80.8	41.9	16.3	1.13E-04	5.50E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_010	15.5	7.52	39.2	865	542	72.5	72.5	39.7	15.9	1.09E-04	5.39E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231400_011	17.6	7.90	49.3	1235	625	99.5	99.5	45.1	16.7	1.20E-04	5.57E-05	4.62	1.52	0.16	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231500_002	13.1	7.13	27.7	569	419	49.3	49.3	34.0	14.9	9.76E-05	5.18E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231600_001	14.0	7.33	31.1	522	416	50.2	50.2	33.7	15.0	9.78E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231600_004	13.9	7.30	31.0	529	420	50.6	50.6	33.6	15.0	9.77E-05	5.23E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231600_005	13.4	7.24	28.4	532	421	50.6	50.6	33.5	15.0	9.70E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231700_002	13.1	7.13	26.9	539	415	49.3	49.3	33.5	14.9	9.62E-05	5.18E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231700_003	13.0	7.13	26.5	542	415	49.2	49.2	33.5	14.9	9.62E-05	5.18E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231700_004	13.5	7.20	28.8	533	413	49.4	49.4	33.6	14.9	9.63E-05	5.20E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231800_001	14.0	7.36	30.6	542	429	50.9	50.9	34.2	15.1	9.87E-05	5.25E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE231800_002	14.2	7.41	31.6	574	441	51.5	51.5	34.5	15.1	9.99E-05	5.26E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE232700_002	13.2	7.14	27.2	561	405	49.4	49.4	33.3	14.9	9.59E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233200_001	14.8	7.47	36.2	721	497	50.4	50.4	34.1	15.0	1.05E-04	5.32E-05	4.47	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE233500_001	13.8	7.36	29.9	574	446	49.6	49.6	33.5	15.0	1.01E-04	5.28E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233600_001	13.8	7.34	30.4	576	444	49.8	49.8	33.5	15.0	1.01E-04	5.28E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233600_002	13.9	7.36	30.6	582	449	50.1	50.1	33.6	15.0	1.02E-04	5.29E-05	4.46	1.50	0.15	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE233700_001	13.7	7.29	29.9	559	423	49.7	49.7	33.5	15.0	9.90E-05	5.27E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233900_001	13.8	7.32	30.2	674	437	51.1	51.1	33.5	15.0	9.98E-05	5.30E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE233900_002	13.8	7.28	31.0	734	448	50.9	50.9	34.0	15.0	1.03E-04	5.27E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE233900_003	13.9	7.30	31.4	728	448	51.7	51.7	34.3	15.0	1.03E-04	5.29E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE234000_001	13.8	7.28	30.7	692	457	51.4	51.4	33.9	15.0	1.02E-04	5.27E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE234100_001	13.6	7.27	29.6	569	448	49.7	49.7	33.4	15.0	1.00E-04	5.27E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE235000_001	13.8	7.25	31.0	579	430	50.0	50.0	33.7	15.0	1.02E-04	5.25E-05	4.47	1.50	0.15	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235100_001	13.9	7.27	31.4	598	432	50.4	50.4	33.8	15.0	1.02E-04	5.26E-05	4.47	1.50	0.15	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235100_002	13.9	7.28	31.6	665	440	50.6	50.6	33.9	15.0	1.02E-04	5.27E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235100_003	13.6	7.22	29.6	630	458	49.3	49.3	33.6	14.9	9.95E-05	5.24E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE235200_001	14.0	7.30	32.0	749	444	51.1	51.1	34.1	15.0	1.03E-04	5.28E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235200_002	14.0	7.29	31.6	755	477	50.1	50.1	33.9	15.0	1.02E-04	5.28E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235500_001	14.1	7.35	32.0	654	473	51.0	51.0	34.5	15.1	1.03E-04	5.31E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE235500_002	14.6	7.32	35.4	686	480	51.7	51.7	35.0	15.1	1.07E-04	5.29E-05	4.47	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE235700_001	14.7	7.35	36.4	641	494	54.8	54.8	36.2	15.2	1.09E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235700_002	15.1	7.34	37.4	617	476	53.8	53.8	36.3	15.2	1.10E-04	5.31E-05	4.47	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235800_001	15.9	7.72	41.6	880	559	63.0	63.0	37.8	15.7	1.16E-04	5.55E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.32	2.54E-02	1.37E-02
RE235900_002	14.9	7.59	35.6	792	542	59.9	59.9	36.4	15.5	1.07E-04	5.47E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235900_003	14.9	7.61	35.1	739	506	58.1	58.1	35.6	15.6	1.07E-04	5.48E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE235900_004	15.2	7.65	39.3	940	539	60.7	60.7	36.5	15.7	1.13E-04	5.50E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE310100_001	14.7	7.54	34.2	732	496	57.2	57.2	35.3	15.5	1.05E-04	5.44E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310100_002	14.5	7.50	33.6	748	488	55.8	55.8	35.0	15.4	1.04E-04	5.41E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310100_003	14.6	7.53	35.1	809	497	57.6	57.6	35.6	15.5	1.07E-04	5.43E-05	4.49	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE310200_001	14.3	7.40	32.8	725	473	54.9	54.9	34.9	15.3	1.04E-04	5.35E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310500_001	13.9	7.28	31.4	648	439	52.8	52.8	34.2	15.1	1.03E-04	5.28E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE310600_001	13.5	7.23	29.9	614	436	50.5	50.5	33.8	15.0	9.95E-05	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE310600_002	14.3	7.38	33.4	738	456	52.9	52.9	34.8	15.2	1.04E-04	5.34E-05	4.47	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE310700_001	14.3	7.37	33.3	756	459	52.3	52.3	34.8	15.2	1.04E-04	5.34E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE310700_002	14.0	7.29	31.3	642	439	52.7	52.7	34.3	15.1	1.02E-04	5.29E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE310900_001	14.2	7.33	32.5	816	454	53.1	53.1	34.5	15.1	1.03E-04	5.31E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE311000_001	14.2	7.39	33.1	713	491	51.9	51.9	34.5	15.2	1.04E-04	5.34E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE311100_001	14.4	7.27	33.9	619	444	51.2	51.2	34.6	15.0	1.03E-04	5.26E-05	4.46	1.50	0.15	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE311200_001	15.0	7.39	37.3	646	467	53.0	53.0	35.5	15.2	1.06E-04	5.31E-05	4.46	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311200_002	14.5	7.44	34.8	666	483	52.0	52.0	34.5	15.2	1.03E-04	5.34E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE311300_001	15.0	7.58	36.8	678	493	53.1	53.1	35.3	15.4	1.04E-04	5.37E-05	4.47	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE311300_002	14.4	7.34	33.3	504	424	49.6	49.6	33.9	15.0	1.01E-04	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311400_001	14.7	7.60	34.8	595	450	55.1	55.1	35.1	15.4	1.02E-04	5.34E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311400_002	15.7	7.93	39.7	792	487	58.2	58.2	36.1	15.7	1.07E-04	5.48E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311400_003	14.5	7.49	32.8	539	430	51.2	51.2	34.4	15.2	1.00E-04	5.30E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311400_006	13.6	7.17	29.3	513	397	49.7	49.7	33.5	14.9	9.66E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311800_001	13.9	7.33	30.7	692	442	50.4	50.4	33.7	15.0	1.00E-04	5.28E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE311900_001	13.8	7.33	30.4	704	442	49.8	49.8	33.6	15.0	9.96E-05	5.28E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312200_001	13.9	7.35	31.1	821	458	49.1	49.1	33.5	15.0	1.01E-04	5.30E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312200_002	13.7	7.29	29.8	765	448	48.9	48.9	33.5	15.0	9.95E-05	5.27E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312200_003	13.5	7.26	28.8	720	438	48.8	48.8	33.5	14.9	9.84E-05	5.25E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312300_001	13.8	7.32	30.3	712	442	48.8	48.8	33.5	15.0	9.95E-05	5.28E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312400_001	13.6	7.27	29.6	651	427	48.6	48.6	33.4	14.9	9.80E-05	5.25E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312800_001	14.4	7.39	33.5	487	415	51.0	51.0	34.6	15.1	9.97E-05	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312800_002	13.7	7.21	30.6	472	411	48.5	48.5	33.9	14.9	9.80E-05	5.20E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312900_001	14.4	7.40	34.1	493	418	51.2	51.2	34.7	15.1	1.00E-04	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE312900_002	14.2	7.33	33.3	485	418	50.4	50.4	34.6	15.1	9.97E-05	5.23E-05	4.45	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_001	14.3	7.51	32.1	500	423	52.0	52.0	34.2	15.2	9.83E-05	5.28E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_002	14.3	7.50	32.1	497	422	51.9	51.9	34.2	15.2	9.83E-05	5.28E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_003	14.4	7.52	32.6	503	424	52.2	52.2	34.2	15.3	9.87E-05	5.28E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_004	14.4	7.53	32.6	516	427	52.0	52.0	34.3	15.3	9.83E-05	5.29E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE313000_005	14.3	7.49	32.4	512	426	51.9	51.9	34.3	15.2	9.82E-05	5.27E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_006	13.6	7.24	29.7	492	402	49.8	49.8	33.5	15.0	9.64E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313000_007	14.1	7.31	32.6	491	420	50.4	50.4	34.4	15.1	9.93E-05	5.23E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE313100_001	14.2	7.37	32.6	516	424	51.5	51.5	34.2	15.1	9.79E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE314400_001	13.4	7.13	29.1	488	413	48.5	48.5	33.9	14.9	9.93E-05	5.19E-05	4.45	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE314800_001	13.6	7.16	30.7	524	429	49.6	49.6	34.5	14.9	1.01E-04	5.21E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE314900_001	13.5	7.27	28.4	525	421	51.2	51.2	33.8	15.1	9.82E-05	5.27E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE316400_001	17.2	7.60	48.8	1017	591	67.4	67.4	41.9	15.8	1.22E-04	5.43E-05	4.54	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE316500_001	18.1	7.83	53.2	1139	631	71.6	71.6	43.6	16.2	1.27E-04	5.55E-05	4.56	1.52	0.16	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE316600_001	18.1	8.09	52.0	1115	622	74.3	74.3	43.8	16.5	1.25E-04	5.68E-05	4.56	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE316600_002	17.9	7.98	51.3	1110	618	73.8	73.8	43.5	16.4	1.24E-04	5.62E-05	4.56	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE316700_001	17.9	7.96	51.5	1116	620	74.4	74.4	43.5	16.4	1.24E-04	5.61E-05	4.56	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE316700_002	17.6	7.87	49.9	1062	601	72.4	72.4	42.9	16.3	1.23E-04	5.56E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE317000_001	15.8	7.75	42.8	875	568	68.4	68.4	40.1	16.1	1.15E-04	5.50E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE410200_001	14.2	7.27	33.7	585	475	50.4	50.4	34.8	15.1	1.06E-04	5.28E-05	4.46	1.51	0.15	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE410200_002	14.2	7.29	34.0	588	469	50.7	50.7	34.8	15.1	1.06E-04	5.29E-05	4.46	1.51	0.15	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE411100_001	15.9	7.46	41.3	753	519	59.3	59.3	36.9	15.3	1.13E-04	5.37E-05	4.49	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE411200_001	16.9	7.89	47.4	1165	592	71.2	71.2	39.2	16.0	1.22E-04	5.63E-05	4.55	1.51	0.16	6.39E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE510000_001	15.0	7.53	37.0	772	490	60.2	60.2	36.5	15.5	1.09E-04	5.44E-05	4.49	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE510000_002	14.9	7.52	36.3	704	489	59.4	59.4	36.3	15.5	1.09E-04	5.43E-05	4.48	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE510100_001	14.3	7.36	33.3	599	464	55.7	55.7	35.3	15.2	1.05E-04	5.33E-05	4.47	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511200_001	18.0	7.91	52.6	1427	780	74.1	74.1	41.1	16.0	1.38E-04	5.71E-05	4.55	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_002	18.1	7.92	52.3	1437	768	74.3	74.3	41.1	16.0	1.37E-04	5.71E-05	4.55	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_003	18.0	7.92	52.3	1444	757	74.8	74.8	41.2	16.0	1.36E-04	5.72E-05	4.56	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_004	18.0	7.92	52.3	1449	746	75.0	75.0	41.2	16.1	1.35E-04	5.72E-05	4.56	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_005	17.3	7.74	49.3	1374	731	70.3	70.3	40.2	15.8	1.32E-04	5.60E-05	4.53	1.52	0.16	6.42E-02	2.57	0.53	0.32	2.54E-02	1.37E-02
RE511200_006	17.3	7.74	49.3	1379	721	70.3	70.3	40.2	15.8	1.31E-04	5.60E-05	4.53	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_001	15.4	7.57	38.3	970	570	57.5	57.5	36.5	15.4	1.14E-04	5.53E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_002	13.2	7.14	28.7	772	451	49.8	49.8	33.5	14.9	1.01E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511300_003	13.4	7.16	29.9	794	465	51.2	51.2	34.0	14.9	1.03E-04	5.23E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_004	13.6	7.19	31.5	895	492	52.0	52.0	34.4	15.0	1.05E-04	5.25E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_005	13.6	7.19	30.5	847	467	52.0	52.0	34.2	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_006	13.7	7.19	31.1	840	482	52.1	52.1	34.4	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_007	13.7	7.20	32.0	919	498	52.3	52.3	34.6	15.0	1.06E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_008	13.6	7.19	30.8	829	477	52.0	52.0	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_009	13.9	7.22	33.0	933	507	53.0	53.0	35.0	15.0	1.07E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_010	13.7	7.20	31.0	873	473	52.3	52.3	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_011	13.8	7.21	31.9	880	488	52.7	52.7	34.7	15.0	1.06E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_012	13.7	7.20	30.8	877	469	52.2	52.2	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_013	13.6	7.19	31.6	899	493	52.1	52.1	34.5	15.0	1.05E-04	5.25E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_014	13.7	7.19	31.7	904	494	52.2	52.2	34.5	15.0	1.05E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_015	13.9	7.22	33.0	919	505	53.1	53.1	35.0	15.0	1.07E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_016	13.8	7.22	32.8	934	506	52.9	52.9	34.9	15.0	1.07E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_017	13.8	7.21	32.5	930	502	52.6	52.6	34.8	15.0	1.07E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_018	13.9	7.23	32.6	900	496	53.1	53.1	34.9	15.0	1.07E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_019	13.9	7.22	32.9	903	502	53.1	53.1	35.0	15.0	1.07E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_020	13.7	7.19	30.9	833	477	52.1	52.1	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_021	13.7	7.19	31.8	909	495	52.2	52.2	34.5	15.0	1.06E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_022	13.9	7.22	32.9	934	506	52.9	52.9	35.0	15.0	1.07E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_023	13.7	7.20	32.4	928	501	52.5	52.5	34.7	15.0	1.06E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_024	13.9	7.23	32.8	891	499	53.1	53.1	34.9	15.0	1.07E-04	5.27E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_025	13.7	7.20	31.5	856	487	52.4	52.4	34.5	15.0	1.05E-04	5.25E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_026	13.7	7.19	30.7	869	467	52.2	52.2	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_027	13.7	7.20	30.9	865	472	52.2	52.2	34.4	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_028	13.7	7.20	31.7	861	489	52.4	52.4	34.6	15.0	1.05E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_029	13.7	7.20	32.3	927	500	52.5	52.5	34.7	15.0	1.06E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_030	13.8	7.20	31.8	862	489	52.5	52.5	34.6	15.0	1.05E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_031	13.8	7.21	31.9	886	488	52.7	52.7	34.7	15.0	1.06E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_032	13.6	7.19	31.0	838	481	52.0	52.0	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_033	13.8	7.21	31.8	869	488	52.6	52.6	34.6	15.0	1.05E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_034	13.8	7.21	31.9	874	489	52.6	52.6	34.7	15.0	1.06E-04	5.26E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_035	13.6	7.19	30.7	833	472	52.0	52.0	34.3	15.0	1.04E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_036	13.6	7.18	30.5	839	467	51.9	51.9	34.2	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_037	13.7	7.20	31.4	852	486	52.3	52.3	34.5	15.0	1.05E-04	5.25E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_038	13.8	7.21	32.6	933	504	52.7	52.7	34.8	15.0	1.07E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_039	13.8	7.21	32.8	934	505	52.8	52.8	34.9	15.0	1.07E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_040	13.7	7.20	31.9	914	497	52.3	52.3	34.6	15.0	1.06E-04	5.25E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_041	13.8	7.21	32.7	934	505	52.8	52.8	34.9	15.0	1.07E-04	5.26E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_042	13.7	7.19	30.7	840	472	52.0	52.0	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511300_043	18.0	7.93	52.3	1452	733	76.2	76.2	41.2	16.1	1.35E-04	5.72E-05	4.57	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_044	18.0	7.92	52.3	1467	719	76.8	76.8	41.2	16.1	1.35E-04	5.72E-05	4.57	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_045	17.9	7.92	52.3	1517	706	76.3	76.3	41.2	16.1	1.35E-04	5.71E-05	4.57	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_046	17.9	7.92	52.4	1553	713	76.2	76.2	41.3	16.1	1.35E-04	5.71E-05	4.58	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_047	17.9	7.92	52.4	1576	718	76.6	76.6	41.3	16.1	1.35E-04	5.71E-05	4.58	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_048	17.9	7.92	52.4	1593	722	77.3	77.3	41.3	16.1	1.35E-04	5.71E-05	4.58	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_049	18.0	7.92	52.4	1601	725	78.1	78.1	41.3	16.1	1.35E-04	5.71E-05	4.58	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_050	18.0	7.92	52.3	1629	726	78.4	78.4	41.3	16.1	1.35E-04	5.71E-05	4.59	1.52	0.16	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_051	18.0	7.92	52.1	1694	727	78.4	78.4	41.3	16.1	1.34E-04	5.71E-05	4.60	1.52	0.16	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_052	18.0	7.91	51.9	1753	726	78.1	78.1	41.2	16.1	1.34E-04	5.71E-05	4.60	1.52	0.16	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_053	18.0	7.91	51.7	1808	725	77.8	77.8	41.2	16.1	1.34E-04	5.70E-05	4.61	1.52	0.16	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_054	17.9	7.91	51.5	1856	724	77.5	77.5	41.1	16.1	1.34E-04	5.70E-05	4.62	1.52	0.17	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_055	18.0	7.90	51.4	1904	722	77.2	77.2	41.0	16.1	1.34E-04	5.70E-05	4.62	1.52	0.17	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_056	18.0	7.89	51.3	1933	720	76.7	76.7	41.0	16.1	1.33E-04	5.69E-05	4.63	1.52	0.17	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_057	18.0	7.89	51.2	1954	718	77.3	77.3	40.9	16.0	1.33E-04	5.69E-05	4.63	1.52	0.17	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_058	18.0	7.88	51.7	1962	715	77.7	77.7	40.8	16.0	1.33E-04	5.68E-05	4.63	1.52	0.17	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_059	18.2	7.93	54.5	1954	708	81.9	81.9	41.4	16.1	1.35E-04	5.71E-05	4.64	1.52	0.17	6.44E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_060	18.0	7.87	52.9	1939	703	79.4	79.4	40.8	16.0	1.33E-04	5.68E-05	4.63	1.52	0.17	6.43E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_061	17.7	7.83	51.4	1908	699	75.5	75.5	40.4	16.0	1.31E-04	5.65E-05	4.63	1.52	0.17	6.43E-02	2.57	0.53	0.32	2.54E-02	1.37E-02
RE511300_062	17.5	7.78	49.7	1848	694	73.6	73.6	40.0	15.9	1.30E-04	5.62E-05	4.62	1.52	0.17	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_063	17.3	7.75	48.4	1786	689	72.6	72.6	39.7	15.8	1.29E-04	5.60E-05	4.61	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_064	17.1	7.72	47.9	1720	683	72.0	72.0	39.5	15.8	1.28E-04	5.58E-05	4.60	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_065	16.9	7.68	47.2	1636	676	71.5	71.5	39.3	15.7	1.27E-04	5.56E-05	4.59	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_066	16.2	7.57	44.1	1287	637	68.3	68.3	38.4	15.6	1.23E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_067	16.0	7.55	43.5	1254	628	67.8	67.8	38.2	15.5	1.22E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_068	15.9	7.53	42.9	1236	624	66.9	66.9	38.1	15.5	1.21E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_069	15.8	7.52	42.3	1215	621	65.9	65.9	37.9	15.5	1.20E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_070	15.7	7.50	41.6	1190	617	65.1	65.1	37.8	15.4	1.19E-04	5.45E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_071	15.6	7.48	40.6	1145	610	64.0	64.0	37.5	15.4	1.18E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_072	15.5	7.46	40.1	1107	607	63.5	63.5	37.4	15.4	1.17E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_073	15.5	7.45	39.6	1096	603	63.2	63.2	37.3	15.4	1.16E-04	5.42E-05	4.52	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_074	14.3	7.28	35.0	984	515	54.7	54.7	35.7	15.1	1.10E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_075	14.3	7.28	34.9	996	510	55.0	55.0	35.7	15.1	1.10E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_076	14.3	7.28	34.7	1003	509	55.3	55.3	35.7	15.1	1.09E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_077	14.3	7.28	34.6	1010	512	55.5	55.5	35.7	15.1	1.09E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_078	14.3	7.29	34.5	1015	515	55.6	55.6	35.6	15.1	1.09E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_079	14.4	7.29	34.5	1020	520	55.5	55.5	35.6	15.1	1.09E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_080	14.4	7.29	34.6	1021	523	55.7	55.7	35.6	15.1	1.10E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_081	14.4	7.30	34.7	1019	526	55.8	55.8	35.6	15.1	1.10E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_082	14.5	7.30	34.8	1017	530	56.0	56.0	35.6	15.1	1.10E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_083	14.5	7.30	34.9	1016	533	56.1	56.1	35.7	15.1	1.10E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_084	14.5	7.31	35.0	1012	538	56.3	56.3	35.7	15.2	1.10E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_085	14.6	7.31	35.2	1004	545	56.8	56.8	35.7	15.2	1.10E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_086	14.6	7.32	35.3	1000	549	57.0	57.0	35.8	15.2	1.10E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_087	14.7	7.32	35.4	1003	552	57.2	57.2	35.8	15.2	1.11E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_088	14.7	7.33	35.5	1005	555	57.5	57.5	35.8	15.2	1.11E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_089	14.8	7.33	35.6	1008	559	57.8	57.8	35.9	15.2	1.11E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_090	14.8	7.34	35.7	1009	562	58.0	58.0	35.9	15.2	1.11E-04	5.34E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_091	14.9	7.34	35.9	1011	567	58.4	58.4	36.0	15.2	1.11E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_092	14.9	7.35	36.0	1014	571	58.7	58.7	36.1	15.2	1.12E-04	5.35E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_093	15.0	7.36	36.2	1016	574	59.0	59.0	36.2	15.2	1.12E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_094	15.0	7.36	36.4	1021	577	59.3	59.3	36.3	15.2	1.12E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_095	15.1	7.38	36.7	1029	581	59.8	59.8	36.4	15.3	1.13E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_096	15.1	7.39	37.1	1038	584	60.5	60.5	36.5	15.3	1.13E-04	5.38E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_097	15.2	7.40	37.5	1049	587	60.9	60.9	36.7	15.3	1.13E-04	5.38E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_098	15.4	7.42	41.7	1202	581	60.7	60.7	37.9	15.3	1.19E-04	5.40E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_099	15.3	7.41	41.4	1194	578	60.3	60.3	37.8	15.3	1.19E-04	5.39E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_100	15.3	7.40	41.1	1187	575	59.9	59.9	37.7	15.3	1.19E-04	5.39E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_101	15.2	7.39	40.8	1178	572	59.5	59.5	37.6	15.3	1.18E-04	5.38E-05	4.51	1.51	0.16	6.37E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_102	15.1	7.38	40.5	1169	569	59.1	59.1	37.5	15.3	1.18E-04	5.37E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_103	15.1	7.37	40.2	1163	567	58.7	58.7	37.4	15.2	1.17E-04	5.37E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_104	15.0	7.36	39.9	1155	564	58.3	58.3	37.3	15.2	1.17E-04	5.36E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_105	14.9	7.36	39.7	1148	562	58.0	58.0	37.2	15.2	1.17E-04	5.36E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_106	14.9	7.35	39.5	1142	560	57.8	57.8	37.1	15.2	1.16E-04	5.35E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_107	14.8	7.34	39.2	1135	558	57.6	57.6	37.1	15.2	1.16E-04	5.35E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_108	14.8	7.34	39.0	1129	556	57.4	57.4	37.0	15.2	1.16E-04	5.34E-05	4.51	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_109	14.7	7.33	38.8	1122	554	57.2	57.2	36.9	15.2	1.15E-04	5.34E-05	4.51	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_110	14.7	7.32	38.5	1114	552	56.8	56.8	36.8	15.2	1.15E-04	5.33E-05	4.51	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_111	14.6	7.31	38.2	1107	550	56.5	56.5	36.7	15.2	1.15E-04	5.33E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_112	14.6	7.31	38.0	1100	548	56.2	56.2	36.7	15.2	1.14E-04	5.33E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_113	14.5	7.30	37.8	1094	546	56.0	56.0	36.6	15.1	1.14E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_114	14.5	7.30	37.5	1086	544	55.8	55.8	36.5	15.1	1.14E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_115	14.4	7.29	37.3	1077	542	55.6	55.6	36.4	15.1	1.13E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_116	14.4	7.29	36.8	1063	538	55.2	55.2	36.3	15.1	1.13E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_117	14.3	7.28	36.5	1051	535	54.8	54.8	36.1	15.1	1.12E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_118	14.3	7.27	36.3	1044	534	54.7	54.7	36.1	15.1	1.12E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_119	14.3	7.27	36.0	1034	532	54.5	54.5	36.0	15.1	1.12E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_120	14.2	7.27	35.7	1024	530	54.3	54.3	35.9	15.1	1.11E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_121	14.2	7.26	35.4	1011	527	54.1	54.1	35.8	15.1	1.11E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_122	15.5	7.42	41.8	1161	574	60.1	60.1	37.9	15.3	1.19E-04	5.40E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_123	15.5	7.41	41.5	1153	571	59.6	59.6	37.8	15.3	1.19E-04	5.39E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_124	15.4	7.40	41.2	1146	567	59.4	59.4	37.7	15.3	1.19E-04	5.39E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_125	15.3	7.39	40.9	1137	564	59.1	59.1	37.6	15.3	1.18E-04	5.38E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_126	15.2	7.38	40.6	1130	561	58.8	58.8	37.6	15.3	1.18E-04	5.37E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_127	15.2	7.37	40.3	1121	557	58.5	58.5	37.5	15.2	1.17E-04	5.37E-05	4.51	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_128	15.1	7.36	40.0	1111	553	58.1	58.1	37.3	15.2	1.17E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_129	15.0	7.36	39.8	1103	551	57.8	57.8	37.3	15.2	1.17E-04	5.36E-05	4.50	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_130	15.0	7.35	39.5	1096	548	57.6	57.6	37.2	15.2	1.16E-04	5.35E-05	4.50	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_131	14.9	7.34	39.3	1088	546	57.4	57.4	37.1	15.2	1.16E-04	5.35E-05	4.50	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_132	14.9	7.34	39.1	1080	544	57.2	57.2	37.1	15.2	1.16E-04	5.34E-05	4.50	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_133	14.8	7.33	38.9	1072	543	57.0	57.0	37.0	15.2	1.15E-04	5.34E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_134	14.8	7.32	38.6	1067	541	56.8	56.8	36.9	15.2	1.15E-04	5.33E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_135	14.7	7.32	38.4	1064	539	56.6	56.6	36.8	15.2	1.15E-04	5.33E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_136	14.7	7.31	38.2	1062	538	56.4	56.4	36.8	15.2	1.14E-04	5.33E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_137	14.6	7.31	38.0	1059	536	56.2	56.2	36.7	15.1	1.14E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_138	14.6	7.30	37.8	1056	535	56.1	56.1	36.6	15.1	1.14E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_139	14.5	7.29	37.5	1051	533	55.8	55.8	36.5	15.1	1.14E-04	5.32E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_140	14.5	7.29	37.3	1045	531	55.6	55.6	36.4	15.1	1.13E-04	5.31E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_141	14.4	7.28	37.1	1040	530	55.4	55.4	36.4	15.1	1.13E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_142	14.4	7.28	36.8	1036	528	55.2	55.2	36.3	15.1	1.13E-04	5.31E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_143	14.3	7.27	36.5	1031	526	55.0	55.0	36.2	15.1	1.12E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_144	14.3	7.27	36.2	1029	526	54.8	54.8	36.1	15.1	1.12E-04	5.30E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_145	14.3	7.26	36.0	1027	525	54.5	54.5	36.0	15.1	1.12E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_146	14.2	7.26	35.8	1025	524	54.3	54.3	35.9	15.1	1.11E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_147	14.2	7.25	35.7	1024	524	54.2	54.2	35.9	15.1	1.11E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_148	14.2	7.25	35.4	1021	524	54.1	54.1	35.8	15.1	1.11E-04	5.29E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_149	17.3	7.74	49.3	1383	711	70.5	70.5	40.2	15.8	1.30E-04	5.60E-05	4.53	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_150	17.3	7.74	49.4	1383	700	70.8	70.8	40.3	15.8	1.30E-04	5.61E-05	4.54	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_151	17.2	7.74	49.3	1379	689	70.6	70.6	40.3	15.8	1.30E-04	5.60E-05	4.54	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_152	17.2	7.74	49.4	1371	677	70.6	70.6	40.3	15.8	1.30E-04	5.60E-05	4.54	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_153	17.2	7.74	49.3	1355	660	70.8	70.8	40.3	15.8	1.30E-04	5.60E-05	4.54	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_154	17.1	7.74	49.4	1360	662	71.1	71.1	40.3	15.8	1.30E-04	5.60E-05	4.54	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_155	17.1	7.74	49.4	1359	663	71.2	71.2	40.3	15.8	1.30E-04	5.60E-05	4.55	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_156	17.1	7.74	49.3	1367	663	71.4	71.4	40.3	15.8	1.30E-04	5.60E-05	4.55	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_157	17.1	7.74	49.2	1385	662	71.3	71.3	40.3	15.8	1.30E-04	5.60E-05	4.55	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_158	17.1	7.74	49.0	1401	664	71.1	71.1	40.3	15.8	1.29E-04	5.60E-05	4.55	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_159	17.1	7.73	48.8	1415	668	71.0	71.0	40.2	15.8	1.29E-04	5.60E-05	4.56	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_160	17.1	7.73	48.7	1422	673	71.3	71.3	40.2	15.8	1.29E-04	5.60E-05	4.56	1.52	0.16	6.42E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_161	17.1	7.73	48.5	1424	676	71.7	71.7	40.2	15.8	1.29E-04	5.59E-05	4.56	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_162	17.1	7.73	48.2	1433	680	72.5	72.5	40.1	15.8	1.29E-04	5.59E-05	4.56	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_163	17.1	7.73	48.3	1434	684	73.4	73.4	40.0	15.8	1.29E-04	5.59E-05	4.56	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_164	17.0	7.73	48.5	1449	687	73.4	73.4	39.9	15.8	1.29E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_165	17.0	7.72	48.5	1483	689	73.3	73.3	39.8	15.8	1.29E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_166	17.0	7.72	48.6	1521	691	73.5	73.5	39.8	15.8	1.29E-04	5.59E-05	4.58	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_167	17.0	7.72	48.6	1571	691	73.4	73.4	39.7	15.8	1.29E-04	5.58E-05	4.58	1.52	0.16	6.41E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_168	16.5	7.57	45.7	1294	662	66.3	66.3	39.1	15.5	1.25E-04	5.49E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_169	16.5	7.57	45.7	1292	652	66.2	66.2	39.1	15.5	1.25E-04	5.50E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_170	16.4	7.57	45.7	1286	643	66.0	66.0	39.2	15.5	1.25E-04	5.50E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_171	16.4	7.57	45.8	1277	635	65.9	65.9	39.2	15.5	1.25E-04	5.50E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_172	16.4	7.57	45.8	1267	628	65.8	65.8	39.2	15.5	1.25E-04	5.50E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_173	16.4	7.58	45.8	1272	619	65.8	65.8	39.2	15.5	1.25E-04	5.50E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_174	16.3	7.57	45.8	1272	615	65.6	65.6	39.2	15.5	1.25E-04	5.50E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_175	16.3	7.57	45.7	1278	618	65.8	65.8	39.2	15.5	1.25E-04	5.50E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_176	16.3	7.57	45.6	1295	620	65.7	65.7	39.2	15.5	1.25E-04	5.50E-05	4.52	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_177	16.2	7.57	45.5	1308	622	65.8	65.8	39.1	15.5	1.25E-04	5.49E-05	4.53	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_178	16.2	7.57	45.4	1321	624	66.1	66.1	39.1	15.5	1.25E-04	5.49E-05	4.53	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_179	16.2	7.57	45.3	1329	626	66.1	66.1	39.1	15.5	1.24E-04	5.49E-05	4.53	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_180	16.1	7.57	45.1	1333	627	66.1	66.1	39.0	15.5	1.24E-04	5.49E-05	4.53	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_181	16.1	7.57	45.0	1331	626	66.1	66.1	39.0	15.5	1.24E-04	5.49E-05	4.53	1.51	0.16	6.40E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_182	16.1	7.56	44.8	1323	624	66.2	66.2	39.0	15.5	1.24E-04	5.49E-05	4.53	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_183	16.1	7.56	44.6	1312	622	66.5	66.5	38.9	15.5	1.23E-04	5.49E-05	4.53	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_184	16.1	7.56	44.3	1295	618	66.4	66.4	38.9	15.5	1.23E-04	5.49E-05	4.53	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_185	16.1	7.56	44.0	1268	613	66.9	66.9	38.8	15.5	1.22E-04	5.49E-05	4.53	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_186	16.1	7.56	43.6	1258	618	66.7	66.7	38.7	15.5	1.22E-04	5.48E-05	4.53	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_187	16.1	7.55	43.6	1271	621	66.5	66.5	38.6	15.5	1.22E-04	5.48E-05	4.53	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_188	16.1	7.55	43.7	1278	624	66.5	66.5	38.5	15.5	1.22E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_189	16.1	7.55	43.8	1278	627	66.5	66.5	38.5	15.5	1.23E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_190	16.1	7.55	43.8	1269	629	66.6	66.6	38.4	15.5	1.23E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_191	16.0	7.49	43.8	1238	620	63.6	63.6	38.6	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_192	16.0	7.49	43.8	1229	612	63.6	63.6	38.6	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_193	16.0	7.50	43.8	1217	605	63.5	63.5	38.6	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_194	16.0	7.50	43.8	1219	598	63.3	63.3	38.6	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_195	15.9	7.50	43.8	1221	593	63.0	63.0	38.6	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_196	15.9	7.50	43.8	1219	595	62.8	62.8	38.6	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_197	15.9	7.50	43.8	1231	598	62.9	62.9	38.6	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_198	15.8	7.50	43.7	1247	600	62.8	62.8	38.6	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_199	15.8	7.49	43.6	1260	603	62.8	62.8	38.5	15.4	1.22E-04	5.45E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_200	15.8	7.49	43.5	1269	604	62.6	62.6	38.5	15.4	1.22E-04	5.44E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_201	15.8	7.49	43.5	1276	606	62.6	62.6	38.5	15.4	1.22E-04	5.44E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_202	15.7	7.49	43.3	1279	607	62.7	62.7	38.5	15.4	1.22E-04	5.44E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_203	15.7	7.49	43.2	1276	606	62.7	62.7	38.4	15.4	1.21E-04	5.44E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_204	15.7	7.49	43.1	1268	605	62.9	62.9	38.4	15.4	1.21E-04	5.44E-05	4.52	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_205	15.7	7.49	42.9	1255	602	62.9	62.9	38.3	15.4	1.21E-04	5.44E-05	4.52	1.51	0.16	6.38E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_206	15.7	7.49	42.7	1239	599	62.8	62.8	38.3	15.4	1.21E-04	5.44E-05	4.52	1.51	0.16	6.38E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_207	15.7	7.48	42.4	1216	594	62.8	62.8	38.2	15.4	1.20E-04	5.44E-05	4.52	1.51	0.16	6.38E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE511300_208	15.6	7.48	42.1	1194	587	62.9	62.9	38.1	15.4	1.20E-04	5.44E-05	4.51	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_209	15.6	7.48	41.8	1211	579	63.2	63.2	38.1	15.4	1.19E-04	5.44E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_210	15.6	7.48	41.4	1219	580	63.7	63.7	38.0	15.4	1.18E-04	5.43E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_211	15.6	7.48	41.1	1221	582	63.6	63.6	37.9	15.4	1.18E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_212	15.6	7.48	40.9	1216	583	63.8	63.8	37.8	15.4	1.18E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_213	15.6	7.47	40.9	1204	586	64.0	64.0	37.8	15.4	1.18E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_214	15.6	7.47	40.8	1184	593	64.0	64.0	37.7	15.4	1.18E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_001	13.6	7.19	29.6	738	479	51.6	51.6	33.9	15.0	1.03E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_002	13.6	7.18	29.6	733	479	51.3	51.3	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_003	13.5	7.18	29.3	723	473	51.2	51.2	33.8	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_004	13.7	7.19	30.5	754	495	52.0	52.0	34.1	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_005	13.6	7.18	29.9	734	485	51.4	51.4	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_006	13.8	7.20	31.1	797	505	52.1	52.1	34.1	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_007	13.8	7.19	30.9	770	502	51.9	51.9	34.1	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_008	13.8	7.19	30.7	766	500	51.8	51.8	34.0	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_009	13.7	7.19	30.6	759	497	51.7	51.7	34.0	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_010	13.6	7.18	29.4	729	476	51.2	51.2	33.8	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_011	13.7	7.18	30.1	737	488	51.4	51.4	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_012	13.8	7.20	31.3	786	508	52.4	52.4	34.2	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_013	13.6	7.19	29.9	747	483	51.7	51.7	34.0	15.0	1.03E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_014	13.6	7.18	29.8	735	482	51.4	51.4	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_015	13.8	7.21	31.1	784	505	52.5	52.5	34.2	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_016	13.8	7.20	31.2	787	507	52.4	52.4	34.2	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_017	13.6	7.17	30.0	737	488	50.9	50.9	33.8	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_018	13.6	7.17	29.6	717	480	50.9	50.9	33.8	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_019	13.6	7.17	29.7	724	483	50.9	50.9	33.8	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_020	13.5	7.17	29.4	714	478	50.8	50.8	33.7	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_021	13.7	7.18	30.4	793	489	51.2	51.2	34.0	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_022	13.7	7.18	30.3	784	491	51.1	51.1	34.0	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_023	13.6	7.17	30.1	742	490	51.0	51.0	33.8	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_024	13.6	7.17	29.9	731	485	50.9	50.9	33.8	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_025	13.7	7.18	30.3	776	492	51.1	51.1	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_026	13.7	7.18	30.3	766	493	51.2	51.2	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_027	13.5	7.17	29.3	715	475	50.8	50.8	33.7	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_028	13.7	7.18	30.3	755	493	51.1	51.1	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_029	13.7	7.18	30.3	745	492	51.1	51.1	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_030	13.7	7.18	30.2	744	491	51.0	51.0	33.9	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_031	14.2	7.27	32.4	810	501	56.2	56.2	34.8	15.1	1.06E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_032	14.0	7.23	31.7	810	513	53.7	53.7	34.5	15.0	1.06E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_033	14.0	7.24	31.8	821	504	54.9	54.9	34.6	15.1	1.05E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_034	14.0	7.23	31.8	816	516	53.5	53.5	34.5	15.0	1.06E-04	5.27E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_035	14.1	7.26	32.2	815	502	55.7	55.7	34.8	15.1	1.05E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_036	15.4	7.43	39.0	1363	551	61.8	61.8	36.9	15.3	1.13E-04	5.40E-05	4.56	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_037	13.5	7.18	29.3	718	471	51.6	51.6	33.9	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_038	13.7	7.18	30.3	748	492	51.5	51.5	33.9	15.0	1.04E-04	5.24E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_039	13.8	7.20	31.2	784	508	52.4	52.4	34.2	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_040	14.0	7.24	31.5	818	508	54.2	54.2	34.6	15.1	1.06E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_041	14.0	7.23	31.6	812	510	53.8	53.8	34.5	15.1	1.06E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_042	14.0	7.24	31.6	821	506	54.6	54.6	34.6	15.1	1.05E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_043	14.2	7.26	32.3	811	502	55.9	55.9	34.8	15.1	1.05E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_044	14.1	7.25	32.1	819	503	55.4	55.4	34.7	15.1	1.05E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_045	14.0	7.25	31.9	820	503	55.1	55.1	34.7	15.1	1.05E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_046	14.3	7.28	33.6	942	487	57.4	57.4	35.2	15.1	1.07E-04	5.31E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_047	14.5	7.30	34.2	947	497	58.1	58.1	35.3	15.2	1.08E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_048	15.0	7.38	37.4	1259	529	60.2	60.2	36.5	15.3	1.11E-04	5.37E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_049	14.7	7.31	35.2	1155	498	58.2	58.2	35.7	15.2	1.08E-04	5.32E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_050	15.0	7.36	37.1	1255	525	59.6	59.6	36.3	15.3	1.11E-04	5.36E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_051	14.0	7.22	32.0	819	519	53.5	53.5	34.4	15.0	1.06E-04	5.27E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_052	14.0	7.22	31.9	828	518	53.3	53.3	34.4	15.0	1.06E-04	5.27E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_053	14.0	7.22	31.8	833	516	53.1	53.1	34.4	15.0	1.06E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_054	14.0	7.21	31.6	836	513	52.9	52.9	34.4	15.0	1.05E-04	5.26E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_055	13.9	7.21	31.6	838	509	52.7	52.7	34.4	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_056	13.9	7.21	31.5	844	505	52.5	52.5	34.3	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_057	13.8	7.20	31.1	838	491	52.1	52.1	34.2	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_058	13.9	7.21	31.4	845	500	52.2	52.2	34.3	15.0	1.04E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_059	13.8	7.20	31.3	843	496	52.2	52.2	34.3	15.0	1.04E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_060	14.9	7.34	36.0	1209	534	60.7	60.7	36.1	15.2	1.09E-04	5.35E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_061	14.8	7.34	35.4	1216	539	59.9	59.9	36.0	15.2	1.09E-04	5.34E-05	4.55	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_062	14.8	7.33	35.3	1229	540	59.6	59.6	35.9	15.2	1.09E-04	5.34E-05	4.55	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_063	14.8	7.34	35.7	1215	537	60.4	60.4	36.0	15.2	1.09E-04	5.34E-05	4.55	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_064	14.8	7.33	35.6	1177	510	58.9	58.9	35.8	15.2	1.09E-04	5.34E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_065	15.2	7.39	37.9	1301	562	62.3	62.3	36.8	15.3	1.12E-04	5.38E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_066	14.6	7.30	34.4	1104	494	57.7	57.7	35.4	15.2	1.07E-04	5.32E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_067	14.3	7.27	33.1	940	481	56.8	56.8	35.1	15.1	1.06E-04	5.30E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_068	15.2	7.40	38.1	1297	560	62.7	62.7	36.8	15.3	1.12E-04	5.38E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_069	14.9	7.35	36.7	1240	520	59.4	59.4	36.2	15.2	1.10E-04	5.35E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_070	14.7	7.32	34.9	1128	505	58.4	58.4	35.6	15.2	1.08E-04	5.33E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_071	15.0	7.37	37.2	1231	536	61.0	61.0	36.5	15.3	1.11E-04	5.36E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_072	14.9	7.35	36.4	1199	516	59.5	59.5	36.2	15.2	1.10E-04	5.35E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_073	14.8	7.34	36.3	1204	512	58.7	58.7	36.1	15.2	1.10E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_074	14.3	7.28	33.4	941	484	57.1	57.1	35.1	15.1	1.07E-04	5.31E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_075	14.4	7.29	33.9	944	493	57.8	57.8	35.2	15.1	1.08E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_076	15.2	7.41	38.3	1286	542	62.6	62.6	36.8	15.3	1.13E-04	5.39E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_077	14.6	7.31	34.4	1058	500	58.5	58.5	35.4	15.2	1.08E-04	5.33E-05	4.52	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_078	14.5	7.29	33.8	1045	490	57.5	57.5	35.3	15.1	1.07E-04	5.31E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_079	14.4	7.29	33.8	944	490	57.6	57.6	35.2	15.1	1.07E-04	5.31E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_080	15.2	7.40	38.3	1282	556	62.5	62.5	36.9	15.3	1.12E-04	5.38E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_081	14.8	7.33	36.0	1197	507	58.5	58.5	36.0	15.2	1.09E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_082	14.7	7.32	35.7	1182	503	58.4	58.4	35.9	15.2	1.09E-04	5.33E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_083	14.9	7.34	36.2	1215	515	59.1	59.1	36.0	15.2	1.09E-04	5.35E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_084	14.9	7.36	36.8	1216	524	60.6	60.6	36.4	15.2	1.10E-04	5.36E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_085	15.2	7.40	38.3	1280	550	62.1	62.1	36.9	15.3	1.12E-04	5.38E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_086	14.6	7.30	35.1	1141	495	57.5	57.5	35.7	15.2	1.08E-04	5.32E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_087	13.4	7.15	28.6	777	444	50.4	50.4	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_088	13.3	7.14	28.4	762	441	50.1	50.1	33.5	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_089	13.3	7.14	28.3	757	436	50.1	50.1	33.5	14.9	1.00E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_090	13.4	7.15	29.0	761	452	50.5	50.5	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_091	13.3	7.14	28.2	753	436	50.0	50.0	33.5	14.9	1.00E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_092	13.5	7.16	29.3	744	471	50.0	50.0	33.7	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_093	13.3	7.14	28.5	764	438	50.4	50.4	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_094	13.5	7.16	29.4	818	453	51.2	51.2	33.8	15.0	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_095	13.2	7.13	28.0	741	433	49.8	49.8	33.4	14.9	9.99E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_096	13.4	7.16	29.4	767	453	51.0	51.0	33.8	14.9	1.02E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_097	13.5	7.16	29.1	738	472	50.0	50.0	33.6	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_098	13.4	7.15	29.0	751	454	50.4	50.4	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_099	13.8	7.20	31.2	790	507	52.3	52.3	34.1	15.0	1.05E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_100	13.8	7.19	30.9	795	503	51.8	51.8	34.1	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_101	13.6	7.18	29.4	729	475	51.6	51.6	33.9	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_102	13.7	7.19	30.1	752	488	51.7	51.7	34.0	15.0	1.03E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_103	13.3	7.14	28.2	753	439	50.0	50.0	33.5	14.9	1.00E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_104	13.3	7.14	28.4	765	442	50.2	50.2	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_105	13.5	7.16	29.4	768	465	50.6	50.6	33.7	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_106	13.5	7.16	29.6	789	454	51.2	51.2	33.9	14.9	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_107	13.5	7.15	29.1	733	473	50.0	50.0	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_108	13.4	7.15	28.6	753	447	50.2	50.2	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_109	13.5	7.16	29.8	785	461	51.2	51.2	33.9	14.9	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_110	13.5	7.16	29.4	816	454	51.1	51.1	33.8	14.9	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_111	13.3	7.15	28.6	770	440	50.6	50.6	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_112	13.4	7.16	29.2	774	448	50.9	50.9	33.8	14.9	1.02E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_113	13.3	7.14	28.6	767	439	50.5	50.5	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_114	13.5	7.16	29.4	796	458	51.0	51.0	33.8	14.9	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_115	13.5	7.16	29.4	816	451	51.2	51.2	33.8	15.0	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_116	13.4	7.15	28.7	773	440	50.7	50.7	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_117	13.3	7.14	28.4	761	437	50.2	50.2	33.5	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_118	13.5	7.16	29.4	770	463	50.7	50.7	33.7	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_119	13.5	7.16	29.4	770	461	50.8	50.8	33.7	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_120	13.5	7.16	29.2	742	472	50.0	50.0	33.7	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_121	13.4	7.15	29.0	791	444	50.9	50.9	33.7	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_122	13.4	7.16	29.0	784	443	50.9	50.9	33.7	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_123	13.4	7.15	29.0	795	445	50.9	50.9	33.7	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_124	13.4	7.15	28.9	792	448	50.7	50.7	33.7	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_125	13.3	7.14	28.3	759	441	50.1	50.1	33.5	14.9	1.00E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_126	13.5	7.16	29.4	799	450	51.2	51.2	33.9	14.9	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_127	13.4	7.15	28.6	767	445	50.3	50.3	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_128	13.4	7.15	28.9	773	451	50.6	50.6	33.7	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_129	13.5	7.16	29.4	812	450	51.2	51.2	33.9	15.0	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_130	13.5	7.16	29.4	780	460	50.9	50.9	33.8	14.9	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_131	13.3	7.14	28.1	748	434	49.9	49.9	33.5	14.9	1.00E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_132	13.4	7.15	28.6	781	442	50.5	50.5	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_133	13.5	7.16	29.3	807	456	51.1	51.1	33.8	14.9	1.02E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_134	13.4	7.15	28.9	796	446	50.8	50.8	33.7	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_135	13.4	7.15	28.9	786	449	50.7	50.7	33.7	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_136	13.4	7.15	28.9	739	460	49.8	49.8	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_137	15.0	7.37	36.4	1177	522	60.8	60.8	36.0	15.3	1.11E-04	5.36E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_138	14.9	7.36	36.2	1124	517	60.4	60.4	35.9	15.2	1.11E-04	5.36E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_139	14.8	7.35	35.8	1067	512	60.1	60.1	35.8	15.2	1.10E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_140	14.7	7.34	35.4	1006	512	59.6	59.6	35.6	15.2	1.10E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_141	14.6	7.33	35.1	986	512	59.5	59.5	35.5	15.2	1.09E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_142	14.5	7.31	34.1	960	511	58.7	58.7	35.3	15.2	1.08E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_143	14.6	7.32	34.6	977	511	59.2	59.2	35.4	15.2	1.09E-04	5.33E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_144	14.5	7.31	33.7	935	510	58.4	58.4	35.2	15.2	1.07E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_145	14.4	7.30	33.3	906	509	58.3	58.3	35.1	15.2	1.07E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_146	14.3	7.29	32.8	863	507	57.8	57.8	35.0	15.1	1.06E-04	5.31E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_147	14.4	7.30	32.8	882	508	58.0	58.0	35.0	15.1	1.06E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_148	14.3	7.28	32.7	838	506	57.5	57.5	34.9	15.1	1.06E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_149	15.2	7.39	38.0	1363	563	63.8	63.8	36.6	15.3	1.12E-04	5.37E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_150	15.2	7.39	37.8	1382	567	62.8	62.8	36.6	15.3	1.12E-04	5.38E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_151	15.2	7.39	37.9	1373	565	63.3	63.3	36.6	15.3	1.12E-04	5.38E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_152	15.2	7.40	37.7	1384	568	62.2	62.2	36.6	15.3	1.12E-04	5.38E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_153	15.2	7.38	38.1	1313	561	63.4	63.4	36.7	15.3	1.13E-04	5.37E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_154	15.2	7.39	38.1	1334	560	63.5	63.5	36.7	15.3	1.13E-04	5.37E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_155	15.2	7.38	38.1	1271	562	62.5	62.5	36.7	15.3	1.13E-04	5.37E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_156	15.2	7.38	38.1	1292	561	63.0	63.0	36.7	15.3	1.13E-04	5.37E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_157	15.2	7.39	38.1	1351	561	63.4	63.4	36.6	15.3	1.13E-04	5.37E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_158	15.2	7.37	38.1	1265	562	62.4	62.4	36.7	15.3	1.13E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_159	14.1	7.24	32.3	874	523	53.7	53.7	34.6	15.1	1.06E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_160	14.1	7.23	32.3	881	516	53.4	53.4	34.6	15.0	1.06E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_161	14.0	7.22	32.0	876	504	53.2	53.2	34.5	15.0	1.05E-04	5.27E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_162	14.0	7.23	32.2	882	512	53.2	53.2	34.6	15.0	1.06E-04	5.27E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_163	13.9	7.21	31.5	899	486	52.9	52.9	34.4	15.0	1.05E-04	5.26E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_164	13.8	7.21	31.2	894	480	52.6	52.6	34.3	15.0	1.05E-04	5.26E-05	4.48	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_165	14.1	7.23	32.3	879	520	53.5	53.5	34.6	15.0	1.06E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_166	13.9	7.22	31.7	891	494	53.1	53.1	34.5	15.0	1.05E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_167	14.1	7.24	32.5	871	526	54.0	54.0	34.6	15.1	1.07E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_168	13.9	7.21	31.4	898	484	52.8	52.8	34.4	15.0	1.05E-04	5.26E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_169	14.0	7.23	32.1	880	509	53.1	53.1	34.6	15.0	1.06E-04	5.27E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_170	13.9	7.22	31.6	896	491	53.1	53.1	34.5	15.0	1.05E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_171	13.8	7.21	31.3	897	482	52.7	52.7	34.4	15.0	1.05E-04	5.26E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_172	13.9	7.22	31.9	882	499	53.1	53.1	34.5	15.0	1.05E-04	5.27E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_173	13.6	7.16	29.7	727	483	50.7	50.7	33.7	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_174	13.6	7.16	29.6	724	482	50.7	50.7	33.7	14.9	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_175	13.6	7.17	29.8	730	486	50.7	50.7	33.8	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_176	13.6	7.17	30.0	785	479	50.9	50.9	33.9	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_177	13.6	7.17	30.0	778	480	50.8	50.8	33.9	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_178	13.6	7.17	29.9	771	482	50.7	50.7	33.8	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_179	13.6	7.17	29.9	768	483	50.8	50.8	33.8	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_180	13.6	7.17	29.8	758	486	50.7	50.7	33.8	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_181	13.6	7.17	29.9	751	486	50.7	50.7	33.8	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_182	13.6	7.17	29.9	744	486	50.7	50.7	33.8	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_183	13.6	7.17	29.9	737	486	50.7	50.7	33.8	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_184	13.6	7.17	29.8	729	485	50.7	50.7	33.7	15.0	1.03E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_185	13.6	7.17	29.8	764	485	50.7	50.7	33.8	15.0	1.03E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_186	14.2	7.28	32.6	871	519	56.5	56.5	34.9	15.1	1.07E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_187	14.3	7.28	32.7	873	519	56.5	56.5	35.0	15.1	1.07E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_188	14.2	7.27	32.4	866	521	56.2	56.2	34.9	15.1	1.07E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_189	14.2	7.27	32.4	860	522	55.9	55.9	34.9	15.1	1.07E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_190	14.2	7.26	32.5	848	524	55.5	55.5	34.8	15.1	1.07E-04	5.30E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_191	14.2	7.26	32.6	850	526	55.3	55.3	34.8	15.1	1.07E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_192	14.2	7.26	32.6	853	528	54.7	54.7	34.8	15.1	1.07E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_193	14.2	7.25	32.7	856	530	54.6	54.6	34.7	15.1	1.07E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_194	14.2	7.25	32.8	855	531	54.6	54.6	34.7	15.1	1.07E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_195	14.2	7.25	32.8	852	532	54.4	54.4	34.7	15.1	1.07E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_196	15.4	7.43	38.4	1315	549	63.1	63.1	36.5	15.4	1.14E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_197	15.2	7.41	37.7	1209	539	62.5	62.5	36.3	15.3	1.13E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_198	15.1	7.40	37.2	1150	534	62.3	62.3	36.2	15.3	1.12E-04	5.38E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_199	15.3	7.42	38.0	1254	543	62.9	62.9	36.4	15.3	1.13E-04	5.40E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_200	15.0	7.39	36.8	1104	531	61.7	61.7	36.1	15.3	1.12E-04	5.37E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_201	15.0	7.38	36.4	1066	529	61.5	61.5	36.0	15.3	1.11E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_202	14.8	7.36	35.3	1025	528	61.0	61.0	35.8	15.2	1.10E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_203	14.8	7.36	35.8	1034	529	61.2	61.2	35.9	15.2	1.10E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_204	14.7	7.35	34.9	1012	527	60.4	60.4	35.7	15.2	1.09E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_205	14.7	7.34	34.5	997	527	60.2	60.2	35.6	15.2	1.09E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_206	14.6	7.34	34.1	967	526	60.1	60.1	35.5	15.2	1.08E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_207	14.6	7.33	34.0	937	526	59.8	59.8	35.5	15.2	1.08E-04	5.34E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_208	14.5	7.32	33.8	913	524	59.4	59.4	35.3	15.2	1.08E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_209	14.5	7.32	33.6	890	522	59.0	59.0	35.3	15.2	1.07E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_210	14.5	7.31	33.4	862	519	58.6	58.6	35.2	15.2	1.07E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_211	14.4	7.30	33.3	869	517	58.0	58.0	35.1	15.2	1.07E-04	5.32E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_212	15.4	7.42	38.6	1347	546	61.6	61.6	36.7	15.3	1.13E-04	5.39E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_213	15.2	7.39	37.4	1277	534	61.1	61.1	36.3	15.3	1.12E-04	5.38E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_214	15.3	7.40	38.0	1315	539	61.4	61.4	36.5	15.3	1.12E-04	5.38E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_215	15.1	7.38	36.7	1234	528	60.9	60.9	36.1	15.3	1.11E-04	5.37E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_216	13.8	7.20	30.8	770	500	52.1	52.1	34.1	15.0	1.04E-04	5.25E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_217	13.6	7.18	30.2	853	465	51.8	51.8	34.0	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_218	13.7	7.19	30.7	876	472	52.1	52.1	34.2	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_219	13.7	7.19	30.6	826	481	51.9	51.9	34.1	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_220	13.6	7.18	30.1	849	463	51.8	51.8	34.0	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_221	13.6	7.18	30.1	850	462	51.8	51.8	34.1	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_222	13.7	7.19	30.6	822	483	51.8	51.8	34.1	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_223	13.6	7.18	30.0	816	467	51.4	51.4	33.9	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_224	13.7	7.20	30.7	879	471	52.2	52.2	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_225	13.6	7.18	30.3	844	462	51.9	51.9	34.2	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_226	13.6	7.17	29.9	817	466	51.4	51.4	33.9	15.0	1.02E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_227	13.6	7.18	30.0	815	469	51.5	51.5	34.0	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_228	13.7	7.19	30.4	857	472	52.0	52.0	34.1	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_229	13.7	7.19	30.6	850	477	52.1	52.1	34.1	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_230	13.6	7.18	30.0	846	464	51.7	51.7	34.0	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_231	13.7	7.20	30.8	879	470	52.2	52.2	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_232	13.7	7.18	30.2	814	472	51.6	51.6	34.0	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_233	13.6	7.18	30.2	849	461	51.8	51.8	34.1	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_234	13.6	7.18	30.2	855	464	51.9	51.9	34.1	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_235	13.7	7.19	30.5	838	476	51.9	51.9	34.1	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_236	13.7	7.19	30.6	874	469	52.1	52.1	34.2	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_237	13.7	7.19	30.6	872	468	52.1	52.1	34.3	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_238	13.7	7.19	30.6	861	475	52.1	52.1	34.2	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_239	13.7	7.19	30.5	817	480	51.7	51.7	34.1	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_240	13.7	7.19	30.4	848	474	52.0	52.0	34.1	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_241	13.7	7.19	30.5	866	471	52.0	52.0	34.1	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_242	13.7	7.19	30.6	869	474	52.1	52.1	34.2	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_243	13.7	7.19	30.6	873	470	52.0	52.0	34.2	15.0	1.04E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_244	13.6	7.18	30.1	849	466	51.8	51.8	34.0	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_245	13.7	7.19	30.5	827	478	51.9	51.9	34.1	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_246	13.6	7.18	30.1	814	470	51.5	51.5	34.0	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_247	13.6	7.19	30.3	851	462	52.0	52.0	34.2	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_248	13.6	7.18	30.3	855	463	51.9	51.9	34.1	15.0	1.03E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_249	13.7	7.19	30.6	838	479	52.0	52.0	34.1	15.0	1.03E-04	5.25E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_250	13.5	7.16	29.5	719	480	50.7	50.7	33.7	14.9	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_251	13.5	7.16	29.4	714	478	50.7	50.7	33.7	14.9	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_252	13.5	7.16	29.3	707	476	50.6	50.6	33.7	14.9	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_265	13.1	7.12	27.4	666	433	48.8	48.8	33.3	14.9	9.85E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_266	13.1	7.12	27.5	674	433	48.8	48.8	33.3	14.9	9.86E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_267	13.1	7.12	27.5	677	432	48.8	48.8	33.3	14.9	9.86E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_268	13.1	7.12	27.5	674	431	48.8	48.8	33.3	14.9	9.87E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_269	13.1	7.12	27.4	684	430	48.9	48.9	33.3	14.9	9.88E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_270	13.1	7.12	27.4	697	428	49.0	49.0	33.3	14.9	9.89E-05	5.20E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_271	13.1	7.12	27.5	709	426	49.1	49.1	33.3	14.9	9.91E-05	5.20E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_272	13.1	7.13	27.6	714	427	49.2	49.2	33.3	14.9	9.92E-05	5.20E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_273	13.2	7.13	27.7	721	429	49.3	49.3	33.3	14.9	9.93E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_274	13.2	7.13	27.8	727	430	49.5	49.5	33.3	14.9	9.95E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_275	13.2	7.13	27.6	673	440	49.0	49.0	33.3	14.9	9.89E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_276	13.2	7.13	27.7	681	438	49.0	49.0	33.3	14.9	9.89E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_277	13.2	7.13	27.7	685	436	49.0	49.0	33.3	14.9	9.89E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_278	13.2	7.13	27.7	687	435	49.0	49.0	33.3	14.9	9.89E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_279	13.2	7.13	27.7	685	433	48.9	48.9	33.3	14.9	9.90E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_280	13.2	7.13	27.6	700	432	49.1	49.1	33.3	14.9	9.92E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_281	13.2	7.13	27.6	715	431	49.3	49.3	33.3	14.9	9.93E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_282	13.4	7.14	28.5	714	461	49.4	49.4	33.5	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_283	13.4	7.14	28.5	711	458	49.4	49.4	33.4	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_284	13.3	7.14	28.4	706	456	49.3	49.3	33.4	14.9	9.99E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_285	13.3	7.14	28.3	703	454	49.2	49.2	33.4	14.9	9.98E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_286	13.3	7.14	28.2	699	452	49.2	49.2	33.4	14.9	9.97E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_287	13.3	7.13	28.1	694	450	49.2	49.2	33.3	14.9	9.96E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_288	13.3	7.13	28.0	689	447	49.2	49.2	33.3	14.9	9.94E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_289	13.3	7.13	27.9	685	446	49.1	49.1	33.3	14.9	9.93E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_290	13.4	7.14	28.7	734	454	49.7	49.7	33.5	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_291	13.4	7.14	28.6	730	452	49.6	49.6	33.5	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_292	13.3	7.14	28.5	725	449	49.5	49.5	33.4	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_293	13.3	7.14	28.4	722	448	49.5	49.5	33.4	14.9	1.00E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_294	13.3	7.14	28.3	720	447	49.4	49.4	33.4	14.9	9.99E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_295	13.3	7.14	28.3	718	446	49.4	49.4	33.4	14.9	9.98E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_296	13.3	7.14	28.2	715	445	49.3	49.3	33.4	14.9	9.97E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_297	13.3	7.13	28.2	713	444	49.3	49.3	33.4	14.9	9.96E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_298	13.3	7.13	28.1	707	442	49.2	49.2	33.3	14.9	9.95E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_299	13.2	7.13	28.0	701	440	49.2	49.2	33.3	14.9	9.93E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_300	13.3	7.14	28.1	747	438	49.9	49.9	33.5	14.9	1.00E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_301	13.3	7.14	28.0	742	437	49.8	49.8	33.4	14.9	9.99E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_302	13.3	7.13	28.0	739	436	49.7	49.7	33.4	14.9	9.98E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_303	13.2	7.13	27.9	733	435	49.6	49.6	33.4	14.9	9.97E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_304	13.4	7.15	28.9	733	462	49.7	49.7	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_305	13.4	7.15	28.9	728	464	49.7	49.7	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_306	13.4	7.15	28.8	725	465	49.7	49.7	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_307	13.4	7.15	28.7	720	467	49.7	49.7	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_308	13.4	7.15	28.7	714	468	49.7	49.7	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_309	13.4	7.15	28.7	706	468	49.8	49.8	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_310	13.4	7.15	28.7	697	468	49.8	49.8	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_311	13.4	7.14	28.7	690	468	49.8	49.8	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_312	13.5	7.15	29.0	727	473	50.0	50.0	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_313	13.5	7.15	29.0	722	474	50.0	50.0	33.6	14.9	1.02E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_314	13.5	7.15	29.1	713	474	50.1	50.1	33.6	14.9	1.02E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_315	13.5	7.15	29.1	705	474	50.1	50.1	33.6	14.9	1.02E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_316	13.5	7.15	29.1	702	474	50.1	50.1	33.6	14.9	1.02E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511400_317	13.5	7.15	29.0	703	473	50.1	50.1	33.6	14.9	1.02E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_318	13.5	7.15	29.0	702	472	50.1	50.1	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511400_319	13.4	7.15	28.9	700	471	50.1	50.1	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_001	13.4	7.17	28.8	680	453	52.2	52.2	33.7	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_002	14.0	7.21	31.9	966	475	55.3	55.3	34.9	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_003	14.0	7.21	32.0	968	470	54.6	54.6	34.9	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_004	14.0	7.21	32.1	967	465	53.9	53.9	34.9	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_005	14.0	7.20	32.1	962	461	54.1	54.1	34.8	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_006	14.0	7.20	32.1	966	459	54.0	54.0	34.8	15.0	1.04E-04	5.25E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_007	14.0	7.20	32.0	964	457	54.0	54.0	34.8	15.0	1.04E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_008	14.0	7.20	31.8	956	454	54.0	54.0	34.7	15.0	1.04E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_009	14.0	7.19	31.6	944	451	53.9	53.9	34.6	15.0	1.03E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_010	14.1	7.21	31.6	1009	490	55.8	55.8	34.8	15.0	1.04E-04	5.26E-05	4.52	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_011	14.1	7.21	31.8	983	481	55.7	55.7	34.9	15.0	1.04E-04	5.26E-05	4.52	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_012	14.1	7.23	33.3	1095	507	56.4	56.4	35.1	15.1	1.06E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_013	14.1	7.22	33.0	1093	506	56.3	56.3	35.0	15.0	1.06E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_014	14.1	7.22	32.5	1082	505	56.1	56.1	34.8	15.0	1.05E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_015	14.1	7.22	32.1	1063	502	56.0	56.0	34.8	15.0	1.04E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_016	14.1	7.22	31.8	1038	499	55.9	55.9	34.8	15.0	1.04E-04	5.27E-05	4.52	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_017	14.0	7.20	32.1	961	461	53.8	53.8	34.9	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_018	14.0	7.20	32.2	953	461	54.0	54.0	34.9	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_019	13.6	7.18	29.6	768	444	53.1	53.1	34.1	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_020	14.2	7.23	33.2	1032	469	55.1	55.1	35.1	15.1	1.05E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_021	14.1	7.22	32.2	975	461	55.2	55.2	34.8	15.0	1.04E-04	5.27E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_022	14.3	7.26	33.4	1134	516	57.4	57.4	35.2	15.1	1.06E-04	5.30E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_023	14.3	7.24	33.2	1030	477	55.4	55.4	35.2	15.1	1.06E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_024	14.2	7.24	33.3	1028	471	55.3	55.3	35.2	15.1	1.06E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_025	13.5	7.17	29.1	716	470	51.1	51.1	33.8	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_026	13.4	7.16	28.6	664	451	51.0	51.0	33.7	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_027	13.3	7.16	28.6	657	448	50.9	50.9	33.7	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_028	13.4	7.17	28.8	653	451	51.3	51.3	33.7	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_029	13.4	7.17	29.0	677	455	51.4	51.4	33.8	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_030	13.5	7.18	29.0	685	458	51.5	51.5	33.8	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_031	13.5	7.17	28.9	700	464	51.0	51.0	33.8	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_032	13.5	7.17	29.2	729	444	52.4	52.4	33.8	15.0	1.00E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_033	13.4	7.17	28.8	664	451	51.4	51.4	33.8	15.0	1.00E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_034	13.4	7.16	28.7	670	453	51.1	51.1	33.7	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_035	13.4	7.17	28.9	692	461	51.1	51.1	33.7	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_036	13.4	7.17	28.9	670	453	51.4	51.4	33.8	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_037	13.6	7.18	29.6	767	444	53.0	53.0	34.0	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_038	13.5	7.17	29.0	711	444	52.4	52.4	33.8	15.0	1.00E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_039	13.5	7.17	28.9	701	444	52.3	52.3	33.7	15.0	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_040	13.4	7.17	28.8	659	451	51.4	51.4	33.8	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_041	13.5	7.17	29.1	716	444	52.4	52.4	33.8	15.0	1.00E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_042	13.5	7.18	29.5	765	444	52.8	52.8	34.0	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_043	13.5	7.18	29.4	761	443	52.6	52.6	33.9	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_044	13.5	7.16	28.9	706	467	50.6	50.6	33.7	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_045	14.9	7.25	37.6	1131	548	59.0	59.0	36.7	15.1	1.12E-04	5.29E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_046	14.6	7.24	34.4	1066	526	57.2	57.2	35.5	15.1	1.08E-04	5.28E-05	4.52	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_047	14.5	7.23	35.3	1124	540	56.8	56.8	35.8	15.1	1.09E-04	5.28E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_048	14.5	7.23	35.1	1111	535	56.7	56.7	35.7	15.1	1.08E-04	5.27E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_049	13.5	7.17	29.2	713	472	50.7	50.7	33.7	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_050	13.5	7.16	29.0	710	470	50.7	50.7	33.7	15.0	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_051	14.6	7.25	34.7	1070	527	57.3	57.3	35.6	15.1	1.08E-04	5.28E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_052	14.7	7.26	36.1	1162	554	57.8	57.8	36.0	15.1	1.10E-04	5.29E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_053	14.6	7.25	35.0	1099	532	57.3	57.3	35.7	15.1	1.08E-04	5.28E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_054	13.3	7.16	28.7	651	453	51.2	51.2	33.7	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_055	14.8	7.25	36.7	1120	549	58.7	58.7	36.4	15.1	1.10E-04	5.28E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_056	14.0	7.22	31.5	916	458	55.0	55.0	34.6	15.0	1.03E-04	5.27E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_057	13.9	7.21	31.0	882	456	54.7	54.7	34.5	15.0	1.03E-04	5.26E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_058	14.3	7.26	32.7	1081	506	57.3	57.3	35.1	15.1	1.05E-04	5.29E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_059	14.4	7.27	34.7	1179	523	58.7	58.7	35.5	15.1	1.08E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_060	14.4	7.27	34.2	1175	522	57.9	57.9	35.4	15.1	1.07E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_061	13.5	7.17	29.3	745	444	52.5	52.5	33.8	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_062	13.4	7.16	28.7	681	444	52.1	52.1	33.7	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_063	13.5	7.18	29.1	695	463	51.5	51.5	33.8	15.0	1.01E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_064	13.4	7.17	28.8	684	458	51.1	51.1	33.7	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_065	14.7	7.31	35.6	1248	537	59.8	59.8	35.9	15.2	1.09E-04	5.33E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_066	14.6	7.30	35.3	1222	531	59.3	59.3	35.7	15.2	1.09E-04	5.32E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_067	14.7	7.33	35.5	1260	542	59.9	59.9	35.8	15.2	1.09E-04	5.34E-05	4.55	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_068	14.7	7.32	35.7	1259	539	59.9	59.9	35.9	15.2	1.09E-04	5.33E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_069	14.7	7.32	35.7	1266	541	60.0	60.0	35.9	15.2	1.09E-04	5.33E-05	4.55	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_070	14.8	7.33	35.4	1247	541	59.6	59.6	35.8	15.2	1.09E-04	5.34E-05	4.55	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_071	14.2	7.25	32.4	930	471	56.1	56.1	34.8	15.1	1.05E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_072	14.5	7.28	33.6	1109	509	58.3	58.3	35.4	15.1	1.06E-04	5.31E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_073	14.3	7.25	33.2	1036	473	56.1	56.1	35.1	15.1	1.05E-04	5.29E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_074	14.4	7.27	33.7	1068	481	56.8	56.8	35.2	15.1	1.06E-04	5.30E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_075	14.4	7.27	34.0	1071	485	56.4	56.4	35.5	15.1	1.07E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_076	14.1	7.24	31.8	923	466	55.5	55.5	34.7	15.1	1.04E-04	5.28E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_077	14.4	7.26	34.0	1080	480	56.2	56.2	35.4	15.1	1.06E-04	5.29E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_078	14.3	7.25	33.8	1075	478	56.2	56.2	35.3	15.1	1.06E-04	5.29E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_079	14.6	7.30	35.0	1121	495	57.4	57.4	35.7	15.2	1.08E-04	5.32E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_080	14.1	7.24	31.9	925	467	55.7	55.7	34.7	15.1	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_081	14.4	7.27	33.5	1092	505	58.0	58.0	35.3	15.1	1.06E-04	5.30E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_082	14.6	7.29	34.8	1113	494	57.6	57.6	35.7	15.2	1.08E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_083	14.4	7.26	34.1	1074	481	56.2	56.2	35.4	15.1	1.07E-04	5.30E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_084	14.5	7.29	34.2	1101	504	58.1	58.1	35.6	15.1	1.07E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_085	14.4	7.27	34.2	1099	484	56.9	56.9	35.4	15.1	1.07E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_086	14.2	7.26	32.6	934	474	56.2	56.2	34.9	15.1	1.05E-04	5.29E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_087	14.5	7.29	34.6	1113	497	58.0	58.0	35.7	15.1	1.07E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_088	14.2	7.24	32.8	1005	471	55.9	55.9	34.9	15.1	1.05E-04	5.28E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_089	14.1	7.24	32.1	927	469	55.9	55.9	34.8	15.1	1.05E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_090	14.5	7.29	33.9	1108	508	58.3	58.3	35.5	15.1	1.07E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_091	14.5	7.29	34.4	1109	500	58.2	58.2	35.6	15.1	1.07E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_092	14.3	7.26	33.1	1025	477	56.5	56.5	35.0	15.1	1.06E-04	5.29E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_093	14.6	7.31	35.5	1237	534	59.7	59.7	35.8	15.2	1.09E-04	5.32E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_094	14.7	7.33	35.6	1268	542	60.1	60.1	35.9	15.2	1.09E-04	5.34E-05	4.55	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_095	14.6	7.29	35.6	1139	531	59.2	59.2	35.9	15.1	1.09E-04	5.31E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_096	14.8	7.29	36.0	1147	540	58.6	58.6	36.1	15.2	1.10E-04	5.31E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_097	14.3	7.25	32.8	1063	499	57.3	57.3	35.2	15.1	1.05E-04	5.29E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_098	14.3	7.25	33.1	1036	484	56.2	56.2	35.2	15.1	1.06E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_099	14.2	7.23	33.0	1028	467	55.2	55.2	35.1	15.1	1.05E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_100	14.2	7.23	32.8	1016	464	55.2	55.2	35.0	15.1	1.05E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_101	14.3	7.26	33.1	1097	512	57.3	57.3	35.1	15.1	1.06E-04	5.29E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_102	14.0	7.22	31.9	947	460	55.0	55.0	34.7	15.0	1.04E-04	5.27E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_103	14.7	7.29	35.7	1141	536	58.8	58.8	36.0	15.2	1.10E-04	5.31E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_104	14.6	7.28	35.4	1160	526	59.3	59.3	35.8	15.1	1.09E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_105	14.3	7.27	33.8	1161	520	57.6	57.6	35.3	15.1	1.07E-04	5.30E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_106	14.3	7.25	33.0	1036	491	56.8	56.8	35.2	15.1	1.05E-04	5.29E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_107	14.1	7.23	32.5	999	463	55.2	55.2	34.9	15.0	1.05E-04	5.27E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_108	14.5	7.28	35.1	1174	523	59.5	59.5	35.7	15.1	1.08E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_109	14.1	7.23	31.7	924	465	55.4	55.4	34.7	15.1	1.04E-04	5.28E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_110	14.3	7.25	33.5	1060	476	56.2	56.2	35.2	15.1	1.06E-04	5.29E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_111	14.8	7.26	36.8	1141	558	59.3	59.3	36.4	15.1	1.10E-04	5.29E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_112	14.7	7.25	35.3	1123	538	57.5	57.5	35.8	15.1	1.09E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_113	14.7	7.25	35.6	1140	542	57.5	57.5	35.9	15.1	1.09E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_114	14.6	7.24	35.6	1121	547	58.1	58.1	35.9	15.1	1.09E-04	5.28E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_115	14.6	7.23	35.5	1128	546	57.1	57.1	35.8	15.1	1.09E-04	5.28E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_116	15.1	7.27	39.1	1154	559	60.2	60.2	37.2	15.1	1.13E-04	5.30E-05	4.54	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_117	14.9	7.27	37.6	1149	559	59.7	59.7	36.7	15.1	1.12E-04	5.30E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_118	15.0	7.27	38.3	1152	559	59.9	59.9	37.0	15.1	1.12E-04	5.30E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_119	14.7	7.26	36.2	1151	557	59.0	59.0	36.1	15.1	1.10E-04	5.29E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_120	14.6	7.24	35.6	1108	548	58.4	58.4	35.9	15.1	1.09E-04	5.28E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_121	14.7	7.25	35.9	1160	551	58.1	58.1	36.0	15.1	1.10E-04	5.29E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_122	13.5	7.17	29.2	737	444	52.4	52.4	33.8	15.0	1.00E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_123	14.7	7.26	36.1	1159	556	58.4	58.4	36.0	15.1	1.10E-04	5.29E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_124	14.7	7.25	35.8	1153	547	57.7	57.7	35.9	15.1	1.09E-04	5.29E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_125	14.5	7.23	35.4	1130	543	56.9	56.9	35.8	15.1	1.09E-04	5.28E-05	4.54	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_126	14.7	7.24	35.9	1117	549	58.6	58.6	36.1	15.1	1.09E-04	5.28E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_127	14.5	7.23	34.8	1090	529	56.8	56.8	35.6	15.1	1.08E-04	5.27E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_128	13.7	7.18	29.9	786	443	53.2	53.2	34.2	15.0	1.01E-04	5.24E-05	4.49	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_129	13.5	7.17	29.3	753	444	52.6	52.6	33.9	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_130	13.6	7.18	29.7	767	444	53.1	53.1	34.1	15.0	1.01E-04	5.24E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_131	13.5	7.17	28.8	694	444	52.2	52.2	33.7	15.0	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_132	13.5	7.18	29.2	706	467	51.6	51.6	33.8	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_133	13.5	7.17	29.0	708	467	51.1	51.1	33.8	15.0	1.02E-04	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_134	13.4	7.17	28.8	677	455	51.1	51.1	33.7	15.0	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_135	14.1	7.22	31.6	1016	495	55.9	55.9	34.8	15.0	1.04E-04	5.27E-05	4.52	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_136	13.9	7.19	31.4	931	449	53.8	53.8	34.6	15.0	1.03E-04	5.25E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_137	13.9	7.19	31.2	914	446	53.6	53.6	34.5	15.0	1.03E-04	5.25E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_138	13.9	7.19	31.0	896	444	53.6	53.6	34.5	15.0	1.02E-04	5.25E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_139	13.8	7.19	30.6	869	443	53.6	53.6	34.4	15.0	1.02E-04	5.25E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_140	14.1	7.21	31.7	998	486	55.9	55.9	34.8	15.0	1.04E-04	5.26E-05	4.52	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_141	14.2	7.24	33.3	1017	472	55.2	55.2	35.2	15.1	1.06E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_142	14.5	7.28	34.6	1120	488	57.1	57.1	35.5	15.1	1.07E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_143	15.2	7.37	38.1	1257	564	61.7	61.7	36.7	15.3	1.13E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_144	15.2	7.37	38.1	1263	563	62.2	62.2	36.7	15.3	1.13E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_145	15.2	7.36	37.9	1240	562	61.2	61.2	36.7	15.3	1.13E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_146	15.2	7.35	37.7	1231	560	61.0	61.0	36.6	15.3	1.12E-04	5.35E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_147	15.1	7.34	37.3	1208	556	60.3	60.3	36.5	15.2	1.12E-04	5.34E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_148	15.0	7.33	37.2	1201	553	60.0	60.0	36.4	15.2	1.12E-04	5.34E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_149	15.1	7.35	37.5	1216	558	60.6	60.6	36.5	15.2	1.12E-04	5.35E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_150	15.0	7.33	37.0	1194	551	59.7	59.7	36.4	15.2	1.11E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_151	14.4	7.26	34.8	1106	520	58.1	58.1	35.6	15.1	1.08E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_152	14.5	7.26	34.9	1095	524	57.8	57.8	35.7	15.1	1.08E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_153	14.3	7.25	34.5	1131	515	58.6	58.6	35.5	15.1	1.08E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_154	14.4	7.26	34.7	1120	516	58.2	58.2	35.5	15.1	1.08E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_155	14.6	7.27	35.0	1107	528	57.7	57.7	35.7	15.1	1.09E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_156	14.3	7.25	34.2	1137	515	57.9	57.9	35.4	15.1	1.07E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_157	14.2	7.25	33.8	1138	515	57.3	57.3	35.2	15.1	1.07E-04	5.29E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_158	14.2	7.25	33.4	1132	514	57.1	57.1	35.1	15.1	1.06E-04	5.28E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_159	14.2	7.24	32.9	1109	511	56.8	56.8	35.0	15.1	1.06E-04	5.28E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_160	14.2	7.24	32.6	1085	507	56.7	56.7	35.0	15.1	1.05E-04	5.28E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_161	14.2	7.24	32.3	1053	502	56.7	56.7	35.0	15.1	1.05E-04	5.28E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_162	14.2	7.24	32.1	1045	497	56.7	56.7	35.0	15.1	1.04E-04	5.28E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_163	14.2	7.23	32.4	1017	488	56.4	56.4	35.0	15.1	1.05E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_164	14.2	7.23	32.2	1035	493	56.6	56.6	35.0	15.1	1.04E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_165	14.2	7.23	32.5	1002	482	56.1	56.1	35.0	15.1	1.05E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_166	14.2	7.23	32.6	1003	476	55.2	55.2	35.0	15.1	1.05E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_167	14.2	7.23	32.7	1000	471	54.6	54.6	35.1	15.0	1.05E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_168	14.1	7.22	32.7	992	467	54.5	54.5	35.1	15.0	1.05E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_169	14.1	7.22	32.8	993	467	54.6	54.6	35.0	15.0	1.05E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_170	14.1	7.22	32.7	1000	466	54.6	54.6	35.0	15.0	1.05E-04	5.27E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_171	14.1	7.22	32.6	1001	464	54.6	54.6	35.0	15.0	1.05E-04	5.27E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_172	14.1	7.21	32.5	995	461	54.6	54.6	34.9	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_173	14.0	7.21	32.0	965	454	54.3	54.3	34.7	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_174	14.0	7.21	31.8	947	453	54.2	54.2	34.6	15.0	1.03E-04	5.26E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_175	14.0	7.21	31.5	928	452	54.2	54.2	34.6	15.0	1.03E-04	5.26E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_176	13.9	7.20	31.2	907	451	54.2	54.2	34.5	15.0	1.03E-04	5.26E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_177	14.1	7.21	32.3	982	458	54.5	54.5	34.8	15.0	1.04E-04	5.26E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_178	13.9	7.20	30.9	883	450	54.2	54.2	34.5	15.0	1.03E-04	5.26E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_179	14.3	7.23	33.9	1075	508	56.7	56.7	35.3	15.1	1.07E-04	5.27E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_180	14.2	7.23	33.8	1086	506	56.9	56.9	35.2	15.1	1.07E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_181	14.3	7.23	34.1	1063	511	56.6	56.6	35.4	15.1	1.07E-04	5.28E-05	4.52	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_182	14.3	7.23	34.2	1049	514	56.4	56.4	35.4	15.1	1.07E-04	5.28E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_183	14.2	7.23	33.6	1092	507	56.7	56.7	35.2	15.1	1.06E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_184	13.4	7.16	28.7	700	464	50.6	50.6	33.7	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_185	13.4	7.16	28.6	694	461	50.6	50.6	33.7	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_186	13.4	7.16	28.5	687	458	50.5	50.5	33.6	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_187	13.4	7.16	28.5	680	455	50.5	50.5	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_188	13.3	7.16	28.4	671	452	50.4	50.4	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_189	13.3	7.15	28.3	661	450	50.4	50.4	33.6	14.9	9.99E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_190	13.5	7.16	29.1	700	473	50.6	50.6	33.7	14.9	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511500_191	13.5	7.16	29.0	698	471	50.6	50.6	33.6	14.9	1.02E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_192	13.4	7.16	28.9	699	468	50.5	50.5	33.6	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_193	13.4	7.16	28.8	697	466	50.5	50.5	33.6	14.9	1.01E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_194	13.4	7.15	28.7	695	463	50.5	50.5	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_195	13.4	7.15	28.5	691	461	50.4	50.4	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_196	13.4	7.15	28.4	687	459	50.3	50.3	33.6	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_197	13.3	7.15	28.3	683	457	50.3	50.3	33.5	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_198	13.3	7.15	28.3	680	455	50.3	50.3	33.5	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_199	13.3	7.15	28.2	676	454	50.2	50.2	33.5	14.9	1.00E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_200	13.3	7.15	28.2	671	452	50.2	50.2	33.5	14.9	1.00E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_201	13.3	7.15	28.2	667	450	50.2	50.2	33.5	14.9	9.99E-05	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_202	13.3	7.16	28.6	648	451	51.0	51.0	33.7	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_203	13.3	7.16	28.5	645	450	50.9	50.9	33.7	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_204	13.3	7.16	28.5	641	448	50.8	50.8	33.7	14.9	9.98E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_205	13.3	7.16	28.4	638	445	50.7	50.7	33.6	14.9	9.97E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_206	13.3	7.16	28.4	639	443	50.7	50.7	33.6	14.9	9.96E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_207	13.3	7.15	28.3	639	441	50.6	50.6	33.6	14.9	9.96E-05	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_208	13.3	7.15	28.3	638	441	50.5	50.5	33.6	14.9	9.95E-05	5.22E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_209	13.3	7.15	28.2	635	441	50.4	50.4	33.6	14.9	9.95E-05	5.22E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_210	13.3	7.15	28.1	634	441	50.3	50.3	33.6	14.9	9.94E-05	5.22E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_211	13.2	7.15	28.1	635	442	50.3	50.3	33.5	14.9	9.93E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_212	13.2	7.15	28.0	636	442	50.2	50.2	33.5	14.9	9.93E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_213	13.2	7.15	28.0	638	443	50.0	50.0	33.5	14.9	9.92E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_214	13.2	7.15	28.0	639	444	50.0	50.0	33.5	14.9	9.91E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_215	13.2	7.14	27.9	641	444	49.9	49.9	33.5	14.9	9.91E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_216	13.3	7.16	28.5	651	452	51.1	51.1	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_217	13.3	7.15	28.5	647	451	51.0	51.0	33.6	14.9	9.99E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_218	13.3	7.15	28.4	642	450	50.9	50.9	33.6	14.9	9.98E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_219	13.3	7.15	28.4	639	449	50.8	50.8	33.6	14.9	9.98E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_220	13.3	7.15	28.3	637	448	50.7	50.7	33.6	14.9	9.97E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_221	13.2	7.15	28.3	635	447	50.6	50.6	33.6	14.9	9.96E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_222	13.2	7.15	28.3	633	446	50.5	50.5	33.6	14.9	9.95E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_223	13.2	7.15	28.2	630	445	50.5	50.5	33.6	14.9	9.95E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_224	13.2	7.15	28.2	625	442	50.4	50.4	33.6	14.9	9.94E-05	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_225	13.2	7.15	28.1	623	441	50.3	50.3	33.6	14.9	9.93E-05	5.22E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_226	13.2	7.15	28.1	624	438	50.2	50.2	33.6	14.9	9.92E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_227	13.2	7.15	28.1	624	436	50.2	50.2	33.6	14.9	9.91E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_228	13.2	7.14	28.0	620	434	50.1	50.1	33.5	14.9	9.90E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_229	13.2	7.14	28.0	619	434	50.0	50.0	33.5	14.9	9.90E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_230	13.2	7.14	27.9	618	434	50.0	50.0	33.5	14.9	9.89E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_231	13.2	7.14	27.9	619	435	49.9	49.9	33.5	14.9	9.89E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_232	13.2	7.14	27.9	620	435	50.0	50.0	33.5	14.9	9.89E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_233	13.2	7.14	27.8	621	436	49.9	49.9	33.5	14.9	9.88E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_234	13.4	7.16	28.6	670	444	52.0	52.0	33.7	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_235	13.4	7.16	28.6	658	445	52.0	52.0	33.6	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_236	13.4	7.16	28.5	659	445	52.0	52.0	33.6	15.0	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_237	13.4	7.16	28.5	662	445	52.0	52.0	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_238	13.3	7.16	28.5	664	445	52.0	52.0	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_239	13.3	7.16	28.4	665	445	51.9	51.9	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_240	13.3	7.16	28.4	665	446	51.9	51.9	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_241	13.3	7.15	28.4	664	447	51.8	51.8	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_242	13.3	7.15	28.4	663	447	51.7	51.7	33.6	14.9	1.00E-04	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_243	13.3	7.15	28.3	648	449	51.0	51.0	33.6	14.9	9.98E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_244	13.3	7.15	28.3	643	448	50.9	50.9	33.6	14.9	9.97E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_245	13.3	7.15	28.2	640	448	50.7	50.7	33.6	14.9	9.96E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_246	13.2	7.15	28.2	637	447	50.6	50.6	33.6	14.9	9.96E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_247	13.2	7.15	28.2	633	447	50.5	50.5	33.6	14.9	9.95E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_259	13.1	7.13	27.5	624	439	49.5	49.5	33.4	14.9	9.83E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_260	13.1	7.13	27.5	624	439	49.4	49.4	33.4	14.9	9.83E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_261	13.1	7.13	27.4	625	439	49.4	49.4	33.4	14.9	9.83E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_262	13.1	7.13	27.4	626	439	49.4	49.4	33.4	14.9	9.83E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_263	13.1	7.13	27.4	628	439	49.4	49.4	33.4	14.9	9.83E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_264	13.1	7.13	27.3	629	439	49.4	49.4	33.4	14.9	9.83E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_265	13.1	7.13	27.3	631	438	49.4	49.4	33.4	14.9	9.84E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_266	13.1	7.13	27.3	632	438	49.4	49.4	33.4	14.9	9.84E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_267	13.1	7.13	27.2	633	437	49.4	49.4	33.4	14.9	9.84E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_268	13.1	7.13	27.2	634	437	49.4	49.4	33.4	14.9	9.84E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_269	13.1	7.13	27.1	632	435	49.3	49.3	33.4	14.9	9.83E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_270	13.1	7.12	27.1	630	434	49.3	49.3	33.4	14.9	9.82E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_288	13.1	7.12	27.3	655	437	48.9	48.9	33.3	14.9	9.84E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_289	13.1	7.12	27.4	659	435	48.9	48.9	33.3	14.9	9.85E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_313	13.2	7.12	27.4	636	444	48.9	48.9	33.3	14.9	9.89E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_314	13.2	7.12	27.4	639	445	49.0	49.0	33.3	14.9	9.89E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_315	13.2	7.12	27.5	641	446	49.0	49.0	33.3	14.9	9.90E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_316	13.2	7.12	27.5	641	447	49.0	49.0	33.3	14.9	9.91E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_317	13.2	7.12	27.5	638	447	49.0	49.0	33.3	14.9	9.91E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_318	13.2	7.12	27.5	643	447	49.0	49.0	33.3	14.9	9.90E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_319	13.2	7.12	27.5	654	446	49.0	49.0	33.3	14.9	9.89E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_320	13.2	7.13	27.6	645	448	49.2	49.2	33.3	14.9	9.93E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_321	13.2	7.13	27.6	651	450	49.2	49.2	33.3	14.9	9.94E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_322	13.2	7.13	27.7	655	451	49.2	49.2	33.3	14.9	9.95E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_323	13.2	7.13	27.7	657	453	49.2	49.2	33.3	14.9	9.96E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_324	13.3	7.13	27.8	657	454	49.2	49.2	33.3	14.9	9.97E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_325	13.2	7.14	27.7	653	443	49.8	49.8	33.4	14.9	9.92E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_326	13.2	7.14	27.7	652	443	49.7	49.7	33.4	14.9	9.92E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_327	13.2	7.13	27.6	651	442	49.7	49.7	33.4	14.9	9.91E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_328	13.2	7.13	27.6	650	442	49.6	49.6	33.4	14.9	9.91E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_329	13.2	7.13	27.5	650	442	49.6	49.6	33.4	14.9	9.91E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_330	13.2	7.13	27.5	651	442	49.6	49.6	33.4	14.9	9.90E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_331	13.2	7.13	27.5	651	443	49.6	49.6	33.4	14.9	9.91E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_332	13.2	7.13	27.5	650	443	49.6	49.6	33.4	14.9	9.90E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_333	13.2	7.13	27.4	649	443	49.5	49.5	33.4	14.9	9.90E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_334	13.2	7.13	27.4	648	443	49.5	49.5	33.4	14.9	9.90E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_335	13.2	7.13	27.4	644	442	49.4	49.4	33.3	14.9	9.89E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_336	13.2	7.13	27.4	641	442	49.4	49.4	33.3	14.9	9.89E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_337	13.1	7.13	27.4	636	440	49.3	49.3	33.3	14.9	9.87E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_338	13.1	7.12	27.3	635	440	49.3	49.3	33.3	14.9	9.87E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_339	13.2	7.13	27.6	668	441	49.0	49.0	33.3	14.9	9.88E-05	5.20E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_340	13.4	7.14	28.3	678	463	49.5	49.5	33.4	14.9	1.01E-04	5.21E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_341	13.3	7.14	28.3	674	462	49.4	49.4	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_342	13.3	7.14	28.1	674	460	49.3	49.3	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_343	13.3	7.13	28.0	672	458	49.3	49.3	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_344	13.3	7.13	27.9	671	457	49.2	49.2	33.4	14.9	9.99E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_345	13.3	7.13	27.8	666	455	49.2	49.2	33.3	14.9	9.97E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_346	13.3	7.13	27.7	660	453	49.1	49.1	33.3	14.9	9.96E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_347	13.4	7.14	28.6	690	468	49.8	49.8	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_348	13.4	7.14	28.6	690	467	49.8	49.8	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_349	13.4	7.14	28.5	687	465	49.8	49.8	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_350	13.4	7.14	28.5	684	464	49.8	49.8	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_351	13.3	7.14	28.4	681	462	49.8	49.8	33.5	14.9	1.01E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_352	13.3	7.14	28.3	676	460	49.8	49.8	33.5	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_353	13.3	7.14	28.2	670	458	49.9	49.9	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_354	13.3	7.14	28.1	664	457	49.8	49.8	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_355	13.3	7.14	28.0	660	454	49.8	49.8	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_356	13.3	7.14	27.9	661	452	49.8	49.8	33.4	14.9	9.98E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_357	13.4	7.15	28.8	697	470	50.2	50.2	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_358	13.4	7.15	28.8	693	468	50.2	50.2	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_359	13.4	7.15	28.7	688	466	50.1	50.1	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_360	13.4	7.15	28.6	684	465	50.1	50.1	33.5	14.9	1.01E-04	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_361	13.4	7.15	28.5	680	463	50.1	50.1	33.5	14.9	1.01E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_362	13.4	7.14	28.4	675	462	50.1	50.1	33.5	14.9	1.01E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_363	13.3	7.14	28.4	673	460	50.1	50.1	33.5	14.9	1.01E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_364	13.3	7.14	28.3	674	458	50.1	50.1	33.5	14.9	1.00E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_365	13.3	7.14	28.2	674	457	50.1	50.1	33.5	14.9	1.00E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_366	13.3	7.14	28.1	674	455	50.0	50.0	33.5	14.9	1.00E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_367	13.3	7.14	28.1	673	454	50.0	50.0	33.4	14.9	1.00E-04	5.22E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_368	13.3	7.14	28.0	671	452	50.0	50.0	33.4	14.9	9.99E-05	5.22E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_369	13.3	7.14	28.1	673	459	49.4	49.4	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_370	13.3	7.13	28.1	671	458	49.5	49.5	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_371	13.3	7.13	28.0	668	457	49.5	49.5	33.4	14.9	1.00E-04	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_372	13.3	7.13	27.9	664	455	49.5	49.5	33.4	14.9	9.99E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_373	13.3	7.13	27.8	659	453	49.5	49.5	33.4	14.9	9.98E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_374	13.2	7.13	27.7	652	451	49.5	49.5	33.4	14.9	9.96E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_376	13.2	7.12	27.3	646	442	49.0	49.0	33.3	14.9	9.86E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_001	14.2	7.22	33.7	1021	508	55.8	55.8	35.2	15.0	1.07E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_002	14.0	7.20	31.6	944	470	54.6	54.6	34.8	15.0	1.03E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_003	14.0	7.20	31.3	973	481	55.3	55.3	34.7	15.0	1.03E-04	5.25E-05	4.52	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_004	13.9	7.18	31.3	927	449	53.6	53.6	34.6	15.0	1.03E-04	5.24E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_005	13.6	7.17	29.7	790	438	52.9	52.9	34.2	15.0	1.01E-04	5.24E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_006	13.5	7.17	29.4	749	440	52.5	52.5	34.0	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_007	13.9	7.19	31.9	1030	493	54.8	54.8	34.7	15.0	1.04E-04	5.25E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_008	13.9	7.18	31.1	915	460	53.3	53.3	34.6	15.0	1.03E-04	5.24E-05	4.51	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_009	14.0	7.19	32.7	1021	492	55.4	55.4	34.9	15.0	1.05E-04	5.25E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_010	14.1	7.20	33.0	1000	497	55.2	55.2	35.0	15.0	1.06E-04	5.25E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_011	13.9	7.18	30.8	945	475	54.2	54.2	34.6	15.0	1.03E-04	5.24E-05	4.51	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_012	13.9	7.18	30.7	960	482	54.2	54.2	34.6	15.0	1.02E-04	5.25E-05	4.51	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_013	13.9	7.19	31.4	1015	492	54.5	54.5	34.6	15.0	1.03E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_014	13.9	7.18	31.0	920	468	54.1	54.1	34.6	15.0	1.03E-04	5.24E-05	4.51	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_015	13.9	7.19	32.4	1031	493	55.0	55.0	34.8	15.0	1.05E-04	5.25E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_016	13.9	7.19	30.8	985	488	54.4	54.4	34.6	15.0	1.03E-04	5.25E-05	4.52	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_017	13.5	7.17	29.2	748	441	52.3	52.3	33.9	15.0	1.01E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_018	14.7	7.22	36.6	1107	533	58.1	58.1	36.3	15.1	1.10E-04	5.27E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_019	14.4	7.21	34.8	1073	536	56.9	56.9	35.6	15.0	1.08E-04	5.26E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_020	14.4	7.21	34.8	1082	535	56.6	56.6	35.6	15.0	1.08E-04	5.26E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_021	14.3	7.20	32.9	996	510	55.6	55.6	35.0	15.0	1.06E-04	5.26E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_022	14.4	7.21	34.7	1092	532	56.2	56.2	35.6	15.0	1.08E-04	5.26E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_023	14.4	7.21	34.2	1054	520	55.9	55.9	35.5	15.0	1.07E-04	5.26E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_024	14.5	7.23	34.1	1041	521	56.5	56.5	35.4	15.1	1.07E-04	5.27E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_025	14.5	7.22	35.4	1081	535	57.1	57.1	35.9	15.0	1.08E-04	5.27E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_026	14.4	7.21	33.9	1026	514	55.5	55.5	35.4	15.0	1.07E-04	5.26E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_027	14.4	7.21	34.8	1090	534	56.3	56.3	35.6	15.0	1.08E-04	5.26E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_028	14.2	7.21	33.5	1044	502	56.0	56.0	35.2	15.0	1.06E-04	5.26E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_029	14.1	7.21	33.3	1058	500	56.3	56.3	35.1	15.0	1.06E-04	5.26E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_030	14.1	7.21	33.0	1065	501	55.5	55.5	35.0	15.0	1.06E-04	5.26E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_031	14.0	7.21	32.6	1065	501	55.5	55.5	34.9	15.0	1.05E-04	5.26E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_032	13.6	7.17	29.6	766	439	52.7	52.7	34.1	15.0	1.01E-04	5.24E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_033	13.5	7.17	29.3	749	441	52.5	52.5	34.0	15.0	1.01E-04	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_034	14.6	7.22	35.9	1080	534	57.8	57.8	36.1	15.0	1.09E-04	5.27E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_035	13.9	7.18	31.4	907	453	53.2	53.2	34.7	15.0	1.03E-04	5.24E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_036	14.4	7.21	34.5	1074	525	56.0	56.0	35.5	15.0	1.08E-04	5.26E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_037	14.3	7.21	33.6	1007	513	55.4	55.4	35.3	15.0	1.06E-04	5.26E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_038	14.5	7.23	34.5	1061	523	56.7	56.7	35.5	15.1	1.08E-04	5.27E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511600_039	14.3	7.20	33.2	1003	512	55.3	55.3	35.1	15.0	1.06E-04	5.26E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_040	14.5	7.22	34.9	1080	536	56.8	56.8	35.7	15.0	1.08E-04	5.27E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_041	14.0	7.21	31.7	1040	497	55.2	55.2	34.7	15.0	1.04E-04	5.26E-05	4.52	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_042	14.0	7.20	31.4	1015	494	55.2	55.2	34.7	15.0	1.04E-04	5.26E-05	4.52	1.50	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_043	14.0	7.20	31.4	956	475	55.2	55.2	34.8	15.0	1.03E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_044	14.0	7.20	31.1	991	490	55.3	55.3	34.7	15.0	1.03E-04	5.26E-05	4.52	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_045	14.0	7.20	31.2	985	486	55.2	55.2	34.7	15.0	1.03E-04	5.26E-05	4.52	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_046	14.9	7.23	38.0	1149	531	59.0	59.0	36.7	15.1	1.12E-04	5.27E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_047	14.4	7.21	34.6	1087	529	56.0	56.0	35.6	15.0	1.08E-04	5.26E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_048	14.4	7.22	33.6	1033	519	56.5	56.5	35.3	15.1	1.07E-04	5.27E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_049	14.8	7.23	37.2	1128	532	58.3	58.3	36.5	15.1	1.11E-04	5.27E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_050	14.0	7.19	31.7	945	465	53.8	53.8	34.8	15.0	1.04E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_051	13.9	7.19	31.7	942	459	53.5	53.5	34.8	15.0	1.04E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_052	13.9	7.19	31.8	935	458	53.6	53.6	34.8	15.0	1.04E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_053	13.9	7.19	31.8	934	457	53.7	53.7	34.7	15.0	1.04E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_054	13.9	7.19	31.7	942	456	53.6	53.6	34.7	15.0	1.04E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_055	13.9	7.19	31.7	943	455	53.6	53.6	34.7	15.0	1.03E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_056	13.9	7.18	31.5	937	452	53.7	53.7	34.6	15.0	1.03E-04	5.25E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_057	13.9	7.18	31.1	912	446	53.4	53.4	34.5	15.0	1.03E-04	5.24E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_058	13.8	7.18	30.9	893	443	53.3	53.3	34.4	15.0	1.02E-04	5.24E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_059	13.8	7.18	30.5	865	439	53.3	53.3	34.4	15.0	1.02E-04	5.24E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_060	14.0	7.21	32.2	1057	500	55.2	55.2	34.7	15.0	1.05E-04	5.26E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_061	13.8	7.17	31.2	900	452	53.1	53.1	34.6	15.0	1.03E-04	5.24E-05	4.51	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_062	13.8	7.17	31.1	894	451	53.0	53.0	34.6	15.0	1.03E-04	5.24E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_085	13.3	7.14	28.1	651	437	50.8	50.8	33.6	14.9	9.94E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_086	13.3	7.15	28.1	651	438	50.8	50.8	33.6	14.9	9.95E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_087	13.3	7.15	28.2	649	439	51.0	51.0	33.6	14.9	9.96E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_091	13.7	7.16	29.9	829	433	52.6	52.6	34.2	14.9	1.01E-04	5.23E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_092	13.6	7.16	29.5	797	433	52.5	52.5	34.1	14.9	1.01E-04	5.23E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_093	13.6	7.16	29.3	772	432	52.4	52.4	34.1	14.9	1.01E-04	5.23E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_094	13.5	7.15	29.1	747	432	52.2	52.2	34.0	14.9	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_095	13.5	7.15	29.0	721	434	52.0	52.0	33.9	14.9	1.00E-04	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_096	13.4	7.15	28.8	719	435	51.8	51.8	33.9	14.9	1.00E-04	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_097	13.4	7.15	28.7	717	435	51.6	51.6	33.8	14.9	9.99E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_098	13.3	7.15	28.6	710	434	51.4	51.4	33.7	14.9	9.97E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_099	13.3	7.15	28.5	701	432	51.2	51.2	33.7	14.9	9.96E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_100	13.3	7.15	28.4	685	432	51.1	51.1	33.6	14.9	9.94E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_101	13.8	7.17	31.0	905	447	53.2	53.2	34.5	15.0	1.03E-04	5.24E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_102	13.8	7.17	30.8	892	443	53.1	53.1	34.4	15.0	1.02E-04	5.24E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_103	13.8	7.17	30.6	877	441	52.9	52.9	34.4	15.0	1.02E-04	5.23E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_104	13.7	7.17	30.3	858	438	52.8	52.8	34.3	15.0	1.02E-04	5.23E-05	4.50	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_105	13.7	7.17	30.0	834	435	52.8	52.8	34.2	15.0	1.01E-04	5.23E-05	4.49	1.50	0.16	6.31E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_106	13.7	7.16	29.7	805	434	52.7	52.7	34.2	15.0	1.01E-04	5.23E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_107	13.6	7.16	29.5	782	434	52.6	52.6	34.1	15.0	1.01E-04	5.23E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_108	13.6	7.16	29.3	760	434	52.5	52.5	34.0	15.0	1.01E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_109	13.5	7.16	29.2	736	436	52.2	52.2	34.0	14.9	1.01E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_110	13.5	7.16	29.1	730	437	52.1	52.1	33.9	14.9	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_111	13.4	7.16	28.9	729	437	51.9	51.9	33.9	14.9	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_112	13.4	7.16	28.9	724	436	51.7	51.7	33.8	14.9	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_113	13.4	7.15	28.8	717	435	51.5	51.5	33.7	14.9	9.99E-05	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_114	13.4	7.15	28.7	708	435	51.4	51.4	33.7	14.9	9.98E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_115	13.4	7.15	28.5	685	435	51.3	51.3	33.6	14.9	9.95E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_116	13.5	7.17	29.2	745	440	52.2	52.2	33.9	15.0	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_117	13.5	7.17	29.1	739	440	52.0	52.0	33.8	15.0	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_118	13.4	7.16	29.0	730	440	51.9	51.9	33.8	15.0	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_119	13.4	7.16	28.9	719	440	51.9	51.9	33.7	15.0	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_120	13.4	7.16	28.9	707	440	51.8	51.8	33.7	15.0	1.00E-04	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_121	13.4	7.16	28.8	700	441	51.8	51.8	33.7	15.0	9.99E-05	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_122	13.4	7.16	28.7	694	440	51.7	51.7	33.7	14.9	9.99E-05	5.23E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_123	13.4	7.16	28.6	685	440	51.5	51.5	33.6	14.9	9.99E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_124	13.4	7.16	28.5	676	441	51.4	51.4	33.6	14.9	9.99E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_125	13.4	7.16	28.4	665	441	51.4	51.4	33.6	14.9	9.99E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_126	13.4	7.15	28.4	653	442	51.4	51.4	33.6	14.9	9.99E-05	5.23E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_127	13.3	7.15	28.3	645	442	51.3	51.3	33.6	14.9	9.99E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_128	13.3	7.15	28.2	648	442	51.3	51.3	33.6	14.9	9.99E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511600_129	13.3	7.15	28.2	651	442	51.2	51.2	33.6	14.9	9.98E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_130	13.3	7.15	28.2	653	441	51.2	51.2	33.6	14.9	9.98E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_131	13.3	7.15	28.2	653	443	51.3	51.3	33.6	14.9	9.97E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_132	13.3	7.14	28.0	639	439	50.8	50.8	33.6	14.9	9.96E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_133	13.2	7.14	28.0	634	438	50.6	50.6	33.6	14.9	9.95E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_134	13.2	7.14	27.9	630	438	50.5	50.5	33.5	14.9	9.94E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_142	13.2	7.14	28.0	637	442	50.5	50.5	33.6	14.9	9.94E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_143	13.2	7.14	27.9	636	441	50.4	50.4	33.5	14.9	9.93E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_144	13.2	7.14	27.9	634	440	50.3	50.3	33.5	14.9	9.93E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_163	13.2	7.13	27.8	621	441	50.2	50.2	33.5	14.9	9.91E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_164	13.2	7.13	27.9	622	442	50.3	50.3	33.6	14.9	9.91E-05	5.21E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_185	13.2	7.15	28.1	629	446	50.5	50.5	33.6	14.9	9.94E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_186	13.2	7.14	28.1	626	446	50.5	50.5	33.6	14.9	9.94E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_187	13.2	7.14	28.1	625	445	50.4	50.4	33.6	14.9	9.93E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_188	13.2	7.14	28.0	623	443	50.3	50.3	33.6	14.9	9.92E-05	5.22E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_189	13.2	7.14	28.0	621	442	50.2	50.2	33.6	14.9	9.91E-05	5.22E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_190	13.2	7.14	27.9	616	440	50.1	50.1	33.6	14.9	9.90E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_191	13.2	7.14	27.9	612	438	50.0	50.0	33.6	14.9	9.89E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_192	13.2	7.14	27.9	610	437	49.9	49.9	33.5	14.9	9.88E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_193	13.2	7.14	27.8	605	435	49.8	49.8	33.5	14.9	9.87E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_194	13.2	7.14	27.8	599	433	49.8	49.8	33.5	14.9	9.86E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_195	13.2	7.14	27.8	600	431	49.8	49.8	33.5	14.9	9.86E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_196	13.2	7.14	27.7	601	429	49.7	49.7	33.5	14.9	9.85E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_197	13.1	7.13	27.7	601	427	49.7	49.7	33.5	14.9	9.85E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_198	13.2	7.14	28.2	645	446	51.0	51.0	33.6	14.9	9.96E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_199	13.2	7.14	28.1	638	446	50.9	50.9	33.6	14.9	9.95E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_200	13.2	7.14	28.1	633	445	50.7	50.7	33.6	14.9	9.94E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_201	13.2	7.14	28.0	629	445	50.5	50.5	33.6	14.9	9.93E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_202	13.2	7.14	28.0	626	444	50.4	50.4	33.6	14.9	9.92E-05	5.22E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_203	13.2	7.14	27.9	621	444	50.3	50.3	33.6	14.9	9.92E-05	5.22E-05	4.46	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_204	13.2	7.14	27.9	616	443	50.2	50.2	33.6	14.9	9.91E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_205	13.2	7.14	27.8	615	442	50.1	50.1	33.6	14.9	9.90E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_206	13.2	7.14	27.8	613	440	50.0	50.0	33.6	14.9	9.89E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_207	13.1	7.14	27.7	610	439	49.9	49.9	33.5	14.9	9.88E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_208	13.1	7.13	27.7	611	438	49.8	49.8	33.5	14.9	9.87E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_209	13.1	7.13	27.6	606	436	49.6	49.6	33.5	14.9	9.86E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_210	13.1	7.13	27.6	601	434	49.5	49.5	33.5	14.9	9.85E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_211	13.1	7.13	27.6	595	432	49.5	49.5	33.5	14.9	9.84E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_212	13.1	7.13	27.6	587	429	49.4	49.4	33.5	14.9	9.83E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_228	13.9	7.17	31.9	974	482	54.4	54.4	34.7	15.0	1.04E-04	5.24E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_242	13.4	7.15	28.6	697	435	51.3	51.3	33.6	14.9	9.97E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511800_001	13.0	7.10	26.5	515	399	48.0	48.0	33.4	14.8	9.64E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512000_002	13.4	7.23	28.8	516	415	48.0	48.0	33.4	14.9	9.77E-05	5.24E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512000_003	13.4	7.24	28.7	501	415	48.1	48.1	33.4	14.9	9.76E-05	5.24E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512100_001	13.6	7.27	29.4	518	418	48.3	48.3	33.5	14.9	9.85E-05	5.25E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512100_002	13.6	7.29	29.4	516	418	48.4	48.4	33.5	14.9	9.85E-05	5.26E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512200_001	13.6	7.29	29.3	514	417	48.5	48.5	33.5	14.9	9.84E-05	5.26E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512200_002	13.5	7.22	28.7	527	415	48.0	48.0	33.5	14.9	9.78E-05	5.23E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512200_003	13.3	7.19	28.0	509	410	47.9	47.9	33.5	14.9	9.72E-05	5.22E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512300_001	13.5	7.26	28.7	508	414	48.2	48.2	33.6	14.9	9.77E-05	5.24E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE512400_001	13.3	7.20	27.7	501	409	48.1	48.1	33.5	14.9	9.69E-05	5.22E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514400_001	13.3	7.12	28.1	536	436	49.1	49.1	33.5	14.9	9.73E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514400_003	13.0	7.09	27.3	513	406	49.7	49.7	33.5	14.9	9.69E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514400_006	13.0	7.08	26.9	513	403	49.7	49.7	33.4	14.9	9.65E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514400_007	13.0	7.09	27.1	511	405	49.7	49.7	33.4	14.9	9.67E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_001	13.4	7.13	28.4	539	443	49.5	49.5	33.7	14.9	9.78E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_002	13.4	7.13	28.5	535	446	50.0	50.0	33.7	14.9	9.81E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_003	13.5	7.15	29.1	569	454	50.6	50.6	34.0	14.9	9.88E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_006	13.1	7.09	27.6	564	409	50.1	50.1	33.8	14.9	9.71E-05	5.17E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_007	13.2	7.09	27.9	566	409	50.4	50.4	33.9	14.9	9.74E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_008	13.0	7.09	27.5	514	407	49.7	49.7	33.6	14.9	9.70E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_009	13.0	7.09	27.7	512	407	49.5	49.5	33.6	14.9	9.72E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514500_010	13.1	7.09	27.7	510	406	49.6	49.6	33.7	14.9	9.74E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_001	13.7	7.18	30.0	634	461	51.4	51.4	34.3	14.9	9.98E-05	5.20E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_002	13.2	7.09	28.1	568	409	50.6	50.6	33.9	14.9	9.76E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE514600_003	13.2	7.10	28.3	571	409	50.8	50.8	34.0	14.9	9.79E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_004	13.2	7.10	28.6	572	409	51.0	51.0	34.0	14.9	9.81E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_005	13.2	7.10	28.8	579	407	51.2	51.2	34.1	14.9	9.83E-05	5.18E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514600_006	13.2	7.11	29.0	588	410	51.7	51.7	34.2	14.9	9.86E-05	5.18E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514700_001	13.6	7.14	30.5	701	434	53.3	53.3	35.0	14.9	1.00E-04	5.20E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE514800_001	14.8	7.41	36.2	650	466	57.3	57.3	36.7	15.3	1.07E-04	5.30E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515000_001	14.9	7.66	37.2	696	486	61.4	61.4	37.4	15.8	1.08E-04	5.46E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515100_001	14.1	7.45	31.5	571	436	55.3	55.3	35.1	15.4	1.01E-04	5.36E-05	4.47	1.50	0.15	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515200_001	13.8	7.34	30.2	570	423	51.7	51.7	34.3	15.3	1.00E-04	5.32E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515200_002	13.8	7.37	30.7	566	422	53.5	53.5	34.6	15.3	1.01E-04	5.33E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515200_003	13.8	7.34	31.0	540	433	54.9	54.9	35.0	15.3	1.01E-04	5.30E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515300_001	13.7	7.29	29.8	608	433	50.8	50.8	34.1	15.2	1.00E-04	5.30E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515300_002	13.1	7.17	26.9	488	399	50.5	50.5	33.4	15.0	9.62E-05	5.22E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE515300_003	13.5	7.25	28.5	536	410	52.5	52.5	34.1	15.1	9.80E-05	5.25E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE516200_001	12.7	7.07	25.1	447	385	47.7	47.7	32.7	14.8	9.44E-05	5.17E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE517200_001	14.2	7.39	31.9	455	395	48.3	48.3	33.3	14.9	9.66E-05	5.20E-05	4.45	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE517200_002	14.2	7.39	31.8	456	395	48.3	48.3	33.3	14.9	9.66E-05	5.20E-05	4.45	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE517200_003	13.2	7.21	27.7	437	387	47.4	47.4	33.0	14.9	9.51E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE517400_001	12.8	7.11	25.5	440	388	47.3	47.3	33.0	14.8	9.51E-05	5.17E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE519100_001	12.9	7.08	26.0	465	404	48.7	48.7	33.6	14.9	9.67E-05	5.18E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE519500_001	13.0	7.17	26.9	491	411	49.5	49.5	33.9	15.0	9.76E-05	5.21E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE519500_002	13.2	7.25	27.9	499	409	49.7	49.7	33.9	15.0	9.75E-05	5.23E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE521400_001	13.6	7.17	28.8	590	479	55.1	55.1	34.9	15.1	1.03E-04	5.26E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE521600_001	15.5	7.46	38.1	984	605	78.3	78.3	41.7	16.0	1.23E-04	5.54E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_002	14.0	7.22	30.9	641	501	56.4	56.4	35.5	15.2	1.06E-04	5.30E-05	4.47	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_003	14.5	7.36	33.7	717	528	58.8	58.8	36.0	15.3	1.10E-04	5.40E-05	4.48	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_004	18.1	7.98	52.3	1691	820	108.4	108.4	50.9	17.4	1.56E-04	6.02E-05	4.62	1.53	0.16	6.48E-02	2.58	0.54	0.32	2.54E-02	1.37E-02
RE521600_005	16.4	7.64	42.1	1192	662	89.0	89.0	44.3	16.4	1.34E-04	5.70E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE521600_006	16.0	7.56	39.6	1072	628	83.4	83.4	42.6	16.2	1.28E-04	5.63E-05	4.54	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE521600_007	15.8	7.56	39.2	1060	618	82.2	82.2	42.3	16.2	1.27E-04	5.62E-05	4.54	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE521600_008	15.1	7.46	36.9	787	554	70.6	70.6	39.9	15.7	1.17E-04	5.49E-05	4.50	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_009	15.9	7.56	40.2	1100	630	80.4	80.4	42.0	16.1	1.27E-04	5.60E-05	4.54	1.51	0.16	6.39E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE521600_010	14.6	7.43	33.8	796	510	66.8	66.8	38.1	15.7	1.12E-04	5.46E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_011	14.0	7.29	31.5	726	475	60.3	60.3	36.7	15.4	1.07E-04	5.35E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_012	14.1	7.25	31.6	660	492	61.9	61.9	37.0	15.3	1.07E-04	5.33E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_013	14.3	7.25	32.7	842	539	64.7	64.7	38.3	15.4	1.13E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_017	13.8	7.27	29.7	574	469	58.1	58.1	35.9	15.2	1.04E-04	5.34E-05	4.47	1.51	0.15	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE521600_018	13.9	7.18	31.3	754	516	61.5	61.5	37.2	15.2	1.10E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_019	14.1	7.22	31.7	721	519	62.1	62.1	37.6	15.3	1.10E-04	5.32E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_020	14.0	7.21	31.7	759	528	62.1	62.1	37.6	15.3	1.10E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_023	14.7	7.29	34.0	883	566	67.2	67.2	39.1	15.5	1.15E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_026	14.1	7.23	31.9	738	523	62.6	62.6	37.7	15.3	1.10E-04	5.33E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_028	14.2	7.23	32.1	779	535	63.4	63.4	37.9	15.3	1.11E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_030	14.1	7.23	31.7	733	510	63.6	63.6	37.5	15.3	1.10E-04	5.33E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_032	14.5	7.27	33.4	879	555	66.3	66.3	38.8	15.5	1.14E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_035	13.9	7.19	31.2	725	516	60.7	60.7	37.2	15.2	1.09E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_036	14.2	7.24	32.3	736	518	63.5	63.5	38.0	15.4	1.11E-04	5.34E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_037	14.0	7.19	31.9	812	513	62.1	62.1	37.5	15.2	1.11E-04	5.29E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_038	14.2	7.23	32.5	830	537	64.4	64.4	38.1	15.3	1.12E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_039	14.2	7.25	32.3	765	511	65.7	65.7	38.0	15.4	1.11E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_041	14.1	7.21	31.9	793	527	63.1	63.1	37.7	15.3	1.11E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_043	14.0	7.21	31.6	737	522	62.2	62.2	37.4	15.3	1.10E-04	5.32E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_044	14.2	7.23	32.3	813	540	64.0	64.0	38.1	15.4	1.12E-04	5.34E-05	4.50	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_045	14.5	7.28	33.6	892	560	67.4	67.4	39.0	15.5	1.15E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_046	14.5	7.25	33.6	905	538	65.5	65.5	38.6	15.4	1.15E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_047	13.5	7.16	29.2	743	476	58.0	58.0	36.0	15.1	1.04E-04	5.26E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE521600_048	13.5	7.15	29.2	743	476	58.1	58.1	36.0	15.1	1.04E-04	5.26E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE521600_049	13.5	7.15	29.2	742	476	58.2	58.2	36.0	15.1	1.04E-04	5.26E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE521600_050	13.5	7.16	29.6	777	490	59.9	59.9	36.4	15.1	1.05E-04	5.26E-05	4.49	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_051	13.5	7.16	29.5	770	487	59.5	59.5	36.3	15.1	1.05E-04	5.27E-05	4.49	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_052	13.5	7.16	29.6	767	486	59.4	59.4	36.2	15.2	1.05E-04	5.27E-05	4.49	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_053	13.5	7.16	29.6	767	486	59.4	59.4	36.3	15.2	1.05E-04	5.27E-05	4.49	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_054	13.6	7.17	29.6	771	487	59.6	59.6	36.3	15.2	1.05E-04	5.27E-05	4.49	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_055	13.7	7.18	30.4	820	507	61.2	61.2	36.8	15.2	1.07E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_056	13.7	7.18	30.4	817	506	61.4	61.4	36.8	15.2	1.07E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE521600_057	13.6	7.18	30.3	813	504	61.5	61.5	36.7	15.2	1.07E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_058	13.6	7.17	30.2	810	503	61.4	61.4	36.7	15.2	1.07E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_059	13.6	7.17	30.1	809	503	61.2	61.2	36.7	15.2	1.06E-04	5.28E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_060	13.7	7.18	30.5	834	513	62.0	62.0	37.0	15.2	1.07E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_061	13.7	7.18	30.7	846	518	62.5	62.5	37.1	15.2	1.08E-04	5.29E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_062	13.7	7.19	30.9	863	524	63.2	63.2	37.2	15.2	1.08E-04	5.29E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_063	13.7	7.19	31.1	877	530	63.8	63.8	37.3	15.2	1.09E-04	5.30E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_064	13.7	7.19	31.2	893	536	63.9	63.9	37.4	15.3	1.09E-04	5.30E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_065	13.8	7.20	31.3	905	541	64.3	64.3	37.5	15.3	1.09E-04	5.30E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_066	13.8	7.20	31.5	923	548	65.0	65.0	37.6	15.3	1.09E-04	5.30E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_067	13.8	7.20	31.7	939	554	65.7	65.7	37.7	15.3	1.10E-04	5.30E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_068	13.8	7.20	31.9	960	561	66.5	66.5	37.8	15.3	1.10E-04	5.31E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_069	13.9	7.20	32.0	976	565	67.3	67.3	37.8	15.3	1.11E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_070	13.9	7.20	32.1	991	569	68.1	68.1	37.8	15.3	1.11E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_071	13.9	7.20	32.1	1002	571	68.5	68.5	37.8	15.3	1.11E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_072	13.9	7.20	32.1	1020	575	69.1	69.1	37.8	15.3	1.11E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_073	13.9	7.19	32.2	1041	579	69.7	69.7	37.9	15.3	1.11E-04	5.30E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_074	13.9	7.19	32.2	1056	582	70.1	70.1	38.0	15.2	1.11E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_075	13.9	7.19	32.1	1054	582	70.1	70.1	38.0	15.2	1.11E-04	5.29E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_076	13.8	7.17	31.0	917	544	64.9	64.9	37.3	15.2	1.08E-04	5.28E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_077	13.7	7.17	30.9	906	540	64.4	64.4	37.3	15.2	1.08E-04	5.28E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_078	13.7	7.18	30.9	896	537	63.9	63.9	37.3	15.2	1.08E-04	5.28E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_079	13.7	7.18	30.9	883	532	63.5	63.5	37.2	15.2	1.08E-04	5.28E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_080	13.7	7.17	30.8	868	527	63.0	63.0	37.2	15.2	1.08E-04	5.28E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_081	13.6	7.17	30.7	854	521	62.4	62.4	37.1	15.2	1.08E-04	5.28E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_082	13.6	7.17	30.5	841	516	61.7	61.7	37.0	15.2	1.07E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_083	13.6	7.16	30.2	815	505	60.5	60.5	36.8	15.2	1.07E-04	5.27E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_084	14.5	7.19	35.4	1032	550	68.9	68.9	39.9	15.2	1.18E-04	5.30E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_085	14.5	7.19	35.3	1040	544	68.7	68.7	39.8	15.2	1.17E-04	5.29E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_086	14.4	7.18	35.6	1086	539	68.6	68.6	40.0	15.2	1.18E-04	5.29E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_087	14.4	7.18	35.8	1082	540	68.6	68.6	40.1	15.2	1.19E-04	5.29E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_088	14.4	7.18	35.8	1075	546	69.2	69.2	40.2	15.2	1.19E-04	5.29E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_089	17.1	7.63	47.8	1751	723	94.4	94.4	46.4	16.4	1.45E-04	5.70E-05	4.63	1.52	0.16	6.45E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE521600_090	14.7	7.33	34.6	753	521	66.8	66.8	38.9	15.5	1.12E-04	5.40E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW110000_001	16.0	7.59	42.5	1036	577	93.6	93.6	45.3	16.6	1.18E-04	5.48E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW110000_002	18.6	8.26	52.8	1683	789	120.8	120.8	55.0	19.1	1.34E-04	5.88E-05	4.71	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_008	18.4	7.59	53.3	1662	671	98.9	98.9	48.2	16.1	1.32E-04	5.48E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.31	2.54E-02	1.37E-02
RW110000_009	19.3	7.82	56.3	1567	734	105.9	105.9	49.8	16.5	1.37E-04	5.62E-05	4.60	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RW110000_010	16.7	7.91	43.7	969	575	91.1	91.1	46.5	16.8	1.21E-04	5.68E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW110000_011	17.6	7.79	48.4	1151	592	107.4	107.4	49.8	17.0	1.27E-04	5.61E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW110000_012	18.3	7.88	51.1	1269	623	115.9	115.9	50.6	17.3	1.31E-04	5.66E-05	4.62	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_013	17.9	8.15	52.2	1108	671	96.4	96.4	49.4	17.1	1.32E-04	5.83E-05	4.60	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_014	19.6	7.97	58.9	1452	731	99.8	99.8	49.1	16.7	1.41E-04	5.73E-05	4.62	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RW110000_015	19.8	8.01	60.8	1498	736	99.2	99.2	49.7	16.7	1.43E-04	5.75E-05	4.63	1.53	0.16	6.49E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RW110000_016	19.5	7.94	62.8	1429	697	101.1	101.1	51.2	16.8	1.45E-04	5.68E-05	4.62	1.53	0.16	6.50E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW110000_017	20.6	8.08	67.7	1512	749	104.0	104.0	52.1	16.9	1.52E-04	5.77E-05	4.63	1.53	0.16	6.52E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RW110000_018	16.6	7.87	44.0	945	561	93.4	93.4	46.7	16.7	1.21E-04	5.66E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW110000_019	17.8	8.16	51.9	1124	595	99.0	99.0	49.6	17.2	1.31E-04	5.82E-05	4.60	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_020	16.3	7.68	43.6	1117	636	98.5	98.5	46.8	17.0	1.20E-04	5.53E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW110000_021	16.6	7.49	47.3	1130	624	80.1	80.1	43.4	15.8	1.22E-04	5.39E-05	4.57	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW110000_022	17.0	7.92	47.1	1271	681	111.2	111.2	47.4	17.2	1.20E-04	5.61E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW110000_023	17.9	7.64	53.9	1372	796	113.4	113.4	51.9	16.6	1.29E-04	5.48E-05	4.65	1.53	0.16	6.46E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW110000_024	21.6	8.38	66.3	1891	782	124.4	124.4	61.1	19.3	1.55E-04	5.97E-05	4.75	1.54	0.17	6.56E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW110100_001	18.8	7.88	56.0	1437	653	101.7	101.7	49.3	16.6	1.37E-04	5.65E-05	4.63	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW112100_001	14.7	7.37	35.0	807	480	66.6	66.6	39.3	15.5	1.07E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112100_002	14.7	7.37	34.7	796	475	65.9	65.9	39.2	15.5	1.06E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112100_003	14.8	7.40	34.9	791	477	66.1	66.1	39.2	15.5	1.06E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112200_001	14.7	7.41	34.6	783	475	65.7	65.7	39.1	15.5	1.06E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112300_001	14.1	7.23	32.1	698	453	61.2	61.2	37.8	15.2	1.03E-04	5.24E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW112300_002	14.3	7.28	32.9	711	457	62.2	62.2	38.2	15.3	1.04E-04	5.26E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW112300_003	15.4	7.52	39.2	927	501	65.3	65.3	40.4	15.6	1.10E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112400_001	15.3	7.48	38.6	916	498	64.6	64.6	40.2	15.6	1.09E-04	5.34E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112400_002	15.2	7.46	38.4	914	497	64.5	64.5	40.1	15.5	1.09E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112400_003	14.8	7.35	36.6	881	489	63.3	63.3	39.4	15.4	1.07E-04	5.29E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112500_001	14.4	7.25	34.3	843	480	62.0	62.0	38.6	15.2	1.05E-04	5.25E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW112500_002	14.4	7.23	34.4	847	481	61.2	61.2	38.6	15.2	1.05E-04	5.24E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112600_001	14.3	7.18	33.9	836	475	60.5	60.5	38.4	15.1	1.05E-04	5.22E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW113300_001	13.5	7.16	29.1	640	441	59.1	59.1	36.3	15.1	1.00E-04	5.22E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW113700_001	13.4	7.19	28.4	614	440	57.1	57.1	35.4	15.1	9.92E-05	5.24E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW210600_001	14.1	7.47	32.2	675	471	58.7	58.7	36.0	15.4	1.05E-04	5.41E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210600_002	15.2	7.56	36.5	874	556	65.1	65.1	37.6	15.6	1.11E-04	5.46E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW210700_001	16.6	7.86	44.0	1215	606	70.3	70.3	40.3	16.0	1.19E-04	5.62E-05	4.56	1.51	0.16	6.38E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW210700_002	14.5	7.33	33.1	767	511	61.7	61.7	36.7	15.3	1.06E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210700_003	14.0	7.45	31.8	668	466	58.2	58.2	35.9	15.4	1.04E-04	5.41E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210800_001	13.3	7.14	28.3	615	431	55.1	55.1	35.4	15.0	9.88E-05	5.21E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW210800_002	14.2	7.29	31.9	740	501	60.7	60.7	36.3	15.2	1.05E-04	5.30E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210800_003	14.1	7.26	31.4	724	496	59.8	59.8	36.0	15.2	1.04E-04	5.28E-05	4.49	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW210800_004	13.9	7.23	30.9	709	489	59.2	59.2	35.8	15.1	1.03E-04	5.27E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW210900_001	14.6	7.32	33.8	822	503	61.8	61.8	37.1	15.3	1.06E-04	5.31E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW211000_001	14.3	7.36	32.6	820	534	57.7	57.7	36.6	15.3	1.06E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW213300_001	14.5	7.42	35.8	787	499	56.6	56.6	36.4	15.4	1.08E-04	5.37E-05	4.49	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW213500_001	14.0	7.35	31.3	654	461	55.3	55.3	35.2	15.3	1.02E-04	5.33E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW213500_002	14.0	7.30	32.6	648	461	54.4	54.4	35.3	15.2	1.03E-04	5.30E-05	4.47	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW213500_003	14.0	7.36	31.4	660	465	55.6	55.6	35.3	15.3	1.02E-04	5.33E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW213900_001	15.0	7.54	37.1	935	523	60.4	60.4	37.5	15.7	1.09E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW213900_002	16.3	7.57	44.4	892	523	71.2	71.2	43.1	16.1	1.14E-04	5.39E-05	4.55	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW213900_003	16.0	7.43	42.7	828	506	66.8	66.8	42.2	15.7	1.12E-04	5.33E-05	4.54	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW214000_001	15.4	7.69	42.3	906	515	75.5	75.5	41.3	16.3	1.13E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW214000_002	15.8	7.47	40.9	776	496	67.7	67.7	41.1	15.8	1.11E-04	5.35E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW214200_001	15.2	7.44	37.7	668	482	64.8	64.8	38.8	15.7	1.08E-04	5.34E-05	4.50	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW214200_002	16.2	7.65	42.9	752	508	71.6	71.6	41.2	16.1	1.14E-04	5.44E-05	4.52	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW214200_003	16.6	7.72	44.8	787	536	73.0	73.0	41.4	16.2	1.16E-04	5.48E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW214200_004	16.4	7.90	47.4	1121	533	88.0	88.0	43.7	16.6	1.19E-04	5.58E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW214400_001	14.6	7.40	34.1	670	479	62.5	62.5	37.0	15.5	1.04E-04	5.33E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW214400_002	15.1	7.40	36.8	735	474	60.4	60.4	37.1	15.4	1.07E-04	5.33E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW214500_001	13.9	7.21	30.9	572	437	55.1	55.1	35.1	15.1	1.01E-04	5.23E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW214700_001	13.9	7.33	31.0	683	458	55.6	55.6	35.2	15.2	1.00E-04	5.29E-05	4.49	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW214800_001	13.5	7.23	29.3	671	445	53.7	53.7	34.8	15.1	9.91E-05	5.24E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW214900_001	13.5	7.24	29.4	678	446	53.6	53.6	34.8	15.1	9.91E-05	5.25E-05	4.49	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW215500_001	14.1	7.30	32.1	655	457	53.5	53.5	34.6	15.1	1.02E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW215500_002	13.7	7.31	30.0	619	445	52.7	52.7	34.5	15.1	9.96E-05	5.28E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW215500_003	14.1	7.28	31.7	638	453	53.2	53.2	34.5	15.1	1.01E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW215600_001	14.1	7.29	32.0	647	456	53.3	53.3	34.5	15.1	1.01E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW215600_002	14.1	7.28	31.7	638	454	53.1	53.1	34.5	15.1	1.01E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW215600_003	13.8	7.31	30.1	624	448	52.7	52.7	34.5	15.1	9.98E-05	5.28E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW216000_001	14.0	7.37	31.7	691	474	53.5	53.5	34.9	15.2	1.01E-04	5.31E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW216300_001	13.8	7.26	30.9	664	450	52.5	52.5	34.1	15.1	1.01E-04	5.28E-05	4.47	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW217300_001	13.3	7.09	29.9	634	413	48.9	48.9	34.0	14.9	1.01E-04	5.18E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW217300_003	13.1	7.08	28.3	634	402	48.8	48.8	33.5	14.9	9.84E-05	5.17E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW217400_001	14.1	7.24	32.5	617	448	51.1	51.1	34.6	15.1	1.05E-04	5.27E-05	4.47	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW217400_003	12.9	7.07	26.5	520	405	48.8	48.8	33.2	14.8	9.66E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW217600_001	14.4	7.34	32.8	726	496	51.4	51.4	34.4	15.0	1.04E-04	5.30E-05	4.48	1.50	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW218600_001	13.2	7.07	28.5	619	422	49.2	49.2	33.7	14.8	9.87E-05	5.16E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW218700_001	14.9	7.30	35.8	591	454	53.4	53.4	36.1	15.2	1.07E-04	5.28E-05	4.47	1.51	0.15	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW219300_001	14.3	7.27	32.4	580	450	51.2	51.2	34.9	15.1	1.00E-04	5.23E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219600_001	14.1	7.36	32.6	623	446	51.7	51.7	35.0	15.2	1.01E-04	5.26E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219800_001	14.2	7.39	33.2	639	450	51.8	51.8	35.2	15.2	1.01E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219800_002	14.1	7.38	33.1	638	449	51.7	51.7	35.2	15.2	1.01E-04	5.27E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219800_003	14.2	7.40	33.5	651	453	51.9	51.9	35.3	15.3	1.01E-04	5.27E-05	4.47	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219900_001	14.1	7.36	32.6	629	444	51.6	51.6	35.1	15.2	1.01E-04	5.26E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219900_002	14.0	7.35	32.4	624	441	51.3	51.3	35.0	15.2	1.01E-04	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219900_003	14.0	7.35	32.5	627	442	51.3	51.3	35.1	15.2	1.01E-04	5.26E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW219900_004	13.4	7.12	29.0	503	411	48.5	48.5	33.7	14.9	9.69E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW220100_001	14.1	7.22	32.2	593	453	50.5	50.5	34.6	15.0	9.92E-05	5.21E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW220200_001	14.1	7.20	32.2	599	451	50.5	50.5	34.6	15.0	9.91E-05	5.20E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW220200_002	13.9	7.18	31.0	645	459	50.6	50.6	34.3	15.0	9.88E-05	5.20E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221500_001	14.2	7.28	32.5	478	409	49.5	49.5	34.1	15.0	9.84E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221600_001	13.8	7.35	30.6	543	420	49.9	49.9	33.8	15.0	9.76E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221600_002	13.8	7.34	30.4	538	419	49.8	49.8	33.8	15.0	9.75E-05	5.23E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221600_003	13.9	7.36	31.0	541	421	49.9	49.9	33.8	15.0	9.77E-05	5.24E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW221600_004	14.3	7.29	32.8	490	407	49.6	49.6	34.1	15.0	9.86E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221600_005	14.2	7.27	32.6	495	403	49.4	49.4	34.0	15.0	9.84E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW221700_001	13.6	7.25	29.2	524	417	49.3	49.3	33.4	15.0	9.70E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW222900_001	15.6	7.46	38.8	503	403	50.8	50.8	34.6	15.0	9.74E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223000_001	14.8	7.54	34.3	495	392	50.1	50.1	33.5	15.0	9.53E-05	5.19E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW223000_002	13.7	7.12	30.4	499	391	48.7	48.7	33.4	14.8	9.53E-05	5.16E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW223100_001	14.3	7.38	33.3	506	401	49.5	49.5	33.4	15.0	9.54E-05	5.18E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW223600_001	13.3	7.10	29.0	623	415	49.4	49.4	34.2	14.9	9.74E-05	5.17E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223700_001	13.4	7.11	29.3	623	421	49.4	49.4	34.3	14.9	9.76E-05	5.17E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223700_002	13.5	7.11	29.8	636	428	49.5	49.5	34.6	14.9	9.82E-05	5.17E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223800_001	13.6	7.12	30.3	628	435	49.9	49.9	34.8	14.9	9.89E-05	5.17E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW223800_002	13.7	7.12	31.5	621	439	50.3	50.3	35.0	14.9	9.94E-05	5.17E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW224200_001	14.5	7.32	34.2	540	432	56.8	56.8	37.0	15.3	1.04E-04	5.26E-05	4.47	1.51	0.15	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW225200_001	13.9	7.28	32.2	600	439	50.3	50.3	34.1	15.0	9.86E-05	5.23E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW225300_001	14.1	7.35	33.7	630	452	50.9	50.9	34.4	15.1	9.95E-05	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW225300_002	14.1	7.33	33.7	634	452	50.8	50.8	34.4	15.1	9.95E-05	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW225300_003	14.2	7.34	34.3	647	456	50.9	50.9	34.5	15.1	9.99E-05	5.25E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW226000_001	15.9	7.50	41.4	526	437	54.5	54.5	36.8	15.2	1.03E-04	5.23E-05	4.47	1.51	0.15	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW226200_001	15.4	7.64	37.0	503	420	54.4	54.4	35.1	15.3	9.98E-05	5.24E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW226300_001	15.4	7.63	37.4	504	421	54.5	54.5	35.1	15.3	9.98E-05	5.24E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW226300_002	15.0	7.54	36.5	503	422	53.6	53.6	35.1	15.2	9.97E-05	5.23E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW227700_001	14.5	7.19	32.6	594	449	63.1	63.1	36.6	15.1	1.01E-04	5.20E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW227800_001	15.2	7.55	36.8	695	479	71.0	71.0	39.3	15.9	1.05E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW227800_002	15.9	7.71	41.0	849	513	76.9	76.9	41.7	16.3	1.08E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW227800_003	15.0	7.25	35.3	645	479	69.4	69.4	38.0	15.2	1.04E-04	5.23E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW228900_001	14.7	7.29	34.7	521	406	51.2	51.2	34.3	15.0	9.65E-05	5.18E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229000_005	15.4	7.42	37.4	518	409	52.1	52.1	34.5	15.0	9.70E-05	5.19E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229100_003	16.1	7.56	40.0	539	409	53.5	53.5	34.6	15.1	9.71E-05	5.20E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229100_004	16.6	7.73	42.6	549	417	55.4	55.4	35.2	15.2	9.82E-05	5.22E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_001	16.6	7.72	42.3	553	414	55.2	55.2	34.9	15.2	9.74E-05	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_002	15.9	7.67	39.1	492	403	52.8	52.8	34.5	15.1	9.68E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_003	16.0	7.70	40.6	494	403	53.1	53.1	34.5	15.2	9.68E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_004	15.8	7.68	40.2	494	403	53.1	53.1	34.4	15.1	9.66E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_005	15.8	7.67	39.2	491	403	52.6	52.6	34.5	15.1	9.67E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_006	16.8	7.76	43.1	557	416	55.5	55.5	35.0	15.2	9.76E-05	5.22E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229200_007	16.4	7.62	41.3	546	412	54.4	54.4	34.5	15.1	9.70E-05	5.21E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW229300_001	15.6	7.57	39.0	492	402	52.9	52.9	34.2	15.1	9.64E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230300_001	14.1	7.29	31.0	616	436	50.0	50.0	33.8	15.0	9.85E-05	5.23E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230300_002	13.3	7.10	28.5	578	421	49.1	49.1	33.4	14.8	9.64E-05	5.16E-05	4.47	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230400_003	14.0	7.31	31.0	543	421	49.9	49.9	34.1	15.0	9.87E-05	5.23E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230400_004	14.2	7.38	32.3	571	431	50.1	50.1	34.3	15.0	9.97E-05	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW230400_005	13.2	7.09	27.8	518	401	48.6	48.6	33.5	14.8	9.66E-05	5.16E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231500_001	13.5	7.13	28.8	507	397	48.1	48.1	33.5	14.9	9.65E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231500_002	13.3	7.12	28.2	522	400	48.3	48.3	33.6	14.9	9.67E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231800_002	13.3	7.10	28.5	495	397	48.7	48.7	33.8	14.8	9.67E-05	5.16E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231800_003	13.4	7.14	29.0	484	413	49.1	49.1	33.7	14.9	9.67E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_001	13.5	7.19	29.3	539	424	49.3	49.3	33.8	14.9	9.78E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_002	14.0	7.21	31.8	607	436	50.7	50.7	34.4	14.9	9.98E-05	5.20E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_003	13.9	7.17	32.4	618	433	50.4	50.4	34.5	14.9	1.00E-04	5.18E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_004	13.9	7.14	32.5	626	430	49.8	49.8	34.5	14.9	1.00E-04	5.17E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_005	13.6	7.11	31.4	631	427	49.0	49.0	34.3	14.8	9.95E-05	5.17E-05	4.48	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW231900_006	13.4	7.10	30.4	610	420	48.6	48.6	34.0	14.8	9.87E-05	5.16E-05	4.48	1.50	0.16	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW232900_001	14.7	7.30	33.9	462	392	48.3	48.3	33.2	14.9	9.60E-05	5.17E-05	4.45	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW232900_002	15.6	7.53	37.4	468	400	49.7	49.7	33.6	15.0	9.68E-05	5.20E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW232900_003	15.3	7.37	36.4	466	395	49.0	49.0	33.5	14.9	9.66E-05	5.18E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233000_001	15.2	7.47	36.4	466	395	49.2	49.2	33.4	15.0	9.66E-05	5.19E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233000_002	15.4	7.50	37.0	468	395	49.2	49.2	33.5	15.0	9.67E-05	5.19E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233000_003	15.3	7.46	36.0	467	395	49.0	49.0	33.4	14.9	9.64E-05	5.19E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233000_004	14.3	7.26	33.7	503	395	49.5	49.5	33.4	14.9	9.57E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW233100_001	15.8	7.74	39.8	522	402	50.6	50.6	34.1	15.0	9.73E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233100_002	15.8	7.75	40.2	522	402	50.7	50.7	34.2	15.0	9.73E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233100_003	15.7	7.72	39.7	522	401	50.6	50.6	34.1	15.0	9.71E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233100_004	14.0	7.25	31.7	501	391	49.1	49.1	33.3	14.9	9.52E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW233300_001	13.3	7.18	28.2	470	389	49.0	49.0	33.3	14.9	9.47E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW233500_001	13.3	7.17	27.6	503	389	48.5	48.5	33.3	14.9	9.52E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW233600_001	13.1	7.15	27.1	501	389	48.3	48.3	33.3	14.9	9.54E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW233700_001	13.1	7.14	26.9	492	392	48.4	48.4	33.3	14.9	9.58E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW233800_001	13.1	7.12	26.6	483	393	48.3	48.3	33.2	14.8	9.58E-05	5.17E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234400_001	13.8	7.19	30.4	482	405	48.6	48.6	33.7	14.9	9.88E-05	5.20E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234400_002	13.2	7.12	28.3	474	410	48.5	48.5	33.6	14.8	9.70E-05	5.17E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234400_003	13.4	7.14	28.7	474	410	48.7	48.7	33.7	14.9	9.74E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234500_001	14.5	7.50	33.6	554	429	51.3	51.3	34.0	15.1	1.00E-04	5.30E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234500_002	14.0	7.38	30.9	546	422	50.6	50.6	33.7	15.0	9.85E-05	5.27E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234600_001	13.8	7.27	30.8	545	421	49.9	49.9	33.8	15.0	9.86E-05	5.23E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234600_002	13.5	7.13	29.2	530	410	48.6	48.6	33.6	14.9	9.75E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW234600_003	13.4	7.12	29.1	492	406	48.2	48.2	33.4	14.9	9.74E-05	5.17E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW235800_001	14.4	7.32	33.6	662	458	56.8	56.8	36.0	15.3	1.04E-04	5.30E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235800_002	14.5	7.32	33.7	678	458	56.9	56.9	36.1	15.3	1.04E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235800_003	14.5	7.34	33.9	718	465	57.7	57.7	36.2	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235800_004	14.4	7.29	33.1	681	455	56.4	56.4	35.9	15.3	1.04E-04	5.28E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235900_003	14.8	7.52	36.3	804	484	62.6	62.6	37.5	15.7	1.07E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235900_004	14.7	7.42	34.8	779	480	60.1	60.1	36.5	15.5	1.05E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235900_008	14.9	7.55	36.5	811	496	62.7	62.7	37.6	15.8	1.07E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW310200_001	13.6	7.21	29.1	563	434	52.2	52.2	34.3	15.1	9.93E-05	5.24E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311300_001	14.8	7.46	34.6	512	435	50.4	50.4	34.2	15.1	1.01E-04	5.28E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311300_002	14.7	7.42	34.3	503	431	50.0	50.0	34.1	15.1	1.01E-04	5.27E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311300_003	14.7	7.41	34.1	507	430	49.9	49.9	34.1	15.1	1.01E-04	5.27E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311300_004	14.6	7.38	33.7	511	426	49.6	49.6	34.0	15.1	1.00E-04	5.26E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_001	14.7	7.52	34.1	552	434	51.3	51.3	34.6	15.2	1.01E-04	5.30E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_002	14.7	7.52	34.3	558	435	51.3	51.3	34.6	15.2	1.01E-04	5.30E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_003	14.8	7.53	34.6	566	437	51.2	51.2	34.6	15.2	1.01E-04	5.30E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_004	14.8	7.53	35.0	574	440	51.2	51.2	34.7	15.2	1.01E-04	5.31E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_005	14.1	7.33	31.3	561	422	50.3	50.3	34.0	15.0	9.90E-05	5.24E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_006	13.9	7.28	31.2	561	421	50.1	50.1	33.8	15.0	9.88E-05	5.23E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_008	13.6	7.15	29.9	545	415	49.1	49.1	33.6	14.9	9.78E-05	5.18E-05	4.47	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW311400_009	13.6	7.12	30.0	548	421	49.0	49.0	33.6	14.9	9.77E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312300_001	13.5	7.14	29.0	457	398	48.2	48.2	33.3	14.9	9.71E-05	5.18E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312400_001	14.1	7.22	30.8	475	415	51.0	51.0	33.7	15.0	9.78E-05	5.20E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312400_002	13.7	7.16	30.0	469	414	50.4	50.4	33.6	14.9	9.68E-05	5.19E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312500_001	14.6	7.40	33.5	485	424	51.8	51.8	34.3	15.1	1.00E-04	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312500_002	14.6	7.39	33.4	486	423	51.8	51.8	34.3	15.1	9.99E-05	5.25E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312500_003	14.4	7.29	32.4	478	418	51.2	51.2	34.1	15.0	9.90E-05	5.22E-05	4.45	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312500_004	13.9	7.25	31.6	504	415	51.5	51.5	33.9	15.0	9.80E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312600_001	14.8	7.43	34.4	492	428	52.2	52.2	34.4	15.2	1.01E-04	5.26E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312600_002	14.6	7.37	33.3	483	420	51.4	51.4	34.2	15.1	1.00E-04	5.25E-05	4.45	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW312700_001	15.8	7.63	40.0	616	458	53.4	53.4	35.1	15.3	1.06E-04	5.36E-05	4.46	1.51	0.15	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW312900_001	13.1	7.14	26.7	472	392	48.4	48.4	33.4	14.9	9.53E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW313100_001	13.7	7.25	30.0	541	415	48.9	48.9	33.4	14.9	9.92E-05	5.23E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW313400_001	13.9	7.24	30.8	507	417	48.6	48.6	33.3	14.9	9.98E-05	5.23E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW313900_001	13.6	7.19	29.2	587	430	50.8	50.8	33.6	14.9	9.88E-05	5.22E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW314100_001	13.1	7.14	26.9	517	400	48.9	48.9	33.5	14.9	9.62E-05	5.20E-05	4.45	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW314300_001	13.3	7.21	27.4	487	401	50.2	50.2	33.7	15.0	9.68E-05	5.23E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW315400_001	12.8	7.08	26.0	498	401	47.7	47.7	33.3	14.8	9.56E-05	5.17E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW317500_001	17.3	7.69	48.4	857	536	67.9	67.9	41.5	15.9	1.22E-04	5.48E-05	4.52	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW317500_003	17.6	7.77	50.1	920	553	69.6	69.6	42.1	16.1	1.24E-04	5.53E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW410100_001	16.0	7.73	40.4	807	541	58.5	58.5	37.3	15.5	1.15E-04	5.57E-05	4.49	1.51	0.16	6.36E-02	2.56	0.50	0.32	2.54E-02	1.37E-02
RW410100_002	15.9	7.70	39.8	799	547	56.7	56.7	36.7	15.5	1.14E-04	5.57E-05	4.48	1.51	0.16	6.36E-02	2.56	0.49	0.32	2.54E-02	1.37E-02
RW410200_001	16.1	7.75	41.1	902	535	61.3	61.3	38.3	15.7	1.16E-04	5.56E-05	4.51	1.51	0.16	6.36E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RW410400_001	16.3	7.64	41.5	945	517	61.6	61.6	39.4	15.8	1.12E-04	5.44E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW410800_002	16.3	7.60	42.0	833	502	59.2	59.2	39.1	15.8	1.13E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW510000_001	16.2	7.73	45.6	1132	564	59.6	59.6	37.2	15.6	1.23E-04	5.56E-05	4.54	1.51	0.16	6.38E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW510100_001	16.9	7.97	44.3	1233	567	61.1	61.1	37.7	15.7	1.20E-04	5.72E-05	4.55	1.51	0.16	6.37E-02	2.56	0.50	0.32	2.54E-02	1.37E-02
RW510100_002	15.5	7.55	38.6	929	509	58.1	58.1	36.7	15.4	1.12E-04	5.44E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW510400_001	14.3	7.33	32.1	628	444	52.6	52.6	34.1	15.0	1.01E-04	5.27E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW512600_001	13.9	7.30	31.3	639	430	47.9	47.9	33.4	14.9	1.00E-04	5.26E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW512600_002	12.8	7.10	25.4	489	386	47.5	47.5	33.3	14.8	9.47E-05	5.18E-05	4.45	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW512700_001	13.0	7.13	26.6	487	396	47.6	47.6	33.4	14.8	9.58E-05	5.19E-05	4.45	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW515200_001	14.5	7.39	34.2	591	477	58.3	58.3	36.3	15.4	1.05E-04	5.32E-05	4.47	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW515200_002	13.2	7.11	27.4	471	407	51.0	51.0	33.7	14.9	9.72E-05	5.19E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW515500_001	13.2	7.16	26.9	521	401	50.6	50.6	33.4	15.0	9.63E-05	5.21E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02

Appendix C.4: Maximum Predicted Concentrations (µg/m³), 2051 No-Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.0254	0.0137
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**94%**	**114%**	**135%**	**5%**	**5%**	**31%**	**151%**	**31%**	**90%**	**311%**	**636%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW110000_024**	**RE110000_005**	**RW110000_017**	**RE110000_006**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE110000_005**	**RE521600_004**	**RE110000_005**	**RE110000_006**	**RW110000_024**	**RE110000_006**	**RW110000_024**	**RW110000_024**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RW515500_002	13.1	7.14	26.6	505	396	50.9	50.9	33.4	15.0	9.60E-05	5.20E-05	4.46	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW515500_003	13.0	7.07	26.4	647	411	50.9	50.9	33.4	14.9	9.56E-05	5.17E-05	4.48	1.50	0.16	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW515600_001	13.0	7.12	26.4	506	393	49.6	49.6	33.2	14.9	9.56E-05	5.19E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW515600_002	13.1	7.12	26.8	513	400	51.6	51.6	33.4	14.9	9.63E-05	5.19E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW515600_003	12.9	7.11	25.9	502	392	50.2	50.2	33.1	14.9	9.53E-05	5.19E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW515700_001	12.9	7.10	25.7	504	394	50.1	50.1	33.1	14.9	9.51E-05	5.18E-05	4.46	1.50	0.15	6.29E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RW516700_001	13.0	7.09	27.2	538	415	48.5	48.5	33.6	14.9	9.72E-05	5.18E-05	4.46	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW517400_001	13.9	7.31	30.4	470	400	48.6	48.6	33.5	14.9	9.70E-05	5.20E-05	4.45	1.50	0.15	6.30E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW517500_001	13.9	7.40	30.7	456	394	48.3	48.3	33.3	15.0	9.63E-05	5.21E-05	4.45	1.50	0.15	6.29E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW517500_002	13.9	7.23	31.3	551	419	51.8	51.8	34.1	15.1	9.91E-05	5.24E-05	4.46	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW517600_001	14.1	7.37	32.7	620	451	54.3	54.3	35.4	15.3	1.04E-04	5.32E-05	4.47	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519300_001	13.4	7.16	29.5	566	440	51.2	51.2	34.5	15.0	1.00E-04	5.21E-05	4.47	1.50	0.16	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW519300_002	15.7	7.67	39.9	1011	540	67.3	67.3	38.3	15.9	1.13E-04	5.50E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW519600_001	13.4	7.26	29.3	527	423	50.1	50.1	34.3	15.1	9.88E-05	5.24E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW519600_002	13.6	7.31	30.4	540	428	50.8	50.8	34.6	15.1	9.98E-05	5.26E-05	4.47	1.50	0.15	6.31E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW519600_003	13.9	7.38	32.4	574	445	52.3	52.3	35.4	15.2	1.02E-04	5.29E-05	4.47	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW519600_004	14.0	7.33	32.3	640	443	57.1	57.1	35.9	15.2	1.03E-04	5.27E-05	4.48	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RW519900_001	14.2	7.35	34.1	712	497	58.8	58.8	36.9	15.4	1.05E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520000_001	14.1	7.32	33.4	687	491	58.1	58.1	36.6	15.4	1.04E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520100_001	14.1	7.34	33.8	695	495	58.4	58.4	36.8	15.4	1.05E-04	5.31E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520200_001	14.0	7.31	32.8	666	485	57.1	57.1	36.4	15.3	1.04E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520300_001	13.9	7.29	32.4	660	481	56.7	56.7	36.2	15.3	1.03E-04	5.28E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520400_001	14.1	7.31	33.3	690	495	56.7	56.7	36.6	15.4	1.04E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520600_001	14.3	7.34	34.5	722	512	57.8	57.8	37.2	15.4	1.06E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520600_002	13.6	7.19	30.0	611	473	53.0	53.0	35.2	15.1	1.01E-04	5.24E-05	4.48	1.50	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW520800_001	14.4	7.34	34.7	724	523	58.1	58.1	37.3	15.4	1.07E-04	5.32E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520800_002	14.2	7.30	33.8	695	516	56.9	56.9	36.9	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520900_001	14.3	7.31	34.1	708	523	57.1	57.1	37.1	15.4	1.06E-04	5.30E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521000_001	14.3	7.31	34.5	721	528	57.3	57.3	37.2	15.4	1.07E-04	5.31E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_001	15.9	7.88	41.1	1039	570	71.6	71.6	39.8	16.0	1.17E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RW521500_002	14.3	7.38	33.0	782	487	62.6	62.6	37.1	15.4	1.07E-04	5.32E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_003	14.1	7.33	32.1	700	478	61.1	61.1	36.7	15.3	1.06E-04	5.31E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_004	14.1	7.33	32.6	657	473	60.4	60.4	36.7	15.3	1.06E-04	5.30E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_005	14.2	7.27	33.6	633	474	59.1	59.1	37.0	15.2	1.07E-04	5.29E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_006	14.2	7.25	33.8	620	476	59.5	59.5	37.1	15.2	1.07E-04	5.28E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_001	15.8	7.46	39.1	776	566	75.0	75.0	41.0	15.8	1.19E-04	5.46E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RW521600_002	13.8	7.24	31.0	618	438	57.9	57.9	36.5	15.3	1.03E-04	5.29E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_009	13.8	7.25	31.4	629	434	58.1	58.1	36.3	15.3	1.04E-04	5.29E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_010	14.9	7.35	36.5	839	538	69.3	69.3	39.9	15.6	1.17E-04	5.40E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521600_011	14.6	7.30	34.6	774	516	66.6	66.6	38.8	15.5	1.13E-04	5.36E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521600_012	14.6	7.38	33.4	1012	517	72.4	72.4	38.1	15.7	1.12E-04	5.44E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521600_013	14.0	7.24	30.8	810	468	65.0	65.0	36.6	15.3	1.07E-04	5.32E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_014	13.8	7.24	31.2	611	432	57.3	57.3	36.2	15.3	1.03E-04	5.28E-05	4.48	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_016	15.3	7.36	38.0	1062	570	75.2	75.2	41.0	15.6	1.22E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521600_017	13.8	7.27	31.4	639	454	60.9	60.9	36.8	15.4	1.05E-04	5.31E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Notes:
[1] Conversion of NO_x to NO_2 using the Ozone Limiting Method and hourly concentrations of NO_2 and ozone. The ambient background concentrations measured at local monitoring stations are not added directly to the 1-hour and 24-hour modelled concentrations without background.

Appendix C.5: Maximum Predicted Concentrations from 2051 Build Scenario with Background

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110000_001	20.8	8.80	62.6	1572	851	120.2	120.2	59.5	20.1	1.49E-04	6.21E-05	4.64	1.53	0.17	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110000_002	18.5	8.42	53.8	1385	696	116.1	116.1	53.2	18.9	1.33E-04	5.91E-05	4.64	1.53	0.16	6.45E-02	2.58	0.50	0.32	2.54E-02	1.37E-02
RE110000_003	19.9	8.67	61.9	1539	857	116.8	116.8	55.3	18.9	1.43E-04	6.06E-05	4.64	1.53	0.17	6.50E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110000_004	20.3	8.73	61.0	1519	821	120.9	120.9	57.3	19.8	1.47E-04	6.16E-05	4.64	1.53	0.17	6.50E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110000_005	22.0	9.23	68.5	1813	906	124.0	124.0	61.7	21.3	1.57E-04	6.45E-05	4.70	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RE110000_006	18.5	8.18	52.5	1973	701	118.4	118.4	50.8	17.7	1.36E-04	5.89E-05	4.73	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_007	18.6	8.37	55.5	1457	730	107.2	107.2	51.1	18.1	1.34E-04	5.89E-05	4.63	1.53	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_008	18.2	8.25	54.1	1413	716	105.5	105.5	50.4	17.9	1.32E-04	5.83E-05	4.62	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_009	17.9	8.17	52.8	1381	705	104.6	104.6	49.9	17.7	1.31E-04	5.78E-05	4.62	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_010	17.7	8.11	51.9	1354	696	103.8	103.8	49.4	17.6	1.30E-04	5.75E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_011	17.6	8.07	51.0	1328	687	103.1	103.1	49.0	17.5	1.29E-04	5.72E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_020	18.3	8.28	54.3	1416	716	105.7	105.7	50.4	17.9	1.33E-04	5.84E-05	4.62	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_021	18.1	8.22	53.4	1390	708	104.8	104.8	50.0	17.8	1.32E-04	5.81E-05	4.62	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_022	17.9	8.15	52.5	1364	700	103.9	103.9	49.6	17.7	1.31E-04	5.77E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_023	17.7	8.11	51.8	1346	693	103.3	103.3	49.3	17.6	1.30E-04	5.75E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_024	17.6	8.07	51.2	1330	687	102.8	102.8	49.0	17.5	1.29E-04	5.73E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_025	17.5	8.04	50.6	1312	681	102.2	102.2	48.7	17.4	1.28E-04	5.71E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_028	18.4	8.32	54.7	1446	719	106.3	106.3	50.5	18.0	1.33E-04	5.86E-05	4.63	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_029	18.1	8.22	53.4	1393	707	104.9	104.9	50.0	17.8	1.32E-04	5.81E-05	4.62	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_030	17.9	8.15	52.3	1357	696	103.7	103.7	49.5	17.7	1.30E-04	5.77E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_031	17.7	8.10	51.5	1336	689	103.1	103.1	49.1	17.6	1.29E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_032	17.5	8.06	50.9	1318	683	102.4	102.4	48.8	17.5	1.29E-04	5.72E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_045	18.5	8.36	54.9	1489	719	107.4	107.4	50.5	18.1	1.33E-04	5.88E-05	4.63	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_046	18.2	8.26	53.7	1422	707	105.2	105.2	50.0	17.9	1.32E-04	5.83E-05	4.62	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_047	18.0	8.18	52.5	1371	697	104.0	104.0	49.4	17.7	1.31E-04	5.78E-05	4.62	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_048	17.8	8.12	51.7	1343	688	103.1	103.1	49.0	17.6	1.30E-04	5.75E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_049	17.6	8.07	50.9	1316	681	102.4	102.4	48.7	17.5	1.29E-04	5.73E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_050	18.3	8.30	54.0	1455	710	106.1	106.1	50.1	18.0	1.32E-04	5.85E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_051	18.3	8.29	53.9	1450	709	106.3	106.3	50.0	17.9	1.32E-04	5.85E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_052	18.3	8.31	54.1	1459	709	106.9	106.9	50.0	18.0	1.32E-04	5.85E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_053	18.3	8.31	54.0	1466	709	107.0	107.0	50.0	18.0	1.32E-04	5.86E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_054	18.4	8.32	54.0	1474	708	107.2	107.2	49.9	18.0	1.32E-04	5.86E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_055	18.4	8.32	54.0	1473	708	107.5	107.5	49.9	18.0	1.32E-04	5.86E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_056	17.6	8.08	50.7	1317	676	102.0	102.0	48.5	17.5	1.28E-04	5.73E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_057	17.6	8.09	50.9	1321	679	102.1	102.1	48.6	17.5	1.29E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_058	17.7	8.09	51.0	1323	680	102.0	102.0	48.6	17.5	1.29E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_059	17.6	8.09	51.0	1324	680	102.2	102.2	48.7	17.5	1.29E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_060	17.7	8.10	51.1	1328	682	102.5	102.5	48.7	17.5	1.29E-04	5.74E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_061	19.1	8.61	56.6	1710	745	112.2	112.2	50.9	18.5	1.36E-04	6.01E-05	4.66	1.53	0.17	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_062	18.6	8.43	54.9	1570	720	110.2	110.2	50.2	18.2	1.33E-04	5.92E-05	4.64	1.52	0.17	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_063	18.3	8.31	53.7	1472	704	107.2	107.2	49.7	18.0	1.32E-04	5.86E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_064	18.1	8.22	52.5	1418	693	105.4	105.4	49.2	17.8	1.31E-04	5.81E-05	4.62	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_065	17.8	8.14	51.3	1361	682	103.1	103.1	48.7	17.6	1.29E-04	5.76E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_066	17.6	8.08	50.5	1316	673	101.9	101.9	48.3	17.5	1.28E-04	5.73E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_067	17.4	8.02	49.6	1275	664	100.8	100.8	47.9	17.4	1.27E-04	5.70E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110000_069	18.7	8.48	55.2	1625	726	110.3	110.3	50.3	18.3	1.34E-04	5.94E-05	4.65	1.52	0.17	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_070	18.3	8.31	53.4	1487	702	106.8	106.8	49.5	17.9	1.32E-04	5.85E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_071	18.0	8.21	52.3	1410	691	105.0	105.0	49.0	17.8	1.30E-04	5.80E-05	4.62	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_072	17.7	8.13	51.2	1354	680	103.2	103.2	48.5	17.6	1.29E-04	5.76E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_073	17.5	8.06	50.1	1305	670	101.7	101.7	48.1	17.4	1.28E-04	5.72E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_112	18.5	8.41	54.2	1579	715	108.6	108.6	49.8	18.1	1.33E-04	5.91E-05	4.64	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_113	18.2	8.29	52.9	1471	696	106.1	106.1	49.2	17.9	1.31E-04	5.84E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_114	17.9	8.18	51.7	1382	684	103.9	103.9	48.7	17.7	1.30E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_115	17.6	8.10	50.6	1333	673	102.5	102.5	48.2	17.5	1.28E-04	5.74E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_123	18.8	8.52	55.2	1653	729	110.3	110.3	50.1	18.3	1.34E-04	5.96E-05	4.65	1.52	0.17	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_124	18.3	8.33	53.4	1509	703	107.1	107.1	49.4	18.0	1.32E-04	5.87E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_125	17.9	8.20	51.7	1396	684	104.1	104.1	48.6	17.7	1.30E-04	5.79E-05	4.62	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_132	18.3	8.31	53.0	1497	699	106.8	106.8	49.1	17.9	1.31E-04	5.86E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_133	17.9	8.18	51.3	1387	679	103.8	103.8	48.4	17.7	1.29E-04	5.78E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_139	18.3	8.32	52.9	1497	698	106.9	106.9	49.0	17.9	1.31E-04	5.86E-05	4.63	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_140	17.9	8.19	51.4	1386	679	103.8	103.8	48.4	17.7	1.29E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_145	18.7	8.47	54.3	1620	718	108.8	108.8	49.6	18.2	1.33E-04	5.94E-05	4.65	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_146	18.2	8.29	52.5	1475	692	106.1	106.1	48.8	17.9	1.31E-04	5.84E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_147	17.8	8.16	50.9	1374	673	103.2	103.2	48.1	17.6	1.29E-04	5.77E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RE110000_149	18.8	8.52	54.5	1667	724	109.5	109.5	49.6	18.3	1.33E-04	5.97E-05	4.66	1.52	0.17	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_150	18.3	8.33	52.7	1515	697	107.1	107.1	48.9	17.9	1.31E-04	5.86E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_151	18.0	8.21	51.4	1420	678	104.0	104.0	48.3	17.7	1.29E-04	5.80E-05	4.62	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_165	17.9	8.19	50.9	1407	673	103.4	103.4	48.0	17.7	1.29E-04	5.79E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_167	17.9	8.20	50.9	1411	673	103.1	103.1	48.0	17.7	1.29E-04	5.79E-05	4.62	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_173	18.8	8.53	54.5	1652	721	109.7	109.7	49.5	18.3	1.33E-04	5.97E-05	4.66	1.52	0.17	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_177	17.7	8.12	50.0	1346	663	101.9	101.9	47.5	17.5	1.28E-04	5.75E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_178	18.3	8.31	52.3	1496	690	105.8	105.8	48.6	17.9	1.30E-04	5.85E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_189	18.3	8.33	52.5	1523	695	106.8	106.8	48.7	17.9	1.31E-04	5.86E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_190	18.3	8.32	52.5	1509	694	106.5	106.5	48.7	17.9	1.31E-04	5.86E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_191	17.9	8.20	51.0	1417	674	103.4	103.4	48.1	17.7	1.29E-04	5.79E-05	4.62	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_239	19.6	8.28	61.6	1456	736	112.4	112.4	53.1	17.8	1.38E-04	5.75E-05	4.63	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_240	20.2	8.48	64.8	1489	756	115.7	115.7	54.7	18.2	1.41E-04	5.84E-05	4.64	1.53	0.16	6.49E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_241	19.7	8.33	60.8	1674	741	113.3	113.3	52.9	17.9	1.37E-04	5.78E-05	4.67	1.53	0.17	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_242	19.5	8.24	59.6	1602	732	112.6	112.6	52.3	17.8	1.36E-04	5.74E-05	4.66	1.53	0.17	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_243	19.8	8.34	62.6	1469	743	114.2	114.2	53.6	17.9	1.39E-04	5.78E-05	4.64	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_244	19.0	8.10	57.3	1490	712	109.7	109.7	51.0	17.4	1.33E-04	5.67E-05	4.64	1.53	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_245	19.9	8.39	63.5	1478	749	114.9	114.9	54.1	18.0	1.40E-04	5.80E-05	4.64	1.53	0.16	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_246	19.6	8.29	60.3	1638	737	113.0	113.0	52.6	17.8	1.37E-04	5.76E-05	4.67	1.53	0.17	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_247	19.2	8.17	58.6	1517	723	111.0	111.0	51.7	17.6	1.35E-04	5.70E-05	4.64	1.53	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_248	19.1	8.14	57.9	1506	717	110.3	110.3	51.4	17.5	1.34E-04	5.69E-05	4.64	1.53	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_249	19.9	8.37	61.1	1729	748	114.5	114.5	53.1	18.0	1.38E-04	5.79E-05	4.68	1.53	0.17	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_253	17.6	8.11	49.5	1329	658	101.5	101.5	47.3	17.5	1.27E-04	5.74E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_254	18.1	8.26	51.2	1440	673	103.3	103.3	48.0	17.8	1.29E-04	5.81E-05	4.62	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_255	17.6	8.11	49.2	1328	654	101.2	101.2	47.1	17.5	1.27E-04	5.73E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_256	18.0	8.25	51.0	1419	670	102.9	102.9	47.8	17.8	1.29E-04	5.80E-05	4.62	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_257	17.7	8.14	49.5	1332	656	100.8	100.8	47.2	17.5	1.27E-04	5.75E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_265	18.0	8.23	51.0	1425	671	103.3	103.3	47.9	17.7	1.29E-04	5.80E-05	4.62	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_267	18.4	8.37	52.6	1542	693	106.2	106.2	48.6	18.0	1.31E-04	5.88E-05	4.64	1.52	0.17	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_276	17.9	8.19	50.2	1372	663	101.6	101.6	47.5	17.6	1.28E-04	5.77E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_277	17.8	8.16	50.0	1369	662	102.4	102.4	47.5	17.6	1.28E-04	5.76E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_278	17.5	8.09	49.1	1313	653	101.4	101.4	47.0	17.4	1.27E-04	5.72E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_279	17.8	8.15	50.2	1371	664	102.1	102.1	47.5	17.6	1.28E-04	5.76E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_280	18.8	8.55	54.3	1671	718	108.9	108.9	49.4	18.3	1.33E-04	5.97E-05	4.66	1.52	0.17	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110000_281	18.2	8.32	52.0	1491	682	105.0	105.0	48.3	17.9	1.30E-04	5.85E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_292	18.3	8.35	52.3	1507	684	105.1	105.1	48.4	17.9	1.30E-04	5.86E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_293	17.9	8.21	50.9	1419	671	103.0	103.0	47.9	17.7	1.29E-04	5.79E-05	4.62	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_294	17.8	8.18	50.2	1384	664	102.3	102.3	47.5	17.6	1.28E-04	5.77E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_305	18.2	8.32	51.8	1474	679	104.3	104.3	48.2	17.9	1.30E-04	5.84E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_309	18.1	8.28	51.7	1475	680	104.5	104.5	48.2	17.8	1.30E-04	5.83E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_310	18.5	8.42	52.9	1547	690	106.3	106.3	48.7	18.1	1.31E-04	5.89E-05	4.64	1.52	0.17	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_316	18.8	8.54	54.1	1640	707	109.1	109.1	49.2	18.3	1.33E-04	5.96E-05	4.65	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_325	17.9	8.21	51.0	1404	672	103.0	103.0	48.0	17.7	1.29E-04	5.79E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_329	17.9	8.20	50.9	1409	671	102.9	102.9	47.9	17.7	1.29E-04	5.79E-05	4.62	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_331	18.7	8.50	54.2	1636	717	109.2	109.2	49.3	18.3	1.33E-04	5.95E-05	4.65	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_332	18.2	8.30	52.1	1490	685	105.0	105.0	48.4	17.9	1.30E-04	5.84E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_333	17.7	8.13	49.9	1345	661	101.6	101.6	47.4	17.5	1.28E-04	5.75E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_342	18.5	8.42	53.3	1585	703	107.2	107.2	48.9	18.1	1.32E-04	5.91E-05	4.64	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_344	18.2	8.30	52.2	1482	687	105.1	105.1	48.5	17.9	1.30E-04	5.84E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_345	17.7	8.13	50.0	1344	663	101.7	101.7	47.5	17.5	1.28E-04	5.75E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_353	18.3	8.37	52.1	1497	682	106.2	106.2	48.3	18.0	1.30E-04	5.86E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_355	18.1	8.28	51.1	1425	671	104.3	104.3	47.9	17.8	1.29E-04	5.81E-05	4.62	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_378	18.8	8.62	54.3	1605	696	110.7	110.7	49.0	18.5	1.32E-04	5.98E-05	4.65	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_387	18.8	8.57	54.1	1647	707	110.5	110.5	49.2	18.4	1.33E-04	5.97E-05	4.66	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_390	19.2	8.79	55.4	1601	699	112.4	112.4	49.6	18.9	1.33E-04	6.04E-05	4.65	1.52	0.17	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_394	18.5	8.49	52.8	1507	682	107.0	107.0	48.5	18.2	1.31E-04	5.91E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110000_397	17.9	8.22	50.3	1376	663	102.8	102.8	47.5	17.7	1.28E-04	5.78E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110000_401	19.4	8.55	59.1	1546	827	114.5	114.5	53.5	18.6	1.39E-04	5.99E-05	4.64	1.53	0.17	6.48E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110200_001	21.4	8.52	65.9	1850	850	116.1	116.1	52.4	18.1	1.46E-04	6.04E-05	4.70	1.53	0.17	6.51E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE110300_001	19.2	8.25	55.0	1586	747	109.8	109.8	48.4	17.4	1.36E-04	5.89E-05	4.63	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_002	19.0	8.25	53.7	1532	724	109.1	109.1	48.2	17.4	1.34E-04	5.89E-05	4.62	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_003	19.1	8.33	54.0	1509	719	109.0	109.0	48.2	17.5	1.36E-04	5.93E-05	4.62	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110300_004	19.4	8.43	55.4	1558	735	110.0	110.0	48.6	17.6	1.38E-04	5.99E-05	4.62	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110400_001	19.7	8.51	55.9	1594	745	110.2	110.2	48.8	17.7	1.39E-04	6.02E-05	4.63	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE110400_002	20.0	8.62	58.8	1608	747	111.1	111.1	49.5	17.9	1.39E-04	6.06E-05	4.63	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE110500_001	18.8	8.26	53.1	1415	688	105.0	105.0	48.1	17.4	1.33E-04	5.85E-05	4.60	1.52	0.16	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE110500_002	18.5	8.16	51.6	1352	673	102.8	102.8	47.5	17.3	1.30E-04	5.79E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110600_001	18.0	8.05	49.4	1269	656	98.9	98.9	46.6	17.1	1.27E-04	5.72E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110600_002	18.3	8.12	50.9	1320	666	101.5	101.5	47.3	17.3	1.29E-04	5.76E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE110700_001	17.8	8.01	48.6	1218	649	97.2	97.2	46.2	17.1	1.26E-04	5.70E-05	4.58	1.52	0.16	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110700_002	17.5	7.88	45.9	1175	642	94.7	94.7	45.0	16.9	1.23E-04	5.65E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE110800_001	17.7	8.04	48.7	1146	643	95.8	95.8	46.3	17.1	1.25E-04	5.70E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110800_002	17.6	8.02	48.3	1096	636	94.5	94.5	46.1	17.1	1.24E-04	5.69E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110900_001	17.4	8.00	47.8	1044	630	92.9	92.9	45.9	17.1	1.23E-04	5.68E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE110900_002	17.3	7.97	47.2	1017	623	92.0	92.0	45.6	17.0	1.23E-04	5.66E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE111100_001	16.7	7.87	44.7	1079	605	88.6	88.6	44.3	16.8	1.20E-04	5.61E-05	4.55	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE111200_001	16.6	7.85	43.8	1092	598	87.7	87.7	43.9	16.8	1.18E-04	5.60E-05	4.55	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111200_002	16.6	7.91	44.4	1119	596	90.5	90.5	44.1	16.9	1.19E-04	5.62E-05	4.56	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_001	16.5	7.87	43.7	1130	593	89.1	89.1	43.7	16.8	1.18E-04	5.61E-05	4.56	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_002	16.4	7.84	43.0	1131	591	87.3	87.3	43.4	16.8	1.17E-04	5.60E-05	4.56	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111300_003	16.4	7.84	42.8	1137	588	87.5	87.5	43.2	16.8	1.18E-04	5.60E-05	4.56	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111400_001	16.3	7.83	42.3	1139	584	87.6	87.6	42.9	16.7	1.18E-04	5.59E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111400_002	16.3	7.84	42.1	1140	582	87.7	87.7	42.8	16.8	1.18E-04	5.59E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111500_001	16.2	7.83	41.5	1137	577	86.6	86.6	42.5	16.7	1.18E-04	5.59E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111500_002	15.9	7.75	39.8	1111	571	84.7	84.7	42.1	16.6	1.17E-04	5.57E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111600_001	15.9	7.74	39.3	1135	566	84.1	84.1	42.1	16.6	1.17E-04	5.57E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111600_002	15.8	7.74	39.0	1144	561	83.4	83.4	42.2	16.6	1.17E-04	5.57E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111700_001	16.7	7.87	42.6	1062	590	85.8	85.8	43.9	16.8	1.20E-04	5.61E-05	4.56	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111700_002	16.2	7.84	40.5	1215	556	86.6	86.6	42.6	16.9	1.19E-04	5.62E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE111800_001	19.0	8.42	56.4	1765	723	107.8	107.8	47.8	17.3	1.39E-04	5.99E-05	4.66	1.52	0.17	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE111800_002	16.6	7.87	42.6	1068	587	86.1	86.1	44.0	16.8	1.20E-04	5.61E-05	4.56	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_003	16.8	7.92	43.1	1089	589	87.4	87.4	44.2	16.9	1.20E-04	5.63E-05	4.56	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_004	16.8	7.93	43.2	1100	586	87.8	87.8	44.3	16.9	1.21E-04	5.64E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_005	16.2	7.86	40.7	1237	557	86.9	86.9	42.9	16.9	1.20E-04	5.64E-05	4.58	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_006	16.3	7.88	41.0	1244	560	86.9	86.9	43.1	17.0	1.20E-04	5.65E-05	4.58	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_007	16.3	7.88	41.1	1242	561	87.6	87.6	43.3	17.0	1.21E-04	5.66E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE111800_008	16.4	7.91	41.9	1248	571	88.9	88.9	43.6	17.1	1.22E-04	5.68E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE112100_001	18.4	8.55	52.1	1327	686	94.4	94.4	44.8	17.5	1.32E-04	6.05E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE112200_001	17.4	8.21	47.1	1159	607	89.7	89.7	43.3	17.0	1.26E-04	5.85E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE113100_001	15.2	7.52	37.6	1745	600	75.7	75.7	40.3	16.1	1.15E-04	5.48E-05	4.62	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE113200_001	16.0	7.72	40.9	1575	655	78.7	78.7	40.5	16.1	1.20E-04	5.60E-05	4.60	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE113200_002	16.1	7.80	41.4	1625	672	79.0	79.0	40.6	16.2	1.21E-04	5.65E-05	4.61	1.51	0.16	6.38E-02	2.56	0.50	0.32	2.54E-02	1.37E-02
RE113300_001	16.3	7.82	42.7	1808	703	81.0	81.0	40.9	16.4	1.23E-04	5.67E-05	4.63	1.51	0.17	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210700_001	16.1	7.68	41.8	1538	689	83.6	83.6	43.9	16.5	1.24E-04	5.65E-05	4.62	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE210700_002	16.8	7.77	44.5	1730	748	91.4	91.4	45.5	16.8	1.29E-04	5.73E-05	4.65	1.52	0.17	6.42E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210700_003	15.0	7.50	36.0	1168	539	77.9	77.9	40.5	16.0	1.16E-04	5.50E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE210900_001	17.4	8.01	46.7	1697	759	92.4	92.4	45.6	17.1	1.33E-04	5.87E-05	4.64	1.52	0.17	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE210900_003	17.5	7.81	47.8	1876	798	99.8	99.8	46.4	16.9	1.37E-04	5.77E-05	4.67	1.52	0.17	6.44E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE210900_004	16.4	7.82	42.0	1542	694	85.5	85.5	43.9	16.6	1.24E-04	5.72E-05	4.62	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210900_005	16.4	7.78	42.4	1584	707	85.6	85.6	44.2	16.6	1.25E-04	5.71E-05	4.63	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210900_006	15.9	7.82	39.8	1343	635	81.2	81.2	42.0	16.5	1.20E-04	5.71E-05	4.59	1.51	0.16	6.38E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE210900_007	15.4	7.70	38.0	1264	595	77.0	77.0	41.0	16.3	1.19E-04	5.63E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.32	2.54E-02	1.37E-02
RE210900_008	15.3	7.68	37.5	1222	578	76.8	76.8	40.9	16.3	1.18E-04	5.61E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211000_001	17.0	7.70	46.4	1755	776	93.6	93.6	45.8	16.6	1.31E-04	5.67E-05	4.65	1.52	0.17	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE211000_002	16.7	7.72	47.4	1725	779	88.8	88.8	46.0	16.5	1.32E-04	5.67E-05	4.65	1.52	0.17	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE211000_003	16.1	7.66	45.4	1637	737	84.1	84.1	44.8	16.3	1.28E-04	5.62E-05	4.64	1.52	0.17	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE211000_004	15.6	7.58	42.5	1513	689	81.2	81.2	43.5	16.2	1.23E-04	5.56E-05	4.62	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211000_005	16.7	7.61	44.5	1683	749	91.2	91.2	45.1	16.4	1.29E-04	5.61E-05	4.64	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211000_006	15.3	7.56	40.5	1386	646	76.6	76.6	42.0	16.1	1.20E-04	5.53E-05	4.59	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211000_007	15.1	7.64	36.9	1118	552	75.6	75.6	40.0	16.1	1.16E-04	5.57E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211000_008	15.0	7.62	36.6	1059	550	74.0	74.0	39.9	16.1	1.15E-04	5.55E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211000_009	14.9	7.57	36.0	1022	544	72.7	72.7	39.7	16.0	1.14E-04	5.53E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211000_010	14.9	7.56	36.0	1012	544	72.7	72.7	39.5	16.0	1.14E-04	5.52E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_001	15.2	7.52	39.8	1352	634	76.5	76.5	41.5	16.0	1.18E-04	5.51E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_002	15.3	7.45	40.3	1474	670	78.0	78.0	42.8	15.9	1.20E-04	5.47E-05	4.61	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE211100_003	15.3	7.57	39.4	1223	568	77.8	77.8	41.1	16.0	1.19E-04	5.53E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_004	15.0	7.59	36.5	996	550	72.9	72.9	39.3	16.0	1.14E-04	5.53E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_005	14.9	7.56	36.4	961	549	71.8	71.8	38.8	15.9	1.14E-04	5.51E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_006	14.8	7.53	36.4	934	549	69.0	69.0	38.4	15.9	1.14E-04	5.49E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211100_009	15.2	7.55	39.3	1248	584	77.8	77.8	41.3	16.0	1.19E-04	5.52E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RE211200_001	15.0	7.41	38.8	1376	638	76.2	76.2	41.7	15.8	1.18E-04	5.44E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211200_002	14.8	7.40	37.6	1278	608	71.6	71.6	40.7	15.8	1.15E-04	5.42E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211200_003	15.0	7.51	36.8	1128	546	76.7	76.7	39.5	15.8	1.14E-04	5.48E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211200_004	14.9	7.51	36.3	1108	554	75.8	75.8	38.8	15.8	1.12E-04	5.48E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211200_005	15.0	7.47	37.2	1147	547	76.2	76.2	40.0	15.8	1.15E-04	5.46E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE211400_001	17.1	7.92	49.4	1828	741	104.3	104.3	49.1	17.6	1.45E-04	5.92E-05	4.65	1.53	0.17	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE211500_002	15.5	7.42	39.2	1377	590	84.0	84.0	42.6	15.9	1.22E-04	5.47E-05	4.59	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE211500_003	15.9	7.62	42.4	1539	665	88.1	88.1	45.6	16.6	1.30E-04	5.66E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE211500_004	15.6	7.42	39.3	1401	606	85.1	85.1	42.5	15.9	1.22E-04	5.46E-05	4.60	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE211900_001	15.7	7.64	41.6	1346	613	85.9	85.9	45.2	16.7	1.29E-04	5.68E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE212600_001	15.3	7.58	38.6	1091	546	75.6	75.6	41.6	16.0	1.18E-04	5.50E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE212700_001	15.6	7.66	40.1	1160	560	78.4	78.4	42.4	16.2	1.20E-04	5.55E-05	4.56	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE212700_002	16.3	7.77	40.8	1409	606	91.0	91.0	44.2	16.8	1.25E-04	5.70E-05	4.60	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE212800_001	16.4	7.84	43.1	1213	595	82.6	82.6	43.6	16.5	1.24E-04	5.65E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE212800_002	16.8	7.90	45.2	1302	617	88.3	88.3	44.0	16.7	1.26E-04	5.70E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE212900_001	16.8	7.87	45.6	1346	617	90.7	90.7	44.4	16.7	1.27E-04	5.70E-05	4.59	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE213000_001	16.2	7.71	42.2	1459	596	86.0	86.0	43.7	16.5	1.24E-04	5.62E-05	4.60	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214400_001	16.3	7.83	44.7	942	620	85.6	85.6	44.3	16.9	1.19E-04	5.58E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_002	17.3	7.80	49.5	1859	696	92.0	92.0	46.7	16.8	1.34E-04	5.65E-05	4.66	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_003	17.6	7.81	51.4	1691	699	92.6	92.6	47.1	16.8	1.34E-04	5.63E-05	4.67	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_004	17.5	7.80	51.4	1600	682	90.0	90.0	47.0	16.8	1.31E-04	5.61E-05	4.65	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_005	17.5	7.79	51.0	1566	687	90.2	90.2	46.9	16.8	1.30E-04	5.61E-05	4.65	1.52	0.17	6.44E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_006	17.5	7.79	50.9	1553	690	90.6	90.6	46.9	16.8	1.30E-04	5.61E-05	4.64	1.52	0.17	6.44E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_007	17.0	7.70	48.1	1657	686	90.0	90.0	45.5	16.5	1.30E-04	5.57E-05	4.66	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_008	17.2	7.72	49.3	1639	683	89.1	89.1	46.0	16.6	1.31E-04	5.59E-05	4.66	1.52	0.17	6.44E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE214600_009	17.1	7.74	48.9	1722	698	90.7	90.7	46.0	16.6	1.32E-04	5.60E-05	4.67	1.52	0.17	6.44E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE214600_010	17.1	7.74	48.7	1740	698	90.6	90.6	46.0	16.7	1.32E-04	5.61E-05	4.67	1.52	0.17	6.44E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE214600_011	16.9	7.71	47.7	1714	691	88.5	88.5	45.5	16.6	1.31E-04	5.59E-05	4.66	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_012	16.9	7.74	47.5	1815	676	88.6	88.6	45.8	16.7	1.31E-04	5.62E-05	4.65	1.52	0.17	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE214600_013	17.5	7.83	50.6	1891	707	94.4	94.4	47.1	16.9	1.35E-04	5.67E-05	4.67	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_014	17.6	7.82	51.2	1789	716	94.4	94.4	47.1	16.8	1.35E-04	5.64E-05	4.68	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_015	17.6	7.81	50.9	1743	710	95.2	95.2	47.1	16.8	1.35E-04	5.63E-05	4.68	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_016	17.6	7.80	51.6	1630	685	90.0	90.0	47.1	16.8	1.33E-04	5.62E-05	4.66	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_017	17.6	7.80	51.5	1609	676	90.0	90.0	47.0	16.8	1.32E-04	5.62E-05	4.65	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_018	17.5	7.79	51.1	1583	684	89.6	89.6	46.9	16.8	1.30E-04	5.61E-05	4.65	1.52	0.17	6.44E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_019	17.6	7.79	51.0	1543	694	91.2	91.2	46.9	16.8	1.30E-04	5.60E-05	4.64	1.52	0.16	6.44E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_020	17.6	7.79	50.9	1522	696	92.0	92.0	46.9	16.8	1.29E-04	5.60E-05	4.64	1.52	0.16	6.44E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_021	17.6	7.80	50.6	1484	695	90.8	90.8	46.9	16.8	1.29E-04	5.60E-05	4.63	1.52	0.16	6.44E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_022	17.2	7.73	49.0	1681	693	92.1	92.1	46.0	16.6	1.32E-04	5.59E-05	4.67	1.52	0.17	6.44E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE214600_023	17.0	7.69	48.8	1546	659	86.3	86.3	45.7	16.5	1.28E-04	5.56E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_024	17.1	7.69	48.7	1536	667	86.0	86.0	45.6	16.5	1.28E-04	5.56E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_025	17.1	7.68	48.7	1529	671	86.2	86.2	45.6	16.5	1.28E-04	5.55E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_026	17.1	7.68	48.7	1523	673	86.4	86.4	45.6	16.5	1.27E-04	5.55E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_027	17.1	7.68	48.5	1512	674	86.5	86.5	45.6	16.5	1.27E-04	5.55E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_028	17.1	7.68	48.4	1498	674	86.6	86.6	45.5	16.5	1.27E-04	5.55E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_029	17.0	7.68	48.2	1487	674	86.5	86.5	45.5	16.5	1.27E-04	5.55E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_030	17.0	7.67	48.0	1471	673	86.5	86.5	45.4	16.5	1.26E-04	5.54E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_031	17.0	7.67	47.8	1457	673	86.5	86.5	45.4	16.5	1.26E-04	5.54E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_032	16.9	7.67	47.4	1422	670	85.8	85.8	45.3	16.5	1.25E-04	5.54E-05	4.62	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_033	17.1	7.70	47.8	1418	674	86.6	86.6	45.7	16.5	1.26E-04	5.55E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_034	17.1	7.71	48.1	1427	676	86.8	86.8	45.8	16.6	1.26E-04	5.56E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_035	17.1	7.71	48.4	1439	678	87.4	87.4	45.8	16.6	1.26E-04	5.56E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_036	17.2	7.71	48.6	1450	679	87.9	87.9	45.9	16.6	1.27E-04	5.56E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_037	17.1	7.70	49.0	1551	658	86.1	86.1	45.7	16.5	1.29E-04	5.57E-05	4.64	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_038	17.0	7.69	48.7	1541	661	86.2	86.2	45.6	16.5	1.28E-04	5.56E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_039	17.0	7.69	48.7	1538	664	85.8	85.8	45.6	16.5	1.28E-04	5.56E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_040	17.1	7.69	48.8	1532	669	86.1	86.1	45.6	16.5	1.28E-04	5.56E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_041	17.0	7.67	47.6	1439	671	86.3	86.3	45.3	16.5	1.26E-04	5.54E-05	4.62	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_042	16.9	7.67	47.3	1415	670	85.5	85.5	45.3	16.5	1.25E-04	5.54E-05	4.62	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_043	17.0	7.70	47.7	1412	673	86.5	86.5	45.6	16.5	1.25E-04	5.55E-05	4.62	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_044	17.2	7.71	49.0	1483	681	88.3	88.3	46.0	16.6	1.27E-04	5.56E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_045	17.2	7.72	49.1	1496	681	88.0	88.0	46.0	16.6	1.28E-04	5.57E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_046	17.2	7.71	49.0	1512	675	87.3	87.3	45.9	16.6	1.28E-04	5.57E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_047	17.2	7.71	49.1	1520	673	87.2	87.2	45.9	16.6	1.28E-04	5.57E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_048	17.2	7.72	49.3	1542	671	87.0	87.0	46.0	16.6	1.28E-04	5.57E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214600_049	17.2	7.72	49.5	1552	670	86.8	86.8	46.0	16.6	1.29E-04	5.57E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_050	17.2	7.72	49.6	1560	667	87.4	87.4	46.0	16.6	1.29E-04	5.58E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_051	16.5	7.66	44.2	1210	627	86.2	86.2	44.6	16.4	1.19E-04	5.52E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_052	16.4	7.64	43.6	1207	624	84.3	84.3	44.3	16.4	1.19E-04	5.51E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_053	17.2	7.71	48.8	1469	680	88.3	88.3	45.9	16.6	1.27E-04	5.56E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_054	17.2	7.71	49.1	1508	678	87.6	87.6	45.9	16.6	1.28E-04	5.57E-05	4.63	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_055	17.2	7.72	49.2	1531	673	87.1	87.1	45.9	16.6	1.28E-04	5.57E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_056	17.2	7.72	49.7	1565	665	87.3	87.3	46.1	16.6	1.30E-04	5.58E-05	4.64	1.52	0.17	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_057	16.2	7.61	42.8	1205	621	81.2	81.2	43.9	16.3	1.18E-04	5.49E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_058	16.2	7.60	42.4	1190	614	81.5	81.5	43.7	16.3	1.17E-04	5.49E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_059	16.2	7.62	42.8	1192	616	83.0	83.0	43.9	16.3	1.18E-04	5.49E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_060	16.4	7.64	43.5	1194	619	85.5	85.5	44.3	16.4	1.18E-04	5.51E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_061	16.4	7.66	43.9	1197	622	86.8	86.8	44.6	16.4	1.19E-04	5.51E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_062	16.3	7.63	43.2	1207	622	82.6	82.6	44.1	16.4	1.18E-04	5.50E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_063	16.3	7.63	43.1	1193	617	84.3	84.3	44.1	16.4	1.18E-04	5.50E-05	4.57	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_064	16.4	7.62	43.5	1225	631	81.0	81.0	44.1	16.3	1.19E-04	5.50E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_065	16.4	7.63	43.8	1227	632	81.2	81.2	44.3	16.4	1.19E-04	5.50E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_066	16.5	7.64	44.0	1229	633	81.8	81.8	44.4	16.4	1.19E-04	5.51E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214600_067	16.5	7.65	44.4	1231	634	83.0	83.0	44.6	16.4	1.20E-04	5.52E-05	4.58	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_068	16.6	7.67	44.8	1234	636	84.8	84.8	44.9	16.5	1.20E-04	5.52E-05	4.58	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_069	16.9	7.69	46.4	1315	660	84.4	84.4	45.5	16.5	1.23E-04	5.54E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_070	16.6	7.62	45.2	1338	655	82.8	82.8	44.4	16.3	1.22E-04	5.51E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_071	16.6	7.63	45.4	1336	656	82.9	82.9	44.5	16.4	1.22E-04	5.52E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_072	16.7	7.65	45.6	1333	657	83.1	83.1	44.7	16.4	1.22E-04	5.52E-05	4.60	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_073	16.8	7.66	45.9	1328	657	83.6	83.6	45.0	16.4	1.23E-04	5.53E-05	4.60	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_074	16.8	7.67	46.1	1323	659	84.1	84.1	45.2	16.5	1.23E-04	5.53E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_075	17.0	7.70	47.2	1370	669	85.1	85.1	45.6	16.5	1.24E-04	5.55E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_076	16.9	7.67	46.7	1375	667	84.8	84.8	45.2	16.5	1.24E-04	5.53E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_077	16.9	7.68	46.9	1372	668	84.9	84.9	45.4	16.5	1.24E-04	5.54E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_078	16.8	7.66	46.5	1375	665	84.7	84.7	45.1	16.4	1.24E-04	5.53E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_079	16.8	7.65	46.3	1378	664	84.6	84.6	45.0	16.4	1.24E-04	5.52E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_080	16.7	7.63	46.1	1382	664	84.5	84.5	44.9	16.4	1.24E-04	5.52E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_081	17.7	7.84	51.8	1831	723	96.7	96.7	47.5	16.9	1.37E-04	5.66E-05	4.68	1.52	0.17	6.46E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE214600_082	17.0	7.69	48.6	1581	669	86.7	86.7	45.5	16.5	1.29E-04	5.56E-05	4.65	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214600_083	17.0	7.77	48.3	1828	684	89.6	89.6	46.2	16.7	1.32E-04	5.63E-05	4.65	1.52	0.17	6.44E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE214700_002	16.3	7.62	43.7	1695	645	81.6	81.6	43.9	16.4	1.25E-04	5.55E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_003	16.3	7.63	44.0	1702	647	82.2	82.2	44.0	16.4	1.26E-04	5.56E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_004	16.4	7.65	44.4	1715	649	83.9	83.9	44.3	16.4	1.27E-04	5.57E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_005	16.4	7.66	44.8	1725	652	84.8	84.8	44.5	16.5	1.27E-04	5.57E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_006	16.5	7.68	45.2	1739	655	85.4	85.4	44.8	16.5	1.28E-04	5.58E-05	4.64	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_007	16.7	7.70	46.0	1767	660	86.3	86.3	45.2	16.6	1.29E-04	5.60E-05	4.64	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_008	16.8	7.72	46.8	1798	668	87.5	87.5	45.5	16.6	1.30E-04	5.61E-05	4.65	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_009	16.5	7.59	45.7	1455	655	82.8	82.8	44.4	16.3	1.24E-04	5.50E-05	4.62	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_010	16.7	7.62	46.5	1443	664	84.5	84.5	44.8	16.3	1.25E-04	5.52E-05	4.62	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_011	16.7	7.62	46.7	1463	663	84.3	84.3	44.8	16.3	1.25E-04	5.52E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_012	16.8	7.63	47.0	1483	663	84.4	84.4	44.9	16.4	1.26E-04	5.52E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_013	16.8	7.63	47.3	1501	662	84.5	84.5	44.9	16.4	1.26E-04	5.53E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_014	16.8	7.64	47.4	1514	651	83.8	83.8	44.9	16.4	1.27E-04	5.54E-05	4.64	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_015	16.7	7.67	46.3	1673	680	85.8	85.8	44.8	16.5	1.29E-04	5.57E-05	4.65	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_016	16.6	7.65	46.0	1672	679	85.7	85.7	44.6	16.4	1.28E-04	5.56E-05	4.65	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_017	16.6	7.64	45.8	1665	678	85.9	85.9	44.4	16.4	1.28E-04	5.55E-05	4.65	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_018	16.6	7.62	46.2	1580	665	84.2	84.2	44.4	16.3	1.27E-04	5.53E-05	4.65	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_019	16.6	7.61	46.3	1524	653	83.2	83.2	44.4	16.3	1.26E-04	5.52E-05	4.64	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_020	16.6	7.60	46.4	1492	652	83.3	83.3	44.5	16.3	1.25E-04	5.51E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_021	16.6	7.60	46.1	1475	654	83.1	83.1	44.4	16.3	1.25E-04	5.51E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_022	16.4	7.57	45.2	1482	640	81.0	81.0	44.0	16.2	1.24E-04	5.49E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_023	16.3	7.57	45.0	1479	641	80.9	80.9	43.9	16.2	1.25E-04	5.50E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_024	16.4	7.57	45.0	1534	653	82.3	82.3	43.9	16.2	1.26E-04	5.50E-05	4.64	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_025	16.3	7.59	44.5	1587	666	82.3	82.3	43.8	16.3	1.26E-04	5.51E-05	4.65	1.52	0.17	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_026	16.2	7.61	43.3	1685	642	81.1	81.1	43.7	16.3	1.25E-04	5.54E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_027	16.4	7.56	44.9	1474	643	80.8	80.8	44.0	16.2	1.24E-04	5.49E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_028	16.8	7.64	47.6	1520	659	84.6	84.6	45.0	16.4	1.26E-04	5.53E-05	4.64	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_029	16.8	7.64	47.4	1518	650	84.7	84.7	44.9	16.4	1.27E-04	5.53E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_030	16.8	7.65	47.4	1562	663	85.0	85.0	44.9	16.4	1.28E-04	5.54E-05	4.64	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_031	16.8	7.66	47.2	1608	673	86.3	86.3	44.9	16.4	1.29E-04	5.55E-05	4.65	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RE214700_032	16.9	7.67	47.3	1647	682	88.7	88.7	45.1	16.5	1.30E-04	5.56E-05	4.66	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_033	16.7	7.68	46.9	1690	684	86.9	86.9	45.1	16.5	1.30E-04	5.58E-05	4.65	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_034	16.5	7.63	45.3	1654	675	84.5	84.5	44.2	16.4	1.27E-04	5.54E-05	4.65	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_035	16.6	7.63	45.9	1619	674	85.2	85.2	44.4	16.4	1.28E-04	5.54E-05	4.65	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_036	16.6	7.61	46.5	1499	643	82.1	82.1	44.4	16.3	1.26E-04	5.52E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_037	16.6	7.61	46.5	1503	647	83.3	83.3	44.5	16.3	1.26E-04	5.52E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_038	16.4	7.58	44.9	1576	663	82.8	82.8	43.9	16.2	1.26E-04	5.51E-05	4.65	1.52	0.17	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_039	16.3	7.59	44.5	1614	668	83.0	83.0	43.7	16.3	1.26E-04	5.52E-05	4.65	1.52	0.17	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_040	16.3	7.60	44.4	1631	668	82.0	82.0	43.7	16.3	1.26E-04	5.53E-05	4.64	1.52	0.17	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_041	16.1	7.57	41.7	1202	620	79.3	79.3	43.3	16.2	1.17E-04	5.47E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_042	16.0	7.56	41.5	1200	619	79.2	79.2	43.2	16.2	1.17E-04	5.47E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_043	15.8	7.52	40.3	1213	619	77.7	77.7	42.7	16.1	1.16E-04	5.45E-05	4.58	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_044	15.8	7.51	40.1	1218	619	77.5	77.5	42.6	16.1	1.16E-04	5.45E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_045	15.8	7.50	39.9	1225	619	77.4	77.4	42.5	16.0	1.16E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_046	15.8	7.50	39.8	1226	619	77.3	77.3	42.5	16.0	1.16E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_047	15.7	7.49	39.6	1227	617	77.0	77.0	42.4	16.0	1.16E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_048	15.6	7.48	39.2	1196	608	76.0	76.0	42.1	16.0	1.15E-04	5.43E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_049	15.7	7.51	39.9	1184	611	77.2	77.2	42.4	16.1	1.16E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_050	15.8	7.52	40.4	1184	611	78.1	78.1	42.6	16.1	1.16E-04	5.45E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_051	15.9	7.54	40.9	1187	611	78.3	78.3	42.8	16.1	1.16E-04	5.46E-05	4.58	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_052	16.0	7.57	41.6	1189	612	79.0	79.0	43.2	16.2	1.17E-04	5.47E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_053	16.1	7.58	41.8	1189	612	79.6	79.6	43.4	16.2	1.17E-04	5.48E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_054	16.2	7.60	42.5	1205	621	79.9	79.9	43.7	16.3	1.18E-04	5.49E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_055	16.1	7.59	42.2	1205	621	79.7	79.7	43.6	16.3	1.17E-04	5.48E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_056	16.1	7.58	42.0	1205	621	79.5	79.5	43.5	16.2	1.17E-04	5.48E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_057	16.0	7.55	41.3	1198	619	79.0	79.0	43.1	16.2	1.17E-04	5.47E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_058	15.9	7.54	41.0	1197	619	78.9	78.9	42.9	16.1	1.17E-04	5.46E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_059	15.9	7.53	40.8	1203	619	78.6	78.6	42.8	16.1	1.17E-04	5.46E-05	4.58	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_060	15.9	7.53	40.5	1208	619	78.1	78.1	42.7	16.1	1.16E-04	5.45E-05	4.58	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_061	15.7	7.49	39.5	1230	617	76.6	76.6	42.3	16.0	1.16E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_062	15.6	7.49	39.4	1195	609	76.3	76.3	42.2	16.0	1.15E-04	5.43E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_063	15.7	7.49	39.6	1192	610	76.6	76.6	42.3	16.0	1.15E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_064	15.7	7.50	39.7	1190	611	76.9	76.9	42.3	16.0	1.16E-04	5.44E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_065	15.8	7.52	40.1	1182	611	77.9	77.9	42.5	16.1	1.16E-04	5.45E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214700_066	15.9	7.53	40.6	1186	611	78.2	78.2	42.7	16.1	1.16E-04	5.46E-05	4.58	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_067	15.9	7.55	41.2	1189	612	78.5	78.5	43.0	16.2	1.16E-04	5.46E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_068	16.0	7.56	41.4	1189	612	78.8	78.8	43.1	16.2	1.17E-04	5.47E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_069	16.1	7.59	42.1	1189	612	80.5	80.5	43.5	16.3	1.17E-04	5.48E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_070	15.8	7.49	40.3	1278	628	77.6	77.6	42.7	16.0	1.17E-04	5.44E-05	4.59	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_071	15.9	7.52	40.9	1274	632	78.7	78.7	42.9	16.1	1.17E-04	5.45E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_072	15.9	7.52	41.0	1271	632	78.8	78.8	43.0	16.1	1.17E-04	5.46E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_073	16.0	7.53	41.4	1263	632	78.9	78.9	43.1	16.1	1.18E-04	5.46E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_074	16.1	7.55	41.8	1254	632	79.0	79.0	43.2	16.2	1.18E-04	5.47E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_075	16.1	7.56	42.2	1240	631	79.6	79.6	43.3	16.2	1.18E-04	5.47E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_076	16.3	7.60	43.0	1221	630	80.6	80.6	43.8	16.3	1.19E-04	5.49E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_077	15.8	7.50	40.4	1275	629	77.9	77.9	42.8	16.0	1.17E-04	5.45E-05	4.59	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_078	15.9	7.51	40.7	1275	630	78.4	78.4	42.9	16.1	1.17E-04	5.45E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_079	16.0	7.52	41.1	1268	632	78.9	78.9	43.0	16.1	1.17E-04	5.46E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_080	16.0	7.54	41.6	1259	632	78.9	78.9	43.1	16.1	1.18E-04	5.46E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_081	16.1	7.56	42.0	1248	631	79.3	79.3	43.3	16.2	1.18E-04	5.47E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_082	16.2	7.57	42.4	1234	630	79.8	79.8	43.4	16.2	1.18E-04	5.48E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_083	16.2	7.58	42.6	1228	630	80.1	80.1	43.5	16.2	1.18E-04	5.48E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_084	16.2	7.59	42.8	1219	630	80.4	80.4	43.7	16.3	1.19E-04	5.49E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_085	16.3	7.61	43.3	1223	631	80.8	80.8	44.0	16.3	1.19E-04	5.49E-05	4.58	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_086	16.3	7.56	44.0	1364	654	81.9	81.9	44.1	16.2	1.22E-04	5.48E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_087	16.3	7.56	43.8	1365	653	81.9	81.9	44.1	16.2	1.21E-04	5.48E-05	4.61	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_088	16.4	7.57	44.2	1364	654	81.9	81.9	44.2	16.2	1.22E-04	5.49E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_089	16.4	7.58	44.3	1360	654	82.1	82.1	44.2	16.2	1.22E-04	5.49E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_090	16.4	7.58	44.4	1356	654	82.4	82.4	44.2	16.2	1.22E-04	5.49E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_091	16.4	7.59	44.5	1350	654	82.3	82.3	44.2	16.3	1.22E-04	5.49E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_092	16.5	7.60	44.6	1348	654	82.3	82.3	44.2	16.3	1.22E-04	5.50E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_093	16.3	7.55	43.6	1374	651	81.8	81.8	44.0	16.2	1.21E-04	5.47E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_094	16.2	7.53	43.3	1387	649	81.3	81.3	43.8	16.1	1.21E-04	5.47E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_095	16.2	7.53	43.1	1390	648	81.0	81.0	43.8	16.1	1.21E-04	5.47E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_096	16.5	7.61	44.8	1341	653	82.4	82.4	44.3	16.3	1.22E-04	5.50E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214700_097	16.6	7.62	45.0	1339	654	82.6	82.6	44.3	16.3	1.22E-04	5.51E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_098	16.2	7.54	43.5	1381	650	81.7	81.7	43.9	16.1	1.21E-04	5.47E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_099	16.2	7.52	43.0	1396	646	80.7	80.7	43.7	16.1	1.21E-04	5.46E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214700_100	16.7	7.62	45.9	1383	663	84.0	84.0	44.8	16.3	1.23E-04	5.51E-05	4.61	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_101	16.6	7.60	45.4	1386	660	83.2	83.2	44.5	16.3	1.23E-04	5.50E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_102	16.5	7.59	45.3	1387	659	83.3	83.3	44.5	16.3	1.23E-04	5.50E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_103	16.5	7.58	45.0	1395	657	83.4	83.4	44.3	16.2	1.23E-04	5.49E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_104	16.4	7.58	44.9	1404	657	83.1	83.1	44.3	16.2	1.23E-04	5.49E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_105	16.4	7.57	44.8	1414	657	82.7	82.7	44.2	16.2	1.23E-04	5.49E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_106	16.3	7.55	44.3	1438	651	81.5	81.5	44.0	16.2	1.22E-04	5.48E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_107	16.3	7.54	44.1	1439	649	81.3	81.3	43.9	16.1	1.22E-04	5.48E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_108	16.6	7.61	45.6	1384	661	83.3	83.3	44.6	16.3	1.23E-04	5.51E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_109	16.5	7.59	45.1	1391	659	83.4	83.4	44.4	16.3	1.23E-04	5.50E-05	4.61	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_110	16.4	7.56	44.7	1421	656	82.4	82.4	44.2	16.2	1.23E-04	5.49E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_111	16.4	7.56	44.6	1429	655	82.2	82.2	44.1	16.2	1.23E-04	5.48E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_112	16.4	7.55	44.5	1436	654	81.9	81.9	44.1	16.2	1.23E-04	5.48E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_113	16.3	7.54	44.0	1439	647	81.2	81.2	43.9	16.1	1.22E-04	5.48E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214700_114	16.2	7.53	43.7	1442	644	80.8	80.8	43.8	16.1	1.22E-04	5.47E-05	4.62	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_004	15.3	7.43	37.6	1128	580	74.3	74.3	41.1	15.9	1.13E-04	5.40E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_005	16.2	7.57	44.1	1603	666	82.3	82.3	43.5	16.2	1.26E-04	5.51E-05	4.65	1.52	0.17	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_006	16.2	7.56	44.1	1548	656	81.5	81.5	43.6	16.2	1.25E-04	5.50E-05	4.64	1.52	0.17	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_007	16.2	7.54	44.1	1464	631	79.3	79.3	43.7	16.1	1.24E-04	5.48E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_012	16.1	7.58	43.0	1684	644	79.8	79.8	43.4	16.3	1.24E-04	5.53E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_013	16.1	7.59	43.0	1675	642	80.0	80.0	43.5	16.3	1.24E-04	5.53E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_014	16.2	7.60	43.1	1675	641	80.7	80.7	43.6	16.3	1.25E-04	5.54E-05	4.62	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_015	16.2	7.58	43.9	1613	664	81.3	81.3	43.5	16.2	1.25E-04	5.51E-05	4.64	1.52	0.17	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_016	16.2	7.56	44.1	1579	663	81.9	81.9	43.6	16.2	1.26E-04	5.50E-05	4.65	1.52	0.17	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_017	16.2	7.55	44.1	1504	646	80.7	80.7	43.6	16.2	1.25E-04	5.49E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_018	16.2	7.54	44.2	1465	636	79.7	79.7	43.7	16.2	1.24E-04	5.48E-05	4.63	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_019	15.7	7.48	39.4	1232	616	76.5	76.5	42.3	16.0	1.16E-04	5.43E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_020	15.6	7.47	39.3	1235	615	76.4	76.4	42.2	16.0	1.16E-04	5.43E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_021	15.6	7.47	39.0	1207	609	75.9	75.9	42.0	16.0	1.15E-04	5.43E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_022	15.6	7.48	39.1	1201	608	76.0	76.0	42.1	16.0	1.15E-04	5.43E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_023	15.5	7.46	38.8	1240	612	75.2	75.2	42.0	15.9	1.16E-04	5.42E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_024	15.5	7.45	38.5	1217	606	74.9	74.9	41.8	15.9	1.15E-04	5.42E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_025	15.5	7.44	38.6	1257	611	75.2	75.2	42.0	15.9	1.16E-04	5.42E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_026	15.4	7.42	38.4	1262	608	74.8	74.8	41.9	15.8	1.16E-04	5.41E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_027	15.4	7.43	38.2	1238	606	74.3	74.3	41.7	15.9	1.15E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_028	15.4	7.44	38.3	1227	605	74.4	74.4	41.7	15.9	1.15E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_029	15.4	7.44	38.3	1223	605	74.6	74.6	41.7	15.9	1.15E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_030	15.4	7.45	38.4	1219	605	74.7	74.7	41.8	15.9	1.15E-04	5.42E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_031	15.3	7.43	37.9	1179	596	73.9	73.9	41.4	15.9	1.14E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_032	15.5	7.45	38.7	1244	612	74.9	74.9	42.0	15.9	1.16E-04	5.42E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_033	15.5	7.45	38.7	1251	612	75.0	75.0	42.0	15.9	1.16E-04	5.42E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_034	15.5	7.44	38.6	1253	611	75.2	75.2	42.0	15.9	1.16E-04	5.42E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_035	15.4	7.44	38.5	1259	610	75.0	75.0	42.0	15.9	1.16E-04	5.41E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_036	15.4	7.43	38.5	1262	610	74.9	74.9	42.0	15.9	1.16E-04	5.41E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_037	15.4	7.43	38.5	1262	609	74.7	74.7	41.9	15.9	1.16E-04	5.41E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_038	15.3	7.42	38.1	1244	605	74.2	74.2	41.7	15.8	1.15E-04	5.41E-05	4.59	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_039	15.4	7.42	38.1	1241	605	74.3	74.3	41.7	15.8	1.15E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_040	15.4	7.43	38.2	1236	606	74.1	74.1	41.7	15.9	1.15E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_041	15.4	7.44	38.3	1232	606	74.2	74.2	41.7	15.9	1.15E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_042	15.4	7.44	38.2	1173	596	74.5	74.5	41.5	15.9	1.14E-04	5.41E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_043	15.4	7.44	38.0	1175	596	74.1	74.1	41.4	15.9	1.14E-04	5.41E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_044	15.3	7.43	37.8	1184	596	73.7	73.7	41.4	15.9	1.14E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_045	15.3	7.43	37.8	1190	597	73.6	73.6	41.3	15.8	1.14E-04	5.41E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_046	15.3	7.42	37.7	1196	597	73.6	73.6	41.3	15.8	1.14E-04	5.40E-05	4.58	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_052	15.3	7.42	37.6	1154	590	73.9	73.9	41.2	15.8	1.13E-04	5.40E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_053	15.3	7.43	37.7	1149	589	74.1	74.1	41.2	15.9	1.13E-04	5.40E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_056	15.3	7.42	37.5	1161	590	73.6	73.6	41.1	15.8	1.13E-04	5.40E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_057	15.3	7.43	37.8	1146	589	74.3	74.3	41.3	15.9	1.13E-04	5.41E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_058	15.3	7.44	38.0	1145	590	74.6	74.6	41.3	15.9	1.13E-04	5.41E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_059	15.8	7.49	40.2	1282	628	77.3	77.3	42.7	16.0	1.17E-04	5.44E-05	4.59	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_060	15.8	7.48	40.1	1284	627	77.1	77.1	42.7	16.0	1.17E-04	5.44E-05	4.59	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_061	16.1	7.51	42.6	1405	643	79.9	79.9	43.6	16.1	1.21E-04	5.46E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE214800_062	15.6	7.46	39.6	1287	621	76.3	76.3	42.5	15.9	1.17E-04	5.43E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_063	15.6	7.46	39.6	1290	620	76.7	76.7	42.5	15.9	1.17E-04	5.43E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_064	15.6	7.45	39.4	1300	617	76.5	76.5	42.5	15.9	1.17E-04	5.42E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_065	16.1	7.52	42.8	1401	644	80.3	80.3	43.6	16.1	1.21E-04	5.46E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_066	16.1	7.51	42.5	1405	641	79.8	79.8	43.5	16.1	1.21E-04	5.46E-05	4.61	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_067	15.6	7.46	39.6	1288	621	76.4	76.4	42.5	15.9	1.17E-04	5.43E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_068	15.6	7.45	39.5	1292	619	77.0	77.0	42.5	15.9	1.17E-04	5.42E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_069	15.6	7.45	39.5	1295	618	76.8	76.8	42.5	15.9	1.17E-04	5.42E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_070	15.6	7.44	39.3	1312	614	75.3	75.3	42.5	15.9	1.17E-04	5.42E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_071	15.5	7.44	39.2	1315	612	75.0	75.0	42.5	15.9	1.17E-04	5.42E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_072	15.6	7.44	39.4	1308	615	75.8	75.8	42.5	15.9	1.17E-04	5.42E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_073	16.2	7.52	43.5	1443	640	79.7	79.7	43.7	16.1	1.22E-04	5.47E-05	4.62	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214800_074	16.1	7.52	43.2	1441	637	78.7	78.7	43.6	16.1	1.22E-04	5.47E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE214800_075	15.7	7.47	39.7	1287	622	76.5	76.5	42.5	16.0	1.17E-04	5.43E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214800_076	16.1	7.57	42.8	1672	643	79.4	79.4	43.2	16.3	1.24E-04	5.52E-05	4.62	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE214900_001	15.4	7.42	38.3	1261	607	74.6	74.6	41.9	15.8	1.16E-04	5.41E-05	4.59	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214900_008	15.5	7.43	39.2	1320	611	74.3	74.3	42.5	15.9	1.18E-04	5.42E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214900_009	15.5	7.43	39.2	1321	609	73.9	73.9	42.5	15.9	1.17E-04	5.41E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE214900_010	15.5	7.43	39.1	1322	608	73.4	73.4	42.4	15.9	1.17E-04	5.41E-05	4.60	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE217600_001	14.5	7.39	33.0	868	506	66.7	66.7	38.1	15.7	1.08E-04	5.39E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE217600_002	14.4	7.36	32.6	823	507	64.9	64.9	38.1	15.7	1.08E-04	5.38E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE218700_001	15.8	7.66	39.9	1077	562	71.0	71.0	40.4	16.1	1.17E-04	5.53E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE218700_002	15.7	7.61	38.7	1037	554	69.2	69.2	39.6	16.0	1.15E-04	5.51E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE220800_001	14.9	7.44	34.7	883	457	60.8	60.8	37.3	15.7	1.05E-04	5.36E-05	4.53	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE220900_001	15.0	7.41	36.5	837	462	60.3	60.3	38.8	15.8	1.07E-04	5.39E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE220900_002	14.7	7.53	34.0	804	455	61.2	61.2	36.8	15.7	1.04E-04	5.38E-05	4.52	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE220900_003	14.9	7.47	35.2	882	459	61.3	61.3	37.3	15.7	1.05E-04	5.37E-05	4.53	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE221000_001	15.0	7.62	35.3	840	460	63.9	63.9	37.4	15.8	1.06E-04	5.41E-05	4.52	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE221000_002	15.0	7.63	35.4	844	464	64.2	64.2	37.5	15.9	1.06E-04	5.41E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE221300_001	14.8	7.54	34.6	829	463	63.7	63.7	38.7	15.9	1.06E-04	5.41E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE221300_002	14.8	7.52	35.4	838	465	63.8	63.8	39.3	15.9	1.08E-04	5.42E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE221300_003	14.1	7.38	30.9	880	451	60.0	60.0	36.5	15.6	1.03E-04	5.35E-05	4.53	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE222600_001	15.2	7.39	39.3	842	469	60.3	60.3	40.7	15.5	1.10E-04	5.31E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_001	15.7	7.57	39.3	1104	490	64.5	64.5	40.5	15.7	1.10E-04	5.35E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_002	15.8	7.58	40.1	1145	497	66.9	66.9	40.1	15.8	1.09E-04	5.36E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_003	16.1	7.63	41.6	1155	500	67.6	67.6	40.1	15.8	1.09E-04	5.37E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_004	16.2	7.63	42.4	1146	505	68.6	68.6	40.3	15.9	1.10E-04	5.38E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_005	16.3	7.64	43.5	1124	511	68.9	68.9	41.2	15.9	1.11E-04	5.39E-05	4.57	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222700_006	16.9	7.60	47.6	1109	542	70.1	70.1	44.5	16.1	1.19E-04	5.44E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE222800_001	15.5	7.74	37.3	1051	481	65.2	65.2	40.9	15.8	1.11E-04	5.36E-05	4.57	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222800_002	15.6	7.75	36.9	1104	489	67.6	67.6	40.7	15.9	1.10E-04	5.37E-05	4.57	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222800_003	15.6	7.77	37.3	1157	497	68.6	68.6	40.3	15.9	1.10E-04	5.38E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222800_004	18.5	7.90	56.8	1400	625	82.4	82.4	48.2	16.8	1.34E-04	5.59E-05	4.62	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE222800_005	14.7	7.47	35.4	829	468	60.1	60.1	39.7	15.5	1.08E-04	5.30E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE222900_001	15.5	7.73	36.7	1182	502	68.7	68.7	40.1	15.9	1.09E-04	5.39E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE223100_001	16.2	7.57	44.3	1209	551	72.9	72.9	44.5	16.2	1.20E-04	5.46E-05	4.58	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE224000_001	15.4	7.55	37.5	809	477	70.8	70.8	39.9	16.0	1.09E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_002	15.3	7.50	36.9	895	476	70.8	70.8	40.3	15.9	1.10E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_003	15.3	7.55	37.0	786	475	69.0	69.0	39.3	16.0	1.08E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_004	14.3	7.31	32.1	763	452	65.9	65.9	37.0	15.5	1.03E-04	5.30E-05	4.52	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE224000_005	15.0	7.48	36.6	776	465	67.6	67.6	39.1	15.8	1.08E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224000_006	14.4	7.32	33.6	697	449	64.2	64.2	37.9	15.5	1.05E-04	5.30E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_007	14.4	7.31	34.3	659	444	60.5	60.5	37.6	15.5	1.04E-04	5.30E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE224000_008	15.4	7.56	37.5	813	477	71.2	71.2	39.9	16.0	1.09E-04	5.41E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224100_001	16.4	7.74	43.3	833	507	70.5	70.5	41.4	16.4	1.11E-04	5.50E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE224200_001	16.8	7.72	44.5	836	515	73.8	73.8	41.9	16.3	1.12E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE225600_001	16.2	7.81	42.4	1159	584	75.6	75.6	41.4	16.3	1.15E-04	5.48E-05	4.57	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE225700_001	15.9	7.78	40.1	1112	581	72.5	72.5	40.9	16.2	1.14E-04	5.46E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE225700_002	16.8	7.92	45.4	1371	595	87.0	87.0	45.4	17.1	1.24E-04	5.63E-05	4.61	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE225800_001	16.9	8.05	44.8	1191	557	77.9	77.9	42.0	16.6	1.15E-04	5.55E-05	4.57	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE226500_001	17.3	7.93	45.2	1227	541	83.1	83.1	43.4	16.9	1.16E-04	5.58E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE226500_002	16.7	7.90	44.6	961	567	82.4	82.4	43.6	16.7	1.15E-04	5.55E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE226600_001	17.1	7.98	46.5	924	585	83.3	83.3	43.8	16.8	1.15E-04	5.57E-05	4.53	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE226700_001	17.3	7.94	46.3	1174	531	81.1	81.1	43.5	16.8	1.15E-04	5.57E-05	4.58	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE226800_001	17.1	7.87	45.2	1120	520	79.5	79.5	42.8	16.7	1.14E-04	5.54E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE227000_001	16.6	7.88	44.8	834	574	78.6	78.6	43.1	16.6	1.15E-04	5.52E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE227100_001	17.2	8.06	48.1	887	610	83.7	83.7	44.3	17.0	1.18E-04	5.59E-05	4.54	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE227100_002	17.7	8.23	50.9	974	638	86.5	86.5	45.3	17.3	1.21E-04	5.65E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE227300_001	15.5	7.57	38.8	747	499	69.4	69.4	40.7	16.1	1.08E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE227800_001	15.4	7.64	38.2	756	531	72.5	72.5	39.9	16.1	1.11E-04	5.48E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE227900_001	15.2	7.64	37.9	879	506	70.9	70.9	39.9	16.1	1.11E-04	5.47E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_001	14.3	7.27	34.1	1004	480	59.4	59.4	37.4	15.3	1.06E-04	5.29E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_002	14.4	7.27	34.2	1022	481	59.9	59.9	37.4	15.3	1.06E-04	5.29E-05	4.55	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_003	14.5	7.27	34.8	1074	487	61.0	61.0	37.6	15.4	1.07E-04	5.30E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_004	14.5	7.28	35.0	1072	490	60.8	60.8	37.7	15.4	1.07E-04	5.30E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_005	14.4	7.29	35.1	1034	503	60.4	60.4	37.8	15.4	1.08E-04	5.30E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_006	14.6	7.29	36.2	1077	527	61.5	61.5	37.8	15.4	1.07E-04	5.30E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_007	14.6	7.29	37.1	1101	544	60.8	60.8	38.2	15.4	1.08E-04	5.30E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_008	14.6	7.48	35.0	978	507	64.2	64.2	38.2	15.7	1.10E-04	5.40E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228000_009	14.7	7.29	36.8	928	505	59.9	59.9	38.2	15.4	1.10E-04	5.31E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228100_001	14.8	7.30	37.6	966	514	60.3	60.3	38.5	15.4	1.11E-04	5.31E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_028	14.8	7.31	37.4	645	482	56.8	56.8	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_029	14.9	7.31	37.4	646	483	56.8	56.8	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_030	14.9	7.31	37.5	646	483	56.7	56.7	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_031	14.8	7.31	37.3	644	482	56.8	56.8	38.8	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_032	14.8	7.31	37.3	642	482	56.8	56.8	38.8	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_033	14.8	7.31	37.3	641	481	56.8	56.8	38.8	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_034	14.8	7.31	37.2	640	481	56.9	56.9	38.8	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228300_035	14.8	7.31	37.2	639	481	56.9	56.9	38.8	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_004	14.9	7.32	37.6	652	484	56.7	56.7	38.9	15.5	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_005	14.9	7.32	37.6	653	485	56.7	56.7	38.9	15.5	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_006	14.9	7.32	37.6	653	485	56.8	56.8	38.9	15.5	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_007	14.9	7.31	37.5	646	483	56.6	56.6	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_008	14.9	7.31	37.5	646	483	56.6	56.6	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_009	14.9	7.31	37.5	647	483	56.6	56.6	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_010	14.9	7.31	37.5	648	483	56.6	56.6	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_011	14.9	7.32	37.6	649	484	56.6	56.6	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_013	14.8	7.31	36.9	644	480	56.3	56.3	38.6	15.4	1.10E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_014	14.8	7.31	36.9	645	480	56.3	56.3	38.6	15.4	1.10E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_015	14.8	7.31	37.0	646	480	56.3	56.3	38.6	15.4	1.10E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_045	14.7	7.31	36.5	636	478	56.4	56.4	38.4	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_046	14.7	7.31	36.6	638	479	56.5	56.5	38.4	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_047	14.7	7.31	36.7	639	479	56.5	56.5	38.5	15.4	1.10E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_048	14.8	7.31	36.8	642	480	56.5	56.5	38.5	15.4	1.10E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_049	14.8	7.31	36.9	644	481	56.5	56.5	38.6	15.4	1.10E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_050	14.8	7.31	37.0	646	481	56.5	56.5	38.6	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_051	14.8	7.31	37.1	648	482	56.5	56.5	38.7	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_052	14.8	7.31	37.2	650	482	56.5	56.5	38.7	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_053	14.8	7.31	37.3	651	483	56.4	56.4	38.7	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228400_054	14.9	7.31	37.3	651	483	56.4	56.4	38.8	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_055	14.9	7.31	37.4	651	483	56.4	56.4	38.8	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_056	14.9	7.32	37.5	651	484	56.5	56.5	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_057	14.9	7.32	37.6	652	484	56.5	56.5	38.9	15.4	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_058	14.9	7.32	37.7	653	485	56.6	56.6	39.0	15.5	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228400_059	14.9	7.32	37.8	653	485	56.6	56.6	39.0	15.5	1.12E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_009	14.7	7.31	35.8	635	469	56.7	56.7	37.8	15.4	1.08E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_010	14.8	7.32	36.2	640	473	56.8	56.8	38.0	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_011	14.8	7.32	36.3	642	475	56.8	56.8	38.1	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_012	14.8	7.32	36.5	644	477	56.8	56.8	38.2	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_013	14.8	7.32	36.7	645	478	56.8	56.8	38.3	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_014	14.9	7.32	36.9	644	480	56.8	56.8	38.5	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_015	14.9	7.32	37.0	643	481	56.7	56.7	38.5	15.5	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_016	14.9	7.33	37.2	642	482	56.7	56.7	38.6	15.5	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_017	14.9	7.33	37.3	642	483	56.8	56.8	38.7	15.5	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_018	14.9	7.33	37.4	642	484	57.0	57.0	38.8	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_019	14.9	7.33	37.5	643	484	57.1	57.1	38.8	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_020	14.9	7.33	37.5	642	483	57.2	57.2	38.8	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_021	15.0	7.33	37.7	644	484	57.3	57.3	38.9	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_022	14.9	7.32	37.6	653	485	56.8	56.8	38.9	15.5	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_023	14.9	7.32	37.6	650	485	56.8	56.8	38.9	15.5	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE228500_024	14.9	7.32	37.5	648	484	56.9	56.9	38.8	15.5	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_025	14.9	7.32	37.5	647	484	56.9	56.9	38.8	15.5	1.11E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_026	14.9	7.32	37.2	643	483	56.8	56.8	38.7	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_027	14.9	7.32	37.1	640	482	56.7	56.7	38.6	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_028	14.8	7.32	36.9	634	480	56.5	56.5	38.5	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_029	14.8	7.32	36.8	633	479	56.5	56.5	38.4	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_030	14.8	7.31	36.6	634	478	56.5	56.5	38.3	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_031	14.8	7.31	36.4	635	477	56.4	56.4	38.3	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_032	14.7	7.31	36.3	636	476	56.4	56.4	38.2	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_033	14.7	7.31	36.2	636	475	56.4	56.4	38.1	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_034	14.7	7.31	36.0	637	473	56.4	56.4	38.0	15.4	1.08E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_035	14.7	7.31	35.9	637	472	56.4	56.4	37.9	15.4	1.08E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_049	14.7	7.31	36.0	629	474	56.1	56.1	38.1	15.4	1.08E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_050	14.7	7.31	36.2	628	476	56.2	56.2	38.2	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_051	14.7	7.31	36.3	627	476	56.2	56.2	38.3	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_052	14.7	7.31	36.5	630	478	56.3	56.3	38.4	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_053	14.8	7.31	36.7	634	479	56.4	56.4	38.4	15.4	1.09E-04	5.31E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_054	14.8	7.31	37.0	641	481	56.6	56.6	38.6	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_055	14.8	7.31	37.1	644	482	56.7	56.7	38.6	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_056	14.8	7.32	37.2	646	483	56.8	56.8	38.7	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_057	14.9	7.32	37.2	648	483	56.8	56.8	38.7	15.4	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_060	15.0	7.34	37.8	645	485	57.7	57.7	39.0	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_061	15.0	7.34	37.8	646	485	57.6	57.6	38.9	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_062	15.0	7.34	37.7	644	485	57.5	57.5	38.9	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_063	15.0	7.34	37.6	642	484	57.3	57.3	38.8	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_064	15.0	7.33	37.5	640	484	57.2	57.2	38.8	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228500_065	15.0	7.33	37.5	639	483	57.1	57.1	38.7	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_066	15.0	7.33	37.4	639	482	57.1	57.1	38.7	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228500_067	14.9	7.33	37.3	639	482	57.0	57.0	38.7	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_013	14.6	7.32	34.6	619	461	56.7	56.7	36.9	15.4	1.06E-04	5.31E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_014	14.6	7.32	34.8	617	461	56.8	56.8	37.1	15.4	1.06E-04	5.32E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_015	14.7	7.32	35.0	616	462	57.1	57.1	37.2	15.4	1.07E-04	5.32E-05	4.48	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_016	14.7	7.32	35.3	622	462	57.4	57.4	37.3	15.4	1.07E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_017	14.7	7.33	35.6	630	463	57.4	57.4	37.5	15.4	1.07E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_018	14.8	7.33	35.9	637	465	57.4	57.4	37.7	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_019	14.8	7.33	36.1	643	468	57.3	57.3	37.8	15.5	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_020	14.9	7.33	36.4	645	471	57.4	57.4	38.0	15.5	1.09E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_021	14.9	7.33	36.7	648	475	57.7	57.7	38.2	15.5	1.09E-04	5.33E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_022	14.9	7.34	36.9	648	477	57.6	57.6	38.3	15.5	1.09E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_023	14.9	7.34	37.0	643	478	57.5	57.5	38.4	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_024	14.9	7.34	37.1	637	479	57.4	57.4	38.5	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_025	15.0	7.34	37.2	637	480	57.3	57.3	38.6	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_026	15.0	7.34	37.5	637	482	57.3	57.3	38.7	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_027	15.0	7.34	37.6	637	483	57.5	57.5	38.8	15.5	1.11E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE228600_036	14.7	7.31	35.4	633	465	56.8	56.8	37.6	15.4	1.07E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_037	14.7	7.31	35.6	634	467	56.8	56.8	37.7	15.4	1.08E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_038	14.7	7.31	35.7	634	468	56.7	56.7	37.8	15.4	1.08E-04	5.31E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_039	14.9	7.33	37.2	640	481	57.0	57.0	38.6	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_040	14.9	7.33	37.1	640	480	57.0	57.0	38.5	15.5	1.10E-04	5.33E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_041	14.9	7.33	37.0	640	480	57.0	57.0	38.5	15.5	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_042	14.9	7.33	37.0	641	479	57.0	57.0	38.5	15.5	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_043	14.9	7.33	36.9	643	479	57.0	57.0	38.4	15.5	1.10E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_044	14.9	7.33	36.9	644	479	57.0	57.0	38.4	15.5	1.09E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_045	14.9	7.33	36.8	645	478	57.0	57.0	38.3	15.5	1.09E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_046	14.9	7.33	36.7	645	478	57.0	57.0	38.3	15.5	1.09E-04	5.32E-05	4.48	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_047	14.8	7.33	36.6	643	476	57.0	57.0	38.2	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_048	14.8	7.32	36.4	642	474	57.1	57.1	38.1	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_049	14.8	7.32	36.3	641	473	57.1	57.1	38.1	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_050	14.8	7.32	36.3	641	473	57.1	57.1	38.0	15.4	1.09E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_051	14.8	7.32	36.2	640	472	57.1	57.1	38.0	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_052	14.8	7.32	36.1	640	471	57.1	57.1	37.9	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_053	14.8	7.32	36.0	639	470	57.0	57.0	37.9	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_054	14.8	7.32	36.0	639	469	57.0	57.0	37.9	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_055	14.7	7.32	35.9	638	468	56.9	56.9	37.8	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_056	14.7	7.32	35.8	638	468	56.9	56.9	37.8	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE228600_057	14.7	7.32	35.7	637	467	56.9	56.9	37.7	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_058	14.7	7.32	35.7	636	466	56.9	56.9	37.7	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_059	14.7	7.32	35.6	636	465	56.9	56.9	37.6	15.4	1.08E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_060	14.7	7.32	35.5	635	464	56.9	56.9	37.6	15.4	1.07E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_061	14.7	7.32	35.5	634	464	56.9	56.9	37.6	15.4	1.07E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_062	14.7	7.32	35.4	633	463	56.9	56.9	37.5	15.4	1.07E-04	5.32E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228600_063	16.7	7.91	44.8	788	493	68.1	68.1	39.6	16.2	1.09E-04	5.45E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228700_010	15.6	7.74	40.5	886	520	67.2	67.2	39.7	16.0	1.11E-04	5.44E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228800_001	16.8	8.01	42.0	729	500	76.2	76.2	40.8	16.4	1.10E-04	5.48E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228800_002	16.7	8.01	41.8	749	493	74.8	74.8	40.4	16.4	1.09E-04	5.47E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228800_003	15.4	7.67	38.0	768	479	69.0	69.0	39.2	16.0	1.07E-04	5.41E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228900_001	16.9	8.02	42.5	773	506	78.5	78.5	41.5	16.5	1.11E-04	5.50E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE228900_002	16.5	7.91	41.9	834	528	81.4	81.4	42.4	16.6	1.14E-04	5.52E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE229000_001	15.1	7.59	37.8	824	502	65.1	65.1	39.0	15.8	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE229100_001	15.0	7.54	36.7	804	491	64.9	64.9	38.7	15.8	1.09E-04	5.39E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230200_001	15.0	7.48	36.8	699	491	63.3	63.3	38.6	15.7	1.08E-04	5.37E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_001	16.2	7.71	41.7	795	510	65.5	65.5	39.4	15.9	1.12E-04	5.46E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_002	15.8	7.62	40.0	758	509	67.5	67.5	39.8	15.9	1.10E-04	5.43E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_003	14.5	7.38	33.9	758	461	59.7	59.7	36.9	15.5	1.06E-04	5.33E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_004	14.6	7.35	34.6	693	482	57.7	57.7	37.1	15.4	1.07E-04	5.32E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230300_005	15.0	7.40	35.6	642	481	58.7	58.7	37.5	15.5	1.08E-04	5.34E-05	4.48	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_001	15.9	7.82	39.1	737	509	71.4	71.4	41.0	16.2	1.12E-04	5.51E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_002	16.2	7.88	40.0	767	516	72.4	72.4	41.6	16.3	1.14E-04	5.54E-05	4.50	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_006	15.0	7.52	36.2	754	490	62.3	62.3	37.6	15.6	1.08E-04	5.39E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_007	15.2	7.48	37.1	816	482	60.3	60.3	37.4	15.5	1.09E-04	5.37E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_008	15.2	7.49	37.1	822	483	60.4	60.4	37.4	15.5	1.09E-04	5.37E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_009	15.0	7.45	36.3	812	477	60.2	60.2	37.4	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_010	15.9	7.60	39.9	698	506	63.0	63.0	38.7	15.7	1.11E-04	5.40E-05	4.49	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230400_011	16.3	7.66	41.7	699	512	65.6	65.6	39.3	15.8	1.13E-04	5.45E-05	4.49	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_001	16.2	7.81	43.1	794	539	70.8	70.8	40.8	16.1	1.12E-04	5.49E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_002	14.8	7.56	35.1	735	480	62.9	62.9	38.0	15.7	1.07E-04	5.41E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_003	14.6	7.51	34.2	751	477	62.1	62.1	37.7	15.7	1.07E-04	5.40E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_004	14.8	7.56	34.7	704	476	61.2	61.2	37.1	15.7	1.07E-04	5.41E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_005	14.7	7.55	34.4	709	477	60.9	60.9	37.0	15.6	1.07E-04	5.41E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_006	14.7	7.51	33.8	755	474	59.3	59.3	37.1	15.6	1.07E-04	5.38E-05	4.49	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_007	15.0	7.57	35.7	717	474	58.9	58.9	37.4	15.7	1.08E-04	5.39E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_008	15.0	7.54	35.3	720	468	58.7	58.7	37.3	15.6	1.08E-04	5.38E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_009	15.0	7.54	35.2	731	465	58.8	58.8	37.2	15.6	1.08E-04	5.38E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230500_010	15.4	7.65	37.6	701	495	61.5	61.5	38.7	15.8	1.12E-04	5.45E-05	4.49	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_011	15.8	7.79	39.4	693	502	63.9	63.9	39.2	16.0	1.13E-04	5.50E-05	4.49	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230500_012	16.3	7.88	42.8	757	518	69.2	69.2	41.3	16.4	1.17E-04	5.62E-05	4.49	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230500_013	17.9	7.98	52.4	1037	665	77.6	77.6	44.4	16.5	1.24E-04	5.65E-05	4.56	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230500_014	15.7	7.66	38.7	713	500	66.3	66.3	38.8	16.0	1.11E-04	5.48E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230600_001	14.3	7.43	32.5	825	492	60.3	60.3	37.5	15.6	1.07E-04	5.37E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230600_002	14.5	7.43	32.9	776	480	58.8	58.8	37.0	15.5	1.06E-04	5.36E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE230600_003	18.9	8.48	63.0	1325	776	90.1	90.1	48.0	17.4	1.35E-04	5.93E-05	4.60	1.53	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230600_004	16.1	7.71	42.4	803	552	72.0	72.0	41.0	16.1	1.14E-04	5.52E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230600_005	15.5	7.61	38.1	745	513	66.3	66.3	39.4	15.9	1.12E-04	5.46E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230600_006	15.3	7.56	37.5	731	501	65.6	65.6	39.1	15.9	1.11E-04	5.44E-05	4.50	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_001	16.9	7.86	47.5	1573	649	91.6	91.6	46.5	17.0	1.33E-04	5.79E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_002	16.5	7.76	46.0	1419	629	87.8	87.8	45.5	16.7	1.30E-04	5.71E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_003	16.3	7.69	44.9	1324	615	84.5	84.5	44.7	16.5	1.28E-04	5.65E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_004	16.1	7.64	44.1	1270	604	82.5	82.5	44.1	16.4	1.26E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_005	16.1	7.62	43.6	1242	599	81.8	81.8	43.8	16.3	1.25E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_006	15.9	7.58	43.0	1203	591	79.5	79.5	43.3	16.2	1.24E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_007	15.8	7.56	42.5	1183	584	77.5	77.5	43.0	16.1	1.23E-04	5.54E-05	4.56	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_008	15.7	7.53	42.0	1157	577	76.4	76.4	42.6	16.1	1.22E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_009	15.7	7.52	41.8	1139	574	75.6	75.6	42.5	16.0	1.21E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_010	15.6	7.50	41.5	1111	569	74.0	74.0	42.2	16.0	1.21E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_011	15.6	7.49	41.2	1082	565	73.2	73.2	42.1	15.9	1.20E-04	5.47E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_012	17.1	7.91	48.8	1671	663	94.8	94.8	47.3	17.1	1.36E-04	5.84E-05	4.62	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_013	16.9	7.85	47.8	1571	649	91.7	91.7	46.6	16.9	1.34E-04	5.78E-05	4.61	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_014	16.7	7.78	46.7	1451	635	89.0	89.0	45.9	16.7	1.31E-04	5.72E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_015	16.5	7.73	45.9	1365	625	87.1	87.1	45.3	16.6	1.30E-04	5.68E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_016	16.4	7.70	45.3	1335	618	85.5	85.5	44.9	16.5	1.29E-04	5.65E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_017	16.3	7.66	44.6	1294	610	83.8	83.8	44.4	16.4	1.27E-04	5.62E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_018	16.2	7.63	44.1	1264	605	82.9	82.9	44.1	16.3	1.26E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_019	16.1	7.61	43.7	1231	600	81.5	81.5	43.8	16.3	1.25E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_020	16.0	7.59	43.4	1214	594	79.8	79.8	43.5	16.2	1.24E-04	5.56E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_021	15.9	7.57	43.1	1199	591	78.7	78.7	43.3	16.2	1.24E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_022	15.9	7.56	42.8	1183	586	77.8	77.8	43.1	16.1	1.23E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_023	15.8	7.54	42.5	1166	582	76.9	76.9	42.9	16.1	1.23E-04	5.52E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_024	15.7	7.52	42.2	1141	576	75.6	75.6	42.6	16.0	1.22E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_025	15.7	7.51	42.0	1122	573	74.5	74.5	42.5	16.0	1.22E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_026	15.7	7.50	41.8	1101	570	74.2	74.2	42.4	16.0	1.21E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_027	18.2	8.20	55.6	1666	738	101.2	101.2	49.5	17.6	1.44E-04	5.98E-05	4.63	1.53	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_028	18.1	8.15	54.9	1599	727	99.5	99.5	49.0	17.5	1.42E-04	5.93E-05	4.62	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_029	17.9	8.11	54.4	1553	717	97.2	97.2	48.6	17.4	1.41E-04	5.90E-05	4.61	1.52	0.16	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_030	17.8	8.08	54.0	1529	709	94.1	94.1	48.3	17.3	1.40E-04	5.87E-05	4.61	1.52	0.16	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_031	16.4	7.69	45.4	1326	620	85.0	85.0	44.9	16.5	1.28E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_032	16.4	7.69	45.6	1333	623	85.4	85.4	45.0	16.5	1.29E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_033	16.5	7.70	45.8	1342	626	85.9	85.9	45.1	16.5	1.29E-04	5.65E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_034	16.5	7.71	46.0	1350	629	86.4	86.4	45.2	16.5	1.29E-04	5.65E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_035	16.5	7.71	46.2	1355	631	86.9	86.9	45.3	16.5	1.30E-04	5.66E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_036	16.5	7.72	46.4	1360	633	87.2	87.2	45.4	16.5	1.30E-04	5.66E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_037	16.6	7.72	46.6	1364	635	87.7	87.7	45.5	16.6	1.30E-04	5.66E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_038	16.6	7.73	46.8	1371	637	88.1	88.1	45.7	16.6	1.31E-04	5.67E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_039	16.6	7.74	47.1	1378	639	88.5	88.5	45.8	16.6	1.31E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_040	16.7	7.74	47.3	1383	640	88.9	88.9	45.9	16.6	1.31E-04	5.68E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_041	16.7	7.75	47.5	1389	642	89.2	89.2	46.1	16.6	1.32E-04	5.68E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_042	16.7	7.75	47.6	1390	642	89.4	89.4	46.1	16.6	1.32E-04	5.68E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_043	16.7	7.75	47.7	1386	640	89.2	89.2	46.1	16.6	1.32E-04	5.68E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_044	16.8	7.76	47.9	1393	642	89.4	89.4	46.2	16.6	1.32E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_045	16.8	7.76	47.9	1393	642	89.4	89.4	46.2	16.7	1.32E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_046	16.8	7.77	48.1	1396	642	89.5	89.5	46.3	16.7	1.33E-04	5.69E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_047	16.8	7.78	48.2	1399	643	89.6	89.6	46.3	16.7	1.33E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_048	16.8	7.78	48.3	1402	645	89.7	89.7	46.4	16.7	1.33E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_049	16.9	7.79	48.4	1405	646	89.8	89.8	46.5	16.7	1.33E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_050	16.9	7.79	48.6	1408	648	89.8	89.8	46.5	16.7	1.33E-04	5.71E-05	4.59	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_051	16.9	7.80	48.7	1408	650	89.9	89.9	46.5	16.7	1.33E-04	5.71E-05	4.59	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_052	16.9	7.81	48.8	1413	652	90.1	90.1	46.6	16.7	1.33E-04	5.72E-05	4.59	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_053	16.9	7.81	48.9	1413	653	90.3	90.3	46.6	16.8	1.34E-04	5.72E-05	4.59	1.52	0.16	6.44E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_054	17.0	7.82	49.1	1418	655	90.6	90.6	46.7	16.8	1.34E-04	5.72E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_055	17.1	7.85	49.7	1426	663	91.4	91.4	47.0	16.8	1.35E-04	5.74E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_056	17.1	7.86	49.9	1430	665	91.6	91.6	47.0	16.9	1.35E-04	5.75E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_057	17.1	7.87	50.0	1429	666	91.5	91.5	47.0	16.9	1.35E-04	5.75E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_058	17.1	7.88	50.2	1434	668	91.6	91.6	47.1	16.9	1.35E-04	5.76E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_059	17.2	7.89	50.3	1438	669	91.7	91.7	47.1	16.9	1.35E-04	5.76E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_060	17.2	7.90	50.6	1445	672	91.9	91.9	47.2	16.9	1.36E-04	5.77E-05	4.60	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_061	17.3	7.91	50.8	1451	675	91.8	91.8	47.3	16.9	1.36E-04	5.78E-05	4.60	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_062	17.3	7.93	51.1	1458	677	91.9	91.9	47.4	17.0	1.36E-04	5.78E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_063	17.4	7.94	51.4	1466	681	92.2	92.2	47.5	17.0	1.37E-04	5.79E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_064	17.4	7.96	51.8	1476	685	92.4	92.4	47.6	17.0	1.37E-04	5.80E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_065	17.5	7.98	52.2	1487	690	92.5	92.5	47.7	17.1	1.38E-04	5.81E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_066	17.6	8.00	52.5	1495	693	92.6	92.6	47.8	17.1	1.38E-04	5.82E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_067	18.1	8.17	55.1	1623	731	100.1	100.1	49.2	17.5	1.43E-04	5.95E-05	4.62	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_068	17.9	8.11	54.4	1558	719	97.6	97.6	48.7	17.4	1.41E-04	5.90E-05	4.61	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_069	18.0	8.13	54.4	1633	724	99.7	99.7	49.1	17.5	1.42E-04	5.93E-05	4.62	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_070	17.9	8.11	54.2	1628	721	99.4	99.4	49.0	17.4	1.42E-04	5.93E-05	4.62	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_071	17.9	8.10	54.0	1624	718	99.2	99.2	49.0	17.4	1.42E-04	5.92E-05	4.62	1.52	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_072	17.9	8.09	53.7	1617	715	98.9	98.9	48.9	17.4	1.41E-04	5.91E-05	4.62	1.52	0.16	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_073	17.8	8.07	53.5	1611	711	98.5	98.5	48.8	17.4	1.41E-04	5.90E-05	4.62	1.52	0.16	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_074	17.8	8.06	53.3	1605	709	98.3	98.3	48.7	17.3	1.41E-04	5.90E-05	4.62	1.52	0.16	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_075	17.7	8.05	53.1	1600	706	98.1	98.1	48.7	17.3	1.40E-04	5.89E-05	4.62	1.52	0.16	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE230900_076	17.7	8.04	52.9	1595	704	97.8	97.8	48.6	17.3	1.40E-04	5.88E-05	4.62	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_077	17.7	8.03	52.7	1592	702	97.7	97.7	48.5	17.3	1.40E-04	5.88E-05	4.62	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_078	17.6	8.02	52.5	1586	699	97.4	97.4	48.5	17.3	1.40E-04	5.87E-05	4.61	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_079	17.6	8.01	52.3	1581	697	97.2	97.2	48.4	17.2	1.39E-04	5.87E-05	4.61	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_080	17.6	8.00	52.1	1574	695	96.8	96.8	48.3	17.2	1.39E-04	5.86E-05	4.61	1.52	0.16	6.46E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_081	17.5	7.99	52.0	1570	693	96.6	96.6	48.3	17.2	1.39E-04	5.86E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RE230900_082	17.4	7.95	51.3	1551	684	95.6	95.6	48.1	17.1	1.38E-04	5.83E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_083	17.4	7.94	51.1	1547	683	95.4	95.4	48.0	17.1	1.38E-04	5.83E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_084	17.4	7.94	51.1	1549	682	95.4	95.4	48.0	17.1	1.38E-04	5.83E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_085	17.4	7.93	50.9	1549	680	95.3	95.3	48.0	17.1	1.38E-04	5.82E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_086	17.4	7.93	50.8	1549	678	95.2	95.2	48.0	17.1	1.38E-04	5.82E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_087	17.4	7.92	50.7	1550	677	95.2	95.2	47.9	17.1	1.38E-04	5.81E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_088	17.4	7.92	50.7	1551	675	95.1	95.1	47.9	17.1	1.37E-04	5.81E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_089	17.3	7.91	50.5	1551	673	95.0	95.0	47.9	17.0	1.37E-04	5.81E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_090	17.3	7.90	50.4	1551	672	94.9	94.9	47.8	17.0	1.37E-04	5.80E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_091	17.3	7.89	50.3	1551	672	94.6	94.6	47.8	17.0	1.37E-04	5.80E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_092	17.3	7.89	50.1	1547	671	94.1	94.1	47.7	17.0	1.37E-04	5.79E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_093	17.3	7.89	50.1	1556	671	93.9	93.9	47.7	17.0	1.37E-04	5.79E-05	4.61	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_094	17.3	7.88	50.0	1553	671	93.7	93.7	47.7	17.0	1.37E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_095	17.2	7.88	49.8	1553	670	93.5	93.5	47.6	17.0	1.36E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_096	17.2	7.87	49.6	1550	670	93.4	93.4	47.5	17.0	1.36E-04	5.78E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_097	17.2	7.87	49.4	1550	668	93.4	93.4	47.4	16.9	1.36E-04	5.78E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_098	17.2	7.87	49.4	1578	668	93.9	93.9	47.3	17.0	1.36E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_099	17.1	7.87	49.1	1572	666	93.7	93.7	47.2	17.0	1.35E-04	5.79E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_100	17.1	7.86	48.9	1557	663	93.3	93.3	47.1	16.9	1.35E-04	5.78E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_101	17.1	7.85	48.8	1553	660	93.1	93.1	47.0	16.9	1.35E-04	5.78E-05	4.61	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE230900_102	17.0	7.84	48.4	1527	655	92.4	92.4	46.8	16.9	1.34E-04	5.76E-05	4.60	1.52	0.16	6.44E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_103	17.0	7.83	48.3	1523	652	92.2	92.2	46.7	16.9	1.34E-04	5.76E-05	4.60	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_104	17.0	7.83	48.1	1514	650	91.9	91.9	46.6	16.9	1.34E-04	5.75E-05	4.60	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_105	16.9	7.82	48.0	1510	648	91.8	91.8	46.6	16.8	1.33E-04	5.75E-05	4.60	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE230900_106	16.9	7.82	47.9	1506	647	91.6	91.6	46.5	16.8	1.33E-04	5.75E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_107	16.9	7.81	47.8	1501	645	91.4	91.4	46.5	16.8	1.33E-04	5.75E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_108	16.9	7.81	47.7	1497	644	91.3	91.3	46.4	16.8	1.33E-04	5.74E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_109	16.9	7.81	47.6	1495	643	91.2	91.2	46.4	16.8	1.33E-04	5.74E-05	4.60	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_110	16.1	7.60	44.1	1231	601	80.2	80.2	43.9	16.2	1.26E-04	5.57E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_111	16.0	7.59	43.8	1216	597	79.2	79.2	43.7	16.2	1.25E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_112	16.0	7.57	43.5	1196	592	78.7	78.7	43.5	16.1	1.24E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_113	15.9	7.55	43.3	1175	587	77.4	77.4	43.3	16.1	1.24E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_114	15.9	7.54	43.0	1155	582	76.3	76.3	43.1	16.1	1.23E-04	5.51E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_115	16.0	7.56	43.6	1170	586	77.1	77.1	43.4	16.1	1.24E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_116	16.0	7.57	43.7	1183	589	78.0	78.0	43.5	16.1	1.24E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_117	16.0	7.58	44.0	1201	593	78.8	78.8	43.7	16.2	1.25E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_118	16.1	7.59	44.1	1211	595	79.3	79.3	43.8	16.2	1.25E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_119	16.1	7.61	44.5	1240	604	80.5	80.5	44.1	16.3	1.26E-04	5.57E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_120	16.2	7.62	44.7	1245	605	80.6	80.6	44.2	16.3	1.26E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_121	16.2	7.62	44.8	1249	606	80.9	80.9	44.3	16.3	1.27E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_122	16.2	7.63	45.0	1252	607	81.0	81.0	44.4	16.3	1.27E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_123	16.3	7.64	45.5	1267	609	81.4	81.4	44.6	16.3	1.28E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_124	16.3	7.65	45.6	1271	610	81.5	81.5	44.7	16.3	1.28E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_125	16.2	7.61	44.9	1231	600	80.2	80.2	44.1	16.2	1.26E-04	5.57E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_126	16.1	7.59	44.4	1193	592	78.1	78.1	43.8	16.2	1.25E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_127	16.3	7.65	45.7	1271	610	81.5	81.5	44.7	16.3	1.28E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_128	16.4	7.66	45.8	1275	611	81.7	81.7	44.7	16.4	1.28E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_129	16.4	7.66	45.9	1278	612	81.9	81.9	44.8	16.4	1.28E-04	5.60E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_130	16.4	7.67	46.0	1280	613	82.1	82.1	44.8	16.4	1.28E-04	5.61E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_131	16.4	7.67	46.2	1284	615	82.3	82.3	44.9	16.4	1.28E-04	5.61E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_132	16.4	7.68	46.3	1286	616	82.4	82.4	44.9	16.4	1.29E-04	5.61E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_133	16.5	7.69	46.5	1292	618	82.7	82.7	45.0	16.4	1.29E-04	5.62E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_134	16.5	7.69	46.6	1295	620	82.8	82.8	45.1	16.4	1.29E-04	5.62E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_135	16.5	7.70	46.7	1297	621	82.9	82.9	45.1	16.4	1.29E-04	5.62E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_136	16.5	7.70	46.9	1301	623	83.1	83.1	45.2	16.5	1.29E-04	5.63E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_137	16.6	7.71	47.1	1304	625	83.2	83.2	45.3	16.5	1.30E-04	5.63E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_138	16.6	7.72	47.2	1306	626	83.4	83.4	45.3	16.5	1.30E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_139	16.6	7.73	47.4	1310	628	83.7	83.7	45.4	16.5	1.30E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_140	16.6	7.73	47.5	1311	629	83.8	83.8	45.5	16.5	1.30E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_141	16.7	7.74	47.7	1313	630	83.9	83.9	45.5	16.5	1.30E-04	5.65E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_142	16.7	7.75	47.9	1316	632	84.0	84.0	45.6	16.5	1.31E-04	5.65E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_143	16.7	7.76	48.1	1320	634	84.1	84.1	45.7	16.6	1.31E-04	5.66E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_144	16.8	7.76	48.3	1323	635	84.3	84.3	45.8	16.6	1.31E-04	5.66E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_145	16.2	7.62	45.2	1218	600	79.2	79.2	44.2	16.2	1.26E-04	5.57E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_146	16.2	7.62	45.0	1216	599	79.2	79.2	44.1	16.2	1.26E-04	5.56E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_147	16.2	7.61	44.9	1213	597	79.2	79.2	44.0	16.2	1.26E-04	5.56E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_148	16.1	7.60	44.7	1216	597	79.7	79.7	44.0	16.2	1.26E-04	5.56E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_149	15.3	7.49	39.0	1057	560	74.0	74.0	41.3	16.0	1.18E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_150	15.4	7.52	39.5	1074	568	75.6	75.6	41.7	16.1	1.19E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_151	15.5	7.54	40.0	1095	576	76.6	76.6	42.0	16.1	1.20E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_152	15.6	7.59	40.8	1133	588	78.2	78.2	42.6	16.3	1.22E-04	5.58E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_153	15.7	7.60	41.0	1142	590	78.5	78.5	42.7	16.3	1.22E-04	5.59E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_154	15.7	7.61	41.1	1150	591	78.7	78.7	42.7	16.3	1.22E-04	5.59E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_155	15.7	7.61	41.3	1160	593	79.0	79.0	42.8	16.3	1.23E-04	5.60E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_156	15.7	7.61	41.3	1162	592	78.8	78.8	42.8	16.3	1.23E-04	5.60E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_157	15.7	7.60	41.1	1157	588	78.2	78.2	42.7	16.3	1.22E-04	5.58E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_158	15.5	7.56	40.5	1129	577	76.7	76.7	42.2	16.2	1.21E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_159	15.4	7.54	40.1	1104	569	75.4	75.4	41.9	16.1	1.20E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_160	15.3	7.51	39.7	1088	563	74.2	74.2	41.7	16.0	1.19E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_161	15.2	7.48	38.9	1057	555	73.0	73.0	41.2	16.0	1.18E-04	5.48E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_162	15.4	7.52	39.6	1081	568	75.5	75.5	41.7	16.1	1.19E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_163	15.4	7.53	39.8	1090	569	75.6	75.6	41.8	16.1	1.20E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_164	15.3	7.49	39.3	1071	559	73.8	73.8	41.4	16.0	1.19E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_165	15.2	7.47	38.6	1043	554	72.5	72.5	41.1	15.9	1.17E-04	5.48E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_166	15.0	7.42	37.7	999	545	71.0	71.0	40.5	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_167	15.0	7.43	37.9	1006	550	71.5	71.5	40.7	15.8	1.16E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_168	15.1	7.45	38.2	1016	555	72.2	72.2	40.9	15.9	1.17E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_169	15.1	7.47	38.5	1024	560	73.1	73.1	41.1	15.9	1.18E-04	5.48E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_170	15.3	7.49	39.0	1036	568	74.3	74.3	41.4	16.0	1.19E-04	5.50E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_171	15.4	7.53	39.6	1056	578	75.7	75.7	41.9	16.1	1.20E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_172	15.5	7.55	40.2	1074	586	76.5	76.5	42.3	16.2	1.21E-04	5.55E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_173	15.5	7.55	40.2	1072	587	76.4	76.4	42.3	16.2	1.21E-04	5.55E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_174	15.5	7.55	40.2	1069	587	76.3	76.3	42.3	16.2	1.21E-04	5.55E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_175	15.5	7.54	40.1	1063	586	76.1	76.1	42.2	16.1	1.21E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_176	15.5	7.53	40.1	1059	586	75.8	75.8	42.2	16.1	1.21E-04	5.54E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_177	15.5	7.53	40.1	1058	586	75.8	75.8	42.2	16.1	1.21E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_178	15.4	7.52	40.0	1054	585	75.7	75.7	42.2	16.1	1.21E-04	5.53E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_179	15.4	7.52	40.0	1052	585	75.5	75.5	42.1	16.1	1.21E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_180	15.4	7.52	40.0	1049	585	75.4	75.4	42.2	16.1	1.21E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_181	15.4	7.51	39.9	1046	584	75.3	75.3	42.1	16.1	1.21E-04	5.51E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_182	15.4	7.50	39.9	1043	584	75.2	75.2	42.1	16.0	1.21E-04	5.51E-05	4.53	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_192	14.9	7.41	37.5	990	544	70.8	70.8	40.4	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_193	15.0	7.43	38.0	1004	552	71.8	71.8	40.7	15.8	1.17E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_194	15.1	7.47	38.6	1022	563	73.2	73.2	41.2	15.9	1.18E-04	5.48E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_198	15.5	7.48	40.9	1091	563	73.0	73.0	41.9	15.9	1.20E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_199	15.6	7.50	41.1	1113	566	74.3	74.3	42.1	16.0	1.20E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_200	15.6	7.51	41.3	1131	569	75.0	75.0	42.3	16.0	1.21E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_201	15.7	7.53	41.6	1149	573	75.7	75.7	42.5	16.1	1.21E-04	5.51E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_202	15.7	7.54	41.9	1164	578	76.4	76.4	42.7	16.1	1.22E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_203	15.8	7.56	42.2	1178	583	78.0	78.0	42.9	16.2	1.23E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_204	15.9	7.59	42.7	1202	589	79.8	79.8	43.3	16.2	1.24E-04	5.56E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_205	15.5	7.47	40.6	1064	560	72.3	72.3	41.7	15.9	1.19E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_206	16.6	7.78	46.4	1460	634	88.9	88.9	45.7	16.8	1.31E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_207	16.8	7.85	47.4	1563	648	91.3	91.3	46.4	17.0	1.33E-04	5.79E-05	4.61	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_208	16.6	7.79	46.2	1468	634	88.9	88.9	45.7	16.8	1.31E-04	5.74E-05	4.60	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_209	16.6	7.79	46.0	1458	633	88.7	88.7	45.6	16.8	1.31E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_210	16.5	7.78	45.8	1447	632	88.4	88.4	45.5	16.8	1.30E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_211	16.5	7.78	45.6	1438	630	88.3	88.3	45.4	16.8	1.30E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_212	16.5	7.77	45.3	1422	628	88.0	88.0	45.2	16.8	1.30E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_213	16.5	7.77	45.3	1421	628	88.1	88.1	45.2	16.8	1.30E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_214	16.4	7.77	45.2	1417	627	88.1	88.1	45.1	16.8	1.29E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_215	16.4	7.77	45.1	1411	626	88.1	88.1	45.1	16.7	1.29E-04	5.72E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_216	16.5	7.78	45.4	1426	629	88.0	88.0	45.2	16.8	1.30E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_217	16.4	7.78	44.7	1382	629	88.0	88.0	45.0	16.8	1.29E-04	5.74E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_218	16.4	7.78	45.1	1419	628	88.4	88.4	45.2	16.8	1.30E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_219	16.4	7.77	44.9	1403	627	88.2	88.2	45.0	16.8	1.29E-04	5.73E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_220	16.4	7.78	44.8	1398	627	88.2	88.2	45.0	16.8	1.29E-04	5.73E-05	4.59	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_221	16.4	7.78	44.7	1394	628	88.2	88.2	45.0	16.8	1.29E-04	5.74E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_222	16.4	7.78	44.7	1386	628	88.1	88.1	45.0	16.8	1.29E-04	5.74E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_223	16.4	7.78	44.6	1369	628	87.5	87.5	44.9	16.8	1.29E-04	5.73E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_224	16.4	7.78	44.6	1367	629	87.4	87.4	45.0	16.8	1.29E-04	5.74E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_225	16.4	7.78	44.3	1347	628	86.7	86.7	44.8	16.8	1.29E-04	5.73E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_226	16.3	7.78	44.2	1337	628	86.3	86.3	44.8	16.8	1.28E-04	5.74E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_227	16.3	7.78	44.2	1334	629	86.2	86.2	44.8	16.8	1.28E-04	5.74E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_228	16.4	7.78	44.3	1333	630	86.2	86.2	44.8	16.8	1.29E-04	5.74E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_229	16.4	7.79	44.3	1332	631	86.2	86.2	44.9	16.8	1.29E-04	5.75E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_230	16.4	7.79	44.3	1329	631	86.1	86.1	44.9	16.8	1.29E-04	5.75E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_231	16.4	7.79	44.4	1329	631	86.2	86.2	44.9	16.8	1.29E-04	5.75E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_232	16.4	7.79	44.3	1323	631	86.0	86.0	44.9	16.8	1.29E-04	5.75E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_233	16.3	7.78	44.1	1307	629	85.4	85.4	44.8	16.8	1.28E-04	5.74E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_234	16.4	7.78	44.3	1306	630	85.4	85.4	44.9	16.8	1.29E-04	5.74E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_235	16.3	7.78	44.2	1298	630	85.2	85.2	44.9	16.8	1.29E-04	5.74E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_236	16.3	7.77	44.1	1287	629	84.9	84.9	44.8	16.8	1.29E-04	5.74E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_237	16.3	7.76	43.9	1272	627	84.4	84.4	44.7	16.7	1.28E-04	5.73E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_238	16.3	7.77	44.1	1279	629	84.8	84.8	44.8	16.8	1.29E-04	5.74E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_239	16.3	7.77	44.1	1271	629	84.6	84.6	44.8	16.8	1.28E-04	5.73E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_240	16.3	7.76	44.0	1262	628	84.4	84.4	44.7	16.8	1.28E-04	5.73E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_241	16.4	7.78	44.6	1378	627	87.8	87.8	44.9	16.8	1.29E-04	5.73E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_242	16.3	7.76	43.8	1247	627	83.9	83.9	44.6	16.7	1.28E-04	5.72E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_243	16.2	7.75	43.7	1232	627	83.5	83.5	44.6	16.7	1.28E-04	5.72E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_244	16.2	7.74	43.5	1217	626	83.0	83.0	44.4	16.7	1.27E-04	5.71E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_245	16.2	7.74	43.4	1208	626	82.8	82.8	44.4	16.7	1.27E-04	5.71E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_246	16.2	7.73	43.3	1205	626	82.7	82.7	44.3	16.7	1.27E-04	5.71E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_247	16.2	7.73	43.3	1200	625	82.5	82.5	44.3	16.7	1.27E-04	5.70E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_257	15.0	7.39	37.8	961	527	67.9	67.9	40.2	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_258	15.0	7.39	37.8	966	527	67.8	67.8	40.2	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_259	15.0	7.39	37.7	970	527	67.8	67.8	40.2	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_260	14.9	7.39	37.5	967	525	67.5	67.5	40.1	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_261	14.9	7.39	37.4	965	524	67.3	67.3	40.1	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_262	14.9	7.38	37.3	962	524	67.1	67.1	40.0	15.7	1.14E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_263	15.1	7.41	38.3	987	532	68.6	68.6	40.5	15.8	1.16E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_264	15.1	7.41	38.3	997	533	68.8	68.8	40.5	15.8	1.16E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_265	15.1	7.42	38.4	1008	533	69.3	69.3	40.6	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_266	15.1	7.42	38.4	1015	534	69.5	69.5	40.6	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_272	14.6	7.34	36.2	924	521	65.7	65.7	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_273	14.6	7.35	36.3	929	522	66.0	66.0	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_274	14.7	7.35	36.4	934	522	66.3	66.3	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_275	14.7	7.35	36.4	938	523	66.4	66.4	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_276	14.7	7.36	36.5	942	523	66.6	66.6	39.7	15.6	1.14E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_277	14.7	7.36	36.6	945	524	66.7	66.7	39.7	15.6	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_278	14.7	7.36	36.7	948	524	66.8	66.8	39.8	15.6	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_279	14.7	7.37	36.7	950	524	67.0	67.0	39.8	15.7	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_280	14.7	7.37	36.8	954	525	67.1	67.1	39.8	15.7	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_281	14.8	7.37	36.8	956	525	67.3	67.3	39.9	15.7	1.14E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_282	14.8	7.37	36.9	959	525	67.4	67.4	39.9	15.7	1.14E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_283	15.0	7.42	38.0	1010	535	69.4	69.4	40.5	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_285	15.1	7.43	38.4	1023	536	69.6	69.6	40.7	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_286	15.1	7.43	38.4	1023	536	69.6	69.6	40.7	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_287	15.1	7.43	38.3	1023	537	69.7	69.7	40.7	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_288	14.8	7.38	37.2	957	523	66.9	66.9	40.0	15.7	1.14E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_289	14.8	7.38	37.1	951	522	66.8	66.8	39.9	15.7	1.14E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_290	14.8	7.37	37.0	949	522	66.7	66.7	39.9	15.7	1.14E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_291	14.8	7.37	36.9	945	521	66.6	66.6	39.8	15.7	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_292	14.8	7.37	36.9	943	521	66.6	66.6	39.8	15.7	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_293	14.7	7.36	36.8	940	520	66.5	66.5	39.8	15.6	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_294	14.8	7.39	37.3	979	530	68.7	68.7	40.1	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_295	14.9	7.40	37.4	983	530	68.7	68.7	40.2	15.7	1.15E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_296	14.9	7.40	37.5	988	531	68.8	68.8	40.2	15.7	1.15E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_297	14.9	7.40	37.6	991	531	68.9	68.9	40.3	15.8	1.15E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_298	14.9	7.41	37.7	997	532	69.0	69.0	40.3	15.8	1.15E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_299	15.0	7.41	37.9	1004	534	69.3	69.3	40.5	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_300	15.1	7.42	38.2	1019	537	69.6	69.6	40.6	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_301	15.1	7.43	38.3	1022	537	69.7	69.7	40.7	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_302	14.7	7.36	36.6	933	519	66.2	66.2	39.7	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_303	14.7	7.35	36.5	930	519	66.1	66.1	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_304	14.7	7.35	36.4	922	518	65.6	65.6	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_305	14.6	7.34	36.3	918	518	65.3	65.3	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_306	14.6	7.34	36.2	916	517	65.2	65.2	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_307	14.6	7.33	36.0	906	516	64.9	64.9	39.3	15.6	1.13E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_310	14.6	7.34	36.1	911	517	65.1	65.1	39.4	15.6	1.13E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_312	15.1	7.42	38.6	996	536	69.1	69.1	40.6	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_313	14.7	7.35	36.4	926	519	65.9	65.9	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_315	15.1	7.42	38.4	1019	535	69.6	69.6	40.7	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_317	15.2	7.44	38.9	1038	539	70.4	70.4	40.9	15.8	1.17E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_318	15.0	7.42	37.7	1003	540	70.1	70.1	40.4	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_319	15.0	7.43	37.8	1009	541	70.2	70.2	40.5	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_320	15.0	7.43	37.9	1013	541	70.2	70.2	40.6	15.8	1.16E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_321	15.0	7.44	38.1	1022	543	70.4	70.4	40.7	15.8	1.16E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_322	15.1	7.44	38.3	1030	544	70.6	70.6	40.8	15.9	1.17E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_323	15.1	7.45	38.5	1038	546	70.8	70.8	40.9	15.9	1.17E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_324	15.1	7.45	38.6	1041	547	70.9	70.9	40.9	15.9	1.17E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_325	15.2	7.46	38.7	1047	548	71.0	71.0	41.0	15.9	1.17E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_326	15.2	7.46	38.9	1053	550	71.3	71.3	41.1	15.9	1.18E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_327	15.2	7.47	39.0	1058	551	71.4	71.4	41.2	15.9	1.18E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_328	15.2	7.47	39.1	1063	551	71.5	71.5	41.2	15.9	1.18E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_329	15.2	7.47	39.2	1063	550	71.2	71.2	41.2	15.9	1.18E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_330	15.2	7.46	39.1	1058	547	70.8	70.8	41.2	15.9	1.18E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_331	15.2	7.45	39.0	1052	545	70.6	70.6	41.1	15.9	1.17E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_332	15.2	7.45	39.0	1046	542	70.5	70.5	41.0	15.9	1.17E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_333	15.2	7.43	38.8	1030	538	70.2	70.2	40.9	15.8	1.17E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_334	15.0	7.42	38.1	1012	535	69.4	69.4	40.6	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_335	14.9	7.39	37.7	973	527	67.9	67.9	40.2	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_337	14.7	7.37	36.7	956	534	69.0	69.0	39.9	15.7	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_338	14.8	7.37	36.8	960	535	69.3	69.3	40.0	15.7	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_339	14.8	7.38	36.9	965	536	69.5	69.5	40.0	15.7	1.15E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_340	14.8	7.38	37.0	969	536	69.6	69.6	40.1	15.7	1.15E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_341	14.8	7.39	37.1	973	537	69.8	69.8	40.1	15.7	1.15E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_342	14.8	7.39	37.1	975	537	69.8	69.8	40.1	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_343	14.8	7.39	37.2	978	537	69.9	69.9	40.2	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_344	14.9	7.40	37.2	982	538	70.1	70.1	40.2	15.7	1.15E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_345	14.9	7.40	37.3	985	538	70.1	70.1	40.3	15.8	1.15E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_346	14.9	7.40	37.3	987	538	70.1	70.1	40.3	15.8	1.15E-04	5.42E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_347	14.9	7.41	37.4	990	539	70.1	70.1	40.3	15.8	1.15E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_348	14.9	7.41	37.5	994	540	70.2	70.2	40.4	15.8	1.15E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_349	14.9	7.42	37.6	998	540	70.2	70.2	40.4	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_350	15.7	7.53	41.6	1152	574	75.7	75.7	42.5	16.1	1.22E-04	5.52E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_351	15.7	7.56	42.0	1169	580	77.8	77.8	42.8	16.1	1.22E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_352	15.8	7.58	42.3	1187	585	79.0	79.0	43.1	16.2	1.23E-04	5.56E-05	4.56	1.51	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_353	15.6	7.55	41.4	1151	575	76.7	76.7	42.5	16.1	1.22E-04	5.53E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_354	15.7	7.57	42.0	1180	583	78.3	78.3	42.9	16.2	1.23E-04	5.55E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_355	16.0	7.64	43.2	1254	599	80.9	80.9	43.8	16.4	1.25E-04	5.61E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_356	16.0	7.65	43.5	1264	601	81.4	81.4	43.9	16.4	1.26E-04	5.62E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_357	15.9	7.61	42.6	1217	590	79.4	79.4	43.3	16.3	1.24E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_358	16.1	7.66	43.7	1274	604	81.8	81.8	44.0	16.4	1.26E-04	5.63E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE230900_359	16.1	7.67	43.9	1285	606	82.4	82.4	44.2	16.5	1.27E-04	5.63E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_360	16.2	7.68	44.3	1300	609	83.2	83.2	44.4	16.5	1.27E-04	5.64E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE230900_361	15.4	7.46	40.2	1056	554	71.7	71.7	41.5	15.9	1.19E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_362	15.4	7.47	40.5	1080	558	72.4	72.4	41.7	15.9	1.19E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_363	15.5	7.49	40.7	1099	561	73.6	73.6	41.9	15.9	1.20E-04	5.48E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_364	15.5	7.50	41.0	1120	564	74.4	74.4	42.1	16.0	1.20E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_365	15.6	7.52	41.3	1138	570	75.0	75.0	42.3	16.0	1.21E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_366	15.5	7.51	40.6	1119	565	74.5	74.5	42.1	16.0	1.20E-04	5.51E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_367	15.5	7.53	40.9	1132	569	75.7	75.7	42.3	16.1	1.21E-04	5.52E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_368	15.6	7.55	41.3	1148	575	76.8	76.8	42.5	16.1	1.22E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_369	15.7	7.58	41.7	1181	582	77.7	77.7	42.8	16.2	1.23E-04	5.57E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_370	15.8	7.62	42.3	1216	591	79.3	79.3	43.2	16.3	1.24E-04	5.60E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_371	16.0	7.68	43.2	1264	604	82.5	82.5	43.9	16.5	1.26E-04	5.65E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE230900_372	15.4	7.51	39.8	1092	562	74.2	74.2	41.7	16.0	1.19E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE230900_373	15.4	7.54	40.2	1112	570	75.3	75.3	42.0	16.1	1.20E-04	5.53E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_374	15.6	7.58	40.9	1151	580	77.1	77.1	42.5	16.2	1.22E-04	5.57E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_375	15.8	7.62	41.6	1186	591	79.2	79.2	43.0	16.3	1.23E-04	5.60E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_376	15.8	7.63	42.1	1212	595	80.2	80.2	43.3	16.4	1.24E-04	5.61E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_377	15.8	7.63	42.2	1214	594	80.1	80.1	43.3	16.4	1.24E-04	5.61E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_378	15.3	7.49	39.8	1088	557	72.7	72.7	41.6	16.0	1.19E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_379	15.5	7.52	40.4	1115	567	75.2	75.2	42.0	16.1	1.20E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_380	15.6	7.56	40.9	1144	575	76.5	76.5	42.4	16.2	1.21E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_381	15.6	7.56	41.1	1150	576	76.6	76.6	42.5	16.2	1.22E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_382	15.5	7.53	40.7	1125	569	75.6	75.6	42.2	16.1	1.21E-04	5.52E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_383	15.4	7.51	40.3	1110	563	74.4	74.4	41.9	16.0	1.20E-04	5.50E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_384	15.4	7.49	40.0	1094	557	72.6	72.6	41.7	16.0	1.19E-04	5.49E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_385	15.3	7.47	39.7	1077	552	71.7	71.7	41.4	15.9	1.19E-04	5.47E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_386	15.1	7.45	38.4	1012	561	72.8	72.8	41.1	15.9	1.18E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_387	15.0	7.43	37.9	998	553	71.8	71.8	40.7	15.8	1.17E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_388	14.9	7.41	37.4	985	545	70.7	70.7	40.4	15.8	1.16E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_389	14.9	7.39	37.2	973	544	70.3	70.3	40.3	15.7	1.15E-04	5.41E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_390	14.9	7.41	37.7	986	551	71.3	71.3	40.6	15.8	1.16E-04	5.43E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_391	15.1	7.44	38.3	1003	561	72.5	72.5	41.0	15.9	1.17E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_394	15.8	7.63	42.3	1219	594	80.0	80.0	43.3	16.4	1.24E-04	5.61E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_395	15.9	7.64	41.8	1138	607	79.3	79.3	43.3	16.4	1.24E-04	5.63E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_396	15.7	7.59	40.8	1105	594	77.6	77.6	42.7	16.3	1.22E-04	5.58E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_397	15.5	7.55	40.0	1076	582	76.4	76.4	42.1	16.2	1.21E-04	5.55E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_398	15.3	7.51	39.3	1051	571	75.2	75.2	41.6	16.1	1.19E-04	5.51E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_399	15.2	7.48	38.7	1033	561	73.4	73.4	41.2	16.0	1.18E-04	5.49E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_400	15.1	7.45	38.1	1017	551	71.7	71.7	40.8	15.9	1.17E-04	5.46E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_401	15.1	7.46	38.3	1028	552	71.9	71.9	40.9	15.9	1.17E-04	5.47E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_402	15.2	7.49	38.9	1046	562	74.0	74.0	41.3	16.0	1.18E-04	5.50E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE230900_403	15.4	7.52	39.4	1063	571	75.6	75.6	41.7	16.1	1.19E-04	5.52E-05	4.54	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE230900_404	15.5	7.55	39.9	1084	580	76.6	76.6	42.0	16.2	1.20E-04	5.55E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_405	15.6	7.58	40.6	1106	589	77.5	77.5	42.5	16.3	1.22E-04	5.58E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE230900_406	15.8	7.64	41.6	1143	604	79.0	79.0	43.2	16.4	1.24E-04	5.62E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_001	16.0	7.55	42.7	1163	583	74.1	74.1	42.2	16.0	1.19E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_002	16.4	7.85	41.8	770	510	72.3	72.3	39.9	16.1	1.12E-04	5.50E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_003	15.5	7.47	40.9	1060	560	72.3	72.3	41.8	15.9	1.20E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_004	15.5	7.46	40.7	1054	556	72.1	72.1	41.7	15.9	1.19E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_005	15.4	7.45	40.4	1045	552	72.0	72.0	41.5	15.8	1.18E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_006	15.4	7.44	40.1	1038	548	71.8	71.8	41.3	15.8	1.18E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_007	15.4	7.43	40.0	1045	546	71.3	71.3	41.2	15.8	1.17E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_008	15.3	7.42	39.7	1056	543	70.8	70.8	41.0	15.8	1.17E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_009	15.3	7.42	39.4	1062	539	70.2	70.2	40.8	15.7	1.16E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_010	15.3	7.41	39.1	1063	535	69.7	69.7	40.6	15.7	1.16E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_011	15.6	7.49	41.6	1079	567	73.4	73.4	42.2	15.9	1.21E-04	5.48E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_012	15.6	7.48	41.4	1074	563	73.2	73.2	42.1	15.9	1.20E-04	5.47E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_013	15.6	7.48	41.2	1070	561	73.0	73.0	41.9	15.9	1.20E-04	5.46E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_014	15.5	7.47	41.0	1061	557	72.9	72.9	41.8	15.9	1.19E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_015	15.5	7.46	40.7	1055	553	72.8	72.8	41.6	15.8	1.19E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_016	15.4	7.45	40.4	1061	550	71.8	71.8	41.4	15.8	1.18E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_017	15.4	7.44	40.3	1066	548	71.6	71.6	41.3	15.8	1.18E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_018	15.4	7.44	40.1	1072	546	71.3	71.3	41.2	15.8	1.17E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_019	15.4	7.43	40.0	1078	544	71.0	71.0	41.1	15.8	1.17E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_020	15.4	7.43	39.8	1083	542	70.8	70.8	41.0	15.8	1.17E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_021	15.4	7.42	39.6	1084	540	70.5	70.5	40.9	15.7	1.16E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_022	15.3	7.42	39.4	1083	537	70.1	70.1	40.8	15.7	1.16E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_023	15.3	7.41	39.2	1083	535	69.5	69.5	40.7	15.7	1.15E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_024	15.3	7.41	39.1	1082	534	69.1	69.1	40.6	15.7	1.15E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_025	15.3	7.40	39.1	1080	533	68.6	68.6	40.5	15.7	1.15E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_026	15.3	7.40	38.9	1072	532	68.2	68.2	40.5	15.7	1.15E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_027	15.8	7.53	42.6	1123	576	75.5	75.5	42.8	16.0	1.22E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_028	15.7	7.52	42.3	1099	572	74.4	74.4	42.6	16.0	1.22E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_029	15.7	7.51	42.1	1095	569	74.1	74.1	42.5	16.0	1.21E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_030	15.7	7.50	41.9	1088	565	73.9	73.9	42.3	15.9	1.21E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_031	15.6	7.49	41.7	1083	563	74.0	74.0	42.1	15.9	1.20E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_032	15.6	7.48	41.5	1084	560	74.0	74.0	42.0	15.9	1.20E-04	5.46E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_033	15.6	7.47	41.1	1086	555	72.7	72.7	41.8	15.9	1.19E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_034	15.5	7.46	40.9	1088	552	72.3	72.3	41.6	15.9	1.19E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_035	15.5	7.46	40.7	1094	550	72.0	72.0	41.5	15.8	1.18E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_036	15.5	7.45	40.5	1100	548	71.8	71.8	41.4	15.8	1.18E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_037	15.5	7.45	40.4	1106	546	71.6	71.6	41.3	15.8	1.17E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_038	15.5	7.44	40.2	1109	545	71.4	71.4	41.2	15.8	1.17E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_039	15.5	7.44	40.1	1110	543	71.0	71.0	41.1	15.8	1.17E-04	5.42E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_040	15.4	7.43	39.9	1107	541	70.3	70.3	41.0	15.8	1.16E-04	5.42E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_041	15.4	7.43	39.7	1102	539	69.8	69.8	40.9	15.7	1.16E-04	5.41E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_042	15.4	7.42	39.5	1096	538	69.2	69.2	40.8	15.7	1.15E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_043	15.4	7.42	39.4	1088	537	68.8	68.8	40.7	15.7	1.15E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_044	15.4	7.43	39.7	1099	541	69.2	69.2	40.9	15.7	1.16E-04	5.41E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_045	15.5	7.43	39.9	1109	542	69.7	69.7	41.0	15.8	1.16E-04	5.42E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_046	15.5	7.44	40.0	1116	543	70.3	70.3	41.0	15.8	1.16E-04	5.42E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_047	15.5	7.45	40.3	1124	546	71.0	71.0	41.2	15.8	1.17E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_048	15.5	7.45	40.5	1126	548	71.6	71.6	41.3	15.8	1.17E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_049	15.5	7.46	40.6	1125	549	71.9	71.9	41.4	15.8	1.18E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_050	15.5	7.46	40.7	1123	549	72.0	72.0	41.4	15.8	1.18E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_051	15.6	7.46	40.8	1119	550	72.2	72.2	41.5	15.8	1.18E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_052	15.6	7.47	40.9	1117	551	72.3	72.3	41.6	15.8	1.18E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_053	15.6	7.47	41.1	1114	553	72.5	72.5	41.7	15.9	1.19E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_054	15.6	7.47	41.2	1110	554	72.6	72.6	41.7	15.9	1.19E-04	5.46E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_055	15.6	7.48	41.3	1108	556	72.9	72.9	41.8	15.9	1.19E-04	5.46E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_056	15.6	7.49	41.6	1108	558	73.3	73.3	42.0	15.9	1.20E-04	5.46E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_057	15.7	7.49	41.8	1107	561	73.8	73.8	42.1	15.9	1.20E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_058	15.7	7.50	41.9	1104	563	74.5	74.5	42.2	15.9	1.21E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_059	15.7	7.50	42.1	1100	565	74.7	74.7	42.3	15.9	1.21E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_060	15.7	7.51	42.2	1097	566	74.6	74.6	42.4	16.0	1.21E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_061	15.8	7.51	42.4	1102	569	74.6	74.6	42.5	16.0	1.21E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_062	15.8	7.52	42.5	1106	570	74.5	74.5	42.6	16.0	1.22E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_063	15.8	7.53	42.7	1110	573	74.7	74.7	42.7	16.0	1.22E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_064	15.8	7.53	42.8	1114	575	75.0	75.0	42.9	16.0	1.23E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_065	15.9	7.54	43.1	1132	579	75.9	75.9	43.0	16.1	1.23E-04	5.51E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_066	15.9	7.55	43.3	1149	582	76.6	76.6	43.2	16.1	1.24E-04	5.52E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_067	16.8	7.78	48.5	1329	638	84.6	84.6	45.8	16.6	1.31E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_068	16.9	7.78	48.7	1329	639	84.7	84.7	45.9	16.6	1.32E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_069	16.9	7.79	48.9	1330	641	84.8	84.8	45.9	16.6	1.32E-04	5.68E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_070	16.9	7.80	49.1	1332	643	84.8	84.8	46.0	16.6	1.32E-04	5.69E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_071	17.0	7.82	49.4	1337	645	85.0	85.0	46.1	16.7	1.32E-04	5.69E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_072	17.0	7.83	49.6	1339	647	85.2	85.2	46.1	16.7	1.33E-04	5.70E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_073	17.1	7.85	49.9	1342	650	85.6	85.6	46.2	16.7	1.33E-04	5.71E-05	4.58	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_074	17.1	7.86	50.1	1343	652	86.0	86.0	46.3	16.7	1.33E-04	5.72E-05	4.58	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_075	17.2	7.88	50.7	1356	658	86.7	86.7	46.5	16.8	1.34E-04	5.73E-05	4.58	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_076	17.3	7.91	51.1	1367	663	87.3	87.3	46.6	16.8	1.35E-04	5.74E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_077	17.6	8.01	52.8	1441	682	90.6	90.6	47.5	17.1	1.37E-04	5.81E-05	4.60	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_078	17.6	8.00	52.6	1417	677	89.8	89.8	47.3	17.0	1.37E-04	5.80E-05	4.59	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_079	17.6	7.99	52.3	1395	675	89.0	89.0	47.1	17.0	1.36E-04	5.79E-05	4.59	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_080	17.5	7.98	52.2	1376	674	88.5	88.5	47.0	17.0	1.36E-04	5.79E-05	4.59	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_081	17.5	7.96	51.8	1374	670	87.9	87.9	46.7	16.9	1.35E-04	5.77E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_082	17.5	7.96	51.6	1376	669	87.8	87.8	46.5	16.9	1.35E-04	5.76E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_083	17.4	7.95	51.5	1377	668	87.8	87.8	46.4	16.9	1.34E-04	5.76E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_084	17.4	7.95	51.3	1378	667	87.3	87.3	46.3	16.9	1.34E-04	5.75E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE231000_085	17.1	7.84	49.8	1333	650	85.1	85.1	45.8	16.7	1.32E-04	5.70E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_086	17.2	7.86	50.1	1343	654	85.6	85.6	45.9	16.7	1.32E-04	5.71E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_087	17.0	7.81	49.0	1307	640	84.0	84.0	45.5	16.6	1.31E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_088	17.0	7.82	49.4	1319	645	84.5	84.5	45.6	16.6	1.31E-04	5.68E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_089	16.9	7.79	48.7	1299	638	83.6	83.6	45.4	16.6	1.31E-04	5.67E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_090	16.9	7.78	48.5	1291	635	83.3	83.3	45.4	16.5	1.30E-04	5.66E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_091	16.8	7.77	48.3	1281	633	83.0	83.0	45.3	16.5	1.30E-04	5.65E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_092	16.8	7.76	48.1	1274	631	82.7	82.7	45.3	16.5	1.30E-04	5.64E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_093	16.7	7.74	47.9	1266	628	82.4	82.4	45.2	16.5	1.30E-04	5.64E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_094	16.7	7.73	47.7	1257	626	82.1	82.1	45.1	16.5	1.29E-04	5.63E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_095	16.7	7.72	47.5	1249	624	81.9	81.9	45.1	16.5	1.29E-04	5.63E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_096	16.6	7.71	47.3	1241	622	81.7	81.7	45.1	16.4	1.29E-04	5.62E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_097	16.6	7.71	47.1	1235	620	81.4	81.4	45.0	16.4	1.29E-04	5.62E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_098	16.5	7.70	46.9	1229	618	81.1	81.1	44.9	16.4	1.28E-04	5.61E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_099	16.5	7.69	46.7	1227	616	80.9	80.9	44.8	16.4	1.28E-04	5.61E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_100	16.5	7.68	46.6	1227	615	80.8	80.8	44.8	16.4	1.28E-04	5.60E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_101	16.5	7.67	46.4	1225	613	80.7	80.7	44.7	16.4	1.28E-04	5.60E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_102	16.4	7.67	46.2	1224	611	80.4	80.4	44.6	16.3	1.28E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_103	16.4	7.66	46.0	1221	609	80.0	80.0	44.5	16.3	1.27E-04	5.59E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_104	16.3	7.65	45.8	1218	607	79.7	79.7	44.4	16.3	1.27E-04	5.58E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_105	16.3	7.65	45.6	1217	605	79.4	79.4	44.3	16.3	1.27E-04	5.58E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_106	16.3	7.64	45.6	1219	605	79.3	79.3	44.3	16.3	1.27E-04	5.58E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_107	16.3	7.64	45.5	1221	604	79.2	79.2	44.3	16.3	1.27E-04	5.58E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_108	16.3	7.63	45.4	1221	603	79.2	79.2	44.3	16.3	1.27E-04	5.57E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_109	16.2	7.63	45.3	1219	602	79.2	79.2	44.2	16.3	1.27E-04	5.57E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_110	16.1	7.58	44.2	1177	590	77.6	77.6	43.6	16.2	1.25E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_111	15.9	7.54	43.0	1122	574	75.5	75.5	42.9	16.0	1.23E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_112	15.9	7.54	43.2	1126	576	75.7	75.7	42.9	16.0	1.23E-04	5.51E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_113	15.9	7.55	43.3	1130	577	75.9	75.9	43.0	16.1	1.23E-04	5.51E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_114	15.9	7.56	43.5	1134	578	76.1	76.1	43.1	16.1	1.23E-04	5.52E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_115	16.0	7.58	44.0	1148	584	76.8	76.8	43.3	16.1	1.24E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_116	16.0	7.57	43.8	1149	582	76.7	76.7	43.2	16.1	1.24E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_117	16.0	7.56	43.5	1150	579	76.6	76.6	43.1	16.1	1.23E-04	5.52E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_118	15.9	7.55	43.4	1151	577	76.5	76.5	42.9	16.1	1.23E-04	5.51E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_119	15.9	7.54	43.1	1154	574	76.1	76.1	42.8	16.0	1.22E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_120	15.9	7.54	42.9	1156	573	75.8	75.8	42.7	16.0	1.22E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_121	15.9	7.53	42.8	1161	571	75.6	75.6	42.5	16.0	1.21E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_122	15.8	7.52	42.6	1162	570	75.3	75.3	42.4	16.0	1.21E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_123	15.8	7.52	42.4	1162	567	75.0	75.0	42.3	16.0	1.20E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_124	15.8	7.51	42.1	1162	565	74.6	74.6	42.2	16.0	1.20E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_125	15.8	7.51	41.9	1163	563	74.3	74.3	42.0	15.9	1.20E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_126	15.7	7.50	41.7	1166	562	74.0	74.0	41.9	15.9	1.19E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_127	15.7	7.49	41.6	1167	561	73.7	73.7	41.8	15.9	1.19E-04	5.46E-05	4.56	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_128	15.7	7.49	41.4	1166	560	73.2	73.2	41.7	15.9	1.18E-04	5.46E-05	4.56	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_129	15.7	7.48	41.3	1161	560	72.6	72.6	41.6	15.9	1.18E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_130	15.7	7.48	41.1	1150	558	71.7	71.7	41.5	15.8	1.18E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_131	15.6	7.47	40.8	1134	556	70.9	70.9	41.4	15.8	1.17E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_132	15.8	7.53	42.8	1130	571	75.8	75.8	42.7	16.0	1.22E-04	5.50E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_133	15.8	7.52	42.7	1133	569	75.3	75.3	42.6	16.0	1.22E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_134	15.8	7.52	42.5	1137	568	74.6	74.6	42.4	16.0	1.21E-04	5.49E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_135	15.8	7.51	42.3	1141	566	74.5	74.5	42.3	16.0	1.21E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_136	15.8	7.51	42.1	1143	564	74.2	74.2	42.2	15.9	1.20E-04	5.48E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_137	15.7	7.50	41.9	1143	562	74.0	74.0	42.1	15.9	1.20E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_138	15.7	7.49	41.7	1142	559	73.6	73.6	42.0	15.9	1.19E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_139	15.7	7.49	41.6	1143	558	73.4	73.4	41.9	15.9	1.19E-04	5.46E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_140	15.7	7.49	41.4	1147	557	73.3	73.3	41.8	15.9	1.19E-04	5.46E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_141	15.7	7.48	41.3	1149	556	73.2	73.2	41.7	15.9	1.19E-04	5.46E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_142	15.7	7.48	41.2	1150	556	73.1	73.1	41.7	15.9	1.18E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_143	15.6	7.47	41.1	1150	555	72.8	72.8	41.6	15.9	1.18E-04	5.45E-05	4.55	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE231000_144	15.6	7.47	41.0	1149	554	72.3	72.3	41.5	15.8	1.18E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_145	15.6	7.46	40.8	1145	553	71.8	71.8	41.4	15.8	1.17E-04	5.44E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_146	15.6	7.46	40.6	1134	551	71.0	71.0	41.3	15.8	1.17E-04	5.43E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_147	15.6	7.45	40.4	1119	549	70.2	70.2	41.1	15.8	1.16E-04	5.43E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_148	16.2	7.61	44.7	1181	593	78.3	78.3	43.7	16.2	1.25E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_149	16.1	7.60	44.5	1183	590	78.1	78.1	43.5	16.2	1.24E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_150	16.1	7.59	44.2	1185	587	78.0	78.0	43.3	16.1	1.24E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_151	16.1	7.58	44.0	1186	586	77.8	77.8	43.2	16.1	1.23E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_152	16.0	7.57	43.8	1189	583	77.4	77.4	43.1	16.1	1.23E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_153	16.0	7.57	43.6	1193	582	77.1	77.1	42.9	16.1	1.22E-04	5.51E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_154	16.0	7.56	43.4	1194	580	76.8	76.8	42.8	16.1	1.22E-04	5.51E-05	4.56	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_155	16.0	7.55	43.2	1194	578	76.4	76.4	42.7	16.0	1.22E-04	5.50E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_156	16.1	7.58	43.9	1208	586	77.5	77.5	43.1	16.1	1.23E-04	5.52E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_157	16.1	7.59	44.1	1214	588	77.8	77.8	43.1	16.1	1.23E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_158	16.2	7.61	44.8	1198	594	78.7	78.7	43.7	16.2	1.25E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_159	16.2	7.62	44.9	1205	595	78.8	78.8	43.7	16.2	1.25E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_160	16.3	7.63	45.0	1212	597	79.1	79.1	43.7	16.2	1.25E-04	5.56E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_161	16.3	7.63	45.1	1218	598	79.2	79.2	43.8	16.2	1.25E-04	5.56E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_162	16.3	7.64	45.4	1226	601	79.5	79.5	43.9	16.2	1.25E-04	5.57E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_163	16.3	7.65	45.5	1233	603	79.7	79.7	43.9	16.3	1.25E-04	5.57E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_164	16.4	7.66	45.7	1241	605	80.0	80.0	43.9	16.3	1.26E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_165	16.4	7.67	45.8	1248	607	80.2	80.2	44.0	16.3	1.26E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_166	16.5	7.68	46.1	1259	611	80.6	80.6	44.1	16.3	1.26E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_167	16.5	7.69	46.4	1271	615	81.1	81.1	44.2	16.3	1.26E-04	5.59E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_168	16.6	7.70	46.7	1284	619	81.5	81.5	44.2	16.4	1.27E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_169	16.6	7.71	46.9	1295	623	81.9	81.9	44.3	16.4	1.27E-04	5.61E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_170	16.7	7.73	47.2	1305	626	82.3	82.3	44.4	16.4	1.27E-04	5.62E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_171	16.7	7.74	47.4	1313	628	82.4	82.4	44.4	16.4	1.28E-04	5.62E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_172	16.8	7.76	47.7	1323	632	82.8	82.8	44.5	16.5	1.28E-04	5.63E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_173	16.8	7.77	47.9	1333	634	83.2	83.2	44.6	16.5	1.28E-04	5.64E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_174	16.9	7.80	48.3	1346	639	83.8	83.8	44.7	16.5	1.29E-04	5.65E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_175	17.0	7.82	48.7	1354	643	84.3	84.3	44.9	16.6	1.29E-04	5.67E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_176	17.3	7.92	50.4	1389	660	86.6	86.6	45.6	16.8	1.32E-04	5.73E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_177	17.3	7.91	50.1	1390	658	86.5	86.5	45.4	16.8	1.31E-04	5.72E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_178	17.3	7.91	50.0	1392	656	86.4	86.4	45.3	16.7	1.31E-04	5.72E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_179	17.2	7.90	49.8	1394	654	86.4	86.4	45.2	16.7	1.30E-04	5.71E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_180	17.2	7.90	49.7	1397	654	86.5	86.5	45.1	16.7	1.30E-04	5.71E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_181	17.2	7.90	49.7	1399	653	86.5	86.5	45.0	16.7	1.30E-04	5.71E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_182	17.2	7.90	49.6	1400	652	86.4	86.4	45.0	16.7	1.30E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_183	17.2	7.89	49.5	1399	651	86.3	86.3	44.9	16.7	1.29E-04	5.70E-05	4.59	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_184	17.2	7.89	49.2	1391	648	85.9	85.9	44.8	16.7	1.29E-04	5.69E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_185	17.2	7.88	49.0	1383	646	85.3	85.3	44.7	16.7	1.28E-04	5.69E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_186	17.2	7.88	48.9	1376	645	84.5	84.5	44.6	16.6	1.28E-04	5.69E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_187	17.1	7.88	48.8	1368	643	83.9	83.9	44.6	16.6	1.28E-04	5.69E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_188	17.2	7.88	48.8	1361	643	83.7	83.7	44.6	16.6	1.28E-04	5.69E-05	4.59	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_189	17.2	7.88	48.8	1351	643	83.6	83.6	44.6	16.6	1.28E-04	5.69E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_190	16.8	7.76	47.0	1299	627	80.3	80.3	43.9	16.4	1.25E-04	5.61E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_191	16.8	7.76	47.0	1313	627	80.3	80.3	44.0	16.4	1.25E-04	5.62E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_192	16.8	7.76	47.1	1326	628	80.8	80.8	44.0	16.4	1.26E-04	5.62E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_193	16.8	7.77	47.2	1336	628	81.6	81.6	44.0	16.4	1.26E-04	5.62E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_194	16.8	7.77	47.3	1342	629	82.0	82.0	44.0	16.4	1.26E-04	5.63E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_195	16.8	7.77	47.4	1348	631	82.6	82.6	44.1	16.4	1.26E-04	5.63E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_196	16.8	7.76	47.4	1348	631	82.8	82.8	44.2	16.4	1.27E-04	5.63E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_197	16.8	7.75	47.3	1343	630	82.7	82.7	44.1	16.4	1.27E-04	5.62E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_198	16.7	7.73	47.0	1334	627	82.3	82.3	44.1	16.4	1.26E-04	5.61E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_199	16.7	7.72	46.8	1326	625	82.0	82.0	44.0	16.4	1.26E-04	5.60E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_200	16.6	7.70	46.5	1314	621	81.3	81.3	43.9	16.3	1.26E-04	5.59E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_201	16.6	7.69	46.2	1303	617	80.8	80.8	43.8	16.3	1.25E-04	5.59E-05	4.58	1.52	0.16	6.41E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE231000_202	16.5	7.68	45.9	1292	613	80.3	80.3	43.7	16.3	1.25E-04	5.58E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_203	16.4	7.67	45.6	1281	610	79.8	79.8	43.6	16.3	1.25E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_204	16.4	7.66	45.4	1273	607	79.6	79.6	43.6	16.2	1.24E-04	5.57E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_205	16.4	7.65	45.3	1266	605	79.4	79.4	43.5	16.2	1.24E-04	5.56E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_206	16.3	7.64	45.1	1259	603	79.2	79.2	43.5	16.2	1.24E-04	5.56E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_207	16.3	7.63	45.0	1251	601	79.0	79.0	43.5	16.2	1.24E-04	5.55E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_208	16.3	7.62	44.8	1243	598	78.7	78.7	43.4	16.2	1.24E-04	5.55E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_209	16.2	7.61	44.7	1237	596	78.5	78.5	43.3	16.2	1.24E-04	5.54E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_210	16.2	7.61	44.5	1230	594	78.3	78.3	43.3	16.2	1.23E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_211	16.2	7.60	44.3	1223	592	78.1	78.1	43.2	16.1	1.23E-04	5.53E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_212	15.8	7.52	42.2	1189	570	74.9	74.9	42.1	16.0	1.20E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_213	15.9	7.53	42.4	1194	572	75.1	75.1	42.2	16.0	1.20E-04	5.48E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_214	15.9	7.53	42.5	1199	574	75.3	75.3	42.3	16.0	1.20E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_215	15.9	7.54	42.7	1205	576	75.5	75.5	42.4	16.0	1.20E-04	5.49E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_216	16.0	7.55	42.9	1211	578	75.8	75.8	42.4	16.0	1.20E-04	5.50E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_217	16.0	7.55	43.0	1216	580	76.0	76.0	42.5	16.0	1.21E-04	5.50E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_218	16.1	7.56	43.3	1226	584	76.4	76.4	42.6	16.0	1.21E-04	5.51E-05	4.56	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_219	16.1	7.57	43.5	1234	587	76.7	76.7	42.7	16.1	1.21E-04	5.51E-05	4.57	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_220	16.1	7.58	43.7	1243	591	76.9	76.9	42.8	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_221	16.2	7.59	43.9	1249	593	77.1	77.1	42.8	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_222	16.2	7.60	44.1	1255	596	77.3	77.3	42.9	16.1	1.22E-04	5.52E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_223	16.2	7.60	44.3	1259	597	77.5	77.5	42.9	16.1	1.22E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_224	16.3	7.61	44.4	1263	599	77.6	77.6	43.0	16.1	1.22E-04	5.53E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_225	16.3	7.62	44.6	1269	602	77.8	77.8	43.1	16.2	1.23E-04	5.54E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_226	16.4	7.63	44.8	1274	604	78.1	78.1	43.1	16.2	1.23E-04	5.55E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_227	16.4	7.64	45.0	1277	606	78.2	78.2	43.2	16.2	1.23E-04	5.55E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_228	16.5	7.65	45.2	1282	609	78.4	78.4	43.3	16.2	1.23E-04	5.56E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_229	16.5	7.67	45.4	1285	611	78.5	78.5	43.4	16.2	1.23E-04	5.56E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_230	16.4	7.64	44.8	1241	605	76.7	76.7	43.1	16.2	1.22E-04	5.55E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_231	16.4	7.63	44.5	1218	602	76.4	76.4	43.0	16.2	1.22E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_232	16.4	7.63	44.3	1184	602	75.9	75.9	42.9	16.1	1.21E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_233	16.4	7.64	44.3	1159	603	75.5	75.5	42.9	16.2	1.21E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_234	16.4	7.65	44.4	1159	606	75.8	75.8	42.9	16.2	1.21E-04	5.54E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_235	16.5	7.66	44.5	1169	608	76.2	76.2	42.9	16.2	1.21E-04	5.55E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_236	16.6	7.69	44.9	1180	612	77.2	77.2	43.1	16.2	1.22E-04	5.57E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_237	16.6	7.71	45.3	1188	616	77.9	77.9	43.3	16.3	1.23E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_238	16.7	7.74	45.7	1196	619	78.6	78.6	43.5	16.3	1.23E-04	5.59E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231000_239	16.8	7.76	46.1	1203	623	79.2	79.2	43.6	16.4	1.24E-04	5.61E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_240	16.8	7.79	46.4	1212	626	79.9	79.9	43.8	16.4	1.24E-04	5.62E-05	4.56	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_241	16.9	7.82	46.8	1221	630	80.8	80.8	44.0	16.5	1.25E-04	5.64E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231000_242	17.0	7.84	47.1	1228	633	81.7	81.7	44.1	16.5	1.25E-04	5.65E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_243	17.1	7.87	47.6	1236	637	82.2	82.2	44.2	16.6	1.25E-04	5.67E-05	4.57	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_244	17.2	7.91	48.2	1249	642	83.1	83.1	44.5	16.7	1.26E-04	5.70E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_245	17.3	7.96	48.9	1267	649	84.9	84.9	44.7	16.8	1.27E-04	5.72E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_246	17.4	8.00	49.5	1281	654	87.2	87.2	44.9	16.8	1.28E-04	5.75E-05	4.58	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_247	17.6	8.08	50.2	1296	660	89.3	89.3	45.1	17.0	1.29E-04	5.79E-05	4.58	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231000_248	15.5	7.43	39.7	1042	546	69.4	69.4	40.8	15.7	1.15E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_249	15.5	7.44	39.9	1040	549	69.7	69.7	40.8	15.7	1.15E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_250	15.6	7.45	40.0	1046	551	70.0	70.0	40.9	15.8	1.16E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_251	15.6	7.45	40.2	1045	554	70.3	70.3	41.0	15.8	1.16E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_252	15.3	7.40	38.8	1030	534	68.1	68.1	40.3	15.7	1.14E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_253	15.3	7.40	38.6	1004	533	67.8	67.8	40.2	15.7	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_254	15.4	7.42	39.3	1041	540	68.8	68.8	40.6	15.7	1.15E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_255	15.4	7.41	39.0	1011	538	68.4	68.4	40.4	15.7	1.14E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_256	14.6	7.32	35.9	909	508	64.5	64.5	39.0	15.5	1.11E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_257	14.7	7.32	36.0	957	509	64.5	64.5	39.0	15.5	1.11E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_276	14.9	7.34	37.0	971	514	65.4	65.4	39.4	15.5	1.12E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_277	14.9	7.34	37.1	986	515	65.6	65.6	39.5	15.5	1.12E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_278	15.2	7.39	38.3	1016	528	67.3	67.3	40.1	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_279	15.2	7.38	38.2	989	527	67.1	67.1	40.0	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_280	15.3	7.43	39.6	1022	545	70.9	70.9	41.0	15.8	1.17E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_281	15.3	7.43	39.8	1028	547	71.1	71.1	41.1	15.8	1.17E-04	5.43E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_282	15.1	7.37	38.0	1040	524	66.9	66.9	40.0	15.6	1.13E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_283	15.2	7.40	38.9	1069	533	69.1	69.1	40.5	15.7	1.15E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_284	15.2	7.40	38.8	1044	533	69.3	69.3	40.5	15.7	1.15E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_285	15.3	7.40	39.0	1067	534	69.5	69.5	40.6	15.7	1.15E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_286	15.2	7.40	39.0	1038	536	69.5	69.5	40.6	15.7	1.16E-04	5.41E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_287	15.2	7.39	38.5	1056	528	67.5	67.5	40.2	15.6	1.14E-04	5.39E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_288	15.2	7.39	38.7	1066	530	68.0	68.0	40.4	15.7	1.14E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_289	15.3	7.41	39.3	1036	540	70.2	70.2	40.8	15.7	1.16E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_290	15.3	7.42	39.5	1030	542	70.5	70.5	40.9	15.7	1.17E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_291	15.1	7.38	38.2	1049	526	67.5	67.5	40.1	15.6	1.14E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_292	15.2	7.38	38.4	1054	529	68.2	68.2	40.3	15.6	1.14E-04	5.39E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_293	15.2	7.39	38.7	1068	531	68.4	68.4	40.4	15.7	1.15E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_294	15.2	7.39	38.5	1052	530	68.8	68.8	40.3	15.7	1.14E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_295	15.2	7.40	38.8	1070	532	68.7	68.7	40.5	15.7	1.15E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_296	15.2	7.39	38.7	1049	531	69.1	69.1	40.4	15.7	1.15E-04	5.40E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_297	15.0	7.36	37.5	999	519	66.2	66.2	39.7	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_298	15.0	7.35	37.3	979	518	65.9	65.9	39.6	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_299	15.4	7.45	40.0	1036	550	71.4	71.4	41.3	15.8	1.18E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_300	15.1	7.40	38.6	992	536	69.5	69.5	40.5	15.7	1.16E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_301	15.1	7.37	37.8	1033	522	66.7	66.7	39.9	15.6	1.13E-04	5.37E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_302	15.1	7.37	37.9	1036	523	67.0	67.0	40.0	15.6	1.13E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_303	15.1	7.38	38.1	1041	525	67.7	67.7	40.1	15.6	1.14E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_304	15.1	7.38	38.3	1043	528	68.3	68.3	40.2	15.6	1.14E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_305	15.1	7.42	38.6	991	536	69.2	69.2	40.6	15.8	1.16E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_306	15.1	7.41	38.6	993	536	69.1	69.1	40.5	15.8	1.16E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_307	15.1	7.41	38.6	994	536	69.0	69.0	40.5	15.7	1.16E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_308	15.1	7.41	38.6	995	537	69.2	69.2	40.5	15.7	1.16E-04	5.42E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_309	15.1	7.39	38.5	996	534	68.7	68.7	40.4	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_310	15.1	7.39	38.5	1037	530	68.9	68.9	40.3	15.7	1.15E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_311	15.1	7.39	38.6	1033	532	69.0	69.0	40.4	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_312	15.2	7.40	38.7	1028	533	69.0	69.0	40.4	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_313	15.2	7.40	38.8	1022	535	69.3	69.3	40.5	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_314	15.2	7.41	39.0	1017	538	69.7	69.7	40.6	15.7	1.16E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_315	15.2	7.41	39.2	1015	540	69.9	69.9	40.7	15.7	1.16E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_316	15.3	7.43	39.5	1020	545	70.7	70.7	40.9	15.8	1.17E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_317	15.1	7.39	38.4	1005	532	68.5	68.5	40.3	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_318	15.1	7.38	38.1	1020	528	68.1	68.1	40.1	15.6	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_319	15.0	7.37	38.0	1024	526	67.8	67.8	40.0	15.6	1.14E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_320	15.0	7.37	37.7	1023	523	67.5	67.5	39.9	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_321	15.0	7.36	37.6	1024	521	66.7	66.7	39.8	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_322	15.0	7.36	37.5	1021	520	66.3	66.3	39.8	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_332	14.5	7.31	35.5	888	504	64.1	64.1	38.9	15.5	1.11E-04	5.34E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_333	14.5	7.31	35.5	890	504	64.2	64.2	38.9	15.5	1.11E-04	5.34E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_334	14.5	7.32	35.6	894	505	64.3	64.3	39.0	15.5	1.11E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_335	14.6	7.32	35.7	897	506	64.4	64.4	39.0	15.5	1.11E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_336	14.6	7.32	35.7	898	506	64.5	64.5	39.0	15.5	1.12E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_337	14.6	7.32	35.8	900	506	64.6	64.6	39.0	15.5	1.12E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_338	14.5	7.32	35.6	888	508	64.2	64.2	39.0	15.5	1.12E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_339	14.5	7.32	35.7	889	508	64.3	64.3	39.1	15.5	1.12E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_340	14.6	7.32	35.8	893	509	64.4	64.4	39.1	15.5	1.12E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_341	14.6	7.33	35.9	900	510	64.7	64.7	39.2	15.5	1.12E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_342	14.6	7.33	36.0	903	511	64.8	64.8	39.3	15.6	1.12E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_343	15.0	7.38	37.9	992	528	67.6	67.6	40.0	15.6	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_345	15.0	7.37	37.7	973	527	67.1	67.1	39.9	15.6	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_346	14.9	7.35	37.2	1011	517	65.9	65.9	39.6	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_347	14.9	7.35	37.3	1012	518	66.1	66.1	39.6	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_348	14.9	7.35	37.3	1011	519	66.5	66.5	39.7	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_350	15.0	7.37	37.7	965	527	67.2	67.2	40.0	15.6	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_351	15.0	7.38	37.7	965	527	67.8	67.8	40.1	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_353	14.6	7.33	35.8	896	509	64.5	64.5	39.2	15.5	1.12E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_354	14.9	7.36	37.5	1004	522	66.8	66.8	39.8	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_355	15.0	7.37	37.6	998	523	67.0	67.0	39.8	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_356	15.0	7.37	37.8	995	526	67.3	67.3	39.9	15.6	1.14E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_357	15.0	7.38	38.1	982	530	67.9	67.9	40.1	15.7	1.15E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_358	15.0	7.39	38.1	975	531	68.2	68.2	40.2	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_359	15.0	7.39	38.1	978	531	68.5	68.5	40.2	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_360	15.0	7.39	38.1	979	531	68.5	68.5	40.2	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_361	15.0	7.39	38.1	980	532	68.4	68.4	40.2	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_362	15.0	7.40	38.1	978	531	68.4	68.4	40.3	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_363	14.9	7.34	36.9	999	515	65.5	65.5	39.4	15.5	1.12E-04	5.35E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_364	14.9	7.35	37.0	1001	517	66.0	66.0	39.5	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_365	14.9	7.35	37.1	997	518	66.1	66.1	39.6	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_366	14.9	7.35	37.2	993	520	66.2	66.2	39.6	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_367	14.9	7.36	37.3	986	521	66.4	66.4	39.7	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_368	14.9	7.36	37.4	982	523	66.7	66.7	39.8	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_369	15.0	7.38	37.7	966	527	67.9	67.9	40.0	15.7	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_370	15.0	7.38	37.7	968	527	67.9	67.9	40.0	15.7	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_371	15.0	7.38	37.7	968	527	67.8	67.8	40.0	15.7	1.14E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_374	15.0	7.37	37.7	964	527	67.5	67.5	40.0	15.7	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_377	14.6	7.34	36.1	906	512	65.0	65.0	39.3	15.6	1.12E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_378	15.1	7.38	38.4	1041	529	68.7	68.7	40.2	15.6	1.14E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_379	15.1	7.40	38.6	994	536	69.5	69.5	40.5	15.7	1.16E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_380	15.1	7.38	38.2	1013	530	68.2	68.2	40.2	15.7	1.14E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_381	14.9	7.36	37.4	1008	521	66.6	66.6	39.7	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_382	15.0	7.36	37.7	1024	522	67.1	67.1	39.9	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_383	14.5	7.32	35.6	892	505	64.2	64.2	38.9	15.5	1.11E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_384	15.1	7.37	38.0	1038	524	67.3	67.3	40.0	15.6	1.13E-04	5.38E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_385	15.2	7.42	39.3	1013	543	70.6	70.6	40.9	15.8	1.17E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_386	15.0	7.39	38.1	979	531	68.4	68.4	40.3	15.7	1.15E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_387	14.9	7.34	37.0	1002	516	65.7	65.7	39.5	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_388	15.0	7.39	37.8	963	527	67.8	67.8	40.1	15.7	1.15E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_390	15.3	7.44	39.8	1028	549	70.9	70.9	41.2	15.8	1.18E-04	5.44E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_391	15.3	7.45	40.0	1032	551	71.0	71.0	41.3	15.8	1.18E-04	5.45E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_392	14.8	7.36	37.1	943	520	66.3	66.3	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_393	14.8	7.35	36.8	936	516	66.6	66.6	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231000_394	14.8	7.33	36.5	985	511	64.9	64.9	39.2	15.5	1.11E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_395	14.8	7.33	36.6	985	512	65.1	65.1	39.3	15.5	1.11E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_396	14.8	7.34	36.6	987	513	65.3	65.3	39.3	15.5	1.12E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_397	14.8	7.34	36.8	989	515	65.5	65.5	39.4	15.5	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_398	14.8	7.34	36.8	986	516	65.6	65.6	39.4	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_399	14.8	7.35	36.9	981	518	65.9	65.9	39.5	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_400	14.8	7.35	37.0	974	519	66.0	66.0	39.5	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_401	14.9	7.35	37.1	965	520	66.1	66.1	39.6	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_402	14.9	7.36	37.1	951	521	66.3	66.3	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_403	14.8	7.36	37.1	943	521	66.4	66.4	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_404	14.8	7.36	37.1	944	520	66.4	66.4	39.6	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_405	14.8	7.36	37.1	946	520	66.6	66.6	39.7	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_406	14.7	7.32	36.3	975	510	64.4	64.4	39.1	15.5	1.11E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_407	14.7	7.33	36.3	972	511	64.8	64.8	39.2	15.5	1.11E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_408	14.7	7.33	36.4	969	512	65.0	65.0	39.2	15.5	1.11E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_409	14.8	7.34	36.6	967	514	65.3	65.3	39.3	15.5	1.12E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_410	14.8	7.34	36.7	966	516	65.5	65.5	39.3	15.6	1.12E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_411	14.8	7.35	36.7	946	517	65.7	65.7	39.4	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_412	14.8	7.35	36.7	937	517	65.8	65.8	39.4	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_413	14.8	7.36	37.1	947	520	67.0	67.0	39.7	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_414	14.8	7.37	37.1	947	520	67.0	67.0	39.7	15.6	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_415	14.8	7.37	37.1	946	520	66.9	66.9	39.8	15.6	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_416	14.8	7.37	37.2	944	520	66.9	66.9	39.8	15.7	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_417	14.8	7.37	37.1	941	520	66.8	66.8	39.8	15.7	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_418	14.8	7.36	37.0	937	518	66.5	66.5	39.7	15.6	1.14E-04	5.39E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_419	14.8	7.35	36.7	933	517	66.0	66.0	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_420	14.8	7.35	36.7	935	516	66.2	66.2	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_421	14.7	7.35	36.6	931	515	66.1	66.1	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_422	14.7	7.34	36.5	926	513	65.9	65.9	39.4	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_423	14.7	7.34	36.4	923	513	65.7	65.7	39.4	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_424	14.7	7.34	36.3	919	511	65.5	65.5	39.3	15.6	1.12E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_425	14.6	7.33	36.1	913	510	65.2	65.2	39.2	15.6	1.12E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_426	14.6	7.33	36.0	908	508	65.0	65.0	39.1	15.5	1.12E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_427	14.8	7.36	36.9	934	518	66.3	66.3	39.7	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_428	14.8	7.36	36.8	931	517	66.1	66.1	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_429	14.7	7.35	36.7	927	516	65.9	65.9	39.6	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_430	14.8	7.35	36.7	942	517	65.8	65.8	39.4	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_431	14.7	7.35	36.5	921	515	65.7	65.7	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_432	14.8	7.34	36.7	952	517	65.6	65.6	39.4	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_433	14.7	7.35	36.5	928	514	66.0	66.0	39.4	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_434	14.7	7.35	36.6	924	515	65.8	65.8	39.5	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_435	14.8	7.33	36.5	968	513	65.1	65.1	39.2	15.5	1.12E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_436	14.8	7.35	36.7	935	516	66.5	66.5	39.5	15.6	1.13E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_437	14.8	7.35	36.7	933	517	65.8	65.8	39.4	15.6	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_438	14.7	7.34	36.4	917	514	65.6	65.6	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_439	14.7	7.32	36.2	975	509	64.3	64.3	39.1	15.5	1.11E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_440	14.7	7.33	36.3	974	510	64.5	64.5	39.1	15.5	1.11E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_441	14.8	7.35	36.7	933	516	66.3	66.3	39.5	15.6	1.13E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_443	14.9	7.33	36.7	964	512	65.0	65.0	39.3	15.5	1.11E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_444	14.8	7.33	36.5	961	510	64.6	64.6	39.2	15.5	1.11E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_445	14.8	7.33	36.6	970	511	64.7	64.7	39.2	15.5	1.11E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_446	14.9	7.34	36.8	978	513	65.2	65.2	39.4	15.5	1.11E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_450	14.8	7.32	36.3	967	509	64.3	64.3	39.1	15.5	1.11E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231000_452	15.1	7.36	37.6	994	521	66.4	66.4	39.8	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_453	15.1	7.36	37.7	1008	522	66.5	66.5	39.8	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_454	15.1	7.38	38.1	1013	525	67.0	67.0	40.0	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_455	15.0	7.36	37.5	977	520	66.2	66.2	39.7	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231000_456	15.1	7.37	38.0	997	525	66.9	66.9	39.9	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_001	16.9	7.89	44.7	1268	652	81.5	81.5	42.0	16.6	1.22E-04	5.67E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231100_002	16.3	7.62	42.4	1131	596	74.9	74.9	41.7	16.1	1.18E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231100_003	15.7	7.66	38.4	711	493	69.1	69.1	38.7	15.9	1.10E-04	5.44E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231100_004	18.2	8.09	50.4	1494	741	95.0	95.0	44.6	16.9	1.28E-04	5.71E-05	4.61	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231100_005	15.5	7.44	39.7	1020	551	68.8	68.8	40.7	15.8	1.15E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_006	15.5	7.44	39.3	1021	550	68.5	68.5	40.5	15.7	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_007	15.5	7.44	39.1	1023	550	68.5	68.5	40.3	15.7	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231100_008	15.5	7.43	39.3	1001	545	68.5	68.5	40.5	15.7	1.14E-04	5.41E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_009	15.4	7.42	39.0	1005	544	67.8	67.8	40.3	15.7	1.14E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_010	15.4	7.42	38.8	1009	544	67.8	67.8	40.2	15.7	1.14E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_011	15.4	7.42	38.6	1010	544	67.7	67.7	40.1	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_012	15.4	7.41	38.4	1008	544	67.7	67.7	39.9	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_018	15.5	7.43	38.9	1023	550	68.4	68.4	40.2	15.7	1.14E-04	5.41E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_019	15.5	7.43	38.7	1020	550	68.3	68.3	40.1	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_020	15.4	7.42	38.5	1012	550	68.3	68.3	39.9	15.7	1.13E-04	5.40E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_027	15.7	7.47	40.1	1056	562	70.1	70.1	40.8	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_028	15.6	7.46	39.6	1047	560	69.7	69.7	40.5	15.8	1.15E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_029	15.6	7.46	39.4	1041	559	69.6	69.6	40.3	15.8	1.14E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_030	15.6	7.46	39.1	1033	560	69.6	69.6	40.2	15.8	1.14E-04	5.42E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_031	15.6	7.45	38.8	1021	559	69.4	69.4	40.0	15.7	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_032	15.5	7.45	38.6	1007	560	69.3	69.3	39.9	15.7	1.13E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_033	15.5	7.44	38.2	1007	559	69.0	69.0	39.7	15.7	1.12E-04	5.41E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_041	15.5	7.46	38.1	1031	564	69.1	69.1	39.5	15.8	1.12E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_042	15.6	7.47	38.7	1032	566	69.5	69.5	39.8	15.8	1.13E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_043	15.7	7.47	39.0	1023	566	70.2	70.2	40.0	15.8	1.13E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_044	15.7	7.47	39.3	1032	566	70.2	70.2	40.2	15.8	1.14E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_045	15.7	7.48	39.6	1047	566	70.5	70.5	40.4	15.8	1.14E-04	5.43E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_046	15.7	7.48	39.8	1056	566	70.6	70.6	40.6	15.8	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_047	15.7	7.49	40.2	1066	568	70.8	70.8	40.8	15.8	1.15E-04	5.44E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_048	15.8	7.49	40.6	1075	570	71.0	71.0	41.0	15.8	1.16E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_049	16.0	7.54	41.5	1102	581	72.5	72.5	41.4	15.9	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_050	16.0	7.53	41.2	1097	580	72.6	72.6	41.2	15.9	1.17E-04	5.47E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_051	15.9	7.52	40.8	1086	579	72.5	72.5	41.0	15.9	1.16E-04	5.46E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_052	15.9	7.52	40.3	1068	577	72.0	72.0	40.7	15.9	1.15E-04	5.46E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_053	15.8	7.51	39.9	1049	575	71.4	71.4	40.5	15.9	1.15E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_054	15.8	7.51	39.6	1052	575	70.9	70.9	40.3	15.9	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_055	15.8	7.50	39.2	1061	575	70.7	70.7	40.1	15.8	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_056	15.8	7.50	39.0	1070	577	70.8	70.8	39.9	15.8	1.13E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_057	15.8	7.50	38.9	1084	581	70.9	70.9	39.8	15.8	1.13E-04	5.44E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_077	16.7	7.96	46.6	1148	659	84.5	84.5	42.6	16.7	1.24E-04	5.70E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231100_078	17.1	8.12	49.1	1210	671	87.4	87.4	43.6	16.9	1.27E-04	5.79E-05	4.57	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE231100_079	15.3	7.40	38.5	979	532	67.7	67.7	40.1	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_080	15.3	7.39	38.3	966	532	67.1	67.1	40.0	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_081	15.2	7.39	38.2	972	532	66.5	66.5	39.9	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_082	15.3	7.41	38.8	981	537	68.0	68.0	40.3	15.7	1.14E-04	5.39E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_083	15.3	7.40	38.6	980	536	67.3	67.3	40.1	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_084	15.3	7.40	38.4	986	536	66.9	66.9	40.0	15.7	1.13E-04	5.39E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_085	15.3	7.40	38.3	989	536	66.9	66.9	39.9	15.6	1.13E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_090	15.0	7.35	37.1	954	516	65.7	65.7	39.5	15.5	1.12E-04	5.35E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_091	14.9	7.34	36.9	951	514	65.2	65.2	39.3	15.5	1.11E-04	5.35E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_116	15.2	7.37	37.8	949	527	66.2	66.2	39.8	15.6	1.12E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_120	15.2	7.38	38.0	960	527	66.9	66.9	39.9	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_121	15.2	7.39	37.9	975	531	66.4	66.4	39.8	15.6	1.12E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_161	15.1	7.36	37.5	932	522	65.9	65.9	39.6	15.6	1.12E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_164	15.0	7.36	37.3	958	518	66.0	66.0	39.6	15.6	1.12E-04	5.36E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_165	15.0	7.35	37.2	938	518	65.6	65.6	39.5	15.6	1.12E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_167	15.1	7.37	37.9	981	524	66.7	66.7	39.9	15.6	1.13E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_171	15.1	7.37	37.8	960	524	66.4	66.4	39.8	15.6	1.12E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231100_175	12.2	7.00	22.6	349	362	35.0	35.0	0.0	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	2.54E-02	1.37E-02
RE231400_001	16.3	7.69	42.8	1025	586	75.1	75.1	40.4	16.1	1.16E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE231400_002	16.6	7.81	44.4	1048	597	76.6	76.6	40.9	16.2	1.18E-04	5.59E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_003	16.1	7.66	41.5	972	574	72.5	72.5	40.1	16.0	1.15E-04	5.50E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_004	16.2	7.70	42.0	980	579	73.5	73.5	40.3	16.1	1.15E-04	5.53E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_005	16.5	7.82	43.3	993	602	75.3	75.3	40.7	16.2	1.17E-04	5.59E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE231400_006	16.4	7.78	42.4	975	596	74.3	74.3	40.4	16.2	1.17E-04	5.57E-05	4.54	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE231400_007	16.1	7.66	41.0	957	575	71.7	71.7	39.9	16.0	1.15E-04	5.51E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_008	16.0	7.66	40.6	937	579	71.7	71.7	39.6	16.0	1.15E-04	5.50E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_009	16.3	7.77	42.3	950	597	73.0	73.0	40.2	16.1	1.17E-04	5.57E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_010	15.6	7.56	38.8	855	570	68.4	68.4	38.6	15.8	1.11E-04	5.45E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE231400_011	17.2	7.88	47.4	1089	602	82.2	82.2	43.2	16.4	1.21E-04	5.59E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE231500_002	14.5	7.37	33.6	672	473	63.8	63.8	38.1	15.6	1.04E-04	5.34E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE231600_001	15.2	7.59	37.1	788	520	69.4	69.4	40.3	16.1	1.11E-04	5.46E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE231600_004	15.1	7.56	36.7	801	522	67.3	67.3	39.9	16.0	1.09E-04	5.44E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231600_005	14.7	7.49	34.6	753	507	66.0	66.0	39.3	15.9	1.08E-04	5.41E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231700_002	14.4	7.39	33.5	686	482	63.8	63.8	38.6	15.7	1.05E-04	5.36E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE231700_003	14.3	7.38	33.2	680	479	63.4	63.4	38.5	15.7	1.05E-04	5.35E-05	4.49	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE231700_004	14.8	7.47	34.4	734	492	65.8	65.8	39.1	15.9	1.07E-04	5.40E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231800_001	15.6	7.67	39.0	772	520	73.0	73.0	41.7	16.2	1.14E-04	5.50E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE231800_002	15.9	7.74	40.0	842	538	74.7	74.7	42.5	16.4	1.16E-04	5.54E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE232700_002	14.7	7.40	35.0	719	496	65.1	65.1	39.8	15.7	1.07E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE233200_001	16.7	7.78	49.2	980	582	67.6	67.6	43.0	16.0	1.18E-04	5.47E-05	4.54	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE233500_001	15.9	7.70	43.5	870	539	71.5	71.5	42.5	16.1	1.15E-04	5.45E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE233600_001	16.1	7.73	44.2	829	536	73.5	73.5	42.6	16.2	1.15E-04	5.46E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE233600_002	16.1	7.74	44.6	859	542	74.3	74.3	42.7	16.2	1.16E-04	5.47E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE233700_001	15.8	7.68	42.2	776	517	73.9	73.9	42.0	16.2	1.13E-04	5.45E-05	4.51	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE233900_001	16.2	7.77	43.2	821	543	77.4	77.4	42.7	16.4	1.15E-04	5.49E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE233900_002	16.3	7.74	42.1	801	525	73.2	73.2	42.1	16.4	1.14E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE233900_003	16.4	7.80	42.8	798	526	73.7	73.7	42.2	16.5	1.14E-04	5.53E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE234000_001	16.5	7.77	42.2	818	533	74.9	74.9	42.7	16.5	1.15E-04	5.52E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE234100_001	16.4	7.72	45.7	879	561	75.5	75.5	43.6	16.3	1.17E-04	5.48E-05	4.53	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235000_001	16.6	7.89	43.2	948	543	84.9	84.9	44.1	16.9	1.18E-04	5.57E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235100_001	16.7	7.91	43.8	924	536	83.7	83.7	44.2	16.9	1.18E-04	5.57E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235100_002	16.7	7.91	43.9	887	530	81.2	81.2	44.3	16.8	1.19E-04	5.56E-05	4.54	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235100_003	16.4	7.69	44.4	788	549	77.1	77.1	43.0	16.3	1.14E-04	5.46E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235200_001	16.7	7.92	44.6	854	532	81.3	81.3	44.2	16.8	1.19E-04	5.55E-05	4.53	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235200_002	17.1	7.85	47.6	839	571	82.1	82.1	44.2	16.6	1.17E-04	5.51E-05	4.53	1.52	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235500_001	17.0	7.92	45.9	950	570	84.0	84.0	43.8	16.6	1.19E-04	5.53E-05	4.55	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE235500_002	17.2	7.94	48.4	889	563	80.6	80.6	45.2	16.8	1.22E-04	5.56E-05	4.54	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE235700_001	15.7	7.64	41.7	811	560	70.4	70.4	41.6	16.1	1.17E-04	5.48E-05	4.51	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235700_002	17.5	7.96	50.3	911	561	85.1	85.1	45.5	16.9	1.25E-04	5.61E-05	4.54	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE235800_001	17.1	8.01	47.5	1055	627	77.5	77.5	44.1	16.7	1.25E-04	5.69E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE235900_002	16.2	7.81	42.5	906	592	71.2	71.2	40.8	16.3	1.15E-04	5.59E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE235900_003	17.4	8.10	48.0	1187	641	82.4	82.4	43.9	16.8	1.22E-04	5.74E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE235900_004	17.8	8.21	48.1	988	604	82.8	82.8	44.7	17.1	1.24E-04	5.79E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE310100_001	17.2	8.03	47.2	1184	632	81.1	81.1	43.6	16.7	1.21E-04	5.70E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE310100_002	17.0	7.99	47.5	1212	623	81.6	81.6	43.6	16.7	1.21E-04	5.68E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE310100_003	17.4	8.07	45.9	964	580	81.7	81.7	43.7	16.9	1.22E-04	5.73E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE310200_001	16.9	7.92	44.5	978	570	77.3	77.3	42.8	16.6	1.22E-04	5.66E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE310500_001	16.4	7.80	43.1	1014	543	77.9	77.9	43.1	16.6	1.19E-04	5.59E-05	4.56	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE310600_001	15.9	7.63	41.0	949	558	73.2	73.2	41.3	16.2	1.15E-04	5.49E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE310600_002	17.0	7.84	46.3	1071	601	77.9	77.9	43.1	16.5	1.23E-04	5.63E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE310700_001	16.8	7.80	45.7	1015	584	75.8	75.8	42.8	16.4	1.22E-04	5.61E-05	4.54	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE310700_002	16.3	7.79	42.0	997	534	78.2	78.2	43.2	16.5	1.18E-04	5.60E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE310900_001	16.5	7.75	44.1	1063	571	74.1	74.1	42.8	16.4	1.20E-04	5.58E-05	4.55	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311000_001	16.4	7.77	43.8	1014	601	73.6	73.6	42.0	16.3	1.19E-04	5.60E-05	4.54	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311100_001	16.3	7.70	43.1	1008	574	76.2	76.2	43.4	16.4	1.18E-04	5.54E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE311200_001	16.8	7.79	44.9	975	598	75.4	75.4	43.5	16.4	1.20E-04	5.59E-05	4.54	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311200_002	16.6	7.80	44.2	1178	604	74.5	74.5	42.3	16.3	1.19E-04	5.59E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE311300_001	17.0	7.93	46.6	1169	607	74.6	74.6	42.9	16.4	1.21E-04	5.63E-05	4.56	1.51	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311300_002	18.2	8.10	54.1	1511	658	105.4	105.4	51.2	18.0	1.36E-04	5.82E-05	4.65	1.53	0.17	6.46E-02	2.58	0.50	0.32	2.54E-02	1.37E-02
RE311400_001	16.4	7.89	42.9	1018	572	73.4	73.4	41.4	16.3	1.15E-04	5.55E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE311400_002	17.8	8.26	48.4	1233	631	78.6	78.6	43.5	16.8	1.23E-04	5.74E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE311400_003	17.1	7.94	46.3	1236	577	86.8	86.8	45.9	16.9	1.24E-04	5.67E-05	4.59	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE311400_006	14.7	7.41	34.7	795	485	65.6	65.6	40.0	15.7	1.09E-04	5.36E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE311800_001	16.2	7.71	42.5	1098	571	74.9	74.9	43.0	16.3	1.18E-04	5.54E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE311900_001	16.3	7.72	42.8	1102	567	76.3	76.3	43.4	16.4	1.19E-04	5.55E-05	4.55	1.51	0.16	6.39E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE312200_001	16.7	7.84	44.8	1138	598	80.1	80.1	46.1	16.8	1.23E-04	5.63E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312200_002	16.5	7.78	43.9	1112	595	80.0	80.0	46.1	16.8	1.22E-04	5.60E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312200_003	16.4	7.74	43.2	1090	592	80.1	80.1	46.1	16.7	1.21E-04	5.58E-05	4.56	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312300_001	17.2	7.92	46.7	1095	644	88.6	88.6	49.9	17.2	1.29E-04	5.70E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE312400_001	17.5	7.96	48.9	1105	662	96.6	96.6	52.5	17.6	1.33E-04	5.74E-05	4.58	1.52	0.16	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE312800_001	17.1	7.85	46.8	834	588	81.9	81.9	47.0	16.8	1.22E-04	5.58E-05	4.52	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312800_002	15.6	7.54	39.6	885	563	70.8	70.8	42.7	16.1	1.15E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE312900_001	16.9	7.82	46.0	836	583	78.4	78.4	45.4	16.7	1.20E-04	5.55E-05	4.52	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE312900_002	16.2	7.65	42.1	916	571	71.5	71.5	43.1	16.2	1.16E-04	5.46E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE313000_001	16.0	7.88	40.2	835	546	76.2	76.2	43.4	16.5	1.15E-04	5.53E-05	4.52	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE313000_002	16.1	7.89	40.3	820	548	77.6	77.6	43.7	16.6	1.16E-04	5.54E-05	4.51	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE313000_003	16.3	7.94	41.3	815	554	80.3	80.3	44.3	16.7	1.17E-04	5.57E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE313000_004	15.9	7.87	40.3	896	543	74.7	74.7	42.9	16.4	1.15E-04	5.51E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE313000_005	15.7	7.81	40.2	913	544	73.6	73.6	42.8	16.3	1.15E-04	5.49E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE313000_006	15.3	7.53	39.0	888	552	69.2	69.2	42.2	16.0	1.14E-04	5.40E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE313000_007	16.0	7.62	41.6	932	572	70.4	70.4	42.9	16.1	1.16E-04	5.44E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE313100_001	15.6	7.66	40.1	907	543	72.3	72.3	42.6	16.1	1.14E-04	5.45E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE314400_001	16.3	7.47	45.1	1193	591	71.6	71.6	46.1	16.0	1.24E-04	5.41E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE314800_001	16.6	7.43	49.9	1264	614	74.0	74.0	48.7	15.9	1.31E-04	5.38E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE314900_001	16.3	7.62	44.2	1179	612	77.7	77.7	46.5	16.3	1.23E-04	5.49E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE316400_001	19.2	7.89	59.7	1643	727	89.7	89.7	51.8	16.8	1.38E-04	5.60E-05	4.66	1.53	0.17	6.47E-02	2.58	0.52	0.31	2.54E-02	1.37E-02
RE316500_001	20.1	8.16	64.5	1744	770	95.2	95.2	53.5	17.4	1.42E-04	5.73E-05	4.68	1.53	0.17	6.50E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE316600_001	20.5	9.01	60.9	1853	789	115.2	115.2	54.0	19.2	1.45E-04	6.12E-05	4.69	1.53	0.17	6.49E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE316600_002	19.9	8.59	59.3	1879	794	110.2	110.2	54.1	18.3	1.46E-04	5.97E-05	4.69	1.53	0.17	6.49E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE316700_001	19.7	8.46	59.3	1912	804	108.3	108.3	54.2	18.0	1.46E-04	5.93E-05	4.70	1.53	0.17	6.50E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE316700_002	19.5	8.36	58.8	1928	801	107.3	107.3	54.3	17.9	1.46E-04	5.89E-05	4.70	1.53	0.17	6.50E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE317000_001	20.3	8.36	66.4	1799	781	120.1	120.1	61.0	18.3	1.60E-04	5.98E-05	4.70	1.54	0.17	6.56E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RE410200_001	17.0	7.65	49.8	1353	599	88.4	88.4	49.0	16.4	1.34E-04	5.55E-05	4.63	1.52	0.16	6.44E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE410200_002	17.3	7.71	50.9	1417	617	93.5	93.5	50.0	16.5	1.36E-04	5.59E-05	4.64	1.52	0.17	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RE411100_001	17.9	7.88	53.9	1348	645	93.3	93.3	46.5	16.8	1.35E-04	5.66E-05	4.61	1.52	0.16	6.44E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RE411200_001	18.4	8.10	55.2	1374	731	88.7	88.7	46.2	16.9	1.34E-04	5.77E-05	4.59	1.52	0.16	6.44E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE510000_001	16.2	7.71	41.8	873	526	73.9	73.9	41.2	16.2	1.18E-04	5.55E-05	4.53	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE510000_002	16.2	7.74	42.1	959	541	75.1	75.1	42.1	16.2	1.18E-04	5.56E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE510100_001	15.8	7.60	39.3	908	537	73.1	73.1	41.0	16.0	1.14E-04	5.50E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511200_001	20.6	8.49	61.5	1454	773	93.9	93.9	47.8	17.6	1.42E-04	5.98E-05	4.57	1.53	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_002	20.5	8.48	61.7	1452	756	93.9	93.9	47.8	17.5	1.42E-04	5.97E-05	4.57	1.53	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_003	20.5	8.47	61.9	1448	742	93.7	93.7	47.7	17.5	1.42E-04	5.96E-05	4.57	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_004	20.4	8.46	62.1	1443	729	93.4	93.4	47.7	17.5	1.42E-04	5.96E-05	4.57	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511200_005	19.6	8.26	56.2	1386	723	87.5	87.5	46.3	17.1	1.35E-04	5.86E-05	4.56	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511200_006	19.5	8.25	56.1	1380	710	87.4	87.4	46.2	17.1	1.36E-04	5.85E-05	4.56	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_001	17.3	7.71	45.7	1077	623	73.2	73.2	42.0	16.0	1.24E-04	5.61E-05	4.57	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE511300_002	14.4	7.36	32.9	787	462	62.4	62.4	37.2	15.6	1.07E-04	5.36E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_003	14.7	7.40	34.5	780	471	63.2	63.2	37.6	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_004	15.0	7.44	35.6	869	485	64.4	64.4	38.0	15.7	1.10E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_005	14.9	7.43	35.7	828	483	63.9	63.9	37.9	15.7	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_006	14.9	7.44	35.8	815	485	64.3	64.3	38.0	15.7	1.10E-04	5.40E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_007	15.0	7.46	36.0	893	490	65.1	65.1	38.1	15.7	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_008	14.9	7.43	35.6	813	483	64.0	64.0	37.9	15.7	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_009	15.2	7.48	36.9	900	500	66.3	66.3	38.4	15.8	1.12E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_010	15.0	7.44	36.2	852	488	64.7	64.7	38.0	15.7	1.11E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_011	15.1	7.46	36.6	861	494	65.8	65.8	38.2	15.7	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_012	15.0	7.44	36.1	853	488	64.5	64.5	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_013	15.0	7.44	35.7	873	486	64.5	64.5	38.0	15.7	1.10E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_014	15.0	7.45	35.8	878	487	64.6	64.6	38.0	15.7	1.10E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_015	15.2	7.48	37.0	883	501	66.5	66.5	38.4	15.8	1.12E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_016	15.2	7.48	36.7	902	498	66.0	66.0	38.3	15.8	1.12E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_017	15.1	7.47	36.4	903	494	65.6	65.6	38.2	15.7	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_018	15.2	7.48	37.2	880	500	66.5	66.5	38.4	15.8	1.12E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_019	15.2	7.48	37.1	866	501	66.5	66.5	38.4	15.8	1.12E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_020	14.9	7.43	35.8	820	484	64.2	64.2	37.9	15.7	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_021	15.0	7.45	35.9	883	488	64.8	64.8	38.1	15.7	1.10E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_022	15.2	7.48	36.8	902	499	66.1	66.1	38.3	15.8	1.12E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_023	15.1	7.46	36.3	901	494	65.5	65.5	38.2	15.7	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_024	15.2	7.48	37.1	872	500	66.5	66.5	38.4	15.8	1.12E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_025	15.0	7.45	36.2	830	489	65.0	65.0	38.1	15.7	1.11E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_026	14.9	7.43	36.0	846	486	64.3	64.3	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_027	15.0	7.44	36.0	844	487	64.5	64.5	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_028	15.0	7.45	36.2	835	490	65.2	65.2	38.1	15.7	1.11E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_029	15.1	7.46	36.2	901	493	65.3	65.3	38.2	15.7	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_030	15.1	7.45	36.3	841	491	65.3	65.3	38.1	15.7	1.11E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_031	15.1	7.46	36.7	866	495	65.8	65.8	38.2	15.7	1.12E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_032	14.9	7.43	35.7	811	483	64.2	64.2	37.9	15.7	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_033	15.1	7.46	36.5	852	492	65.5	65.5	38.2	15.7	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_034	15.1	7.46	36.6	857	493	65.7	65.7	38.2	15.7	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_035	14.9	7.43	35.6	818	482	63.9	63.9	37.9	15.7	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_036	14.9	7.42	35.6	822	482	63.8	63.8	37.9	15.7	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RE511300_037	15.0	7.45	36.1	824	488	64.8	64.8	38.1	15.7	1.11E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_038	15.1	7.47	36.5	905	495	65.7	65.7	38.2	15.8	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_039	15.2	7.47	36.7	903	497	65.9	65.9	38.3	15.8	1.11E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_040	15.0	7.45	36.0	889	489	64.9	64.9	38.1	15.7	1.11E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_041	15.2	7.47	36.6	905	496	65.9	65.9	38.3	15.8	1.11E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_042	14.9	7.43	35.7	824	484	64.0	64.0	37.9	15.7	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511300_043	20.4	8.45	62.2	1434	725	93.6	93.6	47.8	17.5	1.43E-04	5.95E-05	4.58	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_044	20.3	8.44	62.2	1465	726	93.9	93.9	47.8	17.5	1.43E-04	5.94E-05	4.58	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_045	20.2	8.42	62.1	1504	726	93.4	93.4	47.8	17.4	1.43E-04	5.93E-05	4.59	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_046	20.1	8.41	62.0	1528	726	91.9	91.9	47.8	17.4	1.43E-04	5.92E-05	4.59	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_047	20.1	8.40	61.9	1542	725	91.3	91.3	47.8	17.4	1.43E-04	5.92E-05	4.59	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_048	20.0	8.39	61.8	1551	724	91.7	91.7	47.8	17.4	1.42E-04	5.91E-05	4.59	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_049	20.0	8.38	61.7	1552	723	92.5	92.5	47.8	17.4	1.42E-04	5.91E-05	4.59	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_050	20.0	8.37	61.5	1589	723	92.7	92.7	47.8	17.3	1.42E-04	5.90E-05	4.60	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_051	20.0	8.36	61.3	1656	722	92.5	92.5	47.8	17.3	1.42E-04	5.89E-05	4.61	1.53	0.16	6.48E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_052	19.9	8.35	61.0	1703	721	92.4	92.4	47.8	17.3	1.41E-04	5.88E-05	4.61	1.53	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_053	20.0	8.34	60.8	1744	719	92.1	92.1	47.7	17.3	1.41E-04	5.88E-05	4.62	1.53	0.16	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_054	19.9	8.32	60.4	1779	716	91.8	91.8	47.6	17.3	1.41E-04	5.87E-05	4.63	1.53	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_055	19.9	8.31	59.9	1812	712	91.7	91.7	47.5	17.2	1.40E-04	5.86E-05	4.63	1.53	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_056	19.9	8.30	59.4	1831	707	91.5	91.5	47.4	17.2	1.39E-04	5.86E-05	4.64	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_057	19.9	8.29	59.0	1843	704	91.1	91.1	47.3	17.2	1.39E-04	5.85E-05	4.64	1.52	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_058	19.8	8.27	58.4	1844	703	90.4	90.4	47.2	17.2	1.38E-04	5.84E-05	4.64	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_059	20.1	8.32	60.2	1828	720	92.9	92.9	47.8	17.3	1.39E-04	5.87E-05	4.66	1.53	0.17	6.47E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_060	19.7	8.25	58.4	1809	704	89.4	89.4	47.0	17.1	1.37E-04	5.83E-05	4.65	1.52	0.17	6.46E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_061	19.5	8.19	56.8	1786	693	88.2	88.2	46.4	17.0	1.36E-04	5.80E-05	4.64	1.52	0.17	6.45E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE511300_062	19.1	8.13	54.9	1742	680	86.3	86.3	45.7	16.9	1.33E-04	5.77E-05	4.63	1.52	0.17	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_063	18.9	8.09	53.4	1694	672	85.3	85.3	45.2	16.8	1.32E-04	5.75E-05	4.62	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_064	18.7	8.05	52.5	1642	665	84.3	84.3	44.8	16.8	1.31E-04	5.73E-05	4.61	1.52	0.16	6.43E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_065	18.5	8.01	51.4	1576	659	83.7	83.7	44.4	16.7	1.29E-04	5.71E-05	4.60	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE511300_066	17.6	7.87	47.6	1274	636	80.1	80.1	42.7	16.4	1.25E-04	5.64E-05	4.56	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_067	17.5	7.84	47.0	1224	632	79.6	79.6	42.4	16.4	1.24E-04	5.62E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_068	17.4	7.82	46.3	1208	628	79.0	79.0	42.2	16.3	1.24E-04	5.61E-05	4.55	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_069	17.3	7.80	45.8	1192	624	78.4	78.4	41.9	16.3	1.23E-04	5.60E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE511300_070	17.1	7.78	45.2	1172	620	78.2	78.2	41.7	16.3	1.22E-04	5.59E-05	4.54	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_071	16.9	7.75	44.3	1136	613	77.3	77.3	41.3	16.2	1.21E-04	5.58E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_072	16.8	7.74	43.7	1106	609	76.4	76.4	41.1	16.2	1.20E-04	5.57E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_073	16.8	7.72	43.3	1074	604	75.4	75.4	40.9	16.2	1.20E-04	5.56E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_074	15.6	7.54	39.0	953	521	69.3	69.3	39.0	15.9	1.14E-04	5.46E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_075	15.6	7.54	39.1	960	521	69.3	69.3	39.0	15.9	1.15E-04	5.46E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_076	15.6	7.54	39.2	965	522	69.3	69.3	39.0	15.9	1.15E-04	5.46E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_077	15.6	7.54	39.2	969	523	69.2	69.2	39.0	15.9	1.15E-04	5.47E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_078	15.6	7.55	39.3	972	524	69.2	69.2	39.1	15.9	1.15E-04	5.47E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_079	15.7	7.55	39.5	974	526	69.2	69.2	39.1	15.9	1.15E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_080	15.7	7.55	39.6	973	527	69.2	69.2	39.1	15.9	1.15E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_081	15.7	7.56	39.6	971	528	69.2	69.2	39.2	15.9	1.15E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_082	15.7	7.56	39.7	968	528	69.3	69.3	39.2	15.9	1.16E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_083	15.7	7.56	39.8	966	530	69.3	69.3	39.2	15.9	1.16E-04	5.47E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_084	15.7	7.56	39.9	963	533	69.3	69.3	39.3	15.9	1.16E-04	5.48E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_085	15.8	7.57	40.0	955	538	69.3	69.3	39.3	15.9	1.16E-04	5.48E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_086	15.8	7.57	40.1	951	540	69.4	69.4	39.4	15.9	1.16E-04	5.48E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_087	15.8	7.58	40.2	948	542	69.5	69.5	39.4	15.9	1.16E-04	5.48E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_088	15.9	7.58	40.3	950	545	69.6	69.6	39.5	15.9	1.16E-04	5.49E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_089	15.9	7.59	40.4	953	547	69.8	69.8	39.5	15.9	1.16E-04	5.49E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_090	15.9	7.59	40.4	954	549	70.0	70.0	39.6	15.9	1.16E-04	5.49E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_091	16.0	7.60	40.5	955	553	70.4	70.4	39.6	15.9	1.17E-04	5.50E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_092	16.0	7.61	40.7	958	555	70.9	70.9	39.7	16.0	1.17E-04	5.50E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_093	16.1	7.62	40.8	960	558	71.4	71.4	39.8	16.0	1.17E-04	5.50E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_094	16.1	7.62	40.9	962	560	71.7	71.7	39.8	16.0	1.17E-04	5.51E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_095	16.2	7.64	41.1	966	567	71.8	71.8	39.9	16.0	1.17E-04	5.51E-05	4.51	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_096	16.3	7.65	41.4	975	572	72.1	72.1	40.1	16.0	1.18E-04	5.52E-05	4.51	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_097	16.4	7.66	41.7	984	578	72.8	72.8	40.2	16.0	1.18E-04	5.53E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_098	17.0	7.77	45.4	1183	577	75.7	75.7	42.0	16.3	1.23E-04	5.59E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_099	16.9	7.75	45.0	1174	573	75.2	75.2	41.9	16.2	1.22E-04	5.58E-05	4.53	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_100	16.8	7.74	44.6	1165	570	75.0	75.0	41.7	16.2	1.22E-04	5.57E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_101	16.8	7.72	44.2	1156	567	74.8	74.8	41.6	16.2	1.21E-04	5.57E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511300_102	16.7	7.71	43.8	1146	565	74.6	74.6	41.5	16.2	1.21E-04	5.56E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_103	16.6	7.70	43.4	1139	562	74.4	74.4	41.3	16.1	1.21E-04	5.55E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_104	16.5	7.69	43.0	1130	559	74.1	74.1	41.2	16.1	1.20E-04	5.55E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_105	16.5	7.67	42.6	1122	557	73.7	73.7	41.0	16.1	1.20E-04	5.54E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_106	16.4	7.66	42.3	1115	554	73.4	73.4	40.9	16.1	1.19E-04	5.53E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_107	16.3	7.65	42.0	1108	552	73.0	73.0	40.8	16.1	1.19E-04	5.53E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_108	16.3	7.65	41.7	1102	550	72.7	72.7	40.7	16.1	1.19E-04	5.52E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_109	16.2	7.64	41.4	1094	547	72.2	72.2	40.6	16.0	1.18E-04	5.52E-05	4.52	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511300_110	16.1	7.63	41.0	1084	544	71.7	71.7	40.4	16.0	1.18E-04	5.51E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_111	16.1	7.62	40.7	1077	542	71.2	71.2	40.3	16.0	1.17E-04	5.51E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_112	16.0	7.61	40.5	1070	540	70.8	70.8	40.2	16.0	1.17E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_113	16.0	7.60	40.3	1063	537	70.5	70.5	40.1	16.0	1.17E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_114	15.9	7.59	40.0	1054	535	70.2	70.2	40.0	16.0	1.16E-04	5.49E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_115	15.9	7.59	39.7	1044	533	70.0	70.0	39.9	16.0	1.16E-04	5.49E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_116	15.8	7.57	39.4	1029	530	69.8	69.8	39.7	15.9	1.16E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_117	15.7	7.56	39.1	1017	527	69.7	69.7	39.6	15.9	1.15E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_118	15.7	7.56	38.9	1009	525	69.5	69.5	39.5	15.9	1.15E-04	5.47E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_119	15.6	7.55	38.8	998	523	69.3	69.3	39.4	15.9	1.14E-04	5.47E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_120	15.6	7.54	38.6	986	521	69.1	69.1	39.3	15.9	1.14E-04	5.47E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_121	15.6	7.54	38.4	972	518	68.8	68.8	39.2	15.9	1.14E-04	5.46E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_122	17.3	7.80	46.0	1152	584	76.6	76.6	42.5	16.3	1.24E-04	5.61E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_123	17.2	7.79	45.5	1142	581	76.2	76.2	42.3	16.3	1.23E-04	5.60E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_124	17.1	7.77	45.2	1133	579	75.9	75.9	42.2	16.3	1.23E-04	5.60E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_125	17.0	7.76	44.8	1124	576	75.6	75.6	42.1	16.3	1.22E-04	5.59E-05	4.53	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_126	16.9	7.75	44.4	1115	573	75.3	75.3	42.0	16.2	1.22E-04	5.58E-05	4.53	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_127	16.9	7.73	44.0	1105	570	74.9	74.9	41.8	16.2	1.22E-04	5.57E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_128	16.8	7.72	43.6	1094	567	74.5	74.5	41.7	16.2	1.21E-04	5.57E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_129	16.7	7.71	43.2	1086	565	74.1	74.1	41.6	16.2	1.21E-04	5.56E-05	4.53	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_130	16.6	7.70	42.9	1082	563	73.8	73.8	41.4	16.2	1.21E-04	5.55E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_131	16.6	7.69	42.6	1079	561	73.4	73.4	41.3	16.1	1.20E-04	5.55E-05	4.52	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_132	16.5	7.68	42.3	1076	559	73.1	73.1	41.2	16.1	1.20E-04	5.54E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_133	16.4	7.67	42.0	1071	557	72.6	72.6	41.1	16.1	1.19E-04	5.54E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_134	16.4	7.65	41.6	1067	554	72.1	72.1	40.9	16.1	1.19E-04	5.53E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_135	16.3	7.65	41.3	1063	552	71.7	71.7	40.8	16.1	1.19E-04	5.53E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_136	16.2	7.64	41.1	1060	550	71.3	71.3	40.7	16.1	1.18E-04	5.52E-05	4.52	1.51	0.16	6.38E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE511300_137	16.2	7.63	40.8	1055	548	70.9	70.9	40.6	16.0	1.18E-04	5.52E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_138	16.1	7.62	40.5	1052	546	70.7	70.7	40.5	16.0	1.18E-04	5.51E-05	4.52	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_139	16.1	7.61	40.2	1045	543	70.3	70.3	40.3	16.0	1.17E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_140	16.0	7.60	40.0	1039	540	70.3	70.3	40.2	16.0	1.17E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_141	15.9	7.59	39.7	1033	538	70.0	70.0	40.1	16.0	1.17E-04	5.50E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_142	15.9	7.59	39.5	1027	536	69.6	69.6	40.0	16.0	1.16E-04	5.49E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_143	15.8	7.57	39.1	1021	532	69.1	69.1	39.8	15.9	1.16E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_144	15.7	7.56	38.8	1017	529	69.0	69.0	39.7	15.9	1.15E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_145	15.7	7.56	38.6	1013	527	68.9	68.9	39.6	15.9	1.15E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_146	15.7	7.55	38.4	1009	525	68.7	68.7	39.5	15.9	1.15E-04	5.47E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_147	15.6	7.54	38.3	1006	523	68.5	68.5	39.4	15.9	1.15E-04	5.47E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_148	15.6	7.54	38.1	1000	520	68.4	68.4	39.3	15.9	1.14E-04	5.46E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511300_149	19.5	8.24	56.1	1373	698	87.5	87.5	46.2	17.1	1.36E-04	5.84E-05	4.56	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_150	19.5	8.23	56.1	1364	686	87.8	87.8	46.1	17.1	1.36E-04	5.84E-05	4.56	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_151	19.4	8.22	56.1	1350	674	87.7	87.7	46.0	17.1	1.36E-04	5.83E-05	4.56	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_152	19.4	8.21	56.1	1334	676	87.5	87.5	45.9	17.0	1.36E-04	5.83E-05	4.55	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_153	19.3	8.19	56.1	1331	679	87.1	87.1	45.8	17.0	1.36E-04	5.82E-05	4.55	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_154	19.2	8.19	56.2	1329	681	87.1	87.1	45.8	17.0	1.36E-04	5.81E-05	4.55	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_155	19.2	8.18	56.2	1337	683	87.0	87.0	45.8	17.0	1.36E-04	5.81E-05	4.56	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_156	19.1	8.17	56.3	1352	684	86.9	86.9	45.8	17.0	1.37E-04	5.80E-05	4.56	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_157	19.1	8.16	56.3	1364	685	86.5	86.5	45.8	17.0	1.37E-04	5.79E-05	4.56	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_158	19.0	8.15	56.2	1372	685	86.4	86.4	45.8	16.9	1.37E-04	5.79E-05	4.57	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_159	19.0	8.13	56.1	1376	685	86.0	86.0	45.8	16.9	1.36E-04	5.78E-05	4.57	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_160	19.0	8.13	56.1	1385	685	85.7	85.7	45.8	16.9	1.36E-04	5.78E-05	4.57	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_161	18.9	8.12	55.9	1393	684	85.6	85.6	45.7	16.9	1.36E-04	5.77E-05	4.57	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_162	18.9	8.11	55.6	1397	682	85.6	85.6	45.7	16.9	1.36E-04	5.77E-05	4.57	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_163	18.9	8.10	55.2	1393	680	85.9	85.9	45.6	16.8	1.35E-04	5.76E-05	4.57	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_164	18.9	8.09	54.8	1423	678	85.8	85.8	45.5	16.8	1.34E-04	5.75E-05	4.58	1.52	0.16	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_165	18.8	8.08	54.4	1457	677	85.8	85.8	45.4	16.8	1.34E-04	5.75E-05	4.58	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_166	18.8	8.07	54.1	1498	676	85.7	85.7	45.3	16.8	1.33E-04	5.75E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RE511300_167	18.8	8.06	53.6	1535	674	85.4	85.4	45.2	16.8	1.33E-04	5.74E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RE511300_168	18.5	8.03	51.5	1287	658	81.8	81.8	44.3	16.7	1.29E-04	5.74E-05	4.55	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_169	18.4	8.01	51.3	1275	646	81.4	81.4	44.2	16.7	1.29E-04	5.73E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_170	18.4	8.01	51.2	1262	637	81.4	81.4	44.1	16.7	1.29E-04	5.72E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_171	18.3	8.00	51.0	1250	628	81.3	81.3	44.1	16.7	1.29E-04	5.72E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_172	18.3	7.99	50.9	1252	625	81.2	81.2	44.0	16.7	1.29E-04	5.71E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_173	18.3	7.99	50.7	1250	626	81.1	81.1	44.0	16.7	1.29E-04	5.71E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_174	18.2	7.98	50.5	1256	626	80.9	80.9	44.0	16.6	1.29E-04	5.70E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_175	18.1	7.97	50.3	1269	626	80.7	80.7	43.9	16.6	1.29E-04	5.70E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_176	18.1	7.96	50.0	1279	625	80.5	80.5	43.9	16.6	1.29E-04	5.69E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_177	18.1	7.95	49.9	1287	626	80.4	80.4	43.8	16.6	1.29E-04	5.69E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_178	18.0	7.94	49.9	1292	628	80.2	80.2	43.8	16.6	1.29E-04	5.68E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_179	18.0	7.94	49.9	1292	629	80.0	80.0	43.7	16.6	1.29E-04	5.68E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_180	18.0	7.93	49.7	1286	631	79.8	79.8	43.7	16.5	1.29E-04	5.67E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_181	18.0	7.92	49.6	1275	633	80.0	80.0	43.6	16.5	1.29E-04	5.67E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_182	17.9	7.91	49.5	1260	634	79.9	79.9	43.5	16.5	1.29E-04	5.66E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_183	17.9	7.91	49.4	1242	635	79.8	79.8	43.5	16.5	1.28E-04	5.66E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_184	17.9	7.90	49.2	1219	636	80.0	80.0	43.4	16.5	1.28E-04	5.66E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_185	17.8	7.89	49.0	1188	637	80.0	80.0	43.3	16.5	1.28E-04	5.65E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_186	17.8	7.88	48.8	1193	638	79.8	79.8	43.1	16.5	1.27E-04	5.65E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_187	17.8	7.88	48.5	1197	637	79.7	79.7	43.0	16.4	1.27E-04	5.64E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_188	17.7	7.87	48.3	1198	637	79.9	79.9	42.9	16.4	1.27E-04	5.64E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_189	17.7	7.86	48.1	1208	637	79.9	79.9	42.9	16.4	1.26E-04	5.64E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_190	17.6	7.86	47.8	1218	636	79.8	79.8	42.8	16.4	1.26E-04	5.63E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_191	17.9	7.91	48.8	1220	618	79.2	79.2	43.4	16.5	1.26E-04	5.67E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_192	17.8	7.91	48.7	1204	609	79.0	79.0	43.3	16.5	1.26E-04	5.67E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_193	17.8	7.90	48.6	1204	603	78.7	78.7	43.3	16.5	1.26E-04	5.67E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_194	17.8	7.89	48.4	1203	603	78.5	78.5	43.2	16.5	1.26E-04	5.66E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_195	17.7	7.89	48.3	1199	603	78.5	78.5	43.2	16.5	1.26E-04	5.66E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_196	17.7	7.88	48.2	1209	602	78.3	78.3	43.1	16.5	1.26E-04	5.65E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_197	17.6	7.87	48.0	1223	601	78.1	78.1	43.0	16.4	1.26E-04	5.65E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_198	17.6	7.86	47.9	1232	600	78.0	78.0	43.0	16.4	1.26E-04	5.64E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_199	17.5	7.85	47.8	1239	599	77.8	77.8	42.9	16.4	1.26E-04	5.64E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_200	17.5	7.85	47.6	1241	598	77.7	77.7	42.8	16.4	1.26E-04	5.63E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_201	17.5	7.84	47.5	1241	599	77.4	77.4	42.8	16.4	1.25E-04	5.63E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_202	17.4	7.83	47.4	1236	599	77.2	77.2	42.7	16.4	1.25E-04	5.62E-05	4.53	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_203	17.4	7.83	47.2	1224	600	77.2	77.2	42.5	16.4	1.25E-04	5.62E-05	4.53	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_204	17.4	7.82	47.1	1210	601	77.2	77.2	42.5	16.3	1.25E-04	5.62E-05	4.53	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_205	17.4	7.81	46.9	1191	602	77.2	77.2	42.4	16.3	1.24E-04	5.61E-05	4.53	1.52	0.16	6.40E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE511300_206	17.4	7.81	46.8	1170	603	77.1	77.1	42.3	16.3	1.24E-04	5.61E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RE511300_207	17.3	7.80	46.7	1144	604	77.2	77.2	42.2	16.3	1.24E-04	5.61E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_208	17.3	7.80	46.5	1142	605	77.2	77.2	42.2	16.3	1.24E-04	5.60E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_209	17.3	7.79	46.3	1149	606	77.2	77.2	42.1	16.3	1.23E-04	5.60E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_210	17.2	7.78	46.1	1151	607	76.8	76.8	42.0	16.3	1.23E-04	5.59E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_211	17.2	7.78	45.9	1148	608	76.3	76.3	41.9	16.3	1.23E-04	5.59E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_212	17.2	7.77	45.6	1141	609	76.1	76.1	41.8	16.3	1.22E-04	5.59E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_213	17.1	7.77	45.4	1129	609	76.3	76.3	41.7	16.2	1.22E-04	5.59E-05	4.53	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511300_214	17.1	7.76	45.1	1111	610	76.2	76.2	41.6	16.2	1.22E-04	5.58E-05	4.53	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_001	14.4	7.38	33.6	756	480	61.7	61.7	37.2	15.5	1.07E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_002	14.3	7.37	33.5	751	476	61.3	61.3	37.1	15.5	1.07E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_003	14.3	7.36	33.2	747	476	61.1	61.1	37.0	15.5	1.07E-04	5.36E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_004	14.5	7.39	34.4	762	490	62.3	62.3	37.4	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_005	14.4	7.38	33.8	756	482	61.6	61.6	37.2	15.5	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_006	14.7	7.41	35.4	771	500	62.8	62.8	37.7	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_007	14.6	7.40	34.9	765	497	62.3	62.3	37.5	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_008	14.5	7.39	34.6	763	495	62.1	62.1	37.4	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_009	14.5	7.39	34.4	761	492	62.0	62.0	37.3	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_010	14.3	7.36	33.4	749	476	61.2	61.2	37.0	15.5	1.07E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_011	14.4	7.38	34.0	758	484	61.7	61.7	37.2	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_012	14.7	7.41	35.2	769	501	63.0	63.0	37.6	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_013	14.4	7.38	33.8	758	480	61.9	61.9	37.2	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_014	14.4	7.37	33.7	754	479	61.5	61.5	37.1	15.5	1.07E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_015	14.6	7.41	35.1	767	499	63.1	63.1	37.6	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_016	14.7	7.41	35.2	768	500	63.0	63.0	37.6	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_017	14.4	7.37	33.8	751	484	61.5	61.5	37.1	15.5	1.08E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_018	14.3	7.36	33.4	744	478	61.2	61.2	37.0	15.5	1.07E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_019	14.3	7.36	33.5	746	480	61.3	61.3	37.0	15.5	1.07E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_020	14.3	7.36	33.2	743	475	61.1	61.1	37.0	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_021	14.6	7.40	35.2	770	489	62.4	62.4	37.6	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_022	14.6	7.39	35.0	768	489	62.2	62.2	37.6	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_023	14.4	7.37	34.0	754	486	61.7	61.7	37.2	15.5	1.08E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_024	14.3	7.36	33.7	749	482	61.4	61.4	37.1	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_025	14.5	7.39	34.8	766	490	62.1	62.1	37.5	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_026	14.5	7.38	34.6	763	490	62.1	62.1	37.4	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_027	14.3	7.35	33.1	741	473	61.0	61.0	36.9	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_028	14.5	7.38	34.5	761	489	62.0	62.0	37.4	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_029	14.4	7.38	34.3	759	489	61.9	61.9	37.3	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_030	14.4	7.37	34.1	756	487	61.8	61.8	37.2	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_031	15.1	7.47	35.7	794	515	65.6	65.6	37.9	15.7	1.10E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_032	14.9	7.44	35.8	767	505	64.5	64.5	37.9	15.7	1.10E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_033	14.9	7.45	35.6	767	502	64.8	64.8	37.8	15.7	1.10E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_034	14.9	7.44	35.9	771	507	64.3	64.3	37.9	15.7	1.11E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_035	15.0	7.46	35.7	789	508	65.2	65.2	37.9	15.7	1.10E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_036	16.4	7.64	42.7	1305	581	73.0	73.0	40.4	16.0	1.17E-04	5.51E-05	4.57	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_037	14.3	7.37	33.3	750	478	61.4	61.4	37.0	15.5	1.07E-04	5.36E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_038	14.4	7.38	34.2	760	488	61.9	61.9	37.3	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_039	14.7	7.41	35.3	770	501	62.9	62.9	37.6	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_040	14.9	7.45	35.7	767	501	64.6	64.6	37.9	15.7	1.10E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_041	14.9	7.45	35.7	764	503	64.6	64.6	37.9	15.7	1.10E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_042	14.9	7.45	35.6	768	501	64.7	64.7	37.8	15.7	1.10E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_043	15.0	7.47	35.7	793	511	65.4	65.4	37.9	15.7	1.10E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_044	15.0	7.46	35.7	782	506	65.0	65.0	37.9	15.7	1.10E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_045	14.9	7.45	35.6	772	504	64.9	64.9	37.9	15.7	1.10E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_046	15.1	7.47	35.7	958	530	66.8	66.8	37.6	15.7	1.09E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_047	15.3	7.49	36.7	963	538	67.3	67.3	38.1	15.7	1.11E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_048	16.0	7.56	41.1	1210	563	70.3	70.3	39.4	15.9	1.15E-04	5.47E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_049	15.4	7.48	37.7	1129	534	68.0	68.0	38.1	15.7	1.11E-04	5.43E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_050	15.9	7.55	40.5	1209	557	69.8	69.8	39.2	15.8	1.15E-04	5.46E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_051	14.9	7.44	36.2	786	511	64.1	64.1	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_052	14.9	7.44	36.3	793	510	64.0	64.0	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_053	14.9	7.44	36.3	797	509	64.1	64.1	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_054	14.9	7.44	36.4	799	508	64.1	64.1	38.0	15.7	1.12E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_055	14.9	7.44	36.4	805	505	64.1	64.1	38.0	15.7	1.12E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_056	14.9	7.43	36.4	810	502	64.1	64.1	38.0	15.7	1.12E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_057	14.8	7.43	36.2	807	493	64.2	64.2	38.0	15.6	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_058	14.9	7.43	36.4	812	499	64.2	64.2	38.0	15.7	1.12E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_059	14.9	7.43	36.3	810	496	64.3	64.3	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_060	15.7	7.51	39.5	1181	564	68.5	68.5	38.8	15.8	1.13E-04	5.44E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_061	15.6	7.50	38.9	1206	566	68.4	68.4	38.6	15.8	1.12E-04	5.44E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_062	15.6	7.50	38.6	1223	567	68.3	68.3	38.5	15.7	1.12E-04	5.43E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_063	15.6	7.51	39.2	1184	565	68.4	68.4	38.7	15.8	1.12E-04	5.44E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_064	15.6	7.52	38.5	1153	542	69.1	69.1	38.5	15.8	1.12E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_065	16.1	7.57	41.6	1281	586	70.3	70.3	39.7	15.9	1.15E-04	5.48E-05	4.57	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_066	15.3	7.47	36.9	1092	530	67.7	67.7	37.9	15.7	1.10E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_067	15.0	7.45	35.2	957	524	66.6	66.6	37.4	15.7	1.09E-04	5.41E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_068	16.1	7.58	41.9	1259	584	70.7	70.7	39.8	15.9	1.16E-04	5.48E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_069	15.8	7.54	39.9	1199	551	69.4	69.4	39.0	15.8	1.14E-04	5.46E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_070	15.5	7.50	37.8	1117	539	68.5	68.5	38.3	15.8	1.11E-04	5.44E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_071	15.9	7.55	41.0	1190	568	69.6	69.6	39.3	15.8	1.15E-04	5.46E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_072	15.7	7.53	40.1	1161	554	68.9	68.9	39.0	15.8	1.14E-04	5.45E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_073	15.6	7.52	39.5	1161	548	68.8	68.8	38.8	15.8	1.13E-04	5.44E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_074	15.1	7.46	35.4	957	527	66.6	66.6	37.5	15.7	1.09E-04	5.41E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_075	15.2	7.48	36.3	960	535	67.1	67.1	37.9	15.7	1.10E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_076	16.2	7.60	42.3	1242	578	71.7	71.7	40.0	15.9	1.17E-04	5.49E-05	4.57	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_077	15.4	7.49	37.1	1064	536	67.5	67.5	38.1	15.7	1.11E-04	5.43E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_078	15.2	7.47	36.2	1048	528	66.6	66.6	37.6	15.7	1.09E-04	5.42E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_079	15.2	7.47	36.0	959	532	66.9	66.9	37.8	15.7	1.10E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_080	16.2	7.59	42.1	1249	583	70.8	70.8	39.9	15.9	1.16E-04	5.48E-05	4.57	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_081	15.6	7.50	39.0	1159	543	68.5	68.5	38.6	15.8	1.13E-04	5.44E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_082	15.5	7.49	38.4	1148	539	68.1	68.1	38.4	15.7	1.12E-04	5.43E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_083	15.7	7.53	39.2	1181	546	69.3	69.3	38.7	15.8	1.13E-04	5.45E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_084	15.8	7.54	40.5	1179	561	69.4	69.4	39.2	15.8	1.14E-04	5.46E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_085	16.2	7.59	42.2	1233	580	71.2	71.2	39.9	15.9	1.16E-04	5.49E-05	4.57	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_086	15.3	7.47	37.5	1106	533	67.3	67.3	38.0	15.7	1.11E-04	5.42E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_087	14.4	7.36	33.8	754	463	61.9	61.9	37.2	15.5	1.08E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_088	14.3	7.35	33.4	765	460	61.5	61.5	37.1	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_089	14.4	7.35	33.3	774	463	61.7	61.7	37.1	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_090	14.4	7.36	34.1	753	466	62.0	62.0	37.3	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_091	14.3	7.35	33.1	778	462	61.6	61.6	37.0	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_092	14.4	7.36	33.9	746	473	61.7	61.7	37.2	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_093	14.4	7.36	33.5	765	465	61.8	61.8	37.2	15.6	1.07E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_094	14.6	7.39	34.7	795	472	62.6	62.6	37.6	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_095	14.3	7.34	32.8	787	460	61.6	61.6	37.0	15.5	1.06E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_096	14.6	7.38	34.2	769	469	62.7	62.7	37.5	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_097	14.3	7.35	33.7	744	473	61.5	61.5	37.1	15.5	1.08E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_098	14.4	7.36	34.0	750	466	61.8	61.8	37.3	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_099	14.7	7.41	35.4	770	501	62.9	62.9	37.7	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_100	14.6	7.40	35.3	770	498	62.6	62.6	37.7	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_101	14.4	7.37	33.4	753	479	61.6	61.6	37.1	15.5	1.07E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_102	14.5	7.39	34.1	760	484	62.0	62.0	37.3	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_103	14.3	7.35	33.2	772	459	61.5	61.5	37.0	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_104	14.3	7.35	33.5	761	461	61.6	61.6	37.1	15.5	1.08E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_105	14.4	7.37	34.4	753	471	61.9	61.9	37.4	15.6	1.09E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_106	14.7	7.39	34.5	776	472	62.9	62.9	37.6	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_107	14.3	7.35	33.6	743	473	61.4	61.4	37.1	15.5	1.08E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_108	14.3	7.35	33.7	753	462	61.6	61.6	37.2	15.5	1.08E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_109	14.7	7.40	34.5	778	471	63.1	63.1	37.6	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_110	14.6	7.38	34.7	791	470	62.5	62.5	37.5	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_111	14.5	7.37	33.7	755	466	62.1	62.1	37.3	15.6	1.08E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_112	14.6	7.38	34.2	768	469	62.7	62.7	37.5	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_113	14.4	7.36	33.6	759	466	61.9	61.9	37.2	15.6	1.08E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_114	14.5	7.38	34.6	770	470	62.3	62.3	37.5	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_115	14.6	7.39	34.7	795	473	62.7	62.7	37.6	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_116	14.5	7.37	33.9	758	467	62.3	62.3	37.3	15.6	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_117	14.4	7.36	33.4	769	464	61.7	61.7	37.1	15.5	1.07E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_118	14.5	7.37	34.4	755	471	62.0	62.0	37.4	15.6	1.09E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_119	14.5	7.37	34.5	757	471	62.2	62.2	37.4	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_120	14.3	7.36	33.8	745	473	61.6	61.6	37.2	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_121	14.5	7.38	34.2	773	469	62.4	62.4	37.4	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_122	14.6	7.38	34.2	769	469	62.5	62.5	37.4	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_123	14.5	7.38	34.2	775	469	62.4	62.4	37.4	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_124	14.5	7.37	34.2	768	466	62.2	62.2	37.4	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_125	14.3	7.35	33.3	768	460	61.5	61.5	37.1	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_126	14.7	7.39	34.6	784	472	62.8	62.8	37.6	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_127	14.4	7.36	33.7	752	462	61.7	61.7	37.2	15.5	1.08E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_128	14.4	7.37	34.1	754	465	62.1	62.1	37.3	15.6	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_129	14.6	7.39	34.7	793	473	62.8	62.8	37.6	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_130	14.5	7.38	34.6	759	470	62.2	62.2	37.5	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_131	14.3	7.35	33.0	782	461	61.6	61.6	37.0	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_132	14.4	7.36	33.8	760	465	62.0	62.0	37.3	15.6	1.08E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_133	14.6	7.38	34.7	781	469	62.4	62.4	37.5	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_134	14.5	7.37	34.2	774	468	62.3	62.3	37.4	15.6	1.08E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_135	14.5	7.37	34.2	761	465	62.2	62.2	37.4	15.6	1.09E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_136	14.3	7.35	33.7	744	468	61.4	61.4	37.1	15.5	1.08E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_137	15.9	7.57	39.5	1166	558	70.5	70.5	39.4	15.9	1.14E-04	5.47E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_138	15.8	7.56	39.1	1125	555	69.5	69.5	39.2	15.9	1.14E-04	5.47E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_139	15.7	7.55	38.8	1077	553	68.7	68.7	39.1	15.8	1.13E-04	5.46E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_140	15.7	7.54	38.5	1016	551	68.8	68.8	38.9	15.8	1.13E-04	5.46E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_141	15.6	7.53	38.3	979	550	68.3	68.3	38.8	15.8	1.13E-04	5.45E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_142	15.5	7.52	37.7	953	547	67.7	67.7	38.5	15.8	1.12E-04	5.45E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_143	15.5	7.52	38.0	964	548	67.8	67.8	38.6	15.8	1.12E-04	5.45E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_144	15.4	7.51	37.4	935	544	67.7	67.7	38.4	15.8	1.12E-04	5.44E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_145	15.3	7.50	37.1	913	541	67.3	67.3	38.3	15.8	1.11E-04	5.44E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_146	15.2	7.49	36.4	860	534	66.8	66.8	38.0	15.7	1.11E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_147	15.3	7.50	36.8	886	538	66.9	66.9	38.2	15.8	1.11E-04	5.44E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_148	15.2	7.49	36.1	843	530	66.8	66.8	37.9	15.7	1.10E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_149	16.0	7.56	40.9	1341	593	71.6	71.6	39.4	15.8	1.15E-04	5.47E-05	4.56	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_150	16.0	7.56	40.8	1358	594	72.1	72.1	39.5	15.9	1.16E-04	5.47E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_151	16.0	7.56	40.8	1351	594	72.0	72.0	39.4	15.9	1.15E-04	5.47E-05	4.56	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_152	16.0	7.57	40.8	1361	594	71.7	71.7	39.6	15.9	1.16E-04	5.47E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_153	16.0	7.54	40.9	1293	590	71.0	71.0	39.5	15.8	1.15E-04	5.46E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_154	16.0	7.55	40.9	1314	592	71.0	71.0	39.4	15.8	1.15E-04	5.46E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_155	15.9	7.54	40.8	1252	588	70.2	70.2	39.5	15.8	1.15E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_156	16.0	7.54	40.8	1273	589	70.7	70.7	39.5	15.8	1.15E-04	5.46E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_157	16.0	7.55	40.9	1330	592	71.3	71.3	39.4	15.8	1.15E-04	5.46E-05	4.56	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_158	15.9	7.53	40.8	1230	587	69.9	69.9	39.5	15.8	1.15E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_159	15.1	7.47	37.2	837	517	65.7	65.7	38.3	15.7	1.13E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_160	15.1	7.46	37.3	843	512	66.1	66.1	38.3	15.7	1.13E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_161	15.1	7.46	37.1	840	504	65.9	65.9	38.3	15.7	1.12E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_162	15.1	7.46	37.2	844	510	66.4	66.4	38.3	15.7	1.13E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_163	15.0	7.45	36.8	865	492	65.1	65.1	38.2	15.7	1.12E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_164	15.0	7.44	36.5	862	490	64.8	64.8	38.1	15.7	1.12E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_165	15.1	7.46	37.3	841	515	65.9	65.9	38.3	15.7	1.13E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_166	15.1	7.46	37.0	855	497	65.4	65.4	38.2	15.7	1.12E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_167	15.1	7.47	37.2	832	518	65.6	65.6	38.3	15.7	1.13E-04	5.42E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_168	15.0	7.45	36.7	865	491	65.0	65.0	38.2	15.7	1.12E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_169	15.1	7.46	37.2	843	508	66.2	66.2	38.3	15.7	1.13E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_170	15.0	7.45	36.9	860	495	65.3	65.3	38.2	15.7	1.12E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_171	15.0	7.45	36.6	864	490	64.9	64.9	38.1	15.7	1.12E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_172	15.1	7.46	37.1	846	501	65.7	65.7	38.3	15.7	1.12E-04	5.41E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_173	14.3	7.36	33.5	744	481	61.4	61.4	37.0	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_174	14.3	7.35	33.4	742	479	61.2	61.2	37.0	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_175	14.4	7.36	33.8	748	483	61.6	61.6	37.1	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_176	14.5	7.39	34.9	765	481	62.2	62.2	37.5	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_177	14.5	7.38	34.8	763	481	62.2	62.2	37.5	15.6	1.10E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_178	14.5	7.38	34.7	761	482	62.1	62.1	37.5	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_179	14.5	7.38	34.6	759	483	62.0	62.0	37.4	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_180	14.4	7.37	34.3	755	484	61.9	61.9	37.3	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_181	14.4	7.37	34.2	753	484	61.8	61.8	37.3	15.5	1.09E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_182	14.4	7.37	34.1	751	484	61.7	61.7	37.2	15.5	1.09E-04	5.36E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_183	14.4	7.37	34.0	750	484	61.7	61.7	37.2	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_184	14.3	7.36	33.7	746	482	61.5	61.5	37.1	15.5	1.08E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_185	14.5	7.38	34.4	757	484	62.0	62.0	37.4	15.6	1.09E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_186	15.2	7.50	36.7	814	518	66.7	66.7	38.3	15.8	1.11E-04	5.44E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_187	15.3	7.50	36.7	819	520	67.0	67.0	38.3	15.8	1.11E-04	5.44E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_188	15.2	7.49	36.7	806	515	66.4	66.4	38.3	15.7	1.11E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_189	15.2	7.49	36.7	803	513	66.2	66.2	38.2	15.7	1.11E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_190	15.1	7.48	36.7	799	515	66.0	66.0	38.2	15.7	1.12E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_191	15.1	7.48	36.7	801	516	65.9	65.9	38.2	15.7	1.12E-04	5.43E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_192	15.1	7.48	36.7	802	517	65.9	65.9	38.2	15.7	1.12E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_193	15.1	7.48	36.8	805	519	65.9	65.9	38.2	15.7	1.12E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_194	15.1	7.47	36.9	810	520	65.9	65.9	38.2	15.7	1.12E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_195	15.1	7.47	37.0	816	521	65.7	65.7	38.3	15.7	1.12E-04	5.42E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_196	16.4	7.66	41.8	1284	583	72.6	72.6	40.4	16.0	1.17E-04	5.52E-05	4.56	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511400_197	16.2	7.63	41.1	1201	576	71.9	71.9	40.1	16.0	1.16E-04	5.51E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_198	16.1	7.61	40.8	1155	573	71.1	71.1	39.9	16.0	1.16E-04	5.50E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_199	16.3	7.64	41.4	1237	579	72.1	72.1	40.3	16.0	1.17E-04	5.52E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_200	16.1	7.60	40.5	1107	570	70.9	70.9	39.8	15.9	1.15E-04	5.49E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_201	16.0	7.59	40.2	1071	568	70.7	70.7	39.6	15.9	1.15E-04	5.49E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_202	15.8	7.57	39.5	1009	563	69.7	69.7	39.3	15.9	1.14E-04	5.48E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_203	15.9	7.58	39.8	1017	565	70.0	70.0	39.5	15.9	1.15E-04	5.48E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_204	15.7	7.56	39.3	1000	561	69.3	69.3	39.2	15.9	1.14E-04	5.47E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_205	15.7	7.56	39.1	990	560	69.3	69.3	39.1	15.9	1.14E-04	5.47E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_206	15.6	7.55	38.7	968	557	69.3	69.3	39.0	15.8	1.13E-04	5.47E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_207	15.6	7.55	38.4	946	554	69.0	69.0	38.9	15.8	1.13E-04	5.46E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_208	15.5	7.54	38.0	913	550	68.9	68.9	38.7	15.8	1.13E-04	5.46E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_209	15.5	7.53	37.7	887	545	68.7	68.7	38.6	15.8	1.12E-04	5.46E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_210	15.4	7.53	37.2	865	540	68.2	68.2	38.5	15.8	1.12E-04	5.45E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_211	15.4	7.52	37.0	845	537	67.7	67.7	38.4	15.8	1.11E-04	5.45E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_212	16.3	7.62	42.1	1294	576	72.7	72.7	40.2	16.0	1.17E-04	5.51E-05	4.57	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_213	16.1	7.59	40.6	1243	565	71.4	71.4	39.8	15.9	1.15E-04	5.49E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_214	16.2	7.61	41.3	1271	570	71.5	71.5	40.0	15.9	1.16E-04	5.50E-05	4.56	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511400_215	16.0	7.58	40.0	1210	561	71.3	71.3	39.6	15.9	1.14E-04	5.48E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_216	14.6	7.40	34.7	764	495	62.5	62.5	37.5	15.6	1.09E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_217	14.8	7.41	35.6	825	480	63.5	63.5	37.8	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_218	14.9	7.43	36.1	847	485	64.1	64.1	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_219	14.8	7.41	35.8	796	485	63.7	63.7	37.8	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_220	14.8	7.41	35.5	823	479	63.4	63.4	37.8	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_221	14.8	7.41	35.5	825	480	63.4	63.4	37.8	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_222	14.8	7.41	35.7	792	486	63.7	63.7	37.8	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_223	14.7	7.40	35.2	787	475	62.9	62.9	37.7	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_224	14.9	7.43	36.1	851	486	64.2	64.2	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_225	14.8	7.42	35.6	825	481	63.6	63.6	37.9	15.7	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_226	14.7	7.40	35.2	788	474	62.8	62.8	37.7	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_227	14.7	7.40	35.3	786	476	62.9	62.9	37.7	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_228	14.8	7.42	35.8	827	481	63.7	63.7	37.9	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_229	14.8	7.42	35.9	819	483	63.8	63.8	37.9	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_230	14.8	7.41	35.4	818	478	63.3	63.3	37.8	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_231	14.9	7.43	36.1	853	487	64.3	64.3	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_232	14.7	7.40	35.4	784	477	63.1	63.1	37.7	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_233	14.8	7.42	35.5	826	480	63.5	63.5	37.8	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_234	14.8	7.42	35.6	829	481	63.6	63.6	37.8	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_235	14.8	7.41	35.7	808	481	63.6	63.6	37.8	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_236	14.9	7.43	36.0	847	485	64.1	64.1	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_237	14.9	7.43	36.0	848	486	64.2	64.2	38.0	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_238	14.8	7.42	35.9	830	482	63.9	63.9	37.9	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_239	14.7	7.41	35.6	789	484	63.5	63.5	37.8	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_240	14.8	7.42	35.8	818	481	63.6	63.6	37.9	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_241	14.8	7.42	35.9	836	482	63.8	63.8	37.9	15.7	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_242	14.9	7.42	36.0	838	483	64.0	64.0	37.9	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511400_243	14.9	7.43	36.0	845	484	64.0	64.0	37.9	15.7	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_244	14.8	7.41	35.5	820	479	63.4	63.4	37.8	15.6	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_245	14.8	7.41	35.7	797	483	63.6	63.6	37.8	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_246	14.7	7.40	35.3	785	476	63.0	63.0	37.7	15.6	1.10E-04	5.38E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_247	14.9	7.42	35.7	830	483	63.8	63.8	37.9	15.7	1.10E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_248	14.8	7.42	35.6	830	482	63.7	63.7	37.9	15.7	1.10E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_249	14.8	7.42	35.8	808	484	63.8	63.8	37.9	15.6	1.11E-04	5.39E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_250	14.3	7.35	33.3	741	478	61.2	61.2	36.9	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_251	14.3	7.35	33.1	739	476	61.1	61.1	36.9	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_252	14.2	7.35	33.0	736	474	61.0	61.0	36.9	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_265	14.1	7.31	31.7	797	453	60.2	60.2	36.8	15.5	1.05E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_266	14.1	7.32	31.8	797	454	60.3	60.3	36.8	15.5	1.05E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_267	14.1	7.32	31.9	797	454	60.4	60.4	36.8	15.5	1.05E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_268	14.1	7.32	32.0	798	455	60.4	60.4	36.9	15.5	1.05E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_269	14.1	7.32	32.0	799	455	60.5	60.5	36.9	15.5	1.05E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_270	14.1	7.32	32.0	800	457	60.6	60.6	36.9	15.5	1.05E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_271	14.2	7.33	32.0	802	459	60.8	60.8	36.9	15.5	1.05E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_272	14.2	7.33	32.1	800	459	61.0	61.0	36.9	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_273	14.2	7.33	32.3	798	459	61.0	61.0	37.0	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_274	14.2	7.33	32.4	795	460	61.1	61.1	37.0	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_275	14.1	7.32	31.9	791	455	60.4	60.4	36.8	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_276	14.1	7.32	32.0	792	454	60.4	60.4	36.8	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_277	14.1	7.32	32.1	792	455	60.5	60.5	36.8	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_278	14.1	7.32	32.2	793	455	60.6	60.6	36.9	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_279	14.2	7.32	32.2	793	455	60.7	60.7	36.9	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_280	14.2	7.33	32.3	794	456	60.8	60.8	36.9	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_281	14.2	7.33	32.3	794	458	60.9	60.9	36.9	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_282	14.2	7.34	33.0	761	466	61.0	61.0	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_283	14.2	7.33	32.9	764	465	60.9	60.9	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_284	14.2	7.33	32.8	768	464	60.9	60.9	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_285	14.2	7.33	32.7	772	463	60.9	60.9	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_286	14.2	7.33	32.6	775	462	60.9	60.9	36.8	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_287	14.2	7.33	32.5	778	461	60.8	60.8	36.8	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_288	14.1	7.32	32.4	781	459	60.7	60.7	36.8	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_289	14.1	7.32	32.3	784	459	60.6	60.6	36.8	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511400_290	14.3	7.35	33.4	756	465	61.3	61.3	37.0	15.5	1.08E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_291	14.3	7.34	33.3	760	464	61.2	61.2	37.0	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_292	14.3	7.34	33.2	765	462	61.1	61.1	37.0	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_293	14.2	7.34	33.1	768	462	61.1	61.1	36.9	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_294	14.2	7.34	33.0	771	461	61.1	61.1	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_295	14.2	7.34	32.9	773	460	61.1	61.1	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_296	14.2	7.33	32.9	776	460	61.1	61.1	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_297	14.2	7.33	32.8	779	459	61.1	61.1	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_298	14.2	7.33	32.6	782	458	61.0	61.0	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_299	14.2	7.33	32.5	785	457	60.9	60.9	36.9	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_300	14.3	7.34	33.1	776	459	61.4	61.4	37.0	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_301	14.3	7.34	33.0	779	459	61.4	61.4	37.0	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_302	14.2	7.34	32.9	782	459	61.4	61.4	37.0	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_303	14.2	7.34	32.7	786	458	61.4	61.4	37.0	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_304	14.3	7.35	33.6	744	468	61.4	61.4	37.1	15.5	1.08E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_305	14.3	7.35	33.4	745	468	61.3	61.3	37.0	15.5	1.08E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_306	14.3	7.34	33.3	746	468	61.2	61.2	37.0	15.5	1.08E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_307	14.2	7.34	33.2	748	468	61.2	61.2	36.9	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_308	14.2	7.34	33.1	749	469	61.1	61.1	36.9	15.5	1.07E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_309	14.2	7.34	32.9	750	469	61.0	61.0	36.9	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_310	14.2	7.34	32.8	751	468	61.0	61.0	36.8	15.5	1.07E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_311	14.2	7.33	32.6	752	468	60.8	60.8	36.8	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_312	14.3	7.35	33.5	742	473	61.3	61.3	37.0	15.5	1.08E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_313	14.3	7.35	33.4	741	473	61.3	61.3	37.0	15.5	1.08E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_314	14.3	7.35	33.2	739	473	61.2	61.2	36.9	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_315	14.2	7.34	33.1	737	473	61.1	61.1	36.9	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_316	14.2	7.34	33.0	736	473	61.1	61.1	36.9	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_317	14.2	7.34	32.9	736	472	61.1	61.1	36.9	15.5	1.07E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_318	14.2	7.34	32.8	738	471	61.0	61.0	36.8	15.5	1.07E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511400_319	14.2	7.34	32.7	739	470	60.9	60.9	36.8	15.5	1.06E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_001	14.1	7.33	31.8	722	476	60.8	60.8	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_002	14.6	7.35	34.4	961	511	63.9	63.9	36.9	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_003	14.6	7.35	34.4	954	508	64.2	64.2	36.9	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_004	14.6	7.35	34.3	954	506	64.0	64.0	36.9	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_005	14.6	7.34	34.1	946	498	64.3	64.3	36.7	15.5	1.07E-04	5.34E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_006	14.6	7.34	34.1	951	496	64.2	64.2	36.7	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_007	14.5	7.34	33.9	952	494	64.3	64.3	36.6	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_008	14.5	7.34	33.8	948	492	64.1	64.1	36.6	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_009	14.5	7.34	33.6	941	491	63.7	63.7	36.6	15.5	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_010	14.7	7.35	34.2	996	520	63.3	63.3	36.9	15.5	1.07E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_011	14.6	7.35	34.3	978	515	63.5	63.5	36.9	15.5	1.07E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_012	14.8	7.36	35.3	1087	534	64.8	64.8	37.1	15.5	1.08E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_013	14.8	7.36	35.1	1087	532	65.1	65.1	37.0	15.5	1.08E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_014	14.8	7.36	34.9	1079	531	64.9	64.9	37.0	15.5	1.08E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_015	14.7	7.36	34.7	1065	528	64.4	64.4	36.9	15.5	1.08E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_016	14.7	7.36	34.5	1044	526	63.9	63.9	36.9	15.5	1.07E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_017	14.6	7.35	34.3	951	503	63.8	63.8	36.9	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_018	14.6	7.35	34.2	944	500	64.1	64.1	36.8	15.5	1.07E-04	5.34E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_019	14.3	7.33	32.3	778	490	61.7	61.7	36.6	15.4	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_020	14.8	7.39	35.3	1011	508	65.3	65.3	37.1	15.5	1.08E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_021	14.7	7.38	34.3	975	502	64.6	64.6	36.8	15.5	1.07E-04	5.36E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_022	15.1	7.41	36.2	1132	544	66.0	66.0	37.4	15.6	1.10E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_023	14.9	7.39	35.5	1013	518	65.6	65.6	37.3	15.6	1.08E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_024	14.8	7.39	35.4	1005	511	65.2	65.2	37.2	15.5	1.08E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_025	14.3	7.36	33.1	745	475	61.1	61.1	37.0	15.5	1.06E-04	5.36E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_026	14.2	7.34	32.3	730	472	60.5	60.5	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_027	14.2	7.33	32.2	728	472	60.4	60.4	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_028	14.2	7.34	32.3	731	474	60.3	60.3	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_029	14.2	7.35	32.7	740	476	60.8	60.8	36.8	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_030	14.3	7.35	32.8	742	477	60.8	60.8	36.9	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_031	14.2	7.35	32.8	740	474	60.9	60.9	36.9	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_032	14.2	7.32	32.0	740	488	60.7	60.7	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_033	14.2	7.34	32.5	735	475	60.6	60.6	36.8	15.5	1.05E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_034	14.2	7.34	32.4	732	472	60.6	60.6	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_035	14.2	7.35	32.7	737	473	60.8	60.8	36.8	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_036	14.2	7.35	32.6	738	476	60.7	60.7	36.8	15.5	1.05E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_037	14.3	7.33	32.2	767	490	61.5	61.5	36.5	15.4	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_038	14.2	7.32	31.9	721	486	60.4	60.4	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_039	14.2	7.32	31.8	717	484	60.3	60.3	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_040	14.2	7.34	32.4	733	475	60.5	60.5	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_041	14.2	7.32	31.9	729	487	60.5	60.5	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_042	14.3	7.33	32.2	764	490	61.4	61.4	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_043	14.2	7.33	32.1	762	490	61.4	61.4	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_044	14.2	7.34	32.7	735	471	60.8	60.8	36.8	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_045	15.5	7.37	41.2	1109	545	66.0	66.0	39.6	15.5	1.15E-04	5.36E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_046	15.1	7.37	37.2	1051	546	64.1	64.1	38.0	15.5	1.11E-04	5.36E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_047	15.1	7.36	37.8	1093	540	63.5	63.5	38.1	15.5	1.12E-04	5.35E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_048	15.1	7.36	37.6	1086	537	63.3	63.3	38.0	15.5	1.12E-04	5.35E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_049	14.2	7.35	33.0	739	471	60.9	60.9	36.9	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_050	14.2	7.35	32.9	737	471	60.9	60.9	36.8	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_051	15.2	7.38	37.5	1062	546	64.2	64.2	38.0	15.5	1.12E-04	5.36E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_052	15.3	7.38	38.9	1121	551	64.7	64.7	39.0	15.5	1.13E-04	5.37E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_053	15.2	7.38	37.8	1084	546	64.2	64.2	38.1	15.5	1.12E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_054	14.1	7.33	31.9	725	473	60.1	60.1	36.6	15.5	1.04E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_055	15.4	7.37	40.4	1080	545	65.2	65.2	39.4	15.5	1.14E-04	5.36E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_056	14.6	7.37	33.7	932	501	64.9	64.9	36.8	15.5	1.06E-04	5.36E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_057	14.6	7.37	33.5	904	501	64.3	64.3	36.8	15.5	1.06E-04	5.36E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_058	15.0	7.40	35.6	1062	536	65.2	65.2	37.4	15.6	1.09E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_059	15.2	7.42	37.1	1167	551	66.4	66.4	37.7	15.6	1.11E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_060	15.1	7.42	36.8	1165	549	66.5	66.5	37.6	15.6	1.10E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_061	14.2	7.32	32.0	752	489	61.1	61.1	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_062	14.2	7.32	31.7	715	481	60.2	60.2	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_063	14.3	7.36	32.9	745	477	61.0	61.0	36.9	15.5	1.06E-04	5.36E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_064	14.2	7.35	32.6	736	473	60.8	60.8	36.8	15.5	1.05E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_065	15.5	7.47	38.3	1233	565	68.1	68.1	38.4	15.7	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_066	15.3	7.45	37.8	1208	560	67.4	67.4	38.2	15.6	1.12E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_067	15.5	7.49	38.5	1248	569	68.5	68.5	38.5	15.7	1.12E-04	5.43E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_068	15.5	7.47	38.4	1244	567	68.3	68.3	38.5	15.7	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_069	15.5	7.48	38.5	1251	569	68.4	68.4	38.5	15.7	1.12E-04	5.42E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_070	15.6	7.49	38.4	1238	568	68.4	68.4	38.5	15.7	1.12E-04	5.43E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_071	14.9	7.42	34.6	949	515	65.8	65.8	37.2	15.6	1.08E-04	5.39E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_072	15.2	7.44	36.9	1091	541	66.0	66.0	37.8	15.6	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_073	14.9	7.41	35.3	1027	511	65.2	65.2	37.1	15.6	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_074	15.0	7.43	35.9	1056	518	66.0	66.0	37.3	15.6	1.09E-04	5.40E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_075	15.1	7.42	36.5	1050	526	66.6	66.6	37.6	15.6	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_076	14.8	7.40	34.2	943	509	65.3	65.3	37.0	15.6	1.07E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_077	15.0	7.42	36.2	1053	518	66.2	66.2	37.4	15.6	1.09E-04	5.39E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_078	15.0	7.41	35.9	1052	515	65.7	65.7	37.3	15.6	1.08E-04	5.39E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_079	15.3	7.46	37.5	1088	535	67.0	67.0	38.0	15.7	1.11E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_080	14.8	7.40	34.3	945	511	65.3	65.3	37.0	15.6	1.07E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_081	15.1	7.43	36.6	1076	538	65.6	65.6	37.7	15.6	1.09E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_082	15.3	7.46	37.5	1089	536	66.9	66.9	38.0	15.7	1.11E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_083	15.0	7.42	36.3	1046	521	66.0	66.0	37.5	15.6	1.09E-04	5.39E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_084	15.2	7.45	37.2	1081	540	66.6	66.6	37.9	15.6	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_085	15.1	7.44	36.4	1077	521	66.2	66.2	37.5	15.6	1.09E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_086	14.9	7.43	34.8	952	517	66.1	66.1	37.2	15.6	1.08E-04	5.39E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_087	15.3	7.45	37.4	1087	537	67.1	67.1	38.0	15.7	1.10E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_088	14.8	7.40	34.9	1005	510	65.0	65.0	37.0	15.6	1.08E-04	5.38E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_089	14.8	7.41	34.5	946	512	65.5	65.5	37.1	15.6	1.08E-04	5.38E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_090	15.2	7.44	37.1	1092	542	66.3	66.3	37.9	15.6	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_091	15.3	7.45	37.3	1082	538	66.7	66.7	38.0	15.7	1.10E-04	5.41E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_092	15.0	7.43	35.3	1024	517	65.7	65.7	37.2	15.6	1.08E-04	5.39E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_093	15.4	7.46	38.1	1222	563	67.8	67.8	38.3	15.7	1.12E-04	5.41E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_094	15.5	7.49	38.5	1254	569	68.5	68.5	38.5	15.7	1.13E-04	5.43E-05	4.56	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_095	15.3	7.43	37.9	1124	556	66.1	66.1	38.0	15.6	1.12E-04	5.39E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_096	15.4	7.44	38.2	1112	562	65.9	65.9	38.3	15.6	1.12E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_097	15.0	7.40	35.6	1049	531	64.7	64.7	37.4	15.6	1.09E-04	5.38E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_098	14.9	7.40	35.6	1015	522	65.2	65.2	37.4	15.6	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_099	14.8	7.38	35.1	1010	506	65.2	65.2	37.0	15.5	1.08E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_100	14.7	7.38	34.9	1004	505	65.1	65.1	36.9	15.5	1.07E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_101	15.0	7.41	35.9	1101	540	65.8	65.8	37.4	15.6	1.09E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_102	14.6	7.38	33.9	955	502	64.8	64.8	36.8	15.5	1.07E-04	5.36E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_103	15.4	7.43	38.1	1110	559	66.4	66.4	38.1	15.6	1.12E-04	5.39E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_104	15.2	7.43	37.6	1146	554	66.2	66.2	37.9	15.6	1.11E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_105	15.1	7.41	36.5	1154	547	66.1	66.1	37.5	15.6	1.10E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_106	15.0	7.40	35.6	1029	527	64.9	64.9	37.4	15.6	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_107	14.7	7.38	34.6	992	503	64.7	64.7	36.9	15.5	1.07E-04	5.37E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_108	15.2	7.42	37.4	1160	553	66.6	66.6	37.8	15.6	1.11E-04	5.39E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_109	14.7	7.39	34.1	943	507	65.3	65.3	36.9	15.6	1.07E-04	5.37E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_110	14.9	7.41	35.6	1043	513	65.4	65.4	37.2	15.6	1.08E-04	5.38E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_111	15.4	7.39	40.7	1106	553	65.0	65.0	39.6	15.5	1.15E-04	5.37E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_112	15.2	7.38	38.0	1101	545	64.1	64.1	38.1	15.5	1.12E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_113	15.2	7.38	38.2	1113	544	64.1	64.1	38.3	15.5	1.13E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_114	15.2	7.36	38.4	1080	544	64.4	64.4	38.7	15.5	1.12E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_115	15.1	7.36	37.8	1089	543	64.1	64.1	38.5	15.5	1.12E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_116	15.7	7.40	42.6	1131	551	66.9	66.9	40.3	15.6	1.17E-04	5.38E-05	4.55	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE511500_117	15.5	7.39	41.4	1110	553	65.4	65.4	39.9	15.5	1.16E-04	5.37E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_118	15.6	7.40	42.0	1109	552	66.3	66.3	40.1	15.6	1.16E-04	5.37E-05	4.55	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_119	15.4	7.39	40.0	1106	552	65.0	65.0	39.4	15.5	1.14E-04	5.37E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_120	15.2	7.36	39.0	1078	544	64.3	64.3	38.9	15.5	1.13E-04	5.35E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_121	15.3	7.38	38.4	1123	549	64.1	64.1	38.7	15.5	1.13E-04	5.37E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_122	14.2	7.32	32.0	746	488	60.9	60.9	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_123	15.3	7.39	39.4	1115	552	65.2	65.2	39.2	15.5	1.13E-04	5.37E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_124	15.3	7.38	38.3	1120	546	63.9	63.9	38.5	15.5	1.13E-04	5.36E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_125	15.1	7.36	37.8	1094	542	63.6	63.6	38.3	15.5	1.12E-04	5.35E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_126	15.3	7.37	39.7	1082	545	64.4	64.4	39.2	15.5	1.14E-04	5.36E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_127	15.1	7.36	37.4	1071	538	63.4	63.4	38.0	15.5	1.12E-04	5.35E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_128	14.3	7.33	32.4	810	490	61.9	61.9	36.6	15.4	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_129	14.2	7.32	32.1	757	489	61.2	61.2	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_130	14.3	7.33	32.3	792	490	61.8	61.8	36.6	15.4	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_131	14.2	7.32	31.7	716	483	60.3	60.3	36.5	15.4	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_132	14.3	7.36	33.1	748	478	61.2	61.2	37.0	15.5	1.06E-04	5.36E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_133	14.3	7.36	33.0	742	474	61.0	61.0	36.9	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_134	14.2	7.34	32.5	734	473	60.7	60.7	36.8	15.5	1.05E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_135	14.7	7.35	34.3	1018	523	63.5	63.5	36.9	15.5	1.07E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_136	14.5	7.34	33.4	932	490	63.7	63.7	36.6	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_137	14.4	7.34	33.2	920	490	63.7	63.7	36.6	15.5	1.05E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_138	14.4	7.34	32.9	907	490	63.9	63.9	36.6	15.4	1.05E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_139	14.4	7.33	32.7	887	489	63.5	63.5	36.6	15.4	1.05E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_140	14.7	7.35	34.2	989	517	63.1	63.1	36.9	15.5	1.07E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_141	14.9	7.39	35.4	1004	514	65.1	65.1	37.3	15.5	1.08E-04	5.37E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_142	15.2	7.45	36.8	1092	525	66.4	66.4	37.7	15.6	1.10E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_143	15.9	7.52	41.1	1214	586	69.6	69.6	39.5	15.8	1.16E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_144	15.9	7.53	41.0	1222	587	69.8	69.8	39.5	15.8	1.16E-04	5.45E-05	4.57	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_145	15.9	7.51	41.0	1197	584	69.1	69.1	39.5	15.8	1.16E-04	5.44E-05	4.56	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_146	15.8	7.50	40.8	1188	582	68.8	68.8	39.4	15.8	1.15E-04	5.44E-05	4.56	1.51	0.16	6.37E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RE511500_147	15.8	7.49	40.3	1166	577	68.2	68.2	39.2	15.7	1.15E-04	5.43E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_148	15.7	7.48	40.0	1159	575	67.9	67.9	39.0	15.7	1.15E-04	5.42E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_149	15.8	7.49	40.6	1175	579	68.6	68.6	39.3	15.7	1.15E-04	5.43E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_150	15.7	7.47	39.7	1153	573	67.7	67.7	38.9	15.7	1.14E-04	5.42E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_151	15.1	7.40	36.9	1093	546	65.1	65.1	37.6	15.6	1.10E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_152	15.1	7.40	37.1	1075	549	64.8	64.8	37.7	15.6	1.11E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_153	15.0	7.39	36.5	1119	544	65.8	65.8	37.4	15.6	1.10E-04	5.37E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_154	15.1	7.40	36.7	1108	545	65.5	65.5	37.5	15.6	1.10E-04	5.37E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_155	15.2	7.40	37.3	1077	551	65.2	65.2	37.8	15.6	1.11E-04	5.38E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_156	15.0	7.39	36.3	1126	543	65.7	65.7	37.3	15.5	1.10E-04	5.37E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_157	15.0	7.39	36.1	1129	542	65.7	65.7	37.2	15.5	1.09E-04	5.37E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_158	15.0	7.39	35.9	1125	540	65.7	65.7	37.2	15.5	1.09E-04	5.37E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_159	14.9	7.39	35.6	1107	537	65.5	65.5	37.1	15.5	1.09E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_160	14.9	7.38	35.3	1088	535	65.1	65.1	37.1	15.5	1.09E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_161	14.9	7.38	35.1	1054	531	64.6	64.6	37.2	15.5	1.08E-04	5.37E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_162	14.8	7.38	34.8	1030	528	64.2	64.2	37.2	15.5	1.08E-04	5.36E-05	4.54	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_163	14.8	7.38	35.0	1009	522	64.1	64.1	37.2	15.5	1.08E-04	5.36E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_164	14.8	7.38	34.9	1023	525	63.9	63.9	37.2	15.5	1.08E-04	5.36E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_165	14.8	7.38	35.0	990	518	64.4	64.4	37.2	15.5	1.08E-04	5.36E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_166	14.8	7.37	35.0	986	515	64.7	64.7	37.2	15.5	1.08E-04	5.36E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_167	14.8	7.37	35.0	985	512	64.8	64.8	37.1	15.5	1.08E-04	5.36E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_168	14.7	7.37	34.9	981	509	64.4	64.4	37.1	15.5	1.08E-04	5.36E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_169	14.7	7.37	34.8	973	506	64.7	64.7	37.0	15.5	1.07E-04	5.36E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_170	14.7	7.37	34.8	981	504	65.0	65.0	36.9	15.5	1.07E-04	5.36E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_171	14.7	7.37	34.7	984	501	64.8	64.8	36.8	15.5	1.07E-04	5.36E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_172	14.7	7.36	34.5	982	500	64.7	64.7	36.8	15.5	1.07E-04	5.36E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_173	14.6	7.36	34.0	962	497	64.4	64.4	36.7	15.5	1.06E-04	5.35E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_174	14.6	7.36	33.7	950	496	64.3	64.3	36.7	15.5	1.06E-04	5.35E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_175	14.5	7.36	33.5	936	496	64.5	64.5	36.7	15.5	1.06E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_176	14.5	7.36	33.2	920	496	64.4	64.4	36.7	15.5	1.06E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_177	14.6	7.36	34.3	974	498	64.6	64.6	36.8	15.5	1.07E-04	5.35E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_178	14.5	7.35	33.2	902	496	64.2	64.2	36.7	15.5	1.06E-04	5.35E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_179	14.9	7.37	35.8	1064	536	64.9	64.9	37.3	15.5	1.09E-04	5.36E-05	4.53	1.51	0.16	6.34E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_180	14.9	7.36	35.6	1076	535	65.1	65.1	37.3	15.5	1.09E-04	5.36E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_181	14.9	7.37	36.0	1051	536	64.7	64.7	37.4	15.5	1.09E-04	5.36E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_182	15.0	7.37	36.1	1036	538	64.6	64.6	37.5	15.5	1.09E-04	5.36E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511500_183	14.8	7.36	35.5	1083	535	65.0	65.0	37.2	15.5	1.09E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_184	14.2	7.34	32.6	733	471	60.7	60.7	36.8	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_185	14.2	7.34	32.5	731	470	60.7	60.7	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_186	14.2	7.34	32.4	729	469	60.6	60.6	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_187	14.1	7.33	32.3	727	468	60.5	60.5	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_188	14.1	7.33	32.1	725	468	60.4	60.4	36.6	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_189	14.1	7.33	32.0	724	467	60.4	60.4	36.6	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_190	14.2	7.34	32.9	735	472	60.8	60.8	36.8	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_191	14.2	7.34	32.8	733	469	60.8	60.8	36.8	15.5	1.06E-04	5.35E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_192	14.2	7.34	32.7	732	467	60.7	60.7	36.8	15.5	1.06E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_193	14.2	7.34	32.5	731	466	60.6	60.6	36.8	15.5	1.06E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_194	14.2	7.34	32.4	730	466	60.5	60.5	36.7	15.5	1.06E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_195	14.1	7.33	32.3	729	466	60.5	60.5	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_196	14.1	7.33	32.2	727	466	60.4	60.4	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_197	14.1	7.33	32.1	726	466	60.3	60.3	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_198	14.1	7.33	32.1	726	465	60.3	60.3	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_199	14.1	7.33	32.0	727	465	60.3	60.3	36.6	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_200	14.1	7.32	31.9	728	465	60.3	60.3	36.6	15.5	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_201	14.1	7.32	31.9	728	464	60.2	60.2	36.6	15.5	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_202	14.1	7.33	31.9	724	473	60.0	60.0	36.6	15.5	1.04E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_203	14.1	7.33	31.9	723	472	59.9	59.9	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_204	14.1	7.32	31.8	722	471	59.9	59.9	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_205	14.1	7.32	31.8	720	471	59.9	59.9	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_206	14.1	7.32	31.8	719	470	60.0	60.0	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_207	14.1	7.32	31.8	719	469	60.0	60.0	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_208	14.1	7.32	31.7	718	468	60.0	60.0	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_209	14.1	7.32	31.7	718	468	60.0	60.0	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_210	14.1	7.32	31.6	719	467	60.0	60.0	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_211	14.1	7.32	31.6	722	466	60.0	60.0	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_212	14.1	7.32	31.6	725	465	60.1	60.1	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_213	14.1	7.31	31.6	728	465	60.1	60.1	36.6	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_214	14.1	7.31	31.6	731	464	60.1	60.1	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_215	14.0	7.31	31.5	735	463	60.0	60.0	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_216	14.1	7.32	31.6	716	471	59.9	59.9	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_217	14.1	7.32	31.6	715	471	59.8	59.8	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_218	14.1	7.32	31.6	715	471	59.7	59.7	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_219	14.1	7.31	31.6	715	470	59.7	59.7	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_220	14.1	7.31	31.6	714	470	59.7	59.7	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_221	14.1	7.31	31.6	713	469	59.7	59.7	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_222	14.1	7.31	31.5	713	469	59.7	59.7	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_223	14.1	7.31	31.5	712	469	59.7	59.7	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_224	14.0	7.31	31.5	714	468	59.8	59.8	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_225	14.0	7.31	31.5	717	467	59.8	59.8	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_226	14.0	7.31	31.5	720	467	59.8	59.8	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_227	14.0	7.31	31.4	723	466	59.8	59.8	36.5	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_228	14.0	7.31	31.4	726	465	59.8	59.8	36.5	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_229	14.0	7.31	31.4	729	465	59.8	59.8	36.5	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_230	14.0	7.31	31.4	732	464	59.8	59.8	36.5	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_231	14.0	7.31	31.4	734	464	59.8	59.8	36.5	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_232	14.0	7.30	31.4	736	463	59.7	59.7	36.5	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_233	14.0	7.30	31.3	739	462	59.7	59.7	36.5	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_234	14.1	7.32	31.7	714	480	60.2	60.2	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_235	14.1	7.32	31.7	714	479	60.2	60.2	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_236	14.1	7.31	31.6	713	478	60.2	60.2	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_237	14.1	7.31	31.6	712	476	60.3	60.3	36.4	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_238	14.1	7.31	31.6	712	475	60.3	60.3	36.4	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_239	14.1	7.31	31.5	712	474	60.3	60.3	36.4	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_240	14.1	7.31	31.5	712	474	60.3	60.3	36.4	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_241	14.0	7.31	31.5	711	473	60.3	60.3	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_242	14.0	7.31	31.5	710	472	60.2	60.2	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_243	14.0	7.31	31.4	707	470	59.7	59.7	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_244	14.0	7.30	31.4	707	469	59.6	59.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_245	14.0	7.30	31.3	707	469	59.5	59.5	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_246	14.0	7.30	31.3	709	469	59.6	59.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_247	14.0	7.30	31.3	712	468	59.6	59.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_259	14.0	7.30	31.1	756	458	59.3	59.3	36.4	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_260	14.0	7.30	31.0	759	457	59.1	59.1	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_261	14.0	7.30	31.0	760	457	59.1	59.1	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_262	14.0	7.30	31.0	761	456	59.0	59.0	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_263	14.0	7.30	30.9	762	456	58.9	58.9	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_264	14.0	7.30	30.9	763	455	58.8	58.8	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_265	13.9	7.30	30.8	765	455	58.7	58.7	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_266	13.9	7.29	30.8	766	454	58.6	58.6	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_267	13.9	7.29	30.7	767	454	58.6	58.6	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_268	13.9	7.29	30.7	768	453	58.5	58.5	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_269	13.9	7.29	30.6	770	453	58.3	58.3	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_270	13.9	7.29	30.6	771	452	58.2	58.2	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_288	14.1	7.31	31.5	795	452	59.8	59.8	36.8	15.5	1.05E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_289	14.1	7.31	31.6	796	453	60.0	60.0	36.8	15.5	1.05E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_313	14.0	7.30	30.8	783	451	58.7	58.7	36.6	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_314	14.0	7.30	30.9	784	451	58.7	58.7	36.6	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_315	14.0	7.30	31.0	785	451	58.8	58.8	36.6	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_316	14.0	7.30	31.1	786	453	58.9	58.9	36.7	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_317	14.0	7.31	31.3	786	454	59.1	59.1	36.7	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_318	14.0	7.31	31.4	787	455	59.3	59.3	36.7	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_319	14.0	7.31	31.5	788	455	59.6	59.6	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_320	14.0	7.30	31.1	777	453	58.7	58.7	36.6	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_321	14.0	7.31	31.2	777	453	58.9	58.9	36.6	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_322	14.0	7.31	31.3	778	453	59.1	59.1	36.6	15.4	1.04E-04	5.33E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_323	14.0	7.31	31.4	779	455	59.4	59.4	36.7	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_324	14.0	7.31	31.6	779	456	59.7	59.7	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_325	14.0	7.31	31.3	753	459	59.8	59.8	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_326	14.0	7.31	31.3	755	459	59.8	59.8	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_327	14.0	7.31	31.2	758	458	59.7	59.7	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511500_328	14.0	7.31	31.2	759	457	59.6	59.6	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_329	14.0	7.30	31.1	762	457	59.4	59.4	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_330	14.0	7.30	31.1	763	456	59.3	59.3	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_331	14.0	7.30	31.1	765	456	59.2	59.2	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_332	14.0	7.30	31.0	767	455	59.1	59.1	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_333	14.0	7.30	31.0	768	455	59.0	59.0	36.5	15.4	1.04E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_334	14.0	7.30	31.0	770	454	58.9	58.9	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_335	14.0	7.30	30.9	771	453	58.7	58.7	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_336	14.0	7.30	30.9	773	453	58.6	58.6	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_337	13.9	7.30	30.8	775	452	58.5	58.5	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_338	13.9	7.30	30.7	775	452	58.4	58.4	36.5	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511500_339	14.1	7.31	31.8	791	455	60.3	60.3	36.8	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_340	14.1	7.32	32.3	764	464	60.6	60.6	36.7	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_341	14.1	7.32	32.2	767	463	60.7	60.7	36.7	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_342	14.1	7.32	32.2	771	461	60.7	60.7	36.7	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_343	14.1	7.32	32.1	774	461	60.5	60.5	36.7	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_344	14.1	7.32	32.0	776	460	60.4	60.4	36.7	15.5	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_345	14.1	7.32	31.9	778	459	60.3	60.3	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_346	14.1	7.31	31.8	781	458	60.1	60.1	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511500_347	14.2	7.33	32.5	753	467	60.7	60.7	36.8	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_348	14.1	7.33	32.4	754	466	60.6	60.6	36.7	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_349	14.1	7.33	32.2	755	465	60.5	60.5	36.7	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_350	14.1	7.32	32.1	756	464	60.5	60.5	36.7	15.5	1.06E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_351	14.1	7.32	32.0	757	462	60.3	60.3	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_352	14.1	7.32	31.9	757	461	60.2	60.2	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_353	14.1	7.32	31.8	758	459	60.1	60.1	36.6	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_354	14.1	7.32	31.7	759	458	60.1	60.1	36.6	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_355	14.0	7.31	31.6	760	458	60.0	60.0	36.6	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_356	14.0	7.31	31.5	760	457	59.9	59.9	36.6	15.4	1.04E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_357	14.2	7.33	32.5	740	469	60.8	60.8	36.8	15.5	1.06E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_358	14.2	7.33	32.4	741	467	60.7	60.7	36.8	15.5	1.06E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_359	14.1	7.33	32.3	743	466	60.6	60.6	36.7	15.5	1.06E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_360	14.1	7.33	32.2	743	464	60.5	60.5	36.7	15.5	1.06E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_361	14.1	7.33	32.2	744	463	60.5	60.5	36.7	15.5	1.05E-04	5.34E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_362	14.1	7.33	32.1	745	462	60.4	60.4	36.7	15.5	1.05E-04	5.34E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_363	14.1	7.32	32.0	746	460	60.3	60.3	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_364	14.1	7.32	31.9	747	460	60.2	60.2	36.6	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_365	14.1	7.32	31.8	748	460	60.1	60.1	36.6	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_366	14.1	7.32	31.8	748	460	60.1	60.1	36.6	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_367	14.1	7.32	31.7	749	460	60.0	60.0	36.6	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_368	14.1	7.32	31.7	750	461	60.0	60.0	36.6	15.4	1.04E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_369	14.1	7.32	31.9	769	460	60.4	60.4	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_370	14.1	7.32	31.8	769	459	60.1	60.1	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_371	14.1	7.31	31.6	770	457	59.8	59.8	36.7	15.5	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_372	14.0	7.31	31.5	770	456	59.6	59.6	36.6	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_373	14.0	7.31	31.4	770	455	59.5	59.5	36.6	15.4	1.04E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_374	14.0	7.31	31.3	770	455	59.3	59.3	36.6	15.4	1.04E-04	5.33E-05	4.51	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511500_376	14.0	7.31	31.3	792	453	59.3	59.3	36.7	15.4	1.05E-04	5.32E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_001	14.8	7.35	35.4	1009	532	64.3	64.3	37.4	15.5	1.09E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_002	14.5	7.33	34.0	937	506	63.5	63.5	36.8	15.4	1.06E-04	5.34E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_003	14.6	7.34	33.8	966	512	62.9	62.9	36.8	15.4	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_004	14.4	7.32	33.2	923	487	63.2	63.2	36.6	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_005	14.2	7.32	32.1	814	486	61.4	61.4	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_006	14.2	7.31	32.0	774	486	61.2	61.2	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_007	14.6	7.32	33.8	1027	520	64.0	64.0	36.8	15.4	1.06E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_008	14.4	7.31	33.4	906	498	62.9	62.9	36.6	15.4	1.06E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_009	14.6	7.32	34.2	1014	522	63.8	63.8	37.0	15.4	1.07E-04	5.33E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_010	14.7	7.32	34.3	991	523	63.9	63.9	37.2	15.4	1.07E-04	5.33E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_011	14.5	7.32	33.3	940	506	62.8	62.8	36.6	15.4	1.05E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_012	14.5	7.32	33.1	957	511	62.7	62.7	36.6	15.4	1.06E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_013	14.5	7.32	33.5	1017	518	63.6	63.6	36.7	15.4	1.06E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_014	14.4	7.31	33.4	922	502	62.6	62.6	36.6	15.4	1.06E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_015	14.6	7.32	34.0	1025	521	64.0	64.0	36.9	15.4	1.07E-04	5.33E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_016	14.5	7.32	33.3	993	514	63.1	63.1	36.7	15.4	1.06E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_017	14.2	7.31	31.9	748	486	60.8	60.8	36.4	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_018	15.3	7.34	39.9	1085	534	64.7	64.7	39.1	15.5	1.14E-04	5.34E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_019	15.0	7.34	37.5	1045	536	63.6	63.6	38.3	15.4	1.11E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_020	15.0	7.33	37.0	1044	535	63.5	63.5	38.1	15.4	1.11E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_021	14.8	7.33	35.5	982	531	63.7	63.7	37.6	15.4	1.09E-04	5.33E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_022	14.9	7.33	37.1	1060	532	63.3	63.3	37.8	15.4	1.11E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_023	14.9	7.33	36.7	1038	531	63.1	63.1	37.8	15.4	1.11E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_024	15.0	7.35	36.9	1025	540	63.8	63.8	37.9	15.5	1.11E-04	5.35E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_025	15.1	7.34	38.8	1046	536	63.9	63.9	38.7	15.5	1.13E-04	5.34E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_026	14.9	7.33	36.5	1018	532	63.5	63.5	37.8	15.4	1.10E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_027	15.0	7.33	37.1	1054	533	63.1	63.1	37.9	15.4	1.11E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_028	14.8	7.35	35.2	1034	530	64.6	64.6	37.3	15.5	1.08E-04	5.35E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_029	14.8	7.35	35.0	1049	529	64.6	64.6	37.2	15.5	1.08E-04	5.34E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_030	14.7	7.34	34.8	1058	528	64.4	64.4	37.1	15.5	1.08E-04	5.34E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_031	14.7	7.34	34.6	1060	527	64.4	64.4	37.0	15.5	1.08E-04	5.34E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_032	14.2	7.32	32.1	792	486	61.2	61.2	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_033	14.2	7.31	31.9	758	486	61.0	61.0	36.5	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_034	15.2	7.34	39.4	1066	535	64.6	64.6	38.9	15.5	1.13E-04	5.34E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_035	14.4	7.31	33.4	904	492	63.3	63.3	36.5	15.4	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_036	14.9	7.33	36.9	1052	529	62.8	62.8	37.8	15.4	1.11E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE511600_037	14.8	7.33	36.2	992	532	63.7	63.7	37.7	15.4	1.10E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_038	15.0	7.36	37.2	1050	539	63.7	63.7	37.9	15.5	1.11E-04	5.35E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_039	14.8	7.33	35.9	991	532	63.5	63.5	37.7	15.4	1.10E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_040	15.1	7.34	38.1	1048	536	63.4	63.4	38.5	15.5	1.12E-04	5.34E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_041	14.7	7.34	34.2	1042	523	64.0	64.0	36.8	15.5	1.07E-04	5.34E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_042	14.6	7.34	34.0	1022	521	63.6	63.6	36.8	15.4	1.07E-04	5.34E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_043	14.5	7.33	33.9	954	509	63.1	63.1	36.8	15.4	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_044	14.6	7.34	33.8	997	518	63.1	63.1	36.7	15.4	1.07E-04	5.34E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_045	14.6	7.34	33.7	974	515	62.8	62.8	36.8	15.4	1.06E-04	5.34E-05	4.53	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_046	15.4	7.35	41.0	1113	542	66.2	66.2	39.4	15.5	1.15E-04	5.35E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_047	14.9	7.33	37.0	1059	530	63.0	63.0	37.8	15.4	1.11E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_048	15.0	7.35	36.4	1022	540	63.8	63.8	37.8	15.5	1.10E-04	5.35E-05	4.53	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_049	15.3	7.35	40.4	1099	536	65.2	65.2	39.2	15.5	1.15E-04	5.34E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE511600_050	14.5	7.33	34.0	934	503	63.6	63.6	36.8	15.4	1.06E-04	5.34E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_051	14.5	7.33	33.9	933	500	63.5	63.5	36.7	15.4	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_052	14.5	7.33	33.9	929	497	63.6	63.6	36.7	15.4	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_053	14.5	7.33	33.8	920	495	63.8	63.8	36.6	15.4	1.06E-04	5.34E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_054	14.5	7.33	33.7	928	492	63.7	63.7	36.6	15.4	1.06E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_055	14.5	7.33	33.6	931	490	63.7	63.7	36.6	15.4	1.06E-04	5.33E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_056	14.4	7.33	33.4	929	489	63.7	63.7	36.6	15.4	1.06E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_057	14.4	7.32	33.0	914	486	63.1	63.1	36.5	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_058	14.4	7.32	32.8	901	486	63.1	63.1	36.5	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_059	14.3	7.32	32.4	880	485	63.2	63.2	36.5	15.4	1.05E-04	5.33E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_060	14.7	7.34	34.4	1055	525	64.5	64.5	36.9	15.5	1.07E-04	5.34E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_061	14.4	7.31	33.3	898	491	63.2	63.2	36.5	15.4	1.06E-04	5.32E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_062	14.3	7.30	33.2	892	489	63.0	63.0	36.4	15.4	1.05E-04	5.32E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_085	14.0	7.29	31.0	694	474	59.6	59.6	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_086	14.0	7.29	31.1	696	474	59.7	59.7	36.3	15.4	1.04E-04	5.31E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_087	14.0	7.29	31.2	698	475	59.7	59.7	36.3	15.4	1.04E-04	5.31E-05	4.49	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_091	14.2	7.29	31.8	846	478	61.7	61.7	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_092	14.2	7.29	31.7	823	478	61.4	61.4	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_093	14.1	7.29	31.6	798	478	60.7	60.7	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_094	14.1	7.29	31.5	773	478	60.5	60.5	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_095	14.1	7.29	31.4	750	479	60.4	60.4	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_096	14.1	7.29	31.3	730	479	60.2	60.2	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_097	14.0	7.29	31.3	718	479	60.0	60.0	36.2	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_098	14.0	7.29	31.2	715	479	60.1	60.1	36.2	15.4	1.04E-04	5.31E-05	4.49	1.51	0.16	6.32E-02	2.55	0.48	0.31	2.54E-02	1.37E-02
RE511600_099	14.0	7.29	31.2	709	479	59.9	59.9	36.3	15.4	1.04E-04	5.31E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_100	14.0	7.29	31.1	698	478	59.7	59.7	36.3	15.4	1.04E-04	5.31E-05	4.49	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_101	14.3	7.31	32.9	901	483	62.9	62.9	36.5	15.4	1.05E-04	5.32E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_102	14.3	7.31	32.6	894	482	62.3	62.3	36.4	15.4	1.05E-04	5.32E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_103	14.3	7.31	32.4	883	481	62.3	62.3	36.4	15.4	1.05E-04	5.32E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_104	14.3	7.31	32.2	870	481	62.2	62.2	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_105	14.2	7.30	32.0	853	480	62.1	62.1	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_106	14.2	7.30	31.9	831	480	61.7	61.7	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_107	14.2	7.30	31.8	808	481	61.0	61.0	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_108	14.1	7.30	31.7	785	481	60.7	60.7	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_109	14.1	7.30	31.6	763	481	60.7	60.7	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_110	14.1	7.30	31.6	745	482	60.5	60.5	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_111	14.1	7.30	31.5	729	482	60.3	60.3	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_112	14.1	7.30	31.5	727	482	60.3	60.3	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_113	14.1	7.30	31.4	723	481	60.3	60.3	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_114	14.1	7.30	31.4	717	481	60.1	60.1	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_115	14.1	7.29	31.3	701	479	59.8	59.8	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_116	14.2	7.31	31.8	746	486	60.8	60.8	36.4	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_117	14.2	7.31	31.8	743	485	60.8	60.8	36.4	15.4	1.04E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_118	14.2	7.31	31.7	737	485	60.6	60.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_119	14.2	7.31	31.7	729	484	60.4	60.4	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_120	14.1	7.31	31.6	720	483	60.2	60.2	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_121	14.1	7.31	31.6	711	482	60.0	60.0	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_122	14.1	7.31	31.5	709	481	60.0	60.0	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_123	14.1	7.31	31.5	708	480	60.0	60.0	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_124	14.1	7.31	31.5	708	479	59.9	59.9	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_125	14.1	7.30	31.4	707	478	59.9	59.9	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_126	14.1	7.30	31.4	706	476	59.9	59.9	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RE511600_127	14.0	7.30	31.4	705	475	59.8	59.8	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_128	14.0	7.30	31.4	704	474	59.8	59.8	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_129	14.0	7.30	31.3	703	473	59.9	59.9	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_130	14.0	7.30	31.3	703	472	59.9	59.9	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_131	14.0	7.30	31.3	703	471	59.9	59.9	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_132	14.0	7.29	31.1	697	471	59.6	59.6	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_133	14.0	7.29	31.1	700	470	59.4	59.4	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_134	14.0	7.28	31.0	701	470	59.2	59.2	36.3	15.4	1.04E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_142	14.0	7.29	31.0	715	466	59.2	59.2	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_143	13.9	7.28	31.0	716	466	59.1	59.1	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_144	13.9	7.28	30.9	717	466	59.0	59.0	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_163	13.9	7.28	30.9	727	464	58.9	58.9	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_164	13.9	7.28	31.0	725	465	59.0	59.0	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_185	14.0	7.30	31.3	714	468	59.6	59.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_186	14.0	7.30	31.3	716	467	59.6	59.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_187	14.0	7.30	31.3	718	467	59.6	59.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_188	14.0	7.30	31.3	721	467	59.6	59.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE511600_189	14.0	7.30	31.3	723	466	59.6	59.6	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_190	14.0	7.30	31.2	726	465	59.5	59.5	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_191	14.0	7.30	31.2	729	465	59.5	59.5	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_192	14.0	7.30	31.2	732	464	59.5	59.5	36.4	15.4	1.03E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_193	14.0	7.30	31.2	735	464	59.4	59.4	36.4	15.4	1.03E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_194	14.0	7.30	31.1	737	463	59.4	59.4	36.4	15.4	1.03E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_195	14.0	7.29	31.1	739	463	59.4	59.4	36.4	15.4	1.03E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_196	14.0	7.29	31.1	741	462	59.4	59.4	36.4	15.4	1.03E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_197	14.0	7.29	31.1	743	462	59.4	59.4	36.4	15.4	1.03E-04	5.32E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_198	14.0	7.30	31.2	707	468	59.5	59.5	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_199	14.0	7.30	31.2	711	467	59.4	59.4	36.4	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_200	14.0	7.29	31.2	715	467	59.4	59.4	36.4	15.4	1.03E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_201	14.0	7.29	31.1	718	466	59.4	59.4	36.4	15.4	1.03E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_202	14.0	7.29	31.1	721	466	59.3	59.3	36.4	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_203	14.0	7.29	31.1	723	466	59.3	59.3	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_204	14.0	7.29	31.1	726	465	59.3	59.3	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_205	14.0	7.29	31.1	728	465	59.2	59.2	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_206	14.0	7.29	31.1	731	464	59.2	59.2	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_207	13.9	7.29	31.0	734	464	59.2	59.2	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_208	13.9	7.29	31.0	736	463	59.1	59.1	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_209	13.9	7.29	31.0	739	463	59.1	59.1	36.3	15.4	1.03E-04	5.31E-05	4.50	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_210	13.9	7.29	30.9	742	462	59.1	59.1	36.3	15.4	1.03E-04	5.31E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_211	13.9	7.29	30.9	744	461	59.1	59.1	36.3	15.4	1.03E-04	5.31E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_212	13.9	7.29	30.9	746	461	59.0	59.0	36.3	15.4	1.03E-04	5.31E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RE511600_228	14.4	7.30	32.9	969	513	62.6	62.6	36.9	15.4	1.06E-04	5.31E-05	4.52	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511600_242	14.1	7.29	31.3	709	480	59.9	59.9	36.3	15.4	1.04E-04	5.32E-05	4.50	1.51	0.16	6.32E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE511800_001	15.3	7.44	40.1	1153	528	77.2	77.2	42.7	15.9	1.18E-04	5.41E-05	4.59	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE512000_002	15.9	7.71	40.5	1250	562	83.9	83.9	43.3	16.1	1.20E-04	5.48E-05	4.60	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512000_003	16.3	7.77	41.4	1358	592	90.4	90.4	43.8	16.3	1.22E-04	5.51E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512100_001	16.7	7.80	46.2	1359	593	88.4	88.4	43.5	16.2	1.22E-04	5.50E-05	4.62	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512100_002	17.0	7.86	46.3	1531	618	90.7	90.7	44.3	16.3	1.23E-04	5.53E-05	4.66	1.52	0.17	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512200_001	17.2	7.88	46.3	1638	630	92.7	92.7	44.5	16.4	1.24E-04	5.54E-05	4.67	1.52	0.17	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE512200_002	17.9	8.03	49.4	2268	762	117.1	117.1	50.8	17.4	1.37E-04	5.74E-05	4.78	1.52	0.17	6.46E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RE512200_003	18.3	8.11	50.2	2373	820	116.7	116.7	51.7	17.9	1.38E-04	5.83E-05	4.79	1.53	0.17	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RE512300_001	17.6	7.93	49.0	1920	686	110.4	110.4	48.0	16.7	1.30E-04	5.61E-05	4.72	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE512400_001	17.8	7.93	48.4	2123	744	107.9	107.9	48.8	17.1	1.31E-04	5.67E-05	4.75	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE514400_001	14.6	7.38	34.5	1058	499	70.5	70.5	39.8	15.7	1.09E-04	5.35E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514400_003	14.3	7.28	32.3	1150	480	69.0	69.0	37.9	15.5	1.06E-04	5.31E-05	4.57	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE514400_006	14.3	7.27	32.1	1149	480	67.6	67.6	37.8	15.5	1.06E-04	5.30E-05	4.57	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE514400_007	14.3	7.28	32.1	1155	480	67.9	67.9	37.8	15.5	1.06E-04	5.31E-05	4.57	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE514500_001	14.7	7.38	34.6	1070	497	71.3	71.3	39.7	15.7	1.09E-04	5.35E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_002	14.7	7.38	34.6	1070	497	71.1	71.1	39.6	15.7	1.09E-04	5.35E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_003	14.8	7.39	35.0	1067	506	71.0	71.0	39.5	15.7	1.08E-04	5.35E-05	4.56	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_006	14.3	7.27	33.0	1103	478	67.7	67.7	37.8	15.5	1.06E-04	5.30E-05	4.56	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE514500_007	14.3	7.28	33.2	1117	478	67.6	67.6	38.0	15.5	1.06E-04	5.30E-05	4.57	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514500_008	14.3	7.28	32.5	1145	482	70.5	70.5	37.9	15.5	1.06E-04	5.31E-05	4.57	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE514500_009	14.3	7.29	32.5	1136	485	70.9	70.9	37.9	15.5	1.05E-04	5.31E-05	4.57	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE514500_010	14.3	7.29	32.5	1120	489	72.1	72.1	38.0	15.6	1.05E-04	5.31E-05	4.57	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE514600_001	15.0	7.43	35.6	1059	512	70.4	70.4	39.5	15.8	1.09E-04	5.36E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_002	14.4	7.28	33.5	1124	478	67.0	67.0	38.1	15.5	1.06E-04	5.31E-05	4.57	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_003	14.4	7.29	33.7	1132	478	67.3	67.3	38.3	15.5	1.06E-04	5.31E-05	4.57	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_004	14.4	7.29	34.0	1134	478	68.4	68.4	38.4	15.5	1.07E-04	5.31E-05	4.57	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_005	14.4	7.30	34.1	1130	480	69.7	69.7	38.5	15.5	1.07E-04	5.31E-05	4.57	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514600_006	14.4	7.30	34.3	1120	483	70.3	70.3	38.6	15.6	1.07E-04	5.32E-05	4.57	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514700_001	14.6	7.33	36.4	1074	488	72.1	72.1	39.5	15.6	1.09E-04	5.33E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE514800_001	15.6	7.65	38.5	1002	511	74.1	74.1	40.4	16.1	1.12E-04	5.46E-05	4.55	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE515000_001	16.4	7.90	42.9	1108	538	80.5	80.5	42.5	16.7	1.18E-04	5.63E-05	4.56	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE515100_001	15.5	7.69	39.5	1049	505	73.7	73.7	41.4	16.3	1.15E-04	5.52E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE515200_001	15.2	7.58	37.8	991	501	69.8	69.8	40.5	16.1	1.13E-04	5.47E-05	4.54	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE515200_002	15.3	7.61	38.5	1034	501	72.2	72.2	41.0	16.1	1.14E-04	5.49E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE515200_003	15.2	7.61	37.3	1056	497	75.8	75.8	40.9	16.2	1.13E-04	5.48E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515300_001	15.2	7.51	37.0	985	506	69.9	69.9	40.0	16.0	1.12E-04	5.44E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515300_002	14.5	7.44	34.4	980	482	71.7	71.7	39.6	15.9	1.09E-04	5.40E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE515300_003	15.5	7.66	37.9	927	508	81.3	81.3	42.2	16.5	1.13E-04	5.53E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE516200_001	14.3	7.33	32.3	865	468	70.4	70.4	39.3	15.8	1.07E-04	5.35E-05	4.52	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE517200_001	14.3	7.40	32.7	753	451	64.9	64.9	38.2	15.7	1.05E-04	5.33E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE517200_002	14.3	7.39	32.5	758	449	65.0	65.0	38.0	15.6	1.05E-04	5.32E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE517200_003	14.0	7.31	31.6	736	441	64.9	64.9	37.7	15.5	1.04E-04	5.30E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE517400_001	13.9	7.26	31.2	737	440	64.7	64.7	37.8	15.5	1.04E-04	5.30E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE519100_001	13.9	7.25	31.2	735	448	63.7	63.7	37.8	15.5	1.05E-04	5.30E-05	4.50	1.51	0.16	6.33E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RE519500_001	15.1	7.49	37.9	781	548	70.5	70.5	42.9	16.1	1.14E-04	5.43E-05	4.52	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE519500_002	15.7	7.67	41.5	827	586	75.3	75.3	45.7	16.5	1.20E-04	5.51E-05	4.53	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RE521400_001	15.4	7.42	37.1	737	531	66.0	66.0	40.3	15.8	1.11E-04	5.40E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_001	16.3	7.54	41.4	1064	611	79.3	79.3	43.0	16.2	1.26E-04	5.58E-05	4.54	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_002	15.3	7.42	36.5	766	539	63.4	63.4	38.7	15.7	1.11E-04	5.40E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_003	16.4	7.64	42.1	881	588	68.3	68.3	40.9	16.0	1.17E-04	5.55E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_004	20.0	8.31	58.3	1658	834	113.3	113.3	53.6	18.0	1.60E-04	6.14E-05	4.62	1.53	0.16	6.50E-02	2.59	0.55	0.32	2.54E-02	1.37E-02
RE521600_005	17.9	7.88	47.6	1158	674	92.5	92.5	46.3	17.0	1.37E-04	5.80E-05	4.56	1.52	0.16	6.43E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RE521600_006	17.4	7.77	45.5	1088	663	88.5	88.5	44.8	16.7	1.31E-04	5.72E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE521600_007	17.1	7.80	44.9	1081	644	86.3	86.3	44.5	16.7	1.30E-04	5.71E-05	4.55	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE521600_008	16.1	7.71	41.2	877	579	78.4	78.4	41.9	16.3	1.20E-04	5.61E-05	4.52	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_009	17.1	7.81	46.4	1107	656	88.5	88.5	44.7	16.6	1.32E-04	5.70E-05	4.54	1.52	0.16	6.41E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RE521600_010	16.1	7.66	41.4	1039	569	77.0	77.0	41.7	16.2	1.20E-04	5.57E-05	4.54	1.51	0.16	6.38E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RE521600_011	15.1	7.45	36.2	897	518	69.9	69.9	39.7	15.8	1.12E-04	5.43E-05	4.52	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_012	15.3	7.47	37.2	788	513	67.9	67.9	40.3	15.9	1.13E-04	5.43E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_013	14.6	7.30	35.4	911	533	66.1	66.1	39.5	15.6	1.15E-04	5.38E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_017	14.9	7.48	34.8	696	511	62.6	62.6	38.6	15.7	1.09E-04	5.45E-05	4.49	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_018	14.2	7.24	33.6	806	511	63.2	63.2	38.4	15.4	1.11E-04	5.32E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_019	14.5	7.28	33.8	768	518	62.8	62.8	38.4	15.5	1.11E-04	5.35E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_020	14.3	7.26	34.0	812	523	63.4	63.4	38.6	15.5	1.12E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_023	15.0	7.35	35.9	955	560	68.1	68.1	40.0	15.7	1.17E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_026	14.5	7.29	34.1	780	519	63.0	63.0	38.5	15.5	1.12E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_028	14.5	7.29	34.6	834	529	64.2	64.2	38.9	15.5	1.13E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_030	14.4	7.28	33.8	770	505	63.7	63.7	38.3	15.5	1.10E-04	5.36E-05	4.50	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_032	14.7	7.32	35.5	944	549	67.6	67.6	39.8	15.6	1.16E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_035	14.2	7.24	33.5	767	511	62.6	62.6	38.1	15.4	1.10E-04	5.32E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_036	14.6	7.30	34.3	777	515	63.9	63.9	38.7	15.5	1.12E-04	5.37E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_037	14.3	7.24	33.7	870	512	64.2	64.2	38.6	15.4	1.13E-04	5.32E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_038	14.5	7.28	34.5	892	532	65.9	65.9	39.2	15.5	1.14E-04	5.36E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_039	14.5	7.31	34.0	808	506	65.8	65.8	38.5	15.6	1.12E-04	5.38E-05	4.50	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_041	14.4	7.26	34.1	852	522	64.5	64.5	38.8	15.4	1.13E-04	5.34E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_043	14.3	7.27	33.9	778	517	62.6	62.6	38.4	15.5	1.11E-04	5.35E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_044	14.5	7.29	34.6	877	534	65.5	65.5	39.2	15.5	1.14E-04	5.37E-05	4.51	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_045	14.8	7.33	35.6	947	554	68.1	68.1	39.8	15.6	1.16E-04	5.40E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_046	14.7	7.30	35.7	962	539	67.6	67.6	39.7	15.6	1.16E-04	5.38E-05	4.53	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_047	13.9	7.21	32.0	822	488	62.8	62.8	37.3	15.3	1.07E-04	5.29E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_048	13.9	7.21	32.0	821	488	62.1	62.1	37.3	15.3	1.07E-04	5.29E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_049	13.9	7.21	32.0	819	487	61.8	61.8	37.3	15.3	1.07E-04	5.29E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_050	13.9	7.21	32.4	848	502	63.4	63.4	37.6	15.3	1.08E-04	5.29E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_051	13.9	7.21	32.4	844	499	63.1	63.1	37.6	15.3	1.08E-04	5.29E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_052	14.0	7.21	32.4	842	498	63.0	63.0	37.6	15.3	1.08E-04	5.30E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_053	14.0	7.22	32.4	844	498	63.1	63.1	37.6	15.3	1.08E-04	5.30E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_054	14.0	7.22	32.5	847	500	63.8	63.8	37.7	15.3	1.08E-04	5.30E-05	4.51	1.51	0.16	6.33E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	**106%**	**115%**	**166%**	**7%**	**6%**	**32%**	**153%**	**33%**	**90%**	**338%**	**645%**	**<1%**	**<1%**	**4%**	**16%**	**4%**	**24%**	**72%**	**<1%**	**<1%**
Max Receptor ID	**RW224200_001**	**RE110000_005**	**RW224200_001**	**RE512200_003**	**RW219600_001**	**RW110000_024**	**RW110000_024**	**RW110000_024**	**RE110000_005**	**RW110100_001**	**RE110000_005**	**RE512200_003**	**RW110000_024**	**RE512200_003**	**RW110000_017**	**RW110000_017**	**RW110000_017**	**RE110000_005**	**RE110000_001**	**RE110000_001**
RE521600_055	14.1	7.24	33.2	886	520	65.5	65.5	38.2	15.4	1.10E-04	5.32E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_056	14.1	7.23	33.2	883	519	65.3	65.3	38.2	15.4	1.10E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_057	14.1	7.23	33.1	878	517	65.2	65.2	38.1	15.4	1.10E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_058	14.0	7.23	32.9	875	516	65.0	65.0	38.0	15.3	1.09E-04	5.31E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_059	14.0	7.22	32.8	874	516	65.0	65.0	38.0	15.3	1.09E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_060	14.1	7.23	33.2	896	526	66.1	66.1	38.2	15.4	1.10E-04	5.31E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_061	14.1	7.24	33.3	906	531	66.6	66.6	38.3	15.4	1.10E-04	5.32E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_062	14.1	7.24	33.4	920	538	67.0	67.0	38.5	15.4	1.11E-04	5.32E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_063	14.2	7.25	33.6	931	544	67.4	67.4	38.6	15.4	1.11E-04	5.32E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_064	14.2	7.25	33.6	943	550	68.3	68.3	38.7	15.4	1.11E-04	5.33E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_065	14.2	7.25	33.7	957	555	68.4	68.4	38.8	15.4	1.11E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_066	14.2	7.25	33.8	981	562	68.9	68.9	38.8	15.4	1.12E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_067	14.2	7.26	34.0	1002	569	69.6	69.6	38.9	15.4	1.12E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_068	14.3	7.26	34.1	1025	575	70.4	70.4	39.0	15.4	1.12E-04	5.34E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_069	14.3	7.26	34.2	1040	579	70.9	70.9	39.0	15.4	1.13E-04	5.33E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_070	14.3	7.25	34.2	1055	583	71.5	71.5	39.0	15.4	1.13E-04	5.33E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_071	14.3	7.25	34.2	1064	585	71.8	71.8	39.0	15.4	1.13E-04	5.33E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_072	14.3	7.25	34.2	1079	588	72.4	72.4	39.0	15.4	1.13E-04	5.33E-05	4.54	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_073	14.3	7.25	34.2	1093	592	72.9	72.9	39.1	15.4	1.13E-04	5.33E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_074	14.3	7.25	34.2	1104	595	73.2	73.2	39.2	15.4	1.13E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_075	14.3	7.24	34.1	1102	595	73.2	73.2	39.2	15.4	1.13E-04	5.32E-05	4.55	1.51	0.16	6.35E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_076	14.1	7.23	33.1	974	559	68.7	68.7	38.5	15.4	1.10E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_077	14.1	7.23	33.0	959	555	68.1	68.1	38.5	15.4	1.10E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_078	14.1	7.23	33.0	945	551	67.7	67.7	38.5	15.4	1.10E-04	5.31E-05	4.53	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_079	14.1	7.23	33.0	931	546	67.1	67.1	38.5	15.4	1.10E-04	5.31E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_080	14.1	7.23	32.9	921	541	66.6	66.6	38.4	15.3	1.10E-04	5.31E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_081	14.1	7.22	32.7	909	534	66.0	66.0	38.3	15.3	1.10E-04	5.31E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_082	14.1	7.22	32.6	899	529	65.3	65.3	38.2	15.3	1.09E-04	5.30E-05	4.52	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_083	14.0	7.22	32.4	878	518	64.9	64.9	38.0	15.3	1.09E-04	5.30E-05	4.51	1.51	0.16	6.34E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RE521600_084	14.8	7.25	37.2	1075	550	70.0	70.0	40.7	15.4	1.19E-04	5.32E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_085	14.7	7.24	37.1	1082	544	70.0	70.0	40.7	15.4	1.19E-04	5.32E-05	4.54	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_086	14.7	7.24	37.4	1123	543	71.0	71.0	40.9	15.4	1.19E-04	5.32E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_087	14.7	7.24	37.5	1118	543	70.8	70.8	40.9	15.4	1.20E-04	5.32E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_088	14.7	7.24	37.5	1110	546	70.6	70.6	41.0	15.4	1.20E-04	5.32E-05	4.55	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RE521600_089	17.2	7.67	48.9	1796	711	94.8	94.8	47.0	16.6	1.45E-04	5.72E-05	4.64	1.52	0.17	6.45E-02	2.58	0.53	0.32	2.54E-02	1.37E-02
RE521600_090	15.6	7.51	38.5	856	529	73.0	73.0	40.8	16.0	1.16E-04	5.47E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW110000_001	17.1	7.82	50.8	1334	661	102.6	102.6	49.6	17.2	1.30E-04	5.60E-05	4.60	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW110000_002	21.5	8.81	68.5	1980	892	125.3	125.3	60.5	20.4	1.55E-04	6.17E-05	4.72	1.54	0.17	6.55E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW110000_008	19.4	7.69	57.6	1664	693	102.1	102.1	51.9	16.5	1.36E-04	5.53E-05	4.64	1.53	0.17	6.47E-02	2.58	0.52	0.31	2.54E-02	1.37E-02
RW110000_009	20.4	7.93	61.8	1583	760	107.7	107.7	53.6	17.0	1.43E-04	5.66E-05	4.62	1.53	0.16	6.50E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW110000_010	17.8	8.09	49.4	1059	614	96.1	96.1	49.8	17.4	1.27E-04	5.75E-05	4.56	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RW110000_011	19.2	8.05	56.0	1301	671	113.1	113.1	53.1	17.7	1.36E-04	5.73E-05	4.61	1.53	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_012	20.7	8.27	63.5	1536	709	117.7	117.7	55.8	18.3	1.48E-04	5.86E-05	4.65	1.53	0.17	6.52E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW110000_013	20.8	8.58	65.2	1762	771	110.9	110.9	56.3	18.5	1.52E-04	6.04E-05	4.66	1.53	0.17	6.53E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RW110000_014	21.8	8.27	68.9	1627	802	116.3	116.3	54.8	17.8	1.54E-04	5.86E-05	4.64	1.54	0.17	6.54E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RW110000_015	22.2	8.33	71.7	1691	816	116.8	116.8	55.7	17.9	1.58E-04	5.90E-05	4.64	1.54	0.17	6.55E-02	2.60	0.55	0.32	2.54E-02	1.37E-02
RW110000_016	22.2	8.27	74.4	1648	818	115.4	115.4	56.9	17.8	1.62E-04	5.85E-05	4.66	1.54	0.17	6.57E-02	2.60	0.55	0.32	2.54E-02	1.37E-02
RW110000_017	23.3	8.43	79.8	1736	849	116.7	116.7	57.9	18.1	1.69E-04	5.95E-05	4.66	1.54	0.17	6.59E-02	2.60	0.56	0.32	2.54E-02	1.37E-02
RW110000_018	17.8	8.06	49.6	1101	631	97.5	97.5	49.7	17.4	1.27E-04	5.74E-05	4.57	1.52	0.16	6.43E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RW110000_019	22.0	8.77	71.1	1758	797	116.1	116.1	58.3	18.9	1.61E-04	6.15E-05	4.66	1.54	0.17	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RW110000_020	17.5	7.91	50.4	1554	685	108.3	108.3	50.2	17.5	1.31E-04	5.65E-05	4.64	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW110000_021	17.5	7.60	51.8	1123	685	99.6	99.6	47.9	16.2	1.26E-04	5.43E-05	4.60	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW110000_022	18.0	8.01	51.0	1359	721	111.1	111.1	49.5	17.3	1.28E-04	5.70E-05	4.61	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW110000_023	18.8	7.73	59.5	1649	865	117.0	117.0	54.7	16.7	1.41E-04	5.54E-05	4.66	1.53	0.17	6.50E-02	2.58	0.53	0.31	2.54E-02	1.37E-02
RW110000_024	23.9	8.77	75.4	2048	839	127.0	127.0	65.5	20.2	1.62E-04	6.15E-05	4.75	1.54	0.17	6.59E-02	2.60	0.54	0.32	2.54E-02	1.37E-02
RW110100_001	23.4	8.54	77.5	1845	867	120.1	120.1	58.2	18.5	1.69E-04	6.04E-05	4.69	1.54	0.17	6.59E-02	2.60	0.55	0.32	2.54E-02	1.37E-02
RW112100_001	17.6	7.94	51.3	1524	711	105.9	105.9	52.2	17.4	1.39E-04	5.77E-05	4.63	1.53	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW112100_002	17.1	7.81	47.6	1429	681	98.6	98.6	49.1	16.9	1.32E-04	5.65E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW112100_003	17.0	7.80	46.9	1374	672	95.3	95.3	48.3	16.8	1.30E-04	5.62E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW112200_001	16.7	7.75	45.3	1320	658	91.6	91.6	47.0	16.7	1.26E-04	5.58E-05	4.59	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW112300_001	15.2	7.42	36.3	1068	559	74.3	74.3	41.2	15.8	1.11E-04	5.38E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112300_002	15.4	7.47	37.1	1056	567	75.7	75.7	41.6	15.9	1.12E-04	5.40E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW112300_003	16.9	7.77	44.3	1202	656	88.7	88.7	44.4	16.5	1.20E-04	5.54E-05	4.59	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW112400_001	16.7	7.71	43.3	1168	647	85.4	85.4	43.7	16.4	1.18E-04	5.52E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW112400_002	16.6	7.69	43.0	1150	641	82.9	82.9	43.4	16.3	1.18E-04	5.50E-05	4.59	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413

GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
24-hour		-	-	-	-	-	-			-		-	-	-	-	-	-		-	
23.0											-									
CAAQS 2030																				
12.2											-				-					
53%																				
	-	-	-			-	-	-		-	-	-	-				-		-	-
										-	-				-				-	-
										-	-				-				-	-
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										-	-				-				-	-
RW113300_001	17.0	7.80	46.6	1343	663	98.5	98.5	48.4	17.0	1.33E-04	5.70E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW113700_001	17.3	7.58	47.4	1039	571	74.7	74.7	45.3	16.2	1.29E-04	5.51E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW210600_001	17.1	8.03	46.9	1577	676	87.7	87.7	45.8	17.0	1.36E-04	5.85E-05	4.62	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RW210600_002	17.8	7.98	50.9	1480	715	84.2	84.2	45.5	16.8	1.36E-04	5.78E-05	4.58	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW210700_001	18.5	8.10	55.4	1777	766	88.4	88.4	46.7	16.9	1.39E-04	5.82E-05	4.63	1.52	0.17	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW210700_002	16.7	7.69	43.6	1308	660	80.4	80.4	43.2	16.3	1.26E-04	5.61E-05	4.56	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW210700_003	17.4		49.0	1736	699	93.3		47.3	17.2	-	-	4.65	1.52	0.17	6.45E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
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RW210800_003	16.5	7.70	42.3	1468	678	83.4	83.4	43.5	16.4	-	-				-				-	-
RW210800_004	16.4	7.68	41.6	1519	675	84.2	84.2	43.9	16.4	-	-				-				-	-
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RW213300_001	19.0	8.01	54.4	1212	683	91.6	91.6	50.3	17.0	1.45E-04	5.78E-05	4.57	1.52	0.16	6.47E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW213500_001	17.8	8.00	48.8	1343	675	91.6	91.6	50.0	17.1	1.42E-04	5.80E-05	4.58	1.52	0.16	6.46E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW213500_002	17.5	7.71	47.8	969	602	79.6	79.6	46.1	16.4	1.32E-04	5.58E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW213500_003	17.6	7.95	47.7	1266	656	88.2		49.0	17.0	-	-	4.57	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
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RW214000_001	17.0	7.83		1319	602	76.9	76.9	46.2	16.7	-	-	4.63	1.52	0.16	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
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RW214200_002	18.5	7.83	55.2	1087	610	78.8	78.8	49.0	16.6	-	-				-				-	-
RW214200_003	19.2	7.93	58.6	1136	641	81.2	81.2	49.9	16.8	-	-				-				-	-
RW214200_004	19.5	8.38	67.6	1802	699	92.8	92.8	51.7	17.6	-	-	4.73	1.53	0.17	6.52E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RW214400_001	18.6	7.80	55.0	1059	620	82.8	82.8	49.9	16.6	-	-				-				-	-
RW214400_002	17.9	7.64	50.6	868	585	73.2	73.2	46.0	16.1	-	-				-				-	-
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RW217600_001	18.6	8.01	52.0	2132	797	112.4	112.4	52.5	17.5	1.49E-04	5.90E-05	4.70	1.53	0.17	6.49E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW218600_001	15.0	7.21	37.8	888	513	62.8	62.8	39.7	15.2	1.13E-04	5.26E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW218700_001	19.2	7.82	57.9	1171	644	81.5	81.5	50.5	16.5	-	-	4.56	1.53	0.16	6.48E-02	2.58	0.53	0.31	2.54E-02	1.37E-02
RW219300_001	18.1	7.89	50.3	1750	794	97.3	97.3	50.0	16.8	-	-				-				-	-
RW219600_001	18.6	7.93	53.2	2078	971	102.7	102.7	50.7	17.0	-	-				-				-	-
							97.2	48.5	16.5	-	-				-				-	-
							94.3	48.4	16.4	-	-				-				-	-
							91.9	48.3	16.3	-	-				-				-	-
							89.7	48.1	16.3	-	-				-				-	-
							89.2	47.8	16.2	-	-				-				-	-
							87.4	47.5	16.1	-	-				-				-	-
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RW221500_001	17.5	7.67	49.8	1169	626	85.6	85.6	48.3	16.3	-	-				-				-	-
RW221600_001	16.3	7.72	45.7	1153	607	83.4	83.4	47.1	16.2	-	-				-				-	-

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

Highway 413

GTA West

RWDI #1301992A

	$PM_{2.5}$	PM_{10}	CO			NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
24-hour	-	-	-			-				-		-	-	-	-	-	-		-	
23.0											-									
CAAQS 2030																				
12.2											-				-					
53%																				
	-	-	-			-	-	-		-		-	-				-		-	-
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RW222900_001	17.5	7.63	50.0	874	549	77.1	77.1	45.7	15.9	1.22E-04	5.39E-05	4.53	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW223000_001	18.0			1459	658	99.5		52.0	17.2	-	-	4.61	1.52	0.16	6.46E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
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RW224200_001	24.5	8.48	83.1	1233	732	109.0	109.0	62.0	17.9	-	-	4.60	1.54	0.16	6.55E-02	2.59	0.53	0.32	2.54E-02	1.37E-02
RW225200_001	19.2	8.01	60.2	1581	768	100.4	100.4	54.7	17.5	-	-				-				-	-
RW225300_001	19.4	8.04	62.8	1679	773	98.6	98.6	53.7	17.5	-	-				-				-	-
RW225300_002	19.7	8.10	63.9	1686	796	105.7	105.7	55.6	17.7	-	-				-				-	-
RW225300_003	20.2	8.20	66.2	1752	820	110.3	110.3	57.1	18.1	-	-				-				-	-
RW226000_001	20.5	8.03	71.0	1854	778	113.9	113.9	60.0	17.6	-	-				-				-	-
RW226200_001	17.4	7.74	52.4	1284	587	90.9	90.9	51.4	16.4	-	-				-				-	-
RW226300_001	17.1	7.70	50.4	1204	573	87.7	87.7	49.6	16.3	-	-				-				-	-
RW226300_002	16.9	7.64	49.1	1176	565	85.3	85.3	48.6	16.2	-	-				-				-	-
RW227700_001	16.8	7.41	42.7	1143	581	84.2	84.2	43.7	15.8	-	-				-				-	-
RW227800_001	18.2	7.92	51.2	1411	583	101.4	101.4	48.6	17.0	-	-				-				-	-
RW227800_002	18.2	8.00	52.8	1396	613	99.7	99.7	48.3	17.1	-	-				-				-	-
							88.3	44.8	15.9	-	-				-				-	-
							93.3	47.3	16.2	-	-				-				-	-
							92.5	47.3	16.2	-	-				-				-	-
RW229100_003	17.5	7.63	48.0	1022	534	78.5	78.5	44.3	15.9	1.19E-04	5.37E-05	4.55	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW229100_004	18.5	7.85		1231	644	89.9		46.5	16.3	-	-	4.60	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
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RW230400_003	17.1	7.71	46.1	1582	645	91.8	91.8	45.0	16.3	-	-				-				-	-
RW230400_004	16.8	7.69	44.6	1460	611	86.9	86.9	43.6	16.1	-	-				-				-	-
RW230400_005	14.9	7.27	36.4	902	486	68.6	68.6	41.4	15.4	-	-	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW231500_001	16.6	7.44	45.5	1139	546	85.5	85.5	47.1	15.9	-	-				-				-	-
RW231500_002	16.9	7.50	46.2	1216	575	92.2	92.2	48.1	16.1	-	-				-				-	-
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RW233000_001	18.7	7.84	53.9	1110	584	96.5	96.5	52.3	17.0	1.31E-04	5.57E-05	4.56	1.52	0.16	6.45E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW233000_002	17.9	7.75	49.4	981	557	88.3		49.3	16.7	-	-	4.54	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
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RW233100_001	18.7	8.12	52.1	1361	664	103.0	103.0	50.0	17.6	1.29E-04	5.70E-05	4.61	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW233100_002	18.0	7.97	50.1	1150	601	94.8	94.8	48.5	17.2	1.25E-04	5.63E-05	4.57	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW233100_003	17.8	7.91	48.7	1100	590	92.0	92.0	47.6	17.1	1.23E-04	5.60E-05	4.57	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW233100_004	15.7	7.44	38.4	873	510	77.2	77.2	41.8	15.9	1.12E-04	5.37E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RW233300_001	15.9	7.47	39.3	981	539	81.6	81.6	43.1	16.0	1.15E-04	5.39E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW233500_001	19.8	8.19	56.7	2135	723	118.4	118.4	57.5	18.4	1.41E-04	5.79E-05	4.75	1.53	0.17	6.49E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW233600_001	17.1	7.69	45.7	1401	577	102.1	102.1	49.1	16.8	1.26E-04	5.52E-05	4.62	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW233700_001	17.8	7.80	49.6	1627	608	108.4	108.4	52.0	17.2	1.32E-04	5.59E-05	4.66	1.52	0.17	6.45E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW233800_001	16.8	7.59	45.0	1283	556	95.9	95.9	48.0	16.5	1.25E-04	5.47E-05	4.60	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW234400_001	16.7	7.49	46.8	1037	523	79.3	79.3	45.6	15.9	1.23E-04	5.40E-05	4.55	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW234400_002	15.6	7.37	39.1	932	532	75.5	75.5	42.3	15.7	1.14E-04	5.34E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW234400_003	15.9	7.40	41.0	957	535	75.7	75.7	43.0	15.7	1.16E-04	5.35E-05	4.54	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW234500_001	17.6	7.95	48.2	1258	565	90.4	90.4	49.1	16.5	1.27E-04	5.61E-05	4.60	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW234500_002	18.8	8.05	55.5	1427	634	110.0	110.0	55.2	17.3	1.40E-04	5.73E-05	4.63	1.53	0.16	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW234600_001	16.2	7.57	41.0	1051	541	78.3	78.3	44.1	15.9	1.17E-04	5.42E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW234600_002	15.7	7.39	39.3	939	528	75.3	75.3	42.6	15.7	1.14E-04	5.35E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW234600_003	15.5	7.37	38.7	923	527	74.7	74.7	42.1	15.7	1.13E-04	5.34E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW235800_001	20.1	7.90	60.9	1196	618	93.5	93.5	53.6	16.7	1.40E-04	5.58E-05	4.58	1.53	0.16	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW235800_002	17.9	7.65	50.8	1160	570	80.6	80.6	48.6	16.2	1.31E-04	5.49E-05	4.59	1.52	0.16	6.44E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW235800_003	17.5	7.63	48.0	1015	569	79.0	79.0	47.2	16.2	1.27E-04	5.48E-05	4.56	1.52	0.16	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW235800_004	17.2	7.57	45.5	1002	560	78.6	78.6	45.6	16.1	1.24E-04	5.45E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW235900_003	17.6	7.95	48.2	1086	597	88.0	88.0	45.9	16.8	1.23E-04	5.65E-05	4.57	1.52	0.16	6.41E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW235900_004	18.0	7.74	51.1	1108	596	82.4	82.4	49.0	16.4	1.31E-04	5.54E-05	4.58	1.52	0.16	6.45E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW235900_008	18.0	8.06	52.5	1045	604	92.3	92.3	47.5	17.0	1.26E-04	5.70E-05	4.55	1.52	0.16	6.43E-02	2.57	0.50	0.32	2.54E-02	1.37E-02
RW310200_001	18.9	7.89	52.3	1180	575	102.5	102.5	52.5	16.8	1.34E-04	5.58E-05	4.59	1.52	0.16	6.45E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW311300_001	20.7	8.02	67.6	1900	695	118.9	118.9	58.3	17.5	1.64E-04	5.75E-05	4.73	1.54	0.17	6.58E-02	2.59	0.53	0.31	2.54E-02	1.37E-02
RW311300_002	20.1	7.93	62.9	1791	673	114.1	114.1	56.3	17.2	1.56E-04	5.69E-05	4.71	1.54	0.17	6.54E-02	2.59	0.52	0.31	2.54E-02	1.37E-02
RW311300_003	19.5	7.86	57.2	1612	684	110.2	110.2	54.6	16.9	1.45E-04	5.64E-05	4.67	1.53	0.17	6.50E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW311300_004	18.6	7.76	55.1	1515	651	99.3	99.3	52.4	16.6	1.42E-04	5.57E-05	4.65	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW311400_001	19.2	8.03	56.2	1735	677	116.0	116.0	55.3	17.4	1.48E-04	5.74E-05	4.70	1.53	0.17	6.52E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW311400_002	18.3	7.94	51.6	1544	666	110.9	110.9	52.8	17.0	1.40E-04	5.68E-05	4.66	1.53	0.17	6.48E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW311400_003	17.6	7.87	50.2	1465	638	99.2	99.2	51.6	16.7	1.37E-04	5.62E-05	4.65	1.53	0.17	6.47E-02	2.58	0.50	0.31	2.54E-02	1.37E-02
RW311400_004	17.2	7.81	46.9	1303	646	94.5	94.5	49.9	16.5	1.31E-04	5.58E-05	4.61	1.52	0.16	6.44E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW311400_005	16.4	7.62	42.0	1150	626	87.6	87.6	46.7	16.2	1.22E-04	5.48E-05	4.58	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW311400_006	16.0	7.53	40.2	1061	602	80.7	80.7	45.4	16.0	1.19E-04	5.43E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW311400_008	15.6	7.38	38.9	986	562	75.9	75.9	43.9	15.7	1.16E-04	5.35E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW311400_009	15.5	7.35	39.0	964	561	74.2	74.2	43.5	15.7	1.16E-04	5.33E-05	4.55	1.51	0.16	6.38E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW312300_001	16.7	7.52	44.4	1419	603	91.7	91.7	46.4	16.3	1.22E-04	5.45E-05	4.64	1.52	0.16	6.40E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW312400_001	16.2	7.48	41.7	990	533	83.4	83.4	42.5	15.9	1.15E-04	5.38E-05	4.55	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW312400_002	15.5	7.41	37.5	976	518	80.9	80.9	40.4	15.8	1.10E-04	5.36E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW312500_001	17.8	7.76	50.1	1514	609	91.6	91.6	46.4	16.4	1.27E-04	5.51E-05	4.65	1.52	0.17	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW312500_002	17.7	7.73	49.6	1396	581	90.3	90.3	46.2	16.3	1.26E-04	5.49E-05	4.63	1.52	0.16	6.42E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW312500_003	16.7	7.58	44.7	1073	536	84.2	84.2	44.4	16.0	1.19E-04	5.42E-05	4.57	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW312500_004	15.9	7.52	38.8	996	522	82.5	82.5	41.2	15.9	1.11E-04	5.39E-05	4.55	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW312600_001	18.4	7.86	51.9	1588	638	106.6	106.6	48.7	16.7	1.29E-04	5.57E-05	4.66	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW312600_002	18.0	7.77	50.2	1613	636	100.3	100.3	46.9	16.5	1.28E-04	5.53E-05	4.67	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW312700_001	22.1	8.58	70.8	1905	861	123.2	123.2	62.1	18.9	1.65E-04	6.05E-05	4.72	1.54	0.17	6.59E-02	2.60	0.53	0.32	2.54E-02	1.37E-02
RW312900_001	15.3	7.42	36.8	1367	558	83.3	83.3	41.5	15.9	1.12E-04	5.38E-05	4.62	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW313100_001	16.6	7.61	44.8	1337	592	90.7	90.7	45.8	16.3	1.24E-04	5.50E-05	4.62	1.52	0.16	6.41E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW313400_001	15.4	7.47	37.4	1159	519	81.2	81.2	40.7	15.8	1.13E-04	5.41E-05	4.58	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW313900_001	15.0	7.39	36.4	1076	498	73.8	73.8	39.5	15.6	1.09E-04	5.35E-05	4.56	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW314100_001	15.1	7.42	35.4	1145	489	76.0	76.0	40.2	15.8	1.10E-04	5.37E-05	4.58	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW314300_001	17.5	7.85	45.9	1336	596	111.4	111.4	48.7	17.1	1.26E-04	5.63E-05	4.63	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW315400_001	14.8	7.32	35.3	932	479	72.4	72.4	40.0	15.7	1.10E-04	5.33E-05	4.54	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW317500_001	21.9	8.25	70.2	1450	795	110.8	110.8	57.5	18.0	1.63E-04	5.94E-05	4.62	1.54	0.16	6.55E-02	2.59	0.54	0.32	2.54E-02	1.37E-02
RW317500_003	22.1	8.30	70.8	1459	797	110.8	110.8	57.4	18.0	1.63E-04	5.96E-05	4.62	1.54	0.16	6.55E-02	2.59	0.55	0.32	2.54E-02	1.37E-02
RW410100_001	18.4	8.08	50.8	1015	650	90.2	90.2	47.0	16.9	1.34E-04	5.84E-05	4.54	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RW410100_002	18.0	8.04	49.2	1001	640	87.2	87.2	45.8	16.7	1.31E-04	5.82E-05	4.54	1.52	0.16	6.42E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RW410200_001	18.8	8.14	52.4	1117	669	94.3	94.3	48.6	17.1	1.36E-04	5.86E-05	4.55	1.52	0.16	6.45E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW410400_001	18.9	8.00	52.4	1139	636	96.8	96.8	48.1	17.0	1.33E-04	5.72E-05	4.56	1.52	0.16	6.44E-02	2.57	0.51	0.32	2.54E-02	1.37E-02
RW410800_002	18.0	7.88	50.8	1040	642	89.2	89.2	46.8	16.7	1.32E-04	5.64E-05	4.55	1.52	0.16	6.43E-02	2.57	0.51	0.31	2.54E-02	1.37E-02
RW510000_001	17.9	7.94	52.6	1235	680	88.9	88.9	45.3	16.6	1.34E-04	5.71E-05	4.56	1.52	0.16	6.44E-02	2.57	0.52	0.32	2.54E-02	1.37E-02
RW510100_001	18.7	8.18	53.7	1354	661	90.1	90.1	47.0	16.9	1.36E-04	5.88E-05	4.59	1.52	0.16	6.44E-02	2.58	0.52	0.32	2.54E-02	1.37E-02
RW510100_002	17.4	7.79	46.5	1088	599	85.6	85.6	43.5	16.4	1.25E-04	5.62E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW510400_001	17.1	7.77	45.0	1039	605	89.9	89.9	44.7	16.6	1.24E-04	5.60E-05	4.55	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW512600_001	18.7	8.12	54.3	1156	631	101.3	101.3	51.5	17.4	1.35E-04	5.75E-05	4.58	1.52	0.16	6.45E-02	2.58	0.51	0.31	2.54E-02	1.37E-02
RW512600_002	14.7	7.37	34.4	1043	510	72.9	72.9	41.1	15.7	1.11E-04	5.36E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW512700_001	16.0	7.57	44.6	1107	571	84.0	84.0	47.9	16.3	1.25E-04	5.48E-05	4.58	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW515200_001	17.1	7.81	45.9	1239	569	88.3	88.3	45.2	16.7	1.22E-04	5.59E-05	4.60	1.52	0.16	6.40E-02	2.57	0.50	0.31	2.54E-02	1.37E-02

Appendix C.5: Maximum Predicted Concentrations (µg/m³), 2051 Build Scenario, With 90th Percentile Ambient Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23.0	8.0	50.0	36200	15700	400	83.1	200	23.7	5.00E-05	1.00E-05	500.0	500.0	4.5	4.00E-01	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.00	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.43	1.50	0.15	6.28E-02	2.55	0.46	0.31	0.025	0.014
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Maximum Predicted % of Threshold	106%	115%	166%	7%	6%	32%	153%	33%	90%	338%	645%	<1%	<1%	4%	16%	4%	24%	72%	<1%	<1%
Max Receptor ID	RW224200_001	RE110000_005	RW224200_001	RE512200_003	RW219600_001	RW110000_024	RW110000_024	RW110000_024	RE110000_005	RW110100_001	RE110000_005	RE512200_003	RW110000_024	RE512200_003	RW110000_017	RW110000_017	RW110000_017	RE110000_005	RE110000_001	RE110000_001
RW515200_002	14.5	7.29	32.5	675	462	64.5	64.5	38.3	15.5	1.06E-04	5.31E-05	4.49	1.51	0.16	6.34E-02	2.56	0.47	0.31	2.54E-02	1.37E-02
RW515500_001	18.0	8.00	49.4	2077	628	113.7	113.7	50.6	17.9	1.34E-04	5.79E-05	4.75	1.52	0.17	6.45E-02	2.58	0.50	0.32	2.54E-02	1.37E-02
RW515500_002	15.1	7.47	36.4	1420	534	85.7	85.7	41.4	16.1	1.12E-04	5.43E-05	4.62	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW515500_003	13.9	7.22	30.5	763	460	62.6	62.6	37.0	15.4	1.03E-04	5.27E-05	4.51	1.51	0.16	6.32E-02	2.55	0.47	0.31	2.54E-02	1.37E-02
RW515600_001	17.4	7.80	46.3	1910	598	106.1	106.1	48.2	17.3	1.29E-04	5.67E-05	4.72	1.52	0.17	6.43E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW515600_002	15.1	7.36	36.7	1245	561	73.7	73.7	40.7	15.7	1.12E-04	5.35E-05	4.60	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW515600_003	14.9	7.36	35.1	1165	515	76.0	76.0	39.7	15.8	1.10E-04	5.36E-05	4.59	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW515700_001	14.9	7.33	35.4	1228	533	72.4	72.4	40.1	15.7	1.11E-04	5.34E-05	4.60	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW516700_001	14.6	7.35	33.7	1210	494	75.9	75.9	41.0	15.9	1.10E-04	5.37E-05	4.59	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW517400_001	17.8	7.98	49.2	1650	630	114.8	114.8	51.1	18.1	1.38E-04	5.81E-05	4.67	1.53	0.17	6.46E-02	2.58	0.50	0.32	2.54E-02	1.37E-02
RW517500_001	16.7	7.81	42.7	1403	587	104.1	104.1	48.7	17.2	1.27E-04	5.64E-05	4.62	1.52	0.16	6.42E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW517500_002	15.2	7.42	35.9	1162	493	74.4	74.4	41.1	15.9	1.11E-04	5.39E-05	4.58	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW517600_001	15.5	7.56	39.3	1007	533	78.3	78.3	42.6	16.2	1.16E-04	5.48E-05	4.55	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW519300_001	15.0	7.42	36.1	994	526	74.4	74.4	40.9	15.9	1.11E-04	5.40E-05	4.56	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519300_002	17.0	7.77	47.2	1046	604	80.7	80.7	44.1	16.3	1.25E-04	5.58E-05	4.55	1.52	0.16	6.41E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW519600_001	16.2	7.75	41.0	1249	595	91.7	91.7	45.4	16.8	1.21E-04	5.57E-05	4.61	1.52	0.16	6.39E-02	2.57	0.49	0.31	2.54E-02	1.37E-02
RW519600_002	15.6	7.69	37.9	1061	535	81.6	81.6	43.3	16.4	1.16E-04	5.50E-05	4.57	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519600_003	15.2	7.67	37.3	873	500	73.8	73.8	42.7	16.1	1.14E-04	5.45E-05	4.54	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519600_004	15.4	7.50	39.0	783	498	71.4	71.4	41.0	15.8	1.12E-04	5.38E-05	4.51	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW519900_001	14.8	7.53	34.7	823	487	68.1	68.1	39.7	16.0	1.08E-04	5.42E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520000_001	14.8	7.51	34.4	828	483	68.6	68.6	39.5	16.0	1.08E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520100_001	14.8	7.53	34.7	832	488	68.5	68.5	39.6	16.0	1.08E-04	5.41E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520200_001	14.8	7.50	34.5	833	483	69.0	69.0	39.5	16.0	1.08E-04	5.40E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520300_001	14.8	7.49	35.1	832	494	71.2	71.2	40.0	16.0	1.09E-04	5.40E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520400_001	15.2	7.52	36.8	833	518	75.4	75.4	41.1	16.1	1.11E-04	5.42E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520600_001	15.4	7.56	38.0	906	523	75.1	75.1	42.2	16.1	1.14E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520600_002	15.6	7.50	38.7	1111	553	83.0	83.0	44.1	16.2	1.17E-04	5.44E-05	4.57	1.51	0.16	6.38E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW520800_001	15.5	7.56	39.0	853	527	74.2	74.2	41.7	16.1	1.12E-04	5.43E-05	4.52	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520800_002	15.5	7.53	38.8	898	525	73.8	73.8	41.6	16.1	1.12E-04	5.43E-05	4.53	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW520900_001	15.6	7.54	38.5	961	538	73.6	73.6	41.3	16.1	1.11E-04	5.43E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521000_001	15.5	7.54	38.3	956	546	72.9	72.9	41.0	16.1	1.11E-04	5.42E-05	4.54	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521500_001	19.2	8.56	58.5	1250	639	105.2	105.2	51.7	18.4	1.31E-04	5.82E-05	4.63	1.53	0.16	6.47E-02	2.58	0.51	0.32	2.54E-02	1.37E-02
RW521500_002	15.6	7.61	40.0	827	517	75.6	75.6	41.5	16.2	1.13E-04	5.44E-05	4.53	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521500_003	15.3	7.54	38.2	781	504	72.3	72.3	40.4	16.0	1.11E-04	5.41E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521500_004	15.2	7.51	38.1	787	496	72.6	72.6	40.3	15.9	1.11E-04	5.39E-05	4.51	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521500_005	15.3	7.43	38.9	811	495	70.6	70.6	40.7	15.8	1.12E-04	5.37E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521500_006	15.3	7.40	38.8	824	495	70.3	70.3	40.6	15.7	1.12E-04	5.36E-05	4.52	1.51	0.16	6.36E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521600_001	16.8	7.63	43.6	837	597	82.1	82.1	43.4	16.3	1.23E-04	5.54E-05	4.52	1.52	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521600_002	14.7	7.35	35.4	981	507	73.6	73.6	40.0	15.6	1.10E-04	5.35E-05	4.55	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_009	14.6	7.35	34.5	870	501	71.5	71.5	39.6	15.6	1.08E-04	5.34E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_010	15.7	7.46	40.5	913	557	75.6	75.6	42.0	15.9	1.20E-04	5.46E-05	4.53	1.51	0.16	6.38E-02	2.56	0.50	0.31	2.54E-02	1.37E-02
RW521600_011	15.3	7.41	39.3	849	537	74.4	74.4	41.3	15.8	1.16E-04	5.41E-05	4.52	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521600_012	15.7	7.50	38.5	1110	546	85.4	85.4	41.8	16.1	1.19E-04	5.51E-05	4.56	1.51	0.16	6.37E-02	2.56	0.49	0.31	2.54E-02	1.37E-02
RW521600_013	14.8	7.32	33.9	868	497	74.3	74.3	39.0	15.6	1.11E-04	5.37E-05	4.52	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_014	14.5	7.34	34.5	877	498	71.3	71.3	39.6	15.6	1.08E-04	5.33E-05	4.53	1.51	0.16	6.35E-02	2.56	0.48	0.31	2.54E-02	1.37E-02
RW521600_016	15.9	7.44	40.4	1098	577	79.0	79.0	42.5	15.9	1.24E-04	5.47E-05	4.55	1.51	0.16	6.39E-02	2.57	0.50	0.31	2.54E-02	1.37E-02
RW521600_017	15.0	7.40	36.6	1034	524	79.2	79.2	40.5	15.8	1.12E-04	5.38E-05	4.57	1.51	0.16	6.36E-02	2.56	0.48	0.31	2.54E-02	1.37E-02

Notes:
[1] Conversion of NO_x to NO_2 using the Ozone Limiting Method and hourly concentrations of NO_2 and ozone. The ambient background concentrations measured at local monitoring stations are not added directly to the 1-hour and 24-hour modelled concentrations without background.

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build with Background

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE110000_001	2%	1%	5%	18%	7%	0%	0%	0%	0%	4%	1%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE110000_002	12%	6%	24%	44%	13%	21%	21%	18%	10%	11%	4%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE110000_003	10%	4%	17%	17%	19%	11%	11%	14%	5%	8%	3%	1%	1%	1%	1%	0%	2%	0%	0%	0%
RE110000_004	2%	1%	2%	10%	7%	0%	0%	0%	0%	3%	1%	0%	0%	0%	0%	0%	2%	0%	0%	0%
RE110000_005	2%	1%	2%	9%	7%	-1%	-1%	0%	0%	4%	2%	0%	0%	0%	0%	0%	2%	0%	0%	0%
RE110000_006	-4%	-1%	-8%	0%	0%	-3%	-3%	-9%	-4%	-3%	0%	-1%	0%	-1%	-1%	0%	0%	0%	0%	0%
RE110000_007	8%	3%	17%	16%	11%	14%	14%	15%	5%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_008	8%	3%	17%	20%	11%	15%	15%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_009	8%	3%	17%	25%	12%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_010	8%	3%	17%	28%	12%	17%	17%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_011	8%	3%	17%	30%	12%	18%	18%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_020	8%	3%	17%	18%	10%	14%	14%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_021	8%	3%	17%	20%	11%	15%	15%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_022	8%	3%	17%	23%	11%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_023	8%	3%	17%	26%	11%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_024	8%	3%	17%	28%	12%	17%	17%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_025	8%	3%	17%	30%	12%	18%	18%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_028	8%	3%	16%	18%	9%	15%	15%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_029	8%	3%	17%	19%	10%	15%	15%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_030	8%	3%	17%	22%	10%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_031	8%	3%	17%	25%	11%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_032	8%	3%	17%	28%	11%	17%	17%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_045	8%	3%	16%	17%	8%	15%	15%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_046	8%	3%	17%	19%	8%	15%	15%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_047	8%	3%	17%	21%	9%	16%	16%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_048	8%	3%	17%	23%	9%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_049	8%	3%	17%	24%	10%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_050	8%	3%	16%	18%	8%	16%	16%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_051	8%	3%	16%	18%	7%	16%	16%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_052	8%	3%	16%	18%	7%	17%	17%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_053	8%	3%	16%	17%	7%	17%	17%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_054	8%	3%	16%	17%	7%	17%	17%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_055	8%	3%	16%	17%	7%	18%	18%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_056	8%	3%	17%	22%	8%	17%	17%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_057	8%	3%	17%	22%	8%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_058	8%	3%	17%	23%	8%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_059	8%	3%	17%	23%	9%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_060	8%	3%	17%	23%	9%	16%	16%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_061	8%	3%	13%	11%	7%	16%	16%	13%	6%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_062	8%	3%	15%	15%	6%	19%	19%	14%	6%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_063	8%	3%	16%	16%	6%	18%	18%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_064	8%	3%	16%	18%	7%	19%	19%	15%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_065	8%	3%	16%	21%	7%	18%	18%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_066	8%	3%	17%	22%	8%	18%	18%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_067	8%	3%	17%	24%	8%	17%	17%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_069	8%	3%	15%	13%	7%	18%	18%	13%	6%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE110000_070	8%	3%	16%	16%	6%	18%	18%	14%	5%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_071	8%	3%	16%	18%	6%	19%	19%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_072	8%	3%	16%	20%	7%	19%	19%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_073	8%	3%	16%	22%	7%	19%	19%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_112	8%	3%	15%	14%	6%	19%	19%	13%	6%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_113	8%	3%	16%	17%	6%	19%	19%	14%	5%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_114	8%	3%	16%	18%	6%	19%	19%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_115	8%	3%	16%	20%	7%	19%	19%	14%	5%	7%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_123	8%	3%	13%	12%	6%	19%	19%	13%	6%	6%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_124	8%	3%	15%	16%	6%	19%	19%	14%	5%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_125	8%	3%	16%	17%	6%	19%	19%	14%	5%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_132	8%	3%	15%	16%	6%	20%	20%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_133	8%	3%	16%	18%	6%	19%	19%	14%	5%	7%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_139	8%	3%	15%	16%	5%	20%	20%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_140	8%	3%	15%	18%	5%	20%	20%	13%	5%	6%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_145	7%	3%	13%	13%	6%	19%	19%	13%	6%	6%	1%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_146	7%	3%	15%	17%	5%	20%	20%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_147	7%	3%	15%	19%	5%	20%	20%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_149	7%	3%	12%	12%	6%	19%	19%	12%	6%	6%	1%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_150	7%	3%	15%	16%	5%	21%	21%	13%	6%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_151	7%	3%	15%	18%	5%	20%	20%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_165	7%	3%	15%	19%	5%	21%	21%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_167	7%	3%	15%	19%	5%	20%	20%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_173	7%	3%	12%	12%	5%	19%	19%	12%	6%	6%	1%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE110000_177	7%	3%	15%	20%	5%	21%	21%	12%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_178	7%	3%	14%	16%	5%	21%	21%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_189	7%	3%	15%	16%	5%	21%	21%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_190	7%	3%	14%	16%	5%	21%	21%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_191	7%	3%	15%	19%	5%	21%	21%	13%	5%	6%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_239	8%	3%	15%	13%	3%	22%	22%	17%	6%	5%	1%	1%	1%	2%	1%	0%	0%	0%	0%	0%
RE110000_240	8%	3%	15%	14%	4%	22%	22%	17%	7%	5%	1%	1%	1%	2%	1%	0%	0%	0%	0%	0%
RE110000_241	8%	3%	16%	14%	3%	24%	24%	17%	7%	6%	1%	1%	1%	2%	1%	0%	0%	0%	0%	0%
RE110000_242	8%	3%	15%	15%	3%	25%	25%	17%	6%	5%	1%	1%	0%	2%	1%	0%	0%	0%	0%	0%
RE110000_243	8%	3%	15%	14%	4%	22%	22%	17%	6%	5%	1%	1%	1%	2%	1%	0%	0%	0%	0%	0%
RE110000_244	8%	3%	15%	15%	3%	24%	24%	16%	6%	5%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_245	8%	3%	15%	14%	4%	22%	22%	17%	6%	5%	1%	1%	1%	2%	1%	0%	0%	0%	0%	0%
RE110000_246	8%	3%	15%	15%	3%	24%	24%	17%	6%	6%	1%	1%	1%	2%	1%	0%	0%	0%	0%	0%
RE110000_247	8%	3%	15%	15%	3%	23%	23%	16%	6%	5%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_248	8%	3%	15%	15%	3%	23%	23%	16%	6%	5%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_249	8%	3%	16%	13%	3%	25%	25%	17%	7%	6%	2%	1%	1%	2%	1%	0%	0%	0%	0%	0%
RE110000_253	7%	3%	15%	19%	5%	21%	21%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_254	7%	3%	14%	18%	4%	20%	20%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_255	7%	3%	15%	19%	5%	21%	21%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_256	7%	3%	13%	19%	4%	19%	19%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_257	7%	3%	14%	19%	5%	20%	20%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_265	7%	3%	14%	19%	4%	21%	21%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE110000_267	7%	3%	14%	15%	4%	20%	20%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_276	7%	3%	13%	19%	4%	20%	20%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_277	7%	3%	15%	20%	4%	21%	21%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_278	7%	3%	15%	19%	5%	22%	22%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_279	7%	3%	15%	20%	4%	21%	21%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_280	7%	3%	12%	12%	5%	19%	19%	12%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_281	7%	3%	14%	17%	4%	20%	20%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_292	7%	3%	14%	17%	4%	19%	19%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_293	7%	3%	14%	19%	4%	20%	20%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_294	7%	3%	15%	20%	4%	20%	20%	13%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_305	7%	3%	13%	18%	4%	20%	20%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_309	7%	3%	14%	17%	4%	20%	20%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_310	7%	3%	13%	16%	4%	19%	19%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_316	7%	3%	12%	13%	4%	20%	20%	12%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_325	7%	3%	15%	19%	4%	20%	20%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_329	7%	3%	15%	19%	4%	21%	21%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_331	7%	3%	13%	13%	5%	19%	19%	12%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_332	7%	3%	14%	17%	4%	20%	20%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_333	7%	3%	15%	19%	5%	21%	21%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_342	7%	3%	13%	14%	5%	20%	20%	12%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_344	7%	3%	14%	17%	5%	20%	20%	12%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_345	7%	3%	15%	19%	5%	21%	21%	12%	5%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_353	7%	3%	12%	17%	4%	21%	21%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_355	7%	3%	12%	19%	4%	21%	21%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_378	7%	3%	10%	14%	4%	23%	23%	12%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_387	7%	3%	11%	13%	4%	22%	22%	12%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_390	7%	3%	10%	14%	4%	22%	22%	12%	7%	5%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE110000_394	7%	3%	10%	17%	4%	22%	22%	12%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_397	7%	3%	12%	19%	4%	20%	20%	13%	6%	6%	1%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE110000_401	9%	3%	17%	21%	17%	14%	14%	14%	5%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE110200_001	5%	5%	4%	-4%	5%	3%	3%	7%	7%	2%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE110300_001	1%	3%	2%	22%	2%	0%	0%	-4%	3%	0%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE110300_002	1%	3%	-1%	19%	1%	0%	0%	-5%	3%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110300_003	1%	2%	-2%	15%	1%	-1%	-1%	-5%	3%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110300_004	1%	2%	-1%	17%	1%	-2%	-2%	-4%	3%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110400_001	1%	2%	-1%	17%	1%	-3%	-3%	-4%	3%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110400_002	1%	2%	1%	15%	1%	-3%	-3%	-3%	3%	-2%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110500_001	1%	2%	-2%	16%	1%	-4%	-4%	-3%	3%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110500_002	1%	2%	-2%	16%	1%	-3%	-3%	-3%	3%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110600_001	1%	3%	-1%	13%	2%	-1%	-1%	-3%	3%	-1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE110600_002	1%	2%	-1%	15%	2%	-3%	-3%	-3%	3%	-1%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE110700_001	2%	3%	-1%	11%	2%	1%	1%	-3%	3%	-1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE110700_002	2%	3%	-1%	12%	2%	1%	1%	-4%	3%	-1%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE110800_001	2%	3%	0%	8%	2%	3%	3%	-2%	4%	-1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE110800_002	2%	3%	0%	4%	2%	2%	2%	-2%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE110900_001	2%	3%	0%	1%	2%	2%	2%	-2%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE110900_002	2%	3%	0%	0%	2%	3%	3%	-2%	4%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE111100_001	2%	3%	0%	18%	2%	4%	4%	-1%	4%	0%	3%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE111200_001	2%	3%	1%	21%	2%	5%	5%	-1%	4%	0%	3%	0%	0%	1%	0%	0%	0%	1%	0%	0%
RE111200_002	2%	3%	1%	21%	3%	7%	7%	-1%	5%	0%	3%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE111300_001	2%	3%	1%	26%	3%	6%	6%	0%	5%	0%	3%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE111300_002	2%	3%	1%	28%	3%	5%	5%	0%	5%	1%	3%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE111300_003	2%	3%	1%	29%	3%	6%	6%	0%	5%	1%	3%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE111400_001	2%	3%	2%	30%	3%	7%	7%	0%	5%	2%	3%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE111400_002	2%	3%	2%	31%	3%	10%	10%	1%	5%	3%	3%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE111500_001	2%	3%	3%	31%	3%	11%	11%	1%	5%	4%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE111500_002	3%	4%	3%	26%	4%	13%	13%	2%	6%	5%	4%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE111600_001	3%	4%	4%	29%	5%	13%	13%	3%	6%	6%	4%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE111600_002	4%	4%	5%	30%	5%	13%	13%	5%	6%	7%	4%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE111700_001	4%	4%	7%	7%	3%	15%	15%	6%	6%	7%	4%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE111700_002	5%	4%	7%	42%	5%	18%	18%	5%	7%	9%	5%	1%	0%	2%	0%	0%	2%	1%	0%	0%
RE111800_001	1%	2%	4%	10%	-1%	-4%	-4%	2%	3%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE111800_002	4%	4%	7%	8%	3%	16%	16%	6%	6%	7%	4%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE111800_003	4%	4%	6%	8%	3%	17%	17%	6%	6%	8%	4%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE111800_004	4%	4%	7%	9%	3%	18%	18%	6%	7%	8%	4%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE111800_005	5%	5%	9%	45%	6%	19%	19%	6%	8%	10%	5%	1%	0%	2%	0%	0%	2%	1%	0%	0%
RE111800_006	6%	5%	10%	46%	7%	19%	19%	6%	8%	10%	5%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE111800_007	6%	5%	10%	46%	8%	21%	21%	7%	8%	11%	6%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE111800_008	6%	5%	12%	47%	10%	23%	23%	7%	9%	11%	6%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE112100_001	4%	2%	6%	5%	8%	-4%	-4%	2%	3%	2%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE112200_001	3%	2%	5%	7%	4%	-9%	-9%	-1%	2%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE113100_001	10%	4%	26%	166%	30%	25%	25%	10%	6%	14%	5%	3%	0%	5%	1%	0%	3%	1%	0%	0%
RE113200_001	13%	4%	25%	98%	36%	22%	22%	11%	5%	14%	5%	2%	0%	4%	1%	0%	4%	1%	0%	0%
RE113200_002	12%	5%	26%	103%	37%	24%	24%	12%	5%	15%	5%	2%	0%	4%	1%	0%	4%	1%	0%	0%
RE113300_001	15%	6%	33%	149%	43%	32%	32%	13%	6%	18%	6%	3%	0%	6%	1%	0%	5%	1%	0%	0%
RE210700_001	21%	7%	49%	153%	60%	57%	57%	25%	10%	25%	8%	3%	1%	6%	1%	1%	6%	2%	0%	0%
RE210700_002	27%	8%	58%	183%	73%	71%	71%	29%	11%	31%	9%	4%	1%	7%	2%	1%	7%	2%	0%	0%
RE210700_003	14%	5%	31%	96%	26%	47%	47%	16%	7%	18%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE210900_001	26%	8%	44%	154%	64%	64%	64%	30%	11%	27%	9%	4%	1%	6%	2%	1%	6%	2%	0%	0%
RE210900_003	28%	8%	58%	177%	70%	81%	81%	31%	12%	34%	10%	4%	1%	7%	2%	1%	8%	2%	0%	0%
RE210900_004	21%	6%	38%	149%	54%	56%	56%	25%	9%	22%	7%	3%	1%	6%	1%	1%	5%	1%	0%	0%
RE210900_005	22%	7%	46%	164%	60%	58%	58%	26%	9%	25%	7%	3%	1%	6%	1%	1%	6%	1%	0%	0%
RE210900_006	15%	6%	27%	101%	39%	48%	48%	20%	8%	17%	6%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE210900_007	15%	5%	29%	110%	34%	41%	41%	17%	7%	18%	6%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE210900_008	14%	5%	28%	107%	30%	42%	42%	17%	7%	18%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE211000_001	25%	7%	55%	163%	66%	71%	71%	30%	10%	29%	8%	4%	1%	6%	2%	1%	7%	1%	0%	0%
RE211000_002	22%	6%	53%	153%	63%	59%	59%	30%	9%	28%	7%	4%	1%	6%	2%	1%	7%	1%	0%	0%
RE211000_003	18%	5%	48%	144%	56%	51%	51%	27%	8%	25%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE211000_004	16%	5%	45%	137%	50%	49%	49%	24%	7%	22%	6%	3%	1%	5%	1%	1%	6%	1%	0%	0%
RE211000_005	24%	6%	53%	159%	64%	68%	68%	28%	9%	28%	7%	3%	1%	6%	2%	1%	7%	1%	0%	0%
RE211000_006	13%	4%	38%	114%	40%	41%	41%	20%	6%	18%	5%	2%	1%	4%	1%	0%	5%	1%	0%	0%
RE211000_007	12%	4%	24%	89%	23%	39%	39%	15%	6%	15%	5%	2%	0%	3%	1%	0%	3%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE211000_008	12%	4%	26%	76%	24%	36%	36%	15%	6%	14%	4%	2%	0%	3%	1%	0%	4%	1%	0%	0%
RE211000_009	11%	4%	25%	74%	25%	35%	35%	15%	5%	14%	4%	2%	0%	3%	1%	0%	3%	1%	0%	0%
RE211000_010	11%	4%	25%	73%	25%	36%	36%	14%	5%	14%	4%	2%	0%	3%	1%	0%	3%	1%	0%	0%
RE211100_001	13%	4%	36%	108%	37%	41%	41%	18%	6%	17%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE211100_002	16%	4%	44%	141%	52%	46%	46%	23%	6%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE211100_003	11%	4%	28%	81%	19%	38%	38%	16%	5%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE211100_004	11%	4%	24%	64%	24%	35%	35%	14%	5%	13%	4%	2%	0%	3%	1%	0%	3%	1%	0%	0%
RE211100_005	10%	4%	24%	59%	23%	32%	32%	13%	5%	13%	4%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE211100_006	10%	3%	23%	52%	22%	27%	27%	12%	5%	12%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE211100_009	11%	4%	29%	86%	23%	40%	40%	17%	5%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE211200_001	13%	4%	39%	122%	45%	44%	44%	20%	6%	19%	4%	3%	1%	5%	1%	0%	5%	1%	0%	0%
RE211200_002	12%	4%	35%	105%	37%	35%	35%	17%	5%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE211200_003	9%	3%	22%	72%	16%	37%	37%	12%	5%	12%	4%	2%	0%	3%	1%	0%	3%	1%	0%	0%
RE211200_004	8%	3%	18%	68%	17%	33%	33%	10%	4%	9%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE211200_005	10%	3%	26%	76%	17%	39%	39%	14%	5%	14%	4%	2%	0%	3%	1%	0%	3%	1%	0%	0%
RE211400_001	30%	12%	79%	204%	72%	94%	94%	41%	18%	48%	14%	4%	1%	7%	3%	1%	11%	3%	0%	0%
RE211500_002	18%	5%	43%	131%	37%	58%	58%	23%	7%	25%	5%	2%	1%	4%	1%	1%	6%	1%	0%	0%
RE211500_003	22%	7%	54%	158%	55%	64%	64%	31%	11%	33%	9%	3%	1%	6%	2%	1%	7%	2%	0%	0%
RE211500_004	19%	4%	44%	135%	41%	60%	60%	22%	7%	25%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE211900_001	21%	8%	54%	137%	45%	65%	65%	31%	12%	33%	10%	3%	1%	5%	2%	1%	7%	2%	0%	0%
RE212600_001	15%	4%	33%	72%	24%	42%	42%	20%	6%	18%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE212700_001	15%	5%	33%	66%	23%	45%	45%	22%	7%	19%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE212700_002	19%	7%	34%	130%	32%	71%	71%	28%	11%	23%	8%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE212800_001	17%	6%	34%	49%	26%	48%	48%	23%	8%	19%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE212800_002	19%	6%	36%	46%	29%	55%	55%	24%	9%	20%	6%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE212900_001	20%	7%	38%	48%	31%	59%	59%	26%	9%	22%	6%	2%	1%	3%	1%	1%	4%	1%	0%	0%
RE213000_001	20%	6%	44%	127%	31%	58%	58%	26%	9%	25%	7%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214400_001	14%	5%	30%	43%	29%	36%	36%	18%	7%	14%	4%	1%	1%	2%	1%	0%	4%	1%	0%	0%
RE214600_002	21%	8%	47%	195%	52%	61%	61%	25%	10%	29%	8%	4%	1%	7%	2%	1%	7%	1%	0%	0%
RE214600_003	21%	7%	45%	159%	50%	55%	55%	23%	9%	27%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_004	20%	7%	44%	141%	46%	49%	49%	23%	9%	25%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_005	20%	6%	43%	134%	46%	49%	49%	22%	9%	23%	6%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_006	19%	6%	43%	131%	47%	49%	49%	22%	9%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_007	21%	6%	50%	163%	52%	59%	59%	25%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_008	21%	6%	49%	157%	50%	54%	54%	24%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_009	21%	7%	48%	172%	54%	59%	59%	24%	9%	29%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_010	21%	7%	48%	177%	54%	60%	60%	24%	9%	29%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_011	21%	7%	49%	175%	54%	58%	58%	25%	9%	29%	7%	4%	1%	7%	2%	1%	7%	1%	0%	0%
RE214600_012	21%	7%	48%	194%	51%	58%	58%	25%	10%	29%	7%	4%	1%	7%	2%	1%	7%	1%	0%	0%
RE214600_013	22%	8%	46%	196%	53%	64%	64%	25%	11%	30%	8%	4%	1%	7%	2%	1%	7%	1%	0%	0%
RE214600_014	21%	7%	46%	177%	55%	61%	61%	24%	10%	29%	7%	4%	1%	7%	2%	1%	7%	1%	0%	0%
RE214600_015	21%	7%	45%	169%	53%	61%	61%	23%	10%	28%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_016	21%	7%	45%	148%	47%	50%	50%	23%	9%	27%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_017	20%	7%	45%	144%	45%	49%	49%	23%	9%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_018	20%	7%	44%	138%	46%	48%	48%	23%	9%	24%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_019	19%	6%	42%	128%	47%	49%	49%	22%	9%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214600_020	19%	6%	42%	124%	47%	50%	50%	22%	9%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_021	19%	6%	40%	117%	47%	47%	47%	22%	9%	22%	6%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_022	21%	7%	48%	165%	52%	60%	60%	24%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214600_023	20%	6%	50%	141%	45%	48%	48%	24%	8%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_024	20%	6%	49%	138%	47%	47%	47%	24%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_025	20%	6%	48%	136%	48%	47%	47%	24%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_026	20%	6%	48%	134%	48%	47%	47%	24%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_027	20%	6%	47%	132%	48%	47%	47%	23%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_028	20%	6%	46%	130%	48%	47%	47%	23%	8%	23%	6%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214600_029	20%	6%	46%	128%	48%	47%	47%	23%	8%	23%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214600_030	20%	6%	45%	125%	48%	47%	47%	23%	8%	23%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_031	19%	6%	44%	123%	48%	47%	47%	23%	8%	23%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_032	19%	6%	43%	117%	47%	47%	47%	22%	8%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_033	18%	6%	41%	113%	46%	45%	45%	22%	8%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_034	19%	6%	42%	115%	47%	45%	45%	23%	8%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_035	19%	6%	43%	117%	47%	46%	46%	23%	8%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_036	19%	6%	44%	118%	47%	47%	47%	23%	8%	22%	6%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_037	20%	6%	50%	142%	45%	48%	48%	24%	8%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_038	20%	6%	49%	140%	46%	48%	48%	24%	8%	25%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_039	20%	6%	49%	139%	46%	47%	47%	24%	8%	25%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_040	20%	6%	48%	136%	47%	47%	47%	24%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_041	19%	6%	43%	120%	48%	47%	47%	23%	8%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_042	19%	6%	42%	115%	47%	46%	46%	22%	8%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_043	18%	6%	41%	113%	46%	45%	45%	22%	8%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_044	19%	6%	45%	124%	48%	48%	48%	23%	8%	23%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214600_045	19%	6%	46%	126%	48%	48%	48%	23%	8%	23%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214600_046	20%	6%	47%	131%	47%	48%	48%	23%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_047	20%	6%	47%	132%	47%	47%	47%	23%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_048	20%	6%	47%	136%	46%	47%	47%	23%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_049	20%	6%	48%	138%	46%	47%	47%	23%	8%	25%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_050	20%	6%	48%	141%	46%	48%	48%	24%	8%	25%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_051	15%	5%	30%	83%	35%	42%	42%	19%	7%	15%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_052	15%	5%	30%	84%	35%	40%	40%	19%	7%	15%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_053	19%	6%	44%	121%	48%	48%	48%	23%	8%	23%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214600_054	20%	6%	46%	129%	47%	48%	48%	23%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_055	20%	6%	47%	134%	47%	47%	47%	23%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_056	20%	6%	48%	142%	45%	48%	48%	24%	8%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_057	15%	5%	30%	87%	36%	37%	37%	19%	7%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_058	15%	5%	30%	84%	35%	38%	38%	19%	6%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_059	15%	5%	30%	83%	35%	39%	39%	19%	7%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_060	15%	5%	30%	82%	34%	42%	42%	19%	7%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_061	15%	5%	30%	81%	34%	43%	43%	19%	7%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_062	15%	5%	30%	86%	36%	38%	38%	19%	7%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_063	15%	5%	30%	83%	34%	40%	40%	19%	7%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214600_064	16%	5%	32%	89%	38%	37%	37%	20%	7%	16%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214600_065	16%	5%	32%	89%	38%	36%	36%	20%	7%	16%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214600_066	16%	5%	32%	89%	38%	37%	37%	20%	7%	16%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214600_067	16%	5%	32%	88%	37%	38%	38%	20%	7%	16%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214600_068	16%	5%	31%	87%	37%	40%	40%	20%	7%	16%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214600_069	17%	5%	36%	97%	42%	41%	41%	21%	7%	18%	5%	2%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_070	18%	5%	37%	106%	44%	43%	43%	21%	7%	19%	5%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_071	18%	5%	37%	105%	44%	42%	42%	21%	7%	19%	5%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_072	18%	5%	37%	103%	44%	42%	42%	21%	7%	19%	5%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_073	17%	5%	36%	102%	43%	42%	42%	21%	7%	19%	5%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_074	17%	5%	36%	100%	43%	42%	42%	21%	7%	18%	5%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214600_075	18%	6%	38%	105%	45%	42%	42%	22%	8%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_076	18%	5%	39%	108%	45%	44%	44%	21%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_077	18%	5%	38%	106%	45%	43%	43%	21%	8%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_078	18%	5%	39%	109%	46%	44%	44%	21%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_079	18%	5%	39%	110%	46%	45%	45%	22%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_080	19%	5%	40%	112%	47%	46%	46%	22%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214600_081	22%	8%	46%	182%	55%	65%	65%	24%	10%	30%	7%	4%	1%	8%	2%	1%	7%	1%	0%	0%
RE214600_082	21%	6%	51%	149%	48%	51%	51%	24%	8%	27%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214600_083	21%	7%	47%	193%	51%	59%	59%	25%	10%	29%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_002	21%	6%	47%	184%	47%	50%	50%	25%	8%	26%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_003	20%	6%	48%	185%	48%	51%	51%	25%	9%	27%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_004	20%	6%	48%	186%	48%	54%	54%	25%	9%	27%	7%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_005	20%	7%	49%	187%	48%	55%	55%	26%	9%	28%	7%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_006	20%	7%	49%	188%	48%	55%	55%	25%	9%	28%	7%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_007	21%	7%	49%	191%	49%	56%	56%	26%	9%	29%	7%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_008	21%	7%	49%	193%	50%	58%	58%	26%	9%	29%	7%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_009	20%	5%	45%	130%	47%	49%	49%	23%	7%	23%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_010	20%	5%	44%	125%	48%	49%	49%	23%	7%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_011	20%	5%	45%	128%	48%	49%	49%	23%	7%	23%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_012	20%	5%	46%	132%	48%	49%	49%	23%	8%	23%	5%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE214700_013	21%	6%	47%	135%	48%	49%	49%	23%	8%	24%	5%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_014	21%	6%	49%	141%	46%	49%	49%	24%	8%	25%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_015	21%	6%	50%	172%	53%	55%	55%	25%	9%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_016	21%	6%	49%	172%	53%	55%	55%	25%	8%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_017	21%	6%	49%	172%	53%	56%	56%	24%	8%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_018	21%	6%	49%	156%	50%	52%	52%	24%	8%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_019	21%	6%	49%	146%	47%	50%	50%	24%	8%	25%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_020	21%	5%	48%	137%	46%	50%	50%	23%	7%	24%	5%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RE214700_021	21%	5%	46%	133%	47%	49%	49%	23%	7%	23%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_022	21%	5%	48%	138%	45%	47%	47%	23%	7%	24%	5%	3%	1%	6%	1%	1%	5%	1%	0%	0%
RE214700_023	20%	5%	48%	140%	45%	48%	48%	23%	7%	25%	5%	3%	1%	6%	1%	1%	6%	1%	0%	0%
RE214700_024	21%	5%	49%	149%	48%	51%	51%	23%	7%	26%	5%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_025	21%	6%	48%	161%	51%	51%	51%	23%	8%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_026	21%	6%	47%	184%	47%	50%	50%	25%	8%	26%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_027	20%	5%	47%	137%	46%	47%	47%	23%	7%	24%	5%	3%	1%	6%	1%	1%	5%	1%	0%	0%
RE214700_028	21%	6%	49%	139%	47%	49%	49%	23%	8%	24%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_029	21%	6%	49%	140%	45%	49%	49%	24%	8%	25%	6%	3%	1%	6%	2%	1%	6%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214700_030	21%	6%	50%	149%	48%	51%	51%	24%	8%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_031	21%	6%	50%	158%	51%	55%	55%	24%	8%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_032	21%	6%	50%	164%	52%	59%	59%	25%	8%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_033	21%	6%	50%	173%	53%	56%	56%	25%	9%	29%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_034	21%	6%	48%	171%	53%	54%	54%	24%	8%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_035	21%	6%	49%	163%	52%	54%	54%	24%	8%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_036	21%	6%	49%	140%	45%	48%	48%	23%	8%	25%	5%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_037	21%	5%	49%	139%	45%	50%	50%	23%	7%	24%	5%	3%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_038	21%	6%	48%	157%	50%	51%	51%	24%	7%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_039	21%	6%	48%	166%	52%	52%	52%	23%	8%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214700_040	20%	6%	48%	169%	52%	50%	50%	24%	8%	27%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214700_041	15%	5%	31%	89%	38%	37%	37%	19%	6%	15%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_042	15%	5%	32%	89%	38%	38%	38%	19%	6%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_043	16%	4%	32%	94%	40%	39%	39%	20%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_044	16%	4%	33%	95%	40%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_045	16%	4%	33%	97%	41%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_046	16%	4%	33%	98%	41%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_047	16%	4%	33%	98%	41%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_048	15%	4%	33%	94%	39%	39%	39%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_049	15%	4%	32%	90%	38%	39%	39%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_050	15%	4%	32%	89%	38%	38%	38%	19%	6%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_051	15%	4%	32%	88%	37%	37%	37%	19%	6%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_052	15%	5%	31%	87%	36%	36%	36%	19%	6%	15%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_053	15%	5%	31%	86%	35%	36%	36%	19%	6%	15%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_054	15%	5%	31%	88%	36%	35%	35%	19%	7%	15%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_055	15%	5%	31%	88%	37%	36%	36%	19%	6%	15%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_056	15%	5%	31%	89%	37%	36%	36%	19%	6%	15%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_057	15%	5%	32%	89%	38%	38%	38%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_058	16%	4%	32%	90%	39%	39%	39%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_059	16%	4%	32%	91%	39%	40%	40%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_060	16%	4%	32%	93%	40%	39%	39%	20%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_061	16%	4%	33%	99%	41%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_062	15%	4%	33%	94%	39%	39%	39%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_063	15%	4%	33%	93%	39%	39%	39%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_064	15%	4%	33%	92%	39%	39%	39%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_065	15%	4%	32%	89%	38%	39%	39%	19%	6%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_066	15%	4%	32%	89%	37%	38%	38%	19%	6%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_067	15%	4%	32%	88%	37%	36%	36%	19%	6%	15%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_068	15%	4%	31%	88%	36%	36%	36%	19%	6%	15%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214700_069	15%	5%	30%	85%	35%	36%	36%	19%	6%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214700_070	17%	4%	36%	106%	44%	42%	42%	21%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_071	17%	4%	35%	104%	44%	42%	42%	21%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_072	17%	4%	35%	103%	43%	42%	42%	21%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_073	16%	5%	34%	101%	43%	41%	41%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_074	16%	5%	34%	98%	42%	41%	41%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_075	16%	5%	33%	95%	41%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214700_076	16%	5%	32%	90%	39%	38%	38%	19%	7%	16%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_077	16%	4%	35%	105%	44%	42%	42%	21%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_078	17%	4%	35%	105%	44%	42%	42%	21%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_079	17%	4%	35%	102%	43%	42%	42%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_080	16%	5%	34%	100%	42%	41%	41%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_081	16%	5%	34%	97%	41%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_082	16%	5%	33%	94%	40%	40%	40%	19%	7%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_083	16%	5%	33%	92%	40%	39%	39%	19%	7%	16%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_084	16%	5%	32%	90%	39%	39%	39%	19%	7%	16%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_085	16%	5%	32%	90%	38%	38%	38%	20%	7%	16%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214700_086	19%	5%	40%	115%	47%	47%	47%	22%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_087	19%	5%	41%	115%	48%	47%	47%	22%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_088	19%	5%	40%	114%	47%	46%	46%	22%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_089	19%	5%	40%	113%	47%	46%	46%	22%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_090	19%	5%	39%	112%	46%	46%	46%	22%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_091	18%	5%	39%	110%	46%	45%	45%	21%	7%	20%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_092	18%	5%	38%	109%	46%	44%	44%	21%	7%	19%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_093	19%	5%	41%	118%	48%	48%	48%	23%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_094	19%	5%	42%	121%	48%	48%	48%	23%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_095	19%	5%	42%	122%	47%	48%	48%	23%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_096	18%	5%	38%	107%	45%	43%	43%	21%	7%	19%	5%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214700_097	18%	5%	38%	107%	45%	43%	43%	21%	7%	19%	5%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE214700_098	19%	5%	42%	120%	48%	48%	48%	23%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_099	19%	5%	43%	124%	47%	47%	47%	23%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_100	19%	5%	40%	113%	47%	46%	46%	22%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_101	19%	5%	41%	116%	47%	47%	47%	22%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_102	19%	5%	42%	116%	48%	48%	48%	22%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_103	19%	5%	42%	119%	48%	49%	49%	22%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_104	20%	5%	42%	121%	48%	49%	49%	23%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_105	20%	5%	43%	123%	48%	49%	49%	23%	7%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_106	20%	5%	45%	129%	48%	48%	48%	23%	7%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_107	20%	5%	45%	130%	47%	48%	48%	23%	7%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_108	19%	5%	41%	114%	47%	46%	46%	22%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_109	19%	5%	42%	118%	48%	48%	48%	22%	7%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_110	20%	5%	43%	125%	48%	49%	49%	23%	7%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_111	20%	5%	44%	127%	48%	48%	48%	23%	7%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_112	20%	5%	44%	128%	48%	48%	48%	23%	7%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_113	20%	5%	45%	131%	47%	48%	48%	23%	7%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214700_114	20%	5%	45%	132%	47%	48%	48%	23%	7%	23%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214800_004	13%	4%	30%	88%	34%	37%	37%	18%	5%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE214800_005	20%	6%	48%	165%	52%	52%	52%	23%	8%	27%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE214800_006	20%	5%	48%	154%	49%	50%	50%	23%	7%	26%	5%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214800_007	20%	5%	47%	138%	44%	46%	46%	24%	7%	24%	5%	3%	1%	6%	1%	1%	5%	1%	0%	0%
RE214800_012	21%	6%	47%	183%	48%	48%	48%	24%	8%	26%	6%	3%	1%	6%	1%	1%	6%	1%	0%	0%
RE214800_013	20%	6%	47%	182%	47%	48%	48%	24%	8%	26%	6%	3%	1%	6%	1%	1%	6%	1%	0%	0%
RE214800_014	20%	6%	47%	182%	47%	49%	49%	24%	8%	26%	6%	3%	1%	6%	1%	1%	6%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214800_015	20%	6%	48%	168%	52%	50%	50%	23%	8%	26%	6%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214800_016	20%	5%	48%	160%	51%	51%	51%	23%	7%	26%	5%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE214800_017	20%	5%	48%	146%	47%	49%	49%	23%	7%	25%	5%	4%	1%	6%	1%	1%	6%	1%	0%	0%
RE214800_018	20%	5%	48%	138%	45%	47%	47%	24%	7%	25%	5%	3%	1%	6%	1%	1%	6%	1%	0%	0%
RE214800_019	16%	4%	33%	100%	42%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_020	16%	4%	34%	101%	42%	40%	40%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_021	15%	4%	33%	97%	40%	39%	39%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_022	15%	4%	33%	96%	40%	39%	39%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_023	16%	4%	34%	104%	42%	39%	39%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_024	15%	4%	34%	101%	41%	39%	39%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_025	16%	4%	35%	108%	42%	40%	40%	21%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_026	16%	4%	37%	110%	42%	40%	40%	21%	6%	19%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_027	16%	4%	35%	106%	41%	39%	39%	20%	5%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_028	15%	4%	34%	103%	41%	38%	38%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_029	15%	4%	34%	102%	41%	39%	39%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_030	15%	4%	34%	101%	41%	39%	39%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_031	15%	4%	32%	96%	39%	37%	37%	19%	5%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_032	16%	4%	34%	105%	42%	39%	39%	20%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_033	16%	4%	35%	106%	42%	39%	39%	21%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_034	16%	4%	35%	107%	42%	40%	40%	21%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_035	16%	4%	36%	109%	42%	40%	40%	21%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_036	16%	4%	36%	110%	42%	40%	40%	21%	6%	19%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_037	16%	4%	36%	110%	42%	40%	40%	21%	6%	19%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_038	16%	4%	35%	108%	42%	39%	39%	20%	5%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_039	16%	4%	35%	107%	41%	39%	39%	20%	5%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_040	15%	4%	35%	105%	41%	38%	38%	20%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_041	15%	4%	34%	104%	41%	38%	38%	20%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_042	15%	4%	32%	94%	38%	38%	38%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_043	15%	4%	32%	95%	38%	37%	37%	19%	6%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_044	15%	4%	32%	97%	39%	37%	37%	19%	5%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_045	15%	4%	33%	98%	39%	37%	37%	19%	5%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_046	15%	4%	33%	100%	40%	37%	37%	19%	5%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_052	14%	4%	31%	93%	37%	37%	37%	19%	5%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214800_053	14%	4%	31%	91%	37%	37%	37%	19%	5%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214800_056	14%	4%	31%	94%	38%	37%	37%	19%	5%	16%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_057	14%	4%	31%	90%	37%	38%	38%	19%	5%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214800_058	14%	4%	31%	90%	37%	38%	38%	19%	5%	16%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE214800_059	17%	4%	36%	107%	44%	42%	42%	21%	6%	18%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_060	17%	4%	36%	108%	44%	42%	42%	21%	6%	18%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_061	19%	5%	43%	127%	47%	47%	47%	23%	6%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214800_062	17%	4%	37%	111%	44%	42%	42%	22%	6%	19%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_063	17%	4%	38%	112%	44%	43%	43%	22%	6%	19%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_064	17%	4%	39%	115%	43%	43%	43%	23%	6%	20%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_065	19%	5%	43%	125%	47%	47%	47%	23%	6%	21%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214800_066	19%	5%	43%	127%	47%	46%	46%	23%	6%	22%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214800_067	17%	4%	37%	112%	44%	42%	42%	22%	6%	19%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE214800_068	17%	4%	38%	113%	44%	44%	44%	22%	6%	20%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_069	17%	4%	38%	114%	44%	43%	43%	22%	6%	20%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_070	17%	4%	39%	118%	43%	41%	41%	23%	6%	20%	4%	3%	1%	5%	1%	0%	5%	1%	0%	0%
RE214800_071	17%	4%	39%	119%	43%	41%	41%	23%	6%	20%	4%	3%	1%	5%	1%	0%	5%	1%	0%	0%
RE214800_072	17%	4%	39%	117%	43%	42%	42%	23%	6%	20%	4%	3%	1%	5%	1%	0%	5%	1%	0%	0%
RE214800_073	20%	5%	45%	133%	46%	46%	46%	23%	7%	23%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214800_074	20%	5%	46%	134%	46%	45%	45%	24%	7%	23%	5%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214800_075	17%	4%	37%	111%	44%	42%	42%	22%	6%	19%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214800_076	20%	6%	47%	181%	48%	48%	48%	24%	8%	26%	6%	3%	1%	6%	1%	1%	6%	1%	0%	0%
RE214900_001	16%	4%	37%	111%	42%	40%	40%	21%	5%	19%	4%	3%	1%	4%	1%	0%	4%	1%	0%	0%
RE214900_008	17%	4%	40%	120%	43%	40%	40%	23%	6%	21%	4%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214900_009	17%	4%	40%	121%	42%	40%	40%	23%	6%	21%	4%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE214900_010	17%	4%	40%	121%	42%	39%	39%	23%	6%	21%	4%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RE217600_001	11%	4%	22%	71%	22%	34%	34%	14%	5%	12%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE217600_002	11%	3%	23%	57%	23%	31%	31%	14%	5%	12%	4%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE218700_001	7%	2%	13%	28%	15%	19%	19%	11%	4%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE218700_002	5%	2%	10%	20%	12%	16%	16%	9%	3%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE220800_001	9%	3%	17%	85%	15%	23%	23%	12%	5%	8%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE220900_001	11%	4%	27%	71%	16%	24%	24%	16%	6%	11%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE220900_002	8%	3%	17%	71%	13%	25%	25%	10%	5%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE220900_003	9%	3%	18%	85%	15%	24%	24%	11%	5%	8%	3%	2%	0%	3%	0%	0%	2%	1%	0%	0%
RE221000_001	9%	3%	18%	69%	13%	29%	29%	12%	5%	9%	3%	1%	0%	3%	1%	0%	2%	1%	0%	0%
RE221000_002	9%	4%	19%	62%	12%	29%	29%	12%	5%	9%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE221300_001	10%	4%	23%	60%	13%	30%	30%	16%	6%	11%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE221300_002	11%	4%	28%	63%	14%	30%	30%	18%	6%	12%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE221300_003	8%	3%	17%	90%	16%	25%	25%	10%	5%	9%	3%	2%	0%	3%	0%	0%	2%	1%	0%	0%
RE222600_001	5%	2%	17%	73%	17%	21%	21%	20%	4%	14%	3%	1%	1%	2%	1%	0%	3%	0%	0%	0%
RE222700_001	3%	1%	6%	112%	22%	27%	27%	18%	5%	13%	3%	2%	0%	4%	1%	0%	3%	1%	0%	0%
RE222700_002	4%	2%	8%	119%	24%	32%	32%	17%	5%	13%	3%	3%	0%	4%	1%	0%	3%	1%	0%	0%
RE222700_003	4%	1%	10%	121%	25%	32%	32%	17%	5%	12%	4%	3%	0%	4%	1%	0%	3%	1%	0%	0%
RE222700_004	5%	2%	13%	120%	26%	35%	35%	18%	6%	13%	4%	3%	0%	4%	1%	0%	3%	1%	0%	0%
RE222700_005	6%	2%	15%	115%	27%	35%	35%	20%	6%	15%	4%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE222700_006	14%	4%	35%	111%	35%	41%	41%	31%	8%	24%	5%	2%	1%	4%	1%	1%	5%	1%	0%	0%
RE222800_001	2%	1%	4%	109%	22%	29%	29%	22%	5%	16%	3%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE222800_002	2%	1%	3%	119%	24%	33%	33%	21%	5%	16%	3%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE222800_003	2%	1%	3%	130%	26%	35%	35%	20%	5%	15%	3%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE222800_004	18%	5%	46%	154%	54%	61%	61%	40%	11%	38%	8%	3%	1%	6%	2%	1%	8%	1%	0%	0%
RE222800_005	3%	1%	9%	76%	19%	23%	23%	18%	4%	13%	2%	1%	0%	3%	1%	0%	3%	0%	0%	0%
RE222900_001	3%	2%	5%	134%	28%	36%	36%	20%	6%	15%	4%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE223100_001	21%	5%	58%	126%	39%	51%	51%	34%	8%	26%	6%	3%	1%	4%	2%	1%	5%	1%	0%	0%
RE224000_001	5%	1%	5%	19%	8%	14%	14%	6%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE224000_002	7%	3%	10%	46%	12%	26%	26%	10%	4%	6%	3%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE224000_003	2%	0%	2%	9%	5%	10%	10%	4%	2%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE224000_004	4%	1%	5%	6%	7%	11%	11%	5%	2%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE224000_005	2%	1%	4%	7%	6%	9%	9%	5%	2%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE224000_006	5%	2%	9%	13%	7%	13%	13%	7%	3%	5%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE224000_007	5%	1%	11%	11%	7%	10%	10%	6%	2%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE224000_008	5%	1%	5%	16%	7%	14%	14%	6%	2%	4%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE224100_001	10%	2%	26%	22%	16%	14%	14%	12%	4%	7%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE224200_001	20%	5%	45%	56%	24%	31%	31%	19%	6%	12%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE225600_001	12%	6%	25%	117%	36%	41%	41%	18%	8%	14%	5%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE225700_001	13%	6%	25%	126%	43%	41%	41%	20%	7%	16%	4%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE225700_002	18%	8%	36%	140%	33%	68%	68%	30%	13%	24%	7%	3%	1%	6%	2%	1%	4%	1%	0%	0%
RE225800_001	15%	7%	27%	128%	32%	48%	48%	21%	8%	16%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE226500_001	16%	7%	20%	67%	14%	51%	51%	16%	10%	6%	5%	2%	0%	4%	1%	0%	1%	1%	0%	0%
RE226500_002	17%	7%	30%	43%	16%	53%	53%	22%	9%	11%	4%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE226600_001	17%	7%	30%	26%	15%	50%	50%	21%	9%	9%	4%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE226700_001	14%	7%	17%	63%	10%	44%	44%	14%	10%	4%	4%	2%	0%	4%	0%	0%	0%	1%	0%	0%
RE226800_001	12%	7%	14%	67%	6%	41%	41%	11%	9%	4%	4%	2%	0%	3%	0%	0%	0%	1%	0%	0%
RE227000_001	10%	6%	19%	20%	14%	32%	32%	11%	7%	7%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE227100_001	8%	6%	16%	14%	12%	29%	29%	7%	7%	7%	3%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE227100_002	6%	6%	14%	14%	11%	23%	23%	6%	7%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE227300_001	6%	2%	15%	25%	4%	7%	7%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE227800_001	11%	4%	25%	14%	18%	34%	34%	16%	7%	11%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE227900_001	8%	4%	17%	48%	14%	31%	31%	17%	7%	8%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE228000_001	2%	1%	3%	5%	0%	2%	2%	0%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE228000_002	2%	1%	3%	6%	0%	3%	3%	0%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE228000_003	3%	1%	3%	5%	1%	2%	2%	0%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE228000_004	2%	1%	3%	6%	0%	1%	1%	0%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE228000_005	1%	1%	1%	-6%	0%	-1%	-1%	-1%	1%	2%	1%	0%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228000_006	1%	1%	0%	-6%	0%	0%	0%	-2%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228000_007	1%	1%	0%	-5%	0%	0%	0%	-1%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228000_008	-1%	-1%	0%	22%	7%	5%	5%	2%	0%	4%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE228000_009	2%	1%	1%	0%	1%	1%	1%	-1%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE228100_001	1%	1%	1%	0%	1%	1%	1%	-1%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE228300_028	-1%	1%	-1%	-16%	-2%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228300_029	-1%	1%	-1%	-16%	-2%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228300_030	-1%	1%	-1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228300_031	-1%	1%	-1%	-16%	-2%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228300_032	-1%	1%	-1%	-16%	-2%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228300_033	-1%	1%	-1%	-16%	-2%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228300_034	-1%	1%	-1%	-16%	-2%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228300_035	-1%	1%	-1%	-16%	-2%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_004	-1%	1%	0%	-14%	-6%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_005	-1%	1%	0%	-14%	-6%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_006	-1%	1%	1%	-15%	-6%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_007	-1%	1%	-1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_008	-1%	1%	-1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_009	-1%	1%	-1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_010	-1%	1%	-1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_011	-1%	1%	-1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_013	-1%	1%	0%	-11%	-4%	-3%	-3%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE228400_014	-1%	1%	0%	-11%	-4%	-3%	-3%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_015	-1%	1%	0%	-11%	-4%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_045	0%	1%	2%	-15%	-6%	-1%	-1%	-3%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_046	0%	1%	2%	-15%	-6%	-1%	-1%	-3%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_047	0%	1%	2%	-15%	-6%	-1%	-1%	-3%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_048	0%	1%	2%	-15%	-6%	-2%	-2%	-3%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_049	0%	1%	2%	-15%	-6%	-2%	-2%	-3%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_050	0%	1%	2%	-14%	-6%	-3%	-3%	-3%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_051	0%	1%	2%	-14%	-6%	-3%	-3%	-3%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_052	-1%	1%	1%	-14%	-5%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_053	-1%	1%	1%	-13%	-5%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_054	-1%	1%	0%	-12%	-5%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_055	-1%	1%	0%	-12%	-5%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_056	-1%	1%	0%	-12%	-5%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_057	-1%	1%	-1%	-13%	-4%	-5%	-5%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_058	-1%	1%	-1%	-13%	-4%	-5%	-5%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228400_059	-1%	1%	-1%	-14%	-4%	-5%	-5%	-6%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_009	0%	1%	0%	-15%	-4%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_010	0%	1%	0%	-15%	-4%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_011	0%	1%	0%	-14%	-5%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_012	0%	1%	0%	-14%	-5%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_013	0%	1%	0%	-14%	-5%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_014	0%	1%	0%	-15%	-6%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_015	0%	1%	0%	-16%	-6%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_016	0%	1%	0%	-17%	-7%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_017	0%	1%	0%	-17%	-7%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_018	0%	1%	0%	-18%	-7%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_019	0%	1%	0%	-18%	-7%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_020	-1%	1%	1%	-18%	-8%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_021	-1%	1%	0%	-18%	-8%	-5%	-5%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_022	-1%	1%	1%	-15%	-6%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_023	-1%	1%	1%	-16%	-7%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_024	-1%	1%	1%	-16%	-7%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_025	-1%	1%	1%	-17%	-7%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_026	0%	1%	1%	-17%	-7%	-3%	-3%	-4%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_027	0%	1%	1%	-17%	-7%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_028	0%	1%	0%	-17%	-6%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_029	0%	1%	0%	-17%	-6%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_030	0%	1%	0%	-16%	-6%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_031	0%	1%	0%	-15%	-5%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_032	0%	1%	0%	-14%	-5%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_033	0%	1%	0%	-13%	-5%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_034	0%	1%	0%	-13%	-4%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_035	0%	1%	0%	-14%	-4%	-3%	-3%	-4%	2%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_049	0%	1%	0%	-14%	-5%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_050	0%	1%	0%	-15%	-5%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE228500_051	0%	1%	1%	-16%	-6%	-2%	-2%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_052	0%	1%	1%	-16%	-6%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_053	0%	1%	1%	-16%	-6%	-2%	-2%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_054	0%	1%	1%	-16%	-6%	-2%	-2%	-3%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_055	0%	1%	1%	-16%	-6%	-2%	-2%	-3%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_056	0%	1%	1%	-16%	-6%	-2%	-2%	-3%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_057	0%	1%	2%	-16%	-6%	-2%	-2%	-3%	1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228500_060	-1%	1%	0%	-19%	-8%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_061	-1%	1%	0%	-19%	-8%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_062	0%	1%	0%	-19%	-8%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_063	0%	1%	0%	-19%	-8%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_064	0%	1%	0%	-19%	-8%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_065	0%	1%	0%	-19%	-8%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_066	0%	1%	0%	-18%	-7%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228500_067	0%	1%	0%	-18%	-7%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_013	1%	1%	1%	-13%	0%	-3%	-3%	-4%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_014	0%	1%	1%	-13%	-1%	-3%	-3%	-5%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_015	0%	1%	0%	-15%	-1%	-3%	-3%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_016	0%	1%	0%	-15%	-2%	-3%	-3%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_017	0%	1%	0%	-15%	-2%	-3%	-3%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_018	0%	1%	0%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_019	0%	1%	0%	-16%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_020	0%	1%	1%	-17%	-4%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_021	0%	1%	0%	-17%	-4%	-5%	-5%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_022	0%	1%	0%	-17%	-5%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_023	0%	1%	-1%	-17%	-6%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_024	-1%	1%	-1%	-16%	-7%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_025	-1%	1%	-1%	-18%	-7%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_026	-1%	1%	-1%	-19%	-8%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_027	-1%	1%	-1%	-20%	-8%	-6%	-6%	-5%	1%	1%	1%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE228600_036	0%	1%	1%	-15%	-3%	-3%	-3%	-4%	2%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_037	0%	1%	1%	-15%	-4%	-3%	-3%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_038	0%	1%	1%	-15%	-4%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_039	0%	1%	0%	-17%	-7%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_040	0%	1%	-1%	-17%	-7%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_041	0%	1%	-1%	-16%	-6%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_042	0%	1%	0%	-16%	-6%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_043	0%	1%	0%	-15%	-6%	-4%	-4%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_044	0%	1%	0%	-15%	-6%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_045	0%	1%	0%	-15%	-5%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_046	0%	1%	0%	-15%	-5%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_047	0%	1%	0%	-15%	-5%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_048	0%	1%	0%	-16%	-5%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_049	0%	1%	0%	-16%	-5%	-5%	-5%	-5%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_050	0%	1%	0%	-16%	-4%	-5%	-5%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_051	0%	1%	0%	-16%	-4%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE228600_052	0%	1%	0%	-16%	-4%	-4%	-4%	-4%	1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_053	0%	1%	1%	-16%	-4%	-4%	-4%	-4%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_054	0%	1%	1%	-16%	-4%	-4%	-4%	-4%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_055	0%	1%	1%	-16%	-4%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_056	0%	1%	1%	-16%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_057	0%	1%	1%	-16%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_058	0%	1%	1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_059	0%	1%	1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_060	0%	1%	1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_061	0%	1%	1%	-15%	-3%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_062	0%	1%	1%	-15%	-2%	-4%	-4%	-5%	1%	0%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE228600_063	-1%	0%	-3%	32%	13%	21%	21%	11%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE228700_010	5%	2%	13%	49%	19%	27%	27%	15%	5%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE228800_001	2%	1%	1%	39%	22%	40%	40%	17%	7%	12%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE228800_002	2%	1%	1%	43%	20%	37%	37%	15%	7%	11%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE228800_003	5%	2%	11%	43%	17%	33%	33%	13%	6%	10%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE228900_001	3%	2%	4%	49%	24%	44%	44%	19%	8%	13%	5%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE228900_002	7%	4%	12%	62%	30%	53%	53%	22%	9%	16%	6%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE229000_001	7%	3%	18%	43%	16%	26%	26%	13%	5%	9%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE229100_001	7%	3%	17%	42%	15%	26%	26%	12%	5%	10%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE230200_001	11%	3%	25%	19%	10%	24%	24%	13%	4%	8%	3%	0%	0%	1%	1%	0%	1%	0%	0%	0%
RE230300_001	9%	4%	21%	11%	5%	26%	26%	13%	6%	8%	3%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230300_002	11%	4%	26%	16%	11%	32%	32%	16%	6%	10%	4%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE230300_003	6%	2%	14%	14%	1%	10%	10%	7%	3%	6%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230300_004	5%	2%	10%	9%	2%	0%	0%	3%	2%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230300_005	2%	1%	4%	-7%	-1%	-9%	-9%	1%	1%	2%	1%	0%	0%	-1%	0%	0%	0%	0%	0%	0%
RE230400_001	13%	6%	20%	26%	15%	42%	42%	19%	8%	12%	5%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE230400_002	13%	6%	20%	28%	15%	43%	43%	21%	8%	13%	5%	1%	1%	1%	1%	0%	2%	1%	0%	0%
RE230400_006	7%	2%	14%	10%	2%	17%	17%	8%	3%	6%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230400_007	6%	2%	12%	13%	-2%	5%	5%	6%	3%	5%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230400_008	6%	2%	12%	14%	-2%	5%	5%	6%	3%	5%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230400_009	6%	2%	12%	14%	-1%	6%	6%	6%	3%	6%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230400_010	3%	1%	4%	-9%	-5%	-9%	-9%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE230400_011	0%	1%	0%	-14%	-9%	-15%	-15%	-5%	0%	-1%	0%	-1%	0%	-1%	0%	0%	-1%	0%	0%	0%
RE230500_001	13%	5%	29%	27%	22%	37%	37%	18%	6%	10%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE230500_002	6%	3%	9%	32%	8%	23%	23%	10%	4%	6%	3%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230500_003	6%	3%	10%	34%	9%	23%	23%	9%	4%	7%	3%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE230500_004	5%	2%	5%	14%	2%	15%	15%	6%	3%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230500_005	4%	2%	5%	17%	4%	14%	14%	5%	3%	5%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230500_006	4%	2%	3%	21%	2%	9%	9%	5%	3%	5%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230500_007	3%	2%	4%	8%	0%	-1%	-1%	3%	2%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230500_008	4%	2%	4%	11%	0%	0%	0%	3%	2%	5%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230500_009	4%	2%	4%	14%	-1%	0%	0%	3%	2%	5%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230500_010	1%	1%	-2%	-8%	-6%	-17%	-17%	-4%	0%	1%	1%	0%	0%	-1%	0%	0%	0%	0%	0%	0%
RE230500_011	-1%	1%	-6%	-19%	-9%	-18%	-18%	-5%	-1%	-1%	0%	-1%	0%	-1%	0%	0%	-1%	0%	0%	0%
RE230500_012	-5%	-3%	-13%	-16%	-10%	-20%	-20%	-16%	-7%	-5%	-2%	-1%	-1%	-2%	-1%	0%	-2%	-1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230500_013	-1%	-1%	-4%	-9%	-2%	-7%	-7%	-8%	-2%	-1%	0%	-1%	0%	-1%	0%	0%	-1%	0%	0%	0%
RE230500_014	-1%	-1%	-1%	-4%	0%	-3%	-3%	0%	-1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE230600_001	6%	3%	10%	37%	13%	15%	15%	7%	4%	8%	3%	1%	0%	1%	0%	0%	2%	1%	0%	0%
RE230600_002	5%	2%	8%	37%	8%	7%	7%	5%	3%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230600_003	1%	0%	-1%	-10%	-3%	-9%	-9%	-6%	-2%	-1%	0%	-1%	0%	-2%	0%	0%	-1%	0%	0%	0%
RE230600_004	2%	0%	1%	-2%	3%	-5%	-5%	-5%	-1%	1%	1%	0%	0%	-1%	0%	0%	0%	0%	0%	0%
RE230600_005	1%	0%	2%	3%	5%	-3%	-3%	0%	0%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE230600_006	2%	0%	3%	4%	4%	-2%	-2%	2%	0%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE230900_001	5%	2%	11%	31%	8%	9%	9%	5%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_002	5%	2%	12%	31%	7%	10%	10%	6%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_003	5%	2%	12%	30%	7%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_004	5%	1%	13%	29%	8%	9%	9%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_005	5%	1%	13%	29%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_006	6%	1%	13%	30%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_007	6%	1%	13%	30%	9%	9%	9%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_008	6%	1%	13%	31%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_009	6%	1%	13%	30%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_010	6%	1%	14%	29%	9%	9%	9%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_011	6%	1%	14%	28%	9%	9%	9%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_012	5%	2%	12%	32%	8%	10%	10%	5%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_013	5%	2%	12%	32%	8%	10%	10%	6%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_014	5%	2%	13%	31%	7%	11%	11%	6%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_015	5%	2%	13%	30%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_016	5%	2%	13%	30%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_017	6%	2%	13%	30%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_018	6%	2%	13%	29%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_019	6%	2%	13%	29%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_020	6%	2%	13%	30%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_021	6%	2%	14%	31%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_022	6%	2%	14%	31%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_023	6%	2%	14%	30%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_024	6%	2%	14%	30%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_025	6%	2%	14%	29%	9%	9%	9%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_026	6%	2%	14%	28%	9%	10%	10%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_027	9%	4%	19%	33%	14%	16%	16%	9%	5%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_028	9%	4%	20%	33%	14%	16%	16%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_029	9%	4%	20%	33%	13%	16%	16%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_030	9%	4%	20%	33%	13%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_031	6%	2%	14%	30%	9%	10%	10%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_032	6%	2%	14%	30%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_033	6%	2%	14%	30%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_034	6%	2%	14%	30%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_035	6%	2%	14%	30%	10%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_036	6%	2%	15%	30%	11%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_037	6%	2%	15%	30%	11%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_038	6%	2%	15%	30%	11%	13%	13%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_039	7%	2%	16%	31%	11%	13%	13%	8%	2%	10%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_040	7%	2%	16%	31%	11%	13%	13%	8%	2%	10%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_041	7%	2%	16%	31%	12%	13%	13%	8%	2%	10%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_042	7%	2%	16%	31%	12%	13%	13%	8%	2%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_043	7%	2%	16%	31%	11%	13%	13%	8%	2%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_044	7%	2%	17%	31%	11%	13%	13%	8%	2%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_045	7%	2%	17%	31%	11%	13%	13%	8%	2%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_046	7%	2%	17%	31%	11%	13%	13%	8%	3%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_047	7%	2%	17%	31%	11%	13%	13%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_048	7%	2%	17%	31%	11%	13%	13%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_049	7%	2%	17%	31%	12%	13%	13%	9%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_050	7%	2%	17%	31%	12%	13%	13%	9%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_051	7%	2%	17%	31%	12%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_052	7%	2%	17%	31%	12%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_053	7%	2%	17%	31%	12%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_054	8%	3%	17%	31%	12%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_055	8%	3%	18%	31%	12%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_056	8%	3%	18%	31%	12%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_057	8%	3%	18%	31%	12%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_058	8%	3%	18%	31%	12%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_059	8%	3%	18%	32%	12%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_060	8%	3%	18%	32%	12%	15%	15%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_061	8%	3%	18%	32%	12%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_062	8%	3%	18%	32%	12%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_063	8%	3%	19%	32%	12%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_064	9%	3%	19%	32%	12%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_065	9%	3%	19%	32%	12%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_066	9%	3%	19%	33%	12%	14%	14%	9%	4%	12%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_067	9%	4%	20%	33%	14%	16%	16%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_068	9%	4%	20%	32%	14%	16%	16%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_069	9%	4%	19%	33%	14%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_070	9%	4%	19%	33%	14%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_071	9%	4%	19%	33%	14%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_072	9%	3%	19%	33%	13%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_073	9%	3%	19%	33%	13%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_074	8%	3%	19%	33%	13%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_075	8%	3%	18%	33%	13%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_076	8%	3%	18%	33%	13%	15%	15%	9%	4%	12%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_077	8%	3%	18%	33%	13%	14%	14%	9%	4%	11%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_078	8%	3%	18%	33%	13%	14%	14%	9%	4%	11%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_079	8%	3%	18%	32%	13%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RE230900_080	8%	3%	18%	32%	13%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_081	8%	3%	18%	32%	13%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_082	8%	3%	18%	32%	13%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_083	8%	3%	18%	32%	13%	14%	14%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_084	8%	3%	18%	32%	13%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_085	8%	3%	18%	32%	13%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_086	8%	3%	18%	32%	13%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_087	8%	3%	17%	32%	13%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_088	8%	3%	17%	32%	13%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_089	8%	3%	17%	32%	12%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_090	8%	2%	17%	32%	12%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_091	8%	2%	17%	32%	12%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_092	7%	2%	17%	32%	12%	13%	13%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_093	7%	2%	17%	32%	12%	12%	12%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_094	7%	2%	17%	32%	12%	12%	12%	9%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_095	7%	2%	17%	32%	12%	12%	12%	8%	2%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_096	7%	2%	16%	32%	12%	12%	12%	8%	2%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_097	7%	2%	16%	32%	12%	12%	12%	8%	2%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_098	7%	2%	15%	32%	12%	12%	12%	8%	2%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_099	7%	2%	15%	32%	11%	12%	12%	8%	2%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_100	6%	2%	15%	32%	11%	12%	12%	7%	2%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_101	6%	2%	15%	32%	10%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_102	6%	2%	14%	32%	10%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_103	6%	2%	14%	32%	9%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE230900_104	6%	2%	14%	32%	9%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_105	6%	2%	14%	31%	9%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_106	6%	2%	14%	31%	9%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_107	6%	2%	14%	31%	8%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_108	6%	2%	14%	31%	8%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_109	6%	2%	14%	31%	8%	12%	12%	7%	2%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE230900_110	6%	2%	14%	30%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_111	6%	2%	15%	31%	10%	10%	10%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_112	6%	2%	15%	31%	10%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_113	6%	2%	15%	30%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_114	6%	2%	15%	29%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE230900_115	6%	2%	16%	29%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_116	6%	2%	16%	30%	10%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_117	6%	2%	16%	30%	10%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_118	7%	2%	16%	31%	10%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_119	6%	2%	15%	31%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_120	6%	2%	15%	31%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_121	7%	2%	16%	31%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_122	7%	2%	16%	31%	10%	11%	11%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_123	7%	2%	16%	31%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_124	7%	2%	16%	31%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_125	7%	2%	16%	31%	10%	12%	12%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_126	7%	2%	16%	29%	10%	11%	11%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_127	7%	2%	16%	32%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_128	7%	2%	16%	32%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_129	7%	2%	17%	32%	10%	12%	12%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_130	7%	2%	17%	32%	10%	12%	12%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_131	7%	2%	17%	32%	11%	12%	12%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_132	7%	2%	17%	32%	11%	12%	12%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_133	7%	2%	17%	32%	11%	12%	12%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_134	7%	2%	17%	32%	11%	12%	12%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_135	7%	2%	17%	31%	11%	13%	13%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_136	7%	2%	17%	31%	11%	13%	13%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_137	7%	2%	17%	31%	11%	13%	13%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_138	7%	2%	17%	31%	11%	13%	13%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_139	8%	2%	17%	31%	11%	13%	13%	8%	3%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_140	8%	2%	18%	31%	11%	13%	13%	8%	3%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_141	8%	2%	18%	31%	11%	13%	13%	8%	3%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_142	8%	2%	18%	31%	11%	13%	13%	8%	3%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_143	8%	2%	18%	31%	11%	13%	13%	9%	3%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_144	8%	3%	18%	31%	11%	13%	13%	9%	3%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE230900_145	7%	2%	17%	30%	10%	11%	11%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_146	7%	2%	16%	30%	10%	12%	12%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_147	7%	2%	16%	30%	10%	12%	12%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_148	7%	2%	16%	30%	10%	12%	12%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE230900_149	3%	1%	8%	28%	5%	7%	7%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_150	3%	1%	8%	27%	5%	8%	8%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_151	3%	1%	8%	27%	5%	8%	8%	3%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_152	3%	1%	8%	27%	6%	7%	7%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_153	3%	1%	8%	27%	6%	7%	7%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_154	3%	1%	8%	28%	6%	7%	7%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_155	3%	1%	8%	28%	6%	7%	7%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_156	3%	1%	8%	28%	6%	7%	7%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_157	3%	1%	9%	28%	6%	7%	7%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_158	3%	1%	9%	28%	6%	7%	7%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_159	4%	1%	9%	28%	5%	7%	7%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_160	4%	1%	9%	28%	6%	7%	7%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_161	4%	1%	9%	29%	5%	7%	7%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_162	3%	1%	8%	27%	5%	8%	8%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_163	3%	1%	9%	27%	5%	8%	8%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_164	4%	1%	9%	29%	5%	7%	7%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_165	3%	1%	9%	29%	5%	7%	7%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_166	3%	1%	8%	29%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_167	3%	1%	8%	29%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_168	3%	1%	8%	28%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_169	3%	1%	8%	28%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_170	3%	1%	7%	27%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_171	3%	1%	7%	26%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_172	3%	1%	7%	24%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_173	3%	1%	7%	23%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_174	3%	1%	7%	23%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_175	3%	1%	7%	22%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_176	3%	1%	7%	22%	6%	5%	5%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_177	3%	1%	7%	22%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_178	3%	1%	7%	22%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_179	3%	1%	7%	21%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_180	3%	1%	7%	21%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_181	3%	1%	7%	21%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_182	3%	1%	7%	21%	6%	5%	5%	3%	1%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_192	3%	1%	8%	29%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_193	3%	1%	8%	28%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_194	3%	1%	7%	28%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_198	5%	1%	13%	29%	8%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_199	5%	1%	13%	30%	8%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_200	5%	1%	13%	30%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_201	5%	1%	13%	31%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_202	5%	1%	12%	30%	8%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_203	5%	1%	12%	30%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_204	5%	1%	12%	29%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_205	5%	1%	13%	28%	9%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_206	5%	2%	12%	31%	7%	10%	10%	6%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_207	5%	2%	11%	31%	8%	9%	9%	5%	2%	8%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_208	5%	2%	11%	31%	7%	10%	10%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_209	4%	2%	11%	31%	7%	10%	10%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_210	4%	2%	11%	31%	7%	10%	10%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_211	4%	1%	10%	31%	7%	10%	10%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_212	4%	1%	10%	30%	6%	10%	10%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_213	4%	1%	10%	30%	6%	10%	10%	4%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_214	4%	1%	10%	30%	6%	10%	10%	4%	1%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_215	4%	1%	10%	30%	6%	10%	10%	4%	1%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_216	4%	1%	10%	30%	7%	10%	10%	5%	2%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_217	4%	1%	9%	30%	6%	9%	9%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_218	4%	1%	10%	30%	6%	10%	10%	4%	1%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_219	4%	1%	9%	30%	6%	10%	10%	4%	1%	7%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE230900_220	4%	1%	9%	30%	6%	9%	9%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_221	4%	1%	9%	30%	6%	9%	9%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_222	4%	1%	9%	30%	6%	9%	9%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_223	4%	1%	9%	29%	6%	8%	8%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_224	4%	1%	8%	29%	6%	8%	8%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_225	4%	1%	8%	29%	6%	7%	7%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_226	4%	1%	8%	29%	6%	7%	7%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_227	4%	1%	8%	29%	6%	6%	6%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_228	4%	1%	8%	29%	6%	6%	6%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_229	4%	1%	8%	29%	6%	6%	6%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_230	3%	1%	8%	29%	6%	5%	5%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_231	3%	1%	8%	29%	6%	5%	5%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_232	3%	1%	8%	29%	6%	5%	5%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_233	3%	1%	8%	28%	6%	5%	5%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_234	3%	1%	8%	28%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_235	3%	1%	8%	28%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_236	3%	1%	8%	28%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_237	3%	1%	7%	27%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_238	3%	1%	7%	27%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_239	3%	1%	7%	26%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_240	3%	1%	7%	26%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_241	4%	1%	9%	30%	6%	9%	9%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_242	3%	1%	7%	25%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_243	3%	1%	7%	24%	6%	3%	3%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_244	3%	1%	7%	23%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_245	3%	1%	7%	23%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_246	3%	1%	7%	22%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_247	3%	1%	7%	22%	6%	4%	4%	3%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_257	5%	1%	11%	27%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_258	5%	1%	11%	27%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_259	4%	1%	11%	27%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_260	4%	1%	11%	27%	5%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_261	4%	1%	10%	27%	5%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_262	4%	1%	10%	27%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_263	5%	1%	11%	27%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_264	5%	1%	11%	28%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_265	5%	1%	11%	28%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_266	5%	1%	11%	28%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_272	3%	1%	9%	27%	5%	4%	4%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_273	3%	1%	9%	27%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_274	3%	1%	9%	27%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_275	3%	1%	9%	28%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_276	3%	1%	9%	28%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_277	3%	1%	9%	28%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_278	3%	1%	9%	28%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_279	3%	1%	9%	28%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_280	3%	1%	9%	28%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_281	3%	1%	9%	28%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_282	3%	1%	9%	28%	5%	5%	5%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_283	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_285	4%	1%	11%	29%	5%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_286	4%	1%	10%	29%	5%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_287	4%	1%	10%	29%	5%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_288	4%	1%	10%	27%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_289	4%	1%	10%	27%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_290	4%	1%	10%	27%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_291	4%	1%	10%	27%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_292	4%	1%	10%	27%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_293	4%	1%	10%	27%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_294	4%	1%	9%	28%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_295	4%	1%	9%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_296	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_297	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_298	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_299	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_300	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_301	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_302	4%	1%	10%	27%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_303	4%	1%	9%	27%	5%	5%	5%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_304	4%	1%	9%	27%	5%	5%	5%	4%	1%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_305	3%	1%	9%	27%	5%	4%	4%	4%	1%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_306	3%	1%	9%	27%	5%	4%	4%	4%	1%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_307	3%	1%	9%	26%	5%	4%	4%	4%	1%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_310	3%	1%	9%	27%	5%	4%	4%	4%	1%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_312	5%	1%	12%	27%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_313	4%	1%	9%	27%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_315	4%	1%	11%	29%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_317	5%	1%	11%	29%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_318	3%	1%	9%	29%	5%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_319	4%	1%	9%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_320	4%	1%	9%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_321	4%	1%	9%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_322	4%	1%	9%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_323	4%	1%	9%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_324	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_325	4%	1%	10%	29%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_326	4%	1%	10%	29%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_327	4%	1%	10%	29%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_328	4%	1%	10%	29%	6%	5%	5%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_329	4%	1%	10%	30%	6%	5%	5%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_330	4%	1%	11%	30%	6%	5%	5%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_331	4%	1%	11%	30%	6%	5%	5%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_332	5%	1%	11%	29%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_333	5%	1%	11%	28%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_334	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_335	4%	1%	11%	27%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_337	3%	1%	8%	29%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_338	3%	1%	8%	29%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_339	3%	1%	8%	29%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_340	3%	1%	8%	29%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_341	3%	1%	8%	29%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_342	3%	1%	8%	29%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_343	3%	1%	8%	29%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_344	3%	1%	8%	29%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_345	3%	1%	8%	29%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_346	3%	1%	8%	29%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_347	3%	1%	8%	29%	5%	7%	7%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_348	3%	1%	8%	29%	5%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_349	3%	1%	9%	29%	5%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_350	5%	1%	12%	30%	8%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_351	5%	1%	12%	29%	7%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_352	5%	1%	12%	29%	7%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_353	5%	1%	12%	29%	7%	8%	8%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_354	5%	1%	11%	29%	7%	8%	8%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_355	4%	1%	11%	29%	7%	8%	8%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_356	4%	1%	11%	29%	7%	8%	8%	5%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_357	4%	1%	11%	29%	7%	8%	8%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_358	4%	1%	11%	29%	7%	8%	8%	5%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_359	5%	1%	11%	30%	7%	8%	8%	5%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_360	5%	1%	12%	30%	7%	9%	9%	5%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_361	5%	1%	13%	28%	8%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_362	5%	1%	13%	29%	8%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_363	5%	1%	12%	29%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_364	5%	1%	12%	30%	7%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_365	5%	1%	12%	30%	8%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_366	5%	1%	11%	30%	7%	7%	7%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_367	5%	1%	11%	29%	7%	8%	8%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_368	4%	1%	11%	28%	7%	8%	8%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_369	4%	1%	11%	29%	7%	7%	7%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_370	4%	1%	10%	29%	6%	7%	7%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_371	4%	1%	10%	29%	6%	8%	8%	4%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_372	4%	1%	10%	29%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_373	4%	1%	10%	28%	6%	7%	7%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_374	4%	1%	9%	28%	6%	6%	6%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_375	4%	1%	9%	28%	6%	6%	6%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_376	4%	1%	9%	29%	6%	7%	7%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_377	4%	1%	9%	29%	6%	7%	7%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_378	4%	1%	11%	29%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_379	4%	1%	10%	29%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_380	4%	1%	10%	28%	6%	7%	7%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_381	4%	1%	10%	28%	6%	7%	7%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_382	4%	1%	11%	29%	6%	7%	7%	5%	1%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_383	4%	1%	11%	29%	6%	7%	7%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_384	5%	1%	11%	30%	6%	6%	6%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_385	5%	1%	11%	30%	6%	6%	6%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_386	3%	1%	7%	27%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_387	3%	1%	7%	28%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_388	3%	1%	8%	29%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_389	3%	1%	7%	29%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_390	3%	1%	7%	28%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_391	3%	1%	7%	26%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_394	4%	1%	10%	29%	6%	7%	7%	4%	1%	6%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_395	3%	1%	7%	23%	6%	5%	5%	3%	1%	5%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE230900_396	3%	1%	7%	25%	6%	5%	5%	3%	1%	5%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_397	3%	1%	7%	27%	6%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_398	3%	1%	8%	27%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_399	3%	1%	8%	28%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_400	3%	1%	8%	29%	5%	6%	6%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_401	3%	1%	8%	29%	5%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_402	3%	1%	8%	28%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_403	3%	1%	8%	27%	5%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_404	3%	1%	8%	27%	6%	7%	7%	3%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE230900_405	3%	1%	7%	27%	6%	6%	6%	3%	1%	5%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE230900_406	3%	1%	7%	25%	6%	4%	4%	3%	1%	5%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_001	7%	2%	16%	31%	10%	13%	13%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_002	14%	5%	27%	9%	14%	43%	43%	15%	7%	8%	3%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_003	6%	1%	14%	29%	9%	9%	9%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_004	6%	1%	14%	31%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_005	6%	1%	14%	33%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_006	6%	1%	14%	32%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_007	6%	1%	14%	33%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_008	6%	1%	15%	34%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_009	6%	1%	15%	34%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_010	6%	1%	15%	34%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_011	6%	1%	15%	28%	9%	10%	10%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_012	6%	1%	15%	30%	9%	10%	10%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_013	6%	1%	15%	33%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_014	6%	1%	15%	33%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_015	6%	1%	15%	33%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_016	6%	1%	15%	33%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_017	6%	1%	15%	34%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_018	6%	1%	15%	34%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_019	6%	1%	15%	34%	8%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_020	6%	1%	15%	34%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_021	6%	1%	15%	34%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_022	6%	1%	15%	34%	8%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_023	6%	1%	15%	33%	8%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_024	6%	1%	15%	33%	8%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_025	6%	1%	15%	33%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_026	6%	1%	15%	32%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_027	6%	2%	15%	28%	9%	10%	10%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_028	6%	2%	15%	28%	9%	10%	10%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_029	6%	2%	15%	30%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_030	6%	2%	15%	33%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_031	6%	2%	15%	33%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_032	6%	2%	15%	34%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_033	6%	2%	15%	34%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_034	6%	2%	15%	34%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_035	6%	2%	15%	34%	8%	10%	10%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_036	6%	2%	15%	34%	8%	10%	10%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_037	6%	2%	15%	34%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_038	6%	2%	15%	34%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_039	6%	2%	15%	34%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_040	6%	2%	15%	33%	8%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_041	6%	2%	15%	33%	8%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_042	6%	1%	15%	32%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_043	6%	1%	15%	32%	8%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_044	6%	2%	15%	32%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_045	6%	2%	15%	32%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_046	6%	2%	15%	33%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_047	6%	2%	15%	33%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_048	6%	2%	15%	34%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_049	6%	2%	15%	34%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_050	6%	2%	15%	34%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_051	6%	2%	15%	35%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_052	6%	2%	15%	35%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_053	6%	2%	15%	35%	9%	10%	10%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_054	6%	2%	15%	35%	9%	10%	10%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_055	6%	2%	15%	35%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_056	6%	2%	16%	35%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_057	6%	2%	16%	35%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_058	6%	2%	16%	34%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_059	6%	2%	16%	34%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_060	6%	2%	16%	33%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_061	6%	2%	16%	33%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_062	6%	2%	16%	32%	9%	11%	11%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_063	6%	2%	16%	30%	9%	11%	11%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_064	6%	2%	16%	28%	9%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_065	6%	2%	16%	28%	9%	10%	10%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_066	6%	2%	16%	29%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_067	8%	3%	18%	31%	11%	13%	13%	9%	3%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_068	8%	3%	18%	30%	11%	13%	13%	9%	3%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_069	8%	3%	18%	30%	11%	13%	13%	9%	3%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_070	8%	3%	18%	30%	10%	13%	13%	9%	3%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_071	8%	3%	18%	30%	10%	13%	13%	9%	3%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_072	8%	3%	19%	30%	10%	13%	13%	9%	3%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_073	8%	3%	19%	30%	10%	13%	13%	9%	3%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_074	8%	3%	19%	29%	10%	14%	14%	9%	3%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_075	9%	3%	19%	30%	11%	14%	14%	9%	4%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_076	9%	3%	19%	30%	11%	14%	14%	9%	4%	11%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_077	9%	3%	20%	31%	11%	16%	16%	9%	4%	12%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_078	9%	3%	20%	30%	11%	15%	15%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_079	9%	3%	20%	30%	11%	15%	15%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_080	9%	3%	19%	29%	11%	14%	14%	9%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_081	9%	3%	19%	32%	11%	15%	15%	8%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_082	9%	3%	19%	34%	11%	16%	16%	8%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_083	9%	3%	19%	36%	11%	16%	16%	8%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_084	9%	3%	19%	38%	11%	15%	15%	8%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_085	9%	3%	19%	36%	11%	15%	15%	8%	3%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_086	9%	3%	19%	36%	11%	15%	15%	8%	4%	11%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_087	8%	3%	19%	35%	11%	14%	14%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_088	8%	3%	19%	35%	11%	15%	15%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_089	8%	3%	18%	34%	10%	14%	14%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_090	8%	3%	18%	34%	10%	14%	14%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_091	8%	3%	18%	33%	10%	14%	14%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_092	8%	3%	18%	32%	10%	14%	14%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_093	8%	3%	18%	31%	10%	14%	14%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_094	8%	2%	18%	30%	10%	14%	14%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_095	8%	2%	18%	29%	10%	13%	13%	8%	3%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_096	8%	2%	18%	29%	10%	13%	13%	8%	3%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_097	8%	2%	18%	29%	10%	13%	13%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_098	8%	2%	18%	28%	10%	13%	13%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_099	8%	2%	18%	28%	10%	12%	12%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_100	7%	2%	17%	29%	10%	12%	12%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_101	7%	2%	17%	29%	10%	12%	12%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_102	7%	2%	17%	29%	10%	12%	12%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_103	7%	2%	17%	29%	10%	11%	11%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_104	7%	2%	17%	29%	10%	11%	11%	8%	3%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_105	7%	2%	17%	29%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_106	7%	2%	17%	29%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_107	7%	2%	17%	29%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_108	7%	2%	17%	29%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_109	7%	2%	17%	29%	10%	11%	11%	8%	2%	10%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_110	7%	2%	16%	29%	10%	11%	11%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_111	7%	2%	16%	33%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_112	7%	2%	16%	33%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_113	7%	2%	16%	33%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_114	7%	2%	16%	33%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_115	7%	2%	16%	32%	10%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_116	7%	2%	16%	34%	10%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_117	7%	2%	16%	35%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_118	7%	2%	16%	35%	9%	13%	13%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_119	7%	2%	16%	36%	9%	13%	13%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_120	7%	2%	16%	36%	9%	13%	13%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_121	7%	2%	16%	36%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_122	7%	2%	16%	36%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_123	7%	2%	16%	35%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_124	7%	2%	16%	35%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_125	7%	2%	16%	35%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_126	7%	2%	16%	34%	9%	13%	13%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_127	7%	2%	16%	34%	9%	13%	13%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_128	7%	2%	16%	33%	10%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_129	7%	2%	16%	33%	10%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_130	7%	2%	16%	32%	10%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_131	7%	2%	15%	32%	10%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_132	7%	2%	16%	35%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_133	7%	2%	16%	35%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_134	7%	2%	16%	35%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_135	7%	2%	16%	35%	9%	12%	12%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_136	7%	2%	16%	35%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_137	7%	2%	16%	35%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_138	7%	2%	16%	35%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_139	7%	2%	16%	35%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_140	7%	2%	16%	35%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_141	7%	2%	16%	34%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_142	7%	2%	16%	34%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_143	7%	2%	16%	34%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_144	7%	2%	16%	33%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_145	7%	2%	15%	33%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_146	7%	2%	15%	32%	9%	11%	11%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_147	7%	2%	15%	32%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_148	7%	2%	17%	35%	10%	13%	13%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_149	7%	2%	17%	36%	10%	13%	13%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_150	7%	2%	17%	36%	10%	14%	14%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_151	7%	2%	17%	36%	10%	14%	14%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_152	7%	2%	17%	36%	10%	14%	14%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_153	7%	2%	17%	36%	10%	13%	13%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_154	7%	2%	17%	36%	10%	13%	13%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_155	7%	2%	16%	35%	10%	13%	13%	7%	2%	9%	2%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RE231000_156	7%	2%	17%	36%	10%	13%	13%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_157	7%	2%	17%	36%	10%	14%	14%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_158	7%	2%	17%	36%	10%	14%	14%	8%	2%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_159	7%	2%	17%	36%	10%	14%	14%	8%	3%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_160	7%	2%	17%	37%	10%	14%	14%	8%	3%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_161	7%	2%	17%	37%	10%	14%	14%	8%	3%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_162	8%	2%	17%	37%	10%	14%	14%	8%	3%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_163	8%	2%	17%	37%	10%	14%	14%	8%	3%	9%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RE231000_164	8%	2%	17%	37%	10%	14%	14%	8%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_165	8%	2%	17%	37%	10%	14%	14%	8%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_166	8%	2%	18%	37%	10%	14%	14%	8%	3%	10%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_167	8%	2%	18%	37%	10%	15%	15%	8%	3%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_168	8%	2%	18%	37%	11%	15%	15%	8%	3%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_169	8%	2%	18%	37%	11%	15%	15%	8%	3%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_170	8%	3%	18%	37%	11%	15%	15%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_171	8%	3%	18%	37%	11%	15%	15%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_172	8%	3%	18%	37%	11%	15%	15%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_173	8%	3%	18%	37%	11%	16%	16%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_174	8%	3%	18%	37%	11%	16%	16%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_175	9%	3%	18%	37%	11%	16%	16%	8%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_176	9%	3%	19%	37%	11%	17%	17%	8%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_177	9%	3%	19%	37%	11%	17%	17%	8%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_178	9%	3%	19%	36%	11%	18%	18%	8%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_179	9%	3%	19%	36%	11%	18%	18%	8%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_180	9%	3%	19%	35%	11%	18%	18%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_181	9%	3%	19%	35%	11%	18%	18%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_182	9%	3%	19%	35%	11%	18%	18%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_183	9%	3%	19%	34%	11%	19%	19%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_184	9%	3%	19%	34%	11%	19%	19%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_185	9%	3%	19%	33%	11%	18%	18%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_186	9%	3%	19%	33%	11%	18%	18%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_187	9%	3%	19%	33%	11%	17%	17%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_188	9%	3%	19%	32%	11%	17%	17%	7%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_189	9%	3%	19%	32%	10%	16%	16%	8%	4%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_190	8%	3%	18%	32%	10%	16%	16%	7%	3%	9%	2%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_191	8%	3%	18%	32%	11%	15%	15%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_192	8%	3%	18%	33%	11%	15%	15%	7%	3%	9%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_193	8%	3%	18%	33%	11%	16%	16%	7%	3%	9%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_194	8%	3%	18%	33%	11%	17%	17%	7%	3%	9%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_195	8%	3%	18%	34%	11%	17%	17%	7%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_196	8%	3%	18%	34%	11%	17%	17%	7%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_197	8%	3%	18%	35%	11%	17%	17%	7%	3%	10%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_198	8%	3%	18%	35%	11%	16%	16%	7%	3%	10%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_199	8%	3%	18%	35%	11%	16%	16%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_200	8%	2%	18%	35%	11%	16%	16%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RE231000_201	8%	2%	18%	35%	11%	15%	15%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_202	8%	2%	18%	35%	11%	15%	15%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_203	8%	2%	17%	36%	11%	14%	14%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_204	8%	2%	17%	36%	11%	14%	14%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_205	8%	2%	17%	36%	10%	14%	14%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_206	8%	2%	17%	36%	10%	14%	14%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_207	8%	2%	17%	36%	10%	14%	14%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RE231000_208	7%	2%	17%	36%	10%	14%	14%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_209	7%	2%	17%	36%	10%	14%	14%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_210	7%	2%	17%	36%	10%	14%	14%	7%	3%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_211	7%	2%	17%	36%	10%	14%	14%	7%	2%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE231000_212	7%	2%	16%	34%	10%	14%	14%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_213	7%	2%	16%	34%	10%	14%	14%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_214	7%	2%	16%	34%	10%	14%	14%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_215	7%	2%	16%	34%	10%	14%	14%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_216	7%	2%	16%	34%	10%	14%	14%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_217	7%	2%	16%	34%	10%	14%	14%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_218	7%	2%	17%	34%	10%	14%	14%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_219	7%	2%	17%	34%	10%	14%	14%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_220	7%	2%	17%	34%	10%	14%	14%	7%	2%	9%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_221	7%	2%	17%	34%	10%	14%	14%	7%	2%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_222	7%	2%	17%	34%	10%	14%	14%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_223	8%	2%	17%	33%	10%	14%	14%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_224	8%	2%	17%	33%	11%	14%	14%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_225	8%	2%	17%	33%	11%	14%	14%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_226	8%	2%	17%	33%	11%	15%	15%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_227	8%	2%	17%	33%	11%	15%	15%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_228	8%	2%	17%	33%	11%	15%	15%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_229	8%	2%	17%	33%	11%	15%	15%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_230	8%	2%	17%	32%	10%	14%	14%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_231	8%	2%	17%	32%	10%	14%	14%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_232	8%	2%	17%	31%	10%	13%	13%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_233	8%	2%	17%	29%	10%	12%	12%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_234	8%	2%	17%	28%	10%	13%	13%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_235	8%	2%	17%	28%	10%	13%	13%	7%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_236	8%	2%	18%	28%	10%	14%	14%	8%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_237	8%	3%	18%	28%	10%	15%	15%	8%	3%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231000_238	8%	3%	18%	28%	10%	15%	15%	8%	3%	9%	2%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231000_239	8%	3%	18%	28%	10%	15%	15%	8%	3%	9%	2%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231000_240	8%	3%	18%	28%	10%	15%	15%	8%	3%	9%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231000_241	9%	3%	18%	28%	10%	16%	16%	8%	3%	9%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231000_242	9%	3%	18%	28%	10%	16%	16%	8%	3%	9%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231000_243	9%	3%	18%	28%	10%	16%	16%	8%	4%	9%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_244	9%	3%	18%	28%	10%	16%	16%	8%	4%	9%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_245	9%	3%	19%	28%	10%	17%	17%	8%	4%	9%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_246	9%	3%	19%	28%	10%	19%	19%	8%	4%	10%	3%	1%	0%	1%	1%	0%	3%	1%	0%	0%
RE231000_247	9%	4%	19%	29%	10%	20%	20%	8%	4%	10%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231000_248	7%	2%	15%	31%	9%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_249	7%	2%	15%	31%	9%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_250	7%	2%	15%	31%	9%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_251	7%	2%	15%	30%	10%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_252	6%	1%	15%	31%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_253	6%	1%	15%	30%	9%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_254	6%	2%	15%	31%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_255	6%	2%	15%	30%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_256	4%	1%	11%	29%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_257	5%	1%	12%	31%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_276	6%	1%	14%	30%	8%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_277	6%	1%	14%	31%	8%	9%	9%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_278	6%	1%	14%	31%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_279	6%	1%	14%	30%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_280	6%	1%	14%	32%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_281	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_282	6%	1%	14%	32%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_283	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_284	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_285	6%	1%	14%	33%	8%	11%	11%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_286	6%	1%	14%	33%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_287	6%	1%	14%	32%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_288	6%	1%	14%	32%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_289	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_290	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_291	6%	1%	14%	32%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_292	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_293	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_294	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_295	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_296	6%	1%	14%	33%	8%	11%	11%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_297	6%	1%	14%	31%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_298	6%	1%	14%	30%	8%	9%	9%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_299	5%	1%	14%	32%	8%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_300	5%	1%	13%	31%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_301	6%	1%	14%	32%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_302	6%	1%	14%	32%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_303	6%	1%	14%	33%	8%	10%	10%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_304	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_305	5%	1%	12%	28%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_306	5%	1%	12%	30%	7%	7%	7%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_307	5%	1%	12%	31%	7%	7%	7%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_308	5%	1%	12%	33%	8%	8%	8%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_309	5%	1%	13%	32%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_310	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_311	6%	1%	14%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_312	6%	1%	14%	33%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_313	6%	1%	14%	33%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_314	6%	1%	14%	32%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_315	6%	1%	14%	32%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_316	5%	1%	13%	33%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_317	5%	1%	13%	32%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_318	6%	1%	14%	33%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_319	6%	1%	14%	33%	8%	10%	10%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_320	6%	1%	14%	33%	8%	10%	10%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_321	6%	1%	14%	32%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_322	6%	1%	14%	32%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_332	4%	1%	10%	30%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_333	4%	1%	10%	30%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_334	4%	1%	10%	30%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_335	4%	1%	10%	30%	5%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_336	4%	1%	10%	30%	5%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_337	4%	1%	10%	30%	5%	6%	6%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_338	4%	1%	9%	29%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_339	4%	1%	9%	29%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_340	4%	1%	10%	29%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_341	4%	1%	10%	29%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_342	4%	1%	10%	29%	5%	5%	5%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_343	5%	1%	13%	32%	8%	8%	8%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_345	5%	1%	12%	31%	8%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_346	5%	1%	13%	32%	8%	9%	9%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_347	5%	1%	13%	32%	8%	9%	9%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_348	5%	1%	13%	32%	8%	9%	9%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_350	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_351	5%	1%	11%	30%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_353	4%	1%	10%	29%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_354	5%	1%	13%	33%	8%	9%	9%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_355	5%	1%	13%	32%	8%	8%	8%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_356	5%	1%	13%	32%	8%	8%	8%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_357	5%	1%	13%	31%	8%	8%	8%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_358	5%	1%	13%	31%	8%	8%	8%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_359	5%	1%	12%	31%	8%	8%	8%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_360	5%	1%	12%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_361	5%	1%	12%	32%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_362	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_363	5%	1%	13%	32%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_364	5%	1%	13%	32%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_365	5%	1%	13%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_366	5%	1%	13%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_367	5%	1%	13%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_368	5%	1%	13%	32%	8%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_369	5%	1%	12%	31%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_370	5%	1%	12%	32%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_371	5%	1%	12%	32%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_374	5%	1%	12%	31%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_377	4%	1%	10%	29%	5%	5%	5%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_378	6%	1%	14%	33%	8%	11%	11%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_379	5%	1%	13%	32%	8%	9%	9%	5%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_380	5%	1%	13%	33%	8%	8%	8%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_381	5%	1%	13%	32%	8%	9%	9%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_382	6%	1%	14%	33%	8%	10%	10%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_383	4%	1%	10%	30%	5%	5%	5%	4%	1%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_384	6%	1%	14%	32%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_385	5%	1%	14%	32%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_386	5%	1%	12%	31%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_387	5%	1%	13%	32%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_388	5%	1%	11%	28%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_390	5%	1%	13%	30%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_391	5%	1%	13%	28%	8%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_392	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_393	4%	1%	11%	31%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_394	5%	1%	13%	32%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_395	5%	1%	13%	32%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_396	5%	1%	13%	32%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_397	5%	1%	13%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_398	5%	1%	13%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_399	5%	1%	13%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_400	5%	1%	12%	32%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_401	5%	1%	12%	31%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_402	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_403	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_404	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_405	5%	1%	11%	31%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_406	5%	1%	13%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_407	5%	1%	12%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_408	5%	1%	12%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_409	5%	1%	12%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_410	5%	1%	12%	31%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_411	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_412	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_413	5%	1%	11%	31%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_414	4%	1%	11%	32%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_415	4%	1%	11%	31%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_416	4%	1%	11%	29%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_417	4%	1%	11%	28%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_418	4%	1%	11%	29%	6%	6%	6%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_419	4%	1%	11%	30%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_420	4%	1%	11%	30%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_421	4%	1%	11%	31%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_422	4%	1%	11%	31%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_423	4%	1%	11%	31%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_424	4%	1%	10%	31%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_425	4%	1%	10%	31%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_426	4%	1%	10%	30%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_427	4%	1%	11%	29%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_428	4%	1%	10%	29%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_429	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_430	5%	1%	12%	30%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_431	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231000_432	5%	1%	12%	31%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_433	4%	1%	11%	31%	6%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_434	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_435	5%	1%	12%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_436	4%	1%	11%	31%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_437	5%	1%	12%	29%	7%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_438	4%	1%	10%	29%	5%	6%	6%	4%	1%	6%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231000_439	5%	1%	13%	32%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_440	5%	1%	12%	32%	7%	8%	8%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_441	4%	1%	11%	31%	6%	7%	7%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_443	6%	1%	13%	30%	8%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_444	5%	1%	13%	30%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_445	5%	1%	13%	31%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_446	6%	1%	13%	31%	8%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_450	5%	1%	13%	31%	7%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_452	6%	1%	14%	31%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_453	6%	1%	14%	31%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_454	6%	1%	14%	31%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_455	6%	1%	14%	30%	8%	9%	9%	6%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231000_456	6%	1%	14%	31%	8%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_001	8%	3%	12%	25%	8%	15%	15%	7%	4%	6%	3%	1%	0%	1%	0%	0%	2%	1%	0%	0%
RE231100_002	8%	2%	17%	28%	9%	13%	13%	7%	3%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_003	13%	5%	23%	21%	16%	37%	37%	12%	6%	9%	3%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE231100_004	-4%	0%	-10%	16%	3%	-15%	-15%	-10%	-3%	0%	1%	0%	0%	0%	-1%	0%	0%	0%	0%	0%
RE231100_005	7%	2%	15%	26%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_006	7%	2%	15%	26%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_007	7%	2%	15%	26%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_008	7%	2%	15%	26%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_009	6%	2%	15%	26%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_010	6%	2%	15%	26%	9%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_011	6%	2%	15%	26%	9%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_012	6%	2%	15%	27%	9%	8%	8%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_018	7%	2%	15%	27%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_019	7%	2%	15%	27%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_020	6%	2%	15%	27%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_027	7%	2%	15%	27%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_028	7%	2%	15%	27%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_029	7%	2%	15%	27%	9%	9%	9%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_030	7%	2%	15%	27%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_031	7%	2%	15%	26%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_032	7%	2%	15%	23%	9%	10%	10%	6%	2%	7%	2%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_033	7%	2%	15%	23%	9%	10%	10%	6%	2%	7%	2%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_041	7%	2%	15%	24%	9%	10%	10%	5%	2%	6%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_042	7%	2%	15%	23%	9%	10%	10%	6%	2%	6%	2%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_043	7%	2%	15%	23%	9%	11%	11%	6%	2%	7%	2%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_044	7%	2%	15%	25%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_045	7%	2%	15%	27%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_046	7%	2%	15%	27%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_047	7%	2%	16%	27%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_048	7%	2%	16%	27%	9%	10%	10%	6%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_049	7%	2%	16%	27%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_050	7%	2%	16%	27%	9%	11%	11%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_051	7%	2%	16%	28%	9%	12%	12%	7%	2%	8%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE231100_052	7%	2%	16%	26%	9%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_053	7%	2%	16%	24%	9%	11%	11%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_054	7%	2%	15%	23%	9%	11%	11%	6%	2%	7%	2%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_055	7%	2%	15%	24%	9%	10%	10%	6%	2%	6%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_056	7%	2%	15%	24%	9%	11%	11%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_057	7%	2%	15%	25%	9%	11%	11%	5%	2%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE231100_077	7%	3%	13%	25%	8%	19%	19%	8%	4%	7%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231100_078	8%	4%	14%	26%	8%	20%	20%	9%	4%	7%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231100_079	6%	1%	14%	28%	9%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_080	6%	1%	14%	25%	9%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_081	6%	1%	14%	26%	9%	8%	8%	6%	2%	7%	1%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_082	6%	1%	15%	27%	9%	10%	10%	6%	2%	7%	2%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_083	6%	1%	15%	26%	9%	9%	9%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_084	6%	1%	15%	26%	9%	8%	8%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_085	6%	1%	14%	26%	9%	8%	8%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_090	6%	1%	14%	30%	8%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_091	6%	1%	14%	30%	8%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_116	6%	1%	14%	25%	8%	8%	8%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_120	6%	1%	14%	28%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_121	6%	1%	14%	26%	9%	8%	8%	6%	2%	7%	1%	0%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_161	6%	1%	14%	25%	8%	9%	9%	5%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_164	6%	1%	14%	30%	8%	10%	10%	5%	1%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_165	6%	1%	14%	29%	8%	9%	9%	5%	1%	6%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_167	6%	1%	14%	30%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_171	6%	1%	14%	29%	8%	10%	10%	6%	2%	7%	1%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE231100_175	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE231400_001	-1%	0%	-1%	-8%	-2%	-11%	-11%	-5%	-1%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE231400_002	-1%	0%	-2%	-8%	-1%	-11%	-11%	-5%	-2%	1%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE231400_003	0%	0%	0%	-9%	-1%	-11%	-11%	-5%	-1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE231400_004	0%	0%	0%	-9%	-1%	-11%	-11%	-5%	-1%	2%	1%	-1%	0%	-1%	0%	0%	0%	0%	0%	0%
RE231400_005	0%	0%	-1%	-8%	2%	-10%	-10%	-5%	-1%	2%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_006	0%	0%	0%	-7%	3%	-10%	-10%	-5%	-1%	3%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_007	0%	0%	1%	-7%	0%	-11%	-11%	-4%	-1%	3%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_008	1%	0%	0%	-3%	3%	-8%	-8%	-4%	-1%	3%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_009	0%	0%	1%	-3%	4%	-10%	-10%	-4%	-1%	4%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_010	0%	1%	-1%	-1%	5%	-6%	-6%	-3%	0%	2%	1%	-1%	0%	-1%	0%	0%	1%	0%	0%	0%
RE231400_011	-2%	0%	-4%	-12%	-4%	-17%	-17%	-4%	-2%	0%	0%	-1%	0%	-2%	0%	0%	0%	0%	0%	0%
RE231500_002	10%	3%	21%	18%	13%	29%	29%	12%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE231600_001	9%	4%	20%	51%	25%	38%	38%	20%	7%	13%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE231600_004	9%	3%	18%	52%	24%	33%	33%	19%	6%	12%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE231600_005	9%	4%	22%	42%	20%	31%	31%	17%	6%	11%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE231700_002	10%	4%	25%	27%	16%	29%	29%	15%	6%	10%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231700_003	10%	4%	25%	25%	15%	29%	29%	15%	5%	9%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE231700_004	9%	4%	19%	38%	19%	33%	33%	17%	6%	11%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE231800_001	11%	4%	27%	43%	21%	43%	43%	22%	8%	15%	5%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE231800_002	12%	4%	26%	47%	22%	45%	45%	23%	8%	16%	5%	1%	1%	2%	1%	0%	3%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE232700_002	11%	4%	28%	28%	23%	32%	32%	20%	6%	12%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RE233200_001	14%	4%	36%	36%	17%	34%	34%	26%	6%	13%	3%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RE233500_001	15%	5%	46%	51%	21%	44%	44%	27%	7%	14%	3%	1%	1%	3%	1%	0%	3%	1%	0%	0%
RE233600_001	16%	5%	46%	44%	21%	48%	48%	27%	8%	14%	3%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE233600_002	16%	5%	46%	48%	21%	48%	48%	27%	8%	14%	3%	2%	1%	2%	1%	0%	3%	1%	0%	0%
RE233700_001	16%	5%	41%	39%	22%	49%	49%	25%	8%	14%	3%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE233900_001	18%	6%	43%	22%	24%	52%	52%	27%	9%	15%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE233900_002	18%	6%	36%	9%	17%	44%	44%	24%	10%	11%	4%	1%	1%	1%	1%	0%	2%	1%	0%	0%
RE233900_003	19%	7%	36%	10%	17%	43%	43%	23%	10%	11%	4%	1%	1%	1%	1%	0%	2%	1%	0%	0%
RE234000_001	19%	7%	37%	18%	17%	46%	46%	26%	10%	13%	5%	1%	1%	2%	1%	0%	2%	1%	0%	0%
RE234100_001	20%	6%	55%	54%	25%	52%	52%	31%	9%	17%	4%	1%	1%	3%	1%	0%	3%	1%	0%	0%
RE235000_001	20%	9%	39%	64%	26%	70%	70%	31%	13%	16%	6%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE235100_001	20%	9%	39%	55%	24%	66%	66%	31%	13%	16%	6%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE235100_002	20%	9%	39%	33%	21%	61%	61%	30%	12%	16%	6%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE235100_003	21%	6%	50%	25%	20%	57%	57%	28%	9%	15%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE235200_001	19%	9%	39%	14%	20%	59%	59%	30%	12%	16%	5%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE235200_002	22%	8%	51%	11%	20%	64%	64%	31%	10%	15%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE235500_001	21%	8%	44%	45%	21%	65%	65%	27%	10%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE235500_002	17%	8%	37%	30%	17%	56%	56%	29%	11%	14%	5%	2%	1%	2%	1%	0%	3%	1%	0%	0%
RE235700_001	7%	4%	14%	26%	13%	28%	28%	15%	6%	7%	3%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE235700_002	16%	8%	34%	47%	18%	58%	58%	25%	11%	14%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE235800_001	8%	4%	14%	20%	12%	23%	23%	17%	6%	8%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE235900_002	9%	3%	19%	14%	9%	19%	19%	12%	5%	7%	2%	0%	0%	1%	1%	0%	1%	0%	0%	0%
RE235900_003	17%	6%	37%	61%	27%	42%	42%	23%	8%	14%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE235900_004	17%	7%	22%	5%	12%	36%	36%	22%	9%	10%	5%	1%	0%	2%	1%	0%	1%	1%	0%	0%
RE310100_001	17%	6%	38%	62%	27%	42%	42%	24%	8%	15%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RE310100_002	17%	6%	41%	62%	28%	46%	46%	24%	8%	16%	5%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RE310100_003	19%	7%	31%	19%	17%	42%	42%	23%	9%	14%	5%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE310200_001	18%	7%	36%	35%	21%	41%	41%	23%	9%	17%	6%	1%	1%	2%	1%	0%	4%	1%	0%	0%
RE310500_001	19%	7%	37%	57%	24%	48%	48%	26%	10%	16%	6%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE310600_001	17%	5%	37%	55%	28%	45%	45%	22%	8%	16%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE310600_002	19%	6%	39%	45%	32%	47%	47%	24%	8%	18%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE310700_001	17%	6%	37%	34%	27%	45%	45%	23%	8%	17%	5%	2%	1%	2%	1%	0%	4%	1%	0%	0%
RE310700_002	17%	7%	34%	55%	22%	48%	48%	26%	9%	16%	6%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE310900_001	16%	6%	36%	30%	26%	40%	40%	24%	8%	17%	5%	2%	1%	2%	1%	0%	4%	1%	0%	0%
RE311000_001	16%	5%	32%	42%	22%	42%	42%	22%	7%	15%	5%	1%	1%	3%	1%	0%	3%	1%	0%	0%
RE311100_001	14%	6%	27%	63%	29%	49%	49%	26%	9%	15%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE311200_001	12%	5%	20%	51%	28%	42%	42%	22%	8%	14%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE311200_002	15%	5%	27%	77%	25%	43%	43%	23%	7%	15%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE311300_001	13%	5%	27%	72%	23%	41%	41%	22%	7%	16%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE311300_002	26%	10%	62%	200%	55%	113%	113%	51%	19%	35%	11%	4%	1%	7%	2%	1%	7%	2%	0%	0%
RE311400_001	11%	4%	23%	71%	27%	33%	33%	18%	6%	13%	4%	2%	0%	3%	1%	0%	3%	1%	0%	0%
RE311400_002	13%	4%	22%	56%	30%	35%	35%	20%	7%	15%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE311400_003	18%	6%	41%	129%	34%	69%	69%	33%	12%	24%	7%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE311400_006	8%	3%	18%	55%	22%	32%	32%	20%	5%	13%	3%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE311800_001	17%	5%	39%	59%	29%	49%	49%	27%	9%	18%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE311900_001	18%	5%	41%	57%	28%	53%	53%	29%	9%	19%	5%	2%	1%	3%	1%	1%	4%	1%	0%	0%
RE312200_001	20%	7%	44%	39%	30%	63%	63%	37%	12%	22%	6%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RE312200_002	21%	7%	47%	45%	33%	64%	64%	38%	12%	23%	6%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RE312200_003	21%	7%	50%	51%	35%	64%	64%	38%	12%	23%	6%	2%	1%	3%	2%	1%	4%	1%	0%	0%
RE312300_001	25%	8%	54%	54%	46%	81%	81%	49%	15%	29%	8%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RE312400_001	28%	9%	65%	70%	55%	99%	99%	57%	17%	36%	9%	3%	1%	4%	2%	1%	7%	1%	0%	0%
RE312800_001	19%	6%	40%	71%	42%	61%	61%	36%	11%	23%	6%	1%	1%	2%	2%	1%	5%	1%	0%	0%
RE312800_002	14%	5%	29%	87%	37%	46%	46%	26%	8%	17%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE312900_001	17%	6%	35%	69%	39%	53%	53%	31%	10%	19%	6%	1%	1%	2%	1%	1%	4%	1%	0%	0%
RE312900_002	14%	4%	26%	89%	37%	42%	42%	25%	8%	16%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE313000_001	12%	5%	25%	67%	29%	47%	47%	27%	8%	17%	5%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE313000_002	12%	5%	26%	65%	30%	50%	50%	28%	9%	18%	5%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE313000_003	13%	6%	27%	62%	30%	54%	54%	29%	10%	19%	5%	1%	1%	2%	1%	0%	4%	1%	0%	0%
RE313000_004	11%	4%	24%	74%	27%	43%	43%	25%	7%	17%	4%	1%	1%	3%	1%	0%	3%	1%	0%	0%
RE313000_005	10%	4%	24%	78%	28%	42%	42%	25%	7%	17%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE313000_006	13%	4%	31%	80%	37%	39%	39%	26%	7%	18%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RE313000_007	13%	4%	28%	90%	36%	40%	40%	25%	7%	16%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE313100_001	10%	4%	23%	76%	28%	41%	41%	25%	7%	17%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE314400_001	22%	5%	55%	144%	43%	48%	48%	36%	8%	25%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE314800_001	22%	4%	62%	141%	43%	49%	49%	41%	6%	29%	3%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RE314900_001	21%	5%	56%	125%	45%	52%	52%	38%	8%	25%	4%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RE316400_001	11%	4%	22%	62%	23%	33%	33%	24%	6%	13%	3%	3%	1%	4%	1%	0%	3%	0%	0%	0%
RE316500_001	11%	4%	21%	53%	22%	33%	33%	23%	7%	12%	3%	3%	1%	4%	1%	0%	3%	1%	0%	0%
RE316600_001	13%	11%	17%	66%	27%	55%	55%	23%	16%	16%	8%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE316600_002	11%	8%	16%	69%	28%	49%	49%	24%	11%	17%	6%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE316700_001	11%	6%	15%	71%	30%	45%	45%	25%	10%	17%	6%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RE316700_002	11%	6%	18%	82%	33%	48%	48%	27%	10%	19%	6%	3%	1%	6%	1%	1%	4%	1%	0%	0%
RE317000_001	29%	8%	55%	105%	38%	76%	76%	52%	14%	40%	9%	4%	2%	6%	3%	1%	8%	2%	0%	0%
RE410200_001	20%	5%	48%	131%	26%	75%	75%	41%	9%	27%	5%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RE410200_002	21%	6%	50%	141%	32%	84%	84%	44%	10%	28%	6%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RE411100_001	13%	6%	31%	79%	24%	57%	57%	26%	9%	19%	5%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RE411200_001	9%	3%	16%	18%	23%	25%	25%	18%	6%	9%	2%	1%	1%	1%	1%	0%	2%	0%	0%	0%
RE510000_001	8%	2%	13%	13%	7%	23%	23%	13%	4%	8%	2%	1%	0%	1%	1%	0%	1%	0%	0%	0%
RE510000_002	9%	3%	16%	36%	11%	26%	26%	16%	5%	8%	3%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE510100_001	10%	3%	18%	51%	16%	31%	31%	16%	5%	9%	3%	2%	0%	2%	1%	0%	2%	1%	0%	0%
RE511200_001	14%	7%	17%	2%	-1%	27%	27%	16%	10%	3%	5%	1%	0%	0%	1%	0%	0%	1%	0%	0%
RE511200_002	14%	7%	18%	1%	-2%	26%	26%	16%	9%	4%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511200_003	13%	7%	18%	0%	-2%	25%	25%	16%	9%	5%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511200_004	13%	7%	19%	0%	-2%	24%	24%	16%	9%	6%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511200_005	13%	7%	14%	1%	-1%	24%	24%	15%	9%	3%	5%	1%	0%	0%	0%	0%	-1%	1%	0%	0%
RE511200_006	13%	7%	14%	0%	-2%	24%	24%	15%	9%	3%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_001	12%	2%	19%	11%	9%	27%	27%	15%	4%	9%	1%	2%	0%	2%	1%	0%	2%	0%	0%	0%
RE511300_002	9%	3%	15%	2%	2%	25%	25%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_003	9%	3%	16%	-2%	1%	23%	23%	11%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_004	10%	4%	13%	-3%	-1%	24%	24%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_005	9%	3%	17%	-2%	4%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_006	9%	3%	15%	-3%	1%	23%	23%	10%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_007	10%	4%	12%	-3%	-2%	24%	24%	10%	5%	4%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_008	9%	3%	16%	-2%	1%	23%	23%	11%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_009	10%	4%	12%	-4%	-1%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_010	9%	3%	17%	-2%	3%	24%	24%	11%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_011	9%	3%	15%	-2%	1%	25%	25%	10%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_012	9%	3%	17%	-3%	4%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_013	10%	4%	13%	-3%	-1%	24%	24%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_014	10%	4%	13%	-3%	-1%	24%	24%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_015	10%	4%	12%	-4%	-1%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	1%	1%	0%	0%
RE511300_016	10%	4%	12%	-3%	-2%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_017	10%	4%	12%	-3%	-2%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_018	9%	4%	14%	-2%	1%	25%	25%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_019	10%	4%	13%	-4%	0%	25%	25%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_020	9%	3%	16%	-2%	1%	23%	23%	10%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_021	10%	4%	13%	-3%	-2%	24%	24%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_022	10%	4%	12%	-3%	-1%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_023	10%	4%	12%	-3%	-2%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_024	9%	4%	13%	-2%	0%	25%	25%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_025	9%	3%	15%	-3%	0%	24%	24%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_026	9%	3%	17%	-3%	4%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_027	9%	3%	17%	-2%	3%	23%	23%	11%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_028	9%	3%	14%	-3%	0%	24%	24%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_029	10%	4%	12%	-3%	-1%	24%	24%	10%	5%	4%	3%	1%	0%	1%	0%	0%	0%	1%	0%	0%
RE511300_030	9%	3%	14%	-3%	0%	24%	24%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_031	9%	3%	15%	-2%	1%	25%	25%	10%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_032	9%	3%	15%	-3%	0%	23%	23%	10%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_033	9%	3%	15%	-2%	1%	25%	25%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_034	9%	3%	15%	-2%	1%	25%	25%	10%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_035	9%	3%	16%	-2%	2%	23%	23%	11%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_036	9%	3%	17%	-2%	3%	23%	23%	11%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_037	9%	3%	15%	-3%	0%	24%	24%	10%	5%	5%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_038	10%	4%	12%	-3%	-2%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_039	10%	4%	12%	-3%	-2%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_040	10%	4%	13%	-3%	-2%	24%	24%	10%	5%	4%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_041	10%	4%	12%	-3%	-2%	25%	25%	10%	5%	4%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_042	9%	3%	16%	-2%	2%	23%	23%	11%	5%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511300_043	13%	7%	19%	-1%	-1%	23%	23%	16%	9%	6%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_044	13%	6%	19%	0%	1%	22%	22%	16%	9%	6%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_045	13%	6%	19%	-1%	3%	22%	22%	16%	9%	6%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_046	13%	6%	18%	-2%	2%	21%	21%	16%	8%	6%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_047	12%	6%	18%	-2%	1%	19%	19%	16%	8%	6%	4%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_048	12%	6%	18%	-3%	0%	19%	19%	16%	8%	6%	3%	0%	0%	0%	1%	0%	0%	1%	0%	0%
RE511300_049	11%	6%	18%	-3%	0%	18%	18%	16%	8%	6%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_050	11%	6%	18%	-2%	0%	18%	18%	16%	8%	6%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_051	11%	6%	18%	-2%	-1%	18%	18%	16%	8%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_052	11%	5%	18%	-3%	-1%	18%	18%	16%	8%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511300_053	11%	5%	18%	-4%	-1%	18%	18%	16%	8%	5%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_054	11%	5%	17%	-4%	-1%	19%	19%	16%	7%	5%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_055	11%	5%	16%	-5%	-1%	19%	19%	16%	7%	5%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_056	11%	5%	16%	-5%	-2%	19%	19%	16%	7%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_057	10%	5%	15%	-6%	-2%	18%	18%	16%	7%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_058	10%	5%	13%	-6%	-2%	16%	16%	16%	7%	4%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_059	10%	5%	10%	-6%	2%	13%	13%	16%	7%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_060	10%	5%	10%	-7%	0%	13%	13%	15%	7%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_061	10%	5%	10%	-6%	-1%	17%	17%	15%	7%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_062	9%	4%	10%	-6%	-2%	17%	17%	14%	7%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_063	9%	4%	10%	-5%	-2%	18%	18%	14%	6%	2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_064	9%	4%	10%	-5%	-3%	17%	17%	13%	6%	2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_065	9%	4%	9%	-4%	-3%	17%	17%	13%	6%	2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_066	9%	4%	8%	-1%	0%	17%	17%	11%	6%	2%	3%	0%	0%	0%	0%	0%	0%	-1%	0%	0%
RE511300_067	9%	4%	8%	-2%	1%	18%	18%	11%	5%	2%	3%	0%	0%	0%	0%	0%	0%	-1%	0%	0%
RE511300_068	9%	4%	8%	-2%	1%	18%	18%	11%	5%	2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_069	9%	4%	8%	-2%	1%	19%	19%	11%	5%	2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_070	9%	4%	9%	-2%	1%	20%	20%	10%	5%	2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_071	9%	4%	9%	-1%	1%	21%	21%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_072	9%	4%	9%	0%	0%	20%	20%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_073	8%	4%	9%	-2%	0%	19%	19%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_074	9%	4%	11%	-3%	1%	27%	27%	9%	5%	4%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_075	9%	4%	12%	-4%	2%	26%	26%	9%	5%	5%	3%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE511300_076	9%	4%	13%	-4%	3%	25%	25%	9%	5%	5%	3%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE511300_077	9%	4%	13%	-4%	2%	25%	25%	9%	5%	5%	3%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE511300_078	9%	4%	14%	-4%	2%	25%	25%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE511300_079	9%	4%	14%	-5%	1%	25%	25%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	1%	0%	0%
RE511300_080	9%	4%	14%	-5%	1%	24%	24%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_081	9%	4%	14%	-5%	0%	24%	24%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_082	9%	4%	14%	-5%	0%	24%	24%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_083	9%	4%	14%	-5%	-1%	24%	24%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_084	8%	4%	14%	-5%	-1%	23%	23%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_085	8%	4%	14%	-5%	-1%	22%	22%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_086	8%	4%	14%	-5%	-2%	22%	22%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_087	8%	4%	14%	-5%	-2%	21%	21%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_088	8%	4%	13%	-5%	-2%	21%	21%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_089	8%	4%	13%	-6%	-2%	21%	21%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_090	8%	4%	13%	-6%	-2%	21%	21%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_091	7%	4%	13%	-6%	-3%	21%	21%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_092	7%	4%	13%	-6%	-3%	21%	21%	10%	5%	5%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_093	7%	4%	13%	-6%	-3%	21%	21%	10%	5%	4%	3%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511300_094	8%	4%	12%	-6%	-3%	21%	21%	10%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_095	8%	4%	12%	-6%	-2%	20%	20%	10%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_096	8%	4%	12%	-6%	-2%	19%	19%	10%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_097	8%	4%	11%	-6%	-2%	19%	19%	10%	5%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_098	11%	5%	9%	-2%	-1%	25%	25%	11%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_099	10%	5%	9%	-2%	-1%	25%	25%	11%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_100	10%	5%	9%	-2%	-1%	25%	25%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_101	10%	4%	8%	-2%	-1%	26%	26%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_102	10%	4%	8%	-2%	-1%	26%	26%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_103	10%	4%	8%	-2%	-1%	27%	27%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_104	10%	4%	8%	-2%	-1%	27%	27%	10%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_105	10%	4%	7%	-2%	-1%	27%	27%	10%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_106	10%	4%	7%	-2%	-1%	27%	27%	10%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_107	10%	4%	7%	-2%	-1%	27%	27%	10%	6%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_108	10%	4%	7%	-2%	-1%	27%	27%	10%	6%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_109	10%	4%	7%	-3%	-1%	26%	26%	10%	6%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_110	10%	4%	7%	-3%	-1%	26%	26%	10%	6%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_111	10%	4%	7%	-3%	-1%	26%	26%	10%	6%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_112	10%	4%	7%	-3%	-2%	26%	26%	10%	6%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_113	10%	4%	7%	-3%	-2%	26%	26%	10%	6%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_114	10%	4%	7%	-3%	-2%	26%	26%	10%	5%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_115	10%	4%	7%	-3%	-2%	26%	26%	10%	5%	2%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_116	10%	4%	7%	-3%	-2%	26%	26%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_117	10%	4%	7%	-3%	-2%	27%	27%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_118	10%	4%	7%	-3%	-2%	27%	27%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_119	10%	4%	8%	-4%	-2%	27%	27%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_120	10%	4%	8%	-4%	-2%	27%	27%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_121	10%	4%	9%	-4%	-2%	27%	27%	9%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_122	11%	5%	10%	-1%	2%	27%	27%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_123	11%	5%	10%	-1%	2%	28%	28%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_124	11%	5%	10%	-1%	2%	28%	28%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_125	11%	5%	10%	-1%	2%	28%	28%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_126	11%	5%	9%	-1%	2%	28%	28%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_127	11%	5%	9%	-1%	2%	28%	28%	12%	6%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_128	11%	5%	9%	-2%	3%	28%	28%	12%	6%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_129	11%	5%	9%	-2%	3%	28%	28%	12%	6%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_130	11%	5%	9%	-1%	3%	28%	28%	11%	6%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_131	11%	5%	8%	-1%	3%	28%	28%	11%	6%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_132	11%	5%	8%	0%	3%	28%	28%	11%	6%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_133	11%	5%	8%	0%	3%	27%	27%	11%	6%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_134	11%	5%	8%	0%	2%	27%	27%	11%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_135	11%	5%	8%	0%	2%	27%	27%	11%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_136	11%	4%	7%	0%	2%	26%	26%	11%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_137	11%	4%	7%	0%	2%	26%	26%	11%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_138	11%	4%	7%	0%	2%	26%	26%	11%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_139	10%	4%	7%	-1%	2%	26%	26%	10%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_140	10%	4%	7%	-1%	2%	26%	26%	10%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_141	10%	4%	7%	-1%	2%	26%	26%	10%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_142	10%	4%	7%	-1%	1%	26%	26%	10%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_143	10%	4%	7%	-1%	1%	26%	26%	10%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_144	10%	4%	7%	-1%	1%	26%	26%	10%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_145	10%	4%	7%	-1%	0%	26%	26%	10%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_146	10%	4%	7%	-1%	0%	26%	26%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_147	10%	4%	7%	-2%	0%	26%	26%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_148	10%	4%	8%	-2%	-1%	26%	26%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_149	13%	6%	14%	-1%	-2%	24%	24%	15%	8%	4%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_150	13%	6%	14%	-1%	-2%	24%	24%	14%	8%	5%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_151	13%	6%	14%	-2%	-2%	24%	24%	14%	8%	5%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_152	12%	6%	14%	-3%	0%	24%	24%	14%	8%	5%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_153	12%	6%	14%	-2%	3%	23%	23%	14%	8%	5%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_154	12%	6%	14%	-2%	3%	22%	22%	14%	8%	5%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_155	12%	6%	14%	-2%	3%	22%	22%	14%	8%	5%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_156	12%	6%	14%	-1%	3%	22%	22%	14%	7%	5%	4%	0%	0%	0%	1%	0%	1%	1%	0%	0%
RE511300_157	12%	5%	14%	-2%	3%	21%	21%	14%	7%	5%	3%	0%	0%	0%	1%	0%	1%	1%	0%	0%
RE511300_158	11%	5%	15%	-2%	3%	21%	21%	14%	7%	5%	3%	0%	0%	0%	1%	0%	1%	1%	0%	0%
RE511300_159	11%	5%	15%	-3%	3%	21%	21%	14%	7%	5%	3%	0%	0%	0%	1%	0%	1%	1%	0%	0%
RE511300_160	11%	5%	15%	-3%	2%	20%	20%	14%	7%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511300_161	11%	5%	15%	-2%	1%	19%	19%	14%	7%	6%	3%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RE511300_162	11%	5%	16%	-2%	0%	18%	18%	14%	7%	5%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_163	11%	5%	14%	-3%	-1%	17%	17%	14%	7%	5%	3%	0%	0%	0%	1%	0%	0%	0%	0%	0%
RE511300_164	11%	5%	13%	-2%	-1%	17%	17%	14%	7%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_165	11%	5%	12%	-2%	-2%	17%	17%	14%	7%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_166	10%	5%	11%	-2%	-2%	17%	17%	14%	6%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_167	10%	4%	10%	-2%	-2%	16%	16%	14%	6%	2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_168	12%	6%	13%	-1%	-1%	23%	23%	13%	8%	4%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_169	12%	6%	12%	-1%	-1%	23%	23%	13%	8%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_170	12%	6%	12%	-2%	-1%	23%	23%	13%	8%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_171	12%	6%	12%	-2%	-1%	23%	23%	13%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_172	12%	6%	11%	-1%	0%	23%	23%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_173	12%	5%	11%	-2%	1%	23%	23%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_174	11%	5%	10%	-1%	2%	23%	23%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_175	11%	5%	10%	-1%	1%	23%	23%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_176	11%	5%	10%	-1%	1%	23%	23%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_177	11%	5%	10%	-2%	1%	22%	22%	12%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_178	11%	5%	10%	-2%	1%	21%	21%	12%	7%	4%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_179	11%	5%	10%	-3%	0%	21%	21%	12%	7%	4%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_180	11%	5%	10%	-4%	1%	21%	21%	12%	6%	4%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_181	11%	5%	10%	-4%	1%	21%	21%	12%	6%	4%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_182	11%	5%	11%	-5%	1%	21%	21%	12%	6%	4%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_183	11%	5%	11%	-5%	2%	20%	20%	12%	6%	4%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_184	11%	4%	11%	-6%	3%	20%	20%	12%	6%	4%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_185	11%	4%	11%	-6%	4%	20%	20%	12%	6%	5%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_186	10%	4%	12%	-5%	3%	20%	20%	11%	6%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_187	10%	4%	11%	-6%	3%	20%	20%	11%	6%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_188	10%	4%	10%	-6%	2%	20%	20%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_189	10%	4%	10%	-5%	2%	20%	20%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511300_190	10%	4%	9%	-4%	1%	20%	20%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_191	11%	6%	11%	-1%	0%	24%	24%	13%	7%	4%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_192	11%	5%	11%	-2%	0%	24%	24%	12%	7%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_193	11%	5%	11%	-1%	0%	24%	24%	12%	7%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_194	11%	5%	11%	-1%	1%	24%	24%	12%	7%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_195	11%	5%	10%	-2%	2%	24%	24%	12%	7%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_196	11%	5%	10%	-1%	1%	25%	25%	12%	7%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_197	11%	5%	10%	-1%	1%	24%	24%	12%	7%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_198	11%	5%	10%	-1%	0%	24%	24%	11%	7%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_199	11%	5%	10%	-2%	-1%	24%	24%	11%	6%	3%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_200	11%	5%	9%	-2%	-1%	24%	24%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_201	11%	5%	9%	-3%	-1%	24%	24%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_202	11%	5%	9%	-3%	-1%	23%	23%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_203	11%	4%	9%	-4%	-1%	23%	23%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_204	11%	4%	9%	-5%	-1%	23%	23%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_205	11%	4%	9%	-5%	0%	23%	23%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_206	11%	4%	10%	-6%	1%	23%	23%	10%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_207	11%	4%	10%	-6%	2%	23%	23%	10%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_208	11%	4%	10%	-4%	3%	23%	23%	11%	6%	3%	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%
RE511300_209	10%	4%	11%	-5%	5%	22%	22%	11%	6%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_210	10%	4%	11%	-6%	5%	21%	21%	11%	6%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_211	10%	4%	12%	-6%	5%	20%	20%	11%	6%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_212	10%	4%	12%	-6%	4%	19%	19%	11%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_213	10%	4%	11%	-6%	4%	19%	19%	11%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511300_214	9%	4%	10%	-6%	3%	19%	19%	10%	5%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_001	6%	3%	14%	2%	0%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_002	6%	3%	13%	3%	-1%	19%	19%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_003	6%	3%	13%	3%	1%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_004	6%	3%	13%	1%	-1%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_005	6%	3%	13%	3%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_006	6%	3%	14%	-3%	-1%	20%	20%	10%	4%	5%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_007	6%	3%	13%	-1%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_008	6%	3%	13%	0%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_009	6%	3%	13%	0%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_010	6%	3%	13%	3%	0%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_011	6%	3%	13%	3%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_012	6%	3%	13%	-2%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_013	6%	3%	13%	1%	-1%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_014	6%	3%	13%	3%	-1%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_015	6%	3%	13%	-2%	-1%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_016	6%	3%	13%	-2%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_017	5%	3%	13%	2%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_018	5%	3%	13%	4%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_019	5%	3%	13%	3%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_020	5%	3%	13%	4%	0%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_021	7%	3%	16%	-3%	0%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_022	6%	3%	15%	-2%	0%	22%	22%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_023	5%	3%	13%	2%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_024	5%	3%	13%	2%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_025	6%	3%	15%	-1%	-1%	22%	22%	10%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_026	6%	3%	14%	0%	-1%	21%	21%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_027	6%	3%	13%	4%	0%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_028	6%	3%	14%	1%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_029	6%	3%	13%	2%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_030	5%	3%	13%	2%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_031	6%	3%	10%	-2%	3%	17%	17%	9%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_032	6%	3%	13%	-5%	-2%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_033	6%	3%	12%	-7%	0%	18%	18%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_034	6%	3%	13%	-5%	-2%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_035	6%	3%	11%	-3%	1%	17%	17%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_036	6%	3%	9%	-4%	5%	18%	18%	9%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_037	6%	3%	14%	4%	2%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_038	6%	3%	13%	2%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_039	6%	3%	13%	-2%	-1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_040	7%	3%	13%	-6%	-1%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_041	7%	3%	13%	-6%	-1%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_042	7%	3%	13%	-6%	-1%	18%	18%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_043	6%	3%	10%	-2%	2%	17%	17%	9%	4%	4%	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_044	6%	3%	11%	-4%	1%	17%	17%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_045	6%	3%	12%	-6%	0%	18%	18%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_046	6%	2%	6%	2%	9%	16%	16%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_047	6%	3%	7%	2%	8%	16%	16%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_048	6%	3%	10%	-4%	6%	17%	17%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_049	5%	2%	7%	-2%	7%	17%	17%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_050	6%	3%	9%	-4%	6%	17%	17%	8%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_051	6%	3%	13%	-4%	-2%	20%	20%	10%	4%	5%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_052	6%	3%	14%	-4%	-1%	20%	20%	10%	4%	5%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_053	7%	3%	14%	-4%	-1%	21%	21%	11%	4%	5%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_054	7%	3%	15%	-4%	-1%	21%	21%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_055	7%	3%	15%	-4%	-1%	22%	22%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_056	7%	3%	16%	-4%	0%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_057	7%	3%	16%	-4%	0%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_058	7%	3%	16%	-4%	0%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_059	7%	3%	16%	-4%	0%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_060	5%	2%	10%	-2%	6%	13%	13%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_061	5%	2%	10%	-1%	5%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_062	5%	2%	9%	0%	5%	15%	15%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_063	5%	2%	10%	-3%	5%	13%	13%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_064	6%	3%	8%	-2%	6%	17%	17%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_065	6%	2%	10%	-2%	4%	13%	13%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_066	5%	2%	7%	-1%	7%	17%	17%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_067	5%	2%	6%	2%	9%	17%	17%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_068	6%	2%	10%	-3%	4%	13%	13%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_069	6%	3%	9%	-3%	6%	17%	17%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_070	5%	3%	8%	-1%	7%	17%	17%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_071	6%	2%	10%	-3%	6%	14%	14%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_072	6%	2%	10%	-3%	7%	16%	16%	8%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_073	6%	2%	9%	-3%	7%	17%	17%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_074	6%	2%	6%	2%	9%	17%	17%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_075	6%	3%	7%	2%	8%	16%	16%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_076	7%	3%	10%	-3%	7%	15%	15%	8%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_077	5%	3%	8%	1%	7%	15%	15%	8%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_078	5%	2%	7%	0%	8%	16%	16%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_079	6%	3%	7%	2%	9%	16%	16%	7%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_080	6%	3%	10%	-3%	5%	13%	13%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_081	5%	2%	8%	-3%	7%	17%	17%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_082	5%	2%	8%	-3%	7%	17%	17%	7%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_083	6%	3%	8%	-3%	6%	17%	17%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_084	6%	2%	10%	-3%	7%	14%	14%	8%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_085	6%	3%	10%	-4%	6%	15%	15%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_086	5%	2%	7%	-3%	8%	17%	17%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_087	8%	3%	18%	-3%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_088	7%	3%	18%	0%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_089	8%	3%	17%	2%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_090	7%	3%	18%	-1%	3%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_091	8%	3%	17%	3%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_092	6%	3%	16%	0%	0%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_093	8%	3%	18%	0%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_094	8%	3%	18%	-3%	4%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_095	8%	3%	17%	6%	6%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_096	9%	3%	16%	0%	3%	23%	23%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_097	6%	3%	16%	1%	0%	23%	23%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_098	7%	3%	17%	0%	3%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_099	6%	3%	13%	-2%	-1%	20%	20%	10%	4%	5%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_100	6%	3%	14%	-3%	-1%	21%	21%	10%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_101	6%	3%	14%	3%	1%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_102	6%	3%	13%	1%	-1%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_103	7%	3%	18%	2%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_104	7%	3%	18%	0%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_105	7%	3%	17%	-2%	1%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_106	9%	3%	17%	-2%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_107	6%	3%	16%	1%	0%	23%	23%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_108	7%	3%	18%	0%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_109	9%	3%	16%	-1%	2%	23%	23%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_110	8%	3%	18%	-3%	4%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_111	8%	3%	18%	-2%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_112	9%	3%	17%	-1%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_113	8%	3%	18%	-1%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_114	8%	3%	18%	-3%	3%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_115	8%	3%	18%	-3%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_116	8%	3%	18%	-2%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_117	8%	3%	18%	1%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_118	7%	3%	17%	-2%	2%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_119	7%	3%	17%	-2%	2%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_120	6%	3%	16%	0%	0%	23%	23%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_121	8%	3%	18%	-2%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_122	9%	3%	18%	-2%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_123	8%	3%	18%	-3%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_124	8%	3%	18%	-3%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_125	7%	3%	18%	1%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_126	9%	3%	17%	-2%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_127	7%	3%	18%	-2%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_128	7%	3%	18%	-2%	3%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_129	9%	3%	18%	-2%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_130	7%	3%	18%	-3%	2%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_131	8%	3%	17%	5%	6%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_132	8%	3%	18%	-3%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_133	8%	3%	18%	-3%	3%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_134	8%	3%	18%	-3%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_135	8%	3%	18%	-3%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_136	7%	3%	16%	1%	2%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_137	6%	3%	8%	-1%	7%	16%	16%	9%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_138	6%	3%	8%	0%	7%	15%	15%	9%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_139	6%	3%	8%	1%	8%	14%	14%	9%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_140	6%	3%	9%	1%	8%	15%	15%	9%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_141	6%	3%	9%	-1%	7%	15%	15%	9%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_142	6%	3%	10%	-1%	7%	15%	15%	9%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_143	6%	3%	10%	-1%	7%	14%	14%	9%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_144	6%	3%	11%	0%	7%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_145	6%	3%	12%	1%	6%	15%	15%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_146	6%	3%	11%	0%	5%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_147	6%	3%	12%	0%	6%	15%	15%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_148	6%	3%	10%	1%	5%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_149	5%	2%	7%	-2%	5%	12%	12%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_150	5%	2%	8%	-2%	5%	15%	15%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_151	5%	2%	8%	-2%	5%	14%	14%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_152	5%	2%	8%	-2%	5%	15%	15%	8%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_153	5%	2%	7%	-2%	5%	12%	12%	8%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_154	5%	2%	7%	-2%	6%	12%	12%	8%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_155	5%	2%	7%	-1%	5%	12%	12%	8%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_156	5%	2%	7%	-1%	5%	12%	12%	8%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_157	5%	2%	7%	-2%	6%	12%	12%	8%	4%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_158	5%	2%	7%	-3%	4%	12%	12%	8%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_159	7%	3%	15%	-4%	-1%	22%	22%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_160	7%	3%	15%	-4%	-1%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_161	8%	3%	16%	-4%	0%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_162	7%	3%	16%	-4%	0%	25%	25%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_163	8%	3%	17%	-4%	1%	23%	23%	11%	5%	7%	3%	1%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_164	8%	3%	17%	-4%	2%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_165	7%	3%	15%	-4%	-1%	23%	23%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_166	8%	3%	17%	-4%	1%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_167	7%	3%	15%	-4%	-1%	21%	21%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_168	8%	3%	17%	-4%	2%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_169	8%	3%	16%	-4%	0%	25%	25%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_170	8%	3%	17%	-4%	1%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_171	8%	3%	17%	-4%	2%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_172	8%	3%	16%	-4%	0%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_173	5%	3%	13%	2%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_174	5%	3%	13%	3%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_175	6%	3%	13%	3%	-1%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_176	7%	3%	16%	-3%	0%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_177	7%	3%	16%	-2%	0%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_178	6%	3%	16%	-1%	0%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_179	6%	3%	16%	-1%	0%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_180	6%	3%	15%	0%	0%	22%	22%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_181	6%	3%	15%	0%	0%	22%	22%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_182	6%	3%	14%	1%	0%	22%	22%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_183	6%	3%	14%	2%	-1%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_184	5%	3%	13%	2%	-1%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_185	6%	3%	15%	-1%	0%	22%	22%	10%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_186	7%	3%	13%	-7%	0%	18%	18%	10%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_187	7%	3%	12%	-6%	0%	19%	19%	10%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_188	7%	3%	13%	-7%	-1%	18%	18%	10%	4%	4%	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_189	7%	3%	13%	-7%	-2%	18%	18%	10%	4%	4%	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_190	7%	3%	13%	-6%	-2%	19%	19%	10%	4%	4%	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_191	7%	3%	13%	-6%	-2%	19%	19%	10%	4%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511400_192	7%	3%	13%	-6%	-2%	20%	20%	10%	4%	4%	3%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511400_193	7%	3%	12%	-6%	-2%	21%	21%	10%	4%	4%	3%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511400_194	7%	3%	12%	-5%	-2%	21%	21%	10%	4%	4%	3%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511400_195	7%	3%	13%	-4%	-2%	21%	21%	10%	4%	4%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_196	7%	3%	9%	-2%	6%	15%	15%	11%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_197	7%	3%	9%	-1%	7%	15%	15%	10%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_198	7%	3%	10%	0%	7%	14%	14%	10%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_199	7%	3%	9%	-1%	7%	15%	15%	11%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_200	7%	3%	10%	0%	7%	15%	15%	10%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_201	7%	3%	10%	1%	7%	15%	15%	10%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_202	7%	3%	12%	-1%	7%	14%	14%	10%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_203	7%	3%	11%	-2%	7%	14%	14%	10%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_204	7%	3%	13%	-1%	6%	15%	15%	10%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_205	7%	3%	13%	-1%	6%	15%	15%	10%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_206	7%	3%	14%	0%	6%	15%	15%	10%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_207	7%	3%	13%	1%	5%	15%	15%	10%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_208	7%	3%	13%	0%	5%	16%	16%	10%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_209	7%	3%	12%	0%	5%	16%	16%	9%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_210	7%	3%	12%	0%	4%	16%	16%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_211	7%	3%	11%	-3%	4%	17%	17%	9%	4%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511400_212	6%	3%	9%	-4%	5%	18%	18%	9%	4%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_213	6%	3%	9%	-3%	6%	17%	17%	10%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_214	6%	3%	9%	-3%	6%	16%	16%	9%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_215	6%	3%	9%	-2%	6%	17%	17%	10%	4%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511400_216	6%	3%	13%	-1%	-1%	20%	20%	10%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_217	8%	3%	18%	-3%	3%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_218	9%	3%	18%	-3%	3%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_219	8%	3%	17%	-4%	1%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_220	8%	3%	18%	-3%	4%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_221	9%	3%	18%	-3%	4%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_222	7%	3%	17%	-4%	1%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_223	8%	3%	18%	-4%	2%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_224	9%	3%	17%	-3%	3%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_225	9%	3%	17%	-2%	4%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_226	8%	3%	18%	-4%	2%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_227	8%	3%	17%	-4%	1%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_228	8%	3%	18%	-4%	2%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_229	8%	3%	17%	-4%	1%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_230	8%	3%	18%	-3%	3%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_231	9%	3%	17%	-3%	4%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_232	8%	3%	17%	-4%	1%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_233	9%	3%	18%	-3%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_234	9%	3%	18%	-3%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_235	8%	3%	17%	-4%	1%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_236	9%	3%	18%	-3%	3%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_237	9%	3%	17%	-3%	4%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_238	8%	3%	18%	-4%	1%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_239	8%	3%	17%	-3%	1%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_240	8%	3%	18%	-4%	1%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_241	8%	3%	18%	-3%	2%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_242	8%	3%	18%	-4%	2%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_243	9%	3%	18%	-3%	3%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_244	8%	3%	18%	-3%	3%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_245	8%	3%	17%	-4%	1%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_246	8%	3%	17%	-4%	1%	22%	22%	11%	4%	7%	3%	1%	0%	1%	0%	0%	2%	0%	0%	0%
RE511400_247	9%	3%	18%	-2%	4%	23%	23%	11%	5%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_248	9%	3%	18%	-3%	4%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	1%	0%	0%
RE511400_249	8%	3%	17%	-4%	1%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_250	5%	3%	13%	3%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_251	5%	3%	13%	4%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_252	5%	3%	13%	4%	0%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_265	7%	3%	16%	20%	5%	23%	23%	11%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_266	7%	3%	16%	18%	5%	24%	24%	11%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_267	7%	3%	16%	18%	5%	24%	24%	11%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_268	7%	3%	16%	18%	6%	24%	24%	11%	4%	7%	3%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_269	7%	3%	17%	17%	6%	24%	24%	11%	4%	7%	3%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_270	8%	3%	17%	15%	7%	24%	24%	11%	4%	7%	3%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_271	8%	3%	17%	13%	8%	24%	24%	11%	4%	6%	3%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_272	8%	3%	17%	12%	7%	24%	24%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_273	8%	3%	17%	11%	7%	24%	24%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_274	8%	3%	17%	9%	7%	24%	24%	11%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_275	7%	3%	16%	18%	3%	23%	23%	10%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_276	7%	3%	16%	16%	4%	23%	23%	11%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_277	7%	3%	16%	16%	4%	24%	24%	11%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_278	7%	3%	16%	15%	5%	24%	24%	11%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_279	7%	3%	17%	16%	5%	24%	24%	11%	4%	7%	3%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511400_280	7%	3%	17%	13%	5%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_281	8%	3%	17%	11%	6%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_282	6%	3%	16%	7%	1%	23%	23%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_283	6%	3%	16%	7%	1%	23%	23%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_284	6%	3%	16%	9%	2%	24%	24%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_285	6%	3%	16%	10%	2%	24%	24%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_286	6%	3%	16%	11%	2%	24%	24%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_287	7%	3%	16%	12%	2%	24%	24%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_288	7%	3%	16%	13%	3%	23%	23%	11%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_289	7%	3%	16%	14%	3%	23%	23%	11%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_290	7%	3%	17%	3%	2%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_291	7%	3%	17%	4%	3%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_292	7%	3%	17%	5%	3%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_293	7%	3%	17%	6%	3%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_294	7%	3%	17%	7%	3%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_295	7%	3%	16%	8%	3%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_296	7%	3%	16%	9%	3%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_297	7%	3%	16%	9%	3%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_298	7%	3%	16%	11%	4%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_299	7%	3%	16%	12%	4%	24%	24%	11%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_300	7%	3%	18%	4%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_301	7%	3%	18%	5%	5%	23%	23%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_302	7%	3%	18%	6%	5%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_303	7%	3%	17%	7%	6%	24%	24%	11%	4%	7%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_304	6%	3%	16%	2%	1%	23%	23%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_305	6%	3%	16%	2%	1%	23%	23%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_306	6%	3%	16%	3%	1%	23%	23%	10%	4%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_307	6%	3%	16%	4%	0%	23%	23%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_308	6%	3%	15%	5%	0%	23%	23%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_309	6%	3%	15%	6%	0%	23%	23%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511400_310	6%	3%	14%	8%	0%	22%	22%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_311	6%	3%	14%	9%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_312	6%	3%	15%	2%	0%	23%	23%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_313	6%	3%	15%	3%	0%	22%	22%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_314	6%	3%	14%	4%	0%	22%	22%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_315	6%	3%	14%	5%	0%	22%	22%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_316	6%	3%	14%	5%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_317	6%	3%	13%	5%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_318	6%	3%	13%	5%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511400_319	6%	3%	13%	5%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_001	6%	2%	10%	6%	5%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_002	4%	2%	8%	0%	8%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_003	4%	2%	7%	-1%	8%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_004	4%	2%	7%	-1%	9%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_005	4%	2%	6%	-2%	8%	19%	19%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_006	4%	2%	6%	-2%	8%	19%	19%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_007	4%	2%	6%	-1%	8%	19%	19%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_008	4%	2%	6%	-1%	8%	19%	19%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_009	4%	2%	6%	0%	9%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_010	4%	2%	8%	-1%	6%	13%	13%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_011	4%	2%	8%	0%	7%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_012	5%	2%	6%	-1%	5%	15%	15%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_013	5%	2%	7%	-1%	5%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_014	5%	2%	7%	0%	5%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_015	5%	2%	8%	0%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_016	5%	2%	8%	1%	5%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_017	4%	2%	7%	-1%	9%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_018	4%	2%	6%	-1%	8%	19%	19%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_019	5%	2%	9%	1%	10%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_020	4%	2%	6%	-2%	8%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_021	4%	2%	6%	0%	9%	17%	17%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_022	5%	2%	8%	0%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_023	5%	2%	7%	-2%	9%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_024	4%	2%	6%	-2%	9%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_025	6%	3%	14%	4%	1%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_026	6%	2%	13%	10%	5%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_027	6%	2%	13%	11%	5%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_028	6%	2%	12%	12%	5%	18%	18%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_029	6%	2%	13%	9%	5%	18%	18%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_030	6%	3%	13%	8%	4%	18%	18%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_031	6%	3%	14%	6%	2%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_032	5%	2%	10%	2%	10%	16%	16%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_033	6%	2%	13%	11%	5%	18%	18%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_034	6%	2%	13%	9%	4%	19%	19%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_035	6%	3%	13%	7%	3%	19%	19%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_036	6%	2%	13%	10%	5%	18%	18%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_037	5%	2%	9%	0%	10%	16%	16%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_038	5%	2%	10%	1%	9%	15%	15%	8%	3%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_039	5%	2%	10%	2%	9%	15%	15%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_040	6%	2%	12%	11%	5%	18%	18%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_041	5%	2%	10%	2%	10%	15%	15%	8%	3%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_042	5%	2%	9%	0%	10%	16%	16%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_043	5%	2%	9%	0%	10%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_044	6%	3%	13%	4%	1%	20%	20%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_045	4%	2%	9%	-2%	-1%	12%	12%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_046	4%	2%	8%	-1%	4%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_047	4%	2%	7%	-3%	0%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_048	4%	2%	7%	-2%	0%	12%	12%	6%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_049	6%	3%	13%	4%	0%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_050	6%	3%	13%	4%	0%	20%	20%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_051	4%	2%	8%	-1%	4%	12%	12%	7%	3%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_052	4%	2%	8%	-4%	-1%	12%	12%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_053	4%	2%	8%	-1%	3%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_054	6%	2%	11%	11%	4%	17%	17%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_055	4%	2%	10%	-4%	-1%	11%	11%	8%	3%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_056	4%	2%	7%	2%	9%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_057	5%	2%	8%	3%	10%	18%	18%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_058	5%	2%	9%	-2%	6%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_059	5%	2%	7%	-1%	5%	13%	13%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_060	5%	2%	7%	-1%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_061	5%	2%	9%	1%	10%	16%	16%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_062	5%	2%	10%	5%	8%	15%	15%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_063	6%	3%	13%	7%	3%	18%	18%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_064	6%	2%	13%	8%	3%	19%	19%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_065	5%	2%	7%	-1%	5%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_066	5%	2%	7%	-1%	5%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_067	5%	2%	8%	-1%	5%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_068	5%	2%	8%	-1%	5%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_069	5%	2%	8%	-1%	5%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_070	5%	2%	8%	-1%	5%	15%	15%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_071	5%	2%	7%	2%	9%	17%	17%	7%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_072	5%	2%	10%	-2%	6%	13%	13%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_073	4%	2%	6%	-1%	8%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_074	4%	2%	6%	-1%	8%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_075	5%	2%	7%	-2%	9%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_076	5%	2%	8%	2%	9%	18%	18%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_077	4%	2%	6%	-2%	8%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_078	4%	2%	6%	-2%	8%	17%	17%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_079	5%	2%	7%	-3%	8%	17%	17%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_080	5%	2%	8%	2%	9%	17%	17%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_081	5%	2%	9%	-1%	7%	13%	13%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_082	5%	2%	8%	-2%	8%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_083	5%	2%	7%	-3%	8%	17%	17%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_084	5%	2%	9%	-2%	7%	15%	15%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_085	5%	2%	6%	-2%	8%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_086	5%	2%	7%	2%	9%	18%	18%	7%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_087	5%	2%	8%	-2%	8%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_088	4%	2%	6%	0%	8%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_089	5%	2%	7%	2%	9%	17%	17%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_090	5%	2%	9%	-1%	7%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_091	5%	2%	8%	-2%	8%	15%	15%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_092	5%	2%	7%	0%	8%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_093	5%	2%	7%	-1%	5%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_094	5%	2%	8%	-1%	5%	14%	14%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_095	5%	2%	6%	-1%	5%	12%	12%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_096	4%	2%	6%	-3%	4%	12%	12%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_097	5%	2%	8%	-1%	7%	13%	13%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_098	5%	2%	7%	-2%	8%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_099	4%	2%	6%	-2%	8%	18%	18%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_100	4%	2%	6%	-1%	9%	18%	18%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_101	5%	2%	9%	0%	6%	15%	15%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_102	4%	2%	6%	1%	9%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_103	4%	2%	7%	-3%	4%	13%	13%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_104	5%	2%	6%	-1%	5%	12%	12%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_105	5%	2%	8%	-1%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_106	5%	2%	8%	-1%	7%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_107	4%	2%	6%	-1%	9%	17%	17%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_108	5%	2%	6%	-1%	6%	12%	12%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_109	5%	2%	8%	2%	9%	18%	18%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_110	4%	2%	6%	-2%	8%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_111	4%	2%	11%	-3%	-1%	10%	10%	9%	3%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_112	4%	2%	8%	-2%	1%	12%	12%	6%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_113	4%	2%	7%	-2%	0%	11%	11%	7%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_114	4%	2%	8%	-4%	-1%	11%	11%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_115	4%	2%	7%	-3%	0%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_116	4%	2%	9%	-2%	-1%	11%	11%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_117	4%	2%	10%	-3%	-1%	9%	9%	9%	3%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_118	4%	2%	10%	-4%	-1%	11%	11%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_119	4%	2%	10%	-4%	-1%	10%	10%	9%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_120	4%	2%	10%	-3%	-1%	10%	10%	9%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_121	4%	2%	7%	-3%	0%	10%	10%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_122	5%	2%	10%	1%	10%	16%	16%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_123	4%	2%	9%	-4%	-1%	12%	12%	9%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_124	4%	2%	7%	-3%	0%	11%	11%	7%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_125	4%	2%	7%	-3%	0%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_126	4%	2%	11%	-3%	-1%	10%	10%	8%	3%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_127	4%	2%	8%	-2%	2%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_128	5%	2%	9%	3%	11%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_129	5%	2%	9%	1%	10%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_130	5%	2%	9%	3%	10%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_131	5%	2%	10%	3%	9%	15%	15%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_132	6%	3%	13%	6%	2%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_133	6%	3%	14%	5%	2%	19%	19%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_134	6%	2%	13%	8%	4%	19%	19%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_135	5%	2%	9%	0%	6%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_136	4%	2%	6%	0%	9%	19%	19%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_137	4%	2%	6%	1%	10%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_138	4%	2%	6%	1%	10%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_139	4%	2%	7%	2%	10%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_140	4%	2%	8%	-1%	6%	13%	13%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_141	4%	2%	6%	-1%	9%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_142	5%	2%	6%	-2%	8%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_143	5%	2%	8%	-3%	4%	13%	13%	8%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_144	5%	2%	8%	-3%	4%	12%	12%	8%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_145	5%	2%	8%	-4%	4%	13%	13%	8%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_146	5%	2%	8%	-4%	4%	13%	13%	8%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_147	4%	2%	8%	-3%	4%	13%	13%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_148	4%	2%	8%	-3%	4%	13%	13%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_149	4%	2%	8%	-3%	4%	13%	13%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_150	4%	2%	7%	-3%	4%	13%	13%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_151	5%	2%	6%	-1%	5%	12%	12%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_152	4%	2%	6%	-2%	5%	12%	12%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_153	5%	2%	6%	-1%	6%	12%	12%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_154	5%	2%	6%	-1%	6%	13%	13%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_155	4%	2%	6%	-3%	4%	13%	13%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_156	5%	2%	6%	-1%	6%	13%	13%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_157	5%	2%	7%	-1%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_158	5%	2%	7%	-1%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_159	5%	2%	8%	0%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_160	5%	2%	8%	0%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_161	5%	2%	9%	0%	6%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_162	5%	2%	8%	-1%	6%	13%	13%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_163	4%	2%	8%	-1%	7%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_164	4%	2%	8%	-1%	6%	13%	13%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511500_165	4%	2%	8%	-1%	8%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_166	4%	2%	7%	-2%	8%	17%	17%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_167	4%	2%	7%	-1%	9%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_168	4%	2%	7%	-1%	9%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_169	4%	2%	6%	-2%	9%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_170	4%	2%	6%	-2%	8%	19%	19%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_171	4%	2%	6%	-2%	8%	19%	19%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_172	4%	2%	6%	-1%	8%	18%	18%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_173	4%	2%	6%	0%	9%	19%	19%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_174	4%	2%	6%	0%	10%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_175	4%	2%	6%	1%	10%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_176	4%	2%	6%	2%	10%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_177	4%	2%	6%	-1%	9%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_178	4%	2%	7%	2%	10%	19%	19%	7%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_179	4%	2%	5%	-1%	6%	15%	15%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_180	5%	2%	6%	-1%	6%	14%	14%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_181	4%	2%	6%	-1%	5%	14%	14%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_182	4%	2%	6%	-1%	5%	15%	15%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_183	5%	2%	6%	-1%	6%	15%	15%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511500_184	6%	3%	13%	5%	1%	20%	20%	9%	4%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_185	6%	3%	14%	5%	2%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_186	6%	2%	13%	6%	2%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_187	6%	2%	13%	7%	3%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_188	6%	2%	13%	8%	3%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_189	6%	2%	13%	9%	4%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_190	5%	3%	13%	5%	0%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_191	6%	3%	13%	5%	0%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_192	6%	3%	13%	5%	0%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_193	6%	3%	13%	5%	0%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_194	6%	3%	13%	5%	1%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_195	6%	3%	13%	5%	1%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_196	6%	2%	13%	6%	2%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_197	6%	2%	13%	6%	2%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_198	6%	2%	13%	7%	2%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_199	6%	2%	13%	8%	3%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_200	6%	2%	13%	8%	3%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_201	6%	2%	13%	9%	3%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_202	6%	2%	11%	12%	5%	18%	18%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_203	6%	2%	12%	12%	5%	18%	18%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_204	6%	2%	12%	13%	5%	18%	18%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_205	6%	2%	12%	13%	6%	18%	18%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_206	6%	2%	12%	13%	6%	18%	18%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_207	6%	2%	12%	12%	6%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_208	6%	2%	12%	13%	6%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_209	6%	2%	12%	13%	6%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_210	6%	2%	13%	13%	6%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_211	6%	2%	13%	14%	6%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_212	6%	2%	13%	14%	5%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_213	6%	2%	13%	14%	5%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_214	6%	2%	13%	14%	5%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_215	6%	2%	13%	15%	4%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_216	6%	2%	11%	10%	4%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_217	6%	2%	11%	11%	4%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_218	6%	2%	11%	11%	5%	17%	17%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_219	6%	2%	11%	12%	5%	17%	17%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_220	6%	2%	11%	12%	5%	18%	18%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_221	6%	2%	12%	12%	5%	18%	18%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_222	6%	2%	12%	13%	5%	18%	18%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_223	6%	2%	12%	13%	5%	18%	18%	9%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_224	6%	2%	12%	14%	6%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_225	6%	2%	12%	15%	6%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_226	6%	2%	12%	15%	7%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_227	6%	2%	12%	16%	7%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_228	6%	2%	12%	17%	7%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_229	6%	2%	12%	18%	7%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_230	6%	2%	12%	18%	7%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_231	6%	2%	12%	19%	7%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_232	6%	2%	13%	19%	6%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_233	6%	2%	13%	19%	6%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_234	5%	2%	11%	7%	8%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_235	5%	2%	11%	8%	8%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_236	5%	2%	11%	8%	7%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_237	6%	2%	11%	8%	7%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_238	6%	2%	11%	7%	7%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_239	6%	2%	11%	7%	7%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_240	6%	2%	11%	7%	6%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_241	6%	2%	11%	7%	6%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_242	6%	2%	11%	7%	6%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_243	6%	2%	11%	9%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_244	6%	2%	11%	10%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511500_245	6%	2%	11%	11%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_246	6%	2%	11%	11%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_247	6%	2%	11%	12%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_259	6%	2%	13%	21%	4%	20%	20%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_260	6%	2%	13%	22%	4%	20%	20%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_261	6%	2%	13%	22%	4%	20%	20%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_262	6%	2%	13%	22%	4%	19%	19%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_263	6%	2%	13%	21%	4%	19%	19%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_264	6%	2%	13%	21%	4%	19%	19%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_265	6%	2%	13%	21%	4%	19%	19%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_266	6%	2%	13%	21%	4%	19%	19%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_267	6%	2%	13%	21%	4%	19%	19%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_268	6%	2%	13%	21%	4%	18%	18%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_269	6%	2%	13%	22%	4%	18%	18%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_270	6%	2%	13%	22%	4%	18%	18%	9%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_288	7%	3%	15%	21%	4%	22%	22%	10%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_289	7%	3%	15%	21%	4%	23%	23%	11%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_313	6%	2%	12%	23%	2%	20%	20%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_314	6%	2%	13%	23%	1%	20%	20%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_315	6%	3%	13%	22%	1%	20%	20%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_316	6%	3%	13%	23%	1%	20%	20%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_317	6%	3%	14%	23%	1%	21%	21%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_318	6%	3%	14%	22%	2%	21%	21%	10%	4%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_319	6%	3%	15%	20%	2%	22%	22%	10%	4%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_320	6%	2%	13%	20%	1%	19%	19%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_321	6%	2%	13%	19%	1%	20%	20%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_322	6%	3%	13%	19%	0%	20%	20%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_323	6%	3%	13%	19%	0%	21%	21%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_324	6%	3%	14%	19%	1%	21%	21%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_325	6%	2%	13%	15%	4%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_326	6%	2%	13%	16%	4%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_327	6%	2%	13%	16%	3%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_328	6%	2%	13%	17%	3%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_329	6%	2%	13%	17%	3%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_330	6%	2%	13%	17%	3%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_331	6%	2%	13%	18%	3%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_332	6%	2%	13%	18%	3%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_333	6%	2%	13%	18%	3%	19%	19%	10%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_334	6%	2%	13%	19%	2%	19%	19%	10%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_335	6%	2%	13%	20%	3%	19%	19%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_336	6%	2%	13%	21%	3%	19%	19%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_337	6%	2%	12%	22%	3%	19%	19%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_338	6%	2%	12%	22%	3%	19%	19%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_339	7%	3%	15%	18%	3%	23%	23%	10%	4%	7%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_340	6%	3%	14%	13%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_341	6%	3%	14%	14%	0%	23%	23%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_342	6%	3%	14%	14%	0%	23%	23%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_343	6%	3%	14%	15%	1%	23%	23%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_344	6%	3%	15%	16%	1%	23%	23%	10%	4%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_345	6%	3%	15%	17%	1%	23%	23%	10%	4%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_346	6%	3%	15%	18%	1%	22%	22%	10%	4%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_347	6%	3%	13%	9%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_348	6%	3%	13%	9%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_349	6%	3%	13%	10%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_350	6%	3%	13%	10%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_351	6%	3%	13%	11%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_352	6%	3%	13%	12%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_353	6%	3%	13%	13%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_354	6%	3%	13%	14%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_355	6%	2%	13%	15%	1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_356	6%	2%	13%	15%	1%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_357	6%	3%	13%	6%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_358	6%	3%	13%	7%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_359	6%	3%	13%	8%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_360	6%	3%	13%	9%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_361	6%	3%	13%	9%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_362	6%	3%	13%	10%	0%	21%	21%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_363	6%	3%	13%	11%	0%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511500_364	6%	3%	13%	11%	0%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_365	6%	2%	13%	11%	1%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_366	6%	2%	13%	11%	1%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_367	6%	2%	13%	11%	1%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_368	6%	2%	13%	12%	2%	20%	20%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_369	6%	3%	13%	14%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_370	6%	3%	13%	15%	0%	22%	22%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_371	6%	3%	13%	15%	0%	21%	21%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_372	6%	3%	13%	16%	0%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_373	6%	3%	13%	17%	0%	20%	20%	10%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511500_374	6%	2%	13%	18%	1%	20%	20%	10%	4%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511500_376	7%	3%	14%	23%	2%	21%	21%	10%	4%	6%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511600_001	4%	2%	5%	-1%	5%	15%	15%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_002	4%	2%	8%	-1%	8%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_003	4%	2%	8%	-1%	7%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_004	4%	2%	6%	0%	8%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_005	4%	2%	8%	3%	11%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_006	5%	2%	9%	3%	10%	17%	17%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_007	5%	2%	6%	0%	5%	17%	17%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_008	4%	2%	7%	-1%	8%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_009	4%	2%	4%	-1%	6%	15%	15%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_010	4%	2%	4%	-1%	5%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_011	4%	2%	8%	-1%	7%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_012	4%	2%	8%	0%	6%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_013	5%	2%	7%	0%	5%	17%	17%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_014	4%	2%	8%	0%	7%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_015	5%	2%	5%	-1%	6%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_016	5%	2%	8%	1%	5%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_017	5%	2%	9%	0%	10%	16%	16%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_018	4%	2%	9%	-2%	0%	11%	11%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_019	4%	2%	8%	-3%	0%	12%	12%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_020	4%	2%	6%	-4%	0%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_021	4%	2%	8%	-1%	4%	15%	15%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_022	4%	2%	7%	-3%	0%	13%	13%	6%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_023	4%	2%	7%	-1%	2%	13%	13%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_024	4%	2%	8%	-2%	4%	13%	13%	7%	3%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_025	4%	2%	10%	-3%	0%	12%	12%	8%	3%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_026	4%	2%	8%	-1%	3%	14%	14%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_027	4%	2%	6%	-3%	0%	12%	12%	6%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_028	4%	2%	5%	-1%	5%	15%	15%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_029	5%	2%	5%	-1%	6%	15%	15%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_030	5%	2%	6%	-1%	5%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_031	5%	2%	6%	0%	5%	16%	16%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_032	5%	2%	8%	3%	11%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_033	5%	2%	9%	1%	10%	16%	16%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_034	4%	2%	10%	-1%	0%	12%	12%	8%	3%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511600_035	4%	2%	7%	0%	9%	19%	19%	5%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_036	4%	2%	7%	-2%	1%	12%	12%	6%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_037	4%	2%	8%	-1%	4%	15%	15%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_038	4%	2%	8%	-1%	3%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_039	4%	2%	8%	-1%	4%	15%	15%	7%	3%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_040	4%	2%	9%	-3%	0%	12%	12%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_041	5%	2%	8%	0%	5%	16%	16%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_042	5%	2%	8%	1%	5%	15%	15%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_043	4%	2%	8%	0%	7%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_044	4%	2%	9%	1%	6%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_045	4%	2%	8%	-1%	6%	14%	14%	6%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_046	3%	2%	8%	-3%	2%	12%	12%	7%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_047	4%	2%	7%	-3%	0%	13%	13%	6%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_048	4%	2%	8%	-1%	4%	13%	13%	7%	3%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_049	4%	2%	9%	-3%	1%	12%	12%	8%	3%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_050	4%	2%	7%	-1%	8%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_051	4%	2%	7%	-1%	9%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_052	4%	2%	7%	-1%	9%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_053	4%	2%	6%	-2%	8%	19%	19%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_054	4%	2%	6%	-1%	8%	19%	19%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_055	4%	2%	6%	-1%	8%	19%	19%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_056	4%	2%	6%	-1%	8%	19%	19%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_057	4%	2%	6%	0%	9%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_058	4%	2%	6%	1%	10%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_059	4%	2%	6%	2%	11%	19%	19%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_060	5%	2%	7%	0%	5%	17%	17%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_061	4%	2%	7%	0%	8%	19%	19%	5%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_062	4%	2%	7%	0%	8%	19%	19%	5%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_085	5%	2%	10%	7%	9%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_086	5%	2%	11%	7%	8%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_087	5%	2%	11%	7%	8%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_091	4%	2%	6%	2%	10%	17%	17%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_092	4%	2%	7%	3%	10%	17%	17%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_093	4%	2%	8%	3%	11%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_094	4%	2%	8%	3%	11%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_095	5%	2%	8%	4%	10%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_096	5%	2%	9%	1%	10%	16%	16%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_097	5%	2%	9%	0%	10%	16%	16%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_098	5%	2%	9%	1%	10%	17%	17%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_099	5%	2%	9%	1%	11%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_100	5%	2%	9%	2%	11%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_101	4%	2%	6%	0%	8%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_102	4%	2%	6%	0%	9%	18%	18%	6%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_103	4%	2%	6%	1%	9%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_104	4%	2%	6%	1%	10%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_105	4%	2%	7%	2%	11%	18%	18%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511600_106	4%	2%	8%	3%	11%	17%	17%	6%	3%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_107	4%	2%	8%	3%	11%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_108	4%	2%	8%	3%	11%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_109	5%	2%	8%	4%	10%	16%	16%	7%	3%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_110	5%	2%	9%	2%	10%	16%	16%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_111	5%	2%	9%	0%	10%	16%	16%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_112	5%	2%	9%	0%	10%	17%	17%	7%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_113	5%	2%	9%	1%	11%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_114	5%	2%	9%	1%	11%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_115	5%	2%	10%	2%	10%	17%	17%	8%	3%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_116	5%	2%	9%	0%	10%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_117	5%	2%	9%	1%	10%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_118	5%	2%	9%	1%	10%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_119	5%	2%	9%	1%	10%	16%	16%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_120	5%	2%	10%	2%	10%	16%	16%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511600_121	5%	2%	10%	2%	10%	16%	16%	8%	3%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_122	5%	2%	10%	2%	9%	16%	16%	8%	3%	4%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_123	5%	2%	10%	3%	9%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_124	5%	2%	10%	5%	9%	16%	16%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_125	5%	2%	11%	6%	8%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_126	5%	2%	11%	8%	8%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_127	5%	2%	11%	9%	8%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_128	5%	2%	11%	9%	7%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_129	6%	2%	11%	8%	7%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_130	6%	2%	11%	8%	7%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_131	6%	2%	11%	8%	6%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_132	5%	2%	11%	9%	7%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_133	5%	2%	11%	10%	7%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_134	5%	2%	11%	11%	7%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_142	6%	2%	11%	12%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_143	6%	2%	11%	13%	6%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_144	6%	2%	11%	13%	6%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_163	6%	2%	11%	17%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_164	6%	2%	11%	17%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_185	6%	2%	11%	14%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_186	6%	2%	11%	14%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_187	6%	2%	11%	15%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_188	6%	2%	12%	16%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_189	6%	2%	12%	16%	5%	19%	19%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_190	6%	2%	12%	18%	6%	19%	19%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_191	6%	2%	12%	19%	6%	19%	19%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_192	6%	2%	12%	20%	6%	19%	19%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_193	6%	2%	12%	21%	7%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_194	6%	2%	12%	23%	7%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_195	6%	2%	12%	23%	7%	19%	19%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_196	6%	2%	12%	23%	8%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE511600_197	6%	2%	12%	24%	8%	20%	20%	9%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_198	6%	2%	11%	10%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_199	6%	2%	11%	11%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_200	6%	2%	11%	13%	5%	17%	17%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_201	6%	2%	11%	14%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_202	6%	2%	11%	15%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RE511600_203	6%	2%	11%	17%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_204	6%	2%	11%	18%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_205	6%	2%	12%	18%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_206	6%	2%	12%	19%	5%	18%	18%	8%	3%	4%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_207	6%	2%	12%	20%	6%	19%	19%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_208	6%	2%	12%	21%	6%	19%	19%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_209	6%	2%	12%	22%	6%	19%	19%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_210	6%	2%	12%	23%	6%	19%	19%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_211	6%	2%	12%	25%	7%	19%	19%	8%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE511600_212	6%	2%	12%	27%	7%	19%	19%	8%	3%	5%	2%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RE511600_228	4%	2%	3%	-1%	6%	15%	15%	6%	3%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE511600_242	5%	2%	9%	2%	10%	17%	17%	8%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE511800_001	18%	5%	51%	124%	32%	61%	61%	28%	7%	23%	4%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE512000_002	18%	7%	41%	142%	36%	75%	75%	30%	8%	23%	5%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RE512000_003	21%	7%	44%	171%	43%	88%	88%	31%	9%	25%	5%	4%	1%	6%	2%	1%	4%	1%	0%	0%
RE512100_001	23%	7%	57%	162%	42%	83%	83%	30%	9%	24%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RE512100_002	25%	8%	58%	197%	48%	87%	87%	32%	9%	25%	5%	5%	1%	7%	2%	1%	5%	1%	0%	0%
RE512200_001	27%	8%	58%	219%	51%	91%	91%	33%	10%	26%	5%	5%	1%	8%	2%	1%	5%	1%	0%	0%
RE512200_002	33%	11%	72%	331%	84%	144%	144%	52%	17%	40%	10%	7%	2%	13%	3%	1%	8%	2%	0%	0%
RE512200_003	38%	13%	79%	367%	100%	143%	143%	55%	20%	42%	12%	8%	2%	13%	3%	1%	8%	2%	0%	0%
RE512300_001	30%	9%	71%	278%	66%	129%	129%	43%	13%	33%	7%	6%	1%	10%	2%	1%	7%	1%	0%	0%
RE512400_001	34%	10%	75%	323%	82%	124%	124%	46%	15%	35%	9%	7%	1%	11%	2%	1%	7%	1%	0%	0%
RE514400_001	10%	4%	23%	97%	15%	43%	43%	19%	6%	13%	3%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE514400_003	10%	3%	18%	124%	18%	39%	39%	13%	4%	9%	3%	3%	0%	4%	1%	0%	2%	0%	0%	0%
RE514400_006	10%	3%	19%	124%	19%	36%	36%	13%	4%	10%	3%	3%	0%	4%	1%	0%	2%	0%	0%	0%
RE514400_007	10%	3%	19%	126%	18%	37%	37%	13%	4%	9%	3%	3%	0%	4%	1%	0%	2%	0%	0%	0%
RE514500_001	10%	3%	22%	98%	12%	44%	44%	18%	6%	11%	3%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE514500_002	10%	3%	21%	100%	12%	42%	42%	17%	6%	11%	3%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE514500_003	10%	3%	20%	88%	11%	40%	40%	16%	6%	10%	3%	2%	0%	4%	1%	0%	2%	1%	0%	0%
RE514500_006	9%	3%	19%	96%	17%	35%	35%	12%	4%	9%	2%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514500_007	9%	3%	19%	98%	17%	34%	34%	12%	4%	9%	2%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514500_008	10%	3%	18%	123%	18%	42%	42%	13%	4%	9%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514500_009	10%	3%	17%	122%	19%	43%	43%	13%	5%	8%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514500_010	10%	3%	17%	120%	20%	45%	45%	13%	5%	8%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514600_001	10%	3%	19%	67%	11%	37%	37%	15%	6%	9%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE514600_002	9%	3%	19%	98%	17%	33%	33%	12%	4%	9%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514600_003	9%	3%	19%	98%	17%	32%	32%	13%	4%	9%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514600_004	9%	3%	19%	98%	17%	34%	34%	13%	4%	9%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514600_005	9%	3%	19%	95%	18%	36%	36%	13%	4%	9%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RE514600_006	9%	3%	18%	91%	18%	36%	36%	13%	4%	9%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE514700_001	8%	3%	19%	53%	13%	35%	35%	13%	5%	9%	3%	1%	0%	3%	1%	0%	2%	0%	0%	0%
RE514800_001	5%	3%	7%	54%	10%	29%	29%	10%	5%	5%	3%	2%	0%	3%	0%	0%	1%	1%	0%	0%
RE515000_001	9%	3%	15%	59%	11%	31%	31%	14%	5%	10%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE515100_001	10%	3%	25%	84%	16%	33%	33%	18%	5%	13%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE515200_001	11%	3%	25%	74%	18%	35%	35%	18%	5%	12%	3%	2%	0%	3%	1%	0%	3%	0%	0%	0%
RE515200_002	10%	3%	26%	83%	19%	35%	35%	19%	6%	13%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE515200_003	10%	4%	20%	96%	15%	38%	38%	17%	6%	12%	3%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RE515300_001	11%	3%	24%	62%	17%	37%	37%	17%	5%	12%	3%	2%	0%	3%	1%	0%	2%	0%	0%	0%
RE515300_002	11%	4%	28%	101%	21%	42%	42%	19%	6%	14%	3%	2%	0%	3%	1%	0%	3%	1%	0%	0%
RE515300_003	15%	6%	33%	73%	24%	55%	55%	24%	9%	15%	5%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RE516200_001	13%	4%	29%	94%	22%	48%	48%	20%	6%	13%	4%	2%	0%	3%	1%	0%	3%	1%	0%	0%
RE517200_001	1%	0%	2%	65%	14%	34%	34%	15%	5%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE517200_002	1%	0%	2%	66%	14%	35%	35%	14%	5%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE517200_003	6%	1%	14%	68%	14%	37%	37%	14%	5%	10%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE517400_001	9%	2%	23%	68%	13%	37%	37%	14%	5%	10%	3%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE519100_001	8%	2%	20%	58%	11%	31%	31%	13%	4%	8%	2%	1%	0%	2%	1%	0%	1%	0%	0%	0%
RE519500_001	16%	5%	41%	59%	33%	42%	42%	27%	8%	17%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RE519500_002	19%	6%	48%	66%	43%	52%	52%	35%	9%	23%	5%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RE521400_001	13%	4%	29%	25%	11%	20%	20%	16%	5%	7%	3%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RE521600_001	5%	1%	9%	8%	1%	1%	1%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_002	9%	3%	18%	20%	7%	12%	12%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_003	13%	4%	25%	23%	11%	16%	16%	14%	5%	6%	3%	1%	0%	1%	1%	0%	2%	1%	0%	0%
RE521600_004	11%	4%	11%	-2%	2%	5%	5%	5%	4%	3%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE521600_005	9%	3%	13%	-3%	2%	4%	4%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_006	9%	3%	15%	1%	6%	6%	6%	5%	3%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_007	8%	3%	15%	2%	4%	5%	5%	5%	3%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_008	7%	3%	12%	11%	5%	11%	11%	5%	4%	3%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_009	8%	3%	15%	1%	4%	10%	10%	6%	3%	4%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE521600_010	10%	3%	23%	30%	11%	15%	15%	9%	3%	8%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RE521600_011	8%	2%	15%	24%	9%	16%	16%	8%	3%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_012	8%	3%	18%	19%	4%	10%	10%	9%	4%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_013	2%	1%	8%	8%	-1%	2%	2%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_017	8%	3%	17%	21%	9%	8%	8%	7%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_018	2%	1%	7%	7%	-1%	3%	3%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_019	3%	1%	7%	6%	0%	1%	1%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_020	2%	1%	7%	7%	-1%	2%	2%	3%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_023	2%	1%	6%	8%	-1%	1%	1%	2%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_026	3%	1%	7%	6%	-1%	1%	1%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_028	2%	1%	8%	7%	-1%	1%	1%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_030	2%	1%	6%	5%	-1%	0%	0%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_032	2%	1%	6%	7%	-1%	2%	2%	3%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_035	2%	1%	7%	6%	-1%	3%	3%	3%	1%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RE521600_036	3%	1%	6%	6%	-1%	1%	1%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_037	2%	1%	6%	7%	0%	3%	3%	3%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_038	2%	1%	6%	7%	-1%	2%	2%	3%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_039	2%	1%	5%	6%	-1%	0%	0%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE521600_041	2%	1%	7%	8%	-1%	2%	2%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_043	2%	1%	7%	6%	-1%	1%	1%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_044	2%	1%	7%	8%	-1%	2%	2%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_045	1%	1%	6%	6%	-1%	1%	1%	2%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_046	1%	1%	7%	6%	0%	3%	3%	3%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_047	3%	1%	10%	11%	2%	8%	8%	4%	1%	2%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_048	3%	1%	10%	11%	2%	7%	7%	4%	1%	2%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_049	3%	1%	9%	10%	2%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_050	3%	1%	9%	9%	2%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_051	3%	1%	10%	10%	2%	6%	6%	4%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_052	3%	1%	10%	10%	2%	6%	6%	4%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_053	3%	1%	10%	10%	2%	6%	6%	4%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_054	3%	1%	10%	10%	2%	7%	7%	4%	1%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_055	3%	1%	9%	8%	3%	7%	7%	4%	1%	2%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_056	3%	1%	9%	8%	3%	6%	6%	4%	1%	2%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RE521600_057	3%	1%	9%	8%	3%	6%	6%	4%	1%	2%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE521600_058	3%	1%	9%	8%	3%	6%	6%	4%	1%	2%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE521600_059	3%	1%	9%	8%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RE521600_060	3%	1%	9%	7%	3%	7%	7%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_061	3%	1%	9%	7%	3%	7%	7%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_062	3%	1%	8%	7%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_063	3%	1%	8%	6%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_064	3%	1%	8%	6%	3%	7%	7%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_065	3%	1%	8%	6%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_066	3%	1%	7%	6%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_067	3%	1%	7%	7%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_068	3%	1%	7%	7%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_069	3%	1%	7%	7%	3%	5%	5%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_070	3%	1%	7%	6%	2%	5%	5%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_071	3%	1%	7%	6%	2%	5%	5%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_072	3%	1%	7%	6%	2%	5%	5%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_073	3%	1%	6%	5%	2%	5%	5%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_074	3%	1%	6%	5%	2%	4%	4%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_075	3%	1%	6%	5%	2%	4%	4%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_076	3%	1%	7%	6%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_077	3%	1%	7%	6%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_078	3%	1%	7%	6%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_079	3%	1%	7%	6%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_080	3%	1%	7%	6%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_081	3%	1%	7%	7%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_082	3%	1%	7%	7%	3%	6%	6%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_083	3%	1%	7%	8%	3%	7%	7%	3%	1%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_084	2%	1%	5%	4%	0%	1%	1%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_085	2%	1%	5%	4%	0%	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_086	2%	1%	5%	3%	1%	3%	3%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_087	2%	1%	5%	3%	1%	3%	3%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RE521600_088	2%	1%	5%	3%	0%	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_089	1%	0%	2%	3%	-2%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RE521600_090	6%	3%	12%	14%	1%	9%	9%	5%	3%	3%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW110000_001	7%	3%	20%	29%	15%	10%	10%	10%	3%	11%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RW110000_002	16%	7%	30%	18%	13%	4%	4%	10%	7%	15%	5%	0%	1%	1%	1%	1%	5%	1%	0%	0%
RW110000_008	5%	1%	8%	0%	3%	3%	3%	8%	2%	3%	1%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RW110000_009	6%	1%	10%	1%	4%	2%	2%	8%	3%	4%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%
RW110000_010	7%	2%	13%	9%	7%	5%	5%	7%	4%	5%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RW110000_011	9%	3%	16%	13%	13%	5%	5%	6%	4%	7%	2%	0%	0%	0%	1%	0%	2%	0%	0%	0%
RW110000_012	13%	5%	24%	21%	14%	2%	2%	10%	6%	13%	4%	1%	1%	1%	1%	0%	4%	1%	0%	0%
RW110000_013	16%	5%	25%	59%	15%	15%	15%	14%	8%	15%	4%	1%	1%	3%	1%	1%	5%	1%	0%	0%
RW110000_014	11%	4%	17%	12%	10%	17%	17%	11%	6%	9%	2%	0%	1%	1%	1%	0%	3%	0%	0%	0%
RW110000_015	12%	4%	18%	13%	11%	18%	18%	12%	7%	10%	3%	0%	1%	1%	1%	0%	3%	0%	0%	0%
RW110000_016	14%	4%	19%	15%	17%	14%	14%	11%	6%	12%	3%	1%	1%	1%	1%	0%	3%	0%	0%	0%
RW110000_017	13%	4%	18%	15%	13%	12%	12%	11%	7%	11%	3%	1%	1%	1%	1%	0%	3%	0%	0%	0%
RW110000_018	7%	2%	13%	16%	12%	4%	4%	7%	4%	5%	1%	0%	0%	0%	0%	0%	2%	0%	0%	0%
RW110000_019	23%	8%	37%	56%	34%	17%	17%	18%	10%	23%	6%	1%	1%	3%	2%	1%	7%	1%	0%	0%
RW110000_020	7%	3%	16%	39%	8%	10%	10%	7%	3%	9%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RW110000_021	5%	1%	9%	-1%	10%	24%	24%	10%	3%	4%	1%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RW110000_022	5%	1%	8%	7%	6%	0%	0%	4%	1%	6%	2%	0%	0%	0%	0%	0%	2%	0%	0%	0%
RW110000_023	5%	1%	10%	20%	9%	3%	3%	5%	1%	9%	1%	0%	0%	1%	1%	0%	3%	0%	0%	0%
RW110000_024	10%	5%	14%	8%	7%	2%	2%	7%	5%	5%	3%	0%	0%	0%	0%	0%	2%	1%	0%	0%
RW110100_001	24%	8%	38%	28%	33%	18%	18%	18%	11%	23%	7%	1%	1%	2%	2%	1%	7%	1%	0%	0%
RW112100_001	20%	8%	47%	89%	48%	59%	59%	33%	13%	31%	9%	2%	1%	4%	2%	1%	7%	1%	0%	0%
RW112100_002	16%	6%	37%	80%	43%	50%	50%	25%	10%	24%	7%	2%	1%	4%	1%	1%	5%	1%	0%	0%
RW112100_003	15%	5%	34%	74%	41%	44%	44%	23%	9%	22%	6%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW112200_001	13%	5%	31%	69%	39%	39%	39%	20%	8%	19%	5%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW112300_001	8%	3%	13%	53%	23%	22%	22%	9%	4%	8%	3%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RW112300_002	7%	3%	13%	49%	24%	22%	22%	9%	4%	8%	3%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RW112300_003	10%	3%	13%	30%	31%	36%	36%	10%	6%	9%	4%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RW112400_001	9%	3%	12%	27%	30%	32%	32%	9%	6%	8%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RW112400_002	9%	3%	12%	26%	29%	29%	29%	8%	5%	8%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RW112400_003	9%	3%	12%	27%	29%	27%	27%	8%	5%	8%	3%	1%	0%	2%	1%	0%	2%	1%	0%	0%
RW112500_001	9%	3%	12%	29%	28%	25%	25%	8%	5%	9%	3%	1%	0%	2%	0%	0%	2%	1%	0%	0%
RW112500_002	8%	3%	11%	26%	25%	26%	26%	7%	4%	7%	3%	1%	0%	2%	0%	0%	2%	0%	0%	0%
RW112600_001	8%	2%	11%	22%	22%	24%	24%	7%	4%	6%	3%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW113300_001	26%	9%	60%	110%	50%	67%	67%	33%	13%	32%	9%	2%	1%	4%	2%	1%	7%	2%	0%	0%
RW113700_001	29%	5%	67%	69%	30%	31%	31%	28%	7%	30%	5%	1%	1%	2%	2%	1%	8%	1%	0%	0%
RW210600_001	21%	8%	46%	134%	44%	49%	49%	27%	10%	30%	8%	3%	1%	5%	2%	1%	7%	2%	0%	0%
RW210600_002	17%	6%	39%	69%	29%	29%	29%	21%	7%	22%	6%	2%	1%	3%	1%	1%	6%	1%	0%	0%
RW210700_001	12%	3%	26%	46%	27%	26%	26%	16%	5%	17%	4%	1%	1%	3%	1%	0%	5%	1%	0%	0%
RW210700_002	16%	5%	32%	70%	29%	30%	30%	17%	7%	19%	5%	1%	1%	3%	1%	0%	5%	1%	0%	0%
RW210700_003	25%	9%	54%	160%	50%	60%	60%	32%	12%	34%	10%	4%	1%	6%	2%	1%	8%	2%	0%	0%
RW210800_001	8%	2%	17%	24%	17%	16%	16%	8%	3%	10%	3%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RW210800_002	17%	5%	32%	83%	33%	35%	35%	18%	7%	19%	6%	2%	1%	4%	1%	0%	5%	1%	0%	0%
RW210800_003	18%	6%	34%	103%	37%	39%	39%	21%	8%	20%	7%	3%	1%	4%	1%	0%	5%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW210800_004	18%	6%	35%	114%	38%	42%	42%	22%	9%	22%	7%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RW210900_001	11%	3%	22%	57%	22%	22%	22%	12%	5%	14%	4%	1%	0%	2%	1%	0%	4%	1%	0%	0%
RW211000_001	11%	2%	26%	42%	29%	23%	23%	11%	4%	13%	3%	1%	0%	2%	1%	0%	3%	1%	0%	0%
RW213300_001	31%	8%	52%	54%	37%	62%	62%	38%	11%	34%	8%	2%	1%	3%	2%	1%	7%	1%	0%	0%
RW213500_001	28%	9%	56%	105%	46%	66%	66%	42%	12%	40%	9%	2%	1%	4%	2%	1%	8%	1%	0%	0%
RW213500_002	25%	6%	47%	49%	30%	46%	46%	30%	7%	28%	5%	2%	1%	2%	2%	1%	6%	1%	0%	0%
RW213500_003	26%	8%	52%	92%	41%	59%	59%	39%	11%	37%	8%	2%	1%	4%	2%	1%	7%	1%	0%	0%
RW213900_001	19%	4%	34%	21%	22%	26%	26%	23%	5%	18%	3%	1%	1%	2%	1%	0%	3%	0%	0%	0%
RW213900_002	6%	1%	12%	21%	10%	4%	4%	9%	1%	10%	1%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RW213900_003	6%	1%	13%	22%	10%	7%	7%	9%	2%	10%	1%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RW214000_001	10%	2%	21%	45%	17%	2%	2%	12%	2%	12%	2%	2%	0%	3%	1%	0%	3%	0%	0%	0%
RW214000_002	8%	1%	16%	28%	12%	6%	6%	11%	2%	11%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RW214200_001	14%	2%	29%	40%	15%	13%	13%	19%	3%	17%	3%	1%	1%	2%	1%	0%	4%	0%	0%	0%
RW214200_002	14%	2%	29%	45%	20%	10%	10%	19%	3%	18%	3%	1%	1%	2%	1%	1%	4%	0%	0%	0%
RW214200_003	16%	3%	31%	44%	20%	11%	11%	20%	3%	19%	3%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW214200_004	19%	6%	43%	61%	31%	5%	5%	18%	6%	23%	6%	3%	1%	5%	2%	1%	7%	1%	0%	0%
RW214400_001	27%	5%	62%	58%	30%	32%	32%	35%	7%	32%	5%	2%	1%	3%	2%	1%	8%	1%	0%	0%
RW214400_002	19%	3%	37%	18%	23%	21%	21%	24%	4%	22%	3%	1%	1%	1%	1%	1%	5%	1%	0%	0%
RW214500_001	15%	2%	35%	36%	18%	20%	20%	20%	3%	18%	3%	1%	1%	1%	1%	0%	4%	0%	0%	0%
RW214700_001	20%	4%	51%	35%	18%	25%	25%	32%	6%	26%	4%	1%	1%	1%	2%	1%	6%	1%	0%	0%
RW214800_001	22%	5%	52%	33%	21%	29%	29%	31%	7%	27%	5%	1%	1%	1%	2%	1%	6%	1%	0%	0%
RW214900_001	22%	5%	51%	32%	20%	29%	29%	31%	6%	27%	5%	1%	1%	1%	2%	1%	6%	1%	0%	0%
RW215500_001	16%	3%	33%	78%	23%	31%	31%	22%	5%	20%	3%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW215500_002	12%	4%	28%	78%	17%	27%	27%	20%	5%	18%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW215500_003	16%	3%	33%	82%	23%	30%	30%	22%	5%	20%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW215600_001	16%	3%	32%	82%	23%	32%	32%	22%	5%	20%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW215600_002	16%	3%	32%	85%	23%	32%	32%	22%	5%	20%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW215600_003	12%	4%	28%	80%	17%	28%	28%	20%	6%	17%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW216000_001	11%	4%	26%	76%	19%	35%	35%	21%	6%	18%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW216300_001	20%	5%	42%	106%	36%	51%	51%	32%	7%	26%	5%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RW217300_001	11%	2%	24%	23%	20%	33%	33%	17%	3%	12%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RW217300_003	11%	2%	24%	20%	17%	30%	30%	17%	3%	13%	2%	1%	0%	1%	1%	0%	3%	0%	0%	0%
RW217400_001	20%	4%	44%	46%	27%	41%	41%	33%	6%	23%	4%	1%	1%	2%	2%	1%	5%	1%	0%	0%
RW217400_003	12%	2%	28%	41%	19%	22%	22%	17%	3%	15%	2%	1%	1%	1%	1%	0%	3%	0%	0%	0%
RW217600_001	30%	9%	58%	194%	61%	119%	119%	53%	17%	43%	11%	5%	2%	8%	3%	1%	9%	2%	0%	0%
RW218600_001	13%	2%	32%	43%	22%	28%	28%	18%	3%	15%	2%	1%	1%	2%	1%	0%	3%	0%	0%	0%
RW218700_001	29%	7%	62%	98%	42%	53%	53%	40%	9%	34%	7%	2%	1%	4%	2%	1%	10%	1%	0%	0%
RW219300_001	26%	9%	55%	202%	77%	90%	90%	43%	12%	37%	9%	4%	1%	7%	2%	1%	8%	2%	0%	0%
RW219600_001	32%	8%	63%	234%	118%	99%	99%	45%	12%	42%	9%	5%	1%	9%	3%	1%	10%	2%	0%	0%
RW219800_001	23%	5%	49%	185%	99%	88%	88%	38%	8%	35%	6%	4%	1%	7%	2%	1%	8%	1%	0%	0%
RW219800_002	21%	5%	48%	179%	96%	82%	82%	37%	8%	34%	6%	4%	1%	7%	2%	1%	8%	1%	0%	0%
RW219800_003	20%	5%	46%	167%	93%	77%	77%	37%	7%	33%	6%	4%	1%	7%	2%	1%	8%	1%	0%	0%
RW219900_001	20%	5%	47%	174%	94%	74%	74%	37%	7%	33%	5%	4%	1%	7%	2%	1%	8%	1%	0%	0%
RW219900_002	19%	5%	46%	172%	93%	74%	74%	37%	7%	32%	5%	4%	1%	6%	2%	1%	7%	1%	0%	0%
RW219900_003	18%	4%	44%	165%	90%	70%	70%	36%	6%	31%	5%	3%	1%	6%	2%	1%	7%	1%	0%	0%
RW219900_004	19%	3%	50%	150%	37%	56%	56%	31%	4%	27%	3%	3%	1%	5%	2%	1%	6%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW220100_001	18%	3%	41%	131%	59%	54%	54%	30%	4%	25%	3%	3%	1%	5%	1%	1%	6%	1%	0%	0%
RW220200_001	18%	3%	42%	126%	59%	53%	53%	28%	4%	26%	3%	3%	1%	5%	1%	1%	6%	1%	0%	0%
RW220200_002	17%	2%	42%	110%	58%	50%	50%	27%	4%	25%	3%	3%	1%	5%	1%	1%	5%	1%	0%	0%
RW221500_001	24%	5%	53%	145%	53%	73%	73%	42%	9%	33%	6%	3%	1%	4%	2%	1%	7%	1%	0%	0%
RW221600_001	18%	5%	50%	112%	44%	67%	67%	39%	8%	31%	5%	2%	1%	4%	2%	1%	7%	1%	0%	0%
RW221600_002	16%	5%	43%	108%	37%	62%	62%	35%	7%	27%	5%	2%	1%	4%	2%	1%	6%	1%	0%	0%
RW221600_003	15%	4%	34%	91%	36%	54%	54%	30%	7%	23%	4%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW221600_004	18%	4%	42%	103%	33%	47%	47%	32%	6%	24%	3%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW221600_005	17%	3%	41%	98%	34%	45%	45%	31%	5%	23%	3%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW221700_001	12%	3%	27%	77%	28%	38%	38%	22%	4%	16%	3%	2%	1%	3%	1%	0%	3%	0%	0%	0%
RW222900_001	12%	2%	29%	74%	36%	52%	52%	32%	6%	25%	4%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RW223000_001	22%	7%	48%	195%	68%	98%	98%	55%	14%	46%	10%	3%	2%	6%	3%	1%	10%	2%	0%	0%
RW223000_002	9%	2%	24%	75%	21%	30%	30%	23%	4%	17%	2%	2%	1%	3%	1%	0%	4%	0%	0%	0%
RW223100_001	9%	2%	22%	65%	23%	46%	46%	30%	5%	22%	3%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW223600_001	19%	3%	51%	49%	25%	47%	47%	30%	5%	21%	3%	2%	1%	3%	1%	1%	4%	0%	0%	0%
RW223700_001	19%	3%	52%	51%	25%	46%	46%	30%	5%	21%	3%	2%	1%	3%	1%	1%	4%	0%	0%	0%
RW223700_002	20%	3%	54%	51%	25%	47%	47%	31%	5%	22%	3%	2%	1%	3%	1%	1%	4%	1%	0%	0%
RW223800_001	21%	4%	57%	55%	25%	44%	44%	32%	5%	22%	3%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW223800_002	21%	4%	54%	63%	26%	46%	46%	32%	5%	22%	3%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RW224200_001	69%	16%	143%	128%	70%	92%	92%	68%	17%	48%	10%	3%	2%	5%	4%	1%	11%	2%	0%	0%
RW225200_001	38%	10%	87%	163%	75%	100%	100%	60%	16%	48%	9%	4%	2%	7%	3%	1%	10%	1%	0%	0%
RW225300_001	37%	10%	86%	167%	71%	94%	94%	56%	16%	49%	8%	5%	2%	8%	3%	1%	10%	1%	0%	0%
RW225300_002	40%	11%	90%	166%	76%	108%	108%	62%	18%	51%	9%	5%	2%	8%	3%	1%	11%	2%	0%	0%
RW225300_003	42%	12%	93%	171%	80%	117%	117%	65%	20%	54%	11%	5%	2%	8%	4%	1%	11%	2%	0%	0%
RW226000_001	29%	7%	72%	253%	78%	109%	109%	63%	16%	60%	10%	5%	2%	9%	4%	2%	13%	2%	0%	0%
RW226200_001	13%	1%	41%	155%	40%	67%	67%	46%	7%	34%	5%	3%	1%	6%	2%	1%	7%	1%	0%	0%
RW226300_001	11%	1%	35%	139%	36%	61%	61%	41%	6%	31%	5%	3%	1%	5%	2%	1%	7%	1%	0%	0%
RW226300_002	13%	1%	34%	134%	34%	59%	59%	38%	6%	28%	4%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RW227700_001	16%	3%	31%	92%	29%	33%	33%	19%	4%	15%	3%	2%	1%	4%	1%	0%	3%	0%	0%	0%
RW227800_001	20%	5%	39%	103%	22%	43%	43%	24%	6%	20%	4%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RW227800_002	15%	4%	29%	64%	19%	30%	30%	16%	5%	13%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW227800_003	16%	3%	28%	85%	23%	27%	27%	18%	5%	15%	3%	2%	1%	3%	1%	0%	3%	0%	0%	0%
RW228900_001	20%	4%	40%	176%	67%	82%	82%	38%	8%	31%	5%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RW229000_005	16%	3%	33%	172%	65%	77%	77%	37%	8%	30%	5%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RW229100_003	9%	1%	20%	90%	31%	47%	47%	28%	5%	22%	3%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW229100_004	11%	2%	23%	124%	55%	62%	62%	32%	7%	25%	5%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RW229200_001	6%	0%	13%	67%	27%	32%	32%	23%	4%	19%	3%	1%	1%	2%	1%	0%	4%	0%	0%	0%
RW229200_002	3%	0%	7%	91%	29%	41%	41%	21%	5%	17%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW229200_003	2%	0%	3%	78%	27%	38%	38%	19%	4%	16%	3%	1%	1%	3%	1%	0%	3%	0%	0%	0%
RW229200_004	2%	0%	4%	73%	25%	34%	34%	18%	4%	15%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RW229200_005	2%	0%	6%	85%	28%	40%	40%	20%	4%	16%	3%	2%	1%	3%	1%	0%	3%	0%	0%	0%
RW229200_006	6%	-1%	12%	70%	27%	34%	34%	24%	4%	19%	3%	1%	1%	3%	1%	0%	4%	1%	0%	0%
RW229200_007	6%	0%	13%	67%	27%	32%	32%	24%	4%	19%	3%	1%	1%	2%	1%	0%	4%	0%	0%	0%
RW229300_001	2%	0%	6%	70%	23%	32%	32%	18%	4%	15%	2%	1%	0%	2%	1%	0%	3%	0%	0%	0%
RW230300_001	16%	3%	37%	66%	23%	59%	59%	27%	5%	20%	3%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW230300_002	13%	3%	31%	59%	20%	46%	46%	23%	4%	15%	2%	2%	1%	3%	1%	0%	3%	0%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW230400_003	23%	5%	49%	191%	53%	84%	84%	32%	9%	26%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RW230400_004	18%	4%	38%	156%	42%	74%	74%	27%	7%	21%	4%	4%	1%	6%	1%	1%	4%	1%	0%	0%
RW230400_005	13%	2%	31%	74%	21%	41%	41%	24%	4%	16%	2%	2%	1%	3%	1%	0%	3%	0%	0%	0%
RW231500_001	23%	4%	58%	125%	38%	78%	78%	41%	7%	29%	4%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RW231500_002	27%	5%	64%	133%	44%	91%	91%	43%	8%	32%	5%	3%	1%	5%	2%	1%	7%	1%	0%	0%
RW231800_002	16%	3%	32%	122%	34%	40%	40%	26%	5%	17%	3%	3%	1%	4%	1%	0%	3%	0%	0%	0%
RW231800_003	18%	3%	37%	125%	28%	44%	44%	29%	5%	20%	3%	2%	1%	4%	1%	1%	4%	0%	0%	0%
RW231900_001	20%	3%	48%	87%	26%	55%	55%	38%	6%	24%	4%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RW231900_002	14%	3%	27%	79%	20%	42%	42%	29%	5%	17%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW231900_003	13%	3%	23%	69%	19%	41%	41%	27%	5%	16%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW231900_004	13%	3%	20%	69%	20%	41%	41%	26%	5%	15%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW231900_005	14%	3%	22%	71%	23%	42%	42%	25%	5%	15%	3%	2%	1%	3%	1%	0%	3%	0%	0%	0%
RW231900_006	15%	3%	25%	78%	26%	40%	40%	25%	5%	15%	3%	2%	1%	3%	1%	0%	3%	0%	0%	0%
RW232900_001	12%	3%	29%	80%	29%	59%	59%	36%	8%	23%	4%	1%	1%	2%	2%	1%	5%	1%	0%	0%
RW232900_002	9%	1%	22%	76%	36%	60%	60%	38%	9%	24%	5%	2%	1%	3%	2%	1%	5%	1%	0%	0%
RW232900_003	9%	2%	22%	77%	33%	59%	59%	36%	8%	23%	4%	1%	1%	3%	2%	1%	5%	1%	0%	0%
RW233000_001	23%	5%	48%	138%	48%	96%	96%	56%	13%	35%	7%	2%	1%	4%	2%	1%	8%	1%	0%	0%
RW233000_002	16%	3%	34%	110%	41%	79%	79%	47%	12%	30%	6%	2%	1%	3%	2%	1%	6%	1%	0%	0%
RW233000_003	12%	2%	27%	81%	35%	63%	63%	39%	9%	25%	5%	1%	1%	3%	2%	1%	5%	1%	0%	0%
RW233000_004	11%	2%	19%	76%	33%	55%	55%	28%	7%	18%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW233100_001	18%	5%	31%	161%	65%	104%	104%	47%	17%	32%	9%	3%	1%	6%	2%	1%	7%	2%	0%	0%
RW233100_002	14%	3%	25%	120%	49%	87%	87%	42%	14%	28%	8%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RW233100_003	13%	2%	23%	111%	47%	82%	82%	40%	13%	26%	7%	2%	1%	4%	2%	1%	6%	1%	0%	0%
RW233100_004	13%	3%	21%	74%	31%	57%	57%	25%	7%	17%	4%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW233300_001	19%	4%	39%	109%	39%	67%	67%	29%	8%	21%	4%	2%	1%	3%	1%	1%	4%	1%	0%	0%
RW233500_001	49%	14%	106%	325%	86%	144%	144%	73%	24%	48%	12%	7%	2%	11%	3%	1%	9%	2%	0%	0%
RW233600_001	30%	8%	68%	180%	48%	111%	111%	48%	13%	32%	7%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RW233700_001	36%	9%	85%	231%	55%	124%	124%	56%	16%	38%	8%	5%	1%	8%	2%	1%	7%	1%	0%	0%
RW233800_001	28%	7%	69%	165%	42%	99%	99%	45%	11%	30%	6%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RW234400_001	21%	4%	54%	115%	29%	63%	63%	35%	7%	24%	4%	2%	1%	4%	2%	1%	5%	1%	0%	0%
RW234400_002	18%	3%	38%	96%	30%	56%	56%	26%	6%	17%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW234400_003	19%	4%	43%	102%	30%	56%	56%	28%	6%	19%	3%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW234500_001	22%	6%	43%	127%	32%	76%	76%	45%	9%	27%	6%	3%	1%	5%	2%	1%	5%	1%	0%	0%
RW234500_002	34%	9%	79%	162%	50%	118%	118%	64%	15%	43%	9%	4%	2%	6%	3%	1%	8%	1%	0%	0%
RW234600_001	18%	4%	33%	93%	29%	57%	57%	30%	6%	18%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW234600_002	17%	4%	35%	77%	29%	55%	55%	27%	6%	17%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW234600_003	16%	3%	33%	88%	30%	55%	55%	26%	6%	16%	3%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW235800_001	39%	8%	81%	81%	35%	64%	64%	49%	9%	34%	5%	2%	1%	4%	2%	1%	7%	1%	0%	0%
RW235800_002	24%	4%	51%	71%	25%	42%	42%	35%	6%	26%	4%	2%	1%	4%	2%	1%	6%	1%	0%	0%
RW235800_003	21%	4%	42%	41%	22%	37%	37%	31%	5%	21%	3%	1%	1%	2%	2%	1%	5%	1%	0%	0%
RW235800_004	19%	4%	37%	47%	23%	39%	39%	27%	5%	19%	3%	1%	1%	2%	1%	1%	4%	1%	0%	0%
RW235900_003	19%	6%	33%	35%	23%	41%	41%	23%	7%	14%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RW235900_004	22%	4%	47%	42%	24%	37%	37%	34%	5%	24%	3%	2%	1%	2%	2%	1%	5%	1%	0%	0%
RW235900_008	21%	7%	44%	29%	22%	47%	47%	27%	8%	17%	5%	1%	1%	2%	1%	1%	4%	1%	0%	0%
RW310200_001	39%	10%	80%	110%	32%	96%	96%	53%	12%	35%	7%	3%	1%	4%	2%	1%	6%	1%	0%	0%
RW311300_001	40%	8%	95%	272%	60%	136%	136%	70%	16%	62%	9%	6%	2%	10%	4%	2%	13%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW311300_002	36%	7%	84%	256%	56%	128%	128%	65%	14%	54%	8%	6%	2%	9%	4%	1%	11%	1%	0%	0%
RW311300_003	32%	6%	68%	218%	59%	121%	121%	60%	12%	44%	7%	5%	2%	8%	3%	1%	9%	1%	0%	0%
RW311300_004	27%	5%	63%	196%	53%	100%	100%	54%	10%	42%	6%	4%	2%	7%	3%	1%	8%	1%	0%	0%
RW311400_001	30%	7%	65%	214%	56%	126%	126%	60%	14%	46%	8%	5%	2%	9%	3%	1%	9%	1%	0%	0%
RW311400_002	25%	6%	51%	177%	53%	116%	116%	53%	12%	39%	7%	4%	2%	7%	3%	1%	7%	1%	0%	0%
RW311400_003	19%	5%	45%	159%	46%	94%	94%	49%	10%	36%	6%	4%	1%	7%	2%	1%	7%	1%	0%	0%
RW311400_004	16%	4%	34%	127%	47%	84%	84%	44%	9%	29%	5%	3%	1%	6%	2%	1%	5%	1%	0%	0%
RW311400_005	16%	4%	34%	105%	48%	74%	74%	37%	8%	24%	5%	3%	1%	4%	2%	1%	4%	1%	0%	0%
RW311400_006	15%	3%	29%	89%	43%	61%	61%	34%	7%	20%	4%	2%	1%	4%	1%	1%	4%	1%	0%	0%
RW311400_008	15%	3%	30%	81%	35%	55%	55%	30%	6%	19%	3%	2%	1%	3%	1%	0%	4%	1%	0%	0%
RW311400_009	14%	3%	30%	76%	33%	52%	52%	29%	5%	18%	3%	2%	1%	3%	1%	0%	4%	0%	0%	0%
RW312300_001	24%	5%	53%	210%	52%	90%	90%	40%	9%	26%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RW312400_001	15%	4%	35%	109%	28%	64%	64%	26%	6%	18%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RW312400_002	13%	3%	25%	108%	25%	61%	61%	20%	6%	14%	3%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RW312500_001	22%	5%	50%	212%	44%	77%	77%	35%	9%	27%	5%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RW312500_002	21%	5%	48%	187%	37%	74%	74%	35%	8%	26%	5%	4%	1%	7%	2%	1%	5%	1%	0%	0%
RW312500_003	16%	4%	38%	125%	28%	64%	64%	30%	7%	20%	4%	3%	1%	4%	1%	1%	4%	1%	0%	0%
RW312500_004	14%	4%	23%	98%	26%	60%	60%	21%	6%	14%	4%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RW312600_001	25%	6%	51%	223%	49%	104%	104%	41%	11%	28%	6%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RW312600_002	23%	5%	51%	234%	51%	95%	95%	37%	10%	28%	5%	5%	1%	8%	2%	1%	6%	1%	0%	0%
RW312700_001	40%	12%	77%	209%	88%	131%	131%	77%	24%	55%	13%	6%	2%	10%	4%	2%	11%	2%	0%	0%
RW312900_001	17%	4%	38%	190%	43%	72%	72%	24%	7%	17%	4%	4%	1%	6%	1%	0%	3%	1%	0%	0%
RW313100_001	22%	5%	49%	147%	43%	85%	85%	37%	9%	25%	5%	4%	1%	6%	2%	1%	5%	1%	0%	0%
RW313400_001	11%	3%	21%	129%	25%	67%	67%	22%	6%	13%	3%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RW313900_001	10%	3%	25%	83%	16%	45%	45%	18%	5%	10%	3%	2%	0%	4%	1%	0%	2%	0%	0%	0%
RW314100_001	15%	4%	32%	122%	22%	55%	55%	20%	6%	14%	3%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RW314300_001	32%	9%	67%	174%	49%	122%	122%	44%	14%	30%	8%	4%	1%	7%	2%	1%	6%	1%	0%	0%
RW315400_001	16%	3%	36%	87%	20%	52%	52%	20%	6%	15%	3%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RW317500_001	27%	7%	45%	69%	48%	63%	63%	39%	13%	34%	8%	2%	1%	4%	2%	1%	8%	1%	0%	0%
RW317500_003	25%	7%	41%	59%	44%	59%	59%	36%	12%	32%	8%	2%	1%	3%	2%	1%	8%	1%	0%	0%
RW410100_001	15%	5%	26%	26%	20%	54%	54%	26%	8%	16%	5%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RW410100_002	14%	4%	24%	25%	17%	54%	54%	25%	8%	15%	4%	1%	1%	2%	1%	0%	3%	1%	0%	0%
RW410200_001	17%	5%	27%	24%	25%	54%	54%	27%	9%	18%	5%	1%	1%	1%	1%	0%	3%	1%	0%	0%
RW410400_001	16%	5%	26%	21%	23%	57%	57%	22%	8%	19%	5%	1%	1%	1%	1%	1%	4%	1%	0%	0%
RW410800_002	10%	4%	21%	25%	28%	51%	51%	19%	6%	17%	4%	1%	1%	2%	1%	0%	4%	1%	0%	0%
RW510000_001	10%	3%	15%	9%	21%	49%	49%	22%	7%	10%	3%	1%	1%	1%	1%	0%	2%	0%	0%	0%
RW510100_001	11%	3%	21%	10%	17%	48%	48%	25%	7%	13%	3%	1%	1%	1%	1%	0%	3%	0%	0%	0%
RW510100_002	12%	3%	21%	17%	18%	47%	47%	19%	7%	12%	3%	1%	1%	1%	1%	0%	2%	0%	0%	0%
RW510400_001	20%	6%	40%	65%	36%	71%	71%	31%	11%	23%	6%	2%	1%	3%	1%	1%	5%	1%	0%	0%
RW512600_001	34%	11%	73%	81%	47%	111%	111%	54%	16%	35%	9%	3%	1%	4%	2%	1%	7%	1%	0%	0%
RW512600_002	15%	4%	36%	114%	32%	54%	54%	23%	6%	17%	4%	2%	1%	4%	1%	0%	4%	1%	0%	0%
RW512700_001	23%	6%	67%	127%	44%	77%	77%	44%	10%	31%	6%	3%	1%	5%	2%	1%	6%	1%	0%	0%
RW515200_001	18%	6%	34%	110%	19%	51%	51%	25%	8%	17%	5%	3%	1%	5%	1%	0%	4%	1%	0%	0%
RW515200_002	10%	3%	19%	43%	14%	26%	26%	14%	4%	9%	2%	1%	0%	2%	1%	0%	2%	0%	0%	0%
RW515500_001	37%	12%	84%	298%	56%	125%	125%	51%	19%	39%	11%	6%	1%	11%	2%	1%	8%	2%	0%	0%
RW515500_002	15%	5%	37%	181%	35%	68%	68%	24%	8%	17%	4%	4%	1%	6%	1%	0%	3%	1%	0%	0%

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
RW515500_003	7%	2%	16%	18%	12%	23%	23%	11%	3%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW515600_001	34%	10%	76%	278%	52%	114%	114%	45%	16%	35%	9%	6%	1%	10%	2%	1%	7%	2%	0%	0%
RW515600_002	15%	3%	37%	143%	40%	43%	43%	22%	5%	17%	3%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RW515600_003	15%	3%	35%	132%	31%	51%	51%	20%	6%	16%	3%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RW515700_001	15%	3%	37%	144%	35%	44%	44%	21%	5%	16%	3%	3%	1%	5%	1%	0%	3%	1%	0%	0%
RW516700_001	13%	4%	24%	125%	19%	57%	57%	22%	7%	13%	4%	3%	1%	5%	1%	0%	2%	1%	0%	0%
RW517400_001	29%	9%	62%	251%	58%	136%	136%	53%	21%	43%	12%	5%	2%	8%	3%	1%	8%	2%	0%	0%
RW517500_001	20%	6%	39%	208%	49%	116%	116%	46%	15%	32%	8%	4%	1%	6%	2%	1%	6%	1%	0%	0%
RW517500_002	9%	3%	15%	111%	18%	44%	44%	21%	6%	12%	3%	3%	1%	4%	1%	0%	2%	0%	0%	0%
RW517600_001	10%	3%	20%	62%	18%	44%	44%	21%	6%	12%	3%	2%	1%	3%	1%	0%	2%	0%	0%	0%
RW519300_001	12%	4%	22%	76%	19%	45%	45%	18%	6%	11%	4%	2%	0%	3%	1%	0%	2%	1%	0%	0%
RW519300_002	8%	1%	18%	3%	12%	20%	20%	15%	3%	10%	2%	0%	0%	0%	1%	0%	2%	0%	0%	0%
RW519600_001	21%	7%	40%	137%	41%	83%	83%	32%	11%	22%	6%	3%	1%	5%	1%	1%	4%	1%	0%	0%
RW519600_002	14%	5%	25%	96%	25%	61%	61%	25%	8%	16%	5%	2%	1%	4%	1%	0%	3%	1%	0%	0%
RW519600_003	9%	4%	15%	52%	12%	41%	41%	21%	5%	12%	3%	1%	1%	2%	1%	0%	2%	0%	0%	0%
RW519600_004	10%	2%	21%	22%	12%	25%	25%	14%	4%	9%	2%	1%	0%	1%	1%	0%	2%	0%	0%	0%
RW519900_001	4%	2%	2%	16%	-2%	16%	16%	8%	4%	3%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RW520000_001	5%	3%	3%	21%	-2%	18%	18%	8%	4%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RW520100_001	5%	3%	3%	20%	-1%	17%	17%	8%	4%	3%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RW520200_001	5%	3%	5%	25%	-1%	21%	21%	9%	4%	4%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RW520300_001	7%	3%	8%	26%	3%	26%	26%	11%	5%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW520400_001	8%	3%	10%	21%	5%	33%	33%	12%	5%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW520600_001	8%	3%	10%	25%	2%	30%	30%	14%	5%	7%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW520600_002	15%	4%	29%	82%	17%	57%	57%	25%	7%	15%	4%	2%	1%	3%	1%	0%	3%	1%	0%	0%
RW520800_001	8%	3%	12%	18%	1%	28%	28%	12%	5%	5%	2%	1%	0%	1%	0%	0%	0%	0%	0%	0%
RW520800_002	9%	3%	15%	29%	2%	30%	30%	13%	5%	6%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW520900_001	9%	3%	13%	36%	3%	29%	29%	11%	5%	5%	2%	1%	0%	2%	0%	0%	0%	0%	0%	0%
RW521000_001	8%	3%	11%	33%	3%	27%	27%	10%	5%	4%	2%	1%	0%	2%	0%	0%	0%	0%	0%	0%
RW521500_001	21%	9%	42%	20%	12%	47%	47%	30%	15%	12%	5%	2%	1%	3%	1%	1%	3%	1%	0%	0%
RW521500_002	10%	3%	21%	6%	6%	21%	21%	12%	5%	6%	2%	0%	0%	0%	1%	0%	1%	0%	0%	0%
RW521500_003	9%	3%	19%	12%	6%	18%	18%	10%	4%	5%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RW521500_004	8%	2%	17%	20%	5%	20%	20%	10%	4%	5%	2%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RW521500_005	8%	2%	16%	28%	4%	19%	19%	10%	3%	5%	2%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW521500_006	7%	2%	15%	33%	4%	18%	18%	9%	3%	5%	1%	1%	0%	1%	0%	0%	1%	0%	0%	0%
RW521600_001	6%	2%	11%	8%	5%	9%	9%	6%	3%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RW521600_002	7%	2%	14%	59%	16%	27%	27%	10%	2%	6%	1%	2%	0%	3%	0%	0%	1%	0%	0%	0%
RW521600_009	5%	1%	10%	38%	15%	23%	23%	9%	2%	4%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RW521600_010	5%	2%	11%	9%	4%	9%	9%	5%	2%	3%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RW521600_011	5%	2%	14%	10%	4%	12%	12%	6%	2%	3%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RW521600_012	8%	2%	15%	10%	6%	18%	18%	10%	3%	6%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
RW521600_013	5%	1%	10%	7%	6%	14%	14%	6%	2%	4%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
RW521600_014	6%	1%	11%	44%	15%	24%	24%	9%	2%	5%	1%	1%	0%	2%	0%	0%	1%	0%	0%	0%
RW521600_016	4%	1%	6%	3%	1%	5%	5%	4%	2%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RW521600_017	9%	2%	17%	62%	15%	30%	30%	10%	2%	7%	1%	2%	0%	3%	0%	0%	1%	0%	0%	0%

Notes

Appendix C.6: Percent Change in Maximum Predicted Concentrations from 2051 No-Build to Build Scenario With 90th Percentile Background

RWDI #1301992A

Highway 413
GTA West

	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	
Averaging Period	24-hour	Annual	24-hour	1-hour	8-hour	1-hour	1-hour	24-hour	Annual	24-hour	Annual	0.5-hour	24-hour	1-hour	24-hour	24-hour	24-hour	Annual	24-hour	Annual
Threshold	23	8.0	50.0	36200	15700	400	83.1	200	23.7	0.00005	0.00001	500.0	500.0	4.5	0.4	65	2.3	0.45	10	2
Source of Threshold Value	CAAQS 2030	CAAQS 2030	AAQC	AAQC	AAQC	AAQC	CAAQS 2025	AAQC	CAAQS 2025	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC	AAQC
Ambient Background	12.2	7.0	22.6	349	362	35.0	35.0	29.4	14.7	9.15E-05	5.13E-05	4.4	1.5	0.15	0.06	2.5	0.46	0.31	0.03	0.01
Background Percent of Threshold	53%	88%	45%	<1%	2%	9%	42%	15%	62%	183%	513%	<1%	<1%	3%	16%	4%	20%	68%	<1%	<1%

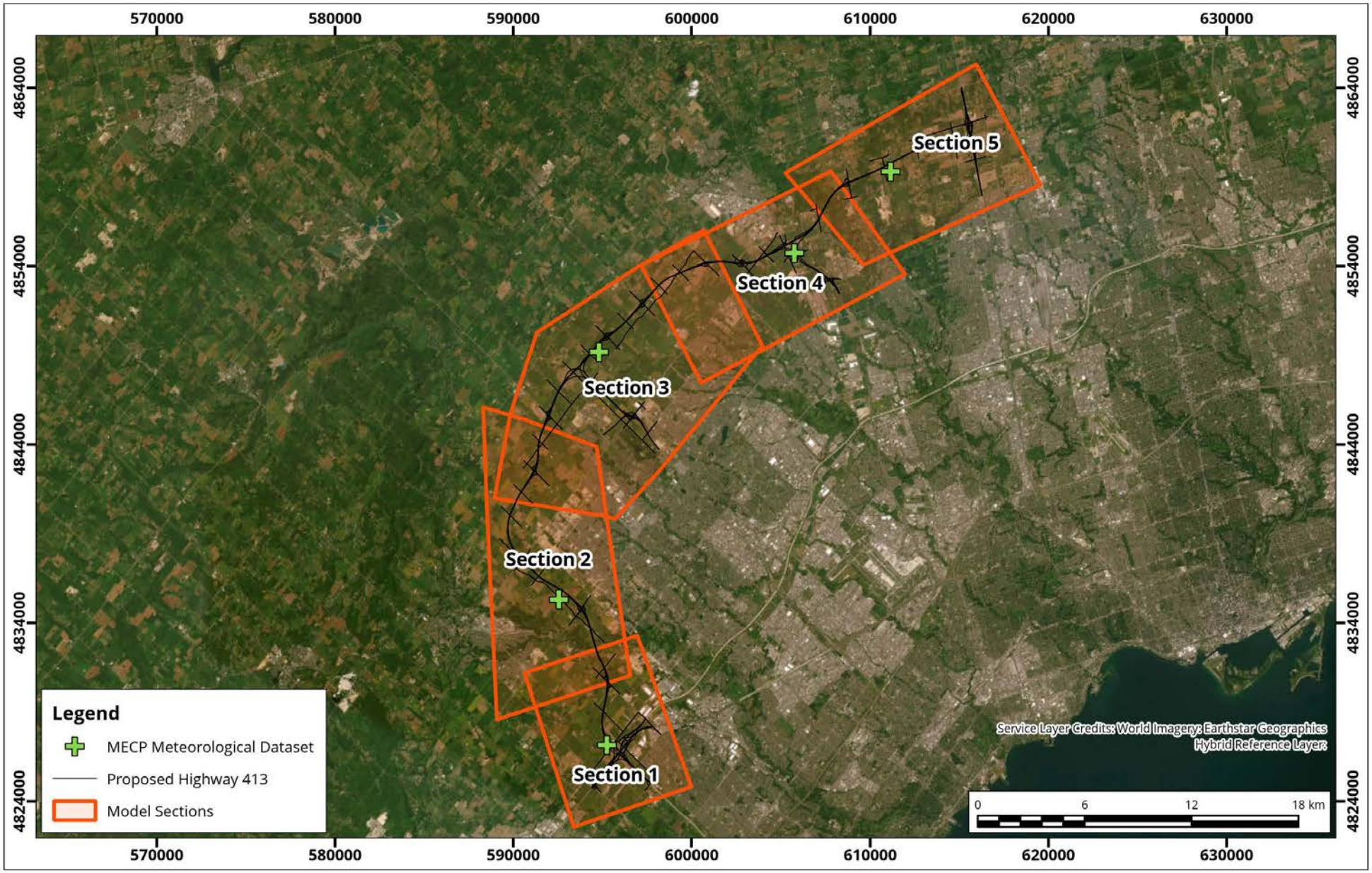
Receptor	$PM_{2.5}$		PM_{10}	CO		NO_2 [1]				Benzo a pyrene		Acetaldehyde		Acrolein		Formaldehyde	Benzene		1,3 Butadiene	

[1] Conversion of NOx to NO_2 using the Ozone Limiting Method.
[2] Red cells represent an increase in concentration from the No-Build to Build scenario.
[3] Green cells represent a decrease in concentration from the No-Build to Build scenario.
[4] Grey cells represent 0% change from the No-Build to Build scenario.

D

Modelled Roadways and Receptors within the Study Area

Appendix D.1: Model Sections



Model Sections - D.1

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

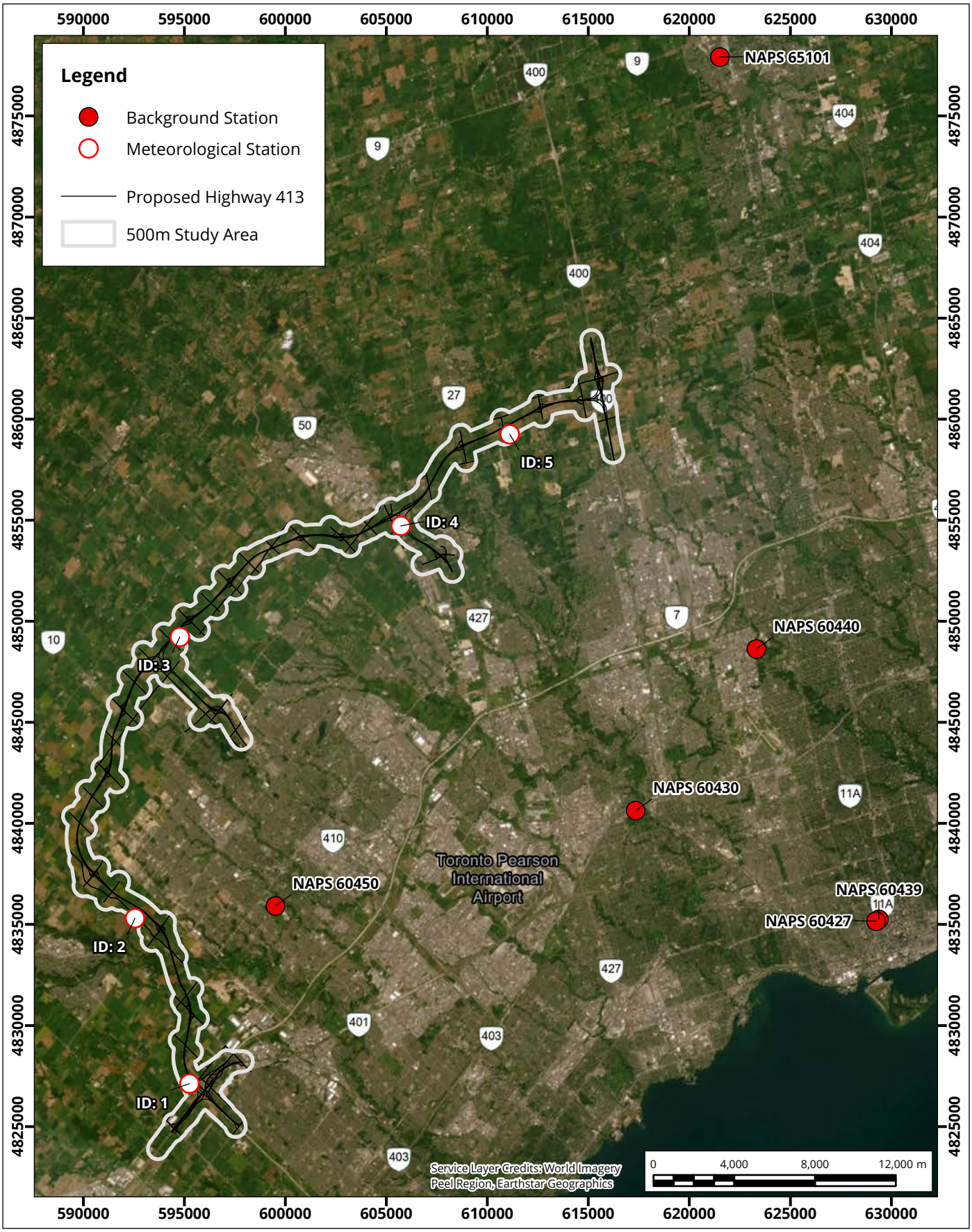
True North

Project #: 1301992A

Drawn by: RCL	Figure: D.1
Approx. Scale:	1:300,000
Date Revised:	Jul 1, 2025

Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_D.aprx

Appendix D.1A: Meteorological and Ambient Background Station Locations



Locations of Background and Meteorological Stations in Proximity to the Study Area

True North

Map Projection: NAD 1983 CSRS UTM Zone 17N

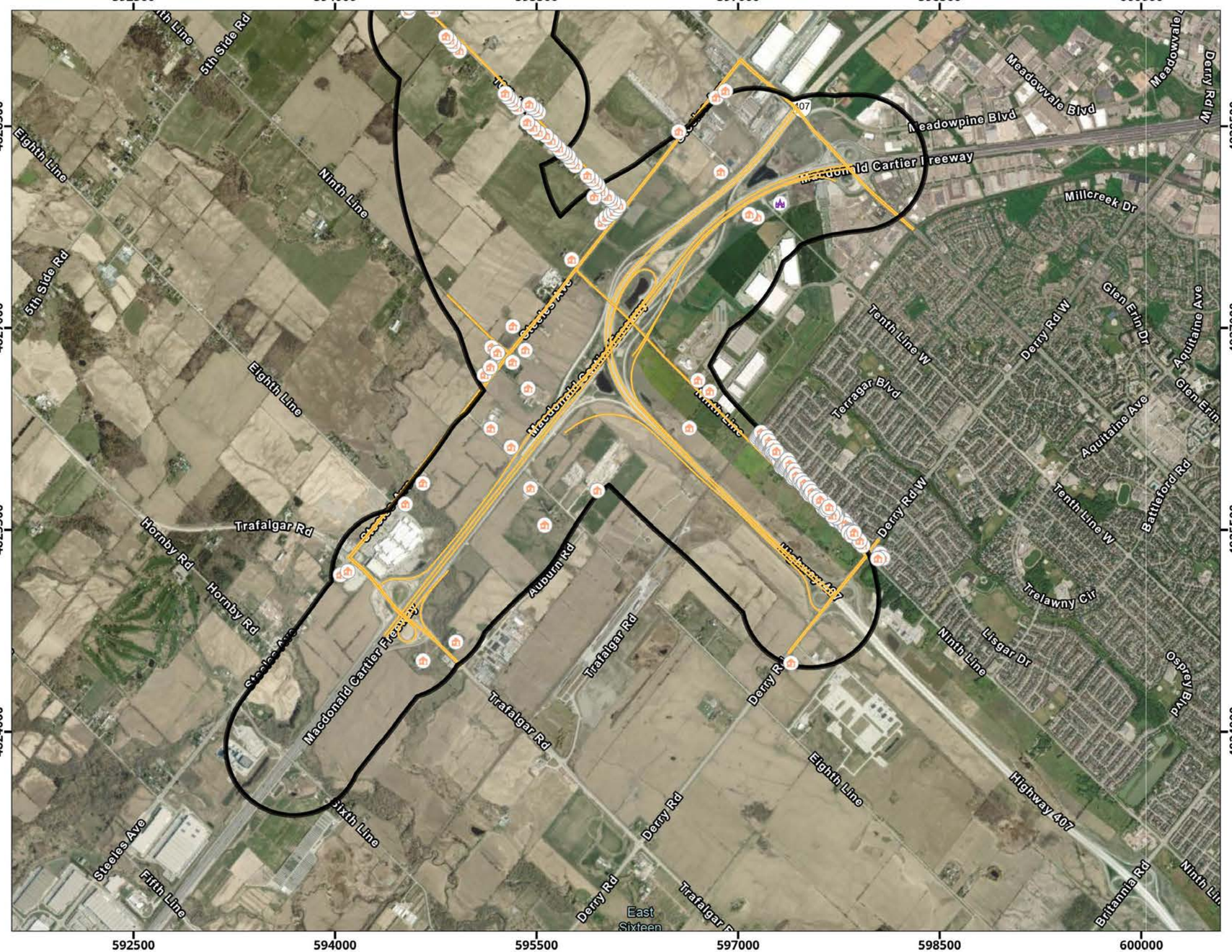
Highway 413 - Ontario

Project #: 1301992A

Drawn by: PIP	Figure:D.1A
Approx. Scale:	1:260,000
Date Revised:	Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix D.2.1-11: No-Build Scenario

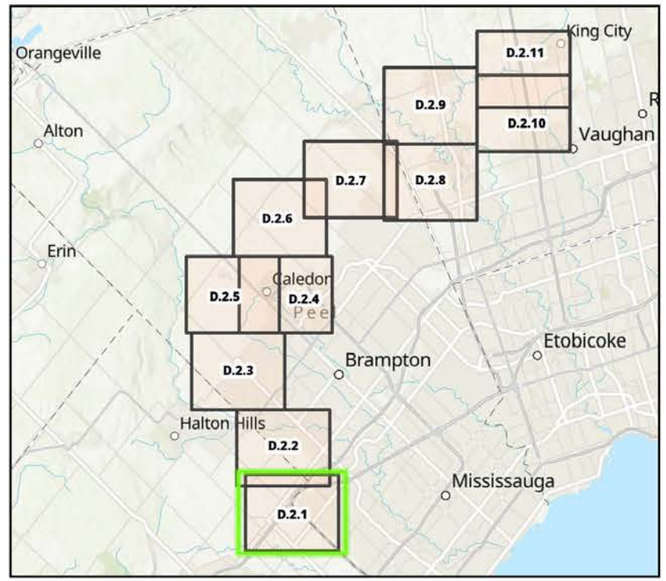


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential



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World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, NASA, NGA, USGS
Hybrid Reference Layer: Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.2.1
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

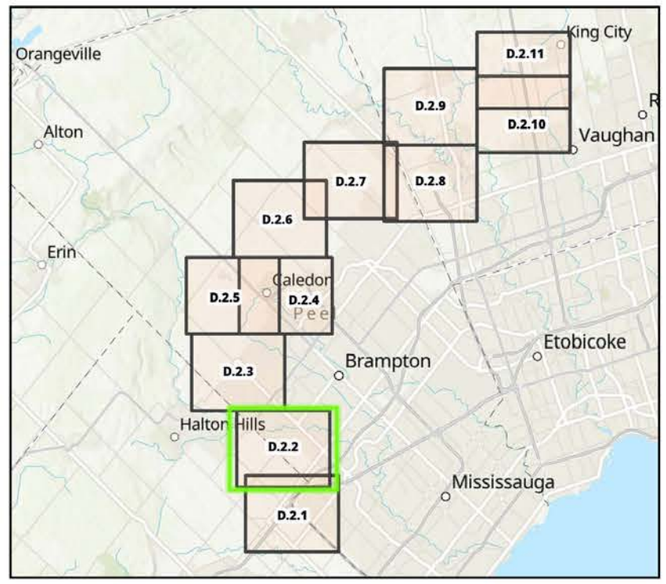
Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential



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Hybrid Reference Layer: Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.2.2
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

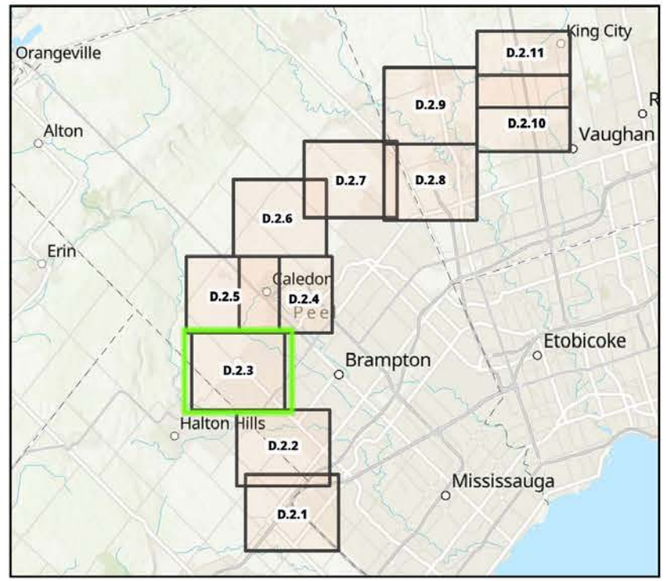
Map Document: C:\GIS\1301992A_Highway413\PI\1301992A_I413_AQ_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential



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Hybrid Reference Layer: Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

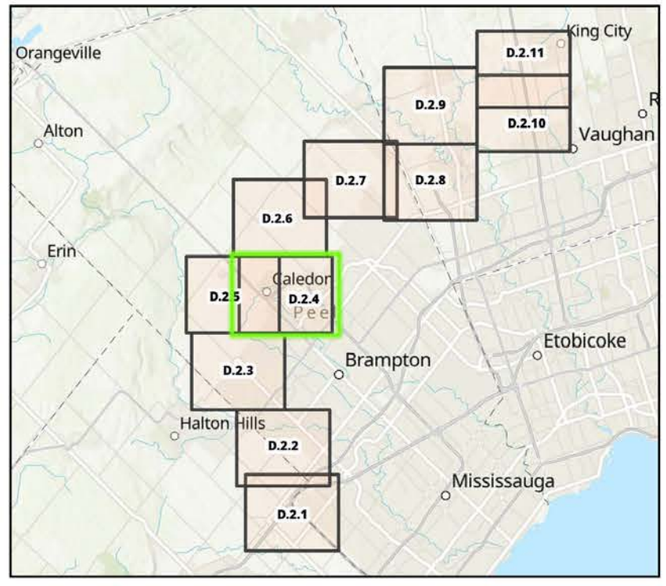
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D2.3
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
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0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.2.4
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

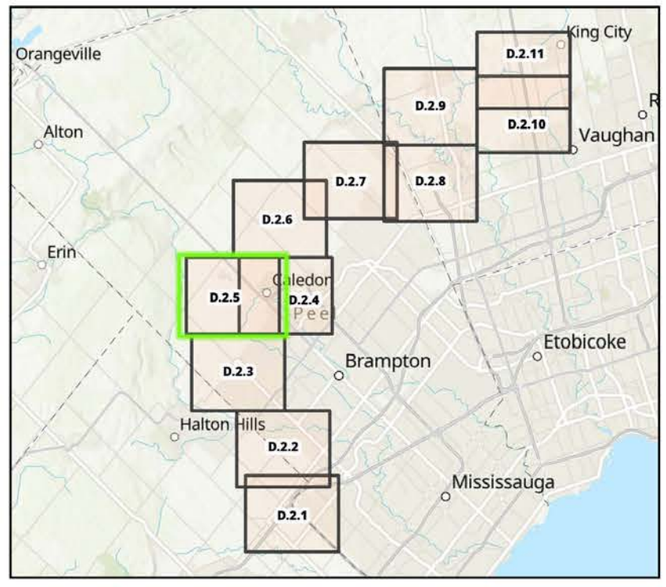
Map Document: C:\GIS\1301992A_Highway413\PI\1301992A_H413_AO_Appd_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential



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0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.2.5
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

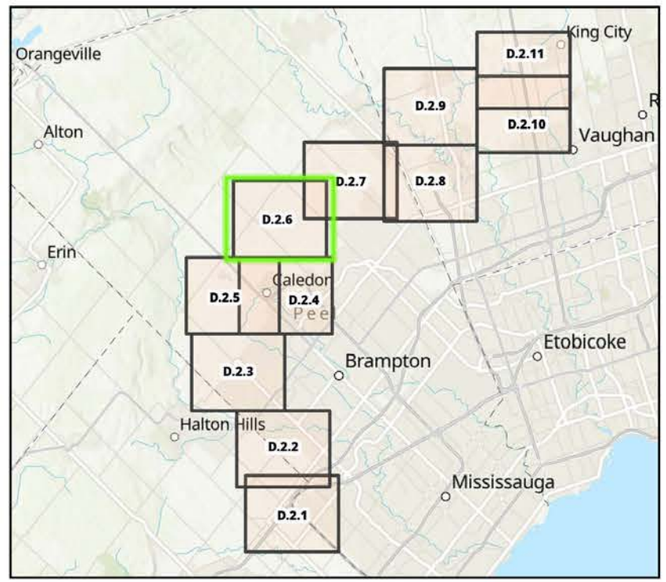
Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential



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0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

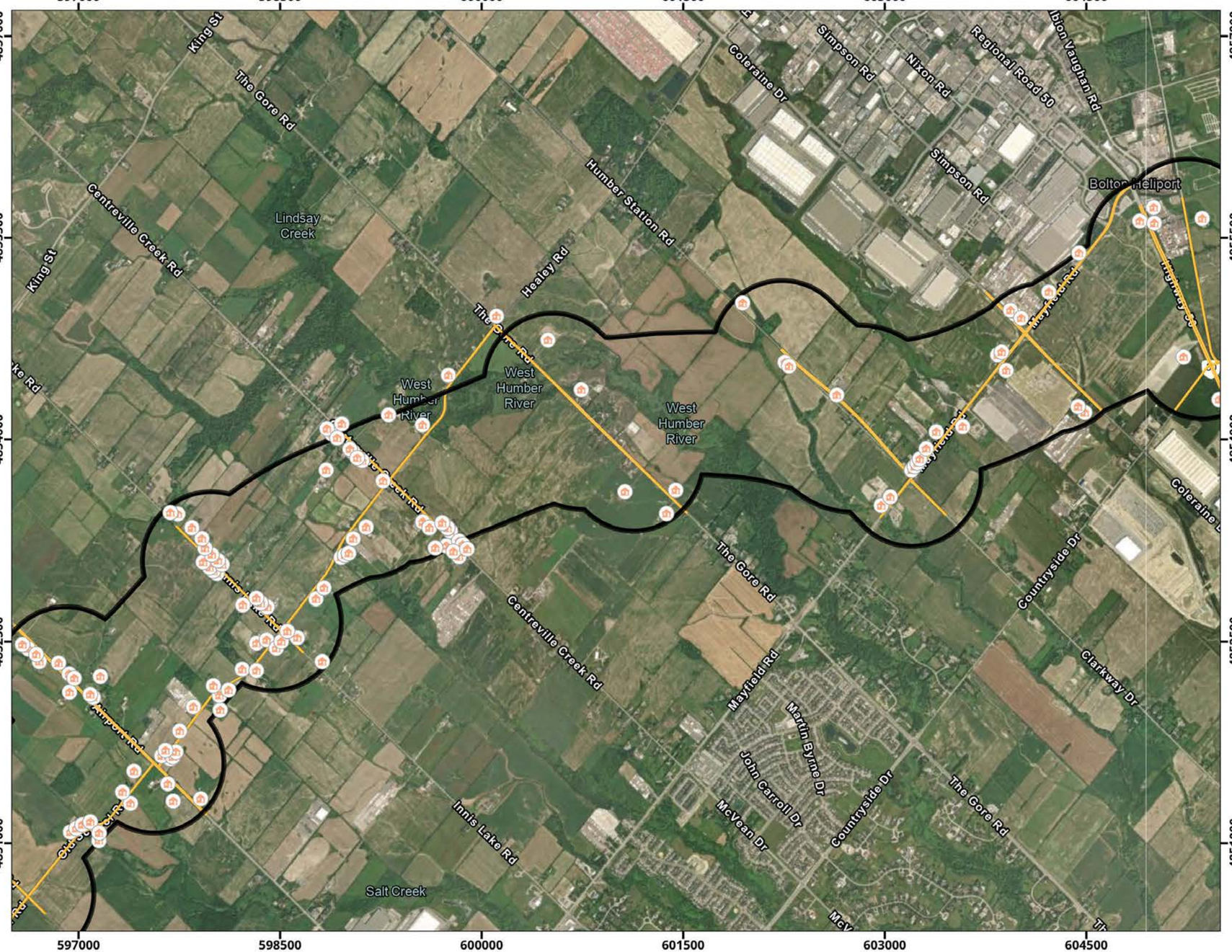
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.2.6
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

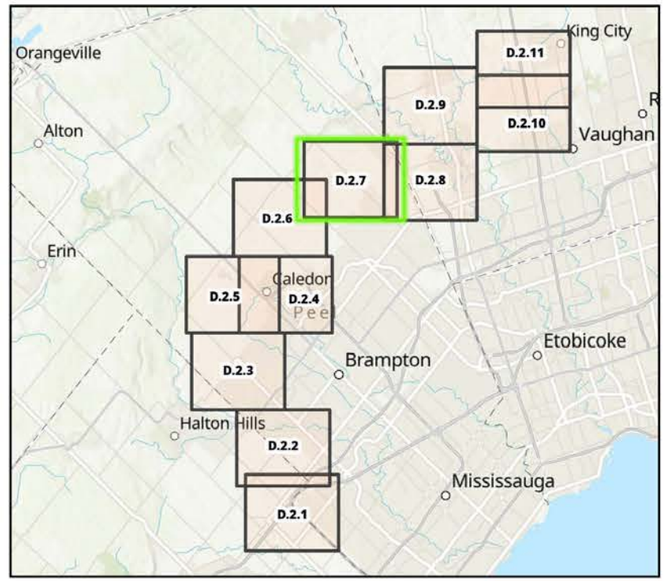


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential



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0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D2.7
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

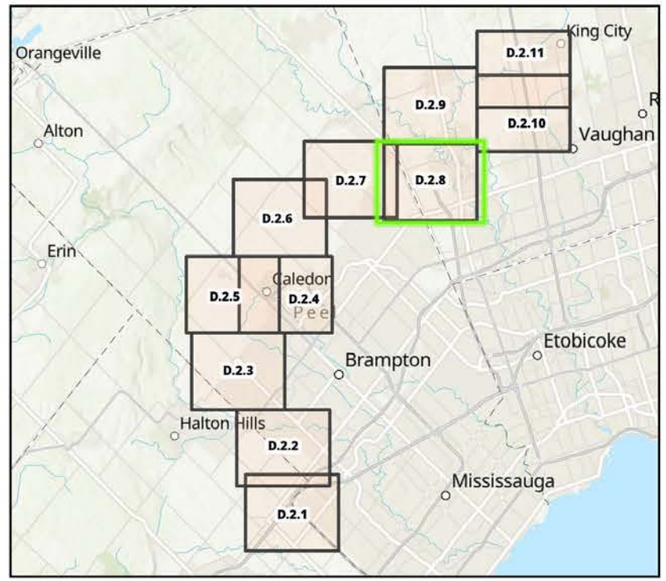
Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential



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0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D2.8
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

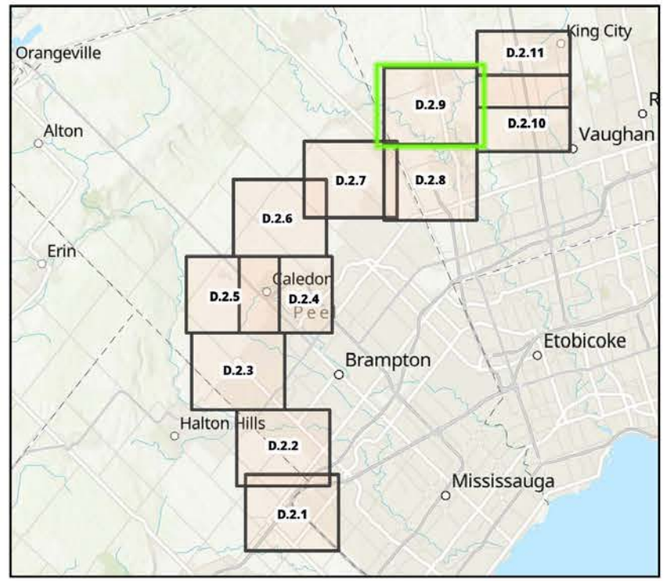
Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential



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0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D2.9
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

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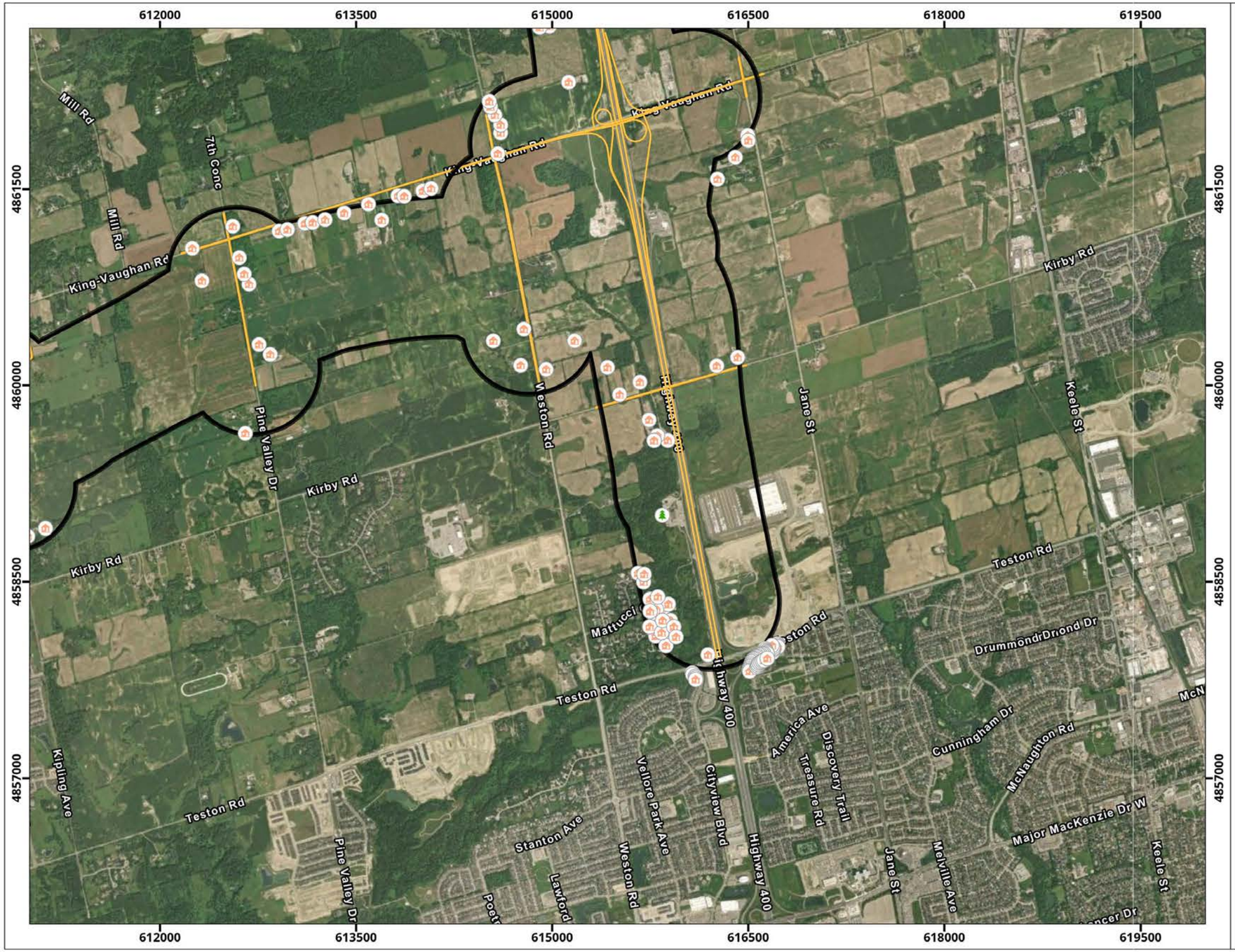
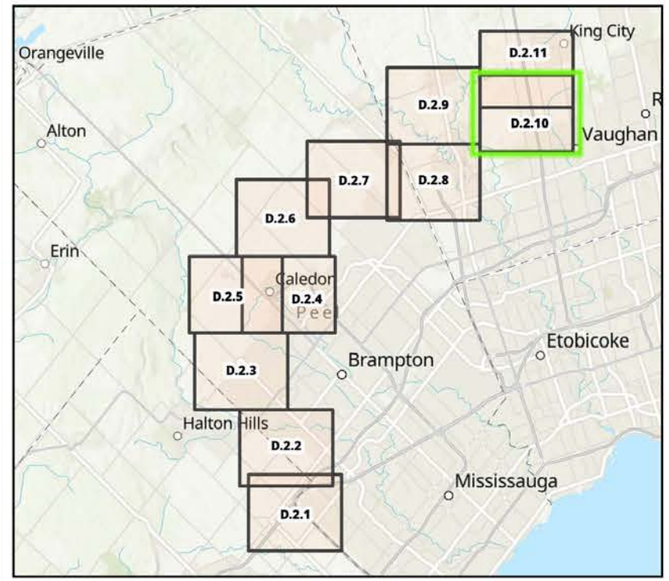


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential



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0 1,000 2,000 3,000 m

Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D2.10
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

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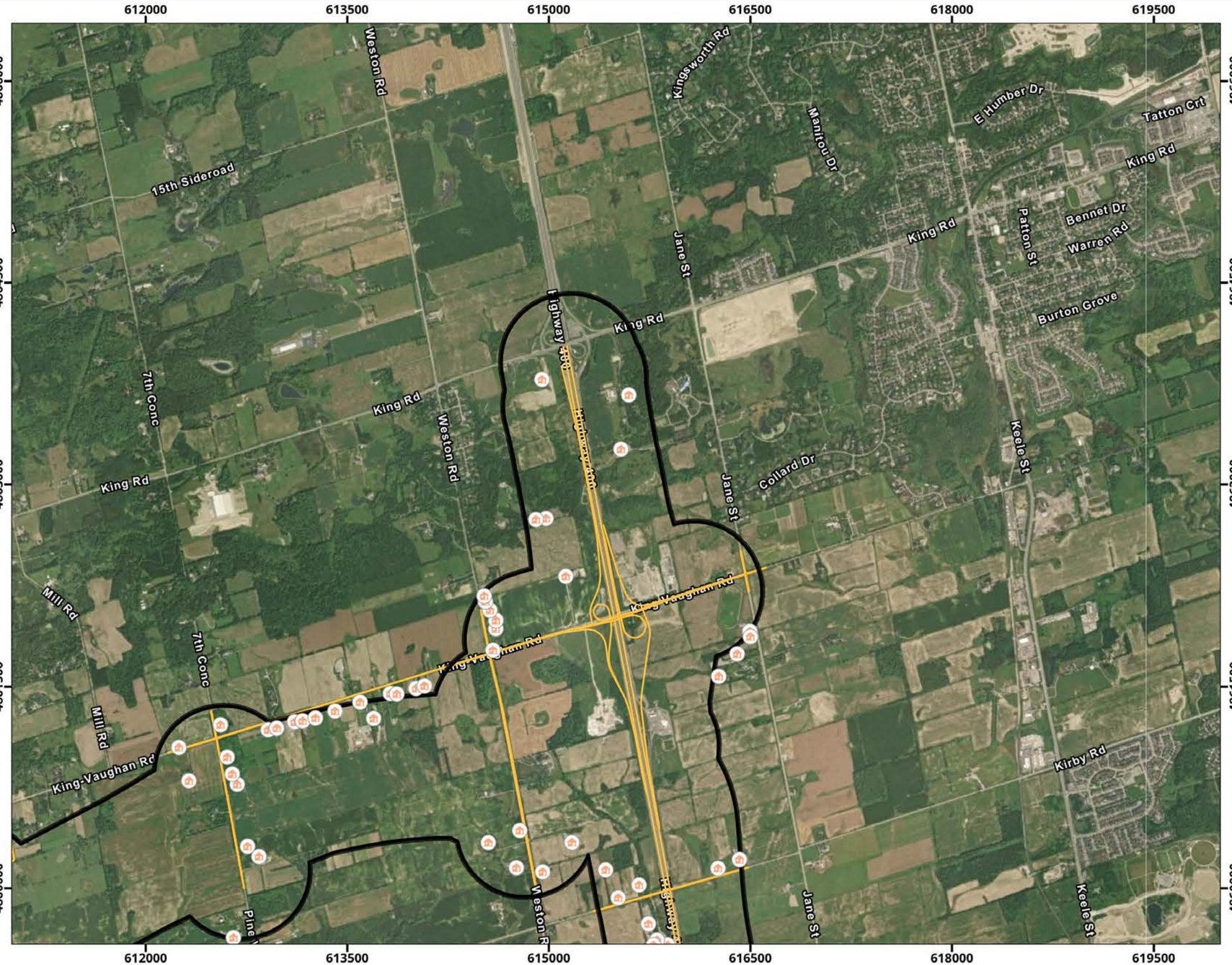
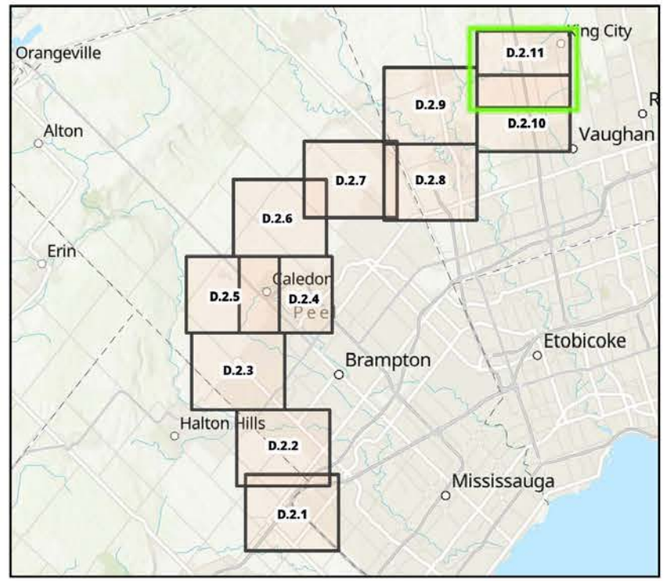


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential



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Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D2.11
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

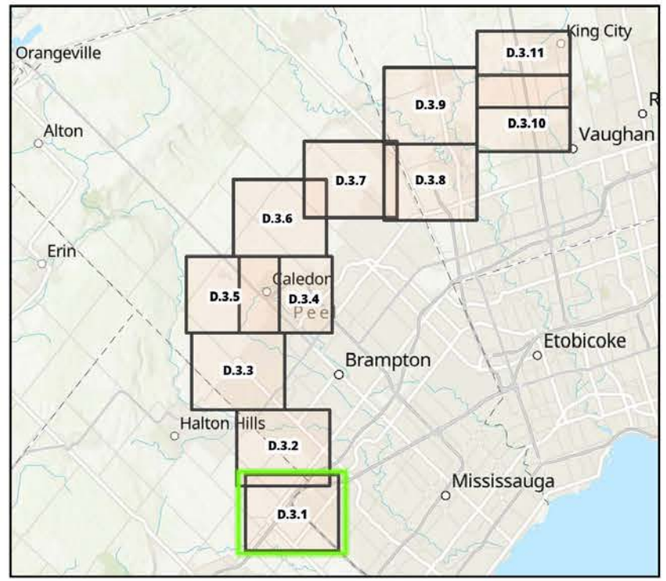
Appendix D.3.1-11: Build Scenario

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential



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0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.3.1
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

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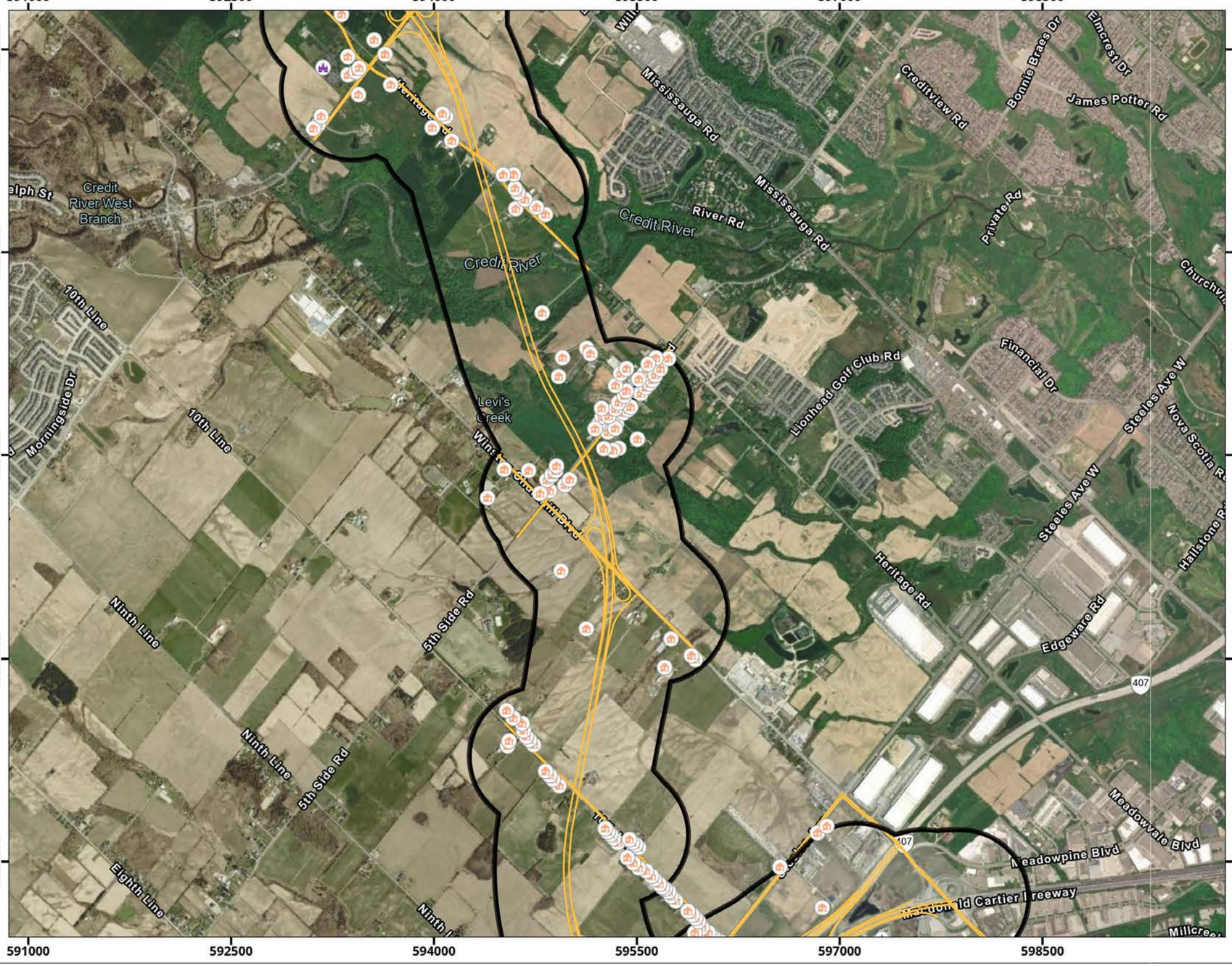
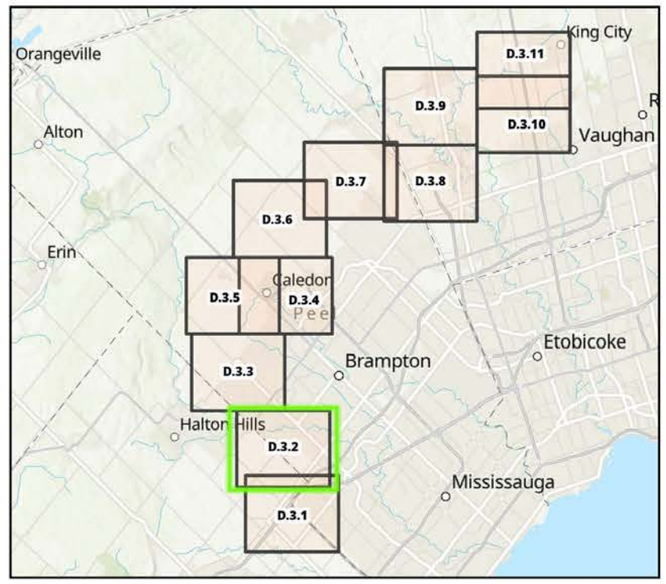


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential



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Hybrid Reference Layer: Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.3.2
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

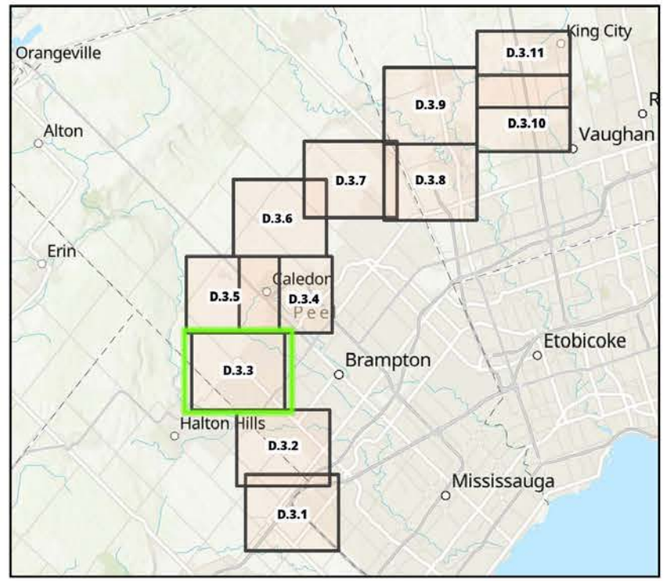
Map Document: C:\GIS\1301992A_Highway413\PI\1301992A_H413_AO_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential



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0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D3.3
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

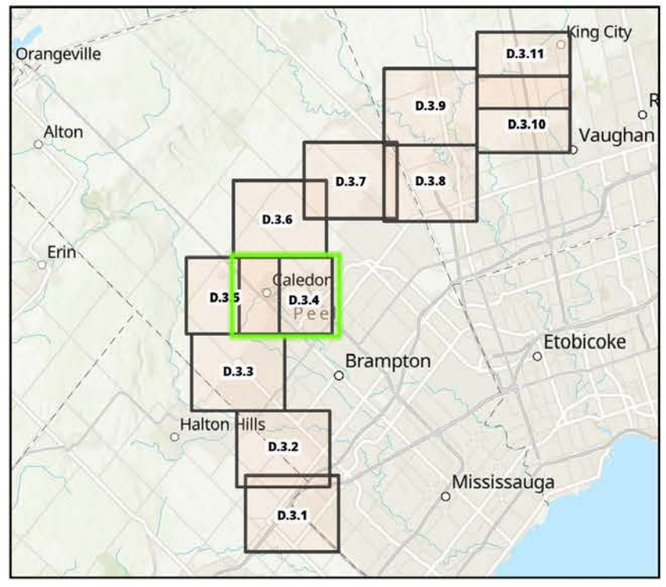
Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_App\D_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential



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0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure:	D.3.4
Approx. Scale:		1:32,000
Date Revised:		Aug 20, 2025

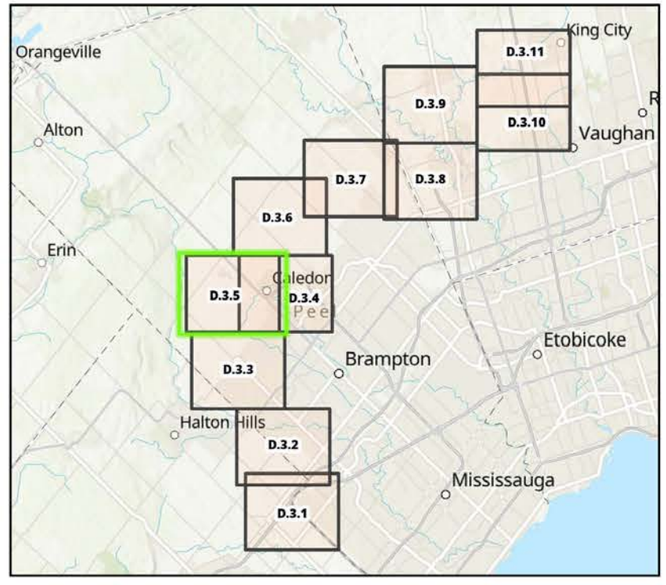
Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential



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0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.3.5
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

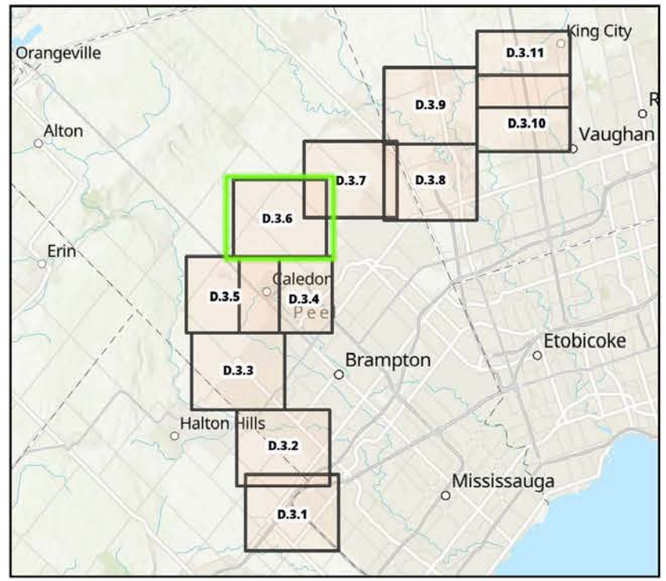
Map Document: C:\GIS\1301992A_Highway413\P\1301992A_H413_AQ_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential



Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Hybrid Reference Layer:
World Hillshade: Esri, CGIAR, USGS Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

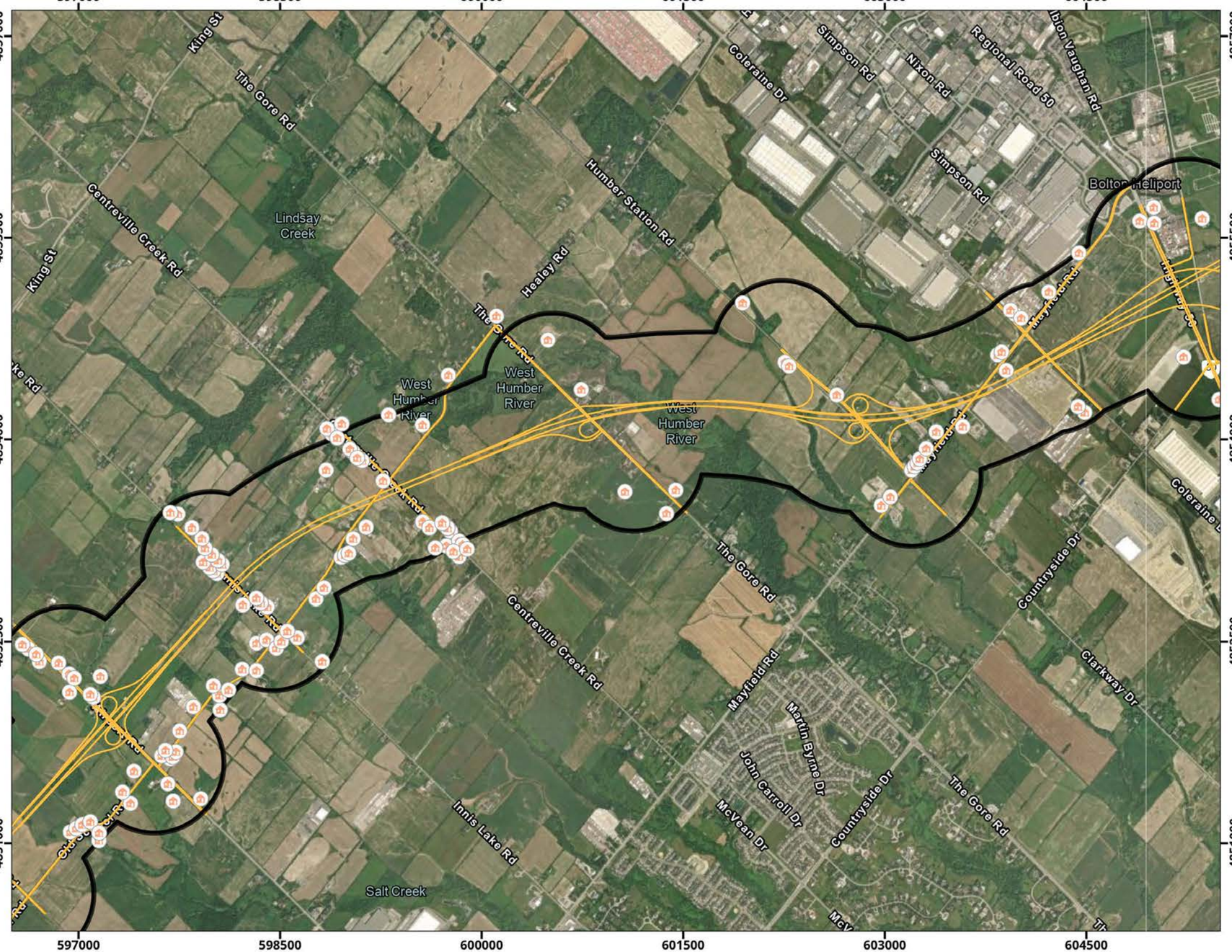
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.3.6
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

Map Document: C:\GIS\1301992A_Highway413\PI\1301992A_H413_AQ_AppD_20250820.aprx

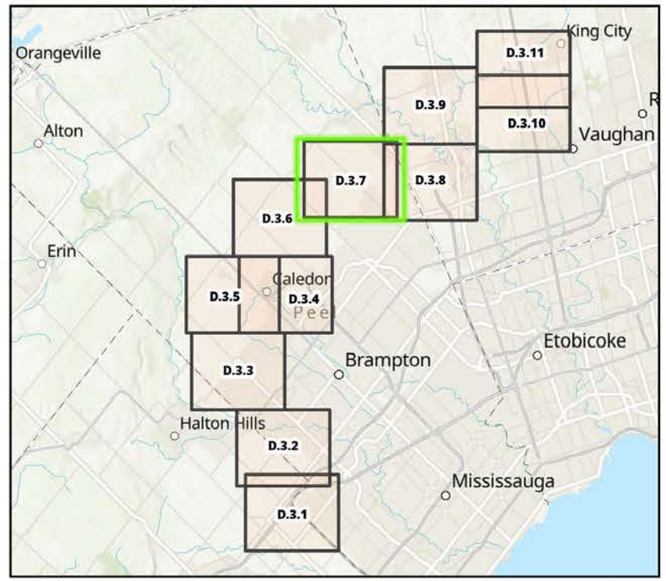


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential



Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Hybrid Reference Layer:
World Hillshade: Esri, CGIAR, USGS Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

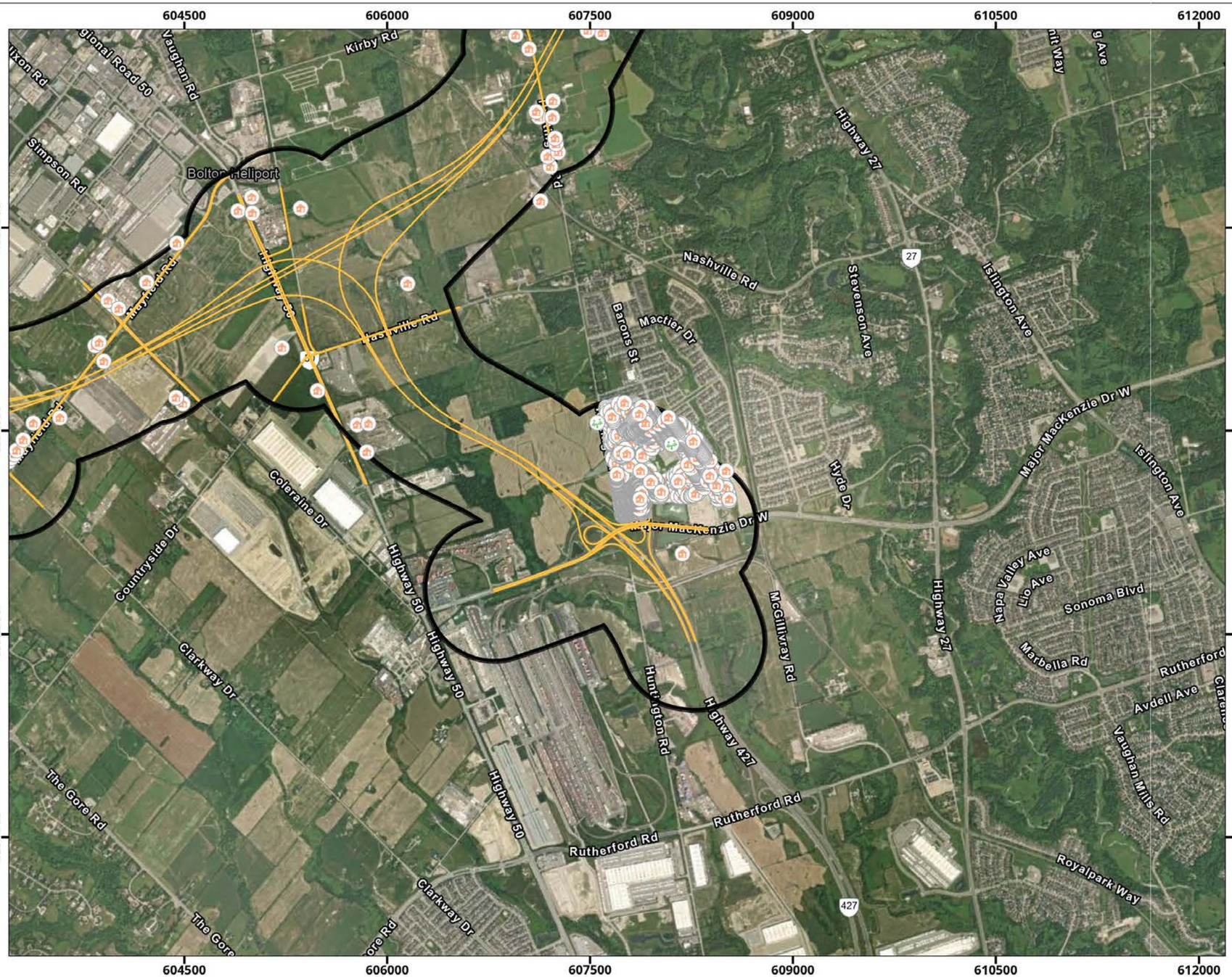
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D.3.7
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_App\D_20250820.aprx

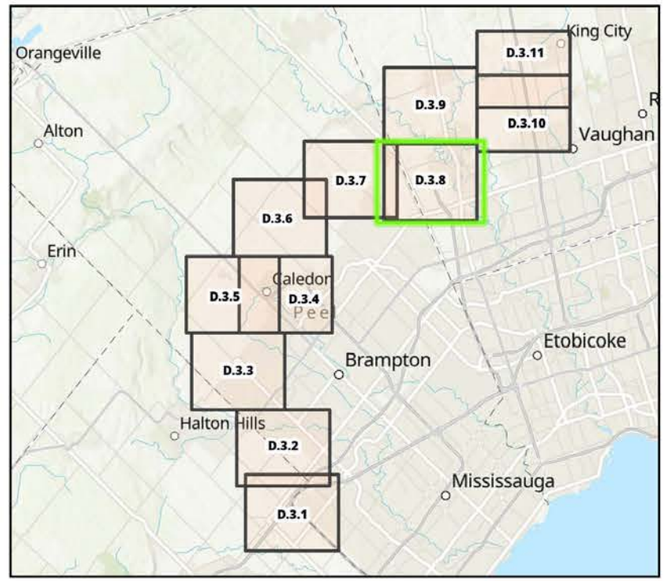


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential



Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Hybrid Reference Layer:
World Hillshade: Esri, CGIAR, USGS Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D3.8
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

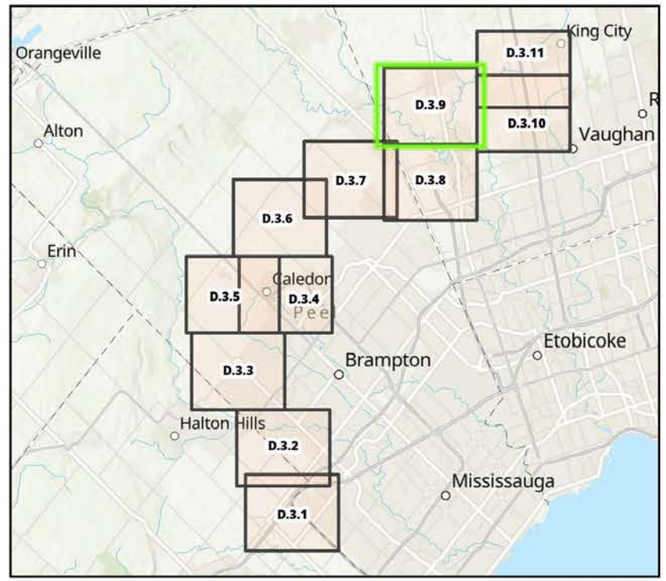
Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential



Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Hybrid Reference Layer:
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0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D3.9
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_App\D.20250820.aprx

612000 613500 615000 616500 618000 619500

4861500 4860000 4858500 4857000

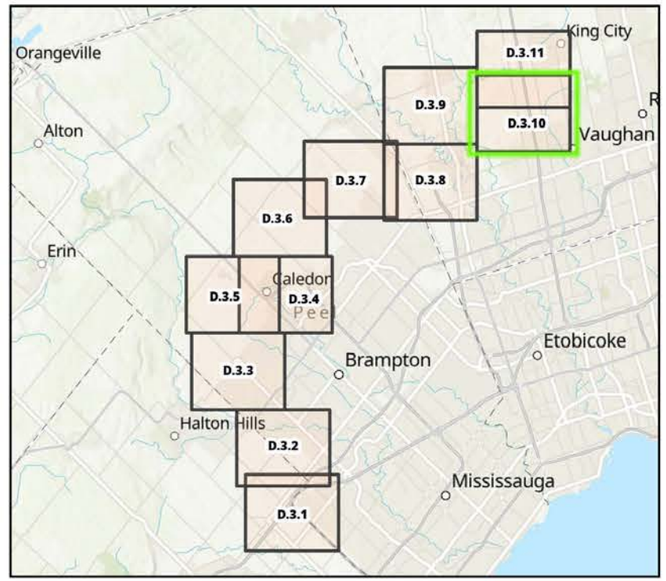
Mill Rd
7th Conc
King-Vaughan Rd
Kirby Rd
Pine Valley Dr
Weston Rd
Jane St
Keele St
Teston Rd
Mattucci
Highway 400
Drummond Dr
America Ave
Discovery Trail
Treasure Rd
Cunningham Dr
McNaughton Rd
Major MacKenzie Dr W
Vellore Park Ave
Cityview Blvd
Stanton Ave
Lawford
Melville Ave
Kipling Ave

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential



Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Hybrid Reference Layer:
World Hillshade: Esri, CGIAR, USGS Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

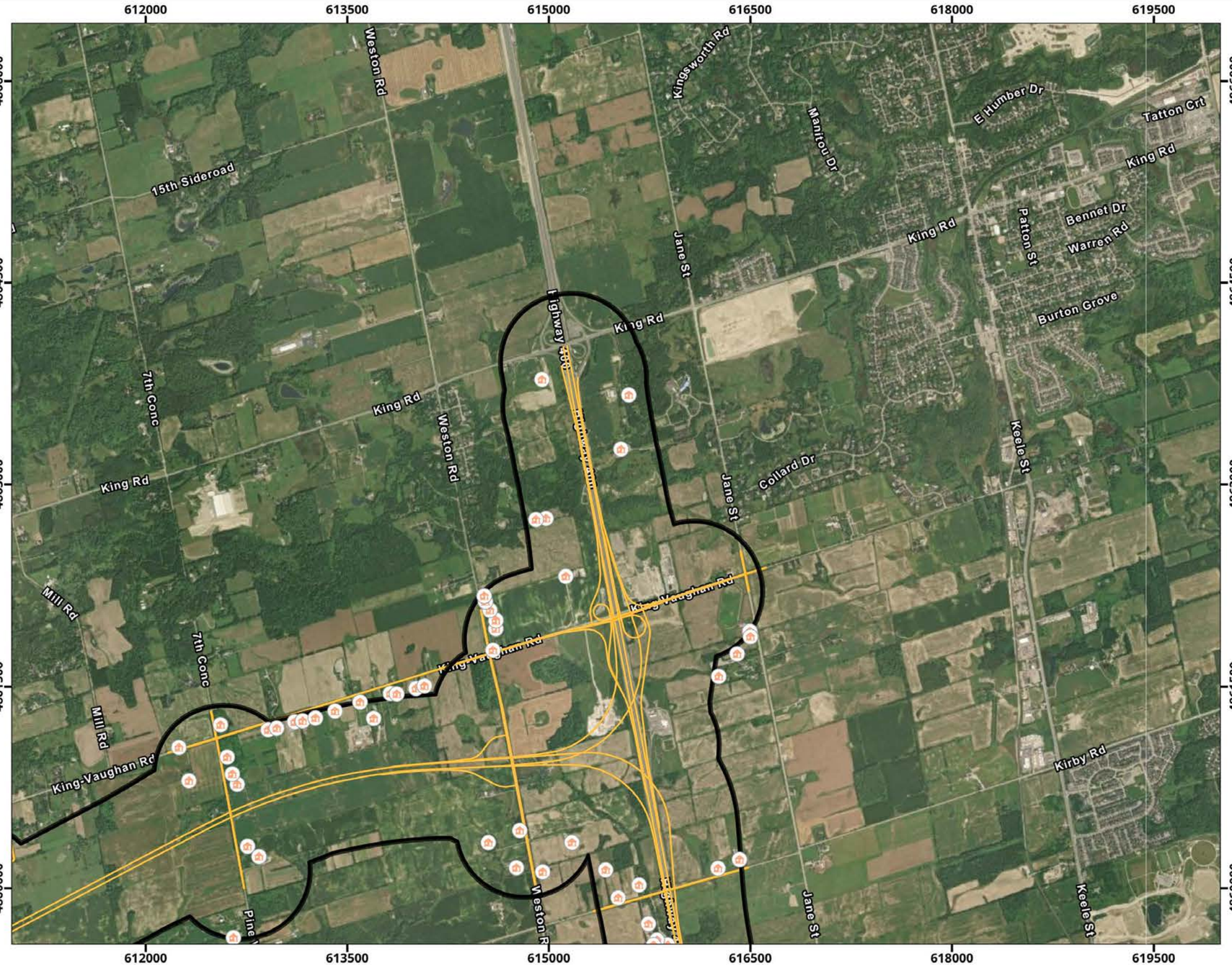
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: RCL	Figure: D3.10
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

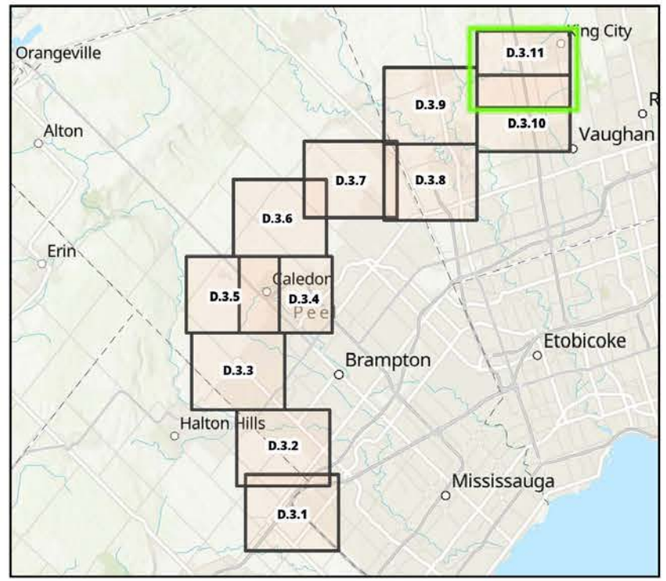


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential



Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Hybrid Reference Layer:
World Hillshade: Esri, CGIAR, USGS Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Proposed Highway 413, Existing Highways, Arterial Roads, and Sensitive Receptors Within the Study Area

Based on 90% Design Drawings

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

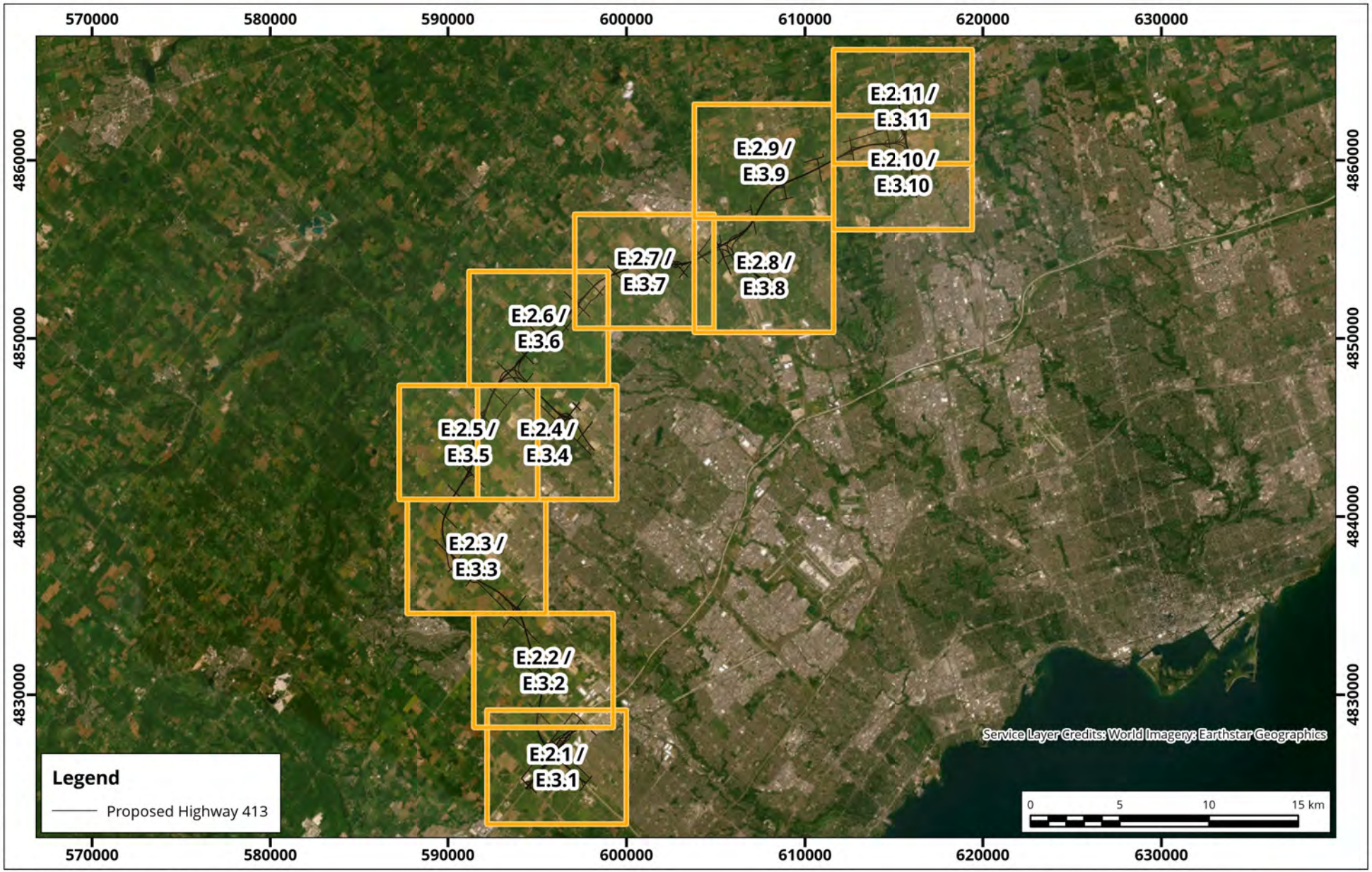
Drawn by: RCL	Figure: D3.11
Approx. Scale:	1:32,000
Date Revised:	Aug 20, 2025

Map Document: C:\GIS\1301992A_Highway413\P1301992A_H413_AQ_AppD_20250820.aprx

E

Model Predicted Maximum Concentration Isopleths

Appendix E.1: Index Map – 1 Hour NO_2



Index Map - E.2 & E.3

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

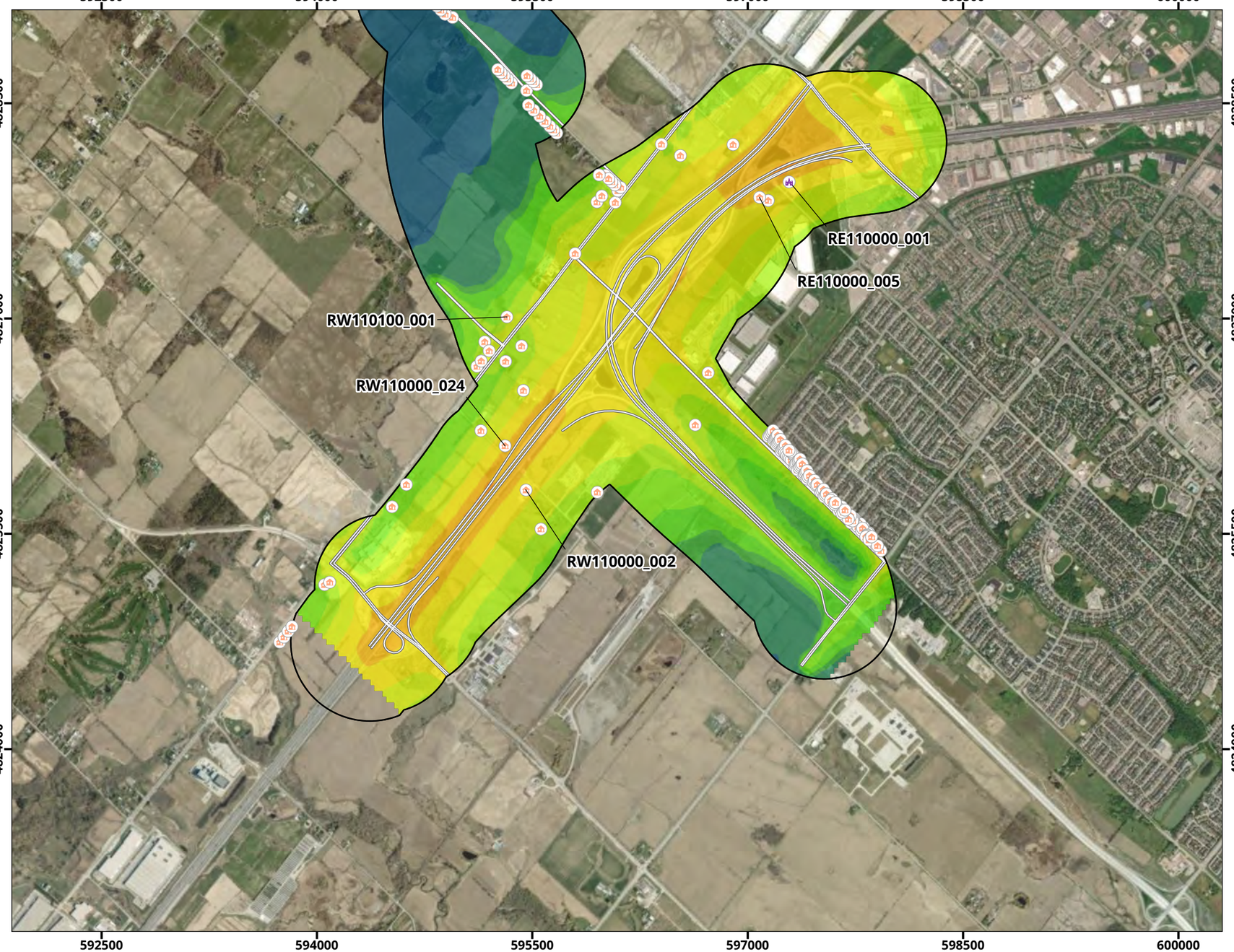
True North

Project #: 1301992A

Drawn by: PIP	Figure: E.1
Approx. Scale:	1:300,000
Date Revised:	Jul 9, 2025

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.2.1-11: 2041 No-Build – Model Predicted Maximum 1 Hour NO_2



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

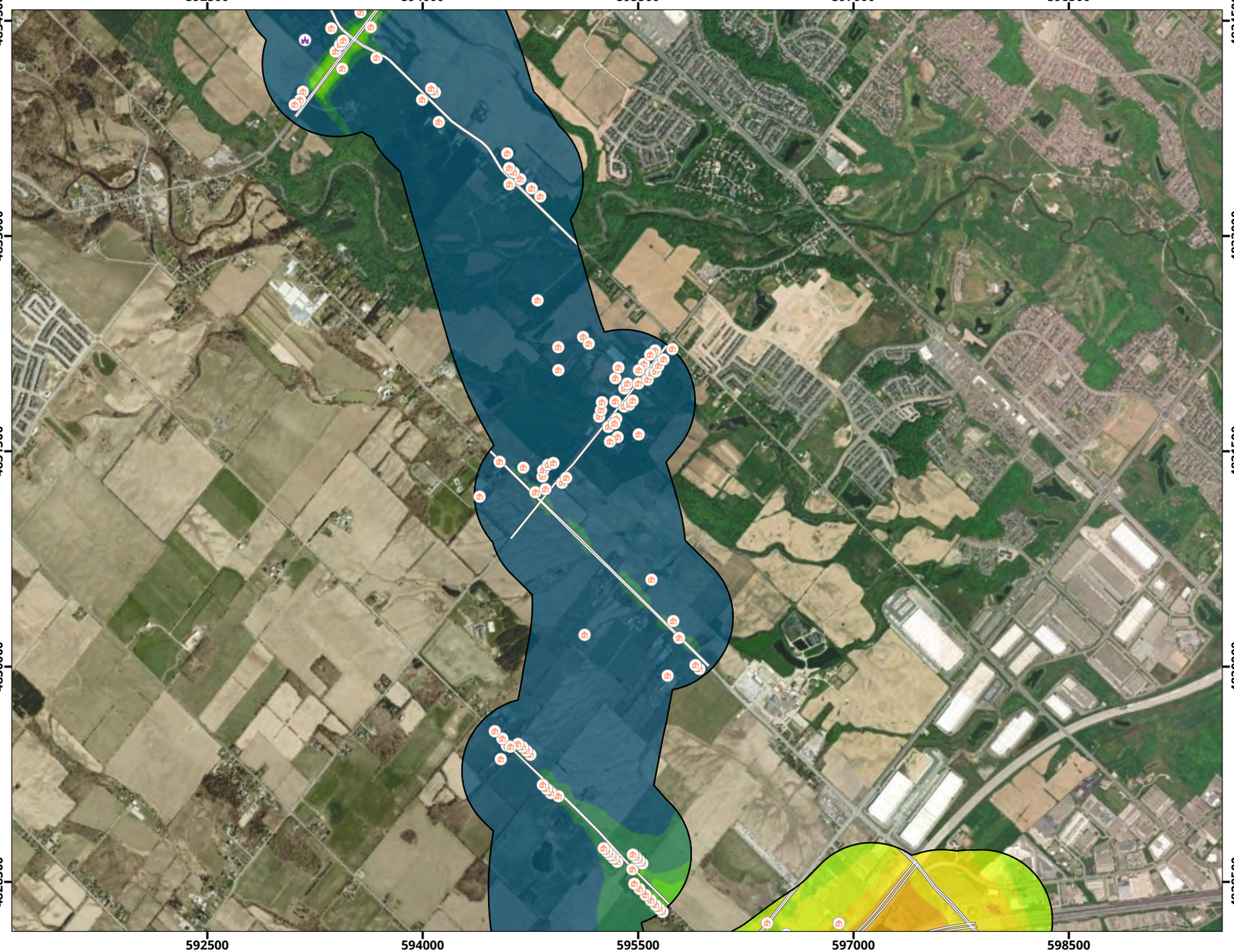
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.2.1
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

35 - 70
70 - 80
80 - 83.1
83.1 - 90
90 - 100
100 - 110
110 - 120
120 - 130
130 - 140
140 - 150
> 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

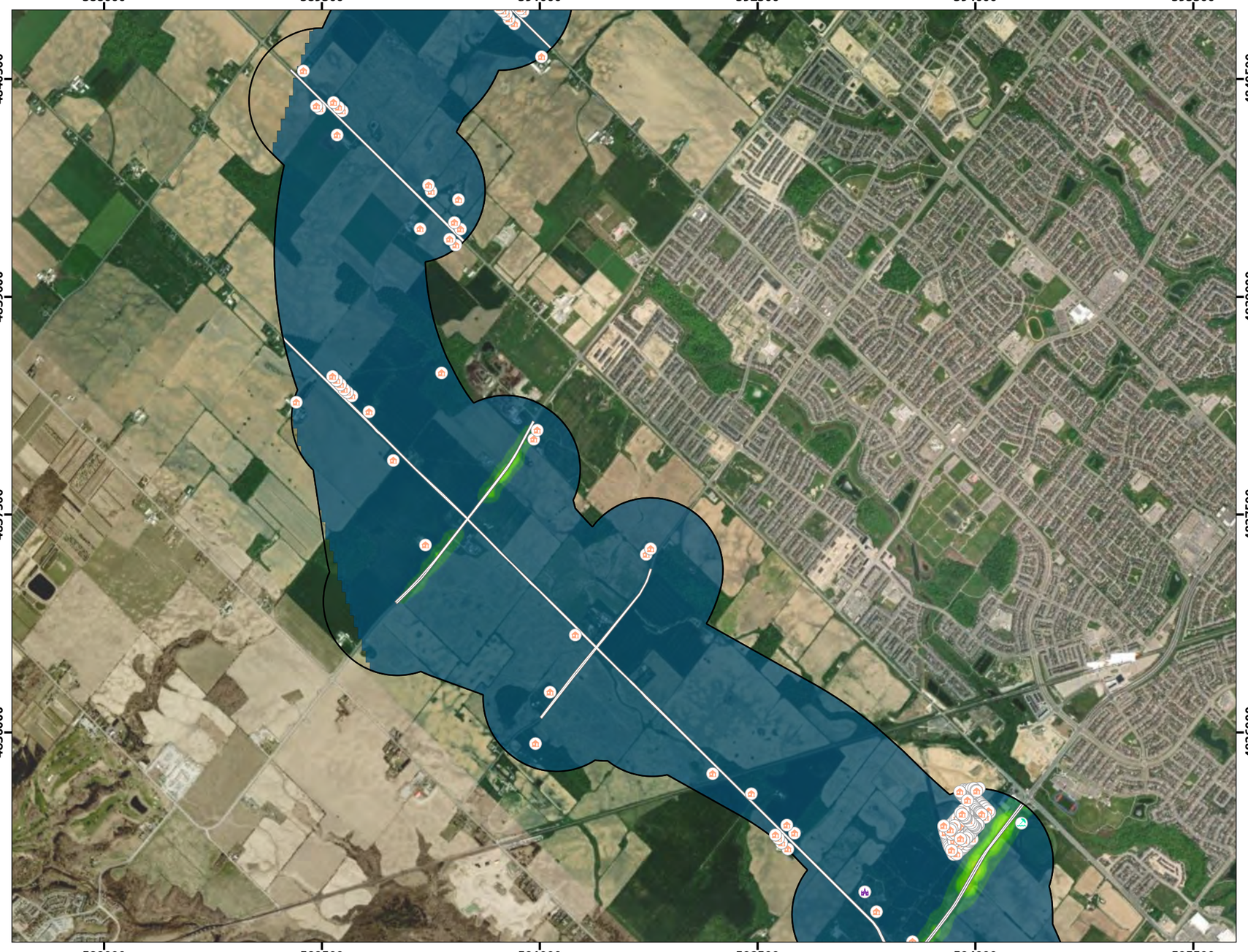
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.2.2
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

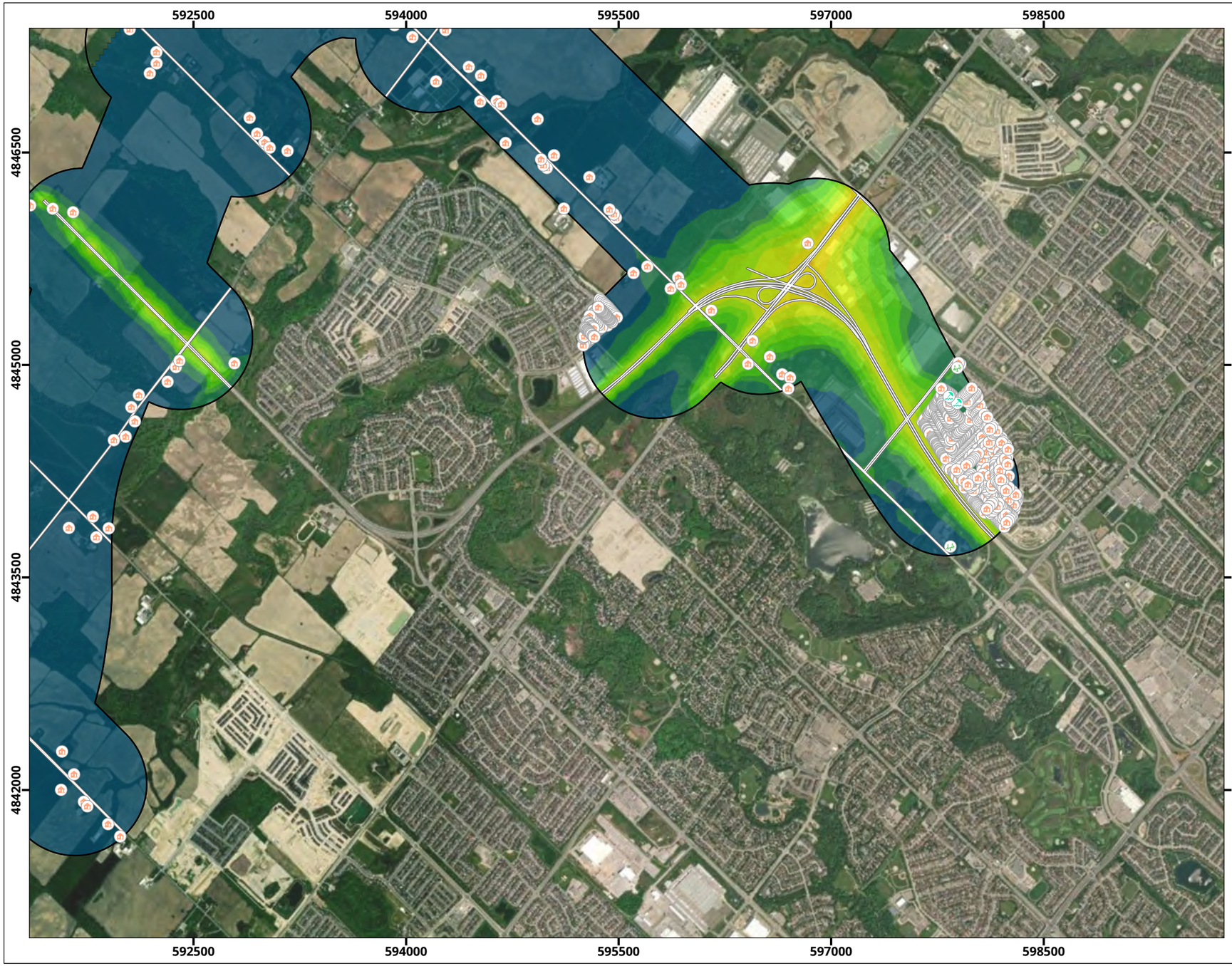
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.2.3
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

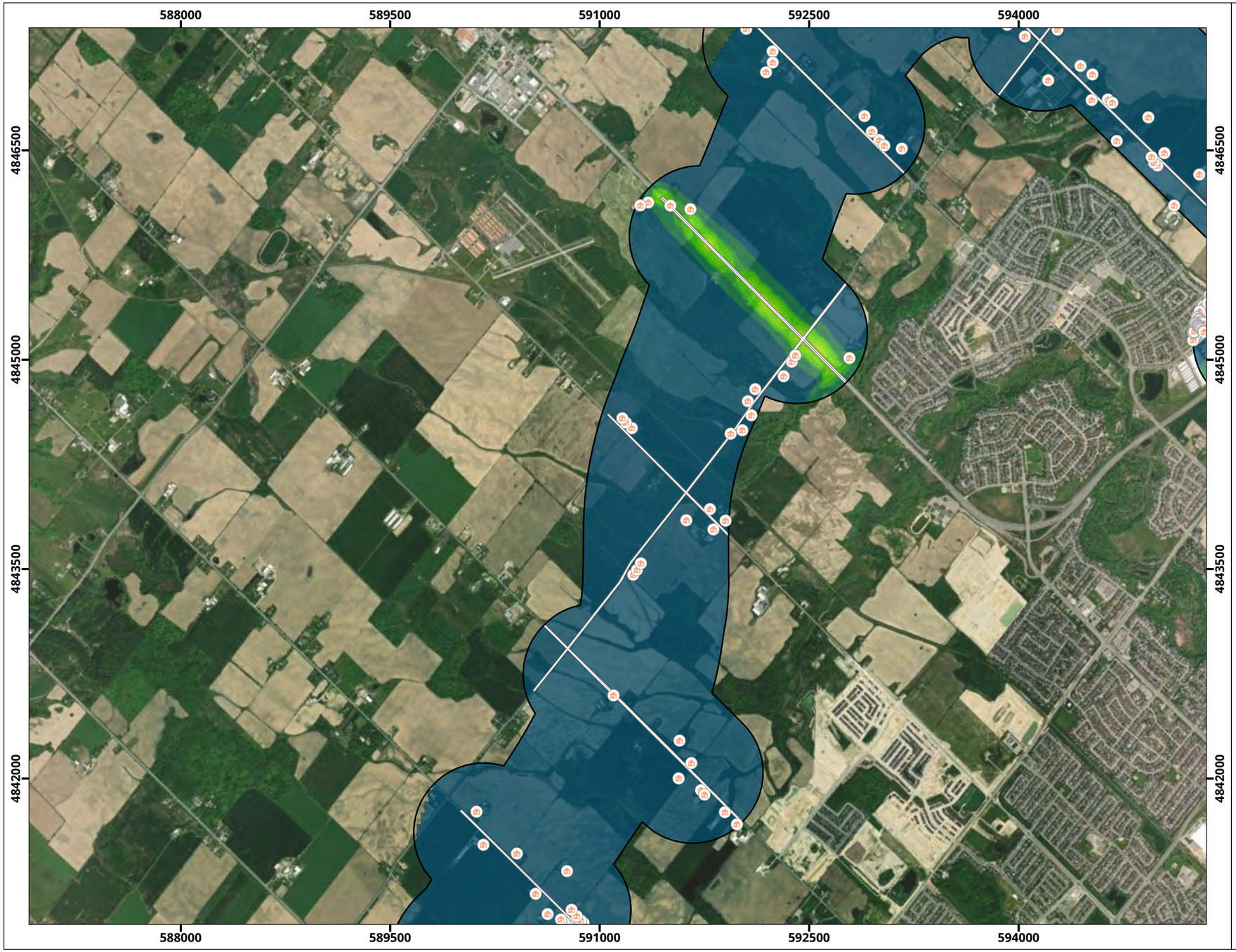
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.2.4	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

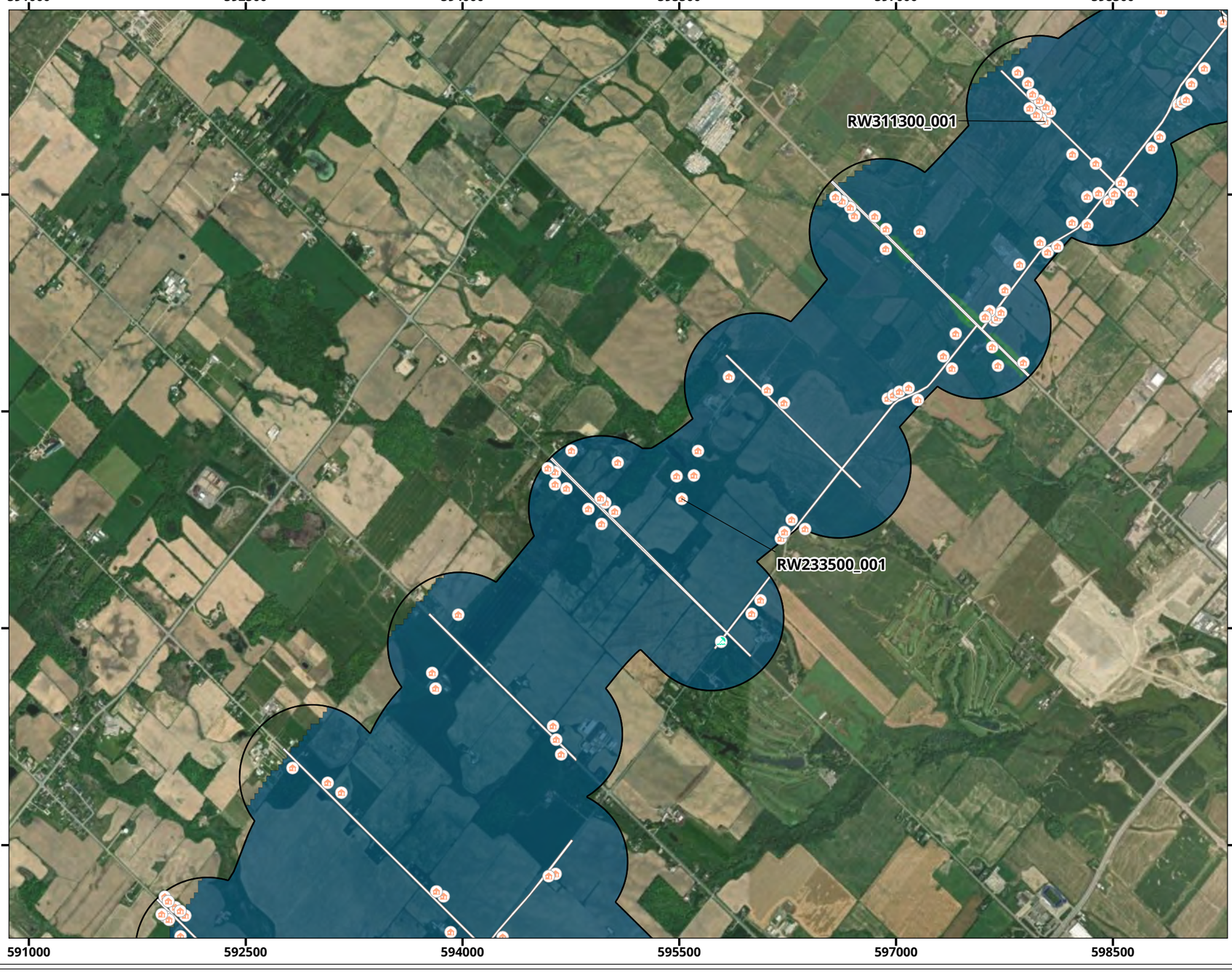
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.2.5	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Work\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

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0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.2.6		
Approx. Scale:	1:30,000		
Date Revised:	Aug 21, 2025		

Project #: 1301992A

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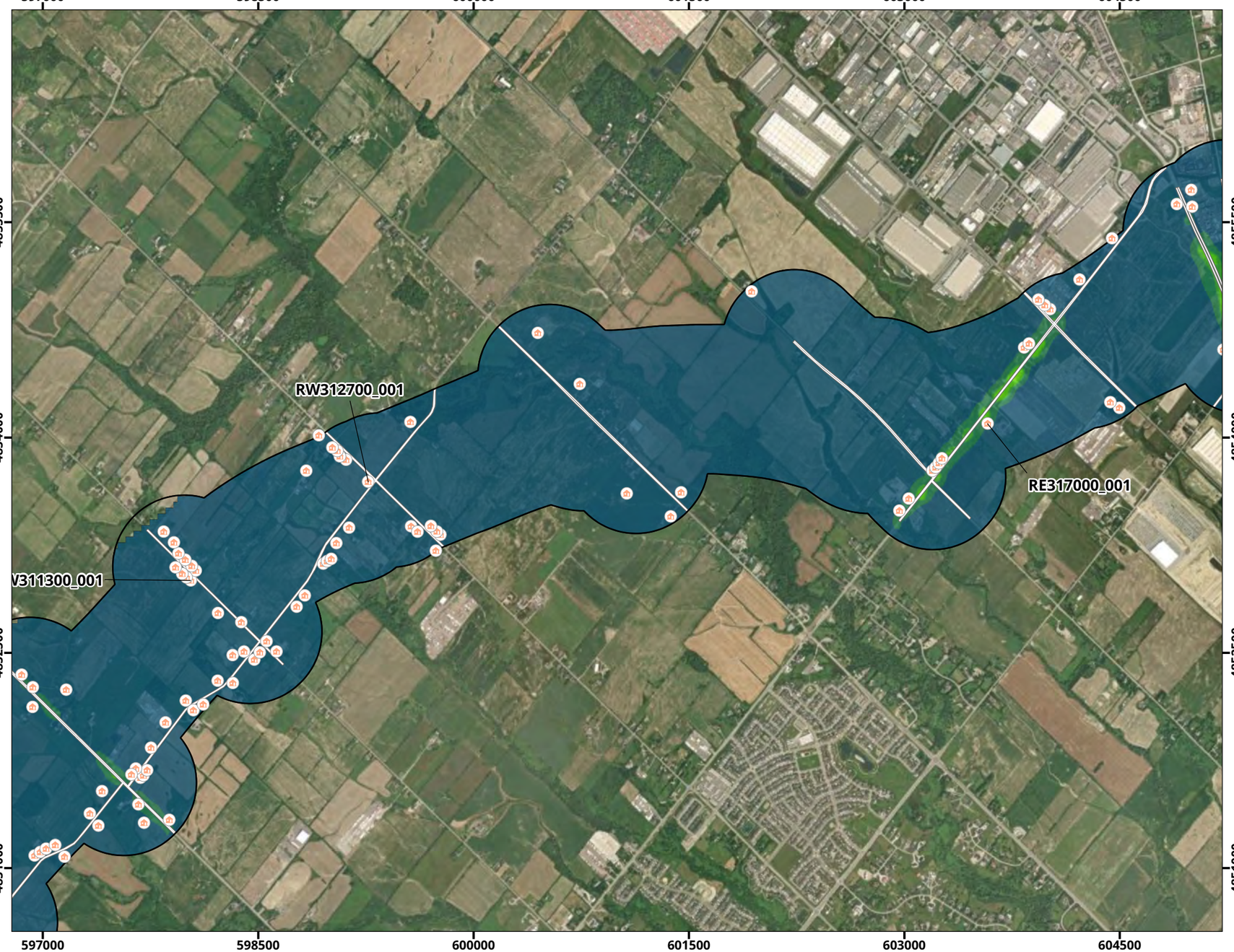

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

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0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.2.7	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
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- 140 - 150
- > 150

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0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

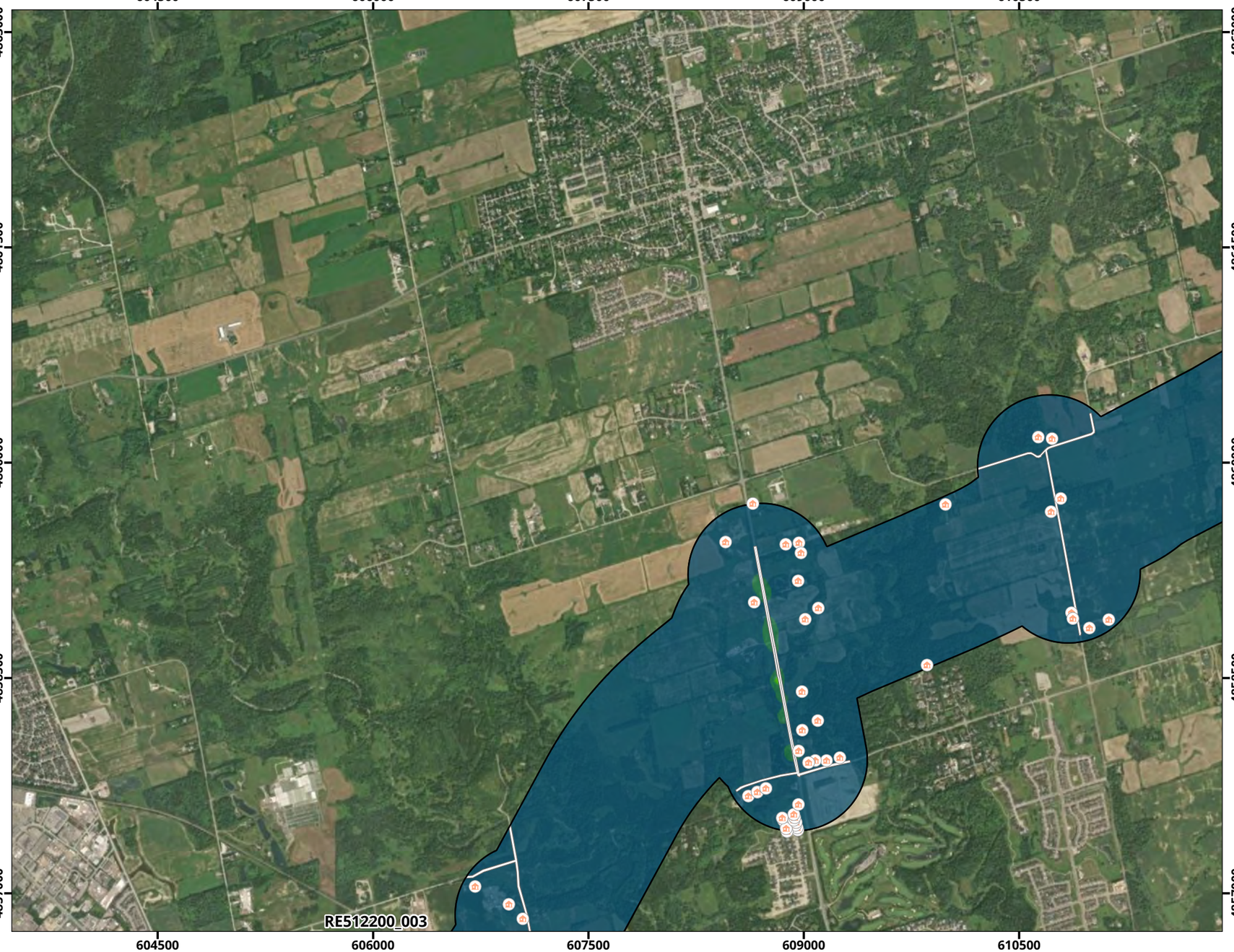
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.2.8
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
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Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

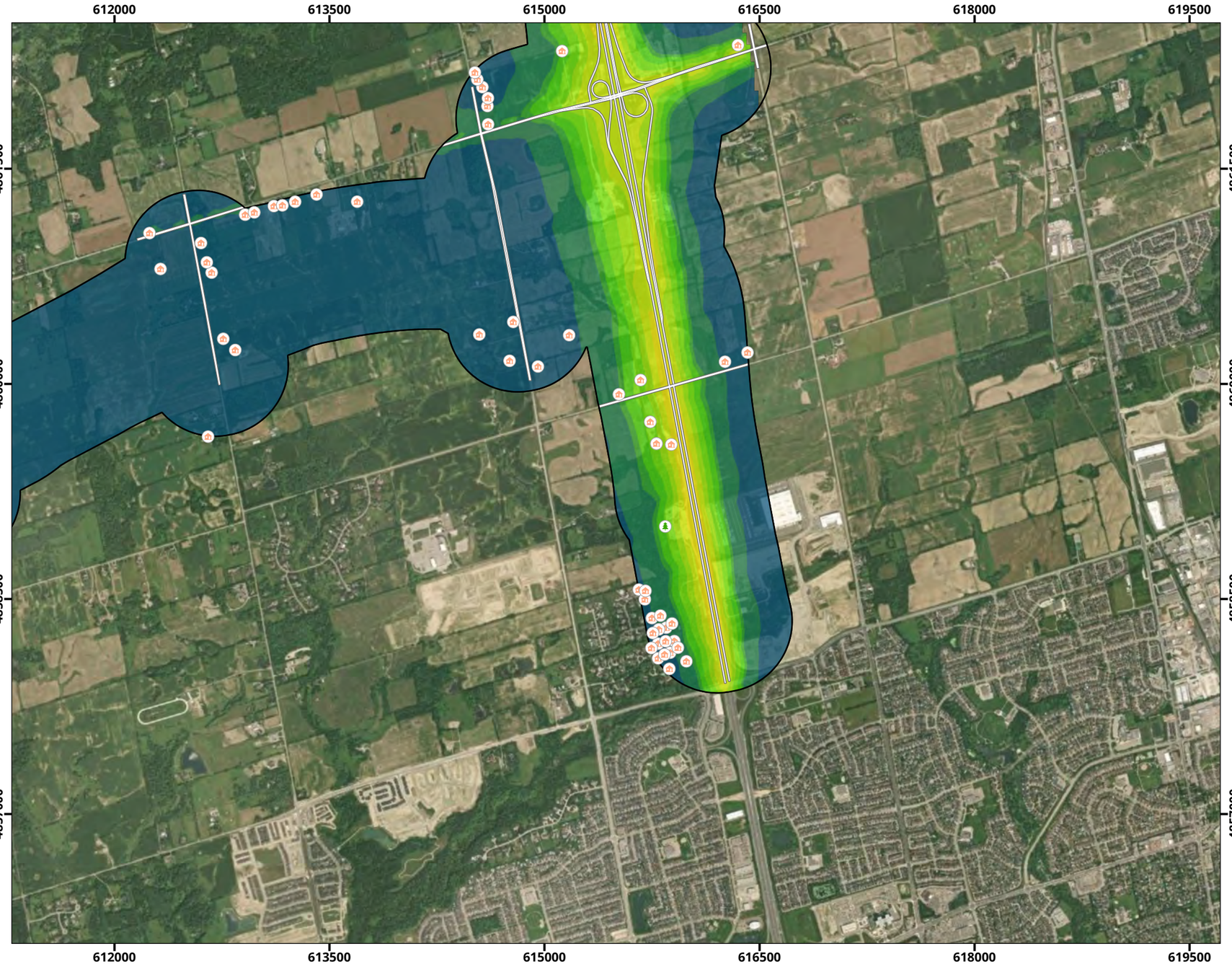
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.2.9
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Working\Folder\Jobs_America\P13019924\P13019924.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

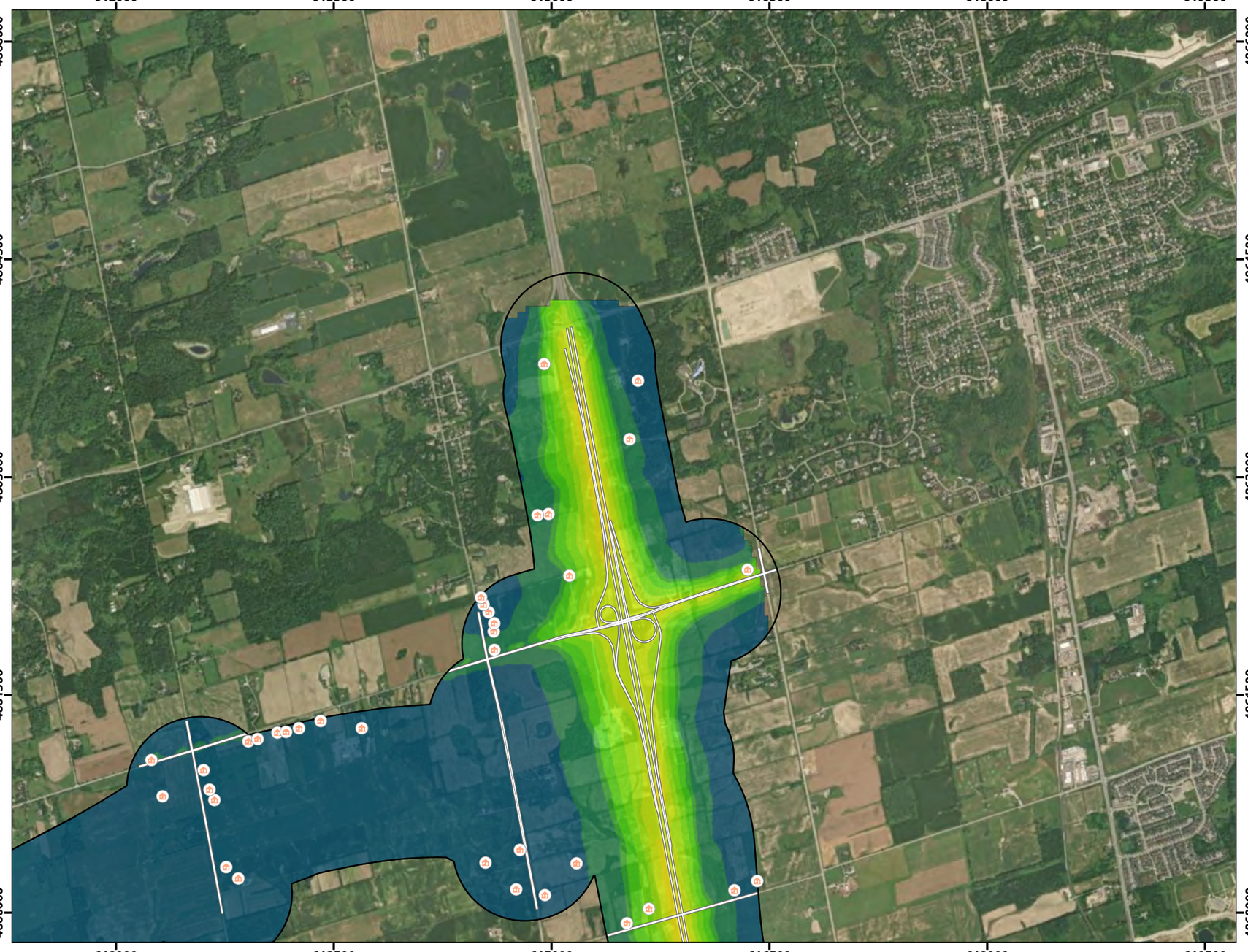
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.2.10
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

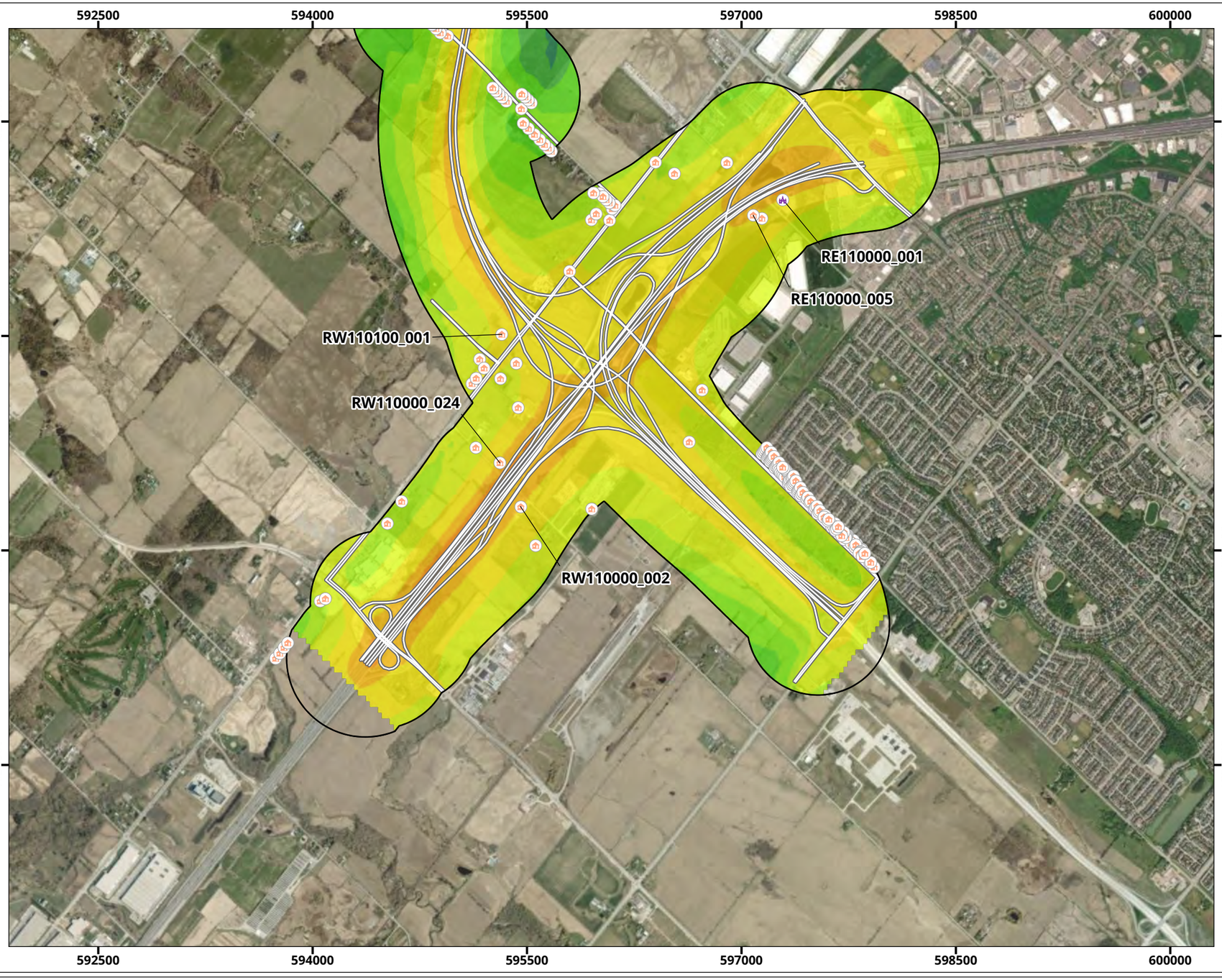
True North

Project #: 1301992A

Drawn by: PIP	Figure: E2.11
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx

Appendix E.3.1-11: 2041 Build – Model Predicted Maximum 1 Hour NO_2



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

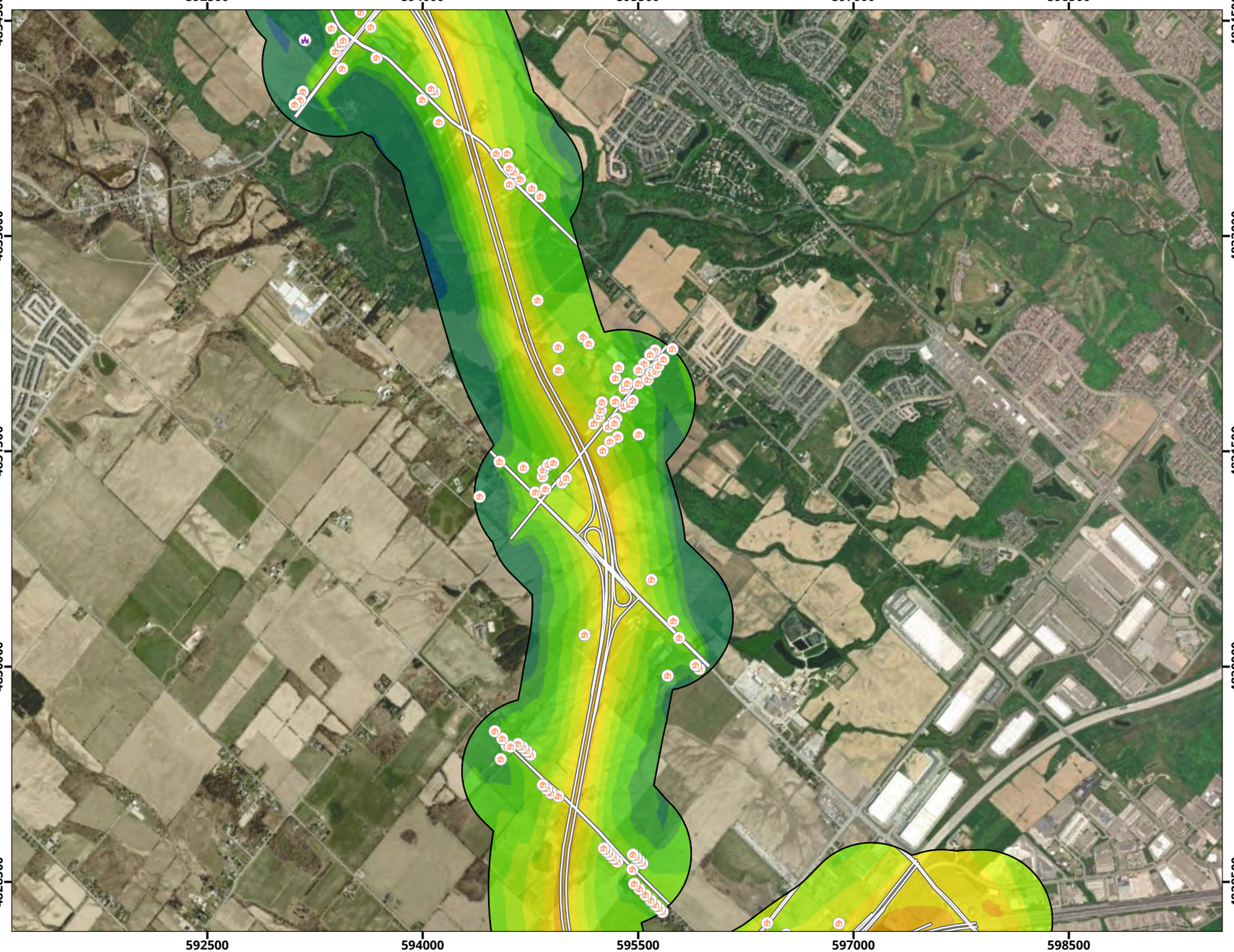
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.3.1
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

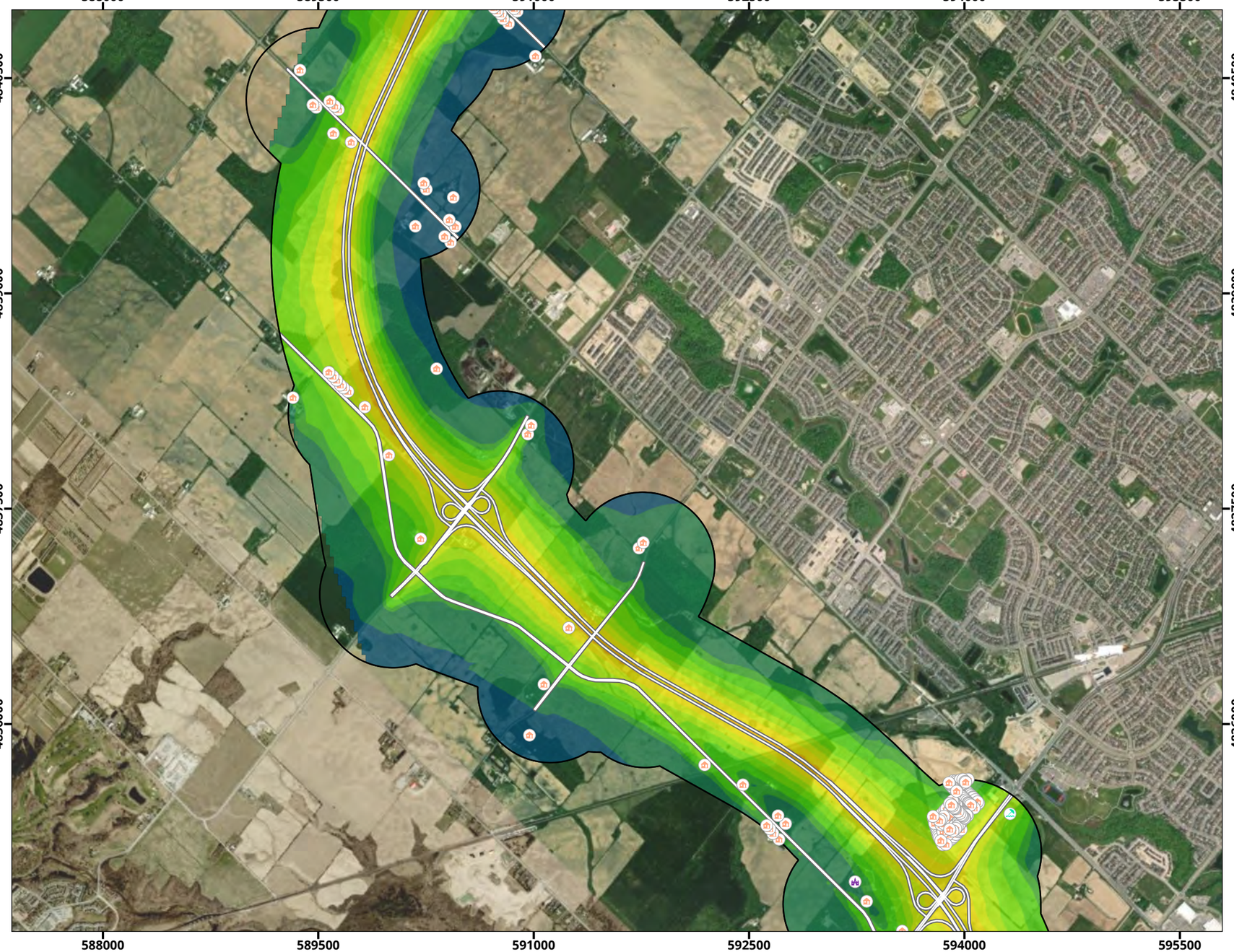
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.3.2	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

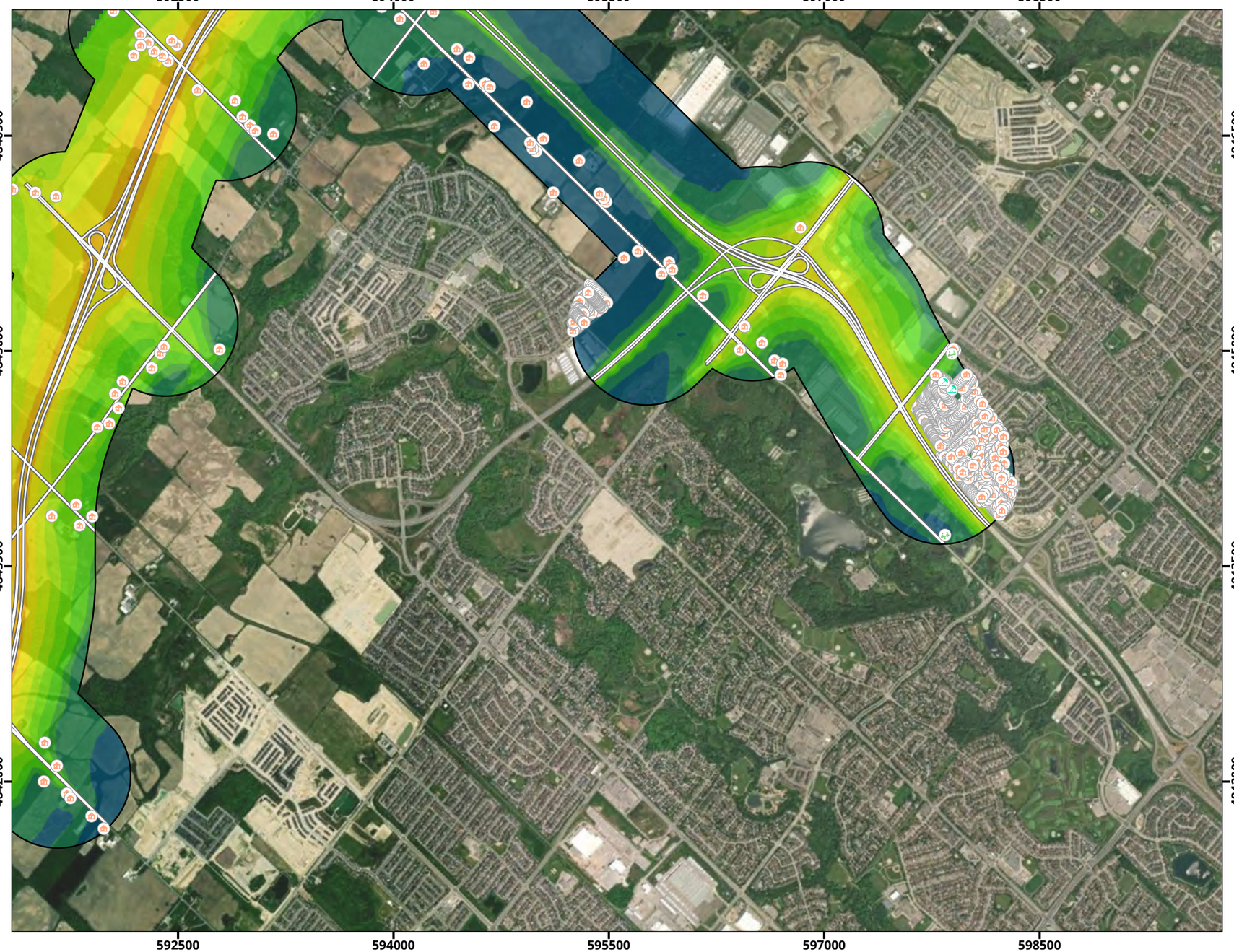
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.3.3
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

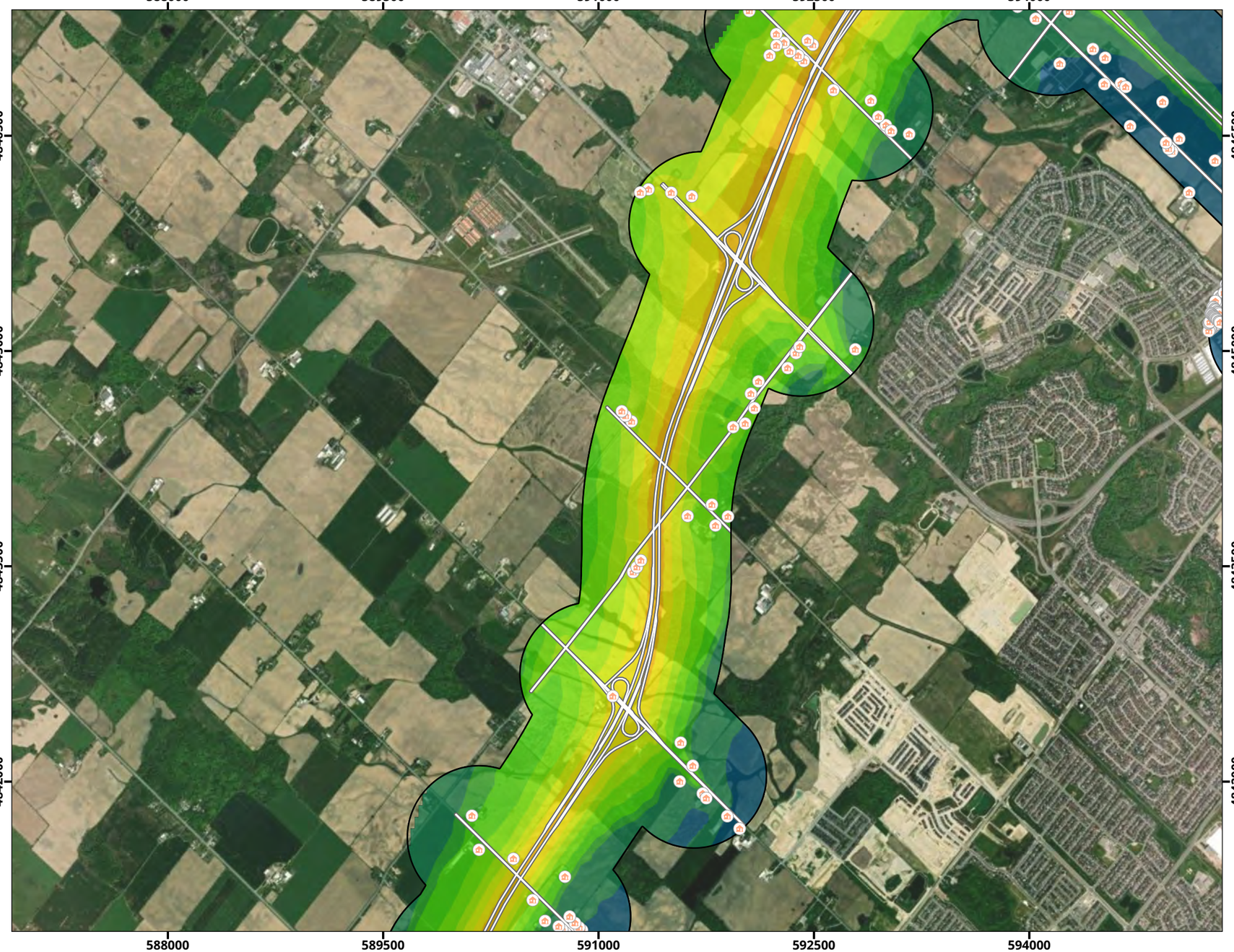
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.3.4	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.3.5
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Working\Folder\Jobs_America\PI 301992A\PI 1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

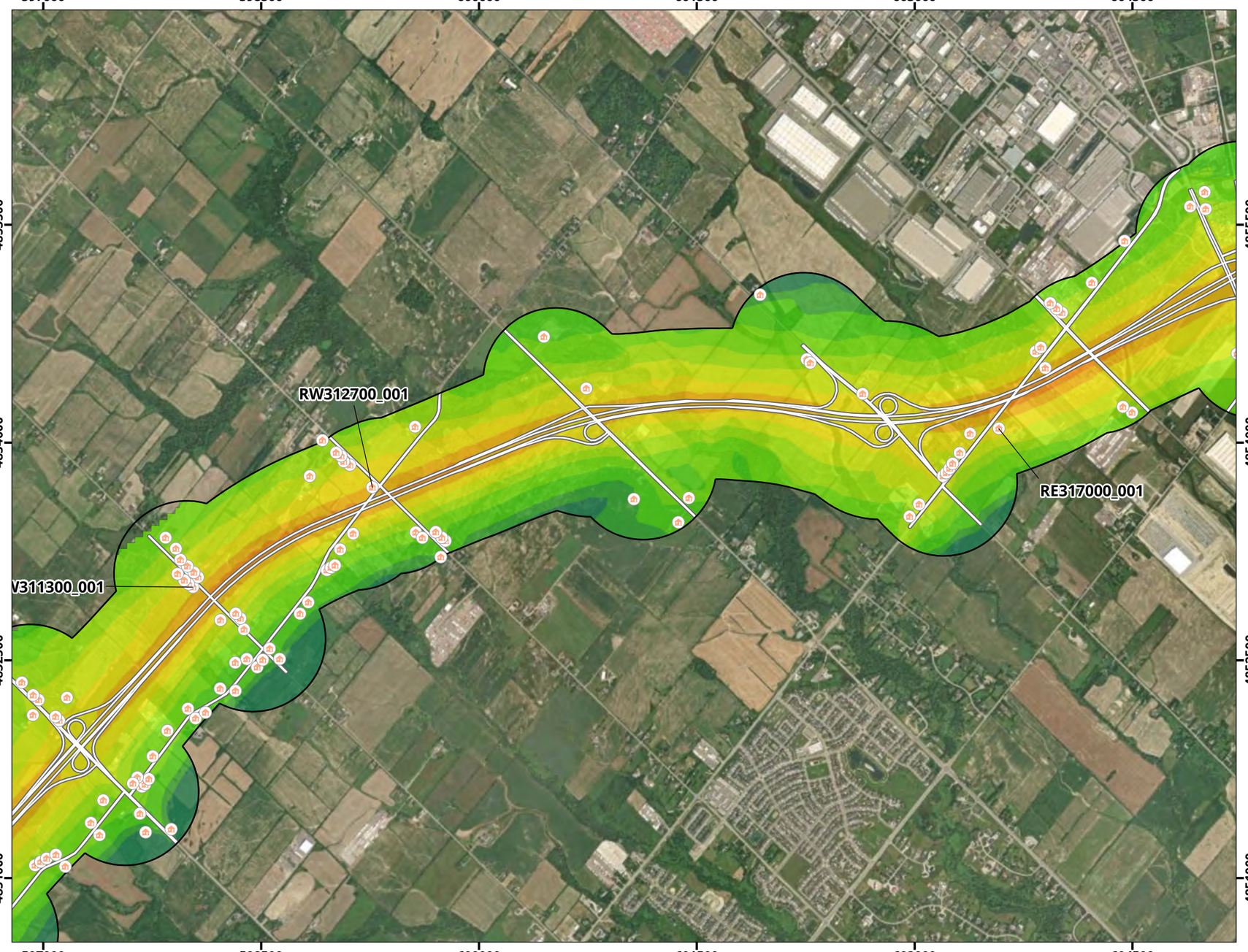
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.3.6
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

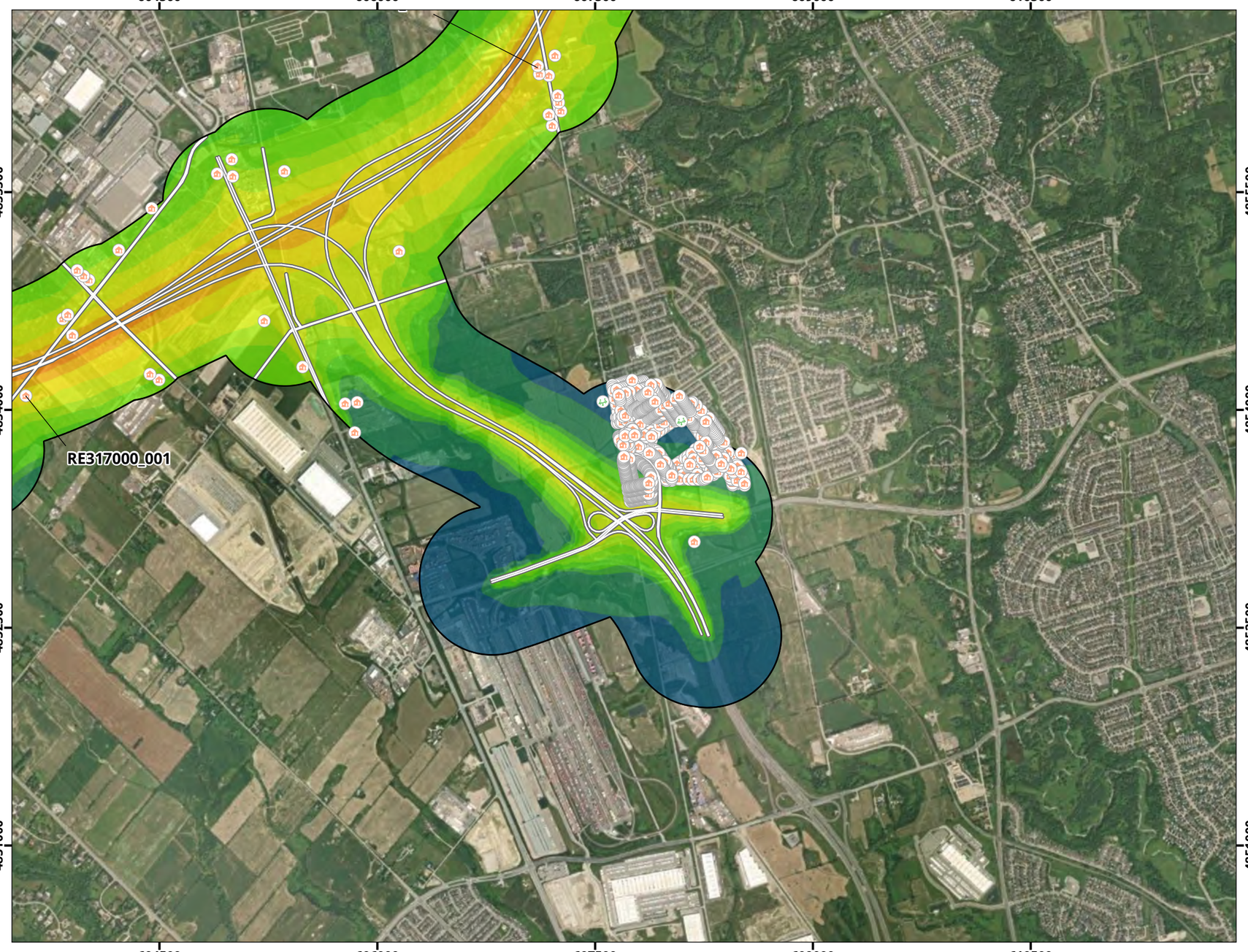
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E3.7
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

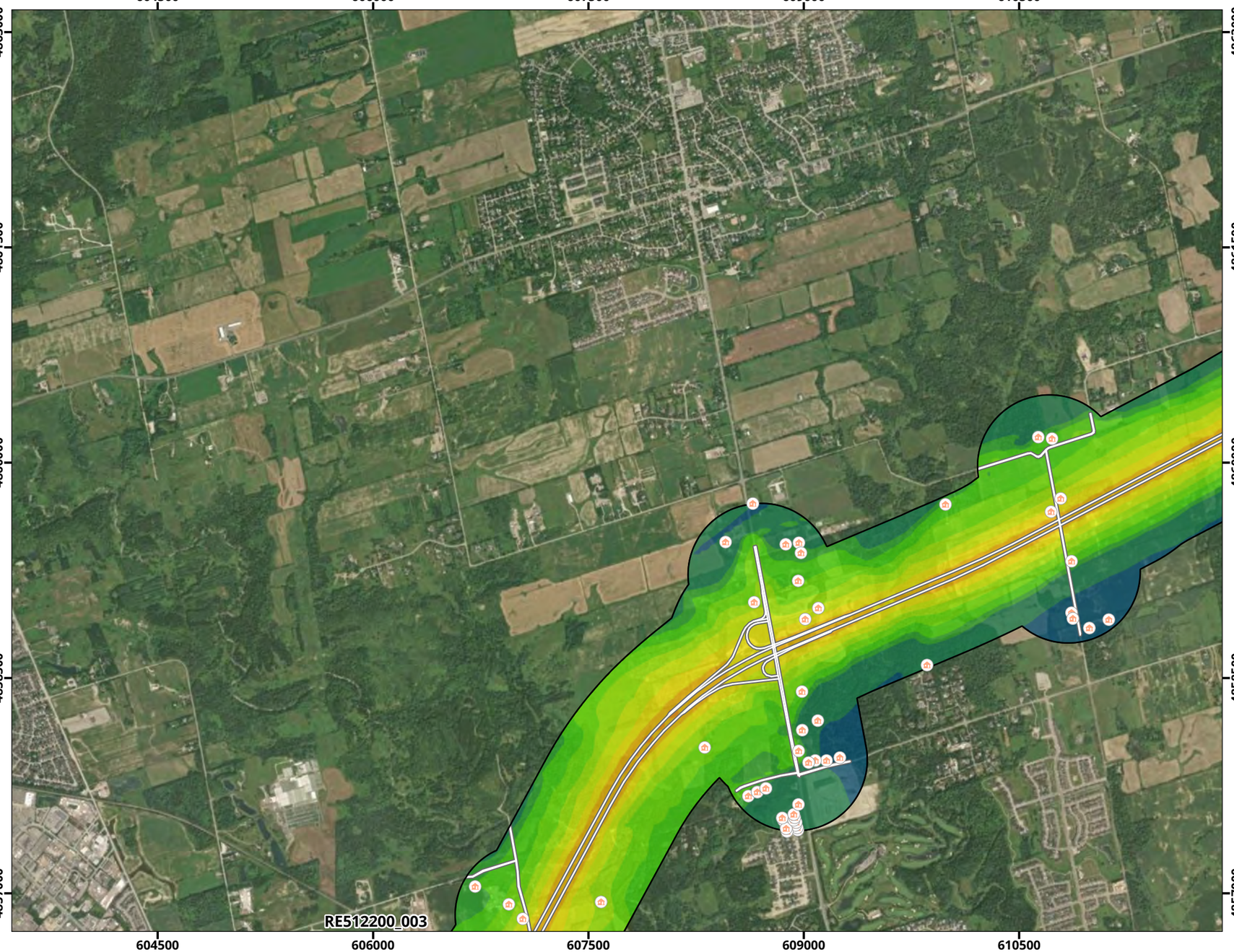
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.3.8
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

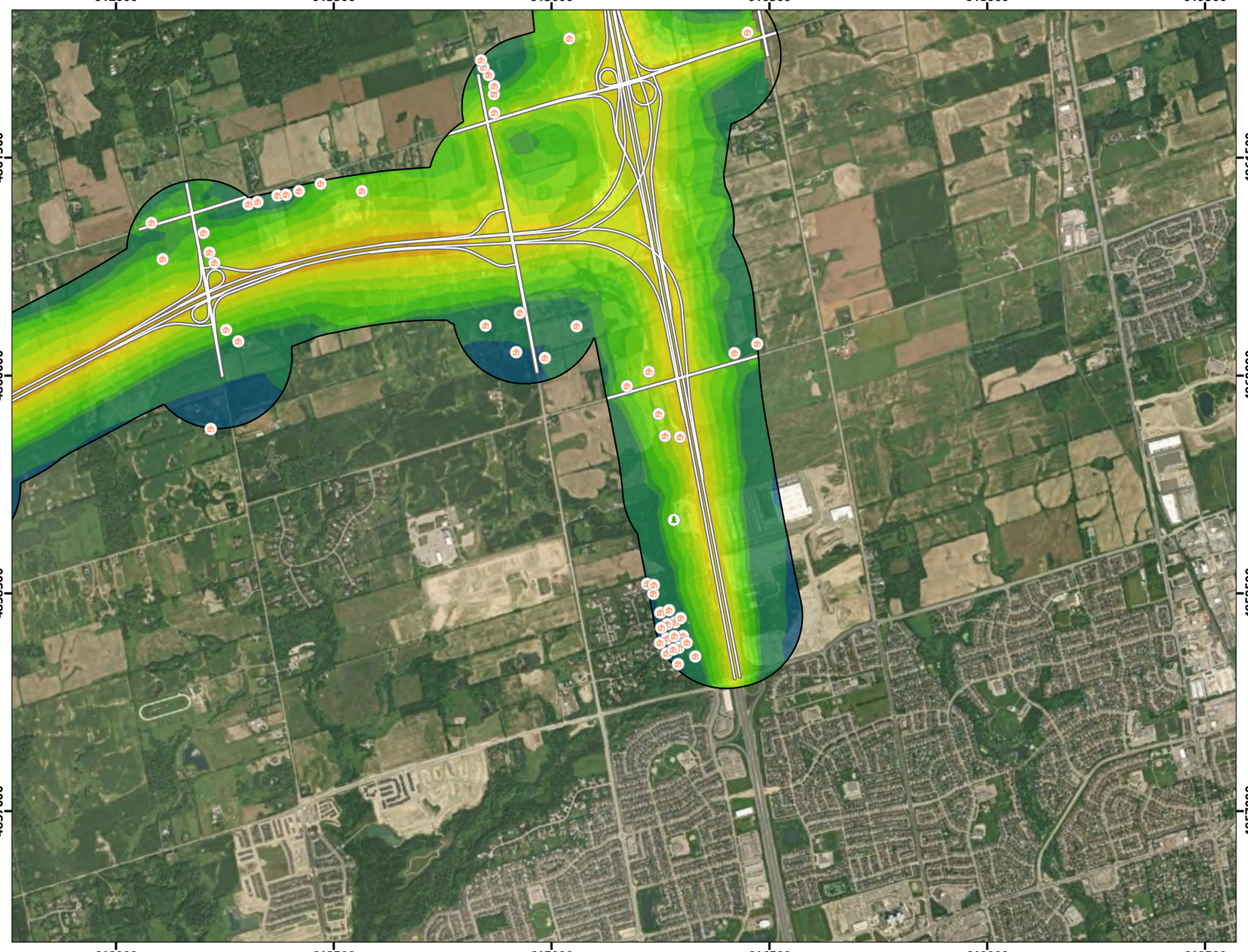
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.3.9	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_Americas\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

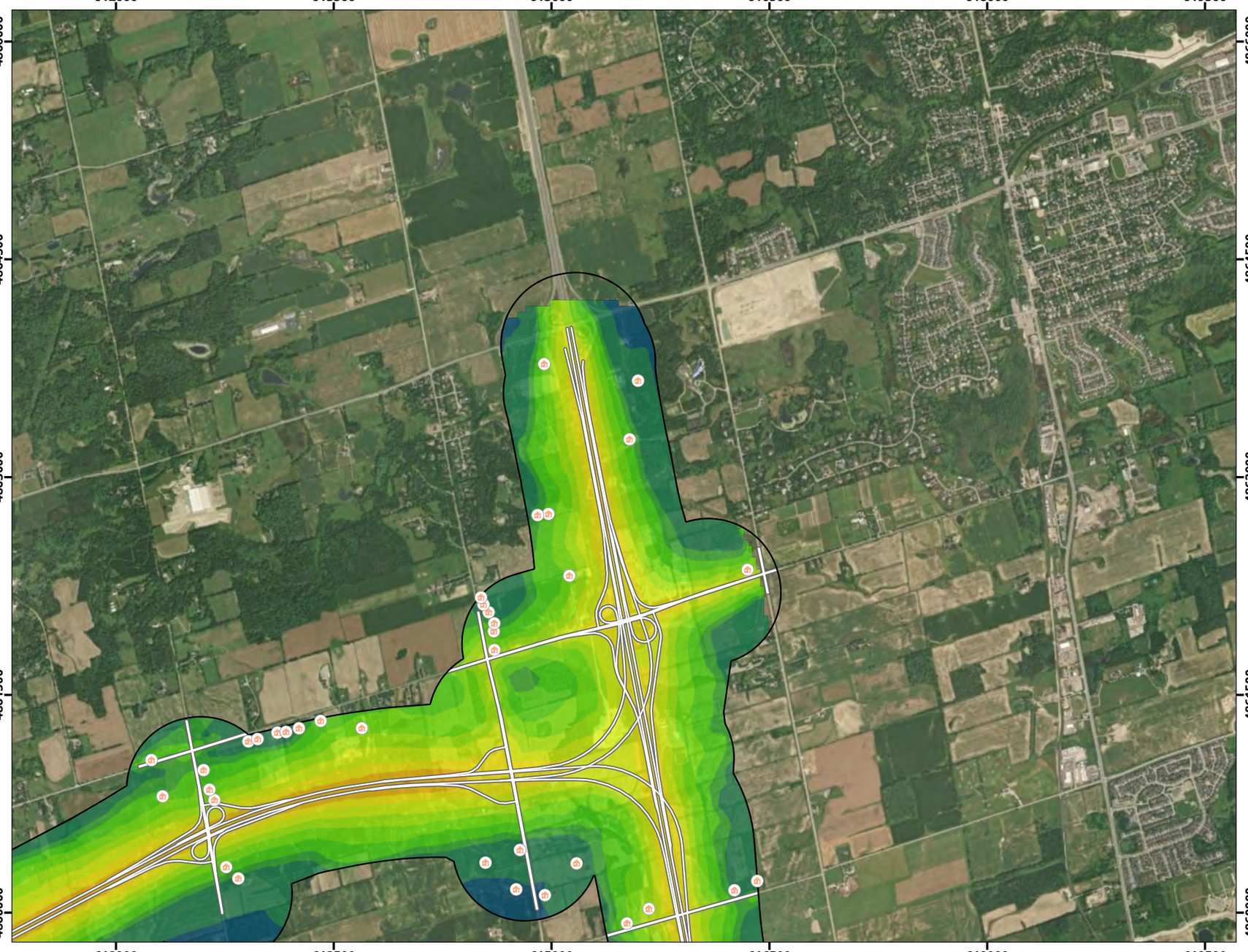
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.3.10
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\PI 301992A\PI 301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard : 83.1 µg/m³

Modelled CAAQS 1-Hour NO_2 results are based on the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentrations.

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model-Predicted Maximum 1-Hour NO_2 Concentrations, CAAQS

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

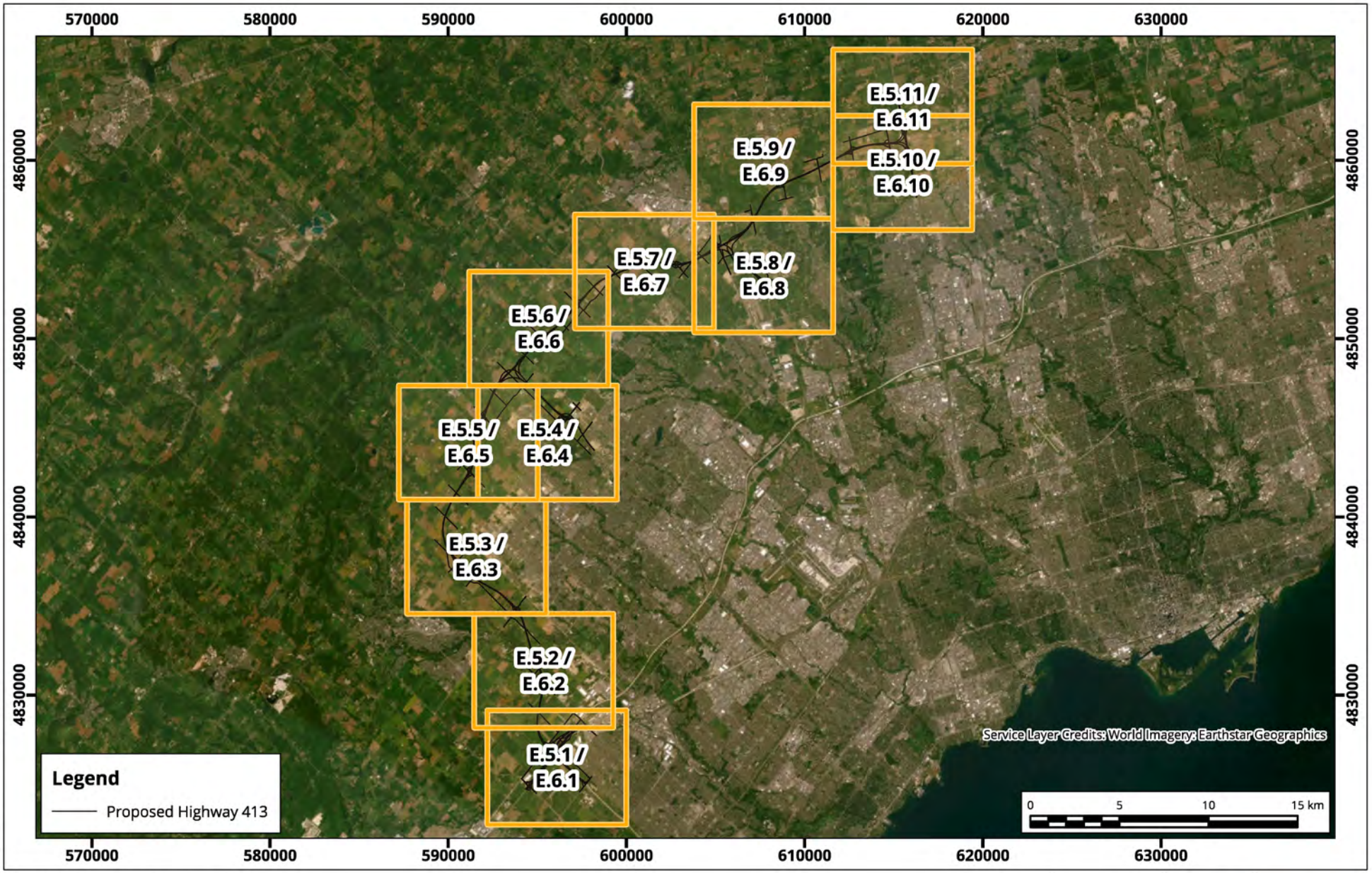
True North

Project #: 1301992A

Drawn by: PIP	Figure: E.3.11
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.4: Index Map – 24 Hour PM_{10}



Index Map - E.5 & E.6

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

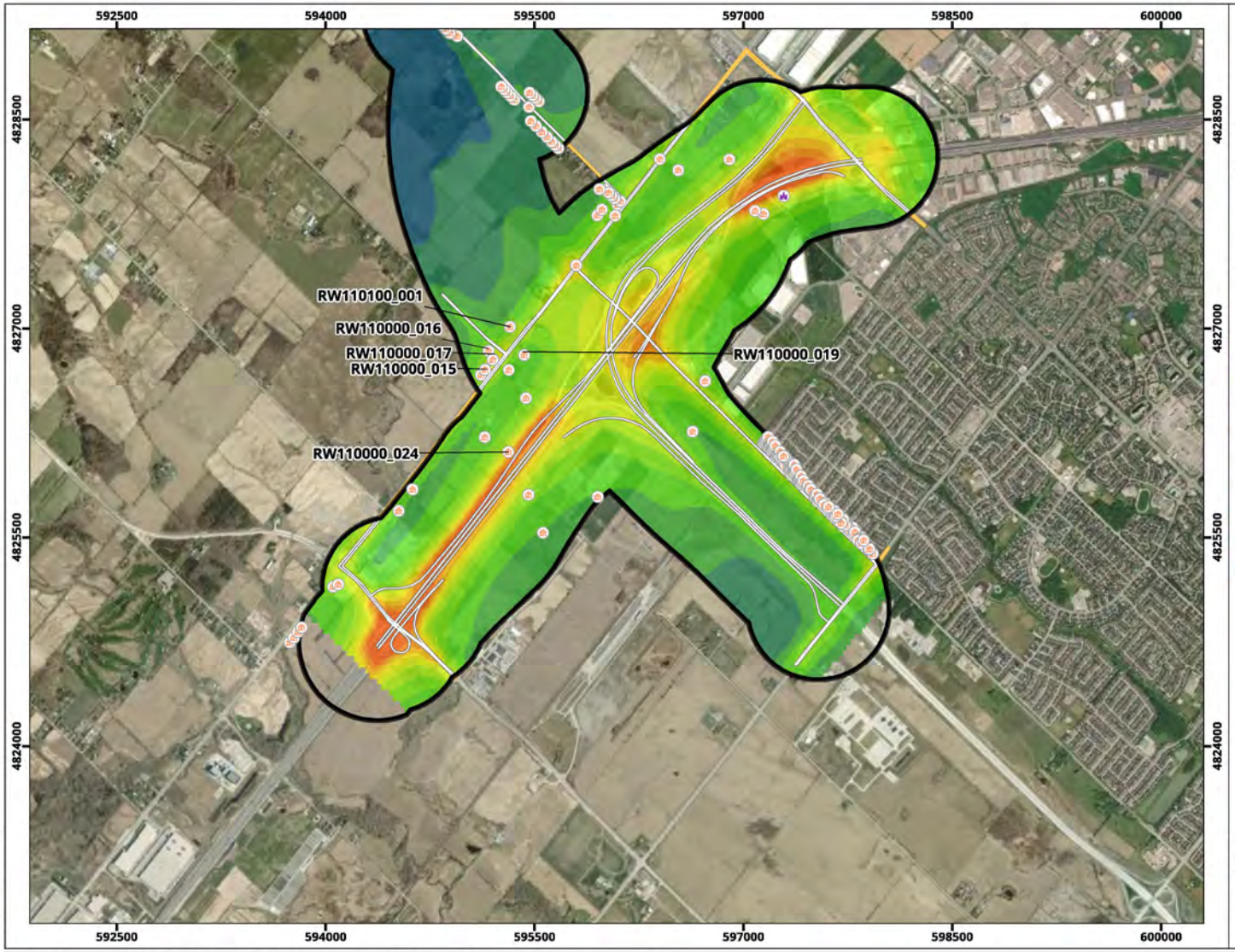
True North

Project #: 1301992A

Drawn by: PIP	Figure: E.4
Approx. Scale:	1:300,000
Date Revised:	Jul 10, 2025

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.5.1-11: 2041 No-Build – Model Predicted Maximum 24 Hour PM_{10}



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

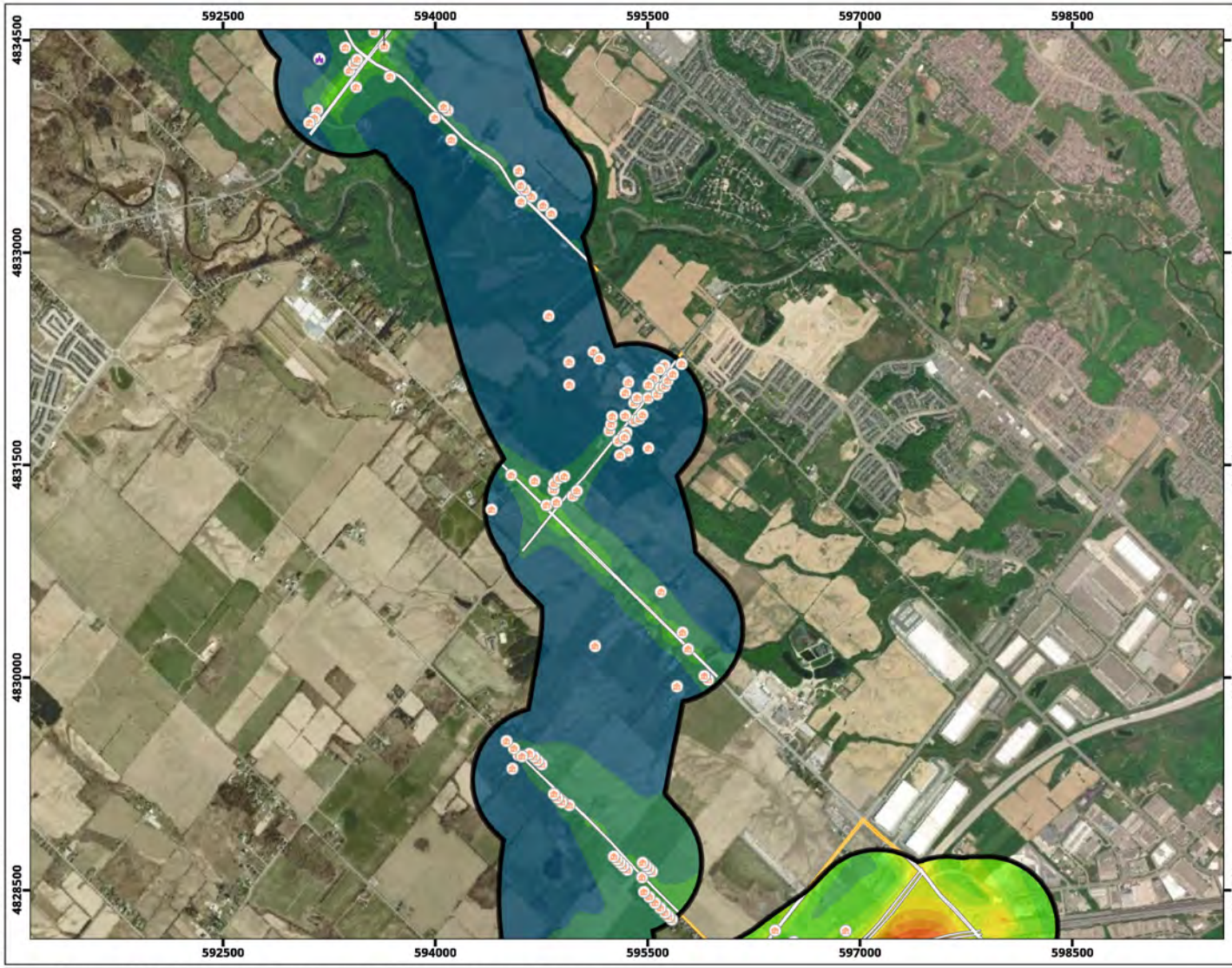
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.1
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Jobs\Jobs_Americas\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.2
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Golder\gisa_America\P\1301992A\P\1301992A.aprx

Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.3
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

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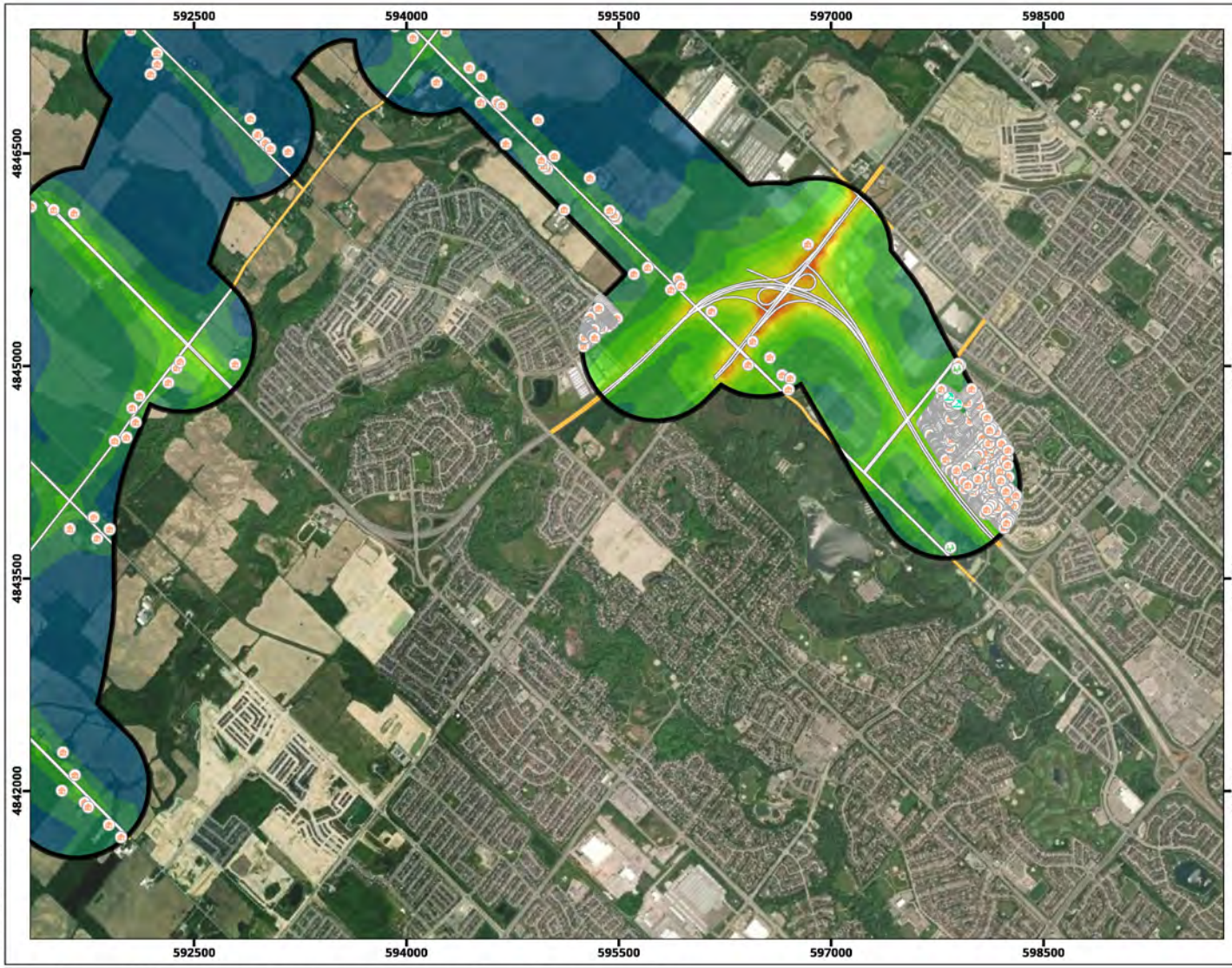

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.4
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

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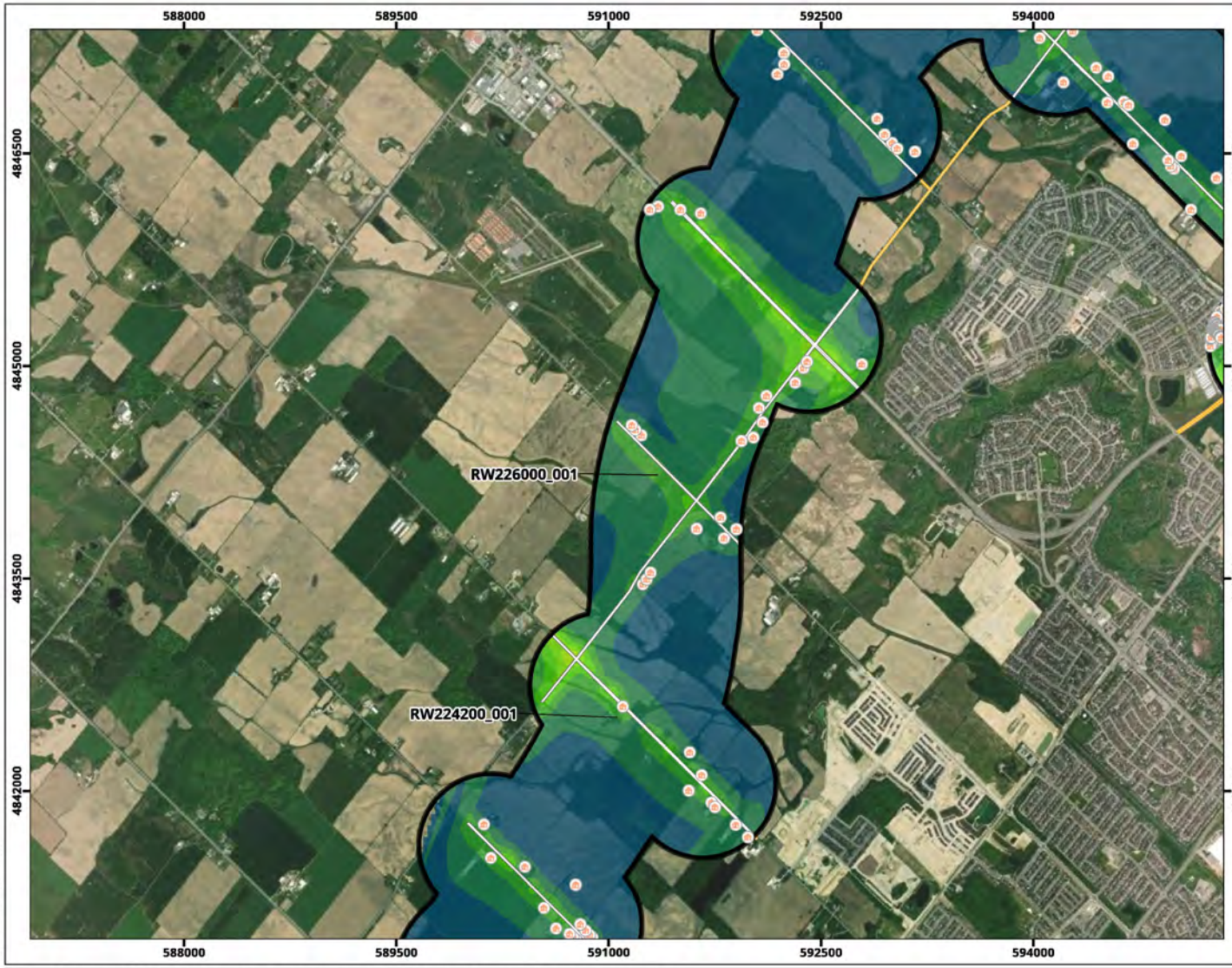

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E5.5
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

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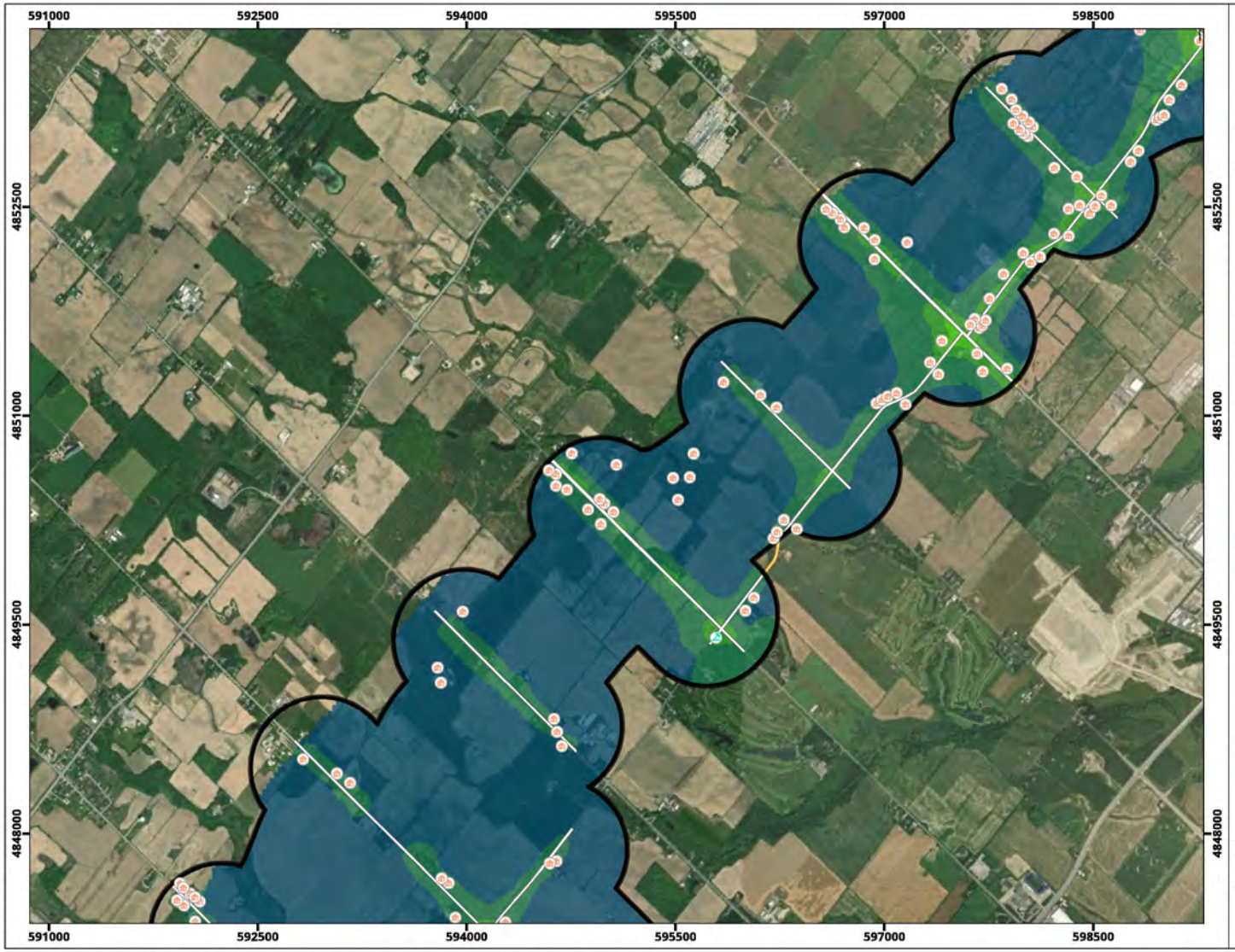


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

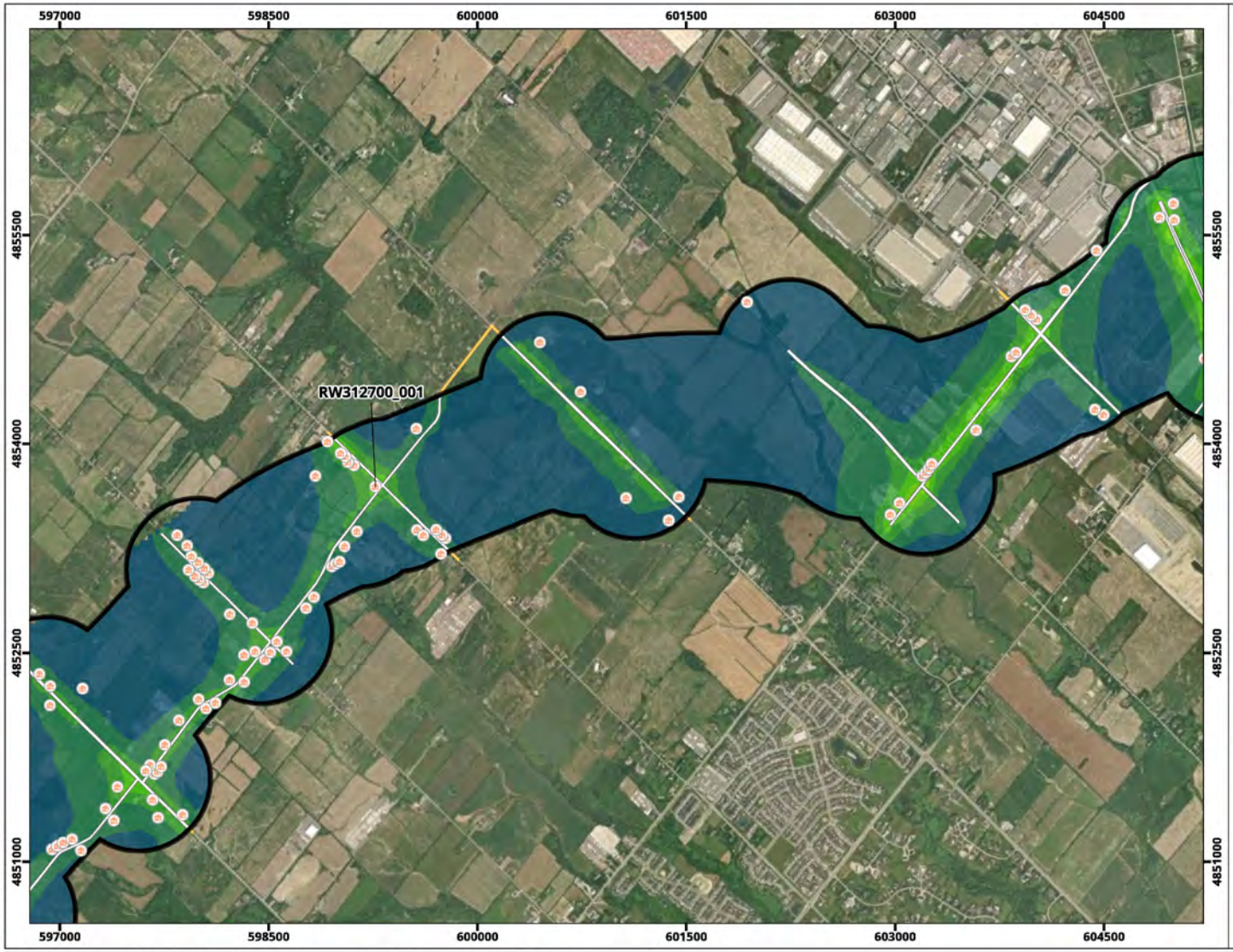
2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.6
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.7
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.8
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

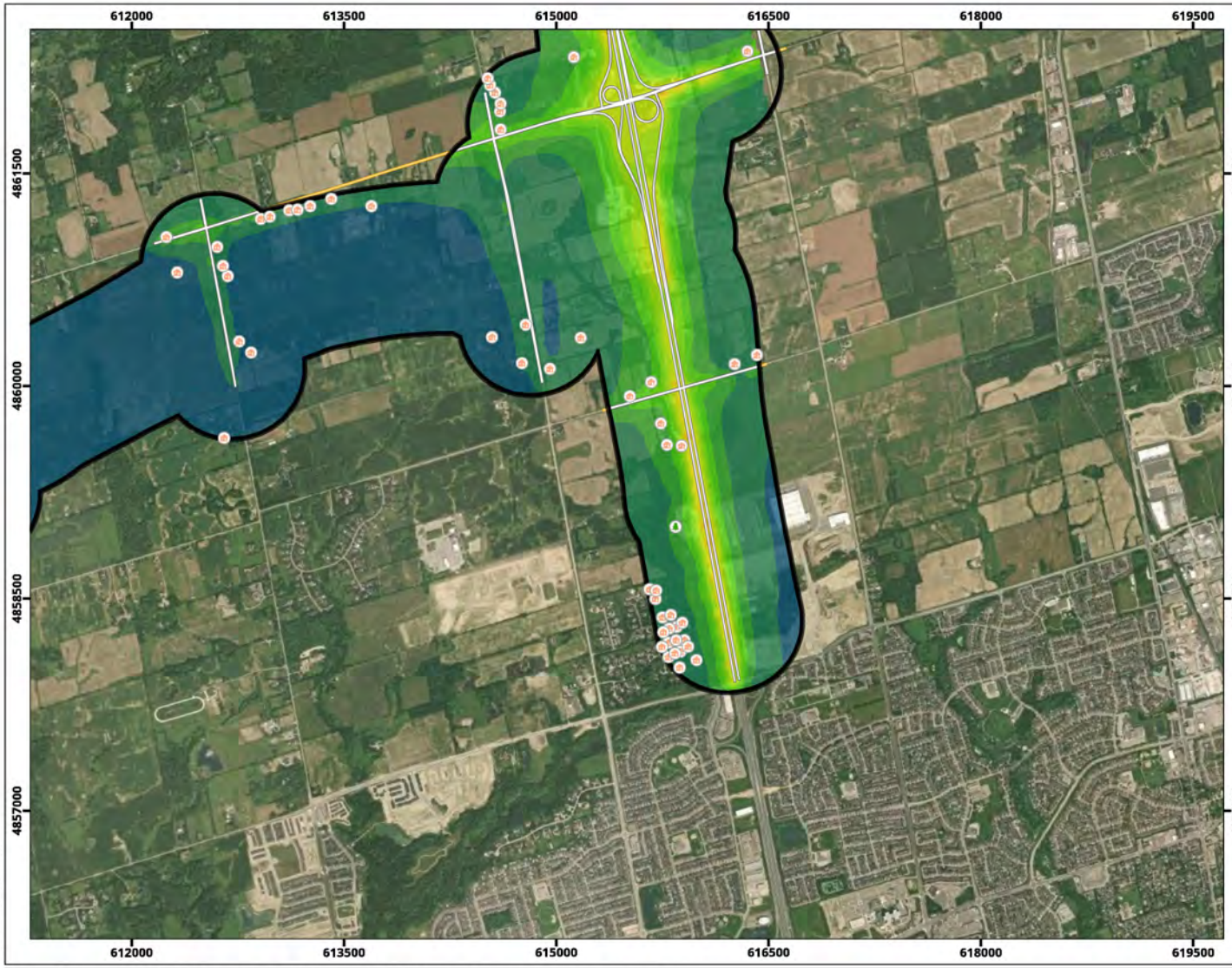
2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.9
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.10
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E5.11
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Appendix E.6.1-11: 2041 Build – Model Predicted Maximum 24 Hour PM_{10}

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E6.1
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.6.2
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.6.3
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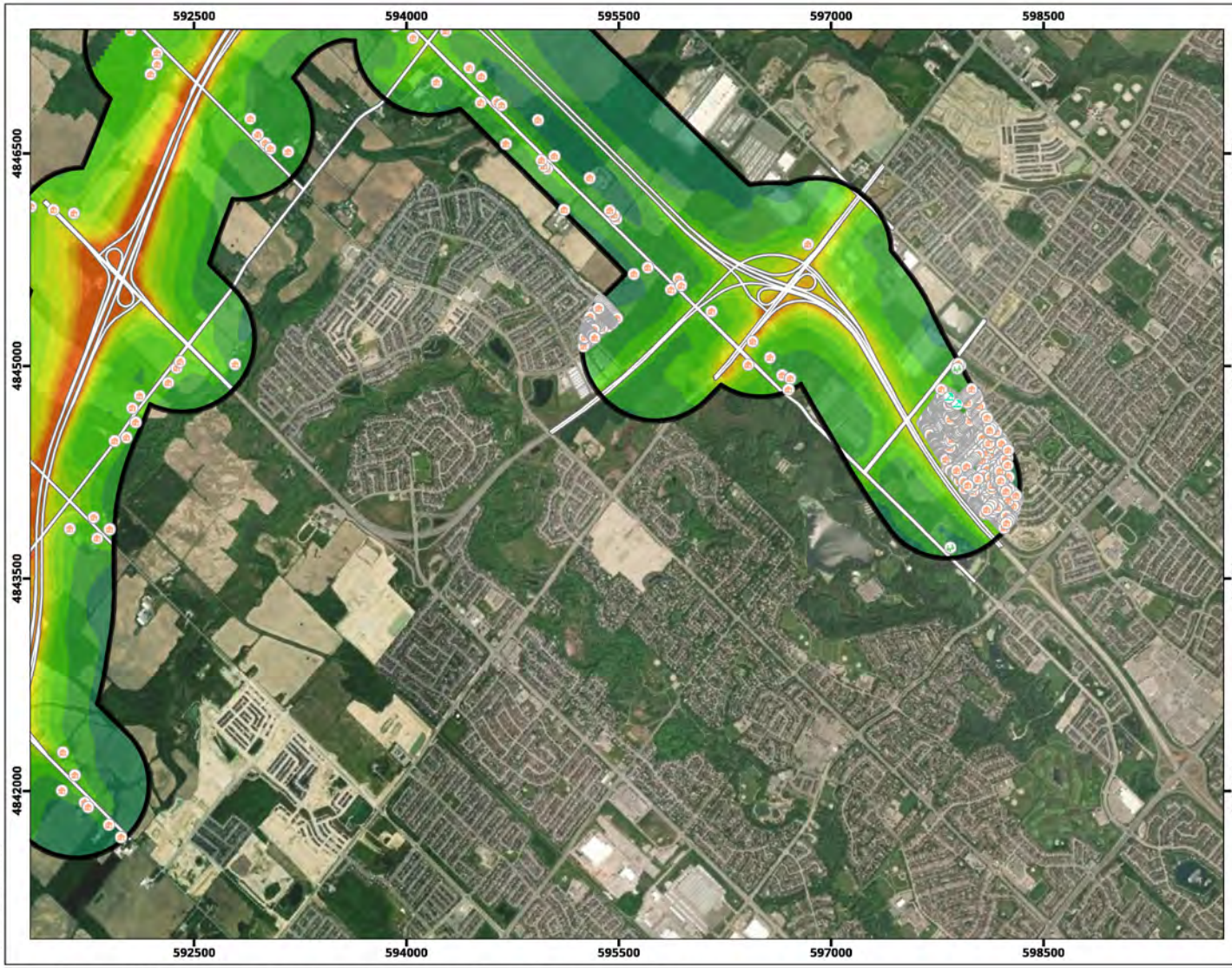
Project #: 1301992A



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

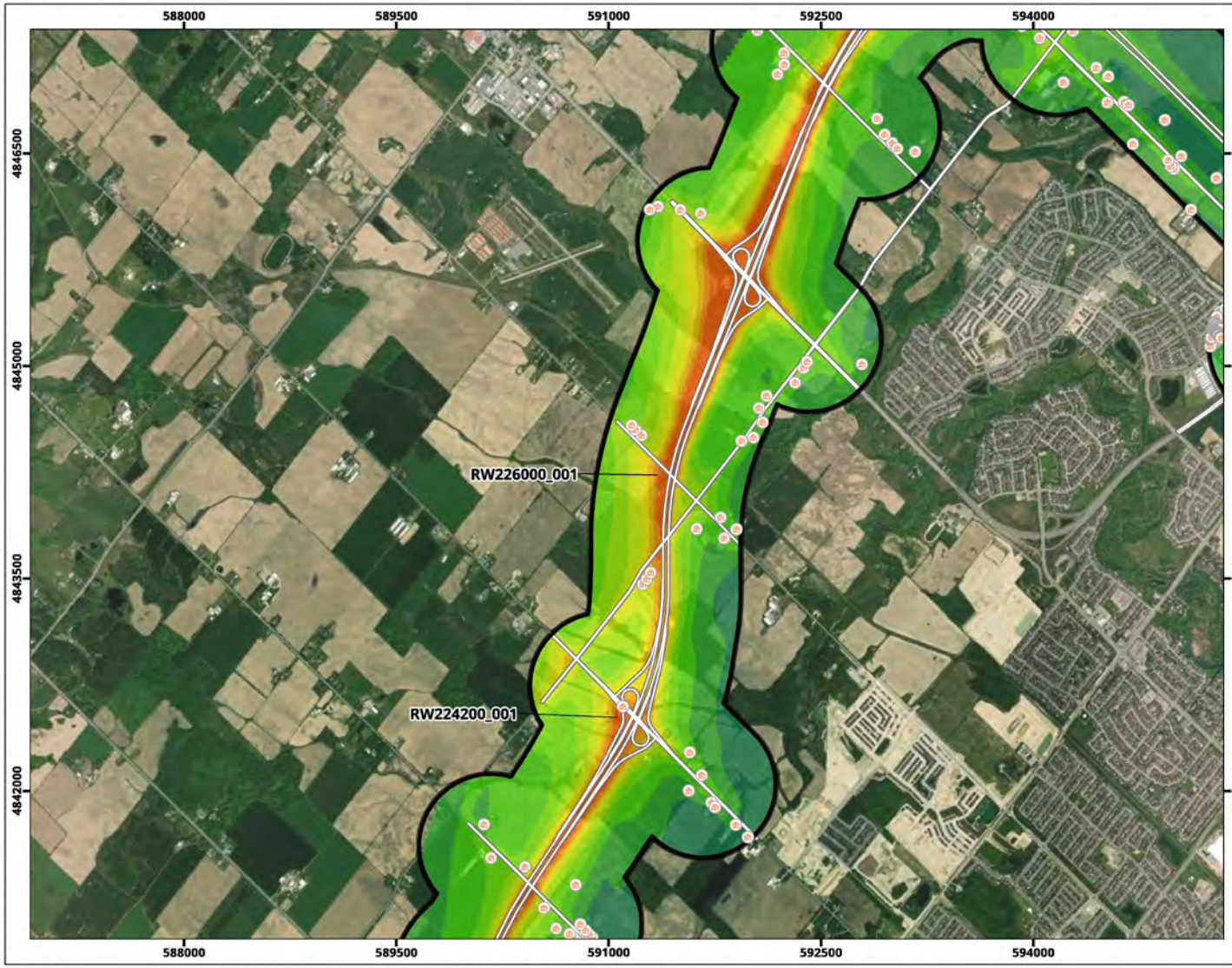
2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.64
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E6.5
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

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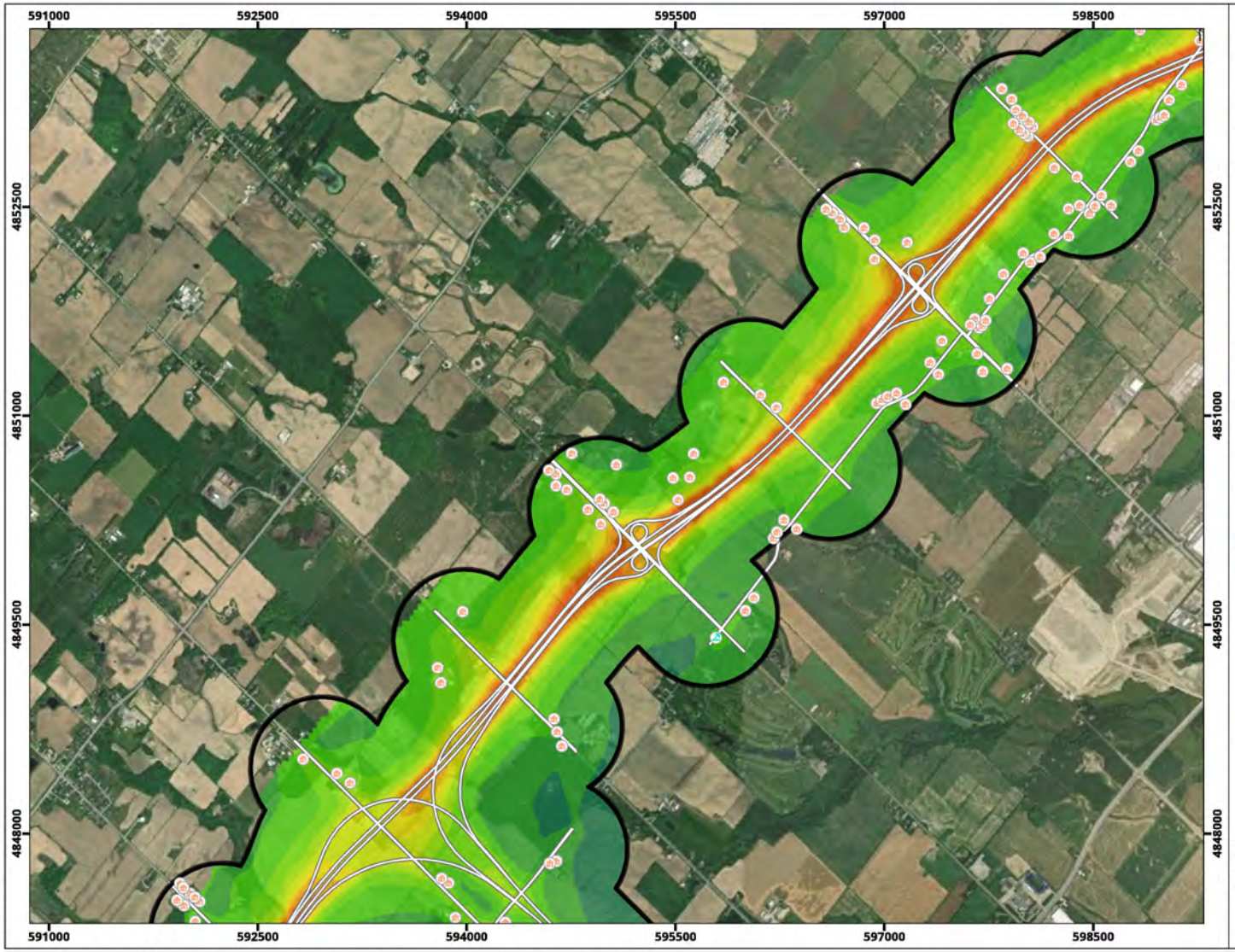


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

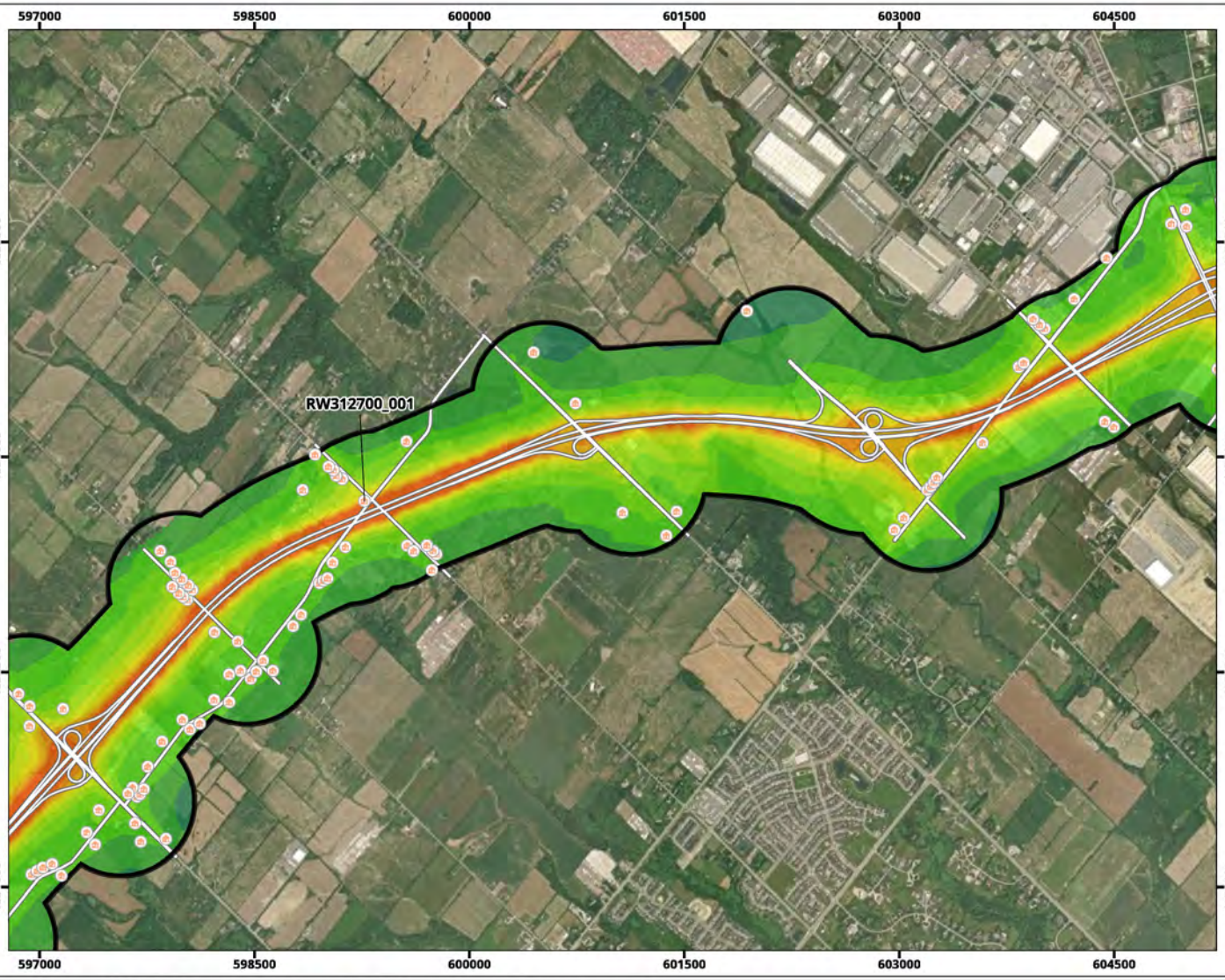
2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.6.6
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E6.7
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Golder\Jobs_Americas\P\1301992A\P\1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E6.8
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

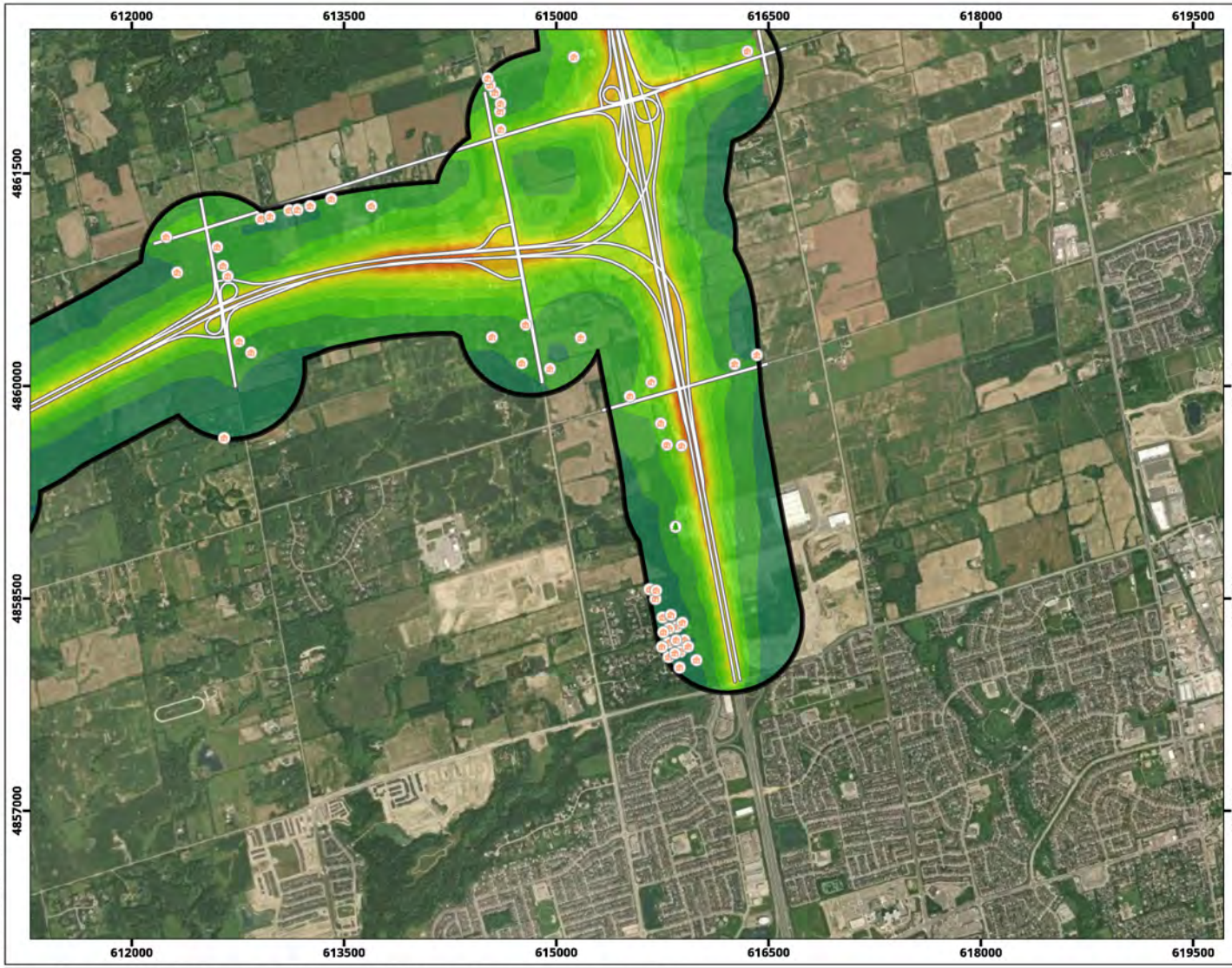
2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E6.9
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.6.10
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

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Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-hour PM_{10} Concentrations

2041 Build Scenario

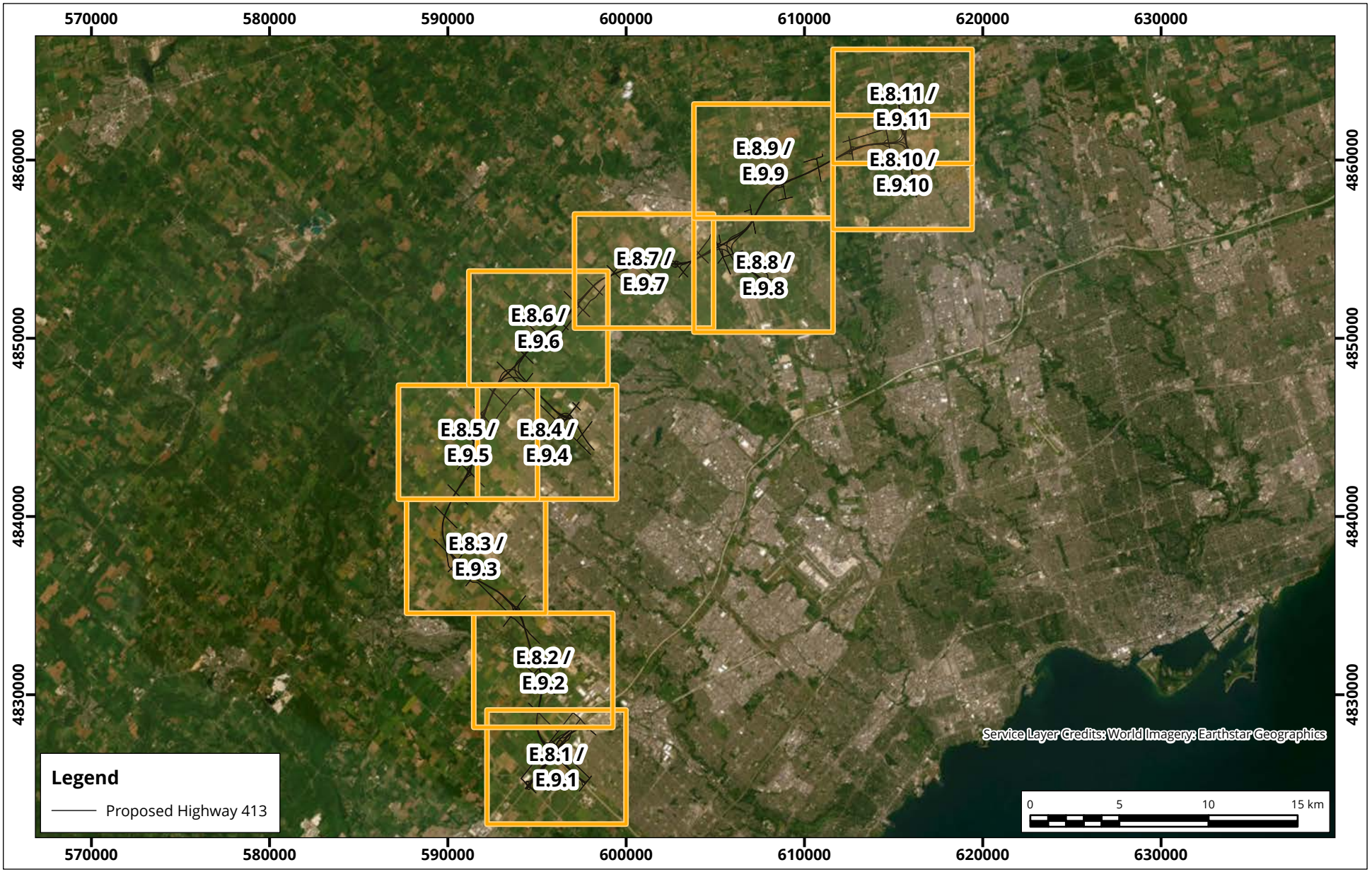
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E6.11
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Appendix E.7: Index Map – Annual $PM_{2.5}$



Index Map - E.8 & E.9

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

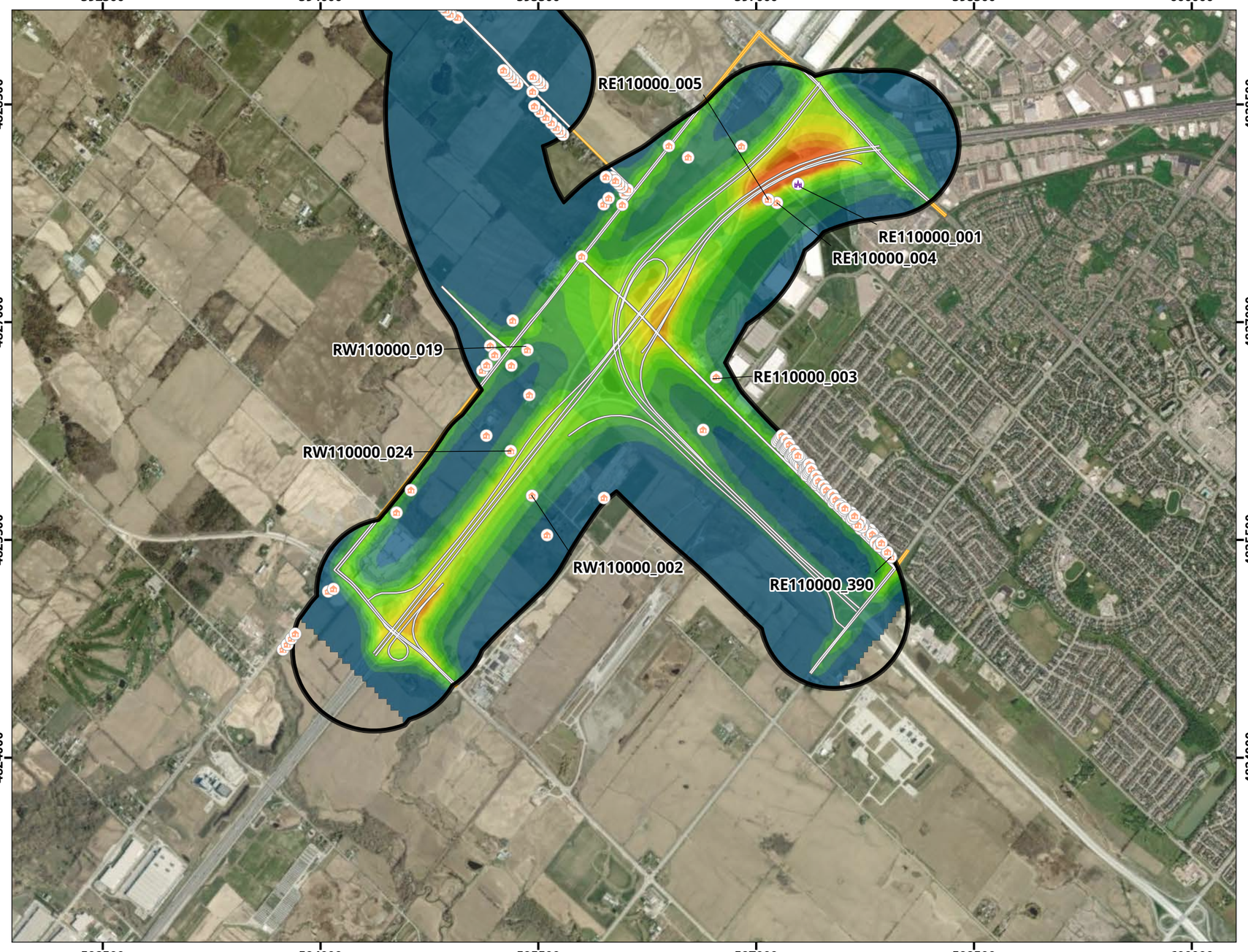
True North

Project #: 1301992A

Drawn by: PIP	Figure: E.7
Approx. Scale:	1:300,000
Date Revised: Aug 21, 2025	

Map Document: C:\Working Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.8.1-11: 2041 No-Build – Model-Predicted Maximum Annual $PM_{2.5}$



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

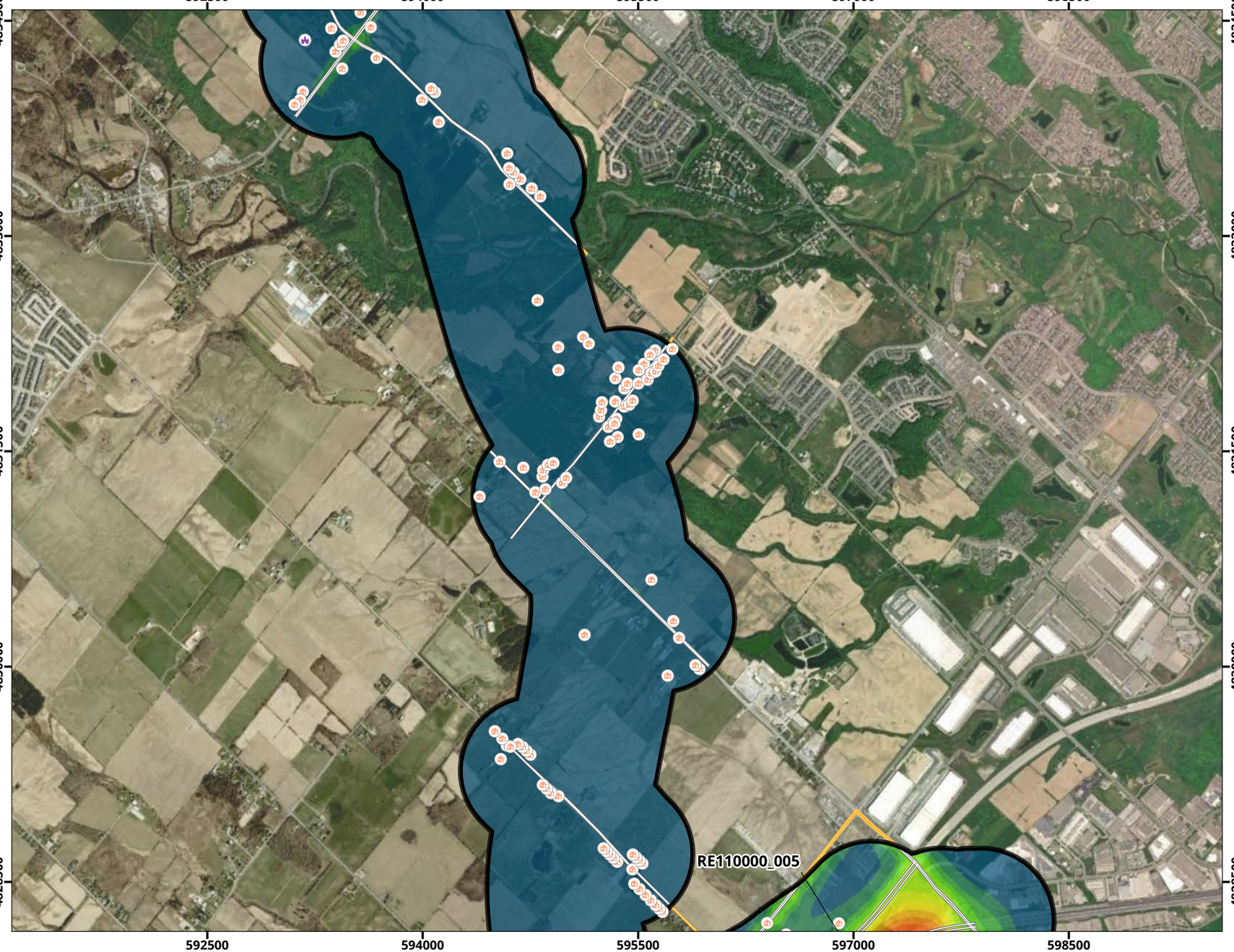
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.8.1
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Map Document: C:\Work\ing\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

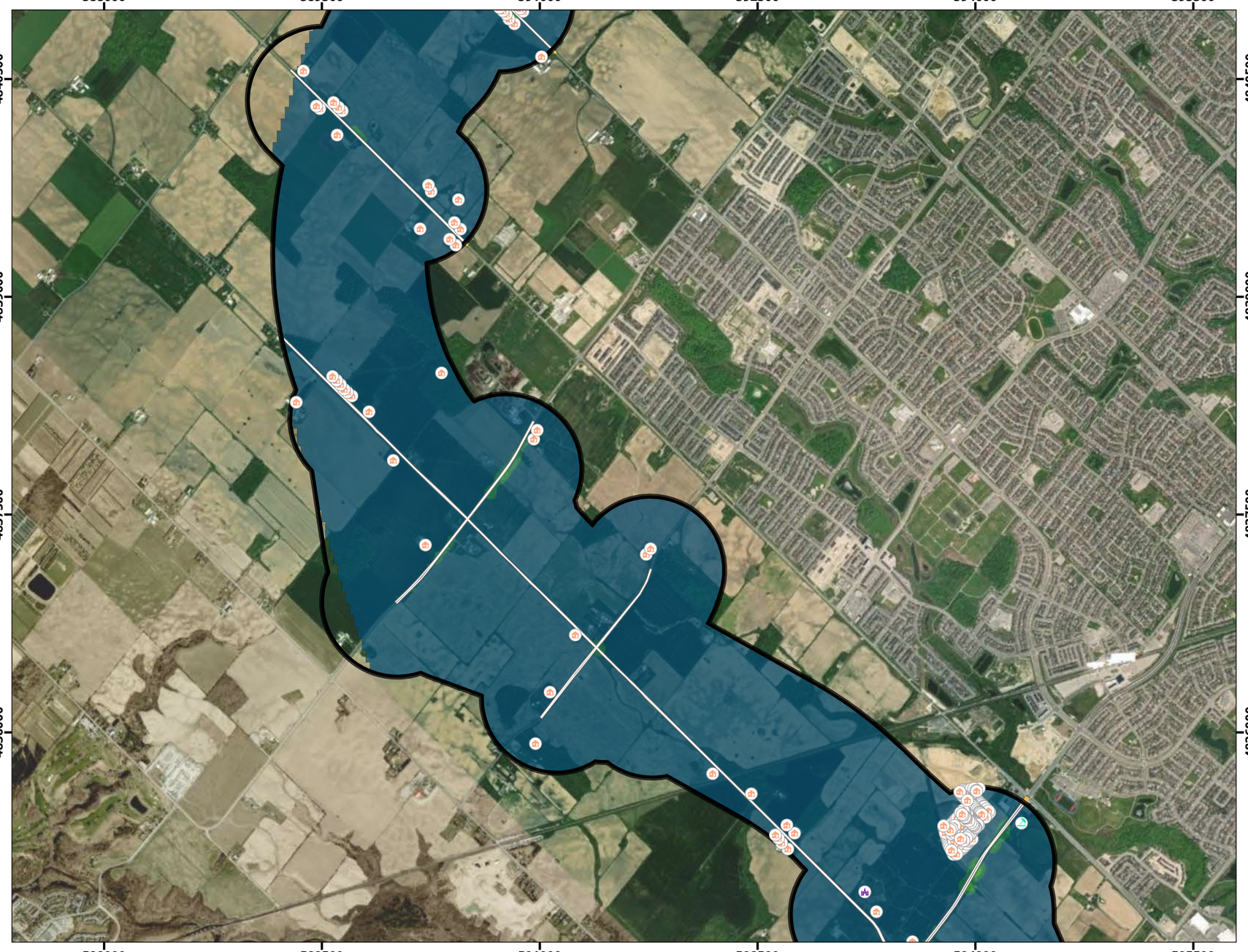
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.8.2	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

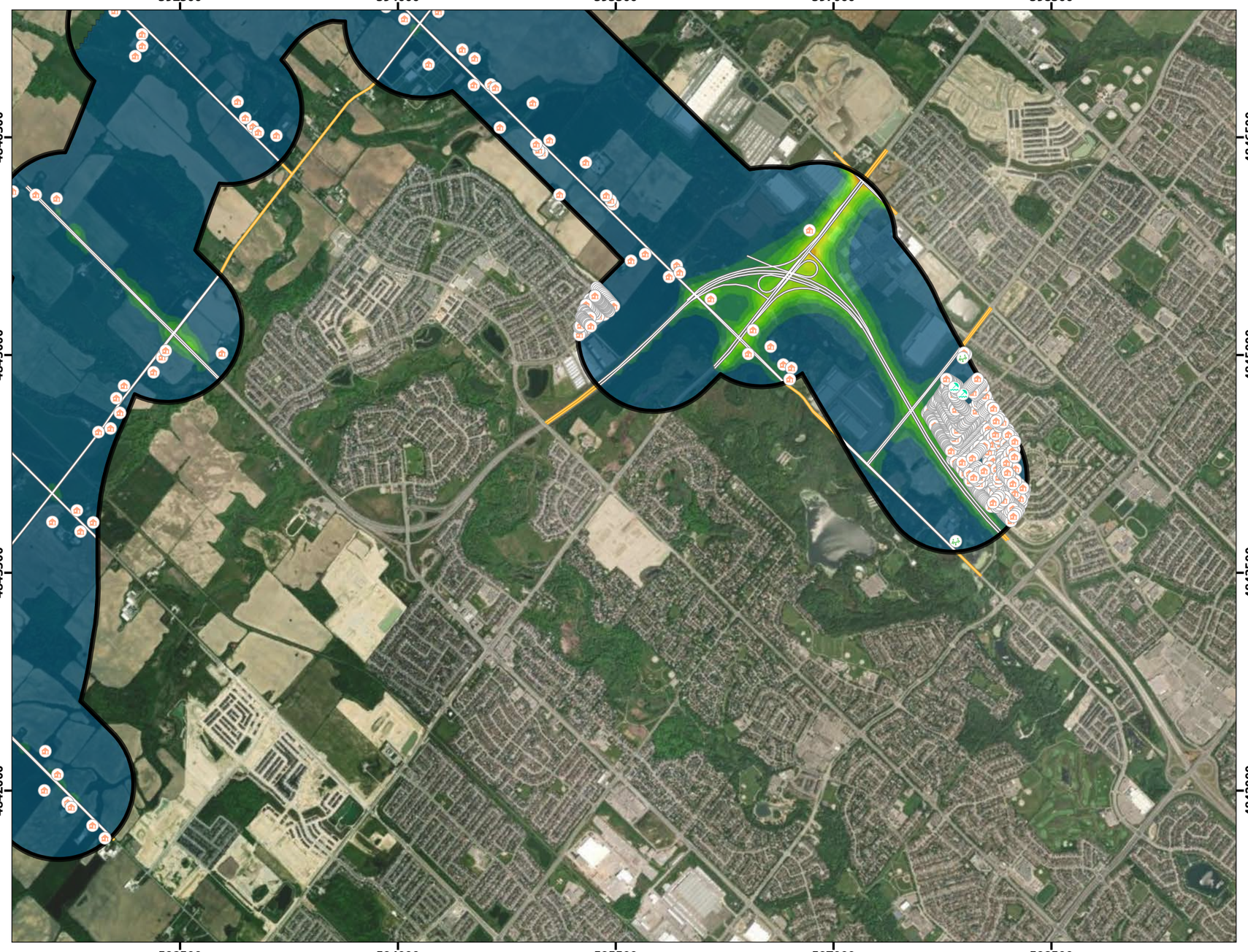
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E8.3
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.8.4	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working Folder\Jobs_Americal\P\1301992A\P\1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

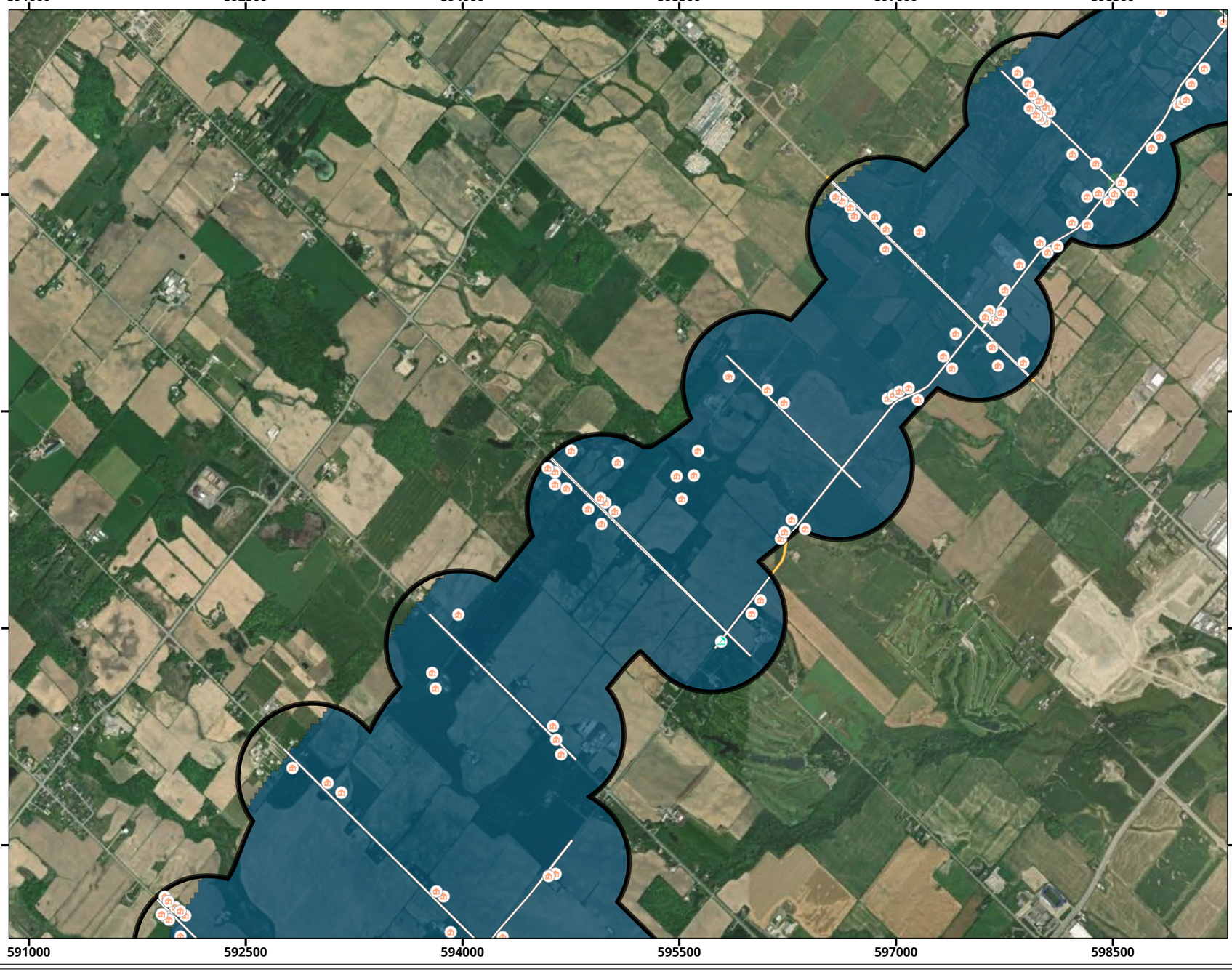
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.8.5	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Work\ing\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Recreation

Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

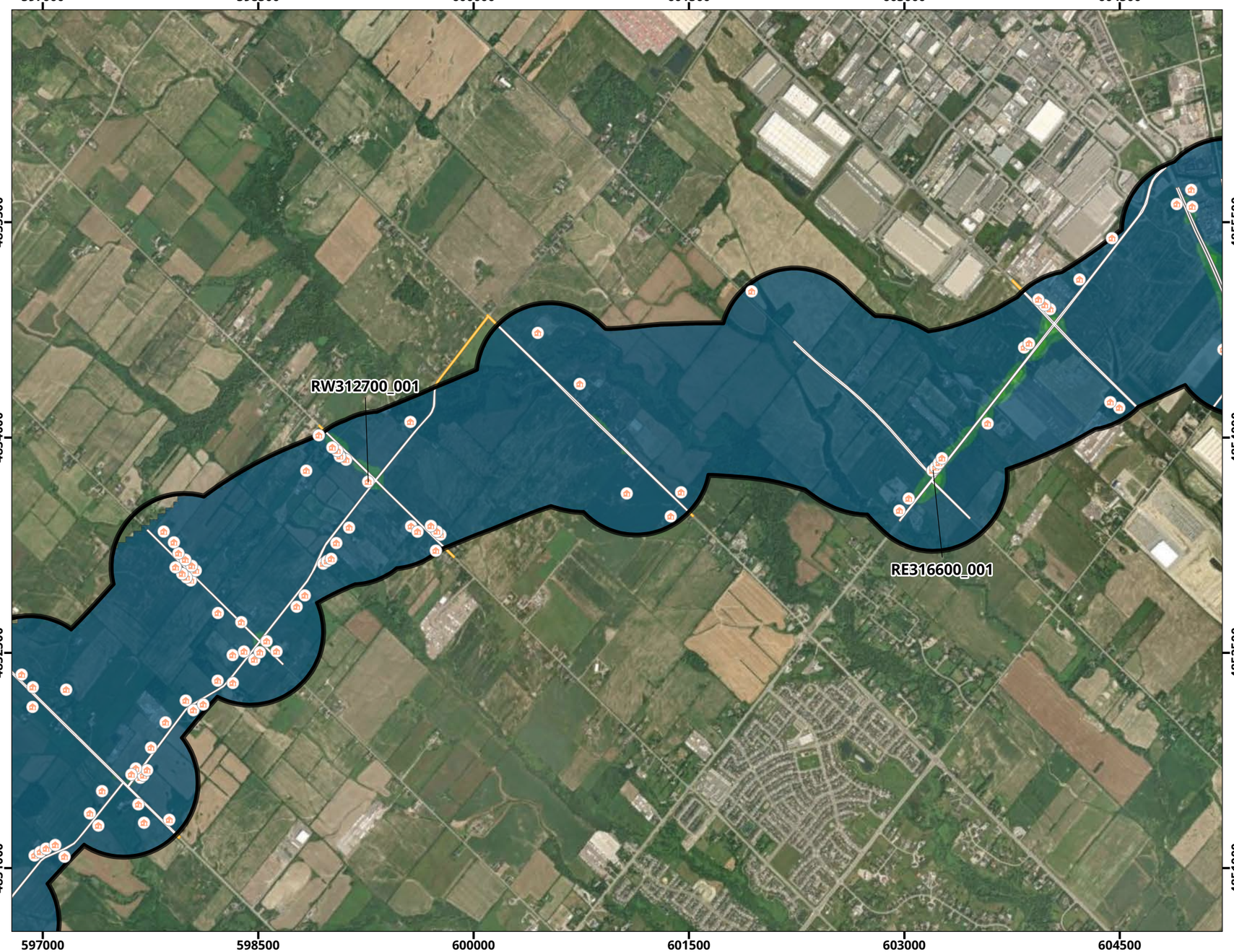
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.8.6
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.8.7	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.8.8	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.8.9	
Approx. Scale:	1:30,000	
Date Revised:	Aug 21, 2025	

Map Document: C:\Working\Folder\Jobs_America\P13019924\P13019924.aprx

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4861500

4860000

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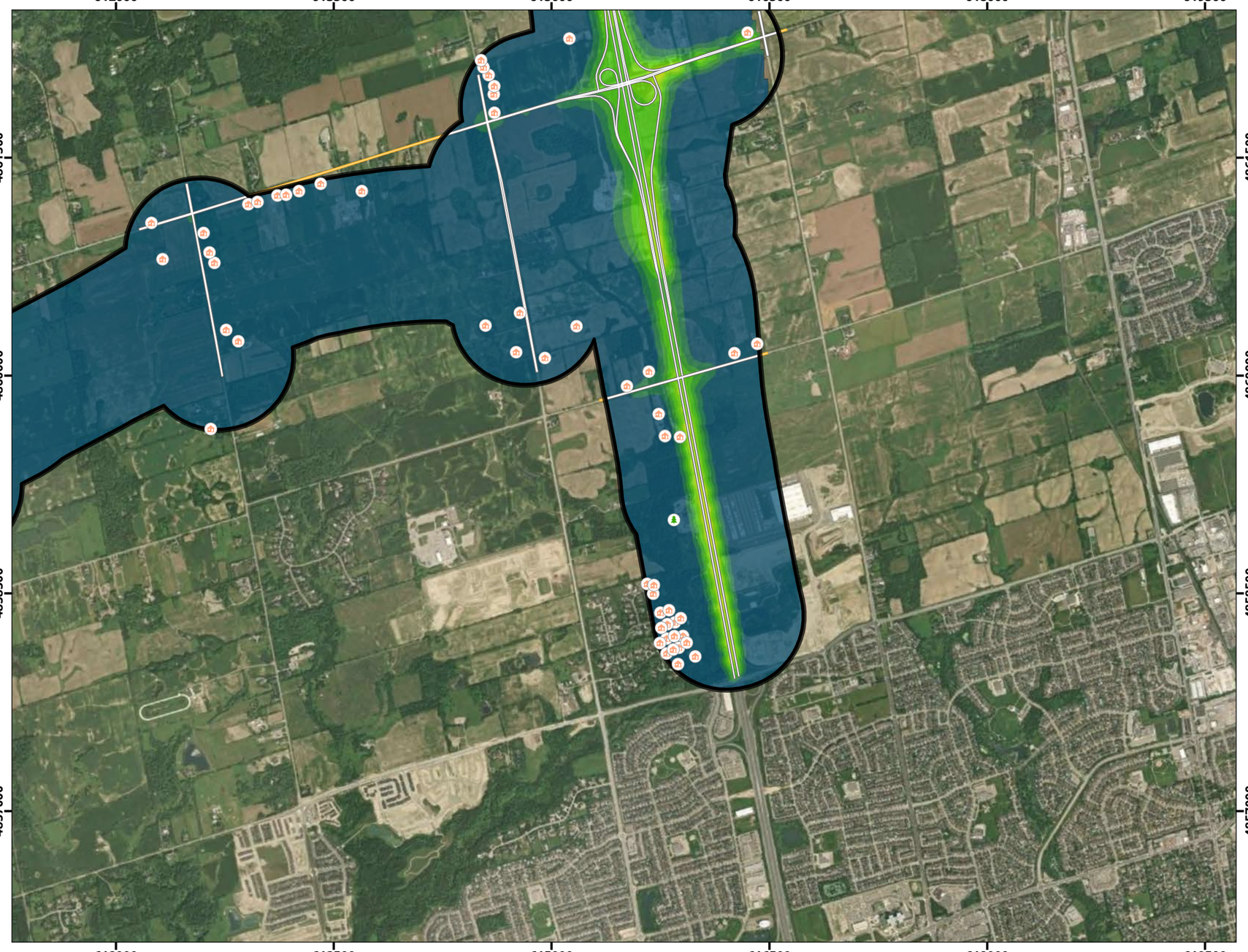


Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Park and Conservation

Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Map Document: C:\Work\ngFolder\Jobs_America\P\1301992A\P\1301992A.aprx

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.8.10
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

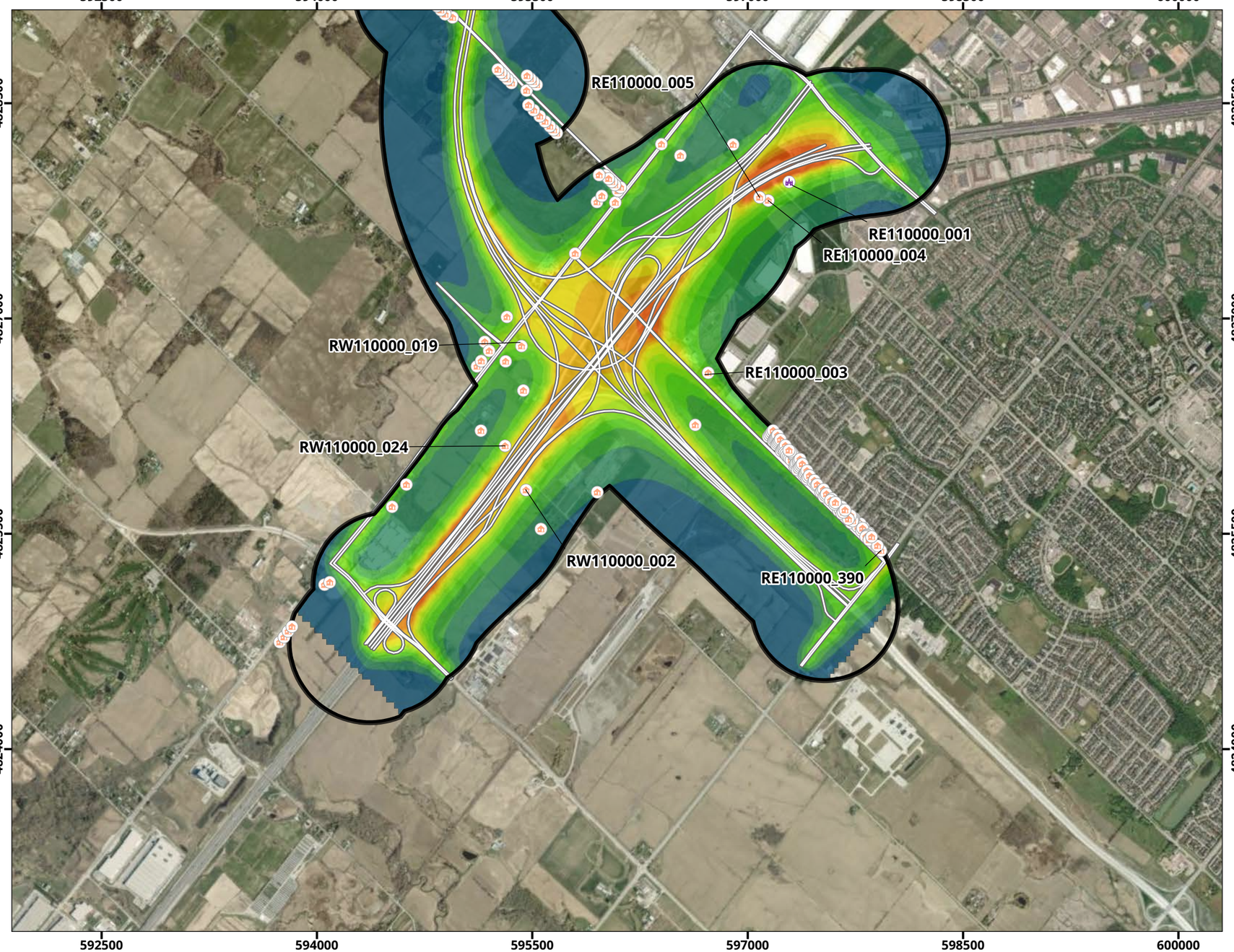
True North

Drawn by: PIP	Figure: E.8.11
Approx. Scale:	1:30,000
Date Revised:	Aug 21, 2025

Project #: 1301992A

Map Document: C:\Working Folder\Jobs_America\P1 301992A\P1301992A.aprx

Appendix E.9.1-11: 2041 Build – Model-Predicted Maximum Annual $PM_{2.5}$



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

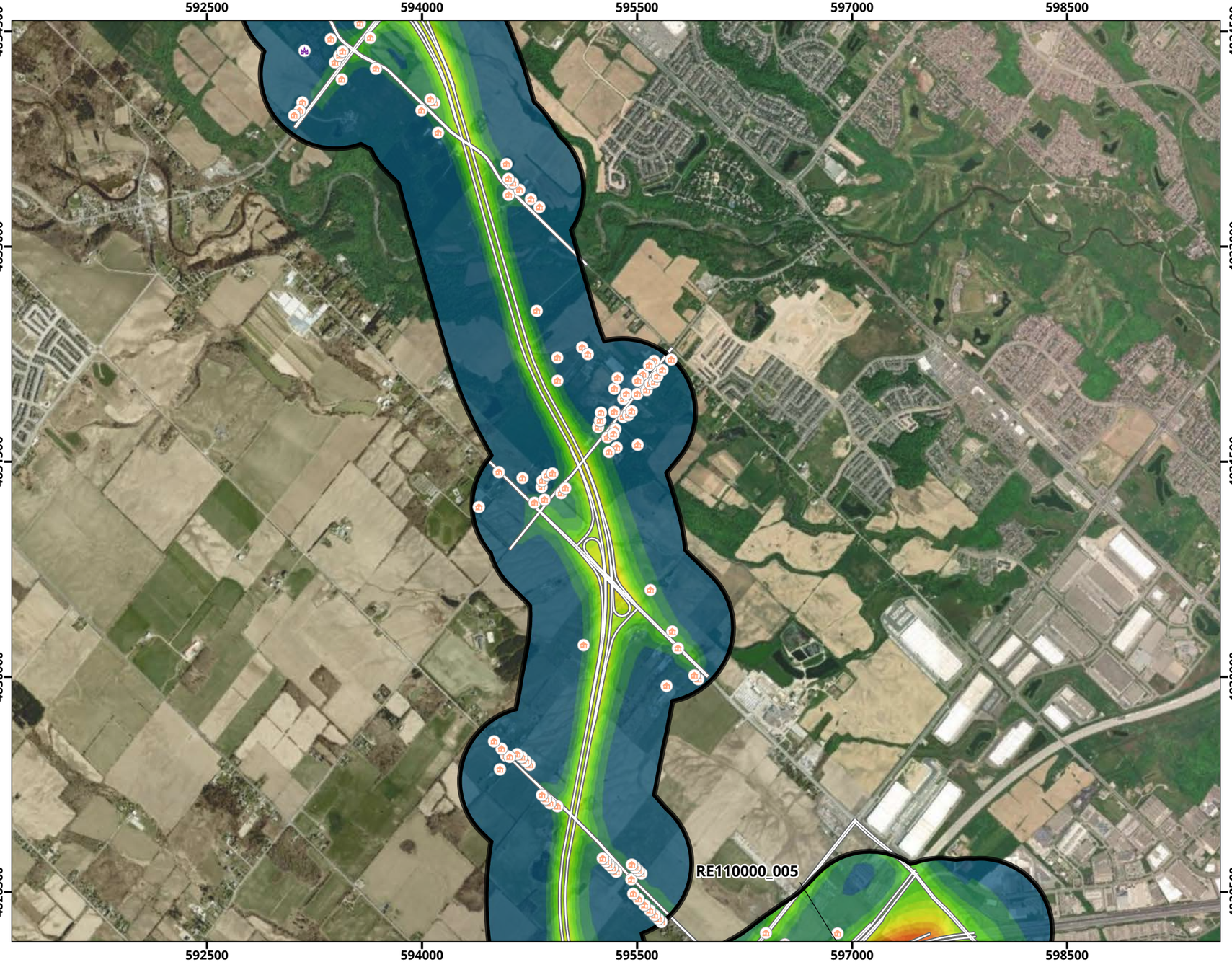
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.9.1
Approx. Scale:	1:30,000
Date Revised:	Aug 25, 2025

Project #: 1301992A

Map Document: C:\Work\ing\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.9.2	
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P\1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E9.3
Approx. Scale:	1:30,000
Date Revised:	Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure:	E.9.4
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Map Document: C:\Working Folder\Jobs_America\P\1301992A\P\1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

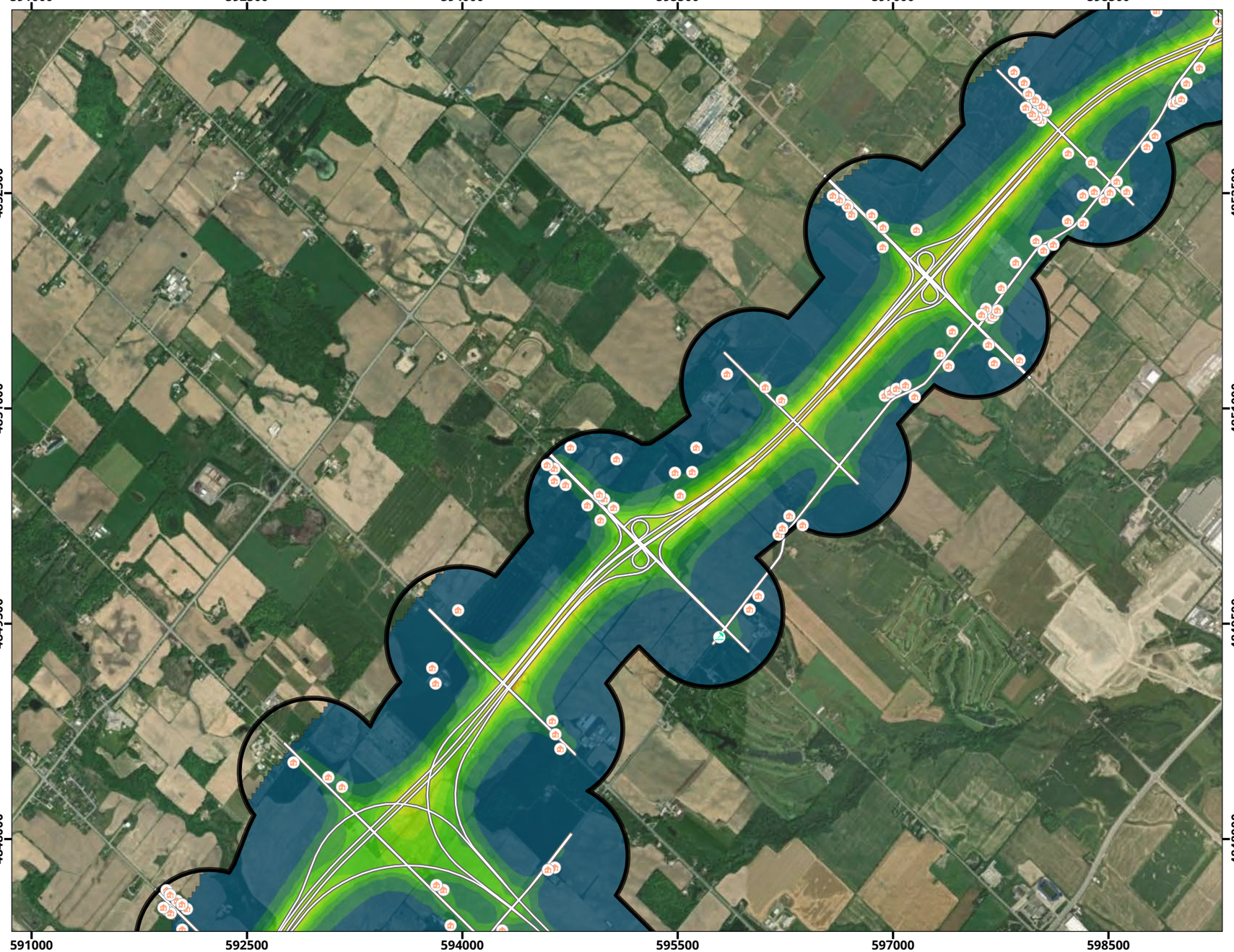
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.9.5	
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Work\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

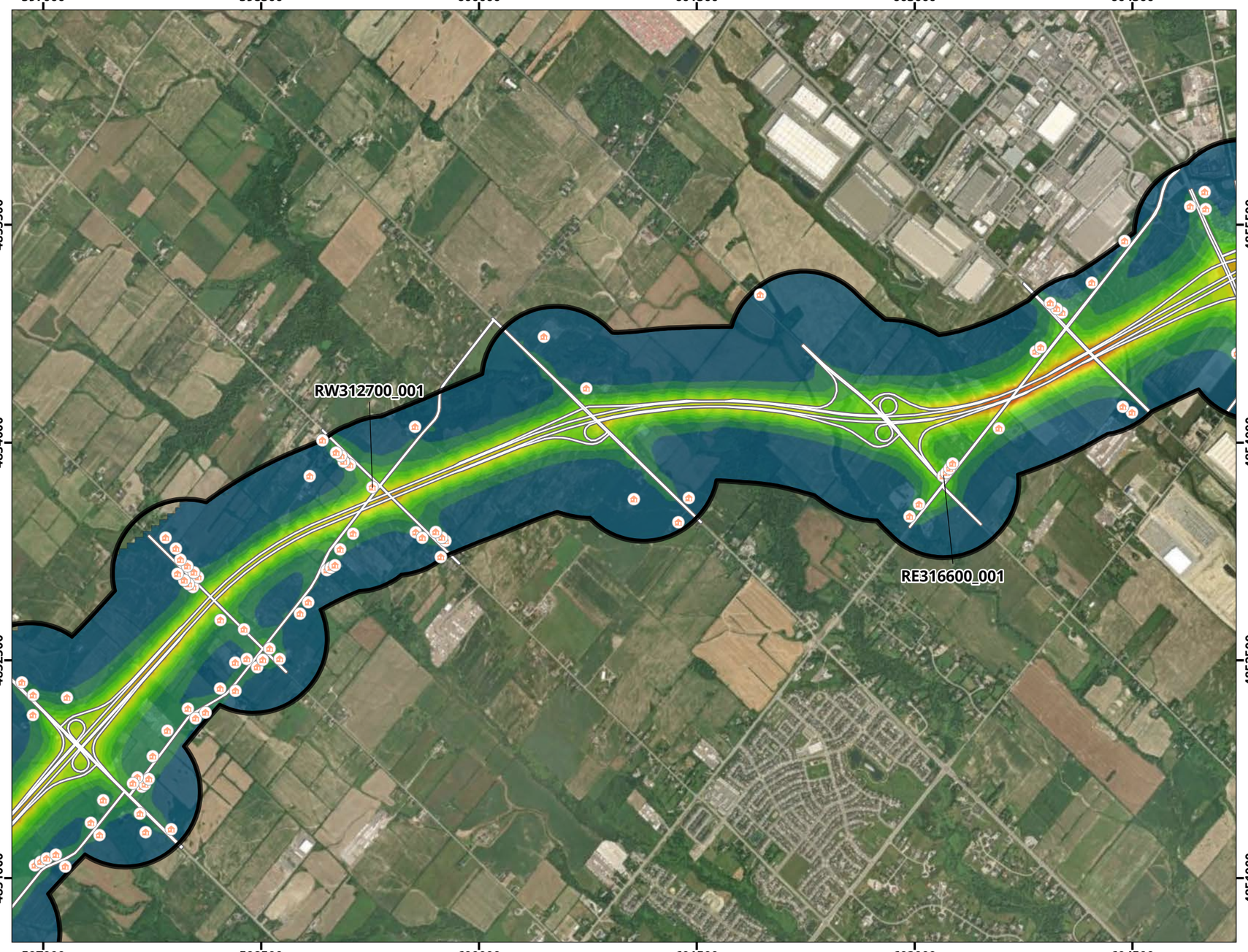
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.9.6
Approx. Scale:	1:30,000
Date Revised:	Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

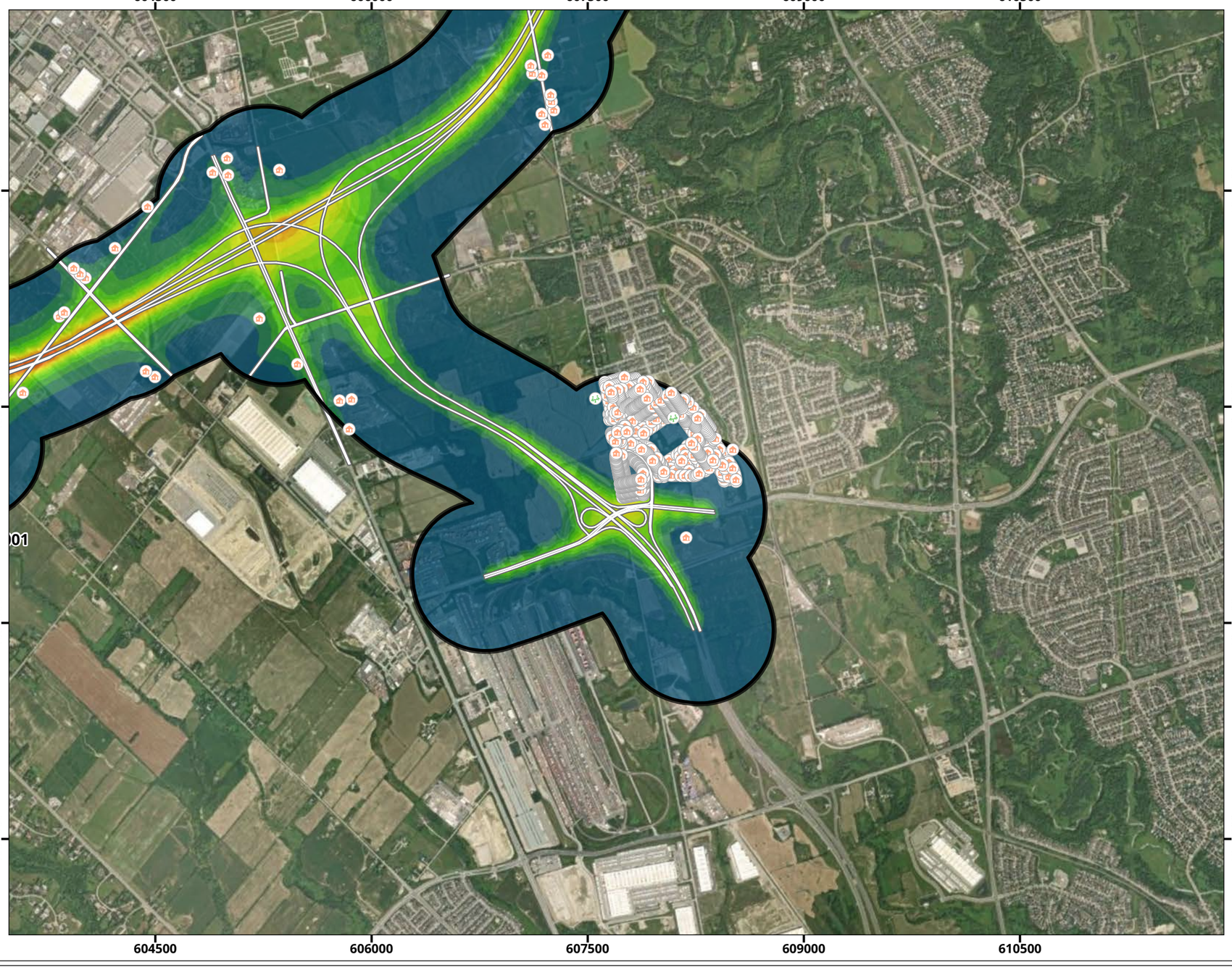
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.9.7	
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

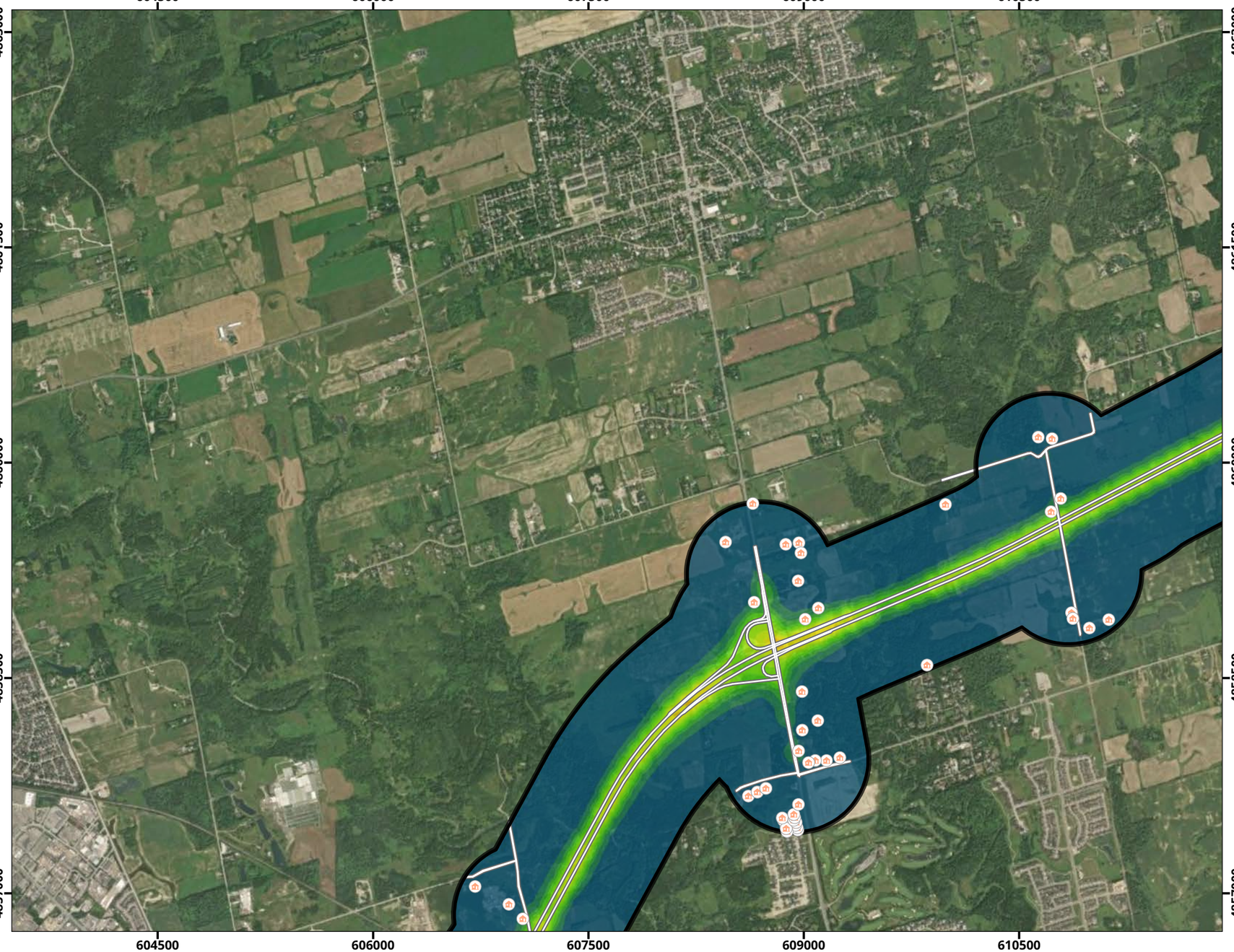
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.9.8	
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.9.9	
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Map Document: C:\Work\Folder\Jobs_America\P13019924\P13019924.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

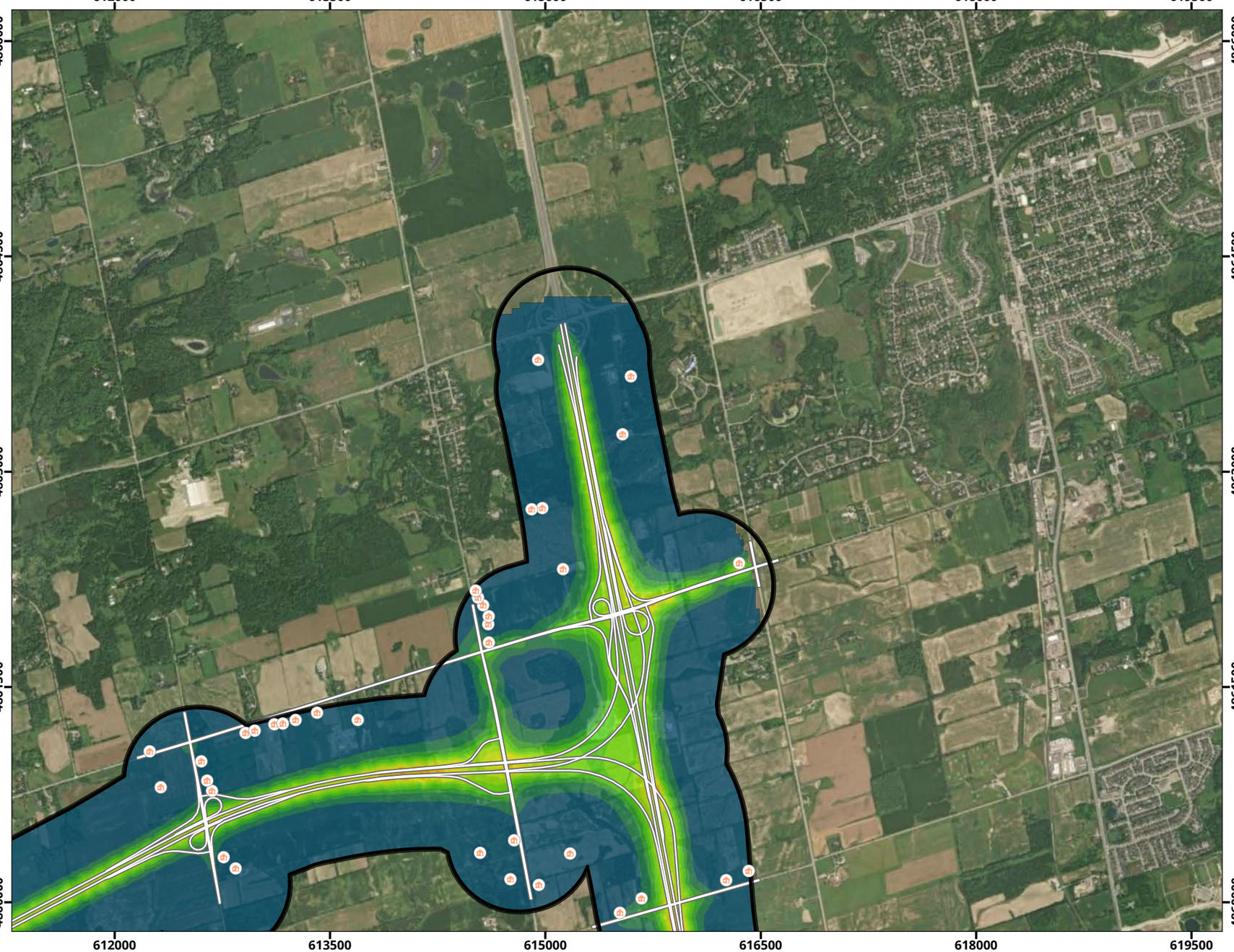
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Figure: E.9.10	
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Work\gFolder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

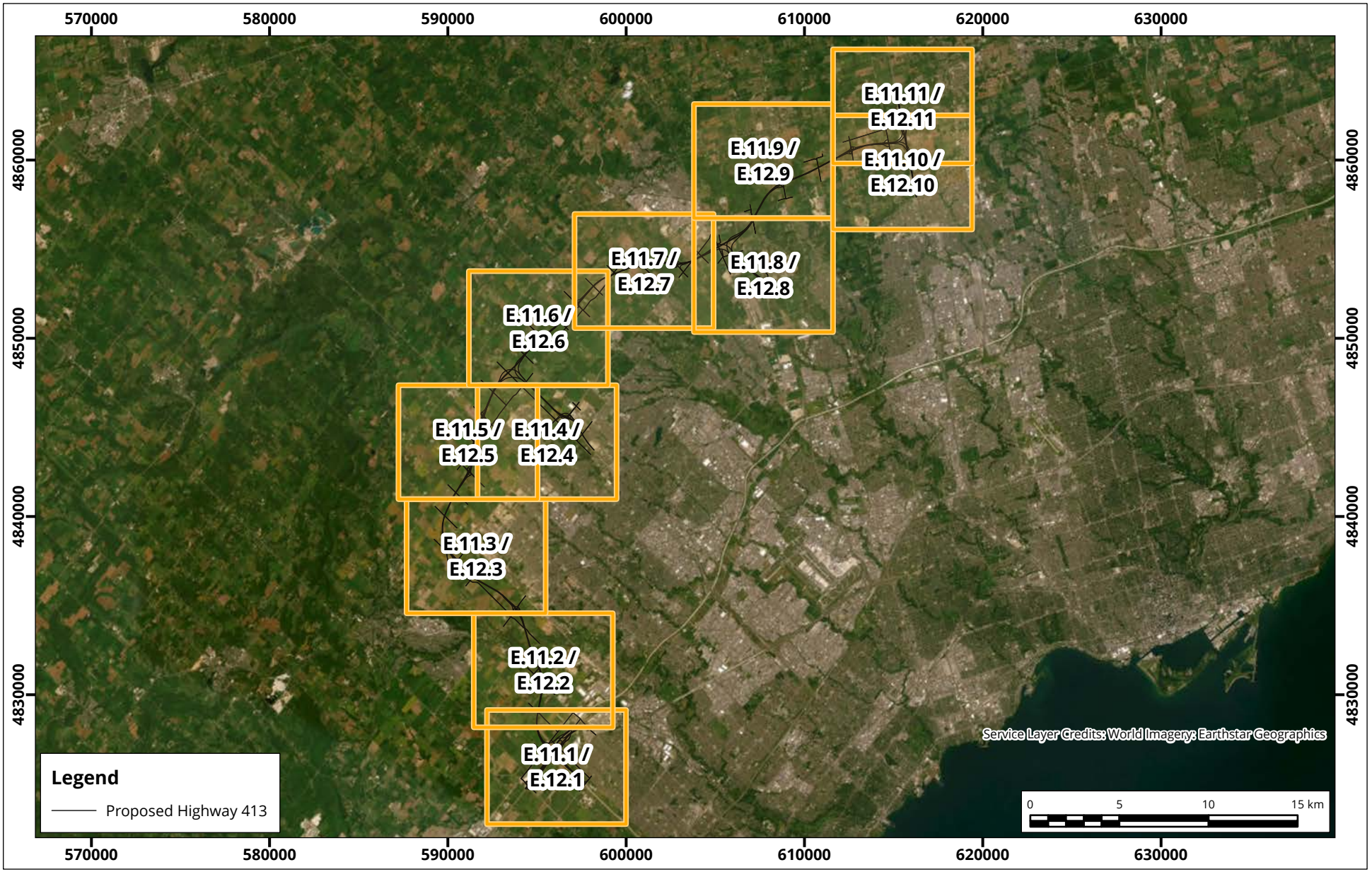
True North

Project #: 1301992A

Drawn by: PIP	Figure: E.9.11
Approx. Scale:	1:30,000
Date Revised:	Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\PI 1301992A\PI 1301992A.aprx

Appendix E.10: Index Map – 24-Hour Benzo(a)pyrene



Index Map - E.11 & E.12

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Figure: E.10
Approx. Scale:	1:300,000
Date Revised: Aug 22, 2025	

Map Document: C:\Working Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.11.1-11: 2041 No-Build – Model-Predicted Maximum 24-Hour Benzo(a)pyrene

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

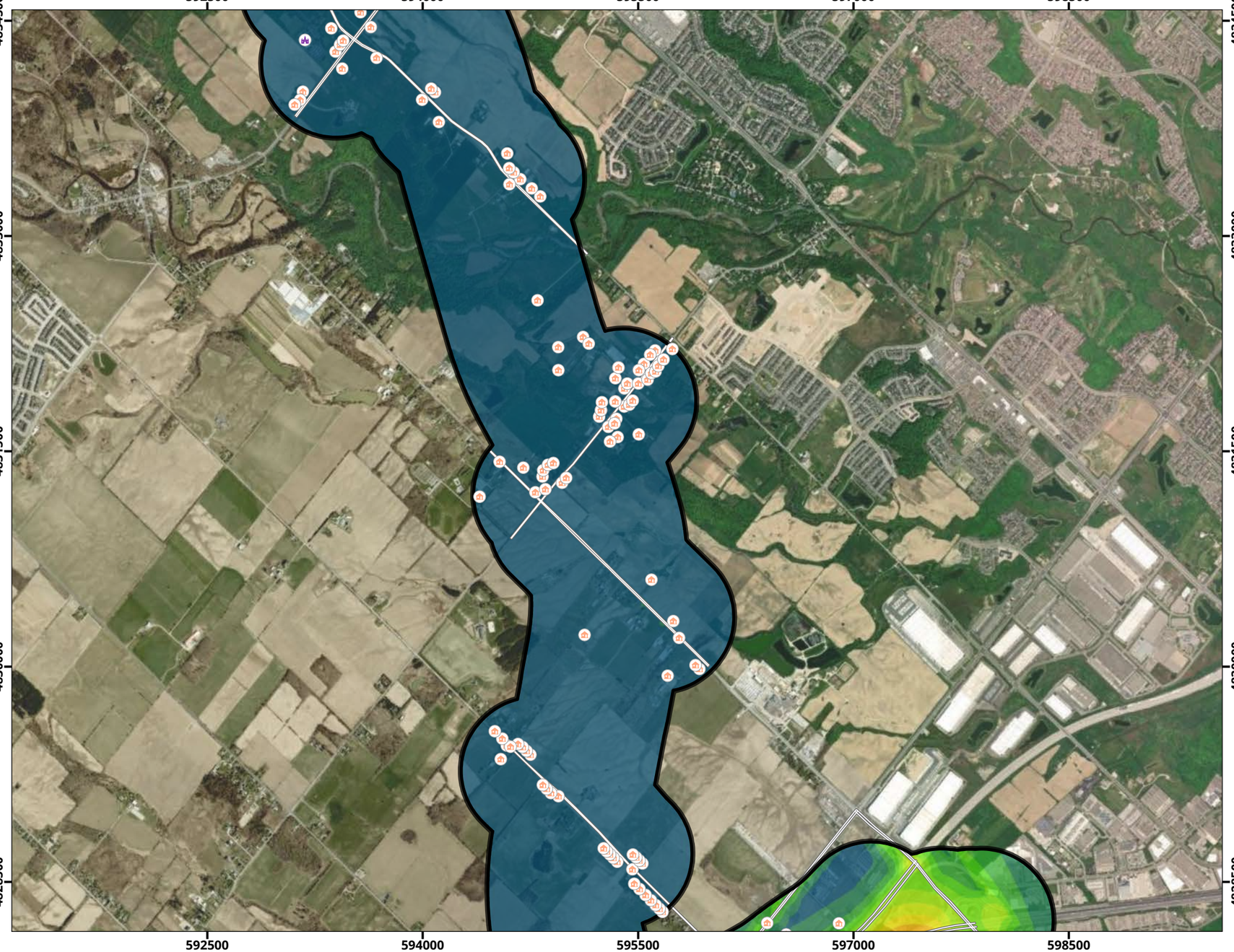
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E11.1
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E11.2
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

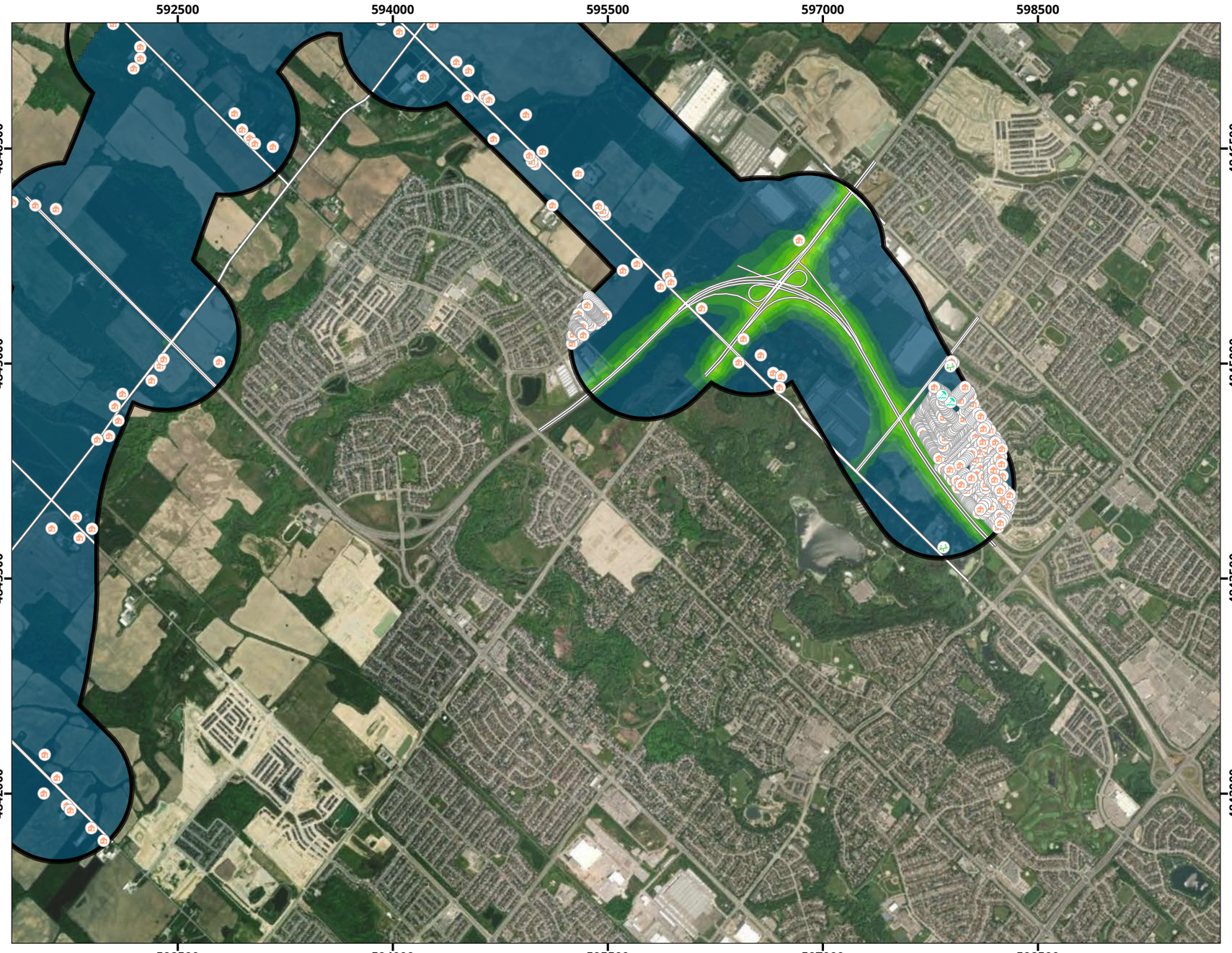
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.11.3
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

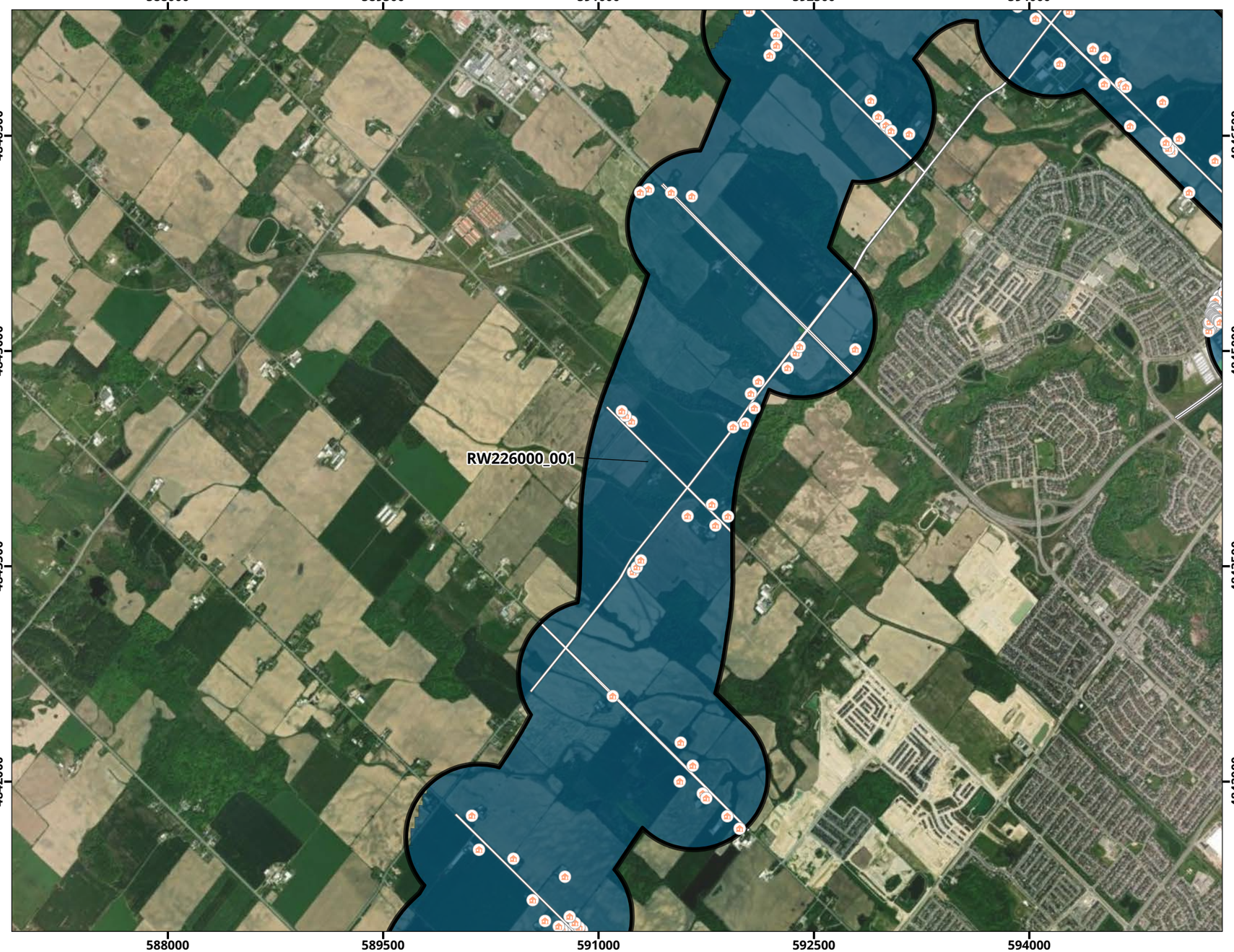
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E11.4	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working Folder\Jobs_Americal\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

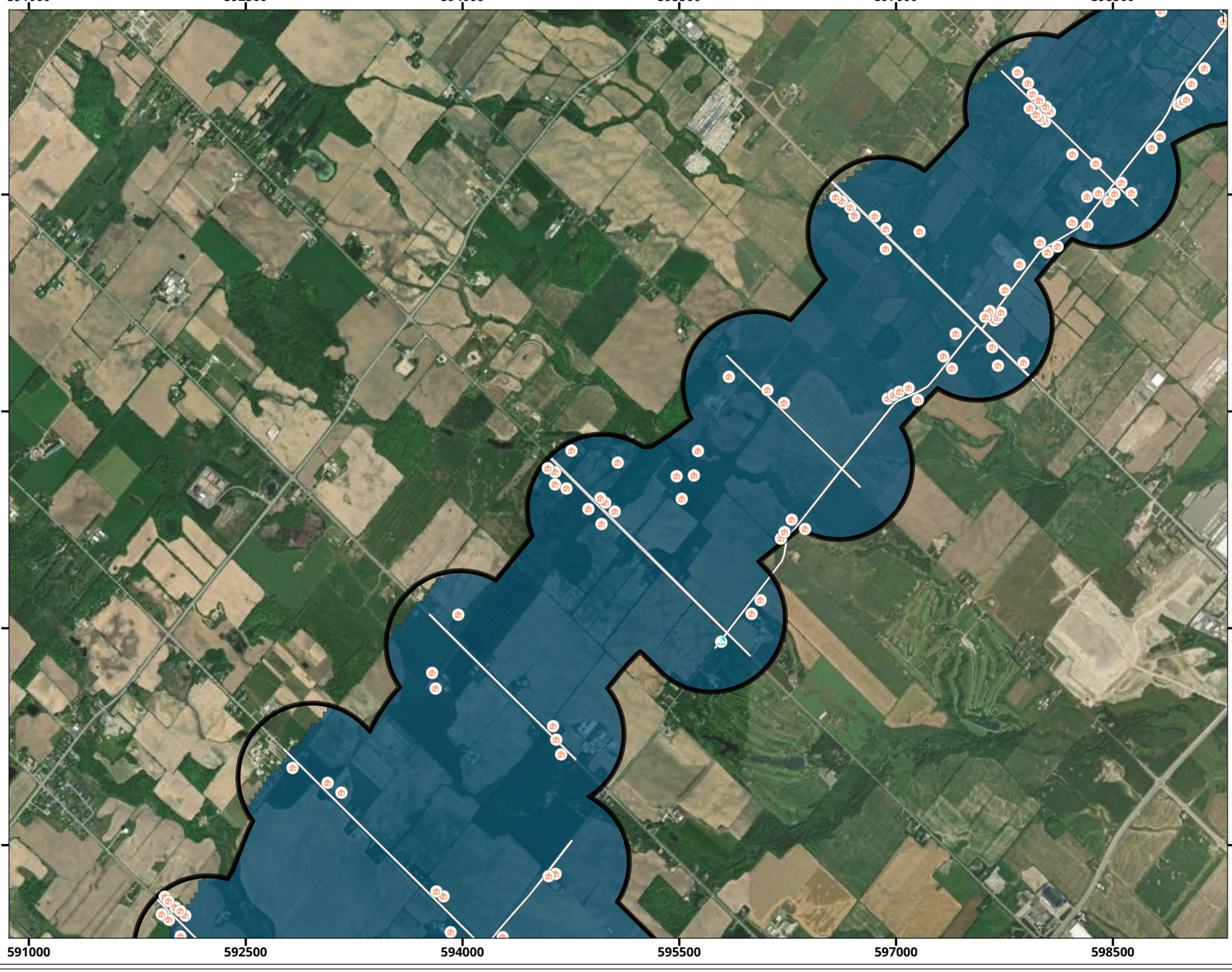
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E11.5
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Work\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.11.6
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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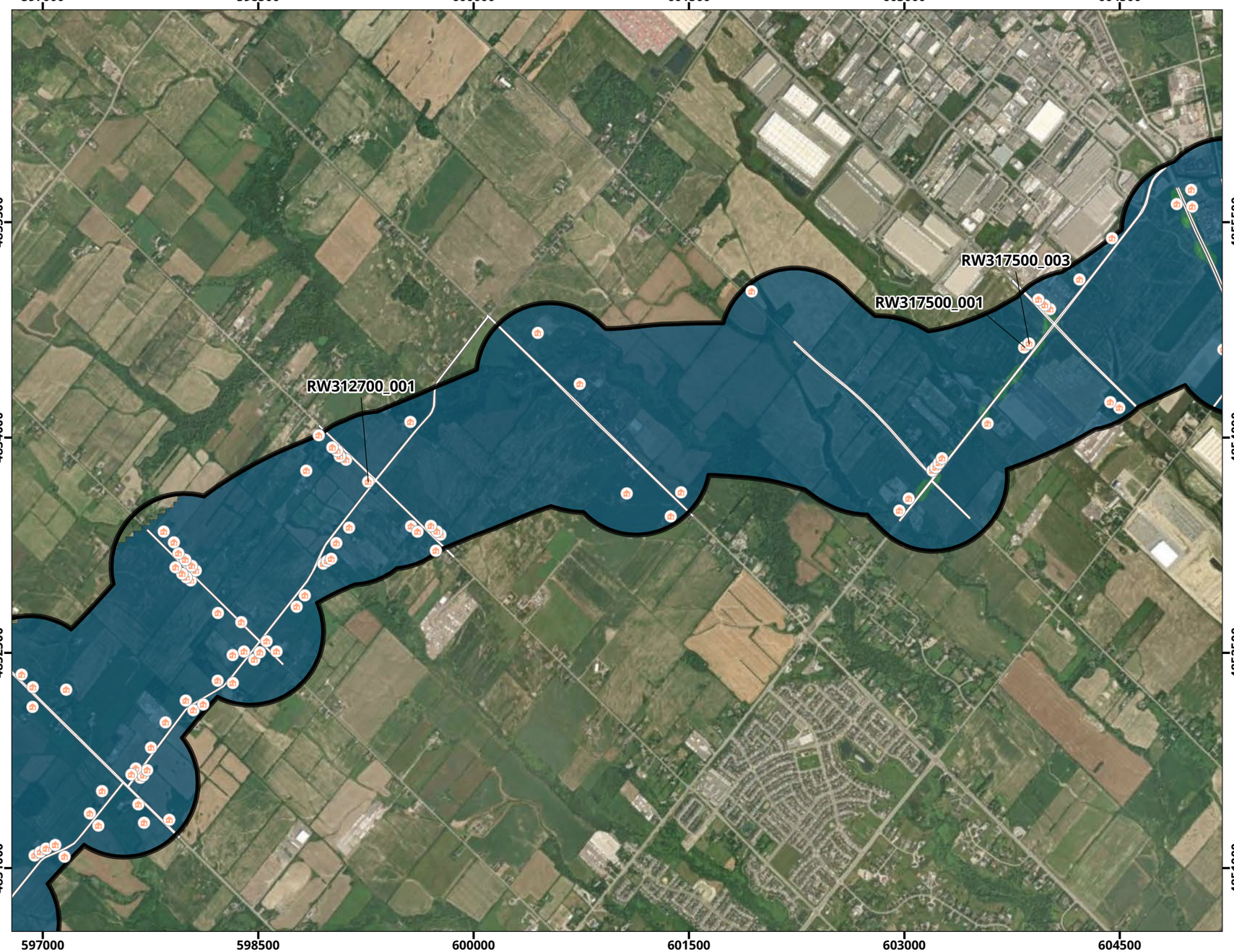

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.11.7
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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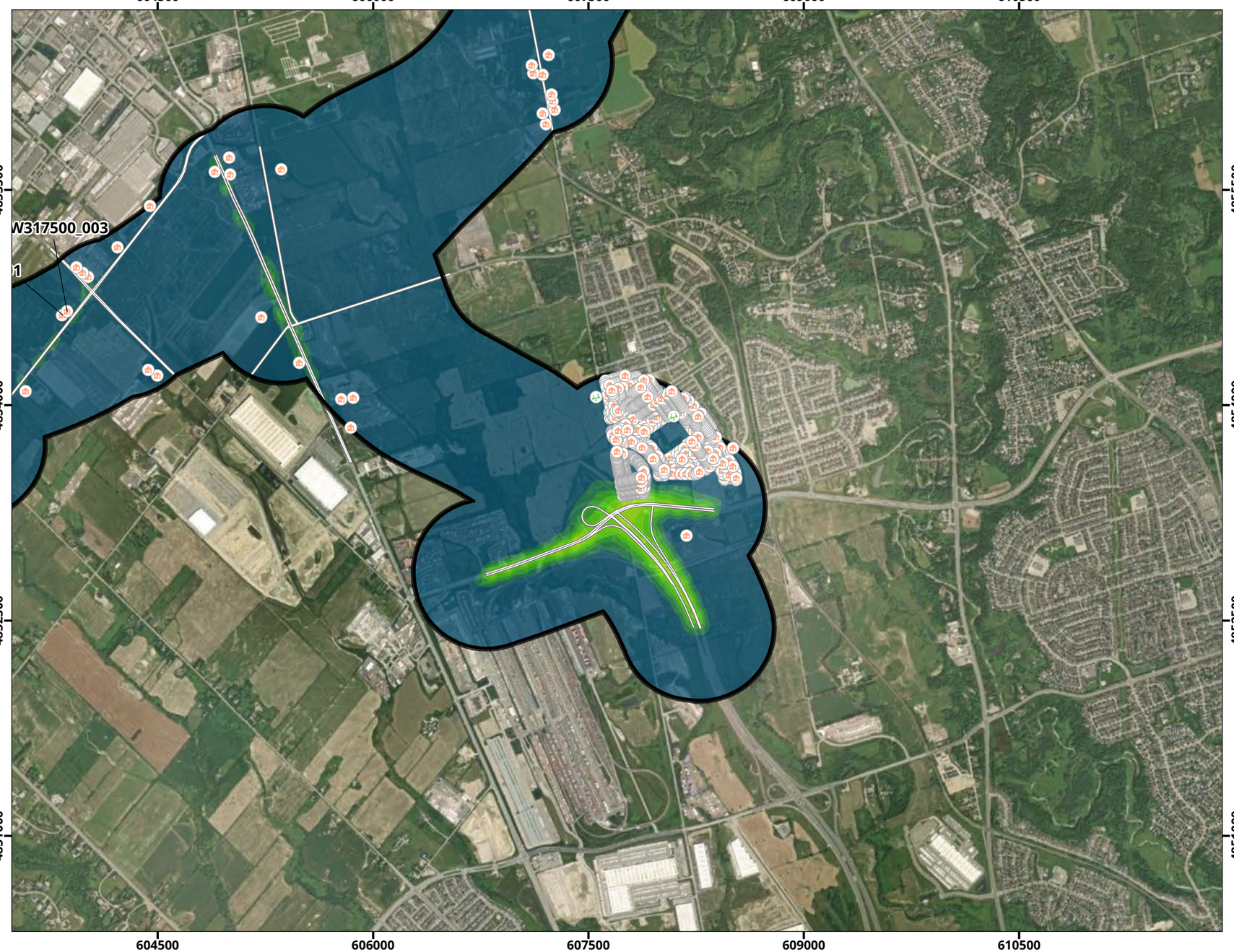


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E11.8
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_Americas\P\1301992A\P\1301992A.aprx

Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

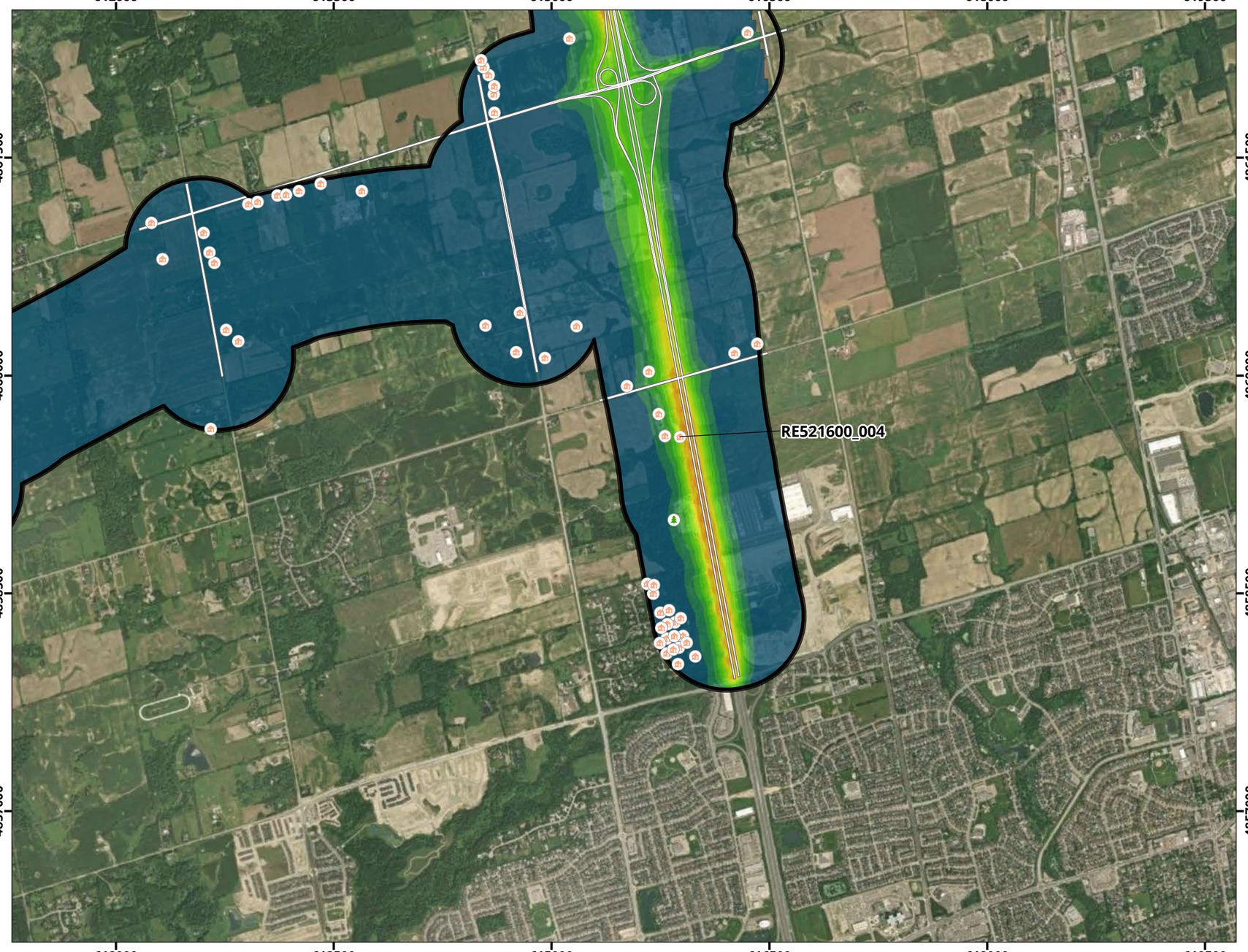
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E11.9	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

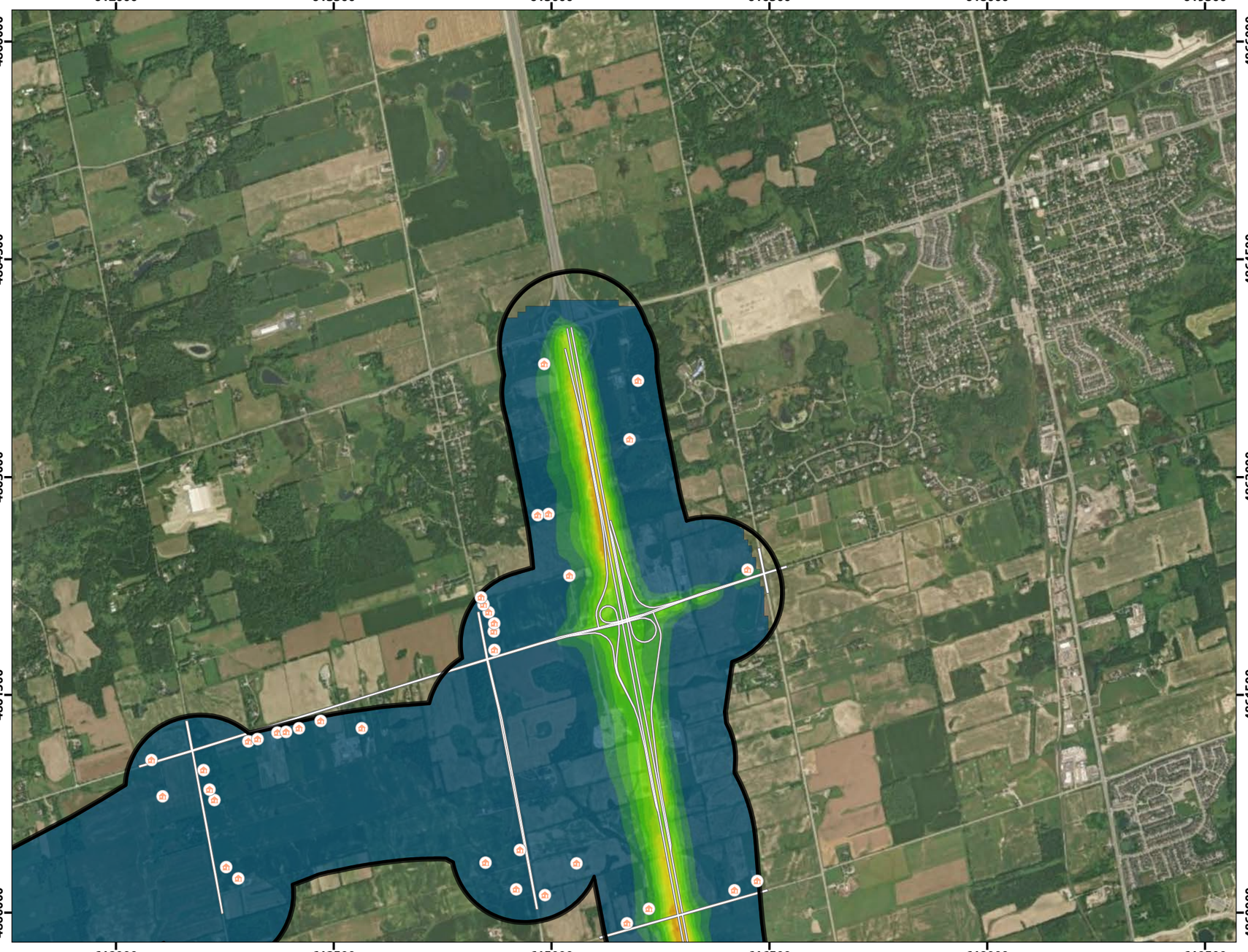
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.11.10
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\PI 301992A\PI 301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.11.11
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Work\ing\Folder\Jobs_America\P\1301992A\P\1301992A.aprx

Appendix E.12.1-11: 2041 Build – Model-Predicted Maximum 24-Hour Benzo(a)pyrene

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

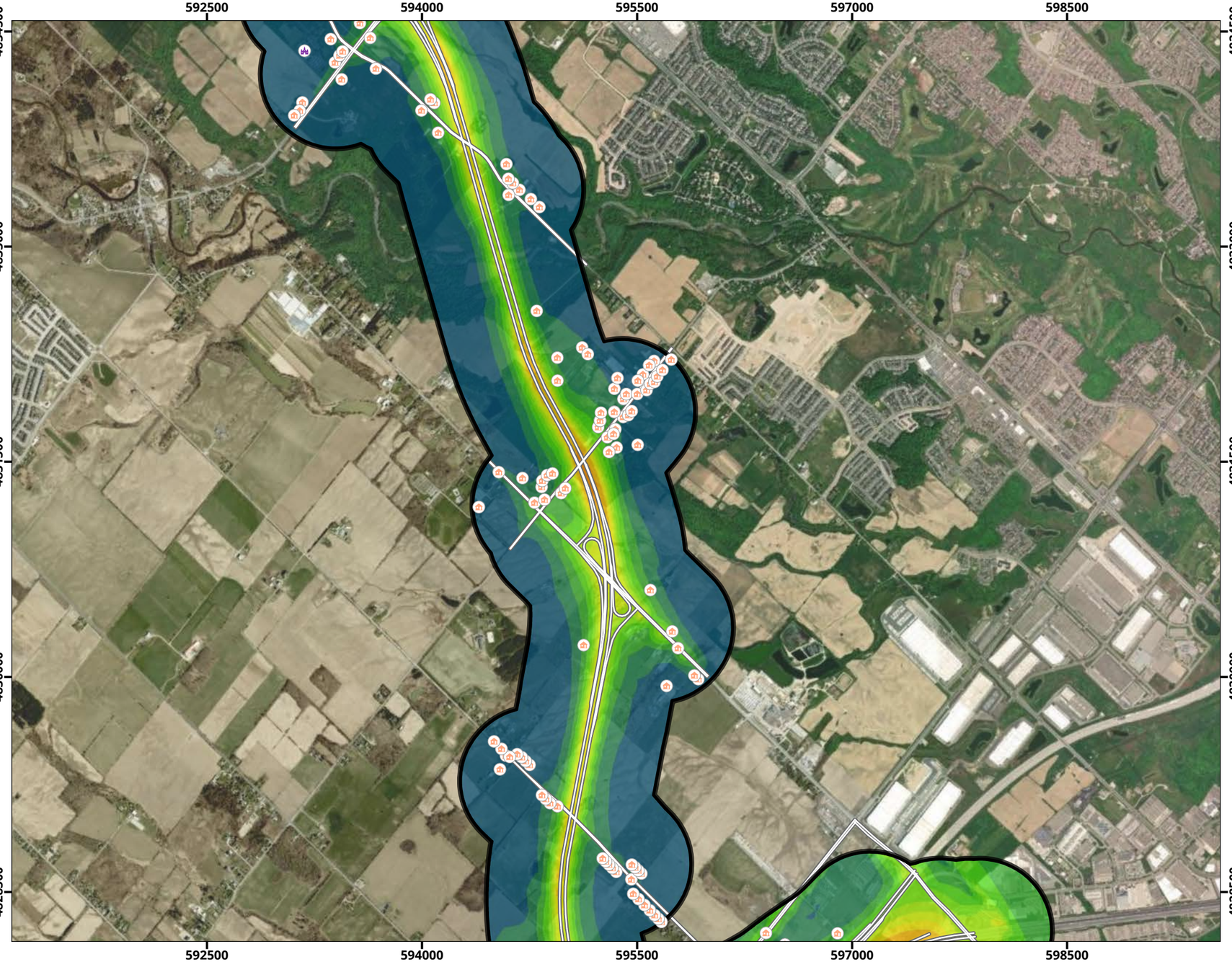
2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E12.1
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

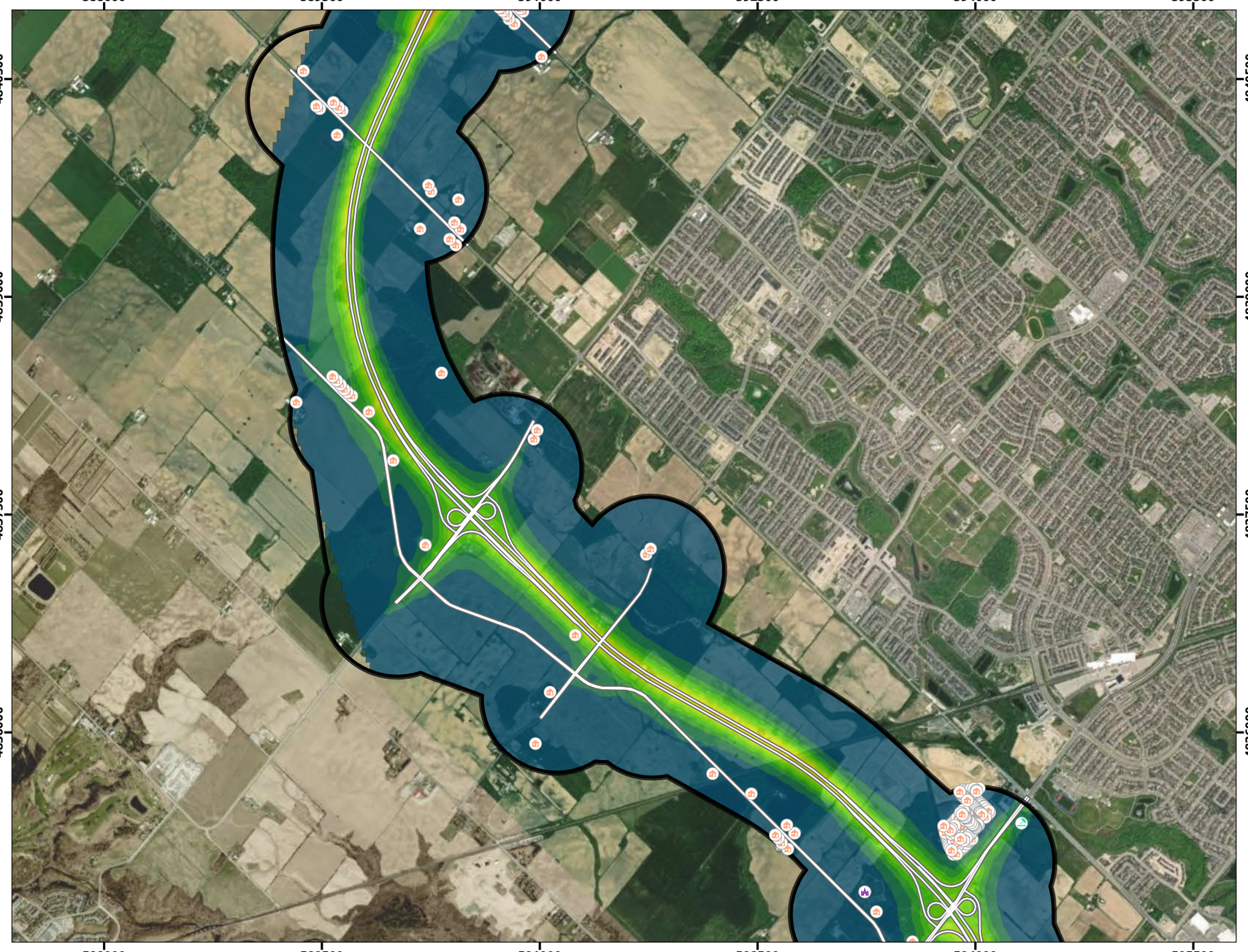
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.12.2	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.12.3
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

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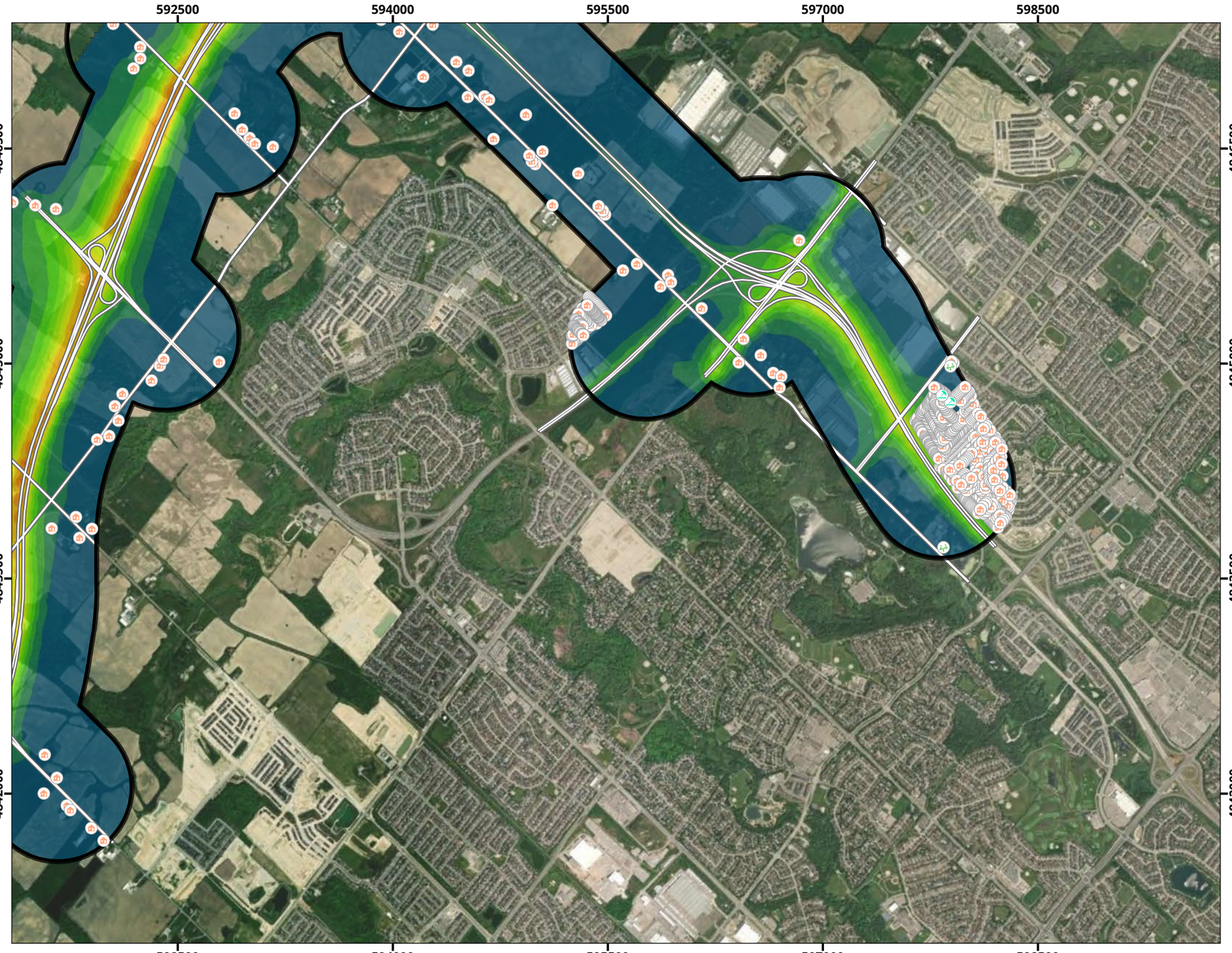

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.12.4	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

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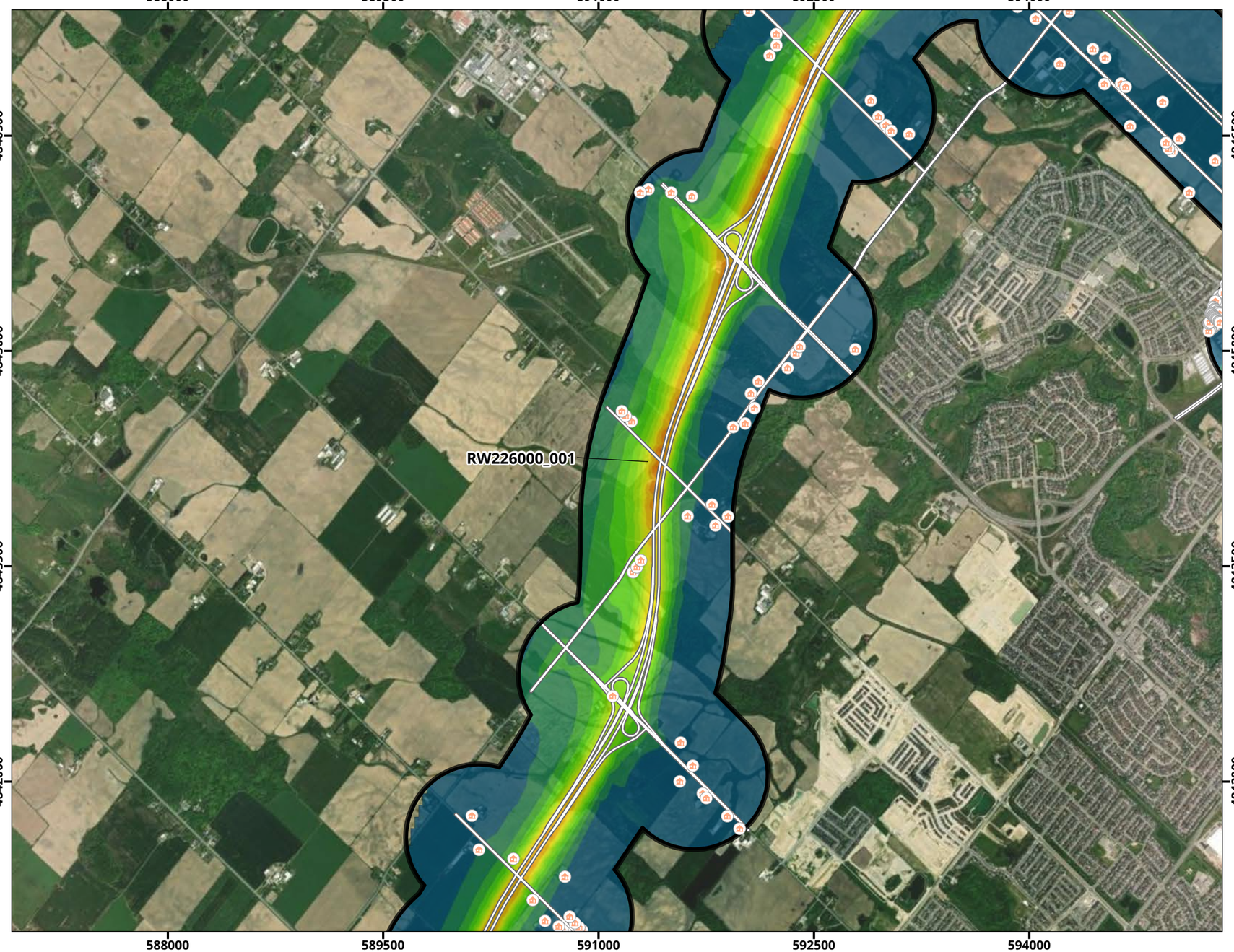

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.12.5
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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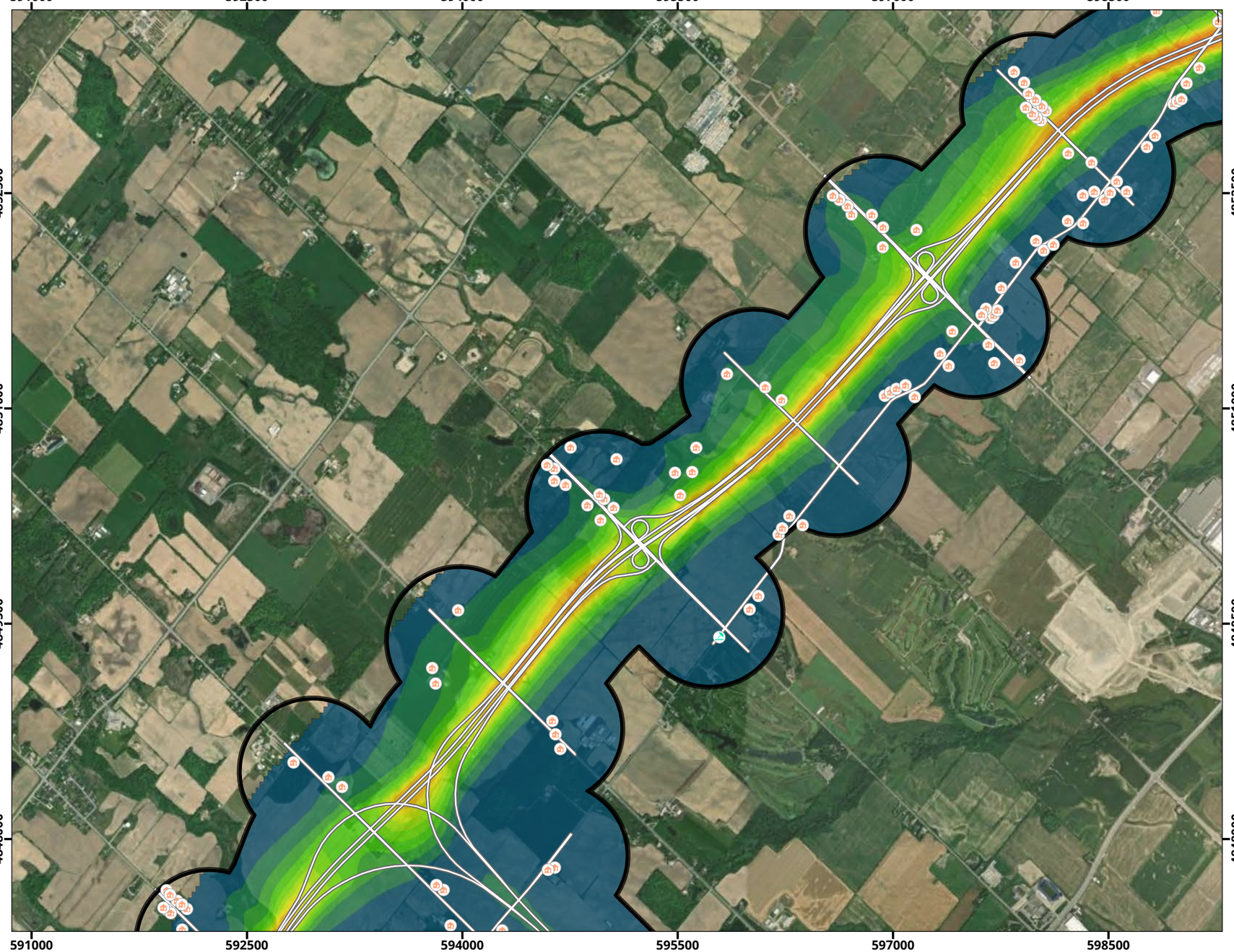

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.12.6
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Date Revised:		Aug 25, 2025

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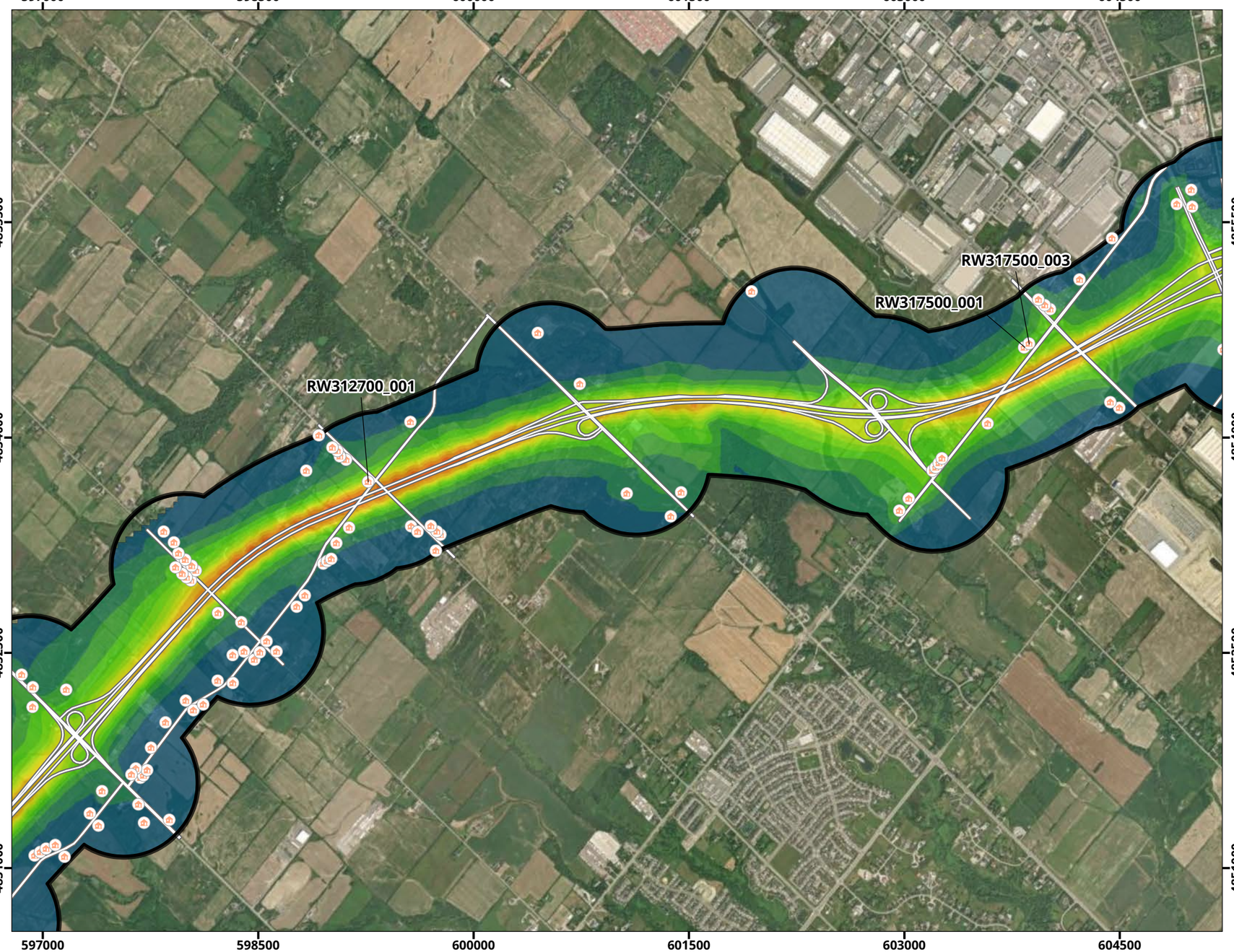

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E12.7
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

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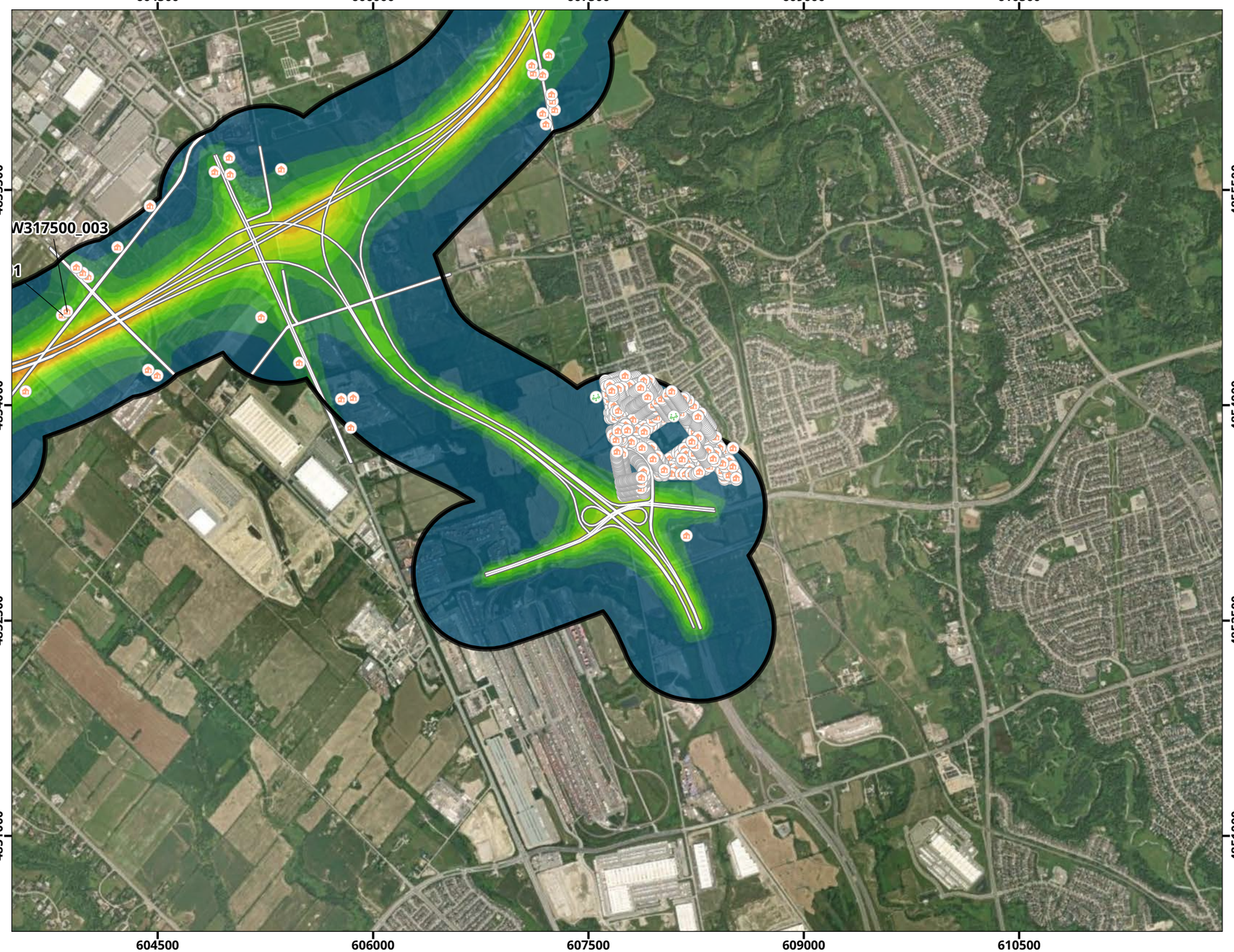

Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Child Care Centre

Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.12.8
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

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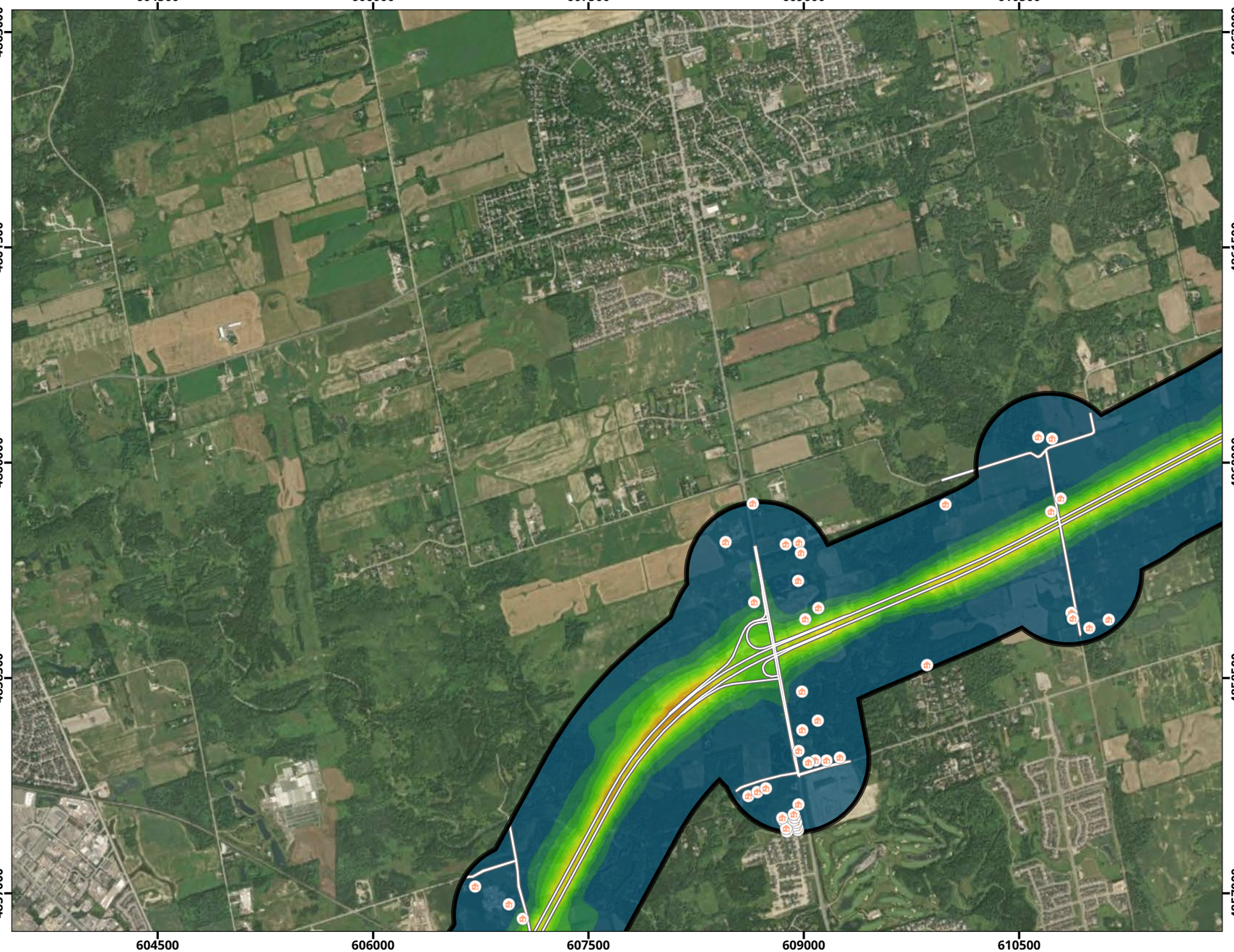


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.12.9	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig: E.12.10
Approx. Scale:	1:30,000
Date Revised:	Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 1.3e-04
- 1.3e-04 - 1.4e-04
- 1.4e-04 - 1.5e-04
- 1.5e-04 - 1.6e-04
- 1.6e-04 - 1.7e-04
- 1.7e-04 - 1.8e-04
- 1.8e-04 - 1.9e-04
- 1.9e-04 - 2.0e-04
- 2.0e-04 - 2.2e-04
- 2.2e-04 - 2.4e-04
- > 2.4e-04

Background Concentration: 9.15e-05 µg/m³
AAQC: 5.0e-05 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted 24-Hour Benzo(a)pyrene Concentrations

2041 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

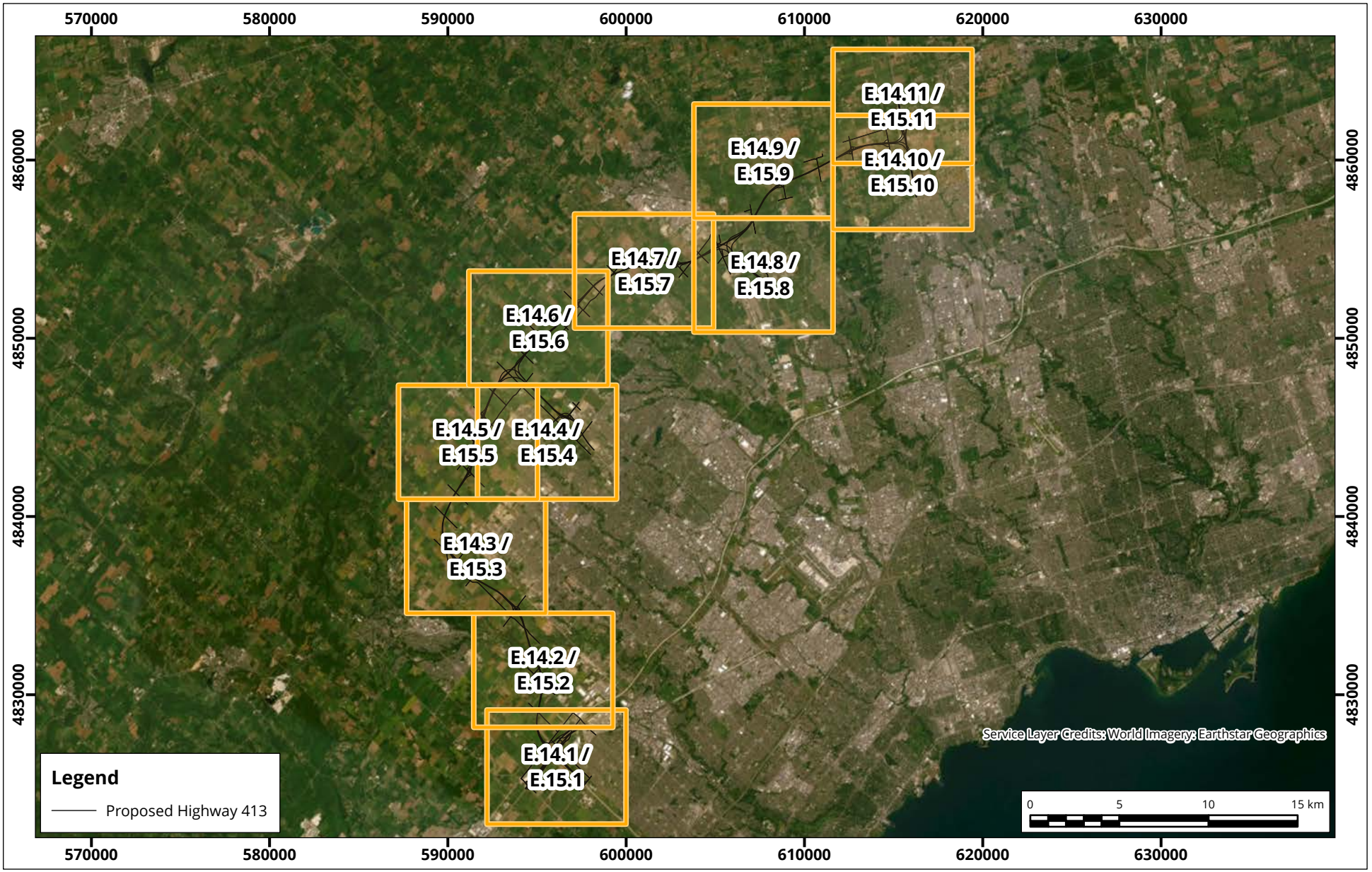
True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.12.11
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Map Document: C:\Working\Golder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.13: Index Map – 1-Hour NO_2



Index Map - E.14 & E.15

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

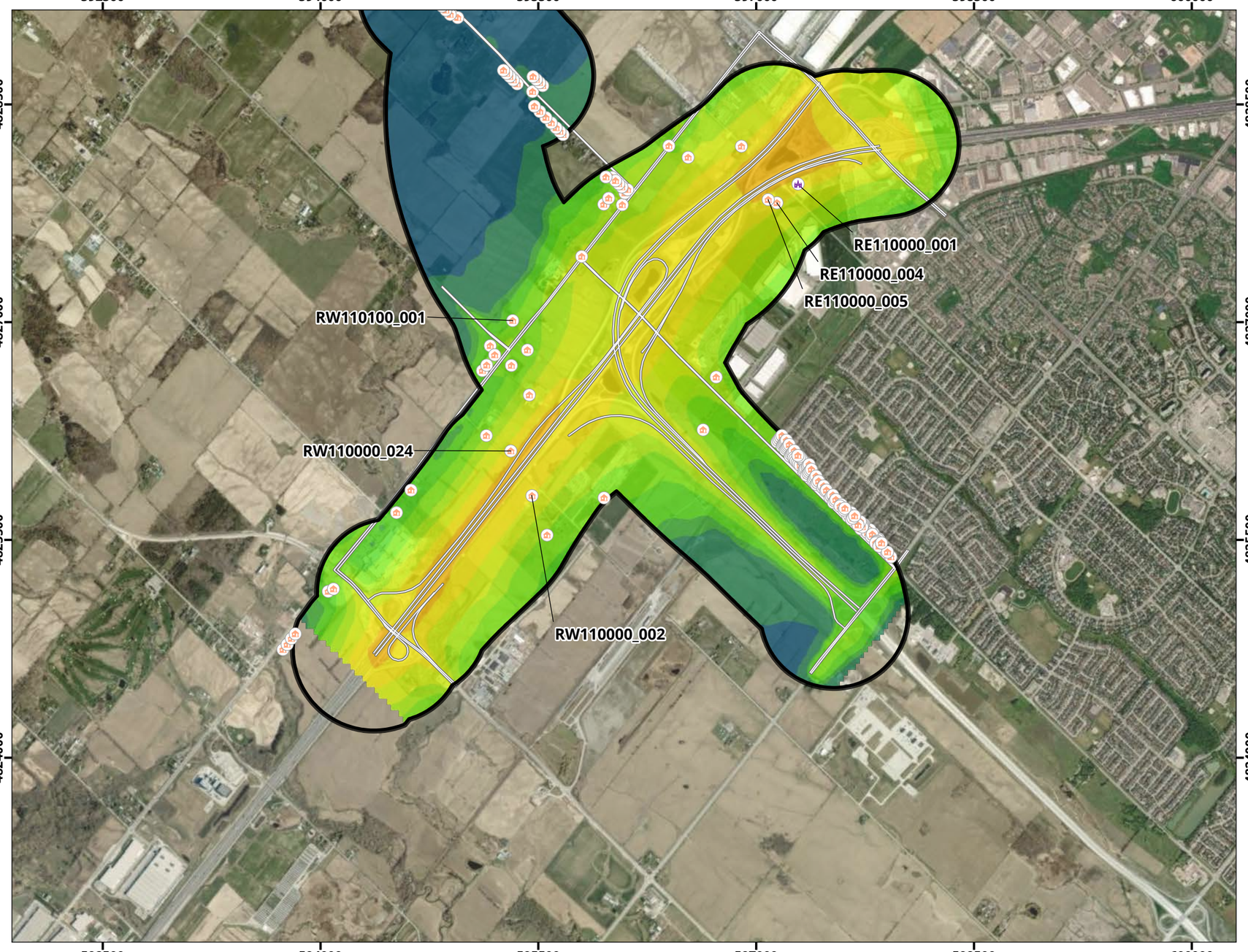
True North

Project #: 1301992A

Drawn by: PIP	Figure: E.13
Approx. Scale:	1:300,000
Date Revised: Aug 22, 2025	

Map Document: C:\Working Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.14.1-11: 2051 No-Build – Model-Predicted Maximum 1-Hour NO_2



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

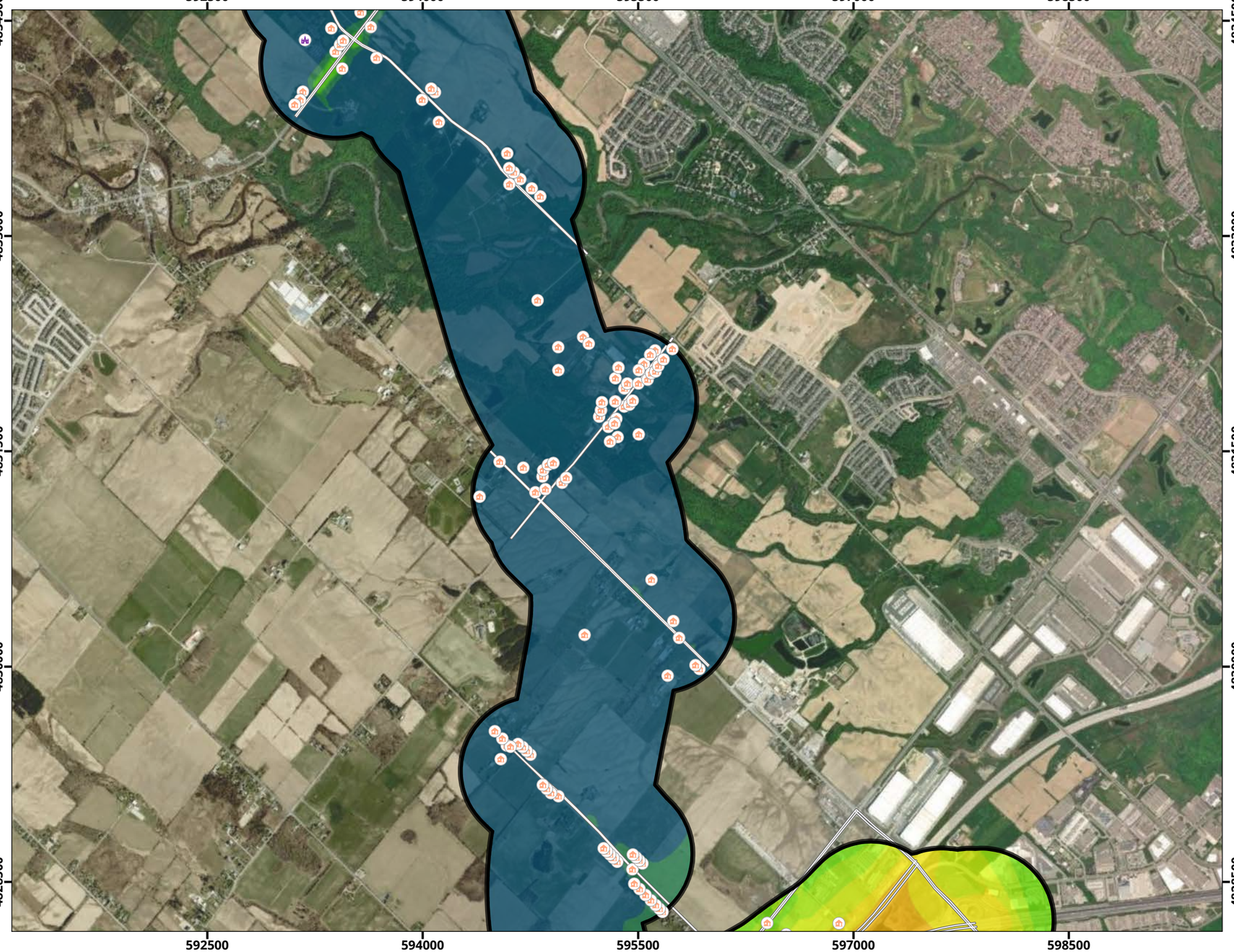
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E14.1
Approx. Scale:	1:30,000
Date Revised:	Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\PI 301992A\PI 1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

35 - 70
70 - 80
80 - 83.1
83.1 - 90
90 - 100
100 - 110
110 - 120
120 - 130
130 - 140
140 - 150
> 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E14.2
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.14.3	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

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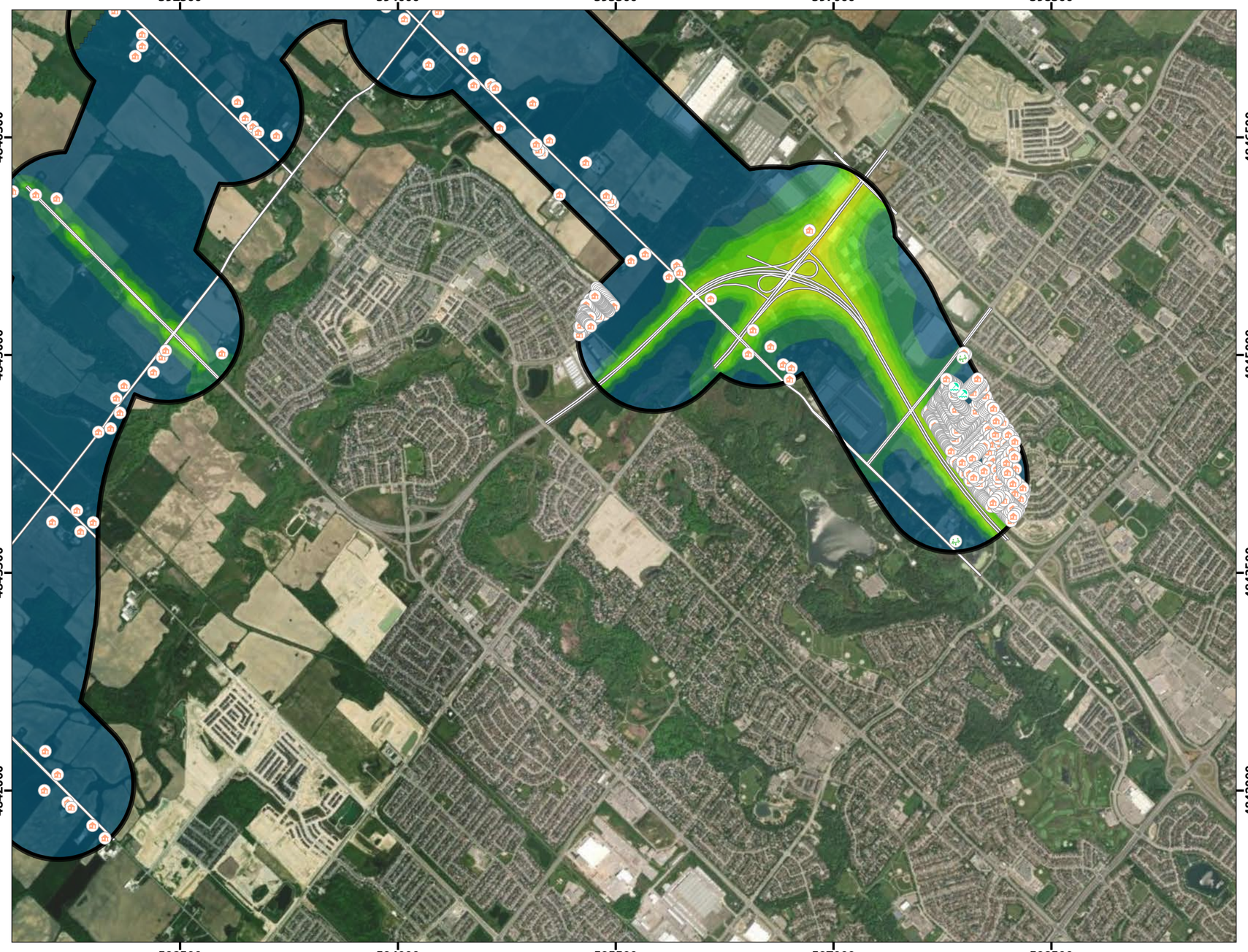

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.14.4
Approx. Scale:	1:30,000	
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Project #: 1301992A

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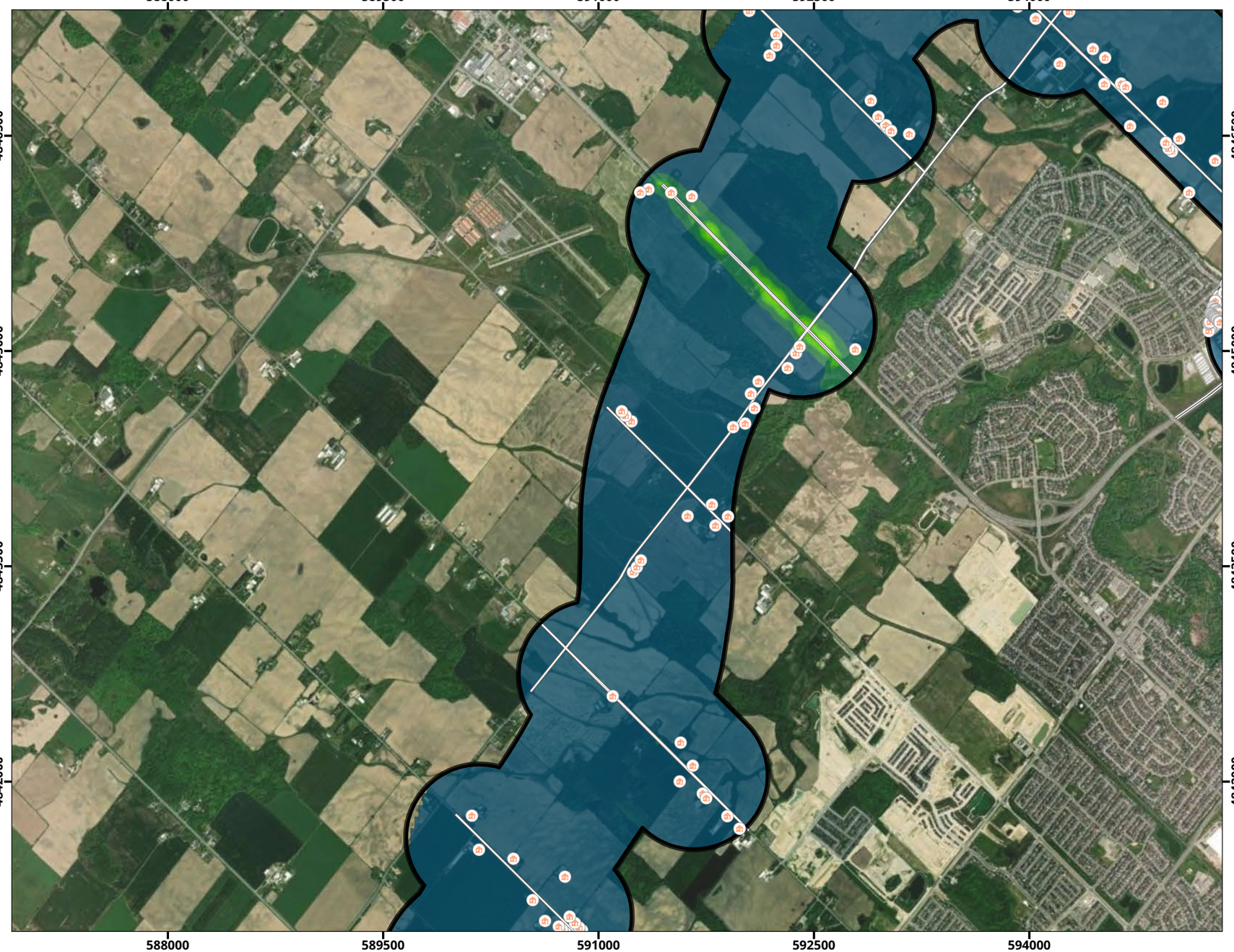

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.14.5	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

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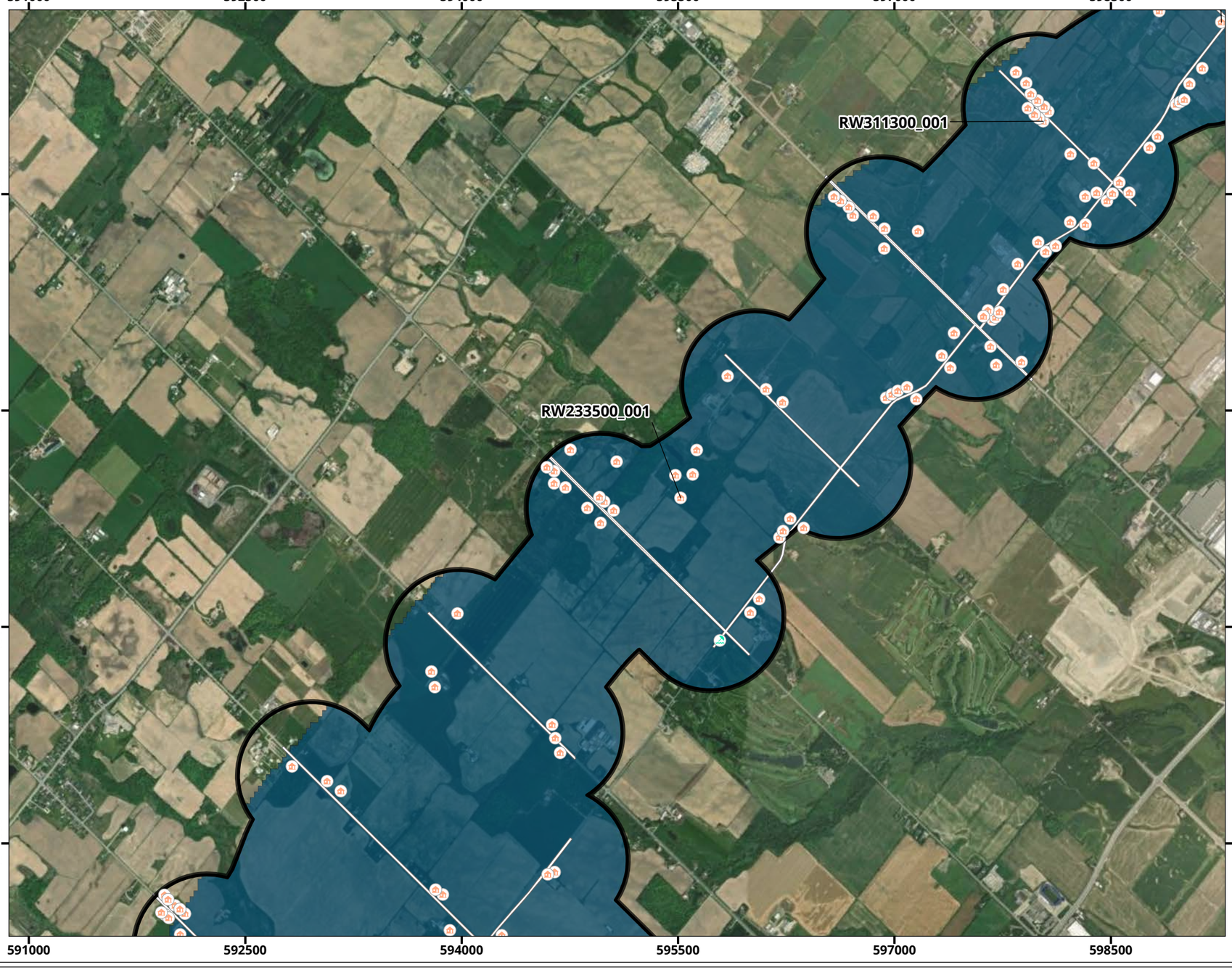


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

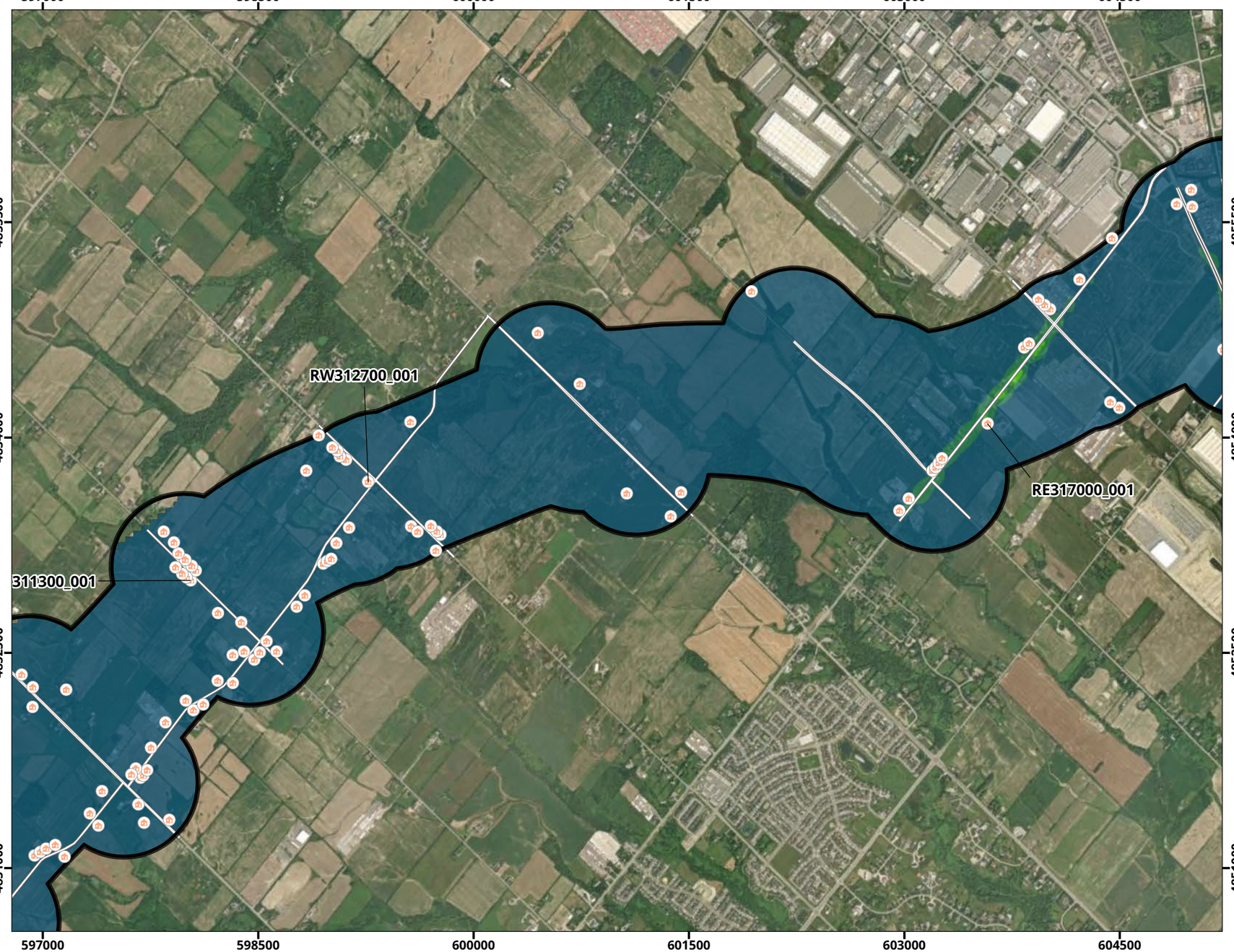
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.14.6
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E14.7
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.14.8
Approx. Scale:	1:30,000	
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Project #: 1301992A

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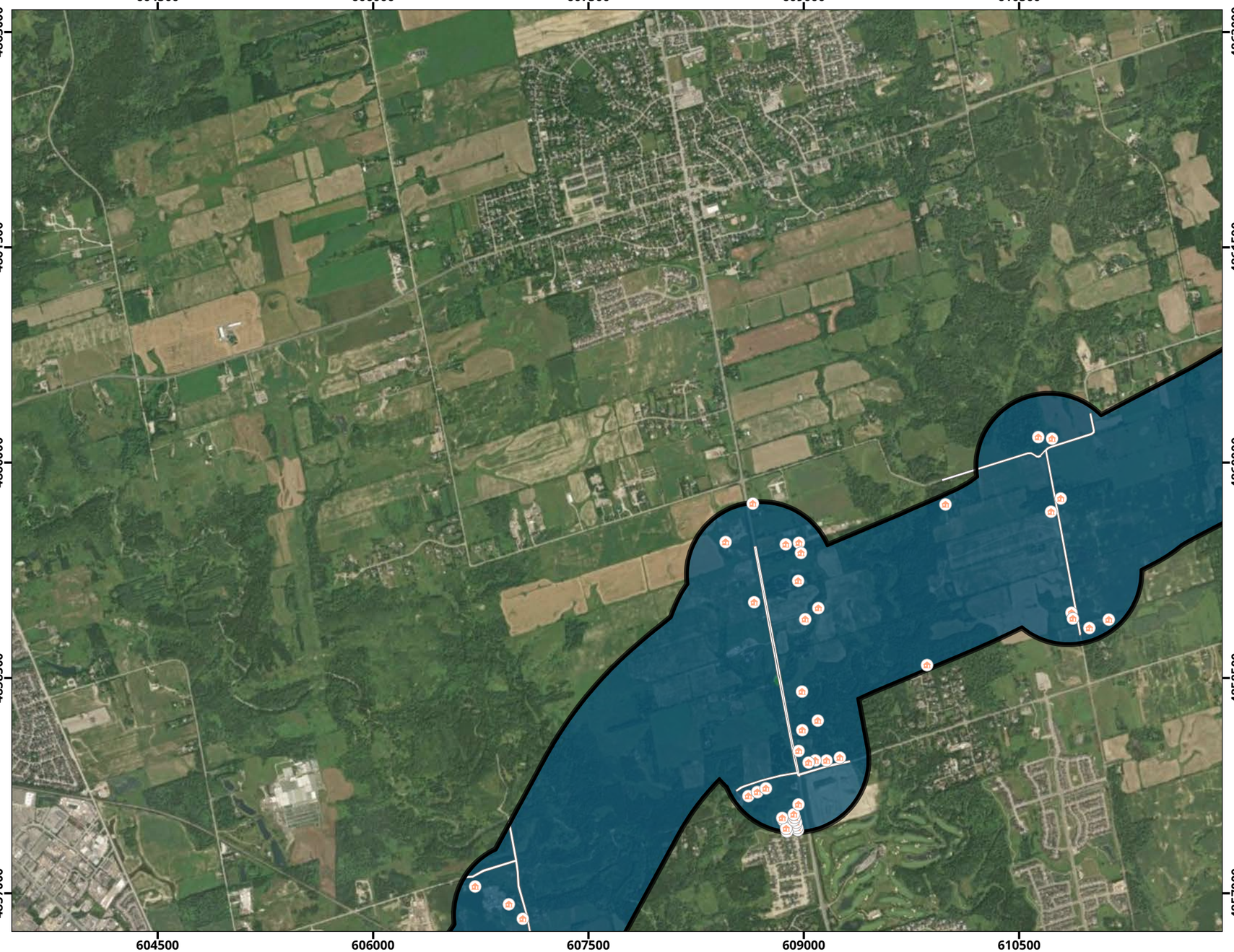

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E14.9	
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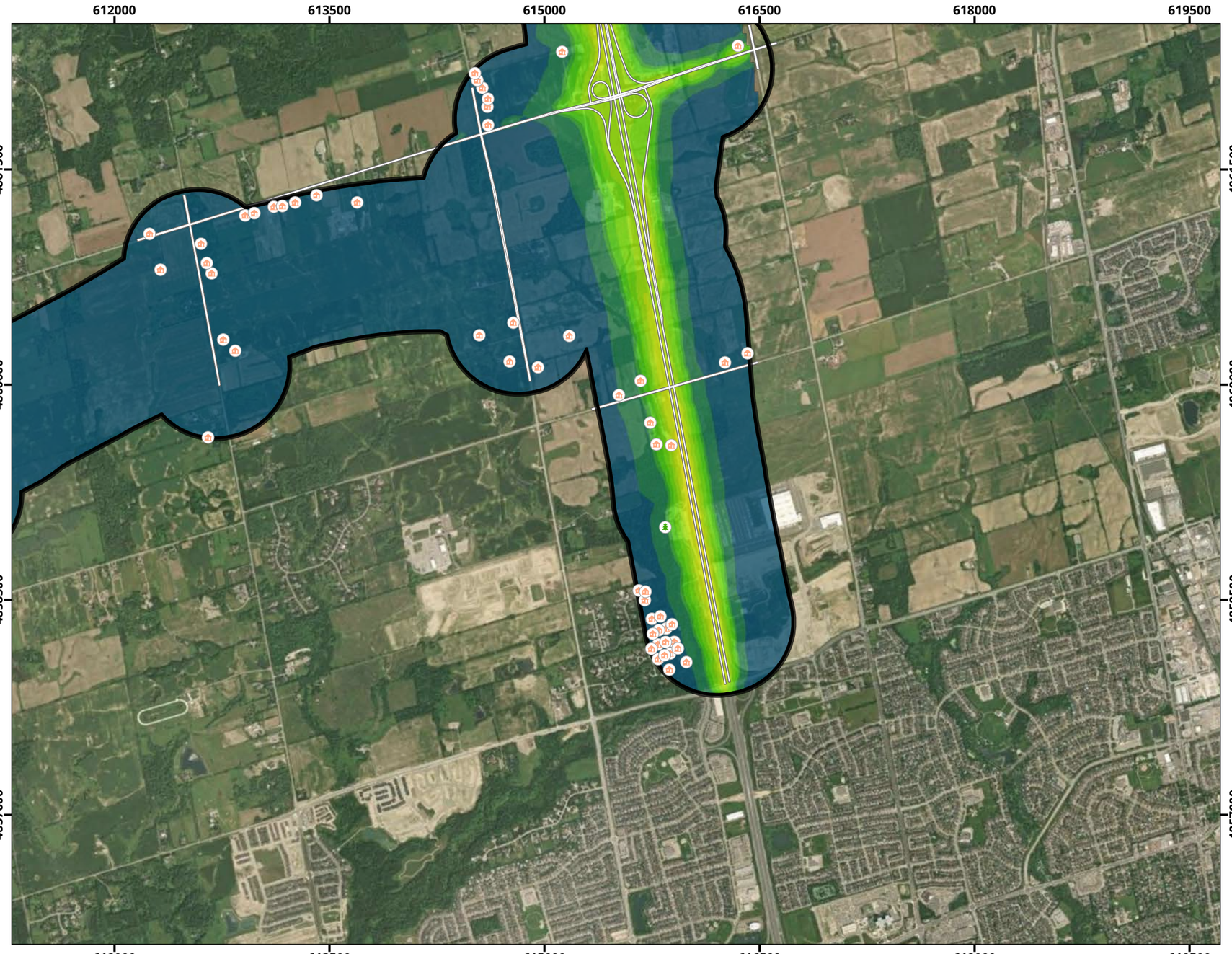

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.14.10
Approx. Scale:		1:30,000
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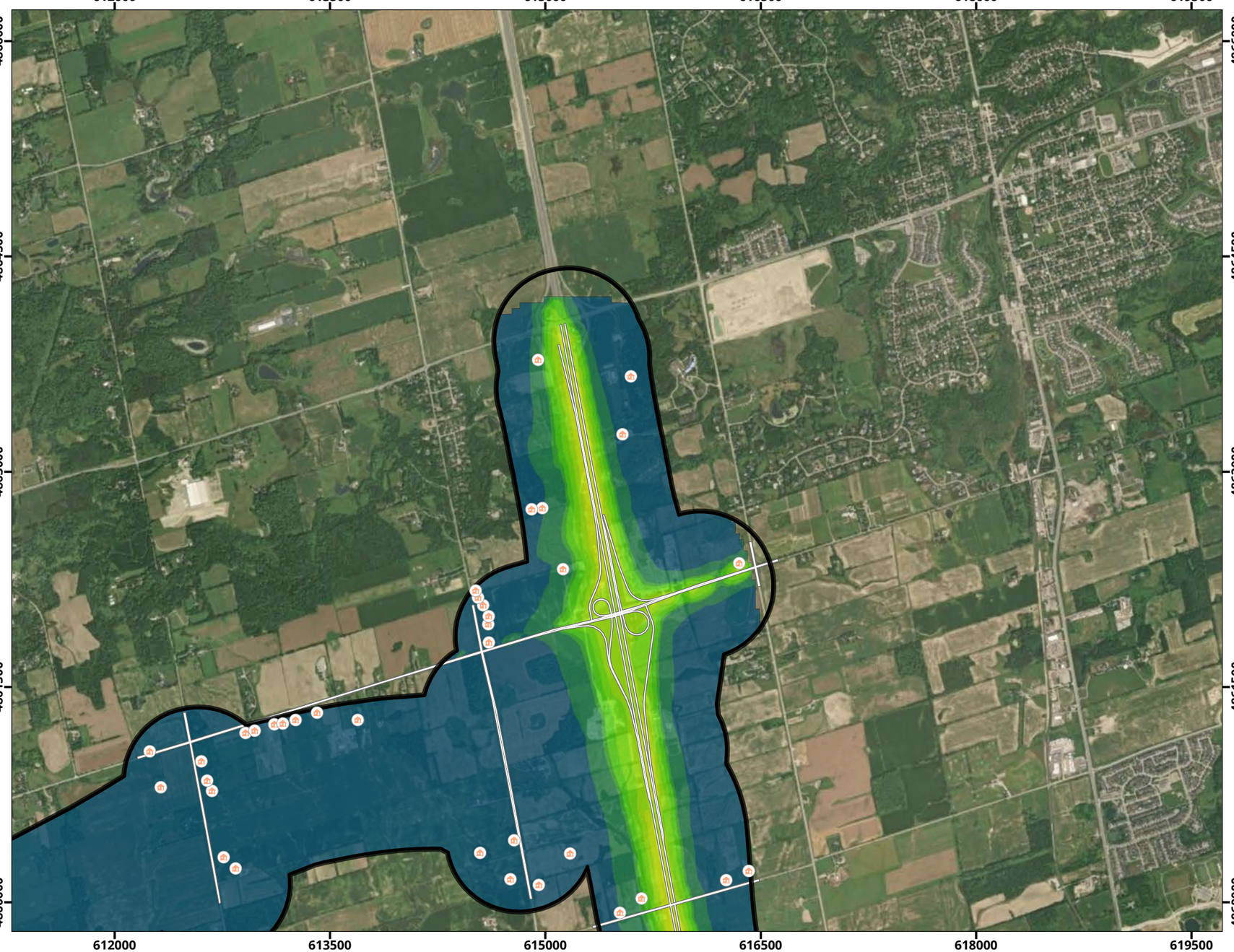

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.14.11
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.15.1-11: 2051 Build – Model-Predicted Maximum 1-Hour NO_2

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.15.1
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

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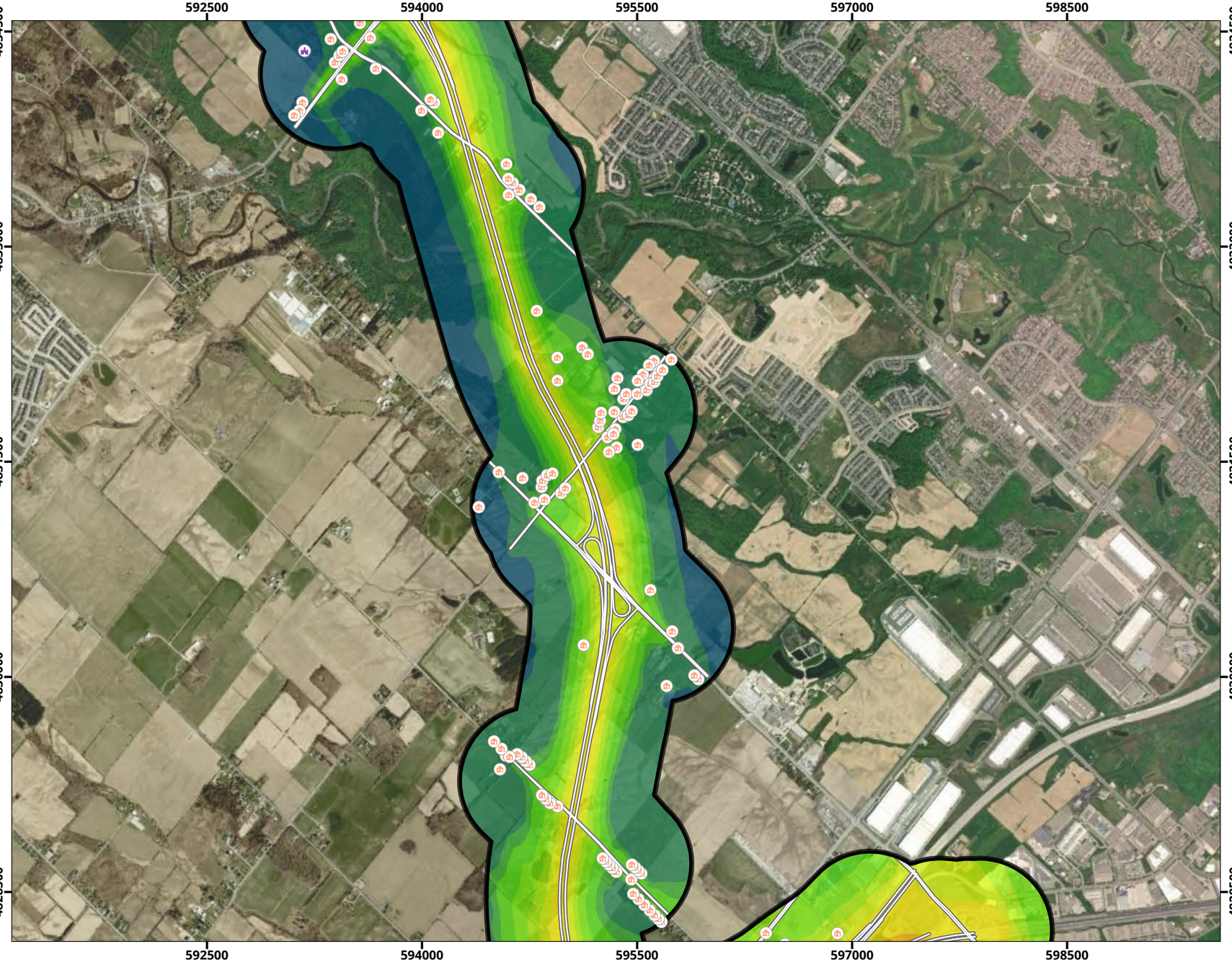

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E15.2	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

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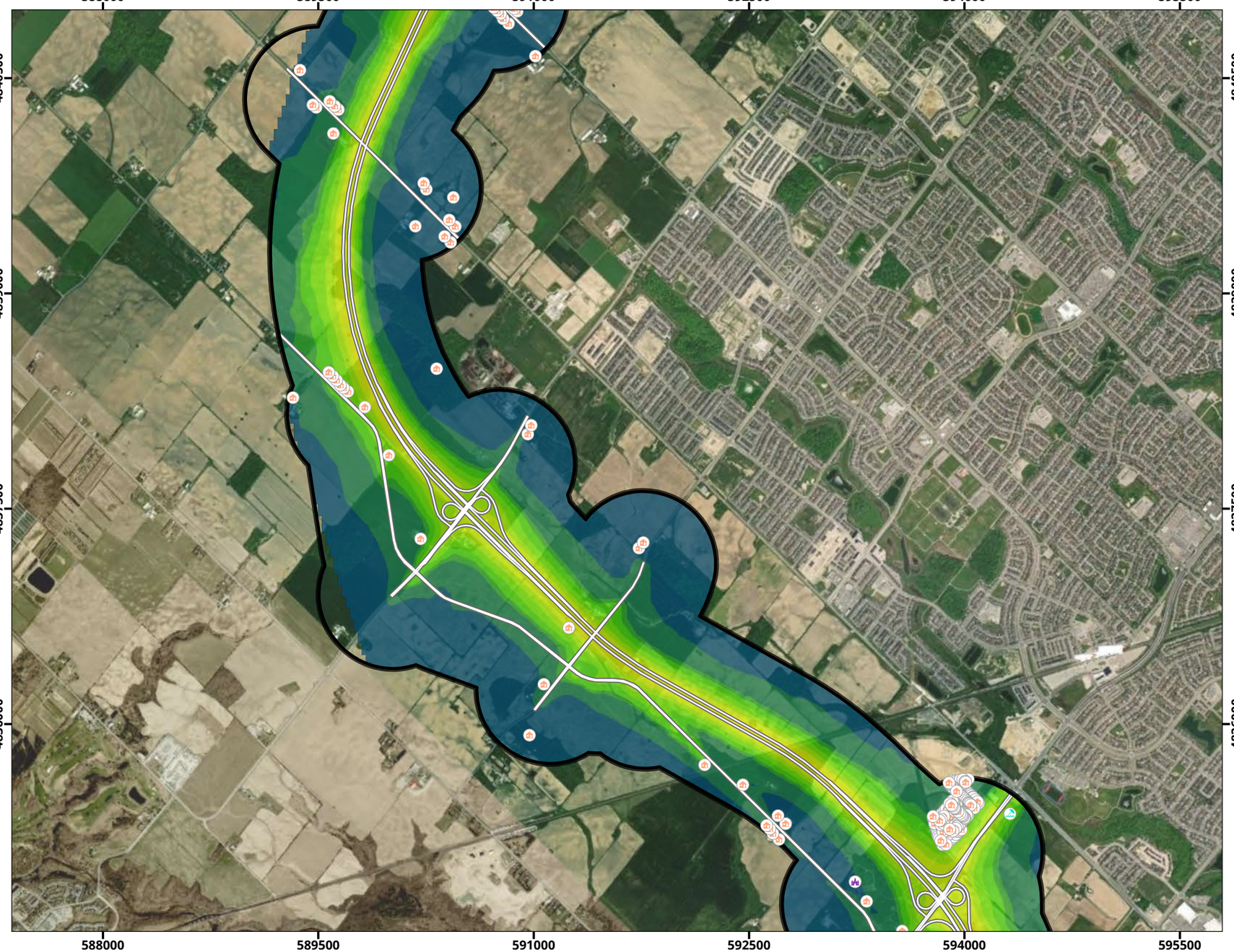

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.15.3
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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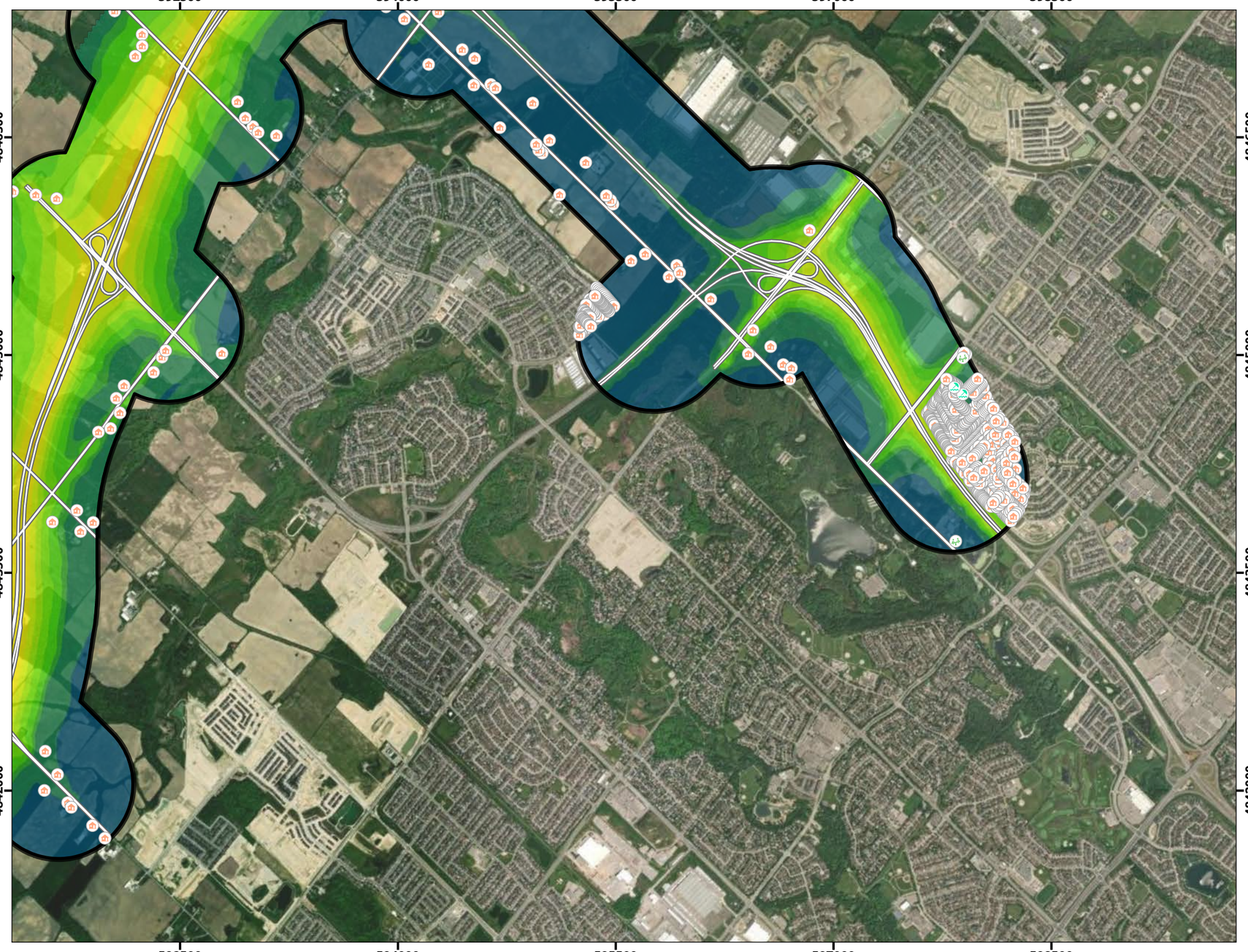

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E15.4	
Approx. Scale:	1:30,000		
Date Revised:	Aug 25, 2025		

Project #: 1301992A

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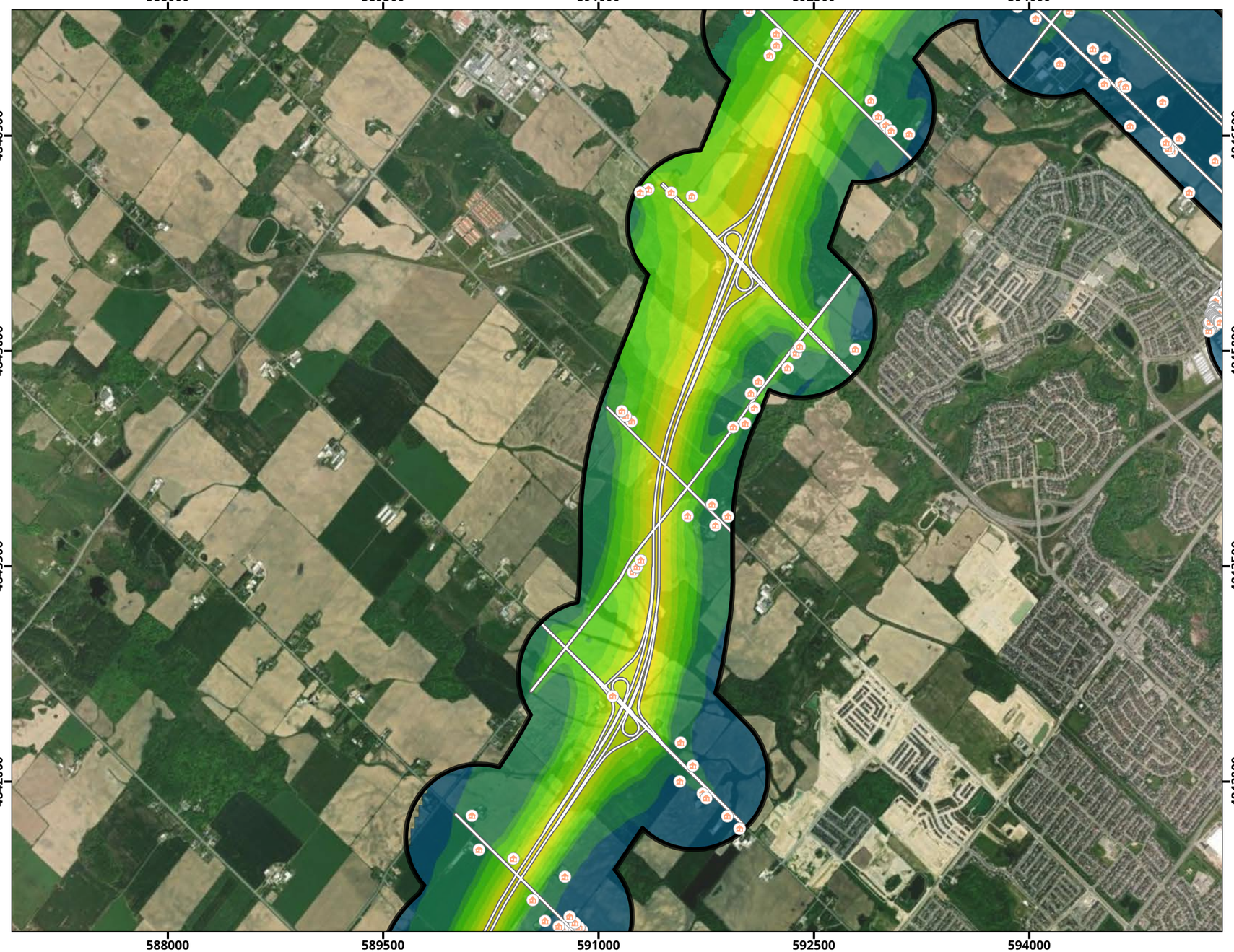

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.15.5
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Work\Folder\Jobs_America\P\1301992A\P\1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.15.6
Approx. Scale:		1:30,000
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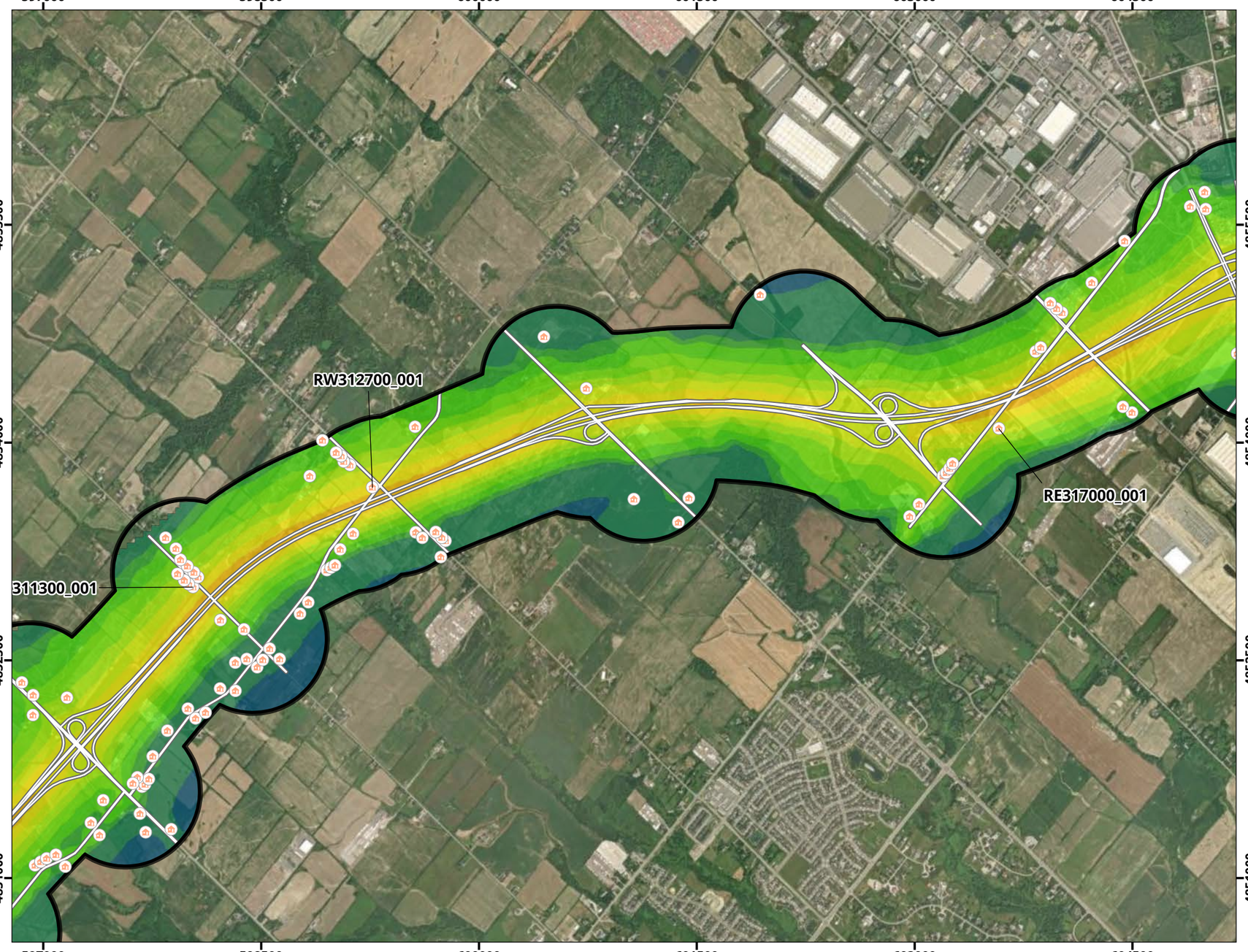


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

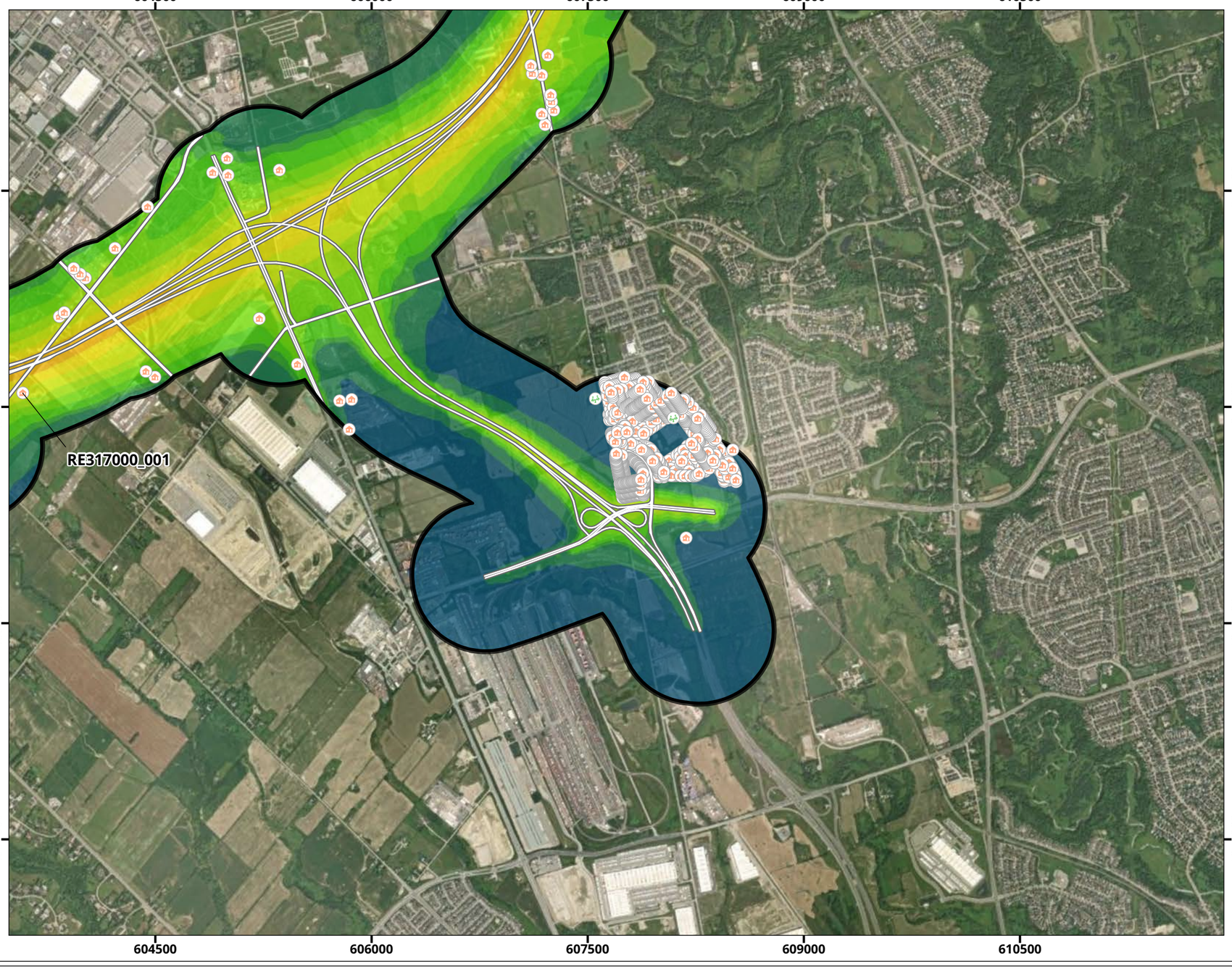
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E15.7
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\PI 1301992A\PI 1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

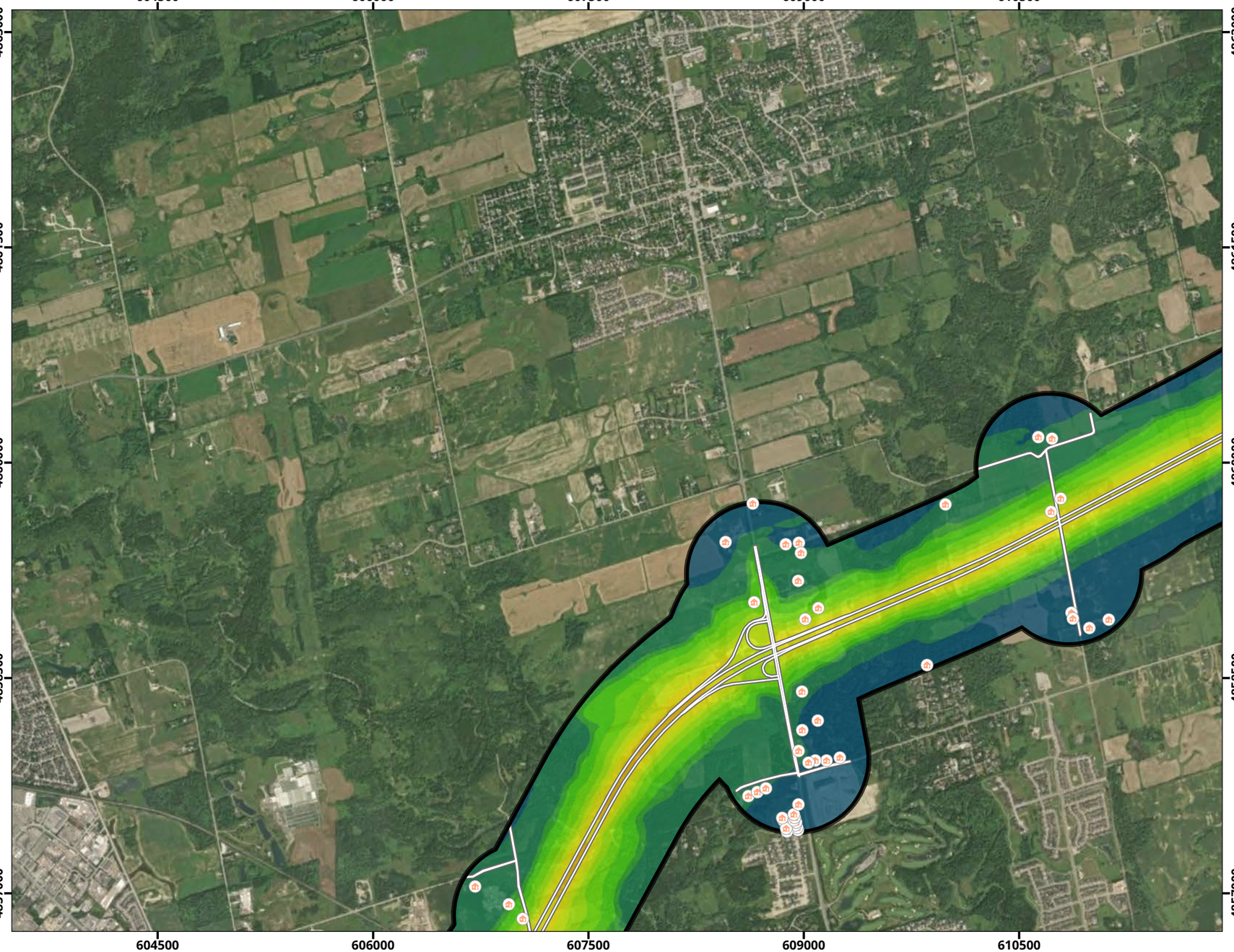
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E15.8
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E15.9	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

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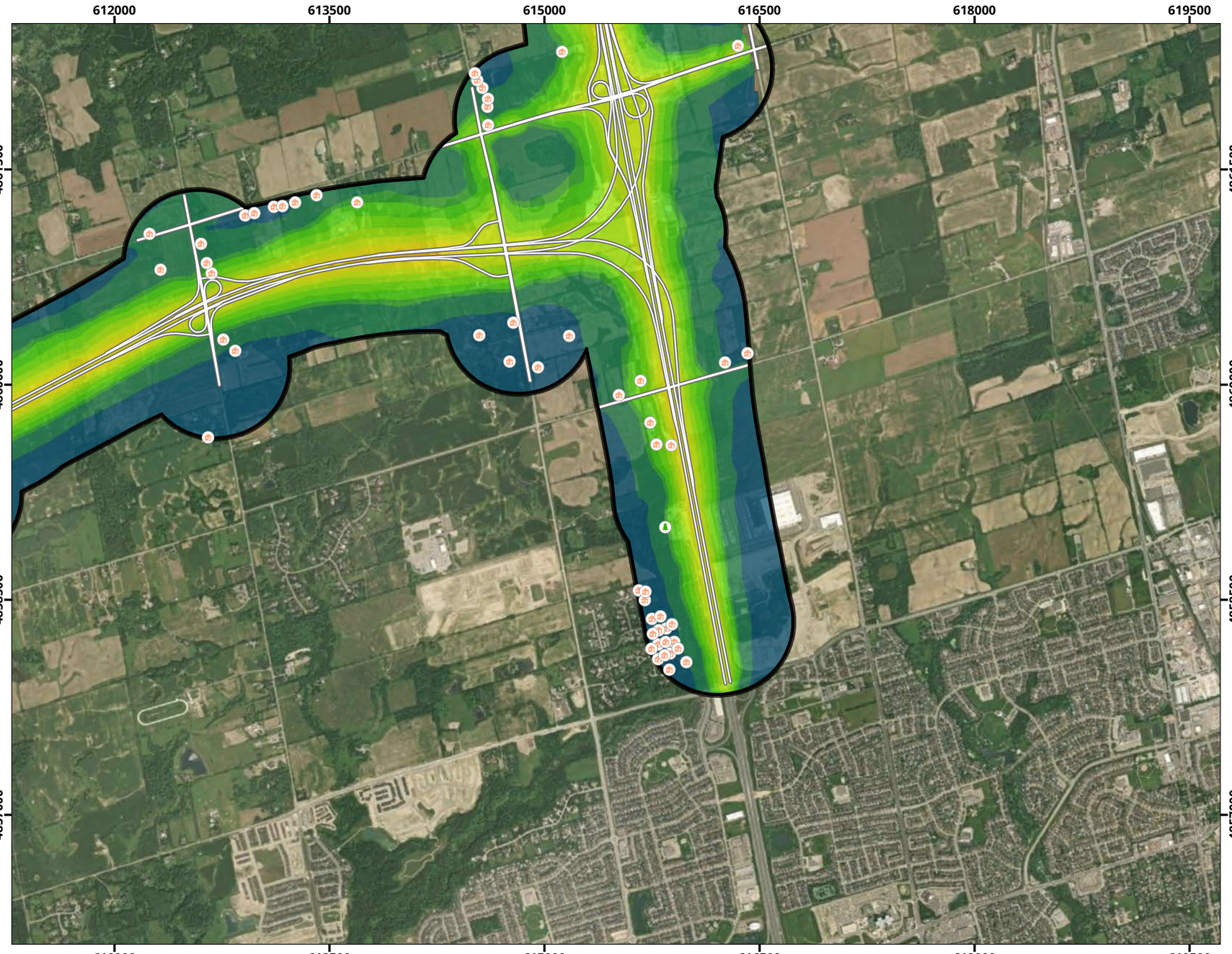


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.15.10
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 35 - 70
- 70 - 80
- 80 - 83.1
- 83.1 - 90
- 90 - 100
- 100 - 110
- 110 - 120
- 120 - 130
- 130 - 140
- 140 - 150
- > 150

Background Concentration: 35 µg/m³
CAAQS 1-Hour NO_2 Standard: 83.1 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Model Predicted Maximum 1-hour NO_2 Concentrations, CAAQS

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

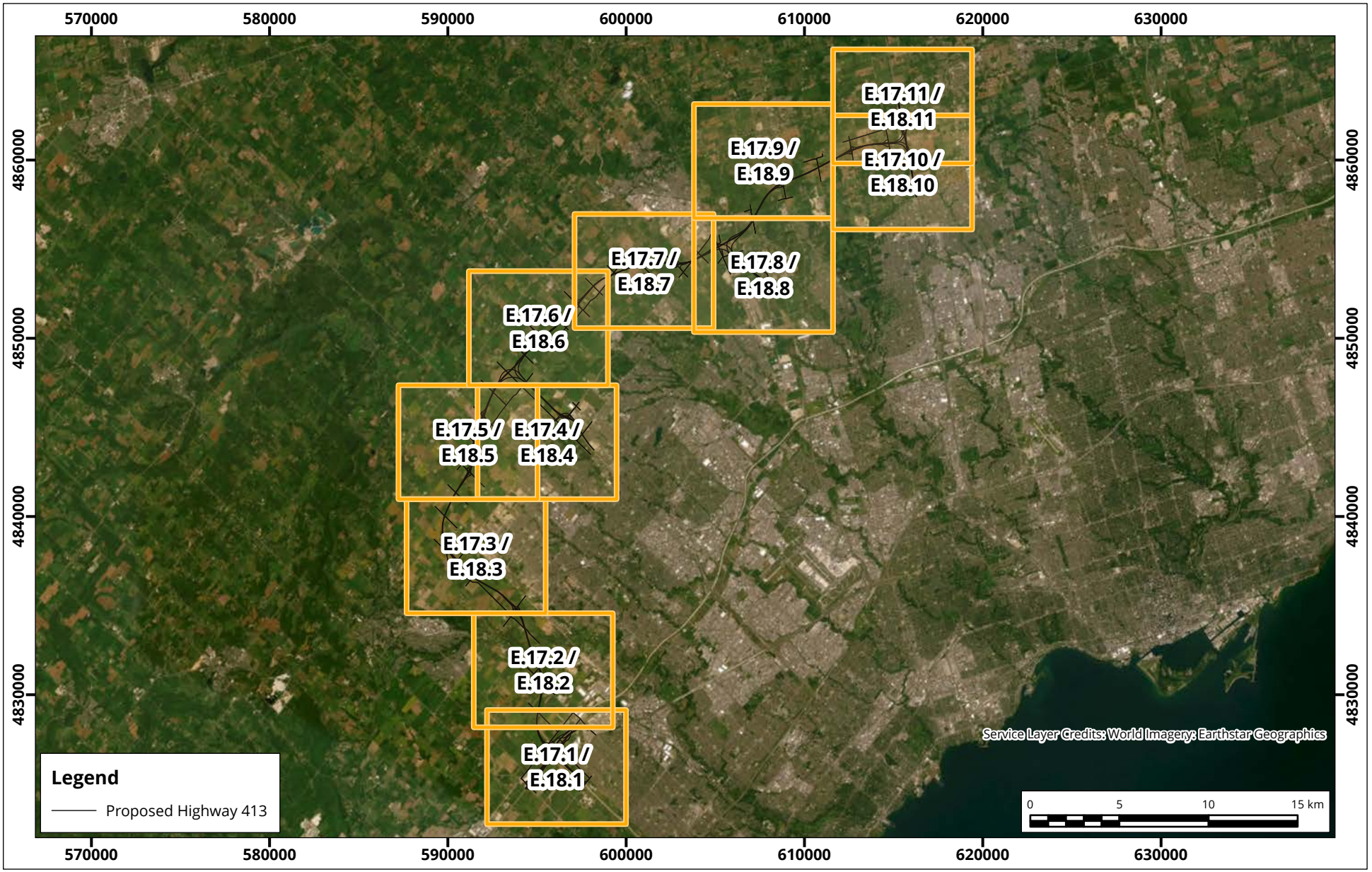
True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.15.11
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx

Appendix E.16: Index Map – 24-Hour PM_{10}



Index Map - E.17 & E.18

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

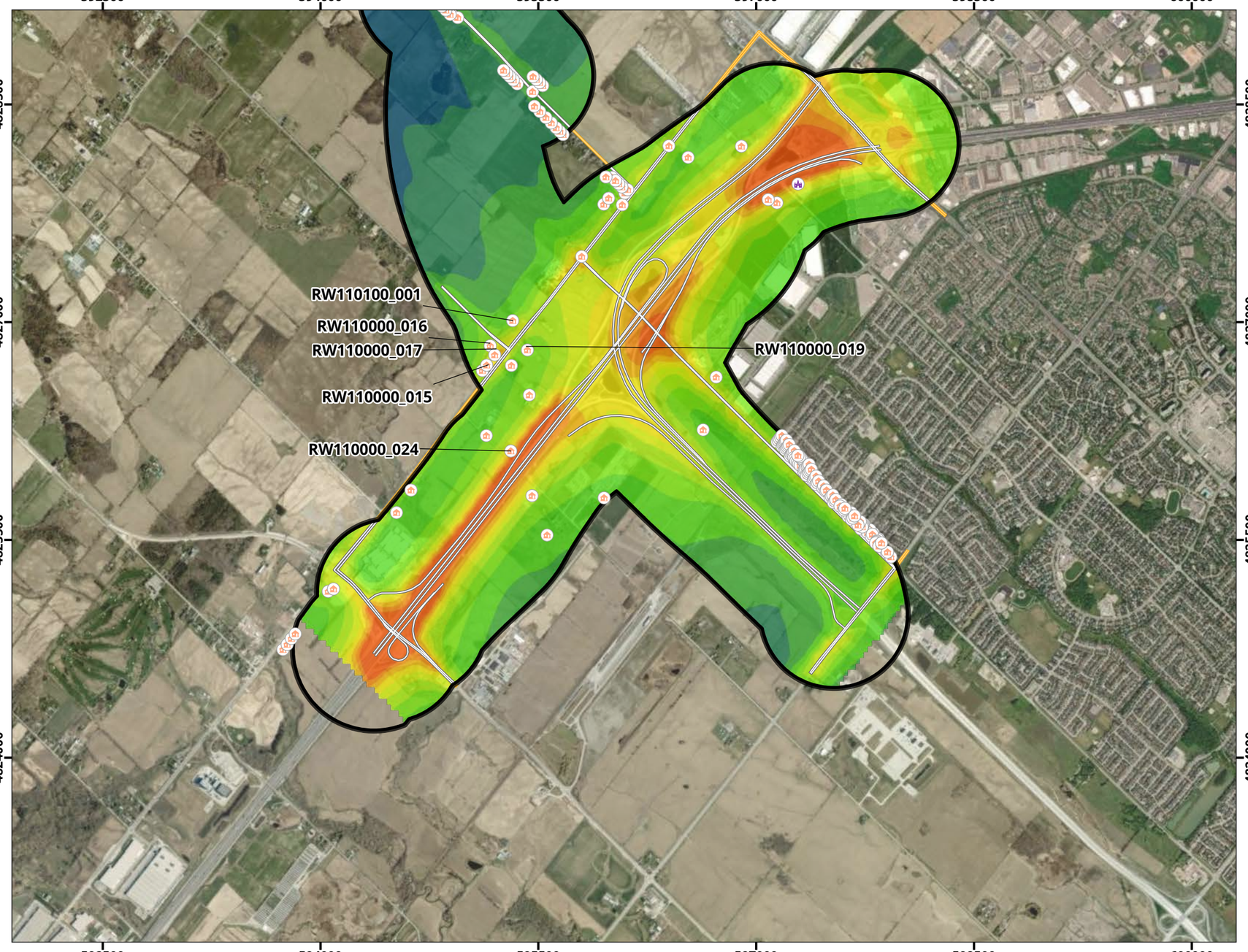
True North

Project #: 1301992A

Drawn by: PIP	Figure: E.16
Approx. Scale:	1:300,000
Date Revised: Aug 25, 2025	

Map Document: C:\Working Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.17.1-11: 2051 No-Build – Model-Predicted Maximum 24-Hour PM_{10}



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

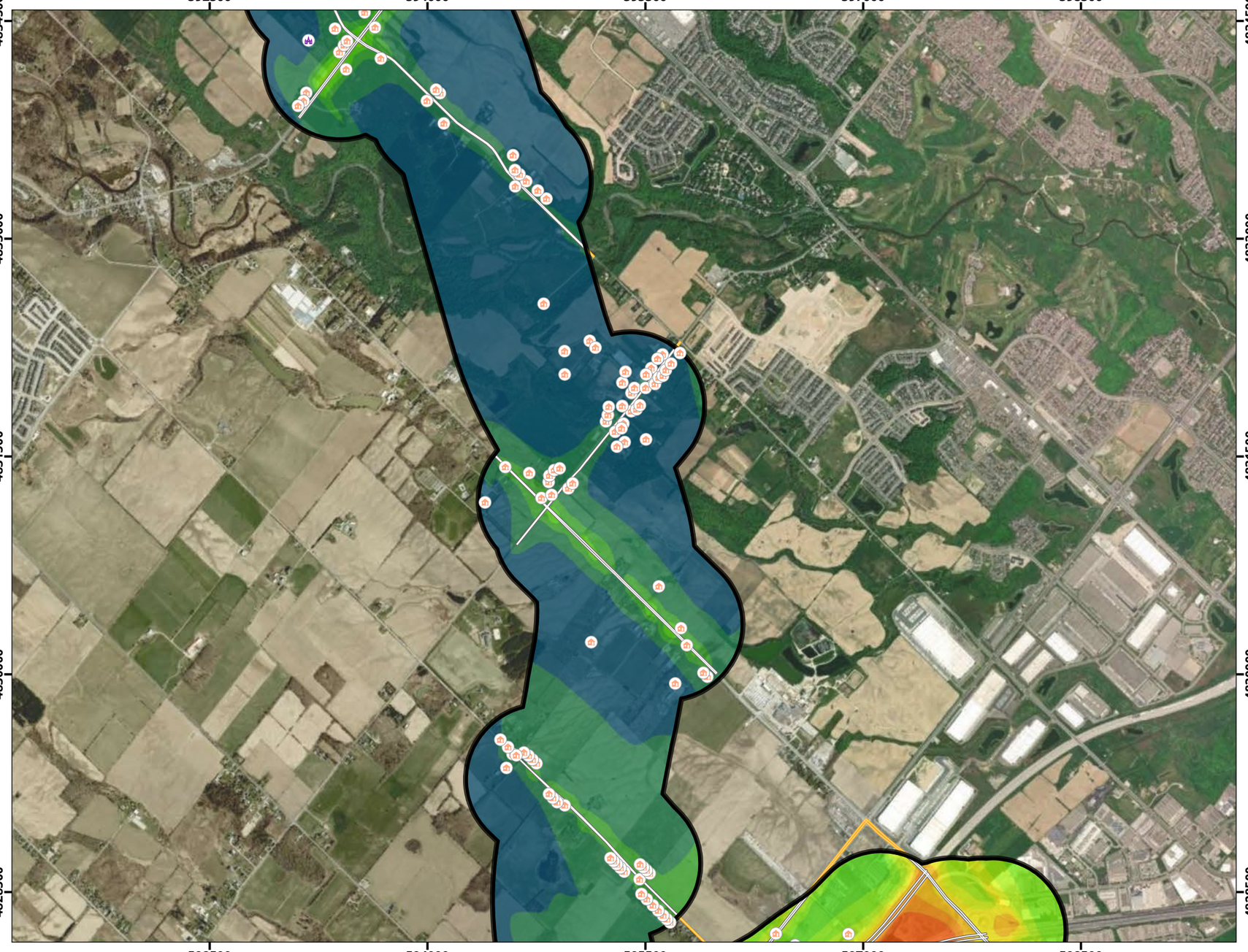
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.17.1
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E17.2
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E17.3
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Date Revised:	Aug 25, 2025	

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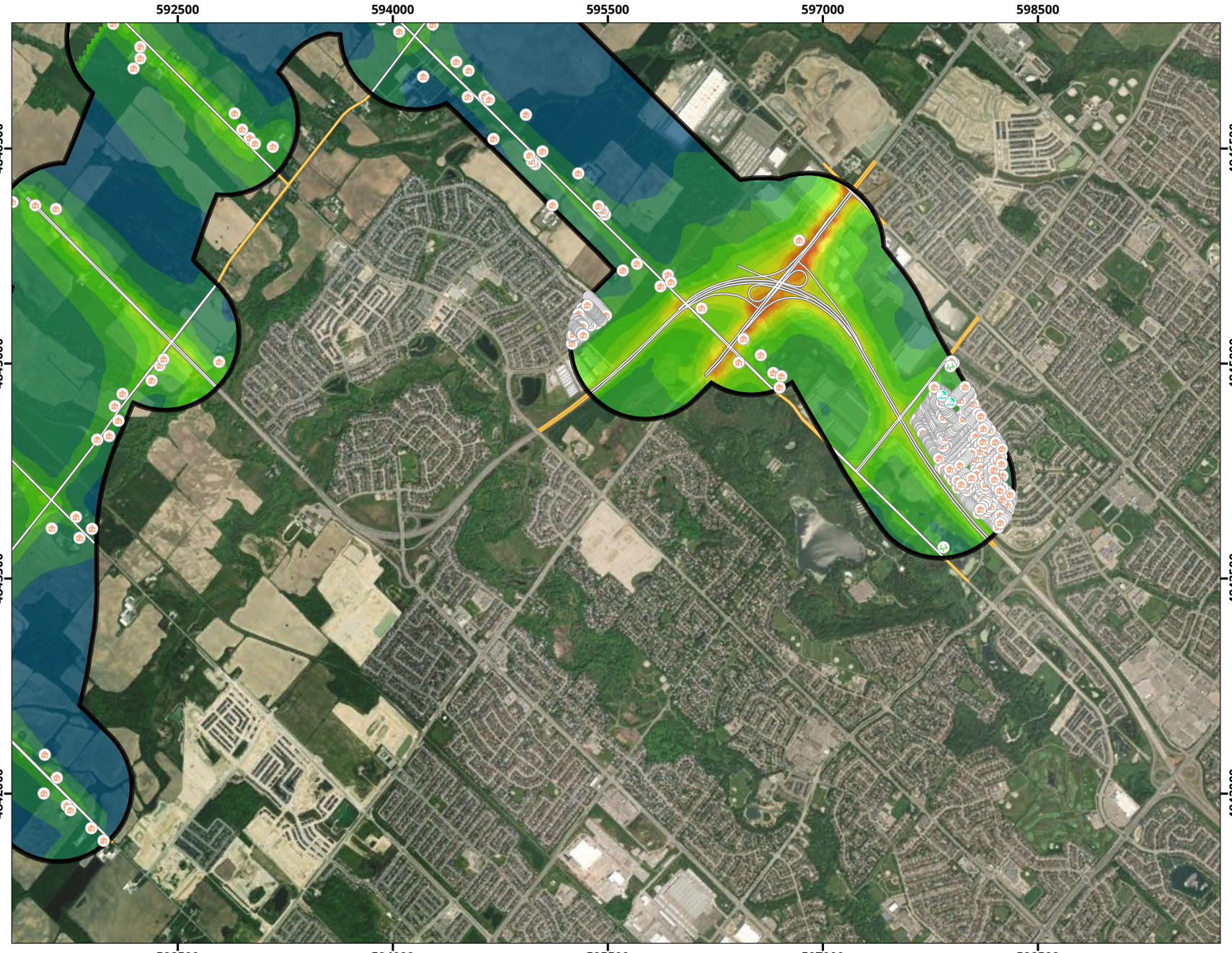

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E17.4	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

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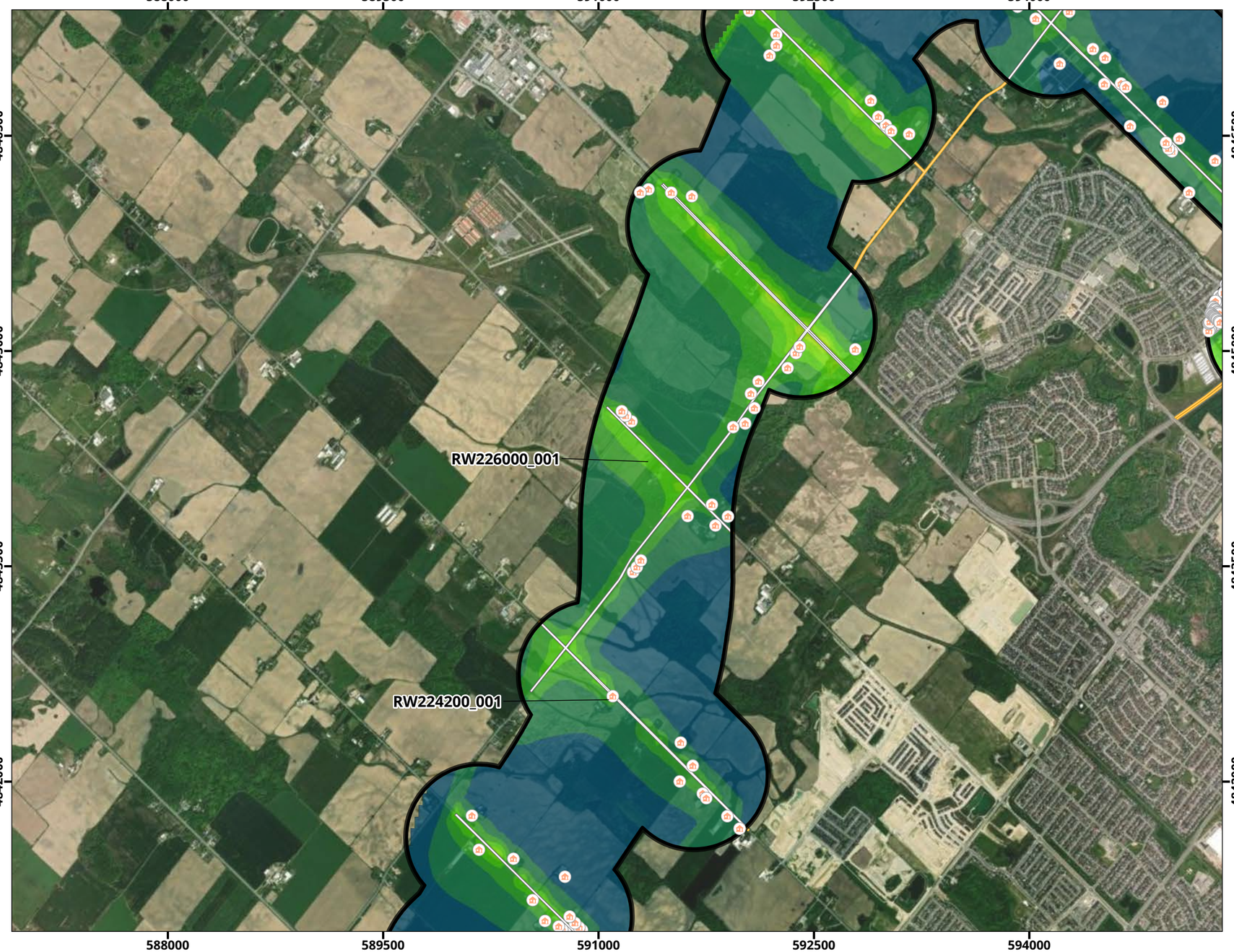

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E17.5
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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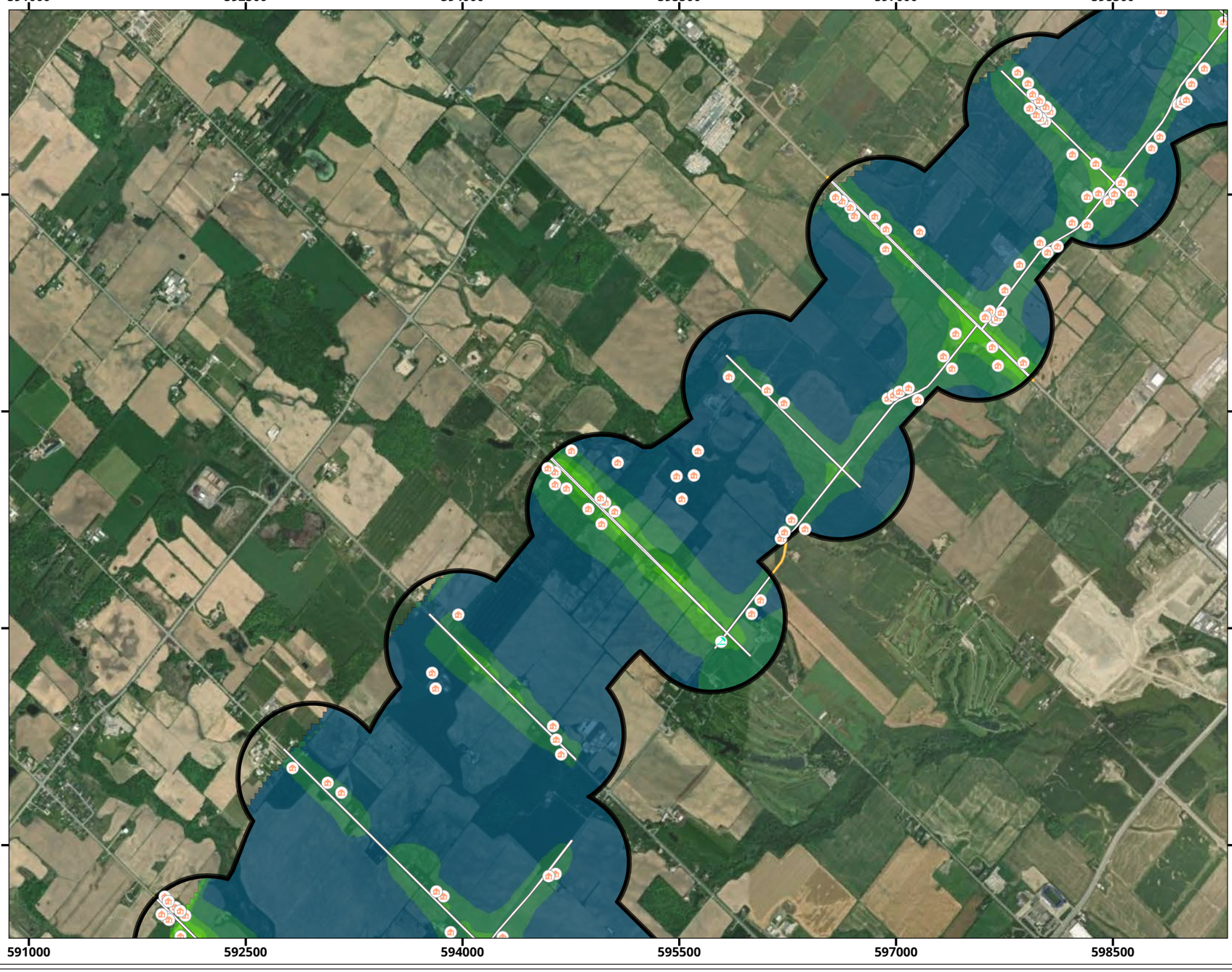

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.17.6
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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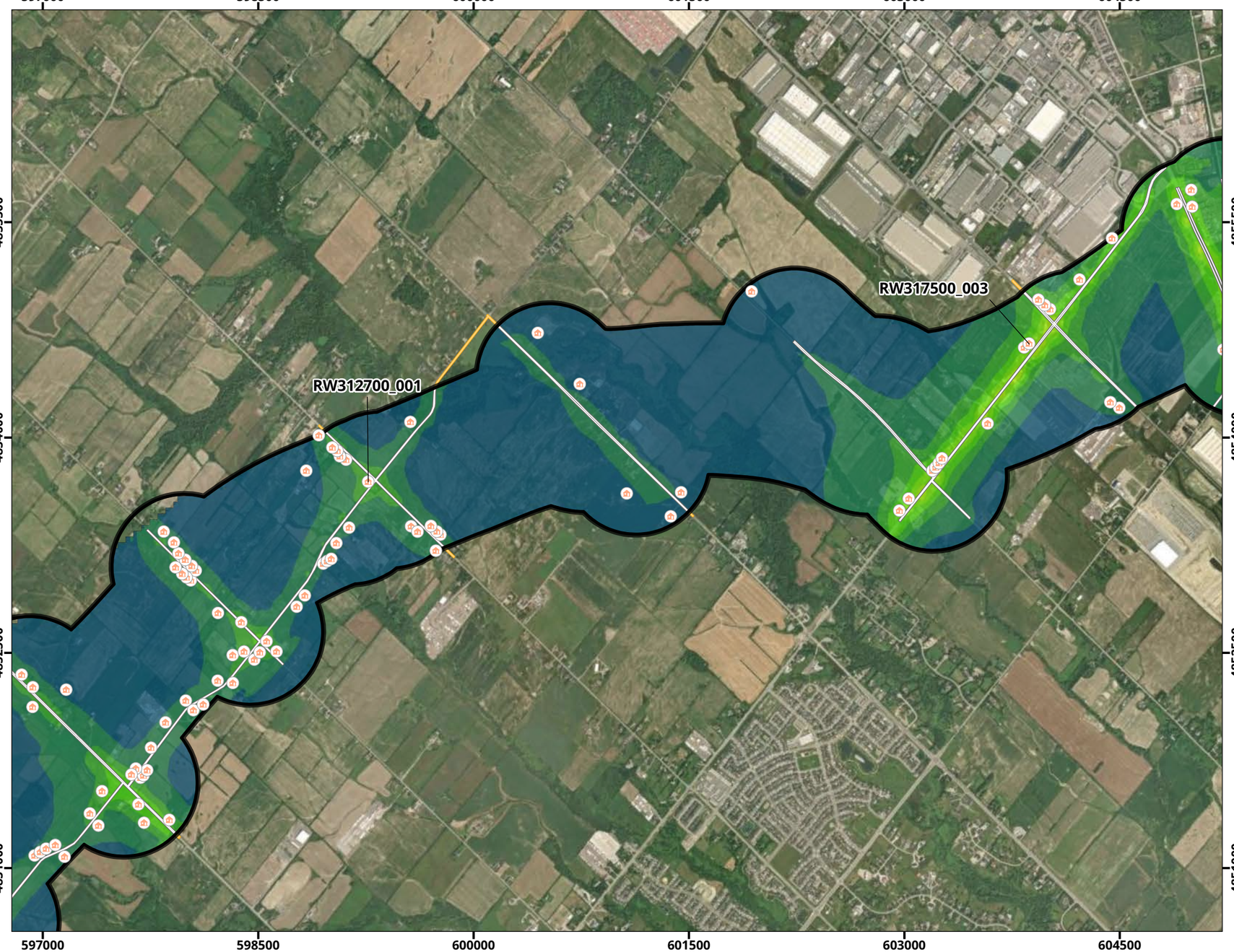

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E17.7
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

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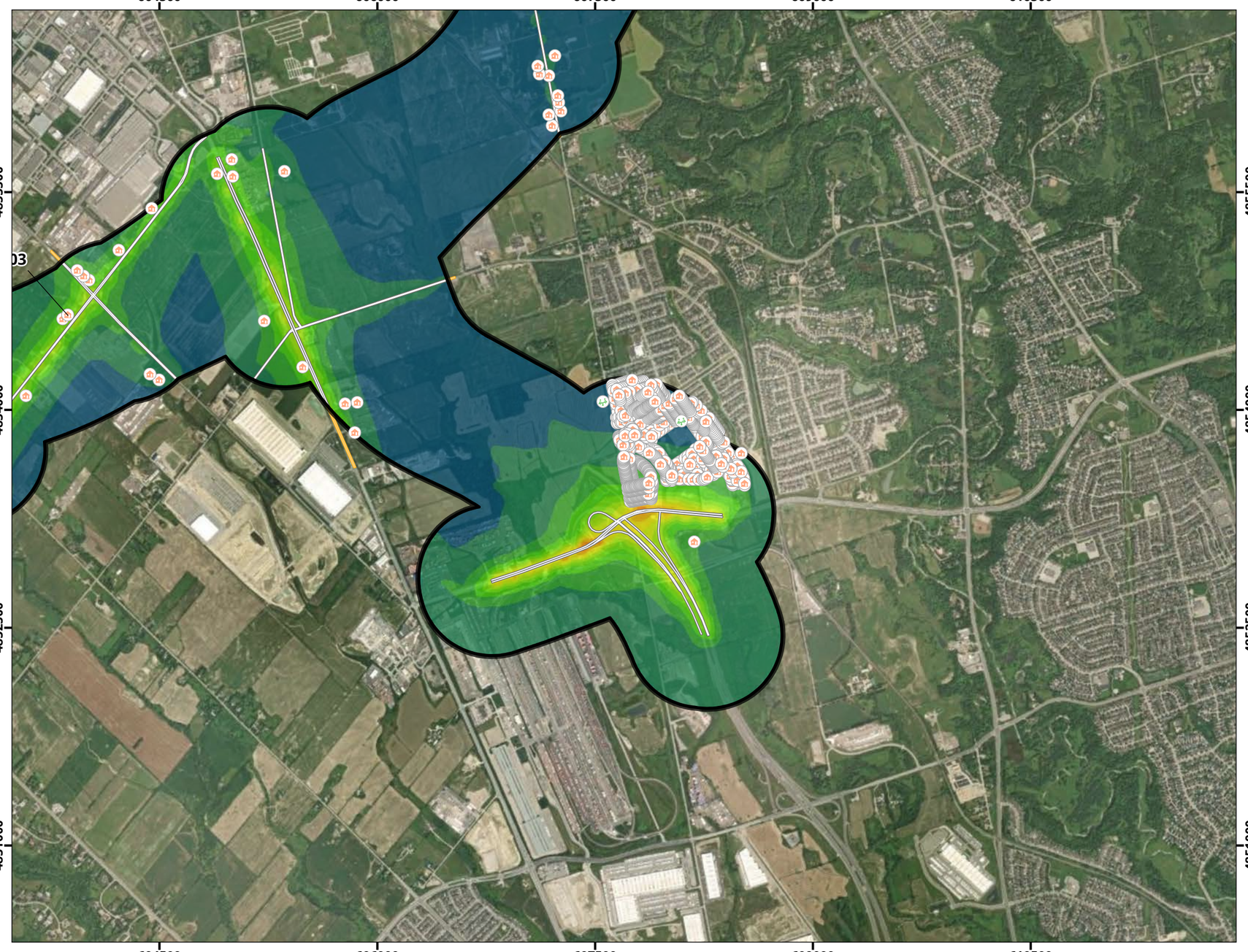

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E17.8
Approx. Scale:	1:30,000	
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Project #: 1301992A

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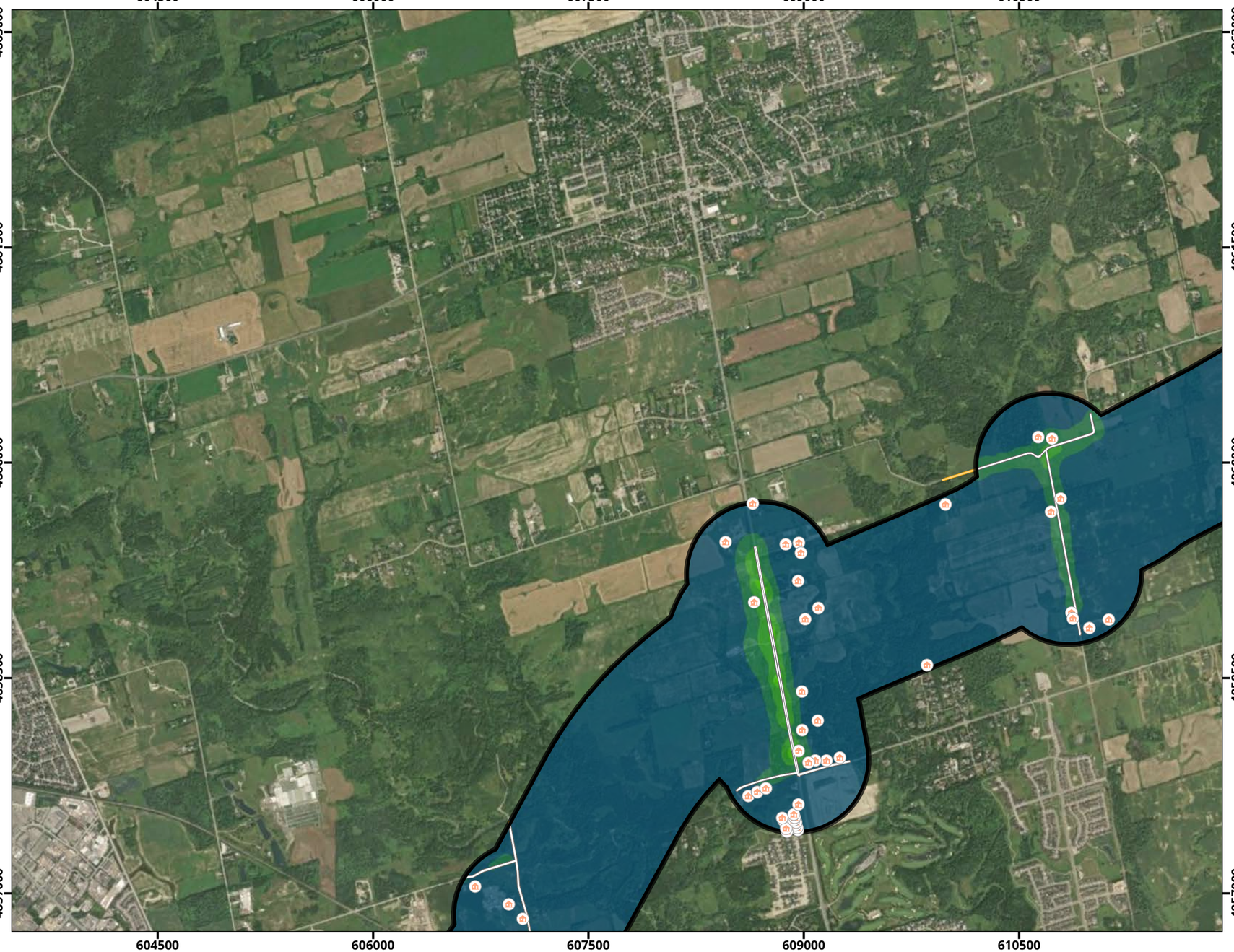

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E17.9
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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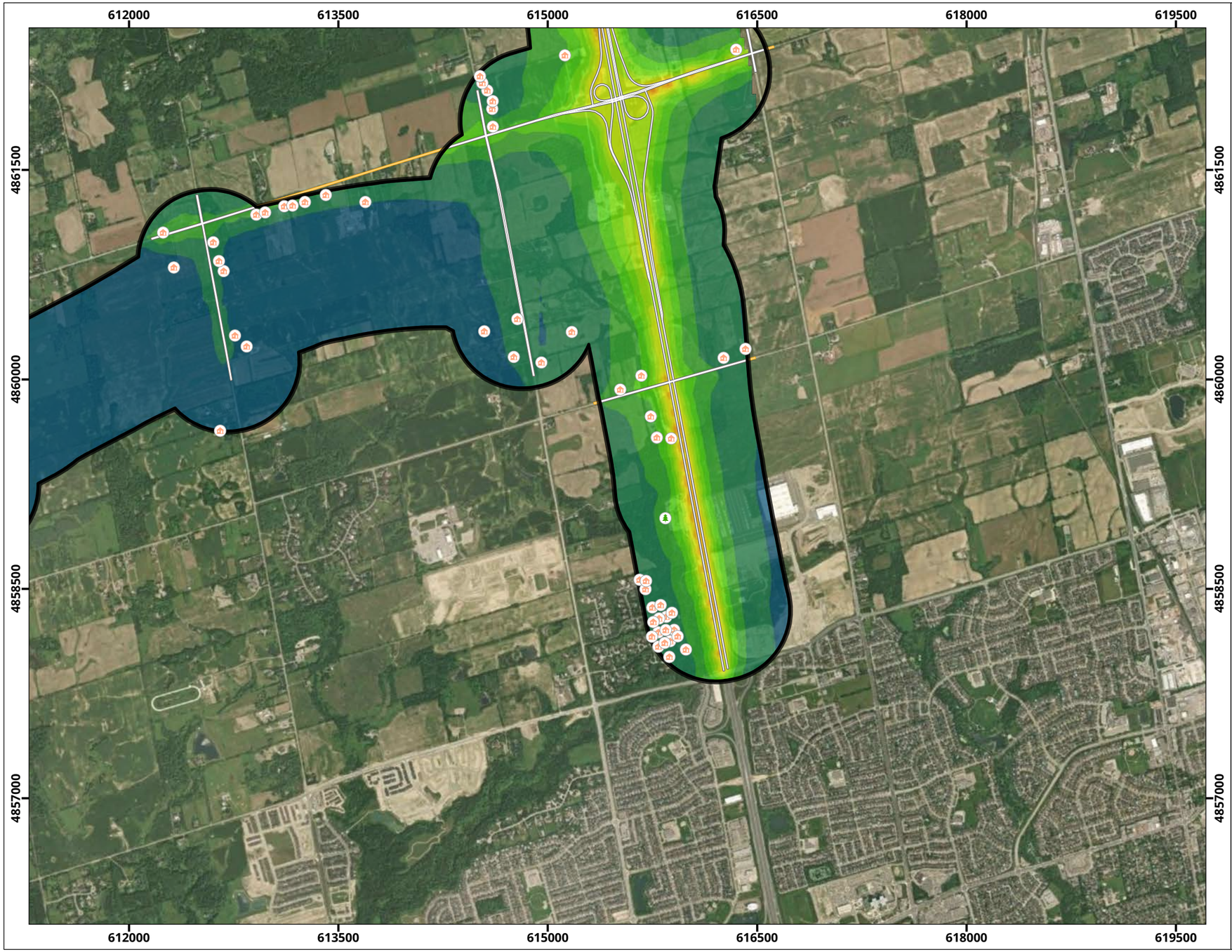

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.17.10
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

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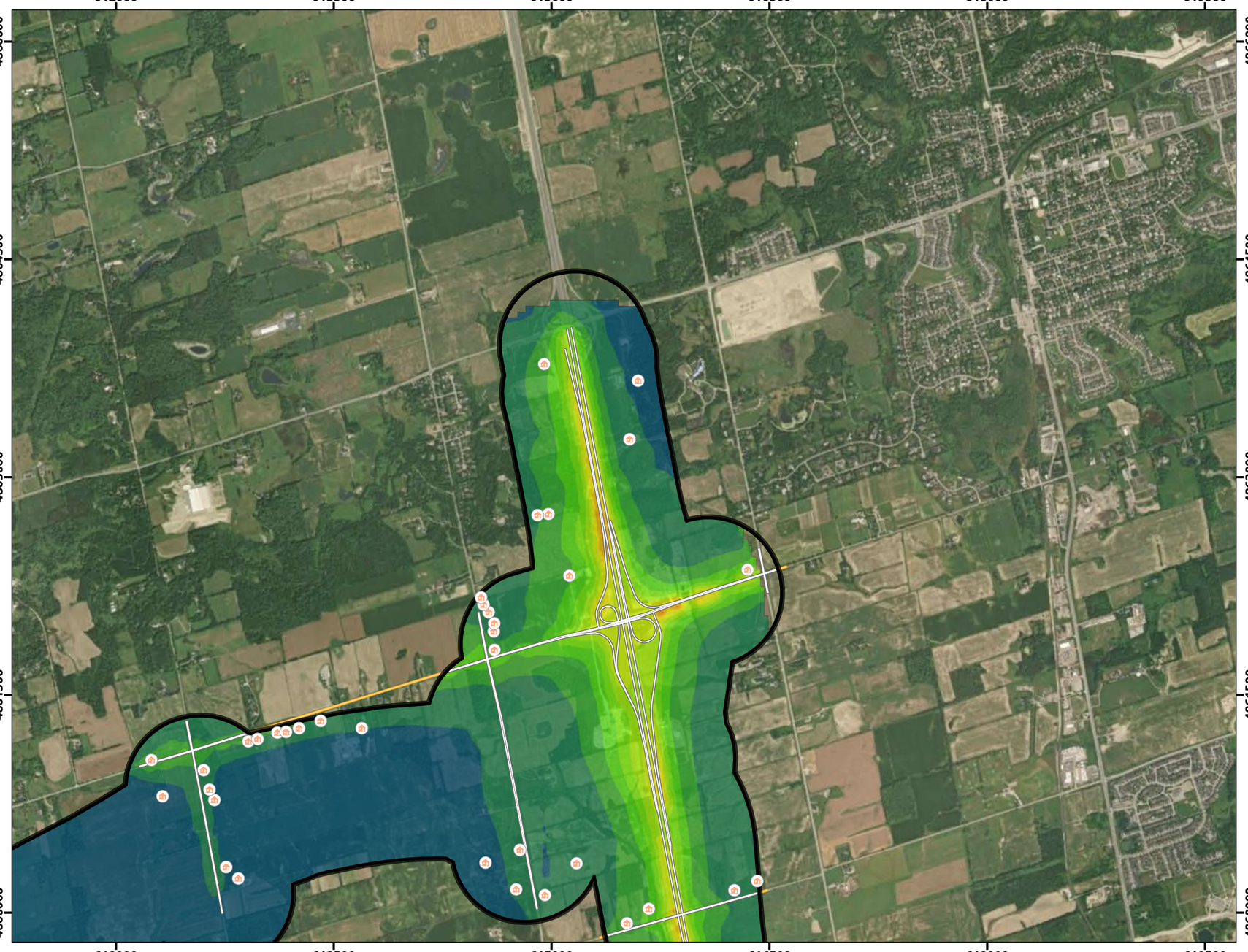


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

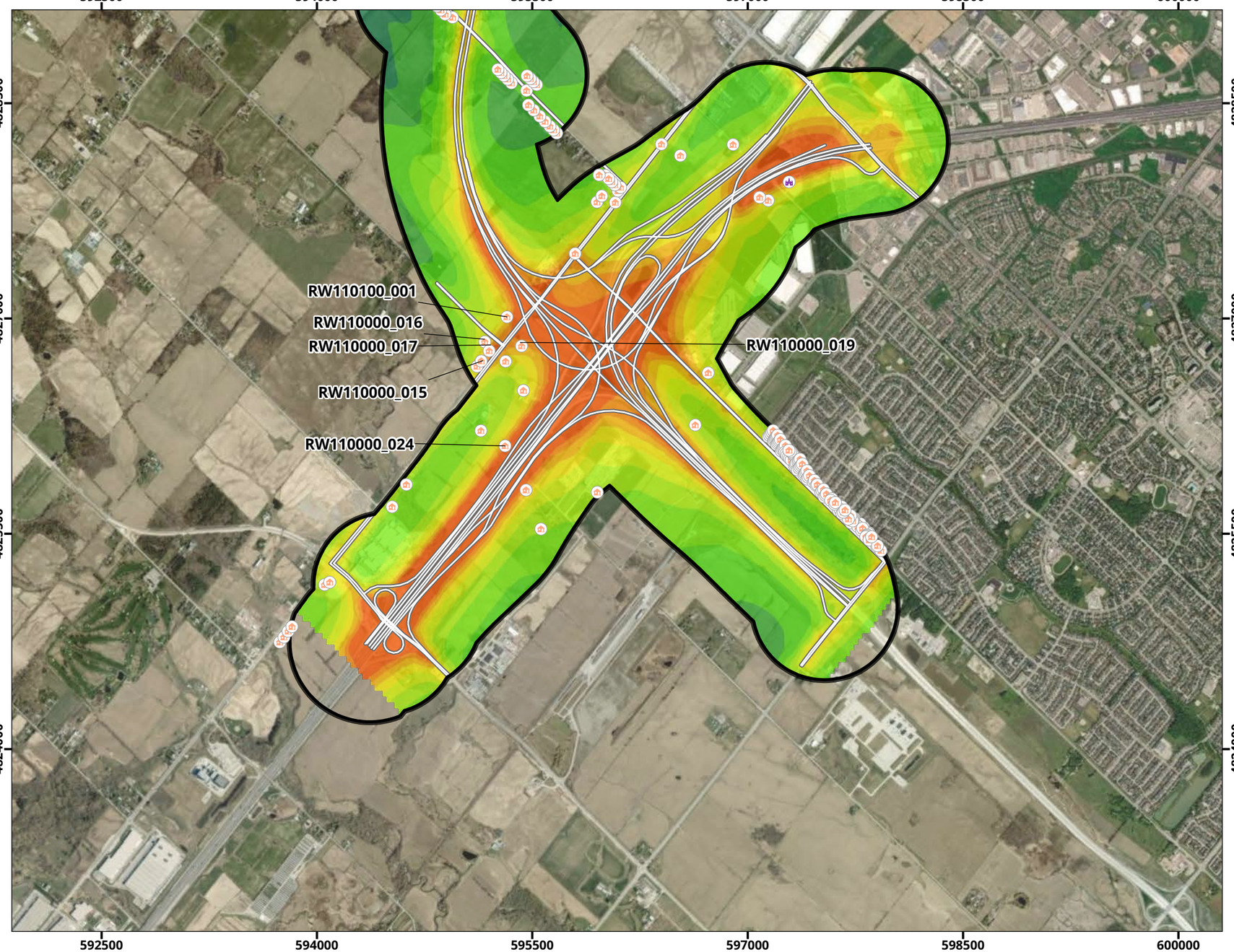
True North

Drawn by: PIP	Fig:	E.17.11	
Approx. Scale:	1:30,000		
Date Revised:	Aug 25, 2025		

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.18.1-11: 2051 Build – Model-Predicted Maximum 24-Hour PM_{10}



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

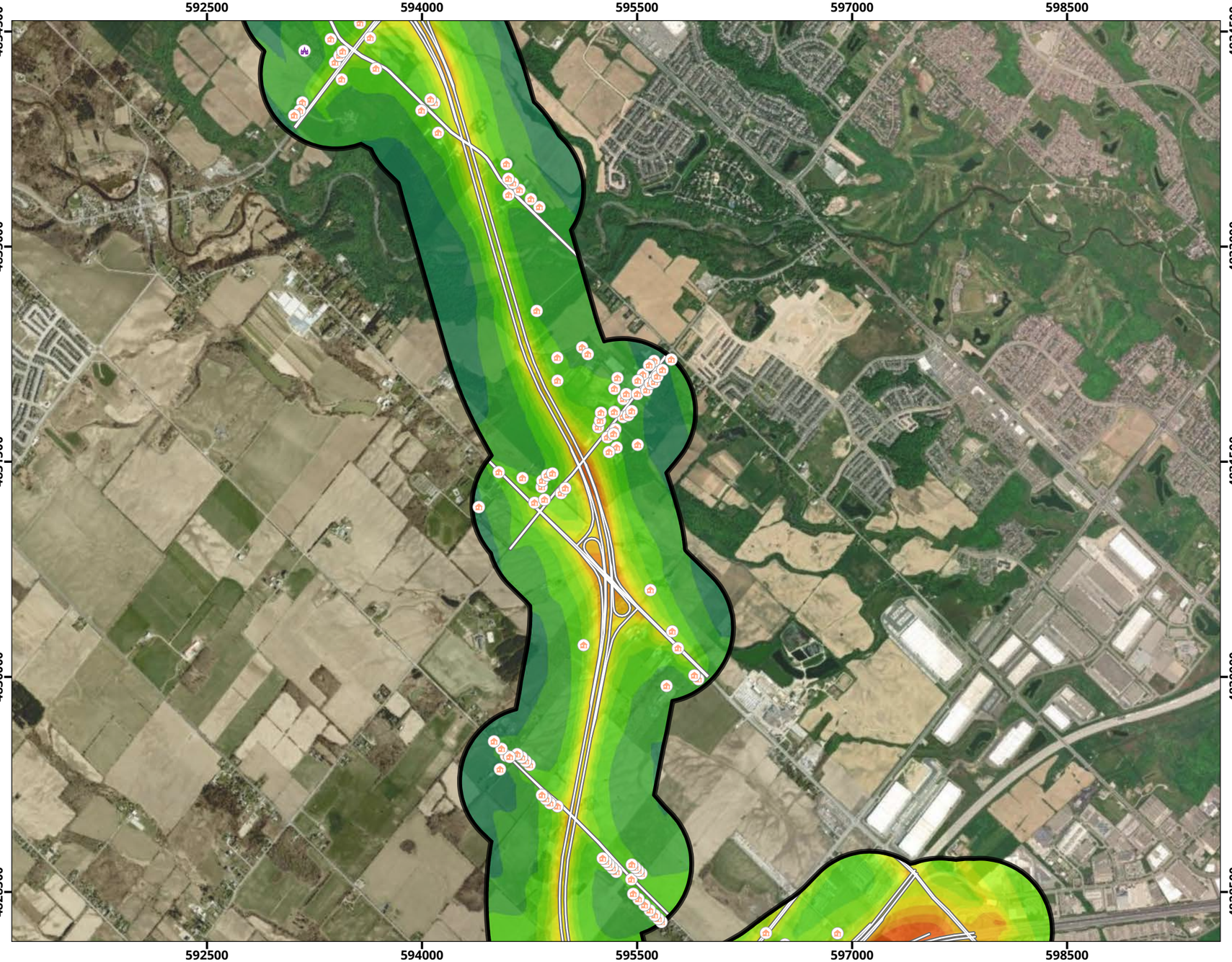
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.18.1
Approx. Scale:	1:30,000	
Date Revised:	Aug 27, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E18.2
Approx. Scale:		1:30,000
Date Revised:		Aug 27, 2025

Map Document: C:\Working\Folder\Jobs_America\P13019924\P13019924_apx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

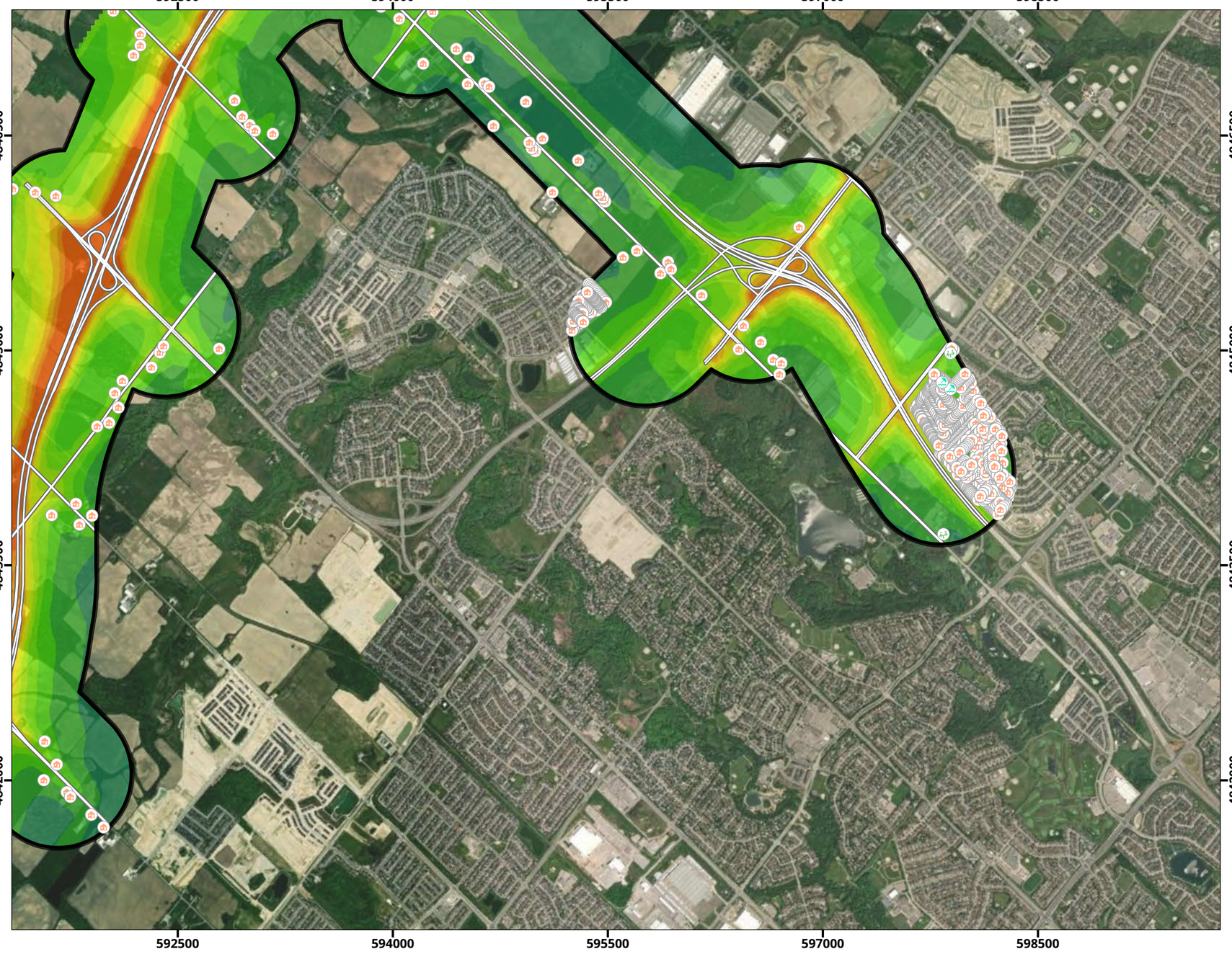
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.18.3
Approx. Scale:	1:30,000	
Date Revised:	Aug 27, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E18.4
Approx. Scale:	1:30,000	
Date Revised:	Aug 27, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P\1301992A.aprx

588000 589500 591000 592500 594000

4846500 4845000 4843500 4842000

RW226000_001

RW224200_001

Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

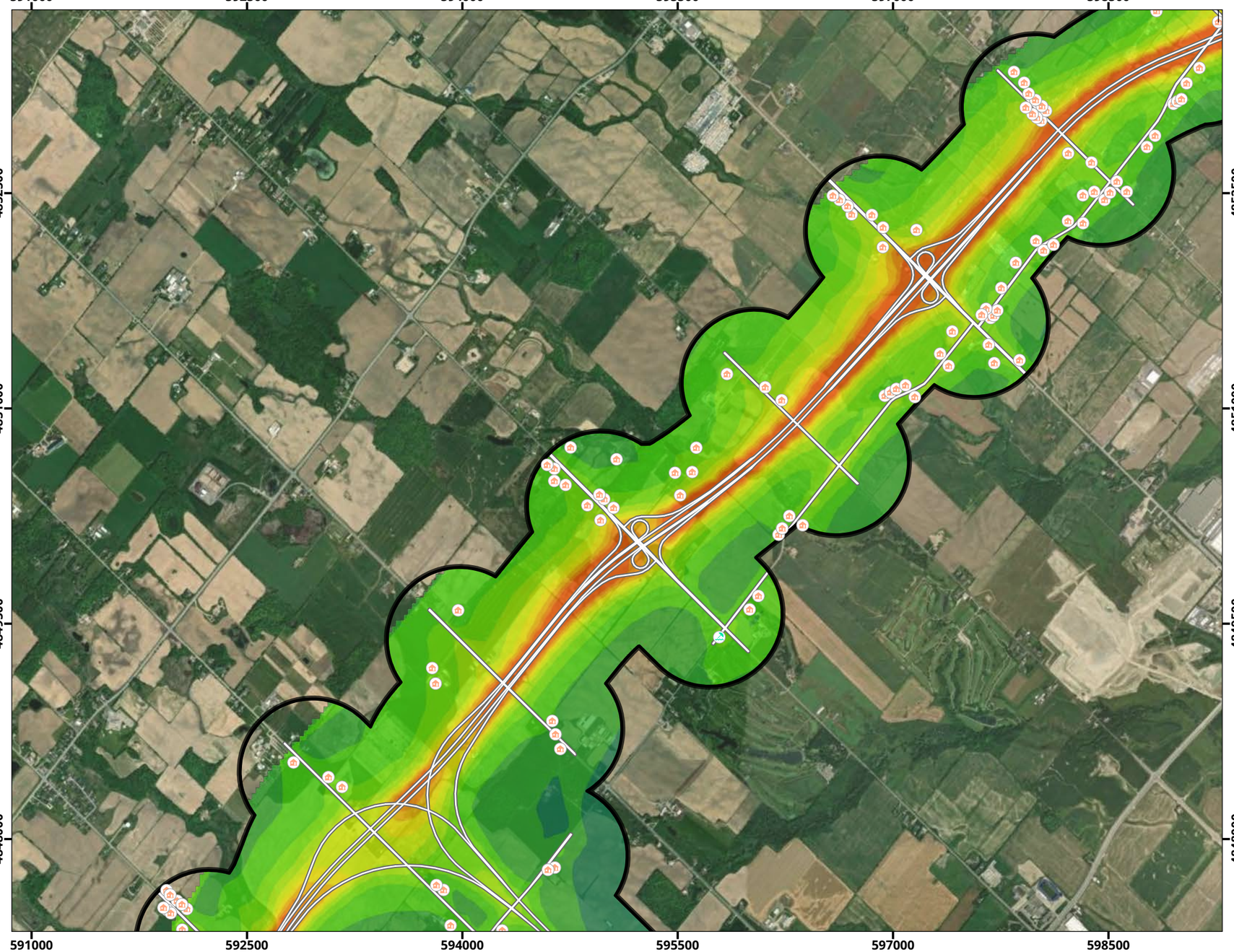
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E18.5
Approx. Scale:		1:30,000
Date Revised:		Aug 27, 2025

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

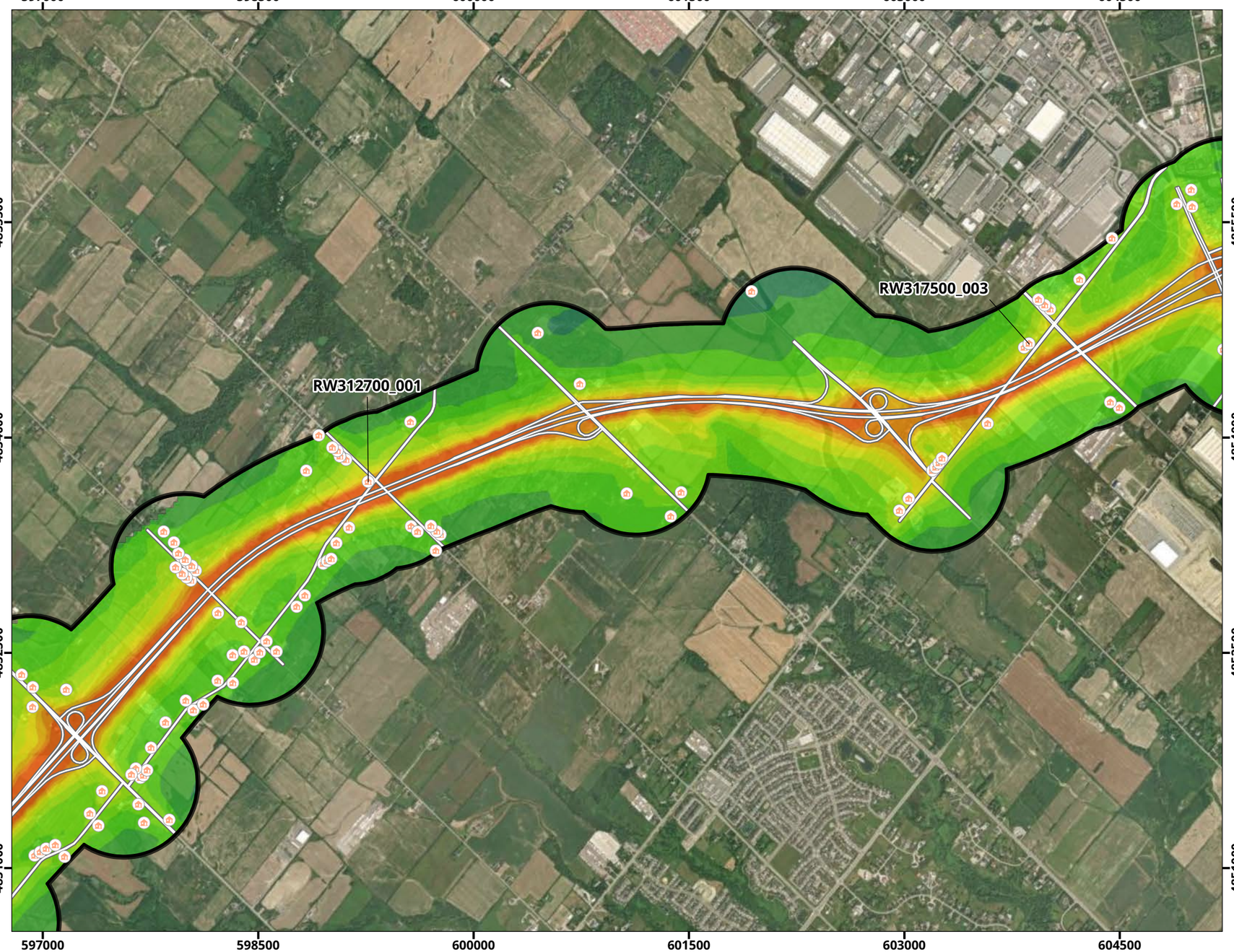
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E18.6	
Approx. Scale:		1:30,000	
Date Revised:		Aug 27, 2025	

Project #: 1301992A

Map Document: C:\Work\Golder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

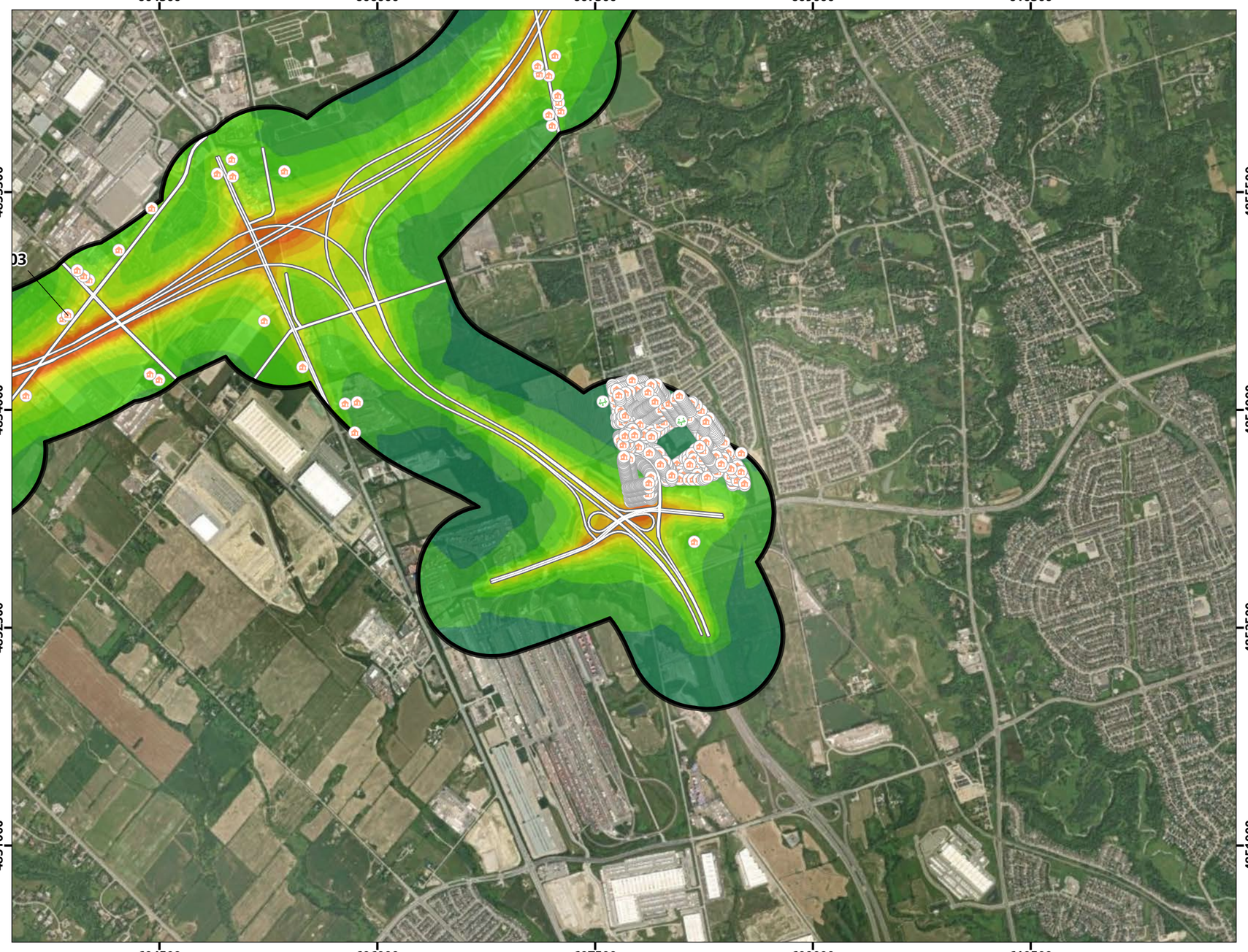
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E18.7
Approx. Scale:		1:30,000
Date Revised:		Aug 27, 2025

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

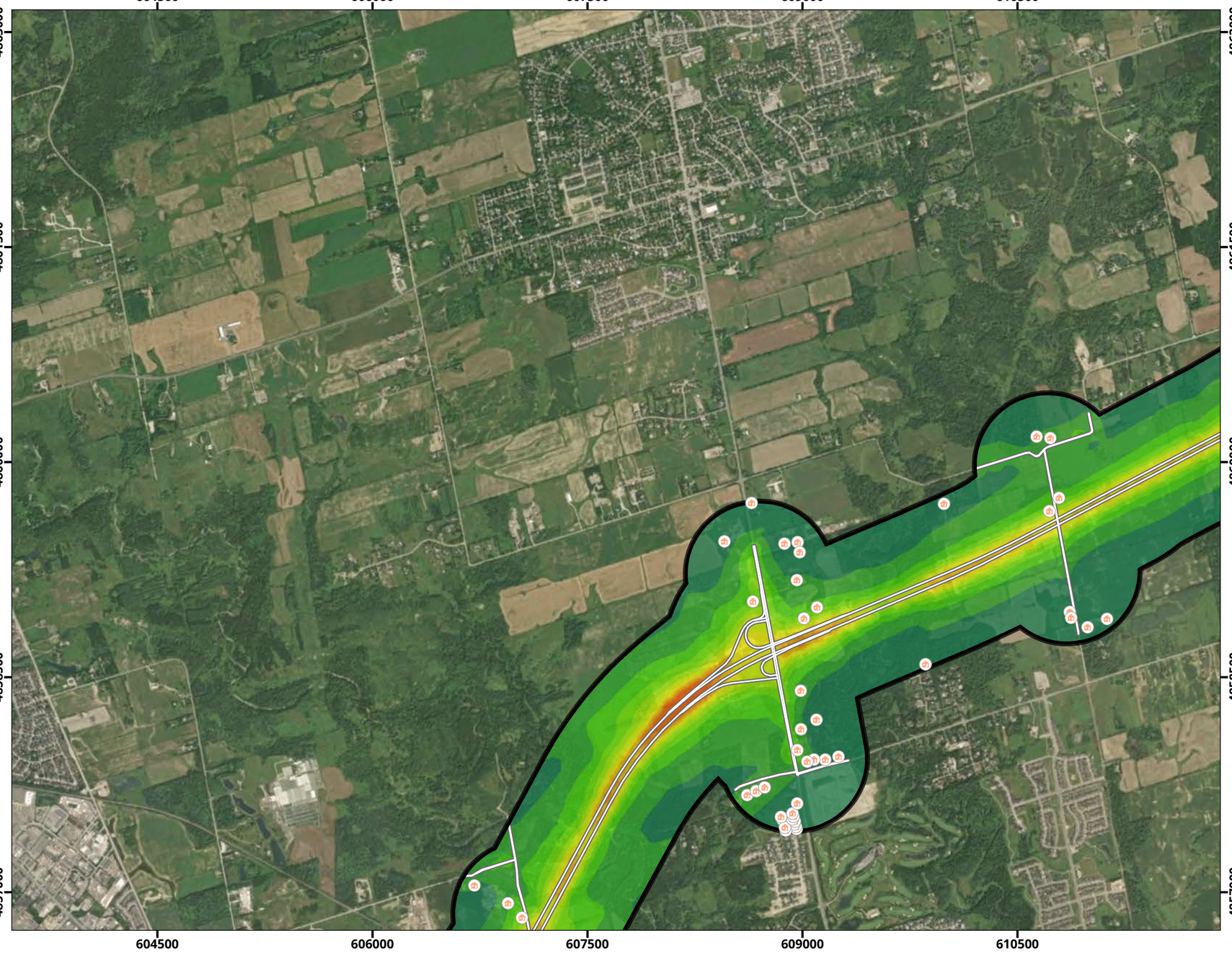
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E18.8	
Approx. Scale:		1:30,000	
Date Revised:		Aug 27, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

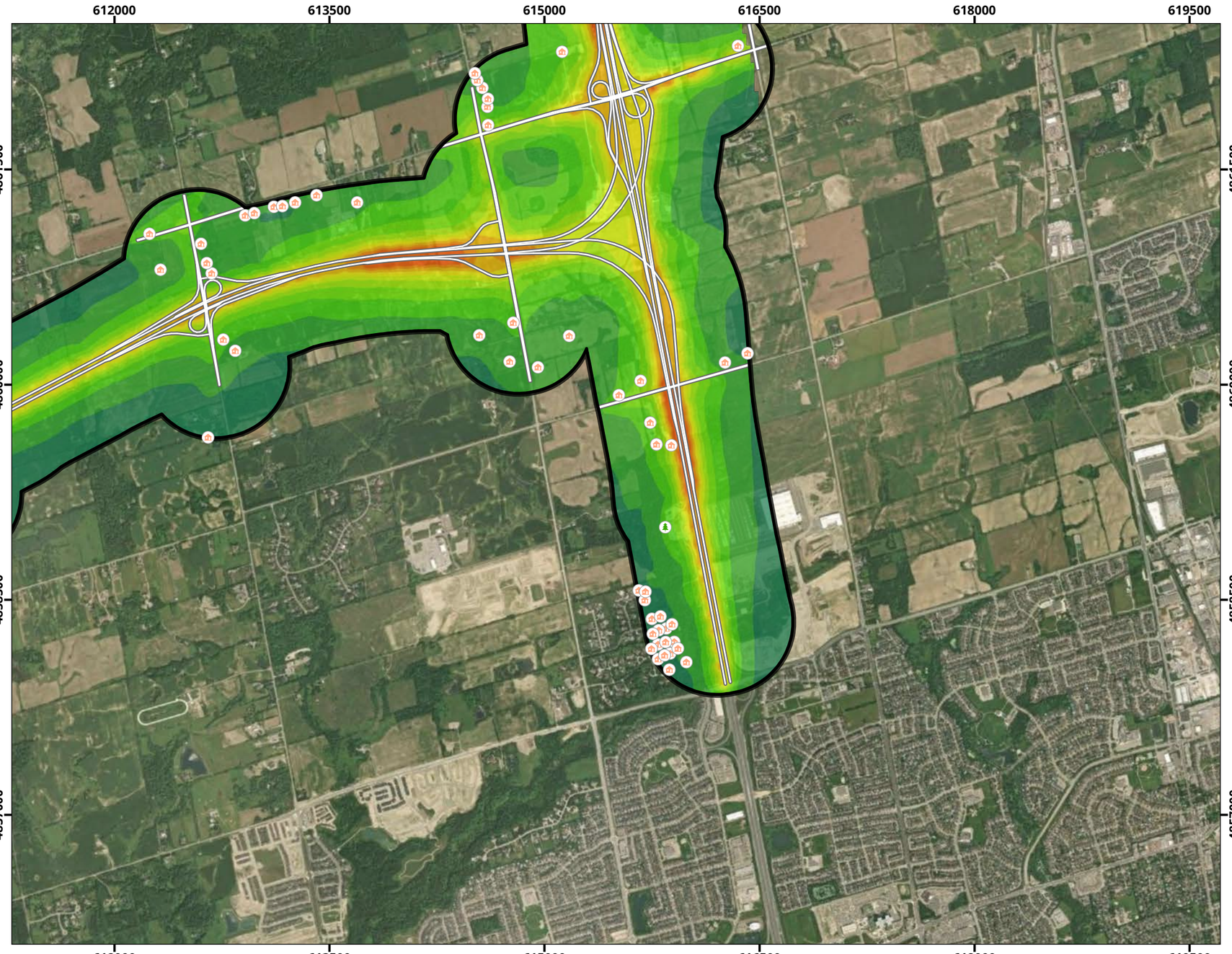
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E18.9	
Approx. Scale:		1:30,000	
Date Revised:		Aug 27, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.18.10
Approx. Scale:		1:30,000
Date Revised:		Aug 27, 2025

Map Document: C:\Working\Folder\Jobs_America\PI 301992A\PI 301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- < 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Background Concentration: 22.60 µg/m³
MECP AAQC: 50 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum (1st highest) Predicted 24-Hour PM_{10} Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

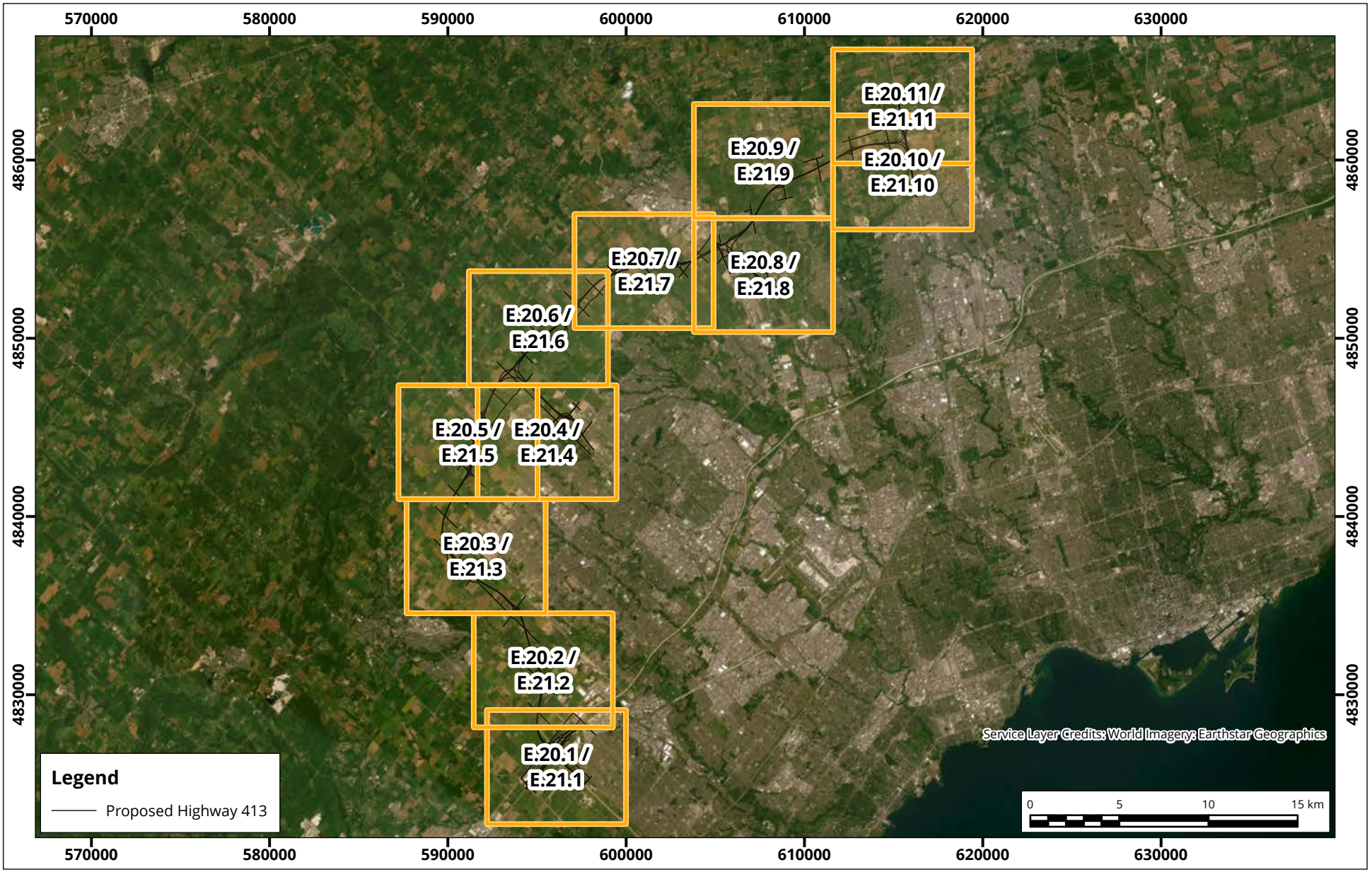
True North

Drawn by: PIP	Fig:	E.18.11	
Approx. Scale:		1:30,000	
Date Revised:		Aug 27, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\ 301992A\P\1301992A.aprx

Appendix E.19: Index Map – Annual $PM_{2.5}$



Index Map - E.20 & E.21

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

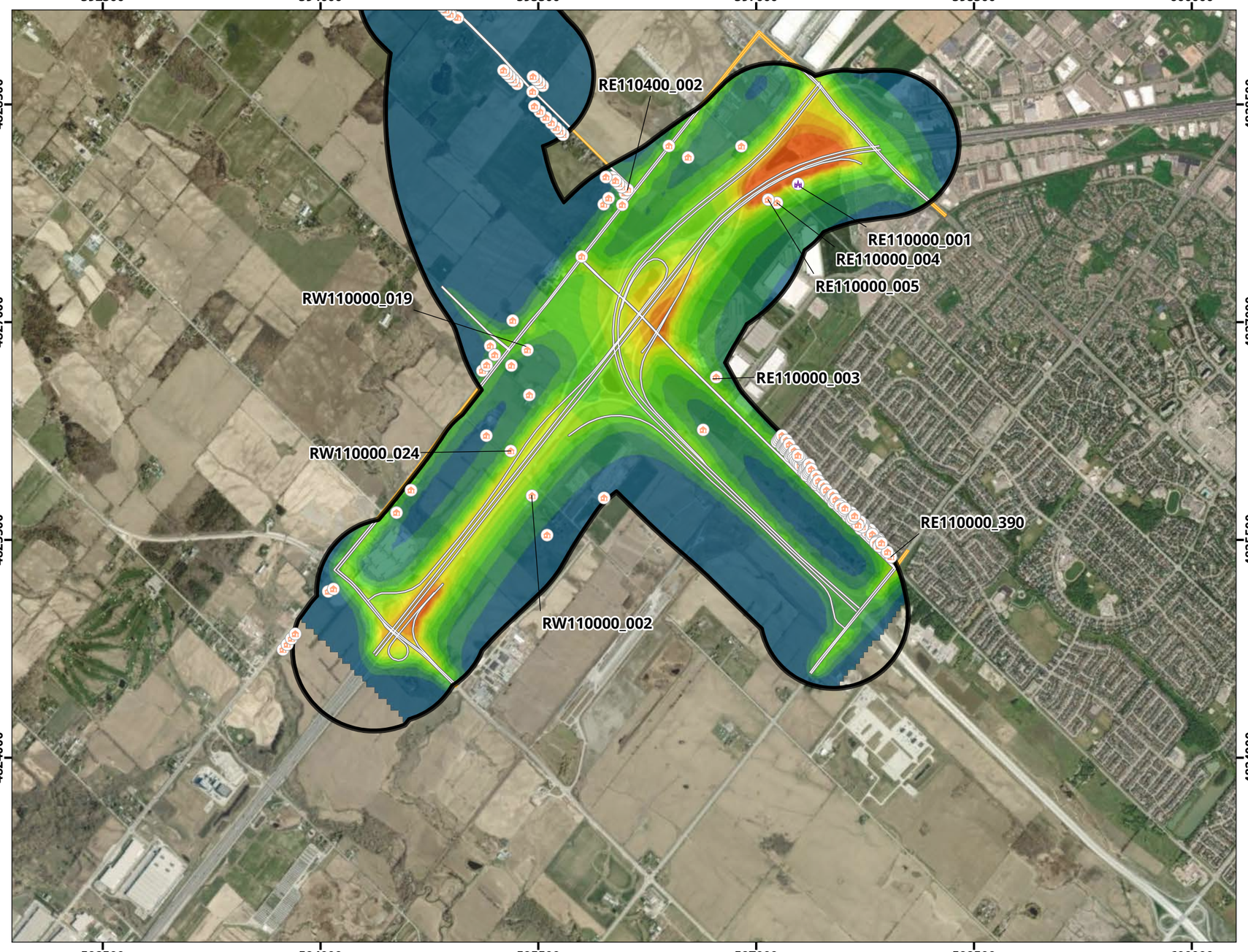
True North

Project #: 1301992A

Drawn by: PIP	Figure: E.19
Approx. Scale:	1:300,000
Date Revised: Aug 22, 2025	

Map Document: C:\Working Folder\Jobs_America\P1301992A\P1301992A.aprx

Appendix E.20.1-11: 2051 No-Build – Model-Predicted Maximum Annual $PM_{2.5}$



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

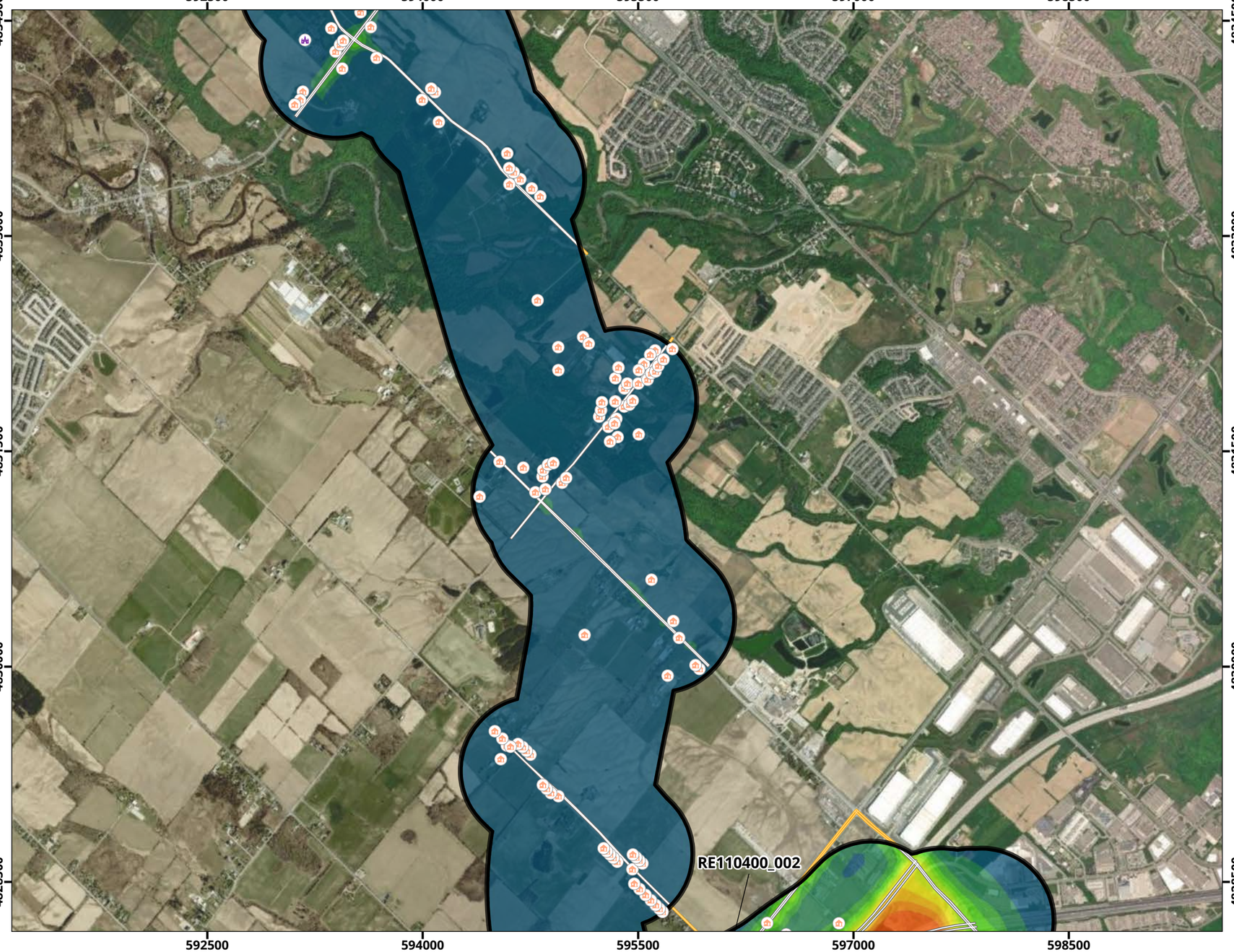
Highway 413 - Ontario

True North

Drawn by: PIP	Fig: E.20.1		
Approx. Scale:	1:30,000		
Date Revised:	Aug 25, 2025		

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

7.00 - 7.75
7.75 - 8.00
8.00 - 8.25
8.25 - 8.50
8.50 - 8.75
8.75 - 9.00
9.00 - 9.25
9.25 - 9.50
9.50 - 9.75
9.75 - 10.0
> 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

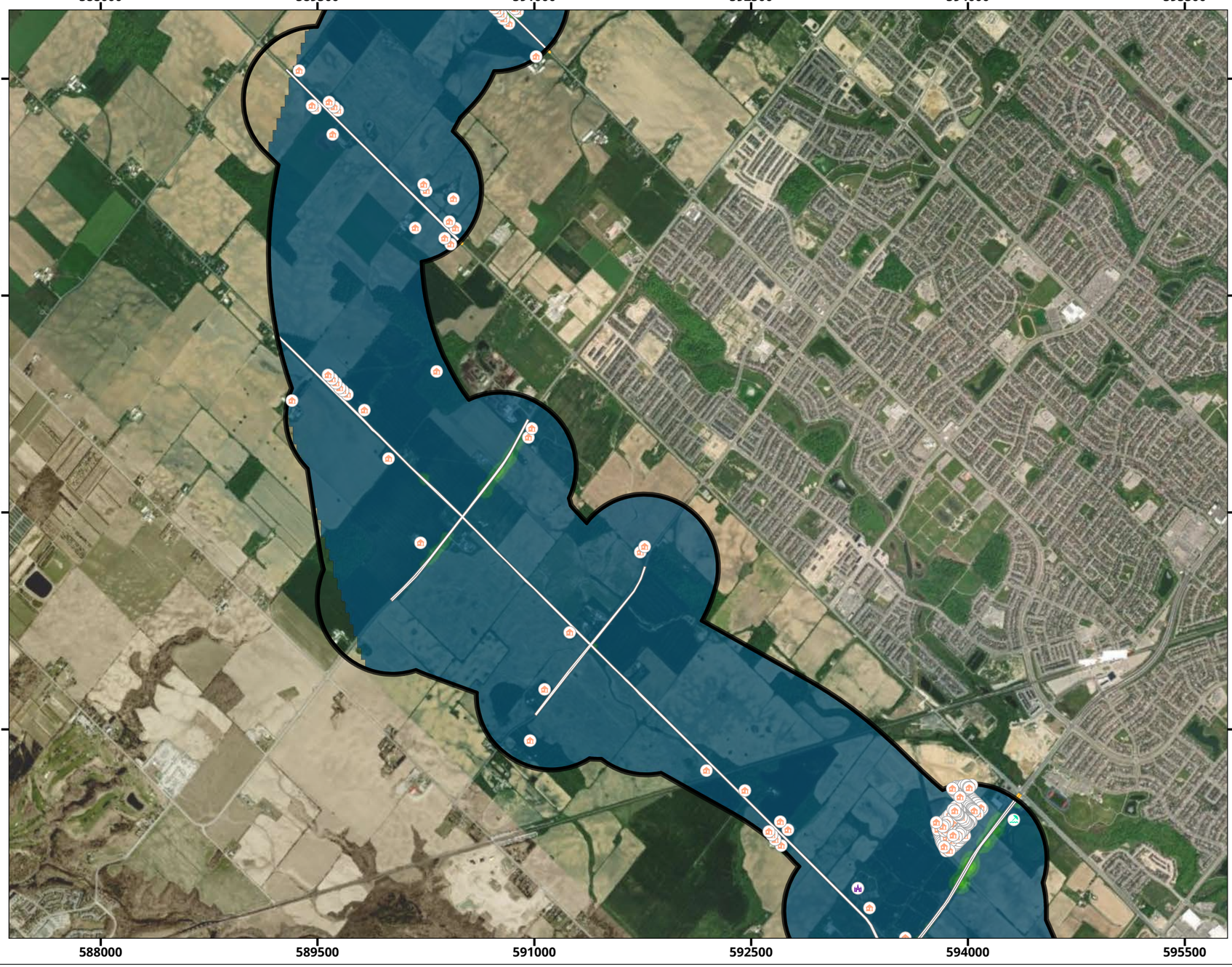
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.20.2
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

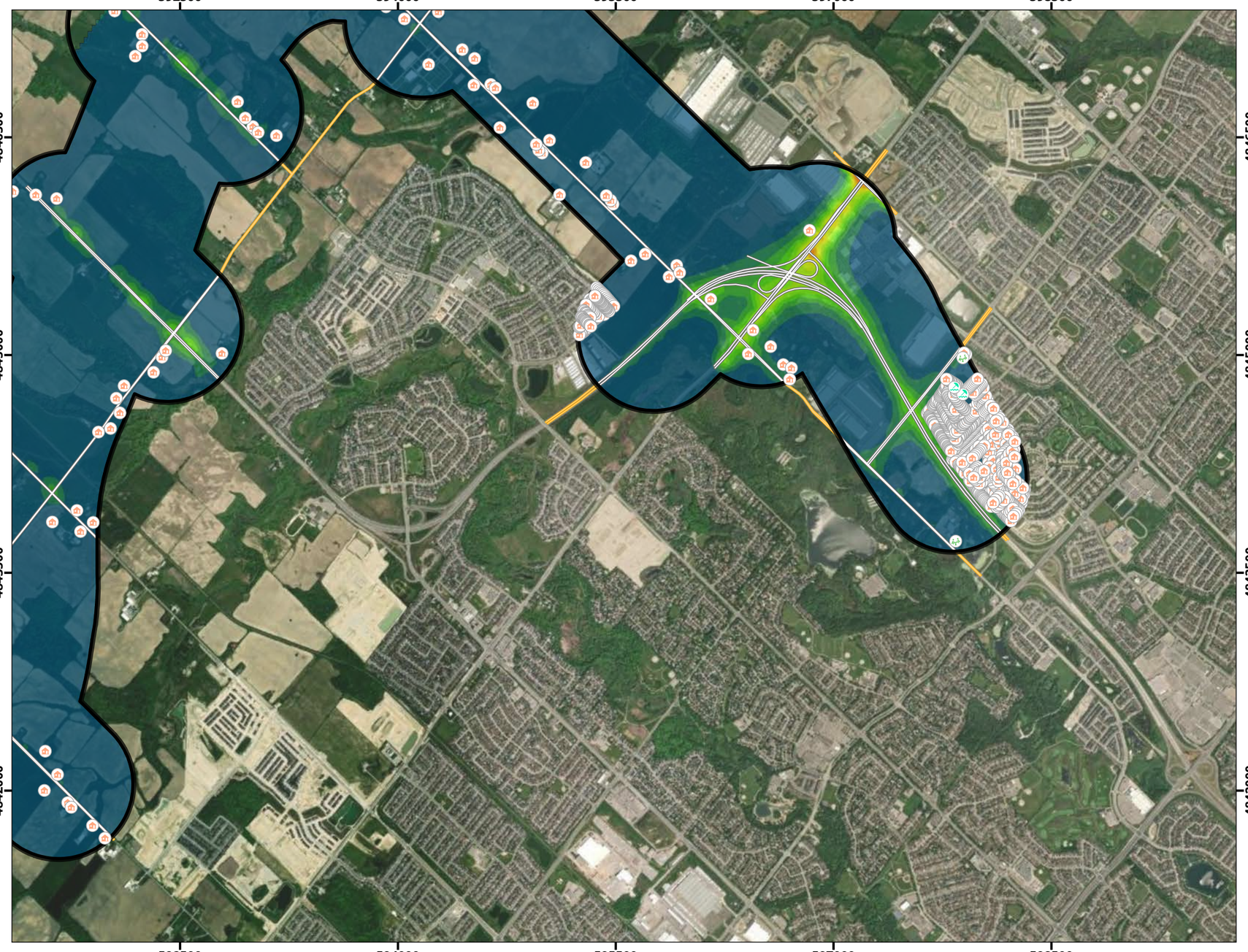
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E20.3
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Golder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

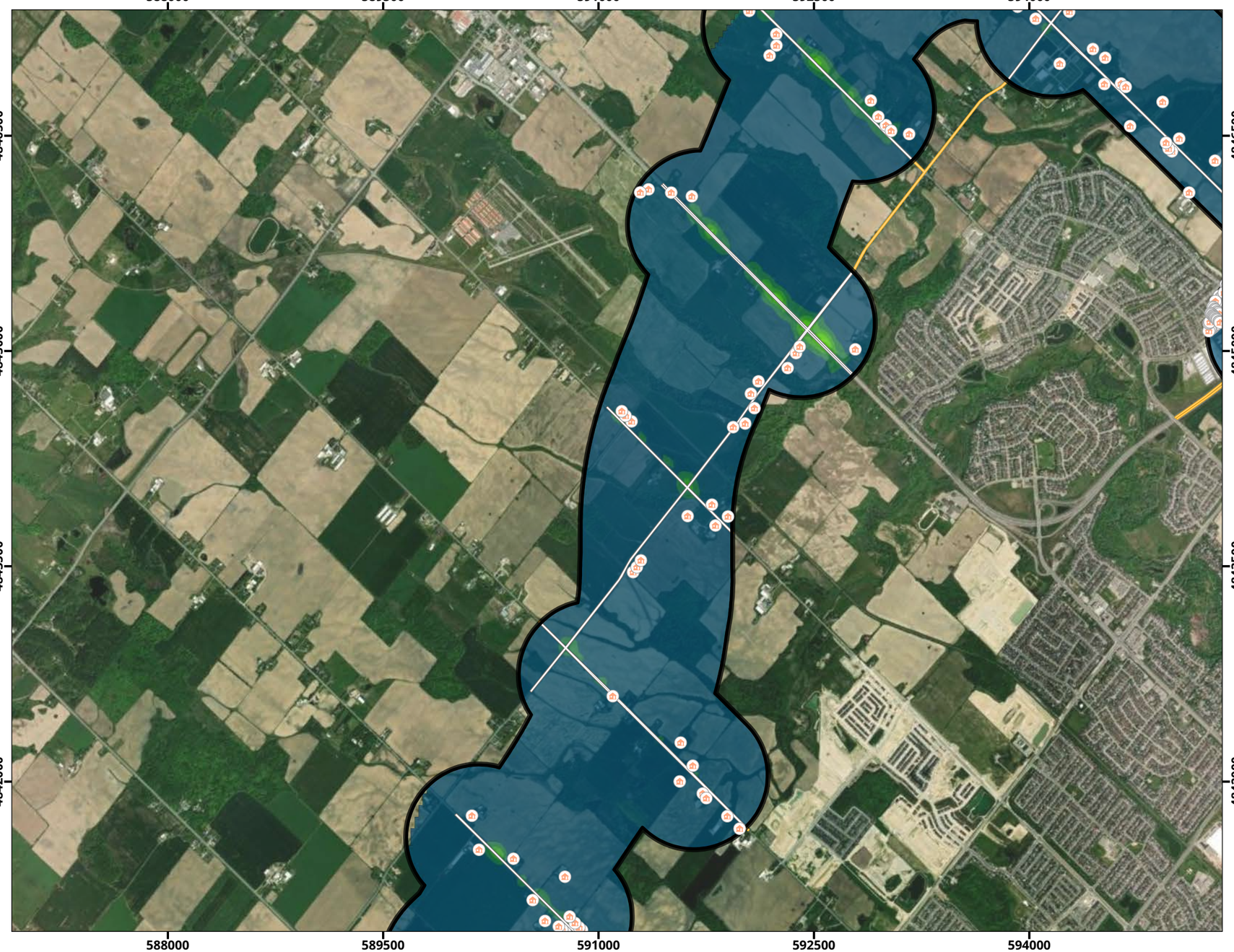
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.20.4
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

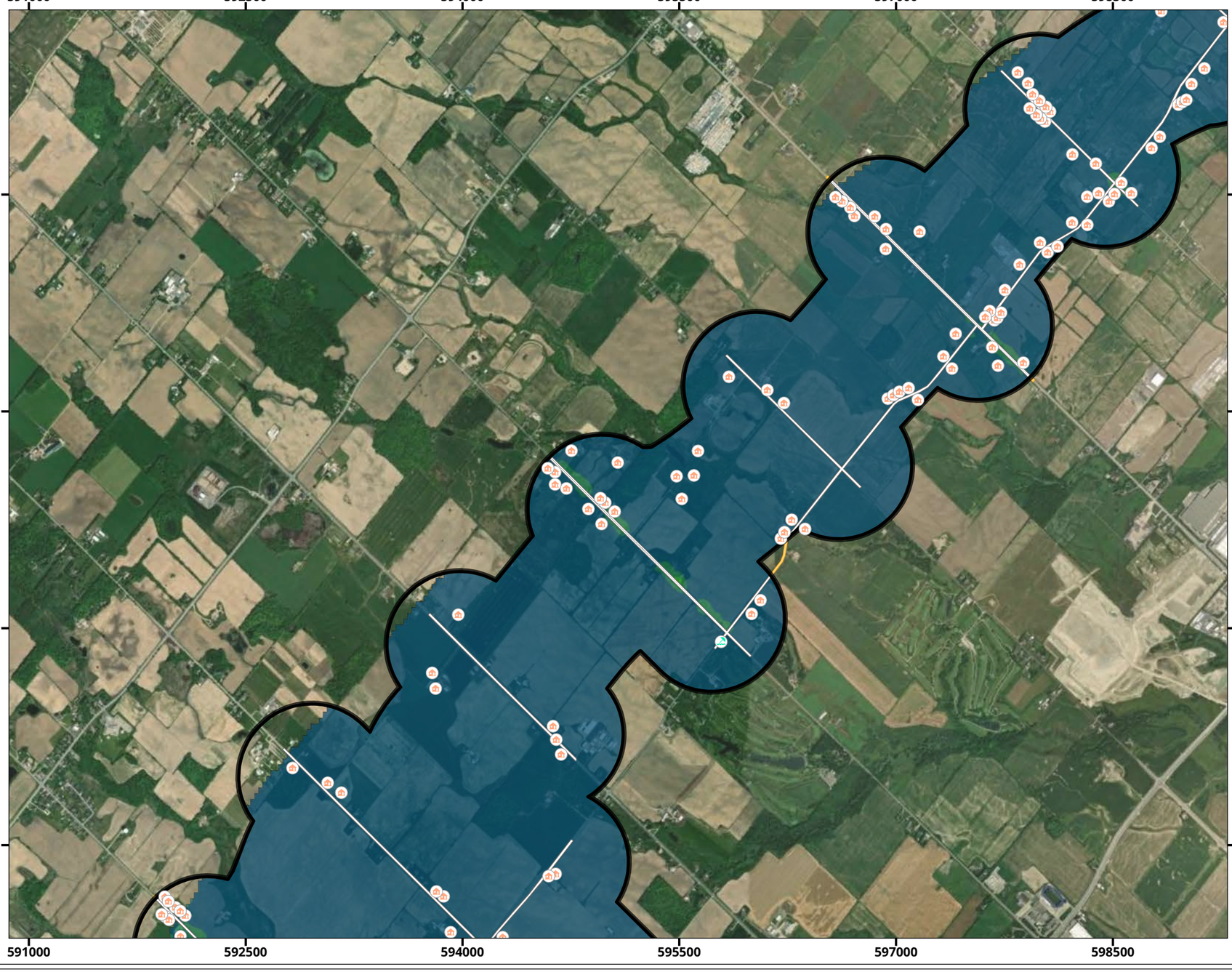
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.20.5
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Work\ing\Folder\Jobs_America\P\1301992A\P\1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

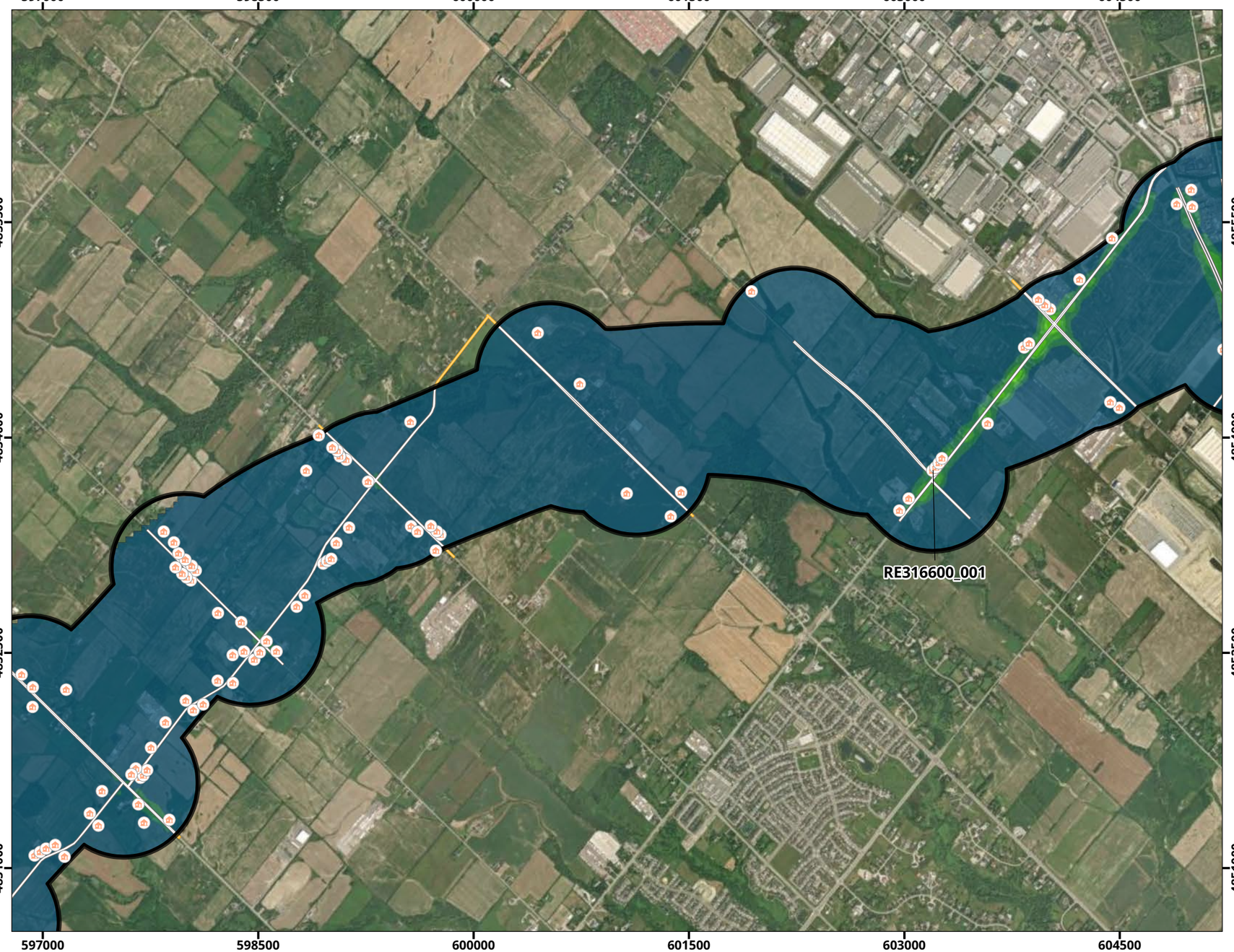
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.20.6
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

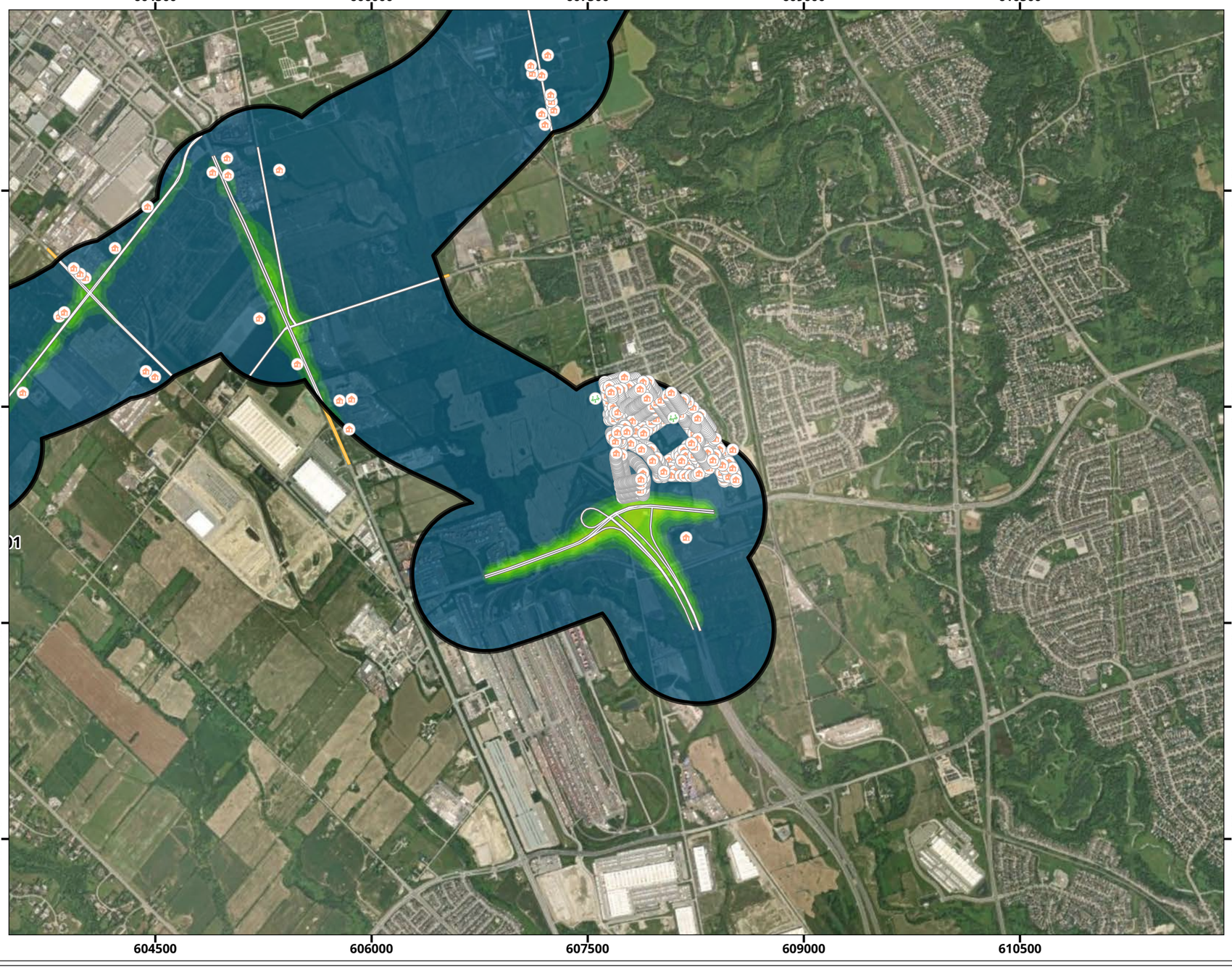
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.20.7
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.20.8
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Project #: 1301992A

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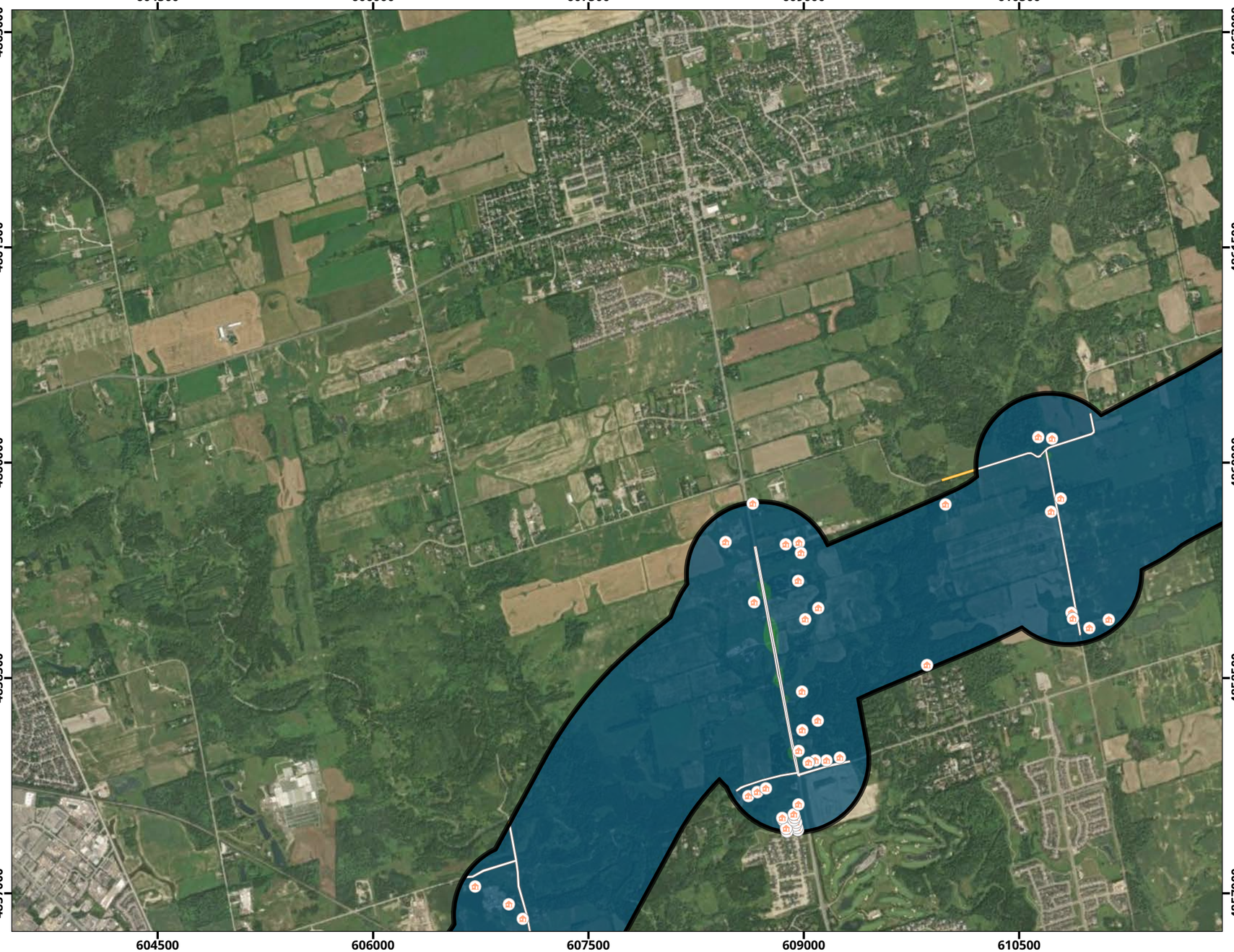

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E20.9	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

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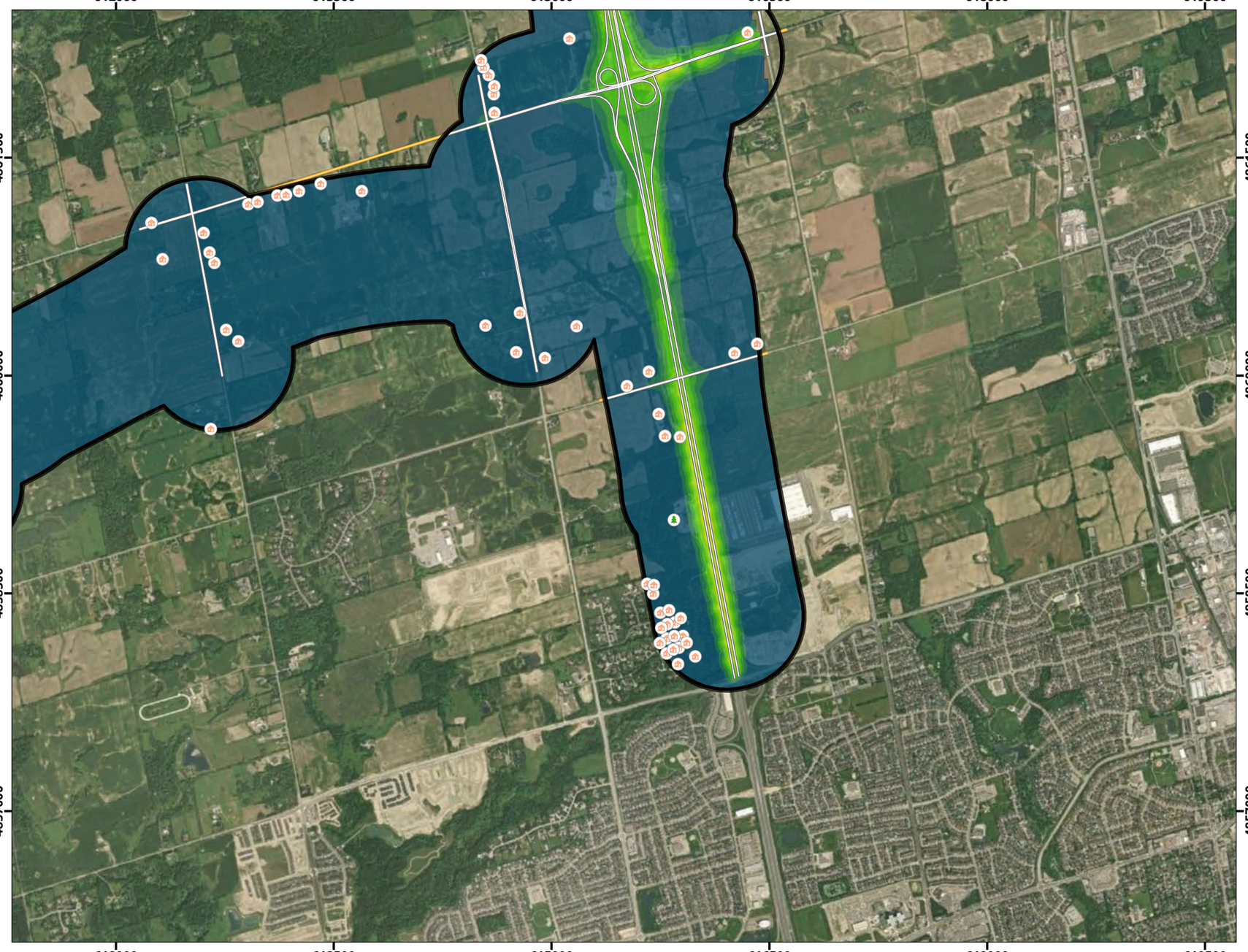
4861500

4860000

4858500

4857000



Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Park and Conservation

Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Map Document: C:\Work\ngFolder\Jobs_America\P\1301992A\P\1301992A.aprx

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.20.10
Approx. Scale:	1:30,000	
Date Revised:	Aug 25, 2025	

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 No-Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.20.11
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx

Appendix E.21.1-11: 2051 Build – Model-Predicted Maximum Annual $PM_{2.5}$

Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

Place of Worship

Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E21.1
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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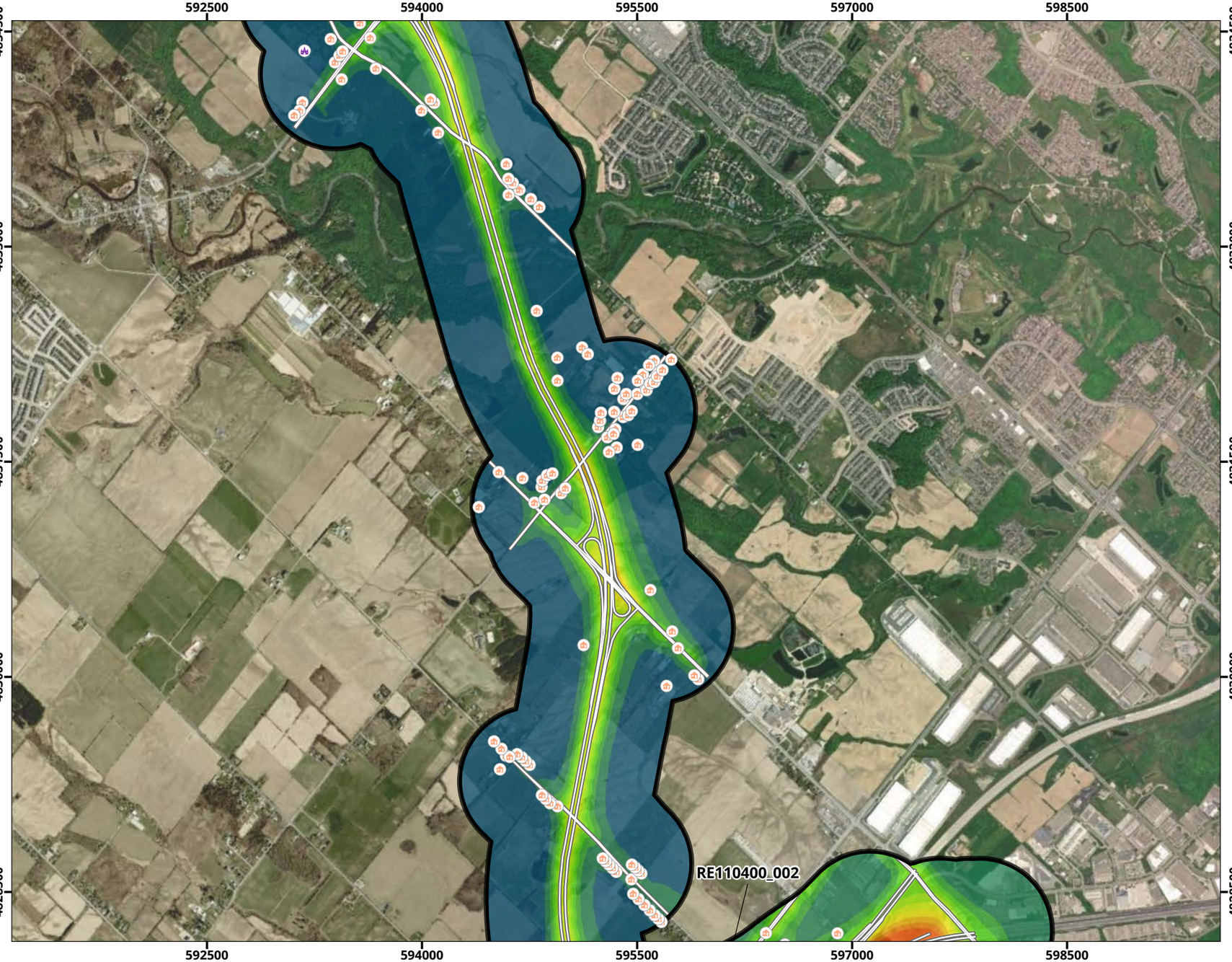

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Place of Worship
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Maxar Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E21.2	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P\1301992A\P\1301992A.aprx

Legend

500 m Study Area

Modelled Roadways

Sensitive Receptors

- Place of Worship
- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E21.3	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E21.4
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

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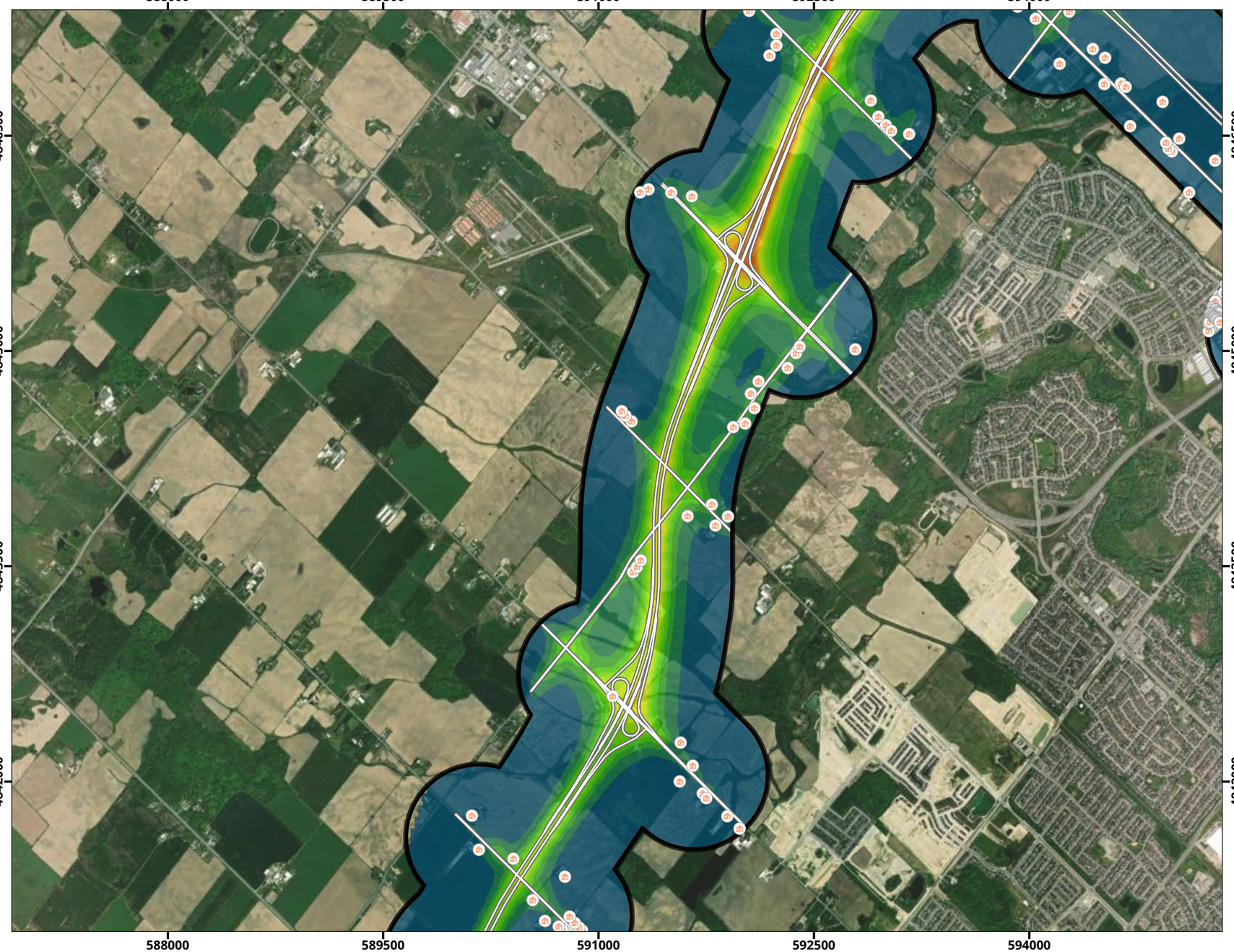

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E21.5
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Project #: 1301992A

Map Document: C:\Work\ngFolder\Jobs_America\P\1301992A\P\1301992A.aprx

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Recreation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.21.6
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

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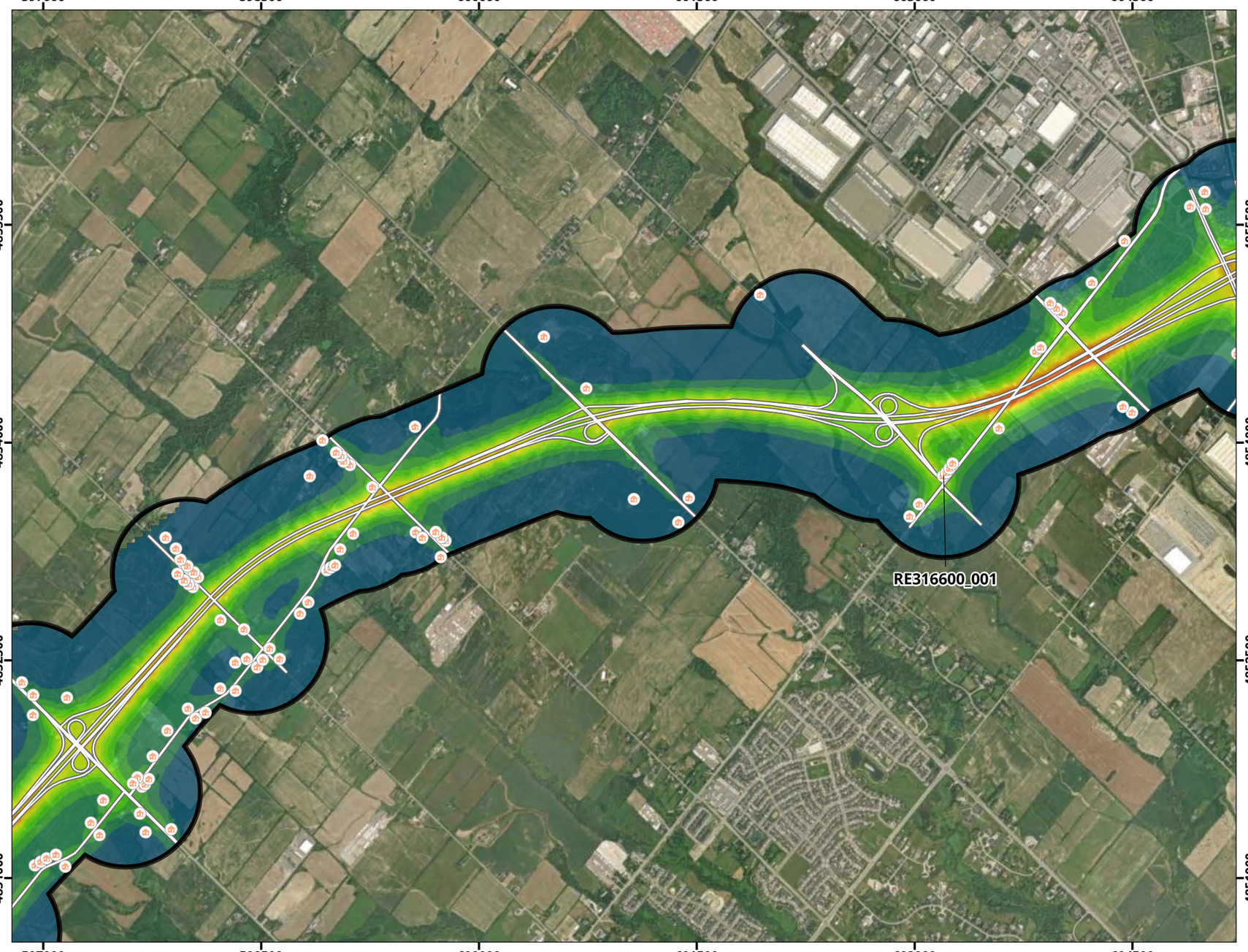

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N

Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.21.7	
Approx. Scale:		1:30,000	
Date Revised:		Aug 25, 2025	

Project #: 1301992A

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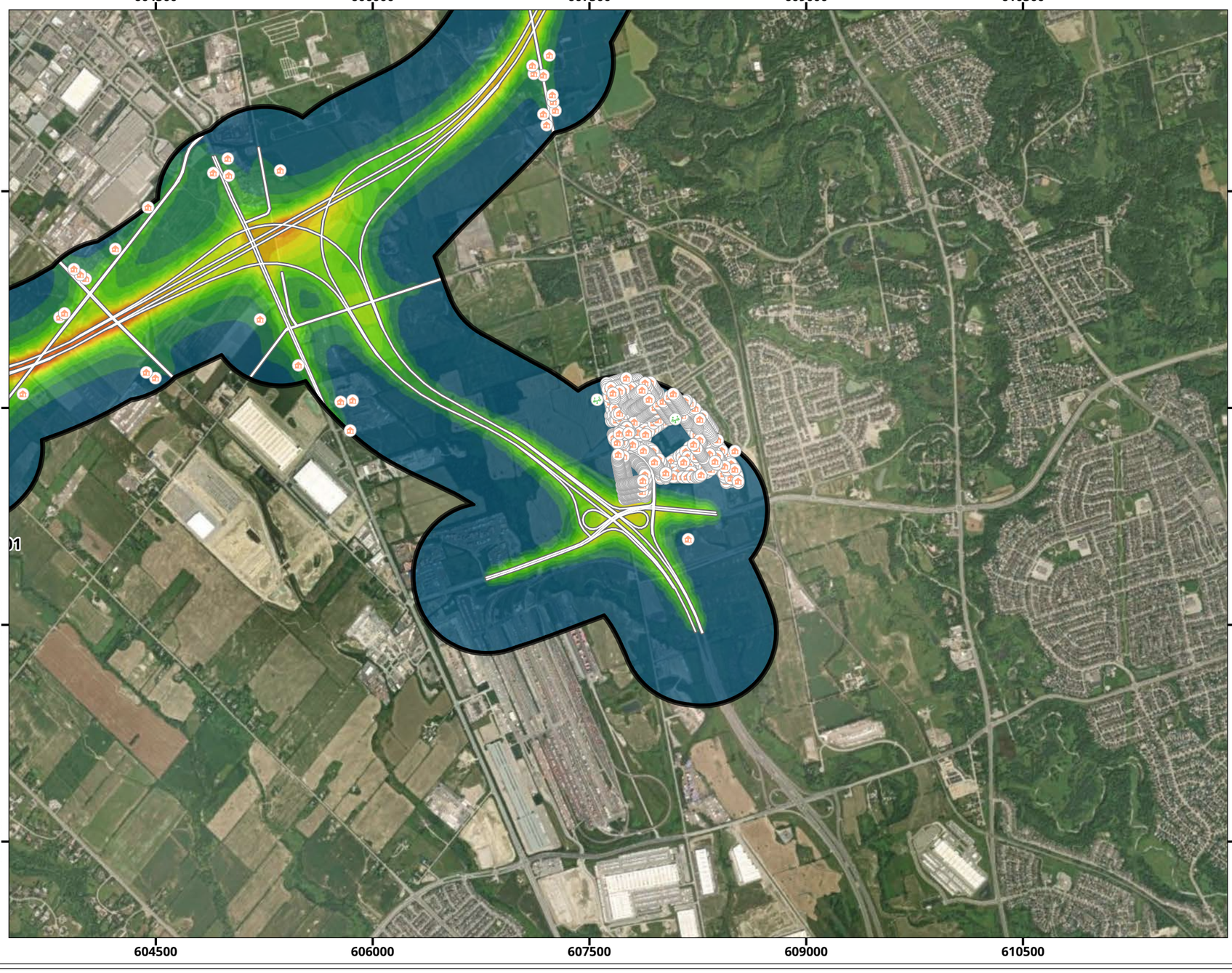


Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Child Care Centre
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

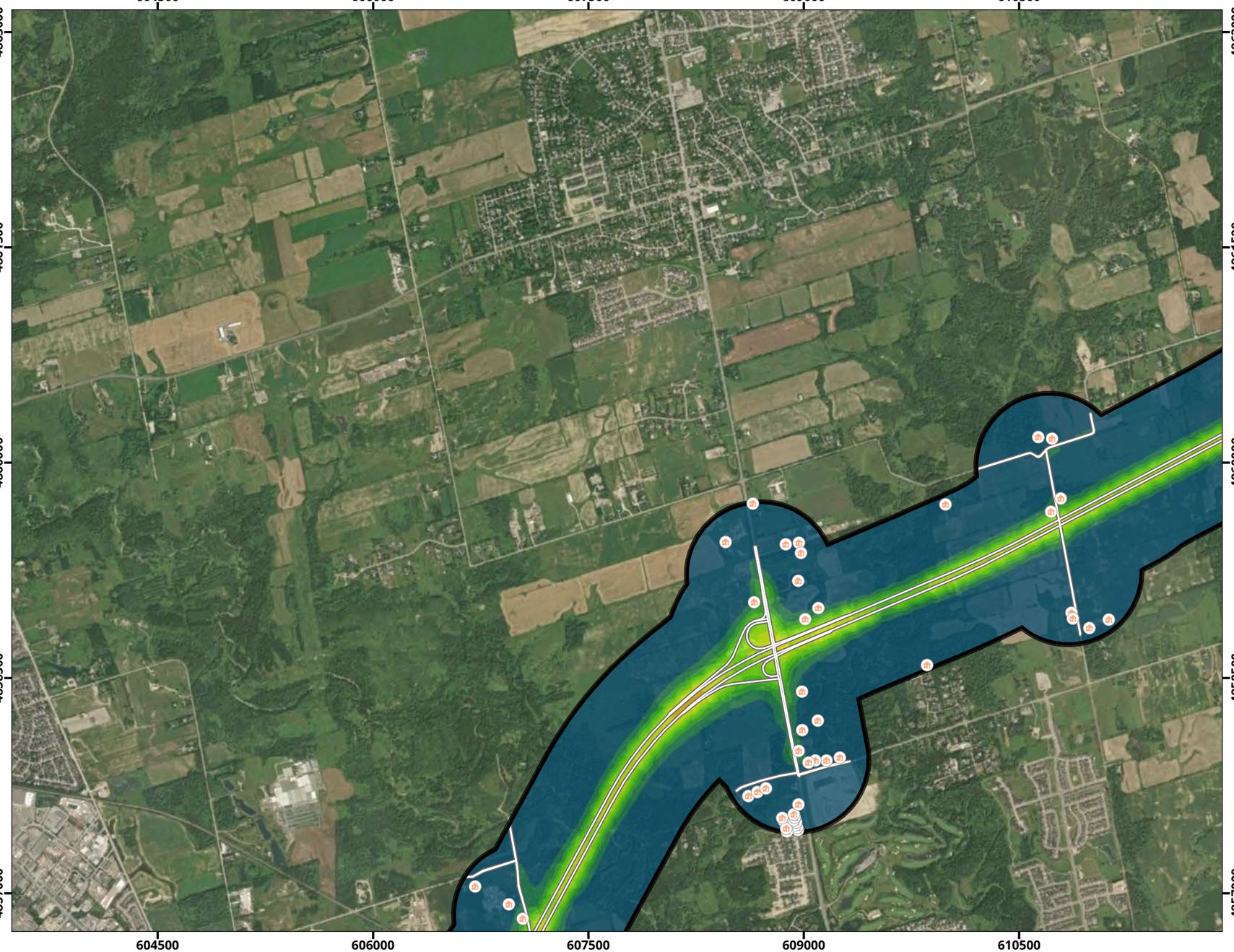
Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.21.8
Approx. Scale:	1:30,000
Date Revised:	Aug 25, 2025

Project #: 1301992A

Map Document: C:\Working\Folder\Jobs_America\P1301992A\P1301992A.aprx



Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m³

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E21.9	
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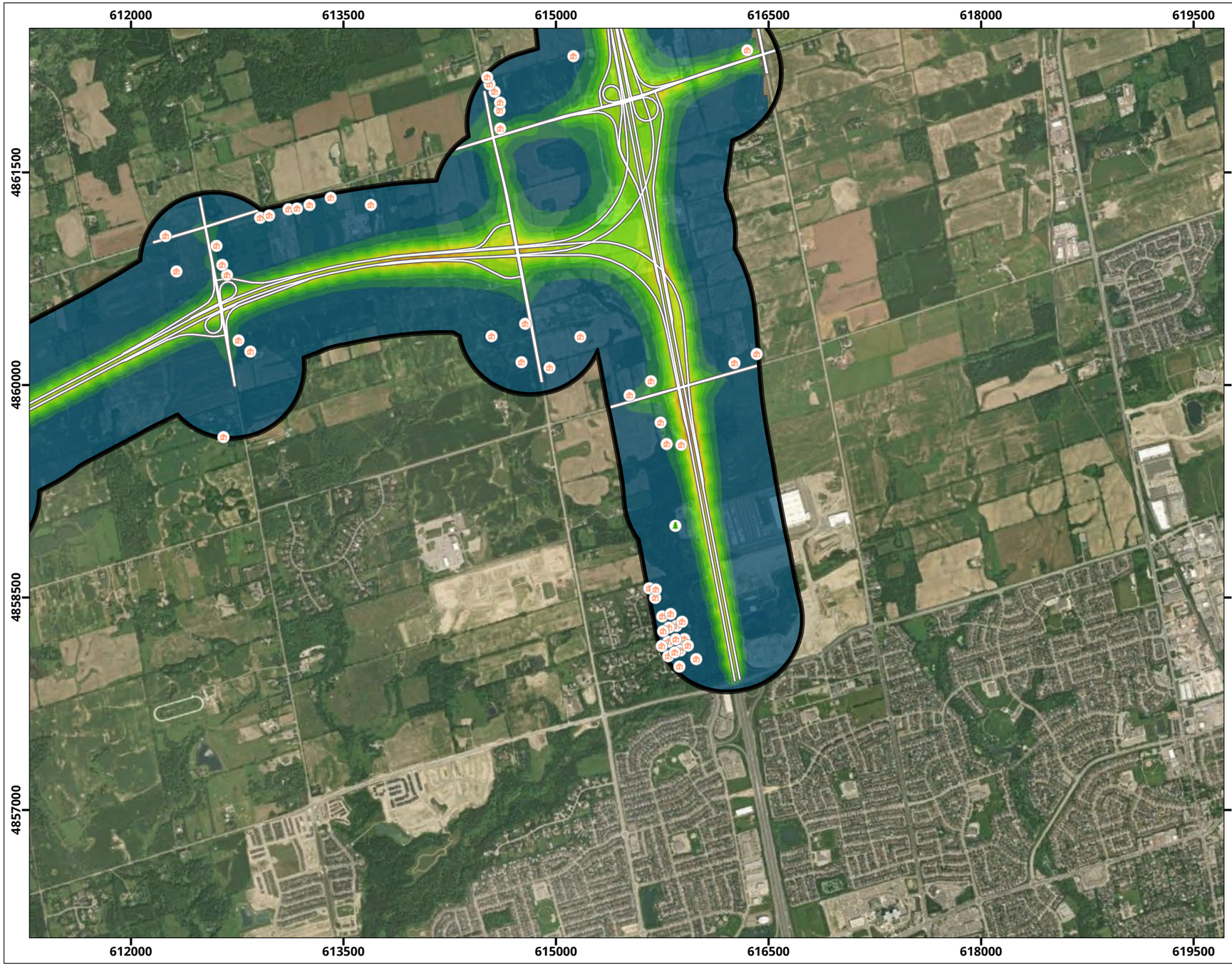

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Park and Conservation
- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Drawn by: PIP	Fig:	E.21.10
Approx. Scale:	1:30,000	
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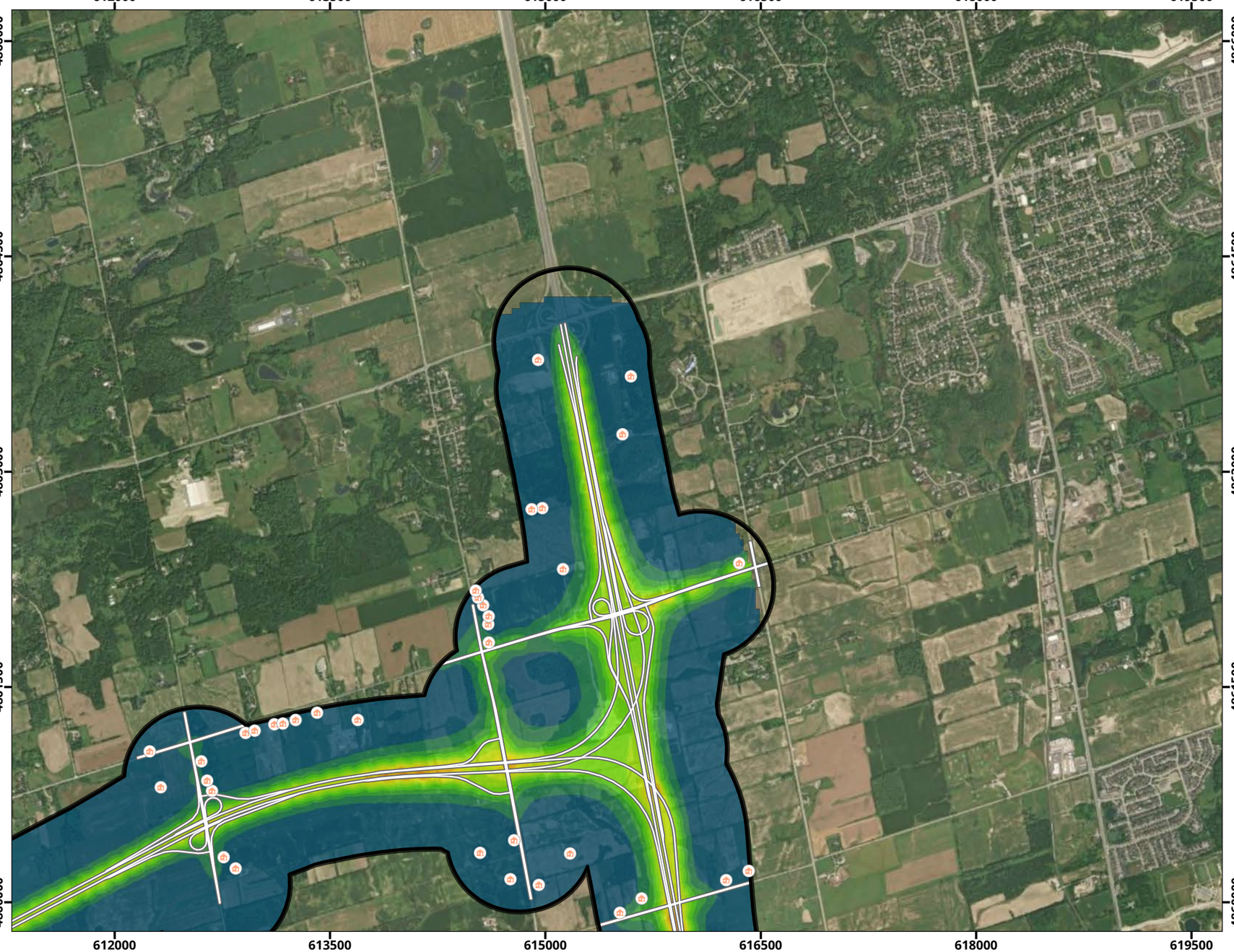

Legend

- 500 m Study Area
- Modelled Roadways

Sensitive Receptors

- Residential

Concentrations (µg/m³)

- 7.00 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25
- 8.25 - 8.50
- 8.50 - 8.75
- 8.75 - 9.00
- 9.00 - 9.25
- 9.25 - 9.50
- 9.50 - 9.75
- 9.75 - 10.0
- > 10.0

Background Concentration: 7 µg/m³
CAAQS Annual $PM_{2.5}$ Standard: 8 µg/m^3

Service Layer Credits: World Imagery: Peel Region, Earthstar Geographics Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada

0 1,000 2,000 3,000 m

Maximum Predicted Annual $PM_{2.5}$ Concentrations

2051 Build Scenario

Map Projection: NAD 1983 CSRS UTM Zone 17N
Highway 413 - Ontario

True North

Project #: 1301992A

Drawn by: PIP	Fig:	E.21.11
Approx. Scale:		1:30,000
Date Revised:		Aug 25, 2025

Map Document: C:\Working\Folder\Jobs_America\P1 301992A\P1301992A.aprx

F

MOVES4 Emission Factors

Appendix F.1.1: MOVES Emission Factors by Road Type, 2041 Build, Section 1

Highway 413
GTA West

RWDI Project#: 1301992

Road Type ID	Road Type De	Link ID	Link Descr pt on	Link Avg Speed kph	Source Type ID	Source Type De	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.95E-05	4.27E-06	1.62E+02	2.75E-04	1.09E+00	8.77E-05	7.69E-03	1.17E-02	2.35E-03	8.54E-03	5.51E-03	5.65E-03	4.51E-04	8.19E-04	2.25E-07	2.89E-03	1.20E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	5.09E-05	5.42E-06	2.28E+02	3.33E-04	1.30E+00	1.08E-04	1.31E-02	1.23E-02	2.62E-03	1.04E-02	6.74E-03	6.91E-03	1.45E-03	1.14E-03	3.13E-07	3.50E-03	2.11E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	6.16E-05	6.42E-06	2.57E+02	3.73E-04	1.20E+00	1.24E-04	1.82E-02	1.37E-02	3.15E-03	1.11E-02	7.66E-03	7.77E-03	3.12E-03	1.26E-03	5.42E-07	3.30E-03	3.04E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.16E-03	5.08E-05	1.14E+03	1.77E-03	1.11E+01	6.17E-03	7.05E-01	3.80E-02	9.10E-03	9.32E-01	7.42E-02	7.67E-02	1.06E-01	4.78E-03	1.34E-06	8.55E-01	1.29E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.33E-03	5.03E-05	1.14E+03	1.70E-03	1.06E+01	6.37E-03	6.06E-01	2.86E-02	7.75E-03	9.65E-01	7.42E-02	7.68E-02	1.04E-01	4.73E-03	1.37E-06	8.88E-01	1.10E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	6.14E-04	2.47E-05	8.33E+02	3.47E-04	1.98E+00	6.54E-04	4.02E-01	3.51E-02	9.53E-03	8.12E-02	1.47E-02	1.50E-02	1.10E-01	3.03E-03	3.13E-07	6.61E-02	7.54E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	5.73E-03	3.85E-05	1.14E+03	1.04E-04	3.91E+00	6.52E-03	9.41E-01	3.50E-02	8.51E-03	1.02E+00	4.92E-02	5.25E-02	1.64E-01	4.03E-03	1.34E-09	9.72E-01	1.75E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.84E-04	2.39E-05	6.57E+02	4.22E-04	1.52E+00	5.23E-04	2.61E-01	2.48E-02	7.22E-03	5.98E-02	1.48E-02	1.51E-02	6.63E-02	2.64E-03	1.08E-06	4.47E-02	4.88E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.49E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.66E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.95E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	3.55E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.48E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.37E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.58E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.17E-05	4.51E-06	1.68E+02	2.90E-04	1.31E+00	9.27E-05	8.44E-03	8.94E-03	2.08E-03	9.03E-03	5.82E-03	5.97E-03	4.10E-04	8.52E-04	2.52E-07	3.05E-03	1.32E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.40E-05	5.77E-06	2.40E+02	3.58E-04	1.61E+00	1.16E-04	1.41E-02	9.26E-03	2.33E-03	1.12E-02	7.23E-03	7.41E-03	1.43E-03	1.20E-03	3.53E-07	3.76E-03	2.27E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.12E-05	6.40E-06	2.65E+02	3.77E-04	1.45E+00	1.25E-04	1.87E-02	1.05E-02	2.82E-03	1.13E-02	7.71E-03	7.84E-03	3.13E-03	1.31E-03	5.70E-07	3.45E-03	3.11E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.32E-01	3.51E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.53E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.08E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.29E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.35E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.14E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.06E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.98E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.77E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.17E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.61E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.88E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.17E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.92E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.63E-04	1.45E+00	3.86E-02	1.53E-02	7.19E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.73E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.54E+00	3.81E-02	1.16E-02	8.06E-02	2.86E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.90E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.69E-05	5.08E-06	1.77E+02	3.27E-04	1.72E+00	1.04E-04	9.41E-03	7.63E-03	2.07E-03	1.02E-02	6.55E-03	6.72E-03	3.76E-04	9.00E-04	3.03E-07	3.44E-03	1.47E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	6.05E-05	6.47E-06	2.54E+02	4.04E-04	2.13E+00	1.30E-04	1.55E-02	7.92E-03	2.31E-03	1.26E-02	8.15E-03	8.35E-03	1.41E-03	1.28E-03	4.07E-07	4.25E-03	2.49E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.62E-05	6.93E-06	2.76E+02	4.13E-04	1.87E+00	1.36E-04	1.99E-02	8.94E-03	2.77E-03	1.24E-02	8.44E-03	8.58E-03	3.14E-03	1.36E-03	6.29E-07	3.85E-03	3.30E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.56E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.76E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.05E-01	1.95E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	5.60E-04	3.62E+00	6.27E-04	5.60E-01	2.54E-02	8.47E-03	7.51E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.34E-02	6.69E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.21E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.97E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.55E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.76E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.15E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.44E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.37E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.58E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.98E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.70E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.21E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	3.52E-02	8.40E-03	1.30E+00	4.40E-01	4.58E-01	2.02E-03	1.30E-03	7.40E-06	1.30E-02	8.26E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.13E-05	7.72E-06	2.46E+02	4.96E-04	1.75E+00	1.59E-04	6.70E-03	8.50E-03	1.19E-02	1.54E-02	9.95E-03	1.02E-02	1.50E-03	1.21E-03	2.76E-07	5.22E-03	1.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	1.01E-04	1.05E-05	3.26E+02	5.92E-04	1.78E+00	1.99E-04	1.70E-02	9.19E-02	1.27E-02	1.86E-02	1.22E-02	1.25E-02	2.97E-03	1.60E-03	3.07E-07	6.12E-03	2.91E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	2.02E-04	2.08E-05	3.78E+02	1.12E-03	1.75E+00	3.84E-04	3.43E-02	9.51E-02	1.39E-02	3.13E-02	2.34E-02	2.36E-02	5.27E-03	1.83E-03	7.72E-07	7.72E-03	6.04E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.62E+00	4.80E-01	6.85E-02	3.89E+00	2.26E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.85E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.43E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.39E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.50E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.92E-03	1.32E-04	1.24E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.28E-02	3.44E-01	6.20E-02	6.38E-02	1.62E-01	4.53E-03	5.76E-07	2.80E-01	3.22E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.45E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.41E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.88E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.94E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.86E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.16E+03	4.76E-03	2.76E+00	1.87E-03	7.57E-01	2.64E-01	4.14E-02	1.31E-01	1.08E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-06	2.33E-02	1.41E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.33E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.15E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.77E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	8.98E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.06E-05	6.56E-06	2.09E+02	4.22E-04	1.56E+00	1.35E-04	6.51E-03	6.23E-02	8.89E-03	1.31E-02	8.45E-03	8.68E-03	1.13E-03	1.04E-03	2.52E-07	4.44E-03	1.02E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.27E-05	8.67E-06	2.79E+02	4.96E-04	1.61E+00	1.66E-04	1.47E-02	6.60E-02	9.39E-03	1.56E-02	1.02E-02	1.05E-02	2.38E-03	1.37E-03	2.93E-07	5.15E-03	2.49E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.53E-04	1.58E-05	3.21E+02	8.61E-04	1.55E+00	2.94E-04	2.78E-02	6.96E-02	1.05E-02	2.43E-02	1.80E-02	1.81E-02	4.37E-03	1.56E-03	6.77E-07	6.17E-03	4.85E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.70E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.43E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.30E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.45E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.79E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.20E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.80E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.46E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.70E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.44E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.26E-03	2.27E+00	1.34E-03	5.88E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.55E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.68E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.90E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.35E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.52E-05	5.97E-06	1.89E+02	3.84E-04	1.42E+00	1.23E-04	6.70E-03	4.71E-02	6.95E-03	1.19E-02	7.76E-03	7.90E-03	9.03E-04	9.42E-04	2.46E-07	4.04E-03	1.05E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.31E-05	7.70E-06	2.54E+02	4.48E-04	1.47E+00	1.49E-04	1.38E-02	4.99E-02	7.34E-03	1.41E-02	9.19E-03	9.41E-03	2.05E-03	1.25E-03	2.96E-07	4.66E-03	2.31E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.27E-04	1.32E-05	2.93E+02	7.26E-04	1.42E+00	2.46E-04	2.48E-02	5.34E-02	8.35E-03	2.06E-02	1.51E-02	1.52E-02	3.90E-03	1.43E-03	6.39E-07	5.36E-03	4.29E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.18E-01
2

Appendix F.1.1: MOVES Emission Factors by Road Type, 2041 Build, Section 1

Highway 413
GTA West

RWDI Project#: 1301992

Road Type ID	Road Type De	Link ID	Link Descr pt on	Link Avg Speed kph	Source Type ID	Source Type De	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.17E-05	4.51E-06	1.68E+02	2.90E-04	1.31E+00	9.27E-05	8.44E-03	8.94E-03	2.08E-03	9.03E-03	5.82E-03	5.97E-03	4.10E-04	8.52E-04	2.52E-07	3.05E-03	1.32E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.40E-05	5.77E-06	2.40E+02	3.58E-04	1.61E+00	1.16E-04	1.41E-02	9.26E-03	2.33E-03	1.12E-02	7.23E-03	7.41E-03	1.43E-03	1.20E-03	3.53E-07	3.76E-03	2.27E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.12E-05	6.40E-06	2.65E+02	3.77E-04	1.45E+00	1.25E-04	1.87E-02	1.05E-02	2.82E-03	1.13E-02	7.71E-03	7.84E-03	3.13E-03	1.31E-03	5.70E-07	3.45E-03	3.11E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.32E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.53E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.08E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.29E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.35E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.14E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.06E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.98E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.77E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.17E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.61E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.88E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.17E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.92E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.41E-02	3.86E-02	1.53E-02	7.19E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.73E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.54E+00	3.81E-02	1.16E-02	8.06E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.90E-01	
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.69E-05	5.08E-06	1.77E+02	3.27E-04	1.72E+00	1.04E-04	9.41E-03	7.63E-03	2.07E-03	1.02E-02	6.55E-03	6.72E-03	3.76E-04	9.00E-04	3.03E-07	3.44E-03	1.47E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	6.05E-05	6.47E-06	2.54E+02	4.04E-04	2.13E+00	1.30E-04	1.55E-02	7.92E-03	2.31E-03	1.26E-02	8.15E-03	8.35E-03	1.41E-03	1.28E-03	4.07E-07	4.25E-03	2.49E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.62E-05	6.93E-06	2.76E+02	4.13E-04	1.87E+00	1.36E-04	1.99E-02	8.94E-03	2.77E-03	1.24E-02	8.44E-03	8.58E-03	3.14E-03	1.36E-03	6.29E-07	3.85E-03	3.30E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.56E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.76E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.06E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.64E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.69E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.21E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.97E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.55E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.76E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.15E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.44E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.37E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.58E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.98E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.70E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.21E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.41E-05	8.01E-06	2.20E+02	5.15E-04	1.76E+00	1.65E-04	8.50E-03	6.58E-02	9.49E-03	1.60E-02	1.03E-02	1.06E-02	1.13E-03	1.10E-03	3.00E-07	5.43E-03	1.33E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.94E-05	1.04E-05	2.97E+02	6.07E-04	1.82E+00	2.01E-04	1.80E-02	7.26E-02	1.06E-02	1.91E-02	1.24E-02	1.27E-02	2.54E-03	1.46E-03	4.14E-07	6.31E-03	3.03E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.72E-04	1.78E-05	3.41E+02	9.79E-04	1.73E+00	3.30E-04	2.50E-02	1.15E-02	2.27E-02	2.05E-02	4.79E-03	1.66E-03	8.23E-07	7.22E-03	5.73E-03			
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.70E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	6.63E+00	1.83E-02	1.83E+00	1.91E-01	3.07E-02	2.86E+00	1.61E-01	1.70E-01	1.41E-01	5.82E-03	1.89E-06	2.69E+00	3.38E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.42E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.79E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.20E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.80E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	2.75E-02	3.10E-03	1.31E-06	1.38E-01	1.46E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.70E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.44E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.88E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.55E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.68E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.90E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.35E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.38E-05	6.90E-06	1.92E+02	4.44E-04	1.65E+00	1.42E-04	7.54E-03	4.89E-02	7.24E-03	1.38E-02	8.90E-03	9.14E-03	9.03E-04	9.58E-04	2.68E-07	4.68E-03	1.18E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.45E-05	8.91E-06	2.58E+02	5.22E-04	1.70E+00	1.73E-04	1.55E-02	5.39E-02	8.06E-03	1.64E-02	1.07E-02	1.09E-02	2.13E-03	1.28E-03	3.69E-07	5.43E-03	2.59E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.42E-04	1.48E-05	2.96E+02	8.19E-04	1.62E+00	2.77E-04	2.76E-02	5.61E-02	8.92E-03	2.33E-02	1.70E-02	1.71E-02	4.09E-03	1.44E-03	7.34E-07	6.11E-03	4.77E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.18E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.45E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.58E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.83E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.38E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.43E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.64E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.24E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.53E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.22E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.00E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.28E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.07E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.78E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.36E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.34E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.46E+02	2.75E-02	1.00E+01	8.72E-03	6.96E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.24E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.51E-05	5.96E-06	1.82E+02	3.83E-04	1.41E+00	1.22E-04	7.58E-03	3.60E-02	5.56E-03	1.19E-02	7.68E-03	7.89E-03	7.52E-04	9.10E-04	2.57E-07	4.03E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.19E-05	7.60E-06	2.48E+02	4.50E-04	1.49E+00	1.48E-04	1.45E-02	3.94E-02	6.19E-03	1.41E-02	9.19E-03	9.42E-03	1.90E-03	1.23E-03	3.58E-07	4.70E-03	2.40E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.12E-04	1.17E-05	2.83E+02	6.53E-04	1.41E+00	2.20E-04	2.42E-02	4.13E-02	6.95E-03	1.87E-02	1.35E-02	1.37E-02	3.78E-03	1.38E-03	6.78E-07	5.07E-03	4.15E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.38E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.11E+00	9.87E-02	1.77E-02	1.81E+00	1.00E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.04E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.81E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.78E+00	1.96E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.25E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.03E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.43E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.93E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.25E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.74E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.93E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.29E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.32E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.49E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.69E-01
3	RuralUnrestrictedAccess	4	ArterialRoads_RuralUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.65E-03	3.97E-04	3.59E+02	2.60E-02	1.08E+01	8.25E-03	8.03E-01	3.62E-02	2.18E-02	6.03E-01	5.19E-01	5.15E-01	1.96E-03	1.92E-03	1.07E-05	8.80E-02	3.05E-02
3	RuralUnrestrictedAccess	4	ArterialRoads_RuralUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.88E-05	5.28E-06	1.74E+02	3.40E-04	1.24E+00	1.09E-04	7.60E-03	2.70E-02	4.40E-03	1.06E-02	6.81E-03	6.99E-03	6.45E-04	8.76E-04	2.50E-07	3.58E-03	1.19E-03
3	RuralUnrestrictedAccess	4	ArterialRoads_RuralUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	6.66E-05	6.94E-06	2.40E+02	3.99E-04	1.34E+00	1.37E-04	1.31E-02	3.29E-02	4.90E-03	1.26E-02	8.13E-03	8.33E-03	1.74E-03	1.20E-03	3.51E-07	4.34E-03	2.27E-03
3	RuralUnrestrictedAccess	4	ArterialRoads_RuralUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	9.13E-05	9.49E-06	2.74E+02	5.34E-04	1.27E+00	1.80E-04	2.18E-02	3

Appendix F.1.1: MOVES Emission Factors by Road Type, 2041 Build, Section 1

Highway 413
GTA West

RWDI Project#: 1301992

Road Type ID	Road Type De	Link ID	Link Descr pt on	Link Avg Speed kph	Source Type ID	Source Type De	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.58E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.98E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.70E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.21E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.89E-01	1.50E-02	2.01E-02	1.55E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.13E-05	7.72E-06	2.46E+02	4.96E-04	1.75E+00	1.59E-04	6.70E-03	8.50E-05	1.19E-02	1.54E-02	9.95E-03	1.02E-02	1.50E-03	1.21E-03	2.76E-07	5.22E-03	1.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	1.01E-04	1.05E-05	3.26E+02	5.92E-04	1.78E+00	1.99E-04	1.70E-02	9.19E-02	1.27E-02	1.86E-02	1.22E-02	1.25E-02	2.97E-03	1.60E-03	3.07E-07	6.12E-03	2.91E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	2.02E-04	2.08E-05	3.78E+02	1.12E-03	1.75E+00	3.84E-04	3.43E-02	9.51E-02	1.39E-02	3.13E-02	2.34E-02	2.36E-02	5.27E-03	1.83E-03	7.72E-07	7.72E-03	6.04E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.62E+00	4.80E-01	6.85E-02	3.89E+00	2.26E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.85E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.43E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.39E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.50E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.92E-03	1.32E-04	1.24E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.28E-02	3.44E-01	6.20E-02	6.38E-02	1.62E-01	4.53E-03	5.76E-07	2.80E-01	3.22E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.45E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.41E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.88E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.94E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.86E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.16E+03	4.76E-03	2.76E+00	1.87E-03	7.57E-01	2.64E-01	4.14E-02	1.31E-01	1.08E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-06	2.33E-02	1.41E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.33E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.15E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.77E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	8.98E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.06E-05	6.56E-06	2.09E+02	4.22E-04	1.56E+00	1.35E-04	6.51E-03	6.23E-02	8.89E-03	1.31E-02	8.45E-03	8.68E-03	1.13E-03	1.04E-03	2.52E-07	4.44E-03	1.02E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.27E-05	8.67E-06	2.79E+02	4.96E-04	1.61E+00	1.66E-04	1.47E-02	6.60E-02	9.20E-03	1.55E-02	1.02E-02	1.05E-02	2.38E-03	1.37E-03	2.93E-07	5.15E-03	2.40E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.53E-04	1.58E-05	3.21E+02	8.61E-04	1.55E+00	2.94E-04	2.78E-02	6.96E-02	1.05E-02	2.43E-02	1.80E-02	1.81E-02	4.37E-03	1.56E-03	6.77E-07	6.17E-03	4.85E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.70E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.43E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.30E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.45E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.79E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.20E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.80E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.46E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.70E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.44E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.88E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.09E-02	1.10E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.55E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.68E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.90E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.35E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.52E-05	5.97E-06	1.89E+02	3.84E-04	1.42E+00	1.23E-04	6.70E-03	4.71E-02	6.95E-03	1.19E-02	7.70E-03	7.90E-03	9.03E-04	9.42E-04	2.46E-07	4.04E-03	1.05E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.31E-05	7.70E-06	2.54E+02	4.48E-04	1.47E+00	1.49E-04	1.38E-02	4.99E-02	7.34E-03	1.41E-02	9.19E-03	9.41E-03	2.05E-03	1.25E-03	2.96E-07	4.66E-03	2.31E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.27E-04	1.32E-05	2.93E+02	7.26E-04	1.42E+00	2.46E-04	2.48E-02	5.34E-02	8.35E-03	2.06E-02	1.51E-02	1.52E-02	3.90E-03	1.43E-03	6.39E-07	5.36E-03	4.29E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.18E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.36E-02	9.69E-05	1.28E+03	1.61E-03	5.47E+00	1.59E-02	1.76E+00	1.99E-01	3.01E-02	2.38E+00	1.47E-01	1.27E-01	5.24E-03	1.73E-06	2.30E+00	2.95E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.84E-03	8.42E-05	1.04E+03	5.64E-04	1.41E+00	1.78E-03	1.09E+00	2.12E-01	3.77E-02	2.14E-01	3.84E-02	3.96E-02	1.37E-01	3.79E-03	4.47E-07	1.74E-01	2.04E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.38E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.43E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.64E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.24E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.53E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.22E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.00E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.28E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.07E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.78E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.36E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.34E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.96E-05	5.37E-06	1.81E+02	3.45E-04	1.28E+00	1.10E-04	7.07E-03	3.55E-02	5.46E-03	1.07E-02	6.92E-03	7.11E-03	7.52E-04	9.05E-04	2.42E-07	3.64E-03	1.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	6.51E-05	6.87E-06	2.46E+02	4.06E-04	1.37E+00	1.34E-04	1.36E-02	3.78E-02	5.85E-03	1.27E-02	8.30E-03	8.50E-03	1.87E-03	1.22E-03	3.06E-07	4.23E-03	2.25E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.04E-04	1.08E-05	2.83E+02	6.01E-04	1.31E+00	2.03E-04	2.26E-02	4.04E-02	6.68E-03	1.72E-02	1.25E-02	1.26E-02	3.67E-03	1.38E-03	6.14E-07	4.63E-03	3.87E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.38E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.11E-02	7.41E-05	1.14E+03	1.42E-03	5.95E+00	1.30E-02	1.18E+00	1.39E-01	2.26E-02	2.02E+00	1.15E-01	1.21E-01	1.11E-01	4.69E-03	1.52E-06	1.90E+00	2.18E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.41E-03	6.01E-05	8.92E+02	4.77E-04	1.48E+00	1.40E-03	8.10E-01	1.48E-01	2.64E-02	1.73E-01	2.93E-02	3.02E-02	1.18E-01	3.26E-03	3.62E-07	1.43E-01	1.52E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.75E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.58E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.03E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.43E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.93E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.25E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.74E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.93E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.29E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.32E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.49E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.69E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.68E-03	4.01E-04	3.65E+02	2.62E-02	1.12E+01	8.32E-03	8.32E-01	3.38E-02	1.95E-02	6.08E-01	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.45E-06	8.87E-02	3.16E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.57E-05	4.94E-06	1.75E+02	3.18E-04	1.18E+00	1.02E-04	1.34E-03	2.75E-02	4.43E-03	9.88E-03	6.37E-03	6.54E-03	6.45E-04	8.78E-04	2.39E-07	3.35E-03	1.15E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	5.94E-05	6.28E-06	2.41E+02	3.76E-04	1.30E+00	1.23E-04	1.34E-02	2.95E-02	4.81E-03	1.18E-02	7.66E-03	7.85E-03	1.74E-03	1.20E-03	3.14E-07	3.93E-03	2.20E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	8.74E-05	9.09E-06	2.76E+02	5.12E-04	1.24E+00	1.72E-04	2.11E-02	3.15E-02	5.52E-03	1.48E-02	1.06E-02	1.07E-02	3.51E-03	1.35E-03	5.96E-07	4.11E-03	3.58E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.04E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.92E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.16E-03	6.05E-05	1.11E+03	1.30E-03	6.40E+00	1.07E-02	9.48E-01	8.96E-02	1.61E-02	1.66E+00	9.65E-02	1.01E-01	1.07E-01	4.58E-03	1.50E-06	1.56E+00	1.75E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.12E-03	4.59E-05	8.51E+02	3.98E-04	1.52E+00	1.13E-03	6.53E-01	1.02E-01	1.93E-02	1.40E-01	2.32E-02	2.38E-02	1.12E-01	3.11E-03	3.31E-07	1.17E-01	1.23E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.48E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.75E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.46E-04	4.24E-05	6.63E+02	6.92E-04	1.33E+00	9.01E-04	4.16E-01	5.95E-02	1.19E-02	1.03E-01	2.53E-02	2.57E-02	6.64E-02	2.67E-03	1.08E-06	7.69E-02	7.80E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	8.36E-04	4.16E-05	6.38E+02	6.77E-04	1.30E+00	9.90E-04	4.57E-01	5.16E-02	1.20E-02	9.84E-02	2.48E-02	2.52E-02	6.37E-02	2.57E-03	1.03E-06	7.54E-02	7.65E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	4.85E-04	4.80E-05	8.21E+02	1.92E-03	3.81E+00	7.48E-04	3.07E-01	7.03E-02	1.40E-02	5.27E-02	4.36E-02	4.35E-02	3.96E-02	3.89E-03	2.22E-06	9.26E-03	5.67E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.87E-03	1.33E-04	1.36E+03	6.08E-06	1.61E+00	1.37E-03	1.96E+00	1.42E-01	3.11E-02	1.14E-01	3.94E-02	3.93E-02	2.05E-01	4.54E-03	0.00E+00	7.47E-02	3.70E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.86E-03	1.24E-04	1.39E+03	7.68E-06	1.87E+00	1.41E-03	2.12E+00	1.55E-01	2.83E-02	1.29E-01	3.75E-02	3.79E-02	2.12E-01	4.65E-03	0.00E+00	9.14E-02	3.99E-01
4	UrbanRestrictedAccess	54	Ramps_UrbanRestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.52E-03	3.84E-04	3.76E+02	2.51E-02	1.14E+01	7.97E-03	8.68E-01	3.13E-02	2.00E-02	5.82E-01	5.01E-01	4.97E-01	1.72E-03	2.01E-03	9.98E-06	8.50E-02	3.30E-02
4	UrbanRestrictedAccess	54	Ramps_UrbanRestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	4.28E-05	4.63E-06	1.69E+02	2.98E-04	1.12E+00	9.52E-05	7.43E-03	2.08E-02	3.55E-03	9.27E-03	5.97E-03	6.13E-03	5.64E-04	8.50E-04	2.31E-07	3.14E-03	1.16E-03
4	UrbanRestrictedAccess	54	Ramps_UrbanRestricted_80kmh	80	31	PassengerT

Appendix F.1.1: MOVES Emission Factors by Road Type, 2041 Build, Section 1

Highway 413
GTA West

RWDI Project#: 1301992

Road Type ID	Road Type De	Link ID	Link Descr pt on	Link Avg Speed kph	Source Type ID	Source Type De	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.55E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.68E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.90E+00	4.09E-01	6.51E-02	2.23E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.35E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.38E-05	6.90E-06	1.92E+02	4.44E-04	1.65E+00	1.42E-04	7.54E-03	4.89E-02	7.24E-03	1.38E-02	8.90E-03	9.14E-03	9.03E-04	9.58E-04	2.68E-07	4.67E-03	1.18E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.45E-05	8.91E-06	2.58E+02	5.22E-04	1.70E+00	1.73E-04	1.55E-02	5.39E-02	8.06E-03	1.64E-02	1.07E-02	1.09E-02	2.13E-03	1.28E-03	3.69E-07	5.43E-03	2.58E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.42E-04	1.48E-05	2.95E+02	8.19E-04	1.62E+00	2.77E-04	2.76E-02	5.61E-02	8.92E-03	2.33E-02	1.70E-02	1.71E-02	4.09E-03	1.44E-03	7.34E-07	6.11E-03	4.77E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.18E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.40E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.58E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.83E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.38E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.43E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.64E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.24E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.53E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.22E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.00E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.28E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.07E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.78E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.36E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.34E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.40E-05	5.84E-06	1.81E+02	3.76E-04	1.40E+00	1.20E-04	7.34E-03	3.65E-02	5.61E-03	1.17E-02	7.54E-03	7.73E-03	7.52E-04	9.05E-04	2.49E-07	3.96E-03	1.15E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.11E-05	7.51E-06	2.46E+02	4.45E-04	1.49E+00	1.47E-04	1.43E-02	4.00E-02	6.21E-03	1.39E-02	9.08E-03	9.30E-03	1.91E-03	1.22E-03	3.38E-07	4.64E-03	2.37E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.12E-04	1.17E-05	2.82E+02	6.51E-04	1.42E+00	2.20E-04	2.40E-02	4.20E-02	6.96E-03	1.87E-02	1.35E-02	1.36E-02	3.77E-03	1.38E-03	6.55E-07	5.03E-03	4.11E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.38E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.11E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.04E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.81E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.75E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.25E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.03E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.43E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.93E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.25E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.74E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.93E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.29E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.32E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.49E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.69E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.71E-05	5.10E-06	1.73E+02	3.28E-04	1.23E+00	1.05E-04	7.21E-03	2.79E-02	4.48E-03	1.02E-02	6.57E-03	6.75E-03	6.45E-04	8.68E-04	2.37E-07	3.45E-03	1.13E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	6.17E-05	6.52E-06	2.38E+02	3.90E-04	1.35E+00	1.28E-04	1.35E-02	3.03E-02	4.93E-03	1.22E-02	7.95E-03	8.14E-03	1.75E-03	1.18E-03	3.17E-07	4.08E-03	2.22E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	9.10E-05	9.46E-06	2.72E+02	5.32E-04	1.28E+00	1.79E-04	2.14E-02	3.21E-02	5.60E-03	1.54E-02	1.10E-02	1.11E-02	3.53E-03	1.33E-03	6.00E-07	4.26E-03	3.65E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.04E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.92E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.33E-03	5.90E-05	1.17E+03	1.38E-03	7.54E+00	9.75E-03	9.07E-01	7.26E-02	1.41E-02	1.51E+00	9.17E-02	9.61E-02	1.12E-01	4.85E-03	1.57E-06	1.42E+00	1.66E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.05E-03	4.36E-05	9.10E+02	3.85E-04	1.63E+00	1.05E-03	6.36E-01	8.00E-02	1.72E-02	1.31E-01	2.20E-02	2.27E-02	1.20E-01	3.32E-03	3.53E-07	1.08E-01	1.19E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.48E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.75E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.46E-04	4.24E-05	6.63E+02	6.92E-04	1.33E+00	9.01E-04	4.16E-01	5.95E-02	1.19E-02	1.03E-01	2.53E-02	2.57E-02	6.64E-02	2.67E-03	1.08E-06	7.69E-02	7.80E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	8.36E-04	4.16E-05	6.38E+02	6.77E-04	1.26E+00	8.90E-04	4.06E-01	6.16E-02	1.20E-02	1.02E-01	2.48E-02	2.52E-02	6.37E-02	2.57E-03	1.03E-06	7.65E-02	7.60E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	4.85E-04	4.80E-05	8.21E+02	1.92E-03	3.81E+00	7.48E-04	3.07E-01	7.03E-02	1.40E-02	5.27E-02	4.36E-02	4.35E-02	3.96E-02	3.89E-03	2.22E-06	9.26E-03	5.67E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.87E-03	1.33E-04	1.36E+03	6.08E-06	1.61E+00	1.37E-03	1.96E+00	1.42E-01	3.11E-02	1.14E-01	3.94E-02	3.93E-02	2.05E-01	4.54E-03	0.00E+00	7.47E-02	3.70E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.86E-03	1.24E-04	1.39E+03	7.68E-06	1.87E+00	1.41E-03	2.12E+00	1.55E-01	2.83E-02	1.29E-01	3.75E-02	3.79E-02	2.12E-01	4.65E-03	0.00E+00	9.14E-02	3.99E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	4.39E-05	4.75E-06	1.68E+02	3.05E-04	1.17E+00	9.76E-05	7.39E-03	1.98E-02	3.44E-03	9.50E-03	6.12E-03	6.28E-03	5.64E-04	8.45E-04	2.37E-07	3.21E-03	1.16E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	5.63E-05	5.97E-06	2.32E+02	3.60E-04	1.29E+00	1.18E-04	1.31E-02	2.12E-02	3.76E-03	1.13E-02	7.33E-03	7.51E-03	1.62E-03	1.16E-03	3.15E-07	3.78E-03	2.14E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	7.71E-05	8.03E-06	2.63E+02	4.56E-04	1.21E+00	1.53E-04	1.98E-02	2.30E-02	4.40E-03	1.33E-02	9.40E-03	9.52E-03	3.33E-03	1.29E-03	5.76E-07	3.80E-03	3.35E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.18E-03	4.98E-05	1.11E+03	1.29E-03	7.43E+00	8.44E-03	8.58E-01	7.53E-02	1.43E-02	1.31E+00	8.06E-02	8.43E-02	1.05E-01	4.59E-03	1.48E-06	1.22E+00	1.58E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.08E-03	5.01E-05	1.13E+03	1.31E-03	7.69E+00	8.32E-03	7.53E-01	5.20E-02	1.12E-02	1.29E+00	8.01E-02	8.38E-02	1.07E-01	4.69E-03	1.52E-06	1.20E+00	1.38E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	8.51E-04	3.45E-05	8.69E+02	3.40E-04	1.63E+00	8.69E-04	5.28E-01	6.01E-02	1.37E-02	1.08E-01	1.82E-02	1.87E-02	1.15E-01	3.17E-03	3.29E-07	8.98E-02	9.90E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.35E-03	5.50E-05	1.14E+03	1.46E-04	4.06E+00	9.49E-03	1.20E+00	8.67E-02	1.55E-02	1.49E+00	7.14E-02	7.61E-02	1.65E-01	4.03E-03	1.29E-09	1.42E+00	2.22E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.75E-04	3.35E-05	6.62E+02	5.43E-04	1.33E+00	7.18E-04	3.45E-01	4.24E-02	9.59E-03	8.21E-02	2.00E-02	2.03E-02	6.64E-02	2.67E-03	1.06E-06	6.18E-02	6.46E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.65E-04	3.28E-05	6.35E+02	5.26E-04	1.25E+00	7.08E-04	3.35E-01	4.39E-02	9.59E-03	8.12E-02	1.95E-02	1.98E-02	6.34E-02	2.56E-03	1.00E-06	6.14E-02	6.26E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	3.97E-04	3.95E-05	8.13E+02	1.64E-03	4.12E+00	6.28E-04	2.55E-01	4.92E-02	1.13E-02	4.44E-02	3.68E-02	3.67E-02	3.91E-02	3.85E-03	2.22E-06	7.68E-03	4.68E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.58E-03	1.13E-04	1.31E+03	4.99E-06	1.40E+00	1.16E-03	1.62E+00	9.58E-02	2.36E-02	9.42E-02	3.34E-02	3.32E-02	1.97E-01	4.38E-03	0.00E+00	6.11E-02	3.05E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.04E-04	1.33E+03	6.33E-06	1.59E+00	1.18E-03	1.72E+00	1.03E-01	2.07E-02	1.07E-01	3.15E-02	3.17E-02	2.03E-01	4.44E-03	0.00E+00	7.50E-02	3.25E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	4.17E-05	4.51E-06	1.65E+02	2.90E-04	1.16E+00	9.27E-05	7.62E-03	1.47E-02	2.79E-03	9.03E-03	5.82E-03	5.97E-03	5.01E-04	8.33E-04	2.38E-07	3.06E-03	1.19E-03
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	31	PassengerTruck	grams/mile	0.00E+00	5.29E-05	5.63E-06	2.30E+02	3.43E-04	1.30E+00	1.12E-04	1.31E-02	1.56E-02	3.05E-03	1.07E-02	6.96E-03	7.14E-03	1.52E-03	1.15E-03	3.19E-07	3.60E-03	2.12E-03
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	32	LightCommercialTruck	grams/mile	0.00E+00	6.79E-05	7.07E-06	2.60E+02	4.06E-04	1.20E+00	1.36E-04	1.89E-02	1.72E-02	3.65E-03	1.20E-02	8.35E-03	8.47E-03	3.20E-03	1.28E-03	5.65E-07	3.50E-03	3.17E-03
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	41	IntercityBus	grams/mile	0.00E+00	5.89E-03	4.34E-05	1.11E+03	1.32E-03	8.25E+00	6.97E-03	7.19E-01	4.76E-02	1.06E-02	1.07E+00	7.07E-02	7.37E-02	1.04E-01	4.61E-03	1.46E-06	1.00E+00	1.32E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	42	TransitBus	grams/mile	0.00E+00	6.09E-03	4.37E-05	1.10E+03	1.27E-03	7.89E+00	7.19E-03	6.34E-01	3.64E-02	8.98E-03	1.11E+00	7.14E-02	7.45E-02	1.03E-01	4.58E-03	1.48E-06	1.04E+00	1.16E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	43	SchoolBus	grams/mile	0.00E+00	6.99E-04	2.75E-05	8.36E+02	3.08E-04	1.64E+00	7.25E-04	4.43E-01	4.47E-02	1.09E-02	9.12E-02	1.52E-02	1.56E-02	1.11E-01	3.05E-03	3.12E-07	7.56E-02	8.31E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	51	RefuseTruck	grams/mile	0.00E+00	6.69E-03	3.78E-05	1.10E+03	1.20E-04	3.97E+00	7.64E-03	9.29E-01	4.99E-02	1.03E-02	1.21E+00	5.60E-02	5.98E-02	1.58E-01	3.87E-03	1.25E-09	1.15E+00	1.72E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	5.42E-04	2.66E-05	6.61E+02	4.30E-04	1.33E+00	5.77E-04	2.89E-01	3.00E-02	7.90E-03	6.64E-02	1.59E-02	1.62E-02	6.63E-02	2.66E-03	1.04E-06	5.02E-02	5.40E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	5.34E-04	2.59E-05	6.33E+02	4.11E-04	1.25E+00	5.67E-04	2.78E-01	3.09E-02	7.81E-03	6.56E-02	1.54E-02	1.57E-02	6.31E-02	2.55E-03	9.77E-07	4.99E-02	5.20E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.31E-05	8.07E+02	1.44E-03	4.39E+00	5.39E-04	2.13E-01	3.37E-02	9.27E-03	3.82E-02	3.18E-02	3.17E-02	3.88E-02	3.82E-03	2.23E-06	6.49E-03	3.90E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.27E-03	9.01E-05	1.25E+03	4.10E-06	1.23E+00	9.28E-04	1.30E+00	5.73E-02	1.69E-02	7.50E-02	2.67E-02	2.62E-02	1.89E-01	4.20E-03	0.00E+00	4.88E-02	2.46E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.20E-03	7.93E-05	1.25E+03	5.21E-06	1.36E+00	9.20E-04	1.35E+00	6.01E-02	1.42E-02	8.42E-02	2.41E-02	2.40E-02	1.91E-01	4.20E-03	0.00E+00	6.01E-02	2.54E-01

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1121	0.00E+00	1.30E-05	1.40E-06	5.24E+01	9.04E-05	4.07E-01	2.89E-05	2.63E-03	2.78E-03	6.49E-04	2.81E-03	1.81E-03	1.86E-03	1.28E-04	2.65E-04	7.86E-08	9.51E-04	4.11E-04
17	A01	110	Passenger Truck	1877	0.00E+00	2.82E-05	3.01E-06	1.25E+02	1.87E-04	8.38E-01	6.04E-05	7.36E-03	4.83E-03	1.22E-03	5.83E-03	3.77E-03	3.86E-03	7.43E-04	6.28E-04	1.84E-07	1.96E-03	1.19E-03
17	A01	110	Single Unit Short Haul Truck	476	0.00E+00	6.30E-05	3.34E-06	9.14E+01	6.46E-05	2.52E-01	6.92E-05	3.67E-02	2.84E-03	9.41E-04	7.63E-03	2.13E-03	2.16E-03	9.34E-03	3.65E-04	1.62E-07	5.47E-03	6.84E-03
17	A01	110	Single Unit Long Haul Truck	21	0.00E+00	2.70E-06	1.39E-07	3.83E+00	2.59E-06	9.92E-03	2.95E-06	1.52E-03	1.27E-04	4.03E-05	3.30E-04	8.76E-05	8.88E-05	3.90E-04	1.53E-05	6.63E-09	2.41E-04	2.85E-04
17	A01	110	Combination Short Haul Truck	246	0.00E+00	9.29E-05	6.98E-06	9.39E+01	2.21E-07	8.38E-02	6.58E-05	9.92E-02	2.64E-03	1.05E-03	4.91E-03	2.03E-03	2.01E-03	1.41E-02	3.14E-04	0.00E+00	2.90E-03	1.87E-02
17	A01	110	Combination Long Haul Truck	224	0.00E+00	8.40E-05	6.06E-06	8.48E+01	2.54E-07	8.32E-02	6.11E-05	9.60E-02	2.37E-03	7.25E-04	5.02E-03	1.78E-03	1.79E-03	1.29E-02	2.84E-04	0.00E+00	3.23E-03	1.81E-02
17	A02	110	Passenger Car	1630	0.00E+00	1.89E-05	2.04E-06	7.61E+01	1.31E-04	5.92E-01	4.20E-05	3.82E-03	4.04E-03	9.43E-04	4.09E-03	2.63E-03	2.70E-03	1.86E-04	3.86E-04	1.14E-07	1.38E-03	5.97E-04
17	A02	110	Passenger Truck	2729	0.00E+00	4.10E-05	4.37E-06	1.82E+02	2.71E-04	1.22E+00	8.79E-05	1.07E-02	7.02E-03	1.77E-03	8.47E-03	5.48E-03	5.62E-03	1.08E-03	9.13E-04	2.67E-07	2.85E-03	1.72E-03
17	A02	110	Single Unit Short Haul Truck	438	0.00E+00	5.79E-05	3.07E-06	8.40E+01	5.94E-05	2.31E-01	6.36E-05	3.37E-02	2.61E-03	8.65E-04	7.01E-03	1.96E-03	1.98E-03	8.58E-03	3.36E-04	1.49E-07	5.03E-03	6.29E-03
17	A02	110	Single Unit Long Haul Truck	19	0.00E+00	2.48E-06	1.27E-07	3.52E+00	2.38E-06	9.12E-03	2.71E-06	1.40E-03	1.17E-04	3.70E-05	3.03E-04	8.05E-05	8.16E-05	3.58E-04	1.41E-05	6.10E-09	2.22E-04	2.62E-04
17	A02	110	Combination Short Haul Truck	216	0.00E+00	8.17E-05	6.14E-06	8.26E+01	1.95E-07	7.37E-02	5.79E-05	8.73E-02	2.32E-03	9.21E-04	4.32E-03	1.78E-03	1.77E-03	1.24E-02	2.76E-04	0.00E+00	2.55E-03	1.64E-02
17	A02	110	Combination Long Haul Truck	197	0.00E+00	7.39E-05	5.33E-06	7.46E+01	2.23E-07	7.32E-02	5.37E-05	8.44E-02	2.09E-03	6.38E-04	4.42E-03	1.57E-03	1.58E-03	1.14E-02	2.50E-04	0.00E+00	2.84E-03	1.59E-02
17	A03	110	Passenger Car	1293	0.00E+00	1.50E-05	1.62E-06	6.04E+01	1.04E-04	4.70E-01	3.33E-05	3.03E-03	3.21E-03	7.48E-04	3.24E-03	2.09E-03	2.14E-03	1.47E-04	3.06E-04	9.06E-08	1.10E-03	4.74E-04
17	A03	110	Passenger Truck	2165	0.00E+00	3.25E-05	3.47E-06	1.44E+02	2.15E-04	9.66E-01	6.97E-05	8.49E-03	5.57E-03	1.40E-03	6.72E-03	4.35E-03	4.46E-03	8.57E-04	7.24E-04	2.12E-07	2.26E-03	1.37E-03
17	A03	110	Single Unit Short Haul Truck	460	0.00E+00	6.08E-05	3.22E-06	8.82E+01	6.23E-05	2.43E-01	6.68E-05	3.54E-02	2.74E-03	9.08E-04	7.36E-03	2.05E-03	2.08E-03	9.01E-03	3.53E-04	1.57E-07	5.28E-03	6.60E-03
17	A03	110	Single Unit Long Haul Truck	20	0.00E+00	2.60E-06	1.34E-07	3.70E+00	2.50E-06	9.58E-03	2.84E-06	1.47E-03	1.23E-04	3.89E-05	3.19E-04	8.45E-05	8.57E-05	3.76E-04	1.48E-05	6.40E-09	2.33E-04	2.75E-04
17	A03	110	Combination Short Haul Truck	232	0.00E+00	8.76E-05	6.58E-06	8.85E+01	2.08E-07	7.90E-02	6.20E-05	9.35E-02	2.48E-03	9.86E-04	4.63E-03	1.91E-03	1.89E-03	1.33E-02	2.96E-04	0.00E+00	2.74E-03	1.76E-02
17	A03	110	Combination Long Haul Truck	211	0.00E+00	7.92E-05	5.71E-06	7.99E+01	2.39E-07	7.84E-02	5.75E-05	9.04E-02	2.24E-03	6.83E-04	4.74E-03	1.68E-03	1.69E-03	1.22E-02	2.68E-04	0.00E+00	3.05E-03	1.70E-02
17	A04	110	Passenger Car	1918	0.00E+00	2.22E-05	2.40E-06	8.96E+01	1.55E-04	6.97E-01	4.94E-05	4.50E-03	4.76E-03	1.11E-03	4.81E-03	3.10E-03	3.18E-03	2.19E-04	4.54E-04	1.35E-07	1.63E-03	7.03E-04
17	A04	110	Passenger Truck	3212	0.00E+00	4.82E-05	5.15E-06	2.14E+02	3.19E-04	1.43E+00	1.03E-04	1.26E-02	8.26E-03	2.08E-03	9.97E-03	6.45E-03	6.61E-03	1.27E-03	1.07E-03	3.15E-07	3.36E-03	2.03E-03
17	A04	110	Single Unit Short Haul Truck	442	0.00E+00	5.85E-05	3.10E-06	8.48E+01	5.99E-05	2.34E-01	6.42E-05	3.40E-02	2.64E-03	8.73E-04	7.08E-03	1.98E-03	2.00E-03	8.66E-03	3.39E-04	1.51E-07	5.08E-03	6.35E-03
17	A04	110	Single Unit Long Haul Truck	19	0.00E+00	2.50E-06	1.29E-07	3.55E+00	2.41E-06	9.21E-03	2.74E-06	1.41E-03	1.18E-04	3.74E-05	3.06E-04	8.13E-05	8.24E-05	3.62E-04	1.42E-05	6.16E-09	2.24E-04	2.64E-04
17	A04	110	Combination Short Haul Truck	206	0.00E+00	7.78E-05	5.85E-06	7.86E+01	1.85E-07	7.01E-02	5.51E-05	8.31E-02	2.21E-03	8.76E-04	4.11E-03	1.70E-03	1.68E-03	1.18E-02	2.63E-04	0.00E+00	2.43E-03	1.57E-02
17	A04	110	Combination Long Haul Truck	188	0.00E+00	7.04E-05	5.07E-06	7.10E+01	2.13E-07	6.96E-02	5.11E-05	8.04E-02	1.99E-03	6.07E-04	4.21E-03	1.49E-03	1.50E-03	1.08E-02	2.38E-04	0.00E+00	2.71E-03	1.51E-02
17	A05	110	Passenger Car	1127	0.00E+00	1.31E-05	1.41E-06	5.27E+01	9.09E-05	4.09E-01	2.90E-05	2.64E-03	2.80E-03	6.52E-04	2.83E-03	1.82E-03	1.87E-03	1.28E-04	2.67E-04	7.90E-08	9.56E-04	4.13E-04
17	A05	110	Passenger Truck	1887	0.00E+00	2.83E-05	3.02E-06	1.26E+02	1.88E-04	8.43E-01	6.07E-05	7.40E-03	4.85E-03	1.22E-03	5.86E-03	3.79E-03	3.89E-03	7.47E-04	6.31E-04	1.85E-07	1.97E-03	1.19E-03
17	A05	110	Single Unit Short Haul Truck	372	0.00E+00	4.92E-05	2.61E-06	7.14E+01	5.04E-05	1.97E-01	5.40E-05	2.86E-02	2.22E-03	7.35E-04	5.96E-03	1.66E-03	1.68E-03	7.29E-03	2.85E-04	1.27E-07	4.27E-03	5.34E-03
17	A05	110	Single Unit Long Haul Truck	16	0.00E+00	2.11E-06	1.08E-07	2.99E+00	2.03E-06	7.75E-03	2.30E-06	1.19E-03	9.92E-05	3.15E-05	2.58E-04	6.84E-05	6.94E-05	3.05E-04	1.20E-05	5.18E-09	1.88E-04	2.22E-04
17	A05	110	Combination Short Haul Truck	193	0.00E+00	7.29E-05	5.48E-06	7.37E+01	1.74E-07	6.58E-02	5.16E-05	7.79E-02	2.07E-03	8.21E-04	3.85E-03	1.59E-03	1.58E-03	1.11E-02	2.47E-04	0.00E+00	2.28E-03	1.47E-02
17	A05	110	Combination Long Haul Truck	176	0.00E+00	6.60E-05	4.76E-06	6.66E+01	1.99E-07	6.53E-02	4.79E-05	7.53E-02	1.86E-03	5.69E-04	3.94E-03	1.40E-03	1.41E-03	1.02E-02	2.23E-04	0.00E+00	2.54E-03	1.42E-02
17	A06	110	Passenger Car	1478	0.00E+00	1.71E-05	1.85E-06	6.91E+01	1.19E-04	5.37E-01	3.81E-05	3.47E-03	3.67E-03	8.56E-04	3.71E-03	2.39E-03	2.45E-03	1.68E-04	3.50E-04	1.04E-07	1.25E-03	5.42E-04
17	A06	110	Passenger Truck	2475	0.00E+00	3.71E-05	3.96E-06	1.65E+02	2.46E-04	1.11E+00	7.97E-05	9.71E-03	6.37E-03	1.61E-03	7.68E-03	4.97E-03	5.10E-03	9.80E-04	8.28E-04	2.42E-07	2.59E-03	1.56E-03
17	A06	110	Single Unit Short Haul Truck	350	0.00E+00	4.62E-05	2.45E-06	6.70E+01	4.74E-05	1.85E-01	5.08E-05	2.69E-02	2.09E-03	6.91E-04	5.60E-03	1.56E-03	1.58E-03	6.85E-03	2.68E-04	1.19E-07	4.01E-03	5.02E-03
17	A06	110	Single Unit Long Haul Truck	15	0.00E+00	1.98E-06	1.02E-07	2.81E+00	1.90E-06	7.28E-03	2.16E-06	1.12E-03	9.32E-05	2.95E-05	2.42E-04	6.43E-05	6.52E-05	2.86E-04	1.12E-05	4.87E-09	1.77E-04	2.09E-04
17	A06	110	Combination Short Haul Truck	170	0.00E+00	6.43E-05	4.83E-06	6.49E+01	1.53E-07	5.79E-02	4.55E-05	6.86E-02	1.82E-03	7.24E-04	3.39E-03	1.40E-03	1.39E-03	9.78E-03	2.17E-04	0.00E+00	2.01E-03	1.29E-02
17	A06	110	Combination Long Haul Truck	155	0.00E+00	5.81E-05	4.19E-06	5.86E+01	1.76E-07	5.75E-02	4.22E-05	6.63E-02	1.64E-03	5.01E-04	3.47E-03	1.23E-03	1.24E-03	8.95E-03	1.96E-04	0.00E+00	2.23E-03	1.25E-02
17	A07	110	Passenger Car	1060	0.00E+00	1.23E-05	1.33E-06	4.95E+01	8.55E-05	3.85E-01	2.73E-05	2.49E-03	2.63E-03	6.14E-04	2.66E-03	1.71E-03	1.76E-03	1.21E-04	2.51E-04	7.43E-08	8.99E-04	3.88E-04
17	A07	110	Passenger Truck	1775	0.00E+00	2.66E-05	2.84E-06	1.18E+02	1.76E-04	7.93E-01	5.71E-05	6.97E-03	4.57E-03	1.15E-03	5.51E-03	3.57E-03	3.65E-03	7.03E-04	5.94E-04	1.74E-07	1.86E-03	1.12E-03
17	A07	110	Single Unit Short Haul Truck	371	0.00E+00	4.91E-05	2.60E-06	7.12E+01	5.04E-05	1.96E-01	5.40E-05	2.86E-02	2.22E-03	7.34E-04	5.95E-03	1.66E-03	1.68E-03	7.28E-03	2.85E-04	1.27E-07	4.26E-03	5.33E-03
17	A07	110	Single Unit Long Haul Truck	16	0.00E+00	2.10E-06	1.08E-07	2.99E+00	2.02E-06	7.74E-03	2.30E-06	1.19E-03	9.90E-05	3.14E-05	2.57E-04	6.83E-05	6.92E-05	3.04E-04	1.20E-05	5.17E-09	1.88E-04	2.22E-04
17	A07	110	Combination Short Haul Truck	203	0.00E+00	7.68E-05	5.77E-06	7.76E+01	1.83E-07	6.93E-02	5.44E-05	8.20E-02	2.18E-03	8.65E-04	4.06E-03	1.68E-03	1.66E-03	1.17E-02	2.60E-04	0.00E+00	2.40E-03	1.55E-02
17	A07	110	Combination Long Haul Truck	186	0.00E+00	6.95E-05	5.01E-06	7.01E+01	2.10E-07	6.88E-02	5.05E-05	7.93E-02	1.96E-03	5.99E-04	4.15E-03	1.47E-03	1.48E-03	1.07E-02	2.35E-04	0.00E+00	2.67E-03	1.49E-02
17	A08	110	Passenger Car	1247	0.00E+00	1.45E-05	1.56E-06	5.83E+01	1.01E-04	4.53E-01	3.21E-05	2.93E-03	3.10E-03	7.22E-04	3.13E-03	2.02E-03	2.07E-03	1.42E-04	2.95E-04	8.75E-08	1.06E-03	4.57E-04
17	A08	110	Passenger Truck	2089	0.00E+00	3.14E-05	3.35E-06	1.39E+02	2.08E-04	9.33E-01	6.72E-05	8.20E-03	5.37E-03	1.35E-03	6.48E-03	4.20E-03	4.30E-03	8.27E-04	6.99E-04	2.05E-07	2.18E-03	1.32E-03
17	A08	110	Single Unit Short Haul Truck	347	0.00E+00	4.59E-05	2.43E-06	6.66E+01	4.71E-05	1.83E-01	5.04E-05	2.67E-02	2.07E-03	6.86E-04	5.56E-03	1.55E-03	1.57E-03	6.81E-03	2.66E-04	1.18E-07	3.99E-03	4.99E-03
17	A08	110	Single Unit Long Haul Truck	15	0.00E+00	1.97E-06	1.01E-07	2.79E+00	1.89E-06	7.23E-03	2.15E-06	1.11E-03	9.26E-05	2.94E-05	2.41E-04	6.38E-05	6.47E-05	2.84E-04	1.12E-05	4.84E-09	1.76E-04	2.07E-04
17	A08	110	Combination Short Haul Truck	180	0.00E+00	6.80E-05	5.11E-06	6.87E+01	1.62E-07	6.13E-02	4.81E-05	7.25E-02	1.93E-03	7.65E-04	3.59E-03	1.48E-03	1.47E-03	1.03E-02	2.30E-04	0.00E+00	2.12E-03	1.37E-02
17	A08	110	Combination Long Haul Truck	164	0.00E+00	6.14E-05	4.43E-06	6.20E+01	1.86E-07	6.08E-02	4.47E-05	7.02E-02	1.74E-03	5.30E-04	3.67E-03	1.30E-03	1.31E-03	9.46E-03	2.08E-04	0.00E+00	2.36E-03	1.32E-02
17	A09	110	Passenger Car	1393	0.00E+00	1.61E-05	1.75E-06	6.51E+01	1.12E-04	5.06E-01	3.59E-05	3.27E-03	3.46E-03	8.06E-04	3.49E-03	2.25E-03	2.31E-03	1.59E-04	3.30E-04	9.77E-08	1.18E-03	5.10E-04
17	A09	110	Passenger Truck	2332	0.00E+00	3.50E-05	3.74E-06	1.55E+02	2.32E-04	1.04E+00	7.51E-05	9.15E-03	6.00E-03	1.51E-03	7.24E-03	4.68E-03	4.80E-03	9.24E-04	7.80E-04	2.29E-07	2.44E-03	1.47E-03
17	A09	110	Single Unit Short Haul Truck	460	0.00E+00	6.08E-05	3.22E-06	8.82E+01	6.24E-05	2.43E-01	6.68E-05	3.54E-02	2.74E-03	9.09E-04	7.36E-03	2.06E-03	2.08E-03	9.01E-03	3.53E-04	1.57E-07	5.28E-03	6.61E-03
17	A09	110	Single Unit Long Haul Truck	20	0.00E+00	2.60E-06	1.34E-07	3.70E+00	2.50E-06	9.58E-03	2.85E-06	1.47E-03	1.23E-04	3.89E-05	3.19E-04	8.45E-05	8.57E-05	3.76E-04	1.48E-05	6.40E-09	2.33E-04	2.75E-04
17	A09	110	Combination Short Haul Truck	254	0.00E+00	9.58E-05	7.20E-06	9.68E+01	2.28E-07	8.64E-02	6.78E-05	1.02E-01	2.72E-03	1.08E-03	5.06E-03	2.09E-03	2.07E-03	1.46E-02	3.24E-04	0.00E+00	2.99E-03	1.93E-02
17	A09	110	Combination Long Haul Truck	231	0.00E+00	8.66E-05	6.25E-06	8.74E+01	2.62E-07	8.58E-02	6.30E-05	9.90E-02	2.45E-03	7.47E-04	5.18E-03	1.84E-03	1.85E-03	1.33E-02	2.93E-04	0.00E+00	3.33E-03	1.86E-02
17	A10	110	Passenger Car	1284	0.00E+00	1.49E-05	1.61E-06	6.00E+01	1.04E-04	4.67E-01	3.31E-05	3.01E-03	3.19E-03	7.43E-04	3.22E-03	2.07E-03	2.13E-03	1.46E-04	3.04E-04	9.00E-08	1.09E-03	4.71E-04
17	A10	110	Passenger Truck	2150	0.00E+00	3.23E-05	3.44E-06	1.43E+02	2.14E-04	9.60E-01	6.92E-05	8.44E-03	5.53E-03	1.39E-03	6.67E-03	4.32E-03	4.43E-03	8.51E-04	7.19E-04	2.11E-07	2.25E-03	1.36E-03
17	A10	110	Single Unit Short Haul Truck	399	0.00E+00	5.27E-05	2.79E-06	7.64E+01	5.40E-05	2.11E-01	5.79E-05	3.07E-02	2.38E-03	7.88E-04	6.38E-03	1.78E-03	1.80E-03	7.81E-03	3.06E-04	1.36E-07	4.58E-03	5.72E-03
17	A10	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.16E-07	3.20E+00	2.17E-06	8.30E-03	2.47E-06	1.28E-03	1.06E-04	3.37E-05	2.76E-04	7.33E-05	7.43E-05	3.26E-04	1.28E-05	5.55E-09	2.02E-04	2.38E-04
17	A10	110	Combination Short Haul Truck	222	0.00E+00	8.37E-05	6.29E-06	8.45E+01	1.99E-07	7.54E-02	5.92E-05	8.93E-02	2.37E-03	9.42E-04	4.42E-03	1.83E-03	1.81E-03	1.27E-02	2.83E-04	0.00E+00	2.61E-03	1.68E-02
17	A10	110	Combination Long Haul Truck	202	0.00E+00	7.56E-05	5.46E-06	7.63E+01	2.29E-07	7.49E-02	5.50E-05	8.64E-02	2.14E-03	6.53E-04	4.52E-03	1.61E-03	1.61E-03	1.17E-02	2.56E-04	0.00E+00	2.91E-03	1.63E-02
16	B05	100	Passenger Car	1047	0.00E+00	1.15E-05	1.24E-06	4.71E+01	7.99E-05	3.16E-01	2.55E-05	2.24E-03	3.40E-03	6.85E-04	2.48E-03	1.60E-03	1.64E-03	1.31E-04	2.38E-04	6.56E-08	8.41E-04	3.50E-04
16	B05	100	Passenger Truck	1754	0.00E+00	2.48E-05	2.64E-06	1.11E+02	1.62E-04	6.36E-01	5.27E-05	6.36E-03	6.01E-03	1.28E-03	5.07E-03	3.29E-03	3.37E-03	7.07E-04	5.57E-04	1.53E-07	1.70E-03	1.03E-03
16	B05	100	Single Unit Short Haul Truck	282	0.00E+00	3.78E-05	1.87E-06	5.14E+01	3.30E-05	1.19E-01	4.09E-05	2.04E-02	1.94E-03	5.65E-04	4.68E-03	1.16E-03	1.18E-03	5.18E-03	2.07E-04	8.44E-08	3.50E-03	3.81E-03
16	B05	100	Single Unit Long Haul Truck	12	0.00E+00	1.64E-06	7.97E-08	2.17E+00	1.37E-06	4.86E-03	1.77E-06	8.60E-04	8.78E-05	2.44E-05	2.04E-04	4.90E-05	4.98E-05	2.17E-04	8.72E-06	3.46E-09	1.54E-04	1.61E-04
16	B05	100	Combination Short Haul Truck	186	0.00E+00	6.40E-05	4.67E-06	6.73E+01	1.82E-07	6.24E-02	4.62E-05	6.81E-02	2.17E-03	7.72E-04	3.58E-03	1.37E-03	1.35E-03	1.02E-02	2.25E-04	0.00E+00	2.24E-03	1.28E-02
16	B05	100	Combination Long Haul Truck	170	0.00E+00	5.57E-05	3.82E-06	6.10E+01	2.11E-07	6.23E-02	4.17E-05	6.47E-02	2.01E-03	5.58E-04	3.65E-03	1.14E-03	1.14E-03	9.31E-03	2.04E-04	0.00E+00	2.51E-03	1.22E-02
16	B06	100	Passenger Car	376	0.00E+00	4.12E-06	4.46E-07	1.69E+01	2.87E-05	1.13E-01	9.16E-06	8.03E-04	1.22E-03	2.46E-04	8.91E-04	5.75E-04	5.90E-04	4.71E-05	8.54E-05	2.35E-08	3.02E-04	1.25E-04
16	B06	100	Passenger Truck	629	0.00E+00	8.89E-06	9.47E-07	3.99E+01	5.82E-05	2.28E-01	1.89E-05	2.28E-03	2.16E-03	4.58E-04	1.82E-03	1.18E-03	1.21E-03	2.54E-04	2.00E-04	5.48E-08	6.11E-04	3.69E-04
16	B06	100	Single Unit Short Haul Truck	324	0.00E+00	4.35E-05	2.15E-06	5.91E+01	3.79E-05	1.37E-01	4.71E-05	2.35E-02	2.23E-03	6.49E-04	5.38E-03	1.33E-03	1.35E-03	5.96E-03	2.37E-04	9.71E-08	4.02E-03	4.39E-03
16	B06	100	Single Unit Long Haul Truck	14	0.00E+00	1.88E-06	9.16E-08	2.49E+00	1.57E-06	5.59E-03	2.03E-06	9.89E-04	1.01E-04	2.81E-05	2.34E-04	5.63E-05	5.72E-05	2.49E-04	1.00E-05	3.97E-09	1.77E-04	1.85E-04
16	B06	100	Combination Short Haul Truck	164	0.00E+00	5.62E-05	4.10E-06	5.92E+01	1.60E-07	5.49E-02	4.06E-05	5.99E-02	1.91E-03	6.79E-04	3.15E-03	1.20E-03	1.18E-03	8.93E-03	1.98E-04	0.00E+00	1.97E-03	1.13E-02
16	B06	100	Combination Long Haul Truck	149	0.00E+00	4.89E-05	3.36E-06	5.36E+01	1.85E-07	5.48E-02	3.67E-05	5.69E-02	1.76E-03	4.91E-04	3.21E-03	1.01E-03	1.00E-03	8.19E-03	1.80E-04	0.00E+00	2.21E-03	1.07E-02
16	B07	100	Passenger Car	1248	0.00E+00	1.37E-05	1.48E-06	5.62E+01	9.52E-05	3.76E-01	3.04E-05	2.67E-03	4.05E-03	8.16E-04	2.96E-03	1.91E-03	1.96E-03	1.56E-04	2.84E-04	7.82E-08	1.00E-03	4.17E-04
16	B07	100	Passenger Truck	2091	0.00E+00	2.95E-05	3.15E-06	1.33E+02	1.93E-04	7.58E-01	6.29E-05	7.59E-03	7.16E-03	1.52E-03	6.05E-03	3.92E-03	4.01E-03	8.43E-04	6.64E-04	1.82E-07	2.03E-03	1.23E-03
16	B07	100	Single Unit Short Haul Truck	283	0.00E+00	3.80E-05	1.88E-06	5.16E+01	3.31E-05	1.19E-01	4.11E-05	2.05E-02	1.95E-03	5.67E-04	4.69E-03	1.16E-03	1.18E-03	5.20E-03	2.07E-04	8.47E-08	3.51E-03	3.83E-03
16	B07	100	Single Unit Long Haul Truck	12	0.00E+00	1.65E-06	7.99E-08	2.17E+00	1.37E-06	4.88E-03	1.77E-06	8.63E-04	8.81E-05	2.45E-05	2.05E-04	4.91E-05	4.99E-05	2.18E-04	8.75E-06	3.47E-09	1.55E-04	1.61E-04
16	B07	100	Combination Short Haul Truck	150	0.00E+00	5.16E-05	3.76E-06	5.43E+01	1.47E-07	5.03E-02	3.72E-05	5.49E-02	1.75E-03	6.22E-04	2.89E-03	1.10E-03	1.08E-03	8.18E-03	1.82E-04	0.00E+00	1.81E-03	1.03E-02
16	B07	100	Combination Long Haul Truck	137	0.00E+00	4.49E-05	3.08E-06	4.92E+01	1.70E-07	5.03E-02	3.36E-05	5.21E-02	1.62E-03	4.50E-04	2.94E-03	9.22E-04	9.20E-04	7.51E-03	1.65E-04	0.00E+00	2.02E-03	9.82E-03
16	B08	100	Passenger Car	511	0.00E+00	5.60E-06	6.06E-07	2.30E+01	3.90E-05	1.54E-01	1.24E-05	1.09E-03	1.66E-03	3.34E-04	1.21E-03	7.81E-04	8.02E-04	6.40E-05	1.16E-04	3.20E-08	4.10E-04	1.71E-04
16	B08	100	Passenger Truck	855	0.00E+00	1.21E-05	1.29E-06	5.42E+01	7.91E-05	3.10E-01	2.57E-05	3.10E-03	2.93E-03	6.22E-04	2.47E-03	1.60E-03	1.64E-03	3.45E-04	2.72E-04	7.45E-08	8.31E-04	5.02E-04
16	B08	100	Single Unit Short Haul Truck	37	0.00E+00	5.02E-06	2.48E-07	6.82E+00	4.38E-06	1.58E-02	5.43E-06	2.71E-03	2.57E-04	7.49E-05	6.20E-04	1.54E-04	1.56E-04	6.88E-04	2.74E-05	1.12E-08	4.64E-04	5.06E-04
16	B08	100	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	1.06E-08	2.87E-01	1.81E-07	6.45E-04	2.35E-07	1.14E-04	1.16E-05	3.24E-06	2.70E-05	6.49E-06	6.60E-06	2.88E-05	1.16E-06	4.58E-10	2.04E-05	2.13

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C14	70	Combination Short Haul Truck	15	0.00E+00	7.72E-06	5.49E-07	5.60E+00	2.51E-08	6.65E-03	5.66E-06	8.09E-03	5.87E-04	1.28E-04	4.70E-04	1.62E-04	1.62E-04	8.44E-04	1.87E-05	0.00E+00	3.08E-04	1.52E-03
53	C14	70	Combination Long Haul Truck	14	0.00E+00	6.98E-06	4.67E-07	5.22E+00	2.89E-08	7.04E-03	5.30E-06	7.97E-03	5.83E-04	1.06E-04	4.86E-04	1.41E-04	1.43E-04	7.98E-04	1.75E-05	0.00E+00	3.44E-04	1.50E-03
50	C15	40	Passenger Car	118	0.00E+00	1.98E-06	2.14E-07	6.84E+00	1.38E-05	5.11E-02	4.40E-06	2.13E-04	2.03E-03	2.91E-04	4.29E-04	2.76E-04	2.83E-04	3.69E-05	3.39E-05	8.25E-09	1.45E-04	3.32E-05
50	C15	40	Passenger Truck	197	0.00E+00	4.53E-06	4.75E-07	1.52E+01	2.72E-05	8.79E-02	9.07E-06	8.05E-04	3.61E-03	5.14E-04	8.54E-04	5.59E-04	5.72E-04	1.30E-04	7.50E-05	1.60E-08	2.82E-04	1.36E-04
50	C15	40	Single Unit Short Haul Truck	19	0.00E+00	8.41E-06	4.41E-07	4.04E+00	7.33E-06	6.96E-03	8.94E-06	4.11E-03	7.68E-04	1.28E-04	9.95E-04	2.63E-04	2.67E-04	4.08E-04	1.63E-05	6.90E-09	7.28E-04	7.70E-04
50	C15	40	Single Unit Long Haul Truck	1	0.00E+00	3.68E-07	1.92E-08	1.74E-01	3.21E-07	3.03E-04	3.92E-07	1.79E-04	3.44E-05	5.67E-06	4.38E-05	1.15E-05	1.17E-05	1.76E-05	7.04E-07	3.00E-10	3.21E-05	3.35E-05
50	C15	40	Combination Short Haul Truck	19	0.00E+00	1.67E-05	1.16E-06	8.49E+00	6.01E-08	1.46E-02	1.24E-05	1.86E-02	1.94E-03	3.51E-04	1.08E-03	3.46E-04	3.50E-04	1.28E-03	2.84E-05	0.00E+00	7.34E-04	3.51E-03
50	C15	40	Combination Long Haul Truck	17	0.00E+00	1.52E-05	9.94E-07	8.07E+00	6.83E-08	1.62E-02	1.17E-05	1.87E-02	1.95E-03	3.11E-04	1.12E-03	3.03E-04	3.09E-04	1.23E-03	2.70E-05	0.00E+00	8.07E-04	3.51E-03
52	C16	60	Passenger Car	137	0.00E+00	1.88E-06	2.04E-07	6.86E+00	1.31E-05	4.86E-02	4.19E-06	2.68E-04	1.35E-03	2.07E-04	4.08E-04	2.63E-04	2.70E-04	2.85E-05	3.43E-05	9.18E-09	1.38E-04	4.19E-05
52	C16	60	Passenger Truck	229	0.00E+00	4.14E-06	4.37E-07	1.56E+01	2.58E-05	8.69E-02	8.51E-06	8.63E-04	2.40E-03	3.71E-04	8.09E-04	5.27E-04	5.40E-04	1.19E-04	7.77E-05	1.95E-08	2.69E-04	1.43E-04
52	C16	60	Single Unit Short Haul Truck	7	0.00E+00	2.18E-06	1.09E-07	1.39E+00	1.79E-06	2.68E-03	2.32E-06	1.04E-03	1.76E-04	3.20E-05	2.65E-04	6.53E-05	6.64E-05	1.39E-04	5.60E-06	2.31E-09	1.98E-04	1.94E-04
52	C16	60	Combination Short Haul Truck	6	0.00E+00	3.75E-06	2.62E-07	2.44E+00	1.33E-08	3.28E-03	2.78E-06	4.06E-03	3.49E-04	6.92E-05	2.39E-04	7.79E-05	7.80E-05	3.68E-04	8.17E-06	0.00E+00	1.61E-04	7.65E-04
52	C16	60	Combination Long Haul Truck	6	0.00E+00	3.37E-06	2.19E-07	2.29E+00	1.52E-08	3.54E-03	2.60E-06	4.03E-03	3.51E-04	5.96E-05	2.46E-04	6.69E-05	6.78E-05	3.50E-04	7.67E-06	0.00E+00	1.78E-04	7.58E-04
53	C17	70	Passenger Car	337	0.00E+00	4.28E-06	4.63E-07	1.64E+01	2.98E-05	1.11E-01	9.51E-06	6.87E-04	2.57E-03	4.15E-04	9.25E-04	5.96E-04	6.12E-04	6.04E-05	8.22E-05	2.24E-08	3.13E-04	1.07E-04
53	C17	70	Passenger Truck	564	0.00E+00	9.31E-06	9.85E-07	3.77E+01	5.90E-05	2.03E-01	1.94E-05	2.10E-03	4.62E-03	7.55E-04	1.85E-03	1.20E-03	1.23E-03	2.72E-04	1.88E-04	4.92E-08	6.16E-04	3.45E-04
53	C17	70	Single Unit Short Haul Truck	111	0.00E+00	2.61E-05	1.31E-06	2.04E+01	2.13E-05	4.08E-02	2.78E-05	1.28E-02	1.83E-03	3.67E-04	3.16E-03	7.80E-04	7.93E-04	2.05E-03	8.24E-05	3.32E-08	2.37E-03	2.40E-03
53	C17	70	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	5.65E-08	8.67E-01	9.20E-07	1.72E-03	1.21E-06	5.52E-04	8.38E-05	1.63E-05	1.38E-04	3.38E-05	3.43E-05	8.66E-05	3.50E-06	1.40E-09	1.04E-04	1.03E-04
53	C17	70	Combination Short Haul Truck	49	0.00E+00	2.54E-05	1.81E-06	1.84E+01	8.25E-08	2.19E-02	1.86E-05	2.66E-02	1.93E-03	4.22E-04	1.55E-03	5.34E-04	5.33E-04	2.78E-03	6.16E-05	0.00E+00	1.01E-03	5.01E-03
53	C17	70	Combination Long Haul Truck	45	0.00E+00	2.30E-05	1.54E-06	1.72E+01	9.51E-08	2.32E-02	1.74E-05	2.62E-02	1.92E-03	3.50E-04	1.60E-03	4.64E-04	4.69E-04	2.63E-03	5.75E-05	0.00E+00	1.13E-03	4.94E-03
52	C18	60	Passenger Car	131	0.00E+00	1.81E-06	1.95E-07	6.58E+00	1.26E-05	4.67E-02	4.02E-06	2.58E-04	1.29E-03	1.99E-04	3.91E-04	2.52E-04	2.59E-04	2.74E-05	3.30E-05	8.81E-09	1.32E-04	4.02E-05
52	C18	60	Passenger Truck	219	0.00E+00	3.97E-06	4.19E-07	1.50E+01	2.48E-05	8.34E-02	8.17E-06	8.28E-04	2.30E-03	3.56E-04	7.76E-04	5.06E-04	5.18E-04	1.14E-04	7.45E-05	1.87E-08	2.58E-04	1.37E-04
52	C18	60	Single Unit Short Haul Truck	19	0.00E+00	5.61E-06	2.81E-07	3.57E+00	4.62E-06	6.92E-03	5.98E-06	2.67E-03	4.54E-04	8.24E-05	6.82E-04	1.68E-04	1.71E-04	3.58E-04	1.44E-05	5.95E-09	5.11E-04	5.00E-04
52	C18	60	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.53E-01	2.01E-07	2.94E-04	2.62E-07	1.15E-04	2.04E-05	3.65E-06	2.99E-05	7.32E-06	7.44E-06	1.52E-05	6.17E-07	2.53E-10	2.24E-05	2.16E-05
52	C18	60	Combination Short Haul Truck	8	0.00E+00	4.66E-06	3.25E-07	3.03E+00	1.65E-08	4.07E-03	3.46E-06	5.04E-03	4.34E-04	8.58E-05	2.96E-04	9.67E-05	9.68E-05	4.57E-04	1.01E-05	0.00E+00	2.00E-04	9.50E-04
52	C18	60	Combination Long Haul Truck	7	0.00E+00	4.18E-06	2.72E-07	2.84E+00	1.89E-08	4.39E-03	3.22E-06	5.00E-03	4.36E-04	7.40E-05	3.05E-04	8.31E-05	8.41E-05	4.34E-04	9.51E-06	0.00E+00	2.21E-04	9.41E-04
50	C19	40	Passenger Car	40	0.00E+00	6.78E-07	7.33E-08	2.34E+00	4.72E-06	1.75E-02	1.51E-06	7.28E-05	6.97E-04	9.95E-05	1.47E-04	9.46E-05	9.71E-05	1.26E-05	1.16E-05	2.82E-09	4.97E-05	1.14E-05
50	C19	40	Passenger Truck	67	0.00E+00	1.55E-06	1.63E-07	5.22E+00	9.30E-06	3.01E-02	3.11E-06	2.76E-04	1.24E-03	1.76E-04	2.92E-04	1.91E-04	1.96E-04	4.46E-05	2.57E-05	5.49E-09	9.65E-05	4.66E-05
50	C19	40	Single Unit Short Haul Truck	4	0.00E+00	1.83E-06	9.63E-08	8.81E-01	1.60E-06	1.52E-03	1.95E-06	8.96E-04	1.68E-04	2.78E-05	2.17E-04	5.73E-05	5.82E-05	8.90E-05	3.56E-06	1.51E-09	1.59E-04	1.68E-04
50	C19	40	Combination Short Haul Truck	2	0.00E+00	1.90E-06	1.32E-07	9.64E-01	6.83E-09	1.66E-03	1.41E-06	2.11E-03	2.21E-04	3.98E-05	1.23E-04	3.93E-05	3.97E-05	1.45E-04	3.23E-06	0.00E+00	8.34E-05	3.98E-04
50	C19	40	Combination Long Haul Truck	2	0.00E+00	1.73E-06	1.13E-07	9.16E-01	7.76E-09	1.84E-03	1.33E-06	2.12E-03	2.22E-04	3.54E-05	1.27E-04	3.44E-05	3.51E-05	1.40E-04	3.07E-06	0.00E+00	9.16E-05	3.99E-04
53	C20	70	Passenger Car	76	0.00E+00	9.67E-07	1.05E-07	3.70E+00	6.73E-06	2.50E-02	2.15E-06	1.55E-04	5.82E-04	9.38E-05	2.09E-04	1.35E-04	1.38E-04	1.36E-05	1.86E-05	5.06E-09	7.08E-05	2.43E-05
53	C20	70	Passenger Truck	128	0.00E+00	2.10E-06	2.23E-07	8.53E+00	1.33E-05	4.60E-02	4.38E-06	4.75E-04	1.04E-03	1.71E-04	4.17E-04	2.72E-04	2.78E-04	6.15E-05	4.25E-05	1.11E-08	1.39E-04	7.80E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	1.09E-06	5.44E-08	8.50E-01	8.88E-07	1.70E-03	1.16E-06	5.34E-04	7.64E-05	1.53E-05	1.32E-04	3.25E-05	3.30E-05	8.52E-05	3.43E-06	1.38E-09	9.87E-05	1.00E-04
53	C20	70	Combination Short Haul Truck	2	0.00E+00	9.76E-07	6.93E-08	7.07E-01	3.17E-09	8.40E-04	7.16E-07	1.02E-03	7.42E-05	1.62E-05	5.94E-05	2.05E-05	2.05E-05	1.07E-04	2.37E-06	0.00E+00	3.89E-05	1.93E-04
53	C20	70	Combination Long Haul Truck	2	0.00E+00	8.82E-07	5.90E-08	6.60E-01	3.65E-09	8.90E-04	6.70E-07	1.01E-03	7.37E-05	1.35E-05	6.14E-05	1.78E-05	1.80E-05	1.01E-04	2.21E-06	0.00E+00	4.34E-05	1.90E-04
50	C21	40	Passenger Car	287	0.00E+00	4.83E-06	5.22E-07	1.67E+01	3.36E-05	1.25E-01	1.07E-05	5.18E-04	4.96E-03	7.08E-04	1.04E-03	6.73E-04	6.91E-04	8.99E-05	8.27E-05	2.01E-08	3.54E-04	8.10E-05
50	C21	40	Passenger Truck	480	0.00E+00	1.10E-05	1.16E-06	3.72E+01	6.62E-05	2.14E-01	2.21E-05	1.96E-03	8.81E-03	1.25E-03	2.08E-03	1.36E-03	1.40E-03	3.18E-04	1.83E-04	3.91E-08	6.87E-04	3.32E-04
50	C21	40	Single Unit Short Haul Truck	79	0.00E+00	3.52E-05	1.85E-06	1.69E+01	3.07E-05	2.92E-02	3.75E-05	1.72E-02	3.22E-03	5.35E-04	4.17E-03	1.10E-03	1.12E-03	1.71E-03	6.83E-05	2.89E-08	3.05E-03	3.23E-03
50	C21	40	Single Unit Long Haul Truck	4	0.00E+00	1.54E-06	8.06E-08	7.31E-01	1.34E-06	1.27E-03	1.64E-06	7.49E-04	1.44E-04	2.37E-05	1.83E-04	4.81E-05	4.89E-05	7.38E-05	2.95E-06	1.26E-09	1.34E-04	1.40E-04
50	C21	40	Combination Short Haul Truck	31	0.00E+00	2.78E-05	1.93E-06	1.41E+01	9.99E-08	2.42E-02	2.07E-05	3.09E-02	3.23E-03	5.83E-04	1.80E-03	5.75E-04	5.81E-04	2.13E-03	4.72E-05	0.00E+00	1.22E-03	5.82E-03
50	C21	40	Combination Long Haul Truck	29	0.00E+00	2.53E-05	1.65E-06	1.34E+01	1.13E-07	2.69E-02	1.95E-05	3.10E-02	3.25E-03	5.17E-04	1.85E-03	5.04E-04	5.13E-04	2.05E-03	4.49E-05	0.00E+00	1.34E-03	5.84E-03
52	C22	60	Passenger Car	230	0.00E+00	3.17E-06	3.43E-07	1.15E+01	2.21E-05	8.18E-02	7.04E-06	4.51E-04	2.27E-03	3.48E-04	6.86E-04	4.42E-04	4.54E-04	4.80E-05	5.78E-05	1.54E-08	2.32E-04	7.06E-05
52	C22	60	Passenger Truck	385	0.00E+00	6.96E-06	7.35E-07	2.63E+01	4.34E-05	1.46E-01	1.43E-05	1.45E-03	4.04E-03	6.25E-04	1.36E-03	8.87E-04	9.08E-04	2.00E-04	1.31E-04	3.28E-08	4.53E-04	2.40E-04
52	C22	60	Single Unit Short Haul Truck	18	0.00E+00	5.20E-06	2.60E-07	3.31E+00	4.29E-06	6.41E-03	5.55E-06	2.48E-03	4.21E-04	7.64E-05	6.32E-04	1.56E-04	1.59E-04	3.32E-04	1.34E-05	5.51E-09	4.73E-04	4.64E-04
52	C22	60	Single Unit Long Haul Truck	1	0.00E+00	2.27E-07	1.13E-08	1.41E-01	1.86E-07	2.72E-04	2.42E-07	1.07E-04	1.89E-05	3.38E-06	2.77E-05	6.78E-06	6.90E-06	1.41E-05	5.72E-07	2.35E-10	2.08E-05	2.01E-05
52	C22	60	Combination Short Haul Truck	6	0.00E+00	3.77E-06	2.63E-07	2.45E+00	1.34E-08	3.30E-03	2.80E-06	4.08E-03	3.51E-04	6.95E-05	2.40E-04	7.83E-05	7.84E-05	3.70E-04	8.21E-06	0.00E+00	1.62E-04	7.69E-04
52	C22	60	Combination Long Haul Truck	6	0.00E+00	3.39E-06	2.20E-07	2.30E+00	1.53E-08	3.55E-03	2.61E-06	4.04E-03	3.53E-04	5.99E-05	2.47E-04	6.72E-05	6.81E-05	3.52E-04	7.70E-06	0.00E+00	1.79E-04	7.62E-04
53	C23	70	Passenger Car	376	0.00E+00	4.77E-06	5.17E-07	1.83E+01	3.32E-05	1.24E-01	1.06E-05	7.67E-04	2.87E-03	4.63E-04	1.03E-03	6.66E-04	6.84E-04	6.74E-05	9.18E-05	2.50E-08	3.50E-04	1.20E-04
53	C23	70	Passenger Truck	630	0.00E+00	1.04E-05	1.10E-06	4.22E+01	6.58E-05	2.27E-01	2.16E-05	2.35E-03	5.16E-03	8.43E-04	2.06E-03	1.34E-03	1.37E-03	3.04E-04	2.10E-04	5.50E-08	6.88E-04	3.85E-04
53	C23	70	Single Unit Short Haul Truck	63	0.00E+00	1.48E-05	7.43E-07	1.16E+01	1.21E-05	2.32E-02	1.58E-05	7.30E-03	1.04E-03	2.09E-04	1.80E-03	4.44E-04	4.51E-04	1.17E-03	4.69E-05	1.89E-08	1.35E-03	1.37E-03
53	C23	70	Single Unit Long Haul Truck	3	0.00E+00	6.46E-07	3.22E-08	4.93E-01	5.24E-07	9.77E-04	6.89E-07	3.14E-04	4.77E-05	9.30E-06	7.87E-05	1.92E-05	1.95E-05	4.93E-05	1.99E-06	7.98E-10	5.92E-05	5.88E-05
53	C23	70	Combination Short Haul Truck	24	0.00E+00	1.23E-05	8.77E-07	8.94E+00	4.01E-08	1.06E-02	9.05E-06	1.29E-02	9.39E-04	2.05E-04	7.52E-04	2.59E-04	2.59E-04	1.35E-03	2.99E-05	0.00E+00	4.93E-04	2.44E-03
53	C23	70	Combination Long Haul Truck	22	0.00E+00	1.12E-05	7.46E-07	8.35E+00	4.62E-08	1.13E-02	8.47E-06	1.27E-02	9.33E-04	1.70E-04	7.77E-04	2.25E-04	2.28E-04	1.28E-03	2.80E-05	0.00E+00	5.49E-04	2.40E-03
52	C24	60	Passenger Car	68	0.00E+00	9.34E-07	1.01E-07	3.40E+00	6.50E-06	2.41E-02	2.08E-06	1.33E-04	6.69E-04	1.03E-04	2.02E-04	1.30E-04	1.34E-04	1.42E-05	1.70E-05	4.55E-09	6.84E-05	2.08E-05
52	C24	60	Passenger Truck	113	0.00E+00	2.05E-06	2.17E-07	7.76E+00	1.28E-05	4.31E-02	4.22E-06	4.28E-04	1.19E-03	1.84E-04	4.01E-04	2.61E-04	2.68E-04	5.88E-05	3.85E-05	9.66E-09	1.33E-04	7.08E-05
52	C24	60	Single Unit Short Haul Truck	1	0.00E+00	3.49E-07	1.74E-08	2.22E-01	2.88E-07	4.30E-04	3.72E-07	1.66E-04	2.83E-05	5.12E-06	4.24E-05	1.05E-05	1.06E-05	2.22E-05	8.98E-07	3.70E-10	3.18E-05	3.11E-05
52	C24	60	Combination Short Haul Truck	1	0.00E+00	8.56E-07	5.96E-08	5.57E-01	3.03E-09	7.48E-04	6.35E-07	9.26E-04	7.97E-05	1.58E-05	5.44E-05	1.78E-05	1.78E-05	8.39E-05	1.86E-06	0.00E+00	3.66E-05	1.74E-04
52	C24	60	Combination Long Haul Truck	1	0.00E+00	7.68E-07	5.00E-08	5.22E-01	3.48E-09	8.06E-04	5.92E-07	9.18E-04	8.01E-05	1.36E-05	5.61E-05	1.53E-05	1.55E-05	7.97E-05	1.75E-06	0.00E+00	4.07E-05	1.73E-04
50	C25	40	Passenger Car	242	0.00E+00	4.07E-06	4.40E-07	1.41E+01	2.83E-05	1.05E-01	9.05E-06	4.37E-04	4.18E-03	5.97E-04	8.81E-04	5.68E-04	5.83E-04	7.58E-05	6.97E-05	1.70E-08	2.98E-04	6.83E-05
50	C25	40	Passenger Truck	405	0.00E+00	9.31E-06	9.76E-07	3.13E+01	5.58E-05	1.81E-01	1.86E-05	1.65E-03	7.43E-03	1.06E-03	1.76E-03	1.15E-03	1.18E-03	2.68E-04	1.54E-04	3.30E-08	5.79E-04	2.80E-04
50	C25	40	Single Unit Short Haul Truck	61	0.00E+00	2.72E-05	1.43E-06	1.31E+01	2.37E-05	2.25E-02	2.89E-05	1.33E-02	2.49E-03	4.13E-04	3.22E-03	8.50E-04	8.63E-04	1.32E-03	5.27E-05	2.23E-08	2.36E-03	2.49E-03
50	C25	40	Single Unit Long Haul Truck	3	0.00E+00	1.19E-06	6.22E-08	5.64E-01	1.04E-06	9.80E-04	1.27E-06	5.78E-04	1.11E-04	1.83E-05	1.42E-04	3.72E-05	3.77E-05	5.70E-05	2.28E-06	9.69E-10	1.04E-04	1.08E-04
50	C25	40	Combination Short Haul Truck	33	0.00E+00	2.89E-05	2.00E-06	1.46E+01	1.04E-07	2.52E-02	2.15E-05	3.21E-02	3.35E-03	6.05E-04	1.87E-03	5.98E-04	6.03E-04	2.21E-03	4.90E-05	0.00E+00	1.27E-03	6.05E-03
50	C25	40	Combination Long Haul Truck	30	0.00E+00	2.63E-05	1.72E-06	1.39E+01	1.18E-07	2.79E-02	2.02E-05	3.22E-02	3.37E-03	5.37E-04	1.93E-03	5.23E-04	5.33E-04	2.13E-03	4.66E-05	0.00E+00	1.39E-03	6.06E-03
53	C26	70	Passenger Car	265	0.00E+00	3.36E-06	3.63E-07	1.29E+01	2.34E-05	8.69E-02	7.46E-06	5.40E-04	2.02E-03	3.26E-04	7.27E-04	4.68E-04	4.81E-04	4.74E-05	6.46E-05	1.76E-08	2.46E-04	8.43E-05
53	C26	70	Passenger Truck	443	0.00E+00	7.31E-06	7.74E-07	2.96E+01	4.63E-05	1.60E-01	1.52E-05	1.65E-03	3.63E-03	5.93E-04	1.45E-03	9.43E-04	9.66E-04	2.14E-04	1.48E-04	3.86E-08	4.84E-04	2.71E-04
53	C26	70	Single Unit Short Haul Truck	59	0.00E+00	1.40E-05	7.00E-07	1.09E+01	1.14E-05	2.19E-02	1.49E-05	6.87E-03	9.83E-04	1.97E-04	1.69E-03	4.18E-04	4.25E-04	1.10E-03	4.41E-05	1.78E-08	1.27E-03	1.29E-03
53	C26	70	Single Unit Long Haul Truck	3	0.00E+00	6.08E-07	3.03E-08	4.64E-01	4.93E-07	9.19E-04	6.48E-07	2.96E-04	4.49E-05	8.75E-06	7.41E-05	1.81E-05	1.84E-05	4.64E-05	1.87E-06	7.51E-10	5.57E-05	5.53E-05
53	C26	70	Combination Short Haul Truck	31	0.00E+00	1.61E-05	1.14E-06	1.17E+01	5.23E-08	1.39E-02	1.18E-05	1.69E-02	1.23E-03	2.67E-04	9.81E-04	3.39E-04	3.38E-04	1.76E-03	3.91E-05	0.00E+00	6.43E-04	3.18E-03
53	C26	70	Combination Long Haul Truck	28	0.00E+00	1.46E-05	9.73E-07	1.09E+01	6.03E-08	1.47E-02	1.11E-05	1.66E-02	1.22E-03	2.22E-04	1.01E-03	2.94E-04	2.97E-04	1.66E-03	3.65E-05	0.00E+00	7.17E-04	3.13E-03
50	C27	40	Passenger Car	338	0.00E+00	5.69E-06	6.16E-07	1.97E+01	3.96E-05	1.47E-01	1.27E-05	6.11E-04	5.85E-03	8.35E-04	1.23E-03	7.94E-04	8.15E-04	1.06E-04	9.75E-05	2.37E-08	4.17E-04	9.55E-05
50	C27	40	Passenger Truck	566	0.00E+00	1.30E-05	1.36E-06	4.38E+01	7.81E-05	2.53E-01	2.61E-05	2.31E-03	1.04E-02	1.48E-03	2.46E-03	1.61E-03	1.65E-03	3.75E-04	2.16E-04	4.61E-08	8.10E-04	3.91E-04
50	C27	40	Single Unit Short Haul Truck	56	0.00E+00	2.50E-05	1.31E-06	1.20E+01	2.18E-05	2.07E-02	2.66E-05	1.22E-02	2.29E-03	3.80E-04	2.96E-03	7.82E-04	7.95E-04	1.22E-03	4.86E-05	2.06E-08	2.17E-03	2.29E-03
50	C27	40	Single Unit Long Haul Truck	2	0.00E+00	1.10E-06	5.73E-08	5.20E-01	9.56E-07	9.02E-04	1.17E-06	5.32E-04	1.02E-04	1.69E-05	1.30E-04	3.42E-05	3.47E-05	5.25E-05	2.10E-06	8.92E-10	9.56E-05	9.98E-05
50	C27	40	Combination Short Haul Truck	18	0.00E+00	1.55E-05	1.08E-06	7.89E+00	5.59E-08	1.36E-02	1.16E-05	1.73E-02	1.81E-03	3.26E-04	1.01E-03	3.22E-04	3.25E-04	1.19E-03	2.64E-05	0.00E+00	6.82E-04	3.26E-03
50	C27	40	Combination Long Haul Truck	16	0.00E+00	1.42E-05	9.24E-07	7.49E+00	6.35E-08	1.50E-02	1.09E-05	1.73E-02	1.81E-03	2.89E-04	1.04E-03	2.82E-04	2.87E-04	1.15E-03	2.51E-05	0.00E+00	7.50E-04	3.26E-03
52	C28	60	Passenger Car	157	0.00E+00	2.17E-06	2.34E-07	7.89E+00	1.51E-05	5.59E-02	4.82E-06	3.09E-04	1.55E-03	2.38E-04	4.69E-04	3.02E-04	3.10E-04	3.28E-05	3.95E-05	1.06E-08	1.59E-04	4.82E-05
52	C28	60	Passenger Truck	263	0.00E+00	4.76E-06	5.02E-07	1.80E+01	2.97E-05	9.99E-02	9.79E-06	9.92E-04	2.76E-03	4.27E-04	9.30E-04	6.06E-04	6.21E-04	1.36E-04	8.93E-05	2.24E-08	3.09E-04	1.64E-04
52	C28	60	Single Unit Short Haul Truck	5	0.00E+00	1.55E-06	7.73E-08	9.85E-01	1.27E-06	1.91E-03	1.65E-06	7.36E-04	1.25E-04	2.27E-05	1.88E-04	4.64E-05	4.71E-05	9.86E-05	3.98E-06	1.64E-09	1.41E-04	1.38E-04
52	C28	60	Combination Short Haul Truck	4	0.00E+00	2.11E-06	1.47E-07	1.38E+00	7.49E-09	1.85E-03	1.57E-06	2.29E-03	1.97E-04	3.90E-05	1.35E-04	4.39E-05	4.40E-05	2.07E-04	4.61E-06	0.00E+00	9.06E-05	4.31E-04
52	C28	60	Combination Long Haul Truck	3	0.00E+00	1.90E-06	1.24E-07	1.29E+00	8.59E-09	1.99E-03	1.46E-06	2.27E-03	1.98E-04	3.36E-05	1.39E-04	3.77E-05	3.82E-05	1.97E-04	4.32E-06	0.00E+00	1.01E-04	4.27E-04
53	C29	70	Passenger Car	31	0.00E+00	3.88E-07	4.20E-08	1.49E+00	2.70E-06	1.00E-02	8.62E-07	6.23E-05	2.33E-04	3.76E-05	8.39E-05	5.41E-05	5.55E-05	5.48E-06	7.46E-06	2.03E-09	2.84E-05	9.74E-06
53	C29	70	Passenger Truck	51	0.00E+00

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C33	60	Passenger Truck	85	0.00E+00	1.53E-06	1.61E-07	5.78E+00	9.54E-06	3.21E-02	3.15E-06	3.19E-04	8.88E-04	1.37E-04	2.99E-04	1.95E-04	2.00E-04	4.39E-05	2.87E-05	7.20E-09	9.94E-05	5.28E-05
52	C33	60	Single Unit Short Haul Truck	2	0.00E+00	6.72E-07	3.36E-08	4.28E-01	5.54E-07	8.29E-04	7.17E-07	3.20E-04	5.45E-05	9.87E-06	8.17E-05	2.02E-05	2.05E-05	4.29E-05	1.73E-06	7.13E-10	6.12E-05	6.00E-05
50	C34	40	Passenger Car	70	0.00E+00	1.18E-06	1.28E-07	4.07E+00	8.21E-06	3.04E-02	2.62E-06	1.27E-04	1.21E-03	1.73E-04	2.55E-04	1.64E-04	1.69E-04	2.20E-05	2.02E-05	4.91E-09	8.64E-05	1.98E-05
50	C34	40	Passenger Truck	117	0.00E+00	2.70E-06	2.83E-07	9.08E+00	1.62E-05	5.24E-02	5.40E-06	4.79E-04	2.15E-03	3.06E-04	5.09E-04	3.33E-04	3.41E-04	7.76E-05	4.47E-05	9.55E-09	1.68E-04	8.11E-05
50	C34	40	Single Unit Short Haul Truck	7	0.00E+00	2.91E-06	1.53E-07	1.40E+00	2.54E-06	2.41E-03	3.10E-06	1.42E-03	2.66E-04	4.42E-05	3.45E-04	9.10E-05	9.24E-05	1.41E-04	5.65E-06	2.39E-09	2.52E-04	2.67E-04
50	C34	40	Combination Short Haul Truck	3	0.00E+00	2.25E-06	1.56E-07	1.14E+00	8.09E-09	1.96E-03	1.67E-06	2.50E-03	2.62E-04	4.72E-05	1.46E-04	4.66E-05	4.70E-05	1.72E-04	3.82E-06	0.00E+00	9.88E-05	4.72E-04
50	C34	40	Combination Long Haul Truck	2	0.00E+00	2.05E-06	1.34E-07	1.09E+00	9.19E-09	2.18E-03	1.58E-06	2.51E-03	2.63E-04	4.19E-05	1.50E-04	4.08E-05	4.16E-05	1.66E-04	3.63E-06	0.00E+00	1.09E-04	4.73E-04
53	C35	70	Passenger Car	110	0.00E+00	1.40E-06	1.52E-07	5.36E+00	9.75E-06	3.63E-02	3.12E-06	2.25E-04	8.43E-04	1.36E-04	3.03E-04	1.95E-04	2.01E-04	1.98E-05	2.69E-05	7.34E-09	1.03E-04	3.52E-05
53	C35	70	Passenger Truck	185	0.00E+00	3.05E-06	3.23E-07	1.24E+01	1.93E-05	6.66E-02	6.34E-06	6.89E-04	1.51E-03	2.47E-04	6.05E-04	3.94E-04	4.03E-04	8.92E-05	6.16E-05	1.61E-08	2.02E-04	1.13E-04
53	C35	70	Single Unit Short Haul Truck	16	0.00E+00	3.86E-06	1.93E-07	3.02E+00	3.15E-06	6.04E-03	4.11E-06	1.90E-03	2.71E-04	5.43E-05	4.68E-04	1.15E-04	1.17E-04	3.03E-04	1.22E-05	4.92E-09	3.50E-04	3.55E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.68E-07	8.35E-09	1.28E-01	1.36E-07	2.54E-04	1.79E-07	8.16E-05	1.24E-05	2.42E-06	2.04E-05	4.99E-06	5.07E-06	1.28E-05	5.17E-07	2.07E-10	1.54E-05	1.53E-05
53	C35	70	Combination Short Haul Truck	13	0.00E+00	6.58E-06	4.68E-07	4.77E+00	2.14E-08	5.67E-03	4.83E-06	6.89E-03	5.01E-04	1.09E-04	4.01E-04	1.38E-04	1.38E-04	7.19E-04	1.60E-05	0.00E+00	2.63E-04	1.30E-03
53	C35	70	Combination Long Haul Truck	12	0.00E+00	5.95E-06	3.98E-07	4.45E+00	2.46E-08	6.00E-03	4.52E-06	6.79E-03	4.97E-04	9.07E-05	4.14E-04	1.20E-04	1.22E-04	6.80E-04	1.49E-05	0.00E+00	2.93E-04	1.28E-03
52	C39	60	Passenger Car	106	0.00E+00	1.46E-06	1.58E-07	5.31E+00	1.01E-05	3.76E-02	3.24E-06	2.08E-04	1.04E-03	1.60E-04	3.15E-04	2.03E-04	2.09E-04	2.21E-05	2.66E-05	7.10E-09	1.07E-04	3.24E-05
52	C39	60	Passenger Truck	177	0.00E+00	3.20E-06	3.38E-07	1.21E+01	2.00E-05	6.72E-02	6.58E-06	6.67E-04	1.86E-03	2.87E-04	6.26E-04	4.08E-04	4.18E-04	9.18E-05	6.01E-05	1.51E-08	2.08E-04	1.10E-04
52	C39	60	Single Unit Short Haul Truck	8	0.00E+00	2.41E-06	1.20E-07	1.53E+00	1.99E-06	2.97E-03	2.57E-06	1.15E-03	1.95E-04	3.54E-05	2.93E-04	7.22E-05	7.34E-05	1.54E-04	6.20E-06	2.55E-09	2.19E-04	2.15E-04
52	C39	60	Combination Short Haul Truck	10	0.00E+00	5.65E-06	3.93E-07	3.67E+00	2.00E-08	4.94E-03	4.19E-06	6.11E-03	5.26E-04	1.04E-04	3.59E-04	1.17E-04	1.17E-04	5.54E-04	1.23E-05	0.00E+00	2.42E-04	1.15E-03
52	C39	60	Combination Long Haul Truck	9	0.00E+00	5.07E-06	3.30E-07	3.44E+00	2.29E-08	5.32E-03	3.91E-06	6.06E-03	5.29E-04	8.97E-05	3.70E-04	1.01E-04	1.02E-04	5.26E-04	1.15E-05	0.00E+00	2.68E-04	1.14E-03
9	D01	60	Passenger Car	1051	0.00E+00	1.58E-05	1.71E-06	5.28E+01	1.10E-04	4.10E-01	3.51E-05	2.14E-03	1.07E-02	1.64E-03	3.41E-03	2.20E-03	2.26E-03	2.20E-04	2.64E-04	7.28E-08	1.16E-03	3.35E-04
9	D01	60	Passenger Truck	1760	0.00E+00	3.48E-05	3.67E-06	1.20E+02	2.17E-04	7.31E-01	7.17E-05	6.99E-03	1.96E-02	3.04E-03	6.82E-03	4.44E-03	4.55E-03	9.32E-04	5.98E-04	1.65E-07	2.27E-03	1.16E-03
9	D01	60	Single Unit Short Haul Truck	25	0.00E+00	7.37E-06	3.69E-07	4.70E+00	6.07E-06	9.09E-03	7.86E-06	3.51E-03	5.97E-04	1.08E-04	8.96E-04	2.21E-04	2.25E-04	4.70E-04	1.90E-05	7.81E-09	6.71E-04	6.57E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	3.22E-07	1.60E-08	2.00E-01	2.64E-07	3.86E-04	3.44E-07	1.52E-04	2.68E-05	4.79E-06	3.92E-05	9.62E-06	9.77E-06	2.00E-05	8.10E-07	3.32E-10	2.95E-05	2.84E-05
9	D01	60	Combination Short Haul Truck	81	0.00E+00	4.78E-05	3.33E-06	3.11E+01	1.69E-07	4.18E-02	3.55E-05	5.18E-02	4.45E-03	8.81E-04	3.04E-03	9.93E-04	9.94E-04	4.69E-03	1.04E-04	0.00E+00	2.05E-03	9.75E-03
9	D01	60	Combination Long Haul Truck	74	0.00E+00	4.29E-05	2.79E-06	2.92E+01	1.94E-07	4.51E-02	3.31E-05	5.13E-02	4.48E-03	7.59E-04	3.14E-03	8.53E-04	8.64E-04	4.46E-03	9.77E-05	0.00E+00	2.27E-03	9.66E-03
9	D02	60	Passenger Car	853	0.00E+00	1.28E-05	1.38E-06	4.28E+01	8.91E-05	3.33E-01	2.85E-05	1.74E-03	8.66E-03	1.33E-03	2.77E-03	1.79E-03	1.83E-03	1.78E-04	2.15E-04	5.91E-08	9.38E-04	2.72E-04
9	D02	60	Passenger Truck	1429	0.00E+00	2.82E-05	2.98E-06	9.78E+01	1.76E-04	5.93E-01	5.82E-05	5.67E-03	1.59E-02	2.47E-03	5.53E-03	3.60E-03	3.69E-03	7.56E-04	4.85E-04	1.34E-07	1.84E-03	9.40E-04
9	D02	60	Single Unit Short Haul Truck	29	0.00E+00	8.46E-06	4.23E-07	5.39E+00	6.97E-06	1.04E-02	9.03E-06	4.03E-03	6.85E-04	1.24E-04	1.03E-03	2.54E-04	2.58E-04	5.39E-04	2.18E-05	8.97E-09	7.70E-04	7.54E-04
9	D02	60	Single Unit Long Haul Truck	1	0.00E+00	3.69E-07	1.84E-08	2.30E-01	3.03E-07	4.43E-04	3.94E-07	1.74E-04	3.08E-05	5.50E-06	4.50E-05	1.10E-05	1.12E-05	2.30E-05	9.30E-07	3.81E-10	3.38E-05	3.26E-05
9	D02	60	Combination Short Haul Truck	35	0.00E+00	2.07E-05	1.44E-06	1.35E+01	7.34E-08	1.81E-02	1.54E-05	2.24E-02	1.93E-03	3.82E-04	1.32E-03	4.30E-04	4.31E-04	2.03E-03	4.51E-05	0.00E+00	8.87E-04	4.22E-03
9	D02	60	Combination Long Haul Truck	32	0.00E+00	1.86E-05	1.21E-06	1.26E+01	8.41E-08	1.95E-02	1.43E-05	2.22E-02	1.94E-03	3.29E-04	1.36E-03	3.69E-04	3.74E-04	1.93E-03	4.23E-05	0.00E+00	9.84E-04	4.18E-03
9	D03	60	Passenger Car	1074	0.00E+00	1.61E-05	1.74E-06	5.40E+01	1.12E-04	4.19E-01	3.58E-05	2.19E-03	1.09E-02	1.67E-03	3.49E-03	2.25E-03	2.31E-03	2.24E-04	2.70E-04	7.44E-08	1.18E-03	3.42E-04
9	D03	60	Passenger Truck	1799	0.00E+00	3.56E-05	3.76E-06	1.23E+02	2.22E-04	7.47E-01	7.33E-05	7.14E-03	2.00E-02	3.11E-03	6.97E-03	4.54E-03	4.65E-03	9.53E-04	6.11E-04	1.69E-07	2.32E-03	1.18E-03
9	D03	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.88E-07	8.76E+00	1.13E-05	1.70E-02	1.47E-05	6.55E-03	1.11E-03	2.02E-04	1.67E-03	4.13E-04	4.19E-04	8.77E-04	3.54E-05	1.46E-08	1.25E-03	1.23E-03
9	D03	60	Single Unit Long Haul Truck	2	0.00E+00	6.01E-07	2.99E-08	3.74E-01	4.93E-07	7.20E-04	6.41E-07	2.83E-04	5.00E-05	8.94E-06	7.32E-05	1.79E-05	1.82E-05	3.74E-05	1.51E-06	6.20E-10	5.50E-05	5.31E-05
9	D03	60	Combination Short Haul Truck	40	0.00E+00	2.35E-05	1.64E-06	1.53E+01	8.31E-08	2.05E-02	1.74E-05	2.54E-02	2.19E-03	4.33E-04	1.49E-03	4.87E-04	4.88E-04	2.30E-03	5.11E-05	0.00E+00	1.01E-03	4.79E-03
9	D03	60	Combination Long Haul Truck	36	0.00E+00	2.11E-05	1.37E-06	1.43E+01	9.53E-08	2.21E-02	1.62E-05	2.52E-02	2.20E-03	3.73E-04	1.54E-03	4.19E-04	4.24E-04	2.19E-03	4.79E-05	0.00E+00	1.12E-03	4.74E-03
9	D04	60	Passenger Car	714	0.00E+00	1.07E-05	1.16E-06	3.59E+01	7.46E-05	2.79E-01	2.38E-05	1.46E-03	7.25E-03	1.11E-03	2.32E-03	1.50E-03	1.53E-03	1.49E-04	1.80E-04	4.95E-08	7.85E-04	2.28E-04
9	D04	60	Passenger Truck	1196	0.00E+00	2.36E-05	2.50E-06	8.19E+01	1.48E-04	4.97E-01	4.87E-05	4.75E-03	1.33E-02	2.06E-03	4.63E-03	3.02E-03	3.09E-03	6.33E-04	4.06E-04	1.12E-07	1.54E-03	7.87E-04
9	D04	60	Single Unit Short Haul Truck	57	0.00E+00	1.66E-05	8.31E-07	1.06E+01	1.37E-05	2.05E-02	1.77E-05	7.91E-03	1.35E-03	2.44E-04	2.02E-03	4.98E-04	5.07E-04	1.06E-03	4.28E-05	1.76E-08	1.51E-03	1.48E-03
9	D04	60	Single Unit Long Haul Truck	2	0.00E+00	7.26E-07	3.61E-08	4.52E-01	5.95E-07	8.70E-04	7.75E-07	3.42E-04	6.04E-05	1.08E-05	8.85E-05	2.17E-05	2.20E-05	4.51E-05	1.83E-06	7.49E-10	6.64E-05	6.41E-05
9	D04	60	Combination Short Haul Truck	77	0.00E+00	4.55E-05	3.17E-06	2.96E+01	1.61E-07	3.98E-02	3.38E-05	4.93E-02	4.24E-03	8.39E-04	2.90E-03	9.45E-04	9.47E-04	4.46E-03	9.92E-05	0.00E+00	1.95E-03	9.28E-03
9	D04	60	Combination Long Haul Truck	71	0.00E+00	4.09E-05	2.66E-06	2.78E+01	1.85E-07	4.29E-02	3.15E-05	4.88E-02	4.26E-03	7.23E-04	2.99E-03	8.12E-04	8.22E-04	4.24E-03	9.30E-05	0.00E+00	2.16E-03	9.20E-03
9	D05	60	Passenger Car	1114	0.00E+00	1.67E-05	1.81E-06	5.59E+01	1.16E-04	4.34E-01	3.72E-05	2.27E-03	1.13E-02	1.74E-03	3.62E-03	2.33E-03	2.39E-03	2.33E-04	2.80E-04	7.72E-08	1.22E-03	3.55E-04
9	D05	60	Passenger Truck	1865	0.00E+00	3.69E-05	3.89E-06	1.28E+02	2.30E-04	7.74E-01	7.60E-05	7.40E-03	2.07E-02	3.22E-03	7.22E-03	4.71E-03	4.82E-03	9.87E-04	6.34E-04	1.75E-07	2.40E-03	1.23E-03
9	D05	60	Single Unit Short Haul Truck	57	0.00E+00	1.67E-05	8.35E-07	1.06E+01	1.38E-05	2.06E-02	1.78E-05	7.95E-03	1.35E-03	2.45E-04	2.03E-03	5.01E-04	5.09E-04	1.06E-03	4.30E-05	1.77E-08	1.52E-03	1.49E-03
9	D05	60	Single Unit Long Haul Truck	3	0.00E+00	7.29E-07	3.63E-08	4.54E-01	5.98E-07	8.74E-04	7.79E-07	3.44E-04	6.07E-05	1.09E-05	8.89E-05	2.18E-05	2.21E-05	4.53E-05	1.84E-06	7.53E-10	6.67E-05	6.44E-05
9	D05	60	Combination Short Haul Truck	70	0.00E+00	4.14E-05	2.89E-06	2.69E+01	1.47E-07	3.62E-02	3.07E-05	4.48E-02	3.86E-03	7.63E-04	2.64E-03	8.60E-04	8.61E-04	4.06E-03	9.02E-05	0.00E+00	1.77E-03	8.44E-03
9	D05	60	Combination Long Haul Truck	64	0.00E+00	3.72E-05	2.42E-06	2.53E+01	1.68E-07	3.90E-02	2.87E-05	4.44E-02	3.88E-03	6.58E-04	2.72E-03	7.39E-04	7.48E-04	3.86E-03	8.46E-05	0.00E+00	1.97E-03	8.37E-03
9	D06	60	Passenger Car	831	0.00E+00	1.25E-05	1.35E-06	4.18E+01	8.68E-05	3.24E-01	2.77E-05	1.70E-03	8.44E-03	1.30E-03	2.70E-03	1.74E-03	1.79E-03	1.74E-04	2.09E-04	5.76E-08	9.14E-04	2.65E-04
9	D06	60	Passenger Truck	1392	0.00E+00	2.75E-05	2.91E-06	9.53E+01	1.72E-04	5.78E-01	5.67E-05	5.53E-03	1.55E-02	2.40E-03	5.39E-03	3.51E-03	3.60E-03	7.37E-04	4.73E-04	1.31E-07	1.79E-03	9.16E-04
9	D06	60	Single Unit Short Haul Truck	128	0.00E+00	3.75E-05	1.88E-06	2.39E+01	3.10E-05	4.63E-02	4.01E-05	1.79E-02	3.04E-03	5.51E-04	4.56E-03	1.13E-03	1.14E-03	2.39E-03	9.66E-05	3.98E-08	3.42E-03	3.35E-03
9	D06	60	Single Unit Long Haul Truck	6	0.00E+00	1.64E-06	8.16E-08	1.02E+00	1.34E-06	1.97E-03	1.75E-06	7.73E-04	1.37E-04	2.44E-05	2.00E-04	4.90E-05	4.98E-05	1.02E-04	4.13E-06	1.69E-09	1.50E-04	1.45E-04
9	D06	60	Combination Short Haul Truck	74	0.00E+00	4.33E-05	3.02E-06	2.82E+01	1.53E-07	3.79E-02	3.21E-05	4.69E-02	4.03E-03	7.98E-04	2.76E-03	8.99E-04	9.01E-04	4.25E-03	9.43E-05	0.00E+00	1.86E-03	8.83E-03
9	D06	60	Combination Long Haul Truck	67	0.00E+00	3.89E-05	2.53E-06	2.64E+01	1.76E-07	4.08E-02	3.00E-05	4.65E-02	4.06E-03	6.88E-04	2.84E-03	7.72E-04	7.82E-04	4.04E-03	8.85E-05	0.00E+00	2.06E-03	8.75E-03
11	D07	80	Passenger Car	1149	0.00E+00	1.40E-05	1.51E-06	5.36E+01	9.74E-05	3.74E-01	3.11E-05	2.36E-03	6.32E-03	1.10E-03	3.03E-03	1.95E-03	2.00E-03	1.80E-04	2.70E-04	7.56E-08	1.03E-03	3.69E-04
11	D07	80	Passenger Truck	1923	0.00E+00	3.01E-05	3.19E-06	1.24E+02	1.93E-04	6.89E-01	6.30E-05	7.01E-03	1.13E-02	2.01E-03	6.03E-03	3.92E-03	4.01E-03	8.64E-04	6.18E-04	1.68E-07	2.02E-03	1.14E-03
11	D07	80	Single Unit Short Haul Truck	82	0.00E+00	1.54E-05	7.63E-07	1.51E+01	1.24E-05	3.02E-02	1.64E-05	7.86E-03	9.66E-04	2.18E-04	1.87E-03	4.55E-04	4.63E-04	1.51E-03	6.08E-05	2.41E-08	1.41E-03	1.47E-03
11	D07	80	Single Unit Long Haul Truck	4	0.00E+00	6.68E-07	3.29E-08	6.38E-01	5.28E-07	1.26E-03	7.11E-07	3.36E-04	4.41E-05	9.64E-06	8.16E-05	1.96E-05	1.99E-05	6.37E-05	2.58E-06	1.01E-09	6.17E-05	6.29E-05
11	D07	80	Combination Short Haul Truck	80	0.00E+00	3.50E-05	2.50E-06	2.90E+01	1.10E-07	3.10E-02	2.56E-05	3.58E-02	2.12E-03	5.22E-04	2.09E-03	7.39E-04	7.34E-04	4.37E-03	9.69E-05	0.00E+00	1.35E-03	6.75E-03
11	D07	80	Combination Long Haul Truck	73	0.00E+00	3.14E-05	2.11E-06	2.68E+01	1.28E-07	3.21E-02	2.38E-05	3.48E-02	2.07E-03	4.17E-04	2.15E-03	6.36E-04	6.40E-04	4.09E-03	8.96E-05	0.00E+00	1.51E-03	6.55E-03
11	D08	80	Passenger Car	808	0.00E+00	9.85E-06	1.07E-06	3.77E+01	6.86E-05	2.63E-01	2.19E-05	1.66E-03	4.45E-03	7.73E-04	2.13E-03	1.37E-03	1.41E-03	1.27E-04	1.90E-04	5.32E-08	7.22E-04	2.60E-04
11	D08	80	Passenger Truck	1354	0.00E+00	2.12E-05	2.24E-06	8.71E+01	1.36E-04	4.85E-01	4.43E-05	4.93E-03	7.97E-03	1.42E-03	4.24E-03	2.76E-03	2.82E-03	6.08E-04	4.35E-04	1.18E-07	1.42E-03	8.06E-04
11	D08	80	Single Unit Short Haul Truck	131	0.00E+00	2.45E-05	1.22E-06	2.40E+01	1.97E-05	4.82E-02	2.61E-05	1.25E-02	1.54E-03	3.48E-04	2.98E-03	7.26E-04	7.38E-04	2.41E-03	9.69E-05	3.84E-08	2.24E-03	2.35E-03
11	D08	80	Single Unit Long Haul Truck	6	0.00E+00	1.07E-06	5.25E-08	1.02E+00	8.42E-07	2.01E-03	1.13E-06	5.36E-04	7.03E-05	1.54E-05	1.30E-04	3.12E-05	3.18E-05	1.02E-04	4.11E-06	1.60E-09	9.84E-05	1.00E-04
11	D08	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.29E+01	8.76E-08	2.46E-02	2.03E-05	2.84E-02	1.68E-03	4.14E-04	1.65E-03	5.86E-04	5.81E-04	3.46E-03	7.68E-05	0.00E+00	1.07E-03	5.35E-03
11	D08	80	Combination Long Haul Truck	58	0.00E+00	2.49E-05	1.67E-06	2.12E+01	1.01E-07	2.55E-02	1.88E-05	2.76E-02	1.64E-03	3.31E-04	1.71E-03	5.04E-04	5.07E-04	3.24E-03	7.10E-05	0.00E+00	1.20E-03	5.19E-03
11	D09	80	Passenger Car	962	0.00E+00	1.17E-05	1.27E-06	4.49E+01	8.16E-05	3.14E-01	2.61E-05	1.98E-03	5.29E-03	9.20E-04	2.54E-03	1.64E-03	1.68E-03	1.51E-04	2.26E-04	6.33E-08	8.59E-04	3.09E-04
11	D09	80	Passenger Truck	1612	0.00E+00	2.52E-05	2.67E-06	1.04E+02	1.61E-04	5.77E-01	5.28E-05	5.87E-03	9.49E-03	1.68E-03	5.05E-03	3.28E-03	3.36E-03	7.24E-04	5.18E-04	1.41E-07	1.69E-03	9.59E-04
11	D09	80	Single Unit Short Haul Truck	37	0.00E+00	6.91E-06	3.43E-07	6.78E+00	5.56E-06	1.36E-02	7.36E-06	3.54E-03	4.34E-04	9.83E-05	8.41E-04	2.05E-04	2.08E-04	6.81E-04	2.73E-05	1.08E-08	6.33E-04	6.62E-04
11	D09	80	Single Unit Long Haul Truck	2	0.00E+00	3.01E-07	1.48E-08	2.87E-01	2.38E-07	5.66E-04	3.20E-07	1.51E-04	1.98E-05	4.34E-06	3.67E-05	8.81E-06	8.96E-06	2.87E-05	1.16E-06	4.52E-10	2.77E-05	2.83E-05
11	D09	80	Combination Short Haul Truck	45	0.00E+00	1.98E-05	1.42E-06	1.64E+01	6.26E-08	1.76E-02	1.45E-05	2.03E-02	1.20E-03	2.96E-04	1.18E-03	4.19E-04	4.15E-04	2.47E-03	5.49E-05	0.00E+00	7.66E-04	3.82E-03
11	D09	80	Combination Long Haul Truck	41	0.00E+00	1.78E-05	1.19E-06	1.52E+01	7.23E-08	1.82E-02	1.35E-05	1.97E-02	1.17E-03	2.36E-04	1.22E-03	3.60E-04	3.62E-04	2.32E-03	5.08E-05	0.00E+00	8.57E-04	3.71E-03
11	D10	80	Passenger Car	662	0.00E+00	8.07E-06	8.73E-07	3.09E+01	5.62E-05	2.16E-01	1.79E-05	1.36E-03	3.64E-03	6.33E-04	1.75E-03	1.13E-03	1.16E-03	1.04E-04	1.55E-04	4.35E-08	5.91E-04	2.12E-04
11	D10	80	Passenger Truck	1109	0.00E+00	1.73E-05	1.84E-06	7.13E+01	1.11E-04	3.97E-01	3.63E-05	4.04E-03	6.53E-03	1.16E-03	3.47E-03	2.26E-03	2.31E-03	4.98E-04	3.56E-04	9.70E-08	1.16E-03	6.60E-04
11	D10	80	Single Unit Short Haul Truck	103	0.00E+00	1.94E-05	9.62E-07	1.90E+01	1.56E-05	3.80E-02	2.06E-05	9.90E-03	1.22E-03	2.75E-04	2.36E-03	5.73E-04	5.83E-04	1.91E-03	7.65E-05	3.04E-08	1.77E-03	1.85E-03
11	D10	80	Single Unit Long Haul Truck	5	0.00E+00	8.42E-07	4.15E-08	8.04E-01	6.65E-07	1.58E-03	8.96E-07	4.24E-04	5.56E-05	1.21E-05	1.03E-04	2.47E-05	2.51E-05	8.02E-05	3.24E-06	1.27E-09	7.77E-05	7.93E-05
11	D10	80	Combination Short Haul Truck	37	0.00E+00	1.63E-05	1.17E-06	1.35E+01	5.14E-08	1.44E-02	1.19E-05	1.67E-02	9.86E-04	2.43E-04	9.70E-04	3.44E-04	3.41E-04	2.03E-03	4.51E-05	0.00E+00	6.29E-04	3.14E-03
11	D10	80	Combination Long Haul Truck	34	0.00E+00	1.46E-05	9.81E-07	1.25E+01	5.94E-08	1.50E-02	1.11E-05	1.62E-02	9.64E-04	1.94E-04	1.00E-03	2.96E-04	2.98E-04	1.90E-03	4.17E-05	0.00E+00	7.05E-04	3.05E-03
11	D11	80	Passenger Car	1218	0.00E+00	1.49E-05	1.61E-06	5.68E+01	1.03E-04	3.97E-01	3.30E-05	2.50E-03	6.70E-03	1.16E-03	3.21E-03	2.07E-03	2.13E-03	1.91E-04	2.86E-04	8.02E-08	1.09E-03	3.91E-04
11	D11	80	Passenger Truck	2040	0.00E+00	3.19E-05	3.38E-06	1.31E+02	2.04E-04	7.31E-01	6.68E-05	7.43E-03	1.20E-02	2.13E-03	6.40E-03	4.15E-03	4.26E-03	9.17E-04	6.55E-04	1.78E-07	2.14E-03	1.21E-03
11	D11	80	Single Unit Short Haul Truck	62	0.00E+00	1.17E-05	5.81E-07	1.15E+01	9.41E-06	2.30E-02	1.24E-05	5.98E-03	7.34E-04	1.66E-04	1.42E-03	3.46E-04	3.52E-04	1.15E-03	4.62E-05	1.83E-08	1.07E-03	1.12E-03
11	D11	80	Single Unit Long Haul Truck	3	0.00E+00	5.08E-07	2.50E-08	4.85E-01	4.02E-07	9.57E-04	5.41E-07	2.56E-04	3.36E-05	7.33E-06	6.21E-05	1.49E-05	1.52E-05	4.85E-05	1.96E-06	7.64E-10	4.69E-05	4.79E-05
11	D11	80

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES L nkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D15	60	Single Unit Long Haul Truck	3	0.00E+00	7.39E-07	3.68E-08	4.60E-01	6.06E-07	8.86E-04	7.89E-07	3.48E-04	6.15E-05	1.10E-05	9.01E-05	2.21E-05	2.24E-05	4.59E-05	1.86E-06	7.63E-10	6.76E-05	6.53E-05
9	D15	60	Combination Short Haul Truck	44	0.00E+00	2.60E-05	1.81E-06	1.69E+01	9.22E-08	2.28E-02	1.93E-05	2.82E-02	2.42E-03	4.80E-04	1.66E-03	5.40E-04	5.41E-04	2.55E-03	5.67E-05	0.00E+00	1.11E-03	5.31E-03
9	D15	60	Combination Long Haul Truck	40	0.00E+00	2.34E-05	1.52E-06	1.59E+01	1.06E-07	2.45E-02	1.80E-05	2.79E-02	2.44E-03	4.13E-04	1.71E-03	4.64E-04	4.70E-04	2.43E-03	5.32E-05	0.00E+00	1.24E-03	5.26E-03
9	D16	60	Passenger Car	688	0.00E+00	1.03E-05	1.12E-06	3.46E+01	7.19E-05	2.68E-01	2.30E-05	1.40E-03	6.99E-03	1.07E-03	2.24E-03	1.44E-03	1.48E-03	1.44E-04	1.73E-04	4.77E-08	7.57E-04	2.19E-04
9	D16	60	Passenger Truck	1152	0.00E+00	2.28E-05	2.41E-06	7.89E+01	1.42E-04	4.79E-01	4.69E-05	4.57E-03	1.28E-02	1.99E-03	4.46E-03	2.91E-03	2.98E-03	6.10E-04	3.91E-04	1.08E-07	1.48E-03	7.58E-04
9	D16	60	Single Unit Short Haul Truck	75	0.00E+00	2.21E-05	1.11E-06	1.41E+01	1.82E-05	2.73E-02	2.36E-05	1.05E-02	1.79E-03	3.25E-04	2.69E-03	6.63E-04	6.74E-04	1.41E-03	5.69E-05	2.34E-08	2.01E-03	1.97E-03
9	D16	60	Single Unit Long Haul Truck	3	0.00E+00	9.65E-07	4.80E-08	6.01E-01	7.91E-07	1.16E-03	1.03E-06	4.55E-04	8.04E-05	1.44E-05	1.18E-04	2.88E-05	2.93E-05	6.00E-05	2.43E-06	9.97E-10	8.83E-05	8.53E-05
9	D16	60	Combination Short Haul Truck	53	0.00E+00	3.10E-05	2.16E-06	2.02E+01	1.10E-07	2.71E-02	2.30E-05	3.36E-02	2.89E-03	5.72E-04	1.97E-03	6.44E-04	6.45E-04	3.04E-03	6.75E-05	0.00E+00	1.33E-03	6.32E-03
9	D16	60	Combination Long Haul Truck	48	0.00E+00	2.78E-05	1.81E-06	1.89E+01	1.26E-07	2.92E-02	2.15E-05	3.33E-02	2.90E-03	4.92E-04	2.03E-03	5.53E-04	5.60E-04	2.89E-03	6.33E-05	0.00E+00	1.47E-03	6.27E-03
10	D17	70	Passenger Car	62	0.00E+00	8.15E-07	8.82E-08	2.99E+00	5.67E-06	2.13E-02	1.81E-06	1.25E-04	4.83E-04	7.75E-05	1.76E-04	1.14E-04	1.17E-04	1.12E-05	1.50E-05	4.09E-09	5.97E-05	1.95E-05
10	D17	70	Passenger Truck	104	0.00E+00	1.79E-06	1.89E-07	6.89E+00	1.13E-05	3.92E-02	3.71E-06	3.90E-04	8.79E-04	1.43E-04	3.54E-04	2.30E-04	2.36E-04	5.06E-05	3.43E-05	9.18E-09	1.18E-04	6.42E-05
10	D17	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.83E-04	9.43E-05	9.59E-05	2.48E-04	9.96E-06	4.02E-09	2.87E-04	2.91E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.08E-04	1.46E-07	6.67E-05	1.01E-05	1.98E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	D17	70	Combination Short Haul Truck	10	0.00E+00	5.11E-06	3.63E-07	3.70E+00	1.66E-08	4.40E-03	3.75E-06	5.35E-03	3.89E-04	8.48E-05	3.11E-04	1.07E-04	1.07E-04	5.58E-04	1.24E-05	0.00E+00	2.04E-04	1.01E-03
10	D17	70	Combination Long Haul Truck	9	0.00E+00	4.62E-06	3.09E-07	3.46E+00	1.91E-08	4.66E-03	3.51E-06	5.27E-03	3.86E-04	7.04E-05	3.22E-04	9.33E-05	9.43E-05	5.28E-04	1.16E-05	0.00E+00	2.27E-04	9.94E-04
10	D18	70	Passenger Car	381	0.00E+00	4.98E-06	5.39E-07	1.83E+01	3.47E-05	1.30E-01	1.11E-05	7.62E-04	2.95E-03	4.73E-04	1.08E-03	6.95E-04	7.13E-04	6.81E-05	9.18E-05	2.50E-08	3.65E-04	1.19E-04
10	D18	70	Passenger Truck	637	0.00E+00	1.09E-05	1.16E-06	4.21E+01	6.90E-05	2.39E-01	2.27E-05	2.38E-03	5.37E-03	8.72E-04	2.16E-03	1.41E-03	1.44E-03	3.09E-04	2.10E-04	5.61E-08	7.22E-04	3.92E-04
10	D18	70	Single Unit Short Haul Truck	31	0.00E+00	7.21E-06	3.61E-07	5.64E+00	5.89E-06	1.13E-02	7.68E-06	3.55E-03	5.07E-04	1.02E-04	8.74E-04	2.16E-04	2.19E-04	5.66E-04	2.28E-05	9.19E-09	6.55E-04	6.64E-04
10	D18	70	Single Unit Long Haul Truck	1	0.00E+00	3.14E-07	1.56E-08	2.40E-01	2.54E-07	4.74E-04	3.35E-07	1.53E-04	2.32E-05	4.52E-06	3.82E-05	9.33E-06	9.49E-06	2.39E-05	9.67E-07	3.87E-10	2.87E-05	2.86E-05
10	D18	70	Combination Short Haul Truck	31	0.00E+00	1.62E-05	1.15E-06	1.17E+01	5.26E-08	1.39E-02	1.19E-05	1.70E-02	1.23E-03	2.69E-04	9.86E-04	3.40E-04	3.40E-04	1.77E-03	3.93E-05	0.00E+00	6.46E-04	3.20E-03
10	D18	70	Combination Long Haul Truck	28	0.00E+00	1.46E-05	9.78E-07	1.10E+01	6.06E-08	1.48E-02	1.11E-05	1.67E-02	1.22E-03	2.23E-04	1.02E-03	2.96E-04	2.99E-04	1.67E-03	3.67E-05	0.00E+00	7.21E-04	3.15E-03
11	D19	80	Passenger Car	1319	0.00E+00	1.61E-05	1.74E-06	6.15E+01	1.12E-04	4.30E-01	3.57E-05	2.71E-03	7.25E-03	1.26E-03	3.48E-03	2.24E-03	2.30E-03	2.07E-04	3.10E-04	8.67E-08	1.18E-03	4.23E-04
11	D19	80	Passenger Truck	2208	0.00E+00	3.45E-05	3.66E-06	1.42E+02	2.21E-04	7.91E-01	7.23E-05	8.05E-03	1.30E-02	2.31E-03	6.92E-03	4.50E-03	4.61E-03	9.92E-04	7.09E-04	1.93E-07	2.32E-03	1.31E-03
11	D19	80	Single Unit Short Haul Truck	126	0.00E+00	2.37E-05	1.18E-06	2.32E+01	1.91E-05	4.66E-02	2.52E-05	1.21E-02	1.49E-03	3.37E-04	2.88E-03	7.02E-04	7.13E-04	2.33E-03	9.37E-05	3.72E-08	2.17E-03	2.27E-03
11	D19	80	Single Unit Long Haul Truck	6	0.00E+00	1.03E-06	5.08E-08	9.84E-01	8.14E-07	1.94E-03	1.10E-06	5.18E-04	6.80E-05	1.49E-05	1.26E-04	3.02E-05	3.07E-05	9.82E-05	3.97E-06	1.55E-09	9.51E-05	9.70E-05
11	D19	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.30E+01	8.78E-08	2.46E-02	2.03E-05	2.85E-02	1.68E-03	4.15E-04	1.66E-03	5.87E-04	5.83E-04	3.47E-03	7.70E-05	0.00E+00	1.07E-03	5.36E-03
11	D19	80	Combination Long Haul Truck	58	0.00E+00	2.49E-05	1.67E-06	2.13E+01	1.01E-07	2.55E-02	1.89E-05	2.76E-02	1.65E-03	3.31E-04	1.71E-03	5.05E-04	5.08E-04	3.25E-03	7.12E-05	0.00E+00	1.20E-03	5.20E-03
11	D20	80	Passenger Car	477	0.00E+00	5.81E-06	6.29E-07	2.22E+01	4.04E-05	1.55E-01	1.29E-05	9.79E-04	2.62E-03	4.56E-04	1.26E-03	8.11E-04	8.32E-04	7.47E-05	1.12E-04	3.14E-08	4.26E-04	1.53E-04
11	D20	80	Passenger Truck	798	0.00E+00	1.25E-05	1.32E-06	5.14E+01	7.99E-05	2.86E-01	2.61E-05	2.91E-03	4.70E-03	8.34E-04	2.50E-03	1.62E-03	1.67E-03	3.59E-04	2.56E-04	6.98E-08	8.37E-04	4.75E-04
11	D20	80	Single Unit Short Haul Truck	362	0.00E+00	6.78E-05	3.37E-06	6.66E+01	5.46E-05	1.33E-01	7.22E-05	3.47E-02	4.26E-03	9.64E-04	8.26E-03	2.01E-03	2.04E-03	6.68E-03	2.68E-04	1.06E-07	6.21E-03	6.49E-03
11	D20	80	Single Unit Long Haul Truck	16	0.00E+00	2.95E-06	1.45E-07	2.82E+00	2.33E-06	5.55E-03	3.14E-06	1.48E-03	1.95E-04	4.26E-05	3.60E-04	8.65E-05	8.80E-05	2.81E-04	1.14E-05	4.44E-09	2.72E-04	2.78E-04
11	D20	80	Combination Short Haul Truck	191	0.00E+00	8.42E-05	6.02E-06	6.96E+01	2.65E-07	7.45E-02	6.15E-05	8.61E-02	5.09E-03	1.26E-03	5.01E-03	1.78E-03	1.76E-03	1.05E-02	2.33E-04	0.00E+00	3.25E-03	1.62E-02
11	D20	80	Combination Long Haul Truck	175	0.00E+00	7.54E-05	5.07E-06	6.43E+01	3.07E-07	7.72E-02	5.71E-05	8.36E-02	4.98E-03	1.00E-03	5.18E-03	1.53E-03	1.54E-03	9.83E-03	2.15E-04	0.00E+00	3.64E-03	1.57E-02
11	D21	80	Passenger Car	1076	0.00E+00	1.31E-05	1.42E-06	5.02E+01	9.13E-05	3.51E-01	2.92E-05	2.21E-03	5.92E-03	1.03E-03	2.84E-03	1.83E-03	1.88E-03	1.69E-04	2.53E-04	7.08E-08	9.61E-04	3.45E-04
11	D21	80	Passenger Truck	1802	0.00E+00	2.82E-05	2.99E-06	1.16E+02	1.80E-04	6.45E-01	5.90E-05	6.57E-03	1.06E-02	1.88E-03	5.65E-03	3.67E-03	3.76E-03	8.09E-04	5.79E-04	1.58E-07	1.89E-03	1.07E-03
11	D21	80	Single Unit Short Haul Truck	69	0.00E+00	1.29E-05	6.42E-07	1.27E+01	1.04E-05	2.54E-02	1.38E-05	6.61E-03	8.12E-04	1.84E-04	1.57E-03	3.83E-04	3.89E-04	1.27E-03	5.11E-05	2.03E-08	1.18E-03	1.24E-03
11	D21	80	Single Unit Long Haul Truck	3	0.00E+00	5.62E-07	2.77E-08	5.37E-01	4.44E-07	1.06E-03	5.98E-07	2.83E-04	3.71E-05	8.11E-06	6.86E-05	1.65E-05	1.68E-05	5.36E-05	2.17E-06	8.45E-10	5.19E-05	5.29E-05
11	D21	80	Combination Short Haul Truck	29	0.00E+00	1.29E-05	9.21E-07	1.06E+01	4.06E-08	1.14E-02	9.41E-06	1.32E-02	7.79E-04	1.92E-04	7.67E-04	2.72E-04	2.70E-04	1.61E-03	3.56E-05	0.00E+00	4.97E-04	2.48E-03
11	D21	80	Combination Long Haul Truck	27	0.00E+00	1.15E-05	7.75E-07	9.84E+00	4.69E-08	1.18E-02	8.74E-06	1.28E-02	7.62E-04	1.53E-04	7.92E-04	2.34E-04	2.35E-04	1.50E-03	3.30E-05	0.00E+00	5.57E-04	2.41E-03
11	D22	80	Passenger Car	515	0.00E+00	6.28E-06	6.79E-07	2.40E+01	4.37E-05	1.68E-01	1.40E-05	1.06E-03	2.83E-03	4.92E-04	1.36E-03	8.75E-04	8.98E-04	8.07E-05	1.21E-04	3.39E-08	4.60E-04	1.65E-04
11	D22	80	Passenger Truck	862	0.00E+00	1.35E-05	1.43E-06	5.55E+01	8.63E-05	3.09E-01	2.82E-05	3.14E-03	5.08E-03	9.01E-04	2.70E-03	1.75E-03	1.80E-03	3.87E-04	2.77E-04	7.54E-08	9.04E-04	5.13E-04
11	D22	80	Single Unit Short Haul Truck	301	0.00E+00	5.63E-05	2.80E-06	5.53E+01	4.54E-05	1.11E-01	6.00E-05	2.88E-02	3.54E-03	8.01E-04	6.86E-03	1.67E-03	1.70E-03	5.55E-03	2.23E-04	8.84E-08	5.16E-03	5.39E-03
11	D22	80	Single Unit Long Haul Truck	13	0.00E+00	2.45E-06	1.21E-07	2.34E+00	1.94E-06	4.61E-03	2.61E-06	1.23E-03	1.62E-04	3.53E-05	2.99E-04	7.18E-05	7.31E-05	2.34E-04	9.45E-06	3.69E-09	2.26E-04	2.31E-04
11	D22	80	Combination Short Haul Truck	200	0.00E+00	8.78E-05	6.28E-06	7.26E+01	2.77E-07	7.78E-02	6.42E-05	8.99E-02	5.31E-03	1.31E-03	5.23E-03	1.85E-03	1.84E-03	1.09E-02	2.43E-04	0.00E+00	3.39E-03	1.69E-02
11	D22	80	Combination Long Haul Truck	182	0.00E+00	7.87E-05	5.29E-06	6.71E+01	3.20E-07	8.06E-02	5.96E-05	8.72E-02	5.20E-03	1.05E-03	5.40E-03	1.60E-03	1.60E-03	1.03E-02	2.25E-04	0.00E+00	3.80E-03	1.64E-02
9	D23	60	Passenger Car	1232	0.00E+00	1.85E-05	2.00E-06	6.19E+01	1.29E-04	4.81E-01	4.11E-05	2.51E-03	1.25E-02	1.92E-03	4.00E-03	2.58E-03	2.65E-03	2.57E-04	3.10E-04	8.54E-08	1.35E-03	3.93E-04
9	D23	60	Passenger Truck	2064	0.00E+00	4.08E-05	4.31E-06	1.41E+02	2.55E-04	8.57E-01	8.40E-05	8.19E-03	2.29E-02	3.56E-03	7.99E-03	5.21E-03	5.33E-03	1.09E-03	7.01E-04	1.94E-07	2.66E-03	1.36E-03
9	D23	60	Single Unit Short Haul Truck	52	0.00E+00	1.52E-05	7.59E-07	9.67E+00	1.25E-05	1.87E-02	1.62E-05	7.23E-03	1.23E-03	2.23E-04	1.85E-03	4.55E-04	4.63E-04	9.68E-04	3.91E-05	1.61E-08	1.38E-03	1.35E-03
9	D23	60	Single Unit Long Haul Truck	2	0.00E+00	6.63E-07	3.30E-08	4.13E-01	5.44E-07	7.95E-04	7.08E-07	3.13E-04	5.52E-05	9.87E-06	8.08E-05	1.98E-05	2.01E-05	4.12E-05	1.67E-06	6.85E-10	6.07E-05	5.86E-05
9	D23	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.79E-07	8.21E+00	4.47E-08	1.10E-02	9.36E-06	1.36E-02	1.17E-03	2.32E-04	8.03E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.57E-03
9	D23	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.37E-07	7.69E+00	5.12E-08	1.19E-02	8.73E-06	1.35E-02	1.18E-03	2.00E-04	8.27E-04	2.25E-04	2.28E-04	1.18E-03	2.58E-05	0.00E+00	5.99E-04	2.55E-03
9	D24	60	Passenger Car	684	0.00E+00	1.03E-05	1.11E-06	3.43E+01	7.14E-05	2.67E-01	2.28E-05	1.39E-03	6.94E-03	1.07E-03	2.22E-03	1.43E-03	1.47E-03	1.43E-04	1.72E-04	4.74E-08	7.52E-04	2.18E-04
9	D24	60	Passenger Truck	1145	0.00E+00	2.26E-05	2.39E-06	7.84E+01	1.41E-04	4.76E-01	4.66E-05	4.55E-03	1.27E-02	1.98E-03	4.43E-03	2.89E-03	2.96E-03	6.06E-04	3.89E-04	1.07E-07	1.48E-03	7.53E-04
9	D24	60	Single Unit Short Haul Truck	77	0.00E+00	2.25E-05	1.13E-06	1.43E+01	1.85E-05	2.77E-02	2.40E-05	1.07E-02	1.82E-03	3.30E-04	2.73E-03	6.75E-04	6.86E-04	1.43E-03	5.79E-05	2.39E-08	2.05E-03	2.01E-03
9	D24	60	Single Unit Long Haul Truck	3	0.00E+00	9.82E-07	4.89E-08	6.12E-01	8.05E-07	1.18E-03	1.05E-06	4.63E-04	8.18E-05	1.46E-05	1.20E-04	2.94E-05	2.98E-05	6.11E-05	2.47E-06	1.01E-09	8.99E-05	8.68E-05
9	D24	60	Combination Short Haul Truck	37	0.00E+00	2.18E-05	1.52E-06	1.42E+01	7.74E-08	1.91E-02	1.62E-05	2.36E-02	2.03E-03	4.03E-04	1.39E-03	4.53E-04	4.54E-04	2.14E-03	4.76E-05	0.00E+00	9.36E-04	4.45E-03
9	D24	60	Combination Long Haul Truck	34	0.00E+00	1.96E-05	1.28E-06	1.33E+01	8.87E-08	2.06E-02	1.51E-05	2.34E-02	2.04E-03	3.47E-04	1.43E-03	3.90E-04	3.95E-04	2.04E-03	4.46E-05	0.00E+00	1.04E-03	4.41E-03
9	D25	60	Passenger Car	1098	0.00E+00	1.65E-05	1.78E-06	5.52E+01	1.15E-04	4.28E-01	3.66E-05	2.24E-03	1.11E-02	1.71E-03	3.57E-03	2.30E-03	2.36E-03	2.29E-04	2.76E-04	7.61E-08	1.21E-03	3.50E-04
9	D25	60	Passenger Truck	1840	0.00E+00	3.64E-05	3.84E-06	1.26E+02	2.27E-04	7.64E-01	7.49E-05	7.30E-03	2.05E-02	3.17E-03	7.12E-03	4.64E-03	4.75E-03	9.74E-04	6.25E-04	1.73E-07	2.37E-03	1.21E-03
9	D25	60	Single Unit Short Haul Truck	59	0.00E+00	1.74E-05	8.72E-07	1.11E+01	1.44E-05	2.15E-02	1.86E-05	8.30E-03	1.41E-03	2.56E-04	2.12E-03	5.23E-04	5.32E-04	1.11E-03	4.49E-05	1.85E-08	1.59E-03	1.55E-03
9	D25	60	Single Unit Long Haul Truck	3	0.00E+00	7.61E-07	3.79E-08	4.74E-01	6.24E-07	9.13E-04	8.13E-07	3.59E-04	6.34E-05	1.13E-05	9.28E-05	2.27E-05	2.31E-05	4.73E-05	1.92E-06	7.86E-10	6.97E-05	6.73E-05
9	D25	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.63E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.07E-03
9	D25	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.05E-03
9	D26	60	Passenger Car	811	0.00E+00	1.22E-05	1.32E-06	4.07E+01	8.47E-05	3.16E-01	2.71E-05	1.65E-03	8.24E-03	1.26E-03	2.63E-03	1.70E-03	1.74E-03	1.70E-04	2.04E-04	5.62E-08	8.92E-04	2.59E-04
9	D26	60	Passenger Truck	1359	0.00E+00	2.69E-05	2.84E-06	9.30E+01	1.68E-04	5.64E-01	5.53E-05	5.39E-03	1.51E-02	2.34E-03	5.26E-03	3.43E-03	3.51E-03	7.19E-04	4.61E-04	1.28E-07	1.75E-03	8.94E-04
9	D26	60	Single Unit Short Haul Truck	78	0.00E+00	2.28E-05	1.14E-06	1.45E+01	1.88E-05	2.81E-02	2.43E-05	1.08E-02	1.85E-03	3.35E-04	2.77E-03	6.83E-04	6.94E-04	1.45E-03	5.86E-05	2.42E-08	2.07E-03	2.03E-03
9	D26	60	Single Unit Long Haul Truck	3	0.00E+00	9.95E-07	4.95E-08	6.19E-01	8.16E-07	1.19E-03	1.06E-06	4.69E-04	8.28E-05	1.48E-05	1.21E-04	2.97E-05	3.02E-05	6.19E-05	2.50E-06	1.03E-09	9.10E-05	8.79E-05
9	D26	60	Combination Short Haul Truck	34	0.00E+00	2.00E-05	1.39E-06	1.30E+01	7.08E-08	1.75E-02	1.48E-05	2.16E-02	1.86E-03	3.69E-04	1.27E-03	4.15E-04	4.16E-04	1.96E-03	4.36E-05	0.00E+00	8.57E-04	4.08E-03
9	D26	60	Combination Long Haul Truck	31	0.00E+00	1.80E-05	1.17E-06	1.22E+01	8.12E-08	1.88E-02	1.38E-05	2.14E-02	1.87E-03	3.18E-04	1.31E-03	3.57E-04	3.61E-04	1.86E-03	4.09E-05	0.00E+00	9.50E-04	4.04E-03
11	D27	80	Passenger Car	544	0.00E+00	6.63E-06	7.17E-07	2.54E+01	4.62E-05	1.77E-01	1.47E-05	1.12E-03	2.99E-03	5.20E-04	1.44E-03	9.25E-04	9.49E-04	8.52E-05	1.28E-04	3.58E-08	4.86E-04	1.75E-04
11	D27	80	Passenger Truck	911	0.00E+00	1.42E-05	1.51E-06	5.86E+01	9.12E-05	3.26E-01	2.98E-05	3.32E-03	5.37E-03	9.52E-04	2.86E-03	1.85E-03	1.90E-03	4.09E-04	2.93E-04	7.97E-08	9.56E-04	5.42E-04
11	D27	80	Single Unit Short Haul Truck	30	0.00E+00	5.54E-06	2.75E-07	5.44E+00	4.46E-06	1.09E-02	5.90E-06	2.83E-03	3.48E-04	7.88E-05	6.74E-04	1.64E-04	1.67E-04	5.45E-04	2.19E-05	8.69E-09	5.07E-04	5.30E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	2.41E-07	1.19E-08	2.30E-01	1.90E-07	4.54E-04	2.56E-07	1.21E-04	1.59E-05	3.47E-06	2.94E-05	7.06E-06	7.18E-06	2.30E-05	9.28E-07	3.62E-10	2.22E-05	2.27E-05
11	D27	80	Combination Short Haul Truck	18	0.00E+00	7.87E-06	5.63E-07	6.51E+00	2.48E-08	6.97E-03	5.75E-06	8.06E-03	4.76E-04	1.17E-04	4.69E-04	1.66E-04	1.65E-04	9.82E-04	2.18E-05	0.00E+00	3.04E-04	1.52E-03
11	D27	80	Combination Long Haul Truck	16	0.00E+00	7.05E-06	4.74E-07	6.02E+00	2.87E-08	7.23E-03	5.34E-06	7.82E-03	4.66E-04	9.38E-05	4.84E-04	1.43E-04	1.44E-04	9.19E-04	2.02E-05	0.00E+00	3.40E-04	1.47E-03
11	D28	80	Passenger Car	1054	0.00E+00	1.29E-05	1.39E-06	4.92E+01	8.94E-05	3.44E-01	2.86E-05	2.17E-03	5.80E-03	1.01E-03	2.78E-03	1.79E-03	1.84E-03	1.65E-04	2.47E-04	6.94E-08	9.41E-04	3.38E-04
11	D28	80	Passenger Truck	1766	0.00E+00	2.76E-05	2.93E-06	1.14E+02	1.77E-04	6.32E-01	5.78E-05	6.43E-03	1.04E-02	1.85E-03	5.53E-03	3.59E-03	3.68E-03	7.93E-04	5.67E-04	1.54E-07	1.85E-03	1.05E-03
11	D28	80	Single Unit Short Haul Truck	75	0.00E+00	1.41E-05	7.01E-07	1.38E+01	1.14E-05	2.77E-02	1.50E-05	7.22E-03	8.86E-04	2.01E-04	1.72E-03	4.18E-04	4.25E-04	1.39E-03	5.58E-05	2.21E-08	1.29E-03	1.35E-03
11	D28	80	Single Unit Long Haul Truck	3	0.00E+00	6.13E-07	3.02E-08	5.86E-01	4.85E-07	1.15E-03	6.52E-07	3.09E-04	4.05E-05	8.85E-06	7.49E-05	1.80E-05	1.83E-05	5.85E-05	2.36E-06	9.22E-10	5.66E-05	5.77E-05
11	D28	80	Combination Short Haul Truck	47	0.00E+00	2.08E-05	1.49E-06	1.72E+01	6.56E-08	1.84E-02	1.52E-05	2.13E-02	1.26E-03	3.10E-04	1.24E-03	4.39E-04	4.35E-04	2.59E-03	5.75E-05	0.00E+00	8.02E-04	4.01E-03
11	D28	80	Combination Long Haul Truck	43	0.00E+00	1.86E-05	1.25E-06	1.59E+01	7.57E-08	1.91E-02	1.41E-05	2.06E-02	1.23E-03	2.47E-04	1.28E-03	3.77E-04	3.80E-04	2.43E-03	5.32E-05	0.00E+00	8.98E-04	3.89E-03
11	D29	80	Passenger Car	445	0.00E+00	5.43E-06	5.87E-07	2.08E+01	3.78E-05	1.45E-01	1.21E-05	9.15E-04	2.45E-03	4.26E-04	1.17E-03	7.57E-04	7.77E-04	6.98E-05	1.05E-04	2.93E-08	3.98E-04	1.43E-04
11	D29	80	Passenger Truck	746	0.00E+00	1.17E-05	1.24E-06	4.80E+01	7.47E-05	2.67E-01	2.44E-05	2.72E-03	4.39E-03	7.79E-04	2.34E-03	1.52E-03	1.56E-03	3.35E-04	2.40E-04	6.52E-08	7.82E-04	4.44E-04
11	D29	80	Single Unit Short Haul Truck	42	0.00E+00	7.83E-06	3.89E-07	7.69E+00	6.31E-06	1.54E-02	8.34E-06	4.01E-03	4.92E-04	1.11E-04	9.54E-04	2.32E-04	2.36E-04	7.71E-04	3.10E-05	1.23E-08	7.18E-04	7.50E-04
11	D29	80	Single Unit Long Haul Truck	2	0.00E+00	3.41E-07	1.68E-08	3.25E-01	2.69E-07	6.41E-04	3.62E-07	1.71E-04	2.25E-05	4.91E-06	4.16E-05	9.99E-06	1.02E-05	3.25E-05	1.31E-06	5.12E-10	3.14E-05	3.21E-05
11	D29	80	Combination Short Haul Truck	24	0.00E+00	1.05E-05	7.48E-07	8.65E+00	3.30E-08	9.26E-03	7.64E-06	1.07E-02	6.33E-04	1.56E-04	6.23E-04	2.21E-04	2.19E-04	1.30E-03	2.89E-05	0.00E+00	4.04E-04	2.02E-03
11	D29	80	Combination Long Haul Truck	22	0.00E+00	9.37E-06	6.30E-07	7.99E+00	3.81E-08	9.60E-03	7.10E-06	1.04E-02	6.19E-04	1.25E-04	6.43E-04	1.90E-04	1.91E-04	1.22E-03	2.68E-05	0.00E+00	4.52E-04	1.96E-03
11	D30	80	Passenger Car	839	0.00E+00	1.02E-05	1.11E-06	3.91E+01	7.12E-05	2.73E-01	2.27E-05	1.72E-03	4.61E-03	8.02E-04	2.21E-03	1.43E-03	1.46E-03	1.31E-04	1.97E-04	5.52E-08	7.49E-04	2.69E-04
11	D30	80	Passenger Truck	1405	0.00E+00	2.20E-05	2.33E-06	9.04E+01	1.41E-04	5.03E-01	4.60E-05	5.12E-03	8.27E-03	1.47E-03	4.40E-03	2.86E-03	2.93E-03	6.31E-04	4.51E-04	1.23E-07	1.47E-03	8.36E-04
11	D30	80	Single Unit Short Haul Truck	67	0.00E+00	1.25E-05	6.21E-07	1.23E+01	1.01E-05	2.46E-02	1.33E-05	6.40E-03	7.86E-04	1.78E-04	1.52E-03	3.70E-04	3.77E-04	1.23E-03	4.95E-05	1.96E-08	1.15E-03	1.20E-03
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	5.44E-07	2.68E-08	5.19E-01	4.30E-07	1.02E-03	5.79E-07	2.74E-04	3.59E-05	7.85E-06	6.64E-05	1.59E-05	1.62E-05	5.19E-05	2.10E-06	8.18E-10	5.02E-05	5.12E-05
11	D30	80	Combination Short Haul Truck	49	0.00E+00	2.17E-05	1.55E-06	1.80E+01	6.86E-08	1.92E-02	1.59E-05	2.22E-02	1.31E-03	3.24E-04	1.29E-03	4.59E-04	4.55E-04	2.71E-03	6.01E-05	0.00E+00	8.39E-04	4.19E-03
11	D30	80	Combination Long Haul Truck	45	0.00E+00	1.95E-05	1.31E-06	1.66E+01	7.92E-08	1.99E-02	1.47E-05	2.16E-02	1.29E-03	2.59E-04	1.34E-03	3.95E-04	3.97E-04	2.54E-03	5.56E-05	0.00E+00	9.39E-04	4.07E-03
11	D31	80	Passenger Car	173	0.00E+00	2.11E-06	2.28E-07	8.08E+00	1.47E-05	5.64E-02	4.69E-06	3.56E-04	9.52E-04	1.66E-04	4.57E-04	2.94E-04	3.02E-04	2.71E-05	4.06E-05	1.14E-08	1.55E-04	5.56E-05
11	D31	80	Passenger Truck	290	0.00E+00	4.53E-06	4.81E-07	1.87E+01	2.90E-05	1.04E-01	9.50E-06	1.06E-03	1.71E-03	3.03E-04	9.09E-04	5.90E-04	6.05E-04	1.30E-04	9.31E-05	2.54E-08	3.04E-04	1.73E-04
11	D31	80	Single Unit Short Haul Truck	22	0.00E+00	4.17E-06	2.07E-07	4.09E+00	3.36E-06	8.19E-03	4.44E-06	2.13E-03	2.62E-04	5.93E-05	5.07E-04	1.23E-04	1.26E-04	4.10E-04	1.65E-05	6.54E-09	3.82E-04	3.99E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.81E-07	8.93E-09	1.73E-01	1.43E-07	3.41E-04	1.93E-07	9.12E-05	1.20E-05	2.62E-06	2.21E-05	5.31E-06	5.41E-06	1.73E-05	6.99E-07	2.73E-10	1.67E-05	1.71E-05
11	D31	80	Combination Short Haul Truck	13	0.00E+00	5.82E-06	4.16E-07	4.81E+00	1.84E-08	5.15E-03	4.25E-06	5.96E-03	3.52E-04	8.68E-05	3.47E-04	1.23E-04	1.22E-04	7.26E-04	1.61E-05	0.00E+00	2.25E-04	1.12E-03
11	D31	80	Combination Long Haul Truck	12	0.00E+00	5.21E-06	3.50E-07	4.45E+00	2.12E-08	5.34E-03	3.95E-06	5.78E-03	3.44E-04	6.93E-05	3.58E-04	1.06E-04	1.06E-04	6.80E-04	1.49E-05	0.00E+00	2.52E-04	1.09E-03
11	D32	80	Passenger Car	349	0.00E+00	4.25E-06	4.60E-07	1.63E+01	2.96E-05	1.14E-01	9.45E-06	7.16E-04	1.92E-03	3.33E-04	9.20E-04	5.93E-04	6.09E-04	5.47E-05	8.19E-05	2.29E-08	3.11E-04	1.12E-04
11	D32	80	Passenger Truck	584	0.00E+00	9.13E-06	9.68E-07	3.76E+01	5.85E-05	2.09E-01	1.91E-05	2.13E-03	3.44E-03	6.11E-04	1.83E-03	1.19E-03	1.22E-03	2.62E-04	1.88E-04	5.11E-08	6.13E-04	3.48E-04
11	D32	80	Single Unit Short Haul Truck	29	0.00E+00	5.37E-06	2.67E-07	5.27E+00	4.32E-06	1.06E-02	5.72E-06	2.75E-03	3.37E-04	7.63E-05	6.54E-04	1.59E-04	1.62E-04	5.29E-04	2.12E-05	8.43E-09	4.92E-04	5.14E-04
11	D32	80	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.15E-08	2.23E-01	1.85E-07	4.40E-04	2.48E-07	1.18E-04	1.54E-05	3.37E-06	2.85E-05	6.85E-06	6.96E-06	2.23E-05	9.00E-07	3.51E-10	2.16E-05	2.20E-05
11	D32	80	Combination Short Haul Truck	25	0.00E+00	1.08E-05	7.74E-07	8.95E+00	3.41E-08	9.58E-03	7.91E-06	1.11E-02	6.55E-04	1.61E-04	6.44E-04	2.28E-04	2.27E-04	1.35E-03	2.99E-05	0.00E+00	4.18E-04	2.09E-03
11	D32	80	Combination Long Haul Truck	22	0.00E+00	9.69E-06	6.51E-07	8.27E+00	3.95E-08	9.93E-03	7.34E-06	1.07E-02	6.40E-04	1.29E-04	6.66E-04	1.97E-04	1.98E-04	1.26E-03	2.77E-05	0.00E+00	4.68E-04	2.02E-03

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D33	60	Passenger Car	272	0.00E+00	4.08E-06	4.41E-07	1.37E+01	2.84E-05	1.06E-01	9.07E-06	5.55E-04	2.76E-03	4.24E-04	8.83E-04	5.69E-04	5.84E-04	5.68E-05	6.84E-05	1.88E-08	2.99E-04	8.67E-05
9	D33	60	Passenger Truck	455	0.00E+00	9.00E-06	9.50E-07	3.12E+01	5.62E-05	1.89E-01	1.85E-05	1.81E-03	5.06E-03	7.86E-04	1.76E-03	1.15E-03	1.18E-03	2.41E-04	1.55E-04	4.27E-08	5.86E-04	3.00E-04
9	D33	60	Single Unit Short Haul Truck	42	0.00E+00	1.25E-05	6.24E-07	7.94E+00	1.03E-05	1.54E-02	1.33E-05	5.94E-03	1.01E-03	1.83E-04	1.52E-03	3.74E-04	3.80E-04	7.95E-04	3.21E-05	1.32E-08	1.14E-03	1.11E-03
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	5.45E-07	2.71E-08	3.39E-01	4.46E-07	6.53E-04	5.81E-07	2.57E-04	4.53E-05	8.10E-06	6.64E-05	1.63E-05	1.65E-05	3.39E-05	1.37E-06	5.62E-10	4.98E-05	4.81E-05
9	D33	60	Combination Short Haul Truck	27	0.00E+00	1.62E-05	1.13E-06	1.05E+01	5.73E-08	1.41E-02	1.20E-05	1.75E-02	1.51E-03	2.98E-04	1.03E-03	3.36E-04	3.36E-04	1.59E-03	3.52E-05	0.00E+00	6.92E-04	3.30E-03
9	D33	60	Combination Long Haul Truck	25	0.00E+00	1.45E-05	9.44E-07	9.86E+00	6.57E-08	1.52E-02	1.12E-05	1.73E-02	1.51E-03	2.57E-04	1.06E-03	2.88E-04	2.92E-04	1.51E-03	3.30E-05	0.00E+00	7.68E-04	3.27E-03
9	D34	60	Passenger Car	280	0.00E+00	4.21E-06	4.55E-07	1.41E+01	2.93E-05	1.09E-01	9.35E-06	5.72E-04	2.85E-03	4.37E-04	9.10E-04	5.87E-04	6.02E-04	5.86E-05	7.05E-05	1.94E-08	3.08E-04	8.93E-05
9	D34	60	Passenger Truck	469	0.00E+00	9.28E-06	9.80E-07	3.21E+01	5.80E-05	1.95E-01	1.91E-05	1.86E-03	5.22E-03	8.10E-04	1.82E-03	1.18E-03	1.21E-03	2.49E-04	1.59E-04	4.41E-08	6.05E-04	3.09E-04
9	D34	60	Single Unit Short Haul Truck	16	0.00E+00	4.72E-06	2.36E-07	3.01E+00	3.89E-06	5.82E-03	5.04E-06	2.25E-03	3.82E-04	6.93E-05	5.74E-04	1.42E-04	1.44E-04	3.01E-04	1.21E-05	5.00E-09	4.30E-04	4.21E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	2.06E-07	1.03E-08	1.28E-01	1.69E-07	2.47E-04	2.20E-07	9.72E-05	1.72E-05	3.07E-06	2.51E-05	6.16E-06	6.26E-06	1.28E-05	5.19E-07	2.13E-10	1.89E-05	1.82E-05
9	D34	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.21E-07	3.00E+00	1.63E-08	4.03E-03	3.42E-06	4.99E-03	4.29E-04	8.49E-05	2.93E-04	9.56E-05	9.58E-05	4.52E-04	1.00E-05	0.00E+00	1.97E-04	9.39E-04
9	D34	60	Combination Long Haul Truck	7	0.00E+00	4.14E-06	2.69E-07	2.81E+00	1.87E-08	4.34E-03	3.19E-06	4.94E-03	4.31E-04	7.32E-05	3.02E-04	8.22E-05	8.32E-05	4.29E-04	9.41E-06	0.00E+00	2.19E-04	9.31E-04
9	D35	60	Passenger Car	390	0.00E+00	5.85E-06	6.33E-07	1.96E+01	4.07E-05	1.52E-01	1.30E-05	7.96E-04	3.96E-03	6.08E-04	1.27E-03	8.17E-04	8.38E-04	8.15E-05	9.81E-05	2.70E-08	4.29E-04	1.24E-04
9	D35	60	Passenger Truck	653	0.00E+00	1.29E-05	1.36E-06	4.47E+01	8.07E-05	2.71E-01	2.66E-05	2.59E-03	7.26E-03	1.13E-03	2.53E-03	1.65E-03	1.69E-03	3.46E-04	2.22E-04	6.13E-08	8.41E-04	4.30E-04
9	D35	60	Single Unit Short Haul Truck	17	0.00E+00	4.96E-06	2.48E-07	3.16E+00	4.09E-06	6.12E-03	5.30E-06	2.36E-03	4.02E-04	7.29E-05	6.03E-04	1.49E-04	1.51E-04	3.17E-04	1.28E-05	5.26E-09	4.52E-04	4.43E-04
9	D35	60	Single Unit Long Haul Truck	1	0.00E+00	2.17E-07	1.08E-08	1.35E-01	1.78E-07	2.60E-04	2.31E-07	1.02E-04	1.81E-05	3.23E-06	2.64E-05	6.48E-06	6.58E-06	1.35E-05	5.46E-07	2.24E-10	1.98E-05	1.92E-05
9	D35	60	Combination Short Haul Truck	13	0.00E+00	7.44E-06	5.18E-07	4.84E+00	2.63E-08	6.50E-03	5.52E-06	8.05E-03	6.92E-04	1.37E-04	4.73E-04	1.54E-04	1.55E-04	7.29E-04	1.62E-05	0.00E+00	3.19E-04	1.52E-03
9	D35	60	Combination Long Haul Truck	12	0.00E+00	6.68E-06	4.34E-07	4.54E+00	3.02E-08	7.01E-03	5.15E-06	7.98E-03	6.96E-04	1.18E-04	4.88E-04	1.33E-04	1.34E-04	6.93E-04	1.52E-05	0.00E+00	3.53E-04	1.50E-03
9	D36	60	Passenger Car	164	0.00E+00	2.46E-06	2.66E-07	8.22E+00	1.71E-05	6.38E-02	5.46E-06	3.34E-04	1.66E-03	2.55E-04	5.31E-04	3.43E-04	3.52E-04	3.42E-05	4.12E-05	1.13E-08	1.80E-04	5.22E-05
9	D36	60	Passenger Truck	274	0.00E+00	5.42E-06	5.72E-07	1.88E+01	3.39E-05	1.14E-01	1.12E-05	1.09E-03	3.05E-03	4.73E-04	1.06E-03	6.91E-04	7.08E-04	1.45E-04	9.31E-05	2.57E-08	3.53E-04	1.80E-04
9	D36	60	Single Unit Short Haul Truck	25	0.00E+00	7.27E-06	3.64E-07	4.63E+00	5.99E-06	8.97E-03	7.76E-06	3.46E-03	5.89E-04	1.07E-04	8.84E-04	2.18E-04	2.22E-04	4.64E-04	1.87E-05	7.71E-09	6.62E-04	6.49E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	3.18E-07	1.58E-08	1.98E-01	2.60E-07	3.81E-04	3.39E-07	1.50E-04	2.64E-05	4.73E-06	3.87E-05	9.49E-06	9.65E-06	1.97E-05	7.99E-07	3.28E-10	2.91E-05	2.81E-05
9	D36	60	Combination Short Haul Truck	18	0.00E+00	1.06E-05	7.39E-07	6.90E+00	3.76E-08	9.28E-03	7.87E-06	1.15E-02	9.88E-04	1.95E-04	6.75E-04	2.20E-04	2.21E-04	1.04E-03	2.31E-05	0.00E+00	4.54E-04	2.16E-03
9	D36	60	Combination Long Haul Truck	16	0.00E+00	9.52E-06	6.20E-07	6.47E+00	4.31E-08	9.99E-03	7.34E-06	1.14E-02	9.93E-04	1.68E-04	6.96E-04	1.89E-04	1.92E-04	9.89E-04	2.17E-05	0.00E+00	5.04E-04	2.14E-03
9	D37	60	Passenger Car	73	0.00E+00	1.10E-06	1.19E-07	3.69E+00	7.67E-06	2.87E-02	2.45E-06	1.50E-04	7.46E-04	1.14E-04	2.39E-04	1.54E-04	1.58E-04	1.53E-05	1.85E-05	5.09E-09	8.08E-05	2.34E-05
9	D37	60	Passenger Truck	123	0.00E+00	2.43E-06	2.57E-07	8.42E+00	1.52E-05	5.11E-02	5.01E-06	4.88E-04	1.37E-03	2.12E-04	4.76E-04	3.10E-04	3.18E-04	6.51E-05	4.18E-05	1.15E-08	1.58E-04	8.09E-05
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	6.00E-07	3.00E-08	3.82E-01	4.95E-07	7.40E-04	6.40E-07	2.86E-04	4.86E-05	8.81E-06	7.29E-05	1.80E-05	1.83E-05	3.83E-05	1.54E-06	6.36E-10	5.46E-05	5.35E-05
9	D37	60	Combination Short Haul Truck	4	0.00E+00	2.31E-06	1.61E-07	1.50E+00	8.17E-09	2.02E-03	1.71E-06	2.49E-03	2.15E-04	4.25E-05	1.47E-04	4.79E-05	4.79E-05	2.26E-04	5.02E-06	0.00E+00	9.87E-05	4.70E-04
9	D37	60	Combination Long Haul Truck	4	0.00E+00	2.07E-06	1.35E-07	1.41E+00	9.37E-09	2.17E-03	1.60E-06	2.47E-03	2.16E-04	3.66E-05	1.51E-04	4.11E-05	4.16E-05	2.15E-04	4.71E-06	0.00E+00	1.10E-04	4.66E-04
9	D38	60	Passenger Car	261	0.00E+00	3.92E-06	4.24E-07	1.31E+01	2.73E-05	1.02E-01	8.71E-06	5.33E-04	2.65E-03	4.07E-04	8.48E-04	5.47E-04	5.61E-04	5.46E-05	6.57E-05	1.81E-08	2.87E-04	8.32E-05
9	D38	60	Passenger Truck	437	0.00E+00	8.64E-06	9.13E-07	2.99E+01	5.40E-05	1.82E-01	1.78E-05	1.74E-03	4.86E-03	7.55E-04	1.69E-03	1.10E-03	1.13E-03	2.31E-04	1.49E-04	4.10E-08	5.63E-04	2.88E-04
9	D38	60	Single Unit Short Haul Truck	8	0.00E+00	2.32E-06	1.16E-07	1.48E+00	1.91E-06	2.86E-03	2.47E-06	1.10E-03	1.88E-04	3.40E-05	2.82E-04	6.95E-05	7.06E-05	1.48E-04	5.96E-06	2.46E-09	2.11E-04	2.07E-04
9	D38	60	Combination Short Haul Truck	18	0.00E+00	1.07E-05	7.48E-07	6.99E+00	3.80E-08	9.39E-03	7.97E-06	1.16E-02	1.00E-03	1.98E-04	6.83E-04	2.23E-04	2.23E-04	1.05E-03	2.34E-05	0.00E+00	4.60E-04	2.19E-03
9	D38	60	Combination Long Haul Truck	17	0.00E+00	9.64E-06	6.27E-07	6.55E+00	4.36E-08	1.01E-02	7.43E-06	1.15E-02	1.01E-03	1.71E-04	7.04E-04	1.91E-04	1.94E-04	1.00E-03	2.19E-05	0.00E+00	5.10E-04	2.17E-03
9	D39	60	Passenger Car	103	0.00E+00	1.54E-06	1.67E-07	5.16E+00	1.07E-05	4.01E-02	3.43E-06	2.10E-04	1.04E-03	1.60E-04	3.34E-04	2.15E-04	2.21E-04	2.15E-05	2.59E-05	7.12E-09	1.13E-04	3.28E-05
9	D39	60	Passenger Truck	172	0.00E+00	3.40E-06	3.59E-07	1.18E+01	2.13E-05	7.15E-02	7.01E-06	6.83E-04	1.91E-03	2.97E-04	6.67E-04	4.34E-04	4.45E-04	9.11E-05	5.85E-05	1.62E-08	2.22E-04	1.13E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.46E-07	1.23E-08	1.57E-01	2.03E-07	3.03E-04	2.62E-07	1.17E-04	1.99E-05	3.61E-06	2.99E-05	7.37E-06	7.49E-06	1.57E-05	6.32E-07	2.60E-10	2.24E-05	2.19E-05
9	D39	60	Combination Short Haul Truck	2	0.00E+00	1.15E-06	7.98E-08	7.45E-01	4.06E-09	1.00E-03	8.50E-07	1.24E-03	1.07E-04	2.11E-05	7.29E-05	2.38E-05	2.38E-05	1.12E-04	2.49E-06	0.00E+00	4.91E-05	2.34E-04
9	D39	60	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.69E-08	6.99E-01	4.65E-09	1.08E-03	7.93E-07	1.23E-03	1.07E-04	1.82E-05	7.51E-05	2.04E-05	2.07E-05	1.07E-04	2.34E-06	0.00E+00	5.44E-05	2.31E-04
9	D40	60	Passenger Car	350	0.00E+00	5.26E-06	5.69E-07	1.76E+01	3.66E-05	1.37E-01	1.17E-05	7.14E-04	3.55E-03	5.46E-04	1.14E-03	7.33E-04	7.52E-04	7.32E-05	8.81E-05	2.43E-08	3.85E-04	1.12E-04
9	D40	60	Passenger Truck	586	0.00E+00	1.16E-05	1.22E-06	4.01E+01	7.25E-05	2.44E-01	2.39E-05	2.33E-03	6.52E-03	1.01E-03	2.27E-03	1.48E-03	1.52E-03	3.10E-04	1.99E-04	5.51E-08	7.55E-04	3.86E-04
9	D40	60	Single Unit Short Haul Truck	21	0.00E+00	6.25E-06	3.13E-07	3.98E+00	5.15E-06	7.71E-03	6.67E-06	2.98E-03	5.06E-04	9.18E-05	7.60E-04	1.88E-04	1.91E-04	3.99E-04	1.61E-05	6.63E-09	5.69E-04	5.58E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.36E-08	1.70E-01	2.24E-07	3.27E-04	2.92E-07	1.29E-04	2.27E-05	4.06E-06	3.33E-05	8.16E-06	8.29E-06	1.70E-05	6.87E-07	2.82E-10	2.50E-05	2.41E-05
9	D40	60	Combination Short Haul Truck	19	0.00E+00	1.14E-05	7.94E-07	7.41E+00	4.04E-08	9.97E-03	8.46E-06	1.23E-02	1.06E-03	2.10E-04	7.25E-04	2.37E-04	2.37E-04	1.12E-03	2.48E-05	0.00E+00	4.88E-04	2.32E-03
9	D40	60	Combination Long Haul Truck	18	0.00E+00	1.02E-05	6.66E-07	6.95E+00	4.63E-08	1.07E-02	7.89E-06	1.22E-02	1.07E-03	1.81E-04	7.47E-04	2.03E-04	2.06E-04	1.06E-03	2.33E-05	0.00E+00	5.42E-04	2.30E-03
9	D41	60	Passenger Car	88	0.00E+00	1.32E-06	1.42E-07	4.40E+00	9.16E-06	3.42E-02	2.93E-06	1.79E-04	8.90E-04	1.37E-04	2.85E-04	1.84E-04	1.88E-04	1.83E-05	2.21E-05	6.07E-09	9.64E-05	2.79E-05
9	D41	60	Passenger Truck	147	0.00E+00	2.90E-06	3.06E-07	1.00E+01	1.81E-05	6.10E-02	5.98E-06	5.83E-04	1.63E-03	2.53E-04	5.69E-04	3.71E-04	3.79E-04	7.77E-05	4.99E-05	1.38E-08	1.89E-04	9.66E-05
9	D41	60	Single Unit Short Haul Truck	4	0.00E+00	1.23E-06	6.14E-08	7.83E-01	1.01E-06	1.51E-03	1.31E-06	5.85E-04	9.95E-05	1.80E-05	1.49E-04	3.68E-05	3.75E-05	7.83E-05	3.16E-06	1.30E-09	1.12E-04	1.10E-04
9	D41	60	Combination Short Haul Truck	3	0.00E+00	1.71E-06	1.19E-07	1.11E+00	6.04E-09	1.49E-03	1.27E-06	1.85E-03	1.59E-04	3.14E-05	1.09E-04	3.54E-05	3.55E-05	1.67E-04	3.71E-06	0.00E+00	7.31E-05	3.48E-04
9	D41	60	Combination Long Haul Truck	3	0.00E+00	1.53E-06	9.96E-08	1.04E+00	6.93E-09	1.61E-03	1.18E-06	1.83E-03	1.60E-04	2.71E-05	1.12E-04	3.04E-05	3.08E-05	1.59E-04	3.48E-06	0.00E+00	8.11E-05	3.45E-04
9	D42	60	Passenger Car	82	0.00E+00	1.23E-06	1.34E-07	4.13E+00	8.59E-06	3.21E-02	2.75E-06	1.68E-04	8.35E-04	1.28E-04	2.67E-04	1.72E-04	1.77E-04	1.72E-05	2.07E-05	5.70E-09	9.04E-05	2.62E-05
9	D42	60	Passenger Truck	138	0.00E+00	2.72E-06	2.88E-07	9.43E+00	1.70E-05	5.72E-02	5.61E-06	5.47E-04	1.53E-03	2.38E-04	5.34E-04	3.48E-04	3.56E-04	7.29E-05	4.68E-05	1.29E-08	1.77E-04	9.06E-05
9	D42	60	Single Unit Short Haul Truck	5	0.00E+00	1.39E-06	6.94E-08	8.84E-01	1.14E-06	1.71E-03	1.48E-06	6.61E-04	1.12E-04	2.04E-05	1.69E-04	4.16E-05	4.23E-05	8.85E-05	3.57E-06	1.47E-09	1.26E-04	1.24E-04
9	D42	60	Combination Short Haul Truck	8	0.00E+00	4.84E-06	3.38E-07	3.15E+00	1.72E-08	4.24E-03	3.59E-06	5.24E-03	4.51E-04	8.93E-05	3.08E-04	1.01E-04	1.01E-04	4.75E-04	1.05E-05	0.00E+00	2.07E-04	9.88E-04
9	D42	60	Combination Long Haul Truck	8	0.00E+00	4.35E-06	2.83E-07	2.95E+00	1.97E-08	4.56E-03	3.35E-06	5.19E-03	4.53E-04	7.69E-05	3.18E-04	8.64E-05	8.75E-05	4.51E-04	9.89E-06	0.00E+00	2.30E-04	9.79E-04
9	D43	60	Passenger Car	344	0.00E+00	5.16E-06	5.58E-07	1.73E+01	3.59E-05	1.34E-01	1.15E-05	7.01E-04	3.49E-03	5.35E-04	1.12E-03	7.19E-04	7.38E-04	7.18E-05	8.64E-05	2.38E-08	3.78E-04	1.10E-04
9	D43	60	Passenger Truck	575	0.00E+00	1.14E-05	1.20E-06	3.94E+01	7.11E-05	2.39E-01	2.34E-05	2.28E-03	6.40E-03	9.93E-04	2.23E-03	1.45E-03	1.49E-03	3.05E-04	1.95E-04	5.40E-08	7.41E-04	3.79E-04
9	D43	60	Combination Short Haul Truck	1	0.00E+00	8.30E-07	5.78E-08	5.40E-01	2.94E-09	7.26E-04	6.16E-07	8.98E-04	7.73E-05	1.53E-05	5.28E-05	1.72E-05	1.73E-05	8.14E-05	1.81E-06	0.00E+00	3.56E-05	1.69E-04
9	D43	60	Combination Long Haul Truck	1	0.00E+00	7.45E-07	4.85E-08	5.06E-01	3.37E-09	7.82E-04	5.74E-07	8.90E-04	7.77E-05	1.32E-05	5.44E-05	1.48E-05	1.50E-05	7.74E-05	1.70E-06	0.00E+00	3.94E-05	1.68E-04
9	D44	60	Passenger Car	160	0.00E+00	2.41E-06	2.60E-07	8.05E+00	1.67E-05	6.25E-02	5.35E-06	3.27E-04	1.63E-03	2.50E-04	5.21E-04	3.36E-04	3.44E-04	3.35E-05	4.03E-05	1.11E-08	1.76E-04	5.11E-05
9	D44	60	Passenger Truck	268	0.00E+00	5.31E-06	5.60E-07	1.84E+01	3.32E-05	1.11E-01	1.09E-05	1.07E-03	2.98E-03	4.63E-04	1.04E-03	6.77E-04	6.94E-04	1.42E-04	9.12E-05	2.52E-08	3.46E-04	1.77E-04
9	D44	60	Single Unit Short Haul Truck	21	0.00E+00	6.18E-06	3.09E-07	3.94E+00	5.10E-06	7.63E-03	6.60E-06	2.94E-03	5.01E-04	9.08E-05	7.51E-04	1.85E-04	1.89E-04	3.94E-04	1.59E-05	6.56E-09	5.63E-04	5.52E-04
9	D44	60	Single Unit Long Haul Truck	1	0.00E+00	2.70E-07	1.34E-08	1.68E-01	2.21E-07	3.24E-04	2.88E-07	1.27E-04	2.25E-05	4.02E-06	3.29E-05	8.07E-06	8.20E-06	1.68E-05	6.80E-07	2.79E-10	2.47E-05	2.39E-05
9	D44	60	Combination Short Haul Truck	12	0.00E+00	7.28E-06	5.08E-07	4.74E+00	2.58E-08	6.37E-03	5.40E-06	7.88E-03	6.78E-04	1.34E-04	4.63E-04	1.51E-04	1.51E-04	7.14E-04	1.59E-05	0.00E+00	3.12E-04	1.48E-03
9	D44	60	Combination Long Haul Truck	11	0.00E+00	6.54E-06	4.25E-07	4.44E+00	2.96E-08	6.86E-03	5.04E-06	7.81E-03	6.82E-04	1.16E-04	4.78E-04	1.30E-04	1.32E-04	6.79E-04	1.49E-05	0.00E+00	3.46E-04	1.47E-03
9	D45	60	Passenger Car	463	0.00E+00	6.94E-06	7.51E-07	2.32E+01	4.83E-05	1.80E-01	1.54E-05	9.44E-04	4.70E-03	7.21E-04	1.50E-03	9.69E-04	9.94E-04	9.67E-05	1.16E-04	3.21E-08	5.09E-04	1.47E-04
9	D45	60	Passenger Truck	775	0.00E+00	1.53E-05	1.62E-06	5.30E+01	9.57E-05	3.22E-01	3.16E-05	3.08E-03	8.61E-03	1.34E-03	3.00E-03	1.95E-03	2.00E-03	4.10E-04	2.63E-04	7.27E-08	9.98E-04	5.10E-04
9	D45	60	Single Unit Short Haul Truck	56	0.00E+00	1.66E-05	8.28E-07	1.06E+01	1.37E-05	2.04E-02	1.77E-05	7.88E-03	1.34E-03	2.43E-04	2.01E-03	4.97E-04	5.05E-04	1.06E-03	4.26E-05	1.76E-08	1.51E-03	1.48E-03
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	7.23E-07	3.60E-08	4.50E-01	5.93E-07	8.67E-04	7.72E-07	3.41E-04	6.02E-05	1.08E-05	8.82E-05	2.16E-05	2.20E-05	4.50E-05	1.82E-06	7.47E-10	6.62E-05	6.39E-05
9	D45	60	Combination Short Haul Truck	46	0.00E+00	2.73E-05	1.90E-06	1.78E+01	9.67E-08	2.39E-02	2.03E-05	2.96E-02	2.54E-03	5.03E-04	1.74E-03	5.67E-04	5.68E-04	2.68E-03	5.95E-05	0.00E+00	1.17E-03	5.57E-03
9	D45	60	Combination Long Haul Truck	42	0.00E+00	2.45E-05	1.60E-06	1.67E+01	1.11E-07	2.57E-02	1.89E-05	2.93E-02	2.56E-03	4.34E-04	1.79E-03	4.87E-04	4.93E-04	2.55E-03	5.58E-05	0.00E+00	1.30E-03	5.52E-03
9	D46	60	Passenger Car	452	0.00E+00	6.78E-06	7.33E-07	2.27E+01	4.72E-05	1.76E-01	1.51E-05	9.21E-04	4.58E-03	7.04E-04	1.47E-03	9.45E-04	9.70E-04	9.43E-05	1.14E-04	3.13E-08	4.96E-04	1.44E-04
9	D46	60	Passenger Truck	756	0.00E+00	1.49E-05	1.58E-06	5.17E+01	9.34E-05	3.14E-01	3.08E-05	3.00E-03	8.41E-03	1.30E-03	2.93E-03	1.91E-03	1.95E-03	4.00E-04	2.57E-04	7.10E-08	9.74E-04	4.97E-04
9	D46	60	Single Unit Short Haul Truck	63	0.00E+00	1.86E-05	9.31E-07	1.19E+01	1.53E-05	2.29E-02	1.99E-05	8.86E-03	1.51E-03	2.73E-04	2.26E-03	5.58E-04	5.67E-04	1.19E-03	4.79E-05	1.97E-08	1.69E-03	1.66E-03
9	D46	60	Single Unit Long Haul Truck	3	0.00E+00	8.13E-07	4.04E-08	5.06E-01	6.66E-07	9.74E-04	8.68E-07	3.83E-04	6.77E-05	1.21E-05	9.90E-05	2.43E-05	2.47E-05	5.05E-05	2.05E-06	8.39E-10	7.44E-05	7.18E-05
9	D46	60	Combination Short Haul Truck	50	0.00E+00	2.94E-05	2.05E-06	1.91E+01	1.04E-07	2.57E-02	2.18E-05	3.18E-02	2.74E-03	5.42E-04	1.87E-03	6.11E-04	6.12E-04	2.88E-03	6.41E-05	0.00E+00	1.26E-03	6.00E-03
9	D46	60	Combination Long Haul Truck	46	0.00E+00	2.64E-05	1.72E-06	1.79E+01	1.20E-07	2.77E-02	2.04E-05	3.15E-02	2.75E-03	4.67E-04	1.93E-03	5.25E-04	5.31E-04	2.74E-03	6.01E-05	0.00E+00	1.40E-03	5.94E-03
9	D47	60	Passenger Car	740	0.00E+00	1.11E-05	1.20E-06	3.71E+01	7.72E-05	2.88E-01	2.47E-05	1.51E-03	7.51E-03	1.15E-03	2.40E-03	1.55E-03	1.59E-03	1.55E-04	1.86E-04	5.12E-08	8.13E-04	2.36E-04
9	D47	60	Passenger Truck	1239	0.00E+00	2.45E-05	2.58E-06	8.48E+01	1.53E-04	5.14E-01	5.04E-05	4.92E-03	1.38E-02	2.14E-03	4.80E-03	3.13E-03	3.20E-03	6.56E-04	4.21E-04	1.16E-07	1.60E-03	8.15E-04
9	D47	60	Single Unit Short Haul Truck	75	0.00E+00	2.20E-05	1.10E-06	1.40E+01	1.82E-05	2.72E-02	2.35E-05	1.05E-02	1.78E-03	3.24E-04	2.68E-03	6.61E-04	6.72E-04	1.40E-03	5.67E-05	2.34E-08	2.01E-03	1.96E-03
9	D47	60	Single Unit Long Haul Truck	3	0.00E+00	9.62E-07	4.79E-08	5.99E-01	7.89E-07	1.15E-03	1.03E-06	4.54E-04	8.01E-05	1.43E-05	1.17E-04	2.87E-05	2.92E-05	5.98E-05	2.42E-06	9.93E-10	8.81E-05	8.50E-05
9	D47	60	Combination Short Haul Truck	51	0.00E+00	2.99E-05	2.08E-06	1.95E+01	1.06E-07	2.62E-02	2.22E-05	3.24E-02	2.78E-03	5.51E-04	1.90E-03	6.21E-04	6.22E-04	2.93E-03	6.51E-05	0.00E+00	1.28E-03	6.10E-03
9	D47	60	Combination Long Haul Truck	46	0.00E+00

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D51	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.40E+00	2.40E-08	5.92E-03	5.02E-06	7.32E-03	6.30E-04	1.25E-04	4.31E-04	1.40E-04	1.41E-04	6.64E-04	1.47E-05	0.00E+00	2.90E-04	1.38E-03
9	D51	60	Combination Long Haul Truck	10	0.00E+00	6.08E-06	3.95E-07	4.13E+00	2.75E-08	6.38E-03	4.68E-06	7.26E-03	6.34E-04	1.07E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
9	D52	60	Passenger Car	192	0.00E+00	2.88E-06	3.12E-07	9.65E+00	2.01E-05	7.50E-02	6.41E-06	3.92E-04	1.95E-03	2.99E-04	6.24E-04	4.02E-04	4.13E-04	4.02E-05	4.83E-05	1.33E-08	2.11E-04	6.13E-05
9	D52	60	Passenger Truck	322	0.00E+00	6.36E-06	6.72E-07	2.20E+01	3.98E-05	1.34E-01	1.31E-05	1.28E-03	3.58E-03	5.55E-04	1.25E-03	8.12E-04	8.32E-04	1.70E-04	1.09E-04	3.02E-08	4.15E-04	2.12E-04
9	D52	60	Single Unit Short Haul Truck	15	0.00E+00	4.50E-06	2.25E-07	2.87E+00	3.71E-06	5.55E-03	4.80E-06	2.14E-03	3.64E-04	6.61E-05	5.47E-04	1.35E-04	1.37E-04	2.87E-04	1.16E-05	4.77E-09	4.10E-04	4.01E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.78E-09	1.22E-01	1.61E-07	2.36E-04	2.10E-07	9.26E-05	1.64E-05	2.92E-06	2.40E-05	5.87E-06	5.97E-06	1.22E-05	4.95E-07	2.03E-10	1.80E-05	1.74E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	4.92E-06	3.43E-07	3.20E+00	1.74E-08	4.31E-03	3.65E-06	5.33E-03	4.58E-04	9.07E-05	3.13E-04	1.02E-04	1.02E-04	4.83E-04	1.07E-05	0.00E+00	2.11E-04	1.00E-03
9	D52	60	Combination Long Haul Truck	8	0.00E+00	4.42E-06	2.88E-07	3.00E+00	2.00E-08	4.64E-03	3.41E-06	5.28E-03	4.61E-04	7.82E-05	3.23E-04	8.78E-05	8.89E-05	4.59E-04	1.01E-05	0.00E+00	2.34E-04	9.95E-04
9	D53	60	Passenger Car	263	0.00E+00	3.95E-06	4.27E-07	1.32E+01	2.75E-05	1.03E-01	8.78E-06	5.37E-04	2.67E-03	4.10E-04	8.55E-04	5.51E-04	5.65E-04	5.50E-05	6.62E-05	1.82E-08	2.89E-04	8.39E-05
9	D53	60	Passenger Truck	441	0.00E+00	8.71E-06	9.20E-07	3.02E+01	5.45E-05	1.83E-01	1.80E-05	1.75E-03	4.90E-03	7.61E-04	1.71E-03	1.11E-03	1.14E-03	2.33E-04	1.50E-04	4.14E-08	5.68E-04	2.90E-04
9	D53	60	Single Unit Short Haul Truck	29	0.00E+00	8.43E-06	4.22E-07	5.37E+00	6.95E-06	1.04E-02	9.00E-06	4.02E-03	6.83E-04	1.24E-04	1.03E-03	2.53E-04	2.57E-04	5.38E-04	2.17E-05	8.94E-09	7.68E-04	7.52E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	3.68E-07	1.83E-08	2.29E-01	3.02E-07	4.42E-04	3.93E-07	1.74E-04	3.07E-05	5.48E-06	4.49E-05	1.10E-05	1.12E-05	2.29E-05	9.27E-07	3.80E-10	3.37E-05	3.25E-05
9	D53	60	Combination Short Haul Truck	16	0.00E+00	9.54E-06	6.65E-07	6.20E+00	3.38E-08	8.34E-03	7.08E-06	1.03E-02	8.88E-04	1.76E-04	6.07E-04	1.98E-04	1.98E-04	9.35E-04	2.08E-05	0.00E+00	4.09E-04	1.94E-03
9	D53	60	Combination Long Haul Truck	15	0.00E+00	8.56E-06	5.57E-07	5.82E+00	3.87E-08	8.99E-03	6.60E-06	1.02E-02	8.93E-04	1.51E-04	6.26E-04	1.70E-04	1.72E-04	8.89E-04	1.95E-05	0.00E+00	4.53E-04	1.93E-03
9	D54	60	Passenger Car	295	0.00E+00	4.43E-06	4.79E-07	1.48E+01	3.08E-05	1.15E-01	9.84E-06	6.02E-04	2.99E-03	4.60E-04	9.58E-04	6.18E-04	6.34E-04	6.16E-05	7.42E-05	2.04E-08	3.24E-04	9.40E-05
9	D54	60	Passenger Truck	494	0.00E+00	9.76E-06	1.03E-06	3.38E+01	6.10E-05	2.05E-01	2.01E-05	1.96E-03	5.49E-03	8.53E-04	1.91E-03	1.25E-03	1.28E-03	2.62E-04	1.68E-04	4.64E-08	6.36E-04	3.25E-04
9	D54	60	Single Unit Short Haul Truck	30	0.00E+00	8.72E-06	4.36E-07	5.55E+00	7.19E-06	1.08E-02	9.30E-06	4.15E-03	7.06E-04	1.28E-04	1.06E-03	2.61E-04	2.66E-04	5.56E-04	2.24E-05	9.24E-09	7.94E-04	7.77E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	3.81E-07	1.89E-08	2.37E-01	3.12E-07	4.56E-04	4.07E-07	1.79E-04	3.17E-05	5.67E-06	4.64E-05	1.14E-05	1.16E-05	2.37E-05	9.58E-07	3.93E-10	3.48E-05	3.36E-05
9	D54	60	Combination Short Haul Truck	13	0.00E+00	7.69E-06	5.36E-07	5.00E+00	2.72E-08	6.73E-03	5.71E-06	8.32E-03	7.16E-04	1.42E-04	4.89E-04	1.60E-04	1.60E-04	7.54E-04	1.68E-05	0.00E+00	3.29E-04	1.57E-03
9	D54	60	Combination Long Haul Truck	12	0.00E+00	6.90E-06	4.49E-07	4.69E+00	3.12E-08	7.25E-03	5.32E-06	8.25E-03	7.20E-04	1.22E-04	5.04E-04	1.37E-04	1.39E-04	7.17E-04	1.57E-05	0.00E+00	3.66E-04	1.55E-03
11	D55	80	Passenger Car	614	0.00E+00	7.49E-06	8.10E-07	2.86E+01	5.21E-05	2.00E-01	1.66E-05	1.26E-03	3.38E-03	5.87E-04	1.62E-03	1.04E-03	1.07E-03	9.63E-05	1.44E-04	4.04E-08	5.48E-04	1.97E-04
11	D55	80	Passenger Truck	1029	0.00E+00	1.61E-05	1.71E-06	6.62E+01	1.03E-04	3.68E-01	3.37E-05	3.75E-03	6.06E-03	1.08E-03	3.22E-03	2.09E-03	2.15E-03	4.62E-04	3.30E-04	9.00E-08	1.08E-03	6.12E-04
11	D55	80	Single Unit Short Haul Truck	95	0.00E+00	1.77E-05	8.81E-07	1.74E+01	1.43E-05	3.49E-02	1.89E-05	9.08E-03	1.11E-03	2.52E-04	2.16E-03	5.26E-04	5.34E-04	1.75E-03	7.02E-05	2.78E-08	1.63E-03	1.70E-03
11	D55	80	Single Unit Long Haul Truck	4	0.00E+00	7.72E-07	3.80E-08	7.37E-01	6.10E-07	1.45E-03	8.21E-07	3.88E-04	5.09E-05	1.11E-05	9.42E-05	2.26E-05	2.30E-05	7.36E-05	2.97E-06	1.16E-09	7.12E-05	7.27E-05
11	D55	80	Combination Short Haul Truck	58	0.00E+00	2.57E-05	1.84E-06	2.13E+01	8.11E-08	2.28E-02	1.88E-05	2.63E-02	1.56E-03	3.83E-04	1.53E-03	5.43E-04	5.39E-04	3.20E-03	7.11E-05	0.00E+00	9.92E-04	4.96E-03
11	D55	80	Combination Long Haul Truck	53	0.00E+00	2.30E-05	1.55E-06	1.96E+01	9.37E-08	2.36E-02	1.74E-05	2.55E-02	1.52E-03	3.06E-04	1.58E-03	4.67E-04	4.70E-04	3.00E-03	6.58E-05	0.00E+00	1.11E-03	4.81E-03
11	D56	80	Passenger Car	355	0.00E+00	4.32E-06	4.68E-07	1.65E+01	3.01E-05	1.16E-01	9.61E-06	7.29E-04	1.95E-03	3.39E-04	9.36E-04	6.03E-04	6.19E-04	5.56E-05	8.33E-05	2.33E-08	3.17E-04	1.14E-04
11	D56	80	Passenger Truck	594	0.00E+00	9.28E-06	9.85E-07	3.82E+01	5.95E-05	2.13E-01	1.95E-05	2.16E-03	3.50E-03	6.21E-04	1.86E-03	1.21E-03	1.24E-03	2.67E-04	1.91E-04	5.20E-08	6.23E-04	3.54E-04
11	D56	80	Single Unit Short Haul Truck	73	0.00E+00	1.36E-05	6.78E-07	1.34E+01	1.10E-05	2.68E-02	1.45E-05	6.98E-03	8.57E-04	1.94E-04	1.66E-03	4.04E-04	4.11E-04	1.34E-03	5.39E-05	2.14E-08	1.25E-03	1.31E-03
11	D56	80	Single Unit Long Haul Truck	3	0.00E+00	5.93E-07	2.92E-08	5.67E-01	4.69E-07	1.12E-03	6.31E-07	2.99E-04	3.92E-05	8.56E-06	7.25E-05	1.74E-05	1.77E-05	5.66E-05	2.29E-06	8.92E-10	5.48E-05	5.59E-05
11	D56	80	Combination Short Haul Truck	41	0.00E+00	1.78E-05	1.27E-06	1.47E+01	5.62E-08	1.58E-02	1.30E-05	1.82E-02	1.08E-03	2.66E-04	1.06E-03	3.76E-04	3.73E-04	2.22E-03	4.93E-05	0.00E+00	6.88E-04	3.44E-03
11	D56	80	Combination Long Haul Truck	37	0.00E+00	1.60E-05	1.07E-06	1.36E+01	6.50E-08	1.64E-02	1.21E-05	1.77E-02	1.05E-03	2.12E-04	1.10E-03	3.24E-04	3.26E-04	2.08E-03	4.56E-05	0.00E+00	7.70E-04	3.33E-03
11	D57	80	Passenger Car	712	0.00E+00	8.68E-06	9.39E-07	3.32E+01	6.04E-05	2.32E-01	1.93E-05	1.46E-03	3.92E-03	6.81E-04	1.88E-03	1.21E-03	1.24E-03	1.12E-04	1.67E-04	4.68E-08	6.36E-04	2.29E-04
11	D57	80	Passenger Truck	1193	0.00E+00	1.86E-05	1.98E-06	7.68E+01	1.19E-04	4.27E-01	3.91E-05	4.34E-03	7.02E-03	1.25E-03	3.74E-03	2.43E-03	2.49E-03	5.36E-04	3.83E-04	1.04E-07	1.25E-03	7.10E-04
11	D57	80	Single Unit Short Haul Truck	115	0.00E+00	2.16E-05	1.07E-06	2.12E+01	1.74E-05	4.24E-02	2.30E-05	1.10E-02	1.36E-03	3.07E-04	2.63E-03	6.39E-04	6.50E-04	2.12E-03	8.53E-05	3.39E-08	1.98E-03	2.07E-03
11	D57	80	Single Unit Long Haul Truck	5	0.00E+00	9.39E-07	4.63E-08	8.96E-01	7.42E-07	1.77E-03	9.98E-07	4.72E-04	6.20E-05	1.35E-05	1.15E-04	2.75E-05	2.80E-05	8.95E-05	3.62E-06	1.41E-09	8.66E-05	8.84E-05
11	D57	80	Combination Short Haul Truck	68	0.00E+00	2.99E-05	2.14E-06	2.47E+01	9.42E-08	2.64E-02	2.18E-05	3.06E-02	1.81E-03	4.45E-04	1.78E-03	6.30E-04	6.26E-04	3.72E-03	8.26E-05	0.00E+00	1.15E-03	5.76E-03
11	D57	80	Combination Long Haul Truck	62	0.00E+00	2.67E-05	1.80E-06	2.28E+01	1.09E-07	2.74E-02	2.03E-05	2.97E-02	1.77E-03	3.56E-04	1.84E-03	5.42E-04	5.46E-04	3.49E-03	7.64E-05	0.00E+00	1.29E-03	5.59E-03
11	D58	80	Passenger Car	630	0.00E+00	7.68E-06	8.31E-07	2.94E+01	5.35E-05	2.05E-01	1.71E-05	1.30E-03	3.47E-03	6.03E-04	1.66E-03	1.07E-03	1.10E-03	9.88E-05	1.48E-04	4.15E-08	5.63E-04	2.02E-04
11	D58	80	Passenger Truck	1056	0.00E+00	1.65E-05	1.75E-06	6.80E+01	1.06E-04	3.78E-01	3.46E-05	3.85E-03	6.22E-03	1.10E-03	3.31E-03	2.15E-03	2.20E-03	4.74E-04	3.39E-04	9.23E-08	1.11E-03	6.28E-04
11	D58	80	Single Unit Short Haul Truck	73	0.00E+00	1.37E-05	6.81E-07	1.34E+01	1.10E-05	2.69E-02	1.46E-05	7.01E-03	8.61E-04	1.95E-04	1.67E-03	4.06E-04	4.13E-04	1.35E-03	5.42E-05	2.15E-08	1.26E-03	1.31E-03
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	5.96E-07	2.94E-08	5.69E-01	4.71E-07	1.12E-03	6.34E-07	3.00E-04	3.93E-05	8.60E-06	7.28E-05	1.75E-05	1.78E-05	5.68E-05	2.30E-06	8.96E-10	5.50E-05	5.61E-05
11	D58	80	Combination Short Haul Truck	44	0.00E+00	1.95E-05	1.39E-06	1.61E+01	6.15E-08	1.73E-02	1.42E-05	2.00E-02	1.18E-03	2.91E-04	1.16E-03	4.12E-04	4.08E-04	2.43E-03	5.40E-05	0.00E+00	7.53E-04	3.76E-03
11	D58	80	Combination Long Haul Truck	40	0.00E+00	1.75E-05	1.17E-06	1.49E+01	7.11E-08	1.79E-02	1.32E-05	1.94E-02	1.15E-03	2.32E-04	1.20E-03	3.54E-04	3.56E-04	2.28E-03	4.99E-05	0.00E+00	8.43E-04	3.65E-03
11	D59	80	Passenger Car	461	0.00E+00	5.62E-06	6.08E-07	2.15E+01	3.91E-05	1.50E-01	1.25E-05	9.47E-04	2.54E-03	4.41E-04	1.22E-03	7.84E-04	8.05E-04	7.22E-05	1.08E-04	3.03E-08	4.12E-04	1.48E-04
11	D59	80	Passenger Truck	772	0.00E+00	1.21E-05	1.28E-06	4.97E+01	7.73E-05	2.76E-01	2.53E-05	2.81E-03	4.55E-03	8.07E-04	2.42E-03	1.57E-03	1.61E-03	3.47E-04	2.48E-04	6.75E-08	8.10E-04	4.60E-04
11	D59	80	Single Unit Short Haul Truck	98	0.00E+00	1.84E-05	9.13E-07	1.80E+01	1.48E-05	3.61E-02	1.96E-05	9.41E-03	1.16E-03	2.61E-04	2.24E-03	5.45E-04	5.54E-04	1.81E-03	7.27E-05	2.88E-08	1.68E-03	1.76E-03
11	D59	80	Single Unit Long Haul Truck	4	0.00E+00	8.00E-07	3.94E-08	7.63E-01	6.32E-07	1.51E-03	8.51E-07	4.02E-04	5.28E-05	1.15E-05	9.76E-05	2.34E-05	2.38E-05	7.62E-05	3.08E-06	1.20E-09	7.38E-05	7.53E-05
11	D59	80	Combination Short Haul Truck	50	0.00E+00	2.20E-05	1.57E-06	1.81E+01	6.93E-08	1.94E-02	1.60E-05	2.25E-02	1.33E-03	3.27E-04	1.31E-03	4.63E-04	4.60E-04	2.74E-03	6.08E-05	0.00E+00	8.47E-04	4.23E-03
11	D59	80	Combination Long Haul Truck	46	0.00E+00	1.97E-05	1.32E-06	1.68E+01	8.00E-08	2.01E-02	1.49E-05	2.18E-02	1.30E-03	2.61E-04	1.35E-03	3.99E-04	4.01E-04	2.56E-03	5.62E-05	0.00E+00	9.49E-04	4.11E-03
11	D60	80	Passenger Car	543	0.00E+00	6.62E-06	7.16E-07	2.53E+01	4.61E-05	1.77E-01	1.47E-05	1.12E-03	2.99E-03	5.19E-04	1.43E-03	9.23E-04	9.48E-04	8.51E-05	1.27E-04	3.57E-08	4.85E-04	1.74E-04
11	D60	80	Passenger Truck	909	0.00E+00	1.42E-05	1.51E-06	5.85E+01	9.10E-05	3.26E-01	2.98E-05	3.31E-03	5.36E-03	9.51E-04	2.85E-03	1.85E-03	1.90E-03	4.08E-04	2.92E-04	7.95E-08	9.54E-04	5.41E-04
11	D60	80	Single Unit Short Haul Truck	58	0.00E+00	1.08E-05	5.37E-07	1.06E+01	8.70E-06	2.13E-02	1.15E-05	5.53E-03	6.80E-04	1.54E-04	1.32E-03	3.20E-04	3.26E-04	1.06E-03	4.28E-05	1.70E-08	9.91E-04	1.04E-03
11	D60	80	Single Unit Long Haul Truck	3	0.00E+00	4.70E-07	2.32E-08	4.49E-01	3.72E-07	8.85E-04	5.00E-07	2.37E-04	3.10E-05	6.78E-06	5.74E-05	1.38E-05	1.40E-05	4.48E-05	1.81E-06	7.07E-10	4.34E-05	4.43E-05
11	D60	80	Combination Short Haul Truck	27	0.00E+00	1.18E-05	8.44E-07	9.75E+00	3.72E-08	1.04E-02	8.62E-06	1.21E-02	7.14E-04	1.76E-04	7.03E-04	2.49E-04	2.47E-04	1.47E-03	3.27E-05	0.00E+00	4.55E-04	2.27E-03
11	D60	80	Combination Long Haul Truck	24	0.00E+00	1.06E-05	7.10E-07	9.02E+00	4.30E-08	1.08E-02	8.01E-06	1.17E-02	6.98E-04	1.41E-04	7.26E-04	2.14E-04	2.16E-04	1.38E-03	3.02E-05	0.00E+00	5.10E-04	2.21E-03
11	D61	80	Passenger Car	55	0.00E+00	6.70E-07	7.25E-08	2.56E+00	4.66E-06	1.79E-02	1.49E-06	1.13E-04	3.02E-04	5.25E-05	1.45E-04	9.35E-05	9.59E-05	8.61E-06	1.29E-05	3.62E-09	4.91E-05	1.76E-05
11	D61	80	Passenger Truck	92	0.00E+00	1.44E-06	1.53E-07	5.92E+00	9.21E-06	3.30E-02	3.01E-06	3.35E-04	5.42E-04	9.62E-05	2.89E-04	1.87E-04	1.92E-04	4.13E-05	2.96E-05	8.05E-09	9.65E-05	5.48E-05
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D61	80	Combination Short Haul Truck	5	0.00E+00	2.07E-06	1.48E-07	1.71E+00	6.53E-09	1.83E-03	1.51E-06	2.12E-03	1.25E-04	3.09E-05	1.23E-04	4.37E-05	4.33E-05	2.58E-04	5.73E-06	0.00E+00	7.99E-05	3.99E-04
11	D61	80	Combination Long Haul Truck	4	0.00E+00	1.85E-06	1.25E-07	1.58E+00	7.54E-09	1.90E-03	1.40E-06	2.05E-03	1.22E-04	2.46E-05	1.27E-04	3.76E-05	3.78E-05	2.42E-04	5.30E-06	0.00E+00	8.95E-05	3.87E-04
11	D62	80	Passenger Car	144	0.00E+00	1.75E-06	1.89E-07	6.69E+00	1.22E-05	4.68E-02	3.89E-06	2.95E-04	7.90E-04	1.37E-04	3.79E-04	2.44E-04	2.51E-04	2.25E-05	3.37E-05	9.44E-09	1.28E-04	4.61E-05
11	D62	80	Passenger Truck	240	0.00E+00	3.76E-06	3.99E-07	1.55E+01	2.41E-05	8.61E-02	7.87E-06	8.76E-04	1.42E-03	2.51E-04	7.54E-04	4.89E-04	5.01E-04	1.08E-04	7.72E-05	2.10E-08	2.52E-04	1.43E-04
11	D62	80	Single Unit Short Haul Truck	28	0.00E+00	5.20E-06	2.59E-07	5.11E+00	4.19E-06	1.02E-02	5.54E-06	2.66E-03	3.27E-04	7.40E-05	6.33E-04	1.54E-04	1.57E-04	5.12E-04	2.06E-05	8.17E-09	4.77E-04	4.98E-04
11	D62	80	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	2.16E-01	1.79E-07	4.26E-04	2.41E-07	1.14E-04	1.49E-05	3.26E-06	2.76E-05	6.63E-06	6.75E-06	2.16E-05	8.72E-07	3.40E-10	2.09E-05	2.13E-05
11	D62	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.18E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.75E-04
11	D62	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.02E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.46E-04
10	D63	70	Passenger Car	50	0.00E+00	6.56E-07	7.09E-08	2.41E+00	4.56E-06	1.71E-02	1.46E-06	1.00E-04	3.88E-04	6.23E-05	1.42E-04	9.15E-05	9.39E-05	8.97E-06	1.21E-05	3.29E-09	4.80E-05	1.57E-05
10	D63	70	Passenger Truck	84	0.00E+00	1.44E-06	1.52E-07	5.54E+00	9.09E-06	3.15E-02	2.98E-06	3.14E-04	7.07E-04	1.15E-04	2.85E-04	1.85E-04	1.90E-04	4.07E-05	2.76E-05	7.38E-09	9.50E-05	5.16E-05
10	D63	70	Single Unit Short Haul Truck	24	0.00E+00	5.63E-06	2.82E-07	4.41E+00	4.60E-06	8.82E-03	5.99E-06	2.77E-03	3.96E-04	7.93E-05	6.83E-04	1.68E-04	1.71E-04	4.42E-04	1.78E-05	7.17E-09	5.12E-04	5.18E-04
10	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.87E-01	1.99E-07	3.70E-04	2.61E-07	1.19E-04	1.81E-05	3.53E-06	2.98E-05	7.28E-06	7.41E-06	1.87E-05	7.55E-07	3.02E-10	2.24E-05	2.23E-05
10	D63	70	Combination Short Haul Truck	10	0.00E+00	5.44E-06	3.87E-07	3.94E+00	1.77E-08	4.68E-03	3.99E-06	5.70E-03	4.14E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.95E-04	1.32E-05	0.00E+00	2.17E-04	1.07E-03
10	D63	70	Combination Long Haul Truck	10	0.00E+00	4.92E-06	3.29E-07	3.68E+00	2.04E-08	4.96E-03	3.74E-06	5.62E-03	4.11E-04	7.50E-05	3.43E-04	9.94E-05	1.00E-04	5.63E-04	1.23E-05	0.00E+00	2.42E-04	1.06E-03
10	D64	70	Passenger Car	24	0.00E+00	3.18E-07	3.44E-08	1.17E+00	2.21E-06	8.31E-03	7.07E-07	4.87E-05	1.88E-04	3.02E-05	6.88E-05	4.44E-05	4.55E-05	4.35E-06	5.86E-06	1.60E-09	2.33E-05	7.61E-06
10	D64	70	Passenger Truck	41	0.00E+00	6.97E-07	7.38E-08	2.69E+00	4.41E-06	1.53E-02	1.45E-06	1.52E-04	3.43E-04	5.57E-05	1.38E-04	8.98E-05	9.20E-05	1.97E-05	1.34E-05	3.58E-09	4.61E-05	2.50E-05
10	D64	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.54E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	D64	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.55E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.61E-04
10	D64	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.43E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
11	D65	80	Passenger Car	373	0.00E+00	4.55E-06	4.92E-07	1.74E+01	3.17E-05	1.22E-01	1.01E-05	7.67E-04	2.05E-03	3.57E-04	9.85E-04	6.35E-04	6.51E-04	5.85E-05	8.76E-05	2.46E-08	3.33E-04	1.20E-04
11	D65	80	Passenger Truck	625	0.00E+00	9.77E-06	1.04E-06	4.02E+01	6.26E-05	2.24E-01	2.05E-05	2.28E-03	3.68E-03	6.54E-04	1.96E-03	1.27E-03	1.30E-03	2.81E-04	2.01E-04	5.47E-08	6.56E-04	3.72E-04
11	D65	80	Single Unit Short Haul Truck	65	0.00E+00	1.22E-05	6.06E-07	1.20E+01	9.82E-06	2.40E-02	1.30E-05	6.24E-03	7.67E-04	1.73E-04	1.48E-03	3.61E-04	3.67E-04	1.20E-03	4.82E-05	1.91E-08	1.12E-03	1.17E-03
11	D65	80	Single Unit Long Haul Truck	3	0.00E+00	5.31E-07	2.61E-08	5.07E-01	4.19E-07	9.99E-04	5.64E-07	2.67E-04	3.50E-05	7.65E-06	6.48E-05	1.56E-05	1.58E-05	5.06E-05	2.04E-06	7.98E-10	4.90E-05	5.00E-05
11	D65	80	Combination Short

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	6.22E-09	1.21E-01	9.98E-08	2.38E-04	1.34E-07	6.36E-05	8.34E-06	1.82E-06	1.54E-05	3.70E-06	3.77E-06	1.20E-05	4.87E-07	1.90E-10	1.17E-05	1.19E-05
11	D69	80	Combination Short Haul Truck	8	0.00E+00	3.31E-06	2.37E-07	2.73E+00	1.04E-08	2.93E-03	2.42E-06	3.38E-03	2.00E-04	4.93E-05	1.97E-04	6.98E-05	6.93E-05	4.12E-04	9.15E-06	0.00E+00	1.28E-04	6.38E-04
11	D69	80	Combination Long Haul Truck	7	0.00E+00	2.96E-06	1.99E-07	2.53E+00	1.21E-08	3.04E-03	2.24E-06	3.28E-03	1.96E-04	3.94E-05	2.03E-04	6.01E-05	6.04E-05	3.86E-04	8.47E-06	0.00E+00	1.43E-04	6.19E-04
11	D70	80	Passenger Car	126	0.00E+00	1.54E-06	1.66E-07	5.88E+00	1.07E-05	4.11E-02	3.42E-06	2.59E-04	6.94E-04	1.21E-04	3.33E-04	2.15E-04	2.20E-04	1.98E-05	2.96E-05	8.30E-09	1.13E-04	4.05E-05
11	D70	80	Passenger Truck	211	0.00E+00	3.30E-06	3.50E-07	1.36E+01	2.12E-05	7.57E-02	6.92E-06	7.70E-04	1.24E-03	2.21E-04	6.62E-04	4.30E-04	4.41E-04	9.49E-05	6.79E-05	1.85E-08	2.22E-04	1.26E-04
11	D70	80	Single Unit Short Haul Truck	37	0.00E+00	6.91E-06	3.44E-07	6.79E+00	5.57E-06	1.36E-02	7.36E-06	3.54E-03	4.35E-04	9.83E-05	8.42E-04	2.05E-04	2.08E-04	6.81E-04	2.73E-05	1.08E-08	6.33E-04	6.62E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	3.01E-07	1.48E-08	2.87E-01	2.38E-07	5.66E-04	3.20E-07	1.51E-04	1.99E-05	4.34E-06	3.67E-05	8.82E-06	8.97E-06	2.87E-05	1.16E-06	4.52E-10	2.78E-05	2.83E-05
11	D70	80	Combination Short Haul Truck	24	0.00E+00	1.04E-05	7.46E-07	8.62E+00	3.29E-08	9.24E-03	7.62E-06	1.07E-02	6.31E-04	1.56E-04	6.21E-04	2.20E-04	2.18E-04	1.30E-03	2.89E-05	0.00E+00	4.03E-04	2.01E-03
11	D70	80	Combination Long Haul Truck	22	0.00E+00	9.34E-06	6.28E-07	7.97E+00	3.80E-08	9.57E-03	7.08E-06	1.04E-02	6.17E-04	1.24E-04	6.41E-04	1.89E-04	1.91E-04	1.22E-03	2.67E-05	0.00E+00	4.51E-04	1.95E-03
10	D71	70	Passenger Car	187	0.00E+00	2.45E-06	2.65E-07	9.00E+00	1.71E-05	6.41E-02	5.45E-06	3.76E-04	1.45E-03	2.33E-04	5.31E-04	3.42E-04	3.51E-04	3.36E-05	4.52E-05	1.23E-08	1.80E-04	5.87E-05
10	D71	70	Passenger Truck	314	0.00E+00	5.38E-06	5.69E-07	2.07E+01	3.40E-05	1.18E-01	1.12E-05	1.17E-03	2.64E-03	4.30E-04	1.07E-03	6.93E-04	7.10E-04	1.52E-04	1.03E-04	2.76E-08	3.55E-04	1.93E-04
10	D71	70	Single Unit Short Haul Truck	37	0.00E+00	8.78E-06	4.40E-07	6.88E+00	7.18E-06	1.38E-02	9.35E-06	4.32E-03	6.18E-04	1.24E-04	1.07E-03	2.63E-04	2.67E-04	6.89E-04	2.77E-05	1.12E-08	7.98E-04	8.09E-04
10	D71	70	Single Unit Long Haul Truck	2	0.00E+00	3.82E-07	1.90E-08	2.92E-01	3.10E-07	5.78E-04	4.08E-07	1.86E-04	2.82E-05	5.50E-06	4.66E-05	1.14E-05	1.16E-05	2.91E-05	1.18E-06	4.72E-10	3.50E-05	3.48E-05
10	D71	70	Combination Short Haul Truck	34	0.00E+00	1.75E-05	1.25E-06	1.27E+01	5.70E-08	1.51E-02	1.29E-05	1.84E-02	1.34E-03	2.91E-04	1.07E-03	3.69E-04	3.68E-04	1.92E-03	4.26E-05	0.00E+00	7.00E-04	3.46E-03
10	D71	70	Combination Long Haul Truck	31	0.00E+00	1.59E-05	1.06E-06	1.19E+01	6.57E-08	1.60E-02	1.20E-05	1.81E-02	1.33E-03	2.42E-04	1.10E-03	3.21E-04	3.24E-04	1.81E-03	3.97E-05	0.00E+00	7.81E-04	3.41E-03
10	D72	70	Passenger Car	145	0.00E+00	1.90E-06	2.06E-07	6.99E+00	1.32E-05	4.97E-02	4.23E-06	2.91E-04	1.13E-03	1.81E-04	4.12E-04	2.66E-04	2.73E-04	2.60E-05	3.51E-05	9.56E-09	1.39E-04	4.55E-05
10	D72	70	Passenger Truck	244	0.00E+00	4.17E-06	4.41E-07	1.61E+01	2.64E-05	9.14E-02	8.67E-06	9.11E-04	2.05E-03	3.33E-04	8.27E-04	5.38E-04	5.51E-04	1.18E-04	8.01E-05	2.14E-08	2.76E-04	1.50E-04
10	D72	70	Single Unit Short Haul Truck	43	0.00E+00	1.01E-05	5.08E-07	7.93E+00	8.29E-06	1.59E-02	1.08E-05	4.99E-03	7.13E-04	1.43E-04	1.23E-03	3.03E-04	3.08E-04	7.96E-04	3.20E-05	1.29E-08	9.21E-04	9.34E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	4.41E-07	2.20E-08	3.37E-01	3.58E-07	6.67E-04	4.70E-07	2.14E-04	3.25E-05	6.35E-06	5.37E-05	1.31E-05	1.33E-05	3.36E-05	1.36E-06	5.45E-10	4.04E-05	4.02E-05
10	D72	70	Combination Short Haul Truck	32	0.00E+00	1.68E-05	1.19E-06	1.22E+01	5.46E-08	1.45E-02	1.23E-05	1.76E-02	1.28E-03	2.79E-04	1.02E-03	3.53E-04	3.53E-04	1.84E-03	4.08E-05	0.00E+00	6.70E-04	3.32E-03
10	D72	70	Combination Long Haul Truck	29	0.00E+00	1.52E-05	1.02E-06	1.14E+01	6.29E-08	1.53E-02	1.15E-05	1.73E-02	1.27E-03	2.32E-04	1.06E-03	3.07E-04	3.10E-04	1.74E-03	3.81E-05	0.00E+00	7.48E-04	3.27E-03
10	D73	70	Passenger Car	105	0.00E+00	1.37E-06	1.48E-07	5.03E+00	9.54E-06	3.58E-02	3.05E-06	2.10E-04	8.12E-04	1.30E-04	2.97E-04	1.91E-04	1.96E-04	1.88E-05	2.53E-05	6.88E-09	1.00E-04	3.28E-05
10	D73	70	Passenger Truck	175	0.00E+00	3.00E-06	3.18E-07	1.16E+01	1.90E-05	6.58E-02	6.24E-06	6.56E-04	1.48E-03	2.40E-04	5.95E-04	3.87E-04	3.97E-04	8.50E-05	5.77E-05	1.54E-08	1.99E-04	1.08E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	9.04E-07	4.53E-08	7.08E-01	7.39E-07	1.42E-03	9.63E-07	4.45E-04	6.36E-05	1.27E-05	1.10E-04	2.70E-05	2.75E-05	7.10E-05	2.85E-06	1.15E-09	8.21E-05	8.33E-05
10	D73	70	Combination Short Haul Truck	11	0.00E+00	5.88E-06	4.18E-07	4.26E+00	1.91E-08	5.07E-03	4.31E-06	6.16E-03	4.48E-04	9.77E-05	3.58E-04	1.24E-04	1.24E-04	6.43E-04	1.43E-05	0.00E+00	2.35E-04	1.16E-03
10	D73	70	Combination Long Haul Truck	10	0.00E+00	5.32E-06	3.56E-07	3.98E+00	2.20E-08	5.37E-03	4.04E-06	6.07E-03	4.45E-04	8.11E-05	3.70E-04	1.07E-04	1.09E-04	6.08E-04	1.33E-05	0.00E+00	2.62E-04	1.14E-03
10	D74	70	Passenger Car	122	0.00E+00	1.60E-06	1.73E-07	5.88E+00	1.11E-05	4.18E-02	3.56E-06	2.45E-04	9.48E-04	1.52E-04	3.46E-04	2.23E-04	2.29E-04	2.19E-05	2.95E-05	8.04E-09	1.17E-04	3.83E-05
10	D74	70	Passenger Truck	205	0.00E+00	3.51E-06	3.71E-07	1.35E+01	2.22E-05	7.69E-02	7.29E-06	7.66E-04	1.73E-03	2.80E-04	6.95E-04	4.52E-04	4.63E-04	9.93E-05	6.74E-05	1.80E-08	2.32E-04	1.26E-04
10	D74	70	Single Unit Short Haul Truck	8	0.00E+00	1.88E-06	9.43E-08	1.47E+00	1.54E-06	2.95E-03	2.01E-06	9.27E-04	1.33E-04	2.65E-05	2.28E-04	5.63E-05	5.73E-05	1.48E-04	5.95E-06	2.40E-09	1.71E-04	1.74E-04
10	D74	70	Combination Short Haul Truck	6	0.00E+00	3.33E-06	2.37E-07	2.42E+00	1.08E-08	2.87E-03	2.45E-06	3.49E-03	2.54E-04	5.54E-05	2.03E-04	7.01E-05	7.00E-05	3.64E-04	8.09E-06	0.00E+00	1.33E-04	6.58E-04
10	D74	70	Combination Long Haul Truck	6	0.00E+00	3.01E-06	2.02E-07	2.26E+00	1.25E-08	3.04E-03	2.29E-06	3.44E-03	2.52E-04	4.60E-05	2.10E-04	6.09E-05	6.16E-05	3.45E-04	7.55E-06	0.00E+00	1.48E-04	6.48E-04
11	D75	80	Passenger Car	104	0.00E+00	1.27E-06	1.37E-07	4.85E+00	8.82E-06	3.39E-02	2.82E-06	2.14E-04	5.72E-04	9.94E-05	2.74E-04	1.77E-04	1.81E-04	1.63E-05	2.44E-05	6.84E-09	9.28E-05	3.34E-05
11	D75	80	Passenger Truck	174	0.00E+00	2.72E-06	2.89E-07	1.12E+01	1.74E-05	6.23E-02	5.70E-06	6.34E-04	1.03E-03	1.82E-04	5.46E-04	3.54E-04	3.63E-04	7.82E-05	5.59E-05	1.52E-08	1.83E-04	1.04E-04
11	D75	80	Single Unit Short Haul Truck	10	0.00E+00	1.79E-06	8.91E-08	1.76E+00	1.44E-06	3.53E-03	1.91E-06	9.18E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	D75	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.59E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.88E-04
11	D75	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.51E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.73E-04
11	D76	80	Passenger Car	95	0.00E+00	1.16E-06	1.25E-07	4.43E+00	8.06E-06	3.09E-02	2.57E-06	1.95E-04	5.22E-04	9.08E-05	2.51E-04	1.61E-04	1.66E-04	1.49E-05	2.23E-05	6.25E-09	8.48E-05	3.05E-05
11	D76	80	Passenger Truck	159	0.00E+00	2.49E-06	2.64E-07	1.02E+01	1.59E-05	5.69E-02	5.21E-06	5.79E-04	9.37E-04	1.66E-04	4.99E-04	3.24E-04	3.32E-04	7.14E-05	5.11E-05	1.39E-08	1.67E-04	9.46E-05
11	D76	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.64E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.50E-05	8.65E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.75E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.15E-09	1.19E-01	9.87E-08	2.35E-04	1.33E-07	6.28E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	D76	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.53E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.65E-04
11	D76	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.42E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.45E-04
11	D77	80	Passenger Car	79	0.00E+00	9.66E-07	1.05E-07	3.70E+00	6.72E-06	2.58E-02	2.15E-06	1.63E-04	4.36E-04	7.58E-05	2.09E-04	1.35E-04	1.38E-04	1.24E-05	1.86E-05	5.21E-09	7.08E-05	2.54E-05
11	D77	80	Passenger Truck	133	0.00E+00	2.07E-06	2.20E-07	8.54E+00	1.33E-05	4.75E-02	4.35E-06	4.84E-04	7.82E-04	1.39E-04	4.16E-04	2.70E-04	2.77E-04	5.96E-05	4.26E-05	1.16E-08	1.39E-04	7.90E-05
11	D77	80	Single Unit Short Haul Truck	28	0.00E+00	5.20E-06	2.59E-07	5.11E+00	4.19E-06	1.02E-02	5.54E-06	2.66E-03	3.27E-04	7.40E-05	6.33E-04	1.54E-04	1.57E-04	5.12E-04	2.06E-05	8.17E-09	4.77E-04	4.98E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	2.16E-01	1.79E-07	4.26E-04	2.41E-07	1.14E-04	1.49E-05	3.26E-06	2.76E-05	6.63E-06	6.75E-06	2.16E-05	8.72E-07	3.40E-10	2.09E-05	2.13E-05
11	D77	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.12E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.15E-03
11	D77	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.94E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	D78	80	Passenger Car	162	0.00E+00	1.97E-06	2.13E-07	7.55E+00	1.37E-05	5.28E-02	4.39E-06	3.33E-04	8.90E-04	1.55E-04	4.27E-04	2.75E-04	2.82E-04	2.54E-05	3.80E-05	1.06E-08	1.45E-04	5.20E-05
11	D78	80	Passenger Truck	271	0.00E+00	4.24E-06	4.49E-07	1.74E+01	2.71E-05	9.71E-02	8.88E-06	9.88E-04	1.60E-03	2.83E-04	8.50E-04	5.52E-04	5.65E-04	1.22E-04	8.71E-05	2.37E-08	2.84E-04	1.61E-04
11	D78	80	Single Unit Short Haul Truck	37	0.00E+00	7.00E-06	3.48E-07	6.87E+00	5.63E-06	1.38E-02	7.45E-06	3.58E-03	4.40E-04	9.95E-05	8.52E-04	2.07E-04	2.11E-04	6.89E-04	2.77E-05	1.10E-08	6.41E-04	6.70E-04
11	D78	80	Single Unit Long Haul Truck	2	0.00E+00	3.04E-07	1.50E-08	2.91E-01	2.41E-07	5.73E-04	3.24E-07	1.53E-04	2.01E-05	4.39E-06	3.72E-05	8.92E-06	9.08E-06	2.90E-05	1.17E-06	4.58E-10	2.81E-05	2.87E-05
11	D78	80	Combination Short Haul Truck	21	0.00E+00	9.20E-06	6.58E-07	7.60E+00	2.90E-08	8.14E-03	6.72E-06	9.41E-03	5.56E-04	1.37E-04	5.48E-04	1.94E-04	1.93E-04	1.15E-03	2.55E-05	0.00E+00	3.55E-04	1.77E-03
11	D78	80	Combination Long Haul Truck	19	0.00E+00	8.24E-06	5.54E-07	7.03E+00	3.35E-08	8.44E-03	6.24E-06	9.13E-03	5.44E-04	1.10E-04	5.66E-04	1.67E-04	1.68E-04	1.07E-03	2.35E-05	0.00E+00	3.98E-04	1.72E-03
10	D79	70	Passenger Car	156	0.00E+00	2.04E-06	2.21E-07	7.49E+00	1.42E-05	5.33E-02	4.54E-06	3.12E-04	1.21E-03	1.94E-04	4.42E-04	2.85E-04	2.92E-04	2.79E-05	3.76E-05	1.02E-08	1.49E-04	4.88E-05
10	D79	70	Passenger Truck	261	0.00E+00	4.47E-06	4.73E-07	1.73E+01	2.83E-05	9.80E-02	9.29E-06	9.77E-04	2.20E-03	3.57E-04	8.86E-04	5.76E-04	5.90E-04	1.27E-04	8.59E-05	2.30E-08	2.96E-04	1.61E-04
10	D79	70	Single Unit Short Haul Truck	43	0.00E+00	1.00E-05	5.01E-07	7.84E+00	8.19E-06	1.57E-02	1.07E-05	4.93E-03	7.04E-04	1.41E-04	1.21E-03	2.99E-04	3.04E-04	7.86E-04	3.16E-05	1.28E-08	9.10E-04	9.22E-04
10	D79	70	Single Unit Long Haul Truck	2	0.00E+00	4.36E-07	2.17E-08	3.33E-01	3.53E-07	6.59E-04	4.65E-07	2.12E-04	3.22E-05	6.27E-06	5.31E-05	1.30E-05	1.32E-05	3.32E-05	1.34E-06	5.38E-10	3.99E-05	3.97E-05
10	D79	70	Combination Short Haul Truck	28	0.00E+00	1.47E-05	1.05E-06	1.07E+01	4.78E-08	1.27E-02	1.08E-05	1.54E-02	1.12E-03	2.44E-04	8.96E-04	3.09E-04	3.09E-04	1.61E-03	3.57E-05	0.00E+00	5.87E-04	2.90E-03
10	D79	70	Combination Long Haul Truck	26	0.00E+00	1.33E-05	8.89E-07	9.96E+00	5.51E-08	1.34E-02	1.01E-05	1.52E-02	1.11E-03	2.03E-04	9.27E-04	2.69E-04	2.72E-04	1.52E-03	3.33E-05	0.00E+00	6.55E-04	2.86E-03
10	D80	70	Passenger Car	180	0.00E+00	2.35E-06	2.54E-07	8.62E+00	1.64E-05	6.14E-02	5.22E-06	3.60E-04	1.39E-03	2.23E-04	5.08E-04	3.28E-04	3.36E-04	3.21E-05	4.33E-05	1.18E-08	1.72E-04	5.62E-05
10	D80	70	Passenger Truck	301	0.00E+00	5.15E-06	5.45E-07	1.99E+01	3.26E-05	1.13E-01	1.07E-05	1.12E-03	2.53E-03	4.12E-04	1.02E-03	6.64E-04	6.80E-04	1.46E-04	9.89E-05	2.64E-08	3.40E-04	1.85E-04
10	D80	70	Single Unit Short Haul Truck	38	0.00E+00	8.98E-06	4.50E-07	7.03E+00	7.34E-06	1.41E-02	9.57E-06	4.42E-03	6.32E-04	1.26E-04	1.09E-03	2.69E-04	2.73E-04	7.05E-04	2.84E-05	1.14E-08	8.16E-04	8.27E-04
10	D80	70	Single Unit Long Haul Truck	2	0.00E+00	3.91E-07	1.95E-08	2.98E-01	3.17E-07	5.91E-04	4.17E-07	1.90E-04	2.88E-05	5.63E-06	4.76E-05	1.16E-05	1.18E-05	2.98E-05	1.21E-06	4.83E-10	3.58E-05	3.56E-05
10	D80	70	Combination Short Haul Truck	19	0.00E+00	9.72E-06	6.90E-07	7.04E+00	3.16E-08	8.36E-03	7.13E-06	1.02E-02	7.39E-04	1.61E-04	5.92E-04	2.04E-04	2.04E-04	1.06E-03	2.36E-05	0.00E+00	3.88E-04	1.92E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	8.78E-06	5.87E-07	6.57E+00	3.64E-08	8.86E-03	6.67E-06	1.00E-02	7.34E-04	1.34E-04	6.12E-04	1.77E-04	1.79E-04	1.00E-03	2.20E-05	0.00E+00	4.32E-04	1.89E-03
9	F31	60	Passenger Car	666	0.00E+00	9.99E-06	1.08E-06	3.34E+01	6.95E-05	2.60E-01	2.22E-05	1.36E-03	6.76E-03	1.04E-03	2.16E-03	1.39E-03	1.43E-03	1.39E-04	1.67E-04	4.61E-08	7.32E-04	2.12E-04
9	F31	60	Passenger Truck	1115	0.00E+00	2.20E-05	2.33E-06	7.63E+01	1.38E-04	4.63E-01	4.54E-05	4.43E-03	1.24E-02	1.92E-03	4.32E-03	2.81E-03	2.88E-03	5.90E-04	3.79E-04	1.05E-07	1.44E-03	7.33E-04
9	F31	60	Single Unit Short Haul Truck	28	0.00E+00	8.16E-06	4.08E-07	5.20E+00	6.73E-06	1.01E-02	8.71E-06	3.89E-03	6.61E-04	1.20E-04	9.92E-04	2.45E-04	2.49E-04	5.21E-04	2.10E-05	8.66E-09	7.43E-04	7.28E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	3.57E-07	1.77E-08	2.22E-01	2.92E-07	4.27E-04	3.81E-07	1.68E-04	2.97E-05	5.31E-06	4.35E-05	1.07E-05	1.08E-05	2.22E-05	8.97E-07	3.68E-10	3.26E-05	3.15E-05
9	F31	60	Combination Short Haul Truck	40	0.00E+00	2.33E-05	1.62E-06	1.51E+01	8.25E-08	2.04E-02	1.73E-05	2.52E-02	2.17E-03	4.29E-04	1.48E-03	4.83E-04	4.84E-04	2.28E-03	5.07E-05	0.00E+00	9.98E-04	4.75E-03
9	F31	60	Combination Long Haul Truck	36	0.00E+00	2.09E-05	1.36E-06	1.42E+01	9.46E-08	2.19E-02	1.61E-05	2.50E-02	2.18E-03	3.70E-04	1.53E-03	4.15E-04	4.21E-04	2.17E-03	4.76E-05	0.00E+00	1.11E-03	4.71E-03
9	F32	60	Passenger Car	672	0.00E+00	1.01E-05	1.09E-06	3.37E+01	7.01E-05	2.62E-01	2.24E-05	1.37E-03	6.82E-03	1.05E-03	2.18E-03	1.41E-03	1.44E-03	1.40E-04	1.69E-04	4.65E-08	7.38E-04	2.14E-04
9	F32	60	Passenger Truck	1125	0.00E+00	2.22E-05	2.35E-06	7.70E+01	1.39E-04	4.67E-01	4.58E-05	4.46E-03	1.25E-02	1.94E-03	4.36E-03	2.84E-03	2.91E-03	5.95E-04	3.82E-04	1.06E-07	1.45E-03	7.40E-04
9	F32	60	Single Unit Short Haul Truck	105	0.00E+00	3.09E-05	1.54E-06	1.97E+01	2.54E-05	3.81E-02	3.29E-05	1.47E-02	2.50E-03	4.53E-04	3.75E-03	9.26E-04	9.41E-04	1.97E-03	7.94E-05	3.27E-08	2.81E-03	2.75E-03
9	F32	60	Single Unit Long Haul Truck	5	0.00E+00	1.35E-06	6.71E-08	8.39E-01	1.10E-06	1.62E-03	1.44E-06	6.35E-04	1.12E-04	2.01E-05	1.64E-04	4.03E-05	4.09E-05	8.38E-05	3.39E-06	1.39E-09	1.23E-04	1.19E-04
9	F32	60	Combination Short Haul Truck	48	0.00E+00	2.81E-05	1.96E-06	1.83E+01	9.95E-08	2.46E-02	2.08E-05	3.04E-02	2.61E-03	5.18E-04	1.79E-03	5.83E-04	5.84E-04	2.75E-03	6.12E-05	0.00E+00	1.20E-03	5.73E-03
9	F32	60	Combination Long Haul Truck	44	0.00E+00	2.52E-05	1.64E-06	1.71E+01	1.14E-07	2.65E-02	1.94E-05	3.01E-02	2.63E-03	4.46E-04	1.84E-03	5.01E-04	5.07E-04	2.62E-03	5.74E-05	0.00E+00	1.33E-03	5.67E-03
9	F33	60	Passenger Car	103	0.00E+00	1.54E-06	1.67E-07	5.16E+00	1.07E-05	4.01E-02	3.43E-06	2.10E-04	1.04E-03	1.60E-04	3.34E-04	2.15E-04	2.21E-04	2.15E-05	2.59E-05	7.12E-09	1.13E-04	3.28E-05
9	F33	60	Passenger Truck	172	0.00E+00	3.40E-06	3.59E-07	1.18E+01	2.13E-05	7.15E-02	7.01E-06	6.83E-04	1.91E-03	2.97E-04	6.67E-04	4.34E-04	4.45E-04	9.11E-05	5.85E-05	1.62E-08	2.22E-04	1.13E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.46E-07	1.23E-08	1.57E-01	2.03E-07	3.03E-04	2.62E-07	1.17E-04	1.99E-05	3.61E-06	2.99E-05	7.37E-06	7.49E-06	1.57E-05	6.32E-07	2.60E-10	2.24E-05	2.19E-05
9	F33	60	Combination Short Haul Truck	2	0.00E+00	1.15E-06	7.98E-08	7.45E-01	4.06E-09	1.00E-03	8.50E-07	1.24E-03	1.07E-04	2.11E-05	7.29E-05	2.38E-05	2.38E-05	1.12E-04	2.49E-06	0.00E+00	4.91E-05	2.34E-04
9	F33	60	Combination Long Haul

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	G03	100	Combination Long Haul Truck	144	0.00E+00	4.71E-05	3.23E-06	5.16E+01	1.78E-07	5.27E-02	3.53E-05	5.47E-02	1.70E-03	4.72E-04	3.08E-03	9.66E-04	9.64E-04	7.87E-03	1.73E-04	0.00E+00	2.12E-03	1.03E-02
16	G04	100	Passenger Car	142	0.00E+00	1.56E-06	1.68E-07	6.39E+00	1.08E-05	4.28E-02	3.46E-06	3.03E-04	4.61E-04	9.29E-05	3.37E-04	2.17E-04	2.23E-04	1.78E-05	3.23E-05	8.89E-09	1.14E-04	4.74E-05
16	G04	100	Passenger Truck	238	0.00E+00	3.36E-06	3.58E-07	1.51E+01	2.20E-05	8.62E-02	7.15E-06	8.63E-04	8.14E-04	1.73E-04	6.88E-04	4.45E-04	4.57E-04	9.59E-05	7.55E-05	2.07E-08	2.31E-04	1.40E-04
16	G04	100	Single Unit Short Haul Truck	184	0.00E+00	2.47E-05	1.22E-06	3.36E+01	2.16E-05	7.79E-02	2.68E-05	1.34E-02	1.27E-03	3.70E-04	3.06E-03	7.59E-04	7.71E-04	3.39E-03	1.35E-04	5.52E-08	2.29E-03	2.50E-03
16	G04	100	Single Unit Long Haul Truck	8	0.00E+00	1.07E-06	5.21E-08	1.42E+00	8.94E-07	3.18E-03	1.16E-06	5.63E-04	5.74E-05	1.60E-05	1.33E-04	3.20E-05	3.26E-05	1.42E-04	5.70E-06	2.26E-09	1.01E-04	1.05E-04
16	G04	100	Combination Short Haul Truck	134	0.00E+00	4.61E-05	3.36E-06	4.85E+01	1.31E-07	4.49E-02	3.32E-05	4.90E-02	1.56E-03	5.56E-04	2.58E-03	9.86E-04	9.69E-04	7.31E-03	1.62E-04	0.00E+00	1.61E-03	9.24E-03
16	G04	100	Combination Long Haul Truck	122	0.00E+00	4.01E-05	2.75E-06	4.39E+01	1.52E-07	4.49E-02	3.00E-05	4.66E-02	1.45E-03	4.02E-04	2.63E-03	8.23E-04	8.21E-04	6.70E-03	1.47E-04	0.00E+00	1.81E-03	8.77E-03
16	G05	100	Passenger Car	159	0.00E+00	1.75E-06	1.89E-07	7.17E+00	1.22E-05	4.80E-02	3.88E-06	3.40E-04	5.17E-04	1.04E-04	3.78E-04	2.44E-04	2.50E-04	2.00E-05	3.62E-05	9.98E-09	1.28E-04	5.32E-05
16	G05	100	Passenger Truck	267	0.00E+00	3.77E-06	4.01E-07	1.69E+01	2.47E-05	9.67E-02	8.02E-06	9.68E-04	9.14E-04	1.94E-04	7.71E-04	5.00E-04	5.12E-04	1.08E-04	8.47E-05	2.32E-08	2.59E-04	1.57E-04
16	G05	100	Single Unit Short Haul Truck	4	0.00E+00	4.83E-07	2.39E-08	6.57E-01	4.22E-07	1.52E-03	5.23E-07	2.61E-04	2.48E-05	7.21E-06	5.97E-05	1.48E-05	1.50E-05	6.62E-05	2.64E-06	1.08E-09	4.47E-05	4.87E-05
16	G05	100	Combination Short Haul Truck	2	0.00E+00	6.27E-07	4.57E-08	6.60E-01	1.78E-09	6.11E-04	4.52E-07	6.67E-04	2.12E-05	7.56E-06	3.51E-05	1.34E-05	1.32E-05	9.95E-05	2.21E-06	0.00E+00	2.19E-05	1.26E-04
16	G05	100	Combination Long Haul Truck	2	0.00E+00	5.45E-07	3.74E-08	5.98E-01	2.07E-09	6.11E-04	4.09E-07	6.34E-04	1.97E-05	5.47E-06	3.58E-05	1.12E-05	1.12E-05	9.12E-05	2.00E-06	0.00E+00	2.46E-05	1.19E-04
56	G06	100	Passenger Car	12	0.00E+00	1.33E-07	1.44E-08	5.45E-01	9.24E-07	3.65E-03	2.95E-07	2.59E-05	3.93E-05	7.92E-06	2.87E-05	1.85E-05	1.90E-05	1.52E-06	2.76E-06	7.59E-10	9.73E-06	4.05E-06
56	G06	100	Passenger Truck	20	0.00E+00	2.87E-07	3.05E-08	1.29E+00	1.88E-06	7.35E-03	6.10E-07	7.36E-05	6.95E-05	1.48E-05	5.87E-05	3.80E-05	3.90E-05	8.18E-06	6.45E-06	1.77E-09	1.97E-05	1.19E-05
53	G07	70	Passenger Car	170	0.00E+00	2.16E-06	2.34E-07	8.27E+00	1.50E-05	5.59E-02	4.80E-06	3.47E-04	1.30E-03	2.10E-04	4.67E-04	3.01E-04	3.09E-04	3.05E-05	4.15E-05	1.13E-08	1.58E-04	5.43E-05
53	G07	70	Passenger Truck	285	0.00E+00	4.70E-06	4.98E-07	1.91E+01	2.98E-05	1.03E-01	9.78E-06	1.06E-03	2.33E-03	3.81E-04	9.33E-04	6.07E-04	6.22E-04	1.37E-04	9.50E-05	2.49E-08	3.11E-04	1.74E-04
53	G07	70	Single Unit Short Haul Truck	88	0.00E+00	2.06E-05	1.03E-06	1.61E+01	1.68E-05	3.22E-02	2.19E-05	1.01E-02	1.45E-03	2.90E-04	2.50E-03	6.15E-04	6.26E-04	1.62E-03	6.50E-05	2.62E-08	1.87E-03	1.90E-03
53	G07	70	Single Unit Long Haul Truck	4	0.00E+00	8.96E-07	4.46E-08	6.84E-01	7.26E-07	1.35E-03	9.55E-07	4.35E-04	6.61E-05	1.29E-05	1.09E-04	2.66E-05	2.71E-05	6.83E-05	2.76E-06	1.11E-09	8.20E-05	8.15E-05
53	G07	70	Combination Short Haul Truck	54	0.00E+00	2.78E-05	1.98E-06	2.02E+01	9.04E-08	2.40E-02	2.04E-05	2.92E-02	2.12E-03	4.62E-04	1.70E-03	5.85E-04	5.84E-04	3.04E-03	6.75E-05	0.00E+00	1.11E-03	5.49E-03
53	G07	70	Combination Long Haul Truck	49	0.00E+00	2.52E-05	1.68E-06	1.88E+01	1.04E-07	2.54E-02	1.91E-05	2.87E-02	2.10E-03	3.84E-04	1.75E-03	5.08E-04	5.14E-04	2.88E-03	6.31E-05	0.00E+00	1.24E-03	5.41E-03
54	G08	80	Passenger Car	112	0.00E+00	1.33E-06	1.44E-07	5.25E+00	9.26E-06	3.49E-02	2.96E-06	2.31E-04	6.47E-04	1.10E-04	2.88E-04	1.86E-04	1.91E-04	1.75E-05	2.64E-05	7.18E-09	9.75E-05	3.61E-05
54	G08	80	Passenger Truck	187	0.00E+00	2.89E-06	3.06E-07	1.22E+01	1.85E-05	6.62E-02	6.05E-06	6.86E-04	1.16E-03	2.03E-04	5.79E-04	3.76E-04	3.85E-04	8.42E-05	6.09E-05	1.62E-08	1.94E-04	1.12E-04
54	G08	80	Single Unit Short Haul Truck	3	0.00E+00	5.14E-07	2.55E-08	5.04E-01	4.14E-07	1.01E-03	5.47E-07	2.63E-04	3.23E-05	7.31E-06	6.26E-05	1.52E-05	1.55E-05	5.06E-05	2.03E-06	8.06E-10	4.71E-05	4.92E-05
54	G08	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.25E-08	9.53E-01	3.64E-09	1.02E-03	8.43E-07	1.18E-03	6.98E-05	1.72E-05	6.87E-05	2.43E-05	2.42E-05	1.44E-04	3.19E-06	0.00E+00	4.45E-05	2.22E-04
54	G08	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.94E-08	8.81E-01	4.20E-09	1.06E-03	7.82E-07	1.15E-03	6.83E-05	1.37E-05	7.09E-05	2.09E-05	2.11E-05	1.35E-04	2.95E-06	0.00E+00	4.99E-05	2.16E-04
50	G09	40	Passenger Car	42	0.00E+00	7.01E-07	7.59E-08	2.42E+00	4.88E-06	1.81E-02	1.56E-06	7.53E-05	7.21E-04	1.03E-04	1.52E-04	9.78E-05	1.00E-04	1.31E-05	1.20E-05	2.92E-09	5.14E-05	1.18E-05
50	G09	40	Passenger Truck	70	0.00E+00	1.60E-06	1.68E-07	5.40E+00	9.62E-06	3.11E-02	3.21E-06	2.85E-04	1.28E-03	1.82E-04	3.03E-04	1.98E-04	2.03E-04	4.62E-05	2.66E-05	5.68E-09	9.98E-05	4.82E-05
50	G09	40	Single Unit Short Haul Truck	4	0.00E+00	1.70E-06	8.91E-08	8.16E-01	1.48E-06	1.40E-03	1.81E-06	8.29E-04	1.55E-04	2.58E-05	2.01E-04	5.30E-05	5.39E-05	8.24E-05	3.29E-06	1.39E-09	1.47E-04	1.55E-04
50	G09	40	Combination Short Haul Truck	10	0.00E+00	8.61E-06	5.98E-07	4.37E+00	3.10E-08	7.51E-03	6.40E-06	9.58E-03	1.00E-03	1.81E-04	5.58E-04	1.78E-04	1.80E-04	6.59E-04	1.46E-05	0.00E+00	3.78E-04	1.81E-03
50	G09	40	Combination Long Haul Truck	9	0.00E+00	7.84E-06	5.12E-07	4.15E+00	3.52E-08	8.34E-03	6.04E-06	9.60E-03	1.01E-03	1.60E-04	5.75E-04	1.56E-04	1.59E-04	6.35E-04	1.39E-05	0.00E+00	4.16E-04	1.81E-03
53	G10	70	Passenger Car	509	0.00E+00	6.45E-06	6.98E-07	2.47E+01	4.49E-05	1.67E-01	1.43E-05	1.04E-03	3.88E-03	6.26E-04	1.40E-03	9.00E-04	9.24E-04	9.11E-05	1.24E-04	3.38E-08	4.73E-04	1.62E-04
53	G10	70	Passenger Truck	852	0.00E+00	1.40E-05	1.49E-06	5.69E+01	8.89E-05	3.07E-01	2.92E-05	3.17E-03	6.97E-03	1.14E-03	2.79E-03	1.81E-03	1.86E-03	4.10E-04	2.84E-04	7.42E-08	9.30E-04	5.20E-04
53	G10	70	Single Unit Short Haul Truck	128	0.00E+00	3.01E-05	1.51E-06	2.36E+01	2.46E-05	4.72E-02	3.21E-05	1.48E-02	2.12E-03	4.24E-04	3.65E-03	9.01E-04	9.16E-04	2.37E-03	9.51E-05	3.84E-08	2.74E-03	2.78E-03
53	G10	70	Single Unit Long Haul Truck	6	0.00E+00	1.31E-06	6.53E-08	1.00E+00	1.06E-06	1.98E-03	1.40E-06	6.37E-04	9.68E-05	1.89E-05	1.60E-04	3.90E-05	3.96E-05	1.00E-04	4.04E-06	1.62E-09	1.20E-04	1.19E-04
53	G10	70	Combination Short Haul Truck	83	0.00E+00	4.30E-05	3.06E-06	3.12E+01	1.40E-07	3.70E-02	3.16E-05	4.51E-02	3.27E-03	7.14E-04	2.62E-03	9.05E-04	9.03E-04	4.70E-03	1.04E-04	0.00E+00	1.72E-03	8.49E-03
53	G10	70	Combination Long Haul Truck	75	0.00E+00	3.89E-05	2.60E-06	2.91E+01	1.61E-07	3.92E-02	2.95E-05	4.44E-02	3.25E-03	5.93E-04	2.71E-03	7.86E-04	7.94E-04	4.45E-03	9.75E-05	0.00E+00	1.91E-03	8.37E-03
16	H01	100	Passenger Car	3322	0.00E+00	3.64E-05	3.94E-06	1.49E+02	2.53E-04	1.00E+00	8.10E-05	7.10E-03	1.08E-02	2.17E-03	7.88E-03	5.08E-03	5.21E-03	4.16E-04	7.55E-04	2.08E-07	2.67E-03	1.11E-03
16	H01	100	Passenger Truck	5564	0.00E+00	7.86E-05	8.37E-06	3.53E+02	5.15E-04	2.02E+00	1.67E-04	2.02E-02	1.91E-02	4.05E-03	1.61E-02	1.04E-02	1.07E-02	2.24E-03	1.77E-03	4.84E-07	5.41E-03	3.27E-03
16	H01	100	Single Unit Short Haul Truck	829	0.00E+00	1.11E-04	5.51E-06	1.51E+02	9.72E-05	3.50E-01	1.21E-04	6.01E-02	5.71E-03	1.66E-03	1.38E-02	3.41E-03	3.47E-03	1.53E-02	6.08E-04	2.49E-07	1.03E-02	1.12E-02
16	H01	100	Single Unit Long Haul Truck	37	0.00E+00	4.83E-06	2.34E-07	6.37E+00	4.02E-06	1.43E-02	5.21E-06	2.53E-03	2.58E-04	7.18E-05	6.00E-04	1.44E-04	1.46E-04	6.39E-04	2.57E-05	1.02E-08	4.54E-04	4.73E-04
16	H01	100	Combination Short Haul Truck	638	0.00E+00	2.19E-04	1.60E-05	2.31E+02	6.23E-07	2.14E-01	1.58E-04	2.33E-01	7.42E-03	2.64E-03	1.23E-02	4.69E-03	4.61E-03	3.48E-02	7.72E-04	0.00E+00	7.67E-03	4.39E-02
16	H01	100	Combination Long Haul Truck	581	0.00E+00	1.91E-04	1.31E-05	2.09E+02	7.22E-07	2.13E-01	1.43E-04	2.21E-01	6.87E-03	1.91E-03	1.25E-02	3.91E-03	3.91E-03	3.19E-02	6.99E-04	0.00E+00	8.59E-03	4.17E-02
16	H02	100	Passenger Car	2796	0.00E+00	3.06E-05	3.32E-06	1.26E+02	2.13E-04	8.43E-01	6.81E-05	5.97E-03	9.07E-03	1.83E-03	6.63E-03	4.28E-03	4.39E-03	3.50E-04	6.36E-04	1.75E-07	2.24E-03	9.33E-04
16	H02	100	Passenger Truck	4682	0.00E+00	6.61E-05	7.04E-06	2.97E+02	4.33E-04	1.70E+00	1.41E-04	1.70E-02	1.60E-02	3.40E-03	1.35E-02	8.77E-03	8.99E-03	1.89E-03	1.49E-03	4.08E-07	4.55E-03	2.75E-03
16	H02	100	Single Unit Short Haul Truck	542	0.00E+00	7.28E-05	3.61E-06	9.90E+01	6.36E-05	2.29E-01	7.88E-05	3.93E-02	3.74E-03	1.09E-03	9.01E-03	2.23E-03	2.27E-03	9.98E-03	3.98E-04	1.63E-07	6.74E-03	7.35E-03
16	H02	100	Single Unit Long Haul Truck	24	0.00E+00	3.16E-06	1.53E-07	4.17E+00	2.63E-06	9.36E-03	3.41E-06	1.66E-03	1.69E-04	4.70E-05	3.93E-04	9.43E-05	9.58E-05	4.18E-04	1.68E-05	6.65E-09	2.97E-04	3.09E-04
16	H02	100	Combination Short Haul Truck	553	0.00E+00	1.90E-04	1.39E-05	2.00E+02	5.41E-07	1.85E-01	1.37E-04	2.02E-01	6.44E-03	2.29E-03	1.06E-02	4.07E-03	4.00E-03	3.02E-02	6.69E-04	0.00E+00	6.65E-03	3.81E-02
16	H02	100	Combination Long Haul Truck	504	0.00E+00	1.65E-04	1.13E-05	1.81E+02	6.26E-07	1.85E-01	1.24E-04	1.92E-01	5.96E-03	1.66E-03	1.08E-02	3.40E-03	3.39E-03	2.77E-02	6.07E-04	0.00E+00	7.45E-03	3.62E-02
16	H03	100	Passenger Car	2980	0.00E+00	3.27E-05	3.53E-06	1.34E+02	2.27E-04	8.99E-01	7.26E-05	6.37E-03	9.66E-03	1.95E-03	7.07E-03	4.56E-03	4.68E-03	3.74E-04	6.78E-04	1.87E-07	2.39E-03	9.95E-04
16	H03	100	Passenger Truck	4990	0.00E+00	7.05E-05	7.51E-06	3.16E+02	4.62E-04	1.81E+00	1.50E-04	1.81E-02	1.71E-02	3.63E-03	1.44E-02	9.35E-03	9.58E-03	2.01E-03	1.59E-03	4.34E-07	4.85E-03	2.93E-03
16	H03	100	Single Unit Short Haul Truck	544	0.00E+00	7.31E-05	3.62E-06	9.93E+01	6.38E-05	2.30E-01	7.91E-05	3.95E-02	3.75E-03	1.09E-03	9.04E-03	2.24E-03	2.28E-03	1.00E-02	3.99E-04	1.63E-07	6.76E-03	7.37E-03
16	H03	100	Single Unit Long Haul Truck	24	0.00E+00	3.17E-06	1.54E-07	4.18E+00	2.64E-06	9.39E-03	3.42E-06	1.66E-03	1.70E-04	4.72E-05	3.94E-04	9.46E-05	9.62E-05	4.19E-04	1.68E-05	6.68E-09	2.98E-04	3.10E-04
16	H03	100	Combination Short Haul Truck	547	0.00E+00	1.88E-04	1.37E-05	1.98E+02	5.34E-07	1.83E-01	1.36E-04	2.00E-01	6.37E-03	2.27E-03	1.05E-02	4.02E-03	3.95E-03	2.98E-02	6.62E-04	0.00E+00	6.58E-03	3.77E-02
16	H03	100	Combination Long Haul Truck	499	0.00E+00	1.63E-04	1.12E-05	1.79E+02	6.19E-07	1.83E-01	1.22E-04	1.90E-01	5.89E-03	1.64E-03	1.07E-02	3.36E-03	3.35E-03	2.73E-02	6.00E-04	0.00E+00	7.36E-03	3.58E-02
16	H04	100	Passenger Car	1804	0.00E+00	1.98E-05	2.14E-06	8.11E+01	1.38E-04	5.44E-01	4.40E-05	3.85E-03	5.85E-03	1.18E-03	4.28E-03	2.76E-03	2.83E-03	2.26E-04	4.10E-04	1.13E-07	1.45E-03	6.02E-04
16	H04	100	Passenger Truck	3020	0.00E+00	4.27E-05	4.54E-06	1.91E+02	2.79E-04	1.09E+00	9.08E-05	1.10E-02	1.03E-02	2.20E-03	8.73E-03	5.66E-03	5.80E-03	1.22E-03	9.59E-04	2.63E-07	2.93E-03	1.77E-03
16	H04	100	Single Unit Short Haul Truck	528	0.00E+00	7.10E-05	3.51E-06	9.65E+01	6.19E-05	2.23E-01	7.68E-05	3.83E-02	3.64E-03	1.06E-03	8.78E-03	2.18E-03	2.21E-03	9.73E-03	3.88E-04	1.58E-07	6.57E-03	7.16E-03
16	H04	100	Single Unit Long Haul Truck	23	0.00E+00	3.08E-06	1.50E-07	4.06E+00	2.57E-06	9.12E-03	3.32E-06	1.61E-03	1.65E-04	4.58E-05	3.83E-04	9.19E-05	9.34E-05	4.07E-04	1.64E-05	6.49E-09	2.89E-04	3.02E-04
16	H04	100	Combination Short Haul Truck	548	0.00E+00	1.88E-04	1.37E-05	1.98E+02	5.36E-07	1.84E-01	1.36E-04	2.01E-01	6.38E-03	2.27E-03	1.06E-02	4.03E-03	3.96E-03	2.99E-02	6.64E-04	0.00E+00	6.60E-03	3.78E-02
16	H04	100	Combination Long Haul Truck	500	0.00E+00	1.64E-04	1.12E-05	1.80E+02	6.21E-07	1.84E-01	1.23E-04	1.90E-01	5.91E-03	1.64E-03	1.07E-02	3.37E-03	3.36E-03	2.74E-02	6.01E-04	0.00E+00	7.39E-03	3.59E-02
56	H05	100	Passenger Car	878	0.00E+00	9.62E-06	1.04E-06	3.95E+01	6.70E-05	2.65E-01	2.14E-05	1.88E-03	2.85E-03	5.74E-04	2.08E-03	1.34E-03	1.38E-03	1.10E-04	2.00E-04	5.50E-08	7.05E-04	2.93E-04
56	H05	100	Passenger Truck	1470	0.00E+00	2.08E-05	2.21E-06	9.32E+01	1.36E-04	5.33E-01	4.42E-05	5.33E-03	5.03E-03	1.07E-03	4.25E-03	2.75E-03	2.82E-03	5.93E-04	4.67E-04	1.28E-07	1.43E-03	8.63E-04
56	H05	100	Single Unit Short Haul Truck	249	0.00E+00	3.34E-05	1.65E-06	4.54E+01	2.92E-05	1.05E-01	3.62E-05	1.80E-02	1.71E-03	4.99E-04	4.13E-03	1.02E-03	1.04E-03	4.58E-03	1.82E-04	7.46E-08	3.09E-03	3.37E-03
56	H05	100	Single Unit Long Haul Truck	11	0.00E+00	1.45E-06	7.04E-08	1.91E+00	1.21E-06	4.29E-03	1.56E-06	7.60E-04	7.76E-05	2.16E-05	1.80E-04	4.33E-05	4.40E-05	1.92E-04	7.70E-06	3.05E-09	1.36E-04	1.42E-04
56	H05	100	Combination Short Haul Truck	216	0.00E+00	7.43E-05	5.42E-06	7.82E+01	2.11E-07	7.25E-02	5.36E-05	7.91E-02	2.52E-03	8.97E-04	4.16E-03	1.59E-03	1.56E-03	1.18E-02	2.62E-04	0.00E+00	2.60E-03	1.49E-02
56	H05	100	Combination Long Haul Truck	197	0.00E+00	6.47E-05	4.43E-06	7.08E+01	2.45E-07	7.24E-02	4.84E-05	7.51E-02	2.33E-03	6.48E-04	4.24E-03	1.33E-03	1.33E-03	1.08E-02	2.37E-04	0.00E+00	2.91E-03	1.42E-02
56	H06	100	Passenger Car	926	0.00E+00	1.02E-05	1.10E-06	4.17E+01	7.06E-05	2.79E-01	2.26E-05	1.98E-03	3.00E-03	6.06E-04	2.20E-03	1.42E-03	1.45E-03	1.16E-04	2.11E-04	5.80E-08	7.44E-04	3.09E-04
56	H06	100	Passenger Truck	1551	0.00E+00	2.19E-05	2.33E-06	9.83E+01	1.43E-04	5.62E-01	4.66E-05	5.63E-03	5.31E-03	1.13E-03	4.48E-03	2.90E-03	2.98E-03	6.25E-04	4.93E-04	1.35E-07	1.51E-03	9.10E-04
56	H06	100	Single Unit Short Haul Truck	280	0.00E+00	3.76E-05	1.86E-06	5.11E+01	3.28E-05	1.18E-01	4.07E-05	2.03E-02	1.93E-03	5.61E-04	4.65E-03	1.15E-03	1.17E-03	5.15E-03	2.05E-04	8.39E-08	3.48E-03	3.79E-03
56	H06	100	Single Unit Long Haul Truck	12	0.00E+00	1.63E-06	7.91E-08	2.15E+00	1.36E-06	4.83E-03	1.76E-06	8.55E-04	8.72E-05	2.42E-05	2.03E-04	4.86E-05	4.94E-05	2.16E-04	8.66E-06	3.43E-09	1.53E-04	1.60E-04
56	H06	100	Combination Short Haul Truck	332	0.00E+00	1.14E-04	8.33E-06	1.20E+02	3.25E-07	1.11E-01	8.23E-05	1.21E-01	3.87E-03	1.38E-03	6.39E-03	2.44E-03	2.40E-03	1.81E-02	4.02E-04	0.00E+00	3.99E-03	2.29E-02
56	H06	100	Combination Long Haul Truck	303	0.00E+00	9.93E-05	6.81E-06	1.09E+02	3.76E-07	1.11E-01	7.44E-05	1.15E-01	3.58E-03	9.96E-04	6.51E-03	2.04E-03	2.03E-03	1.66E-02	3.64E-04	0.00E+00	4.47E-03	2.17E-02
16	H07	100	Passenger Car	1957	0.00E+00	2.15E-05	2.32E-06	8.80E+01	1.49E-04	5.90E-01	4.77E-05	4.18E-03	6.35E-03	1.28E-03	4.64E-03	2.99E-03	3.07E-03	2.45E-04	4.45E-04	1.23E-07	1.57E-03	6.53E-04
16	H07	100	Passenger Truck	3277	0.00E+00	4.63E-05	4.93E-06	2.08E+02	3.03E-04	1.19E+00	9.85E-05	1.19E-02	1.12E-02	2.38E-03	9.47E-03	6.14E-03	6.29E-03	1.32E-03	1.04E-03	2.85E-07	3.18E-03	1.92E-03
16	H07	100	Single Unit Short Haul Truck	531	0.00E+00	7.13E-05	3.53E-06	9.69E+01	6.22E-05	2.24E-01	7.72E-05	3.85E-02	3.66E-03	1.06E-03	8.82E-03	2.19E-03	2.22E-03	9.77E-03	3.89E-04	1.59E-07	6.60E-03	7.19E-03
16	H07	100	Single Unit Long Haul Truck	23	0.00E+00	3.09E-06	1.50E-07	4.08E+00	2.58E-06	9.16E-03	3.33E-06	1.62E-03	1.66E-04	4.60E-05	3.84E-04	9.23E-05	9.38E-05	4.09E-04	1.64E-05	6.52E-09	2.91E-04	3.03E-04
16	H07	100	Combination Short Haul Truck	547	0.00E+00	1.88E-04	1.37E-05	1.98E+02	5.35E-07	1.83E-01	1.36E-04	2.00E-01	6.37E-03	2.27E-03	1.05E-02	4.02E-03	3.95E-03	2.98E-02	6.62E-04	0.00E+00	6.58E-03	3.77E-02
16	H07	100	Combination Long Haul Truck	499	0.00E+00	1.64E-04	1.12E-05	1.79E+02	6.19E-07	1.83E-01	1.23E-04	1.90E-01	5.90E-03	1.64E-03	1.07E-02	3.36E-03	3.35E-03	2.74E-02	6.00E-04	0.00E+00	7.37E-03	3.58E-02
52	H08	60	Passenger Car	286	0.00E+00	3.94E-06	4.27E-07	1.44E+01	2.74E-05	1.02E-01	8.77E-06	5.62E-04	2.82E-03	4.34E-04	8.54E-04	5.50E-04	5.65E-04	5.98E-05	7.19E-05	1.92E-08	2.89E-04	8.78E-05
52	H08	60	Passenger Truck	479	0.00E+00	8.66E-06	9.14E-07	3.28E+01	5.40E-05	1.82E-01	1.78E-05	1.81E-03	5.03E-03	7.78E-04	1.69E-03	1.10E-03	1.13E-03	2.48E-04	1.63E-04	4.08E-08	5.63E-04	2.99E-04
52	H08	60	Single Unit Short Haul Truck	30	0.00E+00	8.77E-06	4.39E-07	5.59E+00	7.23E-06	1.08E-02	9.37E-06	4.18E-03	7.11E-04	1.29E-04	1.07E-03	2.63E-04	2.68E-04	5.60E-04	2.26E-05	9.31E-09	7.99E-04	7.83E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	3.83E-07	1.91E-08	2.39E-01	3.14E-07	4.59E-04	4.09E-07	1.81E-04	3.19E-05	5.70E-06	4.67E-05	1.15E-05	1.16E-05	2.38E-05	9.65E-07	3.96E-10	3.51E-05	3.39E-05
52	H08	60	Combination Short Haul

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	H12	100	Combination Long Haul Truck	77	0.00E+00	2.52E-05	1.73E-06	2.76E+01	9.55E-08	2.83E-02	1.89E-05	2.93E-02	9.10E-04	2.53E-04	1.65E-03	5.18E-04	5.17E-04	4.22E-03	9.26E-05	0.00E+00	1.14E-03	5.52E-03
54	H13	80	Passenger Car	807	0.00E+00	9.60E-06	1.04E-06	3.79E+01	6.68E-05	2.52E-01	2.13E-05	1.67E-03	4.67E-03	7.96E-04	2.08E-03	1.34E-03	1.37E-03	1.26E-04	1.91E-04	5.18E-08	7.03E-04	2.60E-04
54	H13	80	Passenger Truck	1352	0.00E+00	2.08E-05	2.21E-06	8.80E+01	1.33E-04	4.77E-01	4.36E-05	4.94E-03	8.39E-03	1.46E-03	4.18E-03	2.71E-03	2.78E-03	6.07E-04	4.39E-04	1.17E-07	1.40E-03	8.07E-04
54	H13	80	Single Unit Short Haul Truck	289	0.00E+00	5.41E-05	2.69E-06	5.31E+01	4.35E-05	1.06E-01	5.76E-05	2.77E-02	3.40E-03	7.69E-04	6.58E-03	1.60E-03	1.63E-03	5.32E-03	2.14E-04	8.48E-08	4.95E-03	5.18E-03
54	H13	80	Single Unit Long Haul Truck	13	0.00E+00	2.35E-06	1.16E-07	2.25E+00	1.86E-06	4.43E-03	2.50E-06	1.18E-03	1.55E-04	3.39E-05	2.87E-04	6.89E-05	7.01E-05	2.24E-04	9.06E-06	3.54E-09	2.17E-04	2.21E-04
54	H13	80	Combination Short Haul Truck	110	0.00E+00	4.84E-05	3.46E-06	4.00E+01	1.53E-07	4.29E-02	3.54E-05	4.95E-02	2.93E-03	7.22E-04	2.88E-03	1.02E-03	1.01E-03	6.04E-03	1.34E-04	0.00E+00	1.87E-03	9.34E-03
54	H13	80	Combination Long Haul Truck	100	0.00E+00	4.34E-05	2.91E-06	3.70E+01	1.77E-07	4.44E-02	3.29E-05	4.81E-02	2.87E-03	5.77E-04	2.98E-03	8.79E-04	8.85E-04	5.65E-03	1.24E-04	0.00E+00	2.09E-03	9.06E-03
53	H14	70	Passenger Car	32	0.00E+00	4.06E-07	4.39E-08	1.55E+00	2.82E-06	1.05E-02	9.02E-07	6.52E-05	2.44E-04	3.94E-05	8.78E-05	5.66E-05	5.81E-05	5.73E-06	7.80E-06	2.13E-09	2.97E-05	1.02E-05
53	H14	70	Passenger Truck	54	0.00E+00	8.83E-07	9.35E-08	3.58E+00	5.59E-06	1.93E-02	1.84E-06	1.99E-04	4.38E-04	7.16E-05	1.75E-04	1.14E-04	1.17E-04	2.58E-05	1.78E-05	4.67E-09	5.85E-05	3.27E-05
53	H14	70	Single Unit Short Haul Truck	2	0.00E+00	5.37E-07	2.69E-08	4.20E-01	4.39E-07	8.41E-04	5.72E-07	2.64E-04	3.78E-05	7.56E-06	6.51E-05	1.61E-05	1.63E-05	4.21E-05	1.69E-06	6.84E-10	4.88E-05	4.94E-05
53	H14	70	Combination Short Haul Truck	8	0.00E+00	4.17E-06	2.97E-07	3.03E+00	1.36E-08	3.59E-03	3.06E-06	4.37E-03	3.18E-04	6.93E-05	2.54E-04	8.78E-05	8.76E-05	4.56E-04	1.01E-05	0.00E+00	1.67E-04	8.24E-04
53	H14	70	Combination Long Haul Truck	7	0.00E+00	3.77E-06	2.52E-07	2.82E+00	1.56E-08	3.81E-03	2.87E-06	4.31E-03	3.15E-04	5.76E-05	2.63E-04	7.63E-05	7.71E-05	4.32E-04	9.46E-06	0.00E+00	1.86E-04	8.12E-04
54	H15	80	Passenger Car	1032	0.00E+00	1.23E-05	1.33E-06	4.84E+01	8.54E-05	3.22E-01	2.73E-05	2.13E-03	5.97E-03	1.02E-03	2.66E-03	1.71E-03	1.76E-03	1.62E-04	2.44E-04	6.62E-08	8.99E-04	3.33E-04
54	H15	80	Passenger Truck	1728	0.00E+00	2.66E-05	2.82E-06	1.13E+02	1.71E-04	6.10E-01	5.58E-05	6.32E-03	1.07E-02	1.87E-03	5.34E-03	3.47E-03	3.55E-03	7.76E-04	5.62E-04	1.49E-07	1.79E-03	1.03E-03
54	H15	80	Single Unit Short Haul Truck	84	0.00E+00	1.57E-05	7.79E-07	1.54E+01	1.26E-05	3.08E-02	1.67E-05	8.02E-03	9.85E-04	2.23E-04	1.91E-03	4.64E-04	4.72E-04	1.54E-03	6.20E-05	2.46E-08	1.44E-03	1.50E-03
54	H15	80	Single Unit Long Haul Truck	4	0.00E+00	6.82E-07	3.36E-08	6.51E-01	5.39E-07	1.28E-03	7.25E-07	3.43E-04	4.50E-05	9.84E-06	8.33E-05	2.00E-05	2.03E-05	6.50E-05	2.63E-06	1.03E-09	6.29E-05	6.42E-05
54	H15	80	Combination Short Haul Truck	27	0.00E+00	1.20E-05	8.56E-07	9.89E+00	3.78E-08	1.06E-02	8.74E-06	1.22E-02	7.24E-04	1.78E-04	7.13E-04	2.53E-04	2.51E-04	1.49E-03	3.31E-05	0.00E+00	4.62E-04	2.31E-03
54	H15	80	Combination Long Haul Truck	25	0.00E+00	1.07E-05	7.20E-07	9.15E+00	4.36E-08	1.10E-02	8.12E-06	1.19E-02	7.08E-04	1.43E-04	7.36E-04	2.17E-04	2.19E-04	1.40E-03	3.06E-05	0.00E+00	5.17E-04	2.24E-03
53	H16	70	Passenger Car	877	0.00E+00	1.11E-05	1.20E-06	4.26E+01	7.74E-05	2.88E-01	2.47E-05	1.79E-03	6.69E-03	1.08E-03	2.41E-03	1.55E-03	1.59E-03	1.57E-04	2.14E-04	5.83E-08	8.15E-04	2.79E-04
53	H16	70	Passenger Truck	1468	0.00E+00	2.42E-05	2.56E-06	9.82E+01	1.53E-04	5.29E-01	5.03E-05	5.47E-03	1.20E-02	1.96E-03	4.80E-03	3.12E-03	3.20E-03	7.08E-04	4.89E-04	1.28E-07	1.60E-03	8.97E-04
53	H16	70	Single Unit Short Haul Truck	19	0.00E+00	4.47E-06	2.24E-07	3.50E+00	3.66E-06	7.00E-03	4.76E-06	2.20E-03	3.15E-04	6.30E-05	5.42E-04	1.34E-04	1.36E-04	3.51E-04	1.41E-05	5.70E-09	4.06E-04	4.12E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.69E-09	1.49E-01	1.58E-07	2.94E-04	2.08E-07	9.46E-05	1.44E-05	2.80E-06	2.37E-05	5.79E-06	5.89E-06	1.48E-05	6.00E-07	2.40E-10	1.78E-05	1.77E-05
53	H16	70	Combination Short Haul Truck	18	0.00E+00	9.62E-06	6.83E-07	6.97E+00	3.12E-08	8.28E-03	7.05E-06	1.01E-02	7.32E-04	1.60E-04	5.86E-04	2.02E-04	2.02E-04	1.05E-03	2.33E-05	0.00E+00	3.84E-04	1.90E-03
53	H16	70	Combination Long Haul Truck	17	0.00E+00	8.69E-06	5.81E-07	6.51E+00	3.60E-08	8.77E-03	6.60E-06	9.93E-03	7.27E-04	1.33E-04	6.06E-04	1.76E-04	1.78E-04	9.94E-04	2.18E-05	0.00E+00	4.28E-04	1.87E-03

Appendix F.1.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	2.84E-04	2.09E-05	4.51E+02	3.45E-04	1.67E+00	2.88E-04	2.43E-01	1.56E-02	4.62E-03	2.65E-02	1.16E-02	1.18E-02	3.77E-02	1.87E-03	4.32E-07	1.48E-02	4.55E-02
A02	0.00E+00	2.76E-04	2.11E-05	5.03E+02	4.65E-04	2.20E+00	3.08E-04	2.21E-01	1.82E-02	5.17E-03	2.86E-02	1.35E-02	1.37E-02	3.40E-02	2.17E-03	5.37E-07	1.49E-02	4.12E-02
A03	0.00E+00	2.78E-04	2.07E-05	4.65E+02	3.85E-04	1.85E+00	2.92E-04	2.32E-01	1.64E-02	4.77E-03	2.70E-02	1.22E-02	1.23E-02	3.59E-02	1.96E-03	4.66E-07	1.47E-02	4.34E-02
A04	0.00E+00	2.80E-04	2.17E-05	5.42E+02	5.37E-04	2.51E+00	3.26E-04	2.16E-01	2.00E-02	5.59E-03	3.05E-02	1.48E-02	1.51E-02	3.32E-02	2.38E-03	6.06E-07	1.54E-02	4.01E-02
A05	0.00E+00	2.32E-04	1.74E-05	3.93E+02	3.31E-04	1.59E+00	2.46E-04	1.93E-01	1.39E-02	4.03E-03	2.27E-02	1.03E-02	1.05E-02	2.97E-02	1.66E-03	3.96E-07	1.22E-02	3.60E-02
A06	0.00E+00	2.25E-04	1.74E-05	4.27E+02	4.15E-04	1.95E+00	2.58E-04	1.76E-01	1.57E-02	4.41E-03	2.41E-02	1.16E-02	1.18E-02	2.70E-02	1.87E-03	4.70E-07	1.23E-02	3.28E-02
A07	0.00E+00	2.36E-04	1.77E-05	3.90E+02	3.15E-04	1.52E+00	2.46E-04	2.01E-01	1.37E-02	3.99E-03	2.26E-02	1.02E-02	1.03E-02	3.08E-02	1.64E-03	3.80E-07	1.23E-02	3.75E-02
A08	0.00E+00	2.23E-04	1.70E-05	3.97E+02	3.57E-04	1.70E+00	2.45E-04	1.82E-01	1.43E-02	4.09E-03	2.27E-02	1.06E-02	1.08E-02	2.79E-02	1.71E-03	4.15E-07	1.19E-02	3.39E-02
A09	0.00E+00	2.97E-04	2.23E-05	4.97E+02	4.09E-04	1.97E+00	3.11E-04	2.51E-01	1.75E-02	5.09E-03	2.87E-02	1.30E-02	1.32E-02	3.84E-02	2.09E-03	4.89E-07	1.55E-02	4.68E-02
A10	0.00E+00	2.61E-04	1.97E-05	4.44E+02	3.74E-04	1.80E+00	2.77E-04	2.19E-01	1.57E-02	4.55E-03	2.55E-02	1.17E-02	1.19E-02	3.35E-02	1.88E-03	4.42E-07	1.36E-02	4.09E-02
B05	0.00E+00	1.95E-04	1.43E-05	3.40E+02	2.77E-04	1.20E+00	2.09E-04	1.63E-01	1.56E-02	3.88E-03	1.97E-02	8.61E-03	8.72E-03	2.57E-02	1.44E-03	3.06E-07	1.09E-02	3.04E-02
B06	0.00E+00	1.64E-04	1.11E-05	2.31E+02	1.27E-04	5.93E-01	1.54E-04	1.44E-01	9.38E-03	2.55E-03	1.47E-02	5.35E-03	5.40E-03	2.36E-02	9.11E-04	1.79E-07	9.29E-03	2.71E-02
B07	0.00E+00	1.79E-04	1.34E-05	3.46E+02	3.23E-04	1.36E+00	2.07E-04	1.39E-01	1.66E-02	4.00E-03	1.97E-02	9.06E-03	9.21E-03	2.21E-02	1.51E-03	3.48E-07	1.05E-02	2.58E-02
B08	0.00E+00	4.41E-05	3.65E-06	1.07E+02	1.23E-04	5.02E-01	5.94E-05	3.05E-02	5.59E-03	1.27E-03	5.61E-03	2.99E-03	3.05E-03	4.57E-03	4.92E-04	1.18E-07	2.57E-03	5.63E-03
C11	0.00E+00	4.16E-05	3.11E-06	6.51E+01	7.54E-05	2.77E-01	4.81E-05	3.12E-02	7.97E-03	1.39E-03	4.63E-03	2.11E-03	2.15E-03	3.46E-03	2.91E-04	6.58E-08	2.48E-03	5.82E-03
C12	0.00E+00	1.69E-05	1.68E-06	5.49E+01	9.28E-05	3.23E-01	3.23E-05	5.04E-03	9.11E-03	1.41E-03	3.11E-03	1.93E-03	1.98E-03	5.79E-04	2.71E-04	6.88E-08	1.13E-03	8.81E-04
C13	0.00E+00	2.50E-05	1.83E-06	3.02E+01	4.37E-05	1.47E-01	2.88E-05	1.88E-02	7.40E-03	1.11E-03	2.81E-03	1.23E-03	1.26E-03	1.46E-03	1.36E-04	2.78E-08	1.55E-03	3.52E-03
C14	0.00E+00	4.41E-05	3.72E-06	1.04E+02	1.49E-04	5.31E-01	6.54E-05	2.42E-02	1.33E-02	2.22E-03	6.33E-03	3.42E-03	3.50E-03	2.76E-03	4.95E-04	1.25E-07	2.83E-03	4.44E-03
C15	0.00E+00	4.72E-05	3.31E-06	4.28E+01	4.87E-05	1.77E-01	4.70E-05	4.26E-02	1.03E-02	1.60E-03	4.52E-03	1.76E-03	1.79E-03	3.11E-03	1.81E-04	3.15E-08	2.73E-03	7.99E-03
C16	0.00E+00	1.54E-05	1.23E-06	2.87E+01	4.08E-05	1.45E-01	2.05E-05	1.03E-02	4.64E-03	7.41E-04	1.98E-03	1.00E-03	1.02E-03	1.01E-03	1.34E-04	3.11E-08	9.53E-04	1.91E-03
C17	0.00E+00	8.92E-05	6.15E-06	1.11E+02	1.11E-04	4.02E-01	9.39E-05	6.90E-02	1.30E-02	2.33E-03	9.22E-03	3.61E-03	3.67E-03	7.87E-03	4.75E-04	1.06E-07	5.55E-03	1.29E-02
C18	0.00E+00	2.05E-05	1.50E-06	3.12E+01	4.22E-05	1.46E-01	2.51E-05	1.39E-02	4.94E-03	8.01E-04	2.48E-03	1.11E-03	1.14E-03	1.40E-03	1.42E-04	3.37E-08	1.34E-03	2.59E-03
C19	0.00E+00	7.77E-06	5.81E-07	1.04E+01	1.57E-05	5.27E-02	9.39E-06	5.51E-03	2.55E-03	3.80E-04	9.16E-04	4.20E-04	4.29E-04	4.35E-04	4.73E-05	9.89E-09	4.87E-04	1.03E-03
C20	0.00E+00	6.06E-06	5.12E-07	1.45E+01	2.10E-05	7.45E-02	9.12E-06	3.22E-03	1.85E-03	3.10E-04	8.85E-04	4.79E-04	4.89E-04	3.71E-04	6.92E-05	1.76E-08	3.95E-04	5.89E-04
C21	0.00E+00	1.06E-04	7.19E-06	9.90E+01	1.32E-04	4.21E-01	1.12E-04	8.23E-02	2.36E-02	3.62E-03	1.11E-02	4.26E-03	4.35E-03	6.37E-03	4.29E-04	8.94E-08	6.79E-03	1.54E-02
C22	0.00E+00	2.27E-05	1.83E-06	4.61E+01	7.00E-05	2.42E-01	3.26E-05	1.26E-02	7.45E-03	1.18E-03	3.19E-03	1.64E-03	1.67E-03	1.31E-03	2.18E-04	5.39E-08	1.52E-03	2.33E-03
C23	0.00E+00	5.42E-05	4.02E-06	8.98E+01	1.12E-04	3.97E-01	6.63E-05	3.64E-02	1.10E-02	1.90E-03	6.50E-03	2.96E-03	3.02E-03	4.21E-03	4.09E-04	9.97E-08	3.49E-03	6.77E-03
C24	0.00E+00	4.97E-06	4.45E-07	1.25E+01	1.96E-05	6.92E-02	7.91E-06	2.58E-03	2.05E-03	3.22E-04	7.58E-04	4.36E-04	4.46E-04	2.60E-04	6.01E-05	1.46E-08	3.12E-04	4.71E-04
C25	0.00E+00	9.69E-05	6.62E-06	8.76E+01	1.09E-04	3.62E-01	9.96E-05	8.02E-02	2.09E-02	3.23E-03	9.79E-03	3.72E-03	3.80E-03	6.06E-03	3.75E-04	7.32E-08	6.00E-03	1.51E-02
C26	0.00E+00	5.59E-05	3.98E-06	7.65E+01	8.17E-05	2.98E-01	6.11E-05	4.29E-02	9.12E-03	1.61E-03	5.94E-03	2.48E-03	2.53E-03	4.83E-03	3.34E-04	7.48E-08	3.41E-03	8.01E-03
C27	0.00E+00	7.45E-05	5.35E-06	9.14E+01	1.41E-04	4.50E-01	8.90E-05	5.03E-02	2.22E-02	3.32E-03	8.82E-03	3.82E-03	3.90E-03	4.08E-03	4.15E-04	9.13E-08	4.92E-03	9.40E-03
C28	0.00E+00	1.25E-05	1.09E-06	2.96E+01	4.61E-05	1.62E-01	1.94E-05	6.63E-03	4.84E-03	7.62E-04	1.87E-03	1.04E-03	1.06E-03	6.77E-04	1.42E-04	3.47E-08	8.06E-04	1.21E-03
C29	0.00E+00	3.57E-06	2.89E-07	6.64E+00	8.22E-06	3.08E-02	4.42E-06	2.69E-03	8.37E-04	1.43E-04	4.15E-04	2.13E-04	2.17E-04	2.85E-04	3.04E-05	6.75E-09	1.97E-04	5.00E-04
C30	0.00E+00	8.38E-05	5.57E-06	5.96E+01	5.51E-05	1.98E-01	7.74E-05	7.79E-02	1.40E-02	2.23E-03	7.54E-03	2.56E-03	2.61E-03	5.66E-03	2.38E-04	3.88E-08	4.93E-03	1.46E-02
C31	0.00E+00	4.58E-05	3.29E-06	6.49E+01	8.46E-05	2.92E-01	5.43E-05	3.22E-02	1.02E-02	1.67E-03	5.38E-03	2.32E-03	2.37E-03	3.24E-03	2.92E-04	6.85E-08	3.01E-03	6.01E-03
C32	0.00E+00	6.48E-05	4.43E-06	6.89E+01	5.36E-05	2.10E-01	6.18E-05	5.63E-02	7.87E-03	1.45E-03	5.92E-03	2.18E-03	2.21E-03	6.19E-03	2.80E-04	5.22E-08	3.71E-03	1.06E-02
C33	0.00E+00	2.93E-06	2.72E-07	8.77E+00	1.50E-05	5.10E-02	5.44E-06	7.52E-04	1.44E-03	2.24E-04	5.35E-04	3.13E-04	3.21E-04	9.91E-05	4.32E-05	1.13E-08	2.14E-04	1.31E-04
C34	0.00E+00	1.12E-05	8.60E-07	1.68E+01	2.70E-05	8.94E-02	1.45E-05	7.10E-03	4.17E-03	6.14E-04	1.42E-03	6.80E-04	6.95E-04	5.85E-04	7.82E-05	1.70E-08	7.25E-04	1.32E-03
C35	0.00E+00	2.10E-05	1.54E-06	3.01E+01	3.24E-05	1.21E-01	2.31E-05	1.66E-02	3.64E-03	6.40E-04	2.21E-03	9.68E-04	9.86E-04	1.82E-03	1.32E-04	2.86E-08	1.23E-03	3.10E-03
C39	0.00E+00	1.79E-05	1.34E-06	2.61E+01	3.22E-05	1.18E-01	2.06E-05	1.42E-02	4.16E-03	6.78E-04	1.98E-03	9.04E-04	9.22E-04	1.35E-03	1.17E-04	2.48E-08	1.05E-03	2.66E-03
D01	0.00E+00	1.49E-04	1.19E-05	2.38E+02	3.34E-04	1.24E+00	1.84E-04	1.16E-01	3.98E-02	6.43E-03	1.73E-02	8.72E-03	8.90E-03	1.08E-02	1.08E-03	2.46E-07	8.44E-03	2.16E-02
D02	0.00E+00	8.92E-05	7.46E-06	1.72E+02	2.73E-04	9.74E-01	1.26E-04	5.62E-02	2.91E-02	4.64E-03	1.21E-02	6.45E-03	6.60E-03	5.46E-03	8.10E-04	2.03E-07	5.45E-03	1.04E-02
D03	0.00E+00	1.11E-04	9.22E-06	2.16E+02	3.47E-04	1.23E+00	1.58E-04	6.67E-02	3.65E-02	5.80E-03	1.52E-02	8.13E-03	8.31E-03	6.58E-03	1.02E-03	2.59E-07	6.93E-03	1.23E-02
D04	0.00E+00	1.38E-04	1.04E-05	1.86E+02	2.37E-04	8.79E-01	1.56E-04	1.13E-01	3.05E-02	4.99E-03	1.49E-02	6.79E-03	6.92E-03	1.06E-02	8.23E-04	1.80E-07	8.02E-03	2.10E-02
D05	0.00E+00	1.50E-04	1.19E-05	2.47E+02	3.61E-04	1.31E+00	1.91E-04	1.07E-01	4.12E-02	6.63E-03	1.83E-02	9.16E-03	9.35E-03	1.03E-02	1.13E-03	2.71E-07	8.96E-03	1.99E-02
D06	0.00E+00	1.61E-04	1.18E-05	2.17E+02	2.91E-04	1.03E+00	1.88E-04	1.19E-01	3.52E-02	5.76E-03	1.85E-02	8.10E-03	8.26E-03	1.17E-02	9.66E-04	2.30E-07	1.02E-02	2.23E-02
D07	0.00E+00	1.26E-04	1.01E-05	2.49E+02	3.03E-04	1.16E+00	1.61E-04	8.82E-02	2.28E-02	4.28E-03	1.52E-02	7.72E-03	7.87E-03	1.11E-02	1.14E-03	2.69E-07	7.38E-03	1.64E-02
D08	0.00E+00	1.09E-04	8.24E-06	1.94E+02	2.25E-04	8.48E-01	1.33E-04	7.56E-02	1.74E-02	3.30E-03	1.28E-02	5.98E-03	6.09E-03	9.95E-03	8.73E-04	2.12E-07	6.76E-03	1.41E-02
D09	0.00E+00	8.17E-05	6.91E-06	1.87E+02	2.49E-04	9.41E-01	1.14E-04	5.15E-02	1.76E-02	3.24E-03	1.09E-02	5.91E-03	6.04E-03	6.37E-03	8.78E-04	2.16E-07	4.83E-03	9.49E-03
D10	0.00E+00	7.65E-05	5.86E-06	1.48E+02	1.83E-04	6.82E-01	9.87E-05	4.86E-02	1.34E-02	2.52E-03	9.65E-03	4.62E-03	4.71E-03	6.52E-03	6.78E-04	1.72E-07	4.94E-03	9.00E-03
D11	0.00E+00	1.18E-04	9.72E-06	2.50E+02	3.18E-04	1.21E+00	1.57E-04	7.94E-02	2.32E-02	4.31E-03	1.49E-02	7.82E-03	7.98E-03	9.88E-03	1.16E-03	2.78E-07	6.91E-03	1.47E-02
D12	0.00E+00	7.98E-05	5.97E-06	1.43E+02	1.69E-04	6.31E-01	9.84E-05	5.33E-02	1.28E-02	2.43E-03	9.62E-03	4.43E-03	4.52E-03	7.15E-03	6.48E-04	1.61E-07	5.10E-03	9.89E-03
D13	0.00E+00	3.48E-05	2.55E-06	4.67E+01	6.23E-05	2.22E-01	4.04E-05	2.61E-02	7.59E-03	1.24E-03	3.95E-03	1.74E-03	1.77E-03	2.54E-03	2.08E-04	4.89E-08	2.17E-03	4.87E-03
D14	0.00E+00	8.77E-05	6.61E-06	1.28E+02	1.77E-04	6.34E-01	1.06E-04	6.45E-02	2.10E-02	3.41E-03	1.03E-02	4.75E-03	4.85E-03	6.25E-03	5.75E-04	1.37E-07	5.41E-03	1.20E-02
D15	0.00E+00	9.82E-05	7.54E-06	1.51E+02	2.17E-04	7.73E-01	1.22E-04	7.01E-02	2.50E-02	4.04E-03	1.18E-02	5.63E-03	5.75E-03	6.81E-03	6.87E-04	1.66E-07	6.07E-03	1.31E-02
D16	0.00E+00	1.15E-04	8.65E-06	1.67E+02	2.34E-04	8.32E-01	1.39E-04	8.38E-02	2.75E-02	4.46E-03	1.35E-02	6.24E-03	6.36E-03	8.15E-03	7.55E-04	1.80E-07	7.14E-03	1.56E-02
D17	0.00E+00	1.56E-05	1.11E-06	1.96E+01	1.97E-05	7.47E-02	1.63E-05	1.28E-02	2.37E-03	4.22E-04	1.56E-03	6.43E-04	6.54E-04	1.41E-03	8.37E-05	1.75E-08	9.08E-04	2.39E-03
D18	0.00E+00	5.42E-05	4.20E-06	8.90E+01	1.10E-04	4.10E-01	6.47E-05	4.05E-02	1.13E-02	1.94E-03	6.16E-03	2.96E-03	3.02E-03	4.41E-03	4.01E-04	9.06E-08	3.14E-03	7.55E-03
D19	0.00E+00	1.28E-04	1.03E-05	2.72E+02	3.53E-04	1.32E+00	1.74E-04	7.95E-02	2.51E-02	4.67E-03	1.68E-02	8.56E-03	8.74E-03	1.03E-02	1.26E-03	3.19E-07	8.04E-03	1.47E-02
D20	0.00E+00	2.49E-04	1.66E-05	2.77E+02	1.78E-04	7.32E-01	2.33E-04	2.10E-01	2.19E-02	4.55E-03	2.26E-02	7.84E-03	7.93E-03	2.77E-02	1.10E-03	2.12E-07	1.46E-02	3.94E-02
D21	0.00E+00	7.92E-05	6.77E-06	2.00E+02	2.83E-04	1.05E+00	1.21E-04	4.16E-02	1.89E-02	3.45E-03	1.17E-02	6.40E-03	6.55E-03	5.41E-03	9.53E-04	2.50E-07	5.14E-03	7.60E-03
D22	0.00E+00	2.45E-04	1.66E-05	2.77E+02	1.78E-04	7.50E-01	2.29E-04	2.11E-01	2.21E-02	4.59E-03	2.19E-02	7.82E-03	7.91E-03	2.75E-02	1.10E-03	2.01E-07	1.39E-02	3.97E-02
D23	0.00E+00	9.91E-05	8.72E-06	2.29E+02	3.97E-04	1.38E+00	1.60E-04	4.54E-02	3.91E-02	6.15E-03	1.55E-02	8.75E-03	8.95E-03	4.77E-03	1.10E-03	2.96E-07	6.60E-03	8.28E-03
D24	0.00E+00	9.78E-05	7.47E-06	1.55E+02	2.32E-04	8.11E-01	1.26E-04	6.42E-02	2.57E-02	4.14E-03	1.23E-02	5.87E-03	5.99E-03	6.42E-03	7.14E-04	1.80E-07	6.34E-03	1.19E-02
D25	0.00E+00	9.96E-05	8.46E-06	2.12E+02	3.57E-04	1.24E+00	1.53E-04	5.07E-02	3.59E-02	5.67E-03	1.49E-02	8.07E-03	8.25E-03	5.25E-03	1.01E-03	2.68E-07	6.60E-03	9.30E-03
D26	0.00E+00	1.01E-04	7.90E-06	1.74E+02	2.72E-04	9.46E-01	1.36E-04	6.14E-02	2.90E-02	4.64E-03	1.34E-02	6.61E-03	6.76E-03	6.23E-03	8.11E-04	2.09E-07	6.61E-03	1.14E-02
D27	0.00E+00	4.16E-05	3.55E-06	1.02E+02	1.42E-04	5.29E-01	6.18E-05	2.33E-02	9.66E-03	1.77E-03	5.95E-03	3.26E-03	3.33E-03	2.96E-03	4.85E-04	1.25E-07	2.62E-03	4.26E-03
D28	0.00E+00	9.45E-05	7.78E-06	2.10E+02	2.78E-04	1.04E+00	1.31E-04	5.80E-02	1.96E-02	3.62E-03	1.26E-02	6.64E-03	6.78E-03	7.42E-03	9.83E-04	2.47E-07	5.84E-03	1.07E-02
D29	0.00E+00	4.51E-05	3.61E-06	9.34E+01	1.19E-04	4.47E-01	5.99E-05	2.89E-02	8.61E-03	1.60E-03	5.77E-03	2.93E-03	2.99E-03	3.73E-03	4.32E-04	1.07E-07	2.78E-03	5.34E-03
D30	0.00E+00	8.64E-05	6.94E-06	1.77E+02	2.22E-04	8.41E-01	1.13E-04	5.73E-02	1.63E-02	3.04E-03	1.08E-02	5.53E-03	5.64E-03	7.29E-03	8.15E-04	1.99E-07	5.20E-03	1.06E-02
D31	0.00E+00	2.20E-05	1.69E-06	4.03E+01	4.73E-05	1.79E-01	2.70E-05	1.54E-02	3.63E-03	6.87E-04	2.60E-03	1.24E-03	1.27E-03	1.99E-03	1.82E-04	4.36E-08	1.33E-03	2.86E-03
D32	0.00E+00	3.95E-05	3.13E-06	7.66E+01	9.26E-05	3.53E-01	4.98E-05	2.75E-02	7.01E-03	1.31E-03	4.74E-03	2.37E-03	2.42E-03	3.48E-03	3.49E-04	8.28E-08	2.32E-03	5.11E-03
D33	0.00E+00	5.68E-05	4.11E-06	7.35E+01	9.55E-05	3.41E-01	6.47E-05	4.34E-02	1.19E-02	1.96E-03	6.32E-03	2.73E-03	2.79E-03	4.22E-03	3.25E-04	7.54E-08	3.53E-03	8.11E-03
D34	0.00E+00	2.72E-05	2.27E-06	5.51E+01	9.14E-05	3.19E-01	4.03E-05	1.47E-02	9.32E-03	1.48E-03	3.92E-03	2.10E-03	2.14E-03	1.50E-03	2.62E-04	6.87E-08	1.78E-03	2.71E-03
D35	0.00E+00	3.81E-05	3.21E-06	7.70E+01	1.26E-04	4.43E-01	5.58E-05	2.19E-02	1.30E-02	2.07E-03	5.39E-03	2.91E-03	2.97E-03	2.18E-03	3.65E-04	9.38E-08	2.41E-03	4.03E-03
D36	0.00E+00	3.56E-05	2.58E-06	4.52E+01	5.73E-05	2.06E-01	3.99E-05	2.79E-02	7.30E-03	1.20E-03	3.89E-03	1.67E-03	1.70E-03	2.69E-03	1.99E-04	4.51E-08	2.18E-03	5.22E-03
D37	0.00E+00	8.53E-06	7.03E-07	1.54E+01	2.34E-05	8.47E-02	1.14E-05	5.90E-03	2.59E-03	4.15E-04	1.09E-03	5.72E-04	5.84E-04	5.61E-04	7.16E-05	1.73E-08	5.05E-04	1.10E-03
D38	0.00E+00	3.54E-05	2.83E-06	5.81E+01	8.34E-05	3.06E-01	4.45E-05	2.66E-02	9.71E-03	1.57E-03	4.22E-03	2.14E-03	2.18E-03	2.49E-03	2.66E-04	6.17E-08	2.04E-03	4.95E-03
D39	0.00E+00	7.37E-06	6.86E-07	1.85E+01	3.22E-05	1.14E-01	1.24E-05	3.48E-03	3.19E-03	5.00E-04	1.18E-03	7.01E-04	7.18E-04	3.48E-04	8.98E-05	2.36E-08	4.62E-04	6.34E-04
D40	0.00E+00	4.50E-05	3.58E-06	7.62E+01	1.14E-04	4.09E-01	5.89E-05	3.07E-02	1.27E-02	2.04E-03	5.67E-03	2.85E-03	2.91E-03	2.98E-03	3.52E-04	8.62E-08	2.76E-03	5.71E-03
D41	0.00E+00	8.74E-06	7.31E-07	1.74E+01	2.84E-05	9.99E-02	1.27E-05	5.05E-03	2.95E-03	4.67E-04	1.23E-03	6.58E-04	6.73E-04	5.04E-04	8.24E-05	2.12E-08	5.56E-04	9.31E-04
D42	0.00E+00	1.46E-05	1.11E-06	2.06E+01	2.68E-05	9.99E-02	1.68E-05	1.18E-02	3.39E-03	5.53E-04	1.60E-03	7.50E-04	7.65E-04	1.11E-03	9.17E-05	2.02E-08	8.37E-04	2.21E-03
D43	0.00E+00	1.82E-05	1.87E-06	5.78E+01	1.07E-04	3.75E-01	3.62E-05	4.83E-03	1.01E-02	1.56E-03	3.47E-03	2.21E-03	2.26E-03	5.42E-04	2.86E-04	7.79E-08	1.20E-03	8.35E-04
D44	0.00E+00	2.80E-05	2.08E-06	3.97E+01	5.53E-05	1.95E-01	3.36E-05	2.02E-02	6.50E-03	1.06E-03	3.29E-03	1.49E-03	1.52E-03	1.98E-03	1.79E-04	4.31E-08	1.77E-03	3.76E-03
D45	0.00E+00	9.14E-05	6.73E-06	1.22E+02	1.58E-04	5.73E-01	1.05E-04	7.11E-02	1.98E-02	3.25E-03	1.01E-02	4.50E-03	4.58E-03	6.83E-03	5.39E-04	1.23E-07	5.55E-03	1.33E-02
D46	0.00E+00	9.70E-05	7.05E-06	1.24E+02	1.57E-04	5.67E-01	1.09E-04	7.65E-02	2.01E-02	3.30E-03	1.06E-02	4.57E-03	4.66E-03	7.36E-03	5.44E-04	1.23E-07	5.90E-03	1.43E-02
D47	0.00E+00	1.15E-04	8.77E-06	1.74E+02	2.49E-04	8.85E-01	1.43E-04	8.18E-02	2.87E-02	4.65E-03	1.39E-02	6.52E-03	6.65E-03	8.00E-03	7.92E-04	1.92E-07	7.20E-03	1.52E-02
D48	0.00E+00	4.50E-05	3.58E-06	7.62E+01	1.14E-04	4.09E-01	5.89E-05	3.07E-02	1.27E-02	2.04E-03	5.67E-03	2.85E-03	2.91E-03	2.98E-03	3.52E-04	8.62E-08	2.76E-03	5.71E-03
D49	0.00E+00	1.90E-04	1.34E-05	2.29E+02	2.85E-04	1.01E+00	2.10E-04	1.46E-01	3.66E-02	6.06E-03	2.07E-02	8.52E-03	8.69E-03	1.43E-02	9.98E-04	2.30E-07	1.20E-02	2.74E-02
D50	0.00E+00	1.96E-04	1.42E-05	2.60E+02	3.48E-04	1.23E+00	2.28E-04	1.45E-01	4.21E-02	6.91E-03	2.24E-02	9.73E-03	9.92E-03	1.42E-02	1.16E-03	2.76E-07	1.24E-02	2.70E-02
D51	0.00E+00	2.82E-05	2.12E-06	4.23E+01	6.14E-05	2.15E-01	3.51E-05	1.94E-02	6.96E-03	1.13E-03	3.44E-03	1.60E-03	1.63E-03	1.92E-03	1.93E-04	4.77E-08	1.81E-03	3.60E-03
D52	0.00E+00	2.33E-05	1.85E-06	4.09E+01	6.37E-05	2.23E-01	3.16E-05	1.45E-02	6.83E-03	1.09E-03	3.08E-03	1.55E-03	1.58E-03	1.45E-03	1.90E-04	4.85E-08	1.50E-03	2.69E-03
D53	0.00E+00	3.96E-05	3.01E-06	6.10E+01	8.93E-05	3.14E-01	4.98E-05	2.70E-02	1.01E-02	1.63E-03	4.86E-03	2.30E-03	2.34E-03	2.67E-03	2.79E-04	6.89E-08	2.52E-03	5.03E-03
D54	0.00E+00	3.79E-05	2.95E-06	6.41E+01	9.94E-05	3.45E-01	5.07E-05	2.35E-02	1.07E-02	1.71E-03	4.97E-03	2.43E-03	2.49E-03

Appendix F.1.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D70	0.00E+00	3.18E-05	2.25E-06	4.32E+01	3.77E-05	1.50E-01	3.27E-05	2.57E-02	3.64E-03	7.24E-04	3.14E-03	1.27E-03	1.29E-03	3.34E-03	1.82E-04	3.81E-08	1.85E-03	4.82E-03
D71	0.00E+00	5.04E-05	3.60E-06	6.15E+01	5.87E-05	2.27E-01	5.13E-05	4.25E-02	7.40E-03	1.33E-03	4.88E-03	2.00E-03	2.03E-03	4.64E-03	2.60E-04	5.16E-08	2.85E-03	7.97E-03
D72	0.00E+00	4.86E-05	3.39E-06	5.49E+01	4.84E-05	1.87E-01	4.80E-05	4.13E-02	6.47E-03	1.17E-03	4.60E-03	1.78E-03	1.81E-03	4.55E-03	2.27E-04	4.44E-08	2.79E-03	7.75E-03
D73	0.00E+00	1.65E-05	1.29E-06	2.56E+01	2.93E-05	1.14E-01	1.86E-05	1.36E-02	3.25E-03	5.62E-04	1.73E-03	8.38E-04	8.54E-04	1.43E-03	1.14E-04	2.35E-08	8.81E-04	2.53E-03
D74	0.00E+00	1.34E-05	1.08E-06	2.56E+01	3.50E-05	1.28E-01	1.77E-05	8.91E-03	3.32E-03	5.62E-04	1.69E-03	8.65E-04	8.84E-04	9.84E-04	1.19E-04	2.86E-08	8.09E-04	1.65E-03
D75	0.00E+00	1.07E-05	8.52E-07	2.19E+01	2.78E-05	1.04E-01	1.41E-05	6.90E-03	2.02E-03	3.76E-04	1.35E-03	6.86E-04	7.00E-04	8.89E-04	1.01E-04	2.50E-08	6.54E-04	1.28E-03
D76	0.00E+00	1.32E-05	9.92E-07	2.31E+01	2.64E-05	1.00E-01	1.58E-05	9.26E-03	2.06E-03	3.92E-04	1.53E-03	7.09E-04	7.23E-04	1.21E-03	1.04E-04	2.49E-08	8.08E-04	1.72E-03
D77	0.00E+00	1.98E-05	1.38E-06	2.71E+01	2.44E-05	9.48E-02	2.07E-05	1.55E-02	2.28E-03	4.52E-04	2.01E-03	8.01E-04	8.13E-04	2.05E-03	1.15E-04	2.53E-08	1.20E-03	2.89E-03
D78	0.00E+00	3.09E-05	2.24E-06	4.68E+01	4.68E-05	1.81E-01	3.40E-05	2.36E-02	4.05E-03	7.89E-04	3.28E-03	1.40E-03	1.43E-03	3.09E-03	2.03E-04	4.58E-08	1.85E-03	4.41E-03
D79	0.00E+00	4.50E-05	3.15E-06	5.35E+01	5.11E-05	1.94E-01	4.58E-05	3.70E-02	6.38E-03	1.15E-03	4.42E-03	1.75E-03	1.78E-03	4.10E-03	2.25E-04	4.65E-08	2.64E-03	6.94E-03
D80	0.00E+00	3.54E-05	2.55E-06	4.94E+01	5.66E-05	2.06E-01	3.97E-05	2.63E-02	6.06E-03	1.06E-03	3.87E-03	1.65E-03	1.68E-03	2.98E-03	2.17E-04	5.02E-08	2.18E-03	4.91E-03
F31	0.00E+00	8.47E-05	6.82E-06	1.45E+02	2.14E-04	7.75E-01	1.10E-04	6.00E-02	2.42E-02	3.89E-03	1.05E-02	5.36E-03	5.48E-03	5.73E-03	6.66E-04	1.60E-07	5.05E-03	1.12E-02
F32	0.00E+00	1.18E-04	8.65E-06	1.67E+02	2.36E-04	8.20E-01	1.43E-04	8.17E-02	2.72E-02	4.42E-03	1.41E-02	6.29E-03	6.42E-03	8.16E-03	7.52E-04	1.86E-07	7.66E-03	1.52E-02
F33	0.00E+00	7.37E-06	6.86E-07	1.85E+01	3.22E-05	1.14E-01	1.24E-05	3.48E-03	3.19E-03	5.00E-04	1.18E-03	7.01E-04	7.18E-04	3.48E-04	8.98E-05	2.36E-08	4.62E-04	6.34E-04
F34	0.00E+00	4.50E-05	3.58E-06	7.62E+01	1.14E-04	4.09E-01	5.89E-05	3.07E-02	1.27E-02	2.04E-03	5.67E-03	2.85E-03	2.91E-03	2.98E-03	3.52E-04	8.62E-08	2.76E-03	5.71E-03
G01	0.00E+00	8.68E-06	8.30E-07	2.87E+01	4.31E-05	1.58E-01	1.57E-05	3.38E-03	2.91E-03	5.11E-04	1.51E-03	9.13E-04	9.35E-04	4.19E-04	1.41E-04	3.69E-08	5.76E-04	5.99E-04
G02	0.00E+00	5.20E-05	4.07E-06	1.01E+02	1.19E-04	4.49E-01	6.50E-05	3.62E-02	9.49E-03	1.76E-03	6.21E-03	3.06E-03	3.12E-03	4.62E-03	4.59E-04	1.07E-07	3.09E-03	6.72E-03
G03	0.00E+00	1.50E-04	9.87E-06	1.90E+02	7.24E-05	3.76E-01	1.32E-04	1.37E-01	7.09E-03	2.05E-03	1.26E-02	4.15E-03	4.16E-03	2.25E-02	7.13E-04	1.28E-07	8.40E-03	2.57E-02
G04	0.00E+00	1.17E-04	7.91E-06	1.49E+02	5.56E-05	3.00E-01	1.02E-04	1.11E-01	5.61E-03	1.61E-03	9.43E-03	3.26E-03	3.27E-03	1.77E-02	5.58E-04	8.71E-08	6.15E-03	2.08E-02
G05	0.00E+00	7.19E-06	6.98E-07	2.60E+01	3.73E-05	1.48E-01	1.33E-05	2.88E-03	1.50E-03	3.19E-04	1.28E-03	7.83E-04	8.02E-04	3.87E-04	1.28E-04	3.43E-08	4.80E-04	5.06E-04
G06	0.00E+00	4.19E-07	4.49E-08	1.83E+00	2.80E-06	1.10E-02	9.05E-07	9.95E-05	1.09E-04	2.27E-05	8.74E-05	5.65E-05	5.80E-05	9.70E-06	9.20E-06	2.53E-09	2.94E-05	1.60E-05
G07	0.00E+00	8.13E-05	5.47E-06	8.31E+01	6.26E-05	2.42E-01	7.70E-05	6.99E-02	9.37E-03	1.74E-03	7.45E-03	2.64E-03	2.68E-03	7.77E-03	3.35E-04	6.35E-08	4.77E-03	1.31E-02
G08	0.00E+00	6.94E-06	6.29E-07	1.98E+01	2.82E-05	1.04E-01	1.12E-05	3.52E-03	1.98E-03	3.52E-04	1.07E-03	6.23E-04	6.37E-04	4.33E-04	9.56E-05	2.42E-08	4.35E-04	6.37E-04
G09	0.00E+00	2.05E-05	1.45E-06	1.72E+01	1.61E-05	6.66E-02	1.91E-05	2.04E-02	4.17E-03	6.53E-04	1.80E-03	6.86E-04	6.98E-04	1.44E-03	7.06E-05	1.01E-08	1.10E-03	3.84E-03
G10	0.00E+00	1.34E-04	9.42E-06	1.67E+02	1.60E-04	5.99E-01	1.38E-04	1.09E-01	1.96E-02	3.52E-03	1.33E-02	5.34E-03	5.43E-03	1.21E-02	7.09E-04	1.48E-07	7.89E-03	2.04E-02
H01	0.00E+00	6.41E-04	4.71E-05	1.10E+03	8.71E-04	3.81E+00	6.75E-04	5.45E-01	5.01E-02	1.25E-02	6.31E-02	2.77E-02	2.80E-02	8.52E-02	4.63E-03	9.51E-07	3.51E-02	1.02E-01
H02	0.00E+00	5.28E-04	3.93E-05	9.07E+02	7.14E-04	3.15E+00	5.52E-04	4.58E-01	4.14E-02	1.03E-02	5.11E-02	2.28E-02	2.31E-02	7.05E-02	3.81E-03	7.52E-07	2.79E-02	8.56E-02
H03	0.00E+00	5.31E-04	3.97E-05	9.31E+02	7.57E-04	3.31E+00	5.63E-04	4.55E-01	4.29E-02	1.06E-02	5.22E-02	2.36E-02	2.39E-02	7.00E-02	3.94E-03	7.91E-07	2.82E-02	8.51E-02
H04	0.00E+00	4.89E-04	3.53E-05	7.51E+02	4.83E-04	2.24E+00	4.74E-04	4.46E-01	3.23E-02	8.40E-03	4.35E-02	1.81E-02	1.83E-02	6.89E-02	3.04E-03	5.41E-07	2.52E-02	8.35E-02
H05	0.00E+00	2.04E-04	1.48E-05	3.29E+02	2.34E-04	1.05E+00	2.05E-04	1.80E-01	1.45E-02	3.71E-03	1.90E-02	8.08E-03	8.17E-03	2.81E-02	1.36E-03	2.61E-07	1.09E-02	3.37E-02
H06	0.00E+00	2.85E-04	2.05E-05	4.22E+02	2.49E-04	1.19E+00	2.68E-04	2.66E-01	1.78E-02	4.69E-03	2.44E-02	1.00E-02	1.01E-02	4.08E-02	1.68E-03	2.80E-07	1.43E-02	4.98E-02
H07	0.00E+00	4.94E-04	3.59E-05	7.74E+02	5.18E-04	2.38E+00	4.85E-04	4.46E-01	3.37E-02	8.68E-03	4.46E-02	1.88E-02	1.90E-02	6.89E-02	3.15E-03	5.74E-07	2.56E-02	8.36E-02
H08	0.00E+00	6.82E-05	4.94E-06	8.38E+01	8.92E-05	3.40E-01	7.15E-05	5.95E-02	1.32E-02	2.19E-03	6.82E-03	2.87E-03	2.93E-03	5.58E-03	3.61E-04	6.97E-08	3.90E-03	1.11E-02
H09	0.00E+00	1.15E-04	8.59E-06	1.24E+02	1.43E-04	5.66E-01	1.17E-04	1.10E-01	3.06E-02	4.67E-03	1.09E-02	4.78E-03	4.87E-03	7.80E-03	5.35E-04	8.53E-08	6.03E-03	2.07E-02
H10	0.00E+00	8.35E-05	6.19E-06	1.11E+02	1.06E-04	4.20E-01	8.56E-05	7.31E-02	1.34E-02	2.38E-03	7.97E-03	3.49E-03	3.55E-03	7.74E-03	4.76E-04	8.98E-08	4.42E-03	1.37E-02
H11	0.00E+00	4.71E-05	3.70E-06	7.56E+01	8.32E-05	3.24E-01	5.28E-05	3.96E-02	9.40E-03	1.63E-03	4.87E-03	2.39E-03	2.43E-03	4.12E-03	3.36E-04	6.77E-08	2.44E-03	7.40E-03
H12	0.00E+00	1.13E-04	7.79E-06	1.92E+02	1.57E-04	6.61E-01	1.23E-04	8.62E-02	8.69E-03	2.19E-03	1.20E-02	4.83E-03	4.90E-03	1.47E-02	8.14E-04	1.99E-07	7.15E-03	1.61E-02
H13	0.00E+00	1.79E-04	1.24E-05	2.58E+02	2.46E-04	9.27E-01	1.93E-04	1.33E-01	2.24E-02	4.36E-03	1.90E-02	7.62E-03	7.75E-03	1.80E-02	1.11E-03	2.57E-07	1.12E-02	2.49E-02
H14	0.00E+00	9.80E-06	7.14E-07	1.14E+01	8.91E-06	3.81E-02	9.26E-06	9.22E-03	1.36E-03	2.46E-04	8.48E-04	3.51E-04	3.57E-04	9.63E-04	4.70E-05	7.51E-09	4.92E-04	1.73E-03
H15	0.00E+00	7.79E-05	6.54E-06	1.96E+02	2.69E-04	9.86E-01	1.17E-04	4.10E-02	1.92E-02	3.44E-03	1.14E-02	6.13E-03	6.27E-03	5.44E-03	9.34E-04	2.41E-07	5.16E-03	7.48E-03
H16	0.00E+00	5.83E-05	5.26E-06	1.58E+02	2.35E-04	8.41E-01	9.37E-05	2.96E-02	2.05E-02	3.40E-03	8.97E-03	5.19E-03	5.31E-03	3.28E-03	7.63E-04	1.92E-07	3.65E-03	5.37E-03

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1346	0.00E+00	1.56E-05	1.69E-06	6.29E+01	1.09E-04	4.89E-01	3.47E-05	3.16E-03	3.34E-03	7.79E-04	3.37E-03	2.17E-03	2.23E-03	1.53E-04	3.18E-04	9.44E-08	1.14E-03	4.93E-04
17	A01	110	Passenger Truck	2254	0.00E+00	3.38E-05	3.61E-06	1.50E+02	2.24E-04	1.01E+00	7.25E-05	8.84E-03	5.80E-03	1.46E-03	7.00E-03	4.53E-03	4.64E-03	8.92E-04	7.54E-04	2.21E-07	2.36E-03	1.42E-03
17	A01	110	Single Unit Short Haul Truck	298	0.00E+00	3.94E-05	2.09E-06	5.72E+01	4.04E-05	1.58E-01	4.33E-05	2.29E-02	1.78E-03	5.89E-04	4.77E-03	1.33E-03	1.35E-03	5.84E-03	2.29E-04	1.02E-07	3.42E-03	4.28E-03
17	A01	110	Single Unit Long Haul Truck	13	0.00E+00	1.69E-06	8.68E-08	2.40E+00	1.62E-06	6.21E-03	1.84E-06	9.54E-04	7.95E-05	2.52E-05	2.07E-04	5.48E-05	5.56E-05	2.44E-04	9.60E-06	4.15E-09	1.51E-04	1.78E-04
17	A01	110	Combination Short Haul Truck	220	0.00E+00	8.29E-05	6.23E-06	8.38E+01	1.97E-07	7.48E-02	5.87E-05	8.85E-02	2.35E-03	9.34E-04	4.38E-03	1.81E-03	1.79E-03	1.26E-02	2.80E-04	0.00E+00	2.59E-03	1.67E-02
17	A01	110	Combination Long Haul Truck	200	0.00E+00	7.50E-05	5.41E-06	7.57E+01	2.27E-07	7.42E-02	5.45E-05	8.56E-02	2.12E-03	6.47E-04	4.48E-03	1.59E-03	1.60E-03	1.15E-02	2.53E-04	0.00E+00	2.88E-03	1.61E-02
17	A02	110	Passenger Car	1269	0.00E+00	1.47E-05	1.59E-06	5.93E+01	1.02E-04	4.61E-01	3.27E-05	2.98E-03	3.15E-03	7.35E-04	3.18E-03	2.05E-03	2.11E-03	1.45E-04	3.00E-04	8.90E-08	1.08E-03	4.65E-04
17	A02	110	Passenger Truck	2126	0.00E+00	3.19E-05	3.41E-06	1.42E+02	2.11E-04	9.49E-01	6.84E-05	8.34E-03	5.47E-03	1.38E-03	6.60E-03	4.27E-03	4.38E-03	8.42E-04	7.11E-04	2.08E-07	2.22E-03	1.34E-03
17	A02	110	Single Unit Short Haul Truck	357	0.00E+00	4.73E-05	2.50E-06	6.85E+01	4.85E-05	1.89E-01	5.19E-05	2.75E-02	2.13E-03	7.06E-04	5.72E-03	1.60E-03	1.62E-03	7.00E-03	2.74E-04	1.22E-07	4.10E-03	5.13E-03
17	A02	110	Single Unit Long Haul Truck	16	0.00E+00	2.02E-06	1.04E-07	2.87E+00	1.95E-06	7.44E-03	2.21E-06	1.14E-03	9.53E-05	3.02E-05	2.48E-04	6.57E-05	6.66E-05	2.93E-04	1.15E-05	4.98E-09	1.81E-04	2.13E-04
17	A02	110	Combination Short Haul Truck	218	0.00E+00	8.24E-05	6.19E-06	8.33E+01	1.96E-07	7.43E-02	5.83E-05	8.80E-02	2.34E-03	9.28E-04	4.35E-03	1.80E-03	1.78E-03	1.25E-02	2.79E-04	0.00E+00	2.57E-03	1.66E-02
17	A02	110	Combination Long Haul Truck	199	0.00E+00	7.45E-05	5.37E-06	7.52E+01	2.25E-07	7.38E-02	5.41E-05	8.51E-02	2.11E-03	6.43E-04	4.46E-03	1.58E-03	1.59E-03	1.15E-02	2.52E-04	0.00E+00	2.87E-03	1.60E-02
17	A03	110	Passenger Car	1768	0.00E+00	2.05E-05	2.22E-06	8.26E+01	1.43E-04	6.42E-01	4.55E-05	4.15E-03	4.39E-03	1.02E-03	4.43E-03	2.86E-03	2.93E-03	2.01E-04	4.18E-04	1.24E-07	1.50E-03	6.48E-04
17	A03	110	Passenger Truck	2960	0.00E+00	4.44E-05	4.74E-06	1.97E+02	2.94E-04	1.32E+00	9.53E-05	1.16E-02	7.61E-03	1.92E-03	9.19E-03	5.95E-03	6.10E-03	1.17E-03	9.90E-04	2.90E-07	3.09E-03	1.87E-03
17	A03	110	Single Unit Short Haul Truck	301	0.00E+00	3.99E-05	2.11E-06	5.78E+01	4.09E-05	1.59E-01	4.38E-05	2.32E-02	1.80E-03	5.96E-04	4.83E-03	1.35E-03	1.36E-03	5.91E-03	2.31E-04	1.03E-07	3.46E-03	4.33E-03
17	A03	110	Single Unit Long Haul Truck	13	0.00E+00	1.71E-06	8.77E-08	2.42E+00	1.64E-06	6.28E-03	1.86E-06	9.64E-04	8.03E-05	2.55E-05	2.09E-04	5.54E-05	5.62E-05	2.47E-04	9.70E-06	4.20E-09	1.53E-04	1.80E-04
17	A03	110	Combination Short Haul Truck	210	0.00E+00	7.93E-05	5.96E-06	8.01E+01	1.89E-07	7.15E-02	5.61E-05	8.46E-02	2.25E-03	8.93E-04	4.19E-03	1.73E-03	1.71E-03	1.21E-02	2.68E-04	0.00E+00	2.48E-03	1.59E-02
17	A03	110	Combination Long Haul Truck	191	0.00E+00	7.17E-05	5.17E-06	7.23E+01	2.17E-07	7.09E-02	5.21E-05	8.18E-02	2.03E-03	6.18E-04	4.29E-03	1.52E-03	1.53E-03	1.10E-02	2.42E-04	0.00E+00	2.76E-03	1.54E-02
17	A04	110	Passenger Car	1358	0.00E+00	1.57E-05	1.70E-06	6.35E+01	1.09E-04	4.93E-01	3.50E-05	3.18E-03	3.37E-03	7.86E-04	3.40E-03	2.19E-03	2.25E-03	1.55E-04	3.21E-04	9.52E-08	1.15E-03	4.98E-04
17	A04	110	Passenger Truck	2274	0.00E+00	3.41E-05	3.64E-06	1.51E+02	2.26E-04	1.02E+00	7.32E-05	8.92E-03	5.85E-03	1.47E-03	7.06E-03	4.57E-03	4.68E-03	9.01E-04	7.61E-04	2.23E-07	2.38E-03	1.44E-03
17	A04	110	Single Unit Short Haul Truck	360	0.00E+00	4.76E-05	2.52E-06	6.91E+01	4.88E-05	1.90E-01	5.23E-05	2.77E-02	2.15E-03	7.12E-04	5.77E-03	1.61E-03	1.63E-03	7.06E-03	2.76E-04	1.23E-07	4.14E-03	5.17E-03
17	A04	110	Single Unit Long Haul Truck	16	0.00E+00	2.04E-06	1.05E-07	2.90E+00	1.96E-06	7.50E-03	2.23E-06	1.15E-03	9.60E-05	3.05E-05	2.50E-04	6.62E-05	6.72E-05	2.95E-04	1.16E-05	5.02E-09	1.82E-04	2.15E-04
17	A04	110	Combination Short Haul Truck	216	0.00E+00	8.15E-05	6.12E-06	8.23E+01	1.94E-07	7.34E-02	5.77E-05	8.70E-02	2.31E-03	9.17E-04	4.30E-03	1.78E-03	1.76E-03	1.24E-02	2.75E-04	0.00E+00	2.54E-03	1.64E-02
17	A04	110	Combination Long Haul Truck	197	0.00E+00	7.37E-05	5.31E-06	7.43E+01	2.23E-07	7.29E-02	5.35E-05	8.41E-02	2.08E-03	6.35E-04	4.40E-03	1.56E-03	1.57E-03	1.13E-02	2.49E-04	0.00E+00	2.83E-03	1.58E-02
17	A05	110	Passenger Car	1334	0.00E+00	1.55E-05	1.67E-06	6.23E+01	1.08E-04	4.85E-01	3.44E-05	3.13E-03	3.31E-03	7.72E-04	3.34E-03	2.16E-03	2.21E-03	1.52E-04	3.16E-04	9.36E-08	1.13E-03	4.89E-04
17	A05	110	Passenger Truck	2234	0.00E+00	3.35E-05	3.58E-06	1.49E+02	2.22E-04	9.98E-01	7.19E-05	8.77E-03	5.75E-03	1.45E-03	6.94E-03	4.49E-03	4.60E-03	8.85E-04	7.47E-04	2.19E-07	2.34E-03	1.41E-03
17	A05	110	Single Unit Short Haul Truck	249	0.00E+00	3.29E-05	1.75E-06	4.78E+01	3.38E-05	1.32E-01	3.62E-05	1.92E-02	1.49E-03	4.92E-04	3.99E-03	1.11E-03	1.13E-03	4.88E-03	1.91E-04	8.50E-08	2.86E-03	3.58E-03
17	A05	110	Single Unit Long Haul Truck	11	0.00E+00	1.41E-06	7.25E-08	2.00E+00	1.36E-06	5.19E-03	1.54E-06	7.97E-04	6.64E-05	2.11E-05	1.73E-04	4.58E-05	4.64E-05	2.04E-04	8.02E-06	3.47E-09	1.26E-04	1.49E-04
17	A05	110	Combination Short Haul Truck	182	0.00E+00	6.89E-05	5.18E-06	6.96E+01	1.64E-07	6.21E-02	4.88E-05	7.35E-02	1.95E-03	7.76E-04	3.64E-03	1.50E-03	1.49E-03	1.05E-02	2.33E-04	0.00E+00	2.15E-03	1.39E-02
17	A05	110	Combination Long Haul Truck	166	0.00E+00	6.23E-05	4.49E-06	6.28E+01	1.88E-07	6.17E-02	4.53E-05	7.11E-02	1.76E-03	5.37E-04	3.72E-03	1.32E-03	1.33E-03	9.59E-03	2.10E-04	0.00E+00	2.40E-03	1.34E-02
17	A06	110	Passenger Car	1117	0.00E+00	1.29E-05	1.40E-06	5.22E+01	9.01E-05	4.06E-01	2.88E-05	2.62E-03	2.77E-03	6.47E-04	2.80E-03	1.81E-03	1.85E-03	1.27E-04	2.64E-04	7.84E-08	9.48E-04	4.09E-04
17	A06	110	Passenger Truck	1871	0.00E+00	2.81E-05	3.00E-06	1.25E+02	1.86E-04	8.36E-01	6.02E-05	7.34E-03	4.81E-03	1.21E-03	5.81E-03	3.76E-03	3.85E-03	7.41E-04	6.26E-04	1.83E-07	1.96E-03	1.18E-03
17	A06	110	Single Unit Short Haul Truck	297	0.00E+00	3.93E-05	2.08E-06	5.70E+01	4.03E-05	1.57E-01	4.31E-05	2.29E-02	1.77E-03	5.87E-04	4.76E-03	1.33E-03	1.34E-03	5.82E-03	2.28E-04	1.01E-07	3.41E-03	4.27E-03
17	A06	110	Single Unit Long Haul Truck	13	0.00E+00	1.68E-06	8.65E-08	2.39E+00	1.62E-06	6.19E-03	1.84E-06	9.50E-04	7.92E-05	2.51E-05	2.06E-04	5.46E-05	5.54E-05	2.43E-04	9.56E-06	4.14E-09	1.50E-04	1.77E-04
17	A06	110	Combination Short Haul Truck	201	0.00E+00	7.60E-05	5.71E-06	7.68E+01	1.81E-07	6.85E-02	5.38E-05	8.12E-02	2.16E-03	8.56E-04	4.02E-03	1.66E-03	1.64E-03	1.16E-02	2.57E-04	0.00E+00	2.37E-03	1.53E-02
17	A06	110	Combination Long Haul Truck	184	0.00E+00	6.87E-05	4.96E-06	6.94E+01	2.08E-07	6.81E-02	5.00E-05	7.85E-02	1.94E-03	5.93E-04	4.11E-03	1.46E-03	1.47E-03	1.06E-02	2.32E-04	0.00E+00	2.64E-03	1.48E-02
17	A07	110	Passenger Car	1158	0.00E+00	1.34E-05	1.45E-06	5.41E+01	9.34E-05	4.21E-01	2.98E-05	2.72E-03	2.88E-03	6.71E-04	2.90E-03	1.87E-03	1.92E-03	1.32E-04	2.74E-04	8.12E-08	9.83E-04	4.25E-04
17	A07	110	Passenger Truck	1940	0.00E+00	2.91E-05	3.11E-06	1.29E+02	1.93E-04	8.66E-01	6.25E-05	7.61E-03	4.99E-03	1.26E-03	6.02E-03	3.90E-03	3.99E-03	7.68E-04	6.49E-04	1.90E-07	2.03E-03	1.23E-03
17	A07	110	Single Unit Short Haul Truck	256	0.00E+00	3.39E-05	1.80E-06	4.91E+01	3.47E-05	1.35E-01	3.72E-05	1.97E-02	1.53E-03	5.06E-04	4.10E-03	1.15E-03	1.16E-03	5.02E-03	1.96E-04	8.74E-08	2.94E-03	3.68E-03
17	A07	110	Single Unit Long Haul Truck	11	0.00E+00	1.45E-06	7.46E-08	2.06E+00	1.40E-06	5.34E-03	1.59E-06	8.20E-04	6.83E-05	2.17E-05	1.78E-04	4.71E-05	4.78E-05	2.10E-04	8.25E-06	3.57E-09	1.30E-04	1.53E-04
17	A07	110	Combination Short Haul Truck	199	0.00E+00	7.51E-05	5.64E-06	7.58E+01	1.79E-07	6.77E-02	5.31E-05	8.01E-02	2.13E-03	8.45E-04	3.97E-03	1.64E-03	1.62E-03	1.14E-02	2.54E-04	0.00E+00	2.34E-03	1.51E-02
17	A07	110	Combination Long Haul Truck	181	0.00E+00	6.79E-05	4.90E-06	6.85E+01	2.05E-07	6.72E-02	4.93E-05	7.75E-02	1.92E-03	5.85E-04	4.06E-03	1.44E-03	1.45E-03	1.05E-02	2.29E-04	0.00E+00	2.61E-03	1.46E-02
17	A08	110	Passenger Car	997	0.00E+00	1.15E-05	1.25E-06	4.66E+01	8.04E-05	3.62E-01	2.57E-05	2.34E-03	2.47E-03	5.77E-04	2.50E-03	1.61E-03	1.65E-03	1.14E-04	2.36E-04	6.99E-08	8.46E-04	3.65E-04
17	A08	110	Passenger Truck	1669	0.00E+00	2.51E-05	2.67E-06	1.11E+02	1.66E-04	7.45E-01	5.37E-05	6.55E-03	4.29E-03	1.08E-03	5.18E-03	3.35E-03	3.44E-03	6.61E-04	5.58E-04	1.64E-07	1.74E-03	1.05E-03
17	A08	110	Single Unit Short Haul Truck	313	0.00E+00	4.14E-05	2.19E-06	6.00E+01	4.24E-05	1.65E-01	4.55E-05	2.41E-02	1.87E-03	6.19E-04	5.01E-03	1.40E-03	1.42E-03	6.14E-03	2.40E-04	1.07E-07	3.59E-03	4.50E-03
17	A08	110	Single Unit Long Haul Truck	14	0.00E+00	1.77E-06	9.11E-08	2.52E+00	1.70E-06	6.52E-03	1.94E-06	1.00E-03	8.34E-05	2.65E-05	2.17E-04	5.76E-05	5.84E-05	2.56E-04	1.01E-05	4.36E-09	1.59E-04	1.87E-04
17	A08	110	Combination Short Haul Truck	219	0.00E+00	8.28E-05	6.23E-06	8.37E+01	1.97E-07	7.47E-02	5.86E-05	8.84E-02	2.35E-03	9.33E-04	4.38E-03	1.81E-03	1.79E-03	1.26E-02	2.80E-04	0.00E+00	2.59E-03	1.67E-02
17	A08	110	Combination Long Haul Truck	200	0.00E+00	7.49E-05	5.40E-06	7.56E+01	2.26E-07	7.41E-02	5.44E-05	8.55E-02	2.12E-03	6.46E-04	4.48E-03	1.59E-03	1.60E-03	1.15E-02	2.53E-04	0.00E+00	2.88E-03	1.61E-02
17	A09	110	Passenger Car	1227	0.00E+00	1.42E-05	1.54E-06	5.73E+01	9.89E-05	4.46E-01	3.16E-05	2.88E-03	3.05E-03	7.10E-04	3.08E-03	1.98E-03	2.03E-03	1.40E-04	2.90E-04	8.60E-08	1.04E-03	4.50E-04
17	A09	110	Passenger Truck	2055	0.00E+00	3.08E-05	3.29E-06	1.37E+02	2.04E-04	9.17E-01	6.61E-05	8.06E-03	5.28E-03	1.33E-03	6.38E-03	4.13E-03	4.23E-03	8.14E-04	6.87E-04	2.01E-07	2.15E-03	1.30E-03
17	A09	110	Single Unit Short Haul Truck	292	0.00E+00	3.86E-05	2.05E-06	5.60E+01	3.96E-05	1.54E-01	4.24E-05	2.25E-02	1.74E-03	5.77E-04	4.68E-03	1.31E-03	1.32E-03	5.72E-03	2.24E-04	9.96E-08	3.35E-03	4.19E-03
17	A09	110	Single Unit Long Haul Truck	13	0.00E+00	1.65E-06	8.50E-08	2.35E+00	1.59E-06	6.08E-03	1.81E-06	9.34E-04	7.78E-05	2.47E-05	2.02E-04	5.37E-05	5.44E-05	2.39E-04	9.40E-06	4.07E-09	1.48E-04	1.74E-04
17	A09	110	Combination Short Haul Truck	232	0.00E+00	8.78E-05	6.59E-06	8.87E+01	2.09E-07	7.91E-02	6.21E-05	9.37E-02	2.49E-03	9.88E-04	4.64E-03	1.91E-03	1.90E-03	1.34E-02	2.97E-04	0.00E+00	2.74E-03	1.77E-02
17	A09	110	Combination Long Haul Truck	212	0.00E+00	7.93E-05	5.72E-06	8.01E+01	2.40E-07	7.85E-02	5.77E-05	9.06E-02	2.24E-03	6.84E-04	4.74E-03	1.68E-03	1.69E-03	1.22E-02	2.68E-04	0.00E+00	3.05E-03	1.71E-02
17	A10	110	Passenger Car	1209	0.00E+00	1.40E-05	1.51E-06	5.65E+01	9.75E-05	4.39E-01	3.11E-05	2.83E-03	3.00E-03	7.00E-04	3.03E-03	1.95E-03	2.00E-03	1.38E-04	2.86E-04	8.48E-08	1.03E-03	4.43E-04
17	A10	110	Passenger Truck	2024	0.00E+00	3.04E-05	3.24E-06	1.35E+02	2.01E-04	9.04E-01	6.52E-05	7.94E-03	5.21E-03	1.31E-03	6.28E-03	4.07E-03	4.17E-03	8.02E-04	6.77E-04	1.98E-07	2.12E-03	1.28E-03
17	A10	110	Single Unit Short Haul Truck	369	0.00E+00	4.87E-05	2.58E-06	7.07E+01	5.00E-05	1.95E-01	5.35E-05	2.84E-02	2.20E-03	7.28E-04	5.90E-03	1.65E-03	1.67E-03	7.22E-03	2.83E-04	1.26E-07	4.23E-03	5.29E-03
17	A10	110	Single Unit Long Haul Truck	16	0.00E+00	2.09E-06	1.07E-07	2.96E+00	2.01E-06	7.68E-03	2.28E-06	1.18E-03	9.82E-05	3.12E-05	2.55E-04	6.78E-05	6.87E-05	3.02E-04	1.19E-05	5.13E-09	1.87E-04	2.20E-04
17	A10	110	Combination Short Haul Truck	263	0.00E+00	9.91E-05	7.45E-06	1.00E+02	2.36E-07	8.94E-02	7.02E-05	1.06E-01	2.81E-03	1.12E-03	5.24E-03	2.16E-03	2.14E-03	1.51E-02	3.35E-04	0.00E+00	3.10E-03	1.99E-02
17	A10	110	Combination Long Haul Truck	239	0.00E+00	8.96E-05	6.47E-06	9.05E+01	2.71E-07	8.87E-02	6.51E-05	1.02E-01	2.53E-03	7.73E-04	5.36E-03	1.90E-03	1.91E-03	1.38E-02	3.03E-04	0.00E+00	3.45E-03	1.93E-02
16	B05	100	Passenger Car	426	0.00E+00	4.67E-06	5.05E-07	1.92E+01	3.25E-05	1.29E-01	1.04E-05	9.11E-04	1.38E-03	2.79E-04	1.01E-03	6.52E-04	6.69E-04	5.34E-05	9.69E-05	2.67E-08	3.42E-04	1.42E-04
16	B05	100	Passenger Truck	714	0.00E+00	1.01E-05	1.07E-06	4.52E+01	6.60E-05	2.59E-01	2.15E-05	2.59E-03	2.44E-03	5.19E-04	2.06E-03	1.34E-03	1.37E-03	2.88E-04	2.27E-04	6.21E-08	6.93E-04	4.19E-04
16	B05	100	Single Unit Short Haul Truck	128	0.00E+00	1.72E-05	8.53E-07	2.34E+01	1.50E-05	5.43E-02	1.87E-05	9.31E-03	8.85E-04	2.57E-04	2.13E-03	5.29E-04	5.37E-04	2.36E-03	9.41E-05	3.85E-08	1.59E-03	1.74E-03
16	B05	100	Single Unit Long Haul Truck	6	0.00E+00	7.47E-07	3.63E-08	9.87E-01	6.23E-07	2.22E-03	8.06E-07	3.92E-04	4.00E-05	1.11E-05	9.29E-05	2.23E-05	2.27E-05	9.89E-05	3.97E-06	1.58E-09	7.02E-05	7.32E-05
16	B05	100	Combination Short Haul Truck	41	0.00E+00	1.42E-05	1.04E-06	1.49E+01	4.04E-08	1.38E-02	1.02E-05	1.51E-02	4.81E-04	1.71E-04	7.96E-04	3.04E-04	2.99E-04	2.25E-03	5.00E-05	0.00E+00	4.97E-04	2.85E-03
16	B05	100	Combination Long Haul Truck	38	0.00E+00	1.24E-05	8.47E-07	1.35E+01	4.68E-08	1.38E-02	9.26E-06	1.44E-02	4.45E-04	1.24E-04	8.10E-04	2.54E-04	2.53E-04	2.07E-03	4.53E-05	0.00E+00	5.57E-04	2.70E-03
16	B06	100	Passenger Car	759	0.00E+00	8.32E-06	9.00E-07	3.41E+01	5.79E-05	2.29E-01	1.85E-05	1.62E-03	2.46E-03	4.96E-04	1.80E-03	1.16E-03	1.19E-03	9.51E-05	1.72E-04	4.75E-08	6.09E-04	2.53E-04
16	B06	100	Passenger Truck	1270	0.00E+00	1.79E-05	1.91E-06	8.05E+01	1.18E-04	4.60E-01	3.82E-05	4.61E-03	4.35E-03	9.24E-04	3.67E-03	2.38E-03	2.44E-03	5.12E-04	4.04E-04	1.11E-07	1.23E-03	7.45E-04
16	B06	100	Single Unit Short Haul Truck	261	0.00E+00	3.51E-05	1.74E-06	4.77E+01	3.06E-05	1.11E-01	3.80E-05	1.90E-02	1.80E-03	5.24E-04	4.34E-03	1.08E-03	1.09E-03	4.81E-03	1.92E-04	7.84E-08	3.25E-03	3.54E-03
16	B06	100	Single Unit Long Haul Truck	12	0.00E+00	1.52E-06	7.40E-08	2.01E+00	1.27E-06	4.51E-03	1.64E-06	7.99E-04	8.15E-05	2.27E-05	1.89E-04	4.55E-05	4.62E-05	2.01E-04	8.10E-06	3.21E-09	1.43E-04	1.49E-04
16	B06	100	Combination Short Haul Truck	31	0.00E+00	1.06E-05	7.74E-07	1.12E+01	3.02E-08	1.03E-02	7.65E-06	1.13E-02	3.59E-04	1.28E-04	5.94E-04	2.27E-04	2.23E-04	1.68E-03	3.74E-05	0.00E+00	3.71E-04	2.13E-03
16	B06	100	Combination Long Haul Truck	28	0.00E+00	9.23E-06	6.32E-07	1.01E+01	3.49E-08	1.03E-02	6.91E-06	1.07E-02	3.33E-04	9.25E-05	6.05E-04	1.89E-04	1.89E-04	1.54E-03	3.38E-05	0.00E+00	4.16E-04	2.02E-03
16	B07	100	Passenger Car	476	0.00E+00	5.22E-06	5.64E-07	2.14E+01	3.63E-05	1.44E-01	1.16E-05	1.02E-03	1.54E-03	3.11E-04	1.13E-03	7.28E-04	7.47E-04	5.97E-05	1.08E-04	2.98E-08	3.82E-04	1.59E-04
16	B07	100	Passenger Truck	797	0.00E+00	1.13E-05	1.20E-06	5.05E+01	7.37E-05	2.89E-01	2.40E-05	2.89E-03	2.73E-03	5.80E-04	2.30E-03	1.49E-03	1.53E-03	3.21E-04	2.53E-04	6.94E-08	7.74E-04	4.68E-04
16	B08	100	Passenger Car	953	0.00E+00	1.04E-05	1.13E-06	4.29E+01	7.27E-05	2.87E-01	2.32E-05	2.04E-03	3.09E-03	6.23E-04	2.26E-03	1.46E-03	1.50E-03	1.19E-04	2.17E-04	5.97E-08	7.65E-04	3.18E-04
16	B08	100	Passenger Truck	1595	0.00E+00	2.25E-05	2.40E-06	1.01E+02	1.48E-04	5.78E-01	4.80E-05	5.79E-03	5.46E-03	1.16E-03	4.61E-03	2.99E-03	3.06E-03	6.43E-04	5.07E-04	1.39E-07	1.55E-03	9.36E-04
16	B08	100	Single Unit Short Haul Truck	3	0.00E+00	3.86E-07	1.91E-08	5.25E-01	3.37E-07	1.21E-03	4.18E-07	2.08E-04	1.98E-05	5.76E-06	4.77E-05	1.18E-05	1.20E-05	5.29E-05	2.11E-06	8.62E-10	3.57E-05	3.89E-05
16	B08	100	Combination Short Haul Truck	1	0.00E+00	1.80E-07	1.31E-08	1.89E-01	5.11E-10	1.75E-04	1.30E-07	1.91E-04	6.09E-06	2.17E-06	1.01E-05	3.84E-06	3.78E-06	2.85E-05	6.33E-07	0.00E+00	6.29E-06	3.60E-05
53	C11	70	Passenger Car	287	0.00E+00	3.64E-06	3.93E-07	1.39E+01	2.53E-05	9.42E-02	8.09E-06	5.84E-04	2.19E-03	3.53E-04	7.87E-04	5.07E-04	5.21E-04	5.13E-05	6.99E-05	1.91E-08	2.66E-04	9.13E-05
53	C11	70	Passenger Truck	480	0.00E+00	7.92E-06	8.38E-07	3.21E+01	5.01E-05	1.73E-01	1.65E-05	1.79E-03	3.93E-03	6.42E-04	1.57E-03	1.02E-03	1.05E-03	2.31E-04	1.60E-04	4.19E-08	5.24E-04	2.93E-04
53	C11	70	Single Unit Short Haul Truck	24	0.00E+00	5.53E-06	2.77E-07	4.33E+00	4.52E-06	8.67E-03	5.89E-06	2.72E-03	3.89E-04	7.79E-05	6.71E-04	1.65E-04	1.68E-04	4.34E-04	1.75E-05	7.05E-09	5.03E-04	5.10E-04
53	C11	70	Single Unit Long Haul Truck	1	0.00E+00	2.41E-07	1.20E-08	1.84E-01	1.95E-07	3.64E-04	2.57E-07	1.17E-04	1.78E-05	3.47E-06	2.93E-05	7.16E-06	7.28E-06	1.84E-05	7.42E-07	2.97E-10	2.21E-05	2.19E-05
53	C11

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	C15	40	Single Unit Long Haul Truck	1	0.00E+00	4.49E-07	2.34E-08	2.13E-01	3.91E-07	3.69E-04	4.78E-07	2.18E-04	4.19E-05	6.91E-06	5.33E-05	1.40E-05	1.42E-05	2.15E-05	8.58E-07	3.65E-10	3.91E-05	4.08E-05
50	C15	40	Combination Long Haul Truck	31	0.00E+00	2.73E-05	1.90E-06	1.39E+01	9.81E-08	2.38E-02	2.03E-05	3.04E-02	3.17E-03	5.72E-04	1.77E-03	5.65E-04	5.71E-04	2.09E-03	4.64E-05	0.00E+00	1.20E-03	5.72E-03
50	C15	40	Combination Long Haul Truck	28	0.00E+00	2.49E-05	1.62E-06	1.32E+01	1.11E-07	2.64E-02	1.91E-05	3.04E-02	3.19E-03	5.08E-04	1.82E-03	4.95E-04	5.04E-04	2.01E-03	4.41E-05	0.00E+00	1.32E-03	5.73E-03
52	C16	60	Passenger Car	104	0.00E+00	1.44E-06	1.56E-07	5.24E+00	1.00E-05	3.71E-02	3.20E-06	2.05E-04	1.03E-03	1.58E-04	3.11E-04	2.01E-04	2.06E-04	2.18E-05	2.62E-05	7.01E-09	1.05E-04	3.20E-05
52	C16	60	Passenger Truck	175	0.00E+00	3.16E-06	3.34E-07	1.19E+01	1.97E-05	6.64E-02	6.50E-06	6.59E-04	1.83E-03	2.84E-04	6.18E-04	4.03E-04	4.12E-04	9.06E-05	5.93E-05	1.49E-08	2.05E-04	1.09E-04
52	C16	60	Single Unit Short Haul Truck	4	0.00E+00	1.25E-06	6.25E-08	7.97E-01	1.03E-06	1.54E-03	1.33E-06	5.95E-04	1.01E-04	1.84E-05	1.52E-04	3.75E-05	3.81E-05	7.97E-05	3.22E-06	1.33E-09	1.14E-04	1.12E-04
52	C16	60	Combination Short Haul Truck	1	0.00E+00	6.41E-07	4.47E-08	4.17E-01	2.27E-09	5.61E-04	4.76E-07	6.94E-04	5.97E-05	1.18E-05	4.08E-05	1.33E-05	1.33E-05	6.29E-05	1.40E-06	0.00E+00	2.75E-05	1.31E-04
52	C16	60	Combination Long Haul Truck	1	0.00E+00	5.76E-07	3.75E-08	3.91E-01	2.61E-09	6.04E-04	4.44E-07	6.88E-04	6.00E-05	1.02E-05	4.21E-05	1.14E-05	1.16E-05	5.98E-05	1.31E-06	0.00E+00	3.05E-05	1.30E-04
53	C17	70	Passenger Car	511	0.00E+00	6.48E-06	7.01E-07	2.48E+01	4.51E-05	1.68E-01	1.44E-05	1.04E-03	3.90E-03	6.29E-04	1.40E-03	9.05E-04	9.28E-04	9.15E-05	1.25E-04	3.40E-08	4.75E-04	1.63E-04
53	C17	70	Passenger Truck	856	0.00E+00	1.41E-05	1.49E-06	5.72E+01	8.94E-05	3.08E-01	2.94E-05	3.19E-03	7.00E-03	1.14E-03	2.80E-03	1.82E-03	1.87E-03	4.13E-04	2.85E-04	7.46E-08	9.35E-04	5.23E-04
53	C17	70	Single Unit Short Haul Truck	61	0.00E+00	1.45E-05	7.24E-07	1.13E+01	1.18E-05	2.26E-02	1.54E-05	7.11E-03	1.02E-03	2.04E-04	1.75E-03	4.32E-04	4.39E-04	1.13E-03	4.56E-05	1.84E-08	1.31E-03	1.33E-03
53	C17	70	Single Unit Long Haul Truck	3	0.00E+00	6.29E-07	3.13E-08	4.80E-01	5.10E-07	9.51E-04	6.71E-07	3.06E-04	4.64E-05	9.05E-06	7.66E-05	1.87E-05	1.90E-05	4.80E-05	1.94E-06	7.77E-10	5.76E-05	5.73E-05
53	C17	70	Combination Long Haul Truck	32	0.00E+00	1.65E-05	1.17E-06	1.19E+01	5.35E-08	1.42E-02	1.21E-05	1.73E-02	1.25E-03	2.73E-04	1.00E-03	3.46E-04	3.46E-04	1.80E-03	4.00E-05	0.00E+00	6.57E-04	3.25E-03
53	C17	70	Combination Long Haul Truck	29	0.00E+00	1.49E-05	9.95E-07	1.11E+01	6.16E-08	1.50E-02	1.13E-05	1.70E-02	1.24E-03	2.27E-04	1.04E-03	3.01E-04	3.04E-04	1.70E-03	3.73E-05	0.00E+00	7.33E-04	3.20E-03
52	C18	60	Passenger Car	72	0.00E+00	9.88E-07	1.07E-07	3.60E+00	6.88E-06	2.55E-02	2.20E-06	1.41E-04	7.07E-04	1.09E-04	2.14E-04	1.38E-04	1.41E-04	1.50E-05	1.80E-05	4.81E-09	7.24E-05	2.20E-05
52	C18	60	Passenger Truck	120	0.00E+00	2.17E-06	2.29E-07	8.21E+00	1.35E-05	4.56E-02	4.46E-06	4.52E-04	1.26E-03	1.95E-04	4.24E-04	2.77E-04	2.83E-04	6.22E-05	4.07E-05	1.02E-08	1.41E-04	7.49E-05
52	C18	60	Single Unit Short Haul Truck	9	0.00E+00	2.63E-06	1.32E-07	1.68E+00	2.17E-06	3.25E-03	2.81E-06	1.25E-03	2.13E-04	3.87E-05	3.20E-04	7.89E-05	8.02E-05	1.68E-04	6.77E-06	2.79E-09	2.40E-04	2.35E-04
52	C18	60	Combination Short Haul Truck	4	0.00E+00	2.37E-06	1.65E-07	1.54E+00	8.39E-09	2.07E-03	1.76E-06	2.56E-03	2.21E-04	4.37E-05	1.51E-04	4.92E-05	4.93E-05	2.32E-04	5.16E-06	0.00E+00	1.01E-04	4.83E-04
52	C18	60	Combination Long Haul Truck	4	0.00E+00	2.13E-06	1.38E-07	1.44E+00	9.62E-09	2.23E-03	1.64E-06	2.54E-03	2.22E-04	3.76E-05	1.55E-04	4.22E-05	4.28E-05	2.21E-04	4.84E-06	0.00E+00	1.13E-04	4.79E-04
50	C19	40	Passenger Car	6	0.00E+00	9.97E-08	1.08E-08	3.44E-01	6.94E-07	2.57E-03	2.22E-07	1.07E-05	1.02E-04	1.46E-05	2.16E-05	1.39E-05	1.43E-05	1.86E-06	1.71E-06	4.15E-10	7.30E-06	1.67E-06
50	C19	40	Passenger Truck	10	0.00E+00	2.28E-07	2.39E-08	7.67E-01	1.37E-06	4.43E-03	4.57E-07	4.05E-05	1.82E-04	2.59E-05	4.30E-05	2.82E-05	2.88E-05	6.56E-06	3.78E-06	8.08E-10	1.42E-05	6.86E-06
53	C20	70	Passenger Car	132	0.00E+00	1.68E-06	1.81E-07	6.42E+00	1.17E-05	4.34E-02	3.73E-06	2.69E-04	1.01E-03	1.63E-04	3.63E-04	2.34E-04	2.40E-04	2.37E-05	3.22E-05	8.78E-09	1.23E-04	4.21E-05
53	C20	70	Passenger Truck	221	0.00E+00	3.65E-06	3.86E-07	1.48E+01	2.31E-05	7.97E-02	7.59E-06	8.24E-04	1.81E-03	2.96E-04	7.24E-04	4.71E-04	4.82E-04	1.07E-04	7.37E-05	1.93E-08	2.42E-04	1.35E-04
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	1.22E-06	6.10E-08	9.54E-01	9.96E-07	1.91E-03	1.30E-06	5.99E-04	8.57E-05	1.72E-05	1.48E-04	3.64E-05	3.70E-05	9.57E-05	3.85E-06	1.55E-09	1.11E-04	1.12E-04
53	C20	70	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.33E+00	5.97E-09	1.58E-03	1.35E-06	1.93E-03	1.40E-04	3.05E-05	1.12E-04	3.86E-05	3.86E-05	2.01E-04	4.46E-06	0.00E+00	7.34E-05	3.63E-04
53	C20	70	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.11E-07	1.24E+00	6.88E-09	1.68E-03	1.26E-06	1.90E-03	1.39E-04	2.53E-05	1.16E-04	3.36E-05	3.39E-05	1.90E-04	4.16E-06	0.00E+00	8.18E-05	3.57E-04
50	C21	40	Passenger Car	287	0.00E+00	4.83E-06	5.23E-07	1.67E+01	3.36E-05	1.25E-01	1.07E-05	5.19E-04	4.97E-03	7.09E-04	1.05E-03	6.74E-04	6.92E-04	9.00E-05	8.28E-05	2.01E-08	3.54E-04	8.11E-05
50	C21	40	Passenger Truck	481	0.00E+00	1.10E-05	1.16E-06	3.72E+01	6.63E-05	2.15E-01	2.21E-05	1.96E-03	8.82E-03	1.25E-03	2.08E-03	1.36E-03	1.40E-03	3.18E-04	1.83E-04	3.92E-08	6.88E-04	3.32E-04
50	C21	40	Single Unit Short Haul Truck	66	0.00E+00	2.94E-05	1.55E-06	1.41E+01	2.57E-05	2.44E-02	3.13E-05	1.44E-02	2.69E-03	4.47E-04	3.48E-03	9.20E-04	9.34E-04	1.43E-03	5.71E-05	2.42E-08	2.55E-03	2.70E-03
50	C21	40	Single Unit Long Haul Truck	3	0.00E+00	1.29E-06	6.74E-08	6.11E-01	1.12E-06	1.06E-03	1.37E-06	6.26E-04	1.20E-04	1.99E-05	1.53E-04	4.02E-05	4.09E-05	6.17E-05	2.47E-06	1.05E-09	1.12E-04	1.17E-04
50	C21	40	Combination Short Haul Truck	16	0.00E+00	1.46E-05	1.01E-06	7.40E+00	5.24E-08	1.27E-02	1.08E-05	1.62E-02	1.69E-03	3.06E-04	9.44E-04	3.02E-04	3.05E-04	1.12E-03	2.48E-05	0.00E+00	6.40E-04	3.06E-03
50	C21	40	Combination Long Haul Truck	15	0.00E+00	1.33E-05	8.67E-07	7.03E+00	5.95E-08	1.41E-02	1.02E-05	1.63E-02	1.70E-03	2.71E-04	9.73E-04	2.64E-04	2.69E-04	1.07E-03	2.35E-05	0.00E+00	7.03E-04	3.06E-03
52	C22	60	Passenger Car	86	0.00E+00	1.18E-06	1.28E-07	4.30E+00	8.21E-06	3.05E-02	2.62E-06	1.68E-04	8.44E-04	1.30E-04	2.55E-04	1.65E-04	1.69E-04	1.79E-05	2.15E-05	5.75E-09	8.64E-05	2.63E-05
52	C22	60	Passenger Truck	143	0.00E+00	2.59E-06	2.73E-07	9.80E+00	1.62E-05	5.44E-02	5.33E-06	5.40E-04	1.50E-03	2.33E-04	5.07E-04	3.30E-04	3.38E-04	7.43E-05	4.86E-05	1.22E-08	1.68E-04	8.94E-05
52	C22	60	Single Unit Short Haul Truck	2	0.00E+00	6.02E-07	3.01E-08	3.83E-01	4.96E-07	7.42E-04	6.42E-07	2.86E-04	4.87E-05	8.84E-06	7.31E-05	1.80E-05	1.83E-05	3.84E-05	1.55E-06	6.38E-10	5.48E-05	5.37E-05
52	C22	60	Combination Short Haul Truck	1	0.00E+00	8.57E-07	5.97E-08	5.57E-01	3.03E-09	7.49E-04	6.36E-07	9.27E-04	7.98E-05	1.58E-05	5.45E-05	1.78E-05	1.78E-05	8.40E-05	1.87E-06	0.00E+00	3.67E-05	1.75E-04
52	C22	60	Combination Long Haul Truck	1	0.00E+00	7.69E-07	5.00E-08	5.23E-01	3.48E-09	8.07E-04	5.93E-07	9.19E-04	8.02E-05	1.36E-05	5.62E-05	1.53E-05	1.55E-05	7.99E-05	1.75E-06	0.00E+00	4.07E-05	1.73E-04
53	C23	70	Passenger Car	427	0.00E+00	5.41E-06	5.86E-07	2.07E+01	3.77E-05	1.40E-01	1.20E-05	8.70E-04	3.26E-03	5.26E-04	1.17E-03	7.55E-04	7.75E-04	7.64E-05	1.04E-04	2.84E-08	3.97E-04	1.36E-04
53	C23	70	Passenger Truck	715	0.00E+00	1.18E-05	1.25E-06	4.78E+01	7.46E-05	2.57E-01	2.45E-05	2.66E-03	5.85E-03	9.56E-04	2.34E-03	1.52E-03	1.56E-03	3.44E-04	2.38E-04	6.23E-08	7.80E-04	4.37E-04
53	C23	70	Single Unit Short Haul Truck	32	0.00E+00	7.57E-06	3.79E-07	5.93E+00	6.19E-06	1.19E-02	8.07E-06	3.73E-03	5.33E-04	1.07E-04	9.19E-04	2.26E-04	2.30E-04	5.95E-04	2.39E-05	9.66E-09	6.88E-04	6.98E-04
53	C23	70	Single Unit Long Haul Truck	1	0.00E+00	3.30E-07	1.64E-08	2.52E-01	2.67E-07	4.98E-04	3.52E-07	1.60E-04	2.43E-05	4.75E-06	4.02E-05	9.80E-06	9.97E-06	2.51E-05	1.02E-06	4.07E-10	3.02E-05	3.00E-05
53	C23	70	Combination Short Haul Truck	16	0.00E+00	8.26E-06	5.87E-07	5.99E+00	2.68E-08	7.11E-03	6.06E-06	8.65E-03	6.28E-04	1.37E-04	5.03E-04	1.74E-04	1.73E-04	9.03E-04	2.00E-05	0.00E+00	3.30E-04	1.63E-03
53	C23	70	Combination Long Haul Truck	14	0.00E+00	7.46E-06	4.99E-07	5.59E+00	3.09E-08	7.53E-03	5.67E-06	8.53E-03	6.24E-04	1.14E-04	5.20E-04	1.51E-04	1.52E-04	8.54E-04	1.87E-05	0.00E+00	3.68E-04	1.61E-03
52	C24	60	Passenger Car	56	0.00E+00	7.77E-07	8.40E-08	2.83E+00	5.41E-06	2.01E-02	1.73E-06	1.11E-04	5.56E-04	8.54E-05	1.68E-04	1.08E-04	1.11E-04	1.18E-05	1.42E-05	3.78E-09	5.69E-05	1.73E-05
52	C24	60	Passenger Truck	94	0.00E+00	1.71E-06	1.80E-07	6.45E+00	1.06E-05	3.58E-02	3.51E-06	3.56E-04	9.91E-04	1.53E-04	3.34E-04	2.17E-04	2.23E-04	4.89E-05	3.20E-05	8.03E-09	1.11E-04	5.89E-05
50	C25	40	Passenger Car	195	0.00E+00	3.28E-06	3.55E-07	1.13E+01	2.28E-05	8.46E-02	7.29E-06	3.52E-04	3.37E-03	4.81E-04	7.10E-04	4.57E-04	4.69E-04	6.10E-05	5.62E-05	1.37E-08	2.40E-04	5.50E-05
50	C25	40	Passenger Truck	326	0.00E+00	7.50E-06	7.86E-07	2.52E+01	4.50E-05	1.46E-01	1.50E-05	1.33E-03	5.98E-03	8.50E-04	1.41E-03	9.26E-04	9.48E-04	2.16E-04	1.24E-04	2.66E-08	4.67E-04	2.25E-04
50	C25	40	Single Unit Short Haul Truck	39	0.00E+00	1.73E-05	9.10E-07	8.33E+00	1.51E-05	1.43E-02	1.84E-05	8.47E-03	1.58E-03	2.63E-04	2.05E-03	5.41E-04	5.50E-04	8.41E-04	3.36E-05	1.42E-08	1.50E-03	1.59E-03
50	C25	40	Single Unit Long Haul Truck	2	0.00E+00	7.59E-07	3.97E-08	3.60E-01	6.61E-07	6.24E-04	8.09E-07	3.68E-04	7.09E-05	1.17E-05	9.02E-05	2.37E-05	2.40E-05	3.63E-05	1.45E-06	6.18E-10	6.62E-05	6.91E-05
50	C25	40	Combination Short Haul Truck	32	0.00E+00	2.81E-05	1.95E-06	1.43E+01	1.01E-07	2.45E-02	2.09E-05	3.13E-02	3.27E-03	5.90E-04	1.82E-03	5.83E-04	5.88E-04	2.15E-03	4.78E-05	0.00E+00	1.24E-03	5.90E-03
50	C25	40	Combination Long Haul Truck	29	0.00E+00	2.56E-05	1.67E-06	1.36E+01	1.15E-07	2.72E-02	1.97E-05	3.14E-02	3.29E-03	5.24E-04	1.88E-03	5.10E-04	5.20E-04	2.07E-03	4.54E-05	0.00E+00	1.36E-03	5.91E-03
53	C26	70	Passenger Car	293	0.00E+00	3.71E-06	4.02E-07	1.42E+01	2.58E-05	9.61E-02	8.26E-06	5.97E-04	2.23E-03	3.60E-04	8.04E-04	5.18E-04	5.32E-04	5.24E-05	7.14E-05	1.94E-08	2.72E-04	9.32E-05
53	C26	70	Passenger Truck	490	0.00E+00	8.08E-06	8.56E-07	3.28E+01	5.12E-05	1.77E-01	1.68E-05	1.83E-03	4.01E-03	6.55E-04	1.60E-03	1.04E-03	1.07E-03	2.36E-04	1.63E-04	4.27E-08	5.35E-04	3.00E-04
53	C26	70	Single Unit Short Haul Truck	47	0.00E+00	1.12E-05	5.59E-07	8.74E+00	9.13E-06	1.75E-02	1.19E-05	5.49E-03	7.85E-04	1.57E-04	1.35E-03	3.34E-04	3.39E-04	8.76E-04	3.52E-05	1.42E-08	1.01E-03	1.03E-03
53	C26	70	Single Unit Long Haul Truck	2	0.00E+00	4.86E-07	2.42E-08	3.71E-01	3.94E-07	7.34E-04	5.18E-07	2.36E-04	3.58E-05	6.99E-06	5.92E-05	1.44E-05	1.47E-05	3.70E-05	1.50E-06	6.00E-10	4.45E-05	4.42E-05
53	C26	70	Combination Short Haul Truck	30	0.00E+00	1.56E-05	1.11E-06	1.13E+01	5.08E-08	1.35E-02	1.15E-05	1.64E-02	1.19E-03	2.60E-04	9.52E-04	3.29E-04	3.28E-04	1.71E-03	3.79E-05	0.00E+00	6.24E-04	3.08E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.41E-05	9.45E-07	1.06E+01	5.85E-08	1.43E-02	1.07E-05	1.61E-02	1.18E-03	2.15E-04	9.84E-04	2.86E-04	2.89E-04	1.62E-03	3.54E-05	0.00E+00	6.96E-04	3.04E-03
50	C27	40	Passenger Car	139	0.00E+00	2.34E-06	2.53E-07	8.07E+00	1.63E-05	6.02E-02	5.19E-06	2.51E-04	2.40E-03	3.43E-04	5.05E-04	3.26E-04	3.34E-04	4.35E-05	4.00E-05	9.73E-09	1.71E-04	3.92E-05
50	C27	40	Passenger Truck	232	0.00E+00	5.34E-06	5.60E-07	1.80E+01	3.20E-05	1.04E-01	1.07E-05	9.49E-04	4.26E-03	6.06E-04	1.01E-03	6.59E-04	6.75E-04	1.54E-04	8.85E-05	1.89E-08	3.32E-04	1.61E-04
50	C27	40	Single Unit Short Haul Truck	30	0.00E+00	1.32E-05	6.94E-07	6.36E+00	1.15E-05	1.09E-02	1.41E-05	6.46E-03	1.21E-03	2.01E-04	1.57E-03	4.13E-04	4.20E-04	6.42E-04	2.57E-05	1.09E-08	1.15E-03	1.21E-03
50	C27	40	Single Unit Long Haul Truck	1	0.00E+00	5.80E-07	3.03E-08	2.74E-01	5.05E-07	4.76E-04	6.17E-07	2.81E-04	5.41E-05	8.92E-06	6.88E-05	1.81E-05	1.84E-05	2.77E-05	1.11E-06	4.71E-10	5.05E-05	5.27E-05
50	C27	40	Combination Short Haul Truck	11	0.00E+00	9.76E-06	6.78E-07	4.95E+00	3.51E-08	8.51E-03	7.26E-06	1.09E-02	1.13E-03	2.05E-04	6.32E-04	2.02E-04	2.04E-04	7.46E-04	1.66E-05	0.00E+00	4.28E-04	2.05E-03
50	C27	40	Combination Long Haul Truck	10	0.00E+00	8.89E-06	5.80E-07	4.71E+00	3.99E-08	9.45E-03	6.84E-06	1.09E-02	1.14E-03	1.82E-04	6.51E-04	1.77E-04	1.80E-04	7.20E-04	1.58E-05	0.00E+00	4.71E-04	2.05E-03
52	C28	60	Passenger Car	274	0.00E+00	3.78E-06	4.09E-07	1.38E+01	2.63E-05	9.77E-02	8.41E-06	5.39E-04	2.71E-03	4.16E-04	8.19E-04	5.28E-04	5.42E-04	5.73E-05	6.90E-05	1.84E-08	2.77E-04	8.43E-05
52	C28	60	Passenger Truck	460	0.00E+00	8.31E-06	8.77E-07	3.14E+01	5.18E-05	1.75E-01	1.71E-05	1.73E-03	4.83E-03	7.46E-04	1.63E-03	1.06E-03	1.08E-03	2.38E-04	1.56E-04	3.91E-08	5.41E-04	2.87E-04
52	C28	60	Single Unit Short Haul Truck	2	0.00E+00	4.69E-07	2.35E-08	2.99E-01	3.87E-07	5.79E-04	5.01E-07	2.23E-04	3.80E-05	6.89E-06	5.70E-05	1.41E-05	1.43E-05	2.99E-05	1.21E-06	4.98E-10	4.27E-05	4.19E-05
52	C28	60	Combination Short Haul Truck	1	0.00E+00	5.94E-07	4.14E-08	3.87E-01	2.11E-09	5.20E-04	4.41E-07	6.43E-04	5.53E-05	1.10E-05	3.78E-05	1.23E-05	1.24E-05	5.83E-05	1.29E-06	0.00E+00	2.55E-05	1.21E-04
52	C28	60	Combination Long Haul Truck	1	0.00E+00	5.34E-07	3.47E-08	3.62E-01	2.41E-09	5.60E-04	4.11E-07	6.37E-04	5.56E-05	9.44E-06	3.90E-05	1.06E-05	1.07E-05	5.54E-05	1.21E-06	0.00E+00	2.82E-05	1.20E-04
53	C29	70	Passenger Car	55	0.00E+00	6.93E-07	7.50E-08	2.65E+00	4.82E-06	1.79E-02	1.54E-06	1.11E-04	4.17E-04	6.73E-05	1.50E-04	9.67E-05	9.92E-05	9.78E-06	1.33E-05	3.63E-09	5.08E-05	1.74E-05
53	C29	70	Passenger Truck	91	0.00E+00	1.51E-06	1.60E-07	6.12E+00	9.55E-06	3.29E-02	3.14E-06	3.41E-04	7.48E-04	1.22E-04	2.99E-04	1.95E-04	1.99E-04	4.41E-05	3.05E-05	7.97E-09	9.99E-05	5.59E-05
53	C29	70	Single Unit Short Haul Truck	2	0.00E+00	5.01E-07	2.51E-08	3.93E-01	4.10E-07	7.85E-04	5.34E-07	2.47E-04	3.53E-05	7.06E-06	6.08E-05	1.50E-05	1.52E-05	3.94E-05	1.58E-06	6.39E-10	4.56E-05	4.62E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	9.09E-07	6.46E-08	6.59E-01	2.95E-09	7.83E-04	6.67E-07	9.52E-04	6.92E-05	1.51E-05	5.54E-05	1.91E-05	1.91E-05	9.93E-05	2.21E-06	0.00E+00	3.63E-05	1.79E-04
53	C29	70	Combination Long Haul Truck	2	0.00E+00	8.22E-07	5.49E-08	6.15E-01	3.40E-09	8.29E-04	6.24E-07	9.38E-04	6.87E-05	1.25E-05	5.72E-05	1.66E-05	1.68E-05	9.40E-05	2.06E-06	0.00E+00	4.05E-05	1.77E-04
50	C30	40	Passenger Car	50	0.00E+00	8.35E-07	9.03E-08	2.88E+00	5.81E-06	2.15E-02	1.86E-06	8.97E-05	8.58E-04	1.23E-04	1.81E-04	1.17E-04	1.20E-04	1.55E-05	1.43E-05	3.48E-09	6.12E-05	1.40E-05
50	C30	40	Passenger Truck	83	0.00E+00	1.91E-06	2.00E-07	6.43E+00	1.15E-05	3.71E-02	3.82E-06	3.39E-04	1.52E-03	2.17E-04	3.60E-04	2.36E-04	2.41E-04	5.50E-05	3.16E-05	6.77E-09	1.19E-04	5.74E-05
50	C30	40	Single Unit Short Haul Truck	21	0.00E+00	9.40E-06	4.93E-07	4.52E+00	8.19E-06	7.78E-03	1.00E-05	4.59E-03	8.59E-04	1.43E-04	1.11E-03	2.94E-04	2.98E-04	4.56E-04	1.82E-05	7.72E-09	8.14E-04	8.61E-04
50	C30	40	Single Unit Long Haul Truck	1	0.00E+00	4.12E-07	2.15E-08	1.95E-01	3.59E-07	3.38E-04	4.39E-07	2.00E-04	3.85E-05	6.34E-06	4.89E-05	1.28E-05	1.30E-05	1.97E-05	7.87E-07	3.35E-10	3.59E-05	3.75E-05
50	C30	40	Combination Short Haul Truck	22	0.00E+00	1.91E-05	1.32E-06	9.68E+00	6.86E-08	1.66E-02	1.42E-05	2.12E-02	2.22E-03	4.00E-04	1.24E-03	3.95E-04	3.99E-04	1.46E-03	3.24E-05	0.00E+00	8.37E-04	4.00E-03
50	C30	40	Combination Long Haul Truck	20	0.00E+00	1.74E-05	1.13E-06	9.20E+00	7.79E-08	1.85E-02	1.34E-05	2.13E-02	2.23E-03	3.55E-04	1.27E-03	3.46E-04	3.52E-04	1.41E-03	3.08E-05	0.00E+00	9.20E-04	4.01E-03
52	C31	60	Passenger Car	73	0.00E+00	1.01E-06	1.09E-07	3.69E+00	7.04E-06	2.61E-02	2.25E-06	1.44E-04	7.24E-04	1.11E-04	2.19E-04	1.41E-04	1.45E-04	1.53E-05	1.85E-05	4.93E-09	7.41E-05	2.25E-05
52	C31	60	Passenger Truck	123	0.00E+00	2.22E-06	2.35E-07	8.41E+00	1.39E-05	4.67E-02	4.57E-06	4.63E-04	1.29E-03	2.00E-04	4.35E-04	2.83E-04	2.90E-04	6.38E-05	4.17E-05	1.05E-08	1.45E-04	7.67E-05
52	C31	60	Single Unit Short Haul Truck	17	0.00E+00	4.92E-06	2.46E-07	3.13E+00	4.05E-06	6.06E-03	5.25E-06	2.34E-03	3.98E-04	7.22E-05	5.98E-04	1.48E-04	1.50E-04	3.14E-04	1.27E-05	5.21E-09	4.48E-04	4.39E-04
52	C31	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C39	60	Passenger Car	78	0.00E+00	1.08E-06	1.17E-07	3.93E+00	7.52E-06	2.79E-02	2.40E-06	1.54E-04	7.73E-04	1.19E-04	2.34E-04	1.51E-04	1.55E-04	1.64E-05	1.97E-05	5.26E-09	7.91E-05	2.40E-05
52	C39	60	Passenger Truck	131	0.00E+00	2.37E-06	2.50E-07	8.97E+00	1.48E-05	4.98E-02	4.88E-06	4.94E-04	1.38E-03	2.13E-04	4.64E-04	3.02E-04	3.10E-04	6.80E-05	4.45E-05	1.12E-08	1.54E-04	8.18E-05
52	C39	60	Single Unit Short Haul Truck	17	0.00E+00	5.09E-06	2.55E-07	3.24E+00	4.19E-06	6.28E-03	5.43E-06	2.42E-03	4.12E-04	7.47E-05	6.18E-04	1.53E-04	1.55E-04	3.24E-04	1.31E-05	5.40E-09	4.63E-04	4.54E-04
52	C39	60	Single Unit Long Haul Truck	1	0.00E+00	2.22E-07	1.11E-08	1.38E-01	1.82E-07	2.66E-04	2.37E-07	1.05E-04	1.85E-05	3.31E-06	2.71E-05	6.64E-06	6.75E-06	1.38E-05	5.59E-07	2.29E-10	2.03E-05	1.96E-05
52	C39	60	Combination Short Haul Truck	7	0.00E+00	4.20E-06	2.92E-07	2.73E+00	1.49E-08	3.67E-03	3.11E-06	4.54E-03	3.91E-04	7.73E-05	2.67E-04	8.71E-05	8.72E-05	4.11E-04	9.14E-06	0.00E+00	1.80E-04	8.56E-04
52	C39	60	Combination Long Haul Truck	7	0.00E+00	3.77E-06	2.45E-07	2.56E+00	1.70E-08	3.95E-03	2.90E-06	4.50E-03	3.93E-04	6.66E-05	2.75E-04	7.48E-05	7.58E-05	3.91E-04	8.57E-06	0.00E+00	1.99E-04	8.48E-04
9	D01	60	Passenger Car	829	0.00E+00	1.24E-05	1.35E-06	4.16E+01	8.66E-05	3.23E-01	2.77E-05	1.69E-03	8.42E-03	1.29E-03	2.69E-03	1.74E-03	1.78E-03	1.73E-04	2.09E-04	5.75E-08	9.12E-04	2.64E-04
9	D01	60	Passenger Truck	1389	0.00E+00	2.74E-05	2.90E-06	9.50E+01	1.72E-04	5.77E-01	5.66E-05	5.51E-03	1.54E-02	2.40E-03	5.38E-03	3.50E-03	3.59E-03	7.35E-04	4.72E-04	1.30E-07	1.79E-03	9.14E-04
9	D01	60	Single Unit Short Haul Truck	3	0.00E+00	8.98E-07	4.49E-08	5.72E-01	7.41E-07	1.11E-03	9.59E-07	4.28E-04	7.28E-05	1.32E-05	1.09E-04	2.69E-05	2.74E-05	5.73E-05	2.31E-06	9.53E-10	8.18E-05	8.01E-05
9	D01	60	Combination Short Haul Truck	26	0.00E+00	1.52E-05	1.06E-06	9.90E+00	5.39E-08	1.33E-02	1.13E-05	1.65E-02	1.42E-03	2.80E-04	9.68E-04	3.16E-04	3.16E-04	1.49E-03	3.31E-05	0.00E+00	6.52E-04	3.10E-03
9	D01	60	Combination Long Haul Truck	24	0.00E+00	1.37E-05	8.89E-07	9.28E+00	6.18E-08	1.43E-02	1.05E-05	1.63E-02	1.42E-03	2.42E-04	9.98E-04	2.71E-04	2.75E-04	1.42E-03	3.11E-05	0.00E+00	7.23E-04	3.07E-03
9	D02	60	Passenger Car	1060	0.00E+00	1.59E-05	1.72E-06	5.32E+01	1.11E-04	4.13E-01	3.54E-05	2.16E-03	1.08E-02	1.65E-03	3.44E-03	2.22E-03	2.28E-03	2.21E-04	2.66E-04	7.34E-08	1.16E-03	3.38E-04
9	D02	60	Passenger Truck	1774	0.00E+00	3.51E-05	3.70E-06	1.21E+02	2.19E-04	7.37E-01	7.23E-05	7.04E-03	1.97E-02	3.06E-03	6.87E-03	4.48E-03	4.59E-03	9.39E-04	6.03E-04	1.67E-07	2.29E-03	1.17E-03
9	D02	60	Single Unit Short Haul Truck	7	0.00E+00	2.07E-06	1.04E-07	1.32E+00	1.71E-06	2.56E-03	2.21E-06	9.88E-04	1.68E-04	3.05E-05	2.52E-04	6.22E-05	6.33E-05	1.32E-04	5.34E-06	2.20E-09	1.89E-04	1.85E-04
9	D02	60	Combination Short Haul Truck	32	0.00E+00	1.86E-05	1.29E-06	1.21E+01	6.58E-08	1.62E-02	1.38E-05	2.01E-02	1.73E-03	3.42E-04	1.18E-03	3.86E-04	3.86E-04	1.82E-03	4.05E-05	0.00E+00	7.96E-04	3.79E-03
9	D02	60	Combination Long Haul Truck	29	0.00E+00	1.67E-05	1.09E-06	1.13E+01	7.55E-08	1.75E-02	1.29E-05	1.99E-02	1.74E-03	2.95E-04	1.22E-03	3.31E-04	3.36E-04	1.73E-03	3.79E-05	0.00E+00	8.83E-04	3.75E-03
9	D03	60	Passenger Car	805	0.00E+00	1.21E-05	1.31E-06	4.04E+01	8.41E-05	3.14E-01	2.69E-05	1.64E-03	8.17E-03	1.25E-03	2.61E-03	1.69E-03	1.73E-03	1.68E-04	2.02E-04	5.58E-08	8.85E-04	2.57E-04
9	D03	60	Passenger Truck	1348	0.00E+00	2.66E-05	2.81E-06	9.23E+01	1.67E-04	5.60E-01	5.49E-05	5.35E-03	1.50E-02	2.33E-03	5.22E-03	3.40E-03	3.48E-03	7.14E-04	4.58E-04	1.27E-07	1.74E-03	8.87E-04
9	D03	60	Single Unit Short Haul Truck	36	0.00E+00	1.06E-05	5.31E-07	6.76E+00	8.74E-06	1.31E-02	1.13E-05	5.05E-03	8.59E-04	1.56E-04	1.29E-03	3.18E-04	3.23E-04	6.76E-04	2.73E-05	1.12E-08	9.66E-04	9.46E-04
9	D03	60	Single Unit Long Haul Truck	2	0.00E+00	4.63E-07	2.31E-08	2.88E-01	3.80E-07	5.55E-04	4.95E-07	2.18E-04	3.86E-05	6.89E-06	5.65E-05	1.38E-05	1.41E-05	2.88E-05	1.17E-06	4.78E-10	4.24E-05	4.09E-05
9	D03	60	Combination Short Haul Truck	39	0.00E+00	2.31E-05	1.61E-06	1.50E+01	8.18E-08	2.02E-02	1.71E-05	2.50E-02	2.15E-03	4.25E-04	1.47E-03	4.79E-04	4.80E-04	2.26E-03	5.03E-05	0.00E+00	9.89E-04	4.71E-03
9	D03	60	Combination Long Haul Truck	36	0.00E+00	2.07E-05	1.35E-06	1.41E+01	9.38E-08	2.17E-02	1.60E-05	2.48E-02	2.16E-03	3.67E-04	1.51E-03	4.12E-04	4.17E-04	2.15E-03	4.72E-05	0.00E+00	1.10E-03	4.66E-03
9	D04	60	Passenger Car	974	0.00E+00	1.46E-05	1.58E-06	4.89E+01	1.02E-04	3.80E-01	3.25E-05	1.99E-03	9.88E-03	1.52E-03	3.16E-03	2.04E-03	2.09E-03	2.03E-04	2.45E-04	6.75E-08	1.07E-03	3.10E-04
9	D04	60	Passenger Truck	1630	0.00E+00	3.22E-05	3.40E-06	1.12E+02	2.01E-04	6.77E-01	6.64E-05	6.47E-03	1.81E-02	2.81E-03	6.31E-03	4.11E-03	4.21E-03	8.63E-04	5.54E-04	1.53E-07	2.10E-03	1.07E-03
9	D04	60	Single Unit Short Haul Truck	40	0.00E+00	1.19E-05	5.94E-07	7.57E+00	9.79E-06	1.46E-02	1.27E-05	5.65E-03	9.62E-04	1.74E-04	1.44E-03	3.56E-04	3.62E-04	7.57E-04	3.06E-05	1.26E-08	1.08E-03	1.06E-03
9	D04	60	Single Unit Long Haul Truck	2	0.00E+00	5.19E-07	2.58E-08	3.23E-01	4.25E-07	6.22E-04	5.54E-07	2.45E-04	4.32E-05	7.72E-06	6.32E-05	1.55E-05	1.58E-05	3.23E-05	1.31E-06	5.36E-10	4.75E-05	4.58E-05
9	D04	60	Combination Short Haul Truck	68	0.00E+00	3.99E-05	2.78E-06	2.60E+01	1.41E-07	3.49E-02	2.96E-05	4.32E-02	3.72E-03	7.36E-04	2.54E-03	8.29E-04	8.30E-04	3.92E-03	8.69E-05	0.00E+00	1.71E-03	8.14E-03
9	D04	60	Combination Long Haul Truck	62	0.00E+00	3.58E-05	2.33E-06	2.44E+01	1.62E-07	3.76E-02	2.76E-05	4.28E-02	3.74E-03	6.34E-04	2.62E-03	7.12E-04	7.21E-04	3.72E-03	8.16E-05	0.00E+00	1.90E-03	8.07E-03
9	D05	60	Passenger Car	829	0.00E+00	1.24E-05	1.35E-06	4.16E+01	8.66E-05	3.23E-01	2.77E-05	1.69E-03	8.41E-03	1.29E-03	2.69E-03	1.74E-03	1.78E-03	1.73E-04	2.08E-04	5.74E-08	9.11E-04	2.64E-04
9	D05	60	Passenger Truck	1388	0.00E+00	2.74E-05	2.90E-06	9.50E+01	1.72E-04	5.76E-01	5.65E-05	5.51E-03	1.54E-02	2.40E-03	5.38E-03	3.50E-03	3.59E-03	7.35E-04	4.72E-04	1.30E-07	1.79E-03	9.13E-04
9	D05	60	Single Unit Short Haul Truck	32	0.00E+00	9.41E-06	4.71E-07	6.00E+00	7.76E-06	1.16E-02	1.00E-05	4.48E-03	7.63E-04	1.38E-04	1.14E-03	2.82E-04	2.87E-04	6.00E-04	2.42E-05	9.98E-09	8.57E-04	8.40E-04
9	D05	60	Single Unit Long Haul Truck	1	0.00E+00	4.11E-07	2.05E-08	2.56E-01	3.37E-07	4.93E-04	4.39E-07	1.94E-04	3.42E-05	6.12E-06	5.01E-05	1.23E-05	1.25E-05	2.56E-05	1.04E-06	4.25E-10	3.76E-05	3.63E-05
9	D05	60	Combination Short Haul Truck	27	0.00E+00	1.60E-05	1.11E-06	1.04E+01	5.66E-08	1.40E-02	1.19E-05	1.73E-02	1.49E-03	2.95E-04	1.02E-03	3.32E-04	3.32E-04	1.57E-03	3.48E-05	0.00E+00	6.85E-04	3.26E-03
9	D05	60	Combination Long Haul Truck	25	0.00E+00	1.43E-05	9.34E-07	9.75E+00	6.49E-08	1.51E-02	1.11E-05	1.71E-02	1.50E-03	2.54E-04	1.05E-03	2.85E-04	2.89E-04	1.49E-03	3.26E-05	0.00E+00	7.60E-04	3.23E-03
9	D06	60	Passenger Car	1287	0.00E+00	1.93E-05	2.09E-06	6.46E+01	1.34E-04	5.02E-01	4.29E-05	2.62E-03	1.31E-02	2.01E-03	4.18E-03	2.69E-03	2.76E-03	2.69E-04	3.24E-04	8.92E-08	1.41E-03	4.10E-04
9	D06	60	Passenger Truck	2155	0.00E+00	4.26E-05	4.50E-06	1.47E+02	2.66E-04	8.95E-01	8.78E-05	8.55E-03	2.40E-02	3.72E-03	8.34E-03	5.44E-03	5.57E-03	1.14E-03	7.32E-04	2.02E-07	2.78E-03	1.42E-03
9	D06	60	Single Unit Short Haul Truck	48	0.00E+00	1.42E-05	7.08E-07	9.02E+00	1.17E-05	1.75E-02	1.51E-05	6.74E-03	1.15E-03	2.08E-04	1.72E-03	4.25E-04	4.32E-04	9.03E-04	3.64E-05	1.50E-08	1.29E-03	1.26E-03
9	D06	60	Single Unit Long Haul Truck	2	0.00E+00	6.18E-07	3.08E-08	3.85E-01	5.07E-07	7.41E-04	6.60E-07	2.92E-04	5.15E-05	9.20E-06	7.54E-05	1.85E-05	1.88E-05	3.85E-05	1.56E-06	6.39E-10	5.66E-05	5.46E-05
9	D06	60	Combination Short Haul Truck	67	0.00E+00	3.92E-05	2.73E-06	2.55E+01	1.39E-07	3.43E-02	2.91E-05	4.24E-02	3.65E-03	7.22E-04	2.49E-03	8.13E-04	8.14E-04	3.84E-03	8.53E-05	0.00E+00	1.68E-03	7.99E-03
9	D06	60	Combination Long Haul Truck	61	0.00E+00	3.52E-05	2.29E-06	2.39E+01	1.59E-07	3.69E-02	2.71E-05	4.20E-02	3.67E-03	6.22E-04	2.57E-03	6.99E-04	7.07E-04	3.65E-03	8.00E-05	0.00E+00	1.86E-03	7.91E-03
11	D07	80	Passenger Car	984	0.00E+00	1.20E-05	1.30E-06	4.59E+01	8.35E-05	3.21E-01	2.67E-05	2.02E-03	5.41E-03	9.41E-04	2.60E-03	1.67E-03	1.72E-03	1.54E-04	2.31E-04	6.48E-08	8.79E-04	3.16E-04
11	D07	80	Passenger Truck	1648	0.00E+00	2.58E-05	2.73E-06	1.06E+02	1.65E-04	5.90E-01	5.40E-05	6.01E-03	9.71E-03	1.72E-03	5.17E-03	3.36E-03	3.44E-03	7.40E-04	5.29E-04	1.44E-07	1.73E-03	9.81E-04
11	D07	80	Single Unit Short Haul Truck	42	0.00E+00	7.79E-06	3.87E-07	7.64E+00	6.27E-06	1.53E-02	8.29E-06	3.98E-03	4.89E-04	1.11E-04	9.48E-04	2.31E-04	2.35E-04	7.67E-04	3.08E-05	1.22E-08	7.13E-04	7.46E-04
11	D07	80	Single Unit Long Haul Truck	2	0.00E+00	3.39E-07	1.67E-08	3.23E-01	2.68E-07	6.38E-04	3.60E-07	1.70E-04	2.24E-05	4.89E-06	4.14E-05	9.93E-06	1.01E-05	3.23E-05	1.31E-06	5.09E-10	3.13E-05	3.19E-05
11	D07	80	Combination Short Haul Truck	38	0.00E+00	1.69E-05	1.21E-06	1.40E+01	5.33E-08	1.49E-02	1.23E-05	1.73E-02	1.02E-03	2.52E-04	1.01E-03	3.56E-04	3.54E-04	2.10E-03	4.67E-05	0.00E+00	6.52E-04	3.25E-03
11	D07	80	Combination Long Haul Truck	35	0.00E+00	1.51E-05	1.02E-06	1.29E+01	6.15E-08	1.55E-02	1.15E-05	1.68E-02	9.99E-04	2.01E-04	1.04E-03	3.07E-04	3.08E-04	1.97E-03	4.32E-05	0.00E+00	7.30E-04	3.16E-03
11	D08	80	Passenger Car	1058	0.00E+00	1.29E-05	1.39E-06	4.93E+01	8.97E-05	3.45E-01	2.87E-05	2.17E-03	5.82E-03	1.01E-03	2.79E-03	1.80E-03	1.85E-03	1.66E-04	2.48E-04	6.96E-08	9.44E-04	3.40E-04
11	D08	80	Passenger Truck	1772	0.00E+00	2.77E-05	2.94E-06	1.14E+02	1.77E-04	6.34E-01	5.80E-05	6.45E-03	1.04E-02	1.85E-03	5.55E-03	3.61E-03	3.69E-03	7.96E-04	5.69E-04	1.55E-07	1.86E-03	1.05E-03
11	D08	80	Single Unit Short Haul Truck	58	0.00E+00	1.08E-05	5.38E-07	1.06E+01	8.72E-06	2.13E-02	1.15E-05	5.54E-03	6.81E-04	1.54E-04	1.32E-03	3.21E-04	3.26E-04	1.07E-03	4.28E-05	1.70E-08	9.92E-04	1.04E-03
11	D08	80	Single Unit Long Haul Truck	3	0.00E+00	4.71E-07	2.32E-08	4.50E-01	3.72E-07	8.87E-04	5.01E-07	2.37E-04	3.11E-05	6.80E-06	5.75E-05	1.38E-05	1.40E-05	4.49E-05	1.82E-06	7.09E-10	4.35E-05	4.44E-05
11	D08	80	Combination Short Haul Truck	59	0.00E+00	2.57E-05	1.84E-06	2.13E+01	8.12E-08	2.28E-02	1.88E-05	2.63E-02	1.56E-03	3.84E-04	1.53E-03	5.43E-04	5.39E-04	3.21E-03	7.12E-05	0.00E+00	9.94E-04	4.96E-03
11	D08	80	Combination Long Haul Truck	53	0.00E+00	2.31E-05	1.55E-06	1.97E+01	9.38E-08	2.36E-02	1.75E-05	2.56E-02	1.52E-03	3.07E-04	1.58E-03	4.67E-04	4.70E-04	3.01E-03	6.59E-05	0.00E+00	1.11E-03	4.82E-03
11	D09	80	Passenger Car	757	0.00E+00	9.23E-06	9.99E-07	3.53E+01	6.43E-05	2.47E-01	2.05E-05	1.56E-03	4.17E-03	7.24E-04	2.00E-03	1.29E-03	1.32E-03	1.19E-04	1.78E-04	4.98E-08	6.76E-04	2.43E-04
11	D09	80	Passenger Truck	1268	0.00E+00	1.98E-05	2.10E-06	8.16E+01	1.27E-04	4.54E-01	4.15E-05	4.62E-03	7.47E-03	1.33E-03	3.98E-03	2.58E-03	2.65E-03	5.70E-04	4.07E-04	1.11E-07	1.33E-03	7.55E-04
11	D09	80	Single Unit Short Haul Truck	19	0.00E+00	3.62E-06	1.80E-07	3.56E+00	2.92E-06	7.12E-03	3.86E-06	1.85E-03	2.28E-04	5.15E-05	4.41E-04	1.07E-04	1.09E-04	3.57E-04	1.43E-05	5.69E-09	3.32E-04	3.47E-04
11	D09	80	Single Unit Long Haul Truck	1	0.00E+00	1.58E-07	7.77E-09	1.50E-01	1.25E-07	2.97E-04	1.68E-07	7.93E-05	1.04E-05	2.27E-06	1.92E-05	4.62E-06	4.70E-06	1.50E-05	6.07E-07	2.37E-10	1.45E-05	1.48E-05
11	D09	80	Combination Short Haul Truck	21	0.00E+00	9.32E-06	6.66E-07	7.70E+00	2.94E-08	8.25E-03	6.81E-06	9.54E-03	5.64E-04	1.39E-04	5.55E-04	1.97E-04	1.95E-04	1.16E-03	2.58E-05	0.00E+00	3.60E-04	1.80E-03
11	D09	80	Combination Long Haul Truck	19	0.00E+00	8.35E-06	5.61E-07	7.12E+00	3.40E-08	8.55E-03	6.32E-06	9.25E-03	5.52E-04	1.11E-04	5.73E-04	1.69E-04	1.70E-04	1.09E-03	2.39E-05	0.00E+00	4.03E-04	1.74E-03
11	D10	80	Passenger Car	1047	0.00E+00	1.28E-05	1.38E-06	4.88E+01	8.88E-05	3.41E-01	2.84E-05	2.15E-03	5.76E-03	1.00E-03	2.76E-03	1.78E-03	1.83E-03	1.64E-04	2.46E-04	6.89E-08	9.35E-04	3.36E-04
11	D10	80	Passenger Truck	1753	0.00E+00	2.74E-05	2.91E-06	1.13E+02	1.76E-04	6.28E-01	5.74E-05	6.39E-03	1.03E-02	1.83E-03	5.50E-03	3.57E-03	3.66E-03	7.87E-04	5.63E-04	1.53E-07	1.84E-03	1.04E-03
11	D10	80	Single Unit Short Haul Truck	35	0.00E+00	6.64E-06	3.30E-07	6.52E+00	5.35E-06	1.31E-02	7.07E-06	3.40E-03	4.17E-04	9.44E-05	8.08E-04	1.97E-04	2.00E-04	6.54E-04	2.63E-05	1.04E-08	6.08E-04	6.36E-04
11	D10	80	Single Unit Long Haul Truck	2	0.00E+00	2.89E-07	1.42E-08	2.76E-01	2.28E-07	5.44E-04	3.07E-07	1.45E-04	1.91E-05	4.17E-06	3.53E-05	8.47E-06	8.61E-06	2.75E-05	1.11E-06	4.34E-10	2.67E-05	2.72E-05
11	D10	80	Combination Short Haul Truck	37	0.00E+00	1.63E-05	1.17E-06	1.35E+01	5.15E-08	1.44E-02	1.19E-05	1.67E-02	9.87E-04	2.43E-04	9.71E-04	3.44E-04	3.42E-04	2.03E-03	4.51E-05	0.00E+00	6.30E-04	3.14E-03
11	D10	80	Combination Long Haul Truck	34	0.00E+00	1.46E-05	9.82E-07	1.25E+01	5.95E-08	1.50E-02	1.11E-05	1.62E-02	9.65E-04	1.94E-04	1.00E-03	2.96E-04	2.98E-04	1.90E-03	4.18E-05	0.00E+00	7.05E-04	3.05E-03
11	D11	80	Passenger Car	722	0.00E+00	8.80E-06	9.52E-07	3.37E+01	6.13E-05	2.35E-01	1.96E-05	1.48E-03	3.97E-03	6.90E-04	1.90E-03	1.23E-03	1.26E-03	1.13E-04	1.70E-04	4.75E-08	6.45E-04	2.32E-04
11	D11	80	Passenger Truck	1209	0.00E+00	1.89E-05	2.00E-06	7.78E+01	1.21E-04	4.33E-01	3.96E-05	4.41E-03	7.12E-03	1.26E-03	3.79E-03	2.46E-03	2.52E-03	5.43E-04	3.88E-04	1.06E-07	1.27E-03	7.20E-04
11	D11	80	Single Unit Short Haul Truck	19	0.00E+00	3.50E-06	1.74E-07	3.44E+00	2.82E-06	6.88E-03	3.73E-06	1.79E-03	2.20E-04	4.98E-05	4.26E-04	1.04E-04	1.05E-04	3.45E-04	1.38E-05	5.49E-09	3.21E-04	3.35E-04
11	D11	80	Single Unit Long Haul Truck	1	0.00E+00	1.52E-07	7.50E-09	1.45E-01	1.20E-07	2.87E-04	1.62E-07	7.66E-05	1.01E-05	2.20E-06	1.86E-05	4.46E-06	4.54E-06	1.45E-05	5.87E-07	2.29E-10	1.41E-05	1.43E-05
11	D11	80	Combination Short Haul Truck	22	0.00E+00	9.55E-06	6.83E-07	7.90E+00	3.01E-08	8.46E-03	6.98E-06	9.78E-03	5.78E-04	1.42E-04	5.69E-04	2.02E-04	2.00E-04	1.19E-03	2.64E-05	0.00E+00	3.69E-04	1.84E-03
11	D11	80	Combination Long Haul Truck	20	0.00E+00	8.56E-06	5.75E-07	7.30E+00	3.48E-08	8.77E-03	6.48E-06	9.49E-03	5.65E-04	1.14E-04	5.88E-04	1.74E-04	1.75E-04	1.12E-03	2.45E-05	0.00E+00	4.13E-04	1.79E-03
11	D12	80	Passenger Car	1163	0.00E+00	1.42E-05	1.53E-06	5.42E+01	9.87E-05	3.79E-01	3.15E-05	2.39E-03	6.40E-03	1.11E-03	3.07E-03	1.98E-03	2.03E-03	1.82E-04	2.73E-04	7.65E-08	1.04E-03	3.73E-04
11	D12	80	Passenger Truck	1948	0.00E+00	3.04E-05	3.23E-06	1.25E+02	1.95E-04	6.97E-01	6.38E-05	7.10E-03	1.15E-02	2.04E-03	6.10E-03	3.96E-03	4.06E-03	8.75E-04	6.26E-04	1.70E-07	2.04E-03	1.16E-03
11	D12	80	Single Unit Short Haul Truck	45	0.00E+00	8.43E-06	4.19E-07	8.27E+00	6.78E-06	1.66E-02	8.97E-06	4.31E-03	5.30E-04	1.20E-04	1.03E-03	2.50E-04	2.54E-04	8.30E-04	3.33E-05	1.32E-08	7.72E-04	8.07E-04
11	D12	80	Single Unit Long Haul Truck	2	0.00E+00	3.67E-07	1.81E-08	3.50E-01	2.90E-07	6.90E-04	3.90E-07	1.84E-04	2.42E-05	5.29E-06	4.48E-05	1.07E-05	1.09E-05	3.49E-05	1.41E-06	5.51E-10	3.38E-05	3.45E-05
11	D12	80	Combination Short Haul Truck	49	0.00E+00	2.15E-05	1.54E-06	1.78E+01	6.79E-08	1.91E-02	1.57E-05	2.20E-02	1.30E-03	3.21E-04	1.28E-03	4.54E-04	4.51E-04	2.68E-03	5.96E-05	0.00E+00	8.31E-04	4.15E-03
11	D12	80	Combination Long Haul Truck	45	0.00E+00	1.93E-05	1.30E-06	1.65E+01	7.85E-08	1.98E-02	1.46E-05	2.14E-02	1.27E-03	2.56E-04	1.32E-03	3.91E-04	3.93E-04	2.51E-03	5.51E-05	0.00E+00	9.31E-04	4.03E-03
9	D13	60	Passenger Car	364	0.00E+00	5.46E-06	5.90E-07	1.83E+01	3.80E-05	1.42E-01	1.21E-05	7.42E-04	3.69E-03	5.67E-04	1.18E-03	7.61E-04	7.81E-04	7.60E-05	9.15E-05	2.52E-08	4.00E-04	1.16E-04
9	D13	60	Passenger Truck	609	0.00E+00	1.20E-05	1.27E-06	4.17E+01	7.52E-05	2.53E-01	2.48E-05	2.42E-03	6.77E-03	1.05E-03	2.36E-03	1.54E-03	1.57E-03	3.22E-04	2.07E-04	5.72E-08	7.84E-04	4.01E-04
9	D13	60	Single Unit Short Haul Truck	20	0.00E+00	5.98E-06	2.99E-07	3.81E+00	4.93E-06	7.37E-03	6.38E-06	2.85E-03	4.84E-04	8.78E-05	7.27E-04	1.79E-04	1.82E-04	3.81E-04	1.54E-05	6.34E-09	5.44E-04	5.33E-04
9	D13	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.30E-08	1.63E-01	2.14E-07	3.13E-04	2.79E-07	1.23E-04	2.17E-05	3.89E-06	3.18E-05	7.80E-06	7.93E-06	1.62E-05	6.57E-07	2.70E-10	2.39E-05	2.31E-05
9	D13	60	Combination Short Haul Truck	20	0.00E+00	1.18E-05	8.25E-07	7.70E+00	4.19E-08	1.04E-02	8.78E-06	1.28E-02	1.10E-03	2.18E-04	7.53E-04	2.46E-04	2.46E-04	1.16E-03	2.58E-05	0.00E+00	5.07E-04	2.41E-03
9	D13	60	Combination Long Haul Truck	18	0.00E+00	1.06E-05	6.91E-07	7.22E+00	4.81E-08	1.12E-02	8.19E-06	1.27E-02	1.11E-03	1.88E-04	7.76E-04	2.11E-04	2.14E-04	1.10E-03	2.42E-05	0.00E+00	5.62E-04	2.39E-03
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Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D17	70	Combination Long Haul Truck	13	0.00E+00	6.57E-06	4.39E-07	4.92E+00	2.72E-08	6.63E-03	4.99E-06	7.50E-03	5.49E-04	1.00E-04	4.58E-04	1.33E-04	1.34E-04	7.51E-04	1.65E-05	0.00E+00	3.23E-04	1.41E-03
10	D18	70	Passenger Car	121	0.00E+00	1.59E-06	1.72E-07	5.83E+00	1.11E-05	4.15E-02	3.53E-06	2.43E-04	9.41E-04	1.51E-04	3.44E-04	2.22E-04	2.27E-04	2.17E-05	2.93E-05	7.98E-09	1.16E-04	3.80E-05
10	D18	70	Passenger Truck	203	0.00E+00	3.48E-06	3.69E-07	1.34E+01	2.20E-05	7.63E-02	7.23E-06	7.61E-04	1.71E-03	2.78E-04	6.90E-04	4.49E-04	4.60E-04	9.86E-05	6.69E-05	1.79E-08	2.30E-04	1.25E-04
10	D18	70	Single Unit Short Haul Truck	2	0.00E+00	3.72E-07	1.86E-08	2.91E-01	3.04E-07	5.83E-04	3.97E-07	1.83E-04	2.62E-05	5.24E-06	4.52E-05	1.11E-05	1.13E-05	2.92E-05	1.18E-06	4.75E-10	3.38E-05	3.43E-05
10	D18	70	Combination Short Haul Truck	3	0.00E+00	1.37E-06	9.76E-08	9.95E-01	4.46E-09	1.18E-03	1.01E-06	1.44E-03	1.04E-04	2.28E-05	8.36E-05	2.89E-05	2.88E-05	1.50E-04	3.33E-06	0.00E+00	5.48E-05	2.71E-04
10	D18	70	Combination Long Haul Truck	2	0.00E+00	1.24E-06	8.30E-08	9.29E-01	5.14E-09	1.25E-03	9.42E-07	1.42E-03	1.04E-04	1.89E-05	8.65E-05	2.51E-05	2.54E-05	1.42E-04	3.11E-06	0.00E+00	6.11E-05	2.67E-04
11	D19	80	Passenger Car	861	0.00E+00	1.05E-05	1.14E-06	4.02E+01	7.31E-05	2.81E-01	2.33E-05	1.77E-03	4.74E-03	8.24E-04	2.27E-03	1.46E-03	1.50E-03	1.35E-04	2.02E-04	5.67E-08	7.69E-04	2.77E-04
11	D19	80	Passenger Truck	1443	0.00E+00	2.25E-05	2.39E-06	9.28E+01	1.44E-04	5.17E-01	4.72E-05	5.26E-03	8.50E-03	1.51E-03	4.52E-03	2.94E-03	3.01E-03	6.48E-04	4.63E-04	1.26E-07	1.51E-03	8.59E-04
11	D19	80	Single Unit Short Haul Truck	163	0.00E+00	3.05E-05	1.52E-06	2.99E+01	2.46E-05	6.00E-02	3.25E-05	1.56E-02	1.92E-03	4.34E-04	3.71E-03	9.04E-04	9.19E-04	3.00E-03	1.21E-04	4.79E-08	2.79E-03	2.92E-03
11	D19	80	Single Unit Long Haul Truck	7	0.00E+00	1.33E-06	6.54E-08	1.27E+00	1.05E-06	2.50E-03	1.41E-06	6.68E-04	8.76E-05	1.91E-05	1.62E-04	3.89E-05	3.96E-05	1.26E-04	5.11E-06	2.00E-09	1.22E-04	1.25E-04
11	D19	80	Combination Short Haul Truck	59	0.00E+00	2.58E-05	1.84E-06	2.13E+01	8.12E-08	2.28E-02	1.88E-05	2.64E-02	1.56E-03	3.84E-04	1.53E-03	5.44E-04	5.39E-04	3.21E-03	7.13E-05	0.00E+00	9.94E-04	4.96E-03
11	D19	80	Combination Long Haul Truck	53	0.00E+00	2.31E-05	1.55E-06	1.97E+01	9.39E-08	2.36E-02	1.75E-05	2.56E-02	1.52E-03	3.07E-04	1.58E-03	4.68E-04	4.70E-04	3.01E-03	6.59E-05	0.00E+00	1.11E-03	4.82E-03
11	D20	80	Passenger Car	1075	0.00E+00	1.31E-05	1.42E-06	5.01E+01	9.12E-05	3.50E-01	2.91E-05	2.21E-03	5.91E-03	1.03E-03	2.83E-03	1.83E-03	1.88E-03	1.68E-04	2.52E-04	7.07E-08	9.59E-04	3.45E-04
11	D20	80	Passenger Truck	1799	0.00E+00	2.81E-05	2.98E-06	1.16E+02	1.80E-04	6.44E-01	5.89E-05	6.56E-03	1.06E-02	1.88E-03	5.64E-03	3.66E-03	3.75E-03	8.08E-04	5.78E-04	1.57E-07	1.89E-03	1.07E-03
11	D20	80	Single Unit Short Haul Truck	243	0.00E+00	4.56E-05	2.26E-06	4.47E+01	3.67E-05	8.96E-02	4.85E-05	2.33E-02	2.86E-03	6.48E-04	5.55E-03	1.35E-03	1.37E-03	4.49E-03	1.80E-04	7.15E-08	4.18E-03	4.36E-03
11	D20	80	Single Unit Long Haul Truck	11	0.00E+00	1.98E-06	9.77E-08	1.89E+00	1.57E-06	3.73E-03	2.11E-06	9.98E-04	1.31E-04	2.86E-05	2.42E-04	5.81E-05	5.91E-05	1.89E-04	7.64E-06	2.98E-09	1.83E-04	1.87E-04
11	D20	80	Combination Short Haul Truck	28	0.00E+00	1.24E-05	8.88E-07	1.03E+01	3.92E-08	1.10E-02	9.07E-06	1.27E-02	7.51E-04	1.85E-04	7.39E-04	2.62E-04	2.60E-04	1.55E-03	3.44E-05	0.00E+00	4.79E-04	2.39E-03
11	D20	80	Combination Long Haul Truck	26	0.00E+00	1.11E-05	7.47E-07	9.49E+00	4.53E-08	1.14E-02	8.42E-06	1.23E-02	7.35E-04	1.48E-04	7.64E-04	2.25E-04	2.27E-04	1.45E-03	3.18E-05	0.00E+00	5.37E-04	2.32E-03
11	D21	80	Passenger Car	805	0.00E+00	9.81E-06	1.06E-06	3.75E+01	6.83E-05	2.62E-01	2.18E-05	1.65E-03	4.43E-03	7.69E-04	2.12E-03	1.37E-03	1.40E-03	1.26E-04	1.89E-04	5.29E-08	7.18E-04	2.58E-04
11	D21	80	Passenger Truck	1347	0.00E+00	2.11E-05	2.23E-06	8.67E+01	1.35E-04	4.82E-01	4.41E-05	4.91E-03	7.93E-03	1.41E-03	4.22E-03	2.74E-03	2.81E-03	6.05E-04	4.33E-04	1.18E-07	1.41E-03	8.02E-04
11	D21	80	Single Unit Short Haul Truck	127	0.00E+00	2.39E-05	1.19E-06	2.34E+01	1.92E-05	4.69E-02	2.54E-05	1.22E-02	1.50E-03	3.39E-04	2.91E-03	7.07E-04	7.19E-04	2.35E-03	9.44E-05	3.74E-08	2.19E-03	2.28E-03
11	D21	80	Single Unit Long Haul Truck	6	0.00E+00	1.04E-06	5.12E-08	9.91E-01	8.21E-07	1.95E-03	1.10E-06	5.22E-04	6.85E-05	1.50E-05	1.27E-04	3.04E-05	3.09E-05	9.89E-05	4.00E-06	1.56E-09	9.58E-05	9.77E-05
11	D21	80	Combination Short Haul Truck	66	0.00E+00	2.90E-05	2.07E-06	2.40E+01	9.14E-08	2.57E-02	2.12E-05	2.96E-02	1.75E-03	4.32E-04	1.73E-03	6.12E-04	6.07E-04	3.61E-03	8.02E-05	0.00E+00	1.12E-03	5.59E-03
11	D21	80	Combination Long Haul Truck	60	0.00E+00	2.59E-05	1.74E-06	2.21E+01	1.06E-07	2.66E-02	1.97E-05	2.88E-02	1.71E-03	3.45E-04	1.78E-03	5.26E-04	5.29E-04	3.38E-03	7.42E-05	0.00E+00	1.25E-03	5.42E-03
11	D22	80	Passenger Car	873	0.00E+00	1.06E-05	1.15E-06	4.07E+01	7.40E-05	2.84E-01	2.36E-05	1.79E-03	4.80E-03	8.34E-04	2.30E-03	1.48E-03	1.52E-03	1.37E-04	2.05E-04	5.74E-08	7.79E-04	2.80E-04
11	D22	80	Passenger Truck	1461	0.00E+00	2.28E-05	2.42E-06	9.41E+01	1.46E-04	5.23E-01	4.79E-05	5.32E-03	8.61E-03	1.53E-03	4.58E-03	2.97E-03	3.05E-03	6.56E-04	4.69E-04	1.28E-07	1.53E-03	8.70E-04
11	D22	80	Single Unit Short Haul Truck	76	0.00E+00	1.42E-05	7.04E-07	1.39E+01	1.14E-05	2.79E-02	1.51E-05	7.25E-03	8.91E-04	2.02E-04	1.73E-03	4.20E-04	4.27E-04	1.40E-03	5.61E-05	2.22E-08	1.30E-03	1.36E-03
11	D22	80	Single Unit Long Haul Truck	3	0.00E+00	6.17E-07	3.04E-08	5.89E-01	4.87E-07	1.16E-03	6.56E-07	3.10E-04	4.07E-05	8.89E-06	7.53E-05	1.81E-05	1.84E-05	5.88E-05	2.38E-06	9.27E-10	5.69E-05	5.81E-05
11	D22	80	Combination Short Haul Truck	46	0.00E+00	2.02E-05	1.45E-06	1.67E+01	6.38E-08	1.79E-02	1.48E-05	2.07E-02	1.22E-03	3.02E-04	1.20E-03	4.27E-04	4.24E-04	2.52E-03	5.60E-05	0.00E+00	7.81E-04	3.90E-03
11	D22	80	Combination Long Haul Truck	42	0.00E+00	1.81E-05	1.22E-06	1.55E+01	7.38E-08	1.86E-02	1.37E-05	2.01E-02	1.20E-03	2.41E-04	1.24E-03	3.67E-04	3.70E-04	2.36E-03	5.18E-05	0.00E+00	8.75E-04	3.79E-03
9	D23	60	Passenger Car	748	0.00E+00	1.12E-05	1.21E-06	3.76E+01	7.81E-05	2.92E-01	2.49E-05	1.53E-03	7.59E-03	1.17E-03	2.43E-03	1.57E-03	1.61E-03	1.56E-04	1.88E-04	5.18E-08	8.22E-04	2.38E-04
9	D23	60	Passenger Truck	1252	0.00E+00	2.47E-05	2.61E-06	8.57E+01	1.55E-04	5.20E-01	5.10E-05	4.97E-03	1.39E-02	2.16E-03	4.85E-03	3.16E-03	3.24E-03	6.63E-04	4.25E-04	1.18E-07	1.61E-03	8.24E-04
9	D23	60	Single Unit Short Haul Truck	63	0.00E+00	1.86E-05	9.28E-07	1.18E+01	1.53E-05	2.29E-02	1.98E-05	8.83E-03	1.50E-03	2.73E-04	2.26E-03	5.57E-04	5.66E-04	1.18E-03	4.78E-05	1.97E-08	1.69E-03	1.66E-03
9	D23	60	Single Unit Long Haul Truck	3	0.00E+00	8.11E-07	4.03E-08	5.05E-01	6.65E-07	9.72E-04	8.65E-07	3.82E-04	6.75E-05	1.21E-05	9.88E-05	2.42E-05	2.46E-05	5.04E-05	2.04E-06	8.37E-10	7.42E-05	7.16E-05
9	D23	60	Combination Short Haul Truck	41	0.00E+00	2.40E-05	1.67E-06	1.56E+01	8.50E-08	2.10E-02	1.78E-05	2.60E-02	2.23E-03	4.42E-04	1.53E-03	4.98E-04	4.99E-04	2.35E-03	5.23E-05	0.00E+00	1.03E-03	4.89E-03
9	D23	60	Combination Long Haul Truck	37	0.00E+00	2.15E-05	1.40E-06	1.46E+01	9.75E-08	2.26E-02	1.66E-05	2.57E-02	2.25E-03	3.81E-04	1.57E-03	4.28E-04	4.33E-04	2.24E-03	4.90E-05	0.00E+00	1.14E-03	4.85E-03
9	D24	60	Passenger Car	1012	0.00E+00	1.52E-05	1.64E-06	5.08E+01	1.06E-04	3.95E-01	3.38E-05	2.07E-03	1.03E-02	1.58E-03	3.29E-03	2.12E-03	2.18E-03	2.12E-04	2.55E-04	7.01E-08	1.11E-03	3.23E-04
9	D24	60	Passenger Truck	1696	0.00E+00	3.35E-05	3.54E-06	1.16E+02	2.09E-04	7.04E-01	6.90E-05	6.73E-03	1.89E-02	2.93E-03	6.57E-03	4.28E-03	4.38E-03	8.98E-04	5.76E-04	1.59E-07	2.18E-03	1.12E-03
9	D24	60	Single Unit Short Haul Truck	49	0.00E+00	1.43E-05	7.17E-07	9.14E+00	1.18E-05	1.77E-02	1.53E-05	6.83E-03	1.16E-03	2.11E-04	1.74E-03	4.30E-04	4.37E-04	9.14E-04	3.69E-05	1.52E-08	1.31E-03	1.28E-03
9	D24	60	Single Unit Long Haul Truck	2	0.00E+00	6.26E-07	3.12E-08	3.90E-01	5.13E-07	7.51E-04	6.69E-07	2.95E-04	5.22E-05	9.32E-06	7.63E-05	1.87E-05	1.90E-05	3.89E-05	1.58E-06	6.47E-10	5.73E-05	5.53E-05
9	D24	60	Combination Short Haul Truck	28	0.00E+00	1.66E-05	1.16E-06	1.08E+01	5.89E-08	1.45E-02	1.23E-05	1.80E-02	1.55E-03	3.06E-04	1.06E-03	3.45E-04	3.45E-04	1.63E-03	3.62E-05	0.00E+00	7.12E-04	3.39E-03
9	D24	60	Combination Long Haul Truck	26	0.00E+00	1.49E-05	9.71E-07	1.01E+01	6.75E-08	1.57E-02	1.15E-05	1.78E-02	1.56E-03	2.64E-04	1.09E-03	2.96E-04	3.00E-04	1.55E-03	3.39E-05	0.00E+00	7.90E-04	3.36E-03
9	D25	60	Passenger Car	800	0.00E+00	1.20E-05	1.30E-06	4.02E+01	8.35E-05	3.12E-01	2.67E-05	1.63E-03	8.12E-03	1.25E-03	2.60E-03	1.67E-03	1.72E-03	1.67E-04	2.01E-04	5.54E-08	8.79E-04	2.55E-04
9	D25	60	Passenger Truck	1339	0.00E+00	2.65E-05	2.80E-06	9.17E+01	1.65E-04	5.56E-01	5.45E-05	5.32E-03	1.49E-02	2.31E-03	5.19E-03	3.38E-03	3.46E-03	7.09E-04	4.55E-04	1.26E-07	1.73E-03	8.81E-04
9	D25	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.03E-07	8.96E+00	1.16E-05	1.73E-02	1.50E-05	6.69E-03	1.14E-03	2.07E-04	1.71E-03	4.22E-04	4.29E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.25E-03
9	D25	60	Single Unit Long Haul Truck	2	0.00E+00	6.14E-07	3.06E-08	3.82E-01	5.03E-07	7.36E-04	6.56E-07	2.89E-04	5.11E-05	9.14E-06	7.48E-05	1.83E-05	1.86E-05	3.82E-05	1.55E-06	6.34E-10	5.62E-05	5.42E-05
9	D25	60	Combination Short Haul Truck	30	0.00E+00	1.78E-05	1.24E-06	1.16E+01	6.32E-08	1.56E-02	1.32E-05	1.93E-02	1.66E-03	3.29E-04	1.14E-03	3.70E-04	3.71E-04	1.75E-03	3.89E-05	0.00E+00	7.64E-04	3.64E-03
9	D25	60	Combination Long Haul Truck	28	0.00E+00	1.60E-05	1.04E-06	1.09E+01	7.25E-08	1.68E-02	1.23E-05	1.91E-02	1.67E-03	2.83E-04	1.17E-03	3.18E-04	3.22E-04	1.66E-03	3.65E-05	0.00E+00	8.48E-04	3.61E-03
9	D26	60	Passenger Car	1005	0.00E+00	1.51E-05	1.63E-06	5.05E+01	1.05E-04	3.92E-01	3.35E-05	2.05E-03	1.02E-02	1.57E-03	3.26E-03	2.10E-03	2.16E-03	2.10E-04	2.53E-04	6.96E-08	1.10E-03	3.20E-04
9	D26	60	Passenger Truck	1682	0.00E+00	3.32E-05	3.51E-06	1.15E+02	2.08E-04	6.99E-01	6.85E-05	6.68E-03	1.87E-02	2.90E-03	6.51E-03	4.25E-03	4.35E-03	8.91E-04	5.71E-04	1.58E-07	2.17E-03	1.11E-03
9	D26	60	Single Unit Short Haul Truck	15	0.00E+00	4.50E-06	2.25E-07	2.87E+00	3.71E-06	5.55E-03	4.80E-06	2.14E-03	3.64E-04	6.61E-05	5.47E-04	1.35E-04	1.37E-04	2.87E-04	1.16E-05	4.77E-09	4.10E-04	4.01E-04
9	D26	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.78E-09	1.22E-01	1.61E-07	2.36E-04	2.10E-07	9.26E-05	1.64E-05	2.92E-06	2.40E-05	5.87E-06	5.97E-06	1.22E-05	4.95E-07	2.03E-10	1.80E-05	1.74E-05
9	D26	60	Combination Short Haul Truck	11	0.00E+00	6.46E-06	4.50E-07	4.20E+00	2.29E-08	5.65E-03	4.79E-06	6.99E-03	6.02E-04	1.19E-04	4.11E-04	1.34E-04	1.34E-04	6.34E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
9	D26	60	Combination Long Haul Truck	10	0.00E+00	5.80E-06	3.77E-07	3.94E+00	2.62E-08	6.09E-03	4.47E-06	6.93E-03	6.05E-04	1.03E-04	4.24E-04	1.15E-04	1.17E-04	6.02E-04	1.32E-05	0.00E+00	3.07E-04	1.31E-03
11	D27	80	Passenger Car	1181	0.00E+00	1.44E-05	1.56E-06	5.51E+01	1.00E-04	3.85E-01	3.20E-05	2.43E-03	6.50E-03	1.13E-03	3.12E-03	2.01E-03	2.06E-03	1.85E-04	2.77E-04	7.77E-08	1.05E-03	3.79E-04
11	D27	80	Passenger Truck	1978	0.00E+00	3.09E-05	3.28E-06	1.27E+02	1.98E-04	7.08E-01	6.48E-05	7.21E-03	1.16E-02	2.07E-03	6.20E-03	4.03E-03	4.13E-03	8.89E-04	6.35E-04	1.73E-07	2.07E-03	1.18E-03
11	D27	80	Single Unit Short Haul Truck	33	0.00E+00	6.10E-06	3.03E-07	5.98E+00	4.91E-06	1.20E-02	6.49E-06	3.12E-03	3.83E-04	8.67E-05	7.42E-04	1.81E-04	1.84E-04	6.00E-04	2.41E-05	9.57E-09	5.59E-04	5.84E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.31E-08	2.53E-01	2.10E-07	4.99E-04	2.82E-07	1.33E-04	1.75E-05	3.83E-06	3.24E-05	7.77E-06	7.91E-06	2.53E-05	1.02E-06	3.99E-10	2.45E-05	2.50E-05
11	D27	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.75E-07	1.01E+01	3.86E-08	1.08E-02	8.94E-06	1.25E-02	7.40E-04	1.82E-04	7.28E-04	2.58E-04	2.56E-04	1.52E-03	3.39E-05	0.00E+00	4.72E-04	2.36E-03
11	D27	80	Combination Long Haul Truck	25	0.00E+00	1.10E-05	7.36E-07	9.35E+00	4.46E-08	1.12E-02	8.30E-06	1.21E-02	7.24E-04	1.46E-04	7.52E-04	2.22E-04	2.23E-04	1.43E-03	3.13E-05	0.00E+00	5.29E-04	2.29E-03
11	D28	80	Passenger Car	516	0.00E+00	6.29E-06	6.80E-07	2.41E+01	4.38E-05	1.68E-01	1.40E-05	1.06E-03	2.84E-03	4.93E-04	1.36E-03	8.77E-04	9.00E-04	8.08E-05	1.21E-04	3.39E-08	4.61E-04	1.66E-04
11	D28	80	Passenger Truck	864	0.00E+00	1.35E-05	1.43E-06	5.56E+01	8.65E-05	3.09E-01	2.83E-05	3.15E-03	5.09E-03	9.03E-04	2.71E-03	1.76E-03	1.80E-03	3.88E-04	2.77E-04	7.56E-08	9.06E-04	5.14E-04
11	D28	80	Single Unit Short Haul Truck	9	0.00E+00	1.73E-06	8.58E-08	1.69E+00	1.39E-06	3.39E-03	1.84E-06	8.84E-04	1.09E-04	2.46E-05	2.10E-04	5.11E-05	5.20E-05	1.70E-04	6.83E-06	2.71E-09	1.58E-04	1.65E-04
11	D28	80	Combination Short Haul Truck	11	0.00E+00	4.98E-06	3.56E-07	4.11E+00	1.57E-08	4.41E-03	3.64E-06	5.09E-03	3.01E-04	7.42E-05	2.96E-04	1.05E-04	1.04E-04	6.20E-04	1.38E-05	0.00E+00	1.92E-04	9.59E-04
11	D28	80	Combination Long Haul Truck	10	0.00E+00	4.46E-06	3.00E-07	3.80E+00	1.81E-08	4.57E-03	3.38E-06	4.94E-03	2.94E-04	5.93E-05	3.06E-04	9.04E-05	9.09E-05	5.81E-04	1.27E-05	0.00E+00	2.15E-04	9.31E-04
11	D29	80	Passenger Car	866	0.00E+00	1.06E-05	1.14E-06	4.04E+01	7.34E-05	2.82E-01	2.35E-05	1.78E-03	4.76E-03	8.28E-04	2.28E-03	1.47E-03	1.51E-03	1.36E-04	2.03E-04	5.69E-08	7.73E-04	2.78E-04
11	D29	80	Passenger Truck	1450	0.00E+00	2.27E-05	2.40E-06	9.33E+01	1.45E-04	5.19E-01	4.75E-05	5.28E-03	8.54E-03	1.52E-03	4.54E-03	2.95E-03	3.02E-03	6.51E-04	4.66E-04	1.27E-07	1.52E-03	8.63E-04
11	D29	80	Single Unit Short Haul Truck	45	0.00E+00	8.34E-06	4.14E-07	8.18E+00	6.71E-06	1.64E-02	8.88E-06	4.27E-03	5.24E-04	1.19E-04	1.02E-03	2.47E-04	2.51E-04	8.21E-04	3.30E-05	1.31E-08	7.64E-04	7.98E-04
11	D29	80	Single Unit Long Haul Truck	2	0.00E+00	3.63E-07	1.79E-08	3.46E-01	2.87E-07	6.83E-04	3.86E-07	1.83E-04	2.39E-05	5.23E-06	4.43E-05	1.06E-05	1.08E-05	3.46E-05	1.40E-06	5.46E-10	3.35E-05	3.41E-05
11	D29	80	Combination Short Haul Truck	43	0.00E+00	1.91E-05	1.37E-06	1.58E+01	6.03E-08	1.69E-02	1.40E-05	1.95E-02	1.16E-03	2.85E-04	1.14E-03	4.03E-04	4.00E-04	2.38E-03	5.29E-05	0.00E+00	7.37E-04	3.68E-03
11	D29	80	Combination Long Haul Truck	40	0.00E+00	1.71E-05	1.15E-06	1.46E+01	6.96E-08	1.75E-02	1.30E-05	1.90E-02	1.13E-03	2.28E-04	1.17E-03	3.47E-04	3.49E-04	2.23E-03	4.89E-05	0.00E+00	8.26E-04	3.57E-03
11	D30	80	Passenger Car	534	0.00E+00	6.51E-06	7.04E-07	2.49E+01	4.53E-05	1.74E-01	1.45E-05	1.10E-03	2.94E-03	5.10E-04	1.41E-03	9.08E-04	9.31E-04	8.36E-05	1.25E-04	3.51E-08	4.77E-04	1.71E-04
11	D30	80	Passenger Truck	894	0.00E+00	1.40E-05	1.48E-06	5.75E+01	8.95E-05	3.20E-01	2.93E-05	3.26E-03	5.26E-03	9.34E-04	2.80E-03	1.82E-03	1.86E-03	4.02E-04	2.87E-04	7.82E-08	9.38E-04	5.32E-04
11	D30	80	Single Unit Short Haul Truck	22	0.00E+00	4.03E-06	2.00E-07	3.95E+00	3.24E-06	7.92E-03	4.29E-06	2.06E-03	2.53E-04	5.73E-05	4.90E-04	1.19E-04	1.21E-04	3.97E-04	1.59E-05	6.32E-09	3.69E-04	3.86E-04
11	D30	80	Single Unit Long Haul Truck	1	0.00E+00	1.75E-07	8.64E-09	1.67E-01	1.39E-07	3.30E-04	1.86E-07	8.82E-05	1.16E-05	2.53E-06	2.14E-05	5.14E-06	5.22E-06	1.67E-05	6.75E-07	2.64E-10	1.62E-05	1.65E-05
11	D30	80	Combination Short Haul Truck	20	0.00E+00	8.68E-06	6.21E-07	7.17E+00	2.74E-08	7.69E-03	6.34E-06	8.88E-03	5.25E-04	1.29E-04	5.17E-04	1.83E-04	1.82E-04	1.08E-03	2.40E-05	0.00E+00	3.35E-04	1.67E-03
11	D30	80	Combination Long Haul Truck	18	0.00E+00	7.77E-06	5.22E-07	6.63E+00	3.16E-08	7.97E-03	5.89E-06	8.62E-03	5.14E-04	1.03E-04	5.34E-04	1.58E-04	1.59E-04	1.01E-03	2.22E-05	0.00E+00	3.75E-04	1.62E-03
11	D31	80	Passenger Car	345	0.00E+00	4.21E-06	4.55E-07	1.61E+01	2.93E-05	1.12E-01	9.35E-06	7.09E-04	1.90E-03	3.30E-04	9.10E-04	5.87E-04	6.02E-04	5.41E-05	8.10E-05	2.27E-08	3.08E-04	1.11E-04
11	D31	80	Passenger Truck	578	0.00E+00	9.03E-06	9.58E-07	3.72E+01	5.79E-05	2.07E-01	1.89E-05	2.11E-03	3.40E-03	6.04E-04	1.81E-03	1.18E-03	1.21E-03	2.60E-04	1.86E-04	5.05E-08	6.06E-04	3.44E-04
11	D31	80	Single Unit Short Haul Truck	12	0.00E+00	2.22E-06	1.10E-07	2.18E+00	1.79E-06	4.37E-03	2.36E-06	1.14E-03	1.40E-04	3.16E-05	2.70E-04	6.58E-05	6.69E-05	2.19E-04	8.78E-06	3.49E-09	2.03E-04	2.13E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	9.66E-08	4.76E-09	9.22E-02	7.64E-08	1.82E-04	1.03E-07	4.86E-05	6.38E-06	1.39E-06	1.18E-05	2.83E-06	2.88E-06	9.21E-06	3.72E-07	1.45E-10	8.92E-06	9.10E-06
11	D31	80	Combination Short Haul Truck	9	0.00E+00	4.08E-06	2.92E-07	3.37E+00	1.29E-08	3.61E-03	2.98E-06	4.17E-03	2.47E-04	6.08E-05	2.43E-04	8.61E-05	8.54E-05	5.08E-04	1.13E-05	0.00E+00	1.57E-04	7.86E-04
11	D31

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D36	60	Passenger Car	394	0.00E+00	5.91E-06	6.39E-07	1.98E+01	4.11E-05	1.54E-01	1.31E-05	8.03E-04	3.99E-03	6.13E-04	1.28E-03	8.24E-04	8.45E-04	8.22E-05	9.90E-05	2.73E-08	4.33E-04	1.25E-04
9	D36	60	Passenger Truck	659	0.00E+00	1.30E-05	1.38E-06	4.51E+01	8.14E-05	2.74E-01	2.68E-05	2.62E-03	7.33E-03	1.14E-03	2.55E-03	1.66E-03	1.70E-03	3.49E-04	2.24E-04	6.19E-08	8.49E-04	4.34E-04
9	D36	60	Single Unit Short Haul Truck	7	0.00E+00	2.19E-06	1.10E-07	1.40E+00	1.81E-06	2.71E-03	2.34E-06	1.04E-03	1.78E-04	3.22E-05	2.67E-04	6.58E-05	6.69E-05	1.40E-04	5.65E-06	2.33E-09	2.00E-04	1.96E-04
9	D36	60	Combination Short Haul Truck	6	0.00E+00	3.79E-06	2.64E-07	2.46E+00	1.34E-08	3.31E-03	2.81E-06	4.10E-03	3.52E-04	6.98E-05	2.41E-04	7.86E-05	7.87E-05	3.71E-04	8.24E-06	0.00E+00	1.62E-04	7.72E-04
9	D36	60	Combination Long Haul Truck	6	0.00E+00	3.40E-06	2.21E-07	2.31E+00	1.54E-08	3.57E-03	2.62E-06	4.06E-03	3.54E-04	6.01E-05	2.48E-04	6.75E-05	6.84E-05	3.53E-04	7.73E-06	0.00E+00	1.80E-04	7.65E-04
9	D37	60	Passenger Car	270	0.00E+00	4.05E-06	4.38E-07	1.36E+01	2.82E-05	1.05E-01	9.01E-06	5.51E-04	2.74E-03	4.21E-04	8.77E-04	5.65E-04	5.80E-04	5.64E-05	6.79E-05	1.87E-08	2.97E-04	8.61E-05
9	D37	60	Passenger Truck	452	0.00E+00	8.94E-06	9.44E-07	3.09E+01	5.59E-05	1.88E-01	1.84E-05	1.79E-03	5.03E-03	7.80E-04	1.75E-03	1.14E-03	1.17E-03	2.39E-04	1.54E-04	4.24E-08	5.82E-04	2.97E-04
9	D37	60	Single Unit Short Haul Truck	1	0.00E+00	3.87E-07	1.94E-08	2.47E-01	3.19E-07	4.78E-04	4.14E-07	1.84E-04	3.14E-05	5.69E-06	4.71E-05	1.16E-05	1.18E-05	2.47E-05	9.97E-07	4.11E-10	3.53E-05	3.46E-05
9	D37	60	Combination Short Haul Truck	8	0.00E+00	4.57E-06	3.19E-07	2.98E+00	1.62E-08	4.00E-03	3.39E-06	4.95E-03	4.26E-04	8.43E-05	2.91E-04	9.49E-05	9.51E-05	4.49E-04	9.96E-06	0.00E+00	1.96E-04	9.33E-04
9	D37	60	Combination Long Haul Truck	7	0.00E+00	4.11E-06	2.67E-07	2.79E+00	1.86E-08	4.31E-03	3.17E-06	4.91E-03	4.28E-04	7.26E-05	3.00E-04	8.16E-05	8.26E-05	4.26E-04	9.34E-06	0.00E+00	2.17E-04	9.24E-04
9	D38	60	Passenger Car	108	0.00E+00	1.63E-06	1.76E-07	5.44E+00	1.13E-05	4.23E-02	3.62E-06	2.21E-04	1.10E-03	1.69E-04	3.52E-04	2.27E-04	2.33E-04	2.26E-05	2.73E-05	7.51E-09	1.19E-04	3.45E-05
9	D38	60	Passenger Truck	181	0.00E+00	3.59E-06	3.79E-07	1.24E+01	2.24E-05	7.54E-02	7.39E-06	7.20E-04	2.02E-03	3.13E-04	7.03E-04	4.58E-04	4.69E-04	9.61E-05	6.16E-05	1.70E-08	2.34E-04	1.19E-04
9	D38	60	Single Unit Short Haul Truck	3	0.00E+00	7.62E-07	3.81E-08	4.86E-01	6.29E-07	9.41E-04	8.14E-07	3.63E-04	6.18E-05	1.12E-05	9.27E-05	2.29E-05	2.33E-05	4.86E-05	1.96E-06	8.09E-10	6.94E-05	6.80E-05
9	D38	60	Combination Short Haul Truck	2	0.00E+00	1.19E-06	8.32E-08	7.77E-01	4.23E-09	1.04E-03	8.86E-07	1.29E-03	1.11E-04	2.20E-05	7.60E-05	2.48E-05	2.48E-05	1.17E-04	2.60E-06	0.00E+00	5.11E-05	2.43E-04
9	D38	60	Combination Long Haul Truck	2	0.00E+00	1.07E-06	6.97E-08	7.28E-01	4.85E-09	1.12E-03	8.26E-07	1.28E-03	1.12E-04	1.90E-05	7.83E-05	2.13E-05	2.16E-05	1.11E-04	2.44E-06	0.00E+00	5.67E-05	2.41E-04
9	D39	60	Passenger Car	276	0.00E+00	4.14E-06	4.48E-07	1.39E+01	2.88E-05	1.08E-01	9.21E-06	5.63E-04	2.80E-03	4.30E-04	8.97E-04	5.78E-04	5.93E-04	5.77E-05	6.94E-05	1.91E-08	3.04E-04	8.80E-05
9	D39	60	Passenger Truck	462	0.00E+00	9.14E-06	9.65E-07	3.16E+01	5.71E-05	1.92E-01	1.88E-05	1.84E-03	5.14E-03	7.98E-04	1.79E-03	1.17E-03	1.19E-03	2.45E-04	1.57E-04	4.34E-08	5.96E-04	3.04E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.37E-07	1.19E-08	1.51E-01	1.95E-07	2.92E-04	2.53E-07	1.13E-04	1.92E-05	3.48E-06	2.88E-05	7.11E-06	7.23E-06	1.51E-05	6.10E-07	2.51E-10	2.16E-05	2.11E-05
9	D39	60	Combination Short Haul Truck	7	0.00E+00	4.35E-06	3.03E-07	2.83E+00	1.54E-08	3.81E-03	3.23E-06	4.71E-03	4.05E-04	8.02E-05	2.77E-04	9.04E-05	9.05E-05	4.27E-04	9.48E-06	0.00E+00	1.87E-04	8.88E-04
9	D39	60	Combination Long Haul Truck	7	0.00E+00	3.91E-06	2.54E-07	2.66E+00	1.77E-08	4.10E-03	3.01E-06	4.67E-03	4.08E-04	6.91E-05	2.86E-04	7.76E-05	7.86E-05	4.06E-04	8.89E-06	0.00E+00	2.07E-04	8.80E-04
9	D40	60	Passenger Car	176	0.00E+00	2.64E-06	2.85E-07	8.83E+00	1.84E-05	6.86E-02	5.87E-06	3.59E-04	1.78E-03	2.74E-04	5.71E-04	3.68E-04	3.78E-04	3.67E-05	4.42E-05	1.22E-08	1.93E-04	5.61E-05
9	D40	60	Passenger Truck	294	0.00E+00	5.82E-06	6.15E-07	2.02E+01	3.64E-05	1.22E-01	1.20E-05	1.17E-03	3.27E-03	5.08E-04	1.14E-03	7.43E-04	7.61E-04	1.56E-04	1.00E-04	2.76E-08	3.79E-04	1.94E-04
9	D40	60	Single Unit Short Haul Truck	3	0.00E+00	8.73E-07	4.37E-08	5.57E-01	7.20E-07	1.08E-03	9.32E-07	4.16E-04	7.08E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.79E-05
9	D40	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.06E-08	8.45E-01	4.60E-09	1.14E-03	9.64E-07	1.41E-03	1.21E-04	2.39E-05	8.27E-05	2.70E-05	2.70E-05	1.27E-04	2.83E-06	0.00E+00	5.57E-05	2.65E-04
9	D40	60	Combination Long Haul Truck	2	0.00E+00	1.17E-06	7.59E-08	7.93E-01	5.28E-09	1.22E-03	8.99E-07	1.39E-03	1.22E-04	2.06E-05	8.52E-05	2.32E-05	2.35E-05	1.21E-04	2.65E-06	0.00E+00	6.18E-05	2.63E-04
9	D41	60	Passenger Car	51	0.00E+00	7.66E-07	8.29E-08	2.56E+00	5.33E-06	1.99E-02	1.70E-06	1.04E-04	5.18E-04	7.96E-05	1.66E-04	1.07E-04	1.10E-04	1.07E-05	1.28E-05	3.54E-09	5.61E-05	1.63E-05
9	D41	60	Passenger Truck	86	0.00E+00	1.69E-06	1.78E-07	5.85E+00	1.06E-05	3.55E-02	3.48E-06	3.39E-04	9.51E-04	1.48E-04	3.31E-04	2.16E-04	2.21E-04	4.53E-05	2.90E-05	8.03E-09	1.10E-04	5.62E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	3.43E-07	1.72E-08	2.19E-01	2.83E-07	4.23E-04	3.66E-07	1.63E-04	2.78E-05	5.04E-06	4.17E-05	1.03E-05	1.05E-05	2.19E-05	8.83E-07	3.64E-10	3.13E-05	3.06E-05
9	D41	60	Combination Short Haul Truck	4	0.00E+00	2.24E-06	1.56E-07	1.46E+00	7.94E-09	1.96E-03	1.66E-06	2.43E-03	2.09E-04	4.13E-05	1.43E-04	4.65E-05	4.66E-05	2.20E-04	4.88E-06	0.00E+00	9.60E-05	4.57E-04
9	D41	60	Combination Long Haul Truck	3	0.00E+00	2.01E-06	1.31E-07	1.37E+00	9.11E-09	2.11E-03	1.55E-06	2.40E-03	2.10E-04	3.56E-05	1.47E-04	4.00E-05	4.05E-05	2.09E-04	4.58E-06	0.00E+00	1.07E-04	4.53E-04
9	D42	60	Passenger Car	73	0.00E+00	1.09E-06	1.18E-07	3.66E+00	7.62E-06	2.84E-02	2.43E-06	1.49E-04	7.40E-04	1.14E-04	2.37E-04	1.53E-04	1.57E-04	1.52E-05	1.83E-05	5.05E-09	8.02E-05	2.32E-05
9	D42	60	Passenger Truck	122	0.00E+00	2.41E-06	2.55E-07	8.36E+00	1.51E-05	5.07E-02	4.97E-06	4.85E-04	1.36E-03	2.11E-04	4.73E-04	3.08E-04	3.16E-04	6.47E-05	4.15E-05	1.15E-08	1.57E-04	8.03E-05
9	D42	60	Single Unit Short Haul Truck	2	0.00E+00	5.49E-07	2.75E-08	3.50E-01	4.53E-07	6.78E-04	5.86E-07	2.62E-04	4.45E-05	8.07E-06	6.68E-05	1.65E-05	1.68E-05	3.50E-05	1.41E-06	5.83E-10	5.00E-05	4.90E-05
9	D42	60	Combination Short Haul Truck	2	0.00E+00	1.18E-06	8.21E-08	7.67E-01	4.17E-09	1.03E-03	8.74E-07	1.28E-03	1.10E-04	2.17E-05	7.50E-05	2.45E-05	2.45E-05	1.16E-04	2.57E-06	0.00E+00	5.05E-05	2.40E-04
9	D42	60	Combination Long Haul Truck	2	0.00E+00	1.06E-06	6.88E-08	7.19E-01	4.79E-09	1.11E-03	8.16E-07	1.26E-03	1.10E-04	1.87E-05	7.73E-05	2.10E-05	2.13E-05	1.10E-04	2.41E-06	0.00E+00	5.60E-05	2.38E-04
9	D43	60	Passenger Car	146	0.00E+00	2.20E-06	2.38E-07	7.36E+00	1.53E-05	5.71E-02	4.89E-06	2.99E-04	1.49E-03	2.28E-04	4.76E-04	3.07E-04	3.15E-04	3.06E-05	3.68E-05	1.01E-08	1.61E-04	4.67E-05
9	D43	60	Passenger Truck	245	0.00E+00	4.85E-06	5.12E-07	1.68E+01	3.03E-05	1.02E-01	9.99E-06	9.74E-04	2.73E-03	4.23E-04	9.50E-04	6.19E-04	6.34E-04	1.30E-04	8.33E-05	2.30E-08	3.16E-04	1.61E-04
9	D43	60	Single Unit Short Haul Truck	12	0.00E+00	3.63E-06	1.81E-07	2.31E+00	2.99E-06	4.47E-03	3.87E-06	1.73E-03	2.94E-04	5.33E-05	4.41E-04	1.09E-04	1.11E-04	2.31E-04	9.33E-06	3.85E-09	3.30E-04	3.23E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	1.58E-07	7.88E-09	9.86E-02	1.30E-07	1.90E-04	1.69E-07	7.47E-05	1.32E-05	2.36E-06	1.93E-05	4.73E-06	4.81E-06	9.85E-06	3.99E-07	1.64E-10	1.45E-05	1.40E-05
9	D43	60	Combination Short Haul Truck	7	0.00E+00	4.05E-06	2.82E-07	2.63E+00	1.43E-08	3.54E-03	3.00E-06	4.38E-03	3.77E-04	7.46E-05	2.57E-04	8.40E-05	8.41E-05	3.97E-04	8.81E-06	0.00E+00	1.73E-04	8.25E-04
9	D43	60	Combination Long Haul Truck	6	0.00E+00	3.63E-06	2.36E-07	2.47E+00	1.64E-08	3.81E-03	2.80E-06	4.34E-03	3.79E-04	6.42E-05	2.65E-04	7.22E-05	7.31E-05	3.77E-04	8.27E-06	0.00E+00	1.92E-04	8.18E-04
9	D44	60	Passenger Car	326	0.00E+00	4.89E-06	5.29E-07	1.64E+01	3.41E-05	1.27E-01	1.09E-05	6.65E-04	3.31E-03	5.08E-04	1.06E-03	6.83E-04	7.00E-04	6.81E-05	8.20E-05	2.26E-08	3.58E-04	1.04E-04
9	D44	60	Passenger Truck	546	0.00E+00	1.08E-05	1.14E-06	3.74E+01	6.75E-05	2.27E-01	2.22E-05	2.17E-03	6.07E-03	9.42E-04	2.11E-03	1.38E-03	1.41E-03	2.89E-04	1.85E-04	5.13E-08	7.03E-04	3.59E-04
9	D44	60	Combination Short Haul Truck	1	0.00E+00	7.98E-07	5.56E-08	5.19E-01	2.83E-09	6.98E-04	5.92E-07	8.64E-04	7.43E-05	1.47E-05	5.08E-05	1.66E-05	1.66E-05	7.83E-05	1.74E-06	0.00E+00	3.42E-05	1.63E-04
9	D44	60	Combination Long Haul Truck	1	0.00E+00	7.17E-07	4.66E-08	4.87E-01	3.24E-09	7.52E-04	5.52E-07	8.56E-04	7.47E-05	1.27E-05	5.24E-05	1.42E-05	1.44E-05	7.44E-05	1.63E-06	0.00E+00	3.79E-05	1.61E-04
9	D45	60	Passenger Car	473	0.00E+00	7.10E-06	7.68E-07	2.38E+01	4.94E-05	1.85E-01	1.58E-05	9.65E-04	4.80E-03	7.37E-04	1.54E-03	9.90E-04	1.02E-03	9.88E-05	1.19E-04	3.28E-08	5.20E-04	1.51E-04
9	D45	60	Passenger Truck	792	0.00E+00	1.57E-05	1.65E-06	5.42E+01	9.79E-05	3.29E-01	3.23E-05	3.14E-03	8.81E-03	1.37E-03	3.07E-03	2.00E-03	2.05E-03	4.19E-04	2.69E-04	7.44E-08	1.02E-03	5.21E-04
9	D45	60	Single Unit Short Haul Truck	30	0.00E+00	8.95E-06	4.48E-07	5.70E+00	7.38E-06	1.10E-02	9.55E-06	4.26E-03	7.25E-04	1.31E-04	1.09E-03	2.69E-04	2.73E-04	5.71E-04	2.30E-05	9.49E-09	8.15E-04	7.99E-04
9	D45	60	Single Unit Long Haul Truck	1	0.00E+00	3.91E-07	1.95E-08	2.43E-01	3.21E-07	4.69E-04	4.17E-07	1.84E-04	3.26E-05	5.82E-06	4.77E-05	1.17E-05	1.19E-05	2.43E-05	9.84E-07	4.04E-10	3.58E-05	3.45E-05
9	D45	60	Combination Short Haul Truck	23	0.00E+00	1.36E-05	9.47E-07	8.84E+00	4.82E-08	1.19E-02	1.01E-05	1.47E-02	1.27E-03	2.51E-04	8.65E-04	2.82E-04	2.83E-04	1.33E-03	2.96E-05	0.00E+00	5.82E-04	2.77E-03
9	D45	60	Combination Long Haul Truck	21	0.00E+00	1.22E-05	7.94E-07	8.29E+00	5.52E-08	1.28E-02	9.41E-06	1.46E-02	1.27E-03	2.16E-04	8.92E-04	2.42E-04	2.46E-04	1.27E-03	2.78E-05	0.00E+00	6.46E-04	2.75E-03
9	D46	60	Passenger Car	433	0.00E+00	6.50E-06	7.03E-07	2.18E+01	4.52E-05	1.69E-01	1.45E-05	8.83E-04	4.40E-03	6.75E-04	1.41E-03	9.07E-04	9.31E-04	9.05E-05	1.09E-04	3.00E-08	4.76E-04	1.38E-04
9	D46	60	Passenger Truck	725	0.00E+00	1.43E-05	1.51E-06	4.96E+01	8.96E-05	3.01E-01	2.95E-05	2.88E-03	8.06E-03	1.25E-03	2.81E-03	1.83E-03	1.87E-03	3.84E-04	2.46E-04	6.81E-08	9.34E-04	4.77E-04
9	D46	60	Single Unit Short Haul Truck	26	0.00E+00	7.60E-06	3.80E-07	4.84E+00	6.27E-06	9.38E-03	8.11E-06	3.62E-03	6.16E-04	1.12E-04	9.24E-04	2.28E-04	2.32E-04	4.85E-04	1.96E-05	8.06E-09	6.92E-04	6.78E-04
9	D46	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.07E-01	2.72E-07	3.98E-04	3.55E-07	1.57E-04	2.76E-05	4.94E-06	4.05E-05	9.92E-06	1.01E-05	2.06E-05	8.36E-07	3.43E-10	3.04E-05	2.93E-05
9	D46	60	Combination Short Haul Truck	43	0.00E+00	2.53E-05	1.77E-06	1.65E+01	8.98E-08	2.22E-02	1.88E-05	2.74E-02	2.36E-03	4.67E-04	1.61E-03	5.26E-04	5.27E-04	2.48E-03	5.52E-05	0.00E+00	1.09E-03	5.17E-03
9	D46	60	Combination Long Haul Truck	39	0.00E+00	2.27E-05	1.48E-06	1.55E+01	1.03E-07	2.39E-02	1.75E-05	2.72E-02	2.37E-03	4.02E-04	1.66E-03	4.52E-04	4.58E-04	2.36E-03	5.18E-05	0.00E+00	1.20E-03	5.12E-03
9	D47	60	Passenger Car	692	0.00E+00	1.04E-05	1.12E-06	3.47E+01	7.23E-05	2.70E-01	2.31E-05	1.41E-03	7.02E-03	1.08E-03	2.25E-03	1.45E-03	1.49E-03	1.45E-04	1.74E-04	4.79E-08	7.61E-04	2.21E-04
9	D47	60	Passenger Truck	1159	0.00E+00	2.29E-05	2.42E-06	7.93E+01	1.43E-04	4.81E-01	4.72E-05	4.60E-03	1.29E-02	2.00E-03	4.49E-03	2.92E-03	2.99E-03	6.13E-04	3.94E-04	1.09E-07	1.49E-03	7.62E-04
9	D47	60	Single Unit Short Haul Truck	34	0.00E+00	9.86E-06	4.93E-07	6.28E+00	8.13E-06	1.22E-02	1.05E-05	4.69E-03	7.99E-04	1.45E-04	1.20E-03	2.96E-04	3.01E-04	6.29E-04	2.54E-05	1.05E-08	8.98E-04	8.79E-04
9	D47	60	Single Unit Long Haul Truck	1	0.00E+00	4.31E-07	2.14E-08	2.68E-01	3.53E-07	5.16E-04	4.60E-07	2.03E-04	3.59E-05	6.41E-06	5.25E-05	1.29E-05	1.31E-05	2.68E-05	1.08E-06	4.45E-10	3.94E-05	3.80E-05
9	D47	60	Combination Short Haul Truck	24	0.00E+00	1.43E-05	9.94E-07	9.28E+00	5.05E-08	1.25E-02	1.06E-05	1.54E-02	1.33E-03	2.63E-04	9.08E-04	2.96E-04	2.97E-04	1.40E-03	3.11E-05	0.00E+00	6.11E-04	2.91E-03
9	D47	60	Combination Long Haul Truck	22	0.00E+00	1.28E-05	8.33E-07	8.70E+00	5.80E-08	1.34E-02	9.87E-06	1.53E-02	1.34E-03	2.27E-04	9.36E-04	2.54E-04	2.58E-04	1.33E-03	2.91E-05	0.00E+00	6.78E-04	2.88E-03
9	D48	60	Passenger Car	176	0.00E+00	2.64E-06	2.85E-07	8.83E+00	1.84E-05	6.86E-02	5.87E-06	3.59E-04	1.78E-03	2.74E-04	5.71E-04	3.68E-04	3.78E-04	3.67E-05	4.42E-05	1.22E-08	1.93E-04	5.61E-05
9	D48	60	Passenger Truck	294	0.00E+00	5.82E-06	6.15E-07	2.02E+01	3.64E-05	1.22E-01	1.20E-05	1.17E-03	3.27E-03	5.08E-04	1.14E-03	7.43E-04	7.61E-04	1.56E-04	1.00E-04	2.76E-08	3.79E-04	1.94E-04
9	D48	60	Single Unit Short Haul Truck	3	0.00E+00	8.73E-07	4.37E-08	5.57E-01	7.20E-07	1.08E-03	9.32E-07	4.16E-04	7.08E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.79E-05
9	D48	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.06E-08	8.45E-01	4.60E-09	1.14E-03	9.64E-07	1.41E-03	1.21E-04	2.39E-05	8.27E-05	2.70E-05	2.70E-05	1.27E-04	2.83E-06	0.00E+00	5.57E-05	2.65E-04
9	D48	60	Combination Long Haul Truck	2	0.00E+00	1.17E-06	7.59E-08	7.93E-01	5.28E-09	1.22E-03	8.99E-07	1.39E-03	1.22E-04	2.06E-05	8.52E-05	2.32E-05	2.35E-05	1.21E-04	2.65E-06	0.00E+00	6.18E-05	2.63E-04
9	D49	60	Passenger Car	1086	0.00E+00	1.63E-05	1.76E-06	5.45E+01	1.13E-04	4.23E-01	3.62E-05	2.21E-03	1.10E-02	1.69E-03	3.53E-03	2.27E-03	2.33E-03	2.27E-04	2.73E-04	7.52E-08	1.19E-03	3.46E-04
9	D49	60	Passenger Truck	1818	0.00E+00	3.59E-05	3.79E-06	1.24E+02	2.25E-04	7.55E-01	7.40E-05	7.22E-03	2.02E-02	3.14E-03	7.04E-03	4.59E-03	4.70E-03	9.63E-04	6.18E-04	1.71E-07	2.34E-03	1.20E-03
9	D49	60	Single Unit Short Haul Truck	93	0.00E+00	2.72E-05	1.36E-06	1.73E+01	2.24E-05	3.36E-02	2.90E-05	1.30E-02	2.21E-03	4.00E-04	3.31E-03	8.17E-04	8.30E-04	1.74E-03	7.01E-05	2.89E-08	2.48E-03	2.43E-03
9	D49	60	Single Unit Long Haul Truck	4	0.00E+00	1.19E-06	5.92E-08	7.40E-01	9.75E-07	1.43E-03	1.27E-06	5.60E-04	9.90E-05	1.77E-05	1.45E-04	3.55E-05	3.61E-05	7.39E-05	2.99E-06	1.23E-09	1.09E-04	1.05E-04
9	D49	60	Combination Short Haul Truck	56	0.00E+00	3.27E-05	2.28E-06	2.13E+01	1.16E-07	2.86E-02	2.43E-05	3.54E-02	3.05E-03	6.03E-04	2.08E-03	6.80E-04	6.81E-04	3.21E-03	7.13E-05	0.00E+00	1.40E-03	6.67E-03
9	D49	60	Combination Long Haul Truck	51	0.00E+00	2.94E-05	1.91E-06	2.00E+01	1.33E-07	3.08E-02	2.27E-05	3.51E-02	3.06E-03	5.20E-04	2.15E-03	5.84E-04	5.91E-04	3.05E-03	6.69E-05	0.00E+00	1.56E-03	6.61E-03
9	D50	60	Passenger Car	791	0.00E+00	1.19E-05	1.28E-06	3.97E+01	8.26E-05	3.09E-01	2.64E-05	1.61E-03	8.03E-03	1.23E-03	2.57E-03	1.66E-03	1.70E-03	1.65E-04	1.99E-04	5.48E-08	8.70E-04	2.52E-04
9	D50	60	Passenger Truck	1325	0.00E+00	2.62E-05	2.77E-06	9.07E+01	1.64E-04	5.50E-01	5.40E-05	5.26E-03	1.47E-02	2.29E-03	5.13E-03	3.34E-03	3.42E-03	7.02E-04	4.50E-04	1.24E-07	1.71E-03	8.72E-04
9	D50	60	Single Unit Short Haul Truck	98	0.00E+00	2.88E-05	1.44E-06	1.84E+01	2.38E-05	3.56E-02	3.08E-05	1.37E-02	2.34E-03	4.24E-04	3.50E-03	8.65E-04	8.79E-04	1.84E-03	7.42E-05	3.06E-08	2.63E-03	2.57E-03
9	D50	60	Single Unit Long Haul Truck	4	0.00E+00	1.26E-06	6.27E-08	7.84E-01	1.03E-06	1.51E-03	1.34E-06	5.94E-04	1.05E-04	1.87E-05	1.54E-04	3.76E-05	3.83E-05	7.83E-05	3.17E-06	1.30E-09	1.15E-04	1.11E-04
9	D50	60	Combination Short Haul Truck	62	0.00E+00	3.64E-05	2.54E-06	2.37E+01	1.29E-07	3.19E-02	2.70E-05	3.94E-02	3.39E-03	6.72E-04	2.32E-03	7.57E-04	7.58E-04	3.57E-03	7.94E-05	0.00E+00	1.56E-03	7.43E-03
9	D50	60	Combination Long Haul Truck	56	0.00E+00	3.27E-05	2.13E-06	2.22E+01	1.48E-07	3.43E-02	2.52E-05	3.91E-02	3.41E-03	5.79E-04	2.39E-03	6.50E-04	6.58E-04	3.40E-03	7.44E-05	0.00E+00	1.73E-03	7.36E-03
9	D51	60	Passenger Car	199	0.00E+00	2.98E-06	3.22E-07	9.97E+00	2.07E-05	7.74E-02	6.62E-06	4.05E-04	2.02E-03	3.09E-04	6.45E-04	4.16E-04	4.27E-04	4.15E-05	4.99E-05	1.38E-08	2.18E-04	6.33E-05
9	D51	60	Passenger Truck	332	0.00E+00	6.57E-06	6.94E-07	2.28E+01	4.11E-05	1.38E-01	1.35E-05	1.32E-03	3.70E-03	5.74E-04	1.29E-03	8.39E-04	8.59E-04	1.76E-04	1.13E-04	3.12E-08	4.28E-04	2.19E-04
9	D51	60	Single Unit Short Haul Truck	9	0.00E+00	2.53E-06

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D55	80	Combination Long Haul Truck	33	0.00E+00	1.41E-05	9.51E-07	1.21E+01	5.76E-08	1.45E-02	1.07E-05	1.57E-02	9.35E-04	1.88E-04	9.71E-04	2.87E-04	2.89E-04	1.84E-03	4.04E-05	0.00E+00	6.83E-04	2.95E-03
11	D56	80	Passenger Car	581	0.00E+00	7.08E-06	7.65E-07	2.71E+01	4.92E-05	1.89E-01	1.57E-05	1.19E-03	3.19E-03	5.55E-04	1.53E-03	9.87E-04	1.01E-03	9.10E-05	1.36E-04	3.82E-08	5.18E-04	1.86E-04
11	D56	80	Passenger Truck	972	0.00E+00	1.52E-05	1.61E-06	6.26E+01	9.73E-05	3.48E-01	3.18E-05	3.54E-03	5.72E-03	1.02E-03	3.05E-03	1.98E-03	2.03E-03	4.37E-04	3.12E-04	8.50E-08	1.02E-03	5.79E-04
11	D56	80	Single Unit Short Haul Truck	58	0.00E+00	1.09E-05	5.40E-07	1.07E+01	8.75E-06	2.14E-02	1.16E-05	5.56E-03	6.83E-04	1.55E-04	1.32E-03	3.22E-04	3.27E-04	1.07E-03	4.30E-05	1.71E-08	9.96E-04	1.04E-03
11	D56	80	Single Unit Long Haul Truck	3	0.00E+00	4.73E-07	2.33E-08	4.51E-01	3.74E-07	8.90E-04	5.03E-07	2.38E-04	3.12E-05	6.82E-06	5.77E-05	1.39E-05	1.41E-05	4.51E-05	1.82E-06	7.11E-10	4.36E-05	4.45E-05
11	D56	80	Combination Short Haul Truck	35	0.00E+00	1.54E-05	1.10E-06	1.27E+01	4.85E-08	1.36E-02	1.12E-05	1.57E-02	9.30E-04	2.29E-04	9.15E-04	3.24E-04	3.22E-04	1.92E-03	4.25E-05	0.00E+00	5.93E-04	2.96E-03
11	D56	80	Combination Long Haul Truck	32	0.00E+00	1.38E-05	9.25E-07	1.17E+01	5.60E-08	1.41E-02	1.04E-05	1.53E-02	9.09E-04	1.83E-04	9.45E-04	2.79E-04	2.81E-04	1.79E-03	3.93E-05	0.00E+00	6.64E-04	2.87E-03
11	D57	80	Passenger Car	693	0.00E+00	8.45E-06	9.14E-07	3.23E+01	5.88E-05	2.26E-01	1.88E-05	1.42E-03	3.81E-03	6.62E-04	1.83E-03	1.18E-03	1.21E-03	1.09E-04	1.63E-04	4.56E-08	6.19E-04	2.22E-04
11	D57	80	Passenger Truck	1160	0.00E+00	1.81E-05	1.92E-06	7.47E+01	1.16E-04	4.15E-01	3.80E-05	4.23E-03	6.83E-03	1.21E-03	3.64E-03	2.36E-03	2.42E-03	5.21E-04	3.73E-04	1.01E-07	1.22E-03	6.91E-04
11	D57	80	Single Unit Short Haul Truck	47	0.00E+00	8.87E-06	4.41E-07	8.71E+00	7.14E-06	1.74E-02	9.45E-06	4.54E-03	5.58E-04	1.26E-04	1.08E-03	2.63E-04	2.67E-04	8.74E-04	3.51E-05	1.39E-08	8.13E-04	8.49E-04
11	D57	80	Single Unit Long Haul Truck	2	0.00E+00	3.86E-07	1.90E-08	3.68E-01	3.05E-07	7.26E-04	4.10E-07	1.94E-04	2.55E-05	5.57E-06	4.71E-05	1.13E-05	1.15E-05	3.68E-05	1.49E-06	5.80E-10	3.56E-05	3.63E-05
11	D57	80	Combination Short Haul Truck	38	0.00E+00	1.69E-05	1.21E-06	1.40E+01	5.34E-08	1.50E-02	1.24E-05	1.73E-02	1.02E-03	2.52E-04	1.01E-03	3.57E-04	3.54E-04	2.11E-03	4.68E-05	0.00E+00	6.53E-04	3.26E-03
11	D57	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.29E+01	6.17E-08	1.55E-02	1.15E-05	1.68E-02	1.00E-03	2.02E-04	1.04E-03	3.07E-04	3.09E-04	1.98E-03	4.33E-05	0.00E+00	7.31E-04	3.17E-03
11	D58	80	Passenger Car	707	0.00E+00	8.62E-06	9.33E-07	3.30E+01	6.00E-05	2.30E-01	1.92E-05	1.45E-03	3.89E-03	6.76E-04	1.87E-03	1.20E-03	1.23E-03	1.11E-04	1.66E-04	4.65E-08	6.32E-04	2.27E-04
11	D58	80	Passenger Truck	1184	0.00E+00	1.85E-05	1.96E-06	7.62E+01	1.19E-04	4.24E-01	3.88E-05	4.32E-03	6.98E-03	1.24E-03	3.71E-03	2.41E-03	2.47E-03	5.32E-04	3.80E-04	1.04E-07	1.24E-03	7.05E-04
11	D58	80	Single Unit Short Haul Truck	71	0.00E+00	1.33E-05	6.61E-07	1.31E+01	1.07E-05	2.62E-02	1.42E-05	6.81E-03	8.37E-04	1.89E-04	1.62E-03	3.94E-04	4.01E-04	1.31E-03	5.27E-05	2.09E-08	1.22E-03	1.27E-03
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	5.79E-07	2.85E-08	5.53E-01	4.58E-07	1.09E-03	6.16E-07	2.91E-04	3.82E-05	8.35E-06	7.07E-05	1.70E-05	1.73E-05	5.52E-05	2.23E-06	8.71E-10	5.34E-05	5.45E-05
11	D58	80	Combination Short Haul Truck	41	0.00E+00	1.81E-05	1.30E-06	1.50E+01	5.72E-08	1.60E-02	1.32E-05	1.85E-02	1.10E-03	2.70E-04	1.08E-03	3.83E-04	3.80E-04	2.26E-03	5.02E-05	0.00E+00	6.99E-04	3.49E-03
11	D58	80	Combination Long Haul Truck	38	0.00E+00	1.62E-05	1.09E-06	1.38E+01	6.61E-08	1.66E-02	1.23E-05	1.80E-02	1.07E-03	2.16E-04	1.11E-03	3.29E-04	3.31E-04	2.12E-03	4.64E-05	0.00E+00	7.83E-04	3.39E-03
11	D59	80	Passenger Car	546	0.00E+00	6.66E-06	7.20E-07	2.55E+01	4.63E-05	1.78E-01	1.48E-05	1.12E-03	3.00E-03	5.22E-04	1.44E-03	9.29E-04	9.53E-04	8.56E-05	1.28E-04	3.59E-08	4.88E-04	1.75E-04
11	D59	80	Passenger Truck	915	0.00E+00	1.43E-05	1.52E-06	5.89E+01	9.16E-05	3.27E-01	3.00E-05	3.33E-03	5.39E-03	9.56E-04	2.87E-03	1.86E-03	1.91E-03	4.11E-04	2.94E-04	8.00E-08	9.59E-04	5.44E-04
11	D59	80	Single Unit Short Haul Truck	33	0.00E+00	6.15E-06	3.05E-07	6.03E+00	4.95E-06	1.21E-02	6.54E-06	3.15E-03	3.86E-04	8.74E-05	7.48E-04	1.82E-04	1.85E-04	6.05E-04	2.43E-05	9.65E-09	5.63E-04	5.89E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	2.67E-07	1.32E-08	2.55E-01	2.11E-07	5.03E-04	2.84E-07	1.35E-04	1.76E-05	3.86E-06	3.26E-05	7.84E-06	7.97E-06	2.55E-05	1.03E-06	4.02E-10	2.47E-05	2.52E-05
11	D59	80	Combination Short Haul Truck	20	0.00E+00	8.97E-06	6.42E-07	7.42E+00	2.83E-08	7.95E-03	6.56E-06	9.18E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.73E-03
11	D59	80	Combination Long Haul Truck	19	0.00E+00	8.04E-06	5.40E-07	6.86E+00	3.27E-08	8.24E-03	6.09E-06	8.91E-03	5.31E-04	1.07E-04	5.52E-04	1.63E-04	1.64E-04	1.05E-03	2.30E-05	0.00E+00	3.88E-04	1.68E-03
11	D60	80	Passenger Car	505	0.00E+00	6.16E-06	6.66E-07	2.36E+01	4.29E-05	1.65E-01	1.37E-05	1.04E-03	2.78E-03	4.83E-04	1.33E-03	8.59E-04	8.82E-04	7.92E-05	1.19E-04	3.32E-08	4.51E-04	1.62E-04
11	D60	80	Passenger Truck	846	0.00E+00	1.32E-05	1.40E-06	5.45E+01	8.47E-05	3.03E-01	2.77E-05	3.08E-03	4.98E-03	8.85E-04	2.65E-03	1.72E-03	1.77E-03	3.80E-04	2.72E-04	7.40E-08	8.88E-04	5.04E-04
11	D60	80	Single Unit Short Haul Truck	48	0.00E+00	8.91E-06	4.43E-07	8.75E+00	7.17E-06	1.75E-02	9.49E-06	4.56E-03	5.60E-04	1.27E-04	1.08E-03	2.64E-04	2.68E-04	8.78E-04	3.52E-05	1.40E-08	8.16E-04	8.53E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	3.88E-07	1.91E-08	3.70E-01	3.06E-07	7.30E-04	4.12E-07	1.95E-04	2.56E-05	5.59E-06	4.73E-05	1.14E-05	1.16E-05	3.69E-05	1.49E-06	5.83E-10	3.58E-05	3.65E-05
11	D60	80	Combination Short Haul Truck	21	0.00E+00	9.45E-06	6.76E-07	7.81E+00	2.98E-08	8.37E-03	6.90E-06	9.67E-03	5.72E-04	1.41E-04	5.63E-04	1.99E-04	1.98E-04	1.18E-03	2.61E-05	0.00E+00	3.65E-04	1.82E-03
11	D60	80	Combination Long Haul Truck	20	0.00E+00	8.46E-06	5.69E-07	7.22E+00	3.44E-08	8.67E-03	6.41E-06	9.38E-03	5.59E-04	1.13E-04	5.81E-04	1.72E-04	1.73E-04	1.10E-03	2.42E-05	0.00E+00	4.08E-04	1.77E-03
11	D61	80	Passenger Car	98	0.00E+00	1.19E-06	1.29E-07	4.57E+00	8.31E-06	3.19E-02	2.65E-06	2.01E-04	5.39E-04	9.37E-05	2.58E-04	1.67E-04	1.71E-04	1.53E-05	2.30E-05	6.44E-09	8.75E-05	3.14E-05
11	D61	80	Passenger Truck	164	0.00E+00	2.56E-06	2.72E-07	1.06E+01	1.64E-05	5.87E-02	5.37E-06	5.98E-04	9.66E-04	1.71E-04	5.14E-04	3.34E-04	3.42E-04	7.37E-05	5.27E-05	1.43E-08	1.72E-04	9.76E-05
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D61	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.41E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.66E-04
11	D61	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.37E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.58E-04
11	D62	80	Passenger Car	71	0.00E+00	8.70E-07	9.42E-08	3.33E+00	6.06E-06	2.33E-02	1.94E-06	1.47E-04	3.93E-04	6.83E-05	1.88E-04	1.21E-04	1.25E-04	1.12E-05	1.68E-05	4.70E-09	6.38E-05	2.29E-05
11	D62	80	Passenger Truck	120	0.00E+00	1.87E-06	1.98E-07	7.70E+00	1.20E-05	4.28E-02	3.92E-06	4.36E-04	7.04E-04	1.25E-04	3.75E-04	2.43E-04	2.49E-04	5.37E-05	3.84E-05	1.05E-08	1.25E-04	7.12E-05
11	D62	80	Single Unit Short Haul Truck	8	0.00E+00	1.44E-06	7.13E-08	1.41E+00	1.16E-06	2.82E-03	1.53E-06	7.35E-04	9.02E-05	2.04E-05	1.75E-04	4.25E-05	4.32E-05	1.41E-04	5.68E-06	2.25E-09	1.32E-04	1.37E-04
11	D62	80	Combination Short Haul Truck	5	0.00E+00	2.07E-06	1.48E-07	1.71E+00	6.53E-09	1.83E-03	1.51E-06	2.12E-03	1.25E-04	3.09E-05	1.23E-04	4.37E-05	4.33E-05	2.58E-04	5.73E-06	0.00E+00	7.99E-05	3.99E-04
11	D62	80	Combination Long Haul Truck	4	0.00E+00	1.85E-06	1.25E-07	1.58E+00	7.54E-09	1.90E-03	1.40E-06	2.05E-03	1.22E-04	2.46E-05	1.27E-04	3.76E-05	3.78E-05	2.42E-04	5.30E-06	0.00E+00	8.95E-05	3.87E-04
10	D63	70	Passenger Car	4	0.00E+00	4.89E-08	5.29E-09	1.80E-01	3.41E-07	1.28E-03	1.09E-07	7.49E-06	2.90E-05	4.65E-06	1.06E-05	6.83E-06	7.01E-06	6.70E-07	9.02E-07	2.46E-10	3.58E-06	1.17E-06
10	D63	70	Passenger Truck	6	0.00E+00	1.07E-07	1.13E-08	4.14E-01	6.78E-07	2.35E-03	2.23E-07	2.34E-05	5.27E-05	8.57E-06	2.12E-05	1.38E-05	1.42E-05	3.04E-06	2.06E-06	5.51E-10	7.09E-06	3.85E-06
10	D64	70	Passenger Car	43	0.00E+00	5.68E-07	6.14E-08	2.08E+00	3.95E-06	1.48E-02	1.26E-06	8.69E-05	3.36E-04	5.39E-05	1.23E-04	7.92E-05	8.13E-05	7.77E-06	1.05E-05	2.85E-09	4.16E-05	1.36E-05
10	D64	70	Passenger Truck	73	0.00E+00	1.24E-06	1.32E-07	4.80E+00	7.87E-06	2.73E-02	2.58E-06	2.72E-04	6.12E-04	9.94E-05	2.46E-04	1.60E-04	1.64E-04	3.52E-05	2.39E-05	6.39E-09	8.22E-05	4.47E-05
10	D64	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.82E-03	1.92E-06	8.86E-04	1.27E-04	2.54E-05	2.18E-04	5.39E-05	5.48E-05	1.41E-04	5.69E-06	2.30E-09	1.64E-04	1.66E-04
10	D64	70	Combination Short Haul Truck	6	0.00E+00	3.27E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.42E-03	2.48E-04	5.42E-05	1.99E-04	6.86E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.44E-04
10	D64	70	Combination Long Haul Truck	6	0.00E+00	2.95E-06	1.97E-07	2.21E+00	1.22E-08	2.98E-03	2.24E-06	3.37E-03	2.47E-04	4.50E-05	2.06E-04	5.96E-05	6.03E-05	3.38E-04	7.40E-06	0.00E+00	1.45E-04	6.35E-04
11	D65	80	Passenger Car	186	0.00E+00	2.26E-06	2.45E-07	8.65E+00	1.57E-05	6.05E-02	5.03E-06	3.81E-04	1.02E-03	1.77E-04	4.89E-04	3.15E-04	3.24E-04	2.91E-05	4.35E-05	1.22E-08	1.66E-04	5.95E-05
11	D65	80	Passenger Truck	311	0.00E+00	4.85E-06	5.15E-07	2.00E+01	3.11E-05	1.11E-01	1.02E-05	1.13E-03	1.83E-03	3.25E-04	9.74E-04	6.32E-04	6.48E-04	1.40E-04	9.98E-05	2.72E-08	3.26E-04	1.85E-04
11	D65	80	Single Unit Short Haul Truck	29	0.00E+00	5.52E-06	2.74E-07	5.42E+00	4.45E-06	1.09E-02	5.88E-06	2.83E-03	3.47E-04	7.85E-05	6.72E-04	1.64E-04	1.66E-04	5.44E-04	2.18E-05	8.67E-09	5.06E-04	5.29E-04
11	D65	80	Single Unit Long Haul Truck	1	0.00E+00	2.40E-07	1.18E-08	2.29E-01	1.90E-07	4.52E-04	2.56E-07	1.21E-04	1.59E-05	3.47E-06	2.93E-05	7.04E-06	7.16E-06	2.29E-05	9.26E-07	3.61E-10	2.22E-05	2.26E-05
11	D65	80	Combination Short Haul Truck	22	0.00E+00	9.87E-06	7.06E-07	8.16E+00	3.11E-08	8.74E-03	7.21E-06	1.01E-02	5.97E-04	1.47E-04	5.88E-04	2.08E-04	2.07E-04	1.23E-03	2.73E-05	0.00E+00	3.81E-04	1.90E-03
11	D65	80	Combination Long Haul Truck	20	0.00E+00	8.84E-06	5.94E-07	7.54E+00	3.60E-08	9.06E-03	6.70E-06	9.80E-03	5.84E-04	1.18E-04	6.07E-04	1.79E-04	1.80E-04	1.15E-03	2.53E-05	0.00E+00	4.27E-04	1.85E-03
11	D66	80	Passenger Car	285	0.00E+00	3.47E-06	3.76E-07	1.33E+01	2.42E-05	9.29E-02	7.72E-06	5.85E-04	1.57E-03	2.72E-04	7.52E-04	4.85E-04	4.97E-04	4.47E-05	6.69E-05	1.87E-08	2.54E-04	9.15E-05
11	D66	80	Passenger Truck	477	0.00E+00	7.46E-06	7.91E-07	3.07E+01	4.78E-05	1.71E-01	1.56E-05	1.74E-03	2.81E-03	4.99E-04	1.50E-03	9.71E-04	9.95E-04	2.14E-04	1.53E-04	4.17E-08	5.01E-04	2.84E-04
11	D66	80	Single Unit Short Haul Truck	33	0.00E+00	6.16E-06	3.06E-07	6.05E+00	4.96E-06	1.21E-02	6.56E-06	3.15E-03	3.87E-04	8.77E-05	7.50E-04	1.83E-04	1.86E-04	6.07E-04	2.44E-05	9.67E-09	5.65E-04	5.90E-04
11	D66	80	Single Unit Long Haul Truck	1	0.00E+00	2.68E-07	1.32E-08	2.56E-01	2.12E-07	5.05E-04	2.85E-07	1.35E-04	1.77E-05	3.87E-06	3.27E-05	7.86E-06	7.99E-06	2.56E-05	1.03E-06	4.03E-10	2.47E-05	2.52E-05
11	D66	80	Combination Short Haul Truck	26	0.00E+00	1.13E-05	8.11E-07	9.38E+00	3.58E-08	1.00E-02	8.29E-06	1.16E-02	6.86E-04	1.69E-04	6.76E-04	2.39E-04	2.38E-04	1.41E-03	3.14E-05	0.00E+00	4.38E-04	2.19E-03
11	D66	80	Combination Long Haul Truck	24	0.00E+00	1.02E-05	6.83E-07	8.67E+00	4.14E-08	1.04E-02	7.70E-06	1.13E-02	6.71E-04	1.35E-04	6.98E-04	2.06E-04	2.07E-04	1.32E-03	2.90E-05	0.00E+00	4.90E-04	2.12E-03
11	D67	80	Passenger Car	202	0.00E+00	2.46E-06	2.66E-07	9.40E+00	1.71E-05	6.57E-02	5.46E-06	4.14E-04	1.11E-03	1.93E-04	5.32E-04	3.43E-04	3.52E-04	3.16E-05	4.73E-05	1.33E-08	1.80E-04	6.47E-05
11	D67	80	Passenger Truck	338	0.00E+00	5.28E-06	5.60E-07	2.17E+01	3.38E-05	1.21E-01	1.11E-05	1.23E-03	1.99E-03	3.53E-04	1.06E-03	6.87E-04	7.04E-04	1.52E-04	1.08E-04	2.95E-08	3.54E-04	2.01E-04
11	D67	80	Single Unit Short Haul Truck	49	0.00E+00	9.21E-06	4.57E-07	9.04E+00	7.41E-06	1.81E-02	9.80E-06	4.71E-03	5.79E-04	1.31E-04	1.12E-03	2.73E-04	2.77E-04	9.07E-04	3.64E-05	1.44E-08	8.44E-04	8.82E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.97E-08	3.82E-01	3.17E-07	7.54E-04	4.26E-07	2.02E-04	2.64E-05	5.78E-06	4.89E-05	1.17E-05	1.19E-05	3.82E-05	1.54E-06	6.02E-10	3.70E-05	3.77E-05
11	D67	80	Combination Short Haul Truck	38	0.00E+00	1.67E-05	1.19E-06	1.38E+01	5.27E-08	1.48E-02	1.22E-05	1.71E-02	1.01E-03	2.49E-04	9.94E-04	3.52E-04	3.50E-04	2.08E-03	4.62E-05	0.00E+00	6.44E-04	3.22E-03
11	D67	80	Combination Long Haul Truck	35	0.00E+00	1.49E-05	1.00E-06	1.28E+01	6.09E-08	1.53E-02	1.13E-05	1.66E-02	9.88E-04	1.99E-04	1.03E-03	3.03E-04	3.05E-04	1.95E-03	4.27E-05	0.00E+00	7.22E-04	3.12E-03
11	D68	80	Passenger Car	158	0.00E+00	1.92E-06	2.08E-07	7.36E+00	1.34E-05	5.14E-02	4.28E-06	3.24E-04	8.68E-04	1.51E-04	4.16E-04	2.68E-04	2.75E-04	2.47E-05	3.70E-05	1.04E-08	1.41E-04	5.06E-05
11	D68	80	Passenger Truck	264	0.00E+00	4.13E-06	4.38E-07	1.70E+01	2.65E-05	9.46E-02	8.65E-06	9.63E-04	1.56E-03	2.76E-04	8.28E-04	5.38E-04	5.51E-04	1.19E-04	8.49E-05	2.31E-08	2.77E-04	1.57E-04
11	D68	80	Single Unit Short Haul Truck	33	0.00E+00	6.16E-06	3.06E-07	6.05E+00	4.96E-06	1.21E-02	6.56E-06	3.15E-03	3.87E-04	8.76E-05	7.50E-04	1.82E-04	1.86E-04	6.07E-04	2.44E-05	9.67E-09	5.64E-04	5.90E-04
11	D68	80	Single Unit Long Haul Truck	1	0.00E+00	2.68E-07	1.32E-08	2.56E-01	2.12E-07	5.04E-04	2.85E-07	1.35E-04	1.77E-05	3.86E-06	3.27E-05	7.85E-06	7.99E-06	2.55E-05	1.03E-06	4.03E-10	2.47E-05	2.52E-05
11	D68	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	9.99E-07	1.15E+01	4.41E-08	1.24E-02	1.02E-05	1.43E-02	8.45E-04	2.08E-04	8.32E-04	2.95E-04	2.93E-04	1.74E-03	3.87E-05	0.00E+00	5.39E-04	2.69E-03
11	D68	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.41E-07	1.07E+01	5.09E-08	1.28E-02	9.48E-06	1.39E-02	8.27E-04	1.66E-04	8.59E-04	2.54E-04	2.55E-04	1.63E-03	3.58E-05	0.00E+00	6.04E-04	2.61E-03
11	D69	80	Passenger Car	128	0.00E+00	1.56E-06	1.68E-07	5.96E+00	1.08E-05	4.16E-02	3.46E-06	2.62E-04	7.02E-04	1.22E-04	3.37E-04	2.17E-04	2.23E-04	2.00E-05	3.00E-05	8.40E-09	1.14E-04	4.10E-05
11	D69	80	Passenger Truck	214	0.00E+00	3.34E-06	3.55E-07	1.38E+01	2.14E-05	7.66E-02	7.01E-06	7.79E-04	1.26E-03	2.24E-04	6.70E-04	4.35E-04	4.46E-04	9.61E-05	6.87E-05	1.87E-08	2.24E-04	1.27E-04
11	D69	80	Single Unit Short Haul Truck	12	0.00E+00	2.24E-06	1.11E-07	2.19E+00	1.80E-06	4.39E-03	2.38E-06	1.14E-03	1.40E-04	3.18E-05	2.72E-04	6.62E-05	6.73E-05	2.20E-04	8.84E-06	3.51E-09	2.05E-04	2.14E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	9.72E-08	4.79E-09	9.28E-02	7.68E-08	1.83E-04	1.03E-07	4.89E-05	6.42E-06	1.40E-06	1.19E-05	2.85E-06	2.90E-06	9.27E-06	3.75E-07	1.46E-10	8.97E-06	9.15E-06
11	D69	80	Combination Short Haul Truck	11	0.00E+00	4.91E-06	3.51E-07	4.06E+00	1.55E-08	4.34E-03	3.58E-06	5.02E-03	2.97E-04	7.32E-05	2.92E-04	1.04E-04	1.03E-04	6.12E-04	1.36E-05	0.00E+00	1.89E-04	9.46E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	4.39E-06	2.95E-07	3.75E+00	1.79E-08	4.50E-03	3.33E-06	4.87E-03	2.90E-04	5.84E-05	3.02E-04	8.91E-05	8.96E-05	5.73E-04	1.26E-05	0.00E+00	2.12E-04	9.18E-04
11	D70	80	Passenger Car	64	0.00E+00	7.86E-07	8.50E-08	3.01E+00	5.47E-06	2.10E-02	1.75E-06	1.32E-04	3.55E-04	6.16E-05	1.70E-04	1.10E-04	1.12E-04	1.01E-05	1.51E-05	4.24E-09	5.76E-05	2.07E-05
11	D70	80	Passenger Truck	108	0.00E+00	1.69E-06	1.79E-07	6.95E+00	1.08E-05	3.87E-02	3.54E-06	3.93E-04	6.36E-04	1.13E-04	3.38E-04	2.20E-04	2.25E-04	4.85E-05	3.47E-05	9.44E-09	1.13E-04	6.42E-05
11	D70	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.28E+00	1.87E-06	4.57E-03	2.48E-06	1.19E-03	1.46E-04	3.31E-05	2.83E-04	6.89E-05	7.00E-05	2.29E-04	9.20E-06	3.65E-09	2.13E-04	2.23E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	4.98E-09	9.66E-02	8.00E-08	1.90E-04	1.08E-07	5.09E-05	6.68E-06	1.46E-06	1.24E-05	2.97E-06	3.02E-06	9.64E-06	3.90E-07	1.52E-10	9.34E-06	9.52E-06
11	D70	80	Combination Short Haul Truck	10	0

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D74	70	Combination Long Haul Truck	4	0.00E+00	1.84E-06	1.23E-07	1.38E+00	7.61E-09	1.85E-03	1.40E-06	2.10E-03	1.54E-04	2.80E-05	1.28E-04	3.72E-05	3.76E-05	2.10E-04	4.61E-06	0.00E+00	9.05E-05	3.96E-04
11	D75	80	Passenger Car	84	0.00E+00	1.02E-06	1.10E-07	3.91E+00	7.10E-06	2.73E-02	2.27E-06	1.72E-04	4.61E-04	8.01E-05	2.21E-04	1.42E-04	1.46E-04	1.31E-05	1.97E-05	5.51E-09	7.48E-05	2.69E-05
11	D75	80	Passenger Truck	140	0.00E+00	2.19E-06	2.32E-07	9.03E+00	1.40E-05	5.02E-02	4.59E-06	5.11E-04	8.26E-04	1.47E-04	4.40E-04	2.85E-04	2.93E-04	6.30E-05	4.50E-05	1.23E-08	1.47E-04	8.35E-05
11	D75	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.26E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	D75	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	D75	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.14E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.15E-04
11	D76	80	Passenger Car	86	0.00E+00	1.04E-06	1.13E-07	3.99E+00	7.26E-06	2.79E-02	2.32E-06	1.76E-04	4.71E-04	8.19E-05	2.26E-04	1.46E-04	1.49E-04	1.34E-05	2.01E-05	5.63E-09	7.64E-05	2.75E-05
11	D76	80	Passenger Truck	143	0.00E+00	2.24E-06	2.38E-07	9.23E+00	1.44E-05	5.13E-02	4.70E-06	5.22E-04	8.44E-04	1.50E-04	4.49E-04	2.92E-04	2.99E-04	6.44E-05	4.61E-05	1.25E-08	1.50E-04	8.53E-05
11	D76	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.43E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	D76	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.32E-07	1.52E+00	5.80E-09	1.63E-03	1.34E-06	1.88E-03	1.11E-04	2.74E-05	1.10E-04	3.88E-05	3.85E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.55E-04
11	D76	80	Combination Long Haul Truck	4	0.00E+00	1.65E-06	1.11E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.44E-04
11	D77	80	Passenger Car	139	0.00E+00	1.70E-06	1.83E-07	6.49E+00	1.18E-05	4.53E-02	3.77E-06	2.86E-04	7.65E-04	1.33E-04	3.67E-04	2.36E-04	2.43E-04	2.18E-05	3.26E-05	9.15E-09	1.24E-04	4.46E-05
11	D77	80	Passenger Truck	233	0.00E+00	3.64E-06	3.86E-07	1.50E+01	2.33E-05	8.34E-02	7.63E-06	8.49E-04	1.37E-03	2.43E-04	7.30E-04	4.74E-04	4.86E-04	1.05E-04	7.48E-05	2.04E-08	2.44E-04	1.39E-04
11	D77	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.85E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	D77	80	Combination Short Haul Truck	10	0.00E+00	4.37E-06	3.12E-07	3.61E+00	1.38E-08	3.87E-03	3.19E-06	4.47E-03	2.64E-04	6.52E-05	2.60E-04	9.22E-05	9.15E-05	5.45E-04	1.21E-05	0.00E+00	1.69E-04	8.42E-04
11	D77	80	Combination Long Haul Truck	9	0.00E+00	3.91E-06	2.63E-07	3.34E+00	1.59E-08	4.01E-03	2.96E-06	4.34E-03	2.59E-04	5.20E-05	2.69E-04	7.93E-05	7.98E-05	5.10E-04	1.12E-05	0.00E+00	1.89E-04	8.17E-04
11	D78	80	Passenger Car	73	0.00E+00	8.93E-07	9.66E-08	3.42E+00	6.22E-06	2.39E-02	1.99E-06	1.51E-04	4.03E-04	7.01E-05	1.93E-04	1.25E-04	1.28E-04	1.15E-05	1.72E-05	4.82E-09	6.54E-05	2.35E-05
11	D78	80	Passenger Truck	123	0.00E+00	1.92E-06	2.03E-07	7.90E+00	1.23E-05	4.39E-02	4.02E-06	4.47E-04	7.23E-04	1.28E-04	3.85E-04	2.50E-04	2.56E-04	5.51E-05	3.94E-05	1.07E-08	1.29E-04	7.30E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.23E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.38E-05	6.49E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.06E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	9.37E-08	4.62E-09	8.94E-02	7.40E-08	1.76E-04	9.96E-08	4.71E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.61E-07	1.41E-10	8.64E-06	8.82E-06
11	D78	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.76E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.09E-04
11	D78	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.65E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.88E-04
10	D79	70	Passenger Car	122	0.00E+00	1.60E-06	1.73E-07	5.86E+00	1.11E-05	4.17E-02	3.55E-06	2.45E-04	9.46E-04	1.52E-04	3.46E-04	2.23E-04	2.29E-04	2.19E-05	2.94E-05	8.02E-09	1.17E-04	3.82E-05
10	D79	70	Passenger Truck	204	0.00E+00	3.50E-06	3.71E-07	1.35E+01	2.21E-05	7.67E-02	7.27E-06	7.65E-04	1.72E-03	2.80E-04	6.94E-04	4.51E-04	4.62E-04	9.91E-05	6.72E-05	1.80E-08	2.31E-04	1.26E-04
10	D79	70	Single Unit Short Haul Truck	22	0.00E+00	5.28E-06	2.64E-07	4.13E+00	4.31E-06	8.26E-03	5.62E-06	2.60E-03	3.71E-04	7.43E-05	6.40E-04	1.58E-04	1.60E-04	4.14E-04	1.67E-05	6.73E-09	4.80E-04	4.86E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	2.30E-07	1.14E-08	1.75E-01	1.86E-07	3.47E-04	2.45E-07	1.12E-04	1.69E-05	3.31E-06	2.80E-05	6.83E-06	6.94E-06	1.75E-05	7.08E-07	2.84E-10	2.10E-05	2.09E-05
10	D79	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.55E-07	7.70E+00	3.45E-08	9.15E-03	7.80E-06	1.11E-02	8.09E-04	1.77E-04	6.47E-04	2.24E-04	2.23E-04	1.16E-03	2.58E-05	0.00E+00	4.24E-04	2.10E-03
10	D79	70	Combination Long Haul Truck	19	0.00E+00	9.61E-06	6.43E-07	7.19E+00	3.98E-08	9.69E-03	7.30E-06	1.10E-02	8.03E-04	1.47E-04	6.69E-04	1.94E-04	1.96E-04	1.10E-03	2.41E-05	0.00E+00	4.73E-04	2.07E-03
10	D80	70	Passenger Car	340	0.00E+00	4.45E-06	4.82E-07	1.63E+01	3.10E-05	1.16E-01	9.90E-06	6.82E-04	2.64E-03	4.23E-04	9.64E-04	6.21E-04	6.38E-04	6.09E-05	8.21E-05	2.24E-08	3.26E-04	1.07E-04
10	D80	70	Passenger Truck	570	0.00E+00	9.76E-06	1.03E-06	3.77E+01	6.17E-05	2.14E-01	2.03E-05	2.13E-03	4.80E-03	7.80E-04	1.93E-03	1.26E-03	1.29E-03	2.76E-04	1.87E-04	5.01E-08	6.45E-04	3.51E-04
10	D80	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.81E-07	2.82E+00	2.95E-06	5.65E-03	3.84E-06	1.77E-03	2.54E-04	5.08E-05	4.37E-04	1.08E-04	1.10E-04	2.83E-04	1.14E-05	4.59E-09	3.28E-04	3.32E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.63E-05	1.16E-05	2.26E-06	1.91E-05	4.66E-06	4.74E-06	1.20E-05	4.84E-07	1.94E-10	1.44E-05	1.43E-05
10	D80	70	Combination Short Haul Truck	18	0.00E+00	9.48E-06	6.74E-07	6.87E+00	3.08E-08	8.16E-03	6.95E-06	9.93E-03	7.22E-04	1.57E-04	5.78E-04	1.99E-04	1.99E-04	1.04E-03	2.30E-05	0.00E+00	3.78E-04	1.87E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	8.57E-06	5.73E-07	6.41E+00	3.55E-08	8.65E-03	6.51E-06	9.79E-03	7.17E-04	1.31E-04	5.97E-04	1.73E-04	1.75E-04	9.80E-04	2.15E-05	0.00E+00	4.22E-04	1.84E-03
9	F31	60	Passenger Car	803	0.00E+00	1.20E-05	1.30E-06	4.03E+01	8.39E-05	3.13E-01	2.68E-05	1.64E-03	8.15E-03	1.25E-03	2.61E-03	1.68E-03	1.72E-03	1.68E-04	2.02E-04	5.56E-08	8.83E-04	2.56E-04
9	F31	60	Passenger Truck	1345	0.00E+00	2.66E-05	2.81E-06	9.20E+01	1.66E-04	5.58E-01	5.48E-05	5.34E-03	1.49E-02	2.32E-03	5.21E-03	3.39E-03	3.47E-03	7.12E-04	4.57E-04	1.26E-07	1.73E-03	8.85E-04
9	F31	60	Single Unit Short Haul Truck	25	0.00E+00	7.23E-06	3.62E-07	4.61E+00	5.96E-06	8.92E-03	7.71E-06	3.44E-03	5.86E-04	1.06E-04	8.79E-04	2.17E-04	2.20E-04	4.61E-04	1.86E-05	7.67E-09	6.58E-04	6.45E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	3.16E-07	1.57E-08	1.97E-01	2.59E-07	3.78E-04	3.37E-07	1.49E-04	2.63E-05	4.70E-06	3.85E-05	9.43E-06	9.59E-06	1.96E-05	7.95E-07	3.26E-10	2.89E-05	2.79E-05
9	F31	60	Combination Short Haul Truck	26	0.00E+00	1.52E-05	1.06E-06	9.88E+00	5.38E-08	1.33E-02	1.13E-05	1.64E-02	1.41E-03	2.80E-04	9.67E-04	3.15E-04	3.16E-04	1.49E-03	3.31E-05	0.00E+00	6.51E-04	3.10E-03
9	F31	60	Combination Long Haul Truck	24	0.00E+00	1.36E-05	8.88E-07	9.27E+00	6.17E-08	1.43E-02	1.05E-05	1.63E-02	1.42E-03	2.41E-04	9.97E-04	2.71E-04	2.74E-04	1.42E-03	3.10E-05	0.00E+00	7.22E-04	3.07E-03
9	F32	60	Passenger Car	770	0.00E+00	1.16E-05	1.25E-06	3.87E+01	8.04E-05	3.00E-01	2.57E-05	1.57E-03	7.81E-03	1.20E-03	2.50E-03	1.61E-03	1.65E-03	1.61E-04	1.94E-04	5.33E-08	8.46E-04	2.45E-04
9	F32	60	Passenger Truck	1289	0.00E+00	2.55E-05	2.69E-06	8.82E+01	1.59E-04	5.35E-01	5.25E-05	5.12E-03	1.43E-02	2.22E-03	4.99E-03	3.25E-03	3.33E-03	6.83E-04	4.38E-04	1.21E-07	1.66E-03	8.48E-04
9	F32	60	Single Unit Short Haul Truck	38	0.00E+00	1.11E-05	5.54E-07	7.05E+00	9.12E-06	1.37E-02	1.18E-05	5.27E-03	8.97E-04	1.63E-04	1.35E-03	3.32E-04	3.37E-04	7.06E-04	2.85E-05	1.17E-08	1.01E-03	9.87E-04
9	F32	60	Single Unit Long Haul Truck	2	0.00E+00	4.83E-07	2.41E-08	3.01E-01	3.96E-07	5.79E-04	5.16E-07	2.28E-04	4.03E-05	7.19E-06	5.89E-05	1.44E-05	1.47E-05	3.01E-05	1.22E-06	4.99E-10	4.42E-05	4.27E-05
9	F32	60	Combination Short Haul Truck	39	0.00E+00	2.28E-05	1.59E-06	1.48E+01	8.08E-08	1.99E-02	1.69E-05	2.47E-02	2.12E-03	4.20E-04	1.45E-03	4.73E-04	4.74E-04	2.24E-03	4.97E-05	0.00E+00	9.77E-04	4.65E-03
9	F32	60	Combination Long Haul Truck	35	0.00E+00	2.05E-05	1.33E-06	1.39E+01	9.26E-08	2.15E-02	1.58E-05	2.45E-02	2.13E-03	3.62E-04	1.50E-03	4.07E-04	4.12E-04	2.13E-03	4.66E-05	0.00E+00	1.08E-03	4.61E-03
9	F33	60	Passenger Car	276	0.00E+00	4.14E-06	4.48E-07	1.39E+01	2.88E-05	1.08E-01	9.21E-06	5.63E-04	2.80E-03	4.30E-04	8.97E-04	5.78E-04	5.93E-04	5.77E-05	6.94E-05	1.91E-08	3.04E-04	8.80E-05
9	F33	60	Passenger Truck	462	0.00E+00	9.14E-06	9.65E-07	3.16E+01	5.71E-05	1.92E-01	1.88E-05	1.84E-03	5.14E-03	7.98E-04	1.79E-03	1.17E-03	1.19E-03	2.45E-04	1.57E-04	4.34E-08	5.96E-04	3.04E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.37E-07	1.19E-08	1.51E-01	1.95E-07	2.92E-04	2.53E-07	1.13E-04	1.92E-05	3.48E-06	2.88E-05	7.11E-06	7.23E-06	1.51E-05	6.10E-07	2.51E-10	2.16E-05	2.11E-05
9	F33	60	Combination Short Haul Truck	7	0.00E+00	4.35E-06	3.03E-07	2.83E+00	1.54E-08	3.81E-03	3.23E-06	4.71E-03	4.05E-04	8.02E-05	2.77E-04	9.04E-05	9.05E-05	4.27E-04	9.48E-06	0.00E+00	1.87E-04	8.88E-04
9	F33	60	Combination Long Haul Truck	7	0.00E+00	3.91E-06	2.54E-07	2.66E+00	1.77E-08	4.10E-03	3.01E-06	4.67E-03	4.08E-04	6.91E-05	2.86E-04	7.76E-05	7.86E-05	4.06E-04	8.89E-06	0.00E+00	2.07E-04	8.80E-04
9	F34	60	Passenger Car	176	0.00E+00	2.64E-06	2.85E-07	8.83E+00	1.84E-05	6.86E-02	5.87E-06	3.59E-04	1.78E-03	2.74E-04	5.71E-04	3.68E-04	3.78E-04	3.67E-05	4.42E-05	1.22E-08	1.93E-04	5.61E-05
9	F34	60	Passenger Truck	294	0.00E+00	5.82E-06	6.15E-07	2.02E+01	3.64E-05	1.22E-01	1.20E-05	1.17E-03	3.27E-03	5.08E-04	1.14E-03	7.43E-04	7.61E-04	1.56E-04	1.00E-04	2.76E-08	3.79E-04	1.94E-04
9	F34	60	Single Unit Short Haul Truck	3	0.00E+00	8.73E-07	4.37E-08	5.57E-01	7.20E-07	1.08E-03	9.32E-07	4.16E-04	7.08E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.79E-05
9	F34	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.06E-08	8.45E-01	4.60E-09	1.14E-03	9.64E-07	1.41E-03	1.21E-04	2.39E-05	8.27E-05	2.70E-05	2.70E-05	1.27E-04	2.83E-06	0.00E+00	5.57E-05	2.65E-04
9	F34	60	Combination Long Haul Truck	2	0.00E+00	1.17E-06	7.59E-08	7.93E-01	5.28E-09	1.22E-03	8.99E-07	1.39E-03	1.22E-04	2.06E-05	8.52E-05	2.32E-05	2.35E-05	1.21E-04	2.65E-06	0.00E+00	6.18E-05	2.63E-04
54	G01	80	Passenger Car	279	0.00E+00	3.32E-06	3.59E-07	1.31E+01	2.31E-05	8.71E-02	7.38E-06	5.76E-04	1.61E-03	2.75E-04	7.18E-04	4.63E-04	4.75E-04	4.37E-05	6.59E-05	1.79E-08	2.43E-04	9.01E-05
54	G01	80	Passenger Truck	467	0.00E+00	7.20E-06	7.64E-07	3.04E+01	4.61E-05	1.65E-01	1.51E-05	1.71E-03	2.90E-03	5.06E-04	1.44E-03	9.38E-04	9.61E-04	2.10E-04	1.52E-04	4.03E-08	4.83E-04	2.79E-04
54	G01	80	Single Unit Short Haul Truck	29	0.00E+00	5.34E-06	2.65E-07	5.24E+00	4.30E-06	1.05E-02	5.69E-06	2.73E-03	3.36E-04	7.60E-05	6.50E-04	1.58E-04	1.61E-04	5.26E-04	2.11E-05	8.38E-09	4.89E-04	5.11E-04
54	G01	80	Single Unit Long Haul Truck	1	0.00E+00	2.32E-07	1.15E-08	2.22E-01	1.84E-07	4.37E-04	2.47E-07	1.17E-04	1.53E-05	3.35E-06	2.84E-05	6.81E-06	6.93E-06	2.21E-05	8.96E-07	3.49E-10	2.14E-05	2.19E-05
54	G01	80	Combination Short Haul Truck	37	0.00E+00	1.62E-05	1.16E-06	1.34E+01	5.11E-08	1.43E-02	1.18E-05	1.66E-02	9.80E-04	2.42E-04	9.64E-04	3.42E-04	3.39E-04	2.02E-03	4.48E-05	0.00E+00	6.25E-04	3.12E-03
54	G01	80	Combination Long Haul Truck	34	0.00E+00	1.45E-05	9.75E-07	1.24E+01	5.90E-08	1.49E-02	1.10E-05	1.61E-02	9.59E-04	1.93E-04	9.96E-04	2.94E-04	2.96E-04	1.89E-03	4.15E-05	0.00E+00	7.00E-04	3.03E-03
54	G02	80	Passenger Car	336	0.00E+00	4.00E-06	4.33E-07	1.58E+01	2.78E-05	1.05E-01	8.89E-06	6.94E-04	1.94E-03	3.32E-04	8.65E-04	5.58E-04	5.72E-04	5.27E-05	7.94E-05	2.16E-08	2.93E-04	1.08E-04
54	G02	80	Passenger Truck	563	0.00E+00	8.67E-06	9.20E-07	3.67E+01	5.56E-05	1.99E-01	1.82E-05	2.06E-03	3.50E-03	6.09E-04	1.74E-03	1.13E-03	1.16E-03	2.53E-04	1.83E-04	4.86E-08	5.82E-04	3.36E-04
54	G02	80	Single Unit Short Haul Truck	26	0.00E+00	4.83E-06	2.40E-07	4.74E+00	3.89E-06	9.50E-03	5.15E-06	2.47E-03	3.04E-04	6.87E-05	5.88E-04	1.43E-04	1.46E-04	4.76E-04	1.91E-05	7.58E-09	4.43E-04	4.63E-04
54	G02	80	Single Unit Long Haul Truck	1	0.00E+00	2.10E-07	1.04E-08	2.01E-01	1.66E-07	3.96E-04	2.24E-07	1.06E-04	1.39E-05	3.03E-06	2.57E-05	6.16E-06	6.27E-06	2.00E-05	8.10E-07	3.16E-10	1.94E-05	1.98E-05
54	G02	80	Combination Short Haul Truck	17	0.00E+00	7.54E-06	5.39E-07	6.24E+00	2.38E-08	6.68E-03	5.51E-06	7.72E-03	4.56E-04	1.12E-04	4.49E-04	1.59E-04	1.58E-04	9.40E-04	2.09E-05	0.00E+00	2.91E-04	1.45E-03
54	G02	80	Combination Long Haul Truck	16	0.00E+00	6.76E-06	4.54E-07	5.76E+00	2.75E-08	6.92E-03	5.12E-06	7.49E-03	4.46E-04	8.98E-05	4.64E-04	1.37E-04	1.38E-04	8.81E-04	1.93E-05	0.00E+00	3.26E-04	1.41E-03
16	G03	100	Passenger Car	158	0.00E+00	1.73E-06	1.87E-07	7.09E+00	1.20E-05	4.75E-02	3.84E-06	3.37E-04	5.11E-04	1.03E-04	3.74E-04	2.41E-04	2.47E-04	1.98E-05	3.59E-05	9.88E-09	1.27E-04	5.26E-05
16	G03	100	Passenger Truck	264	0.00E+00	3.73E-06	3.97E-07	1.67E+01	2.44E-05	9.57E-02	7.94E-06	9.58E-04	9.04E-04	1.92E-04	7.63E-04	4.95E-04	5.07E-04	1.06E-04	8.39E-05	2.30E-08	2.57E-04	1.55E-04
16	G03	100	Single Unit Short Haul Truck	251	0.00E+00	3.37E-05	1.67E-06	4.58E+01	2.94E-05	1.06E-01	3.65E-05	1.82E-02	1.73E-03	5.03E-04	4.17E-03	1.03E-03	1.05E-03	4.62E-03	1.84E-04	7.52E-08	3.12E-03	3.40E-03
16	G03	100	Single Unit Long Haul Truck	11	0.00E+00	1.46E-06	7.10E-08	1.93E+00	1.22E-06	4.33E-03	1.58E-06	7.67E-04	7.82E-05	2.18E-05	1.82E-04	4.36E-05	4.44E-05	1.93E-04	7.77E-06	3.08E-09	1.37E-04	1.43E-04
16	G03	100	Combination Short Haul Truck	30	0.00E+00	1.02E-05	7.47E-07	1.08E+01	2.91E-08	9.98E-03	7.38E-06	1.09E-02	3.47E-04	1.23E-04	5.73E-04	2.19E-04	2.15E-04	1.62E-03	3.61E-05	0.00E+00	3.58E-04	2.05E-03
16	G03	100	Combination Long Haul Truck	27	0.00E+00	8.91E-06	6.10E-07	9.76E+00	3.37E-08	9.97E-03	6.67E-06	1.03E-02	3.21E-04	8.93E-05	5.84E-04	1.83E-04	1.83E-04	1.49E-03	3.27E-05	0.00E+00	4.01E-04	1.95E-03
16	G04	100	Passenger Car	171	0.00E+00	1.88E-06	2.03E-07	7.71E+00	1.31E-05	5.17E-02	4.18E-06	3.66E-04	5.56E-04	1.12E-04	4.07E-04	2.62E-04	2.69E-04	2.15E-05	3.90E-05	1.07E-08	1.38E-04	5.72E-05
16	G04	100	Passenger Truck	287	0.00E+00	4.06E-06	4.32E-07	1.82E+01	2.66E-05	1.04E-01	8.63E-06	1.04E-03	9.83E-04	2.09E-04	8.30E-04	5.38E-04	5.51E-04	1.16E-04	9.12E-05	2.50E-08	2.79E-04	1.68E-04
16	G04	100	Single Unit Short Haul Truck	123	0.00E+00	1.65E-05	8.19E-07	2.25E+01	1.44E-05	5.21E-02	1.79E-05	8.94E-03	8.49E-04	2.47E-04	2.05E-03	5.07E-04	5.15E-04	2.27E-03	9.04E-05	3.69E-08	1.53E-03	1.67E-03
16	G04	100	Single Unit Long Haul Truck	5	0.00E+00	7.17E-07	3.49E-08	9.47E-01	5.98E-07	2.13E-03	7.74E-07	3.76E-04	3.84E-05	1.07E-05	8.92E-05	2.14E-05	2.18E-05	9.49E-05	3.81E-06	1.51E-09	6.74E-05	7.03E-05
16	G04	100	Combination Short Haul Truck	40	0.00E+00	1.36E-05	9.95E-07	1.43E+01	3.88E-08	1.33E-02	9.84E-06	1.45E-02	4.62E-04	1.65E-04	7.64E-04	2.92E-04	2.87E-04	2.16E-03	4.80E-05	0.00E+00	4.77E-04	2.73E-03
16	G04	100	Combination Long Haul Truck	36	0.00E+00	1.19E-05	8.13E-07	1.30E+01	4.49E-08	1.33E-02	8.89E-06	1.38E-02	4.28E-04	1.19E-04	7.78E-04	2.44E-04	2.43E-04	1.98E-03	4.35E-05	0.00E+00	5.34E-04	2.60E-03
16	G05	100	Passenger Car	210	0.00E+00	2.31E-06	2.49E-07	9.46E+00	1.60E-05	6.34E-02	5.13E-06	4.49E-04	6.82E-04	1.38E-04	4.99E-04	3.22E-04	3.30E-04	2.64E-05	4.78E-05	1.32E-08	1.69E-04	7.02E-05
16	G05	100	Passenger Truck	352	0.00E+00

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	G10	70	Single Unit Short Haul Truck	28	0.00E+00	6.48E-06	3.24E-07	5.07E+00	5.30E-06	1.01E-02	6.90E-06	3.19E-03	4.56E-04	9.12E-05	7.86E-04	1.94E-04	1.97E-04	5.09E-04	2.05E-05	8.26E-09	5.89E-04	5.97E-04
53	G10	70	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.40E-08	2.15E-01	2.29E-07	4.26E-04	3.01E-07	1.37E-04	2.08E-05	4.06E-06	3.43E-05	8.38E-06	8.52E-06	2.15E-05	8.69E-07	3.48E-10	2.58E-05	2.57E-05
53	G10	70	Combination Short Haul Truck	21	0.00E+00	1.09E-05	7.76E-07	7.91E+00	3.55E-08	9.40E-03	8.01E-06	1.14E-02	8.31E-04	1.81E-04	6.65E-04	2.30E-04	2.29E-04	1.19E-03	2.65E-05	0.00E+00	4.36E-04	2.16E-03
53	G10	70	Combination Long Haul Truck	19	0.00E+00	9.87E-06	6.60E-07	7.39E+00	4.09E-08	9.96E-03	7.50E-06	1.13E-02	8.25E-04	1.51E-04	6.88E-04	1.99E-04	2.02E-04	1.13E-03	2.47E-05	0.00E+00	4.86E-04	2.12E-03
16	H01	100	Passenger Car	2723	0.00E+00	2.99E-05	3.23E-06	1.22E+02	2.08E-04	8.21E-01	6.64E-05	5.82E-03	8.83E-03	1.78E-03	6.46E-03	4.16E-03	4.27E-03	3.41E-04	6.19E-04	1.71E-07	2.19E-03	9.09E-04
16	H01	100	Passenger Truck	4560	0.00E+00	6.44E-05	6.86E-06	2.89E+02	4.22E-04	1.65E+00	1.37E-04	1.65E-02	1.56E-02	3.32E-03	1.32E-02	8.54E-03	8.76E-03	1.84E-03	1.45E-03	3.97E-07	4.43E-03	2.68E-03
16	H01	100	Single Unit Short Haul Truck	438	0.00E+00	5.88E-05	2.91E-06	8.00E+01	5.13E-05	1.85E-01	6.37E-05	3.18E-02	3.02E-03	8.78E-04	7.27E-03	1.80E-03	1.83E-03	8.06E-03	3.21E-04	1.31E-07	5.44E-03	5.93E-03
16	H01	100	Single Unit Long Haul Truck	19	0.00E+00	2.55E-06	1.24E-07	3.37E+00	2.13E-06	7.56E-03	2.75E-06	1.34E-03	1.37E-04	3.80E-05	3.17E-04	7.62E-05	7.74E-05	3.37E-04	1.36E-05	5.37E-09	2.40E-04	2.50E-04
16	H01	100	Combination Short Haul Truck	539	0.00E+00	1.85E-04	1.35E-05	1.95E+02	5.27E-07	1.81E-01	1.34E-04	1.97E-01	6.28E-03	2.24E-03	1.04E-02	3.96E-03	3.89E-03	2.94E-02	6.53E-04	0.00E+00	6.48E-03	3.72E-02
16	H01	100	Combination Long Haul Truck	492	0.00E+00	1.61E-04	1.10E-05	1.77E+02	6.10E-07	1.80E-01	1.21E-04	1.87E-01	5.81E-03	1.62E-03	1.06E-02	3.31E-03	3.30E-03	2.70E-02	5.91E-04	0.00E+00	7.26E-03	3.53E-02
16	H02	100	Passenger Car	2140	0.00E+00	2.35E-05	2.54E-06	9.63E+01	1.63E-04	6.45E-01	5.22E-05	4.57E-03	6.94E-03	1.40E-03	5.08E-03	3.27E-03	3.36E-03	2.68E-04	4.87E-04	1.34E-07	1.72E-03	7.15E-04
16	H02	100	Passenger Truck	3584	0.00E+00	5.06E-05	5.39E-06	2.27E+02	3.32E-04	1.30E+00	1.08E-04	1.30E-02	1.23E-02	2.61E-03	1.04E-02	6.71E-03	6.88E-03	1.44E-03	1.14E-03	3.12E-07	3.48E-03	2.10E-03
16	H02	100	Single Unit Short Haul Truck	288	0.00E+00	3.86E-05	1.91E-06	5.25E+01	3.37E-05	1.22E-01	4.18E-05	2.09E-02	1.98E-03	5.77E-04	4.78E-03	1.19E-03	1.20E-03	5.30E-03	2.11E-04	8.63E-08	3.57E-03	3.90E-03
16	H02	100	Single Unit Long Haul Truck	13	0.00E+00	1.68E-06	8.14E-08	2.21E+00	1.40E-06	4.97E-03	1.81E-06	8.79E-04	8.97E-05	2.49E-05	2.08E-04	5.00E-05	5.08E-05	2.22E-04	8.91E-06	3.53E-09	1.57E-04	1.64E-04
16	H02	100	Combination Short Haul Truck	387	0.00E+00	1.33E-04	9.71E-06	1.40E+02	3.78E-07	1.30E-01	9.60E-05	1.42E-01	4.51E-03	1.61E-03	7.45E-03	2.85E-03	2.80E-03	2.11E-02	4.69E-04	0.00E+00	4.66E-03	2.67E-02
16	H02	100	Combination Long Haul Truck	353	0.00E+00	1.16E-04	7.94E-06	1.27E+02	4.38E-07	1.30E-01	8.67E-05	1.34E-01	4.17E-03	1.16E-03	7.59E-03	2.38E-03	2.37E-03	1.94E-02	4.25E-04	0.00E+00	5.22E-03	2.53E-02
16	H03	100	Passenger Car	2376	0.00E+00	2.61E-05	2.82E-06	1.07E+02	1.81E-04	7.17E-01	5.79E-05	5.08E-03	7.71E-03	1.55E-03	5.64E-03	3.63E-03	3.73E-03	2.98E-04	5.40E-04	1.49E-07	1.91E-03	7.94E-04
16	H03	100	Passenger Truck	3980	0.00E+00	5.62E-05	5.99E-06	2.52E+02	3.68E-04	1.44E+00	1.20E-04	1.44E-02	1.36E-02	2.89E-03	1.15E-02	7.46E-03	7.64E-03	1.60E-03	1.26E-03	3.46E-07	3.87E-03	2.34E-03
16	H03	100	Single Unit Short Haul Truck	299	0.00E+00	4.01E-05	1.99E-06	5.46E+01	3.50E-05	1.26E-01	4.35E-05	2.17E-02	2.06E-03	6.00E-04	4.96E-03	1.23E-03	1.25E-03	5.50E-03	2.19E-04	8.96E-08	3.71E-03	4.05E-03
16	H03	100	Single Unit Long Haul Truck	13	0.00E+00	1.74E-06	8.46E-08	2.30E+00	1.45E-06	5.16E-03	1.88E-06	9.13E-04	9.32E-05	2.59E-05	2.16E-04	5.20E-05	5.28E-05	2.30E-04	9.25E-06	3.67E-09	1.64E-04	1.71E-04
16	H03	100	Combination Short Haul Truck	370	0.00E+00	1.27E-04	9.28E-06	1.34E+02	3.62E-07	1.24E-01	9.18E-05	1.35E-01	4.31E-03	1.54E-03	7.13E-03	2.72E-03	2.68E-03	2.02E-02	4.48E-04	0.00E+00	4.45E-03	2.55E-02
16	H03	100	Combination Long Haul Truck	338	0.00E+00	1.11E-04	7.59E-06	1.21E+02	4.19E-07	1.24E-01	8.29E-05	1.29E-01	3.99E-03	1.11E-03	7.26E-03	2.27E-03	2.27E-03	1.85E-02	4.06E-04	0.00E+00	4.99E-03	2.42E-02
16	H04	100	Passenger Car	2717	0.00E+00	2.98E-05	3.22E-06	1.22E+02	2.07E-04	8.19E-01	6.62E-05	5.80E-03	8.81E-03	1.78E-03	6.45E-03	4.15E-03	4.26E-03	3.41E-04	6.18E-04	1.70E-07	2.18E-03	9.07E-04
16	H04	100	Passenger Truck	4550	0.00E+00	6.43E-05	6.85E-06	2.88E+02	4.21E-04	1.65E+00	1.37E-04	1.65E-02	1.56E-02	3.31E-03	1.32E-02	8.52E-03	8.74E-03	1.83E-03	1.45E-03	3.96E-07	4.42E-03	2.67E-03
16	H04	100	Single Unit Short Haul Truck	251	0.00E+00	3.38E-05	1.67E-06	4.59E+01	2.95E-05	1.06E-01	3.65E-05	1.82E-02	1.73E-03	5.04E-04	4.17E-03	1.04E-03	1.05E-03	4.63E-03	1.84E-04	7.53E-08	3.12E-03	3.40E-03
16	H04	100	Single Unit Long Haul Truck	11	0.00E+00	1.46E-06	7.11E-08	1.93E+00	1.22E-06	4.34E-03	1.58E-06	7.68E-04	7.83E-05	2.18E-05	1.82E-04	4.37E-05	4.44E-05	1.94E-04	7.78E-06	3.08E-09	1.38E-04	1.43E-04
16	H04	100	Combination Short Haul Truck	441	0.00E+00	1.52E-04	1.11E-05	1.59E+02	4.31E-07	1.48E-01	1.09E-04	1.61E-01	5.13E-03	1.83E-03	8.49E-03	3.24E-03	3.19E-03	2.40E-02	5.34E-04	0.00E+00	5.30E-03	3.04E-02
16	H04	100	Combination Long Haul Truck	402	0.00E+00	1.32E-04	9.04E-06	1.44E+02	4.99E-07	1.48E-01	9.88E-05	1.53E-01	4.75E-03	1.32E-03	8.64E-03	2.71E-03	2.70E-03	2.21E-02	4.84E-04	0.00E+00	5.94E-03	2.89E-02
56	H05	100	Passenger Car	1010	0.00E+00	1.11E-05	1.20E-06	4.54E+01	7.71E-05	3.05E-01	2.46E-05	2.16E-03	3.28E-03	6.61E-04	2.40E-03	1.54E-03	1.59E-03	1.27E-04	2.30E-04	6.33E-08	8.11E-04	3.37E-04
56	H05	100	Passenger Truck	1691	0.00E+00	2.39E-05	2.55E-06	1.07E+02	1.56E-04	6.13E-01	5.09E-05	6.14E-03	5.79E-03	1.23E-03	4.89E-03	3.17E-03	3.25E-03	6.82E-04	5.37E-04	1.47E-07	1.64E-03	9.93E-04
56	H05	100	Single Unit Short Haul Truck	127	0.00E+00	1.71E-05	8.45E-07	2.32E+01	1.49E-05	5.37E-02	1.85E-05	9.22E-03	8.76E-04	2.55E-04	2.11E-03	5.23E-04	5.31E-04	2.34E-03	9.32E-05	3.81E-08	1.58E-03	1.72E-03
56	H05	100	Single Unit Long Haul Truck	6	0.00E+00	7.40E-07	3.59E-08	9.77E-01	6.17E-07	2.19E-03	7.98E-07	3.88E-04	3.96E-05	1.10E-05	9.20E-05	2.21E-05	2.25E-05	9.79E-05	3.93E-06	1.56E-09	6.95E-05	7.25E-05
56	H05	100	Combination Short Haul Truck	164	0.00E+00	5.64E-05	4.11E-06	5.93E+01	1.60E-07	5.50E-02	4.07E-05	6.00E-02	1.91E-03	6.80E-04	3.16E-03	1.21E-03	1.19E-03	8.95E-03	1.99E-04	0.00E+00	1.97E-03	1.13E-02
56	H05	100	Combination Long Haul Truck	150	0.00E+00	4.91E-05	3.36E-06	5.37E+01	1.86E-07	5.49E-02	3.68E-05	5.70E-02	1.77E-03	4.92E-04	3.22E-03	1.01E-03	1.01E-03	8.21E-03	1.80E-04	0.00E+00	2.21E-03	1.07E-02
56	H06	100	Passenger Car	1707	0.00E+00	1.87E-05	2.02E-06	7.68E+01	1.30E-04	5.15E-01	4.16E-05	3.65E-03	5.54E-03	1.12E-03	4.05E-03	2.61E-03	2.68E-03	2.14E-04	3.88E-04	1.07E-07	1.37E-03	5.70E-04
56	H06	100	Passenger Truck	2858	0.00E+00	4.04E-05	4.30E-06	1.81E+02	2.64E-04	1.04E+00	8.59E-05	1.04E-02	9.79E-03	2.08E-03	8.26E-03	5.35E-03	5.49E-03	1.15E-03	9.08E-04	2.49E-07	2.78E-03	1.68E-03
56	H06	100	Single Unit Short Haul Truck	124	0.00E+00	1.67E-05	8.26E-07	2.27E+01	1.46E-05	5.25E-02	1.81E-05	9.01E-03	8.56E-04	2.49E-04	2.06E-03	5.12E-04	5.20E-04	2.29E-03	9.11E-05	3.73E-08	1.54E-03	1.68E-03
56	H06	100	Single Unit Long Haul Truck	5	0.00E+00	7.23E-07	3.51E-08	9.55E-01	6.03E-07	2.14E-03	7.80E-07	3.80E-04	3.87E-05	1.08E-05	8.99E-05	2.16E-05	2.20E-05	9.57E-05	3.85E-06	1.52E-09	6.80E-05	7.09E-05
56	H06	100	Combination Short Haul Truck	277	0.00E+00	9.51E-05	6.94E-06	1.00E+02	2.71E-07	9.28E-02	6.86E-05	1.01E-01	3.22E-03	1.15E-03	5.33E-03	2.04E-03	2.00E-03	1.51E-02	3.35E-04	0.00E+00	3.33E-03	1.91E-02
56	H06	100	Combination Long Haul Truck	253	0.00E+00	8.28E-05	5.68E-06	9.07E+01	3.13E-07	9.27E-02	6.20E-05	9.62E-02	2.99E-03	8.30E-04	5.43E-03	1.70E-03	1.70E-03	1.38E-02	3.04E-04	0.00E+00	3.73E-03	1.81E-02
16	H07	100	Passenger Car	3021	0.00E+00	3.31E-05	3.58E-06	1.36E+02	2.31E-04	9.11E-01	7.36E-05	6.46E-03	9.80E-03	1.98E-03	7.17E-03	4.62E-03	4.74E-03	3.79E-04	6.87E-04	1.89E-07	2.43E-03	1.01E-03
16	H07	100	Passenger Truck	5060	0.00E+00	7.15E-05	7.61E-06	3.21E+02	4.68E-04	1.83E+00	1.52E-04	1.84E-02	1.73E-02	3.68E-03	1.46E-02	9.48E-03	9.71E-03	2.04E-03	1.61E-03	4.41E-07	4.92E-03	2.97E-03
16	H07	100	Single Unit Short Haul Truck	282	0.00E+00	3.79E-05	1.88E-06	5.15E+01	3.31E-05	1.19E-01	4.10E-05	2.05E-02	1.95E-03	5.66E-04	4.69E-03	1.16E-03	1.18E-03	5.20E-03	2.07E-04	8.46E-08	3.51E-03	3.82E-03
16	H07	100	Single Unit Long Haul Truck	12	0.00E+00	1.64E-06	7.99E-08	2.17E+00	1.37E-06	4.87E-03	1.77E-06	8.62E-04	8.80E-05	2.45E-05	2.04E-04	4.91E-05	4.99E-05	2.18E-04	8.74E-06	3.46E-09	1.54E-04	1.61E-04
16	H07	100	Combination Short Haul Truck	484	0.00E+00	1.66E-04	1.21E-05	1.75E+02	4.73E-07	1.62E-01	1.20E-04	1.77E-01	5.64E-03	2.01E-03	9.32E-03	3.56E-03	3.50E-03	2.64E-02	5.86E-04	0.00E+00	5.82E-03	3.34E-02
16	H07	100	Combination Long Haul Truck	441	0.00E+00	1.45E-04	9.92E-06	1.59E+02	5.48E-07	1.62E-01	1.08E-04	1.68E-01	5.22E-03	1.45E-03	9.49E-03	2.97E-03	2.97E-03	2.42E-02	5.31E-04	0.00E+00	6.52E-03	3.17E-02
52	H08	60	Passenger Car	249	0.00E+00	3.43E-06	3.71E-07	1.25E+01	2.39E-05	8.86E-02	7.63E-06	4.89E-04	2.46E-03	3.77E-04	7.43E-04	4.79E-04	4.91E-04	5.20E-05	6.26E-05	1.67E-08	2.51E-04	7.64E-05
52	H08	60	Passenger Truck	417	0.00E+00	7.54E-06	7.96E-07	2.85E+01	4.70E-05	1.58E-01	1.55E-05	1.57E-03	4.38E-03	6.77E-04	1.47E-03	9.61E-04	9.84E-04	2.16E-04	1.42E-04	3.55E-08	4.90E-04	2.60E-04
52	H08	60	Single Unit Short Haul Truck	10	0.00E+00	2.94E-06	1.47E-07	1.87E+00	2.42E-06	3.63E-03	3.14E-06	1.40E-03	2.38E-04	4.32E-05	3.57E-04	8.82E-05	8.96E-05	1.87E-04	7.57E-06	3.12E-09	2.68E-04	2.62E-04
52	H08	60	Combination Short Haul Truck	20	0.00E+00	1.20E-05	8.37E-07	7.81E+00	4.25E-08	1.05E-02	8.91E-06	1.30E-02	1.12E-03	2.21E-04	7.64E-04	2.49E-04	2.50E-04	1.18E-03	2.62E-05	0.00E+00	5.14E-04	2.45E-03
52	H08	60	Combination Long Haul Truck	19	0.00E+00	1.08E-05	7.02E-07	7.33E+00	4.88E-08	1.13E-02	8.31E-06	1.29E-02	1.12E-03	1.91E-04	7.88E-04	2.14E-04	2.17E-04	1.12E-03	2.45E-05	0.00E+00	5.71E-04	2.43E-03
50	H09	40	Passenger Car	331	0.00E+00	5.57E-06	6.02E-07	1.92E+01	3.88E-05	1.44E-01	1.24E-05	5.98E-04	5.72E-03	8.17E-04	1.21E-03	7.77E-04	7.97E-04	1.04E-04	9.54E-05	2.32E-08	4.08E-04	9.34E-05
50	H09	40	Passenger Truck	554	0.00E+00	1.27E-05	1.33E-06	4.29E+01	7.64E-05	2.47E-01	2.55E-05	2.26E-03	1.02E-02	1.44E-03	2.40E-03	1.57E-03	1.61E-03	3.67E-04	2.11E-04	4.51E-08	7.93E-04	3.83E-04
50	H09	40	Single Unit Short Haul Truck	2	0.00E+00	9.30E-07	4.88E-08	4.47E-01	8.11E-07	7.70E-04	9.90E-07	4.54E-04	8.50E-05	1.41E-05	1.10E-04	2.91E-05	2.95E-05	4.52E-05	1.80E-06	7.64E-10	8.06E-05	8.52E-05
50	H09	40	Combination Short Haul Truck	4	0.00E+00	3.77E-06	2.62E-07	1.91E+00	1.35E-08	3.29E-03	2.80E-06	4.19E-03	4.38E-04	7.90E-05	2.44E-04	7.80E-05	7.88E-05	2.88E-04	6.40E-06	0.00E+00	1.65E-04	7.90E-04
50	H09	40	Combination Long Haul Truck	4	0.00E+00	3.43E-06	2.24E-07	1.82E+00	1.54E-08	3.65E-03	2.64E-06	4.20E-03	4.40E-04	7.01E-05	2.51E-04	6.83E-05	6.96E-05	2.78E-04	6.09E-06	0.00E+00	1.82E-04	7.91E-04
53	H10	70	Passenger Car	251	0.00E+00	3.18E-06	3.44E-07	1.22E+01	2.21E-05	8.24E-02	7.07E-06	5.11E-04	1.92E-03	3.09E-04	6.89E-04	4.44E-04	4.56E-04	4.49E-05	6.12E-05	1.67E-08	2.33E-04	7.99E-05
53	H10	70	Passenger Truck	420	0.00E+00	6.93E-06	7.33E-07	2.81E+01	4.39E-05	1.51E-01	1.44E-05	1.56E-03	3.44E-03	5.62E-04	1.37E-03	8.94E-04	9.16E-04	2.02E-04	1.40E-04	3.66E-08	4.59E-04	2.57E-04
53	H10	70	Single Unit Short Haul Truck	12	0.00E+00	2.75E-06	1.38E-07	2.15E+00	2.25E-06	4.30E-03	2.93E-06	1.35E-03	1.93E-04	3.87E-05	3.33E-04	8.21E-05	8.35E-05	2.16E-04	8.67E-06	3.50E-09	2.50E-04	2.53E-04
53	H10	70	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	5.95E-09	9.13E-02	9.69E-08	1.81E-04	1.27E-07	5.81E-05	8.82E-06	1.72E-06	1.46E-05	3.56E-06	3.61E-06	9.12E-06	3.69E-07	1.48E-10	1.09E-05	1.09E-05
53	H10	70	Combination Short Haul Truck	24	0.00E+00	1.27E-05	9.00E-07	9.18E+00	4.11E-08	1.09E-02	9.29E-06	1.33E-02	9.64E-04	2.10E-04	7.71E-04	2.66E-04	2.66E-04	1.38E-03	3.07E-05	0.00E+00	5.05E-04	2.50E-03
53	H10	70	Combination Long Haul Truck	22	0.00E+00	1.14E-05	7.65E-07	8.57E+00	4.74E-08	1.15E-02	8.69E-06	1.31E-02	9.57E-04	1.75E-04	7.97E-04	2.31E-04	2.34E-04	1.31E-03	2.87E-05	0.00E+00	5.64E-04	2.46E-03
53	H11	70	Passenger Car	329	0.00E+00	4.17E-06	4.51E-07	1.60E+01	2.90E-05	1.08E-01	9.28E-06	6.70E-04	2.51E-03	4.05E-04	9.03E-04	5.82E-04	5.97E-04	5.89E-05	8.02E-05	2.19E-08	3.06E-04	1.05E-04
53	H11	70	Passenger Truck	551	0.00E+00	9.08E-06	9.61E-07	3.68E+01	5.75E-05	1.98E-01	1.89E-05	2.05E-03	4.51E-03	7.36E-04	1.80E-03	1.17E-03	1.20E-03	2.65E-04	1.83E-04	4.80E-08	6.01E-04	3.37E-04
16	H12	100	Passenger Car	583	0.00E+00	6.39E-06	6.91E-07	2.62E+01	4.45E-05	1.76E-01	1.42E-05	1.24E-03	1.89E-03	3.81E-04	1.38E-03	8.91E-04	9.14E-04	7.30E-05	1.32E-04	3.65E-08	4.68E-04	1.95E-04
16	H12	100	Passenger Truck	976	0.00E+00	1.38E-05	1.47E-06	6.19E+01	9.03E-05	3.54E-01	2.93E-05	3.54E-03	3.34E-03	7.10E-04	2.82E-03	1.83E-03	1.87E-03	3.93E-04	3.10E-04	8.50E-08	9.48E-04	5.73E-04
16	H12	100	Single Unit Short Haul Truck	150	0.00E+00	2.02E-05	9.99E-07	2.74E+01	1.76E-05	6.35E-02	2.18E-05	1.09E-02	1.04E-03	3.01E-04	2.50E-03	6.19E-04	6.29E-04	2.77E-03	1.10E-04	4.51E-08	1.87E-03	2.04E-03
16	H12	100	Single Unit Long Haul Truck	7	0.00E+00	8.75E-07	4.25E-08	1.16E+00	7.29E-07	2.59E-03	9.44E-07	4.59E-04	4.68E-05	1.30E-05	1.09E-04	2.61E-05	2.66E-05	1.16E-04	4.65E-06	1.84E-09	8.22E-05	8.57E-05
16	H12	100	Combination Short Haul Truck	152	0.00E+00	5.22E-05	3.81E-06	5.49E+01	1.48E-07	5.09E-02	3.77E-05	5.56E-02	1.77E-03	6.30E-04	2.92E-03	1.12E-03	1.10E-03	8.28E-03	1.84E-04	0.00E+00	1.83E-03	1.05E-02
16	H12	100	Combination Long Haul Truck	139	0.00E+00	4.54E-05	3.11E-06	4.97E+01	1.72E-07	5.09E-02	3.40E-05	5.28E-02	1.64E-03	4.55E-04	2.98E-03	9.33E-04	9.31E-04	7.60E-03	1.67E-04	0.00E+00	2.05E-03	9.94E-03
54	H13	80	Passenger Car	895	0.00E+00	1.06E-05	1.15E-06	4.20E+01	7.41E-05	2.79E-01	2.37E-05	1.85E-03	5.18E-03	8.83E-04	2.30E-03	1.49E-03	1.52E-03	1.40E-04	2.11E-04	5.74E-08	7.80E-04	2.89E-04
54	H13	80	Passenger Truck	1499	0.00E+00	2.31E-05	2.45E-06	9.76E+01	1.48E-04	5.30E-01	4.84E-05	5.48E-03	9.31E-03	1.62E-03	4.63E-03	3.01E-03	3.08E-03	6.73E-04	4.87E-04	1.29E-07	1.55E-03	8.95E-04
54	H13	80	Single Unit Short Haul Truck	146	0.00E+00	2.74E-05	1.36E-06	2.69E+01	2.21E-05	5.39E-02	2.92E-05	1.40E-02	1.72E-03	3.90E-04	3.34E-03	8.13E-04	8.27E-04	2.70E-03	1.09E-04	4.31E-08	2.51E-03	2.63E-03
54	H13	80	Single Unit Long Haul Truck	6	0.00E+00	1.19E-06	5.88E-08	1.14E+00	9.43E-07	2.25E-03	1.27E-06	6.01E-04	7.88E-05	1.72E-05	1.46E-04	3.50E-05	3.56E-05	1.14E-04	4.60E-06	1.80E-09	1.10E-04	1.12E-04
54	H13	80	Combination Short Haul Truck	143	0.00E+00	6.29E-05	4.50E-06	5.20E+01	1.98E-07	5.57E-02	4.60E-05	6.44E-02	3.81E-03	9.38E-04	3.74E-03	1.33E-03	1.32E-03	7.84E-03	1.74E-04	0.00E+00	2.43E-03	1.21E-02
54	H13	80	Combination Long Haul Truck	130	0.00E+00	5.63E-05	3.79E-06	4.81E+01	2.29E-07	5.77E-02	4.27E-05	6.25E-02	3.72E-03	7.49E-04	3.87E-03	1.14E-03	1.15E-03	7.34E-03	1.61E-04	0.00E+00	2.72E-03	1.18E-02
53	H14	70	Passenger Car	16	0.00E+00	2.08E-07	2.25E-08	7.97E-01	1.45E-06	5.39E-03	4.63E-07	3.34E-05	1.25E-04	2.02E-05	4.50E-05	2.90E-05	2.98E-05	2.94E-06	4.00E-06	1.09E-09	1.52E-05	5.23E-06
53	H14	70	Passenger Truck	27	0.00E+00	4.53E-07	4.79E-08	1.84E+00	2.87E-06	9.89E-03	9.42E-07	1.02E-04	2.25E-04	3.67E-05	8.99E-05	5.85E-05	5.99E-05	1.32E-05	9.15E-06	2.39E-09	3.00E-05	1.68E-05
53	H14	70	Single Unit Short Haul Truck	4	0.00E+00	9.90E-07	4.96E-08	7.76E-01	8.10E-07	1.55E-03	1.06E-06	4.87E-04	6.97E-05	1.40E-05	1.20E-04	2.96E-05	3.01E-05	7.78E-05	3.13E-06	1.26E-09	9.00E-05	9.12E-05
53	H14	70	Single Unit Long Haul Truck	9	0.00E+00	4.76E-06	3.38E-07	3.45E+00	1.55E-08	4.10E-03	3.49E-06	4.99E-03	3.62E-04	7.91E-05	2.90E-04	1.00E-04	1.00E-04	5.20E-04	1.16E-05	0.00E+00	1.90E-04	9.40E-04
53	H14	70	Combination Long Haul Truck	8	0.00E+00	4.30E-06	2.88E-07	3.22E+00	1.78E-08	4.34E-03	3.27E-06	4.92E-03	3.60E-04	6.57E-05	3.00E-04	8.70E-05	8.79E-05	4.92E-04	1.08E-05	0.00E+00	2.12E-04	9.26E-04
54	H15	80	Passenger Car	776	0.00E+00	9.22E-06	9.98E-07	3.64E+01	6.42E-05	2.42E-01	2.05E-05	1.60E-03	4.49E-03	7.65E-04	2.00E-03	1.29E-03	1.32E-03	1.22E-04	1.83E-04	4.97E-08	6.76E-04	2.50E-04
54	H15	80	Pass

Appendix F.1.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	2.48E-04	1.91E-05	4.32E+02	3.75E-04	1.81E+00	2.66E-04	2.10E-01	1.55E-02	4.44E-03	2.42E-02	1.15E-02	1.17E-02	3.13E-02	1.84E-03	4.21E-07	1.25E-02	3.92E-02
A02	0.00E+00	2.53E-04	1.92E-05	4.31E+02	3.64E-04	1.75E+00	2.68E-04	2.13E-01	1.53E-02	4.42E-03	2.46E-02	1.14E-02	1.15E-02	3.23E-02	1.83E-03	4.24E-07	1.30E-02	3.98E-02
A03	0.00E+00	2.57E-04	2.03E-05	4.92E+02	4.80E-04	2.27E+00	2.95E-04	2.06E-01	1.82E-02	5.08E-03	2.71E-02	1.35E-02	1.37E-02	3.06E-02	2.16E-03	5.21E-07	1.34E-02	3.84E-02
A04	0.00E+00	2.55E-04	1.94E-05	4.44E+02	3.87E-04	1.85E+00	2.74E-04	2.12E-01	1.59E-02	4.56E-03	2.52E-02	1.18E-02	1.20E-02	3.22E-02	1.89E-03	4.46E-07	1.32E-02	3.96E-02
A05	0.00E+00	2.14E-04	1.67E-05	3.93E+02	3.65E-04	1.74E+00	2.38E-04	1.77E-01	1.43E-02	4.05E-03	2.18E-02	1.06E-02	1.08E-02	2.62E-02	1.71E-03	4.01E-07	1.10E-02	3.29E-02
A06	0.00E+00	2.27E-04	1.72E-05	3.82E+02	3.18E-04	1.54E+00	2.38E-04	1.93E-01	1.35E-02	3.92E-03	2.17E-02	1.01E-02	1.02E-02	2.91E-02	1.62E-03	3.67E-07	1.15E-02	3.61E-02
A07	0.00E+00	2.21E-04	1.70E-05	3.79E+02	3.23E-04	1.56E+00	2.34E-04	1.88E-01	1.35E-02	3.89E-03	2.12E-02	1.00E-02	1.02E-02	2.80E-02	1.61E-03	3.62E-07	1.10E-02	3.52E-02
A08	0.00E+00	2.38E-04	1.78E-05	3.80E+02	2.91E-04	1.43E+00	2.40E-04	2.08E-01	1.32E-02	3.88E-03	2.18E-02	9.82E-03	9.95E-03	3.13E-02	1.58E-03	3.45E-07	1.18E-02	3.89E-02
A09	0.00E+00	2.52E-04	1.93E-05	4.21E+02	3.45E-04	1.68E+00	2.62E-04	2.19E-01	1.49E-02	4.32E-03	2.37E-02	1.11E-02	1.12E-02	3.25E-02	1.78E-03	3.91E-07	1.25E-02	4.08E-02
A10	0.00E+00	2.84E-04	2.14E-05	4.56E+02	3.51E-04	1.72E+00	2.87E-04	2.49E-01	1.58E-02	4.66E-03	2.61E-02	1.18E-02	1.20E-02	3.74E-02	1.90E-03	4.14E-07	1.41E-02	4.65E-02
A11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A24	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A25	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A26	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A27	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
A28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B05	0.00E+00	5.93E-05	4.35E-06	1.17E+02	1.14E-04	4.71E-01	7.08E-05	4.27E-02	5.68E-03	1.36E-03	6.90E-03	3.10E-03	3.15E-03	7.12E-03	5.17E-04	1.29E-07	3.75E-03	7.92E-03
B06	0.00E+00	8.27E-05	6.03E-06	1.86E+02	2.07E-04	8.25E-01	1.11E-04	4.80E-02	9.39E-03	2.19E-03	1.12E-02	5.08E-03	5.18E-03	8.85E-03	8.47E-04	2.40E-07	6.02E-03	8.84E-03
B07	0.00E+00	1.65E-05	1.76E-06	7.19E+01	1.10E-04	4.32E-01	3.56E-05	3.91E-03	4.27E-03	8.91E-04	3.43E-03	2.22E-03	2.28E-03	3.81E-04	3.61E-04	9.92E-08	1.16E-03	6.27E-04
B08	0.00E+00	3.37E-05	3.57E-06	1.45E+02	2.21E-04	8.67E-01	7.19E-05	8.41E-03	8.59E-03	1.79E-03	6.94E-03	4.46E-03	4.58E-03	8.72E-04	7.27E-04	1.99E-07	2.37E-03	1.37E-03
B09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B24	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C11	0.00E+00	4.96E-05	3.75E-06	7.43E+01	8.03E-05	3.06E-01	5.48E-05	4.04E-02	9.09E-03	1.59E-03	5.16E-03	2.37E-03	2.41E-03	4.34E-03	3.28E-04	6.83E-08	2.75E-03	7.55E-03
C12	0.00E+00	4.08E-05	3.60E-06	9.97E+01	1.56E-04	5.50E-01	6.42E-05	2.11E-02	1.63E-02	2.57E-03	6.18E-03	3.49E-03	3.57E-03	2.15E-03	4.80E-04	1.17E-07	2.60E-03	3.86E-03
C13	0.00E+00	3.46E-05	2.61E-06	4.51E+01	6.51E-05	2.27E-01	4.05E-05	2.67E-02	1.11E-02	1.66E-03	3.89E-03	1.80E-03	1.83E-03	2.04E-03	2.04E-04	4.04E-08	2.06E-03	5.00E-03
C14	0.00E+00	5.20E-05	4.04E-06	8.90E+01	1.07E-04	3.97E-01	6.26E-05	3.86E-02	1.11E-02	1.90E-03	5.96E-03	2.88E-03	2.93E-03	4.21E-03	4.04E-04	9.12E-08	3.03E-03	7.19E-03
C15	0.00E+00	7.35E-05	5.20E-06	6.82E+01	7.64E-05	2.86E-01	7.28E-05	6.77E-02	1.66E-02	2.56E-03	6.95E-03	2.76E-03	2.81E-03	4.89E-03	2.89E-04	4.84E-08	4.14E-03	1.27E-02
C16	0.00E+00	7.12E-06	6.37E-07	1.88E+01	3.08E-05	1.06E-01	1.20E-05	2.87E-03	3.09E-03	4.83E-04	1.17E-03	6.67E-04	6.83E-04	3.18E-04	9.16E-05	2.33E-08	4.88E-04	5.18E-04
C17	0.00E+00	6.70E-05	5.12E-06	1.17E+02	1.47E-04	5.29E-01	8.32E-05	4.59E-02	1.45E-02	2.49E-03	8.07E-03	3.82E-03	3.90E-03	5.19E-03	5.35E-04	1.28E-07	4.17E-03	8.53E-03
C18	0.00E+00	1.04E-05	7.77E-07	1.65E+01	2.27E-05	7.88E-02	1.30E-05	7.00E-03	2.63E-03	4.25E-04	1.28E-03	5.88E-04	6.00E-04	7.05E-04	7.58E-05	1.79E-08	6.78E-04	1.30E-03
C19	0.00E+00	6.98E-07	5.78E-08	1.30E+00	2.17E-06	7.34E-03	9.96E-07	3.99E-04	3.26E-04	4.75E-05	9.62E-05	5.09E-05	5.21E-05	3.38E-05	6.15E-06	1.32E-09	4.41E-05	7.40E-05
C20	0.00E+00	1.01E-05	8.73E-07	2.48E+01	3.58E-05	1.28E-01	1.53E-05	5.54E-03	3.19E-03	5.32E-04	1.47E-03	8.15E-04	8.33E-04	6.21E-04	1.19E-04	2.97E-08	6.35E-04	1.01E-03
C21	0.00E+00	7.45E-05	5.17E-06	8.31E+01	1.27E-04	3.92E-01	8.66E-05	5.00E-02	2.00E-02	3.01E-03	8.69E-03	3.56E-03	3.64E-03	4.09E-03	3.74E-04	8.45E-08	5.05E-03	9.35E-03
C22	0.00E+00	6.02E-06	5.42E-07	1.56E+01	2.49E-05	8.72E-02	9.85E-06	2.85E-03	2.56E-03	4.01E-04	9.49E-04	5.47E-04	5.59E-04	2.96E-04	7.54E-05	1.86E-08	3.89E-04	5.19E-04
C23	0.00E+00	4.08E-05	3.32E-06	8.63E+01	1.19E-04	4.25E-01	5.67E-05	2.46E-02	1.09E-02	1.84E-03	5.49E-03	2.84E-03	2.90E-03	2.80E-03	4.06E-04	1.01E-07	2.59E-03	4.54E-03
C24	0.00E+00	3.09E-06	3.04E-07	9.68E+00	1.61E-05	5.65E-02	5.72E-06	1.11E-03	1.61E-03	2.49E-04	5.47E-04	3.39E-04	3.47E-04	1.19E-04	4.76E-05	1.19E-08	2.00E-04	1.97E-04
C25	0.00E+00	8.26E-05	5.72E-06	7.31E+01	8.38E-05	2.97E-01	8.22E-05	7.32E-02	1.76E-02	2.72E-03	7.97E-03	3.04E-03	3.10E-03	5.38E-03	3.09E-04	5.51E-08	4.87E-03	1.37E-02
C26	0.00E+00	5.32E-05	3.90E-06	7.80E+01	8.67E-05	3.19E-01	5.97E-05	4.07E-02	9.44E-03	1.65E-03	5.76E-03	2.52E-03	2.57E-03	4.53E-03	3.45E-04	7.70E-08	3.19E-03	7.59E-03
C27	0.00E+00	4.01E-05	2.79E-06	4.23E+01	6.04E-05	1.93E-01	4.47E-05	2.97E-02	1.02E-02	1.54E-03	4.43E-03	1.80E-03	1.83E-03	2.33E-03	1.88E-04	4.00E-08	2.60E-03	5.56E-03
C28	0.00E+00	1.37E-05	1.39E-06	4.63E+01	7.86E-05	2.74E-01	2.69E-05	3.79E-03	7.69E-03	1.19E-03	2.58E-03	1.62E-03	1.66E-03	4.41E-04	2.29E-04	5.81E-08	9.16E-04	6.56E-04
C29	0.00E+00	4.45E-06	3.80E-07	1.05E+01	1.48E-05	5.33E-02	6.52E-06	2.60E-03	1.34E-03	2.25E-04	6.25E-04	3.43E-04	3.50E-04	2.88E-04	4.97E-05	1.23E-08	2.75E-04	4.78E-04
C30	0.00E+00	4.90E-05	3.26E-06	3.29E+01	2.60E-05	1.02E-01	4.37E-05	4.77E-02	7.72E-03	1.24E-03	4.21E-03	1.40E-03	1.42E-03	3.41E-03	1.28E-04	1.83E-08	2.79E-03	8.97E-03
C31	0.00E+00	2.38E-05	1.64E-06	2.56E+01	2.52E-05	9.39E-02	2.40E-05	2.06E-02	3.95E-03	6.66E-04	2.33E-03	8.93E-04	9.08E-04	1.96E-03	1.08E-04	2.08E-08	1.42E-03	3.86E-03
C32	0.00E+00	6.98E-05	4.94E-06	8.73E+01	8.32E-05	3.15E-01	7.18E-05	5.76E-02	1.03E-02	1.85E-03	6.89E-03	2.79E-03	2.84E-03	6.35E-03	3.71E-04	7.62E-08	4.05E-03	1.08E-02
C33	0.00E+00	2.01E-06	1.89E-07	6.00E+00	1.01E-05	3.48E-02	3.68E-06	6.26E-04	9.90E-04	1.54E-04	3.58E-04	2.13E-04	2.18E-04	7.44E-05	2.95E-05	7.58E-09	1.40E-04	1.11E-04
C34	0.00E+00	5.13E-06	3.66E-07	6.26E+00	9.73E-06	3.07E-02	6.16E-06	3.38E-03	1.52E-03	2.27E-04	6.13E-04	2.63E-04	2.69E-04	2.78E-04	2.85E-05	6.36E-09	3.44E-04	6.32E-04
C35	0.00E+00	1.30E-05	1.04E-06	2.71E+01	3.74E-05	1.33E-01	1.80E-05	7.61E-03	3.41E-03	5.77E-04	1.76E-03	8.93E-04	9.13E-04	8.81E-04	1.27E-04	3.20E-08	8.42E-04	1.40E-03
C36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C38	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C39	0.00E+00	1.67E-05	1.17E-06	2.16E+01	2.67E-05	9.19E-02	1.90E-05	1.22E-02	3.36E-03	5.54E-04	1.89E-03	7.74E-04	7.89E-04	1.23E-03	9.56E-05	2.21E-08	1.10E-03	2.28E-03
C40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C42	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C43	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C44	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C45	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C46	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C47	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C51	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C52	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C54	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C56	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0

Appendix F.1.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
C72	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C73	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C74	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C81	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C82	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C83	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C84	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C86	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D01	0.00E+00	6.97E-05	6.24E-06	1.56E+02	2.59E-04	9.29E-01	1.07E-04	4.04E-02	2.68E-02	4.22E-03	1.02E-02	5.86E-03	5.99E-03	3.88E-03	7.47E-04	1.89E-07	4.16E-03	7.44E-03
D02	0.00E+00	8.84E-05	7.91E-06	1.99E+02	3.32E-04	1.19E+00	1.37E-04	5.03E-02	3.41E-02	5.38E-03	1.30E-02	7.48E-03	7.65E-03	4.85E-03	9.53E-04	2.42E-07	5.33E-03	9.24E-03
D03	0.00E+00	9.36E-05	7.63E-06	1.69E+02	2.60E-04	9.29E-01	1.27E-04	6.20E-02	2.84E-02	4.54E-03	1.22E-02	6.31E-03	6.45E-03	6.00E-03	7.86E-04	1.94E-07	5.72E-03	1.15E-02
D04	0.00E+00	1.35E-04	1.07E-05	2.19E+02	3.14E-04	1.14E+00	1.69E-04	1.00E-01	3.65E-02	5.88E-03	1.61E-02	8.06E-03	8.23E-03	9.49E-03	9.99E-04	2.34E-07	7.91E-03	1.87E-02
D05	0.00E+00	8.00E-05	6.78E-06	1.63E+02	2.66E-04	9.41E-01	1.18E-04	4.63E-02	2.76E-02	4.38E-03	1.13E-02	6.15E-03	6.29E-03	4.59E-03	7.73E-04	1.98E-07	5.04E-03	8.54E-03
D06	0.00E+00	1.51E-04	1.23E-05	2.71E+02	4.13E-04	1.49E+00	2.03E-04	1.03E-01	4.55E-02	7.29E-03	1.94E-02	1.01E-02	1.03E-02	9.84E-03	1.26E-03	3.07E-07	9.08E-03	1.90E-02
D07	0.00E+00	7.79E-05	6.66E-06	1.87E+02	2.55E-04	9.57E-01	1.13E-04	4.62E-02	1.77E-02	3.23E-03	1.08E-02	5.93E-03	6.06E-03	5.77E-03	8.83E-04	2.22E-07	4.73E-03	8.49E-03
D08	0.00E+00	1.01E-04	8.28E-06	2.15E+02	2.76E-04	1.05E+00	1.35E-04	6.63E-02	2.00E-02	3.71E-03	1.28E-02	6.75E-03	6.89E-03	8.29E-03	9.99E-04	2.42E-07	5.95E-03	1.23E-02
D09	0.00E+00	5.05E-05	4.52E-06	1.35E+02	1.94E-04	7.25E-01	7.92E-05	2.69E-02	1.30E-02	2.35E-03	7.56E-03	4.35E-03	4.45E-03	3.31E-03	6.50E-04	1.67E-07	3.12E-03	4.90E-03
D10	0.00E+00	7.80E-05	6.78E-06	1.94E+02	2.70E-04	1.01E+00	1.16E-04	4.50E-02	1.85E-02	3.37E-03	1.11E-02	6.19E-03	6.33E-03	5.57E-03	9.23E-04	2.33E-07	4.74E-03	8.24E-03
D11	0.00E+00	4.95E-05	4.40E-06	1.30E+02	1.85E-04	6.93E-01	7.65E-05	2.70E-02	1.25E-02	2.26E-03	7.30E-03	4.17E-03	4.27E-03	3.32E-03	6.23E-04	1.59E-07	3.03E-03	4.93E-03
D12	0.00E+00	9.42E-05	8.03E-06	2.22E+02	3.01E-04	1.13E+00	1.35E-04	5.74E-02	2.10E-02	3.85E-03	1.28E-02	7.05E-03	7.20E-03	7.12E-03	1.05E-03	2.61E-07	5.65E-03	1.06E-02
D13	0.00E+00	4.62E-05	3.69E-06	7.88E+01	1.18E-04	4.24E-01	6.06E-05	3.16E-02	1.32E-02	2.12E-03	5.83E-03	2.94E-03	3.01E-03	3.06E-03	3.64E-04	8.90E-08	2.82E-03	5.88E-03
D14	0.00E+00	3.20E-05	2.55E-06	5.53E+01	8.44E-05	2.99E-01	4.26E-05	2.11E-02	9.24E-03	1.48E-03	4.12E-03	2.08E-03	2.12E-03	2.07E-03	2.56E-04	6.38E-08	2.00E-03	3.91E-03
D15	0.00E+00	6.56E-05	5.17E-06	1.08E+02	1.61E-04	5.74E-01	8.45E-05	4.55E-02	1.80E-02	2.90E-03	8.15E-03	4.04E-03	4.13E-03	4.41E-03	4.98E-04	1.21E-07	4.02E-03	8.46E-03
D16	0.00E+00	7.12E-05	5.95E-06	1.41E+02	2.28E-04	8.04E-01	1.03E-04	4.20E-02	2.38E-02	3.78E-03	9.92E-03	5.31E-03	5.43E-03	4.16E-03	6.65E-04	1.70E-07	4.50E-03	7.75E-03
D17	0.00E+00	2.81E-05	2.31E-06	5.57E+01	7.67E-05	2.82E-01	3.76E-05	1.88E-02	7.27E-03	1.23E-03	3.57E-03	1.88E-03	1.92E-03	2.04E-03	2.59E-04	6.18E-08	1.65E-03	3.48E-03
D18	0.00E+00	8.07E-06	7.40E-07	2.15E+01	3.34E-05	1.21E-01	1.31E-05	4.05E-03	2.89E-03	4.77E-04	1.25E-03	7.36E-04	7.53E-04	4.43E-04	1.04E-04	2.64E-08	4.98E-04	7.37E-04
D19	0.00E+00	1.14E-04	8.50E-06	2.05E+02	2.43E-04	9.06E-01	1.41E-04	7.52E-02	1.83E-02	3.48E-03	1.38E-02	6.36E-03	6.48E-03	1.01E-02	9.28E-04	2.33E-07	7.31E-03	1.40E-02
D20	0.00E+00	1.12E-04	8.40E-06	2.32E+02	3.10E-04	1.11E+00	1.56E-04	5.81E-02	2.10E-02	3.92E-03	1.58E-02	7.39E-03	7.55E-03	8.65E-03	1.08E-03	3.03E-07	8.22E-03	1.07E-02
D21	0.00E+00	1.11E-04	8.35E-06	1.95E+02	2.23E-04	8.46E-01	1.33E-04	7.77E-02	1.74E-02	3.31E-03	1.29E-02	5.99E-03	6.10E-03	1.02E-02	8.74E-04	2.10E-07	6.78E-03	1.44E-02
D22	0.00E+00	8.66E-05	6.97E-06	1.81E+02	2.32E-04	8.73E-01	1.16E-04	5.55E-02	1.68E-02	3.12E-03	1.11E-02	5.69E-03	5.81E-03	7.13E-03	8.40E-04	2.08E-07	5.32E-03	1.03E-02
D23	0.00E+00	1.01E-04	7.87E-06	1.66E+02	2.49E-04	8.79E-01	1.31E-04	6.74E-02	2.76E-02	4.43E-03	1.27E-02	6.23E-03	6.37E-03	6.64E-03	7.64E-04	1.90E-07	6.37E-03	1.25E-02
D24	0.00E+00	9.52E-05	8.06E-06	1.97E+02	3.28E-04	1.15E+00	1.43E-04	5.17E-02	3.34E-02	5.29E-03	1.38E-02	7.49E-03	7.66E-03	5.24E-03	9.39E-04	2.45E-07	6.16E-03	9.52E-03
D25	0.00E+00	8.70E-05	7.11E-06	1.64E+02	2.61E-04	9.19E-01	1.22E-04	5.24E-02	2.75E-02	4.39E-03	1.19E-02	6.18E-03	6.32E-03	5.22E-03	7.69E-04	1.97E-07	5.55E-03	9.69E-03
D26	0.00E+00	6.53E-05	6.20E-06	1.77E+02	3.17E-04	1.11E+00	1.16E-04	2.49E-02	3.05E-02	4.76E-03	1.12E-02	6.74E-03	6.90E-03	2.64E-03	8.63E-04	2.33E-07	4.28E-03	4.47E-03
D27	0.00E+00	7.49E-05	6.76E-06	2.08E+02	3.03E-04	1.13E+00	1.21E-04	3.75E-02	2.00E-02	3.62E-03	1.16E-02	6.70E-03	6.86E-03	4.65E-03	1.00E-03	2.61E-07	4.71E-03	6.81E-03
D28	0.00E+00	3.10E-05	2.86E-06	8.93E+01	1.32E-04	4.90E-01	5.12E-05	1.52E-02	8.63E-03	1.56E-03	4.89E-03	2.88E-03	2.95E-03	1.85E-03	4.32E-04	1.12E-07	1.94E-03	2.74E-03
D29	0.00E+00	7.81E-05	6.49E-06	1.73E+02	2.26E-04	8.53E-01	1.07E-04	5.00E-02	1.61E-02	2.98E-03	1.02E-02	5.43E-03	5.55E-03	6.25E-03	8.05E-04	1.97E-07	4.65E-03	9.23E-03
D30	0.00E+00	4.11E-05	3.54E-06	1.00E+02	1.38E-04	5.18E-01	6.04E-05	2.40E-02	9.50E-03	1.74E-03	5.77E-03	3.19E-03	3.26E-03	2.99E-03	4.75E-04	1.20E-07	2.51E-03	4.40E-03
D31	0.00E+00	2.33E-05	2.07E-06	6.20E+01	8.90E-05	3.31E-01	3.65E-05	1.22E-02	5.93E-03	1.08E-03	3.50E-03	1.99E-03	2.04E-03	1.53E-03	2.97E-04	7.69E-08	1.46E-03	2.23E-03
D32	0.00E+00	1.24E-05	1.15E-06	3.59E+01	5.29E-05	1.97E-01	2.05E-05	6.21E-03	3.48E-03	6.27E-04	1.94E-03	1.16E-03	1.19E-03	7.41E-04	1.74E-04	4.48E-08	7.59E-04	1.12E-03
D33	0.00E+00	2.89E-05	2.35E-06	5.19E+01	8.01E-05	2.85E-01	3.92E-05	1.90E-02	8.72E-03	1.39E-03	3.77E-03	1.94E-03	1.99E-03	1.85E-03	2.42E-04	6.00E-08	1.78E-03	3.52E-03
D34	0.00E+00	5.74E-05	4.32E-06	8.00E+01	1.06E-04	3.87E-01	6.67E-05	4.50E-02	1.31E-02	2.14E-03	6.41E-03	2.94E-03	3.00E-03	4.28E-03	3.57E-04	8.08E-08	3.41E-03	8.40E-03
D35	0.00E+00	2.19E-05	1.93E-06	5.01E+01	8.60E-05	3.00E-01	3.50E-05	1.06E-02	8.55E-03	1.35E-03	3.39E-03	1.91E-03	1.95E-03	1.09E-03	2.41E-04	6.40E-08	1.44E-03	1.93E-03
D36	0.00E+00	2.84E-05	2.61E-06	7.11E+01	1.24E-04	4.37E-01	4.78E-05	1.27E-02	1.22E-02	1.91E-03	4.60E-03	2.70E-03	2.77E-03	1.30E-03	3.45E-04	9.16E-08	1.83E-03	2.30E-03
D37	0.00E+00	2.21E-05	1.99E-06	5.05E+01	8.44E-05	3.02E-01	3.44E-05	1.24E-02	8.65E-03	1.36E-03	3.27E-03	1.89E-03	1.94E-03	1.20E-03	2.42E-04	6.16E-08	1.33E-03	2.28E-03
D38	0.00E+00	8.27E-06	7.47E-07	1.99E+01	3.44E-05	1.21E-01	1.36E-05	3.89E-03	3.41E-03	5.35E-04	1.31E-03	7.55E-04	7.72E-04	3.98E-04	9.60E-05	2.54E-08	5.33E-04	7.09E-04
D39	0.00E+00	2.18E-05	1.98E-06	5.12E+01	8.62E-05	3.08E-01	3.46E-05	1.19E-02	8.78E-03	1.38E-03	3.28E-03	1.92E-03	1.96E-03	1.15E-03	2.46E-04	6.28E-08	1.32E-03	2.18E-03
D40	0.00E+00	1.18E-05	1.11E-06	3.12E+01	5.55E-05	1.94E-01	2.07E-05	4.76E-03	5.38E-03	8.40E-04	1.99E-03	1.19E-03	1.22E-03	4.99E-04	1.52E-04	4.08E-08	7.73E-04	8.59E-04
D41	0.00E+00	7.07E-06	5.66E-07	1.15E+01	1.62E-05	5.99E-02	8.78E-06	5.45E-03	1.92E-03	3.09E-04	8.30E-04	4.20E-04	4.29E-04	5.08E-04	5.23E-05	1.19E-08	4.01E-04	1.01E-03
D42	0.00E+00	6.32E-06	5.53E-07	1.39E+01	2.32E-05	8.20E-02	9.71E-06	3.45E-03	2.36E-03	3.73E-04	9.32E-04	5.24E-04	5.36E-04	3.42E-04	6.63E-05	1.71E-08	3.96E-04	6.33E-04
D43	0.00E+00	1.85E-05	1.46E-06	3.17E+01	4.88E-05	1.71E-01	2.47E-05	1.18E-02	5.28E-03	8.46E-04	2.41E-03	1.20E-03	1.22E-03	1.18E-03	1.47E-04	3.72E-08	1.19E-03	2.19E-03
D44	0.00E+00	1.73E-05	1.78E-06	5.48E+01	1.02E-04	3.56E-01	3.44E-05	4.62E-03	9.54E-03	1.48E-03	3.29E-03	2.10E-03	2.15E-03	5.18E-04	2.71E-04	7.40E-08	1.15E-03	7.99E-04
D45	0.00E+00	5.79E-05	4.63E-06	1.01E+02	1.55E-04	5.50E-01	7.75E-05	3.78E-02	1.69E-02	2.71E-03	7.50E-03	3.79E-03	3.88E-03	3.71E-03	4.69E-04	1.17E-07	3.62E-03	7.02E-03
D46	0.00E+00	7.69E-05	5.86E-06	1.08E+02	1.42E-04	5.26E-01	8.88E-05	6.21E-02	1.78E-02	2.91E-03	8.45E-03	3.95E-03	4.03E-03	5.83E-03	4.83E-04	1.06E-07	4.42E-03	1.16E-02
D47	0.00E+00	7.06E-05	5.88E-06	1.39E+02	2.24E-04	7.90E-01	1.02E-04	4.16E-02	2.34E-02	3.72E-03	9.83E-03	5.23E-03	5.35E-03	4.14E-03	6.54E-04	1.68E-07	4.48E-03	7.69E-03
D48	0.00E+00	1.18E-05	1.11E-06	3.12E+01	5.55E-05	1.94E-01	2.07E-05	4.76E-03	5.38E-03	8.40E-04	1.99E-03	1.19E-03	1.22E-03	4.99E-04	1.52E-04	4.08E-08	7.73E-04	8.59E-04
D49	0.00E+00	1.43E-04	1.12E-05	2.38E+02	3.62E-04	1.27E+00	1.88E-04	9.35E-02	3.97E-02	6.37E-03	1.82E-02	8.98E-03	9.17E-03	9.26E-03	1.10E-03	2.76E-07	9.08E-03	1.74E-02
D50	0.00E+00	1.37E-04	1.02E-05	1.96E+02	2.71E-04	9.62E-01	1.65E-04	9.97E-02	3.20E-02	5.21E-03	1.61E-02	7.31E-03	7.46E-03	9.75E-03	8.80E-04	2.11E-07	8.61E-03	1.86E-02
D51	0.00E+00	1.51E-05	1.35E-06	3.63E+01	6.40E-05	2.22E-01	2.52E-05	6.30E-03	6.21E-03	9.75E-04	2.45E-03	1.39E-03	1.43E-03	6.80E-04	1.76E-04	4.78E-08	1.03E-03	1.14E-03
D52	0.00E+00	1.19E-05	1.04E-06	2.70E+01	4.65E-05	1.62E-01	1.90E-05	5.54E-03	4.60E-03	7.23E-04	1.85E-03	1.03E-03	1.05E-03	5.83E-04	1.30E-04	3.48E-08	7.95E-04	1.01E-03
D53	0.00E+00	1.98E-05	1.72E-06	4.36E+01	7.39E-05	2.58E-01	3.09E-05	1.00E-02	7.42E-03	1.17E-03	2.99E-03	1.66E-03	1.70E-03	1.03E-03	2.09E-04	5.51E-08	1.29E-03	1.84E-03
D54	0.00E+00	1.64E-05	1.37E-06	3.27E+01	5.34E-05	1.87E-01	2.39E-05	9.31E-03	5.52E-03	8.76E-04	2.32E-03	1.24E-03	1.27E-03	9.37E-04	1.55E-04	4.01E-08	1.05E-03	1.72E-03
D55	0.00E+00	5.48E-05	4.21E-06	9.72E+01	1.11E-04	4.24E-01	6.55E-05	3.99E-02	8.74E-03	1.66E-03	6.25E-03	2.98E-03	3.03E-03	5.09E-03	4.36E-04	1.01E-07	3.22E-03	7.42E-03
D56	0.00E+00	6.27E-05	4.96E-06	1.25E+02	1.56E-04	5.87E-01	8.13E-05	4.15E-02	1.15E-02	2.14E-03	7.82E-03	3.91E-03	3.98E-03	5.35E-03	5.75E-04	1.41E-07	3.83E-03	7.69E-03
D57	0.00E+00	6.79E-05	5.52E-06	1.43E+02	1.83E-04	6.90E-01	9.05E-05	4.45E-02	1.33E-02	2.46E-03	8.64E-03	4.48E-03	4.57E-03	5.62E-03	6.62E-04	1.62E-07	4.07E-03	8.23E-03
D58	0.00E+00	7.54E-05	5.97E-06	1.52E+02	1.90E-04	7.15E-01	9.83E-05	4.94E-02	1.39E-02	2.60E-03	9.46E-03	4.74E-03	4.83E-03	6.38E-03	6.98E-04	1.72E-07	4.63E-03	9.15E-03
D59	0.00E+00	4.44E-05	3.74E-06	1.05E+02	1.43E-04	5.34E-01	6.42E-05	2.58E-02	9.87E-03	1.81E-03	6.17E-03	3.33E-03	3.41E-03	3.29E-03	4.95E-04	1.26E-07	2.77E-03	4.74E-03
D60	0.00E+00	4.66E-05	3.78E-06	1.02E+02	1.35E-04	5.03E-01	6.46E-05	2.79E-02	9.48E-03	1.75E-03	6.26E-03	3.23E-03	3.30E-03	3.65E-03	4.77E-04	1.22E-07	2.96E-03	5.14E-03
D61	0.00E+00	8.43E-06	6.85E-07	1.93E+01	2.64E-05	9.72E-02	1.22E-05	4.63E-03	1.80E-03	3.31E-04	1.19E-03	6.16E-04	6.29E-04	6.25E-04	9.12E-05	2.40E-08	5.61E-04	8.50E-04
D62	0.00E+00	8.16E-06	6.39E-07	1.58E+01	1.92E-05	7.28E-02	1.04E-05	5.52E-03	1.44E-03	2.70E-04	9.96E-04	4.90E-04	5.00E-04	7.12E-04	7.21E-05	1.75E-08	4.96E-04	1.02E-03
D63	0.00E+00	3.35E-07	2.86E-08	7.26E-01	1.04E-06	3.81E-03	4.72E-07	2.12E-04	9.58E-05	1.60E-05	4.48E-05	2.46E-05	2.51E-05	2.29E-05	3.42E-06	8.26E-10	1.97E-05	3.92E-05
D64	0.00E+00	9.91E-06	7.17E-07	1.29E+01	1.34E-05	5.08E-02	1.05E-05	8.07E-03	1.58E-03	2.79E-04	1.00E-03	4.24E-04	4.31E-04	8.85E-04	5.56E-05	1.16E-08	5.70E-04	1.51E-03
D65	0.00E+00	3.16E-05	2.35E-06	5.00E+01	5.15E-05	2.01E-01	3.52E-05	2.44E-02	4.39E-03	8.49E-04	3.36E-03	1.51E-03	1.53E-03	3.12E-03	2.19E-04	4.84E-08	1.83E-03	4.54E-03
D66	0.00E+00	3.89E-05	2.98E-06	6.84E+01	7.72E-05	2.97E-01	4.62E-05	2.85E-02	6.14E-03	1.17E-03	4.40E-03	2.09E-03	2.13E-03	3.63E-03	3.06E-04	7.06E-08	2.27E-03	5.30E-03
D67	0.00E+00	4.90E-05	3.50E-06	6.71E+01	5.88E-05	2.36E-01	5.03E-05	4.02E-02	5.70E-03	1.13E-03	4.78E-03	1.97E-03	2.00E-03	5.16E-03	2.83E-04	5.78E-08	2.78E-03	7.53E-03
D68	0.00E+00	3.90E-05	2.81E-06	5.29E+01	4.51E-05	1.84E-01	3.95E-05	3.27E-02	4.50E-03	8.93E-04	3.72E-03	1.55E-03	1.57E-03	4.15E-03	2.22E-04	4.36E-08	2.15E-03	6.13E-03
D69	0.00E+00	1.65E-05	1.28E-06	2.98E+01	3.42E-05	1.32E-01	1.99E-05	1.21E-02	2.70E-03	5.10E-04	1.89E-03	9.14E-04	9.32E-04	1.53E-03	1.34E-04	3.08E-08	9.54E-04	2.25E-03
D70	0.00E+00	1.33E-05	9.70E-07	1.94E+01	1.83E-05	7.24E-02	1.41E-05	1.07E-02	1.68E-03	3.28E-04	1.34E-03	5.76E-04	5.85E-04	1.37E-03	8.31E-05	1.75E-08	7.57E-04	2.01E-03
D71	0.00E+00	4.03E-05	2.90E-06	4.84E+01	4.44E-05	1.76E-01	4.03E-05	3.51E-02	5.84E-03	1.05E-03	3.80E-03	1.56E-03	1.59E-03	3.77E-03	2.03E-04	3.84E-08	2.21E-03	6.57E-03
D72	0.00E+00	4.85E-05	3.43E-06	5.86E+01	5.63E-05	2.15E-01	4.95E-05	4.02E-02	7.02E-03	1.26E-03	4.75E-03	1.91E-03	1.94E-03	4.43E-03	2.47E-04	5.04E-08	2.80E-03	7.54E-03
D73	0.00E+00	1.04E-05	8.29E-07	1.78E+01	2.22E-05	8.40E-02	1.25E-05	7.98E-03	2.29E-03	3.92E-04	1.18E-03	5.91E-04	6.03E-04	8.47E-04	8.08E-05	1.78E-08	5.74E-04	1.49E-03
D74	0.00E+00	1.02E-05	8.88E-07	2.41E+01	3.60E-05	1.31E-01	1.53E-05	5.73E-03	3.20E-03	5.32E-04	1.46E-03	8.22E-04	8.40E-04	6.29E-04	1.15E-04	2.87E-08	6.21E-04	1.05E-03
D75	0.00E+00	7.08E-06	5.78E-07	1.64E+01	2.25E-05	8.29E-02	1.03E-05	3.86E-03	1.53E-03	2.82E-04	1.00E-03	5.23E-04	5.34E-04	5.19E-04	7.75E-05	2.04E-08	4.70E-04	7.08E-04
D76	0.00E+00	8.08E-06	6.58E-07	1.74E+01	2.27E-05	8.51E-02	1.10E-05	5.08E-03	1.62E-03	3.00E-04	1.06E-03	5.48E-04	5.60E-04	6.51E-04	8.11E-05	2.02E-08	4.97E-04	9.37E-04
D77	0.00E+00	1.74E-05	1.33E-06	3.21E+01	3.82E-05	1.44E-01	2.15E-05	1.19E-02	2.90E-03	5.47E-04	2.08E-03	9.93E-04	1.01E-03	1.55E-03	1.46E-04	3.54E-08	1.07E-03	2.20E-03
D78	0.00E+00	1.20E-05	8.96E-07	1.94E+01	2.03E-05	7.89E-02	1.36E-05	9.16E-03	1.71E-03	3.29E-04	1.30E-03	5.85E-04	5.96E-04	1.18E-03	8.51E-05	1.91E-08	7.01E-04	1.71E-03
D79	0.00E+00	3.08E-05	2.22E-06	3.86E+01	3.78E-05	1.46E-01	3.18E-05	2.58E-02	4.67E-03	8.32E-04	3.02E-03	1.26E-03	1.28E-03	2.81E-03	1.64E-04	3.30E-08	1.75E-03	4.84E-03
D80	0.00E+00	3.60E-05	2.95E-06	7.02E+01	9.59E-05	3.53E-01	4.76E-05	2.44E-02	9.14E-03	1.54E-03	4.53E-03	2.36E-03	2.41E-03	2.65E-03	3.26E-04	7.73E-08	2.11E-03	4.52E-03
D81	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D82	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D83	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D84	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
D85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0

Appendix F.1.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E19	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E24	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E25	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E26	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E27	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E29	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E31	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E32	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E33	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E34	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E35	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E38	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E39	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E42	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E43	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E44	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E45	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E46	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E47	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E51	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E52	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E54	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E56	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E57	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E58	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E59	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E60	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E61	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E62	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E64	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E65	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E66	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E67	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E68	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E69	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E70	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E71	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E72	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E73	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E74	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E75	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E76	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E77	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E78	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E79	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E80	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E81	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E82	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E83	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E84	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E86	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E87	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E88	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E89	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E90	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E91	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E92	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E93	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E94	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E95	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E96	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E97	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
E98	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Appendix F.1.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F21	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F24	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F25	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F26	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F27	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F28	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F29	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F30	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F31	0.00E+00	7.50E-05	6.43E-06	1.56E+02	2.56E-04	9.08E-01	1.11E-04	4.33E-02	2.65E-02	4.20E-03	1.07E-02	5.89E-03	6.02E-03	4.27E-03	7.42E-04	1.90E-07	4.67E-03	7.98E-03
F32	0.00E+00	9.19E-05	7.44E-06	1.63E+02	2.49E-04	8.91E-01	1.23E-04	6.13E-02	2.73E-02	4.38E-03	1.18E-02	6.09E-03	6.22E-03	5.94E-03	7.57E-04	1.87E-07	5.62E-03	1.14E-02
F33	0.00E+00	2.18E-05	1.98E-06	5.12E+01	8.62E-05	3.08E-01	3.46E-05	1.19E-02	8.78E-03	1.38E-03	3.28E-03	1.92E-03	1.96E-03	1.15E-03	2.46E-04	6.28E-08	1.32E-03	2.18E-03
F34	0.00E+00	1.18E-05	1.11E-06	3.12E+01	5.55E-05	1.94E-01	2.07E-05	4.76E-03	5.38E-03	8.40E-04	1.99E-03	1.19E-03	1.22E-03	4.99E-04	1.52E-04	4.08E-08	7.73E-04	8.59E-04
F35	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F38	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F39	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F42	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F43	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F44	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F45	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F46	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F47	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F50	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F51	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F52	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F54	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F71	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F72	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F73	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F74	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F75	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F76	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F77	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F78	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F79	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F80	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F81	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F82	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F83	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F84	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F86	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F87	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F88	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
G01	0.00E+00	4.68E-05	3.53E-06	7.48E+01	7.38E-05	2.92E-01	5.12E-05	3.78E-02	6.81E-03	1.30E-03	4.80E-03	2.20E-03	2.24E-03	4.71E-03	3.26E-04	6.70E-08	2.56E-03	7.06E-03
G02	0.00E+00	3.20E-05	2.60E-06	6.94E+01	8.75E-05	3.27E-01	4.31E-05	2.05E-02	6.66E-03	1.22E-03	4.13E-03	2.13E-03	2.18E-03	2.62E-03	3.23E-04	7.80E-08	1.95E-03	3.79E-03
G03	0.00E+00	5.98E-05	3.68E-06	9.21E+01	6.71E-05	2.74E-01	6.39E-05	4.15E-02	3.89E-03	1.03E-03	6.64E-03	2.21E-03	2.25E-03	8.05E-03	3.80E-04	1.11E-07	4.40E-03	7.75E-03
G04	0.00E+00	4.87E-05	3.30E-06	7.67E+01	5.48E-05	2.36E-01	5.02E-05	3.90E-02	3.32E-03	8.62E-04	4.91E-03	1.86E-03	1.89E-03	6.65E-03	3.16E-04	7.42E-08	3.03E-03	7.30E-03
G05	0.00E+00	3.40E-05	2.59E-06	6.16E+01	5.22E-05	2.27E-01	3.67E-05	2.91E-02	2.89E-03	7.06E-04	3.39E-03	1.58E-03	1.60E-03	4.41E-03	2.63E-04	5.27E-08	1.78E-03	5.43E-03
G06	0.00E+00	3.33E-06	3.22E-07	1.14E+01	1.59E-05	6.35E-02	5.84E-06	1.61E-03	6.51E-04	1.39E-04	5.54E-04	3.41E-04	3.49E-04	2.08E-04	5.57E-05	1.44E-08	2.05E-04	2.87E-04
G07	0.00E+00	6.37E-06	5.12E-07	1.17E+01	1.43E-05	5.37E-02	7.84E-06	4.80E-03	1.47E-03	2.51E-04	7.36E-04	3.74E-04	3.82E-04	5.10E-04	5.33E-05	1.18E-08	3.54E-04	8.92E-04
G08	0.00E+00	5.72E-07	6.10E-08	2.37E+00	3.76E-06	1.37E-02	1.22E-06	1.24E-04	2.46E-04	4.25E-05	1.18E-04	7.62E-05	7.81E-05	1.38E-05	1.18E-05	3.17E-09	3.95E-05	2.01E-05
G09	0.00E+00	2.05E-05	1.44E-06	1.65E+01	1.42E-05	6.12E-02	1.87E-05	2.09E-02	3.98E-03	6.27E-04	1.75E-03	6.55E-04	6.67E-04	1.46E-03	6.66E-05	8.87E-09	1.08E-03	3.92E-03
G10	0.00E+00	4.26E-05	3.38E-06	8.07E+01	1.04E-04	3.78E-01	5.47E-05	2.91E-02	1.01E-02	1.73E-03	5.25E-03	2.63E-03	2.68E-03	3.22E-03	3.73E-04	8.81E-08	2.57E-03	5.40E-03
H01	0.00E+00	5.02E-04	3.77E-05	8.66E+02	6.84E-04	3.03E+00	5.24E-04	4.40E-01	3.97E-02	9.86E-03	4.82E-02	2.19E-02	2.21E-02	6.69E-02	3.65E-03	7.04E-07	2.60E-02	8.22E-02
H02	0.00E+00	3.63E-04	2.76E-05	6.45E+02	5.31E-04	2.33E+00	3.86E-04	3.15E-01	3.00E-02	7.37E-03	3.55E-02	1.64E-02	1.67E-02	4.77E-02	2.74E-03	5.36E-07	1.88E-02	5.89E-02
H03	0.00E+00	3.62E-04	2.78E-05	6.71E+02	5.87E-04	2.54E+00	3.98E-04	3.06E-01	3.18E-02	7.72E-03	3.67E-02	1.74E-02	1.76E-02	4.63E-02	2.89E-03	5.89E-07	1.91E-02	5.71E-02
H04	0.00E+00	4.13E-04	3.19E-05	7.62E+02	6.60E-04	2.87E+00	4.49E-04	3.56E-01	3.61E-02	8.76E-03	4.11E-02	1.97E-02	2.00E-02	5.31E-02	3.27E-03	6.45E-07	2.11E-02	6.64E-02
H05	0.00E+00	1.58E-04	1.21E-05	2.90E+02	2.49E-04	1.08E+00	1.72E-04	1.35E-01	1.37E-02	3.33E-03	1.59E-02	7.47E-03	7.58E-03	2.04E-02	1.24E-03	2.50E-07	8.29E-03	2.52E-02
H06	0.00E+00	2.54E-04	1.98E-05	4.72E+02	4.10E-04	1.79E+00	2.77E-04	2.21E-01	2.24E-02	5.43E-03	2.52E-02	1.22E-02	1.24E-02	3.27E-02	2.03E-03	3.95E-07	1.28E-02	4.12E-02
H07	0.00E+00	4.55E-04	3.52E-05	8.44E+02	7.34E-04	3.19E+00	4.97E-04	3.91E-01	4.00E-02	9.70E-03	4.55E-02	2.18E-02	2.22E-02	5.84E-02	3.63E-03	7.18E-07	2.33E-02	7.30E-02
H08	0.00E+00	3.68E-05	2.86E-06	5.81E+01	7.35E-05	2.73E-01	4.36E-05	2.94E-02	9.33E-03	1.51E-03	4.14E-03	2.00E-03	2.04E-03	2.76E-03	2.63E-04	5.55E-08	2.11E-03	5.49E-03
H09	0.00E+00	2.65E-05	2.47E-06	6.63E+01	1.16E-04	3.99E-01	4.44E-05	1.17E-02	1.68E-02	2.43E-03	4.22E-03	2.53E-03	2.59E-03	1.08E-03	3.21E-04	6.91E-08	1.63E-03	2.15E-03
H10	0.00E+00	3.71E-05	2.89E-06	6.03E+01	6.85E-05	2.61E-01	4.25E-05	2.98E-02	7.47E-03	1.30E-03	3.98E-03	1.92E-03	1.96E-03	3.17E-03	2.70E-04	5.69E-08	2.02E-03	5.56E-03
H11	0.00E+00	1.37E-05	1.44E-06	5.31E+01	8.66E-05	3.07E-01	2.85E-05	3.13E-03	7.05E-03	1.15E-03	2.74E-03	1.76E-03	1.81E-03	3.69E-04	2.65E-04	7.00E-08	9.31E-04	5.18E-04
H12	0.00E+00	1.39E-04	1.01E-05	2.21E+02	1.53E-04	6.97E-01	1.38E-04	1.24E-01	9.72E-03	2.49E-03	1.27E-02	5.41E-03	5.47E-03	1.92E-02	9.08E-04	1.68E-07	7.24E-03	2.33E-02
H13	0.00E+00	1.82E-04	1.33E-05	2.68E+02	2.46E-04	9.78E-01	1.91E-04	1.49E-01	2.38E-02	4.60E-03	1.80E-02	7.81E-03	7.93E-03	1.88E-02	1.15E-03	2.32E-07	1.01E-02	2.78E-02
H14	0.00E+00	1.08E-05	7.48E-07	1.01E+01	5.19E-06	2.53E-02	9.27E-06	1.05E-02	1.15E-03	2.16E-04	8.50E-04	3.06E-04	3.09E-04	1.11E-03	3.88E-05	4.80E-09	5.41E-04	1.98E-03
H15	0.00E+00	1.88E-04	1.38E-05	2.56E+02	2.06E-04	8.67E-01	1.85E-04	1.66E-01	2.26E-02	4.41E-03	1.70E-02	7.32E-03	7.42E-03	2.04E-02	1.07E-03	1.86E-07	9.62E-03	3.11E-02
H16	0.00E+00	6.95E-05	5.68E-06	1.36E+02	1.75E-04	6.47E-01	8.95E-05	4.96E-02	1.72E-02	2.93E-03	8.44E-03	4.40E-03	4.49E-03	5.31E-03	6.30E-04	1.44E-07	3.95E-03	9.19E-03

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B05	100	Passenger Car	1082	0.00E+00	1.19E-05	1.28E-06	4.87E+01	8.26E-05	3.26E-01	2.64E-05	2.31E-03	3.51E-03	7.08E-04	2.57E-03	1.65E-03	1.70E-03	1.36E-04	2.46E-04	6.78E-08	8.69E-04	3.61E-04
16	B05	100	Passenger Truck	1812	0.00E+00	2.56E-05	2.73E-06	1.15E+02	1.68E-04	6.57E-01	5.45E-05	6.58E-03	6.21E-03	1.32E-03	5.24E-03	3.39E-03	3.48E-03	7.31E-04	5.76E-04	1.58E-07	1.76E-03	1.06E-03
16	B05	100	Single Unit Short Haul Truck	125	0.00E+00	1.69E-05	8.34E-07	2.29E+01	1.47E-05	5.30E-02	1.82E-05	9.10E-03	8.65E-04	2.52E-04	2.08E-03	5.17E-04	5.25E-04	2.31E-03	9.20E-05	3.76E-08	1.56E-03	1.70E-03
16	B05	100	Single Unit Long Haul Truck	6	0.00E+00	7.31E-07	3.55E-08	9.65E-01	6.09E-07	2.17E-03	7.88E-07	3.83E-04	3.91E-05	1.09E-05	9.08E-05	2.18E-05	2.22E-05	9.67E-05	3.88E-06	1.54E-09	6.87E-05	7.16E-05
16	B05	100	Combination Short Haul Truck	129	0.00E+00	4.42E-05	3.23E-06	4.65E+01	1.26E-07	4.31E-02	3.19E-05	4.71E-02	1.50E-03	5.33E-04	2.48E-03	9.46E-04	9.30E-04	7.01E-03	1.56E-04	0.00E+00	1.55E-03	8.87E-03
16	B05	100	Combination Long Haul Truck	117	0.00E+00	3.85E-05	2.64E-06	4.21E+01	1.46E-07	4.31E-02	2.88E-05	4.47E-02	1.39E-03	3.86E-04	2.52E-03	7.90E-04	7.88E-04	6.43E-03	1.41E-04	0.00E+00	1.73E-03	8.42E-03
16	B06	100	Passenger Car	524	0.00E+00	5.75E-06	6.22E-07	2.36E+01	4.00E-05	1.58E-01	1.28E-05	1.12E-03	1.70E-03	3.43E-04	1.24E-03	8.02E-04	8.23E-04	6.57E-05	1.19E-04	3.28E-08	4.21E-04	1.75E-04
16	B06	100	Passenger Truck	878	0.00E+00	1.24E-05	1.32E-06	5.56E+01	8.12E-05	3.18E-01	2.64E-05	3.19E-03	3.01E-03	6.38E-04	2.54E-03	1.64E-03	1.69E-03	3.54E-04	2.79E-04	7.64E-08	8.53E-04	5.15E-04
16	B06	100	Single Unit Short Haul Truck	15	0.00E+00	2.06E-06	1.02E-07	2.80E+00	1.80E-06	6.48E-03	2.23E-06	1.11E-03	1.06E-04	3.07E-05	2.54E-04	6.31E-05	6.41E-05	2.82E-04	1.12E-05	4.59E-09	1.90E-04	2.08E-04
16	B06	100	Single Unit Long Haul Truck	1	0.00E+00	8.92E-08	4.34E-09	1.18E-01	7.44E-08	2.65E-04	9.62E-08	4.68E-05	4.78E-06	1.33E-06	1.11E-05	2.66E-06	2.71E-06	1.18E-05	4.74E-07	1.88E-10	8.39E-06	8.74E-06
16	B06	100	Combination Short Haul Truck	12	0.00E+00	3.95E-06	2.88E-07	4.16E+00	1.12E-08	3.86E-03	2.85E-06	4.21E-03	1.34E-04	4.77E-05	2.22E-04	8.46E-05	8.31E-05	6.27E-04	1.39E-05	0.00E+00	1.38E-04	7.93E-04
16	B06	100	Combination Long Haul Truck	10	0.00E+00	3.44E-06	2.36E-07	3.77E+00	1.30E-08	3.85E-03	2.58E-06	4.00E-03	1.24E-04	3.45E-05	2.26E-04	7.07E-05	7.05E-05	5.75E-04	1.26E-05	0.00E+00	1.55E-04	7.53E-04
16	B07	100	Passenger Car	1265	0.00E+00	1.39E-05	1.50E-06	5.69E+01	9.65E-05	3.82E-01	3.08E-05	2.70E-03	4.10E-03	8.27E-04	3.00E-03	1.93E-03	1.99E-03	1.59E-04	2.88E-04	7.92E-08	1.02E-03	4.22E-04
16	B07	100	Passenger Truck	2119	0.00E+00	2.99E-05	3.19E-06	1.34E+02	1.96E-04	7.68E-01	6.37E-05	7.69E-03	7.26E-03	1.54E-03	6.13E-03	3.97E-03	4.07E-03	8.54E-04	6.73E-04	1.84E-07	2.06E-03	1.24E-03
16	B07	100	Single Unit Short Haul Truck	510	0.00E+00	6.84E-05	3.39E-06	9.30E+01	5.97E-05	2.15E-01	7.41E-05	3.70E-02	3.51E-03	1.02E-03	8.46E-03	2.10E-03	2.13E-03	9.38E-03	3.74E-04	1.53E-07	6.33E-03	6.90E-03
16	B07	100	Single Unit Long Haul Truck	22	0.00E+00	2.97E-06	1.44E-07	3.92E+00	2.47E-06	8.80E-03	3.20E-06	1.56E-03	1.59E-04	4.42E-05	3.69E-04	8.86E-05	9.00E-05	3.93E-04	1.58E-05	6.25E-09	2.79E-04	2.91E-04
16	B07	100	Combination Short Haul Truck	373	0.00E+00	1.28E-04	9.36E-06	1.35E+02	3.65E-07	1.25E-01	9.26E-05	1.37E-01	4.35E-03	1.55E-03	7.19E-03	2.75E-03	2.70E-03	2.04E-02	4.52E-04	0.00E+00	4.49E-03	2.57E-02
16	B07	100	Combination Long Haul Truck	341	0.00E+00	1.12E-04	7.65E-06	1.22E+02	4.23E-07	1.25E-01	8.37E-05	1.30E-01	4.03E-03	1.12E-03	7.32E-03	2.29E-03	2.29E-03	1.87E-02	4.10E-04	0.00E+00	5.03E-03	2.44E-02
16	B08	100	Passenger Car	678	0.00E+00	7.43E-06	8.04E-07	3.05E+01	5.17E-05	2.04E-01	1.65E-05	1.45E-03	2.20E-03	4.43E-04	1.61E-03	1.04E-03	1.06E-03	8.50E-05	1.54E-04	4.25E-08	5.44E-04	2.26E-04
16	B08	100	Passenger Truck	1135	0.00E+00	1.60E-05	1.71E-06	7.20E+01	1.05E-04	4.11E-01	3.41E-05	4.12E-03	3.89E-03	8.26E-04	3.28E-03	2.13E-03	2.18E-03	4.58E-04	3.61E-04	9.88E-08	1.10E-03	6.66E-04
16	B08	100	Single Unit Short Haul Truck	308	0.00E+00	4.14E-05	2.05E-06	5.63E+01	3.61E-05	1.30E-01	4.48E-05	2.24E-02	2.13E-03	6.19E-04	5.12E-03	1.27E-03	1.29E-03	5.68E-03	2.26E-04	9.25E-08	3.83E-03	4.18E-03
16	B08	100	Single Unit Long Haul Truck	14	0.00E+00	1.80E-06	8.72E-08	2.37E+00	1.50E-06	5.32E-03	1.94E-06	9.42E-04	9.62E-05	2.67E-05	2.23E-04	5.36E-05	5.45E-05	2.38E-04	9.55E-06	3.78E-09	1.69E-04	1.76E-04
16	B08	100	Combination Short Haul Truck	235	0.00E+00	8.07E-05	5.89E-06	8.49E+01	2.30E-07	7.87E-02	5.82E-05	8.59E-02	2.73E-03	9.74E-04	4.52E-03	1.73E-03	1.70E-03	1.28E-02	2.84E-04	0.00E+00	2.82E-03	1.62E-02
16	B08	100	Combination Long Haul Truck	214	0.00E+00	7.02E-05	4.81E-06	7.69E+01	2.66E-07	7.86E-02	5.26E-05	8.16E-02	2.53E-03	7.04E-04	4.60E-03	1.44E-03	1.44E-03	1.17E-02	2.58E-04	0.00E+00	3.16E-03	1.54E-02
9	D01	60	Passenger Car	935	0.00E+00	1.40E-05	1.52E-06	4.70E+01	9.77E-05	3.65E-01	3.12E-05	1.91E-03	9.49E-03	1.46E-03	3.04E-03	1.96E-03	2.01E-03	1.95E-04	2.35E-04	6.48E-08	1.03E-03	2.98E-04
9	D01	60	Passenger Truck	1567	0.00E+00	3.10E-05	3.27E-06	1.07E+02	1.94E-04	6.50E-01	6.38E-05	6.22E-03	1.74E-02	2.70E-03	6.07E-03	3.95E-03	4.05E-03	8.29E-04	5.32E-04	1.47E-07	2.02E-03	1.03E-03
9	D01	60	Single Unit Short Haul Truck	34	0.00E+00	9.84E-06	4.92E-07	6.27E+00	8.11E-06	1.21E-02	1.05E-05	4.68E-03	7.97E-04	1.45E-04	1.20E-03	2.95E-04	3.00E-04	6.28E-04	2.53E-05	1.04E-08	8.96E-04	8.78E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	4.30E-07	2.14E-08	2.68E-01	3.52E-07	5.15E-04	4.59E-07	2.03E-04	3.58E-05	6.40E-06	5.24E-05	1.28E-05	1.31E-05	2.67E-05	1.08E-06	4.44E-10	3.93E-05	3.80E-05
9	D01	60	Combination Short Haul Truck	114	0.00E+00	6.68E-05	4.65E-06	4.34E+01	2.36E-07	5.84E-02	4.95E-05	7.22E-02	6.22E-03	1.23E-03	4.25E-03	1.39E-03	1.39E-03	6.55E-03	1.45E-04	0.00E+00	2.86E-03	1.36E-02
9	D01	60	Combination Long Haul Truck	103	0.00E+00	5.99E-05	3.90E-06	4.07E+01	2.71E-07	6.29E-02	4.62E-05	7.16E-02	6.25E-03	1.06E-03	4.38E-03	1.19E-03	1.21E-03	6.22E-03	1.36E-04	0.00E+00	3.17E-03	1.35E-02
9	D02	60	Passenger Car	753	0.00E+00	1.13E-05	1.22E-06	3.78E+01	7.86E-05	2.94E-01	2.51E-05	1.54E-03	7.64E-03	1.17E-03	2.44E-03	1.58E-03	1.62E-03	1.57E-04	1.89E-04	5.21E-08	8.27E-04	2.40E-04
9	D02	60	Passenger Truck	1260	0.00E+00	2.49E-05	2.63E-06	8.63E+01	1.56E-04	5.23E-01	5.13E-05	5.00E-03	1.40E-02	2.18E-03	4.88E-03	3.18E-03	3.26E-03	6.67E-04	4.28E-04	1.18E-07	1.62E-03	8.29E-04
9	D02	60	Single Unit Short Haul Truck	58	0.00E+00	1.71E-05	8.58E-07	1.09E+01	1.41E-05	2.12E-02	1.83E-05	8.17E-03	1.39E-03	2.52E-04	2.08E-03	5.15E-04	5.23E-04	1.09E-03	4.41E-05	1.82E-08	1.56E-03	1.53E-03
9	D02	60	Single Unit Long Haul Truck	3	0.00E+00	7.49E-07	3.73E-08	4.66E-01	6.14E-07	8.98E-04	8.00E-07	3.53E-04	6.24E-05	1.11E-05	9.13E-05	2.24E-05	2.28E-05	4.66E-05	1.89E-06	7.74E-10	6.86E-05	6.62E-05
9	D02	60	Combination Short Haul Truck	55	0.00E+00	3.23E-05	2.25E-06	2.10E+01	1.14E-07	2.83E-02	2.40E-05	3.50E-02	3.01E-03	5.95E-04	2.06E-03	6.71E-04	6.72E-04	3.17E-03	7.04E-05	0.00E+00	1.38E-03	6.59E-03
9	D02	60	Combination Long Haul Truck	50	0.00E+00	2.90E-05	1.89E-06	1.97E+01	1.31E-07	3.04E-02	2.24E-05	3.46E-02	3.02E-03	5.13E-04	2.12E-03	5.76E-04	5.83E-04	3.01E-03	6.60E-05	0.00E+00	1.54E-03	6.53E-03
9	D03	60	Passenger Car	1161	0.00E+00	1.74E-05	1.88E-06	5.83E+01	1.21E-04	4.53E-01	3.87E-05	2.37E-03	1.18E-02	1.81E-03	3.77E-03	2.43E-03	2.49E-03	2.42E-04	2.92E-04	8.04E-08	1.28E-03	3.70E-04
9	D03	60	Passenger Truck	1943	0.00E+00	3.84E-05	4.06E-06	1.33E+02	2.40E-04	8.07E-01	7.91E-05	7.71E-03	2.16E-02	3.35E-03	7.53E-03	4.90E-03	5.02E-03	1.03E-03	6.60E-04	1.82E-07	2.50E-03	1.28E-03
9	D03	60	Single Unit Short Haul Truck	63	0.00E+00	1.86E-05	9.28E-07	1.18E+01	1.53E-05	2.29E-02	1.98E-05	8.83E-03	1.50E-03	2.73E-04	2.26E-03	5.57E-04	5.66E-04	1.18E-03	4.78E-05	1.97E-08	1.69E-03	1.66E-03
9	D03	60	Single Unit Long Haul Truck	3	0.00E+00	8.11E-07	4.03E-08	5.05E-01	6.65E-07	9.72E-04	8.65E-07	3.82E-04	6.75E-05	1.21E-05	9.88E-05	2.42E-05	2.46E-05	5.04E-05	2.04E-06	8.37E-10	7.42E-05	7.16E-05
9	D03	60	Combination Short Haul Truck	47	0.00E+00	2.74E-05	1.91E-06	1.78E+01	9.70E-08	2.39E-02	2.03E-05	2.96E-02	2.55E-03	5.05E-04	1.74E-03	5.68E-04	5.69E-04	2.69E-03	5.96E-05	0.00E+00	1.17E-03	5.58E-03
9	D03	60	Combination Long Haul Truck	42	0.00E+00	2.46E-05	1.60E-06	1.67E+01	1.11E-07	2.58E-02	1.89E-05	2.94E-02	2.56E-03	4.35E-04	1.80E-03	4.88E-04	4.95E-04	2.55E-03	5.59E-05	0.00E+00	1.30E-03	5.53E-03
9	D04	60	Passenger Car	891	0.00E+00	1.34E-05	1.45E-06	4.47E+01	9.30E-05	3.47E-01	2.97E-05	1.82E-03	9.04E-03	1.39E-03	2.89E-03	1.86E-03	1.91E-03	1.86E-04	2.24E-04	6.17E-08	9.79E-04	2.84E-04
9	D04	60	Passenger Truck	1491	0.00E+00	2.95E-05	3.11E-06	1.02E+02	1.84E-04	6.19E-01	6.07E-05	5.92E-03	1.66E-02	2.57E-03	5.78E-03	3.76E-03	3.85E-03	7.90E-04	5.07E-04	1.40E-07	1.92E-03	9.81E-04
9	D04	60	Single Unit Short Haul Truck	73	0.00E+00	2.14E-05	1.07E-06	1.36E+01	1.76E-05	2.64E-02	2.28E-05	1.02E-02	1.73E-03	3.14E-04	2.60E-03	6.41E-04	6.52E-04	1.36E-03	5.50E-05	2.27E-08	1.95E-03	1.91E-03
9	D04	60	Single Unit Long Haul Truck	3	0.00E+00	9.33E-07	4.64E-08	5.81E-01	7.65E-07	1.12E-03	9.97E-07	4.40E-04	7.77E-05	1.39E-05	1.14E-04	2.79E-05	2.83E-05	5.80E-05	2.35E-06	9.64E-10	8.54E-05	8.24E-05
9	D04	60	Combination Short Haul Truck	76	0.00E+00	4.49E-05	3.13E-06	2.92E+01	1.59E-07	3.93E-02	3.33E-05	4.86E-02	4.18E-03	8.28E-04	2.86E-03	9.32E-04	9.34E-04	4.40E-03	9.78E-05	0.00E+00	1.92E-03	9.16E-03
9	D04	60	Combination Long Haul Truck	70	0.00E+00	4.03E-05	2.62E-06	2.74E+01	1.82E-07	4.23E-02	3.11E-05	4.82E-02	4.21E-03	7.13E-04	2.95E-03	8.01E-04	8.11E-04	4.19E-03	9.18E-05	0.00E+00	2.13E-03	9.08E-03
9	D05	60	Passenger Car	1111	0.00E+00	1.67E-05	1.80E-06	5.58E+01	1.16E-04	4.33E-01	3.71E-05	2.27E-03	1.13E-02	1.73E-03	3.61E-03	2.33E-03	2.39E-03	2.32E-04	2.79E-04	7.70E-08	1.22E-03	3.54E-04
9	D05	60	Passenger Truck	1860	0.00E+00	3.68E-05	3.88E-06	1.27E+02	2.30E-04	7.72E-01	7.58E-05	7.38E-03	2.07E-02	3.21E-03	7.20E-03	4.69E-03	4.81E-03	9.85E-04	6.32E-04	1.75E-07	2.40E-03	1.22E-03
9	D05	60	Single Unit Short Haul Truck	72	0.00E+00	2.11E-05	1.05E-06	1.34E+01	1.74E-05	2.60E-02	2.25E-05	1.00E-02	1.71E-03	3.10E-04	2.56E-03	6.33E-04	6.43E-04	1.34E-03	5.43E-05	2.24E-08	1.92E-03	1.88E-03
9	D05	60	Single Unit Long Haul Truck	3	0.00E+00	9.21E-07	4.58E-08	5.74E-01	7.55E-07	1.10E-03	9.83E-07	4.34E-04	7.67E-05	1.37E-05	1.12E-04	2.75E-05	2.80E-05	5.73E-05	2.32E-06	9.51E-10	8.43E-05	8.14E-05
9	D05	60	Combination Short Haul Truck	75	0.00E+00	4.40E-05	3.07E-06	2.86E+01	1.56E-07	3.85E-02	3.26E-05	4.76E-02	4.10E-03	8.11E-04	2.80E-03	9.13E-04	9.15E-04	4.31E-03	9.58E-05	0.00E+00	1.88E-03	8.97E-03
9	D05	60	Combination Long Haul Truck	68	0.00E+00	3.95E-05	2.57E-06	2.68E+01	1.79E-07	4.15E-02	3.04E-05	4.72E-02	4.12E-03	6.99E-04	2.89E-03	7.85E-04	7.95E-04	4.10E-03	8.99E-05	0.00E+00	2.09E-03	8.89E-03
9	D06	60	Passenger Car	943	0.00E+00	1.42E-05	1.53E-06	4.74E+01	9.85E-05	3.68E-01	3.15E-05	1.92E-03	9.57E-03	1.47E-03	3.06E-03	1.97E-03	2.03E-03	1.97E-04	2.37E-04	6.53E-08	1.04E-03	3.01E-04
9	D06	60	Passenger Truck	1579	0.00E+00	3.12E-05	3.30E-06	1.08E+02	1.95E-04	6.56E-01	6.43E-05	6.27E-03	1.76E-02	2.73E-03	6.11E-03	3.98E-03	4.08E-03	8.36E-04	5.36E-04	1.48E-07	2.03E-03	1.04E-03
9	D06	60	Single Unit Short Haul Truck	84	0.00E+00	2.47E-05	1.24E-06	1.58E+01	2.04E-05	3.05E-02	2.64E-05	1.18E-02	2.00E-03	3.63E-04	3.01E-03	7.42E-04	7.55E-04	1.58E-03	6.37E-05	2.62E-08	2.25E-03	2.21E-03
9	D06	60	Single Unit Long Haul Truck	4	0.00E+00	1.08E-06	5.38E-08	6.73E-01	8.86E-07	1.30E-03	1.15E-06	5.09E-04	9.00E-05	1.61E-05	1.32E-04	3.23E-05	3.28E-05	6.72E-05	2.72E-06	1.12E-09	9.89E-05	9.55E-05
9	D06	60	Combination Short Haul Truck	55	0.00E+00	3.23E-05	2.25E-06	2.10E+01	1.14E-07	2.83E-02	2.40E-05	3.50E-02	3.01E-03	5.95E-04	2.06E-03	6.71E-04	6.72E-04	3.17E-03	7.04E-05	0.00E+00	1.38E-03	6.59E-03
9	D06	60	Combination Long Haul Truck	50	0.00E+00	2.90E-05	1.89E-06	1.97E+01	1.31E-07	3.04E-02	2.24E-05	3.46E-02	3.02E-03	5.13E-04	2.12E-03	5.76E-04	5.83E-04	3.01E-03	6.60E-05	0.00E+00	1.54E-03	6.53E-03
11	D07	80	Passenger Car	1148	0.00E+00	1.40E-05	1.51E-06	5.35E+01	9.74E-05	3.74E-01	3.11E-05	2.36E-03	6.31E-03	1.10E-03	3.03E-03	1.95E-03	2.00E-03	1.80E-04	2.70E-04	7.55E-08	1.03E-03	3.69E-04
11	D07	80	Passenger Truck	1923	0.00E+00	3.00E-05	3.19E-06	1.24E+02	1.93E-04	6.89E-01	6.30E-05	7.01E-03	1.13E-02	2.01E-03	6.03E-03	3.91E-03	4.01E-03	8.64E-04	6.18E-04	1.68E-07	2.02E-03	1.14E-03
11	D07	80	Single Unit Short Haul Truck	89	0.00E+00	1.67E-05	8.29E-07	1.64E+01	1.34E-05	3.28E-02	1.78E-05	8.54E-03	1.05E-03	2.37E-04	2.03E-03	4.94E-04	5.03E-04	1.64E-03	6.60E-05	2.62E-08	1.53E-03	1.60E-03
11	D07	80	Single Unit Long Haul Truck	4	0.00E+00	7.26E-07	3.58E-08	6.93E-01	5.74E-07	1.37E-03	7.72E-07	3.65E-04	4.79E-05	1.05E-05	8.86E-05	2.13E-05	2.16E-05	6.92E-05	2.80E-06	1.09E-09	6.70E-05	6.83E-05
11	D07	80	Combination Short Haul Truck	81	0.00E+00	3.54E-05	2.53E-06	2.93E+01	1.12E-07	3.14E-02	2.59E-05	3.62E-02	2.14E-03	5.28E-04	2.11E-03	7.48E-04	7.42E-04	4.41E-03	9.80E-05	0.00E+00	1.37E-03	6.83E-03
11	D07	80	Combination Long Haul Truck	73	0.00E+00	3.17E-05	2.13E-06	2.71E+01	1.29E-07	3.25E-02	2.40E-05	3.52E-02	2.10E-03	4.22E-04	2.18E-03	6.43E-04	6.47E-04	4.13E-03	9.06E-05	0.00E+00	1.53E-03	6.62E-03
11	D08	80	Passenger Car	873	0.00E+00	1.06E-05	1.15E-06	4.07E+01	7.40E-05	2.84E-01	2.36E-05	1.79E-03	4.80E-03	8.34E-04	2.30E-03	1.48E-03	1.52E-03	1.37E-04	2.05E-04	5.74E-08	7.79E-04	2.80E-04
11	D08	80	Passenger Truck	1461	0.00E+00	2.28E-05	2.42E-06	9.41E+01	1.46E-04	5.23E-01	4.79E-05	5.32E-03	8.61E-03	1.53E-03	4.58E-03	2.97E-03	3.05E-03	6.56E-04	4.69E-04	1.28E-07	1.53E-03	8.70E-04
11	D08	80	Single Unit Short Haul Truck	77	0.00E+00	1.44E-05	7.13E-07	1.41E+01	1.16E-05	2.82E-02	1.53E-05	7.35E-03	9.02E-04	2.04E-04	1.75E-03	4.25E-04	4.32E-04	1.41E-03	5.68E-05	2.25E-08	1.32E-03	1.37E-03
11	D08	80	Single Unit Long Haul Truck	3	0.00E+00	6.24E-07	3.08E-08	5.96E-01	4.94E-07	1.18E-03	6.64E-07	3.14E-04	4.12E-05	9.01E-06	7.62E-05	1.83E-05	1.86E-05	5.95E-05	2.41E-06	9.39E-10	5.76E-05	5.88E-05
11	D08	80	Combination Short Haul Truck	44	0.00E+00	1.93E-05	1.38E-06	1.60E+01	6.09E-08	1.71E-02	1.41E-05	1.98E-02	1.17E-03	2.88E-04	1.15E-03	4.08E-04	4.05E-04	2.41E-03	5.35E-05	0.00E+00	7.46E-04	3.72E-03
11	D08	80	Combination Long Haul Truck	40	0.00E+00	1.73E-05	1.16E-06	1.48E+01	7.04E-08	1.77E-02	1.31E-05	1.92E-02	1.14E-03	2.30E-04	1.19E-03	3.51E-04	3.53E-04	2.26E-03	4.94E-05	0.00E+00	8.35E-04	3.61E-03
11	D09	80	Passenger Car	946	0.00E+00	1.15E-05	1.25E-06	4.41E+01	8.02E-05	3.08E-01	2.56E-05	1.94E-03	5.20E-03	9.04E-04	2.49E-03	1.61E-03	1.65E-03	1.48E-04	2.22E-04	6.22E-08	8.44E-04	3.04E-04
11	D09	80	Passenger Truck	1583	0.00E+00	2.47E-05	2.62E-06	1.02E+02	1.59E-04	5.67E-01	5.19E-05	5.77E-03	9.32E-03	1.66E-03	4.96E-03	3.22E-03	3.30E-03	7.11E-04	5.09E-04	1.38E-07	1.66E-03	9.42E-04
11	D09	80	Single Unit Short Haul Truck	61	0.00E+00	1.15E-05	5.71E-07	1.13E+01	9.24E-06	2.26E-02	1.22E-05	5.88E-03	7.22E-04	1.63E-04	1.40E-03	3.40E-04	3.46E-04	1.13E-03	4.54E-05	1.80E-08	1.05E-03	1.10E-03
11	D09	80	Single Unit Long Haul Truck	3	0.00E+00	5.00E-07	2.46E-08	4.77E-01	3.95E-07	9.40E-04	5.31E-07	2.51E-04	3.30E-05	7.20E-06	6.10E-05	1.46E-05	1.49E-05	4.76E-05	1.93E-06	7.51E-10	4.61E-05	4.70E-05
11	D09	80	Combination Short Haul Truck	48	0.00E+00	2.12E-05	1.51E-06	1.75E+01	6.67E-08	1.87E-02	1.55E-05	2.16E-02	1.28E-03	3.15E-04	1.26E-03	4.47E-04	4.43E-04	2.64E-03	5.85E-05	0.00E+00	8.17E-04	4.08E-03
11	D09	80	Combination Long Haul Truck	44	0.00E+00	1.89E-05	1.27E-06	1.62E+01	7.71E-08	1.94E-02	1.44E-05	2.10E-02	1.25E-03	2.52E-04	1.30E-03	3.84E-04	3.86E-04	2.47E-03	5.41E-05	0.00E+00	9.15E-04	3.96E-03
11	D10	80	Passenger Car	766	0.00E+00	9.34E-06	1.01E-06	3.57E+01	6.50E-05	2.50E-01	2.08E-05	1.57E-03	4.22E-03	7.33E-04	2.02E-03	1.30E-03	1.34E-03	1.20E-04	1.80E-04	5.04E-08	6.84E-04	2.46E-04
11	D10	80	Passenger Truck	1284	0.00E+00	2.01E-05	2.13E-06	8.26E+01	1.29E-04	4.60E-01	4.20E-05	4.68E-03	7.56E-03	1.34E-03	4.02E-03	2.61E-03	2.68E-03	5.77E-04	4.12E-04	1.12E-07	1.35E-03	7.64E-04
11	D10	80	Single Unit Short Haul Truck	58	0.00E+00	1.09E-05	5.44E-07	1.07E+01	8.81E-06	2.15E-02	1.17E-05	5.60E-03	6.88E-04	1.56E-04	1.33E-03	3.24E-04	3.30E-04	1.08E-03	4.33E-05	1.72E-08	1.00E-03	1.05E-03
11	D10	80	Single Unit Long Haul Truck	3	0.00E+00	4.76E-07	2.35E-08	4.55E-01	3.76E-07	8.96E-04	5.06E-07	2.40E-04	3.14E-05	6.87E-06	5.81E-05	1.40E-05	1.42E-05	4.54E-05	1.83E-06	7.16E-10	4.39E-05	4.48E-05

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D14	60	Single Unit Long Haul Truck	3	0.00E+00	7.98E-07	3.97E-08	4.97E-01	6.54E-07	9.57E-04	8.52E-07	3.76E-04	6.65E-05	1.19E-05	9.73E-05	2.38E-05	2.42E-05	4.96E-05	2.01E-06	8.24E-10	7.31E-05	7.05E-05
9	D14	60	Combination Short Haul Truck	44	0.00E+00	2.58E-05	1.80E-06	1.68E+01	9.15E-08	2.26E-02	1.92E-05	2.80E-02	2.41E-03	4.76E-04	1.64E-03	5.36E-04	5.37E-04	2.53E-03	5.63E-05	0.00E+00	1.11E-03	5.27E-03
9	D14	60	Combination Long Haul Truck	40	0.00E+00	2.32E-05	1.51E-06	1.58E+01	1.05E-07	2.43E-02	1.79E-05	2.77E-02	2.42E-03	4.10E-04	1.69E-03	4.61E-04	4.67E-04	2.41E-03	5.28E-05	0.00E+00	1.23E-03	5.22E-03
9	D15	60	Passenger Car	646	0.00E+00	9.70E-06	1.05E-06	3.25E+01	6.75E-05	2.52E-01	2.16E-05	1.32E-03	6.56E-03	1.01E-03	2.10E-03	1.35E-03	1.39E-03	1.35E-04	1.63E-04	4.48E-08	7.11E-04	2.06E-04
9	D15	60	Passenger Truck	1083	0.00E+00	2.14E-05	2.26E-06	7.41E+01	1.34E-04	4.50E-01	4.41E-05	4.30E-03	1.20E-02	1.87E-03	4.19E-03	2.73E-03	2.80E-03	5.73E-04	3.68E-04	1.02E-07	1.39E-03	7.12E-04
9	D15	60	Single Unit Short Haul Truck	76	0.00E+00	2.22E-05	1.11E-06	1.42E+01	1.83E-05	2.74E-02	2.37E-05	1.06E-02	1.80E-03	3.26E-04	2.70E-03	6.66E-04	6.77E-04	1.42E-03	5.72E-05	2.36E-08	2.02E-03	1.98E-03
9	D15	60	Single Unit Long Haul Truck	3	0.00E+00	9.70E-07	4.83E-08	6.04E-01	7.95E-07	1.16E-03	1.04E-06	4.57E-04	8.08E-05	1.44E-05	1.18E-04	2.90E-05	2.95E-05	6.03E-05	2.44E-06	1.00E-09	8.88E-05	8.57E-05
9	D15	60	Combination Short Haul Truck	44	0.00E+00	2.62E-05	1.82E-06	1.70E+01	9.26E-08	2.29E-02	1.94E-05	2.83E-02	2.43E-03	4.82E-04	1.66E-03	5.43E-04	5.44E-04	2.56E-03	5.70E-05	0.00E+00	1.12E-03	5.33E-03
9	D15	60	Combination Long Haul Truck	41	0.00E+00	2.35E-05	1.53E-06	1.60E+01	1.06E-07	2.46E-02	1.81E-05	2.80E-02	2.45E-03	4.15E-04	1.72E-03	4.66E-04	4.72E-04	2.44E-03	5.34E-05	0.00E+00	1.24E-03	5.28E-03
9	D16	60	Passenger Car	744	0.00E+00	1.12E-05	1.21E-06	3.74E+01	7.77E-05	2.90E-01	2.48E-05	1.52E-03	7.56E-03	1.16E-03	2.42E-03	1.56E-03	1.60E-03	1.56E-04	1.87E-04	5.16E-08	8.18E-04	2.37E-04
9	D16	60	Passenger Truck	1247	0.00E+00	2.46E-05	2.60E-06	8.53E+01	1.54E-04	5.18E-01	5.08E-05	4.95E-03	1.39E-02	2.15E-03	4.83E-03	3.15E-03	3.22E-03	6.60E-04	4.23E-04	1.17E-07	1.61E-03	8.20E-04
9	D16	60	Single Unit Short Haul Truck	84	0.00E+00	2.47E-05	1.24E-06	1.58E+01	2.04E-05	3.05E-02	2.64E-05	1.18E-02	2.00E-03	3.63E-04	3.01E-03	7.42E-04	7.55E-04	1.58E-03	6.37E-05	2.62E-08	2.25E-03	2.21E-03
9	D16	60	Single Unit Long Haul Truck	4	0.00E+00	1.08E-06	5.38E-08	6.73E-01	8.86E-07	1.30E-03	1.15E-06	5.09E-04	9.00E-05	1.61E-05	1.32E-04	3.23E-05	3.28E-05	6.72E-05	2.72E-06	1.12E-09	9.89E-05	9.55E-05
9	D16	60	Combination Short Haul Truck	56	0.00E+00	3.29E-05	2.29E-06	2.14E+01	1.17E-07	2.88E-02	2.44E-05	3.56E-02	3.07E-03	6.07E-04	2.09E-03	6.83E-04	6.84E-04	3.23E-03	7.17E-05	0.00E+00	1.41E-03	6.71E-03
9	D16	60	Combination Long Haul Truck	51	0.00E+00	2.96E-05	1.92E-06	2.01E+01	1.34E-07	3.10E-02	2.28E-05	3.53E-02	3.08E-03	5.23E-04	2.16E-03	5.87E-04	5.95E-04	3.07E-03	6.72E-05	0.00E+00	1.56E-03	6.65E-03
10	D17	70	Passenger Car	92	0.00E+00	1.20E-06	1.30E-07	4.40E+00	8.34E-06	3.13E-02	2.67E-06	1.84E-04	7.10E-04	1.14E-04	2.59E-04	1.67E-04	1.72E-04	1.64E-05	2.21E-05	6.02E-09	8.78E-05	2.87E-05
10	D17	70	Passenger Truck	153	0.00E+00	2.63E-06	2.78E-07	1.01E+01	1.66E-05	5.76E-02	5.46E-06	5.74E-04	1.29E-03	2.10E-04	5.21E-04	3.39E-04	3.47E-04	7.44E-05	5.05E-05	1.35E-08	1.74E-04	9.44E-05
10	D17	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.07E-04
10	D17	70	Combination Short Haul Truck	7	0.00E+00	3.81E-06	2.71E-07	2.76E+00	1.24E-08	3.28E-03	2.79E-06	3.99E-03	2.90E-04	6.33E-05	2.32E-04	8.01E-05	8.00E-05	4.16E-04	9.24E-06	0.00E+00	1.52E-04	7.52E-04
10	D17	70	Combination Long Haul Truck	7	0.00E+00	3.44E-06	2.30E-07	2.58E+00	1.43E-08	3.47E-03	2.61E-06	3.93E-03	2.88E-04	5.25E-05	2.40E-04	6.96E-05	7.03E-05	3.94E-04	8.63E-06	0.00E+00	1.70E-04	7.41E-04
10	D18	70	Passenger Car	377	0.00E+00	4.94E-06	5.34E-07	1.81E+01	3.44E-05	1.29E-01	1.10E-05	7.56E-04	2.92E-03	4.69E-04	1.07E-03	6.89E-04	7.07E-04	6.76E-05	9.10E-05	2.48E-08	3.62E-04	1.18E-04
10	D18	70	Passenger Truck	632	0.00E+00	1.08E-05	1.15E-06	4.17E+01	6.84E-05	2.37E-01	2.25E-05	2.36E-03	5.32E-03	8.65E-04	2.14E-03	1.39E-03	1.43E-03	3.06E-04	2.08E-04	5.56E-08	7.15E-04	3.89E-04
10	D18	70	Single Unit Short Haul Truck	35	0.00E+00	8.33E-06	4.17E-07	6.52E+00	6.81E-06	1.30E-02	8.87E-06	4.10E-03	5.86E-04	1.17E-04	1.01E-03	2.49E-04	2.53E-04	6.54E-04	2.63E-05	1.06E-08	7.57E-04	7.67E-04
10	D18	70	Single Unit Long Haul Truck	2	0.00E+00	3.63E-07	1.80E-08	2.77E-01	2.94E-07	5.48E-04	3.87E-07	1.76E-04	2.68E-05	5.22E-06	4.42E-05	1.08E-05	1.10E-05	2.76E-05	1.12E-06	4.48E-10	3.32E-05	3.30E-05
10	D18	70	Combination Short Haul Truck	33	0.00E+00	1.74E-05	1.24E-06	1.26E+01	5.66E-08	1.50E-02	1.28E-05	1.82E-02	1.32E-03	2.89E-04	1.06E-03	3.66E-04	3.66E-04	1.90E-03	4.23E-05	0.00E+00	6.95E-04	3.44E-03
10	D18	70	Combination Long Haul Truck	31	0.00E+00	1.57E-05	1.05E-06	1.18E+01	6.52E-08	1.59E-02	1.20E-05	1.80E-02	1.32E-03	2.40E-04	1.10E-03	3.18E-04	3.22E-04	1.80E-03	3.94E-05	0.00E+00	7.75E-04	3.39E-03
11	D19	80	Passenger Car	1342	0.00E+00	1.64E-05	1.77E-06	6.26E+01	1.14E-04	4.37E-01	3.64E-05	2.76E-03	7.38E-03	1.28E-03	3.54E-03	2.28E-03	2.34E-03	2.10E-04	3.15E-04	8.83E-08	1.20E-03	4.31E-04
11	D19	80	Passenger Truck	2247	0.00E+00	3.51E-05	3.72E-06	1.45E+02	2.25E-04	8.05E-01	7.36E-05	8.19E-03	1.32E-02	2.35E-03	7.04E-03	4.57E-03	4.69E-03	1.01E-03	7.22E-04	1.97E-07	2.36E-03	1.34E-03
11	D19	80	Single Unit Short Haul Truck	103	0.00E+00	1.94E-05	9.63E-07	1.90E+01	1.56E-05	3.81E-02	2.06E-05	9.92E-03	1.22E-03	2.76E-04	2.36E-03	5.74E-04	5.84E-04	1.91E-03	7.66E-05	3.04E-08	1.78E-03	1.86E-03
11	D19	80	Single Unit Long Haul Truck	5	0.00E+00	8.43E-07	4.15E-08	8.05E-01	6.66E-07	1.59E-03	8.97E-07	4.24E-04	5.56E-05	1.22E-05	1.03E-04	2.47E-05	2.51E-05	8.03E-05	3.25E-06	1.27E-09	7.78E-05	7.94E-05
11	D19	80	Combination Short Haul Truck	52	0.00E+00	2.28E-05	1.63E-06	1.88E+01	7.18E-08	2.02E-02	1.66E-05	2.33E-02	1.38E-03	3.39E-04	1.36E-03	4.81E-04	4.77E-04	2.84E-03	6.30E-05	0.00E+00	8.79E-04	4.39E-03
11	D19	80	Combination Long Haul Truck	47	0.00E+00	2.04E-05	1.37E-06	1.74E+01	8.30E-08	2.09E-02	1.54E-05	2.26E-02	1.35E-03	2.71E-04	1.40E-03	4.13E-04	4.16E-04	2.66E-03	5.83E-05	0.00E+00	9.84E-04	4.26E-03
11	D20	80	Passenger Car	778	0.00E+00	9.48E-06	1.03E-06	3.63E+01	6.60E-05	2.53E-01	2.11E-05	1.60E-03	4.28E-03	7.44E-04	2.05E-03	1.32E-03	1.36E-03	1.22E-04	1.83E-04	5.12E-08	6.94E-04	2.50E-04
11	D20	80	Passenger Truck	1302	0.00E+00	2.04E-05	2.16E-06	8.38E+01	1.30E-04	4.66E-01	4.27E-05	4.74E-03	7.67E-03	1.36E-03	4.08E-03	2.65E-03	2.72E-03	5.85E-04	4.18E-04	1.14E-07	1.37E-03	7.75E-04
11	D20	80	Single Unit Short Haul Truck	167	0.00E+00	3.12E-05	1.55E-06	3.06E+01	2.51E-05	6.14E-02	3.32E-05	1.60E-02	1.96E-03	4.44E-04	3.80E-03	9.25E-04	9.40E-04	3.07E-03	1.23E-04	4.90E-08	2.86E-03	2.99E-03
11	D20	80	Single Unit Long Haul Truck	7	0.00E+00	1.36E-06	6.69E-08	1.30E+00	1.07E-06	2.56E-03	1.44E-06	6.83E-04	8.96E-05	1.96E-05	1.66E-04	3.98E-05	4.05E-05	1.29E-04	5.23E-06	2.04E-09	1.25E-04	1.28E-04
11	D20	80	Combination Short Haul Truck	52	0.00E+00	2.28E-05	1.63E-06	1.88E+01	7.18E-08	2.02E-02	1.66E-05	2.33E-02	1.38E-03	3.39E-04	1.36E-03	4.81E-04	4.77E-04	2.84E-03	6.30E-05	0.00E+00	8.79E-04	4.39E-03
11	D20	80	Combination Long Haul Truck	47	0.00E+00	2.04E-05	1.37E-06	1.74E+01	8.30E-08	2.09E-02	1.54E-05	2.26E-02	1.35E-03	2.71E-04	1.40E-03	4.13E-04	4.16E-04	2.66E-03	5.83E-05	0.00E+00	9.84E-04	4.26E-03
11	D21	80	Passenger Car	1123	0.00E+00	1.37E-05	1.48E-06	5.24E+01	9.52E-05	3.66E-01	3.04E-05	2.31E-03	6.18E-03	1.07E-03	2.96E-03	1.91E-03	1.96E-03	1.76E-04	2.64E-04	7.39E-08	1.00E-03	3.60E-04
11	D21	80	Passenger Truck	1880	0.00E+00	2.94E-05	3.12E-06	1.21E+02	1.88E-04	6.73E-01	6.16E-05	6.85E-03	1.11E-02	1.97E-03	5.89E-03	3.83E-03	3.92E-03	8.45E-04	6.04E-04	1.64E-07	1.97E-03	1.12E-03
11	D21	80	Single Unit Short Haul Truck	42	0.00E+00	7.90E-06	3.92E-07	7.75E+00	6.36E-06	1.55E-02	8.41E-06	4.04E-03	4.96E-04	1.12E-04	9.61E-04	2.34E-04	2.38E-04	7.77E-04	3.12E-05	1.24E-08	7.23E-04	7.56E-04
11	D21	80	Single Unit Long Haul Truck	2	0.00E+00	3.43E-07	1.69E-08	3.28E-01	2.71E-07	6.46E-04	3.65E-07	1.73E-04	2.27E-05	4.95E-06	4.19E-05	1.01E-05	1.02E-05	3.27E-05	1.32E-06	5.16E-10	3.17E-05	3.23E-05
11	D21	80	Combination Short Haul Truck	16	0.00E+00	6.90E-06	4.93E-07	5.70E+00	2.18E-08	6.11E-03	5.04E-06	7.06E-03	4.17E-04	1.03E-04	4.11E-04	1.46E-04	1.44E-04	8.60E-04	1.91E-05	0.00E+00	2.66E-04	1.33E-03
11	D21	80	Combination Long Haul Truck	14	0.00E+00	6.18E-06	4.15E-07	5.27E+00	2.51E-08	6.33E-03	4.68E-06	6.85E-03	4.08E-04	8.22E-05	4.24E-04	1.25E-04	1.26E-04	8.05E-04	1.77E-05	0.00E+00	2.98E-04	1.29E-03
11	D22	80	Passenger Car	728	0.00E+00	8.87E-06	9.60E-07	3.39E+01	6.18E-05	2.37E-01	1.97E-05	1.50E-03	4.00E-03	6.96E-04	1.92E-03	1.24E-03	1.27E-03	1.14E-04	1.71E-04	4.79E-08	6.50E-04	2.34E-04
11	D22	80	Passenger Truck	1219	0.00E+00	1.90E-05	2.02E-06	7.85E+01	1.22E-04	4.37E-01	3.99E-05	4.44E-03	7.18E-03	1.27E-03	3.82E-03	2.48E-03	2.54E-03	5.48E-04	3.92E-04	1.07E-07	1.28E-03	7.26E-04
11	D22	80	Single Unit Short Haul Truck	211	0.00E+00	3.95E-05	1.96E-06	3.87E+01	3.18E-05	7.76E-02	4.20E-05	2.02E-02	2.48E-03	5.61E-04	4.81E-03	1.17E-03	1.19E-03	3.89E-03	1.56E-04	6.19E-08	3.62E-03	3.78E-03
11	D22	80	Single Unit Long Haul Truck	9	0.00E+00	1.72E-06	8.46E-08	1.64E+00	1.36E-06	3.23E-03	1.83E-06	8.64E-04	1.13E-04	2.48E-05	2.10E-04	5.03E-05	5.12E-05	1.64E-04	6.62E-06	2.58E-09	1.58E-04	1.62E-04
11	D22	80	Combination Short Haul Truck	134	0.00E+00	5.91E-05	4.23E-06	4.89E+01	1.86E-07	5.23E-02	4.32E-05	6.05E-02	3.58E-03	8.81E-04	3.52E-03	1.25E-03	1.24E-03	7.37E-03	1.64E-04	0.00E+00	2.28E-03	1.14E-02
11	D22	80	Combination Long Haul Truck	123	0.00E+00	5.29E-05	3.56E-06	4.52E+01	2.15E-07	5.42E-02	4.01E-05	5.87E-02	3.50E-03	7.04E-04	3.63E-03	1.07E-03	1.08E-03	6.90E-03	1.51E-04	0.00E+00	2.55E-03	1.11E-02
9	D23	60	Passenger Car	1109	0.00E+00	1.66E-05	1.80E-06	5.57E+01	1.16E-04	4.33E-01	3.70E-05	2.26E-03	1.13E-02	1.73E-03	3.60E-03	2.32E-03	2.38E-03	2.32E-04	2.79E-04	7.69E-08	1.22E-03	3.54E-04
9	D23	60	Passenger Truck	1858	0.00E+00	3.67E-05	3.88E-06	1.27E+02	2.30E-04	7.71E-01	7.57E-05	7.37E-03	2.07E-02	3.21E-03	7.19E-03	4.69E-03	4.80E-03	9.84E-04	6.31E-04	1.74E-07	2.39E-03	1.22E-03
9	D23	60	Single Unit Short Haul Truck	88	0.00E+00	2.59E-05	1.29E-06	1.65E+01	2.13E-05	3.19E-02	2.76E-05	1.23E-02	2.10E-03	3.80E-04	3.14E-03	7.76E-04	7.89E-04	1.65E-03	6.66E-05	2.74E-08	2.36E-03	2.31E-03
9	D23	60	Single Unit Long Haul Truck	4	0.00E+00	1.13E-06	5.62E-08	7.03E-01	9.26E-07	1.35E-03	1.21E-06	5.33E-04	9.41E-05	1.68E-05	1.38E-04	3.38E-05	3.43E-05	7.03E-05	2.84E-06	1.17E-09	1.03E-04	9.98E-05
9	D23	60	Combination Short Haul Truck	35	0.00E+00	2.03E-05	1.42E-06	1.32E+01	7.19E-08	1.78E-02	1.51E-05	2.20E-02	1.89E-03	3.74E-04	1.29E-03	4.21E-04	4.22E-04	1.99E-03	4.42E-05	0.00E+00	8.70E-04	4.14E-03
9	D23	60	Combination Long Haul Truck	31	0.00E+00	1.82E-05	1.19E-06	1.24E+01	8.25E-08	1.91E-02	1.41E-05	2.18E-02	1.90E-03	3.22E-04	1.33E-03	3.62E-04	3.67E-04	1.89E-03	4.15E-05	0.00E+00	9.65E-04	4.10E-03
9	D24	60	Passenger Car	586	0.00E+00	8.79E-06	9.51E-07	2.94E+01	6.12E-05	2.29E-01	1.95E-05	1.19E-03	5.95E-03	9.13E-04	1.90E-03	1.23E-03	1.26E-03	1.22E-04	1.47E-04	4.06E-08	6.44E-04	1.87E-04
9	D24	60	Passenger Truck	981	0.00E+00	1.94E-05	2.05E-06	6.71E+01	1.21E-04	4.07E-01	4.00E-05	3.89E-03	1.09E-02	1.69E-03	3.80E-03	2.48E-03	2.54E-03	5.19E-04	3.33E-04	9.21E-08	1.26E-03	6.45E-04
9	D24	60	Single Unit Short Haul Truck	87	0.00E+00	2.56E-05	1.28E-06	1.63E+01	2.11E-05	3.16E-02	2.73E-05	1.22E-02	2.07E-03	3.76E-04	3.11E-03	7.68E-04	7.80E-04	1.63E-03	6.59E-05	2.71E-08	2.33E-03	2.28E-03
9	D24	60	Single Unit Long Haul Truck	4	0.00E+00	1.12E-06	5.56E-08	6.96E-01	9.16E-07	1.34E-03	1.19E-06	5.27E-04	9.31E-05	1.66E-05	1.36E-04	3.34E-05	3.39E-05	6.95E-05	2.81E-06	1.15E-09	1.02E-04	9.87E-05
9	D24	60	Combination Short Haul Truck	41	0.00E+00	2.43E-05	1.69E-06	1.58E+01	8.61E-08	2.13E-02	1.80E-05	2.63E-02	2.26E-03	4.48E-04	1.55E-03	5.05E-04	5.05E-04	2.38E-03	5.29E-05	0.00E+00	1.04E-03	4.96E-03
9	D24	60	Combination Long Haul Truck	38	0.00E+00	2.18E-05	1.42E-06	1.48E+01	9.87E-08	2.29E-02	1.68E-05	2.61E-02	2.28E-03	3.86E-04	1.59E-03	4.33E-04	4.39E-04	2.27E-03	4.96E-05	0.00E+00	1.16E-03	4.91E-03
9	D25	60	Passenger Car	1161	0.00E+00	1.74E-05	1.89E-06	5.83E+01	1.21E-04	4.53E-01	3.87E-05	2.37E-03	1.18E-02	1.81E-03	3.77E-03	2.43E-03	2.49E-03	2.43E-04	2.92E-04	8.05E-08	1.28E-03	3.70E-04
9	D25	60	Passenger Truck	1945	0.00E+00	3.84E-05	4.06E-06	1.33E+02	2.40E-04	8.08E-01	7.92E-05	7.72E-03	2.16E-02	3.36E-03	7.53E-03	4.91E-03	5.03E-03	1.03E-03	6.61E-04	1.83E-07	2.50E-03	1.28E-03
9	D25	60	Single Unit Short Haul Truck	67	0.00E+00	1.97E-05	9.85E-07	1.25E+01	1.62E-05	2.43E-02	2.10E-05	9.37E-03	1.59E-03	2.89E-04	2.39E-03	5.90E-04	6.00E-04	1.26E-03	5.07E-05	2.09E-08	1.79E-03	1.76E-03
9	D25	60	Single Unit Long Haul Truck	3	0.00E+00	8.60E-07	4.28E-08	5.35E-01	7.05E-07	1.03E-03	9.18E-07	4.05E-04	7.16E-05	1.28E-05	1.05E-04	2.57E-05	2.61E-05	5.35E-05	2.16E-06	8.88E-10	7.87E-05	7.59E-05
9	D25	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.33E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.51E-03
9	D25	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.32E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.49E-03
9	D26	60	Passenger Car	918	0.00E+00	1.38E-05	1.49E-06	4.61E+01	9.58E-05	3.58E-01	3.06E-05	1.87E-03	9.31E-03	1.43E-03	2.98E-03	1.92E-03	1.97E-03	1.92E-04	2.31E-04	6.36E-08	1.01E-03	2.92E-04
9	D26	60	Passenger Truck	1536	0.00E+00	3.04E-05	3.21E-06	1.05E+02	1.90E-04	6.38E-01	6.26E-05	6.10E-03	1.71E-02	2.65E-03	5.95E-03	3.88E-03	3.97E-03	8.13E-04	5.22E-04	1.44E-07	1.98E-03	1.01E-03
9	D26	60	Single Unit Short Haul Truck	80	0.00E+00	2.36E-05	1.18E-06	1.50E+01	1.95E-05	2.91E-02	2.52E-05	1.12E-02	1.91E-03	3.47E-04	2.87E-03	7.09E-04	7.20E-04	1.51E-03	6.08E-05	2.50E-08	2.15E-03	2.11E-03
9	D26	60	Single Unit Long Haul Truck	4	0.00E+00	1.03E-06	5.13E-08	6.42E-01	8.46E-07	1.24E-03	1.10E-06	4.86E-04	8.59E-05	1.54E-05	1.26E-04	3.08E-05	3.13E-05	6.41E-05	2.60E-06	1.07E-09	9.44E-05	9.11E-05
9	D26	60	Combination Short Haul Truck	32	0.00E+00	1.91E-05	1.33E-06	1.24E+01	6.76E-08	1.67E-02	1.42E-05	2.06E-02	1.78E-03	3.52E-04	1.21E-03	3.96E-04	3.97E-04	1.87E-03	4.15E-05	0.00E+00	8.17E-04	3.89E-03
9	D26	60	Combination Long Haul Truck	30	0.00E+00	1.71E-05	1.11E-06	1.16E+01	7.75E-08	1.80E-02	1.32E-05	2.05E-02	1.79E-03	3.03E-04	1.25E-03	3.40E-04	3.45E-04	1.78E-03	3.90E-05	0.00E+00	9.07E-04	3.85E-03
11	D27	80	Passenger Car	226	0.00E+00	2.76E-06	2.98E-07	1.05E+01	1.92E-05	7.37E-02	6.13E-06	4.65E-04	1.24E-03	2.16E-04	5.97E-04	3.85E-04	3.95E-04	3.54E-05	5.31E-05	1.49E-08	2.02E-04	7.26E-05
11	D27	80	Passenger Truck	379	0.00E+00	5.92E-06	6.28E-07	2.44E+01	3.79E-05	1.36E-01	1.24E-05	1.38E-03	2.23E-03	3.96E-04	1.19E-03	7.71E-04	7.90E-04	1.70E-04	1.22E-04	3.31E-08	3.97E-04	2.25E-04
11	D27	80	Single Unit Short Haul Truck	22	0.00E+00	4.13E-06	2.05E-07	4.05E+00	3.32E-06	8.11E-03	4.39E-06	2.11E-03	2.59E-04	5.87E-05	5.02E-04	1.22E-04	1.24E-04	4.06E-04	1.63E-05	6.48E-09	3.78E-04	3.95E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.80E-07	8.85E-09	1.71E-01	1.42E-07	3.38E-04	1.91E-07	9.03E-05	1.18E-05	2.59E-06	2.19E-05	5.26E-06	5.35E-06	1.71E-05	6.92E-07	2.70E-10	1.66E-05	1.69E-05
11	D27	80	Combination Short Haul Truck	15	0.00E+00	6.44E-06	4.60E-07	5.32E+00	2.03E-08	5.70E-03	4.70E-06	6.59E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.03E-04	1.78E-05	0.00E+00	2.49E-04	1.24E-03
11	D27	80	Combination Long Haul Truck	13	0.00E+00	5.77E-06	3.88E-07	4.92E+00	2.35E-08	5.91E-03	4.37E-06	6.39E-03	3.81E-04	7.67E-05	3.96E-04	1.17E-04	1.18E-04	7.52E-04	1.65E-05	0.00E+00	2.78E-04	1.20E-03
11	D28	80	Passenger Car	734	0.00E+00	8.94E-06	9.67E-07	3.42E+01	6.22E-05	2.39E-01	1.99E-05	1.51E-03	4.03E-03	7.01E-04	1.93E-03	1.25E-03	1.28E-03	1.15E-04	1.72E-04	4.83E-08	6.55E-04	2.35E-04
11	D28	80	Passenger Truck	1228	0.00E+00	1.92E-05	2.04E-06	7.91E+01	1.23E-04	4.40E-01	4.02E-05	4.48E-03	7.23E-03	1.28E-03	3.85E-03	2.50E-03	2.56E-03	5.52E-04	3.95E-04	1.07E-07	1.29E-03	7.31E-04
11	D28

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D32	80	Passenger Truck	696	0.00E+00	1.09E-05	1.15E-06	4.48E+01	6.97E-05	2.49E-01	2.28E-05	2.54E-03	4.10E-03	7.28E-04	2.18E-03	1.42E-03	1.45E-03	3.13E-04	2.24E-04	6.09E-08	7.30E-04	4.14E-04
11	D32	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.13E-03	5.07E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.19E-05	1.27E-08	7.40E-04	7.73E-04
11	D32	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.61E-04	3.74E-07	1.77E-04	2.32E-05	5.07E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.31E-05
11	D32	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	1.00E-06	1.16E+01	4.42E-08	1.24E-02	1.02E-05	1.44E-02	8.49E-04	2.09E-04	8.35E-04	2.96E-04	2.94E-04	1.75E-03	3.88E-05	0.00E+00	5.41E-04	2.70E-03
11	D32	80	Combination Long Haul Truck	29	0.00E+00	1.26E-05	8.44E-07	1.07E+01	5.11E-08	1.29E-02	9.52E-06	1.39E-02	8.30E-04	1.67E-04	8.63E-04	2.55E-04	2.56E-04	1.64E-03	3.59E-05	0.00E+00	6.06E-04	2.62E-03
9	D33	60	Passenger Car	274	0.00E+00	4.12E-06	4.46E-07	1.38E+01	2.87E-05	1.07E-01	9.16E-06	5.60E-04	2.79E-03	4.28E-04	8.91E-04	5.75E-04	5.90E-04	5.73E-05	6.90E-05	1.90E-08	3.02E-04	8.75E-05
9	D33	60	Passenger Truck	460	0.00E+00	9.08E-06	9.59E-07	3.15E+01	5.68E-05	1.91E-01	1.87E-05	1.82E-03	5.11E-03	7.93E-04	1.78E-03	1.16E-03	1.19E-03	2.43E-04	1.56E-04	4.31E-08	5.92E-04	3.02E-04
9	D33	60	Single Unit Short Haul Truck	40	0.00E+00	1.18E-05	5.91E-07	7.52E+00	9.74E-06	1.46E-02	1.26E-05	5.62E-03	9.57E-04	1.73E-04	1.44E-03	3.54E-04	3.60E-04	7.53E-04	3.04E-05	1.25E-08	1.08E-03	1.05E-03
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	5.16E-07	2.57E-08	3.21E-01	4.23E-07	6.18E-04	5.51E-07	2.43E-04	4.30E-05	7.68E-06	6.29E-05	1.54E-05	1.57E-05	3.21E-05	1.30E-06	5.33E-10	4.72E-05	4.56E-05
9	D33	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.63E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.07E-03
9	D33	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.05E-03
9	D34	60	Passenger Car	230	0.00E+00	3.46E-06	3.74E-07	1.16E+01	2.41E-05	8.98E-02	7.68E-06	4.70E-04	2.34E-03	3.59E-04	7.48E-04	4.82E-04	4.95E-04	4.81E-05	5.79E-05	1.60E-08	2.53E-04	7.34E-05
9	D34	60	Passenger Truck	386	0.00E+00	7.62E-06	8.05E-07	2.64E+01	4.76E-05	1.60E-01	1.57E-05	1.53E-03	4.29E-03	6.66E-04	1.49E-03	9.73E-04	9.97E-04	2.04E-04	1.31E-04	3.62E-08	4.97E-04	2.54E-04
9	D34	60	Single Unit Short Haul Truck	9	0.00E+00	2.53E-06	1.27E-07	1.61E+00	2.09E-06	3.12E-03	2.70E-06	1.20E-03	2.05E-04	3.72E-05	3.08E-04	7.59E-05	7.72E-05	1.61E-04	6.51E-06	2.68E-09	2.30E-04	2.26E-04
9	D34	60	Combination Short Haul Truck	4	0.00E+00	2.15E-06	1.50E-07	1.40E+00	7.63E-09	1.88E-03	1.60E-06	2.33E-03	2.01E-04	3.97E-05	1.37E-04	4.47E-05	4.48E-05	2.11E-04	4.69E-06	0.00E+00	9.23E-05	4.39E-04
9	D34	60	Combination Long Haul Truck	3	0.00E+00	1.93E-06	1.26E-07	1.31E+00	8.75E-09	2.03E-03	1.49E-06	2.31E-03	2.02E-04	3.42E-05	1.41E-04	3.84E-05	3.89E-05	2.01E-04	4.40E-06	0.00E+00	1.02E-04	4.35E-04
9	D35	60	Passenger Car	361	0.00E+00	5.41E-06	5.86E-07	1.81E+01	3.77E-05	1.41E-01	1.20E-05	7.36E-04	3.66E-03	5.62E-04	1.17E-03	7.55E-04	7.75E-04	7.54E-05	9.07E-05	2.50E-08	3.97E-04	1.15E-04
9	D35	60	Passenger Truck	604	0.00E+00	1.19E-05	1.26E-06	4.13E+01	7.46E-05	2.51E-01	2.46E-05	2.40E-03	6.72E-03	1.04E-03	2.34E-03	1.52E-03	1.56E-03	3.20E-04	2.05E-04	5.67E-08	7.78E-04	3.97E-04
9	D35	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.55E-07	1.97E+00	2.55E-06	3.81E-03	3.30E-06	1.47E-03	2.51E-04	4.54E-05	3.76E-04	9.28E-05	9.43E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.76E-04
9	D35	60	Combination Short Haul Truck	6	0.00E+00	3.69E-06	2.57E-07	2.40E+00	1.31E-08	3.23E-03	2.74E-06	4.00E-03	3.44E-04	6.80E-05	2.35E-04	7.66E-05	7.68E-05	3.62E-04	8.04E-06	0.00E+00	1.58E-04	7.53E-04
9	D35	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.25E+00	1.50E-08	3.48E-03	2.56E-06	3.96E-03	3.46E-04	5.86E-05	2.42E-04	6.58E-05	6.67E-05	3.44E-04	7.54E-06	0.00E+00	1.75E-04	7.46E-04
9	D36	60	Passenger Car	112	0.00E+00	1.68E-06	1.81E-07	5.61E+00	1.17E-05	4.36E-02	3.73E-06	2.28E-04	1.13E-03	1.74E-04	3.63E-04	2.34E-04	2.40E-04	2.34E-05	2.81E-05	7.75E-09	1.23E-04	3.56E-05
9	D36	60	Passenger Truck	187	0.00E+00	3.70E-06	3.91E-07	1.28E+01	2.31E-05	7.77E-02	7.62E-06	7.43E-04	2.08E-03	3.23E-04	7.25E-04	4.72E-04	4.84E-04	9.91E-05	6.36E-05	1.76E-08	2.41E-04	1.23E-04
9	D36	60	Single Unit Short Haul Truck	22	0.00E+00	6.47E-06	3.23E-07	4.12E+00	5.33E-06	7.98E-03	6.90E-06	3.08E-03	5.24E-04	9.50E-05	7.86E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.86E-09	5.89E-04	5.77E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.76E-01	2.32E-07	3.39E-04	3.02E-07	1.33E-04	2.35E-05	4.20E-06	3.44E-05	8.44E-06	8.58E-06	1.76E-05	7.11E-07	2.92E-10	2.59E-05	2.50E-05
9	D36	60	Combination Short Haul Truck	17	0.00E+00	1.02E-05	7.08E-07	6.60E+00	3.60E-08	8.88E-03	7.53E-06	1.10E-02	9.45E-04	1.87E-04	6.46E-04	2.11E-04	2.11E-04	9.96E-04	2.21E-05	0.00E+00	4.35E-04	2.07E-03
9	D36	60	Combination Long Haul Truck	16	0.00E+00	9.11E-06	5.93E-07	6.19E+00	4.12E-08	9.57E-03	7.03E-06	1.09E-02	9.50E-04	1.61E-04	6.66E-04	1.81E-04	1.83E-04	9.46E-04	2.07E-05	0.00E+00	4.83E-04	2.05E-03
9	D37	60	Passenger Car	187	0.00E+00	2.80E-06	3.03E-07	9.37E+00	1.95E-05	7.28E-02	6.22E-06	3.81E-04	1.89E-03	2.91E-04	6.06E-04	3.91E-04	4.01E-04	3.90E-05	4.69E-05	1.29E-08	2.05E-04	5.95E-05
9	D37	60	Passenger Truck	312	0.00E+00	6.17E-06	6.52E-07	2.14E+01	3.86E-05	1.30E-01	1.27E-05	1.24E-03	3.47E-03	5.39E-04	1.21E-03	7.88E-04	8.07E-04	1.65E-04	1.06E-04	2.93E-08	4.02E-04	2.06E-04
9	D37	60	Single Unit Short Haul Truck	6	0.00E+00	1.69E-06	8.44E-08	1.07E+00	1.39E-06	2.08E-03	1.80E-06	8.03E-04	1.37E-04	2.48E-05	2.05E-04	5.06E-05	5.14E-05	1.08E-04	4.34E-06	1.79E-09	1.54E-04	1.50E-04
9	D37	60	Combination Short Haul Truck	7	0.00E+00	4.31E-06	3.00E-07	2.80E+00	1.53E-08	3.77E-03	3.20E-06	4.66E-03	4.01E-04	7.94E-05	2.74E-04	8.94E-05	8.96E-05	4.22E-04	9.38E-06	0.00E+00	1.85E-04	8.78E-04
9	D37	60	Combination Long Haul Truck	7	0.00E+00	3.87E-06	2.52E-07	2.63E+00	1.75E-08	4.06E-03	2.98E-06	4.62E-03	4.03E-04	6.84E-05	2.82E-04	7.68E-05	7.78E-05	4.01E-04	8.80E-06	0.00E+00	2.05E-04	8.70E-04
9	D38	60	Passenger Car	434	0.00E+00	6.52E-06	7.05E-07	2.18E+01	4.54E-05	1.69E-01	1.45E-05	8.86E-04	4.41E-03	6.77E-04	1.41E-03	9.10E-04	9.33E-04	9.08E-05	1.09E-04	3.01E-08	4.78E-04	1.38E-04
9	D38	60	Passenger Truck	728	0.00E+00	1.44E-05	1.52E-06	4.98E+01	8.99E-05	3.02E-01	2.96E-05	2.89E-03	8.09E-03	1.26E-03	2.82E-03	1.84E-03	1.88E-03	3.85E-04	2.47E-04	6.83E-08	9.37E-04	4.79E-04
9	D38	60	Single Unit Short Haul Truck	17	0.00E+00	5.06E-06	2.53E-07	3.22E+00	4.17E-06	6.24E-03	5.40E-06	2.41E-03	4.10E-04	7.43E-05	6.15E-04	1.52E-04	1.54E-04	3.23E-04	1.30E-05	5.37E-09	4.61E-04	4.51E-04
9	D38	60	Single Unit Long Haul Truck	1	0.00E+00	2.21E-07	1.10E-08	1.38E-01	1.81E-07	2.65E-04	2.36E-07	1.04E-04	1.84E-05	3.29E-06	2.69E-05	6.60E-06	6.71E-06	1.37E-05	5.56E-07	2.28E-10	2.02E-05	1.95E-05
9	D38	60	Combination Short Haul Truck	24	0.00E+00	1.42E-05	9.86E-07	9.21E+00	5.01E-08	1.24E-02	1.05E-05	1.53E-02	1.32E-03	2.61E-04	9.00E-04	2.94E-04	2.94E-04	1.39E-03	3.08E-05	0.00E+00	6.06E-04	2.89E-03
9	D38	60	Combination Long Haul Truck	22	0.00E+00	1.27E-05	8.27E-07	8.63E+00	5.75E-08	1.33E-02	9.79E-06	1.52E-02	1.32E-03	2.25E-04	9.28E-04	2.52E-04	2.56E-04	1.32E-03	2.89E-05	0.00E+00	6.73E-04	2.86E-03
9	D39	60	Passenger Car	132	0.00E+00	1.98E-06	2.14E-07	6.61E+00	1.37E-05	5.13E-02	4.39E-06	2.68E-04	1.34E-03	2.05E-04	4.27E-04	2.76E-04	2.83E-04	2.75E-05	3.31E-05	9.12E-09	1.45E-04	4.19E-05
9	D39	60	Passenger Truck	220	0.00E+00	4.36E-06	4.60E-07	1.51E+01	2.72E-05	9.15E-02	8.98E-06	8.75E-04	2.45E-03	3.80E-04	8.53E-04	5.56E-04	5.70E-04	1.17E-04	7.49E-05	2.07E-08	2.84E-04	1.45E-04
9	D39	60	Combination Short Haul Truck	2	0.00E+00	9.23E-07	6.43E-08	6.00E-01	3.27E-09	8.07E-04	6.85E-07	9.99E-04	8.59E-05	1.70E-05	5.87E-05	1.92E-05	1.92E-05	9.05E-05	2.01E-06	0.00E+00	3.95E-05	1.88E-04
9	D39	60	Combination Long Haul Truck	1	0.00E+00	8.29E-07	5.39E-08	5.63E-01	3.75E-09	8.70E-04	6.39E-07	9.90E-04	8.64E-05	1.47E-05	6.05E-05	1.65E-05	1.67E-05	8.60E-05	1.89E-06	0.00E+00	4.39E-05	1.86E-04
9	D40	60	Passenger Car	321	0.00E+00	4.82E-06	5.21E-07	1.61E+01	3.35E-05	1.25E-01	1.07E-05	6.55E-04	3.26E-03	5.00E-04	1.04E-03	6.72E-04	6.90E-04	6.71E-05	8.08E-05	2.23E-08	3.53E-04	1.02E-04
9	D40	60	Passenger Truck	538	0.00E+00	1.06E-05	1.12E-06	3.68E+01	6.64E-05	2.23E-01	2.19E-05	2.13E-03	5.98E-03	9.28E-04	2.08E-03	1.36E-03	1.39E-03	2.85E-04	1.83E-04	5.05E-08	6.93E-04	3.54E-04
9	D40	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.87E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.51E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.11E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	D40	60	Combination Short Haul Truck	16	0.00E+00	9.23E-06	6.43E-07	6.00E+00	3.27E-08	8.07E-03	6.85E-06	9.99E-03	8.59E-04	1.70E-04	5.87E-04	1.92E-04	1.92E-04	9.05E-04	2.01E-05	0.00E+00	3.95E-04	1.88E-03
9	D40	60	Combination Long Haul Truck	14	0.00E+00	8.29E-06	5.39E-07	5.63E+00	3.75E-08	8.70E-03	6.39E-06	9.90E-03	8.64E-04	1.47E-04	6.05E-04	1.65E-04	1.67E-04	8.60E-04	1.89E-05	0.00E+00	4.39E-04	1.86E-03
9	D41	60	Passenger Car	218	0.00E+00	3.27E-06	3.53E-07	1.09E+01	2.27E-05	8.49E-02	7.26E-06	4.44E-04	2.21E-03	3.39E-04	7.07E-04	4.56E-04	4.67E-04	4.55E-05	5.47E-05	1.51E-08	2.39E-04	6.94E-05
9	D41	60	Passenger Truck	364	0.00E+00	7.20E-06	7.61E-07	2.49E+01	4.50E-05	1.51E-01	1.48E-05	1.45E-03	4.05E-03	6.29E-04	1.41E-03	9.20E-04	9.42E-04	1.93E-04	1.24E-04	3.42E-08	4.69E-04	2.40E-04
9	D41	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.66E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.25E-04
9	D41	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.60E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.24E-04
9	D42	60	Passenger Car	65	0.00E+00	9.71E-07	1.05E-07	3.25E+00	6.76E-06	2.52E-02	2.16E-06	1.32E-04	6.57E-04	1.01E-04	2.10E-04	1.35E-04	1.39E-04	1.35E-05	1.63E-05	4.48E-09	7.11E-05	2.06E-05
9	D42	60	Passenger Truck	108	0.00E+00	2.14E-06	2.26E-07	7.41E+00	1.34E-05	4.50E-02	4.41E-06	4.30E-04	1.20E-03	1.87E-04	4.19E-04	2.73E-04	2.80E-04	5.73E-05	3.68E-05	1.02E-08	1.40E-04	7.13E-05
9	D42	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.35E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.00E-04
9	D42	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.22E-07	3.00E+00	1.63E-08	4.04E-03	3.42E-06	4.99E-03	4.30E-04	8.51E-05	2.94E-04	9.58E-05	9.59E-05	4.53E-04	1.01E-05	0.00E+00	1.98E-04	9.41E-04
9	D42	60	Combination Long Haul Truck	7	0.00E+00	4.14E-06	2.70E-07	2.81E+00	1.87E-08	4.35E-03	3.19E-06	4.95E-03	4.32E-04	7.33E-05	3.03E-04	8.23E-05	8.34E-05	4.30E-04	9.43E-06	0.00E+00	2.19E-04	9.32E-04
9	D43	60	Passenger Car	272	0.00E+00	4.08E-06	4.42E-07	1.37E+01	2.84E-05	1.06E-01	9.08E-06	5.55E-04	2.76E-03	4.24E-04	8.84E-04	5.70E-04	5.85E-04	5.69E-05	6.85E-05	1.89E-08	2.99E-04	8.68E-05
9	D43	60	Passenger Truck	456	0.00E+00	9.01E-06	9.51E-07	3.12E+01	5.63E-05	1.89E-01	1.86E-05	1.81E-03	5.07E-03	7.87E-04	1.77E-03	1.15E-03	1.18E-03	2.41E-04	1.55E-04	4.28E-08	5.87E-04	3.00E-04
9	D43	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.58E-08	8.01E-01	4.36E-09	1.08E-03	9.13E-07	1.33E-03	1.15E-04	2.27E-05	7.83E-05	2.55E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.51E-04
9	D43	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.19E-08	7.51E-01	5.00E-09	1.16E-03	8.52E-07	1.32E-03	1.15E-04	1.95E-05	8.07E-05	2.19E-05	2.22E-05	1.15E-04	2.51E-06	0.00E+00	5.85E-05	2.49E-04
9	D44	60	Passenger Car	62	0.00E+00	9.26E-07	1.00E-07	3.10E+00	6.44E-06	2.41E-02	2.06E-06	1.26E-04	6.26E-04	9.61E-05	2.00E-04	1.29E-04	1.33E-04	1.29E-05	1.55E-05	4.27E-09	6.78E-05	1.97E-05
9	D44	60	Passenger Truck	103	0.00E+00	2.04E-06	2.16E-07	7.07E+00	1.28E-05	4.29E-02	4.21E-06	4.10E-04	1.15E-03	1.78E-04	4.00E-04	2.61E-04	2.67E-04	5.47E-05	3.51E-05	9.70E-09	1.33E-04	6.80E-05
9	D44	60	Single Unit Short Haul Truck	30	0.00E+00	8.72E-06	4.36E-07	5.55E+00	7.19E-06	1.08E-02	9.30E-06	4.15E-03	7.06E-04	1.28E-04	1.06E-03	2.61E-04	2.66E-04	5.56E-04	2.24E-05	9.24E-09	7.94E-04	7.77E-04
9	D44	60	Single Unit Long Haul Truck	1	0.00E+00	3.81E-07	1.89E-08	2.37E-01	3.12E-07	4.56E-04	4.07E-07	1.79E-04	3.17E-05	5.67E-06	4.64E-05	1.14E-05	1.16E-05	2.37E-05	9.58E-07	3.93E-10	3.48E-05	3.36E-05
9	D44	60	Combination Short Haul Truck	16	0.00E+00	9.23E-06	6.43E-07	6.00E+00	3.27E-08	8.07E-03	6.85E-06	9.99E-03	8.59E-04	1.70E-04	5.87E-04	1.92E-04	1.92E-04	9.05E-04	2.01E-05	0.00E+00	3.95E-04	1.88E-03
9	D44	60	Combination Long Haul Truck	14	0.00E+00	8.29E-06	5.39E-07	5.63E+00	3.75E-08	8.70E-03	6.39E-06	9.90E-03	8.64E-04	1.47E-04	6.05E-04	1.65E-04	1.67E-04	8.60E-04	1.89E-05	0.00E+00	4.39E-04	1.86E-03
9	D45	60	Passenger Car	482	0.00E+00	7.23E-06	7.82E-07	2.42E+01	5.03E-05	1.88E-01	1.61E-05	9.83E-04	4.89E-03	7.51E-04	1.57E-03	1.01E-03	1.04E-03	1.01E-04	1.21E-04	3.34E-08	5.30E-04	1.54E-04
9	D45	60	Passenger Truck	807	0.00E+00	1.59E-05	1.68E-06	5.52E+01	9.97E-05	3.35E-01	3.29E-05	3.20E-03	8.97E-03	1.39E-03	3.13E-03	2.04E-03	2.09E-03	4.27E-04	2.74E-04	7.58E-08	1.04E-03	5.31E-04
9	D45	60	Single Unit Short Haul Truck	80	0.00E+00	2.36E-05	1.18E-06	1.50E+01	1.95E-05	2.91E-02	2.52E-05	1.12E-02	1.91E-03	3.47E-04	2.87E-03	7.09E-04	7.20E-04	1.51E-03	6.08E-05	2.50E-08	2.15E-03	2.11E-03
9	D45	60	Single Unit Long Haul Truck	4	0.00E+00	1.03E-06	5.13E-08	6.42E-01	8.46E-07	1.24E-03	1.10E-06	4.86E-04	8.59E-05	1.54E-05	1.26E-04	3.08E-05	3.13E-05	6.41E-05	2.60E-06	1.07E-09	9.44E-05	9.11E-05
9	D45	60	Combination Short Haul Truck	54	0.00E+00	3.20E-05	2.23E-06	2.08E+01	1.13E-07	2.80E-02	2.37E-05	3.46E-02	2.98E-03	5.90E-04	2.04E-03	6.64E-04	6.65E-04	3.14E-03	6.97E-05	0.00E+00	1.37E-03	6.52E-03
9	D45	60	Combination Long Haul Truck	50	0.00E+00	2.87E-05	1.87E-06	1.95E+01	1.30E-07	3.01E-02	2.21E-05	3.43E-02	3.00E-03	5.08E-04	2.10E-03	5.71E-04	5.78E-04	2.98E-03	6.54E-05	0.00E+00	1.52E-03	6.47E-03
9	D46	60	Passenger Car	498	0.00E+00	7.48E-06	8.09E-07	2.50E+01	5.21E-05	1.94E-01	1.66E-05	1.02E-03	5.06E-03	7.77E-04	1.62E-03	1.04E-03	1.07E-03	1.04E-04	1.25E-04	3.45E-08	5.48E-04	1.59E-04
9	D46	60	Passenger Truck	835	0.00E+00	1.65E-05	1.74E-06	5.71E+01	1.03E-04	3.47E-01	3.40E-05	3.31E-03	9.28E-03	1.44E-03	3.23E-03	2.11E-03	2.16E-03	4.42E-04	2.83E-04	7.83E-08	1.08E-03	5.49E-04
9	D46	60	Single Unit Short Haul Truck	105	0.00E+00	3.09E-05	1.55E-06	1.97E+01	2.55E-05	3.81E-02	3.30E-05	1.47E-02	2.51E-03	4.54E-04	3.76E-03	9.28E-04	9.43E-04	1.97E-03	7.96E-05	3.28E-08	2.82E-03	2.76E-03
9	D46	60	Single Unit Long Haul Truck	5	0.00E+00	1.35E-06	6.72E-08	8.41E-01	1.11E-06	1.62E-03	1.44E-06	6.37E-04	1.12E-04	2.01E-05	1.65E-04	4.04E-05	4.10E-05	8.40E-05	3.40E-06	1.39E-09	1.24E-04	1.19E-04
9	D46	60	Combination Short Haul Truck	60	0.00E+00	3.54E-05	2.47E-06	2.30E+01	1.25E-07	3.09E-02	2.63E-05	3.83E-02	3.29E-03	6.52E-04	2.25E-03	7.34E-04	7.36E-04	3.47E-03	7.71E-05	0.00E+00	1.52E-03	7.21E-03
9	D46	60	Combination Long Haul Truck	55	0.00E+00	3.18E-05	2.07E-06	2.16E+01	1.44E-07	3.33E-02	2.45E-05	3.79E-02	3.31E-03	5.62E-04	2.32E-03	6.31E-04	6.39E-04	3.30E-03	7.23E-05	0.00E+00	1.68E-03	7.15E-03
9	D47	60	Passenger Car	572	0.00E+00	8.58E-06	9.28E-07	2.87E+01	5.97E-05	2.23E-01	1.91E-05	1.17E-03	5.80E-03	8.91E-04	1.86E-03	1.20E-03	1.23E-03	1.19E-04	1.44E-04	3.96E-08	6.28E-04	1.82E-04
9	D47	60	Passenger Truck	957	0.00E+00	1.89E-05	2.00E-06	6.55E+01	1.18E-04	3.98E-01	3.90E-05	3.80E-03	1.06E-02	1.65E-03	3.71E-03	2.42E-03	2.47E-03	5.07E-04	3.25E-04	8.99E-08	1.23E-03	6.30E-04
9	D47	60	Single Unit Short Haul Truck	85	0.00E+00	2.50E-05	1.25E-06	1.59E+01	2.06E-05	3.09E-02	2.67E-05	1.19E-02	2.03E-03	3.68E-04	3.04E-03	7.51E-04	7.63E-04	1.60E-03	6.44E-05	2.65E-08	2.28E-03	2.23E-03
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	1.09

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D51	60	Single Unit Short Haul Truck	41	0.00E+00	1.21E-05	6.05E-07	7.70E+00	9.97E-06	1.49E-02	1.29E-05	5.76E-03	9.80E-04	1.78E-04	1.47E-03	3.63E-04	3.69E-04	7.71E-04	3.11E-05	1.28E-08	1.10E-03	1.08E-03
9	D51	60	Single Unit Long Haul Truck	2	0.00E+00	5.28E-07	2.63E-08	3.29E-01	4.33E-07	6.33E-04	5.64E-07	2.49E-04	4.40E-05	7.86E-06	6.44E-05	1.58E-05	1.60E-05	3.28E-05	1.33E-06	5.45E-10	4.83E-05	4.66E-05
9	D51	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.33E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.51E-03
9	D51	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.32E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.49E-03
9	D52	60	Passenger Car	252	0.00E+00	3.78E-06	4.09E-07	1.27E+01	2.63E-05	9.83E-02	8.41E-06	5.14E-04	2.56E-03	3.93E-04	8.18E-04	5.28E-04	5.41E-04	5.26E-05	6.34E-05	1.75E-08	2.77E-04	8.03E-05
9	D52	60	Passenger Truck	422	0.00E+00	8.34E-06	8.81E-07	2.89E+01	5.21E-05	1.75E-01	1.72E-05	1.68E-03	4.69E-03	7.28E-04	1.63E-03	1.06E-03	1.09E-03	2.23E-04	1.43E-04	3.96E-08	5.44E-04	2.78E-04
9	D52	60	Single Unit Short Haul Truck	22	0.00E+00	6.47E-06	3.23E-07	4.12E+00	5.33E-06	7.98E-03	6.90E-06	3.08E-03	5.24E-04	9.50E-05	7.86E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.86E-09	5.89E-04	5.77E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.76E-01	2.32E-07	3.39E-04	3.02E-07	1.33E-04	2.35E-05	4.20E-06	3.44E-05	8.44E-06	8.58E-06	1.76E-05	7.11E-07	2.92E-10	2.59E-05	2.50E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	4.92E-06	3.43E-07	3.20E+00	1.74E-08	4.31E-03	3.65E-06	5.33E-03	4.58E-04	9.07E-05	3.13E-04	1.02E-04	1.02E-04	4.83E-04	1.07E-05	0.00E+00	2.11E-04	1.00E-03
9	D52	60	Combination Long Haul Truck	8	0.00E+00	4.42E-06	2.88E-07	3.00E+00	2.00E-08	4.64E-03	3.41E-06	5.28E-03	4.61E-04	7.82E-05	3.23E-04	8.78E-05	8.89E-05	4.59E-04	1.01E-05	0.00E+00	2.34E-04	9.95E-04
9	D53	60	Passenger Car	304	0.00E+00	4.56E-06	4.93E-07	1.53E+01	3.17E-05	1.19E-01	1.01E-05	6.20E-04	3.09E-03	4.74E-04	9.87E-04	6.36E-04	6.53E-04	6.35E-05	7.64E-05	2.11E-08	3.34E-04	9.69E-05
9	D53	60	Passenger Truck	509	0.00E+00	1.01E-05	1.06E-06	3.48E+01	6.29E-05	2.11E-01	2.07E-05	2.02E-03	5.66E-03	8.79E-04	1.97E-03	1.28E-03	1.32E-03	2.69E-04	1.73E-04	4.78E-08	6.56E-04	3.35E-04
9	D53	60	Single Unit Short Haul Truck	42	0.00E+00	1.24E-05	6.19E-07	7.88E+00	1.02E-05	1.53E-02	1.32E-05	5.89E-03	1.00E-03	1.82E-04	1.50E-03	3.71E-04	3.77E-04	7.89E-04	3.18E-05	1.31E-08	1.13E-03	1.10E-03
9	D53	60	Single Unit Long Haul Truck	2	0.00E+00	5.40E-07	2.69E-08	3.36E-01	4.43E-07	6.48E-04	5.77E-07	2.55E-04	4.50E-05	8.04E-06	6.59E-05	1.61E-05	1.64E-05	3.36E-05	1.36E-06	5.58E-10	4.95E-05	4.77E-05
9	D53	60	Combination Short Haul Truck	23	0.00E+00	1.35E-05	9.43E-07	8.81E+00	4.80E-08	1.18E-02	1.00E-05	1.46E-02	1.26E-03	2.49E-04	8.61E-04	2.81E-04	2.81E-04	1.33E-03	2.95E-05	0.00E+00	5.80E-04	2.76E-03
9	D53	60	Combination Long Haul Truck	21	0.00E+00	1.22E-05	7.91E-07	8.26E+00	5.50E-08	1.28E-02	9.37E-06	1.45E-02	1.27E-03	2.15E-04	8.88E-04	2.41E-04	2.45E-04	1.26E-03	2.77E-05	0.00E+00	6.43E-04	2.74E-03
9	D54	60	Passenger Car	437	0.00E+00	6.56E-06	7.10E-07	2.20E+01	4.57E-05	1.71E-01	1.46E-05	8.92E-04	4.44E-03	6.82E-04	1.42E-03	9.16E-04	9.40E-04	9.14E-05	1.10E-04	3.03E-08	4.81E-04	1.39E-04
9	D54	60	Passenger Truck	733	0.00E+00	1.45E-05	1.53E-06	5.01E+01	9.05E-05	3.04E-01	2.98E-05	2.91E-03	8.15E-03	1.26E-03	2.84E-03	1.85E-03	1.89E-03	3.88E-04	2.49E-04	6.88E-08	9.44E-04	4.82E-04
9	D54	60	Single Unit Short Haul Truck	31	0.00E+00	9.00E-06	4.50E-07	5.73E+00	7.42E-06	1.11E-02	9.60E-06	4.28E-03	7.29E-04	1.32E-04	1.09E-03	2.70E-04	2.74E-04	5.74E-04	2.32E-05	9.54E-09	8.19E-04	8.03E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	3.93E-07	1.96E-08	2.45E-01	3.22E-07	4.71E-04	4.20E-07	1.85E-04	3.27E-05	5.85E-06	4.79E-05	1.17E-05	1.19E-05	2.44E-05	9.89E-07	4.06E-10	3.60E-05	3.47E-05
9	D54	60	Combination Short Haul Truck	11	0.00E+00	6.46E-06	4.50E-07	4.20E+00	2.29E-08	5.65E-03	4.79E-06	6.99E-03	6.02E-04	1.19E-04	4.11E-04	1.34E-04	1.34E-04	6.34E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
9	D54	60	Combination Long Haul Truck	10	0.00E+00	5.80E-06	3.77E-07	3.94E+00	2.62E-08	6.09E-03	4.47E-06	6.93E-03	6.05E-04	1.03E-04	4.24E-04	1.15E-04	1.17E-04	6.02E-04	1.32E-05	0.00E+00	3.07E-04	1.31E-03
11	D55	80	Passenger Car	505	0.00E+00	6.15E-06	6.66E-07	2.35E+01	4.28E-05	1.64E-01	1.37E-05	1.04E-03	2.78E-03	4.83E-04	1.33E-03	8.58E-04	8.81E-04	7.91E-05	1.18E-04	3.32E-08	4.51E-04	1.62E-04
11	D55	80	Passenger Truck	845	0.00E+00	1.32E-05	1.40E-06	5.44E+01	8.46E-05	3.03E-01	2.77E-05	3.08E-03	4.98E-03	8.84E-04	2.65E-03	1.72E-03	1.76E-03	3.80E-04	2.71E-04	7.39E-08	8.87E-04	5.03E-04
11	D55	80	Single Unit Short Haul Truck	82	0.00E+00	1.54E-05	7.67E-07	1.51E+01	1.24E-05	3.03E-02	1.64E-05	7.90E-03	9.70E-04	2.19E-04	1.88E-03	4.57E-04	4.65E-04	1.52E-03	6.10E-05	2.42E-08	1.41E-03	1.48E-03
11	D55	80	Single Unit Long Haul Truck	4	0.00E+00	6.71E-07	3.31E-08	6.41E-01	5.31E-07	1.26E-03	7.14E-07	3.38E-04	4.43E-05	9.68E-06	8.20E-05	1.97E-05	2.00E-05	6.40E-05	2.59E-06	1.01E-09	6.19E-05	6.32E-05
11	D55	80	Combination Short Haul Truck	48	0.00E+00	2.09E-05	1.50E-06	1.73E+01	6.60E-08	1.85E-02	1.53E-05	2.14E-02	1.27E-03	3.12E-04	1.25E-03	4.42E-04	4.38E-04	2.61E-03	5.79E-05	0.00E+00	8.08E-04	4.03E-03
11	D55	80	Combination Long Haul Truck	43	0.00E+00	1.87E-05	1.26E-06	1.60E+01	7.63E-08	1.92E-02	1.42E-05	2.08E-02	1.24E-03	2.49E-04	1.29E-03	3.80E-04	3.82E-04	2.44E-03	5.36E-05	0.00E+00	9.05E-04	3.91E-03
11	D56	80	Passenger Car	320	0.00E+00	3.91E-06	4.22E-07	1.49E+01	2.72E-05	1.04E-01	8.68E-06	6.58E-04	1.76E-03	3.06E-04	8.45E-04	5.45E-04	5.59E-04	5.02E-05	7.52E-05	2.11E-08	2.86E-04	1.03E-04
11	D56	80	Passenger Truck	537	0.00E+00	8.38E-06	8.89E-07	3.45E+01	5.37E-05	1.92E-01	1.76E-05	1.95E-03	3.16E-03	5.61E-04	1.68E-03	1.09E-03	1.12E-03	2.41E-04	1.72E-04	4.69E-08	5.63E-04	3.19E-04
11	D56	80	Single Unit Short Haul Truck	74	0.00E+00	1.38E-05	6.86E-07	1.36E+01	1.11E-05	2.72E-02	1.47E-05	7.07E-03	8.68E-04	1.96E-04	1.68E-03	4.09E-04	4.16E-04	1.36E-03	5.46E-05	2.17E-08	1.27E-03	1.32E-03
11	D56	80	Single Unit Long Haul Truck	3	0.00E+00	6.01E-07	2.96E-08	5.74E-01	4.75E-07	1.13E-03	6.39E-07	3.02E-04	3.97E-05	8.67E-06	7.34E-05	1.76E-05	1.79E-05	5.73E-05	2.32E-06	9.04E-10	5.55E-05	5.66E-05
11	D56	80	Combination Short Haul Truck	40	0.00E+00	1.75E-05	1.25E-06	1.44E+01	5.51E-08	1.55E-02	1.28E-05	1.79E-02	1.06E-03	2.61E-04	1.04E-03	3.69E-04	3.66E-04	2.18E-03	4.84E-05	0.00E+00	6.75E-04	3.37E-03
11	D56	80	Combination Long Haul Truck	36	0.00E+00	1.57E-05	1.05E-06	1.34E+01	6.37E-08	1.60E-02	1.19E-05	1.74E-02	1.03E-03	2.08E-04	1.07E-03	3.17E-04	3.19E-04	2.04E-03	4.47E-05	0.00E+00	7.55E-04	3.27E-03
11	D57	80	Passenger Car	513	0.00E+00	6.26E-06	6.77E-07	2.39E+01	4.35E-05	1.67E-01	1.39E-05	1.05E-03	2.82E-03	4.91E-04	1.35E-03	8.73E-04	8.96E-04	8.04E-05	1.20E-04	3.38E-08	4.58E-04	1.65E-04
11	D57	80	Passenger Truck	860	0.00E+00	1.34E-05	1.42E-06	5.53E+01	8.61E-05	3.08E-01	2.82E-05	3.13E-03	5.06E-03	8.99E-04	2.69E-03	1.75E-03	1.79E-03	3.86E-04	2.76E-04	7.52E-08	9.02E-04	5.12E-04
11	D57	80	Single Unit Short Haul Truck	111	0.00E+00	2.08E-05	1.03E-06	2.04E+01	1.68E-05	4.09E-02	2.22E-05	1.07E-02	1.31E-03	2.96E-04	2.53E-03	6.17E-04	6.27E-04	2.05E-03	8.23E-05	3.27E-08	1.91E-03	1.99E-03
11	D57	80	Single Unit Long Haul Truck	5	0.00E+00	9.06E-07	4.46E-08	8.64E-01	7.16E-07	1.70E-03	9.63E-07	4.56E-04	5.98E-05	1.31E-05	1.11E-04	2.65E-05	2.70E-05	8.63E-05	3.49E-06	1.36E-09	8.36E-05	8.52E-05
11	D57	80	Combination Short Haul Truck	60	0.00E+00	2.64E-05	1.89E-06	2.19E+01	8.34E-08	2.34E-02	1.93E-05	2.71E-02	1.60E-03	3.94E-04	1.57E-03	5.58E-04	5.54E-04	3.30E-03	7.32E-05	0.00E+00	1.02E-03	5.10E-03
11	D57	80	Combination Long Haul Truck	55	0.00E+00	2.37E-05	1.59E-06	2.02E+01	9.64E-08	2.43E-02	1.79E-05	2.63E-02	1.56E-03	3.15E-04	1.63E-03	4.80E-04	4.83E-04	3.09E-03	6.77E-05	0.00E+00	1.14E-03	4.95E-03
11	D58	80	Passenger Car	387	0.00E+00	4.72E-06	5.10E-07	1.80E+01	3.28E-05	1.26E-01	1.05E-05	7.95E-04	2.13E-03	3.70E-04	1.02E-03	6.58E-04	6.75E-04	6.06E-05	9.08E-05	2.55E-08	3.46E-04	1.24E-04
11	D58	80	Passenger Truck	648	0.00E+00	1.01E-05	1.07E-06	4.17E+01	6.49E-05	2.32E-01	2.12E-05	2.36E-03	3.82E-03	6.77E-04	2.03E-03	1.32E-03	1.35E-03	2.91E-04	2.08E-04	5.67E-08	6.80E-04	3.86E-04
11	D58	80	Single Unit Short Haul Truck	77	0.00E+00	1.44E-05	7.13E-07	1.41E+01	1.16E-05	2.82E-02	1.53E-05	7.35E-03	9.02E-04	2.04E-04	1.75E-03	4.25E-04	4.32E-04	1.41E-03	5.68E-05	2.25E-08	1.32E-03	1.37E-03
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	6.24E-07	3.08E-08	5.96E-01	4.94E-07	1.18E-03	6.64E-07	3.14E-04	4.12E-05	9.01E-06	7.62E-05	1.83E-05	1.86E-05	5.95E-05	2.41E-06	9.39E-10	5.76E-05	5.88E-05
11	D58	80	Combination Short Haul Truck	45	0.00E+00	1.98E-05	1.41E-06	1.63E+01	6.24E-08	1.75E-02	1.44E-05	2.02E-02	1.20E-03	2.95E-04	1.18E-03	4.17E-04	4.14E-04	2.46E-03	5.47E-05	0.00E+00	7.63E-04	3.81E-03
11	D58	80	Combination Long Haul Truck	41	0.00E+00	1.77E-05	1.19E-06	1.51E+01	7.21E-08	1.81E-02	1.34E-05	1.96E-02	1.17E-03	2.36E-04	1.22E-03	3.59E-04	3.61E-04	2.31E-03	5.06E-05	0.00E+00	8.55E-04	3.70E-03
11	D59	80	Passenger Car	513	0.00E+00	6.26E-06	6.77E-07	2.39E+01	4.35E-05	1.67E-01	1.39E-05	1.05E-03	2.82E-03	4.91E-04	1.35E-03	8.73E-04	8.96E-04	8.04E-05	1.20E-04	3.38E-08	4.58E-04	1.65E-04
11	D59	80	Passenger Truck	860	0.00E+00	1.34E-05	1.42E-06	5.53E+01	8.61E-05	3.08E-01	2.82E-05	3.13E-03	5.06E-03	8.99E-04	2.69E-03	1.75E-03	1.79E-03	3.86E-04	2.76E-04	7.52E-08	9.02E-04	5.12E-04
11	D59	80	Single Unit Short Haul Truck	111	0.00E+00	2.08E-05	1.03E-06	2.04E+01	1.68E-05	4.09E-02	2.22E-05	1.07E-02	1.31E-03	2.96E-04	2.53E-03	6.17E-04	6.27E-04	2.05E-03	8.23E-05	3.27E-08	1.91E-03	1.99E-03
11	D59	80	Single Unit Long Haul Truck	5	0.00E+00	9.06E-07	4.46E-08	8.64E-01	7.16E-07	1.70E-03	9.63E-07	4.56E-04	5.98E-05	1.31E-05	1.11E-04	2.65E-05	2.70E-05	8.63E-05	3.49E-06	1.36E-09	8.36E-05	8.52E-05
11	D59	80	Combination Short Haul Truck	60	0.00E+00	2.64E-05	1.89E-06	2.19E+01	8.34E-08	2.34E-02	1.93E-05	2.71E-02	1.60E-03	3.94E-04	1.57E-03	5.58E-04	5.54E-04	3.30E-03	7.32E-05	0.00E+00	1.02E-03	5.10E-03
11	D59	80	Combination Long Haul Truck	55	0.00E+00	2.37E-05	1.59E-06	2.02E+01	9.64E-08	2.43E-02	1.79E-05	2.63E-02	1.56E-03	3.15E-04	1.63E-03	4.80E-04	4.83E-04	3.09E-03	6.77E-05	0.00E+00	1.14E-03	4.95E-03
11	D60	80	Passenger Car	387	0.00E+00	4.72E-06	5.10E-07	1.80E+01	3.28E-05	1.26E-01	1.05E-05	7.95E-04	2.13E-03	3.70E-04	1.02E-03	6.58E-04	6.75E-04	6.06E-05	9.08E-05	2.55E-08	3.46E-04	1.24E-04
11	D60	80	Passenger Truck	648	0.00E+00	1.01E-05	1.07E-06	4.17E+01	6.49E-05	2.32E-01	2.12E-05	2.36E-03	3.82E-03	6.77E-04	2.03E-03	1.32E-03	1.35E-03	2.91E-04	2.08E-04	5.67E-08	6.80E-04	3.86E-04
11	D60	80	Single Unit Short Haul Truck	77	0.00E+00	1.44E-05	7.13E-07	1.41E+01	1.16E-05	2.82E-02	1.53E-05	7.35E-03	9.02E-04	2.04E-04	1.75E-03	4.25E-04	4.32E-04	1.41E-03	5.68E-05	2.25E-08	1.32E-03	1.37E-03
11	D60	80	Single Unit Long Haul Truck	3	0.00E+00	6.24E-07	3.08E-08	5.96E-01	4.94E-07	1.18E-03	6.64E-07	3.14E-04	4.12E-05	9.01E-06	7.62E-05	1.83E-05	1.86E-05	5.95E-05	2.41E-06	9.39E-10	5.76E-05	5.88E-05
11	D60	80	Combination Short Haul Truck	45	0.00E+00	1.98E-05	1.41E-06	1.63E+01	6.24E-08	1.75E-02	1.44E-05	2.02E-02	1.20E-03	2.95E-04	1.18E-03	4.17E-04	4.14E-04	2.46E-03	5.47E-05	0.00E+00	7.63E-04	3.81E-03
11	D60	80	Combination Long Haul Truck	41	0.00E+00	1.77E-05	1.19E-06	1.51E+01	7.21E-08	1.81E-02	1.34E-05	1.96E-02	1.17E-03	2.36E-04	1.22E-03	3.59E-04	3.61E-04	2.31E-03	5.06E-05	0.00E+00	8.55E-04	3.70E-03
11	D61	80	Passenger Car	60	0.00E+00	7.29E-07	7.89E-08	2.79E+00	5.07E-06	1.95E-02	1.62E-06	1.23E-04	3.29E-04	5.72E-05	1.58E-04	1.02E-04	1.04E-04	9.37E-06	1.40E-05	3.94E-09	5.34E-05	1.92E-05
11	D61	80	Passenger Truck	100	0.00E+00	1.57E-06	1.66E-07	6.45E+00	1.00E-05	3.59E-02	3.28E-06	3.65E-04	5.90E-04	1.05E-04	3.14E-04	2.04E-04	2.09E-04	4.50E-05	3.22E-05	8.76E-09	1.05E-04	5.96E-05
11	D61	80	Single Unit Short Haul Truck	10	0.00E+00	1.79E-06	8.91E-08	1.76E+00	1.44E-06	3.53E-03	1.91E-06	9.18E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	D61	80	Combination Short Haul Truck	5	0.00E+00	2.07E-06	1.48E-07	1.71E+00	6.53E-09	1.83E-03	1.51E-06	2.12E-03	1.25E-04	3.09E-05	1.23E-04	4.37E-05	4.33E-05	2.58E-04	5.73E-06	0.00E+00	7.99E-05	3.99E-04
11	D61	80	Combination Long Haul Truck	4	0.00E+00	1.85E-06	1.25E-07	1.58E+00	7.54E-09	1.90E-03	1.40E-06	2.05E-03	1.22E-04	2.46E-05	1.27E-04	3.76E-05	3.78E-05	2.42E-04	5.30E-06	0.00E+00	8.95E-05	3.87E-04
11	D62	80	Passenger Car	154	0.00E+00	1.88E-06	2.03E-07	7.18E+00	1.31E-05	5.02E-02	4.17E-06	3.16E-04	8.47E-04	1.47E-04	4.06E-04	2.62E-04	2.69E-04	2.41E-05	3.62E-05	1.01E-08	1.38E-04	4.94E-05
11	D62	80	Passenger Truck	258	0.00E+00	4.03E-06	4.28E-07	1.66E+01	2.58E-05	9.24E-02	8.45E-06	9.40E-04	1.52E-03	2.70E-04	8.09E-04	5.25E-04	5.38E-04	1.16E-04	8.29E-05	2.26E-08	2.71E-04	1.54E-04
11	D62	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.00E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.04E-05	9.19E-05	3.00E-04	1.21E-05	4.79E-09	2.79E-04	2.92E-04
11	D62	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.50E-04	1.41E-07	6.68E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.96E-06	1.26E-05	5.11E-07	2.00E-10	1.22E-05	1.25E-05
11	D62	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.29E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.21E-04
11	D62	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.20E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.02E-04
10	D63	70	Passenger Car	70	0.00E+00	9.10E-07	9.85E-08	3.34E+00	6.33E-06	2.38E-02	2.02E-06	1.39E-04	5.39E-04	8.65E-05	1.97E-04	1.27E-04	1.30E-04	1.25E-05	1.68E-05	4.57E-09	6.67E-05	2.18E-05
10	D63	70	Passenger Truck	116	0.00E+00	1.99E-06	2.11E-07	7.70E+00	1.26E-05	4.37E-02	4.14E-06	4.36E-04	9.81E-04	1.59E-04	3.95E-04	2.57E-04	2.63E-04	5.65E-05	3.83E-05	1.02E-08	1.32E-04	7.17E-05
10	D63	70	Single Unit Short Haul Truck	28	0.00E+00	6.53E-06	3.27E-07	5.11E+00	5.34E-06	1.02E-02	6.95E-06	3.21E-03	4.59E-04	9.20E-05	7.92E-04	1.95E-04	1.98E-04	5.13E-04	2.06E-05	8.32E-09	5.93E-04	6.01E-04
10	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.84E-07	1.41E-08	2.17E-01	2.30E-07	4.30E-04	3.03E-07	1.38E-04	2.10E-05	4.09E-06	3.46E-05	8.45E-06	8.59E-06	2.17E-05	8.76E-07	3.51E-10	2.60E-05	2.59E-05
10	D63	70	Combination Short Haul Truck	15	0.00E+00	7.62E-06	5.41E-07	5.52E+00	2.48E-08	6.56E-03	5.59E-06	7.98E-03	5.80E-04	1.27E-04	4.64E-04	1.60E-04	1.60E-04	8.33E-04	1.85E-05	0.00E+00	3.04E-04	1.50E-03
10	D63	70	Combination Long Haul Truck	13	0.00E+00	6.89E-06	4.60E-07	5.15E+00	2.85E-08	6.95E-03	5.23E-06	7.86E-03	5.76E-04	1.05E-04	4.80E-04	1.39E-04	1.41E-04	7.88E-04	1.73E-05	0.00E+00	3.39E-04	1.48E-03
10	D64	70	Passenger Car	72	0.00E+00	9.40E-07	1.02E-07	3.45E+00	6.54E-06	2.45E-02	2.09E-06	1.44E-04	5.57E-04	8.93E-05	2.03E-04	1.31E-04	1.35E-04	1.29E-05	1.73E-05	4.72E-09	6.88E-05	2.25E-05
10	D64	70	Passenger Truck	120	0.00E+00	2.06E-06	2.18E-07	7.94E+00	1.30E-05	4.51E-02	4.28E-06	4.50E-04	1.01E-03	1.65E-04	4.08E-04	2.65E-04	2.72E-04	5.83E-05	3.95E-05	1.06E-08	1.36E-04	7.40E-05
10	D64	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.82E-03	1.92E-06	8.86E-04	1.27E-04	2.54E-05	2.18E-04	5.39E-05	5.48E-05	1.41E-04	5.69E-06	2.30E-09	1.64E-04	1.66E-04
10	D64	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.18E+00	5.30E-09	1.41E-03	1.20E-06	1.71E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.78E-04	3.96E-06	0.00E+00	6.52E-05	3.22E-04
10	D64	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.87E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.18E-04
11	D65	80	Passenger Car	169	0.00E+00	2.06E-06	2.23E-07	7.88E+00	1.43E-05	5.51E-02	4.58E-06	3.47E-04	9.29E-04	1.62E-04	4.46E-04	2.87E-04	2.95E-04	2.65E-05	3.97E-05	1.11E-08	1.51E-04	5.42E-05
11	D65	80	Passenger Truck	283	0.00E+00	4.42E-06	4.69E-07	1.82E+01	2.83E-05	1.01E-01	9.27E-06	1.03E-03	1.67E-03	2.96E-04	8.87E-04	5.76E-04	5.90E-04	1.27E-04	9.09E-05	2.48E-08	2.97E-04	1.68E-04
11	D65	80	Single Unit Short

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D69	80	Passenger Truck	142	0.00E+00	2.22E-06	2.36E-07	9.15E+00	1.42E-05	5.09E-02	4.66E-06	5.18E-04	8.37E-04	1.49E-04	4.46E-04	2.89E-04	2.96E-04	6.38E-05	4.57E-05	1.24E-08	1.49E-04	8.46E-05
11	D69	80	Single Unit Short Haul Truck	40	0.00E+00	7.54E-06	3.74E-07	7.40E+00	6.07E-06	1.48E-02	8.02E-06	3.86E-03	4.74E-04	1.07E-04	9.17E-04	2.23E-04	2.27E-04	7.42E-04	2.98E-05	1.18E-08	6.90E-04	7.22E-04
11	D69	80	Single Unit Long Haul Truck	2	0.00E+00	3.28E-07	1.62E-08	3.13E-01	2.59E-07	6.17E-04	3.49E-07	1.65E-04	2.16E-05	4.73E-06	4.00E-05	9.61E-06	9.77E-06	3.12E-05	1.26E-06	4.93E-10	3.03E-05	3.09E-05
11	D69	80	Combination Short Haul Truck	19	0.00E+00	8.28E-06	5.92E-07	6.84E+00	2.61E-08	7.33E-03	6.05E-06	8.47E-03	5.01E-04	1.23E-04	4.93E-04	1.75E-04	1.73E-04	1.03E-03	2.29E-05	0.00E+00	3.20E-04	1.60E-03
11	D69	80	Combination Long Haul Truck	17	0.00E+00	7.41E-06	4.98E-07	6.33E+00	3.02E-08	7.60E-03	5.62E-06	8.22E-03	4.90E-04	9.86E-05	5.09E-04	1.50E-04	1.51E-04	9.67E-04	2.12E-05	0.00E+00	3.58E-04	1.55E-03
11	D70	80	Passenger Car	113	0.00E+00	1.38E-06	1.49E-07	5.27E+00	9.58E-06	3.68E-02	3.06E-06	2.32E-04	6.21E-04	1.08E-04	2.98E-04	1.92E-04	1.97E-04	1.77E-05	2.65E-05	7.43E-09	1.01E-04	3.62E-05
11	D70	80	Passenger Truck	189	0.00E+00	2.95E-06	3.13E-07	1.22E+01	1.89E-05	6.77E-02	6.19E-06	6.89E-04	1.11E-03	1.98E-04	5.93E-04	3.85E-04	3.94E-04	8.49E-05	6.07E-05	1.65E-08	1.98E-04	1.13E-04
11	D70	80	Single Unit Short Haul Truck	31	0.00E+00	5.74E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.94E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.01E-09	5.26E-04	5.50E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.97E-07	4.70E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.45E-06	2.38E-05	9.63E-07	3.76E-10	2.31E-05	2.35E-05
11	D70	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.23E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.55E-03
11	D70	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	7.99E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
10	D71	70	Passenger Car	238	0.00E+00	3.11E-06	3.37E-07	1.14E+01	2.17E-05	8.13E-02	6.92E-06	4.76E-04	1.84E-03	2.96E-04	6.74E-04	4.34E-04	4.46E-04	4.26E-05	5.73E-05	1.56E-08	2.28E-04	7.45E-05
10	D71	70	Passenger Truck	398	0.00E+00	6.82E-06	7.22E-07	2.63E+01	4.31E-05	1.49E-01	1.42E-05	1.49E-03	3.35E-03	5.45E-04	1.35E-03	8.79E-04	9.01E-04	1.93E-04	1.31E-04	3.50E-08	4.51E-04	2.45E-04
10	D71	70	Single Unit Short Haul Truck	21	0.00E+00	4.95E-06	2.48E-07	3.88E+00	4.05E-06	7.76E-03	5.28E-06	2.44E-03	3.48E-04	6.98E-05	6.01E-04	1.48E-04	1.51E-04	3.89E-04	1.56E-05	6.31E-09	4.50E-04	4.56E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.16E-07	1.07E-08	1.65E-01	1.75E-07	3.26E-04	2.30E-07	1.05E-04	1.59E-05	3.10E-06	2.63E-05	6.41E-06	6.52E-06	1.64E-05	6.65E-07	2.66E-10	1.97E-05	1.96E-05
10	D71	70	Combination Short Haul Truck	11	0.00E+00	5.71E-06	4.06E-07	4.14E+00	1.86E-08	4.92E-03	4.19E-06	5.99E-03	4.35E-04	9.49E-05	3.48E-04	1.20E-04	1.20E-04	6.24E-04	1.39E-05	0.00E+00	2.28E-04	1.13E-03
10	D71	70	Combination Long Haul Truck	10	0.00E+00	5.16E-06	3.45E-07	3.87E+00	2.14E-08	5.21E-03	3.92E-06	5.90E-03	4.32E-04	7.88E-05	3.60E-04	1.04E-04	1.06E-04	5.91E-04	1.29E-05	0.00E+00	2.54E-04	1.11E-03
10	D72	70	Passenger Car	170	0.00E+00	2.22E-06	2.40E-07	8.15E+00	1.55E-05	5.80E-02	4.94E-06	3.40E-04	1.32E-03	2.11E-04	4.81E-04	3.10E-04	3.18E-04	3.04E-05	4.09E-05	1.12E-08	1.63E-04	5.31E-05
10	D72	70	Passenger Truck	284	0.00E+00	4.87E-06	5.15E-07	1.88E+01	3.08E-05	1.07E-01	1.01E-05	1.06E-03	2.39E-03	3.89E-04	9.65E-04	6.28E-04	6.43E-04	1.38E-04	9.35E-05	2.50E-08	3.22E-04	1.75E-04
10	D72	70	Single Unit Short Haul Truck	35	0.00E+00	8.33E-06	4.17E-07	6.52E+00	6.81E-06	1.30E-02	8.87E-06	4.10E-03	5.86E-04	1.17E-04	1.01E-03	2.49E-04	2.53E-04	6.54E-04	2.63E-05	1.06E-08	7.57E-04	7.67E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.63E-07	1.80E-08	2.77E-01	2.94E-07	5.48E-04	3.87E-07	1.76E-04	2.68E-05	5.22E-06	4.42E-05	1.08E-05	1.10E-05	2.76E-05	1.12E-06	4.48E-10	3.32E-05	3.30E-05
10	D72	70	Combination Short Haul Truck	24	0.00E+00	1.22E-05	8.70E-07	8.87E+00	3.98E-08	1.05E-02	8.98E-06	1.28E-02	9.32E-04	2.03E-04	7.46E-04	2.57E-04	2.57E-04	1.34E-03	2.97E-05	0.00E+00	4.89E-04	2.42E-03
10	D72	70	Combination Long Haul Truck	21	0.00E+00	1.11E-05	7.40E-07	8.28E+00	4.58E-08	1.12E-02	8.41E-06	1.26E-02	9.25E-04	1.69E-04	7.71E-04	2.24E-04	2.26E-04	1.27E-03	2.77E-05	0.00E+00	5.45E-04	2.38E-03
10	D73	70	Passenger Car	182	0.00E+00	2.38E-06	2.57E-07	8.73E+00	1.66E-05	6.21E-02	5.29E-06	3.64E-04	1.41E-03	2.26E-04	5.15E-04	3.32E-04	3.40E-04	3.25E-05	4.38E-05	1.19E-08	1.74E-04	5.69E-05
10	D73	70	Passenger Truck	304	0.00E+00	5.21E-06	5.52E-07	2.01E+01	3.30E-05	1.14E-01	1.08E-05	1.14E-03	2.56E-03	4.17E-04	1.03E-03	6.72E-04	6.88E-04	1.48E-04	1.00E-04	2.68E-08	3.45E-04	1.87E-04
10	D73	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.65E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.24E-04
10	D73	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.76E-04
10	D73	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.70E-04
10	D74	70	Passenger Car	131	0.00E+00	1.72E-06	1.86E-07	6.30E+00	1.20E-05	4.49E-02	3.82E-06	2.63E-04	1.02E-03	1.63E-04	3.72E-04	2.40E-04	2.46E-04	2.35E-05	3.16E-05	8.62E-09	1.26E-04	4.11E-05
10	D74	70	Passenger Truck	220	0.00E+00	3.76E-06	3.98E-07	1.45E+01	2.38E-05	8.25E-02	7.82E-06	8.22E-04	1.85E-03	3.01E-04	7.46E-04	4.85E-04	4.97E-04	1.07E-04	7.23E-05	1.93E-08	2.49E-04	1.35E-04
10	D74	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.10E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.94E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.05E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.69E-05
10	D74	70	Combination Short Haul Truck	15	0.00E+00	7.89E-06	5.61E-07	5.72E+00	2.56E-08	6.79E-03	5.79E-06	8.27E-03	6.00E-04	1.31E-04	4.81E-04	1.66E-04	1.66E-04	8.62E-04	1.91E-05	0.00E+00	3.15E-04	1.56E-03
10	D74	70	Combination Long Haul Truck	14	0.00E+00	7.13E-06	4.77E-07	5.34E+00	2.95E-08	7.20E-03	5.42E-06	8.15E-03	5.96E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.16E-04	1.79E-05	0.00E+00	3.51E-04	1.53E-03
11	D75	80	Passenger Car	166	0.00E+00	2.02E-06	2.19E-07	7.74E+00	1.41E-05	5.41E-02	4.50E-06	3.41E-04	9.13E-04	1.59E-04	4.38E-04	2.82E-04	2.90E-04	2.60E-05	3.90E-05	1.09E-08	1.48E-04	5.33E-05
11	D75	80	Passenger Truck	278	0.00E+00	4.34E-06	4.61E-07	1.79E+01	2.78E-05	9.95E-02	9.11E-06	1.01E-03	1.64E-03	2.91E-04	8.71E-04	5.66E-04	5.80E-04	1.25E-04	8.93E-05	2.43E-08	2.92E-04	1.65E-04
11	D75	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.85E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	D75	80	Combination Short Haul Truck	9	0.00E+00	4.14E-06	2.96E-07	3.42E+00	1.31E-08	3.67E-03	3.02E-06	4.23E-03	2.50E-04	6.17E-05	2.46E-04	8.74E-05	8.67E-05	5.16E-04	1.15E-05	0.00E+00	1.60E-04	7.98E-04
11	D75	80	Combination Long Haul Truck	9	0.00E+00	3.71E-06	2.49E-07	3.16E+00	1.51E-08	3.80E-03	2.81E-06	4.11E-03	2.45E-04	4.93E-05	2.55E-04	7.52E-05	7.56E-05	4.83E-04	1.06E-05	0.00E+00	1.79E-04	7.74E-04
11	D76	80	Passenger Car	199	0.00E+00	2.43E-06	2.63E-07	9.29E+00	1.69E-05	6.49E-02	5.40E-06	4.09E-04	1.10E-03	1.91E-04	5.26E-04	3.39E-04	3.48E-04	3.12E-05	4.68E-05	1.31E-08	1.78E-04	6.40E-05
11	D76	80	Passenger Truck	334	0.00E+00	5.21E-06	5.53E-07	2.15E+01	3.34E-05	1.19E-01	1.09E-05	1.22E-03	1.97E-03	3.49E-04	1.05E-03	6.79E-04	6.96E-04	1.50E-04	1.07E-04	2.92E-08	3.50E-04	1.99E-04
11	D76	80	Single Unit Short Haul Truck	34	0.00E+00	6.28E-06	3.12E-07	6.16E+00	5.06E-06	1.23E-02	6.69E-06	3.21E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.48E-05	9.86E-09	5.75E-04	6.01E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.14E-04	2.91E-07	1.37E-04	1.80E-05	3.94E-06	3.34E-05	8.01E-06	8.14E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.57E-05
11	D76	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.23E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.55E-03
11	D76	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	7.99E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	D77	80	Passenger Car	71	0.00E+00	8.61E-07	9.32E-08	3.30E+00	5.99E-06	2.30E-02	1.91E-06	1.45E-04	3.89E-04	6.76E-05	1.86E-04	1.20E-04	1.23E-04	1.11E-05	1.66E-05	4.65E-09	6.31E-05	2.27E-05
11	D77	80	Passenger Truck	118	0.00E+00	1.85E-06	1.96E-07	7.62E+00	1.18E-05	4.24E-02	3.88E-06	4.31E-04	6.97E-04	1.24E-04	3.71E-04	2.41E-04	2.47E-04	5.32E-05	3.80E-05	1.04E-08	1.24E-04	7.04E-05
11	D77	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.35E-03	3.44E-06	1.65E-03	2.03E-04	4.59E-05	3.93E-04	9.57E-05	9.73E-05	3.18E-04	1.28E-05	5.07E-09	2.96E-04	3.09E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.41E-07	6.92E-09	1.34E-01	1.11E-07	2.64E-04	1.49E-07	7.07E-05	9.27E-06	2.03E-06	1.72E-05	4.12E-06	4.19E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.32E-05
11	D77	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.76E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.09E-04
11	D77	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.65E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.88E-04
11	D78	80	Passenger Car	154	0.00E+00	1.88E-06	2.04E-07	7.20E+00	1.31E-05	5.03E-02	4.18E-06	3.17E-04	8.49E-04	1.48E-04	4.07E-04	2.63E-04	2.69E-04	2.42E-05	3.62E-05	1.02E-08	1.38E-04	4.96E-05
11	D78	80	Passenger Truck	259	0.00E+00	4.04E-06	4.29E-07	1.66E+01	2.59E-05	9.26E-02	8.47E-06	9.42E-04	1.52E-03	2.70E-04	8.11E-04	5.26E-04	5.39E-04	1.16E-04	8.31E-05	2.26E-08	2.71E-04	1.54E-04
11	D78	80	Single Unit Short Haul Truck	34	0.00E+00	6.28E-06	3.12E-07	6.16E+00	5.06E-06	1.23E-02	6.69E-06	3.21E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.48E-05	9.86E-09	5.75E-04	6.01E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.14E-04	2.91E-07	1.37E-04	1.80E-05	3.94E-06	3.34E-05	8.01E-06	8.14E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.57E-05
11	D78	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.23E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.55E-03
11	D78	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	7.99E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
10	D79	70	Passenger Car	232	0.00E+00	3.04E-06	3.29E-07	1.12E+01	2.11E-05	7.94E-02	6.76E-06	4.65E-04	1.80E-03	2.89E-04	6.58E-04	4.24E-04	4.35E-04	4.16E-05	5.60E-05	1.53E-08	2.23E-04	7.27E-05
10	D79	70	Passenger Truck	389	0.00E+00	6.66E-06	7.05E-07	2.57E+01	4.21E-05	1.46E-01	1.38E-05	1.45E-03	3.27E-03	5.32E-04	1.32E-03	8.58E-04	8.79E-04	1.88E-04	1.28E-04	3.42E-08	4.40E-04	2.39E-04
10	D79	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.66E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.11E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.14E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	D79	70	Combination Short Haul Truck	7	0.00E+00	3.81E-06	2.71E-07	2.76E+00	1.24E-08	3.28E-03	2.79E-06	3.99E-03	2.90E-04	6.33E-05	2.32E-04	8.01E-05	8.00E-05	4.16E-04	9.24E-06	0.00E+00	1.52E-04	7.52E-04
10	D79	70	Combination Long Haul Truck	7	0.00E+00	3.44E-06	2.30E-07	2.58E+00	1.43E-08	3.47E-03	2.61E-06	3.93E-03	2.88E-04	5.25E-05	2.40E-04	6.96E-05	7.03E-05	3.94E-04	8.63E-06	0.00E+00	1.70E-04	7.41E-04
10	D80	70	Passenger Car	224	0.00E+00	2.93E-06	3.17E-07	1.07E+01	2.04E-05	7.64E-02	6.51E-06	4.48E-04	1.73E-03	2.78E-04	6.33E-04	4.08E-04	4.19E-04	4.00E-05	5.39E-05	1.47E-08	2.14E-04	7.00E-05
10	D80	70	Passenger Truck	374	0.00E+00	6.41E-06	6.79E-07	2.47E+01	4.06E-05	1.41E-01	1.33E-05	1.40E-03	3.15E-03	5.13E-04	1.27E-03	8.27E-04	8.47E-04	1.82E-04	1.23E-04	3.29E-08	4.24E-04	2.30E-04
10	D80	70	Single Unit Short Haul Truck	29	0.00E+00	6.75E-06	3.38E-07	5.29E+00	5.52E-06	1.06E-02	7.19E-06	3.32E-03	4.75E-04	9.51E-05	8.19E-04	2.02E-04	2.05E-04	5.30E-04	2.13E-05	8.61E-09	6.14E-04	6.22E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	2.94E-07	1.46E-08	2.24E-01	2.38E-07	4.44E-04	3.13E-07	1.43E-04	2.17E-05	4.23E-06	3.58E-05	8.74E-06	8.89E-06	2.24E-05	9.06E-07	3.63E-10	2.69E-05	2.68E-05
10	D80	70	Combination Short Haul Truck	18	0.00E+00	9.25E-06	6.57E-07	6.71E+00	3.01E-08	7.96E-03	6.78E-06	9.69E-03	7.04E-04	1.54E-04	5.63E-04	1.95E-04	1.94E-04	1.01E-03	2.24E-05	0.00E+00	3.69E-04	1.83E-03
10	D80	70	Combination Long Haul Truck	16	0.00E+00	8.36E-06	5.59E-07	6.26E+00	3.46E-08	8.44E-03	6.35E-06	9.55E-03	6.99E-04	1.28E-04	5.83E-04	1.69E-04	1.71E-04	9.56E-04	2.10E-05	0.00E+00	4.12E-04	1.80E-03
9	F31	60	Passenger Car	681	0.00E+00	1.02E-05	1.11E-06	3.42E+01	7.11E-05	2.66E-01	2.27E-05	1.39E-03	6.91E-03	1.06E-03	2.21E-03	1.43E-03	1.46E-03	1.42E-04	1.71E-04	4.72E-08	7.48E-04	2.17E-04
9	F31	60	Passenger Truck	1140	0.00E+00	2.25E-05	2.38E-06	7.80E+01	1.41E-04	4.73E-01	4.64E-05	4.53E-03	1.27E-02	1.97E-03	4.42E-03	2.88E-03	2.95E-03	6.04E-04	3.87E-04	1.07E-07	1.47E-03	7.50E-04
9	F31	60	Single Unit Short Haul Truck	35	0.00E+00	1.04E-05	5.20E-07	6.63E+00	8.58E-06	1.28E-02	1.11E-05	4.95E-03	8.43E-04	1.53E-04	1.26E-03	3.12E-04	3.17E-04	6.63E-04	2.68E-05	1.10E-08	9.47E-04	9.28E-04
9	F31	60	Single Unit Long Haul Truck	2	0.00E+00	4.54E-07	2.26E-08	2.83E-01	3.73E-07	5.45E-04	4.85E-07	2.14E-04	3.78E-05	6.76E-06	5.54E-05	1.36E-05	1.38E-05	2.83E-05	1.14E-06	4.69E-10	4.16E-05	4.01E-05
9	F31	60	Combination Short Haul Truck	39	0.00E+00	2.28E-05	1.59E-06	1.48E+01	8.06E-08	1.99E-02	1.69E-05	2.46E-02	2.12E-03	4.20E-04	1.45E-03	4.73E-04	4.73E-04	2.23E-03	4.96E-05	0.00E+00	9.75E-04	4.64E-03
9	F31	60	Combination Long Haul Truck	35	0.00E+00	2.04E-05	1.33E-06	1.39E+01	9.25E-08	2.15E-02	1.58E-05	2.44E-02	2.13E-03	3.62E-04	1.49E-03	4.06E-04	4.11E-04	2.12E-03	4.65E-05	0.00E+00	1.08E-03	4.60E-03
9	F32	60	Passenger Car	779	0.00E+00	1.17E-05	1.26E-06	3.91E+01	8.14E-05	3.04E-01	2.60E-05	1.59E-03	7.91E-03	1.21E-03	2.53E-03	1.63E-03	1.67E-03	1.63E-04	1.96E-04	5.40E-08	8.57E-04	2.48E-04
9	F32	60	Passenger Truck	1305	0.00E+00	2.58E-05	2.72E-06	8.93E+01	1.61E-04	5.42E-01	5.31E-05	5.18E-03	1.45E-02	2.25E-03	5.05E-03	3.29E-03	3.37E-03	6.91E-04	4.43E-04	1.22E-07	1.68E-03	8.58E-04
9	F32	60	Single Unit Short Haul Truck	43	0.00E+00	1.27E-05	6.33E-07	8.06E+00	1.04E-05	1.56E-02	1.35E-05	6.02E-03	1.03E-03	1.86E-04	1.54E-03	3.80E-04	3.86E-04	8.07E-04	3.26E-05	1.34E-08	1.15E-03	1.13E-03
9	F32	60	Single Unit Long Haul Truck	2	0.00E+00	5.53E-07	2.75E-08	3.44E-01	4.53E-07	6.62E-04	5.90E-07	2.61E-04	4.60E-05	8.22E-06	6.74E-05	1.65E-05	1.68E-05	3.44E-05	1.39E-06	5.71E-10	5.06E-05	4.88E-05
9	F32	60	Combination Short Haul Truck	22	0.00E+00	1.32E-05	9.22E-07	8.61E+00	4.69E-08	1.16E-02	9.82E-06	1.43E-02	1.23E-03	2.44E-04	8.42E-04	2.75E-04	2.75E-04	1.30E-03	2.88E-05	0.00E+00	5.67E-04	2.70E-03
9	F32	60	Combination Long Haul Truck	21	0.00E+00	1.19E-05	7.73E-07	8.07E+00	5.37E-08	1.25E-02	9.16E-06	1.42E-02	1.24E-03	2.10E-04	8.68E-04	2.36E-04	2.39E-04	1.23E-03	2.70E-05	0.00E+00	6.29E-04	2.67E-03
9	F33	60	Pass

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	G10	70	Single Unit Short Haul Truck	79	0.00E+00	1.85E-05	9.25E-07	1.45E+01	1.51E-05	2.89E-02	1.97E-05	9.08E-03	1.30E-03	2.60E-04	2.24E-03	5.52E-04	5.61E-04	1.45E-03	5.83E-05	2.35E-08	1.68E-03	1.70E-03
53	G10	70	Single Unit Long Haul Truck	3	0.00E+00	8.04E-07	4.00E-08	6.13E-01	6.51E-07	1.21E-03	8.57E-07	3.91E-04	5.93E-05	1.16E-05	9.79E-05	2.39E-05	2.43E-05	6.13E-05	2.48E-06	9.92E-10	7.36E-05	7.31E-05
53	G10	70	Combination Short Haul Truck	53	0.00E+00	2.75E-05	1.95E-06	1.99E+01	8.93E-08	2.37E-02	2.02E-05	2.88E-02	2.09E-03	4.56E-04	1.67E-03	5.78E-04	5.77E-04	3.00E-03	6.67E-05	0.00E+00	1.10E-03	5.42E-03
53	G10	70	Combination Long Haul Truck	48	0.00E+00	2.48E-05	1.66E-06	1.86E+01	1.03E-07	2.51E-02	1.89E-05	2.84E-02	2.08E-03	3.79E-04	1.73E-03	5.02E-04	5.07E-04	2.84E-03	6.23E-05	0.00E+00	1.22E-03	5.34E-03
16	H01	100	Passenger Car	3105	0.00E+00	3.40E-05	3.68E-06	1.40E+02	2.37E-04	9.36E-01	7.57E-05	6.63E-03	1.01E-02	2.03E-03	7.37E-03	4.75E-03	4.87E-03	3.89E-04	7.06E-04	1.94E-07	2.49E-03	1.04E-03
16	H01	100	Passenger Truck	5199	0.00E+00	7.35E-05	7.82E-06	3.30E+02	4.81E-04	1.88E+00	1.56E-04	1.89E-02	1.78E-02	3.78E-03	1.50E-02	9.74E-03	9.98E-03	2.10E-03	1.65E-03	4.53E-07	5.05E-03	3.05E-03
16	H01	100	Single Unit Short Haul Truck	734	0.00E+00	9.85E-05	4.88E-06	1.34E+02	8.60E-05	3.10E-01	1.07E-04	5.32E-02	5.06E-03	1.47E-03	1.22E-02	3.02E-03	3.07E-03	1.35E-02	5.38E-04	2.20E-07	9.12E-03	9.94E-03
16	H01	100	Single Unit Long Haul Truck	32	0.00E+00	4.27E-06	2.08E-07	5.64E+00	3.56E-06	1.27E-02	4.61E-06	2.24E-03	2.29E-04	6.36E-05	5.31E-04	1.28E-04	1.30E-04	5.65E-04	2.27E-05	9.00E-09	4.02E-04	4.19E-04
16	H01	100	Combination Short Haul Truck	663	0.00E+00	2.28E-04	1.66E-05	2.40E+02	6.48E-07	2.22E-01	1.64E-04	2.42E-01	7.72E-03	2.75E-03	1.28E-02	4.87E-03	4.79E-03	3.61E-02	8.02E-04	0.00E+00	7.97E-03	4.57E-02
16	H01	100	Combination Long Haul Truck	604	0.00E+00	1.98E-04	1.36E-05	2.17E+02	7.50E-07	2.22E-01	1.48E-04	2.30E-01	7.14E-03	1.99E-03	1.30E-02	4.07E-03	4.06E-03	3.31E-02	7.27E-04	0.00E+00	8.93E-03	4.34E-02
16	H02	100	Passenger Car	3105	0.00E+00	3.40E-05	3.68E-06	1.40E+02	2.37E-04	9.36E-01	7.57E-05	6.63E-03	1.01E-02	2.03E-03	7.37E-03	4.75E-03	4.87E-03	3.89E-04	7.06E-04	1.94E-07	2.49E-03	1.04E-03
16	H02	100	Passenger Truck	5199	0.00E+00	7.35E-05	7.82E-06	3.30E+02	4.81E-04	1.88E+00	1.56E-04	1.89E-02	1.78E-02	3.78E-03	1.50E-02	9.74E-03	9.98E-03	2.10E-03	1.65E-03	4.53E-07	5.05E-03	3.05E-03
16	H02	100	Single Unit Short Haul Truck	734	0.00E+00	9.85E-05	4.88E-06	1.34E+02	8.60E-05	3.10E-01	1.07E-04	5.32E-02	5.06E-03	1.47E-03	1.22E-02	3.02E-03	3.07E-03	1.35E-02	5.38E-04	2.20E-07	9.12E-03	9.94E-03
16	H02	100	Single Unit Long Haul Truck	32	0.00E+00	4.27E-06	2.08E-07	5.64E+00	3.56E-06	1.27E-02	4.61E-06	2.24E-03	2.29E-04	6.36E-05	5.31E-04	1.28E-04	1.30E-04	5.65E-04	2.27E-05	9.00E-09	4.02E-04	4.19E-04
16	H02	100	Combination Short Haul Truck	663	0.00E+00	2.28E-04	1.66E-05	2.40E+02	6.48E-07	2.22E-01	1.64E-04	2.42E-01	7.72E-03	2.75E-03	1.28E-02	4.87E-03	4.79E-03	3.61E-02	8.02E-04	0.00E+00	7.97E-03	4.57E-02
16	H02	100	Combination Long Haul Truck	604	0.00E+00	1.98E-04	1.36E-05	2.17E+02	7.50E-07	2.22E-01	1.48E-04	2.30E-01	7.14E-03	1.99E-03	1.30E-02	4.07E-03	4.06E-03	3.31E-02	7.27E-04	0.00E+00	8.93E-03	4.34E-02
16	H03	100	Passenger Car	3008	0.00E+00	3.30E-05	3.57E-06	1.35E+02	2.30E-04	9.07E-01	7.33E-05	6.43E-03	9.76E-03	1.97E-03	7.14E-03	4.60E-03	4.72E-03	3.77E-04	6.84E-04	1.88E-07	2.42E-03	1.00E-03
16	H03	100	Passenger Truck	5038	0.00E+00	7.12E-05	7.58E-06	3.19E+02	4.66E-04	1.83E+00	1.51E-04	1.83E-02	1.73E-02	3.66E-03	1.46E-02	9.44E-03	9.67E-03	2.03E-03	1.60E-03	4.39E-07	4.89E-03	2.96E-03
16	H03	100	Single Unit Short Haul Truck	518	0.00E+00	6.96E-05	3.44E-06	9.46E+01	6.07E-05	2.19E-01	7.53E-05	3.76E-02	3.57E-03	1.04E-03	8.61E-03	2.13E-03	2.17E-03	9.54E-03	3.80E-04	1.55E-07	6.44E-03	7.02E-03
16	H03	100	Single Unit Long Haul Truck	23	0.00E+00	3.02E-06	1.47E-07	3.98E+00	2.51E-06	8.94E-03	3.25E-06	1.58E-03	1.62E-04	4.49E-05	3.75E-04	9.01E-05	9.16E-05	3.99E-04	1.60E-05	6.36E-09	2.84E-04	2.96E-04
16	H03	100	Combination Short Haul Truck	536	0.00E+00	1.84E-04	1.34E-05	1.94E+02	5.24E-07	1.80E-01	1.33E-04	1.96E-01	6.24E-03	2.22E-03	1.03E-02	3.94E-03	3.87E-03	2.92E-02	6.49E-04	0.00E+00	6.45E-03	3.69E-02
16	H03	100	Combination Long Haul Truck	489	0.00E+00	1.60E-04	1.10E-05	1.76E+02	6.07E-07	1.80E-01	1.20E-04	1.86E-01	5.78E-03	1.61E-03	1.05E-02	3.29E-03	3.28E-03	2.68E-02	5.88E-04	0.00E+00	7.22E-03	3.51E-02
16	H04	100	Passenger Car	2001	0.00E+00	2.19E-05	2.37E-06	9.00E+01	1.53E-04	6.03E-01	4.88E-05	4.28E-03	6.49E-03	1.31E-03	4.75E-03	3.06E-03	3.14E-03	2.51E-04	4.55E-04	1.25E-07	1.61E-03	6.68E-04
16	H04	100	Passenger Truck	3351	0.00E+00	4.73E-05	5.04E-06	2.12E+02	3.10E-04	1.21E+00	1.01E-04	1.22E-02	1.15E-02	2.44E-03	9.69E-03	6.28E-03	6.43E-03	1.35E-03	1.06E-03	2.92E-07	3.26E-03	1.97E-03
16	H04	100	Single Unit Short Haul Truck	534	0.00E+00	7.18E-05	3.55E-06	9.76E+01	6.26E-05	2.26E-01	7.77E-05	3.88E-02	3.68E-03	1.07E-03	8.88E-03	2.20E-03	2.24E-03	9.84E-03	3.92E-04	1.60E-07	6.64E-03	7.24E-03
16	H04	100	Single Unit Long Haul Truck	24	0.00E+00	3.11E-06	1.51E-07	4.11E+00	2.59E-06	9.23E-03	3.36E-06	1.63E-03	1.67E-04	4.63E-05	3.87E-04	9.29E-05	9.44E-05	4.12E-04	1.65E-05	6.56E-09	2.92E-04	3.05E-04
16	H04	100	Combination Short Haul Truck	530	0.00E+00	1.82E-04	1.33E-05	1.92E+02	5.18E-07	1.78E-01	1.31E-04	1.94E-01	6.17E-03	2.20E-03	1.02E-02	3.89E-03	3.83E-03	2.89E-02	6.41E-04	0.00E+00	6.37E-03	3.65E-02
16	H04	100	Combination Long Haul Truck	483	0.00E+00	1.58E-04	1.09E-05	1.74E+02	6.00E-07	1.77E-01	1.19E-04	1.84E-01	5.71E-03	1.59E-03	1.04E-02	3.25E-03	3.25E-03	2.65E-02	5.81E-04	0.00E+00	7.14E-03	3.47E-02
56	H05	100	Passenger Car	1008	0.00E+00	1.11E-05	1.20E-06	4.53E+01	7.69E-05	3.04E-01	2.46E-05	2.15E-03	3.27E-03	6.59E-04	2.39E-03	1.54E-03	1.58E-03	1.26E-04	2.29E-04	6.31E-08	8.09E-04	3.37E-04
56	H05	100	Passenger Truck	1688	0.00E+00	2.38E-05	2.54E-06	1.07E+02	1.56E-04	6.12E-01	5.07E-05	6.13E-03	5.78E-03	1.23E-03	4.88E-03	3.16E-03	3.24E-03	6.81E-04	5.36E-04	1.47E-07	1.64E-03	9.91E-04
56	H05	100	Single Unit Short Haul Truck	274	0.00E+00	3.68E-05	1.82E-06	5.00E+01	3.21E-05	1.16E-01	3.98E-05	1.99E-02	1.89E-03	5.49E-04	4.55E-03	1.13E-03	1.15E-03	5.04E-03	2.01E-04	8.21E-08	3.40E-03	3.71E-03
56	H05	100	Single Unit Long Haul Truck	12	0.00E+00	1.59E-06	7.75E-08	2.11E+00	1.33E-06	4.73E-03	1.72E-06	8.37E-04	8.54E-05	2.37E-05	1.98E-04	4.76E-05	4.84E-05	2.11E-04	8.48E-06	3.36E-09	1.50E-04	1.56E-04
56	H05	100	Combination Short Haul Truck	218	0.00E+00	7.49E-05	5.47E-06	7.89E+01	2.13E-07	7.31E-02	5.41E-05	7.98E-02	2.54E-03	9.04E-04	4.20E-03	1.60E-03	1.58E-03	1.19E-02	2.64E-04	0.00E+00	2.62E-03	1.50E-02
56	H05	100	Combination Long Haul Truck	199	0.00E+00	6.52E-05	4.47E-06	7.14E+01	2.47E-07	7.30E-02	4.89E-05	7.58E-02	2.35E-03	6.54E-04	4.27E-03	1.34E-03	1.34E-03	1.09E-02	2.39E-04	0.00E+00	2.94E-03	1.43E-02
56	H06	100	Passenger Car	993	0.00E+00	1.09E-05	1.18E-06	4.47E+01	7.58E-05	2.99E-01	2.42E-05	2.12E-03	3.22E-03	6.49E-04	2.36E-03	1.52E-03	1.56E-03	1.24E-04	2.26E-04	6.22E-08	7.97E-04	3.32E-04
56	H06	100	Passenger Truck	1663	0.00E+00	2.35E-05	2.50E-06	1.05E+02	1.54E-04	6.03E-01	5.00E-05	6.03E-03	5.70E-03	1.21E-03	4.81E-03	3.12E-03	3.19E-03	6.70E-04	5.28E-04	1.45E-07	1.62E-03	9.76E-04
56	H06	100	Single Unit Short Haul Truck	261	0.00E+00	3.50E-05	1.73E-06	4.76E+01	3.05E-05	1.10E-01	3.79E-05	1.89E-02	1.80E-03	5.23E-04	4.33E-03	1.07E-03	1.09E-03	4.80E-03	1.91E-04	7.81E-08	3.24E-03	3.53E-03
56	H06	100	Single Unit Long Haul Truck	11	0.00E+00	1.52E-06	7.37E-08	2.00E+00	1.26E-06	4.50E-03	1.64E-06	7.96E-04	8.12E-05	2.26E-05	1.89E-04	4.53E-05	4.60E-05	2.01E-04	8.07E-06	3.20E-09	1.43E-04	1.49E-04
56	H06	100	Combination Short Haul Truck	312	0.00E+00	1.07E-04	7.82E-06	1.13E+02	3.05E-07	1.04E-01	7.73E-05	1.14E-01	3.63E-03	1.29E-03	6.00E-03	2.29E-03	2.25E-03	1.70E-02	3.77E-04	0.00E+00	3.75E-03	2.15E-02
56	H06	100	Combination Long Haul Truck	284	0.00E+00	9.32E-05	6.39E-06	1.02E+02	3.53E-07	1.04E-01	6.98E-05	1.08E-01	3.36E-03	9.34E-04	6.11E-03	1.91E-03	1.91E-03	1.56E-02	3.42E-04	0.00E+00	4.20E-03	2.04E-02
16	H07	100	Passenger Car	2040	0.00E+00	2.24E-05	2.42E-06	9.18E+01	1.56E-04	6.15E-01	4.97E-05	4.36E-03	6.62E-03	1.33E-03	4.84E-03	3.12E-03	3.20E-03	2.56E-04	4.64E-04	1.28E-07	1.64E-03	6.81E-04
16	H07	100	Passenger Truck	3417	0.00E+00	4.83E-05	5.14E-06	2.17E+02	3.16E-04	1.24E+00	1.03E-04	1.24E-02	1.17E-02	2.48E-03	9.88E-03	6.40E-03	6.56E-03	1.38E-03	1.09E-03	2.97E-07	3.32E-03	2.01E-03
16	H07	100	Single Unit Short Haul Truck	533	0.00E+00	7.17E-05	3.55E-06	9.74E+01	6.25E-05	2.26E-01	7.76E-05	3.87E-02	3.68E-03	1.07E-03	8.86E-03	2.20E-03	2.23E-03	9.82E-03	3.91E-04	1.60E-07	6.63E-03	7.23E-03
16	H07	100	Single Unit Long Haul Truck	24	0.00E+00	3.11E-06	1.51E-07	4.10E+00	2.59E-06	9.21E-03	3.35E-06	1.63E-03	1.66E-04	4.62E-05	3.86E-04	9.28E-05	9.43E-05	4.11E-04	1.65E-05	6.55E-09	2.92E-04	3.04E-04
16	H07	100	Combination Short Haul Truck	527	0.00E+00	1.81E-04	1.32E-05	1.90E+02	5.15E-07	1.77E-01	1.31E-04	1.93E-01	6.13E-03	2.18E-03	1.01E-02	3.87E-03	3.81E-03	2.87E-02	6.38E-04	0.00E+00	6.33E-03	3.63E-02
16	H07	100	Combination Long Haul Truck	480	0.00E+00	1.57E-04	1.08E-05	1.73E+02	5.96E-07	1.76E-01	1.18E-04	1.83E-01	5.68E-03	1.58E-03	1.03E-02	3.23E-03	3.23E-03	2.63E-02	5.78E-04	0.00E+00	7.10E-03	3.45E-02
52	H08	60	Passenger Car	246	0.00E+00	3.40E-06	3.68E-07	1.24E+01	2.36E-05	8.77E-02	7.55E-06	4.84E-04	2.43E-03	3.74E-04	7.35E-04	4.74E-04	4.86E-04	5.15E-05	6.19E-05	1.66E-08	2.49E-04	7.56E-05
52	H08	60	Passenger Truck	413	0.00E+00	7.46E-06	7.88E-07	2.82E+01	4.65E-05	1.57E-01	1.54E-05	1.56E-03	4.33E-03	6.70E-04	1.46E-03	9.51E-04	9.74E-04	2.14E-04	1.40E-04	3.51E-08	4.85E-04	2.57E-04
52	H08	60	Single Unit Short Haul Truck	21	0.00E+00	6.19E-06	3.09E-07	3.94E+00	5.10E-06	7.63E-03	6.60E-06	2.94E-03	5.01E-04	9.09E-05	7.52E-04	1.86E-04	1.89E-04	3.94E-04	1.59E-05	6.56E-09	5.63E-04	5.52E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	2.70E-07	1.34E-08	1.68E-01	2.22E-07	3.24E-04	2.88E-07	1.27E-04	2.25E-05	4.02E-06	3.29E-05	8.07E-06	8.21E-06	1.68E-05	6.80E-07	2.79E-10	2.47E-05	2.39E-05
52	H08	60	Combination Short Haul Truck	37	0.00E+00	2.15E-05	1.50E-06	1.40E+01	7.63E-08	1.88E-02	1.60E-05	2.33E-02	2.01E-03	3.97E-04	1.37E-03	4.47E-04	4.48E-04	2.11E-03	4.69E-05	0.00E+00	9.23E-04	4.39E-03
52	H08	60	Combination Long Haul Truck	33	0.00E+00	1.93E-05	1.26E-06	1.31E+01	8.75E-08	2.03E-02	1.49E-05	2.31E-02	2.02E-03	3.42E-04	1.41E-03	3.84E-04	3.89E-04	2.01E-03	4.40E-05	0.00E+00	1.02E-03	4.35E-03
50	H09	40	Passenger Car	181	0.00E+00	3.05E-06	3.30E-07	1.05E+01	2.12E-05	7.88E-02	6.79E-06	3.28E-04	3.14E-03	4.48E-04	6.61E-04	4.26E-04	4.37E-04	5.68E-05	5.23E-05	1.27E-08	2.24E-04	5.12E-05
50	H09	40	Passenger Truck	304	0.00E+00	6.98E-06	7.32E-07	2.35E+01	4.19E-05	1.36E-01	1.40E-05	1.24E-03	5.57E-03	7.92E-04	1.32E-03	8.62E-04	8.82E-04	2.01E-04	1.16E-04	2.47E-08	4.35E-04	2.10E-04
50	H09	40	Single Unit Short Haul Truck	2	0.00E+00	8.50E-07	4.46E-08	4.08E-01	7.41E-07	7.03E-04	9.04E-07	4.15E-04	7.76E-05	1.29E-05	1.01E-04	2.65E-05	2.70E-05	4.12E-05	1.65E-06	6.98E-10	7.36E-05	7.78E-05
50	H09	40	Combination Short Haul Truck	73	0.00E+00	6.44E-05	4.47E-06	3.27E+01	2.32E-07	5.62E-02	4.79E-05	7.17E-02	7.49E-03	1.35E-03	4.17E-03	1.33E-03	1.35E-03	4.93E-03	1.09E-04	0.00E+00	2.83E-03	1.35E-02
50	H09	40	Combination Long Haul Truck	66	0.00E+00	5.87E-05	3.83E-06	3.11E+01	2.63E-07	6.23E-02	4.52E-05	7.18E-02	7.52E-03	1.20E-03	4.30E-03	1.17E-03	1.19E-03	4.75E-03	1.04E-04	0.00E+00	3.11E-03	1.35E-02
53	H14	70	Passenger Car	147	0.00E+00	1.87E-06	2.02E-07	7.16E+00	1.30E-05	4.84E-02	4.15E-06	3.00E-04	1.12E-03	1.81E-04	4.04E-04	2.61E-04	2.68E-04	2.64E-05	3.59E-05	9.79E-09	1.37E-04	4.69E-05
53	H14	70	Passenger Truck	247	0.00E+00	4.07E-06	4.31E-07	1.65E+01	2.58E-05	8.88E-02	8.46E-06	9.19E-04	2.02E-03	3.30E-04	8.07E-04	5.25E-04	5.38E-04	1.19E-04	8.21E-05	2.15E-08	2.69E-04	1.51E-04
53	H14	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.35E-03	4.32E-06	1.99E-03	2.85E-04	5.71E-05	4.91E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.73E-04
53	H14	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	8.78E-09	1.35E-01	1.43E-07	2.67E-04	1.88E-07	8.57E-05	1.30E-05	2.54E-06	2.15E-05	5.24E-06	5.33E-06	1.35E-05	5.44E-07	2.18E-10	1.61E-05	1.61E-05
53	H14	70	Combination Short Haul Truck	19	0.00E+00	1.01E-05	7.15E-07	7.30E+00	3.27E-08	8.67E-03	7.38E-06	1.05E-02	7.66E-04	1.67E-04	6.13E-04	2.12E-04	2.11E-04	1.10E-03	2.44E-05	0.00E+00	4.02E-04	1.99E-03
53	H14	70	Combination Long Haul Truck	18	0.00E+00	9.10E-06	6.08E-07	6.81E+00	3.77E-08	9.18E-03	6.91E-06	1.04E-02	7.61E-04	1.39E-04	6.34E-04	1.84E-04	1.86E-04	1.04E-03	2.28E-05	0.00E+00	4.48E-04	1.96E-03
53	H16	70	Passenger Car	464	0.00E+00	5.88E-06	6.36E-07	2.25E+01	4.09E-05	1.52E-01	1.31E-05	9.45E-04	3.54E-03	5.71E-04	1.27E-03	8.20E-04	8.42E-04	8.30E-05	1.13E-04	3.08E-08	4.31E-04	1.48E-04
53	H16	70	Passenger Truck	776	0.00E+00	1.28E-05	1.36E-06	5.19E+01	8.11E-05	2.80E-01	2.66E-05	2.89E-03	6.35E-03	1.04E-03	2.54E-03	1.65E-03	1.69E-03	3.74E-04	2.59E-04	6.77E-08	8.48E-04	4.74E-04
53	H16	70	Single Unit Short Haul Truck	33	0.00E+00	7.65E-06	3.83E-07	5.99E+00	6.26E-06	1.20E-02	8.15E-06	3.77E-03	5.38E-04	1.08E-04	9.28E-04	2.29E-04	2.33E-04	6.01E-04	2.42E-05	9.76E-09	6.96E-04	7.05E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.66E-08	2.54E-01	2.70E-07	5.04E-04	3.55E-07	1.62E-04	2.46E-05	4.80E-06	4.06E-05	9.91E-06	1.01E-05	2.54E-05	1.03E-06	4.11E-10	3.05E-05	3.03E-05
53	H16	70	Combination Short Haul Truck	32	0.00E+00	1.69E-05	1.20E-06	1.22E+01	5.48E-08	1.45E-02	1.24E-05	1.77E-02	1.28E-03	2.80E-04	1.03E-03	3.55E-04	3.54E-04	1.84E-03	4.09E-05	0.00E+00	6.73E-04	3.33E-03
53	H16	70	Combination Long Haul Truck	30	0.00E+00	1.52E-05	1.02E-06	1.14E+01	6.31E-08	1.54E-02	1.16E-05	1.74E-02	1.27E-03	2.33E-04	1.06E-03	3.08E-04	3.11E-04	1.74E-03	3.82E-05	0.00E+00	7.51E-04	3.28E-03

Appendix F.1.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B05	0.00E+00	1.38E-04	1.07E-05	2.76E+02	2.66E-04	1.12E+00	1.61E-04	1.10E-01	1.35E-02	3.21E-03	1.50E-02	7.32E-03	7.44E-03	1.67E-02	1.21E-03	2.65E-07	7.54E-03	2.05E-02
B06	0.00E+00	2.77E-05	2.57E-06	9.01E+01	1.23E-04	4.91E-01	4.69E-05	1.37E-02	5.07E-03	1.10E-03	4.49E-03	2.67E-03	2.73E-03	1.92E-03	4.36E-04	1.14E-07	1.77E-03	2.45E-03
B07	0.00E+00	3.55E-04	2.52E-05	5.46E+02	3.56E-04	1.62E+00	3.48E-04	3.15E-01	2.34E-02	6.10E-03	3.25E-02	1.31E-02	1.33E-02	4.98E-02	2.21E-03	4.23E-07	1.92E-02	5.90E-02
B08	0.00E+00	2.18E-04	1.54E-05	3.23E+02	1.95E-04	9.09E-01	2.08E-04	1.96E-01	1.36E-02	3.59E-03	1.94E-02	7.66E-03	7.72E-03	3.10E-02	1.29E-03	2.38E-07	1.16E-02	3.68E-02
D01	0.00E+00	1.82E-04	1.39E-05	2.45E+02	3.00E-04	1.15E+00	2.02E-04	1.57E-01	4.02E-02	6.60E-03	1.90E-02	8.80E-03	8.97E-03	1.44E-02	1.08E-03	2.23E-07	1.00E-02	2.93E-02
D02	0.00E+00	1.15E-04	8.89E-06	1.76E+02	2.49E-04	8.98E-01	1.42E-04	8.47E-02	2.91E-02	4.72E-03	1.37E-02	6.54E-03	6.68E-03	8.14E-03	8.00E-04	1.89E-07	7.00E-03	1.58E-02
D03	0.00E+00	1.27E-04	1.04E-05	2.38E+02	3.77E-04	1.33E+00	1.78E-04	7.83E-02	4.01E-02	6.39E-03	1.72E-02	8.97E-03	9.17E-03	7.74E-03	1.12E-03	2.83E-07	8.02E-03	1.45E-02
D04	0.00E+00	1.50E-04	1.14E-05	2.18E+02	2.96E-04	1.08E+00	1.79E-04	1.15E-01	3.58E-02	5.83E-03	1.72E-02	8.03E-03	8.19E-03	1.10E-02	9.77E-04	2.25E-07	8.99E-03	2.15E-02
D05	0.00E+00	1.59E-04	1.24E-05	2.53E+02	3.64E-04	1.31E+00	1.99E-04	1.15E-01	4.20E-02	6.77E-03	1.92E-02	9.38E-03	9.57E-03	1.10E-02	1.15E-03	2.75E-07	9.60E-03	2.14E-02
D06	0.00E+00	1.32E-04	1.03E-05	2.13E+02	3.15E-04	1.11E+00	1.70E-04	9.01E-02	3.53E-02	5.68E-03	1.65E-02	7.98E-03	8.15E-03	8.86E-03	9.76E-04	2.41E-07	8.34E-03	1.68E-02
D07	0.00E+00	1.29E-04	1.02E-05	2.51E+02	3.04E-04	1.16E+00	1.63E-04	8.97E-02	2.30E-02	4.31E-03	1.55E-02	7.77E-03	7.93E-03	1.13E-02	1.14E-03	2.71E-07	7.54E-03	1.66E-02
D08	0.00E+00	8.51E-05	6.86E-06	1.80E+02	2.33E-04	8.72E-01	1.15E-04	5.37E-02	1.67E-02	3.09E-03	1.10E-02	5.66E-03	5.78E-03	6.93E-03	8.36E-04	2.09E-07	5.27E-03	9.92E-03
D09	0.00E+00	8.84E-05	7.25E-06	1.91E+02	2.49E-04	9.37E-01	1.20E-04	5.65E-02	1.78E-02	3.30E-03	1.15E-02	6.02E-03	6.14E-03	7.14E-03	8.91E-04	2.19E-07	5.33E-03	1.04E-02
D10	0.00E+00	6.04E-05	5.07E-06	1.46E+02	2.03E-04	7.50E-01	8.96E-05	3.30E-02	1.37E-02	2.51E-03	8.69E-03	4.66E-03	4.76E-03	4.32E-03	6.92E-04	1.81E-07	3.92E-03	6.03E-03
D11	0.00E+00	1.24E-04	9.98E-06	2.50E+02	3.09E-04	1.17E+00	1.60E-04	8.49E-02	2.30E-02	4.29E-03	1.53E-02	7.77E-03	7.93E-03	1.07E-02	1.15E-03	2.74E-07	7.35E-03	1.57E-02
D12	0.00E+00	5.85E-05	4.85E-06	1.37E+02	1.87E-04	6.93E-01	8.47E-05	3.32E-02	1.28E-02	2.35E-03	8.21E-03	4.35E-03	4.44E-03	4.34E-03	6.45E-04	1.67E-07	3.76E-03	6.09E-03
D13	0.00E+00	5.25E-05	3.81E-06	6.90E+01	9.12E-05	3.23E-01	6.05E-05	3.94E-02	1.12E-02	1.83E-03	5.92E-03	2.57E-03	2.62E-03	3.85E-03	3.06E-04	7.20E-08	3.30E-03	7.36E-03
D14	0.00E+00	9.86E-05	7.51E-06	1.49E+02	2.13E-04	7.58E-01	1.22E-04	7.03E-02	2.46E-02	3.98E-03	1.18E-02	5.57E-03	5.69E-03	6.85E-03	6.78E-04	1.64E-07	6.13E-03	1.31E-02
D15	0.00E+00	1.04E-04	7.82E-06	1.54E+02	2.21E-04	7.78E-01	1.28E-04	7.30E-02	2.54E-02	4.11E-03	1.25E-02	5.79E-03	5.91E-03	7.19E-03	7.00E-04	1.71E-07	6.58E-03	1.36E-02
D16	0.00E+00	1.24E-04	9.32E-06	1.81E+02	2.53E-04	9.00E-01	1.50E-04	8.97E-02	2.97E-02	4.82E-03	1.46E-02	6.75E-03	6.89E-03	8.76E-03	8.16E-04	1.96E-07	7.75E-03	1.67E-02
D17	0.00E+00	1.34E-05	1.03E-06	2.17E+01	2.69E-05	9.93E-02	1.60E-05	9.84E-03	2.75E-03	4.73E-04	1.54E-03	7.26E-04	7.40E-04	1.09E-03	9.78E-05	2.25E-08	7.97E-04	1.83E-03
D18	0.00E+00	5.76E-05	4.40E-06	9.11E+01	1.10E-04	4.11E-01	6.74E-05	4.36E-02	1.15E-02	1.99E-03	6.42E-03	3.03E-03	3.09E-03	4.76E-03	4.08E-04	9.14E-08	3.34E-03	8.13E-03
D19	0.00E+00	1.15E-04	9.50E-06	2.63E+02	3.55E-04	1.32E+00	1.64E-04	6.72E-02	2.46E-02	4.53E-03	1.58E-02	8.35E-03	8.53E-03	8.70E-03	1.24E-03	3.16E-07	7.27E-03	1.23E-02
D20	0.00E+00	1.06E-04	7.80E-06	1.88E+02	2.23E-04	8.25E-01	1.30E-04	6.89E-02	1.67E-02	3.18E-03	1.29E-02	5.83E-03	5.95E-03	9.41E-03	8.51E-04	2.16E-07	6.91E-03	1.28E-02
D21	0.00E+00	6.44E-05	5.91E-06	1.92E+02	2.90E-04	1.07E+00	1.11E-04	2.73E-02	1.86E-02	3.34E-03	1.07E-02	6.25E-03	6.40E-03	3.50E-03	9.37E-04	2.51E-07	4.29E-03	4.89E-03
D22	0.00E+00	1.81E-04	1.28E-05	2.47E+02	2.17E-04	8.61E-01	1.87E-04	1.46E-01	2.08E-02	4.14E-03	1.79E-02	7.26E-03	7.37E-03	1.90E-02	1.04E-03	2.19E-07	1.05E-02	2.73E-02
D23	0.00E+00	1.19E-04	9.63E-06	2.26E+02	3.68E-04	1.27E+00	1.71E-04	6.62E-02	3.79E-02	6.03E-03	1.67E-02	8.60E-03	8.80E-03	6.82E-03	1.07E-03	2.80E-07	7.91E-03	1.22E-02
D24	0.00E+00	1.01E-04	7.45E-06	1.44E+02	2.05E-04	7.13E-01	1.23E-04	7.02E-02	2.36E-02	3.83E-03	1.21E-02	5.44E-03	5.55E-03	6.99E-03	6.52E-04	1.61E-07	6.54E-03	1.31E-02
D25	0.00E+00	9.98E-05	8.55E-06	2.20E+02	3.79E-04	1.31E+00	1.58E-04	4.64E-02	3.74E-02	5.89E-03	1.54E-02	8.43E-03	8.63E-03	4.93E-03	1.06E-03	2.85E-07	6.76E-03	8.48E-03
D26	0.00E+00	1.05E-04	8.37E-06	1.91E+02	3.06E-04	1.06E+00	1.47E-04	6.08E-02	3.20E-02	5.10E-03	1.44E-02	7.27E-03	7.43E-03	6.22E-03	8.97E-04	2.34E-07	6.96E-03	1.12E-02
D27	0.00E+00	2.52E-05	1.99E-06	4.94E+01	6.06E-05	2.29E-01	3.22E-05	1.70E-02	4.52E-03	8.46E-04	3.09E-03	1.54E-03	1.57E-03	2.18E-03	2.26E-04	5.48E-08	1.52E-03	3.16E-03
D28	0.00E+00	7.47E-05	6.01E-06	1.54E+02	1.94E-04	7.35E-01	9.83E-05	4.93E-02	1.42E-02	2.64E-03	9.41E-03	4.81E-03	4.91E-03	6.27E-03	7.10E-04	1.73E-07	4.50E-03	9.12E-03
D29	0.00E+00	2.52E-05	1.99E-06	4.94E+01	6.06E-05	2.29E-01	3.22E-05	1.70E-02	4.52E-03	8.46E-04	3.09E-03	1.54E-03	1.57E-03	2.18E-03	2.26E-04	5.48E-08	1.52E-03	3.16E-03
D30	0.00E+00	7.47E-05	6.01E-06	1.54E+02	1.94E-04	7.35E-01	9.83E-05	4.93E-02	1.42E-02	2.64E-03	9.41E-03	4.81E-03	4.91E-03	6.27E-03	7.10E-04	1.73E-07	4.50E-03	9.12E-03
D31	0.00E+00	2.54E-05	1.94E-06	4.67E+01	5.54E-05	2.09E-01	3.14E-05	1.74E-02	4.21E-03	7.96E-04	3.03E-03	1.45E-03	1.47E-03	2.27E-03	2.12E-04	5.14E-08	1.56E-03	3.23E-03
D32	0.00E+00	5.10E-05	3.97E-06	9.48E+01	1.12E-04	4.27E-01	6.28E-05	3.60E-02	8.60E-03	1.62E-03	6.00E-03	2.92E-03	2.98E-03	4.59E-03	4.29E-04	1.01E-07	3.02E-03	6.68E-03
D33	0.00E+00	5.41E-05	3.95E-06	7.21E+01	9.57E-05	3.40E-01	6.26E-05	4.07E-02	1.17E-02	1.92E-03	6.12E-03	2.69E-03	2.74E-03	3.97E-03	3.20E-04	7.52E-08	3.38E-03	7.61E-03
D34	0.00E+00	1.78E-05	1.59E-06	4.24E+01	7.39E-05	2.57E-01	2.93E-05	7.90E-03	7.24E-03	1.14E-03	2.84E-03	1.62E-03	1.66E-03	8.32E-04	2.05E-04	5.50E-08	1.19E-03	1.44E-03
D35	0.00E+00	2.76E-05	2.48E-06	6.62E+01	1.15E-04	4.02E-01	4.54E-05	1.26E-02	1.13E-02	1.78E-03	4.38E-03	2.52E-03	2.58E-03	1.31E-03	3.20E-04	8.51E-08	1.80E-03	2.30E-03
D36	0.00E+00	3.14E-05	2.21E-06	3.55E+01	4.04E-05	1.48E-01	3.31E-05	2.61E-02	5.66E-03	9.45E-04	3.22E-03	1.30E-03	1.32E-03	2.49E-03	1.52E-04	3.25E-08	1.90E-03	4.88E-03
D37	0.00E+00	1.89E-05	1.59E-06	3.73E+01	5.96E-05	2.13E-01	2.70E-05	1.17E-02	6.31E-03	1.00E-03	2.59E-03	1.40E-03	1.43E-03	1.14E-03	1.76E-04	4.41E-08	1.16E-03	2.17E-03
D38	0.00E+00	5.30E-05	4.30E-06	9.28E+01	1.40E-04	5.04E-01	7.01E-05	3.68E-02	1.56E-02	2.50E-03	6.70E-03	3.45E-03	3.52E-03	3.52E-03	4.30E-04	1.04E-07	3.17E-03	6.83E-03
D39	0.00E+00	8.08E-06	7.92E-07	2.29E+01	4.10E-05	1.45E-01	1.47E-05	3.13E-03	3.96E-03	6.17E-04	1.40E-03	8.67E-04	8.88E-04	3.21E-04	1.12E-04	2.98E-08	5.12E-04	5.62E-04
D40	0.00E+00	3.71E-05	3.03E-06	6.72E+01	1.03E-04	3.70E-01	5.02E-05	2.46E-02	1.13E-02	1.81E-03	4.82E-03	2.51E-03	2.56E-03	2.38E-03	3.13E-04	7.71E-08	2.25E-03	4.57E-03
D41	0.00E+00	1.16E-05	1.19E-06	3.66E+01	6.78E-05	2.37E-01	2.30E-05	3.22E-03	6.38E-03	9.89E-04	2.20E-03	1.40E-03	1.43E-03	3.56E-04	1.81E-04	4.93E-08	7.64E-04	5.59E-04
D42	0.00E+00	1.30E-05	9.81E-07	1.72E+01	2.11E-05	8.00E-02	1.44E-05	1.11E-02	2.82E-03	4.63E-04	1.37E-03	6.22E-04	6.34E-04	1.03E-03	7.56E-05	1.59E-08	7.35E-04	2.07E-03
D43	0.00E+00	1.54E-05	1.55E-06	4.64E+01	8.47E-05	2.98E-01	2.94E-05	5.02E-03	8.06E-03	1.25E-03	2.81E-03	1.77E-03	1.81E-03	5.34E-04	2.28E-04	6.16E-08	9.98E-04	8.86E-04
D44	0.00E+00	2.96E-05	1.95E-06	2.76E+01	2.68E-05	9.49E-02	2.92E-05	2.48E-02	4.24E-03	7.25E-04	2.90E-03	1.02E-03	1.04E-03	2.41E-03	1.13E-04	2.36E-08	1.86E-03	4.65E-03
D45	0.00E+00	1.09E-04	7.80E-06	1.35E+02	1.71E-04	6.12E-01	1.21E-04	8.49E-02	2.18E-02	3.60E-03	1.18E-02	5.02E-03	5.12E-03	8.22E-03	5.94E-04	1.35E-07	6.71E-03	1.59E-02
D46	0.00E+00	1.23E-04	8.70E-06	1.47E+02	1.82E-04	6.45E-01	1.36E-04	9.59E-02	2.36E-02	3.91E-03	1.33E-02	5.48E-03	5.59E-03	9.37E-03	6.41E-04	1.47E-07	7.76E-03	1.79E-02
D47	0.00E+00	1.16E-04	8.45E-06	1.52E+02	2.00E-04	7.12E-01	1.33E-04	8.83E-02	2.47E-02	4.06E-03	1.30E-02	5.67E-03	5.78E-03	8.59E-03	6.75E-04	1.57E-07	7.21E-03	1.65E-02
D48	0.00E+00	3.71E-05	3.03E-06	6.72E+01	1.03E-04	3.70E-01	5.02E-05	2.46E-02	1.13E-02	1.81E-03	4.82E-03	2.51E-03	2.56E-03	2.38E-03	3.13E-04	7.71E-08	2.25E-03	4.57E-03
D49	0.00E+00	1.16E-04	8.45E-06	1.52E+02	2.00E-04	7.12E-01	1.33E-04	8.83E-02	2.47E-02	4.06E-03	1.30E-02	5.67E-03	5.78E-03	8.59E-03	6.75E-04	1.57E-07	7.21E-03	1.65E-02
D50	0.00E+00	1.36E-04	9.79E-06	1.75E+02	2.29E-04	8.11E-01	1.55E-04	1.02E-01	2.83E-02	4.65E-03	1.52E-02	6.53E-03	6.66E-03	1.00E-02	7.74E-04	1.82E-07	8.54E-03	1.91E-02
D51	0.00E+00	4.87E-05	3.56E-06	6.70E+01	9.26E-05	3.24E-01	5.79E-05	3.48E-02	1.09E-02	1.78E-03	5.69E-03	2.52E-03	2.57E-03	3.45E-03	3.01E-04	7.31E-08	3.12E-03	6.50E-03
D52	0.00E+00	2.82E-05	2.26E-06	5.20E+01	8.41E-05	2.91E-01	3.99E-05	1.60E-02	8.72E-03	1.39E-03	3.91E-03	1.98E-03	2.03E-03	1.65E-03	2.45E-04	6.42E-08	1.88E-03	2.96E-03
D53	0.00E+00	5.32E-05	3.94E-06	7.54E+01	1.05E-04	3.70E-01	6.41E-05	3.80E-02	1.23E-02	2.01E-03	6.28E-03	2.83E-03	2.89E-03	3.74E-03	3.40E-04	8.25E-08	3.39E-03	7.08E-03
D54	0.00E+00	4.27E-05	3.54E-06	8.62E+01	1.44E-04	4.98E-01	6.37E-05	2.22E-02	1.46E-02	2.31E-03	6.23E-03	3.30E-03	3.37E-03	2.31E-03	4.10E-04	1.09E-07	2.86E-03	4.08E-03
D55	0.00E+00	7.51E-05	5.62E-06	1.27E+02	1.41E-04	5.36E-01	8.80E-05	5.45E-02	1.13E-02	2.16E-03	8.47E-03	3.88E-03	3.95E-03	7.09E-03	5.65E-04	1.32E-07	4.53E-03	1.02E-02
D56	0.00E+00	5.98E-05	4.33E-06	9.14E+01	9.26E-05	3.56E-01	6.62E-05	4.52E-02	7.92E-03	1.54E-03	6.40E-03	2.75E-03	2.80E-03	5.93E-03	3.98E-04	9.06E-08	3.60E-03	8.44E-03
D57	0.00E+00	9.15E-05	6.66E-06	1.43E+02	1.47E-04	5.65E-01	1.02E-04	6.86E-02	1.24E-02	2.41E-03	9.89E-03	4.30E-03	4.38E-03	8.99E-03	6.23E-04	1.43E-07	5.51E-03	1.28E-02
D58	0.00E+00	6.73E-05	4.93E-06	1.06E+02	1.10E-04	4.23E-01	7.55E-05	5.07E-02	9.25E-03	1.79E-03	7.27E-03	3.20E-03	3.25E-03	6.60E-03	4.63E-04	1.06E-07	4.02E-03	9.45E-03
D59	0.00E+00	9.15E-05	6.66E-06	1.43E+02	1.47E-04	5.65E-01	1.02E-04	6.86E-02	1.24E-02	2.41E-03	9.89E-03	4.30E-03	4.38E-03	8.99E-03	6.23E-04	1.43E-07	5.51E-03	1.28E-02
D60	0.00E+00	6.73E-05	4.93E-06	1.06E+02	1.10E-04	4.23E-01	7.55E-05	5.07E-02	9.25E-03	1.79E-03	7.27E-03	3.20E-03	3.25E-03	6.60E-03	4.63E-04	1.06E-07	4.02E-03	9.45E-03
D61	0.00E+00	8.09E-06	6.10E-07	1.44E+01	1.66E-05	6.28E-02	9.81E-06	5.62E-03	1.28E-03	2.44E-04	9.50E-04	4.42E-04	4.51E-04	7.38E-04	6.46E-05	1.56E-08	4.99E-04	1.04E-03
D62	0.00E+00	1.52E-05	1.21E-06	3.20E+01	4.15E-05	1.55E-01	2.05E-05	9.37E-03	2.95E-03	5.49E-04	1.99E-03	1.01E-03	1.03E-03	1.23E-03	1.49E-04	3.77E-08	9.63E-04	1.73E-03
D63	0.00E+00	2.42E-05	1.65E-06	2.70E+01	2.46E-05	9.16E-02	2.42E-05	1.98E-02	3.16E-03	5.74E-04	2.36E-03	8.87E-04	9.01E-04	2.22E-03	1.12E-04	2.35E-08	1.46E-03	3.71E-03
D64	0.00E+00	7.99E-06	6.28E-07	1.52E+01	2.11E-05	7.55E-02	1.07E-05	4.91E-03	1.95E-03	3.30E-04	1.04E-03	5.17E-04	5.28E-04	5.66E-04	7.04E-05	1.77E-08	5.14E-04	9.09E-04
D65	0.00E+00	4.27E-05	2.97E-06	5.81E+01	5.22E-05	2.03E-01	4.46E-05	3.34E-02	4.88E-03	9.71E-04	4.33E-03	1.72E-03	1.75E-03	4.42E-03	2.46E-04	5.43E-08	2.58E-03	6.24E-03
D66	0.00E+00	4.09E-05	2.96E-06	6.18E+01	6.19E-05	2.39E-01	4.49E-05	3.12E-02	5.35E-03	1.04E-03	4.33E-03	1.86E-03	1.89E-03	4.08E-03	2.68E-04	6.04E-08	2.44E-03	5.83E-03
D67	0.00E+00	4.27E-05	2.97E-06	5.81E+01	5.22E-05	2.03E-01	4.46E-05	3.34E-02	4.88E-03	9.71E-04	4.33E-03	1.72E-03	1.75E-03	4.42E-03	2.46E-04	5.43E-08	2.58E-03	6.24E-03
D68	0.00E+00	4.09E-05	2.96E-06	6.18E+01	6.19E-05	2.39E-01	4.49E-05	3.12E-02	5.35E-03	1.04E-03	4.33E-03	1.86E-03	1.89E-03	4.08E-03	2.68E-04	6.04E-08	2.44E-03	5.83E-03
D69	0.00E+00	2.68E-05	1.83E-06	3.40E+01	2.78E-05	1.09E-01	2.70E-05	2.14E-02	2.79E-03	5.64E-04	2.63E-03	9.92E-04	1.01E-03	2.85E-03	1.41E-04	3.03E-08	1.62E-03	4.01E-03
D70	0.00E+00	2.56E-05	1.82E-06	3.61E+01	3.34E-05	1.31E-01	2.70E-05	2.02E-02	3.08E-03	6.07E-04	2.59E-03	1.07E-03	1.09E-03	2.63E-03	1.54E-04	3.34E-08	1.51E-03	3.78E-03
D71	0.00E+00	2.60E-05	2.07E-06	4.98E+01	6.91E-05	2.49E-01	3.47E-05	1.64E-02	6.43E-03	1.09E-03	3.36E-03	1.69E-03	1.73E-03	1.86E-03	2.31E-04	5.72E-08	1.63E-03	3.03E-03
D72	0.00E+00	3.91E-05	2.80E-06	5.09E+01	5.34E-05	2.00E-01	4.17E-05	3.11E-02	6.18E-03	1.09E-03	4.02E-03	1.68E-03	1.71E-03	3.45E-03	2.19E-04	4.72E-08	2.31E-03	5.83E-03
D73	0.00E+00	1.26E-05	1.13E-06	3.26E+01	5.07E-05	1.82E-01	2.03E-05	6.16E-03	4.36E-03	7.20E-04	1.95E-03	1.12E-03	1.15E-03	6.96E-04	1.57E-04	4.05E-08	8.08E-04	1.12E-03
D74	0.00E+00	2.50E-05	1.85E-06	3.54E+01	3.95E-05	1.48E-01	2.76E-05	1.97E-02	4.38E-03	7.67E-04	2.64E-03	1.17E-03	1.19E-03	2.16E-03	1.55E-04	3.36E-08	1.45E-03	3.68E-03
D75	0.00E+00	1.80E-05	1.41E-06	3.59E+01	4.50E-05	1.68E-01	2.34E-05	1.16E-02	3.28E-03	6.14E-04	2.27E-03	1.12E-03	1.14E-03	1.52E-03	1.65E-04	4.11E-08	1.12E-03	2.15E-03
D76	0.00E+00	2.95E-05	2.20E-06	5.00E+01	5.56E-05	2.12E-01	3.46E-05	2.12E-02	4.44E-03	8.49E-04	3.34E-03	1.53E-03	1.56E-03	2.77E-03	2.23E-04	5.26E-08	1.79E-03	3.95E-03
D77	0.00E+00	1.31E-05	9.41E-07	2.01E+01	2.06E-05	7.86E-02	1.46E-05	9.72E-03	1.74E-03	3.38E-04	1.41E-03	6.05E-04	6.16E-04	1.28E-03	8.75E-05	2.03E-08	7.97E-04	1.81E-03
D78	0.00E+00	2.77E-05	2.02E-06	4.31E+01	4.43E-05	1.70E-01	3.10E-05	2.08E-02	3.75E-03	7.27E-04	2.99E-03	1.30E-03	1.32E-03	2.73E-03	1.88E-04	4.30E-08	1.67E-03	3.89E-03
D79	0.00E+00	2.05E-05	1.71E-06	4.49E+01	6.62E-05	2.38E-01	2.98E-05	1.16E-02	5.90E-03	9.87E-04	2.88E-03	1.54E-03	1.57E-03	1.32E-03	2.13E-04	5.39E-08	1.30E-03	2.13E-03
D80	0.00E+00	3.40E-05	2.56E-06	5.40E+01	6.67E-05	2.44E-01	4.05E-05	2.46E-02	6.79E-03	1.17E-03	3.90E-03	1.81E-03	1.84E-03	2.74E-03	2.43E-04	5.66E-08	2.06E-03	4.57E-03
F31	0.00E+00	8.68E-05	6.94E-06	1.48E+02	2.21E-04	7.94E-01	1.13E-04	6.01E-02	2.47E-02	3.97E-03	1.09E-02	5.51E-03	5.62E-03	5.79E-03	6.83E-04	1.66E-07	5.26E-03	1.12E-02
F32	0.00E+00	7.58E-05	6.34E-06	1.54E+02	2.54E-04	8.86E-01	1.12E-04	4.16E-02	2.60E-02	4.11E-03	1.09E-02	5.83E-03	5.96E-03	4.23E-03	7.29E-04	1.90E-07	4.94E-03	7.65E-03
F33	0.00E+00	8.08E-06	7.92E-07	2.29E+01	4.10E-05	1.45E-01	1.47E-05	3.13E-03	3.96E-03	6.17E-04	1.40E-03	8.67E-04	8.88E-04	3.21E-04	1.12E-04	2.98E-08	5.12E-04	5.62E-04
F34	0.00E+00	3.71E-05	3.03E-06	6.72E+01	1.03E-04	3.70E-01	5.02E-05	2.46E-02	1.13E-02	1.81E-03	4.82E-03	2.51E-03	2.56E-03	2.38E-03	3.13E-04	7.71E-08	2.25E-03	4.57E-03
G07	0.00E+00	7.90E-05	5.37E-06	8.30E+01	6.43E-05	2.50E-01	7.53E-05	6.81E-02	9.44E-03	1.74E-03	7.25E-03	2.63E-03	2.67E-03	7.54E-03	3.37E-04	6.35E-08	4.58E-03	1.28E-02
G09	0.00E+00	2.01E-05	1.38E-06	1.45E+01	1.09E-05	4.90E-02	1.76E-05	2.07E-02	3.49E-03	5.57E-04	1.66E-03	5.86E-04	5.96E-04	1.45E-03	5.72E-05	6.94E-09	1.06E-03	3.90E-03
G10	0.00E+00	7.90E-05	5.37E-06	8.30E+01	6.43E-05	2.50E-01	7.53E-05	6.81E-02	9.44E-03	1.74E-03	7.25E-03	2.63E-03	2.67E-03	7.54E-03	3.37E-04	6.35E-08	4.58E-03	1.28E-02
H01	0.00E+00	6.36E-04	4.68E-05	1.07E+03	8.09E-04	3.59E+00	6.56E-04	5.54E-01	4.80E-02	1.21E-02	6.09E-02	2.66E-02	2.69E-02	8.58E-02	4.45E-03	8.76E-07	3.40E-02	1.03E-01
H02	0.00E+00	6.36E-04	4.68E-05	1.07E+03	8.09E-04	3.59E+00	6.56E-04	5.54E-01	4.80E-02	1.21E-02	6.09E-02	2.66E-02	2.69E-02	8.58E-02	4.45E-03	8.76E-07	3.40E-02	1.03E-01
H03	0.00E+00	5.21E-04	3.92E-05	9.23E+02	7.60E-04	3.32E+00	5.56E-04	4.46E-01	4.28E-02	1.05E-02	5.15E-02	2.35E-02	2.38E-02

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B05	100	Passenger Car	298	0.00E+00	3.27E-06	3.53E-07	1.34E+01	2.27E-05	8.99E-02	7.26E-06	6.37E-04	9.66E-04	1.95E-04	7.07E-04	4.56E-04	4.68E-04	3.74E-05	6.78E-05	1.87E-08	2.39E-04	9.95E-05
16	B05	100	Passenger Truck	499	0.00E+00	7.05E-06	7.51E-07	3.16E+01	4.62E-05	1.81E-01	1.50E-05	1.81E-03	1.71E-03	3.63E-04	1.44E-03	9.35E-04	9.58E-04	2.01E-04	1.59E-04	4.34E-08	4.85E-04	2.93E-04
16	B06	100	Passenger Car	948	0.00E+00	1.04E-05	1.12E-06	4.27E+01	7.23E-05	2.86E-01	2.31E-05	2.03E-03	3.08E-03	6.20E-04	2.25E-03	1.45E-03	1.49E-03	1.19E-04	2.16E-04	5.94E-08	7.61E-04	3.17E-04
16	B06	100	Passenger Truck	1588	0.00E+00	2.24E-05	2.39E-06	1.01E+02	1.47E-04	5.75E-01	4.77E-05	5.76E-03	5.44E-03	1.15E-03	4.59E-03	2.97E-03	3.05E-03	6.40E-04	5.04E-04	1.38E-07	1.54E-03	9.32E-04
16	B07	100	Passenger Car	707	0.00E+00	7.75E-06	8.39E-07	3.18E+01	5.40E-05	2.13E-01	1.72E-05	1.51E-03	2.29E-03	4.63E-04	1.68E-03	1.08E-03	1.11E-03	8.87E-05	1.61E-04	4.43E-08	5.68E-04	2.36E-04
16	B07	100	Passenger Truck	1185	0.00E+00	1.67E-05	1.78E-06	7.51E+01	1.10E-04	4.29E-01	3.56E-05	4.30E-03	4.06E-03	8.62E-04	3.43E-03	2.22E-03	2.27E-03	4.78E-04	3.76E-04	1.03E-07	1.15E-03	6.95E-04
16	B07	100	Single Unit Short Haul Truck	5	0.00E+00	6.43E-07	3.18E-08	8.74E-01	5.61E-07	2.02E-03	6.96E-07	3.47E-04	3.30E-05	9.61E-06	7.95E-05	1.97E-05	2.00E-05	8.82E-05	3.51E-06	1.44E-09	5.95E-05	6.49E-05
16	B07	100	Combination Short Haul Truck	1	0.00E+00	3.59E-07	2.62E-08	3.78E-01	1.02E-09	3.51E-04	2.59E-07	3.83E-04	1.22E-05	4.34E-06	2.01E-05	7.69E-06	7.56E-06	5.70E-05	1.27E-06	0.00E+00	1.26E-05	7.21E-05
16	B07	100	Combination Long Haul Truck	1	0.00E+00	3.13E-07	2.14E-08	3.43E-01	1.18E-09	3.50E-04	2.34E-07	3.63E-04	1.13E-05	3.14E-06	2.05E-05	6.42E-06	6.41E-06	5.23E-05	1.15E-06	0.00E+00	1.41E-05	6.85E-05
16	B08	100	Passenger Car	1128	0.00E+00	1.24E-05	1.34E-06	5.08E+01	8.61E-05	3.40E-01	2.75E-05	2.41E-03	3.66E-03	7.38E-04	2.68E-03	1.73E-03	1.77E-03	1.41E-04	2.57E-04	7.07E-08	9.06E-04	3.77E-04
16	B08	100	Passenger Truck	1890	0.00E+00	2.67E-05	2.84E-06	1.20E+02	1.75E-04	6.85E-01	5.68E-05	6.86E-03	6.47E-03	1.37E-03	5.46E-03	3.54E-03	3.63E-03	7.62E-04	6.00E-04	1.65E-07	1.84E-03	1.11E-03
16	B08	100	Single Unit Short Haul Truck	231	0.00E+00	3.10E-05	1.53E-06	4.21E+01	2.71E-05	9.76E-02	3.36E-05	1.67E-02	1.59E-03	4.63E-04	3.83E-03	9.51E-04	9.66E-04	4.25E-03	1.69E-04	6.92E-08	2.87E-03	3.13E-03
16	B08	100	Single Unit Long Haul Truck	10	0.00E+00	1.34E-06	6.53E-08	1.77E+00	1.12E-06	3.98E-03	1.45E-06	7.05E-04	7.20E-05	2.00E-05	1.67E-04	4.01E-05	4.08E-05	1.78E-04	7.15E-06	2.83E-09	1.26E-04	1.32E-04
16	B08	100	Combination Short Haul Truck	47	0.00E+00	1.62E-05	1.18E-06	1.70E+01	4.60E-08	1.58E-02	1.17E-05	1.72E-02	5.48E-04	1.95E-04	9.06E-04	3.46E-04	3.40E-04	2.57E-03	5.70E-05	0.00E+00	5.66E-04	3.24E-03
16	B08	100	Combination Long Haul Truck	43	0.00E+00	1.41E-05	9.65E-07	1.54E+01	5.33E-08	1.58E-02	1.05E-05	1.64E-02	5.08E-04	1.41E-04	9.23E-04	2.89E-04	2.88E-04	2.35E-03	5.16E-05	0.00E+00	6.34E-04	3.08E-03
9	D01	60	Passenger Car	736	0.00E+00	1.10E-05	1.19E-06	3.70E+01	7.68E-05	2.87E-01	2.45E-05	1.50E-03	7.47E-03	1.15E-03	2.39E-03	1.54E-03	1.58E-03	1.54E-04	1.85E-04	5.10E-08	8.09E-04	2.35E-04
9	D01	60	Passenger Truck	1232	0.00E+00	2.44E-05	2.57E-06	8.43E+01	1.52E-04	5.12E-01	5.02E-05	4.89E-03	1.37E-02	2.13E-03	4.77E-03	3.11E-03	3.18E-03	6.52E-04	4.19E-04	1.16E-07	1.59E-03	8.11E-04
9	D01	60	Single Unit Short Haul Truck	12	0.00E+00	3.65E-06	1.83E-07	2.33E+00	3.01E-06	4.51E-03	3.90E-06	1.74E-03	2.96E-04	5.37E-05	4.44E-04	1.10E-04	1.11E-04	2.33E-04	9.41E-06	3.88E-09	3.33E-04	3.26E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	7.95E-09	9.94E-02	1.31E-07	1.91E-04	1.70E-07	7.53E-05	1.33E-05	2.38E-06	1.95E-05	4.77E-06	4.85E-06	9.93E-06	4.02E-07	1.65E-10	1.46E-05	1.41E-05
9	D01	60	Combination Short Haul Truck	43	0.00E+00	2.55E-05	1.78E-06	1.66E+01	9.05E-08	2.23E-02	1.89E-05	2.76E-02	2.38E-03	4.71E-04	1.62E-03	5.30E-04	5.31E-04	2.50E-03	5.56E-05	0.00E+00	1.09E-03	5.21E-03
9	D01	60	Combination Long Haul Truck	40	0.00E+00	2.29E-05	1.49E-06	1.56E+01	1.04E-07	2.41E-02	1.77E-05	2.74E-02	2.39E-03	4.05E-04	1.67E-03	4.55E-04	4.61E-04	2.38E-03	5.22E-05	0.00E+00	1.21E-03	5.16E-03
9	D02	60	Passenger Car	944	0.00E+00	1.42E-05	1.53E-06	4.74E+01	9.86E-05	3.68E-01	3.15E-05	1.93E-03	9.58E-03	1.47E-03	3.07E-03	1.98E-03	2.03E-03	1.97E-04	2.37E-04	6.54E-08	1.04E-03	3.01E-04
9	D02	60	Passenger Truck	1581	0.00E+00	3.12E-05	3.30E-06	1.08E+02	1.95E-04	6.56E-01	6.44E-05	6.28E-03	1.76E-02	2.73E-03	6.12E-03	3.99E-03	4.09E-03	8.37E-04	5.37E-04	1.48E-07	2.04E-03	1.04E-03
9	D02	60	Single Unit Short Haul Truck	20	0.00E+00	5.90E-06	2.95E-07	3.76E+00	4.87E-06	7.28E-03	6.30E-06	2.81E-03	4.78E-04	8.67E-05	7.18E-04	1.77E-04	1.80E-04	3.77E-04	1.52E-05	6.26E-09	5.38E-04	5.27E-04
9	D02	60	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.28E-08	1.61E-01	2.11E-07	3.09E-04	2.75E-07	1.22E-04	2.15E-05	3.84E-06	3.14E-05	7.70E-06	7.83E-06	1.60E-05	6.49E-07	2.66E-10	2.36E-05	2.28E-05
9	D02	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.79E-07	8.21E+00	4.47E-08	1.10E-02	9.36E-06	1.36E-02	1.17E-03	2.32E-04	8.03E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.57E-03
9	D02	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.37E-07	7.69E+00	5.12E-08	1.19E-02	8.73E-06	1.35E-02	1.18E-03	2.00E-04	8.27E-04	2.25E-04	2.28E-04	1.18E-03	2.58E-05	0.00E+00	5.99E-04	2.55E-03
9	D03	60	Passenger Car	925	0.00E+00	1.39E-05	1.50E-06	4.64E+01	9.66E-05	3.61E-01	3.08E-05	1.89E-03	9.38E-03	1.44E-03	3.00E-03	1.94E-03	1.99E-03	1.93E-04	2.33E-04	6.41E-08	1.02E-03	2.95E-04
9	D03	60	Passenger Truck	1548	0.00E+00	3.06E-05	3.23E-06	1.06E+02	1.91E-04	6.43E-01	6.31E-05	6.15E-03	1.72E-02	2.67E-03	6.00E-03	3.91E-03	4.00E-03	8.20E-04	5.26E-04	1.45E-07	1.99E-03	1.02E-03
9	D03	60	Single Unit Short Haul Truck	28	0.00E+00	8.15E-06	4.08E-07	5.20E+00	6.72E-06	1.01E-02	8.70E-06	3.88E-03	6.61E-04	1.20E-04	9.91E-04	2.45E-04	2.49E-04	5.20E-04	2.10E-05	8.65E-09	7.42E-04	7.27E-04
9	D03	60	Single Unit Long Haul Truck	1	0.00E+00	3.56E-07	1.77E-08	2.22E-01	2.92E-07	4.27E-04	3.80E-07	1.68E-04	2.97E-05	5.30E-06	4.34E-05	1.06E-05	1.08E-05	2.21E-05	8.97E-07	3.68E-10	3.26E-05	3.15E-05
9	D03	60	Combination Short Haul Truck	38	0.00E+00	2.25E-05	1.57E-06	1.46E+01	7.96E-08	1.96E-02	1.67E-05	2.43E-02	2.09E-03	4.14E-04	1.43E-03	4.66E-04	4.67E-04	2.20E-03	4.89E-05	0.00E+00	9.62E-04	4.58E-03
9	D03	60	Combination Long Haul Truck	35	0.00E+00	2.02E-05	1.31E-06	1.37E+01	9.12E-08	2.12E-02	1.55E-05	2.41E-02	2.10E-03	3.57E-04	1.47E-03	4.01E-04	4.06E-04	2.09E-03	4.59E-05	0.00E+00	1.07E-03	4.54E-03
9	D04	60	Passenger Car	1114	0.00E+00	1.67E-05	1.81E-06	5.60E+01	1.16E-04	4.35E-01	3.72E-05	2.27E-03	1.13E-02	1.74E-03	3.62E-03	2.33E-03	2.39E-03	2.33E-04	2.80E-04	7.72E-08	1.22E-03	3.55E-04
9	D04	60	Passenger Truck	1866	0.00E+00	3.69E-05	3.89E-06	1.28E+02	2.31E-04	7.75E-01	7.60E-05	7.41E-03	2.07E-02	3.22E-03	7.23E-03	4.71E-03	4.82E-03	9.88E-04	6.34E-04	1.75E-07	2.40E-03	1.23E-03
9	D04	60	Single Unit Short Haul Truck	27	0.00E+00	7.87E-06	3.94E-07	5.02E+00	6.49E-06	9.71E-03	8.40E-06	3.75E-03	6.38E-04	1.16E-04	9.57E-04	2.36E-04	2.40E-04	5.02E-04	2.03E-05	8.35E-09	7.17E-04	7.02E-04
9	D04	60	Single Unit Long Haul Truck	1	0.00E+00	3.44E-07	1.71E-08	2.14E-01	2.82E-07	4.12E-04	3.67E-07	1.62E-04	2.86E-05	5.12E-06	4.19E-05	1.03E-05	1.04E-05	2.14E-05	8.66E-07	3.55E-10	3.15E-05	3.04E-05
9	D04	60	Combination Short Haul Truck	51	0.00E+00	2.98E-05	2.08E-06	1.94E+01	1.06E-07	2.61E-02	2.21E-05	3.23E-02	2.78E-03	5.50E-04	1.90E-03	6.19E-04	6.20E-04	2.93E-03	6.50E-05	0.00E+00	1.28E-03	6.08E-03
9	D04	60	Combination Long Haul Truck	46	0.00E+00	2.68E-05	1.74E-06	1.82E+01	1.21E-07	2.81E-02	2.07E-05	3.20E-02	2.79E-03	4.74E-04	1.96E-03	5.32E-04	5.39E-04	2.78E-03	6.10E-05	0.00E+00	1.42E-03	6.03E-03
9	D05	60	Passenger Car	903	0.00E+00	1.35E-05	1.47E-06	4.53E+01	9.43E-05	3.52E-01	3.01E-05	1.84E-03	9.16E-03	1.41E-03	2.93E-03	1.89E-03	1.94E-03	1.89E-04	2.27E-04	6.25E-08	9.92E-04	2.88E-04
9	D05	60	Passenger Truck	1511	0.00E+00	2.99E-05	3.15E-06	1.03E+02	1.87E-04	6.28E-01	6.16E-05	6.00E-03	1.68E-02	2.61E-03	5.85E-03	3.81E-03	3.91E-03	8.00E-04	5.13E-04	1.42E-07	1.95E-03	9.94E-04
9	D05	60	Single Unit Short Haul Truck	31	0.00E+00	9.00E-06	4.50E-07	5.73E+00	7.42E-06	1.11E-02	9.60E-06	4.28E-03	7.29E-04	1.32E-04	1.09E-03	2.70E-04	2.74E-04	5.74E-04	2.32E-05	9.54E-09	8.19E-04	8.03E-04
9	D05	60	Single Unit Long Haul Truck	1	0.00E+00	3.93E-07	1.96E-08	2.45E-01	3.22E-07	4.71E-04	4.20E-07	1.85E-04	3.27E-05	5.85E-06	4.79E-05	1.17E-05	1.19E-05	2.44E-05	9.89E-07	4.06E-10	3.60E-05	3.47E-05
9	D05	60	Combination Short Haul Truck	32	0.00E+00	1.91E-05	1.33E-06	1.24E+01	6.76E-08	1.67E-02	1.42E-05	2.06E-02	1.78E-03	3.52E-04	1.21E-03	3.96E-04	3.97E-04	1.87E-03	4.15E-05	0.00E+00	8.17E-04	3.89E-03
9	D05	60	Combination Long Haul Truck	30	0.00E+00	1.71E-05	1.11E-06	1.16E+01	7.75E-08	1.80E-02	1.32E-05	2.05E-02	1.79E-03	3.03E-04	1.25E-03	3.40E-04	3.45E-04	1.78E-03	3.90E-05	0.00E+00	9.07E-04	3.85E-03
9	D06	60	Passenger Car	1421	0.00E+00	2.13E-05	2.31E-06	7.14E+01	1.48E-04	5.54E-01	4.74E-05	2.90E-03	1.44E-02	2.21E-03	4.62E-03	2.98E-03	3.05E-03	2.97E-04	3.57E-04	9.85E-08	1.56E-03	4.53E-04
9	D06	60	Passenger Truck	2380	0.00E+00	4.70E-05	4.97E-06	1.63E+02	2.94E-04	9.88E-01	9.69E-05	9.45E-03	2.65E-02	4.11E-03	9.22E-03	6.01E-03	6.15E-03	1.26E-03	8.08E-04	2.23E-07	3.07E-03	1.57E-03
9	D06	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.26E-04
9	D06	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.84E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.84E-05
9	D06	60	Combination Short Haul Truck	44	0.00E+00	2.58E-05	1.80E-06	1.68E+01	9.15E-08	2.26E-02	1.92E-05	2.80E-02	2.41E-03	4.76E-04	1.64E-03	5.36E-04	5.37E-04	2.53E-03	5.63E-05	0.00E+00	1.11E-03	5.27E-03
9	D06	60	Combination Long Haul Truck	40	0.00E+00	2.32E-05	1.51E-06	1.58E+01	1.05E-07	2.43E-02	1.79E-05	2.77E-02	2.42E-03	4.10E-04	1.69E-03	4.61E-04	4.67E-04	2.41E-03	5.28E-05	0.00E+00	1.23E-03	5.22E-03
11	D07	80	Passenger Car	956	0.00E+00	1.17E-05	1.26E-06	4.46E+01	8.11E-05	3.12E-01	2.59E-05	1.96E-03	5.26E-03	9.14E-04	2.52E-03	1.63E-03	1.67E-03	1.50E-04	2.24E-04	6.29E-08	8.54E-04	3.07E-04
11	D07	80	Passenger Truck	1601	0.00E+00	2.50E-05	2.65E-06	1.03E+02	1.60E-04	5.73E-01	5.24E-05	5.83E-03	9.43E-03	1.67E-03	5.02E-03	3.26E-03	3.34E-03	7.19E-04	5.14E-04	1.40E-07	1.68E-03	9.53E-04
11	D07	80	Single Unit Short Haul Truck	47	0.00E+00	8.79E-06	4.37E-07	8.63E+00	7.08E-06	1.73E-02	9.36E-06	4.50E-03	5.53E-04	1.25E-04	1.07E-03	2.60E-04	2.65E-04	8.66E-04	3.48E-05	1.38E-08	8.05E-04	8.42E-04
11	D07	80	Single Unit Long Haul Truck	2	0.00E+00	3.83E-07	1.88E-08	3.65E-01	3.02E-07	7.20E-04	4.07E-07	1.92E-04	2.52E-05	5.52E-06	4.67E-05	1.12E-05	1.14E-05	3.65E-05	1.47E-06	5.75E-10	3.53E-05	3.60E-05
11	D07	80	Combination Short Haul Truck	48	0.00E+00	2.09E-05	1.50E-06	1.73E+01	6.60E-08	1.85E-02	1.53E-05	2.14E-02	1.27E-03	3.12E-04	1.25E-03	4.42E-04	4.38E-04	2.61E-03	5.79E-05	0.00E+00	8.08E-04	4.03E-03
11	D07	80	Combination Long Haul Truck	43	0.00E+00	1.87E-05	1.26E-06	1.60E+01	7.63E-08	1.92E-02	1.42E-05	2.08E-02	1.24E-03	2.49E-04	1.29E-03	3.80E-04	3.82E-04	2.44E-03	5.36E-05	0.00E+00	9.05E-04	3.91E-03
11	D08	80	Passenger Car	1135	0.00E+00	1.38E-05	1.50E-06	5.29E+01	9.63E-05	3.70E-01	3.08E-05	2.33E-03	6.25E-03	1.09E-03	3.00E-03	1.93E-03	1.98E-03	1.78E-04	2.67E-04	7.47E-08	1.01E-03	3.64E-04
11	D08	80	Passenger Truck	1902	0.00E+00	2.97E-05	3.15E-06	1.22E+02	1.90E-04	6.81E-01	6.23E-05	6.93E-03	1.12E-02	1.99E-03	5.96E-03	3.87E-03	3.97E-03	8.54E-04	6.11E-04	1.66E-07	1.99E-03	1.13E-03
11	D08	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.82E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.77E-05	7.04E-09	4.11E-04	4.30E-04
11	D08	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.82E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.82E-06	1.86E-05	7.52E-07	2.93E-10	1.80E-05	1.84E-05
11	D08	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	1.00E-06	1.16E+01	4.42E-08	1.24E-02	1.02E-05	1.44E-02	8.49E-04	2.09E-04	8.35E-04	2.96E-04	2.94E-04	1.75E-03	3.88E-05	0.00E+00	5.41E-04	2.70E-03
11	D08	80	Combination Long Haul Truck	29	0.00E+00	1.26E-05	8.44E-07	1.07E+01	5.11E-08	1.29E-02	9.52E-06	1.39E-02	8.30E-04	1.67E-04	8.63E-04	2.55E-04	2.56E-04	1.64E-03	3.59E-05	0.00E+00	6.06E-04	2.62E-03
11	D09	80	Passenger Car	802	0.00E+00	9.77E-06	1.06E-06	3.74E+01	6.80E-05	2.61E-01	2.17E-05	1.65E-03	4.41E-03	7.66E-04	2.11E-03	1.36E-03	1.40E-03	1.26E-04	1.88E-04	5.27E-08	7.16E-04	2.57E-04
11	D09	80	Passenger Truck	1342	0.00E+00	2.10E-05	2.23E-06	8.64E+01	1.34E-04	4.81E-01	4.40E-05	4.89E-03	7.91E-03	1.40E-03	4.21E-03	2.73E-03	2.80E-03	6.03E-04	4.31E-04	1.17E-07	1.41E-03	7.99E-04
11	D09	80	Single Unit Short Haul Truck	23	0.00E+00	4.31E-06	2.14E-07	4.23E+00	3.47E-06	8.47E-03	4.59E-06	2.20E-03	2.71E-04	6.12E-05	5.24E-04	1.28E-04	1.30E-04	4.24E-04	1.70E-05	6.76E-09	3.95E-04	4.12E-04
11	D09	80	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	9.23E-09	1.79E-01	1.48E-07	3.53E-04	1.99E-07	9.43E-05	1.24E-05	2.70E-06	2.29E-05	5.49E-06	5.58E-06	1.79E-05	7.22E-07	2.82E-10	1.73E-05	1.76E-05
11	D09	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.84E-08	1.08E-02	8.90E-06	1.25E-02	7.37E-04	1.82E-04	7.26E-04	2.57E-04	2.55E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.35E-03
11	D09	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.34E-07	9.31E+00	4.44E-08	1.12E-02	8.27E-06	1.21E-02	7.21E-04	1.45E-04	7.49E-04	2.21E-04	2.23E-04	1.42E-03	3.12E-05	0.00E+00	5.27E-04	2.28E-03
11	D10	80	Passenger Car	1143	0.00E+00	1.39E-05	1.51E-06	5.33E+01	9.70E-05	3.72E-01	3.10E-05	2.35E-03	6.29E-03	1.09E-03	3.01E-03	1.94E-03	1.99E-03	1.79E-04	2.68E-04	7.52E-08	1.02E-03	3.67E-04
11	D10	80	Passenger Truck	1914	0.00E+00	2.99E-05	3.17E-06	1.23E+02	1.92E-04	6.85E-01	6.27E-05	6.97E-03	1.13E-02	2.00E-03	6.00E-03	3.90E-03	3.99E-03	8.60E-04	6.15E-04	1.67E-07	2.01E-03	1.14E-03
11	D10	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D10	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.23E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.55E-03
11	D10	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	7.99E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	D11	80	Passenger Car	757	0.00E+00	9.23E-06	9.99E-07	3.53E+01	6.43E-05	2.47E-01	2.05E-05	1.56E-03	4.17E-03	7.24E-04	2.00E-03	1.29E-03	1.32E-03	1.19E-04	1.78E-04	4.98E-08	6.76E-04	2.43E-04
11	D11	80	Passenger Truck	1269	0.00E+00	1.98E-05	2.10E-06	8.16E+01	1.27E-04	4.54E-01	4.15E-05	4.62E-03	7.47E-03	1.33E-03	3.98E-03	2.58E-03	2.65E-03	5.70E-04	4.07E-04	1.11E-07	1.33E-03	7.55E-04
11	D11	80	Single Unit Short Haul Truck	23	0.00E+00	4.31E-06	2.14E-07	4.23E+00	3.47E-06	8.47E-03	4.59E-06	2.20E-03	2.71E-04	6.12E-05	5.24E-04	1.28E-04	1.30E-04	4.24E-04	1.70E-05	6.76E-09	3.95E-04	4.12E-04
11	D11	80	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	9.23E-09	1.79E-01	1.48E-07	3.53E-04	1.99E-07	9.43E-05	1.24E-05	2.70E-06	2.29E-05	5.49E-06	5.58E-06	1.79E-05	7.22E-07	2.82E-10	1.73E-05	1.76E-05
11	D11	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.84E-08	1.08E-02	8.90E-06	1.25E-02	7.37E-04	1.82E-04	7.26E-04	2.57E-04	2.55E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.35E-03
11	D11	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.34E-07	9.31E+00	4.44E-08	1.12E-02	8.27E-06	1.21E-02	7.21E-04	1.45E-04	7.49E-04	2.21E-04	2.23E-04	1.42E-03	3.12E-05	0.00E+00	5.27E-04	2.28E-03
11	D12	80	Passenger Car	1226	0.00E+00	1.49E-05	1.62E-06	5.72E+01	1.04E-04	4.00E-01	3.32E-05	2.52E-03	6.74E-03	1.17E-03	3.23E-03	2.08E-03	2.14E-03	1.92E-04	2.88E-04	8.06E-08	1.09E-03	3.94E-04
11	D12	80	Passenger Truck	2053	0.00E+00	3.21E-05	3.40E-06	1.32E+02	2.06E-04	7.35E-01	6.72E-05	7.48E-03	1.21E-02	2.15E-03	6.44E-03	4.18E-03	4.28E-03	9.22E-04	6.59E-04	1.80E-07	2.15E-03	1.22E-03
11	D12	80	Single Unit Short Ha

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D16	60	Passenger Truck	1146	0.00E+00	2.26E-05	2.39E-06	7.84E+01	1.42E-04	4.76E-01	4.67E-05	4.55E-03	1.27E-02	1.98E-03	4.44E-03	2.89E-03	2.96E-03	6.07E-04	3.89E-04	1.08E-07	1.48E-03	7.54E-04
9	D16	60	Single Unit Short Haul Truck	41	0.00E+00	1.21E-05	6.05E-07	7.70E+00	9.97E-06	1.49E-02	1.29E-05	5.76E-03	9.80E-04	1.78E-04	1.47E-03	3.63E-04	3.69E-04	7.71E-04	3.11E-05	1.28E-08	1.10E-03	1.08E-03
9	D16	60	Single Unit Long Haul Truck	2	0.00E+00	5.28E-07	2.63E-08	3.29E-01	4.33E-07	6.33E-04	5.64E-07	2.49E-04	4.40E-05	7.86E-06	6.44E-05	1.58E-05	1.60E-05	3.28E-05	1.33E-06	5.45E-10	4.83E-05	4.66E-05
9	D16	60	Combination Short Haul Truck	31	0.00E+00	1.85E-05	1.29E-06	1.20E+01	6.54E-08	1.61E-02	1.37E-05	2.00E-02	1.72E-03	3.40E-04	1.17E-03	3.83E-04	3.84E-04	1.81E-03	4.02E-05	0.00E+00	7.91E-04	3.76E-03
9	D16	60	Combination Long Haul Truck	29	0.00E+00	1.66E-05	1.08E-06	1.13E+01	7.50E-08	1.74E-02	1.28E-05	1.98E-02	1.73E-03	2.93E-04	1.21E-03	3.29E-04	3.33E-04	1.72E-03	3.77E-05	0.00E+00	8.77E-04	3.73E-03
10	D17	70	Passenger Car	256	0.00E+00	3.35E-06	3.63E-07	1.23E+01	2.33E-05	8.75E-02	7.45E-06	5.13E-04	1.99E-03	3.19E-04	7.25E-04	4.68E-04	4.80E-04	4.59E-05	6.18E-05	1.68E-08	2.46E-04	8.02E-05
10	D17	70	Passenger Truck	429	0.00E+00	7.35E-06	7.77E-07	2.83E+01	4.65E-05	1.61E-01	1.53E-05	1.60E-03	3.61E-03	5.87E-04	1.46E-03	9.47E-04	9.70E-04	2.08E-04	1.41E-04	3.77E-08	4.86E-04	2.64E-04
10	D17	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.01E-07	1.59E+00	1.66E-06	3.17E-03	2.16E-06	9.97E-04	1.43E-04	2.85E-05	2.46E-04	6.06E-05	6.16E-05	1.59E-04	6.40E-06	2.58E-09	1.84E-04	1.87E-04
10	D17	70	Combination Short Haul Truck	12	0.00E+00	5.99E-06	4.25E-07	4.34E+00	1.94E-08	5.15E-03	4.39E-06	6.27E-03	4.55E-04	9.94E-05	3.65E-04	1.26E-04	1.26E-04	6.54E-04	1.45E-05	0.00E+00	2.39E-04	1.18E-03
10	D17	70	Combination Long Haul Truck	10	0.00E+00	5.41E-06	3.62E-07	4.05E+00	2.24E-08	5.46E-03	4.11E-06	6.18E-03	4.52E-04	8.25E-05	3.77E-04	1.09E-04	1.11E-04	6.19E-04	1.36E-05	0.00E+00	2.66E-04	1.16E-03
10	D18	70	Passenger Car	129	0.00E+00	1.69E-06	1.83E-07	6.20E+00	1.17E-05	4.41E-02	3.75E-06	2.58E-04	1.00E-03	1.60E-04	3.65E-04	2.36E-04	2.42E-04	2.31E-05	3.11E-05	8.47E-09	1.24E-04	4.04E-05
10	D18	70	Passenger Truck	216	0.00E+00	3.70E-06	3.92E-07	1.43E+01	2.34E-05	8.11E-02	7.69E-06	8.08E-04	1.82E-03	2.96E-04	7.33E-04	4.77E-04	4.89E-04	1.05E-04	7.10E-05	1.90E-08	2.45E-04	1.33E-04
10	D18	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.43E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.30E-05
10	D18	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	D18	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.12E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
11	D19	80	Passenger Car	773	0.00E+00	9.42E-06	1.02E-06	3.60E+01	6.56E-05	2.52E-01	2.09E-05	1.59E-03	4.25E-03	7.39E-04	2.04E-03	1.31E-03	1.35E-03	1.21E-04	1.81E-04	5.08E-08	6.90E-04	2.48E-04
11	D19	80	Passenger Truck	1294	0.00E+00	2.02E-05	2.15E-06	8.33E+01	1.30E-04	4.63E-01	4.24E-05	4.72E-03	7.62E-03	1.35E-03	4.06E-03	2.63E-03	2.70E-03	5.81E-04	4.16E-04	1.13E-07	1.36E-03	7.70E-04
11	D19	80	Single Unit Short Haul Truck	144	0.00E+00	2.69E-05	1.34E-06	2.64E+01	2.17E-05	5.29E-02	2.87E-05	1.38E-02	1.69E-03	3.83E-04	3.28E-03	7.97E-04	8.11E-04	2.65E-03	1.06E-04	4.22E-08	2.47E-03	2.58E-03
11	D19	80	Single Unit Long Haul Truck	6	0.00E+00	1.17E-06	5.77E-08	1.12E+00	9.25E-07	2.20E-03	1.25E-06	5.89E-04	7.73E-05	1.69E-05	1.43E-04	3.43E-05	3.49E-05	1.12E-04	4.51E-06	1.76E-09	1.08E-04	1.10E-04
11	D19	80	Combination Short Haul Truck	72	0.00E+00	3.15E-05	2.25E-06	2.60E+01	9.94E-08	2.79E-02	2.30E-05	3.22E-02	1.91E-03	4.70E-04	1.88E-03	6.65E-04	6.60E-04	3.93E-03	8.72E-05	0.00E+00	1.22E-03	6.07E-03
11	D19	80	Combination Long Haul Truck	65	0.00E+00	2.82E-05	1.90E-06	2.41E+01	1.15E-07	2.89E-02	2.14E-05	3.13E-02	1.86E-03	3.75E-04	1.94E-03	5.72E-04	5.75E-04	3.68E-03	8.06E-05	0.00E+00	1.36E-03	5.89E-03
11	D20	80	Passenger Car	1186	0.00E+00	1.45E-05	1.56E-06	5.53E+01	1.01E-04	3.87E-01	3.21E-05	2.44E-03	6.52E-03	1.13E-03	3.13E-03	2.02E-03	2.07E-03	1.86E-04	2.78E-04	7.80E-08	1.06E-03	3.81E-04
11	D20	80	Passenger Truck	1987	0.00E+00	3.10E-05	3.29E-06	1.28E+02	1.99E-04	7.11E-01	6.51E-05	7.24E-03	1.17E-02	2.08E-03	6.23E-03	4.04E-03	4.14E-03	8.92E-04	6.38E-04	1.74E-07	2.08E-03	1.18E-03
11	D20	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.13E-03	5.07E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.19E-05	1.27E-08	7.40E-04	7.73E-04
11	D20	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.61E-04	3.74E-07	1.77E-04	2.32E-05	5.07E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.31E-05
11	D20	80	Combination Short Haul Truck	36	0.00E+00	1.59E-05	1.13E-06	1.31E+01	5.01E-08	1.40E-02	1.16E-05	1.62E-02	9.60E-04	2.37E-04	9.45E-04	3.35E-04	3.32E-04	1.98E-03	4.39E-05	0.00E+00	6.12E-04	3.06E-03
11	D20	80	Combination Long Haul Truck	33	0.00E+00	1.42E-05	9.55E-07	1.21E+01	5.78E-08	1.46E-02	1.08E-05	1.58E-02	9.39E-04	1.89E-04	9.76E-04	2.88E-04	2.90E-04	1.85E-03	4.06E-05	0.00E+00	6.86E-04	2.97E-03
11	D21	80	Passenger Car	864	0.00E+00	1.05E-05	1.14E-06	4.03E+01	7.33E-05	2.81E-01	2.34E-05	1.77E-03	4.75E-03	8.26E-04	2.28E-03	1.47E-03	1.51E-03	1.35E-04	2.03E-04	5.68E-08	7.71E-04	2.77E-04
11	D21	80	Passenger Truck	1446	0.00E+00	2.26E-05	2.40E-06	9.31E+01	1.45E-04	5.18E-01	4.74E-05	5.27E-03	8.52E-03	1.51E-03	4.53E-03	2.94E-03	3.02E-03	6.50E-04	4.65E-04	1.27E-07	1.52E-03	8.61E-04
11	D21	80	Single Unit Short Haul Truck	150	0.00E+00	2.82E-05	1.40E-06	2.77E+01	2.27E-05	5.54E-02	3.00E-05	1.44E-02	1.77E-03	4.01E-04	3.43E-03	8.35E-04	8.49E-04	2.77E-03	1.11E-04	4.42E-08	2.58E-03	2.70E-03
11	D21	80	Single Unit Long Haul Truck	7	0.00E+00	1.23E-06	6.04E-08	1.17E+00	9.69E-07	2.31E-03	1.30E-06	6.17E-04	8.09E-05	1.77E-05	1.50E-04	3.59E-05	3.65E-05	1.17E-04	4.72E-06	1.84E-09	1.13E-04	1.15E-04
11	D21	80	Combination Short Haul Truck	72	0.00E+00	3.15E-05	2.25E-06	2.60E+01	9.94E-08	2.79E-02	2.30E-05	3.22E-02	1.91E-03	4.70E-04	1.88E-03	6.65E-04	6.60E-04	3.93E-03	8.72E-05	0.00E+00	1.22E-03	6.07E-03
11	D21	80	Combination Long Haul Truck	65	0.00E+00	2.82E-05	1.90E-06	2.41E+01	1.15E-07	2.89E-02	2.14E-05	3.13E-02	1.86E-03	3.75E-04	1.94E-03	5.72E-04	5.75E-04	3.68E-03	8.06E-05	0.00E+00	1.36E-03	5.89E-03
11	D22	80	Passenger Car	940	0.00E+00	1.15E-05	1.24E-06	4.38E+01	7.97E-05	3.06E-01	2.55E-05	1.93E-03	5.17E-03	8.98E-04	2.48E-03	1.60E-03	1.64E-03	1.47E-04	2.21E-04	6.18E-08	8.39E-04	3.02E-04
11	D22	80	Passenger Truck	1573	0.00E+00	2.46E-05	2.61E-06	1.01E+02	1.58E-04	5.63E-01	5.15E-05	5.73E-03	9.27E-03	1.64E-03	4.93E-03	3.20E-03	3.28E-03	7.07E-04	5.05E-04	1.38E-07	1.65E-03	9.36E-04
11	D22	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.13E-03	5.07E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.19E-05	1.27E-08	7.40E-04	7.73E-04
11	D22	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.61E-04	3.74E-07	1.77E-04	2.32E-05	5.07E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.31E-05
11	D22	80	Combination Short Haul Truck	36	0.00E+00	1.59E-05	1.13E-06	1.31E+01	5.01E-08	1.40E-02	1.16E-05	1.62E-02	9.60E-04	2.37E-04	9.45E-04	3.35E-04	3.32E-04	1.98E-03	4.39E-05	0.00E+00	6.12E-04	3.06E-03
11	D22	80	Combination Long Haul Truck	33	0.00E+00	1.42E-05	9.55E-07	1.21E+01	5.78E-08	1.46E-02	1.08E-05	1.58E-02	9.39E-04	1.89E-04	9.76E-04	2.88E-04	2.90E-04	1.85E-03	4.06E-05	0.00E+00	6.86E-04	2.97E-03
9	D23	60	Passenger Car	697	0.00E+00	1.05E-05	1.13E-06	3.50E+01	7.27E-05	2.72E-01	2.32E-05	1.42E-03	7.07E-03	1.09E-03	2.26E-03	1.46E-03	1.50E-03	1.46E-04	1.75E-04	4.83E-08	7.66E-04	2.22E-04
9	D23	60	Passenger Truck	1166	0.00E+00	2.31E-05	2.43E-06	7.98E+01	1.44E-04	4.84E-01	4.75E-05	4.63E-03	1.30E-02	2.01E-03	4.52E-03	2.94E-03	3.01E-03	6.18E-04	3.96E-04	1.09E-07	1.50E-03	7.67E-04
9	D23	60	Single Unit Short Haul Truck	55	0.00E+00	1.60E-05	8.02E-07	1.02E+01	1.32E-05	1.98E-02	1.71E-05	7.63E-03	1.30E-03	2.35E-04	1.95E-03	4.81E-04	4.89E-04	1.02E-03	4.12E-05	1.70E-08	1.46E-03	1.43E-03
9	D23	60	Single Unit Long Haul Truck	2	0.00E+00	7.00E-07	3.48E-08	4.36E-01	5.74E-07	8.39E-04	7.47E-07	3.30E-04	5.83E-05	1.04E-05	8.53E-05	2.09E-05	2.13E-05	4.35E-05	1.76E-06	7.23E-10	6.41E-05	6.18E-05
9	D23	60	Combination Short Haul Truck	33	0.00E+00	1.94E-05	1.35E-06	1.26E+01	6.87E-08	1.70E-02	1.44E-05	2.10E-02	1.80E-03	3.57E-04	1.23E-03	4.02E-04	4.03E-04	1.90E-03	4.22E-05	0.00E+00	8.30E-04	3.95E-03
9	D23	60	Combination Long Haul Truck	30	0.00E+00	1.74E-05	1.13E-06	1.18E+01	7.87E-08	1.83E-02	1.34E-05	2.08E-02	1.81E-03	3.08E-04	1.27E-03	3.46E-04	3.50E-04	1.81E-03	3.96E-05	0.00E+00	9.21E-04	3.92E-03
9	D24	60	Passenger Car	898	0.00E+00	1.35E-05	1.46E-06	4.51E+01	9.38E-05	3.50E-01	3.00E-05	1.83E-03	9.12E-03	1.40E-03	2.92E-03	1.88E-03	1.93E-03	1.88E-04	2.26E-04	6.22E-08	9.88E-04	2.86E-04
9	D24	60	Passenger Truck	1505	0.00E+00	2.97E-05	3.14E-06	1.03E+02	1.86E-04	6.25E-01	6.13E-05	5.97E-03	1.67E-02	2.60E-03	5.83E-03	3.80E-03	3.89E-03	7.97E-04	5.11E-04	1.41E-07	1.94E-03	9.90E-04
9	D24	60	Single Unit Short Haul Truck	37	0.00E+00	1.10E-05	5.49E-07	6.99E+00	9.04E-06	1.35E-02	1.17E-05	5.22E-03	8.88E-04	1.61E-04	1.33E-03	3.29E-04	3.34E-04	6.99E-04	2.82E-05	1.16E-08	9.98E-04	9.78E-04
9	D24	60	Single Unit Long Haul Truck	2	0.00E+00	4.79E-07	2.38E-08	2.98E-01	3.93E-07	5.74E-04	5.11E-07	2.26E-04	3.99E-05	7.13E-06	5.84E-05	1.43E-05	1.45E-05	2.98E-05	1.21E-06	4.95E-10	4.38E-05	4.23E-05
9	D24	60	Combination Short Haul Truck	22	0.00E+00	1.29E-05	9.00E-07	8.41E+00	4.58E-08	1.13E-02	9.59E-06	1.40E-02	1.20E-03	2.38E-04	8.22E-04	2.68E-04	2.69E-04	1.27E-03	2.81E-05	0.00E+00	5.54E-04	2.63E-03
9	D24	60	Combination Long Haul Truck	20	0.00E+00	1.16E-05	7.55E-07	7.88E+00	5.25E-08	1.22E-02	8.94E-06	1.39E-02	1.21E-03	2.05E-04	8.47E-04	2.30E-04	2.33E-04	1.20E-03	2.64E-05	0.00E+00	6.14E-04	2.61E-03
9	D25	60	Passenger Car	875	0.00E+00	1.31E-05	1.42E-06	4.39E+01	9.14E-05	3.41E-01	2.92E-05	1.78E-03	8.88E-03	1.36E-03	2.84E-03	1.83E-03	1.88E-03	1.83E-04	2.20E-04	6.06E-08	9.62E-04	2.79E-04
9	D25	60	Passenger Truck	1465	0.00E+00	2.90E-05	3.06E-06	1.00E+02	1.81E-04	6.08E-01	5.97E-05	5.82E-03	1.63E-02	2.53E-03	5.67E-03	3.70E-03	3.79E-03	7.76E-04	4.98E-04	1.38E-07	1.89E-03	9.64E-04
9	D25	60	Single Unit Short Haul Truck	45	0.00E+00	1.32E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.29E-03	1.07E-03	1.94E-04	1.61E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	D25	60	Single Unit Long Haul Truck	2	0.00E+00	5.77E-07	2.87E-08	3.59E-01	4.73E-07	6.92E-04	6.16E-07	2.72E-04	4.81E-05	8.59E-06	7.04E-05	1.72E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.10E-05
9	D25	60	Combination Short Haul Truck	25	0.00E+00	1.45E-05	1.01E-06	9.41E+00	5.12E-08	1.26E-02	1.07E-05	1.56E-02	1.35E-03	2.66E-04	9.20E-04	3.00E-04	3.01E-04	1.42E-03	3.15E-05	0.00E+00	6.19E-04	2.95E-03
9	D25	60	Combination Long Haul Truck	22	0.00E+00	1.30E-05	8.45E-07	8.82E+00	5.87E-08	1.36E-02	1.00E-05	1.55E-02	1.35E-03	2.30E-04	9.48E-04	2.58E-04	2.61E-04	1.35E-03	2.95E-05	0.00E+00	6.87E-04	2.92E-03
9	D26	60	Passenger Car	1120	0.00E+00	1.68E-05	1.82E-06	5.63E+01	1.17E-04	4.37E-01	3.74E-05	2.28E-03	1.14E-02	1.75E-03	3.64E-03	2.35E-03	2.41E-03	2.34E-04	2.82E-04	7.76E-08	1.23E-03	3.57E-04
9	D26	60	Passenger Truck	1876	0.00E+00	3.71E-05	3.91E-06	1.28E+02	2.32E-04	7.79E-01	7.64E-05	7.45E-03	2.09E-02	3.24E-03	7.26E-03	4.73E-03	4.85E-03	9.93E-04	6.37E-04	1.76E-07	2.42E-03	1.23E-03
9	D26	60	Single Unit Short Haul Truck	19	0.00E+00	5.62E-06	2.81E-07	3.58E+00	4.64E-06	6.94E-03	6.00E-06	2.68E-03	4.56E-04	8.26E-05	6.83E-04	1.69E-04	1.71E-04	3.59E-04	1.45E-05	5.96E-09	5.12E-04	5.02E-04
9	D26	60	Single Unit Long Haul Truck	1	0.00E+00	2.46E-07	1.22E-08	1.53E-01	2.01E-07	2.94E-04	2.62E-07	1.16E-04	2.05E-05	3.66E-06	2.99E-05	7.34E-06	7.46E-06	1.53E-05	6.18E-07	2.54E-10	2.25E-05	2.17E-05
9	D26	60	Combination Short Haul Truck	11	0.00E+00	6.46E-06	4.50E-07	4.20E+00	2.29E-08	5.65E-03	4.79E-06	6.99E-03	6.02E-04	1.19E-04	4.11E-04	1.34E-04	1.34E-04	6.34E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
9	D26	60	Combination Long Haul Truck	10	0.00E+00	5.80E-06	3.77E-07	3.94E+00	2.62E-08	6.09E-03	4.47E-06	6.93E-03	6.05E-04	1.03E-04	4.24E-04	1.15E-04	1.17E-04	6.02E-04	1.32E-05	0.00E+00	3.07E-04	1.31E-03
9	D27	80	Passenger Car	731	0.00E+00	8.91E-06	9.64E-07	3.41E+01	6.20E-05	2.38E-01	1.98E-05	1.50E-03	4.02E-03	6.99E-04	1.93E-03	1.24E-03	1.28E-03	1.15E-04	1.72E-04	4.81E-08	6.53E-04	2.35E-04
9	D27	80	Passenger Truck	1225	0.00E+00	1.91E-05	2.03E-06	7.88E+01	1.23E-04	4.39E-01	4.01E-05	4.46E-03	7.21E-03	1.28E-03	3.84E-03	2.49E-03	2.55E-03	5.50E-04	3.93E-04	1.07E-07	1.28E-03	7.29E-04
11	D27	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.52E-03	5.16E-06	2.48E-03	3.04E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.60E-09	4.44E-04	4.64E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.97E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.28E-06	2.01E-05	8.12E-07	3.17E-10	1.94E-05	1.98E-05
11	D27	80	Combination Short Haul Truck	20	0.00E+00	8.97E-06	6.41E-07	7.41E+00	2.83E-08	7.94E-03	6.55E-06	9.18E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.73E-03
11	D27	80	Combination Long Haul Truck	19	0.00E+00	8.03E-06	5.40E-07	6.85E+00	3.27E-08	8.23E-03	6.08E-06	8.90E-03	5.31E-04	1.07E-04	5.51E-04	1.63E-04	1.64E-04	1.05E-03	2.30E-05	0.00E+00	3.88E-04	1.68E-03
11	D28	80	Passenger Car	309	0.00E+00	3.76E-06	4.07E-07	1.44E+01	2.62E-05	1.01E-01	8.37E-06	6.34E-04	1.70E-03	2.95E-04	8.15E-04	5.25E-04	5.39E-04	4.84E-05	7.25E-05	2.03E-08	2.76E-04	9.91E-05
11	D28	80	Passenger Truck	517	0.00E+00	8.08E-06	8.57E-07	3.33E+01	5.18E-05	1.85E-01	1.69E-05	1.88E-03	3.05E-03	5.41E-04	1.62E-03	1.05E-03	1.08E-03	2.32E-04	1.66E-04	4.52E-08	5.42E-04	3.08E-04
11	D28	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.43E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	D28	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.53E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.65E-04
11	D28	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.42E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.45E-04
11	D29	80	Passenger Car	731	0.00E+00	8.91E-06	9.64E-07	3.41E+01	6.20E-05	2.38E-01	1.98E-05	1.50E-03	4.02E-03	6.99E-04	1.93E-03	1.24E-03	1.28E-03	1.15E-04	1.72E-04	4.81E-08	6.53E-04	2.35E-04
11	D29	80	Passenger Truck	1225	0.00E+00	1.91E-05	2.03E-06	7.88E+01	1.23E-04	4.39E-01	4.01E-05	4.46E-03	7.21E-03	1.28E-03	3.84E-03	2.49E-03	2.55E-03	5.50E-04	3.93E-04	1.07E-07	1.28E-03	7.29E-04
11	D29	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.52E-03	5.16E-06	2.48E-03	3.04E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.60E-09	4.44E-04	4.64E-04
11	D29	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.97E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.28E-06	2.01E-05	8.12E-07	3.17E-10	1.94E-05	1.98E-05
11	D29	80	Combination Short Haul Truck	20	0.00E+00	8.97E-06	6.41E-07	7.41E+00	2.83E-08	7.94E-03	6.55E-06	9.18E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.73E-03
11	D29	80	Combination Long Haul Truck	19	0.00E+00	8.03E-06	5.40E-07	6.85E+00	3.27E-08	8.23E-03	6.08E-06	8.90E-03	5.31E-04	1.07E-04	5.51E-04	1.63E-04	1.64E-04	1.05E-03	2.30E-05	0.00E+00	3.88E-04	1.68E-03
11	D30	80	Passenger Car	309	0.00E+00	3.76E-06	4.07E-07	1.44E+01	2.62E-05	1.01E-01	8.37E-06	6.34E-04	1.70E-03	2.95E-04	8.15E-04	5.25E-04	5.39E-04	4.84E-05	7.25E-05	2.03E-08	2.76E-04	9.91E-05
11	D30	80	Passenger Truck	517	0.00E+00	8.08E-06	8.57E-07	3.33E+01	5.18E-05	1.85E-01	1.69E-05	1.88E-03	3.05E-03	5.41E-04	1.62E-03	1.05E-03	1.08E-03	2.32E-04	1.66E-04	4.52E-08	5.42E-04	3.08E-04
11	D30	80

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D34	60	Combination Short Haul Truck	10	0.00E+00	5.85E-06	4.07E-07	3.80E+00	2.07E-08	5.11E-03	4.34E-06	6.33E-03	5.44E-04	1.08E-04	3.72E-04	1.21E-04	1.22E-04	5.73E-04	1.27E-05	0.00E+00	2.50E-04	1.19E-03
9	D34	60	Combination Long Haul Truck	9	0.00E+00	5.25E-06	3.41E-07	3.57E+00	2.37E-08	5.51E-03	4.05E-06	6.27E-03	5.47E-04	9.28E-05	3.83E-04	1.04E-04	1.06E-04	5.45E-04	1.19E-05	0.00E+00	2.78E-04	1.18E-03
9	D35	60	Passenger Car	209	0.00E+00	3.14E-06	3.40E-07	1.05E+01	2.19E-05	8.17E-02	6.99E-06	4.27E-04	2.13E-03	3.26E-04	6.80E-04	4.38E-04	4.50E-04	4.37E-05	5.27E-05	1.45E-08	2.30E-04	6.67E-05
9	D35	60	Passenger Truck	351	0.00E+00	6.93E-06	7.32E-07	2.40E+01	4.33E-05	1.46E-01	1.43E-05	1.39E-03	3.90E-03	6.05E-04	1.36E-03	8.85E-04	9.06E-04	1.86E-04	1.19E-04	3.29E-08	4.52E-04	2.31E-04
9	D35	60	Single Unit Short Haul Truck	6	0.00E+00	1.69E-06	8.44E-08	1.07E+00	1.39E-06	2.08E-03	1.80E-06	8.03E-04	1.37E-04	2.48E-05	2.05E-04	5.06E-05	5.14E-05	1.08E-04	4.34E-06	1.79E-09	1.54E-04	1.50E-04
9	D35	60	Combination Short Haul Truck	5	0.00E+00	3.08E-06	2.14E-07	2.00E+00	1.09E-08	2.69E-03	2.28E-06	3.33E-03	2.86E-04	5.67E-05	1.96E-04	6.39E-05	6.40E-05	3.02E-04	6.70E-06	0.00E+00	1.32E-04	6.27E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.30E-03	2.88E-04	4.89E-05	2.02E-04	5.49E-05	5.56E-05	2.87E-04	6.28E-06	0.00E+00	1.46E-04	6.22E-04
9	D36	60	Passenger Car	338	0.00E+00	5.07E-06	5.49E-07	1.70E+01	3.53E-05	1.32E-01	1.13E-05	6.89E-04	3.43E-03	5.27E-04	1.10E-03	7.08E-04	7.26E-04	7.06E-05	8.50E-05	2.34E-08	3.72E-04	1.08E-04
9	D36	60	Passenger Truck	566	0.00E+00	1.12E-05	1.18E-06	3.87E+01	6.99E-05	2.35E-01	2.30E-05	2.25E-03	6.29E-03	9.77E-04	2.19E-03	1.43E-03	1.46E-03	3.00E-04	1.92E-04	5.31E-08	7.29E-04	3.72E-04
9	D36	60	Single Unit Short Haul Truck	7	0.00E+00	1.97E-06	9.85E-08	1.25E+00	1.62E-06	2.43E-03	2.10E-06	9.37E-04	1.59E-04	2.89E-05	2.39E-04	5.90E-05	6.00E-05	1.26E-04	5.07E-06	2.09E-09	1.79E-04	1.76E-04
9	D36	60	Combination Short Haul Truck	7	0.00E+00	4.00E-06	2.79E-07	2.60E+00	1.42E-08	3.50E-03	2.97E-06	4.33E-03	3.72E-04	7.37E-05	2.54E-04	8.30E-05	8.32E-05	3.92E-04	8.71E-06	0.00E+00	1.71E-04	8.15E-04
9	D36	60	Combination Long Haul Truck	6	0.00E+00	3.59E-06	2.34E-07	2.44E+00	1.62E-08	3.77E-03	2.77E-06	4.29E-03	3.74E-04	6.35E-05	2.62E-04	7.13E-05	7.22E-05	3.73E-04	8.17E-06	0.00E+00	1.90E-04	8.08E-04
9	D37	60	Passenger Car	437	0.00E+00	6.56E-06	7.10E-07	2.20E+01	4.57E-05	1.71E-01	1.46E-05	8.92E-04	4.44E-03	6.82E-04	1.42E-03	9.16E-04	9.40E-04	9.14E-05	1.10E-04	3.03E-08	4.81E-04	1.39E-04
9	D37	60	Passenger Truck	733	0.00E+00	1.45E-05	1.53E-06	5.01E+01	9.05E-05	3.04E-01	2.98E-05	2.91E-03	8.15E-03	1.26E-03	2.84E-03	1.85E-03	1.89E-03	3.88E-04	2.49E-04	6.88E-08	9.44E-04	4.82E-04
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.68E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.02E-05
9	D37	60	Combination Short Haul Truck	10	0.00E+00	6.15E-06	4.29E-07	4.00E+00	2.18E-08	5.38E-03	4.57E-06	6.66E-03	5.73E-04	1.13E-04	3.92E-04	1.28E-04	1.28E-04	6.03E-04	1.34E-05	0.00E+00	2.64E-04	1.25E-03
9	D37	60	Combination Long Haul Truck	10	0.00E+00	5.52E-06	3.59E-07	3.75E+00	2.50E-08	5.80E-03	4.26E-06	6.60E-03	5.76E-04	9.77E-05	4.04E-04	1.10E-04	1.11E-04	5.74E-04	1.26E-05	0.00E+00	2.92E-04	1.24E-03
9	D38	60	Passenger Car	241	0.00E+00	3.61E-06	3.91E-07	1.21E+01	2.51E-05	9.39E-02	8.03E-06	4.91E-04	2.44E-03	3.75E-04	7.82E-04	5.04E-04	5.17E-04	5.03E-05	6.06E-05	1.67E-08	2.65E-04	7.67E-05
9	D38	60	Passenger Truck	403	0.00E+00	7.97E-06	8.42E-07	2.76E+01	4.98E-05	1.67E-01	1.64E-05	1.60E-03	4.48E-03	6.96E-04	1.56E-03	1.02E-03	1.04E-03	2.13E-04	1.37E-04	3.79E-08	5.19E-04	2.65E-04
9	D38	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.35E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.00E-04
9	D38	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.00E-03	1.72E-04	3.40E-05	1.17E-04	3.83E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.76E-04
9	D38	60	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.98E-03	1.73E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.77E-05	3.73E-04
9	D39	60	Passenger Car	258	0.00E+00	3.87E-06	4.18E-07	1.29E+01	2.69E-05	1.00E-01	8.59E-06	5.25E-04	2.61E-03	4.01E-04	8.37E-04	5.39E-04	5.53E-04	5.38E-05	6.48E-05	1.78E-08	2.83E-04	8.21E-05
9	D39	60	Passenger Truck	431	0.00E+00	8.53E-06	9.00E-07	2.95E+01	5.33E-05	1.79E-01	1.76E-05	1.71E-03	4.80E-03	7.45E-04	1.67E-03	1.09E-03	1.11E-03	2.28E-04	1.47E-04	4.05E-08	5.56E-04	2.84E-04
9	D39	60	Combination Short Haul Truck	7	0.00E+00	4.00E-06	2.79E-07	2.60E+00	1.42E-08	3.50E-03	2.97E-06	4.33E-03	3.72E-04	7.37E-05	2.54E-04	8.30E-05	8.32E-05	3.92E-04	8.71E-06	0.00E+00	1.71E-04	8.15E-04
9	D39	60	Combination Long Haul Truck	6	0.00E+00	3.59E-06	2.34E-07	2.44E+00	1.62E-08	3.77E-03	2.77E-06	4.29E-03	3.74E-04	6.35E-05	2.62E-04	7.13E-05	7.22E-05	3.73E-04	8.17E-06	0.00E+00	1.90E-04	8.08E-04
9	D40	60	Passenger Car	161	0.00E+00	2.42E-06	2.62E-07	8.09E+00	1.68E-05	6.29E-02	5.38E-06	3.29E-04	1.64E-03	2.51E-04	5.23E-04	3.37E-04	3.46E-04	3.37E-05	4.05E-05	1.12E-08	1.77E-04	5.14E-05
9	D40	60	Passenger Truck	270	0.00E+00	5.33E-06	5.63E-07	1.85E+01	3.33E-05	1.12E-01	1.10E-05	1.07E-03	3.00E-03	4.66E-04	1.04E-03	6.81E-04	6.97E-04	1.43E-04	9.17E-05	2.53E-08	3.48E-04	1.78E-04
9	D40	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.66E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.25E-04
9	D40	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.60E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.24E-04
9	D41	60	Passenger Car	50	0.00E+00	7.46E-07	8.07E-08	2.50E+00	5.19E-06	1.94E-02	1.66E-06	1.01E-04	5.05E-04	7.75E-05	1.61E-04	1.04E-04	1.07E-04	1.04E-05	1.25E-05	3.45E-09	5.47E-05	1.58E-05
9	D41	60	Passenger Truck	83	0.00E+00	1.65E-06	1.74E-07	5.70E+00	1.03E-05	3.46E-02	3.39E-06	3.31E-04	9.26E-04	1.44E-04	3.22E-04	2.10E-04	2.15E-04	4.41E-05	2.83E-05	7.82E-09	1.07E-04	5.48E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	D41	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.07E-07	1.00E+00	5.45E-09	1.35E-03	1.14E-06	1.66E-03	1.43E-04	2.84E-05	9.79E-05	3.19E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.14E-04
9	D41	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	8.99E-08	9.38E-01	6.25E-09	1.45E-03	1.06E-06	1.65E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.31E-05	3.11E-04
9	D42	60	Passenger Car	187	0.00E+00	2.81E-06	3.04E-07	9.41E+00	1.96E-05	7.31E-02	6.25E-06	3.82E-04	1.90E-03	2.92E-04	6.08E-04	3.92E-04	4.02E-04	3.91E-05	4.71E-05	1.30E-08	2.06E-04	5.97E-05
9	D42	60	Passenger Truck	314	0.00E+00	6.20E-06	6.55E-07	2.15E+01	3.88E-05	1.30E-01	1.28E-05	1.25E-03	3.49E-03	5.41E-04	1.21E-03	7.92E-04	8.11E-04	1.66E-04	1.07E-04	2.94E-08	4.04E-04	2.06E-04
9	D42	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	D42	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.66E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.25E-04
9	D42	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.60E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.24E-04
9	D43	60	Passenger Car	134	0.00E+00	2.01E-06	2.17E-07	6.72E+00	1.40E-05	5.22E-02	4.47E-06	2.73E-04	1.36E-03	2.09E-04	4.35E-04	2.80E-04	2.88E-04	2.80E-05	3.37E-05	9.27E-09	1.47E-04	4.27E-05
9	D43	60	Passenger Truck	224	0.00E+00	4.43E-06	4.68E-07	1.53E+01	2.77E-05	9.31E-02	9.13E-06	8.90E-04	2.49E-03	3.87E-04	8.68E-04	5.66E-04	5.79E-04	1.19E-04	7.61E-05	2.10E-08	2.89E-04	1.47E-04
9	D43	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.26E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.84E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.84E-05
9	D43	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.22E-07	3.00E+00	1.63E-08	4.04E-03	3.42E-06	4.99E-03	4.30E-04	8.51E-05	2.94E-04	9.58E-05	9.59E-05	4.53E-04	1.01E-05	0.00E+00	1.98E-04	9.41E-04
9	D43	60	Combination Long Haul Truck	7	0.00E+00	4.14E-06	2.70E-07	2.81E+00	1.87E-08	4.35E-03	3.19E-06	4.95E-03	4.32E-04	7.33E-05	3.03E-04	8.23E-05	8.34E-05	4.30E-04	9.43E-06	0.00E+00	2.19E-04	9.32E-04
9	D44	60	Passenger Car	266	0.00E+00	3.99E-06	4.32E-07	1.34E+01	2.78E-05	1.04E-01	8.87E-06	5.42E-04	2.70E-03	4.14E-04	8.63E-04	5.57E-04	5.71E-04	5.55E-05	6.69E-05	1.84E-08	2.92E-04	8.47E-05
9	D44	60	Passenger Truck	445	0.00E+00	8.80E-06	9.29E-07	3.05E+01	5.50E-05	1.85E-01	1.81E-05	1.77E-03	4.95E-03	7.68E-04	1.72E-03	1.12E-03	1.15E-03	2.36E-04	1.51E-04	4.18E-08	5.73E-04	2.93E-04
9	D44	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	D44	60	Combination Short Haul Truck	2	0.00E+00	9.23E-07	6.43E-08	6.00E-01	3.27E-09	8.07E-04	6.85E-07	9.99E-04	8.59E-05	1.70E-05	5.87E-05	1.92E-05	1.92E-05	9.05E-05	2.01E-06	0.00E+00	3.95E-05	1.88E-04
9	D44	60	Combination Long Haul Truck	1	0.00E+00	8.29E-07	5.39E-08	5.63E-01	3.75E-09	8.70E-04	6.39E-07	9.90E-04	8.64E-05	1.47E-05	6.05E-05	1.65E-05	1.67E-05	8.60E-05	1.89E-06	0.00E+00	4.39E-05	1.86E-04
9	D45	60	Passenger Car	521	0.00E+00	7.82E-06	8.45E-07	2.62E+01	5.44E-05	2.03E-01	1.74E-05	1.06E-03	5.29E-03	8.12E-04	1.69E-03	1.09E-03	1.12E-03	1.09E-04	1.31E-04	3.61E-08	5.73E-04	1.66E-04
9	D45	60	Passenger Truck	872	0.00E+00	1.72E-05	1.82E-06	5.97E+01	1.08E-04	3.62E-01	3.55E-05	3.46E-03	9.70E-03	1.51E-03	3.38E-03	2.20E-03	2.25E-03	4.62E-04	2.96E-04	8.19E-08	1.12E-03	5.74E-04
9	D45	60	Single Unit Short Haul Truck	46	0.00E+00	1.35E-05	6.75E-07	8.60E+00	1.11E-05	1.66E-02	1.44E-05	6.43E-03	1.09E-03	1.98E-04	1.64E-03	4.05E-04	4.12E-04	8.61E-04	3.47E-05	1.43E-08	1.23E-03	1.20E-03
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	5.89E-07	2.93E-08	3.67E-01	4.83E-07	7.07E-04	6.29E-07	2.78E-04	4.91E-05	8.77E-06	7.19E-05	1.76E-05	1.79E-05	3.67E-05	1.48E-06	6.09E-10	5.40E-05	5.21E-05
9	D45	60	Combination Short Haul Truck	31	0.00E+00	1.85E-05	1.29E-06	1.20E+01	6.54E-08	1.61E-02	1.37E-05	2.00E-02	1.72E-03	3.40E-04	1.17E-03	3.83E-04	3.84E-04	1.81E-03	4.02E-05	0.00E+00	7.91E-04	3.76E-03
9	D45	60	Combination Long Haul Truck	29	0.00E+00	1.66E-05	1.08E-06	1.13E+01	7.50E-08	1.74E-02	1.28E-05	1.98E-02	1.73E-03	2.93E-04	1.21E-03	3.29E-04	3.33E-04	1.72E-03	3.77E-05	0.00E+00	8.77E-04	3.73E-03
9	D46	60	Passenger Car	481	0.00E+00	7.22E-06	7.81E-07	2.41E+01	5.02E-05	1.88E-01	1.60E-05	9.81E-04	4.88E-03	7.49E-04	1.56E-03	1.01E-03	1.03E-03	1.00E-04	1.21E-04	3.33E-08	5.29E-04	1.53E-04
9	D46	60	Passenger Truck	805	0.00E+00	1.59E-05	1.68E-06	5.51E+01	9.95E-05	3.34E-01	3.28E-05	3.20E-03	8.95E-03	1.39E-03	3.12E-03	2.03E-03	2.08E-03	4.26E-04	2.73E-04	7.56E-08	1.04E-03	5.30E-04
9	D46	60	Single Unit Short Haul Truck	44	0.00E+00	1.29E-05	6.47E-07	8.24E+00	1.07E-05	1.60E-02	1.38E-05	6.16E-03	1.05E-03	1.90E-04	1.57E-03	3.88E-04	3.94E-04	8.25E-04	3.33E-05	1.37E-08	1.18E-03	1.15E-03
9	D46	60	Single Unit Long Haul Truck	2	0.00E+00	5.65E-07	2.81E-08	3.52E-01	4.63E-07	6.77E-04	6.03E-07	2.66E-04	4.70E-05	8.41E-06	6.89E-05	1.69E-05	1.72E-05	3.51E-05	1.42E-06	5.83E-10	5.17E-05	4.99E-05
9	D46	60	Combination Short Haul Truck	36	0.00E+00	2.12E-05	1.48E-06	1.38E+01	7.52E-08	1.86E-02	1.58E-05	2.30E-02	1.98E-03	3.91E-04	1.35E-03	4.41E-04	4.41E-04	2.08E-03	4.62E-05	0.00E+00	9.09E-04	4.33E-03
9	D46	60	Combination Long Haul Truck	33	0.00E+00	1.91E-05	1.24E-06	1.29E+01	8.62E-08	2.00E-02	1.47E-05	2.28E-02	1.99E-03	3.37E-04	1.39E-03	3.79E-04	3.83E-04	1.98E-03	4.34E-05	0.00E+00	1.01E-03	4.29E-03
9	D47	60	Passenger Car	741	0.00E+00	1.11E-05	1.20E-06	3.72E+01	7.74E-05	2.89E-01	2.47E-05	1.51E-03	7.52E-03	1.15E-03	2.41E-03	1.55E-03	1.59E-03	1.55E-04	1.86E-04	5.13E-08	8.14E-04	2.36E-04
9	D47	60	Passenger Truck	1240	0.00E+00	2.45E-05	2.59E-06	8.49E+01	1.53E-04	5.15E-01	5.05E-05	4.92E-03	1.38E-02	2.14E-03	4.80E-03	3.13E-03	3.21E-03	6.57E-04	4.21E-04	1.16E-07	1.60E-03	8.16E-04
9	D47	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.89E-07	8.78E+00	1.14E-05	1.70E-02	1.47E-05	6.56E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	D47	60	Single Unit Long Haul Truck	2	0.00E+00	6.02E-07	2.99E-08	3.75E-01	4.93E-07	7.21E-04	6.43E-07	2.84E-04	5.01E-05	8.96E-06	7.34E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.32E-05
9	D47	60	Combination Short Haul Truck	33	0.00E+00	1.97E-05	1.37E-06	1.28E+01	6.97E-08	1.72E-02	1.46E-05	2.13E-02	1.83E-03	3.63E-04	1.25E-03	4.09E-04	4.09E-04	1.93E-03	4.29E-05	0.00E+00	8.43E-04	4.01E-03
9	D47	60	Combination Long Haul Truck	31	0.00E+00	1.77E-05	1.15E-06	1.20E+01	8.00E-08	1.86E-02	1.36E-05	2.11E-02	1.84E-03	3.13E-04	1.29E-03	3.51E-04	3.56E-04	1.84E-03	4.02E-05	0.00E+00	9.36E-04	3.98E-03
9	D48	60	Passenger Car	161	0.00E+00	2.42E-06	2.62E-07	8.09E+00	1.68E-05	6.29E-02	5.38E-06	3.29E-04	1.64E-03	2.51E-04	5.23E-04	3.37E-04	3.46E-04	3.37E-05	4.05E-05	1.12E-08	1.77E-04	5.14E-05
9	D48	60	Passenger Truck	270	0.00E+00	5.33E-06	5.63E-07	1.85E+01	3.33E-05	1.12E-01	1.10E-05	1.07E-03	3.00E-03	4.66E-04	1.04E-03	6.81E-04	6.97E-04	1.43E-04	9.17E-05	2.53E-08	3.48E-04	1.78E-04
9	D48	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.66E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.25E-04
9	D48	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.60E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.24E-04
9	D49	60	Passenger Car	741	0.00E+00	1.11E-05	1.20E-06	3.72E+01	7.74E-05	2.89E-01	2.47E-05	1.51E-03	7.52E-03	1.15E-03	2.41E-03	1.55E-03	1.59E-03	1.55E-04	1.86E-04	5.13E-08	8.14E-04	2.36E-04
9	D49	60	Passenger Truck	1240	0.00E+00	2.45E-05	2.59E-06	8.49E+01	1.53E-04	5.15E-01	5.05E-05	4.92E-03	1.38E-02	2.14E-03	4.80E-03	3.13E-03	3.21E-03	6.57E-04	4.21E-04	1.16E-07	1.60E-03	8.16E-04
9	D49	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.89E-07	8.78E+00	1.14E-05	1.70E-02	1.47E-05	6.56E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	D49	60	Single Unit Long Haul Truck	2	0.00E+00	6.02E-07	2.99E-08	3.75E-01	4.93E-07	7.21E-04	6.43E-07	2.84E-04	5.01E-05	8.96E-06	7.34E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.32E-05
9	D49	60	Combination Short Haul Truck	33	0.00E+00	1.97E-05	1.37E-06	1.28E+01	6.97E-08	1.72E-02	1.46E-05	2.13E-02	1.83E-03	3.63E-04	1.25E-03	4.09E-04	4.09E-04	1.93E-03	4.29E-05	0.00E+00	8.43E-04	4.01E-03
9	D49	60	Combination Long Haul Truck	31	0.00E+00	1.77E-05	1.15E-06	1.20E+01	8.00E-08	1.86E-02	1.36E-05	2.11E-02	1.84E-03	3.13E-04	1.29E-03	3.51E-04	3.56E-04	1.84E-03	4.02E-05	0.00E+00	9.36E-04	3.98E-03
9	D50	60	Passenger Car	601	0.00E+00	9.02E-06	9.76E-07	3.02E+01	6.28E-05	2.35E-01	2.01E-05	1.23E-03	6.10E-03	9.37E-04	1.95E-03	1.26E-03	1.29E-03	1.26E-04	1.51E-04	4.17E-08	6.61E-04	1.92E-04
9	D50	60	Passenger Truck	1007	0.00E+00	1.99E-05	2.10E-06	6.89E+01	1.24E-04	4.18E-01	4.10E-05	4.00E-03	1.12E-02	1.74E-03	3.90E-03	2.54E-03	2.60E-03	5.33E-04	3.42E-04	9.45E-08	1.30E-03	6.62E-04
9	D50	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.89E-07	8.78E+00	1.14E-05	1.70E-02	1.47E-05	6.56E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	D50	60	Single Unit Long Haul Truck	2	0.00E+00	6.02E-07	2.

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D54	60	Single Unit Short Haul Truck	25	0.00E+00	7.31E-06	3.66E-07	4.66E+00	6.03E-06	9.02E-03	7.80E-06	3.48E-03	5.92E-04	1.07E-04	8.89E-04	2.19E-04	2.23E-04	4.66E-04	1.88E-05	7.75E-09	6.66E-04	6.52E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	3.19E-07	1.59E-08	1.99E-01	2.62E-07	3.83E-04	3.41E-07	1.51E-04	2.66E-05	4.75E-06	3.89E-05	9.54E-06	9.70E-06	1.99E-05	8.04E-07	3.30E-10	2.92E-05	2.82E-05
9	D54	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	8.99E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.69E-03
9	D54	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.91E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.68E-03
11	D55	80	Passenger Car	380	0.00E+00	4.63E-06	5.01E-07	1.77E+01	3.22E-05	1.24E-01	1.03E-05	7.80E-04	2.09E-03	3.63E-04	1.00E-03	6.46E-04	6.63E-04	5.95E-05	8.92E-05	2.50E-08	3.39E-04	1.22E-04
11	D55	80	Passenger Truck	636	0.00E+00	9.94E-06	1.05E-06	4.09E+01	6.37E-05	2.28E-01	2.08E-05	2.32E-03	3.75E-03	6.65E-04	1.99E-03	1.29E-03	1.33E-03	2.86E-04	2.04E-04	5.56E-08	6.67E-04	3.79E-04
11	D55	80	Single Unit Short Haul Truck	31	0.00E+00	5.74E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.94E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.01E-09	5.26E-04	5.50E-04
11	D55	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.97E-07	4.70E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.45E-06	2.38E-05	9.63E-07	3.76E-10	2.31E-05	2.35E-05
11	D55	80	Combination Short Haul Truck	24	0.00E+00	1.03E-05	7.40E-07	8.55E+00	3.26E-08	9.16E-03	7.56E-06	1.06E-02	6.26E-04	1.54E-04	6.16E-04	2.18E-04	2.17E-04	1.29E-03	2.86E-05	0.00E+00	3.99E-04	1.99E-03
11	D55	80	Combination Long Haul Truck	21	0.00E+00	9.27E-06	6.23E-07	7.91E+00	3.77E-08	9.50E-03	7.02E-06	1.03E-02	6.12E-04	1.23E-04	6.36E-04	1.88E-04	1.89E-04	1.21E-03	2.65E-05	0.00E+00	4.47E-04	1.94E-03
11	D56	80	Passenger Car	471	0.00E+00	5.74E-06	6.21E-07	2.20E+01	3.99E-05	1.53E-01	1.28E-05	9.67E-04	2.59E-03	4.50E-04	1.24E-03	8.00E-04	8.21E-04	7.38E-05	1.10E-04	3.10E-08	4.20E-04	1.51E-04
11	D56	80	Passenger Truck	788	0.00E+00	1.23E-05	1.31E-06	5.07E+01	7.89E-05	2.82E-01	2.58E-05	2.87E-03	4.64E-03	8.24E-04	2.47E-03	1.60E-03	1.64E-03	3.54E-04	2.53E-04	6.89E-08	8.27E-04	4.69E-04
11	D56	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.18E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.41E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	D56	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.84E-08	1.08E-02	8.90E-06	1.25E-02	7.37E-04	1.82E-04	7.26E-04	2.57E-04	2.55E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.35E-03
11	D56	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.34E-07	9.31E+00	4.44E-08	1.12E-02	8.27E-06	1.21E-02	7.21E-04	1.45E-04	7.49E-04	2.21E-04	2.23E-04	1.42E-03	3.12E-05	0.00E+00	5.27E-04	2.28E-03
11	D57	80	Passenger Car	440	0.00E+00	5.36E-06	5.80E-07	2.05E+01	3.73E-05	1.43E-01	1.19E-05	9.04E-04	2.42E-03	4.21E-04	1.16E-03	7.48E-04	7.68E-04	6.90E-05	1.03E-04	2.89E-08	3.93E-04	1.41E-04
11	D57	80	Passenger Truck	737	0.00E+00	1.15E-05	1.22E-06	4.74E+01	7.38E-05	2.64E-01	2.41E-05	2.68E-03	4.34E-03	7.70E-04	2.31E-03	1.50E-03	1.54E-03	3.31E-04	2.37E-04	6.45E-08	7.73E-04	4.39E-04
11	D57	80	Single Unit Short Haul Truck	32	0.00E+00	5.92E-06	2.94E-07	5.81E+00	4.77E-06	1.16E-02	6.30E-06	3.03E-03	3.72E-04	8.42E-05	7.21E-04	1.75E-04	1.78E-04	5.83E-04	2.34E-05	9.29E-09	5.42E-04	5.67E-04
11	D57	80	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.27E-08	2.46E-01	2.04E-07	4.85E-04	2.74E-07	1.30E-04	1.70E-05	3.72E-06	3.15E-05	7.55E-06	7.68E-06	2.46E-05	9.93E-07	3.87E-10	2.38E-05	2.42E-05
11	D57	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.22E-07	9.50E+00	3.63E-08	1.02E-02	8.40E-06	1.18E-02	6.96E-04	1.71E-04	6.85E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.22E-03
11	D57	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.92E-07	8.79E+00	4.19E-08	1.06E-02	7.80E-06	1.14E-02	6.80E-04	1.37E-04	7.07E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.15E-03
11	D58	80	Passenger Car	536	0.00E+00	6.54E-06	7.07E-07	2.50E+01	4.55E-05	1.75E-01	1.45E-05	1.10E-03	2.95E-03	5.13E-04	1.41E-03	9.12E-04	9.36E-04	8.40E-05	1.26E-04	3.53E-08	4.79E-04	1.72E-04
11	D58	80	Passenger Truck	898	0.00E+00	1.40E-05	1.49E-06	5.78E+01	8.99E-05	3.22E-01	2.94E-05	3.27E-03	5.29E-03	9.39E-04	2.81E-03	1.83E-03	1.87E-03	4.03E-04	2.88E-04	7.85E-08	9.42E-04	5.34E-04
11	D58	80	Single Unit Short Haul Truck	51	0.00E+00	9.51E-06	4.72E-07	9.33E+00	7.65E-06	1.87E-02	1.01E-05	4.87E-03	5.98E-04	1.35E-04	1.16E-03	2.82E-04	2.86E-04	9.37E-04	3.76E-05	1.49E-08	8.71E-04	9.11E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	4.14E-07	2.04E-08	3.95E-01	3.27E-07	7.79E-04	4.40E-07	2.08E-04	2.73E-05	5.97E-06	5.05E-05	1.21E-05	1.23E-05	3.94E-05	1.59E-06	6.22E-10	3.82E-05	3.89E-05
11	D58	80	Combination Short Haul Truck	35	0.00E+00	1.54E-05	1.10E-06	1.27E+01	4.86E-08	1.36E-02	1.13E-05	1.58E-02	9.32E-04	2.30E-04	9.17E-04	3.25E-04	3.23E-04	1.92E-03	4.26E-05	0.00E+00	5.95E-04	2.97E-03
11	D58	80	Combination Long Haul Truck	32	0.00E+00	1.38E-05	9.27E-07	1.18E+01	5.62E-08	1.41E-02	1.05E-05	1.53E-02	9.12E-04	1.83E-04	9.47E-04	2.80E-04	2.81E-04	1.80E-03	3.94E-05	0.00E+00	6.66E-04	2.88E-03
11	D59	80	Passenger Car	440	0.00E+00	5.36E-06	5.80E-07	2.05E+01	3.73E-05	1.43E-01	1.19E-05	9.04E-04	2.42E-03	4.21E-04	1.16E-03	7.48E-04	7.68E-04	6.90E-05	1.03E-04	2.89E-08	3.93E-04	1.41E-04
11	D59	80	Passenger Truck	737	0.00E+00	1.15E-05	1.22E-06	4.74E+01	7.38E-05	2.64E-01	2.41E-05	2.68E-03	4.34E-03	7.70E-04	2.31E-03	1.50E-03	1.54E-03	3.31E-04	2.37E-04	6.45E-08	7.73E-04	4.39E-04
11	D59	80	Single Unit Short Haul Truck	32	0.00E+00	5.92E-06	2.94E-07	5.81E+00	4.77E-06	1.16E-02	6.30E-06	3.03E-03	3.72E-04	8.42E-05	7.21E-04	1.75E-04	1.78E-04	5.83E-04	2.34E-05	9.29E-09	5.42E-04	5.67E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.27E-08	2.46E-01	2.04E-07	4.85E-04	2.74E-07	1.30E-04	1.70E-05	3.72E-06	3.15E-05	7.55E-06	7.68E-06	2.46E-05	9.93E-07	3.87E-10	2.38E-05	2.42E-05
11	D59	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.22E-07	9.50E+00	3.63E-08	1.02E-02	8.40E-06	1.18E-02	6.96E-04	1.71E-04	6.85E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.22E-03
11	D59	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.92E-07	8.79E+00	4.19E-08	1.06E-02	7.80E-06	1.14E-02	6.80E-04	1.37E-04	7.07E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.15E-03
11	D60	80	Passenger Car	536	0.00E+00	6.54E-06	7.07E-07	2.50E+01	4.55E-05	1.75E-01	1.45E-05	1.10E-03	2.95E-03	5.13E-04	1.41E-03	9.12E-04	9.36E-04	8.40E-05	1.26E-04	3.53E-08	4.79E-04	1.72E-04
11	D60	80	Passenger Truck	898	0.00E+00	1.40E-05	1.49E-06	5.78E+01	8.99E-05	3.22E-01	2.94E-05	3.27E-03	5.29E-03	9.39E-04	2.81E-03	1.83E-03	1.87E-03	4.03E-04	2.88E-04	7.85E-08	9.42E-04	5.34E-04
11	D60	80	Single Unit Short Haul Truck	51	0.00E+00	9.51E-06	4.72E-07	9.33E+00	7.65E-06	1.87E-02	1.01E-05	4.87E-03	5.98E-04	1.35E-04	1.16E-03	2.82E-04	2.86E-04	9.37E-04	3.76E-05	1.49E-08	8.71E-04	9.11E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	4.14E-07	2.04E-08	3.95E-01	3.27E-07	7.79E-04	4.40E-07	2.08E-04	2.73E-05	5.97E-06	5.05E-05	1.21E-05	1.23E-05	3.94E-05	1.59E-06	6.22E-10	3.82E-05	3.89E-05
11	D60	80	Combination Short Haul Truck	35	0.00E+00	1.54E-05	1.10E-06	1.27E+01	4.86E-08	1.36E-02	1.13E-05	1.58E-02	9.32E-04	2.30E-04	9.17E-04	3.25E-04	3.23E-04	1.92E-03	4.26E-05	0.00E+00	5.95E-04	2.97E-03
11	D60	80	Combination Long Haul Truck	32	0.00E+00	1.38E-05	9.27E-07	1.18E+01	5.62E-08	1.41E-02	1.05E-05	1.53E-02	9.12E-04	1.83E-04	9.47E-04	2.80E-04	2.81E-04	1.80E-03	3.94E-05	0.00E+00	6.66E-04	2.88E-03
11	D61	80	Passenger Car	138	0.00E+00	1.68E-06	1.82E-07	6.43E+00	1.17E-05	4.50E-02	3.74E-06	2.83E-04	7.59E-04	1.32E-04	3.64E-04	2.35E-04	2.41E-04	2.16E-05	3.24E-05	9.08E-09	1.23E-04	4.43E-05
11	D61	80	Passenger Truck	231	0.00E+00	3.61E-06	3.83E-07	1.49E+01	2.31E-05	8.27E-02	7.57E-06	8.42E-04	1.36E-03	2.42E-04	7.24E-04	4.70E-04	4.82E-04	1.04E-04	7.42E-05	2.02E-08	2.42E-04	1.38E-04
11	D61	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.26E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	D61	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.41E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.66E-04
11	D61	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.37E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.58E-04
11	D62	80	Passenger Car	70	0.00E+00	8.48E-07	9.17E-08	3.24E+00	5.90E-06	2.27E-02	1.88E-06	1.43E-04	3.82E-04	6.65E-05	1.83E-04	1.18E-04	1.21E-04	1.09E-05	1.63E-05	4.57E-09	6.21E-05	2.23E-05
11	D62	80	Passenger Truck	116	0.00E+00	1.82E-06	1.93E-07	7.50E+00	1.17E-05	4.17E-02	3.81E-06	4.24E-04	6.86E-04	1.22E-04	3.65E-04	2.37E-04	2.43E-04	5.23E-05	3.74E-05	1.02E-08	1.22E-04	6.93E-05
11	D62	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.59E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.59E-05
11	D62	80	Combination Short Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.43E-03	1.18E-06	1.65E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.37E-05	2.01E-04	4.45E-06	0.00E+00	6.21E-05	3.10E-04
11	D62	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.69E-08	1.23E+00	5.87E-09	1.48E-03	1.09E-06	1.60E-03	9.53E-05	1.92E-05	9.90E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.01E-04
10	D63	70	Passenger Car	40	0.00E+00	5.19E-07	5.61E-08	1.90E+00	3.61E-06	1.35E-02	1.15E-06	7.94E-05	3.07E-04	4.93E-05	1.12E-04	7.24E-05	7.43E-05	7.10E-06	9.56E-06	2.60E-09	3.80E-05	1.24E-05
10	D63	70	Passenger Truck	66	0.00E+00	1.14E-06	1.20E-07	4.39E+00	7.19E-06	2.49E-02	2.36E-06	2.48E-04	5.59E-04	9.09E-05	2.25E-04	1.47E-04	1.50E-04	3.22E-05	2.18E-05	5.84E-09	7.51E-05	4.08E-05
10	D63	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.32E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.22E-05
10	D63	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.70E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.07E-04
10	D63	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.62E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	D64	70	Passenger Car	78	0.00E+00	1.02E-06	1.11E-07	3.75E+00	7.12E-06	2.67E-02	2.27E-06	1.57E-04	6.06E-04	9.72E-05	2.21E-04	1.43E-04	1.46E-04	1.40E-05	1.88E-05	5.13E-09	7.49E-05	2.45E-05
10	D64	70	Passenger Truck	131	0.00E+00	2.24E-06	2.37E-07	8.65E+00	1.42E-05	4.91E-02	4.66E-06	4.90E-04	1.10E-03	1.79E-04	4.44E-04	2.89E-04	2.96E-04	6.34E-05	4.30E-05	1.15E-08	1.48E-04	8.05E-05
10	D64	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.94E-06	5.64E-03	3.84E-06	1.77E-03	2.53E-04	5.07E-05	4.37E-04	1.08E-04	1.10E-04	2.83E-04	1.14E-05	4.59E-09	3.27E-04	3.32E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.80E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.62E-05	1.16E-05	2.26E-06	1.91E-05	4.66E-06	4.74E-06	1.20E-05	4.83E-07	1.94E-10	1.44E-05	1.43E-05
10	D64	70	Combination Short Haul Truck	10	0.00E+00	5.44E-06	3.87E-07	3.94E+00	1.77E-08	4.68E-03	3.99E-06	5.70E-03	4.14E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.95E-04	1.32E-05	0.00E+00	2.17E-04	1.07E-03
10	D64	70	Combination Long Haul Truck	10	0.00E+00	4.92E-06	3.29E-07	3.68E+00	2.04E-08	4.96E-03	3.74E-06	5.62E-03	4.11E-04	7.50E-05	3.43E-04	9.94E-05	1.00E-04	5.63E-04	1.23E-05	0.00E+00	2.42E-04	1.06E-03
11	D65	80	Passenger Car	173	0.00E+00	2.11E-06	2.28E-07	8.07E+00	1.47E-05	5.64E-02	4.69E-06	3.56E-04	9.52E-04	1.66E-04	4.57E-04	2.94E-04	3.02E-04	2.71E-05	4.06E-05	1.14E-08	1.55E-04	5.56E-05
11	D65	80	Passenger Truck	290	0.00E+00	4.53E-06	4.81E-07	1.87E+01	2.90E-05	1.04E-01	9.50E-06	1.06E-03	1.71E-03	3.03E-04	9.09E-04	5.90E-04	6.05E-04	1.30E-04	9.31E-05	2.54E-08	3.04E-04	1.73E-04
11	D65	80	Single Unit Short Haul Truck	36	0.00E+00	6.82E-06	3.39E-07	6.69E+00	5.49E-06	1.34E-02	7.26E-06	3.49E-03	4.29E-04	9.70E-05	8.30E-04	2.02E-04	2.05E-04	6.71E-04	2.70E-05	1.07E-08	6.25E-04	6.53E-04
11	D65	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.46E-08	2.83E-01	2.34E-07	5.58E-04	3.15E-07	1.49E-04	1.96E-05	4.28E-06	3.62E-05	8.69E-06	8.84E-06	2.83E-05	1.14E-06	4.46E-10	2.74E-05	2.79E-05
11	D65	80	Combination Short Haul Truck	22	0.00E+00	9.89E-06	7.07E-07	8.17E+00	3.12E-08	8.76E-03	7.22E-06	1.01E-02	5.98E-04	1.47E-04	5.89E-04	2.09E-04	2.07E-04	1.23E-03	2.74E-05	0.00E+00	3.82E-04	1.91E-03
11	D65	80	Combination Long Haul Truck	21	0.00E+00	8.85E-06	5.95E-07	7.56E+00	3.60E-08	9.07E-03	6.71E-06	9.82E-03	5.85E-04	1.18E-04	6.08E-04	1.80E-04	1.81E-04	1.15E-03	2.53E-05	0.00E+00	4.27E-04	1.85E-03
11	D66	80	Passenger Car	188	0.00E+00	2.29E-06	2.47E-07	8.75E+00	1.59E-05	6.12E-02	5.09E-06	3.86E-04	1.03E-03	1.79E-04	4.95E-04	3.19E-04	3.28E-04	2.94E-05	4.41E-05	1.23E-08	1.68E-04	6.02E-05
11	D66	80	Passenger Truck	314	0.00E+00	4.91E-06	5.21E-07	2.02E+01	3.15E-05	1.13E-01	1.03E-05	1.15E-03	1.85E-03	3.29E-04	9.85E-04	6.40E-04	6.56E-04	1.41E-04	1.01E-04	2.75E-08	3.30E-04	1.87E-04
11	D66	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.18E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.41E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	D66	80	Combination Short Haul Truck	30	0.00E+00	1.33E-05	9.54E-07	1.10E+01	4.21E-08	1.18E-02	9.74E-06	1.36E-02	8.07E-04	1.99E-04	7.94E-04	2.82E-04	2.79E-04	1.66E-03	3.69E-05	0.00E+00	5.15E-04	2.57E-03
11	D66	80	Combination Long Haul Truck	28	0.00E+00	1.19E-05	8.03E-07	1.02E+01	4.86E-08	1.22E-02	9.05E-06	1.32E-02	7.89E-04	1.59E-04	8.20E-04	2.42E-04	2.44E-04	1.56E-03	3.41E-05	0.00E+00	5.77E-04	2.49E-03
11	D67	80	Passenger Car	173	0.00E+00	2.11E-06	2.28E-07	8.07E+00	1.47E-05	5.64E-02	4.69E-06	3.56E-04	9.52E-04	1.66E-04	4.57E-04	2.94E-04	3.02E-04	2.71E-05	4.06E-05	1.14E-08	1.55E-04	5.56E-05
11	D67	80	Passenger Truck	290	0.00E+00	4.53E-06	4.81E-07	1.87E+01	2.90E-05	1.04E-01	9.50E-06	1.06E-03	1.71E-03	3.03E-04	9.09E-04	5.90E-04	6.05E-04	1.30E-04	9.31E-05	2.54E-08	3.04E-04	1.73E-04
11	D67	80	Single Unit Short Haul Truck	36	0.00E+00	6.82E-06	3.39E-07	6.69E+00	5.49E-06	1.34E-02	7.26E-06	3.49E-03	4.29E-04	9.70E-05	8.30E-04	2.02E-04	2.05E-04	6.71E-04	2.70E-05	1.07E-08	6.25E-04	6.53E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.46E-08	2.83E-01	2.34E-07	5.58E-04	3.15E-07	1.49E-04	1.96E-05	4.28E-06	3.62E-05	8.69E-06	8.84E-06	2.83E-05	1.14E-06	4.46E-10	2.74E-05	2.79E-05
11	D67	80	Combination Short Haul Truck	22	0.00E+00	9.89E-06	7.07E-07	8.17E+00	3.12E-08	8.76E-03	7.22E-06	1.01E-02	5.98E-04	1.47E-04	5.89E-04	2.09E-04	2.07E-04	1.23E-03	2.74E-05	0.00E+00	3.82E-04	1.91E-03
11	D67	80	Combination Long Haul Truck	21	0.00E+00	8.85E-06	5.95E-07	7.56E+00	3.60E-08	9.07E-03	6.71E-06	9.82E-03	5.85E-04	1.18E-04	6.08E-04	1.80E-04	1.81E-04	1.15E-03	2.53E-05	0.00E+00	4.27E-04	1.85E-03
11	D68	80	Passenger Car	188	0.00E+00	2.29E-06	2.47E-07	8.75E+00	1.59E-05	6.12E-02	5.09E-06	3.86E-04	1.03E-03	1.79E-04	4.95E-04	3.19E-04	3.28E-04	2.94E-05	4.41E-05	1.23E-08	1.68E-04	6.02E-05
11	D68	80	Passenger Truck	314	0.00E+00	4.91E-06	5.21E-07	2.02E+01	3.15E-05	1.13E-01	1.03E-05	1.15E-03	1.85E-03	3.29E-04	9.85E-04	6.40E-04	6.56E-04	1.41E-04	1.01E-04	2.75E-08	3.30E-04	1.87E-04
11	D68	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.18E-04
11	D68	80	Single Unit Long

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D72	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.88E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.53E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.10E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	D72	70	Combination Short Haul Truck	10	0.00E+00	5.17E-06	3.67E-07	3.75E+00	1.68E-08	4.45E-03	3.79E-06	5.42E-03	3.93E-04	8.58E-05	3.15E-04	1.09E-04	1.09E-04	5.65E-04	1.25E-05	0.00E+00	2.06E-04	1.02E-03
10	D72	70	Combination Long Haul Truck	9	0.00E+00	4.67E-06	3.12E-07	3.50E+00	1.93E-08	4.71E-03	3.55E-06	5.34E-03	3.91E-04	7.13E-05	3.26E-04	9.44E-05	9.55E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
10	D73	70	Passenger Car	130	0.00E+00	1.70E-06	1.84E-07	6.23E+00	1.18E-05	4.43E-02	3.78E-06	2.60E-04	1.01E-03	1.61E-04	3.67E-04	2.37E-04	2.43E-04	2.32E-05	3.13E-05	8.52E-09	1.24E-04	4.06E-05
10	D73	70	Passenger Truck	217	0.00E+00	3.72E-06	3.94E-07	1.44E+01	2.35E-05	8.16E-02	7.73E-06	8.13E-04	1.83E-03	2.97E-04	7.37E-04	4.80E-04	4.91E-04	1.05E-04	7.15E-05	1.91E-08	2.46E-04	1.34E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.43E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.30E-05
10	D73	70	Combination Short Haul Truck	8	0.00E+00	4.35E-06	3.09E-07	3.16E+00	1.41E-08	3.75E-03	3.19E-06	4.56E-03	3.31E-04	7.23E-05	2.65E-04	9.15E-05	9.14E-05	4.76E-04	1.06E-05	0.00E+00	1.74E-04	8.59E-04
10	D73	70	Combination Long Haul Truck	8	0.00E+00	3.93E-06	2.63E-07	2.94E+00	1.63E-08	3.97E-03	2.99E-06	4.49E-03	3.29E-04	6.00E-05	2.74E-04	7.95E-05	8.04E-05	4.50E-04	9.86E-06	0.00E+00	1.94E-04	8.47E-04
10	D74	70	Passenger Car	193	0.00E+00	2.53E-06	2.73E-07	9.27E+00	1.76E-05	6.59E-02	5.61E-06	3.87E-04	1.50E-03	2.40E-04	5.46E-04	3.52E-04	3.61E-04	3.45E-05	4.65E-05	1.27E-08	1.85E-04	6.04E-05
10	D74	70	Passenger Truck	323	0.00E+00	5.53E-06	5.86E-07	2.14E+01	3.50E-05	1.21E-01	1.15E-05	1.21E-03	2.72E-03	4.42E-04	1.10E-03	7.13E-04	7.31E-04	1.57E-04	1.06E-04	2.84E-08	3.66E-04	1.99E-04
10	D74	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
10	D74	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	D74	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.12E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
11	D75	80	Passenger Car	106	0.00E+00	1.29E-06	1.40E-07	4.95E+00	9.01E-06	3.46E-02	2.88E-06	2.18E-04	5.84E-04	1.02E-04	2.80E-04	1.81E-04	1.85E-04	1.66E-05	2.49E-05	6.99E-09	9.48E-05	3.41E-05
11	D75	80	Passenger Truck	178	0.00E+00	2.78E-06	2.95E-07	1.14E+01	1.78E-05	6.37E-02	5.82E-06	6.48E-04	1.05E-03	1.86E-04	5.57E-04	3.62E-04	3.71E-04	7.99E-05	5.71E-05	1.56E-08	1.87E-04	1.06E-04
11	D75	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.19E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.23E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.11E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.55E-06
11	D75	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.04E-03	1.68E-06	2.35E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.87E-04	6.36E-06	0.00E+00	8.88E-05	4.43E-04
11	D75	80	Combination Long Haul Truck	5	0.00E+00	2.06E-06	1.38E-07	1.76E+00	8.38E-09	2.11E-03	1.56E-06	2.28E-03	1.36E-04	2.74E-05	1.41E-04	4.18E-05	4.20E-05	2.68E-04	5.88E-06	0.00E+00	9.94E-05	4.30E-04
11	D76	80	Passenger Car	133	0.00E+00	1.63E-06	1.76E-07	6.22E+00	1.13E-05	4.35E-02	3.62E-06	2.74E-04	7.34E-04	1.28E-04	3.52E-04	2.27E-04	2.33E-04	2.09E-05	3.13E-05	8.78E-09	1.19E-04	4.28E-05
11	D76	80	Passenger Truck	224	0.00E+00	3.49E-06	3.71E-07	1.44E+01	2.24E-05	8.00E-02	7.32E-06	8.14E-04	1.32E-03	2.34E-04	7.01E-04	4.55E-04	4.66E-04	1.00E-04	7.18E-05	1.96E-08	2.34E-04	1.33E-04
11	D76	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D76	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.29E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.21E-04
11	D76	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.20E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.02E-04
11	D77	80	Passenger Car	101	0.00E+00	1.23E-06	1.33E-07	4.71E+00	8.56E-06	3.29E-02	2.74E-06	2.07E-04	5.55E-04	9.65E-05	2.66E-04	1.72E-04	1.76E-04	1.58E-05	2.37E-05	6.64E-09	9.01E-05	3.24E-05
11	D77	80	Passenger Truck	169	0.00E+00	2.64E-06	2.80E-07	1.09E+01	1.69E-05	6.05E-02	5.54E-06	6.16E-04	9.96E-04	1.77E-04	5.30E-04	3.44E-04	3.53E-04	7.59E-05	5.43E-05	1.48E-08	1.77E-04	1.01E-04
11	D77	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.64E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.50E-05	8.65E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.75E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.15E-09	1.19E-01	9.87E-08	2.35E-04	1.33E-07	6.28E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	D77	80	Combination Short Haul Truck	7	0.00E+00	2.99E-06	2.14E-07	2.47E+00	9.43E-09	2.65E-03	2.18E-06	3.06E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.26E-05	3.73E-04	8.27E-06	0.00E+00	1.15E-04	5.76E-04
11	D77	80	Combination Long Haul Truck	6	0.00E+00	2.68E-06	1.80E-07	2.28E+00	1.09E-08	2.74E-03	2.03E-06	2.97E-03	1.77E-04	3.56E-05	1.84E-04	5.43E-05	5.46E-05	3.49E-04	7.65E-06	0.00E+00	1.29E-04	5.59E-04
11	D78	80	Passenger Car	71	0.00E+00	8.66E-07	9.37E-08	3.31E+00	6.03E-06	2.31E-02	1.93E-06	1.46E-04	3.91E-04	6.79E-05	1.87E-04	1.21E-04	1.24E-04	1.11E-05	1.67E-05	4.67E-09	6.34E-05	2.28E-05
11	D78	80	Passenger Truck	119	0.00E+00	1.86E-06	1.97E-07	7.66E+00	1.19E-05	4.26E-02	3.90E-06	4.33E-04	7.01E-04	1.24E-04	3.73E-04	2.42E-04	2.48E-04	5.34E-05	3.82E-05	1.04E-08	1.25E-04	7.08E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D78	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.29E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.21E-04
11	D78	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.20E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.02E-04
10	D79	70	Passenger Car	178	0.00E+00	2.33E-06	2.52E-07	8.57E+00	1.62E-05	6.10E-02	5.19E-06	3.57E-04	1.38E-03	2.22E-04	5.05E-04	3.26E-04	3.34E-04	3.19E-05	4.30E-05	1.17E-08	1.71E-04	5.58E-05
10	D79	70	Passenger Truck	299	0.00E+00	5.12E-06	5.41E-07	1.97E+01	3.24E-05	1.12E-01	1.06E-05	1.12E-03	2.52E-03	4.09E-04	1.01E-03	6.59E-04	6.75E-04	1.45E-04	9.82E-05	2.63E-08	3.38E-04	1.84E-04
10	D79	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.90E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.67E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	D79	70	Combination Short Haul Truck	14	0.00E+00	7.35E-06	5.22E-07	5.32E+00	2.39E-08	6.32E-03	5.39E-06	7.70E-03	5.59E-04	1.22E-04	4.47E-04	1.54E-04	1.54E-04	8.03E-04	1.78E-05	0.00E+00	2.93E-04	1.45E-03
10	D79	70	Combination Long Haul Truck	13	0.00E+00	6.64E-06	4.44E-07	4.97E+00	2.75E-08	6.70E-03	5.04E-06	7.58E-03	5.55E-04	1.01E-04	4.63E-04	1.34E-04	1.36E-04	7.59E-04	1.66E-05	0.00E+00	3.27E-04	1.43E-03
10	D80	70	Passenger Car	400	0.00E+00	5.23E-06	5.66E-07	1.92E+01	3.64E-05	1.37E-01	1.16E-05	8.01E-04	3.10E-03	4.97E-04	1.13E-03	7.30E-04	7.49E-04	7.16E-05	9.64E-05	2.63E-08	3.83E-04	1.25E-04
10	D80	70	Passenger Truck	669	0.00E+00	1.15E-05	1.21E-06	4.42E+01	7.25E-05	2.51E-01	2.38E-05	2.50E-03	5.64E-03	9.16E-04	2.27E-03	1.48E-03	1.51E-03	3.24E-04	2.20E-04	5.89E-08	7.58E-04	4.12E-04
10	D80	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.66E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.11E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.14E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	D80	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.84E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.66E-03
10	D80	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.71E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.64E-03
9	F31	60	Passenger Car	839	0.00E+00	1.26E-05	1.36E-06	4.21E+01	8.76E-05	3.27E-01	2.80E-05	1.71E-03	8.51E-03	1.31E-03	2.72E-03	1.76E-03	1.80E-03	1.75E-04	2.11E-04	5.81E-08	9.22E-04	2.67E-04
9	F31	60	Passenger Truck	1404	0.00E+00	2.78E-05	2.93E-06	9.61E+01	1.74E-04	5.83E-01	5.72E-05	5.57E-03	1.56E-02	2.42E-03	5.44E-03	3.54E-03	3.63E-03	7.44E-04	4.77E-04	1.32E-07	1.81E-03	9.24E-04
9	F31	60	Single Unit Short Haul Truck	26	0.00E+00	7.59E-06	3.80E-07	4.84E+00	6.26E-06	9.36E-03	8.10E-06	3.61E-03	6.15E-04	1.12E-04	9.23E-04	2.28E-04	2.31E-04	4.84E-04	1.95E-05	8.05E-09	6.91E-04	6.77E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.06E-01	2.72E-07	3.97E-04	3.54E-07	1.56E-04	2.76E-05	4.93E-06	4.04E-05	9.91E-06	1.01E-05	2.06E-05	8.35E-07	3.42E-10	3.03E-05	2.93E-05
9	F31	60	Combination Short Haul Truck	31	0.00E+00	1.82E-05	1.26E-06	1.18E+01	6.43E-08	1.59E-02	1.35E-05	1.96E-02	1.69E-03	3.35E-04	1.15E-03	3.77E-04	3.77E-04	1.78E-03	3.95E-05	0.00E+00	7.78E-04	3.70E-03
9	F31	60	Combination Long Haul Truck	28	0.00E+00	1.63E-05	1.06E-06	1.11E+01	7.37E-08	1.71E-02	1.26E-05	1.95E-02	1.70E-03	2.88E-04	1.19E-03	3.24E-04	3.28E-04	1.69E-03	3.71E-05	0.00E+00	8.63E-04	3.67E-03
9	F32	60	Passenger Car	873	0.00E+00	1.31E-05	1.42E-06	4.38E+01	9.11E-05	3.40E-01	2.91E-05	1.78E-03	8.86E-03	1.36E-03	2.83E-03	1.83E-03	1.87E-03	1.82E-04	2.19E-04	6.05E-08	9.59E-04	2.78E-04
9	F32	60	Passenger Truck	1461	0.00E+00	2.89E-05	3.05E-06	1.00E+02	1.81E-04	6.07E-01	5.95E-05	5.80E-03	1.62E-02	2.52E-03	5.66E-03	3.69E-03	3.78E-03	7.74E-04	4.96E-04	1.37E-07	1.88E-03	9.61E-04
9	F32	60	Single Unit Short Haul Truck	7	0.00E+00	1.97E-06	9.85E-08	1.25E+00	1.62E-06	2.43E-03	2.10E-06	9.37E-04	1.59E-04	2.89E-05	2.39E-04	5.90E-05	6.00E-05	1.26E-04	5.07E-06	2.09E-09	1.79E-04	1.76E-04
9	F32	60	Combination Short Haul Truck	15	0.00E+00	8.61E-06	6.00E-07	5.60E+00	3.05E-08	7.53E-03	6.39E-06	9.32E-03	8.02E-04	1.59E-04	5.48E-04	1.79E-04	1.79E-04	8.45E-04	1.88E-05	0.00E+00	3.69E-04	1.76E-03
9	F32	60	Combination Long Haul Truck	13	0.00E+00	7.73E-06	5.03E-07	5.25E+00	3.50E-08	8.12E-03	5.96E-06	9.24E-03	8.06E-04	1.37E-04	5.65E-04	1.54E-04	1.56E-04	8.03E-04	1.76E-05	0.00E+00	4.09E-04	1.74E-03
9	F33	60	Passenger Car	258	0.00E+00	3.87E-06	4.18E-07	1.29E+01	2.69E-05	1.00E-01	8.59E-06	5.25E-04	2.61E-03	4.01E-04	8.37E-04	5.39E-04	5.53E-04	5.38E-05	6.48E-05	1.78E-08	2.83E-04	8.21E-05
9	F33	60	Passenger Truck	431	0.00E+00	8.53E-06	9.00E-07	2.95E+01	5.33E-05	1.79E-01	1.76E-05	1.71E-03	4.80E-03	7.45E-04	1.67E-03	1.09E-03	1.11E-03	2.28E-04	1.47E-04	4.05E-08	5.56E-04	2.84E-04
9	F33	60	Combination Short Haul Truck	7	0.00E+00	4.00E-06	2.79E-07	2.60E+00	1.42E-08	3.50E-03	2.97E-06	4.33E-03	3.72E-04	7.37E-05	2.54E-04	8.30E-05	8.32E-05	3.92E-04	8.71E-06	0.00E+00	1.71E-04	8.15E-04
9	F33	60	Combination Long Haul Truck	6	0.00E+00	3.59E-06	2.34E-07	2.44E+00	1.62E-08	3.77E-03	2.77E-06	4.29E-03	3.74E-04	6.35E-05	2.62E-04	7.13E-05	7.22E-05	3.73E-04	8.17E-06	0.00E+00	1.90E-04	8.08E-04
9	F34	60	Passenger Car	161	0.00E+00	2.42E-06	2.62E-07	8.09E+00	1.68E-05	6.29E-02	5.38E-06	3.29E-04	1.64E-03	2.51E-04	5.23E-04	3.37E-04	3.46E-04	3.37E-05	4.05E-05	1.12E-08	1.77E-04	5.14E-05
9	F34	60	Passenger Truck	270	0.00E+00	5.33E-06	5.63E-07	1.85E+01	3.33E-05	1.12E-01	1.10E-05	1.07E-03	3.00E-03	4.66E-04	1.04E-03	6.81E-04	6.97E-04	1.43E-04	9.17E-05	2.53E-08	3.48E-04	1.78E-04
9	F34	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.66E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.25E-04
9	F34	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.60E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.24E-04
53	G07	70	Passenger Car	56	0.00E+00	7.16E-07	7.75E-08	2.74E+00	4.98E-06	1.85E-02	1.59E-06	1.15E-04	4.31E-04	6.95E-05	1.55E-04	9.99E-05	1.03E-04	1.01E-05	1.38E-05	3.75E-09	5.25E-05	1.80E-05
53	G07	70	Passenger Truck	95	0.00E+00	1.56E-06	1.65E-07	6.32E+00	9.87E-06	3.40E-02	3.24E-06	3.52E-04	7.74E-04	1.26E-04	3.09E-04	2.01E-04	2.06E-04	4.56E-05	3.15E-05	8.24E-09	1.03E-04	5.78E-05
53	G07	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
53	G07	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.76E-04
53	G07	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.70E-04
50	G09	40	Passenger Car	37	0.00E+00	6.23E-07	6.74E-08	2.15E+00	4.34E-06	1.61E-02	1.39E-06	6.69E-05	6.40E-04	9.14E-05	1.35E-04	8.69E-05	8.92E-05	1.16E-05	1.07E-05	2.60E-09	4.56E-05	1.05E-05
50	G09	40	Passenger Truck	62	0.00E+00	1.42E-06	1.49E-07	4.80E+00	8.55E-06	2.77E-02	2.85E-06	2.53E-04	1.14E-03	1.62E-04	2.69E-04	1.76E-04	1.80E-04	4.10E-05	2.36E-05	5.05E-09	8.87E-05	4.28E-05
50	G09	40	Single Unit Short Haul Truck	3	0.00E+00	1.27E-06	6.69E-08	6.12E-01	1.11E-06	1.05E-03	1.36E-06	6.23E-04	1.16E-04	1.93E-05	1.51E-04	3.98E-05	4.04E-05	6.19E-05	2.47E-06	1.05E-09	1.10E-04	1.17E-04
50	G09	40	Single Unit Long Haul Truck	10	0.00E+00	8.80E-06	6.11E-07	4.47E+00	3.17E-08	7.68E-03	6.55E-06	9.79E-03	1.02E-03	1.85E-04	5.70E-04	1.82E-04	1.84E-04	6.73E-04	1.50E-05	0.00E+00	3.86E-04	1.85E-03
50	G09	40	Combination Long Haul Truck	9	0.00E+00	8.02E-06	5.23E-07	4.25E+00	3.60E-08	8.52E-03	6.17E-06	9.82E-03	1.03E-03	1.64E-04	5.87E-04	1.60E-04	1.63E-04	6.49E-04	1.42E-05	0.00E+00	4.25E-04	1.85E-03
53	G10	70	Passenger Car	56	0.00E+00	7.16E-07	7.75E-08	2.74E+00	4.98E-06	1.85E-02	1.59E-06	1.15E-04	4.31E-04	6.95E-05	1.55E-04	9.99E-05	1.03E-04	1.01E-05	1.38E-05	3.75E-09	5.25E-05	1.80E-05
53	G10	70	Passenger Truck	95	0.00E+00	1.56E-06	1.65E-07	6.32E+00	9.87E-06	3.40E-02	3.24E-06	3.52E-04	7.74E-04	1.26E-04	3.09E-04	2.01E-04	2.06E-04	4.56E-05	3.15E-05	8.24E-09	1.03E-04	5.78E-05
53	G10	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
53	G10	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.76E-04
53	G10	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.70E-04
16	H01	100	Passenger Car	2518	0.00E+00	2.76

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	H04	100	Combination Long Haul Truck	465	0.00E+00	1.52E-04	1.04E-05	1.67E+02	5.77E-07	1.71E-01	1.14E-04	1.77E-01	5.49E-03	1.53E-03	9.98E-03	3.13E-03	3.12E-03	2.55E-02	5.59E-04	0.00E+00	6.86E-03	3.33E-02
56	H05	100	Passenger Car	1301	0.00E+00	1.43E-05	1.54E-06	5.85E+01	9.92E-05	3.92E-01	3.17E-05	2.78E-03	4.22E-03	8.51E-04	3.09E-03	1.99E-03	2.04E-03	1.63E-04	2.96E-04	8.15E-08	1.04E-03	4.34E-04
56	H05	100	Passenger Truck	2178	0.00E+00	3.08E-05	3.28E-06	1.38E+02	2.01E-04	7.89E-01	6.55E-05	7.90E-03	7.46E-03	1.58E-03	6.30E-03	4.08E-03	4.18E-03	8.78E-04	6.92E-04	1.90E-07	2.12E-03	1.28E-03
56	H05	100	Single Unit Short Haul Truck	166	0.00E+00	2.23E-05	1.10E-06	3.02E+01	1.94E-05	7.00E-02	2.41E-05	1.20E-02	1.14E-03	3.32E-04	2.75E-03	6.82E-04	6.93E-04	3.05E-03	1.22E-04	4.97E-08	2.06E-03	2.24E-03
56	H05	100	Single Unit Long Haul Truck	7	0.00E+00	9.65E-07	4.69E-08	1.27E+00	8.04E-07	2.86E-03	1.04E-06	5.06E-04	5.17E-05	1.44E-05	1.20E-04	2.88E-05	2.93E-05	1.28E-04	5.13E-06	2.03E-09	9.07E-05	9.45E-05
56	H05	100	Combination Short Haul Truck	229	0.00E+00	7.85E-05	5.73E-06	8.27E+01	2.23E-07	7.66E-02	5.67E-05	8.36E-02	2.66E-03	9.48E-04	4.40E-03	1.68E-03	1.65E-03	1.25E-02	2.77E-04	0.00E+00	2.75E-03	1.58E-02
56	H05	100	Combination Long Haul Truck	208	0.00E+00	6.83E-05	4.68E-06	7.49E+01	2.59E-07	7.65E-02	5.12E-05	7.94E-02	2.46E-03	6.85E-04	4.48E-03	1.40E-03	1.40E-03	1.14E-02	2.51E-04	0.00E+00	3.08E-03	1.50E-02
56	H06	100	Passenger Car	1715	0.00E+00	1.88E-05	2.03E-06	7.72E+01	1.31E-04	5.17E-01	4.18E-05	3.67E-03	5.56E-03	1.12E-03	4.07E-03	2.62E-03	2.69E-03	2.15E-04	3.90E-04	1.07E-07	1.38E-03	5.73E-04
56	H06	100	Passenger Truck	2873	0.00E+00	4.06E-05	4.32E-06	1.82E+02	2.66E-04	1.04E+00	8.64E-05	1.04E-02	9.84E-03	2.09E-03	8.31E-03	5.38E-03	5.52E-03	1.16E-03	9.13E-04	2.50E-07	2.79E-03	1.69E-03
56	H06	100	Single Unit Short Haul Truck	114	0.00E+00	1.53E-05	7.58E-07	2.08E+01	1.34E-05	4.82E-02	1.66E-05	8.27E-03	7.86E-04	2.29E-04	1.89E-03	4.69E-04	4.77E-04	2.10E-03	8.36E-05	3.42E-08	1.42E-03	1.54E-03
56	H06	100	Single Unit Long Haul Truck	5	0.00E+00	6.64E-07	3.22E-08	8.76E-01	5.53E-07	1.97E-03	7.16E-07	3.48E-04	3.55E-05	9.88E-06	8.25E-05	1.98E-05	2.01E-05	8.78E-05	3.53E-06	1.40E-09	6.24E-05	6.50E-05
56	H06	100	Combination Short Haul Truck	281	0.00E+00	9.65E-05	7.04E-06	1.02E+02	2.74E-07	9.41E-02	6.96E-05	1.03E-01	3.27E-03	1.16E-03	5.41E-03	2.06E-03	2.03E-03	1.53E-02	3.40E-04	0.00E+00	3.38E-03	1.94E-02
56	H06	100	Combination Long Haul Truck	256	0.00E+00	8.40E-05	5.76E-06	9.20E+01	3.18E-07	9.40E-02	6.29E-05	9.76E-02	3.03E-03	8.42E-04	5.50E-03	1.72E-03	1.72E-03	1.40E-02	3.08E-04	0.00E+00	3.78E-03	1.84E-02
16	H07	100	Passenger Car	3128	0.00E+00	3.43E-05	3.71E-06	1.41E+02	2.39E-04	9.43E-01	7.62E-05	6.68E-03	1.01E-02	2.05E-03	7.42E-03	4.78E-03	4.91E-03	3.92E-04	7.11E-04	1.96E-07	2.51E-03	1.04E-03
16	H07	100	Passenger Truck	5239	0.00E+00	7.40E-05	7.88E-06	3.32E+02	4.85E-04	1.90E+00	1.57E-04	1.90E-02	1.79E-02	3.81E-03	1.51E-02	9.81E-03	1.01E-02	2.11E-03	1.66E-03	4.56E-07	5.09E-03	3.07E-03
16	H07	100	Single Unit Short Haul Truck	283	0.00E+00	3.80E-05	1.88E-06	5.16E+01	3.31E-05	1.19E-01	4.11E-05	2.05E-02	1.95E-03	5.67E-04	4.69E-03	1.16E-03	1.18E-03	5.20E-03	2.07E-04	8.47E-08	3.51E-03	3.83E-03
16	H07	100	Single Unit Long Haul Truck	12	0.00E+00	1.65E-06	7.99E-08	2.17E+00	1.37E-06	4.88E-03	1.77E-06	8.63E-04	8.81E-05	2.45E-05	2.05E-04	4.91E-05	4.99E-05	2.18E-04	8.75E-06	3.47E-09	1.55E-04	1.61E-04
16	H07	100	Combination Short Haul Truck	517	0.00E+00	1.78E-04	1.30E-05	1.87E+02	5.06E-07	1.73E-01	1.28E-04	1.89E-01	6.02E-03	2.14E-03	9.96E-03	3.80E-03	3.74E-03	2.82E-02	6.26E-04	0.00E+00	6.22E-03	3.56E-02
16	H07	100	Combination Long Haul Truck	472	0.00E+00	1.55E-04	1.06E-05	1.69E+02	5.86E-07	1.73E-01	1.16E-04	1.80E-01	5.58E-03	1.55E-03	1.01E-02	3.18E-03	3.17E-03	2.59E-02	5.67E-04	0.00E+00	6.97E-03	3.38E-02
52	H08	60	Passenger Car	307	0.00E+00	4.24E-06	4.58E-07	1.54E+01	2.95E-05	1.09E-01	9.42E-06	6.04E-04	3.03E-03	4.66E-04	9.17E-04	5.91E-04	6.07E-04	6.42E-05	7.73E-05	2.06E-08	3.10E-04	9.44E-05
52	H08	60	Passenger Truck	515	0.00E+00	9.31E-06	9.82E-07	3.52E+01	5.80E-05	1.95E-01	1.91E-05	1.94E-03	5.40E-03	8.36E-04	1.82E-03	1.19E-03	1.21E-03	2.67E-04	1.75E-04	4.38E-08	6.05E-04	3.21E-04
52	H08	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.55E-07	1.97E+00	2.55E-06	3.81E-03	3.30E-06	1.47E-03	2.51E-04	4.54E-05	3.76E-04	9.28E-05	9.43E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.76E-04
52	H08	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.33E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.51E-03
52	H08	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.32E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.49E-03
50	H09	40	Passenger Car	72	0.00E+00	1.21E-06	1.31E-07	4.17E+00	8.41E-06	3.12E-02	2.69E-06	1.30E-04	1.24E-03	1.77E-04	2.62E-04	1.69E-04	1.73E-04	2.25E-05	2.07E-05	5.03E-09	8.85E-05	2.03E-05
50	H09	40	Passenger Truck	120	0.00E+00	2.76E-06	2.90E-07	9.30E+00	1.66E-05	5.37E-02	5.53E-06	4.91E-04	2.21E-03	3.13E-04	5.21E-04	3.41E-04	3.49E-04	7.96E-05	4.58E-05	9.79E-09	1.72E-04	8.31E-05
50	H09	40	Single Unit Short Haul Truck	2	0.00E+00	8.50E-07	4.46E-08	4.08E-01	7.41E-07	7.03E-04	9.04E-07	4.15E-04	7.76E-05	1.29E-05	1.01E-04	2.65E-05	2.70E-05	4.12E-05	1.65E-06	6.98E-10	7.36E-05	7.78E-05
50	H09	40	Combination Short Haul Truck	4	0.00E+00	3.71E-06	2.57E-07	1.88E+00	1.33E-08	3.23E-03	2.76E-06	4.12E-03	4.31E-04	7.77E-05	2.40E-04	7.68E-05	7.75E-05	2.84E-04	6.30E-06	0.00E+00	1.63E-04	7.77E-04
50	H09	40	Combination Long Haul Truck	4	0.00E+00	3.38E-06	2.20E-07	1.79E+00	1.51E-08	3.59E-03	2.60E-06	4.13E-03	4.33E-04	6.90E-05	2.47E-04	6.72E-05	6.85E-05	2.73E-04	5.99E-06	0.00E+00	1.79E-04	7.79E-04
53	H14	70	Passenger Car	176	0.00E+00	2.23E-06	2.41E-07	8.54E+00	1.55E-05	5.77E-02	4.96E-06	3.58E-04	1.34E-03	2.16E-04	4.82E-04	3.11E-04	3.19E-04	3.15E-05	4.29E-05	1.17E-08	1.63E-04	5.60E-05
53	H14	70	Passenger Truck	294	0.00E+00	4.85E-06	5.14E-07	1.97E+01	3.07E-05	1.06E-01	1.01E-05	1.10E-03	2.41E-03	3.93E-04	9.63E-04	6.26E-04	6.41E-04	1.42E-04	9.80E-05	2.57E-08	3.21E-04	1.80E-04
53	H14	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.43E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.30E-05
53	H14	70	Combination Short Haul Truck	9	0.00E+00	4.90E-06	3.48E-07	3.55E+00	1.59E-08	4.22E-03	3.59E-06	5.13E-03	3.73E-04	8.13E-05	2.98E-04	1.03E-04	1.03E-04	5.35E-04	1.19E-05	0.00E+00	1.95E-04	9.67E-04
53	H14	70	Combination Long Haul Truck	9	0.00E+00	4.43E-06	2.96E-07	3.31E+00	1.83E-08	4.47E-03	3.36E-06	5.06E-03	3.70E-04	6.75E-05	3.08E-04	8.95E-05	9.04E-05	5.06E-04	1.11E-05	0.00E+00	2.18E-04	9.53E-04
53	H16	70	Passenger Car	418	0.00E+00	5.30E-06	5.74E-07	2.03E+01	3.69E-05	1.37E-01	1.18E-05	8.52E-04	3.19E-03	5.15E-04	1.15E-03	7.40E-04	7.59E-04	7.49E-05	1.02E-04	2.78E-08	3.88E-04	1.33E-04
53	H16	70	Passenger Truck	700	0.00E+00	1.15E-05	1.22E-06	4.68E+01	7.31E-05	2.52E-01	2.40E-05	2.61E-03	5.73E-03	9.36E-04	2.29E-03	1.49E-03	1.53E-03	3.37E-04	2.33E-04	6.10E-08	7.64E-04	4.28E-04
53	H16	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.35E-03	4.32E-06	1.99E-03	2.85E-04	5.71E-05	4.91E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.73E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	8.78E-09	1.35E-01	1.43E-07	2.67E-04	1.88E-07	8.57E-05	1.30E-05	2.54E-06	2.15E-05	5.24E-06	5.33E-06	1.35E-05	5.44E-07	2.18E-10	1.61E-05	1.61E-05
53	H16	70	Combination Short Haul Truck	18	0.00E+00	9.52E-06	6.77E-07	6.90E+00	3.09E-08	8.20E-03	6.98E-06	9.98E-03	7.25E-04	1.58E-04	5.80E-04	2.00E-04	2.00E-04	1.04E-03	2.31E-05	0.00E+00	3.80E-04	1.88E-03
53	H16	70	Combination Long Haul Truck	17	0.00E+00	8.61E-06	5.76E-07	6.44E+00	3.56E-08	8.68E-03	6.54E-06	9.83E-03	7.20E-04	1.31E-04	6.00E-04	1.74E-04	1.76E-04	9.84E-04	2.16E-05	0.00E+00	4.24E-04	1.85E-03

Appendix F.1.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B05	0.00E+00	1.03E-05	1.10E-06	4.50E+01	6.89E-05	2.71E-01	2.23E-05	2.45E-03	2.68E-03	5.58E-04	2.15E-03	1.39E-03	1.43E-03	2.39E-04	2.26E-04	6.21E-08	7.24E-04	3.92E-04
B06	0.00E+00	3.28E-05	3.51E-06	1.43E+02	2.19E-04	8.61E-01	7.08E-05	7.79E-03	8.51E-03	1.77E-03	6.84E-03	4.42E-03	4.54E-03	7.59E-04	7.20E-04	1.98E-07	2.30E-03	1.25E-03
B07	0.00E+00	2.58E-05	2.70E-06	1.09E+02	1.64E-04	6.45E-01	5.41E-05	6.92E-03	6.41E-03	1.34E-03	5.23E-03	3.34E-03	3.42E-03	7.67E-04	5.43E-04	1.49E-07	1.81E-03	1.14E-03
B08	0.00E+00	1.02E-04	7.93E-06	2.47E+02	2.89E-04	1.16E+00	1.42E-04	6.03E-02	1.28E-02	2.93E-03	1.40E-02	6.89E-03	7.03E-03	1.03E-02	1.14E-03	3.07E-07	6.94E-03	1.11E-02
D01	0.00E+00	8.77E-05	7.23E-06	1.56E+02	2.32E-04	8.50E-01	1.15E-04	6.32E-02	2.62E-02	4.21E-03	1.09E-02	5.75E-03	5.87E-03	5.93E-03	7.21E-04	1.71E-07	5.05E-03	1.18E-02
D02	0.00E+00	7.55E-05	6.76E-06	1.75E+02	2.99E-04	1.06E+00	1.21E-04	3.83E-02	3.00E-02	4.72E-03	1.16E-02	6.64E-03	6.79E-03	3.84E-03	8.44E-04	2.20E-07	4.78E-03	7.01E-03
D03	0.00E+00	9.56E-05	8.04E-06	1.86E+02	2.95E-04	1.05E+00	1.35E-04	6.05E-02	3.15E-02	5.01E-03	1.29E-02	6.96E-03	7.12E-03	5.85E-03	8.75E-04	2.18E-07	5.82E-03	1.12E-02
D04	0.00E+00	1.18E-04	9.94E-06	2.26E+02	3.54E-04	1.27E+00	1.65E-04	7.79E-02	3.83E-02	6.10E-03	1.57E-02	8.44E-03	8.63E-03	7.45E-03	1.06E-03	2.61E-07	7.07E-03	1.44E-02
D05	0.00E+00	8.90E-05	7.53E-06	1.79E+02	2.89E-04	1.03E+00	1.29E-04	5.34E-02	3.03E-02	4.81E-03	1.24E-02	6.72E-03	6.87E-03	5.24E-03	8.45E-04	2.14E-07	5.52E-03	9.86E-03
D06	0.00E+00	1.22E-04	1.08E-05	2.70E+02	4.47E-04	1.60E+00	1.87E-04	7.04E-02	4.61E-02	7.28E-03	1.78E-02	1.01E-02	1.04E-02	6.82E-03	1.29E-03	3.27E-07	7.42E-03	1.30E-02
D07	0.00E+00	8.55E-05	7.13E-06	1.90E+02	2.49E-04	9.41E-01	1.18E-04	5.47E-02	1.78E-02	3.28E-03	1.12E-02	5.98E-03	6.10E-03	6.82E-03	8.86E-04	2.17E-07	5.09E-03	1.01E-02
D08	0.00E+00	7.48E-05	6.73E-06	2.02E+02	2.91E-04	1.09E+00	1.18E-04	3.99E-02	1.94E-02	3.52E-03	1.12E-02	6.49E-03	6.64E-03	4.88E-03	9.70E-04	2.48E-07	4.59E-03	7.27E-03
D09	0.00E+00	5.83E-05	5.11E-06	1.48E+02	2.06E-04	7.73E-01	8.76E-05	3.34E-02	1.41E-02	2.56E-03	8.34E-03	4.71E-03	4.81E-03	4.11E-03	7.02E-04	1.77E-07	3.53E-03	6.12E-03
D10	0.00E+00	6.12E-05	5.84E-06	1.91E+02	2.90E-04	1.08E+00	1.07E-04	2.66E-02	1.87E-02	3.34E-03	1.02E-02	6.22E-03	6.36E-03	3.18E-03	9.34E-04	2.46E-07	3.88E-03	4.76E-03
D11	0.00E+00	5.67E-05	4.93E-06	1.41E+02	1.95E-04	7.32E-01	8.40E-05	3.30E-02	1.34E-02	2.44E-03	8.00E-03	4.48E-03	4.58E-03	4.07E-03	6.68E-04	1.68E-07	3.42E-03	6.06E-03
D12	0.00E+00	7.33E-05	6.78E-06	2.12E+02	3.12E-04	1.16E+00	1.21E-04	3.62E-02	2.05E-02	3.69E-03	1.15E-02	6.84E-03	7.00E-03	4.37E-03	1.02E-03	2.65E-07	4.54E-03	6.55E-03
D13	0.00E+00	5.12E-05	4.18E-06	9.38E+01	1.46E-04	5.20E-01	7.02E-05	3.30E-02	1.58E-02	2.52E-03	6.76E-03	3.52E-03	3.59E-03	3.22E-03	4.38E-04	1.09E-07	3.17E-03	6.11E-03
D14	0.00E+00	4.48E-05	3.46E-06	7.02E+01	1.02E-04	3.63E-01	5.63E-05	3.16E-02	1.16E-02	1.88E-03	5.45E-03	2.62E-03	2.68E-03	3.08E-03	3.21E-04	7.77E-08	2.77E-03	5.89E-03
D15	0.00E+00	6.23E-05	5.02E-06	1.11E+02	1.70E-04	6.05E-01	8.40E-05	4.07E-02	1.85E-02	2.97E-03	8.10E-03	4.15E-03	4.24E-03	3.98E-03	5.14E-04	1.28E-07	3.86E-03	7.55E-03
D16	0.00E+00	8.06E-05	6.50E-06	1.44E+02	2.24E-04	7.92E-01	1.09E-04	5.17E-02	2.42E-02	3.86E-03	1.06E-02	5.41E-03	5.53E-03	5.08E-03	6.72E-04	1.68E-07	5.05E-03	9.59E-03
D17	0.00E+00	2.42E-05	2.03E-06	5.07E+01	7.16E-05	2.62E-01	3.35E-05	1.56E-02	6.65E-03	1.12E-03	3.18E-03	1.71E-03	1.75E-03	1.69E-03	2.38E-04	5.72E-08	1.43E-03	2.88E-03
D18	0.00E+00	8.40E-06	7.64E-07	2.27E+01	3.59E-05	1.29E-01	1.40E-05	3.79E-03	3.05E-03	5.02E-04	1.35E-03	7.83E-04	8.02E-04	4.33E-04	1.10E-04	2.87E-08	5.46E-04	6.86E-04
D19	0.00E+00	1.17E-04	8.71E-06	1.97E+02	2.18E-04	8.27E-01	1.38E-04	8.42E-02	1.74E-02	3.34E-03	1.33E-02	6.02E-03	6.13E-03	1.11E-02	8.76E-04	2.08E-07	7.20E-03	1.57E-02
D20	0.00E+00	8.40E-05	7.37E-06	2.17E+02	3.06E-04	1.14E+00	1.29E-04	4.60E-02	2.07E-02	3.76E-03	1.23E-02	6.93E-03	7.09E-03	5.74E-03	1.03E-03	2.65E-07	5.21E-03	8.40E-03
D21	0.00E+00	1.22E-04	9.14E-06	2.12E+02	2.42E-04	9.14E-01	1.46E-04	8.56E-02	1.89E-02	3.60E-03	1.42E-02	6.52E-03	6.64E-03	1.13E-02	9.51E-04	2.29E-07	7.56E-03	1.59E-02
D22	0.00E+00	7.45E-05	6.35E-06	1.79E+02	2.44E-04	9.15E-01	1.08E-04	4.40E-02	1.69E-02	3.09E-03	1.04E-02	5.67E-03	5.80E-03	5.51E-03	8.44E-04	2.13E-07	4.56E-03	8.07E-03
D23	0.00E+00	8.70E-05	6.88E-06	1.50E+02	2.31E-04	8.12E-01	1.16E-04	5.58E-02	2.50E-02	4.01E-03	1.13E-02	5.65E-03	5.77E-03	5.54E-03	6.96E-04	1.75E-07	5.54E-03	1.03E-02
D24	0.00E+00	7.92E-05	6.83E-06	1.72E+02	2.89E-04	1.01E+00	1.22E-04	4.11E-02	2.92E-02	4.61E-03	1.18E-02	6.52E-03	6.67E-03	4.18E-03	8.21E-04	2.16E-07	5.14E-03	7.54E-03
D25	0.00E+00	8.33E-05	7.02E-06	1.71E+02	2.84E-04	9.93E-01	1.24E-04	4.53E-02	2.90E-02	4.59E-03	1.21E-02	6.50E-03	6.65E-03	4.60E-03	8.14E-04	2.13E-07	5.41E-03	8.34E-03
D26	0.00E+00	7.20E-05	6.85E-06	1.97E+02	3.54E-04	1.23E+00	1.29E-04	2.64E-02	3.39E-02	5.29E-03	1.25E-02	7.50E-03	7.68E-03	2.84E-03	9.61E-04	2.60E-07	4.77E-03	4.74E-03
D27	0.00E+00	5.01E-05	4.43E-06	1.32E+02	1.89E-04	7.03E-01	7.79E-05	2.66E-02	1.26E-02	2.29E-03	7.47E-03	4.24E-03	4.33E-03	3.33E-03	6.33E-04	1.63E-07	3.13E-03	4.85E-03
D28	0.00E+00	1.97E-05	1.78E-06	5.45E+01	7.91E-05	2.95E-01	3.16E-05	1.01E-02	5.24E-03	9.47E-04	3.01E-03	1.75E-03	1.79E-03	1.24E-03	2.62E-04	6.76E-08	1.22E-03	1.84E-03
D29	0.00E+00	5.01E-05	4.43E-06	1.32E+02	1.89E-04	7.03E-01	7.79E-05	2.66E-02	1.26E-02	2.29E-03	7.47E-03	4.24E-03	4.33E-03	3.33E-03	6.33E-04	1.63E-07	3.13E-03	4.85E-03
D30	0.00E+00	1.97E-05	1.78E-06	5.45E+01	7.91E-05	2.95E-01	3.16E-05	1.01E-02	5.24E-03	9.47E-04	3.01E-03	1.75E-03	1.79E-03	1.24E-03	2.62E-04	6.76E-08	1.22E-03	1.84E-03
D31	0.00E+00	3.03E-05	2.61E-06	7.44E+01	1.03E-04	3.85E-01	4.48E-05	1.75E-02	7.04E-03	1.29E-03	4.29E-03	2.37E-03	2.42E-03	2.19E-03	3.53E-04	8.94E-08	1.87E-03	3.20E-03
D32	0.00E+00	1.52E-05	1.35E-06	3.98E+01	5.64E-05	2.11E-01	2.34E-05	8.39E-03	3.81E-03	6.91E-04	2.23E-03	1.27E-03	1.30E-03	1.03E-03	1.90E-04	4.84E-08	9.30E-04	1.53E-03
D33	0.00E+00	1.94E-05	1.69E-06	4.21E+01	7.02E-05	2.48E-01	2.96E-05	1.07E-02	7.18E-03	1.13E-03	2.84E-03	1.59E-03	1.63E-03	1.06E-03	2.01E-04	5.18E-08	1.21E-03	1.97E-03
D34	0.00E+00	3.09E-05	2.66E-06	6.54E+01	1.08E-04	3.82E-01	4.65E-05	1.72E-02	1.11E-02	1.76E-03	4.48E-03	2.47E-03	2.53E-03	1.71E-03	3.11E-04	8.04E-08	1.95E-03	3.17E-03
D35	0.00E+00	1.77E-05	1.55E-06	3.95E+01	6.67E-05	2.35E-01	2.76E-05	9.29E-03	6.74E-03	1.06E-03	2.65E-03	1.49E-03	1.53E-03	9.30E-04	1.89E-04	4.93E-08	1.12E-03	1.70E-03
D36	0.00E+00	2.59E-05	2.35E-06	6.21E+01	1.07E-04	3.77E-01	4.23E-05	1.25E-02	1.06E-02	1.67E-03	4.06E-03	2.35E-03	2.41E-03	1.27E-03	2.99E-04	7.87E-08	1.65E-03	2.29E-03
D37	0.00E+00	3.33E-05	3.06E-06	8.02E+01	1.37E-04	4.87E-01	5.39E-05	1.73E-02	1.38E-02	2.17E-03	5.12E-03	3.02E-03	3.09E-03	1.69E-03	3.86E-04	9.97E-08	2.03E-03	3.17E-03
D38	0.00E+00	1.63E-05	1.53E-06	4.28E+01	7.59E-05	2.66E-01	2.84E-05	6.63E-03	7.37E-03	1.15E-03	2.72E-03	1.63E-03	1.67E-03	6.92E-04	2.08E-04	5.58E-08	1.06E-03	1.20E-03
D39	0.00E+00	2.00E-05	1.83E-06	4.75E+01	8.02E-05	2.87E-01	3.19E-05	1.09E-02	8.16E-03	1.28E-03	3.02E-03	1.78E-03	1.82E-03	1.05E-03	2.28E-04	5.83E-08	1.20E-03	1.99E-03
D40	0.00E+00	8.92E-06	9.04E-07	2.73E+01	5.02E-05	1.76E-01	1.72E-05	2.73E-03	4.75E-03	7.38E-04	1.65E-03	1.04E-03	1.07E-03	2.94E-04	1.35E-04	3.65E-08	5.80E-04	4.79E-04
D41	0.00E+00	5.60E-06	4.66E-07	1.03E+01	1.57E-05	5.71E-02	7.57E-06	3.89E-03	1.74E-03	2.78E-04	7.18E-04	3.82E-04	3.91E-04	3.67E-04	4.80E-05	1.16E-08	3.28E-04	7.21E-04
D42	0.00E+00	1.05E-05	1.05E-06	3.18E+01	5.86E-05	2.05E-01	2.02E-05	3.09E-03	5.53E-03	8.59E-04	1.94E-03	1.22E-03	1.25E-03	3.42E-04	1.57E-04	4.27E-08	6.92E-04	5.42E-04
D43	0.00E+00	2.02E-05	1.53E-06	3.11E+01	4.58E-05	1.60E-01	2.55E-05	1.35E-02	5.12E-03	8.27E-04	2.51E-03	1.17E-03	1.20E-03	1.35E-03	1.42E-04	3.56E-08	1.31E-03	2.51E-03
D44	0.00E+00	1.48E-05	1.49E-06	4.52E+01	8.30E-05	2.91E-01	2.86E-05	4.44E-03	7.84E-03	1.22E-03	2.74E-03	1.72E-03	1.77E-03	4.86E-04	2.23E-04	6.05E-08	9.76E-04	7.78E-04
D45	0.00E+00	7.42E-05	5.73E-06	1.18E+02	1.74E-04	6.16E-01	9.44E-05	5.10E-02	1.96E-02	3.16E-03	9.17E-03	4.43E-03	4.52E-03	5.00E-03	5.41E-04	1.33E-07	4.65E-03	9.49E-03
D46	0.00E+00	7.69E-05	5.86E-06	1.15E+02	1.61E-04	5.77E-01	9.37E-05	5.63E-02	1.89E-02	3.07E-03	9.06E-03	4.26E-03	4.35E-03	5.45E-03	5.19E-04	1.23E-07	4.71E-03	1.05E-02
D47	0.00E+00	8.74E-05	7.03E-06	1.56E+02	2.43E-04	8.57E-01	1.19E-04	5.57E-02	2.62E-02	4.18E-03	1.15E-02	5.87E-03	6.00E-03	5.49E-03	7.28E-04	1.83E-07	5.50E-03	1.03E-02
D48	0.00E+00	8.92E-06	9.04E-07	2.73E+01	5.02E-05	1.76E-01	1.72E-05	2.73E-03	4.75E-03	7.38E-04	1.65E-03	1.04E-03	1.07E-03	2.94E-04	1.35E-04	3.65E-08	5.80E-04	4.79E-04
D49	0.00E+00	8.74E-05	7.03E-06	1.56E+02	2.43E-04	8.57E-01	1.19E-04	5.57E-02	2.62E-02	4.18E-03	1.15E-02	5.87E-03	6.00E-03	5.49E-03	7.28E-04	1.83E-07	5.50E-03	1.03E-02
D50	0.00E+00	8.36E-05	6.52E-06	1.35E+02	1.99E-04	7.09E-01	1.07E-04	5.78E-02	2.24E-02	3.61E-03	1.03E-02	5.05E-03	5.16E-03	5.63E-03	6.20E-04	1.51E-07	5.19E-03	1.08E-02
D51	0.00E+00	2.45E-05	2.03E-06	4.91E+01	8.14E-05	2.83E-01	3.63E-05	1.31E-02	8.29E-03	1.31E-03	3.54E-03	1.87E-03	1.92E-03	1.35E-03	2.33E-04	6.15E-08	1.62E-03	2.42E-03
D52	0.00E+00	3.60E-05	2.79E-06	5.85E+01	8.79E-05	3.09E-01	4.67E-05	2.38E-02	9.71E-03	1.56E-03	4.55E-03	2.21E-03	2.25E-03	2.36E-03	2.70E-04	6.74E-08	2.30E-03	4.42E-03
D53	0.00E+00	3.21E-05	2.80E-06	7.28E+01	1.25E-04	4.36E-01	5.12E-05	1.52E-02	1.24E-02	1.95E-03	4.98E-03	2.78E-03	2.84E-03	1.59E-03	3.50E-04	9.35E-08	2.13E-03	2.77E-03
D54	0.00E+00	3.68E-05	2.87E-06	6.11E+01	9.28E-05	3.26E-01	4.83E-05	2.39E-02	1.02E-02	1.63E-03	4.70E-03	2.30E-03	2.35E-03	2.38E-03	2.83E-04	7.10E-08	2.35E-03	4.45E-03
D55	0.00E+00	4.02E-05	3.22E-06	8.10E+01	1.01E-04	3.82E-01	5.21E-05	2.70E-02	7.45E-03	1.39E-03	4.98E-03	2.52E-03	2.58E-03	3.43E-03	3.72E-04	9.00E-08	2.40E-03	5.00E-03
D56	0.00E+00	4.79E-05	3.87E-06	9.87E+01	1.24E-04	4.71E-01	6.29E-05	3.19E-02	9.11E-03	1.70E-03	6.01E-03	3.08E-03	3.15E-03	4.03E-03	4.55E-04	1.10E-07	2.86E-03	5.89E-03
D57	0.00E+00	4.49E-05	3.62E-06	9.23E+01	1.16E-04	4.40E-01	5.88E-05	2.99E-02	8.53E-03	1.59E-03	5.61E-03	2.88E-03	2.94E-03	3.78E-03	4.26E-04	1.03E-07	2.67E-03	5.54E-03
D58	0.00E+00	5.97E-05	4.72E-06	1.17E+02	1.43E-04	5.43E-01	7.62E-05	4.05E-02	1.07E-02	2.01E-03	7.30E-03	3.64E-03	3.71E-03	5.18E-03	5.36E-04	1.29E-07	3.59E-03	7.51E-03
D59	0.00E+00	4.49E-05	3.62E-06	9.23E+01	1.16E-04	4.40E-01	5.88E-05	2.99E-02	8.53E-03	1.59E-03	5.61E-03	2.88E-03	2.94E-03	3.78E-03	4.26E-04	1.03E-07	2.67E-03	5.54E-03
D60	0.00E+00	5.97E-05	4.72E-06	1.17E+02	1.43E-04	5.43E-01	7.62E-05	4.05E-02	1.07E-02	2.01E-03	7.30E-03	3.64E-03	3.71E-03	5.18E-03	5.36E-04	1.29E-07	3.59E-03	7.51E-03
D61	0.00E+00	9.59E-06	8.30E-07	2.52E+01	3.62E-05	1.33E-01	1.50E-05	4.77E-03	2.39E-03	4.34E-04	1.46E-03	8.09E-04	8.27E-04	6.24E-04	1.21E-04	3.19E-08	6.33E-04	8.67E-04
D62	0.00E+00	6.65E-06	5.43E-07	1.42E+01	1.83E-05	6.91E-02	8.96E-06	4.29E-03	1.32E-03	2.45E-04	8.57E-04	4.46E-04	4.56E-04	5.44E-04	6.60E-05	1.62E-08	4.02E-04	7.93E-04
D63	0.00E+00	3.40E-06	2.83E-07	7.60E+00	1.14E-05	4.05E-02	5.04E-06	1.81E-03	9.98E-04	1.67E-04	4.90E-04	2.61E-04	2.67E-04	2.10E-04	3.62E-05	9.34E-09	2.23E-04	3.31E-04
D64	0.00E+00	1.74E-05	1.25E-06	2.30E+01	2.44E-05	9.14E-02	1.87E-05	1.38E-02	2.80E-03	4.95E-04	1.80E-03	7.58E-04	7.71E-04	1.53E-03	9.93E-05	2.14E-08	1.02E-03	2.58E-03
D65	0.00E+00	3.25E-05	2.36E-06	4.94E+01	4.95E-05	1.92E-01	3.57E-05	2.50E-02	4.29E-03	8.35E-04	3.43E-03	1.48E-03	1.51E-03	3.24E-03	2.15E-04	4.79E-08	1.92E-03	4.66E-03
D66	0.00E+00	3.92E-05	2.86E-06	5.68E+01	5.29E-05	2.11E-01	4.13E-05	3.19E-02	4.90E-03	9.62E-04	3.92E-03	1.68E-03	1.71E-03	4.05E-03	2.43E-04	5.04E-08	2.21E-03	5.96E-03
D67	0.00E+00	3.25E-05	2.36E-06	4.94E+01	4.95E-05	1.92E-01	3.57E-05	2.50E-02	4.29E-03	8.35E-04	3.43E-03	1.48E-03	1.51E-03	3.24E-03	2.15E-04	4.79E-08	1.92E-03	4.66E-03
D68	0.00E+00	3.92E-05	2.86E-06	5.68E+01	5.29E-05	2.11E-01	4.13E-05	3.19E-02	4.90E-03	9.62E-04	3.92E-03	1.68E-03	1.71E-03	4.05E-03	2.43E-04	5.04E-08	2.21E-03	5.96E-03
D69	0.00E+00	1.88E-05	1.40E-06	3.01E+01	3.14E-05	1.22E-01	2.11E-05	1.43E-02	2.65E-03	5.10E-04	2.02E-03	9.08E-04	9.24E-04	1.84E-03	1.32E-04	2.95E-08	1.10E-03	2.67E-03
D70	0.00E+00	1.87E-05	1.37E-06	2.84E+01	2.80E-05	1.10E-01	2.04E-05	1.47E-02	2.47E-03	4.80E-04	1.94E-03	8.48E-04	8.62E-04	1.88E-03	1.23E-04	2.67E-08	1.08E-03	2.74E-03
D71	0.00E+00	3.41E-05	2.55E-06	4.77E+01	5.10E-05	1.97E-01	3.68E-05	2.83E-02	5.92E-03	1.04E-03	3.46E-03	1.56E-03	1.58E-03	3.03E-03	2.07E-04	4.24E-08	1.87E-03	5.29E-03
D72	0.00E+00	2.26E-05	1.82E-06	4.37E+01	6.06E-05	2.19E-01	3.02E-05	1.45E-02	5.66E-03	9.56E-04	2.91E-03	1.48E-03	1.51E-03	1.62E-03	2.03E-04	4.98E-08	1.40E-03	2.68E-03
D73	0.00E+00	1.46E-05	1.20E-06	2.74E+01	3.61E-05	1.35E-01	1.87E-05	1.06E-02	3.56E-03	6.04E-04	1.76E-03	9.16E-04	9.35E-04	1.13E-03	1.26E-04	2.88E-08	8.23E-04	1.97E-03
D74	0.00E+00	1.06E-05	1.03E-06	3.25E+01	5.30E-05	1.90E-01	1.92E-05	4.09E-03	4.41E-03	7.22E-04	1.83E-03	1.12E-03	1.15E-03	4.59E-04	1.59E-04	4.17E-08	6.85E-04	7.29E-04
D75	0.00E+00	1.09E-05	8.58E-07	2.24E+01	2.88E-05	1.07E-01	1.45E-05	6.75E-03	2.06E-03	3.84E-04	1.41E-03	7.05E-04	7.20E-04	8.91E-04	1.04E-04	2.64E-08	6.93E-04	1.25E-03
D76	0.00E+00	1.33E-05	1.07E-06	2.78E+01	3.54E-05	1.33E-01	1.77E-05	8.63E-03	2.57E-03	4.77E-04	1.69E-03	8.69E-04	8.87E-04	1.10E-03	1.28E-04	3.16E-08	8.06E-04	1.60E-03
D77	0.00E+00	1.25E-05	9.56E-07	2.33E+01	2.79E-05	1.05E-01	1.57E-05	8.38E-03	2.10E-03	3.96E-04	1.52E-03	7.22E-04	7.36E-04	1.11E-03	1.06E-04	2.61E-08	7.87E-04	1.56E-03
D78	0.00E+00	1.09E-05	8.17E-07	1.81E+01	1.96E-05	7.56E-02	1.26E-05	8.12E-03	1.61E-03	3.08E-04	1.20E-03	5.50E-04	5.60E-04	1.04E-03	8.02E-05	1.83E-08	6.40E-04	1.51E-03
D79	0.00E+00	2.47E-05	1.92E-06	4.12E+01	5.13E-05	1.91E-01	2.97E-05	1.84E-02	5.24E-03	9.00E-04	2.83E-03	1.37E-03	1.40E-03	2.00E-03	1.86E-04	4.22E-08	1.43E-03	3.42E-03
D80	0.00E+00	3.63E-05	3.06E-06	7.80E+01	1.12E-04	4.08E-01	5.12E-05	2.26E-02	1.03E-02	1.72E-03	4.88E-03	2.64E-03	2.70E-03	2.47E-03	3.67E-04	8.96E-08	2.17E-03	4.17E-03
F31	0.00E+00	8.27E-05	7.01E-06	1.66E+02	2.68E-04	9.53E-01	1.20E-04	5.02E-02	2.82E-02	4.47E-03	1.15E-02	6.24E-03	6.38E-03	4.90E-03	7.85E-04	1.98E-07	5.09E-03	9.27E-03
F32	0.00E+00	6.04E-05	5.67E-06	1.56E+02	2.73E-04	9.65E-01	1.03E-04	2.71E-02	2.69E-02	4.21E-03	9.86E-03	5.91E-03	6.05E-03	2.73E-03	7.57E-04	2.00E-07	3.81E-03	4.92E-03
F33	0.00E+00	2.00E-05	1.83E-06	4.75E+01	8.02E-05	2.87E-01	3.19E-05	1.09E-02	8.16E-03	1.28E-03	3.02E-03	1.78E-03	1.82E-03	1.05E-03	2.28E-04	5.83E-08	1.20E-03	1.99E-03
F34	0.00E+00	8.92E-06	9.04E-07	2.73E+01	5.02E-05	1.76E-01	1.72E-05	2.73E-03	4.75E-03	7.38E-04	1.65E-03	1.04E-03	1.07E-03	2.94E-04	1.35E-04	3.65E-08	5.80E-04	4.79E-04
G07	0.00E+00	6.37E-06	5.17E-07	1.21E+01	1.53E-05	5.67E-02	8.04E-06	4.66E-03	1.53E-03	2.60E-04	7.57E-04	3.90E-04	3.98E-04	4.98E-04	5.57E-05	1.26E-08	3.59E-04	8.65E-04
G09	0.00E+00	2.02E-05	1.42E-06	1.63E+01	1.41E-05	6.11E-02	1.84E-05	2.06E-02	3.95E-03	6.22E-04	1.72E-03	6.46E-04	6.58E-04	1.44E-03	6.60E-05	8.74E-09	1.06E-03	3.87E-03
G10	0.00E+00	6.37E-06	5.17E-07	1.21E+01	1.53E-05	5.67E-02	8.04E-06	4.66E-03	1.53E-03	2.60E-04	7.57E-04	3.90E-04	3.98E-04	4.98E-04	5.57E-05	1.26E-08	3.59E-04	8.65E-04
H01	0.00E+00	4.25E-04	3.22E-05	7.58E+02	6.27E-04	2.75E+00	4.54E-04	3.67E-01	3.52E-02	8.67E-03	4.18E-02	1.93E-02	1.96E-02	5.57E-02	3.22E-03	6.38E-07	2.22E-02	6.85E-02
H02	0.00E+00	4.25E-04	3.22E-05	7.58E+02	6.27E-04	2.75E+00	4.54E-04	3.67E-01	3.52E-02	8.67E-03	4.18E-02	1.93E-02	1.96E-02	5.57E-02	3.22E-03	6.38E-07	2.22E-02	6.85E-02
H03	0.00E+00	3.94E-04	2.98E-05	7.01E+02	5.80E-04	2.54E+00	4.20E-04	3.39E-01	3.26E-02	8.01E-03	3.87E-02	1.79E-02	1.81E-02

Appendix F.2.1: MOVES Emission Factors by Road Type, 2041 Build, Section 2

Highway 413

GTA West

RWDI Project#: 1301992

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.94E-05	4.26E-06	1.62E+02	2.74E-04	1.08E+00	8.76E-05	7.69E-03	1.17E-02	2.35E-03	8.52E-03	5.49E-03	5.64E-03	4.51E-04	8.19E-04	2.25E-07	2.88E-03	1.20E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	5.08E-05	5.41E-06	2.28E+02	3.32E-04	1.29E+00	1.08E-04	1.31E-02	1.23E-02	2.62E-03	1.04E-02	6.73E-03	6.90E-03	1.45E-03	1.14E-03	3.13E-07	3.49E-03	2.11E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	6.14E-05	6.41E-06	2.54E+02	3.72E-04	1.19E+00	1.24E-04	1.82E-02	1.37E-02	3.15E-03	1.11E-02	7.64E-03	7.76E-03	3.12E-03	1.26E-03	5.42E-07	3.30E-03	3.04E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.16E-03	5.08E-05	1.14E+03	1.77E-03	1.11E+01	6.17E-03	7.07E-01	3.80E-02	9.10E-03	9.32E-01	7.42E-02	7.67E-02	1.06E-01	4.78E-03	1.34E-06	8.55E-01	1.29E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.33E-03	5.03E-05	1.14E+03	1.70E-03	1.06E+01	6.37E-03	6.07E-01	2.86E-02	7.75E-03	9.65E-01	7.42E-02	7.68E-02	1.04E-01	4.73E-03	1.37E-06	8.88E-01	1.10E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	6.14E-04	2.47E-05	8.33E+02	3.47E-04	1.98E+00	6.54E-04	4.03E-01	3.51E-02	9.53E-03	8.12E-02	1.47E-02	1.50E-02	1.10E-01	3.03E-03	3.13E-07	6.61E-02	7.55E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	5.73E-03	3.85E-05	1.14E+03	1.04E-04	3.91E+00	6.52E-03	9.43E-01	3.50E-02	8.51E-03	1.02E+00	4.92E-02	5.25E-02	1.64E-01	4.03E-03	1.34E-09	9.72E-01	1.75E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.84E-04	2.39E-05	6.57E+02	4.22E-04	1.52E+00	5.23E-04	2.61E-01	2.48E-02	7.22E-03	5.98E-02	1.48E-02	1.51E-02	6.63E-02	2.64E-03	1.08E-06	4.47E-02	4.88E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.50E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.66E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.96E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	3.56E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.49E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.37E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.59E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.00E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.16E-05	4.50E-06	1.68E+02	2.90E-04	1.30E+00	9.25E-05	8.44E-03	8.94E-03	2.08E-03	9.01E-03	5.81E-03	5.96E-03	4.10E-04	8.52E-04	2.52E-07	3.05E-03	1.32E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.39E-05	5.75E-06	2.39E+02	3.57E-04	1.60E+00	1.16E-04	1.41E-02	9.26E-03	2.33E-03	1.12E-02	7.22E-03	7.40E-03	1.43E-03	1.20E-03	3.53E-07	3.75E-03	2.27E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.11E-05	6.38E-06	2.65E+02	3.76E-04	1.44E+00	1.24E-04	1.87E-02	1.05E-02	2.82E-03	1.13E-02	7.69E-03	7.82E-03	3.13E-03	1.31E-03	5.70E-07	3.44E-03	3.11E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.34E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.53E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.09E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.29E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.36E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.15E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.07E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.99E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.77E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.18E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.62E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.88E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.18E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.93E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.45E+00	3.86E-02	1.53E-02	7.18E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.74E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.54E+00	3.81E-02	1.16E-02	8.06E-02	2.86E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.91E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.68E-05	5.07E-06	1.77E+02	3.26E-04	1.70E+00	1.04E-04	9.41E-03	7.63E-03	2.07E-03	1.01E-02	6.53E-03	6.70E-03	3.76E-04	9.00E-04	3.03E-07	3.43E-03	1.47E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	6.04E-05	6.45E-06	2.54E+02	4.03E-04	2.11E+00	1.30E-04	1.55E-02	7.92E-03	2.31E-03	1.26E-02	8.13E-03	8.34E-03	1.41E-03	1.28E-03	4.07E-07	4.24E-03	2.49E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.60E-05	6.92E-06	2.75E+02	4.13E-04	1.85E+00	1.36E-04	1.99E-02	8.94E-03	2.77E-03	1.24E-02	8.42E-03	8.56E-03	3.14E-03	1.36E-03	6.29E-07	3.84E-03	3.30E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.58E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.76E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.08E-01	1.99E-02	5.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.65E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.70E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.22E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.55E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.76E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.16E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.44E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.38E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.58E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.98E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.22E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.12E-05	7.70E-06	2.45E+02	4.95E-04	1.74E+00	1.58E-04	6.70E-03	8.50E-02	1.19E-02	1.54E-02	9.93E-03	1.02E-02	1.50E-03	1.21E-03	2.76E-07	5.21E-03	1.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	1.01E-04	1.05E-05	3.25E+02	5.91E-04	1.77E+00	1.99E-04	1.70E-02	9.19E-02	1.27E-02	1.86E-02	1.22E-02	1.25E-02	2.97E-03	1.60E-03	3.07E-07	6.11E-03	2.92E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	2.01E-04	2.08E-05	3.77E+02	1.12E-03	1.74E+00	3.83E-04	3.43E-02	9.51E-02	1.39E-02	3.12E-02	2.34E-02	2.35E-02	5.27E-03	1.83E-03	7.72E-07	7.70E-03	6.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.63E+00	4.80E-01	6.85E-02	3.89E+00	2.20E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.86E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.44E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.39E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.50E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.92E-03	1.32E-04	1.24E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.28E-02	3.44E-01	6.20E-02	6.38E-02	1.62E-01	4.53E-03	5.76E-07	2.80E-01	3.23E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.46E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.42E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.89E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.95E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.87E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.16E+03	4.76E-03	2.76E+00	9.87E-03	7.58E-01	2.64E-01	4.34E-02	9.21E-01	5.98E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-05	2.33E-02	1.41E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.33E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.17E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.78E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	9.00E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.05E-05	6.54E-06	2.09E+02	4.21E-04	1.55E+00	1.34E-04	6.51E-03	6.23E-02	8.89E-03	1.31E-02	8.44E-03	8.66E-03	1.13E-03	1.04E-03	2.52E-07	4.43E-03	1.02E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.26E-05	8.66E-06	2.78E+02	4.95E-04	1.60E+00	1.65E-04	1.47E-02	6.60E-02	9.39E-03	1.56E-02	1.02E-02	1.04E-02	2.38E-03	1.37E-03	2.93E-07	5.14E-03	2.49E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.53E-04	1.58E-05	3.20E+02	8.60E-04	1.54E+00	2.93E-04	2.78E-02	6.96E-02	1.05E-02	2.42E-02	1.79E-02	1.81E-02	4.37E-03	1.56E-03	6.77E-07	6.15E-03	4.86E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.71E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.44E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.31E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.45E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.44E+03	3.31E-04	5.95E+00	2.19E-02	2.80E+00	3.55E-01	5.20E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.58E-09	3.26E+00	5.31E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.81E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.46E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.71E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.89E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.55E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.70E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.91E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.36E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.51E-05	5.96E-06	1.89E+02	3.83E-04	1.41E+00	1.22E-04	6.70E-03	4.71E-02	6.95E-03	1.19E-02	7.69E-03	7.89E-03	9.03E-04	9.42E-04	2.46E-07	4.04E-03	1.05E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.30E-05	7.68E-06	2.53E+02	4.47E-04	1.46E+00	1.48E-04	1.38E-02	4.99E-02	7.34E-03	1.40E-02	9.17E-03	9.39E-03	2.05E-03	1.25E-03	2.95E-07	4.65E-03	2.31E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	8.13E-05	8.50E-06	2.92E+02	7.24E-04	1.41E+00	2.06E-04	1.30E-02	5.14E-02	7.95E-03	2.05E-02	1.52E-02	1.52E-02	3.90E-03	1.43E-03	6.34E-07	5.31E-03	4.47E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.19E-01
2	RuralR

Appendix F.2.1: MOVES Emission Factors by Road Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.50E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.66E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.96E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	5.66E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.49E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.37E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.59E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.08E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.16E-05	4.50E-06	1.68E+02	2.90E-04	1.30E+00	9.25E-05	8.44E-03	8.94E-03	2.08E-03	9.01E-03	5.81E-03	5.96E-03	4.10E-04	8.52E-04	2.52E-07	3.05E-03	1.32E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.39E-05	5.75E-06	2.39E+02	3.57E-04	1.60E+00	1.16E-04	1.41E-02	9.26E-03	2.33E-03	1.12E-02	7.22E-03	7.40E-03	1.43E-03	1.20E-03	3.53E-07	3.75E-03	2.27E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.11E-05	6.38E-06	2.65E+02	3.76E-04	1.44E+00	1.24E-04	1.87E-02	1.05E-02	2.82E-03	1.13E-02	7.69E-03	7.82E-03	3.13E-03	1.31E-03	5.70E-07	3.44E-03	3.11E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.34E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.53E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.09E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.29E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.36E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.15E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.07E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.99E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.77E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.18E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.62E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.88E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.18E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.93E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.45E+00	3.86E-02	1.53E-02	7.18E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.74E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.54E+00	3.81E-02	1.16E-02	8.06E-02	2.86E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.91E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.68E-05	5.07E-06	1.77E+02	3.26E-04	1.70E+00	1.04E-04	9.41E-03	7.63E-03	2.07E-03	1.01E-02	6.53E-03	6.70E-03	3.76E-04	9.00E-04	3.03E-07	3.43E-03	1.47E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	6.04E-05	6.45E-06	2.54E+02	4.03E-04	2.11E+00	1.30E-04	1.55E-02	7.92E-03	2.31E-03	1.26E-02	8.13E-03	8.34E-03	1.41E-03	1.28E-03	4.07E-07	4.24E-03	2.49E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.60E-05	6.92E-06	2.75E+02	4.13E-04	1.85E+00	1.36E-04	1.99E-02	8.94E-03	2.77E-03	1.24E-02	8.42E-03	8.56E-03	3.14E-03	1.36E-03	6.29E-07	3.84E-03	3.30E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.58E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.76E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.08E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.65E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.70E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.22E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.55E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.76E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.16E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.44E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.38E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.58E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.98E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.22E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.39E-05	8.00E-06	2.20E+02	5.15E-04	1.74E+00	1.64E-04	8.50E-03	6.58E-02	9.49E-03	1.60E-02	1.03E-02	1.06E-02	1.13E-03	1.10E-03	3.00E-07	5.42E-03	1.33E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.92E-05	1.04E-05	2.96E+02	6.06E-04	1.81E+00	2.01E-04	1.81E-02	7.26E-02	1.06E-02	1.90E-02	1.24E-02	1.27E-02	2.54E-03	1.46E-03	4.14E-07	6.30E-03	3.03E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.72E-04	1.78E-05	3.40E+02	9.77E-04	1.72E+00	3.32E-04	3.30E-02	7.50E-02	1.15E-02	2.77E-02	2.03E-02	2.05E-02	4.79E-03	1.66E-03	8.23E-07	7.21E-03	5.73E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.71E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.22E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.42E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.22E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.81E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.46E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.71E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.89E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.55E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.70E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.91E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.36E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.37E-05	6.89E-06	1.92E+02	4.43E-04	1.64E+00	1.42E-04	7.54E-03	4.89E-02	7.24E-03	1.38E-02	8.89E-03	9.12E-03	9.03E-04	9.58E-04	2.68E-07	4.67E-03	1.18E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.44E-05	8.89E-06	2.58E+02	5.21E-04	1.69E+00	1.72E-04	1.55E-02	5.39E-02	8.06E-03	1.63E-02	1.07E-02	1.09E-02	2.13E-03	1.28E-03	3.69E-07	5.42E-03	2.59E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.42E-04	1.47E-05	2.95E+02	8.18E-04	1.65E+00	2.77E-04	2.76E-02	5.61E-02	8.92E-03	2.32E-02	1.70E-02	1.71E-02	4.09E-03	1.44E-03	7.34E-07	6.10E-03	4.77E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.19E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.40E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.58E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.85E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.38E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.44E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.65E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.25E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.54E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.01E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.30E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.07E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.79E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.37E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.35E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.44E+02	2.75E-02	1.00E+01	8.72E-03	6.98E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.50E-05	5.95E-06	1.81E+02	3.83E-04	1.40E+00	1.22E-04	7.58E-03	3.60E-02	5.56E-03	1.19E-02	7.67E-03	7.87E-03	7.52E-04	9.10E-04	2.57E-07	4.03E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.18E-05	7.58E-06	2.47E+02	4.49E-04	1.48E+00	1.48E-04	1.45E-02	3.94E-02	6.19E-03	1.41E-02	9.18E-03	9.40E-03	1.90E-03	1.23E-03	3.58E-07	4.69E-03	2.40E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.12E-04	1.17E-05	2.83E+02	6.52E-04	1.40E+00	2.20E-04	2.42E-02	4.13E-02	6.95E-03	1.87E-02	1.35E-02	1.36E-02	3.78E-03	1.38E-03	6.78E-07	5.06E-03	4.15E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.38E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.11E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.05E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.82E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.75E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.26E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.04E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.44E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.94E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.26E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.75E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.94E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.33E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E

Appendix F.2.1: MOVES Emission Factors by Road Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.58E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.76E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.08E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.65E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.70E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.22E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.55E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.76E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.16E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.44E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.38E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.58E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.98E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.22E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.12E-05	7.70E-06	2.45E+02	4.95E-04	1.74E+00	1.58E-04	6.70E-03	8.50E-02	1.19E-02	1.54E-02	9.93E-03	1.02E-02	1.50E-03	1.21E-03	2.76E-07	5.21E-03	1.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	1.01E-04	1.05E-05	3.25E+02	5.91E-04	1.77E+00	1.99E-04	1.70E-02	9.19E-02	1.27E-02	1.86E-02	1.22E-02	1.25E-02	2.97E-03	1.60E-03	3.07E-07	6.11E-03	2.92E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	2.01E-04	2.08E-05	3.77E+02	1.12E-03	1.74E+00	3.83E-04	3.43E-02	9.51E-02	1.39E-02	3.12E-02	2.34E-02	2.35E-02	5.27E-03	1.83E-03	7.72E-07	7.70E-03	6.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.63E+00	4.80E-01	6.85E-02	3.89E+00	2.20E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.86E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.44E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.38E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.50E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.32E-03	1.32E-04	9.77E+04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.23E-02	3.44E-01	6.20E-02	6.38E-02	1.62E-01	4.53E-03	5.76E-07	1.80E-01	1.23E-01	5.80E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.46E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.42E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.89E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.95E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.87E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.16E+03	4.76E-03	2.76E+00	1.87E-03	7.58E-01	2.64E-01	4.14E-02	1.31E-01	1.08E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-06	2.33E-02	1.41E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.33E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.17E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.78E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	9.00E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.05E-05	6.54E-06	2.09E+02	4.21E-04	1.55E+00	1.34E-04	6.51E-03	6.23E-02	8.89E-03	1.31E-02	8.44E-03	8.66E-03	1.13E-03	1.04E-03	2.52E-07	4.43E-03	1.02E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.26E-05	8.64E-06	2.73E+02	4.95E-04	1.66E+00	1.65E-04	1.47E-02	6.60E-02	9.39E-03	1.56E-02	1.02E-02	1.04E-02	2.38E-03	1.37E-03	2.59E-07	5.14E-03	2.63E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.53E-04	1.58E-05	3.20E+02	8.60E-04	1.54E+00	2.93E-04	2.78E-02	6.96E-02	1.05E-02	2.42E-02	1.79E-02	1.81E-02	4.37E-03	1.56E-03	6.77E-07	6.15E-03	4.86E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.71E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.44E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.31E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.45E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.80E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.21E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.81E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.46E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.71E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.89E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.55E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.70E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.91E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.36E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.51E-05	5.96E-06	1.89E+02	3.83E-04	1.41E+00	1.22E-04	6.70E-03	4.71E-02	6.95E-03	1.19E-02	7.69E-03	7.89E-03	9.03E-04	9.42E-04	2.46E-07	4.04E-03	1.05E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.30E-05	7.68E-06	2.53E+02	4.47E-04	1.46E+00	1.48E-04	1.38E-02	4.99E-02	7.34E-03	1.40E-02	9.17E-03	9.39E-03	2.05E-03	1.25E-03	2.96E-07	4.65E-03	2.31E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.27E-04	1.31E-05	2.92E+02	7.24E-04	1.41E+00	2.45E-04	2.48E-02	5.34E-02	8.35E-03	2.05E-02	1.50E-02	1.52E-02	3.90E-03	1.43E-03	6.39E-07	5.35E-03	4.29E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.19E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.36E-02	9.69E-05	1.28E+03	1.61E-03	5.47E+00	1.57E-02	1.60E+00	1.99E-01	3.11E-02	2.44E+00	1.39E-01	1.47E-01	1.27E-01	5.24E-03	1.73E-06	2.30E+00	2.95E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.84E-03	8.42E-05	1.04E+03	5.64E-04	1.41E+00	1.78E-03	1.09E+00	2.12E-01	3.77E-02	2.14E-01	3.84E-02	3.96E-02	1.37E-01	3.79E-03	4.47E-07	1.74E-01	2.05E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.38E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.44E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.65E-01	1.15E-01	2.06E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.37E-06	1.18E-01	1.16E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.54E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.01E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.30E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.07E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.79E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.37E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.35E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.95E-05	5.36E-06	1.80E+02	3.45E-04	1.27E+00	1.10E-04	7.07E-03	3.55E-02	5.46E-03	1.07E-02	6.91E-03	7.09E-03	7.52E-04	9.05E-04	2.42E-07	3.63E-03	1.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	6.50E-05	6.86E-06	2.46E+02	4.05E-04	1.36E+00	1.34E-04	1.36E-02	3.78E-02	5.85E-03	1.27E-02	8.28E-03	8.48E-03	1.87E-03	1.22E-03	3.06E-07	4.23E-03	2.25E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.04E-04	1.08E-05	2.82E+02	6.00E-04	1.36E+00	2.02E-04	2.26E-02	4.04E-02	6.68E-03	1.72E-02	1.24E-02	1.26E-02	3.67E-03	1.38E-03	6.14E-07	4.62E-03	3.87E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.91E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.53E-06	1.83E+00	2.28E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.11E-02	7.41E-05	1.14E+03	1.42E-03	5.95E+00	1.30E-02	1.19E+00	1.39E-01	2.26E-02	2.02E+00	1.15E-01	1.21E-01	1.11E-01	4.69E-03	1.52E-06	1.90E+00	2.19E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.41E-03	6.01E-05	8.92E+02	4.77E-04	1.48E+00	1.40E-03	8.12E-01	1.48E-01	2.64E-02	1.73E-01	2.93E-02	3.02E-02	1.18E-01	3.26E-03	3.62E-07	1.43E-01	1.52E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.75E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.26E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.04E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.44E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.94E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.26E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.75E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.94E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.33E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.70E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.66E-03	4.01E-04	3.65E+02	2.62E-02	1.12E+01	8.32E-03	1.38E-01	3.38E-02	1.75E-02	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.41E-06	8.87E-02	2.70E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.56E-05	4.93E-06	1.75E+02	3.17E-04	1.17E+00	1.01E-04	7.34E-03	2.75E-02	4.43E-03	9.86E-03	6.36E-03	6.52E-03	6.45E-04	8.78E-04	2.39E-07	3.34E-03	1.15E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	5.92E-05	6.27E-06	2.40E+02	3.75E-04	1.29E+00	1.23E-04	1.34E-02	2.95E-02	4.81E-03	1.18E-02	7.65E-03	7.83E-03	1.74E-03	1.20E-03	3.14E-07	3.92E-03	2.20E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	8.73E-05	9.07E-06	2.75E+02	5.11E-04	1.23E+00	1.72E-04	2.11E-02	3.15E-02	5.52E-03	1.48E-02	1.06E-02	1.07E-02	3.51E-03	1.35E-03	5.96E-07	4.10E-03	3.58E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.04E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.93E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.16E-03	6.05E-05	1.11E+03	1.30E-03	6.40E+00	1.07E-02	9.50E-01	8.96E-02	1.61E-02	1.66E+00	9.65E-02	1.01E-01	1.07E-01	4.58E-03	1.50E-06	1.56E+00	1.75E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.12E-03	4.59E-05	8.51E+02	3.98E-04	1.52E+00	1.13E-03	6.54E-01	1.02E-01	1.93E-02	1.40E-01	2.32E-02	2.38E-02	1.12E-01	3.11E-03	3.31E-07	1.17E-01	1.23E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.48E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.76E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.39E-05	8.00E-06	2.20E+02	5.15E-04	1.74E+00	1.64E-04	8.50E-03	6.58E-02	9.49E-03	1.60E-02	1.03E-02	1.06E-02	1.13E-03	1.10E-03	3.00E-07	5.42E-03	1.33E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.92E-05	1.04E-05	2.96E+02	6.06E-04	1.81E+00	2.01E-04	1.81E-02	7.26E-02	1.06E-02	1.90E-02	1.24E-02	1.27E-02	2.54E-03	1.46E-03	4.14E-07	6.30E-03	3.03E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.72E-04	1.78E-05	3.40E+02	9.77E-04	1.72E+00	3.32E-04	3.30E-02	7.50E-02	1.15E-02	2.77E-02	2.03E-02	2.05E-02	4.79E-03	1.66E-03	8.23E-07	7.21E-03	5.73E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.71E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	6.63E+00	1.83E-02	1.84E+00	1.91E-01	3.07E-02	2.86E+00	1.61E-01	1.70E-01	1.41E-01	5.82E-03	1.89E-06	2.69E+00	3.38E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.42E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.80E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.21E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.81E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.46E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.71E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.89E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.55E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.70E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.91E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.36E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.37E-05	6.89E-06	1.92E+02	4.43E-04	1.64E+00	1.42E-04	7.54E-03	4.89E-02	7.24E-03	1.38E-02	8.89E-03	9.12E-03	9.03E-04	9.58E-04	2.68E-07	4.67E-03	1.18E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.44E-05	8.89E-06	2.58E+02	5.21E-04	1.69E+00	1.72E-04	1.55E-02	5.39E-02	8.06E-03	1.63E-02	1.07E-02	1.09E-02	2.13E-03	1.28E-03	3.69E-07	5.42E-03	2.59E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.42E-04	1.47E-05	2.95E+02	8.18E-04	1.60E+00	2.77E-04	2.76E-02	5.61E-02	8.92E-03	2.32E-02	1.70E-02	1.71E-02	4.09E-03	1.44E-03	7.34E-07	6.10E-03	4.77E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.19E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.40E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.58E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.85E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.38E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.44E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.65E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.25E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.54E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.01E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.30E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.07E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.79E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.37E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.35E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.39E-05	5.83E-06	1.81E+02	3.75E-04	1.39E+00	1.20E-04	7.34E-03	3.65E-02	5.61E-03	1.17E-02	7.52E-03	7.72E-03	7.52E-04	9.05E-04	2.49E-07	3.95E-03	1.15E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.10E-05	7.50E-06	2.46E+02	4.44E-04	1.48E+00	1.46E-04	1.43E-02	4.00E-02	6.21E-03	1.39E-02	9.07E-03	9.29E-03	1.91E-03	1.22E-03	3.38E-07	4.63E-03	2.37E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.12E-04	1.16E-05	2.81E+02	6.50E-04	1.41E+00	2.19E-04	2.40E-02	4.20E-02	6.96E-03	1.86E-02	1.35E-02	1.36E-02	3.77E-03	1.38E-03	6.55E-07	5.02E-03	4.12E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.38E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.11E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.05E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.82E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.75E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.26E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.04E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.44E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.94E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.26E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.75E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.94E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.33E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.70E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.70E-05	5.09E-06	1.73E+02	3.27E-04	1.23E+00	1.05E-04	7.21E-03	2.79E-02	4.48E-03	1.02E-02	6.56E-03	6.73E-03	6.45E-04	8.68E-04	2.37E-07	3.44E-03	1.13E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	6.15E-05	6.51E-06	2.38E+02	3.89E-04	1.34E+00	1.28E-04	1.35E-02	3.03E-02	4.93E-03	1.22E-02	7.93E-03	8.13E-03	1.75E-03	1.18E-03	3.17E-07	4.07E-03	2.22E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	9.08E-05	9.44E-06	2.72E+02	5.31E-04	1.27E+00	1.79E-04	2.14E-02	3.21E-02	5.60E-03	1.54E-02	1.10E-02	1.11E-02	3.53E-03	1.33E-03	6.00E-07	4.25E-03	3.65E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.04E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.93E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.33E-03	5.90E-05	1.17E+03	1.38E-03	7.54E+00	9.75E-03	9.09E-01	7.26E-02	1.41E-02	1.51E+00	9.17E-02	9.61E-02	1.12E-01	4.85E-03	1.57E-06	1.42E+00	1.67E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.05E-03	4.36E-05	9.10E+02	3.85E-04	1.63E+00	1.05E-03	6.37E-01	8.00E-02	1.72E-02	1.31E-01	2.20E-02	2.27E-02	1.20E-01	3.32E-03	3.53E-07	1.08E-01	1.20E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.48E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.76E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.46E-04	4.24E-05	6.63E+02	6.92E-04	1.33E+00	9.01E-04	4.17E-01	5.95E-02	1.19E-02	1.03E-01	2.53E-02	2.57E-02	6.64E-02	2.67E-03	1.08E-06	7.69E-02	7.81E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	8.36E-04	4.16E-05	6.38E+02	6.77E-04	1.26E+00	8.90E-04	4.07E-01	6.16E-02	1.20E-02	1.02E-01	2.48E-02	2.52E-02	6.37E-02	2.57E-03	1.03E-06	7.65E-02	7.61E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	4.85E-04	4.80E-05	8.21E+02	1.92E-03	3.81E+00	7.48E-04	3.08E-01	7.03E-02	1.40E-02	5.27E-02	4.36E-02	4.35E-02	3.96E-02	3.89E-03	2.22E-06	9.26E-03	5.68E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.87E-03	1.33E-04	1.36E+03	6.08E-06	1.61E+00	1.37E-03	1.97E+00	1.42E-01	3.11E-02	1.14E-01	3.94E-02	3.93E-02	2.05E-01	4.54E-03	0.00E+00	7.47E-02	3.70E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.86E-03	1.24E-04	1.39E+03	7.68E-06	1.87E+00	1.41E-03	2.12E+00	1.55E-01	2.83E-02	1.29E-01	3.75E-02	3.79E-02	2.12E-01	4.65E-03	0.00E+00	9.14E-02	4.00E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	4.38E-05	4.74E-06	1.68E+02	3.05E-04	1.16E+00	9.74E-05	7.40E-03	1.98E-02	3.44E-03	9.48E-03	6.11E-03	6.27E-03	5.64E-04	8.45E-04	2.37E-07	3.21E-03	1.16E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	5.61E-05	5.96E-06	2.31E+02	3.60E-04	1.28E+00	1.18E-04	1.31E-02	2.12E-02	3.76E-03	1.13E-02	7.31E-03	7.49E-03	1.62E-03	1.16E-03	3.15E-07	3.77E-03	2.14E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	7.70E-05	8.01E-06	2.63E+02	4.55E-04	1.20E+00	1.52E-04	1.98E-02	2.30E-02	4.40E-03	1.33E-02	9.38E-03	9.50E-03	3.33E-03	1.29E-03	5.76E-07	3.79E-03	3.35E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.18E-03	4.98E-05	1.11E+03	1.29E-03	7.43E+00	8.44E-03	8.59E-01	7.53E-02	1.43E-02	1.31E+00	8.06E-02	8.43E-02	1.05E-01	4.59E-03	1.48E-06	1.22E+00	1.58E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.08E-03	5.01E-05	1.13E+03	1.31E-03	7.69E+00	8.32E-03	7.54E-01	5.20E-02	1.12E-02	1.29E+00	8.01E-02	8.38E-02	1.07E-01	4.69E-03	1.52E-06	1.20E+00	1.38E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	8.51E-04	3.45E-05	8.69E+02	3.40E-04	1.63E+00	8.69E-04	5.29E-01	6.01E-02	1.37E-02	1.08E-01	1.82E-02	1.87E-02	1.15E-01	3.17E-03	3.29E-07	8.98E-02	9.92E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.35E-03	5.50E-05	1.14E+03	1.46E-04	4.06E+00	9.49E-03	1.20E+00	8.67E-02	1.55E-02	1.49E+00	7.14E-02	7.61E-02	1.65E-01	4.03E-03	1.29E-09	1.42E+00	2.23E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.75E-04	3.35E-05	6.62E+02	5.43E-04	1.33E+00	7.18E-04	3.46E-01	4.24E-02	9.59E-03	8.21E-02	2.00E-02	2.03E-02	6.64E-02	2.67E-03	1.06E-06	6.18E-02	6.47E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.65E-04	3.28E-05	6.35E+02	5.26E-04	1.25E+00	7.08E-04	3.35E-01	4.39E-02	9.59E-03	8.12E-02	1.95E-02	1.98E-02	6.34E-02	2.56E-03	1.00E-06	6.14E-02	6.27E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	3.97E-04	3.95E-05	8.13E+02	1.64E-03	4.12E+00	6.28E-04	2.55E-01	4.92E-02	1.13E-02	4.44E-02	3.68E-02	3.67E-02	3.91E-02	3.85E-03	2.22E-06	7.68E-03	4.69E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.58E-03	1.13E-04	1.31E+03	4.99E-06	1.40E+00	1.16E-03	1.62E+00	9.58E-02	2.36E-02	9.42E-02	3.34E-02	3.32E-02	1.97E-01	4.38E-03	0.00E+00	6.11E-02	3.06E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.04E-04	1.33E+03	6.33E-06	1.59E+00	1.18E-03	1.73E+00	1.03E-01	2.07E-02	1.07E-01	3.15E-02	3.17E-02	2.03E-01	4.44E-03	0.00E+00	7.50E-02	3.25E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	4.16E-05	4.50E-06	1.65E+02	2.90E-04	1.15E+00	9.26E-05	7.62E-03	1.47E-02	2.79E-03	9.01E-03	5.81E-03	5.96E-03	5.01E-04	8.33E-04	2.38E-07	3.05E-03	1.19E-03
5	UrbanUnrestrictedA

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1121	0.00E+00	1.30E-05	1.40E-06	5.23E+01	9.02E-05	4.04E-01	2.88E-05	2.63E-03	2.78E-03	6.49E-04	2.80E-03	1.81E-03	1.85E-03	1.28E-04	2.65E-04	7.86E-08	9.49E-04	4.11E-04
17	A01	110	Passenger Truck	1877	0.00E+00	2.81E-05	3.00E-06	1.25E+02	1.86E-04	8.32E-01	6.03E-05	7.36E-03	4.83E-03	1.22E-03	5.81E-03	3.76E-03	3.86E-03	7.43E-04	6.28E-04	1.84E-07	1.96E-03	1.19E-03
17	A01	110	Single Unit Short Haul Truck	476	0.00E+00	6.30E-05	3.34E-06	9.14E+01	6.46E-05	2.52E-01	6.92E-05	3.67E-02	2.84E-03	9.41E-04	7.63E-03	2.13E-03	2.16E-03	9.34E-03	3.65E-04	1.62E-07	5.47E-03	6.85E-03
17	A01	110	Single Unit Long Haul Truck	21	0.00E+00	2.70E-06	1.39E-07	3.83E+00	2.59E-06	9.92E-03	2.95E-06	1.53E-03	1.27E-04	4.03E-05	3.30E-04	8.76E-05	8.88E-05	3.90E-04	1.53E-05	6.63E-09	2.41E-04	2.85E-04
17	A01	110	Combination Short Haul Truck	246	0.00E+00	9.29E-05	6.98E-06	9.39E+01	2.21E-07	8.38E-02	6.58E-05	9.94E-02	2.64E-03	1.05E-03	4.91E-03	2.03E-03	2.01E-03	1.41E-02	3.14E-04	0.00E+00	2.90E-03	1.87E-02
17	A01	110	Combination Long Haul Truck	224	0.00E+00	8.40E-05	6.06E-06	8.48E+01	2.54E-07	8.32E-02	6.11E-05	9.62E-02	2.37E-03	7.25E-04	5.02E-03	1.78E-03	1.79E-03	1.29E-02	2.84E-04	0.00E+00	3.23E-03	1.81E-02
17	A02	110	Passenger Car	1630	0.00E+00	1.88E-05	2.04E-06	7.60E+01	1.31E-04	5.88E-01	4.19E-05	3.82E-03	4.04E-03	9.43E-04	4.08E-03	2.63E-03	2.70E-03	1.86E-04	3.86E-04	1.14E-07	1.38E-03	5.97E-04
17	A02	110	Passenger Truck	2729	0.00E+00	4.09E-05	4.36E-06	1.82E+02	2.71E-04	1.21E+00	8.77E-05	1.07E-02	7.02E-03	1.77E-03	8.45E-03	5.47E-03	5.61E-03	1.08E-03	9.13E-04	2.67E-07	2.85E-03	1.72E-03
17	A02	110	Single Unit Short Haul Truck	438	0.00E+00	5.79E-05	3.07E-06	8.40E+01	5.94E-05	2.31E-01	6.36E-05	3.37E-02	2.61E-03	8.65E-04	7.01E-03	1.96E-03	1.98E-03	8.58E-03	3.36E-04	1.49E-07	5.03E-03	6.30E-03
17	A02	110	Single Unit Long Haul Truck	19	0.00E+00	2.48E-06	1.27E-07	3.52E+00	2.38E-06	9.12E-03	2.71E-06	1.40E-03	1.17E-04	3.70E-05	3.03E-04	8.05E-05	8.16E-05	3.58E-04	1.41E-05	6.10E-09	2.22E-04	2.62E-04
17	A02	110	Combination Short Haul Truck	216	0.00E+00	8.17E-05	6.14E-06	8.26E+01	1.95E-07	7.37E-02	5.79E-05	8.74E-02	2.32E-03	9.21E-04	4.32E-03	1.78E-03	1.77E-03	1.24E-02	2.76E-04	0.00E+00	2.55E-03	1.65E-02
17	A02	110	Combination Long Haul Truck	197	0.00E+00	7.39E-05	5.33E-06	7.46E+01	2.23E-07	7.32E-02	5.37E-05	8.46E-02	2.09E-03	6.38E-04	4.42E-03	1.57E-03	1.58E-03	1.14E-02	2.50E-04	0.00E+00	2.84E-03	1.59E-02
17	A03	110	Passenger Car	1293	0.00E+00	1.49E-05	1.62E-06	6.03E+01	1.04E-04	4.66E-01	3.32E-05	3.03E-03	3.21E-03	7.48E-04	3.23E-03	2.08E-03	2.14E-03	1.47E-04	3.06E-04	9.06E-08	1.09E-03	4.74E-04
17	A03	110	Passenger Truck	2165	0.00E+00	3.24E-05	3.46E-06	1.44E+02	2.15E-04	9.59E-01	6.95E-05	8.49E-03	5.57E-03	1.40E-03	6.71E-03	4.34E-03	4.45E-03	8.57E-04	7.24E-04	2.12E-07	2.26E-03	1.37E-03
17	A03	110	Single Unit Short Haul Truck	460	0.00E+00	6.08E-05	3.22E-06	8.82E+01	6.23E-05	2.43E-01	6.68E-05	3.54E-02	2.74E-03	9.08E-04	7.36E-03	2.05E-03	2.08E-03	9.01E-03	3.53E-04	1.57E-07	5.28E-03	6.61E-03
17	A03	110	Single Unit Long Haul Truck	20	0.00E+00	2.60E-06	1.34E-07	3.70E+00	2.50E-06	9.58E-03	2.84E-06	1.47E-03	1.23E-04	3.89E-05	3.19E-04	8.45E-05	8.57E-05	3.76E-04	1.48E-05	6.40E-09	2.33E-04	2.75E-04
17	A03	110	Combination Short Haul Truck	232	0.00E+00	8.76E-05	6.58E-06	8.85E+01	2.08E-07	7.90E-02	6.20E-05	9.37E-02	2.48E-03	9.86E-04	4.63E-03	1.91E-03	1.89E-03	1.33E-02	2.96E-04	0.00E+00	2.74E-03	1.77E-02
17	A03	110	Combination Long Haul Truck	211	0.00E+00	7.92E-05	5.71E-06	7.99E+01	2.39E-07	7.84E-02	5.75E-05	9.06E-02	2.24E-03	6.83E-04	4.74E-03	1.68E-03	1.69E-03	1.22E-02	2.68E-04	0.00E+00	3.05E-03	1.71E-02
17	A04	110	Passenger Car	1918	0.00E+00	2.22E-05	2.40E-06	8.95E+01	1.54E-04	6.92E-01	4.93E-05	4.50E-03	4.76E-03	1.11E-03	4.80E-03	3.09E-03	3.17E-03	2.19E-04	4.54E-04	1.35E-07	1.62E-03	7.03E-04
17	A04	110	Passenger Truck	3212	0.00E+00	4.81E-05	5.14E-06	2.14E+02	3.19E-04	1.42E+00	1.03E-04	1.26E-02	8.26E-03	2.08E-03	9.95E-03	6.44E-03	6.60E-03	1.27E-03	1.07E-03	3.15E-07	3.35E-03	2.03E-03
17	A04	110	Single Unit Short Haul Truck	442	0.00E+00	5.85E-05	3.10E-06	8.48E+01	5.99E-05	2.34E-01	6.42E-05	3.41E-02	2.64E-03	8.73E-04	7.08E-03	1.98E-03	2.00E-03	8.66E-03	3.39E-04	1.51E-07	5.08E-03	6.36E-03
17	A04	110	Single Unit Long Haul Truck	19	0.00E+00	2.50E-06	1.29E-07	3.55E+00	2.41E-06	9.21E-03	2.74E-06	1.42E-03	1.18E-04	3.74E-05	3.06E-04	8.13E-05	8.24E-05	3.62E-04	1.42E-05	6.16E-09	2.24E-04	2.64E-04
17	A04	110	Combination Short Haul Truck	206	0.00E+00	7.78E-05	5.85E-06	7.86E+01	1.85E-07	7.01E-02	5.51E-05	8.32E-02	2.21E-03	8.76E-04	4.11E-03	1.70E-03	1.68E-03	1.18E-02	2.63E-04	0.00E+00	2.43E-03	1.57E-02
17	A04	110	Combination Long Haul Truck	188	0.00E+00	7.04E-05	5.07E-06	7.10E+01	2.13E-07	6.96E-02	5.11E-05	8.05E-02	1.99E-03	6.07E-04	4.21E-03	1.49E-03	1.50E-03	1.08E-02	2.38E-04	0.00E+00	2.71E-03	1.52E-02
17	A05	110	Passenger Car	1127	0.00E+00	1.30E-05	1.41E-06	5.26E+01	9.07E-05	4.06E-01	2.90E-05	2.64E-03	2.80E-03	6.52E-04	2.82E-03	1.82E-03	1.86E-03	1.28E-04	2.67E-04	7.90E-08	9.54E-04	4.13E-04
17	A05	110	Passenger Truck	1887	0.00E+00	2.83E-05	3.02E-06	1.26E+02	1.87E-04	8.36E-01	6.06E-05	7.41E-03	4.85E-03	1.22E-03	5.85E-03	3.78E-03	3.88E-03	7.47E-04	6.31E-04	1.85E-07	1.97E-03	1.19E-03
17	A05	110	Single Unit Short Haul Truck	372	0.00E+00	4.92E-05	2.61E-06	7.14E+01	5.04E-05	1.97E-01	5.40E-05	2.87E-02	2.22E-03	7.35E-04	5.96E-03	1.66E-03	1.68E-03	7.29E-03	2.85E-04	1.27E-07	4.27E-03	5.35E-03
17	A05	110	Single Unit Long Haul Truck	16	0.00E+00	2.11E-06	1.08E-07	2.99E+00	2.03E-06	7.75E-03	2.30E-06	1.19E-03	9.92E-05	3.15E-05	2.58E-04	6.84E-05	6.94E-05	3.05E-04	1.20E-05	5.18E-09	1.88E-04	2.23E-04
17	A05	110	Combination Short Haul Truck	193	0.00E+00	7.29E-05	5.48E-06	7.37E+01	1.74E-07	6.58E-02	5.16E-05	7.80E-02	2.07E-03	8.21E-04	3.85E-03	1.59E-03	1.58E-03	1.11E-02	2.47E-04	0.00E+00	2.28E-03	1.47E-02
17	A05	110	Combination Long Haul Truck	176	0.00E+00	6.60E-05	4.76E-06	6.66E+01	1.99E-07	6.53E-02	4.79E-05	7.55E-02	1.86E-03	5.69E-04	3.94E-03	1.40E-03	1.41E-03	1.02E-02	2.23E-04	0.00E+00	2.54E-03	1.42E-02
17	A06	110	Passenger Car	1478	0.00E+00	1.71E-05	1.85E-06	6.90E+01	1.19E-04	5.33E-01	3.80E-05	3.47E-03	3.67E-03	8.56E-04	3.70E-03	2.38E-03	2.45E-03	1.68E-04	3.50E-04	1.04E-07	1.25E-03	5.42E-04
17	A06	110	Passenger Truck	2475	0.00E+00	3.71E-05	3.96E-06	1.65E+02	2.45E-04	1.10E+00	7.95E-05	9.71E-03	6.37E-03	1.61E-03	7.67E-03	4.96E-03	5.09E-03	9.80E-04	8.28E-04	2.42E-07	2.58E-03	1.56E-03
17	A06	110	Single Unit Short Haul Truck	350	0.00E+00	4.62E-05	2.45E-06	6.70E+01	4.74E-05	1.85E-01	5.08E-05	2.69E-02	2.09E-03	6.91E-04	5.60E-03	1.56E-03	1.58E-03	6.85E-03	2.68E-04	1.19E-07	4.01E-03	5.03E-03
17	A06	110	Single Unit Long Haul Truck	15	0.00E+00	1.98E-06	1.02E-07	2.81E+00	1.90E-06	7.28E-03	2.16E-06	1.12E-03	9.32E-05	2.95E-05	2.42E-04	6.43E-05	6.52E-05	2.86E-04	1.12E-05	4.87E-09	1.77E-04	2.09E-04
17	A06	110	Combination Short Haul Truck	170	0.00E+00	6.43E-05	4.83E-06	6.49E+01	1.53E-07	5.79E-02	4.55E-05	6.87E-02	1.82E-03	7.24E-04	3.39E-03	1.40E-03	1.39E-03	9.78E-03	2.17E-04	0.00E+00	2.01E-03	1.29E-02
17	A06	110	Combination Long Haul Truck	155	0.00E+00	5.81E-05	4.19E-06	5.86E+01	1.76E-07	5.75E-02	4.22E-05	6.65E-02	1.64E-03	5.01E-04	3.47E-03	1.23E-03	1.24E-03	8.95E-03	1.96E-04	0.00E+00	2.23E-03	1.25E-02
17	A07	110	Passenger Car	1060	0.00E+00	1.23E-05	1.33E-06	4.95E+01	8.53E-05	3.82E-01	2.72E-05	2.49E-03	2.63E-03	6.14E-04	2.65E-03	1.71E-03	1.75E-03	1.21E-04	2.51E-04	7.43E-08	8.98E-04	3.88E-04
17	A07	110	Passenger Truck	1775	0.00E+00	2.66E-05	2.84E-06	1.18E+02	1.76E-04	7.87E-01	5.70E-05	6.97E-03	4.57E-03	1.15E-03	5.50E-03	3.56E-03	3.65E-03	7.03E-04	5.94E-04	1.74E-07	1.85E-03	1.12E-03
17	A07	110	Single Unit Short Haul Truck	371	0.00E+00	4.91E-05	2.60E-06	7.12E+01	5.04E-05	1.96E-01	5.40E-05	2.86E-02	2.22E-03	7.34E-04	5.95E-03	1.66E-03	1.68E-03	7.28E-03	2.85E-04	1.27E-07	4.26E-03	5.34E-03
17	A07	110	Single Unit Long Haul Truck	16	0.00E+00	2.10E-06	1.08E-07	2.99E+00	2.02E-06	7.74E-03	2.30E-06	1.19E-03	9.90E-05	3.14E-05	2.57E-04	6.83E-05	6.92E-05	3.04E-04	1.20E-05	5.17E-09	1.88E-04	2.22E-04
17	A07	110	Combination Short Haul Truck	203	0.00E+00	7.68E-05	5.77E-06	7.76E+01	1.83E-07	6.93E-02	5.44E-05	8.22E-02	2.18E-03	8.65E-04	4.06E-03	1.68E-03	1.66E-03	1.17E-02	2.60E-04	0.00E+00	2.40E-03	1.55E-02
17	A07	110	Combination Long Haul Truck	186	0.00E+00	6.95E-05	5.01E-06	7.01E+01	2.10E-07	6.88E-02	5.05E-05	7.95E-02	1.96E-03	5.99E-04	4.15E-03	1.47E-03	1.48E-03	1.07E-02	2.35E-04	0.00E+00	2.67E-03	1.50E-02
17	A08	110	Passenger Car	1247	0.00E+00	1.44E-05	1.56E-06	5.82E+01	1.00E-04	4.50E-01	3.21E-05	2.93E-03	3.10E-03	7.22E-04	3.12E-03	2.01E-03	2.06E-03	1.42E-04	2.95E-04	8.75E-08	1.06E-03	4.57E-04
17	A08	110	Passenger Truck	2089	0.00E+00	3.13E-05	3.34E-06	1.39E+02	2.07E-04	9.26E-01	6.71E-05	8.20E-03	5.37E-03	1.35E-03	6.47E-03	4.19E-03	4.29E-03	8.27E-04	6.99E-04	2.05E-07	2.18E-03	1.32E-03
17	A08	110	Single Unit Short Haul Truck	347	0.00E+00	4.59E-05	2.43E-06	6.66E+01	4.71E-05	1.83E-01	5.04E-05	2.68E-02	2.07E-03	6.86E-04	5.56E-03	1.55E-03	1.57E-03	6.81E-03	2.66E-04	1.18E-07	3.99E-03	4.99E-03
17	A08	110	Single Unit Long Haul Truck	15	0.00E+00	1.97E-06	1.01E-07	2.79E+00	1.89E-06	7.23E-03	2.15E-06	1.11E-03	9.26E-05	2.94E-05	2.41E-04	6.38E-05	6.47E-05	2.84E-04	1.12E-05	4.84E-09	1.76E-04	2.08E-04
17	A08	110	Combination Short Haul Truck	180	0.00E+00	6.80E-05	5.11E-06	6.87E+01	1.62E-07	6.13E-02	4.81E-05	7.27E-02	1.93E-03	7.65E-04	3.59E-03	1.48E-03	1.47E-03	1.03E-02	2.30E-04	0.00E+00	2.12E-03	1.37E-02
17	A08	110	Combination Long Haul Truck	164	0.00E+00	6.14E-05	4.43E-06	6.20E+01	1.86E-07	6.08E-02	4.47E-05	7.03E-02	1.74E-03	5.30E-04	3.67E-03	1.30E-03	1.31E-03	9.46E-03	2.08E-04	0.00E+00	2.36E-03	1.33E-02
17	A09	110	Passenger Car	1393	0.00E+00	1.61E-05	1.74E-06	6.50E+01	1.12E-04	5.02E-01	3.58E-05	3.27E-03	3.46E-03	8.06E-04	3.48E-03	2.25E-03	2.31E-03	1.59E-04	3.30E-04	9.77E-08	1.18E-03	5.10E-04
17	A09	110	Passenger Truck	2332	0.00E+00	3.49E-05	3.73E-06	1.55E+02	2.31E-04	1.03E+00	7.49E-05	9.15E-03	6.00E-03	1.51E-03	7.23E-03	4.68E-03	4.79E-03	9.24E-04	7.80E-04	2.29E-07	2.43E-03	1.47E-03
17	A09	110	Single Unit Short Haul Truck	460	0.00E+00	6.08E-05	3.22E-06	8.82E+01	6.24E-05	2.43E-01	6.68E-05	3.54E-02	2.74E-03	9.09E-04	7.36E-03	2.06E-03	2.08E-03	9.01E-03	3.53E-04	1.57E-07	5.28E-03	6.61E-03
17	A09	110	Single Unit Long Haul Truck	20	0.00E+00	2.60E-06	1.34E-07	3.70E+00	2.50E-06	9.58E-03	2.85E-06	1.47E-03	1.23E-04	3.89E-05	3.19E-04	8.45E-05	8.57E-05	3.76E-04	1.48E-05	6.40E-09	2.33E-04	2.75E-04
17	A09	110	Combination Short Haul Truck	254	0.00E+00	9.58E-05	7.20E-06	9.68E+01	2.28E-07	8.64E-02	6.78E-05	1.02E-01	2.72E-03	1.08E-03	5.06E-03	2.09E-03	2.07E-03	1.46E-02	3.24E-04	0.00E+00	2.99E-03	1.93E-02
17	A09	110	Combination Long Haul Truck	231	0.00E+00	8.66E-05	6.25E-06	8.74E+01	2.62E-07	8.58E-02	6.30E-05	9.92E-02	2.45E-03	7.47E-04	5.18E-03	1.84E-03	1.85E-03	1.33E-02	2.93E-04	0.00E+00	3.33E-03	1.87E-02
17	A10	110	Passenger Car	1284	0.00E+00	1.48E-05	1.61E-06	5.99E+01	1.03E-04	4.63E-01	3.30E-05	3.01E-03	3.19E-03	7.43E-04	3.21E-03	2.07E-03	2.12E-03	1.46E-04	3.04E-04	9.00E-08	1.09E-03	4.71E-04
17	A10	110	Passenger Truck	2150	0.00E+00	3.22E-05	3.44E-06	1.43E+02	2.13E-04	9.53E-01	6.91E-05	8.44E-03	5.53E-03	1.39E-03	6.66E-03	4.31E-03	4.42E-03	8.51E-04	7.19E-04	2.11E-07	2.24E-03	1.36E-03
17	A10	110	Single Unit Short Haul Truck	399	0.00E+00	5.27E-05	2.79E-06	7.64E+01	5.40E-05	2.11E-01	5.79E-05	3.07E-02	2.38E-03	7.88E-04	6.38E-03	1.78E-03	1.80E-03	7.81E-03	3.06E-04	1.36E-07	4.58E-03	5.73E-03
17	A10	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.16E-07	3.20E+00	2.17E-06	8.30E-03	2.47E-06	1.28E-03	1.06E-04	3.37E-05	2.76E-04	7.33E-05	7.43E-05	3.26E-04	1.28E-05	5.55E-09	2.02E-04	2.38E-04
17	A10	110	Combination Short Haul Truck	222	0.00E+00	8.37E-05	6.29E-06	8.45E+01	1.99E-07	7.54E-02	5.92E-05	8.95E-02	2.37E-03	9.42E-04	4.42E-03	1.83E-03	1.81E-03	1.27E-02	2.83E-04	0.00E+00	2.61E-03	1.69E-02
17	A10	110	Combination Long Haul Truck	202	0.00E+00	7.56E-05	5.46E-06	7.63E+01	2.29E-07	7.49E-02	5.50E-05	8.66E-02	2.14E-03	6.53E-04	4.52E-03	1.61E-03	1.61E-03	1.17E-02	2.56E-04	0.00E+00	2.91E-03	1.63E-02
17	A11	110	Passenger Car	1678	0.00E+00	1.94E-05	2.10E-06	7.83E+01	1.35E-04	6.05E-01	4.31E-05	3.94E-03	4.17E-03	9.72E-04	4.20E-03	2.71E-03	2.78E-03	1.91E-04	3.97E-04	1.18E-07	1.42E-03	6.15E-04
17	A11	110	Passenger Truck	2810	0.00E+00	4.21E-05	4.49E-06	1.87E+02	2.79E-04	1.25E+00	9.03E-05	1.10E-02	7.23E-03	1.82E-03	8.71E-03	5.63E-03	5.78E-03	1.11E-03	9.40E-04	2.75E-07	2.93E-03	1.78E-03
17	A11	110	Single Unit Short Haul Truck	524	0.00E+00	6.93E-05	3.67E-06	1.01E+02	7.11E-05	2.77E-01	7.62E-05	4.04E-02	3.13E-03	1.04E-03	8.40E-03	2.34E-03	2.37E-03	1.03E-02	4.02E-04	1.79E-07	6.02E-03	7.54E-03
17	A11	110	Single Unit Long Haul Truck	23	0.00E+00	2.97E-06	1.53E-07	4.22E+00	2.86E-06	1.09E-02	3.24E-06	1.68E-03	1.40E-04	4.43E-05	3.63E-04	9.64E-05	9.78E-05	4.29E-04	1.69E-05	7.30E-09	2.66E-04	3.14E-04
17	A11	110	Combination Short Haul Truck	325	0.00E+00	1.23E-04	9.21E-06	1.24E+02	2.92E-07	1.10E-01	8.68E-05	1.31E-01	3.48E-03	1.38E-03	6.48E-03	2.67E-03	2.65E-03	1.87E-02	4.14E-04	0.00E+00	3.83E-03	2.47E-02
17	A11	110	Combination Long Haul Truck	296	0.00E+00	1.11E-04	7.99E-06	1.12E+02	3.35E-07	1.10E-01	8.05E-05	1.27E-01	3.13E-03	9.56E-04	6.63E-03	2.35E-03	2.36E-03	1.71E-02	3.75E-04	0.00E+00	4.26E-03	2.39E-02
17	A12	110	Passenger Car	1302	0.00E+00	1.51E-05	1.63E-06	6.08E+01	1.05E-04	4.69E-01	3.35E-05	3.05E-03	3.23E-03	7.54E-04	3.26E-03	2.10E-03	2.15E-03	1.48E-04	3.08E-04	9.13E-08	1.10E-03	4.77E-04
17	A12	110	Passenger Truck	2180	0.00E+00	3.27E-05	3.49E-06	1.45E+02	2.16E-04	9.66E-01	7.01E-05	8.56E-03	5.61E-03	1.41E-03	6.75E-03	4.37E-03	4.48E-03	8.63E-04	7.29E-04	2.14E-07	2.27E-03	1.38E-03
17	A12	110	Single Unit Short Haul Truck	467	0.00E+00	6.18E-05	3.27E-06	8.96E+01	6.34E-05	2.47E-01	6.79E-05	3.60E-02	2.79E-03	9.23E-04	7.48E-03	2.09E-03	2.12E-03	9.16E-03	3.58E-04	1.59E-07	5.37E-03	6.72E-03
17	A12	110	Single Unit Long Haul Truck	21	0.00E+00	2.65E-06	1.36E-07	3.76E+00	2.54E-06	9.73E-03	2.89E-06	1.50E-03	1.25E-04	3.95E-05	3.24E-04	8.59E-05	8.71E-05	3.83E-04	1.50E-05	6.51E-09	2.37E-04	2.80E-04
17	A12	110	Combination Short Haul Truck	265	0.00E+00	1.00E-04	7.51E-06	1.01E+02	2.38E-07	9.01E-02	7.08E-05	1.07E-01	2.83E-03	1.13E-03	5.28E-03	2.18E-03	2.16E-03	1.52E-02	3.38E-04	0.00E+00	3.12E-03	2.01E-02
17	A12	110	Combination Long Haul Truck	241	0.00E+00	9.04E-05	6.52E-06	9.12E+01	2.73E-07	8.95E-02	6.57E-05	1.03E-01	2.55E-03	7.80E-04	5.41E-03	1.92E-03	1.93E-03	1.39E-02	3.05E-04	0.00E+00	3.48E-03	1.95E-02
17	A13	110	Passenger Car	1503	0.00E+00	1.74E-05	1.88E-06	7.01E+01	1.21E-04	5.42E-01	3.86E-05	3.52E-03	3.73E-03	8.70E-04	3.76E-03	2.42E-03	2.49E-03	1.71E-04	3.56E-04	1.05E-07	1.27E-03	5.51E-04
17	A13	110	Passenger Truck	2516	0.00E+00	3.77E-05	4.02E-06	1.67E+02	2.50E-04	1.12E+00	8.08E-05	9.88E-03	6.47E-03	1.63E-03	7.80E-03	5.04E-03	5.17E-03	9.96E-04	8.42E-04	2.47E-07	2.62E-03	1.59E-03
17	A13	110	Single Unit Short Haul Truck	538	0.00E+00	7.11E-05	3.77E-06	1.03E+02	7.29E-05	2.84E-01	7.81E-05	4.14E-02	3.21E-03	1.06E-03	8.61E-03	2.40E-03	2.44E-03	1.05E-02	4.12E-04	1.83E-07	6.18E-03	7.74E-03
17	A13	110	Single Unit Long Haul Truck	24	0.00E+00	3.05E-06	1.57E-07	4.32E+00	2.93E-06	1.12E-02	3.33E-06	1.72E-03	1.43E-04	4.55E-05	3.73E-04	9.89E-05	1.00E-04	4.40E-04	1.73E-05	7.49E-09	2.72E-04	3.22E-04
17	A13	110	Combination Short Haul Truck	292	0.00E+00	1.10E-04	8.29E-06	1.11E+02	2.63E-07	9.95E-02	7.81E-05	1.18E-01	3.13E-03	1.24E-03	5.83E-03	2.41E-03	2.38E-03	1.68E-02	3.73E-04	0.00E+00	3.45E-03	2.22E-02
17	A13	110	Combination Long Haul Truck	266	0.00E+00	9.98E-05	7.20E-06	1.01E+02	3.01E-07	9.88E-02	7.25E-05	1.14E-01	2.82E-03	8.60E-04	5.97E-03	2.12E-03	2.13E-03	1.54E-02	3.37E-04	0.00E+00	3.84E-03	2.15E-02
17	A14	110	Passenger Car	1492	0.00E+00	1.73E-05	1.87E-06	6.96E+01	1.20E-04	5.38E-01	3.84E-05	3.50E-03	3.70E-03	8.64E-04	3.73E-03	2.41E-03	2.47E-03	1.70E-04	3.53E-04	1.05E-07	1.26E-03	5.47E-04
17	A14	110	Passenger Truck	2499	0.00E+00	3.74E-05	4.00E-06	1.66E+02	2.48E-04	1.11E+00	8.03E-05	9.81E-03	6.43E-03	1.62E-03	7.74E-03	5.01E-03	5.14E-03	9.90E-04	8.36E-04	2.45E-07	2.61E-03	1.58E-03
17	A14	110	Single Unit Short Haul Truck	461	0.00E+00	6.09E-05	3.23E-06	8.84E+01	6.25E-05	2.43E-01	6.69E-05	3.55E-02	2.75E-03	9.10E-04	7.38E-03	2.06E-03	2.09E-03	9.03E-03	3.53E-04	1.57E-07	5.29E-03	6.63E-03
17	A14	110	Single Unit Long Haul Truck	20	0.00E+00	2.61E-06	1.34E-07	3.70E+00	2.51E-06	9.60E-03	2.85E-06	1.48E-03	1.23E-04	3.90E-05	3.19E-04	8.47E-05	8.59E-05	3.77E-04	1.48E-05	6.42E-09	2.33E-04

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A18	110	Single Unit Long Haul Truck	23	0.00E+00	2.94E-06	1.51E-07	4.18E+00	2.83E-06	1.08E-02	3.22E-06	1.67E-03	1.39E-04	4.40E-05	3.60E-04	9.56E-05	9.69E-05	4.26E-04	1.67E-05	7.24E-09	2.63E-04	3.11E-04
17	A18	110	Combination Short Haul Truck	299	0.00E+00	1.13E-04	8.48E-06	1.14E+02	2.69E-07	1.02E-01	7.99E-05	1.21E-01	3.20E-03	1.27E-03	5.96E-03	2.46E-03	2.44E-03	1.72E-02	3.82E-04	0.00E+00	3.53E-03	2.27E-02
17	A18	110	Combination Long Haul Truck	273	0.00E+00	1.02E-04	7.36E-06	1.03E+02	3.08E-07	1.01E-01	7.42E-05	1.17E-01	2.88E-03	8.80E-04	6.10E-03	2.17E-03	2.18E-03	1.57E-02	3.45E-04	0.00E+00	3.93E-03	2.20E-02
17	A19	110	Passenger Car	1278	0.00E+00	1.48E-05	1.60E-06	5.96E+01	1.03E-04	4.61E-01	3.28E-05	3.00E-03	3.17E-03	7.40E-04	3.20E-03	2.06E-03	2.12E-03	1.46E-04	3.02E-04	8.96E-08	1.08E-03	4.68E-04
17	A19	110	Passenger Truck	2140	0.00E+00	3.21E-05	3.42E-06	1.42E+02	2.12E-04	9.48E-01	6.88E-05	8.40E-03	5.50E-03	1.39E-03	6.63E-03	4.29E-03	4.40E-03	8.48E-04	7.16E-04	2.10E-07	2.23E-03	1.35E-03
17	A19	110	Single Unit Short Haul Truck	513	0.00E+00	6.78E-05	3.59E-06	9.83E+01	6.95E-05	2.71E-01	7.45E-05	3.95E-02	3.06E-03	1.01E-03	8.21E-03	2.29E-03	2.32E-03	1.01E-02	3.93E-04	1.75E-07	5.89E-03	7.38E-03
17	A19	110	Single Unit Long Haul Truck	23	0.00E+00	2.90E-06	1.49E-07	4.12E+00	2.79E-06	1.07E-02	3.17E-06	1.64E-03	1.37E-04	4.34E-05	3.55E-04	9.43E-05	9.56E-05	4.20E-04	1.65E-05	7.14E-09	2.60E-04	3.07E-04
17	A19	110	Combination Short Haul Truck	296	0.00E+00	1.12E-04	8.39E-06	1.13E+02	2.66E-07	1.01E-01	7.90E-05	1.19E-01	3.16E-03	1.26E-03	5.90E-03	2.43E-03	2.41E-03	1.70E-02	3.77E-04	0.00E+00	3.49E-03	2.25E-02
17	A19	110	Combination Long Haul Truck	269	0.00E+00	1.01E-04	7.28E-06	1.02E+02	3.05E-07	9.99E-02	7.33E-05	1.15E-01	2.85E-03	8.70E-04	6.03E-03	2.14E-03	2.15E-03	1.55E-02	3.41E-04	0.00E+00	3.88E-03	2.18E-02
17	A20	110	Passenger Car	1065	0.00E+00	1.23E-05	1.33E-06	4.97E+01	8.57E-05	3.84E-01	2.74E-05	2.50E-03	2.64E-03	6.16E-04	2.66E-03	1.72E-03	1.76E-03	1.21E-04	2.52E-04	7.47E-08	9.02E-04	3.90E-04
17	A20	110	Passenger Truck	1783	0.00E+00	2.67E-05	2.85E-06	1.19E+02	1.77E-04	7.90E-01	5.73E-05	7.00E-03	4.59E-03	1.16E-03	5.52E-03	3.57E-03	3.66E-03	7.06E-04	5.96E-04	1.75E-07	1.86E-03	1.13E-03
17	A20	110	Single Unit Short Haul Truck	496	0.00E+00	6.56E-05	3.48E-06	9.52E+01	6.73E-05	2.62E-01	7.21E-05	3.82E-02	2.96E-03	9.81E-04	7.95E-03	2.22E-03	2.25E-03	9.73E-03	3.81E-04	1.69E-07	5.70E-03	7.14E-03
17	A20	110	Single Unit Long Haul Truck	22	0.00E+00	2.81E-06	1.44E-07	3.99E+00	2.70E-06	1.03E-02	3.07E-06	1.59E-03	1.32E-04	4.20E-05	3.44E-04	9.13E-05	9.25E-05	4.06E-04	1.60E-05	6.91E-09	2.51E-04	2.97E-04
17	A20	110	Combination Short Haul Truck	283	0.00E+00	1.07E-04	8.03E-06	1.08E+02	2.54E-07	9.63E-02	7.56E-05	1.14E-01	3.03E-03	1.20E-03	5.64E-03	2.33E-03	2.31E-03	1.63E-02	3.61E-04	0.00E+00	3.34E-03	2.15E-02
17	A20	110	Combination Long Haul Truck	258	0.00E+00	9.66E-05	6.97E-06	9.75E+01	2.92E-07	9.56E-02	7.02E-05	1.11E-01	2.73E-03	8.33E-04	5.78E-03	2.05E-03	2.06E-03	1.49E-02	3.26E-04	0.00E+00	3.72E-03	2.08E-02
16	B05	100	Passenger Car	1047	0.00E+00	1.15E-05	1.24E-06	4.70E+01	7.97E-05	3.13E-01	2.55E-05	2.24E-03	3.40E-03	6.85E-04	2.48E-03	1.60E-03	1.64E-03	1.31E-04	2.38E-04	6.56E-08	8.39E-04	3.50E-04
16	B05	100	Passenger Truck	1754	0.00E+00	2.47E-05	2.63E-06	1.11E+02	1.62E-04	6.31E-01	5.26E-05	6.36E-03	6.01E-03	1.28E-03	5.06E-03	3.28E-03	3.36E-03	7.07E-04	5.57E-04	1.53E-07	1.70E-03	1.03E-03
16	B05	100	Single Unit Short Haul Truck	282	0.00E+00	3.78E-05	1.87E-06	5.14E+01	3.30E-05	1.19E-01	4.09E-05	2.05E-02	1.94E-03	5.65E-04	4.68E-03	1.16E-03	1.18E-03	5.18E-03	2.07E-04	8.44E-08	3.50E-03	3.82E-03
16	B05	100	Single Unit Long Haul Truck	12	0.00E+00	1.64E-06	7.97E-08	2.17E+00	1.37E-06	4.86E-03	1.77E-06	8.61E-04	8.78E-05	2.44E-05	2.04E-04	4.90E-05	4.98E-05	2.17E-04	8.72E-06	3.46E-09	1.54E-04	1.61E-04
16	B05	100	Combination Short Haul Truck	186	0.00E+00	6.40E-05	4.67E-06	6.73E+01	1.82E-07	6.24E-02	4.62E-05	6.82E-02	2.17E-03	7.72E-04	3.58E-03	1.37E-03	1.35E-03	1.02E-02	2.25E-04	0.00E+00	2.24E-03	1.29E-02
16	B05	100	Combination Long Haul Truck	170	0.00E+00	5.57E-05	3.82E-06	6.10E+01	2.11E-07	6.23E-02	4.17E-05	6.48E-02	2.01E-03	5.58E-04	3.65E-03	1.14E-03	1.14E-03	9.31E-03	2.04E-04	0.00E+00	2.51E-03	1.22E-02
16	B06	100	Passenger Car	376	0.00E+00	4.11E-06	4.45E-07	1.69E+01	2.86E-05	1.12E-01	9.14E-06	8.03E-04	1.22E-03	2.46E-04	8.90E-04	5.73E-04	5.88E-04	4.71E-05	8.54E-05	2.35E-08	3.01E-04	1.25E-04
16	B06	100	Passenger Truck	629	0.00E+00	8.87E-06	9.45E-07	3.98E+01	5.81E-05	2.26E-01	1.89E-05	2.28E-03	2.16E-03	4.58E-04	1.82E-03	1.18E-03	1.21E-03	2.54E-04	2.00E-04	5.48E-08	6.10E-04	3.69E-04
16	B06	100	Single Unit Short Haul Truck	324	0.00E+00	4.35E-05	2.15E-06	5.91E+01	3.79E-05	1.37E-01	4.71E-05	2.35E-02	2.23E-03	6.49E-04	5.38E-03	1.33E-03	1.35E-03	5.96E-03	2.37E-04	9.71E-08	4.02E-03	4.39E-03
16	B06	100	Single Unit Long Haul Truck	14	0.00E+00	1.88E-06	9.16E-08	2.49E+00	1.57E-06	5.59E-03	2.03E-06	9.90E-04	1.01E-04	2.81E-05	2.34E-04	5.63E-05	5.72E-05	2.49E-04	1.00E-05	3.97E-09	1.77E-04	1.85E-04
16	B06	100	Combination Short Haul Truck	164	0.00E+00	5.62E-05	4.10E-06	5.92E+01	1.60E-07	5.49E-02	4.06E-05	6.00E-02	1.91E-03	6.79E-04	3.15E-03	1.20E-03	1.18E-03	8.93E-03	1.98E-04	0.00E+00	1.97E-03	1.13E-02
16	B06	100	Combination Long Haul Truck	149	0.00E+00	4.89E-05	3.36E-06	5.36E+01	1.85E-07	5.48E-02	3.67E-05	5.70E-02	1.76E-03	4.91E-04	3.21E-03	1.01E-03	1.00E-03	8.19E-03	1.80E-04	0.00E+00	2.21E-03	1.07E-02
16	B07	100	Passenger Car	1248	0.00E+00	1.37E-05	1.48E-06	5.61E+01	9.50E-05	3.74E-01	3.04E-05	2.67E-03	4.05E-03	8.16E-04	2.96E-03	1.91E-03	1.96E-03	1.56E-04	2.84E-04	7.82E-08	1.00E-03	4.17E-04
16	B07	100	Passenger Truck	2091	0.00E+00	2.95E-05	3.14E-06	1.32E+02	1.93E-04	7.52E-01	6.27E-05	7.59E-03	7.16E-03	1.52E-03	6.03E-03	3.91E-03	4.01E-03	8.43E-04	6.64E-04	1.82E-07	2.03E-03	1.23E-03
16	B07	100	Single Unit Short Haul Truck	283	0.00E+00	3.80E-05	1.88E-06	5.16E+01	3.31E-05	1.19E-01	4.11E-05	2.05E-02	1.95E-03	5.67E-04	4.69E-03	1.16E-03	1.18E-03	5.20E-03	2.07E-04	8.47E-08	3.51E-03	3.83E-03
16	B07	100	Single Unit Long Haul Truck	12	0.00E+00	1.65E-06	7.99E-08	2.17E+00	1.37E-06	4.88E-03	1.77E-06	8.64E-04	8.81E-05	2.45E-05	2.05E-04	4.91E-05	4.99E-05	2.18E-04	8.75E-06	3.47E-09	1.55E-04	1.61E-04
16	B07	100	Combination Short Haul Truck	150	0.00E+00	5.16E-05	3.76E-06	5.43E+01	1.47E-07	5.03E-02	3.72E-05	5.50E-02	1.75E-03	6.22E-04	2.89E-03	1.10E-03	1.08E-03	8.18E-03	1.82E-04	0.00E+00	1.81E-03	1.04E-02
16	B07	100	Combination Long Haul Truck	137	0.00E+00	4.49E-05	3.08E-06	4.92E+01	1.70E-07	5.03E-02	3.36E-05	5.23E-02	1.62E-03	4.50E-04	2.94E-03	9.22E-04	9.20E-04	7.51E-03	1.65E-04	0.00E+00	2.02E-03	9.84E-03
16	B08	100	Passenger Car	511	0.00E+00	5.59E-06	6.04E-07	2.29E+01	3.89E-05	1.53E-01	1.24E-05	1.09E-03	1.66E-03	3.34E-04	1.21E-03	7.79E-04	8.00E-04	6.40E-05	1.16E-04	3.20E-08	4.09E-04	1.71E-04
16	B08	100	Passenger Truck	855	0.00E+00	1.21E-05	1.28E-06	5.41E+01	7.90E-05	3.08E-01	2.57E-05	3.10E-03	2.93E-03	6.22E-04	2.47E-03	1.60E-03	1.64E-03	3.45E-04	2.72E-04	7.45E-08	8.29E-04	5.02E-04
16	B08	100	Single Unit Short Haul Truck	37	0.00E+00	5.02E-06	2.48E-07	6.82E+00	4.38E-06	1.58E-02	5.43E-06	2.71E-03	2.57E-04	7.49E-05	6.20E-04	1.54E-04	1.56E-04	6.88E-04	2.74E-05	1.12E-08	4.64E-04	5.07E-04
16	B08	100	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	1.06E-08	2.87E-01	1.81E-07	6.45E-04	2.35E-07	1.14E-04	1.16E-05	3.24E-06	2.70E-05	6.49E-06	6.60E-06	2.88E-05	1.16E-06	4.58E-10	2.04E-05	2.13E-05
16	B08	100	Combination Short Haul Truck	33	0.00E+00	1.13E-05	8.26E-07	1.19E+01	3.22E-08	1.10E-02	8.17E-06	1.21E-02	3.84E-04	1.37E-04	6.34E-04	2.42E-04	2.38E-04	1.80E-03	3.99E-05	0.00E+00	3.96E-04	2.28E-03
16	B08	100	Combination Long Haul Truck	30	0.00E+00	9.85E-06	6.75E-07	1.08E+01	3.73E-08	1.10E-02	7.38E-06	1.15E-02	3.55E-04	9.88E-05	6.46E-04	2.02E-04	2.02E-04	1.65E-03	3.61E-05	0.00E+00	4.44E-04	2.16E-03
16	B09	100	Passenger Car	754	0.00E+00	8.25E-06	8.93E-07	3.39E+01	5.74E-05	2.26E-01	1.83E-05	1.61E-03	2.45E-03	4.93E-04	1.79E-03	1.15E-03	1.18E-03	9.46E-05	1.72E-04	4.73E-08	6.05E-04	2.52E-04
16	B09	100	Passenger Truck	1263	0.00E+00	1.78E-05	1.90E-06	8.00E+01	1.17E-04	4.54E-01	3.79E-05	4.59E-03	4.33E-03	9.19E-04	3.65E-03	2.36E-03	2.42E-03	5.09E-04	4.01E-04	1.10E-07	1.22E-03	7.42E-04
16	B09	100	Single Unit Short Haul Truck	146	0.00E+00	1.96E-05	9.68E-07	2.66E+01	1.71E-05	6.16E-02	2.12E-05	1.06E-02	1.00E-03	2.92E-04	2.42E-03	6.00E-04	6.09E-04	2.68E-03	1.07E-04	4.37E-08	1.81E-03	1.98E-03
16	B09	100	Single Unit Long Haul Truck	6	0.00E+00	8.48E-07	4.12E-08	1.12E+00	7.07E-07	2.51E-03	9.15E-07	4.46E-04	4.54E-05	1.26E-05	1.05E-04	2.53E-05	2.57E-05	1.12E-04	4.51E-06	1.79E-09	7.97E-05	8.32E-05
16	B09	100	Combination Short Haul Truck	77	0.00E+00	2.66E-05	1.94E-06	2.80E+01	7.57E-08	2.60E-02	1.92E-05	2.84E-02	9.02E-04	3.21E-04	1.49E-03	5.69E-04	5.60E-04	4.22E-03	9.37E-05	0.00E+00	9.32E-04	5.35E-03
16	B09	100	Combination Long Haul Truck	71	0.00E+00	2.32E-05	1.59E-06	2.54E+01	8.77E-08	2.59E-02	1.73E-05	2.70E-02	8.35E-04	2.32E-04	1.52E-03	4.76E-04	4.75E-04	3.87E-03	8.49E-05	0.00E+00	1.04E-03	5.08E-03
16	B10	100	Passenger Car	1540	0.00E+00	1.69E-05	1.82E-06	6.92E+01	1.17E-04	4.61E-01	3.75E-05	3.29E-03	5.00E-03	1.01E-03	3.65E-03	2.35E-03	2.41E-03	1.93E-04	3.50E-04	9.65E-08	1.23E-03	5.14E-04
16	B10	100	Passenger Truck	2580	0.00E+00	3.64E-05	3.87E-06	1.63E+02	2.38E-04	9.28E-01	7.74E-05	9.36E-03	8.83E-03	1.88E-03	7.44E-03	4.82E-03	4.94E-03	1.04E-03	8.19E-04	2.25E-07	2.50E-03	1.51E-03
16	B10	100	Single Unit Short Haul Truck	115	0.00E+00	1.54E-05	7.64E-07	2.10E+01	1.35E-05	4.86E-02	1.67E-05	8.34E-03	7.92E-04	2.30E-04	1.91E-03	4.73E-04	4.80E-04	2.11E-03	8.42E-05	3.44E-08	1.43E-03	1.56E-03
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	6.69E-07	3.25E-08	8.83E-01	5.57E-07	1.98E-03	7.21E-07	3.51E-04	3.58E-05	9.95E-06	8.32E-05	2.00E-05	2.03E-05	8.85E-05	3.56E-06	1.41E-09	6.29E-05	6.56E-05
16	B10	100	Combination Short Haul Truck	216	0.00E+00	7.41E-05	5.41E-06	7.80E+01	2.11E-07	7.23E-02	5.35E-05	7.91E-02	2.51E-03	8.95E-04	4.15E-03	1.59E-03	1.56E-03	1.18E-02	2.61E-04	0.00E+00	2.60E-03	1.49E-02
16	B10	100	Combination Long Haul Truck	197	0.00E+00	6.45E-05	4.42E-06	7.07E+01	2.44E-07	7.22E-02	4.83E-05	7.51E-02	2.33E-03	6.47E-04	4.23E-03	1.32E-03	1.32E-03	1.08E-02	2.37E-04	0.00E+00	2.91E-03	1.41E-02
16	B11	100	Passenger Car	284	0.00E+00	3.10E-06	3.36E-07	1.27E+01	2.16E-05	8.49E-02	6.90E-06	6.06E-04	9.20E-04	1.86E-04	6.72E-04	4.33E-04	4.44E-04	3.56E-05	6.45E-05	1.78E-08	2.27E-04	9.47E-05
16	B11	100	Passenger Truck	475	0.00E+00	6.70E-06	7.13E-07	3.01E+01	4.39E-05	1.71E-01	1.43E-05	1.72E-03	1.63E-03	3.46E-04	1.37E-03	8.88E-04	9.10E-04	1.92E-04	1.51E-04	4.14E-08	4.61E-04	2.79E-04
16	B11	100	Single Unit Short Haul Truck	83	0.00E+00	1.11E-05	5.51E-07	1.51E+01	9.71E-06	3.50E-02	1.20E-05	6.02E-03	5.71E-04	1.66E-04	1.38E-03	3.41E-04	3.46E-04	1.52E-03	6.07E-05	2.48E-08	1.03E-03	1.12E-03
16	B11	100	Single Unit Long Haul Truck	4	0.00E+00	4.82E-07	2.34E-08	6.37E-01	4.02E-07	1.43E-03	5.20E-07	2.53E-04	2.58E-05	7.18E-06	6.00E-05	1.44E-05	1.46E-05	6.38E-05	2.56E-06	1.02E-09	4.53E-05	4.73E-05
16	B11	100	Combination Short Haul Truck	38	0.00E+00	1.31E-05	9.56E-07	1.38E+01	3.72E-08	1.28E-02	9.45E-06	1.40E-02	4.44E-04	1.58E-04	7.34E-04	2.80E-04	2.75E-04	2.08E-03	4.61E-05	0.00E+00	4.58E-04	2.63E-03
16	B11	100	Combination Long Haul Truck	35	0.00E+00	1.14E-05	7.81E-07	1.25E+01	4.31E-08	1.28E-02	8.54E-06	1.33E-02	4.11E-04	1.14E-04	7.47E-04	2.34E-04	2.34E-04	1.91E-03	4.18E-05	0.00E+00	5.13E-04	2.50E-03
16	B12	100	Passenger Car	650	0.00E+00	7.11E-06	7.69E-07	2.92E+01	4.95E-05	1.94E-01	1.58E-05	1.39E-03	2.11E-03	4.25E-04	1.54E-03	9.92E-04	1.02E-03	8.15E-05	1.48E-04	4.07E-08	5.21E-04	2.17E-04
16	B12	100	Passenger Truck	1088	0.00E+00	1.53E-05	1.63E-06	6.89E+01	1.00E-04	3.91E-01	3.26E-05	3.95E-03	3.73E-03	7.91E-04	3.14E-03	2.03E-03	2.09E-03	4.39E-04	3.46E-04	9.47E-08	1.06E-03	6.39E-04
16	B12	100	Single Unit Short Haul Truck	63	0.00E+00	8.43E-06	4.17E-07	1.15E+01	7.35E-06	2.65E-02	9.12E-06	4.56E-03	4.32E-04	1.26E-04	1.04E-03	2.58E-04	2.62E-04	1.16E-03	4.60E-05	1.88E-08	7.80E-04	8.51E-04
16	B12	100	Single Unit Long Haul Truck	3	0.00E+00	3.65E-07	1.77E-08	4.82E-01	3.05E-07	1.08E-03	3.94E-07	1.92E-04	1.96E-05	5.44E-06	4.54E-05	1.09E-05	1.11E-05	4.83E-05	1.94E-06	7.70E-10	3.43E-05	3.58E-05
16	B12	100	Combination Short Haul Truck	70	0.00E+00	2.40E-05	1.75E-06	2.52E+01	6.82E-08	2.34E-02	1.73E-05	2.56E-02	8.12E-04	2.89E-04	1.34E-03	5.13E-04	5.04E-04	3.80E-03	8.44E-05	0.00E+00	8.39E-04	4.82E-03
16	B12	100	Combination Long Haul Truck	64	0.00E+00	2.09E-05	1.43E-06	2.28E+01	7.90E-08	2.34E-02	1.56E-05	2.43E-02	7.52E-04	2.09E-04	1.37E-03	4.28E-04	4.27E-04	3.49E-03	7.65E-05	0.00E+00	9.40E-04	4.57E-03
16	B13	100	Passenger Car	728	0.00E+00	7.96E-06	8.62E-07	3.27E+01	5.54E-05	2.18E-01	1.77E-05	1.56E-03	2.36E-03	4.76E-04	1.72E-03	1.11E-03	1.14E-03	9.13E-05	1.66E-04	4.56E-08	5.83E-04	2.43E-04
16	B13	100	Passenger Truck	1219	0.00E+00	1.72E-05	1.83E-06	7.72E+01	1.13E-04	4.38E-01	3.66E-05	4.42E-03	4.18E-03	8.87E-04	3.52E-03	2.28E-03	2.34E-03	4.92E-04	3.87E-04	1.06E-07	1.18E-03	7.16E-04
16	B13	100	Single Unit Short Haul Truck	70	0.00E+00	9.41E-06	4.66E-07	1.28E+01	8.21E-06	2.96E-02	1.02E-05	5.09E-03	4.83E-04	1.41E-04	1.16E-03	2.89E-04	2.93E-04	1.29E-03	5.14E-05	2.10E-08	8.71E-04	9.51E-04
16	B13	100	Single Unit Long Haul Truck	3	0.00E+00	4.08E-07	1.98E-08	5.39E-01	3.40E-07	1.21E-03	4.40E-07	2.14E-04	2.18E-05	6.07E-06	5.07E-05	1.22E-05	1.24E-05	5.40E-05	2.17E-06	8.60E-10	3.83E-05	4.00E-05
16	B13	100	Combination Short Haul Truck	97	0.00E+00	3.34E-05	2.44E-06	3.52E+01	9.50E-08	3.26E-02	2.41E-05	3.56E-02	1.13E-03	4.03E-04	1.87E-03	7.15E-04	7.03E-04	5.30E-03	1.18E-04	0.00E+00	1.17E-03	6.71E-03
16	B13	100	Combination Long Haul Truck	89	0.00E+00	2.91E-05	1.99E-06	3.19E+01	1.10E-07	3.26E-02	2.18E-05	3.39E-02	1.05E-03	2.92E-04	1.91E-03	5.97E-04	5.96E-04	4.86E-03	1.07E-04	0.00E+00	1.31E-03	6.38E-03
16	B14	100	Passenger Car	294	0.00E+00	3.21E-06	3.47E-07	1.32E+01	2.24E-05	8.78E-02	7.14E-06	6.27E-04	9.52E-04	1.92E-04	6.95E-04	4.48E-04	4.60E-04	3.68E-05	6.68E-05	1.84E-08	2.35E-04	9.80E-05
16	B14	100	Passenger Truck	492	0.00E+00	6.93E-06	7.38E-07	3.11E+01	4.54E-05	1.77E-01	1.48E-05	1.78E-03	1.68E-03	3.58E-04	1.42E-03	9.19E-04	9.42E-04	1.98E-04	1.56E-04	4.28E-08	4.77E-04	2.89E-04
16	B14	100	Single Unit Short Haul Truck	72	0.00E+00	9.69E-06	4.80E-07	1.32E+01	8.45E-06	3.05E-02	1.05E-05	5.24E-03	4.97E-04	1.45E-04	1.20E-03	2.97E-04	3.02E-04	1.33E-03	5.29E-05	2.16E-08	8.96E-04	9.79E-04
16	B14	100	Single Unit Long Haul Truck	3	0.00E+00	4.20E-07	2.04E-08	5.55E-01	3.50E-07	1.25E-03	4.53E-07	2.21E-04	2.25E-05	6.25E-06	5.22E-05	1.25E-05	1.27E-05	5.56E-05	2.23E-06	8.85E-10	3.95E-05	4.12E-05
16	B14	100	Combination Short Haul Truck	35	0.00E+00	1.22E-05	8.90E-07	1.28E+01	3.47E-08	1.19E-02	8.80E-06	1.30E-02	4.13E-04	1.47E-04	6.83E-04	2.61E-04	2.56E-04	1.93E-03	4.29E-05	0.00E+00	4.27E-04	2.45E-03
16	B14	100	Combination Long Haul Truck	32	0.00E+00	1.06E-05	7.27E-07	1.16E+01	4.02E-08	1.19E-02	7.95E-06	1.24E-02	3.83E-04	1.06E-04	6.95E-04	2.18E-04	2.17E-04	1.77E-03	3.89E-05	0.00E+00	4.78E-04	2.33E-03
53	C11	70	Passenger Car	261	0.00E+00	3.30E-06	3.57E-07	1.26E+01	2.30E-05	8.50E-02	7.34E-06	5.32E-04	1.99E-03	3.21E-04	7.15E-04	4.61E-04	4.73E-04	4.67E-05	6.36E-05	1.73E-08	2.42E-04	8.31E-05
53	C11	70	Passenger Truck	437	0.00E+00	7.19E-06	7.61E-07	2.92E+01	4.55E-05	1.56E-01	1.49E-05	1.63E-03	3.57E-03	5.84E-04	1.43E-03	9.28E-04	9.50E-04	2.10E-04	1.45E-04	3.81E-08	4.76E-04	2.67E-04
53	C11	70	Single Unit Short Haul Truck	33	0.00E+00	7.84E-06	3.93E-07	6.14E+00	6.41E-06	1.23E-02	8.36E-06	3.86E-03	5.52E-04	1.11E-04	9.51E-04	2.35E-04	2.38E-04	6.16E-04	2.48E-05	1.00E-08	7.13E-04	7.24E-04
53	C11	70	Single Unit Long Haul Truck	1	0.00E+00	3.42E-07	1.70E-08	2.61E-01	2.77E-07	5.16E-04	3.64E-07	1.66E-04	2.52E-05	4.91E-06	4.16E-05	1.02E-05	1.03E-05	2.60E-05	1.05E-06	4.22E-10	3.13E-05	3.11E-05
53	C11	70	Combination Short Haul Truck	23	0.00E+00	1.20E-05	8.56E-07	8.73E+00	3.91E-08	1.04E-02	8.83E-06	1.26E-02	9.16E-04	2.00E-04	7.33E-04	2.53E-04	2.53E-04	1.32E-03	2.92E-05	0.00E+00	4.80E-04	2.38E-03
53	C11	70	Combination Long Haul Truck	21	0.00E+00	1.09E-05	7.28E-07	8.14E+00	4.51E-08	1.10E-02	8.26E-06	1.25E-02	9.10E-04	1.66E-04	7.58E-04	2.20E-04	2.22E-04	1.24E-03	2.73E-05	0.00E+00	5.36E-04	2.35E-03
52	C12	60	Passenger Car	323	0.00E+00	4.44E-06	4.81E-07	1.62E+01	3.09E-05	1.14E-01	9.88E-06	6.34E-04	3.19E-03	4.89E-04	9.61E-04	6.20E-04	6.36E-04	6.74E-05	8.11E-05	2.17E-08	3.25E-04	9.91E-05
52	C

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C16	60	Passenger Truck	229	0.00E+00	4.13E-06	4.36E-07	1.56E+01	2.58E-05	8.63E-02	8.50E-06	8.63E-04	2.40E-03	3.71E-04	8.07E-04	5.26E-04	5.39E-04	1.19E-04	7.77E-05	1.95E-08	2.69E-04	1.43E-04
52	C16	60	Single Unit Short Haul Truck	7	0.00E+00	2.18E-06	1.09E-07	1.39E+00	1.79E-06	2.68E-03	2.32E-06	1.04E-03	1.76E-04	3.20E-05	2.65E-04	6.53E-05	6.64E-05	1.39E-04	5.60E-06	2.31E-09	1.98E-04	1.94E-04
52	C16	60	Combination Short Haul Truck	6	0.00E+00	3.75E-06	2.62E-07	2.44E+00	1.33E-08	3.28E-03	2.78E-06	4.07E-03	3.49E-04	6.92E-05	2.39E-04	7.79E-05	7.80E-05	3.68E-04	8.17E-06	0.00E+00	1.61E-04	7.67E-04
52	C16	60	Combination Long Haul Truck	6	0.00E+00	3.37E-06	2.19E-07	2.29E+00	1.52E-08	3.54E-03	2.60E-06	4.03E-03	3.51E-04	5.96E-05	2.46E-04	6.69E-05	6.78E-05	3.50E-04	7.67E-06	0.00E+00	1.78E-04	7.60E-04
53	C17	70	Passenger Car	337	0.00E+00	4.27E-06	4.62E-07	1.63E+01	2.97E-05	1.10E-01	9.49E-06	6.87E-04	2.57E-03	4.15E-04	9.23E-04	5.95E-04	6.11E-04	6.04E-05	8.22E-05	2.24E-08	3.13E-04	1.07E-04
53	C17	70	Passenger Truck	564	0.00E+00	9.29E-06	9.83E-07	3.77E+01	5.88E-05	2.02E-01	1.93E-05	2.10E-03	4.62E-03	7.55E-04	1.84E-03	1.20E-03	1.23E-03	2.72E-04	1.88E-04	4.92E-08	6.15E-04	3.45E-04
53	C17	70	Single Unit Short Haul Truck	111	0.00E+00	2.61E-05	1.31E-06	2.04E+01	2.13E-05	4.08E-02	2.78E-05	1.28E-02	1.83E-03	3.67E-04	3.16E-03	7.80E-04	7.93E-04	2.05E-03	8.24E-05	3.32E-08	2.37E-03	2.41E-03
53	C17	70	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	5.65E-08	8.67E-01	9.20E-07	1.72E-03	1.21E-06	5.53E-04	8.38E-05	1.63E-05	1.38E-04	3.38E-05	3.43E-05	8.66E-05	3.50E-06	1.40E-09	1.04E-04	1.03E-04
53	C17	70	Combination Short Haul Truck	49	0.00E+00	2.54E-05	1.81E-06	1.84E+01	8.25E-08	2.19E-02	1.86E-05	2.67E-02	1.93E-03	4.22E-04	1.55E-03	5.34E-04	5.33E-04	2.78E-03	6.16E-05	0.00E+00	1.01E-03	5.02E-03
53	C17	70	Combination Long Haul Truck	45	0.00E+00	2.30E-05	1.54E-06	1.72E+01	9.51E-08	2.32E-02	1.74E-05	2.63E-02	1.92E-03	3.50E-04	1.60E-03	4.64E-04	4.69E-04	2.63E-03	5.75E-05	0.00E+00	1.13E-03	4.95E-03
52	C18	60	Passenger Car	131	0.00E+00	1.80E-06	1.95E-07	6.57E+00	1.26E-05	4.63E-02	4.01E-06	2.58E-04	1.29E-03	1.99E-04	3.90E-04	2.52E-04	2.58E-04	2.74E-05	3.30E-05	8.81E-09	1.32E-04	4.02E-05
52	C18	60	Passenger Truck	219	0.00E+00	3.96E-06	4.18E-07	1.50E+01	2.47E-05	8.27E-02	8.15E-06	8.28E-04	2.30E-03	3.56E-04	7.75E-04	5.05E-04	5.17E-04	1.14E-04	7.45E-05	1.87E-08	2.58E-04	1.37E-04
52	C18	60	Single Unit Short Haul Truck	19	0.00E+00	5.61E-06	2.81E-07	3.57E+00	4.62E-06	6.92E-03	5.98E-06	2.67E-03	4.54E-04	8.24E-05	6.82E-04	1.68E-04	1.71E-04	3.58E-04	1.44E-05	5.95E-09	5.11E-04	5.01E-04
52	C18	60	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.53E-01	2.01E-07	2.94E-04	2.62E-07	1.16E-04	2.04E-05	3.65E-06	2.99E-05	7.32E-06	7.44E-06	1.52E-05	6.17E-07	2.53E-10	2.24E-05	2.17E-05
52	C18	60	Combination Short Haul Truck	8	0.00E+00	4.66E-06	3.25E-07	3.03E+00	1.65E-08	4.07E-03	3.46E-06	5.05E-03	4.34E-04	8.58E-05	2.96E-04	9.67E-05	9.68E-05	4.57E-04	1.01E-05	0.00E+00	2.00E-04	9.51E-04
52	C18	60	Combination Long Haul Truck	7	0.00E+00	4.18E-06	2.72E-07	2.84E+00	1.89E-08	4.39E-03	3.22E-06	5.01E-03	4.36E-04	7.40E-05	3.05E-04	8.31E-05	8.41E-05	4.34E-04	9.51E-06	0.00E+00	2.21E-04	9.43E-04
50	C19	40	Passenger Car	40	0.00E+00	6.77E-07	7.32E-08	2.34E+00	4.71E-06	1.74E-02	1.50E-06	7.28E-05	6.97E-04	9.95E-05	1.46E-04	9.44E-05	9.69E-05	1.26E-05	1.16E-05	2.82E-09	4.96E-05	1.14E-05
50	C19	40	Passenger Truck	67	0.00E+00	1.55E-06	1.62E-07	5.21E+00	9.28E-06	2.99E-02	3.10E-06	2.76E-04	1.24E-03	1.76E-04	2.92E-04	1.91E-04	1.96E-04	4.46E-05	2.57E-05	5.49E-09	9.63E-05	4.66E-05
50	C19	40	Single Unit Short Haul Truck	4	0.00E+00	1.83E-06	9.63E-08	8.81E-01	1.60E-06	1.52E-03	1.95E-06	8.97E-04	1.68E-04	2.78E-05	2.17E-04	5.73E-05	5.82E-05	8.90E-05	3.56E-06	1.51E-09	1.59E-04	1.68E-04
50	C19	40	Single Unit Long Haul Truck	2	0.00E+00	1.90E-06	1.32E-07	9.64E-01	6.83E-09	1.66E-03	1.41E-06	2.12E-03	2.21E-04	3.98E-05	1.23E-04	3.93E-05	3.97E-05	1.45E-04	3.23E-06	0.00E+00	8.34E-05	3.99E-04
50	C19	40	Combination Long Haul Truck	2	0.00E+00	1.73E-06	1.13E-07	9.16E-01	7.76E-09	1.84E-03	1.33E-06	2.12E-03	2.22E-04	3.54E-05	1.27E-04	3.44E-05	3.51E-05	1.40E-04	3.07E-06	0.00E+00	9.16E-05	4.00E-04
53	C20	70	Passenger Car	76	0.00E+00	9.65E-07	1.04E-07	3.70E+00	6.71E-06	2.48E-02	2.14E-06	1.55E-04	5.82E-04	9.38E-05	2.09E-04	1.35E-04	1.38E-04	1.36E-05	1.86E-05	5.06E-09	7.07E-05	2.43E-05
53	C20	70	Passenger Truck	128	0.00E+00	2.10E-06	2.22E-07	8.52E+00	1.33E-05	4.56E-02	4.37E-06	4.75E-04	1.04E-03	1.71E-04	4.17E-04	2.71E-04	2.78E-04	6.15E-05	4.25E-05	1.11E-08	1.39E-04	7.80E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	1.09E-06	5.44E-08	8.50E-01	8.88E-07	1.70E-03	1.16E-06	5.35E-04	7.64E-05	1.53E-05	1.32E-04	3.25E-05	3.30E-05	8.52E-05	3.43E-06	1.38E-09	9.87E-05	1.00E-04
53	C20	70	Combination Short Haul Truck	2	0.00E+00	9.76E-07	6.93E-08	7.07E-01	3.17E-09	8.40E-04	7.16E-07	1.02E-03	7.42E-05	1.62E-05	5.94E-05	2.05E-05	2.05E-05	1.07E-04	2.37E-06	0.00E+00	3.89E-05	1.93E-04
53	C20	70	Combination Long Haul Truck	2	0.00E+00	8.82E-07	5.90E-08	6.60E-01	3.65E-09	8.90E-04	6.70E-07	1.01E-03	7.37E-05	1.35E-05	6.14E-05	1.78E-05	1.80E-05	1.01E-04	2.21E-06	0.00E+00	4.34E-05	1.90E-04
50	C21	40	Passenger Car	287	0.00E+00	4.82E-06	5.21E-07	1.66E+01	3.35E-05	1.24E-01	1.07E-05	5.18E-04	4.96E-03	7.08E-04	1.04E-03	6.72E-04	6.90E-04	8.99E-05	8.27E-05	2.01E-08	3.53E-04	8.10E-05
50	C21	40	Passenger Truck	480	0.00E+00	1.10E-05	1.16E-06	3.71E+01	6.61E-05	2.13E-01	2.21E-05	1.96E-03	8.81E-03	1.25E-03	2.08E-03	1.36E-03	1.39E-03	3.18E-04	1.83E-04	3.91E-08	6.86E-04	3.32E-04
50	C21	40	Single Unit Short Haul Truck	79	0.00E+00	3.52E-05	1.85E-06	1.69E+01	3.07E-05	2.92E-02	3.75E-05	1.72E-02	3.22E-03	5.35E-04	4.17E-03	1.10E-03	1.12E-03	1.71E-03	6.83E-05	2.89E-08	3.05E-03	3.23E-03
50	C21	40	Single Unit Long Haul Truck	4	0.00E+00	1.54E-06	8.06E-08	7.31E-01	1.34E-06	1.27E-03	1.64E-06	7.50E-04	1.44E-04	2.37E-05	1.83E-04	4.81E-05	4.89E-05	7.38E-05	2.95E-06	1.26E-09	1.34E-04	1.41E-04
50	C21	40	Combination Short Haul Truck	31	0.00E+00	2.78E-05	1.93E-06	1.41E+01	9.99E-08	2.42E-02	2.07E-05	3.10E-02	3.23E-03	5.83E-04	1.80E-03	5.75E-04	5.81E-04	2.13E-03	4.72E-05	0.00E+00	1.22E-03	5.84E-03
50	C21	40	Combination Long Haul Truck	29	0.00E+00	2.53E-05	1.65E-06	1.34E+01	1.13E-07	2.69E-02	1.95E-05	3.10E-02	3.25E-03	5.17E-04	1.85E-03	5.04E-04	5.13E-04	2.05E-03	4.49E-05	0.00E+00	1.34E-03	5.85E-03
52	C22	60	Passenger Car	230	0.00E+00	3.16E-06	3.42E-07	1.15E+01	2.20E-05	8.12E-02	7.03E-06	4.51E-04	2.27E-03	3.48E-04	6.84E-04	4.41E-04	4.53E-04	4.80E-05	5.78E-05	1.54E-08	2.32E-04	7.06E-05
52	C22	60	Passenger Truck	385	0.00E+00	6.95E-06	7.33E-07	2.63E+01	4.33E-05	1.45E-01	1.43E-05	1.45E-03	4.04E-03	6.25E-04	1.36E-03	8.85E-04	9.07E-04	2.00E-04	1.31E-04	3.28E-08	4.52E-04	2.40E-04
52	C22	60	Single Unit Short Haul Truck	18	0.00E+00	5.20E-06	2.60E-07	3.31E+00	4.29E-06	6.41E-03	5.55E-06	2.48E-03	4.21E-04	7.64E-05	6.32E-04	1.56E-04	1.59E-04	3.32E-04	1.34E-05	5.51E-09	4.73E-04	4.64E-04
52	C22	60	Single Unit Long Haul Truck	1	0.00E+00	2.27E-07	1.13E-08	1.41E-01	1.86E-07	2.72E-04	2.42E-07	1.07E-04	1.89E-05	3.38E-06	2.77E-05	6.78E-06	6.90E-06	1.41E-05	5.72E-07	2.35E-10	2.08E-05	2.01E-05
52	C22	60	Combination Short Haul Truck	6	0.00E+00	3.77E-06	2.63E-07	2.45E+00	1.34E-08	3.30E-03	2.80E-06	4.09E-03	3.51E-04	6.95E-05	2.40E-04	7.83E-05	7.84E-05	3.70E-04	8.21E-06	0.00E+00	1.62E-04	7.70E-04
52	C22	60	Combination Long Haul Truck	6	0.00E+00	3.39E-06	2.20E-07	2.30E+00	1.53E-08	3.55E-03	2.61E-06	4.05E-03	3.53E-04	5.99E-05	2.47E-04	6.72E-05	6.81E-05	3.52E-04	7.70E-06	0.00E+00	1.79E-04	7.64E-04
53	C23	70	Passenger Car	376	0.00E+00	4.77E-06	5.15E-07	1.83E+01	3.32E-05	1.23E-01	1.06E-05	7.67E-04	2.87E-03	4.63E-04	1.03E-03	6.65E-04	6.82E-04	6.74E-05	9.18E-05	2.50E-08	3.49E-04	1.20E-04
53	C23	70	Passenger Truck	630	0.00E+00	1.04E-05	1.10E-06	4.21E+01	6.57E-05	2.25E-01	2.16E-05	2.35E-03	5.16E-03	8.43E-04	2.06E-03	1.34E-03	1.37E-03	3.04E-04	2.10E-04	5.50E-08	6.87E-04	3.85E-04
53	C23	70	Single Unit Short Haul Truck	63	0.00E+00	1.48E-05	7.43E-07	1.16E+01	1.21E-05	2.32E-02	1.58E-05	7.31E-03	1.04E-03	2.09E-04	1.80E-03	4.44E-04	4.51E-04	1.17E-03	4.69E-05	1.89E-08	1.35E-03	1.37E-03
53	C23	70	Single Unit Long Haul Truck	3	0.00E+00	6.46E-07	3.22E-08	4.93E-01	5.24E-07	9.77E-04	6.89E-07	3.14E-04	4.77E-05	9.30E-06	7.87E-05	1.92E-05	1.95E-05	4.93E-05	1.99E-06	7.98E-10	5.92E-05	5.89E-05
53	C23	70	Combination Short Haul Truck	24	0.00E+00	1.23E-05	8.77E-07	8.94E+00	4.01E-08	1.06E-02	9.05E-06	1.30E-02	9.39E-04	2.05E-04	7.52E-04	2.59E-04	2.59E-04	1.35E-03	2.99E-05	0.00E+00	4.93E-04	2.44E-03
53	C23	70	Combination Long Haul Truck	22	0.00E+00	1.12E-05	7.46E-07	8.35E+00	4.62E-08	1.13E-02	8.47E-06	1.28E-02	9.33E-04	1.70E-04	7.77E-04	2.25E-04	2.28E-04	1.28E-03	2.80E-05	0.00E+00	5.49E-04	2.41E-03
52	C24	60	Passenger Car	68	0.00E+00	9.32E-07	1.01E-07	3.40E+00	6.49E-06	2.39E-02	2.07E-06	1.33E-04	6.69E-04	1.03E-04	2.02E-04	1.30E-04	1.33E-04	1.42E-05	1.70E-05	4.55E-09	6.83E-05	2.08E-05
52	C24	60	Passenger Truck	113	0.00E+00	2.05E-06	2.16E-07	7.75E+00	1.28E-05	4.28E-02	4.21E-06	4.28E-04	1.19E-03	1.84E-04	4.00E-04	2.61E-04	2.67E-04	5.88E-05	3.85E-05	9.66E-09	1.33E-04	7.08E-05
52	C24	60	Single Unit Short Haul Truck	1	0.00E+00	3.49E-07	1.74E-08	2.22E-01	2.88E-07	4.30E-04	3.72E-07	1.66E-04	2.83E-05	5.12E-06	4.24E-05	1.05E-05	1.06E-05	2.22E-05	8.98E-07	3.70E-10	3.18E-05	3.12E-05
52	C24	60	Combination Short Haul Truck	1	0.00E+00	8.56E-07	5.96E-08	5.57E-01	3.03E-09	7.48E-04	6.35E-07	9.27E-04	7.97E-05	1.58E-05	5.44E-05	1.78E-05	1.78E-05	8.39E-05	1.86E-06	0.00E+00	3.66E-05	1.75E-04
52	C24	60	Combination Long Haul Truck	1	0.00E+00	7.68E-07	5.00E-08	5.22E-01	3.48E-09	8.06E-04	5.92E-07	9.19E-04	8.01E-05	1.36E-05	5.61E-05	1.53E-05	1.55E-05	7.97E-05	1.75E-06	0.00E+00	4.07E-05	1.73E-04
50	C25	40	Passenger Car	242	0.00E+00	4.06E-06	4.39E-07	1.40E+01	2.83E-05	1.04E-01	9.03E-06	4.37E-04	4.18E-03	5.97E-04	8.79E-04	5.67E-04	5.82E-04	7.58E-05	6.97E-05	1.70E-08	2.98E-04	6.83E-05
50	C25	40	Passenger Truck	405	0.00E+00	9.29E-06	9.74E-07	3.13E+01	5.57E-05	1.79E-01	1.86E-05	1.66E-03	7.43E-03	1.06E-03	1.75E-03	1.15E-03	1.17E-03	2.68E-04	1.54E-04	3.30E-08	5.78E-04	2.80E-04
50	C25	40	Single Unit Short Haul Truck	61	0.00E+00	2.72E-05	1.43E-06	1.31E+01	2.37E-05	2.25E-02	2.89E-05	1.33E-02	2.49E-03	4.13E-04	3.22E-03	8.50E-04	8.63E-04	1.32E-03	5.27E-05	2.23E-08	2.36E-03	2.49E-03
50	C25	40	Single Unit Long Haul Truck	3	0.00E+00	1.19E-06	6.22E-08	5.64E-01	1.04E-06	9.80E-04	1.27E-06	5.79E-04	1.11E-04	1.83E-05	1.42E-04	3.72E-05	3.77E-05	5.70E-05	2.28E-06	9.69E-10	1.04E-04	1.09E-04
50	C25	40	Combination Short Haul Truck	33	0.00E+00	2.89E-05	2.00E-06	1.46E+01	1.04E-07	2.52E-02	2.15E-05	3.22E-02	3.35E-03	6.05E-04	1.87E-03	5.98E-04	6.03E-04	2.21E-03	4.90E-05	0.00E+00	1.27E-03	6.06E-03
50	C25	40	Combination Long Haul Truck	30	0.00E+00	2.63E-05	1.72E-06	1.39E+01	1.18E-07	2.79E-02	2.02E-05	3.22E-02	3.37E-03	5.37E-04	1.93E-03	5.23E-04	5.33E-04	2.13E-03	4.66E-05	0.00E+00	1.39E-03	6.07E-03
53	C26	70	Passenger Car	265	0.00E+00	3.35E-06	3.62E-07	1.28E+01	2.33E-05	8.63E-02	7.45E-06	5.40E-04	2.02E-03	3.26E-04	7.25E-04	4.67E-04	4.80E-04	4.74E-05	6.46E-05	1.76E-08	2.45E-04	8.43E-05
53	C26	70	Passenger Truck	443	0.00E+00	7.30E-06	7.72E-07	2.96E+01	4.62E-05	1.58E-01	1.52E-05	1.65E-03	3.63E-03	5.93E-04	1.45E-03	9.41E-04	9.64E-04	2.14E-04	1.48E-04	3.86E-08	4.83E-04	2.71E-04
53	C26	70	Single Unit Short Haul Truck	59	0.00E+00	1.40E-05	7.00E-07	1.09E+01	1.14E-05	2.19E-02	1.49E-05	6.88E-03	9.83E-04	1.97E-04	1.69E-03	4.18E-04	4.25E-04	1.10E-03	4.41E-05	1.78E-08	1.27E-03	1.29E-03
53	C26	70	Single Unit Long Haul Truck	3	0.00E+00	6.08E-07	3.03E-08	4.64E-01	4.93E-07	9.19E-04	6.48E-07	2.96E-04	4.49E-05	8.75E-06	7.41E-05	1.81E-05	1.84E-05	4.64E-05	1.87E-06	7.51E-10	5.57E-05	5.54E-05
53	C26	70	Combination Short Haul Truck	31	0.00E+00	1.61E-05	1.14E-06	1.17E+01	5.23E-08	1.39E-02	1.18E-05	1.69E-02	1.23E-03	2.67E-04	9.81E-04	3.39E-04	3.38E-04	1.76E-03	3.91E-05	0.00E+00	6.43E-04	3.18E-03
53	C26	70	Combination Long Haul Truck	28	0.00E+00	1.46E-05	9.73E-07	1.09E+01	6.03E-08	1.47E-02	1.11E-05	1.67E-02	1.22E-03	2.22E-04	1.01E-03	2.94E-04	2.97E-04	1.66E-03	3.65E-05	0.00E+00	7.17E-04	3.14E-03
50	C27	40	Passenger Car	338	0.00E+00	5.68E-06	6.15E-07	1.96E+01	3.95E-05	1.46E-01	1.26E-05	6.11E-04	5.85E-03	8.35E-04	1.23E-03	7.93E-04	8.13E-04	1.06E-04	9.75E-05	2.37E-08	4.16E-04	9.55E-05
50	C27	40	Passenger Truck	566	0.00E+00	1.30E-05	1.36E-06	4.37E+01	7.79E-05	2.51E-01	2.60E-05	2.31E-03	1.04E-02	1.48E-03	2.45E-03	1.60E-03	1.64E-03	3.75E-04	2.16E-04	4.61E-08	8.09E-04	3.92E-04
50	C27	40	Single Unit Short Haul Truck	56	0.00E+00	2.50E-05	1.31E-06	1.20E+01	2.18E-05	2.07E-02	2.66E-05	1.23E-02	2.29E-03	3.80E-04	2.96E-03	7.82E-04	7.95E-04	1.22E-03	4.86E-05	2.06E-08	2.17E-03	2.30E-03
50	C27	40	Single Unit Long Haul Truck	2	0.00E+00	1.10E-06	5.73E-08	5.20E-01	9.56E-07	9.02E-04	1.17E-06	5.33E-04	1.02E-04	1.69E-05	1.30E-04	3.42E-05	3.47E-05	5.25E-05	2.10E-06	8.92E-10	9.56E-05	9.99E-05
50	C27	40	Combination Short Haul Truck	18	0.00E+00	1.55E-05	1.08E-06	7.89E+00	5.59E-08	1.36E-02	1.16E-05	1.73E-02	1.81E-03	3.26E-04	1.01E-03	3.22E-04	3.25E-04	1.19E-03	2.64E-05	0.00E+00	6.82E-04	3.26E-03
50	C27	40	Combination Long Haul Truck	16	0.00E+00	1.42E-05	9.24E-07	7.49E+00	6.35E-08	1.50E-02	1.09E-05	1.74E-02	1.81E-03	2.89E-04	1.04E-03	2.82E-04	2.87E-04	1.15E-03	2.51E-05	0.00E+00	7.50E-04	3.27E-03
52	C28	60	Passenger Car	157	0.00E+00	2.16E-06	2.34E-07	7.87E+00	1.50E-05	5.55E-02	4.81E-06	3.09E-04	1.55E-03	2.38E-04	4.68E-04	3.02E-04	3.09E-04	3.28E-05	3.95E-05	1.06E-08	1.58E-04	4.82E-05
52	C28	60	Passenger Truck	263	0.00E+00	4.75E-06	5.01E-07	1.80E+01	2.96E-05	9.92E-02	9.77E-06	9.92E-04	2.76E-03	4.27E-04	9.28E-04	6.05E-04	6.20E-04	1.36E-04	8.93E-05	2.24E-08	3.09E-04	1.64E-04
52	C28	60	Single Unit Short Haul Truck	5	0.00E+00	1.55E-06	7.73E-08	9.85E-01	1.27E-06	1.91E-03	1.65E-06	7.37E-04	1.25E-04	2.27E-05	1.88E-04	4.64E-05	4.71E-05	9.86E-05	3.98E-06	1.64E-09	1.41E-04	1.38E-04
52	C28	60	Single Unit Long Haul Truck	4	0.00E+00	2.11E-06	1.47E-07	1.38E+00	7.49E-09	1.85E-03	1.57E-06	2.29E-03	1.97E-04	3.90E-05	1.35E-04	4.39E-05	4.40E-05	2.07E-04	4.61E-06	0.00E+00	9.06E-05	4.32E-04
52	C28	60	Combination Long Haul Truck	3	0.00E+00	1.90E-06	1.24E-07	1.29E+00	8.59E-09	1.99E-03	1.46E-06	2.27E-03	1.98E-04	3.36E-05	1.39E-04	3.77E-05	3.82E-05	1.97E-04	4.32E-06	0.00E+00	1.01E-04	4.28E-04
53	C29	70	Passenger Car	31	0.00E+00	3.87E-07	4.19E-08	1.48E+00	2.69E-06	9.96E-03	8.61E-07	6.23E-05	2.33E-04	3.76E-05	8.38E-05	5.40E-05	5.54E-05	5.48E-06	7.46E-06	2.03E-09	2.84E-05	9.74E-06
53	C29	70	Passenger Truck	51	0.00E+00	8.43E-07	8.92E-08	3.42E+00	5.34E-06	1.83E-02	1.75E-06	1.91E-04	4.19E-04	6.85E-05	1.67E-04	1.09E-04	1.11E-04	2.47E-05	1.71E-05	4.46E-09	5.58E-05	3.13E-05
53	C29	70	Single Unit Short Haul Truck	1	0.00E+00	1.89E-07	9.46E-09	1.48E-01	1.54E-07	2.96E-04	2.01E-07	9.31E-05	1.33E-05	2.66E-06	2.29E-05	5.65E-06	5.74E-06	1.48E-05	5.96E-07	2.41E-10	1.72E-05	1.74E-05
53	C29	70	Single Unit Long Haul Truck	2	0.00E+00	1.12E-06	7.99E-08	8.14E-01	3.65E-09	9.67E-04	8.24E-07	1.18E-03	8.55E-05	1.87E-05	6.84E-05	2.36E-05	2.36E-05	1.23E-04	2.73E-06	0.00E+00	4.48E-05	2.22E-04
53	C29	70	Combination Long Haul Truck	2	0.00E+00	1.02E-06	6.79E-08	7.60E-01	4.20E-09	1.02E-03	7.71E-07	1.16E-03	8.49E-05	1.55E-05	7.08E-05	2.05E-05	2.07E-05	1.16E-04	2.55E-06	0.00E+00	5.00E-05	2.19E-04
50	C30	40	Passenger Car	106	0.00E+00	1.79E-06	1.94E-07	6.18E+00	1.25E-05	4.59E-02	3.98E-06	1.92E-04	1.84E-03	2.63E-04	3.87E-04	2.50E-04	2.56E-04	3.34E-05	3.07E-05	7.47E-09	1.31E-04	3.01E-05
50	C30	40	Passenger Truck	178	0.00E+00	4.09E-06	4.29E-07	1.38E+01	2.45E-05	7.90E-02	8.19E-06	7.29E-04	3.27E-03	4.65E-04	7.72E-04	5.05E-04	5.17E-04	1.18E-04	6.79E-05	1.45E-08	2.55E-04	1.23E-04
50	C30	40	Single Unit Short Haul Truck	44	0.00E+00	1.96E-05	1.03E-06	9.43E+00	1.71E-05	1.62E-02	2.09E-05	9.60E-03	1.79E-03	2.98E-04	2.32E-03	6.13E-04	6.23E-04	9.52E-04	3.81E-05	1.61E-08	1.70E-03	1.80E-03
50	C30	40	Single Unit Long Haul Truck	2	0.00E+00	8.60E-07	4.49E-08	4.07E-01	7.49E-07	7.07E-04	9.16E-07	4.18E-04	8.03E-05	1.32E-05	1.02E-04	2.68E-05	2.72E-05	4.11E-05	1.64E-06	6.99E-10	7.49E-05	7.83E-05
50	C30	40	Combination Short Haul Truck	34	0.00E+00	3.01E-05	2.09E-06	1.53E+01	1.08E-07	2.62E-02	2.23E-05	3.35E-02	3.49E-03	6.30E-04	1.95E-03	6.22E-04	6.28E-04	2.30E-03	5.11E-05	0.00E+00	1.32E-03	6.31E-03
50	C30	40	Combination Long Haul Truck

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C35	70	Single Unit Short Haul Truck	16	0.00E+00	3.86E-06	1.93E-07	3.02E+00	3.15E-06	6.04E-03	4.11E-06	1.90E-03	2.71E-04	5.43E-05	4.68E-04	1.15E-04	1.17E-04	3.03E-04	1.22E-05	4.92E-09	3.50E-04	3.56E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.68E-07	8.35E-09	1.28E-01	1.36E-07	2.54E-04	1.79E-07	8.17E-05	1.24E-05	2.42E-06	2.04E-05	4.99E-06	5.07E-06	1.28E-05	5.17E-07	2.07E-10	1.54E-05	1.53E-05
53	C35	70	Combination Short Haul Truck	13	0.00E+00	6.58E-06	4.68E-07	4.77E+00	2.14E-08	5.67E-03	4.83E-06	6.91E-03	5.01E-04	1.09E-04	4.01E-04	1.38E-04	1.38E-04	7.19E-04	1.60E-05	0.00E+00	2.63E-04	1.30E-03
53	C35	70	Combination Long Haul Truck	12	0.00E+00	5.95E-06	3.98E-07	4.45E+00	2.46E-08	6.00E-03	4.52E-06	6.81E-03	4.97E-04	9.07E-05	4.14E-04	1.20E-04	1.22E-04	6.80E-04	1.49E-05	0.00E+00	2.93E-04	1.28E-03
50	C36	40	Passenger Car	305	0.00E+00	5.12E-06	5.54E-07	1.77E+01	3.56E-05	1.31E-01	1.14E-05	5.50E-04	5.27E-03	7.52E-04	1.11E-03	7.14E-04	7.33E-04	9.55E-05	8.78E-05	2.14E-08	3.75E-04	8.60E-05
50	C36	40	Passenger Truck	510	0.00E+00	1.17E-05	1.23E-06	3.94E+01	7.02E-05	2.26E-01	2.34E-05	2.09E-03	9.36E-03	1.33E-03	2.21E-03	1.44E-03	1.48E-03	3.38E-04	1.94E-04	4.15E-08	7.29E-04	3.53E-04
50	C36	40	Single Unit Short Haul Truck	45	0.00E+00	2.00E-05	1.05E-06	9.61E+00	1.74E-05	1.65E-02	2.13E-05	9.78E-03	1.83E-03	3.04E-04	2.37E-03	6.25E-04	6.35E-04	9.71E-04	3.88E-05	1.64E-08	1.73E-03	1.83E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	8.76E-07	4.58E-08	4.15E-01	7.63E-07	7.20E-04	9.33E-07	4.26E-04	8.18E-05	1.35E-05	1.04E-04	2.73E-05	2.77E-05	4.19E-05	1.67E-06	7.12E-10	7.63E-05	7.98E-05
50	C36	40	Combination Short Haul Truck	59	0.00E+00	5.18E-05	3.60E-06	2.63E+01	1.86E-07	4.52E-02	3.86E-05	5.78E-02	6.03E-03	1.09E-03	3.36E-03	1.07E-03	1.08E-03	3.97E-03	8.81E-05	0.00E+00	2.28E-03	1.09E-02
50	C36	40	Combination Long Haul Truck	53	0.00E+00	4.72E-05	3.08E-06	2.50E+01	2.12E-07	5.02E-02	3.63E-05	5.79E-02	6.06E-03	9.65E-04	3.46E-03	9.40E-04	9.57E-04	3.82E-03	8.37E-05	0.00E+00	2.50E-03	1.09E-02
52	C37	60	Passenger Car	91	0.00E+00	1.26E-06	1.36E-07	4.58E+00	8.75E-06	3.23E-02	2.80E-06	1.79E-04	9.02E-04	1.39E-04	2.72E-04	1.75E-04	1.80E-04	1.91E-05	2.30E-05	6.14E-09	9.21E-05	2.80E-05
52	C37	60	Passenger Truck	153	0.00E+00	2.76E-06	2.91E-07	1.04E+01	1.72E-05	5.77E-02	5.68E-06	5.77E-04	1.61E-03	2.48E-04	5.40E-04	3.52E-04	3.60E-04	7.94E-05	5.19E-05	1.30E-08	1.80E-04	9.55E-05
52	C37	60	Single Unit Short Haul Truck	36	0.00E+00	1.05E-05	5.26E-07	6.70E+00	8.67E-06	1.30E-02	1.12E-05	5.01E-03	8.52E-04	1.54E-04	1.28E-03	3.15E-04	3.21E-04	6.70E-04	2.71E-05	1.11E-08	9.57E-04	9.39E-04
52	C37	60	Single Unit Long Haul Truck	2	0.00E+00	4.59E-07	2.28E-08	2.86E-01	3.76E-07	5.50E-04	4.90E-07	2.17E-04	3.82E-05	6.83E-06	5.60E-05	1.37E-05	1.39E-05	2.85E-05	1.16E-06	4.74E-10	4.20E-05	4.06E-05
52	C37	60	Combination Short Haul Truck	25	0.00E+00	1.46E-05	1.02E-06	9.53E+00	5.19E-08	1.28E-02	1.09E-05	1.59E-02	1.36E-03	2.70E-04	9.32E-04	3.04E-04	3.04E-04	1.44E-03	3.19E-05	0.00E+00	6.27E-04	2.99E-03
52	C37	60	Combination Long Haul Truck	23	0.00E+00	1.31E-05	8.55E-07	8.93E+00	5.95E-08	1.38E-02	1.01E-05	1.57E-02	1.37E-03	2.33E-04	9.60E-04	2.61E-04	2.65E-04	1.37E-03	2.99E-05	0.00E+00	6.96E-04	2.97E-03
53	C38	70	Passenger Car	124	0.00E+00	1.57E-06	1.70E-07	6.00E+00	1.09E-05	4.03E-02	3.49E-06	2.52E-04	9.45E-04	1.52E-04	3.39E-04	2.19E-04	2.24E-04	2.22E-05	3.02E-05	8.23E-09	1.15E-04	3.94E-05
53	C38	70	Passenger Truck	207	0.00E+00	3.41E-06	3.61E-07	1.38E+01	2.16E-05	7.41E-02	7.10E-06	7.72E-04	1.70E-03	2.77E-04	6.77E-04	4.40E-04	4.51E-04	9.99E-05	6.91E-05	1.81E-08	2.26E-04	1.27E-04
53	C38	70	Single Unit Short Haul Truck	77	0.00E+00	1.81E-05	9.06E-07	1.42E+01	1.48E-05	2.83E-02	1.93E-05	8.91E-03	1.27E-03	2.55E-04	2.19E-03	5.41E-04	5.50E-04	1.42E-03	5.71E-05	2.31E-08	1.64E-03	1.67E-03
53	C38	70	Single Unit Long Haul Truck	3	0.00E+00	7.88E-07	3.92E-08	6.01E-01	6.38E-07	1.19E-03	8.40E-07	3.83E-04	5.81E-05	1.13E-05	9.59E-05	2.34E-05	2.38E-05	6.01E-05	2.43E-06	9.72E-10	7.21E-05	7.18E-05
53	C38	70	Combination Short Haul Truck	53	0.00E+00	2.75E-05	1.95E-06	1.99E+01	8.92E-08	2.36E-02	2.01E-05	2.88E-02	2.09E-03	4.56E-04	1.67E-03	5.77E-04	5.76E-04	3.00E-03	6.66E-05	0.00E+00	1.10E-03	5.43E-03
53	C38	70	Combination Long Haul Truck	48	0.00E+00	2.48E-05	1.66E-06	1.86E+01	1.03E-07	2.50E-02	1.88E-05	2.84E-02	2.07E-03	3.79E-04	1.73E-03	5.02E-04	5.07E-04	2.84E-03	6.22E-05	0.00E+00	1.22E-03	5.35E-03
52	C39	60	Passenger Car	106	0.00E+00	1.45E-06	1.57E-07	5.30E+00	1.01E-05	3.73E-02	3.23E-06	2.08E-04	1.04E-03	1.60E-04	3.15E-04	2.03E-04	2.08E-04	2.21E-05	2.66E-05	7.10E-09	1.07E-04	3.24E-05
52	C39	60	Passenger Truck	177	0.00E+00	3.19E-06	3.37E-07	1.21E+01	1.99E-05	6.67E-02	6.57E-06	6.67E-04	1.86E-03	2.87E-04	6.25E-04	4.07E-04	4.17E-04	9.18E-05	6.01E-05	1.51E-08	2.08E-04	1.10E-04
52	C39	60	Single Unit Short Haul Truck	8	0.00E+00	2.41E-06	1.20E-07	1.53E+00	1.99E-06	2.97E-03	2.57E-06	1.15E-03	1.95E-04	3.54E-05	2.93E-04	7.22E-05	7.34E-05	1.54E-04	6.20E-06	2.55E-09	2.19E-04	2.15E-04
52	C39	60	Combination Short Haul Truck	10	0.00E+00	5.65E-06	3.93E-07	3.67E+00	2.00E-08	4.94E-03	4.19E-06	6.12E-03	5.26E-04	1.04E-04	3.59E-04	1.17E-04	1.17E-04	5.54E-04	1.23E-05	0.00E+00	2.42E-04	1.15E-03
52	C39	60	Combination Long Haul Truck	9	0.00E+00	5.07E-06	3.30E-07	3.44E+00	2.29E-08	5.32E-03	3.91E-06	6.07E-03	5.29E-04	8.97E-05	3.70E-04	1.01E-04	1.02E-04	5.26E-04	1.15E-05	0.00E+00	2.68E-04	1.14E-03
50	C40	40	Passenger Car	106	0.00E+00	1.78E-06	1.92E-07	6.13E+00	1.24E-05	4.55E-02	3.95E-06	1.91E-04	1.83E-03	2.61E-04	3.84E-04	2.48E-04	2.54E-04	3.31E-05	3.05E-05	7.41E-09	1.30E-04	2.98E-05
50	C40	40	Passenger Truck	177	0.00E+00	4.06E-06	4.26E-07	1.37E+01	2.44E-05	7.84E-02	8.13E-06	7.23E-04	3.25E-03	4.61E-04	7.66E-04	5.01E-04	5.13E-04	1.17E-04	6.74E-05	1.44E-08	2.53E-04	1.22E-04
50	C40	40	Single Unit Short Haul Truck	8	0.00E+00	3.64E-06	1.91E-07	1.75E+00	3.17E-06	3.01E-03	3.87E-06	1.78E-03	3.32E-04	5.52E-05	4.31E-04	1.14E-04	1.15E-04	1.77E-04	7.06E-06	2.99E-09	3.15E-04	3.34E-04
50	C40	40	Combination Short Haul Truck	10	0.00E+00	8.50E-06	5.91E-07	4.32E+00	3.06E-08	7.42E-03	6.32E-06	9.48E-03	9.89E-04	1.78E-04	5.51E-04	1.76E-04	1.78E-04	6.51E-04	1.44E-05	0.00E+00	3.73E-04	1.79E-03
50	C40	40	Combination Long Haul Truck	9	0.00E+00	7.75E-06	5.06E-07	4.10E+00	3.47E-08	8.23E-03	5.96E-06	9.50E-03	9.93E-04	1.58E-04	5.67E-04	1.54E-04	1.57E-04	6.27E-04	1.37E-05	0.00E+00	4.10E-04	1.79E-03
55	C41	90	Passenger Car	335	0.00E+00	3.77E-06	4.08E-07	1.52E+01	2.63E-05	1.00E-01	8.39E-06	6.91E-04	1.44E-03	2.63E-04	8.17E-04	5.27E-04	5.40E-04	4.66E-05	7.66E-05	2.05E-08	2.76E-04	1.08E-04
55	C41	90	Passenger Truck	561	0.00E+00	8.18E-06	8.69E-07	3.55E+01	5.29E-05	1.96E-01	1.73E-05	2.01E-03	2.58E-03	4.87E-04	1.66E-03	1.07E-03	1.10E-03	2.36E-04	1.78E-04	4.71E-08	5.55E-04	3.27E-04
55	C41	90	Single Unit Short Haul Truck	37	0.00E+00	5.52E-06	2.71E-07	6.73E+00	4.38E-06	1.36E-02	5.88E-06	2.94E-03	3.05E-04	8.04E-05	6.76E-04	1.62E-04	1.64E-04	6.75E-04	2.71E-05	1.06E-08	5.12E-04	5.50E-04
55	C41	90	Single Unit Long Haul Truck	2	0.00E+00	2.40E-07	1.16E-08	2.84E-01	1.84E-07	5.61E-04	2.55E-07	1.25E-04	1.39E-05	3.51E-06	2.94E-05	6.91E-06	7.03E-06	2.83E-05	1.15E-06	4.39E-10	2.24E-05	2.34E-05
55	C41	90	Combination Short Haul Truck	53	0.00E+00	1.85E-05	1.32E-06	1.83E+01	5.98E-08	1.80E-02	1.36E-05	1.91E-02	8.37E-04	2.46E-04	1.10E-03	3.89E-04	3.82E-04	2.76E-03	6.13E-05	0.00E+00	7.13E-04	3.59E-03
55	C41	90	Combination Long Haul Truck	48	0.00E+00	1.60E-05	1.06E-06	1.67E+01	6.93E-08	1.82E-02	1.23E-05	1.80E-02	8.01E-04	1.89E-04	1.12E-03	3.21E-04	3.20E-04	2.55E-03	5.59E-05	0.00E+00	8.01E-04	3.39E-03
55	C42	90	Passenger Car	315	0.00E+00	3.55E-06	3.84E-07	1.43E+01	2.47E-05	9.43E-02	7.90E-06	6.51E-04	1.36E-03	2.48E-04	7.69E-04	4.95E-04	5.08E-04	4.39E-05	7.20E-05	1.93E-08	2.60E-04	1.02E-04
55	C42	90	Passenger Truck	528	0.00E+00	7.69E-06	8.18E-07	3.34E+01	4.98E-05	1.85E-01	1.62E-05	1.89E-03	2.43E-03	4.59E-04	1.56E-03	1.01E-03	1.04E-03	2.22E-04	1.67E-04	4.43E-08	5.22E-04	3.08E-04
55	C42	90	Single Unit Short Haul Truck	26	0.00E+00	3.93E-06	1.93E-07	4.79E+00	3.12E-06	9.66E-03	4.19E-06	2.10E-03	2.17E-04	5.73E-05	4.81E-04	1.15E-04	1.17E-04	4.81E-04	1.93E-05	7.57E-09	3.64E-04	3.92E-04
55	C42	90	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	8.29E-09	2.02E-01	1.31E-07	4.00E-04	1.81E-07	8.91E-05	9.88E-06	2.50E-06	2.10E-05	4.92E-06	5.01E-06	2.02E-05	8.16E-07	3.12E-10	1.60E-05	1.67E-05
55	C42	90	Combination Short Haul Truck	17	0.00E+00	6.04E-06	4.30E-07	5.99E+00	1.95E-08	5.88E-03	4.43E-06	6.23E-03	2.73E-04	8.05E-05	3.58E-04	1.27E-04	1.25E-04	9.02E-04	2.00E-05	0.00E+00	2.33E-04	1.17E-03
55	C42	90	Combination Long Haul Truck	16	0.00E+00	5.23E-06	3.45E-07	5.45E+00	2.26E-08	5.93E-03	4.00E-06	5.88E-03	2.62E-04	6.16E-05	3.66E-04	1.05E-04	1.04E-04	8.33E-04	1.83E-05	0.00E+00	2.62E-04	1.11E-03
55	C43	90	Passenger Car	159	0.00E+00	1.79E-06	1.94E-07	7.20E+00	1.25E-05	4.77E-02	3.99E-06	3.29E-04	6.85E-04	1.25E-04	3.88E-04	2.50E-04	2.57E-04	2.22E-05	3.64E-05	9.73E-09	1.31E-04	5.14E-05
55	C43	90	Passenger Truck	267	0.00E+00	3.89E-06	4.13E-07	1.69E+01	2.52E-05	9.34E-02	8.21E-06	9.56E-04	1.23E-03	2.32E-04	7.87E-04	5.11E-04	5.23E-04	1.12E-04	8.44E-05	2.24E-08	2.64E-04	1.55E-04
55	C43	90	Single Unit Short Haul Truck	50	0.00E+00	7.55E-06	3.70E-07	9.21E+00	5.99E-06	1.86E-02	8.05E-06	4.03E-03	4.18E-04	1.10E-04	9.25E-04	2.21E-04	2.25E-04	9.24E-04	3.71E-05	1.45E-08	7.00E-04	7.53E-04
55	C43	90	Single Unit Long Haul Truck	2	0.00E+00	3.28E-07	1.59E-08	3.89E-01	2.53E-07	7.69E-04	3.49E-07	1.71E-04	1.90E-05	4.80E-06	4.03E-05	9.46E-06	9.63E-06	3.88E-05	1.57E-06	6.01E-10	3.07E-05	3.20E-05
55	C43	90	Combination Short Haul Truck	20	0.00E+00	7.11E-06	5.05E-07	7.04E+00	2.30E-08	6.91E-03	5.21E-06	7.33E-03	3.21E-04	9.47E-05	4.21E-04	1.49E-04	1.47E-04	1.06E-03	2.36E-05	0.00E+00	2.74E-04	1.38E-03
55	C43	90	Combination Long Haul Truck	18	0.00E+00	6.15E-06	4.06E-07	6.41E+00	2.66E-08	6.98E-03	4.70E-06	6.92E-03	3.08E-04	7.24E-05	4.30E-04	1.23E-04	1.23E-04	9.79E-04	2.15E-05	0.00E+00	3.08E-04	1.30E-03
55	C44	90	Passenger Car	125	0.00E+00	1.40E-06	1.52E-07	5.64E+00	9.78E-06	3.73E-02	3.12E-06	2.57E-04	5.36E-04	9.80E-05	3.04E-04	1.96E-04	2.01E-04	1.74E-05	2.85E-05	7.62E-09	1.03E-04	4.02E-05
55	C44	90	Passenger Truck	209	0.00E+00	3.04E-06	3.23E-07	1.32E+01	1.97E-05	7.31E-02	6.42E-06	7.49E-04	9.60E-04	1.81E-04	6.16E-04	4.00E-04	4.10E-04	8.76E-05	6.61E-05	1.75E-08	2.07E-04	1.22E-04
55	C44	90	Single Unit Short Haul Truck	33	0.00E+00	4.92E-06	2.41E-07	6.00E+00	3.90E-06	1.21E-02	5.24E-06	2.62E-03	2.72E-04	7.17E-05	6.02E-04	1.44E-04	1.47E-04	6.02E-04	2.41E-05	9.47E-09	4.56E-04	4.90E-04
55	C44	90	Single Unit Long Haul Truck	1	0.00E+00	2.14E-07	1.04E-08	2.53E-01	1.64E-07	5.00E-04	2.27E-07	1.12E-04	1.24E-05	3.12E-06	2.62E-05	6.16E-06	6.27E-06	2.53E-05	1.02E-06	3.91E-10	2.00E-05	2.09E-05
55	C44	90	Combination Short Haul Truck	18	0.00E+00	6.31E-06	4.49E-07	6.25E+00	2.04E-08	6.13E-03	4.62E-06	6.50E-03	2.85E-04	8.40E-05	3.73E-04	1.33E-04	1.30E-04	9.42E-04	2.09E-05	0.00E+00	2.43E-04	1.23E-03
55	C44	90	Combination Long Haul Truck	16	0.00E+00	5.46E-06	3.60E-07	5.69E+00	2.36E-08	6.19E-03	4.18E-06	6.14E-03	2.73E-04	6.43E-05	3.82E-04	1.09E-04	1.09E-04	8.69E-04	1.91E-05	0.00E+00	2.73E-04	1.16E-03
53	C45	70	Passenger Car	170	0.00E+00	2.15E-06	2.32E-07	8.22E+00	1.49E-05	5.52E-02	4.77E-06	3.46E-04	1.29E-03	2.09E-04	4.64E-04	2.99E-04	3.07E-04	3.04E-05	4.14E-05	1.13E-08	1.57E-04	5.40E-05
53	C45	70	Passenger Truck	284	0.00E+00	4.67E-06	4.95E-07	1.90E+01	2.96E-05	1.01E-01	9.71E-06	1.06E-03	2.32E-03	3.80E-04	9.27E-04	6.03E-04	6.18E-04	1.37E-04	9.45E-05	2.47E-08	3.09E-04	1.74E-04
53	C45	70	Single Unit Short Haul Truck	49	0.00E+00	1.15E-05	5.74E-07	8.97E+00	9.37E-06	1.79E-02	1.22E-05	5.65E-03	8.06E-04	1.61E-04	1.39E-03	3.43E-04	3.48E-04	9.00E-04	3.62E-05	1.46E-08	1.04E-03	1.06E-03
53	C45	70	Single Unit Long Haul Truck	2	0.00E+00	4.99E-07	2.48E-08	3.81E-01	4.04E-07	7.54E-04	5.32E-07	2.43E-04	3.68E-05	7.18E-06	6.08E-05	1.48E-05	1.51E-05	3.80E-05	1.54E-06	6.16E-10	4.57E-05	4.55E-05
53	C45	70	Combination Short Haul Truck	20	0.00E+00	1.04E-05	7.39E-07	7.53E+00	3.38E-08	8.95E-03	7.62E-06	1.09E-02	7.91E-04	1.73E-04	6.33E-04	2.19E-04	2.18E-04	1.14E-03	2.52E-05	0.00E+00	4.15E-04	2.06E-03
53	C45	70	Combination Long Haul Truck	18	0.00E+00	9.39E-06	6.28E-07	7.03E+00	3.89E-08	9.48E-03	7.13E-06	1.08E-02	7.85E-04	1.43E-04	6.54E-04	1.90E-04	1.92E-04	1.07E-03	2.35E-05	0.00E+00	4.63E-04	2.03E-03
50	C46	40	Passenger Car	111	0.00E+00	1.86E-06	2.01E-07	6.43E+00	1.29E-05	4.77E-02	4.14E-06	2.00E-04	1.92E-03	2.74E-04	4.03E-04	2.60E-04	2.66E-04	3.47E-05	3.19E-05	7.76E-09	1.36E-04	3.13E-05
50	C46	40	Passenger Truck	185	0.00E+00	4.25E-06	4.46E-07	1.43E+01	2.55E-05	8.22E-02	8.52E-06	7.58E-04	3.40E-03	4.84E-04	8.03E-04	5.25E-04	5.38E-04	1.23E-04	7.06E-05	1.51E-08	2.65E-04	1.28E-04
50	C46	40	Single Unit Short Haul Truck	54	0.00E+00	2.39E-05	1.26E-06	1.15E+01	2.09E-05	1.98E-02	2.54E-05	1.17E-02	2.19E-03	3.63E-04	2.83E-03	7.47E-04	7.59E-04	1.16E-03	4.64E-05	1.96E-08	2.07E-03	2.19E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	1.05E-06	5.47E-08	4.96E-01	9.13E-07	8.62E-04	1.12E-06	5.09E-04	9.79E-05	1.61E-05	1.24E-04	3.27E-05	3.32E-05	5.01E-05	2.00E-06	8.52E-10	9.13E-05	9.55E-05
50	C46	40	Combination Short Haul Truck	33	0.00E+00	2.95E-05	2.05E-06	1.50E+01	1.06E-07	2.57E-02	2.19E-05	3.29E-02	3.43E-03	6.19E-04	1.91E-03	6.11E-04	6.17E-04	2.26E-03	5.01E-05	0.00E+00	1.30E-03	6.20E-03
50	C46	40	Combination Long Haul Truck	30	0.00E+00	2.69E-05	1.75E-06	1.42E+01	1.21E-07	2.86E-02	2.07E-05	3.30E-02	3.45E-03	5.49E-04	1.97E-03	5.35E-04	5.45E-04	2.18E-03	4.77E-05	0.00E+00	1.42E-03	6.21E-03
53	C48	70	Passenger Car	60	0.00E+00	7.63E-07	8.25E-08	2.92E+00	5.31E-06	1.96E-02	1.70E-06	1.23E-04	4.60E-04	7.42E-05	1.65E-04	1.06E-04	1.09E-04	1.08E-05	1.47E-05	4.00E-09	5.59E-05	1.92E-05
53	C48	70	Passenger Truck	101	0.00E+00	1.66E-06	1.76E-07	6.74E+00	1.05E-05	3.61E-02	3.45E-06	3.76E-04	8.26E-04	1.35E-04	3.30E-04	2.14E-04	2.20E-04	4.86E-05	3.36E-05	8.80E-09	1.10E-04	6.17E-05
53	C48	70	Single Unit Short Haul Truck	101	0.00E+00	2.38E-05	1.19E-06	1.87E+01	1.95E-05	3.73E-02	2.54E-05	1.17E-02	1.68E-03	3.36E-04	2.89E-03	7.13E-04	7.24E-04	1.87E-03	7.52E-05	3.04E-08	2.17E-03	2.20E-03
53	C48	70	Single Unit Long Haul Truck	4	0.00E+00	1.04E-06	5.16E-08	7.92E-01	8.41E-07	1.57E-03	1.11E-06	5.05E-04	7.65E-05	1.49E-05	1.26E-04	3.08E-05	3.14E-05	7.91E-05	3.20E-06	1.28E-09	9.50E-05	9.45E-05
53	C48	70	Combination Short Haul Truck	65	0.00E+00	3.37E-05	2.39E-06	2.44E+01	1.09E-07	2.90E-02	2.47E-05	3.54E-02	2.56E-03	5.59E-04	2.05E-03	7.08E-04	7.07E-04	3.68E-03	8.17E-05	0.00E+00	1.34E-03	6.66E-03
53	C48	70	Combination Long Haul Truck	59	0.00E+00	3.04E-05	2.04E-06	2.28E+01	1.26E-07	3.07E-02	2.31E-05	3.49E-02	2.55E-03	4.64E-04	2.12E-03	6.15E-04	6.22E-04	3.48E-03	7.63E-05	0.00E+00	1.50E-03	6.57E-03
52	C49	60	Passenger Car	280	0.00E+00	3.85E-06	4.16E-07	1.40E+01	2.68E-05	9.88E-02	8.56E-06	5.49E-04	2.76E-03	4.24E-04	8.33E-04	5.37E-04	5.51E-04	5.84E-05	7.03E-05	1.88E-08	2.82E-04	8.59E-05
52	C49	60	Passenger Truck	468	0.00E+00	8.45E-06	8.92E-07	3.20E+01	5.27E-05	1.77E-01	1.74E-05	1.77E-03	4.92E-03	7.60E-04	1.65E-03	1.08E-03	1.10E-03	2.43E-04	1.59E-04	3.99E-08	5.50E-04	2.92E-04
52	C49	60	Single Unit Short Haul Truck	35	0.00E+00	1.04E-05	5.18E-07	6.60E+00	8.55E-06	1.28E-02	1.11E-05	4.94E-03	8.40E-04	1.52E-04	1.26E-03	3.11E-04	3.16E-04	6.61E-04	2.67E-05	1.10E-08	9.44E-04	9.26E-04
52	C49	60	Single Unit Long Haul Truck	2	0.00E+00	4.53E-07	2.25E-08	2.82E-01	3.71E-07	5.43E-04	4.83E-07	2.14E-04	3.77E-05	6.74E-06	5.52E-05	1.35E-05	1.37E-05	2.82E-05	1.14E-06	4.67E-10	4.14E-05	4.00E-05
52	C49	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.79E-07	8.21E+00	4.47E-08	1.10E-02	9.36E-06	1.37E-02	1.17E-03	2.33E-04	8.03E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.58E-03
52	C49	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.37E-07	7.70E+00	5.13E-08	1.19E-02	8.73E-06	1.36E-02	1.18E-03	2.00E-04	8.28E-04	2.25E-04	2.28E-04	1.18E-03	2.58E-05	0.00E+00	6.00E-04	2.55E-03
50	C50	40	Passenger Car	6	0.00E+00	1.06E-07	1.15E-08	3.67E-01	7.40E-07	2.73E-03	2.36E-07	1.14E-05	1.09E-04	1.56E-05	2.30E-05	1.48E-05	1.52E-05	1.98E-06	1.82E-06	4.44E-10	7.79E-06	1.79E-06
50	C50	40	Passenger Truck	11	0.00E+00	2.43E-07	2.55E-08	8.18E-01	1.46E-06	4.70E-03	4.87E-07	4.33E-05	1.94E-04	2.76E-05	4.59E-05	3.00E-05	3.07E-05	7.01E-06	4.03E-06	8.63E-10	1.51E-05	7.33E-06
50	C50	40	Combination Short Haul

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C54	70	Combination Long Haul Truck	11	0.00E+00	5.82E-06	3.89E-07	4.36E+00	2.41E-08	5.87E-03	4.42E-06	6.66E-03	4.87E-04	8.88E-05	4.05E-04	1.18E-04	1.19E-04	6.66E-04	1.46E-05	0.00E+00	2.87E-04	1.25E-03
52	C55	60	Passenger Car	183	0.00E+00	2.52E-06	2.72E-07	9.17E+00	1.75E-05	6.46E-02	5.60E-06	3.59E-04	1.81E-03	2.77E-04	5.45E-04	3.51E-04	3.60E-04	3.82E-05	4.60E-05	1.23E-08	1.84E-04	5.62E-05
52	C55	60	Passenger Truck	306	0.00E+00	5.53E-06	5.84E-07	2.09E+01	3.45E-05	1.15E-01	1.14E-05	1.16E-03	3.22E-03	4.97E-04	1.08E-03	7.05E-04	7.22E-04	1.59E-04	1.04E-04	2.61E-08	3.59E-04	1.91E-04
52	C55	60	Single Unit Short Haul Truck	29	0.00E+00	8.64E-06	4.32E-07	5.50E+00	7.12E-06	1.07E-02	9.22E-06	4.12E-03	7.00E-04	1.27E-04	1.05E-03	2.59E-04	2.63E-04	5.51E-04	2.22E-05	9.16E-09	7.86E-04	7.71E-04
52	C55	60	Single Unit Long Haul Truck	1	0.00E+00	3.77E-07	1.88E-08	2.35E-01	3.09E-07	4.52E-04	4.03E-07	1.78E-04	3.14E-05	5.61E-06	4.60E-05	1.13E-05	1.15E-05	2.35E-05	9.50E-07	3.90E-10	3.45E-05	3.34E-05
52	C55	60	Combination Short Haul Truck	19	0.00E+00	1.10E-05	7.64E-07	7.13E+00	3.88E-08	9.59E-03	8.14E-06	1.19E-02	1.02E-03	2.02E-04	6.98E-04	2.28E-04	2.28E-04	1.08E-03	2.39E-05	0.00E+00	4.70E-04	2.24E-03
52	C55	60	Combination Long Haul Truck	17	0.00E+00	9.84E-06	6.41E-07	6.69E+00	4.45E-08	1.03E-02	7.59E-06	1.18E-02	1.03E-03	1.74E-04	7.19E-04	1.96E-04	1.98E-04	1.02E-03	2.24E-05	0.00E+00	5.21E-04	2.22E-03
50	C56	40	Passenger Car	5	0.00E+00	8.12E-08	8.79E-09	2.81E-01	5.65E-07	2.08E-03	1.81E-07	8.74E-06	8.36E-05	1.19E-05	1.76E-05	1.13E-05	1.16E-05	1.52E-06	1.39E-06	3.39E-10	5.95E-06	1.37E-06
50	C56	40	Passenger Truck	8	0.00E+00	1.86E-07	1.95E-08	6.25E-01	1.11E-06	3.59E-03	3.72E-07	3.31E-05	1.49E-04	2.11E-05	3.50E-05	2.29E-05	2.35E-05	5.36E-06	3.08E-06	6.59E-10	1.16E-05	5.60E-06
50	C56	40	Single Unit Short Haul Truck	3	0.00E+00	1.20E-06	6.28E-08	5.75E-01	1.04E-06	9.90E-04	1.27E-06	5.85E-04	1.09E-04	1.82E-05	1.42E-04	3.74E-05	3.80E-05	5.81E-05	2.32E-06	9.83E-10	1.04E-04	1.10E-04
50	C56	40	Combination Short Haul Truck	1	0.00E+00	7.46E-07	5.18E-08	3.78E-01	2.68E-09	6.51E-04	5.55E-07	8.31E-04	8.67E-05	1.56E-05	4.83E-05	1.54E-05	1.56E-05	5.70E-05	1.27E-06	0.00E+00	3.27E-05	1.57E-04
50	C56	40	Combination Long Haul Truck	1	0.00E+00	6.79E-07	4.43E-08	3.60E-01	3.05E-09	7.22E-04	5.23E-07	8.33E-04	8.71E-05	1.39E-05	4.98E-05	1.35E-05	1.38E-05	5.50E-05	1.20E-06	0.00E+00	3.60E-05	1.57E-04
53	C57	70	Passenger Car	195	0.00E+00	2.47E-06	2.67E-07	9.45E+00	1.72E-05	6.35E-02	5.48E-06	3.97E-04	1.49E-03	2.40E-04	5.34E-04	3.44E-04	3.53E-04	3.49E-05	4.75E-05	1.29E-08	1.81E-04	6.21E-05
53	C57	70	Passenger Truck	326	0.00E+00	5.37E-06	5.68E-07	2.18E+01	3.40E-05	1.17E-01	1.12E-05	1.22E-03	2.67E-03	4.36E-04	1.07E-03	6.93E-04	7.10E-04	1.57E-04	1.09E-04	2.84E-08	3.56E-04	1.99E-04
53	C57	70	Single Unit Short Haul Truck	28	0.00E+00	6.63E-06	3.32E-07	5.19E+00	5.42E-06	1.04E-02	7.06E-06	3.27E-03	4.66E-04	9.34E-05	8.04E-04	1.98E-04	2.02E-04	5.20E-04	2.09E-05	8.45E-09	6.03E-04	6.12E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.44E-08	2.20E-01	2.34E-07	4.36E-04	3.08E-07	1.40E-04	2.13E-05	4.15E-06	3.51E-05	8.58E-06	8.72E-06	2.20E-05	8.90E-07	3.56E-10	2.64E-05	2.63E-05
53	C57	70	Combination Short Haul Truck	13	0.00E+00	6.51E-06	4.62E-07	4.72E+00	2.11E-08	5.60E-03	4.77E-06	6.83E-03	4.95E-04	1.08E-04	3.96E-04	1.37E-04	1.37E-04	7.11E-04	1.58E-05	0.00E+00	2.60E-04	1.29E-03
53	C57	70	Combination Long Haul Truck	11	0.00E+00	5.88E-06	3.93E-07	4.40E+00	2.44E-08	5.93E-03	4.47E-06	6.73E-03	4.92E-04	8.97E-05	4.10E-04	1.19E-04	1.20E-04	6.73E-04	1.47E-05	0.00E+00	2.90E-04	1.27E-03
50	C58	40	Passenger Car	53	0.00E+00	8.92E-07	9.65E-08	3.08E+00	6.21E-06	2.29E-02	1.98E-06	9.60E-05	9.18E-04	1.31E-04	1.93E-04	1.24E-04	1.28E-04	1.66E-05	1.53E-05	3.72E-09	6.54E-05	1.50E-05
50	C58	40	Passenger Truck	89	0.00E+00	2.04E-06	2.14E-07	6.87E+00	1.22E-05	3.94E-02	4.09E-06	3.64E-04	1.63E-03	2.32E-04	3.85E-04	2.52E-04	2.58E-04	5.88E-05	3.39E-05	7.24E-09	1.27E-04	6.15E-05
50	C58	40	Single Unit Short Haul Truck	2	0.00E+00	7.05E-07	3.70E-08	3.39E-01	6.14E-07	5.83E-04	7.49E-07	3.45E-04	6.44E-05	1.07E-05	8.34E-05	2.20E-05	2.24E-05	3.42E-05	1.37E-06	5.79E-10	6.10E-05	6.46E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	6.24E-07	4.33E-08	3.17E-01	2.24E-09	5.44E-04	4.64E-07	6.95E-04	7.25E-05	1.31E-05	4.04E-05	1.29E-05	1.30E-05	4.77E-05	1.06E-06	0.00E+00	2.74E-05	1.31E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	5.68E-07	3.71E-08	3.01E-01	2.55E-09	6.04E-04	4.37E-07	6.97E-04	7.29E-05	1.16E-05	4.16E-05	1.13E-05	1.15E-05	4.60E-05	1.01E-06	0.00E+00	3.01E-05	1.31E-04
53	C59	70	Passenger Car	46	0.00E+00	5.80E-07	6.27E-08	2.22E+00	4.04E-06	1.49E-02	1.29E-06	9.34E-05	3.50E-04	5.64E-05	1.26E-04	8.09E-05	8.30E-05	8.21E-06	1.12E-05	3.04E-09	4.25E-05	1.46E-05
53	C59	70	Passenger Truck	77	0.00E+00	1.26E-06	1.34E-07	5.12E+00	8.00E-06	2.74E-02	2.63E-06	2.86E-04	6.28E-04	1.03E-04	2.51E-04	1.63E-04	1.67E-04	3.70E-05	2.56E-05	6.69E-09	8.36E-05	4.69E-05
53	C59	70	Single Unit Short Haul Truck	3	0.00E+00	7.21E-07	3.61E-08	5.65E-01	5.90E-07	1.13E-03	7.68E-07	3.55E-04	5.08E-05	1.02E-05	8.75E-05	2.16E-05	2.19E-05	5.66E-05	2.28E-06	9.20E-10	6.56E-05	6.66E-05
53	C59	70	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.27E-08	3.33E-01	1.49E-09	3.96E-04	3.37E-07	4.83E-04	3.50E-05	7.64E-06	2.80E-05	9.67E-06	9.66E-06	5.03E-05	1.12E-06	0.00E+00	1.84E-05	9.10E-05
53	C59	70	Combination Long Haul Truck	1	0.00E+00	4.16E-07	2.78E-08	3.11E-01	1.72E-09	4.20E-04	3.16E-07	4.76E-04	3.48E-05	6.34E-06	2.90E-05	8.41E-06	8.50E-06	4.76E-05	1.04E-06	0.00E+00	2.05E-05	8.97E-05
52	C60	60	Passenger Car	174	0.00E+00	2.40E-06	2.60E-07	8.74E+00	1.67E-05	6.16E-02	5.34E-06	3.43E-04	1.72E-03	2.64E-04	5.19E-04	3.35E-04	3.44E-04	3.64E-05	4.38E-05	1.17E-08	1.76E-04	5.35E-05
52	C60	60	Passenger Truck	292	0.00E+00	5.27E-06	5.56E-07	1.99E+01	3.29E-05	1.10E-01	1.08E-05	1.10E-03	3.07E-03	4.74E-04	1.03E-03	6.72E-04	6.88E-04	1.51E-04	9.91E-05	2.49E-08	3.43E-04	1.82E-04
52	C60	60	Single Unit Short Haul Truck	27	0.00E+00	7.81E-06	3.91E-07	4.98E+00	6.44E-06	9.64E-03	8.34E-06	3.73E-03	6.33E-04	1.15E-04	9.50E-04	2.34E-04	2.38E-04	4.98E-04	2.01E-05	8.29E-09	7.11E-04	6.98E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	3.41E-07	1.70E-08	2.13E-01	2.80E-07	4.09E-04	3.64E-07	1.61E-04	2.84E-05	5.08E-06	4.16E-05	1.02E-05	1.04E-05	2.12E-05	8.59E-07	3.52E-10	3.12E-05	3.02E-05
52	C60	60	Combination Short Haul Truck	17	0.00E+00	9.93E-06	6.92E-07	6.46E+00	3.52E-08	8.68E-03	7.37E-06	1.08E-02	9.24E-04	1.83E-04	6.32E-04	2.06E-04	2.06E-04	9.74E-04	2.16E-05	0.00E+00	4.25E-04	2.03E-03
52	C60	60	Combination Long Haul Truck	15	0.00E+00	8.91E-06	5.80E-07	6.06E+00	4.03E-08	9.35E-03	6.87E-06	1.07E-02	9.29E-04	1.58E-04	6.51E-04	1.77E-04	1.79E-04	9.25E-04	2.03E-05	0.00E+00	4.72E-04	2.01E-03
9	D01	60	Passenger Car	1051	0.00E+00	1.57E-05	1.70E-06	5.27E+01	1.10E-04	4.07E-01	3.50E-05	2.14E-03	1.07E-02	1.64E-03	3.41E-03	2.20E-03	2.25E-03	2.20E-04	2.64E-04	7.28E-08	1.15E-03	3.35E-04
9	D01	60	Passenger Truck	1760	0.00E+00	3.47E-05	3.67E-06	1.20E+02	2.17E-04	7.26E-01	7.16E-05	6.99E-03	1.96E-02	3.04E-03	6.80E-03	4.43E-03	4.54E-03	9.32E-04	5.98E-04	1.65E-07	2.26E-03	1.16E-03
9	D01	60	Single Unit Short Haul Truck	25	0.00E+00	7.37E-06	3.69E-07	4.70E+00	6.07E-06	9.09E-03	7.86E-06	3.51E-03	5.97E-04	1.08E-04	8.96E-04	2.21E-04	2.25E-04	4.70E-04	1.90E-05	7.81E-09	6.71E-04	6.58E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	3.22E-07	1.60E-08	2.00E-01	2.64E-07	3.86E-04	3.44E-07	1.52E-04	2.68E-05	4.79E-06	3.92E-05	9.62E-06	9.77E-06	2.00E-05	8.10E-07	3.32E-10	2.95E-05	2.85E-05
9	D01	60	Combination Short Haul Truck	81	0.00E+00	4.78E-05	3.33E-06	3.11E+01	1.69E-04	4.18E-02	3.55E-05	5.18E-02	4.45E-03	8.81E-04	3.04E-03	9.93E-04	9.94E-04	4.69E-03	1.04E-04	0.00E+00	2.05E-03	9.77E-03
9	D01	60	Combination Long Haul Truck	74	0.00E+00	4.29E-05	2.79E-06	2.92E+01	1.94E-07	4.51E-02	3.31E-05	5.14E-02	4.48E-03	7.59E-04	3.14E-03	8.53E-04	8.64E-04	4.46E-03	9.77E-05	0.00E+00	2.27E-03	9.68E-03
9	D02	60	Passenger Car	853	0.00E+00	1.28E-05	1.38E-06	4.28E+01	8.89E-05	3.30E-01	2.84E-05	1.74E-03	8.66E-03	1.33E-03	2.77E-03	1.78E-03	1.83E-03	1.78E-04	2.15E-04	5.91E-08	9.36E-04	2.72E-04
9	D02	60	Passenger Truck	1429	0.00E+00	2.82E-05	2.98E-06	9.76E+01	1.76E-04	5.89E-01	5.81E-05	5.67E-03	1.59E-02	2.47E-03	5.52E-03	3.60E-03	3.68E-03	7.56E-04	4.85E-04	1.34E-07	1.84E-03	9.40E-04
9	D02	60	Single Unit Short Haul Truck	29	0.00E+00	8.46E-06	4.23E-07	5.39E+00	6.97E-06	1.04E-02	9.03E-06	4.03E-03	6.85E-04	1.24E-04	1.03E-03	2.54E-04	2.58E-04	5.39E-04	2.18E-05	8.97E-09	7.70E-04	7.56E-04
9	D02	60	Single Unit Long Haul Truck	1	0.00E+00	3.69E-07	1.84E-08	2.30E-01	3.03E-07	4.43E-04	3.94E-07	1.74E-04	3.08E-05	5.50E-06	4.50E-05	1.10E-05	1.12E-05	2.30E-05	9.30E-07	3.81E-10	3.38E-05	3.27E-05
9	D02	60	Combination Short Haul Truck	35	0.00E+00	2.07E-05	1.44E-06	1.35E+01	7.34E-08	1.81E-02	1.54E-05	2.25E-02	1.93E-03	3.82E-04	1.32E-03	4.30E-04	4.31E-04	2.03E-03	4.51E-05	0.00E+00	8.87E-04	4.23E-03
9	D02	60	Combination Long Haul Truck	32	0.00E+00	1.86E-05	1.21E-06	1.26E+01	8.41E-08	1.95E-02	1.43E-05	2.23E-02	1.94E-03	3.29E-04	1.36E-03	3.69E-04	3.74E-04	1.93E-03	4.23E-05	0.00E+00	9.84E-04	4.19E-03
9	D03	60	Passenger Car	1074	0.00E+00	1.61E-05	1.74E-06	5.39E+01	1.12E-04	4.16E-01	3.58E-05	2.19E-03	1.09E-02	1.67E-03	3.48E-03	2.24E-03	2.30E-03	2.24E-04	2.70E-04	7.44E-08	1.18E-03	3.42E-04
9	D03	60	Passenger Truck	1799	0.00E+00	3.55E-05	3.75E-06	1.23E+02	2.22E-04	7.42E-01	7.31E-05	7.14E-03	2.00E-02	3.11E-03	6.95E-03	4.53E-03	4.64E-03	9.53E-04	6.11E-04	1.69E-07	2.31E-03	1.18E-03
9	D03	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.88E-07	8.76E+00	1.13E-05	1.70E-02	1.47E-05	6.56E-03	1.11E-03	2.02E-04	1.67E-03	4.13E-04	4.19E-04	8.77E-04	3.54E-05	1.46E-08	1.25E-03	1.23E-03
9	D03	60	Single Unit Long Haul Truck	2	0.00E+00	6.01E-07	2.99E-08	3.74E-01	4.93E-07	7.20E-04	6.41E-07	2.84E-04	5.00E-05	8.94E-06	7.32E-05	1.79E-05	1.82E-05	3.74E-05	1.51E-06	6.20E-10	5.50E-05	5.31E-05
9	D03	60	Combination Short Haul Truck	40	0.00E+00	2.35E-05	1.64E-06	1.53E+01	8.31E-08	2.05E-02	1.74E-05	2.54E-02	2.19E-03	4.33E-04	1.49E-03	4.87E-04	4.88E-04	2.30E-03	5.11E-05	0.00E+00	1.01E-03	4.79E-03
9	D03	60	Combination Long Haul Truck	36	0.00E+00	2.11E-05	1.37E-06	1.43E+01	9.53E-08	2.21E-02	1.62E-05	2.52E-02	2.20E-03	3.73E-04	1.54E-03	4.19E-04	4.24E-04	2.19E-03	4.79E-05	0.00E+00	1.12E-03	4.75E-03
9	D04	60	Passenger Car	714	0.00E+00	1.07E-05	1.16E-06	3.58E+01	7.45E-05	2.77E-01	2.38E-05	1.46E-03	7.25E-03	1.11E-03	2.32E-03	1.49E-03	1.53E-03	1.49E-04	1.80E-04	4.95E-08	7.84E-04	2.28E-04
9	D04	60	Passenger Truck	1196	0.00E+00	2.36E-05	2.49E-06	8.17E+01	1.48E-04	4.93E-01	4.86E-05	4.75E-03	1.33E-02	2.06E-03	4.62E-03	3.01E-03	3.09E-03	6.33E-04	4.06E-04	1.12E-07	1.54E-03	7.87E-04
9	D04	60	Single Unit Short Haul Truck	57	0.00E+00	1.66E-05	8.31E-07	1.06E+01	1.37E-05	2.05E-02	1.77E-05	7.92E-03	1.35E-03	2.44E-04	2.02E-03	4.98E-04	5.07E-04	1.06E-03	4.28E-05	1.76E-08	1.51E-03	1.48E-03
9	D04	60	Single Unit Long Haul Truck	2	0.00E+00	7.26E-07	3.61E-08	4.52E-01	5.95E-07	8.70E-04	7.75E-07	3.43E-04	6.04E-05	1.08E-05	8.85E-05	2.17E-05	2.20E-05	4.51E-05	1.83E-06	7.49E-10	6.64E-05	6.42E-05
9	D04	60	Combination Short Haul Truck	77	0.00E+00	4.55E-05	3.17E-06	2.96E+01	1.61E-07	3.98E-02	3.38E-05	4.94E-02	4.24E-03	8.39E-04	2.90E-03	9.45E-04	9.47E-04	4.46E-03	9.92E-05	0.00E+00	1.95E-03	9.30E-03
9	D04	60	Combination Long Haul Truck	71	0.00E+00	4.09E-05	2.66E-06	2.78E+01	1.85E-07	4.29E-02	3.15E-05	4.89E-02	4.26E-03	7.23E-04	2.99E-03	8.12E-04	8.22E-04	4.24E-03	9.30E-05	0.00E+00	2.16E-03	9.22E-03
9	D05	60	Passenger Car	1114	0.00E+00	1.67E-05	1.80E-06	5.58E+01	1.16E-04	4.31E-01	3.71E-05	2.27E-03	1.13E-02	1.74E-03	3.61E-03	2.33E-03	2.39E-03	2.33E-04	2.80E-04	7.72E-08	1.22E-03	3.55E-04
9	D05	60	Passenger Truck	1865	0.00E+00	3.68E-05	3.89E-06	1.27E+02	2.30E-04	7.69E-01	7.58E-05	7.41E-03	2.07E-02	3.22E-03	7.21E-03	4.70E-03	4.81E-03	9.87E-04	6.34E-04	1.75E-07	2.40E-03	1.23E-03
9	D05	60	Single Unit Short Haul Truck	57	0.00E+00	1.67E-05	8.35E-07	1.06E+01	1.38E-05	2.06E-02	1.78E-05	7.96E-03	1.35E-03	2.45E-04	2.03E-03	5.01E-04	5.09E-04	1.06E-03	4.30E-05	1.77E-08	1.52E-03	1.49E-03
9	D05	60	Single Unit Long Haul Truck	3	0.00E+00	7.29E-07	3.63E-08	4.54E-01	5.98E-07	8.74E-04	7.79E-07	3.44E-04	6.07E-05	1.09E-05	8.89E-05	2.18E-05	2.21E-05	4.53E-05	1.84E-06	7.53E-10	6.67E-05	6.45E-05
9	D05	60	Combination Short Haul Truck	70	0.00E+00	4.14E-05	2.89E-06	2.69E+01	1.47E-07	3.62E-02	3.07E-05	4.49E-02	3.86E-03	7.63E-04	2.64E-03	8.60E-04	8.61E-04	4.06E-03	9.02E-05	0.00E+00	1.77E-03	8.46E-03
9	D05	60	Combination Long Haul Truck	64	0.00E+00	3.72E-05	2.42E-06	2.53E+01	1.68E-07	3.90E-02	2.87E-05	4.45E-02	3.88E-03	6.58E-04	2.72E-03	7.39E-04	7.48E-04	3.86E-03	8.46E-05	0.00E+00	1.97E-03	8.38E-03
9	D06	60	Passenger Car	831	0.00E+00	1.25E-05	1.35E-06	4.17E+01	8.67E-05	3.22E-01	2.77E-05	1.70E-03	8.44E-03	1.30E-03	2.69E-03	1.74E-03	1.78E-03	1.74E-04	2.09E-04	5.76E-08	9.12E-04	2.65E-04
9	D06	60	Passenger Truck	1392	0.00E+00	2.75E-05	2.90E-06	9.51E+01	1.72E-04	5.74E-01	5.66E-05	5.53E-03	1.55E-02	2.40E-03	5.38E-03	3.51E-03	3.59E-03	7.37E-04	4.73E-04	1.31E-07	1.79E-03	9.16E-04
9	D06	60	Single Unit Short Haul Truck	128	0.00E+00	3.75E-05	1.88E-06	2.39E+01	3.10E-05	4.63E-02	4.01E-05	1.79E-02	3.04E-03	5.51E-04	4.56E-03	1.13E-03	1.14E-03	2.39E-03	9.66E-05	3.98E-08	3.42E-03	3.35E-03
9	D06	60	Single Unit Long Haul Truck	6	0.00E+00	1.64E-06	8.16E-08	1.02E+00	1.34E-06	1.97E-03	1.75E-06	7.74E-04	1.37E-04	2.44E-05	2.00E-04	4.90E-05	4.98E-05	1.02E-04	4.13E-06	1.69E-09	1.50E-04	1.45E-04
9	D06	60	Combination Short Haul Truck	74	0.00E+00	4.33E-05	3.02E-06	2.82E+01	1.53E-07	3.79E-02	3.21E-05	4.70E-02	4.03E-03	7.98E-04	2.76E-03	8.99E-04	9.01E-04	4.25E-03	9.43E-05	0.00E+00	1.86E-03	8.85E-03
9	D06	60	Combination Long Haul Truck	67	0.00E+00	3.89E-05	2.53E-06	2.64E+01	1.76E-07	4.08E-02	3.00E-05	4.66E-02	4.06E-03	6.88E-04	2.84E-03	7.72E-04	7.82E-04	4.04E-03	8.85E-05	0.00E+00	2.06E-03	8.77E-03
11	D07	80	Passenger Car	1149	0.00E+00	1.40E-05	1.51E-06	5.35E+01	9.72E-05	3.71E-01	3.11E-05	2.36E-03	6.32E-03	1.10E-03	3.02E-03	1.95E-03	2.00E-03	1.80E-04	2.70E-04	7.56E-08	1.02E-03	3.69E-04
11	D07	80	Passenger Truck	1923	0.00E+00	3.00E-05	3.18E-06	1.24E+02	1.92E-04	6.84E-01	6.29E-05	7.01E-03	1.13E-02	2.01E-03	6.02E-03	3.91E-03	4.00E-03	8.64E-04	6.18E-04	1.68E-07	2.01E-03	1.15E-03
11	D07	80	Single Unit Short Haul Truck	82	0.00E+00	1.54E-05	7.63E-07	1.51E+01	1.24E-05	3.02E-02	1.64E-05	7.87E-03	9.66E-04	2.18E-04	1.87E-03	4.55E-04	4.63E-04	1.51E-03	6.08E-05	2.41E-08	1.41E-03	1.47E-03
11	D07	80	Single Unit Long Haul Truck	4	0.00E+00	6.68E-07	3.29E-08	6.38E-01	5.28E-07	1.26E-03	7.11E-07	3.37E-04	4.41E-05	9.64E-06	8.16E-05	1.96E-05	1.99E-05	6.37E-05	2.58E-06	1.01E-09	6.17E-05	6.30E-05
11	D07	80	Combination Short Haul Truck	80	0.00E+00	3.50E-05	2.50E-06	2.90E+01	1.10E-07	3.10E-02	2.56E-05	3.59E-02	2.12E-03	5.22E-04	2.09E-03	7.39E-04	7.34E-04	4.37E-03	9.69E-05	0.00E+00	1.35E-03	6.76E-03
11	D07	80	Combination Long Haul Truck	73	0.00E+00	3.14E-05	2.11E-06	2.68E+01	1.28E-07	3.21E-02	2.38E-05	3.48E-02	2.07E-03	4.17E-04	2.15E-03	6.36E-04	6.40E-04	4.09E-03	8.96E-05	0.00E+00	1.51E-03	6.57E-03
11	D08	80	Passenger Car	808	0.00E+00	9.83E-06	1.06E-06	3.76E+01	6.84E-05	2.61E-01	2.19E-05	1.66E-03	4.45E-03	7.73E-04	2.13E-03	1.37E-03	1.41E-03	1.27E-04	1.90E-04	5.32E-08	7.20E-04	2.60E-04
11	D08	80	Passenger Truck	1354	0.00E+00	2.11E-05	2.24E-06	8.70E+01	1.35E-04	4.81E-01	4.43E-05	4.93E-03	7.97E-03	1.42E-03	4.24E-03	2.75E-03	2.82E-03	6.08E-04	4.35E-04	1.18E-07	1.42E-03	8.06E-04
11	D08	80	Single Unit Short Haul Truck	131	0.00E+00	2.45E-05	1.22E-06	2.40E+01	1.97E-05	4.82E-02	2.61E-05	1.26E-02	1.54E-03	3.48E-04	2.98E-03	7.26E-04	7.38E-04	2.41E-03	9.69E-05	3.84E-08	2.24E-03	2.35E-03
11	D08	80	Single Unit Long Haul Truck	6	0.00E+00	1.07E-06	5.25E-08	1.02E+00	8.42E-07	2.01E-03	1.13E-06	5.37E-04	7.03E-05	1.54E-05	1.30E-04	3.12E-05	3.18E-05	1.02E-04	4.11E-06	1.60E-09	9.84E-05	1.00E-04
11	D08	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.29E+01	8.76E-08	2.46E-02	2.03E-05	2.85E-02	1.68E-03	4.14E-04	1.65E-03	5.86E-04	5.81E-04	3.46E-03	7.68E-05	0.00E+00	1.07E-03	5.36E-03
11	D08	80	Combination Long Haul Truck	58	0.00E+00	2.49E-05	1.67E-06	2.12E+01	1.01E-07	2.55E-02	1.88E-05	2.76E-02	1.64E-03	3.31E-04	1.71E-03	5.04E-04	5.07E-04	3.24E-03	7.10E-05	0.00E+00	1.20E-03	5.20E-03
11	D09	80

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D12	80	Combination Long Haul Truck	38	0.00E+00	1.65E-05	1.11E-06	1.41E+01	6.73E-08	1.69E-02	1.25E-05	1.84E-02	1.09E-03	2.20E-04	1.14E-03	3.35E-04	3.37E-04	2.16E-03	4.72E-05	0.00E+00	7.98E-04	3.46E-03
9	D13	60	Passenger Car	179	0.00E+00	2.68E-06	2.90E-07	8.98E+00	1.87E-05	6.93E-02	5.96E-06	3.65E-04	1.82E-03	2.79E-04	5.81E-04	3.74E-04	3.84E-04	3.74E-05	4.51E-05	1.24E-08	1.97E-04	5.71E-05
9	D13	60	Passenger Truck	300	0.00E+00	5.92E-06	6.25E-07	2.05E+01	3.70E-05	1.24E-01	1.22E-05	1.19E-03	3.34E-03	5.18E-04	1.16E-03	7.55E-04	7.74E-04	1.59E-04	1.02E-04	2.82E-08	3.86E-04	1.97E-04
9	D13	60	Single Unit Short Haul Truck	26	0.00E+00	7.55E-06	3.78E-07	4.81E+00	6.22E-06	9.31E-03	8.06E-06	3.60E-03	6.11E-04	1.11E-04	9.17E-04	2.26E-04	2.30E-04	4.81E-04	1.94E-05	8.00E-09	6.87E-04	6.74E-04
9	D13	60	Single Unit Long Haul Truck	1	0.00E+00	3.30E-07	1.64E-08	2.05E-01	2.70E-07	3.95E-04	3.52E-07	1.56E-04	2.75E-05	4.91E-06	4.02E-05	9.85E-06	1.00E-05	2.05E-05	8.30E-07	3.40E-10	3.02E-05	2.92E-05
9	D13	60	Combination Short Haul Truck	16	0.00E+00	9.64E-06	6.72E-07	6.27E+00	3.42E-08	8.44E-03	7.16E-06	1.05E-02	8.98E-04	1.78E-04	6.14E-04	2.00E-04	2.01E-04	9.46E-04	2.10E-05	0.00E+00	4.13E-04	1.97E-03
9	D13	60	Combination Long Haul Truck	15	0.00E+00	8.66E-06	5.63E-07	5.88E+00	3.92E-08	9.09E-03	6.67E-06	1.04E-02	9.03E-04	1.53E-04	6.33E-04	1.72E-04	1.74E-04	8.99E-04	1.97E-05	0.00E+00	4.58E-04	1.95E-03
9	D14	60	Passenger Car	525	0.00E+00	7.86E-06	8.51E-07	2.63E+01	5.47E-05	2.03E-01	1.75E-05	1.07E-03	5.33E-03	8.18E-04	1.70E-03	1.10E-03	1.13E-03	1.10E-04	1.32E-04	3.64E-08	5.76E-04	1.67E-04
9	D14	60	Passenger Truck	879	0.00E+00	1.73E-05	1.83E-06	6.01E+01	1.08E-04	3.62E-01	3.57E-05	3.49E-03	9.78E-03	1.52E-03	3.40E-03	2.21E-03	2.27E-03	4.66E-04	2.99E-04	8.25E-08	1.13E-03	5.79E-04
9	D14	60	Single Unit Short Haul Truck	54	0.00E+00	1.59E-05	7.96E-07	1.01E+01	1.31E-05	1.96E-02	1.70E-05	7.59E-03	1.29E-03	2.34E-04	1.94E-03	4.78E-04	4.86E-04	1.02E-03	4.10E-05	1.69E-08	1.45E-03	1.42E-03
9	D14	60	Single Unit Long Haul Truck	2	0.00E+00	6.95E-07	3.46E-08	4.33E-01	5.70E-07	8.34E-04	7.43E-07	3.28E-04	5.79E-05	1.03E-05	8.48E-05	2.08E-05	2.11E-05	4.32E-05	1.75E-06	7.18E-10	6.36E-05	6.15E-05
9	D14	60	Combination Short Haul Truck	41	0.00E+00	2.42E-05	1.68E-06	1.57E+01	8.56E-08	2.11E-02	1.79E-05	2.62E-02	2.25E-03	4.45E-04	1.54E-03	5.01E-04	5.02E-04	2.37E-03	5.26E-05	0.00E+00	1.03E-03	4.93E-03
9	D14	60	Combination Long Haul Truck	37	0.00E+00	2.17E-05	1.41E-06	1.47E+01	9.81E-08	2.28E-02	1.67E-05	2.60E-02	2.26E-03	3.84E-04	1.58E-03	4.31E-04	4.36E-04	2.25E-03	4.93E-05	0.00E+00	1.15E-03	4.89E-03
9	D15	60	Passenger Car	649	0.00E+00	9.71E-06	1.05E-06	3.25E+01	6.76E-05	2.51E-01	2.16E-05	1.32E-03	6.58E-03	1.01E-03	2.10E-03	1.36E-03	1.39E-03	1.36E-04	1.63E-04	4.49E-08	7.12E-04	2.07E-04
9	D15	60	Passenger Truck	1086	0.00E+00	2.14E-05	2.26E-06	7.42E+01	1.34E-04	4.48E-01	4.41E-05	4.31E-03	1.21E-02	1.87E-03	4.20E-03	2.74E-03	2.80E-03	5.75E-04	3.69E-04	1.02E-07	1.40E-03	7.15E-04
9	D15	60	Single Unit Short Haul Truck	58	0.00E+00	1.69E-05	8.46E-07	1.08E+01	1.39E-05	2.09E-02	1.81E-05	8.06E-03	1.37E-03	2.48E-04	2.06E-03	5.07E-04	5.16E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.51E-03
9	D15	60	Single Unit Long Haul Truck	3	0.00E+00	7.39E-07	3.68E-08	4.60E-01	6.06E-07	8.86E-04	7.89E-07	3.49E-04	6.15E-05	1.10E-05	9.01E-05	2.21E-05	2.24E-05	4.59E-05	1.86E-06	7.63E-10	6.76E-05	6.54E-05
9	D15	60	Combination Short Haul Truck	44	0.00E+00	2.60E-05	1.81E-06	1.69E+01	9.22E-08	2.28E-02	1.93E-05	2.82E-02	2.42E-03	4.80E-04	1.66E-03	5.40E-04	5.41E-04	2.55E-03	5.67E-05	0.00E+00	1.11E-03	5.32E-03
9	D15	60	Combination Long Haul Truck	40	0.00E+00	2.34E-05	1.52E-06	1.59E+01	1.06E-07	2.45E-02	1.80E-05	2.80E-02	2.44E-03	4.13E-04	1.71E-03	4.64E-04	4.70E-04	2.43E-03	5.32E-05	0.00E+00	1.24E-03	5.27E-03
9	D16	60	Passenger Car	688	0.00E+00	1.03E-05	1.12E-06	3.45E+01	7.17E-05	2.66E-01	2.29E-05	1.40E-03	6.99E-03	1.07E-03	2.23E-03	1.44E-03	1.48E-03	1.44E-04	1.73E-04	4.77E-08	7.55E-04	2.19E-04
9	D16	60	Passenger Truck	1152	0.00E+00	2.27E-05	2.40E-06	7.87E+01	1.42E-04	4.75E-01	4.68E-05	4.58E-03	1.28E-02	1.99E-03	4.45E-03	2.90E-03	2.97E-03	6.10E-04	3.91E-04	1.08E-07	1.48E-03	7.58E-04
9	D16	60	Single Unit Short Haul Truck	75	0.00E+00	2.21E-05	1.11E-06	1.41E+01	1.82E-05	2.73E-02	2.36E-05	1.05E-02	1.79E-03	3.25E-04	2.69E-03	6.63E-04	6.74E-04	1.41E-03	5.69E-05	2.34E-08	2.01E-03	1.97E-03
9	D16	60	Single Unit Long Haul Truck	3	0.00E+00	9.65E-07	4.80E-08	6.01E-01	7.91E-07	1.16E-03	1.03E-06	4.56E-04	8.04E-05	1.44E-05	1.18E-04	2.88E-05	2.93E-05	6.00E-05	2.43E-06	9.97E-10	8.83E-05	8.54E-05
9	D16	60	Combination Short Haul Truck	53	0.00E+00	3.10E-05	2.16E-06	2.02E+01	1.10E-07	2.71E-02	2.30E-05	3.36E-02	2.89E-03	5.72E-04	1.97E-03	6.44E-04	6.45E-04	3.04E-03	6.75E-05	0.00E+00	1.33E-03	6.33E-03
9	D16	60	Combination Long Haul Truck	48	0.00E+00	2.78E-05	1.81E-06	1.89E+01	1.26E-07	2.92E-02	2.15E-05	3.33E-02	2.90E-03	4.92E-04	2.03E-03	5.53E-04	5.60E-04	2.89E-03	6.33E-05	0.00E+00	1.47E-03	6.28E-03
10	D17	70	Passenger Car	62	0.00E+00	8.14E-07	8.80E-08	2.99E+00	5.66E-06	2.11E-02	1.81E-06	1.25E-04	4.83E-04	7.75E-05	1.76E-04	1.14E-04	1.16E-04	1.12E-05	1.50E-05	4.09E-09	5.96E-05	1.95E-05
10	D17	70	Passenger Truck	104	0.00E+00	1.78E-06	1.89E-07	6.88E+00	1.13E-05	3.89E-02	3.70E-06	3.90E-04	8.79E-04	1.43E-04	3.53E-04	2.30E-04	2.35E-04	5.06E-05	3.43E-05	9.18E-09	1.18E-04	6.42E-05
10	D17	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.83E-04	9.43E-05	9.59E-05	2.48E-04	9.96E-06	4.02E-09	2.87E-04	2.91E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.08E-04	1.46E-07	6.68E-05	1.01E-05	1.98E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	D17	70	Combination Short Haul Truck	10	0.00E+00	5.11E-06	3.63E-07	3.70E+00	1.66E-08	4.40E-03	3.75E-06	5.36E-03	3.89E-04	8.48E-05	3.11E-04	1.07E-04	1.07E-04	5.58E-04	1.24E-05	0.00E+00	2.04E-04	1.01E-03
10	D17	70	Combination Long Haul Truck	9	0.00E+00	4.62E-06	3.09E-07	3.46E+00	1.91E-08	4.66E-03	3.51E-06	5.28E-03	3.86E-04	7.04E-05	3.22E-04	9.33E-05	9.43E-05	5.28E-04	1.16E-05	0.00E+00	2.27E-04	9.96E-04
10	D18	70	Passenger Car	381	0.00E+00	4.97E-06	5.38E-07	1.83E+01	3.46E-05	1.29E-01	1.11E-05	7.62E-04	2.95E-03	4.73E-04	1.08E-03	6.93E-04	7.12E-04	6.81E-05	9.18E-05	2.50E-08	3.64E-04	1.19E-04
10	D18	70	Passenger Truck	637	0.00E+00	1.09E-05	1.15E-06	4.21E+01	6.89E-05	2.37E-01	2.26E-05	2.38E-03	5.37E-03	8.72E-04	2.16E-03	1.40E-03	1.44E-03	3.09E-04	2.10E-04	5.61E-08	7.20E-04	3.92E-04
10	D18	70	Single Unit Short Haul Truck	31	0.00E+00	7.21E-06	3.61E-07	5.64E+00	5.89E-06	1.13E-02	7.68E-06	3.55E-03	5.07E-04	1.02E-04	8.74E-04	2.16E-04	2.19E-04	5.66E-04	2.28E-05	9.19E-09	6.55E-04	6.65E-04
10	D18	70	Single Unit Long Haul Truck	1	0.00E+00	3.14E-07	1.56E-08	2.40E-01	2.54E-07	4.74E-04	3.35E-07	1.53E-04	2.32E-05	4.52E-06	3.82E-05	9.33E-06	9.49E-06	2.39E-05	9.67E-07	3.87E-10	2.87E-05	2.86E-05
10	D18	70	Combination Short Haul Truck	31	0.00E+00	1.62E-05	1.15E-06	1.17E+01	5.26E-08	1.39E-02	1.19E-05	1.70E-02	1.23E-03	2.69E-04	9.86E-04	3.40E-04	3.40E-04	1.77E-03	3.93E-05	0.00E+00	6.46E-04	3.20E-03
10	D18	70	Combination Long Haul Truck	28	0.00E+00	1.46E-05	9.78E-07	1.10E+01	6.06E-08	1.48E-02	1.11E-05	1.67E-02	1.22E-03	2.23E-04	1.02E-03	2.96E-04	2.99E-04	1.67E-03	3.67E-05	0.00E+00	7.21E-04	3.16E-03
11	D19	80	Passenger Car	1319	0.00E+00	1.60E-05	1.74E-06	6.14E+01	1.12E-04	4.26E-01	3.57E-05	2.71E-03	7.25E-03	1.26E-03	3.47E-03	2.24E-03	2.30E-03	2.07E-04	3.10E-04	8.67E-08	1.17E-03	4.23E-04
11	D19	80	Passenger Truck	2208	0.00E+00	3.44E-05	3.65E-06	1.42E+02	2.21E-04	7.85E-01	7.22E-05	8.05E-03	1.30E-02	2.31E-03	6.91E-03	4.49E-03	4.60E-03	9.92E-04	7.09E-04	1.93E-07	2.31E-03	1.31E-03
11	D19	80	Single Unit Short Haul Truck	126	0.00E+00	2.37E-05	1.18E-06	2.32E+01	1.91E-05	4.66E-02	2.52E-05	1.21E-02	1.49E-03	3.37E-04	2.88E-03	7.02E-04	7.13E-04	2.33E-03	9.37E-05	3.72E-08	2.17E-03	2.27E-03
11	D19	80	Single Unit Long Haul Truck	6	0.00E+00	1.03E-06	5.08E-08	9.84E-01	8.14E-07	1.94E-03	1.10E-06	5.19E-04	6.80E-05	1.49E-05	1.26E-04	3.02E-05	3.07E-05	9.82E-05	3.97E-06	1.55E-09	9.51E-05	9.71E-05
11	D19	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.30E+01	8.78E-08	2.46E-02	2.03E-05	2.85E-02	1.68E-03	4.15E-04	1.66E-03	5.87E-04	5.83E-04	3.47E-03	7.70E-05	0.00E+00	1.07E-03	5.37E-03
11	D19	80	Combination Long Haul Truck	58	0.00E+00	2.49E-05	1.67E-06	2.13E+01	1.01E-07	2.55E-02	1.89E-05	2.77E-02	1.65E-03	3.31E-04	1.71E-03	5.05E-04	5.08E-04	3.25E-03	7.12E-05	0.00E+00	1.20E-03	5.22E-03
11	D20	80	Passenger Car	477	0.00E+00	5.80E-06	6.27E-07	2.22E+01	4.04E-05	1.54E-01	1.29E-05	9.79E-04	2.62E-03	4.56E-04	1.25E-03	8.09E-04	8.30E-04	7.47E-05	1.12E-04	3.14E-08	4.25E-04	1.53E-04
11	D20	80	Passenger Truck	798	0.00E+00	1.24E-05	1.32E-06	5.13E+01	7.98E-05	2.84E-01	2.61E-05	2.91E-03	4.70E-03	8.34E-04	2.50E-03	1.62E-03	1.66E-03	3.59E-04	2.56E-04	6.98E-08	8.36E-04	4.75E-04
11	D20	80	Single Unit Short Haul Truck	362	0.00E+00	6.78E-05	3.37E-06	6.66E+01	5.46E-05	1.33E-01	7.22E-05	3.48E-02	4.26E-03	9.64E-04	8.26E-03	2.01E-03	2.04E-03	6.68E-03	2.68E-04	1.06E-07	6.21E-03	6.50E-03
11	D20	80	Single Unit Long Haul Truck	16	0.00E+00	2.95E-06	1.45E-07	2.82E+00	2.33E-06	5.55E-03	3.14E-06	1.49E-03	1.95E-04	4.26E-05	3.60E-04	8.65E-05	8.80E-05	2.81E-04	1.14E-05	4.44E-09	2.72E-04	2.78E-04
11	D20	80	Combination Short Haul Truck	191	0.00E+00	8.42E-05	6.02E-06	6.96E+01	2.65E-07	7.45E-02	6.15E-05	8.63E-02	5.09E-03	1.26E-03	5.01E-03	1.78E-03	1.76E-03	1.05E-02	2.33E-04	0.00E+00	3.25E-03	1.63E-02
11	D20	80	Combination Long Haul Truck	175	0.00E+00	7.54E-05	5.07E-06	6.43E+01	3.07E-07	7.72E-02	5.71E-05	8.37E-02	4.98E-03	1.00E-03	5.18E-03	1.53E-03	1.54E-03	9.83E-03	2.15E-04	0.00E+00	3.64E-03	1.58E-02
11	D21	80	Passenger Car	1076	0.00E+00	1.31E-05	1.42E-06	5.01E+01	9.11E-05	3.48E-01	2.91E-05	2.21E-03	5.92E-03	1.03E-03	2.83E-03	1.83E-03	1.87E-03	1.69E-04	2.53E-04	7.08E-08	9.59E-04	3.45E-04
11	D21	80	Passenger Truck	1802	0.00E+00	2.81E-05	2.98E-06	1.16E+02	1.80E-04	6.40E-01	5.89E-05	6.57E-03	1.06E-02	1.88E-03	5.64E-03	3.66E-03	3.75E-03	8.09E-04	5.79E-04	1.58E-07	1.89E-03	1.07E-03
11	D21	80	Single Unit Short Haul Truck	69	0.00E+00	1.29E-05	6.42E-07	1.27E+01	1.04E-05	2.54E-02	1.38E-05	6.62E-03	8.12E-04	1.84E-04	1.57E-03	3.83E-04	3.89E-04	1.27E-03	5.11E-05	2.03E-08	1.18E-03	1.24E-03
11	D21	80	Single Unit Long Haul Truck	3	0.00E+00	5.62E-07	2.77E-08	5.37E-01	4.44E-07	1.06E-03	5.98E-07	2.83E-04	3.71E-05	8.11E-06	6.86E-05	1.65E-05	1.68E-05	5.36E-05	2.17E-06	8.45E-10	5.19E-05	5.30E-05
11	D21	80	Combination Short Haul Truck	29	0.00E+00	1.29E-05	9.21E-07	1.06E+01	4.06E-08	1.14E-02	9.41E-06	1.32E-02	7.79E-04	1.92E-04	7.67E-04	2.72E-04	2.70E-04	1.61E-03	3.56E-05	0.00E+00	4.97E-04	2.49E-03
11	D21	80	Combination Long Haul Truck	27	0.00E+00	1.15E-05	7.75E-07	9.84E+00	4.69E-08	1.18E-02	8.74E-06	1.28E-02	7.62E-04	1.53E-04	7.92E-04	2.34E-04	2.35E-04	1.50E-03	3.30E-05	0.00E+00	5.57E-04	2.41E-03
11	D22	80	Passenger Car	515	0.00E+00	6.26E-06	6.77E-07	2.40E+01	4.36E-05	1.66E-01	1.39E-05	1.06E-03	2.83E-03	4.92E-04	1.36E-03	8.74E-04	8.97E-04	8.07E-05	1.21E-04	3.39E-08	4.59E-04	1.65E-04
11	D22	80	Passenger Truck	862	0.00E+00	1.34E-05	1.43E-06	5.54E+01	8.61E-05	3.06E-01	2.82E-05	3.14E-03	5.08E-03	9.01E-04	2.70E-03	1.75E-03	1.79E-03	3.87E-04	2.77E-04	7.54E-08	9.03E-04	5.13E-04
11	D22	80	Single Unit Short Haul Truck	301	0.00E+00	5.63E-05	2.80E-06	5.53E+01	4.54E-05	1.11E-01	6.00E-05	2.89E-02	3.54E-03	8.01E-04	6.86E-03	1.67E-03	1.70E-03	5.55E-03	2.23E-04	8.84E-08	5.16E-03	5.40E-03
11	D22	80	Single Unit Long Haul Truck	13	0.00E+00	2.45E-06	1.21E-07	2.34E+00	1.94E-06	4.61E-03	2.61E-06	1.23E-03	1.62E-04	3.53E-05	2.99E-04	7.18E-05	7.31E-05	2.34E-04	9.45E-06	3.69E-09	2.26E-04	2.31E-04
11	D22	80	Combination Short Haul Truck	200	0.00E+00	8.78E-05	6.28E-06	7.26E+01	2.77E-07	7.78E-02	6.42E-05	9.00E-02	5.31E-03	1.31E-03	5.23E-03	1.85E-03	1.84E-03	1.09E-02	2.43E-04	0.00E+00	3.39E-03	1.70E-02
11	D22	80	Combination Long Haul Truck	182	0.00E+00	7.87E-05	5.29E-06	6.71E+01	3.20E-07	8.06E-02	5.96E-05	8.74E-02	5.20E-03	1.05E-03	5.40E-03	1.60E-03	1.60E-03	1.03E-02	2.25E-04	0.00E+00	3.80E-03	1.65E-02
9	D23	60	Passenger Car	1232	0.00E+00	1.85E-05	2.00E-06	6.18E+01	1.28E-04	4.77E-01	4.10E-05	2.51E-03	1.25E-02	1.92E-03	3.99E-03	2.57E-03	2.64E-03	2.57E-04	3.10E-04	8.54E-08	1.35E-03	3.93E-04
9	D23	60	Passenger Truck	2064	0.00E+00	4.07E-05	4.30E-06	1.41E+02	2.54E-04	8.51E-01	8.39E-05	8.19E-03	2.29E-02	3.56E-03	7.98E-03	5.20E-03	5.32E-03	1.09E-03	7.01E-04	1.94E-07	2.65E-03	1.36E-03
9	D23	60	Single Unit Short Haul Truck	52	0.00E+00	1.52E-05	7.59E-07	9.67E+00	1.25E-05	1.87E-02	1.62E-05	7.24E-03	1.23E-03	2.23E-04	1.85E-03	4.55E-04	4.63E-04	9.68E-04	3.91E-05	1.61E-08	1.38E-03	1.36E-03
9	D23	60	Single Unit Long Haul Truck	2	0.00E+00	6.63E-07	3.30E-08	4.13E-01	5.44E-07	7.95E-04	7.08E-07	3.13E-04	5.52E-05	9.87E-06	8.08E-05	1.98E-05	2.01E-05	4.12E-05	1.67E-06	6.85E-10	6.07E-05	5.87E-05
9	D23	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.79E-07	8.21E+00	4.47E-08	1.10E-02	9.36E-06	1.37E-02	1.17E-03	2.32E-04	8.03E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.58E-03
9	D23	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.37E-07	7.69E+00	5.12E-08	1.19E-02	8.73E-06	1.36E-02	1.18E-03	2.00E-04	8.27E-04	2.25E-04	2.28E-04	1.18E-03	2.58E-05	0.00E+00	5.99E-04	2.55E-03
9	D24	60	Passenger Car	684	0.00E+00	1.02E-05	1.11E-06	3.43E+01	7.13E-05	2.65E-01	2.28E-05	1.39E-03	6.94E-03	1.07E-03	2.22E-03	1.43E-03	1.47E-03	1.43E-04	1.72E-04	4.74E-08	7.50E-04	2.18E-04
9	D24	60	Passenger Truck	1145	0.00E+00	2.26E-05	2.39E-06	7.82E+01	1.41E-04	4.72E-01	4.65E-05	4.55E-03	1.27E-02	1.98E-03	4.43E-03	2.88E-03	2.95E-03	6.06E-04	3.89E-04	1.07E-07	1.47E-03	7.54E-04
9	D24	60	Single Unit Short Haul Truck	77	0.00E+00	2.25E-05	1.13E-06	1.43E+01	1.85E-05	2.77E-02	2.40E-05	1.07E-02	1.82E-03	3.30E-04	2.73E-03	6.75E-04	6.86E-04	1.43E-03	5.79E-05	2.39E-08	2.05E-03	2.01E-03
9	D24	60	Single Unit Long Haul Truck	3	0.00E+00	9.82E-07	4.89E-08	6.12E-01	8.05E-07	1.18E-03	1.05E-06	4.64E-04	8.18E-05	1.46E-05	1.20E-04	2.94E-05	2.98E-05	6.11E-05	2.47E-06	1.01E-09	8.99E-05	8.69E-05
9	D24	60	Combination Short Haul Truck	37	0.00E+00	2.18E-05	1.52E-06	1.42E+01	7.74E-08	1.91E-02	1.62E-05	2.37E-02	2.03E-03	4.03E-04	1.39E-03	4.53E-04	4.54E-04	2.14E-03	4.76E-05	0.00E+00	9.36E-04	4.46E-03
9	D24	60	Combination Long Haul Truck	34	0.00E+00	1.96E-05	1.28E-06	1.33E+01	8.87E-08	2.06E-02	1.51E-05	2.35E-02	2.04E-03	3.47E-04	1.43E-03	3.90E-04	3.95E-04	2.04E-03	4.46E-05	0.00E+00	1.04E-03	4.42E-03
9	D25	60	Passenger Car	1098	0.00E+00	1.65E-05	1.78E-06	5.51E+01	1.15E-04	4.25E-01	3.66E-05	2.24E-03	1.11E-02	1.71E-03	3.56E-03	2.30E-03	2.36E-03	2.29E-04	2.76E-04	7.61E-08	1.21E-03	3.50E-04
9	D25	60	Passenger Truck	1840	0.00E+00	3.63E-05	3.83E-06	1.26E+02	2.27E-04	7.58E-01	7.48E-05	7.30E-03	2.05E-02	3.17E-03	7.11E-03	4.63E-03	4.74E-03	9.74E-04	6.25E-04	1.73E-07	2.36E-03	1.21E-03
9	D25	60	Single Unit Short Haul Truck	59	0.00E+00	1.74E-05	8.72E-07	1.11E+01	1.44E-05	2.15E-02	1.86E-05	8.31E-03	1.41E-03	2.56E-04	2.12E-03	5.23E-04	5.32E-04	1.11E-03	4.49E-05	1.85E-08	1.59E-03	1.56E-03
9	D25	60	Single Unit Long Haul Truck	3	0.00E+00	7.61E-07	3.79E-08	4.74E-01	6.24E-07	9.13E-04	8.13E-07	3.59E-04	6.34E-05	1.13E-05	9.28E-05	2.27E-05	2.31E-05	4.73E-05	1.92E-06	7.86E-10	6.97E-05	6.74E-05
9	D25	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.63E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.08E-03
9	D25	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.05E-03
9	D26	60	Passenger Car	811	0.00E+00	1.22E-05	1.31E-06	4.07E+01	8.46E-05	3.14E-01	2.70E-05	1.65E-03	8.24E-03	1.26E-03	2.63E-03	1.70E-03	1.74E-03	1.70E-04	2.04E-04	5.62E-08	8.90E-04	2.59E-04
9	D26	60	Passenger Truck	1359	0.00E+00	2.68E-05	2.83E-06	9.28E+01	1.68E-04	5.60E-01	5.52E-05	5.39E-03	1.51E-02	2.34E-03	5.25E-03	3.42E-03	3.50E-03	7.19E-04	4.61E-04	1.28E-07	1.75E-03	8.94E-04
9	D26	60	Single Unit Short Haul Truck	78	0.00E+00	2.28E-05	1.14E-06	1.45E+01	1.88E-05	2.81E-02	2.43E-05	1.09E-02	1.85E-03	3.35E-04	2.77E-03	6.83E-04	6.94E-04	1.45E-03	5.86E-05	2.42E-08	2.07E-03	2.03E-03
9	D26

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D30	80	Single Unit Short Haul Truck	67	0.00E+00	1.25E-05	6.21E-07	1.23E+01	1.01E-05	2.46E-02	1.33E-05	6.41E-03	7.86E-04	1.78E-04	1.52E-03	3.70E-04	3.77E-04	1.23E-03	4.95E-05	1.96E-08	1.15E-03	1.20E-03
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	5.44E-07	2.68E-08	5.19E-01	4.30E-07	1.02E-03	5.79E-07	2.74E-04	3.59E-05	7.85E-06	6.64E-05	1.59E-05	1.62E-05	5.19E-05	2.10E-06	8.18E-10	5.02E-05	5.13E-05
11	D30	80	Combination Short Haul Truck	49	0.00E+00	2.17E-05	1.55E-06	1.80E+01	6.86E-08	1.92E-02	1.59E-05	2.23E-02	1.31E-03	3.24E-04	1.29E-03	4.59E-04	4.55E-04	2.71E-03	6.01E-05	0.00E+00	8.39E-04	4.20E-03
11	D30	80	Combination Long Haul Truck	45	0.00E+00	1.95E-05	1.31E-06	1.66E+01	7.92E-08	1.99E-02	1.47E-05	2.16E-02	1.29E-03	2.59E-04	1.34E-03	3.95E-04	3.97E-04	2.54E-03	5.56E-05	0.00E+00	9.39E-04	4.07E-03
11	D31	80	Passenger Car	173	0.00E+00	2.11E-06	2.28E-07	8.06E+00	1.47E-05	5.60E-02	4.68E-06	3.56E-04	9.52E-04	1.66E-04	4.56E-04	2.94E-04	3.02E-04	2.71E-05	4.06E-05	1.14E-08	1.54E-04	5.56E-05
11	D31	80	Passenger Truck	290	0.00E+00	4.52E-06	4.80E-07	1.86E+01	2.90E-05	1.03E-01	9.48E-06	1.06E-03	1.71E-03	3.03E-04	9.07E-04	5.89E-04	6.04E-04	1.30E-04	9.31E-05	2.54E-08	3.04E-04	1.73E-04
11	D31	80	Single Unit Short Haul Truck	22	0.00E+00	4.17E-06	2.07E-07	4.09E+00	3.36E-06	8.19E-03	4.44E-06	2.14E-03	2.62E-04	5.93E-05	5.07E-04	1.23E-04	1.26E-04	4.10E-04	1.65E-05	6.54E-09	3.82E-04	4.00E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.81E-07	8.93E-09	1.73E-01	1.43E-07	3.41E-04	1.93E-07	9.14E-05	1.20E-05	2.62E-06	2.21E-05	5.31E-06	5.41E-06	1.73E-05	6.99E-07	2.73E-10	1.67E-05	1.71E-05
11	D31	80	Combination Short Haul Truck	13	0.00E+00	5.82E-06	4.16E-07	4.81E+00	1.84E-08	5.15E-03	4.25E-06	5.97E-03	3.52E-04	8.68E-05	3.47E-04	1.23E-04	1.22E-04	7.26E-04	1.61E-05	0.00E+00	2.25E-04	1.12E-03
11	D31	80	Combination Long Haul Truck	12	0.00E+00	5.21E-06	3.50E-07	4.45E+00	2.12E-08	5.34E-03	3.95E-06	5.79E-03	3.44E-04	6.93E-05	3.58E-04	1.06E-04	1.06E-04	6.80E-04	1.49E-05	0.00E+00	2.52E-04	1.09E-03
11	D32	80	Passenger Car	349	0.00E+00	4.24E-06	4.59E-07	1.62E+01	2.95E-05	1.13E-01	9.43E-06	7.16E-04	1.92E-03	3.33E-04	9.18E-04	5.92E-04	6.07E-04	5.47E-05	8.19E-05	2.29E-08	3.11E-04	1.12E-04
11	D32	80	Passenger Truck	584	0.00E+00	9.11E-06	9.66E-07	3.75E+01	5.84E-05	2.08E-01	1.91E-05	2.13E-03	3.44E-03	6.11E-04	1.83E-03	1.19E-03	1.22E-03	2.62E-04	1.88E-04	5.11E-08	6.11E-04	3.48E-04
11	D32	80	Single Unit Short Haul Truck	29	0.00E+00	5.37E-06	2.67E-07	5.27E+00	4.32E-06	1.06E-02	5.72E-06	2.75E-03	3.37E-04	7.63E-05	6.54E-04	1.59E-04	1.62E-04	5.29E-04	2.12E-05	8.43E-09	4.92E-04	5.15E-04
11	D32	80	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.15E-08	2.23E-01	1.85E-07	4.40E-04	2.48E-07	1.18E-04	1.54E-05	3.37E-06	2.85E-05	6.85E-06	6.96E-06	2.23E-05	9.00E-07	3.51E-10	2.16E-05	2.20E-05
11	D32	80	Combination Short Haul Truck	25	0.00E+00	1.08E-05	7.74E-07	8.95E+00	3.41E-08	9.58E-03	7.91E-06	1.11E-02	6.55E-04	1.61E-04	6.44E-04	2.28E-04	2.27E-04	1.35E-03	2.99E-05	0.00E+00	4.18E-04	2.09E-03
11	D32	80	Combination Long Haul Truck	22	0.00E+00	9.69E-06	6.51E-07	8.27E+00	3.95E-08	9.93E-03	7.34E-06	1.08E-02	6.40E-04	1.29E-04	6.66E-04	1.97E-04	1.98E-04	1.26E-03	2.77E-05	0.00E+00	4.68E-04	2.03E-03
9	D33	60	Passenger Car	272	0.00E+00	4.07E-06	4.41E-07	1.36E+01	2.83E-05	1.05E-01	9.05E-06	5.55E-04	2.76E-03	4.24E-04	8.81E-04	5.68E-04	5.83E-04	5.68E-05	6.84E-05	1.88E-08	2.98E-04	8.67E-05
9	D33	60	Passenger Truck	455	0.00E+00	8.98E-06	9.48E-07	3.11E+01	5.61E-05	1.88E-01	1.85E-05	1.81E-03	5.06E-03	7.86E-04	1.76E-03	1.15E-03	1.17E-03	2.41E-04	1.55E-04	4.27E-08	5.85E-04	3.00E-04
9	D33	60	Single Unit Short Haul Truck	42	0.00E+00	1.25E-05	6.24E-07	7.94E+00	1.03E-05	1.54E-02	1.33E-05	5.94E-03	1.01E-03	1.83E-04	1.52E-03	3.74E-04	3.80E-04	7.95E-04	3.21E-05	1.32E-08	1.14E-03	1.11E-03
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	5.45E-07	2.71E-08	3.39E-01	4.46E-07	6.53E-04	5.81E-07	2.57E-04	4.53E-05	8.10E-06	6.64E-05	1.63E-05	1.65E-05	3.39E-05	1.37E-06	5.62E-10	4.98E-05	4.82E-05
9	D33	60	Combination Short Haul Truck	27	0.00E+00	1.62E-05	1.13E-06	1.05E+01	5.73E-08	1.41E-02	1.20E-05	1.75E-02	1.51E-03	2.98E-04	1.03E-03	3.36E-04	3.36E-04	1.59E-03	3.52E-05	0.00E+00	6.92E-04	3.30E-03
9	D33	60	Combination Long Haul Truck	25	0.00E+00	1.45E-05	9.44E-07	9.86E+00	6.57E-08	1.52E-02	1.12E-05	1.74E-02	1.51E-03	2.57E-04	1.06E-03	2.88E-04	2.92E-04	1.51E-03	3.30E-05	0.00E+00	7.68E-04	3.27E-03
9	D34	60	Passenger Car	280	0.00E+00	4.20E-06	4.54E-07	1.41E+01	2.92E-05	1.09E-01	9.33E-06	5.72E-04	2.85E-03	4.37E-04	9.09E-04	5.86E-04	6.01E-04	5.86E-05	7.05E-05	1.94E-08	3.08E-04	8.93E-05
9	D34	60	Passenger Truck	469	0.00E+00	9.26E-06	9.78E-07	3.21E+01	5.79E-05	1.93E-01	1.91E-05	1.86E-03	5.22E-03	8.10E-04	1.81E-03	1.18E-03	1.21E-03	2.49E-04	1.59E-04	4.41E-08	6.03E-04	3.09E-04
9	D34	60	Single Unit Short Haul Truck	16	0.00E+00	4.72E-06	2.36E-07	3.01E+00	3.89E-06	5.82E-03	5.04E-06	2.25E-03	3.82E-04	6.93E-05	5.74E-04	1.42E-04	1.44E-04	3.01E-04	1.21E-05	5.00E-09	4.30E-04	4.22E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	2.06E-07	1.03E-08	1.28E-01	1.69E-07	2.47E-04	2.20E-07	9.73E-05	1.72E-05	3.07E-06	2.51E-05	6.16E-06	6.26E-06	1.28E-05	5.19E-07	2.13E-10	1.89E-05	1.82E-05
9	D34	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.21E-07	3.00E+00	1.63E-08	4.03E-03	3.42E-06	4.99E-03	4.29E-04	8.49E-05	2.93E-04	9.56E-05	9.58E-05	4.52E-04	1.00E-05	0.00E+00	1.97E-04	9.41E-04
9	D34	60	Combination Long Haul Truck	7	0.00E+00	4.14E-06	2.69E-07	2.81E+00	1.87E-08	4.34E-03	3.19E-06	4.95E-03	4.31E-04	7.32E-05	3.02E-04	8.22E-05	8.32E-05	4.29E-04	9.41E-06	0.00E+00	2.19E-04	9.33E-04
9	D35	60	Passenger Car	390	0.00E+00	5.84E-06	6.32E-07	1.96E+01	4.07E-05	1.51E-01	1.30E-05	7.96E-04	3.96E-03	6.08E-04	1.26E-03	8.15E-04	8.36E-04	8.15E-05	9.81E-05	2.70E-08	4.28E-04	1.24E-04
9	D35	60	Passenger Truck	653	0.00E+00	1.29E-05	1.36E-06	4.46E+01	8.06E-05	2.69E-01	2.66E-05	2.59E-03	7.26E-03	1.13E-03	2.52E-03	1.65E-03	1.69E-03	3.46E-04	2.22E-04	6.13E-08	8.40E-04	4.30E-04
9	D35	60	Single Unit Short Haul Truck	17	0.00E+00	4.96E-06	2.48E-07	3.16E+00	4.09E-06	6.12E-03	5.30E-06	2.37E-03	4.02E-04	7.29E-05	6.03E-04	1.49E-04	1.51E-04	3.17E-04	1.28E-05	5.26E-09	4.52E-04	4.43E-04
9	D35	60	Single Unit Long Haul Truck	1	0.00E+00	2.17E-07	1.08E-08	1.35E-01	1.78E-07	2.60E-04	2.31E-07	1.02E-04	1.81E-05	3.23E-06	2.64E-05	6.48E-06	6.58E-06	1.35E-05	5.46E-07	2.24E-10	1.98E-05	1.92E-05
9	D35	60	Combination Short Haul Truck	13	0.00E+00	7.44E-06	5.18E-07	4.84E+00	2.63E-08	6.50E-03	5.52E-06	8.06E-03	6.92E-04	1.37E-04	4.73E-04	1.54E-04	1.55E-04	7.29E-04	1.62E-05	0.00E+00	3.19E-04	1.52E-03
9	D35	60	Combination Long Haul Truck	12	0.00E+00	6.68E-06	4.34E-07	4.54E+00	3.02E-08	7.01E-03	5.15E-06	7.99E-03	6.96E-04	1.18E-04	4.88E-04	1.33E-04	1.34E-04	6.93E-04	1.52E-05	0.00E+00	3.53E-04	1.51E-03
9	D36	60	Passenger Car	164	0.00E+00	2.45E-06	2.65E-07	8.20E+00	1.71E-05	6.33E-02	5.45E-06	3.34E-04	1.66E-03	2.55E-04	5.30E-04	3.42E-04	3.51E-04	3.42E-05	4.12E-05	1.13E-08	1.80E-04	5.22E-05
9	D36	60	Passenger Truck	274	0.00E+00	5.40E-06	5.71E-07	1.87E+01	3.38E-05	1.13E-01	1.11E-05	1.09E-03	3.05E-03	4.73E-04	1.06E-03	6.90E-04	7.07E-04	1.45E-04	9.31E-05	2.57E-08	3.52E-04	1.80E-04
9	D36	60	Single Unit Short Haul Truck	25	0.00E+00	7.27E-06	3.64E-07	4.63E+00	5.99E-06	8.97E-03	7.76E-06	3.47E-03	5.89E-04	1.07E-04	8.84E-04	2.18E-04	2.22E-04	4.64E-04	1.87E-05	7.71E-09	6.62E-04	6.50E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	3.18E-07	1.58E-08	1.98E-01	2.60E-07	3.81E-04	3.39E-07	1.50E-04	2.64E-05	4.73E-06	3.87E-05	9.49E-06	9.65E-06	1.97E-05	7.99E-07	3.28E-10	2.91E-05	2.81E-05
9	D36	60	Combination Short Haul Truck	18	0.00E+00	1.06E-05	7.39E-07	6.90E+00	3.76E-08	9.28E-03	7.87E-06	1.15E-02	9.88E-04	1.95E-04	6.75E-04	2.20E-04	2.21E-04	1.04E-03	2.31E-05	0.00E+00	4.54E-04	2.17E-03
9	D36	60	Combination Long Haul Truck	16	0.00E+00	9.52E-06	6.20E-07	6.47E+00	4.31E-08	9.99E-03	7.34E-06	1.14E-02	9.93E-04	1.68E-04	6.96E-04	1.89E-04	1.92E-04	9.89E-04	2.17E-05	0.00E+00	5.04E-04	2.15E-03
9	D37	60	Passenger Car	73	0.00E+00	1.10E-06	1.19E-07	3.68E+00	7.66E-06	2.84E-02	2.45E-06	1.50E-04	7.46E-04	1.14E-04	2.38E-04	1.53E-04	1.58E-04	1.53E-05	1.85E-05	5.09E-09	8.06E-05	2.34E-05
9	D37	60	Passenger Truck	123	0.00E+00	2.43E-06	2.56E-07	8.41E+00	1.52E-05	5.07E-02	5.00E-06	4.88E-04	1.37E-03	2.12E-04	4.75E-04	3.10E-04	3.17E-04	6.51E-05	4.18E-05	1.15E-08	1.58E-04	8.10E-05
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	6.00E-07	3.00E-08	3.82E-01	4.95E-07	7.40E-04	6.40E-07	2.86E-04	4.86E-05	8.81E-06	7.29E-05	1.80E-05	1.83E-05	3.83E-05	1.54E-06	6.36E-10	5.46E-05	5.36E-05
9	D37	60	Combination Short Haul Truck	4	0.00E+00	2.31E-06	1.61E-07	1.50E+00	8.17E-09	2.02E-03	1.71E-06	2.50E-03	2.15E-04	4.25E-05	1.47E-04	4.79E-05	4.79E-05	2.26E-04	5.02E-06	0.00E+00	9.87E-05	4.71E-04
9	D37	60	Combination Long Haul Truck	4	0.00E+00	2.07E-06	1.35E-07	1.41E+00	9.37E-09	2.17E-03	1.60E-06	2.48E-03	2.16E-04	3.66E-05	1.51E-04	4.11E-05	4.16E-05	2.15E-04	4.71E-06	0.00E+00	1.10E-04	4.67E-04
9	D38	60	Passenger Car	261	0.00E+00	3.91E-06	4.23E-07	1.31E+01	2.72E-05	1.01E-01	8.69E-06	5.33E-04	2.65E-03	4.07E-04	8.46E-04	5.46E-04	5.60E-04	5.46E-05	6.57E-05	1.81E-08	2.86E-04	8.32E-05
9	D38	60	Passenger Truck	437	0.00E+00	8.62E-06	9.11E-07	2.99E+01	5.39E-05	1.80E-01	1.78E-05	1.74E-03	4.86E-03	7.55E-04	1.69E-03	1.10E-03	1.13E-03	2.31E-04	1.49E-04	4.10E-08	5.62E-04	2.88E-04
9	D38	60	Single Unit Short Haul Truck	8	0.00E+00	2.32E-06	1.16E-07	1.48E+00	1.91E-06	2.86E-03	2.47E-06	1.10E-03	1.88E-04	3.40E-05	2.82E-04	6.95E-05	7.06E-05	1.48E-04	5.96E-06	2.46E-09	2.11E-04	2.07E-04
9	D38	60	Single Unit Long Haul Truck	18	0.00E+00	1.07E-05	7.48E-07	6.99E+00	3.80E-08	9.39E-03	7.97E-06	1.16E-02	1.00E-03	1.98E-04	6.83E-04	2.23E-04	2.23E-04	1.05E-03	2.34E-05	0.00E+00	4.60E-04	2.19E-03
9	D38	60	Combination Long Haul Truck	17	0.00E+00	9.64E-06	6.27E-07	6.55E+00	4.36E-08	1.01E-02	7.43E-06	1.15E-02	1.01E-03	1.71E-04	7.04E-04	1.91E-04	1.94E-04	1.00E-03	2.19E-05	0.00E+00	5.10E-04	2.17E-03
9	D39	60	Passenger Car	103	0.00E+00	1.54E-06	1.67E-07	5.15E+00	1.07E-05	3.98E-02	3.42E-06	2.10E-04	1.04E-03	1.60E-04	3.33E-04	2.15E-04	2.20E-04	2.15E-05	2.59E-05	7.12E-09	1.13E-04	3.28E-05
9	D39	60	Passenger Truck	172	0.00E+00	3.40E-06	3.59E-07	1.18E+01	2.12E-05	7.09E-02	7.00E-06	6.83E-04	1.91E-03	2.97E-04	6.65E-04	4.34E-04	4.44E-04	9.11E-05	5.85E-05	1.62E-08	2.21E-04	1.13E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.46E-07	1.23E-08	1.57E-01	2.03E-07	3.03E-04	2.62E-07	1.17E-04	1.99E-05	3.61E-06	2.99E-05	7.37E-06	7.49E-06	1.57E-05	6.32E-07	2.60E-10	2.24E-05	2.19E-05
9	D39	60	Combination Short Haul Truck	2	0.00E+00	1.15E-06	7.98E-08	7.45E-01	4.06E-09	1.00E-03	8.50E-07	1.24E-03	1.07E-04	2.11E-05	7.29E-05	2.38E-05	2.38E-05	1.12E-04	2.49E-06	0.00E+00	4.91E-05	2.34E-04
9	D39	60	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.69E-08	6.99E-01	4.65E-09	1.08E-03	7.93E-07	1.23E-03	1.07E-04	1.82E-05	7.51E-05	2.04E-05	2.07E-05	1.07E-04	2.34E-06	0.00E+00	5.44E-05	2.32E-04
9	D40	60	Passenger Car	350	0.00E+00	5.25E-06	5.67E-07	1.76E+01	3.65E-05	1.36E-01	1.17E-05	7.14E-04	3.55E-03	5.46E-04	1.14E-03	7.32E-04	7.51E-04	7.32E-05	8.81E-05	2.43E-08	3.84E-04	1.12E-04
9	D40	60	Passenger Truck	586	0.00E+00	1.16E-05	1.22E-06	4.01E+01	7.23E-05	2.42E-01	2.38E-05	2.33E-03	6.52E-03	1.01E-03	2.27E-03	1.48E-03	1.51E-03	3.10E-04	1.99E-04	5.51E-08	7.54E-04	3.86E-04
9	D40	60	Single Unit Short Haul Truck	21	0.00E+00	6.25E-06	3.13E-07	3.98E+00	5.15E-06	7.71E-03	6.67E-06	2.98E-03	5.06E-04	9.18E-05	7.60E-04	1.88E-04	1.91E-04	3.99E-04	1.61E-05	6.63E-09	5.69E-04	5.58E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.36E-08	1.70E-01	2.24E-07	3.27E-04	2.92E-07	1.29E-04	2.27E-05	4.06E-06	3.33E-05	8.16E-06	8.29E-06	1.70E-05	6.87E-07	2.82E-10	2.50E-05	2.42E-05
9	D40	60	Combination Short Haul Truck	19	0.00E+00	1.14E-05	7.94E-07	7.41E+00	4.04E-08	9.97E-03	8.46E-06	1.24E-02	1.06E-03	2.10E-04	7.25E-04	2.37E-04	2.37E-04	1.12E-03	2.48E-05	0.00E+00	4.88E-04	2.33E-03
9	D40	60	Combination Long Haul Truck	18	0.00E+00	1.02E-05	6.66E-07	6.95E+00	4.63E-08	1.07E-02	7.89E-06	1.22E-02	1.07E-03	1.81E-04	7.47E-04	2.03E-04	2.06E-04	1.06E-03	2.33E-05	0.00E+00	5.42E-04	2.31E-03
9	D41	60	Passenger Car	88	0.00E+00	1.31E-06	1.42E-07	4.40E+00	9.14E-06	3.39E-02	2.92E-06	1.79E-04	8.90E-04	1.37E-04	2.84E-04	1.83E-04	1.88E-04	1.83E-05	2.21E-05	6.07E-09	9.62E-05	2.79E-05
9	D41	60	Passenger Truck	147	0.00E+00	2.90E-06	3.06E-07	1.00E+01	1.81E-05	6.05E-02	5.97E-06	5.83E-04	1.63E-03	2.53E-04	5.68E-04	3.70E-04	3.79E-04	7.77E-05	4.99E-05	1.38E-08	1.89E-04	9.66E-05
9	D41	60	Single Unit Short Haul Truck	4	0.00E+00	1.23E-06	6.14E-08	7.83E-01	1.01E-06	1.51E-03	1.31E-06	5.86E-04	9.95E-05	1.80E-05	1.49E-04	3.68E-05	3.75E-05	7.83E-05	3.16E-06	1.30E-09	1.12E-04	1.10E-04
9	D41	60	Combination Short Haul Truck	3	0.00E+00	1.71E-06	1.19E-07	1.11E+00	6.04E-09	1.49E-03	1.27E-06	1.85E-03	1.59E-04	3.14E-05	1.09E-04	3.54E-05	3.55E-05	1.67E-04	3.71E-06	0.00E+00	7.31E-05	3.48E-04
9	D41	60	Combination Long Haul Truck	3	0.00E+00	1.53E-06	9.96E-08	1.04E+00	6.93E-09	1.61E-03	1.18E-06	1.83E-03	1.60E-04	2.71E-05	1.12E-04	3.04E-05	3.08E-05	1.59E-04	3.48E-06	0.00E+00	8.11E-05	3.45E-04
9	D42	60	Passenger Car	82	0.00E+00	1.23E-06	1.33E-07	4.13E+00	8.58E-06	3.18E-02	2.74E-06	1.68E-04	8.35E-04	1.28E-04	2.67E-04	1.72E-04	1.76E-04	1.72E-05	2.07E-05	5.70E-09	9.03E-05	2.62E-05
9	D42	60	Passenger Truck	138	0.00E+00	2.72E-06	2.87E-07	9.41E+00	1.70E-05	5.68E-02	5.60E-06	5.47E-04	1.53E-03	2.38E-04	5.33E-04	3.47E-04	3.55E-04	7.29E-05	4.68E-05	1.29E-08	1.77E-04	9.07E-05
9	D42	60	Single Unit Short Haul Truck	5	0.00E+00	1.39E-06	6.94E-08	8.84E-01	1.14E-06	1.71E-03	1.48E-06	6.62E-04	1.12E-04	2.04E-05	1.69E-04	4.16E-05	4.23E-05	8.85E-05	3.57E-06	1.47E-09	1.26E-04	1.24E-04
9	D42	60	Combination Short Haul Truck	8	0.00E+00	4.84E-06	3.38E-07	3.15E+00	1.72E-08	4.24E-03	3.59E-06	5.25E-03	4.51E-04	8.93E-05	3.08E-04	1.01E-04	1.01E-04	4.75E-04	1.05E-05	0.00E+00	2.07E-04	9.89E-04
9	D42	60	Combination Long Haul Truck	8	0.00E+00	4.35E-06	2.83E-07	2.95E+00	1.97E-08	4.56E-03	3.35E-06	5.21E-03	4.53E-04	7.69E-05	3.18E-04	8.64E-05	8.75E-05	4.51E-04	9.89E-06	0.00E+00	2.30E-04	9.81E-04
9	D43	60	Passenger Car	344	0.00E+00	5.15E-06	5.57E-07	1.72E+01	3.58E-05	1.33E-01	1.14E-05	7.01E-04	3.49E-03	5.35E-04	1.11E-03	7.18E-04	7.37E-04	7.18E-05	8.64E-05	2.38E-08	3.77E-04	1.10E-04
9	D43	60	Passenger Truck	575	0.00E+00	1.14E-05	1.20E-06	3.93E+01	7.10E-05	2.37E-01	2.34E-05	2.28E-03	6.40E-03	9.93E-04	2.22E-03	1.45E-03	1.48E-03	3.05E-04	1.95E-04	5.40E-08	7.40E-04	3.79E-04
9	D43	60	Combination Short Haul Truck	1	0.00E+00	8.30E-07	5.78E-08	5.40E-01	2.94E-09	7.26E-04	6.16E-07	9.00E-04	7.73E-05	1.53E-05	5.28E-05	1.72E-05	1.73E-05	8.14E-05	1.81E-06	0.00E+00	3.56E-05	1.70E-04
9	D43	60	Combination Long Haul Truck	1	0.00E+00	7.45E-07	4.85E-08	5.06E-01	3.37E-09	7.82E-04	5.74E-07	8.92E-04	7.77E-05	1.32E-05	5.44E-05	1.48E-05	1.50E-05	7.74E-05	1.70E-06	0.00E+00	3.94E-05	1.68E-04
9	D44	60	Passenger Car	160	0.00E+00	2.40E-06	2.60E-07	8.04E+00	1.67E-05	6.21E-02	5.34E-06	3.27E-04	1.63E-03	2.50E-04	5.20E-04	3.35E-04	3.44E-04	3.35E-05	4.03E-05	1.11E-08	1.76E-04	5.11E-05
9	D44	60	Passenger Truck	268	0.00E+00	5.30E-06	5.59E-07	1.83E+01	3.31E-05	1.11E-01	1.09E-05	1.07E-03	2.98E-03	4.63E-04	1.04E-03	6.76E-04	6.92E-04	1.42E-04	9.12E-05	2.52E-08	3.45E-04	1.77E-04
9	D44	60	Single Unit Short Haul Truck	21	0.00E+00	6.18E-06	3.09E-07	3.94E+00	5.10E-06	7.63E-03	6.60E-06	2.95E-03	5.01E-04	9.08E-05	7.51E-04	1.85E-04	1.89E-04	3.94E-04	1.59E-05	6.56E-09	5.63E-04	5.52E-04
9	D44	60	Single Unit Long Haul Truck	1	0.00E+00	2.70E-07	1.34E-08	1.68E-01	2.21E-07	3.24E-04	2.88E-07	1.27E-04	2.25E-05	4.02E-06	3.29E-05	8.07E-06	8.20E-06	1.68E-05	6.80E-07	2.79E-10	2.47E-05	2.39E-05
9	D44	60	Combination Short Haul Truck	12	0.00E+00	7.28E-06	5.08E-07	4.74E+00	2.58E-08	6.37E-03	5.40E-06	7.90E-03	6.78E-04	1.34E-04	4.63E-04	1.51E-04	1.51E-04	7.14E-04	1.59E-05	0.00E+00	3.12E-04	1.49E-03
9	D44	60	Combination Long Haul Truck	11	0.00E+00	6.54E-06	4.25E-07	4.44E+00	2.96E-08	6.86E-03	5.04E-06	7.83E-03	6.82E-04	1.16E-04	4.78E-04	1.30E-04	1.32E-04	6.79E-04	1.49E-05	0.00E+00	3.46E-04	1.47E-03
9	D45	60	Passenger Car	463	0.00E+00	6.93E-06	7.50E-07	2.32E+01	4.82E-05	1.79E-01	1.54E-05	9.44E-04	4.70E-03	7.21E-04	1.50E-03	9.67E-04	9.92E-04	9.67E-05	1.16E-04	3.21E-08	5.08E-04	1.47E-04
9	D45	60	Passenger Truck	775	0.00E+

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D49	60	Passenger Car	782	0.00E+00	1.17E-05	1.27E-06	3.92E+01	8.16E-05	3.03E-01	2.61E-05	1.60E-03	7.94E-03	1.22E-03	2.54E-03	1.63E-03	1.68E-03	1.63E-04	1.97E-04	5.42E-08	8.58E-04	2.49E-04
9	D49	60	Passenger Truck	1310	0.00E+00	2.58E-05	2.73E-06	8.95E+01	1.62E-04	5.40E-01	5.33E-05	5.20E-03	1.46E-02	2.26E-03	5.06E-03	3.30E-03	3.38E-03	6.94E-04	4.45E-04	1.23E-07	1.68E-03	8.62E-04
9	D49	60	Single Unit Short Haul Truck	164	0.00E+00	4.82E-05	2.41E-06	3.07E+01	3.97E-05	5.94E-02	5.14E-05	2.30E-02	3.90E-03	7.08E-04	5.86E-03	1.45E-03	1.47E-03	3.07E-03	1.24E-04	5.11E-08	4.39E-03	4.30E-03
9	D49	60	Single Unit Long Haul Truck	7	0.00E+00	2.10E-06	1.05E-07	1.31E+00	1.73E-06	2.52E-03	2.25E-06	9.93E-04	1.75E-04	3.13E-05	2.57E-04	6.29E-05	6.39E-05	1.31E-04	5.30E-06	2.17E-09	1.93E-04	1.86E-04
9	D49	60	Combination Short Haul Truck	91	0.00E+00	5.37E-05	3.74E-06	3.49E+01	1.90E-07	4.69E-02	3.98E-05	5.82E-02	5.00E-03	9.89E-04	3.41E-03	1.11E-03	1.12E-03	5.26E-03	1.17E-04	0.00E+00	2.30E-03	1.10E-02
9	D49	60	Combination Long Haul Truck	83	0.00E+00	4.82E-05	3.14E-06	3.27E+01	2.18E-07	5.06E-02	3.71E-05	5.77E-02	5.02E-03	8.52E-04	3.52E-03	9.57E-04	9.69E-04	5.00E-03	1.10E-04	0.00E+00	2.55E-03	1.09E-02
9	D50	60	Passenger Car	986	0.00E+00	1.48E-05	1.60E-06	4.94E+01	1.03E-04	3.82E-01	3.28E-05	2.01E-03	1.00E-02	1.54E-03	3.20E-03	2.06E-03	2.11E-03	2.06E-04	2.48E-04	6.83E-08	1.08E-03	3.14E-04
9	D50	60	Passenger Truck	1652	0.00E+00	3.26E-05	3.44E-06	1.13E+02	2.04E-04	6.81E-01	6.71E-05	6.56E-03	1.84E-02	2.85E-03	6.38E-03	4.16E-03	4.26E-03	8.74E-04	5.61E-04	1.55E-07	2.12E-03	1.09E-03
9	D50	60	Single Unit Short Haul Truck	161	0.00E+00	4.73E-05	2.37E-06	3.02E+01	3.90E-05	5.84E-02	5.05E-05	2.26E-02	3.84E-03	6.95E-04	5.75E-03	1.42E-03	1.44E-03	3.02E-03	1.22E-04	5.02E-08	4.31E-03	4.23E-03
9	D50	60	Single Unit Long Haul Truck	7	0.00E+00	2.07E-06	1.03E-07	1.29E+00	1.70E-06	2.48E-03	2.21E-06	9.76E-04	1.72E-04	3.08E-05	2.52E-04	6.18E-05	6.28E-05	1.29E-04	5.20E-06	2.13E-09	1.89E-04	1.83E-04
9	D50	60	Combination Short Haul Truck	89	0.00E+00	5.23E-05	3.64E-06	3.40E+01	1.85E-07	4.57E-02	3.88E-05	5.67E-02	4.87E-03	9.63E-04	3.33E-03	1.09E-03	1.09E-03	5.13E-03	1.14E-04	0.00E+00	2.24E-03	1.07E-02
9	D50	60	Combination Long Haul Truck	81	0.00E+00	4.69E-05	3.05E-06	3.19E+01	2.12E-07	4.92E-02	3.62E-05	5.62E-02	4.89E-03	8.30E-04	3.43E-03	9.32E-04	9.44E-04	4.87E-03	1.07E-04	0.00E+00	2.48E-03	1.06E-02
9	D51	60	Passenger Car	179	0.00E+00	2.68E-06	2.90E-07	8.98E+00	1.87E-05	6.93E-02	5.96E-06	3.65E-04	1.82E-03	2.79E-04	5.80E-04	3.74E-04	3.84E-04	3.74E-05	4.50E-05	1.24E-08	1.96E-04	5.71E-05
9	D51	60	Passenger Truck	300	0.00E+00	5.92E-06	6.25E-07	2.05E+01	3.70E-05	1.24E-01	1.22E-05	1.19E-03	3.33E-03	5.18E-04	1.16E-03	7.55E-04	7.74E-04	1.59E-04	1.02E-04	2.82E-08	3.86E-04	1.97E-04
9	D51	60	Single Unit Short Haul Truck	22	0.00E+00	6.47E-06	3.23E-07	4.12E+00	5.33E-06	7.98E-03	6.90E-06	3.08E-03	5.24E-04	9.50E-05	7.86E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.86E-09	5.89E-04	5.78E-04
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.76E-01	2.32E-07	3.39E-04	3.02E-07	1.33E-04	2.35E-05	4.20E-06	3.44E-05	8.44E-06	8.58E-06	1.76E-05	7.11E-07	2.92E-10	2.59E-05	2.50E-05
9	D51	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.40E+00	2.40E-08	5.92E-03	5.02E-06	7.34E-03	6.30E-04	1.25E-04	4.31E-04	1.40E-04	1.41E-04	6.64E-04	1.47E-05	0.00E+00	2.90E-04	1.38E-03
9	D51	60	Combination Long Haul Truck	10	0.00E+00	6.08E-06	3.95E-07	4.13E+00	2.75E-08	6.38E-03	4.68E-06	7.27E-03	6.34E-04	1.07E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
9	D52	60	Passenger Car	192	0.00E+00	2.88E-06	3.11E-07	9.64E+00	2.00E-05	7.44E-02	6.40E-06	3.92E-04	1.95E-03	2.99E-04	6.23E-04	4.02E-04	4.12E-04	4.02E-05	4.83E-05	1.33E-08	2.11E-04	6.13E-05
9	D52	60	Passenger Truck	322	0.00E+00	6.35E-06	6.70E-07	2.20E+01	3.97E-05	1.33E-01	1.31E-05	1.28E-03	3.58E-03	5.55E-04	1.24E-03	8.11E-04	8.30E-04	1.70E-04	1.09E-04	3.02E-08	4.14E-04	2.12E-04
9	D52	60	Single Unit Short Haul Truck	15	0.00E+00	4.50E-06	2.25E-07	2.87E+00	3.71E-06	5.55E-03	4.80E-06	2.14E-03	3.64E-04	6.61E-05	5.47E-04	1.35E-04	1.37E-04	2.87E-04	1.16E-05	4.77E-09	4.10E-04	4.02E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.78E-09	1.22E-01	1.61E-07	2.36E-04	2.10E-07	9.28E-05	1.64E-05	2.92E-06	2.40E-05	5.87E-06	5.97E-06	1.22E-05	4.95E-07	2.03E-10	1.80E-05	1.74E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	4.92E-06	3.43E-07	3.20E+00	1.74E-08	4.31E-03	3.65E-06	5.34E-03	4.58E-04	9.07E-05	3.13E-04	1.02E-04	1.02E-04	4.83E-04	1.07E-05	0.00E+00	2.11E-04	1.01E-03
9	D52	60	Combination Long Haul Truck	8	0.00E+00	4.42E-06	2.88E-07	3.00E+00	2.00E-08	4.64E-03	3.41E-06	5.29E-03	4.61E-04	7.82E-05	3.23E-04	8.78E-05	8.89E-05	4.59E-04	1.01E-05	0.00E+00	2.34E-04	9.97E-04
9	D53	60	Passenger Car	263	0.00E+00	3.94E-06	4.26E-07	1.32E+01	2.74E-05	1.02E-01	8.76E-06	5.37E-04	2.67E-03	4.10E-04	8.53E-04	5.50E-04	5.64E-04	5.50E-05	6.62E-05	1.82E-08	2.89E-04	8.39E-05
9	D53	60	Passenger Truck	441	0.00E+00	8.69E-06	9.18E-07	3.01E+01	5.44E-05	1.82E-01	1.79E-05	1.75E-03	4.90E-03	7.61E-04	1.70E-03	1.11E-03	1.14E-03	2.33E-04	1.50E-04	4.14E-08	5.67E-04	2.90E-04
9	D53	60	Single Unit Short Haul Truck	29	0.00E+00	8.43E-06	4.22E-07	5.37E+00	6.95E-06	1.04E-02	9.00E-06	4.02E-03	6.83E-04	1.24E-04	1.03E-03	2.53E-04	2.57E-04	5.38E-04	2.17E-05	8.94E-09	7.68E-04	7.53E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	3.68E-07	1.83E-08	2.29E-01	3.02E-07	4.42E-04	3.93E-07	1.74E-04	3.07E-05	5.48E-06	4.49E-05	1.10E-05	1.12E-05	2.29E-05	9.27E-07	3.80E-10	3.37E-05	3.26E-05
9	D53	60	Combination Short Haul Truck	16	0.00E+00	9.54E-06	6.65E-07	6.20E+00	3.38E-08	8.34E-03	7.08E-06	1.03E-02	8.88E-04	1.76E-04	6.07E-04	1.98E-04	1.98E-04	9.35E-04	2.08E-05	0.00E+00	4.09E-04	1.95E-03
9	D53	60	Combination Long Haul Truck	15	0.00E+00	8.56E-06	5.57E-07	5.82E+00	3.87E-08	8.99E-03	6.60E-06	1.02E-02	8.93E-04	1.51E-04	6.26E-04	1.70E-04	1.72E-04	8.89E-04	1.95E-05	0.00E+00	4.53E-04	1.93E-03
9	D54	60	Passenger Car	295	0.00E+00	4.42E-06	4.78E-07	1.48E+01	3.07E-05	1.14E-01	9.82E-06	6.02E-04	2.99E-03	4.60E-04	9.56E-04	6.16E-04	6.33E-04	6.16E-05	7.42E-05	2.04E-08	3.24E-04	9.40E-05
9	D54	60	Passenger Truck	494	0.00E+00	9.74E-06	1.03E-06	3.38E+01	6.09E-05	2.04E-01	2.01E-05	1.96E-03	5.49E-03	8.53E-04	1.91E-03	1.24E-03	1.27E-03	2.62E-04	1.68E-04	4.64E-08	6.35E-04	3.25E-04
9	D54	60	Single Unit Short Haul Truck	30	0.00E+00	8.72E-06	4.36E-07	5.55E+00	7.19E-06	1.08E-02	9.30E-06	4.16E-03	7.06E-04	1.28E-04	1.06E-03	2.61E-04	2.66E-04	5.56E-04	2.24E-05	9.24E-09	7.94E-04	7.79E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	3.81E-07	1.89E-08	2.37E-01	3.12E-07	4.56E-04	4.07E-07	1.80E-04	3.17E-05	5.67E-06	4.64E-05	1.14E-05	1.16E-05	2.37E-05	9.58E-07	3.93E-10	3.48E-05	3.37E-05
9	D54	60	Combination Short Haul Truck	13	0.00E+00	7.69E-06	5.36E-07	5.00E+00	2.72E-08	6.73E-03	5.71E-06	8.34E-03	7.16E-04	1.42E-04	4.89E-04	1.60E-04	1.60E-04	7.54E-04	1.68E-05	0.00E+00	3.29E-04	1.57E-03
9	D54	60	Combination Long Haul Truck	12	0.00E+00	6.90E-06	4.49E-07	4.69E+00	3.12E-08	7.25E-03	5.32E-06	8.27E-03	7.20E-04	1.22E-04	5.04E-04	1.37E-04	1.39E-04	7.17E-04	1.57E-05	0.00E+00	3.66E-04	1.56E-03
11	D55	80	Passenger Car	614	0.00E+00	7.47E-06	8.08E-07	2.86E+01	5.20E-05	1.99E-01	1.66E-05	1.26E-03	3.38E-03	5.87E-04	1.62E-03	1.04E-03	1.07E-03	9.63E-05	1.44E-04	4.04E-08	5.47E-04	1.97E-04
11	D55	80	Passenger Truck	1029	0.00E+00	1.60E-05	1.70E-06	6.61E+01	1.03E-04	3.66E-01	3.36E-05	3.75E-03	6.06E-03	1.08E-03	3.22E-03	2.09E-03	2.14E-03	4.62E-04	3.30E-04	9.00E-08	1.08E-03	6.12E-04
11	D55	80	Single Unit Short Haul Truck	95	0.00E+00	1.77E-05	8.81E-07	1.74E+01	1.43E-05	3.49E-02	1.89E-05	9.09E-03	1.11E-03	2.52E-04	2.16E-03	5.26E-04	5.34E-04	1.75E-03	7.02E-05	2.78E-08	1.63E-03	1.70E-03
11	D55	80	Single Unit Long Haul Truck	4	0.00E+00	7.72E-07	3.80E-08	7.37E-01	6.10E-07	1.45E-03	8.21E-07	3.89E-04	5.09E-05	1.11E-05	9.42E-05	2.26E-05	2.30E-05	7.36E-05	2.97E-06	1.16E-09	7.12E-05	7.28E-05
11	D55	80	Combination Short Haul Truck	58	0.00E+00	2.57E-05	1.84E-06	2.13E+01	8.11E-08	2.28E-02	1.88E-05	2.64E-02	1.56E-03	3.83E-04	1.53E-03	5.43E-04	5.39E-04	3.20E-03	7.11E-05	0.00E+00	9.92E-04	4.97E-03
11	D55	80	Combination Long Haul Truck	53	0.00E+00	2.30E-05	1.55E-06	1.96E+01	9.37E-08	2.36E-02	1.74E-05	2.56E-02	1.52E-03	3.06E-04	1.58E-03	4.67E-04	4.70E-04	3.00E-03	6.58E-05	0.00E+00	1.11E-03	4.82E-03
11	D56	80	Passenger Car	355	0.00E+00	4.31E-06	4.67E-07	1.65E+01	3.00E-05	1.15E-01	9.59E-06	7.29E-04	1.95E-03	3.39E-04	9.34E-04	6.02E-04	6.18E-04	5.56E-05	8.33E-05	2.33E-08	3.16E-04	1.14E-04
11	D56	80	Passenger Truck	594	0.00E+00	9.26E-06	9.83E-07	3.82E+01	5.94E-05	2.11E-01	1.94E-05	2.16E-03	3.50E-03	6.21E-04	1.86E-03	1.21E-03	1.24E-03	2.67E-04	1.91E-04	5.20E-08	6.22E-04	3.54E-04
11	D56	80	Single Unit Short Haul Truck	73	0.00E+00	1.36E-05	6.78E-07	1.34E+01	1.10E-05	2.68E-02	1.45E-05	6.99E-03	8.57E-04	1.94E-04	1.66E-03	4.04E-04	4.11E-04	1.34E-03	5.39E-05	2.14E-08	1.25E-03	1.31E-03
11	D56	80	Single Unit Long Haul Truck	3	0.00E+00	5.93E-07	2.92E-08	5.67E-01	4.69E-07	1.12E-03	6.31E-07	2.99E-04	3.92E-05	8.56E-06	7.25E-05	1.74E-05	1.77E-05	5.66E-05	2.29E-06	8.92E-10	5.48E-05	5.59E-05
11	D56	80	Combination Short Haul Truck	41	0.00E+00	1.78E-05	1.27E-06	1.47E+01	5.62E-08	1.58E-02	1.30E-05	1.83E-02	1.08E-03	2.66E-04	1.06E-03	3.76E-04	3.73E-04	2.22E-03	4.93E-05	0.00E+00	6.88E-04	3.44E-03
11	D56	80	Combination Long Haul Truck	37	0.00E+00	1.60E-05	1.07E-06	1.36E+01	6.50E-08	1.64E-02	1.21E-05	1.77E-02	1.05E-03	2.12E-04	1.10E-03	3.24E-04	3.26E-04	2.08E-03	4.56E-05	0.00E+00	7.70E-04	3.34E-03
11	D57	80	Passenger Car	712	0.00E+00	8.66E-06	9.37E-07	3.32E+01	6.03E-05	2.30E-01	1.93E-05	1.46E-03	3.92E-03	6.81E-04	1.87E-03	1.21E-03	1.24E-03	1.12E-04	1.67E-04	4.68E-08	6.35E-04	2.29E-04
11	D57	80	Passenger Truck	1193	0.00E+00	1.86E-05	1.97E-06	7.66E+01	1.19E-04	4.24E-01	3.90E-05	4.35E-03	7.02E-03	1.25E-03	3.73E-03	2.42E-03	2.48E-03	5.36E-04	3.83E-04	1.04E-07	1.25E-03	7.10E-04
11	D57	80	Single Unit Short Haul Truck	115	0.00E+00	2.16E-05	1.07E-06	2.12E+01	1.74E-05	4.24E-02	2.30E-05	1.11E-02	1.36E-03	3.07E-04	2.63E-03	6.39E-04	6.50E-04	2.12E-03	8.53E-05	3.39E-08	1.98E-03	2.07E-03
11	D57	80	Single Unit Long Haul Truck	5	0.00E+00	9.39E-07	4.63E-08	8.96E-01	7.42E-07	1.77E-03	9.98E-07	4.73E-04	6.20E-05	1.35E-05	1.15E-04	2.75E-05	2.80E-05	8.95E-05	3.62E-06	1.41E-09	8.66E-05	8.85E-05
11	D57	80	Combination Short Haul Truck	68	0.00E+00	2.99E-05	2.14E-06	2.47E+01	9.42E-08	2.64E-02	2.18E-05	3.06E-02	1.81E-03	4.45E-04	1.78E-03	6.30E-04	6.26E-04	3.72E-03	8.26E-05	0.00E+00	1.15E-03	5.77E-03
11	D57	80	Combination Long Haul Truck	62	0.00E+00	2.67E-05	1.80E-06	2.28E+01	1.09E-07	2.74E-02	2.03E-05	2.97E-02	1.77E-03	3.56E-04	1.84E-03	5.42E-04	5.46E-04	3.49E-03	7.64E-05	0.00E+00	1.29E-03	5.60E-03
11	D58	80	Passenger Car	630	0.00E+00	7.67E-06	8.30E-07	2.94E+01	5.34E-05	2.04E-01	1.71E-05	1.30E-03	3.47E-03	6.03E-04	1.66E-03	1.07E-03	1.10E-03	9.88E-05	1.48E-04	4.15E-08	5.62E-04	2.02E-04
11	D58	80	Passenger Truck	1056	0.00E+00	1.65E-05	1.75E-06	6.79E+01	1.05E-04	3.75E-01	3.45E-05	3.85E-03	6.22E-03	1.10E-03	3.30E-03	2.14E-03	2.20E-03	4.74E-04	3.39E-04	9.23E-08	1.11E-03	6.29E-04
11	D58	80	Single Unit Short Haul Truck	73	0.00E+00	1.37E-05	6.81E-07	1.34E+01	1.10E-05	2.69E-02	1.46E-05	7.02E-03	8.61E-04	1.95E-04	1.67E-03	4.06E-04	4.13E-04	1.35E-03	5.42E-05	2.15E-08	1.26E-03	1.31E-03
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	5.96E-07	2.94E-08	5.69E-01	4.71E-07	1.12E-03	6.34E-07	3.00E-04	3.93E-05	8.60E-06	7.28E-05	1.75E-05	1.78E-05	5.68E-05	2.30E-06	8.96E-10	5.50E-05	5.62E-05
11	D58	80	Combination Short Haul Truck	44	0.00E+00	1.95E-05	1.39E-06	1.61E+01	6.15E-08	1.73E-02	1.42E-05	2.00E-02	1.18E-03	2.91E-04	1.16E-03	4.12E-04	4.08E-04	2.43E-03	5.40E-05	0.00E+00	7.53E-04	3.77E-03
11	D58	80	Combination Long Haul Truck	40	0.00E+00	1.75E-05	1.17E-06	1.49E+01	7.11E-08	1.79E-02	1.32E-05	1.94E-02	1.15E-03	2.32E-04	1.20E-03	3.54E-04	3.56E-04	2.28E-03	4.99E-05	0.00E+00	8.43E-04	3.66E-03
11	D59	80	Passenger Car	461	0.00E+00	5.61E-06	6.07E-07	2.15E+01	3.90E-05	1.49E-01	1.25E-05	9.47E-04	2.54E-03	4.41E-04	1.21E-03	7.82E-04	8.03E-04	7.22E-05	1.08E-04	3.03E-08	4.11E-04	1.48E-04
11	D59	80	Passenger Truck	772	0.00E+00	1.20E-05	1.28E-06	4.96E+01	7.71E-05	2.74E-01	2.52E-05	2.81E-03	4.55E-03	8.07E-04	2.42E-03	1.57E-03	1.61E-03	3.47E-04	2.48E-04	6.75E-08	8.08E-04	4.60E-04
11	D59	80	Single Unit Short Haul Truck	98	0.00E+00	1.84E-05	9.13E-07	1.80E+01	1.48E-05	3.61E-02	1.96E-05	9.42E-03	1.16E-03	2.61E-04	2.24E-03	5.45E-04	5.54E-04	1.81E-03	7.27E-05	2.88E-08	1.68E-03	1.76E-03
11	D59	80	Single Unit Long Haul Truck	4	0.00E+00	8.00E-07	3.94E-08	7.63E-01	6.32E-07	1.51E-03	8.51E-07	4.03E-04	5.28E-05	1.15E-05	9.76E-05	2.34E-05	2.38E-05	7.62E-05	3.08E-06	1.20E-09	7.38E-05	7.54E-05
11	D59	80	Combination Short Haul Truck	50	0.00E+00	2.20E-05	1.57E-06	1.81E+01	6.93E-08	1.94E-02	1.60E-05	2.25E-02	1.33E-03	3.27E-04	1.31E-03	4.63E-04	4.60E-04	2.74E-03	6.08E-05	0.00E+00	8.47E-04	4.24E-03
11	D59	80	Combination Long Haul Truck	46	0.00E+00	1.97E-05	1.32E-06	1.68E+01	8.00E-08	2.01E-02	1.49E-05	2.18E-02	1.30E-03	2.61E-04	1.35E-03	3.99E-04	4.01E-04	2.56E-03	5.62E-05	0.00E+00	9.49E-04	4.12E-03
11	D60	80	Passenger Car	543	0.00E+00	6.61E-06	7.15E-07	2.53E+01	4.60E-05	1.76E-01	1.47E-05	1.12E-03	2.99E-03	5.19E-04	1.43E-03	9.21E-04	9.46E-04	8.51E-05	1.27E-04	3.57E-08	4.84E-04	1.74E-04
11	D60	80	Passenger Truck	909	0.00E+00	1.42E-05	1.50E-06	5.84E+01	9.09E-05	3.23E-01	2.97E-05	3.31E-03	5.36E-03	9.51E-04	2.84E-03	1.85E-03	1.89E-03	4.08E-04	2.92E-04	7.95E-08	9.52E-04	5.41E-04
11	D60	80	Single Unit Short Haul Truck	58	0.00E+00	1.08E-05	5.37E-07	1.06E+01	8.70E-06	2.13E-02	1.15E-05	5.54E-03	6.80E-04	1.54E-04	1.32E-03	3.20E-04	3.26E-04	1.06E-03	4.28E-05	1.70E-08	9.91E-04	1.04E-03
11	D60	80	Single Unit Long Haul Truck	3	0.00E+00	4.70E-07	2.32E-08	4.49E-01	3.72E-07	8.85E-04	5.00E-07	2.37E-04	3.10E-05	6.78E-06	5.74E-05	1.38E-05	1.40E-05	4.48E-05	1.81E-06	7.07E-10	4.34E-05	4.43E-05
11	D60	80	Combination Short Haul Truck	27	0.00E+00	1.18E-05	8.44E-07	9.75E+00	3.72E-08	1.04E-02	8.62E-06	1.21E-02	7.14E-04	1.76E-04	7.03E-04	2.49E-04	2.47E-04	1.47E-03	3.27E-05	0.00E+00	4.55E-04	2.28E-03
11	D60	80	Combination Long Haul Truck	24	0.00E+00	1.06E-05	7.10E-07	9.02E+00	4.30E-08	1.08E-02	8.01E-06	1.17E-02	6.98E-04	1.41E-04	7.26E-04	2.14E-04	2.16E-04	1.38E-03	3.02E-05	0.00E+00	5.10E-04	2.21E-03
11	D61	80	Passenger Car	55	0.00E+00	6.69E-07	7.23E-08	2.56E+00	4.65E-06	1.78E-02	1.49E-06	1.13E-04	3.02E-04	5.25E-05	1.45E-04	9.33E-05	9.57E-05	8.61E-06	1.29E-05	3.62E-09	4.90E-05	1.76E-05
11	D61	80	Passenger Truck	92	0.00E+00	1.44E-06	1.52E-07	5.92E+00	9.20E-06	3.27E-02	3.01E-06	3.35E-04	5.42E-04	9.62E-05	2.88E-04	1.87E-04	1.92E-04	4.13E-05	2.96E-05	8.05E-09	9.64E-05	5.48E-05
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D61	80	Combination Short Haul Truck	5	0.00E+00	2.07E-06	1.48E-07	1.71E+00	6.53E-09	1.83E-03	1.51E-06	2.12E-03	1.25E-04	3.09E-05	1.23E-04	4.37E-05	4.33E-05	2.58E-04	5.73E-06	0.00E+00	7.99E-05	4.00E-04
11	D61	80	Combination Long Haul Truck	4	0.00E+00	1.85E-06	1.25E-07	1.58E+00	7.54E-09	1.90E-03	1.40E-06	2.06E-03	1.22E-04	2.46E-05	1.27E-04	3.76E-05	3.78E-05	2.42E-04	5.30E-06	0.00E+00	8.95E-05	3.88E-04
11	D62	80	Passenger Car	144	0.00E+00	1.75E-06	1.89E-07	6.68E+00	1.22E-05	4.64E-02	3.88E-06	2.95E-04	7.90E-04	1.37E-04	3.78E-04	2.44E-04	2.50E-04	2.25E-05	3.37E-05	9.44E-09	1.28E-04	4.61E-05
11	D62	80	Passenger Truck	240	0.00E+00	3.75E-06	3.98E-07	1.55E+01	2.40E-05	8.54E-02	7.86E-06	8.76E-04	1.42E-03	2.51E-04	7.52E-04	4.88E-04	5.00E-04	1.08E-04	7.72E-05	2.10E-08	2.52E-04	1.43E-04
11	D62	80	Single Unit Short Haul Truck	28	0.00E+00	5.20E-06	2.59E-07	5.11E+00	4.19E-06	1.02E-02	5.54E-06	2.67E-03	3.27E-04	7.40E-05	6.33E-04	1.54E-04	1.57E-04	5.12E-04	2.06E-05	8.17E-09	4.77E-04	4.99E-04
11	D62	80	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	2.16E-01	1.79E-07	4.26E-04	2.41E-07	1.14E-04	1.49E-05	3.26E-06	2.76E-05	6.63E-06	6.75E-06	2.16E-05	8.72E-07	3.40E-10	2.09E-05	2.13E-05
11	D62	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.77E-04
11	D62	80	Comb

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D66	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.40E-07	1.07E+01	5.09E-08	1.28E-02	9.47E-06	1.39E-02	8.26E-04	1.66E-04	8.59E-04	2.54E-04	2.55E-04	1.63E-03	3.57E-05	0.00E+00	6.04E-04	2.62E-03
11	D67	80	Passenger Car	126	0.00E+00	1.53E-06	1.65E-07	5.85E+00	1.06E-05	4.07E-02	3.40E-06	2.58E-04	6.91E-04	1.20E-04	3.31E-04	2.13E-04	2.19E-04	1.97E-05	2.95E-05	8.27E-09	1.12E-04	4.04E-05
11	D67	80	Passenger Truck	211	0.00E+00	3.28E-06	3.48E-07	1.35E+01	2.10E-05	7.48E-02	6.88E-06	7.67E-04	1.24E-03	2.20E-04	6.59E-04	4.28E-04	4.38E-04	9.46E-05	6.76E-05	1.84E-08	2.20E-04	1.25E-04
11	D67	80	Single Unit Short Haul Truck	55	0.00E+00	1.03E-05	5.11E-07	1.01E+01	8.28E-06	2.02E-02	1.10E-05	5.27E-03	6.47E-04	1.46E-04	1.25E-03	3.05E-04	3.10E-04	1.01E-03	4.07E-05	1.61E-08	9.43E-04	9.87E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	4.48E-07	2.21E-08	4.27E-01	3.54E-07	8.42E-04	4.76E-07	2.26E-04	2.95E-05	6.46E-06	5.46E-05	1.31E-05	1.33E-05	4.27E-05	1.72E-06	6.73E-10	4.13E-05	4.22E-05
11	D67	80	Combination Short Haul Truck	36	0.00E+00	1.57E-05	1.12E-06	1.30E+01	4.96E-08	1.39E-02	1.15E-05	1.61E-02	9.51E-04	2.34E-04	9.36E-04	3.32E-04	3.29E-04	1.96E-03	4.35E-05	0.00E+00	6.07E-04	3.04E-03
11	D67	80	Combination Long Haul Truck	33	0.00E+00	1.41E-05	9.46E-07	1.20E+01	5.73E-08	1.44E-02	1.07E-05	1.56E-02	9.30E-04	1.87E-04	9.67E-04	2.85E-04	2.87E-04	1.84E-03	4.02E-05	0.00E+00	6.80E-04	2.95E-03
11	D68	80	Passenger Car	285	0.00E+00	3.46E-06	3.75E-07	1.33E+01	2.41E-05	9.21E-02	7.70E-06	5.85E-04	1.57E-03	2.72E-04	7.50E-04	4.83E-04	4.96E-04	4.46E-05	6.68E-05	1.87E-08	2.54E-04	9.14E-05
11	D68	80	Passenger Truck	477	0.00E+00	7.44E-06	7.89E-07	3.07E+01	4.77E-05	1.69E-01	1.56E-05	1.74E-03	2.81E-03	4.99E-04	1.49E-03	9.69E-04	9.93E-04	2.14E-04	1.53E-04	4.17E-08	4.99E-04	2.84E-04
11	D68	80	Single Unit Short Haul Truck	75	0.00E+00	1.40E-05	6.96E-07	1.37E+01	1.13E-05	2.75E-02	1.49E-05	7.17E-03	8.80E-04	1.99E-04	1.70E-03	4.15E-04	4.22E-04	1.38E-03	5.54E-05	2.20E-08	1.28E-03	1.34E-03
11	D68	80	Single Unit Long Haul Truck	3	0.00E+00	6.09E-07	3.00E-08	5.81E-01	4.81E-07	1.15E-03	6.48E-07	3.07E-04	4.02E-05	8.78E-06	7.44E-05	1.79E-05	1.82E-05	5.81E-05	2.35E-06	9.16E-10	5.62E-05	5.74E-05
11	D68	80	Combination Short Haul Truck	48	0.00E+00	2.13E-05	1.52E-06	1.76E+01	6.73E-08	1.89E-02	1.56E-05	2.19E-02	1.29E-03	3.18E-04	1.27E-03	4.50E-04	4.47E-04	2.66E-03	5.90E-05	0.00E+00	8.23E-04	4.12E-03
11	D68	80	Combination Long Haul Truck	44	0.00E+00	1.91E-05	1.28E-06	1.63E+01	7.77E-08	1.96E-02	1.45E-05	2.12E-02	1.26E-03	2.54E-04	1.31E-03	3.87E-04	3.89E-04	2.49E-03	5.46E-05	0.00E+00	9.22E-04	4.00E-03
11	D69	80	Passenger Car	27	0.00E+00	3.25E-07	3.52E-08	1.24E+00	2.26E-06	8.64E-03	7.22E-07	5.49E-05	1.47E-04	2.55E-05	7.03E-05	4.53E-05	4.65E-05	4.19E-06	6.27E-06	1.76E-09	2.38E-05	8.58E-06
11	D69	80	Passenger Truck	45	0.00E+00	6.98E-07	7.40E-08	2.88E+00	4.47E-06	1.59E-02	1.46E-06	1.63E-04	2.63E-04	4.68E-05	1.40E-04	9.09E-05	9.31E-05	2.01E-05	1.44E-05	3.91E-09	4.68E-05	2.66E-05
11	D69	80	Single Unit Short Haul Truck	15	0.00E+00	2.90E-06	1.44E-07	2.85E+00	2.34E-06	5.71E-03	3.09E-06	1.49E-03	1.82E-04	4.13E-05	3.53E-04	8.60E-05	8.75E-05	2.86E-04	1.15E-05	4.56E-09	2.66E-04	2.78E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	6.22E-09	1.21E-01	9.98E-08	2.38E-04	1.34E-07	6.36E-05	8.34E-06	1.82E-06	1.54E-05	3.70E-06	3.77E-06	1.20E-05	4.87E-07	1.90E-10	1.17E-05	1.19E-05
11	D69	80	Combination Short Haul Truck	8	0.00E+00	3.31E-06	2.37E-07	2.73E+00	1.04E-08	2.93E-03	2.42E-06	3.39E-03	2.00E-04	4.93E-05	1.97E-04	6.98E-05	6.93E-05	4.12E-04	9.15E-06	0.00E+00	1.28E-04	6.39E-04
11	D69	80	Combination Long Haul Truck	7	0.00E+00	2.96E-06	1.99E-07	2.53E+00	1.21E-08	3.04E-03	2.24E-06	3.29E-03	1.96E-04	3.94E-05	2.03E-04	6.01E-05	6.04E-05	3.86E-04	8.47E-06	0.00E+00	1.43E-04	6.20E-04
11	D70	80	Passenger Car	126	0.00E+00	1.54E-06	1.66E-07	5.88E+00	1.07E-05	4.08E-02	3.41E-06	2.59E-04	6.94E-04	1.21E-04	3.32E-04	2.14E-04	2.20E-04	1.98E-05	2.96E-05	8.30E-09	1.12E-04	4.05E-05
11	D70	80	Passenger Truck	211	0.00E+00	3.30E-06	3.50E-07	1.36E+01	2.11E-05	7.51E-02	6.91E-06	7.70E-04	1.24E-03	2.21E-04	6.61E-04	4.29E-04	4.40E-04	9.49E-05	6.79E-05	1.85E-08	2.21E-04	1.26E-04
11	D70	80	Single Unit Short Haul Truck	37	0.00E+00	6.91E-06	3.44E-07	6.79E+00	5.57E-06	1.36E-02	7.36E-06	3.54E-03	4.35E-04	9.83E-05	8.42E-04	2.05E-04	2.08E-04	6.81E-04	2.73E-05	1.08E-08	6.33E-04	6.63E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	3.01E-07	1.48E-08	2.87E-01	2.38E-07	5.66E-04	3.20E-07	1.52E-04	1.99E-05	4.34E-06	3.67E-05	8.82E-06	8.97E-06	2.87E-05	1.16E-06	4.52E-10	2.78E-05	2.84E-05
11	D70	80	Combination Short Haul Truck	24	0.00E+00	1.04E-05	7.46E-07	8.62E+00	3.29E-08	9.24E-03	7.62E-06	1.07E-02	6.31E-04	1.56E-04	6.21E-04	2.20E-04	2.18E-04	1.30E-03	2.89E-05	0.00E+00	4.03E-04	2.01E-03
11	D70	80	Combination Long Haul Truck	22	0.00E+00	9.34E-06	6.28E-07	7.97E+00	3.80E-08	9.57E-03	7.08E-06	1.04E-02	6.17E-04	1.24E-04	6.41E-04	1.89E-04	1.91E-04	1.22E-03	2.67E-05	0.00E+00	4.51E-04	1.96E-03
10	D71	70	Passenger Car	187	0.00E+00	2.45E-06	2.65E-07	8.99E+00	1.70E-05	6.36E-02	5.44E-06	3.76E-04	1.45E-03	2.33E-04	5.30E-04	3.42E-04	3.50E-04	3.36E-05	4.52E-05	1.23E-08	1.79E-04	5.87E-05
10	D71	70	Passenger Truck	314	0.00E+00	5.37E-06	5.68E-07	2.07E+01	3.39E-05	1.17E-01	1.11E-05	1.17E-03	2.64E-03	4.30E-04	1.06E-03	6.92E-04	7.08E-04	1.52E-04	1.03E-04	2.76E-08	3.55E-04	1.93E-04
10	D71	70	Single Unit Short Haul Truck	37	0.00E+00	8.78E-06	4.40E-07	6.88E+00	7.18E-06	1.38E-02	9.35E-06	4.33E-03	6.18E-04	1.24E-04	1.07E-03	2.63E-04	2.67E-04	6.89E-04	2.77E-05	1.12E-08	7.98E-04	8.10E-04
10	D71	70	Single Unit Long Haul Truck	2	0.00E+00	3.82E-07	1.90E-08	2.92E-01	3.10E-07	5.78E-04	4.08E-07	1.86E-04	2.82E-05	5.50E-06	4.66E-05	1.14E-05	1.16E-05	2.91E-05	1.18E-06	4.72E-10	3.50E-05	3.48E-05
10	D71	70	Combination Short Haul Truck	34	0.00E+00	1.75E-05	1.25E-06	1.27E+01	5.70E-08	1.51E-02	1.29E-05	1.84E-02	1.34E-03	2.91E-04	1.07E-03	3.69E-04	3.68E-04	1.92E-03	4.26E-05	0.00E+00	7.00E-04	3.47E-03
10	D71	70	Combination Long Haul Truck	31	0.00E+00	1.59E-05	1.06E-06	1.19E+01	6.57E-08	1.60E-02	1.20E-05	1.82E-02	1.33E-03	2.42E-04	1.10E-03	3.21E-04	3.24E-04	1.81E-03	3.97E-05	0.00E+00	7.81E-04	3.42E-03
10	D72	70	Passenger Car	145	0.00E+00	1.90E-06	2.06E-07	6.98E+00	1.32E-05	4.93E-02	4.22E-06	2.91E-04	1.13E-03	1.81E-04	4.11E-04	2.65E-04	2.72E-04	2.60E-05	3.51E-05	9.56E-09	1.39E-04	4.55E-05
10	D72	70	Passenger Truck	244	0.00E+00	4.16E-06	4.41E-07	1.61E+01	2.63E-05	9.08E-02	8.65E-06	9.11E-04	2.05E-03	3.33E-04	8.25E-04	5.37E-04	5.50E-04	1.18E-04	8.01E-05	2.14E-08	2.75E-04	1.50E-04
10	D72	70	Single Unit Short Haul Truck	43	0.00E+00	1.01E-05	5.08E-07	7.93E+00	8.29E-06	1.59E-02	1.08E-05	4.99E-03	7.13E-04	1.43E-04	1.23E-03	3.03E-04	3.08E-04	7.96E-04	3.20E-05	1.29E-08	9.21E-04	9.35E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	4.41E-07	2.20E-08	3.37E-01	3.58E-07	6.67E-04	4.70E-07	2.15E-04	3.25E-05	6.35E-06	5.37E-05	1.31E-05	1.33E-05	3.36E-05	1.36E-06	5.45E-10	4.04E-05	4.02E-05
10	D72	70	Combination Short Haul Truck	32	0.00E+00	1.68E-05	1.19E-06	1.22E+01	5.46E-08	1.45E-02	1.23E-05	1.76E-02	1.28E-03	2.79E-04	1.02E-03	3.53E-04	3.53E-04	1.84E-03	4.08E-05	0.00E+00	6.70E-04	3.32E-03
10	D72	70	Combination Long Haul Truck	29	0.00E+00	1.52E-05	1.02E-06	1.14E+01	6.29E-08	1.53E-02	1.15E-05	1.74E-02	1.27E-03	2.32E-04	1.06E-03	3.07E-04	3.10E-04	1.74E-03	3.81E-05	0.00E+00	7.48E-04	3.27E-03
10	D73	70	Passenger Car	105	0.00E+00	1.37E-06	1.48E-07	5.02E+00	9.52E-06	3.55E-02	3.04E-06	2.10E-04	8.12E-04	1.30E-04	2.96E-04	1.91E-04	1.96E-04	1.88E-05	2.53E-05	6.88E-09	1.00E-04	3.28E-05
10	D73	70	Passenger Truck	175	0.00E+00	3.00E-06	3.17E-07	1.16E+01	1.90E-05	6.53E-02	6.23E-06	6.56E-04	1.48E-03	2.40E-04	5.94E-04	3.86E-04	3.96E-04	8.50E-05	5.77E-05	1.54E-08	1.98E-04	1.08E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	9.04E-07	4.53E-08	7.08E-01	7.39E-07	1.42E-03	9.63E-07	4.45E-04	6.36E-05	1.27E-05	1.10E-04	2.70E-05	2.75E-05	7.10E-05	2.85E-06	1.15E-09	8.21E-05	8.34E-05
10	D73	70	Combination Short Haul Truck	11	0.00E+00	5.88E-06	4.18E-07	4.26E+00	1.91E-08	5.07E-03	4.31E-06	6.17E-03	4.48E-04	9.77E-05	3.58E-04	1.24E-04	1.24E-04	6.43E-04	1.43E-05	0.00E+00	2.35E-04	1.16E-03
10	D73	70	Combination Long Haul Truck	10	0.00E+00	5.32E-06	3.56E-07	3.98E+00	2.20E-08	5.37E-03	4.04E-06	6.09E-03	4.45E-04	8.11E-05	3.70E-04	1.07E-04	1.09E-04	6.08E-04	1.33E-05	0.00E+00	2.62E-04	1.15E-03
10	D74	70	Passenger Car	122	0.00E+00	1.60E-06	1.73E-07	5.87E+00	1.11E-05	4.15E-02	3.55E-06	2.45E-04	9.48E-04	1.52E-04	3.46E-04	2.23E-04	2.29E-04	2.19E-05	2.95E-05	8.04E-09	1.17E-04	3.83E-05
10	D74	70	Passenger Truck	205	0.00E+00	3.50E-06	3.71E-07	1.35E+01	2.21E-05	7.63E-02	7.27E-06	7.67E-04	1.73E-03	2.80E-04	6.94E-04	4.51E-04	4.62E-04	9.93E-05	6.74E-05	1.80E-08	2.31E-04	1.26E-04
10	D74	70	Single Unit Short Haul Truck	8	0.00E+00	1.88E-06	9.43E-08	1.47E+00	1.54E-06	2.95E-03	2.01E-06	9.28E-04	1.33E-04	2.65E-05	2.28E-04	5.63E-05	5.73E-05	1.48E-04	5.95E-06	2.40E-09	1.71E-04	1.74E-04
10	D74	70	Combination Short Haul Truck	6	0.00E+00	3.33E-06	2.37E-07	2.42E+00	1.08E-08	2.87E-03	2.45E-06	3.50E-03	2.54E-04	5.54E-05	2.03E-04	7.01E-05	7.00E-05	3.64E-04	8.09E-06	0.00E+00	1.33E-04	6.59E-04
10	D74	70	Combination Long Haul Truck	6	0.00E+00	3.01E-06	2.02E-07	2.26E+00	1.25E-08	3.04E-03	2.29E-06	3.45E-03	2.52E-04	4.60E-05	2.10E-04	6.09E-05	6.16E-05	3.45E-04	7.55E-06	0.00E+00	1.48E-04	6.50E-04
11	D75	80	Passenger Car	104	0.00E+00	1.26E-06	1.37E-07	4.84E+00	8.80E-06	3.36E-02	2.81E-06	2.14E-04	5.72E-04	9.94E-05	2.74E-04	1.76E-04	1.81E-04	1.63E-05	2.44E-05	6.84E-09	9.26E-05	3.34E-05
11	D75	80	Passenger Truck	174	0.00E+00	2.71E-06	2.88E-07	1.12E+01	1.74E-05	6.19E-02	5.69E-06	6.34E-04	1.03E-03	1.82E-04	5.45E-04	3.54E-04	3.62E-04	7.82E-05	5.59E-05	1.52E-08	1.82E-04	1.04E-04
11	D75	80	Single Unit Short Haul Truck	10	0.00E+00	1.79E-06	8.91E-08	1.76E+00	1.44E-06	3.53E-03	1.91E-06	9.19E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	D75	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.59E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	D75	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.74E-04
11	D76	80	Passenger Car	95	0.00E+00	1.16E-06	1.25E-07	4.42E+00	8.04E-06	3.07E-02	2.57E-06	1.95E-04	5.22E-04	9.08E-05	2.50E-04	1.61E-04	1.65E-04	1.49E-05	2.23E-05	6.25E-09	8.46E-05	3.05E-05
11	D76	80	Passenger Truck	159	0.00E+00	2.48E-06	2.63E-07	1.02E+01	1.59E-05	5.65E-02	5.20E-06	5.80E-04	9.37E-04	1.66E-04	4.98E-04	3.23E-04	3.31E-04	7.14E-05	5.11E-05	1.39E-08	1.66E-04	9.47E-05
11	D76	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.64E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.50E-05	8.65E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.75E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.15E-09	1.19E-01	9.87E-08	2.35E-04	1.33E-07	6.29E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	D76	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.54E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.66E-04
11	D76	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.43E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.47E-04
11	D77	80	Passenger Car	79	0.00E+00	9.64E-07	1.04E-07	3.69E+00	6.71E-06	2.56E-02	2.14E-06	1.63E-04	4.36E-04	7.58E-05	2.09E-04	1.35E-04	1.38E-04	1.24E-05	1.86E-05	5.21E-09	7.06E-05	2.54E-05
11	D77	80	Passenger Truck	133	0.00E+00	2.07E-06	2.20E-07	8.53E+00	1.33E-05	4.72E-02	4.34E-06	4.84E-04	7.82E-04	1.39E-04	4.15E-04	2.70E-04	2.76E-04	5.96E-05	4.26E-05	1.16E-08	1.39E-04	7.90E-05
11	D77	80	Single Unit Short Haul Truck	28	0.00E+00	5.20E-06	2.59E-07	5.11E+00	4.19E-06	1.02E-02	5.54E-06	2.67E-03	3.27E-04	7.40E-05	6.33E-04	1.54E-04	1.57E-04	5.12E-04	2.06E-05	8.17E-09	4.77E-04	4.99E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	2.16E-01	1.79E-07	4.26E-04	2.41E-07	1.14E-04	1.49E-05	3.26E-06	2.76E-05	6.63E-06	6.75E-06	2.16E-05	8.72E-07	3.40E-10	2.09E-05	2.13E-05
11	D77	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.13E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.15E-03
11	D77	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.95E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	D78	80	Passenger Car	162	0.00E+00	1.97E-06	2.13E-07	7.54E+00	1.37E-05	5.24E-02	4.38E-06	3.33E-04	8.90E-04	1.55E-04	4.26E-04	2.75E-04	2.82E-04	2.54E-05	3.80E-05	1.06E-08	1.44E-04	5.20E-05
11	D78	80	Passenger Truck	271	0.00E+00	4.23E-06	4.48E-07	1.74E+01	2.71E-05	9.64E-02	8.86E-06	9.88E-04	1.60E-03	2.83E-04	8.48E-04	5.51E-04	5.64E-04	1.22E-04	8.71E-05	2.37E-08	2.84E-04	1.61E-04
11	D78	80	Single Unit Short Haul Truck	37	0.00E+00	7.00E-06	3.48E-07	6.87E+00	5.63E-06	1.38E-02	7.45E-06	3.59E-03	4.40E-04	9.95E-05	8.52E-04	2.07E-04	2.11E-04	6.89E-04	2.77E-05	1.10E-08	6.41E-04	6.71E-04
11	D78	80	Single Unit Long Haul Truck	2	0.00E+00	3.04E-07	1.50E-08	2.91E-01	2.41E-07	5.73E-04	3.24E-07	1.53E-04	2.01E-05	4.39E-06	3.72E-05	8.92E-06	9.08E-06	2.90E-05	1.17E-06	4.58E-10	2.81E-05	2.87E-05
11	D78	80	Combination Short Haul Truck	21	0.00E+00	9.20E-06	6.58E-07	7.60E+00	2.90E-08	8.14E-03	6.72E-06	9.43E-03	5.56E-04	1.37E-04	5.48E-04	1.94E-04	1.93E-04	1.15E-03	2.55E-05	0.00E+00	3.55E-04	1.78E-03
11	D78	80	Combination Long Haul Truck	19	0.00E+00	8.24E-06	5.54E-07	7.03E+00	3.35E-08	8.44E-03	6.24E-06	9.15E-03	5.44E-04	1.10E-04	5.66E-04	1.67E-04	1.68E-04	1.07E-03	2.35E-05	0.00E+00	3.98E-04	1.72E-03
11	D79	70	Passenger Car	156	0.00E+00	2.04E-06	2.20E-07	7.48E+00	1.42E-05	5.29E-02	4.53E-06	3.12E-04	1.21E-03	1.94E-04	4.41E-04	2.84E-04	2.92E-04	2.79E-05	3.76E-05	1.02E-08	1.49E-04	4.88E-05
11	D79	70	Passenger Truck	261	0.00E+00	4.46E-06	4.72E-07	1.72E+01	2.82E-05	9.73E-02	9.27E-06	9.77E-04	2.20E-03	3.57E-04	8.84E-04	5.75E-04	5.89E-04	1.27E-04	8.59E-05	2.30E-08	2.95E-04	1.61E-04
11	D79	70	Single Unit Short Haul Truck	43	0.00E+00	1.00E-05	5.01E-07	7.84E+00	8.19E-06	1.57E-02	1.07E-05	4.93E-03	7.04E-04	1.41E-04	1.21E-03	2.99E-04	3.04E-04	7.86E-04	3.16E-05	1.28E-08	9.10E-04	9.24E-04
11	D79	70	Single Unit Long Haul Truck	2	0.00E+00	4.36E-07	2.17E-08	3.33E-01	3.53E-07	6.59E-04	4.65E-07	2.12E-04	3.22E-05	6.27E-06	5.31E-05	1.30E-05	1.32E-05	3.32E-05	1.34E-06	5.38E-10	3.99E-05	3.97E-05
11	D79	70	Combination Short Haul Truck	28	0.00E+00	1.47E-05	1.05E-06	1.07E+01	4.78E-08	1.27E-02	1.08E-05	1.54E-02	1.12E-03	2.44E-04	8.96E-04	3.09E-04	3.09E-04	1.61E-03	3.57E-05	0.00E+00	5.87E-04	2.91E-03
11	D79	70	Combination Long Haul Truck	26	0.00E+00	1.33E-05	8.89E-07	9.96E+00	5.51E-08	1.34E-02	1.01E-05	1.52E-02	1.11E-03	2.03E-04	9.27E-04	2.69E-04	2.72E-04	1.52E-03	3.33E-05	0.00E+00	6.55E-04	2.87E-03
10	D80	70	Passenger Car	180	0.00E+00	2.34E-06	2.54E-07	8.61E+00	1.63E-05	6.09E-02	5.21E-06	3.60E-04	1.39E-03	2.23E-04	5.07E-04	3.27E-04	3.36E-04	3.21E-05	4.33E-05	1.18E-08	1.72E-04	5.62E-05
10	D80	70	Passenger Truck	301	0.00E+00	5.14E-06	5.44E-07	1.98E+01	3.25E-05	1.12E-01	1.07E-05	1.12E-03	2.53E-03	4.12E-04	1.02E-03	6.62E-04	6.78E-04	1.46E-04	9.89E-05	2.64E-08	3.40E-04	1.85E-04
10	D80	70	Single Unit Short Haul Truck	38	0.00E+00	8.98E-06	4.50E-07	7.03E+00	7.34E-06	1.41E-02	9.57E-06	4.42E-03	6.32E-04	1.26E-04	1.09E-03	2.69E-04	2.73E-04	7.05E-04	2.84E-05	1.14E-08	8.16E-04	8.28E-04
10	D80	70	Single Unit Long Haul Truck	2	0.00E+00	3.91E-07	1.95E-08	2.98E-01	3.17E-07	5.91E-04	4.17E-07	1.90E-04	2.88E-05	5.63E-06	4.76E-05	1.16E-05	1.18E-05	2.98E-05	1.21E-06	4.83E-10	3.58E-05	3.56E-05
10	D80	70	Combination Short Haul Truck	19	0.00E+00	9.72E-06	6.90E-07	7.04E+00	3.16E-08	8.36E-03	7.13E-06	1.02E-02	7.39E-04	1.61E-04	5.92E-04	2.04E-04	2.04E-04	1.06E-03	2.36E-05	0.00E+00	3.88E-04	1.92E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	8.78E-06	5.87E-07	6.57E+00	3.64E-08	8.86E-03	6.67E-06	1.01E-02	7.34E-04	1.34E-04	6.12E-04	1.77E-04	1.79E-04	1.00E-03	2.20E-05	0.00E+00	4.32E-04	1.89E-03
11	D81	70	Passenger Car	171

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D85	80	Passenger Truck	420	0.00E+00	6.55E-06	6.95E-07	2.70E+01	4.20E-05	1.49E-01	1.37E-05	1.53E-03	2.47E-03	4.39E-04	1.31E-03	8.53E-04	8.74E-04	1.89E-04	1.35E-04	3.67E-08	4.40E-04	2.50E-04
11	D85	80	Single Unit Short Haul Truck	69	0.00E+00	1.30E-05	6.45E-07	1.27E+01	1.04E-05	2.55E-02	1.38E-05	6.65E-03	8.16E-04	1.85E-04	1.58E-03	3.84E-04	3.91E-04	1.28E-03	5.13E-05	2.04E-08	1.19E-03	1.24E-03
11	D85	80	Single Unit Long Haul Truck	3	0.00E+00	5.65E-07	2.78E-08	5.39E-01	4.46E-07	1.06E-03	6.00E-07	2.84E-04	3.73E-05	8.14E-06	6.89E-05	1.65E-05	1.68E-05	5.38E-05	2.18E-06	8.49E-10	5.21E-05	5.32E-05
11	D85	80	Combination Short Haul Truck	48	0.00E+00	2.13E-05	1.52E-06	1.76E+01	6.73E-08	1.89E-02	1.56E-05	2.19E-02	1.29E-03	3.18E-04	1.27E-03	4.50E-04	4.47E-04	2.66E-03	5.90E-05	0.00E+00	8.23E-04	4.12E-03
11	D85	80	Combination Long Haul Truck	44	0.00E+00	1.91E-05	1.28E-06	1.63E+01	7.77E-08	1.96E-02	1.45E-05	2.12E-02	1.26E-03	2.54E-04	1.31E-03	3.87E-04	3.89E-04	2.49E-03	5.46E-05	0.00E+00	9.22E-04	4.00E-03
11	D86	80	Passenger Car	371	0.00E+00	4.51E-06	4.88E-07	1.73E+01	3.14E-05	1.20E-01	1.00E-05	7.62E-04	2.04E-03	3.54E-04	9.76E-04	6.29E-04	6.46E-04	5.81E-05	8.70E-05	2.44E-08	3.30E-04	1.19E-04
11	D86	80	Passenger Truck	621	0.00E+00	9.68E-06	1.03E-06	3.99E+01	6.20E-05	2.21E-01	2.03E-05	2.26E-03	3.66E-03	6.49E-04	1.94E-03	1.26E-03	1.29E-03	2.79E-04	1.99E-04	5.43E-08	6.50E-04	3.70E-04
11	D86	80	Single Unit Short Haul Truck	32	0.00E+00	5.93E-06	2.94E-07	5.82E+00	4.77E-06	1.17E-02	6.31E-06	3.04E-03	3.72E-04	8.43E-05	7.21E-04	1.76E-04	1.79E-04	5.84E-04	2.34E-05	9.30E-09	5.43E-04	5.68E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.27E-08	2.46E-01	2.04E-07	4.85E-04	2.74E-07	1.30E-04	1.70E-05	3.72E-06	3.15E-05	7.56E-06	7.69E-06	2.46E-05	9.93E-07	3.88E-10	2.38E-05	2.43E-05
11	D86	80	Combination Short Haul Truck	67	0.00E+00	2.93E-05	2.10E-06	2.42E+01	9.25E-08	2.60E-02	2.14E-05	3.00E-02	1.77E-03	4.37E-04	1.75E-03	6.19E-04	6.14E-04	3.65E-03	8.11E-05	0.00E+00	1.13E-03	5.66E-03
11	D86	80	Combination Long Haul Truck	61	0.00E+00	2.62E-05	1.76E-06	2.24E+01	1.07E-07	2.69E-02	1.99E-05	2.92E-02	1.73E-03	3.49E-04	1.80E-03	5.32E-04	5.35E-04	3.42E-03	7.50E-05	0.00E+00	1.27E-03	5.49E-03
11	D87	80	Passenger Car	337	0.00E+00	4.10E-06	4.43E-07	1.57E+01	2.85E-05	1.09E-01	9.11E-06	6.92E-04	1.85E-03	3.22E-04	8.86E-04	5.71E-04	5.86E-04	5.28E-05	7.90E-05	2.21E-08	3.00E-04	1.08E-04
11	D87	80	Passenger Truck	564	0.00E+00	8.79E-06	9.33E-07	3.62E+01	5.63E-05	2.00E-01	1.84E-05	2.05E-03	3.32E-03	5.89E-04	1.76E-03	1.15E-03	1.17E-03	2.53E-04	1.81E-04	4.93E-08	5.90E-04	3.36E-04
11	D87	80	Single Unit Short Haul Truck	124	0.00E+00	2.33E-05	1.16E-06	2.28E+01	1.87E-05	4.58E-02	2.48E-05	1.19E-02	1.46E-03	3.31E-04	2.83E-03	6.90E-04	7.01E-04	2.29E-03	9.21E-05	3.65E-08	2.13E-03	2.23E-03
11	D87	80	Single Unit Long Haul Truck	5	0.00E+00	1.01E-06	4.99E-08	9.67E-01	8.00E-07	1.91E-03	1.08E-06	5.10E-04	6.68E-05	1.46E-05	1.24E-04	2.97E-05	3.02E-05	9.65E-05	3.90E-06	1.52E-09	9.35E-05	9.55E-05
11	D87	80	Combination Short Haul Truck	85	0.00E+00	3.73E-05	2.67E-06	3.09E+01	1.18E-07	3.30E-02	2.73E-05	3.83E-02	2.26E-03	5.57E-04	2.22E-03	7.88E-04	7.82E-04	4.65E-03	1.03E-04	0.00E+00	1.44E-03	7.21E-03
11	D87	80	Combination Long Haul Truck	77	0.00E+00	3.34E-05	2.25E-06	2.85E+01	1.36E-07	3.42E-02	2.53E-05	3.71E-02	2.21E-03	4.44E-04	2.30E-03	6.78E-04	6.82E-04	4.36E-03	9.55E-05	0.00E+00	1.61E-03	7.00E-03
11	D88	80	Passenger Car	724	0.00E+00	8.81E-06	9.53E-07	3.37E+01	6.13E-05	2.34E-01	1.96E-05	1.49E-03	3.98E-03	6.92E-04	1.91E-03	1.23E-03	1.26E-03	1.13E-04	1.70E-04	4.76E-08	6.45E-04	2.32E-04
11	D88	80	Passenger Truck	1212	0.00E+00	1.89E-05	2.01E-06	7.79E+01	1.21E-04	4.31E-01	3.96E-05	4.42E-03	7.14E-03	1.27E-03	3.79E-03	2.46E-03	2.52E-03	5.45E-04	3.89E-04	1.06E-07	1.27E-03	7.22E-04
11	D88	80	Single Unit Short Haul Truck	82	0.00E+00	1.54E-05	7.66E-07	1.51E+01	1.24E-05	3.03E-02	1.64E-05	7.91E-03	9.70E-04	2.19E-04	1.88E-03	4.57E-04	4.65E-04	1.52E-03	6.10E-05	2.42E-08	1.41E-03	1.48E-03
11	D88	80	Single Unit Long Haul Truck	4	0.00E+00	6.71E-07	3.31E-08	6.41E-01	5.30E-07	1.26E-03	7.14E-07	3.38E-04	4.43E-05	9.68E-06	8.19E-05	1.97E-05	2.00E-05	6.40E-05	2.59E-06	1.01E-09	6.19E-05	6.33E-05
11	D88	80	Combination Short Haul Truck	131	0.00E+00	5.74E-05	4.11E-06	4.75E+01	1.81E-07	5.09E-02	4.20E-05	5.89E-02	3.48E-03	8.57E-04	3.42E-03	1.21E-03	1.20E-03	7.16E-03	1.59E-04	0.00E+00	2.22E-03	1.11E-02
11	D88	80	Combination Long Haul Truck	119	0.00E+00	5.14E-05	3.46E-06	4.39E+01	2.09E-07	5.27E-02	3.90E-05	5.72E-02	3.40E-03	6.84E-04	3.53E-03	1.04E-03	1.05E-03	6.71E-03	1.47E-04	0.00E+00	2.48E-03	1.08E-02
9	D89	60	Passenger Car	49	0.00E+00	7.28E-07	7.87E-08	2.44E+00	5.07E-06	1.88E-02	1.62E-06	9.91E-05	4.93E-04	7.57E-05	1.58E-04	1.02E-04	1.04E-04	1.02E-05	1.22E-05	3.37E-09	5.33E-05	1.55E-05
9	D89	60	Passenger Truck	81	0.00E+00	1.61E-06	1.70E-07	5.56E+00	1.00E-05	3.35E-02	3.31E-06	3.23E-04	9.05E-04	1.40E-04	3.15E-04	2.05E-04	2.10E-04	4.31E-05	2.76E-05	7.64E-09	1.05E-04	5.36E-05
9	D89	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.02E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.53E-05
9	D89	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.00E-03	1.72E-04	3.40E-05	1.17E-04	3.83E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.77E-04
9	D89	60	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.98E-03	1.73E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.77E-05	3.74E-04
9	D90	60	Passenger Car	76	0.00E+00	1.14E-06	1.23E-07	3.81E+00	7.91E-06	2.94E-02	2.53E-06	1.55E-04	7.70E-04	1.18E-04	2.46E-04	1.59E-04	1.63E-04	1.59E-05	1.91E-05	5.26E-09	8.33E-05	2.42E-05
9	D90	60	Passenger Truck	127	0.00E+00	2.51E-06	2.65E-07	8.68E+00	1.57E-05	5.24E-02	5.17E-06	5.05E-04	1.41E-03	2.19E-04	4.91E-04	3.20E-04	3.28E-04	6.73E-05	4.32E-05	1.19E-08	1.63E-04	8.36E-05
9	D90	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.55E-07	1.97E+00	2.55E-06	3.81E-03	3.30E-06	1.47E-03	2.51E-04	4.54E-05	3.76E-04	9.28E-05	9.43E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.76E-04
9	D90	60	Combination Short Haul Truck	6	0.00E+00	3.69E-06	2.57E-07	2.40E+00	1.31E-08	3.23E-03	2.74E-06	4.00E-03	3.44E-04	6.80E-05	2.35E-04	7.66E-05	7.68E-05	3.62E-04	8.04E-06	0.00E+00	1.58E-04	7.54E-04
9	D90	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.25E+00	1.50E-08	3.48E-03	2.56E-06	3.97E-03	3.46E-04	5.86E-05	2.42E-04	6.58E-05	6.67E-05	3.44E-04	7.54E-06	0.00E+00	1.75E-04	7.47E-04
10	D91	70	Passenger Car	243	0.00E+00	3.17E-06	3.43E-07	1.16E+01	2.21E-05	8.23E-02	7.05E-06	4.86E-04	1.88E-03	3.02E-04	6.86E-04	4.42E-04	4.54E-04	4.35E-05	5.85E-05	1.59E-08	2.32E-04	7.60E-05
10	D91	70	Passenger Truck	406	0.00E+00	6.95E-06	7.35E-07	2.68E+01	4.39E-05	1.51E-01	1.44E-05	1.52E-03	3.42E-03	5.56E-04	1.38E-03	8.95E-04	9.17E-04	1.97E-04	1.34E-04	3.57E-08	4.59E-04	2.50E-04
10	D91	70	Single Unit Short Haul Truck	12	0.00E+00	2.93E-06	1.47E-07	2.29E+00	2.39E-06	4.58E-03	3.12E-06	1.44E-03	2.06E-04	4.12E-05	3.55E-04	8.75E-05	8.90E-05	2.30E-04	9.24E-06	3.73E-09	2.66E-04	2.70E-04
10	D91	70	Single Unit Long Haul Truck	1	0.00E+00	1.27E-07	6.34E-09	9.72E-02	1.03E-07	1.93E-04	1.36E-07	6.20E-05	9.40E-06	1.83E-06	1.55E-05	3.79E-06	3.85E-06	9.71E-06	3.93E-07	1.57E-10	1.17E-05	1.16E-05
10	D91	70	Combination Short Haul Truck	8	0.00E+00	4.35E-06	3.09E-07	3.16E+00	1.41E-08	3.75E-03	3.19E-06	4.57E-03	3.31E-04	7.23E-05	2.65E-04	9.15E-05	9.14E-05	4.76E-04	1.06E-05	0.00E+00	1.74E-04	8.61E-04
10	D91	70	Combination Long Haul Truck	8	0.00E+00	3.93E-06	2.63E-07	2.94E+00	1.63E-08	3.97E-03	2.99E-06	4.50E-03	3.29E-04	6.00E-05	2.74E-04	7.95E-05	8.04E-05	4.50E-04	9.86E-06	0.00E+00	1.94E-04	8.48E-04
10	D92	70	Passenger Car	62	0.00E+00	8.16E-07	8.82E-08	2.99E+00	5.68E-06	2.12E-02	1.81E-06	1.25E-04	4.84E-04	7.76E-05	1.76E-04	1.14E-04	1.17E-04	1.12E-05	1.51E-05	4.10E-09	5.97E-05	1.95E-05
10	D92	70	Passenger Truck	105	0.00E+00	1.79E-06	1.89E-07	6.90E+00	1.13E-05	3.90E-02	3.71E-06	3.91E-04	8.81E-04	1.43E-04	3.54E-04	2.30E-04	2.36E-04	5.07E-05	3.44E-05	9.20E-09	1.18E-04	6.44E-05
10	D92	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.23E-05
10	D92	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	D92	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.65E-04
10	D93	70	Passenger Car	219	0.00E+00	2.86E-06	3.10E-07	1.05E+01	1.99E-05	7.43E-02	6.36E-06	4.39E-04	1.70E-03	2.72E-04	6.19E-04	3.99E-04	4.10E-04	3.92E-05	5.28E-05	1.44E-08	2.10E-04	6.86E-05
10	D93	70	Passenger Truck	367	0.00E+00	6.27E-06	6.64E-07	2.42E+01	3.97E-05	1.37E-01	1.30E-05	1.37E-03	3.09E-03	5.02E-04	1.24E-03	8.08E-04	8.28E-04	1.78E-04	1.21E-04	3.23E-08	4.15E-04	2.26E-04
10	D93	70	Single Unit Short Haul Truck	12	0.00E+00	2.93E-06	1.47E-07	2.29E+00	2.39E-06	4.58E-03	3.12E-06	1.44E-03	2.06E-04	4.12E-05	3.55E-04	8.75E-05	8.90E-05	2.30E-04	9.24E-06	3.73E-09	2.66E-04	2.70E-04
10	D93	70	Single Unit Long Haul Truck	1	0.00E+00	1.27E-07	6.34E-09	9.72E-02	1.03E-07	1.93E-04	1.36E-07	6.20E-05	9.40E-06	1.83E-06	1.55E-05	3.79E-06	3.85E-06	9.71E-06	3.93E-07	1.57E-10	1.17E-05	1.16E-05
10	D93	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.28E-03	3.11E-04	6.78E-05	2.49E-04	8.58E-05	8.57E-05	4.46E-04	9.90E-06	0.00E+00	1.63E-04	8.07E-04
10	D93	70	Combination Long Haul Truck	7	0.00E+00	3.69E-06	2.47E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.22E-03	3.08E-04	5.63E-05	2.57E-04	7.46E-05	7.54E-05	4.22E-04	9.25E-06	0.00E+00	1.82E-04	7.95E-04
10	D94	70	Passenger Car	49	0.00E+00	6.45E-07	6.97E-08	2.37E+00	4.49E-06	1.67E-02	1.43E-06	9.89E-05	3.83E-04	6.14E-05	1.40E-04	8.99E-05	9.23E-05	8.84E-06	1.19E-05	3.24E-09	4.72E-05	1.55E-05
10	D94	70	Passenger Truck	83	0.00E+00	1.41E-06	1.50E-07	5.45E+00	8.93E-06	3.08E-02	2.93E-06	3.09E-04	6.96E-04	1.13E-04	2.80E-04	1.82E-04	1.87E-04	4.01E-05	2.72E-05	7.27E-09	9.34E-05	5.09E-05
10	D94	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.23E-05
10	D94	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.57E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.61E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.44E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
9	E01	60	Passenger Car	112	0.00E+00	1.67E-06	1.81E-07	5.59E+00	1.16E-05	4.32E-02	3.72E-06	2.28E-04	1.13E-03	1.74E-04	3.62E-04	2.33E-04	2.39E-04	2.33E-05	2.81E-05	7.73E-09	1.22E-04	3.56E-05
9	E01	60	Passenger Truck	187	0.00E+00	3.69E-06	3.89E-07	1.28E+01	2.30E-05	7.70E-02	7.60E-06	7.42E-04	2.08E-03	3.22E-04	7.22E-04	4.71E-04	4.82E-04	9.89E-05	6.35E-05	1.75E-08	2.40E-04	1.23E-04
9	E01	60	Single Unit Short Haul Truck	15	0.00E+00	4.43E-06	2.21E-07	2.82E+00	3.65E-06	5.46E-03	4.72E-06	2.11E-03	3.59E-04	6.50E-05	5.38E-04	1.33E-04	1.35E-04	2.82E-04	1.14E-05	4.69E-09	4.03E-04	3.95E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.93E-07	9.62E-09	1.20E-01	1.59E-07	2.32E-04	2.06E-07	9.13E-05	1.61E-05	2.88E-06	2.36E-05	5.78E-06	5.87E-06	1.20E-05	4.87E-07	2.00E-10	1.77E-05	1.71E-05
9	E01	60	Combination Short Haul Truck	6	0.00E+00	3.74E-06	2.61E-07	2.43E+00	1.33E-08	3.27E-03	2.78E-06	4.06E-03	3.48E-04	6.90E-05	2.38E-04	7.77E-05	7.78E-05	3.67E-04	8.15E-06	0.00E+00	1.60E-04	7.64E-04
9	E01	60	Combination Long Haul Truck	6	0.00E+00	3.36E-06	2.19E-07	2.28E+00	1.52E-08	3.53E-03	2.59E-06	4.02E-03	3.50E-04	5.94E-05	2.45E-04	6.67E-05	6.76E-05	3.49E-04	7.64E-06	0.00E+00	1.78E-04	7.58E-04
9	E02	60	Passenger Car	199	0.00E+00	2.98E-06	3.23E-07	9.99E+00	2.08E-05	7.71E-02	6.63E-06	4.06E-04	2.02E-03	3.10E-04	6.46E-04	4.16E-04	4.27E-04	4.16E-05	5.01E-05	1.38E-08	2.19E-04	6.35E-05
9	E02	60	Passenger Truck	334	0.00E+00	6.58E-06	6.95E-07	2.28E+01	4.11E-05	1.37E-01	1.36E-05	1.32E-03	3.71E-03	5.76E-04	1.29E-03	8.40E-04	8.61E-04	1.77E-04	1.13E-04	3.13E-08	4.29E-04	2.20E-04
9	E02	60	Single Unit Short Haul Truck	32	0.00E+00	9.48E-06	4.74E-07	6.04E+00	7.82E-06	1.17E-02	1.01E-05	4.52E-03	7.69E-04	1.39E-04	1.15E-03	2.85E-04	2.89E-04	6.05E-04	2.44E-05	1.01E-08	8.64E-04	8.47E-04
9	E02	60	Single Unit Long Haul Truck	1	0.00E+00	4.14E-07	2.06E-08	2.58E-01	3.40E-07	4.97E-04	4.42E-07	1.96E-04	3.45E-05	6.17E-06	5.05E-05	1.24E-05	1.26E-05	2.58E-05	1.04E-06	4.28E-10	3.79E-05	3.67E-05
9	E02	60	Combination Short Haul Truck	23	0.00E+00	1.32E-05	9.22E-07	8.61E+00	4.69E-08	1.16E-02	9.82E-06	1.43E-02	1.23E-03	2.44E-04	8.42E-04	2.75E-04	2.75E-04	1.30E-03	2.88E-05	0.00E+00	5.67E-04	2.70E-03
9	E02	60	Combination Long Haul Truck	21	0.00E+00	1.19E-05	7.73E-07	8.07E+00	5.38E-08	1.25E-02	9.16E-06	1.42E-02	1.24E-03	2.10E-04	8.68E-04	2.36E-04	2.39E-04	1.23E-03	2.70E-05	0.00E+00	6.29E-04	2.68E-03
11	E03	80	Passenger Car	180	0.00E+00	2.19E-06	2.36E-07	8.37E+00	1.52E-05	5.81E-02	4.86E-06	3.69E-04	9.88E-04	1.72E-04	4.73E-04	3.05E-04	3.13E-04	2.82E-05	4.22E-05	1.18E-08	1.60E-04	5.77E-05
11	E03	80	Passenger Truck	301	0.00E+00	4.69E-06	4.98E-07	1.93E+01	3.01E-05	1.07E-01	9.83E-06	1.10E-03	1.77E-03	3.15E-04	9.41E-04	6.11E-04	6.26E-04	1.35E-04	9.66E-05	2.63E-08	3.15E-04	1.79E-04
11	E03	80	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	1.00E-07	1.98E+00	1.62E-06	3.96E-03	2.15E-06	1.03E-03	1.27E-04	2.87E-05	2.45E-04	5.97E-05	6.07E-05	1.99E-04	7.98E-06	3.16E-09	1.85E-04	1.93E-04
11	E03	80	Combination Short Haul Truck	7	0.00E+00	2.89E-06	2.07E-07	2.39E+00	9.13E-09	2.56E-03	2.11E-06	2.97E-03	1.75E-04	4.31E-05	1.72E-04	6.11E-05	6.06E-05	3.61E-04	8.01E-06	0.00E+00	1.12E-04	5.59E-04
11	E03	80	Combination Long Haul Truck	6	0.00E+00	2.59E-06	1.74E-07	2.21E+00	1.05E-08	2.65E-03	1.96E-06	2.88E-03	1.71E-04	3.45E-05	1.78E-04	5.25E-05	5.28E-05	3.38E-04	7.40E-06	0.00E+00	1.25E-04	5.42E-04
11	E04	80	Passenger Car	145	0.00E+00	1.77E-06	1.91E-07	6.76E+00	1.23E-05	4.70E-02	3.93E-06	2.98E-04	7.99E-04	1.39E-04	3.82E-04	2.46E-04	2.53E-04	2.28E-05	3.41E-05	9.55E-09	1.29E-04	4.66E-05
11	E04	80	Passenger Truck	243	0.00E+00	3.79E-06	4.02E-07	1.56E+01	2.43E-05	8.64E-02	7.95E-06	8.86E-04	1.43E-03	2.54E-04	7.61E-04	4.94E-04	5.06E-04	1.09E-04	7.81E-05	2.13E-08	2.55E-04	1.45E-04
11	E04	80	Single Unit Short Haul Truck	14	0.00E+00	2.62E-06	1.30E-07	2.57E+00	2.10E-06	5.14E-03	2.78E-06	1.34E-03	1.64E-04	3.72E-05	3.18E-04	7.75E-05	7.88E-05	2.58E-04	1.03E-05	4.10E-09	2.40E-04	2.51E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	5.61E-09	1.09E-01	8.99E-08	2.14E-04	1.21E-07	5.73E-05	7.51E-06	1.64E-06	1.39E-05	3.33E-06	3.39E-06	1.08E-05	4.38E-07	1.71E-10	1.05E-05	1.07E-05
11	E04	80	Combination Short Haul Truck	12	0.00E+00	5.24E-06	3.75E-07	4.33E+00	1.65E-08	4.64E-03	3.83E-06	5.37E-03	3.17E-04	7.82E-05	3.12E-04	1.11E-04	1.10E-04	6.53E-04	1.45E-05	0.00E+00	2.02E-04	1.01E-03
11	E04	80	Combination Long Haul Truck	11	0.00E+00	4.69E-06	3.15E-07	4.01E+00	1.91E-08	4.81E-03	3.56E-06	5.22E-03	3.10E-04	6.24E-05	3.22E-04	9.52E-05	9.57E-05	6.12E-04	1.34E-05	0.00E+00	2.27E-04	9.83E-04
11	E05	80	Passenger Car	65	0.00E+00	7.87E-07	8.51E-08	3.01E+00	5.48E-06	2.09E-02	1.75E-06	1.33E-04	3.56E-04	6.18E-05	1.70E-04	1.10E-04	1.13E-04	1.01E-05	1.52E-05	4.26E-09	5.76E-05	2.08E-05
11	E05	80	Passenger Truck	108	0.00E+00	1.69E-06	1.79E-07	6.96E+00	1.08E-05	3.85E-02	3.54E-06	3.95E-04	6.38E-04	1.13E-04	3.39E-04	2.20E-04	2.25E-04	4.87E-05	3.48E-05	9.47E-09	1.13E-04	6.45E-05
11	E05	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	E05	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.04E-03	1.68E-06	2.36E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.87E-04	6.36E-06	0.00E+00	8.88E-05	4.44E-04
11	E05	80	Combination Long Haul Truck	5

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E09	60	Combination Short Haul Truck	78	0.00E+00	4.61E-05	3.21E-06	3.00E+01	1.63E-07	4.03E-02	3.42E-05	5.00E-02	4.29E-03	8.50E-04	2.93E-03	9.57E-04	9.59E-04	4.52E-03	1.00E-04	0.00E+00	1.98E-03	9.42E-03
9	E09	60	Combination Long Haul Truck	71	0.00E+00	4.14E-05	2.69E-06	2.81E+01	1.87E-07	4.34E-02	3.19E-05	4.96E-02	4.32E-03	7.32E-04	3.02E-03	8.22E-04	8.33E-04	4.30E-03	9.42E-05	0.00E+00	2.19E-03	9.34E-03
9	E10	60	Passenger Car	718	0.00E+00	1.08E-05	1.16E-06	3.60E+01	7.49E-05	2.78E-01	2.39E-05	1.46E-03	7.29E-03	1.12E-03	2.33E-03	1.50E-03	1.54E-03	1.50E-04	1.81E-04	4.98E-08	7.88E-04	2.29E-04
9	E10	60	Passenger Truck	1203	0.00E+00	2.37E-05	2.51E-06	8.22E+01	1.48E-04	4.96E-01	4.89E-05	4.78E-03	1.34E-02	2.08E-03	4.65E-03	3.03E-03	3.10E-03	6.37E-04	4.09E-04	1.13E-07	1.55E-03	7.91E-04
9	E10	60	Single Unit Short Haul Truck	89	0.00E+00	2.62E-05	1.31E-06	1.67E+01	2.16E-05	3.23E-02	2.79E-05	1.25E-02	2.12E-03	3.84E-04	3.18E-03	7.85E-04	7.98E-04	1.67E-03	6.74E-05	2.78E-08	2.38E-03	2.34E-03
9	E10	60	Single Unit Long Haul Truck	4	0.00E+00	1.14E-06	5.69E-08	7.12E-01	9.37E-07	1.37E-03	1.22E-06	5.40E-04	9.52E-05	1.70E-05	1.39E-04	3.42E-05	3.47E-05	7.11E-05	2.88E-06	1.18E-09	1.05E-04	1.01E-04
9	E10	60	Combination Short Haul Truck	46	0.00E+00	2.69E-05	1.87E-06	1.75E+01	9.51E-08	2.35E-02	1.99E-05	2.91E-02	2.50E-03	4.95E-04	1.71E-03	5.58E-04	5.58E-04	2.63E-03	5.85E-05	0.00E+00	1.15E-03	5.49E-03
9	E10	60	Combination Long Haul Truck	42	0.00E+00	2.41E-05	1.57E-06	1.64E+01	1.09E-07	2.53E-02	1.86E-05	2.89E-02	2.51E-03	4.27E-04	1.76E-03	4.79E-04	4.85E-04	2.50E-03	5.49E-05	0.00E+00	1.28E-03	5.44E-03
9	E11	60	Passenger Car	1030	0.00E+00	1.54E-05	1.67E-06	5.17E+01	1.07E-04	3.99E-01	3.43E-05	2.10E-03	1.05E-02	1.61E-03	3.34E-03	2.15E-03	2.21E-03	2.15E-04	2.59E-04	7.14E-08	1.13E-03	3.28E-04
9	E11	60	Passenger Truck	1726	0.00E+00	3.40E-05	3.59E-06	1.18E+02	2.13E-04	7.11E-01	7.01E-05	6.85E-03	1.92E-02	2.98E-03	6.67E-03	4.35E-03	4.45E-03	9.14E-04	5.86E-04	1.62E-07	2.22E-03	1.14E-03
9	E11	60	Single Unit Short Haul Truck	110	0.00E+00	3.22E-05	1.61E-06	2.05E+01	2.65E-05	3.97E-02	3.43E-05	1.53E-02	2.61E-03	4.73E-04	3.91E-03	9.65E-04	9.81E-04	2.05E-03	8.28E-05	3.41E-08	2.93E-03	2.87E-03
9	E11	60	Single Unit Long Haul Truck	5	0.00E+00	1.41E-06	6.99E-08	8.75E-01	1.15E-06	1.68E-03	1.50E-06	6.64E-04	1.17E-04	2.09E-05	1.71E-04	4.20E-05	4.27E-05	8.74E-05	3.54E-06	1.45E-09	1.29E-04	1.24E-04
9	E11	60	Combination Short Haul Truck	68	0.00E+00	3.97E-05	2.77E-06	2.58E+01	1.41E-07	3.48E-02	2.95E-05	4.31E-02	3.70E-03	7.32E-04	2.53E-03	8.25E-04	8.26E-04	3.90E-03	8.65E-05	0.00E+00	1.70E-03	8.12E-03
9	E11	60	Combination Long Haul Truck	62	0.00E+00	3.57E-05	2.32E-06	2.42E+01	1.61E-07	3.74E-02	2.75E-05	4.27E-02	3.72E-03	6.31E-04	2.61E-03	7.08E-04	7.18E-04	3.70E-03	8.12E-05	0.00E+00	1.89E-03	8.04E-03
9	E12	60	Passenger Car	724	0.00E+00	1.08E-05	1.17E-06	3.63E+01	7.54E-05	2.80E-01	2.41E-05	1.48E-03	7.34E-03	1.13E-03	2.35E-03	1.51E-03	1.55E-03	1.51E-04	1.82E-04	5.01E-08	7.94E-04	2.31E-04
9	E12	60	Passenger Truck	1212	0.00E+00	2.39E-05	2.52E-06	8.28E+01	1.49E-04	4.99E-01	4.92E-05	4.81E-03	1.35E-02	2.09E-03	4.68E-03	3.05E-03	3.13E-03	6.41E-04	4.12E-04	1.14E-07	1.56E-03	7.97E-04
9	E12	60	Single Unit Short Haul Truck	91	0.00E+00	2.68E-05	1.34E-06	1.71E+01	2.21E-05	3.31E-02	2.86E-05	1.28E-02	2.17E-03	3.94E-04	3.26E-03	8.04E-04	8.17E-04	1.71E-03	6.90E-05	2.84E-08	2.44E-03	2.39E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	1.17E-06	5.83E-08	7.29E-01	9.60E-07	1.40E-03	1.25E-06	5.53E-04	9.75E-05	1.74E-05	1.43E-04	3.50E-05	3.56E-05	7.28E-05	2.95E-06	1.21E-09	1.07E-04	1.04E-04
9	E12	60	Combination Short Haul Truck	80	0.00E+00	4.69E-05	3.27E-06	3.05E+01	1.66E-07	4.10E-02	3.48E-05	5.08E-02	4.37E-03	8.64E-04	2.98E-03	9.73E-04	9.75E-04	4.60E-03	1.02E-04	0.00E+00	2.01E-03	9.58E-03
9	E12	60	Combination Long Haul Truck	73	0.00E+00	4.21E-05	2.74E-06	2.86E+01	1.91E-07	4.42E-02	3.25E-05	5.04E-02	4.39E-03	7.45E-04	3.08E-03	8.36E-04	8.47E-04	4.37E-03	9.58E-05	0.00E+00	2.23E-03	9.49E-03
11	E13	80	Passenger Car	272	0.00E+00	3.30E-06	3.57E-07	1.26E+01	2.30E-05	8.78E-02	7.35E-06	5.58E-04	1.49E-03	2.60E-04	7.15E-04	4.61E-04	4.73E-04	4.26E-05	6.38E-05	1.79E-08	2.42E-04	8.72E-05
11	E13	80	Passenger Truck	455	0.00E+00	7.09E-06	7.53E-07	2.92E+01	4.55E-05	1.62E-01	1.49E-05	1.66E-03	2.68E-03	4.76E-04	1.42E-03	9.24E-04	9.47E-04	2.04E-04	1.46E-04	3.98E-08	4.76E-04	2.71E-04
11	E13	80	Single Unit Short Haul Truck	30	0.00E+00	5.55E-06	2.76E-07	5.45E+00	4.47E-06	1.09E-02	5.91E-06	2.85E-03	3.49E-04	7.90E-05	6.76E-04	1.65E-04	1.67E-04	5.47E-04	2.20E-05	8.71E-09	5.09E-04	5.32E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	1.19E-08	2.31E-01	1.91E-07	4.55E-04	2.57E-07	1.22E-04	1.59E-05	3.48E-06	2.95E-05	7.08E-06	7.20E-06	2.30E-05	9.31E-07	3.63E-10	2.23E-05	2.28E-05
11	E13	80	Combination Short Haul Truck	13	0.00E+00	5.67E-06	4.06E-07	4.69E+00	1.79E-08	5.02E-03	4.14E-06	5.81E-03	3.43E-04	8.46E-05	3.38E-04	1.20E-04	1.19E-04	7.07E-04	1.57E-05	0.00E+00	2.19E-04	1.10E-03
11	E13	80	Combination Long Haul Truck	12	0.00E+00	5.08E-06	3.41E-07	4.34E+00	2.07E-08	5.21E-03	3.85E-06	5.64E-03	3.36E-04	6.76E-05	3.49E-04	1.03E-04	1.04E-04	6.62E-04	1.45E-05	0.00E+00	2.45E-04	1.06E-03
11	E14	80	Passenger Car	464	0.00E+00	5.64E-06	6.10E-07	2.16E+01	3.92E-05	1.50E-01	1.25E-05	9.52E-04	2.55E-03	4.43E-04	1.22E-03	7.87E-04	8.07E-04	7.26E-05	1.09E-04	3.05E-08	4.13E-04	1.49E-04
11	E14	80	Passenger Truck	776	0.00E+00	1.21E-05	1.28E-06	4.99E+01	7.76E-05	2.76E-01	2.54E-05	2.83E-03	4.57E-03	8.11E-04	2.43E-03	1.58E-03	1.62E-03	3.49E-04	2.49E-04	6.79E-08	8.13E-04	4.62E-04
11	E14	80	Single Unit Short Haul Truck	55	0.00E+00	1.03E-05	5.11E-07	1.01E+01	8.27E-06	2.02E-02	1.09E-05	5.27E-03	6.46E-04	1.46E-04	1.25E-03	3.04E-04	3.10E-04	1.01E-03	4.06E-05	1.61E-08	9.42E-04	9.85E-04
11	E14	80	Single Unit Long Haul Truck	2	0.00E+00	4.47E-07	2.20E-08	4.27E-01	3.53E-07	8.42E-04	4.76E-07	2.25E-04	2.95E-05	6.45E-06	5.46E-05	1.31E-05	1.33E-05	4.26E-05	1.72E-06	6.72E-10	4.13E-05	4.22E-05
11	E14	80	Combination Short Haul Truck	32	0.00E+00	1.41E-05	1.01E-06	1.16E+01	4.44E-08	1.25E-02	1.03E-05	1.44E-02	8.51E-04	2.10E-04	8.38E-04	2.97E-04	2.95E-04	1.75E-03	3.89E-05	0.00E+00	5.43E-04	2.72E-03
11	E14	80	Combination Long Haul Truck	29	0.00E+00	1.26E-05	8.47E-07	1.08E+01	5.13E-08	1.29E-02	9.54E-06	1.40E-02	8.33E-04	1.68E-04	8.65E-04	2.56E-04	2.57E-04	1.64E-03	3.60E-05	0.00E+00	6.08E-04	2.64E-03
11	E15	80	Passenger Car	146	0.00E+00	1.77E-06	1.92E-07	6.79E+00	1.23E-05	4.72E-02	3.94E-06	3.00E-04	8.02E-04	1.39E-04	3.84E-04	2.48E-04	2.54E-04	2.29E-05	3.42E-05	9.60E-09	1.30E-04	4.68E-05
11	E15	80	Passenger Truck	244	0.00E+00	3.81E-06	4.04E-07	1.57E+01	2.44E-05	8.68E-02	7.98E-06	8.90E-04	1.44E-03	2.55E-04	7.64E-04	4.96E-04	5.08E-04	1.10E-04	7.85E-05	2.14E-08	2.56E-04	1.45E-04
11	E15	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.28E+00	1.87E-06	4.57E-03	2.48E-06	1.19E-03	1.46E-04	3.31E-05	2.83E-04	6.89E-05	7.01E-05	2.29E-04	9.20E-06	3.65E-09	2.13E-04	2.23E-04
11	E15	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	4.99E-09	9.66E-02	8.00E-08	1.90E-04	1.08E-07	5.10E-05	6.68E-06	1.46E-06	1.24E-05	2.97E-06	3.02E-06	9.64E-06	3.90E-07	1.52E-10	9.34E-06	9.54E-06
11	E15	80	Combination Short Haul Truck	7	0.00E+00	3.14E-06	2.25E-07	2.60E+00	9.91E-09	2.78E-03	2.30E-06	3.22E-03	1.90E-04	4.69E-05	1.87E-04	6.63E-05	6.58E-05	3.92E-04	8.70E-06	0.00E+00	1.21E-04	6.07E-04
11	E15	80	Combination Long Haul Truck	7	0.00E+00	2.81E-06	1.89E-07	2.40E+00	1.15E-08	2.88E-03	2.13E-06	3.13E-03	1.86E-04	3.74E-05	1.93E-04	5.71E-05	5.74E-05	3.67E-04	8.04E-06	0.00E+00	1.36E-04	5.89E-04
11	E16	80	Passenger Car	248	0.00E+00	3.01E-06	3.26E-07	1.15E+01	2.10E-05	8.00E-02	6.69E-06	5.08E-04	1.36E-03	2.37E-04	6.52E-04	4.20E-04	4.31E-04	3.88E-05	5.81E-05	1.63E-08	2.21E-04	7.95E-05
11	E16	80	Passenger Truck	414	0.00E+00	6.46E-06	6.86E-07	2.66E+01	4.14E-05	1.47E-01	1.35E-05	1.51E-03	2.44E-03	4.33E-04	1.30E-03	8.42E-04	8.63E-04	1.86E-04	1.33E-04	3.63E-08	4.34E-04	2.47E-04
11	E16	80	Single Unit Short Haul Truck	11	0.00E+00	2.00E-06	9.94E-08	1.96E+00	1.61E-06	3.93E-03	2.13E-06	1.03E-03	1.26E-04	2.84E-05	2.44E-04	5.93E-05	6.03E-05	1.97E-04	7.91E-06	3.14E-09	1.83E-04	1.92E-04
11	E16	80	Combination Short Haul Truck	31	0.00E+00	1.35E-05	9.62E-07	1.11E+01	4.24E-08	1.19E-02	9.83E-06	1.38E-02	8.14E-04	2.01E-04	8.01E-04	2.84E-04	2.82E-04	1.68E-03	3.72E-05	0.00E+00	5.19E-04	2.60E-03
11	E16	80	Combination Long Haul Truck	28	0.00E+00	1.20E-05	8.10E-07	1.03E+01	4.90E-08	1.23E-02	9.13E-06	1.34E-02	7.96E-04	1.60E-04	8.27E-04	2.44E-04	2.46E-04	1.57E-03	3.44E-05	0.00E+00	5.82E-04	2.52E-03
11	E17	80	Passenger Car	67	0.00E+00	8.14E-07	8.81E-08	3.12E+00	5.67E-06	2.16E-02	1.81E-06	1.37E-04	3.68E-04	6.40E-05	1.76E-04	1.14E-04	1.17E-04	1.05E-05	1.57E-05	4.40E-09	5.96E-05	2.15E-05
11	E17	80	Passenger Truck	112	0.00E+00	1.75E-06	1.85E-07	7.20E+00	1.12E-05	3.98E-02	3.66E-06	4.08E-04	6.60E-04	1.17E-04	3.51E-04	2.28E-04	2.33E-04	5.03E-05	3.60E-05	9.80E-09	1.17E-04	6.67E-05
11	E17	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.70E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.35E-09	3.12E-04	3.27E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.47E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.42E-06	1.41E-05	5.72E-07	2.23E-10	1.37E-05	1.40E-05
11	E17	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.59E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	E17	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.74E-04
11	E18	80	Passenger Car	219	0.00E+00	2.67E-06	2.88E-07	1.02E+01	1.85E-05	7.09E-02	5.93E-06	4.50E-04	1.21E-03	2.09E-04	5.77E-04	3.72E-04	3.82E-04	3.43E-05	5.14E-05	1.44E-08	1.95E-04	7.03E-05
11	E18	80	Passenger Truck	367	0.00E+00	5.72E-06	6.07E-07	2.36E+01	3.67E-05	1.30E-01	1.20E-05	1.34E-03	2.16E-03	3.84E-04	1.15E-03	7.45E-04	7.64E-04	1.65E-04	1.18E-04	3.21E-08	3.84E-04	2.18E-04
11	E18	80	Single Unit Short Haul Truck	8	0.00E+00	1.44E-06	7.13E-08	1.41E+00	1.16E-06	2.82E-03	1.53E-06	7.36E-04	9.02E-05	2.04E-05	1.75E-04	4.25E-05	4.32E-05	1.41E-04	5.68E-06	2.25E-09	1.32E-04	1.38E-04
11	E18	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.04E-03	1.68E-06	2.36E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.87E-04	6.36E-06	0.00E+00	8.88E-05	4.44E-04
11	E18	80	Combination Long Haul Truck	5	0.00E+00	2.06E-06	1.38E-07	1.76E+00	8.38E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.41E-04	4.18E-05	4.20E-05	2.68E-04	5.88E-06	0.00E+00	9.94E-05	4.31E-04
9	E19	60	Passenger Car	425	0.00E+00	6.37E-06	6.89E-07	2.13E+01	4.43E-05	1.65E-01	1.42E-05	8.67E-04	4.31E-03	6.62E-04	1.38E-03	8.88E-04	9.12E-04	8.88E-05	1.07E-04	2.95E-08	4.66E-04	1.35E-04
9	E19	60	Passenger Truck	712	0.00E+00	1.40E-05	1.48E-06	4.86E+01	8.78E-05	2.93E-01	2.89E-05	2.83E-03	7.92E-03	1.23E-03	2.75E-03	1.79E-03	1.84E-03	3.77E-04	2.42E-04	6.68E-08	9.15E-04	4.68E-04
9	E19	60	Single Unit Short Haul Truck	65	0.00E+00	1.91E-05	9.56E-07	1.22E+01	1.58E-05	2.36E-02	2.04E-05	9.12E-03	1.55E-03	2.81E-04	2.32E-03	5.74E-04	5.83E-04	1.22E-03	4.92E-05	2.03E-08	1.74E-03	1.71E-03
9	E19	60	Single Unit Long Haul Truck	3	0.00E+00	8.35E-07	4.16E-08	5.20E-01	6.85E-07	1.00E-03	8.92E-07	3.94E-04	6.95E-05	1.24E-05	1.02E-04	2.49E-05	2.54E-05	5.19E-05	2.10E-06	8.62E-10	7.64E-05	7.39E-05
9	E19	60	Combination Short Haul Truck	30	0.00E+00	1.78E-05	1.24E-06	1.16E+01	6.32E-08	1.56E-02	1.32E-05	1.93E-02	1.66E-03	3.29E-04	1.14E-03	3.70E-04	3.71E-04	1.75E-03	3.89E-05	0.00E+00	7.64E-04	3.64E-03
9	E19	60	Combination Long Haul Truck	28	0.00E+00	1.60E-05	1.04E-06	1.09E+01	7.25E-08	1.68E-02	1.23E-05	1.92E-02	1.67E-03	2.83E-04	1.17E-03	3.18E-04	3.22E-04	1.66E-03	3.65E-05	0.00E+00	8.48E-04	3.61E-03
9	E20	60	Passenger Car	242	0.00E+00	3.62E-06	3.91E-07	1.21E+01	2.52E-05	9.35E-02	8.04E-06	4.93E-04	2.45E-03	3.76E-04	7.83E-04	5.05E-04	5.18E-04	5.05E-05	6.07E-05	1.67E-08	2.65E-04	7.70E-05
9	E20	60	Passenger Truck	404	0.00E+00	7.98E-06	8.43E-07	2.76E+01	4.99E-05	1.67E-01	1.64E-05	1.61E-03	4.50E-03	6.98E-04	1.56E-03	1.02E-03	1.04E-03	2.14E-04	1.37E-04	3.80E-08	5.20E-04	2.66E-04
9	E20	60	Single Unit Short Haul Truck	35	0.00E+00	1.04E-05	5.20E-07	6.63E+00	8.58E-06	1.28E-02	1.11E-05	4.96E-03	8.43E-04	1.53E-04	1.26E-03	3.12E-04	3.17E-04	6.63E-04	2.68E-05	1.10E-08	9.47E-04	9.29E-04
9	E20	60	Single Unit Long Haul Truck	2	0.00E+00	4.54E-07	2.26E-08	2.83E-01	3.73E-07	5.45E-04	4.85E-07	2.15E-04	3.78E-05	6.76E-06	5.54E-05	1.36E-05	1.38E-05	2.83E-05	1.14E-06	4.69E-10	4.16E-05	4.02E-05
9	E20	60	Combination Short Haul Truck	13	0.00E+00	7.38E-06	5.15E-07	4.80E+00	2.62E-08	6.46E-03	5.48E-06	8.00E-03	6.88E-04	1.36E-04	4.70E-04	1.53E-04	1.54E-04	7.24E-04	1.61E-05	0.00E+00	3.16E-04	1.51E-03
9	E20	60	Combination Long Haul Truck	11	0.00E+00	6.63E-06	4.31E-07	4.50E+00	3.00E-08	6.96E-03	5.11E-06	7.94E-03	6.91E-04	1.17E-04	4.84E-04	1.32E-04	1.33E-04	6.88E-04	1.51E-05	0.00E+00	3.51E-04	1.49E-03
11	E21	80	Passenger Car	8	0.00E+00	9.33E-08	1.01E-08	3.57E-01	6.49E-07	2.48E-03	2.07E-07	1.57E-05	4.22E-05	7.33E-06	2.02E-05	1.30E-05	1.33E-05	1.20E-06	1.80E-06	5.04E-10	6.83E-06	2.46E-06
11	E21	80	Passenger Truck	13	0.00E+00	2.00E-07	2.12E-08	8.25E-01	1.28E-06	4.56E-03	4.20E-07	4.68E-05	7.56E-05	1.34E-05	4.02E-05	2.61E-05	2.67E-05	5.77E-06	4.12E-06	1.12E-09	1.34E-05	7.64E-06
11	E21	80	Single Unit Short Haul Truck	1	0.00E+00	1.71E-07	8.49E-09	1.68E-01	1.38E-07	3.36E-04	1.82E-07	8.76E-05	1.07E-05	2.43E-06	2.08E-05	5.06E-06	5.15E-06	1.68E-05	6.76E-07	2.68E-10	1.57E-05	1.64E-05
11	E21	80	Combination Short Haul Truck	2	0.00E+00	7.30E-07	5.22E-08	6.04E-01	2.30E-09	6.47E-04	5.34E-07	7.49E-04	4.42E-05	1.09E-05	4.35E-05	1.54E-05	1.53E-05	9.10E-05	2.02E-06	0.00E+00	2.82E-05	1.41E-04
11	E21	80	Combination Long Haul Truck	2	0.00E+00	6.54E-07	4.40E-08	5.58E-01	2.66E-09	6.70E-04	4.96E-07	7.27E-04	4.32E-05	8.70E-06	4.49E-05	1.33E-05	1.33E-05	8.53E-05	1.87E-06	0.00E+00	3.16E-05	1.37E-04
11	E22	80	Passenger Car	60	0.00E+00	7.35E-07	7.95E-08	2.81E+00	5.12E-06	1.95E-02	1.63E-06	1.24E-04	3.32E-04	5.78E-05	1.59E-04	1.03E-04	1.05E-04	9.47E-06	1.42E-05	3.98E-09	5.39E-05	1.94E-05
11	E22	80	Passenger Truck	101	0.00E+00	1.58E-06	1.67E-07	6.50E+00	1.01E-05	3.60E-02	3.31E-06	3.69E-04	5.96E-04	1.06E-04	3.17E-04	2.06E-04	2.11E-04	4.55E-05	3.25E-05	8.85E-09	1.06E-04	6.03E-05
11	E22	80	Single Unit Short Haul Truck	7	0.00E+00	1.24E-06	6.17E-08	1.22E+00	1.00E-06	2.44E-03	1.32E-06	6.37E-04	7.81E-05	1.77E-05	1.51E-04	3.68E-05	3.74E-05	1.22E-04	4.91E-06	1.95E-09	1.14E-04	1.19E-04
11	E22	80	Combination Short Haul Truck	6	0.00E+00	2.64E-06	1.89E-07	2.18E+00	8.32E-09	2.34E-03	1.93E-06	2.70E-03	1.60E-04	3.93E-05	1.57E-04	5.57E-05	5.53E-05	3.29E-04	7.30E-06	0.00E+00	1.02E-04	5.10E-04
11	E22	80	Combination Long Haul Truck	5	0.00E+00	2.36E-06	1.59E-07	2.02E+00	9.62E-09	2.42E-03	1.79E-06	2.63E-03	1.56E-04	3.14E-05	1.62E-04	4.79E-05	4.82E-05	3.08E-04	6.75E-06	0.00E+00	1.14E-04	4.95E-04
11	E23	80	Passenger Car	178	0.00E+00	2.16E-06	2.34E-07	8.28E+00	1.51E-05	5.75E-02	4.81E-06	3.65E-04	9.78E-04	1.70E-04	4.68E-04	3.02E-04	3.10E-04	2.79E-05	4.17E-05	1.17E-08	1.58E-04	5.71E-05
11	E23	80	Passenger Truck	298	0.00E+00	4.64E-06	4.93E-07	1.91E+01	2.98E-05	1.06E-01	9.74E-06	1.09E-03	1.75E-03	3.11E-04	9.32E-04	6.05E-04	6.20E-04	1.34E-04	9.57E-05	2.61E-08	3.12E-04	1.77E-04
11	E23	80	Single Unit Short Haul Truck	146	0.00E+00	2.73E-05	1.36E-06	2.68E+01	2.20E-05	5.37E-02	2.91E-05	1.40E-02	1.72E-03	3.89E-04	3.33E-03	8.10E-04	8.24E-04	2.69E-03	1.08E-04	4.29E-08	2.50E-03	2.62E-03
11	E23	80	Single Unit Long Haul Truck	6	0.00E+00	1.19E-06	5.86E-08	1.14E+00	9.40E-07	2.24E-03	1.27E-06	5.99E-04	7.85E-05	1.72E-05	1.45E-04	3.49E-05	3.55E-05	1.13E-04	4.58E-06	1.79E-09	1.10E-04	1.12E-04
11	E23	80	Combination Short Haul Truck	82	0.00E+00	3.62E-05	2.59E-06	3.00E+01	1.14E-07	3.21E-02	2.65E-05	3.71E-02	2.19E-03	5.40E-04	2.16E-03	7.65E-04	7.59E-04	4.52E-03	1.00E-04	0.00E+00	1.40E-03	7.00E-03
11	E23	80	Combination Long Haul Truck	75	0.00E+00	3.25E-05	2.18E-06	2.77E+01	1.32E-07	3.33E-02	2.46E-05	3.61E-02	2.14E-03	4.32E-04	2.23E-03	6.58E-04	6.62E-04	4.23E-03	9.27E-05	0.00E+00	1.57E-03	6.79E-03
11	E24	80	Passenger Car	398

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E28	70	Passenger Truck	116	0.00E+00	1.99E-06	2.10E-07	7.67E+00	1.26E-05	4.33E-02	4.13E-06	4.35E-04	9.79E-04	1.59E-04	3.94E-04	2.56E-04	2.62E-04	5.63E-05	3.82E-05	1.02E-08	1.31E-04	7.15E-05
10	E28	70	Single Unit Short Haul Truck	3	0.00E+00	7.81E-07	3.91E-08	6.12E-01	6.39E-07	1.22E-03	8.32E-07	3.85E-04	5.49E-05	1.10E-05	9.47E-05	2.34E-05	2.37E-05	6.13E-05	2.47E-06	9.96E-10	7.10E-05	7.21E-05
10	E28	70	Combination Short Haul Truck	2	0.00E+00	1.02E-06	7.28E-08	7.42E-01	3.33E-09	8.82E-04	7.51E-07	1.07E-03	7.79E-05	1.70E-05	6.24E-05	2.15E-05	2.15E-05	1.12E-04	2.48E-06	0.00E+00	4.09E-05	2.03E-04
10	E28	70	Combination Long Haul Truck	2	0.00E+00	9.26E-07	6.19E-08	6.93E-01	3.83E-09	9.34E-04	7.03E-07	1.06E-03	7.74E-05	1.41E-05	6.45E-05	1.87E-05	1.89E-05	1.06E-04	2.32E-06	0.00E+00	4.56E-05	2.00E-04
10	E29	70	Passenger Car	33	0.00E+00	4.30E-07	4.65E-08	1.58E+00	2.99E-06	1.12E-02	9.55E-07	6.59E-05	2.55E-04	4.09E-05	9.30E-05	5.99E-05	6.15E-05	5.89E-06	7.93E-06	2.16E-09	3.15E-05	1.03E-05
10	E29	70	Passenger Truck	55	0.00E+00	9.42E-07	9.97E-08	3.64E+00	5.96E-06	2.05E-02	1.96E-06	2.06E-04	4.64E-04	7.54E-05	1.87E-04	1.21E-04	1.24E-04	2.67E-05	1.81E-05	4.85E-09	6.23E-05	3.39E-05
10	E29	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
10	E29	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.57E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.61E-04
10	E29	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.44E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	E30	70	Passenger Car	177	0.00E+00	2.31E-06	2.50E-07	8.48E+00	1.61E-05	6.00E-02	5.14E-06	3.54E-04	1.37E-03	2.20E-04	5.00E-04	3.22E-04	3.31E-04	3.17E-05	4.26E-05	1.16E-08	1.69E-04	5.54E-05
10	E30	70	Passenger Truck	296	0.00E+00	5.06E-06	5.36E-07	1.95E+01	3.20E-05	1.10E-01	1.05E-05	1.11E-03	2.49E-03	4.05E-04	1.00E-03	6.53E-04	6.68E-04	1.44E-04	9.74E-05	2.61E-08	3.35E-04	1.82E-04
10	E30	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.91E-04
10	E30	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.68E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	E30	70	Combination Short Haul Truck	9	0.00E+00	4.63E-06	3.29E-07	3.35E+00	1.50E-08	3.98E-03	3.39E-06	4.85E-03	3.52E-04	7.68E-05	2.82E-04	9.73E-05	9.71E-05	5.05E-04	1.12E-05	0.00E+00	1.85E-04	9.15E-04
10	E30	70	Combination Long Haul Truck	8	0.00E+00	4.18E-06	2.80E-07	3.13E+00	1.73E-08	4.22E-03	3.18E-06	4.78E-03	3.50E-04	6.38E-05	2.91E-04	8.45E-05	8.54E-05	4.78E-04	1.05E-05	0.00E+00	2.06E-04	9.01E-04
10	E31	70	Passenger Car	77	0.00E+00	1.01E-06	1.09E-07	3.71E+00	7.04E-06	2.62E-02	2.25E-06	1.55E-04	6.00E-04	9.62E-05	2.19E-04	1.41E-04	1.45E-04	1.39E-05	1.87E-05	5.08E-09	7.40E-05	2.42E-05
10	E31	70	Passenger Truck	130	0.00E+00	2.22E-06	2.34E-07	8.55E+00	1.40E-05	4.83E-02	4.60E-06	4.85E-04	1.09E-03	1.77E-04	4.39E-04	2.86E-04	2.93E-04	6.28E-05	4.26E-05	1.14E-08	1.46E-04	7.98E-05
10	E31	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	E31	70	Combination Short Haul Truck	4	0.00E+00	2.18E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.60E-06	2.28E-03	1.66E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.69E-05	4.30E-04
10	E31	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.32E-07	1.47E+00	8.15E-09	1.98E-03	1.49E-06	2.25E-03	1.65E-04	3.00E-05	1.37E-04	3.98E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.24E-04
10	E32	70	Passenger Car	327	0.00E+00	4.27E-06	4.62E-07	1.57E+01	2.97E-05	1.11E-01	9.50E-06	6.55E-04	2.54E-03	4.07E-04	9.25E-04	5.96E-04	6.12E-04	5.86E-05	7.89E-05	2.15E-08	3.13E-04	1.02E-04
10	E32	70	Passenger Truck	548	0.00E+00	9.36E-06	9.91E-07	3.62E+01	5.92E-05	2.04E-01	1.95E-05	2.05E-03	4.61E-03	7.50E-04	1.86E-03	1.21E-03	1.24E-03	2.66E-04	1.80E-04	4.82E-08	6.19E-04	3.37E-04
10	E32	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.94E-06	5.64E-03	3.84E-06	1.77E-03	2.53E-04	5.07E-05	4.37E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.59E-09	3.27E-04	3.32E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.80E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.63E-05	1.16E-05	2.26E-06	1.91E-05	4.66E-06	4.74E-06	1.20E-05	4.83E-07	1.94E-10	1.44E-05	1.43E-05
10	E32	70	Combination Short Haul Truck	10	0.00E+00	5.17E-06	3.67E-07	3.75E+00	1.68E-08	4.45E-03	3.79E-06	5.43E-03	3.93E-04	8.58E-05	3.15E-04	1.09E-04	1.09E-04	5.65E-04	1.25E-05	0.00E+00	2.06E-04	1.02E-03
10	E32	70	Combination Long Haul Truck	9	0.00E+00	4.67E-06	3.12E-07	3.50E+00	1.93E-08	4.71E-03	3.55E-06	5.35E-03	3.91E-04	7.13E-05	3.26E-04	9.44E-05	9.55E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
9	E33	60	Passenger Car	168	0.00E+00	2.51E-06	2.72E-07	8.42E+00	1.75E-05	6.50E-02	5.59E-06	3.42E-04	1.70E-03	2.62E-04	5.44E-04	3.51E-04	3.60E-04	3.51E-05	4.22E-05	1.16E-08	1.84E-04	5.35E-05
9	E33	60	Passenger Truck	281	0.00E+00	5.55E-06	5.86E-07	1.92E+01	3.47E-05	1.16E-01	1.14E-05	1.12E-03	3.13E-03	4.85E-04	1.09E-03	7.08E-04	7.25E-04	1.49E-04	9.55E-05	2.64E-08	3.61E-04	1.85E-04
9	E33	60	Single Unit Short Haul Truck	15	0.00E+00	4.33E-06	2.17E-07	2.76E+00	3.57E-06	5.34E-03	4.62E-06	2.07E-03	3.51E-04	6.36E-05	5.27E-04	1.30E-04	1.32E-04	2.76E-04	1.12E-05	4.59E-09	3.94E-04	3.87E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.89E-07	9.42E-09	1.18E-01	1.55E-07	2.27E-04	2.02E-07	8.93E-05	1.58E-05	2.82E-06	2.31E-05	5.65E-06	5.75E-06	1.18E-05	4.76E-07	1.95E-10	1.73E-05	1.67E-05
9	E33	60	Combination Short Haul Truck	8	0.00E+00	4.89E-06	3.41E-07	3.18E+00	1.73E-08	4.28E-03	3.63E-06	5.30E-03	4.55E-04	9.01E-05	3.11E-04	1.02E-04	1.02E-04	4.80E-04	1.07E-05	0.00E+00	2.10E-04	9.99E-04
9	E33	60	Combination Long Haul Truck	8	0.00E+00	4.39E-06	2.86E-07	2.98E+00	1.99E-08	4.61E-03	3.38E-06	5.26E-03	4.58E-04	7.77E-05	3.21E-04	8.72E-05	8.83E-05	4.56E-04	9.99E-06	0.00E+00	2.32E-04	9.90E-04
9	E34	60	Passenger Car	497	0.00E+00	7.45E-06	8.06E-07	2.49E+01	5.19E-05	1.93E-01	1.66E-05	1.01E-03	5.05E-03	7.75E-04	1.61E-03	1.04E-03	1.07E-03	1.04E-04	1.25E-04	3.45E-08	5.46E-04	1.59E-04
9	E34	60	Passenger Truck	833	0.00E+00	1.64E-05	1.74E-06	5.69E+01	1.03E-04	3.43E-01	3.39E-05	3.31E-03	9.26E-03	1.44E-03	3.22E-03	2.10E-03	2.15E-03	4.41E-04	2.83E-04	7.82E-08	1.07E-03	5.48E-04
9	E34	60	Single Unit Short Haul Truck	41	0.00E+00	1.19E-05	5.98E-07	7.61E+00	9.85E-06	1.47E-02	1.27E-05	5.70E-03	9.68E-04	1.75E-04	1.45E-03	3.58E-04	3.64E-04	7.62E-04	3.07E-05	1.27E-08	1.09E-03	1.07E-03
9	E34	60	Single Unit Long Haul Truck	2	0.00E+00	5.22E-07	2.60E-08	3.25E-01	4.28E-07	6.25E-04	5.57E-07	2.46E-04	4.35E-05	7.77E-06	6.36E-05	1.56E-05	1.58E-05	3.24E-05	1.31E-06	5.39E-10	4.78E-05	4.62E-05
9	E34	60	Combination Short Haul Truck	29	0.00E+00	1.68E-05	1.17E-06	1.09E+01	5.96E-08	1.47E-02	1.25E-05	1.82E-02	1.57E-03	3.10E-04	1.07E-03	3.49E-04	3.50E-04	1.65E-03	3.66E-05	0.00E+00	7.20E-04	3.43E-03
9	E34	60	Combination Long Haul Truck	26	0.00E+00	1.51E-05	9.82E-07	1.03E+01	6.83E-08	1.58E-02	1.16E-05	1.81E-02	1.57E-03	2.67E-04	1.10E-03	3.00E-04	3.04E-04	1.57E-03	3.44E-05	0.00E+00	7.99E-04	3.40E-03
9	E35	60	Passenger Car	247	0.00E+00	3.69E-06	4.00E-07	1.24E+01	2.57E-05	9.55E-02	8.21E-06	5.03E-04	2.50E-03	3.84E-04	7.99E-04	5.15E-04	5.29E-04	5.15E-05	6.20E-05	1.71E-08	2.71E-04	7.86E-05
9	E35	60	Passenger Truck	413	0.00E+00	8.15E-06	8.60E-07	2.82E+01	5.09E-05	1.70E-01	1.68E-05	1.64E-03	4.59E-03	7.13E-04	1.60E-03	1.04E-03	1.07E-03	2.19E-04	1.40E-04	3.88E-08	5.31E-04	2.72E-04
9	E35	60	Single Unit Short Haul Truck	27	0.00E+00	7.82E-06	3.91E-07	4.98E+00	6.45E-06	9.64E-03	8.34E-06	3.73E-03	6.33E-04	1.15E-04	9.50E-04	2.35E-04	2.38E-04	4.99E-04	2.01E-05	8.29E-09	7.12E-04	6.98E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	3.41E-07	1.70E-08	2.13E-01	2.80E-07	4.09E-04	3.65E-07	1.61E-04	2.84E-05	5.08E-06	4.16E-05	1.02E-05	1.04E-05	2.12E-05	8.60E-07	3.53E-10	3.13E-05	3.02E-05
9	E35	60	Combination Short Haul Truck	17	0.00E+00	9.75E-06	6.80E-07	6.34E+00	3.45E-08	8.53E-03	7.24E-06	1.06E-02	9.08E-04	1.80E-04	6.20E-04	2.02E-04	2.03E-04	9.56E-04	2.12E-05	0.00E+00	4.18E-04	1.99E-03
9	E35	60	Combination Long Haul Truck	15	0.00E+00	8.75E-06	5.70E-07	5.95E+00	3.96E-08	9.19E-03	6.75E-06	1.05E-02	9.13E-04	1.55E-04	6.40E-04	1.74E-04	1.76E-04	9.09E-04	1.99E-05	0.00E+00	4.63E-04	1.97E-03
9	E36	60	Passenger Car	446	0.00E+00	6.67E-06	7.22E-07	2.23E+01	4.64E-05	1.72E-01	1.48E-05	9.09E-04	4.52E-03	6.94E-04	1.44E-03	9.31E-04	9.55E-04	9.31E-05	1.12E-04	3.09E-08	4.89E-04	1.42E-04
9	E36	60	Passenger Truck	746	0.00E+00	1.47E-05	1.55E-06	5.10E+01	9.20E-05	3.08E-01	3.03E-05	2.96E-03	8.30E-03	1.29E-03	2.88E-03	1.88E-03	1.92E-03	3.95E-04	2.53E-04	7.00E-08	9.59E-04	4.91E-04
9	E36	60	Single Unit Short Haul Truck	38	0.00E+00	1.11E-05	5.54E-07	7.05E+00	9.13E-06	1.37E-02	1.18E-05	5.28E-03	8.97E-04	1.63E-04	1.35E-03	3.32E-04	3.38E-04	7.06E-04	2.85E-05	1.17E-08	1.01E-03	9.89E-04
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	4.83E-07	2.41E-08	3.01E-01	3.96E-07	5.80E-04	5.16E-07	2.28E-04	4.03E-05	7.19E-06	5.89E-05	1.44E-05	1.47E-05	3.01E-05	1.22E-06	4.99E-10	4.42E-05	4.28E-05
9	E36	60	Combination Short Haul Truck	26	0.00E+00	1.55E-05	1.08E-06	1.01E+01	5.48E-08	1.35E-02	1.15E-05	1.68E-02	1.44E-03	2.85E-04	9.84E-04	3.21E-04	3.22E-04	1.52E-03	3.37E-05	0.00E+00	6.62E-04	3.16E-03
9	E36	60	Combination Long Haul Truck	24	0.00E+00	1.39E-05	9.03E-07	9.43E+00	6.28E-08	1.46E-02	1.07E-05	1.66E-02	1.45E-03	2.46E-04	1.01E-03	2.76E-04	2.79E-04	1.44E-03	3.16E-05	0.00E+00	7.35E-04	3.13E-03
9	E37	60	Passenger Car	228	0.00E+00	3.42E-06	3.70E-07	1.15E+01	2.38E-05	8.84E-02	7.61E-06	4.66E-04	2.32E-03	3.56E-04	7.40E-04	4.77E-04	4.90E-04	4.77E-05	5.74E-05	1.58E-08	2.51E-04	7.28E-05
9	E37	60	Passenger Truck	383	0.00E+00	7.54E-06	7.97E-07	2.61E+01	4.72E-05	1.58E-01	1.55E-05	1.52E-03	4.25E-03	6.60E-04	1.48E-03	9.63E-04	9.87E-04	2.03E-04	1.30E-04	3.59E-08	4.92E-04	2.52E-04
9	E37	60	Single Unit Short Haul Truck	43	0.00E+00	1.27E-05	6.35E-07	8.09E+00	1.05E-05	1.57E-02	1.36E-05	6.06E-03	1.03E-03	1.87E-04	1.54E-03	3.81E-04	3.87E-04	8.10E-04	3.27E-05	1.35E-08	1.16E-03	1.13E-03
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	5.55E-07	2.76E-08	3.45E-01	4.55E-07	6.65E-04	5.92E-07	2.62E-04	4.62E-05	8.26E-06	6.76E-05	1.66E-05	1.68E-05	3.45E-05	1.40E-06	5.73E-10	5.08E-05	4.91E-05
9	E37	60	Combination Short Haul Truck	23	0.00E+00	1.34E-05	9.33E-07	8.71E+00	4.74E-08	1.17E-02	9.94E-06	1.45E-02	1.25E-03	2.47E-04	8.52E-04	2.78E-04	2.78E-04	1.31E-03	2.92E-05	0.00E+00	5.74E-04	2.74E-03
9	E37	60	Combination Long Haul Truck	21	0.00E+00	1.20E-05	7.82E-07	8.17E+00	5.44E-08	1.26E-02	9.27E-06	1.44E-02	1.25E-03	2.13E-04	8.78E-04	2.39E-04	2.42E-04	1.25E-03	2.74E-05	0.00E+00	6.36E-04	2.71E-03
9	E38	60	Passenger Car	477	0.00E+00	7.14E-06	7.73E-07	2.39E+01	4.97E-05	1.85E-01	1.59E-05	9.73E-04	4.84E-03	7.43E-04	1.55E-03	9.96E-04	1.02E-03	9.96E-05	1.20E-04	3.30E-08	5.23E-04	1.52E-04
9	E38	60	Passenger Truck	799	0.00E+00	1.58E-05	1.66E-06	5.46E+01	9.85E-05	3.29E-01	3.25E-05	3.17E-03	8.88E-03	1.38E-03	3.09E-03	2.01E-03	2.06E-03	4.23E-04	2.71E-04	7.50E-08	1.03E-03	5.26E-04
9	E38	60	Single Unit Short Haul Truck	57	0.00E+00	1.68E-05	8.43E-07	1.07E+01	1.39E-05	2.08E-02	1.80E-05	8.03E-03	1.36E-03	2.47E-04	2.05E-03	5.05E-04	5.14E-04	1.07E-03	4.34E-05	1.79E-08	1.53E-03	1.51E-03
9	E38	60	Single Unit Long Haul Truck	3	0.00E+00	7.36E-07	3.66E-08	4.58E-01	6.03E-07	8.82E-04	7.86E-07	3.47E-04	6.13E-05	1.10E-05	8.97E-05	2.20E-05	2.24E-05	4.58E-05	1.85E-06	7.60E-10	6.74E-05	6.51E-05
9	E38	60	Combination Short Haul Truck	41	0.00E+00	2.44E-05	1.70E-06	1.58E+01	8.63E-08	2.13E-02	1.81E-05	2.64E-02	2.27E-03	4.49E-04	1.55E-03	5.06E-04	5.06E-04	2.39E-03	5.30E-05	0.00E+00	1.04E-03	4.98E-03
9	E38	60	Combination Long Haul Truck	38	0.00E+00	2.19E-05	1.42E-06	1.49E+01	9.90E-08	2.29E-02	1.69E-05	2.62E-02	2.28E-03	3.87E-04	1.60E-03	4.34E-04	4.40E-04	2.27E-03	4.98E-05	0.00E+00	1.16E-03	4.93E-03
10	E39	70	Passenger Car	239	0.00E+00	3.12E-06	3.37E-07	1.14E+01	2.17E-05	8.09E-02	6.93E-06	4.78E-04	1.85E-03	2.97E-04	6.74E-04	4.35E-04	4.46E-04	4.27E-05	5.75E-05	1.57E-08	2.28E-04	7.47E-05
10	E39	70	Passenger Truck	399	0.00E+00	6.83E-06	7.23E-07	2.64E+01	4.32E-05	1.49E-01	1.42E-05	1.49E-03	3.36E-03	5.47E-04	1.35E-03	8.80E-04	9.02E-04	1.94E-04	1.31E-04	3.51E-08	4.51E-04	2.46E-04
10	E39	70	Single Unit Short Haul Truck	17	0.00E+00	3.90E-06	1.95E-07	3.06E+00	3.19E-06	6.11E-03	4.16E-06	1.92E-03	2.74E-04	5.50E-05	4.73E-04	1.17E-04	1.19E-04	3.06E-04	1.23E-05	4.97E-09	3.55E-04	3.60E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.70E-07	8.45E-09	1.30E-01	1.38E-07	2.57E-04	1.81E-07	8.27E-05	1.25E-05	2.44E-06	2.07E-05	5.05E-06	5.14E-06	1.30E-05	5.24E-07	2.10E-10	1.56E-05	1.55E-05
10	E39	70	Combination Short Haul Truck	8	0.00E+00	4.30E-06	3.05E-07	3.11E+00	1.40E-08	3.70E-03	3.15E-06	4.51E-03	3.27E-04	7.14E-05	2.62E-04	9.04E-05	9.02E-05	4.70E-04	1.04E-05	0.00E+00	1.72E-04	8.50E-04
10	E39	70	Combination Long Haul Truck	8	0.00E+00	3.88E-06	2.60E-07	2.91E+00	1.61E-08	3.92E-03	2.95E-06	4.45E-03	3.25E-04	5.92E-05	2.71E-04	7.85E-05	7.93E-05	4.44E-04	9.74E-06	0.00E+00	1.91E-04	8.37E-04
10	E40	70	Passenger Car	199	0.00E+00	2.60E-06	2.81E-07	9.54E+00	1.81E-05	6.75E-02	5.78E-06	3.99E-04	1.54E-03	2.47E-04	5.62E-04	3.62E-04	3.72E-04	3.56E-05	4.80E-05	1.31E-08	1.90E-04	6.23E-05
10	E40	70	Passenger Truck	333	0.00E+00	5.69E-06	6.03E-07	2.20E+01	3.60E-05	1.24E-01	1.18E-05	1.25E-03	2.81E-03	4.56E-04	1.13E-03	7.34E-04	7.52E-04	1.61E-04	1.10E-04	2.93E-08	3.76E-04	2.05E-04
10	E40	70	Single Unit Short Haul Truck	6	0.00E+00	1.44E-06	7.24E-08	1.13E+00	1.18E-06	2.26E-03	1.54E-06	7.12E-04	1.02E-04	2.04E-05	1.75E-04	4.32E-05	4.39E-05	1.13E-04	4.56E-06	1.84E-09	1.31E-04	1.33E-04
10	E40	70	Combination Short Haul Truck	4	0.00E+00	2.21E-06	1.57E-07	1.60E+00	7.18E-09	1.90E-03	1.62E-06	2.32E-03	1.68E-04	3.67E-05	1.35E-04	4.65E-05	4.64E-05	2.42E-04	5.37E-06	0.00E+00	8.83E-05	4.37E-04
10	E40	70	Combination Long Haul Truck	4	0.00E+00	2.00E-06	1.34E-07	1.50E+00	8.27E-09	2.02E-03	1.52E-06	2.29E-03	1.67E-04	3.05E-05	1.39E-04	4.04E-05	4.08E-05	2.29E-04	5.01E-06	0.00E+00	9.84E-05	4.31E-04
10	E41	70	Passenger Car	212	0.00E+00	2.77E-06	3.00E-07	1.02E+01	1.93E-05	7.20E-02	6.17E-06	4.26E-04	1.65E-03	2.64E-04	6.00E-04	3.87E-04	3.97E-04	3.80E-05	5.12E-05	1.40E-08	2.03E-04	6.65E-05
10	E41	70	Passenger Truck	356	0.00E+00	6.08E-06	6.43E-07	2.35E+01	3.84E-05	1.33E-01	1.26E-05	1.33E-03	3.00E-03	4.87E-04	1.20E-03	7.84E-04	8.03E-04	1.72E-04	1.17E-04	3.13E-08	4.02E-04	2.19E-04
10	E41	70	Single Unit Short Haul Truck	1	0.00E+00	1.82E-07	9.09E-09	1.42E-01	1.48E-07	2.84E-04	1.93E-07	8.94E-05	1.28E-05	2.56E-06	2.20E-05	5.43E-06	5.52E-06	1.43E-05	5.73E-07	2.31E-10	1.65E-05	1.67E-05
10	E41	70	Combination Short Haul Truck	2	0.00E+00	9.25E-07	6.58E-08	6.71E-01	3.01E-09	7.97E-04	6.79E-07	9.71E-04	7.04E-05	1.54E-05	5.64E-05	1.95E-05	1.94E-05	1.01E-04	2.25E-06	0.00E+00	3.69E-05	1.83E-04
10	E41	70	Combination Long Haul Truck	2	0.00E+00	8.36E-07	5.59E-08	6.26E-01	3.46E-09	8.44E-04	6.35E-07	9.57E-04	6.99E-05	1.28E-05	5.83E-05	1.69E-05	1.71E-05	9.57E-05	2.10E-06	0.00E+00	4.12E-05	1.80E-04
10	E42	70	Passenger Car	134	0.00E+00	1.75E-06	1.89E-07	6.43E+00	1.22E-05	4.55E-02	3.89E-06	2.69E-04	1.04E-03	1.67E-04	3.79E-04	2.44E-04	2.51E-04	2.40E-05	3.23E-05	8.81E-09	1.28E-04	4.20E-05
10	E42	70	Passenger Truck	225	0.00E+00	3.84E-06	4.06E-07	1.48E+01	2.43E-05	8.37E-02	7.97E-06	8.40E-04	1.89E-03	3.07E-04	7.61E-04	4.95E-04	5.07E-04	1.09E-04	7.38E-05	1.98E-08	2.54E-04	1.38E-04
10	E42	70	Single Unit Short Haul Truck	4	0.00E+00	8.82E-07	4.42E-08	6.90E-01	7.21E-07	1.38E-03	9.39E-07	4.34E-04	6.20E-05	1.24E-05	1.07E-04	2.64E-05	2.68E-05	6.92E-05	2.78E-06	1.12E-09	8.01E-05	8.14E-05
10	E42	70	Combination Short Haul Truck	5	0.00E+00	2.61E-06	1.86E-07	1.89E+00	8.49E-09	2.25E-03	1.92E-06	2.74E-03	1.99E-04	4.34E-05	1.59E-04	5.49E-05	5.48E-05	2.86E-04	6.34E-06	0.00E+00	1.04E-04	5.17E-04
10	E42	70	Combination Long Haul Truck	5

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E47	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	E47	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.14E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E48	80	Passenger Car	337	0.00E+00	4.10E-06	4.44E-07	1.57E+01	2.85E-05	1.09E-01	9.12E-06	6.93E-04	1.85E-03	3.22E-04	8.88E-04	5.72E-04	5.87E-04	5.28E-05	7.92E-05	2.22E-08	3.00E-04	1.08E-04
11	E48	80	Passenger Truck	565	0.00E+00	8.81E-06	9.34E-07	3.63E+01	5.64E-05	2.01E-01	1.85E-05	2.06E-03	3.33E-03	5.90E-04	1.77E-03	1.15E-03	1.18E-03	2.54E-04	1.81E-04	4.94E-08	5.91E-04	3.36E-04
11	E48	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.35E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.57E-05	9.73E-05	3.18E-04	1.28E-05	5.07E-09	2.96E-04	3.10E-04
11	E48	80	Single Unit Long Haul Truck	1	0.00E+00	1.41E-07	6.92E-09	1.34E-01	1.11E-07	2.64E-04	1.49E-07	7.08E-05	9.27E-06	2.03E-06	1.72E-05	4.12E-06	4.19E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.32E-05
11	E48	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.77E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	E48	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.66E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.90E-04
11	E49	80	Passenger Car	43	0.00E+00	5.19E-07	5.62E-08	1.99E+00	3.61E-06	1.38E-02	1.15E-06	8.77E-05	2.35E-04	4.08E-05	1.12E-04	7.24E-05	7.43E-05	6.69E-06	1.00E-05	2.81E-09	3.80E-05	1.37E-05
11	E49	80	Passenger Truck	71	0.00E+00	1.11E-06	1.18E-07	4.59E+00	7.14E-06	2.54E-02	2.34E-06	2.60E-04	4.21E-04	7.47E-05	2.24E-04	1.45E-04	1.49E-04	3.21E-05	2.30E-05	6.25E-09	7.48E-05	4.25E-05
11	E49	80	Single Unit Short Haul Truck	1	0.00E+00	2.01E-07	1.00E-08	1.98E-01	1.62E-07	3.96E-04	2.14E-07	1.03E-04	1.27E-05	2.86E-06	2.45E-05	5.96E-06	6.06E-06	1.98E-05	7.96E-07	3.16E-10	1.84E-05	1.93E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	1.27E-06	9.11E-08	1.05E+00	4.02E-09	1.13E-03	9.31E-07	1.31E-03	7.71E-05	1.90E-05	7.58E-05	2.69E-05	2.67E-05	1.59E-04	3.52E-06	0.00E+00	4.92E-05	2.46E-04
11	E49	80	Combination Long Haul Truck	3	0.00E+00	1.14E-06	7.67E-08	9.73E-01	4.64E-09	1.17E-03	8.64E-07	1.27E-03	7.54E-05	1.52E-05	7.83E-05	2.31E-05	2.33E-05	1.49E-04	3.26E-06	0.00E+00	5.51E-05	2.39E-04
11	E50	80	Passenger Car	265	0.00E+00	3.23E-06	3.49E-07	1.24E+01	2.25E-05	8.58E-02	7.18E-06	5.45E-04	1.46E-03	2.54E-04	6.98E-04	4.50E-04	4.62E-04	4.16E-05	6.23E-05	1.75E-08	2.36E-04	8.52E-05
11	E50	80	Passenger Truck	444	0.00E+00	6.93E-06	7.35E-07	2.86E+01	4.44E-05	1.58E-01	1.45E-05	1.62E-03	2.62E-03	4.64E-04	1.39E-03	9.03E-04	9.25E-04	2.00E-04	1.43E-04	3.89E-08	4.65E-04	2.65E-04
11	E50	80	Single Unit Short Haul Truck	53	0.00E+00	9.95E-06	4.94E-07	9.77E+00	8.01E-06	1.96E-02	1.06E-05	5.10E-03	6.25E-04	1.42E-04	1.21E-03	2.95E-04	3.00E-04	9.80E-04	3.94E-05	1.56E-08	9.12E-04	9.54E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	2.13E-08	4.13E-01	3.42E-07	8.15E-04	4.60E-07	2.18E-04	2.86E-05	6.24E-06	5.29E-05	1.27E-05	1.29E-05	4.13E-05	1.67E-06	6.51E-10	3.99E-05	4.08E-05
11	E50	80	Combination Short Haul Truck	43	0.00E+00	1.89E-05	1.35E-06	1.56E+01	5.96E-08	1.67E-02	1.38E-05	1.94E-02	1.14E-03	2.82E-04	1.12E-03	3.99E-04	3.95E-04	2.35E-03	5.22E-05	0.00E+00	7.29E-04	3.65E-03
11	E50	80	Combination Long Haul Truck	39	0.00E+00	1.69E-05	1.14E-06	1.44E+01	6.88E-08	1.73E-02	1.28E-05	1.88E-02	1.12E-03	2.25E-04	1.16E-03	3.43E-04	3.45E-04	2.20E-03	4.83E-05	0.00E+00	8.16E-04	3.54E-03
11	E51	80	Passenger Car	13	0.00E+00	1.58E-07	1.70E-08	6.03E-01	1.10E-06	4.19E-03	3.50E-07	2.66E-05	7.12E-05	1.24E-05	3.41E-05	2.20E-05	2.26E-05	2.03E-06	3.04E-06	8.52E-10	1.15E-05	4.16E-06
11	E51	80	Passenger Truck	22	0.00E+00	3.38E-07	3.59E-08	1.39E+00	2.17E-06	7.71E-03	7.09E-07	7.90E-05	1.28E-04	2.27E-05	6.79E-05	4.41E-05	4.51E-05	9.74E-06	6.97E-06	1.90E-09	2.27E-05	1.29E-05
11	E51	80	Combination Short Haul Truck	1	0.00E+00	3.84E-07	2.75E-08	3.18E-01	1.21E-09	3.40E-04	2.81E-07	3.94E-04	2.33E-05	5.73E-06	2.29E-05	8.11E-06	8.05E-06	4.79E-05	1.06E-06	0.00E+00	1.48E-05	7.42E-05
11	E51	80	Combination Long Haul Truck	1	0.00E+00	3.44E-07	2.31E-08	2.94E-01	1.40E-09	3.53E-04	2.61E-07	3.82E-04	2.27E-05	4.58E-06	2.36E-05	6.98E-06	7.02E-06	4.49E-05	9.84E-07	0.00E+00	1.66E-05	7.20E-05
11	E52	80	Passenger Car	183	0.00E+00	2.22E-06	2.40E-07	8.50E+00	1.55E-05	5.90E-02	4.94E-06	3.75E-04	1.00E-03	1.75E-04	4.81E-04	3.10E-04	3.18E-04	2.86E-05	4.28E-05	1.20E-08	1.63E-04	5.86E-05
11	E52	80	Passenger Truck	306	0.00E+00	4.77E-06	5.06E-07	1.96E+01	3.05E-05	1.09E-01	9.99E-06	1.11E-03	1.80E-03	3.20E-04	9.56E-04	6.21E-04	6.36E-04	1.37E-04	9.82E-05	2.67E-08	3.20E-04	1.82E-04
11	E52	80	Single Unit Short Haul Truck	52	0.00E+00	9.71E-06	4.83E-07	9.53E+00	7.82E-06	1.91E-02	1.03E-05	4.98E-03	6.10E-04	1.38E-04	1.18E-03	2.88E-04	2.93E-04	9.56E-04	3.84E-05	1.52E-08	8.90E-04	9.31E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.08E-08	4.03E-01	3.34E-07	7.95E-04	4.49E-07	2.13E-04	2.79E-05	6.09E-06	5.16E-05	1.24E-05	1.26E-05	4.03E-05	1.63E-06	6.35E-10	3.90E-05	3.98E-05
11	E52	80	Combination Short Haul Truck	42	0.00E+00	1.83E-05	1.31E-06	1.51E+01	5.76E-08	1.62E-02	1.33E-05	1.87E-02	1.11E-03	2.72E-04	1.09E-03	3.86E-04	3.83E-04	2.28E-03	5.06E-05	0.00E+00	7.05E-04	3.53E-03
11	E52	80	Combination Long Haul Truck	38	0.00E+00	1.64E-05	1.10E-06	1.40E+01	6.66E-08	1.68E-02	1.24E-05	1.82E-02	1.08E-03	2.18E-04	1.12E-03	3.32E-04	3.34E-04	2.13E-03	4.68E-05	0.00E+00	7.90E-04	3.42E-03
11	E53	80	Passenger Car	131	0.00E+00	1.60E-06	1.73E-07	6.12E+00	1.11E-05	4.25E-02	3.55E-06	2.70E-04	7.23E-04	1.26E-04	3.46E-04	2.23E-04	2.29E-04	2.06E-05	3.08E-05	8.65E-09	1.17E-04	4.22E-05
11	E53	80	Passenger Truck	220	0.00E+00	3.43E-06	3.64E-07	1.41E+01	2.20E-05	7.82E-02	7.19E-06	8.02E-04	1.30E-03	2.30E-04	6.88E-04	4.47E-04	4.58E-04	9.89E-05	7.07E-05	1.92E-08	2.30E-04	1.31E-04
11	E53	80	Single Unit Short Haul Truck	32	0.00E+00	6.00E-06	2.98E-07	5.89E+00	4.83E-06	1.18E-02	6.39E-06	3.08E-03	3.77E-04	8.53E-05	7.31E-04	1.78E-04	1.81E-04	5.91E-04	2.37E-05	9.42E-09	5.50E-04	5.75E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.29E-08	2.49E-01	2.06E-07	4.91E-04	2.78E-07	1.32E-04	1.72E-05	3.77E-06	3.19E-05	7.65E-06	7.78E-06	2.49E-05	1.01E-06	3.93E-10	2.41E-05	2.46E-05
11	E53	80	Combination Short Haul Truck	23	0.00E+00	1.00E-05	7.18E-07	8.30E+00	3.17E-08	8.89E-03	7.34E-06	1.03E-02	6.08E-04	1.50E-04	5.98E-04	2.12E-04	2.10E-04	1.25E-03	2.78E-05	0.00E+00	3.88E-04	1.94E-03
11	E53	80	Combination Long Haul Truck	21	0.00E+00	8.99E-06	6.04E-07	7.67E+00	3.66E-08	9.22E-03	6.81E-06	9.99E-03	5.94E-04	1.20E-04	6.18E-04	1.82E-04	1.83E-04	1.17E-03	2.57E-05	0.00E+00	4.34E-04	1.88E-03
11	E54	80	Passenger Car	353	0.00E+00	4.29E-06	4.65E-07	1.64E+01	2.99E-05	1.14E-01	9.55E-06	7.25E-04	1.94E-03	3.38E-04	9.29E-04	5.99E-04	6.15E-04	5.53E-05	8.29E-05	2.32E-08	3.15E-04	1.13E-04
11	E54	80	Passenger Truck	591	0.00E+00	9.22E-06	9.78E-07	3.80E+01	5.91E-05	2.10E-01	1.93E-05	2.15E-03	3.48E-03	6.18E-04	1.85E-03	1.20E-03	1.23E-03	2.66E-04	1.90E-04	5.17E-08	6.19E-04	3.52E-04
11	E54	80	Single Unit Short Haul Truck	54	0.00E+00	1.01E-05	5.02E-07	9.92E+00	8.13E-06	1.99E-02	1.08E-05	5.18E-03	6.35E-04	1.44E-04	1.23E-03	2.99E-04	3.04E-04	9.95E-04	4.00E-05	1.59E-08	9.26E-04	9.69E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	4.40E-07	2.17E-08	4.20E-01	3.47E-07	8.27E-04	4.68E-07	2.21E-04	2.90E-05	6.34E-06	5.37E-05	1.29E-05	1.31E-05	4.19E-05	1.69E-06	6.61E-10	4.06E-05	4.14E-05
11	E54	80	Combination Short Haul Truck	39	0.00E+00	1.71E-05	1.22E-06	1.41E+01	5.39E-08	1.51E-02	1.25E-05	1.75E-02	1.03E-03	2.55E-04	1.02E-03	3.61E-04	3.58E-04	2.13E-03	4.73E-05	0.00E+00	6.60E-04	3.30E-03
11	E54	80	Combination Long Haul Truck	35	0.00E+00	1.53E-05	1.03E-06	1.31E+01	6.23E-08	1.57E-02	1.16E-05	1.70E-02	1.01E-03	2.04E-04	1.05E-03	3.10E-04	3.12E-04	2.00E-03	4.37E-05	0.00E+00	7.39E-04	3.20E-03
11	E55	80	Passenger Car	72	0.00E+00	8.76E-07	9.47E-08	3.35E+00	6.09E-06	2.33E-02	1.95E-06	1.48E-04	3.96E-04	6.88E-05	1.89E-04	1.22E-04	1.25E-04	1.13E-05	1.69E-05	4.73E-09	6.41E-05	2.31E-05
11	E55	80	Passenger Truck	121	0.00E+00	1.88E-06	1.99E-07	7.75E+00	1.20E-05	4.28E-02	3.94E-06	4.39E-04	7.10E-04	1.26E-04	3.77E-04	2.45E-04	2.51E-04	5.41E-05	3.87E-05	1.05E-08	1.26E-04	7.18E-05
11	E55	80	Single Unit Short Haul Truck	22	0.00E+00	4.11E-06	2.04E-07	4.03E+00	3.31E-06	8.08E-03	4.37E-06	2.11E-03	2.58E-04	5.84E-05	5.00E-04	1.22E-04	1.24E-04	4.05E-04	1.62E-05	6.45E-09	3.76E-04	3.94E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.81E-09	1.71E-01	1.41E-07	3.36E-04	1.90E-07	9.00E-05	1.18E-05	2.58E-06	2.18E-05	5.24E-06	5.33E-06	1.70E-05	6.89E-07	2.69E-10	1.65E-05	1.68E-05
11	E55	80	Combination Short Haul Truck	13	0.00E+00	5.82E-06	4.16E-07	4.81E+00	1.84E-08	5.15E-03	4.25E-06	5.96E-03	3.52E-04	8.68E-05	3.46E-04	1.23E-04	1.22E-04	7.25E-04	1.61E-05	0.00E+00	2.25E-04	1.12E-03
11	E55	80	Combination Long Haul Truck	12	0.00E+00	5.21E-06	3.50E-07	4.45E+00	2.12E-08	5.34E-03	3.95E-06	5.79E-03	3.44E-04	6.93E-05	3.58E-04	1.06E-04	1.06E-04	6.79E-04	1.49E-05	0.00E+00	2.52E-04	1.09E-03
11	E56	80	Passenger Car	280	0.00E+00	3.41E-06	3.69E-07	1.31E+01	2.37E-05	9.07E-02	7.58E-06	5.76E-04	1.54E-03	2.68E-04	7.38E-04	4.76E-04	4.88E-04	4.39E-05	6.58E-05	1.84E-08	2.50E-04	9.00E-05
11	E56	80	Passenger Truck	470	0.00E+00	7.32E-06	7.77E-07	3.02E+01	4.69E-05	1.67E-01	1.54E-05	1.71E-03	2.77E-03	4.91E-04	1.47E-03	9.54E-04	9.78E-04	2.11E-04	1.51E-04	4.11E-08	4.92E-04	2.80E-04
11	E56	80	Single Unit Short Haul Truck	41	0.00E+00	7.64E-06	3.79E-07	7.50E+00	6.15E-06	1.50E-02	8.13E-06	3.91E-03	4.80E-04	1.09E-04	9.30E-04	2.26E-04	2.30E-04	7.52E-04	3.02E-05	1.20E-08	7.00E-04	7.32E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	3.32E-07	1.64E-08	3.17E-01	2.63E-07	6.25E-04	3.53E-07	1.67E-04	2.19E-05	4.79E-06	4.06E-05	9.74E-06	9.90E-06	3.17E-05	1.28E-06	5.00E-10	3.07E-05	3.13E-05
11	E56	80	Combination Short Haul Truck	33	0.00E+00	1.47E-05	1.05E-06	1.22E+01	4.64E-08	1.30E-02	1.07E-05	1.51E-02	8.90E-04	2.19E-04	8.76E-04	3.11E-04	3.08E-04	1.83E-03	4.07E-05	0.00E+00	5.68E-04	2.84E-03
11	E56	80	Combination Long Haul Truck	31	0.00E+00	1.32E-05	8.85E-07	1.12E+01	5.36E-08	1.35E-02	9.98E-06	1.46E-02	8.70E-04	1.75E-04	9.05E-04	2.67E-04	2.69E-04	1.72E-03	3.76E-05	0.00E+00	6.36E-04	2.76E-03
9	F31	60	Passenger Car	666	0.00E+00	9.97E-06	1.08E-06	3.34E+01	6.94E-05	2.58E-01	2.22E-05	1.36E-03	6.76E-03	1.04E-03	2.16E-03	1.39E-03	1.43E-03	1.39E-04	1.67E-04	4.61E-08	7.30E-04	2.12E-04
9	F31	60	Passenger Truck	1115	0.00E+00	2.20E-05	2.32E-06	7.62E+01	1.37E-04	4.59E-01	4.53E-05	4.43E-03	1.24E-02	1.92E-03	4.31E-03	2.81E-03	2.88E-03	5.90E-04	3.79E-04	1.05E-07	1.43E-03	7.34E-04
9	F31	60	Single Unit Short Haul Truck	28	0.00E+00	8.16E-06	4.08E-07	5.20E+00	6.73E-06	1.01E-02	8.71E-06	3.89E-03	6.61E-04	1.20E-04	9.92E-04	2.45E-04	2.49E-04	5.21E-04	2.10E-05	8.66E-09	7.43E-04	7.29E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	3.57E-07	1.77E-08	2.22E-01	2.92E-07	4.27E-04	3.81E-07	1.68E-04	2.97E-05	5.31E-06	4.35E-05	1.07E-05	1.08E-05	2.22E-05	8.97E-07	3.68E-10	3.26E-05	3.15E-05
9	F31	60	Combination Short Haul Truck	40	0.00E+00	2.33E-05	1.62E-06	1.51E+01	8.25E-08	2.04E-02	1.73E-05	2.52E-02	2.17E-03	4.29E-04	1.48E-03	4.83E-04	4.84E-04	2.28E-03	5.07E-05	0.00E+00	9.98E-04	4.76E-03
9	F31	60	Combination Long Haul Truck	36	0.00E+00	2.09E-05	1.36E-06	1.42E+01	9.46E-08	2.19E-02	1.61E-05	2.50E-02	2.18E-03	3.70E-04	1.53E-03	4.15E-04	4.21E-04	2.17E-03	4.76E-05	0.00E+00	1.11E-03	4.71E-03
9	F32	60	Passenger Car	672	0.00E+00	1.01E-05	1.09E-06	3.37E+01	7.00E-05	2.60E-01	2.24E-05	1.37E-03	6.82E-03	1.05E-03	2.18E-03	1.40E-03	1.44E-03	1.40E-04	1.69E-04	4.65E-08	7.37E-04	2.14E-04
9	F32	60	Passenger Truck	1125	0.00E+00	2.22E-05	2.34E-06	7.68E+01	1.39E-04	4.64E-01	4.57E-05	4.47E-03	1.25E-02	1.94E-03	4.35E-03	2.83E-03	2.90E-03	5.95E-04	3.82E-04	1.06E-07	1.45E-03	7.40E-04
9	F32	60	Single Unit Short Haul Truck	105	0.00E+00	3.09E-05	1.54E-06	1.97E+01	2.54E-05	3.81E-02	3.29E-05	1.47E-02	2.50E-03	4.53E-04	3.75E-03	9.26E-04	9.41E-04	1.97E-03	7.94E-05	3.27E-08	2.81E-03	2.76E-03
9	F32	60	Single Unit Long Haul Truck	5	0.00E+00	1.35E-06	6.71E-08	8.39E-01	1.10E-06	1.62E-03	1.44E-06	6.36E-04	1.12E-04	2.01E-05	1.64E-04	4.03E-05	4.09E-05	8.38E-05	3.39E-06	1.39E-09	1.23E-04	1.19E-04
9	F32	60	Combination Short Haul Truck	48	0.00E+00	2.81E-05	1.96E-06	1.83E+01	9.95E-08	2.46E-02	2.08E-05	3.04E-02	2.61E-03	5.18E-04	1.79E-03	5.83E-04	5.84E-04	2.75E-03	6.12E-05	0.00E+00	1.20E-03	5.74E-03
9	F32	60	Combination Long Haul Truck	44	0.00E+00	2.52E-05	1.64E-06	1.71E+01	1.14E-07	2.65E-02	1.94E-05	3.02E-02	2.63E-03	4.46E-04	1.84E-03	5.01E-04	5.07E-04	2.62E-03	5.74E-05	0.00E+00	1.33E-03	5.69E-03
9	F33	60	Passenger Car	103	0.00E+00	1.54E-06	1.67E-07	5.15E+00	1.07E-05	3.98E-02	3.42E-06	2.10E-04	1.04E-03	1.60E-04	3.33E-04	2.15E-04	2.20E-04	2.15E-05	2.59E-05	7.12E-09	1.13E-04	3.28E-05
9	F33	60	Passenger Truck	172	0.00E+00	3.40E-06	3.59E-07	1.18E+01	2.12E-05	7.09E-02	7.00E-06	6.83E-04	1.91E-03	2.97E-04	6.65E-04	4.34E-04	4.44E-04	9.11E-05	5.85E-05	1.62E-08	2.21E-04	1.13E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.46E-07	1.23E-08	1.57E-01	2.03E-07	3.03E-04	2.62E-07	1.17E-04	1.99E-05	3.61E-06	2.99E-05	7.37E-06	7.49E-06	1.57E-05	6.32E-07	2.60E-10	2.24E-05	2.19E-05
9	F33	60	Combination Short Haul Truck	2	0.00E+00	1.15E-06	7.98E-08	7.45E-01	4.06E-09	1.00E-03	8.50E-07	1.24E-03	1.07E-04	2.11E-05	7.29E-05	2.38E-05	2.38E-05	1.12E-04	2.49E-06	0.00E+00	4.91E-05	2.34E-04
9	F33	60	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.69E-08	6.99E-01	4.65E-09	1.08E-03	7.93E-07	1.23E-03	1.07E-04	1.82E-05	7.51E-05	2.04E-05	2.07E-05	1.07E-04	2.34E-06	0.00E+00	5.44E-05	2.32E-04
9	F34	60	Passenger Car	350	0.00E+00	5.25E-06	5.67E-07	1.76E+01	3.65E-05	1.36E-01	1.17E-05	7.14E-04	3.55E-03	5.46E-04	1.14E-03	7.32E-04	7.51E-04	7.32E-05	8.81E-05	2.43E-08	3.84E-04	1.12E-04
9	F34	60	Passenger Truck	586	0.00E+00	1.16E-05	1.22E-06	4.01E+01	7.23E-05	2.42E-01	2.38E-05	2.33E-03	6.52E-03	1.01E-03	2.27E-03	1.48E-03	1.51E-03	3.10E-04	1.99E-04	5.51E-08	7.54E-04	3.86E-04
9	F34	60	Single Unit Short Haul Truck	21	0.00E+00	6.25E-06	3.13E-07	3.98E+00	5.15E-06	7.71E-03	6.67E-06	2.98E-03	5.06E-04	9.18E-05	7.60E-04	1.88E-04	1.91E-04	3.99E-04	1.61E-05	6.63E-09	5.69E-04	5.58E-04
9	F34	60	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.36E-08	1.70E-01	2.24E-07	3.27E-04	2.92E-07	1.29E-04	2.27E-05	4.06E-06	3.33E-05	8.16E-06	8.29E-06	1.70E-05	6.87E-07	2.82E-10	2.50E-05	2.42E-05
9	F34	60	Combination Short Haul Truck	19	0.00E+00	1.14E-05	7.94E-07	7.41E+00	4.04E-08	9.97E-03	8.46E-06	1.24E-02	1.06E-03	2.10E-04	7.25E-04	2.37E-04	2.37E-04	1.12E-03	2.48E-05	0.00E+00	4.88E-04	2.33E-03
9	F34	60	Combination Long Haul Truck	18	0.00E+00	1.02E-05	6.66E-07	6.95E+00	4.63E-08	1.07E-02	7.89E-06	1.22E-02	1.07E-03	1.81E-04	7.47E-04	2.03E-04	2.06E-04	1.06E-03	2.33E-05	0.00E+00	5.42E-04	2.31E-03
11	F35	80	Passenger Car	49	0.00E+00	6.00E-07	6.49E-08	2.30E+00	4.18E-06	1.60E-02	1.33E-06	1.01E-04	2.71E-04	4.72E-05	1.30E-04	8.37E-05	8.59E-05	7.73E-06	1.16E-05	3.25E-09	4.40E-05	1.58E-05
11	F35	80	Passenger Truck	83	0.00E+00	1.29E-06	1.37E-07	5.31E+00	8.26E-06	2.94E-02	2.70E-06	3.01E-04	4.87E-04	8.64E-05	2.59E-04	1.68E-04	1.72E-04	3.71E-05	2.65E-05	7.23E-09	8.65E-05	4.92E-05
11	F35	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.44E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	F35	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	F35	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.14E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	F36	80	Passenger Car	166	0.00E+00	2.02E-06	2.19E-07	7.75E+00	1.41E-05	5.38E-02	4.50E-06	3.42E-04	9.15E-04	1.59E-04	4.38E-04	2.82E-04	2.90E-04	2.61E-05	3.91E-05	1.09E-08	1.48E-04	5.34E-05
11	F36	80	Passenger Truck	279	0.00E+

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F40	80	Passenger Truck	376	0.00E+00	5.87E-06	6.22E-07	2.42E+01	3.76E-05	1.34E-01	1.23E-05	1.37E-03	2.22E-03	3.93E-04	1.18E-03	7.64E-04	7.83E-04	1.69E-04	1.21E-04	3.29E-08	3.94E-04	2.24E-04
11	F40	80	Single Unit Short Haul Truck	6	0.00E+00	1.10E-06	5.47E-08	1.08E+00	8.87E-07	2.17E-03	1.17E-06	5.64E-04	6.92E-05	1.57E-05	1.34E-04	3.26E-05	3.32E-05	1.08E-04	4.36E-06	1.73E-09	1.01E-04	1.06E-04
11	F40	80	Combination Short Haul Truck	8	0.00E+00	3.44E-06	2.46E-07	2.84E+00	1.09E-08	3.05E-03	2.51E-06	3.53E-03	2.08E-04	5.13E-05	2.05E-04	7.26E-05	7.20E-05	4.29E-04	9.52E-06	0.00E+00	1.33E-04	6.64E-04
11	F40	80	Combination Long Haul Truck	7	0.00E+00	3.08E-06	2.07E-07	2.63E+00	1.25E-08	3.16E-03	2.33E-06	3.42E-03	2.04E-04	4.10E-05	2.12E-04	6.25E-05	6.28E-05	4.02E-04	8.80E-06	0.00E+00	1.49E-04	6.45E-04
10	F41	70	Passenger Car	232	0.00E+00	3.03E-06	3.28E-07	1.11E+01	2.11E-05	7.86E-02	6.73E-06	4.65E-04	1.80E-03	2.88E-04	6.55E-04	4.23E-04	4.34E-04	4.15E-05	5.59E-05	1.52E-08	2.22E-04	7.26E-05
10	F41	70	Passenger Truck	388	0.00E+00	6.64E-06	7.02E-07	2.56E+01	4.20E-05	1.45E-01	1.38E-05	1.45E-03	3.27E-03	5.32E-04	1.32E-03	8.56E-04	8.76E-04	1.88E-04	1.28E-04	3.42E-08	4.39E-04	2.39E-04
10	F41	70	Single Unit Short Haul Truck	1	0.00E+00	1.29E-07	6.45E-09	1.01E-01	1.05E-07	2.02E-04	1.37E-07	6.34E-05	9.06E-06	1.81E-06	1.56E-05	3.85E-06	3.92E-06	1.01E-05	4.07E-07	1.64E-10	1.17E-05	1.19E-05
10	F41	70	Combination Short Haul Truck	2	0.00E+00	1.08E-06	7.66E-08	7.81E-01	3.50E-09	9.27E-04	7.90E-07	1.13E-03	8.20E-05	1.79E-05	6.56E-05	2.27E-05	2.26E-05	1.18E-04	2.61E-06	0.00E+00	4.30E-05	2.13E-04
10	F41	70	Combination Long Haul Truck	2	0.00E+00	9.74E-07	6.51E-08	7.29E-01	4.03E-09	9.82E-04	7.40E-07	1.11E-03	8.14E-05	1.49E-05	6.78E-05	1.97E-05	1.99E-05	1.11E-04	2.44E-06	0.00E+00	4.79E-05	2.10E-04
10	F42	70	Passenger Car	92	0.00E+00	1.20E-06	1.29E-07	4.39E+00	8.32E-06	3.11E-02	2.66E-06	1.83E-04	7.10E-04	1.14E-04	2.59E-04	1.67E-04	1.71E-04	1.64E-05	2.21E-05	6.02E-09	8.76E-05	2.87E-05
10	F42	70	Passenger Truck	153	0.00E+00	2.62E-06	2.77E-07	1.01E+01	1.66E-05	5.71E-02	5.44E-06	5.74E-04	1.29E-03	2.10E-04	5.19E-04	3.38E-04	3.46E-04	7.43E-05	5.04E-05	1.35E-08	1.73E-04	9.44E-05
53	F83	70	Passenger Car	93	0.00E+00	1.18E-06	1.28E-07	4.52E+00	8.20E-06	3.03E-02	2.62E-06	1.90E-04	7.11E-04	1.15E-04	2.55E-04	1.64E-04	1.69E-04	1.67E-05	2.27E-05	6.19E-09	8.64E-05	2.97E-05
53	F83	70	Passenger Truck	156	0.00E+00	2.57E-06	2.72E-07	1.04E+01	1.63E-05	5.57E-02	5.34E-06	5.81E-04	1.28E-03	2.08E-04	5.09E-04	3.31E-04	3.39E-04	7.52E-05	5.19E-05	1.36E-08	1.70E-04	9.53E-05
53	F83	70	Single Unit Short Haul Truck	24	0.00E+00	5.59E-06	2.80E-07	4.38E+00	4.57E-06	8.75E-03	5.95E-06	2.75E-03	3.93E-04	7.87E-05	6.78E-04	1.67E-04	1.70E-04	4.39E-04	1.76E-05	7.12E-09	5.08E-04	5.16E-04
53	F83	70	Single Unit Long Haul Truck	1	0.00E+00	2.43E-07	1.21E-08	1.86E-01	1.97E-07	3.68E-04	2.59E-07	1.18E-04	1.79E-05	3.50E-06	2.96E-05	7.23E-06	7.35E-06	1.85E-05	7.50E-07	3.00E-10	2.23E-05	2.22E-05
53	F83	70	Combination Short Haul Truck	15	0.00E+00	7.87E-06	5.59E-07	5.70E+00	2.56E-08	6.77E-03	5.77E-06	8.26E-03	5.99E-04	1.31E-04	4.79E-04	1.65E-04	1.65E-04	8.60E-04	1.91E-05	0.00E+00	3.14E-04	1.56E-03
53	F83	70	Combination Long Haul Truck	14	0.00E+00	7.11E-06	4.76E-07	5.32E+00	2.94E-08	7.17E-03	5.40E-06	8.14E-03	5.95E-04	1.08E-04	4.95E-04	1.44E-04	1.45E-04	8.13E-04	1.78E-05	0.00E+00	3.50E-04	1.53E-03
50	F84	40	Passenger Car	62	0.00E+00	1.04E-06	1.12E-07	3.59E+00	7.23E-06	2.66E-02	2.31E-06	1.12E-04	1.07E-03	1.53E-04	2.25E-04	1.45E-04	1.49E-04	1.94E-05	1.78E-05	4.34E-09	7.61E-05	1.75E-05
50	F84	40	Passenger Truck	104	0.00E+00	2.38E-06	2.49E-07	8.00E+00	1.42E-05	4.59E-02	4.76E-06	4.23E-04	1.90E-03	2.70E-04	4.48E-04	2.93E-04	3.00E-04	6.85E-05	3.94E-05	8.43E-09	1.48E-04	7.16E-05
50	F84	40	Single Unit Short Haul Truck	1	0.00E+00	3.31E-07	1.74E-08	1.59E-01	2.89E-07	2.74E-04	3.53E-07	1.62E-04	3.03E-05	5.03E-06	3.92E-05	1.04E-05	1.05E-05	1.61E-05	6.43E-07	2.72E-10	2.87E-05	3.04E-05
50	F84	40	Combination Short Haul Truck	36	0.00E+00	3.20E-05	2.22E-06	1.62E+01	1.15E-07	2.79E-02	2.38E-05	3.56E-02	3.72E-03	6.71E-04	2.07E-03	6.62E-04	6.68E-04	2.45E-03	5.43E-05	0.00E+00	1.40E-03	6.71E-03
50	F84	40	Combination Long Haul Truck	33	0.00E+00	2.91E-05	1.90E-06	1.54E+01	1.31E-07	3.10E-02	2.24E-05	3.57E-02	3.73E-03	5.95E-04	2.13E-03	5.80E-04	5.90E-04	2.36E-03	5.16E-05	0.00E+00	1.54E-03	6.73E-03
52	F85	60	Passenger Car	194	0.00E+00	2.67E-06	2.89E-07	9.72E+00	1.86E-05	6.85E-02	5.93E-06	3.81E-04	1.91E-03	2.94E-04	5.77E-04	3.72E-04	3.82E-04	4.05E-05	4.87E-05	1.30E-08	1.95E-04	5.95E-05
52	F85	60	Passenger Truck	325	0.00E+00	5.86E-06	6.19E-07	2.22E+01	3.65E-05	1.22E-01	1.21E-05	1.22E-03	3.41E-03	5.27E-04	1.15E-03	7.47E-04	7.65E-04	1.68E-04	1.10E-04	2.76E-08	3.81E-04	2.03E-04
52	F85	60	Single Unit Short Haul Truck	5	0.00E+00	1.49E-06	7.44E-08	9.48E-01	1.23E-06	1.84E-03	1.59E-06	7.09E-04	1.21E-04	2.19E-05	1.81E-04	4.46E-05	4.54E-05	9.49E-05	3.83E-06	1.58E-09	1.35E-04	1.33E-04
52	F85	60	Combination Short Haul Truck	28	0.00E+00	1.64E-05	1.14E-06	1.06E+01	5.79E-08	1.43E-02	1.21E-05	1.77E-02	1.52E-03	3.01E-04	1.04E-03	3.40E-04	3.40E-04	1.60E-03	3.56E-05	0.00E+00	7.01E-04	3.34E-03
52	F85	60	Combination Long Haul Truck	25	0.00E+00	1.47E-05	9.55E-07	9.98E+00	6.64E-08	1.54E-02	1.13E-05	1.76E-02	1.53E-03	2.60E-04	1.07E-03	2.92E-04	2.95E-04	1.52E-03	3.34E-05	0.00E+00	7.77E-04	3.31E-03
53	F86	70	Passenger Car	270	0.00E+00	3.42E-06	3.70E-07	1.31E+01	2.38E-05	8.81E-02	7.61E-06	5.51E-04	2.06E-03	3.33E-04	7.41E-04	4.77E-04	4.90E-04	4.84E-05	6.59E-05	1.80E-08	2.51E-04	8.61E-05
53	F86	70	Passenger Truck	453	0.00E+00	7.45E-06	7.89E-07	3.02E+01	4.72E-05	1.62E-01	1.55E-05	1.69E-03	3.70E-03	6.05E-04	1.48E-03	9.61E-04	9.85E-04	2.18E-04	1.51E-04	3.95E-08	4.93E-04	2.77E-04
53	F86	70	Single Unit Short Haul Truck	22	0.00E+00	5.09E-06	2.55E-07	3.99E+00	4.16E-06	7.97E-03	5.42E-06	2.51E-03	3.58E-04	7.17E-05	6.17E-04	1.52E-04	1.55E-04	4.00E-04	1.61E-05	6.49E-09	4.63E-04	4.70E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	2.22E-07	1.10E-08	1.69E-01	1.80E-07	3.35E-04	2.36E-07	1.08E-04	1.63E-05	3.19E-06	2.70E-05	6.59E-06	6.70E-06	1.69E-05	6.83E-07	2.74E-10	2.03E-05	2.02E-05
53	F86	70	Combination Short Haul Truck	20	0.00E+00	1.04E-05	7.37E-07	7.51E+00	3.37E-08	8.92E-03	7.60E-06	1.09E-02	7.89E-04	1.72E-04	6.31E-04	2.18E-04	2.18E-04	1.13E-03	2.51E-05	0.00E+00	4.14E-04	2.05E-03
53	F86	70	Combination Long Haul Truck	18	0.00E+00	9.37E-06	6.26E-07	7.01E+00	3.88E-08	9.45E-03	7.12E-06	1.07E-02	7.83E-04	1.43E-04	6.53E-04	1.89E-04	1.91E-04	1.07E-03	2.35E-05	0.00E+00	4.61E-04	2.02E-03
52	F87	60	Passenger Car	33	0.00E+00	4.47E-07	4.84E-08	1.63E+00	3.11E-06	1.15E-02	9.95E-07	6.39E-05	3.21E-04	4.93E-05	9.68E-05	6.24E-05	6.41E-05	6.79E-06	8.17E-06	2.18E-09	3.28E-05	9.98E-06
52	F87	60	Passenger Truck	54	0.00E+00	9.83E-07	1.04E-07	3.72E+00	6.13E-06	2.05E-02	2.02E-06	2.05E-04	5.72E-04	8.84E-05	1.92E-04	1.25E-04	1.28E-04	2.82E-05	1.85E-05	4.63E-09	6.39E-05	3.40E-05
52	F87	60	Single Unit Short Haul Truck	11	0.00E+00	3.17E-06	1.59E-07	2.02E+00	2.61E-06	3.91E-03	3.38E-06	1.51E-03	2.57E-04	4.65E-05	3.85E-04	9.51E-05	9.66E-05	2.02E-04	8.16E-06	3.36E-09	2.89E-04	2.83E-04
52	F87	60	Combination Short Haul Truck	4	0.00E+00	2.52E-06	1.76E-07	1.64E+00	8.94E-09	2.21E-03	1.87E-06	2.74E-03	2.35E-04	4.65E-05	1.61E-04	5.24E-05	5.25E-05	2.47E-04	5.50E-06	0.00E+00	1.08E-04	5.15E-04
52	F87	60	Combination Long Haul Truck	4	0.00E+00	2.27E-06	1.47E-07	1.54E+00	1.03E-08	2.38E-03	1.75E-06	2.71E-03	2.36E-04	4.01E-05	1.66E-04	4.50E-05	4.56E-05	2.35E-04	5.16E-06	0.00E+00	1.20E-04	5.11E-04
50	F88	40	Passenger Car	61	0.00E+00	1.02E-06	1.10E-07	3.52E+00	7.10E-06	2.62E-02	2.27E-06	1.10E-04	1.05E-03	1.50E-04	2.21E-04	1.42E-04	1.46E-04	1.90E-05	1.75E-05	4.26E-09	7.47E-05	1.72E-05
50	F88	40	Passenger Truck	102	0.00E+00	2.33E-06	2.45E-07	7.85E+00	1.40E-05	4.51E-02	4.67E-06	4.16E-04	1.87E-03	2.65E-04	4.40E-04	2.88E-04	2.95E-04	6.73E-05	3.87E-05	8.28E-09	1.45E-04	7.03E-05
50	F88	40	Single Unit Short Haul Truck	20	0.00E+00	8.94E-06	4.69E-07	4.29E+00	7.79E-06	7.40E-03	9.51E-06	4.37E-03	8.17E-04	1.36E-04	1.06E-03	2.79E-04	2.84E-04	4.34E-04	1.73E-05	7.34E-09	7.74E-04	8.20E-04
50	F88	40	Single Unit Long Haul Truck	1	0.00E+00	3.92E-07	2.04E-08	1.85E-01	3.41E-07	3.22E-04	4.17E-07	1.90E-04	3.66E-05	6.03E-06	4.65E-05	1.22E-05	1.24E-05	1.87E-05	7.49E-07	3.18E-10	3.41E-05	3.57E-05
50	F88	40	Combination Short Haul Truck	12	0.00E+00	1.04E-05	7.25E-07	5.30E+00	3.75E-08	9.11E-03	7.76E-06	1.16E-02	1.21E-03	2.19E-04	6.76E-04	2.16E-04	2.18E-04	7.98E-04	1.77E-05	0.00E+00	4.58E-04	2.19E-03
50	F88	40	Combination Long Haul Truck	11	0.00E+00	9.51E-06	6.20E-07	5.03E+00	4.26E-08	1.01E-02	7.32E-06	1.17E-02	1.22E-03	1.94E-04	6.96E-04	1.89E-04	1.93E-04	7.70E-04	1.69E-05	0.00E+00	5.04E-04	2.20E-03
54	G01	80	Passenger Car	171	0.00E+00	2.03E-06	2.20E-07	8.03E+00	1.42E-05	5.31E-02	4.52E-06	3.54E-04	9.92E-04	1.69E-04	4.40E-04	2.84E-04	2.91E-04	2.69E-05	4.05E-05	1.10E-08	1.49E-04	5.53E-05
54	G01	80	Passenger Truck	287	0.00E+00	4.41E-06	4.68E-07	1.87E+01	2.83E-05	1.01E-01	9.25E-06	1.05E-03	1.78E-03	3.11E-04	8.85E-04	5.75E-04	5.89E-04	1.29E-04	9.33E-05	2.48E-08	2.96E-04	1.71E-04
54	G01	80	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	3.35E-08	6.61E-01	5.42E-07	1.32E-03	7.17E-07	3.45E-04	4.23E-05	9.58E-06	8.20E-05	2.00E-05	2.03E-05	6.64E-05	2.66E-06	1.06E-09	6.17E-05	6.46E-05
54	G01	80	Combination Short Haul Truck	2	0.00E+00	8.02E-07	5.74E-08	6.63E-01	2.53E-09	7.10E-04	5.86E-07	8.22E-04	4.85E-05	1.20E-05	4.78E-05	1.69E-05	1.68E-05	1.00E-04	2.22E-06	0.00E+00	3.10E-05	1.55E-04
54	G01	80	Combination Long Haul Truck	2	0.00E+00	7.18E-07	4.83E-08	6.13E-01	2.92E-09	7.36E-04	5.44E-07	7.98E-04	4.75E-05	9.55E-06	4.93E-05	1.46E-05	1.47E-05	9.36E-05	2.05E-06	0.00E+00	3.47E-05	1.50E-04
54	G02	80	Passenger Car	450	0.00E+00	5.34E-06	5.78E-07	2.11E+01	3.72E-05	1.39E-01	1.19E-05	9.29E-04	2.60E-03	4.44E-04	1.16E-03	7.45E-04	7.65E-04	7.05E-05	1.06E-04	2.89E-08	3.91E-04	1.45E-04
54	G02	80	Passenger Truck	754	0.00E+00	1.16E-05	1.23E-06	4.90E+01	7.43E-05	2.64E-01	2.43E-05	2.76E-03	4.68E-03	8.16E-04	2.32E-03	1.51E-03	1.55E-03	3.39E-04	2.45E-04	6.50E-08	7.78E-04	4.50E-04
54	G02	80	Single Unit Short Haul Truck	43	0.00E+00	8.12E-06	4.03E-07	7.97E+00	6.54E-06	1.60E-02	8.65E-06	4.16E-03	5.10E-04	1.15E-04	9.89E-04	2.41E-04	2.45E-04	8.00E-04	3.21E-05	1.27E-08	7.44E-04	7.79E-04
54	G02	80	Single Unit Long Haul Truck	2	0.00E+00	3.53E-07	1.74E-08	3.37E-01	2.79E-07	6.65E-04	3.76E-07	1.78E-04	2.33E-05	5.10E-06	4.31E-05	1.04E-05	1.05E-05	3.37E-05	1.36E-06	5.31E-10	3.26E-05	3.33E-05
54	G02	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	1.00E-06	1.16E+01	4.41E-08	1.24E-02	1.02E-05	1.43E-02	8.46E-04	2.09E-04	8.33E-04	2.95E-04	2.93E-04	1.74E-03	3.87E-05	0.00E+00	5.40E-04	2.70E-03
54	G02	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.42E-07	1.07E+01	5.10E-08	1.28E-02	9.49E-06	1.39E-02	8.28E-04	1.67E-04	8.60E-04	2.54E-04	2.56E-04	1.63E-03	3.58E-05	0.00E+00	6.05E-04	2.62E-03
16	G03	100	Passenger Car	148	0.00E+00	1.61E-06	1.75E-07	6.63E+00	1.12E-05	4.42E-02	3.59E-06	3.15E-04	4.79E-04	9.65E-05	3.49E-04	2.25E-04	2.31E-04	1.85E-05	3.36E-05	9.24E-09	1.18E-04	4.93E-05
16	G03	100	Passenger Truck	247	0.00E+00	3.48E-06	3.71E-07	1.56E+01	2.28E-05	8.89E-02	7.41E-06	8.97E-04	8.46E-04	1.80E-04	7.13E-04	4.62E-04	4.73E-04	9.96E-05	7.85E-05	2.15E-08	2.40E-04	1.45E-04
16	G03	100	Single Unit Short Haul Truck	311	0.00E+00	4.18E-05	2.07E-06	5.68E+01	3.64E-05	1.31E-01	4.52E-05	2.26E-02	2.14E-03	6.24E-04	5.16E-03	1.28E-03	1.30E-03	5.72E-03	2.28E-04	9.32E-08	3.86E-03	4.22E-03
16	G03	100	Single Unit Long Haul Truck	14	0.00E+00	1.81E-06	8.79E-08	2.39E+00	1.51E-06	5.37E-03	1.95E-06	9.51E-04	9.69E-05	2.69E-05	2.25E-04	5.41E-05	5.49E-05	2.40E-04	9.63E-06	3.82E-09	1.70E-04	1.78E-04
16	G03	100	Combination Short Haul Truck	157	0.00E+00	5.41E-05	3.95E-06	5.69E+01	1.54E-07	5.28E-02	3.90E-05	5.77E-02	1.83E-03	6.53E-04	3.03E-03	1.16E-03	1.14E-03	8.58E-03	1.91E-04	0.00E+00	1.89E-03	1.09E-02
16	G03	100	Combination Long Haul Truck	144	0.00E+00	4.71E-05	3.23E-06	5.16E+01	1.78E-07	5.27E-02	3.53E-05	5.48E-02	1.70E-03	4.72E-04	3.08E-03	9.66E-04	9.64E-04	7.87E-03	1.73E-04	0.00E+00	2.12E-03	1.03E-02
16	G04	100	Passenger Car	142	0.00E+00	1.55E-06	1.68E-07	6.38E+00	1.08E-05	4.25E-02	3.45E-06	3.03E-04	4.61E-04	9.29E-05	3.36E-04	2.17E-04	2.22E-04	1.78E-05	3.23E-05	8.89E-09	1.14E-04	4.74E-05
16	G04	100	Passenger Truck	238	0.00E+00	3.35E-06	3.57E-07	1.51E+01	2.20E-05	8.55E-02	7.14E-06	8.63E-04	8.14E-04	1.73E-04	6.86E-04	4.45E-04	4.56E-04	9.59E-05	7.55E-05	2.07E-08	2.31E-04	1.40E-04
16	G04	100	Single Unit Short Haul Truck	184	0.00E+00	2.47E-05	1.22E-06	3.36E+01	2.16E-05	7.79E-02	2.68E-05	1.34E-02	1.27E-03	3.70E-04	3.06E-03	7.59E-04	7.71E-04	3.39E-03	1.35E-04	5.52E-08	2.29E-03	2.50E-03
16	G04	100	Single Unit Long Haul Truck	8	0.00E+00	1.07E-06	5.21E-08	1.42E+00	8.94E-07	3.18E-03	1.16E-06	5.64E-04	5.74E-05	1.60E-05	1.33E-04	3.20E-05	3.26E-05	1.42E-04	5.70E-06	2.26E-09	1.01E-04	1.05E-04
16	G04	100	Combination Short Haul Truck	134	0.00E+00	4.61E-05	3.36E-06	4.85E+01	1.31E-07	4.49E-02	3.32E-05	4.91E-02	1.56E-03	5.56E-04	2.58E-03	9.85E-04	9.69E-04	7.31E-03	1.62E-04	0.00E+00	1.61E-03	9.26E-03
16	G04	100	Combination Long Haul Truck	122	0.00E+00	4.01E-05	2.75E-06	4.39E+01	1.52E-07	4.49E-02	3.00E-05	4.67E-02	1.45E-03	4.02E-04	2.63E-03	8.23E-04	8.21E-04	6.70E-03	1.47E-04	0.00E+00	1.81E-03	8.79E-03
16	G05	100	Passenger Car	159	0.00E+00	1.74E-06	1.89E-07	7.16E+00	1.21E-05	4.77E-02	3.87E-06	3.40E-04	5.17E-04	1.04E-04	3.77E-04	2.43E-04	2.50E-04	2.00E-05	3.62E-05	9.98E-09	1.28E-04	5.32E-05
16	G05	100	Passenger Truck	267	0.00E+00	3.76E-06	4.01E-07	1.69E+01	2.46E-05	9.59E-02	8.00E-06	9.68E-04	9.14E-04	1.94E-04	7.70E-04	4.99E-04	5.11E-04	1.08E-04	8.47E-05	2.32E-08	2.59E-04	1.57E-04
16	G05	100	Single Unit Short Haul Truck	4	0.00E+00	4.83E-07	2.39E-08	6.57E-01	4.22E-07	1.52E-03	5.23E-07	2.61E-04	2.48E-05	7.21E-06	5.97E-05	1.48E-05	1.50E-05	6.62E-05	2.64E-06	1.08E-09	4.47E-05	4.88E-05
16	G05	100	Combination Short Haul Truck	2	0.00E+00	6.27E-07	4.57E-08	6.60E-01	1.78E-09	6.11E-04	4.52E-07	6.69E-04	2.12E-05	7.56E-06	3.51E-05	1.34E-05	1.32E-05	9.95E-05	2.21E-06	0.00E+00	2.19E-05	1.26E-04
16	G05	100	Combination Long Haul Truck	2	0.00E+00	5.45E-07	3.74E-08	5.98E-01	2.07E-09	6.11E-04	4.09E-07	6.35E-04	1.97E-05	5.47E-06	3.58E-05	1.12E-05	1.12E-05	9.12E-05	2.00E-06	0.00E+00	2.46E-05	1.20E-04
56	G06	100	Passenger Car	12	0.00E+00	1.33E-07	1.43E-08	5.44E-01	9.22E-07	3.63E-03	2.95E-07	2.59E-05	3.93E-05	7.92E-06	2.87E-05	1.85E-05	1.90E-05	1.52E-06	2.76E-06	7.59E-10	9.71E-06	4.05E-06
56	G06	100	Passenger Truck	20	0.00E+00	2.86E-07	3.05E-08	1.28E+00	1.87E-06	7.30E-03	6.09E-07	7.36E-05	6.95E-05	1.48E-05	5.86E-05	3.79E-05	3.89E-05	8.18E-06	6.45E-06	1.77E-09	1.97E-05	1.19E-05
53	G07	70	Passenger Car	170	0.00E+00	2.16E-06	2.33E-07	8.26E+00	1.50E-05	5.55E-02	4.79E-06	3.47E-04	1.30E-03	2.10E-04	4.67E-04	3.01E-04	3.09E-04	3.05E-05	4.15E-05	1.13E-08	1.58E-04	5.43E-05
53	G07	70	Passenger Truck	285	0.00E+00	4.69E-06	4.97E-07	1.90E+01	2.97E-05	1.02E-01	9.76E-06	1.06E-03	2.33E-03	3.81E-04	9.31E-04	6.06E-04	6.20E-04	1.37E-04	9.50E-05	2.49E-08	3.11E-04	1.74E-04
53	G07	70	Single Unit Short Haul Truck	88	0.00E+00	2.06E-05	1.03E-06	1.61E+01	1.68E-05	3.22E-02	2.19E-05	1.01E-02	1.45E-03	2.90E-04	2.50E-03	6.15E-04	6.26E-04	1.62E-03	6.50E-05	2.62E-08	1.87E-03	1.90E-03
53	G07	70	Single Unit Long Haul Truck	4	0.00E+00	8.96E-07	4.46E-08	6.84E-01	7.26E-07	1.35E-03	9.55E-07	4.36E-04	6.61E-05	1.29E-05	1.09E-04	2.66E-05	2.71E-05	6.83E-05	2.76E-06	1.11E-09	8.20E-05	8.17E-05
53	G07	70	Combination Short Haul Truck	54	0.00E+00	2.78E-05	1.98E-06	2.02E+01	9.04E-08	2.40E-02	2.04E-05	2.92E-02	2.12E-03	4.62E-04	1.70E-03	5.85E-04	5.84E-04	3.04E-03	6.75E-05	0.00E+00	1.11E-03	5.50E-03
53	G07	70	Combination Long Haul Truck	49	0.00E+00	2.52E-05	1.68E-06	1.88E+01	1.04E-07	2.54E-02	1.91E-05	2.88E-02	2.10E-03	3.84E-04	1.75E-03	5.08E-04	5.14E-04	2.88E-03	6.31E-05	0.00E+00	1.24E-03	5.42E-03
54	G08	80	Passenger Car	112	0.00E+00	1.33E-06	1.44E-07	5.24E+00	9.24E-06	3.46E-02	2.95E-06	2.31E-04	6.47E-04	1.10E-04	2.87E-04	1.85E-04	1.90E-04	1.75E-05	2.64E-05	7.18E-09	9.73E-05	3.61E-05
54	G08	80	Passenger Truck	187	0.00E+00	2.88E-06	3.06E-07	1.22E+01	1.85E-05	6.57E-02	6.04E-06	6.86E-04	1.16E-03	2.03E-04	5.78E-04	3.75E-04	3.85E-04	8.42E-05	6.09E-05	1.62E-08	1.93E-04	1.12E-04
54	G08	80	Single Unit Short Haul Truck	3	0.00E+00	5.14E-07	2.55E

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	H02	100	Single Unit Long Haul Truck	24	0.00E+00	3.16E-06	1.53E-07	4.17E+00	2.63E-06	9.36E-03	3.41E-06	1.66E-03	1.69E-04	4.70E-05	3.93E-04	9.43E-05	9.58E-05	4.18E-04	1.68E-05	6.65E-09	2.97E-04	3.10E-04
16	H02	100	Combination Short Haul Truck	553	0.00E+00	1.90E-04	1.39E-05	2.00E+02	5.41E-07	1.85E-01	1.37E-04	2.03E-01	6.44E-03	2.29E-03	1.06E-02	4.07E-03	4.00E-03	3.02E-02	6.69E-04	0.00E+00	6.65E-03	3.82E-02
16	H02	100	Combination Long Haul Truck	504	0.00E+00	1.65E-04	1.13E-05	1.81E+02	6.26E-07	1.85E-01	1.24E-04	1.93E-01	5.96E-03	1.66E-03	1.08E-02	3.40E-03	3.39E-03	2.77E-02	6.07E-04	0.00E+00	7.45E-03	3.63E-02
16	H03	100	Passenger Car	2980	0.00E+00	3.26E-05	3.53E-06	1.34E+02	2.27E-04	8.92E-01	7.25E-05	6.37E-03	9.66E-03	1.95E-03	7.05E-03	4.55E-03	4.67E-03	3.74E-04	6.78E-04	1.87E-07	2.39E-03	9.95E-04
16	H03	100	Passenger Truck	4990	0.00E+00	7.04E-05	7.49E-06	3.16E+02	4.61E-04	1.79E+00	1.50E-04	1.81E-02	1.71E-02	3.63E-03	1.44E-02	9.33E-03	9.56E-03	2.01E-03	1.59E-03	4.34E-07	4.84E-03	2.93E-03
16	H03	100	Single Unit Short Haul Truck	544	0.00E+00	7.31E-05	3.62E-06	9.93E+01	6.38E-05	2.30E-01	7.91E-05	3.95E-02	3.75E-03	1.09E-03	9.04E-03	2.24E-03	2.28E-03	1.00E-02	3.99E-04	1.63E-07	6.76E-03	7.38E-03
16	H03	100	Single Unit Long Haul Truck	24	0.00E+00	3.17E-06	1.54E-07	4.18E+00	2.64E-06	9.39E-03	3.42E-06	1.66E-03	1.70E-04	4.72E-05	3.94E-04	9.46E-05	9.62E-05	4.19E-04	1.68E-05	6.68E-09	2.98E-04	3.11E-04
16	H03	100	Combination Short Haul Truck	547	0.00E+00	1.88E-04	1.37E-05	1.98E+02	5.34E-07	1.83E-01	1.36E-04	2.00E-01	6.37E-03	2.27E-03	1.05E-02	4.02E-03	3.95E-03	2.98E-02	6.62E-04	0.00E+00	6.58E-03	3.77E-02
16	H03	100	Combination Long Haul Truck	499	0.00E+00	1.63E-04	1.12E-05	1.79E+02	6.19E-07	1.83E-01	1.22E-04	1.90E-01	5.89E-03	1.64E-03	1.07E-02	3.36E-03	3.35E-03	2.73E-02	6.00E-04	0.00E+00	7.36E-03	3.59E-02
16	H04	100	Passenger Car	1804	0.00E+00	1.97E-05	2.13E-06	8.10E+01	1.37E-04	5.40E-01	4.39E-05	3.85E-03	5.85E-03	1.18E-03	4.27E-03	2.75E-03	2.82E-03	2.26E-04	4.10E-04	1.13E-07	1.45E-03	6.02E-04
16	H04	100	Passenger Truck	3020	0.00E+00	4.26E-05	4.54E-06	1.91E+02	2.79E-04	1.09E+00	9.06E-05	1.10E-02	1.03E-02	2.20E-03	8.72E-03	5.65E-03	5.79E-03	1.22E-03	9.59E-04	2.63E-07	2.93E-03	1.77E-03
16	H04	100	Single Unit Short Haul Truck	528	0.00E+00	7.10E-05	3.51E-06	9.65E+01	6.19E-05	2.23E-01	7.68E-05	3.84E-02	3.64E-03	1.06E-03	8.78E-03	2.18E-03	2.21E-03	9.73E-03	3.88E-04	1.58E-07	6.57E-03	7.17E-03
16	H04	100	Single Unit Long Haul Truck	23	0.00E+00	3.08E-06	1.50E-07	4.06E+00	2.57E-06	9.12E-03	3.32E-06	1.62E-03	1.65E-04	4.58E-05	3.83E-04	9.19E-05	9.34E-05	4.07E-04	1.64E-05	6.49E-09	2.89E-04	3.02E-04
16	H04	100	Combination Short Haul Truck	548	0.00E+00	1.88E-04	1.37E-05	1.98E+02	5.36E-07	1.84E-01	1.36E-04	2.01E-01	6.38E-03	2.27E-03	1.06E-02	4.03E-03	3.96E-03	2.99E-02	6.64E-04	0.00E+00	6.60E-03	3.79E-02
16	H04	100	Combination Long Haul Truck	500	0.00E+00	1.64E-04	1.12E-05	1.80E+02	6.21E-07	1.84E-01	1.23E-04	1.91E-01	5.91E-03	1.64E-03	1.07E-02	3.37E-03	3.36E-03	2.74E-02	6.01E-04	0.00E+00	7.39E-03	3.60E-02
56	H05	100	Passenger Car	878	0.00E+00	9.60E-06	1.04E-06	3.94E+01	6.68E-05	2.63E-01	2.13E-05	1.88E-03	2.85E-03	5.74E-04	2.08E-03	1.34E-03	1.37E-03	1.10E-04	2.00E-04	5.50E-08	7.03E-04	2.93E-04
56	H05	100	Passenger Truck	1470	0.00E+00	2.07E-05	2.21E-06	9.31E+01	1.36E-04	5.29E-01	4.41E-05	5.33E-03	5.03E-03	1.07E-03	4.24E-03	2.75E-03	2.82E-03	5.93E-04	4.67E-04	1.28E-07	1.43E-03	8.63E-04
56	H05	100	Single Unit Short Haul Truck	249	0.00E+00	3.34E-05	1.65E-06	4.54E+01	2.92E-05	1.05E-01	3.62E-05	1.81E-02	1.71E-03	4.99E-04	4.13E-03	1.02E-03	1.04E-03	4.58E-03	1.82E-04	7.46E-08	3.09E-03	3.37E-03
56	H05	100	Single Unit Long Haul Truck	11	0.00E+00	1.45E-06	7.04E-08	1.91E+00	1.21E-06	4.29E-03	1.56E-06	7.61E-04	7.76E-05	2.16E-05	1.80E-04	4.33E-05	4.40E-05	1.92E-04	7.70E-06	3.05E-09	1.36E-04	1.42E-04
56	H05	100	Combination Short Haul Truck	216	0.00E+00	7.43E-05	5.42E-06	7.82E+01	2.11E-07	7.25E-02	5.36E-05	7.93E-02	2.52E-03	8.97E-04	4.16E-03	1.59E-03	1.56E-03	1.18E-02	2.62E-04	0.00E+00	2.60E-03	1.49E-02
56	H05	100	Combination Long Haul Truck	197	0.00E+00	6.47E-05	4.43E-06	7.08E+01	2.45E-07	7.24E-02	4.84E-05	7.53E-02	2.33E-03	6.48E-04	4.24E-03	1.33E-03	1.33E-03	1.08E-02	2.37E-04	0.00E+00	2.91E-03	1.42E-02
56	H06	100	Passenger Car	926	0.00E+00	1.01E-05	1.10E-06	4.16E+01	7.05E-05	2.77E-01	2.25E-05	1.98E-03	3.00E-03	6.06E-04	2.19E-03	1.41E-03	1.45E-03	1.16E-04	2.11E-04	5.80E-08	7.42E-04	3.09E-04
56	H06	100	Passenger Truck	1551	0.00E+00	2.19E-05	2.33E-06	9.82E+01	1.43E-04	5.58E-01	4.65E-05	5.63E-03	5.31E-03	1.13E-03	4.47E-03	2.90E-03	2.97E-03	6.25E-04	4.93E-04	1.35E-07	1.50E-03	9.10E-04
56	H06	100	Single Unit Short Haul Truck	280	0.00E+00	3.76E-05	1.86E-06	5.11E+01	3.28E-05	1.18E-01	4.07E-05	2.03E-02	1.93E-03	5.61E-04	4.65E-03	1.15E-03	1.17E-03	5.15E-03	2.05E-04	8.39E-08	3.48E-03	3.79E-03
56	H06	100	Single Unit Long Haul Truck	12	0.00E+00	1.63E-06	7.91E-08	2.15E+00	1.36E-06	4.83E-03	1.76E-06	8.56E-04	8.72E-05	2.42E-05	2.03E-04	4.86E-05	4.94E-05	2.16E-04	8.66E-06	3.43E-09	1.53E-04	1.60E-04
56	H06	100	Combination Short Haul Truck	332	0.00E+00	1.14E-04	8.33E-06	1.20E+02	3.25E-07	1.11E-01	8.23E-05	1.22E-01	3.87E-03	1.38E-03	6.39E-03	2.44E-03	2.40E-03	1.81E-02	4.02E-04	0.00E+00	3.99E-03	2.29E-02
56	H06	100	Combination Long Haul Truck	303	0.00E+00	9.93E-05	6.81E-06	1.09E+02	3.76E-07	1.11E-01	7.44E-05	1.16E-01	3.58E-03	9.96E-04	6.51E-03	2.04E-03	2.03E-03	1.66E-02	3.64E-04	0.00E+00	4.47E-03	2.18E-02
16	H07	100	Passenger Car	1957	0.00E+00	2.14E-05	2.32E-06	8.79E+01	1.49E-04	5.85E-01	4.76E-05	4.18E-03	6.35E-03	1.28E-03	4.63E-03	2.99E-03	3.06E-03	2.45E-04	4.45E-04	1.23E-07	1.57E-03	6.53E-04
16	H07	100	Passenger Truck	3277	0.00E+00	4.62E-05	4.92E-06	2.07E+02	3.02E-04	1.18E+00	9.83E-05	1.19E-02	1.12E-02	2.38E-03	9.46E-03	6.13E-03	6.28E-03	1.32E-03	1.04E-03	2.85E-07	3.18E-03	1.92E-03
16	H07	100	Single Unit Short Haul Truck	531	0.00E+00	7.13E-05	3.53E-06	9.69E+01	6.22E-05	2.24E-01	7.72E-05	3.86E-02	3.66E-03	1.06E-03	8.82E-03	2.19E-03	2.22E-03	9.77E-03	3.89E-04	1.59E-07	6.60E-03	7.20E-03
16	H07	100	Single Unit Long Haul Truck	23	0.00E+00	3.09E-06	1.50E-07	4.08E+00	2.58E-06	9.16E-03	3.33E-06	1.62E-03	1.66E-04	4.60E-05	3.84E-04	9.23E-05	9.38E-05	4.09E-04	1.64E-05	6.52E-09	2.91E-04	3.03E-04
16	H07	100	Combination Short Haul Truck	547	0.00E+00	1.88E-04	1.37E-05	1.98E+02	5.35E-07	1.83E-01	1.36E-04	2.01E-01	6.37E-03	2.27E-03	1.05E-02	4.02E-03	3.95E-03	2.98E-02	6.62E-04	0.00E+00	6.58E-03	3.78E-02
16	H07	100	Combination Long Haul Truck	499	0.00E+00	1.64E-04	1.12E-05	1.79E+02	6.19E-07	1.83E-01	1.23E-04	1.90E-01	5.90E-03	1.64E-03	1.07E-02	3.36E-03	3.35E-03	2.74E-02	6.00E-04	0.00E+00	7.37E-03	3.59E-02
52	H08	60	Passenger Car	286	0.00E+00	3.94E-06	4.26E-07	1.43E+01	2.74E-05	1.01E-01	8.75E-06	5.62E-04	2.82E-03	4.34E-04	8.52E-04	5.49E-04	5.64E-04	5.98E-05	7.19E-05	1.92E-08	2.88E-04	8.78E-05
52	H08	60	Passenger Truck	479	0.00E+00	8.65E-06	9.13E-07	3.27E+01	5.39E-05	1.81E-01	1.78E-05	1.81E-03	5.03E-03	7.78E-04	1.69E-03	1.10E-03	1.13E-03	2.48E-04	1.63E-04	4.08E-08	5.62E-04	2.99E-04
52	H08	60	Single Unit Short Haul Truck	30	0.00E+00	8.77E-06	4.39E-07	5.59E+00	7.23E-06	1.08E-02	9.37E-06	4.18E-03	7.11E-04	1.29E-04	1.07E-03	2.63E-04	2.68E-04	5.60E-04	2.26E-05	9.31E-09	7.99E-04	7.84E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	3.83E-07	1.91E-08	2.39E-01	3.14E-07	4.59E-04	4.09E-07	1.81E-04	3.19E-05	5.70E-06	4.67E-05	1.15E-05	1.16E-05	2.38E-05	9.65E-07	3.96E-10	3.51E-05	3.39E-05
52	H08	60	Combination Short Haul Truck	42	0.00E+00	2.45E-05	1.71E-06	1.59E+01	8.67E-08	2.14E-02	1.82E-05	2.65E-02	2.28E-03	4.51E-04	1.56E-03	5.08E-04	5.09E-04	2.40E-03	5.33E-05	0.00E+00	1.05E-03	5.00E-03
52	H08	60	Combination Long Haul Truck	38	0.00E+00	2.20E-05	1.43E-06	1.49E+01	9.95E-08	2.31E-02	1.69E-05	2.63E-02	2.29E-03	3.89E-04	1.61E-03	4.37E-04	4.42E-04	2.28E-03	5.00E-05	0.00E+00	1.16E-03	4.96E-03
50	H09	40	Passenger Car	403	0.00E+00	6.78E-06	7.33E-07	2.34E+01	4.72E-05	1.74E-01	1.51E-05	7.29E-04	6.98E-03	9.97E-04	1.47E-03	9.46E-04	9.70E-04	1.26E-04	1.16E-04	2.83E-08	4.97E-04	1.14E-04
50	H09	40	Passenger Truck	676	0.00E+00	1.55E-05	1.62E-06	5.22E+01	9.30E-05	2.99E-01	3.10E-05	2.76E-03	1.24E-02	1.76E-03	2.92E-03	1.91E-03	1.96E-03	4.47E-04	2.57E-04	5.50E-08	9.65E-04	4.67E-04
50	H09	40	Single Unit Short Haul Truck	5	0.00E+00	2.33E-06	1.22E-07	1.12E+00	2.03E-06	1.93E-03	2.48E-06	1.14E-03	2.13E-04	3.53E-05	2.75E-04	7.27E-05	7.38E-05	1.13E-04	4.51E-06	1.91E-09	2.02E-04	2.13E-04
50	H09	40	Combination Short Haul Truck	53	0.00E+00	4.73E-05	3.28E-06	2.40E+01	1.70E-07	4.13E-02	3.52E-05	5.27E-02	5.50E-03	9.92E-04	3.06E-03	9.80E-04	9.89E-04	3.62E-03	8.04E-05	0.00E+00	2.08E-03	9.93E-03
50	H09	40	Combination Long Haul Truck	49	0.00E+00	4.31E-05	2.81E-06	2.28E+01	1.93E-07	4.58E-02	3.32E-05	5.28E-02	5.53E-03	8.81E-04	3.16E-03	8.58E-04	8.74E-04	3.49E-03	7.64E-05	0.00E+00	2.28E-03	9.96E-03
53	H10	70	Passenger Car	377	0.00E+00	4.77E-06	5.16E-07	1.83E+01	3.32E-05	1.23E-01	1.06E-05	7.69E-04	2.88E-03	4.64E-04	1.03E-03	6.66E-04	6.84E-04	6.75E-05	9.20E-05	2.51E-08	3.50E-04	1.20E-04
53	H10	70	Passenger Truck	632	0.00E+00	1.04E-05	1.10E-06	4.22E+01	6.58E-05	2.26E-01	2.16E-05	2.35E-03	5.17E-03	8.44E-04	2.06E-03	1.34E-03	1.37E-03	3.04E-04	2.10E-04	5.51E-08	6.88E-04	3.86E-04
53	H10	70	Single Unit Short Haul Truck	31	0.00E+00	7.28E-06	3.65E-07	5.70E+00	5.95E-06	1.14E-02	7.75E-06	3.59E-03	5.12E-04	1.03E-04	8.83E-04	2.18E-04	2.21E-04	5.71E-04	2.30E-05	9.28E-09	6.62E-04	6.71E-04
53	H10	70	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.58E-08	2.42E-01	2.57E-07	4.79E-04	3.38E-07	1.54E-04	2.34E-05	4.56E-06	3.86E-05	9.42E-06	9.58E-06	2.42E-05	9.77E-07	3.91E-10	2.90E-05	2.89E-05
53	H10	70	Combination Short Haul Truck	61	0.00E+00	3.19E-05	2.26E-06	2.31E+01	1.04E-07	2.74E-02	2.34E-05	3.34E-02	2.42E-03	5.29E-04	1.94E-03	6.70E-04	6.69E-04	3.48E-03	7.73E-05	0.00E+00	1.27E-03	6.30E-03
53	H10	70	Combination Long Haul Truck	56	0.00E+00	2.88E-05	1.93E-06	2.16E+01	1.19E-07	2.91E-02	2.19E-05	3.30E-02	2.41E-03	4.39E-04	2.01E-03	5.82E-04	5.88E-04	3.29E-03	7.22E-05	0.00E+00	1.42E-03	6.21E-03
53	H11	70	Passenger Car	312	0.00E+00	3.95E-06	4.28E-07	1.51E+01	2.75E-05	1.02E-01	8.79E-06	6.37E-04	2.38E-03	3.85E-04	8.56E-04	5.52E-04	5.66E-04	5.59E-05	7.62E-05	2.08E-08	2.90E-04	9.95E-05
53	H11	70	Passenger Truck	523	0.00E+00	8.61E-06	9.11E-07	3.49E+01	5.45E-05	1.87E-01	1.79E-05	1.95E-03	4.28E-03	6.99E-04	1.71E-03	1.11E-03	1.14E-03	2.52E-04	1.74E-04	4.56E-08	5.70E-04	3.20E-04
53	H11	70	Single Unit Short Haul Truck	4	0.00E+00	9.80E-07	4.91E-08	7.68E-01	8.02E-07	1.54E-03	1.04E-06	4.83E-04	6.90E-05	1.38E-05	1.19E-04	2.93E-05	2.98E-05	7.70E-05	3.10E-06	1.25E-09	8.91E-05	9.05E-05
53	H11	70	Combination Short Haul Truck	34	0.00E+00	1.76E-05	1.25E-06	1.27E+01	5.71E-08	1.51E-02	1.29E-05	1.84E-02	1.34E-03	2.92E-04	1.07E-03	3.69E-04	3.69E-04	1.92E-03	4.26E-05	0.00E+00	7.01E-04	3.47E-03
53	H11	70	Combination Long Haul Truck	31	0.00E+00	1.59E-05	1.06E-06	1.19E+01	6.57E-08	1.60E-02	1.21E-05	1.82E-02	1.33E-03	2.42E-04	1.11E-03	3.21E-04	3.24E-04	1.82E-03	3.98E-05	0.00E+00	7.82E-04	3.42E-03
16	H12	100	Passenger Car	527	0.00E+00	5.76E-06	6.23E-07	2.37E+01	4.01E-05	1.58E-01	1.28E-05	1.13E-03	1.71E-03	3.45E-04	1.25E-03	8.04E-04	8.25E-04	6.60E-05	1.20E-04	3.30E-08	4.22E-04	1.76E-04
16	H12	100	Passenger Truck	882	0.00E+00	1.24E-05	1.32E-06	5.59E+01	8.14E-05	3.17E-01	2.65E-05	3.20E-03	3.02E-03	6.42E-04	2.55E-03	1.65E-03	1.69E-03	3.56E-04	2.80E-04	7.68E-08	8.55E-04	5.18E-04
16	H12	100	Single Unit Short Haul Truck	287	0.00E+00	3.85E-05	1.91E-06	5.23E+01	3.36E-05	1.21E-01	4.17E-05	2.08E-02	1.98E-03	5.75E-04	4.76E-03	1.18E-03	1.20E-03	5.28E-03	2.10E-04	8.60E-08	3.56E-03	3.89E-03
16	H12	100	Single Unit Long Haul Truck	13	0.00E+00	1.67E-06	8.11E-08	2.20E+00	1.39E-06	4.95E-03	1.80E-06	8.77E-04	8.94E-05	2.48E-05	2.08E-04	4.98E-05	5.07E-05	2.21E-04	8.88E-06	3.52E-09	1.57E-04	1.64E-04
16	H12	100	Combination Short Haul Truck	84	0.00E+00	2.90E-05	2.12E-06	3.05E+01	8.25E-08	2.83E-02	2.09E-05	3.09E-02	9.83E-04	3.50E-04	1.62E-03	6.20E-04	6.10E-04	4.60E-03	1.02E-04	0.00E+00	1.02E-03	5.83E-03
16	H12	100	Combination Long Haul Truck	77	0.00E+00	2.52E-05	1.73E-06	2.76E+01	9.55E-08	2.83E-02	1.89E-05	2.94E-02	9.10E-04	2.53E-04	1.65E-03	5.18E-04	5.17E-04	4.22E-03	9.26E-05	0.00E+00	1.14E-03	5.53E-03
54	H13	80	Passenger Car	807	0.00E+00	9.58E-06	1.04E-06	3.78E+01	6.67E-05	2.50E-01	2.13E-05	1.67E-03	4.67E-03	7.96E-04	2.07E-03	1.34E-03	1.37E-03	1.26E-04	1.91E-04	5.18E-08	7.02E-04	2.60E-04
54	H13	80	Passenger Truck	1352	0.00E+00	2.08E-05	2.20E-06	8.79E+01	1.33E-04	4.74E-01	4.36E-05	4.95E-03	8.39E-03	1.46E-03	4.17E-03	2.71E-03	2.77E-03	6.07E-04	4.39E-04	1.17E-07	1.39E-03	8.07E-04
54	H13	80	Single Unit Short Haul Truck	289	0.00E+00	5.41E-05	2.69E-06	5.31E+01	4.35E-05	1.06E-01	5.76E-05	2.77E-02	3.40E-03	7.69E-04	6.58E-03	1.60E-03	1.63E-03	5.32E-03	2.14E-04	8.48E-08	4.95E-03	5.18E-03
54	H13	80	Single Unit Long Haul Truck	13	0.00E+00	2.35E-06	1.16E-07	2.25E+00	1.86E-06	4.43E-03	2.50E-06	1.18E-03	1.55E-04	3.39E-05	2.87E-04	6.89E-05	7.01E-05	2.24E-04	9.06E-06	3.54E-09	2.17E-04	2.22E-04
54	H13	80	Combination Short Haul Truck	110	0.00E+00	4.84E-05	3.46E-06	4.00E+01	1.53E-07	4.29E-02	3.54E-05	4.96E-02	2.93E-03	7.22E-04	2.88E-03	1.02E-03	1.01E-03	6.04E-03	1.34E-04	0.00E+00	1.87E-03	9.35E-03
54	H13	80	Combination Long Haul Truck	100	0.00E+00	4.34E-05	2.91E-06	3.70E+01	1.77E-07	4.44E-02	3.29E-05	4.82E-02	2.87E-03	5.77E-04	2.98E-03	8.79E-04	8.85E-04	5.65E-03	1.24E-04	0.00E+00	2.09E-03	9.08E-03
53	H14	70	Passenger Car	32	0.00E+00	4.05E-07	4.38E-08	1.55E+00	2.82E-06	1.04E-02	9.00E-07	6.52E-05	2.44E-04	3.94E-05	8.76E-05	5.65E-05	5.80E-05	5.73E-06	7.80E-06	2.13E-09	2.97E-05	1.02E-05
53	H14	70	Passenger Truck	54	0.00E+00	8.82E-07	9.33E-08	3.58E+00	5.58E-06	1.91E-02	1.83E-06	2.00E-04	4.38E-04	7.16E-05	1.75E-04	1.14E-04	1.17E-04	2.58E-05	1.78E-05	4.67E-09	5.84E-05	3.27E-05
53	H14	70	Single Unit Short Haul Truck	2	0.00E+00	5.37E-07	2.69E-08	4.20E-01	4.39E-07	8.41E-04	5.72E-07	2.64E-04	3.78E-05	7.56E-06	6.51E-05	1.61E-05	1.63E-05	4.21E-05	1.69E-06	6.84E-10	4.88E-05	4.95E-05
53	H14	70	Combination Short Haul Truck	8	0.00E+00	4.17E-06	2.97E-07	3.03E+00	1.36E-08	3.59E-03	3.06E-06	4.38E-03	3.18E-04	6.93E-05	2.54E-04	8.78E-05	8.76E-05	4.56E-04	1.01E-05	0.00E+00	1.67E-04	8.25E-04
53	H14	70	Combination Long Haul Truck	7	0.00E+00	3.77E-06	2.52E-07	2.82E+00	1.56E-08	3.81E-03	2.87E-06	4.32E-03	3.15E-04	5.76E-05	2.63E-04	7.63E-05	7.71E-05	4.32E-04	9.46E-06	0.00E+00	1.86E-04	8.14E-04
54	H15	80	Passenger Car	1032	0.00E+00	1.22E-05	1.32E-06	4.83E+01	8.52E-05	3.19E-01	2.72E-05	2.13E-03	5.97E-03	1.02E-03	2.65E-03	1.71E-03	1.75E-03	1.62E-04	2.44E-04	6.62E-08	8.97E-04	3.33E-04
54	H15	80	Passenger Truck	1728	0.00E+00	2.66E-05	2.82E-06	1.12E+02	1.70E-04	6.06E-01	5.57E-05	6.32E-03	1.07E-02	1.87E-03	5.33E-03	3.46E-03	3.55E-03	7.76E-04	5.62E-04	1.49E-07	1.78E-03	1.03E-03
54	H15	80	Single Unit Short Haul Truck	84	0.00E+00	1.57E-05	7.79E-07	1.54E+01	1.26E-05	3.08E-02	1.67E-05	8.03E-03	9.85E-04	2.23E-04	1.91E-03	4.64E-04	4.72E-04	1.54E-03	6.20E-05	2.46E-08	1.44E-03	1.50E-03
54	H15	80	Single Unit Long Haul Truck	4	0.00E+00	6.82E-07	3.36E-08	6.51E-01	5.39E-07	1.28E-03	7.25E-07	3.44E-04	4.50E-05	9.84E-06	8.33E-05	2.00E-05	2.03E-05	6.50E-05	2.63E-06	1.03E-09	6.29E-05	6.43E-05
54	H15	80	Combination Short Haul Truck	27	0.00E+00	1.20E-05	8.56E-07	9.89E+00	3.78E-08	1.06E-02	8.74E-06	1.23E-02	7.24E-04	1.78E-04	7.13E-04	2.53E-04	2.51E-04	1.49E-03	3.31E-05	0.00E+00	4.62E-04	2.31E-03
54	H15	80	Combination Long Haul Truck	25	0.00E+00	1.07E-05	7.20E-07	9.15E+00	4.36E-08	1.10E-02	8.12E-06	1.19E-02	7.08E-04	1.43E-04	7.36E-04	2.17E-04	2.19E-04	1.40E-03	3.06E-05	0.00E+00	5.17E-04	2.24E-03
53	H16	70	Passenger Car	877	0.00E+00	1.11E-05	1.20E-06	4.25E+01	7.73E-05	2.86E-01	2.47E-05	1.79E-03	6.69E-03	1.08E-03	2.40E-03	1.55E-03	1.59E-03	1.57E-04	2.14E-04	5.83E-08	8.13E-04	2.79E-04
53	H16	70	Passenger Truck	1468	0.00E+00	2.42E-05	2.56E-06	9.80E+01	1.53E-04	5.25E-01	5.02E-05	5.47E-03	1.20E-02	1.96E-03	4.79E-03	3.12E-03	3.19E-03	7.08E-04	4.89E-04	1.28E-07	1.60E-03	8.98E-04
53	H16	70	Single Unit Short Haul Truck	19	0.00E+00	4.47E-06	2.24E-07	3.50E+00	3.66E-06	7.00E-03	4.76E-06	2.20E-03	3.15E-04	6.30E-05	5.42E-04	1.34E-04	1.36E-04	3.51E-04	1.41E-05	5.70E-09	4.06E-04	4.13E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.69E-09	1.49E-01	1.58E-07	2.94E-04	2.08E-07	9.47E-05	1.44E-05	2.80E-06	2.37E-05	5.79E-06	5.89E-06	1.48E-05	6.00E-07	2.40E-10	1.78E-05	1.77E-05
53	H16	70

Appendix F.2.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	2.84E-04	2.09E-05	4.51E+02	3.44E-04	1.66E+00	2.88E-04	2.44E-01	1.56E-02	4.62E-03	2.65E-02	1.16E-02	1.18E-02	3.77E-02	1.87E-03	4.32E-07	1.48E-02	4.56E-02
A02	0.00E+00	2.76E-04	2.11E-05	5.02E+02	4.64E-04	2.18E+00	3.07E-04	2.22E-01	1.82E-02	5.17E-03	2.86E-02	1.35E-02	1.37E-02	3.40E-02	2.17E-03	5.37E-07	1.49E-02	4.13E-02
A03	0.00E+00	2.78E-04	2.07E-05	4.65E+02	3.84E-04	1.84E+00	2.92E-04	2.33E-01	1.64E-02	4.77E-03	2.70E-02	1.22E-02	1.23E-02	3.59E-02	1.96E-03	4.66E-07	1.46E-02	4.35E-02
A04	0.00E+00	2.79E-04	2.17E-05	5.41E+02	5.36E-04	2.50E+00	3.26E-04	2.16E-01	2.00E-02	5.59E-03	3.05E-02	1.48E-02	1.50E-02	3.32E-02	2.38E-03	6.06E-07	1.54E-02	4.02E-02
A05	0.00E+00	2.31E-04	1.74E-05	3.93E+02	3.31E-04	1.58E+00	2.45E-04	1.93E-01	1.39E-02	4.03E-03	2.27E-02	1.03E-02	1.05E-02	2.97E-02	1.66E-03	3.96E-07	1.22E-02	3.61E-02
A06	0.00E+00	2.25E-04	1.74E-05	4.27E+02	4.14E-04	1.94E+00	2.58E-04	1.76E-01	1.57E-02	4.41E-03	2.41E-02	1.16E-02	1.18E-02	2.70E-02	1.87E-03	4.70E-07	1.23E-02	3.28E-02
A07	0.00E+00	2.36E-04	1.77E-05	3.89E+02	3.14E-04	1.51E+00	2.45E-04	2.01E-01	1.37E-02	3.99E-03	2.26E-02	1.01E-02	1.03E-02	3.08E-02	1.64E-03	3.80E-07	1.23E-02	3.75E-02
A08	0.00E+00	2.23E-04	1.70E-05	3.97E+02	3.57E-04	1.69E+00	2.45E-04	1.82E-01	1.43E-02	4.09E-03	2.27E-02	1.06E-02	1.08E-02	2.79E-02	1.71E-03	4.15E-07	1.19E-02	3.39E-02
A09	0.00E+00	2.97E-04	2.23E-05	4.96E+02	4.09E-04	1.96E+00	3.11E-04	2.51E-01	1.75E-02	5.09E-03	2.86E-02	1.30E-02	1.32E-02	3.84E-02	2.09E-03	4.89E-07	1.55E-02	4.69E-02
A10	0.00E+00	2.61E-04	1.97E-05	4.43E+02	3.73E-04	1.78E+00	2.77E-04	2.19E-01	1.57E-02	4.55E-03	2.55E-02	1.17E-02	1.18E-02	3.35E-02	1.88E-03	4.42E-07	1.36E-02	4.10E-02
A11	0.00E+00	3.67E-04	2.76E-05	6.06E+02	4.88E-04	2.36E+00	3.80E-04	3.15E-01	2.13E-02	6.21E-03	3.48E-02	1.58E-02	1.60E-02	4.77E-02	2.54E-03	5.79E-07	1.87E-02	5.88E-02
A12	0.00E+00	3.03E-04	2.26E-05	4.91E+02	3.87E-04	1.87E+00	3.11E-04	2.59E-01	1.71E-02	5.04E-03	2.85E-02	1.27E-02	1.29E-02	3.97E-02	2.05E-03	4.71E-07	1.56E-02	4.85E-02
A13	0.00E+00	3.39E-04	2.53E-05	5.57E+02	4.47E-04	2.15E+00	3.52E-04	2.89E-01	1.95E-02	5.71E-03	3.23E-02	1.45E-02	1.47E-02	4.43E-02	2.34E-03	5.43E-07	1.76E-02	5.39E-02
A14	0.00E+00	3.08E-04	2.32E-05	5.20E+02	4.33E-04	2.08E+00	3.25E-04	2.60E-01	1.84E-02	5.33E-03	2.98E-02	1.36E-02	1.39E-02	3.96E-02	2.20E-03	5.13E-07	1.60E-02	4.86E-02
A15	0.00E+00	3.47E-04	2.58E-05	5.59E+02	4.33E-04	2.10E+00	3.55E-04	2.99E-01	1.94E-02	5.72E-03	3.25E-02	1.44E-02	1.46E-02	4.58E-02	2.33E-03	5.31E-07	1.79E-02	5.59E-02
A16	0.00E+00	3.39E-04	2.50E-05	5.28E+02	3.87E-04	1.89E+00	3.38E-04	2.97E-01	1.81E-02	5.40E-03	3.09E-02	1.35E-02	1.37E-02	4.54E-02	2.17E-03	4.84E-07	1.72E-02	5.55E-02
A17	0.00E+00	3.47E-04	2.58E-05	5.55E+02	4.27E-04	2.07E+00	3.53E-04	3.00E-01	1.93E-02	5.69E-03	3.23E-02	1.43E-02	1.45E-02	4.60E-02	2.31E-03	5.24E-07	1.78E-02	5.61E-02
A18	0.00E+00	3.30E-04	2.43E-05	5.10E+02	3.68E-04	1.80E+00	3.28E-04	2.90E-01	1.74E-02	5.21E-03	2.99E-02	1.30E-02	1.31E-02	4.45E-02	2.09E-03	4.64E-07	1.68E-02	5.42E-02
A19	0.00E+00	3.30E-04	2.44E-05	5.19E+02	3.88E-04	1.89E+00	3.32E-04	2.87E-01	1.79E-02	5.31E-03	3.03E-02	1.33E-02	1.35E-02	4.40E-02	2.15E-03	4.81E-07	1.68E-02	5.38E-02
A20	0.00E+00	3.11E-04	2.28E-05	4.73E+02	3.33E-04	1.64E+00	3.06E-04	2.74E-01	1.61E-02	4.83E-03	2.79E-02	1.20E-02	1.21E-02	4.21E-02	1.93E-03	4.26E-07	1.58E-02	5.13E-02
B05	0.00E+00	1.95E-04	1.43E-05	3.40E+02	2.76E-04	1.19E+00	2.09E-04	1.63E-01	1.56E-02	3.88E-03	1.97E-02	8.60E-03	8.71E-03	2.57E-02	1.44E-03	3.06E-07	1.09E-02	3.04E-02
B06	0.00E+00	1.64E-04	1.11E-05	2.31E+02	1.27E-04	5.91E-01	1.54E-04	1.45E-01	9.38E-03	2.55E-03	1.47E-02	5.35E-03	5.39E-03	2.36E-02	9.11E-04	1.79E-07	9.28E-03	2.71E-02
B07	0.00E+00	1.79E-04	1.34E-05	3.46E+02	3.23E-04	1.35E+00	2.07E-04	1.39E-01	1.66E-02	4.00E-03	1.97E-02	9.05E-03	9.20E-03	2.21E-02	1.51E-03	3.48E-07	1.05E-02	2.58E-02
B08	0.00E+00	4.41E-05	3.65E-06	1.07E+02	1.22E-04	4.99E-01	5.93E-05	3.06E-02	5.59E-03	1.27E-03	5.60E-03	2.98E-03	3.04E-03	4.57E-03	4.92E-04	1.18E-07	2.56E-03	5.64E-03
B09	0.00E+00	9.62E-05	7.33E-06	1.95E+02	1.92E-04	7.96E-01	1.15E-04	7.26E-02	9.56E-03	2.27E-03	1.10E-02	5.18E-03	5.27E-03	1.15E-02	8.63E-04	2.03E-07	5.69E-03	1.35E-02
B10	0.00E+00	2.08E-04	1.63E-05	4.03E+02	3.70E-04	1.58E+00	2.34E-04	1.76E-01	1.95E-02	4.67E-03	2.15E-02	1.06E-02	1.07E-02	2.60E-02	1.76E-03	3.57E-07	1.07E-02	3.27E-02
B11	0.00E+00	4.59E-05	3.36E-06	8.48E+01	7.57E-05	3.18E-01	5.17E-05	3.58E-02	4.00E-03	9.77E-04	4.96E-03	2.19E-03	2.22E-03	5.80E-03	3.67E-04	8.50E-08	2.73E-03	6.68E-03
B12	0.00E+00	7.61E-05	6.02E-06	1.58E+02	1.58E-04	6.60E-01	9.09E-05	5.99E-02	7.85E-03	1.85E-03	8.48E-03	4.24E-03	4.31E-03	9.01E-03	7.02E-04	1.55E-07	4.17E-03	1.11E-02
B13	0.00E+00	9.75E-05	7.61E-06	1.90E+02	1.77E-04	7.52E-01	1.11E-04	8.08E-02	9.22E-03	2.20E-03	1.02E-02	5.00E-03	5.08E-03	1.21E-02	8.31E-04	1.74E-07	5.15E-03	1.50E-02
B14	0.00E+00	4.31E-05	3.20E-06	8.25E+01	7.66E-05	3.20E-01	4.96E-05	3.32E-02	3.95E-03	9.54E-04	4.74E-03	2.16E-03	2.19E-03	5.33E-03	3.60E-04	8.37E-08	2.55E-03	6.18E-03
C11	0.00E+00	4.16E-05	3.11E-06	6.51E+01	7.53E-05	2.75E-01	4.81E-05	3.13E-02	7.97E-03	1.39E-03	4.63E-03	2.11E-03	2.15E-03	3.46E-03	2.91E-04	6.58E-08	2.48E-03	5.83E-03
C12	0.00E+00	1.69E-05	1.67E-06	5.48E+01	9.26E-05	3.21E-01	3.23E-05	5.04E-03	9.11E-03	1.41E-03	3.10E-03	1.93E-03	1.97E-03	5.79E-04	2.71E-04	6.88E-08	1.13E-03	8.82E-04
C13	0.00E+00	2.50E-05	1.83E-06	3.02E+01	4.37E-05	1.46E-01	2.88E-05	1.89E-02	7.40E-03	1.11E-03	2.81E-03	1.23E-03	1.26E-03	1.46E-03	1.36E-04	2.78E-08	1.55E-03	3.53E-03
C14	0.00E+00	4.40E-05	3.72E-06	1.04E+02	1.49E-04	5.27E-01	6.53E-05	2.43E-02	1.33E-02	2.22E-03	6.32E-03	3.42E-03	3.49E-03	2.76E-03	4.95E-04	1.25E-07	2.83E-03	4.45E-03
C15	0.00E+00	4.72E-05	3.30E-06	4.28E+01	4.86E-05	1.76E-01	4.69E-05	4.26E-02	1.03E-02	1.60E-03	4.52E-03	1.76E-03	1.79E-03	3.11E-03	1.81E-04	3.15E-08	2.73E-03	8.01E-03
C16	0.00E+00	1.54E-05	1.23E-06	2.86E+01	4.07E-05	1.44E-01	2.05E-05	1.03E-02	4.64E-03	7.41E-04	1.98E-03	1.00E-03	1.02E-03	1.01E-03	1.34E-04	3.11E-08	9.52E-04	1.91E-03
C17	0.00E+00	8.91E-05	6.15E-06	1.11E+02	1.11E-04	3.99E-01	9.39E-05	6.91E-02	1.30E-02	2.33E-03	9.21E-03	3.61E-03	3.67E-03	7.87E-03	4.75E-04	1.06E-07	5.55E-03	1.29E-02
C18	0.00E+00	2.05E-05	1.50E-06	3.12E+01	4.21E-05	1.45E-01	2.51E-05	1.39E-02	4.94E-03	8.01E-04	2.48E-03	1.11E-03	1.13E-03	1.40E-03	1.42E-04	3.37E-08	1.34E-03	2.59E-03
C19	0.00E+00	7.77E-06	5.81E-07	1.03E+01	1.57E-05	5.23E-02	9.38E-06	5.52E-03	2.55E-03	3.80E-04	9.15E-04	4.19E-04	4.28E-04	4.35E-04	4.73E-05	9.89E-09	4.87E-04	1.03E-03
C20	0.00E+00	6.06E-06	5.12E-07	1.45E+01	2.09E-05	7.39E-02	9.10E-06	3.22E-03	1.85E-03	3.10E-04	8.84E-04	4.78E-04	4.89E-04	3.71E-04	6.92E-05	1.76E-08	3.95E-04	5.90E-04
C21	0.00E+00	1.06E-04	7.19E-06	9.89E+01	1.32E-04	4.18E-01	1.12E-04	8.25E-02	2.36E-02	3.62E-03	1.11E-02	4.26E-03	4.34E-03	6.37E-03	4.29E-04	8.94E-08	6.78E-03	1.55E-02
C22	0.00E+00	2.27E-05	1.83E-06	4.60E+01	6.98E-05	2.40E-01	3.25E-05	1.26E-02	7.45E-03	1.18E-03	3.19E-03	1.63E-03	1.67E-03	1.31E-03	2.18E-04	5.39E-08	1.52E-03	2.33E-03
C23	0.00E+00	5.41E-05	4.01E-06	8.97E+01	1.12E-04	3.94E-01	6.62E-05	3.65E-02	1.10E-02	1.90E-03	6.50E-03	2.95E-03	3.01E-03	4.21E-03	4.09E-04	9.97E-08	3.49E-03	6.78E-03
C24	0.00E+00	4.97E-06	4.45E-07	1.25E+01	1.96E-05	6.87E-02	7.90E-06	2.58E-03	2.05E-03	3.22E-04	7.57E-04	4.35E-04	4.45E-04	2.60E-04	6.01E-05	1.46E-08	3.12E-04	4.72E-04
C25	0.00E+00	9.69E-05	6.62E-06	8.75E+01	1.09E-04	3.60E-01	9.95E-05	8.04E-02	2.09E-02	3.23E-03	9.79E-03	3.72E-03	3.79E-03	6.06E-03	3.75E-04	7.32E-08	5.99E-03	1.51E-02
C26	0.00E+00	5.59E-05	3.98E-06	7.64E+01	8.15E-05	2.96E-01	6.10E-05	4.29E-02	9.12E-03	1.61E-03	5.94E-03	2.48E-03	2.52E-03	4.83E-03	3.34E-04	7.48E-08	3.41E-03	8.02E-03
C27	0.00E+00	7.45E-05	5.35E-06	9.13E+01	1.40E-04	4.47E-01	8.89E-05	5.04E-02	2.22E-02	3.32E-03	8.82E-03	3.82E-03	3.90E-03	4.08E-03	4.15E-04	9.13E-08	4.92E-03	9.42E-03
C28	0.00E+00	1.25E-05	1.09E-06	2.95E+01	4.60E-05	1.60E-01	1.93E-05	6.64E-03	4.84E-03	7.62E-04	1.87E-03	1.04E-03	1.06E-03	6.77E-04	1.42E-04	3.47E-08	8.05E-04	1.22E-03
C29	0.00E+00	3.57E-06	2.89E-07	6.63E+00	8.20E-06	3.06E-02	4.42E-06	2.69E-03	8.37E-04	1.43E-04	4.14E-04	2.13E-04	2.17E-04	2.85E-04	3.04E-05	6.75E-09	1.97E-04	5.00E-04
C30	0.00E+00	8.38E-05	5.57E-06	5.95E+01	5.51E-05	1.97E-01	7.74E-05	7.80E-02	1.40E-02	2.23E-03	7.54E-03	2.56E-03	2.61E-03	5.66E-03	2.38E-04	3.88E-08	4.93E-03	1.47E-02
C31	0.00E+00	4.58E-05	3.29E-06	6.48E+01	8.45E-05	2.90E-01	5.42E-05	3.23E-02	1.02E-02	1.67E-03	5.37E-03	2.32E-03	2.36E-03	3.24E-03	2.92E-04	6.85E-08	3.01E-03	6.02E-03
C32	0.00E+00	6.48E-05	4.43E-06	6.89E+01	5.35E-05	2.09E-01	6.17E-05	5.64E-02	7.87E-03	1.45E-03	5.92E-03	2.18E-03	2.21E-03	6.19E-03	2.80E-04	5.22E-08	3.71E-03	1.06E-02
C33	0.00E+00	2.92E-06	2.71E-07	8.75E+00	1.49E-05	5.06E-02	5.43E-06	7.53E-04	1.44E-03	2.24E-04	5.34E-04	3.13E-04	3.20E-04	9.91E-05	4.32E-05	1.13E-08	2.14E-04	1.31E-04
C34	0.00E+00	1.12E-05	8.59E-07	1.68E+01	2.70E-05	8.88E-02	1.45E-05	7.12E-03	4.17E-03	6.14E-04	1.42E-03	6.79E-04	6.94E-04	5.85E-04	7.82E-05	1.70E-08	7.24E-04	1.33E-03
C35	0.00E+00	2.10E-05	1.54E-06	3.01E+01	3.23E-05	1.20E-01	2.31E-05	1.66E-02	3.64E-03	6.40E-04	2.21E-03	9.67E-04	9.85E-04	1.82E-03	1.32E-04	2.86E-08	1.23E-03	3.10E-03
C36	0.00E+00	1.37E-04	9.56E-06	1.18E+02	1.24E-04	4.70E-01	1.32E-04	1.29E-01	2.86E-02	4.45E-03	1.26E-02	4.82E-03	4.92E-03	9.23E-03	4.94E-04	8.00E-08	7.69E-03	2.42E-02
C37	0.00E+00	4.28E-05	2.85E-06	4.05E+01	3.51E-05	1.30E-01	4.12E-05	3.76E-02	6.13E-03	1.05E-03	4.04E-03	1.42E-03	1.44E-03	3.60E-03	1.65E-04	3.08E-08	2.59E-03	7.06E-03
C38	0.00E+00	7.61E-05	5.09E-06	7.31E+01	4.81E-05	1.93E-01	6.97E-05	6.75E-02	8.14E-03	1.53E-03	6.71E-03	2.30E-03	2.33E-03	7.44E-03	2.88E-04	5.03E-08	4.37E-03	1.27E-02
C39	0.00E+00	1.79E-05	1.34E-06	2.61E+01	3.22E-05	1.17E-01	2.06E-05	1.43E-02	4.16E-03	6.78E-04	1.97E-03	9.03E-04	9.21E-04	1.35E-03	1.17E-04	2.48E-08	1.05E-03	2.66E-03
C40	0.00E+00	2.59E-05	1.91E-06	3.00E+01	4.01E-05	1.43E-01	2.84E-05	2.18E-02	7.40E-03	1.12E-03	2.72E-03	1.20E-03	1.22E-03	1.61E-03	1.33E-04	2.49E-08	1.50E-03	4.08E-03
C41	0.00E+00	5.22E-05	3.93E-06	9.26E+01	8.39E-05	3.47E-01	5.76E-05	4.29E-02	5.98E-03	1.27E-03	5.39E-03	2.48E-03	2.51E-03	6.30E-03	4.00E-04	7.86E-08	2.88E-03	8.00E-03
C42	0.00E+00	2.66E-05	2.18E-06	6.41E+01	7.78E-05	3.01E-01	3.69E-05	1.68E-02	4.55E-03	9.08E-04	3.55E-03	1.86E-03	1.90E-03	2.50E-03	2.98E-04	7.14E-08	1.66E-03	3.10E-03
C43	0.00E+00	2.68E-05	1.90E-06	4.71E+01	4.39E-05	1.74E-01	3.05E-05	1.97E-02	2.98E-03	6.39E-04	2.99E-03	1.26E-03	1.28E-03	3.14E-03	2.04E-04	4.72E-08	1.71E-03	3.68E-03
C44	0.00E+00	2.13E-05	1.54E-06	3.70E+01	3.36E-05	1.35E-01	2.38E-05	1.64E-02	2.34E-03	5.02E-04	2.30E-03	9.88E-04	1.00E-03	2.54E-03	1.60E-04	3.50E-08	1.30E-03	3.06E-03
C45	0.00E+00	3.86E-05	2.69E-06	5.11E+01	5.44E-05	1.94E-01	4.20E-05	2.89E-02	6.04E-03	1.07E-03	4.13E-03	1.67E-03	1.70E-03	3.31E-03	2.22E-04	5.12E-08	2.43E-03	5.41E-03
C46	0.00E+00	8.75E-05	5.76E-06	6.19E+01	6.05E-05	2.05E-01	8.19E-05	7.90E-02	1.45E-02	2.30E-03	8.04E-03	2.71E-03	2.76E-03	5.80E-03	2.49E-04	4.34E-08	5.28E-03	1.49E-02
C47	0.00E+00	3.18E-10	2.82E-11	7.94E-04	1.26E-09	4.38E-06	5.10E-10	1.56E-07	1.30E-07	2.05E-08	4.92E-08	2.79E-08	2.85E-08	1.61E-08	3.84E-09	9.47E-13	2.06E-08	2.84E-08
C48	0.00E+00	9.14E-05	5.93E-06	7.63E+01	3.64E-05	1.54E-01	7.95E-05	8.30E-02	8.15E-03	1.58E-03	7.68E-03	2.39E-03	2.41E-03	9.17E-03	2.85E-04	4.45E-08	5.27E-03	1.56E-02
C49	0.00E+00	4.71E-05	3.47E-06	6.88E+01	8.85E-05	3.12E-01	5.56E-05	3.47E-02	1.09E-02	1.78E-03	5.43E-03	2.43E-03	2.47E-03	3.40E-03	3.10E-04	7.01E-08	2.96E-03	6.48E-03
C50	0.00E+00	2.57E-06	1.86E-07	2.33E+00	2.26E-06	9.55E-03	2.42E-06	2.60E-03	5.73E-04	8.89E-05	2.25E-04	9.07E-05	9.24E-05	1.81E-04	9.72E-06	1.36E-09	1.32E-04	4.89E-04
C51	0.00E+00	2.35E-05	1.80E-06	4.27E+01	5.55E-05	1.96E-01	3.02E-05	1.52E-02	5.31E-03	9.08E-04	2.95E-03	1.41E-03	1.44E-03	1.75E-03	1.97E-04	4.86E-08	1.51E-03	2.82E-03
C52	0.00E+00	1.69E-05	1.23E-06	2.03E+01	2.96E-05	9.83E-02	1.96E-05	1.26E-02	4.97E-03	7.46E-04	1.91E-03	8.34E-04	8.51E-04	9.79E-04	9.15E-05	1.90E-08	1.06E-03	2.35E-03
C53	0.00E+00	1.51E-05	1.12E-06	2.27E+01	2.98E-05	1.05E-01	1.81E-05	1.10E-02	3.62E-03	5.87E-04	1.77E-03	8.02E-04	8.19E-04	1.08E-03	1.03E-04	2.35E-08	9.54E-04	2.04E-03
C54	0.00E+00	2.31E-05	1.65E-06	3.22E+01	3.51E-05	1.27E-01	2.55E-05	1.74E-02	3.85E-03	6.80E-04	2.49E-03	1.05E-03	1.07E-03	1.97E-03	1.41E-04	3.22E-08	1.42E-03	3.26E-03
C55	0.00E+00	3.79E-05	2.71E-06	4.96E+01	5.95E-05	2.11E-01	4.23E-05	2.95E-02	7.80E-03	1.28E-03	4.14E-03	1.75E-03	1.78E-03	2.87E-03	2.19E-04	4.79E-08	2.36E-03	5.51E-03
C56	0.00E+00	2.94E-06	1.90E-07	2.24E+00	2.77E-06	8.08E-03	2.96E-06	2.32E-03	5.20E-04	8.15E-05	2.98E-04	1.02E-04	1.04E-04	1.79E-04	9.37E-06	2.02E-09	1.94E-04	4.35E-04
C57	0.00E+00	2.71E-05	2.04E-06	4.58E+01	5.69E-05	2.02E-01	3.33E-05	1.86E-02	5.63E-03	9.71E-04	3.24E-03	1.50E-03	1.53E-03	2.12E-03	2.09E-04	5.02E-08	1.71E-03	3.45E-03
C58	0.00E+00	4.86E-06	4.29E-07	1.09E+01	1.91E-05	6.40E-02	7.75E-06	2.21E-03	2.76E-03	3.99E-04	7.47E-04	4.24E-04	4.33E-04	2.05E-04	5.27E-05	1.16E-08	3.14E-04	4.06E-04
C59	0.00E+00	3.47E-06	2.95E-07	8.58E+00	1.27E-05	4.43E-02	5.37E-06	1.71E-03	1.10E-03	1.84E-04	5.24E-04	2.84E-04	2.91E-04	2.02E-04	4.13E-05	1.07E-08	2.33E-04	3.12E-04
C60	0.00E+00	3.47E-05	2.50E-06	4.64E+01	5.64E-05	2.00E-01	3.91E-05	2.68E-02	7.30E-03	1.20E-03	3.82E-03	1.63E-03	1.67E-03	2.61E-03	2.06E-04	4.52E-08	2.16E-03	5.00E-03
D01	0.00E+00	1.49E-04	1.19E-05	2.38E+02	3.33E-04	1.23E+00	1.83E-04	1.16E-01	3.98E-02	6.43E-03	1.73E-02	8.71E-03	8.89E-03	1.08E-02	1.08E-03	2.46E-07	8.44E-03	2.16E-02
D02	0.00E+00	8.91E-05	7.45E-06	1.72E+02	2.73E-04	9.67E-01	1.26E-04	5.63E-02	2.91E-02	4.64E-03	1.20E-02	6.44E-03	6.59E-03	5.46E-03	8.10E-04	2.03E-07	5.45E-03	1.04E-02
D03	0.00E+00	1.10E-04	9.21E-06	2.16E+02	3.46E-04	1.22E+00	1.58E-04	6.68E-02	3.65E-02	5.80E-03	1.52E-02	8.11E-03	8.29E-03	6.58E-03	1.02E-03	2.59E-07	6.92E-03	1.24E-02
D04	0.00E+00	1.38E-04	1.03E-05	1.86E+02	2.37E-04	8.74E-01	1.56E-04	1.13E-01	3.05E-02	4.99E-03	1.49E-02	6.78E-03	6.92E-03	1.06E-02	8.23E-04	1.80E-07	8.02E-03	2.11E-02
D05	0.00E+00	1.49E-04	1.19E-05	2.47E+02	3.61E-04	1.30E+00	1.91E-04	1.07E-01	4.12E-02	6.63E-03	1.83E-02	9.15E-03	9.34E-03	1.03E-02	1.13E-03	2.71E-07	8.95E-03	2.00E-02
D06	0.00E+00	1.61E-04	1.18E-05	2.16E+02	2.91E-04	1.02E+00	1.88E-04	1.19E-01	3.52E-02	5.76E-03	1.84E-02	8.09E-03	8.25E-03	1.17E-02	9.66E-04	2.30E-07	1.02E-02	2.23E-02
D07	0.00E+00	1.26E-04	1.01E-05	2.49E+02	3.03E-04	1.15E+00	1.60E-04	8.83E-02	2.28E-02	4.28E-03	1.52E-02	7.71E-03	7.86E-03	1.11E-02	1.14E-03	2.69E-07	7.37E-03	1.64E-02
D08	0.00E+00	1.09E-04	8.23E-06	1.94E+02	2.24E-04	8.43E-01	1.32E-04	7.58E-02	1.74E-02	3.30E-03	1.28E-02	5.97E-03	6.08E-03	9.95E-03	8.73E-04	2.12E-07	6.75E-03	1.41E-02
D09	0.00E+00	8.17E-05	6.90E-06	1.87E+02	2.48E-04	9.34E-01	1.14E-04	5.16E-02	1.76E-02	3.24E-03	1.09E-02	5.90E-03	6.03E-03	6.37E-03	8.78E-04	2.16E-07	4.83E-03	9.51E-03
D10	0.00E+00	7.64E-05	5.85E-06	1.48E+02	1.83E-04	6.77E-01	9.86E-05	4.87E-02	1.34E-02	2.52E-03	9.64E-03	4.61E-03	4.71E-03	6.52E-03	6.78E-04	1.72E-07	4.93E-03	9.01E-03
D11	0.00E+00	1.18E-04	9.71E-06	2.50E+02	3.17E-04	1.20E+00	1.57E-04	7.95E-02	2.32E-02	4.31E-03	1.49E-02	7.81E-03	7.97E-03	9.88E-03	1.16E-03	2.78E-07	6.91E-03	1.47E-02
D12	0.00E+00	7.98E-05	5.96E-06	1.43E+02	1.69E-04	6.27E-01	9.83E-05	5.34E-02	1.28E-02	2.43E-03	9.61E-03	4.43E-03	4.52E-03	7.15E-03	6.48E-04	1.61E-07	5.09E-03	9.91E-03
D13	0.00E+00	3.48E-05	2.54E-06	4.66E+01	6.22E-05	2.20E-01	4.04E-05	2.61E-02	7.59E-03	1.24E-03	3.94E-03	1.74E-03	1.77E-03	2.54E-03	2.08E-04	4.89E-08	2.17E-03	4.88E-03
D14	0.00E+00	8.77E-05	6.61E-06	1.27E+02	1.77E-04	6.30E-01	1.06E-04	6.46E-02	2.10E-02	3.41E-03	1.02E-02	4.74E-03	4.84E-03

Appendix F.2.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D30	0.00E+00	8.64E-05	6.94E-06	1.77E+02	2.22E-04	8.35E-01	1.13E-04	5.74E-02	1.63E-02	3.04E-03	1.08E-02	5.52E-03	5.63E-03	7.29E-03	8.15E-04	1.99E-07	5.19E-03	1.06E-02
D31	0.00E+00	2.20E-05	1.69E-06	4.02E+01	4.72E-05	1.78E-01	2.70E-05	1.54E-02	3.63E-03	6.87E-04	2.60E-03	1.24E-03	1.26E-03	1.99E-03	1.82E-04	4.36E-08	1.33E-03	2.86E-03
D32	0.00E+00	3.95E-05	3.13E-06	7.65E+01	9.25E-05	3.51E-01	4.97E-05	2.76E-02	7.01E-03	1.31E-03	4.74E-03	2.37E-03	2.42E-03	3.48E-03	3.49E-04	8.28E-08	2.32E-03	5.12E-03
D33	0.00E+00	5.67E-05	4.11E-06	7.34E+01	9.53E-05	3.38E-01	6.46E-05	4.35E-02	1.19E-02	1.96E-03	6.31E-03	2.73E-03	2.78E-03	4.22E-03	3.25E-04	7.54E-08	3.53E-03	8.12E-03
D34	0.00E+00	2.71E-05	2.27E-06	5.51E+01	9.12E-05	3.16E-01	4.03E-05	1.47E-02	9.32E-03	1.48E-03	3.92E-03	2.09E-03	2.14E-03	1.50E-03	2.62E-04	6.87E-08	1.78E-03	2.71E-03
D35	0.00E+00	3.80E-05	3.20E-06	7.69E+01	1.26E-04	4.40E-01	5.57E-05	2.19E-02	1.30E-02	2.07E-03	5.38E-03	2.90E-03	2.97E-03	2.18E-03	3.65E-04	9.38E-08	2.41E-03	4.04E-03
D36	0.00E+00	3.56E-05	2.57E-06	4.51E+01	5.72E-05	2.05E-01	3.99E-05	2.79E-02	7.30E-03	1.20E-03	3.88E-03	1.67E-03	1.70E-03	2.69E-03	1.99E-04	4.51E-08	2.18E-03	5.22E-03
D37	0.00E+00	8.53E-06	7.02E-07	1.54E+01	2.34E-05	8.41E-02	1.14E-05	5.91E-03	2.59E-03	4.15E-04	1.09E-03	5.71E-04	5.84E-04	5.61E-04	7.16E-05	1.73E-08	5.04E-04	1.10E-03
D38	0.00E+00	3.53E-05	2.83E-06	5.80E+01	8.32E-05	3.04E-01	4.44E-05	2.66E-02	9.71E-03	1.57E-03	4.22E-03	2.13E-03	2.18E-03	2.49E-03	2.66E-04	6.17E-08	2.04E-03	4.95E-03
D39	0.00E+00	7.36E-06	6.85E-07	1.85E+01	3.22E-05	1.13E-01	1.23E-05	3.49E-03	3.19E-03	5.00E-04	1.18E-03	7.00E-04	7.17E-04	3.48E-04	8.98E-05	2.36E-08	4.61E-04	6.35E-04
D40	0.00E+00	4.50E-05	3.58E-06	7.61E+01	1.14E-04	4.06E-01	5.88E-05	3.08E-02	1.27E-02	2.04E-03	5.67E-03	2.84E-03	2.91E-03	2.98E-03	3.52E-04	8.62E-08	2.76E-03	5.72E-03
D41	0.00E+00	8.73E-06	7.31E-07	1.74E+01	2.83E-05	9.91E-02	1.27E-05	5.05E-03	2.95E-03	4.67E-04	1.23E-03	6.57E-04	6.72E-04	5.04E-04	8.24E-05	2.12E-08	5.56E-04	9.33E-04
D42	0.00E+00	1.46E-05	1.11E-06	2.06E+01	2.68E-05	9.92E-02	1.68E-05	1.19E-02	3.39E-03	5.53E-04	1.60E-03	7.49E-04	7.64E-04	1.11E-03	9.17E-05	2.02E-08	8.37E-04	2.22E-03
D43	0.00E+00	1.82E-05	1.87E-06	5.77E+01	1.07E-04	3.72E-01	3.61E-05	4.83E-03	1.01E-02	1.56E-03	3.46E-03	2.20E-03	2.26E-03	5.42E-04	2.86E-04	7.79E-08	1.20E-03	8.36E-04
D44	0.00E+00	2.80E-05	2.07E-06	3.97E+01	5.52E-05	1.94E-01	3.36E-05	2.02E-02	6.50E-03	1.06E-03	3.28E-03	1.49E-03	1.52E-03	1.98E-03	1.79E-04	4.31E-08	1.77E-03	3.77E-03
D45	0.00E+00	9.13E-05	6.73E-06	1.22E+02	1.58E-04	5.69E-01	1.05E-04	7.12E-02	1.98E-02	3.25E-03	1.01E-02	4.49E-03	4.58E-03	6.83E-03	5.39E-04	1.23E-07	5.55E-03	1.33E-02
D46	0.00E+00	9.69E-05	7.05E-06	1.24E+02	1.57E-04	5.64E-01	1.09E-04	7.67E-02	2.01E-02	3.30E-03	1.05E-02	4.57E-03	4.65E-03	7.36E-03	5.44E-04	1.23E-07	5.89E-03	1.43E-02
D47	0.00E+00	1.15E-04	8.76E-06	1.74E+02	2.49E-04	8.79E-01	1.42E-04	8.19E-02	2.87E-02	4.65E-03	1.38E-02	6.51E-03	6.64E-03	8.00E-03	7.92E-04	1.92E-07	7.20E-03	1.53E-02
D48	0.00E+00	4.50E-05	3.58E-06	7.61E+01	1.14E-04	4.06E-01	5.88E-05	3.08E-02	1.27E-02	2.04E-03	5.67E-03	2.84E-03	2.91E-03	2.98E-03	3.52E-04	8.62E-08	2.76E-03	5.72E-03
D49	0.00E+00	1.90E-04	1.34E-05	2.28E+02	2.85E-04	1.00E+00	2.10E-04	1.47E-01	3.66E-02	6.06E-03	2.06E-02	8.51E-03	8.68E-03	1.43E-02	9.98E-04	2.30E-07	1.20E-02	2.74E-02
D50	0.00E+00	1.96E-04	1.42E-05	2.60E+02	3.48E-04	1.22E+00	2.28E-04	1.45E-01	4.21E-02	6.91E-03	2.23E-02	9.72E-03	9.91E-03	1.42E-02	1.16E-03	2.76E-07	1.24E-02	2.71E-02
D51	0.00E+00	2.82E-05	2.12E-06	4.23E+01	6.13E-05	2.14E-01	3.51E-05	1.94E-02	6.96E-03	1.13E-03	3.43E-03	1.59E-03	1.63E-03	1.92E-03	1.93E-04	4.77E-08	1.81E-03	3.61E-03
D52	0.00E+00	2.33E-05	1.85E-06	4.08E+01	6.36E-05	2.22E-01	3.16E-05	1.45E-02	6.83E-03	1.09E-03	3.07E-03	1.54E-03	1.58E-03	1.45E-03	1.90E-04	4.85E-08	1.50E-03	2.69E-03
D53	0.00E+00	3.95E-05	3.01E-06	6.09E+01	8.91E-05	3.12E-01	4.98E-05	2.71E-02	1.01E-02	1.63E-03	4.86E-03	2.29E-03	2.34E-03	2.67E-03	2.79E-04	6.89E-08	2.52E-03	5.04E-03
D54	0.00E+00	3.79E-05	2.95E-06	6.40E+01	9.92E-05	3.43E-01	5.06E-05	2.35E-02	1.07E-02	1.71E-03	4.97E-03	2.43E-03	2.48E-03	2.37E-03	2.98E-04	7.64E-08	2.48E-03	4.36E-03
D55	0.00E+00	9.08E-05	6.82E-06	1.54E+02	1.70E-04	6.47E-01	1.06E-04	6.64E-02	1.37E-02	2.62E-03	1.02E-02	4.69E-03	4.78E-03	8.59E-03	6.85E-04	1.59E-07	5.42E-03	1.24E-02
D56	0.00E+00	6.16E-05	4.50E-06	9.70E+01	1.01E-04	3.86E-01	6.93E-05	4.62E-02	8.48E-03	1.64E-03	6.68E-03	2.93E-03	2.98E-03	6.02E-03	4.25E-04	9.76E-08	3.70E-03	8.61E-03
D57	0.00E+00	1.06E-04	7.96E-06	1.79E+02	1.98E-04	7.52E-01	1.24E-04	7.77E-02	1.59E-02	3.05E-03	1.20E-02	5.47E-03	5.57E-03	1.01E-02	7.98E-04	1.86E-07	6.39E-03	1.45E-02
D58	0.00E+00	7.54E-05	5.85E-06	1.42E+02	1.71E-04	6.42E-01	9.43E-05	5.19E-02	1.29E-02	2.43E-03	9.06E-03	4.40E-03	4.49E-03	6.69E-03	6.47E-04	1.56E-07	4.57E-03	9.62E-03
D59	0.00E+00	7.84E-05	5.73E-06	1.25E+02	1.32E-04	5.01E-01	8.91E-05	5.79E-02	1.09E-02	2.11E-03	8.62E-03	3.78E-03	3.85E-03	7.61E-03	5.49E-04	1.28E-07	4.77E-03	1.08E-02
D60	0.00E+00	5.44E-05	4.33E-06	1.14E+02	1.46E-04	5.42E-01	7.31E-05	3.40E-02	1.05E-02	1.95E-03	7.08E-03	3.57E-03	3.64E-03	4.45E-03	5.27E-04	1.33E-07	3.44E-03	6.29E-03
D61	0.00E+00	8.09E-06	5.99E-07	1.38E+01	1.55E-05	5.83E-02	9.60E-06	5.68E-03	1.22E-03	2.34E-04	9.34E-04	4.22E-04	4.30E-04	7.52E-04	6.16E-05	1.49E-08	5.03E-04	1.06E-03
D62	0.00E+00	2.05E-05	1.52E-06	3.55E+01	4.06E-05	1.52E-01	2.47E-05	1.42E-02	3.15E-03	6.02E-04	2.40E-03	1.09E-03	1.11E-03	1.89E-03	1.59E-04	3.90E-08	1.29E-03	2.63E-03
D63	0.00E+00	1.83E-05	1.23E-06	2.02E+01	1.85E-05	6.71E-02	1.84E-05	1.46E-02	2.33E-03	4.25E-04	1.81E-03	6.66E-04	6.76E-04	1.67E-03	8.37E-05	1.81E-08	1.14E-03	2.75E-03
D64	0.00E+00	3.74E-06	2.74E-07	5.91E+00	7.57E-06	2.67E-02	4.56E-06	2.48E-03	7.38E-04	1.27E-04	4.50E-04	2.01E-04	2.05E-04	2.90E-04	2.68E-05	6.67E-09	2.45E-04	4.61E-04
D65	0.00E+00	5.01E-05	3.76E-06	8.94E+01	1.04E-04	3.90E-01	6.13E-05	3.42E-02	8.00E-03	1.52E-03	5.96E-03	2.76E-03	2.81E-03	4.54E-03	4.04E-04	9.92E-08	3.15E-03	6.35E-03
D66	0.00E+00	4.48E-05	3.27E-06	6.78E+01	6.71E-05	2.60E-01	4.89E-05	3.49E-02	5.89E-03	1.15E-03	4.68E-03	2.03E-03	2.06E-03	4.50E-03	2.94E-04	6.47E-08	2.62E-03	6.52E-03
D67	0.00E+00	4.53E-05	3.12E-06	5.49E+01	4.04E-05	1.65E-01	4.39E-05	3.83E-02	4.49E-03	9.15E-04	4.20E-03	1.58E-03	1.60E-03	4.97E-03	2.23E-04	4.35E-08	2.60E-03	7.18E-03
D68	0.00E+00	6.59E-05	4.70E-06	9.22E+01	8.37E-05	3.29E-01	6.89E-05	5.29E-02	7.85E-03	1.55E-03	6.60E-03	2.72E-03	2.76E-03	6.84E-03	3.91E-04	8.33E-08	3.84E-03	9.89E-03
D69	0.00E+00	1.03E-05	6.95E-07	1.24E+01	9.19E-06	3.64E-02	1.01E-05	8.45E-03	9.97E-04	2.04E-04	9.80E-04	3.56E-04	3.61E-04	1.12E-03	5.02E-05	1.04E-08	6.19E-04	1.58E-03
D70	0.00E+00	3.18E-05	2.25E-06	4.31E+01	3.77E-05	1.49E-01	3.27E-05	2.58E-02	3.64E-03	7.24E-04	3.13E-03	1.27E-03	1.29E-03	3.34E-03	1.82E-04	3.81E-08	1.85E-03	4.83E-03
D71	0.00E+00	5.04E-05	3.60E-06	6.15E+01	5.86E-05	2.26E-01	5.13E-05	4.26E-02	7.40E-03	1.33E-03	4.88E-03	2.00E-03	2.03E-03	4.64E-03	2.60E-04	5.16E-08	2.85E-03	7.99E-03
D72	0.00E+00	4.86E-05	3.38E-06	5.49E+01	4.83E-05	1.86E-01	4.80E-05	4.14E-02	6.47E-03	1.17E-03	4.60E-03	1.78E-03	1.81E-03	4.55E-03	2.27E-04	4.44E-08	2.79E-03	7.77E-03
D73	0.00E+00	1.65E-05	1.29E-06	2.56E+01	2.93E-05	1.13E-01	1.86E-05	1.36E-02	3.25E-03	5.62E-04	1.73E-03	8.37E-04	8.52E-04	1.43E-03	1.14E-04	2.35E-08	8.81E-04	2.54E-03
D74	0.00E+00	1.34E-05	1.08E-06	2.56E+01	3.49E-05	1.27E-01	1.77E-05	8.93E-03	3.32E-03	5.62E-04	1.69E-03	8.64E-04	8.82E-04	9.84E-04	1.19E-04	2.86E-08	8.09E-04	1.65E-03
D75	0.00E+00	1.06E-05	8.51E-07	2.19E+01	2.77E-05	1.04E-01	1.41E-05	6.92E-03	2.02E-03	3.76E-04	1.35E-03	6.85E-04	6.99E-04	8.89E-04	1.01E-04	2.50E-08	6.53E-04	1.28E-03
D76	0.00E+00	1.32E-05	9.91E-07	2.31E+01	2.64E-05	9.93E-02	1.58E-05	9.28E-03	2.06E-03	3.92E-04	1.53E-03	7.08E-04	7.22E-04	1.21E-03	1.04E-04	2.49E-08	8.08E-04	1.72E-03
D77	0.00E+00	1.98E-05	1.38E-06	2.71E+01	2.44E-05	9.42E-02	2.07E-05	1.55E-02	2.28E-03	4.52E-04	2.01E-03	8.00E-04	8.12E-04	2.05E-03	1.15E-04	2.53E-08	1.20E-03	2.90E-03
D78	0.00E+00	3.09E-05	2.24E-06	4.68E+01	4.67E-05	1.80E-01	3.40E-05	2.36E-02	4.05E-03	7.89E-04	3.28E-03	1.40E-03	1.43E-03	3.09E-03	2.03E-04	4.58E-08	1.85E-03	4.41E-03
D79	0.00E+00	4.50E-05	3.15E-06	5.35E+01	5.10E-05	1.93E-01	4.58E-05	3.71E-02	6.38E-03	1.15E-03	4.42E-03	1.75E-03	1.78E-03	4.10E-03	2.25E-04	4.65E-08	2.64E-03	6.95E-03
D80	0.00E+00	3.53E-05	2.54E-06	4.94E+01	5.65E-05	2.05E-01	3.97E-05	2.63E-02	6.06E-03	1.06E-03	3.87E-03	1.65E-03	1.68E-03	2.98E-03	2.17E-04	5.02E-08	2.18E-03	4.92E-03
D81	0.00E+00	1.26E-05	1.11E-06	3.12E+01	4.75E-05	1.70E-01	1.96E-05	6.65E-03	4.16E-03	6.89E-04	1.88E-03	1.07E-03	1.09E-03	7.41E-04	1.50E-04	3.81E-08	7.93E-04	1.21E-03
D82	0.00E+00	6.74E-06	6.19E-07	1.84E+01	2.91E-05	1.04E-01	1.12E-05	3.11E-03	2.48E-03	4.09E-04	1.08E-03	6.34E-04	6.49E-04	3.48E-04	8.95E-05	2.31E-08	4.30E-04	5.63E-04
D83	0.00E+00	6.27E-05	4.50E-06	9.16E+01	8.82E-05	3.41E-01	6.75E-05	4.88E-02	7.87E-03	1.54E-03	6.50E-03	2.73E-03	2.78E-03	6.36E-03	3.94E-04	8.73E-08	3.72E-03	9.12E-03
D84	0.00E+00	7.79E-05	5.74E-06	1.07E+02	9.03E-05	3.76E-01	7.81E-05	6.79E-02	9.23E-03	1.82E-03	7.22E-03	3.12E-03	3.16E-03	8.38E-03	4.49E-04	8.26E-08	4.06E-03	1.27E-02
D85	0.00E+00	6.36E-05	4.51E-06	8.59E+01	7.42E-05	2.95E-01	6.50E-05	5.20E-02	7.26E-03	1.44E-03	6.20E-03	2.52E-03	2.55E-03	6.71E-03	3.61E-04	7.45E-08	3.65E-03	9.74E-03
D86	0.00E+00	7.59E-05	5.68E-06	1.10E+02	9.86E-05	4.06E-01	7.82E-05	6.54E-02	9.59E-03	1.88E-03	7.22E-03	3.22E-03	3.27E-03	8.02E-03	4.67E-04	8.84E-08	3.95E-03	1.22E-02
D87	0.00E+00	1.08E-04	7.50E-06	1.35E+02	1.05E-04	4.24E-01	1.06E-04	9.06E-02	1.12E-02	2.26E-03	1.01E-02	3.90E-03	3.95E-03	1.17E-02	5.55E-04	1.10E-07	6.17E-03	1.70E-02
D88	0.00E+00	1.53E-04	1.13E-05	2.19E+02	1.96E-04	8.00E-01	1.57E-04	1.30E-01	1.90E-02	3.73E-03	1.46E-02	6.42E-03	6.52E-03	1.61E-02	9.29E-04	1.79E-07	8.09E-03	2.44E-02
D89	0.00E+00	6.72E-06	5.29E-07	1.09E+01	1.58E-05	5.68E-02	8.51E-06	4.83E-03	1.81E-03	2.92E-04	8.18E-04	4.04E-04	4.13E-04	4.62E-04	4.99E-05	1.19E-08	4.05E-04	8.98E-04
D90	0.00E+00	1.39E-05	1.02E-06	1.92E+01	2.63E-05	9.24E-02	1.64E-05	1.02E-02	3.13E-03	5.12E-04	1.61E-03	7.18E-04	7.32E-04	9.95E-04	8.61E-05	2.06E-08	8.74E-04	1.90E-03
D91	0.00E+00	2.15E-05	1.80E-06	4.69E+01	6.85E-05	2.46E-01	3.09E-05	1.26E-02	6.18E-03	1.03E-03	2.97E-03	1.60E-03	1.64E-03	1.41E-03	2.22E-04	5.56E-08	1.34E-03	2.32E-03
D92	0.00E+00	5.90E-06	4.92E-07	1.24E+01	1.76E-05	6.36E-02	8.21E-06	3.70E-03	1.62E-03	2.72E-04	7.85E-04	4.19E-04	4.28E-04	4.06E-04	5.81E-05	1.42E-08	3.57E-04	6.83E-04
D93	0.00E+00	2.00E-05	1.66E-06	4.28E+01	6.21E-05	2.23E-01	2.84E-05	1.18E-02	5.62E-03	9.42E-04	2.74E-03	1.46E-03	1.49E-03	1.32E-03	2.02E-04	5.06E-08	1.25E-03	2.18E-03
D94	0.00E+00	4.32E-06	3.62E-07	9.52E+00	1.40E-05	5.01E-02	6.28E-06	2.46E-03	1.25E-03	2.09E-04	6.06E-04	3.25E-04	3.32E-04	2.78E-04	4.51E-05	1.14E-08	2.74E-04	4.52E-04
E01	0.00E+00	1.71E-05	1.28E-06	2.60E+01	3.85E-05	1.33E-01	2.16E-05	1.13E-02	4.28E-03	6.93E-04	2.13E-03	9.87E-04	1.01E-03	1.13E-03	1.19E-04	3.02E-08	1.12E-03	2.09E-03
E02	0.00E+00	4.46E-05	3.21E-06	5.58E+01	7.02E-05	2.51E-01	4.97E-05	3.50E-02	9.01E-03	1.49E-03	4.85E-03	2.06E-03	2.10E-03	3.38E-03	2.45E-04	5.56E-08	2.74E-03	6.55E-03
E03	0.00E+00	1.45E-05	1.22E-06	3.44E+01	4.70E-05	1.74E-01	2.10E-05	8.39E-03	3.24E-03	5.94E-04	2.02E-03	1.09E-03	1.12E-03	1.07E-03	1.63E-04	4.14E-08	9.05E-04	1.54E-03
E04	0.00E+00	1.82E-05	1.42E-06	3.34E+01	3.88E-05	1.48E-01	2.22E-05	1.32E-02	3.03E-03	5.72E-04	2.11E-03	1.03E-03	1.05E-03	1.67E-03	1.51E-04	3.51E-08	1.06E-03	2.45E-03
E05	0.00E+00	8.89E-06	6.69E-07	1.57E+01	1.80E-05	6.76E-02	1.07E-05	6.23E-03	1.40E-03	2.66E-04	1.04E-03	4.81E-04	4.90E-04	8.16E-04	7.04E-05	1.70E-08	5.48E-04	1.16E-03
E06	0.00E+00	1.72E-05	1.37E-06	3.58E+01	4.58E-05	1.71E-01	2.29E-05	1.09E-02	3.30E-03	6.15E-04	2.21E-03	1.12E-03	1.15E-03	1.41E-03	1.66E-04	4.14E-08	1.07E-03	2.02E-03
E07	0.00E+00	1.91E-04	1.42E-05	2.69E+02	3.68E-04	1.31E+00	2.26E-04	1.42E-01	4.41E-02	7.20E-03	2.19E-02	1.00E-02	1.02E-02	1.38E-02	1.21E-03	2.85E-07	1.17E-02	2.66E-02
E08	0.00E+00	1.15E-04	8.47E-06	1.64E+02	2.33E-04	8.07E-01	1.40E-04	8.01E-02	2.68E-02	4.37E-03	1.37E-02	6.19E-03	6.31E-03	7.96E-03	7.43E-04	1.83E-07	7.41E-03	1.49E-02
E09	0.00E+00	1.66E-04	1.26E-05	2.44E+02	3.39E-04	1.21E+00	2.01E-04	1.23E-01	4.01E-02	6.52E-03	1.95E-02	9.06E-03	9.25E-03	1.19E-02	1.10E-03	2.61E-07	1.02E-02	2.29E-02
E10	0.00E+00	1.13E-04	8.48E-06	1.69E+02	2.46E-04	8.56E-01	1.40E-04	7.72E-02	2.79E-02	4.52E-03	1.38E-02	6.39E-03	6.52E-03	7.66E-03	7.73E-04	1.92E-07	7.25E-03	1.44E-02
E11	0.00E+00	1.58E-04	1.20E-05	2.41E+02	3.48E-04	1.22E+00	1.97E-04	1.11E-01	3.98E-02	6.44E-03	1.92E-02	9.04E-03	9.23E-03	1.09E-02	1.10E-03	2.69E-07	1.00E-02	2.06E-02
E12	0.00E+00	1.52E-04	1.11E-05	1.96E+02	2.48E-04	8.99E-01	1.70E-04	1.21E-01	3.18E-02	5.24E-03	1.65E-02	7.21E-03	7.35E-03	1.15E-02	8.63E-04	1.94E-07	9.14E-03	2.26E-02
E13	0.00E+00	2.69E-05	2.14E-06	5.66E+01	7.32E-05	2.71E-01	3.64E-05	1.66E-02	5.22E-03	9.70E-04	3.53E-03	1.78E-03	1.82E-03	2.19E-03	2.63E-04	6.67E-08	1.71E-03	3.07E-03
E14	0.00E+00	5.51E-05	4.28E-06	1.04E+02	1.26E-04	4.72E-01	6.92E-05	3.77E-02	9.48E-03	1.78E-03	6.66E-03	3.23E-03	3.30E-03	4.87E-03	4.75E-04	1.15E-07	3.36E-03	6.99E-03
E15	0.00E+00	1.40E-05	1.13E-06	2.99E+01	3.87E-05	1.44E-01	1.89E-05	8.78E-03	2.77E-03	5.14E-04	1.82E-03	9.39E-04	9.59E-04	1.13E-03	1.39E-04	3.48E-08	8.65E-04	1.62E-03
E16	0.00E+00	3.71E-05	2.89E-06	6.16E+01	6.41E-05	2.56E-01	4.14E-05	3.03E-02	5.54E-03	1.06E-03	3.83E-03	1.85E-03	1.88E-03	3.68E-03	2.71E-04	5.58E-08	1.95E-03	5.65E-03
E17	0.00E+00	1.09E-05	7.83E-07	1.78E+01	1.97E-05	7.30E-02	1.28E-05	7.48E-03	1.55E-03	3.00E-04	1.27E-03	5.46E-04	5.56E-04	1.02E-03	7.92E-05	1.98E-08	7.10E-04	1.39E-03
E18	0.00E+00	1.42E-05	1.27E-06	3.89E+01	5.64E-05	2.08E-01	2.28E-05	7.20E-03	3.74E-03	6.76E-04	2.19E-03	1.25E-03	1.28E-03	9.02E-04	1.87E-04	4.89E-08	9.05E-04	1.31E-03
E19	0.00E+00	7.42E-05	5.46E-06	1.05E+02	1.49E-04	5.15E-01	9.00E-05	5.17E-02	1.72E-02	2.80E-03	8.86E-03	3.97E-03	4.05E-03	5.15E-03	4.75E-04	1.17E-07	4.81E-03	9.64E-03
E20	0.00E+00	3.65E-05	2.72E-06	5.60E+01	8.41E-05	2.87E-01	4.67E-05	2.32E-02	9.21E-03	1.49E-03	4.62E-03	2.13E-03	2.18E-03	2.37E-03	2.57E-04	6.62E-08	2.44E-03	4.32E-03
E21	0.00E+00	1.86E-06	1.36E-07	2.52E+00	2.08E-06	8.71E-03	1.85E-06	1.63E-03	2.16E-04	4.29E-05	1.70E-04	7.31E-05	7.41E-05	2.01E-04	1.05E-05	1.91E-09	9.64E-05	3.05E-04
E22	0.00E+00	8.61E-06	6.59E-07	1.48E+01	1.63E-05	6.28E-02	1.00E-05	6.49E-03	1.33E-03	2.53E-04	9.53E-04	4.50E-04	4.58E-04	8.19E-04	6.59E-05	1.49E-08	4.95E-04	1.21E-03
E23	0.00E+00	1.04E-04	6.92E-06	1.13E+02	6.80E-05	2.85E-01	9.60E-05	8.93E-02	8.87E-03	1.86E-03	9.26E-03	3.17E-03	3.21E-03	1.17E-02	4.43E-04	8.24E-08	6.05E-03	1.68E-02
E24	0.00E+00	8.14E-05	5.87E-06	1.19E+02	1.15E-04	4.46E-01	8.74E-05	6.39E-02	1.03E-02	2.01E-03	8.38E-03	3.56E-03	3.61E-03	8.27E-03	5.13E-04	1.12E-07	4.77E-03	1.19E-02
E25	0.00E+00	1.96E-05	1.64E-06	4.20E+01	6.04E-05	2.18E-01	2.77E-05	1.20E-02	5.52E-03	9.25E-04	2.65E-03	1.43E-03	1.46E-03	1.32E-03	1.98E-04	4.88E-08	1.19E-03	2.21E-03
E26	0.00E+00	1.35E-05	1.22E-06	3.48E+01	5.36E-05	1.93E-01	2.15E-05	7.03E-03	4.67E-03	7.72E-04	2.05E-03	1.19E-03	1.22E-03	7.69E-04	1.68E-04	4.25E-08	8.33E-04	1.28E-03
E27	0.00E+00	2.52E-05	1.97E-06	4.43E+01	5.81E-05	2.11E-01	3.17E-05	1.74E-02	5.67E-03	9.68E-04	3.05E-03	1.49E-03	1.52E-03	1.93E-03	2.03E-04	4.83E-08	1.53E-03	3.24E-03
E28	0.00E+00	5.66E-06	4.84E-07	1.31E+01	1.95E-05	6.99E-02	8.46E-06	3.11E-03	1.73E-03	2.88E-04	8.15E-04	4.47E-04	4.57E-04	3.50E-04	6.23E-05	1.58E-08	3.58E-04	5.71E-04
E29	0.00E+00	3.40E-06	2.77E-07	6.72E+00	9.34E-06	3.39E-02	4.57E-06	2.20E-03	8.76E-04	1.48E-04	4.38E-04	2.27E-04	2.32E-04

Appendix F.2.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E45	0.00E+00	4.56E-06	3.63E-07	9.14E+00	1.14E-05	4.27E-02	5.90E-06	3.05E-03	8.40E-04	1.57E-04	5.66E-04	2.85E-04	2.90E-04	3.90E-04	4.20E-05	1.02E-08	2.75E-04	5.66E-04
E46	0.00E+00	2.23E-05	1.76E-06	4.58E+01	5.84E-05	2.17E-01	2.97E-05	1.40E-02	4.20E-03	7.84E-04	2.88E-03	1.44E-03	1.47E-03	1.84E-03	2.12E-04	5.35E-08	1.41E-03	2.59E-03
E47	0.00E+00	4.50E-06	3.46E-07	8.34E+00	9.90E-06	3.72E-02	5.58E-06	3.10E-03	7.54E-04	1.42E-04	5.39E-04	2.58E-04	2.63E-04	4.03E-04	3.78E-05	9.16E-09	2.76E-04	5.75E-04
E48	0.00E+00	2.33E-05	2.03E-06	6.12E+01	8.77E-05	3.23E-01	3.64E-05	1.19E-02	5.83E-03	1.06E-03	3.51E-03	1.96E-03	2.01E-03	1.53E-03	2.93E-04	7.69E-08	1.50E-03	2.17E-03
E49	0.00E+00	4.26E-06	3.53E-07	8.81E+00	1.09E-05	4.19E-02	5.51E-06	3.03E-03	8.21E-04	1.53E-04	5.16E-04	2.74E-04	2.79E-04	3.67E-04	4.06E-05	9.39E-09	2.36E-04	5.61E-04
E50	0.00E+00	5.63E-05	4.09E-06	8.11E+01	7.53E-05	2.98E-01	5.94E-05	4.56E-02	6.99E-03	1.37E-03	5.64E-03	2.40E-03	2.44E-03	5.82E-03	3.47E-04	7.26E-08	3.20E-03	8.53E-03
E51	0.00E+00	1.25E-06	1.05E-07	2.63E+00	3.28E-06	1.26E-02	1.62E-06	8.93E-04	2.46E-04	4.57E-05	1.51E-04	8.18E-05	8.34E-05	1.07E-04	1.21E-05	2.78E-09	6.77E-05	1.65E-04
E52	0.00E+00	5.18E-05	3.66E-06	6.71E+01	5.43E-05	2.21E-01	5.15E-05	4.36E-02	5.63E-03	1.13E-03	4.88E-03	1.95E-03	1.98E-03	5.57E-03	2.78E-04	5.46E-08	2.91E-03	8.17E-03
E53	0.00E+00	3.03E-05	2.17E-06	4.24E+01	3.82E-05	1.51E-01	3.16E-05	2.46E-02	3.62E-03	7.14E-04	3.01E-03	1.25E-03	1.27E-03	3.16E-03	1.80E-04	3.77E-08	1.74E-03	4.60E-03
E54	0.00E+00	5.65E-05	4.22E-06	9.20E+01	9.76E-05	3.76E-01	6.42E-05	4.28E-02	8.13E-03	1.56E-03	6.13E-03	2.78E-03	2.83E-03	5.48E-03	4.05E-04	9.14E-08	3.30E-03	7.98E-03
E55	0.00E+00	1.81E-05	1.27E-06	2.46E+01	2.16E-05	8.50E-02	1.86E-05	1.45E-02	2.07E-03	4.12E-04	1.79E-03	7.22E-04	7.33E-04	1.89E-03	1.04E-04	2.20E-08	1.06E-03	2.72E-03
E56	0.00E+00	4.66E-05	3.48E-06	7.45E+01	7.72E-05	3.00E-01	5.21E-05	3.61E-02	6.57E-03	1.27E-03	4.96E-03	2.24E-03	2.28E-03	4.59E-03	3.26E-04	7.20E-08	2.68E-03	6.73E-03
F31	0.00E+00	8.47E-05	6.81E-06	1.44E+02	2.14E-04	7.70E-01	1.10E-04	6.01E-02	2.42E-02	3.89E-03	1.05E-02	5.35E-03	5.47E-03	5.73E-03	6.66E-04	1.60E-07	5.04E-03	1.12E-02
F32	0.00E+00	1.18E-04	8.64E-06	1.66E+02	2.35E-04	8.14E-01	1.43E-04	8.18E-02	2.72E-02	4.42E-03	1.41E-02	6.29E-03	6.41E-03	8.16E-03	7.52E-04	1.86E-07	7.65E-03	1.53E-02
F33	0.00E+00	7.36E-06	6.85E-07	1.85E+01	3.22E-05	1.13E-01	1.23E-05	3.49E-03	3.19E-03	5.00E-04	1.18E-03	7.00E-04	7.17E-04	3.48E-04	8.98E-05	2.36E-08	4.61E-04	6.35E-04
F34	0.00E+00	4.50E-05	3.58E-06	7.61E+01	1.14E-04	4.06E-01	5.88E-05	3.08E-02	1.27E-02	2.04E-03	5.67E-03	2.84E-03	2.91E-03	2.98E-03	3.52E-04	8.62E-08	2.76E-03	5.72E-03
F35	0.00E+00	5.38E-06	4.18E-07	1.07E+01	1.35E-05	5.00E-02	7.05E-06	3.40E-03	9.78E-04	1.83E-04	6.87E-04	3.36E-04	3.43E-04	4.51E-04	4.94E-05	1.25E-08	3.45E-04	6.28E-04
F36	0.00E+00	1.40E-05	1.16E-06	3.24E+01	4.39E-05	1.63E-01	2.01E-05	8.18E-03	3.04E-03	5.59E-04	1.94E-03	1.03E-03	1.05E-03	1.06E-03	1.53E-04	3.91E-08	8.89E-04	1.50E-03
F37	0.00E+00	1.15E-04	8.78E-06	1.76E+02	2.54E-04	8.99E-01	1.43E-04	8.14E-02	2.92E-02	4.72E-03	1.38E-02	6.59E-03	6.72E-03	7.91E-03	8.04E-04	1.95E-07	7.10E-03	1.52E-02
F38	0.00E+00	1.01E-04	7.43E-06	1.37E+02	1.83E-04	6.49E-01	1.17E-04	7.63E-02	2.23E-02	3.65E-03	1.14E-02	5.09E-03	5.19E-03	7.40E-03	6.10E-04	1.43E-07	6.25E-03	1.43E-02
F39	0.00E+00	7.45E-06	5.68E-07	1.28E+01	1.40E-05	5.41E-02	8.68E-06	5.60E-03	1.14E-03	2.18E-04	8.24E-04	3.88E-04	3.95E-04	7.09E-04	5.68E-05	1.28E-08	4.29E-04	1.04E-03
F40	0.00E+00	1.63E-05	1.43E-06	4.12E+01	5.75E-05	2.15E-01	2.44E-05	9.37E-03	3.93E-03	7.17E-04	2.32E-03	1.31E-03	1.34E-03	1.15E-03	1.96E-04	4.95E-08	9.81E-04	1.72E-03
F41	0.00E+00	1.19E-05	1.18E-06	3.84E+01	6.32E-05	2.25E-01	2.22E-05	4.23E-03	5.24E-03	8.55E-04	2.12E-03	1.32E-03	1.36E-03	4.69E-04	1.89E-04	4.96E-08	7.64E-04	7.47E-04
F42	0.00E+00	3.85E-06	4.09E-07	1.45E+01	2.49E-05	8.82E-02	8.13E-06	7.95E-04	2.00E-03	3.24E-04	7.81E-04	5.05E-04	5.18E-04	9.47E-05	7.26E-05	1.95E-08	2.63E-04	1.30E-04
F83	0.00E+00	2.46E-05	1.73E-06	3.05E+01	2.93E-05	1.09E-01	2.53E-05	2.00E-02	3.59E-03	6.44E-04	2.45E-03	9.79E-04	9.96E-04	2.22E-03	1.30E-04	2.72E-08	1.45E-03	3.75E-03
F84	0.00E+00	6.49E-05	4.50E-06	4.34E+01	2.20E-05	1.32E-01	5.36E-05	7.21E-02	1.05E-02	1.69E-03	4.92E-03	1.69E-03	1.72E-03	4.91E-03	1.64E-04	1.31E-08	3.20E-03	1.36E-02
F85	0.00E+00	4.11E-05	3.08E-06	5.35E+01	5.65E-05	2.23E-01	4.31E-05	3.77E-02	8.50E-03	1.41E-03	4.03E-03	1.80E-03	1.83E-03	3.44E-03	2.32E-04	4.23E-08	2.20E-03	7.05E-03
F86	0.00E+00	3.59E-05	2.79E-06	6.20E+01	7.54E-05	2.77E-01	4.35E-05	2.65E-02	7.71E-03	1.33E-03	4.15E-03	2.00E-03	2.05E-03	2.89E-03	2.82E-04	6.42E-08	2.10E-03	4.92E-03
F87	0.00E+00	9.53E-06	6.41E-07	1.06E+01	1.20E-05	4.07E-02	1.02E-05	7.29E-03	1.63E-03	2.73E-04	1.02E-03	3.84E-04	3.91E-04	7.28E-04	4.58E-05	1.03E-08	6.26E-04	1.37E-03
F88	0.00E+00	3.26E-05	2.19E-06	2.62E+01	2.93E-05	9.82E-02	3.19E-05	2.84E-02	6.20E-03	9.70E-04	3.14E-03	1.13E-03	1.15E-03	2.11E-03	1.09E-04	2.02E-08	1.99E-03	5.33E-03
G01	0.00E+00	8.67E-06	8.29E-07	2.87E+01	4.30E-05	1.57E-01	1.57E-05	3.38E-03	2.91E-03	5.11E-04	1.51E-03	9.11E-04	9.33E-04	4.19E-04	1.41E-04	3.69E-08	5.75E-04	5.99E-04
G02	0.00E+00	5.19E-05	4.07E-06	1.01E+02	1.18E-04	4.45E-01	6.49E-05	3.63E-02	9.49E-03	1.76E-03	6.21E-03	3.06E-03	3.12E-03	4.62E-03	4.59E-04	1.07E-07	3.09E-03	6.73E-03
G03	0.00E+00	1.50E-04	9.87E-06	1.90E+02	7.23E-05	3.75E-01	1.32E-04	1.37E-01	7.09E-03	2.05E-03	1.26E-02	4.15E-03	4.16E-03	2.25E-02	7.13E-04	1.28E-07	8.40E-03	2.58E-02
G04	0.00E+00	1.17E-04	7.91E-06	1.49E+02	5.55E-05	2.99E-01	1.02E-04	1.11E-01	5.61E-03	1.61E-03	9.42E-03	3.26E-03	3.27E-03	1.77E-02	5.58E-04	8.71E-08	6.15E-03	2.08E-02
G05	0.00E+00	7.18E-06	6.97E-07	2.60E+01	3.72E-05	1.46E-01	1.33E-05	2.88E-03	1.50E-03	3.19E-04	1.28E-03	7.82E-04	8.01E-04	3.87E-04	1.28E-04	3.43E-08	4.80E-04	5.06E-04
G06	0.00E+00	4.19E-07	4.48E-08	1.83E+00	2.80E-06	1.09E-02	9.03E-07	9.95E-05	1.09E-04	2.27E-05	8.72E-05	5.64E-05	5.79E-05	9.70E-06	9.20E-06	2.53E-09	2.94E-05	1.60E-05
G07	0.00E+00	8.13E-05	5.47E-06	8.31E+01	6.25E-05	2.40E-01	7.70E-05	7.00E-02	9.37E-03	1.74E-03	7.45E-03	2.64E-03	2.68E-03	7.77E-03	3.35E-04	6.35E-08	4.77E-03	1.31E-02
G08	0.00E+00	6.93E-06	6.28E-07	1.98E+01	2.81E-05	1.03E-01	1.12E-05	3.52E-03	1.98E-03	3.52E-04	1.07E-03	6.22E-04	6.36E-04	4.33E-04	9.56E-05	2.42E-08	4.34E-04	6.38E-04
G09	0.00E+00	2.05E-05	1.45E-06	1.72E+01	1.61E-05	6.62E-02	1.91E-05	2.04E-02	4.17E-03	6.53E-04	1.80E-03	6.85E-04	6.98E-04	1.44E-03	7.06E-05	1.01E-08	1.10E-03	3.84E-03
G10	0.00E+00	1.34E-04	9.41E-06	1.66E+02	1.60E-04	5.96E-01	1.38E-04	1.09E-01	1.96E-02	3.52E-03	1.33E-02	5.34E-03	5.43E-03	1.21E-02	7.09E-04	1.48E-07	7.89E-03	2.05E-02
H01	0.00E+00	6.41E-04	4.71E-05	1.10E+03	8.69E-04	3.79E+00	6.74E-04	5.46E-01	5.01E-02	1.25E-02	6.31E-02	2.76E-02	2.80E-02	8.52E-02	4.63E-03	9.51E-07	3.51E-02	1.02E-01
H02	0.00E+00	5.28E-04	3.93E-05	9.06E+02	7.12E-04	3.13E+00	5.52E-04	4.59E-01	4.14E-02	1.03E-02	5.10E-02	2.28E-02	2.31E-02	7.05E-02	3.81E-03	7.52E-07	2.79E-02	8.58E-02
H03	0.00E+00	5.31E-04	3.97E-05	9.30E+02	7.55E-04	3.29E+00	5.63E-04	4.56E-01	4.29E-02	1.06E-02	5.21E-02	2.36E-02	2.39E-02	7.00E-02	3.94E-03	7.91E-07	2.82E-02	8.52E-02
H04	0.00E+00	4.89E-04	3.53E-05	7.51E+02	4.82E-04	2.23E+00	4.73E-04	4.47E-01	3.23E-02	8.40E-03	4.35E-02	1.81E-02	1.82E-02	6.89E-02	3.04E-03	5.41E-07	2.52E-02	8.37E-02
H05	0.00E+00	2.04E-04	1.48E-05	3.29E+02	2.33E-04	1.05E+00	2.05E-04	1.81E-01	1.45E-02	3.71E-03	1.90E-02	8.07E-03	8.16E-03	2.81E-02	1.36E-03	2.61E-07	1.09E-02	3.38E-02
H06	0.00E+00	2.85E-04	2.05E-05	4.22E+02	2.48E-04	1.18E+00	2.68E-04	2.66E-01	1.78E-02	4.69E-03	2.44E-02	9.99E-03	1.01E-02	4.08E-02	1.68E-03	2.80E-07	1.43E-02	4.99E-02
H07	0.00E+00	4.94E-04	3.58E-05	7.73E+02	5.17E-04	2.36E+00	4.85E-04	4.47E-01	3.37E-02	8.68E-03	4.45E-02	1.88E-02	1.90E-02	6.89E-02	3.15E-03	5.74E-07	2.56E-02	8.37E-02
H08	0.00E+00	6.82E-05	4.93E-06	8.37E+01	8.90E-05	3.37E-01	7.14E-05	5.96E-02	1.32E-02	2.19E-03	6.82E-03	2.87E-03	2.92E-03	5.58E-03	3.61E-04	6.97E-08	3.90E-03	1.12E-02
H09	0.00E+00	1.15E-04	8.58E-06	1.24E+02	1.43E-04	5.62E-01	1.17E-04	1.10E-01	3.06E-02	4.67E-03	1.09E-02	4.77E-03	4.87E-03	7.80E-03	5.35E-04	8.53E-08	6.03E-03	2.07E-02
H10	0.00E+00	8.34E-05	6.19E-06	1.11E+02	1.05E-04	4.17E-01	8.56E-05	7.33E-02	1.34E-02	2.38E-03	7.96E-03	3.49E-03	3.55E-03	7.74E-03	4.76E-04	8.98E-08	4.42E-03	1.37E-02
H11	0.00E+00	4.70E-05	3.70E-06	7.55E+01	8.30E-05	3.21E-01	5.27E-05	3.97E-02	9.40E-03	1.63E-03	4.86E-03	2.38E-03	2.43E-03	4.12E-03	3.36E-04	6.77E-08	2.44E-03	7.41E-03
H12	0.00E+00	1.13E-04	7.78E-06	1.92E+02	1.57E-04	6.58E-01	1.23E-04	8.63E-02	8.69E-03	2.19E-03	1.20E-02	4.82E-03	4.89E-03	1.47E-02	8.14E-04	1.99E-07	7.15E-03	1.61E-02
H13	0.00E+00	1.79E-04	1.24E-05	2.58E+02	2.46E-04	9.22E-01	1.93E-04	1.33E-01	2.24E-02	4.36E-03	1.90E-02	7.62E-03	7.74E-03	1.80E-02	1.11E-03	2.57E-07	1.12E-02	2.49E-02
H14	0.00E+00	9.79E-06	7.14E-07	1.14E+01	8.89E-06	3.78E-02	9.26E-06	9.24E-03	1.36E-03	2.46E-04	8.48E-04	3.51E-04	3.56E-04	9.63E-04	4.70E-05	7.51E-09	4.91E-04	1.73E-03
H15	0.00E+00	7.79E-05	6.53E-06	1.96E+02	2.69E-04	9.79E-01	1.17E-04	4.10E-02	1.92E-02	3.44E-03	1.14E-02	6.12E-03	6.26E-03	5.44E-03	9.34E-04	2.41E-07	5.16E-03	7.49E-03
H16	0.00E+00	5.82E-05	5.26E-06	1.58E+02	2.34E-04	8.35E-01	9.36E-05	2.96E-02	2.05E-02	3.40E-03	8.95E-03	5.18E-03	5.30E-03	3.28E-03	7.63E-04	1.92E-07	3.65E-03	5.38E-03

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1346	0.00E+00	1.56E-05	1.68E-06	6.28E+01	1.08E-04	4.85E-01	3.46E-05	3.16E-03	3.34E-03	7.79E-04	3.37E-03	2.17E-03	2.23E-03	1.53E-04	3.18E-04	9.44E-08	1.14E-03	4.93E-04
17	A01	110	Passenger Truck	2254	0.00E+00	3.38E-05	3.60E-06	1.50E+02	2.24E-04	9.99E-01	7.24E-05	8.84E-03	5.80E-03	1.46E-03	6.98E-03	4.52E-03	4.63E-03	8.92E-04	7.54E-04	2.21E-07	2.35E-03	1.42E-03
17	A01	110	Single Unit Short Haul Truck	298	0.00E+00	3.94E-05	2.09E-06	5.72E+01	4.04E-05	1.58E-01	4.33E-05	2.30E-02	1.78E-03	5.89E-04	4.77E-03	1.33E-03	1.35E-03	5.84E-03	2.29E-04	1.02E-07	3.42E-03	4.29E-03
17	A01	110	Single Unit Long Haul Truck	13	0.00E+00	1.69E-06	8.68E-08	2.40E+00	1.62E-06	6.21E-03	1.84E-06	9.55E-04	7.95E-05	2.52E-05	2.07E-04	5.48E-05	5.56E-05	2.44E-04	9.60E-06	4.15E-09	1.51E-04	1.78E-04
17	A01	110	Combination Short Haul Truck	220	0.00E+00	8.29E-05	6.23E-06	8.38E+01	1.97E-07	7.48E-02	5.87E-05	8.87E-02	2.35E-03	9.34E-04	4.38E-03	1.81E-03	1.79E-03	1.26E-02	2.80E-04	0.00E+00	2.59E-03	1.67E-02
17	A01	110	Combination Long Haul Truck	200	0.00E+00	7.50E-05	5.41E-06	7.57E+01	2.27E-07	7.42E-02	5.45E-05	8.58E-02	2.12E-03	6.47E-04	4.48E-03	1.59E-03	1.60E-03	1.15E-02	2.53E-04	0.00E+00	2.88E-03	1.62E-02
17	A02	110	Passenger Car	1269	0.00E+00	1.47E-05	1.59E-06	5.92E+01	1.02E-04	4.58E-01	3.26E-05	2.98E-03	3.15E-03	7.35E-04	3.18E-03	2.05E-03	2.10E-03	1.45E-04	3.00E-04	8.90E-08	1.07E-03	4.65E-04
17	A02	110	Passenger Truck	2126	0.00E+00	3.18E-05	3.40E-06	1.41E+02	2.11E-04	9.42E-01	6.83E-05	8.34E-03	5.47E-03	1.38E-03	6.59E-03	4.26E-03	4.37E-03	8.42E-04	7.11E-04	2.08E-07	2.22E-03	1.34E-03
17	A02	110	Single Unit Short Haul Truck	357	0.00E+00	4.73E-05	2.50E-06	6.85E+01	4.85E-05	1.89E-01	5.19E-05	2.75E-02	2.13E-03	7.06E-04	5.72E-03	1.60E-03	1.62E-03	7.00E-03	2.74E-04	1.22E-07	4.10E-03	5.14E-03
17	A02	110	Single Unit Long Haul Truck	16	0.00E+00	2.02E-06	1.04E-07	2.87E+00	1.95E-06	7.44E-03	2.21E-06	1.14E-03	9.53E-05	3.02E-05	2.48E-04	6.57E-05	6.66E-05	2.93E-04	1.15E-05	4.98E-09	1.81E-04	2.14E-04
17	A02	110	Combination Short Haul Truck	218	0.00E+00	8.24E-05	6.19E-06	8.33E+01	1.96E-07	7.43E-02	5.83E-05	8.81E-02	2.34E-03	9.28E-04	4.35E-03	1.80E-03	1.78E-03	1.25E-02	2.79E-04	0.00E+00	2.57E-03	1.66E-02
17	A02	110	Combination Long Haul Truck	199	0.00E+00	7.45E-05	5.37E-06	7.52E+01	2.25E-07	7.38E-02	5.41E-05	8.53E-02	2.11E-03	6.43E-04	4.46E-03	1.58E-03	1.59E-03	1.15E-02	2.52E-04	0.00E+00	2.87E-03	1.61E-02
17	A03	110	Passenger Car	1768	0.00E+00	2.04E-05	2.21E-06	8.25E+01	1.42E-04	6.37E-01	4.54E-05	4.15E-03	4.39E-03	1.02E-03	4.42E-03	2.85E-03	2.93E-03	2.01E-04	4.18E-04	1.24E-07	1.50E-03	6.48E-04
17	A03	110	Passenger Truck	2960	0.00E+00	4.43E-05	4.73E-06	1.97E+02	2.94E-04	1.31E+00	9.51E-05	1.16E-02	7.61E-03	1.92E-03	9.17E-03	5.93E-03	6.08E-03	1.17E-03	9.90E-04	2.90E-07	3.09E-03	1.87E-03
17	A03	110	Single Unit Short Haul Truck	301	0.00E+00	3.99E-05	2.11E-06	5.78E+01	4.09E-05	1.59E-01	4.38E-05	2.32E-02	1.80E-03	5.96E-04	4.83E-03	1.35E-03	1.36E-03	5.91E-03	2.31E-04	1.03E-07	3.46E-03	4.33E-03
17	A03	110	Single Unit Long Haul Truck	13	0.00E+00	1.71E-06	8.77E-08	2.42E+00	1.64E-06	6.28E-03	1.86E-06	9.66E-04	8.03E-05	2.55E-05	2.09E-04	5.54E-05	5.62E-05	2.47E-04	9.70E-06	4.20E-09	1.53E-04	1.80E-04
17	A03	110	Combination Short Haul Truck	210	0.00E+00	7.93E-05	5.96E-06	8.01E+01	1.89E-07	7.15E-02	5.61E-05	8.48E-02	2.25E-03	8.93E-04	4.19E-03	1.73E-03	1.71E-03	1.21E-02	2.68E-04	0.00E+00	2.48E-03	1.60E-02
17	A03	110	Combination Long Haul Truck	191	0.00E+00	7.17E-05	5.17E-06	7.23E+01	2.17E-07	7.09E-02	5.21E-05	8.20E-02	2.03E-03	6.18E-04	4.29E-03	1.52E-03	1.53E-03	1.10E-02	2.42E-04	0.00E+00	2.76E-03	1.55E-02
17	A04	110	Passenger Car	1358	0.00E+00	1.57E-05	1.70E-06	6.34E+01	1.09E-04	4.90E-01	3.49E-05	3.18E-03	3.37E-03	7.86E-04	3.40E-03	2.19E-03	2.25E-03	1.55E-04	3.21E-04	9.52E-08	1.15E-03	4.98E-04
17	A04	110	Passenger Truck	2274	0.00E+00	3.41E-05	3.64E-06	1.51E+02	2.26E-04	1.01E+00	7.31E-05	8.92E-03	5.85E-03	1.47E-03	7.04E-03	4.56E-03	4.67E-03	9.01E-04	7.61E-04	2.23E-07	2.37E-03	1.44E-03
17	A04	110	Single Unit Short Haul Truck	360	0.00E+00	4.76E-05	2.52E-06	6.91E+01	4.88E-05	1.90E-01	5.23E-05	2.78E-02	2.15E-03	7.12E-04	5.77E-03	1.61E-03	1.63E-03	7.06E-03	2.76E-04	1.23E-07	4.14E-03	5.18E-03
17	A04	110	Single Unit Long Haul Truck	16	0.00E+00	2.04E-06	1.05E-07	2.90E+00	1.96E-06	7.50E-03	2.23E-06	1.15E-03	9.60E-05	3.05E-05	2.50E-04	6.62E-05	6.72E-05	2.95E-04	1.16E-05	5.02E-09	1.82E-04	2.15E-04
17	A04	110	Combination Short Haul Truck	216	0.00E+00	8.15E-05	6.12E-06	8.23E+01	1.94E-07	7.34E-02	5.77E-05	8.71E-02	2.31E-03	9.17E-04	4.30E-03	1.78E-03	1.76E-03	1.24E-02	2.75E-04	0.00E+00	2.54E-03	1.64E-02
17	A04	110	Combination Long Haul Truck	197	0.00E+00	7.37E-05	5.31E-06	7.43E+01	2.23E-07	7.29E-02	5.35E-05	8.43E-02	2.08E-03	6.35E-04	4.40E-03	1.56E-03	1.57E-03	1.13E-02	2.49E-04	0.00E+00	2.83E-03	1.59E-02
17	A05	110	Passenger Car	1334	0.00E+00	1.54E-05	1.67E-06	6.23E+01	1.07E-04	4.81E-01	3.43E-05	3.13E-03	3.31E-03	7.72E-04	3.34E-03	2.15E-03	2.21E-03	1.52E-04	3.16E-04	9.36E-08	1.13E-03	4.89E-04
17	A05	110	Passenger Truck	2234	0.00E+00	3.35E-05	3.57E-06	1.49E+02	2.22E-04	9.90E-01	7.18E-05	8.77E-03	5.75E-03	1.45E-03	6.92E-03	4.48E-03	4.59E-03	8.85E-04	7.47E-04	2.19E-07	2.33E-03	1.41E-03
17	A05	110	Single Unit Short Haul Truck	249	0.00E+00	3.29E-05	1.75E-06	4.78E+01	3.38E-05	1.32E-01	3.62E-05	1.92E-02	1.49E-03	4.92E-04	3.99E-03	1.11E-03	1.13E-03	4.88E-03	1.91E-04	8.50E-08	2.86E-03	3.58E-03
17	A05	110	Single Unit Long Haul Truck	11	0.00E+00	1.41E-06	7.25E-08	2.00E+00	1.36E-06	5.19E-03	1.54E-06	7.98E-04	6.64E-05	2.11E-05	1.73E-04	4.58E-05	4.64E-05	2.04E-04	8.02E-06	3.47E-09	1.26E-04	1.49E-04
17	A05	110	Combination Short Haul Truck	182	0.00E+00	6.89E-05	5.18E-06	6.96E+01	1.64E-07	6.21E-02	4.88E-05	7.37E-02	1.95E-03	7.76E-04	3.64E-03	1.50E-03	1.49E-03	1.05E-02	2.33E-04	0.00E+00	2.15E-03	1.39E-02
17	A05	110	Combination Long Haul Truck	166	0.00E+00	6.23E-05	4.49E-06	6.28E+01	1.88E-07	6.17E-02	4.53E-05	7.13E-02	1.76E-03	5.37E-04	3.72E-03	1.32E-03	1.33E-03	9.59E-03	2.10E-04	0.00E+00	2.40E-03	1.34E-02
17	A06	110	Passenger Car	1117	0.00E+00	1.29E-05	1.40E-06	5.21E+01	8.99E-05	4.03E-01	2.87E-05	2.62E-03	2.77E-03	6.47E-04	2.80E-03	1.80E-03	1.85E-03	1.27E-04	2.64E-04	7.84E-08	9.46E-04	4.09E-04
17	A06	110	Passenger Truck	1871	0.00E+00	2.80E-05	2.99E-06	1.24E+02	1.86E-04	8.29E-01	6.01E-05	7.34E-03	4.81E-03	1.21E-03	5.80E-03	3.75E-03	3.85E-03	7.41E-04	6.26E-04	1.83E-07	1.95E-03	1.18E-03
17	A06	110	Single Unit Short Haul Truck	297	0.00E+00	3.93E-05	2.08E-06	5.70E+01	4.03E-05	1.57E-01	4.31E-05	2.29E-02	1.77E-03	5.87E-04	4.76E-03	1.33E-03	1.34E-03	5.82E-03	2.28E-04	1.01E-07	3.41E-03	4.27E-03
17	A06	110	Single Unit Long Haul Truck	13	0.00E+00	1.68E-06	8.65E-08	2.39E+00	1.62E-06	6.19E-03	1.84E-06	9.51E-04	7.92E-05	2.51E-05	2.06E-04	5.46E-05	5.54E-05	2.43E-04	9.56E-06	4.14E-09	1.50E-04	1.78E-04
17	A06	110	Combination Short Haul Truck	201	0.00E+00	7.60E-05	5.71E-06	7.68E+01	1.81E-07	6.85E-02	5.38E-05	8.13E-02	2.16E-03	8.56E-04	4.02E-03	1.66E-03	1.64E-03	1.16E-02	2.57E-04	0.00E+00	2.37E-03	1.53E-02
17	A06	110	Combination Long Haul Truck	184	0.00E+00	6.87E-05	4.96E-06	6.94E+01	2.08E-07	6.81E-02	5.00E-05	7.87E-02	1.94E-03	5.93E-04	4.11E-03	1.46E-03	1.47E-03	1.06E-02	2.32E-04	0.00E+00	2.64E-03	1.48E-02
17	A07	110	Passenger Car	1158	0.00E+00	1.34E-05	1.45E-06	5.41E+01	9.32E-05	4.18E-01	2.98E-05	2.72E-03	2.88E-03	6.71E-04	2.90E-03	1.87E-03	1.92E-03	1.32E-04	2.74E-04	8.12E-08	9.81E-04	4.25E-04
17	A07	110	Passenger Truck	1940	0.00E+00	2.91E-05	3.10E-06	1.29E+02	1.92E-04	8.60E-01	6.23E-05	7.61E-03	4.99E-03	1.26E-03	6.01E-03	3.89E-03	3.99E-03	7.68E-04	6.49E-04	1.90E-07	2.02E-03	1.23E-03
17	A07	110	Single Unit Short Haul Truck	256	0.00E+00	3.39E-05	1.80E-06	4.91E+01	3.47E-05	1.35E-01	3.72E-05	1.97E-02	1.53E-03	5.06E-04	4.10E-03	1.15E-03	1.16E-03	5.02E-03	1.96E-04	8.74E-08	2.94E-03	3.69E-03
17	A07	110	Single Unit Long Haul Truck	11	0.00E+00	1.45E-06	7.46E-08	2.06E+00	1.40E-06	5.34E-03	1.59E-06	8.21E-04	6.83E-05	2.17E-05	1.78E-04	4.71E-05	4.78E-05	2.10E-04	8.25E-06	3.57E-09	1.30E-04	1.53E-04
17	A07	110	Combination Short Haul Truck	199	0.00E+00	7.51E-05	5.64E-06	7.58E+01	1.79E-07	6.77E-02	5.31E-05	8.03E-02	2.13E-03	8.45E-04	3.97E-03	1.64E-03	1.62E-03	1.14E-02	2.54E-04	0.00E+00	2.34E-03	1.51E-02
17	A07	110	Combination Long Haul Truck	181	0.00E+00	6.79E-05	4.90E-06	6.85E+01	2.05E-07	6.72E-02	4.93E-05	7.77E-02	1.92E-03	5.85E-04	4.06E-03	1.44E-03	1.45E-03	1.05E-02	2.29E-04	0.00E+00	2.61E-03	1.46E-02
17	A08	110	Passenger Car	997	0.00E+00	1.15E-05	1.25E-06	4.65E+01	8.02E-05	3.59E-01	2.56E-05	2.34E-03	2.47E-03	5.77E-04	2.49E-03	1.61E-03	1.65E-03	1.14E-04	2.36E-04	6.99E-08	8.44E-04	3.65E-04
17	A08	110	Passenger Truck	1669	0.00E+00	2.50E-05	2.67E-06	1.11E+02	1.66E-04	7.40E-01	5.36E-05	6.55E-03	4.29E-03	1.08E-03	5.17E-03	3.35E-03	3.43E-03	6.61E-04	5.58E-04	1.64E-07	1.74E-03	1.05E-03
17	A08	110	Single Unit Short Haul Truck	313	0.00E+00	4.14E-05	2.19E-06	6.00E+01	4.24E-05	1.65E-01	4.55E-05	2.41E-02	1.87E-03	6.19E-04	5.01E-03	1.40E-03	1.42E-03	6.14E-03	2.40E-04	1.07E-07	3.59E-03	4.50E-03
17	A08	110	Single Unit Long Haul Truck	14	0.00E+00	1.77E-06	9.11E-08	2.52E+00	1.70E-06	6.52E-03	1.94E-06	1.00E-03	8.34E-05	2.65E-05	2.17E-04	5.76E-05	5.84E-05	2.56E-04	1.01E-05	4.36E-09	1.59E-04	1.87E-04
17	A08	110	Combination Short Haul Truck	219	0.00E+00	8.28E-05	6.23E-06	8.37E+01	1.97E-07	7.47E-02	5.86E-05	8.86E-02	2.35E-03	9.33E-04	4.38E-03	1.81E-03	1.79E-03	1.26E-02	2.80E-04	0.00E+00	2.59E-03	1.67E-02
17	A08	110	Combination Long Haul Truck	200	0.00E+00	7.49E-05	5.40E-06	7.56E+01	2.26E-07	7.41E-02	5.44E-05	8.57E-02	2.12E-03	6.46E-04	4.48E-03	1.59E-03	1.60E-03	1.15E-02	2.53E-04	0.00E+00	2.88E-03	1.62E-02
17	A09	110	Passenger Car	1227	0.00E+00	1.42E-05	1.53E-06	5.72E+01	9.87E-05	4.42E-01	3.15E-05	2.88E-03	3.05E-03	7.10E-04	3.07E-03	1.98E-03	2.03E-03	1.40E-04	2.90E-04	8.60E-08	1.04E-03	4.50E-04
17	A09	110	Passenger Truck	2055	0.00E+00	3.08E-05	3.28E-06	1.37E+02	2.04E-04	9.10E-01	6.60E-05	8.06E-03	5.28E-03	1.33E-03	6.36E-03	4.12E-03	4.22E-03	8.14E-04	6.87E-04	2.01E-07	2.14E-03	1.30E-03
17	A09	110	Single Unit Short Haul Truck	292	0.00E+00	3.86E-05	2.05E-06	5.60E+01	3.96E-05	1.54E-01	4.24E-05	2.25E-02	1.74E-03	5.77E-04	4.68E-03	1.31E-03	1.32E-03	5.72E-03	2.24E-04	9.96E-08	3.35E-03	4.20E-03
17	A09	110	Single Unit Long Haul Truck	13	0.00E+00	1.65E-06	8.50E-08	2.35E+00	1.59E-06	6.08E-03	1.81E-06	9.36E-04	7.78E-05	2.47E-05	2.02E-04	5.37E-05	5.44E-05	2.39E-04	9.40E-06	4.07E-09	1.48E-04	1.75E-04
17	A09	110	Combination Short Haul Truck	232	0.00E+00	8.78E-05	6.59E-06	8.87E+01	2.09E-07	7.91E-02	6.21E-05	9.39E-02	2.49E-03	9.88E-04	4.64E-03	1.91E-03	1.90E-03	1.34E-02	2.97E-04	0.00E+00	2.74E-03	1.77E-02
17	A09	110	Combination Long Haul Truck	212	0.00E+00	7.93E-05	5.72E-06	8.01E+01	2.40E-07	7.85E-02	5.77E-05	9.08E-02	2.24E-03	6.84E-04	4.74E-03	1.68E-03	1.69E-03	1.22E-02	2.68E-04	0.00E+00	3.05E-03	1.71E-02
17	A10	110	Passenger Car	1209	0.00E+00	1.40E-05	1.51E-06	5.64E+01	9.72E-05	4.36E-01	3.11E-05	2.83E-03	3.00E-03	7.00E-04	3.02E-03	1.95E-03	2.00E-03	1.38E-04	2.86E-04	8.48E-08	1.02E-03	4.43E-04
17	A10	110	Passenger Truck	2024	0.00E+00	3.03E-05	3.24E-06	1.35E+02	2.01E-04	8.97E-01	6.50E-05	7.94E-03	5.21E-03	1.31E-03	6.27E-03	4.06E-03	4.16E-03	8.02E-04	6.77E-04	1.98E-07	2.11E-03	1.28E-03
17	A10	110	Single Unit Short Haul Truck	369	0.00E+00	4.87E-05	2.58E-06	7.07E+01	5.00E-05	1.95E-01	5.35E-05	2.84E-02	2.20E-03	7.28E-04	5.90E-03	1.65E-03	1.67E-03	7.22E-03	2.83E-04	1.26E-07	4.23E-03	5.30E-03
17	A10	110	Single Unit Long Haul Truck	16	0.00E+00	2.09E-06	1.07E-07	2.96E+00	2.01E-06	7.68E-03	2.28E-06	1.18E-03	9.82E-05	3.12E-05	2.55E-04	6.78E-05	6.87E-05	3.02E-04	1.19E-05	5.13E-09	1.87E-04	2.20E-04
17	A10	110	Combination Short Haul Truck	263	0.00E+00	9.91E-05	7.45E-06	1.00E+02	2.36E-07	8.94E-02	7.02E-05	1.06E-01	2.81E-03	1.12E-03	5.24E-03	2.16E-03	2.14E-03	1.51E-02	3.35E-04	0.00E+00	3.10E-03	2.00E-02
17	A10	110	Combination Long Haul Truck	239	0.00E+00	8.96E-05	6.47E-06	9.05E+01	2.71E-07	8.87E-02	6.51E-05	1.03E-01	2.53E-03	7.73E-04	5.36E-03	1.90E-03	1.91E-03	1.38E-02	3.03E-04	0.00E+00	3.45E-03	1.93E-02
17	A11	110	Passenger Car	1255	0.00E+00	1.45E-05	1.57E-06	5.86E+01	1.01E-04	4.52E-01	3.23E-05	2.94E-03	3.11E-03	7.26E-04	3.14E-03	2.02E-03	2.08E-03	1.43E-04	2.97E-04	8.80E-08	1.06E-03	4.60E-04
17	A11	110	Passenger Truck	2101	0.00E+00	3.15E-05	3.36E-06	1.40E+02	2.08E-04	9.31E-01	6.75E-05	8.25E-03	5.40E-03	1.36E-03	6.51E-03	4.21E-03	4.32E-03	8.32E-04	7.03E-04	2.06E-07	2.19E-03	1.33E-03
17	A11	110	Single Unit Short Haul Truck	338	0.00E+00	4.47E-05	2.37E-06	6.48E+01	4.58E-05	1.79E-01	4.91E-05	2.60E-02	2.02E-03	6.68E-04	5.41E-03	1.51E-03	1.53E-03	6.62E-03	2.59E-04	1.15E-07	3.88E-03	4.86E-03
17	A11	110	Single Unit Long Haul Truck	15	0.00E+00	1.91E-06	9.84E-08	2.72E+00	1.84E-06	7.04E-03	2.09E-06	1.08E-03	9.01E-05	2.86E-05	2.34E-04	6.21E-05	6.30E-05	2.77E-04	1.09E-05	4.71E-09	1.71E-04	2.02E-04
17	A11	110	Combination Short Haul Truck	282	0.00E+00	1.06E-04	8.00E-06	1.08E+02	2.53E-07	9.60E-02	7.53E-05	1.14E-01	3.02E-03	1.20E-03	5.62E-03	2.32E-03	2.30E-03	1.62E-02	3.60E-04	0.00E+00	3.32E-03	2.15E-02
17	A11	110	Combination Long Haul Truck	257	0.00E+00	9.62E-05	6.94E-06	9.71E+01	2.91E-07	9.53E-02	6.99E-05	1.10E-01	2.72E-03	8.30E-04	5.76E-03	2.04E-03	2.05E-03	1.48E-02	3.25E-04	0.00E+00	3.70E-03	2.08E-02
17	A12	110	Passenger Car	1596	0.00E+00	1.85E-05	2.00E-06	7.45E+01	1.28E-04	5.76E-01	4.10E-05	3.74E-03	3.96E-03	9.24E-04	3.99E-03	2.57E-03	2.64E-03	1.82E-04	3.78E-04	1.12E-07	1.35E-03	5.85E-04
17	A12	110	Passenger Truck	2673	0.00E+00	4.00E-05	4.27E-06	1.78E+02	2.65E-04	1.18E+00	8.59E-05	1.05E-02	6.88E-03	1.73E-03	8.28E-03	5.36E-03	5.49E-03	1.06E-03	8.94E-04	2.62E-07	2.79E-03	1.69E-03
17	A12	110	Single Unit Short Haul Truck	405	0.00E+00	5.35E-05	2.84E-06	7.76E+01	5.49E-05	2.14E-01	5.88E-05	3.12E-02	2.42E-03	8.00E-04	6.48E-03	1.81E-03	1.83E-03	7.93E-03	3.10E-04	1.38E-07	4.65E-03	5.82E-03
17	A12	110	Single Unit Long Haul Truck	18	0.00E+00	2.29E-06	1.18E-07	3.25E+00	2.20E-06	8.43E-03	2.51E-06	1.30E-03	1.08E-04	3.42E-05	2.81E-04	7.44E-05	7.55E-05	3.31E-04	1.30E-05	5.64E-09	2.05E-04	2.42E-04
17	A12	110	Combination Short Haul Truck	309	0.00E+00	1.17E-04	8.78E-06	1.18E+02	2.78E-07	1.05E-01	8.27E-05	1.25E-01	3.31E-03	1.32E-03	6.17E-03	2.55E-03	2.52E-03	1.78E-02	3.95E-04	0.00E+00	3.65E-03	2.35E-02
17	A12	110	Combination Long Haul Truck	282	0.00E+00	1.06E-04	7.62E-06	1.07E+02	3.19E-07	1.05E-01	7.68E-05	1.21E-01	2.99E-03	9.11E-04	6.32E-03	2.24E-03	2.25E-03	1.63E-02	3.57E-04	0.00E+00	4.06E-03	2.28E-02
17	A13	110	Passenger Car	1395	0.00E+00	1.61E-05	1.74E-06	6.51E+01	1.12E-04	5.03E-01	3.59E-05	3.27E-03	3.46E-03	8.08E-04	3.49E-03	2.25E-03	2.31E-03	1.59E-04	3.30E-04	9.78E-08	1.18E-03	5.11E-04
17	A13	110	Passenger Truck	2336	0.00E+00	3.50E-05	3.73E-06	1.55E+02	2.32E-04	1.04E+00	7.51E-05	9.17E-03	6.01E-03	1.52E-03	7.24E-03	4.68E-03	4.80E-03	9.25E-04	7.81E-04	2.29E-07	2.44E-03	1.48E-03
17	A13	110	Single Unit Short Haul Truck	347	0.00E+00	4.59E-05	2.43E-06	6.65E+01	4.70E-05	1.83E-01	5.04E-05	2.67E-02	2.07E-03	6.85E-04	5.55E-03	1.55E-03	1.57E-03	6.80E-03	2.66E-04	1.18E-07	3.98E-03	4.99E-03
17	A13	110	Single Unit Long Haul Truck	15	0.00E+00	1.96E-06	1.01E-07	2.79E+00	1.89E-06	7.22E-03	2.15E-06	1.11E-03	9.24E-05	2.93E-05	2.40E-04	6.38E-05	6.47E-05	2.84E-04	1.12E-05	4.83E-09	1.76E-04	2.07E-04
17	A13	110	Combination Short Haul Truck	285	0.00E+00	1.08E-04	8.09E-06	1.09E+02	2.56E-07	9.71E-02	7.62E-05	1.15E-01	3.05E-03	1.21E-03	5.69E-03	2.35E-03	2.33E-03	1.64E-02	3.64E-04	0.00E+00	3.36E-03	2.17E-02
17	A13	110	Combination Long Haul Truck	260	0.00E+00	9.73E-05	7.02E-06	9.82E+01	2.94E-07	9.64E-02	7.07E-05	1.11E-01	2.75E-03	8.40E-04	5.82E-03	2.07E-03	2.08E-03	1.50E-02	3.29E-04	0.00E+00	3.74E-03	2.10E-02
17	A14	110	Passenger Car	1402	0.00E+00	1.62E-05	1.75E-06	6.54E+01	1.13E-04	5.05E-01	3.60E-05	3.29E-03	3.48E-03	8.12E-04	3.51E-03	2.26E-03	2.32E-03	1.60E-04	3.32E-04	9.83E-08	1.19E-03	5.14E-04
17	A14	110	Passenger Truck	2348	0.00E+00	3.52E-05	3.75E-06	1.56E+02	2.33E-04	1.04E+00	7.54E-05	9.21E-03	6.04E-03	1.52E-03	7.27E-03	4.71E-03	4.82E-03	9.30E-04	7.85E-04	2.30E-07	2.45E-03	1.48E-03
17	A14	110	Single Unit Short Haul Truck	431	0.00E+00	5.70E-05	3.02E-06	8.27E+01	5.84E-05	2.28E-01	6.26E-05	3.32E-02	2.57E-03	8.52E-04	6.90E-03	1.93E-03	1.95E-03	8.45E-03	3.31E-04	1.47E-07	4.95E-03	6.20E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	2.44E-06	1.25E-07	3.47E+00	2.35E-06	8.98E-03	2.67E-06	1.38E-03	1.15E-04	3.64E-05	2.99E-04	7.93E-05	8.04E-05	3.53E-04	1.39E-05	6.00E-09	2.18E-04

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A18	110	Single Unit Long Haul Truck	20	0.00E+00	2.51E-06	1.29E-07	3.57E+00	2.42E-06	9.25E-03	2.75E-06	1.42E-03	1.18E-04	3.75E-05	3.08E-04	8.16E-05	8.28E-05	3.63E-04	1.43E-05	6.18E-09	2.25E-04	2.66E-04
17	A18	110	Combination Short Haul Truck	332	0.00E+00	1.25E-04	9.42E-06	1.27E+02	2.98E-07	1.13E-01	8.88E-05	1.34E-01	3.56E-03	1.41E-03	6.63E-03	2.74E-03	2.71E-03	1.91E-02	4.24E-04	0.00E+00	3.92E-03	2.53E-02
17	A18	110	Combination Long Haul Truck	303	0.00E+00	1.13E-04	8.18E-06	1.14E+02	3.43E-07	1.12E-01	8.24E-05	1.30E-01	3.20E-03	9.78E-04	6.78E-03	2.41E-03	2.42E-03	1.75E-02	3.83E-04	0.00E+00	4.36E-03	2.44E-02
17	A19	110	Passenger Car	1026	0.00E+00	1.19E-05	1.28E-06	4.79E+01	8.25E-05	3.70E-01	2.64E-05	2.41E-03	2.55E-03	5.94E-04	2.57E-03	1.65E-03	1.70E-03	1.17E-04	2.43E-04	7.19E-08	8.69E-04	3.76E-04
17	A19	110	Passenger Truck	1718	0.00E+00	2.57E-05	2.75E-06	1.14E+02	1.70E-04	7.61E-01	5.52E-05	6.74E-03	4.42E-03	1.11E-03	5.32E-03	3.44E-03	3.53E-03	6.80E-04	5.75E-04	1.68E-07	1.79E-03	1.09E-03
17	A19	110	Single Unit Short Haul Truck	337	0.00E+00	4.46E-05	2.37E-06	6.47E+01	4.58E-05	1.78E-01	4.90E-05	2.60E-02	2.01E-03	6.67E-04	5.40E-03	1.51E-03	1.53E-03	6.61E-03	2.59E-04	1.15E-07	3.88E-03	4.85E-03
17	A19	110	Single Unit Long Haul Truck	15	0.00E+00	1.91E-06	9.82E-08	2.71E+00	1.84E-06	7.03E-03	2.09E-06	1.08E-03	9.00E-05	2.85E-05	2.34E-04	6.20E-05	6.29E-05	2.76E-04	1.09E-05	4.70E-09	1.71E-04	2.02E-04
17	A19	110	Combination Short Haul Truck	285	0.00E+00	1.08E-04	8.08E-06	1.09E+02	2.56E-07	9.70E-02	7.61E-05	1.15E-01	3.05E-03	1.21E-03	5.68E-03	2.35E-03	2.32E-03	1.64E-02	3.64E-04	0.00E+00	3.36E-03	2.17E-02
17	A19	110	Combination Long Haul Truck	260	0.00E+00	9.72E-05	7.01E-06	9.81E+01	2.94E-07	9.63E-02	7.07E-05	1.11E-01	2.75E-03	8.39E-04	5.81E-03	2.06E-03	2.07E-03	1.50E-02	3.29E-04	0.00E+00	3.74E-03	2.10E-02
17	A20	110	Passenger Car	1197	0.00E+00	1.38E-05	1.50E-06	5.58E+01	9.63E-05	4.31E-01	3.08E-05	2.81E-03	2.97E-03	6.93E-04	2.99E-03	1.93E-03	1.98E-03	1.36E-04	2.83E-04	8.39E-08	1.01E-03	4.39E-04
17	A20	110	Passenger Truck	2004	0.00E+00	3.00E-05	3.20E-06	1.33E+02	1.99E-04	8.88E-01	6.44E-05	7.87E-03	5.15E-03	1.30E-03	6.21E-03	4.02E-03	4.12E-03	7.94E-04	6.70E-04	1.96E-07	2.09E-03	1.27E-03
17	A20	110	Single Unit Short Haul Truck	435	0.00E+00	5.76E-05	3.05E-06	8.35E+01	5.90E-05	2.30E-01	6.33E-05	3.36E-02	2.60E-03	8.60E-04	6.97E-03	1.95E-03	1.97E-03	8.53E-03	3.34E-04	1.49E-07	5.00E-03	6.26E-03
17	A20	110	Single Unit Long Haul Truck	19	0.00E+00	2.47E-06	1.27E-07	3.50E+00	2.37E-06	9.07E-03	2.69E-06	1.40E-03	1.16E-04	3.68E-05	3.02E-04	8.00E-05	8.12E-05	3.56E-04	1.40E-05	6.06E-09	2.21E-04	2.60E-04
17	A20	110	Combination Short Haul Truck	327	0.00E+00	1.24E-04	9.29E-06	1.25E+02	2.94E-07	1.11E-01	8.75E-05	1.32E-01	3.51E-03	1.39E-03	6.53E-03	2.70E-03	2.67E-03	1.88E-02	4.18E-04	0.00E+00	3.86E-03	2.49E-02
17	A20	110	Combination Long Haul Truck	299	0.00E+00	1.12E-04	8.06E-06	1.13E+02	3.38E-07	1.11E-01	8.12E-05	1.28E-01	3.16E-03	9.64E-04	6.68E-03	2.37E-03	2.38E-03	1.72E-02	3.78E-04	0.00E+00	4.30E-03	2.41E-02
16	B05	100	Passenger Car	426	0.00E+00	4.66E-06	5.04E-07	1.91E+01	3.25E-05	1.28E-01	1.04E-05	9.11E-04	1.38E-03	2.79E-04	1.01E-03	6.50E-04	6.68E-04	5.34E-05	9.69E-05	2.67E-08	3.42E-04	1.42E-04
16	B05	100	Passenger Truck	714	0.00E+00	1.01E-05	1.07E-06	4.52E+01	6.59E-05	2.57E-01	2.14E-05	2.59E-03	2.44E-03	5.19E-04	2.06E-03	1.33E-03	1.37E-03	2.88E-04	2.27E-04	6.21E-08	6.92E-04	4.19E-04
16	B05	100	Single Unit Short Haul Truck	128	0.00E+00	1.72E-05	8.53E-07	2.34E+01	1.50E-05	5.43E-02	1.87E-05	9.32E-03	8.85E-04	2.57E-04	2.13E-03	5.29E-04	5.37E-04	2.36E-03	9.41E-05	3.85E-08	1.59E-03	1.74E-03
16	B05	100	Single Unit Long Haul Truck	6	0.00E+00	7.47E-07	3.63E-08	9.87E-01	6.23E-07	2.22E-03	8.06E-07	3.93E-04	4.00E-05	1.11E-05	9.29E-05	2.23E-05	2.27E-05	9.89E-05	3.97E-06	1.58E-09	7.02E-05	7.33E-05
16	B05	100	Combination Short Haul Truck	41	0.00E+00	1.42E-05	1.04E-06	1.49E+01	4.04E-08	1.38E-02	1.02E-05	1.51E-02	4.81E-04	1.71E-04	7.96E-04	3.04E-04	2.99E-04	2.25E-03	5.00E-05	0.00E+00	4.97E-04	2.85E-03
16	B05	100	Combination Long Haul Truck	38	0.00E+00	1.24E-05	8.47E-07	1.35E+01	4.68E-08	1.38E-02	9.26E-06	1.44E-02	4.45E-04	1.24E-04	8.10E-04	2.54E-04	2.53E-04	2.07E-03	4.53E-05	0.00E+00	5.57E-04	2.71E-03
16	B06	100	Passenger Car	759	0.00E+00	8.30E-06	8.98E-07	3.41E+01	5.78E-05	2.27E-01	1.85E-05	1.62E-03	2.46E-03	4.96E-04	1.80E-03	1.16E-03	1.19E-03	9.51E-05	1.72E-04	4.75E-08	6.08E-04	2.53E-04
16	B06	100	Passenger Truck	1270	0.00E+00	1.79E-05	1.91E-06	8.04E+01	1.17E-04	4.57E-01	3.81E-05	4.61E-03	4.35E-03	9.24E-04	3.67E-03	2.38E-03	2.43E-03	5.12E-04	4.04E-04	1.11E-07	1.23E-03	7.46E-04
16	B06	100	Single Unit Short Haul Truck	261	0.00E+00	3.51E-05	1.74E-06	4.77E+01	3.06E-05	1.11E-01	3.80E-05	1.90E-02	1.80E-03	5.24E-04	4.34E-03	1.08E-03	1.09E-03	4.81E-03	1.92E-04	7.84E-08	3.25E-03	3.55E-03
16	B06	100	Single Unit Long Haul Truck	12	0.00E+00	1.52E-06	7.40E-08	2.01E+00	1.27E-06	4.51E-03	1.64E-06	8.00E-04	8.15E-05	2.27E-05	1.89E-04	4.55E-05	4.62E-05	2.01E-04	8.10E-06	3.21E-09	1.43E-04	1.49E-04
16	B06	100	Combination Short Haul Truck	31	0.00E+00	1.06E-05	7.74E-07	1.12E+01	3.02E-08	1.03E-02	7.65E-06	1.13E-02	3.59E-04	1.28E-04	5.94E-04	2.27E-04	2.23E-04	1.68E-03	3.74E-05	0.00E+00	3.71E-04	2.13E-03
16	B06	100	Combination Long Haul Truck	28	0.00E+00	9.23E-06	6.32E-07	1.01E+01	3.49E-08	1.03E-02	6.91E-06	1.07E-02	3.33E-04	9.25E-05	6.05E-04	1.89E-04	1.89E-04	1.54E-03	3.38E-05	0.00E+00	4.16E-04	2.02E-03
16	B07	100	Passenger Car	476	0.00E+00	5.21E-06	5.63E-07	2.14E+01	3.62E-05	1.42E-01	1.16E-05	1.02E-03	1.54E-03	3.11E-04	1.13E-03	7.26E-04	7.45E-04	5.97E-05	1.08E-04	2.98E-08	3.81E-04	1.59E-04
16	B07	100	Passenger Truck	797	0.00E+00	1.12E-05	1.20E-06	5.05E+01	7.36E-05	2.87E-01	2.39E-05	2.89E-03	2.73E-03	5.80E-04	2.30E-03	1.49E-03	1.53E-03	3.21E-04	2.53E-04	6.94E-08	7.73E-04	4.68E-04
16	B08	100	Passenger Car	953	0.00E+00	1.04E-05	1.13E-06	4.28E+01	7.25E-05	2.85E-01	2.32E-05	2.04E-03	3.09E-03	6.23E-04	2.26E-03	1.45E-03	1.49E-03	1.19E-04	2.17E-04	5.97E-08	7.63E-04	3.18E-04
16	B08	100	Passenger Truck	1595	0.00E+00	2.25E-05	2.40E-06	1.01E+02	1.47E-04	5.74E-01	4.79E-05	5.79E-03	5.46E-03	1.16E-03	4.60E-03	2.98E-03	3.06E-03	6.43E-04	5.07E-04	1.39E-07	1.55E-03	9.36E-04
16	B08	100	Single Unit Short Haul Truck	3	0.00E+00	3.86E-07	1.91E-08	5.25E-01	3.37E-07	1.21E-03	4.18E-07	2.09E-04	1.98E-05	5.76E-06	4.77E-05	1.18E-05	1.20E-05	5.29E-05	2.11E-06	8.62E-10	3.57E-05	3.90E-05
16	B08	100	Combination Short Haul Truck	1	0.00E+00	1.80E-07	1.31E-08	1.89E-01	5.11E-10	1.75E-04	1.30E-07	1.92E-04	6.09E-06	2.17E-06	1.01E-05	3.84E-06	3.78E-06	2.85E-05	6.33E-07	0.00E+00	6.29E-06	3.61E-05
16	B09	100	Passenger Car	1308	0.00E+00	1.43E-05	1.55E-06	5.88E+01	9.96E-05	3.91E-01	3.18E-05	2.79E-03	4.24E-03	8.55E-04	3.10E-03	2.00E-03	2.05E-03	1.64E-04	2.97E-04	8.19E-08	1.05E-03	4.37E-04
16	B09	100	Passenger Truck	2190	0.00E+00	3.09E-05	3.29E-06	1.39E+02	2.02E-04	7.88E-01	6.57E-05	7.95E-03	7.50E-03	1.59E-03	6.32E-03	4.10E-03	4.20E-03	8.83E-04	6.96E-04	1.91E-07	2.12E-03	1.29E-03
16	B09	100	Single Unit Short Haul Truck	62	0.00E+00	8.37E-06	4.14E-07	1.14E+01	7.30E-06	2.63E-02	9.06E-06	4.53E-03	4.29E-04	1.25E-04	1.03E-03	2.57E-04	2.61E-04	1.15E-03	4.57E-05	1.87E-08	7.74E-04	8.45E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	3.63E-07	1.76E-08	4.79E-01	3.02E-07	1.08E-03	3.91E-07	1.91E-04	1.94E-05	5.40E-06	4.51E-05	1.08E-05	1.10E-05	4.80E-05	1.93E-06	7.65E-10	3.41E-05	3.56E-05
16	B09	100	Combination Short Haul Truck	72	0.00E+00	2.47E-05	1.80E-06	2.60E+01	7.02E-08	2.41E-02	1.78E-05	2.63E-02	8.36E-04	2.98E-04	1.38E-03	5.28E-04	5.19E-04	3.92E-03	8.69E-05	0.00E+00	8.64E-04	4.96E-03
16	B09	100	Combination Long Haul Truck	65	0.00E+00	2.15E-05	1.47E-06	2.35E+01	8.13E-08	2.40E-02	1.61E-05	2.50E-02	7.74E-04	2.15E-04	1.41E-03	4.41E-04	4.40E-04	3.59E-03	7.88E-05	0.00E+00	9.68E-04	4.71E-03
16	B10	100	Passenger Car	1058	0.00E+00	1.16E-05	1.25E-06	4.75E+01	8.05E-05	3.17E-01	2.57E-05	2.26E-03	3.43E-03	6.92E-04	2.50E-03	1.61E-03	1.66E-03	1.33E-04	2.41E-04	6.63E-08	8.48E-04	3.53E-04
16	B10	100	Passenger Truck	1772	0.00E+00	2.50E-05	2.66E-06	1.12E+02	1.64E-04	6.37E-01	5.32E-05	6.43E-03	6.07E-03	1.29E-03	5.11E-03	3.31E-03	3.39E-03	7.14E-04	5.63E-04	1.54E-07	1.72E-03	1.04E-03
16	B10	100	Single Unit Short Haul Truck	76	0.00E+00	1.02E-05	5.04E-07	1.38E+01	8.88E-06	3.20E-02	1.10E-05	5.50E-03	5.22E-04	1.52E-04	1.26E-03	3.12E-04	3.17E-04	1.39E-03	5.56E-05	2.27E-08	9.41E-04	1.03E-03
16	B10	100	Single Unit Long Haul Truck	3	0.00E+00	4.41E-07	2.14E-08	5.83E-01	3.68E-07	1.31E-03	4.76E-07	2.32E-04	2.36E-05	6.57E-06	5.49E-05	1.32E-05	1.34E-05	5.84E-05	2.35E-06	9.30E-10	4.15E-05	4.33E-05
16	B10	100	Combination Short Haul Truck	77	0.00E+00	2.65E-05	1.93E-06	2.79E+01	7.54E-08	2.59E-02	1.91E-05	2.83E-02	8.99E-04	3.20E-04	1.49E-03	5.67E-04	5.58E-04	4.21E-03	9.34E-05	0.00E+00	9.28E-04	5.33E-03
16	B10	100	Combination Long Haul Truck	70	0.00E+00	2.31E-05	1.58E-06	2.53E+01	8.74E-08	2.58E-02	1.73E-05	2.69E-02	8.32E-04	2.31E-04	1.51E-03	4.74E-04	4.73E-04	3.86E-03	8.46E-05	0.00E+00	1.04E-03	5.06E-03
16	B11	100	Passenger Car	615	0.00E+00	6.73E-06	7.28E-07	2.76E+01	4.68E-05	1.84E-01	1.50E-05	1.31E-03	1.99E-03	4.02E-04	1.46E-03	9.38E-04	9.63E-04	7.71E-05	1.40E-04	3.85E-08	4.93E-04	2.05E-04
16	B11	100	Passenger Truck	1030	0.00E+00	1.45E-05	1.55E-06	6.52E+01	9.51E-05	3.70E-01	3.09E-05	3.74E-03	3.53E-03	7.49E-04	2.97E-03	1.92E-03	1.97E-03	4.15E-04	3.27E-04	8.96E-08	9.98E-04	6.04E-04
16	B11	100	Single Unit Short Haul Truck	24	0.00E+00	3.21E-06	1.59E-07	4.37E+00	2.80E-06	1.01E-02	3.48E-06	1.74E-03	1.65E-04	4.80E-05	3.97E-04	9.85E-05	1.00E-04	4.40E-04	1.75E-05	7.17E-09	2.97E-04	3.24E-04
16	B11	100	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	6.77E-09	1.84E-01	1.16E-07	4.13E-04	1.50E-07	7.32E-05	7.46E-06	2.07E-06	1.73E-05	4.16E-06	4.23E-06	1.84E-05	7.40E-07	2.94E-10	1.31E-05	1.37E-05
16	B11	100	Combination Short Haul Truck	29	0.00E+00	9.88E-06	7.21E-07	1.04E+01	2.81E-08	9.64E-03	7.13E-06	1.05E-02	3.35E-04	1.19E-04	5.54E-04	2.11E-04	2.08E-04	1.57E-03	3.48E-05	0.00E+00	3.46E-04	1.99E-03
16	B11	100	Combination Long Haul Truck	26	0.00E+00	8.60E-06	5.90E-07	9.42E+00	3.26E-08	9.63E-03	6.44E-06	1.00E-02	3.10E-04	8.62E-05	5.64E-04	1.77E-04	1.76E-04	1.44E-03	3.16E-05	0.00E+00	3.88E-04	1.89E-03
16	B12	100	Passenger Car	280	0.00E+00	3.06E-06	3.31E-07	1.26E+01	2.13E-05	8.38E-02	6.81E-06	5.98E-04	9.08E-04	1.83E-04	6.63E-04	4.27E-04	4.39E-04	3.51E-05	6.37E-05	1.75E-08	2.24E-04	9.35E-05
16	B12	100	Passenger Truck	469	0.00E+00	6.61E-06	7.04E-07	2.97E+01	4.33E-05	1.69E-01	1.41E-05	1.70E-03	1.61E-03	3.41E-04	1.35E-03	8.77E-04	8.98E-04	1.89E-04	1.49E-04	4.08E-08	4.55E-04	2.75E-04
16	B12	100	Single Unit Short Haul Truck	41	0.00E+00	5.54E-06	2.74E-07	7.54E+00	4.84E-06	1.75E-02	6.00E-06	3.00E-03	2.85E-04	8.28E-05	6.86E-04	1.70E-04	1.73E-04	7.60E-04	3.03E-05	1.24E-08	5.13E-04	5.60E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	2.40E-07	1.17E-08	3.17E-01	2.00E-07	7.13E-04	2.59E-07	1.26E-04	1.29E-05	3.58E-06	2.99E-05	7.18E-06	7.30E-06	3.18E-05	1.28E-06	5.07E-10	2.26E-05	2.36E-05
16	B12	100	Combination Long Haul Truck	29	0.00E+00	9.90E-06	7.23E-07	1.04E+01	2.82E-08	9.66E-03	7.15E-06	1.06E-02	3.36E-04	1.20E-04	5.55E-04	2.12E-04	2.08E-04	1.57E-03	3.49E-05	0.00E+00	3.47E-04	1.99E-03
16	B12	100	Combination Short Haul Truck	26	0.00E+00	8.62E-06	5.91E-07	9.44E+00	3.26E-08	9.65E-03	6.46E-06	1.00E-02	3.11E-04	8.64E-05	5.65E-04	1.77E-04	1.77E-04	1.44E-03	3.16E-05	0.00E+00	3.88E-04	1.89E-03
16	B13	100	Passenger Car	438	0.00E+00	4.80E-06	5.19E-07	1.97E+01	3.34E-05	1.31E-01	1.07E-05	9.37E-04	1.42E-03	2.87E-04	1.04E-03	6.69E-04	6.87E-04	5.50E-05	9.97E-05	2.75E-08	3.51E-04	1.46E-04
16	B13	100	Passenger Truck	734	0.00E+00	1.04E-05	1.10E-06	4.65E+01	6.78E-05	2.64E-01	2.20E-05	2.66E-03	2.51E-03	5.34E-04	2.12E-03	1.37E-03	1.41E-03	2.96E-04	2.33E-04	6.39E-08	7.12E-04	4.31E-04
16	B13	100	Single Unit Short Haul Truck	30	0.00E+00	3.99E-06	1.98E-07	5.43E+00	3.48E-06	1.26E-02	4.32E-06	2.16E-03	2.05E-04	5.96E-05	4.94E-04	1.22E-04	1.24E-04	5.47E-04	2.18E-05	8.91E-09	3.69E-04	4.03E-04
16	B13	100	Single Unit Long Haul Truck	1	0.00E+00	1.73E-07	8.41E-09	2.29E-01	1.44E-07	5.13E-04	1.87E-07	9.09E-05	9.27E-06	2.58E-06	2.15E-05	5.17E-06	5.25E-06	2.29E-05	9.20E-07	3.65E-10	1.63E-05	1.70E-05
16	B13	100	Combination Short Haul Truck	34	0.00E+00	1.16E-05	8.45E-07	1.22E+01	3.29E-08	1.13E-02	8.36E-06	1.24E-02	3.93E-04	1.40E-04	6.49E-04	2.48E-04	2.44E-04	1.84E-03	4.08E-05	0.00E+00	4.05E-04	2.33E-03
16	B13	100	Combination Long Haul Truck	31	0.00E+00	1.01E-05	6.91E-07	1.10E+01	3.82E-08	1.13E-02	7.55E-06	1.17E-02	3.63E-04	1.01E-04	6.61E-04	2.07E-04	2.07E-04	1.69E-03	3.70E-05	0.00E+00	4.54E-04	2.21E-03
16	B14	100	Passenger Car	593	0.00E+00	6.49E-06	7.02E-07	2.67E+01	4.52E-05	1.78E-01	1.44E-05	1.27E-03	1.92E-03	3.88E-04	1.40E-03	9.05E-04	9.29E-04	7.44E-05	1.35E-04	3.72E-08	4.75E-04	1.98E-04
16	B14	100	Passenger Truck	994	0.00E+00	1.40E-05	1.49E-06	6.29E+01	9.17E-05	3.57E-01	2.98E-05	3.61E-03	3.40E-03	7.23E-04	2.87E-03	1.86E-03	1.90E-03	4.01E-04	3.16E-04	8.65E-08	9.63E-04	5.83E-04
16	B14	100	Single Unit Short Haul Truck	36	0.00E+00	4.81E-06	2.38E-07	6.54E+00	4.20E-06	1.51E-02	5.21E-06	2.60E-03	2.47E-04	7.18E-05	5.95E-04	1.47E-04	1.50E-04	6.59E-04	2.63E-05	1.07E-08	4.45E-04	4.86E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.08E-07	1.01E-08	2.75E-01	1.74E-07	6.18E-04	2.25E-07	1.10E-04	1.12E-05	3.10E-06	2.59E-05	6.22E-06	6.33E-06	2.76E-05	1.11E-06	4.39E-10	1.96E-05	2.05E-05
16	B14	100	Combination Short Haul Truck	33	0.00E+00	1.13E-05	8.24E-07	1.19E+01	3.21E-08	1.10E-02	8.15E-06	1.20E-02	3.83E-04	1.36E-04	6.33E-04	2.42E-04	2.37E-04	1.79E-03	3.98E-05	0.00E+00	3.95E-04	2.27E-03
16	B14	100	Combination Long Haul Truck	30	0.00E+00	9.83E-06	6.73E-07	1.08E+01	3.72E-08	1.10E-02	7.36E-06	1.14E-02	3.54E-04	9.85E-05	6.44E-04	2.02E-04	2.01E-04	1.64E-03	3.60E-05	0.00E+00	4.43E-04	2.16E-03
53	C11	70	Passenger Car	287	0.00E+00	3.63E-06	3.93E-07	1.39E+01	2.53E-05	9.34E-02	8.07E-06	5.84E-04	2.19E-03	3.53E-04	7.86E-04	5.06E-04	5.20E-04	5.13E-05	6.99E-05	1.91E-08	2.66E-04	9.13E-05
53	C11	70	Passenger Truck	480	0.00E+00	7.90E-06	8.36E-07	3.21E+01	5.00E-05	1.72E-01	1.64E-05	1.79E-03	3.93E-03	6.42E-04	1.57E-03	1.02E-03	1.04E-03	2.31E-04	1.60E-04	4.19E-08	5.23E-04	2.94E-04
53	C11	70	Single Unit Short Haul Truck	24	0.00E+00	5.53E-06	2.77E-07	4.33E+00	4.52E-06	8.67E-03	5.89E-06	2.73E-03	3.89E-04	7.79E-05	6.71E-04	1.65E-04	1.68E-04	4.34E-04	1.75E-05	7.05E-09	5.03E-04	5.10E-04
53	C11	70	Single Unit Long Haul Truck	1	0.00E+00	2.41E-07	1.20E-08	1.84E-01	1.95E-07	3.64E-04	2.57E-07	1.17E-04	1.78E-05	3.47E-06	2.93E-05	7.16E-06	7.28E-06	1.84E-05	7.42E-07	2.97E-10	2.21E-05	2.20E-05
53	C11	70	Combination Short Haul Truck	33	0.00E+00	1.69E-05	1.20E-06	1.23E+01	5.50E-08	1.46E-02	1.24E-05	1.78E-02	1.29E-03	2.81E-04	1.03E-03	3.56E-04	3.56E-04	1.85E-03	4.11E-05	0.00E+00	6.76E-04	3.35E-03
53	C11	70	Combination Long Haul Truck	30	0.00E+00	1.53E-05	1.02E-06	1.15E+01	6.34E-08	1.54E-02	1.16E-05	1.75E-02	1.28E-03	2.34E-04	1.07E-03	3.09E-04	3.13E-04	1.75E-03	3.84E-05	0.00E+00	7.54E-04	3.30E-03
52	C12	60	Passenger Car	537	0.00E+00	7.38E-06	7.99E-07	2.69E+01	5.14E-05	1.90E-01	1.64E-05	1.05E-03	5.30E-03	8.14E-04	1.60E-03	1.03E-03	1.06E-03	1.12E-04	1.35E-04	3.61E-08	5.41E-04	1.65E-04
52	C12	60	Passenger Truck	899	0.00E+00	1.62E-05	1.71E-06	6.14E+01	1.01E-04	3.39E-01	3.34E-05	3.39E-03	9.44E-03	1.46E-03	3.17E-03	2.07E-03	2.12E-03	4.66E-04	3.05E-04	7.65E-08	1.05E-03	5.61E-04
52	C12	60	Single Unit Short Haul Truck	14	0.00E+00	4.11E-06	2.06E-07	2.62E+00	3.39E-06	5.07E-03	4.39E-06	1.96E-03	3.33E-04	6.04E-05	5.00E-04	1.23E-04	1.25E-04	2.62E-04	1.06E-05	4.36E-09	3.74E-04	3.67E-04
52	C12	60	Single Unit Long Haul Truck	1	0.00E+00	1.80E-07	8.94E-09	1.12E-01	1.47E-07	2.15E-04	1.92E-07	8.48E-05	1.50E-05	2.67E-06	2.19E-05	5.37E-06	5.45E-06	1.12E-05	4.52E-07	1.85E-10	1.64E-05	1.59E-05
52	C12	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.41E+00	2.40E-08	5.93E-03	5.03E-06	7.34E-03	6.31E-04	1.25E-04	4.31E-04	1.41E-04	1.41E-04	6.64E-04	1.48E-05	0.00E+00	2.90E-04	1.38E-03
52	C12	60	Combination Long Haul Truck	11	0.00E+00	6.08E-06	3.96E-07	4.13E+00	2.75E-08	6.38E-03	4.69E-06	7.28E-03	6.34E-04	1.08E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
50	C13	40	Passenger Car	172	0.00E+00	2.89E-06	3.13E-07	9.99E+00	2.01E-05	7.42E-02	6.43E-06	3.11E-04	2.98E-03	4.25E-04	6.26E-04	4.04E-04	4.14E-04	5.40E-05	4.97E-05	1.21E-08	2.12E-04	4.86E-05
50	C13	40	Passen

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C17	70	Passenger Truck	856	0.00E+00	1.41E-05	1.49E-06	5.72E+01	8.92E-05	3.06E-01	2.93E-05	3.19E-03	7.00E-03	1.14E-03	2.80E-03	1.82E-03	1.86E-03	4.13E-04	2.85E-04	7.46E-08	9.33E-04	5.23E-04
53	C17	70	Single Unit Short Haul Truck	61	0.00E+00	1.45E-05	7.24E-07	1.13E+01	1.18E-05	2.26E-02	1.54E-05	7.12E-03	1.02E-03	2.04E-04	1.75E-03	4.32E-04	4.39E-04	1.13E-03	4.56E-05	1.84E-08	1.31E-03	1.33E-03
53	C17	70	Single Unit Long Haul Truck	3	0.00E+00	6.29E-07	3.13E-08	4.80E-01	5.10E-07	9.51E-04	6.71E-07	3.06E-04	4.64E-05	9.05E-06	7.66E-05	1.87E-05	1.90E-05	4.80E-05	1.94E-06	7.77E-10	5.76E-05	5.73E-05
53	C17	70	Combination Short Haul Truck	32	0.00E+00	1.65E-05	1.17E-06	1.19E+01	5.35E-08	1.42E-02	1.21E-05	1.73E-02	1.25E-03	2.73E-04	1.00E-03	3.46E-04	3.46E-04	1.80E-03	4.00E-05	0.00E+00	6.57E-04	3.26E-03
53	C17	70	Combination Long Haul Truck	29	0.00E+00	1.49E-05	9.95E-07	1.11E+01	6.16E-08	1.50E-02	1.13E-05	1.70E-02	1.24E-03	2.27E-04	1.04E-03	3.01E-04	3.04E-04	1.70E-03	3.73E-05	0.00E+00	7.33E-04	3.21E-03
52	C18	60	Passenger Car	72	0.00E+00	9.86E-07	1.07E-07	3.59E+00	6.86E-06	2.53E-02	2.19E-06	1.41E-04	7.07E-04	1.09E-04	2.13E-04	1.38E-04	1.41E-04	1.50E-05	1.80E-05	4.81E-09	7.22E-05	2.20E-05
52	C18	60	Passenger Truck	120	0.00E+00	2.17E-06	2.29E-07	8.19E+00	1.35E-05	4.52E-02	4.46E-06	4.53E-04	1.26E-03	1.95E-04	4.24E-04	2.76E-04	2.83E-04	6.22E-05	4.07E-05	1.02E-08	1.41E-04	7.49E-05
52	C18	60	Single Unit Short Haul Truck	9	0.00E+00	2.63E-06	1.32E-07	1.68E+00	2.17E-06	3.25E-03	2.81E-06	1.25E-03	2.13E-04	3.87E-05	3.20E-04	7.89E-05	8.02E-05	1.68E-04	6.77E-06	2.79E-09	2.40E-04	2.35E-04
52	C18	60	Combination Short Haul Truck	4	0.00E+00	2.37E-06	1.65E-07	1.54E+00	8.39E-09	2.07E-03	1.76E-06	2.57E-03	2.21E-04	4.37E-05	1.51E-04	4.92E-05	4.93E-05	2.32E-04	5.16E-06	0.00E+00	1.01E-04	4.84E-04
52	C18	60	Combination Long Haul Truck	4	0.00E+00	2.13E-06	1.38E-07	1.44E+00	9.62E-09	2.23E-03	1.64E-06	2.55E-03	2.22E-04	3.76E-05	1.55E-04	4.22E-05	4.28E-05	2.21E-04	4.84E-06	0.00E+00	1.13E-04	4.80E-04
50	C19	40	Passenger Car	6	0.00E+00	9.95E-08	1.08E-08	3.44E-01	6.93E-07	2.55E-03	2.21E-07	1.07E-05	1.02E-04	1.46E-05	2.15E-05	1.39E-05	1.42E-05	1.86E-06	1.71E-06	4.15E-10	7.29E-06	1.67E-06
50	C19	40	Passenger Truck	10	0.00E+00	2.28E-07	2.39E-08	7.66E-01	1.36E-06	4.40E-03	4.56E-07	4.05E-05	1.82E-04	2.59E-05	4.29E-05	2.81E-05	2.88E-05	6.56E-06	3.78E-06	8.08E-10	1.42E-05	6.86E-06
53	C20	70	Passenger Car	132	0.00E+00	1.67E-06	1.81E-07	6.41E+00	1.16E-05	4.30E-02	3.72E-06	2.69E-04	1.01E-03	1.63E-04	3.62E-04	2.33E-04	2.39E-04	2.37E-05	3.22E-05	8.78E-09	1.23E-04	4.21E-05
53	C20	70	Passenger Truck	221	0.00E+00	3.64E-06	3.85E-07	1.48E+01	2.31E-05	7.91E-02	7.57E-06	8.24E-04	1.81E-03	2.96E-04	7.22E-04	4.70E-04	4.81E-04	1.07E-04	7.37E-05	1.93E-08	2.41E-04	1.35E-04
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	1.22E-06	6.10E-08	9.54E-01	9.96E-07	1.91E-03	1.30E-06	6.00E-04	8.57E-05	1.72E-05	1.48E-04	3.64E-05	3.70E-05	9.57E-05	3.85E-06	1.55E-09	1.11E-04	1.12E-04
53	C20	70	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.33E+00	5.97E-09	1.58E-03	1.35E-06	1.93E-03	1.40E-04	3.05E-05	1.12E-04	3.86E-05	3.86E-05	2.01E-04	4.46E-06	0.00E+00	7.34E-05	3.63E-04
53	C20	70	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.11E-07	1.24E+00	6.88E-09	1.68E-03	1.26E-06	1.90E-03	1.39E-04	2.53E-05	1.16E-04	3.36E-05	3.39E-05	1.90E-04	4.16E-06	0.00E+00	8.18E-05	3.58E-04
50	C21	40	Passenger Car	287	0.00E+00	4.82E-06	5.22E-07	1.67E+01	3.36E-05	1.24E-01	1.07E-05	5.19E-04	4.97E-03	7.09E-04	1.04E-03	6.73E-04	6.91E-04	9.00E-05	8.28E-05	2.01E-08	3.53E-04	8.11E-05
50	C21	40	Passenger Truck	481	0.00E+00	1.10E-05	1.16E-06	3.71E+01	6.62E-05	2.13E-01	2.21E-05	1.97E-03	8.82E-03	1.25E-03	2.08E-03	1.36E-03	1.39E-03	3.18E-04	1.83E-04	3.92E-08	6.87E-04	3.32E-04
50	C21	40	Single Unit Short Haul Truck	66	0.00E+00	2.94E-05	1.55E-06	1.41E+01	2.57E-05	2.44E-02	3.13E-05	1.44E-02	2.69E-03	4.47E-04	3.48E-03	9.20E-04	9.34E-04	1.43E-03	5.71E-05	2.42E-08	2.55E-03	2.70E-03
50	C21	40	Single Unit Long Haul Truck	3	0.00E+00	1.29E-06	6.74E-08	6.11E-01	1.12E-06	1.06E-03	1.37E-06	6.27E-04	1.20E-04	1.99E-05	1.53E-04	4.02E-05	4.09E-05	6.17E-05	2.47E-06	1.05E-09	1.12E-04	1.18E-04
50	C21	40	Combination Short Haul Truck	16	0.00E+00	1.46E-05	1.01E-06	7.40E+00	5.24E-08	1.27E-02	1.08E-05	1.62E-02	1.69E-03	3.06E-04	9.44E-04	3.02E-04	3.05E-04	1.12E-03	2.48E-05	0.00E+00	6.40E-04	3.06E-03
50	C21	40	Combination Long Haul Truck	15	0.00E+00	1.33E-05	8.67E-07	7.03E+00	5.95E-08	1.41E-02	1.02E-05	1.63E-02	1.70E-03	2.71E-04	9.73E-04	2.64E-04	2.69E-04	1.07E-03	2.35E-05	0.00E+00	7.03E-04	3.07E-03
52	C22	60	Passenger Car	86	0.00E+00	1.18E-06	1.27E-07	4.29E+00	8.19E-06	3.02E-02	2.62E-06	1.68E-04	8.44E-04	1.30E-04	2.55E-04	1.64E-04	1.69E-04	1.79E-05	2.15E-05	5.75E-09	8.62E-05	2.63E-05
52	C22	60	Passenger Truck	143	0.00E+00	2.59E-06	2.73E-07	9.78E+00	1.61E-05	5.40E-02	5.32E-06	5.40E-04	1.50E-03	2.33E-04	5.06E-04	3.30E-04	3.38E-04	7.43E-05	4.86E-05	1.22E-08	1.68E-04	8.94E-05
52	C22	60	Single Unit Short Haul Truck	2	0.00E+00	6.02E-07	3.01E-08	3.83E-01	4.96E-07	7.42E-04	6.42E-07	2.87E-04	4.87E-05	8.84E-06	7.31E-05	1.80E-05	1.83E-05	3.84E-05	1.55E-06	6.38E-10	5.48E-05	5.37E-05
52	C22	60	Combination Short Haul Truck	1	0.00E+00	8.57E-07	5.97E-08	5.57E-01	3.03E-09	7.49E-04	6.36E-07	9.29E-04	7.98E-05	1.58E-05	5.45E-05	1.78E-05	1.78E-05	8.40E-05	1.87E-06	0.00E+00	3.67E-05	1.75E-04
52	C22	60	Combination Long Haul Truck	1	0.00E+00	7.69E-07	5.00E-08	5.23E-01	3.48E-09	8.07E-04	5.93E-07	9.21E-04	8.02E-05	1.36E-05	5.62E-05	1.53E-05	1.55E-05	7.99E-05	1.75E-06	0.00E+00	4.07E-05	1.73E-04
53	C23	70	Passenger Car	427	0.00E+00	5.40E-06	5.85E-07	2.07E+01	3.76E-05	1.39E-01	1.20E-05	8.70E-04	3.26E-03	5.26E-04	1.17E-03	7.54E-04	7.74E-04	7.64E-05	1.04E-04	2.84E-08	3.96E-04	1.36E-04
53	C23	70	Passenger Truck	715	0.00E+00	1.18E-05	1.25E-06	4.77E+01	7.45E-05	2.55E-01	2.45E-05	2.66E-03	5.85E-03	9.56E-04	2.33E-03	1.52E-03	1.56E-03	3.44E-04	2.38E-04	6.23E-08	7.79E-04	4.37E-04
53	C23	70	Single Unit Short Haul Truck	32	0.00E+00	7.57E-06	3.79E-07	5.93E+00	6.19E-06	1.19E-02	8.07E-06	3.73E-03	5.33E-04	1.07E-04	9.19E-04	2.26E-04	2.30E-04	5.95E-04	2.39E-05	9.66E-09	6.88E-04	6.99E-04
53	C23	70	Single Unit Long Haul Truck	1	0.00E+00	3.30E-07	1.64E-08	2.52E-01	2.67E-07	4.98E-04	3.52E-07	1.60E-04	2.43E-05	4.75E-06	4.02E-05	9.80E-06	9.97E-06	2.51E-05	1.02E-06	4.07E-10	3.02E-05	3.01E-05
53	C23	70	Combination Short Haul Truck	16	0.00E+00	8.26E-06	5.87E-07	5.99E+00	2.68E-08	7.11E-03	6.06E-06	8.67E-03	6.28E-04	1.37E-04	5.03E-04	1.74E-04	1.73E-04	9.03E-04	2.00E-05	0.00E+00	3.30E-04	1.63E-03
53	C23	70	Combination Long Haul Truck	14	0.00E+00	7.46E-06	4.99E-07	5.59E+00	3.09E-08	7.53E-03	5.67E-06	8.54E-03	6.24E-04	1.14E-04	5.20E-04	1.51E-04	1.52E-04	8.54E-04	1.87E-05	0.00E+00	3.68E-04	1.61E-03
52	C24	60	Passenger Car	56	0.00E+00	7.75E-07	8.39E-08	2.82E+00	5.39E-06	1.99E-02	1.72E-06	1.11E-04	5.56E-04	8.54E-05	1.68E-04	1.08E-04	1.11E-04	1.18E-05	1.42E-05	3.78E-09	5.68E-05	1.73E-05
52	C24	60	Passenger Truck	94	0.00E+00	1.70E-06	1.80E-07	6.44E+00	1.06E-05	3.56E-02	3.50E-06	3.56E-04	9.91E-04	1.53E-04	3.33E-04	2.17E-04	2.22E-04	4.89E-05	3.20E-05	8.03E-09	1.11E-04	5.89E-05
50	C25	40	Passenger Car	195	0.00E+00	3.27E-06	3.54E-07	1.13E+01	2.28E-05	8.39E-02	7.28E-06	3.52E-04	3.37E-03	4.81E-04	7.08E-04	4.57E-04	4.68E-04	6.10E-05	5.62E-05	1.37E-08	2.40E-04	5.50E-05
50	C25	40	Passenger Truck	326	0.00E+00	7.48E-06	7.84E-07	2.52E+01	4.49E-05	1.45E-01	1.50E-05	1.33E-03	5.98E-03	8.50E-04	1.41E-03	9.24E-04	9.46E-04	2.16E-04	1.24E-04	2.66E-08	4.66E-04	2.26E-04
50	C25	40	Single Unit Short Haul Truck	39	0.00E+00	1.73E-05	9.10E-07	8.33E+00	1.51E-05	1.43E-02	1.84E-05	8.48E-03	1.58E-03	2.63E-04	2.05E-03	5.41E-04	5.50E-04	8.41E-04	3.36E-05	1.42E-08	1.50E-03	1.59E-03
50	C25	40	Single Unit Long Haul Truck	2	0.00E+00	7.59E-07	3.97E-08	3.60E-01	6.61E-07	6.24E-04	8.09E-07	3.69E-04	7.09E-05	1.17E-05	9.02E-05	2.37E-05	2.40E-05	3.63E-05	1.45E-06	6.18E-10	6.62E-05	6.92E-05
50	C25	40	Combination Short Haul Truck	32	0.00E+00	2.81E-05	1.95E-06	1.43E+01	1.01E-07	2.45E-02	2.09E-05	3.14E-02	3.27E-03	5.90E-04	1.82E-03	5.83E-04	5.88E-04	2.15E-03	4.78E-05	0.00E+00	1.24E-03	5.91E-03
50	C25	40	Combination Long Haul Truck	29	0.00E+00	2.56E-05	1.67E-06	1.36E+01	1.15E-07	2.72E-02	1.97E-05	3.14E-02	3.29E-03	5.24E-04	1.88E-03	5.10E-04	5.20E-04	2.07E-03	4.54E-05	0.00E+00	1.36E-03	5.92E-03
53	C26	70	Passenger Car	293	0.00E+00	3.71E-06	4.01E-07	1.42E+01	2.58E-05	9.54E-02	8.24E-06	5.97E-04	2.23E-03	3.60E-04	8.02E-04	5.17E-04	5.31E-04	5.24E-05	7.14E-05	1.94E-08	2.71E-04	9.33E-05
53	C26	70	Passenger Truck	490	0.00E+00	8.07E-06	8.54E-07	3.27E+01	5.11E-05	1.75E-01	1.68E-05	1.83E-03	4.01E-03	6.55E-04	1.60E-03	1.04E-03	1.07E-03	2.36E-04	1.63E-04	4.27E-08	5.34E-04	3.00E-04
53	C26	70	Single Unit Short Haul Truck	47	0.00E+00	1.12E-05	5.59E-07	8.74E+00	9.13E-06	1.75E-02	1.19E-05	5.50E-03	7.85E-04	1.57E-04	1.35E-03	3.34E-04	3.39E-04	8.76E-04	3.52E-05	1.42E-08	1.01E-03	1.03E-03
53	C26	70	Single Unit Long Haul Truck	2	0.00E+00	4.86E-07	2.42E-08	3.71E-01	3.94E-07	7.34E-04	5.18E-07	2.36E-04	3.58E-05	6.99E-06	5.92E-05	1.44E-05	1.47E-05	3.70E-05	1.50E-06	6.00E-10	4.45E-05	4.43E-05
53	C26	70	Combination Short Haul Truck	30	0.00E+00	1.56E-05	1.11E-06	1.13E+01	5.08E-08	1.35E-02	1.15E-05	1.64E-02	1.19E-03	2.60E-04	9.52E-04	3.29E-04	3.28E-04	1.71E-03	3.79E-05	0.00E+00	6.24E-04	3.09E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.41E-05	9.45E-07	1.06E+01	5.85E-08	1.43E-02	1.07E-05	1.62E-02	1.18E-03	2.15E-04	9.84E-04	2.86E-04	2.89E-04	1.62E-03	3.54E-05	0.00E+00	6.96E-04	3.05E-03
50	C27	40	Passenger Car	139	0.00E+00	2.33E-06	2.52E-07	8.05E+00	1.62E-05	5.98E-02	5.18E-06	2.51E-04	2.40E-03	3.43E-04	5.04E-04	3.25E-04	3.34E-04	4.35E-05	4.00E-05	9.73E-09	1.71E-04	3.92E-05
50	C27	40	Passenger Truck	232	0.00E+00	5.33E-06	5.59E-07	1.79E+01	3.20E-05	1.03E-01	1.07E-05	9.50E-04	4.26E-03	6.06E-04	1.01E-03	6.58E-04	6.74E-04	1.54E-04	8.85E-05	1.89E-08	3.32E-04	1.61E-04
50	C27	40	Single Unit Short Haul Truck	30	0.00E+00	1.32E-05	6.94E-07	6.36E+00	1.15E-05	1.09E-02	1.41E-05	6.47E-03	1.21E-03	2.01E-04	1.57E-03	4.13E-04	4.20E-04	6.42E-04	2.57E-05	1.09E-08	1.15E-03	1.21E-03
50	C27	40	Single Unit Long Haul Truck	1	0.00E+00	5.80E-07	3.03E-08	2.74E-01	5.05E-07	4.76E-04	6.17E-07	2.82E-04	5.41E-05	8.92E-06	6.88E-05	1.81E-05	1.84E-05	2.77E-05	1.11E-06	4.71E-10	5.05E-05	5.28E-05
50	C27	40	Combination Short Haul Truck	11	0.00E+00	9.76E-06	6.78E-07	4.95E+00	3.51E-08	8.51E-03	7.26E-06	1.09E-02	1.13E-03	2.05E-04	6.32E-04	2.02E-04	2.04E-04	7.46E-04	1.66E-05	0.00E+00	4.28E-04	2.05E-03
50	C27	40	Combination Long Haul Truck	10	0.00E+00	8.89E-06	5.80E-07	4.71E+00	3.99E-08	9.45E-03	6.84E-06	1.09E-02	1.14E-03	1.82E-04	6.51E-04	1.77E-04	1.80E-04	7.20E-04	1.58E-05	0.00E+00	4.71E-04	2.05E-03
52	C28	60	Passenger Car	274	0.00E+00	3.78E-06	4.09E-07	1.38E+01	2.63E-05	9.70E-02	8.40E-06	5.39E-04	2.71E-03	4.16E-04	8.17E-04	5.27E-04	5.41E-04	5.73E-05	6.90E-05	1.84E-08	2.77E-04	8.43E-05
52	C28	60	Passenger Truck	460	0.00E+00	8.30E-06	8.76E-07	3.14E+01	5.17E-05	1.73E-01	1.71E-05	1.73E-03	4.83E-03	7.46E-04	1.62E-03	1.06E-03	1.08E-03	2.38E-04	1.56E-04	3.91E-08	5.39E-04	2.87E-04
52	C28	60	Single Unit Short Haul Truck	2	0.00E+00	4.69E-07	2.35E-08	2.99E-01	3.87E-07	5.79E-04	5.01E-07	2.24E-04	3.80E-05	6.89E-06	5.70E-05	1.41E-05	1.43E-05	2.99E-05	1.21E-06	4.98E-10	4.27E-05	4.19E-05
52	C28	60	Combination Short Haul Truck	1	0.00E+00	5.94E-07	4.14E-08	3.87E-01	2.11E-09	5.20E-04	4.41E-07	6.44E-04	5.53E-05	1.10E-05	3.78E-05	1.23E-05	1.24E-05	5.83E-05	1.29E-06	0.00E+00	2.55E-05	1.21E-04
52	C28	60	Combination Long Haul Truck	1	0.00E+00	5.34E-07	3.47E-08	3.62E-01	2.41E-09	5.60E-04	4.11E-07	6.39E-04	5.56E-05	9.44E-06	3.90E-05	1.06E-05	1.07E-05	5.54E-05	1.21E-06	0.00E+00	2.82E-05	1.20E-04
53	C29	70	Passenger Car	55	0.00E+00	6.92E-07	7.48E-08	2.65E+00	4.81E-06	1.78E-02	1.54E-06	1.11E-04	4.17E-04	6.73E-05	1.50E-04	9.65E-05	9.90E-05	9.78E-06	1.33E-05	3.63E-09	5.07E-05	1.74E-05
53	C29	70	Passenger Truck	91	0.00E+00	1.51E-06	1.59E-07	6.11E+00	9.53E-06	3.27E-02	3.13E-06	3.41E-04	7.48E-04	1.22E-04	2.99E-04	1.94E-04	1.99E-04	4.41E-05	3.05E-05	7.97E-09	9.97E-05	5.59E-05
53	C29	70	Single Unit Short Haul Truck	2	0.00E+00	5.01E-07	2.51E-08	3.93E-01	4.10E-07	7.85E-04	5.34E-07	2.47E-04	3.53E-05	7.06E-06	6.08E-05	1.50E-05	1.52E-05	3.94E-05	1.58E-06	6.39E-10	4.56E-05	4.63E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	9.09E-07	6.46E-08	6.59E-01	2.95E-09	7.83E-04	6.67E-07	9.54E-04	6.92E-05	1.51E-05	5.54E-05	1.91E-05	1.91E-05	9.93E-05	2.21E-06	0.00E+00	3.63E-05	1.80E-04
53	C29	70	Combination Long Haul Truck	2	0.00E+00	8.22E-07	5.49E-08	6.15E-01	3.40E-09	8.29E-04	6.24E-07	9.40E-04	6.87E-05	1.25E-05	5.72E-05	1.66E-05	1.68E-05	9.40E-05	2.06E-06	0.00E+00	4.05E-05	1.77E-04
50	C30	40	Passenger Car	50	0.00E+00	8.34E-07	9.02E-08	2.88E+00	5.80E-06	2.14E-02	1.85E-06	8.97E-05	8.58E-04	1.23E-04	1.80E-04	1.16E-04	1.19E-04	1.55E-05	1.43E-05	3.48E-09	6.11E-05	1.40E-05
50	C30	40	Passenger Truck	83	0.00E+00	1.91E-06	2.00E-07	6.42E+00	1.14E-05	3.68E-02	3.82E-06	3.40E-04	1.52E-03	2.17E-04	3.60E-04	2.35E-04	2.41E-04	5.50E-05	3.16E-05	6.77E-09	1.19E-04	5.75E-05
50	C30	40	Single Unit Short Haul Truck	21	0.00E+00	9.40E-06	4.93E-07	4.52E+00	8.19E-06	7.78E-03	1.00E-05	4.60E-03	8.59E-04	1.43E-04	1.11E-03	2.94E-04	2.98E-04	4.56E-04	1.82E-05	7.72E-09	8.14E-04	8.62E-04
50	C30	40	Single Unit Long Haul Truck	1	0.00E+00	4.12E-07	2.15E-08	1.95E-01	3.59E-07	3.38E-04	4.39E-07	2.00E-04	3.85E-05	6.34E-06	4.89E-05	1.28E-05	1.30E-05	1.97E-05	7.87E-07	3.35E-10	3.59E-05	3.75E-05
50	C30	40	Combination Short Haul Truck	22	0.00E+00	1.91E-05	1.32E-06	9.68E+00	6.86E-08	1.66E-02	1.42E-05	2.13E-02	2.22E-03	4.00E-04	1.24E-03	3.95E-04	3.99E-04	1.46E-03	3.24E-05	0.00E+00	8.37E-04	4.00E-03
50	C30	40	Combination Long Haul Truck	20	0.00E+00	1.74E-05	1.13E-06	9.20E+00	7.79E-08	1.85E-02	1.34E-05	2.13E-02	2.23E-03	3.55E-04	1.27E-03	3.46E-04	3.52E-04	1.41E-03	3.08E-05	0.00E+00	9.20E-04	4.01E-03
52	C31	60	Passenger Car	73	0.00E+00	1.01E-06	1.09E-07	3.68E+00	7.03E-06	2.59E-02	2.25E-06	1.44E-04	7.24E-04	1.11E-04	2.19E-04	1.41E-04	1.45E-04	1.53E-05	1.85E-05	4.93E-09	7.40E-05	2.25E-05
52	C31	60	Passenger Truck	123	0.00E+00	2.22E-06	2.34E-07	8.39E+00	1.38E-05	4.63E-02	4.56E-06	4.64E-04	1.29E-03	2.00E-04	4.34E-04	2.83E-04	2.90E-04	6.38E-05	4.17E-05	1.05E-08	1.44E-04	7.67E-05
52	C31	60	Single Unit Short Haul Truck	17	0.00E+00	4.92E-06	2.46E-07	3.13E+00	4.05E-06	6.06E-03	5.25E-06	2.34E-03	3.98E-04	7.22E-05	5.98E-04	1.48E-04	1.50E-04	3.14E-04	1.27E-05	5.21E-09	4.48E-04	4.39E-04
52	C31	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	1.07E-08	1.34E-01	1.76E-07	2.57E-04	2.29E-07	1.01E-04	1.79E-05	3.20E-06	2.62E-05	6.42E-06	6.52E-06	1.34E-05	5.41E-07	2.22E-10	1.97E-05	1.90E-05
52	C31	60	Combination Short Haul Truck	14	0.00E+00	8.14E-06	5.67E-07	5.30E+00	2.88E-08	7.12E-03	6.04E-06	8.82E-03	7.58E-04	1.50E-04	5.18E-04	1.69E-04	1.69E-04	7.98E-04	1.77E-05	0.00E+00	3.49E-04	1.66E-03
52	C31	60	Combination Long Haul Truck	13	0.00E+00	7.31E-06	4.75E-07	4.96E+00	3.31E-08	7.67E-03	5.63E-06	8.75E-03	7.62E-04	1.29E-04	5.34E-04	1.45E-04	1.47E-04	7.59E-04	1.66E-05	0.00E+00	3.87E-04	1.65E-03
53	C32	70	Passenger Car	269	0.00E+00	3.41E-06	3.69E-07	1.31E+01	2.37E-05	8.78E-02	7.58E-06	5.49E-04	2.06E-03	3.32E-04	7.38E-04	4.76E-04	4.88E-04	4.82E-05	6.57E-05	1.79E-08	2.50E-04	8.58E-05
53	C32	70	Passenger Truck	451	0.00E+00	7.42E-06	7.86E-07	3.01E+01	4.70E-05	1.61E-01	1.54E-05	1.68E-03	3.69E-03	6.03E-04	1.47E-03	9.58E-04	9.81E-04	2.17E-04	1.50E-04	3.93E-08	4.91E-04	2.76E-04
53	C32	70	Single Unit Short Haul Truck	61	0.00E+00	1.43E-05	7.15E-07	1.12E+01	1.17E-05	2.24E-02	1.52E-05	7.04E-03	1.00E-03	2.01E-04	1.73E-03	4.27E-04	4.34E-04	1.12E-03	4.51E-05	1.82E-08	1.30E-03	1.32E-03
53	C32	70	Single Unit Long Haul Truck	3	0.00E+00	6.22E-07	3.09E-08	4.75E-01	5.04E-07	9.40E-04	6.63E-07	3.03E-04	4.59E-05	8.95E-06	7.57E-05	1.85E-05	1.88E-05	4.74E-05	1.92E-06	7.67E-10	5.69E-05	5.67E-05
53	C32	70	Combination Short Haul Truck	44	0.00E+00	2.31E-05	1.64E-06	1.68E+01	7.51E-08	1.99E-02	1.70E-05	2.43E-02	1.76E-03	3.84E-04	1.41E-03	4.86E-04	4.85E-04	2.53E-03	5.61E-05	0.00E+00	9.23E-04	4.57E-03
53	C32	70	Combination Long Haul Truck	41	0.00E+00	2.09E-05	1.40E-06	1.56E+01	8.65E-08	2.11E-02	1.59E-05	2.39E-02	1.75E-03	3.19E-04	1.46E-03	4.22E-04	4.27E-04	2.39E-03	5.24E-05	0.00E+00	1.03E-03	4.51E-03
52	C33	60	Passenger Car	34	0.00E+00	4.75E-07

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C37	60	Single Unit Long Haul Truck	1	0.00E+00	1.99E-07	9.90E-09	1.24E-01	1.63E-07	2.38E-04	2.12E-07	9.39E-05	1.66E-05	2.96E-06	2.42E-05	5.94E-06	6.04E-06	1.24E-05	5.01E-07	2.05E-10	1.82E-05	1.76E-05
52	C37	60	Combination Short Haul Truck	14	0.00E+00	8.44E-06	5.88E-07	5.49E+00	2.99E-08	7.38E-03	6.26E-06	9.15E-03	7.86E-04	1.55E-04	5.37E-04	1.75E-04	1.75E-04	8.27E-04	1.84E-05	0.00E+00	3.61E-04	1.72E-03
52	C37	60	Combination Long Haul Truck	13	0.00E+00	7.57E-06	4.93E-07	5.15E+00	3.43E-08	7.95E-03	5.84E-06	9.07E-03	7.90E-04	1.34E-04	5.53E-04	1.50E-04	1.52E-04	7.86E-04	1.72E-05	0.00E+00	4.01E-04	1.71E-03
53	C38	70	Passenger Car	466	0.00E+00	5.90E-06	6.38E-07	2.26E+01	4.11E-05	1.52E-01	1.31E-05	9.50E-04	3.56E-03	5.74E-04	1.28E-03	8.23E-04	8.45E-04	8.35E-05	1.14E-04	3.10E-08	4.32E-04	1.48E-04
53	C38	70	Passenger Truck	780	0.00E+00	1.28E-05	1.36E-06	5.21E+01	8.13E-05	2.79E-01	2.67E-05	2.91E-03	6.39E-03	1.04E-03	2.55E-03	1.66E-03	1.70E-03	3.76E-04	2.60E-04	6.80E-08	8.50E-04	4.77E-04
53	C38	70	Single Unit Short Haul Truck	54	0.00E+00	1.26E-05	6.32E-07	9.87E+00	1.03E-05	1.98E-02	1.34E-05	6.21E-03	8.87E-04	1.78E-04	1.53E-03	3.77E-04	3.83E-04	9.90E-04	3.98E-05	1.61E-08	1.15E-03	1.16E-03
53	C38	70	Single Unit Long Haul Truck	2	0.00E+00	5.49E-07	2.73E-08	4.19E-01	4.45E-07	8.30E-04	5.85E-07	2.67E-04	4.05E-05	7.90E-06	6.68E-05	1.63E-05	1.66E-05	4.19E-05	1.69E-06	6.78E-10	5.03E-05	5.00E-05
53	C38	70	Combination Short Haul Truck	54	0.00E+00	2.81E-05	2.00E-06	2.03E+01	9.12E-08	2.42E-02	2.06E-05	2.95E-02	2.14E-03	4.66E-04	1.71E-03	5.90E-04	5.89E-04	3.07E-03	6.81E-05	0.00E+00	1.12E-03	5.55E-03
53	C38	70	Combination Long Haul Truck	49	0.00E+00	2.54E-05	1.70E-06	1.90E+01	1.05E-07	2.56E-02	1.93E-05	2.90E-02	2.12E-03	3.87E-04	1.77E-03	5.13E-04	5.18E-04	2.90E-03	6.36E-05	0.00E+00	1.25E-03	5.47E-03
52	C39	60	Passenger Car	78	0.00E+00	1.08E-06	1.17E-07	3.93E+00	7.50E-06	2.77E-02	2.40E-06	1.54E-04	7.73E-04	1.19E-04	2.33E-04	1.50E-04	1.54E-04	1.64E-05	1.97E-05	5.26E-09	7.89E-05	2.40E-05
52	C39	60	Passenger Truck	131	0.00E+00	2.37E-06	2.50E-07	8.95E+00	1.48E-05	4.94E-02	4.87E-06	4.95E-04	1.38E-03	2.13E-04	4.63E-04	3.02E-04	3.09E-04	6.80E-05	4.45E-05	1.12E-08	1.54E-04	8.19E-05
52	C39	60	Single Unit Short Haul Truck	17	0.00E+00	5.09E-06	2.55E-07	3.24E+00	4.19E-06	6.28E-03	5.43E-06	2.43E-03	4.12E-04	7.47E-05	6.18E-04	1.53E-04	1.55E-04	3.24E-04	1.31E-05	5.40E-09	4.63E-04	4.55E-04
52	C39	60	Single Unit Long Haul Truck	1	0.00E+00	2.22E-07	1.11E-08	1.38E-01	1.82E-07	2.66E-04	2.37E-07	1.05E-04	1.85E-05	3.31E-06	2.71E-05	6.64E-06	6.75E-06	1.38E-05	5.59E-07	2.29E-10	2.03E-05	1.97E-05
52	C39	60	Combination Short Haul Truck	7	0.00E+00	4.20E-06	2.92E-07	2.73E+00	1.49E-08	3.67E-03	3.11E-06	4.55E-03	3.91E-04	7.73E-05	2.67E-04	8.71E-05	8.72E-05	4.11E-04	9.14E-06	0.00E+00	1.80E-04	8.57E-04
52	C39	60	Combination Long Haul Truck	7	0.00E+00	3.77E-06	2.45E-07	2.56E+00	1.70E-08	3.95E-03	2.90E-06	4.51E-03	3.93E-04	6.66E-05	2.75E-04	7.48E-05	7.58E-05	3.91E-04	8.57E-06	0.00E+00	1.99E-04	8.50E-04
50	C40	40	Passenger Car	78	0.00E+00	1.32E-06	1.42E-07	4.55E+00	9.16E-06	3.38E-02	2.93E-06	1.42E-04	1.35E-03	1.93E-04	2.85E-04	1.84E-04	1.88E-04	2.45E-05	2.26E-05	5.49E-09	9.64E-05	2.21E-05
50	C40	40	Passenger Truck	131	0.00E+00	3.01E-06	3.15E-07	1.01E+01	1.80E-05	5.81E-02	6.03E-06	5.36E-04	2.41E-03	3.42E-04	5.68E-04	3.72E-04	3.80E-04	8.68E-05	4.99E-05	1.07E-08	1.87E-04	9.07E-05
50	C40	40	Single Unit Short Haul Truck	17	0.00E+00	7.69E-06	4.03E-07	3.69E+00	6.70E-06	6.36E-03	8.18E-06	3.76E-03	7.03E-04	1.17E-04	9.10E-04	2.40E-04	2.44E-04	3.73E-04	1.49E-05	6.31E-09	6.66E-04	7.05E-04
50	C40	40	Single Unit Long Haul Truck	1	0.00E+00	3.37E-07	1.76E-08	1.60E-01	2.93E-07	2.77E-04	3.59E-07	1.64E-04	3.15E-05	5.18E-06	4.00E-05	1.05E-05	1.07E-05	1.61E-05	6.44E-07	2.74E-10	2.93E-05	3.07E-05
50	C40	40	Combination Short Haul Truck	7	0.00E+00	6.32E-06	4.39E-07	3.21E+00	2.27E-08	5.51E-03	4.70E-06	7.04E-03	7.35E-04	1.33E-04	4.09E-04	1.31E-04	1.32E-04	4.83E-04	1.07E-05	0.00E+00	2.77E-04	1.33E-03
50	C40	40	Combination Long Haul Truck	7	0.00E+00	5.76E-06	3.76E-07	3.05E+00	2.58E-08	6.12E-03	4.43E-06	7.06E-03	7.38E-04	1.18E-04	4.22E-04	1.15E-04	1.17E-04	4.66E-04	1.02E-05	0.00E+00	3.05E-04	1.33E-03
55	C41	90	Passenger Car	78	0.00E+00	8.84E-07	9.56E-08	3.55E+00	6.15E-06	2.35E-02	1.96E-06	1.62E-04	3.37E-04	6.17E-05	1.91E-04	1.23E-04	1.26E-04	1.09E-05	1.79E-05	4.79E-09	6.47E-05	2.53E-05
55	C41	90	Passenger Truck	131	0.00E+00	1.91E-06	2.03E-07	8.30E+00	1.24E-05	4.60E-02	4.04E-06	4.71E-04	6.04E-04	1.14E-04	3.88E-04	2.51E-04	2.58E-04	5.51E-05	4.16E-05	1.10E-08	1.30E-04	7.65E-05
55	C41	90	Single Unit Short Haul Truck	2	0.00E+00	3.00E-07	1.47E-08	3.66E-01	2.38E-07	7.37E-04	3.19E-07	1.60E-04	1.66E-05	4.37E-06	3.67E-05	8.79E-06	8.94E-06	3.67E-05	1.47E-06	5.78E-10	2.78E-05	2.99E-05
55	C41	90	Combination Short Haul Truck	3	0.00E+00	1.06E-06	7.57E-08	1.05E+00	3.44E-09	1.04E-03	7.80E-07	1.10E-03	4.82E-05	1.42E-05	6.30E-05	2.24E-05	2.20E-05	1.59E-04	3.53E-06	0.00E+00	4.11E-05	2.07E-04
55	C41	90	Combination Long Haul Truck	3	0.00E+00	9.21E-07	6.08E-08	9.61E-01	3.99E-09	1.05E-03	7.05E-07	1.04E-03	4.61E-05	1.08E-05	6.45E-05	1.85E-05	1.84E-05	1.47E-04	3.22E-06	0.00E+00	4.61E-05	1.95E-04
55	C42	90	Passenger Car	202	0.00E+00	2.27E-06	2.46E-07	9.13E+00	1.58E-05	6.04E-02	5.05E-06	4.16E-04	8.68E-04	1.59E-04	4.92E-04	3.17E-04	3.25E-04	2.81E-05	4.61E-05	1.23E-08	1.67E-04	6.51E-05
55	C42	90	Passenger Truck	338	0.00E+00	4.92E-06	5.23E-07	2.14E+01	3.19E-05	1.18E-01	1.04E-05	1.21E-03	1.55E-03	2.94E-04	9.97E-04	6.47E-04	6.63E-04	1.42E-04	1.07E-04	2.83E-08	3.34E-04	1.97E-04
55	C42	90	Single Unit Short Haul Truck	39	0.00E+00	5.91E-06	2.90E-07	7.21E+00	4.69E-06	1.45E-02	6.30E-06	3.16E-03	3.27E-04	8.62E-05	7.25E-04	1.73E-04	1.76E-04	7.24E-04	2.90E-05	1.14E-08	5.48E-04	5.90E-04
55	C42	90	Single Unit Long Haul Truck	2	0.00E+00	2.57E-07	1.25E-08	3.05E-01	1.98E-07	6.02E-04	2.73E-07	1.34E-04	1.49E-05	3.76E-06	3.16E-05	7.41E-06	7.54E-06	3.04E-05	1.23E-06	4.70E-10	2.40E-05	2.51E-05
55	C42	90	Combination Short Haul Truck	26	0.00E+00	9.08E-06	6.46E-07	8.99E+00	2.94E-08	8.83E-03	6.65E-06	9.36E-03	4.11E-04	1.21E-04	5.38E-04	1.91E-04	1.87E-04	1.36E-03	3.01E-05	0.00E+00	3.50E-04	1.76E-03
55	C42	90	Combination Long Haul Truck	24	0.00E+00	7.86E-06	5.18E-07	8.19E+00	3.40E-08	8.91E-03	6.01E-06	8.84E-03	3.93E-04	9.25E-05	5.50E-04	1.57E-04	1.57E-04	1.25E-03	2.74E-05	0.00E+00	3.93E-04	1.67E-03
55	C43	90	Passenger Car	219	0.00E+00	2.47E-06	2.67E-07	9.90E+00	1.72E-05	6.55E-02	5.48E-06	4.52E-04	9.42E-04	1.72E-04	5.34E-04	3.44E-04	3.53E-04	3.05E-05	5.00E-05	1.34E-08	1.81E-04	7.06E-05
55	C43	90	Passenger Truck	366	0.00E+00	5.34E-06	5.68E-07	2.32E+01	3.46E-05	1.28E-01	1.13E-05	1.31E-03	1.69E-03	3.18E-04	1.08E-03	7.02E-04	7.19E-04	1.54E-04	1.16E-04	3.07E-08	3.63E-04	2.14E-04
55	C43	90	Single Unit Short Haul Truck	11	0.00E+00	1.64E-06	8.03E-08	2.00E+00	1.30E-06	4.02E-03	1.74E-06	8.73E-04	9.05E-05	2.39E-05	2.01E-04	4.80E-05	4.88E-05	2.00E-04	8.04E-06	3.15E-09	1.52E-04	1.63E-04
55	C43	90	Combination Short Haul Truck	6	0.00E+00	2.20E-06	1.56E-07	2.17E+00	7.10E-09	2.14E-03	1.61E-06	2.26E-03	9.93E-05	2.92E-05	1.30E-04	4.62E-05	4.53E-05	3.28E-04	7.28E-06	0.00E+00	8.47E-05	4.27E-04
55	C43	90	Combination Long Haul Truck	6	0.00E+00	1.90E-06	1.25E-07	1.98E+00	8.23E-09	2.16E-03	1.45E-06	2.14E-03	9.51E-05	2.24E-05	1.33E-04	3.81E-05	3.79E-05	3.03E-04	6.64E-06	0.00E+00	9.51E-05	4.03E-04
55	C44	90	Passenger Car	396	0.00E+00	4.47E-06	4.83E-07	1.79E+01	3.11E-05	1.19E-01	9.93E-06	8.18E-04	1.71E-03	3.12E-04	9.66E-04	6.23E-04	6.39E-04	5.52E-05	9.06E-05	2.42E-08	3.27E-04	1.28E-04
55	C44	90	Passenger Truck	663	0.00E+00	9.67E-06	1.03E-06	4.20E+01	6.26E-05	2.32E-01	2.04E-05	2.38E-03	3.05E-03	5.77E-04	1.96E-03	1.27E-03	1.30E-03	2.79E-04	2.10E-04	5.57E-08	6.57E-04	3.87E-04
55	C44	90	Single Unit Short Haul Truck	13	0.00E+00	1.96E-06	9.63E-08	2.40E+00	1.56E-06	4.83E-03	2.09E-06	1.05E-03	1.09E-04	2.86E-05	2.41E-04	5.76E-05	5.85E-05	2.40E-04	9.64E-06	3.78E-09	1.82E-04	1.96E-04
55	C44	90	Single Unit Long Haul Truck	1	0.00E+00	8.53E-08	4.14E-09	1.01E-01	6.57E-08	2.00E-04	9.07E-08	4.46E-05	4.94E-06	1.25E-06	1.05E-05	2.46E-06	2.50E-06	1.01E-05	4.08E-07	1.56E-10	7.98E-06	8.33E-06
55	C44	90	Combination Short Haul Truck	23	0.00E+00	7.93E-06	5.64E-07	7.85E+00	2.56E-08	7.71E-03	5.81E-06	8.17E-03	3.59E-04	1.06E-04	4.69E-04	1.67E-04	1.64E-04	1.18E-03	2.63E-05	0.00E+00	3.06E-04	1.54E-03
55	C44	90	Combination Long Haul Truck	21	0.00E+00	6.86E-06	4.53E-07	7.15E+00	2.97E-08	7.78E-03	5.25E-06	7.72E-03	3.43E-04	8.08E-05	4.80E-04	1.37E-04	1.37E-04	1.09E-03	2.40E-05	0.00E+00	3.43E-04	1.45E-03
53	C45	70	Passenger Car	203	0.00E+00	2.57E-06	2.78E-07	9.85E+00	1.79E-05	6.62E-02	5.72E-06	4.14E-04	1.55E-03	2.50E-04	5.56E-04	3.59E-04	3.68E-04	3.64E-05	4.95E-05	1.35E-08	1.88E-04	6.47E-05
53	C45	70	Passenger Truck	340	0.00E+00	5.60E-06	5.92E-07	2.27E+01	3.54E-05	1.22E-01	1.16E-05	1.27E-03	2.78E-03	4.55E-04	1.11E-03	7.22E-04	7.40E-04	1.64E-04	1.13E-04	2.96E-08	3.71E-04	2.08E-04
53	C45	70	Single Unit Short Haul Truck	17	0.00E+00	4.10E-06	2.05E-07	3.21E+00	3.35E-06	6.42E-03	4.37E-06	2.02E-03	2.88E-04	5.78E-05	4.97E-04	1.23E-04	1.25E-04	3.22E-04	1.29E-05	5.23E-09	3.73E-04	3.78E-04
53	C45	70	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.88E-09	1.36E-01	1.45E-07	2.70E-04	1.90E-07	8.69E-05	1.32E-05	2.57E-06	2.17E-05	5.31E-06	5.40E-06	1.36E-05	5.50E-07	2.20E-10	1.63E-05	1.63E-05
53	C45	70	Combination Short Haul Truck	12	0.00E+00	6.15E-06	4.37E-07	4.46E+00	2.00E-08	5.29E-03	4.51E-06	6.45E-03	4.68E-04	1.02E-04	3.75E-04	1.29E-04	1.29E-04	6.72E-04	1.49E-05	0.00E+00	2.45E-04	1.22E-03
53	C45	70	Combination Long Haul Truck	11	0.00E+00	5.56E-06	3.72E-07	4.16E+00	2.30E-08	5.61E-03	4.22E-06	6.36E-03	4.65E-04	8.48E-05	3.87E-04	1.12E-04	1.14E-04	6.36E-04	1.39E-05	0.00E+00	2.74E-04	1.20E-03
50	C46	40	Passenger Car	61	0.00E+00	1.02E-06	1.10E-07	3.52E+00	7.09E-06	2.61E-02	2.26E-06	1.10E-04	1.05E-03	1.50E-04	2.20E-04	1.42E-04	1.46E-04	1.90E-05	1.75E-05	4.25E-09	7.46E-05	1.71E-05
50	C46	40	Passenger Truck	102	0.00E+00	2.33E-06	2.44E-07	7.84E+00	1.40E-05	4.50E-02	4.67E-06	4.15E-04	1.86E-03	2.65E-04	4.39E-04	2.88E-04	2.94E-04	6.72E-05	3.87E-05	8.27E-09	1.45E-04	7.02E-05
50	C46	40	Single Unit Short Haul Truck	46	0.00E+00	2.03E-05	1.07E-06	9.75E+00	1.77E-05	1.68E-02	2.16E-05	9.93E-03	1.85E-03	3.08E-04	2.40E-03	6.34E-04	6.44E-04	9.85E-04	3.94E-05	1.67E-08	1.76E-03	1.86E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	8.89E-07	4.64E-08	4.21E-01	7.74E-07	7.31E-04	9.47E-07	4.32E-04	8.30E-05	1.37E-05	1.06E-04	2.77E-05	2.82E-05	4.25E-05	1.70E-06	7.23E-10	7.75E-05	8.10E-05
50	C46	40	Combination Short Haul Truck	40	0.00E+00	3.57E-05	2.48E-06	1.81E+01	1.28E-07	3.12E-02	2.66E-05	3.98E-02	4.15E-03	7.49E-04	2.32E-03	7.40E-04	7.47E-04	2.73E-03	6.07E-05	0.00E+00	1.57E-03	7.50E-03
50	C46	40	Combination Long Haul Truck	37	0.00E+00	3.25E-05	2.12E-06	1.72E+01	1.46E-07	3.46E-02	2.51E-05	3.99E-02	4.17E-03	6.65E-04	2.38E-03	6.48E-04	6.60E-04	2.63E-03	5.77E-05	0.00E+00	1.72E-03	7.52E-03
52	C47	60	Passenger Car	22	0.00E+00	3.04E-07	3.29E-08	1.11E+00	2.11E-06	7.80E-03	6.75E-07	4.34E-05	2.18E-04	3.35E-05	6.58E-05	4.24E-05	4.35E-05	4.61E-06	5.55E-06	1.48E-09	2.23E-05	6.78E-06
52	C47	60	Passenger Truck	37	0.00E+00	6.67E-07	7.04E-08	2.52E+00	4.16E-06	1.39E-02	1.37E-06	1.39E-04	3.88E-04	6.00E-05	1.30E-04	8.50E-05	8.71E-05	1.92E-05	1.26E-05	3.15E-09	4.34E-05	2.31E-05
52	C47	60	Single Unit Short Haul Truck	1	0.00E+00	1.73E-07	8.63E-09	1.10E-01	1.42E-07	2.13E-04	1.84E-07	8.23E-05	1.40E-05	2.53E-06	2.10E-05	5.18E-06	5.26E-06	1.10E-05	4.44E-07	1.83E-10	1.57E-05	1.54E-05
53	C48	70	Passenger Car	126	0.00E+00	1.60E-06	1.73E-07	6.12E+00	1.11E-05	4.11E-02	3.55E-06	2.57E-04	9.63E-04	1.55E-04	3.46E-04	2.23E-04	2.29E-04	2.26E-05	3.08E-05	8.38E-09	1.17E-04	4.02E-05
53	C48	70	Passenger Truck	211	0.00E+00	3.48E-06	3.68E-07	1.41E+01	2.20E-05	7.55E-02	7.23E-06	7.87E-04	1.73E-03	2.83E-04	6.90E-04	4.49E-04	4.60E-04	1.02E-04	7.04E-05	1.84E-08	2.30E-04	1.29E-04
53	C48	70	Single Unit Short Haul Truck	59	0.00E+00	1.38E-05	6.89E-07	1.08E+01	1.13E-05	2.16E-02	1.47E-05	6.78E-03	9.68E-04	1.94E-04	1.67E-03	4.12E-04	4.18E-04	1.08E-03	4.35E-05	1.75E-08	1.25E-03	1.27E-03
53	C48	70	Single Unit Long Haul Truck	3	0.00E+00	5.99E-07	2.98E-08	4.57E-01	4.86E-07	9.06E-04	6.39E-07	2.92E-04	4.42E-05	8.62E-06	7.30E-05	1.78E-05	1.81E-05	4.57E-05	1.85E-06	7.40E-10	5.49E-05	5.46E-05
53	C48	70	Combination Short Haul Truck	42	0.00E+00	2.17E-05	1.54E-06	1.57E+01	7.05E-08	1.87E-02	1.59E-05	2.28E-02	1.65E-03	3.60E-04	1.32E-03	4.56E-04	4.55E-04	2.37E-03	5.26E-05	0.00E+00	8.66E-04	4.29E-03
53	C48	70	Combination Long Haul Truck	38	0.00E+00	1.96E-05	1.31E-06	1.47E+01	8.12E-08	1.98E-02	1.49E-05	2.24E-02	1.64E-03	2.99E-04	1.37E-03	3.96E-04	4.01E-04	2.24E-03	4.91E-05	0.00E+00	9.65E-04	4.23E-03
52	C49	60	Passenger Car	198	0.00E+00	2.73E-06	2.95E-07	9.94E+00	1.90E-05	7.01E-02	6.07E-06	3.90E-04	1.96E-03	3.01E-04	5.91E-04	3.81E-04	3.91E-04	4.14E-05	4.99E-05	1.33E-08	2.00E-04	6.09E-05
52	C49	60	Passenger Truck	332	0.00E+00	5.99E-06	6.33E-07	2.27E+01	3.74E-05	1.25E-01	1.23E-05	1.25E-03	3.49E-03	5.39E-04	1.17E-03	7.64E-04	7.82E-04	1.72E-04	1.13E-04	2.83E-08	3.90E-04	2.07E-04
52	C49	60	Single Unit Short Haul Truck	39	0.00E+00	1.15E-05	5.73E-07	7.30E+00	9.44E-06	1.41E-02	1.22E-05	5.46E-03	9.28E-04	1.68E-04	1.39E-03	3.44E-04	3.49E-04	7.31E-04	2.95E-05	1.21E-08	1.04E-03	1.02E-03
52	C49	60	Single Unit Long Haul Truck	2	0.00E+00	5.00E-07	2.49E-08	3.12E-01	4.10E-07	6.00E-04	5.34E-07	2.36E-04	4.17E-05	7.45E-06	6.10E-05	1.49E-05	1.52E-05	3.11E-05	1.26E-06	5.17E-10	4.58E-05	4.43E-05
52	C49	60	Combination Short Haul Truck	19	0.00E+00	1.14E-05	7.92E-07	7.40E+00	4.03E-08	9.94E-03	8.43E-06	1.23E-02	1.06E-03	2.09E-04	7.23E-04	2.36E-04	2.36E-04	1.11E-03	2.48E-05	0.00E+00	4.87E-04	2.32E-03
52	C49	60	Combination Long Haul Truck	18	0.00E+00	1.02E-05	6.64E-07	6.93E+00	4.62E-08	1.07E-02	7.87E-06	1.22E-02	1.06E-03	1.81E-04	7.46E-04	2.03E-04	2.05E-04	1.06E-03	2.32E-05	0.00E+00	5.40E-04	2.30E-03
50	C50	40	Passenger Car	28	0.00E+00	4.64E-07	5.02E-08	1.60E+00	3.23E-06	1.19E-02	1.03E-06	4.99E-05	4.78E-04	6.82E-05	1.00E-04	6.48E-05	6.64E-05	8.66E-06	7.97E-06	1.94E-09	3.40E-05	7.80E-06
50	C50	40	Passenger Truck	46	0.00E+00	1.06E-06	1.11E-07	3.57E+00	6.37E-06	2.05E-02	2.13E-06	1.89E-04	8.49E-04	1.21E-04	2.00E-04	1.31E-04	1.34E-04	3.06E-05	1.76E-05	3.77E-09	6.61E-05	3.20E-05
53	C51	70	Passenger Car	222	0.00E+00	2.81E-06	3.04E-07	1.08E+01	1.95E-05	7.23E-02	6.24E-06	4.52E-04	1.69E-03	2.73E-04	6.07E-04	3.92E-04	4.02E-04	3.97E-05	5.41E-05	1.47E-08	2.06E-04	7.06E-05
53	C51	70	Passenger Truck	371	0.00E+00	6.11E-06	6.47E-07	2.48E+01	3.87E-05	1.33E-01	1.27E-05	1.38E-03	3.04E-03	4.96E-04	1.21E-03	7.89E-04	8.08E-04	1.79E-04	1.24E-04	3.24E-08	4.05E-04	2.27E-04
53	C51	70	Single Unit Short Haul Truck	28	0.00E+00	6.47E-06	3.24E-07	5.07E+00	5.29E-06	1.01E-02	6.89E-06	3.19E-03	4.55E-04	9.11E-05	7.85E-04	1.93E-04	1.97E-04	5.08E-04	2.04E-05	8.25E-09	5.88E-04	5.97E-04
53	C51	70	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.40E-08	2.15E-01	2.28E-07	4.26E-04	3.00E-07	1.37E-04	2.08E-05	4.05E-06	3.43E-05	8.37E-06	8.51E-06	2.15E-05	8.68E-07	3.48E-10	2.58E-05	2.57E-05
53	C51	70	Combination Short Haul Truck	20	0.00E+00	1.02E-05	7.24E-07	7.38E+00	3.31E-08	8.77E-03	7.47E-06	1.07E-02	7.75E-04	1.69E-04	6.20E-04	2.14E-04	2.14E-04	1.11E-03	2.47E-05	0.00E+00	4.06E-04	2.01E-03
53	C51	70	Combination Long Haul Truck	18	0.00E+00	9.20E-06	6.16E-07	6.89E+00	3.81E-08	9.29E-03	6.99E-06	1.05E-02	7.70E-04	1.40E-04	6.41E-04	1.86E-04	1.88E-04	1.05E-03	2.31E-05	0.00E+00	4.53E-04	1.98E-03
50	C52	40	Passenger Car	48	0.00E+00	8.11E-07	8.77E-08	2.80E+00	5.64E-06	2.08E-02	1.80E-06	8.72E-05	8.35E-04	1.19E-04	1.75E-04	1.13E-04	1.16E-04	1.51E-05	1.39E-05	3.38E-09	5.94E-05	1.36E-05
50	C52	40	Passenger Truck	81	0.00E+00	1.85E-06	1.94E-07	6.24E+00	1.11E-05	3.58E-02	3.71E-06	3.30E-04	1.48E-03	2.11E-04	3.50E-04	2.29E-04	2.34E-04	5.35E-05	3.08E-05	6.58E-09	1.15E-04	5.59E-05
50	C52	40	Single Unit Short Haul Truck	7	0.00E+00	3.11E-06	1.63E-07	1.50E+00	2.72E-06	2.58E-03	3.31E-06	1.52E-03	2.85E-04	4.73E-05	3.69E-04	9.73E-05	9.88E-05	1.51E-04	6.04E-06	2.56E-09	2.70E-04	2.86E-04
50	C52	40	Combination Short Haul Truck	6	0.00E+00	5.36E-06	3.72E-07	2.72E+00	1.93E-08	4.67E-03	3.98E-06	5.97E-03	6.23E-04	1.12E-04	3.47E-04	1.11E-04	1.12E-04	4.10E-04	9.10E-06	0.00E+00	2.35E-04	1.12E-03
50	C52	40	Combination Long Haul Truck	6	0.00

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C57	70	Combination Long Haul Truck	16	0.00E+00	8.29E-06	5.54E-07	6.20E+00	3.43E-08	8.36E-03	6.29E-06	9.49E-03	6.93E-04	1.26E-04	5.77E-04	1.68E-04	1.69E-04	9.48E-04	2.08E-05	0.00E+00	4.08E-04	1.79E-03
50	C58	40	Passenger Car	32	0.00E+00	5.41E-07	5.85E-08	1.87E+00	3.77E-06	1.39E-02	1.20E-06	5.82E-05	5.57E-04	7.96E-05	1.17E-04	7.55E-05	7.75E-05	1.01E-05	9.29E-06	2.26E-09	3.96E-05	9.09E-06
50	C58	40	Passenger Truck	54	0.00E+00	1.24E-06	1.30E-07	4.16E+00	7.42E-06	2.39E-02	2.48E-06	2.20E-04	9.89E-04	1.41E-04	2.33E-04	1.53E-04	1.56E-04	3.57E-05	2.05E-05	4.39E-09	7.70E-05	3.73E-05
50	C58	40	Single Unit Short Haul Truck	1	0.00E+00	5.05E-07	2.65E-08	2.43E-01	4.41E-07	4.18E-04	5.38E-07	2.47E-04	4.62E-05	7.67E-06	5.98E-05	1.58E-05	1.60E-05	2.45E-05	9.80E-07	4.15E-10	4.38E-05	4.64E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	1.30E-06	9.04E-08	6.61E-01	4.68E-09	1.14E-03	9.68E-07	1.45E-03	1.51E-04	2.73E-05	8.44E-05	2.70E-05	2.72E-05	9.96E-05	2.21E-06	0.00E+00	5.72E-05	2.73E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	1.19E-06	7.74E-08	6.28E-01	5.32E-09	1.26E-03	9.13E-07	1.45E-03	1.52E-04	2.42E-05	8.69E-05	2.36E-05	2.41E-05	9.60E-05	2.10E-06	0.00E+00	6.28E-05	2.74E-04
53	C59	70	Passenger Car	106	0.00E+00	1.34E-06	1.45E-07	5.13E+00	9.32E-06	3.45E-02	2.98E-06	2.16E-04	8.08E-04	1.30E-04	2.90E-04	1.87E-04	1.92E-04	1.89E-05	2.58E-05	7.03E-09	9.81E-05	3.37E-05
53	C59	70	Passenger Truck	177	0.00E+00	2.92E-06	3.09E-07	1.18E+01	1.85E-05	6.33E-02	6.06E-06	6.60E-04	1.45E-03	2.37E-04	5.79E-04	3.76E-04	3.86E-04	8.54E-05	5.90E-05	1.54E-08	1.93E-04	1.08E-04
53	C59	70	Single Unit Short Haul Truck	8	0.00E+00	1.83E-06	9.15E-08	1.43E+00	1.49E-06	2.86E-03	1.95E-06	9.00E-04	1.28E-04	2.57E-05	2.22E-04	5.46E-05	5.55E-05	1.43E-04	5.77E-06	2.33E-09	1.66E-04	1.69E-04
53	C59	70	Combination Short Haul Truck	5	0.00E+00	2.76E-06	1.96E-07	2.00E+00	8.98E-09	2.38E-03	2.03E-06	2.90E-03	2.10E-04	4.59E-05	1.68E-04	5.81E-05	5.80E-05	3.02E-04	6.71E-06	0.00E+00	1.10E-04	5.47E-04
53	C59	70	Combination Long Haul Truck	5	0.00E+00	2.50E-06	1.67E-07	1.87E+00	1.03E-08	2.52E-03	1.90E-06	2.86E-03	2.09E-04	3.81E-05	1.74E-04	5.05E-05	5.10E-05	2.86E-04	6.26E-06	0.00E+00	1.23E-04	5.39E-04
52	C60	60	Passenger Car	229	0.00E+00	3.15E-06	3.41E-07	1.15E+01	2.19E-05	8.08E-02	7.00E-06	4.50E-04	2.26E-03	3.47E-04	6.81E-04	4.39E-04	4.51E-04	4.78E-05	5.75E-05	1.54E-08	2.31E-04	7.03E-05
52	C60	60	Passenger Truck	383	0.00E+00	6.92E-06	7.30E-07	2.62E+01	4.31E-05	1.44E-01	1.42E-05	1.45E-03	4.02E-03	6.22E-04	1.35E-03	8.81E-04	9.03E-04	1.99E-04	1.30E-04	3.26E-08	4.50E-04	2.39E-04
52	C60	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.95E-06	5.90E-03	5.11E-06	2.28E-03	3.88E-04	7.03E-05	5.82E-04	1.44E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.36E-04	4.27E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.51E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.55E-05	6.24E-06	6.35E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
52	C60	60	Combination Short Haul Truck	10	0.00E+00	5.87E-06	4.09E-07	3.82E+00	2.08E-08	5.14E-03	4.36E-06	6.37E-03	5.47E-04	1.08E-04	3.74E-04	1.22E-04	1.22E-04	5.76E-04	1.28E-05	0.00E+00	2.52E-04	1.20E-03
52	C60	60	Combination Long Haul Truck	9	0.00E+00	5.27E-06	3.43E-07	3.58E+00	2.39E-08	5.53E-03	4.06E-06	6.31E-03	5.50E-04	9.33E-05	3.85E-04	1.05E-04	1.06E-04	5.47E-04	1.20E-05	0.00E+00	2.79E-04	1.19E-03
9	D01	60	Passenger Car	829	0.00E+00	1.24E-05	1.34E-06	4.16E+01	8.64E-05	3.21E-01	2.76E-05	1.69E-03	8.42E-03	1.29E-03	2.69E-03	1.73E-03	1.78E-03	1.73E-04	2.09E-04	5.75E-08	9.10E-04	2.64E-04
9	D01	60	Passenger Truck	1389	0.00E+00	2.74E-05	2.89E-06	9.49E+01	1.71E-04	5.72E-01	5.64E-05	5.51E-03	1.54E-02	2.40E-03	5.37E-03	3.50E-03	3.58E-03	7.35E-04	4.72E-04	1.30E-07	1.79E-03	9.14E-04
9	D01	60	Single Unit Short Haul Truck	3	0.00E+00	8.98E-07	4.49E-08	5.72E-01	7.41E-07	1.11E-03	9.59E-07	4.28E-04	7.28E-05	1.32E-05	1.09E-04	2.69E-05	2.74E-05	5.73E-05	2.31E-06	9.53E-10	8.18E-05	8.02E-05
9	D01	60	Combination Short Haul Truck	26	0.00E+00	1.52E-05	1.06E-06	9.90E+00	5.39E-08	1.33E-02	1.13E-05	1.65E-02	1.42E-03	2.80E-04	9.68E-04	3.16E-04	3.16E-04	1.49E-03	3.31E-05	0.00E+00	6.52E-04	3.11E-03
9	D01	60	Combination Long Haul Truck	24	0.00E+00	1.37E-05	8.89E-07	9.28E+00	6.18E-08	1.43E-02	1.05E-05	1.63E-02	1.42E-03	2.42E-04	9.98E-04	2.71E-04	2.75E-04	1.42E-03	3.11E-05	0.00E+00	7.23E-04	3.08E-03
9	D02	60	Passenger Car	1060	0.00E+00	1.59E-05	1.72E-06	5.31E+01	1.10E-04	4.10E-01	3.53E-05	2.16E-03	1.08E-02	1.65E-03	3.43E-03	2.21E-03	2.27E-03	2.21E-04	2.66E-04	7.34E-08	1.16E-03	3.38E-04
9	D02	60	Passenger Truck	1774	0.00E+00	3.50E-05	3.70E-06	1.21E+02	2.19E-04	7.31E-01	7.21E-05	7.05E-03	1.97E-02	3.06E-03	6.86E-03	4.47E-03	4.58E-03	9.39E-04	6.03E-04	1.67E-07	2.28E-03	1.17E-03
9	D02	60	Single Unit Short Haul Truck	7	0.00E+00	2.07E-06	1.04E-07	1.32E+00	1.71E-06	2.56E-03	2.21E-06	9.89E-04	1.68E-04	3.05E-05	2.52E-04	6.22E-05	6.33E-05	1.32E-04	5.34E-06	2.20E-09	1.89E-04	1.85E-04
9	D02	60	Combination Short Haul Truck	32	0.00E+00	1.86E-05	1.29E-06	1.21E+01	6.58E-08	1.62E-02	1.38E-05	2.01E-02	1.73E-03	3.42E-04	1.18E-03	3.86E-04	3.86E-04	1.82E-03	4.05E-05	0.00E+00	7.96E-04	3.79E-03
9	D02	60	Combination Long Haul Truck	29	0.00E+00	1.67E-05	1.09E-06	1.13E+01	7.55E-08	1.75E-02	1.29E-05	2.00E-02	1.74E-03	2.95E-04	1.22E-03	3.31E-04	3.36E-04	1.73E-03	3.79E-05	0.00E+00	8.83E-04	3.76E-03
9	D03	60	Passenger Car	805	0.00E+00	1.21E-05	1.30E-06	4.04E+01	8.39E-05	3.12E-01	2.68E-05	1.64E-03	8.17E-03	1.25E-03	2.61E-03	1.68E-03	1.73E-03	1.68E-04	2.02E-04	5.58E-08	8.83E-04	2.57E-04
9	D03	60	Passenger Truck	1348	0.00E+00	2.66E-05	2.81E-06	9.21E+01	1.66E-04	5.56E-01	5.48E-05	5.35E-03	1.50E-02	2.33E-03	5.21E-03	3.40E-03	3.48E-03	7.14E-04	4.58E-04	1.27E-07	1.73E-03	8.87E-04
9	D03	60	Single Unit Short Haul Truck	36	0.00E+00	1.06E-05	5.31E-07	6.76E+00	8.74E-06	1.31E-02	1.13E-05	5.06E-03	8.59E-04	1.56E-04	1.29E-03	3.18E-04	3.23E-04	6.76E-04	2.73E-05	1.12E-08	9.66E-04	9.47E-04
9	D03	60	Single Unit Long Haul Truck	2	0.00E+00	4.63E-07	2.31E-08	2.88E-01	3.80E-07	5.55E-04	4.95E-07	2.19E-04	3.86E-05	6.89E-06	5.65E-05	1.38E-05	1.41E-05	2.88E-05	1.17E-06	4.78E-10	4.24E-05	4.10E-05
9	D03	60	Combination Short Haul Truck	39	0.00E+00	2.31E-05	1.61E-06	1.50E+01	8.18E-08	2.02E-02	1.71E-05	2.50E-02	2.15E-03	4.25E-04	1.47E-03	4.79E-04	4.80E-04	2.26E-03	5.03E-05	0.00E+00	9.89E-04	4.71E-03
9	D03	60	Combination Long Haul Truck	36	0.00E+00	2.07E-05	1.35E-06	1.41E+01	9.38E-08	2.17E-02	1.60E-05	2.48E-02	2.16E-03	3.67E-04	1.51E-03	4.12E-04	4.17E-04	2.15E-03	4.72E-05	0.00E+00	1.10E-03	4.67E-03
9	D04	60	Passenger Car	974	0.00E+00	1.46E-05	1.58E-06	4.88E+01	1.01E-04	3.77E-01	3.24E-05	1.99E-03	9.88E-03	1.52E-03	3.16E-03	2.03E-03	2.09E-03	2.03E-04	2.45E-04	6.75E-08	1.07E-03	3.10E-04
9	D04	60	Passenger Truck	1630	0.00E+00	3.22E-05	3.40E-06	1.11E+02	2.01E-04	6.72E-01	6.63E-05	6.47E-03	1.81E-02	2.81E-03	6.30E-03	4.11E-03	4.21E-03	8.63E-04	5.54E-04	1.53E-07	2.10E-03	1.07E-03
9	D04	60	Single Unit Short Haul Truck	40	0.00E+00	1.19E-05	5.94E-07	7.57E+00	9.79E-06	1.46E-02	1.27E-05	5.66E-03	9.62E-04	1.74E-04	1.44E-03	3.56E-04	3.62E-04	7.57E-04	3.06E-05	1.26E-08	1.08E-03	1.06E-03
9	D04	60	Single Unit Long Haul Truck	2	0.00E+00	5.19E-07	2.58E-08	3.23E-01	4.25E-07	6.22E-04	5.54E-07	2.45E-04	4.32E-05	7.72E-06	6.32E-05	1.55E-05	1.58E-05	3.23E-05	1.31E-06	5.36E-10	4.75E-05	4.59E-05
9	D04	60	Combination Short Haul Truck	68	0.00E+00	3.99E-05	2.78E-06	2.60E+01	1.41E-07	3.49E-02	2.96E-05	4.33E-02	3.72E-03	7.36E-04	2.54E-03	8.29E-04	8.30E-04	3.92E-03	8.69E-05	0.00E+00	1.71E-03	8.16E-03
9	D04	60	Combination Long Haul Truck	62	0.00E+00	3.58E-05	2.33E-06	2.44E+01	1.62E-07	3.76E-02	2.76E-05	4.29E-02	3.74E-03	6.34E-04	2.62E-03	7.12E-04	7.21E-04	3.72E-03	8.16E-05	0.00E+00	1.90E-03	8.08E-03
9	D05	60	Passenger Car	829	0.00E+00	1.24E-05	1.34E-06	4.16E+01	8.64E-05	3.21E-01	2.76E-05	1.69E-03	8.41E-03	1.29E-03	2.69E-03	1.73E-03	1.78E-03	1.73E-04	2.08E-04	5.74E-08	9.09E-04	2.64E-04
9	D05	60	Passenger Truck	1388	0.00E+00	2.74E-05	2.89E-06	9.49E+01	1.71E-04	5.72E-01	5.64E-05	5.51E-03	1.54E-02	2.40E-03	5.37E-03	3.50E-03	3.58E-03	7.35E-04	4.72E-04	1.30E-07	1.78E-03	9.14E-04
9	D05	60	Single Unit Short Haul Truck	32	0.00E+00	9.41E-06	4.71E-07	6.00E+00	7.76E-06	1.16E-02	1.00E-05	4.49E-03	7.63E-04	1.38E-04	1.14E-03	2.82E-04	2.87E-04	6.00E-04	2.42E-05	9.98E-09	8.57E-04	8.41E-04
9	D05	60	Single Unit Long Haul Truck	1	0.00E+00	4.11E-07	2.05E-08	2.56E-01	3.37E-07	4.93E-04	4.39E-07	1.94E-04	3.42E-05	6.12E-06	5.01E-05	1.23E-05	1.25E-05	2.56E-05	1.04E-06	4.25E-10	3.76E-05	3.64E-05
9	D05	60	Combination Short Haul Truck	27	0.00E+00	1.60E-05	1.11E-06	1.04E+01	5.66E-08	1.40E-02	1.19E-05	1.73E-02	1.49E-03	2.95E-04	1.02E-03	3.32E-04	3.32E-04	1.57E-03	3.48E-05	0.00E+00	6.85E-04	3.26E-03
9	D05	60	Combination Long Haul Truck	25	0.00E+00	1.43E-05	9.34E-07	9.75E+00	6.49E-08	1.51E-02	1.11E-05	1.72E-02	1.50E-03	2.54E-04	1.05E-03	2.85E-04	2.89E-04	1.49E-03	3.26E-05	0.00E+00	7.60E-04	3.24E-03
9	D06	60	Passenger Car	1287	0.00E+00	1.93E-05	2.08E-06	6.45E+01	1.34E-04	4.98E-01	4.28E-05	2.62E-03	1.31E-02	2.01E-03	4.17E-03	2.69E-03	2.76E-03	2.69E-04	3.24E-04	8.92E-08	1.41E-03	4.10E-04
9	D06	60	Passenger Truck	2155	0.00E+00	4.25E-05	4.49E-06	1.47E+02	2.66E-04	8.88E-01	8.76E-05	8.56E-03	2.40E-02	3.72E-03	8.33E-03	5.43E-03	5.56E-03	1.14E-03	7.32E-04	2.02E-07	2.77E-03	1.42E-03
9	D06	60	Single Unit Short Haul Truck	48	0.00E+00	1.42E-05	7.08E-07	9.02E+00	1.17E-05	1.75E-02	1.51E-05	6.75E-03	1.15E-03	2.08E-04	1.72E-03	4.25E-04	4.32E-04	9.03E-04	3.64E-05	1.50E-08	1.29E-03	1.26E-03
9	D06	60	Single Unit Long Haul Truck	2	0.00E+00	6.18E-07	3.08E-08	3.85E-01	5.07E-07	7.41E-04	6.60E-07	2.92E-04	5.15E-05	9.20E-06	7.54E-05	1.85E-05	1.88E-05	3.85E-05	1.56E-06	6.39E-10	5.66E-05	5.47E-05
9	D06	60	Combination Short Haul Truck	67	0.00E+00	3.92E-05	2.73E-06	2.55E+01	1.39E-07	3.43E-02	2.91E-05	4.25E-02	3.65E-03	7.22E-04	2.49E-03	8.13E-04	8.14E-04	3.84E-03	8.53E-05	0.00E+00	1.68E-03	8.00E-03
9	D06	60	Combination Long Haul Truck	61	0.00E+00	3.52E-05	2.29E-06	2.39E+01	1.59E-07	3.69E-02	2.71E-05	4.21E-02	3.67E-03	6.22E-04	2.57E-03	6.99E-04	7.07E-04	3.65E-03	8.00E-05	0.00E+00	1.86E-03	7.93E-03
11	D07	80	Passenger Car	984	0.00E+00	1.20E-05	1.30E-06	4.58E+01	8.33E-05	3.18E-01	2.66E-05	2.02E-03	5.41E-03	9.41E-04	2.59E-03	1.67E-03	1.71E-03	1.54E-04	2.31E-04	6.48E-08	8.77E-04	3.16E-04
11	D07	80	Passenger Truck	1648	0.00E+00	2.57E-05	2.73E-06	1.06E+02	1.65E-04	5.86E-01	5.39E-05	6.01E-03	9.71E-03	1.72E-03	5.16E-03	3.35E-03	3.43E-03	7.40E-04	5.29E-04	1.44E-07	1.73E-03	9.81E-04
11	D07	80	Single Unit Short Haul Truck	42	0.00E+00	7.79E-06	3.87E-07	7.64E+00	6.27E-06	1.53E-02	8.29E-06	3.99E-03	4.89E-04	1.11E-04	9.48E-04	2.31E-04	2.35E-04	7.67E-04	3.08E-05	1.22E-08	7.13E-04	7.47E-04
11	D07	80	Single Unit Long Haul Truck	2	0.00E+00	3.39E-07	1.67E-08	3.23E-01	2.68E-07	6.38E-04	3.60E-07	1.71E-04	2.24E-05	4.89E-06	4.14E-05	9.93E-06	1.01E-05	3.23E-05	1.31E-06	5.09E-10	3.13E-05	3.19E-05
11	D07	80	Combination Short Haul Truck	38	0.00E+00	1.69E-05	1.21E-06	1.40E+01	5.33E-08	1.49E-02	1.23E-05	1.73E-02	1.02E-03	2.52E-04	1.01E-03	3.56E-04	3.54E-04	2.10E-03	4.67E-05	0.00E+00	6.52E-04	3.26E-03
11	D07	80	Combination Long Haul Truck	35	0.00E+00	1.51E-05	1.02E-06	1.29E+01	6.15E-08	1.55E-02	1.15E-05	1.68E-02	9.99E-04	2.01E-04	1.04E-03	3.07E-04	3.08E-04	1.97E-03	4.32E-05	0.00E+00	7.30E-04	3.16E-03
11	D08	80	Passenger Car	1058	0.00E+00	1.29E-05	1.39E-06	4.93E+01	8.96E-05	3.42E-01	2.86E-05	2.17E-03	5.82E-03	1.01E-03	2.78E-03	1.80E-03	1.84E-03	1.66E-04	2.48E-04	6.96E-08	9.43E-04	3.40E-04
11	D08	80	Passenger Truck	1772	0.00E+00	2.76E-05	2.93E-06	1.14E+02	1.77E-04	6.30E-01	5.79E-05	6.46E-03	1.04E-02	1.85E-03	5.54E-03	3.60E-03	3.69E-03	7.96E-04	5.69E-04	1.55E-07	1.85E-03	1.05E-03
11	D08	80	Single Unit Short Haul Truck	58	0.00E+00	1.08E-05	5.38E-07	1.06E+01	8.72E-06	2.13E-02	1.15E-05	5.55E-03	6.81E-04	1.54E-04	1.32E-03	3.21E-04	3.26E-04	1.07E-03	4.28E-05	1.70E-08	9.92E-04	1.04E-03
11	D08	80	Single Unit Long Haul Truck	3	0.00E+00	4.71E-07	2.32E-08	4.50E-01	3.72E-07	8.87E-04	5.01E-07	2.37E-04	3.11E-05	6.80E-06	5.75E-05	1.38E-05	1.40E-05	4.49E-05	1.82E-06	7.09E-10	4.35E-05	4.44E-05
11	D08	80	Combination Short Haul Truck	59	0.00E+00	2.57E-05	1.84E-06	2.13E+01	8.12E-08	2.28E-02	1.88E-05	2.64E-02	1.56E-03	3.84E-04	1.53E-03	5.43E-04	5.39E-04	3.21E-03	7.12E-05	0.00E+00	9.94E-04	4.97E-03
11	D08	80	Combination Long Haul Truck	53	0.00E+00	2.31E-05	1.55E-06	1.97E+01	9.38E-08	2.36E-02	1.75E-05	2.56E-02	1.52E-03	3.07E-04	1.58E-03	4.67E-04	4.70E-04	3.01E-03	6.59E-05	0.00E+00	1.11E-03	4.83E-03
11	D09	80	Passenger Car	757	0.00E+00	9.21E-06	9.97E-07	3.53E+01	6.41E-05	2.45E-01	2.05E-05	1.56E-03	4.17E-03	7.24E-04	1.99E-03	1.29E-03	1.32E-03	1.19E-04	1.78E-04	4.98E-08	6.75E-04	2.43E-04
11	D09	80	Passenger Truck	1268	0.00E+00	1.98E-05	2.10E-06	8.15E+01	1.27E-04	4.51E-01	4.15E-05	4.62E-03	7.47E-03	1.33E-03	3.97E-03	2.58E-03	2.64E-03	5.70E-04	4.07E-04	1.11E-07	1.33E-03	7.55E-04
11	D09	80	Single Unit Short Haul Truck	19	0.00E+00	3.62E-06	1.80E-07	3.56E+00	2.92E-06	7.12E-03	3.86E-06	1.86E-03	2.28E-04	5.15E-05	4.41E-04	1.07E-04	1.09E-04	3.57E-04	1.43E-05	5.69E-09	3.32E-04	3.47E-04
11	D09	80	Single Unit Long Haul Truck	1	0.00E+00	1.58E-07	7.77E-09	1.50E-01	1.25E-07	2.97E-04	1.68E-07	7.94E-05	1.04E-05	2.27E-06	1.92E-05	4.62E-06	4.70E-06	1.50E-05	6.07E-07	2.37E-10	1.45E-05	1.49E-05
11	D09	80	Combination Short Haul Truck	21	0.00E+00	9.32E-06	6.66E-07	7.70E+00	2.94E-08	8.25E-03	6.81E-06	9.55E-03	5.64E-04	1.39E-04	5.55E-04	1.97E-04	1.95E-04	1.16E-03	2.58E-05	0.00E+00	3.60E-04	1.80E-03
11	D09	80	Combination Long Haul Truck	19	0.00E+00	8.35E-06	5.61E-07	7.12E+00	3.40E-08	8.55E-03	6.32E-06	9.27E-03	5.52E-04	1.11E-04	5.73E-04	1.69E-04	1.70E-04	1.09E-03	2.39E-05	0.00E+00	4.03E-04	1.75E-03
11	D10	80	Passenger Car	1047	0.00E+00	1.27E-05	1.38E-06	4.87E+01	8.86E-05	3.39E-01	2.83E-05	2.15E-03	5.76E-03	1.00E-03	2.76E-03	1.78E-03	1.82E-03	1.64E-04	2.46E-04	6.89E-08	9.33E-04	3.36E-04
11	D10	80	Passenger Truck	1753	0.00E+00	2.73E-05	2.90E-06	1.13E+02	1.75E-04	6.23E-01	5.73E-05	6.39E-03	1.03E-02	1.83E-03	5.48E-03	3.56E-03	3.65E-03	7.87E-04	5.63E-04	1.53E-07	1.84E-03	1.04E-03
11	D10	80	Single Unit Short Haul Truck	35	0.00E+00	6.64E-06	3.30E-07	6.52E+00	5.35E-06	1.31E-02	7.07E-06	3.40E-03	4.17E-04	9.44E-05	8.08E-04	1.97E-04	2.00E-04	6.54E-04	2.63E-05	1.04E-08	6.08E-04	6.37E-04
11	D10	80	Single Unit Long Haul Truck	2	0.00E+00	2.89E-07	1.42E-08	2.76E-01	2.28E-07	5.44E-04	3.07E-07	1.46E-04	1.91E-05	4.17E-06	3.53E-05	8.47E-06	8.61E-06	2.75E-05	1.11E-06	4.34E-10	2.67E-05	2.72E-05
11	D10	80	Combination Short Haul Truck	37	0.00E+00	1.63E-05	1.17E-06	1.35E+01	5.15E-08	1.44E-02	1.19E-05	1.67E-02	9.87E-04	2.43E-04	9.71E-04	3.44E-04	3.42E-04	2.03E-03	4.51E-05	0.00E+00	6.30E-04	3.15E-03
11	D10	80	Combination Long Haul Truck	34	0.00E+00	1.46E-05	9.82E-07	1.25E+01	5.95E-08	1.50E-02	1.11E-05	1.62E-02	9.65E-04	1.94E-04	1.00E-03	2.96E-04	2.98E-04	1.90E-03	4.18E-05	0.00E+00	7.05E-04	3.06E-03
11	D11	80	Passenger Car	722	0.00E+00	8.78E-06	9.50E-07	3.36E+01	6.11E-05	2.34E-01	1.95E-05	1.48E-03	3.97E-03	6.90E-04	1.90E-03	1.23E-03	1.26E-03	1.13E-04	1.70E-04	4.75E-08	6.43E-04	2.32E-04
11	D11	80	Passenger Truck	1209	0.00E+00	1.89E-05	2.00E-06	7.77E+01	1.21E-04	4.30E-01	3.95E-05	4.41E-03	7.12E-03	1.26E-03	3.78E-03	2.46E-03	2.52E-03	5.43E-04	3.88E-04	1.06E-07	1.27E-03	7.20E-04
11	D11	80	Single Unit Short Haul Truck	19	0.00E+00	3.50E-06	1.74E-07	3.44E+00	2.82E-06	6.88E-03	3.73E-06	1.79E-03	2.20E-04	4.98E-05	4.26E-04	1.04E-04	1.05E-04	3.45E-04	1.38E-05	5.49E-09	3.21E-04	3.36E-04
11	D11	80	Single Unit Long Haul Truck	1	0.00E+00	1.52E-07	7.50E-09	1.45E-01	1.20E-07	2.87E-04	1.62E-07	7.67E-05	1.01E-05	2.20E-06	1.86E-05	4.46E-06	4.54E-06	1.45E-05	5.87E-07	2.29E-10	1.41E-05	1.44E-05
11	D11	80	Combination Short Haul Truck	22	0.00E+00	9.55E-06	6.83E-07	7.90E+00	3.01E-08	8.46E-03	6.98E-06	9.79E-03	5.78E-04	1.42E-04	5.69E-04	2.02E-04	2.00E-04	1.19E-03	2.64E-05	0.00E+00	3.69E-04	1.85E-03
11	D11	80	Combination Long Haul Truck	20	0.00E+00	8.56E-06	5.75E-07	7.30E+00	3.48E-08	8.77E-03	6.48E-06	9.51E-03	5.65E-04	1.14E-04	5.88E-04	1.74E-04	1.75E-04	1.12E-03	2.45E-05	0.00E+00	4.13E-04	1.79E-03
11	D12	80	Passenger Car	1163	0.00E+00	1.41E-05	1.53E-06	5.41E+01	9.85E-05	3.76E-01	3.15E-05	2.39E-03	6.40E-03	1.11E-03	3.06E-03	1.97E-03	2.03E-03	1.82E-04	2.73E-04	7.65E-08	1.04E-03	3.73E-04
11	D12	80	Pass

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D16	60	Passenger Car	705	0.00E+00	1.06E-05	1.14E-06	3.54E+01	7.35E-05	2.73E-01	2.35E-05	1.44E-03	7.16E-03	1.10E-03	2.29E-03	1.47E-03	1.51E-03	1.47E-04	1.77E-04	4.89E-08	7.74E-04	2.25E-04
9	D16	60	Passenger Truck	1181	0.00E+00	2.33E-05	2.46E-06	8.07E+01	1.46E-04	4.87E-01	4.80E-05	4.69E-03	1.31E-02	2.04E-03	4.56E-03	2.97E-03	3.05E-03	6.25E-04	4.01E-04	1.11E-07	1.52E-03	7.77E-04
9	D16	60	Single Unit Short Haul Truck	32	0.00E+00	9.39E-06	4.70E-07	5.98E+00	7.74E-06	1.16E-02	1.00E-05	4.48E-03	7.61E-04	1.38E-04	1.14E-03	2.82E-04	2.86E-04	5.99E-04	2.42E-05	9.96E-09	8.55E-04	8.39E-04
9	D16	60	Single Unit Long Haul Truck	1	0.00E+00	4.10E-07	2.04E-08	2.55E-01	3.36E-07	4.92E-04	4.38E-07	1.94E-04	3.41E-05	6.10E-06	5.00E-05	1.23E-05	1.25E-05	2.55E-05	1.03E-06	4.23E-10	3.75E-05	3.63E-05
9	D16	60	Combination Short Haul Truck	25	0.00E+00	1.45E-05	1.01E-06	9.41E+00	5.13E-08	1.27E-02	1.07E-05	1.57E-02	1.35E-03	2.67E-04	9.21E-04	3.00E-04	3.01E-04	1.42E-03	3.15E-05	0.00E+00	6.20E-04	2.96E-03
9	D16	60	Combination Long Haul Truck	22	0.00E+00	1.30E-05	8.45E-07	8.83E+00	5.88E-08	1.36E-02	1.00E-05	1.56E-02	1.35E-03	2.30E-04	9.49E-04	2.58E-04	2.61E-04	1.35E-03	2.96E-05	0.00E+00	6.88E-04	2.93E-03
10	D17	70	Passenger Car	273	0.00E+00	3.56E-06	3.85E-07	1.31E+01	2.48E-05	9.25E-02	7.92E-06	5.47E-04	2.12E-03	3.39E-04	7.71E-04	4.97E-04	5.10E-04	4.89E-05	6.58E-05	1.79E-08	2.61E-04	8.54E-05
10	D17	70	Passenger Truck	457	0.00E+00	7.81E-06	8.26E-07	3.01E+01	4.94E-05	1.70E-01	1.62E-05	1.71E-03	3.85E-03	6.25E-04	1.55E-03	1.01E-03	1.03E-03	2.21E-04	1.50E-04	4.02E-08	5.16E-04	2.81E-04
10	D17	70	Single Unit Short Haul Truck	12	0.00E+00	2.76E-06	1.38E-07	2.16E+00	2.26E-06	4.33E-03	2.95E-06	1.36E-03	1.95E-04	3.89E-05	3.35E-04	8.27E-05	8.41E-05	2.17E-04	8.73E-06	3.52E-09	2.51E-04	2.55E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	5.99E-09	9.19E-02	9.76E-08	1.82E-04	1.28E-07	5.86E-05	8.88E-06	1.73E-06	1.47E-05	3.58E-06	3.64E-06	9.18E-06	3.71E-07	1.49E-10	1.10E-05	1.10E-05
10	D17	70	Combination Short Haul Truck	14	0.00E+00	7.27E-06	5.16E-07	5.27E+00	2.36E-08	6.26E-03	5.33E-06	7.63E-03	5.53E-04	1.21E-04	4.43E-04	1.53E-04	1.53E-04	7.94E-04	1.76E-05	0.00E+00	2.90E-04	1.44E-03
10	D17	70	Combination Long Haul Truck	13	0.00E+00	6.57E-06	4.39E-07	4.92E+00	2.72E-08	6.63E-03	4.99E-06	7.52E-03	5.49E-04	1.00E-04	4.58E-04	1.33E-04	1.34E-04	7.51E-04	1.65E-05	0.00E+00	3.23E-04	1.42E-03
10	D18	70	Passenger Car	121	0.00E+00	1.59E-06	1.72E-07	5.82E+00	1.10E-05	4.12E-02	3.53E-06	2.43E-04	9.41E-04	1.51E-04	3.43E-04	2.21E-04	2.27E-04	2.17E-05	2.93E-05	7.98E-09	1.16E-04	3.80E-05
10	D18	70	Passenger Truck	203	0.00E+00	3.48E-06	3.68E-07	1.34E+01	2.20E-05	7.58E-02	7.22E-06	7.61E-04	1.71E-03	2.78E-04	6.89E-04	4.48E-04	4.59E-04	9.86E-05	6.69E-05	1.79E-08	2.30E-04	1.25E-04
10	D18	70	Single Unit Short Haul Truck	2	0.00E+00	3.72E-07	1.86E-08	2.91E-01	3.04E-07	5.83E-04	3.97E-07	1.83E-04	2.62E-05	5.24E-06	4.52E-05	1.11E-05	1.13E-05	2.92E-05	1.18E-06	4.75E-10	3.38E-05	3.43E-05
10	D18	70	Combination Short Haul Truck	3	0.00E+00	1.37E-06	9.76E-08	9.95E-01	4.46E-09	1.18E-03	1.01E-06	1.44E-03	1.04E-04	2.28E-05	8.36E-05	2.89E-05	2.88E-05	1.50E-04	3.33E-06	0.00E+00	5.48E-05	2.71E-04
10	D18	70	Combination Long Haul Truck	2	0.00E+00	1.24E-06	8.30E-08	9.29E-01	5.14E-09	1.25E-03	9.42E-07	1.42E-03	1.04E-04	1.89E-05	8.65E-05	2.51E-05	2.54E-05	1.42E-04	3.11E-06	0.00E+00	6.11E-05	2.68E-04
11	D19	80	Passenger Car	861	0.00E+00	1.05E-05	1.13E-06	4.01E+01	7.29E-05	2.79E-01	2.33E-05	1.77E-03	4.74E-03	8.24E-04	2.27E-03	1.46E-03	1.50E-03	1.35E-04	2.02E-04	5.67E-08	7.68E-04	2.77E-04
11	D19	80	Passenger Truck	1443	0.00E+00	2.25E-05	2.39E-06	9.27E+01	1.44E-04	5.13E-01	4.72E-05	5.26E-03	8.50E-03	1.51E-03	4.51E-03	2.93E-03	3.00E-03	6.48E-04	4.63E-04	1.26E-07	1.51E-03	8.59E-04
11	D19	80	Single Unit Short Haul Truck	163	0.00E+00	3.05E-05	1.52E-06	2.99E+01	2.46E-05	6.00E-02	3.25E-05	1.56E-02	1.92E-03	4.34E-04	3.71E-03	9.04E-04	9.19E-04	3.00E-03	1.21E-04	4.79E-08	2.79E-03	2.92E-03
11	D19	80	Single Unit Long Haul Truck	7	0.00E+00	1.33E-06	6.54E-08	1.27E+00	1.05E-06	2.50E-03	1.41E-06	6.69E-04	8.76E-05	1.91E-05	1.62E-04	3.89E-05	3.96E-05	1.26E-04	5.11E-06	2.00E-09	1.22E-04	1.25E-04
11	D19	80	Combination Short Haul Truck	59	0.00E+00	2.58E-05	1.84E-06	2.13E+01	8.12E-08	2.28E-02	1.88E-05	2.64E-02	1.56E-03	3.84E-04	1.53E-03	5.44E-04	5.39E-04	3.21E-03	7.13E-05	0.00E+00	9.94E-04	4.97E-03
11	D19	80	Combination Long Haul Truck	53	0.00E+00	2.31E-05	1.55E-06	1.97E+01	9.39E-08	2.36E-02	1.75E-05	2.56E-02	1.52E-03	3.07E-04	1.58E-03	4.68E-04	4.70E-04	3.01E-03	6.59E-05	0.00E+00	1.11E-03	4.83E-03
11	D20	80	Passenger Car	1075	0.00E+00	1.31E-05	1.41E-06	5.00E+01	9.10E-05	3.47E-01	2.91E-05	2.21E-03	5.91E-03	1.03E-03	2.83E-03	1.82E-03	1.87E-03	1.68E-04	2.52E-04	7.07E-08	9.57E-04	3.45E-04
11	D20	80	Passenger Truck	1799	0.00E+00	2.81E-05	2.98E-06	1.16E+02	1.80E-04	6.40E-01	5.88E-05	6.56E-03	1.06E-02	1.88E-03	5.63E-03	3.66E-03	3.75E-03	8.08E-04	5.78E-04	1.57E-07	1.88E-03	1.07E-03
11	D20	80	Single Unit Short Haul Truck	243	0.00E+00	4.56E-05	2.26E-06	4.47E+01	3.67E-05	8.96E-02	4.85E-05	2.34E-02	2.86E-03	6.48E-04	5.55E-03	1.35E-03	1.37E-03	4.49E-03	1.80E-04	7.15E-08	4.18E-03	4.37E-03
11	D20	80	Single Unit Long Haul Truck	11	0.00E+00	1.98E-06	9.77E-08	1.89E+00	1.57E-06	3.73E-03	2.11E-06	9.99E-04	1.31E-04	2.86E-05	2.42E-04	5.81E-05	5.91E-05	1.89E-04	7.64E-06	2.98E-09	1.83E-04	1.87E-04
11	D20	80	Combination Short Haul Truck	28	0.00E+00	1.24E-05	8.88E-07	1.03E+01	3.92E-08	1.10E-02	9.07E-06	1.27E-02	7.51E-04	1.85E-04	7.39E-04	2.62E-04	2.60E-04	1.55E-03	3.44E-05	0.00E+00	4.79E-04	2.40E-03
11	D20	80	Combination Long Haul Truck	26	0.00E+00	1.11E-05	7.47E-07	9.49E+00	4.53E-08	1.14E-02	8.42E-06	1.24E-02	7.35E-04	1.48E-04	7.64E-04	2.25E-04	2.27E-04	1.45E-03	3.18E-05	0.00E+00	5.37E-04	2.33E-03
11	D21	80	Passenger Car	805	0.00E+00	9.79E-06	1.06E-06	3.75E+01	6.81E-05	2.60E-01	2.18E-05	1.65E-03	4.43E-03	7.69E-04	2.12E-03	1.37E-03	1.40E-03	1.26E-04	1.89E-04	5.29E-08	7.17E-04	2.58E-04
11	D21	80	Passenger Truck	1347	0.00E+00	2.10E-05	2.23E-06	8.66E+01	1.35E-04	4.79E-01	4.40E-05	4.91E-03	7.93E-03	1.41E-03	4.22E-03	2.74E-03	2.80E-03	6.05E-04	4.33E-04	1.18E-07	1.41E-03	8.02E-04
11	D21	80	Single Unit Short Haul Truck	127	0.00E+00	2.39E-05	1.19E-06	2.34E+01	1.92E-05	4.69E-02	2.54E-05	1.22E-02	1.50E-03	3.39E-04	2.91E-03	7.07E-04	7.19E-04	2.35E-03	9.44E-05	3.74E-08	2.19E-03	2.29E-03
11	D21	80	Single Unit Long Haul Truck	6	0.00E+00	1.04E-06	5.12E-08	9.91E-01	8.21E-07	1.95E-03	1.10E-06	5.23E-04	6.85E-05	1.50E-05	1.27E-04	3.04E-05	3.09E-05	9.89E-05	4.00E-06	1.56E-09	9.58E-05	9.79E-05
11	D21	80	Combination Short Haul Truck	66	0.00E+00	2.90E-05	2.07E-06	2.40E+01	9.14E-08	2.57E-02	2.12E-05	2.97E-02	1.75E-03	4.32E-04	1.73E-03	6.12E-04	6.07E-04	3.61E-03	8.02E-05	0.00E+00	1.12E-03	5.60E-03
11	D21	80	Combination Long Haul Truck	60	0.00E+00	2.59E-05	1.74E-06	2.21E+01	1.06E-07	2.66E-02	1.97E-05	2.88E-02	1.71E-03	3.45E-04	1.78E-03	5.26E-04	5.29E-04	3.38E-03	7.42E-05	0.00E+00	1.25E-03	5.43E-03
11	D22	80	Passenger Car	873	0.00E+00	1.06E-05	1.15E-06	4.06E+01	7.39E-05	2.82E-01	2.36E-05	1.79E-03	4.80E-03	8.34E-04	2.30E-03	1.48E-03	1.52E-03	1.37E-04	2.05E-04	5.74E-08	7.78E-04	2.80E-04
11	D22	80	Passenger Truck	1461	0.00E+00	2.28E-05	2.42E-06	9.39E+01	1.46E-04	5.19E-01	4.78E-05	5.33E-03	8.61E-03	1.53E-03	4.57E-03	2.97E-03	3.04E-03	6.56E-04	4.69E-04	1.28E-07	1.53E-03	8.70E-04
11	D22	80	Single Unit Short Haul Truck	76	0.00E+00	1.42E-05	7.04E-07	1.39E+01	1.14E-05	2.79E-02	1.51E-05	7.26E-03	8.91E-04	2.02E-04	1.73E-03	4.20E-04	4.27E-04	1.40E-03	5.61E-05	2.22E-08	1.30E-03	1.36E-03
11	D22	80	Single Unit Long Haul Truck	3	0.00E+00	6.17E-07	3.04E-08	5.89E-01	4.87E-07	1.16E-03	6.56E-07	3.11E-04	4.07E-05	8.89E-06	7.53E-05	1.81E-05	1.84E-05	5.88E-05	2.38E-06	9.27E-10	5.69E-05	5.81E-05
11	D22	80	Combination Short Haul Truck	46	0.00E+00	2.02E-05	1.45E-06	1.67E+01	6.38E-08	1.79E-02	1.48E-05	2.07E-02	1.22E-03	3.02E-04	1.20E-03	4.27E-04	4.24E-04	2.52E-03	5.60E-05	0.00E+00	7.81E-04	3.91E-03
11	D22	80	Combination Long Haul Truck	42	0.00E+00	1.81E-05	1.22E-06	1.55E+01	7.38E-08	1.86E-02	1.37E-05	2.01E-02	1.20E-03	2.41E-04	1.24E-03	3.67E-04	3.70E-04	2.36E-03	5.18E-05	0.00E+00	8.75E-04	3.79E-03
9	D23	60	Passenger Car	748	0.00E+00	1.12E-05	1.21E-06	3.75E+01	7.79E-05	2.89E-01	2.49E-05	1.53E-03	7.59E-03	1.17E-03	2.42E-03	1.56E-03	1.60E-03	1.56E-04	1.88E-04	5.18E-08	8.20E-04	2.38E-04
9	D23	60	Passenger Truck	1252	0.00E+00	2.47E-05	2.61E-06	8.56E+01	1.54E-04	5.16E-01	5.09E-05	4.97E-03	1.39E-02	2.16E-03	4.84E-03	3.15E-03	3.23E-03	6.63E-04	4.25E-04	1.18E-07	1.61E-03	8.24E-04
9	D23	60	Single Unit Short Haul Truck	63	0.00E+00	1.86E-05	9.28E-07	1.18E+01	1.53E-05	2.29E-02	1.98E-05	8.85E-03	1.50E-03	2.73E-04	2.26E-03	5.57E-04	5.66E-04	1.18E-03	4.78E-05	1.97E-08	1.69E-03	1.66E-03
9	D23	60	Single Unit Long Haul Truck	3	0.00E+00	8.11E-07	4.03E-08	5.05E-01	6.65E-07	9.72E-04	8.65E-07	3.83E-04	6.75E-05	1.21E-05	9.88E-05	2.42E-05	2.46E-05	5.04E-05	2.04E-06	8.37E-10	7.42E-05	7.17E-05
9	D23	60	Combination Short Haul Truck	41	0.00E+00	2.40E-05	1.67E-06	1.56E+01	8.50E-08	2.10E-02	1.78E-05	2.60E-02	2.23E-03	4.42E-04	1.53E-03	4.98E-04	4.99E-04	2.35E-03	5.23E-05	0.00E+00	1.03E-03	4.90E-03
9	D23	60	Combination Long Haul Truck	37	0.00E+00	2.15E-05	1.40E-06	1.46E+01	9.75E-08	2.26E-02	1.66E-05	2.58E-02	2.25E-03	3.81E-04	1.57E-03	4.28E-04	4.33E-04	2.24E-03	4.90E-05	0.00E+00	1.14E-03	4.86E-03
9	D24	60	Passenger Car	1012	0.00E+00	1.52E-05	1.64E-06	5.08E+01	1.06E-04	3.92E-01	3.37E-05	2.07E-03	1.03E-02	1.58E-03	3.28E-03	2.12E-03	2.17E-03	2.12E-04	2.55E-04	7.01E-08	1.11E-03	3.23E-04
9	D24	60	Passenger Truck	1696	0.00E+00	3.34E-05	3.53E-06	1.16E+02	2.09E-04	6.99E-01	6.89E-05	6.73E-03	1.89E-02	2.93E-03	6.55E-03	4.27E-03	4.37E-03	8.98E-04	5.76E-04	1.59E-07	2.18E-03	1.12E-03
9	D24	60	Single Unit Short Haul Truck	49	0.00E+00	1.43E-05	7.17E-07	9.14E+00	1.18E-05	1.77E-02	1.53E-05	6.84E-03	1.16E-03	2.11E-04	1.74E-03	4.30E-04	4.37E-04	9.14E-04	3.69E-05	1.52E-08	1.31E-03	1.28E-03
9	D24	60	Single Unit Long Haul Truck	2	0.00E+00	6.26E-07	3.12E-08	3.90E-01	5.13E-07	7.51E-04	6.69E-07	2.96E-04	5.22E-05	9.32E-06	7.63E-05	1.87E-05	1.90E-05	3.89E-05	1.58E-06	6.47E-10	5.73E-05	5.54E-05
9	D24	60	Combination Short Haul Truck	28	0.00E+00	1.66E-05	1.16E-06	1.08E+01	5.89E-08	1.45E-02	1.23E-05	1.80E-02	1.55E-03	3.06E-04	1.06E-03	3.45E-04	3.45E-04	1.63E-03	3.62E-05	0.00E+00	7.12E-04	3.39E-03
9	D24	60	Combination Long Haul Truck	26	0.00E+00	1.49E-05	9.71E-07	1.01E+01	6.75E-08	1.57E-02	1.15E-05	1.79E-02	1.56E-03	2.64E-04	1.09E-03	2.96E-04	3.00E-04	1.55E-03	3.39E-05	0.00E+00	7.90E-04	3.36E-03
9	D25	60	Passenger Car	800	0.00E+00	1.20E-05	1.30E-06	4.01E+01	8.34E-05	3.10E-01	2.66E-05	1.63E-03	8.12E-03	1.25E-03	2.59E-03	1.67E-03	1.71E-03	1.67E-04	2.01E-04	5.54E-08	8.77E-04	2.55E-04
9	D25	60	Passenger Truck	1339	0.00E+00	2.64E-05	2.79E-06	9.15E+01	1.65E-04	5.52E-01	5.44E-05	5.32E-03	1.49E-02	2.31E-03	5.18E-03	3.37E-03	3.45E-03	7.09E-04	4.55E-04	1.26E-07	1.72E-03	8.81E-04
9	D25	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.03E-07	8.96E+00	1.16E-05	1.73E-02	1.50E-05	6.70E-03	1.14E-03	2.07E-04	1.71E-03	4.22E-04	4.29E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.26E-03
9	D25	60	Single Unit Long Haul Truck	2	0.00E+00	6.14E-07	3.06E-08	3.82E-01	5.03E-07	7.36E-04	6.56E-07	2.90E-04	5.11E-05	9.14E-06	7.48E-05	1.83E-05	1.86E-05	3.82E-05	1.55E-06	6.34E-10	5.62E-05	5.43E-05
9	D25	60	Combination Short Haul Truck	30	0.00E+00	1.78E-05	1.24E-06	1.16E+01	6.32E-08	1.56E-02	1.32E-05	1.93E-02	1.66E-03	3.29E-04	1.14E-03	3.70E-04	3.71E-04	1.75E-03	3.89E-05	0.00E+00	7.64E-04	3.64E-03
9	D25	60	Combination Long Haul Truck	28	0.00E+00	1.60E-05	1.04E-06	1.09E+01	7.25E-08	1.68E-02	1.23E-05	1.92E-02	1.67E-03	2.83E-04	1.17E-03	3.18E-04	3.22E-04	1.66E-03	3.65E-05	0.00E+00	8.48E-04	3.61E-03
9	D26	60	Passenger Car	1005	0.00E+00	1.50E-05	1.63E-06	5.04E+01	1.05E-04	3.89E-01	3.35E-05	2.05E-03	1.02E-02	1.57E-03	3.26E-03	2.10E-03	2.15E-03	2.10E-04	2.53E-04	6.96E-08	1.10E-03	3.20E-04
9	D26	60	Passenger Truck	1682	0.00E+00	3.32E-05	3.50E-06	1.15E+02	2.07E-04	6.93E-01	6.84E-05	6.68E-03	1.87E-02	2.90E-03	6.50E-03	4.24E-03	4.34E-03	8.91E-04	5.71E-04	1.58E-07	2.16E-03	1.11E-03
9	D26	60	Single Unit Short Haul Truck	15	0.00E+00	4.50E-06	2.25E-07	2.87E+00	3.71E-06	5.55E-03	4.80E-06	2.14E-03	3.64E-04	6.61E-05	5.47E-04	1.35E-04	1.37E-04	2.87E-04	1.16E-05	4.77E-09	4.10E-04	4.02E-04
9	D26	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.78E-09	1.22E-01	1.61E-07	2.36E-04	2.10E-07	9.28E-05	1.64E-05	2.92E-06	2.40E-05	5.87E-06	5.97E-06	1.22E-05	4.95E-07	2.03E-10	1.80E-05	1.74E-05
9	D26	60	Combination Short Haul Truck	11	0.00E+00	6.46E-06	4.50E-07	4.20E+00	2.29E-08	5.65E-03	4.79E-06	7.00E-03	6.02E-04	1.19E-04	4.11E-04	1.34E-04	1.34E-04	6.34E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
9	D26	60	Combination Long Haul Truck	10	0.00E+00	5.80E-06	3.77E-07	3.94E+00	2.62E-08	6.09E-03	4.47E-06	6.94E-03	6.05E-04	1.03E-04	4.24E-04	1.15E-04	1.17E-04	6.02E-04	1.32E-05	0.00E+00	3.07E-04	1.31E-03
11	D27	80	Passenger Car	1181	0.00E+00	1.44E-05	1.55E-06	5.50E+01	1.00E-04	3.82E-01	3.19E-05	2.43E-03	6.50E-03	1.13E-03	3.11E-03	2.00E-03	2.06E-03	1.85E-04	2.77E-04	7.77E-08	1.05E-03	3.79E-04
11	D27	80	Passenger Truck	1978	0.00E+00	3.09E-05	3.27E-06	1.27E+02	1.98E-04	7.03E-01	6.47E-05	7.21E-03	1.16E-02	2.07E-03	6.19E-03	4.02E-03	4.12E-03	8.89E-04	6.35E-04	1.73E-07	2.07E-03	1.18E-03
11	D27	80	Single Unit Short Haul Truck	33	0.00E+00	6.10E-06	3.03E-07	5.98E+00	4.91E-06	1.20E-02	6.49E-06	3.12E-03	3.83E-04	8.67E-05	7.42E-04	1.81E-04	1.84E-04	6.00E-04	2.41E-05	9.57E-09	5.59E-04	5.85E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.31E-08	2.53E-01	2.10E-07	4.99E-04	2.82E-07	1.34E-04	1.75E-05	3.83E-06	3.24E-05	7.77E-06	7.91E-06	2.53E-05	1.02E-06	3.99E-10	2.45E-05	2.50E-05
11	D27	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.75E-07	1.01E+01	3.86E-08	1.08E-02	8.94E-06	1.25E-02	7.40E-04	1.82E-04	7.28E-04	2.58E-04	2.56E-04	1.52E-03	3.39E-05	0.00E+00	4.72E-04	2.36E-03
11	D27	80	Combination Long Haul Truck	25	0.00E+00	1.10E-05	7.36E-07	9.35E+00	4.46E-08	1.12E-02	8.30E-06	1.22E-02	7.24E-04	1.46E-04	7.52E-04	2.22E-04	2.23E-04	1.43E-03	3.13E-05	0.00E+00	5.29E-04	2.29E-03
11	D28	80	Passenger Car	516	0.00E+00	6.27E-06	6.79E-07	2.40E+01	4.37E-05	1.67E-01	1.40E-05	1.06E-03	2.84E-03	4.93E-04	1.36E-03	8.75E-04	8.98E-04	8.08E-05	1.21E-04	3.39E-08	4.60E-04	1.66E-04
11	D28	80	Passenger Truck	864	0.00E+00	1.35E-05	1.43E-06	5.55E+01	8.63E-05	3.07E-01	2.82E-05	3.15E-03	5.09E-03	9.03E-04	2.70E-03	1.75E-03	1.80E-03	3.88E-04	2.77E-04	7.56E-08	9.04E-04	5.14E-04
11	D28	80	Single Unit Short Haul Truck	9	0.00E+00	1.73E-06	8.58E-08	1.69E+00	1.39E-06	3.39E-03	1.84E-06	8.85E-04	1.09E-04	2.46E-05	2.10E-04	5.11E-05	5.20E-05	1.70E-04	6.83E-06	2.71E-09	1.58E-04	1.66E-04
11	D28	80	Combination Short Haul Truck	11	0.00E+00	4.98E-06	3.56E-07	4.11E+00	1.57E-08	4.41E-03	3.64E-06	5.10E-03	3.01E-04	7.42E-05	2.96E-04	1.05E-04	1.04E-04	6.20E-04	1.38E-05	0.00E+00	1.92E-04	9.61E-04
11	D28	80	Combination Long Haul Truck	10	0.00E+00	4.46E-06	3.00E-07	3.80E+00	1.81E-08	4.57E-03	3.38E-06	4.95E-03	2.94E-04	5.93E-05	3.06E-04	9.04E-05	9.09E-05	5.81E-04	1.27E-05	0.00E+00	2.15E-04	9.33E-04
11	D29	80	Passenger Car	866	0.00E+00	1.05E-05	1.14E-06	4.03E+01	7.33E-05	2.80E-01	2.34E-05	1.78E-03	4.76E-03	8.28E-04	2.28E-03	1.47E-03	1.51E-03	1.36E-04	2.03E-04	5.69E-08	7.71E-04	2.78E-04
11	D29	80	Passenger Truck	1450	0.00E+00	2.26E-05	2.40E-06	9.32E+01	1.45E-04	5.15E-01	4.74E-05	5.28E-03	8.54E-03	1.52E-03	4.54E-03	2.94E-03	3.02E-03	6.51E-04	4.66E-04	1.27E-07	1.52E-03	8.63E-04
11	D29	80	Single Unit Short Haul Truck	45	0.00E+00	8.34E-06	4.14E-07	8.18E+00	6.71E-06	1.64E-02	8.88E-06	4.27E-03	5.24E-04	1.19E-04	1.02E-03	2.47E-04	2.51E-04	8.21E-04	3.30E-05	1.31E-08	7.64E-04	8.00E-04
11	D29	80	Single Unit Long Haul Truck	2	0.00E+00	3.63E-07	1.79E-08	3.46E-01	2.87E-07	6.83E-04	3.86E-07	1.83E-04	2.39E-05	5.23E-06	4.43E-05	1.06E-05	1.08E-05	3.46E-05	1.40E-06	5.46E-10	3.35E-05	3.42E-05
11	D29	80	Combination Short Haul Truck	43	0.00E+00	1.91E-05	1.37E-06	1.58E+01	6.03E-08	1.69E-02	1.40E-05	1.96E-02	1.16E-03	2.85E-04	1.14E-03	4.03E-04	4.00E-04	2.38E-03	5.29E-05	0.00E+00	7.37E-04	3.69E-03
11	D29	80	Combination Long Haul Truck	40	0.00E+00	1.71E-05	1.15E-06	1.46E+01	6.96E-08	1.75E-02	1.30E-05	1.90E-02	1.13E-03	2.28E-04	1.17E-03	3.47E-04	3.49E-04	2.23E-03	4.89E-05	0.00E+00	8.26E-04	3.58E-03
11	D30

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D34	60	Passenger Car	317	0.00E+00	4.74E-06	5.13E-07	1.59E+01	3.30E-05	1.23E-01	1.05E-05	6.46E-04	3.22E-03	4.94E-04	1.03E-03	6.62E-04	6.79E-04	6.62E-05	7.97E-05	2.19E-08	3.48E-04	1.01E-04
9	D34	60	Passenger Truck	530	0.00E+00	1.05E-05	1.10E-06	3.62E+01	6.54E-05	2.19E-01	2.16E-05	2.11E-03	5.90E-03	9.16E-04	2.05E-03	1.34E-03	1.37E-03	2.81E-04	1.80E-04	4.98E-08	6.82E-04	3.49E-04
9	D34	60	Single Unit Short Haul Truck	28	0.00E+00	8.21E-06	4.11E-07	5.23E+00	6.77E-06	1.01E-02	8.76E-06	3.91E-03	6.65E-04	1.21E-04	9.98E-04	2.46E-04	2.50E-04	5.23E-04	2.11E-05	8.70E-09	7.47E-04	7.33E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	3.58E-07	1.78E-08	2.23E-01	2.94E-07	4.30E-04	3.83E-07	1.69E-04	2.99E-05	5.34E-06	4.37E-05	1.07E-05	1.09E-05	2.23E-05	9.02E-07	3.70E-10	3.28E-05	3.17E-05
9	D34	60	Combination Short Haul Truck	30	0.00E+00	1.77E-05	1.23E-06	1.15E+01	6.27E-08	1.55E-02	1.31E-05	1.92E-02	1.65E-03	3.26E-04	1.13E-03	3.67E-04	3.68E-04	1.74E-03	3.86E-05	0.00E+00	7.58E-04	3.62E-03
9	D34	60	Combination Long Haul Truck	27	0.00E+00	1.59E-05	1.03E-06	1.08E+01	7.19E-08	1.67E-02	1.23E-05	1.90E-02	1.66E-03	2.81E-04	1.16E-03	3.16E-04	3.20E-04	1.65E-03	3.62E-05	0.00E+00	8.41E-04	3.58E-03
9	D35	60	Passenger Car	268	0.00E+00	4.01E-06	4.34E-07	1.34E+01	2.79E-05	1.04E-01	8.93E-06	5.47E-04	2.72E-03	4.18E-04	8.69E-04	5.60E-04	5.75E-04	5.60E-05	6.74E-05	1.86E-08	2.94E-04	8.54E-05
9	D35	60	Passenger Truck	449	0.00E+00	8.85E-06	9.35E-07	3.07E+01	5.54E-05	1.85E-01	1.82E-05	1.78E-03	4.99E-03	7.75E-04	1.73E-03	1.13E-03	1.16E-03	2.38E-04	1.52E-04	4.21E-08	5.77E-04	2.95E-04
9	D35	60	Single Unit Short Haul Truck	10	0.00E+00	2.95E-06	1.47E-07	1.88E+00	2.43E-06	3.64E-03	3.15E-06	1.41E-03	2.39E-04	4.33E-05	3.58E-04	8.84E-05	8.99E-05	1.88E-04	7.59E-06	3.13E-09	2.68E-04	2.63E-04
9	D35	60	Combination Short Haul Truck	5	0.00E+00	3.15E-06	2.19E-07	2.05E+00	1.12E-08	2.75E-03	2.34E-06	3.41E-03	2.93E-04	5.80E-05	2.00E-04	6.54E-05	6.55E-05	3.09E-04	6.86E-06	0.00E+00	1.35E-04	6.43E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.83E-06	1.84E-07	1.92E+00	1.28E-08	2.97E-03	2.18E-06	3.38E-03	2.95E-04	5.00E-05	2.06E-04	5.61E-05	5.69E-05	2.93E-04	6.43E-06	0.00E+00	1.50E-04	6.37E-04
9	D36	60	Passenger Car	394	0.00E+00	5.89E-06	6.38E-07	1.97E+01	4.10E-05	1.52E-01	1.31E-05	8.03E-04	3.99E-03	6.13E-04	1.28E-03	8.22E-04	8.44E-04	8.22E-05	9.90E-05	2.73E-08	4.32E-04	1.25E-04
9	D36	60	Passenger Truck	659	0.00E+00	1.30E-05	1.37E-06	4.50E+01	8.13E-05	2.72E-01	2.68E-05	2.62E-03	7.33E-03	1.14E-03	2.55E-03	1.66E-03	1.70E-03	3.49E-04	2.24E-04	6.19E-08	8.47E-04	4.34E-04
9	D36	60	Single Unit Short Haul Truck	7	0.00E+00	2.19E-06	1.10E-07	1.40E+00	1.81E-06	2.71E-03	2.34E-06	1.05E-03	1.78E-04	3.22E-05	2.67E-04	6.58E-05	6.69E-05	1.40E-04	5.65E-06	2.33E-09	2.00E-04	1.96E-04
9	D36	60	Combination Short Haul Truck	6	0.00E+00	3.79E-06	2.64E-07	2.46E+00	1.34E-08	3.31E-03	2.81E-06	4.10E-03	3.52E-04	6.98E-05	2.41E-04	7.86E-05	7.87E-05	3.71E-04	8.24E-06	0.00E+00	1.62E-04	7.73E-04
9	D36	60	Combination Long Haul Truck	6	0.00E+00	3.40E-06	2.21E-07	2.31E+00	1.54E-08	3.57E-03	2.62E-06	4.07E-03	3.54E-04	6.01E-05	2.48E-04	6.75E-05	6.84E-05	3.53E-04	7.73E-06	0.00E+00	1.80E-04	7.66E-04
9	D37	60	Passenger Car	270	0.00E+00	4.04E-06	4.37E-07	1.35E+01	2.81E-05	1.05E-01	8.99E-06	5.51E-04	2.74E-03	4.21E-04	8.75E-04	5.64E-04	5.79E-04	5.64E-05	6.79E-05	1.87E-08	2.96E-04	8.61E-05
9	D37	60	Passenger Truck	452	0.00E+00	8.92E-06	9.42E-07	3.09E+01	5.58E-05	1.86E-01	1.84E-05	1.80E-03	5.03E-03	7.80E-04	1.75E-03	1.14E-03	1.17E-03	2.39E-04	1.54E-04	4.24E-08	5.81E-04	2.98E-04
9	D37	60	Single Unit Short Haul Truck	1	0.00E+00	3.87E-07	1.94E-08	2.47E-01	3.19E-07	4.78E-04	4.14E-07	1.85E-04	3.14E-05	5.69E-06	4.71E-05	1.16E-05	1.18E-05	2.47E-05	9.97E-07	4.11E-10	3.53E-05	3.46E-05
9	D37	60	Combination Short Haul Truck	8	0.00E+00	4.57E-06	3.19E-07	2.98E+00	1.62E-08	4.00E-03	3.39E-06	4.96E-03	4.26E-04	8.43E-05	2.91E-04	9.49E-05	9.51E-05	4.49E-04	9.96E-06	0.00E+00	1.96E-04	9.34E-04
9	D37	60	Combination Long Haul Truck	7	0.00E+00	4.11E-06	2.67E-07	2.79E+00	1.86E-08	4.31E-03	3.17E-06	4.92E-03	4.28E-04	7.26E-05	3.00E-04	8.16E-05	8.26E-05	4.26E-04	9.34E-06	0.00E+00	2.17E-04	9.26E-04
9	D38	60	Passenger Car	108	0.00E+00	1.62E-06	1.76E-07	5.43E+00	1.13E-05	4.19E-02	3.61E-06	2.21E-04	1.10E-03	1.69E-04	3.51E-04	2.26E-04	2.32E-04	2.26E-05	2.73E-05	7.51E-09	1.19E-04	3.45E-05
9	D38	60	Passenger Truck	181	0.00E+00	3.58E-06	3.78E-07	1.24E+01	2.24E-05	7.48E-02	7.38E-06	7.21E-04	2.02E-03	3.13E-04	7.01E-04	4.57E-04	4.68E-04	9.61E-05	6.16E-05	1.70E-08	2.33E-04	1.19E-04
9	D38	60	Single Unit Short Haul Truck	3	0.00E+00	7.62E-07	3.81E-08	4.86E-01	6.29E-07	9.41E-04	8.14E-07	3.64E-04	6.18E-05	1.12E-05	9.27E-05	2.29E-05	2.33E-05	4.86E-05	1.96E-06	8.09E-10	6.94E-05	6.81E-05
9	D38	60	Combination Short Haul Truck	2	0.00E+00	1.19E-06	8.32E-08	7.77E-01	4.23E-09	1.04E-03	8.86E-07	1.29E-03	1.11E-04	2.20E-05	7.60E-05	2.48E-05	2.48E-05	1.17E-04	2.60E-06	0.00E+00	5.11E-05	2.44E-04
9	D38	60	Combination Long Haul Truck	2	0.00E+00	1.07E-06	6.97E-08	7.28E-01	4.85E-09	1.12E-03	8.26E-07	1.28E-03	1.12E-04	1.90E-05	7.83E-05	2.13E-05	2.16E-05	1.11E-04	2.44E-06	0.00E+00	5.67E-05	2.42E-04
9	D39	60	Passenger Car	276	0.00E+00	4.14E-06	4.47E-07	1.38E+01	2.88E-05	1.07E-01	9.19E-06	5.63E-04	2.80E-03	4.30E-04	8.95E-04	5.77E-04	5.92E-04	5.77E-05	6.94E-05	1.91E-08	3.03E-04	8.80E-05
9	D39	60	Passenger Truck	462	0.00E+00	9.12E-06	9.63E-07	3.16E+01	5.70E-05	1.91E-01	1.88E-05	1.84E-03	5.14E-03	7.98E-04	1.79E-03	1.16E-03	1.19E-03	2.45E-04	1.57E-04	4.34E-08	5.94E-04	3.04E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.37E-07	1.19E-08	1.51E-01	1.95E-07	2.92E-04	2.53E-07	1.13E-04	1.92E-05	3.48E-06	2.88E-05	7.11E-06	7.23E-06	1.51E-05	6.10E-07	2.51E-10	2.16E-05	2.12E-05
9	D39	60	Combination Short Haul Truck	7	0.00E+00	4.35E-06	3.03E-07	2.83E+00	1.54E-08	3.81E-03	3.23E-06	4.72E-03	4.05E-04	8.02E-05	2.77E-04	9.04E-05	9.05E-05	4.27E-04	9.48E-06	0.00E+00	1.87E-04	8.89E-04
9	D39	60	Combination Long Haul Truck	7	0.00E+00	3.91E-06	2.54E-07	2.66E+00	1.77E-08	4.10E-03	3.01E-06	4.68E-03	4.08E-04	6.91E-05	2.86E-04	7.76E-05	7.86E-05	4.06E-04	8.89E-06	0.00E+00	2.07E-04	8.82E-04
9	D40	60	Passenger Car	176	0.00E+00	2.63E-06	2.85E-07	8.82E+00	1.83E-05	6.81E-02	5.86E-06	3.59E-04	1.78E-03	2.74E-04	5.70E-04	3.67E-04	3.77E-04	3.67E-05	4.42E-05	1.22E-08	1.93E-04	5.61E-05
9	D40	60	Passenger Truck	294	0.00E+00	5.81E-06	6.13E-07	2.01E+01	3.63E-05	1.21E-01	1.20E-05	1.17E-03	3.27E-03	5.08E-04	1.14E-03	7.42E-04	7.60E-04	1.56E-04	1.00E-04	2.76E-08	3.79E-04	1.94E-04
9	D40	60	Single Unit Short Haul Truck	3	0.00E+00	8.73E-07	4.37E-08	5.57E-01	7.20E-07	1.08E-03	9.32E-07	4.16E-04	7.08E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.80E-05
9	D40	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.06E-08	8.45E-01	4.60E-09	1.14E-03	9.64E-07	1.41E-03	1.21E-04	2.39E-05	8.27E-05	2.70E-05	2.70E-05	1.27E-04	2.83E-06	0.00E+00	5.57E-05	2.65E-04
9	D40	60	Combination Long Haul Truck	2	0.00E+00	1.17E-06	7.59E-08	7.93E-01	5.28E-09	1.22E-03	8.99E-07	1.40E-03	1.22E-04	2.06E-05	8.52E-05	2.32E-05	2.35E-05	1.21E-04	2.65E-06	0.00E+00	6.18E-05	2.63E-04
9	D41	60	Passenger Car	51	0.00E+00	7.65E-07	8.27E-08	2.56E+00	5.32E-06	1.98E-02	1.70E-06	1.04E-04	5.18E-04	7.96E-05	1.66E-04	1.07E-04	1.09E-04	1.07E-05	1.28E-05	3.54E-09	5.60E-05	1.63E-05
9	D41	60	Passenger Truck	86	0.00E+00	1.69E-06	1.78E-07	5.84E+00	1.05E-05	3.52E-02	3.48E-06	3.39E-04	9.51E-04	1.48E-04	3.30E-04	2.15E-04	2.21E-04	4.53E-05	2.90E-05	8.03E-09	1.10E-04	5.63E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	3.43E-07	1.72E-08	2.19E-01	2.83E-07	4.23E-04	3.66E-07	1.64E-04	2.78E-05	5.04E-06	4.17E-05	1.03E-05	1.05E-05	2.19E-05	8.83E-07	3.64E-10	3.13E-05	3.07E-05
9	D41	60	Combination Short Haul Truck	4	0.00E+00	2.24E-06	1.56E-07	1.46E+00	7.94E-09	1.96E-03	1.66E-06	2.43E-03	2.09E-04	4.13E-05	1.43E-04	4.65E-05	4.66E-05	2.20E-04	4.88E-06	0.00E+00	9.60E-05	4.58E-04
9	D41	60	Combination Long Haul Truck	3	0.00E+00	2.01E-06	1.31E-07	1.37E+00	9.11E-09	2.11E-03	1.55E-06	2.41E-03	2.10E-04	3.56E-05	1.47E-04	4.00E-05	4.05E-05	2.09E-04	4.58E-06	0.00E+00	1.07E-04	4.54E-04
9	D42	60	Passenger Car	73	0.00E+00	1.09E-06	1.18E-07	3.66E+00	7.60E-06	2.82E-02	2.43E-06	1.49E-04	7.40E-04	1.14E-04	2.36E-04	1.52E-04	1.56E-04	1.52E-05	1.83E-05	5.05E-09	8.00E-05	2.32E-05
9	D42	60	Passenger Truck	122	0.00E+00	2.41E-06	2.54E-07	8.35E+00	1.51E-05	5.03E-02	4.96E-06	4.85E-04	1.36E-03	2.11E-04	4.72E-04	3.08E-04	3.15E-04	6.47E-05	4.15E-05	1.15E-08	1.57E-04	8.04E-05
9	D42	60	Single Unit Short Haul Truck	2	0.00E+00	5.49E-07	2.75E-08	3.50E-01	4.53E-07	6.78E-04	5.86E-07	2.62E-04	4.45E-05	8.07E-06	6.68E-05	1.65E-05	1.68E-05	3.50E-05	1.41E-06	5.83E-10	5.00E-05	4.91E-05
9	D42	60	Combination Short Haul Truck	2	0.00E+00	1.18E-06	8.21E-08	7.67E-01	4.17E-09	1.03E-03	8.74E-07	1.28E-03	1.10E-04	2.17E-05	7.50E-05	2.45E-05	2.45E-05	1.16E-04	2.57E-06	0.00E+00	5.05E-05	2.41E-04
9	D42	60	Combination Long Haul Truck	2	0.00E+00	1.06E-06	6.88E-08	7.19E-01	4.79E-09	1.11E-03	8.16E-07	1.27E-03	1.10E-04	1.87E-05	7.73E-05	2.10E-05	2.13E-05	1.10E-04	2.41E-06	0.00E+00	5.60E-05	2.39E-04
9	D43	60	Passenger Car	146	0.00E+00	2.19E-06	2.37E-07	7.35E+00	1.53E-05	5.67E-02	4.88E-06	2.99E-04	1.49E-03	2.28E-04	4.75E-04	3.06E-04	3.14E-04	3.06E-05	3.68E-05	1.01E-08	1.61E-04	4.67E-05
9	D43	60	Passenger Truck	245	0.00E+00	4.84E-06	5.11E-07	1.68E+01	3.03E-05	1.01E-01	9.97E-06	9.74E-04	2.73E-03	4.23E-04	9.48E-04	6.18E-04	6.33E-04	1.30E-04	8.33E-05	2.30E-08	3.15E-04	1.61E-04
9	D43	60	Combination Short Haul Truck	12	0.00E+00	3.63E-06	1.81E-07	2.31E+00	2.99E-06	4.47E-03	3.87E-06	1.73E-03	2.94E-04	5.33E-05	4.41E-04	1.09E-04	1.11E-04	2.31E-04	9.33E-06	3.85E-09	3.30E-04	3.24E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	1.58E-07	7.88E-09	9.86E-02	1.30E-07	1.90E-04	1.69E-07	7.48E-05	1.32E-05	2.36E-06	1.93E-05	4.73E-06	4.81E-06	9.85E-06	3.99E-07	1.64E-10	1.45E-05	1.40E-05
9	D43	60	Combination Short Haul Truck	7	0.00E+00	4.05E-06	2.82E-07	2.63E+00	1.43E-08	3.54E-03	3.00E-06	4.39E-03	3.77E-04	7.46E-05	2.57E-04	8.40E-05	8.41E-05	3.97E-04	8.81E-06	0.00E+00	1.73E-04	8.26E-04
9	D43	60	Combination Long Haul Truck	6	0.00E+00	3.63E-06	2.36E-07	2.47E+00	1.64E-08	3.81E-03	2.80E-06	4.35E-03	3.79E-04	6.42E-05	2.65E-04	7.22E-05	7.31E-05	3.77E-04	8.27E-06	0.00E+00	1.92E-04	8.19E-04
9	D44	60	Passenger Car	326	0.00E+00	4.88E-06	5.28E-07	1.63E+01	3.40E-05	1.26E-01	1.09E-05	6.65E-04	3.31E-03	5.08E-04	1.06E-03	6.81E-04	6.99E-04	6.81E-05	8.20E-05	2.26E-08	3.58E-04	1.04E-04
9	D44	60	Passenger Truck	546	0.00E+00	1.08E-05	1.14E-06	3.73E+01	6.73E-05	2.25E-01	2.22E-05	2.17E-03	6.07E-03	9.42E-04	2.11E-03	1.38E-03	1.41E-03	2.89E-04	1.85E-04	5.13E-08	7.02E-04	3.59E-04
9	D44	60	Combination Short Haul Truck	1	0.00E+00	7.98E-07	5.56E-08	5.19E-01	2.83E-09	6.98E-04	5.92E-07	8.65E-04	7.43E-05	1.47E-05	5.08E-05	1.66E-05	1.66E-05	7.83E-05	1.74E-06	0.00E+00	3.42E-05	1.63E-04
9	D44	60	Combination Long Haul Truck	1	0.00E+00	7.17E-07	4.66E-08	4.87E-01	3.24E-09	7.52E-04	5.52E-07	8.58E-04	7.47E-05	1.27E-05	5.24E-05	1.42E-05	1.44E-05	7.44E-05	1.63E-06	0.00E+00	3.79E-05	1.62E-04
9	D45	60	Passenger Car	473	0.00E+00	7.08E-06	7.66E-07	2.37E+01	4.93E-05	1.83E-01	1.58E-05	9.65E-04	4.80E-03	7.37E-04	1.53E-03	9.88E-04	1.01E-03	9.88E-05	1.19E-04	3.28E-08	5.19E-04	1.51E-04
9	D45	60	Passenger Truck	792	0.00E+00	1.56E-05	1.65E-06	5.41E+01	9.77E-05	3.26E-01	3.22E-05	3.15E-03	8.81E-03	1.37E-03	3.06E-03	2.00E-03	2.04E-03	4.19E-04	2.69E-04	7.44E-08	1.02E-03	5.21E-04
9	D45	60	Single Unit Short Haul Truck	30	0.00E+00	8.95E-06	4.48E-07	5.70E+00	7.38E-06	1.10E-02	9.55E-06	4.27E-03	7.25E-04	1.31E-04	1.09E-03	2.69E-04	2.73E-04	5.71E-04	2.30E-05	9.49E-09	8.15E-04	8.00E-04
9	D45	60	Single Unit Long Haul Truck	1	0.00E+00	3.91E-07	1.95E-08	2.43E-01	3.21E-07	4.69E-04	4.17E-07	1.85E-04	3.26E-05	5.82E-06	4.77E-05	1.17E-05	1.19E-05	2.43E-05	9.84E-07	4.04E-10	3.58E-05	3.46E-05
9	D45	60	Combination Short Haul Truck	23	0.00E+00	1.36E-05	9.47E-07	8.84E+00	4.82E-08	1.19E-02	1.01E-05	1.47E-02	1.27E-03	2.51E-04	8.65E-04	2.82E-04	2.83E-04	1.33E-03	2.96E-05	0.00E+00	5.82E-04	2.78E-03
9	D45	60	Combination Long Haul Truck	21	0.00E+00	1.22E-05	7.94E-07	8.29E+00	5.52E-08	1.28E-02	9.41E-06	1.46E-02	1.27E-03	2.16E-04	8.92E-04	2.42E-04	2.46E-04	1.27E-03	2.78E-05	0.00E+00	6.46E-04	2.75E-03
9	D46	60	Passenger Car	433	0.00E+00	6.49E-06	7.02E-07	2.17E+01	4.51E-05	1.68E-01	1.44E-05	8.83E-04	4.40E-03	6.75E-04	1.40E-03	9.05E-04	9.29E-04	9.05E-05	1.09E-04	3.00E-08	4.75E-04	1.38E-04
9	D46	60	Passenger Truck	725	0.00E+00	1.43E-05	1.51E-06	4.96E+01	8.94E-05	2.99E-01	2.95E-05	2.88E-03	8.06E-03	1.25E-03	2.80E-03	1.83E-03	1.87E-03	3.84E-04	2.46E-04	6.81E-08	9.32E-04	4.77E-04
9	D46	60	Single Unit Short Haul Truck	26	0.00E+00	7.60E-06	3.80E-07	4.84E+00	6.27E-06	9.38E-03	8.11E-06	3.62E-03	6.16E-04	1.12E-04	9.24E-04	2.28E-04	2.32E-04	4.85E-04	1.96E-05	8.06E-09	6.92E-04	6.79E-04
9	D46	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.07E-01	2.72E-07	3.98E-04	3.55E-07	1.57E-04	2.76E-05	4.94E-06	4.05E-05	9.92E-06	1.01E-05	2.06E-05	8.36E-07	3.43E-10	3.04E-05	2.94E-05
9	D46	60	Combination Short Haul Truck	43	0.00E+00	2.53E-05	1.77E-06	1.65E+01	8.98E-08	2.22E-02	1.88E-05	2.75E-02	2.36E-03	4.67E-04	1.61E-03	5.26E-04	5.27E-04	2.48E-03	5.52E-05	0.00E+00	1.09E-03	5.18E-03
9	D46	60	Combination Long Haul Truck	39	0.00E+00	2.27E-05	1.48E-06	1.55E+01	1.03E-07	2.39E-02	1.75E-05	2.72E-02	2.37E-03	4.02E-04	1.66E-03	4.52E-04	4.58E-04	2.36E-03	5.18E-05	0.00E+00	1.20E-03	5.13E-03
9	D47	60	Passenger Car	692	0.00E+00	1.04E-05	1.12E-06	3.47E+01	7.21E-05	2.68E-01	2.30E-05	1.41E-03	7.02E-03	1.08E-03	2.24E-03	1.45E-03	1.48E-03	1.45E-04	1.74E-04	4.79E-08	7.59E-04	2.21E-04
9	D47	60	Passenger Truck	1159	0.00E+00	2.29E-05	2.41E-06	7.92E+01	1.43E-04	4.78E-01	4.71E-05	4.60E-03	1.29E-02	2.00E-03	4.48E-03	2.92E-03	2.99E-03	6.13E-04	3.94E-04	1.09E-07	1.49E-03	7.62E-04
9	D47	60	Single Unit Short Haul Truck	34	0.00E+00	9.86E-06	4.93E-07	6.28E+00	8.13E-06	1.22E-02	1.05E-05	4.70E-03	7.99E-04	1.45E-04	1.20E-03	2.96E-04	3.01E-04	6.29E-04	2.54E-05	1.05E-08	8.98E-04	8.81E-04
9	D47	60	Single Unit Long Haul Truck	1	0.00E+00	4.31E-07	2.14E-08	2.68E-01	3.53E-07	5.16E-04	4.60E-07	2.03E-04	3.59E-05	6.41E-06	5.25E-05	1.29E-05	1.31E-05	2.68E-05	1.08E-06	4.45E-10	3.94E-05	3.81E-05
9	D47	60	Combination Short Haul Truck	24	0.00E+00	1.43E-05	9.94E-07	9.28E+00	5.05E-08	1.25E-02	1.06E-05	1.55E-02	1.33E-03	2.63E-04	9.08E-04	2.96E-04	2.97E-04	1.40E-03	3.11E-05	0.00E+00	6.11E-04	2.91E-03
9	D47	60	Combination Long Haul Truck	22	0.00E+00	1.28E-05	8.33E-07	8.70E+00	5.80E-08	1.34E-02	9.87E-06	1.53E-02	1.34E-03	2.27E-04	9.36E-04	2.54E-04	2.58E-04	1.33E-03	2.91E-05	0.00E+00	6.78E-04	2.89E-03
9	D48	60	Passenger Car	176	0.00E+00	2.63E-06	2.85E-07	8.82E+00	1.83E-05	6.81E-02	5.86E-06	3.59E-04	1.78E-03	2.74E-04	5.70E-04	3.67E-04	3.77E-04	3.67E-05	4.42E-05	1.22E-08	1.93E-04	5.61E-05
9	D48	60	Passenger Truck	294	0.00E+00	5.81E-06	6.13E-07	2.01E+01	3.63E-05	1.21E-01	1.20E-05	1.17E-03	3.27E-03	5.08E-04	1.14E-03	7.42E-04	7.60E-04	1.56E-04	1.00E-04	2.76E-08	3.79E-04	1.94E-04
9	D48	60	Single Unit Short Haul Truck	3	0.00E+00	8.73E-07	4.37E-08	5.57E-01	7.20E-07	1.08E-03	9.32E-07	4.16E-04	7.08E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.80E-05
9	D48	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.06E-08	8.45E-01	4.60E-09	1.14E-03	9.64E-07	1.41E-03	1.21E-04	2.39E-05	8.27E-05	2.70E-05	2.70E-05	1.27E-04	2.83E-06	0.00E+00	5.57E-05	2.65E-04
9	D48	60	Combination Long Haul Truck	2	0.00E+00	1.17E-06	7.59E-08	7.93E-01	5.28E-09	1.22E-03	8.99E-07	1.40E-03	1.22E-04	2.06E-05	8.52E-05	2.32E-05	2.35E-05	1.21E-04	2.65E-06	0.00E+00	6.18E-05	2.63E-04
9	D49	60	Passenger Car	1086	0.00E+00	1.63E-05	1.76E-06	5.44E+01	1.13E-04	4.20E-01	3.62E-05	2.21E-03	1.10E-02	1.69E-03	3.52E-03	2.27E-03	2.33E-03	2.27E-04	2.73E-04	7.52E-08	1.19E-03	3.46E-04
9	D49	60	Passenger Truck	1818	0.00E+00	3.59E-05	3.79E-06	1.24E+02	2.24E-04	7.49E-01	7.39E-05	7.22E-03	2.02E-02	3.14E-03	7.03E-03	4.58E-03	4.69E-03	9.63E-04	6.18E-04	1.71E-07	2.34E-03	1.20E-03
9	D49	60	Single Unit Short Haul Truck	93	0.00E+00	2.72E-05	1.36E-06	1.73E+01	2.24E-05	3.36E-02	2.90E-05	1.30E-02	2.21E-03	4.00E-04	3.31E-03	8.17E-04	8.30E-04	1.74E-03	7.01E-05	2.89E-08	2.48E-03	2.43E-03
9	D49	60	Single Unit Long Haul Truck	4	0.00E+00	1.19E-06	5

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

MOVES L nkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D53	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.31E-03	2.88E-04	4.89E-05	2.02E-04	5.49E-05	5.56E-05	2.87E-04	6.28E-06	0.00E+00	1.46E-04	6.23E-04
9	D54	60	Passenger Car	165	0.00E+00	2.46E-06	2.67E-07	8.25E+00	1.71E-05	6.37E-02	5.48E-06	3.36E-04	1.67E-03	2.56E-04	5.33E-04	3.44E-04	3.53E-04	3.44E-05	4.14E-05	1.14E-08	1.80E-04	5.24E-05
9	D54	60	Passenger Truck	275	0.00E+00	5.43E-06	5.74E-07	1.88E+01	3.40E-05	1.14E-01	1.12E-05	1.09E-03	3.06E-03	4.75E-04	1.06E-03	6.94E-04	7.11E-04	1.46E-04	9.36E-05	2.59E-08	3.54E-04	1.81E-04
9	D54	60	Single Unit Short Haul Truck	9	0.00E+00	2.53E-06	1.27E-07	1.61E+00	2.09E-06	3.12E-03	2.70E-06	1.21E-03	2.05E-04	3.72E-05	3.08E-04	7.59E-05	7.72E-05	1.61E-04	6.51E-06	2.68E-09	2.30E-04	2.26E-04
9	D54	60	Combination Short Haul Truck	5	0.00E+00	3.08E-06	2.14E-07	2.00E+00	1.09E-08	2.69E-03	2.28E-06	3.34E-03	2.86E-04	5.67E-05	1.96E-04	6.39E-05	6.40E-05	3.02E-04	6.70E-06	0.00E+00	1.32E-04	6.28E-04
9	D54	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.31E-03	2.88E-04	4.89E-05	2.02E-04	5.49E-05	5.56E-05	2.87E-04	6.28E-06	0.00E+00	1.46E-04	6.23E-04
11	D55	80	Passenger Car	408	0.00E+00	4.97E-06	5.37E-07	1.90E+01	3.46E-05	1.32E-01	1.10E-05	8.39E-04	2.25E-03	3.90E-04	1.08E-03	6.93E-04	7.11E-04	6.40E-05	9.59E-05	2.69E-08	3.64E-04	1.31E-04
11	D55	80	Passenger Truck	684	0.00E+00	1.07E-05	1.13E-06	4.40E+01	6.83E-05	2.43E-01	2.24E-05	2.49E-03	4.03E-03	7.15E-04	2.14E-03	1.39E-03	1.42E-03	3.07E-04	2.20E-04	5.98E-08	7.16E-04	4.07E-04
11	D55	80	Single Unit Short Haul Truck	47	0.00E+00	8.79E-06	4.37E-07	8.63E+00	7.08E-06	1.73E-02	9.36E-06	4.51E-03	5.53E-04	1.25E-04	1.07E-03	2.60E-04	2.65E-04	8.66E-04	3.48E-05	1.38E-08	8.05E-04	8.43E-04
11	D55	80	Single Unit Long Haul Truck	2	0.00E+00	3.82E-07	1.88E-08	3.65E-01	3.02E-07	7.20E-04	4.07E-07	1.93E-04	2.52E-05	5.52E-06	4.67E-05	1.12E-05	1.14E-05	3.65E-05	1.47E-06	5.75E-10	3.53E-05	3.61E-05
11	D55	80	Combination Short Haul Truck	36	0.00E+00	1.58E-05	1.13E-06	1.31E+01	4.98E-08	1.40E-02	1.15E-05	1.62E-02	9.56E-04	2.36E-04	9.41E-04	3.33E-04	3.31E-04	1.97E-03	4.37E-05	0.00E+00	6.10E-04	3.05E-03
11	D55	80	Combination Long Haul Truck	33	0.00E+00	1.41E-05	9.51E-07	1.21E+01	5.76E-08	1.45E-02	1.07E-05	1.57E-02	9.35E-04	1.88E-04	9.71E-04	2.87E-04	2.89E-04	1.84E-03	4.04E-05	0.00E+00	6.83E-04	2.96E-03
11	D56	80	Passenger Car	581	0.00E+00	7.06E-06	7.64E-07	2.70E+01	4.91E-05	1.88E-01	1.57E-05	1.19E-03	3.19E-03	5.55E-04	1.53E-03	9.85E-04	1.01E-03	9.10E-05	1.36E-04	3.82E-08	5.17E-04	1.86E-04
11	D56	80	Passenger Truck	972	0.00E+00	1.52E-05	1.61E-06	6.25E+01	9.71E-05	3.45E-01	3.18E-05	3.54E-03	5.72E-03	1.02E-03	3.04E-03	1.97E-03	2.02E-03	4.37E-04	3.12E-04	8.50E-08	1.02E-03	5.79E-04
11	D56	80	Single Unit Short Haul Truck	58	0.00E+00	1.09E-05	5.40E-07	1.07E+01	8.75E-06	2.14E-02	1.16E-05	5.57E-03	6.83E-04	1.55E-04	1.32E-03	3.22E-04	3.27E-04	1.07E-03	4.30E-05	1.71E-08	9.96E-04	1.04E-03
11	D56	80	Single Unit Long Haul Truck	3	0.00E+00	4.73E-07	2.33E-08	4.51E-01	3.74E-07	8.90E-04	5.03E-07	2.38E-04	3.12E-05	6.82E-06	5.77E-05	1.39E-05	1.41E-05	4.51E-05	1.82E-06	7.11E-10	4.36E-05	4.46E-05
11	D56	80	Combination Short Haul Truck	35	0.00E+00	1.54E-05	1.10E-06	1.27E+01	4.85E-08	1.36E-02	1.12E-05	1.58E-02	9.30E-04	2.29E-04	9.15E-04	3.24E-04	3.22E-04	1.92E-03	4.25E-05	0.00E+00	5.93E-04	2.97E-03
11	D56	80	Combination Long Haul Truck	32	0.00E+00	1.38E-05	9.25E-07	1.17E+01	5.60E-08	1.41E-02	1.04E-05	1.53E-02	9.09E-04	1.83E-04	9.45E-04	2.79E-04	2.81E-04	1.79E-03	3.93E-05	0.00E+00	6.64E-04	2.88E-03
11	D57	80	Passenger Car	693	0.00E+00	8.43E-06	9.12E-07	3.23E+01	5.87E-05	2.24E-01	1.87E-05	1.42E-03	3.81E-03	6.62E-04	1.82E-03	1.18E-03	1.21E-03	1.09E-04	1.63E-04	4.56E-08	6.17E-04	2.22E-04
11	D57	80	Passenger Truck	1160	0.00E+00	1.81E-05	1.92E-06	7.46E+01	1.16E-04	4.12E-01	3.79E-05	4.23E-03	6.83E-03	1.21E-03	3.63E-03	2.36E-03	2.42E-03	5.21E-04	3.73E-04	1.01E-07	1.21E-03	6.91E-04
11	D57	80	Single Unit Short Haul Truck	47	0.00E+00	8.87E-06	4.41E-07	8.71E+00	7.14E-06	1.74E-02	9.45E-06	4.55E-03	5.58E-04	1.26E-04	1.08E-03	2.63E-04	2.67E-04	8.74E-04	3.51E-05	1.39E-08	8.13E-04	8.51E-04
11	D57	80	Single Unit Long Haul Truck	2	0.00E+00	3.86E-07	1.90E-08	3.68E-01	3.05E-07	7.26E-04	4.10E-07	1.94E-04	2.55E-05	5.57E-06	4.71E-05	1.13E-05	1.15E-05	3.68E-05	1.49E-06	5.80E-10	3.56E-05	3.64E-05
11	D57	80	Combination Short Haul Truck	38	0.00E+00	1.69E-05	1.21E-06	1.40E+01	5.34E-08	1.50E-02	1.24E-05	1.73E-02	1.02E-03	2.52E-04	1.01E-03	3.57E-04	3.54E-04	2.11E-03	4.68E-05	0.00E+00	6.53E-04	3.27E-03
11	D57	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.29E+01	6.17E-08	1.55E-02	1.15E-05	1.68E-02	1.00E-03	2.02E-04	1.04E-03	3.07E-04	3.09E-04	1.98E-03	4.33E-05	0.00E+00	7.31E-04	3.17E-03
11	D58	80	Passenger Car	707	0.00E+00	8.60E-06	9.31E-07	3.29E+01	5.99E-05	2.29E-01	1.91E-05	1.45E-03	3.89E-03	6.76E-04	1.86E-03	1.20E-03	1.23E-03	1.11E-04	1.66E-04	4.65E-08	6.30E-04	2.27E-04
11	D58	80	Passenger Truck	1184	0.00E+00	1.85E-05	1.96E-06	7.61E+01	1.18E-04	4.21E-01	3.87E-05	4.32E-03	6.98E-03	1.24E-03	3.71E-03	2.41E-03	2.47E-03	5.32E-04	3.80E-04	1.04E-07	1.24E-03	7.05E-04
11	D58	80	Single Unit Short Haul Truck	71	0.00E+00	1.33E-05	6.61E-07	1.31E+01	1.07E-05	2.62E-02	1.42E-05	6.82E-03	8.37E-04	1.89E-04	1.62E-03	3.94E-04	4.01E-04	1.31E-03	5.27E-05	2.09E-08	1.22E-03	1.28E-03
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	5.79E-07	2.85E-08	5.53E-01	4.58E-07	1.09E-03	6.16E-07	2.92E-04	3.82E-05	8.35E-06	7.07E-05	1.70E-05	1.73E-05	5.52E-05	2.23E-06	8.71E-10	5.34E-05	5.46E-05
11	D58	80	Combination Short Haul Truck	41	0.00E+00	1.81E-05	1.30E-06	1.50E+01	5.72E-08	1.60E-02	1.32E-05	1.86E-02	1.10E-03	2.70E-04	1.08E-03	3.83E-04	3.80E-04	2.26E-03	5.02E-05	0.00E+00	6.99E-04	3.50E-03
11	D58	80	Combination Long Haul Truck	38	0.00E+00	1.62E-05	1.09E-06	1.38E+01	6.61E-08	1.66E-02	1.23E-05	1.80E-02	1.07E-03	2.16E-04	1.11E-03	3.29E-04	3.31E-04	2.12E-03	4.64E-05	0.00E+00	7.83E-04	3.40E-03
11	D59	80	Passenger Car	546	0.00E+00	6.64E-06	7.19E-07	2.54E+01	4.62E-05	1.77E-01	1.48E-05	1.12E-03	3.00E-03	5.22E-04	1.44E-03	9.27E-04	9.51E-04	8.56E-05	1.28E-04	3.59E-08	4.87E-04	1.75E-04
11	D59	80	Passenger Truck	915	0.00E+00	1.43E-05	1.51E-06	5.88E+01	9.14E-05	3.25E-01	2.99E-05	3.33E-03	5.39E-03	9.56E-04	2.86E-03	1.86E-03	1.90E-03	4.11E-04	2.94E-04	8.00E-08	9.57E-04	5.44E-04
11	D59	80	Single Unit Short Haul Truck	33	0.00E+00	6.15E-06	3.05E-07	6.03E+00	4.95E-06	1.21E-02	6.54E-06	3.15E-03	3.86E-04	8.74E-05	7.48E-04	1.82E-04	1.85E-04	6.05E-04	2.43E-05	9.65E-09	5.63E-04	5.89E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	2.67E-07	1.32E-08	2.55E-01	2.11E-07	5.03E-04	2.84E-07	1.35E-04	1.76E-05	3.86E-06	3.26E-05	7.84E-06	7.97E-06	2.55E-05	1.03E-06	4.02E-10	2.47E-05	2.52E-05
11	D59	80	Combination Short Haul Truck	20	0.00E+00	8.97E-06	6.42E-07	7.42E+00	2.83E-08	7.95E-03	6.56E-06	9.20E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.73E-03
11	D59	80	Combination Long Haul Truck	19	0.00E+00	8.04E-06	5.40E-07	6.86E+00	3.27E-08	8.24E-03	6.09E-06	8.93E-03	5.31E-04	1.07E-04	5.52E-04	1.63E-04	1.64E-04	1.05E-03	2.30E-05	0.00E+00	3.88E-04	1.68E-03
11	D60	80	Passenger Car	505	0.00E+00	6.15E-06	6.65E-07	2.35E+01	4.28E-05	1.63E-01	1.37E-05	1.04E-03	2.78E-03	4.83E-04	1.33E-03	8.57E-04	8.80E-04	7.92E-05	1.19E-04	3.32E-08	4.50E-04	1.62E-04
11	D60	80	Passenger Truck	846	0.00E+00	1.32E-05	1.40E-06	5.44E+01	8.46E-05	3.01E-01	2.77E-05	3.08E-03	4.98E-03	8.85E-04	2.65E-03	1.72E-03	1.76E-03	3.80E-04	2.72E-04	7.40E-08	8.86E-04	5.04E-04
11	D60	80	Single Unit Short Haul Truck	48	0.00E+00	8.91E-06	4.43E-07	8.75E+00	7.17E-06	1.75E-02	9.49E-06	4.57E-03	5.60E-04	1.27E-04	1.08E-03	2.64E-04	2.68E-04	8.78E-04	3.52E-05	1.40E-08	8.16E-04	8.54E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	3.88E-07	1.91E-08	3.70E-01	3.06E-07	7.30E-04	4.12E-07	1.95E-04	2.56E-05	5.59E-06	4.73E-05	1.14E-05	1.16E-05	3.69E-05	1.49E-06	5.83E-10	3.58E-05	3.65E-05
11	D60	80	Combination Short Haul Truck	21	0.00E+00	9.45E-06	6.76E-07	7.81E+00	2.98E-08	8.37E-03	6.90E-06	9.69E-03	5.72E-04	1.41E-04	5.63E-04	1.99E-04	1.98E-04	1.18E-03	2.61E-05	0.00E+00	3.65E-04	1.82E-03
11	D60	80	Combination Long Haul Truck	20	0.00E+00	8.46E-06	5.69E-07	7.22E+00	3.44E-08	8.67E-03	6.41E-06	9.40E-03	5.59E-04	1.13E-04	5.81E-04	1.72E-04	1.73E-04	1.10E-03	2.42E-05	0.00E+00	4.08E-04	1.77E-03
11	D61	80	Passenger Car	98	0.00E+00	1.19E-06	1.29E-07	4.56E+00	8.29E-06	3.17E-02	2.65E-06	2.01E-04	5.39E-04	9.37E-05	2.58E-04	1.66E-04	1.71E-04	1.53E-05	2.30E-05	6.44E-09	8.73E-05	3.14E-05
11	D61	80	Passenger Truck	164	0.00E+00	2.56E-06	2.71E-07	1.05E+01	1.64E-05	5.83E-02	5.36E-06	5.98E-04	9.66E-04	1.71E-04	5.13E-04	3.33E-04	3.41E-04	7.37E-05	5.27E-05	1.43E-08	1.72E-04	9.77E-05
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D61	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.41E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.66E-04
11	D61	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.37E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	D62	80	Passenger Car	71	0.00E+00	8.69E-07	9.40E-08	3.32E+00	6.05E-06	2.31E-02	1.93E-06	1.47E-04	3.93E-04	6.83E-05	1.88E-04	1.21E-04	1.24E-04	1.12E-05	1.68E-05	4.70E-09	6.36E-05	2.29E-05
11	D62	80	Passenger Truck	120	0.00E+00	1.87E-06	1.98E-07	7.69E+00	1.19E-05	4.25E-02	3.91E-06	4.36E-04	7.04E-04	1.25E-04	3.74E-04	2.43E-04	2.49E-04	5.37E-05	3.84E-05	1.05E-08	1.25E-04	7.12E-05
11	D62	80	Single Unit Short Haul Truck	8	0.00E+00	1.44E-06	7.13E-08	1.41E+00	1.16E-06	2.82E-03	1.53E-06	7.36E-04	9.02E-05	2.04E-05	1.75E-04	4.25E-05	4.32E-05	1.41E-04	5.68E-06	2.25E-09	1.32E-04	1.38E-04
11	D62	80	Combination Short Haul Truck	5	0.00E+00	2.07E-06	1.48E-07	1.71E+00	6.53E-09	1.83E-03	1.51E-06	2.12E-03	1.25E-04	3.09E-05	1.23E-04	4.37E-05	4.33E-05	2.58E-04	5.73E-06	0.00E+00	7.99E-05	4.00E-04
11	D62	80	Combination Long Haul Truck	4	0.00E+00	1.85E-06	1.25E-07	1.58E+00	7.54E-09	1.90E-03	1.40E-06	2.06E-03	1.22E-04	2.46E-05	1.27E-04	3.76E-05	3.78E-05	2.42E-04	5.30E-06	0.00E+00	8.95E-05	3.88E-04
10	D63	70	Passenger Car	4	0.00E+00	4.88E-08	5.28E-09	1.79E-01	3.40E-07	1.27E-03	1.09E-07	7.49E-06	2.90E-05	4.65E-06	1.06E-05	6.81E-06	6.99E-06	6.70E-07	9.02E-07	2.46E-10	3.58E-06	1.17E-06
10	D63	70	Passenger Truck	6	0.00E+00	1.07E-07	1.13E-08	4.13E-01	6.77E-07	2.33E-03	2.22E-07	2.34E-05	5.27E-05	8.57E-06	2.12E-05	1.38E-05	1.41E-05	3.04E-06	2.06E-06	5.51E-10	7.08E-06	3.85E-06
10	D64	70	Passenger Car	43	0.00E+00	5.66E-07	6.13E-08	2.08E+00	3.94E-06	1.47E-02	1.26E-06	8.69E-05	3.36E-04	5.39E-05	1.23E-04	7.90E-05	8.11E-05	7.77E-06	1.05E-05	2.85E-09	4.15E-05	1.36E-05
10	D64	70	Passenger Truck	73	0.00E+00	1.24E-06	1.31E-07	4.79E+00	7.85E-06	2.71E-02	2.58E-06	2.72E-04	6.12E-04	9.94E-05	2.46E-04	1.60E-04	1.64E-04	3.52E-05	2.39E-05	6.39E-09	8.21E-05	4.47E-05
10	D64	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.82E-03	1.92E-06	8.87E-04	1.27E-04	2.54E-05	2.18E-04	5.39E-05	5.47E-05	1.41E-04	5.69E-06	2.30E-09	1.64E-04	1.66E-04
10	D64	70	Combination Short Haul Truck	6	0.00E+00	3.27E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.86E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.46E-04
10	D64	70	Combination Long Haul Truck	6	0.00E+00	2.95E-06	1.97E-07	2.21E+00	1.22E-08	2.98E-03	2.24E-06	3.38E-03	2.47E-04	4.50E-05	2.06E-04	5.96E-05	6.03E-05	3.38E-04	7.40E-06	0.00E+00	1.45E-04	6.36E-04
11	D65	80	Passenger Car	186	0.00E+00	2.26E-06	2.44E-07	8.64E+00	1.57E-05	6.00E-02	5.02E-06	3.81E-04	1.02E-03	1.77E-04	4.88E-04	3.15E-04	3.23E-04	2.91E-05	4.35E-05	1.22E-08	1.65E-04	5.95E-05
11	D65	80	Passenger Truck	311	0.00E+00	4.84E-06	5.14E-07	2.00E+01	3.10E-05	1.10E-01	1.02E-05	1.13E-03	1.83E-03	3.25E-04	9.72E-04	6.31E-04	6.47E-04	1.40E-04	9.98E-05	2.72E-08	3.25E-04	1.85E-04
11	D65	80	Single Unit Short Haul Truck	29	0.00E+00	5.52E-06	2.74E-07	5.42E+00	4.45E-06	1.09E-02	5.88E-06	2.83E-03	3.47E-04	7.85E-05	6.72E-04	1.64E-04	1.66E-04	5.44E-04	2.18E-05	8.67E-09	5.06E-04	5.30E-04
11	D65	80	Single Unit Long Haul Truck	1	0.00E+00	2.40E-07	1.18E-08	2.29E-01	1.90E-07	4.52E-04	2.56E-07	1.21E-04	1.59E-05	3.47E-06	2.93E-05	7.04E-06	7.16E-06	2.29E-05	9.26E-07	3.61E-10	2.22E-05	2.27E-05
11	D65	80	Combination Short Haul Truck	22	0.00E+00	9.87E-06	7.06E-07	8.16E+00	3.11E-08	8.74E-03	7.21E-06	1.01E-02	5.97E-04	1.47E-04	5.88E-04	2.08E-04	2.07E-04	1.23E-03	2.73E-05	0.00E+00	3.81E-04	1.91E-03
11	D65	80	Combination Long Haul Truck	20	0.00E+00	8.84E-06	5.94E-07	7.54E+00	3.60E-08	9.06E-03	6.70E-06	9.82E-03	5.84E-04	1.18E-04	6.07E-04	1.79E-04	1.80E-04	1.15E-03	2.53E-05	0.00E+00	4.27E-04	1.85E-03
11	D66	80	Passenger Car	285	0.00E+00	3.47E-06	3.75E-07	1.33E+01	2.41E-05	9.22E-02	7.71E-06	5.85E-04	1.57E-03	2.72E-04	7.50E-04	4.84E-04	4.96E-04	4.47E-05	6.69E-05	1.87E-08	2.54E-04	9.15E-05
11	D66	80	Passenger Truck	477	0.00E+00	7.44E-06	7.90E-07	3.07E+01	4.77E-05	1.70E-01	1.56E-05	1.74E-03	2.81E-03	4.99E-04	1.49E-03	9.70E-04	9.93E-04	2.14E-04	1.53E-04	4.17E-08	5.00E-04	2.84E-04
11	D66	80	Single Unit Short Haul Truck	33	0.00E+00	6.16E-06	3.06E-07	6.05E+00	4.96E-06	1.21E-02	6.56E-06	3.16E-03	3.87E-04	8.77E-05	7.50E-04	1.83E-04	1.86E-04	6.07E-04	2.44E-05	9.67E-09	5.65E-04	5.91E-04
11	D66	80	Single Unit Long Haul Truck	1	0.00E+00	2.68E-07	1.32E-08	2.56E-01	2.12E-07	5.05E-04	2.85E-07	1.35E-04	1.77E-05	3.87E-06	3.27E-05	7.86E-06	7.99E-06	2.56E-05	1.03E-06	4.03E-10	2.47E-05	2.53E-05
11	D66	80	Combination Short Haul Truck	26	0.00E+00	1.13E-05	8.11E-07	9.38E+00	3.58E-08	1.00E-02	8.29E-06	1.16E-02	6.86E-04	1.69E-04	6.76E-04	2.39E-04	2.38E-04	1.41E-03	3.14E-05	0.00E+00	4.38E-04	2.19E-03
11	D66	80	Combination Long Haul Truck	24	0.00E+00	1.02E-05	6.83E-07	8.67E+00	4.14E-08	1.04E-02	7.70E-06	1.13E-02	6.71E-04	1.35E-04	6.98E-04	2.06E-04	2.07E-04	1.32E-03	2.90E-05	0.00E+00	4.90E-04	2.13E-03
11	D67	80	Passenger Car	202	0.00E+00	2.45E-06	2.65E-07	9.39E+00	1.71E-05	6.52E-02	5.45E-06	4.14E-04	1.11E-03	1.93E-04	5.31E-04	3.42E-04	3.51E-04	3.16E-05	4.73E-05	1.33E-08	1.80E-04	6.47E-05
11	D67	80	Passenger Truck	338	0.00E+00	5.27E-06	5.59E-07	2.17E+01	3.37E-05	1.20E-01	1.10E-05	1.23E-03	1.99E-03	3.53E-04	1.06E-03	6.86E-04	7.03E-04	1.52E-04	1.08E-04	2.95E-08	3.53E-04	2.01E-04
11	D67	80	Single Unit Short Haul Truck	49	0.00E+00	9.21E-06	4.57E-07	9.04E+00	7.41E-06	1.81E-02	9.80E-06	4.72E-03	5.79E-04	1.31E-04	1.12E-03	2.73E-04	2.77E-04	9.07E-04	3.64E-05	1.44E-08	8.44E-04	8.83E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.97E-08	3.82E-01	3.17E-07	7.54E-04	4.26E-07	2.02E-04	2.64E-05	5.78E-06	4.89E-05	1.17E-05	1.19E-05	3.82E-05	1.54E-06	6.02E-10	3.70E-05	3.78E-05
11	D67	80	Combination Short Haul Truck	38	0.00E+00	1.67E-05	1.19E-06	1.38E+01	5.27E-08	1.48E-02	1.22E-05	1.71E-02	1.01E-03	2.49E-04	9.94E-04	3.52E-04	3.50E-04	2.08E-03	4.62E-05	0.00E+00	6.44E-04	3.22E-03
11	D67	80	Combination Long Haul Truck	35	0.00E+00	1.49E-05	1.00E-06	1.28E+01	6.09E-08	1.53E-02	1.13E-05	1.66E-02	9.88E-04	1.99E-04	1.03E-03	3.03E-04	3.05E-04	1.95E-03	4.27E-05	0.00E+00	7.22E-04	3.13E-03
11	D68	80	Passenger Car	158	0.00E+00	1.92E-06	2.08E-07	7.35E+00	1.34E-05	5.10E-02	4.27E-06	3.24E-04	8.68E-04	1.51E-04	4.15E-04	2.68E-04	2.75E-04	2.47E-05	3.70E-05	1.04E-08	1.41E-04	5.06E-05
11	D68	80	Passenger Truck	264	0.00E+00	4.12E-06	4.37E-07	1.70E+01	2.64E-05	9.39E-02	8.64E-06	9.63E-04	1.56E-03	2.76E-04	8.27E-04	5.37E-04	5.50E-04	1.19E-04	8.49E-05	2.31E-08	2.77E-04	1.57E-04
11	D68	80	Single Unit Short Haul Truck	33	0.00E+00	6.16E-06	3.06E-07	6.05E+00	4.96E-06	1.21E-02	6.56E-06	3.16E-03	3.87E-04	8.76E-05	7.50E-04	1.82E-04	1.86E-04	6.07E-04	2.44E-05	9.67E-09	5.64E-04	5.91E-04
11	D68	80	Single Unit Long Haul Truck	1	0.00E+00	2.68E-07	1.32E-08	2.56E-01	2.12E-07	5.04E-04	2.85E-07	1.35E-04	1.77E-05	3.86E-06	3.27E-05	7.85E-06	7.99E-06	2.55E-05	1.03E-06	4.03E-10	2.47E-05	2.53E-05
11	D68	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	9.99E-07	1.15E+01	4.41E-08	1.24E-02	1.02E-05	1.43E-02	8.45E-04	2.08E-04	8.32E-04	2.95E-04	2.93E-04	1.74E-03	3.87E-05	0.00E+00	5.39E-04	2.70E-03
11	D68	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.41E-07	1.07E+01	5.09E-08	1.28E-02	9.48E-06	1.39E-02	8.27E-04	1.66E-04	8.59E-04	2.54E-04	2.55E-04	1.63E-03	3.58E-05	0.00E+00	6.04E-04	2.62E-03
11	D69	80	Passenger Car	128	0.00E+00	1.55E-06	1.68E-07	5.95E+00	1.08E-05	4.13E-02	3.45E-06	2.62E-04	7.02E-04	1.22E-04	3.36E-04	2.17E-04	2.22E-04	2.00E-05	3.00E-05	8.40E-09	1.14E-04	4.10E-05
11	D69	80	Passenger Truck	214	0.00E+00	3.34E-06	3.54E-07	1.37E+01	2.14E-05	7.60E-02	6.99E-06	7.79E-04	1.26E-03	2.24E-04	6.69E-04	4.35E-04	4.45E-04	9.61E-05	6.87E-05	1.87E-08	2.24E-04	1.27E-04
11	D69	80	Single Unit Short Haul Truck	12	0.00E+00	2.24E-06	1.11E-07	2.19E+00	1.80E-06	4.39E-03	2.38E-06	1.15E-03	1.40E-04	3.18E-05	2.72E-04	6.62E-05	6.73E-05	2.20E-04	8.84E-06	3.51E-09	2.05E-04	2.14E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	9.72E-08	4.79E-09	9.28E-02	7.68E-08	1.83E-04	1.03E-07	4.90E-05	6.42E-06	1.40E-06	1.19E-05	2.85E-06	2.90E-06	9.27E-06	3.75E-07	1.46E-10	8.97E-06	9.16E-06
11	D69	80	Combination Short Haul Truck	11	0.00E+00	4.91E-06	3.51E-07	4.06E+00	1.55E-08	4.34E-03	3.58E-06	5.03E-03	2.97E-04	7.32E-05	2.92E-04	1.04E-04	1.03E-04	6.12E-04	1.36E-05	0.00E+00	1.89E-04	9.48E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	4.39E-06	2.95E-07	3.75E+00	1.79E-08	4.50E-03	3.33E-06	4.88E-03	2.90E-04	5.84E-05	3.02E-04	8.91E-05	8.96E-05	5.73E-04	1.26E-05	0.00E+00	2.12E-04	9.20E-04
11	D70	80	Passenger Car	64	0.00E+00	7.84E-07	8.48E-08	3.00E+00	5.46E-06	2.08E-02	1.74E-06	1.32E-04	3.55E-04	6.16E-05	1.70E-04	1.09E-04	1.12E-04	1.01E-05	1.51E-05	4.24E-09	5.74E-05	2.07E-05
11	D70	80	Passenger Truck	108	0.00E+00	1.68E-06	1.79E-07	6.94E+00	1.08E-05	3.84E-02	3.53E-06	3.93E-04	6.36E-04	1.13E-04	3.38E-04	2.19E-04	2.25E-04	4.85E-05	3.47E-05	9.44E-09	1.13E-04	6.43E-05
11	D70	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.28E+00	1.87E-06	4.57E-03	2.48E-06	1.19E-03	1.46E-04	3.31E-05	2.83E-04	6.89E-05	7.00E-05	2.29E-04	9.20E-06	3.65E-09	2.13E-04	2.23E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	4.98E-09	9.66E-02	8.00E-08	1.90E-04	1.08E-07	5.10E-05	6.68E-06	1.46E-06	1.24E-05	2.97E-06	3.02E-06	9.64E-06	3.90E-07	1.52E-10	9.34E-06	9.54E-06
11	D70	80	Combination Short Haul Truck	10	0.00E+00	4.45E-06	3.18E-07	3.68E+00	1.40E-08	3.94E-03	3.25E-06	4.56E-03	2.69E-04	6.64E-05	2.65E-04	9.39E-05	9.32E-05	5.55E-04	1.23E-05	0.00E+00	1.72E-04	8.59E-04
11	D70	80	Combination Long Haul Truck	9	0.00E+00	3.98E-06	2.68E-07	3.40E+00	1.62E-08	4.08E-03	3.02E-06	4.43E-03	2.63E-04	5.30E-05	2.74E-04	8.08E-05	8.13E-05	5.20E-04	1.14E-05	0.00E+00	1.92E-04	8.34E-04
10	D71	70	Passenger Car	145	0.00E+00	1.89E-06	2.04E-07	6.94E+00	1.31E-05	4.91E-02	4.20E-06	2.90E-04	1.12E-03	1.80E-04	4.09E-04	2.64E-04	2.70E-04	2.59E-05	3.49E-05	9.50E-09	1.38E-04	4.53E-05
10	D71	70	Passenger Truck	242	0.00E+00	4.14E-06	4.38E-07	1.60E+01	2.62E-05	9.03E-02	8.60E-06	9.06E-04	2.04E-03	3.32E-04	8.20E-04	5.34E-04	5.47E-04	1.17E-04	7.97E-05	2.13E-08	2.74E-04	1.49E-04
10	D71	70	Single Unit Short Haul Truck	24	0.00E+00	5.70E-06	2.85E-07	4.46E+00	4.66E-06	8.92E-03	6.07E-06	2.81E-03	4.01E-04	8.02E-05	6.91E-04	1.70E-04	1.73E-04	4.47E-04	1.80E-05	7.26E-09	5.18E-04	5.26E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.48E-07	1.23E-08	1.89E-01	2.01E-07	3.75E-04	2.64E-07	1.21E-04	1.83E-05	3.57E-06	3.02E-05	7.37E-06	7.50E-06	1.89E-05	7.64E-07	3.06E-10	2.27E-05	2.26E-05
10	D71	70	Combination Short Haul Truck	29	0.00E+00	1.49E-05	1.06E-06	1.08E+01	4.83E-08	1.28E-02	1.09E-05	1.56E-02	1.13E-03	2.47E-04	9.06E-04	3.13E-04	3.12E-04	1.63E-03	3.61E-05	0.00E+00	5.94E-04	2.94E-03
10	D71	70	Combination Long Haul Truck	26	0.00E+00	1.34E-05	8.99E-07	1.01E+01	5.57E-08	1.36E-02	1.02E-05	1.54E-02	1.12E-03	2.05E-04	9.37E-04	2.72E-04	2.75E-04	1.54E-03	3.37E-05	0.00E+00	6.62E-04	2.90E-03
10	D72	70	Passenger Car	176	0.00E+00	2.29E-06	2.48E-07	8.42E+00	1.60E-05	5.95E-02	5.10E-06	3.52E-04	1.36E-03	2.18E-04	4.96E-04	3.20E-04	3.28E-04	3.14E-05	4.23E-05	1.15E-08	1.68E-04	5.50E-05
10	D72	70	Passenger Truck	294	0.00E+00	5.02E-06	5.32E-07	1.94E+01	3.18E-05	1.10E-01	1.04E-05	1.10E-03	2.48E-03	4.02E-04	9.96E-04	6.48E-04	6.63E-04	1.43E-04	9.67E-05	2.59E-08	3.32E-04	1.81E-04
10	D72	70	Single Unit Short Haul Truck	42	0.00E+00	9.79E-06	4.90E-07	7.66E+00	8.00E-06	1.53E-02	1.04E-05	4.82E-03	6.89E-04	1.38E-04	1.19E-03	2.93E-04	2.98E-04	7.69E-04	3.09E-05	1.25E-08	8.90E-04	9.03E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	4.26E-07	2.12E-08	3.25E-01	3.45E-07	6.44E-04	4.54E-07	2.07E-04	3.14E-05	6.13E-06	5.19E-05	1.27E-05	1.29E-05	3.25E-05	1.31E-06	5.26E-10	3.90E-05	3.88E-05

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D72	70	Combination Short Haul Truck	31	0.00E+00	1.62E-05	1.15E-06	1.18E+01	5.28E-08	1.40E-02	1.19E-05	1.70E-02	1.24E-03	2.70E-04	9.89E-04	3.41E-04	3.41E-04	1.77E-03	3.94E-05	0.00E+00	6.48E-04	3.21E-03
10	D72	70	Combination Long Haul Truck	28	0.00E+00	1.47E-05	9.81E-07	1.10E+01	6.08E-08	1.48E-02	1.11E-05	1.68E-02	1.23E-03	2.24E-04	1.02E-03	2.97E-04	3.00E-04	1.68E-03	3.68E-05	0.00E+00	7.23E-04	3.16E-03
10	D73	70	Passenger Car	79	0.00E+00	1.04E-06	1.12E-07	3.80E+00	7.21E-06	2.69E-02	2.30E-06	1.59E-04	6.15E-04	9.86E-05	2.24E-04	1.44E-04	1.48E-04	1.42E-05	1.91E-05	5.21E-09	7.59E-05	2.48E-05
10	D73	70	Passenger Truck	133	0.00E+00	2.27E-06	2.40E-07	8.76E+00	1.44E-05	4.95E-02	4.71E-06	4.97E-04	1.12E-03	1.82E-04	4.50E-04	2.93E-04	3.00E-04	6.44E-05	4.37E-05	1.17E-08	1.50E-04	8.17E-05
10	D73	70	Single Unit Short Haul Truck	3	0.00E+00	6.78E-07	3.40E-08	5.31E-01	5.55E-07	1.06E-03	7.23E-07	3.34E-04	4.77E-05	9.56E-06	8.23E-05	2.03E-05	2.06E-05	5.33E-05	2.14E-06	8.65E-10	6.17E-05	6.26E-05
10	D73	70	Combination Short Haul Truck	6	0.00E+00	3.35E-06	2.38E-07	2.43E+00	1.09E-08	2.89E-03	2.46E-06	3.52E-03	2.55E-04	5.57E-05	2.04E-04	7.05E-05	7.04E-05	3.67E-04	8.14E-06	0.00E+00	1.34E-04	6.63E-04
10	D73	70	Combination Long Haul Truck	6	0.00E+00	3.03E-06	2.03E-07	2.27E+00	1.26E-08	3.06E-03	2.30E-06	3.47E-03	2.53E-04	4.62E-05	2.11E-04	6.13E-05	6.19E-05	3.47E-04	7.60E-06	0.00E+00	1.49E-04	6.54E-04
10	D74	70	Passenger Car	130	0.00E+00	1.69E-06	1.83E-07	6.22E+00	1.18E-05	4.40E-02	3.76E-06	2.60E-04	1.00E-03	1.61E-04	3.66E-04	2.36E-04	2.42E-04	2.32E-05	3.13E-05	8.51E-09	1.24E-04	4.06E-05
10	D74	70	Passenger Truck	217	0.00E+00	3.71E-06	3.93E-07	1.43E+01	2.35E-05	8.09E-02	7.71E-06	8.12E-04	1.83E-03	2.97E-04	7.35E-04	4.78E-04	4.90E-04	1.05E-04	7.14E-05	1.91E-08	2.45E-04	1.34E-04
10	D74	70	Single Unit Short Haul Truck	4	0.00E+00	8.33E-07	4.17E-08	6.52E-01	6.81E-07	1.30E-03	8.87E-07	4.10E-04	5.86E-05	1.17E-05	1.01E-04	2.49E-05	2.53E-05	6.54E-05	2.63E-06	1.06E-09	7.57E-05	7.68E-05
10	D74	70	Combination Short Haul Truck	4	0.00E+00	2.03E-06	1.45E-07	1.47E+00	6.61E-09	1.75E-03	1.49E-06	2.13E-03	1.55E-04	3.38E-05	1.24E-04	4.28E-05	4.27E-05	2.22E-04	4.93E-06	0.00E+00	8.12E-05	4.02E-04
10	D74	70	Combination Long Haul Truck	4	0.00E+00	1.84E-06	1.23E-07	1.38E+00	7.61E-09	1.85E-03	1.40E-06	2.10E-03	1.54E-04	2.80E-05	1.28E-04	3.72E-05	3.76E-05	2.10E-04	4.61E-06	0.00E+00	9.05E-05	3.96E-04
11	D75	80	Passenger Car	84	0.00E+00	1.02E-06	1.10E-07	3.90E+00	7.09E-06	2.71E-02	2.26E-06	1.72E-04	4.61E-04	8.01E-05	2.20E-04	1.42E-04	1.46E-04	1.31E-05	1.97E-05	5.51E-09	7.46E-05	2.69E-05
11	D75	80	Passenger Truck	140	0.00E+00	2.19E-06	2.32E-07	9.01E+00	1.40E-05	4.98E-02	4.58E-06	5.11E-04	8.26E-04	1.47E-04	4.39E-04	2.85E-04	2.92E-04	6.30E-05	4.50E-05	1.23E-08	1.47E-04	8.35E-05
11	D75	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.28E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	D75	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	D75	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.14E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	D76	80	Passenger Car	86	0.00E+00	1.04E-06	1.13E-07	3.99E+00	7.25E-06	2.77E-02	2.32E-06	1.76E-04	4.71E-04	8.19E-05	2.25E-04	1.45E-04	1.49E-04	1.34E-05	2.01E-05	5.63E-09	7.63E-05	2.75E-05
11	D76	80	Passenger Truck	143	0.00E+00	2.24E-06	2.37E-07	9.22E+00	1.43E-05	5.10E-02	4.69E-06	5.22E-04	8.44E-04	1.50E-04	4.49E-04	2.91E-04	2.98E-04	6.44E-05	4.61E-05	1.25E-08	1.50E-04	8.54E-05
11	D76	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.44E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	D76	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.32E-07	1.52E+00	5.80E-09	1.63E-03	1.34E-06	1.89E-03	1.11E-04	2.74E-05	1.10E-04	3.88E-05	3.85E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.55E-04
11	D76	80	Combination Long Haul Truck	4	0.00E+00	1.65E-06	1.11E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.45E-04
11	D77	80	Passenger Car	139	0.00E+00	1.69E-06	1.83E-07	6.48E+00	1.18E-05	4.50E-02	3.76E-06	2.86E-04	7.65E-04	1.33E-04	3.66E-04	2.36E-04	2.42E-04	2.18E-05	3.26E-05	9.15E-09	1.24E-04	4.46E-05
11	D77	80	Passenger Truck	233	0.00E+00	3.63E-06	3.85E-07	1.50E+01	2.33E-05	8.28E-02	7.61E-06	8.49E-04	1.37E-03	2.43E-04	7.29E-04	4.73E-04	4.85E-04	1.05E-04	7.48E-05	2.04E-08	2.44E-04	1.39E-04
11	D77	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	D77	80	Combination Short Haul Truck	10	0.00E+00	4.37E-06	3.12E-07	3.61E+00	1.38E-08	3.87E-03	3.19E-06	4.48E-03	2.64E-04	6.52E-05	2.60E-04	9.22E-05	9.15E-05	5.45E-04	1.21E-05	0.00E+00	1.69E-04	8.44E-04
11	D77	80	Combination Long Haul Truck	9	0.00E+00	3.91E-06	2.63E-07	3.34E+00	1.59E-08	4.01E-03	2.96E-06	4.35E-03	2.59E-04	5.20E-05	2.69E-04	7.93E-05	7.98E-05	5.10E-04	1.12E-05	0.00E+00	1.89E-04	8.19E-04
11	D78	80	Passenger Car	73	0.00E+00	8.91E-07	9.64E-08	3.41E+00	6.20E-06	2.37E-02	1.98E-06	1.51E-04	4.03E-04	7.01E-05	1.93E-04	1.24E-04	1.28E-04	1.15E-05	1.72E-05	4.82E-09	6.53E-05	2.35E-05
11	D78	80	Passenger Truck	123	0.00E+00	1.91E-06	2.03E-07	7.89E+00	1.23E-05	4.36E-02	4.01E-06	4.47E-04	7.23E-04	1.28E-04	3.84E-04	2.49E-04	2.55E-04	5.51E-05	3.94E-05	1.07E-08	1.28E-04	7.31E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.23E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.38E-05	6.49E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.06E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	9.37E-08	4.62E-09	8.94E-02	7.40E-08	1.76E-04	9.96E-08	4.72E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.61E-07	1.41E-10	8.64E-06	8.83E-06
11	D78	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.77E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	D78	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.66E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.90E-04
11	D79	70	Passenger Car	122	0.00E+00	1.59E-06	1.72E-07	5.85E+00	1.11E-05	4.14E-02	3.54E-06	2.45E-04	9.46E-04	1.52E-04	3.45E-04	2.22E-04	2.28E-04	2.19E-05	2.94E-05	8.02E-09	1.17E-04	3.82E-05
10	D79	70	Passenger Truck	204	0.00E+00	3.49E-06	3.70E-07	1.35E+01	2.21E-05	7.62E-02	7.26E-06	7.65E-04	1.72E-03	2.80E-04	6.92E-04	4.50E-04	4.61E-04	9.91E-05	6.72E-05	1.80E-08	2.31E-04	1.26E-04
10	D79	70	Single Unit Short Haul Truck	22	0.00E+00	5.28E-06	2.64E-07	4.13E+00	4.31E-06	8.26E-03	5.62E-06	2.60E-03	3.71E-04	7.43E-05	6.40E-04	1.58E-04	1.60E-04	4.14E-04	1.67E-05	6.73E-09	4.80E-04	4.87E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	2.30E-07	1.14E-08	1.75E-01	1.86E-07	3.47E-04	2.45E-07	1.12E-04	1.69E-05	3.31E-06	2.80E-05	6.83E-06	6.94E-06	1.75E-05	7.08E-07	2.84E-10	2.10E-05	2.09E-05
10	D79	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.55E-07	7.70E+00	3.45E-08	9.15E-03	7.80E-06	1.12E-02	8.09E-04	1.77E-04	6.47E-04	2.24E-04	2.23E-04	1.16E-03	2.58E-05	0.00E+00	4.24E-04	2.10E-03
10	D79	70	Combination Long Haul Truck	19	0.00E+00	9.61E-06	6.43E-07	7.19E+00	3.98E-08	9.69E-03	7.30E-06	1.10E-02	8.03E-04	1.47E-04	6.69E-04	1.94E-04	1.96E-04	1.10E-03	2.41E-05	0.00E+00	4.73E-04	2.07E-03
10	D80	70	Passenger Car	340	0.00E+00	4.44E-06	4.81E-07	1.63E+01	3.09E-05	1.15E-01	9.88E-06	6.82E-04	2.64E-03	4.23E-04	9.62E-04	6.20E-04	6.36E-04	6.09E-05	8.21E-05	2.24E-08	3.26E-04	1.07E-04
10	D80	70	Passenger Truck	570	0.00E+00	9.74E-06	1.03E-06	3.76E+01	6.16E-05	2.12E-01	2.02E-05	2.13E-03	4.80E-03	7.80E-04	1.93E-03	1.26E-03	1.29E-03	2.76E-04	1.87E-04	5.01E-08	6.44E-04	3.51E-04
10	D80	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.81E-07	2.82E+00	2.95E-06	5.65E-03	3.84E-06	1.78E-03	2.54E-04	5.08E-05	4.37E-04	1.08E-04	1.10E-04	2.83E-04	1.14E-05	4.59E-09	3.28E-04	3.32E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.64E-05	1.16E-05	2.26E-06	1.91E-05	4.66E-06	4.74E-06	1.20E-05	4.84E-07	1.94E-10	1.44E-05	1.43E-05
10	D80	70	Combination Short Haul Truck	18	0.00E+00	9.48E-06	6.74E-07	6.87E+00	3.08E-08	8.16E-03	6.95E-06	9.95E-03	7.22E-04	1.57E-04	5.78E-04	1.99E-04	1.99E-04	1.04E-03	2.30E-05	0.00E+00	3.78E-04	1.88E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	8.57E-06	5.73E-07	6.41E+00	3.55E-08	8.65E-03	6.51E-06	9.81E-03	7.17E-04	1.31E-04	5.97E-04	1.73E-04	1.75E-04	9.80E-04	2.15E-05	0.00E+00	4.22E-04	1.85E-03
10	D81	70	Passenger Car	101	0.00E+00	1.32E-06	1.43E-07	4.85E+00	9.19E-06	3.43E-02	2.93E-06	2.02E-04	7.84E-04	1.26E-04	2.86E-04	1.84E-04	1.89E-04	1.81E-05	2.44E-05	6.64E-09	9.67E-05	3.16E-05
10	D81	70	Passenger Truck	169	0.00E+00	2.89E-06	3.06E-07	1.12E+01	1.83E-05	6.31E-02	6.01E-06	6.33E-04	1.43E-03	2.32E-04	5.73E-04	3.73E-04	3.82E-04	8.21E-05	5.57E-05	1.49E-08	1.91E-04	1.04E-04
10	D81	70	Single Unit Short Haul Truck	1	0.00E+00	3.19E-07	1.60E-08	2.50E-01	2.61E-07	5.00E-04	3.40E-07	1.57E-04	2.25E-05	4.50E-06	3.87E-05	9.55E-06	9.71E-06	2.51E-05	1.01E-06	4.07E-10	2.90E-05	2.95E-05
10	D81	70	Combination Short Haul Truck	2	0.00E+00	1.08E-06	7.66E-08	7.81E-01	3.50E-09	9.28E-04	7.90E-07	1.13E-03	8.20E-05	1.79E-05	6.56E-05	2.27E-05	2.26E-05	1.18E-04	2.61E-06	0.00E+00	4.30E-05	2.13E-04
10	D81	70	Combination Long Haul Truck	2	0.00E+00	9.74E-07	6.51E-08	7.29E-01	4.03E-09	9.82E-04	7.40E-07	1.11E-03	8.14E-05	1.49E-05	6.78E-05	1.97E-05	1.99E-05	1.11E-04	2.44E-06	0.00E+00	4.79E-05	2.10E-04
10	D82	70	Passenger Car	138	0.00E+00	1.80E-06	1.95E-07	6.62E+00	1.26E-05	4.68E-02	4.01E-06	2.77E-04	1.07E-03	1.72E-04	3.90E-04	2.52E-04	2.58E-04	2.47E-05	3.33E-05	9.07E-09	1.32E-04	4.32E-05
10	D82	70	Passenger Truck	231	0.00E+00	3.95E-06	4.18E-07	1.53E+01	2.50E-05	8.62E-02	8.21E-06	8.65E-04	1.95E-03	3.17E-04	7.83E-04	5.09E-04	5.22E-04	1.12E-04	7.60E-05	2.03E-08	2.61E-04	1.42E-04
10	D82	70	Single Unit Short Haul Truck	1	0.00E+00	1.41E-07	7.07E-09	1.11E-01	1.15E-07	2.21E-04	1.50E-07	6.96E-05	9.94E-06	1.99E-06	1.71E-05	4.22E-06	4.29E-06	1.11E-05	4.46E-07	1.80E-10	1.28E-05	1.30E-05
11	D83	80	Passenger Car	485	0.00E+00	5.90E-06	6.38E-07	2.26E+01	4.11E-05	1.57E-01	1.31E-05	9.96E-04	2.67E-03	4.64E-04	1.28E-03	8.23E-04	8.45E-04	7.60E-05	1.14E-04	3.19E-08	4.32E-04	1.56E-04
11	D83	80	Passenger Truck	812	0.00E+00	1.27E-05	1.34E-06	5.22E+01	8.12E-05	2.89E-01	2.66E-05	2.96E-03	4.78E-03	8.49E-04	2.54E-03	1.65E-03	1.69E-03	3.65E-04	2.61E-04	7.11E-08	8.50E-04	4.84E-04
11	D83	80	Single Unit Short Haul Truck	28	0.00E+00	5.17E-06	2.57E-07	5.07E+00	4.16E-06	1.02E-02	5.50E-06	2.65E-03	3.25E-04	7.35E-05	6.29E-04	1.53E-04	1.56E-04	5.09E-04	2.04E-05	8.11E-09	4.73E-04	4.95E-04
11	D83	80	Single Unit Long Haul Truck	1	0.00E+00	2.25E-07	1.11E-08	2.15E-01	1.78E-07	4.23E-04	2.39E-07	1.13E-04	1.48E-05	3.24E-06	2.74E-05	6.59E-06	6.70E-06	2.14E-05	8.66E-07	3.38E-10	2.07E-05	2.12E-05
11	D83	80	Combination Short Haul Truck	34	0.00E+00	1.48E-05	1.06E-06	1.22E+01	4.67E-08	1.31E-02	1.08E-05	1.52E-02	8.96E-04	2.21E-04	8.82E-04	3.13E-04	3.10E-04	1.85E-03	4.10E-05	0.00E+00	5.72E-04	2.86E-03
11	D83	80	Combination Long Haul Truck	31	0.00E+00	1.33E-05	8.92E-07	1.13E+01	5.40E-08	1.36E-02	1.01E-05	1.47E-02	8.77E-04	1.76E-04	9.11E-04	2.69E-04	2.71E-04	1.73E-03	3.79E-05	0.00E+00	6.40E-04	2.78E-03
11	D84	80	Passenger Car	349	0.00E+00	4.24E-06	4.59E-07	1.62E+01	2.95E-05	1.13E-01	9.43E-06	7.16E-04	1.92E-03	3.33E-04	9.18E-04	5.92E-04	6.07E-04	5.46E-05	8.19E-05	2.29E-08	3.11E-04	1.12E-04
11	D84	80	Passenger Truck	584	0.00E+00	9.11E-06	9.66E-07	3.75E+01	5.84E-05	2.08E-01	1.91E-05	2.13E-03	3.44E-03	6.11E-04	1.83E-03	1.19E-03	1.22E-03	2.62E-04	1.88E-04	5.11E-08	6.11E-04	3.48E-04
11	D84	80	Single Unit Short Haul Truck	23	0.00E+00	4.39E-06	2.18E-07	4.30E+00	3.53E-06	8.62E-03	4.67E-06	2.25E-03	2.76E-04	6.24E-05	5.34E-04	1.30E-04	1.32E-04	4.32E-04	1.73E-05	6.88E-09	4.02E-04	4.21E-04
11	D84	80	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	9.40E-09	1.82E-01	1.51E-07	3.59E-04	2.03E-07	9.61E-05	1.26E-05	2.75E-06	2.33E-05	5.59E-06	5.69E-06	1.82E-05	7.35E-07	2.87E-10	1.76E-05	1.80E-05
11	D84	80	Combination Short Haul Truck	27	0.00E+00	1.18E-05	8.46E-07	9.78E+00	3.73E-08	1.05E-02	8.64E-06	1.21E-02	7.16E-04	1.76E-04	7.04E-04	2.50E-04	2.48E-04	1.47E-03	3.27E-05	0.00E+00	4.56E-04	2.28E-03
11	D84	80	Combination Long Haul Truck	25	0.00E+00	1.06E-05	7.12E-07	9.04E+00	4.31E-08	1.09E-02	8.02E-06	1.18E-02	7.00E-04	1.41E-04	7.27E-04	2.15E-04	2.16E-04	1.38E-03	3.03E-05	0.00E+00	5.11E-04	2.22E-03
11	D85	80	Passenger Car	292	0.00E+00	3.55E-06	3.84E-07	1.36E+01	2.47E-05	9.44E-02	7.89E-06	6.00E-04	1.61E-03	2.79E-04	7.68E-04	4.95E-04	5.08E-04	4.57E-05	6.85E-05	1.92E-08	2.60E-04	9.37E-05
11	D85	80	Passenger Truck	489	0.00E+00	7.62E-06	8.09E-07	3.14E+01	4.88E-05	1.74E-01	1.60E-05	1.78E-03	2.88E-03	5.11E-04	1.53E-03	9.93E-04	1.02E-03	2.20E-04	1.57E-04	4.27E-08	5.12E-04	2.91E-04
11	D85	80	Single Unit Short Haul Truck	27	0.00E+00	5.07E-06	2.52E-07	4.97E+00	4.08E-06	9.96E-03	5.39E-06	2.60E-03	3.18E-04	7.20E-05	6.17E-04	1.50E-04	1.53E-04	4.99E-04	2.00E-05	7.95E-09	4.64E-04	4.86E-04
11	D85	80	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	1.09E-08	2.10E-01	1.74E-07	4.15E-04	2.34E-07	1.11E-04	1.45E-05	3.18E-06	2.69E-05	6.46E-06	6.57E-06	2.10E-05	8.49E-07	3.31E-10	2.03E-05	2.08E-05
11	D85	80	Combination Short Haul Truck	31	0.00E+00	1.38E-05	9.86E-07	1.14E+01	4.35E-08	1.22E-02	1.01E-05	1.41E-02	8.34E-04	2.06E-04	8.21E-04	2.91E-04	2.89E-04	1.72E-03	3.81E-05	0.00E+00	5.32E-04	2.66E-03
11	D85	80	Combination Long Haul Truck	29	0.00E+00	1.23E-05	8.30E-07	1.05E+01	5.02E-08	1.26E-02	9.35E-06	1.37E-02	8.16E-04	1.64E-04	8.48E-04	2.50E-04	2.52E-04	1.61E-03	3.53E-05	0.00E+00	5.96E-04	2.58E-03
11	D86	80	Passenger Car	337	0.00E+00	4.10E-06	4.43E-07	1.57E+01	2.85E-05	1.09E-01	9.11E-06	6.92E-04	1.85E-03	3.22E-04	8.86E-04	5.71E-04	5.86E-04	5.28E-05	7.90E-05	2.22E-08	3.00E-04	1.08E-04
11	D86	80	Passenger Truck	564	0.00E+00	8.79E-06	9.33E-07	3.62E+01	5.63E-05	2.00E-01	1.84E-05	2.05E-03	3.32E-03	5.89E-04	1.76E-03	1.15E-03	1.17E-03	2.53E-04	1.81E-04	4.93E-08	5.90E-04	3.36E-04
11	D86	80	Single Unit Short Haul Truck	17	0.00E+00	3.09E-06	1.54E-07	3.04E+00	2.49E-06	6.08E-03	3.29E-06	1.59E-03	1.94E-04	4.40E-05	3.77E-04	9.17E-05	9.32E-05	3.05E-04	1.22E-05	4.86E-09	2.83E-04	2.97E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	1.35E-07	6.63E-09	1.29E-01	1.06E-07	2.53E-04	1.43E-07	6.78E-05	8.88E-06	1.94E-06	1.64E-05	3.95E-06	4.01E-06	1.28E-05	5.19E-07	2.02E-10	1.24E-05	1.27E-05
11	D86	80	Combination Short Haul Truck	24	0.00E+00	1.07E-05	7.63E-07	8.82E+00	3.37E-08	9.45E-03	7.80E-06	1.09E-02	6.46E-04	1.59E-04	6.35E-04	2.25E-04	2.24E-04	1.33E-03	2.95E-05	0.00E+00	4.12E-04	2.06E-03
11	D86	80	Combination Long Haul Truck	22	0.00E+00	9.56E-06	6.42E-07	8.16E+00	3.89E-08	9.79E-03	7.24E-06	1.06E-02	6.32E-04	1.27E-04	6.56E-04	1.94E-04	1.95E-04	1.25E-03	2.73E-05	0.00E+00	4.61E-04	2.00E-03
11	D87	80	Passenger Car	760	0.00E+00	9.25E-06	1.00E-06	3.54E+01	6.43E-05	2.46E-01	2.06E-05	1.56E-03	4.18E-03	7.27E-04	2.00E-03	1.29E-03	1.32E-03	1.19E-04	1.78E-04	5.00E-08	6.77E-04	2.44E-04
11	D87	80	Passenger Truck	1273	0.00E+00	1.98E-05	2.11E-06	8.18E+01	1.27E-04	4.52E-01	4.16E-05	4.64E-03	7.50E-03	1.33E-03	3.98E-03	2.59E-03	2.65E-03	5.72E-04	4.09E-04	1.11E-07	1.33E-03	7.58E-04
11	D87	80	Single Unit Short Haul Truck	75	0.00E+00	1.40E-05	6.97E-07	1.38E+01	1.13E-05	2.76E-02	1.49E-05	7.19E-03	8.82E-04	1.99E-04	1.71E-03	4.15E-04	4.22E-04	1.38E-03	5.55E-05	2.20E-08	1.28E-03	1.34E-03
11	D87	80	Single Unit Long Haul Truck	3	0.00E+00	6.10E-07	3.01E-08	5.83E-01	4.82E-07	1.15E-03	6.49E-07	3.07E-04	4.03E-05	8.80E-06	7.45E-05	1.79E-05	1.82E-05	5.82E-05	2.35E-06	9.18E-10	5.63E-05	5.75E-05
11	D87	80	Combination Short Haul Truck	72	0.00E

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D92	70	Passenger Car	191	0.00E+00	2.50E-06	2.70E-07	9.18E+00	1.74E-05	6.49E-02	5.56E-06	3.84E-04	1.48E-03	2.38E-04	5.41E-04	3.49E-04	3.58E-04	3.43E-05	4.62E-05	1.26E-08	1.83E-04	5.99E-05
10	D92	70	Passenger Truck	321	0.00E+00	5.48E-06	5.80E-07	2.12E+01	3.47E-05	1.19E-01	1.14E-05	1.20E-03	2.70E-03	4.39E-04	1.09E-03	7.06E-04	7.24E-04	1.55E-04	1.05E-04	2.82E-08	3.62E-04	1.97E-04
10	D92	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.55E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	D92	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.97E-01	8.84E-10	2.34E-04	2.00E-07	2.86E-04	2.07E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.97E-05	6.60E-07	0.00E+00	1.09E-05	5.38E-05
10	D93	70	Passenger Car	46	0.00E+00	6.01E-07	6.50E-08	2.21E+00	4.18E-06	1.56E-02	1.34E-06	9.21E-05	3.57E-04	5.72E-05	1.30E-04	8.38E-05	8.60E-05	8.24E-06	1.11E-05	3.02E-09	4.40E-05	1.44E-05
10	D93	70	Passenger Truck	77	0.00E+00	1.32E-06	1.39E-07	5.08E+00	8.33E-06	2.87E-02	2.73E-06	2.88E-04	6.49E-04	1.05E-04	2.61E-04	1.70E-04	1.74E-04	3.73E-05	2.53E-05	6.77E-09	8.70E-05	4.74E-05
10	D93	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	D93	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.97E-01	8.84E-10	2.34E-04	2.00E-07	2.86E-04	2.07E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.97E-05	6.60E-07	0.00E+00	1.09E-05	5.38E-05
10	D94	70	Passenger Car	165	0.00E+00	2.15E-06	2.32E-07	7.89E+00	1.50E-05	5.58E-02	4.78E-06	3.30E-04	1.28E-03	2.05E-04	4.65E-04	3.00E-04	3.08E-04	2.95E-05	3.97E-05	1.08E-08	1.57E-04	5.15E-05
10	D94	70	Passenger Truck	275	0.00E+00	4.71E-06	4.98E-07	1.82E+01	2.98E-05	1.03E-01	9.78E-06	1.03E-03	2.32E-03	3.77E-04	9.33E-04	6.07E-04	6.22E-04	1.34E-04	9.06E-05	2.42E-08	3.11E-04	1.70E-04
10	D94	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.23E-05
10	D94	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.71E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.63E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
9	E01	60	Passenger Car	194	0.00E+00	2.90E-06	3.14E-07	9.71E+00	2.02E-05	7.49E-02	6.45E-06	3.95E-04	1.96E-03	3.02E-04	6.27E-04	4.04E-04	4.15E-04	4.04E-05	4.87E-05	1.34E-08	2.12E-04	6.17E-05
9	E01	60	Passenger Truck	324	0.00E+00	6.39E-06	6.75E-07	2.21E+01	4.00E-05	1.34E-01	1.32E-05	1.29E-03	3.60E-03	5.59E-04	1.25E-03	8.16E-04	8.36E-04	1.72E-04	1.10E-04	3.04E-08	4.17E-04	2.13E-04
9	E01	60	Single Unit Short Haul Truck	12	0.00E+00	3.42E-06	1.71E-07	2.18E+00	2.82E-06	4.22E-03	3.65E-06	1.63E-03	2.77E-04	5.02E-05	4.15E-04	1.03E-04	1.04E-04	2.18E-04	8.80E-06	3.62E-09	3.11E-04	3.05E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	7.43E-09	9.30E-02	1.22E-07	1.79E-04	1.59E-07	7.05E-05	1.24E-05	2.22E-06	1.82E-05	4.46E-06	4.53E-06	9.28E-06	3.76E-07	1.54E-10	1.37E-05	1.32E-05
9	E01	60	Combination Short Haul Truck	8	0.00E+00	4.96E-06	3.46E-07	3.23E+00	1.76E-08	4.34E-03	3.68E-06	5.38E-03	4.62E-04	9.14E-05	3.16E-04	1.03E-04	1.03E-04	4.86E-04	1.08E-05	0.00E+00	2.13E-04	1.01E-03
9	E01	60	Combination Long Haul Truck	8	0.00E+00	4.45E-06	2.90E-07	3.03E+00	2.02E-08	4.67E-03	3.43E-06	5.33E-03	4.64E-04	7.88E-05	3.25E-04	8.85E-05	8.96E-05	4.62E-04	1.01E-05	0.00E+00	2.36E-04	1.00E-03
9	E02	60	Passenger Car	138	0.00E+00	2.07E-06	2.23E-07	6.92E+00	1.44E-05	5.34E-02	4.59E-06	2.81E-04	1.40E-03	2.15E-04	4.47E-04	2.88E-04	2.96E-04	2.88E-05	3.47E-05	9.56E-09	1.51E-04	4.40E-05
9	E02	60	Passenger Truck	231	0.00E+00	4.56E-06	4.81E-07	1.58E+01	2.85E-05	9.52E-02	9.39E-06	9.17E-04	2.57E-03	3.99E-04	8.93E-04	5.82E-04	5.96E-04	1.22E-04	7.84E-05	2.17E-08	2.97E-04	1.52E-04
9	E02	60	Single Unit Short Haul Truck	8	0.00E+00	2.23E-06	1.11E-07	1.42E+00	1.84E-06	2.75E-03	2.38E-06	1.06E-03	1.80E-04	3.27E-05	2.71E-04	6.68E-05	6.79E-05	1.42E-04	5.73E-06	2.36E-09	2.03E-04	1.99E-04
9	E02	60	Combination Short Haul Truck	7	0.00E+00	3.88E-06	2.71E-07	2.53E+00	1.38E-08	3.40E-03	2.88E-06	4.21E-03	3.62E-04	7.16E-05	2.47E-04	8.06E-05	8.08E-05	3.81E-04	8.46E-06	0.00E+00	1.66E-04	7.93E-04
9	E02	60	Combination Long Haul Truck	6	0.00E+00	3.49E-06	2.27E-07	2.37E+00	1.58E-08	3.66E-03	2.69E-06	4.17E-03	3.64E-04	6.17E-05	2.55E-04	6.93E-05	7.02E-05	3.62E-04	7.94E-06	0.00E+00	1.85E-04	7.86E-04
11	E03	80	Passenger Car	103	0.00E+00	1.25E-06	1.35E-07	4.77E+00	8.68E-06	3.32E-02	2.77E-06	2.11E-04	5.64E-04	9.80E-05	2.70E-04	1.74E-04	1.79E-04	1.61E-05	2.41E-05	6.74E-09	9.14E-05	3.29E-05
11	E03	80	Passenger Truck	172	0.00E+00	2.68E-06	2.84E-07	1.10E+01	1.72E-05	6.10E-02	5.61E-06	6.26E-04	1.01E-03	1.79E-04	5.37E-04	3.49E-04	3.57E-04	7.71E-05	5.51E-05	1.50E-08	1.80E-04	1.02E-04
11	E03	80	Single Unit Short Haul Truck	11	0.00E+00	2.14E-06	1.06E-07	2.10E+00	1.72E-06	4.20E-03	2.27E-06	1.09E-03	1.34E-04	3.04E-05	2.60E-04	6.32E-05	6.43E-05	2.10E-04	8.44E-06	3.35E-09	1.96E-04	2.05E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	9.29E-08	4.58E-09	8.87E-02	7.34E-08	1.75E-04	9.88E-08	4.68E-05	6.13E-06	1.34E-06	1.13E-05	2.72E-06	2.77E-06	8.85E-06	3.58E-07	1.40E-10	8.57E-06	8.76E-06
11	E03	80	Combination Short Haul Truck	6	0.00E+00	2.82E-06	2.02E-07	2.33E+00	8.90E-09	2.50E-03	2.06E-06	2.89E-03	1.71E-04	4.21E-05	1.68E-04	5.95E-05	5.91E-05	3.52E-04	7.80E-06	0.00E+00	1.09E-04	5.45E-04
11	E03	80	Combination Long Haul Truck	6	0.00E+00	2.53E-06	1.70E-07	2.16E+00	1.03E-08	2.59E-03	1.91E-06	2.81E-03	1.67E-04	3.36E-05	1.73E-04	5.12E-05	5.15E-05	3.29E-04	7.22E-06	0.00E+00	1.22E-04	5.29E-04
11	E04	80	Passenger Car	156	0.00E+00	1.90E-06	2.05E-07	7.25E+00	1.32E-05	5.04E-02	4.21E-06	3.20E-04	8.57E-04	1.49E-04	4.10E-04	2.64E-04	2.71E-04	2.44E-05	3.66E-05	1.03E-08	1.39E-04	5.00E-05
11	E04	80	Passenger Truck	261	0.00E+00	4.07E-06	4.32E-07	1.68E+01	2.61E-05	9.27E-02	8.53E-06	9.51E-04	1.54E-03	2.73E-04	8.16E-04	5.30E-04	5.43E-04	1.17E-04	8.38E-05	2.28E-08	2.73E-04	1.55E-04
11	E04	80	Single Unit Short Haul Truck	4	0.00E+00	6.83E-07	3.39E-08	6.70E-01	5.50E-07	1.34E-03	7.27E-07	3.50E-04	4.29E-05	9.71E-06	8.31E-05	2.02E-05	2.06E-05	6.73E-05	2.70E-06	1.07E-09	6.26E-05	6.55E-05
11	E04	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.50E-01	3.62E-09	1.02E-03	8.39E-07	1.18E-03	6.95E-05	1.71E-05	6.84E-05	2.42E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.43E-05	2.22E-04
11	E04	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.91E-08	8.78E-01	4.19E-09	1.05E-03	7.79E-07	1.14E-03	6.80E-05	1.37E-05	7.06E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.15E-04
11	E05	80	Passenger Car	123	0.00E+00	1.49E-06	1.61E-07	5.71E+00	1.04E-05	3.97E-02	3.32E-06	2.52E-04	6.74E-04	1.17E-04	3.23E-04	2.08E-04	2.14E-04	1.92E-05	2.88E-05	8.07E-09	1.09E-04	3.94E-05
11	E05	80	Passenger Truck	205	0.00E+00	3.20E-06	3.40E-07	1.32E+01	2.05E-05	7.30E-02	6.71E-06	7.48E-04	1.21E-03	2.15E-04	6.42E-04	4.17E-04	4.27E-04	9.22E-05	6.60E-05	1.80E-08	2.15E-04	1.22E-04
11	E05	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	E05	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.59E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	E05	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.74E-04
11	E06	80	Passenger Car	46	0.00E+00	5.59E-07	6.05E-08	2.14E+00	3.89E-06	1.49E-02	1.24E-06	9.45E-05	2.53E-04	4.40E-05	1.21E-04	7.80E-05	8.01E-05	7.21E-06	1.08E-05	3.03E-09	4.10E-05	1.48E-05
11	E06	80	Passenger Truck	77	0.00E+00	1.20E-06	1.27E-07	4.95E+00	7.70E-06	2.74E-02	2.52E-06	2.81E-04	4.54E-04	8.05E-05	2.41E-04	1.56E-04	1.60E-04	3.46E-05	2.47E-05	6.74E-09	8.06E-05	4.58E-05
11	E06	80	Single Unit Short Haul Truck	4	0.00E+00	7.18E-07	3.57E-08	7.04E-01	5.78E-07	1.41E-03	7.64E-07	3.68E-04	4.51E-05	1.02E-05	8.74E-05	2.13E-05	2.16E-05	7.07E-05	2.84E-06	1.13E-09	6.58E-05	6.88E-05
11	E06	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.44E-05
9	E07	60	Passenger Car	840	0.00E+00	1.26E-05	1.36E-06	4.21E+01	8.76E-05	3.25E-01	2.80E-05	1.71E-03	8.53E-03	1.31E-03	2.72E-03	1.76E-03	1.80E-03	1.76E-04	2.11E-04	5.82E-08	9.22E-04	2.68E-04
9	E07	60	Passenger Truck	1407	0.00E+00	2.78E-05	2.93E-06	9.61E+01	1.73E-04	5.80E-01	5.72E-05	5.59E-03	1.56E-02	2.43E-03	5.44E-03	3.54E-03	3.63E-03	7.45E-04	4.78E-04	1.32E-07	1.81E-03	9.26E-04
9	E07	60	Single Unit Short Haul Truck	43	0.00E+00	1.27E-05	6.34E-07	8.08E+00	1.04E-05	1.56E-02	1.35E-05	6.04E-03	1.03E-03	1.86E-04	1.54E-03	3.80E-04	3.86E-04	8.08E-04	3.26E-05	1.34E-08	1.15E-03	1.13E-03
9	E07	60	Single Unit Long Haul Truck	2	0.00E+00	5.54E-07	2.75E-08	3.45E-01	4.54E-07	6.64E-04	5.91E-07	2.61E-04	4.61E-05	8.24E-06	6.75E-05	1.65E-05	1.68E-05	3.44E-05	1.39E-06	5.72E-10	5.07E-05	4.90E-05
9	E07	60	Combination Short Haul Truck	43	0.00E+00	2.52E-05	1.76E-06	1.64E+01	8.94E-08	2.21E-02	1.87E-05	2.74E-02	2.35E-03	4.65E-04	1.61E-03	5.24E-04	5.25E-04	2.48E-03	5.50E-05	0.00E+00	1.08E-03	5.16E-03
9	E07	60	Combination Long Haul Truck	39	0.00E+00	2.27E-05	1.47E-06	1.54E+01	1.03E-07	2.38E-02	1.75E-05	2.71E-02	2.36E-03	4.01E-04	1.66E-03	4.50E-04	4.56E-04	2.35E-03	5.16E-05	0.00E+00	1.20E-03	5.11E-03
9	E08	60	Passenger Car	1061	0.00E+00	1.59E-05	1.72E-06	5.32E+01	1.11E-04	4.11E-01	3.53E-05	2.16E-03	1.08E-02	1.65E-03	3.44E-03	2.22E-03	2.27E-03	2.22E-04	2.67E-04	7.35E-08	1.16E-03	3.38E-04
9	E08	60	Passenger Truck	1776	0.00E+00	3.50E-05	3.70E-06	1.21E+02	2.19E-04	7.32E-01	7.22E-05	7.05E-03	1.97E-02	3.07E-03	6.86E-03	4.47E-03	4.58E-03	9.40E-04	6.03E-04	1.67E-07	2.28E-03	1.17E-03
9	E08	60	Single Unit Short Haul Truck	29	0.00E+00	8.46E-06	4.23E-07	5.39E+00	6.97E-06	1.04E-02	9.03E-06	4.03E-03	6.85E-04	1.24E-04	1.03E-03	2.54E-04	2.58E-04	5.40E-04	2.18E-05	8.97E-09	7.70E-04	7.56E-04
9	E08	60	Single Unit Long Haul Truck	1	0.00E+00	3.70E-07	1.84E-08	2.30E-01	3.03E-07	4.43E-04	3.95E-07	1.74E-04	3.08E-05	5.50E-06	4.50E-05	1.10E-05	1.12E-05	2.30E-05	9.30E-07	3.82E-10	3.38E-05	3.27E-05
9	E08	60	Combination Short Haul Truck	29	0.00E+00	1.69E-05	1.18E-06	1.10E+01	5.98E-08	1.48E-02	1.25E-05	1.83E-02	1.57E-03	3.11E-04	1.07E-03	3.50E-04	3.51E-04	1.66E-03	3.68E-05	0.00E+00	7.23E-04	3.45E-03
9	E08	60	Combination Long Haul Truck	26	0.00E+00	1.52E-05	9.86E-07	1.03E+01	6.86E-08	1.59E-02	1.17E-05	1.81E-02	1.58E-03	2.68E-04	1.11E-03	3.01E-04	3.05E-04	1.57E-03	3.45E-05	0.00E+00	8.02E-04	3.42E-03
9	E09	60	Passenger Car	823	0.00E+00	1.23E-05	1.33E-06	4.13E+01	8.58E-05	3.19E-01	2.74E-05	1.68E-03	8.36E-03	1.28E-03	2.67E-03	1.72E-03	1.77E-03	1.72E-04	2.07E-04	5.70E-08	9.03E-04	2.62E-04
9	E09	60	Passenger Truck	1379	0.00E+00	2.72E-05	2.87E-06	9.42E+01	1.70E-04	5.68E-01	5.60E-05	5.47E-03	1.53E-02	2.38E-03	5.33E-03	3.47E-03	3.56E-03	7.30E-04	4.68E-04	1.29E-07	1.77E-03	9.07E-04
9	E09	60	Single Unit Short Haul Truck	37	0.00E+00	1.10E-05	5.50E-07	7.01E+00	9.06E-06	1.36E-02	1.17E-05	5.24E-03	8.91E-04	1.62E-04	1.34E-03	3.30E-04	3.35E-04	7.01E-04	2.83E-05	1.17E-08	1.00E-03	9.82E-04
9	E09	60	Single Unit Long Haul Truck	2	0.00E+00	4.80E-07	2.39E-08	2.99E-01	3.94E-07	5.76E-04	5.13E-07	2.27E-04	4.00E-05	7.15E-06	5.85E-05	1.43E-05	1.46E-05	2.99E-05	1.21E-06	4.96E-10	4.40E-05	4.25E-05
9	E09	60	Combination Short Haul Truck	37	0.00E+00	2.17E-05	1.51E-06	1.41E+01	7.69E-08	1.90E-02	1.61E-05	2.35E-02	2.02E-03	4.00E-04	1.38E-03	4.51E-04	4.52E-04	2.13E-03	4.73E-05	0.00E+00	9.30E-04	4.44E-03
9	E09	60	Combination Long Haul Truck	34	0.00E+00	1.95E-05	1.27E-06	1.32E+01	8.82E-08	2.05E-02	1.50E-05	2.33E-02	2.03E-03	3.45E-04	1.42E-03	3.87E-04	3.92E-04	2.02E-03	4.44E-05	0.00E+00	1.03E-03	4.40E-03
9	E10	60	Passenger Car	935	0.00E+00	1.40E-05	1.51E-06	4.69E+01	9.74E-05	3.62E-01	3.11E-05	1.91E-03	9.49E-03	1.46E-03	3.03E-03	1.95E-03	2.00E-03	1.95E-04	2.35E-04	6.48E-08	1.03E-03	2.98E-04
9	E10	60	Passenger Truck	1565	0.00E+00	3.09E-05	3.26E-06	1.07E+02	1.93E-04	6.45E-01	6.36E-05	6.21E-03	1.74E-02	2.70E-03	6.05E-03	3.94E-03	4.04E-03	8.29E-04	5.32E-04	1.47E-07	2.01E-03	1.03E-03
9	E10	60	Single Unit Short Haul Truck	27	0.00E+00	7.86E-06	3.93E-07	5.01E+00	6.48E-06	9.70E-03	8.39E-06	3.75E-03	6.37E-04	1.16E-04	9.56E-04	2.36E-04	2.40E-04	5.02E-04	2.02E-05	8.34E-09	7.16E-04	7.03E-04
9	E10	60	Single Unit Long Haul Truck	1	0.00E+00	3.43E-07	1.71E-08	2.14E-01	2.82E-07	4.12E-04	3.67E-07	1.62E-04	2.86E-05	5.11E-06	4.19E-05	1.03E-05	1.04E-05	2.14E-05	8.65E-07	3.55E-10	3.14E-05	3.04E-05
9	E10	60	Combination Short Haul Truck	25	0.00E+00	1.45E-05	1.01E-06	9.44E+00	5.14E-08	1.27E-02	1.08E-05	1.57E-02	1.35E-03	2.67E-04	9.24E-04	3.01E-04	3.02E-04	1.42E-03	3.16E-05	0.00E+00	6.22E-04	2.96E-03
9	E10	60	Combination Long Haul Truck	23	0.00E+00	1.30E-05	8.48E-07	8.85E+00	5.90E-08	1.37E-02	1.00E-05	1.56E-02	1.36E-03	2.30E-04	9.52E-04	2.59E-04	2.62E-04	1.35E-03	2.96E-05	0.00E+00	6.90E-04	2.94E-03
9	E11	60	Passenger Car	761	0.00E+00	1.14E-05	1.23E-06	3.82E+01	7.94E-05	2.95E-01	2.54E-05	1.55E-03	7.73E-03	1.19E-03	2.47E-03	1.59E-03	1.63E-03	1.59E-04	1.91E-04	5.28E-08	8.35E-04	2.43E-04
9	E11	60	Passenger Truck	1275	0.00E+00	2.51E-05	2.66E-06	8.71E+01	1.57E-04	5.25E-01	5.18E-05	5.06E-03	1.42E-02	2.20E-03	4.93E-03	3.21E-03	3.29E-03	6.75E-04	4.33E-04	1.20E-07	1.64E-03	8.39E-04
9	E11	60	Single Unit Short Haul Truck	38	0.00E+00	1.11E-05	5.55E-07	7.08E+00	9.15E-06	1.37E-02	1.19E-05	5.29E-03	9.00E-04	1.63E-04	1.35E-03	3.33E-04	3.39E-04	7.08E-04	2.86E-05	1.18E-08	1.01E-03	9.92E-04
9	E11	60	Single Unit Long Haul Truck	2	0.00E+00	4.85E-07	2.41E-08	3.02E-01	3.98E-07	5.81E-04	5.18E-07	2.29E-04	4.04E-05	7.22E-06	5.91E-05	1.45E-05	1.47E-05	3.02E-05	1.22E-06	5.01E-10	4.44E-05	4.29E-05
9	E11	60	Combination Short Haul Truck	39	0.00E+00	2.32E-05	1.62E-06	1.51E+01	8.21E-08	2.03E-02	1.72E-05	2.51E-02	2.16E-03	4.27E-04	1.47E-03	4.81E-04	4.82E-04	2.27E-03	5.05E-05	0.00E+00	9.93E-04	4.73E-03
9	E11	60	Combination Long Haul Truck	36	0.00E+00	2.08E-05	1.35E-06	1.41E+01	9.42E-08	2.18E-02	1.60E-05	2.49E-02	2.17E-03	3.68E-04	1.52E-03	4.13E-04	4.19E-04	2.16E-03	4.73E-05	0.00E+00	1.10E-03	4.69E-03
9	E12	60	Passenger Car	1112	0.00E+00	1.67E-05	1.80E-06	5.58E+01	1.16E-04	4.31E-01	3.70E-05	2.27E-03	1.13E-02	1.73E-03	3.61E-03	2.32E-03	2.39E-03	2.32E-04	2.80E-04	7.71E-08	1.22E-03	3.55E-04
9	E12	60	Passenger Truck	1863	0.00E+00	3.67E-05	3.88E-06	1.27E+02	2.30E-04	7.68E-01	7.57E-05	7.40E-03	2.07E-02	3.22E-03	7.20E-03	4.69E-03	4.81E-03	9.86E-04	6.33E-04	1.75E-07	2.39E-03	1.23E-03
9	E12	60	Single Unit Short Haul Truck	29	0.00E+00	8.61E-06	4.31E-07	5.49E+00	7.10E-06	1.06E-02	9.19E-06	4.11E-03	6.98E-04	1.26E-04	1.05E-03	2.58E-04	2.63E-04	5.49E-04	2.22E-05	9.13E-09	7.84E-04	7.69E-04
9	E12	60	Single Unit Long Haul Truck	1	0.00E+00	3.76E-07	1.87E-08	2.34E-01	3.08E-07	4.51E-04	4.02E-07	1.78E-04	3.13E-05	5.60E-06	4.58E-05	1.12E-05	1.14E-05	2.34E-05	9.47E-07	3.88E-10	3.44E-05	3.33E-05
9	E12	60	Combination Short Haul Truck	32	0.00E+00	1.86E-05	1.30E-06	1.21E+01	6.58E-08	1.63E-02	1.38E-05	2.02E-02	1.73E-03	3.43E-04	1.18E-03	3.86E-04	3.86E-04	1.82E-03	4.05E-05	0.00E+00	7.96E-04	3.80E-03
9	E12	60	Combination Long Haul Truck	29	0.00E+00	1.67E-05	1.09E-06	1.13E+01	7.55E-08	1.75E-02	1.29E-05	2.00E-02	1.74E-03	2.95E-04	1.22E-03	3.31E-04	3.36E-04	1.73E-03	3.80E-05	0.00E+00	8.83E-04	3.76E-03
11	E13	80	Passenger Car	362	0.00E+00	4.40E-06	4.76E-07	1.68E+01	3.06E-05	1.17E-01	9.79E-06	7.43E-04	1.99E-03	3.46E-04	9.53E-04	6.14E-04	6.30E-04	5.67E-05	8.49E-05	2.38E-08	3.22E-04	1.16E-04
11	E13	80	Passenger Truck	606	0.00E+00	9.45E-06	1.00E-06	3.89E+01	6.06E-05	2.15E-01	1.98E-05	2.21E-03	3.57E-03	6.33E-04	1.90E-03	1.23E-03	1.26E-03	2.72E-04	1.95E-04	5.30E-08	6.34E-04	3.61E-04
11	E13	80	Single Unit Short Haul Truck	20	0.00E+00

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E17	80	Combination Long Haul Truck	5	0.00E+00	2.06E-06	1.38E-07	1.76E+00	8.38E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.41E-04	4.18E-05	4.20E-05	2.68E-04	5.88E-06	0.00E+00	9.94E-05	4.31E-04
11	E18	80	Passenger Car	102	0.00E+00	1.24E-06	1.34E-07	4.74E+00	8.61E-06	3.29E-02	2.75E-06	2.09E-04	5.59E-04	9.72E-05	2.68E-04	1.73E-04	1.77E-04	1.59E-05	2.39E-05	6.69E-09	9.06E-05	3.26E-05
11	E18	80	Passenger Truck	170	0.00E+00	2.66E-06	2.82E-07	1.09E+01	1.70E-05	6.05E-02	5.57E-06	6.21E-04	1.00E-03	1.78E-04	5.33E-04	3.46E-04	3.54E-04	7.65E-05	5.47E-05	1.49E-08	1.78E-04	1.01E-04
11	E18	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.23E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.38E-05	6.49E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.06E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	9.37E-08	4.62E-09	8.94E-02	7.40E-08	1.76E-04	9.96E-08	4.72E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.61E-07	1.41E-10	8.64E-06	8.83E-06
11	E18	80	Combination Short Haul Truck	7	0.00E+00	2.99E-06	2.14E-07	2.47E+00	9.43E-09	2.65E-03	2.18E-06	3.06E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.26E-05	3.73E-04	8.27E-06	0.00E+00	1.15E-04	5.77E-04
11	E18	80	Combination Long Haul Truck	6	0.00E+00	2.68E-06	1.80E-07	2.28E+00	1.09E-08	2.74E-03	2.03E-06	2.97E-03	1.77E-04	3.56E-05	1.84E-04	5.43E-05	5.46E-05	3.49E-04	7.65E-06	0.00E+00	1.29E-04	5.60E-04
9	E19	60	Passenger Car	246	0.00E+00	3.68E-06	3.99E-07	1.23E+01	2.56E-05	9.52E-02	8.19E-06	5.02E-04	2.50E-03	3.83E-04	7.97E-04	5.14E-04	5.28E-04	5.14E-05	6.19E-05	1.70E-08	2.70E-04	7.84E-05
9	E19	60	Passenger Truck	412	0.00E+00	8.13E-06	8.58E-07	2.81E+01	5.08E-05	1.70E-01	1.67E-05	1.64E-03	4.58E-03	7.11E-04	1.59E-03	1.04E-03	1.06E-03	2.18E-04	1.40E-04	3.87E-08	5.30E-04	2.71E-04
9	E19	60	Single Unit Short Haul Truck	24	0.00E+00	7.03E-06	3.52E-07	4.48E+00	5.80E-06	8.67E-03	7.50E-06	3.35E-03	5.69E-04	1.03E-04	8.54E-04	2.11E-04	2.14E-04	4.48E-04	1.81E-05	7.45E-09	6.40E-04	6.28E-04
9	E19	60	Single Unit Long Haul Truck	1	0.00E+00	3.07E-07	1.53E-08	1.91E-01	2.52E-07	3.68E-04	3.28E-07	1.45E-04	2.56E-05	4.57E-06	3.74E-05	9.17E-06	9.32E-06	1.91E-05	7.73E-07	3.17E-10	2.81E-05	2.72E-05
9	E19	60	Combination Short Haul Truck	17	0.00E+00	1.02E-05	7.08E-07	6.60E+00	3.60E-08	8.88E-03	7.53E-06	1.10E-02	9.45E-04	1.87E-04	6.46E-04	2.11E-04	2.11E-04	9.96E-04	2.21E-05	0.00E+00	4.35E-04	2.07E-03
9	E19	60	Combination Long Haul Truck	16	0.00E+00	9.11E-06	5.93E-07	6.19E+00	4.12E-08	9.57E-03	7.03E-06	1.09E-02	9.50E-04	1.61E-04	6.66E-04	1.81E-04	1.83E-04	9.46E-04	2.07E-05	0.00E+00	4.83E-04	2.06E-03
9	E20	60	Passenger Car	412	0.00E+00	6.17E-06	6.68E-07	2.07E+01	4.29E-05	1.59E-01	1.37E-05	8.40E-04	4.18E-03	6.42E-04	1.34E-03	8.61E-04	8.83E-04	8.61E-05	1.04E-04	2.85E-08	4.52E-04	1.31E-04
9	E20	60	Passenger Truck	690	0.00E+00	1.36E-05	1.44E-06	4.71E+01	8.51E-05	2.84E-01	2.80E-05	2.74E-03	7.67E-03	1.19E-03	2.67E-03	1.74E-03	1.78E-03	3.65E-04	2.34E-04	6.48E-08	8.87E-04	4.54E-04
9	E20	60	Single Unit Short Haul Truck	20	0.00E+00	5.90E-06	2.95E-07	3.76E+00	4.87E-06	7.28E-03	6.30E-06	2.81E-03	4.78E-04	8.67E-05	7.18E-04	1.77E-04	1.80E-04	3.77E-04	1.52E-05	6.26E-09	5.38E-04	5.27E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.28E-08	1.61E-01	2.11E-07	3.09E-04	2.75E-07	1.22E-04	2.15E-05	3.84E-06	3.14E-05	7.70E-06	7.83E-06	1.60E-05	6.49E-07	2.66E-10	2.36E-05	2.28E-05
9	E20	60	Combination Short Haul Truck	11	0.00E+00	6.46E-06	4.50E-07	4.20E+00	2.29E-08	5.65E-03	4.79E-06	7.00E-03	6.02E-04	1.19E-04	4.11E-04	1.34E-04	1.34E-04	6.34E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
9	E20	60	Combination Long Haul Truck	10	0.00E+00	5.80E-06	3.77E-07	3.94E+00	2.62E-08	6.09E-03	4.47E-06	6.94E-03	6.05E-04	1.03E-04	4.24E-04	1.15E-04	1.17E-04	6.02E-04	1.32E-05	0.00E+00	3.07E-04	1.31E-03
11	E21	80	Passenger Car	82	0.00E+00	1.00E-06	1.08E-07	3.83E+00	6.96E-06	2.66E-02	2.22E-06	1.69E-04	4.52E-04	7.86E-05	2.16E-04	1.40E-04	1.43E-04	1.29E-05	1.93E-05	5.41E-09	7.33E-05	2.64E-05
11	E21	80	Passenger Truck	138	0.00E+00	2.15E-06	2.28E-07	8.85E+00	1.38E-05	4.89E-02	4.50E-06	5.02E-04	8.11E-04	1.44E-04	4.31E-04	2.80E-04	2.87E-04	6.19E-05	4.42E-05	1.20E-08	1.44E-04	8.20E-05
11	E21	80	Single Unit Short Haul Truck	3	0.00E+00	5.72E-07	2.84E-08	5.61E-01	4.60E-07	1.12E-03	6.09E-07	2.93E-04	3.59E-05	8.13E-06	6.96E-05	1.69E-05	1.72E-05	5.63E-05	2.26E-06	8.98E-10	5.24E-05	5.48E-05
11	E21	80	Combination Short Haul Truck	4	0.00E+00	1.79E-06	1.28E-07	1.48E+00	5.64E-09	1.58E-03	1.31E-06	1.83E-03	1.08E-04	2.67E-05	1.06E-04	3.78E-05	3.75E-05	2.23E-04	4.95E-06	0.00E+00	6.90E-05	3.45E-04
11	E21	80	Combination Long Haul Truck	4	0.00E+00	1.60E-06	1.08E-07	1.37E+00	6.52E-09	1.64E-03	1.21E-06	1.78E-03	1.06E-04	2.13E-05	1.10E-04	3.25E-05	3.27E-05	2.09E-04	4.58E-06	0.00E+00	7.73E-05	3.35E-04
11	E22	80	Passenger Car	13	0.00E+00	1.60E-07	1.73E-08	6.14E-01	1.12E-06	4.26E-03	3.56E-07	2.71E-05	7.25E-05	1.26E-05	3.47E-05	2.24E-05	2.29E-05	2.06E-06	3.09E-06	8.67E-10	1.17E-05	4.23E-06
11	E22	80	Passenger Truck	22	0.00E+00	3.44E-07	3.65E-08	1.42E+00	2.20E-06	7.84E-03	7.21E-07	8.04E-05	1.30E-04	2.31E-05	6.90E-05	4.48E-05	4.59E-05	9.91E-06	7.09E-06	1.93E-09	2.31E-05	1.31E-05
11	E22	80	Combination Short Haul Truck	1	0.00E+00	5.23E-07	3.74E-08	4.32E-01	1.65E-09	4.63E-04	3.82E-07	5.36E-04	3.16E-05	7.80E-06	3.11E-05	1.10E-05	1.10E-05	6.52E-05	1.45E-06	0.00E+00	2.02E-05	1.01E-04
11	E22	80	Combination Long Haul Truck	1	0.00E+00	4.68E-07	3.15E-08	4.00E-01	1.91E-09	4.80E-04	3.55E-07	5.20E-04	3.10E-05	6.23E-06	3.22E-05	9.50E-06	9.55E-06	6.11E-05	1.34E-06	0.00E+00	2.26E-05	9.80E-05
11	E23	80	Passenger Car	355	0.00E+00	4.32E-06	4.67E-07	1.65E+01	3.01E-05	1.15E-01	9.61E-06	7.30E-04	1.95E-03	3.40E-04	9.35E-04	6.03E-04	6.19E-04	5.57E-05	8.34E-05	2.34E-08	3.17E-04	1.14E-04
11	E23	80	Passenger Truck	595	0.00E+00	9.28E-06	9.84E-07	3.82E+01	5.94E-05	2.11E-01	1.94E-05	2.17E-03	3.50E-03	6.22E-04	1.86E-03	1.21E-03	1.24E-03	2.67E-04	1.91E-04	5.20E-08	6.23E-04	3.54E-04
11	E23	80	Single Unit Short Haul Truck	78	0.00E+00	1.47E-05	7.28E-07	1.44E+01	1.18E-05	2.88E-02	1.56E-05	7.51E-03	9.21E-04	2.08E-04	1.78E-03	4.34E-04	4.41E-04	1.44E-03	5.79E-05	2.30E-08	1.34E-03	1.40E-03
11	E23	80	Single Unit Long Haul Truck	3	0.00E+00	6.37E-07	3.14E-08	6.08E-01	5.04E-07	1.20E-03	6.78E-07	3.21E-04	4.21E-05	9.19E-06	7.78E-05	1.87E-05	1.90E-05	6.07E-05	2.46E-06	9.58E-10	5.88E-05	6.01E-05
11	E23	80	Combination Short Haul Truck	57	0.00E+00	2.49E-05	1.78E-06	2.05E+01	7.84E-08	2.20E-02	1.82E-05	2.55E-02	1.50E-03	3.71E-04	1.48E-03	5.25E-04	5.21E-04	3.10E-03	6.88E-05	0.00E+00	9.59E-04	4.80E-03
11	E23	80	Combination Long Haul Truck	52	0.00E+00	2.23E-05	1.50E-06	1.90E+01	9.06E-08	2.28E-02	1.69E-05	2.47E-02	1.47E-03	2.96E-04	1.53E-03	4.51E-04	4.54E-04	2.90E-03	6.36E-05	0.00E+00	1.07E-03	4.66E-03
11	E24	80	Passenger Car	266	0.00E+00	3.23E-06	3.49E-07	1.24E+01	2.25E-05	8.59E-02	7.18E-06	5.46E-04	1.46E-03	2.54E-04	6.99E-04	4.51E-04	4.62E-04	4.16E-05	6.23E-05	1.75E-08	2.37E-04	8.52E-05
11	E24	80	Passenger Truck	445	0.00E+00	6.94E-06	7.36E-07	2.86E+01	4.44E-05	1.58E-01	1.45E-05	1.62E-03	2.62E-03	4.65E-04	1.39E-03	9.03E-04	9.26E-04	2.00E-04	1.43E-04	3.89E-08	4.66E-04	2.65E-04
11	E24	80	Single Unit Short Haul Truck	85	0.00E+00	1.59E-05	7.92E-07	1.57E+01	1.28E-05	3.13E-02	1.70E-05	8.17E-03	1.00E-03	2.27E-04	1.94E-03	4.72E-04	4.80E-04	1.57E-03	6.31E-05	2.50E-08	1.46E-03	1.53E-03
11	E24	80	Single Unit Long Haul Truck	4	0.00E+00	6.94E-07	3.42E-08	6.62E-01	5.48E-07	1.31E-03	7.38E-07	3.50E-04	4.58E-05	1.00E-05	8.47E-05	2.03E-05	2.07E-05	6.61E-05	2.67E-06	1.04E-09	6.40E-05	6.54E-05
11	E24	80	Combination Short Haul Truck	61	0.00E+00	2.67E-05	1.91E-06	2.21E+01	8.42E-08	2.36E-02	1.95E-05	2.74E-02	1.61E-03	3.98E-04	1.59E-03	5.63E-04	5.59E-04	3.33E-03	7.39E-05	0.00E+00	1.03E-03	5.15E-03
11	E24	80	Combination Long Haul Truck	55	0.00E+00	2.39E-05	1.61E-06	2.04E+01	9.73E-08	2.45E-02	1.81E-05	2.66E-02	1.58E-03	3.18E-04	1.64E-03	4.85E-04	4.88E-04	3.12E-03	6.83E-05	0.00E+00	1.15E-03	5.00E-03
10	E25	70	Passenger Car	159	0.00E+00	2.08E-06	2.25E-07	7.64E+00	1.45E-05	5.40E-02	4.63E-06	3.19E-04	1.24E-03	1.98E-04	4.50E-04	2.90E-04	2.98E-04	2.85E-05	3.84E-05	1.05E-08	1.52E-04	4.99E-05
10	E25	70	Passenger Truck	267	0.00E+00	4.56E-06	4.83E-07	1.76E+01	2.88E-05	9.94E-02	9.47E-06	9.98E-04	2.25E-03	3.65E-04	9.04E-04	5.88E-04	6.02E-04	1.29E-04	8.78E-05	2.35E-08	3.02E-04	1.64E-04
10	E25	70	Single Unit Short Haul Truck	1	0.00E+00	1.95E-07	9.76E-09	1.53E-01	1.59E-07	3.05E-04	2.08E-07	9.60E-05	1.37E-05	2.75E-06	2.36E-05	5.83E-06	5.93E-06	1.53E-05	6.16E-07	2.49E-10	1.77E-05	1.80E-05
10	E25	70	Combination Short Haul Truck	2	0.00E+00	1.02E-06	7.28E-08	7.42E-01	3.33E-09	8.82E-04	7.51E-07	1.07E-03	7.79E-05	1.70E-05	6.24E-05	2.15E-05	2.15E-05	1.12E-04	2.48E-06	0.00E+00	4.09E-05	2.03E-04
10	E25	70	Combination Long Haul Truck	2	0.00E+00	9.26E-07	6.19E-08	6.93E-01	3.83E-09	9.34E-04	7.03E-07	1.06E-03	7.74E-05	1.41E-05	6.45E-05	1.87E-05	1.89E-05	1.06E-04	2.32E-06	0.00E+00	4.56E-05	2.00E-04
10	E26	70	Passenger Car	212	0.00E+00	2.77E-06	2.99E-07	1.02E+01	1.93E-05	7.19E-02	6.15E-06	4.24E-04	1.64E-03	2.63E-04	5.99E-04	3.86E-04	3.96E-04	3.79E-05	5.11E-05	1.39E-08	2.03E-04	6.63E-05
10	E26	70	Passenger Truck	355	0.00E+00	6.06E-06	6.42E-07	2.34E+01	3.84E-05	1.32E-01	1.26E-05	1.33E-03	2.99E-03	4.86E-04	1.20E-03	7.82E-04	8.01E-04	1.72E-04	1.17E-04	3.12E-08	4.01E-04	2.18E-04
10	E26	70	Single Unit Short Haul Truck	2	0.00E+00	3.68E-07	1.84E-08	2.88E-01	3.01E-07	5.76E-04	3.92E-07	1.81E-04	2.59E-05	5.18E-06	4.46E-05	1.10E-05	1.12E-05	2.89E-05	1.16E-06	4.69E-10	3.34E-05	3.39E-05
10	E26	70	Combination Short Haul Truck	3	0.00E+00	1.74E-06	1.24E-07	1.26E+00	5.66E-09	1.50E-03	1.28E-06	1.83E-03	1.33E-04	2.89E-05	1.06E-04	3.66E-05	3.66E-05	1.90E-04	4.23E-06	0.00E+00	6.95E-05	3.44E-04
10	E26	70	Combination Long Haul Truck	3	0.00E+00	1.57E-06	1.05E-07	1.18E+00	6.52E-09	1.59E-03	1.20E-06	1.80E-03	1.32E-04	2.40E-05	1.10E-04	3.18E-05	3.22E-05	1.80E-04	3.95E-06	0.00E+00	7.75E-05	3.39E-04
10	E27	70	Passenger Car	182	0.00E+00	2.38E-06	2.57E-07	8.72E+00	1.65E-05	6.17E-02	5.28E-06	3.64E-04	1.41E-03	2.26E-04	5.14E-04	3.31E-04	3.40E-04	3.26E-05	4.39E-05	1.20E-08	1.74E-04	5.70E-05
10	E27	70	Passenger Truck	305	0.00E+00	5.21E-06	5.51E-07	2.01E+01	3.29E-05	1.13E-01	1.08E-05	1.14E-03	2.57E-03	4.17E-04	1.03E-03	6.71E-04	6.88E-04	1.48E-04	1.00E-04	2.68E-08	3.44E-04	1.88E-04
10	E27	70	Single Unit Short Haul Truck	2	0.00E+00	5.83E-07	2.92E-08	4.56E-01	4.76E-07	9.12E-04	6.21E-07	2.87E-04	4.10E-05	8.21E-06	7.07E-05	1.74E-05	1.77E-05	4.57E-05	1.84E-06	7.43E-10	5.29E-05	5.37E-05
10	E27	70	Combination Short Haul Truck	5	0.00E+00	2.43E-06	1.73E-07	1.76E+00	7.91E-09	2.09E-03	1.78E-06	2.55E-03	1.85E-04	4.04E-05	1.48E-04	5.12E-05	5.11E-05	2.66E-04	5.90E-06	0.00E+00	9.71E-05	4.81E-04
10	E27	70	Combination Long Haul Truck	4	0.00E+00	2.20E-06	1.47E-07	1.65E+00	9.11E-09	2.22E-03	1.67E-06	2.52E-03	1.84E-04	3.36E-05	1.53E-04	4.45E-05	4.49E-05	2.52E-04	5.51E-06	0.00E+00	1.08E-04	4.74E-04
10	E28	70	Passenger Car	193	0.00E+00	2.52E-06	2.73E-07	9.27E+00	1.76E-05	6.56E-02	5.61E-06	3.87E-04	1.50E-03	2.40E-04	5.46E-04	3.52E-04	3.61E-04	3.46E-05	4.66E-05	1.27E-08	1.85E-04	6.05E-05
10	E28	70	Passenger Truck	324	0.00E+00	5.53E-06	5.86E-07	2.14E+01	3.50E-05	1.21E-01	1.15E-05	1.21E-03	2.73E-03	4.43E-04	1.10E-03	7.13E-04	7.31E-04	1.57E-04	1.06E-04	2.85E-08	3.66E-04	1.99E-04
10	E28	70	Single Unit Short Haul Truck	1	0.00E+00	2.40E-07	1.20E-08	1.88E-01	1.97E-07	3.77E-04	2.56E-07	1.18E-04	1.69E-05	3.39E-06	2.92E-05	7.19E-06	7.31E-06	1.89E-05	7.59E-07	3.06E-10	2.18E-05	2.22E-05
10	E28	70	Combination Short Haul Truck	1	0.00E+00	6.56E-07	4.66E-08	4.75E-01	2.13E-09	5.64E-04	4.81E-07	6.88E-04	4.99E-05	1.09E-05	3.99E-05	1.38E-05	1.38E-05	7.16E-05	1.59E-06	0.00E+00	2.62E-05	1.30E-04
10	E28	70	Combination Long Haul Truck	1	0.00E+00	5.92E-07	3.96E-08	4.43E-01	2.45E-09	5.98E-04	4.50E-07	6.78E-04	4.95E-05	9.04E-06	4.13E-05	1.20E-05	1.21E-05	6.78E-05	1.49E-06	0.00E+00	2.92E-05	1.28E-04
10	E29	70	Passenger Car	122	0.00E+00	1.59E-06	1.72E-07	5.83E+00	1.10E-05	4.12E-02	3.53E-06	2.43E-04	9.42E-04	1.51E-04	3.43E-04	2.21E-04	2.27E-04	2.18E-05	2.93E-05	7.98E-09	1.16E-04	3.80E-05
10	E29	70	Passenger Truck	203	0.00E+00	3.48E-06	3.68E-07	1.34E+01	2.20E-05	7.58E-02	7.23E-06	7.61E-04	1.71E-03	2.79E-04	6.89E-04	4.48E-04	4.59E-04	9.86E-05	6.69E-05	1.79E-08	2.30E-04	1.25E-04
10	E29	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	E29	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E29	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.65E-04
10	E30	70	Passenger Car	55	0.00E+00	7.23E-07	7.82E-08	2.65E+00	5.03E-06	1.88E-02	1.61E-06	1.11E-04	4.29E-04	6.88E-05	1.56E-04	1.01E-04	1.03E-04	9.91E-06	1.33E-05	3.64E-09	5.29E-05	1.73E-05
10	E30	70	Passenger Truck	93	0.00E+00	1.58E-06	1.68E-07	6.11E+00	1.00E-05	3.45E-02	3.29E-06	3.47E-04	7.80E-04	1.27E-04	3.14E-04	2.04E-04	2.09E-04	4.49E-05	3.05E-05	8.15E-09	1.05E-04	5.70E-05
10	E30	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.23E-05
10	E30	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.71E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E30	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.63E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	E31	70	Passenger Car	238	0.00E+00	3.11E-06	3.37E-07	1.14E+01	2.16E-05	8.08E-02	6.92E-06	4.77E-04	1.85E-03	2.96E-04	6.73E-04	4.34E-04	4.45E-04	4.27E-05	5.74E-05	1.56E-08	2.28E-04	7.46E-05
10	E31	70	Passenger Truck	399	0.00E+00	6.82E-06	7.21E-07	2.63E+01	4.31E-05	1.49E-01	1.42E-05	1.49E-03	3.36E-03	5.46E-04	1.35E-03	8.79E-04	9.00E-04	1.93E-04	1.31E-04	3.51E-08	4.51E-04	2.45E-04
10	E31	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.65E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	E31	70	Combination Short Haul Truck	4	0.00E+00	2.18E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.60E-06	2.28E-03	1.66E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.69E-05	4.30E-04
10	E31	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.32E-07	1.47E+00	8.15E-09	1.98E-03	1.49E-06	2.25E-03	1.65E-04	3.00E-05	1.37E-04	3.98E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.24E-04
10	E32	70	Passenger Car	121	0.00E+00	1.58E-06	1.71E-07	5.81E+00	1.10E-05	4.11E-02	3.52E-06	2.43E-04	9.39E-04	1.51E-04	3.42E-04	2.21E-04	2.27E-04	2.17E-05	2.92E-05	7.96E-09	1.16E-04	3.79E-05
10	E32	70	Passenger Truck	203	0.00E+00	3.47E-06	3.67E-07	1.34E+01	2.19E-05	7.56E-02	7.20E-06	7.59E-04	1.71E-03	2.78E-04	6.87E-04	4.47E-04	4.58E-04	9.83E-05	6.67E-05	1.78E-08	2.29E-04	1.25E-04
10	E32	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.55E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	E32	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.18E+00	5.30E-09	1.41E-03	1.20E-06	1.71E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.78E-04	3.96E-06	0.00E+00	6.52E-05	3.23E-04
10	E32	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.87E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.18E-04
9	E33	60	Passenger Car	473	0.00E+00	7.09E-06	7.66E-07	2.37E+01	4.93E-05	1.83E-01	1.58E-05	9.65E-04	4.80E-03	7.37E-04	1.53E-03	9.88E-04	1.01E-03	9.88E-05	1.19E-04	3.28E-08	5.19E-04	1.51E-04
9	E33	60	Passenger Truck	792	0.00E+00	1.56E-05	1.65E-06	5.41E+01	9.77E-05	3.26E-01	3.22E-05	3.15E-03	8.81E-03	1.37E-03	3.06E-03	2.00E-03	2.04E-03	4.19E-04	2.69E-04	7.44E-08	1.02E-03	5.21E-04
9	E33	60	Single Unit Short Haul Truck	16	0.00E+00	4.56E-06	2.28E

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	4.40E-07	2.19E-08	2.74E-01	3.61E-07	5.28E-04	4.70E-07	2.08E-04	3.67E-05	6.55E-06	5.37E-05	1.32E-05	1.34E-05	2.74E-05	1.11E-06	4.55E-10	4.03E-05	3.90E-05
9	E37	60	Combination Short Haul Truck	33	0.00E+00	1.95E-05	1.36E-06	1.27E+01	6.89E-08	1.70E-02	1.44E-05	2.11E-02	1.81E-03	3.59E-04	1.24E-03	4.04E-04	4.05E-04	1.91E-03	4.24E-05	0.00E+00	8.34E-04	3.98E-03
9	E37	60	Combination Long Haul Truck	30	0.00E+00	1.75E-05	1.14E-06	1.19E+01	7.91E-08	1.83E-02	1.35E-05	2.09E-02	1.82E-03	3.09E-04	1.28E-03	3.47E-04	3.52E-04	1.81E-03	3.98E-05	0.00E+00	9.25E-04	3.94E-03
9	E38	60	Passenger Car	214	0.00E+00	3.20E-06	3.46E-07	1.07E+01	2.23E-05	8.27E-02	7.12E-06	4.36E-04	2.17E-03	3.33E-04	6.93E-04	4.46E-04	4.58E-04	4.46E-05	5.37E-05	1.48E-08	2.34E-04	6.81E-05
9	E38	60	Passenger Truck	358	0.00E+00	7.06E-06	7.45E-07	2.45E+01	4.41E-05	1.47E-01	1.45E-05	1.42E-03	3.98E-03	6.18E-04	1.38E-03	9.01E-04	9.23E-04	1.89E-04	1.22E-04	3.36E-08	4.60E-04	2.35E-04
9	E38	60	Single Unit Short Haul Truck	14	0.00E+00	4.21E-06	2.11E-07	2.68E+00	3.47E-06	5.20E-03	4.50E-06	2.01E-03	3.41E-04	6.19E-05	5.12E-04	1.26E-04	1.28E-04	2.69E-04	1.08E-05	4.47E-09	3.84E-04	3.76E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	1.84E-07	9.16E-09	1.15E-01	1.51E-07	2.21E-04	1.96E-07	8.69E-05	1.53E-05	2.74E-06	2.24E-05	5.50E-06	5.59E-06	1.14E-05	4.63E-07	1.90E-10	1.68E-05	1.63E-05
9	E38	60	Combination Short Haul Truck	14	0.00E+00	8.22E-06	5.73E-07	5.34E+00	2.91E-08	7.19E-03	6.10E-06	8.91E-03	7.65E-04	1.51E-04	5.23E-04	1.71E-04	1.71E-04	8.06E-04	1.79E-05	0.00E+00	3.52E-04	1.68E-03
9	E38	60	Combination Long Haul Truck	13	0.00E+00	7.38E-06	4.80E-07	5.01E+00	3.34E-08	7.74E-03	5.69E-06	8.83E-03	7.69E-04	1.30E-04	5.39E-04	1.47E-04	1.48E-04	7.66E-04	1.68E-05	0.00E+00	3.90E-04	1.66E-03
10	E39	70	Passenger Car	215	0.00E+00	2.81E-06	3.03E-07	1.03E+01	1.95E-05	7.28E-02	6.24E-06	4.30E-04	1.66E-03	2.67E-04	6.07E-04	3.91E-04	4.02E-04	3.85E-05	5.18E-05	1.41E-08	2.05E-04	6.72E-05
10	E39	70	Passenger Truck	360	0.00E+00	6.15E-06	6.51E-07	2.37E+01	3.89E-05	1.34E-01	1.28E-05	1.35E-03	3.03E-03	4.92E-04	1.22E-03	7.92E-04	8.12E-04	1.74E-04	1.18E-04	3.16E-08	4.06E-04	2.21E-04
10	E39	70	Single Unit Short Haul Truck	7	0.00E+00	1.55E-06	7.74E-08	1.21E+00	1.26E-06	2.42E-03	1.65E-06	7.62E-04	1.09E-04	2.18E-05	1.87E-04	4.62E-05	4.70E-05	1.21E-04	4.88E-06	1.97E-09	1.40E-04	1.43E-04
10	E39	70	Combination Short Haul Truck	5	0.00E+00	2.48E-06	1.76E-07	1.79E+00	8.05E-09	2.13E-03	1.82E-06	2.60E-03	1.88E-04	4.11E-05	1.51E-04	5.21E-05	5.20E-05	2.71E-04	6.01E-06	0.00E+00	9.88E-05	4.90E-04
10	E39	70	Combination Long Haul Truck	4	0.00E+00	2.24E-06	1.50E-07	1.67E+00	9.27E-09	2.26E-03	1.70E-06	2.56E-03	1.87E-04	3.41E-05	1.56E-04	4.52E-05	4.57E-05	2.56E-04	5.61E-06	0.00E+00	1.10E-04	4.83E-04
10	E40	70	Passenger Car	241	0.00E+00	3.15E-06	3.41E-07	1.16E+01	2.19E-05	8.18E-02	7.00E-06	4.83E-04	1.87E-03	3.00E-04	6.81E-04	4.39E-04	4.51E-04	4.32E-05	5.81E-05	1.58E-08	2.31E-04	7.55E-05
10	E40	70	Passenger Truck	404	0.00E+00	6.90E-06	7.30E-07	2.66E+01	4.36E-05	1.50E-01	1.43E-05	1.51E-03	3.40E-03	5.53E-04	1.37E-03	8.89E-04	9.11E-04	1.96E-04	1.33E-04	3.55E-08	4.56E-04	2.48E-04
10	E40	70	Single Unit Short Haul Truck	10	0.00E+00	2.44E-06	1.22E-07	1.91E+00	2.00E-06	3.83E-03	2.60E-06	1.20E-03	1.72E-04	3.44E-05	2.97E-04	7.31E-05	7.43E-05	1.92E-04	7.72E-06	3.12E-09	2.22E-04	2.26E-04
10	E40	70	Combination Short Haul Truck	6	0.00E+00	3.37E-06	2.39E-07	2.44E+00	1.09E-08	2.90E-03	2.47E-06	3.54E-03	2.56E-04	5.59E-05	2.05E-04	7.08E-05	7.07E-05	3.68E-04	8.17E-06	0.00E+00	1.34E-04	6.66E-04
10	E40	70	Combination Long Haul Truck	6	0.00E+00	3.04E-06	2.04E-07	2.28E+00	1.26E-08	3.07E-03	2.31E-06	3.49E-03	2.55E-04	4.64E-05	2.12E-04	6.15E-05	6.22E-05	3.48E-04	7.63E-06	0.00E+00	1.50E-04	6.57E-04
10	E41	70	Passenger Car	166	0.00E+00	2.17E-06	2.35E-07	7.98E+00	1.51E-05	5.64E-02	4.83E-06	3.33E-04	1.29E-03	2.07E-04	4.70E-04	3.03E-04	3.11E-04	2.98E-05	4.01E-05	1.09E-08	1.59E-04	5.21E-05
10	E41	70	Passenger Truck	279	0.00E+00	4.76E-06	5.04E-07	1.84E+01	3.01E-05	1.04E-01	9.89E-06	1.04E-03	2.35E-03	3.81E-04	9.44E-04	6.14E-04	6.29E-04	1.35E-04	9.16E-05	2.45E-08	3.15E-04	1.71E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	3.91E-07	1.96E-08	3.06E-01	3.20E-07	6.13E-04	4.17E-07	1.93E-04	2.75E-05	5.51E-06	4.75E-05	1.17E-05	1.19E-05	3.07E-05	1.24E-06	4.99E-10	3.56E-05	3.61E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.09E-07	1.12E+00	5.01E-09	1.33E-03	1.13E-06	1.62E-03	1.17E-04	2.56E-05	9.38E-05	3.24E-05	3.23E-05	1.68E-04	3.74E-06	0.00E+00	6.15E-05	3.05E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.39E-06	9.31E-08	1.04E+00	5.76E-09	1.40E-03	1.06E-06	1.59E-03	1.16E-04	2.12E-05	9.70E-05	2.81E-05	2.84E-05	1.59E-04	3.49E-06	0.00E+00	6.86E-05	3.00E-04
10	E42	70	Passenger Car	226	0.00E+00	2.95E-06	3.19E-07	1.08E+01	2.05E-05	7.65E-02	6.55E-06	4.52E-04	1.75E-03	2.80E-04	6.37E-04	4.11E-04	4.22E-04	4.04E-05	5.44E-05	1.48E-08	2.16E-04	7.06E-05
10	E42	70	Passenger Truck	378	0.00E+00	6.46E-06	6.83E-07	2.49E+01	4.08E-05	1.41E-01	1.34E-05	1.41E-03	3.18E-03	5.17E-04	1.28E-03	8.32E-04	8.52E-04	1.83E-04	1.24E-04	3.32E-08	4.27E-04	2.32E-04
10	E42	70	Single Unit Short Haul Truck	5	0.00E+00	1.23E-06	6.18E-08	9.66E-01	1.01E-06	1.93E-03	1.31E-06	6.08E-04	8.68E-05	1.74E-05	1.50E-04	3.69E-05	3.75E-05	9.69E-05	3.90E-06	1.57E-09	1.12E-04	1.14E-04
10	E42	70	Combination Short Haul Truck	4	0.00E+00	2.17E-06	1.54E-07	1.57E+00	7.04E-09	1.87E-03	1.59E-06	2.27E-03	1.65E-04	3.60E-05	1.32E-04	4.56E-05	4.55E-05	2.37E-04	5.26E-06	0.00E+00	8.65E-05	4.29E-04
10	E42	70	Combination Long Haul Truck	4	0.00E+00	1.96E-06	1.31E-07	1.47E+00	8.11E-09	1.98E-03	1.49E-06	2.24E-03	1.64E-04	2.99E-05	1.36E-04	3.96E-05	4.00E-05	2.24E-04	4.91E-06	0.00E+00	9.65E-05	4.22E-04
10	E43	70	Passenger Car	150	0.00E+00	1.96E-06	2.11E-07	7.18E+00	1.36E-05	5.08E-02	4.35E-06	3.00E-04	1.16E-03	1.86E-04	4.23E-04	2.73E-04	2.80E-04	2.68E-05	3.61E-05	9.83E-09	1.43E-04	4.69E-05
10	E43	70	Passenger Truck	251	0.00E+00	4.28E-06	4.53E-07	1.65E+01	2.71E-05	9.34E-02	8.90E-06	9.38E-04	2.11E-03	3.43E-04	8.49E-04	5.52E-04	5.66E-04	1.22E-04	8.24E-05	2.21E-08	2.83E-04	1.54E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	1.72E-07	8.60E-09	1.34E-01	1.40E-07	2.69E-04	1.83E-07	8.45E-05	1.21E-05	2.42E-06	2.08E-05	5.13E-06	5.22E-06	1.35E-05	5.42E-07	2.19E-10	1.56E-05	1.58E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	7.61E-07	5.40E-08	5.51E-01	2.47E-09	6.55E-04	5.58E-07	7.98E-04	5.79E-05	1.26E-05	4.63E-05	1.60E-05	1.60E-05	8.31E-05	1.85E-06	0.00E+00	3.04E-05	1.50E-04
10	E43	70	Combination Long Haul Truck	1	0.00E+00	6.87E-07	4.60E-08	5.14E-01	2.85E-09	6.94E-04	5.22E-07	7.87E-04	5.75E-05	1.05E-05	4.79E-05	1.39E-05	1.40E-05	7.86E-05	1.72E-06	0.00E+00	3.38E-05	1.48E-04
10	E44	70	Passenger Car	203	0.00E+00	2.65E-06	2.87E-07	9.73E+00	1.84E-05	6.88E-02	5.89E-06	4.06E-04	1.57E-03	2.52E-04	5.73E-04	3.70E-04	3.79E-04	3.63E-05	4.89E-05	1.33E-08	1.94E-04	6.35E-05
10	E44	70	Passenger Truck	340	0.00E+00	5.81E-06	6.14E-07	2.24E+01	3.67E-05	1.27E-01	1.21E-05	1.27E-03	2.86E-03	4.65E-04	1.15E-03	7.48E-04	7.67E-04	1.65E-04	1.12E-04	2.99E-08	3.84E-04	2.09E-04
10	E44	70	Single Unit Short Haul Truck	2	0.00E+00	5.13E-07	2.57E-08	4.02E-01	4.19E-07	8.03E-04	5.46E-07	2.53E-04	3.61E-05	7.22E-06	6.22E-05	1.53E-05	1.56E-05	4.03E-05	1.62E-06	6.54E-10	4.66E-05	4.73E-05
10	E44	70	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.77E-08	9.97E-01	4.47E-09	1.18E-03	1.01E-06	1.44E-03	1.05E-04	2.28E-05	8.37E-05	2.89E-05	2.89E-05	1.50E-04	3.34E-06	0.00E+00	5.49E-05	2.72E-04
10	E44	70	Combination Long Haul Truck	2	0.00E+00	1.24E-06	8.31E-08	9.30E-01	5.15E-09	1.25E-03	9.44E-07	1.42E-03	1.04E-04	1.90E-05	8.66E-05	2.51E-05	2.54E-05	1.42E-04	3.12E-06	0.00E+00	6.12E-05	2.68E-04
11	E45	80	Passenger Car	175	0.00E+00	2.12E-06	2.30E-07	8.13E+00	1.48E-05	5.65E-02	4.72E-06	3.59E-04	9.60E-04	1.67E-04	4.60E-04	2.96E-04	3.04E-04	2.74E-05	4.10E-05	1.15E-08	1.56E-04	5.60E-05
11	E45	80	Passenger Truck	292	0.00E+00	4.56E-06	4.84E-07	1.88E+01	2.92E-05	1.04E-01	9.56E-06	1.07E-03	1.72E-03	3.06E-04	9.15E-04	5.94E-04	6.09E-04	1.31E-04	9.39E-05	2.56E-08	3.06E-04	1.74E-04
11	E45	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	E45	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	E45	80	Combination Short Haul Truck	10	0.00E+00	4.60E-06	3.29E-07	3.80E+00	1.45E-08	4.07E-03	3.36E-06	4.71E-03	2.78E-04	6.86E-05	2.74E-04	9.71E-05	9.63E-05	5.73E-04	1.27E-05	0.00E+00	1.78E-04	8.88E-04
11	E45	80	Combination Long Haul Truck	10	0.00E+00	4.12E-06	2.77E-07	3.51E+00	1.68E-08	4.22E-03	3.12E-06	4.58E-03	2.72E-04	5.48E-05	2.83E-04	8.35E-05	8.40E-05	5.37E-04	1.18E-05	0.00E+00	1.99E-04	8.62E-04
11	E46	80	Passenger Car	64	0.00E+00	7.82E-07	8.46E-08	2.99E+00	5.44E-06	2.08E-02	1.74E-06	1.32E-04	3.54E-04	6.15E-05	1.69E-04	1.09E-04	1.12E-04	1.01E-05	1.51E-05	4.23E-09	5.73E-05	2.06E-05
11	E46	80	Passenger Truck	108	0.00E+00	1.68E-06	1.78E-07	6.92E+00	1.08E-05	3.83E-02	3.52E-06	3.92E-04	6.34E-04	1.13E-04	3.37E-04	2.19E-04	2.24E-04	4.84E-05	3.46E-05	9.42E-09	1.13E-04	6.41E-05
11	E46	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	E46	80	Combination Short Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.43E-03	1.18E-06	1.65E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.37E-05	2.01E-04	4.45E-06	0.00E+00	6.21E-05	3.11E-04
11	E46	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.69E-08	1.23E+00	5.87E-09	1.48E-03	1.09E-06	1.60E-03	9.53E-05	1.92E-05	9.90E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.02E-04
11	E47	80	Passenger Car	214	0.00E+00	2.60E-06	2.81E-07	9.96E+00	1.81E-05	6.92E-02	5.78E-06	4.39E-04	1.18E-03	2.04E-04	5.63E-04	3.63E-04	3.72E-04	3.35E-05	5.02E-05	1.41E-08	1.91E-04	6.87E-05
11	E47	80	Passenger Truck	358	0.00E+00	5.59E-06	5.92E-07	2.30E+01	3.58E-05	1.27E-01	1.17E-05	1.31E-03	2.11E-03	3.74E-04	1.12E-03	7.28E-04	7.45E-04	1.61E-04	1.15E-04	3.13E-08	3.75E-04	2.13E-04
11	E47	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.00E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.04E-05	9.19E-05	3.00E-04	1.21E-05	4.79E-09	2.79E-04	2.92E-04
11	E47	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.50E-04	1.41E-07	6.69E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.96E-06	1.26E-05	5.11E-07	2.00E-10	1.22E-05	1.25E-05
11	E47	80	Combination Short Haul Truck	9	0.00E+00	4.14E-06	2.96E-07	3.42E+00	1.31E-08	3.67E-03	3.02E-06	4.24E-03	2.50E-04	6.17E-05	2.46E-04	8.74E-05	8.67E-05	5.16E-04	1.15E-05	0.00E+00	1.60E-04	7.99E-04
11	E47	80	Combination Long Haul Truck	9	0.00E+00	3.71E-06	2.49E-07	3.16E+00	1.51E-08	3.80E-03	2.81E-06	4.12E-03	2.45E-04	4.93E-05	2.55E-04	7.52E-05	7.56E-05	4.83E-04	1.06E-05	0.00E+00	1.79E-04	7.76E-04
11	E48	80	Passenger Car	44	0.00E+00	5.37E-07	5.81E-08	2.05E+00	3.73E-06	1.43E-02	1.19E-06	9.06E-05	2.43E-04	4.22E-05	1.16E-04	7.49E-05	7.68E-05	6.91E-06	1.04E-05	2.90E-09	3.93E-05	1.42E-05
11	E48	80	Passenger Truck	74	0.00E+00	1.15E-06	1.22E-07	4.75E+00	7.38E-06	2.63E-02	2.42E-06	2.69E-04	4.35E-04	7.72E-05	2.31E-04	1.50E-04	1.54E-04	3.32E-05	2.37E-05	6.46E-09	7.73E-05	4.40E-05
11	E48	80	Single Unit Short Haul Truck	4	0.00E+00	7.18E-07	3.57E-08	7.04E-01	5.78E-07	1.41E-03	7.64E-07	3.68E-04	4.51E-05	1.02E-05	8.74E-05	2.13E-05	2.16E-05	7.07E-05	2.84E-06	1.13E-09	6.58E-05	6.88E-05
11	E48	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	E48	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.14E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E49	80	Passenger Car	236	0.00E+00	2.87E-06	3.11E-07	1.10E+01	2.00E-05	7.64E-02	6.39E-06	4.85E-04	1.30E-03	2.26E-04	6.22E-04	4.01E-04	4.11E-04	3.70E-05	5.55E-05	1.55E-08	2.11E-04	7.58E-05
11	E49	80	Passenger Truck	396	0.00E+00	6.17E-06	6.55E-07	2.54E+01	3.95E-05	1.41E-01	1.29E-05	1.44E-03	2.33E-03	4.14E-04	1.24E-03	8.04E-04	8.24E-04	1.78E-04	1.27E-04	3.46E-08	4.14E-04	2.36E-04
11	E49	80	Single Unit Short Haul Truck	22	0.00E+00	4.10E-06	2.04E-07	4.02E+00	3.30E-06	8.05E-03	4.36E-06	2.10E-03	2.57E-04	5.83E-05	4.99E-04	1.21E-04	1.23E-04	4.03E-04	1.62E-05	6.43E-09	3.75E-04	3.93E-04
11	E49	80	Single Unit Long Haul Truck	1	0.00E+00	1.78E-07	8.78E-09	1.70E-01	1.41E-07	3.35E-04	1.90E-07	8.98E-05	1.18E-05	2.57E-06	2.18E-05	5.22E-06	5.31E-06	1.70E-05	6.87E-07	2.68E-10	1.64E-05	1.68E-05
11	E49	80	Combination Short Haul Truck	12	0.00E+00	5.22E-06	3.73E-07	4.31E+00	1.65E-08	4.62E-03	3.81E-06	5.35E-03	3.16E-04	7.78E-05	3.11E-04	1.10E-04	1.09E-04	6.50E-04	1.44E-05	0.00E+00	2.01E-04	1.01E-03
11	E49	80	Combination Long Haul Truck	11	0.00E+00	4.67E-06	3.14E-07	3.99E+00	1.90E-08	4.79E-03	3.54E-06	5.19E-03	3.09E-04	6.21E-05	3.21E-04	9.47E-05	9.53E-05	6.09E-04	1.33E-05	0.00E+00	2.25E-04	9.78E-04
11	E50	80	Passenger Car	67	0.00E+00	8.18E-07	8.85E-08	3.13E+00	5.69E-06	2.17E-02	1.82E-06	1.38E-04	3.70E-04	6.43E-05	1.77E-04	1.14E-04	1.17E-04	1.05E-05	1.58E-05	4.42E-09	5.99E-05	2.16E-05
11	E50	80	Passenger Truck	113	0.00E+00	1.76E-06	1.86E-07	7.24E+00	1.12E-05	4.00E-02	3.68E-06	4.10E-04	6.63E-04	1.18E-04	3.52E-04	2.29E-04	2.34E-04	5.06E-05	3.62E-05	9.85E-09	1.18E-04	6.70E-05
11	E50	80	Single Unit Short Haul Truck	1	0.00E+00	2.22E-07	1.10E-08	2.18E-01	1.79E-07	4.37E-04	2.37E-07	1.14E-04	1.40E-05	3.16E-06	2.71E-05	6.59E-06	6.70E-06	2.19E-05	8.80E-07	3.49E-10	2.04E-05	2.13E-05
11	E50	80	Single Unit Long Haul Truck	1	0.00E+00	6.36E-07	4.54E-08	5.25E-01	2.00E-09	5.63E-04	4.64E-07	6.51E-04	3.85E-05	9.48E-06	3.78E-05	1.34E-05	1.33E-05	7.92E-05	1.76E-06	0.00E+00	2.45E-05	1.23E-04
11	E50	80	Combination Long Haul Truck	1	0.00E+00	5.69E-07	3.83E-08	4.86E-01	2.32E-09	5.83E-04	4.31E-07	6.32E-04	3.76E-05	7.57E-06	3.91E-05	1.15E-05	1.16E-05	7.42E-05	1.63E-06	0.00E+00	2.75E-05	1.19E-04
11	E51	80	Passenger Car	198	0.00E+00	2.41E-06	2.60E-07	9.21E+00	1.67E-05	6.40E-02	5.35E-06	4.06E-04	1.09E-03	1.89E-04	5.21E-04	3.36E-04	3.44E-04	3.10E-05	4.64E-05	1.30E-08	1.76E-04	6.35E-05
11	E51	80	Passenger Truck	331	0.00E+00	5.17E-06	5.48E-07	2.13E+01	3.31E-05	1.18E-01	1.08E-05	1.21E-03	1.95E-03	3.46E-04	1.04E-03	6.73E-04	6.89E-04	1.49E-04	1.06E-04	2.90E-08	3.47E-04	1.97E-04
11	E51	80	Single Unit Short Haul Truck	19	0.00E+00	3.48E-06	1.73E-07	3.42E+00	2.80E-06	6.84E-03	3.71E-06	1.78E-03	2.19E-04	4.95E-05	4.24E-04	1.03E-04	1.05E-04	3.43E-04	1.38E-05	5.46E-09	3.19E-04	3.34E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.51E-07	7.46E-09	1.45E-01	1.20E-07	2.85E-04	1.61E-07	7.63E-05	1.00E-05	2.18E-06	1.85E-05	4.44E-06	4.52E-06	1.44E-05	5.84E-07	2.28E-10	1.40E-05	1.43E-05
11	E51	80	Combination Short Haul Truck	11	0.00E+00	4.82E-06	3.45E-07	3.99E+00	1.52E-08	4.27E-03	3.53E-06	4.95E-03	2.92E-04	7.20E-05	2.87E-04	1.02E-04	1.01E-04	6.01E-04	1.34E-05	0.00E+00	1.86E-04	9.32E-04
11	E51	80	Combination Long Haul Truck	10	0.00E+00	4.32E-06	2.90E-07	3.69E+00	1.76E-08	4.43E-03	3.27E-06	4.80E-03	2.86E-04	5.75E-05	2.97E-04	8.76E-05	8.81E-05	5.63E-04	1.23E-05	0.00E+00	2.09E-04	9.04E-04
11	E52	80	Passenger Car	35	0.00E+00	4.23E-07	4.58E-08	1.62E+00	2.95E-06	1.13E-02	9.41E-07	7.15E-05	1.91E-04	3.33E-05	9.16E-05	5.90E-05	6.06E-05	5.45E-06	8.17E-06	2.29E-09	3.10E-05	1.12E-05
11	E52	80	Passenger Truck	58	0.00E+00	9.09E-07	9.64E-08	3.75E+00	5.82E-06	2.07E-02	1.90E-06	2.12E-04	3.43E-04	6.09E-05	1.82E-04	1.18E-04	1.21E-04	2.62E-05	1.87E-05	5.10E-09	6.10E-05	3.47E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	2.55E-07	1.82E-08	2.11E-01	8.04E-10	2.26E-04	1.86E-07	2.61E-04	1.54E-05	3.80E-06	1.52E-05	5.38E-06	5.34E-06	3.18E-05	7.05E-07	0.00E+00	9.84E-06	4.92E-05
11	E52	80	Combination Long Haul Truck	1	0.00E+00	2.28E-07	1.53E-08	1.95E-01	9.29E-10	2.34E-04	1.73E-07	2.54E-04	1.51E-05	3.04E-06	1.57E-05	4.63E-06	4.66E-06	2.98E-05	6.52E-07	0.00E+00	1.10E-05	4.78E-05
11	E53	80	Passenger Car	287	0.00E+00	3.49E-06

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F31	60	Passenger Car	803	0.00E+00	1.20E-05	1.30E-06	4.03E+01	8.37E-05	3.11E-01	2.67E-05	1.64E-03	8.15E-03	1.25E-03	2.60E-03	1.68E-03	1.72E-03	1.68E-04	2.02E-04	5.56E-08	8.81E-04	2.56E-04
9	F31	60	Passenger Truck	1345	0.00E+00	2.65E-05	2.80E-06	9.19E+01	1.66E-04	5.54E-01	5.47E-05	5.34E-03	1.49E-02	2.32E-03	5.20E-03	3.39E-03	3.47E-03	7.12E-04	4.57E-04	1.26E-07	1.73E-03	8.85E-04
9	F31	60	Single Unit Short Haul Truck	25	0.00E+00	7.23E-06	3.62E-07	4.61E+00	5.96E-06	8.92E-03	7.71E-06	3.45E-03	5.86E-04	1.06E-04	8.79E-04	2.17E-04	2.20E-04	4.61E-04	1.86E-05	7.67E-09	6.58E-04	6.46E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	3.16E-07	1.57E-08	1.97E-01	2.59E-07	3.78E-04	3.37E-07	1.49E-04	2.63E-05	4.70E-06	3.85E-05	9.43E-06	9.59E-06	1.96E-05	7.95E-07	3.26E-10	2.89E-05	2.79E-05
9	F31	60	Combination Short Haul Truck	26	0.00E+00	1.52E-05	1.06E-06	9.88E+00	5.38E-08	1.33E-02	1.13E-05	1.65E-02	1.41E-03	2.80E-04	9.67E-04	3.15E-04	3.16E-04	1.49E-03	3.31E-05	0.00E+00	6.51E-04	3.10E-03
9	F31	60	Combination Long Haul Truck	24	0.00E+00	1.36E-05	8.88E-07	9.27E+00	6.17E-08	1.43E-02	1.05E-05	1.63E-02	1.42E-03	2.41E-04	9.97E-04	2.71E-04	2.74E-04	1.42E-03	3.10E-05	0.00E+00	7.22E-04	3.08E-03
9	F32	60	Passenger Car	770	0.00E+00	1.15E-05	1.25E-06	3.86E+01	8.02E-05	2.98E-01	2.56E-05	1.57E-03	7.81E-03	1.20E-03	2.50E-03	1.61E-03	1.65E-03	1.61E-04	1.94E-04	5.33E-08	8.45E-04	2.45E-04
9	F32	60	Passenger Truck	1289	0.00E+00	2.54E-05	2.69E-06	8.81E+01	1.59E-04	5.31E-01	5.24E-05	5.12E-03	1.43E-02	2.22E-03	4.98E-03	3.25E-03	3.33E-03	6.83E-04	4.38E-04	1.21E-07	1.66E-03	8.48E-04
9	F32	60	Single Unit Short Haul Truck	38	0.00E+00	1.11E-05	5.54E-07	7.05E+00	9.12E-06	1.37E-02	1.18E-05	5.28E-03	8.97E-04	1.63E-04	1.35E-03	3.32E-04	3.37E-04	7.06E-04	2.85E-05	1.17E-08	1.01E-03	9.89E-04
9	F32	60	Single Unit Long Haul Truck	2	0.00E+00	4.83E-07	2.41E-08	3.01E-01	3.96E-07	5.79E-04	5.16E-07	2.28E-04	4.03E-05	7.19E-06	5.89E-05	1.44E-05	1.47E-05	3.01E-05	1.22E-06	4.99E-10	4.42E-05	4.28E-05
9	F32	60	Combination Short Haul Truck	39	0.00E+00	2.28E-05	1.59E-06	1.48E+01	8.08E-08	1.99E-02	1.69E-05	2.47E-02	2.12E-03	4.20E-04	1.45E-03	4.73E-04	4.74E-04	2.24E-03	4.97E-05	0.00E+00	9.77E-04	4.66E-03
9	F32	60	Combination Long Haul Truck	35	0.00E+00	2.05E-05	1.33E-06	1.39E+01	9.26E-08	2.15E-02	1.58E-05	2.45E-02	2.13E-03	3.62E-04	1.50E-03	4.07E-04	4.12E-04	2.13E-03	4.66E-05	0.00E+00	1.08E-03	4.62E-03
9	F33	60	Passenger Car	276	0.00E+00	4.14E-06	4.47E-07	1.38E+01	2.88E-05	1.07E-01	9.19E-06	5.63E-04	2.80E-03	4.30E-04	8.95E-04	5.77E-04	5.92E-04	5.77E-05	6.94E-05	1.91E-08	3.03E-04	8.80E-05
9	F33	60	Passenger Truck	462	0.00E+00	9.12E-06	9.63E-07	3.16E+01	5.70E-05	1.91E-01	1.88E-05	1.84E-03	5.14E-03	7.98E-04	1.79E-03	1.16E-03	1.19E-03	2.45E-04	1.57E-04	4.34E-08	5.94E-04	3.04E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.37E-07	1.19E-08	1.51E-01	1.95E-07	2.92E-04	2.53E-07	1.13E-04	1.92E-05	3.48E-06	2.88E-05	7.11E-06	7.23E-06	1.51E-05	6.10E-07	2.51E-10	2.16E-05	2.12E-05
9	F33	60	Combination Short Haul Truck	7	0.00E+00	4.35E-06	3.03E-07	2.83E+00	1.54E-08	3.81E-03	3.23E-06	4.72E-03	4.05E-04	8.02E-05	2.77E-04	9.04E-05	9.05E-05	4.27E-04	9.48E-06	0.00E+00	1.87E-04	8.89E-04
9	F33	60	Combination Long Haul Truck	7	0.00E+00	3.91E-06	2.54E-07	2.66E+00	1.77E-08	4.10E-03	3.01E-06	4.68E-03	4.08E-04	6.91E-05	2.86E-04	7.76E-05	7.86E-05	4.06E-04	8.89E-06	0.00E+00	2.07E-04	8.82E-04
9	F34	60	Passenger Car	176	0.00E+00	2.63E-06	2.85E-07	8.82E+00	1.83E-05	6.81E-02	5.86E-06	3.59E-04	1.78E-03	2.74E-04	5.70E-04	3.67E-04	3.77E-04	3.67E-05	4.42E-05	1.22E-08	1.93E-04	5.61E-05
9	F34	60	Passenger Truck	294	0.00E+00	5.81E-06	6.13E-07	2.01E+01	3.63E-05	1.21E-01	1.20E-05	1.17E-03	3.27E-03	5.08E-04	1.14E-03	7.42E-04	7.60E-04	1.56E-04	1.00E-04	2.76E-08	3.79E-04	1.94E-04
9	F34	60	Single Unit Short Haul Truck	3	0.00E+00	8.73E-07	4.37E-08	5.57E-01	7.20E-07	1.08E-03	9.32E-07	4.16E-04	7.08E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.80E-05
9	F34	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.06E-08	8.45E-01	4.60E-09	1.14E-03	9.64E-07	1.41E-03	1.21E-04	2.39E-05	8.27E-05	2.70E-05	2.70E-05	1.27E-04	2.83E-06	0.00E+00	5.57E-05	2.65E-04
9	F34	60	Combination Long Haul Truck	2	0.00E+00	1.17E-06	7.59E-08	7.93E-01	5.28E-09	1.22E-03	8.99E-07	1.40E-03	1.22E-04	2.06E-05	8.52E-05	2.32E-05	2.35E-05	1.21E-04	2.65E-06	0.00E+00	6.18E-05	2.63E-04
11	F35	80	Passenger Car	132	0.00E+00	1.60E-06	1.73E-07	6.13E+00	1.11E-05	4.26E-02	3.56E-06	2.70E-04	7.24E-04	1.26E-04	3.46E-04	2.23E-04	2.29E-04	2.06E-05	3.09E-05	8.66E-09	1.17E-04	4.22E-05
11	F35	80	Passenger Truck	220	0.00E+00	3.44E-06	3.65E-07	1.42E+01	2.20E-05	7.83E-02	7.20E-06	8.03E-04	1.30E-03	2.30E-04	6.89E-04	4.48E-04	4.59E-04	9.90E-05	7.08E-05	1.93E-08	2.31E-04	1.31E-04
11	F35	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	F35	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.04E-03	1.68E-06	2.36E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.87E-04	6.36E-06	0.00E+00	8.88E-05	4.44E-04
11	F35	80	Combination Long Haul Truck	5	0.00E+00	2.06E-06	1.38E-07	1.76E+00	8.38E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.41E-04	4.18E-05	4.20E-05	2.68E-04	5.88E-06	0.00E+00	9.94E-05	4.31E-04
11	F36	80	Passenger Car	37	0.00E+00	4.46E-07	4.82E-08	1.71E+00	3.10E-06	1.18E-02	9.91E-07	7.53E-05	2.02E-04	3.50E-05	9.65E-05	6.22E-05	6.38E-05	5.74E-06	8.60E-06	2.41E-09	3.26E-05	1.18E-05
11	F36	80	Passenger Truck	61	0.00E+00	9.57E-07	1.02E-07	3.94E+00	6.13E-06	2.18E-02	2.01E-06	2.24E-04	3.61E-04	6.41E-05	1.92E-04	1.25E-04	1.28E-04	2.76E-05	1.97E-05	5.37E-09	6.42E-05	3.65E-05
11	F36	80	Single Unit Short Haul Truck	3	0.00E+00	5.38E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.59E-05	1.62E-05	5.30E-05	2.13E-06	8.45E-10	4.93E-05	5.16E-05
11	F36	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.71E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.88E-05
11	F36	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.58E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.62E-05
9	F37	60	Passenger Car	601	0.00E+00	9.01E-06	9.75E-07	3.02E+01	6.27E-05	2.33E-01	2.00E-05	1.23E-03	6.11E-03	9.37E-04	1.95E-03	1.26E-03	1.29E-03	1.26E-04	1.51E-04	4.17E-08	6.60E-04	1.92E-04
9	F37	60	Passenger Truck	1007	0.00E+00	1.99E-05	2.10E-06	6.88E+01	1.24E-04	4.15E-01	4.09E-05	4.00E-03	1.12E-02	1.74E-03	3.89E-03	2.54E-03	2.60E-03	5.33E-04	3.42E-04	9.46E-08	1.29E-03	6.63E-04
9	F37	60	Single Unit Short Haul Truck	41	0.00E+00	1.19E-05	5.96E-07	7.60E+00	9.83E-06	1.47E-02	1.27E-05	5.68E-03	9.66E-04	1.75E-04	1.45E-03	3.58E-04	3.64E-04	7.60E-04	3.07E-05	1.26E-08	1.09E-03	1.06E-03
9	F37	60	Single Unit Long Haul Truck	2	0.00E+00	5.21E-07	2.59E-08	3.24E-01	4.27E-07	6.24E-04	5.56E-07	2.46E-04	4.34E-05	7.75E-06	6.35E-05	1.56E-05	1.58E-05	3.24E-05	1.31E-06	5.38E-10	4.77E-05	4.61E-05
9	F37	60	Combination Short Haul Truck	38	0.00E+00	2.25E-05	1.57E-06	1.47E+01	7.99E-08	1.97E-02	1.67E-05	2.44E-02	2.10E-03	4.15E-04	1.43E-03	4.68E-04	4.69E-04	2.21E-03	4.91E-05	0.00E+00	9.66E-04	4.60E-03
9	F37	60	Combination Long Haul Truck	35	0.00E+00	2.02E-05	1.32E-06	1.38E+01	9.16E-08	2.12E-02	1.56E-05	2.42E-02	2.11E-03	3.58E-04	1.48E-03	4.02E-04	4.07E-04	2.10E-03	4.61E-05	0.00E+00	1.07E-03	4.56E-03
9	F38	60	Passenger Car	793	0.00E+00	1.19E-05	1.28E-06	3.97E+01	8.26E-05	3.07E-01	2.64E-05	1.62E-03	8.05E-03	1.24E-03	2.57E-03	1.66E-03	1.70E-03	1.66E-04	1.99E-04	5.49E-08	8.70E-04	2.53E-04
9	F38	60	Passenger Truck	1327	0.00E+00	2.62E-05	2.77E-06	9.07E+01	1.64E-04	5.47E-01	5.40E-05	5.27E-03	1.48E-02	2.29E-03	5.13E-03	3.34E-03	3.42E-03	7.03E-04	4.51E-04	1.25E-07	1.71E-03	8.74E-04
9	F38	60	Single Unit Short Haul Truck	20	0.00E+00	5.89E-06	2.94E-07	3.75E+00	4.85E-06	7.26E-03	6.28E-06	2.81E-03	4.77E-04	8.65E-05	7.16E-04	1.77E-04	1.80E-04	3.75E-04	1.52E-05	6.24E-09	5.36E-04	5.26E-04
9	F38	60	Single Unit Long Haul Truck	1	0.00E+00	2.57E-07	1.28E-08	1.60E-01	2.11E-07	3.08E-04	2.75E-07	1.21E-04	2.14E-05	3.83E-06	3.13E-05	7.68E-06	7.81E-06	1.60E-05	6.47E-07	2.66E-10	2.35E-05	2.27E-05
9	F38	60	Combination Short Haul Truck	25	0.00E+00	1.49E-05	1.04E-06	9.68E+00	5.27E-08	1.30E-02	1.10E-05	1.61E-02	1.39E-03	2.74E-04	9.47E-04	3.09E-04	3.09E-04	1.46E-03	3.24E-05	0.00E+00	6.38E-04	3.04E-03
9	F38	60	Combination Long Haul Truck	23	0.00E+00	1.34E-05	8.69E-07	9.08E+00	6.05E-08	1.40E-02	1.03E-05	1.60E-02	1.39E-03	2.36E-04	9.76E-04	2.65E-04	2.69E-04	1.39E-03	3.04E-05	0.00E+00	7.07E-04	3.01E-03
11	F39	80	Passenger Car	153	0.00E+00	1.87E-06	2.02E-07	7.14E+00	1.30E-05	4.96E-02	4.15E-06	3.15E-04	8.44E-04	1.47E-04	4.04E-04	2.60E-04	2.67E-04	2.40E-05	3.60E-05	1.01E-08	1.37E-04	4.92E-05
11	F39	80	Passenger Truck	257	0.00E+00	4.01E-06	4.25E-07	1.65E+01	2.57E-05	9.13E-02	8.40E-06	9.36E-04	1.51E-03	2.69E-04	8.04E-04	5.22E-04	5.35E-04	1.15E-04	8.25E-05	2.25E-08	2.69E-04	1.53E-04
11	F39	80	Single Unit Short Haul Truck	4	0.00E+00	6.83E-07	3.39E-08	6.70E-01	5.50E-07	1.34E-03	7.27E-07	3.50E-04	4.29E-05	9.71E-06	8.31E-05	2.02E-05	2.06E-05	6.73E-05	2.70E-06	1.07E-09	6.26E-05	6.55E-05
11	F39	80	Combination Short Haul Truck	5	0.00E+00	2.28E-06	1.63E-07	1.88E+00	7.18E-09	2.02E-03	1.66E-06	2.33E-03	1.38E-04	3.39E-05	1.36E-04	4.80E-05	4.77E-05	2.84E-04	6.30E-06	0.00E+00	8.78E-05	4.40E-04
11	F39	80	Combination Long Haul Truck	5	0.00E+00	2.04E-06	1.37E-07	1.74E+00	8.30E-09	2.09E-03	1.54E-06	2.26E-03	1.35E-04	2.71E-05	1.40E-04	4.13E-05	4.16E-05	2.66E-04	5.82E-06	0.00E+00	9.84E-05	4.27E-04
11	F40	80	Passenger Car	64	0.00E+00	7.74E-07	8.37E-08	2.96E+00	5.39E-06	2.06E-02	1.72E-06	1.31E-04	3.50E-04	6.08E-05	1.68E-04	1.08E-04	1.11E-04	9.97E-06	1.49E-05	4.19E-09	5.67E-05	2.04E-05
11	F40	80	Passenger Truck	107	0.00E+00	1.66E-06	1.76E-07	6.85E+00	1.06E-05	3.79E-02	3.48E-06	3.88E-04	6.27E-04	1.11E-04	3.33E-04	2.16E-04	2.22E-04	4.79E-05	3.42E-05	9.32E-09	1.12E-04	6.34E-05
11	F40	80	Single Unit Short Haul Truck	2	0.00E+00	3.44E-07	1.71E-08	3.38E-01	2.77E-07	6.77E-04	3.67E-07	1.76E-04	2.16E-05	4.90E-06	4.19E-05	1.02E-05	1.04E-05	3.39E-05	1.36E-06	5.40E-10	3.15E-05	3.30E-05
11	F40	80	Combination Short Haul Truck	4	0.00E+00	1.80E-06	1.29E-07	1.49E+00	5.67E-09	1.59E-03	1.31E-06	1.84E-03	1.09E-04	2.68E-05	1.07E-04	3.80E-05	3.77E-05	2.24E-04	4.98E-06	0.00E+00	6.94E-05	3.47E-04
11	F40	80	Combination Long Haul Truck	4	0.00E+00	1.61E-06	1.08E-07	1.37E+00	6.55E-09	1.65E-03	1.22E-06	1.79E-03	1.06E-04	2.14E-05	1.11E-04	3.27E-05	3.28E-05	2.10E-04	4.60E-06	0.00E+00	7.77E-05	3.37E-04
10	F41	70	Passenger Car	128	0.00E+00	1.67E-06	1.81E-07	6.14E+00	1.16E-05	4.34E-02	3.72E-06	2.57E-04	9.93E-04	1.59E-04	3.62E-04	2.33E-04	2.40E-04	2.29E-05	3.09E-05	8.42E-09	1.23E-04	4.01E-05
10	F41	70	Passenger Truck	215	0.00E+00	3.67E-06	3.88E-07	1.42E+01	2.32E-05	7.99E-02	7.62E-06	8.03E-04	1.81E-03	2.94E-04	7.27E-04	4.73E-04	4.84E-04	1.04E-04	7.06E-05	1.89E-08	2.42E-04	1.32E-04
10	F41	70	Single Unit Short Haul Truck	1	0.00E+00	1.45E-07	7.24E-09	1.13E-01	1.18E-07	2.26E-04	1.54E-07	7.12E-05	1.02E-05	2.04E-06	1.75E-05	4.32E-06	4.40E-06	1.14E-05	4.57E-07	1.84E-10	1.31E-05	1.33E-05
10	F42	70	Passenger Car	201	0.00E+00	2.63E-06	2.84E-07	9.66E+00	1.83E-05	6.83E-02	5.85E-06	4.03E-04	1.56E-03	2.50E-04	5.69E-04	3.67E-04	3.76E-04	3.61E-05	4.86E-05	1.32E-08	1.93E-04	6.30E-05
10	F42	70	Passenger Truck	337	0.00E+00	5.76E-06	6.10E-07	2.22E+01	3.64E-05	1.26E-01	1.20E-05	1.26E-03	2.84E-03	4.62E-04	1.14E-03	7.43E-04	7.61E-04	1.63E-04	1.11E-04	2.97E-08	3.81E-04	2.08E-04
53	F83	70	Passenger Car	9	0.00E+00	1.20E-07	1.30E-08	4.59E-01	8.33E-07	3.08E-03	2.66E-07	1.93E-05	7.22E-05	1.16E-05	2.59E-05	1.67E-05	1.71E-05	1.69E-06	2.31E-06	6.28E-10	8.77E-06	3.01E-06
53	F83	70	Passenger Truck	16	0.00E+00	2.61E-07	2.76E-08	1.06E+00	1.65E-06	5.66E-03	5.42E-07	5.90E-05	1.30E-04	2.12E-05	5.17E-05	3.36E-05	3.45E-05	7.63E-06	5.27E-06	1.38E-09	1.73E-05	9.68E-06
53	F83	70	Single Unit Short Haul Truck	1	0.00E+00	1.98E-07	9.94E-09	1.55E-01	1.62E-07	3.11E-04	2.11E-07	9.78E-05	1.40E-05	2.80E-06	2.41E-05	5.94E-06	6.03E-06	1.56E-05	6.27E-07	2.53E-10	1.80E-05	1.83E-05
50	F84	40	Passenger Car	183	0.00E+00	3.08E-06	3.33E-07	1.06E+01	2.14E-05	7.89E-02	6.84E-06	3.31E-04	3.17E-03	4.52E-04	6.66E-04	4.29E-04	4.40E-04	5.74E-05	5.28E-05	1.28E-08	2.25E-04	5.17E-05
50	F84	40	Passenger Truck	307	0.00E+00	7.03E-06	7.37E-07	2.37E+01	4.22E-05	1.36E-01	1.41E-05	1.25E-03	5.62E-03	7.99E-04	1.33E-03	8.68E-04	8.89E-04	2.03E-04	1.17E-04	2.50E-08	4.38E-04	2.12E-04
50	F84	40	Single Unit Short Haul Truck	2	0.00E+00	1.08E-06	5.66E-08	5.18E-01	9.40E-07	8.92E-04	1.15E-06	5.27E-04	9.85E-05	1.64E-05	1.28E-04	3.37E-05	3.42E-05	5.23E-05	2.09E-06	8.85E-10	9.33E-05	9.89E-05
50	F84	40	Combination Short Haul Truck	7	0.00E+00	6.63E-06	4.61E-07	3.37E+00	2.39E-08	5.79E-03	4.93E-06	7.39E-03	7.71E-04	1.39E-04	4.30E-04	1.37E-04	1.39E-04	5.07E-04	1.13E-05	0.00E+00	2.91E-04	1.39E-03
50	F84	40	Combination Long Haul Truck	7	0.00E+00	6.04E-06	3.94E-07	3.20E+00	2.71E-08	6.42E-03	4.65E-06	7.41E-03	7.75E-04	1.23E-04	4.43E-04	1.20E-04	1.23E-04	4.89E-04	1.07E-05	0.00E+00	3.20E-04	1.40E-03
52	F85	60	Passenger Car	166	0.00E+00	2.28E-06	2.47E-07	8.32E+00	1.59E-05	5.86E-02	5.07E-06	3.26E-04	1.64E-03	2.52E-04	4.94E-04	3.18E-04	3.27E-04	3.47E-05	4.17E-05	1.11E-08	1.67E-04	5.09E-05
52	F85	60	Passenger Truck	278	0.00E+00	5.01E-06	5.29E-07	1.90E+01	3.13E-05	1.05E-01	1.03E-05	1.05E-03	2.92E-03	4.51E-04	9.80E-04	6.39E-04	6.54E-04	1.44E-04	9.43E-05	2.36E-08	3.26E-04	1.73E-04
52	F85	60	Single Unit Short Haul Truck	3	0.00E+00	9.32E-07	4.66E-08	5.94E-01	7.69E-07	1.15E-03	9.95E-07	4.45E-04	7.56E-05	1.37E-05	1.13E-04	2.80E-05	2.84E-05	5.95E-05	2.40E-06	9.89E-10	8.49E-05	8.33E-05
52	F85	60	Combination Short Haul Truck	8	0.00E+00	4.47E-06	3.11E-07	2.91E+00	1.58E-08	3.91E-03	3.32E-06	4.85E-03	4.16E-04	8.24E-05	2.84E-04	9.28E-05	9.29E-05	4.38E-04	9.73E-06	0.00E+00	1.91E-04	9.13E-04
52	F85	60	Combination Long Haul Truck	7	0.00E+00	4.01E-06	2.61E-07	2.73E+00	1.82E-08	4.21E-03	3.09E-06	4.80E-03	4.18E-04	7.10E-05	2.93E-04	7.97E-05	8.07E-05	4.17E-04	9.13E-06	0.00E+00	2.12E-04	9.05E-04
53	F86	70	Passenger Car	132	0.00E+00	1.67E-06	1.81E-07	6.40E+00	1.16E-05	4.30E-02	3.72E-06	2.69E-04	1.01E-03	1.63E-04	3.62E-04	2.33E-04	2.39E-04	2.36E-05	3.22E-05	8.77E-09	1.22E-04	4.21E-05
53	F86	70	Passenger Truck	221	0.00E+00	3.64E-06	3.85E-07	1.48E+01	2.30E-05	7.90E-02	7.57E-06	8.23E-04	1.81E-03	2.96E-04	7.22E-04	4.70E-04	4.81E-04	1.07E-04	7.36E-05	1.93E-08	2.41E-04	1.35E-04
53	F86	70	Single Unit Short Haul Truck	5	0.00E+00	1.11E-06	5.58E-08	8.73E-01	9.11E-07	1.75E-03	1.19E-06	5.49E-04	7.84E-05	1.57E-05	1.35E-04	3.33E-05	3.39E-05	8.75E-05	3.52E-06	1.42E-09	1.01E-04	1.03E-04
53	F86	70	Combination Short Haul Truck	12	0.00E+00	6.45E-06	4.59E-07	4.68E+00	2.10E-08	5.55E-03	4.73E-06	6.77E-03	4.91E-04	1.07E-04	3.93E-04	1.36E-04	1.35E-04	7.05E-04	1.57E-05	0.00E+00	2.57E-04	1.28E-03
53	F86	70	Combination Long Haul Truck	11	0.00E+00	5.83E-06	3.90E-07	4.36E+00	2.41E-08	5.88E-03	4.43E-06	6.67E-03	4.88E-04	8.90E-05	4.06E-04	1.18E-04	1.19E-04	6.67E-04	1.46E-05	0.00E+00	2.87E-04	1.26E-03
52	F87	60	Passenger Car	26	0.00E+00	3.62E-07	3.92E-08	1.32E+00	2.52E-06	9.30E-03	8.06E-07	5.17E-05	2.60E-04	3.99E-05	7.84E-05	5.06E-05	5.19E-05	5.50E-06	6.62E-06	1.77E-09	2.65E-05	8.09E-06
52	F87	60	Passenger Truck	44	0.00E+00	7.96E-07	8.40E-08	3.01E+00	4.96E-06	1.66E-02	1.64E-06	1.66E-04	4.63E-04	7.16E-05	1.56E-04	1.01E-04	1.04E-04	2.29E-05	1.50E-05	3.75E-09	5.18E-05	2.75E-05
52	F87	60	Single Unit Short Haul Truck	2	0.00E+00	5.89E-07	2.94E-08	3.75E-01	4.85E-07	7.26E-04	6.28E-07	2.81E-04	4.77E-05	8.65E-06	7.15E-05	1.77E-05	1.79E-05	3.75E-05	1.51E-06	6.24E-10	5.36E-05	5.26E-05
52	F87	60	Combination Short Haul Truck	2	0.00E+00	1.12E-06	7.81E-08	7.29E-01	3.97E-09	9.80E-04	8.31E-07	1.21E-03	1.04E-04	2.06E-05	7.13E-05	2.33E-05	2.33E-05	1.10E-04	2.44E-06	0.00E+00	4.80E-05	2.29E-04
52	F87	60	Combination Long Haul Truck	2	0.00E+00	1.01E-06	6.54E-08	6.83E-01	4.55E-09	1.06E-03	7.75E-07	1.20E-03	1.05E-04	1.78E-05	7.35E-05	2.00E-05	2.02E-05	1.04E-04	2.29E-06	0.00E+00	5.32E-05	2.27E-04
50	F88	40	Passenger Car	6	0.00E+00	9.76E-08	1.06E-08	3.37E-

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	G04	100	Single Unit Long Haul Truck	5	0.00E+00	7.17E-07	3.49E-08	9.47E-01	5.98E-07	2.13E-03	7.74E-07	3.77E-04	3.84E-05	1.07E-05	8.92E-05	2.14E-05	2.18E-05	9.49E-05	3.81E-06	1.51E-09	6.74E-05	7.04E-05
16	G04	100	Combination Short Haul Truck	40	0.00E+00	1.36E-05	9.95E-07	1.43E+01	3.88E-08	1.33E-02	9.84E-06	1.45E-02	4.62E-04	1.65E-04	7.64E-04	2.92E-04	2.87E-04	2.16E-03	4.80E-05	0.00E+00	4.77E-04	2.74E-03
16	G04	100	Combination Long Haul Truck	36	0.00E+00	1.19E-05	8.13E-07	1.30E+01	4.49E-08	1.33E-02	8.89E-06	1.38E-02	4.28E-04	1.19E-04	7.78E-04	2.44E-04	2.43E-04	1.98E-03	4.35E-05	0.00E+00	5.34E-04	2.60E-03
16	G05	100	Passenger Car	210	0.00E+00	2.30E-06	2.49E-07	9.45E+00	1.60E-05	6.29E-02	5.12E-06	4.49E-04	6.82E-04	1.38E-04	4.98E-04	3.21E-04	3.29E-04	2.64E-05	4.78E-05	1.32E-08	1.69E-04	7.02E-05
16	G05	100	Passenger Truck	352	0.00E+00	4.97E-06	5.29E-07	2.23E+01	3.25E-05	1.27E-01	1.06E-05	1.28E-03	1.21E-03	2.56E-04	1.02E-03	6.59E-04	6.75E-04	1.42E-04	1.12E-04	3.07E-08	3.42E-04	2.07E-04
16	G05	100	Single Unit Short Haul Truck	28	0.00E+00	3.82E-06	1.89E-07	5.20E+00	3.34E-06	1.20E-02	4.14E-06	2.07E-03	1.96E-04	5.71E-05	4.73E-04	1.17E-04	1.19E-04	5.24E-04	2.09E-05	8.54E-09	3.54E-04	3.86E-04
16	G05	100	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	8.06E-09	2.19E-01	1.38E-07	4.92E-04	1.79E-07	8.71E-05	8.88E-06	2.47E-06	2.06E-05	4.95E-06	5.03E-06	2.19E-05	8.82E-07	3.49E-10	1.56E-05	1.63E-05
16	G05	100	Combination Short Haul Truck	35	0.00E+00	1.22E-05	8.87E-07	1.28E+01	3.46E-08	1.19E-02	8.77E-06	1.30E-02	4.12E-04	1.47E-04	6.81E-04	2.60E-04	2.56E-04	1.93E-03	4.28E-05	0.00E+00	4.26E-04	2.44E-03
16	G05	100	Combination Long Haul Truck	32	0.00E+00	1.06E-05	7.25E-07	1.16E+01	4.01E-08	1.18E-02	7.93E-06	1.23E-02	3.82E-04	1.06E-04	6.93E-04	2.17E-04	2.17E-04	1.77E-03	3.88E-05	0.00E+00	4.77E-04	2.32E-03
56	G06	100	Passenger Car	69	0.00E+00	7.53E-07	8.14E-08	3.09E+00	5.24E-06	2.06E-02	1.67E-06	1.47E-04	2.23E-04	4.50E-05	1.63E-04	1.05E-04	1.08E-04	8.63E-06	1.57E-05	4.31E-09	5.52E-05	2.30E-05
56	G06	100	Passenger Truck	115	0.00E+00	1.63E-06	1.73E-07	7.30E+00	1.06E-05	4.15E-02	3.46E-06	4.18E-04	3.95E-04	8.38E-05	3.33E-04	2.15E-04	2.21E-04	4.65E-05	3.66E-05	1.00E-08	1.12E-04	6.77E-05
56	G06	100	Combination Short Haul Truck	1	0.00E+00	5.01E-07	3.66E-08	5.28E-01	1.43E-09	4.89E-04	3.62E-07	5.35E-04	1.70E-05	6.05E-06	2.81E-05	1.07E-05	1.05E-05	7.95E-05	1.77E-06	0.00E+00	1.75E-05	1.01E-04
56	G06	100	Combination Long Haul Truck	1	0.00E+00	4.36E-07	2.99E-08	4.78E-01	1.65E-09	4.88E-04	3.27E-07	5.08E-04	1.57E-05	4.37E-06	2.86E-05	8.96E-06	8.94E-06	7.29E-05	1.60E-06	0.00E+00	1.97E-05	9.57E-05
53	G07	70	Passenger Car	53	0.00E+00	6.72E-07	7.27E-08	2.58E+00	4.68E-06	1.73E-02	1.49E-06	1.08E-04	4.06E-04	6.54E-05	1.46E-04	9.38E-05	9.63E-05	9.51E-06	1.30E-05	3.53E-09	4.93E-05	1.69E-05
53	G07	70	Passenger Truck	89	0.00E+00	1.46E-06	1.55E-07	5.94E+00	9.27E-06	3.18E-02	3.04E-06	3.31E-04	7.28E-04	1.19E-04	2.90E-04	1.89E-04	1.94E-04	4.29E-05	2.96E-05	7.75E-09	9.69E-05	5.44E-05
53	G07	70	Single Unit Short Haul Truck	2	0.00E+00	4.14E-07	2.08E-08	3.24E-01	3.39E-07	6.49E-04	4.41E-07	2.04E-04	2.92E-05	5.84E-06	5.03E-05	1.24E-05	1.26E-05	3.25E-05	1.31E-06	5.28E-10	3.77E-05	3.82E-05
53	G07	70	Combination Short Haul Truck	4	0.00E+00	1.99E-06	1.42E-07	1.44E+00	6.47E-09	1.72E-03	1.46E-06	2.09E-03	1.52E-04	3.31E-05	1.21E-04	4.19E-05	4.18E-05	2.18E-04	4.83E-06	0.00E+00	7.95E-05	3.94E-04
53	G07	70	Combination Long Haul Truck	3	0.00E+00	1.80E-06	1.20E-07	1.35E+00	7.46E-09	1.82E-03	1.37E-06	2.06E-03	1.51E-04	2.75E-05	1.25E-04	3.64E-05	3.68E-05	2.06E-04	4.51E-06	0.00E+00	8.87E-05	3.88E-04
54	G08	80	Passenger Car	15	0.00E+00	1.80E-07	1.95E-08	7.11E-01	1.25E-06	4.70E-03	4.00E-07	3.13E-05	8.78E-05	1.50E-05	3.90E-05	2.51E-05	2.58E-05	2.38E-06	3.58E-06	9.73E-10	1.32E-05	4.90E-06
54	G08	80	Passenger Truck	25	0.00E+00	3.91E-07	4.14E-08	1.65E+00	2.50E-06	8.91E-03	8.19E-07	9.30E-05	1.58E-04	2.75E-05	7.84E-05	5.09E-05	5.22E-05	1.14E-05	8.26E-06	2.19E-09	2.62E-05	1.52E-05
50	G09	40	Passenger Car	37	0.00E+00	6.20E-07	6.70E-08	2.14E+00	4.31E-06	1.59E-02	1.38E-06	6.67E-05	6.38E-04	9.11E-05	1.34E-04	8.65E-05	8.87E-05	1.16E-05	1.06E-05	2.59E-09	4.54E-05	1.04E-05
50	G09	40	Passenger Truck	62	0.00E+00	1.42E-06	1.49E-07	4.77E+00	8.50E-06	2.74E-02	2.84E-06	2.52E-04	1.13E-03	1.61E-04	2.67E-04	1.75E-04	1.79E-04	4.09E-05	2.35E-05	5.03E-09	8.82E-05	4.27E-05
50	G09	40	Single Unit Short Haul Truck	3	0.00E+00	1.46E-06	7.65E-08	7.01E-01	1.27E-06	1.21E-03	1.55E-06	7.14E-04	1.33E-04	2.21E-05	1.73E-04	4.56E-05	4.63E-05	7.08E-05	2.83E-06	1.20E-09	1.26E-04	1.34E-04
50	G09	40	Combination Short Haul Truck	10	0.00E+00	8.89E-06	6.17E-07	4.51E+00	3.20E-08	7.75E-03	6.61E-06	9.91E-03	1.03E-03	1.86E-04	5.76E-04	1.84E-04	1.86E-04	6.80E-04	1.51E-05	0.00E+00	3.90E-04	1.87E-03
50	G09	40	Combination Long Haul Truck	9	0.00E+00	8.10E-06	5.28E-07	4.29E+00	3.63E-08	8.60E-03	6.23E-06	9.93E-03	1.04E-03	1.65E-04	5.93E-04	1.61E-04	1.64E-04	6.55E-04	1.44E-05	0.00E+00	4.29E-04	1.87E-03
53	G10	70	Passenger Car	374	0.00E+00	4.74E-06	5.12E-07	1.81E+01	3.30E-05	1.22E-01	1.05E-05	7.63E-04	2.86E-03	4.61E-04	1.03E-03	6.61E-04	6.78E-04	6.70E-05	9.13E-05	2.49E-08	3.47E-04	1.19E-04
53	G10	70	Passenger Truck	627	0.00E+00	1.03E-05	1.09E-06	4.18E+01	6.53E-05	2.24E-01	2.14E-05	2.33E-03	5.13E-03	8.38E-04	2.05E-03	1.33E-03	1.36E-03	3.02E-04	2.09E-04	5.46E-08	6.83E-04	3.83E-04
53	G10	70	Single Unit Short Haul Truck	28	0.00E+00	6.48E-06	3.24E-07	5.07E+00	5.30E-06	1.01E-02	6.90E-06	3.19E-03	4.56E-04	9.12E-05	7.86E-04	1.94E-04	1.97E-04	5.09E-04	2.05E-05	8.26E-09	5.89E-04	5.98E-04
53	G10	70	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.40E-08	2.15E-01	2.29E-07	4.26E-04	3.01E-07	1.37E-04	2.08E-05	4.06E-06	3.43E-05	8.38E-06	8.52E-06	2.15E-05	8.69E-07	3.48E-10	2.58E-05	2.57E-05
53	G10	70	Combination Short Haul Truck	21	0.00E+00	1.09E-05	7.76E-07	7.91E+00	3.55E-08	9.40E-03	8.01E-06	1.15E-02	8.31E-04	1.81E-04	6.65E-04	2.30E-04	2.29E-04	1.19E-03	2.65E-05	0.00E+00	4.36E-04	2.16E-03
53	G10	70	Combination Long Haul Truck	19	0.00E+00	9.87E-06	6.60E-07	7.39E+00	4.09E-08	9.96E-03	7.50E-06	1.13E-02	8.25E-04	1.51E-04	6.88E-04	1.99E-04	2.02E-04	1.13E-03	2.47E-05	0.00E+00	4.86E-04	2.13E-03
16	H01	100	Passenger Car	2723	0.00E+00	2.98E-05	3.22E-06	1.22E+02	2.07E-04	8.15E-01	6.62E-05	5.82E-03	8.83E-03	1.78E-03	6.45E-03	4.16E-03	4.26E-03	3.41E-04	6.19E-04	1.71E-07	2.18E-03	9.09E-04
16	H01	100	Passenger Truck	4560	0.00E+00	6.43E-05	6.85E-06	2.89E+02	4.21E-04	1.64E+00	1.37E-04	1.65E-02	1.56E-02	3.32E-03	1.32E-02	8.52E-03	8.74E-03	1.84E-03	1.45E-03	3.97E-07	4.42E-03	2.68E-03
16	H01	100	Single Unit Short Haul Truck	438	0.00E+00	5.88E-05	2.91E-06	8.00E+01	5.13E-05	1.85E-01	6.37E-05	3.18E-02	3.02E-03	8.78E-04	7.27E-03	1.80E-03	1.83E-03	8.06E-03	3.21E-04	1.31E-07	5.44E-03	5.94E-03
16	H01	100	Single Unit Long Haul Truck	19	0.00E+00	2.55E-06	1.24E-07	3.37E+00	2.13E-06	7.56E-03	2.75E-06	1.34E-03	1.37E-04	3.80E-05	3.17E-04	7.62E-05	7.74E-05	3.37E-04	1.36E-05	5.37E-09	2.40E-04	2.50E-04
16	H01	100	Combination Short Haul Truck	539	0.00E+00	1.85E-04	1.35E-05	1.95E+02	5.27E-07	1.81E-01	1.34E-04	1.98E-01	6.28E-03	2.24E-03	1.04E-02	3.96E-03	3.89E-03	2.94E-02	6.53E-04	0.00E+00	6.48E-03	3.72E-02
16	H01	100	Combination Long Haul Truck	492	0.00E+00	1.61E-04	1.10E-05	1.77E+02	6.10E-07	1.80E-01	1.21E-04	1.88E-01	5.81E-03	1.62E-03	1.06E-02	3.31E-03	3.30E-03	2.70E-02	5.91E-04	0.00E+00	7.26E-03	3.54E-02
16	H02	100	Passenger Car	2140	0.00E+00	2.34E-05	2.53E-06	9.61E+01	1.63E-04	6.40E-01	5.21E-05	4.57E-03	6.94E-03	1.40E-03	5.07E-03	3.27E-03	3.35E-03	2.68E-04	4.87E-04	1.34E-07	1.72E-03	7.15E-04
16	H02	100	Passenger Truck	3584	0.00E+00	5.05E-05	5.38E-06	2.27E+02	3.31E-04	1.29E+00	1.08E-04	1.30E-02	1.23E-02	2.61E-03	1.03E-02	6.70E-03	6.87E-03	1.44E-03	1.14E-03	3.12E-07	3.48E-03	2.10E-03
16	H02	100	Single Unit Short Haul Truck	288	0.00E+00	3.86E-05	1.91E-06	5.25E+01	3.37E-05	1.22E-01	4.18E-05	2.09E-02	1.98E-03	5.77E-04	4.78E-03	1.19E-03	1.20E-03	5.30E-03	2.11E-04	8.63E-08	3.57E-03	3.90E-03
16	H02	100	Single Unit Long Haul Truck	13	0.00E+00	1.68E-06	8.14E-08	2.21E+00	1.40E-06	4.97E-03	1.81E-06	8.80E-04	8.97E-05	2.49E-05	2.08E-04	5.00E-05	5.08E-05	2.22E-04	8.91E-06	3.53E-09	1.57E-04	1.64E-04
16	H02	100	Combination Short Haul Truck	387	0.00E+00	1.33E-04	9.71E-06	1.40E+02	3.78E-07	1.30E-01	9.60E-05	1.42E-01	4.51E-03	1.61E-03	7.45E-03	2.85E-03	2.80E-03	2.11E-02	4.69E-04	0.00E+00	4.66E-03	2.67E-02
16	H02	100	Combination Long Haul Truck	353	0.00E+00	1.16E-04	7.94E-06	1.27E+02	4.38E-07	1.30E-01	8.67E-05	1.35E-01	4.17E-03	1.16E-03	7.59E-03	2.38E-03	2.37E-03	1.94E-02	4.25E-04	0.00E+00	5.22E-03	2.54E-02
16	H03	100	Passenger Car	2376	0.00E+00	2.60E-05	2.81E-06	1.07E+02	1.81E-04	7.11E-01	5.78E-05	5.08E-03	7.71E-03	1.55E-03	5.63E-03	3.63E-03	3.72E-03	2.98E-04	5.40E-04	1.49E-07	1.90E-03	7.94E-04
16	H03	100	Passenger Truck	3980	0.00E+00	5.61E-05	5.98E-06	2.52E+02	3.67E-04	1.43E+00	1.19E-04	1.44E-02	1.36E-02	2.89E-03	1.15E-02	7.44E-03	7.63E-03	1.60E-03	1.26E-03	3.46E-07	3.86E-03	2.34E-03
16	H03	100	Single Unit Short Haul Truck	299	0.00E+00	4.01E-05	1.99E-06	5.46E+01	3.50E-05	1.26E-01	4.35E-05	2.17E-02	2.06E-03	6.00E-04	4.96E-03	1.23E-03	1.25E-03	5.50E-03	2.19E-04	8.96E-08	3.71E-03	4.05E-03
16	H03	100	Single Unit Long Haul Truck	13	0.00E+00	1.74E-06	8.46E-08	2.30E+00	1.45E-06	5.16E-03	1.88E-06	9.14E-04	9.32E-05	2.59E-05	2.16E-04	5.20E-05	5.28E-05	2.30E-04	9.25E-06	3.67E-09	1.64E-04	1.71E-04
16	H03	100	Combination Short Haul Truck	370	0.00E+00	1.27E-04	9.28E-06	1.34E+02	3.62E-07	1.24E-01	9.18E-05	1.36E-01	4.31E-03	1.54E-03	7.13E-03	2.72E-03	2.68E-03	2.02E-02	4.48E-04	0.00E+00	4.45E-03	2.56E-02
16	H03	100	Combination Long Haul Truck	338	0.00E+00	1.11E-04	7.59E-06	1.21E+02	4.19E-07	1.24E-01	8.29E-05	1.29E-01	3.99E-03	1.11E-03	7.26E-03	2.27E-03	2.27E-03	1.85E-02	4.06E-04	0.00E+00	4.99E-03	2.43E-02
16	H04	100	Passenger Car	2717	0.00E+00	2.97E-05	3.22E-06	1.22E+02	2.07E-04	8.13E-01	6.61E-05	5.80E-03	8.81E-03	1.78E-03	6.43E-03	4.15E-03	4.26E-03	3.41E-04	6.18E-04	1.70E-07	2.18E-03	9.07E-04
16	H04	100	Passenger Truck	4550	0.00E+00	6.42E-05	6.83E-06	2.88E+02	4.20E-04	1.64E+00	1.37E-04	1.65E-02	1.56E-02	3.31E-03	1.31E-02	8.51E-03	8.72E-03	1.83E-03	1.45E-03	3.96E-07	4.41E-03	2.67E-03
16	H04	100	Single Unit Short Haul Truck	251	0.00E+00	3.38E-05	1.67E-06	4.59E+01	2.95E-05	1.06E-01	3.65E-05	1.83E-02	1.73E-03	5.04E-04	4.17E-03	1.04E-03	1.05E-03	4.63E-03	1.84E-04	7.53E-08	3.12E-03	3.41E-03
16	H04	100	Single Unit Long Haul Truck	11	0.00E+00	1.46E-06	7.11E-08	1.93E+00	1.22E-06	4.34E-03	1.58E-06	7.69E-04	7.83E-05	2.18E-05	1.82E-04	4.37E-05	4.44E-05	1.94E-04	7.78E-06	3.08E-09	1.38E-04	1.44E-04
16	H04	100	Combination Short Haul Truck	441	0.00E+00	1.52E-04	1.11E-05	1.59E+02	4.31E-07	1.48E-01	1.09E-04	1.62E-01	5.13E-03	1.83E-03	8.49E-03	3.24E-03	3.19E-03	2.40E-02	5.34E-04	0.00E+00	5.30E-03	3.05E-02
16	H04	100	Combination Long Haul Truck	402	0.00E+00	1.32E-04	9.04E-06	1.44E+02	4.99E-07	1.48E-01	9.88E-05	1.54E-01	4.75E-03	1.32E-03	8.64E-03	2.71E-03	2.70E-03	2.21E-02	4.84E-04	0.00E+00	5.94E-03	2.89E-02
56	H05	100	Passenger Car	1010	0.00E+00	1.10E-05	1.20E-06	4.54E+01	7.69E-05	3.02E-01	2.46E-05	2.16E-03	3.28E-03	6.61E-04	2.39E-03	1.54E-03	1.58E-03	1.27E-04	2.30E-04	6.33E-08	8.09E-04	3.37E-04
56	H05	100	Passenger Truck	1691	0.00E+00	2.38E-05	2.54E-06	1.07E+02	1.56E-04	6.08E-01	5.08E-05	6.14E-03	5.79E-03	1.23E-03	4.88E-03	3.16E-03	3.24E-03	6.82E-04	5.37E-04	1.47E-07	1.64E-03	9.93E-04
56	H05	100	Single Unit Short Haul Truck	127	0.00E+00	1.71E-05	8.45E-07	2.32E+01	1.49E-05	5.37E-02	1.85E-05	9.23E-03	8.76E-04	2.55E-04	2.11E-03	5.23E-04	5.31E-04	2.34E-03	9.32E-05	3.81E-08	1.58E-03	1.72E-03
56	H05	100	Single Unit Long Haul Truck	6	0.00E+00	7.40E-07	3.59E-08	9.77E-01	6.17E-07	2.19E-03	7.98E-07	3.89E-04	3.96E-05	1.10E-05	9.20E-05	2.21E-05	2.25E-05	9.79E-05	3.93E-06	1.56E-09	6.95E-05	7.26E-05
56	H05	100	Combination Short Haul Truck	164	0.00E+00	5.64E-05	4.11E-06	5.93E+01	1.60E-07	5.50E-02	4.07E-05	6.01E-02	1.91E-03	6.80E-04	3.16E-03	1.21E-03	1.19E-03	8.95E-03	1.99E-04	0.00E+00	1.97E-03	1.13E-02
56	H05	100	Combination Long Haul Truck	150	0.00E+00	4.91E-05	3.36E-06	5.37E+01	1.86E-07	5.49E-02	3.68E-05	5.71E-02	1.77E-03	4.92E-04	3.22E-03	1.01E-03	1.01E-03	8.21E-03	1.80E-04	0.00E+00	2.21E-03	1.08E-02
56	H06	100	Passenger Car	1707	0.00E+00	1.87E-05	2.02E-06	7.67E+01	1.30E-04	5.11E-01	4.15E-05	3.65E-03	5.54E-03	1.12E-03	4.04E-03	2.60E-03	2.67E-03	2.14E-04	3.88E-04	1.07E-07	1.37E-03	5.70E-04
56	H06	100	Passenger Truck	2858	0.00E+00	4.03E-05	4.29E-06	1.81E+02	2.64E-04	1.03E+00	8.58E-05	1.04E-02	9.79E-03	2.08E-03	8.25E-03	5.34E-03	5.48E-03	1.15E-03	9.08E-04	2.49E-07	2.77E-03	1.68E-03
56	H06	100	Single Unit Short Haul Truck	124	0.00E+00	1.67E-05	8.26E-07	2.27E+01	1.46E-05	5.25E-02	1.81E-05	9.02E-03	8.56E-04	2.49E-04	2.06E-03	5.12E-04	5.20E-04	2.29E-03	9.11E-05	3.73E-08	1.54E-03	1.69E-03
56	H06	100	Single Unit Long Haul Truck	5	0.00E+00	7.23E-07	3.51E-08	9.55E-01	6.03E-07	2.14E-03	7.80E-07	3.80E-04	3.87E-05	1.08E-05	8.99E-05	2.16E-05	2.20E-05	9.57E-05	3.85E-06	1.52E-09	6.80E-05	7.10E-05
56	H06	100	Combination Short Haul Truck	277	0.00E+00	9.51E-05	6.94E-06	1.00E+02	2.71E-07	9.28E-02	6.86E-05	1.01E-01	3.22E-03	1.15E-03	5.33E-03	2.04E-03	2.00E-03	1.51E-02	3.35E-04	0.00E+00	3.33E-03	1.91E-02
56	H06	100	Combination Long Haul Truck	253	0.00E+00	8.28E-05	5.68E-06	9.07E+01	3.13E-07	9.27E-02	6.20E-05	9.64E-02	2.99E-03	8.30E-04	5.43E-03	1.70E-03	1.70E-03	1.38E-02	3.04E-04	0.00E+00	3.73E-03	1.82E-02
16	H07	100	Passenger Car	3021	0.00E+00	3.31E-05	3.58E-06	1.36E+02	2.30E-04	9.04E-01	7.35E-05	6.46E-03	9.80E-03	1.98E-03	7.15E-03	4.61E-03	4.73E-03	3.79E-04	6.87E-04	1.89E-07	2.42E-03	1.01E-03
16	H07	100	Passenger Truck	5060	0.00E+00	7.13E-05	7.60E-06	3.20E+02	4.67E-04	1.82E+00	1.52E-04	1.84E-02	1.73E-02	3.68E-03	1.46E-02	9.46E-03	9.70E-03	2.04E-03	1.61E-03	4.41E-07	4.91E-03	2.97E-03
16	H07	100	Single Unit Short Haul Truck	282	0.00E+00	3.79E-05	1.88E-06	5.15E+01	3.31E-05	1.19E-01	4.10E-05	2.05E-02	1.95E-03	5.66E-04	4.69E-03	1.16E-03	1.18E-03	5.20E-03	2.07E-04	8.46E-08	3.51E-03	3.83E-03
16	H07	100	Single Unit Long Haul Truck	12	0.00E+00	1.64E-06	7.99E-08	2.17E+00	1.37E-06	4.87E-03	1.77E-06	8.63E-04	8.80E-05	2.45E-05	2.04E-04	4.91E-05	4.99E-05	2.18E-04	8.74E-06	3.46E-09	1.54E-04	1.61E-04
16	H07	100	Combination Short Haul Truck	484	0.00E+00	1.66E-04	1.21E-05	1.75E+02	4.73E-07	1.62E-01	1.20E-04	1.77E-01	5.64E-03	2.01E-03	9.32E-03	3.56E-03	3.50E-03	2.64E-02	5.86E-04	0.00E+00	5.82E-03	3.34E-02
16	H07	100	Combination Long Haul Truck	441	0.00E+00	1.45E-04	9.92E-06	1.59E+02	5.48E-07	1.62E-01	1.08E-04	1.69E-01	5.22E-03	1.45E-03	9.49E-03	2.97E-03	2.97E-03	2.42E-02	5.31E-04	0.00E+00	6.52E-03	3.17E-02
52	H08	60	Passenger Car	249	0.00E+00	3.43E-06	3.71E-07	1.25E+01	2.38E-05	8.79E-02	7.62E-06	4.89E-04	2.46E-03	3.77E-04	7.41E-04	4.78E-04	4.90E-04	5.20E-05	6.26E-05	1.67E-08	2.51E-04	7.64E-05
52	H08	60	Passenger Truck	417	0.00E+00	7.52E-06	7.94E-07	2.85E+01	4.69E-05	1.57E-01	1.55E-05	1.57E-03	4.38E-03	6.77E-04	1.47E-03	9.59E-04	9.82E-04	2.16E-04	1.42E-04	3.55E-08	4.89E-04	2.60E-04
52	H08	60	Single Unit Short Haul Truck	10	0.00E+00	2.94E-06	1.47E-07	1.87E+00	2.42E-06	3.63E-03	3.14E-06	1.40E-03	2.38E-04	4.32E-05	3.57E-04	8.82E-05	8.96E-05	1.87E-04	7.57E-06	3.12E-09	2.68E-04	2.63E-04
52	H08	60	Combination Short Haul Truck	20	0.00E+00	1.20E-05	8.37E-07	7.81E+00	4.25E-08	1.05E-02	8.91E-06	1.30E-02	1.12E-03	2.21E-04	7.64E-04	2.49E-04	2.50E-04	1.18E-03	2.62E-05	0.00E+00	5.14E-04	2.45E-03
52	H08	60	Combination Long Haul Truck	19	0.00E+00	1.08E-05	7.02E-07	7.33E+00	4.88E-08	1.13E-02	8.31E-06	1.29E-02	1.12E-03	1.91E-04	7.88E-04	2.14E-04	2.17E-04	1.12E-03	2.45E-05	0.00E+00	5.71E-04	2.43E-03
50	H09	40	Passenger Car	331	0.00E+00	5.56E-06	6.01E-07	1.92E+01	3.87E-05	1.43E-01	1.24E-05	5.98E-04	5.72E-03	8.17E-04	1.20E-03	7.75E-04	7.96E-04	1.04E-04	9.54E-05	2.32E-08	4.07E-04	9.34E-05
50	H09	40	Passenger Truck	554	0.00E+00	1.27E-05	1.33E-06	4.28E+01	7.62E-05	2.45E-01	2.55E-05	2.26E-03	1.02E-02	1.44E-03	2.40E-03	1.57E-03	1.61E-03	3.67E-04	2.11E-04	4.51E-08	7.91E-04	3.83E-04
50	H09	40	Single Unit Short Haul Truck	2	0.00E+00	9.30E-07	4.88E-08	4.47E-01	8.11E-07	7.70E-04	9.90E-07	4.55E-04	8.50E-05	1.41E-05	1.10E-04	2.91E-05	2.95E-05	4.52E-05	1.80E-06	7.64E-10	8.06E-05	8.53E-05
50	H09	40	Combination Short Haul Truck	4	0.00E+00	3.77E-06	2.62E-07	1.91E+00	1.35E-08	3.29E-03	2.80E-06	4.20E-03	4.38E-04	7.90E-05	2.44E-04	7.80E-05	7.88E-05	2.88E-04	6.40E-06	0.00E+00	1.65E-04	7.91E-04
50	H09	40	Combination Long Haul Tru

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	H14	70	Single Unit Short Haul Truck	4	0.00E+00	9.90E-07	4.96E-08	7.76E-01	8.10E-07	1.55E-03	1.06E-06	4.88E-04	6.97E-05	1.40E-05	1.20E-04	2.96E-05	3.01E-05	7.78E-05	3.13E-06	1.26E-09	9.00E-05	9.14E-05
53	H14	70	Combination Short Haul Truck	9	0.00E+00	4.76E-06	3.38E-07	3.45E+00	1.55E-08	4.10E-03	3.49E-06	5.00E-03	3.62E-04	7.91E-05	2.90E-04	1.00E-04	1.00E-04	5.20E-04	1.16E-05	0.00E+00	1.90E-04	9.42E-04
53	H14	70	Combination Long Haul Truck	8	0.00E+00	4.30E-06	2.88E-07	3.22E+00	1.78E-08	4.34E-03	3.27E-06	4.93E-03	3.60E-04	6.57E-05	3.00E-04	8.70E-05	8.79E-05	4.92E-04	1.08E-05	0.00E+00	2.12E-04	9.28E-04
54	H15	80	Passenger Car	776	0.00E+00	9.20E-06	9.96E-07	3.63E+01	6.41E-05	2.40E-01	2.05E-05	1.60E-03	4.49E-03	7.65E-04	1.99E-03	1.28E-03	1.32E-03	1.22E-04	1.83E-04	4.97E-08	6.74E-04	2.50E-04
54	H15	80	Passenger Truck	1299	0.00E+00	2.00E-05	2.12E-06	8.44E+01	1.28E-04	4.55E-01	4.18E-05	4.75E-03	8.06E-03	1.41E-03	4.00E-03	2.60E-03	2.67E-03	5.83E-04	4.22E-04	1.12E-07	1.34E-03	7.76E-04
54	H15	80	Single Unit Short Haul Truck	81	0.00E+00	1.51E-05	7.50E-07	1.48E+01	1.22E-05	2.97E-02	1.61E-05	7.74E-03	9.49E-04	2.15E-04	1.84E-03	4.47E-04	4.55E-04	1.49E-03	5.97E-05	2.37E-08	1.38E-03	1.45E-03
54	H15	80	Single Unit Long Haul Truck	4	0.00E+00	6.57E-07	3.24E-08	6.27E-01	5.19E-07	1.24E-03	6.99E-07	3.31E-04	4.34E-05	9.47E-06	8.02E-05	1.93E-05	1.96E-05	6.26E-05	2.53E-06	9.88E-10	6.06E-05	6.19E-05
54	H15	80	Combination Short Haul Truck	171	0.00E+00	7.53E-05	5.38E-06	6.22E+01	2.38E-07	6.67E-02	5.50E-05	7.72E-02	4.56E-03	1.12E-03	4.48E-03	1.59E-03	1.58E-03	9.39E-03	2.08E-04	0.00E+00	2.91E-03	1.45E-02
54	H15	80	Combination Long Haul Truck	156	0.00E+00	6.74E-05	4.53E-06	5.75E+01	2.74E-07	6.91E-02	5.11E-05	7.49E-02	4.46E-03	8.97E-04	4.63E-03	1.37E-03	1.38E-03	8.79E-03	1.93E-04	0.00E+00	3.25E-03	1.41E-02
53	H16	70	Passenger Car	648	0.00E+00	8.20E-06	8.87E-07	3.14E+01	5.71E-05	2.11E-01	1.82E-05	1.32E-03	4.94E-03	7.97E-04	1.77E-03	1.14E-03	1.17E-03	1.16E-04	1.58E-04	4.30E-08	6.00E-04	2.06E-04
53	H16	70	Passenger Truck	1084	0.00E+00	1.78E-05	1.89E-06	7.24E+01	1.13E-04	3.88E-01	3.71E-05	4.04E-03	8.87E-03	1.45E-03	3.54E-03	2.30E-03	2.36E-03	5.23E-04	3.61E-04	9.45E-08	1.18E-03	6.63E-04
53	H16	70	Single Unit Short Haul Truck	22	0.00E+00	5.06E-06	2.53E-07	3.96E+00	4.14E-06	7.92E-03	5.39E-06	2.49E-03	3.56E-04	7.13E-05	6.14E-04	1.51E-04	1.54E-04	3.97E-04	1.60E-05	6.45E-09	4.60E-04	4.67E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	1.10E-08	1.68E-01	1.79E-07	3.33E-04	2.35E-07	1.07E-04	1.62E-05	3.17E-06	2.68E-05	6.55E-06	6.66E-06	1.68E-05	6.79E-07	2.72E-10	2.02E-05	2.01E-05
53	H16	70	Combination Short Haul Truck	38	0.00E+00	2.00E-05	1.42E-06	1.45E+01	6.50E-08	1.72E-02	1.47E-05	2.10E-02	1.52E-03	3.32E-04	1.22E-03	4.21E-04	4.20E-04	2.19E-03	4.85E-05	0.00E+00	7.98E-04	3.96E-03
53	H16	70	Combination Long Haul Truck	35	0.00E+00	1.81E-05	1.21E-06	1.35E+01	7.49E-08	1.82E-02	1.37E-05	2.07E-02	1.51E-03	2.76E-04	1.26E-03	3.65E-04	3.69E-04	2.07E-03	4.53E-05	0.00E+00	8.90E-04	3.90E-03

Appendix F.2.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	2.48E-04	1.91E-05	4.32E+02	3.74E-04	1.80E+00	2.65E-04	2.10E-01	1.55E-02	4.44E-03	2.42E-02	1.15E-02	1.17E-02	3.13E-02	1.84E-03	4.21E-07	1.25E-02	3.93E-02
A02	0.00E+00	2.53E-04	1.92E-05	4.31E+02	3.64E-04	1.74E+00	2.68E-04	2.13E-01	1.53E-02	4.42E-03	2.45E-02	1.14E-02	1.15E-02	3.23E-02	1.83E-03	4.24E-07	1.30E-02	3.98E-02
A03	0.00E+00	2.57E-04	2.03E-05	4.92E+02	4.79E-04	2.26E+00	2.94E-04	2.07E-01	1.82E-02	5.08E-03	2.71E-02	1.34E-02	1.37E-02	3.06E-02	2.16E-03	5.21E-07	1.34E-02	3.85E-02
A04	0.00E+00	2.55E-04	1.94E-05	4.43E+02	3.86E-04	1.84E+00	2.74E-04	2.12E-01	1.59E-02	4.56E-03	2.52E-02	1.18E-02	1.19E-02	3.22E-02	1.89E-03	4.46E-07	1.32E-02	3.96E-02
A05	0.00E+00	2.14E-04	1.67E-05	3.93E+02	3.64E-04	1.73E+00	2.38E-04	1.77E-01	1.43E-02	4.05E-03	2.18E-02	1.06E-02	1.08E-02	2.62E-02	1.71E-03	4.01E-07	1.10E-02	3.29E-02
A06	0.00E+00	2.27E-04	1.72E-05	3.82E+02	3.18E-04	1.53E+00	2.38E-04	1.94E-01	1.35E-02	3.92E-03	2.17E-02	1.01E-02	1.02E-02	2.91E-02	1.62E-03	3.67E-07	1.15E-02	3.62E-02
A07	0.00E+00	2.21E-04	1.70E-05	3.79E+02	3.22E-04	1.55E+00	2.33E-04	1.89E-01	1.35E-02	3.89E-03	2.12E-02	1.00E-02	1.02E-02	2.80E-02	1.61E-03	3.62E-07	1.10E-02	3.52E-02
A08	0.00E+00	2.37E-04	1.78E-05	3.79E+02	2.90E-04	1.42E+00	2.40E-04	2.08E-01	1.32E-02	3.88E-03	2.18E-02	9.81E-03	9.94E-03	3.13E-02	1.58E-03	3.45E-07	1.18E-02	3.90E-02
A09	0.00E+00	2.52E-04	1.93E-05	4.21E+02	3.44E-04	1.67E+00	2.62E-04	2.19E-01	1.49E-02	4.32E-03	2.37E-02	1.11E-02	1.12E-02	3.25E-02	1.78E-03	3.91E-07	1.25E-02	4.09E-02
A10	0.00E+00	2.84E-04	2.14E-05	4.55E+02	3.50E-04	1.71E+00	2.87E-04	2.49E-01	1.58E-02	4.66E-03	2.60E-02	1.18E-02	1.20E-02	3.74E-02	1.90E-03	4.14E-07	1.41E-02	4.66E-02
A11	0.00E+00	2.95E-04	2.23E-05	4.71E+02	3.58E-04	1.76E+00	2.96E-04	2.62E-01	1.64E-02	4.81E-03	2.67E-02	1.22E-02	1.23E-02	3.89E-02	1.95E-03	4.14E-07	1.43E-02	4.91E-02
A12	0.00E+00	3.37E-04	2.56E-05	5.58E+02	4.51E-04	2.19E+00	3.48E-04	2.93E-01	1.97E-02	5.72E-03	3.15E-02	1.46E-02	1.48E-02	4.36E-02	2.35E-03	5.18E-07	1.67E-02	5.47E-02
A13	0.00E+00	3.04E-04	2.31E-05	4.97E+02	3.93E-04	1.92E+00	3.10E-04	2.67E-01	1.74E-02	5.09E-03	2.80E-02	1.30E-02	1.31E-02	3.96E-02	2.08E-03	4.50E-07	1.49E-02	4.99E-02
A14	0.00E+00	3.36E-04	2.52E-05	5.35E+02	4.07E-04	1.99E+00	3.38E-04	2.96E-01	1.86E-02	5.47E-03	3.06E-02	1.38E-02	1.40E-02	4.43E-02	2.22E-03	4.81E-07	1.66E-02	5.53E-02
A15	0.00E+00	3.24E-04	2.44E-05	5.05E+02	3.68E-04	1.83E+00	3.20E-04	2.91E-01	1.74E-02	5.16E-03	2.88E-02	1.29E-02	1.31E-02	4.32E-02	2.08E-03	4.32E-07	1.56E-02	5.45E-02
A16	0.00E+00	3.50E-04	2.61E-05	5.39E+02	3.85E-04	1.91E+00	3.44E-04	3.14E-01	1.85E-02	5.50E-03	3.10E-02	1.37E-02	1.39E-02	4.70E-02	2.21E-03	4.65E-07	1.71E-02	5.87E-02
A17	0.00E+00	3.07E-04	2.31E-05	4.71E+02	3.33E-04	1.66E+00	3.00E-04	2.78E-01	1.61E-02	4.81E-03	2.69E-02	1.20E-02	1.22E-02	4.13E-02	1.93E-03	3.95E-07	1.47E-02	5.20E-02
A18	0.00E+00	3.48E-04	2.60E-05	5.38E+02	3.89E-04	1.92E+00	3.43E-04	3.11E-01	1.85E-02	5.50E-03	3.10E-02	1.38E-02	1.39E-02	4.66E-02	2.21E-03	4.67E-07	1.70E-02	5.83E-02
A19	0.00E+00	2.89E-04	2.16E-05	4.36E+02	3.01E-04	1.51E+00	2.79E-04	2.63E-01	1.49E-02	4.45E-03	2.50E-02	1.11E-02	1.12E-02	3.90E-02	1.78E-03	3.60E-07	1.38E-02	4.92E-02
A20	0.00E+00	3.39E-04	2.52E-05	5.14E+02	3.57E-04	1.78E+00	3.30E-04	3.06E-01	1.75E-02	5.25E-03	2.97E-02	1.30E-02	1.32E-02	4.59E-02	2.10E-03	4.35E-07	1.65E-02	5.72E-02
B05	0.00E+00	5.93E-05	4.35E-06	1.17E+02	1.14E-04	4.68E-01	7.07E-05	4.27E-02	5.68E-03	1.36E-03	6.90E-03	3.09E-03	3.15E-03	7.12E-03	5.17E-04	1.29E-07	3.75E-03	7.94E-03
B06	0.00E+00	8.27E-05	6.02E-06	1.86E+02	2.07E-04	8.20E-01	1.11E-04	4.81E-02	9.39E-03	2.19E-03	1.12E-02	5.07E-03	5.17E-03	8.85E-03	8.47E-04	2.40E-07	6.02E-03	8.85E-03
B07	0.00E+00	1.64E-05	1.76E-06	7.18E+01	1.10E-04	4.29E-01	3.55E-05	3.91E-03	4.27E-03	8.91E-04	3.43E-03	2.22E-03	2.27E-03	3.81E-04	3.61E-04	9.92E-08	1.15E-03	6.27E-04
B08	0.00E+00	3.37E-05	3.57E-06	1.45E+02	2.20E-04	8.60E-01	7.17E-05	8.42E-03	8.59E-03	1.79E-03	6.93E-03	4.46E-03	4.57E-03	8.72E-04	7.27E-04	1.99E-07	2.36E-03	1.37E-03
B09	0.00E+00	1.00E-04	8.54E-06	2.59E+02	3.10E-04	1.25E+00	1.41E-04	6.68E-02	1.38E-02	3.09E-03	1.33E-02	7.33E-03	7.48E-03	9.75E-03	1.21E-03	2.92E-07	5.81E-03	1.23E-02
B10	0.00E+00	9.68E-05	7.95E-06	2.27E+02	2.54E-04	1.04E+00	1.27E-04	6.96E-02	1.18E-02	2.69E-03	1.19E-02	6.29E-03	6.41E-03	1.04E-02	1.04E-03	2.44E-07	5.52E-03	1.29E-02
B11	0.00E+00	4.31E-05	3.75E-06	1.17E+02	1.45E-04	5.84E-01	6.31E-05	2.74E-02	6.34E-03	1.41E-03	5.96E-03	3.35E-03	3.42E-03	3.96E-03	5.52E-04	1.36E-07	2.53E-03	5.02E-03
B12	0.00E+00	3.40E-05	2.63E-06	7.00E+01	6.97E-05	2.90E-01	4.07E-05	2.60E-02	3.46E-03	8.16E-04	3.85E-03	1.87E-03	1.90E-03	4.03E-03	3.11E-04	7.12E-08	1.95E-03	4.83E-03
B13	0.00E+00	4.10E-05	3.36E-06	9.51E+01	1.05E-04	4.31E-01	5.31E-05	2.99E-02	4.91E-03	1.12E-03	4.98E-03	2.62E-03	2.67E-03	4.44E-03	4.33E-04	1.01E-07	2.31E-03	5.54E-03
B14	0.00E+00	4.66E-05	3.94E-06	1.19E+02	1.41E-04	5.73E-01	6.52E-05	3.11E-02	6.32E-03	1.42E-03	6.17E-03	3.36E-03	3.43E-03	4.60E-03	5.54E-04	1.35E-07	2.74E-03	5.71E-03
C11	0.00E+00	4.96E-05	3.75E-06	7.42E+01	8.01E-05	3.04E-01	5.47E-05	4.05E-02	9.09E-03	1.59E-03	5.15E-03	2.36E-03	2.41E-03	4.34E-03	3.28E-04	6.83E-08	2.74E-03	7.57E-03
C12	0.00E+00	4.08E-05	3.59E-06	9.95E+01	1.56E-04	5.46E-01	6.41E-05	2.11E-02	1.63E-02	2.57E-03	6.17E-03	3.49E-03	3.57E-03	2.15E-03	4.80E-04	1.17E-07	2.60E-03	3.86E-03
C13	0.00E+00	3.46E-05	2.61E-06	4.50E+01	6.50E-05	2.25E-01	4.04E-05	2.68E-02	1.11E-02	1.66E-03	3.89E-03	1.79E-03	1.83E-03	2.04E-03	2.04E-04	4.04E-08	2.06E-03	5.01E-03
C14	0.00E+00	5.20E-05	4.03E-06	8.89E+01	1.07E-04	3.94E-01	6.25E-05	3.87E-02	1.11E-02	1.90E-03	5.95E-03	2.87E-03	2.93E-03	4.21E-03	4.04E-04	9.12E-08	3.02E-03	7.20E-03
C15	0.00E+00	7.35E-05	5.20E-06	6.81E+01	7.62E-05	2.84E-01	7.28E-05	6.78E-02	1.66E-02	2.56E-03	6.95E-03	2.76E-03	2.81E-03	4.89E-03	2.89E-04	4.84E-08	4.14E-03	1.27E-02
C16	0.00E+00	7.11E-06	6.36E-07	1.88E+01	3.07E-05	1.05E-01	1.20E-05	2.87E-03	3.09E-03	4.83E-04	1.17E-03	6.66E-04	6.82E-04	3.18E-04	9.16E-05	2.33E-08	4.87E-04	5.18E-04
C17	0.00E+00	6.70E-05	5.11E-06	1.17E+02	1.47E-04	5.25E-01	8.31E-05	4.60E-02	1.45E-02	2.49E-03	8.07E-03	3.82E-03	3.90E-03	5.19E-03	5.35E-04	1.28E-07	4.17E-03	8.54E-03
C18	0.00E+00	1.04E-05	7.76E-07	1.65E+01	2.27E-05	7.82E-02	1.30E-05	7.02E-03	2.63E-03	4.25E-04	1.28E-03	5.87E-04	6.00E-04	7.05E-04	7.58E-05	1.79E-08	6.77E-04	1.31E-03
C19	0.00E+00	6.97E-07	5.77E-08	1.30E+00	2.17E-06	7.29E-03	9.95E-07	4.00E-04	3.26E-04	4.75E-05	9.60E-05	5.08E-05	5.20E-05	3.38E-05	6.15E-06	1.32E-09	4.40E-05	7.41E-05
C20	0.00E+00	1.01E-05	8.72E-07	2.47E+01	3.58E-05	1.27E-01	1.53E-05	5.55E-03	3.19E-03	5.32E-04	1.47E-03	8.13E-04	8.32E-04	6.21E-04	1.19E-04	2.97E-08	6.34E-04	1.02E-03
C21	0.00E+00	7.44E-05	5.17E-06	8.30E+01	1.27E-04	3.89E-01	8.66E-05	5.00E-02	2.00E-02	3.01E-03	8.68E-03	3.56E-03	3.63E-03	4.09E-03	3.74E-04	8.45E-08	5.05E-03	9.36E-03
C22	0.00E+00	6.02E-06	5.41E-07	1.56E+01	2.48E-05	8.66E-02	9.84E-06	2.86E-03	2.56E-03	4.01E-04	9.47E-04	5.46E-04	5.58E-04	2.96E-04	7.54E-05	1.86E-08	3.89E-04	5.20E-04
C23	0.00E+00	4.08E-05	3.31E-06	8.62E+01	1.19E-04	4.22E-01	5.66E-05	2.46E-02	1.09E-02	1.84E-03	5.49E-03	2.83E-03	2.89E-03	2.80E-03	4.06E-04	1.01E-07	2.59E-03	4.54E-03
C24	0.00E+00	3.09E-06	3.03E-07	9.67E+00	1.61E-05	5.61E-02	5.71E-06	1.11E-03	1.61E-03	2.49E-04	5.46E-04	3.38E-04	3.46E-04	1.19E-04	4.76E-05	1.19E-08	2.00E-04	1.97E-04
C25	0.00E+00	8.26E-05	5.71E-06	7.30E+01	8.36E-05	2.95E-01	8.22E-05	7.33E-02	1.76E-02	2.72E-03	7.96E-03	3.04E-03	3.10E-03	5.38E-03	3.09E-04	5.51E-08	4.87E-03	1.38E-02
C26	0.00E+00	5.32E-05	3.89E-06	7.79E+01	8.65E-05	3.17E-01	5.96E-05	4.07E-02	9.44E-03	1.65E-03	5.75E-03	2.52E-03	2.57E-03	4.53E-03	3.45E-04	7.70E-08	3.18E-03	7.60E-03
C27	0.00E+00	4.01E-05	2.79E-06	4.23E+01	6.03E-05	1.92E-01	4.46E-05	2.97E-02	1.02E-02	1.54E-03	4.43E-03	1.79E-03	1.83E-03	2.33E-03	1.88E-04	4.00E-08	2.60E-03	5.57E-03
C28	0.00E+00	1.37E-05	1.39E-06	4.62E+01	7.84E-05	2.72E-01	2.68E-05	3.79E-03	7.69E-03	1.19E-03	2.58E-03	1.62E-03	1.66E-03	4.41E-04	2.29E-04	5.81E-08	9.14E-04	6.57E-04
C29	0.00E+00	4.45E-06	3.80E-07	1.04E+01	1.48E-05	5.29E-02	6.52E-06	2.60E-03	1.34E-03	2.25E-04	6.24E-04	3.42E-04	3.50E-04	2.88E-04	4.97E-05	1.23E-08	2.75E-04	4.78E-04
C30	0.00E+00	4.90E-05	3.26E-06	3.29E+01	2.59E-05	1.01E-01	4.37E-05	4.78E-02	7.72E-03	1.24E-03	4.21E-03	1.40E-03	1.42E-03	3.41E-03	1.28E-04	1.83E-08	2.79E-03	8.99E-03
C31	0.00E+00	2.38E-05	1.64E-06	2.56E+01	2.52E-05	9.34E-02	2.40E-05	2.06E-02	3.95E-03	6.66E-04	2.33E-03	8.92E-04	9.07E-04	1.96E-03	1.08E-04	2.08E-08	1.42E-03	3.87E-03
C32	0.00E+00	6.97E-05	4.94E-06	8.72E+01	8.31E-05	3.13E-01	7.17E-05	5.77E-02	1.03E-02	1.85E-03	6.88E-03	2.79E-03	2.83E-03	6.35E-03	3.71E-04	7.62E-08	4.05E-03	1.08E-02
C33	0.00E+00	2.01E-06	1.89E-07	5.99E+00	1.01E-05	3.45E-02	3.67E-06	6.26E-04	9.90E-04	1.54E-04	3.57E-04	2.12E-04	2.17E-04	7.44E-05	2.95E-05	7.58E-09	1.40E-04	1.11E-04
C34	0.00E+00	5.13E-06	3.66E-07	6.25E+00	9.71E-06	3.05E-02	6.15E-06	3.39E-03	1.52E-03	2.27E-04	6.13E-04	2.63E-04	2.69E-04	2.78E-04	2.85E-05	6.36E-09	3.44E-04	6.33E-04
C35	0.00E+00	1.29E-05	1.04E-06	2.70E+01	3.74E-05	1.32E-01	1.80E-05	7.63E-03	3.41E-03	5.77E-04	1.75E-03	8.92E-04	9.12E-04	8.81E-04	1.27E-04	3.20E-08	8.42E-04	1.41E-03
C36	0.00E+00	9.32E-05	6.22E-06	6.50E+01	5.57E-05	2.10E-01	8.45E-05	8.93E-02	1.53E-02	2.45E-03	8.17E-03	2.77E-03	2.81E-03	6.41E-03	2.57E-04	3.89E-08	5.35E-03	1.68E-02
C37	0.00E+00	2.30E-05	1.56E-06	2.20E+01	1.84E-05	7.13E-02	2.19E-05	2.09E-02	3.36E-03	5.75E-04	2.12E-03	7.62E-04	7.74E-04	1.97E-03	8.95E-05	1.57E-08	1.35E-03	3.92E-03
C38	0.00E+00	8.54E-05	6.35E-06	1.24E+02	1.33E-04	5.01E-01	9.37E-05	6.88E-02	1.51E-02	2.66E-03	8.90E-03	3.98E-03	4.05E-03	7.46E-03	5.47E-04	1.16E-07	4.85E-03	1.29E-02
C39	0.00E+00	1.67E-05	1.17E-06	2.16E+01	2.67E-05	9.13E-02	1.90E-05	1.22E-02	3.36E-03	5.54E-04	1.88E-03	7.73E-04	7.88E-04	1.23E-03	9.56E-05	2.21E-08	1.10E-03	2.29E-03
C40	0.00E+00	2.44E-05	1.69E-06	2.48E+01	3.42E-05	1.10E-01	2.66E-05	1.87E-02	5.97E-03	9.08E-04	2.63E-03	1.05E-03	1.07E-03	1.45E-03	1.09E-04	2.28E-08	1.56E-03	3.51E-03
C41	0.00E+00	5.10E-06	4.51E-07	1.42E+01	1.88E-05	7.23E-02	7.82E-06	2.93E-03	1.05E-03	2.05E-04	7.45E-04	4.25E-04	4.34E-04	4.10E-04	6.78E-05	1.64E-08	3.11E-04	5.35E-04
C42	0.00E+00	3.03E-05	2.24E-06	5.52E+01	5.27E-05	2.12E-01	3.47E-05	2.31E-02	3.57E-03	7.56E-04	3.33E-03	1.49E-03	1.52E-03	3.53E-03	2.41E-04	5.25E-08	1.82E-03	4.31E-03
C43	0.00E+00	1.36E-05	1.20E-06	3.93E+01	5.31E-05	2.02E-01	2.16E-05	7.08E-03	2.92E-03	5.67E-04	2.09E-03	1.18E-03	1.21E-03	1.02E-03	1.88E-04	4.74E-08	8.81E-04	1.28E-03
C44	0.00E+00	3.10E-05	2.63E-06	7.74E+01	9.54E-05	3.72E-01	4.36E-05	2.02E-02	5.57E-03	1.10E-03	4.13E-03	2.26E-03	2.30E-03	2.86E-03	3.61E-04	8.38E-08	1.82E-03	3.71E-03
C45	0.00E+00	2.42E-05	1.89E-06	4.45E+01	5.69E-05	2.05E-01	3.06E-05	1.66E-02	5.57E-03	9.52E-04	2.95E-03	1.45E-03	1.48E-03	1.84E-03	2.05E-04	4.86E-08	1.47E-03	3.08E-03
C46	0.00E+00	9.28E-05	6.07E-06	5.69E+01	3.98E-05	1.54E-01	8.11E-05	9.06E-02	1.32E-02	2.15E-03	7.87E-03	2.48E-03	2.52E-03	6.48E-03	2.16E-04	2.99E-08	5.35E-03	1.71E-02
C47	0.00E+00	1.69E-06	1.49E-07	4.10E+00	6.43E-06	2.25E-02	2.65E-06	8.80E-04	6.74E-04	1.06E-04	2.55E-04	1.44E-04	1.47E-04	8.94E-05	1.98E-05	4.82E-09	1.08E-04	1.61E-04
C48	0.00E+00	6.07E-05	4.11E-06	6.19E+01	4.50E-05	1.78E-01	5.69E-05	5.33E-02	6.99E-03	1.30E-03	5.47E-03	1.95E-03	1.98E-03	5.86E-03	2.48E-04	4.51E-08	3.48E-03	1.00E-02
C49	0.00E+00	4.23E-05	2.98E-06	5.46E+01	6.63E-05	2.31E-01	4.75E-05	3.19E-02	8.54E-03	1.41E-03	4.68E-03	1.94E-03	1.98E-03	3.15E-03	2.41E-04	5.43E-08	2.71E-03	5.96E-03
C50	0.00E+00	2.39E-06	2.18E-07	5.62E+00	9.71E-06	3.32E-02	3.85E-06	1.16E-03	1.43E-03	2.06E-04	3.66E-04	2.15E-04	2.20E-04	1.03E-04	2.71E-05	5.81E-09	1.46E-04	2.14E-04
C51	0.00E+00	3.51E-05	2.63E-06	5.51E+01	6.38E-05	2.34E-01	4.06E-05	2.64E-02	6.75E-03	1.17E-03	3.90E-03	1.78E-03	1.82E-03	2.91E-03	2.47E-04	5.57E-08	2.08E-03	4.92E-03
C52	0.00E+00	1.62E-05	1.14E-06	1.59E+01	1.96E-05	6.92E-02	1.67E-05	1.40E-02	3.86E-03	5.91E-04	1.61E-03	6.52E-04	6.64E-04	1.03E-03	6.87E-05	1.26E-08	9.50E-04	2.62E-03
C53	0.00E+00	2.58E-06	2.49E-07	7.85E+00	1.30E-05	4.53E-02	4.70E-06	9.44E-04	1.30E-03	2.02E-04	4.51E-04	2.75E-04	2.82E-04	1.02E-04	3.86E-05	9.67E-09	1.69E-04	1.68E-04
C54	0.00E+00	9.11E-06	6.88E-07	1.51E+01	1.84E-05	6.64E-02	1.10E-05	6.49E-03	1.87E-03	3.22E-04	1.06E-03	4.93E-04	5.03E-04	7.27E-04	6.87E-05	1.61E-08	5.59E-04	1.21E-03
C55	0.00E+00	4.07E-06	2.82E-07	4.88E+00	5.63E-06	1.96E-02	4.42E-06	3.16E-03	7.57E-04	1.26E-04	4.37E-04	1.74E-04	1.77E-04	3.11E-04	2.12E-05	4.69E-09	2.60E-04	5.92E-04
C56	0.00E+00	1.53E-05	1.02E-06	1.25E+01	1.47E-05	4.76E-02	1.53E-05	1.29E-02	2.96E-03	4.61E-04	1.51E-03	5.44E-04	5.54E-04	9.71E-04	5.24E-05	1.02E-08	9.58E-04	2.42E-03
C57	0.00E+00	2.84E-05	2.10E-06	4.11E+01	4.41E-05	1.65E-01	3.11E-05	2.27E-02	4.99E-03	8.77E-04	2.97E-03	1.32E-03	1.34E-03	2.47E-03	1.81E-04	3.85E-08	1.63E-03	4.24E-03
C58	0.00E+00	4.79E-06	3.84E-07	7.58E+00	1.17E-05	4.06E-02	6.12E-06	3.44E-03	1.90E-03	2.80E-04	5.84E-04	2.95E-04	3.02E-04	2.67E-04	3.52E-05	7.08E-09	2.82E-04	6.42E-04
C59	0.00E+00	1.14E-05	9.13E-07	2.23E+01	2.94E-05	1.06E-01	1.50E-05	7.57E-03	2.81E-03	4.78E-04	1.44E-03	7.29E-04	7.44E-04	8.42E-04	1.04E-04	2.49E-08	6.98E-04	1.40E-03
C60	0.00E+00	2.62E-05	2.07E-06	4.82E+01	6.92E-05	2.42E-01	3.50E-05	1.70E-02	7.78E-03	1.24E-03	3.40E-03	1.70E-03	1.73E-03	1.69E-03	2.25E-04	5.33E-08	1.67E-03	3.14E-03
D01	0.00E+00	6.96E-05	6.23E-06	1.56E+02	2.59E-04	9.22E-01	1.07E-04	4.05E-02	2.68E-02	4.22E-03	1.01E-02	5.85E-03	5.98E-03	3.88E-03	7.47E-04	1.89E-07	4.16E-03	7.45E-03
D02	0.00E+00	8.83E-05	7.90E-06	1.99E+02	3.31E-04	1.18E+00	1.36E-04	5.03E-02	3.41E-02	5.38E-03	1.30E-02	7.46E-03	7.64E-03	4.85E-03	9.53E-04	2.42E-07	5.32E-03	9.25E-03
D03	0.00E+00	9.35E-05	7.62E-06	1.69E+02	2.59E-04	9.23E-01	1.27E-04	6.21E-02	2.84E-02	4.54E-03	1.21E-02	6.30E-03	6.44E-03	6.00E-03	7.86E-04	1.94E-07	5.71E-03	1.15E-02
D04	0.00E+00	1.35E-04	1.07E-05	2.18E+02	3.13E-04	1.14E+00	1.69E-04	1.01E-01	3.65E-02	5.88E-03	1.61E-02	8.05E-03	8.22E-03	9.49E-03	9.99E-04	2.34E-07	7.90E-03	1.87E-02
D05	0.00E+00	8.00E-05	6.77E-06	1.63E+02	2.66E-04	9.34E-01	1.17E-04	4.64E-02	2.76E-02	4.38E-03	1.13E-02	6.14E-03	6.28E-03	4.59E-03	7.73E-04	1.98E-07	5.03E-03	8.56E-03
D06	0.00E+00	1.51E-04	1.23E-05	2.71E+02	4.12E-04	1.48E+00	2.02E-04	1.03E-01	4.55E-02	7.29E-03	1.94E-02	1.01E-02	1.03E-02	9.84E-03	1.26E-03	3.07E-07	9.07E-03	1.91E-02
D07	0.00E+00	7.78E-05	6.65E-06	1.87E+02	2.55E-04	9.51E-01	1.13E-04	4.63E-02	1.77E-02	3.23E-03	1.08E-02	5.92E-03	6.05E-03	5.77E-03	8.83E-04	2.22E-07	4.73E-03	8.50E-03
D08	0.00E+00	1.01E-04	8.27E-06	2.15E+02	2.76E-04	1.04E+00	1.35E-04	6.64E-02	2.00E-02	3.71E-03	1.28E-02	6.74E-03	6.88E-03	8.29E-03	9.99E-04	2.42E-07	5.94E-03	1.23E-02
D09	0.00E+00	5.04E-05	4.51E-06	1.35E+02	1.94E-04	7.20E-01	7.91E-05	2.69E-02	1.30E-02	2.35E-03	7.55E-03	4.34E-03	4.44E-03	3.31E-03	6.50E-04	1.67E-07	3.11E-03	4.91E-03
D10	0.00E+00	7.79E-05	6.77E-06	1.94E+02	2.69E-04	1.00E+00	1.16E-04	4.50E-02	1.85E-02	3.37E-03	1.11E-02	6.18E-03	6.32E-03	5.57E-03	9.23E-04	2.33E-07	4.74E-03	8.25E-03
D11	0.00E+00	4.94E-05	4.39E-06	1.30E+02	1.85E-04	6.88E-01	7.64E-05	2.71E-02	1.25E-02	2.26E-03	7.29E-03	4.17E-03	4.26E-03	3.32E-03	6.23E-04	1.59E-07	3.03E-03	4.94E-03
D12	0.00E+00	9.41E-05	8.02E-06	2.22E+02	3.00E-04	1.12E+00	1.35E-04	5.75E-02	2.10E-02	3.85E-03	1.28E-02	7.04E-03	7.19E-03	7.12E-03	1.05E-03	2.61E-07	5.64E-03	1.06E-02
D13	0.00E+00	4.62E-05	3.69E-06	7.87E+01	1.18E-04	4.21E-01	6.05E-05	3.17E-02	1.32E-02	2.12E-03	5.82E-03	2.94E-03	3.00E-03	3.06E-03	3.64E-04	8.90E-08	2.82E-03	5.89E-03
D14	0.00E+00	3.20E-05	2.55E-06	5.52E+01	8.43E-05	2.97E-01	4.26E-05	2.11E-02	9.24E-03	1.48E-03	4.12E-03	2.07E-03	2.12E-03

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D30	0.00E+00	4.11E-05	3.53E-06	1.00E+02	1.38E-04	5.14E-01	6.04E-05	2.40E-02	9.50E-03	1.74E-03	5.76E-03	3.19E-03	3.26E-03	2.99E-03	4.75E-04	1.20E-07	2.51E-03	4.41E-03
D31	0.00E+00	2.33E-05	2.06E-06	6.20E+01	8.88E-05	3.29E-01	3.64E-05	1.22E-02	5.93E-03	1.08E-03	3.49E-03	1.99E-03	2.03E-03	1.53E-03	2.97E-04	7.69E-08	1.46E-03	2.23E-03
D32	0.00E+00	1.24E-05	1.15E-06	3.59E+01	5.28E-05	1.96E-01	2.04E-05	6.22E-03	3.48E-03	6.27E-04	1.94E-03	1.16E-03	1.18E-03	7.41E-04	1.74E-04	4.48E-08	7.57E-04	1.13E-03
D33	0.00E+00	2.89E-05	2.35E-06	5.19E+01	8.00E-05	2.83E-01	3.91E-05	1.90E-02	8.72E-03	1.39E-03	3.77E-03	1.94E-03	1.98E-03	1.85E-03	2.42E-04	6.00E-08	1.78E-03	3.53E-03
D34	0.00E+00	5.74E-05	4.31E-06	7.99E+01	1.06E-04	3.84E-01	6.66E-05	4.50E-02	1.31E-02	2.14E-03	6.41E-03	2.94E-03	3.00E-03	4.28E-03	3.57E-04	8.08E-08	3.41E-03	8.41E-03
D35	0.00E+00	2.19E-05	1.93E-06	5.00E+01	8.59E-05	2.98E-01	3.50E-05	1.06E-02	8.55E-03	1.35E-03	3.38E-03	1.90E-03	1.95E-03	1.09E-03	2.41E-04	6.40E-08	1.44E-03	1.94E-03
D36	0.00E+00	2.84E-05	2.61E-06	7.10E+01	1.24E-04	4.34E-01	4.78E-05	1.27E-02	1.22E-02	1.91E-03	4.59E-03	2.70E-03	2.76E-03	1.30E-03	3.45E-04	9.16E-08	1.83E-03	2.30E-03
D37	0.00E+00	2.20E-05	1.99E-06	5.05E+01	8.43E-05	3.00E-01	3.44E-05	1.24E-02	8.65E-03	1.36E-03	3.26E-03	1.89E-03	1.94E-03	1.20E-03	2.42E-04	6.16E-08	1.33E-03	2.28E-03
D38	0.00E+00	8.26E-06	7.46E-07	1.98E+01	3.43E-05	1.20E-01	1.35E-05	3.90E-03	3.41E-03	5.35E-04	1.30E-03	7.53E-04	7.71E-04	3.98E-04	9.60E-05	2.54E-08	5.33E-04	7.11E-04
D39	0.00E+00	2.18E-05	1.98E-06	5.11E+01	8.60E-05	3.06E-01	3.45E-05	1.19E-02	8.78E-03	1.38E-03	3.27E-03	1.92E-03	1.96E-03	1.15E-03	2.46E-04	6.28E-08	1.31E-03	2.19E-03
D40	0.00E+00	1.18E-05	1.11E-06	3.12E+01	5.54E-05	1.93E-01	2.07E-05	4.77E-03	5.38E-03	8.40E-04	1.99E-03	1.19E-03	1.21E-03	4.99E-04	1.52E-04	4.08E-08	7.72E-04	8.60E-04
D41	0.00E+00	7.06E-06	5.66E-07	1.15E+01	1.62E-05	5.95E-02	8.77E-06	5.45E-03	1.92E-03	3.09E-04	8.29E-04	4.19E-04	4.28E-04	5.08E-04	5.23E-05	1.19E-08	4.01E-04	1.02E-03
D42	0.00E+00	6.31E-06	5.52E-07	1.39E+01	2.31E-05	8.14E-02	9.69E-06	3.45E-03	2.36E-03	3.73E-04	9.30E-04	5.23E-04	5.35E-04	3.42E-04	6.63E-05	1.71E-08	3.96E-04	6.34E-04
D43	0.00E+00	1.85E-05	1.46E-06	3.16E+01	4.87E-05	1.70E-01	2.47E-05	1.18E-02	5.28E-03	8.46E-04	2.41E-03	1.19E-03	1.22E-03	1.18E-03	1.47E-04	3.72E-08	1.19E-03	2.19E-03
D44	0.00E+00	1.73E-05	1.77E-06	5.47E+01	1.01E-04	3.53E-01	3.43E-05	4.62E-03	9.54E-03	1.48E-03	3.29E-03	2.09E-03	2.14E-03	5.18E-04	2.71E-04	7.40E-08	1.14E-03	8.00E-04
D45	0.00E+00	5.79E-05	4.63E-06	1.01E+02	1.55E-04	5.46E-01	7.74E-05	3.79E-02	1.69E-02	2.71E-03	7.49E-03	3.79E-03	3.87E-03	3.71E-03	4.69E-04	1.17E-07	3.62E-03	7.04E-03
D46	0.00E+00	7.68E-05	5.86E-06	1.08E+02	1.41E-04	5.22E-01	8.87E-05	6.22E-02	1.78E-02	2.91E-03	8.45E-03	3.95E-03	4.03E-03	5.83E-03	4.83E-04	1.06E-07	4.42E-03	1.16E-02
D47	0.00E+00	7.06E-05	5.88E-06	1.38E+02	2.24E-04	7.84E-01	1.02E-04	4.17E-02	2.34E-02	3.72E-03	9.81E-03	5.22E-03	5.34E-03	4.14E-03	6.54E-04	1.68E-07	4.47E-03	7.70E-03
D48	0.00E+00	1.18E-05	1.11E-06	3.12E+01	5.54E-05	1.93E-01	2.07E-05	4.77E-03	5.38E-03	8.40E-04	1.99E-03	1.19E-03	1.21E-03	4.99E-04	1.52E-04	4.08E-08	7.72E-04	8.60E-04
D49	0.00E+00	1.43E-04	1.12E-05	2.38E+02	3.61E-04	1.26E+00	1.87E-04	9.36E-02	3.97E-02	6.37E-03	1.82E-02	8.96E-03	9.16E-03	9.26E-03	1.10E-03	2.76E-07	9.07E-03	1.74E-02
D50	0.00E+00	1.37E-04	1.02E-05	1.95E+02	2.71E-04	9.56E-01	1.65E-04	9.99E-02	3.20E-02	5.21E-03	1.61E-02	7.30E-03	7.45E-03	9.75E-03	8.80E-04	2.11E-07	8.61E-03	1.86E-02
D51	0.00E+00	1.51E-05	1.34E-06	3.63E+01	6.39E-05	2.20E-01	2.51E-05	6.30E-03	6.21E-03	9.75E-04	2.45E-03	1.39E-03	1.42E-03	6.80E-04	1.76E-04	4.78E-08	1.02E-03	1.14E-03
D52	0.00E+00	1.19E-05	1.04E-06	2.69E+01	4.64E-05	1.60E-01	1.90E-05	5.55E-03	4.60E-03	7.23E-04	1.85E-03	1.03E-03	1.05E-03	5.83E-04	1.30E-04	3.48E-08	7.94E-04	1.01E-03
D53	0.00E+00	1.98E-05	1.71E-06	4.35E+01	7.38E-05	2.57E-01	3.08E-05	1.00E-02	7.42E-03	1.17E-03	2.98E-03	1.65E-03	1.69E-03	1.03E-03	2.09E-04	5.51E-08	1.29E-03	1.84E-03
D54	0.00E+00	1.64E-05	1.37E-06	3.26E+01	5.33E-05	1.86E-01	2.39E-05	9.33E-03	5.52E-03	8.76E-04	2.32E-03	1.24E-03	1.26E-03	9.37E-04	1.55E-04	4.01E-08	1.05E-03	1.72E-03
D55	0.00E+00	5.48E-05	4.20E-06	9.71E+01	1.10E-04	4.22E-01	6.54E-05	3.99E-02	8.74E-03	1.66E-03	6.24E-03	2.97E-03	3.03E-03	5.09E-03	4.36E-04	1.01E-07	3.21E-03	7.43E-03
D56	0.00E+00	6.27E-05	4.96E-06	1.25E+02	1.56E-04	5.83E-01	8.12E-05	4.16E-02	1.15E-02	2.14E-03	7.81E-03	3.90E-03	3.98E-03	5.35E-03	5.75E-04	1.41E-07	3.83E-03	7.70E-03
D57	0.00E+00	6.79E-05	5.52E-06	1.43E+02	1.82E-04	6.85E-01	9.04E-05	4.46E-02	1.33E-02	2.46E-03	8.63E-03	4.47E-03	4.56E-03	5.62E-03	6.62E-04	1.62E-07	4.06E-03	8.24E-03
D58	0.00E+00	7.53E-05	5.97E-06	1.52E+02	1.90E-04	7.10E-01	9.82E-05	4.95E-02	1.39E-02	2.60E-03	9.45E-03	4.73E-03	4.83E-03	6.38E-03	6.98E-04	1.72E-07	4.63E-03	9.16E-03
D59	0.00E+00	4.43E-05	3.73E-06	1.05E+02	1.43E-04	5.30E-01	6.41E-05	2.59E-02	9.87E-03	1.81E-03	6.17E-03	3.33E-03	3.40E-03	3.29E-03	4.95E-04	1.26E-07	2.77E-03	4.75E-03
D60	0.00E+00	4.66E-05	3.77E-06	1.02E+02	1.35E-04	4.99E-01	6.45E-05	2.80E-02	9.48E-03	1.75E-03	6.25E-03	3.22E-03	3.29E-03	3.65E-03	4.77E-04	1.22E-07	2.96E-03	5.15E-03
D61	0.00E+00	8.42E-06	6.84E-07	1.93E+01	2.64E-05	9.65E-02	1.21E-05	4.64E-03	1.80E-03	3.31E-04	1.19E-03	6.15E-04	6.28E-04	6.25E-04	9.12E-05	2.40E-08	5.61E-04	8.52E-04
D62	0.00E+00	8.15E-06	6.39E-07	1.58E+01	1.92E-05	7.23E-02	1.04E-05	5.53E-03	1.44E-03	2.70E-04	9.95E-04	4.90E-04	5.00E-04	7.12E-04	7.21E-05	1.75E-08	4.95E-04	1.03E-03
D63	0.00E+00	3.35E-07	2.85E-08	7.25E-01	1.04E-06	3.78E-03	4.72E-07	2.13E-04	9.58E-05	1.60E-05	4.47E-05	2.45E-05	2.51E-05	2.29E-05	3.42E-06	8.26E-10	1.97E-05	3.92E-05
D64	0.00E+00	9.90E-06	7.16E-07	1.29E+01	1.34E-05	5.05E-02	1.05E-05	8.09E-03	1.58E-03	2.79E-04	1.00E-03	4.24E-04	4.31E-04	8.85E-04	5.56E-05	1.16E-08	5.70E-04	1.51E-03
D65	0.00E+00	3.16E-05	2.34E-06	5.00E+01	5.14E-05	1.99E-01	3.52E-05	2.44E-02	4.39E-03	8.49E-04	3.36E-03	1.50E-03	1.53E-03	3.12E-03	2.19E-04	4.84E-08	1.83E-03	4.55E-03
D66	0.00E+00	3.88E-05	2.98E-06	6.83E+01	7.71E-05	2.95E-01	4.61E-05	2.85E-02	6.14E-03	1.17E-03	4.40E-03	2.09E-03	2.13E-03	3.63E-03	3.06E-04	7.06E-08	2.27E-03	5.31E-03
D67	0.00E+00	4.90E-05	3.50E-06	6.71E+01	5.87E-05	2.34E-01	5.02E-05	4.03E-02	5.70E-03	1.13E-03	4.78E-03	1.97E-03	2.00E-03	5.16E-03	2.83E-04	5.78E-08	2.78E-03	7.54E-03
D68	0.00E+00	3.90E-05	2.80E-06	5.29E+01	4.50E-05	1.83E-01	3.94E-05	3.28E-02	4.50E-03	8.93E-04	3.72E-03	1.54E-03	1.57E-03	4.15E-03	2.22E-04	4.36E-08	2.15E-03	6.14E-03
D69	0.00E+00	1.65E-05	1.28E-06	2.98E+01	3.41E-05	1.31E-01	1.98E-05	1.21E-02	2.70E-03	5.10E-04	1.88E-03	9.13E-04	9.30E-04	1.53E-03	1.34E-04	3.08E-08	9.53E-04	2.26E-03
D70	0.00E+00	1.33E-05	9.70E-07	1.94E+01	1.82E-05	7.20E-02	1.41E-05	1.08E-02	1.68E-03	3.28E-04	1.34E-03	5.75E-04	5.85E-04	1.37E-03	8.31E-05	1.75E-08	7.57E-04	2.01E-03
D71	0.00E+00	4.03E-05	2.90E-06	4.84E+01	4.43E-05	1.75E-01	4.03E-05	3.51E-02	5.84E-03	1.05E-03	3.79E-03	1.56E-03	1.58E-03	3.77E-03	2.03E-04	3.84E-08	2.21E-03	6.58E-03
D72	0.00E+00	4.84E-05	3.43E-06	5.86E+01	5.62E-05	2.14E-01	4.95E-05	4.03E-02	7.02E-03	1.26E-03	4.74E-03	1.91E-03	1.94E-03	4.43E-03	2.47E-04	5.04E-08	2.80E-03	7.55E-03
D73	0.00E+00	1.04E-05	8.29E-07	1.78E+01	2.22E-05	8.34E-02	1.25E-05	7.99E-03	2.29E-03	3.92E-04	1.18E-03	5.90E-04	6.02E-04	8.47E-04	8.08E-05	1.78E-08	5.73E-04	1.49E-03
D74	0.00E+00	1.01E-05	8.87E-07	2.41E+01	3.60E-05	1.30E-01	1.53E-05	5.74E-03	3.20E-03	5.32E-04	1.46E-03	8.20E-04	8.39E-04	6.29E-04	1.15E-04	2.87E-08	6.20E-04	1.05E-03
D75	0.00E+00	7.07E-06	5.77E-07	1.64E+01	2.25E-05	8.23E-02	1.03E-05	3.87E-03	1.53E-03	2.82E-04	1.00E-03	5.22E-04	5.34E-04	5.19E-04	7.75E-05	2.04E-08	4.70E-04	7.09E-04
D76	0.00E+00	8.08E-06	6.57E-07	1.74E+01	2.26E-05	8.45E-02	1.10E-05	5.09E-03	1.62E-03	3.00E-04	1.06E-03	5.48E-04	5.59E-04	6.51E-04	8.11E-05	2.02E-08	4.97E-04	9.39E-04
D77	0.00E+00	1.74E-05	1.33E-06	3.21E+01	3.81E-05	1.43E-01	2.15E-05	1.19E-02	2.90E-03	5.47E-04	2.08E-03	9.92E-04	1.01E-03	1.55E-03	1.46E-04	3.54E-08	1.07E-03	2.20E-03
D78	0.00E+00	1.20E-05	8.96E-07	1.94E+01	2.03E-05	7.84E-02	1.36E-05	9.18E-03	1.71E-03	3.29E-04	1.30E-03	5.85E-04	5.95E-04	1.18E-03	8.51E-05	1.91E-08	7.01E-04	1.71E-03
D79	0.00E+00	3.08E-05	2.22E-06	3.85E+01	3.78E-05	1.45E-01	3.18E-05	2.59E-02	4.67E-03	8.32E-04	3.02E-03	1.26E-03	1.28E-03	2.81E-03	1.64E-04	3.30E-08	1.75E-03	4.85E-03
D80	0.00E+00	3.60E-05	2.95E-06	7.02E+01	9.57E-05	3.50E-01	4.76E-05	2.44E-02	9.14E-03	1.54E-03	4.52E-03	2.36E-03	2.41E-03	2.65E-03	3.26E-04	7.73E-08	2.11E-03	4.53E-03
D81	0.00E+00	6.60E-06	6.07E-07	1.78E+01	2.78E-05	9.98E-02	1.08E-05	3.25E-03	2.40E-03	3.95E-04	1.03E-03	6.09E-04	6.24E-04	3.55E-04	8.61E-05	2.20E-08	4.09E-04	5.90E-04
D82	0.00E+00	6.04E-06	6.30E-07	2.21E+01	3.77E-05	1.33E-01	1.25E-05	1.37E-03	3.04E-03	4.93E-04	1.20E-03	7.68E-04	7.87E-04	1.64E-04	1.10E-04	2.96E-08	4.13E-04	2.28E-04
D83	0.00E+00	5.20E-05	4.20E-06	1.04E+02	1.27E-04	4.83E-01	6.63E-05	3.66E-02	9.56E-03	1.79E-03	6.27E-03	3.21E-03	3.28E-03	4.55E-03	4.75E-04	1.11E-07	2.99E-03	6.79E-03
D84	0.00E+00	4.03E-05	3.21E-06	7.71E+01	9.16E-05	3.51E-01	5.01E-05	2.91E-02	7.06E-03	1.33E-03	4.73E-03	2.38E-03	2.42E-03	3.62E-03	3.51E-04	8.12E-08	2.31E-03	5.40E-03
D85	0.00E+00	4.26E-05	3.27E-06	7.21E+01	7.79E-05	3.03E-01	4.89E-05	3.29E-02	6.47E-03	1.23E-03	4.61E-03	2.19E-03	2.23E-03	4.11E-03	3.20E-04	7.02E-08	2.38E-03	6.14E-03
D86	0.00E+00	3.63E-05	2.94E-06	7.21E+01	8.75E-05	3.35E-01	4.60E-05	2.60E-02	6.65E-03	1.24E-03	4.34E-03	2.23E-03	2.28E-03	3.20E-03	3.30E-04	7.65E-08	2.06E-03	4.81E-03
D87	0.00E+00	1.04E-04	8.00E-06	1.82E+02	2.04E-04	7.84E-01	1.22E-04	7.76E-02	1.64E-02	3.11E-03	1.16E-02	5.55E-03	5.65E-03	9.77E-03	8.14E-04	1.84E-07	5.94E-03	1.44E-02
D88	0.00E+00	8.78E-05	6.45E-06	1.30E+02	1.24E-04	4.91E-01	9.36E-05	7.10E-02	1.13E-02	2.21E-03	8.86E-03	3.86E-03	3.93E-03	9.00E-03	5.59E-04	1.17E-07	4.93E-03	1.33E-02
D89	0.00E+00	5.10E-06	4.02E-07	8.57E+00	1.29E-05	4.56E-02	6.68E-06	3.42E-03	1.43E-03	2.30E-04	6.47E-04	3.21E-04	3.28E-04	3.34E-04	3.97E-05	9.82E-09	3.19E-04	6.35E-04
D90	0.00E+00	3.78E-06	2.85E-07	5.66E+00	8.17E-06	2.85E-02	4.69E-06	2.62E-03	9.32E-04	1.51E-04	4.59E-04	2.13E-04	2.17E-04	2.59E-04	2.58E-05	6.35E-09	2.41E-04	4.88E-04
D91	0.00E+00	4.06E-06	3.62E-07	9.98E+00	1.50E-05	5.44E-02	6.24E-06	2.27E-03	1.33E-03	2.21E-04	5.94E-04	3.40E-04	3.48E-04	2.46E-04	4.78E-05	1.19E-08	2.46E-04	4.16E-04
D92	0.00E+00	9.67E-06	9.45E-07	3.16E+01	5.30E-05	1.87E-01	1.86E-05	2.73E-03	4.31E-03	7.02E-04	1.80E-03	1.10E-03	1.13E-03	3.40E-04	1.57E-04	4.23E-08	6.75E-04	4.72E-04
D93	0.00E+00	2.67E-06	2.52E-07	7.85E+00	1.27E-05	4.51E-02	4.71E-06	1.06E-03	1.06E-03	1.74E-04	4.53E-04	2.71E-04	2.78E-04	1.22E-04	3.84E-05	1.01E-08	1.75E-04	1.90E-04
D94	0.00E+00	8.60E-06	8.38E-07	2.74E+01	4.53E-05	1.61E-01	1.61E-05	2.84E-03	3.73E-03	6.08E-04	1.55E-03	9.49E-04	9.72E-04	3.34E-04	1.35E-04	3.59E-08	5.79E-04	5.00E-04
E01	0.00E+00	2.23E-05	1.80E-06	4.04E+01	6.31E-05	2.22E-01	3.05E-05	1.41E-02	6.78E-03	1.08E-03	2.95E-03	1.52E-03	1.55E-03	1.39E-03	1.89E-04	4.76E-08	1.40E-03	2.61E-03
E02	0.00E+00	1.63E-05	1.32E-06	2.91E+01	4.48E-05	1.58E-01	2.20E-05	1.07E-02	4.88E-03	7.81E-04	2.12E-03	1.09E-03	1.11E-03	1.04E-03	1.36E-04	3.37E-08	1.01E-03	1.98E-03
E03	0.00E+00	1.15E-05	9.01E-07	2.25E+01	2.76E-05	1.04E-01	1.47E-05	7.67E-03	2.05E-03	3.85E-04	1.42E-03	7.00E-04	7.14E-04	9.93E-04	1.03E-04	2.53E-08	7.06E-04	1.42E-03
E04	0.00E+00	8.85E-06	8.23E-07	2.66E+01	3.98E-05	1.47E-01	1.51E-05	3.96E-03	2.58E-03	4.63E-04	1.45E-03	8.61E-04	8.81E-04	4.89E-04	1.29E-04	3.42E-08	5.71E-04	7.11E-04
E05	0.00E+00	1.15E-05	9.37E-07	2.50E+01	3.26E-05	1.21E-01	1.58E-05	7.16E-03	2.32E-03	4.29E-04	1.52E-03	7.86E-04	8.02E-04	9.25E-04	1.16E-04	2.93E-08	7.20E-04	1.32E-03
E06	0.00E+00	2.95E-06	2.55E-07	8.19E+00	1.22E-05	4.41E-02	4.88E-06	1.22E-03	7.81E-04	1.41E-04	4.81E-04	2.66E-04	2.72E-04	1.71E-04	3.97E-05	1.09E-08	2.09E-04	2.20E-04
E07	0.00E+00	1.01E-04	8.19E-06	1.79E+02	2.72E-04	9.67E-01	1.35E-04	6.81E-02	3.00E-02	4.80E-03	1.30E-02	6.67E-03	6.82E-03	6.59E-03	8.30E-04	2.04E-07	6.22E-03	1.26E-02
E08	0.00E+00	9.18E-05	8.02E-06	2.01E+02	3.37E-04	1.18E+00	1.41E-04	4.99E-02	3.44E-02	5.43E-03	1.36E-02	7.61E-03	7.78E-03	4.95E-03	9.64E-04	2.50E-07	5.78E-03	9.16E-03
E09	0.00E+00	9.22E-05	7.56E-06	1.70E+02	2.65E-04	9.40E-01	1.27E-04	5.95E-02	2.87E-02	4.58E-03	1.22E-02	6.37E-03	6.52E-03	5.79E-03	7.97E-04	1.99E-07	5.68E-03	1.10E-02
E10	0.00E+00	8.06E-05	7.04E-06	1.77E+02	2.97E-04	1.04E+00	1.24E-04	4.34E-02	3.03E-02	4.78E-03	1.20E-02	6.70E-03	6.86E-03	4.32E-03	8.49E-04	2.20E-07	5.10E-03	7.96E-03
E11	0.00E+00	9.21E-05	7.44E-06	1.62E+02	2.46E-04	8.77E-01	1.23E-04	6.22E-02	2.72E-02	4.35E-03	1.18E-02	6.04E-03	6.18E-03	6.01E-03	7.52E-04	1.85E-07	5.62E-03	1.15E-02
E12	0.00E+00	9.77E-05	8.51E-06	2.12E+02	3.53E-04	1.24E+00	1.49E-04	5.41E-02	3.62E-02	5.72E-03	1.43E-02	8.00E-03	8.19E-03	5.35E-03	1.01E-03	2.61E-07	6.11E-03	9.94E-03
E13	0.00E+00	2.95E-05	2.49E-06	6.95E+01	9.44E-05	3.51E-01	4.25E-05	1.75E-02	6.55E-03	1.20E-03	4.08E-03	2.20E-03	2.25E-03	2.21E-03	3.28E-04	8.30E-08	1.82E-03	3.21E-03
E14	0.00E+00	2.05E-05	1.82E-06	5.47E+01	7.83E-05	2.90E-01	3.20E-05	1.09E-02	5.24E-03	9.51E-04	3.06E-03	1.75E-03	1.79E-03	1.35E-03	2.62E-04	6.74E-08	1.27E-03	1.99E-03
E15	0.00E+00	1.66E-05	1.43E-06	3.89E+01	5.21E-05	1.97E-01	2.35E-05	1.05E-02	3.69E-03	6.76E-04	2.22E-03	1.23E-03	1.26E-03	1.28E-03	1.83E-04	4.47E-08	9.61E-04	1.94E-03
E16	0.00E+00	1.52E-05	1.34E-06	3.85E+01	5.36E-05	2.00E-01	2.28E-05	8.84E-03	3.67E-03	6.69E-04	2.16E-03	1.23E-03	1.25E-03	1.08E-03	1.83E-04	4.60E-08	9.09E-04	1.62E-03
E17	0.00E+00	1.26E-05	1.09E-06	3.18E+01	4.47E-05	1.65E-01	1.91E-05	6.91E-03	3.02E-03	5.51E-04	1.84E-03	1.02E-03	1.04E-03	8.77E-04	1.52E-04	3.91E-08	7.97E-04	1.26E-03
E18	0.00E+00	1.18E-05	9.21E-07	2.26E+01	2.75E-05	1.03E-01	1.49E-05	8.02E-03	2.06E-03	3.87E-04	1.44E-03	7.02E-04	7.16E-04	1.04E-03	1.03E-04	2.51E-08	7.19E-04	1.49E-03
E19	0.00E+00	3.84E-05	2.92E-06	5.80E+01	8.26E-05	2.93E-01	4.73E-05	2.76E-02	9.57E-03	1.55E-03	4.59E-03	2.16E-03	2.21E-03	2.68E-03	2.64E-04	6.35E-08	2.39E-03	5.13E-03
E20	0.00E+00	3.82E-05	3.24E-06	7.99E+01	1.33E-04	4.63E-01	5.76E-05	2.05E-02	1.36E-02	2.15E-03	5.59E-03	3.03E-03	3.10E-03	2.08E-03	3.81E-04	9.98E-08	2.48E-03	3.76E-03
E21	0.00E+00	7.13E-06	6.01E-07	1.61E+01	2.12E-05	7.99E-02	9.88E-06	4.59E-03	1.51E-03	2.79E-04	9.36E-04	5.07E-04	5.18E-04	5.65E-04	7.54E-05	1.84E-08	4.18E-04	8.46E-04
E22	0.00E+00	1.56E-06	1.26E-07	2.93E+00	3.38E-06	1.32E-02	1.89E-06	1.20E-03	2.69E-04	5.07E-05	1.75E-04	8.97E-05	9.14E-05	1.45E-04	1.32E-05	2.90E-09	8.38E-05	2.23E-04
E23	0.00E+00	7.60E-05	5.48E-06	1.09E+02	1.02E-04	4.01E-01	8.03E-05	6.09E-02	9.39E-03	1.85E-03	7.67E-03	3.24E-03	3.29E-03	7.83E-03	4.67E-04	9.93E-08	4.37E-03	1.14E-02
E24	0.00E+00	7.74E-05	5.43E-06	9.97E+01	8.05E-05	3.25E-01	7.70E-05	6.46E-02	8.32E-03	1.67E-03	7.35E-03	2.89E-03	2.94E-03	8.32E-03	4.13E-04	8.24E-08	4.41E-03	1.21E-02
E25	0.00E+00	8.79E-06	8.53E-07	2.68E+01	4.35E-05	1.56E-01	1.58E-05	3.55E-03	3.65E-03	5.97E-04	1.51E-03	9.24E-04	9.47E-04	3.92E-04	1.32E-04	3.42E-08	5.59E-04	6.35E-04
E26	0.00E+00	1.25E-05	1.19E-06	3.63E+01	5.79E-05	2.08E-01	2.16E-05	5.57E-03	4.92E-03	8.08E-04	2.06E-03	1.25E-03	1.28E-03	6.10E-04	1.77E-04	4.56E-08	7.86E-04	1.00E-03
E27	0.00E+00	1.28E-05	1.16E-06	3.27E+01	5.00E-05	1.80E-01	2.02E-05	6.87E-03	4.39E-03	7.26E-04	1.92E-03	1.12E-03	1.14E-03	7.45E-04	1.57E-04	3.95E-08	7.79E-04	1.26E-03
E28	0.00E+00	9.56E-06	9.57E-07	3.17E+01	5.28E-05	1.88E-01	1.83E-05	3.09E-03	4.34E-03	7.07E-04	1.75E-03	1.10E-03	1.13E-03	3.51E-04	1.57E-04	4.15E-08	6.29E-04	5.40E-04
E29	0.00E+00	8.59E-06	7.66E-07	2.19E+01	3.38E-05	1.21E-01	1.37E-05	4.30E-03	2.93E-03	4.84E-04	1.32E-

Appendix F.2.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E45	0.00E+00	1.91E-05	1.51E-06	3.79E+01	4.70E-05	1.76E-01	2.47E-05	1.26E-02	3.47E-03	6.49E-04	2.39E-03	1.18E-03	1.21E-03	1.64E-03	1.74E-04	4.29E-08	1.18E-03	2.34E-03
E46	0.00E+00	6.64E-06	5.31E-07	1.36E+01	1.71E-05	6.42E-02	8.72E-06	4.35E-03	1.25E-03	2.33E-04	8.38E-04	4.24E-04	4.33E-04	5.58E-04	6.27E-05	1.54E-08	4.05E-04	8.05E-04
E47	0.00E+00	1.92E-05	1.58E-06	4.27E+01	5.65E-05	2.10E-01	2.67E-05	1.17E-02	3.98E-03	7.35E-04	2.57E-03	1.35E-03	1.38E-03	1.51E-03	2.00E-04	5.04E-08	1.20E-03	2.16E-03
E48	0.00E+00	4.62E-06	3.69E-07	9.37E+00	1.17E-05	4.41E-02	6.03E-06	3.07E-03	8.62E-04	1.61E-04	5.78E-04	2.92E-04	2.98E-04	3.91E-04	4.32E-05	1.05E-08	2.79E-04	5.67E-04
E49	0.00E+00	2.32E-05	1.86E-06	4.89E+01	6.30E-05	2.35E-01	3.12E-05	1.47E-02	4.52E-03	8.40E-04	3.01E-03	1.54E-03	1.57E-03	1.89E-03	2.27E-04	5.68E-08	1.44E-03	2.71E-03
E50	0.00E+00	4.01E-06	3.70E-07	1.16E+01	1.71E-05	6.34E-02	6.64E-06	1.95E-03	1.12E-03	2.02E-04	6.34E-04	3.75E-04	3.83E-04	2.37E-04	5.62E-05	1.46E-08	2.51E-04	3.53E-04
E51	0.00E+00	2.04E-05	1.62E-06	4.17E+01	5.28E-05	1.97E-01	2.68E-05	1.32E-02	3.84E-03	7.16E-04	2.58E-03	1.31E-03	1.33E-03	1.70E-03	1.93E-04	4.77E-08	1.25E-03	2.45E-03
E52	0.00E+00	1.82E-06	1.76E-07	5.78E+00	8.78E-06	3.24E-02	3.21E-06	8.03E-04	5.66E-04	1.01E-04	3.06E-04	1.88E-04	1.92E-04	9.39E-05	2.83E-05	7.40E-09	1.14E-04	1.44E-04
E53	0.00E+00	2.87E-05	2.32E-06	5.97E+01	7.57E-05	2.85E-01	3.79E-05	1.89E-02	5.52E-03	1.03E-03	3.63E-03	1.87E-03	1.90E-03	2.39E-03	2.76E-04	6.74E-08	1.72E-03	3.49E-03
E54	0.00E+00	2.95E-05	2.21E-06	4.65E+01	4.71E-05	1.85E-01	3.25E-05	2.34E-02	4.10E-03	7.92E-04	3.07E-03	1.39E-03	1.42E-03	2.95E-03	2.03E-04	4.34E-08	1.65E-03	4.37E-03
E55	0.00E+00	2.80E-05	2.34E-06	6.37E+01	8.48E-05	3.17E-01	3.93E-05	1.73E-02	5.98E-03	1.10E-03	3.76E-03	2.01E-03	2.05E-03	2.18E-03	2.99E-04	7.45E-08	1.70E-03	3.19E-03
E56	0.00E+00	1.75E-05	1.48E-06	4.09E+01	5.51E-05	2.06E-01	2.49E-05	1.07E-02	3.86E-03	7.09E-04	2.38E-03	1.30E-03	1.32E-03	1.33E-03	1.93E-04	4.80E-08	1.05E-03	1.97E-03
F31	0.00E+00	7.49E-05	6.43E-06	1.56E+02	2.56E-04	9.02E-01	1.11E-04	4.34E-02	2.65E-02	4.20E-03	1.07E-02	5.88E-03	6.01E-03	4.27E-03	7.42E-04	1.90E-07	4.67E-03	7.99E-03
F32	0.00E+00	9.18E-05	7.43E-06	1.63E+02	2.49E-04	8.85E-01	1.23E-04	6.14E-02	2.73E-02	4.38E-03	1.18E-02	6.08E-03	6.21E-03	5.94E-03	7.57E-04	1.87E-07	5.61E-03	1.14E-02
F33	0.00E+00	2.18E-05	1.98E-06	5.11E+01	8.60E-05	3.06E-01	3.45E-05	1.19E-02	8.78E-03	1.38E-03	3.27E-03	1.92E-03	1.96E-03	1.15E-03	2.46E-04	6.28E-08	1.31E-03	2.19E-03
F34	0.00E+00	1.18E-05	1.11E-06	3.12E+01	5.54E-05	1.93E-01	2.07E-05	4.77E-03	5.38E-03	8.40E-04	1.99E-03	1.19E-03	1.21E-03	4.99E-04	1.52E-04	4.08E-08	7.72E-04	8.60E-04
F35	0.00E+00	1.15E-05	9.43E-07	2.60E+01	3.48E-05	1.29E-01	1.62E-05	6.77E-03	2.43E-03	4.47E-04	1.57E-03	8.22E-04	8.40E-04	8.77E-04	1.22E-04	3.12E-08	7.25E-04	1.25E-03
F36	0.00E+00	2.84E-06	2.38E-07	6.93E+00	9.69E-06	3.56E-02	4.24E-06	1.52E-03	6.53E-04	1.20E-04	4.12E-04	2.22E-04	2.26E-04	2.00E-04	3.30E-05	8.66E-09	1.86E-04	2.77E-04
F37	0.00E+00	8.41E-05	6.58E-06	1.35E+02	1.97E-04	7.04E-01	1.07E-04	5.98E-02	2.25E-02	3.63E-03	1.03E-02	5.04E-03	5.14E-03	5.76E-03	6.21E-04	1.49E-07	5.13E-03	1.11E-02
F38	0.00E+00	7.24E-05	6.26E-06	1.53E+02	2.51E-04	8.89E-01	1.08E-04	4.19E-02	2.61E-02	4.13E-03	1.04E-02	5.76E-03	5.89E-03	4.11E-03	7.29E-04	1.86E-07	4.48E-03	7.73E-03
F39	0.00E+00	1.09E-05	9.62E-07	2.80E+01	3.92E-05	1.46E-01	1.65E-05	6.21E-03	2.67E-03	4.86E-04	1.57E-03	8.93E-04	9.13E-04	7.59E-04	1.33E-04	3.37E-08	6.57E-04	1.14E-03
F40	0.00E+00	6.20E-06	5.15E-07	1.30E+01	1.63E-05	6.24E-02	8.12E-06	4.34E-03	1.22E-03	2.26E-04	7.62E-04	4.06E-04	4.14E-04	5.27E-04	6.02E-05	1.41E-08	3.48E-04	8.03E-04
F41	0.00E+00	5.95E-06	6.08E-07	2.08E+01	3.50E-05	1.24E-01	1.18E-05	1.63E-03	2.85E-03	4.62E-04	1.14E-03	7.20E-04	7.38E-04	1.90E-04	1.03E-04	2.75E-08	3.99E-04	2.80E-04
F42	0.00E+00	8.55E-06	9.03E-07	3.20E+01	5.48E-05	1.94E-01	1.80E-05	1.77E-03	4.41E-03	7.14E-04	1.73E-03	1.11E-03	1.14E-03	2.13E-04	1.60E-04	4.30E-08	5.86E-04	2.90E-04
F83	0.00E+00	1.03E-06	8.14E-08	2.00E+00	2.66E-06	9.48E-03	1.36E-06	6.63E-04	2.52E-04	4.28E-05	1.31E-04	6.56E-05	6.70E-05	7.49E-05	9.32E-06	2.27E-09	6.44E-05	1.23E-04
F84	0.00E+00	2.39E-05	1.98E-06	4.14E+01	6.46E-05	2.28E-01	3.17E-05	1.69E-02	1.04E-02	1.53E-03	3.00E-03	1.59E-03	1.63E-03	1.31E-03	1.94E-04	3.87E-08	1.37E-03	3.16E-03
F85	0.00E+00	1.68E-05	1.40E-06	3.35E+01	4.80E-05	1.73E-01	2.28E-05	1.15E-02	5.47E-03	8.70E-04	2.17E-03	1.16E-03	1.18E-03	1.10E-03	1.57E-04	3.58E-08	9.86E-04	2.13E-03
F86	0.00E+00	1.88E-05	1.47E-06	3.11E+01	3.57E-05	1.35E-01	2.17E-05	1.51E-02	3.88E-03	6.71E-04	2.02E-03	9.91E-04	1.01E-03	1.59E-03	1.40E-04	2.95E-08	1.01E-03	2.82E-03
F87	0.00E+00	3.90E-06	2.97E-07	6.13E+00	8.00E-06	2.87E-02	4.71E-06	2.93E-03	9.82E-04	1.59E-04	4.54E-04	2.14E-04	2.18E-04	2.82E-04	2.79E-05	6.17E-09	2.35E-04	5.46E-04
F88	0.00E+00	9.08E-07	7.26E-08	1.39E+00	2.08E-06	7.37E-03	1.13E-06	6.90E-04	3.49E-04	5.15E-05	1.07E-04	5.39E-05	5.50E-05	5.24E-05	6.41E-06	1.26E-09	5.20E-05	1.29E-04
G01	0.00E+00	4.68E-05	3.53E-06	7.47E+01	7.37E-05	2.90E-01	5.12E-05	3.79E-02	6.81E-03	1.30E-03	4.80E-03	2.20E-03	2.24E-03	4.71E-03	3.26E-04	6.70E-08	2.56E-03	7.07E-03
G02	0.00E+00	3.20E-05	2.59E-06	6.93E+01	8.74E-05	3.25E-01	4.30E-05	2.06E-02	6.66E-03	1.22E-03	4.13E-03	2.13E-03	2.17E-03	2.62E-03	3.23E-04	7.80E-08	1.95E-03	3.80E-03
G03	0.00E+00	5.98E-05	3.68E-06	9.21E+01	6.71E-05	2.73E-01	6.39E-05	4.16E-02	3.89E-03	1.03E-03	6.64E-03	2.21E-03	2.24E-03	8.05E-03	3.80E-04	1.11E-07	4.40E-03	7.77E-03
G04	0.00E+00	4.87E-05	3.30E-06	7.67E+01	5.47E-05	2.35E-01	5.02E-05	3.91E-02	3.32E-03	8.62E-04	4.91E-03	1.86E-03	1.89E-03	6.65E-03	3.16E-04	7.42E-08	3.03E-03	7.31E-03
G05	0.00E+00	3.40E-05	2.59E-06	6.16E+01	5.21E-05	2.26E-01	3.67E-05	2.92E-02	2.89E-03	7.06E-04	3.38E-03	1.58E-03	1.60E-03	4.41E-03	2.63E-04	5.27E-08	1.78E-03	5.44E-03
G06	0.00E+00	3.32E-06	3.21E-07	1.14E+01	1.59E-05	6.30E-02	5.83E-06	1.61E-03	6.51E-04	1.39E-04	5.53E-04	3.40E-04	3.48E-04	2.08E-04	5.57E-05	1.44E-08	2.05E-04	2.88E-04
G07	0.00E+00	6.36E-06	5.11E-07	1.16E+01	1.43E-05	5.33E-02	7.83E-06	4.81E-03	1.47E-03	2.51E-04	7.35E-04	3.74E-04	3.82E-04	5.10E-04	5.33E-05	1.18E-08	3.54E-04	8.94E-04
G08	0.00E+00	5.71E-07	6.09E-08	2.36E+00	3.76E-06	1.36E-02	1.22E-06	1.24E-04	2.46E-04	4.25E-05	1.17E-04	7.60E-05	7.79E-05	1.38E-05	1.18E-05	3.17E-09	3.94E-05	2.01E-05
G09	0.00E+00	2.05E-05	1.44E-06	1.64E+01	1.42E-05	6.09E-02	1.87E-05	2.09E-02	3.98E-03	6.27E-04	1.75E-03	6.54E-04	6.66E-04	1.46E-03	6.66E-05	8.87E-09	1.08E-03	3.93E-03
G10	0.00E+00	4.26E-05	3.38E-06	8.06E+01	1.04E-04	3.76E-01	5.47E-05	2.92E-02	1.01E-02	1.73E-03	5.24E-03	2.62E-03	2.68E-03	3.22E-03	3.73E-04	8.81E-08	2.57E-03	5.41E-03
H01	0.00E+00	5.02E-04	3.77E-05	8.66E+02	6.83E-04	3.01E+00	5.24E-04	4.41E-01	3.97E-02	9.86E-03	4.81E-02	2.18E-02	2.21E-02	6.69E-02	3.65E-03	7.04E-07	2.60E-02	8.24E-02
H02	0.00E+00	3.63E-04	2.76E-05	6.45E+02	5.30E-04	2.32E+00	3.86E-04	3.16E-01	3.00E-02	7.37E-03	3.54E-02	1.64E-02	1.66E-02	4.77E-02	2.74E-03	5.36E-07	1.88E-02	5.90E-02
H03	0.00E+00	3.62E-04	2.77E-05	6.71E+02	5.86E-04	2.52E+00	3.97E-04	3.07E-01	3.18E-02	7.72E-03	3.67E-02	1.73E-02	1.76E-02	4.63E-02	2.89E-03	5.89E-07	1.91E-02	5.72E-02
H04	0.00E+00	4.12E-04	3.19E-05	7.62E+02	6.58E-04	2.86E+00	4.49E-04	3.56E-01	3.61E-02	8.76E-03	4.11E-02	1.97E-02	2.00E-02	5.31E-02	3.27E-03	6.45E-07	2.11E-02	6.65E-02
H05	0.00E+00	1.58E-04	1.21E-05	2.90E+02	2.49E-04	1.08E+00	1.72E-04	1.35E-01	1.37E-02	3.33E-03	1.58E-02	7.46E-03	7.57E-03	2.04E-02	1.24E-03	2.50E-07	8.28E-03	2.52E-02
H06	0.00E+00	2.54E-04	1.98E-05	4.72E+02	4.10E-04	1.78E+00	2.77E-04	2.21E-01	2.24E-02	5.43E-03	2.52E-02	1.22E-02	1.24E-02	3.27E-02	2.03E-03	3.95E-07	1.28E-02	4.13E-02
H07	0.00E+00	4.55E-04	3.52E-05	8.43E+02	7.33E-04	3.17E+00	4.97E-04	3.92E-01	4.00E-02	9.70E-03	4.55E-02	2.18E-02	2.21E-02	5.84E-02	3.63E-03	7.18E-07	2.33E-02	7.31E-02
H08	0.00E+00	3.68E-05	2.86E-06	5.80E+01	7.34E-05	2.71E-01	4.36E-05	2.94E-02	9.33E-03	1.51E-03	4.14E-03	1.99E-03	2.03E-03	2.76E-03	2.63E-04	5.55E-08	2.10E-03	5.50E-03
H09	0.00E+00	2.64E-05	2.47E-06	6.62E+01	1.16E-04	3.96E-01	4.43E-05	1.17E-02	1.68E-02	2.43E-03	4.21E-03	2.52E-03	2.58E-03	1.08E-03	3.21E-04	6.91E-08	1.63E-03	2.15E-03
H10	0.00E+00	3.71E-05	2.88E-06	6.02E+01	6.83E-05	2.59E-01	4.25E-05	2.99E-02	7.47E-03	1.30E-03	3.98E-03	1.92E-03	1.96E-03	3.17E-03	2.70E-04	5.69E-08	2.02E-03	5.57E-03
H11	0.00E+00	1.37E-05	1.44E-06	5.30E+01	8.65E-05	3.04E-01	2.85E-05	3.13E-03	7.05E-03	1.15E-03	2.73E-03	1.76E-03	1.80E-03	3.69E-04	2.65E-04	7.00E-08	9.29E-04	5.18E-04
H12	0.00E+00	1.39E-04	1.01E-05	2.21E+02	1.53E-04	6.93E-01	1.38E-04	1.25E-01	9.72E-03	2.49E-03	1.27E-02	5.41E-03	5.47E-03	1.92E-02	9.08E-04	1.68E-07	7.24E-03	2.33E-02
H13	0.00E+00	1.82E-04	1.33E-05	2.68E+02	2.45E-04	9.72E-01	1.91E-04	1.49E-01	2.38E-02	4.60E-03	1.80E-02	7.80E-03	7.93E-03	1.88E-02	1.15E-03	2.32E-07	1.01E-02	2.79E-02
H14	0.00E+00	1.08E-05	7.48E-07	1.01E+01	5.19E-06	2.52E-02	9.26E-06	1.06E-02	1.15E-03	2.16E-04	8.50E-04	3.05E-04	3.09E-04	1.11E-03	3.88E-05	4.80E-09	5.41E-04	1.99E-03
H15	0.00E+00	1.88E-04	1.38E-05	2.56E+02	2.05E-04	8.62E-01	1.85E-04	1.67E-01	2.26E-02	4.41E-03	1.70E-02	7.31E-03	7.41E-03	2.04E-02	1.07E-03	1.86E-07	9.62E-03	3.12E-02
H16	0.00E+00	6.94E-05	5.67E-06	1.36E+02	1.75E-04	6.42E-01	8.94E-05	4.96E-02	1.72E-02	2.93E-03	8.43E-03	4.39E-03	4.48E-03	5.31E-03	6.30E-04	1.44E-07	3.95E-03	9.21E-03

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B05	100	Passenger Car	1082	0.00E+00	1.18E-05	1.28E-06	4.86E+01	8.24E-05	3.24E-01	2.63E-05	2.31E-03	3.51E-03	7.08E-04	2.56E-03	1.65E-03	1.69E-03	1.36E-04	2.46E-04	6.78E-08	8.67E-04	3.61E-04
16	B05	100	Passenger Truck	1812	0.00E+00	2.55E-05	2.72E-06	1.15E+02	1.67E-04	6.52E-01	5.44E-05	6.58E-03	6.21E-03	1.32E-03	5.23E-03	3.39E-03	3.47E-03	7.31E-04	5.76E-04	1.58E-07	1.76E-03	1.06E-03
16	B05	100	Single Unit Short Haul Truck	125	0.00E+00	1.69E-05	8.34E-07	2.29E+01	1.47E-05	5.30E-02	1.82E-05	9.11E-03	8.65E-04	2.52E-04	2.08E-03	5.17E-04	5.25E-04	2.31E-03	9.20E-05	3.76E-08	1.56E-03	1.70E-03
16	B05	100	Single Unit Long Haul Truck	6	0.00E+00	7.31E-07	3.55E-08	9.65E-01	6.09E-07	2.17E-03	7.88E-07	3.84E-04	3.91E-05	1.09E-05	9.08E-05	2.18E-05	2.22E-05	9.67E-05	3.88E-06	1.54E-09	6.87E-05	7.17E-05
16	B05	100	Combination Short Haul Truck	129	0.00E+00	4.42E-05	3.23E-06	4.65E+01	1.26E-07	4.31E-02	3.19E-05	4.72E-02	1.50E-03	5.33E-04	2.48E-03	9.46E-04	9.30E-04	7.01E-03	1.56E-04	0.00E+00	1.55E-03	8.88E-03
16	B05	100	Combination Long Haul Truck	117	0.00E+00	3.85E-05	2.64E-06	4.21E+01	1.46E-07	4.31E-02	2.88E-05	4.48E-02	1.39E-03	3.86E-04	2.52E-03	7.90E-04	7.88E-04	6.43E-03	1.41E-04	0.00E+00	1.73E-03	8.44E-03
16	B06	100	Passenger Car	524	0.00E+00	5.73E-06	6.20E-07	2.35E+01	3.99E-05	1.57E-01	1.27E-05	1.12E-03	1.70E-03	3.43E-04	1.24E-03	8.00E-04	8.21E-04	6.57E-05	1.19E-04	3.28E-08	4.20E-04	1.75E-04
16	B06	100	Passenger Truck	878	0.00E+00	1.24E-05	1.32E-06	5.56E+01	8.10E-05	3.16E-01	2.63E-05	3.19E-03	3.01E-03	6.38E-04	2.53E-03	1.64E-03	1.68E-03	3.54E-04	2.79E-04	7.64E-08	8.51E-04	5.15E-04
16	B06	100	Single Unit Short Haul Truck	15	0.00E+00	2.06E-06	1.02E-07	2.80E+00	1.80E-06	6.48E-03	2.23E-06	1.11E-03	1.06E-04	3.07E-05	2.54E-04	6.31E-05	6.41E-05	2.82E-04	1.12E-05	4.59E-09	1.90E-04	2.08E-04
16	B06	100	Single Unit Long Haul Truck	1	0.00E+00	8.92E-08	4.34E-09	1.18E-01	7.44E-08	2.65E-04	9.62E-08	4.69E-05	4.78E-06	1.33E-06	1.11E-05	2.66E-06	2.71E-06	1.18E-05	4.74E-07	1.88E-10	8.39E-06	8.75E-06
16	B06	100	Combination Short Haul Truck	12	0.00E+00	3.95E-06	2.88E-07	4.16E+00	1.12E-08	3.86E-03	2.85E-06	4.22E-03	1.34E-04	4.77E-05	2.22E-04	8.46E-05	8.31E-05	6.27E-04	1.39E-05	0.00E+00	1.38E-04	7.95E-04
16	B06	100	Combination Long Haul Truck	10	0.00E+00	3.44E-06	2.36E-07	3.77E+00	1.30E-08	3.85E-03	2.58E-06	4.01E-03	1.24E-04	3.45E-05	2.26E-04	7.07E-05	7.05E-05	5.75E-04	1.26E-05	0.00E+00	1.55E-04	7.55E-04
16	B07	100	Passenger Car	1265	0.00E+00	1.38E-05	1.50E-06	5.68E+01	9.63E-05	3.79E-01	3.08E-05	2.70E-03	4.10E-03	8.27E-04	3.00E-03	1.93E-03	1.98E-03	1.59E-04	2.88E-04	7.92E-08	1.01E-03	4.22E-04
16	B07	100	Passenger Truck	2119	0.00E+00	2.99E-05	3.18E-06	1.34E+02	1.96E-04	7.62E-01	6.36E-05	7.69E-03	7.26E-03	1.54E-03	6.11E-03	3.96E-03	4.06E-03	8.54E-04	6.73E-04	1.84E-07	2.05E-03	1.24E-03
16	B07	100	Single Unit Short Haul Truck	510	0.00E+00	6.84E-05	3.39E-06	9.30E+01	5.97E-05	2.15E-01	7.41E-05	3.70E-02	3.51E-03	1.02E-03	8.46E-03	2.10E-03	2.13E-03	9.38E-03	3.74E-04	1.53E-07	6.33E-03	6.91E-03
16	B07	100	Single Unit Long Haul Truck	22	0.00E+00	2.97E-06	1.44E-07	3.92E+00	2.47E-06	8.80E-03	3.20E-06	1.56E-03	1.59E-04	4.42E-05	3.69E-04	8.86E-05	9.00E-05	3.93E-04	1.58E-05	6.25E-09	2.79E-04	2.91E-04
16	B07	100	Combination Short Haul Truck	373	0.00E+00	1.28E-04	9.36E-06	1.35E+02	3.65E-07	1.25E-01	9.26E-05	1.37E-01	4.35E-03	1.55E-03	7.19E-03	2.75E-03	2.70E-03	2.04E-02	4.52E-04	0.00E+00	4.49E-03	2.58E-02
16	B07	100	Combination Long Haul Truck	341	0.00E+00	1.12E-04	7.65E-06	1.22E+02	4.23E-07	1.25E-01	8.37E-05	1.30E-01	4.03E-03	1.12E-03	7.32E-03	2.29E-03	2.29E-03	1.87E-02	4.10E-04	0.00E+00	5.03E-03	2.45E-02
16	B08	100	Passenger Car	678	0.00E+00	7.42E-06	8.02E-07	3.05E+01	5.16E-05	2.03E-01	1.65E-05	1.45E-03	2.20E-03	4.43E-04	1.60E-03	1.03E-03	1.06E-03	8.50E-05	1.54E-04	4.25E-08	5.43E-04	2.26E-04
16	B08	100	Passenger Truck	1135	0.00E+00	1.60E-05	1.70E-06	7.19E+01	1.05E-04	4.08E-01	3.41E-05	4.12E-03	3.89E-03	8.26E-04	3.28E-03	2.12E-03	2.18E-03	4.58E-04	3.61E-04	9.88E-08	1.10E-03	6.66E-04
16	B08	100	Single Unit Short Haul Truck	308	0.00E+00	4.14E-05	2.05E-06	5.63E+01	3.61E-05	1.30E-01	4.48E-05	2.24E-02	2.13E-03	6.19E-04	5.12E-03	1.27E-03	1.29E-03	5.68E-03	2.26E-04	9.25E-08	3.83E-03	4.18E-03
16	B08	100	Single Unit Long Haul Truck	14	0.00E+00	1.80E-06	8.72E-08	2.37E+00	1.50E-06	5.32E-03	1.94E-06	9.43E-04	9.62E-05	2.67E-05	2.23E-04	5.36E-05	5.45E-05	2.38E-04	9.55E-06	3.78E-09	1.69E-04	1.76E-04
16	B08	100	Combination Short Haul Truck	235	0.00E+00	8.07E-05	5.89E-06	8.49E+01	2.30E-07	7.87E-02	5.82E-05	8.61E-02	2.73E-03	9.74E-04	4.52E-03	1.73E-03	1.70E-03	1.28E-02	2.84E-04	0.00E+00	2.82E-03	1.62E-02
16	B08	100	Combination Long Haul Truck	214	0.00E+00	7.02E-05	4.81E-06	7.69E+01	2.66E-07	7.86E-02	5.26E-05	8.17E-02	2.53E-03	7.04E-04	4.60E-03	1.44E-03	1.44E-03	1.17E-02	2.58E-04	0.00E+00	3.16E-03	1.54E-02
16	B09	100	Passenger Car	598	0.00E+00	6.54E-06	7.08E-07	2.69E+01	4.55E-05	1.79E-01	1.45E-05	1.28E-03	1.94E-03	3.91E-04	1.42E-03	9.13E-04	9.37E-04	7.50E-05	1.36E-04	3.75E-08	4.79E-04	2.00E-04
16	B09	100	Passenger Truck	1002	0.00E+00	1.41E-05	1.50E-06	6.34E+01	9.25E-05	3.60E-01	3.01E-05	3.64E-03	3.43E-03	7.29E-04	2.89E-03	1.87E-03	1.92E-03	4.04E-04	3.18E-04	8.72E-08	9.71E-04	5.88E-04
16	B09	100	Single Unit Short Haul Truck	152	0.00E+00	2.05E-05	1.01E-06	2.78E+01	1.78E-05	6.44E-02	2.21E-05	1.11E-02	1.05E-03	3.05E-04	2.53E-03	6.27E-04	6.37E-04	2.80E-03	1.12E-04	4.57E-08	1.89E-03	2.07E-03
16	B09	100	Single Unit Long Haul Truck	7	0.00E+00	8.87E-07	4.31E-08	1.17E+00	7.39E-07	2.63E-03	9.56E-07	4.66E-04	4.75E-05	1.32E-05	1.10E-04	2.65E-05	2.69E-05	1.17E-04	4.71E-06	1.87E-09	8.33E-05	8.70E-05
16	B09	100	Combination Short Haul Truck	87	0.00E+00	2.98E-05	2.18E-06	3.14E+01	8.49E-08	2.91E-02	2.15E-05	3.18E-02	1.01E-03	3.60E-04	1.67E-03	6.38E-04	6.27E-04	4.73E-03	1.05E-04	0.00E+00	1.04E-03	6.00E-03
16	B09	100	Combination Long Haul Truck	79	0.00E+00	2.60E-05	1.78E-06	2.84E+01	9.83E-08	2.91E-02	1.94E-05	3.02E-02	9.36E-04	2.60E-04	1.70E-03	5.33E-04	5.32E-04	4.34E-03	9.52E-05	0.00E+00	1.17E-03	5.69E-03
16	B10	100	Passenger Car	1454	0.00E+00	1.59E-05	1.72E-06	6.53E+01	1.11E-04	4.35E-01	3.54E-05	3.11E-03	4.72E-03	9.51E-04	3.44E-03	2.22E-03	2.28E-03	1.82E-04	3.31E-04	9.11E-08	1.17E-03	4.86E-04
16	B10	100	Passenger Truck	2435	0.00E+00	3.43E-05	3.66E-06	1.54E+02	2.25E-04	8.76E-01	7.31E-05	8.84E-03	8.34E-03	1.77E-03	7.03E-03	4.55E-03	4.67E-03	9.82E-04	7.74E-04	2.12E-07	2.36E-03	1.43E-03
16	B10	100	Single Unit Short Haul Truck	103	0.00E+00	1.39E-05	6.88E-07	1.89E+01	1.21E-05	4.37E-02	1.50E-05	7.51E-03	7.13E-04	2.07E-04	1.72E-03	4.26E-04	4.33E-04	1.90E-03	7.59E-05	3.10E-08	1.29E-03	1.40E-03
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	6.02E-07	2.93E-08	7.95E-01	5.02E-07	1.79E-03	6.50E-07	3.16E-04	3.22E-05	8.96E-06	7.49E-05	1.80E-05	1.83E-05	7.97E-05	3.20E-06	1.27E-09	5.66E-05	5.91E-05
16	B10	100	Combination Short Haul Truck	215	0.00E+00	7.39E-05	5.39E-06	7.77E+01	2.10E-07	7.20E-02	5.33E-05	7.88E-02	2.50E-03	8.91E-04	4.14E-03	1.58E-03	1.55E-03	1.17E-02	2.60E-04	0.00E+00	2.59E-03	1.48E-02
16	B10	100	Combination Long Haul Truck	196	0.00E+00	6.43E-05	4.41E-06	7.04E+01	2.43E-07	7.20E-02	4.82E-05	7.48E-02	2.32E-03	6.44E-04	4.21E-03	1.32E-03	1.32E-03	1.07E-02	2.36E-04	0.00E+00	2.90E-03	1.41E-02
16	B13	100	Passenger Car	864	0.00E+00	9.46E-06	1.02E-06	3.88E+01	6.58E-05	2.59E-01	2.10E-05	1.85E-03	2.80E-03	5.65E-04	2.05E-03	1.32E-03	1.35E-03	1.08E-04	1.97E-04	5.41E-08	6.93E-04	2.89E-04
16	B13	100	Passenger Truck	1448	0.00E+00	2.04E-05	2.17E-06	9.16E+01	1.34E-04	5.21E-01	4.34E-05	5.25E-03	4.96E-03	1.05E-03	4.18E-03	2.71E-03	2.77E-03	5.84E-04	4.60E-04	1.26E-07	1.40E-03	8.50E-04
16	B13	100	Single Unit Short Haul Truck	80	0.00E+00	1.08E-05	5.35E-07	1.47E+01	9.43E-06	3.40E-02	1.17E-05	5.84E-03	5.55E-04	1.61E-04	1.34E-03	3.31E-04	3.37E-04	1.48E-03	5.90E-05	2.41E-08	1.00E-03	1.09E-03
16	B13	100	Single Unit Long Haul Truck	4	0.00E+00	4.68E-07	2.28E-08	6.19E-01	3.90E-07	1.39E-03	5.05E-07	2.46E-04	2.51E-05	6.97E-06	5.82E-05	1.40E-05	1.42E-05	6.20E-05	2.49E-06	9.87E-10	4.40E-05	4.60E-05
16	B13	100	Combination Short Haul Truck	137	0.00E+00	4.69E-05	3.42E-06	4.94E+01	1.33E-07	4.58E-02	3.38E-05	5.00E-02	1.59E-03	5.66E-04	2.63E-03	1.00E-03	9.86E-04	7.44E-03	1.65E-04	0.00E+00	1.64E-03	9.43E-03
16	B13	100	Combination Long Haul Truck	124	0.00E+00	4.08E-05	2.80E-06	4.47E+01	1.55E-07	4.57E-02	3.06E-05	4.75E-02	1.47E-03	4.09E-04	2.68E-03	8.38E-04	8.36E-04	6.83E-03	1.50E-04	0.00E+00	1.84E-03	8.95E-03
16	B14	100	Passenger Car	391	0.00E+00	4.28E-06	4.63E-07	1.76E+01	2.98E-05	1.17E-01	9.52E-06	8.36E-04	1.27E-03	2.56E-04	9.27E-04	5.97E-04	6.13E-04	4.91E-05	8.90E-05	2.45E-08	3.14E-04	1.31E-04
16	B14	100	Passenger Truck	656	0.00E+00	9.24E-06	9.84E-07	4.15E+01	6.05E-05	2.36E-01	1.97E-05	2.38E-03	2.25E-03	4.77E-04	1.89E-03	1.23E-03	1.26E-03	2.64E-04	2.08E-04	5.71E-08	6.36E-04	3.85E-04
16	B14	100	Single Unit Short Haul Truck	120	0.00E+00	1.61E-05	7.96E-07	2.19E+01	1.40E-05	5.06E-02	1.74E-05	8.70E-03	8.25E-04	2.40E-04	1.99E-03	4.93E-04	5.01E-04	2.20E-03	8.78E-05	3.59E-08	1.49E-03	1.62E-03
16	B14	100	Single Unit Long Haul Truck	5	0.00E+00	6.97E-07	3.39E-08	9.21E-01	5.81E-07	2.07E-03	7.52E-07	3.66E-04	3.73E-05	1.04E-05	8.67E-05	2.08E-05	2.12E-05	9.23E-05	3.71E-06	1.47E-09	6.55E-05	6.84E-05
16	B14	100	Combination Short Haul Truck	65	0.00E+00	2.23E-05	1.63E-06	2.35E+01	6.34E-08	2.17E-02	1.61E-05	2.38E-02	7.55E-04	2.69E-04	1.25E-03	4.77E-04	4.69E-04	3.54E-03	7.85E-05	0.00E+00	7.80E-04	4.48E-03
16	B14	100	Combination Long Haul Truck	59	0.00E+00	1.94E-05	1.33E-06	2.12E+01	7.34E-08	2.17E-02	1.45E-05	2.26E-02	6.99E-04	1.94E-04	1.27E-03	3.98E-04	3.97E-04	3.24E-03	7.11E-05	0.00E+00	8.74E-04	4.25E-03
9	D01	60	Passenger Car	935	0.00E+00	1.40E-05	1.52E-06	4.69E+01	9.75E-05	3.62E-01	3.11E-05	1.91E-03	9.49E-03	1.46E-03	3.03E-03	1.95E-03	2.01E-03	1.95E-04	2.35E-04	6.48E-08	1.03E-03	2.98E-04
9	D01	60	Passenger Truck	1567	0.00E+00	3.09E-05	3.26E-06	1.07E+02	1.93E-04	6.46E-01	6.37E-05	6.22E-03	1.74E-02	2.70E-03	6.05E-03	3.95E-03	4.04E-03	8.29E-04	5.32E-04	1.47E-07	2.01E-03	1.03E-03
9	D01	60	Single Unit Short Haul Truck	34	0.00E+00	9.84E-06	4.92E-07	6.27E+00	8.11E-06	1.21E-02	1.05E-05	4.69E-03	7.97E-04	1.45E-04	1.20E-03	2.95E-04	3.00E-04	6.28E-04	2.53E-05	1.04E-08	8.96E-04	8.79E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	4.30E-07	2.14E-08	2.68E-01	3.52E-07	5.15E-04	4.59E-07	2.03E-04	3.58E-05	6.40E-06	5.24E-05	1.28E-05	1.31E-05	2.67E-05	1.08E-06	4.44E-10	3.93E-05	3.80E-05
9	D01	60	Combination Short Haul Truck	114	0.00E+00	6.68E-05	4.65E-06	4.34E+01	2.36E-07	5.84E-02	4.95E-05	7.24E-02	6.22E-03	1.23E-03	4.25E-03	1.39E-03	1.39E-03	6.55E-03	1.45E-04	0.00E+00	2.86E-03	1.36E-02
9	D01	60	Combination Long Haul Truck	103	0.00E+00	5.99E-05	3.90E-06	4.07E+01	2.71E-07	6.29E-02	4.62E-05	7.17E-02	6.25E-03	1.06E-03	4.38E-03	1.19E-03	1.21E-03	6.22E-03	1.36E-04	0.00E+00	3.17E-03	1.35E-02
9	D02	60	Passenger Car	753	0.00E+00	1.13E-05	1.22E-06	3.77E+01	7.85E-05	2.91E-01	2.51E-05	1.54E-03	7.64E-03	1.17E-03	2.44E-03	1.57E-03	1.61E-03	1.57E-04	1.89E-04	5.21E-08	8.26E-04	2.40E-04
9	D02	60	Passenger Truck	1260	0.00E+00	2.49E-05	2.63E-06	8.61E+01	1.55E-04	5.19E-01	5.12E-05	5.00E-03	1.40E-02	2.18E-03	4.87E-03	3.17E-03	3.25E-03	6.67E-04	4.28E-04	1.18E-07	1.62E-03	8.29E-04
9	D02	60	Single Unit Short Haul Truck	58	0.00E+00	1.71E-05	8.58E-07	1.09E+01	1.41E-05	2.12E-02	1.83E-05	8.18E-03	1.39E-03	2.52E-04	2.08E-03	5.15E-04	5.23E-04	1.09E-03	4.41E-05	1.82E-08	1.56E-03	1.53E-03
9	D02	60	Single Unit Long Haul Truck	3	0.00E+00	7.49E-07	3.73E-08	4.66E-01	6.14E-07	8.98E-04	8.00E-07	3.54E-04	6.24E-05	1.11E-05	9.13E-05	2.24E-05	2.28E-05	4.66E-05	1.89E-06	7.74E-10	6.86E-05	6.63E-05
9	D02	60	Combination Short Haul Truck	55	0.00E+00	3.23E-05	2.25E-06	2.10E+01	1.14E-07	2.83E-02	2.40E-05	3.50E-02	3.01E-03	5.95E-04	2.06E-03	6.71E-04	6.72E-04	3.17E-03	7.04E-05	0.00E+00	1.38E-03	6.60E-03
9	D02	60	Combination Long Haul Truck	50	0.00E+00	2.90E-05	1.89E-06	1.97E+01	1.31E-07	3.04E-02	2.24E-05	3.47E-02	3.02E-03	5.13E-04	2.12E-03	5.76E-04	5.83E-04	3.01E-03	6.60E-05	0.00E+00	1.54E-03	6.54E-03
9	D03	60	Passenger Car	1161	0.00E+00	1.74E-05	1.88E-06	5.82E+01	1.21E-04	4.49E-01	3.86E-05	2.37E-03	1.18E-02	1.81E-03	3.76E-03	2.42E-03	2.49E-03	2.42E-04	2.92E-04	8.04E-08	1.27E-03	3.70E-04
9	D03	60	Passenger Truck	1943	0.00E+00	3.83E-05	4.05E-06	1.33E+02	2.40E-04	8.01E-01	7.90E-05	7.72E-03	2.16E-02	3.35E-03	7.51E-03	4.89E-03	5.01E-03	1.03E-03	6.60E-04	1.82E-07	2.50E-03	1.28E-03
9	D03	60	Single Unit Short Haul Truck	63	0.00E+00	1.86E-05	9.28E-07	1.18E+01	1.53E-05	2.29E-02	1.98E-05	8.85E-03	1.50E-03	2.73E-04	2.26E-03	5.57E-04	5.66E-04	1.18E-03	4.78E-05	1.97E-08	1.69E-03	1.66E-03
9	D03	60	Single Unit Long Haul Truck	3	0.00E+00	8.11E-07	4.03E-08	5.05E-01	6.65E-07	9.72E-04	8.65E-07	3.83E-04	6.75E-05	1.21E-05	9.88E-05	2.42E-05	2.46E-05	5.04E-05	2.04E-06	8.37E-10	7.42E-05	7.17E-05
9	D03	60	Combination Short Haul Truck	47	0.00E+00	2.74E-05	1.91E-06	1.78E+01	9.70E-08	2.39E-02	2.03E-05	2.97E-02	2.55E-03	5.05E-04	1.74E-03	5.68E-04	5.69E-04	2.69E-03	5.96E-05	0.00E+00	1.17E-03	5.59E-03
9	D03	60	Combination Long Haul Truck	42	0.00E+00	2.46E-05	1.60E-06	1.67E+01	1.11E-07	2.58E-02	1.89E-05	2.94E-02	2.56E-03	4.35E-04	1.80E-03	4.88E-04	4.95E-04	2.55E-03	5.59E-05	0.00E+00	1.30E-03	5.54E-03
9	D04	60	Passenger Car	891	0.00E+00	1.33E-05	1.44E-06	4.47E+01	9.28E-05	3.45E-01	2.97E-05	1.82E-03	9.04E-03	1.39E-03	2.89E-03	1.86E-03	1.91E-03	1.86E-04	2.24E-04	6.17E-08	9.77E-04	2.84E-04
9	D04	60	Passenger Truck	1491	0.00E+00	2.94E-05	3.11E-06	1.02E+02	1.84E-04	6.15E-01	6.06E-05	5.92E-03	1.66E-02	2.57E-03	5.76E-03	3.76E-03	3.85E-03	7.90E-04	5.07E-04	1.40E-07	1.92E-03	9.81E-04
9	D04	60	Single Unit Short Haul Truck	73	0.00E+00	2.14E-05	1.07E-06	1.36E+01	1.76E-05	2.64E-02	2.28E-05	1.02E-02	1.73E-03	3.14E-04	2.60E-03	6.41E-04	6.52E-04	1.36E-03	5.50E-05	2.27E-08	1.95E-03	1.91E-03
9	D04	60	Single Unit Long Haul Truck	3	0.00E+00	9.33E-07	4.64E-08	5.81E-01	7.65E-07	1.12E-03	9.97E-07	4.41E-04	7.77E-05	1.39E-05	1.14E-04	2.79E-05	2.83E-05	5.80E-05	2.35E-06	9.64E-10	8.54E-05	8.26E-05
9	D04	60	Combination Short Haul Truck	76	0.00E+00	4.49E-05	3.13E-06	2.92E+01	1.59E-07	3.93E-02	3.33E-05	4.87E-02	4.18E-03	8.28E-04	2.86E-03	9.32E-04	9.34E-04	4.40E-03	9.78E-05	0.00E+00	1.92E-03	9.17E-03
9	D04	60	Combination Long Haul Truck	70	0.00E+00	4.03E-05	2.62E-06	2.74E+01	1.82E-07	4.23E-02	3.11E-05	4.83E-02	4.21E-03	7.13E-04	2.95E-03	8.01E-04	8.11E-04	4.19E-03	9.18E-05	0.00E+00	2.13E-03	9.09E-03
9	D05	60	Passenger Car	1111	0.00E+00	1.66E-05	1.80E-06	5.57E+01	1.16E-04	4.30E-01	3.70E-05	2.27E-03	1.13E-02	1.73E-03	3.60E-03	2.32E-03	2.38E-03	2.32E-04	2.79E-04	7.70E-08	1.22E-03	3.54E-04
9	D05	60	Passenger Truck	1860	0.00E+00	3.67E-05	3.87E-06	1.27E+02	2.29E-04	7.67E-01	7.56E-05	7.39E-03	2.07E-02	3.21E-03	7.19E-03	4.68E-03	4.80E-03	9.85E-04	6.32E-04	1.75E-07	2.39E-03	1.22E-03
9	D05	60	Single Unit Short Haul Truck	72	0.00E+00	2.11E-05	1.05E-06	1.34E+01	1.74E-05	2.60E-02	2.25E-05	1.01E-02	1.71E-03	3.10E-04	2.56E-03	6.33E-04	6.43E-04	1.34E-03	5.43E-05	2.24E-08	1.92E-03	1.88E-03
9	D05	60	Single Unit Long Haul Truck	3	0.00E+00	9.21E-07	4.58E-08	5.74E-01	7.55E-07	1.10E-03	9.83E-07	4.35E-04	7.67E-05	1.37E-05	1.12E-04	2.75E-05	2.80E-05	5.73E-05	2.32E-06	9.51E-10	8.43E-05	8.15E-05
9	D05	60	Combination Short Haul Truck	75	0.00E+00	4.40E-05	3.07E-06	2.86E+01	1.56E-07	3.85E-02	3.26E-05	4.77E-02	4.10E-03	8.11E-04	2.80E-03	9.13E-04	9.15E-04	4.31E-03	9.58E-05	0.00E+00	1.88E-03	8.99E-03
9	D05	60	Combination Long Haul Truck	68	0.00E+00	3.95E-05	2.57E-06	2.68E+01	1.79E-07	4.15E-02	3.04E-05	4.73E-02	4.12E-03	6.99E-04	2.89E-03	7.85E-04	7.95E-04	4.10E-03	8.99E-05	0.00E+00	2.09E-03	8.91E-03
9	D06	60	Passenger Car	943	0.00E+00	1.41E-05	1.53E-06	4.73E+01	9.83E-05	3.65E-01	3.14E-05	1.92E-03	9.57E-03	1.47E-03	3.06E-03	1.97E-03	2.02E-03	1.97E-04	2.37E-04	6.53E-08	1.03E-03	3.01E-04
9	D06	60	Passenger Truck	1579	0.00E+00	3.11E-05	3.29E-06	1.08E+02	1.95E-04	6.51E-01	6.42E-05	6.27E-03	1.76E-02	2.73E-03	6.10E-03	3.98E-03	4.07E-03	8.36E-04	5.36E-04	1.48E-07	2.03E-03	1.04E-03
9	D06	60	Single Unit Short Haul Truck	84	0.00E+00	2.47E-05	1.24E-06	1.58E+01	2.04E-05	3.05E-02	2.64E-05	1.18E-02	2.00E-03	3.63E-04	3.01E-03	7.42E-04	7.55E-04	1.58E-03	6.37E-05	2.62E-08	2.25E-03	2.21E-03
9	D06	60	Single Unit Long Haul Truck	4	0.00E+00	1.08E-06	5.38E-08	6.73E-01	8.86E-07	1.30E-03	1.15E-06	5.10E-04	9.00E-05	1.61E-05	1.32E-04	3.23E-05	3.28E-05	6.72E-05	2.72E-06	1.12E-09	9.89E-05	9.56E-05

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D10	80	Single Unit Long Haul Truck	3	0.00E+00	4.76E-07	2.35E-08	4.55E-01	3.76E-07	8.96E-04	5.06E-07	2.40E-04	3.14E-05	6.87E-06	5.81E-05	1.40E-05	1.42E-05	4.54E-05	1.83E-06	7.16E-10	4.39E-05	4.49E-05
11	D10	80	Combination Short Haul Truck	24	0.00E+00	1.03E-05	7.40E-07	8.55E+00	3.26E-08	9.16E-03	7.56E-06	1.06E-02	6.26E-04	1.54E-04	6.16E-04	2.18E-04	2.17E-04	1.29E-03	2.86E-05	0.00E+00	3.99E-04	2.00E-03
11	D10	80	Combination Long Haul Truck	21	0.00E+00	9.27E-06	6.23E-07	7.91E+00	3.77E-08	9.50E-03	7.02E-06	1.03E-02	6.12E-04	1.23E-04	6.36E-04	1.88E-04	1.89E-04	1.21E-03	2.65E-05	0.00E+00	4.47E-04	1.94E-03
11	D11	80	Passenger Car	1168	0.00E+00	1.42E-05	1.54E-06	5.44E+01	9.89E-05	3.78E-01	3.16E-05	2.40E-03	6.43E-03	1.12E-03	3.08E-03	1.98E-03	2.03E-03	1.83E-04	2.74E-04	7.69E-08	1.04E-03	3.75E-04
11	D11	80	Passenger Truck	1957	0.00E+00	3.05E-05	3.24E-06	1.26E+02	1.96E-04	6.95E-01	6.40E-05	7.13E-03	1.15E-02	2.05E-03	6.12E-03	3.97E-03	4.07E-03	8.79E-04	6.28E-04	1.71E-07	2.05E-03	1.16E-03
11	D11	80	Single Unit Short Haul Truck	86	0.00E+00	1.62E-05	8.02E-07	1.59E+01	1.30E-05	3.17E-02	1.72E-05	8.28E-03	1.01E-03	2.30E-04	1.97E-03	4.78E-04	4.86E-04	1.59E-03	6.39E-05	2.53E-08	1.48E-03	1.55E-03
11	D11	80	Single Unit Long Haul Truck	4	0.00E+00	7.03E-07	3.46E-08	6.71E-01	5.55E-07	1.32E-03	7.47E-07	3.54E-04	4.64E-05	1.01E-05	8.58E-05	2.06E-05	2.09E-05	6.70E-05	2.71E-06	1.06E-09	6.48E-05	6.62E-05
11	D11	80	Combination Short Haul Truck	75	0.00E+00	3.31E-05	2.37E-06	2.74E+01	1.04E-07	2.93E-02	2.42E-05	3.39E-02	2.00E-03	4.94E-04	1.97E-03	6.99E-04	6.94E-04	4.13E-03	9.16E-05	0.00E+00	1.28E-03	6.40E-03
11	D11	80	Combination Long Haul Truck	69	0.00E+00	2.97E-05	1.99E-06	2.53E+01	1.21E-07	3.04E-02	2.25E-05	3.29E-02	1.96E-03	3.94E-04	2.04E-03	6.01E-04	6.05E-04	3.87E-03	8.47E-05	0.00E+00	1.43E-03	6.21E-03
11	D12	80	Passenger Car	704	0.00E+00	8.56E-06	9.26E-07	3.28E+01	5.96E-05	2.28E-01	1.90E-05	1.45E-03	3.87E-03	6.73E-04	1.85E-03	1.19E-03	1.23E-03	1.10E-04	1.65E-04	4.63E-08	6.27E-04	2.26E-04
11	D12	80	Passenger Truck	1179	0.00E+00	1.84E-05	1.95E-06	7.58E+01	1.18E-04	4.19E-01	3.85E-05	4.30E-03	6.94E-03	1.23E-03	3.69E-03	2.40E-03	2.45E-03	5.30E-04	3.79E-04	1.03E-07	1.23E-03	7.02E-04
11	D12	80	Single Unit Short Haul Truck	57	0.00E+00	1.06E-05	5.26E-07	1.04E+01	8.52E-06	2.08E-02	1.13E-05	5.42E-03	6.65E-04	1.51E-04	1.29E-03	3.14E-04	3.19E-04	1.04E-03	4.19E-05	1.66E-08	9.70E-04	1.02E-03
11	D12	80	Single Unit Long Haul Truck	2	0.00E+00	4.61E-07	2.27E-08	4.40E-01	3.64E-07	8.67E-04	4.90E-07	2.32E-04	3.04E-05	6.64E-06	5.62E-05	1.35E-05	1.37E-05	4.39E-05	1.77E-06	6.93E-10	4.25E-05	4.34E-05
11	D12	80	Combination Short Haul Truck	25	0.00E+00	1.08E-05	7.73E-07	8.93E+00	3.41E-08	9.57E-03	7.90E-06	1.11E-02	6.54E-04	1.61E-04	6.44E-04	2.28E-04	2.26E-04	1.35E-03	2.99E-05	0.00E+00	4.17E-04	2.09E-03
11	D12	80	Combination Long Haul Truck	22	0.00E+00	9.68E-06	6.50E-07	8.26E+00	3.94E-08	9.92E-03	7.33E-06	1.08E-02	6.40E-04	1.29E-04	6.65E-04	1.96E-04	1.97E-04	1.26E-03	2.77E-05	0.00E+00	4.67E-04	2.03E-03
9	D13	60	Passenger Car	259	0.00E+00	3.88E-06	4.20E-07	1.30E+01	2.70E-05	1.00E-01	8.63E-06	5.28E-04	2.63E-03	4.04E-04	8.40E-04	5.41E-04	5.56E-04	5.41E-05	6.52E-05	1.80E-08	2.84E-04	8.26E-05
9	D13	60	Passenger Truck	434	0.00E+00	8.56E-06	9.04E-07	2.96E+01	5.35E-05	1.79E-01	1.76E-05	1.72E-03	4.82E-03	7.49E-04	1.68E-03	1.09E-03	1.12E-03	2.30E-04	1.47E-04	4.07E-08	5.58E-04	2.86E-04
9	D13	60	Single Unit Short Haul Truck	41	0.00E+00	1.21E-05	6.05E-07	7.70E+00	9.97E-06	1.49E-02	1.29E-05	5.76E-03	9.80E-04	1.78E-04	1.47E-03	3.63E-04	3.69E-04	7.71E-04	3.11E-05	1.28E-08	1.10E-03	1.08E-03
9	D13	60	Single Unit Long Haul Truck	2	0.00E+00	5.28E-07	2.63E-08	3.29E-01	4.33E-07	6.33E-04	5.64E-07	2.49E-04	4.40E-05	7.86E-06	6.44E-05	1.58E-05	1.60E-05	3.28E-05	1.33E-06	5.45E-10	4.83E-05	4.67E-05
9	D13	60	Combination Short Haul Truck	25	0.00E+00	1.45E-05	1.01E-06	9.41E+00	5.12E-08	1.26E-02	1.07E-05	1.57E-02	1.35E-03	2.66E-04	9.20E-04	3.00E-04	3.01E-04	1.42E-03	3.15E-05	0.00E+00	6.19E-04	2.95E-03
9	D13	60	Combination Long Haul Truck	22	0.00E+00	1.30E-05	8.45E-07	8.82E+00	5.87E-08	1.36E-02	1.00E-05	1.55E-02	1.35E-03	2.30E-04	9.48E-04	2.58E-04	2.61E-04	1.35E-03	2.95E-05	0.00E+00	6.87E-04	2.93E-03
9	D14	60	Passenger Car	633	0.00E+00	9.49E-06	1.03E-06	3.18E+01	6.60E-05	2.45E-01	2.11E-05	1.29E-03	6.43E-03	9.87E-04	2.05E-03	1.32E-03	1.36E-03	1.32E-04	1.59E-04	4.39E-08	6.95E-04	2.02E-04
9	D14	60	Passenger Truck	1061	0.00E+00	2.09E-05	2.21E-06	7.25E+01	1.31E-04	4.37E-01	4.31E-05	4.21E-03	1.18E-02	1.83E-03	4.10E-03	2.67E-03	2.74E-03	5.62E-04	3.60E-04	9.96E-08	1.36E-03	6.98E-04
9	D14	60	Single Unit Short Haul Truck	62	0.00E+00	1.83E-05	9.14E-07	1.16E+01	1.51E-05	2.25E-02	1.95E-05	8.71E-03	1.48E-03	2.68E-04	2.22E-03	5.48E-04	5.57E-04	1.17E-03	4.70E-05	1.94E-08	1.66E-03	1.63E-03
9	D14	60	Single Unit Long Haul Truck	3	0.00E+00	7.98E-07	3.97E-08	4.97E-01	6.54E-07	9.57E-04	8.52E-07	3.77E-04	6.65E-05	1.19E-05	9.73E-05	2.38E-05	2.42E-05	4.96E-05	2.01E-06	8.24E-10	7.31E-05	7.06E-05
9	D14	60	Combination Short Haul Truck	44	0.00E+00	2.58E-05	1.80E-06	1.68E+01	9.15E-08	2.26E-02	1.92E-05	2.80E-02	2.41E-03	4.76E-04	1.64E-03	5.36E-04	5.37E-04	2.53E-03	5.63E-05	0.00E+00	1.11E-03	5.28E-03
9	D14	60	Combination Long Haul Truck	40	0.00E+00	2.32E-05	1.51E-06	1.58E+01	1.05E-07	2.43E-02	1.79E-05	2.78E-02	2.42E-03	4.10E-04	1.69E-03	4.61E-04	4.67E-04	2.41E-03	5.28E-05	0.00E+00	1.23E-03	5.23E-03
9	D15	60	Passenger Car	646	0.00E+00	9.68E-06	1.05E-06	3.24E+01	6.74E-05	2.50E-01	2.15E-05	1.32E-03	6.56E-03	1.01E-03	2.10E-03	1.35E-03	1.39E-03	1.35E-04	1.63E-04	4.48E-08	7.09E-04	2.06E-04
9	D15	60	Passenger Truck	1083	0.00E+00	2.14E-05	2.25E-06	7.40E+01	1.33E-04	4.46E-01	4.40E-05	4.30E-03	1.20E-02	1.87E-03	4.18E-03	2.73E-03	2.79E-03	5.73E-04	3.68E-04	1.02E-07	1.39E-03	7.12E-04
9	D15	60	Single Unit Short Haul Truck	76	0.00E+00	2.22E-05	1.11E-06	1.42E+01	1.83E-05	2.74E-02	2.37E-05	1.06E-02	1.80E-03	3.26E-04	2.70E-03	6.66E-04	6.77E-04	1.42E-03	5.72E-05	2.36E-08	2.02E-03	1.98E-03
9	D15	60	Single Unit Long Haul Truck	3	0.00E+00	9.70E-07	4.83E-08	6.04E-01	7.95E-07	1.16E-03	1.04E-06	4.58E-04	8.08E-05	1.44E-05	1.18E-04	2.90E-05	2.95E-05	6.03E-05	2.44E-06	1.00E-09	8.88E-05	8.58E-05
9	D15	60	Combination Short Haul Truck	44	0.00E+00	2.62E-05	1.82E-06	1.70E+01	9.26E-08	2.29E-02	1.94E-05	2.84E-02	2.43E-03	4.82E-04	1.66E-03	5.43E-04	5.44E-04	2.56E-03	5.70E-05	0.00E+00	1.12E-03	5.34E-03
9	D15	60	Combination Long Haul Truck	41	0.00E+00	2.35E-05	1.53E-06	1.60E+01	1.06E-07	2.46E-02	1.81E-05	2.81E-02	2.45E-03	4.15E-04	1.72E-03	4.66E-04	4.72E-04	2.44E-03	5.34E-05	0.00E+00	1.24E-03	5.29E-03
9	D16	60	Passenger Car	744	0.00E+00	1.11E-05	1.21E-06	3.73E+01	7.76E-05	2.88E-01	2.48E-05	1.52E-03	7.56E-03	1.16E-03	2.41E-03	1.56E-03	1.60E-03	1.56E-04	1.87E-04	5.16E-08	8.17E-04	2.37E-04
9	D16	60	Passenger Truck	1247	0.00E+00	2.46E-05	2.60E-06	8.52E+01	1.54E-04	5.14E-01	5.07E-05	4.95E-03	1.39E-02	2.15E-03	4.82E-03	3.14E-03	3.22E-03	6.60E-04	4.23E-04	1.17E-07	1.60E-03	8.20E-04
9	D16	60	Single Unit Short Haul Truck	84	0.00E+00	2.47E-05	1.24E-06	1.58E+01	2.04E-05	3.05E-02	2.64E-05	1.18E-02	2.00E-03	3.63E-04	3.01E-03	7.42E-04	7.55E-04	1.58E-03	6.37E-05	2.62E-08	2.25E-03	2.21E-03
9	D16	60	Single Unit Long Haul Truck	4	0.00E+00	1.08E-06	5.38E-08	6.73E-01	8.86E-07	1.30E-03	1.15E-06	5.10E-04	9.00E-05	1.61E-05	1.32E-04	3.23E-05	3.28E-05	6.72E-05	2.72E-06	1.12E-09	9.89E-05	9.56E-05
9	D16	60	Combination Short Haul Truck	56	0.00E+00	3.29E-05	2.29E-06	2.14E+01	1.17E-07	2.88E-02	2.44E-05	3.57E-02	3.07E-03	6.07E-04	2.09E-03	6.83E-04	6.84E-04	3.23E-03	7.17E-05	0.00E+00	1.41E-03	6.72E-03
9	D16	60	Combination Long Haul Truck	51	0.00E+00	2.96E-05	1.92E-06	2.01E+01	1.34E-07	3.10E-02	2.28E-05	3.54E-02	3.08E-03	5.23E-04	2.16E-03	5.87E-04	5.95E-04	3.07E-03	6.72E-05	0.00E+00	1.56E-03	6.67E-03
10	D17	70	Passenger Car	92	0.00E+00	1.20E-06	1.29E-07	4.39E+00	8.33E-06	3.11E-02	2.66E-06	1.84E-04	7.10E-04	1.14E-04	2.59E-04	1.67E-04	1.71E-04	1.64E-05	2.21E-05	6.02E-09	8.76E-05	2.87E-05
10	D17	70	Passenger Truck	153	0.00E+00	2.62E-06	2.77E-07	1.01E+01	1.66E-05	5.72E-02	5.45E-06	5.74E-04	1.29E-03	2.10E-04	5.20E-04	3.38E-04	3.46E-04	7.44E-05	5.05E-05	1.35E-08	1.73E-04	9.44E-05
10	D17	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	D17	70	Combination Short Haul Truck	7	0.00E+00	3.81E-06	2.71E-07	2.76E+00	1.24E-08	3.28E-03	2.79E-06	4.00E-03	2.90E-04	6.33E-05	2.32E-04	8.01E-05	8.00E-05	4.16E-04	9.24E-06	0.00E+00	1.52E-04	7.53E-04
10	D17	70	Combination Long Haul Truck	7	0.00E+00	3.44E-06	2.30E-07	2.58E+00	1.43E-08	3.47E-03	2.61E-06	3.94E-03	2.88E-04	5.25E-05	2.40E-04	6.96E-05	7.03E-05	3.94E-04	8.63E-06	0.00E+00	1.70E-04	7.42E-04
10	D18	70	Passenger Car	377	0.00E+00	4.93E-06	5.33E-07	1.81E+01	3.43E-05	1.28E-01	1.10E-05	7.56E-04	2.92E-03	4.69E-04	1.07E-03	6.87E-04	7.05E-04	6.76E-05	9.10E-05	2.48E-08	3.61E-04	1.18E-04
10	D18	70	Passenger Truck	632	0.00E+00	1.08E-05	1.14E-06	4.17E+01	6.83E-05	2.35E-01	2.24E-05	2.36E-03	5.32E-03	8.65E-04	2.14E-03	1.39E-03	1.43E-03	3.06E-04	2.08E-04	5.56E-08	7.14E-04	3.89E-04
10	D18	70	Single Unit Short Haul Truck	35	0.00E+00	8.33E-06	4.17E-07	6.52E+00	6.81E-06	1.30E-02	8.87E-06	4.10E-03	5.86E-04	1.17E-04	1.01E-03	2.49E-04	2.53E-04	6.54E-04	2.63E-05	1.06E-08	7.57E-04	7.68E-04
10	D18	70	Single Unit Long Haul Truck	2	0.00E+00	3.63E-07	1.80E-08	2.77E-01	2.94E-07	5.48E-04	3.87E-07	1.76E-04	2.68E-05	5.22E-06	4.42E-05	1.08E-05	1.10E-05	2.76E-05	1.12E-06	4.48E-10	3.32E-05	3.30E-05
10	D18	70	Combination Short Haul Truck	33	0.00E+00	1.74E-05	1.24E-06	1.26E+01	5.66E-08	1.50E-02	1.28E-05	1.83E-02	1.32E-03	2.89E-04	1.06E-03	3.66E-04	3.66E-04	1.90E-03	4.23E-05	0.00E+00	6.95E-04	3.44E-03
10	D18	70	Combination Long Haul Truck	31	0.00E+00	1.57E-05	1.05E-06	1.18E+01	6.52E-08	1.59E-02	1.20E-05	1.80E-02	1.32E-03	2.40E-04	1.10E-03	3.18E-04	3.22E-04	1.80E-03	3.94E-05	0.00E+00	7.75E-04	3.39E-03
11	D19	80	Passenger Car	1342	0.00E+00	1.63E-05	1.77E-06	6.25E+01	1.14E-04	4.34E-01	3.63E-05	2.76E-03	7.38E-03	1.28E-03	3.53E-03	2.28E-03	2.34E-03	2.10E-04	3.15E-04	8.83E-08	1.20E-03	4.31E-04
11	D19	80	Passenger Truck	2247	0.00E+00	3.50E-05	3.72E-06	1.44E+02	2.25E-04	7.99E-01	7.35E-05	8.19E-03	1.32E-02	2.35E-03	7.03E-03	4.57E-03	4.68E-03	1.01E-03	7.22E-04	1.97E-07	2.35E-03	1.34E-03
11	D19	80	Single Unit Short Haul Truck	103	0.00E+00	1.94E-05	9.63E-07	1.90E+01	1.56E-05	3.81E-02	2.06E-05	9.93E-03	1.22E-03	2.76E-04	2.36E-03	5.74E-04	5.84E-04	1.91E-03	7.66E-05	3.04E-08	1.78E-03	1.86E-03
11	D19	80	Single Unit Long Haul Truck	5	0.00E+00	8.43E-07	4.15E-08	8.05E-01	6.66E-07	1.59E-03	8.97E-07	4.25E-04	5.56E-05	1.22E-05	1.03E-04	2.47E-05	2.51E-05	8.03E-05	3.25E-06	1.27E-09	7.78E-05	7.95E-05
11	D19	80	Combination Short Haul Truck	52	0.00E+00	2.28E-05	1.63E-06	1.88E+01	7.18E-08	2.02E-02	1.66E-05	2.33E-02	1.38E-03	3.39E-04	1.36E-03	4.81E-04	4.77E-04	2.84E-03	6.30E-05	0.00E+00	8.79E-04	4.40E-03
11	D19	80	Combination Long Haul Truck	47	0.00E+00	2.04E-05	1.37E-06	1.74E+01	8.30E-08	2.09E-02	1.54E-05	2.27E-02	1.35E-03	2.71E-04	1.40E-03	4.13E-04	4.16E-04	2.66E-03	5.83E-05	0.00E+00	9.84E-04	4.27E-03
11	D20	80	Passenger Car	778	0.00E+00	9.46E-06	1.02E-06	3.62E+01	6.58E-05	2.51E-01	2.10E-05	1.60E-03	4.28E-03	7.44E-04	2.05E-03	1.32E-03	1.35E-03	1.22E-04	1.83E-04	5.12E-08	6.93E-04	2.50E-04
11	D20	80	Passenger Truck	1302	0.00E+00	2.03E-05	2.15E-06	8.37E+01	1.30E-04	4.63E-01	4.26E-05	4.75E-03	7.67E-03	1.36E-03	4.07E-03	2.65E-03	2.71E-03	5.85E-04	4.18E-04	1.14E-07	1.36E-03	7.75E-04
11	D20	80	Single Unit Short Haul Truck	167	0.00E+00	3.12E-05	1.55E-06	3.06E+01	2.51E-05	6.14E-02	3.32E-05	1.60E-02	1.96E-03	4.44E-04	3.80E-03	9.25E-04	9.40E-04	3.07E-03	1.23E-04	4.90E-08	2.86E-03	2.99E-03
11	D20	80	Single Unit Long Haul Truck	7	0.00E+00	1.36E-06	6.69E-08	1.30E+00	1.07E-06	2.56E-03	1.44E-06	6.84E-04	8.96E-05	1.96E-05	1.66E-04	3.98E-05	4.05E-05	1.29E-04	5.23E-06	2.04E-09	1.25E-04	1.28E-04
11	D20	80	Combination Short Haul Truck	52	0.00E+00	2.28E-05	1.63E-06	1.88E+01	7.18E-08	2.02E-02	1.66E-05	2.33E-02	1.38E-03	3.39E-04	1.36E-03	4.81E-04	4.77E-04	2.84E-03	6.30E-05	0.00E+00	8.79E-04	4.40E-03
11	D20	80	Combination Long Haul Truck	47	0.00E+00	2.04E-05	1.37E-06	1.74E+01	8.30E-08	2.09E-02	1.54E-05	2.27E-02	1.35E-03	2.71E-04	1.40E-03	4.13E-04	4.16E-04	2.66E-03	5.83E-05	0.00E+00	9.84E-04	4.27E-03
11	D21	80	Passenger Car	1123	0.00E+00	1.37E-05	1.48E-06	5.23E+01	9.50E-05	3.63E-01	3.04E-05	2.31E-03	6.18E-03	1.07E-03	2.96E-03	1.91E-03	1.96E-03	1.76E-04	2.64E-04	7.39E-08	1.00E-03	3.60E-04
11	D21	80	Passenger Truck	1880	0.00E+00	2.93E-05	3.11E-06	1.21E+02	1.88E-04	6.68E-01	6.15E-05	6.85E-03	1.11E-02	1.97E-03	5.88E-03	3.82E-03	3.91E-03	8.45E-04	6.04E-04	1.64E-07	1.97E-03	1.12E-03
11	D21	80	Single Unit Short Haul Truck	42	0.00E+00	7.90E-06	3.92E-07	7.75E+00	6.36E-06	1.55E-02	8.41E-06	4.05E-03	4.96E-04	1.12E-04	9.61E-04	2.34E-04	2.38E-04	7.77E-04	3.12E-05	1.24E-08	7.23E-04	7.57E-04
11	D21	80	Single Unit Long Haul Truck	2	0.00E+00	3.43E-07	1.69E-08	3.28E-01	2.71E-07	6.46E-04	3.65E-07	1.73E-04	2.27E-05	4.95E-06	4.19E-05	1.01E-05	1.02E-05	3.27E-05	1.32E-06	5.16E-10	3.17E-05	3.24E-05
11	D21	80	Combination Short Haul Truck	16	0.00E+00	6.90E-06	4.93E-07	5.70E+00	2.18E-08	6.11E-03	5.04E-06	7.07E-03	4.17E-04	1.03E-04	4.11E-04	1.46E-04	1.44E-04	8.60E-04	1.91E-05	0.00E+00	2.66E-04	1.33E-03
11	D21	80	Combination Long Haul Truck	14	0.00E+00	6.18E-06	4.15E-07	5.27E+00	2.51E-08	6.33E-03	4.68E-06	6.86E-03	4.08E-04	8.22E-05	4.24E-04	1.25E-04	1.26E-04	8.05E-04	1.77E-05	0.00E+00	2.98E-04	1.29E-03
11	D22	80	Passenger Car	728	0.00E+00	8.85E-06	9.58E-07	3.39E+01	6.16E-05	2.35E-01	1.97E-05	1.50E-03	4.00E-03	6.96E-04	1.92E-03	1.24E-03	1.27E-03	1.14E-04	1.71E-04	4.79E-08	6.49E-04	2.34E-04
11	D22	80	Passenger Truck	1219	0.00E+00	1.90E-05	2.02E-06	7.83E+01	1.22E-04	4.33E-01	3.98E-05	4.44E-03	7.18E-03	1.27E-03	3.81E-03	2.48E-03	2.54E-03	5.48E-04	3.92E-04	1.07E-07	1.28E-03	7.26E-04
11	D22	80	Single Unit Short Haul Truck	211	0.00E+00	3.95E-05	1.96E-06	3.87E+01	3.18E-05	7.76E-02	4.20E-05	2.02E-02	2.48E-03	5.61E-04	4.81E-03	1.17E-03	1.19E-03	3.89E-03	1.56E-04	6.19E-08	3.62E-03	3.78E-03
11	D22	80	Single Unit Long Haul Truck	9	0.00E+00	1.72E-06	8.46E-08	1.64E+00	1.36E-06	3.23E-03	1.83E-06	8.65E-04	1.13E-04	2.48E-05	2.10E-04	5.03E-05	5.12E-05	1.64E-04	6.62E-06	2.58E-09	1.58E-04	1.62E-04
11	D22	80	Combination Short Haul Truck	134	0.00E+00	5.91E-05	4.23E-06	4.89E+01	1.86E-07	5.23E-02	4.32E-05	6.06E-02	3.58E-03	8.81E-04	3.52E-03	1.25E-03	1.24E-03	7.37E-03	1.64E-04	0.00E+00	2.28E-03	1.14E-02
11	D22	80	Combination Long Haul Truck	123	0.00E+00	5.29E-05	3.56E-06	4.52E+01	2.15E-07	5.42E-02	4.01E-05	5.88E-02	3.50E-03	7.04E-04	3.63E-03	1.07E-03	1.08E-03	6.90E-03	1.51E-04	0.00E+00	2.55E-03	1.11E-02
9	D23	60	Passenger Car	1109	0.00E+00	1.66E-05	1.80E-06	5.56E+01	1.16E-04	4.29E-01	3.69E-05	2.26E-03	1.13E-02	1.73E-03	3.60E-03	2.32E-03	2.38E-03	2.32E-04	2.79E-04	7.69E-08	1.22E-03	3.54E-04
9	D23	60	Passenger Truck	1858	0.00E+00	3.66E-05	3.87E-06	1.27E+02	2.29E-04	7.66E-01	7.55E-05	7.38E-03	2.07E-02	3.21E-03	7.18E-03	4.68E-03	4.79E-03	9.84E-04	6.31E-04	1.74E-07	2.39E-03	1.22E-03
9	D23	60	Single Unit Short Haul Truck	88	0.00E+00	2.59E-05	1.29E-06	1.65E+01	2.13E-05	3.19E-02	2.76E-05	1.23E-02	2.10E-03	3.80E-04	3.14E-03	7.76E-04	7.89E-04	1.65E-03	6.66E-05	2.74E-08	2.36E-03	2.31E-03
9	D23	60	Single Unit Long Haul Truck	4	0.00E+00	1.13E-06	5.62E-08	7.03E-01	9.26E-07	1.35E-03	1.21E-06	5.33E-04	9.41E-05	1.68E-05	1.38E-04	3.38E-05	3.43E-05	7.03E-05	2.84E-06	1.17E-09	1.03E-04	9.99E-05
9	D23	60	Combination Short Haul Truck	35	0.00E+00	2.03E-05	1.42E-06	1.32E+01	7.19E-08	1.78E-02	1.51E-05	2.20E-02	1.89E-03	3.74E-04	1.29E-03	4.21E-04	4.22E-04	1.99E-03	4.42E-05	0.00E+00	8.70E-04	4.15E-03
9	D23	60	Combination Long Haul Truck	31	0.00E+00	1.82E-05	1.19E-06	1.24E+01	8.25E-08	1.91E-02	1.41E-05	2.18E-02	1.90E-03	3.22E-04	1.33E-03	3.62E-04	3.67E-04	1.89E-03	4.15E-05	0.00E+00	9.65E-04	4.11E-03
9	D24	60	Passenger Car	586	0.00E+00	8.78E-06	9.49E-07	2.94E+01	6.11E-05	2.27E-01	1.95E-05	1.19E-03	5.95E-03	9.13E-04	1.90E-03	1.22E-03	1.26E-03	1.22E-04	1.47E-04	4.06E-08	6.43E-04	1.87E-04
9	D24	60	Passenger Truck	981	0.00E+00	1.94E-05	2.04E-06	6.70E+01	1.21E-04	4.04E-01	3.99E-05	3.90E-03	1.09E-02	1.69E-03	3.79E-03	2.47E-03	2.53E-03	5.19E-04	3.33E-04	9.21E-08	1.26E-03	6.46E-04
9	D24

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D28	80	Passenger Truck	1228	0.00E+00	1.92E-05	2.03E-06	7.90E+01	1.23E-04	4.37E-01	4.02E-05	4.48E-03	7.23E-03	1.28E-03	3.84E-03	2.50E-03	2.56E-03	5.52E-04	3.95E-04	1.07E-07	1.29E-03	7.31E-04
11	D28	80	Single Unit Short Haul Truck	57	0.00E+00	1.08E-05	5.35E-07	1.06E+01	8.67E-06	2.12E-02	1.15E-05	5.52E-03	6.77E-04	1.53E-04	1.31E-03	3.19E-04	3.24E-04	1.06E-03	4.26E-05	1.69E-08	9.86E-04	1.03E-03
11	D28	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	2.31E-08	4.47E-01	3.70E-07	8.82E-04	4.98E-07	2.36E-04	3.09E-05	6.75E-06	5.72E-05	1.37E-05	1.40E-05	4.46E-05	1.80E-06	7.04E-10	4.32E-05	4.42E-05
11	D28	80	Combination Short Haul Truck	42	0.00E+00	1.86E-05	1.33E-06	1.54E+01	5.88E-08	1.65E-02	1.36E-05	1.91E-02	1.13E-03	2.78E-04	1.11E-03	3.93E-04	3.90E-04	2.32E-03	5.15E-05	0.00E+00	7.19E-04	3.60E-03
11	D28	80	Combination Long Haul Truck	39	0.00E+00	1.67E-05	1.12E-06	1.42E+01	6.79E-08	1.71E-02	1.26E-05	1.85E-02	1.10E-03	2.22E-04	1.15E-03	3.38E-04	3.40E-04	2.17E-03	4.77E-05	0.00E+00	8.05E-04	3.49E-03
11	D29	80	Passenger Car	226	0.00E+00	2.75E-06	2.98E-07	1.05E+01	1.91E-05	7.31E-02	6.12E-06	4.65E-04	1.24E-03	2.16E-04	5.95E-04	3.84E-04	3.94E-04	3.54E-05	5.31E-05	1.49E-08	2.02E-04	7.26E-05
11	D29	80	Passenger Truck	379	0.00E+00	5.91E-06	6.27E-07	2.43E+01	3.79E-05	1.35E-01	1.24E-05	1.38E-03	2.23E-03	3.96E-04	1.19E-03	7.70E-04	7.88E-04	1.70E-04	1.22E-04	3.31E-08	3.97E-04	2.26E-04
11	D29	80	Single Unit Short Haul Truck	22	0.00E+00	4.13E-06	2.05E-07	4.05E+00	3.32E-06	8.11E-03	4.39E-06	2.11E-03	2.59E-04	5.87E-05	5.02E-04	1.22E-04	1.24E-04	4.06E-04	1.63E-05	6.48E-09	3.78E-04	3.96E-04
11	D29	80	Single Unit Long Haul Truck	1	0.00E+00	1.80E-07	8.85E-09	1.71E-01	1.42E-07	3.38E-04	1.91E-07	9.05E-05	1.18E-05	2.59E-06	2.19E-05	5.26E-06	5.35E-06	1.71E-05	6.92E-07	2.70E-10	1.66E-05	1.69E-05
11	D29	80	Combination Short Haul Truck	15	0.00E+00	6.44E-06	4.60E-07	5.32E+00	2.03E-08	5.70E-03	4.70E-06	6.60E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.03E-04	1.78E-05	0.00E+00	2.49E-04	1.24E-03
11	D29	80	Combination Long Haul Truck	13	0.00E+00	5.77E-06	3.88E-07	4.92E+00	2.35E-08	5.91E-03	4.37E-06	6.41E-03	3.81E-04	7.67E-05	3.96E-04	1.17E-04	1.18E-04	7.52E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	D30	80	Passenger Car	734	0.00E+00	8.92E-06	9.65E-07	3.42E+01	6.21E-05	2.37E-01	1.98E-05	1.51E-03	4.03E-03	7.01E-04	1.93E-03	1.24E-03	1.28E-03	1.15E-04	1.72E-04	4.83E-08	6.54E-04	2.35E-04
11	D30	80	Passenger Truck	1228	0.00E+00	1.92E-05	2.03E-06	7.90E+01	1.23E-04	4.37E-01	4.02E-05	4.48E-03	7.23E-03	1.28E-03	3.84E-03	2.50E-03	2.56E-03	5.52E-04	3.95E-04	1.07E-07	1.29E-03	7.31E-04
11	D30	80	Single Unit Short Haul Truck	57	0.00E+00	1.08E-05	5.35E-07	1.06E+01	8.67E-06	2.12E-02	1.15E-05	5.52E-03	6.77E-04	1.53E-04	1.31E-03	3.19E-04	3.24E-04	1.06E-03	4.26E-05	1.69E-08	9.86E-04	1.03E-03
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	2.31E-08	4.47E-01	3.70E-07	8.82E-04	4.98E-07	2.36E-04	3.09E-05	6.75E-06	5.72E-05	1.37E-05	1.40E-05	4.46E-05	1.80E-06	7.04E-10	4.32E-05	4.42E-05
11	D30	80	Combination Short Haul Truck	42	0.00E+00	1.86E-05	1.33E-06	1.54E+01	5.88E-08	1.65E-02	1.36E-05	1.91E-02	1.13E-03	2.78E-04	1.11E-03	3.93E-04	3.90E-04	2.32E-03	5.15E-05	0.00E+00	7.19E-04	3.60E-03
11	D30	80	Combination Long Haul Truck	39	0.00E+00	1.67E-05	1.12E-06	1.42E+01	6.79E-08	1.71E-02	1.26E-05	1.85E-02	1.10E-03	2.22E-04	1.15E-03	3.38E-04	3.40E-04	2.17E-03	4.77E-05	0.00E+00	8.05E-04	3.49E-03
11	D31	80	Passenger Car	202	0.00E+00	2.46E-06	2.66E-07	9.40E+00	1.71E-05	6.53E-02	5.46E-06	4.15E-04	1.11E-03	1.93E-04	5.31E-04	3.43E-04	3.52E-04	3.16E-05	4.74E-05	1.33E-08	1.80E-04	6.48E-05
11	D31	80	Passenger Truck	338	0.00E+00	5.27E-06	5.59E-07	2.17E+01	3.38E-05	1.20E-01	1.11E-05	1.23E-03	1.99E-03	3.53E-04	1.06E-03	6.87E-04	7.04E-04	1.52E-04	1.09E-04	2.96E-08	3.54E-04	2.01E-04
11	D31	80	Single Unit Short Haul Truck	28	0.00E+00	5.20E-06	2.59E-07	5.11E+00	4.19E-06	1.02E-02	5.54E-06	2.67E-03	3.27E-04	7.40E-05	6.33E-04	1.54E-04	1.57E-04	5.12E-04	2.06E-05	8.17E-09	4.77E-04	4.99E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	2.16E-01	1.79E-07	4.26E-04	2.41E-07	1.14E-04	1.49E-05	3.26E-06	2.76E-05	6.63E-06	6.75E-06	2.16E-05	8.72E-07	3.40E-10	2.09E-05	2.13E-05
11	D31	80	Combination Short Haul Truck	15	0.00E+00	6.44E-06	4.60E-07	5.32E+00	2.03E-08	5.70E-03	4.70E-06	6.60E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.03E-04	1.78E-05	0.00E+00	2.49E-04	1.24E-03
11	D31	80	Combination Long Haul Truck	13	0.00E+00	5.77E-06	3.88E-07	4.92E+00	2.35E-08	5.91E-03	4.37E-06	6.41E-03	3.81E-04	7.67E-05	3.96E-04	1.17E-04	1.18E-04	7.52E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	D32	80	Passenger Car	416	0.00E+00	5.06E-06	5.47E-07	1.94E+01	3.52E-05	1.34E-01	1.12E-05	8.54E-04	2.29E-03	3.98E-04	1.09E-03	7.05E-04	7.24E-04	6.51E-05	9.76E-05	2.74E-08	3.70E-04	1.33E-04
11	D32	80	Passenger Truck	696	0.00E+00	1.09E-05	1.15E-06	4.47E+01	6.96E-05	2.47E-01	2.28E-05	2.54E-03	4.10E-03	7.28E-04	2.18E-03	1.41E-03	1.45E-03	3.13E-04	2.24E-04	6.09E-08	7.29E-04	4.14E-04
11	D32	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.14E-03	5.07E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.19E-05	1.27E-08	7.40E-04	7.74E-04
11	D32	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.61E-04	3.74E-07	1.77E-04	2.32E-05	5.07E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.31E-05
11	D32	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	1.00E-06	1.16E+01	4.42E-08	1.24E-02	1.02E-05	1.44E-02	8.49E-04	2.09E-04	8.35E-04	2.96E-04	2.94E-04	1.75E-03	3.88E-05	0.00E+00	5.41E-04	2.71E-03
11	D32	80	Combination Long Haul Truck	29	0.00E+00	1.26E-05	8.44E-07	1.07E+01	5.11E-08	1.29E-02	9.52E-06	1.40E-02	8.30E-04	1.67E-04	8.63E-04	2.55E-04	2.56E-04	1.64E-03	3.59E-05	0.00E+00	6.06E-04	2.63E-03
9	D33	60	Passenger Car	274	0.00E+00	4.11E-06	4.45E-07	1.38E+01	2.86E-05	1.06E-01	9.14E-06	5.60E-04	2.79E-03	4.28E-04	8.90E-04	5.73E-04	5.88E-04	5.73E-05	6.90E-05	1.90E-08	3.01E-04	8.75E-05
9	D33	60	Passenger Truck	460	0.00E+00	9.06E-06	9.57E-07	3.14E+01	5.67E-05	1.89E-01	1.87E-05	1.82E-03	5.11E-03	7.93E-04	1.78E-03	1.16E-03	1.19E-03	2.43E-04	1.56E-04	4.31E-08	5.91E-04	3.02E-04
9	D33	60	Single Unit Short Haul Truck	40	0.00E+00	1.18E-05	5.91E-07	7.52E+00	9.74E-06	1.46E-02	1.26E-05	5.63E-03	9.57E-04	1.73E-04	1.44E-03	3.54E-04	3.60E-04	7.53E-04	3.04E-05	1.25E-08	1.08E-03	1.05E-03
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	5.16E-07	2.57E-08	3.21E-01	4.23E-07	6.18E-04	5.51E-07	2.44E-04	4.30E-05	7.68E-06	6.29E-05	1.54E-05	1.57E-05	3.21E-05	1.30E-06	5.33E-10	4.72E-05	4.56E-05
9	D33	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.63E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.08E-03
9	D33	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.05E-03
9	D34	60	Passenger Car	230	0.00E+00	3.45E-06	3.73E-07	1.15E+01	2.40E-05	8.92E-02	7.67E-06	4.70E-04	2.34E-03	3.59E-04	7.47E-04	4.81E-04	4.94E-04	4.81E-05	5.79E-05	1.60E-08	2.53E-04	7.34E-05
9	D34	60	Passenger Truck	386	0.00E+00	7.61E-06	8.03E-07	2.64E+01	4.76E-05	1.59E-01	1.57E-05	1.53E-03	4.29E-03	6.66E-04	1.49E-03	9.71E-04	9.95E-04	2.04E-04	1.31E-04	3.62E-08	4.96E-04	2.54E-04
9	D34	60	Single Unit Short Haul Truck	9	0.00E+00	2.53E-06	1.27E-07	1.61E+00	2.09E-06	3.12E-03	2.70E-06	1.21E-03	2.05E-04	3.72E-05	3.08E-04	7.59E-05	7.72E-05	1.61E-04	6.51E-06	2.68E-09	2.30E-04	2.26E-04
9	D34	60	Combination Short Haul Truck	4	0.00E+00	2.15E-06	1.50E-07	1.40E+00	7.63E-09	1.88E-03	1.60E-06	2.33E-03	2.01E-04	3.97E-05	1.37E-04	4.47E-05	4.48E-05	2.11E-04	4.69E-06	0.00E+00	9.23E-05	4.40E-04
9	D34	60	Combination Long Haul Truck	3	0.00E+00	1.93E-06	1.26E-07	1.31E+00	8.75E-09	2.03E-03	1.49E-06	2.31E-03	2.02E-04	3.42E-05	1.41E-04	3.84E-05	3.89E-05	2.01E-04	4.40E-06	0.00E+00	1.02E-04	4.36E-04
9	D35	60	Passenger Car	361	0.00E+00	5.40E-06	5.85E-07	1.81E+01	3.76E-05	1.40E-01	1.20E-05	7.36E-04	3.66E-03	5.62E-04	1.17E-03	7.54E-04	7.74E-04	7.54E-05	9.07E-05	2.50E-08	3.96E-04	1.15E-04
9	D35	60	Passenger Truck	604	0.00E+00	1.19E-05	1.26E-06	4.13E+01	7.45E-05	2.49E-01	2.46E-05	2.40E-03	6.72E-03	1.04E-03	2.34E-03	1.52E-03	1.56E-03	3.20E-04	2.05E-04	5.67E-08	7.77E-04	3.98E-04
9	D35	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.55E-07	1.97E+00	2.55E-06	3.81E-03	3.30E-06	1.47E-03	2.51E-04	4.54E-05	3.76E-04	9.28E-05	9.43E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.76E-04
9	D35	60	Combination Short Haul Truck	6	0.00E+00	3.69E-06	2.57E-07	2.40E+00	1.31E-08	3.23E-03	2.74E-06	4.00E-03	3.44E-04	6.80E-05	2.35E-04	7.66E-05	7.68E-05	3.62E-04	8.04E-06	0.00E+00	1.58E-04	7.54E-04
9	D35	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.25E+00	1.50E-08	3.48E-03	2.56E-06	3.97E-03	3.46E-04	5.86E-05	2.42E-04	6.58E-05	6.67E-05	3.44E-04	7.54E-06	0.00E+00	1.75E-04	7.47E-04
9	D36	60	Passenger Car	112	0.00E+00	1.67E-06	1.81E-07	5.61E+00	1.17E-05	4.33E-02	3.72E-06	2.28E-04	1.13E-03	1.74E-04	3.62E-04	2.34E-04	2.40E-04	2.34E-05	2.81E-05	7.75E-09	1.23E-04	3.56E-05
9	D36	60	Passenger Truck	187	0.00E+00	3.69E-06	3.90E-07	1.28E+01	2.31E-05	7.72E-02	7.61E-06	7.43E-04	2.08E-03	3.23E-04	7.24E-04	4.71E-04	4.83E-04	9.91E-05	6.36E-05	1.76E-08	2.41E-04	1.23E-04
9	D36	60	Single Unit Short Haul Truck	22	0.00E+00	6.47E-06	3.23E-07	4.12E+00	5.33E-06	7.98E-03	6.90E-06	3.08E-03	5.24E-04	9.50E-05	7.86E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.86E-09	5.89E-04	5.78E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.76E-01	2.32E-07	3.39E-04	3.02E-07	1.33E-04	2.35E-05	4.20E-06	3.44E-05	8.44E-06	8.58E-06	1.76E-05	7.11E-07	2.92E-10	2.59E-05	2.50E-05
9	D36	60	Combination Short Haul Truck	17	0.00E+00	1.02E-05	7.08E-07	6.60E+00	3.60E-08	8.88E-03	7.53E-06	1.10E-02	9.45E-04	1.87E-04	6.46E-04	2.11E-04	2.11E-04	9.96E-04	2.21E-05	0.00E+00	4.35E-04	2.07E-03
9	D36	60	Combination Long Haul Truck	16	0.00E+00	9.11E-06	5.93E-07	6.19E+00	4.12E-08	9.57E-03	7.03E-06	1.09E-02	9.50E-04	1.61E-04	6.66E-04	1.81E-04	1.83E-04	9.46E-04	2.07E-05	0.00E+00	4.83E-04	2.06E-03
9	D37	60	Passenger Car	187	0.00E+00	2.79E-06	3.02E-07	9.35E+00	1.94E-05	7.22E-02	6.21E-06	3.81E-04	1.89E-03	2.91E-04	6.05E-04	3.90E-04	4.00E-04	3.90E-05	4.69E-05	1.29E-08	2.05E-04	5.95E-05
9	D37	60	Passenger Truck	312	0.00E+00	6.16E-06	6.51E-07	2.13E+01	3.85E-05	1.29E-01	1.27E-05	1.24E-03	3.47E-03	5.39E-04	1.21E-03	7.87E-04	8.06E-04	1.65E-04	1.06E-04	2.93E-08	4.02E-04	2.06E-04
9	D37	60	Single Unit Short Haul Truck	6	0.00E+00	1.69E-06	8.44E-08	1.07E+00	1.39E-06	2.08E-03	1.80E-06	8.04E-04	1.37E-04	2.48E-05	2.05E-04	5.06E-05	5.14E-05	1.08E-04	4.34E-06	1.79E-09	1.54E-04	1.51E-04
9	D37	60	Combination Short Haul Truck	7	0.00E+00	4.31E-06	3.00E-07	2.80E+00	1.53E-08	3.77E-03	3.20E-06	4.67E-03	4.01E-04	7.94E-05	2.74E-04	8.94E-05	8.96E-05	4.22E-04	9.38E-06	0.00E+00	1.85E-04	8.80E-04
9	D37	60	Combination Long Haul Truck	7	0.00E+00	3.87E-06	2.52E-07	2.63E+00	1.75E-08	4.06E-03	2.98E-06	4.63E-03	4.03E-04	6.84E-05	2.82E-04	7.68E-05	7.78E-05	4.01E-04	8.80E-06	0.00E+00	2.05E-04	8.72E-04
9	D38	60	Passenger Car	434	0.00E+00	6.51E-06	7.04E-07	2.18E+01	4.53E-05	1.68E-01	1.45E-05	8.86E-04	4.41E-03	6.77E-04	1.41E-03	9.08E-04	9.32E-04	9.08E-05	1.09E-04	3.01E-08	4.77E-04	1.38E-04
9	D38	60	Passenger Truck	728	0.00E+00	1.44E-05	1.52E-06	4.97E+01	8.97E-05	3.00E-01	2.96E-05	2.89E-03	8.09E-03	1.26E-03	2.81E-03	1.83E-03	1.88E-03	3.85E-04	2.47E-04	6.83E-08	9.35E-04	4.79E-04
9	D38	60	Single Unit Short Haul Truck	17	0.00E+00	5.06E-06	2.53E-07	3.22E+00	4.17E-06	6.24E-03	5.40E-06	2.41E-03	4.10E-04	7.43E-05	6.15E-04	1.52E-04	1.54E-04	3.23E-04	1.30E-05	5.37E-09	4.61E-04	4.52E-04
9	D38	60	Single Unit Long Haul Truck	1	0.00E+00	2.21E-07	1.10E-08	1.38E-01	1.81E-07	2.65E-04	2.36E-07	1.04E-04	1.84E-05	3.29E-06	2.69E-05	6.60E-06	6.71E-06	1.37E-05	5.56E-07	2.28E-10	2.02E-05	1.96E-05
9	D38	60	Combination Short Haul Truck	24	0.00E+00	1.42E-05	9.86E-07	9.21E+00	5.01E-08	1.24E-02	1.05E-05	1.53E-02	1.32E-03	2.61E-04	9.00E-04	2.94E-04	2.94E-04	1.39E-03	3.08E-05	0.00E+00	6.06E-04	2.89E-03
9	D38	60	Combination Long Haul Truck	22	0.00E+00	1.27E-05	8.27E-07	8.63E+00	5.75E-08	1.33E-02	9.79E-06	1.52E-02	1.32E-03	2.25E-04	9.28E-04	2.52E-04	2.56E-04	1.32E-03	2.89E-05	0.00E+00	6.73E-04	2.87E-03
9	D39	60	Passenger Car	132	0.00E+00	1.97E-06	2.13E-07	6.60E+00	1.37E-05	5.09E-02	4.38E-06	2.68E-04	1.34E-03	2.05E-04	4.27E-04	2.75E-04	2.82E-04	2.75E-05	3.31E-05	9.12E-09	1.44E-04	4.19E-05
9	D39	60	Passenger Truck	220	0.00E+00	4.35E-06	4.59E-07	1.51E+01	2.72E-05	9.08E-02	8.96E-06	8.75E-04	2.45E-03	3.80E-04	8.52E-04	5.55E-04	5.68E-04	1.17E-04	7.49E-05	2.07E-08	2.83E-04	1.45E-04
9	D39	60	Combination Short Haul Truck	2	0.00E+00	9.23E-07	6.43E-08	6.00E-01	3.27E-09	8.07E-04	6.85E-07	1.00E-03	8.59E-05	1.70E-05	5.87E-05	1.92E-05	1.92E-05	9.05E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	D39	60	Combination Long Haul Truck	1	0.00E+00	8.29E-07	5.39E-08	5.63E-01	3.75E-09	8.70E-04	6.39E-07	9.92E-04	8.64E-05	1.47E-05	6.05E-05	1.65E-05	1.67E-05	8.60E-05	1.89E-06	0.00E+00	4.39E-05	1.87E-04
9	D40	60	Passenger Car	321	0.00E+00	4.81E-06	5.20E-07	1.61E+01	3.35E-05	1.24E-01	1.07E-05	6.55E-04	3.26E-03	5.00E-04	1.04E-03	6.71E-04	6.89E-04	6.71E-05	8.08E-05	2.23E-08	3.52E-04	1.02E-04
9	D40	60	Passenger Truck	538	0.00E+00	1.06E-05	1.12E-06	3.67E+01	6.63E-05	2.22E-01	2.19E-05	2.14E-03	5.98E-03	9.28E-04	2.08E-03	1.35E-03	1.39E-03	2.85E-04	1.83E-04	5.05E-08	6.91E-04	3.54E-04
9	D40	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.88E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.12E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	D40	60	Combination Short Haul Truck	16	0.00E+00	9.23E-06	6.43E-07	6.00E+00	3.27E-08	8.07E-03	6.85E-06	1.00E-02	8.59E-04	1.70E-04	5.87E-04	1.92E-04	1.92E-04	9.05E-04	2.01E-05	0.00E+00	3.95E-04	1.89E-03
9	D40	60	Combination Long Haul Truck	14	0.00E+00	8.29E-06	5.39E-07	5.63E+00	3.75E-08	8.70E-03	6.39E-06	9.92E-03	8.64E-04	1.47E-04	6.05E-04	1.65E-04	1.67E-04	8.60E-04	1.89E-05	0.00E+00	4.39E-04	1.87E-03
9	D41	60	Passenger Car	218	0.00E+00	3.26E-06	3.53E-07	1.09E+01	2.27E-05	8.42E-02	7.25E-06	4.44E-04	2.21E-03	3.39E-04	7.05E-04	4.55E-04	4.67E-04	4.55E-05	5.47E-05	1.51E-08	2.39E-04	6.94E-05
9	D41	60	Passenger Truck	364	0.00E+00	7.19E-06	7.59E-07	2.49E+01	4.49E-05	1.50E-01	1.48E-05	1.45E-03	4.05E-03	6.29E-04	1.41E-03	9.18E-04	9.40E-04	1.93E-04	1.24E-04	3.42E-08	4.68E-04	2.40E-04
9	D41	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.67E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D41	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.61E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
9	D42	60	Passenger Car	65	0.00E+00	9.69E-07	1.05E-07	3.24E+00	6.74E-06	2.50E-02	2.15E-06	1.32E-04	6.57E-04	1.01E-04	2.10E-04	1.35E-04	1.39E-04	1.35E-05	1.63E-05	4.48E-09	7.10E-05	2.06E-05
9	D42	60	Passenger Truck	108	0.00E+00	2.14E-06	2.26E-07	7.40E+00	1.34E-05	4.46E-02	4.40E-06	4.30E-04	1.20E-03	1.87E-04	4.19E-04	2.73E-04	2.79E-04	5.73E-05	3.68E-05	1.02E-08	1.39E-04	7.13E-05
9	D42	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.36E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.00E-04
9	D42	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.22E-07	3.00E+00	1.63E-08	4.04E-03	3.42E-06	5.00E-03	4.30E-04	8.51E-05	2.94E-04	9.58E-05	9.59E-05	4.53E-04	1.01E-05	0.00E+00	1.98E-04	9.43E-04
9	D42	60	Combination Long Haul Truck	7	0.00E+00	4.14E-06	2.70E-07	2.81E+00	1.87E-08	4.35E-03	3.19E-06	4.96E-03	4.32E-04	7.33E-05	3.03E-04	8.23E-05	8.34E-05	4.30E-04	9.43E-06	0.00E+00	2.19E-04	9.34E-04
9	D43	60	Passenger Car	272	0.00E+00	4.08E-06	4.41E-07	1.36E+01	2.84E-05	1.05E-01	9.06E-06	5.55E-04	2.76E-03	4.24E-04	8.82E-04	5.69E-04	5.84E-04	5.69E-05	6.85E-05	1.89E-08	2.99E-04	8.68E-05
9	D43	60	Passenger Truck	456	0.00E+00	8

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D47	60	Single Unit Short Haul Truck	85	0.00E+00	2.50E-05	1.25E-06	1.59E+01	2.06E-05	3.09E-02	2.67E-05	1.19E-02	2.03E-03	3.68E-04	3.04E-03	7.51E-04	7.63E-04	1.60E-03	6.44E-05	2.65E-08	2.28E-03	2.24E-03
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	1.09E-06	5.44E-08	6.81E-01	8.96E-07	1.31E-03	1.17E-06	5.16E-04	9.10E-05	1.63E-05	1.33E-04	3.27E-05	3.32E-05	6.80E-05	2.75E-06	1.13E-09	1.00E-04	9.67E-05
9	D47	60	Combination Short Haul Truck	56	0.00E+00	3.29E-05	2.29E-06	2.14E+01	1.17E-07	2.88E-02	2.44E-05	3.57E-02	3.07E-03	6.07E-04	2.09E-03	6.83E-04	6.84E-04	3.23E-03	7.17E-05	0.00E+00	1.41E-03	6.72E-03
9	D47	60	Combination Long Haul Truck	51	0.00E+00	2.96E-05	1.92E-06	2.01E+01	1.34E-07	3.10E-02	2.28E-05	3.54E-02	3.08E-03	5.23E-04	2.16E-03	5.87E-04	5.95E-04	3.07E-03	6.72E-05	0.00E+00	1.56E-03	6.67E-03
9	D48	60	Passenger Car	321	0.00E+00	4.81E-06	5.20E-07	1.61E+01	3.35E-05	1.24E-01	1.07E-05	6.55E-04	3.26E-03	5.00E-04	1.04E-03	6.71E-04	6.89E-04	6.71E-05	8.08E-05	2.23E-08	3.52E-04	1.02E-04
9	D48	60	Passenger Truck	538	0.00E+00	1.06E-05	1.12E-06	3.67E+01	6.63E-05	2.22E-01	2.19E-05	2.14E-03	5.98E-03	9.28E-04	2.08E-03	1.35E-03	1.39E-03	2.85E-04	1.83E-04	5.05E-08	6.91E-04	3.54E-04
9	D48	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.88E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	D48	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.12E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	D48	60	Combination Short Haul Truck	16	0.00E+00	9.23E-06	6.43E-07	6.00E+00	3.27E-08	8.07E-03	6.85E-06	1.00E-02	8.59E-04	1.70E-04	5.87E-04	1.92E-04	1.92E-04	9.05E-04	2.01E-05	0.00E+00	3.95E-04	1.89E-03
9	D48	60	Combination Long Haul Truck	14	0.00E+00	8.29E-06	5.39E-07	5.63E+00	3.75E-08	8.70E-03	6.39E-06	9.92E-03	8.64E-04	1.47E-04	6.05E-04	1.65E-04	1.67E-04	8.60E-04	1.89E-05	0.00E+00	4.39E-04	1.87E-03
9	D49	60	Passenger Car	572	0.00E+00	8.56E-06	9.26E-07	2.87E+01	5.96E-05	2.21E-01	1.90E-05	1.17E-03	5.80E-03	8.91E-04	1.85E-03	1.19E-03	1.23E-03	1.19E-04	1.44E-04	3.96E-08	6.27E-04	1.82E-04
9	D49	60	Passenger Truck	957	0.00E+00	1.89E-05	1.99E-06	6.54E+01	1.18E-04	3.95E-01	3.89E-05	3.80E-03	1.06E-02	1.65E-03	3.70E-03	2.41E-03	2.47E-03	5.07E-04	3.25E-04	8.99E-08	1.23E-03	6.30E-04
9	D49	60	Single Unit Short Haul Truck	85	0.00E+00	2.50E-05	1.25E-06	1.59E+01	2.06E-05	3.09E-02	2.67E-05	1.19E-02	2.03E-03	3.68E-04	3.04E-03	7.51E-04	7.63E-04	1.60E-03	6.44E-05	2.65E-08	2.28E-03	2.24E-03
9	D49	60	Single Unit Long Haul Truck	4	0.00E+00	1.09E-06	5.44E-08	6.81E-01	8.96E-07	1.31E-03	1.17E-06	5.16E-04	9.10E-05	1.63E-05	1.33E-04	3.27E-05	3.32E-05	6.80E-05	2.75E-06	1.13E-09	1.00E-04	9.67E-05
9	D49	60	Combination Short Haul Truck	56	0.00E+00	3.29E-05	2.29E-06	2.14E+01	1.17E-07	2.88E-02	2.44E-05	3.57E-02	3.07E-03	6.07E-04	2.09E-03	6.83E-04	6.84E-04	3.23E-03	7.17E-05	0.00E+00	1.41E-03	6.72E-03
9	D49	60	Combination Long Haul Truck	51	0.00E+00	2.96E-05	1.92E-06	2.01E+01	1.34E-07	3.10E-02	2.28E-05	3.54E-02	3.08E-03	5.23E-04	2.16E-03	5.87E-04	5.95E-04	3.07E-03	6.72E-05	0.00E+00	1.56E-03	6.67E-03
9	D50	60	Passenger Car	646	0.00E+00	9.68E-06	1.05E-06	3.24E+01	6.73E-05	2.50E-01	2.15E-05	1.32E-03	6.56E-03	1.01E-03	2.09E-03	1.35E-03	1.39E-03	1.35E-04	1.62E-04	4.48E-08	7.09E-04	2.06E-04
9	D50	60	Passenger Truck	1082	0.00E+00	2.13E-05	2.25E-06	7.39E+01	1.33E-04	4.46E-01	4.40E-05	4.30E-03	1.20E-02	1.87E-03	4.18E-03	2.72E-03	2.79E-03	5.73E-04	3.67E-04	1.02E-07	1.39E-03	7.12E-04
9	D50	60	Single Unit Short Haul Truck	109	0.00E+00	3.20E-05	1.60E-06	2.04E+01	2.64E-05	3.95E-02	3.42E-05	1.53E-02	2.60E-03	4.71E-04	3.90E-03	9.62E-04	9.77E-04	2.04E-03	8.25E-05	3.40E-08	2.92E-03	2.86E-03
9	D50	60	Single Unit Long Haul Truck	5	0.00E+00	1.40E-06	6.97E-08	8.72E-01	1.15E-06	1.68E-03	1.49E-06	6.61E-04	1.17E-04	2.08E-05	1.71E-04	4.18E-05	4.25E-05	8.71E-05	3.52E-06	1.45E-09	1.28E-04	1.24E-04
9	D50	60	Combination Short Haul Truck	64	0.00E+00	3.75E-05	2.62E-06	2.44E+01	1.33E-07	3.28E-02	2.78E-05	4.07E-02	3.49E-03	6.92E-04	2.39E-03	7.79E-04	7.80E-04	3.68E-03	8.17E-05	0.00E+00	1.61E-03	7.67E-03
9	D50	60	Combination Long Haul Truck	58	0.00E+00	3.37E-05	2.19E-06	2.29E+01	1.52E-07	3.54E-02	2.60E-05	4.03E-02	3.51E-03	5.96E-04	2.46E-03	6.69E-04	6.78E-04	3.50E-03	7.67E-05	0.00E+00	1.78E-03	7.60E-03
9	D51	60	Passenger Car	264	0.00E+00	3.95E-06	4.27E-07	1.32E+01	2.75E-05	1.02E-01	8.78E-06	5.38E-04	2.68E-03	4.11E-04	8.54E-04	5.51E-04	5.65E-04	5.51E-05	6.63E-05	1.83E-08	2.89E-04	8.40E-05
9	D51	60	Passenger Truck	441	0.00E+00	8.71E-06	9.19E-07	3.02E+01	5.44E-05	1.82E-01	1.79E-05	1.75E-03	4.91E-03	7.62E-04	1.71E-03	1.11E-03	1.14E-03	2.34E-04	1.50E-04	4.14E-08	5.67E-04	2.90E-04
9	D51	60	Single Unit Short Haul Truck	41	0.00E+00	1.21E-05	6.05E-07	7.70E+00	9.97E-06	1.49E-02	1.29E-05	5.76E-03	9.80E-04	1.78E-04	1.47E-03	3.63E-04	3.69E-04	7.71E-04	3.11E-05	1.28E-08	1.10E-03	1.08E-03
9	D51	60	Single Unit Long Haul Truck	2	0.00E+00	5.28E-07	2.63E-08	3.29E-01	4.33E-07	6.33E-04	5.64E-07	2.49E-04	4.40E-05	7.86E-06	6.44E-05	1.58E-05	1.60E-05	3.28E-05	1.33E-06	5.45E-10	4.83E-05	4.67E-05
9	D51	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.33E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.51E-03
9	D51	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.32E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.49E-03
9	D52	60	Passenger Car	252	0.00E+00	3.77E-06	4.08E-07	1.26E+01	2.63E-05	9.75E-02	8.39E-06	5.14E-04	2.56E-03	3.93E-04	8.17E-04	5.27E-04	5.40E-04	5.26E-05	6.34E-05	1.75E-08	2.76E-04	8.03E-05
9	D52	60	Passenger Truck	422	0.00E+00	8.32E-06	8.79E-07	2.88E+01	5.20E-05	1.74E-01	1.72E-05	1.68E-03	4.69E-03	7.28E-04	1.63E-03	1.06E-03	1.09E-03	2.23E-04	1.43E-04	3.96E-08	5.43E-04	2.78E-04
9	D52	60	Single Unit Short Haul Truck	22	0.00E+00	6.47E-06	3.23E-07	4.12E+00	5.33E-06	7.98E-03	6.90E-06	3.08E-03	5.24E-04	9.50E-05	7.86E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.86E-09	5.89E-04	5.78E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.76E-01	2.32E-07	3.39E-04	3.02E-07	1.33E-04	2.35E-05	4.20E-06	3.44E-05	8.44E-06	8.58E-06	1.76E-05	7.11E-07	2.92E-10	2.59E-05	2.50E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	4.92E-06	3.43E-07	3.20E+00	1.74E-08	4.31E-03	3.65E-06	5.34E-03	4.58E-04	9.07E-05	3.13E-04	1.02E-04	1.02E-04	4.83E-04	1.07E-05	0.00E+00	2.11E-04	1.01E-03
9	D52	60	Combination Long Haul Truck	8	0.00E+00	4.42E-06	2.88E-07	3.00E+00	2.00E-08	4.64E-03	3.41E-06	5.29E-03	4.61E-04	7.82E-05	3.23E-04	8.78E-05	8.89E-05	4.59E-04	1.01E-05	0.00E+00	2.34E-04	9.97E-04
9	D53	60	Passenger Car	304	0.00E+00	4.55E-06	4.92E-07	1.52E+01	3.17E-05	1.18E-01	1.01E-05	6.20E-04	3.09E-03	4.74E-04	9.85E-04	6.35E-04	6.52E-04	6.35E-05	7.64E-05	2.11E-08	3.33E-04	9.69E-05
9	D53	60	Passenger Truck	509	0.00E+00	1.00E-05	1.06E-06	3.48E+01	6.28E-05	2.10E-01	2.07E-05	2.02E-03	5.66E-03	8.79E-04	1.97E-03	1.28E-03	1.31E-03	2.69E-04	1.73E-04	4.78E-08	6.54E-04	3.35E-04
9	D53	60	Single Unit Short Haul Truck	42	0.00E+00	1.24E-05	6.19E-07	7.88E+00	1.02E-05	1.53E-02	1.32E-05	5.90E-03	1.00E-03	1.82E-04	1.50E-03	3.71E-04	3.77E-04	7.89E-04	3.18E-05	1.31E-08	1.13E-03	1.11E-03
9	D53	60	Single Unit Long Haul Truck	2	0.00E+00	5.40E-07	2.69E-08	3.36E-01	4.43E-07	6.48E-04	5.77E-07	2.55E-04	4.50E-05	8.04E-06	6.59E-05	1.61E-05	1.64E-05	3.36E-05	1.36E-06	5.58E-10	4.95E-05	4.78E-05
9	D53	60	Combination Short Haul Truck	23	0.00E+00	1.35E-05	9.43E-07	8.81E+00	4.80E-08	1.18E-02	1.00E-05	1.47E-02	1.26E-03	2.49E-04	8.61E-04	2.81E-04	2.81E-04	1.33E-03	2.95E-05	0.00E+00	5.80E-04	2.77E-03
9	D53	60	Combination Long Haul Truck	21	0.00E+00	1.22E-05	7.91E-07	8.26E+00	5.50E-08	1.28E-02	9.37E-06	1.45E-02	1.27E-03	2.15E-04	8.88E-04	2.41E-04	2.45E-04	1.26E-03	2.77E-05	0.00E+00	6.43E-04	2.74E-03
9	D54	60	Passenger Car	437	0.00E+00	6.55E-06	7.09E-07	2.19E+01	4.56E-05	1.69E-01	1.46E-05	8.92E-04	4.44E-03	6.82E-04	1.42E-03	9.14E-04	9.38E-04	9.14E-05	1.10E-04	3.03E-08	4.80E-04	1.39E-04
9	D54	60	Passenger Truck	733	0.00E+00	1.44E-05	1.53E-06	5.01E+01	9.03E-05	3.02E-01	2.98E-05	2.91E-03	8.15E-03	1.26E-03	2.83E-03	1.84E-03	1.89E-03	3.88E-04	2.49E-04	6.88E-08	9.42E-04	4.82E-04
9	D54	60	Single Unit Short Haul Truck	31	0.00E+00	9.00E-06	4.50E-07	5.73E+00	7.42E-06	1.11E-02	9.60E-06	4.29E-03	7.29E-04	1.32E-04	1.09E-03	2.70E-04	2.74E-04	5.74E-04	2.32E-05	9.54E-09	8.19E-04	8.04E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	3.93E-07	1.96E-08	2.45E-01	3.22E-07	4.71E-04	4.20E-07	1.86E-04	3.27E-05	5.85E-06	4.79E-05	1.17E-05	1.19E-05	2.44E-05	9.89E-07	4.06E-10	3.60E-05	3.48E-05
9	D54	60	Combination Short Haul Truck	11	0.00E+00	6.46E-06	4.50E-07	4.20E+00	2.29E-08	5.65E-03	4.79E-06	7.00E-03	6.02E-04	1.19E-04	4.11E-04	1.34E-04	1.34E-04	6.34E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
9	D54	60	Combination Long Haul Truck	10	0.00E+00	5.80E-06	3.77E-07	3.94E+00	2.62E-08	6.09E-03	4.47E-06	6.94E-03	6.05E-04	1.03E-04	4.24E-04	1.15E-04	1.17E-04	6.02E-04	1.32E-05	0.00E+00	3.07E-04	1.31E-03
11	D55	80	Passenger Car	505	0.00E+00	6.14E-06	6.64E-07	2.35E+01	4.27E-05	1.63E-01	1.37E-05	1.04E-03	2.78E-03	4.83E-04	1.33E-03	8.56E-04	8.79E-04	7.91E-05	1.18E-04	3.32E-08	4.50E-04	1.62E-04
11	D55	80	Passenger Truck	845	0.00E+00	1.32E-05	1.40E-06	5.43E+01	8.45E-05	3.00E-01	2.76E-05	3.08E-03	4.98E-03	8.84E-04	2.64E-03	1.72E-03	1.76E-03	3.80E-04	2.71E-04	7.39E-08	8.85E-04	5.03E-04
11	D55	80	Single Unit Short Haul Truck	82	0.00E+00	1.54E-05	7.67E-07	1.51E+01	1.24E-05	3.03E-02	1.64E-05	7.91E-03	9.70E-04	2.19E-04	1.88E-03	4.57E-04	4.65E-04	1.52E-03	6.10E-05	2.42E-08	1.41E-03	1.48E-03
11	D55	80	Single Unit Long Haul Truck	4	0.00E+00	6.71E-07	3.31E-08	6.41E-01	5.31E-07	1.26E-03	7.14E-07	3.38E-04	4.43E-05	9.68E-06	8.20E-05	1.97E-05	2.00E-05	6.40E-05	2.59E-06	1.01E-09	6.19E-05	6.33E-05
11	D55	80	Combination Short Haul Truck	48	0.00E+00	2.09E-05	1.50E-06	1.73E+01	6.60E-08	1.85E-02	1.53E-05	2.14E-02	1.27E-03	3.12E-04	1.25E-03	4.42E-04	4.38E-04	2.61E-03	5.79E-05	0.00E+00	8.08E-04	4.04E-03
11	D55	80	Combination Long Haul Truck	43	0.00E+00	1.87E-05	1.26E-06	1.60E+01	7.63E-08	1.92E-02	1.42E-05	2.08E-02	1.24E-03	2.49E-04	1.29E-03	3.80E-04	3.82E-04	2.44E-03	5.36E-05	0.00E+00	9.05E-04	3.92E-03
11	D56	80	Passenger Car	320	0.00E+00	3.90E-06	4.22E-07	1.49E+01	2.71E-05	1.04E-01	8.67E-06	6.58E-04	1.76E-03	3.06E-04	8.43E-04	5.44E-04	5.58E-04	5.02E-05	7.52E-05	2.11E-08	2.85E-04	1.03E-04
11	D56	80	Passenger Truck	537	0.00E+00	8.37E-06	8.88E-07	3.45E+01	5.36E-05	1.91E-01	1.75E-05	1.96E-03	3.16E-03	5.61E-04	1.68E-03	1.09E-03	1.12E-03	2.41E-04	1.72E-04	4.69E-08	5.62E-04	3.19E-04
11	D56	80	Single Unit Short Haul Truck	74	0.00E+00	1.38E-05	6.86E-07	1.36E+01	1.11E-05	2.72E-02	1.47E-05	7.08E-03	8.68E-04	1.96E-04	1.68E-03	4.09E-04	4.16E-04	1.36E-03	5.46E-05	2.17E-08	1.27E-03	1.32E-03
11	D56	80	Single Unit Long Haul Truck	3	0.00E+00	6.01E-07	2.96E-08	5.74E-01	4.75E-07	1.13E-03	6.39E-07	3.03E-04	3.97E-05	8.67E-06	7.34E-05	1.76E-05	1.79E-05	5.73E-05	2.32E-06	9.04E-10	5.55E-05	5.67E-05
11	D56	80	Combination Short Haul Truck	40	0.00E+00	1.75E-05	1.25E-06	1.44E+01	5.51E-08	1.55E-02	1.28E-05	1.79E-02	1.06E-03	2.61E-04	1.04E-03	3.69E-04	3.66E-04	2.18E-03	4.84E-05	0.00E+00	6.75E-04	3.38E-03
11	D56	80	Combination Long Haul Truck	36	0.00E+00	1.57E-05	1.05E-06	1.34E+01	6.37E-08	1.60E-02	1.19E-05	1.74E-02	1.03E-03	2.08E-04	1.07E-03	3.17E-04	3.19E-04	2.04E-03	4.47E-05	0.00E+00	7.55E-04	3.28E-03
11	D57	80	Passenger Car	513	0.00E+00	6.24E-06	6.75E-07	2.39E+01	4.35E-05	1.66E-01	1.39E-05	1.05E-03	2.82E-03	4.91E-04	1.35E-03	8.71E-04	8.94E-04	8.04E-05	1.20E-04	3.38E-08	4.57E-04	1.65E-04
11	D57	80	Passenger Truck	860	0.00E+00	1.34E-05	1.42E-06	5.52E+01	8.59E-05	3.06E-01	2.81E-05	3.13E-03	5.06E-03	8.99E-04	2.69E-03	1.75E-03	1.79E-03	3.86E-04	2.76E-04	7.52E-08	9.00E-04	5.12E-04
11	D57	80	Single Unit Short Haul Truck	111	0.00E+00	2.08E-05	1.03E-06	2.04E+01	1.68E-05	4.09E-02	2.22E-05	1.07E-02	1.31E-03	2.96E-04	2.53E-03	6.17E-04	6.27E-04	2.05E-03	8.23E-05	3.27E-08	1.91E-03	2.00E-03
11	D57	80	Single Unit Long Haul Truck	5	0.00E+00	9.06E-07	4.46E-08	8.64E-01	7.16E-07	1.70E-03	9.63E-07	4.56E-04	5.98E-05	1.31E-05	1.11E-04	2.65E-05	2.70E-05	8.63E-05	3.49E-06	1.36E-09	8.36E-05	8.54E-05
11	D57	80	Combination Short Haul Truck	60	0.00E+00	2.64E-05	1.89E-06	2.19E+01	8.34E-08	2.34E-02	1.93E-05	2.71E-02	1.60E-03	3.94E-04	1.57E-03	5.58E-04	5.54E-04	3.30E-03	7.32E-05	0.00E+00	1.02E-03	5.11E-03
11	D57	80	Combination Long Haul Truck	55	0.00E+00	2.37E-05	1.59E-06	2.02E+01	9.64E-08	2.43E-02	1.79E-05	2.63E-02	1.56E-03	3.15E-04	1.63E-03	4.80E-04	4.83E-04	3.09E-03	6.77E-05	0.00E+00	1.14E-03	4.96E-03
11	D58	80	Passenger Car	387	0.00E+00	4.71E-06	5.09E-07	1.80E+01	3.28E-05	1.25E-01	1.05E-05	7.95E-04	2.13E-03	3.70E-04	1.02E-03	6.57E-04	6.74E-04	6.06E-05	9.08E-05	2.55E-08	3.45E-04	1.24E-04
11	D58	80	Passenger Truck	648	0.00E+00	1.01E-05	1.07E-06	4.16E+01	6.48E-05	2.30E-01	2.12E-05	2.36E-03	3.82E-03	6.77E-04	2.03E-03	1.32E-03	1.35E-03	2.91E-04	2.08E-04	5.67E-08	6.78E-04	3.86E-04
11	D58	80	Single Unit Short Haul Truck	77	0.00E+00	1.44E-05	7.13E-07	1.41E+01	1.16E-05	2.82E-02	1.53E-05	7.36E-03	9.02E-04	2.04E-04	1.75E-03	4.25E-04	4.32E-04	1.41E-03	5.68E-05	2.25E-08	1.32E-03	1.38E-03
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	6.24E-07	3.08E-08	5.96E-01	4.94E-07	1.18E-03	6.64E-07	3.15E-04	4.12E-05	9.01E-06	7.62E-05	1.83E-05	1.86E-05	5.95E-05	2.41E-06	9.39E-10	5.76E-05	5.89E-05
11	D58	80	Combination Short Haul Truck	45	0.00E+00	1.98E-05	1.41E-06	1.63E+01	6.24E-08	1.75E-02	1.44E-05	2.03E-02	1.20E-03	2.95E-04	1.18E-03	4.17E-04	4.14E-04	2.46E-03	5.47E-05	0.00E+00	7.63E-04	3.82E-03
11	D58	80	Combination Long Haul Truck	41	0.00E+00	1.77E-05	1.19E-06	1.51E+01	7.21E-08	1.81E-02	1.34E-05	1.97E-02	1.17E-03	2.36E-04	1.22E-03	3.59E-04	3.61E-04	2.31E-03	5.06E-05	0.00E+00	8.55E-04	3.71E-03
11	D59	80	Passenger Car	513	0.00E+00	6.24E-06	6.75E-07	2.39E+01	4.35E-05	1.66E-01	1.39E-05	1.05E-03	2.82E-03	4.91E-04	1.35E-03	8.71E-04	8.94E-04	8.04E-05	1.20E-04	3.38E-08	4.57E-04	1.65E-04
11	D59	80	Passenger Truck	860	0.00E+00	1.34E-05	1.42E-06	5.52E+01	8.59E-05	3.06E-01	2.81E-05	3.13E-03	5.06E-03	8.99E-04	2.69E-03	1.75E-03	1.79E-03	3.86E-04	2.76E-04	7.52E-08	9.00E-04	5.12E-04
11	D59	80	Single Unit Short Haul Truck	111	0.00E+00	2.08E-05	1.03E-06	2.04E+01	1.68E-05	4.09E-02	2.22E-05	1.07E-02	1.31E-03	2.96E-04	2.53E-03	6.17E-04	6.27E-04	2.05E-03	8.23E-05	3.27E-08	1.91E-03	2.00E-03
11	D59	80	Single Unit Long Haul Truck	5	0.00E+00	9.06E-07	4.46E-08	8.64E-01	7.16E-07	1.70E-03	9.63E-07	4.56E-04	5.98E-05	1.31E-05	1.11E-04	2.65E-05	2.70E-05	8.63E-05	3.49E-06	1.36E-09	8.36E-05	8.54E-05
11	D59	80	Combination Short Haul Truck	60	0.00E+00	2.64E-05	1.89E-06	2.19E+01	8.34E-08	2.34E-02	1.93E-05	2.71E-02	1.60E-03	3.94E-04	1.57E-03	5.58E-04	5.54E-04	3.30E-03	7.32E-05	0.00E+00	1.02E-03	5.11E-03
11	D59	80	Combination Long Haul Truck	55	0.00E+00	2.37E-05	1.59E-06	2.02E+01	9.64E-08	2.43E-02	1.79E-05	2.63E-02	1.56E-03	3.15E-04	1.63E-03	4.80E-04	4.83E-04	3.09E-03	6.77E-05	0.00E+00	1.14E-03	4.96E-03
11	D60	80	Passenger Car	387	0.00E+00	4.71E-06	5.09E-07	1.80E+01	3.28E-05	1.25E-01	1.05E-05	7.95E-04	2.13E-03	3.70E-04	1.02E-03	6.57E-04	6.74E-04	6.06E-05	9.08E-05	2.55E-08	3.45E-04	1.24E-04
11	D60	80	Passenger Truck	648	0.00E+00	1.01E-05	1.07E-06	4.16E+01	6.48E-05	2.30E-01	2.12E-05	2.36E-03	3.82E-03	6.77E-04	2.03E-03	1.32E-03	1.35E-03	2.91E-04	2.08E-04	5.67E-08	6.78E-04	3.86E-04
11	D60	80	Single Unit Short Haul Truck	77	0.00E+00	1.44E-05	7.13E-07	1.41E+01	1.16E-05	2.82E-02	1.53E-05	7.36E-03	9.02E-04	2.04E-04	1.75E-03	4.25E-04	4.32E-04	1.41E-03	5.68E-05	2.25E-08	1.32E-03	1.38E-03
11	D60	80	Single Unit Long Haul Truck	3	0.00E+00	6.24E-07	3.08E-08	5.96E-01	4.94E-07	1.18E-03	6.64E-07	3.15E-04	4.12E-05	9.01E-06	7.62E-05	1.83E-05	1.86E-05	5.95E-05	2.41E-06	9.39E-10	5.76E-05	5.89E-05
11	D60	80	Combination Short Haul Truck	45	0.00E+00	1.98E-05	1.41E-06	1.63E+01	6.24E-08	1.75E-02	1.44E-05	2.03E-02	1.20E-03	2.95E-04	1.18E-03	4.17E-04	4.14E-04	2.46E-03	5.47E-05	0.00E+00	7.63E-04	3.82E-03
11	D60	80	Combination Long Haul Truck	41	0.00E+00	1.77E-05	1.19E-06	1.51E+01	7.21E-08	1.81E-02	1.34E-05	1.97E-02	1.17E-03	2.36E-04	1.22E-03	3.59E-04	3.61E-04	2.31E-03	5.06E-05	0.00E+00	8.55E-04	3.71E-03
11	D61

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D65	80	Passenger Truck	283	0.00E+00	4.41E-06	4.68E-07	1.82E+01	2.83E-05	1.01E-01	9.25E-06	1.03E-03	1.67E-03	2.96E-04	8.85E-04	5.75E-04	5.89E-04	1.27E-04	9.09E-05	2.48E-08	2.96E-04	1.68E-04
11	D65	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.62E-07	1.11E+01	9.10E-06	2.22E-02	1.20E-05	5.79E-03	7.10E-04	1.61E-04	1.38E-03	3.35E-04	3.41E-04	1.11E-03	4.47E-05	1.77E-08	1.04E-03	1.08E-03
11	D65	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.26E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.47E-05	4.69E-05	1.90E-06	7.40E-10	4.54E-05	4.64E-05
11	D65	80	Combination Short Haul Truck	29	0.00E+00	1.29E-05	9.21E-07	1.06E+01	4.06E-08	1.14E-02	9.41E-06	1.32E-02	7.79E-04	1.92E-04	7.67E-04	2.72E-04	2.70E-04	1.61E-03	3.56E-05	0.00E+00	4.97E-04	2.49E-03
11	D65	80	Combination Long Haul Truck	27	0.00E+00	1.15E-05	7.75E-07	9.84E+00	4.69E-08	1.18E-02	8.74E-06	1.28E-02	7.62E-04	1.53E-04	7.92E-04	2.34E-04	2.35E-04	1.50E-03	3.30E-05	0.00E+00	5.57E-04	2.41E-03
11	D66	80	Passenger Car	214	0.00E+00	2.61E-06	2.82E-07	9.97E+00	1.81E-05	6.93E-02	5.79E-06	4.40E-04	1.18E-03	2.05E-04	5.64E-04	3.64E-04	3.73E-04	3.36E-05	5.03E-05	1.41E-08	1.91E-04	6.88E-05
11	D66	80	Passenger Truck	359	0.00E+00	5.60E-06	5.94E-07	2.31E+01	3.58E-05	1.28E-01	1.17E-05	1.31E-03	2.11E-03	3.75E-04	1.12E-03	7.29E-04	7.47E-04	1.61E-04	1.15E-04	3.14E-08	3.76E-04	2.14E-04
11	D66	80	Single Unit Short Haul Truck	49	0.00E+00	9.15E-06	4.55E-07	8.98E+00	7.37E-06	1.80E-02	9.74E-06	4.69E-03	5.75E-04	1.30E-04	1.11E-03	2.71E-04	2.76E-04	9.01E-04	3.62E-05	1.44E-08	8.38E-04	8.77E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	3.98E-07	1.96E-08	3.80E-01	3.15E-07	7.49E-04	4.23E-07	2.01E-04	2.63E-05	5.74E-06	4.86E-05	1.17E-05	1.19E-05	3.79E-05	1.53E-06	5.99E-10	3.67E-05	3.75E-05
11	D66	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.84E-08	1.08E-02	8.90E-06	1.25E-02	7.37E-04	1.82E-04	7.26E-04	2.57E-04	2.55E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.35E-03
11	D66	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.34E-07	9.31E+00	4.44E-08	1.12E-02	8.27E-06	1.21E-02	7.21E-04	1.45E-04	7.49E-04	2.21E-04	2.23E-04	1.42E-03	3.12E-05	0.00E+00	5.27E-04	2.28E-03
11	D67	80	Passenger Car	169	0.00E+00	2.06E-06	2.22E-07	7.87E+00	1.43E-05	5.46E-02	4.57E-06	3.47E-04	9.29E-04	1.62E-04	4.45E-04	2.87E-04	2.94E-04	2.65E-05	3.97E-05	1.11E-08	1.51E-04	5.42E-05
11	D67	80	Passenger Truck	283	0.00E+00	4.41E-06	4.68E-07	1.82E+01	2.83E-05	1.01E-01	9.25E-06	1.03E-03	1.67E-03	2.96E-04	8.85E-04	5.75E-04	5.89E-04	1.27E-04	9.09E-05	2.48E-08	2.96E-04	1.68E-04
11	D67	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.62E-07	1.11E+01	9.10E-06	2.22E-02	1.20E-05	5.79E-03	7.10E-04	1.61E-04	1.38E-03	3.35E-04	3.41E-04	1.11E-03	4.47E-05	1.77E-08	1.04E-03	1.08E-03
11	D67	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.26E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.47E-05	4.69E-05	1.90E-06	7.40E-10	4.54E-05	4.64E-05
11	D67	80	Combination Short Haul Truck	29	0.00E+00	1.29E-05	9.21E-07	1.06E+01	4.06E-08	1.14E-02	9.41E-06	1.32E-02	7.79E-04	1.92E-04	7.67E-04	2.72E-04	2.70E-04	1.61E-03	3.56E-05	0.00E+00	4.97E-04	2.49E-03
11	D67	80	Combination Long Haul Truck	27	0.00E+00	1.15E-05	7.75E-07	9.84E+00	4.69E-08	1.18E-02	8.74E-06	1.28E-02	7.62E-04	1.53E-04	7.92E-04	2.34E-04	2.35E-04	1.50E-03	3.30E-05	0.00E+00	5.57E-04	2.41E-03
11	D68	80	Passenger Car	214	0.00E+00	2.61E-06	2.82E-07	9.97E+00	1.81E-05	6.93E-02	5.79E-06	4.40E-04	1.18E-03	2.05E-04	5.64E-04	3.64E-04	3.73E-04	3.36E-05	5.03E-05	1.41E-08	1.91E-04	6.88E-05
11	D68	80	Passenger Truck	359	0.00E+00	5.60E-06	5.94E-07	2.31E+01	3.58E-05	1.28E-01	1.17E-05	1.31E-03	2.11E-03	3.75E-04	1.12E-03	7.29E-04	7.47E-04	1.61E-04	1.15E-04	3.14E-08	3.76E-04	2.14E-04
11	D68	80	Single Unit Short Haul Truck	49	0.00E+00	9.15E-06	4.55E-07	8.98E+00	7.37E-06	1.80E-02	9.74E-06	4.69E-03	5.75E-04	1.30E-04	1.11E-03	2.71E-04	2.76E-04	9.01E-04	3.62E-05	1.44E-08	8.38E-04	8.77E-04
11	D68	80	Single Unit Long Haul Truck	2	0.00E+00	3.98E-07	1.96E-08	3.80E-01	3.15E-07	7.49E-04	4.23E-07	2.01E-04	2.63E-05	5.74E-06	4.86E-05	1.17E-05	1.19E-05	3.79E-05	1.53E-06	5.99E-10	3.67E-05	3.75E-05
11	D68	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.84E-08	1.08E-02	8.90E-06	1.25E-02	7.37E-04	1.82E-04	7.26E-04	2.57E-04	2.55E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.35E-03
11	D68	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.34E-07	9.31E+00	4.44E-08	1.12E-02	8.27E-06	1.21E-02	7.21E-04	1.45E-04	7.49E-04	2.21E-04	2.23E-04	1.42E-03	3.12E-05	0.00E+00	5.27E-04	2.28E-03
11	D69	80	Passenger Car	85	0.00E+00	1.03E-06	1.12E-07	3.95E+00	7.18E-06	2.74E-02	2.30E-06	1.74E-04	4.67E-04	8.11E-05	2.23E-04	1.44E-04	1.48E-04	1.33E-05	1.99E-05	5.58E-09	7.56E-05	2.72E-05
11	D69	80	Passenger Truck	142	0.00E+00	2.22E-06	2.35E-07	9.13E+00	1.42E-05	5.05E-02	4.65E-06	5.18E-04	8.37E-04	1.49E-04	4.45E-04	2.89E-04	2.96E-04	6.38E-05	4.57E-05	1.24E-08	1.49E-04	8.46E-05
11	D69	80	Single Unit Short Haul Truck	40	0.00E+00	7.54E-06	3.74E-07	7.40E+00	6.07E-06	1.48E-02	8.02E-06	3.86E-03	4.74E-04	1.07E-04	9.17E-04	2.23E-04	2.27E-04	7.42E-04	2.98E-05	1.18E-08	6.90E-04	7.23E-04
11	D69	80	Single Unit Long Haul Truck	2	0.00E+00	3.28E-07	1.62E-08	3.13E-01	2.59E-07	6.17E-04	3.49E-07	1.65E-04	2.16E-05	4.73E-06	4.00E-05	9.61E-06	9.77E-06	3.12E-05	1.26E-06	4.93E-10	3.03E-05	3.09E-05
11	D69	80	Combination Short Haul Truck	19	0.00E+00	8.28E-06	5.92E-07	6.84E+00	2.61E-08	7.33E-03	6.05E-06	8.49E-03	5.01E-04	1.23E-04	4.93E-04	1.75E-04	1.73E-04	1.03E-03	2.29E-05	0.00E+00	3.20E-04	1.60E-03
11	D69	80	Combination Long Haul Truck	17	0.00E+00	7.41E-06	4.98E-07	6.33E+00	3.02E-08	7.60E-03	5.62E-06	8.24E-03	4.90E-04	9.86E-05	5.09E-04	1.50E-04	1.51E-04	9.67E-04	2.12E-05	0.00E+00	3.58E-04	1.55E-03
11	D70	80	Passenger Car	113	0.00E+00	1.37E-06	1.49E-07	5.26E+00	9.56E-06	3.65E-02	3.05E-06	2.32E-04	6.21E-04	1.08E-04	2.97E-04	1.92E-04	1.97E-04	1.77E-05	2.65E-05	7.43E-09	1.01E-04	3.62E-05
11	D70	80	Passenger Truck	189	0.00E+00	2.95E-06	3.13E-07	1.22E+01	1.89E-05	6.72E-02	6.18E-06	6.89E-04	1.11E-03	1.98E-04	5.92E-04	3.84E-04	3.94E-04	8.49E-05	6.07E-05	1.65E-08	1.98E-04	1.13E-04
11	D70	80	Single Unit Short Haul Truck	31	0.00E+00	5.74E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.94E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.01E-09	5.26E-04	5.51E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.97E-07	4.70E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.45E-06	2.38E-05	9.63E-07	3.76E-10	2.31E-05	2.35E-05
11	D70	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.25E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.55E-03
11	D70	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	8.01E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
10	D71	70	Passenger Car	238	0.00E+00	3.11E-06	3.36E-07	1.14E+01	2.16E-05	8.07E-02	6.91E-06	4.76E-04	1.84E-03	2.96E-04	6.72E-04	4.33E-04	4.45E-04	4.26E-05	5.73E-05	1.56E-08	2.28E-04	7.45E-05
10	D71	70	Passenger Truck	398	0.00E+00	6.81E-06	7.20E-07	2.63E+01	4.30E-05	1.48E-01	1.41E-05	1.49E-03	3.35E-03	5.45E-04	1.35E-03	8.77E-04	8.99E-04	1.93E-04	1.31E-04	3.50E-08	4.50E-04	2.45E-04
10	D71	70	Single Unit Short Haul Truck	21	0.00E+00	4.95E-06	2.48E-07	3.88E+00	4.05E-06	7.76E-03	5.28E-06	2.44E-03	3.48E-04	6.98E-05	6.01E-04	1.48E-04	1.51E-04	3.89E-04	1.56E-05	6.31E-09	4.50E-04	4.57E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.16E-07	1.07E-08	1.65E-01	1.75E-07	3.26E-04	2.30E-07	1.05E-04	1.59E-05	3.10E-06	2.63E-05	6.41E-06	6.52E-06	1.64E-05	6.65E-07	2.66E-10	1.97E-05	1.97E-05
10	D71	70	Combination Short Haul Truck	11	0.00E+00	5.71E-06	4.06E-07	4.14E+00	1.86E-08	4.92E-03	4.19E-06	6.00E-03	4.35E-04	9.49E-05	3.48E-04	1.20E-04	1.20E-04	6.24E-04	1.39E-05	0.00E+00	2.28E-04	1.13E-03
10	D71	70	Combination Long Haul Truck	10	0.00E+00	5.16E-06	3.45E-07	3.87E+00	2.14E-08	5.21E-03	3.92E-06	5.91E-03	4.32E-04	7.88E-05	3.60E-04	1.04E-04	1.06E-04	5.91E-04	1.29E-05	0.00E+00	2.54E-04	1.11E-03
10	D72	70	Passenger Car	170	0.00E+00	2.22E-06	2.40E-07	8.14E+00	1.54E-05	5.76E-02	4.93E-06	3.40E-04	1.32E-03	2.11E-04	4.80E-04	3.09E-04	3.17E-04	3.04E-05	4.09E-05	1.12E-08	1.62E-04	5.31E-05
10	D72	70	Passenger Truck	284	0.00E+00	4.86E-06	5.14E-07	1.88E+01	3.07E-05	1.06E-01	1.01E-05	1.06E-03	2.39E-03	3.89E-04	9.63E-04	6.26E-04	6.42E-04	1.38E-04	9.35E-05	2.50E-08	3.21E-04	1.75E-04
10	D72	70	Single Unit Short Haul Truck	35	0.00E+00	8.33E-06	4.17E-07	6.52E+00	6.81E-06	1.30E-02	8.87E-06	4.10E-03	5.86E-04	1.17E-04	1.01E-03	2.49E-04	2.53E-04	6.54E-04	2.63E-05	1.06E-08	7.57E-04	7.68E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.63E-07	1.80E-08	2.77E-01	2.94E-07	5.48E-04	3.87E-07	1.76E-04	2.68E-05	5.22E-06	4.42E-05	1.08E-05	1.10E-05	2.76E-05	1.12E-06	4.48E-10	3.32E-05	3.30E-05
10	D72	70	Combination Short Haul Truck	24	0.00E+00	1.22E-05	8.70E-07	8.87E+00	3.98E-08	1.05E-02	8.98E-06	1.28E-02	9.32E-04	2.03E-04	7.46E-04	2.57E-04	2.57E-04	1.34E-03	2.97E-05	0.00E+00	4.89E-04	2.42E-03
10	D72	70	Combination Long Haul Truck	21	0.00E+00	1.11E-05	7.40E-07	8.28E+00	4.58E-08	1.12E-02	8.41E-06	1.27E-02	9.25E-04	1.69E-04	7.71E-04	2.24E-04	2.26E-04	1.27E-03	2.77E-05	0.00E+00	5.45E-04	2.39E-03
10	D73	70	Passenger Car	182	0.00E+00	2.37E-06	2.57E-07	8.71E+00	1.65E-05	6.16E-02	5.28E-06	3.64E-04	1.41E-03	2.26E-04	5.14E-04	3.31E-04	3.40E-04	3.25E-05	4.38E-05	1.19E-08	1.74E-04	5.69E-05
10	D73	70	Passenger Truck	304	0.00E+00	5.20E-06	5.50E-07	2.01E+01	3.29E-05	1.13E-01	1.08E-05	1.14E-03	2.56E-03	4.17E-04	1.03E-03	6.70E-04	6.87E-04	1.48E-04	1.00E-04	2.68E-08	3.44E-04	1.87E-04
10	D73	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.65E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	D73	70	Single Unit Long Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.77E-04
10	D73	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.71E-04
10	D74	70	Passenger Car	131	0.00E+00	1.71E-06	1.85E-07	6.29E+00	1.19E-05	4.45E-02	3.81E-06	2.63E-04	1.02E-03	1.63E-04	3.71E-04	2.39E-04	2.45E-04	2.35E-05	3.16E-05	8.62E-09	1.26E-04	4.11E-05
10	D74	70	Passenger Truck	220	0.00E+00	3.76E-06	3.98E-07	1.45E+01	2.38E-05	8.19E-02	7.80E-06	8.22E-04	1.85E-03	3.01E-04	7.44E-04	4.84E-04	4.96E-04	1.07E-04	7.23E-05	1.93E-08	2.48E-04	1.35E-04
10	D74	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.06E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
10	D74	70	Combination Short Haul Truck	15	0.00E+00	7.89E-06	5.61E-07	5.72E+00	2.56E-08	6.79E-03	5.79E-06	8.28E-03	6.00E-04	1.31E-04	4.81E-04	1.66E-04	1.66E-04	8.62E-04	1.91E-05	0.00E+00	3.15E-04	1.56E-03
10	D74	70	Combination Long Haul Truck	14	0.00E+00	7.13E-06	4.77E-07	5.34E+00	2.95E-08	7.20E-03	5.42E-06	8.16E-03	5.96E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.16E-04	1.79E-05	0.00E+00	3.51E-04	1.54E-03
11	D75	80	Passenger Car	166	0.00E+00	2.02E-06	2.18E-07	7.73E+00	1.41E-05	5.37E-02	4.49E-06	3.41E-04	9.13E-04	1.59E-04	4.37E-04	2.82E-04	2.89E-04	2.60E-05	3.90E-05	1.09E-08	1.48E-04	5.33E-05
11	D75	80	Passenger Truck	278	0.00E+00	4.34E-06	4.60E-07	1.79E+01	2.78E-05	9.88E-02	9.09E-06	1.01E-03	1.64E-03	2.91E-04	8.70E-04	5.65E-04	5.79E-04	1.25E-04	8.93E-05	2.43E-08	2.91E-04	1.65E-04
11	D75	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	D75	80	Combination Short Haul Truck	9	0.00E+00	4.14E-06	2.96E-07	3.42E+00	1.31E-08	3.67E-03	3.02E-06	4.24E-03	2.50E-04	6.17E-05	2.46E-04	8.74E-05	8.67E-05	5.16E-04	1.15E-05	0.00E+00	1.60E-04	7.99E-04
11	D75	80	Combination Long Haul Truck	9	0.00E+00	3.71E-06	2.49E-07	3.16E+00	1.51E-08	3.80E-03	2.81E-06	4.12E-03	2.45E-04	4.93E-05	2.55E-04	7.52E-05	7.56E-05	4.83E-04	1.06E-05	0.00E+00	1.79E-04	7.76E-04
11	D76	80	Passenger Car	199	0.00E+00	2.42E-06	2.62E-07	9.28E+00	1.69E-05	6.44E-02	5.39E-06	4.09E-04	1.10E-03	1.91E-04	5.25E-04	3.38E-04	3.47E-04	3.12E-05	4.68E-05	1.31E-08	1.78E-04	6.40E-05
11	D76	80	Passenger Truck	334	0.00E+00	5.20E-06	5.52E-07	2.14E+01	3.33E-05	1.19E-01	1.09E-05	1.22E-03	1.97E-03	3.49E-04	1.04E-03	6.78E-04	6.95E-04	1.50E-04	1.07E-04	2.92E-08	3.49E-04	1.99E-04
11	D76	80	Single Unit Short Haul Truck	34	0.00E+00	6.28E-06	3.12E-07	6.16E+00	5.06E-06	1.23E-02	6.69E-06	3.22E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.48E-05	9.86E-09	5.75E-04	6.02E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.14E-04	2.91E-07	1.38E-04	1.80E-05	3.94E-06	3.34E-05	8.01E-06	8.14E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.58E-05
11	D76	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.25E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.55E-03
11	D76	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	8.01E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	D77	80	Passenger Car	71	0.00E+00	8.60E-07	9.30E-08	3.29E+00	5.98E-06	2.29E-02	1.91E-06	1.45E-04	3.89E-04	6.76E-05	1.86E-04	1.20E-04	1.23E-04	1.11E-05	1.66E-05	4.65E-09	6.30E-05	2.27E-05
11	D77	80	Passenger Truck	118	0.00E+00	1.85E-06	1.96E-07	7.61E+00	1.18E-05	4.21E-02	3.87E-06	4.31E-04	6.97E-04	1.24E-04	3.70E-04	2.40E-04	2.46E-04	5.32E-05	3.80E-05	1.04E-08	1.24E-04	7.04E-05
11	D77	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.35E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.57E-05	9.73E-05	3.18E-04	1.28E-05	5.07E-09	2.96E-04	3.10E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.41E-07	6.92E-09	1.34E-01	1.11E-07	2.64E-04	1.49E-07	7.08E-05	9.27E-06	2.03E-06	1.72E-05	4.12E-06	4.19E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.32E-05
11	D77	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.77E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	D77	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.66E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.90E-04
11	D78	80	Passenger Car	154	0.00E+00	1.88E-06	2.03E-07	7.19E+00	1.31E-05	4.99E-02	4.18E-06	3.17E-04	8.49E-04	1.48E-04	4.06E-04	2.62E-04	2.69E-04	2.42E-05	3.62E-05	1.02E-08	1.38E-04	4.96E-05
11	D78	80	Passenger Truck	259	0.00E+00	4.03E-06	4.28E-07	1.66E+01	2.58E-05	9.19E-02	8.45E-06	9.42E-04	1.52E-03	2.70E-04	8.09E-04	5.25E-04	5.38E-04	1.16E-04	8.31E-05	2.26E-08	2.71E-04	1.54E-04
11	D78	80	Single Unit Short Haul Truck	34	0.00E+00	6.28E-06	3.12E-07	6.16E+00	5.06E-06	1.23E-02	6.69E-06	3.22E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.48E-05	9.86E-09	5.75E-04	6.02E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.14E-04	2.91E-07	1.38E-04	1.80E-05	3.94E-06	3.34E-05	8.01E-06	8.14E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.58E-05
11	D78	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.25E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.55E-03
11	D78	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	8.01E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	D79	70

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D83	80	Single Unit Short Haul Truck	158	0.00E+00	2.96E-05	1.47E-06	2.91E+01	2.38E-05	5.82E-02	3.15E-05	1.52E-02	1.86E-03	4.21E-04	3.60E-03	8.77E-04	8.92E-04	2.92E-03	1.17E-04	4.65E-08	2.71E-03	2.84E-03
11	D83	80	Single Unit Long Haul Truck	7	0.00E+00	1.29E-06	6.35E-08	1.23E+00	1.02E-06	2.42E-03	1.37E-06	6.49E-04	8.50E-05	1.86E-05	1.57E-04	3.77E-05	3.84E-05	1.23E-04	4.96E-06	1.94E-09	1.19E-04	1.21E-04
11	D83	80	Combination Short Haul Truck	99	0.00E+00	4.35E-05	3.11E-06	3.59E+01	1.37E-07	3.85E-02	3.18E-05	4.45E-02	2.63E-03	6.48E-04	2.59E-03	9.17E-04	9.10E-04	5.42E-03	1.20E-04	0.00E+00	1.68E-03	8.39E-03
11	D83	80	Combination Long Haul Truck	90	0.00E+00	3.89E-05	2.62E-06	3.32E+01	1.58E-07	3.99E-02	2.95E-05	4.32E-02	2.57E-03	5.18E-04	2.67E-03	7.89E-04	7.94E-04	5.07E-03	1.11E-04	0.00E+00	1.88E-03	8.15E-03
11	D84	80	Passenger Car	704	0.00E+00	8.56E-06	9.26E-07	3.28E+01	5.96E-05	2.28E-01	1.90E-05	1.45E-03	3.87E-03	6.73E-04	1.85E-03	1.19E-03	1.23E-03	1.10E-04	1.65E-04	4.63E-08	6.27E-04	2.26E-04
11	D84	80	Passenger Truck	1179	0.00E+00	1.84E-05	1.95E-06	7.58E+01	1.18E-04	4.19E-01	3.85E-05	4.30E-03	6.94E-03	1.23E-03	3.69E-03	2.40E-03	2.45E-03	5.30E-04	3.79E-04	1.03E-07	1.23E-03	7.02E-04
11	D84	80	Single Unit Short Haul Truck	83	0.00E+00	1.56E-05	7.76E-07	1.53E+01	1.26E-05	3.07E-02	1.66E-05	8.00E-03	9.81E-04	2.22E-04	1.90E-03	4.62E-04	4.70E-04	1.54E-03	6.17E-05	2.45E-08	1.43E-03	1.50E-03
11	D84	80	Single Unit Long Haul Truck	4	0.00E+00	6.79E-07	3.35E-08	6.48E-01	5.37E-07	1.28E-03	7.22E-07	3.42E-04	4.48E-05	9.79E-06	8.29E-05	1.99E-05	2.02E-05	6.47E-05	2.62E-06	1.02E-09	6.27E-05	6.40E-05
11	D84	80	Combination Short Haul Truck	125	0.00E+00	5.50E-05	3.93E-06	4.54E+01	1.73E-07	4.87E-02	4.02E-05	5.63E-02	3.32E-03	8.20E-04	3.27E-03	1.16E-03	1.15E-03	6.85E-03	1.52E-04	0.00E+00	2.12E-03	1.06E-02
11	D84	80	Combination Long Haul Truck	114	0.00E+00	4.92E-05	3.31E-06	4.20E+01	2.00E-07	5.04E-02	3.73E-05	5.47E-02	3.25E-03	6.55E-04	3.38E-03	9.98E-04	1.00E-03	6.42E-03	1.41E-04	0.00E+00	2.38E-03	1.03E-02
11	D85	80	Passenger Car	299	0.00E+00	3.64E-06	3.94E-07	1.39E+01	2.54E-05	9.68E-02	8.10E-06	6.15E-04	1.65E-03	2.86E-04	7.88E-04	5.08E-04	5.22E-04	4.69E-05	7.03E-05	1.97E-08	2.67E-04	9.61E-05
11	D85	80	Passenger Truck	502	0.00E+00	7.82E-06	8.30E-07	3.22E+01	5.01E-05	1.78E-01	1.64E-05	1.83E-03	2.95E-03	5.24E-04	1.57E-03	1.02E-03	1.04E-03	2.25E-04	1.61E-04	4.39E-08	5.25E-04	2.99E-04
11	D85	80	Single Unit Short Haul Truck	129	0.00E+00	2.42E-05	1.20E-06	2.38E+01	1.95E-05	4.76E-02	2.58E-05	1.24E-02	1.52E-03	3.44E-04	2.95E-03	7.18E-04	7.30E-04	2.39E-03	9.58E-05	3.80E-08	2.22E-03	2.32E-03
11	D85	80	Single Unit Long Haul Truck	6	0.00E+00	1.05E-06	5.19E-08	1.01E+00	8.33E-07	1.98E-03	1.12E-06	5.31E-04	6.96E-05	1.52E-05	1.29E-04	3.09E-05	3.14E-05	1.00E-04	4.06E-06	1.58E-09	9.72E-05	9.93E-05
11	D85	80	Combination Short Haul Truck	83	0.00E+00	3.66E-05	2.61E-06	3.02E+01	1.15E-07	3.24E-02	2.67E-05	3.75E-02	2.21E-03	5.45E-04	2.18E-03	7.72E-04	7.66E-04	4.56E-03	1.01E-04	0.00E+00	1.41E-03	7.06E-03
11	D85	80	Combination Long Haul Truck	76	0.00E+00	3.27E-05	2.20E-06	2.79E+01	1.33E-07	3.36E-02	2.48E-05	3.64E-02	2.16E-03	4.35E-04	2.25E-03	6.64E-04	6.68E-04	4.27E-03	9.36E-05	0.00E+00	1.58E-03	6.85E-03
11	D86	80	Passenger Car	725	0.00E+00	8.82E-06	9.54E-07	3.38E+01	6.14E-05	2.34E-01	1.96E-05	1.49E-03	3.99E-03	6.93E-04	1.91E-03	1.23E-03	1.26E-03	1.14E-04	1.70E-04	4.77E-08	6.46E-04	2.33E-04
11	D86	80	Passenger Truck	1214	0.00E+00	1.89E-05	2.01E-06	7.80E+01	1.21E-04	4.31E-01	3.97E-05	4.42E-03	7.15E-03	1.27E-03	3.80E-03	2.47E-03	2.53E-03	5.45E-04	3.90E-04	1.06E-07	1.27E-03	7.23E-04
11	D86	80	Single Unit Short Haul Truck	72	0.00E+00	1.35E-05	6.69E-07	1.32E+01	1.08E-05	2.65E-02	1.43E-05	6.90E-03	8.46E-04	1.91E-04	1.64E-03	3.99E-04	4.05E-04	1.33E-03	5.32E-05	2.11E-08	1.23E-03	1.29E-03
11	D86	80	Single Unit Long Haul Truck	3	0.00E+00	5.85E-07	2.88E-08	5.59E-01	4.63E-07	1.10E-03	6.23E-07	2.95E-04	3.86E-05	8.44E-06	7.15E-05	1.72E-05	1.75E-05	5.58E-05	2.26E-06	8.80E-10	5.40E-05	5.52E-05
11	D86	80	Combination Short Haul Truck	121	0.00E+00	5.33E-05	3.81E-06	4.41E+01	1.68E-07	4.72E-02	3.90E-05	5.47E-02	3.23E-03	7.96E-04	3.18E-03	1.13E-03	1.12E-03	6.65E-03	1.48E-04	0.00E+00	2.06E-03	1.03E-02
11	D86	80	Combination Long Haul Truck	111	0.00E+00	4.78E-05	3.21E-06	4.08E+01	1.94E-07	4.90E-02	3.62E-05	5.31E-02	3.16E-03	6.35E-04	3.28E-03	9.69E-04	9.74E-04	6.23E-03	1.37E-04	0.00E+00	2.31E-03	1.00E-02
11	D87	80	Passenger Car	299	0.00E+00	3.64E-06	3.94E-07	1.39E+01	2.54E-05	9.68E-02	8.10E-06	6.15E-04	1.65E-03	2.86E-04	7.88E-04	5.08E-04	5.22E-04	4.69E-05	7.03E-05	1.97E-08	2.67E-04	9.61E-05
11	D87	80	Passenger Truck	502	0.00E+00	7.82E-06	8.30E-07	3.22E+01	5.01E-05	1.78E-01	1.64E-05	1.83E-03	2.95E-03	5.24E-04	1.57E-03	1.02E-03	1.04E-03	2.25E-04	1.61E-04	4.39E-08	5.25E-04	2.99E-04
11	D87	80	Single Unit Short Haul Truck	129	0.00E+00	2.42E-05	1.20E-06	2.38E+01	1.95E-05	4.76E-02	2.58E-05	1.24E-02	1.52E-03	3.44E-04	2.95E-03	7.18E-04	7.30E-04	2.39E-03	9.58E-05	3.80E-08	2.22E-03	2.32E-03
11	D87	80	Single Unit Long Haul Truck	6	0.00E+00	1.05E-06	5.19E-08	1.01E+00	8.33E-07	1.98E-03	1.12E-06	5.31E-04	6.96E-05	1.52E-05	1.29E-04	3.09E-05	3.14E-05	1.00E-04	4.06E-06	1.58E-09	9.72E-05	9.93E-05
11	D87	80	Combination Short Haul Truck	83	0.00E+00	3.66E-05	2.61E-06	3.02E+01	1.15E-07	3.24E-02	2.67E-05	3.75E-02	2.21E-03	5.45E-04	2.18E-03	7.72E-04	7.66E-04	4.56E-03	1.01E-04	0.00E+00	1.41E-03	7.06E-03
11	D87	80	Combination Long Haul Truck	76	0.00E+00	3.27E-05	2.20E-06	2.79E+01	1.33E-07	3.36E-02	2.48E-05	3.64E-02	2.16E-03	4.35E-04	2.25E-03	6.64E-04	6.68E-04	4.27E-03	9.36E-05	0.00E+00	1.58E-03	6.85E-03
11	D88	80	Passenger Car	725	0.00E+00	8.82E-06	9.54E-07	3.38E+01	6.14E-05	2.34E-01	1.96E-05	1.49E-03	3.99E-03	6.93E-04	1.91E-03	1.23E-03	1.26E-03	1.14E-04	1.70E-04	4.77E-08	6.46E-04	2.33E-04
11	D88	80	Passenger Truck	1214	0.00E+00	1.89E-05	2.01E-06	7.80E+01	1.21E-04	4.31E-01	3.97E-05	4.42E-03	7.15E-03	1.27E-03	3.80E-03	2.47E-03	2.53E-03	5.45E-04	3.90E-04	1.06E-07	1.27E-03	7.23E-04
11	D88	80	Single Unit Short Haul Truck	72	0.00E+00	1.35E-05	6.69E-07	1.32E+01	1.08E-05	2.65E-02	1.43E-05	6.90E-03	8.46E-04	1.91E-04	1.64E-03	3.99E-04	4.05E-04	1.33E-03	5.32E-05	2.11E-08	1.23E-03	1.29E-03
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	5.85E-07	2.88E-08	5.59E-01	4.63E-07	1.10E-03	6.23E-07	2.95E-04	3.86E-05	8.44E-06	7.15E-05	1.72E-05	1.75E-05	5.58E-05	2.26E-06	8.80E-10	5.40E-05	5.52E-05
11	D88	80	Combination Short Haul Truck	121	0.00E+00	5.33E-05	3.81E-06	4.41E+01	1.68E-07	4.72E-02	3.90E-05	5.47E-02	3.23E-03	7.96E-04	3.18E-03	1.13E-03	1.12E-03	6.65E-03	1.48E-04	0.00E+00	2.06E-03	1.03E-02
11	D88	80	Combination Long Haul Truck	111	0.00E+00	4.78E-05	3.21E-06	4.08E+01	1.94E-07	4.90E-02	3.62E-05	5.31E-02	3.16E-03	6.35E-04	3.28E-03	9.69E-04	9.74E-04	6.23E-03	1.37E-04	0.00E+00	2.31E-03	1.00E-02
9	D89	60	Passenger Car	44	0.00E+00	6.55E-07	7.09E-08	2.19E+00	4.56E-06	1.69E-02	1.46E-06	8.92E-05	4.44E-04	6.82E-05	1.42E-04	9.14E-05	9.38E-05	9.14E-06	1.10E-05	3.03E-09	4.80E-05	1.39E-05
9	D89	60	Passenger Truck	73	0.00E+00	1.44E-06	1.53E-07	5.01E+00	9.03E-06	3.02E-02	2.98E-06	2.91E-04	8.15E-04	1.26E-04	2.83E-04	1.84E-04	1.89E-04	3.88E-05	2.49E-05	6.88E-09	9.42E-05	4.82E-05
9	D89	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.36E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.00E-04
9	D89	60	Combination Short Haul Truck	4	0.00E+00	2.15E-06	1.50E-07	1.40E+00	7.63E-09	1.88E-03	1.60E-06	2.33E-03	2.01E-04	3.97E-05	1.37E-04	4.47E-05	4.48E-05	2.11E-04	4.69E-06	0.00E+00	9.23E-05	4.40E-04
9	D89	60	Combination Long Haul Truck	3	0.00E+00	1.93E-06	1.26E-07	1.31E+00	8.75E-09	2.03E-03	1.49E-06	2.31E-03	2.02E-04	3.42E-05	1.41E-04	3.84E-05	3.89E-05	2.01E-04	4.40E-06	0.00E+00	1.02E-04	4.36E-04
9	D90	60	Passenger Car	67	0.00E+00	1.01E-06	1.09E-07	3.37E+00	7.02E-06	2.61E-02	2.24E-06	1.37E-04	6.83E-04	1.05E-04	2.18E-04	1.41E-04	1.44E-04	1.41E-05	1.69E-05	4.66E-09	7.38E-05	2.15E-05
9	D90	60	Passenger Truck	113	0.00E+00	2.22E-06	2.35E-07	7.70E+00	1.39E-05	4.64E-02	4.58E-06	4.47E-04	1.25E-03	1.95E-04	4.36E-04	2.84E-04	2.91E-04	5.97E-05	3.83E-05	1.06E-08	1.45E-04	7.42E-05
9	D90	60	Single Unit Short Haul Truck	9	0.00E+00	2.53E-06	1.27E-07	1.61E+00	2.09E-06	3.12E-03	2.70E-06	1.21E-03	2.05E-04	3.72E-05	3.08E-04	7.59E-05	7.72E-05	1.61E-04	6.51E-06	2.68E-09	2.30E-04	2.26E-04
9	D90	60	Combination Short Haul Truck	4	0.00E+00	2.46E-06	1.72E-07	1.60E+00	8.72E-09	2.15E-03	1.83E-06	2.67E-03	2.29E-04	4.54E-05	1.57E-04	5.11E-05	5.12E-05	2.41E-04	5.36E-06	0.00E+00	1.05E-04	5.03E-04
9	D90	60	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.44E-07	1.50E+00	1.00E-08	2.32E-03	1.70E-06	2.65E-03	2.30E-04	3.91E-05	1.61E-04	4.39E-05	4.45E-05	2.29E-04	5.03E-06	0.00E+00	1.17E-04	4.98E-04
10	D91	70	Passenger Car	289	0.00E+00	3.78E-06	4.09E-07	1.39E+01	2.63E-05	9.82E-02	8.40E-06	5.80E-04	2.24E-03	3.60E-04	8.18E-04	5.27E-04	5.41E-04	5.18E-05	6.98E-05	1.90E-08	2.77E-04	9.06E-05
10	D91	70	Passenger Truck	485	0.00E+00	8.28E-06	8.77E-07	3.20E+01	5.24E-05	1.81E-01	1.72E-05	1.81E-03	4.08E-03	6.63E-04	1.64E-03	1.07E-03	1.09E-03	2.35E-04	1.59E-04	4.26E-08	5.48E-04	2.98E-04
10	D91	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	D91	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.77E-04
10	D91	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.71E-04
10	D92	70	Passenger Car	116	0.00E+00	1.51E-06	1.64E-07	5.56E+00	1.05E-05	3.93E-02	3.37E-06	2.32E-04	8.99E-04	1.44E-04	3.28E-04	2.11E-04	2.17E-04	2.08E-05	2.80E-05	7.62E-09	1.11E-04	3.63E-05
10	D92	70	Passenger Truck	194	0.00E+00	3.32E-06	3.51E-07	1.28E+01	2.10E-05	7.23E-02	6.89E-06	7.26E-04	1.63E-03	2.66E-04	6.57E-04	4.28E-04	4.38E-04	9.41E-05	6.38E-05	1.71E-08	2.19E-04	1.19E-04
10	D92	70	Single Unit Short Haul Truck	11	0.00E+00	2.48E-06	1.24E-07	1.94E+00	2.02E-06	3.88E-03	2.64E-06	1.22E-03	1.74E-04	3.49E-05	3.00E-04	7.40E-05	7.53E-05	1.94E-04	7.82E-06	3.16E-09	2.25E-04	2.28E-04
10	D92	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.14E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.92E-04
10	D92	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.83E-04
10	D93	70	Passenger Car	285	0.00E+00	3.73E-06	4.03E-07	1.37E+01	2.59E-05	9.68E-02	8.28E-06	5.72E-04	2.21E-03	3.55E-04	8.06E-04	5.20E-04	5.33E-04	5.11E-05	6.88E-05	1.87E-08	2.73E-04	8.93E-05
10	D93	70	Passenger Truck	478	0.00E+00	8.17E-06	8.64E-07	3.15E+01	5.16E-05	1.78E-01	1.70E-05	1.79E-03	4.02E-03	6.54E-04	1.62E-03	1.05E-03	1.08E-03	2.32E-04	1.57E-04	4.20E-08	5.40E-04	2.94E-04
10	D93	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	D93	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.57E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.61E-04
10	D93	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.44E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	D94	70	Passenger Car	111	0.00E+00	1.45E-06	1.56E-07	5.31E+00	1.01E-05	3.75E-02	3.21E-06	2.22E-04	8.58E-04	1.38E-04	3.13E-04	2.02E-04	2.07E-04	1.98E-05	2.67E-05	7.27E-09	1.06E-04	3.47E-05
10	D94	70	Passenger Truck	185	0.00E+00	3.17E-06	3.35E-07	1.22E+01	2.00E-05	6.91E-02	6.58E-06	6.93E-04	1.56E-03	2.54E-04	6.28E-04	4.08E-04	4.18E-04	8.98E-05	6.10E-05	1.63E-08	2.09E-04	1.14E-04
10	D94	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.91E-04
10	D94	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.68E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	D94	70	Combination Short Haul Truck	6	0.00E+00	3.27E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.86E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.46E-04
10	D94	70	Combination Long Haul Truck	6	0.00E+00	2.95E-06	1.97E-07	2.21E+00	1.22E-08	2.98E-03	2.24E-06	3.38E-03	2.47E-04	4.50E-05	2.06E-04	5.96E-05	6.03E-05	3.38E-04	7.40E-06	0.00E+00	1.45E-04	6.36E-04
9	E01	60	Passenger Car	124	0.00E+00	1.85E-06	2.01E-07	6.21E+00	1.29E-05	4.79E-02	4.12E-06	2.52E-04	1.26E-03	1.93E-04	4.01E-04	2.59E-04	2.65E-04	2.59E-05	3.11E-05	8.57E-09	1.36E-04	3.94E-05
9	E01	60	Passenger Truck	207	0.00E+00	4.09E-06	4.32E-07	1.42E+01	2.56E-05	8.54E-02	8.42E-06	8.23E-04	2.30E-03	3.58E-04	8.01E-04	5.22E-04	5.35E-04	1.10E-04	7.04E-05	1.95E-08	2.66E-04	1.36E-04
9	E01	60	Single Unit Short Haul Truck	17	0.00E+00	5.06E-06	2.53E-07	3.22E+00	4.17E-06	6.24E-03	5.40E-06	2.41E-03	4.10E-04	7.43E-05	6.15E-04	1.52E-04	1.54E-04	3.23E-04	1.30E-05	5.37E-09	4.61E-04	4.52E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	2.21E-07	1.10E-08	1.38E-01	1.81E-07	2.65E-04	2.36E-07	1.04E-04	1.84E-05	3.29E-06	2.69E-05	6.60E-06	6.71E-06	1.37E-05	5.56E-07	2.28E-10	2.02E-05	1.96E-05
9	E01	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.22E-07	3.00E+00	1.63E-08	4.04E-03	3.42E-06	5.00E-03	4.30E-04	8.51E-05	2.94E-04	9.58E-05	9.59E-05	4.53E-04	1.01E-05	0.00E+00	1.98E-04	9.43E-04
9	E01	60	Combination Long Haul Truck	7	0.00E+00	4.14E-06	2.70E-07	2.81E+00	1.87E-08	4.35E-03	3.19E-06	4.96E-03	4.32E-04	7.33E-05	3.03E-04	8.23E-05	8.34E-05	4.30E-04	9.43E-06	0.00E+00	2.19E-04	9.34E-04
9	E02	60	Passenger Car	247	0.00E+00	3.70E-06	4.00E-07	1.24E+01	2.58E-05	9.57E-02	8.23E-06	5.04E-04	2.51E-03	3.85E-04	8.01E-04	5.16E-04	5.30E-04	5.16E-05	6.22E-05	1.71E-08	2.71E-04	7.88E-05
9	E02	60	Passenger Truck	414	0.00E+00	8.16E-06	8.62E-07	2.83E+01	5.10E-05	1.71E-01	1.68E-05	1.64E-03	4.60E-03	7.14E-04	1.60E-03	1.04E-03	1.07E-03	2.19E-04	1.41E-04	3.89E-08	5.32E-04	2.72E-04
9	E02	60	Single Unit Short Haul Truck	37	0.00E+00	1.10E-05	5.49E-07	6.99E+00	9.04E-06	1.35E-02	1.17E-05	5.23E-03	8.88E-04	1.61E-04	1.33E-03	3.29E-04	3.34E-04	6.99E-04	2.82E-05	1.16E-08	9.98E-04	9.80E-04
9	E02	60	Single Unit Long Haul Truck	2	0.00E+00	4.79E-07	2.38E-08	2.98E-01	3.93E-07	5.74E-04	5.11E-07	2.26E-04	3.99E-05	7.13E-06	5.84E-05	1.43E-05	1.45E-05	2.98E-05	1.21E-06	4.95E-10	4.38E-05	4.24E-05
9	E02	60	Combination Short Haul Truck	27	0.00E+00	1.57E-05	1.09E-06	1.02E+01	5.56E-08	1.37E-02	1.16E-05	1.70E-02	1.46E-03	2.89E-04	9.98E-04	3.26E-04	3.26E-04	1.54E-03	3.42E-05	0.00E+00	6.72E-04	3.20E-03
9	E02	60	Combination Long Haul Truck	24	0.00E+00	1.41E-05	9.17E-07	9.57E+00	6.37E-08	1.48E-02	1.09E-05	1.69E-02	1.47E-03	2.49E-04	1.03E-03	2.80E-04	2.83E-04	1.46E-03	3.21E-05	0.00E+00	7.46E-04	3.18E-03
11	E03	80	Passenger Car	236	0.00E+00	2.87E-06	3.11E-07	1.10E+01	2.00E-05	7.64E-02	6.39E-06	4.85E-04	1.30E-03	2.26E-04	6.22E-04	4.01E-04	4.11E-04	3.70E-05	5.55E-05	1.55E-08	2.11E-04	7.59E-05
11	E03	80	Passenger Truck	396	0.00E+00	6.17E-06	6.55E-07	2.54E+01	3.95E-05	1.41E-01	1.29E-05	1.44E-03	2.33E-03	4.14E-04	1.24E-03	8.04E-04	8.24E-04	1.78E-04	1.27E-04	3.46E-08	4.14E-04	2.36E-04
11	E03	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.52E-03	5.16E-06	2.48E-03	3.04E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.60E-09	4.44E-04	4.65E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.97E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.28E-06	2.01E-05	8.12E-07	3.17E-10	1.94E-05	1.99E-05
11	E03	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.13E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.15E-03
11	E03	80	Combination Long Haul Tru

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E07	60	Combination Short Haul Truck	92	0.00E+00	5.38E-05	3.75E-06	3.50E+01	1.91E-07	4.71E-02	3.99E-05	5.84E-02	5.01E-03	9.92E-04	3.43E-03	1.12E-03	1.12E-03	5.28E-03	1.17E-04	0.00E+00	2.31E-03	1.10E-02
9	E07	60	Combination Long Haul Truck	83	0.00E+00	4.83E-05	3.15E-06	3.28E+01	2.19E-07	5.07E-02	3.73E-05	5.79E-02	5.04E-03	8.55E-04	3.53E-03	9.60E-04	9.72E-04	5.02E-03	1.10E-04	0.00E+00	2.56E-03	1.09E-02
9	E08	60	Passenger Car	654	0.00E+00	9.80E-06	1.06E-06	3.28E+01	6.82E-05	2.53E-01	2.18E-05	1.33E-03	6.64E-03	1.02E-03	2.12E-03	1.37E-03	1.40E-03	1.37E-04	1.65E-04	4.53E-08	7.18E-04	2.09E-04
9	E08	60	Passenger Truck	1096	0.00E+00	2.16E-05	2.28E-06	7.49E+01	1.35E-04	4.52E-01	4.45E-05	4.35E-03	1.22E-02	1.89E-03	4.23E-03	2.76E-03	2.83E-03	5.80E-04	3.72E-04	1.03E-07	1.41E-03	7.21E-04
9	E08	60	Single Unit Short Haul Truck	83	0.00E+00	2.45E-05	1.22E-06	1.56E+01	2.02E-05	3.02E-02	2.61E-05	1.17E-02	1.98E-03	3.59E-04	2.97E-03	7.34E-04	7.46E-04	1.56E-03	6.30E-05	2.59E-08	2.23E-03	2.19E-03
9	E08	60	Single Unit Long Haul Truck	4	0.00E+00	1.07E-06	5.32E-08	6.65E-01	8.76E-07	1.28E-03	1.14E-06	5.04E-04	8.90E-05	1.59E-05	1.30E-04	3.19E-05	3.25E-05	6.64E-05	2.69E-06	1.10E-09	9.78E-05	9.45E-05
9	E08	60	Combination Short Haul Truck	49	0.00E+00	2.89E-05	2.02E-06	1.88E+01	1.02E-07	2.53E-02	2.15E-05	3.14E-02	2.69E-03	5.33E-04	1.84E-03	6.00E-04	6.01E-04	2.84E-03	6.30E-05	0.00E+00	1.24E-03	5.91E-03
9	E08	60	Combination Long Haul Truck	45	0.00E+00	2.60E-05	1.69E-06	1.76E+01	1.17E-07	2.72E-02	2.00E-05	3.11E-02	2.71E-03	4.59E-04	1.90E-03	5.16E-04	5.22E-04	2.70E-03	5.91E-05	0.00E+00	1.37E-03	5.86E-03
9	E09	60	Passenger Car	1050	0.00E+00	1.57E-05	1.70E-06	5.26E+01	1.09E-04	4.06E-01	3.50E-05	2.14E-03	1.07E-02	1.64E-03	3.40E-03	2.19E-03	2.25E-03	2.19E-04	2.64E-04	7.27E-08	1.15E-03	3.35E-04
9	E09	60	Passenger Truck	1758	0.00E+00	3.47E-05	3.66E-06	1.20E+02	2.17E-04	7.25E-01	7.15E-05	6.98E-03	1.95E-02	3.03E-03	6.80E-03	4.43E-03	4.53E-03	9.31E-04	5.97E-04	1.65E-07	2.26E-03	1.16E-03
9	E09	60	Single Unit Short Haul Truck	72	0.00E+00	2.11E-05	1.05E-06	1.34E+01	1.74E-05	2.60E-02	2.25E-05	1.01E-02	1.71E-03	3.10E-04	2.56E-03	6.33E-04	6.43E-04	1.34E-03	5.43E-05	2.24E-08	1.92E-03	1.88E-03
9	E09	60	Single Unit Long Haul Truck	3	0.00E+00	9.21E-07	4.58E-08	5.74E-01	7.55E-07	1.10E-03	9.83E-07	4.35E-04	7.67E-05	1.37E-05	1.12E-04	2.75E-05	2.80E-05	5.73E-05	2.32E-06	9.51E-10	8.43E-05	8.15E-05
9	E09	60	Combination Short Haul Truck	71	0.00E+00	4.15E-05	2.89E-06	2.70E+01	1.47E-07	3.63E-02	3.08E-05	4.50E-02	3.87E-03	7.65E-04	2.64E-03	8.62E-04	8.64E-04	4.07E-03	9.05E-05	0.00E+00	1.78E-03	8.48E-03
9	E09	60	Combination Long Haul Truck	64	0.00E+00	3.73E-05	2.43E-06	2.53E+01	1.69E-07	3.91E-02	2.87E-05	4.46E-02	3.89E-03	6.60E-04	2.72E-03	7.41E-04	7.50E-04	3.87E-03	8.48E-05	0.00E+00	1.97E-03	8.41E-03
9	E10	60	Passenger Car	651	0.00E+00	9.76E-06	1.06E-06	3.27E+01	6.79E-05	2.52E-01	2.17E-05	1.33E-03	6.61E-03	1.01E-03	2.11E-03	1.36E-03	1.40E-03	1.36E-04	1.64E-04	4.51E-08	7.15E-04	2.08E-04
9	E10	60	Passenger Truck	1091	0.00E+00	2.15E-05	2.27E-06	7.45E+01	1.34E-04	4.50E-01	4.43E-05	4.33E-03	1.21E-02	1.88E-03	4.22E-03	2.75E-03	2.81E-03	5.77E-04	3.70E-04	1.02E-07	1.40E-03	7.18E-04
9	E10	60	Single Unit Short Haul Truck	67	0.00E+00	1.97E-05	9.85E-07	1.25E+01	1.62E-05	2.43E-02	2.10E-05	9.38E-03	1.59E-03	2.89E-04	2.39E-03	5.90E-04	6.00E-04	1.26E-03	5.07E-05	2.09E-08	1.79E-03	1.76E-03
9	E10	60	Single Unit Long Haul Truck	3	0.00E+00	8.60E-07	4.28E-08	5.35E-01	7.05E-07	1.03E-03	9.18E-07	4.06E-04	7.16E-05	1.28E-05	1.05E-04	2.57E-05	2.61E-05	5.35E-05	2.16E-06	8.88E-10	7.87E-05	7.60E-05
9	E10	60	Combination Short Haul Truck	42	0.00E+00	2.49E-05	1.74E-06	1.62E+01	8.83E-08	2.18E-02	1.85E-05	2.70E-02	2.32E-03	4.59E-04	1.59E-03	5.17E-04	5.18E-04	2.44E-03	5.43E-05	0.00E+00	1.07E-03	5.09E-03
9	E10	60	Combination Long Haul Truck	39	0.00E+00	2.24E-05	1.46E-06	1.52E+01	1.01E-07	2.35E-02	1.72E-05	2.68E-02	2.33E-03	3.96E-04	1.63E-03	4.44E-04	4.50E-04	2.32E-03	5.09E-05	0.00E+00	1.18E-03	5.05E-03
9	E11	60	Passenger Car	1227	0.00E+00	1.84E-05	1.99E-06	6.15E+01	1.28E-04	4.75E-01	4.08E-05	2.50E-03	1.25E-02	1.91E-03	3.98E-03	2.56E-03	2.63E-03	2.56E-04	3.09E-04	8.50E-08	1.35E-03	3.91E-04
9	E11	60	Passenger Truck	2054	0.00E+00	4.05E-05	4.28E-06	1.40E+02	2.53E-04	8.47E-01	8.35E-05	8.16E-03	2.28E-02	3.55E-03	7.94E-03	5.17E-03	5.30E-03	1.09E-03	6.98E-04	1.93E-07	2.64E-03	1.35E-03
9	E11	60	Single Unit Short Haul Truck	148	0.00E+00	4.36E-05	2.18E-06	2.78E+01	3.59E-05	5.38E-02	4.65E-05	2.08E-02	3.53E-03	6.40E-04	5.30E-03	1.31E-03	1.33E-03	2.78E-03	1.12E-04	4.62E-08	3.97E-03	3.89E-03
9	E11	60	Single Unit Long Haul Truck	7	0.00E+00	1.90E-06	9.47E-08	1.19E+00	1.56E-06	2.28E-03	2.03E-06	8.99E-04	1.59E-04	2.83E-05	2.32E-04	5.69E-05	5.78E-05	1.18E-04	4.79E-06	1.97E-09	1.74E-04	1.68E-04
9	E11	60	Combination Short Haul Truck	94	0.00E+00	5.51E-05	3.84E-06	3.58E+01	1.95E-07	4.82E-02	4.09E-05	5.97E-02	5.13E-03	1.01E-03	3.50E-03	1.14E-03	1.14E-03	5.40E-03	1.20E-04	0.00E+00	2.36E-03	1.12E-02
9	E11	60	Combination Long Haul Truck	85	0.00E+00	4.94E-05	3.22E-06	3.36E+01	2.24E-07	5.19E-02	3.81E-05	5.92E-02	5.16E-03	8.74E-04	3.61E-03	9.82E-04	9.95E-04	5.13E-03	1.12E-04	0.00E+00	2.62E-03	1.11E-02
9	E12	60	Passenger Car	897	0.00E+00	1.34E-05	1.45E-06	4.50E+01	9.35E-05	3.47E-01	2.99E-05	1.83E-03	9.10E-03	1.40E-03	2.91E-03	1.87E-03	1.92E-03	1.87E-04	2.26E-04	6.21E-08	9.84E-04	2.86E-04
9	E12	60	Passenger Truck	1502	0.00E+00	2.96E-05	3.13E-06	1.03E+02	1.85E-04	6.19E-01	6.11E-05	5.96E-03	1.67E-02	2.59E-03	5.81E-03	3.78E-03	3.87E-03	7.95E-04	5.10E-04	1.41E-07	1.93E-03	9.88E-04
9	E12	60	Single Unit Short Haul Truck	145	0.00E+00	4.25E-05	2.12E-06	2.71E+01	3.50E-05	5.24E-02	4.53E-05	2.02E-02	3.44E-03	6.24E-04	5.16E-03	1.27E-03	1.29E-03	2.71E-03	1.09E-04	4.50E-08	3.87E-03	3.79E-03
9	E12	60	Single Unit Long Haul Truck	6	0.00E+00	1.85E-06	9.23E-08	1.15E+00	1.52E-06	2.22E-03	1.98E-06	8.75E-04	1.54E-04	2.76E-05	2.26E-04	5.54E-05	5.63E-05	1.15E-04	4.67E-06	1.91E-09	1.70E-04	1.64E-04
9	E12	60	Combination Short Haul Truck	132	0.00E+00	7.75E-05	5.40E-06	5.04E+01	2.75E-07	6.78E-02	5.75E-05	8.40E-02	7.22E-03	1.43E-03	4.93E-03	1.61E-03	1.61E-03	7.60E-03	1.69E-04	0.00E+00	3.32E-03	1.58E-02
9	E12	60	Combination Long Haul Truck	120	0.00E+00	6.96E-05	4.53E-06	4.73E+01	3.15E-07	7.30E-02	5.37E-05	8.33E-02	7.26E-03	1.23E-03	5.08E-03	1.38E-03	1.40E-03	7.23E-03	1.58E-04	0.00E+00	3.68E-03	1.57E-02
11	E13	80	Passenger Car	239	0.00E+00	2.91E-06	3.14E-07	1.11E+01	2.02E-05	7.73E-02	6.46E-06	4.91E-04	1.31E-03	2.28E-04	6.29E-04	4.05E-04	4.16E-04	3.74E-05	5.61E-05	1.57E-08	2.13E-04	7.67E-05
11	E13	80	Passenger Truck	400	0.00E+00	6.24E-06	6.62E-07	2.57E+01	4.00E-05	1.42E-01	1.31E-05	1.46E-03	2.36E-03	4.18E-04	1.25E-03	8.13E-04	8.33E-04	1.80E-04	1.29E-04	3.50E-08	4.19E-04	2.38E-04
11	E13	80	Single Unit Short Haul Truck	27	0.00E+00	5.02E-06	2.50E-07	4.93E+00	4.04E-06	9.88E-03	5.35E-06	2.57E-03	3.16E-04	7.14E-05	6.12E-04	1.49E-04	1.51E-04	4.95E-04	1.99E-05	7.88E-09	4.60E-04	4.82E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	2.19E-07	1.08E-08	2.09E-01	1.73E-07	4.11E-04	2.32E-07	1.10E-04	1.44E-05	3.15E-06	2.67E-05	6.41E-06	6.52E-06	2.08E-05	8.42E-07	3.29E-10	2.02E-05	2.06E-05
11	E13	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.77E-04
11	E13	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.03E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.48E-04
11	E14	80	Passenger Car	414	0.00E+00	5.03E-06	5.44E-07	1.93E+01	3.50E-05	1.34E-01	1.12E-05	8.49E-04	2.27E-03	3.95E-04	1.09E-03	7.02E-04	7.20E-04	6.48E-05	9.71E-05	2.72E-08	3.68E-04	1.33E-04
11	E14	80	Passenger Truck	692	0.00E+00	1.08E-05	1.15E-06	4.45E+01	6.92E-05	2.46E-01	2.26E-05	2.52E-03	4.08E-03	7.24E-04	2.17E-03	1.41E-03	1.44E-03	3.11E-04	2.22E-04	6.06E-08	7.25E-04	4.12E-04
11	E14	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.62E-07	1.11E+01	9.10E-06	2.22E-02	1.20E-05	5.79E-03	7.10E-04	1.61E-04	1.38E-03	3.35E-04	3.41E-04	1.11E-03	4.47E-05	1.77E-08	1.04E-03	1.08E-03
11	E14	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.26E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.47E-05	4.69E-05	1.90E-06	7.40E-10	4.54E-05	4.64E-05
11	E14	80	Combination Short Haul Truck	42	0.00E+00	1.84E-05	1.32E-06	1.52E+01	5.80E-08	1.63E-02	1.34E-05	1.89E-02	1.11E-03	2.74E-04	1.10E-03	3.88E-04	3.85E-04	2.29E-03	5.09E-05	0.00E+00	7.10E-04	3.55E-03
11	E14	80	Combination Long Haul Truck	38	0.00E+00	1.65E-05	1.11E-06	1.41E+01	6.71E-08	1.69E-02	1.25E-05	1.83E-02	1.09E-03	2.19E-04	1.13E-03	3.34E-04	3.36E-04	2.15E-03	4.71E-05	0.00E+00	7.95E-04	3.45E-03
11	E15	80	Passenger Car	195	0.00E+00	2.37E-06	2.56E-07	9.07E+00	1.65E-05	6.30E-02	5.27E-06	4.00E-04	1.07E-03	1.86E-04	5.13E-04	3.31E-04	3.39E-04	3.05E-05	4.57E-05	1.28E-08	1.74E-04	6.25E-05
11	E15	80	Passenger Truck	326	0.00E+00	5.09E-06	5.40E-07	2.10E+01	3.26E-05	1.16E-01	1.07E-05	1.19E-03	1.92E-03	3.41E-04	1.02E-03	6.63E-04	6.79E-04	1.47E-04	1.05E-04	2.85E-08	3.41E-04	1.94E-04
11	E15	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.19E-04
11	E15	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	E15	80	Combination Short Haul Truck	16	0.00E+00	7.13E-06	5.10E-07	5.89E+00	2.25E-08	6.31E-03	5.21E-06	7.31E-03	4.31E-04	1.06E-04	4.24E-04	1.50E-04	1.49E-04	8.89E-04	1.97E-05	0.00E+00	2.75E-04	1.38E-03
11	E15	80	Combination Long Haul Truck	15	0.00E+00	6.38E-06	4.29E-07	5.45E+00	2.60E-08	6.54E-03	4.84E-06	7.09E-03	4.22E-04	8.49E-05	4.38E-04	1.29E-04	1.30E-04	8.32E-04	1.82E-05	0.00E+00	3.08E-04	1.34E-03
11	E16	80	Passenger Car	320	0.00E+00	3.89E-06	4.21E-07	1.49E+01	2.71E-05	1.03E-01	8.66E-06	6.57E-04	1.76E-03	3.06E-04	8.42E-04	5.43E-04	5.57E-04	5.01E-05	7.51E-05	2.11E-08	2.85E-04	1.03E-04
11	E16	80	Passenger Truck	536	0.00E+00	8.36E-06	8.87E-07	3.44E+01	5.36E-05	1.90E-01	1.75E-05	1.95E-03	3.16E-03	5.60E-04	1.68E-03	1.09E-03	1.12E-03	2.41E-04	1.72E-04	4.69E-08	5.61E-04	3.19E-04
11	E16	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	E16	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.11E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	E16	80	Combination Short Haul Truck	37	0.00E+00	1.61E-05	1.15E-06	1.33E+01	5.08E-08	1.43E-02	1.18E-05	1.65E-02	9.74E-04	2.40E-04	9.58E-04	3.40E-04	3.37E-04	2.01E-03	4.45E-05	0.00E+00	6.21E-04	3.11E-03
11	E16	80	Combination Long Haul Truck	33	0.00E+00	1.44E-05	9.69E-07	1.23E+01	5.87E-08	1.48E-02	1.09E-05	1.60E-02	9.53E-04	1.92E-04	9.90E-04	2.92E-04	2.94E-04	1.88E-03	4.12E-05	0.00E+00	6.96E-04	3.02E-03
11	E17	80	Passenger Car	104	0.00E+00	1.26E-06	1.37E-07	4.84E+00	8.80E-06	3.36E-02	2.81E-06	2.14E-04	5.72E-04	9.94E-05	2.74E-04	1.76E-04	1.81E-04	1.63E-05	2.44E-05	6.84E-09	9.26E-05	3.34E-05
11	E17	80	Passenger Truck	174	0.00E+00	2.71E-06	2.88E-07	1.12E+01	1.74E-05	6.19E-02	5.69E-06	6.34E-04	1.03E-03	1.82E-04	5.45E-04	3.54E-04	3.62E-04	7.82E-05	5.59E-05	1.52E-08	1.82E-04	1.04E-04
11	E17	80	Single Unit Short Haul Truck	36	0.00E+00	6.82E-06	3.39E-07	6.69E+00	5.49E-06	1.34E-02	7.26E-06	3.49E-03	4.29E-04	9.70E-05	8.30E-04	2.02E-04	2.05E-04	6.71E-04	2.70E-05	1.07E-08	6.25E-04	6.54E-04
11	E17	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.46E-08	2.83E-01	2.34E-07	5.58E-04	3.15E-07	1.49E-04	1.96E-05	4.28E-06	3.62E-05	8.69E-06	8.84E-06	2.83E-05	1.14E-06	4.46E-10	2.74E-05	2.80E-05
11	E17	80	Combination Short Haul Truck	13	0.00E+00	5.75E-06	4.11E-07	4.75E+00	1.81E-08	5.09E-03	4.20E-06	5.89E-03	3.48E-04	8.57E-05	3.42E-04	1.21E-04	1.20E-04	7.17E-04	1.59E-05	0.00E+00	2.22E-04	1.11E-03
11	E17	80	Combination Long Haul Truck	12	0.00E+00	5.15E-06	3.46E-07	4.39E+00	2.10E-08	5.28E-03	3.90E-06	5.72E-03	3.40E-04	6.85E-05	3.54E-04	1.04E-04	1.05E-04	6.71E-04	1.47E-05	0.00E+00	2.49E-04	1.08E-03
11	E18	80	Passenger Car	237	0.00E+00	2.89E-06	3.12E-07	1.11E+01	2.01E-05	7.68E-02	6.42E-06	4.88E-04	1.31E-03	2.27E-04	6.25E-04	4.03E-04	4.13E-04	3.72E-05	5.57E-05	1.56E-08	2.12E-04	7.62E-05
11	E18	80	Passenger Truck	398	0.00E+00	6.20E-06	6.58E-07	2.56E+01	3.97E-05	1.41E-01	1.30E-05	1.45E-03	2.34E-03	4.16E-04	1.24E-03	8.08E-04	8.28E-04	1.79E-04	1.28E-04	3.48E-08	4.16E-04	2.37E-04
11	E18	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.11E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	E18	80	Combination Short Haul Truck	9	0.00E+00	4.14E-06	2.96E-07	3.42E+00	1.31E-08	3.67E-03	3.02E-06	4.24E-03	2.50E-04	6.17E-05	2.46E-04	8.74E-05	8.67E-05	5.16E-04	1.15E-05	0.00E+00	1.60E-04	7.99E-04
11	E18	80	Combination Long Haul Truck	9	0.00E+00	3.71E-06	2.49E-07	3.16E+00	1.51E-08	3.80E-03	2.81E-06	4.12E-03	2.45E-04	4.93E-05	2.55E-04	7.52E-05	7.56E-05	4.83E-04	1.06E-05	0.00E+00	1.79E-04	7.76E-04
9	E19	60	Passenger Car	590	0.00E+00	8.84E-06	9.56E-07	2.96E+01	6.15E-05	2.28E-01	1.96E-05	1.20E-03	5.99E-03	9.19E-04	1.91E-03	1.23E-03	1.27E-03	1.23E-04	1.48E-04	4.09E-08	6.47E-04	1.88E-04
9	E19	60	Passenger Truck	988	0.00E+00	1.95E-05	2.06E-06	6.75E+01	1.22E-04	4.07E-01	4.02E-05	3.92E-03	1.10E-02	1.71E-03	3.82E-03	2.49E-03	2.55E-03	5.23E-04	3.36E-04	9.27E-08	1.27E-03	6.50E-04
9	E19	60	Single Unit Short Haul Truck	50	0.00E+00	1.46E-05	7.31E-07	9.32E+00	1.21E-05	1.80E-02	1.56E-05	6.97E-03	1.18E-03	2.15E-04	1.78E-03	4.39E-04	4.46E-04	9.32E-04	3.76E-05	1.55E-08	1.33E-03	1.31E-03
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	6.39E-07	3.18E-08	3.98E-01	5.24E-07	7.66E-04	6.82E-07	3.01E-04	5.32E-05	9.50E-06	7.78E-05	1.91E-05	1.94E-05	3.97E-05	1.61E-06	6.59E-10	5.84E-05	5.65E-05
9	E19	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.63E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.08E-03
9	E19	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.05E-03
9	E20	60	Passenger Car	388	0.00E+00	5.81E-06	6.28E-07	1.94E+01	4.04E-05	1.50E-01	1.29E-05	7.91E-04	3.94E-03	6.04E-04	1.26E-03	8.10E-04	8.31E-04	8.10E-05	9.75E-05	2.69E-08	4.25E-04	1.24E-04
9	E20	60	Passenger Truck	649	0.00E+00	1.28E-05	1.35E-06	4.44E+01	8.01E-05	2.68E-01	2.64E-05	2.58E-03	7.22E-03	1.12E-03	2.51E-03	1.64E-03	1.67E-03	3.44E-04	2.21E-04	6.09E-08	8.35E-04	4.27E-04
9	E20	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.89E-07	8.78E+00	1.14E-05	1.70E-02	1.47E-05	6.57E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	E20	60	Single Unit Long Haul Truck	2	0.00E+00	6.02E-07	2.99E-08	3.75E-01	4.93E-07	7.21E-04	6.43E-07	2.84E-04	5.01E-05	8.96E-06	7.34E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.32E-05
9	E20	60	Combination Short Haul Truck	16	0.00E+00	9.54E-06	6.65E-07	6.20E+00	3.38E-08	8.34E-03	7.08E-06	1.03E-02	8.88E-04	1.76E-04	6.07E-04	1.98E-04	1.98E-04	9.35E-04	2.08E-05	0.00E+00	4.09E-04	1.95E-03
9	E20	60	Combination Long Haul Truck	15	0.00E+00	8.56E-06	5.57E-07	5.82E+00	3.87E-08	8.99E-03	6.60E-06	1.02E-02	8.93E-04	1.51E-04	6.26E-04	1.70E-04	1.72E-04	8.89E-04	1.95E-05	0.00E+00	4.53E-04	1.93E-03
11	E21	80	Passenger Car	9	0.00E+00	1.09E-07	1.18E-08	4.18E-01	7.60E-07	2.90E-03	2.43E-07	1.84E-05	4.94E-05	8.58E-06	2.36E-05	1.52E-05	1.56E-05	1.41E-06	2.11E-06	5.90E-10	8.00E-06	2.88E-06
11	E21	80	Passenger Truck	15	0.00E+00	2.34E-07	2.49E-08	9.66E-01	1.50E-06	5.34E-03	4.91E-07	5.48E-05	8.85E-05	1.57E-05	4.70E-05	3.05E-05	3.13E-05	6.75E-06	4.83E-06	1.31E-09	1.57E-05	8.95E-06
11	E21	80

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E25	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.14E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.92E-04
10	E25	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.83E-04
10	E26	70	Passenger Car	212	0.00E+00	2.76E-06	2.99E-07	1.01E+01	1.92E-05	7.18E-02	6.15E-06	4.24E-04	1.64E-03	2.63E-04	5.98E-04	3.86E-04	3.96E-04	3.79E-05	5.10E-05	1.39E-08	2.02E-04	6.63E-05
10	E26	70	Passenger Truck	354	0.00E+00	6.06E-06	6.41E-07	2.34E+01	3.83E-05	1.32E-01	1.26E-05	1.33E-03	2.98E-03	4.85E-04	1.20E-03	7.81E-04	8.00E-04	1.72E-04	1.17E-04	3.12E-08	4.00E-04	2.18E-04
10	E26	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	E26	70	Combination Short Haul Truck	9	0.00E+00	4.90E-06	3.48E-07	3.55E+00	1.59E-08	4.22E-03	3.59E-06	5.14E-03	3.73E-04	8.13E-05	2.98E-04	1.03E-04	1.03E-04	5.35E-04	1.19E-05	0.00E+00	1.95E-04	9.68E-04
10	E26	70	Combination Long Haul Truck	9	0.00E+00	4.43E-06	2.96E-07	3.31E+00	1.83E-08	4.47E-03	3.36E-06	5.07E-03	3.70E-04	6.75E-05	3.08E-04	8.95E-05	9.04E-05	5.06E-04	1.11E-05	0.00E+00	2.18E-04	9.54E-04
10	E27	70	Passenger Car	249	0.00E+00	3.26E-06	3.52E-07	1.20E+01	2.27E-05	8.46E-02	7.24E-06	5.00E-04	1.93E-03	3.10E-04	7.05E-04	4.54E-04	4.66E-04	4.47E-05	6.01E-05	1.64E-08	2.39E-04	7.81E-05
10	E27	70	Passenger Truck	418	0.00E+00	7.14E-06	7.55E-07	2.76E+01	4.51E-05	1.56E-01	1.48E-05	1.56E-03	3.52E-03	5.72E-04	1.41E-03	9.20E-04	9.43E-04	2.02E-04	1.37E-04	3.67E-08	4.72E-04	2.57E-04
10	E27	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.65E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	E27	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.57E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.84E-04
10	E27	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.53E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.77E-04
10	E28	70	Passenger Car	149	0.00E+00	1.94E-06	2.10E-07	7.14E+00	1.35E-05	5.05E-02	4.32E-06	2.98E-04	1.15E-03	1.85E-04	4.21E-04	2.71E-04	2.78E-04	2.66E-05	3.59E-05	9.78E-09	1.42E-04	4.66E-05
10	E28	70	Passenger Truck	249	0.00E+00	4.26E-06	4.51E-07	1.64E+01	2.69E-05	9.28E-02	8.85E-06	9.32E-04	2.10E-03	3.41E-04	8.44E-04	5.49E-04	5.62E-04	1.21E-04	8.20E-05	2.19E-08	2.82E-04	1.53E-04
10	E28	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.01E-07	1.59E+00	1.66E-06	3.17E-03	2.16E-06	9.98E-04	1.43E-04	2.85E-05	2.46E-04	6.06E-05	6.16E-05	1.59E-04	6.40E-06	2.58E-09	1.84E-04	1.87E-04
10	E28	70	Combination Short Haul Truck	7	0.00E+00	3.81E-06	2.71E-07	2.76E+00	1.24E-08	3.28E-03	2.79E-06	4.00E-03	2.90E-04	6.33E-05	2.32E-04	8.01E-05	8.00E-05	4.16E-04	9.24E-06	0.00E+00	1.52E-04	7.53E-04
10	E28	70	Combination Long Haul Truck	7	0.00E+00	3.44E-06	2.30E-07	2.58E+00	1.43E-08	3.47E-03	2.61E-06	3.94E-03	2.88E-04	5.25E-05	2.40E-04	6.96E-05	7.03E-05	3.94E-04	8.63E-06	0.00E+00	1.70E-04	7.42E-04
10	E29	70	Passenger Car	31	0.00E+00	4.00E-07	4.33E-08	1.47E+00	2.79E-06	1.04E-02	8.90E-07	6.14E-05	2.38E-04	3.81E-05	8.67E-05	5.59E-05	5.73E-05	5.49E-06	7.39E-06	2.01E-09	2.93E-05	9.60E-06
10	E29	70	Passenger Truck	51	0.00E+00	8.78E-07	9.29E-08	3.39E+00	5.55E-06	1.91E-02	1.82E-06	1.92E-04	4.32E-04	7.03E-05	1.74E-04	1.13E-04	1.16E-04	2.49E-05	1.69E-05	4.52E-09	5.80E-05	3.16E-05
10	E29	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
10	E29	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.97E-01	8.84E-10	2.34E-04	2.00E-07	2.86E-04	2.07E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.97E-05	6.60E-07	0.00E+00	1.09E-05	5.38E-05
10	E30	70	Passenger Car	194	0.00E+00	2.54E-06	2.75E-07	9.32E+00	1.77E-05	6.59E-02	5.65E-06	3.90E-04	1.51E-03	2.42E-04	5.50E-04	3.54E-04	3.64E-04	3.48E-05	4.69E-05	1.28E-08	1.86E-04	6.09E-05
10	E30	70	Passenger Truck	326	0.00E+00	5.57E-06	5.89E-07	2.15E+01	3.52E-05	1.21E-01	1.16E-05	1.22E-03	2.74E-03	4.46E-04	1.10E-03	7.17E-04	7.35E-04	1.58E-04	1.07E-04	2.86E-08	3.68E-04	2.00E-04
10	E30	70	Single Unit Short Haul Truck	11	0.00E+00	2.48E-06	1.24E-07	1.94E+00	2.02E-06	3.88E-03	2.64E-06	1.22E-03	1.74E-04	3.49E-05	3.00E-04	7.40E-05	7.53E-05	1.94E-04	7.82E-06	3.16E-09	2.25E-04	2.28E-04
10	E30	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.71E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	6.99E-04
10	E30	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.66E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.89E-04
10	E31	70	Passenger Car	56	0.00E+00	7.37E-07	7.98E-08	2.71E+00	5.13E-06	1.91E-02	1.64E-06	1.13E-04	4.38E-04	7.02E-05	1.60E-04	1.03E-04	1.06E-04	1.01E-05	1.36E-05	3.71E-09	5.40E-05	1.77E-05
10	E31	70	Passenger Truck	95	0.00E+00	1.62E-06	1.71E-07	6.24E+00	1.02E-05	3.52E-02	3.36E-06	3.54E-04	7.96E-04	1.29E-04	3.20E-04	2.08E-04	2.13E-04	4.58E-05	3.11E-05	8.32E-09	1.07E-04	5.82E-05
10	E31	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.66E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.12E-04
10	E31	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.15E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	E31	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.14E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.92E-04
10	E31	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.83E-04
10	E32	70	Passenger Car	234	0.00E+00	3.06E-06	3.31E-07	1.12E+01	2.13E-05	7.95E-02	6.81E-06	4.70E-04	1.82E-03	2.92E-04	6.63E-04	4.27E-04	4.38E-04	4.20E-05	5.65E-05	1.54E-08	2.24E-04	7.34E-05
10	E32	70	Passenger Truck	393	0.00E+00	6.71E-06	7.10E-07	2.59E+01	4.24E-05	1.46E-01	1.39E-05	1.47E-03	3.31E-03	5.37E-04	1.33E-03	8.65E-04	8.86E-04	1.90E-04	1.29E-04	3.45E-08	4.44E-04	2.42E-04
10	E32	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.35E-03	4.32E-06	2.00E-03	2.85E-04	5.71E-05	4.91E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.74E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	8.78E-09	1.35E-01	1.43E-07	2.67E-04	1.88E-07	8.59E-05	1.30E-05	2.54E-06	2.15E-05	5.24E-06	5.33E-06	1.35E-05	5.44E-07	2.18E-10	1.61E-05	1.61E-05
10	E32	70	Combination Short Haul Truck	10	0.00E+00	5.44E-06	3.87E-07	3.94E+00	1.77E-08	4.68E-03	3.99E-06	5.71E-03	4.14E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.95E-04	1.32E-05	0.00E+00	2.17E-04	1.08E-03
10	E32	70	Combination Long Haul Truck	10	0.00E+00	4.92E-06	3.29E-07	3.68E+00	2.04E-08	4.96E-03	3.74E-06	5.63E-03	4.11E-04	7.50E-05	3.43E-04	9.94E-05	1.00E-04	5.63E-04	1.23E-05	0.00E+00	2.42E-04	1.06E-03
9	E33	60	Passenger Car	267	0.00E+00	4.00E-06	4.33E-07	1.34E+01	2.78E-05	1.03E-01	8.89E-06	5.44E-04	2.71E-03	4.16E-04	8.65E-04	5.58E-04	5.72E-04	5.58E-05	6.71E-05	1.85E-08	2.93E-04	8.51E-05
9	E33	60	Passenger Truck	447	0.00E+00	8.82E-06	9.31E-07	3.05E+01	5.51E-05	1.84E-01	1.82E-05	1.77E-03	4.97E-03	7.72E-04	1.73E-03	1.13E-03	1.15E-03	2.37E-04	1.52E-04	4.20E-08	5.75E-04	2.94E-04
9	E33	60	Single Unit Short Haul Truck	49	0.00E+00	1.43E-05	7.17E-07	9.14E+00	1.18E-05	1.77E-02	1.53E-05	6.84E-03	1.16E-03	2.11E-04	1.74E-03	4.30E-04	4.37E-04	9.14E-04	3.69E-05	1.52E-08	1.31E-03	1.28E-03
9	E33	60	Single Unit Long Haul Truck	2	0.00E+00	6.26E-07	3.12E-08	3.90E-01	5.13E-07	7.51E-04	6.69E-07	2.96E-04	5.22E-05	9.32E-06	7.63E-05	1.87E-05	1.90E-05	3.89E-05	1.58E-06	6.47E-10	5.73E-05	5.54E-05
9	E33	60	Combination Short Haul Truck	28	0.00E+00	1.66E-05	1.16E-06	1.08E+01	5.89E-08	1.45E-02	1.23E-05	1.80E-02	1.55E-03	3.06E-04	1.06E-03	3.45E-04	3.45E-04	1.63E-03	3.62E-05	0.00E+00	7.12E-04	3.39E-03
9	E33	60	Combination Long Haul Truck	26	0.00E+00	1.49E-05	9.71E-07	1.01E+01	6.75E-08	1.57E-02	1.15E-05	1.79E-02	1.56E-03	2.64E-04	1.09E-03	2.96E-04	3.00E-04	1.55E-03	3.39E-05	0.00E+00	7.90E-04	3.36E-03
9	E34	60	Passenger Car	680	0.00E+00	1.02E-05	1.10E-06	3.41E+01	7.09E-05	2.63E-01	2.26E-05	1.39E-03	6.90E-03	1.06E-03	2.20E-03	1.42E-03	1.46E-03	1.42E-04	1.71E-04	4.71E-08	7.46E-04	2.17E-04
9	E34	60	Passenger Truck	1139	0.00E+00	2.25E-05	2.37E-06	7.78E+01	1.40E-04	4.69E-01	4.63E-05	4.52E-03	1.27E-02	1.97E-03	4.40E-03	2.87E-03	2.94E-03	6.03E-04	3.87E-04	1.07E-07	1.46E-03	7.49E-04
9	E34	60	Single Unit Short Haul Truck	42	0.00E+00	1.24E-05	6.19E-07	7.88E+00	1.02E-05	1.53E-02	1.32E-05	5.90E-03	1.00E-03	1.82E-04	1.50E-03	3.71E-04	3.77E-04	7.89E-04	3.18E-05	1.31E-08	1.13E-03	1.11E-03
9	E34	60	Single Unit Long Haul Truck	2	0.00E+00	5.40E-07	2.69E-08	3.36E-01	4.43E-07	6.48E-04	5.77E-07	2.55E-04	4.50E-05	8.04E-06	6.59E-05	1.61E-05	1.64E-05	3.36E-05	1.36E-06	5.58E-10	4.95E-05	4.78E-05
9	E34	60	Combination Short Haul Truck	32	0.00E+00	1.88E-05	1.31E-06	1.22E+01	6.65E-08	1.64E-02	1.39E-05	2.03E-02	1.75E-03	3.46E-04	1.19E-03	3.90E-04	3.90E-04	1.84E-03	4.09E-05	0.00E+00	8.04E-04	3.83E-03
9	E34	60	Combination Long Haul Truck	29	0.00E+00	1.68E-05	1.10E-06	1.14E+01	7.62E-08	1.77E-02	1.30E-05	2.02E-02	1.76E-03	2.98E-04	1.23E-03	3.35E-04	3.39E-04	1.75E-03	3.83E-05	0.00E+00	8.92E-04	3.80E-03
9	E35	60	Passenger Car	186	0.00E+00	2.78E-06	3.01E-07	9.32E+00	1.94E-05	7.19E-02	6.19E-06	3.79E-04	1.89E-03	2.90E-04	6.02E-04	3.88E-04	3.98E-04	3.88E-05	4.67E-05	1.29E-08	2.04E-04	5.92E-05
9	E35	60	Passenger Truck	311	0.00E+00	6.14E-06	6.48E-07	2.13E+01	3.84E-05	1.28E-01	1.26E-05	1.24E-03	3.46E-03	5.37E-04	1.20E-03	7.84E-04	8.03E-04	1.65E-04	1.06E-04	2.92E-08	4.00E-04	2.05E-04
9	E35	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.03E-07	8.96E+00	1.16E-05	1.73E-02	1.50E-05	6.70E-03	1.14E-03	2.07E-04	1.71E-03	4.22E-04	4.29E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.26E-03
9	E35	60	Single Unit Long Haul Truck	2	0.00E+00	6.14E-07	3.06E-08	3.82E-01	5.03E-07	7.36E-04	6.56E-07	2.90E-04	5.11E-05	9.14E-06	7.48E-05	1.83E-05	1.86E-05	3.82E-05	1.55E-06	6.34E-10	5.62E-05	5.43E-05
9	E35	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.63E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.08E-03
9	E35	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.05E-03
9	E36	60	Passenger Car	498	0.00E+00	7.46E-06	8.07E-07	2.50E+01	5.19E-05	1.93E-01	1.66E-05	1.02E-03	5.05E-03	7.76E-04	1.61E-03	1.04E-03	1.07E-03	1.04E-04	1.25E-04	3.45E-08	5.46E-04	1.59E-04
9	E36	60	Passenger Truck	834	0.00E+00	1.64E-05	1.74E-06	5.70E+01	1.03E-04	3.44E-01	3.39E-05	3.31E-03	9.27E-03	1.44E-03	3.22E-03	2.10E-03	2.15E-03	4.42E-04	2.83E-04	7.83E-08	1.07E-03	5.49E-04
9	E36	60	Single Unit Short Haul Truck	45	0.00E+00	1.32E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.30E-03	1.07E-03	1.94E-04	1.61E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	5.77E-07	2.87E-08	3.59E-01	4.73E-07	6.92E-04	6.16E-07	2.72E-04	4.81E-05	8.59E-06	7.04E-05	1.72E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.11E-05
9	E36	60	Combination Short Haul Truck	32	0.00E+00	1.91E-05	1.33E-06	1.24E+01	6.76E-08	1.67E-02	1.42E-05	2.07E-02	1.78E-03	3.52E-04	1.21E-03	3.96E-04	3.97E-04	1.87E-03	4.15E-05	0.00E+00	8.17E-04	3.90E-03
9	E36	60	Combination Long Haul Truck	30	0.00E+00	1.71E-05	1.11E-06	1.16E+01	7.75E-08	1.80E-02	1.32E-05	2.05E-02	1.79E-03	3.03E-04	1.25E-03	3.40E-04	3.45E-04	1.78E-03	3.90E-05	0.00E+00	9.07E-04	3.86E-03
9	E37	60	Passenger Car	186	0.00E+00	2.78E-06	3.01E-07	9.32E+00	1.94E-05	7.19E-02	6.19E-06	3.79E-04	1.89E-03	2.90E-04	6.02E-04	3.88E-04	3.98E-04	3.88E-05	4.67E-05	1.29E-08	2.04E-04	5.92E-05
9	E37	60	Passenger Truck	311	0.00E+00	6.14E-06	6.48E-07	2.13E+01	3.84E-05	1.28E-01	1.26E-05	1.24E-03	3.46E-03	5.37E-04	1.20E-03	7.84E-04	8.03E-04	1.65E-04	1.06E-04	2.92E-08	4.00E-04	2.05E-04
9	E37	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.03E-07	8.96E+00	1.16E-05	1.73E-02	1.50E-05	6.70E-03	1.14E-03	2.07E-04	1.71E-03	4.22E-04	4.29E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.26E-03
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	6.14E-07	3.06E-08	3.82E-01	5.03E-07	7.36E-04	6.56E-07	2.90E-04	5.11E-05	9.14E-06	7.48E-05	1.83E-05	1.86E-05	3.82E-05	1.55E-06	6.34E-10	5.62E-05	5.43E-05
9	E37	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.63E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.08E-03
9	E37	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.05E-03
9	E38	60	Passenger Car	498	0.00E+00	7.46E-06	8.07E-07	2.50E+01	5.19E-05	1.93E-01	1.66E-05	1.02E-03	5.05E-03	7.76E-04	1.61E-03	1.04E-03	1.07E-03	1.04E-04	1.25E-04	3.45E-08	5.46E-04	1.59E-04
9	E38	60	Passenger Truck	834	0.00E+00	1.64E-05	1.74E-06	5.70E+01	1.03E-04	3.44E-01	3.39E-05	3.31E-03	9.27E-03	1.44E-03	3.22E-03	2.10E-03	2.15E-03	4.42E-04	2.83E-04	7.83E-08	1.07E-03	5.49E-04
9	E38	60	Single Unit Short Haul Truck	45	0.00E+00	1.32E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.30E-03	1.07E-03	1.94E-04	1.61E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	E38	60	Single Unit Long Haul Truck	2	0.00E+00	5.77E-07	2.87E-08	3.59E-01	4.73E-07	6.92E-04	6.16E-07	2.72E-04	4.81E-05	8.59E-06	7.04E-05	1.72E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.11E-05
9	E38	60	Combination Short Haul Truck	32	0.00E+00	1.91E-05	1.33E-06	1.24E+01	6.76E-08	1.67E-02	1.42E-05	2.07E-02	1.78E-03	3.52E-04	1.21E-03	3.96E-04	3.97E-04	1.87E-03	4.15E-05	0.00E+00	8.17E-04	3.90E-03
9	E38	60	Combination Long Haul Truck	30	0.00E+00	1.71E-05	1.11E-06	1.16E+01	7.75E-08	1.80E-02	1.32E-05	2.05E-02	1.79E-03	3.03E-04	1.25E-03	3.40E-04	3.45E-04	1.78E-03	3.90E-05	0.00E+00	9.07E-04	3.86E-03
10	E39	70	Passenger Car	267	0.00E+00	3.49E-06	3.77E-07	1.28E+01	2.43E-05	9.05E-02	7.75E-06	5.35E-04	2.07E-03	3.32E-04	7.55E-04	4.86E-04	4.99E-04	4.78E-05	6.44E-05	1.75E-08	2.55E-04	8.36E-05
10	E39	70	Passenger Truck	447	0.00E+00	7.64E-06	8.09E-07	2.95E+01	4.83E-05	1.67E-01	1.59E-05	1.67E-03	3.77E-03	6.12E-04	1.51E-03	9.85E-04	1.01E-03	2.17E-04	1.47E-04	3.93E-08	5.05E-04	2.75E-04
10	E39	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.65E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	E39	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.57E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.84E-04
10	E39	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.53E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.77E-04
10	E40	70	Passenger Car	175	0.00E+00	2.29E-06	2.47E-07	8.39E+00	1.59E-05	5.93E-02	5.08E-06	3.51E-04	1.36E-03	2.18E-04	4.95E-04	3.19E-04	3.27E-04	3.13E-05	4.22E-05	1.15E-08	1.67E-04	5.48E-05
10	E40	70	Passenger Truck	293	0.00E+00	5.01E-06	5.30E-07	1.93E+01	3.17E-05	1.09E-01	1.04E-05	1.10E-03	2.47E-03	4.01E-04	9.92E-04	6.46E-04	6.61E-04	1.42E-04	9.64E-05	2.58E-08	3.31E-04	1.80E-04
10	E40	70	Single Unit Short Haul Truck	31	0.00E+00	7.20E-06	3.61E-07	5.64E+00	5.89E-06	1.13E-02	7.67E-06	3.55E-03	5.07E-04	1.01E-04	8.74E-04	2.15E-04	2.19E-04	5.66E-04	2.27E-05	9.18E-09	6.55E-04	6.65E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E45	80	Passenger Car	75	0.00E+00	9.14E-07	9.89E-08	3.50E+00	6.36E-06	2.43E-02	2.03E-06	1.54E-04	4.13E-04	7.19E-05	1.98E-04	1.28E-04	1.31E-04	1.18E-05	1.76E-05	4.94E-09	6.70E-05	2.41E-05
11	E45	80	Passenger Truck	126	0.00E+00	1.96E-06	2.08E-07	8.09E+00	1.26E-05	4.47E-02	4.11E-06	4.59E-04	7.41E-04	1.32E-04	3.94E-04	2.56E-04	2.62E-04	5.65E-05	4.04E-05	1.10E-08	1.32E-04	7.49E-05
11	E45	80	Single Unit Short Haul Truck	37	0.00E+00	7.00E-06	3.48E-07	6.87E+00	5.63E-06	1.38E-02	7.45E-06	3.59E-03	4.40E-04	9.95E-05	8.52E-04	2.07E-04	2.11E-04	6.89E-04	2.77E-05	1.10E-08	6.41E-04	6.71E-04
11	E45	80	Single Unit Long Haul Truck	2	0.00E+00	3.04E-07	1.50E-08	2.91E-01	2.41E-07	5.73E-04	3.24E-07	1.53E-04	2.01E-05	4.39E-06	3.72E-05	8.92E-06	9.08E-06	2.90E-05	1.17E-06	4.58E-10	2.81E-05	2.87E-05
11	E45	80	Combination Short Haul Truck	20	0.00E+00	8.97E-06	6.41E-07	7.41E+00	2.83E-08	7.94E-03	6.55E-06	9.19E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.73E-03
11	E45	80	Combination Long Haul Truck	19	0.00E+00	8.03E-06	5.40E-07	6.85E+00	3.27E-08	8.23E-03	6.08E-06	8.92E-03	5.31E-04	1.07E-04	5.51E-04	1.63E-04	1.64E-04	1.05E-03	2.30E-05	0.00E+00	3.88E-04	1.68E-03
11	E46	80	Passenger Car	233	0.00E+00	2.83E-06	3.06E-07	1.08E+01	1.97E-05	7.52E-02	6.29E-06	4.78E-04	1.28E-03	2.22E-04	6.12E-04	3.95E-04	4.05E-04	3.64E-05	5.46E-05	1.53E-08	2.07E-04	7.47E-05
11	E46	80	Passenger Truck	389	0.00E+00	6.07E-06	6.44E-07	2.50E+01	3.89E-05	1.38E-01	1.27E-05	1.42E-03	2.29E-03	4.07E-04	1.22E-03	7.91E-04	8.11E-04	1.75E-04	1.25E-04	3.41E-08	4.08E-04	2.32E-04
11	E46	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.14E-03	5.07E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.19E-05	1.27E-08	7.40E-04	7.74E-04
11	E46	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.61E-04	3.74E-07	1.77E-04	2.32E-05	5.07E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.31E-05
11	E46	80	Combination Short Haul Truck	22	0.00E+00	9.66E-06	6.91E-07	7.98E+00	3.05E-08	8.55E-03	7.06E-06	9.90E-03	5.84E-04	1.44E-04	5.75E-04	2.04E-04	2.02E-04	1.20E-03	2.67E-05	0.00E+00	3.73E-04	1.87E-03
11	E46	80	Combination Long Haul Truck	20	0.00E+00	8.65E-06	5.81E-07	7.38E+00	3.52E-08	8.86E-03	6.55E-06	9.61E-03	5.72E-04	1.15E-04	5.94E-04	1.75E-04	1.76E-04	1.13E-03	2.47E-05	0.00E+00	4.18E-04	1.81E-03
11	E47	80	Passenger Car	65	0.00E+00	7.87E-07	8.51E-08	3.01E+00	5.48E-06	2.09E-02	1.75E-06	1.33E-04	3.56E-04	6.18E-05	1.70E-04	1.10E-04	1.13E-04	1.01E-05	1.52E-05	4.26E-09	5.76E-05	2.08E-05
11	E47	80	Passenger Truck	108	0.00E+00	1.69E-06	1.79E-07	6.96E+00	1.08E-05	3.85E-02	3.54E-06	3.95E-04	6.38E-04	1.13E-04	3.39E-04	2.20E-04	2.25E-04	4.87E-05	3.48E-05	9.47E-09	1.13E-04	6.45E-05
11	E47	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.28E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	E47	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.32E-07	1.52E+00	5.80E-09	1.63E-03	1.34E-06	1.89E-03	1.11E-04	2.74E-05	1.10E-04	3.88E-05	3.85E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.55E-04
11	E47	80	Combination Long Haul Truck	4	0.00E+00	1.65E-06	1.11E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.45E-04
11	E48	80	Passenger Car	219	0.00E+00	2.67E-06	2.89E-07	1.02E+01	1.86E-05	7.10E-02	5.94E-06	4.51E-04	1.21E-03	2.10E-04	5.78E-04	3.72E-04	3.82E-04	3.44E-05	5.15E-05	1.44E-08	1.96E-04	7.05E-05
11	E48	80	Passenger Truck	368	0.00E+00	5.73E-06	6.08E-07	2.36E+01	3.67E-05	1.31E-01	1.20E-05	1.34E-03	2.16E-03	3.84E-04	1.15E-03	7.47E-04	7.65E-04	1.65E-04	1.18E-04	3.21E-08	3.85E-04	2.19E-04
11	E48	80	Single Unit Short Haul Truck	38	0.00E+00	7.18E-06	3.57E-07	7.04E+00	5.78E-06	1.41E-02	7.64E-06	3.68E-03	4.51E-04	1.02E-04	8.74E-04	2.13E-04	2.16E-04	7.07E-04	2.84E-05	1.13E-08	6.58E-04	6.88E-04
11	E48	80	Single Unit Long Haul Truck	2	0.00E+00	3.12E-07	1.54E-08	2.98E-01	2.47E-07	5.88E-04	3.32E-07	1.57E-04	2.06E-05	4.50E-06	3.81E-05	9.15E-06	9.31E-06	2.98E-05	1.20E-06	4.70E-10	2.88E-05	2.94E-05
11	E48	80	Combination Short Haul Truck	19	0.00E+00	8.51E-06	6.08E-07	7.03E+00	2.68E-08	7.53E-03	6.22E-06	8.72E-03	5.15E-04	1.27E-04	5.07E-04	1.80E-04	1.78E-04	1.06E-03	2.35E-05	0.00E+00	3.28E-04	1.64E-03
11	E48	80	Combination Long Haul Truck	18	0.00E+00	7.62E-06	5.12E-07	6.50E+00	3.10E-08	7.81E-03	5.77E-06	8.47E-03	5.03E-04	1.01E-04	5.23E-04	1.54E-04	1.55E-04	9.93E-04	2.18E-05	0.00E+00	3.68E-04	1.59E-03
11	E49	80	Passenger Car	56	0.00E+00	6.78E-07	7.33E-08	2.59E+00	4.72E-06	1.80E-02	1.51E-06	1.14E-04	3.06E-04	5.33E-05	1.47E-04	9.45E-05	9.70E-05	8.73E-06	1.31E-05	3.66E-09	4.96E-05	1.79E-05
11	E49	80	Passenger Truck	93	0.00E+00	1.45E-06	1.54E-07	6.00E+00	9.32E-06	3.32E-02	3.05E-06	3.40E-04	5.49E-04	9.75E-05	2.92E-04	1.90E-04	1.94E-04	4.19E-05	3.00E-05	8.16E-09	9.77E-05	5.55E-05
11	E49	80	Single Unit Short Haul Truck	3	0.00E+00	5.38E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.59E-05	1.62E-05	5.30E-05	2.13E-06	8.45E-10	4.93E-05	5.16E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.41E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.66E-04
11	E49	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.37E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	E50	80	Passenger Car	204	0.00E+00	2.48E-06	2.69E-07	9.50E+00	1.73E-05	6.60E-02	5.52E-06	4.19E-04	1.12E-03	1.95E-04	5.37E-04	3.46E-04	3.55E-04	3.20E-05	4.79E-05	1.34E-08	1.82E-04	6.55E-05
11	E50	80	Passenger Truck	342	0.00E+00	5.33E-06	5.66E-07	2.20E+01	3.42E-05	1.21E-01	1.12E-05	1.25E-03	2.01E-03	3.57E-04	1.07E-03	6.95E-04	7.12E-04	1.54E-04	1.10E-04	2.99E-08	3.58E-04	2.04E-04
11	E50	80	Single Unit Short Haul Truck	45	0.00E+00	8.43E-06	4.19E-07	8.28E+00	6.79E-06	1.66E-02	8.98E-06	4.32E-03	5.30E-04	1.20E-04	1.03E-03	2.50E-04	2.54E-04	8.30E-04	3.34E-05	1.32E-08	7.73E-04	8.09E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	3.67E-07	1.81E-08	3.50E-01	2.90E-07	6.91E-04	3.90E-07	1.85E-04	2.42E-05	5.29E-06	4.48E-05	1.08E-05	1.09E-05	3.50E-05	1.41E-06	5.52E-10	3.39E-05	3.46E-05
11	E50	80	Combination Short Haul Truck	36	0.00E+00	1.59E-05	1.13E-06	1.31E+01	5.01E-08	1.40E-02	1.16E-05	1.63E-02	9.60E-04	2.37E-04	9.45E-04	3.35E-04	3.32E-04	1.98E-03	4.39E-05	0.00E+00	6.12E-04	3.06E-03
11	E50	80	Combination Long Haul Truck	33	0.00E+00	1.42E-05	9.55E-07	1.21E+01	5.78E-08	1.46E-02	1.08E-05	1.58E-02	9.39E-04	1.89E-04	9.76E-04	2.88E-04	2.90E-04	1.85E-03	4.06E-05	0.00E+00	6.86E-04	2.97E-03
11	E51	80	Passenger Car	15	0.00E+00	1.86E-07	2.02E-08	7.14E-01	1.30E-06	4.96E-03	4.15E-07	3.15E-05	8.43E-05	1.47E-05	4.04E-05	2.60E-05	2.67E-05	2.40E-06	3.60E-06	1.01E-09	1.37E-05	4.92E-06
11	E51	80	Passenger Truck	26	0.00E+00	4.00E-07	4.25E-08	1.65E+00	2.57E-06	9.12E-03	8.39E-07	9.35E-05	1.51E-04	2.68E-05	8.03E-05	5.22E-05	5.34E-05	1.15E-05	8.25E-06	2.25E-09	2.69E-05	1.53E-05
11	E51	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.44E-05
11	E52	80	Passenger Car	214	0.00E+00	2.60E-06	2.81E-07	9.96E+00	1.81E-05	6.92E-02	5.78E-06	4.39E-04	1.18E-03	2.04E-04	5.63E-04	3.63E-04	3.72E-04	3.35E-05	5.02E-05	1.41E-08	1.91E-04	6.87E-05
11	E52	80	Passenger Truck	358	0.00E+00	5.59E-06	5.92E-07	2.30E+01	3.58E-05	1.27E-01	1.17E-05	1.31E-03	2.11E-03	3.74E-04	1.12E-03	7.28E-04	7.45E-04	1.61E-04	1.15E-04	3.13E-08	3.75E-04	2.13E-04
11	E52	80	Single Unit Short Haul Truck	48	0.00E+00	8.97E-06	4.46E-07	8.81E+00	7.22E-06	1.76E-02	9.55E-06	4.60E-03	5.64E-04	1.28E-04	1.09E-03	2.66E-04	2.70E-04	8.83E-04	3.55E-05	1.41E-08	8.22E-04	8.60E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	3.90E-07	1.92E-08	3.73E-01	3.08E-07	7.35E-04	4.15E-07	1.97E-04	2.58E-05	5.63E-06	4.77E-05	1.14E-05	1.16E-05	3.72E-05	1.50E-06	5.87E-10	3.60E-05	3.68E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	1.63E-05	1.17E-06	1.35E+01	5.15E-08	1.45E-02	1.19E-05	1.67E-02	9.88E-04	2.43E-04	9.72E-04	3.45E-04	3.42E-04	2.04E-03	4.52E-05	0.00E+00	6.30E-04	3.15E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.46E-05	9.83E-07	1.25E+01	5.95E-08	1.50E-02	1.11E-05	1.62E-02	9.66E-04	1.94E-04	1.00E-03	2.96E-04	2.98E-04	1.91E-03	4.18E-05	0.00E+00	7.06E-04	3.06E-03
11	E53	80	Passenger Car	81	0.00E+00	9.82E-07	1.06E-07	3.76E+00	6.84E-06	2.61E-02	2.18E-06	1.66E-04	4.44E-04	7.72E-05	2.13E-04	1.37E-04	1.41E-04	1.27E-05	1.90E-05	5.31E-09	7.20E-05	2.59E-05
11	E53	80	Passenger Truck	135	0.00E+00	2.11E-06	2.24E-07	8.69E+00	1.35E-05	4.81E-02	4.42E-06	4.93E-04	7.96E-04	1.41E-04	4.23E-04	2.75E-04	2.82E-04	6.07E-05	4.34E-05	1.18E-08	1.42E-04	8.05E-05
11	E53	80	Single Unit Short Haul Truck	29	0.00E+00	5.38E-06	2.67E-07	5.28E+00	4.33E-06	1.06E-02	5.73E-06	2.76E-03	3.38E-04	7.65E-05	6.55E-04	1.59E-04	1.62E-04	5.30E-04	2.13E-05	8.45E-09	4.93E-04	5.16E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.15E-08	2.24E-01	1.85E-07	4.41E-04	2.49E-07	1.18E-04	1.55E-05	3.38E-06	2.86E-05	6.86E-06	6.98E-06	2.23E-05	9.02E-07	3.52E-10	2.16E-05	2.21E-05
11	E53	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.13E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.15E-03
11	E53	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.95E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E54	80	Passenger Car	393	0.00E+00	4.78E-06	5.17E-07	1.83E+01	3.33E-05	1.27E-01	1.06E-05	8.07E-04	2.16E-03	3.76E-04	1.03E-03	6.67E-04	6.84E-04	6.16E-05	9.22E-05	2.58E-08	3.50E-04	1.26E-04
11	E54	80	Passenger Truck	658	0.00E+00	1.03E-05	1.09E-06	4.23E+01	6.58E-05	2.34E-01	2.15E-05	2.40E-03	3.88E-03	6.88E-04	2.06E-03	1.34E-03	1.37E-03	2.96E-04	2.11E-04	5.76E-08	6.89E-04	3.92E-04
11	E54	80	Single Unit Short Haul Truck	50	0.00E+00	9.33E-06	4.64E-07	9.16E+00	7.51E-06	1.83E-02	9.93E-06	4.78E-03	5.86E-04	1.33E-04	1.14E-03	2.76E-04	2.81E-04	9.19E-04	3.69E-05	1.46E-08	8.55E-04	8.95E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	4.06E-07	2.00E-08	3.88E-01	3.21E-07	7.64E-04	4.32E-07	2.05E-04	2.68E-05	5.85E-06	4.96E-05	1.19E-05	1.21E-05	3.87E-05	1.56E-06	6.10E-10	3.75E-05	3.83E-05
11	E54	80	Combination Short Haul Truck	39	0.00E+00	1.70E-05	1.22E-06	1.41E+01	5.37E-08	1.51E-02	1.24E-05	1.74E-02	1.03E-03	2.54E-04	1.01E-03	3.59E-04	3.56E-04	2.12E-03	4.71E-05	0.00E+00	6.57E-04	3.29E-03
11	E54	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.30E+01	6.20E-08	1.56E-02	1.15E-05	1.69E-02	1.01E-03	2.03E-04	1.05E-03	3.09E-04	3.11E-04	1.99E-03	4.35E-05	0.00E+00	7.36E-04	3.19E-03
11	E55	80	Passenger Car	81	0.00E+00	9.82E-07	1.06E-07	3.76E+00	6.84E-06	2.61E-02	2.18E-06	1.66E-04	4.44E-04	7.72E-05	2.13E-04	1.37E-04	1.41E-04	1.27E-05	1.90E-05	5.31E-09	7.20E-05	2.59E-05
11	E55	80	Passenger Truck	135	0.00E+00	2.11E-06	2.24E-07	8.69E+00	1.35E-05	4.81E-02	4.42E-06	4.93E-04	7.96E-04	1.41E-04	4.23E-04	2.75E-04	2.82E-04	6.07E-05	4.34E-05	1.18E-08	1.42E-04	8.05E-05
11	E55	80	Single Unit Short Haul Truck	29	0.00E+00	5.38E-06	2.67E-07	5.28E+00	4.33E-06	1.06E-02	5.73E-06	2.76E-03	3.38E-04	7.65E-05	6.55E-04	1.59E-04	1.62E-04	5.30E-04	2.13E-05	8.45E-09	4.93E-04	5.16E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.15E-08	2.24E-01	1.85E-07	4.41E-04	2.49E-07	1.18E-04	1.55E-05	3.38E-06	2.86E-05	6.86E-06	6.98E-06	2.23E-05	9.02E-07	3.52E-10	2.16E-05	2.21E-05
11	E55	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.13E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.15E-03
11	E55	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.95E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E56	80	Passenger Car	393	0.00E+00	4.78E-06	5.17E-07	1.83E+01	3.33E-05	1.27E-01	1.06E-05	8.07E-04	2.16E-03	3.76E-04	1.03E-03	6.67E-04	6.84E-04	6.16E-05	9.22E-05	2.58E-08	3.50E-04	1.26E-04
11	E56	80	Passenger Truck	658	0.00E+00	1.03E-05	1.09E-06	4.23E+01	6.58E-05	2.34E-01	2.15E-05	2.40E-03	3.88E-03	6.88E-04	2.06E-03	1.34E-03	1.37E-03	2.96E-04	2.11E-04	5.76E-08	6.89E-04	3.92E-04
11	E56	80	Single Unit Short Haul Truck	50	0.00E+00	9.33E-06	4.64E-07	9.16E+00	7.51E-06	1.83E-02	9.93E-06	4.78E-03	5.86E-04	1.33E-04	1.14E-03	2.76E-04	2.81E-04	9.19E-04	3.69E-05	1.46E-08	8.55E-04	8.95E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	4.06E-07	2.00E-08	3.88E-01	3.21E-07	7.64E-04	4.32E-07	2.05E-04	2.68E-05	5.85E-06	4.96E-05	1.19E-05	1.21E-05	3.87E-05	1.56E-06	6.10E-10	3.75E-05	3.83E-05
11	E56	80	Combination Short Haul Truck	39	0.00E+00	1.70E-05	1.22E-06	1.41E+01	5.37E-08	1.51E-02	1.24E-05	1.74E-02	1.03E-03	2.54E-04	1.01E-03	3.59E-04	3.56E-04	2.12E-03	4.71E-05	0.00E+00	6.57E-04	3.29E-03
11	E56	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.30E+01	6.20E-08	1.56E-02	1.15E-05	1.69E-02	1.01E-03	2.03E-04	1.05E-03	3.09E-04	3.11E-04	1.99E-03	4.35E-05	0.00E+00	7.36E-04	3.19E-03
9	F31	60	Passenger Car	681	0.00E+00	1.02E-05	1.10E-06	3.41E+01	7.10E-05	2.64E-01	2.27E-05	1.39E-03	6.91E-03	1.06E-03	2.21E-03	1.42E-03	1.46E-03	1.42E-04	1.71E-04	4.72E-08	7.47E-04	2.17E-04
9	F31	60	Passenger Truck	1140	0.00E+00	2.25E-05	2.37E-06	7.79E+01	1.41E-04	4.70E-01	4.63E-05	4.53E-03	1.27E-02	1.97E-03	4.41E-03	2.87E-03	2.94E-03	6.04E-04	3.87E-04	1.07E-07	1.47E-03	7.50E-04
9	F31	60	Single Unit Short Haul Truck	35	0.00E+00	1.04E-05	5.20E-07	6.63E+00	8.58E-06	1.28E-02	1.11E-05	4.96E-03	8.43E-04	1.53E-04	1.26E-03	3.12E-04	3.17E-04	6.63E-04	2.68E-05	1.10E-08	9.47E-04	9.29E-04
9	F31	60	Single Unit Long Haul Truck	2	0.00E+00	4.54E-07	2.26E-08	2.83E-01	3.73E-07	5.45E-04	4.85E-07	2.15E-04	3.78E-05	6.76E-06	5.54E-05	1.36E-05	1.38E-05	2.83E-05	1.14E-06	4.69E-10	4.16E-05	4.02E-05
9	F31	60	Combination Short Haul Truck	39	0.00E+00	2.28E-05	1.59E-06	1.48E+01	8.06E-08	1.99E-02	1.69E-05	2.47E-02	2.12E-03	4.20E-04	1.45E-03	4.73E-04	4.73E-04	2.23E-03	4.96E-05	0.00E+00	9.75E-04	4.65E-03
9	F31	60	Combination Long Haul Truck	35	0.00E+00	2.04E-05	1.33E-06	1.39E+01	9.25E-08	2.15E-02	1.58E-05	2.45E-02	2.13E-03	3.62E-04	1.49E-03	4.06E-04	4.11E-04	2.12E-03	4.65E-05	0.00E+00	1.08E-03	4.61E-03
9	F32	60	Passenger Car	779	0.00E+00	1.17E-05	1.26E-06	3.91E+01	8.12E-05	3.02E-01	2.59E-05	1.59E-03	7.91E-03	1.21E-03	2.53E-03	1.63E-03	1.67E-03	1.63E-04	1.96E-04	5.40E-08	8.55E-04	2.48E-04
9	F32	60	Passenger Truck	1305	0.00E+00	2.57E-05	2.72E-06	8.92E+01	1.61E-04	5.38E-01	5.30E-05	5.18E-03	1.45E-02	2.25E-03	5.04E-03	3.29E-03	3.37E-03	6.91E-04	4.43E-04	1.22E-07	1.68E-03	8.59E-04
9	F32	60	Single Unit Short Haul Truck	43	0.00E+00	1.27E-05	6.33E-07	8.06E+00	1.04E-05	1.56E-02	1.35E-05	6.03E-03	1.03E-03	1.86E-04	1.54E-03	3.80E-04	3.86E-04	8.07E-04	3.26E-05	1.34E-08	1.15E-03	1.13E-03
9	F32	60	Single Unit Long Haul Truck	2	0.00E+00	5.53E-07	2.75E-08	3.44E-01	4.53E-07	6.62E-04	5.90E-07	2.61E-04	4.60E-05	8.22E-06	6.74E-05	1.65E-05	1.68E-05	3.44E-05	1.39E-06	5.71E-10	5.06E-05	4.89E-05
9	F32	60	Combination Short Haul Truck	22	0.00E+00	1.32E-05	9.22E-07	8.61E+00	4.69E-08	1.16E-02	9.82E-06	1.43E-02	1.23E-03	2.44E-04	8.42E-04	2.75E-04	2.75E-04	1.30E-03	2.88E-05	0.00E+00	5.67E-04	2.70E-03
9	F32	60	Combination Long Haul Truck	21	0.00E+00	1.19E-05	7.73E-07	8.07E+00	5.37E-08	1.25E-02	9.16E-06	1.42E-02	1.24E-03	2.10E-04	8.68E-04	2.36E-04	2.39E-04	1.23E-03	2.70E-05	0.00E+00	6.29E-04	2.68E-03
9	F33	60	Passenger Car	132	0.00E+00	1.97E-06	2.13E-07	6.60E+00	1.37E-05	5.09E-02	4.38E-06	2.68E-04	1.34E-03	2.05E-04	4.27E-04	2.75E-04	2.82E-04	2.75E-05	3.31E-05	9.12E-09	1.44E-04	4.19E-05
9	F33	60	Passenger Truck	220	0.00E+00	4.35E-06	4.59E-07	1.51E+01	2.72E-05	9.08E-02	8.96E-06	8.75E-04	2.45E-03	3.80E-04	8.52E-04	5.55E-04	5.68E-04	1.17E-04	7.49E-05	2.07E-08	2.83E-04	1.45E-04
9	F33	60	Combination Short Haul Truck	2	0.00E+00	9.23E-07	6.43E-08	6.00E-01	3.27E-09	8.07E-04	6.85E-07	1.00E-03	8.59E-05	1.70E-05	5.87E-05	1.92E-05	1.92E-05	9.05E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	F33	60	Combination Long Haul Truck	1	0.

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F37	60	Combination Short Haul Truck	55	0.00E+00	3.26E-05	2.27E-06	2.12E+01	1.16E-07	2.85E-02	2.42E-05	3.54E-02	3.04E-03	6.01E-04	2.08E-03	6.77E-04	6.78E-04	3.20E-03	7.10E-05	0.00E+00	1.40E-03	6.66E-03
9	F37	60	Combination Long Haul Truck	51	0.00E+00	2.93E-05	1.91E-06	1.99E+01	1.32E-07	3.07E-02	2.26E-05	3.50E-02	3.05E-03	5.18E-04	2.14E-03	5.82E-04	5.89E-04	3.04E-03	6.66E-05	0.00E+00	1.55E-03	6.60E-03
9	F38	60	Passenger Car	578	0.00E+00	8.66E-06	9.37E-07	2.90E+01	6.03E-05	2.24E-01	1.92E-05	1.18E-03	5.87E-03	9.01E-04	1.87E-03	1.21E-03	1.24E-03	1.21E-04	1.45E-04	4.00E-08	6.34E-04	1.84E-04
9	F38	60	Passenger Truck	968	0.00E+00	1.91E-05	2.02E-06	6.61E+01	1.19E-04	3.99E-01	3.93E-05	3.84E-03	1.08E-02	1.67E-03	3.74E-03	2.44E-03	2.50E-03	5.12E-04	3.29E-04	9.09E-08	1.24E-03	6.37E-04
9	F38	60	Single Unit Short Haul Truck	122	0.00E+00	3.57E-05	1.79E-06	2.28E+01	2.94E-05	4.40E-02	3.81E-05	1.70E-02	2.89E-03	5.25E-04	4.34E-03	1.07E-03	1.09E-03	2.28E-03	9.19E-05	3.79E-08	3.25E-03	3.19E-03
9	F38	60	Single Unit Long Haul Truck	5	0.00E+00	1.56E-06	7.76E-08	9.71E-01	1.28E-06	1.87E-03	1.67E-06	7.36E-04	1.30E-04	2.32E-05	1.90E-04	4.66E-05	4.74E-05	9.70E-05	3.93E-06	1.61E-09	1.43E-04	1.38E-04
9	F38	60	Combination Short Haul Truck	93	0.00E+00	5.48E-05	3.82E-06	3.56E+01	1.94E-07	4.79E-02	4.06E-05	5.94E-02	5.10E-03	1.01E-03	3.48E-03	1.14E-03	1.14E-03	5.37E-03	1.19E-04	0.00E+00	2.35E-03	1.12E-02
9	F38	60	Combination Long Haul Truck	85	0.00E+00	4.92E-05	3.20E-06	3.34E+01	2.22E-07	5.16E-02	3.79E-05	5.89E-02	5.13E-03	8.70E-04	3.59E-03	9.77E-04	9.89E-04	5.10E-03	1.12E-04	0.00E+00	2.60E-03	1.11E-02
11	F39	80	Passenger Car	44	0.00E+00	5.37E-07	5.81E-08	2.05E+00	3.73E-06	1.43E-02	1.19E-06	9.06E-05	2.43E-04	4.22E-05	1.16E-04	7.49E-05	7.68E-05	6.91E-06	1.04E-05	2.90E-09	3.93E-05	1.42E-05
11	F39	80	Passenger Truck	74	0.00E+00	1.15E-06	1.22E-07	4.75E+00	7.38E-06	2.63E-02	2.42E-06	2.69E-04	4.35E-04	7.72E-05	2.31E-04	1.50E-04	1.54E-04	3.32E-05	2.37E-05	6.46E-09	7.73E-05	4.40E-05
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	F39	80	Combination Short Haul Truck	7	0.00E+00	2.99E-06	2.14E-07	2.47E+00	9.43E-09	2.65E-03	2.18E-06	3.06E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.26E-05	3.73E-04	8.27E-06	0.00E+00	1.15E-04	5.77E-04
11	F39	80	Combination Long Haul Truck	6	0.00E+00	2.68E-06	1.80E-07	2.28E+00	1.09E-08	2.74E-03	2.03E-06	2.97E-03	1.77E-04	3.56E-05	1.84E-04	5.43E-05	5.46E-05	3.49E-04	7.65E-06	0.00E+00	1.29E-04	5.60E-04
11	F40	80	Passenger Car	183	0.00E+00	2.22E-06	2.41E-07	8.51E+00	1.55E-05	5.91E-02	4.94E-06	3.76E-04	1.01E-03	1.75E-04	4.81E-04	3.10E-04	3.18E-04	2.86E-05	4.29E-05	1.20E-08	1.63E-04	5.87E-05
11	F40	80	Passenger Truck	306	0.00E+00	4.77E-06	5.06E-07	1.97E+01	3.06E-05	1.09E-01	1.00E-05	1.12E-03	1.80E-03	3.20E-04	9.58E-04	6.22E-04	6.37E-04	1.38E-04	9.83E-05	2.68E-08	3.21E-04	1.82E-04
11	F40	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	F40	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	F40	80	Combination Short Haul Truck	15	0.00E+00	6.67E-06	4.77E-07	5.51E+00	2.10E-08	5.90E-03	4.87E-06	6.84E-03	4.03E-04	9.94E-05	3.97E-04	1.41E-04	1.40E-04	8.31E-04	1.85E-05	0.00E+00	2.57E-04	1.29E-03
11	F40	80	Combination Long Haul Truck	14	0.00E+00	5.97E-06	4.01E-07	5.10E+00	2.43E-08	6.12E-03	4.52E-06	6.64E-03	3.95E-04	7.94E-05	4.10E-04	1.21E-04	1.22E-04	7.79E-04	1.71E-05	0.00E+00	2.88E-04	1.25E-03
10	F41	70	Passenger Car	297	0.00E+00	3.88E-06	4.19E-07	1.42E+01	2.70E-05	1.01E-01	8.62E-06	5.95E-04	2.30E-03	3.69E-04	8.39E-04	5.41E-04	5.55E-04	5.32E-05	7.16E-05	1.95E-08	2.84E-04	9.29E-05
10	F41	70	Passenger Truck	497	0.00E+00	8.50E-06	8.99E-07	3.28E+01	5.37E-05	1.85E-01	1.77E-05	1.86E-03	4.19E-03	6.81E-04	1.68E-03	1.10E-03	1.12E-03	2.41E-04	1.64E-04	4.37E-08	5.62E-04	3.06E-04
10	F42	70	Passenger Car	193	0.00E+00	2.52E-06	2.73E-07	9.27E+00	1.76E-05	6.56E-02	5.61E-06	3.87E-04	1.50E-03	2.40E-04	5.46E-04	3.52E-04	3.61E-04	3.46E-05	4.66E-05	1.27E-08	1.85E-04	6.05E-05
10	F42	70	Passenger Truck	324	0.00E+00	5.53E-06	5.86E-07	2.14E+01	3.50E-05	1.21E-01	1.15E-05	1.21E-03	2.73E-03	4.43E-04	1.10E-03	7.13E-04	7.31E-04	1.57E-04	1.06E-04	2.85E-08	3.66E-04	1.99E-04
10	F42	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	F42	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.14E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.92E-04
10	F42	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.83E-04
50	F84	40	Passenger Car	201	0.00E+00	3.37E-06	3.65E-07	1.17E+01	2.35E-05	8.65E-02	7.50E-06	3.63E-04	3.47E-03	4.96E-04	7.30E-04	4.71E-04	4.83E-04	6.29E-05	5.79E-05	1.41E-08	2.47E-04	5.67E-05
50	F84	40	Passenger Truck	336	0.00E+00	7.71E-06	8.09E-07	2.60E+01	4.63E-05	1.49E-01	1.54E-05	1.37E-03	6.17E-03	8.77E-04	1.46E-03	9.52E-04	9.75E-04	2.23E-04	1.28E-04	2.74E-08	4.80E-04	2.33E-04
50	F84	40	Single Unit Short Haul Truck	6	0.00E+00	2.55E-06	1.34E-07	1.22E+00	2.22E-06	2.11E-03	2.71E-06	1.25E-03	2.33E-04	3.87E-05	3.02E-04	7.96E-05	8.09E-05	1.24E-04	4.94E-06	2.09E-09	2.21E-04	2.34E-04
50	F84	40	Combination Short Haul Truck	44	0.00E+00	3.89E-05	2.70E-06	1.98E+01	1.40E-07	3.40E-02	2.89E-05	4.34E-02	4.52E-03	8.16E-04	2.52E-03	8.06E-04	8.14E-04	2.98E-03	6.61E-05	0.00E+00	1.71E-03	8.17E-03
50	F84	40	Combination Long Haul Truck	40	0.00E+00	3.55E-05	2.31E-06	1.88E+01	1.59E-07	3.77E-02	2.73E-05	4.35E-02	4.55E-03	7.25E-04	2.60E-03	7.06E-04	7.19E-04	2.87E-03	6.29E-05	0.00E+00	1.88E-03	8.19E-03
52	F85	60	Passenger Car	390	0.00E+00	5.36E-06	5.80E-07	1.95E+01	3.73E-05	1.38E-01	1.19E-05	7.65E-04	3.84E-03	5.91E-04	1.16E-03	7.48E-04	7.68E-04	8.14E-05	9.79E-05	2.62E-08	3.93E-04	1.20E-04
52	F85	60	Passenger Truck	652	0.00E+00	1.18E-05	1.24E-06	4.45E+01	7.34E-05	2.46E-01	2.42E-05	2.46E-03	6.85E-03	1.06E-03	2.30E-03	1.50E-03	1.54E-03	3.38E-04	2.21E-04	5.55E-08	7.66E-04	4.07E-04
52	F85	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
52	F85	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.86E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
52	F85	60	Combination Short Haul Truck	34	0.00E+00	2.00E-05	1.39E-06	1.30E+01	7.08E-08	1.75E-02	1.48E-05	2.17E-02	1.86E-03	3.69E-04	1.27E-03	4.15E-04	4.16E-04	1.96E-03	4.36E-05	0.00E+00	8.57E-04	4.08E-03
52	F85	60	Combination Long Haul Truck	31	0.00E+00	1.80E-05	1.17E-06	1.22E+01	8.12E-08	1.88E-02	1.38E-05	2.15E-02	1.87E-03	3.18E-04	1.31E-03	3.57E-04	3.61E-04	1.86E-03	4.09E-05	0.00E+00	9.50E-04	4.05E-03
53	F86	70	Passenger Car	206	0.00E+00	2.61E-06	2.83E-07	1.00E+01	1.82E-05	6.73E-02	5.81E-06	4.21E-04	1.58E-03	2.54E-04	5.65E-04	3.64E-04	3.74E-04	3.70E-05	5.03E-05	1.37E-08	1.91E-04	6.58E-05
53	F86	70	Passenger Truck	346	0.00E+00	5.69E-06	6.02E-07	2.31E+01	3.60E-05	1.24E-01	1.18E-05	1.29E-03	2.83E-03	4.62E-04	1.13E-03	7.34E-04	7.52E-04	1.67E-04	1.15E-04	3.01E-08	3.77E-04	2.11E-04
53	F86	70	Single Unit Short Haul Truck	33	0.00E+00	7.65E-06	3.83E-07	5.99E+00	6.26E-06	1.20E-02	8.15E-06	3.77E-03	5.38E-04	1.08E-04	9.28E-04	2.29E-04	2.33E-04	6.01E-04	2.42E-05	9.76E-09	6.96E-04	7.06E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.66E-08	2.54E-01	2.70E-07	5.04E-04	3.55E-07	1.62E-04	2.46E-05	4.80E-06	4.06E-05	9.91E-06	1.01E-05	2.54E-05	1.03E-06	4.11E-10	3.05E-05	3.04E-05
53	F86	70	Combination Short Haul Truck	22	0.00E+00	1.17E-05	8.31E-07	8.48E+00	3.80E-08	1.01E-02	8.58E-06	1.23E-02	8.90E-04	1.94E-04	7.13E-04	2.46E-04	2.46E-04	1.28E-03	2.84E-05	0.00E+00	4.67E-04	2.31E-03
53	F86	70	Combination Long Haul Truck	21	0.00E+00	1.06E-05	7.07E-07	7.91E+00	4.38E-08	1.07E-02	8.03E-06	1.21E-02	8.84E-04	1.61E-04	7.37E-04	2.14E-04	2.16E-04	1.21E-03	2.65E-05	0.00E+00	5.21E-04	2.28E-03
52	F87	60	Passenger Car	135	0.00E+00	1.86E-06	2.01E-07	6.79E+00	1.30E-05	4.78E-02	4.14E-06	2.66E-04	1.34E-03	2.05E-04	4.03E-04	2.60E-04	2.67E-04	2.83E-05	3.40E-05	9.09E-09	1.36E-04	4.16E-05
52	F87	60	Passenger Truck	227	0.00E+00	4.09E-06	4.32E-07	1.55E+01	2.55E-05	8.54E-02	8.42E-06	8.55E-04	2.38E-03	3.68E-04	8.00E-04	5.21E-04	5.34E-04	1.18E-04	7.69E-05	1.93E-08	2.66E-04	1.41E-04
52	F87	60	Single Unit Short Haul Truck	79	0.00E+00	2.31E-05	1.15E-06	1.47E+01	1.90E-05	2.84E-02	2.46E-05	1.10E-02	1.87E-03	3.39E-04	2.80E-03	6.92E-04	7.03E-04	1.47E-03	5.93E-05	2.44E-08	2.10E-03	2.06E-03
52	F87	60	Single Unit Long Haul Truck	3	0.00E+00	1.01E-06	5.01E-08	6.27E-01	8.26E-07	1.21E-03	1.08E-06	4.75E-04	8.39E-05	1.50E-05	1.23E-04	3.01E-05	3.06E-05	6.26E-05	2.54E-06	1.04E-09	9.22E-05	8.91E-05
52	F87	60	Combination Short Haul Truck	50	0.00E+00	2.92E-05	2.04E-06	1.90E+01	1.04E-07	2.56E-02	2.17E-05	3.17E-02	2.72E-03	5.39E-04	1.86E-03	6.07E-04	6.08E-04	2.87E-03	6.37E-05	0.00E+00	1.25E-03	5.97E-03
52	F87	60	Combination Long Haul Truck	45	0.00E+00	2.62E-05	1.71E-06	1.78E+01	1.19E-07	2.75E-02	2.02E-05	3.14E-02	2.74E-03	4.64E-04	1.92E-03	5.21E-04	5.28E-04	2.72E-03	5.97E-05	0.00E+00	1.39E-03	5.92E-03
50	F88	40	Passenger Car	201	0.00E+00	3.37E-06	3.65E-07	1.17E+01	2.35E-05	8.65E-02	7.50E-06	3.63E-04	3.47E-03	4.96E-04	7.30E-04	4.71E-04	4.83E-04	6.29E-05	5.79E-05	1.41E-08	2.47E-04	5.67E-05
50	F88	40	Passenger Truck	336	0.00E+00	7.71E-06	8.09E-07	2.60E+01	4.63E-05	1.49E-01	1.54E-05	1.37E-03	6.17E-03	8.77E-04	1.46E-03	9.52E-04	9.75E-04	2.23E-04	1.28E-04	2.74E-08	4.80E-04	2.33E-04
50	F88	40	Single Unit Short Haul Truck	6	0.00E+00	2.55E-06	1.34E-07	1.22E+00	2.22E-06	2.11E-03	2.71E-06	1.25E-03	2.33E-04	3.87E-05	3.02E-04	7.96E-05	8.09E-05	1.24E-04	4.94E-06	2.09E-09	2.21E-04	2.34E-04
50	F88	40	Combination Short Haul Truck	44	0.00E+00	3.89E-05	2.70E-06	1.98E+01	1.40E-07	3.40E-02	2.89E-05	4.34E-02	4.52E-03	8.16E-04	2.52E-03	8.06E-04	8.14E-04	2.98E-03	6.61E-05	0.00E+00	1.71E-03	8.17E-03
50	F88	40	Combination Long Haul Truck	40	0.00E+00	3.55E-05	2.31E-06	1.88E+01	1.59E-07	3.77E-02	2.73E-05	4.35E-02	4.55E-03	7.25E-04	2.60E-03	7.06E-04	7.19E-04	2.87E-03	6.29E-05	0.00E+00	1.88E-03	8.19E-03
50	F89	40	Passenger Car	450	0.00E+00	7.56E-06	8.18E-07	2.61E+01	5.26E-05	1.94E-01	1.68E-05	8.14E-04	7.79E-03	1.11E-03	1.64E-03	1.06E-03	1.08E-03	1.41E-04	1.30E-04	3.16E-08	5.54E-04	1.27E-04
50	F89	40	Passenger Truck	754	0.00E+00	1.73E-05	1.81E-06	5.82E+01	1.04E-04	3.34E-01	3.46E-05	3.08E-03	1.38E-02	1.97E-03	3.26E-03	2.14E-03	2.19E-03	4.99E-04	2.87E-04	6.14E-08	1.08E-03	5.21E-04
50	F89	40	Single Unit Short Haul Truck	68	0.00E+00	3.02E-05	1.58E-06	1.45E+01	2.63E-05	2.50E-02	3.21E-05	1.48E-02	2.76E-03	4.58E-04	3.57E-03	9.42E-04	9.57E-04	1.46E-03	5.85E-05	2.48E-08	2.61E-03	2.77E-03
50	F89	40	Single Unit Long Haul Truck	3	0.00E+00	1.32E-06	6.90E-08	6.26E-01	1.15E-06	1.09E-03	1.41E-06	6.42E-04	1.23E-04	2.03E-05	1.57E-04	4.12E-05	4.19E-05	6.32E-05	2.53E-06	1.07E-09	1.15E-04	1.20E-04
50	F89	40	Combination Short Haul Truck	39	0.00E+00	3.43E-05	2.38E-06	1.74E+01	1.23E-07	2.99E-02	2.55E-05	3.82E-02	3.99E-03	7.19E-04	2.22E-03	7.10E-04	7.17E-04	2.62E-03	5.83E-05	0.00E+00	1.51E-03	7.20E-03
50	F89	40	Combination Long Haul Truck	35	0.00E+00	3.12E-05	2.04E-06	1.65E+01	1.40E-07	3.32E-02	2.40E-05	3.83E-02	4.01E-03	6.38E-04	2.29E-03	6.22E-04	6.33E-04	2.53E-03	5.54E-05	0.00E+00	1.65E-03	7.22E-03
53	G07	70	Passenger Car	184	0.00E+00	2.32E-06	2.51E-07	8.90E+00	1.62E-05	5.98E-02	5.17E-06	3.74E-04	1.40E-03	2.26E-04	5.03E-04	3.24E-04	3.33E-04	3.29E-05	4.48E-05	1.22E-08	1.70E-04	5.85E-05
53	G07	70	Passenger Truck	307	0.00E+00	5.06E-06	5.36E-07	2.05E+01	3.20E-05	1.10E-01	1.05E-05	1.15E-03	2.52E-03	4.11E-04	1.00E-03	6.53E-04	6.69E-04	1.48E-04	1.02E-04	2.68E-08	3.35E-04	1.88E-04
53	G07	70	Single Unit Short Haul Truck	79	0.00E+00	1.85E-05	9.25E-07	1.45E+01	1.51E-05	2.89E-02	1.97E-05	9.09E-03	1.30E-03	2.60E-04	2.24E-03	5.52E-04	5.61E-04	1.45E-03	5.83E-05	2.35E-08	1.68E-03	1.70E-03
53	G07	70	Single Unit Long Haul Truck	3	0.00E+00	8.04E-07	4.00E-08	6.13E-01	6.51E-07	1.21E-03	8.57E-07	3.91E-04	5.93E-05	1.16E-05	9.79E-05	2.39E-05	2.43E-05	6.13E-05	2.48E-06	9.92E-10	7.36E-05	7.32E-05
53	G07	70	Combination Short Haul Truck	53	0.00E+00	2.75E-05	1.95E-06	1.99E+01	8.93E-08	2.37E-02	2.02E-05	2.88E-02	2.09E-03	4.56E-04	1.67E-03	5.78E-04	5.77E-04	3.00E-03	6.67E-05	0.00E+00	1.10E-03	5.43E-03
53	G07	70	Combination Long Haul Truck	48	0.00E+00	2.48E-05	1.66E-06	1.86E+01	1.03E-07	2.51E-02	1.89E-05	2.84E-02	2.08E-03	3.79E-04	1.73E-03	5.02E-04	5.07E-04	2.84E-03	6.23E-05	0.00E+00	1.22E-03	5.36E-03
50	G09	40	Passenger Car	27	0.00E+00	4.46E-07	4.82E-08	1.54E+00	3.10E-06	1.14E-02	9.92E-07	4.80E-05	4.59E-04	6.56E-05	9.65E-05	6.22E-05	6.39E-05	8.32E-06	7.66E-06	1.86E-09	3.27E-05	7.50E-06
50	G09	40	Passenger Truck	44	0.00E+00	1.02E-06	1.07E-07	3.43E+00	6.12E-06	1.97E-02	2.04E-06	1.82E-04	8.16E-04	1.16E-04	1.92E-04	1.26E-04	1.29E-04	2.94E-05	1.69E-05	3.62E-09	6.35E-05	3.07E-05
50	G09	40	Single Unit Short Haul Truck	4	0.00E+00	1.70E-06	8.92E-08	8.16E-01	1.48E-06	1.41E-03	1.81E-06	8.31E-04	1.55E-04	2.58E-05	2.01E-04	5.31E-05	5.39E-05	8.25E-05	3.30E-06	1.40E-09	1.47E-04	1.56E-04
50	G09	40	Combination Short Haul Truck	10	0.00E+00	8.80E-06	6.11E-07	4.47E+00	3.17E-08	7.68E-03	6.55E-06	9.81E-03	1.02E-03	1.85E-04	5.70E-04	1.82E-04	1.84E-04	6.73E-04	1.50E-05	0.00E+00	3.86E-04	1.85E-03
50	G09	40	Combination Long Haul Truck	9	0.00E+00	8.02E-06	5.23E-07	4.25E+00	3.60E-08	8.52E-03	6.17E-06	9.84E-03	1.03E-03	1.64E-04	5.87E-04	1.60E-04	1.63E-04	6.49E-04	1.42E-05	0.00E+00	4.25E-04	1.85E-03
53	G10	70	Passenger Car	184	0.00E+00	2.32E-06	2.51E-07	8.90E+00	1.62E-05	5.98E-02	5.17E-06	3.74E-04	1.40E-03	2.26E-04	5.03E-04	3.24E-04	3.33E-04	3.29E-05	4.48E-05	1.22E-08	1.70E-04	5.85E-05
53	G10	70	Passenger Truck	307	0.00E+00	5.06E-06	5.36E-07	2.05E+01	3.20E-05	1.10E-01	1.05E-05	1.15E-03	2.52E-03	4.11E-04	1.00E-03	6.53E-04	6.69E-04	1.48E-04	1.02E-04	2.68E-08	3.35E-04	1.88E-04
53	G10	70	Single Unit Short Haul Truck	79	0.00E+00	1.85E-05	9.25E-07	1.45E+01	1.51E-05	2.89E-02	1.97E-05	9.09E-03	1.30E-03	2.60E-04	2.24E-03	5.52E-04	5.61E-04	1.45E-03	5.83E-05	2.35E-08	1.68E-03	1.70E-03
53	G10	70	Single Unit Long Haul Truck	3	0.00E+00	8.04E-07	4.00E-08	6.13E-01	6.51E-07	1.21E-03	8.57E-07	3.91E-04	5.93E-05	1.16E-05	9.79E-05	2.39E-05	2.43E-05	6.13E-05	2.48E-06	9.92E-10	7.36E-05	7.32E-05
53	G10	70	Combination Short Haul Truck	53	0.00E+00	2.75E-05	1.95E-06	1.99E+01	8.93E-08	2.37E-02	2.02E-05	2.88E-02	2.09E-03	4.56E-04	1.67E-03	5.78E-04	5.77E-04	3.00E-03	6.67E-05	0.00E+00	1.10E-03	5.43E-03
53	G10	70	Combination Long Haul Truck	48	0.00E+00	2.48E-05	1.66E-06	1.86E+01	1.03E-07	2.51E-02	1.89E-05	2.84E-02	2.08E-03	3.79E-04	1.73E-03	5.02E-04	5.07E-04	2.84E-03	6.23E-05	0.00E+00	1.22E-03	5.36E-03
16	H01	100	Passenger Car	3105	0.00E+00	3.40E-05	3.67E-06	1.39E+02	2.36E-04	9.29E-01	7.55E-05	6.63E-03	1.01E-02	2.03E-03	7.35E-03	4.74E-03	4.86E-03	3.89E-04	7.06E-04	1.94E-07	2.49E-03	1.04E-03
16	H01	100	Passenger Truck	5199	0.00E+00	7.33E-05	7.81E-06	3.29E+02	4.80E-04	1.87E+00	1.56E-04	1.89E-02	1.78E-02	3.78E-03	1.50E-02	9.72E-03	9.96E-03	2.10E-03	1.65E-03	4.53E-07	5.04E-03	3.05E-03
16	H01	100	Single Unit Short Haul Truck	734	0.00E+00	9.85E-05	4.88E-06	1.34E+02	8.60E-05	3.10E-01	1.07E-04	5.33E-02	5.06E-03	1.47E-03	1.22E-02	3.02E-03	3.07E-03	1.35E-02	5.38E-04	2.20E-07	9.12E-03	9.95E-03
16	H01	100	Single Unit Long Haul Truck	32	0.00E+00	4.27E-06	2.08E-07	5.64E+00	3.56E-06	1.27E-02	4.61E-06	2.24E-03	2.29E-04	6.36E-05	5.31E-04	1.28E-04	1.30E-04	5.65E-04	2.27E-05	9.00E-09	4.02E-04	4.19E-04
16	H01	100	Combination Short Haul Truck	663	0.00E+00	2.28E-04	1.66E-05	2.40E+02	6.48E-07	2.22E-01	1.64E-04	2.43E-01	7.72E-03	2.75E-03	1.28E-02	4.87E-03	4.79E-03	3.61E-02	8.02E-04	0.00E+00	7.97E-03	4.58E-02
16	H01	100	Combination Long Haul Truck	604	0.00E

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
56	H05	100	Combination Short Haul Truck	218	0.00E+00	7.49E-05	5.47E-06	7.89E+01	2.13E-07	7.31E-02	5.41E-05	7.99E-02	2.54E-03	9.04E-04	4.20E-03	1.60E-03	1.58E-03	1.19E-02	2.64E-04	0.00E+00	2.62E-03	1.51E-02
56	H05	100	Combination Long Haul Truck	199	0.00E+00	6.52E-05	4.47E-06	7.14E+01	2.47E-07	7.30E-02	4.89E-05	7.59E-02	2.35E-03	6.54E-04	4.27E-03	1.34E-03	1.34E-03	1.09E-02	2.39E-04	0.00E+00	2.94E-03	1.43E-02
56	H06	100	Passenger Car	993	0.00E+00	1.09E-05	1.18E-06	4.46E+01	7.56E-05	2.97E-01	2.42E-05	2.12E-03	3.22E-03	6.49E-04	2.35E-03	1.52E-03	1.56E-03	1.24E-04	2.26E-04	6.22E-08	7.96E-04	3.32E-04
56	H06	100	Passenger Truck	1663	0.00E+00	2.34E-05	2.50E-06	1.05E+02	1.54E-04	5.98E-01	4.99E-05	6.04E-03	5.70E-03	1.21E-03	4.80E-03	3.11E-03	3.19E-03	6.70E-04	5.28E-04	1.45E-07	1.61E-03	9.76E-04
56	H06	100	Single Unit Short Haul Truck	261	0.00E+00	3.50E-05	1.73E-06	4.76E+01	3.05E-05	1.10E-01	3.79E-05	1.89E-02	1.80E-03	5.23E-04	4.33E-03	1.07E-03	1.09E-03	4.80E-03	1.91E-04	7.81E-08	3.24E-03	3.53E-03
56	H06	100	Single Unit Long Haul Truck	11	0.00E+00	1.52E-06	7.37E-08	2.00E+00	1.26E-06	4.50E-03	1.64E-06	7.97E-04	8.12E-05	2.26E-05	1.89E-04	4.53E-05	4.60E-05	2.01E-04	8.07E-06	3.20E-09	1.43E-04	1.49E-04
56	H06	100	Combination Short Haul Truck	312	0.00E+00	1.07E-04	7.82E-06	1.13E+02	3.05E-07	1.04E-01	7.73E-05	1.14E-01	3.63E-03	1.29E-03	6.00E-03	2.29E-03	2.25E-03	1.70E-02	3.77E-04	0.00E+00	3.75E-03	2.15E-02
56	H06	100	Combination Long Haul Truck	284	0.00E+00	9.32E-05	6.39E-06	1.02E+02	3.53E-07	1.04E-01	6.98E-05	1.09E-01	3.36E-03	9.34E-04	6.11E-03	1.91E-03	1.91E-03	1.56E-02	3.42E-04	0.00E+00	4.20E-03	2.04E-02
16	H07	100	Passenger Car	2040	0.00E+00	2.23E-05	2.41E-06	9.17E+01	1.55E-04	6.10E-01	4.96E-05	4.36E-03	6.62E-03	1.33E-03	4.83E-03	3.11E-03	3.20E-03	2.56E-04	4.64E-04	1.28E-07	1.63E-03	6.81E-04
16	H07	100	Passenger Truck	3417	0.00E+00	4.82E-05	5.13E-06	2.16E+02	3.15E-04	1.23E+00	1.03E-04	1.24E-02	1.17E-02	2.48E-03	9.86E-03	6.39E-03	6.55E-03	1.38E-03	1.09E-03	2.97E-07	3.31E-03	2.01E-03
16	H07	100	Single Unit Short Haul Truck	533	0.00E+00	7.17E-05	3.55E-06	9.74E+01	6.25E-05	2.26E-01	7.76E-05	3.88E-02	3.68E-03	1.07E-03	8.86E-03	2.20E-03	2.23E-03	9.82E-03	3.91E-04	1.60E-07	6.63E-03	7.24E-03
16	H07	100	Single Unit Long Haul Truck	24	0.00E+00	3.11E-06	1.51E-07	4.10E+00	2.59E-06	9.21E-03	3.35E-06	1.63E-03	1.66E-04	4.62E-05	3.86E-04	9.28E-05	9.43E-05	4.11E-04	1.65E-05	6.55E-09	2.92E-04	3.05E-04
16	H07	100	Combination Short Haul Truck	527	0.00E+00	1.81E-04	1.32E-05	1.90E+02	5.15E-07	1.77E-01	1.31E-04	1.93E-01	6.13E-03	2.18E-03	1.01E-02	3.87E-03	3.81E-03	2.87E-02	6.38E-04	0.00E+00	6.33E-03	3.64E-02
16	H07	100	Combination Long Haul Truck	480	0.00E+00	1.57E-04	1.08E-05	1.73E+02	5.96E-07	1.76E-01	1.18E-04	1.83E-01	5.68E-03	1.58E-03	1.03E-02	3.23E-03	3.23E-03	2.63E-02	5.78E-04	0.00E+00	7.10E-03	3.45E-02
52	H08	60	Passenger Car	246	0.00E+00	3.39E-06	3.67E-07	1.24E+01	2.36E-05	8.70E-02	7.54E-06	4.84E-04	2.43E-03	3.74E-04	7.34E-04	4.73E-04	4.85E-04	5.15E-05	6.19E-05	1.66E-08	2.48E-04	7.56E-05
52	H08	60	Passenger Truck	413	0.00E+00	7.45E-06	7.86E-07	2.82E+01	4.64E-05	1.56E-01	1.53E-05	1.56E-03	4.33E-03	6.70E-04	1.46E-03	9.49E-04	9.72E-04	2.14E-04	1.40E-04	3.51E-08	4.84E-04	2.58E-04
52	H08	60	Single Unit Short Haul Truck	21	0.00E+00	6.19E-06	3.09E-07	3.94E+00	5.10E-06	7.63E-03	6.60E-06	2.95E-03	5.01E-04	9.09E-05	7.52E-04	1.86E-04	1.89E-04	3.94E-04	1.59E-05	6.56E-09	5.63E-04	5.53E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	2.70E-07	1.34E-08	1.68E-01	2.22E-07	3.24E-04	2.88E-07	1.28E-04	2.25E-05	4.02E-06	3.29E-05	8.07E-06	8.21E-06	1.68E-05	6.80E-07	2.79E-10	2.47E-05	2.39E-05
52	H08	60	Combination Short Haul Truck	37	0.00E+00	2.15E-05	1.50E-06	1.40E+01	7.63E-08	1.88E-02	1.60E-05	2.33E-02	2.01E-03	3.97E-04	1.37E-03	4.47E-04	4.48E-04	2.11E-03	4.69E-05	0.00E+00	9.23E-04	4.40E-03
52	H08	60	Combination Long Haul Truck	33	0.00E+00	1.93E-05	1.26E-06	1.31E+01	8.75E-08	2.03E-02	1.49E-05	2.31E-02	2.02E-03	3.42E-04	1.41E-03	3.84E-04	3.89E-04	2.01E-03	4.40E-05	0.00E+00	1.02E-03	4.36E-03
50	H09	40	Passenger Car	181	0.00E+00	3.05E-06	3.30E-07	1.05E+01	2.12E-05	7.81E-02	6.77E-06	3.28E-04	3.14E-03	4.48E-04	6.59E-04	4.25E-04	4.36E-04	5.68E-05	5.23E-05	1.27E-08	2.23E-04	5.12E-05
50	H09	40	Passenger Truck	304	0.00E+00	6.97E-06	7.30E-07	2.35E+01	4.18E-05	1.35E-01	1.40E-05	1.24E-03	5.57E-03	7.92E-04	1.31E-03	8.60E-04	8.81E-04	2.01E-04	1.16E-04	2.47E-08	4.34E-04	2.10E-04
50	H09	40	Single Unit Short Haul Truck	2	0.00E+00	8.50E-07	4.46E-08	4.08E-01	7.41E-07	7.03E-04	9.04E-07	4.16E-04	7.76E-05	1.29E-05	1.01E-04	2.65E-05	2.70E-05	4.12E-05	1.65E-06	6.98E-10	7.36E-05	7.79E-05
50	H09	40	Combination Short Haul Truck	73	0.00E+00	6.44E-05	4.47E-06	3.27E+01	2.32E-07	5.62E-02	4.79E-05	7.18E-02	7.49E-03	1.35E-03	4.17E-03	1.33E-03	1.35E-03	4.93E-03	1.09E-04	0.00E+00	2.83E-03	1.35E-02
50	H09	40	Combination Long Haul Truck	66	0.00E+00	5.87E-05	3.83E-06	3.11E+01	2.63E-07	6.23E-02	4.52E-05	7.20E-02	7.52E-03	1.20E-03	4.30E-03	1.17E-03	1.19E-03	4.75E-03	1.04E-04	0.00E+00	3.11E-03	1.36E-02
53	H14	70	Passenger Car	147	0.00E+00	1.86E-06	2.02E-07	7.14E+00	1.30E-05	4.80E-02	4.15E-06	3.00E-04	1.12E-03	1.81E-04	4.04E-04	2.60E-04	2.67E-04	2.64E-05	3.59E-05	9.79E-09	1.37E-04	4.69E-05
53	H14	70	Passenger Truck	247	0.00E+00	4.06E-06	4.30E-07	1.65E+01	2.57E-05	8.82E-02	8.44E-06	9.19E-04	2.02E-03	3.30E-04	8.06E-04	5.24E-04	5.37E-04	1.19E-04	8.21E-05	2.15E-08	2.69E-04	1.51E-04
53	H14	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.35E-03	4.32E-06	2.00E-03	2.85E-04	5.71E-05	4.91E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.74E-04
53	H14	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	8.78E-09	1.35E-01	1.43E-07	2.67E-04	1.88E-07	8.59E-05	1.30E-05	2.54E-06	2.15E-05	5.24E-06	5.33E-06	1.35E-05	5.44E-07	2.18E-10	1.61E-05	1.61E-05
53	H14	70	Combination Short Haul Truck	19	0.00E+00	1.01E-05	7.15E-07	7.30E+00	3.27E-08	8.67E-03	7.38E-06	1.06E-02	7.66E-04	1.67E-04	6.13E-04	2.12E-04	2.11E-04	1.10E-03	2.44E-05	0.00E+00	4.02E-04	1.99E-03
53	H14	70	Combination Long Haul Truck	18	0.00E+00	9.10E-06	6.08E-07	6.81E+00	3.77E-08	9.18E-03	6.91E-06	1.04E-02	7.61E-04	1.39E-04	6.34E-04	1.84E-04	1.86E-04	1.04E-03	2.28E-05	0.00E+00	4.48E-04	1.96E-03
53	H16	70	Passenger Car	464	0.00E+00	5.87E-06	6.35E-07	2.25E+01	4.08E-05	1.51E-01	1.30E-05	9.45E-04	3.54E-03	5.71E-04	1.27E-03	8.19E-04	8.40E-04	8.30E-05	1.13E-04	3.08E-08	4.30E-04	1.48E-04
53	H16	70	Passenger Truck	776	0.00E+00	1.28E-05	1.35E-06	5.18E+01	8.09E-05	2.78E-01	2.66E-05	2.89E-03	6.35E-03	1.04E-03	2.54E-03	1.65E-03	1.69E-03	3.74E-04	2.59E-04	6.77E-08	8.46E-04	4.75E-04
53	H16	70	Single Unit Short Haul Truck	33	0.00E+00	7.65E-06	3.83E-07	5.99E+00	6.26E-06	1.20E-02	8.15E-06	3.77E-03	5.38E-04	1.08E-04	9.28E-04	2.29E-04	2.33E-04	6.01E-04	2.42E-05	9.76E-09	6.96E-04	7.06E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.66E-08	2.54E-01	2.70E-07	5.04E-04	3.55E-07	1.62E-04	2.46E-05	4.80E-06	4.06E-05	9.91E-06	1.01E-05	2.54E-05	1.03E-06	4.11E-10	3.05E-05	3.04E-05
53	H16	70	Combination Short Haul Truck	32	0.00E+00	1.69E-05	1.20E-06	1.22E+01	5.48E-08	1.45E-02	1.24E-05	1.77E-02	1.28E-03	2.80E-04	1.03E-03	3.55E-04	3.54E-04	1.84E-03	4.09E-05	0.00E+00	6.73E-04	3.34E-03
53	H16	70	Combination Long Haul Truck	30	0.00E+00	1.52E-05	1.02E-06	1.14E+01	6.31E-08	1.54E-02	1.16E-05	1.75E-02	1.27E-03	2.33E-04	1.06E-03	3.08E-04	3.11E-04	1.74E-03	3.82E-05	0.00E+00	7.51E-04	3.29E-03

Appendix F.2.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B05	0.00E+00	1.38E-04	1.07E-05	2.76E+02	2.65E-04	1.12E+00	1.60E-04	1.10E-01	1.35E-02	3.21E-03	1.50E-02	7.31E-03	7.43E-03	1.67E-02	1.21E-03	2.65E-07	7.53E-03	2.05E-02
B06	0.00E+00	2.77E-05	2.57E-06	9.00E+01	1.23E-04	4.87E-01	4.68E-05	1.37E-02	5.07E-03	1.10E-03	4.49E-03	2.66E-03	2.72E-03	1.92E-03	4.36E-04	1.14E-07	1.76E-03	2.46E-03
B07	0.00E+00	3.55E-04	2.52E-05	5.45E+02	3.55E-04	1.61E+00	3.48E-04	3.16E-01	2.34E-02	6.10E-03	3.24E-02	1.31E-02	1.32E-02	4.98E-02	2.21E-03	4.23E-07	1.92E-02	5.91E-02
B08	0.00E+00	2.18E-04	1.53E-05	3.23E+02	1.95E-04	9.04E-01	2.08E-04	1.97E-01	1.36E-02	3.59E-03	1.93E-02	7.65E-03	7.72E-03	3.10E-02	1.29E-03	2.38E-07	1.16E-02	3.69E-02
B09	0.00E+00	9.78E-05	7.22E-06	1.79E+02	1.57E-04	6.64E-01	1.09E-04	7.85E-02	8.42E-03	2.06E-03	1.03E-02	4.61E-03	4.68E-03	1.25E-02	7.71E-04	1.72E-07	5.64E-03	1.46E-02
B10	0.00E+00	2.03E-04	1.59E-05	3.87E+02	3.49E-04	1.50E+00	2.26E-04	1.73E-01	1.86E-02	4.47E-03	2.06E-02	1.01E-02	1.03E-02	2.56E-02	1.68E-03	3.35E-07	1.03E-02	3.23E-02
B13	0.00E+00	1.29E-04	9.97E-06	2.40E+02	2.10E-04	9.06E-01	1.41E-04	1.11E-01	1.14E-02	2.76E-03	1.29E-02	6.21E-03	6.30E-03	1.65E-02	1.03E-03	2.05E-07	6.62E-03	2.07E-02
B14	0.00E+00	7.20E-05	5.23E-06	1.27E+02	1.05E-04	4.49E-01	7.80E-05	5.86E-02	5.83E-03	1.45E-03	7.41E-03	3.21E-03	3.26E-03	9.39E-03	5.38E-04	1.19E-07	4.16E-03	1.09E-02
D01	0.00E+00	1.82E-04	1.38E-05	2.45E+02	3.00E-04	1.14E+00	2.02E-04	1.57E-01	4.02E-02	6.60E-03	1.90E-02	8.78E-03	8.95E-03	1.44E-02	1.08E-03	2.23E-07	1.00E-02	2.94E-02
D02	0.00E+00	1.15E-04	8.88E-06	1.76E+02	2.49E-04	8.92E-01	1.42E-04	8.48E-02	2.91E-02	4.72E-03	1.37E-02	6.53E-03	6.67E-03	8.14E-03	8.00E-04	1.89E-07	7.00E-03	1.58E-02
D03	0.00E+00	1.27E-04	1.04E-05	2.38E+02	3.77E-04	1.32E+00	1.78E-04	7.84E-02	4.01E-02	6.39E-03	1.72E-02	8.96E-03	9.16E-03	7.74E-03	1.12E-03	2.83E-07	8.01E-03	1.45E-02
D04	0.00E+00	1.50E-04	1.14E-05	2.17E+02	2.95E-04	1.07E+00	1.78E-04	1.15E-01	3.58E-02	5.83E-03	1.72E-02	8.02E-03	8.18E-03	1.10E-02	9.77E-04	2.25E-07	8.98E-03	2.15E-02
D05	0.00E+00	1.59E-04	1.24E-05	2.52E+02	3.64E-04	1.30E+00	1.99E-04	1.15E-01	4.20E-02	6.77E-03	1.92E-02	9.36E-03	9.56E-03	1.10E-02	1.15E-03	2.75E-07	9.59E-03	2.14E-02
D06	0.00E+00	1.32E-04	1.02E-05	2.12E+02	3.15E-04	1.11E+00	1.69E-04	9.02E-02	3.53E-02	5.68E-03	1.65E-02	7.97E-03	8.14E-03	8.86E-03	9.76E-04	2.41E-07	8.34E-03	1.68E-02
D07	0.00E+00	1.28E-04	1.02E-05	2.50E+02	3.04E-04	1.15E+00	1.62E-04	8.98E-02	2.30E-02	4.31E-03	1.54E-02	7.76E-03	7.91E-03	1.13E-02	1.14E-03	2.71E-07	7.53E-03	1.67E-02
D08	0.00E+00	8.50E-05	6.85E-06	1.80E+02	2.32E-04	8.66E-01	1.15E-04	5.38E-02	1.67E-02	3.09E-03	1.10E-02	5.65E-03	5.77E-03	6.93E-03	8.36E-04	2.09E-07	5.26E-03	9.94E-03
D09	0.00E+00	8.83E-05	7.24E-06	1.91E+02	2.48E-04	9.30E-01	1.20E-04	5.66E-02	1.78E-02	3.30E-03	1.15E-02	6.01E-03	6.13E-03	7.14E-03	8.91E-04	2.19E-07	5.33E-03	1.04E-02
D10	0.00E+00	6.04E-05	5.06E-06	1.46E+02	2.02E-04	7.45E-01	8.94E-05	3.30E-02	1.37E-02	2.51E-03	8.68E-03	4.65E-03	4.76E-03	4.32E-03	6.92E-04	1.81E-07	3.92E-03	6.04E-03
D11	0.00E+00	1.24E-04	9.97E-06	2.49E+02	3.08E-04	1.17E+00	1.60E-04	8.50E-02	2.30E-02	4.29E-03	1.53E-02	7.76E-03	7.91E-03	1.07E-02	1.15E-03	2.74E-07	7.34E-03	1.58E-02
D12	0.00E+00	5.85E-05	4.85E-06	1.37E+02	1.86E-04	6.88E-01	8.46E-05	3.32E-02	1.28E-02	2.35E-03	8.19E-03	4.34E-03	4.44E-03	4.34E-03	6.45E-04	1.67E-07	3.76E-03	6.10E-03
D13	0.00E+00	5.25E-05	3.81E-06	6.89E+01	9.10E-05	3.21E-01	6.05E-05	3.95E-02	1.12E-02	1.83E-03	5.92E-03	2.57E-03	2.62E-03	3.85E-03	3.06E-04	7.20E-08	3.30E-03	7.38E-03
D14	0.00E+00	9.85E-05	7.50E-06	1.49E+02	2.13E-04	7.53E-01	1.22E-04	7.04E-02	2.46E-02	3.98E-03	1.18E-02	5.56E-03	5.68E-03	6.85E-03	6.78E-04	1.64E-07	6.13E-03	1.31E-02
D15	0.00E+00	1.04E-04	7.81E-06	1.54E+02	2.20E-04	7.72E-01	1.28E-04	7.31E-02	2.54E-02	4.11E-03	1.25E-02	5.78E-03	5.90E-03	7.19E-03	7.00E-04	1.71E-07	6.58E-03	1.36E-02
D16	0.00E+00	1.24E-04	9.31E-06	1.80E+02	2.53E-04	8.94E-01	1.50E-04	8.98E-02	2.97E-02	4.82E-03	1.46E-02	6.74E-03	6.88E-03	8.76E-03	8.16E-04	1.96E-07	7.75E-03	1.68E-02
D17	0.00E+00	1.34E-05	1.03E-06	2.17E+01	2.69E-05	9.86E-02	1.60E-05	9.85E-03	2.75E-03	4.73E-04	1.54E-03	7.25E-04	7.39E-04	1.09E-03	9.78E-05	2.25E-08	7.96E-04	1.84E-03
D18	0.00E+00	5.76E-05	4.40E-06	9.10E+01	1.10E-04	4.08E-01	6.74E-05	4.37E-02	1.15E-02	1.99E-03	6.42E-03	3.02E-03	3.08E-03	4.76E-03	4.08E-04	9.14E-08	3.34E-03	8.15E-03
D19	0.00E+00	1.15E-04	9.49E-06	2.63E+02	3.55E-04	1.31E+00	1.63E-04	6.73E-02	2.46E-02	4.53E-03	1.58E-02	8.33E-03	8.52E-03	8.70E-03	1.24E-03	3.16E-07	7.26E-03	1.24E-02
D20	0.00E+00	1.06E-04	7.79E-06	1.88E+02	2.22E-04	8.19E-01	1.30E-04	6.90E-02	1.67E-02	3.18E-03	1.28E-02	5.82E-03	5.94E-03	9.41E-03	8.51E-04	2.16E-07	6.90E-03	1.28E-02
D21	0.00E+00	6.43E-05	5.91E-06	1.92E+02	2.90E-04	1.06E+00	1.10E-04	2.73E-02	1.86E-02	3.34E-03	1.07E-02	6.24E-03	6.39E-03	3.50E-03	9.37E-04	2.51E-07	4.29E-03	4.89E-03
D22	0.00E+00	1.81E-04	1.28E-05	2.47E+02	2.17E-04	8.56E-01	1.87E-04	1.46E-01	2.08E-02	4.14E-03	1.79E-02	7.25E-03	7.36E-03	1.90E-02	1.04E-03	2.19E-07	1.05E-02	2.74E-02
D23	0.00E+00	1.19E-04	9.62E-06	2.25E+02	3.67E-04	1.27E+00	1.70E-04	6.63E-02	3.79E-02	6.03E-03	1.67E-02	8.59E-03	8.78E-03	6.82E-03	1.07E-03	2.80E-07	7.90E-03	1.22E-02
D24	0.00E+00	1.01E-04	7.44E-06	1.44E+02	2.04E-04	7.08E-01	1.23E-04	7.03E-02	2.36E-02	3.83E-03	1.21E-02	5.43E-03	5.55E-03	6.99E-03	6.52E-04	1.61E-07	6.53E-03	1.31E-02
D25	0.00E+00	9.96E-05	8.54E-06	2.20E+02	3.78E-04	1.30E+00	1.57E-04	4.64E-02	3.74E-02	5.89E-03	1.54E-02	8.42E-03	8.61E-03	4.93E-03	1.06E-03	2.85E-07	6.76E-03	8.49E-03
D26	0.00E+00	1.05E-04	8.36E-06	1.91E+02	3.06E-04	1.05E+00	1.47E-04	6.09E-02	3.20E-02	5.10E-03	1.44E-02	7.26E-03	7.42E-03	6.22E-03	8.97E-04	2.34E-07	6.95E-03	1.13E-02
D27	0.00E+00	2.52E-05	1.99E-06	4.93E+01	6.05E-05	2.28E-01	3.22E-05	1.71E-02	4.52E-03	8.46E-04	3.08E-03	1.53E-03	1.56E-03	2.18E-03	2.26E-04	5.48E-08	1.52E-03	3.16E-03
D28	0.00E+00	7.46E-05	6.01E-06	1.54E+02	1.94E-04	7.29E-01	9.82E-05	4.94E-02	1.42E-02	2.64E-03	9.40E-03	4.80E-03	4.90E-03	6.27E-03	7.10E-04	1.73E-07	4.49E-03	9.13E-03
D29	0.00E+00	2.52E-05	1.99E-06	4.93E+01	6.05E-05	2.28E-01	3.22E-05	1.71E-02	4.52E-03	8.46E-04	3.08E-03	1.53E-03	1.56E-03	2.18E-03	2.26E-04	5.48E-08	1.52E-03	3.16E-03
D30	0.00E+00	7.46E-05	6.01E-06	1.54E+02	1.94E-04	7.29E-01	9.82E-05	4.94E-02	1.42E-02	2.64E-03	9.40E-03	4.80E-03	4.90E-03	6.27E-03	7.10E-04	1.73E-07	4.49E-03	9.13E-03
D31	0.00E+00	2.54E-05	1.94E-06	4.67E+01	5.53E-05	2.08E-01	3.14E-05	1.74E-02	4.21E-03	7.96E-04	3.03E-03	1.44E-03	1.47E-03	2.27E-03	2.12E-04	5.14E-08	1.56E-03	3.24E-03
D32	0.00E+00	5.09E-05	3.96E-06	9.47E+01	1.12E-04	4.24E-01	6.27E-05	3.60E-02	8.60E-03	1.62E-03	6.00E-03	2.92E-03	2.98E-03	4.59E-03	4.29E-04	1.01E-07	3.02E-03	6.69E-03
D33	0.00E+00	5.41E-05	3.95E-06	7.20E+01	9.55E-05	3.38E-01	6.26E-05	4.08E-02	1.17E-02	1.92E-03	6.11E-03	2.68E-03	2.74E-03	3.97E-03	3.20E-04	7.52E-08	3.38E-03	7.62E-03
D34	0.00E+00	1.78E-05	1.58E-06	4.23E+01	7.38E-05	2.55E-01	2.93E-05	7.91E-03	7.24E-03	1.14E-03	2.84E-03	1.61E-03	1.65E-03	8.32E-04	2.05E-04	5.50E-08	1.18E-03	1.44E-03
D35	0.00E+00	2.76E-05	2.48E-06	6.61E+01	1.15E-04	3.99E-01	4.53E-05	1.26E-02	1.13E-02	1.78E-03	4.37E-03	2.51E-03	2.57E-03	1.31E-03	3.20E-04	8.51E-08	1.80E-03	2.30E-03
D36	0.00E+00	3.14E-05	2.21E-06	3.55E+01	4.04E-05	1.47E-01	3.31E-05	2.61E-02	5.66E-03	9.45E-04	3.22E-03	1.30E-03	1.32E-03	2.49E-03	1.52E-04	3.25E-08	1.90E-03	4.89E-03
D37	0.00E+00	1.89E-05	1.59E-06	3.73E+01	5.95E-05	2.11E-01	2.70E-05	1.18E-02	6.31E-03	1.00E-03	2.58E-03	1.40E-03	1.43E-03	1.14E-03	1.76E-04	4.41E-08	1.16E-03	2.17E-03
D38	0.00E+00	5.30E-05	4.30E-06	9.27E+01	1.39E-04	5.00E-01	7.00E-05	3.68E-02	1.56E-02	2.50E-03	6.69E-03	3.44E-03	3.52E-03	3.52E-03	4.30E-04	1.04E-07	3.17E-03	6.84E-03
D39	0.00E+00	8.07E-06	7.91E-07	2.28E+01	4.09E-05	1.43E-01	1.47E-05	3.14E-03	3.96E-03	6.17E-04	1.40E-03	8.66E-04	8.87E-04	3.21E-04	1.12E-04	2.98E-08	5.11E-04	5.62E-04
D40	0.00E+00	3.70E-05	3.03E-06	6.71E+01	1.03E-04	3.68E-01	5.02E-05	2.47E-02	1.13E-02	1.81E-03	4.81E-03	2.50E-03	2.56E-03	2.38E-03	3.13E-04	7.71E-08	2.25E-03	4.58E-03
D41	0.00E+00	1.16E-05	1.19E-06	3.66E+01	6.76E-05	2.36E-01	2.29E-05	3.22E-03	6.38E-03	9.89E-04	2.19E-03	1.40E-03	1.43E-03	3.56E-04	1.81E-04	4.93E-08	7.63E-04	5.59E-04
D42	0.00E+00	1.30E-05	9.80E-07	1.72E+01	2.11E-05	7.95E-02	1.44E-05	1.11E-02	2.82E-03	4.63E-04	1.37E-03	6.21E-04	6.33E-04	1.03E-03	7.56E-05	1.59E-08	7.34E-04	2.07E-03
D43	0.00E+00	1.54E-05	1.55E-06	4.63E+01	8.46E-05	2.95E-01	2.94E-05	5.02E-03	8.06E-03	1.25E-03	2.80E-03	1.76E-03	1.81E-03	5.34E-04	2.28E-04	6.16E-08	9.96E-04	8.87E-04
D44	0.00E+00	2.96E-05	1.95E-06	2.76E+01	2.67E-05	9.44E-02	2.92E-05	2.48E-02	4.24E-03	7.25E-04	2.90E-03	1.02E-03	1.03E-03	2.41E-03	1.13E-04	2.36E-08	1.86E-03	4.65E-03
D45	0.00E+00	1.09E-04	7.79E-06	1.35E+02	1.70E-04	6.08E-01	1.21E-04	8.50E-02	2.18E-02	3.60E-03	1.18E-02	5.01E-03	5.11E-03	8.22E-03	5.94E-04	1.35E-07	6.70E-03	1.59E-02
D46	0.00E+00	1.23E-04	8.69E-06	1.47E+02	1.82E-04	6.41E-01	1.36E-04	9.61E-02	2.36E-02	3.91E-03	1.33E-02	5.48E-03	5.58E-03	9.37E-03	6.41E-04	1.47E-07	7.76E-03	1.80E-02
D47	0.00E+00	1.16E-04	8.44E-06	1.52E+02	1.99E-04	7.08E-01	1.33E-04	8.85E-02	2.47E-02	4.06E-03	1.30E-02	5.66E-03	5.77E-03	8.59E-03	6.75E-04	1.57E-07	7.21E-03	1.65E-02
D48	0.00E+00	3.70E-05	3.03E-06	6.71E+01	1.03E-04	3.68E-01	5.02E-05	2.47E-02	1.13E-02	1.81E-03	4.81E-03	2.50E-03	2.56E-03	2.38E-03	3.13E-04	7.71E-08	2.25E-03	4.58E-03
D49	0.00E+00	1.16E-04	8.44E-06	1.52E+02	1.99E-04	7.08E-01	1.33E-04	8.85E-02	2.47E-02	4.06E-03	1.30E-02	5.66E-03	5.77E-03	8.59E-03	6.75E-04	1.57E-07	7.21E-03	1.65E-02
D50	0.00E+00	1.36E-04	9.78E-06	1.75E+02	2.29E-04	8.05E-01	1.55E-04	1.03E-01	2.83E-02	4.65E-03	1.52E-02	6.53E-03	6.65E-03	1.00E-02	7.74E-04	1.82E-07	8.54E-03	1.92E-02
D51	0.00E+00	4.86E-05	3.55E-06	6.69E+01	9.24E-05	3.22E-01	5.78E-05	3.49E-02	1.09E-02	1.78E-03	5.68E-03	2.52E-03	2.57E-03	3.45E-03	3.01E-04	7.31E-08	3.12E-03	6.51E-03
D52	0.00E+00	2.82E-05	2.26E-06	5.20E+01	8.39E-05	2.89E-01	3.98E-05	1.60E-02	8.72E-03	1.39E-03	3.90E-03	1.98E-03	2.03E-03	1.65E-03	2.45E-04	6.42E-08	1.88E-03	2.96E-03
D53	0.00E+00	5.32E-05	3.93E-06	7.53E+01	1.05E-04	3.68E-01	6.40E-05	3.80E-02	1.23E-02	2.01E-03	6.27E-03	2.83E-03	2.88E-03	3.74E-03	3.40E-04	8.25E-08	3.39E-03	7.09E-03
D54	0.00E+00	4.27E-05	3.53E-06	8.61E+01	1.44E-04	4.95E-01	6.36E-05	2.22E-02	1.46E-02	2.31E-03	6.23E-03	3.29E-03	3.36E-03	2.31E-03	4.10E-04	1.09E-07	2.86E-03	4.09E-03
D55	0.00E+00	7.51E-05	5.62E-06	1.27E+02	1.40E-04	5.33E-01	8.79E-05	5.46E-02	1.13E-02	2.16E-03	8.47E-03	3.87E-03	3.94E-03	7.09E-03	5.65E-04	1.32E-07	4.52E-03	1.02E-02
D56	0.00E+00	5.98E-05	4.33E-06	9.13E+01	9.25E-05	3.54E-01	6.62E-05	4.53E-02	7.92E-03	1.54E-03	6.39E-03	2.75E-03	2.79E-03	5.93E-03	3.98E-04	9.06E-08	3.60E-03	8.45E-03
D57	0.00E+00	9.15E-05	6.66E-06	1.43E+02	1.47E-04	5.62E-01	1.02E-04	6.87E-02	1.24E-02	2.41E-03	9.89E-03	4.30E-03	4.37E-03	8.99E-03	6.23E-04	1.43E-07	5.51E-03	1.28E-02
D58	0.00E+00	6.73E-05	4.93E-06	1.06E+02	1.10E-04	4.20E-01	7.55E-05	5.08E-02	9.25E-03	1.79E-03	7.26E-03	3.19E-03	3.25E-03	6.60E-03	4.63E-04	1.06E-07	4.01E-03	9.47E-03
D59	0.00E+00	9.15E-05	6.66E-06	1.43E+02	1.47E-04	5.62E-01	1.02E-04	6.87E-02	1.24E-02	2.41E-03	9.89E-03	4.30E-03	4.37E-03	8.99E-03	6.23E-04	1.43E-07	5.51E-03	1.28E-02
D60	0.00E+00	6.73E-05	4.93E-06	1.06E+02	1.10E-04	4.20E-01	7.55E-05	5.08E-02	9.25E-03	1.79E-03	7.26E-03	3.19E-03	3.25E-03	6.60E-03	4.63E-04	1.06E-07	4.01E-03	9.47E-03
D61	0.00E+00	8.09E-06	6.10E-07	1.44E+01	1.66E-05	6.24E-02	9.80E-06	5.63E-03	1.28E-03	2.44E-04	9.49E-04	4.42E-04	4.50E-04	7.38E-04	6.46E-05	1.56E-08	4.99E-04	1.05E-03
D62	0.00E+00	1.52E-05	1.21E-06	3.20E+01	4.14E-05	1.54E-01	2.05E-05	9.39E-03	2.95E-03	5.49E-04	1.99E-03	1.01E-03	1.03E-03	1.23E-03	1.49E-04	3.77E-08	9.62E-04	1.73E-03
D63	0.00E+00	2.42E-05	1.65E-06	2.70E+01	2.45E-05	9.11E-02	2.42E-05	1.98E-02	3.16E-03	5.74E-04	2.36E-03	8.86E-04	9.01E-04	2.22E-03	1.12E-04	2.35E-08	1.46E-03	3.71E-03
D64	0.00E+00	7.98E-06	6.28E-07	1.51E+01	2.11E-05	7.50E-02	1.07E-05	4.92E-03	1.95E-03	3.30E-04	1.04E-03	5.16E-04	5.27E-04	5.66E-04	7.04E-05	1.77E-08	5.13E-04	9.11E-04
D65	0.00E+00	4.27E-05	2.97E-06	5.81E+01	5.22E-05	2.02E-01	4.45E-05	3.34E-02	4.88E-03	9.71E-04	4.32E-03	1.72E-03	1.74E-03	4.42E-03	2.46E-04	5.43E-08	2.58E-03	6.25E-03
D66	0.00E+00	4.09E-05	2.95E-06	6.18E+01	6.17E-05	2.37E-01	4.49E-05	3.13E-02	5.35E-03	1.04E-03	4.32E-03	1.85E-03	1.89E-03	4.08E-03	2.68E-04	6.04E-08	2.44E-03	5.84E-03
D67	0.00E+00	4.27E-05	2.97E-06	5.81E+01	5.22E-05	2.02E-01	4.45E-05	3.34E-02	4.88E-03	9.71E-04	4.32E-03	1.72E-03	1.74E-03	4.42E-03	2.46E-04	5.43E-08	2.58E-03	6.25E-03
D68	0.00E+00	4.09E-05	2.95E-06	6.18E+01	6.17E-05	2.37E-01	4.49E-05	3.13E-02	5.35E-03	1.04E-03	4.32E-03	1.85E-03	1.89E-03	4.08E-03	2.68E-04	6.04E-08	2.44E-03	5.84E-03
D69	0.00E+00	2.68E-05	1.83E-06	3.40E+01	2.78E-05	1.08E-01	2.70E-05	2.14E-02	2.79E-03	5.64E-04	2.63E-03	9.91E-04	1.01E-03	2.85E-03	1.41E-04	3.03E-08	1.62E-03	4.02E-03
D70	0.00E+00	2.56E-05	1.82E-06	3.61E+01	3.33E-05	1.30E-01	2.70E-05	2.02E-02	3.08E-03	6.07E-04	2.59E-03	1.07E-03	1.09E-03	2.63E-03	1.54E-04	3.34E-08	1.51E-03	3.79E-03
D71	0.00E+00	2.60E-05	2.07E-06	4.97E+01	6.89E-05	2.47E-01	3.47E-05	1.64E-02	6.43E-03	1.09E-03	3.36E-03	1.69E-03	1.73E-03	1.86E-03	2.31E-04	5.72E-08	1.63E-03	3.04E-03
D72	0.00E+00	3.91E-05	2.80E-06	5.09E+01	5.34E-05	1.99E-01	4.17E-05	3.12E-02	6.18E-03	1.09E-03	4.01E-03	1.68E-03	1.71E-03	3.45E-03	2.19E-04	4.72E-08	2.31E-03	5.84E-03
D73	0.00E+00	1.26E-05	1.13E-06	3.26E+01	5.06E-05	1.81E-01	2.03E-05	6.17E-03	4.36E-03	7.20E-04	1.95E-03	1.12E-03	1.14E-03	6.96E-04	1.57E-04	4.05E-08	8.07E-04	1.12E-03
D74	0.00E+00	2.50E-05	1.84E-06	3.53E+01	3.94E-05	1.47E-01	2.76E-05	1.97E-02	4.38E-03	7.67E-04	2.63E-03	1.17E-03	1.19E-03	2.16E-03	1.55E-04	3.36E-08	1.45E-03	3.69E-03
D75	0.00E+00	1.79E-05	1.41E-06	3.59E+01	4.49E-05	1.67E-01	2.34E-05	1.16E-02	3.28E-03	6.14E-04	2.26E-03	1.12E-03	1.14E-03	1.52E-03	1.65E-04	4.11E-08	1.12E-03	2.15E-03
D76	0.00E+00	2.94E-05	2.20E-06	5.00E+01	5.55E-05	2.10E-01	3.46E-05	2.12E-02	4.44E-03	8.49E-04	3.34E-03	1.53E-03	1.55E-03	2.77E-03	2.23E-04	5.26E-08	1.79E-03	3.95E-03
D77	0.00E+00	1.30E-05	9.41E-07	2.01E+01	2.05E-05	7.82E-02	1.46E-05	9.73E-03	1.74E-03	3.38E-04	1.41E-03	6.05E-04	6.15E-04	1.28E-03	8.75E-05	2.03E-08	7.97E-04	1.82E-03
D78	0.00E+00	2.77E-05	2.02E-06	4.30E+01	4.42E-05	1.69E-01	3.09E-05	2.09E-02	3.75E-03	7.27E-04	2.99E-03	1.30E-03	1.32E-03	2.73E-03	1.88E-04	4.30E-08	1.67E-03	3.89E-03
D79	0.00E+00	2.05E-05	1.71E-06	4.49E+01	6.60E-05	2.36E-01	2.97E-05	1.16E-02	5.90E-03	9.87E-04	2.87E-03	1.53E-03	1.57E-03	1.32E-03	2.13E-04	5.39E-08	1.30E-03	2.13E-03
D80	0.00E+00	3.40E-05	2.56E-06	5.39E+01	6.66E-05	2.43E-01	4.04E-05	2.46E-02	6.79E-03	1.17E-03	3.90E-03	1.81E-03	1.84E-03	2.74E-03	2.43E-04	5.66E-08	2.06E-03	4.58E-03
D81	0.00E+00	1.29E-05	1.25E-06	4.05E+01	6.65E-05	2.36E-01	2.37E-05	4.62E-03	5.51E-03	9.00E-04	2.28E-03	1.40E-03	1.43E-03	5.27E-04	1.99E-04	5.25E-08	8.46E-04	8.18E-04
D82	0.00E+00	6.85E-06	6.91E-07	2.29E+01	3.79E-05	1.35E-01	1.31E-05	2.29E-03	3.13E-03	5.10E-04	1.25E-03	7.90E-04	8.09E-04	2.54E-04	1.13E-04	2.97E-08	4.43E-04	4.01E-04
D83	0.00E+00	1.28E-04	8.78E-06	1.57E+02	1.19E-04	4.81E-01	1.25E-04	1.07E-01	1.29E-02	2.61E-03	1.20E-02	4.52E-03	4.58E-03	1.39E-02	6.41E-04	1.27E-07	7.37E-03	2.00E-02
D84	0.00E+00	1.47E-04	1.09E-05	2.12E+02	1.91E-04	7.78E-01	1.52E-04	1.25E-01	1.84E-02	3.61E-03	1.42E-02	6.23E-03	6.33E-03	1.55E-02	9.01E-04	1.75E-07	7.85E-03	2.34E-02
D85	0.00E+00	1.06E-04	7.29E-06	1.29E+02	9.60E-05	3.91E-01	1.03E-04	8.92E-02	1.06E-02	2.15E-03	9.86E-03	3.71E-03	3.76E-03	1.16E-02	5.26E-04	1.03E-07	6.10E-03	1.67E-02
D86	0.00E+00	1.43E-04	1.07E-05	2.10E+02	1.94E-04	7.90E-01	1.49E-04	1.21E-01	1.84E-02	3.59E-03	1.39E-02	6.21E-03	6.30E-03

Appendix F.2.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E08	0.00E+00	1.12E-04	8.32E-06	1.60E+02	2.25E-04	7.89E-01	1.35E-04	8.03E-02	2.63E-02	4.28E-03	1.32E-02	6.01E-03	6.13E-03	7.87E-03	7.24E-04	1.75E-07	7.06E-03	1.50E-02
E09	0.00E+00	1.51E-04	1.18E-05	2.39E+02	3.45E-04	1.23E+00	1.89E-04	1.09E-01	3.97E-02	6.42E-03	1.82E-02	8.88E-03	9.07E-03	1.05E-02	1.09E-03	2.61E-07	9.17E-03	2.03E-02
E10	0.00E+00	9.91E-05	7.55E-06	1.52E+02	2.20E-04	7.72E-01	1.24E-04	6.92E-02	2.51E-02	4.05E-03	1.20E-02	5.69E-03	5.80E-03	6.79E-03	6.92E-04	1.69E-07	6.24E-03	1.29E-02
E11	0.00E+00	2.09E-04	1.56E-05	3.00E+02	4.19E-04	1.48E+00	2.52E-04	1.51E-01	4.93E-02	8.01E-03	2.46E-02	1.12E-02	1.15E-02	1.48E-02	1.36E-03	3.26E-07	1.31E-02	2.82E-02
E12	0.00E+00	2.34E-04	1.67E-05	2.74E+02	3.16E-04	1.16E+00	2.49E-04	1.96E-01	4.39E-02	7.30E-03	2.41E-02	9.98E-03	1.02E-02	1.86E-02	1.18E-03	2.50E-07	1.40E-02	3.68E-02
E13	0.00E+00	2.40E-05	1.90E-06	5.00E+01	6.45E-05	2.39E-01	3.22E-05	1.49E-02	4.61E-03	8.57E-04	3.13E-03	1.57E-03	1.61E-03	1.95E-03	2.32E-04	5.89E-08	1.53E-03	2.74E-03
E14	0.00E+00	6.25E-05	4.70E-06	1.05E+02	1.14E-04	4.36E-01	7.23E-05	4.66E-02	9.30E-03	1.78E-03	6.92E-03	3.18E-03	3.24E-03	5.98E-03	4.64E-04	1.06E-07	3.68E-03	8.68E-03
E15	0.00E+00	2.77E-05	2.07E-06	4.80E+01	5.46E-05	2.05E-01	3.32E-05	1.94E-02	4.27E-03	8.14E-04	3.22E-03	1.47E-03	1.50E-03	2.56E-03	2.15E-04	5.19E-08	1.72E-03	3.62E-03
E16	0.00E+00	4.52E-05	3.55E-06	7.73E+01	8.27E-05	3.28E-01	5.14E-05	3.64E-02	7.00E-03	1.33E-03	4.76E-03	2.34E-03	2.38E-03	4.42E-03	3.43E-04	7.17E-08	2.39E-03	6.78E-03
E17	0.00E+00	2.20E-05	1.54E-06	3.21E+01	3.20E-05	1.20E-01	2.42E-05	1.61E-02	2.73E-03	5.37E-04	2.38E-03	9.66E-04	9.83E-04	2.18E-03	1.39E-04	3.32E-08	1.40E-03	3.01E-03
E18	0.00E+00	1.94E-05	1.64E-06	4.56E+01	6.18E-05	2.30E-01	2.78E-05	1.15E-02	4.30E-03	7.88E-04	2.67E-03	1.45E-03	1.48E-03	1.45E-03	2.15E-04	5.42E-08	1.19E-03	2.12E-03
E19	0.00E+00	7.22E-05	5.71E-06	1.26E+02	1.96E-04	6.82E-01	9.77E-05	4.49E-02	2.10E-02	3.37E-03	9.53E-03	4.76E-03	4.86E-03	4.50E-03	5.87E-04	1.50E-07	4.67E-03	8.33E-03
E20	0.00E+00	5.11E-05	3.92E-06	8.50E+01	1.32E-04	4.53E-01	6.83E-05	3.08E-02	1.41E-02	2.26E-03	6.75E-03	3.24E-03	3.32E-03	3.16E-03	3.95E-04	1.03E-07	3.43E-03	5.71E-03
E21	0.00E+00	1.84E-06	1.37E-07	2.66E+00	2.42E-06	9.85E-03	1.91E-06	1.56E-03	2.32E-04	4.55E-05	1.77E-04	7.84E-05	7.96E-05	1.93E-04	1.13E-05	2.20E-09	9.73E-05	2.92E-04
E22	0.00E+00	1.77E-05	1.37E-06	3.14E+01	3.56E-05	1.37E-01	2.11E-05	1.31E-02	2.84E-03	5.38E-04	2.00E-03	9.62E-04	9.80E-04	1.66E-03	1.41E-04	3.23E-08	1.02E-03	2.44E-03
E23	0.00E+00	1.84E-06	1.37E-07	2.66E+00	2.42E-06	9.85E-03	1.91E-06	1.56E-03	2.32E-04	4.55E-05	1.77E-04	7.84E-05	7.96E-05	1.93E-04	1.13E-05	2.20E-09	9.73E-05	2.92E-04
E24	0.00E+00	1.77E-05	1.37E-06	3.14E+01	3.56E-05	1.37E-01	2.11E-05	1.31E-02	2.84E-03	5.38E-04	2.00E-03	9.62E-04	9.80E-04	1.66E-03	1.41E-04	3.23E-08	1.02E-03	2.44E-03
E25	0.00E+00	1.96E-05	1.80E-06	5.28E+01	8.27E-05	2.96E-01	3.23E-05	9.41E-03	7.11E-03	1.17E-03	3.09E-03	1.81E-03	1.85E-03	1.04E-03	2.56E-04	6.57E-08	1.24E-03	1.71E-03
E26	0.00E+00	2.05E-05	1.70E-06	4.22E+01	5.95E-05	2.16E-01	2.82E-05	1.31E-02	5.53E-03	9.30E-04	2.69E-03	1.43E-03	1.46E-03	1.44E-03	1.98E-04	4.81E-08	1.23E-03	2.42E-03
E27	0.00E+00	1.65E-05	1.50E-06	4.41E+01	6.90E-05	2.47E-01	2.70E-05	7.86E-03	5.92E-03	9.76E-04	2.59E-03	1.51E-03	1.55E-03	8.78E-04	2.13E-04	5.49E-08	1.05E-03	1.43E-03
E28	0.00E+00	1.56E-05	1.27E-06	3.06E+01	4.22E-05	1.53E-01	2.08E-05	1.02E-02	3.98E-03	6.72E-04	1.99E-03	1.03E-03	1.06E-03	1.12E-03	1.42E-04	3.44E-08	9.38E-04	1.89E-03
E29	0.00E+00	2.27E-06	1.95E-07	5.61E+00	8.72E-06	3.07E-02	3.60E-06	1.05E-03	7.44E-04	1.23E-04	3.51E-04	1.94E-04	1.98E-04	1.25E-04	2.70E-05	7.13E-09	1.53E-04	1.91E-04
E30	0.00E+00	1.74E-05	1.46E-06	3.78E+01	5.50E-05	1.98E-01	2.50E-05	1.03E-02	4.97E-03	8.31E-04	2.40E-03	1.29E-03	1.32E-03	1.15E-03	1.79E-04	4.47E-08	1.09E-03	1.89E-03
E31	0.00E+00	1.16E-05	8.21E-07	1.59E+01	1.83E-05	6.52E-02	1.30E-05	8.44E-03	1.94E-03	3.40E-04	1.28E-03	5.34E-04	5.44E-04	9.69E-04	6.99E-05	1.65E-08	7.34E-04	1.58E-03
E32	0.00E+00	2.44E-05	1.97E-06	4.81E+01	6.72E-05	2.42E-01	3.30E-05	1.54E-02	6.25E-03	1.05E-03	3.18E-03	1.63E-03	1.67E-03	1.72E-03	2.25E-04	5.53E-08	1.51E-03	2.84E-03
E33	0.00E+00	5.93E-05	4.24E-06	7.44E+01	9.54E-05	3.36E-01	6.69E-05	4.53E-02	1.20E-02	1.98E-03	6.56E-03	2.77E-03	2.83E-03	4.42E-03	3.28E-04	7.63E-08	3.73E-03	8.47E-03
E34	0.00E+00	8.12E-05	6.52E-06	1.44E+02	2.22E-04	7.83E-01	1.10E-04	5.26E-02	2.41E-02	3.86E-03	1.06E-02	5.40E-03	5.52E-03	5.16E-03	6.70E-04	1.68E-07	5.08E-03	9.75E-03
E35	0.00E+00	5.22E-05	3.61E-06	5.89E+01	6.99E-05	2.46E-01	5.61E-05	4.12E-02	9.35E-03	1.56E-03	5.54E-03	2.19E-03	2.23E-03	4.02E-03	2.54E-04	5.76E-08	3.30E-03	7.71E-03
E36	0.00E+00	7.39E-05	5.68E-06	1.15E+02	1.66E-04	5.88E-01	9.26E-05	5.21E-02	1.90E-02	3.07E-03	8.98E-03	4.29E-03	4.38E-03	5.07E-03	5.25E-04	1.27E-07	4.60E-03	9.70E-03
E37	0.00E+00	5.22E-05	3.61E-06	5.89E+01	6.99E-05	2.46E-01	5.61E-05	4.12E-02	9.35E-03	1.56E-03	5.54E-03	2.19E-03	2.23E-03	4.02E-03	2.54E-04	5.76E-08	3.30E-03	7.71E-03
E38	0.00E+00	7.39E-05	5.68E-06	1.15E+02	1.66E-04	5.88E-01	9.26E-05	5.21E-02	1.90E-02	3.07E-03	8.98E-03	4.29E-03	4.38E-03	5.07E-03	5.25E-04	1.27E-07	4.60E-03	9.70E-03
E39	0.00E+00	1.72E-05	1.58E-06	4.68E+01	7.38E-05	2.64E-01	2.86E-05	8.00E-03	6.31E-03	1.04E-03	2.74E-03	1.61E-03	1.65E-03	8.96E-04	2.27E-04	5.87E-08	1.10E-03	1.45E-03
E40	0.00E+00	3.55E-05	2.58E-06	4.89E+01	5.38E-05	2.00E-01	3.89E-05	2.78E-02	6.00E-03	1.06E-03	3.75E-03	1.62E-03	1.65E-03	3.08E-03	2.13E-04	4.68E-08	2.10E-03	5.20E-03
E41	0.00E+00	1.28E-05	1.21E-06	3.77E+01	6.10E-05	2.17E-01	2.25E-05	5.13E-03	5.11E-03	8.37E-04	2.16E-03	1.30E-03	1.33E-03	5.82E-04	1.85E-04	4.83E-08	8.31E-04	9.18E-04
E42	0.00E+00	1.80E-05	1.56E-06	4.10E+01	6.00E-05	2.18E-01	2.62E-05	1.09E-02	5.44E-03	9.07E-04	2.49E-03	1.39E-03	1.42E-03	1.17E-03	1.95E-04	4.77E-08	1.07E-03	2.00E-03
E43	0.00E+00	1.34E-05	1.24E-06	3.80E+01	6.11E-05	2.17E-01	2.31E-05	5.46E-03	5.13E-03	8.42E-04	2.24E-03	1.31E-03	1.35E-03	6.36E-04	1.86E-04	4.89E-08	8.91E-04	9.81E-04
E44	0.00E+00	1.25E-05	1.11E-06	3.02E+01	4.50E-05	1.64E-01	1.89E-05	7.26E-03	4.03E-03	6.70E-04	1.79E-03	1.03E-03	1.05E-03	7.78E-04	1.44E-04	3.56E-08	7.40E-04	1.33E-03
E45	0.00E+00	2.72E-05	1.85E-06	3.30E+01	2.49E-05	9.95E-02	2.66E-05	2.25E-02	2.69E-03	5.48E-04	2.57E-03	9.52E-04	9.64E-04	2.95E-03	1.35E-04	2.74E-08	1.60E-03	4.21E-03
E46	0.00E+00	3.56E-05	2.64E-06	5.95E+01	6.54E-05	2.48E-01	4.16E-05	2.57E-02	5.26E-03	1.01E-03	4.03E-03	1.81E-03	1.85E-03	3.37E-03	2.64E-04	6.26E-08	2.18E-03	4.79E-03
E47	0.00E+00	7.65E-06	5.90E-07	1.46E+01	1.77E-05	6.60E-02	9.68E-06	5.11E-03	1.32E-03	2.48E-04	9.37E-04	4.52E-04	4.61E-04	6.69E-04	6.64E-05	1.64E-08	4.76E-04	9.47E-04
E48	0.00E+00	3.20E-05	2.39E-06	5.47E+01	6.14E-05	2.32E-01	3.79E-05	2.28E-02	4.86E-03	9.29E-04	3.67E-03	1.67E-03	1.71E-03	2.99E-03	2.44E-04	5.83E-08	1.96E-03	4.24E-03
E49	0.00E+00	5.31E-06	4.37E-07	1.13E+01	1.45E-05	5.48E-02	7.10E-06	3.53E-03	1.06E-03	1.96E-04	6.74E-04	3.55E-04	3.62E-04	4.39E-04	5.26E-05	1.27E-08	3.12E-04	6.52E-04
E50	0.00E+00	4.67E-05	3.36E-06	6.53E+01	5.86E-05	2.33E-01	4.84E-05	3.82E-02	5.59E-03	1.10E-03	4.60E-03	1.92E-03	1.95E-03	4.88E-03	2.77E-04	5.71E-08	2.64E-03	7.15E-03
E51	0.00E+00	1.02E-06	9.29E-08	2.73E+00	3.86E-06	1.45E-02	1.58E-06	5.90E-04	2.63E-04	4.77E-05	1.48E-04	8.72E-05	8.91E-05	6.94E-05	1.31E-05	3.25E-09	5.93E-05	1.08E-04
E52	0.00E+00	4.85E-05	3.49E-06	6.81E+01	6.15E-05	2.44E-01	5.05E-05	3.95E-02	5.83E-03	1.15E-03	4.80E-03	2.01E-03	2.04E-03	5.06E-03	2.89E-04	6.01E-08	2.76E-03	7.39E-03
E53	0.00E+00	2.00E-05	1.40E-06	2.75E+01	2.49E-05	9.60E-02	2.10E-05	1.56E-02	2.31E-03	4.59E-04	2.04E-03	8.13E-04	8.26E-04	2.07E-03	1.16E-04	2.59E-08	1.22E-03	2.92E-03
E54	0.00E+00	5.70E-05	4.33E-06	9.72E+01	1.07E-04	4.11E-01	6.65E-05	4.26E-02	8.69E-03	1.66E-03	6.34E-03	2.96E-03	3.01E-03	5.42E-03	4.33E-04	9.87E-08	3.32E-03	7.93E-03
E55	0.00E+00	2.00E-05	1.40E-06	2.75E+01	2.49E-05	9.60E-02	2.10E-05	1.56E-02	2.31E-03	4.59E-04	2.04E-03	8.13E-04	8.26E-04	2.07E-03	1.16E-04	2.59E-08	1.22E-03	2.92E-03
E56	0.00E+00	5.70E-05	4.33E-06	9.72E+01	1.07E-04	4.11E-01	6.65E-05	4.26E-02	8.69E-03	1.66E-03	6.34E-03	2.96E-03	3.01E-03	5.42E-03	4.33E-04	9.87E-08	3.32E-03	7.93E-03
F31	0.00E+00	8.67E-05	6.94E-06	1.48E+02	2.21E-04	7.88E-01	1.13E-04	6.02E-02	2.47E-02	3.97E-03	1.09E-02	5.50E-03	5.62E-03	5.79E-03	6.83E-04	1.66E-07	5.26E-03	1.12E-02
F32	0.00E+00	7.57E-05	6.34E-06	1.53E+02	2.53E-04	8.80E-01	1.12E-04	4.16E-02	2.60E-02	4.11E-03	1.09E-02	5.82E-03	5.95E-03	4.23E-03	7.29E-04	1.90E-07	4.93E-03	7.67E-03
F33	0.00E+00	8.07E-06	7.91E-07	2.28E+01	4.09E-05	1.43E-01	1.47E-05	3.14E-03	3.96E-03	6.17E-04	1.40E-03	8.66E-04	8.87E-04	3.21E-04	1.12E-04	2.98E-08	5.11E-04	5.62E-04
F34	0.00E+00	3.70E-05	3.03E-06	6.71E+01	1.03E-04	3.68E-01	5.02E-05	2.47E-02	1.13E-02	1.81E-03	4.81E-03	2.50E-03	2.56E-03	2.38E-03	3.13E-04	7.71E-08	2.25E-03	4.58E-03
F35	0.00E+00	1.49E-05	1.08E-06	2.31E+01	2.39E-05	9.07E-02	1.67E-05	1.10E-02	2.01E-03	3.90E-04	1.63E-03	6.98E-04	7.11E-04	1.46E-03	1.01E-04	2.36E-08	9.16E-04	2.06E-03
F36	0.00E+00	2.31E-05	1.82E-06	4.62E+01	5.75E-05	2.15E-01	3.01E-05	1.52E-02	4.23E-03	7.91E-04	2.90E-03	1.44E-03	1.47E-03	1.97E-03	2.12E-04	5.24E-08	1.43E-03	2.81E-03
F37	0.00E+00	1.29E-04	1.00E-05	2.06E+02	3.04E-04	1.07E+00	1.65E-04	8.97E-02	3.43E-02	5.53E-03	1.60E-02	7.73E-03	7.89E-03	8.75E-03	9.48E-04	2.32E-07	8.08E-03	1.67E-02
F38	0.00E+00	1.69E-04	1.18E-05	1.88E+02	2.11E-04	7.68E-01	1.77E-04	1.41E-01	2.99E-02	5.00E-03	1.72E-02	6.88E-03	7.00E-03	1.35E-02	8.01E-04	1.70E-07	1.02E-02	2.64E-02
F39	0.00E+00	8.48E-06	6.30E-07	1.27E+01	1.20E-05	4.81E-02	9.02E-06	6.97E-03	1.11E-03	2.16E-04	8.46E-04	3.76E-04	3.82E-04	8.72E-04	5.44E-05	1.11E-08	4.64E-04	1.30E-03
F40	0.00E+00	2.34E-05	1.81E-06	4.25E+01	4.91E-05	1.87E-01	2.83E-05	1.69E-02	3.84E-03	7.27E-04	2.70E-03	1.30E-03	1.33E-03	2.14E-03	1.92E-04	4.47E-08	1.37E-03	3.14E-03
F41	0.00E+00	1.24E-05	1.32E-06	4.70E+01	8.07E-05	2.86E-01	2.63E-05	2.46E-03	6.49E-03	1.05E-03	2.52E-03	1.64E-03	1.68E-03	2.94E-04	2.35E-04	6.32E-08	8.46E-04	3.99E-04
F42	0.00E+00	1.47E-05	1.30E-06	3.56E+01	5.34E-05	1.93E-01	2.24E-05	8.30E-03	4.74E-03	7.88E-04	2.13E-03	1.21E-03	1.24E-03	9.02E-04	1.70E-04	4.24E-08	8.89E-04	1.52E-03
F84	0.00E+00	8.81E-05	6.33E-06	7.74E+01	7.24E-05	3.09E-01	8.20E-05	8.99E-02	1.90E-02	2.95E-03	7.62E-03	3.02E-03	3.07E-03	6.26E-03	3.20E-04	4.36E-08	4.54E-03	1.69E-02
F85	0.00E+00	6.01E-05	4.63E-06	9.25E+01	1.15E-04	4.26E-01	7.01E-05	4.88E-02	1.48E-02	2.41E-03	6.65E-03	3.17E-03	3.23E-03	4.56E-03	4.17E-04	8.70E-08	3.42E-03	9.11E-03
F86	0.00E+00	3.86E-05	2.82E-06	5.57E+01	6.08E-05	2.24E-01	4.28E-05	3.00E-02	6.74E-03	1.18E-03	4.11E-03	1.80E-03	1.83E-03	3.32E-03	2.46E-04	5.40E-08	2.28E-03	5.61E-03
F87	0.00E+00	8.55E-05	5.58E-06	7.44E+01	5.85E-05	2.16E-01	8.02E-05	7.57E-02	1.11E-02	1.93E-03	7.90E-03	2.63E-03	2.67E-03	7.27E-03	2.96E-04	5.39E-08	5.23E-03	1.42E-02
F88	0.00E+00	8.81E-05	6.33E-06	7.74E+01	7.24E-05	3.09E-01	8.20E-05	8.99E-02	1.90E-02	2.95E-03	7.62E-03	3.02E-03	3.07E-03	6.26E-03	3.20E-04	4.36E-08	4.54E-03	1.69E-02
F89	0.00E+00	1.22E-04	8.70E-06	1.33E+02	1.84E-04	6.17E-01	1.34E-04	9.58E-02	3.25E-02	4.91E-03	1.31E-02	5.51E-03	5.62E-03	7.32E-03	5.92E-04	1.19E-07	7.52E-03	1.80E-02
G07	0.00E+00	7.90E-05	5.37E-06	8.30E+01	6.42E-05	2.49E-01	7.52E-05	6.83E-02	9.44E-03	1.74E-03	7.25E-03	2.63E-03	2.67E-03	7.54E-03	3.37E-04	6.35E-08	4.58E-03	1.28E-02
G09	0.00E+00	2.01E-05	1.38E-06	1.45E+01	1.08E-05	4.88E-02	1.76E-05	2.07E-02	3.49E-03	5.57E-04	1.66E-03	5.85E-04	5.96E-04	1.45E-03	5.72E-05	6.94E-09	1.06E-03	3.90E-03
G10	0.00E+00	7.90E-05	5.37E-06	8.30E+01	6.42E-05	2.49E-01	7.52E-05	6.83E-02	9.44E-03	1.74E-03	7.25E-03	2.63E-03	2.67E-03	7.54E-03	3.37E-04	6.35E-08	4.58E-03	1.28E-02
H01	0.00E+00	6.36E-04	4.68E-05	1.06E+03	8.07E-04	3.57E+00	6.56E-04	5.55E-01	4.80E-02	1.21E-02	6.08E-02	2.65E-02	2.69E-02	8.58E-02	4.45E-03	8.76E-07	3.39E-02	1.04E-01
H02	0.00E+00	6.36E-04	4.68E-05	1.06E+03	8.07E-04	3.57E+00	6.56E-04	5.55E-01	4.80E-02	1.21E-02	6.08E-02	2.65E-02	2.69E-02	8.58E-02	4.45E-03	8.76E-07	3.39E-02	1.04E-01
H03	0.00E+00	5.21E-04	3.91E-05	9.22E+02	7.58E-04	3.30E+00	5.56E-04	4.47E-01	4.28E-02	1.05E-02	5.15E-02	2.35E-02	2.38E-02	6.84E-02	3.92E-03	7.89E-07	2.77E-02	8.35E-02
H04	0.00E+00	4.85E-04	3.52E-05	7.69E+02	5.28E-04	2.39E+00	4.80E-04	4.35E-01	3.37E-02	8.65E-03	4.43E-02	1.88E-02	1.90E-02	6.72E-02	3.15E-03	5.84E-07	2.53E-02	8.15E-02
H05	0.00E+00	2.13E-04	1.56E-05	3.55E+02	2.66E-04	1.18E+00	2.20E-04	1.85E-01	1.59E-02	4.02E-03	2.05E-02	8.81E-03	8.92E-03	2.89E-02	1.48E-03	2.96E-07	1.16E-02	3.46E-02
H06	0.00E+00	2.71E-04	1.97E-05	4.14E+02	2.62E-04	1.22E+00	2.61E-04	2.51E-01	1.78E-02	4.63E-03	2.38E-02	9.95E-03	1.00E-02	3.84E-02	1.67E-03	2.88E-07	1.37E-02	4.70E-02
H07	0.00E+00	4.84E-04	3.52E-05	7.72E+02	5.37E-04	2.43E+00	4.82E-04	4.34E-01	3.40E-02	8.70E-03	4.44E-02	1.89E-02	1.91E-02	6.69E-02	3.17E-03	5.92E-07	2.53E-02	8.11E-02
H08	0.00E+00	5.82E-05	4.23E-06	7.18E+01	7.55E-05	2.90E-01	6.06E-05	5.16E-02	1.13E-02	1.88E-03	5.76E-03	2.45E-03	2.49E-03	4.80E-03	3.10E-04	5.85E-08	3.27E-03	9.67E-03
H09	0.00E+00	1.34E-04	9.41E-06	9.81E+01	6.43E-05	3.32E-01	1.15E-04	1.46E-01	2.38E-02	3.80E-03	1.05E-02	3.81E-03	3.88E-03	9.98E-03	3.83E-04	3.82E-08	6.67E-03	2.74E-02
H14	0.00E+00	2.93E-05	2.17E-06	4.10E+01	4.22E-05	1.61E-01	3.14E-05	2.43E-02	4.97E-03	8.77E-04	2.97E-03	1.31E-03	1.33E-03	2.62E-03	1.79E-04	3.67E-08	1.64E-03	4.54E-03
H16	0.00E+00	5.88E-05	4.61E-06	1.04E+02	1.28E-04	4.71E-01	7.21E-05	4.29E-02	1.30E-02	2.23E-03	6.86E-03	3.37E-03	3.44E-03	4.67E-03	4.76E-04	1.09E-07	3.43E-03	7.98E-03

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B05	100	Passenger Car	298	0.00E+00	3.26E-06	3.53E-07	1.34E+01	2.27E-05	8.92E-02	7.25E-06	6.37E-04	9.66E-04	1.95E-04	7.05E-04	4.55E-04	4.67E-04	3.74E-05	6.78E-05	1.87E-08	2.39E-04	9.95E-05
16	B05	100	Passenger Truck	499	0.00E+00	7.04E-06	7.49E-07	3.16E+01	4.61E-05	1.79E-01	1.50E-05	1.81E-03	1.71E-03	3.63E-04	1.44E-03	9.33E-04	9.56E-04	2.01E-04	1.59E-04	4.34E-08	4.84E-04	2.93E-04
16	B06	100	Passenger Car	948	0.00E+00	1.04E-05	1.12E-06	4.26E+01	7.22E-05	2.84E-01	2.31E-05	2.03E-03	3.08E-03	6.20E-04	2.24E-03	1.45E-03	1.48E-03	1.19E-04	2.16E-04	5.94E-08	7.60E-04	3.17E-04
16	B06	100	Passenger Truck	1588	0.00E+00	2.24E-05	2.38E-06	1.01E+02	1.47E-04	5.71E-01	4.76E-05	5.76E-03	5.44E-03	1.15E-03	4.58E-03	2.97E-03	3.04E-03	6.40E-04	5.04E-04	1.38E-07	1.54E-03	9.32E-04
16	B07	100	Passenger Car	707	0.00E+00	7.74E-06	8.37E-07	3.18E+01	5.39E-05	2.12E-01	1.72E-05	1.51E-03	2.29E-03	4.63E-04	1.67E-03	1.08E-03	1.11E-03	8.87E-05	1.61E-04	4.43E-08	5.67E-04	2.36E-04
16	B07	100	Passenger Truck	1185	0.00E+00	1.67E-05	1.78E-06	7.50E+01	1.09E-04	4.26E-01	3.55E-05	4.30E-03	4.06E-03	8.62E-04	3.42E-03	2.21E-03	2.27E-03	4.78E-04	3.76E-04	1.03E-07	1.15E-03	6.95E-04
16	B07	100	Single Unit Short Haul Truck	5	0.00E+00	6.43E-07	3.18E-08	8.74E-01	5.61E-07	2.02E-03	6.96E-07	3.48E-04	3.30E-05	9.61E-06	7.95E-05	1.97E-05	2.00E-05	8.82E-05	3.51E-06	1.44E-09	5.95E-05	6.50E-05
16	B07	100	Combination Short Haul Truck	1	0.00E+00	3.59E-07	2.62E-08	3.78E-01	1.02E-09	3.51E-04	2.59E-07	3.83E-04	1.22E-05	4.34E-06	2.01E-05	7.69E-06	7.56E-06	5.70E-05	1.27E-06	0.00E+00	1.26E-05	7.22E-05
16	B07	100	Combination Long Haul Truck	1	0.00E+00	3.13E-07	2.14E-08	3.43E-01	1.18E-09	3.50E-04	2.34E-07	3.64E-04	1.13E-05	3.14E-06	2.05E-05	6.42E-06	6.41E-06	5.23E-05	1.15E-06	0.00E+00	1.41E-05	6.86E-05
16	B08	100	Passenger Car	1128	0.00E+00	1.23E-05	1.34E-06	5.07E+01	8.59E-05	3.38E-01	2.74E-05	2.41E-03	3.66E-03	7.38E-04	2.67E-03	1.72E-03	1.77E-03	1.41E-04	2.57E-04	7.07E-08	9.04E-04	3.77E-04
16	B08	100	Passenger Truck	1890	0.00E+00	2.66E-05	2.84E-06	1.20E+02	1.74E-04	6.80E-01	5.67E-05	6.86E-03	6.47E-03	1.37E-03	5.45E-03	3.53E-03	3.62E-03	7.62E-04	6.00E-04	1.65E-07	1.83E-03	1.11E-03
16	B08	100	Single Unit Short Haul Truck	231	0.00E+00	3.10E-05	1.53E-06	4.21E+01	2.71E-05	9.76E-02	3.36E-05	1.68E-02	1.59E-03	4.63E-04	3.83E-03	9.51E-04	9.66E-04	4.25E-03	1.69E-04	6.92E-08	2.87E-03	3.13E-03
16	B08	100	Single Unit Long Haul Truck	10	0.00E+00	1.34E-06	6.53E-08	1.77E+00	1.12E-06	3.98E-03	1.45E-06	7.06E-04	7.20E-05	2.00E-05	1.67E-04	4.01E-05	4.08E-05	1.78E-04	7.15E-06	2.83E-09	1.26E-04	1.32E-04
16	B08	100	Combination Short Haul Truck	47	0.00E+00	1.62E-05	1.18E-06	1.70E+01	4.60E-08	1.58E-02	1.17E-05	1.73E-02	5.48E-04	1.95E-04	9.06E-04	3.46E-04	3.40E-04	2.57E-03	5.70E-05	0.00E+00	5.66E-04	3.25E-03
16	B08	100	Combination Long Haul Truck	43	0.00E+00	1.41E-05	9.65E-07	1.54E+01	5.33E-08	1.58E-02	1.05E-05	1.64E-02	5.08E-04	1.41E-04	9.23E-04	2.89E-04	2.88E-04	2.35E-03	5.16E-05	0.00E+00	6.34E-04	3.09E-03
16	B09	100	Passenger Car	1227	0.00E+00	1.34E-05	1.45E-06	5.51E+01	9.35E-05	3.67E-01	2.99E-05	2.62E-03	3.98E-03	8.03E-04	2.91E-03	1.87E-03	1.92E-03	1.54E-04	2.79E-04	7.69E-08	9.84E-04	4.10E-04
16	B09	100	Passenger Truck	2056	0.00E+00	2.90E-05	3.09E-06	1.30E+02	1.90E-04	7.39E-01	6.17E-05	7.46E-03	7.04E-03	1.49E-03	5.93E-03	3.84E-03	3.94E-03	8.29E-04	6.53E-04	1.79E-07	1.99E-03	1.21E-03
16	B09	100	Single Unit Short Haul Truck	59	0.00E+00	7.98E-06	3.95E-07	1.08E+01	6.96E-06	2.51E-02	8.63E-06	4.31E-03	4.09E-04	1.19E-04	9.86E-04	2.45E-04	2.48E-04	1.09E-03	4.36E-05	1.78E-08	7.38E-04	8.06E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	3.46E-07	1.68E-08	4.57E-01	2.88E-07	1.03E-03	3.73E-07	1.82E-04	1.85E-05	5.15E-06	4.30E-05	1.03E-05	1.05E-05	4.58E-05	1.84E-06	7.29E-10	3.25E-05	3.39E-05
16	B09	100	Combination Short Haul Truck	73	0.00E+00	2.52E-05	1.84E-06	2.65E+01	7.16E-08	2.45E-02	1.82E-05	2.68E-02	8.53E-04	3.04E-04	1.41E-03	5.38E-04	5.29E-04	3.99E-03	8.86E-05	0.00E+00	8.81E-04	5.06E-03
16	B09	100	Combination Long Haul Truck	67	0.00E+00	2.19E-05	1.50E-06	2.40E+01	8.29E-08	2.45E-02	1.64E-05	2.55E-02	7.89E-04	2.20E-04	1.44E-03	4.50E-04	4.49E-04	3.66E-03	8.03E-05	0.00E+00	9.86E-04	4.80E-03
16	B10	100	Passenger Car	929	0.00E+00	1.02E-05	1.10E-06	4.17E+01	7.07E-05	2.78E-01	2.26E-05	1.98E-03	3.01E-03	6.07E-04	2.20E-03	1.42E-03	1.45E-03	1.16E-04	2.11E-04	5.82E-08	7.44E-04	3.10E-04
16	B10	100	Passenger Truck	1555	0.00E+00	2.19E-05	2.34E-06	9.85E+01	1.44E-04	5.59E-01	4.67E-05	5.64E-03	5.33E-03	1.13E-03	4.49E-03	2.91E-03	2.98E-03	6.27E-04	4.94E-04	1.35E-07	1.51E-03	9.13E-04
16	B10	100	Single Unit Short Haul Truck	47	0.00E+00	6.30E-06	3.12E-07	8.57E+00	5.50E-06	1.98E-02	6.82E-06	3.41E-03	3.23E-04	9.41E-05	7.79E-04	1.93E-04	1.96E-04	8.64E-04	3.44E-05	1.41E-08	5.83E-04	6.37E-04
16	B10	100	Single Unit Long Haul Truck	2	0.00E+00	2.73E-07	1.33E-08	3.61E-01	2.28E-07	8.10E-04	2.95E-07	1.44E-04	1.46E-05	4.07E-06	3.40E-05	8.16E-06	8.29E-06	3.62E-05	1.45E-06	5.76E-10	2.57E-05	2.68E-05
16	B10	100	Combination Short Haul Truck	61	0.00E+00	2.08E-05	1.52E-06	2.19E+01	5.93E-08	2.03E-02	1.50E-05	2.22E-02	7.06E-04	2.52E-04	1.17E-03	4.46E-04	4.38E-04	3.31E-03	7.34E-05	0.00E+00	7.30E-04	4.19E-03
16	B10	100	Combination Long Haul Truck	55	0.00E+00	1.81E-05	1.24E-06	1.99E+01	6.87E-08	2.03E-02	1.36E-05	2.11E-02	6.54E-04	1.82E-04	1.19E-03	3.73E-04	3.72E-04	3.03E-03	6.65E-05	0.00E+00	8.17E-04	3.98E-03
16	B13	100	Passenger Car	502	0.00E+00	5.49E-06	5.94E-07	2.25E+01	3.82E-05	1.50E-01	1.22E-05	1.07E-03	1.63E-03	3.28E-04	1.19E-03	7.66E-04	7.86E-04	6.29E-05	1.14E-04	3.14E-08	4.02E-04	1.68E-04
16	B13	100	Passenger Truck	840	0.00E+00	1.18E-05	1.26E-06	5.32E+01	7.76E-05	3.02E-01	2.52E-05	3.05E-03	2.88E-03	6.11E-04	2.42E-03	1.57E-03	1.61E-03	3.39E-04	2.67E-04	7.32E-08	8.15E-04	4.93E-04
16	B13	100	Single Unit Short Haul Truck	29	0.00E+00	3.86E-06	1.91E-07	5.25E+00	3.37E-06	1.21E-02	4.18E-06	2.09E-03	1.98E-04	5.76E-05	4.77E-04	1.18E-04	1.20E-04	5.29E-04	2.11E-05	8.62E-09	3.57E-04	3.90E-04
16	B13	100	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.13E-09	2.21E-01	1.39E-07	4.96E-04	1.80E-07	8.79E-05	8.96E-06	2.49E-06	2.08E-05	5.00E-06	5.08E-06	2.21E-05	8.90E-07	3.53E-10	1.57E-05	1.64E-05
16	B13	100	Combination Short Haul Truck	35	0.00E+00	1.20E-05	8.79E-07	1.27E+01	3.42E-08	1.17E-02	8.69E-06	1.28E-02	4.08E-04	1.45E-04	6.75E-04	2.58E-04	2.53E-04	1.91E-03	4.24E-05	0.00E+00	4.21E-04	2.42E-03
16	B13	100	Combination Long Haul Truck	32	0.00E+00	1.05E-05	7.18E-07	1.15E+01	3.97E-08	1.17E-02	7.85E-06	1.22E-02	3.78E-04	1.05E-04	6.87E-04	2.15E-04	2.15E-04	1.75E-03	3.84E-05	0.00E+00	4.72E-04	2.30E-03
16	B14	100	Passenger Car	900	0.00E+00	9.85E-06	1.06E-06	4.04E+01	6.85E-05	2.69E-01	2.19E-05	1.92E-03	2.92E-03	5.89E-04	2.13E-03	1.37E-03	1.41E-03	1.13E-04	2.05E-04	5.64E-08	7.21E-04	3.00E-04
16	B14	100	Passenger Truck	1507	0.00E+00	2.12E-05	2.26E-06	9.54E+01	1.39E-04	5.42E-01	4.52E-05	5.47E-03	5.16E-03	1.10E-03	4.35E-03	2.82E-03	2.89E-03	6.08E-04	4.79E-04	1.31E-07	1.46E-03	8.85E-04
16	B14	100	Single Unit Short Haul Truck	48	0.00E+00	6.43E-06	3.18E-07	8.74E+00	5.61E-06	2.02E-02	6.96E-06	3.48E-03	3.30E-04	9.61E-05	7.95E-04	1.97E-04	2.00E-04	8.82E-04	3.51E-05	1.44E-08	5.95E-04	6.50E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.79E-07	1.35E-08	3.68E-01	2.32E-07	8.27E-04	3.01E-07	1.46E-04	1.49E-05	4.15E-06	3.47E-05	8.33E-06	8.46E-06	3.69E-05	1.48E-06	5.88E-10	2.62E-05	2.74E-05
16	B14	100	Combination Short Haul Truck	53	0.00E+00	1.82E-05	1.32E-06	1.91E+01	5.16E-08	1.77E-02	1.31E-05	1.94E-02	6.15E-04	2.19E-04	1.02E-03	3.88E-04	3.82E-04	2.88E-03	6.39E-05	0.00E+00	6.35E-04	3.65E-03
16	B14	100	Combination Long Haul Truck	48	0.00E+00	1.58E-05	1.08E-06	1.73E+01	5.98E-08	1.77E-02	1.18E-05	1.84E-02	5.70E-04	1.58E-04	1.04E-03	3.24E-04	3.24E-04	2.64E-03	5.79E-05	0.00E+00	7.12E-04	3.46E-03
9	D01	60	Passenger Car	736	0.00E+00	1.10E-05	1.19E-06	3.69E+01	7.67E-05	2.85E-01	2.45E-05	1.50E-03	7.47E-03	1.15E-03	2.38E-03	1.54E-03	1.58E-03	1.54E-04	1.85E-04	5.10E-08	8.07E-04	2.35E-04
9	D01	60	Passenger Truck	1232	0.00E+00	2.43E-05	2.57E-06	8.42E+01	1.52E-04	5.08E-01	5.01E-05	4.89E-03	1.37E-02	2.13E-03	4.76E-03	3.10E-03	3.18E-03	6.52E-04	4.19E-04	1.16E-07	1.58E-03	8.11E-04
9	D01	60	Single Unit Short Haul Truck	12	0.00E+00	3.65E-06	1.83E-07	2.33E+00	3.01E-06	4.51E-03	3.90E-06	1.74E-03	2.96E-04	5.37E-05	4.44E-04	1.10E-04	1.11E-04	2.33E-04	9.41E-06	3.88E-09	3.33E-04	3.27E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	7.95E-09	9.94E-02	1.31E-07	1.91E-04	1.70E-07	7.54E-05	1.33E-05	2.38E-06	1.95E-05	4.77E-06	4.85E-06	9.93E-06	4.02E-07	1.65E-10	1.46E-05	1.41E-05
9	D01	60	Combination Short Haul Truck	43	0.00E+00	2.55E-05	1.78E-06	1.66E+01	9.05E-08	2.23E-02	1.89E-05	2.77E-02	2.38E-03	4.71E-04	1.62E-03	5.30E-04	5.31E-04	2.50E-03	5.56E-05	0.00E+00	1.09E-03	5.22E-03
9	D01	60	Combination Long Haul Truck	40	0.00E+00	2.29E-05	1.49E-06	1.56E+01	1.04E-07	2.41E-02	1.77E-05	2.74E-02	2.39E-03	4.05E-04	1.67E-03	4.55E-04	4.61E-04	2.38E-03	5.22E-05	0.00E+00	1.21E-03	5.17E-03
9	D02	60	Passenger Car	944	0.00E+00	1.41E-05	1.53E-06	4.73E+01	9.84E-05	3.65E-01	3.14E-05	1.93E-03	9.58E-03	1.47E-03	3.06E-03	1.97E-03	2.02E-03	1.97E-04	2.37E-04	6.54E-08	1.04E-03	3.01E-04
9	D02	60	Passenger Truck	1581	0.00E+00	3.12E-05	3.29E-06	1.08E+02	1.95E-04	6.52E-01	6.43E-05	6.28E-03	1.76E-02	2.73E-03	6.11E-03	3.98E-03	4.08E-03	8.37E-04	5.37E-04	1.48E-07	2.03E-03	1.04E-03
9	D02	60	Single Unit Short Haul Truck	20	0.00E+00	5.90E-06	2.95E-07	3.76E+00	4.87E-06	7.28E-03	6.30E-06	2.81E-03	4.78E-04	8.67E-05	7.18E-04	1.77E-04	1.80E-04	3.77E-04	1.52E-05	6.26E-09	5.38E-04	5.27E-04
9	D02	60	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.28E-08	1.61E-01	2.11E-07	3.09E-04	2.75E-07	1.22E-04	2.15E-05	3.84E-06	3.14E-05	7.70E-06	7.83E-06	1.60E-05	6.49E-07	2.66E-10	2.36E-05	2.28E-05
9	D02	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.79E-07	8.21E+00	4.47E-08	1.10E-02	9.36E-06	1.37E-02	1.17E-03	2.32E-04	8.03E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.58E-03
9	D02	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.37E-07	7.69E+00	5.12E-08	1.19E-02	8.73E-06	1.36E-02	1.18E-03	2.00E-04	8.27E-04	2.25E-04	2.28E-04	1.18E-03	2.58E-05	0.00E+00	5.99E-04	2.55E-03
9	D03	60	Passenger Car	925	0.00E+00	1.38E-05	1.50E-06	4.64E+01	9.64E-05	3.58E-01	3.08E-05	1.89E-03	9.38E-03	1.44E-03	3.00E-03	1.93E-03	1.98E-03	1.93E-04	2.33E-04	6.41E-08	1.01E-03	2.95E-04
9	D03	60	Passenger Truck	1548	0.00E+00	3.05E-05	3.23E-06	1.06E+02	1.91E-04	6.38E-01	6.29E-05	6.15E-03	1.72E-02	2.67E-03	5.98E-03	3.90E-03	3.99E-03	8.20E-04	5.26E-04	1.45E-07	1.99E-03	1.02E-03
9	D03	60	Single Unit Short Haul Truck	28	0.00E+00	8.15E-06	4.08E-07	5.20E+00	6.72E-06	1.01E-02	8.70E-06	3.89E-03	6.61E-04	1.20E-04	9.91E-04	2.45E-04	2.49E-04	5.20E-04	2.10E-05	8.65E-09	7.42E-04	7.28E-04
9	D03	60	Single Unit Long Haul Truck	1	0.00E+00	3.56E-07	1.77E-08	2.22E-01	2.92E-07	4.27E-04	3.80E-07	1.68E-04	2.97E-05	5.30E-06	4.34E-05	1.06E-05	1.08E-05	2.21E-05	8.97E-07	3.68E-10	3.26E-05	3.15E-05
9	D03	60	Combination Short Haul Truck	38	0.00E+00	2.25E-05	1.57E-06	1.46E+01	7.96E-08	1.96E-02	1.67E-05	2.43E-02	2.09E-03	4.14E-04	1.43E-03	4.66E-04	4.67E-04	2.20E-03	4.89E-05	0.00E+00	9.62E-04	4.59E-03
9	D03	60	Combination Long Haul Truck	35	0.00E+00	2.02E-05	1.31E-06	1.37E+01	9.12E-08	2.12E-02	1.55E-05	2.41E-02	2.10E-03	3.57E-04	1.47E-03	4.01E-04	4.06E-04	2.09E-03	4.59E-05	0.00E+00	1.07E-03	4.55E-03
9	D04	60	Passenger Car	1114	0.00E+00	1.67E-05	1.81E-06	5.59E+01	1.16E-04	4.31E-01	3.71E-05	2.27E-03	1.13E-02	1.74E-03	3.61E-03	2.33E-03	2.39E-03	2.33E-04	2.80E-04	7.72E-08	1.22E-03	3.55E-04
9	D04	60	Passenger Truck	1866	0.00E+00	3.68E-05	3.89E-06	1.27E+02	2.30E-04	7.69E-01	7.58E-05	7.41E-03	2.07E-02	3.22E-03	7.21E-03	4.70E-03	4.81E-03	9.88E-04	6.34E-04	1.75E-07	2.40E-03	1.23E-03
9	D04	60	Single Unit Short Haul Truck	27	0.00E+00	7.87E-06	3.94E-07	5.02E+00	6.49E-06	9.71E-03	8.40E-06	3.75E-03	6.38E-04	1.16E-04	9.57E-04	2.36E-04	2.40E-04	5.02E-04	2.03E-05	8.35E-09	7.17E-04	7.03E-04
9	D04	60	Single Unit Long Haul Truck	1	0.00E+00	3.44E-07	1.71E-08	2.14E-01	2.82E-07	4.12E-04	3.67E-07	1.62E-04	2.86E-05	5.12E-06	4.19E-05	1.03E-05	1.04E-05	2.14E-05	8.66E-07	3.55E-10	3.15E-05	3.04E-05
9	D04	60	Combination Short Haul Truck	51	0.00E+00	2.98E-05	2.08E-06	1.94E+01	1.06E-07	2.61E-02	2.21E-05	3.24E-02	2.78E-03	5.50E-04	1.90E-03	6.19E-04	6.20E-04	2.93E-03	6.50E-05	0.00E+00	1.28E-03	6.10E-03
9	D04	60	Combination Long Haul Truck	46	0.00E+00	2.68E-05	1.74E-06	1.82E+01	1.21E-07	2.81E-02	2.07E-05	3.21E-02	2.79E-03	4.74E-04	1.96E-03	5.32E-04	5.39E-04	2.78E-03	6.10E-05	0.00E+00	1.42E-03	6.04E-03
9	D05	60	Passenger Car	903	0.00E+00	1.35E-05	1.46E-06	4.53E+01	9.41E-05	3.49E-01	3.01E-05	1.84E-03	9.16E-03	1.41E-03	2.93E-03	1.89E-03	1.94E-03	1.89E-04	2.27E-04	6.25E-08	9.90E-04	2.88E-04
9	D05	60	Passenger Truck	1511	0.00E+00	2.98E-05	3.15E-06	1.03E+02	1.86E-04	6.23E-01	6.14E-05	6.00E-03	1.68E-02	2.61E-03	5.84E-03	3.81E-03	3.90E-03	8.00E-04	5.13E-04	1.42E-07	1.94E-03	9.95E-04
9	D05	60	Single Unit Short Haul Truck	31	0.00E+00	9.00E-06	4.50E-07	5.73E+00	7.42E-06	1.11E-02	9.60E-06	4.29E-03	7.29E-04	1.32E-04	1.09E-03	2.70E-04	2.74E-04	5.74E-04	2.32E-05	9.54E-09	8.19E-04	8.04E-04
9	D05	60	Single Unit Long Haul Truck	1	0.00E+00	3.93E-07	1.96E-08	2.45E-01	3.22E-07	4.71E-04	4.20E-07	1.86E-04	3.27E-05	5.85E-06	4.79E-05	1.17E-05	1.19E-05	2.44E-05	9.89E-07	4.06E-10	3.60E-05	3.48E-05
9	D05	60	Combination Short Haul Truck	32	0.00E+00	1.91E-05	1.33E-06	1.24E+01	6.76E-08	1.67E-02	1.42E-05	2.07E-02	1.78E-03	3.52E-04	1.21E-03	3.96E-04	3.97E-04	1.87E-03	4.15E-05	0.00E+00	8.17E-04	3.90E-03
9	D05	60	Combination Long Haul Truck	30	0.00E+00	1.71E-05	1.11E-06	1.16E+01	7.75E-08	1.80E-02	1.32E-05	2.05E-02	1.79E-03	3.03E-04	1.25E-03	3.40E-04	3.45E-04	1.78E-03	3.90E-05	0.00E+00	9.07E-04	3.86E-03
9	D06	60	Passenger Car	1421	0.00E+00	2.13E-05	2.30E-06	7.13E+01	1.48E-04	5.50E-01	4.73E-05	2.90E-03	1.44E-02	2.21E-03	4.61E-03	2.97E-03	3.05E-03	2.97E-04	3.57E-04	9.85E-08	1.56E-03	4.53E-04
9	D06	60	Passenger Truck	2380	0.00E+00	4.69E-05	4.96E-06	1.63E+02	2.93E-04	9.81E-01	9.67E-05	9.45E-03	2.65E-02	4.11E-03	9.20E-03	5.99E-03	6.14E-03	1.26E-03	8.08E-04	2.23E-07	3.06E-03	1.57E-03
9	D06	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	D06	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.86E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	D06	60	Combination Short Haul Truck	44	0.00E+00	2.58E-05	1.80E-06	1.68E+01	9.15E-08	2.26E-02	1.92E-05	2.80E-02	2.41E-03	4.76E-04	1.64E-03	5.36E-04	5.37E-04	2.53E-03	5.63E-05	0.00E+00	1.11E-03	5.28E-03
9	D06	60	Combination Long Haul Truck	40	0.00E+00	2.32E-05	1.51E-06	1.58E+01	1.05E-07	2.43E-02	1.79E-05	2.78E-02	2.42E-03	4.10E-04	1.69E-03	4.61E-04	4.67E-04	2.41E-03	5.28E-05	0.00E+00	1.23E-03	5.23E-03
11	D07	80	Passenger Car	956	0.00E+00	1.16E-05	1.26E-06	4.45E+01	8.09E-05	3.09E-01	2.59E-05	1.96E-03	5.26E-03	9.14E-04	2.52E-03	1.62E-03	1.66E-03	1.50E-04	2.24E-04	6.29E-08	8.52E-04	3.07E-04
11	D07	80	Passenger Truck	1601	0.00E+00	2.50E-05	2.65E-06	1.03E+02	1.60E-04	5.69E-01	5.23E-05	5.83E-03	9.43E-03	1.67E-03	5.01E-03	3.25E-03	3.33E-03	7.19E-04	5.14E-04	1.40E-07	1.68E-03	9.53E-04
11	D07	80	Single Unit Short Haul Truck	47	0.00E+00	8.79E-06	4.37E-07	8.63E+00	7.08E-06	1.73E-02	9.36E-06	4.51E-03	5.53E-04	1.25E-04	1.07E-03	2.60E-04	2.65E-04	8.66E-04	3.48E-05	1.38E-08	8.05E-04	8.43E-04
11	D07	80	Single Unit Long Haul Truck	2	0.00E+00	3.83E-07	1.88E-08	3.65E-01	3.02E-07	7.20E-04	4.07E-07	1.93E-04	2.52E-05	5.52E-06	4.67E-05	1.12E-05	1.14E-05	3.65E-05	1.47E-06	5.75E-10	3.53E-05	3.61E-05
11	D07	80	Combination Short Haul Truck	48	0.00E+00	2.09E-05	1.50E-06	1.73E+01	6.60E-08	1.85E-02	1.53E-05	2.14E-02	1.27E-03	3.12E-04	1.25E-03	4.42E-04	4.38E-04	2.61E-03	5.79E-05	0.00E+00	8.08E-04	4.04E-03
11	D07	80	Combination Long Haul Truck	43	0.00E+00	1.87E-05	1.26E-06	1.60E+01	7.63E-08	1.92E-02	1.42E-05	2.08E-02	1.24E-03	2.49E-04	1.29E-03	3.80E-04	3.82E-04	2.44E-03	5.36E-05	0.00E+00	9.05E-04	3.92E-03
11	D08	80	Passenger Car	1135	0.00E+00	1.38E-05	1.49E-06	5.29E+01	9.61E-05	3.67E-01	3.07E-05	2.33E-03	6.25E-03	1.09E-03	2.99E-03	1.93E-03	1.98E-03	1.78E-04	2.67E-04	7.47E-08	1.01E-03	3.65E-04
11	D08	80	Passenger Tru

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D12	80	Passenger Truck	2053	0.00E+00	3.20E-05	3.40E-06	1.32E+02	2.05E-04	7.30E-01	6.71E-05	7.48E-03	1.21E-02	2.15E-03	6.42E-03	4.17E-03	4.27E-03	9.22E-04	6.59E-04	1.80E-07	2.15E-03	1.22E-03
11	D12	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.00E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.04E-05	9.19E-05	3.00E-04	1.21E-05	4.79E-09	2.79E-04	2.92E-04
11	D12	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.50E-04	1.41E-07	6.69E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.96E-06	1.26E-05	5.11E-07	2.00E-10	1.22E-05	1.25E-05
11	D12	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.84E-08	1.08E-02	8.90E-06	1.25E-02	7.37E-04	1.82E-04	7.26E-04	2.57E-04	2.55E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.35E-03
11	D12	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.34E-07	9.31E+00	4.44E-08	1.12E-02	8.27E-06	1.21E-02	7.21E-04	1.45E-04	7.49E-04	2.21E-04	2.23E-04	1.42E-03	3.12E-05	0.00E+00	5.27E-04	2.28E-03
9	D13	60	Passenger Car	451	0.00E+00	6.76E-06	7.31E-07	2.26E+01	4.70E-05	1.75E-01	1.50E-05	9.20E-04	4.58E-03	7.03E-04	1.46E-03	9.43E-04	9.68E-04	9.43E-05	1.13E-04	3.13E-08	4.95E-04	1.44E-04
9	D13	60	Passenger Truck	756	0.00E+00	1.49E-05	1.57E-06	5.16E+01	9.32E-05	3.11E-01	3.07E-05	3.00E-03	8.40E-03	1.30E-03	2.92E-03	1.90E-03	1.95E-03	4.00E-04	2.57E-04	7.09E-08	9.72E-04	4.97E-04
9	D13	60	Single Unit Short Haul Truck	22	0.00E+00	6.47E-06	3.23E-07	4.12E+00	5.33E-06	7.98E-03	6.90E-06	3.08E-03	5.24E-04	9.50E-05	7.86E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.86E-09	5.89E-04	5.78E-04
9	D13	60	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.76E-01	2.32E-07	3.39E-04	3.02E-07	1.33E-04	2.35E-05	4.20E-06	3.44E-05	8.44E-06	8.58E-06	1.76E-05	7.11E-07	2.92E-10	2.59E-05	2.50E-05
9	D13	60	Combination Short Haul Truck	20	0.00E+00	1.20E-05	8.36E-07	7.81E+00	4.25E-08	1.05E-02	8.90E-06	1.30E-02	1.12E-03	2.21E-04	7.63E-04	2.49E-04	2.49E-04	1.18E-03	2.61E-05	0.00E+00	5.14E-04	2.45E-03
9	D13	60	Combination Long Haul Truck	19	0.00E+00	1.08E-05	7.01E-07	7.32E+00	4.87E-08	1.13E-02	8.30E-06	1.29E-02	1.12E-03	1.91E-04	7.87E-04	2.14E-04	2.17E-04	1.12E-03	2.45E-05	0.00E+00	5.70E-04	2.43E-03
9	D14	60	Passenger Car	306	0.00E+00	4.58E-06	4.96E-07	1.53E+01	3.19E-05	1.18E-01	1.02E-05	6.24E-04	3.10E-03	4.77E-04	9.91E-04	6.39E-04	6.56E-04	6.39E-05	7.69E-05	2.12E-08	3.36E-04	9.75E-05
9	D14	60	Passenger Truck	512	0.00E+00	1.01E-05	1.07E-06	3.50E+01	6.32E-05	2.11E-01	2.08E-05	2.03E-03	5.69E-03	8.84E-04	1.98E-03	1.29E-03	1.32E-03	2.71E-04	1.74E-04	4.81E-08	6.58E-04	3.37E-04
9	D14	60	Single Unit Short Haul Truck	26	0.00E+00	7.59E-06	3.80E-07	4.84E+00	6.26E-06	9.36E-03	8.10E-06	3.62E-03	6.15E-04	1.12E-04	9.23E-04	2.28E-04	2.31E-04	4.84E-04	1.95E-05	8.05E-09	6.91E-04	6.78E-04
9	D14	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.06E-01	2.72E-07	3.97E-04	3.54E-07	1.57E-04	2.76E-05	4.93E-06	4.04E-05	9.91E-06	1.01E-05	2.06E-05	8.35E-07	3.42E-10	3.03E-05	2.93E-05
9	D14	60	Combination Short Haul Truck	20	0.00E+00	1.17E-05	8.15E-07	7.61E+00	4.14E-08	1.02E-02	8.67E-06	1.27E-02	1.09E-03	2.15E-04	7.44E-04	2.43E-04	2.43E-04	1.15E-03	2.55E-05	0.00E+00	5.01E-04	2.39E-03
9	D14	60	Combination Long Haul Truck	18	0.00E+00	1.05E-05	6.83E-07	7.13E+00	4.75E-08	1.10E-02	8.09E-06	1.26E-02	1.09E-03	1.86E-04	7.67E-04	2.08E-04	2.11E-04	1.09E-03	2.39E-05	0.00E+00	5.56E-04	2.37E-03
9	D15	60	Passenger Car	523	0.00E+00	7.83E-06	8.47E-07	2.62E+01	5.45E-05	2.02E-01	1.74E-05	1.07E-03	5.31E-03	8.14E-04	1.69E-03	1.09E-03	1.12E-03	1.09E-04	1.31E-04	3.62E-08	5.73E-04	1.67E-04
9	D15	60	Passenger Truck	875	0.00E+00	1.73E-05	1.82E-06	5.98E+01	1.08E-04	3.61E-01	3.56E-05	3.48E-03	9.73E-03	1.51E-03	3.38E-03	2.20E-03	2.26E-03	4.63E-04	2.97E-04	8.22E-08	1.13E-03	5.76E-04
9	D15	60	Single Unit Short Haul Truck	30	0.00E+00	8.72E-06	4.36E-07	5.55E+00	7.19E-06	1.08E-02	9.30E-06	4.16E-03	7.06E-04	1.28E-04	1.06E-03	2.61E-04	2.66E-04	5.56E-04	2.24E-05	9.24E-09	7.94E-04	7.79E-04
9	D15	60	Single Unit Long Haul Truck	1	0.00E+00	3.81E-07	1.89E-08	2.37E-01	3.12E-07	4.56E-04	4.07E-07	1.80E-04	3.17E-05	5.67E-06	4.64E-05	1.14E-05	1.16E-05	2.37E-05	9.58E-07	3.93E-10	3.48E-05	3.37E-05
9	D15	60	Combination Short Haul Truck	25	0.00E+00	1.48E-05	1.03E-06	9.61E+00	5.23E-08	1.29E-02	1.10E-05	1.60E-02	1.38E-03	2.72E-04	9.40E-04	3.07E-04	3.07E-04	1.45E-03	3.22E-05	0.00E+00	6.33E-04	3.02E-03
9	D15	60	Combination Long Haul Truck	23	0.00E+00	1.33E-05	8.63E-07	9.01E+00	6.00E-08	1.39E-02	1.02E-05	1.59E-02	1.38E-03	2.34E-04	9.69E-04	2.63E-04	2.67E-04	1.38E-03	3.02E-05	0.00E+00	7.02E-04	2.99E-03
9	D16	60	Passenger Car	684	0.00E+00	1.02E-05	1.11E-06	3.43E+01	7.13E-05	2.65E-01	2.28E-05	1.40E-03	6.94E-03	1.07E-03	2.22E-03	1.43E-03	1.47E-03	1.43E-04	1.72E-04	4.74E-08	7.51E-04	2.18E-04
9	D16	60	Passenger Truck	1146	0.00E+00	2.26E-05	2.39E-06	7.83E+01	1.41E-04	4.72E-01	4.66E-05	4.55E-03	1.27E-02	1.98E-03	4.43E-03	2.89E-03	2.96E-03	6.07E-04	3.89E-04	1.08E-07	1.47E-03	7.54E-04
9	D16	60	Single Unit Short Haul Truck	41	0.00E+00	1.21E-05	6.05E-07	7.70E+00	9.97E-06	1.49E-02	1.29E-05	5.76E-03	9.80E-04	1.78E-04	1.47E-03	3.63E-04	3.69E-04	7.71E-04	3.11E-05	1.28E-08	1.10E-03	1.08E-03
9	D16	60	Single Unit Long Haul Truck	2	0.00E+00	5.28E-07	2.63E-08	3.29E-01	4.33E-07	6.33E-04	5.64E-07	2.49E-04	4.40E-05	7.86E-06	6.44E-05	1.58E-05	1.60E-05	3.28E-05	1.33E-06	5.45E-10	4.83E-05	4.67E-05
9	D16	60	Combination Short Haul Truck	31	0.00E+00	1.85E-05	1.29E-06	1.20E+01	6.54E-08	1.61E-02	1.37E-05	2.00E-02	1.72E-03	3.40E-04	1.17E-03	3.83E-04	3.84E-04	1.81E-03	4.02E-05	0.00E+00	7.91E-04	3.77E-03
9	D16	60	Combination Long Haul Truck	29	0.00E+00	1.66E-05	1.08E-06	1.13E+01	7.50E-08	1.74E-02	1.28E-05	1.98E-02	1.73E-03	2.93E-04	1.21E-03	3.29E-04	3.33E-04	1.72E-03	3.77E-05	0.00E+00	8.77E-04	3.74E-03
10	D17	70	Passenger Car	256	0.00E+00	3.35E-06	3.62E-07	1.23E+01	2.33E-05	8.69E-02	7.44E-06	5.13E-04	1.99E-03	3.19E-04	7.24E-04	4.67E-04	4.79E-04	4.59E-05	6.18E-05	1.68E-08	2.45E-04	8.02E-05
10	D17	70	Passenger Truck	429	0.00E+00	7.33E-06	7.76E-07	2.83E+01	4.64E-05	1.60E-01	1.52E-05	1.60E-03	3.61E-03	5.87E-04	1.45E-03	9.45E-04	9.68E-04	2.08E-04	1.41E-04	3.77E-08	4.85E-04	2.64E-04
10	D17	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.01E-07	1.59E+00	1.66E-06	3.17E-03	2.16E-06	9.98E-04	1.43E-04	2.85E-05	2.46E-04	6.06E-05	6.16E-05	1.59E-04	6.40E-06	2.58E-09	1.84E-04	1.87E-04
10	D17	70	Combination Short Haul Truck	12	0.00E+00	5.99E-06	4.25E-07	4.34E+00	1.94E-08	5.15E-03	4.39E-06	6.28E-03	4.55E-04	9.94E-05	3.65E-04	1.26E-04	1.26E-04	6.54E-04	1.45E-05	0.00E+00	2.39E-04	1.18E-03
10	D17	70	Combination Long Haul Truck	10	0.00E+00	5.41E-06	3.62E-07	4.05E+00	2.24E-08	5.46E-03	4.11E-06	6.19E-03	4.52E-04	8.25E-05	3.77E-04	1.09E-04	1.11E-04	6.19E-04	1.36E-05	0.00E+00	2.66E-04	1.17E-03
10	D18	70	Passenger Car	129	0.00E+00	1.68E-06	1.82E-07	6.19E+00	1.17E-05	4.37E-02	3.75E-06	2.58E-04	1.00E-03	1.60E-04	3.65E-04	2.35E-04	2.41E-04	2.31E-05	3.11E-05	8.47E-09	1.23E-04	4.04E-05
10	D18	70	Passenger Truck	216	0.00E+00	3.69E-06	3.91E-07	1.43E+01	2.34E-05	8.05E-02	7.67E-06	8.08E-04	1.82E-03	2.96E-04	7.32E-04	4.76E-04	4.88E-04	1.05E-04	7.10E-05	1.90E-08	2.44E-04	1.33E-04
10	D18	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	D18	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	D18	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
11	D19	80	Passenger Car	773	0.00E+00	9.40E-06	1.02E-06	3.60E+01	6.54E-05	2.50E-01	2.09E-05	1.59E-03	4.25E-03	7.39E-04	2.03E-03	1.31E-03	1.35E-03	1.21E-04	1.81E-04	5.08E-08	6.89E-04	2.48E-04
11	D19	80	Passenger Truck	1294	0.00E+00	2.02E-05	2.14E-06	8.32E+01	1.29E-04	4.60E-01	4.23E-05	4.72E-03	7.62E-03	1.35E-03	4.05E-03	2.63E-03	2.69E-03	5.81E-04	4.16E-04	1.13E-07	1.35E-03	7.70E-04
11	D19	80	Single Unit Short Haul Truck	144	0.00E+00	2.69E-05	1.34E-06	2.64E+01	2.17E-05	5.29E-02	2.87E-05	1.38E-02	1.69E-03	3.83E-04	3.28E-03	7.97E-04	8.11E-04	2.65E-03	1.06E-04	4.22E-08	2.47E-03	2.58E-03
11	D19	80	Single Unit Long Haul Truck	6	0.00E+00	1.17E-06	5.77E-08	1.12E+00	9.25E-07	2.20E-03	1.25E-06	5.90E-04	7.73E-05	1.69E-05	1.43E-04	3.43E-05	3.49E-05	1.12E-04	4.51E-06	1.76E-09	1.08E-04	1.10E-04
11	D19	80	Combination Short Haul Truck	72	0.00E+00	3.15E-05	2.25E-06	2.60E+01	9.94E-08	2.79E-02	2.30E-05	3.23E-02	1.91E-03	4.70E-04	1.88E-03	6.65E-04	6.60E-04	3.93E-03	8.72E-05	0.00E+00	1.22E-03	6.08E-03
11	D19	80	Combination Long Haul Truck	65	0.00E+00	2.82E-05	1.90E-06	2.41E+01	1.15E-07	2.89E-02	2.14E-05	3.13E-02	1.86E-03	3.75E-04	1.94E-03	5.72E-04	5.75E-04	3.68E-03	8.06E-05	0.00E+00	1.36E-03	5.91E-03
11	D20	80	Passenger Car	1186	0.00E+00	1.44E-05	1.56E-06	5.52E+01	1.00E-04	3.84E-01	3.21E-05	2.44E-03	6.52E-03	1.13E-03	3.12E-03	2.01E-03	2.07E-03	1.86E-04	2.78E-04	7.80E-08	1.06E-03	3.81E-04
11	D20	80	Passenger Truck	1987	0.00E+00	3.10E-05	3.29E-06	1.28E+02	1.99E-04	7.06E-01	6.49E-05	7.24E-03	1.17E-02	2.08E-03	6.22E-03	4.04E-03	4.14E-03	8.92E-04	6.38E-04	1.74E-07	2.08E-03	1.18E-03
11	D20	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.14E-03	5.07E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.19E-05	1.27E-08	7.40E-04	7.74E-04
11	D20	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.61E-04	3.74E-07	1.77E-04	2.32E-05	5.07E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.31E-05
11	D20	80	Combination Short Haul Truck	36	0.00E+00	1.59E-05	1.13E-06	1.31E+01	5.01E-08	1.40E-02	1.16E-05	1.63E-02	9.60E-04	2.37E-04	9.45E-04	3.35E-04	3.32E-04	1.98E-03	4.39E-05	0.00E+00	6.12E-04	3.06E-03
11	D20	80	Combination Long Haul Truck	33	0.00E+00	1.42E-05	9.55E-07	1.21E+01	5.78E-08	1.46E-02	1.08E-05	1.58E-02	9.39E-04	1.89E-04	9.76E-04	2.88E-04	2.90E-04	1.85E-03	4.06E-05	0.00E+00	6.86E-04	2.97E-03
11	D21	80	Passenger Car	864	0.00E+00	1.05E-05	1.14E-06	4.02E+01	7.31E-05	2.79E-01	2.34E-05	1.77E-03	4.75E-03	8.26E-04	2.27E-03	1.47E-03	1.50E-03	1.35E-04	2.03E-04	5.68E-08	7.70E-04	2.77E-04
11	D21	80	Passenger Truck	1446	0.00E+00	2.26E-05	2.39E-06	9.30E+01	1.45E-04	5.14E-01	4.73E-05	5.27E-03	8.52E-03	1.51E-03	4.52E-03	2.94E-03	3.01E-03	6.50E-04	4.65E-04	1.27E-07	1.51E-03	8.61E-04
11	D21	80	Single Unit Short Haul Truck	150	0.00E+00	2.82E-05	1.40E-06	2.77E+01	2.27E-05	5.54E-02	3.00E-05	1.44E-02	1.77E-03	4.01E-04	3.43E-03	8.35E-04	8.49E-04	2.77E-03	1.11E-04	4.42E-08	2.58E-03	2.70E-03
11	D21	80	Single Unit Long Haul Truck	7	0.00E+00	1.23E-06	6.04E-08	1.17E+00	9.69E-07	2.31E-03	1.30E-06	6.17E-04	8.09E-05	1.77E-05	1.50E-04	3.59E-05	3.65E-05	1.17E-04	4.72E-06	1.84E-09	1.13E-04	1.16E-04
11	D21	80	Combination Short Haul Truck	72	0.00E+00	3.15E-05	2.25E-06	2.60E+01	9.94E-08	2.79E-02	2.30E-05	3.23E-02	1.91E-03	4.70E-04	1.88E-03	6.65E-04	6.60E-04	3.93E-03	8.72E-05	0.00E+00	1.22E-03	6.08E-03
11	D21	80	Combination Long Haul Truck	65	0.00E+00	2.82E-05	1.90E-06	2.41E+01	1.15E-07	2.89E-02	2.14E-05	3.13E-02	1.86E-03	3.75E-04	1.94E-03	5.72E-04	5.75E-04	3.68E-03	8.06E-05	0.00E+00	1.36E-03	5.91E-03
11	D22	80	Passenger Car	940	0.00E+00	1.14E-05	1.24E-06	4.37E+01	7.95E-05	3.04E-01	2.54E-05	1.93E-03	5.17E-03	8.98E-04	2.47E-03	1.59E-03	1.64E-03	1.47E-04	2.21E-04	6.18E-08	8.37E-04	3.02E-04
11	D22	80	Passenger Truck	1573	0.00E+00	2.45E-05	2.60E-06	1.01E+02	1.57E-04	5.59E-01	5.14E-05	5.73E-03	9.27E-03	1.64E-03	4.92E-03	3.20E-03	3.28E-03	7.07E-04	5.05E-04	1.38E-07	1.65E-03	9.37E-04
11	D22	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.14E-03	5.07E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.19E-05	1.27E-08	7.40E-04	7.74E-04
11	D22	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.61E-04	3.74E-07	1.77E-04	2.32E-05	5.07E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.31E-05
11	D22	80	Combination Short Haul Truck	36	0.00E+00	1.59E-05	1.13E-06	1.31E+01	5.01E-08	1.40E-02	1.16E-05	1.63E-02	9.60E-04	2.37E-04	9.45E-04	3.35E-04	3.32E-04	1.98E-03	4.39E-05	0.00E+00	6.12E-04	3.06E-03
11	D22	80	Combination Long Haul Truck	33	0.00E+00	1.42E-05	9.55E-07	1.21E+01	5.78E-08	1.46E-02	1.08E-05	1.58E-02	9.39E-04	1.89E-04	9.76E-04	2.88E-04	2.90E-04	1.85E-03	4.06E-05	0.00E+00	6.86E-04	2.97E-03
9	D23	60	Passenger Car	697	0.00E+00	1.04E-05	1.13E-06	3.49E+01	7.26E-05	2.70E-01	2.32E-05	1.42E-03	7.07E-03	1.09E-03	2.26E-03	1.46E-03	1.49E-03	1.46E-04	1.75E-04	4.83E-08	7.64E-04	2.22E-04
9	D23	60	Passenger Truck	1166	0.00E+00	2.30E-05	2.43E-06	7.97E+01	1.44E-04	4.81E-01	4.74E-05	4.63E-03	1.30E-02	2.01E-03	4.51E-03	2.94E-03	3.01E-03	6.18E-04	3.96E-04	1.09E-07	1.50E-03	7.68E-04
9	D23	60	Single Unit Short Haul Truck	55	0.00E+00	1.60E-05	8.02E-07	1.02E+01	1.32E-05	1.98E-02	1.71E-05	7.64E-03	1.30E-03	2.35E-04	1.95E-03	4.81E-04	4.89E-04	1.02E-03	4.12E-05	1.70E-08	1.46E-03	1.43E-03
9	D23	60	Single Unit Long Haul Truck	2	0.00E+00	7.00E-07	3.48E-08	4.36E-01	5.74E-07	8.39E-04	7.47E-07	3.30E-04	5.83E-05	1.04E-05	8.53E-05	2.09E-05	2.13E-05	4.35E-05	1.76E-06	7.23E-10	6.41E-05	6.19E-05
9	D23	60	Combination Short Haul Truck	33	0.00E+00	1.94E-05	1.35E-06	1.26E+01	6.87E-08	1.70E-02	1.44E-05	2.10E-02	1.80E-03	3.57E-04	1.23E-03	4.02E-04	4.03E-04	1.90E-03	4.22E-05	0.00E+00	8.30E-04	3.96E-03
9	D23	60	Combination Long Haul Truck	30	0.00E+00	1.74E-05	1.13E-06	1.18E+01	7.87E-08	1.83E-02	1.34E-05	2.08E-02	1.81E-03	3.08E-04	1.27E-03	3.46E-04	3.50E-04	1.81E-03	3.96E-05	0.00E+00	9.21E-04	3.92E-03
9	D24	60	Passenger Car	898	0.00E+00	1.35E-05	1.46E-06	4.50E+01	9.37E-05	3.48E-01	2.99E-05	1.83E-03	9.12E-03	1.40E-03	2.91E-03	1.88E-03	1.93E-03	1.88E-04	2.26E-04	6.22E-08	9.86E-04	2.86E-04
9	D24	60	Passenger Truck	1505	0.00E+00	2.97E-05	3.13E-06	1.03E+02	1.86E-04	6.20E-01	6.12E-05	5.97E-03	1.67E-02	2.60E-03	5.82E-03	3.79E-03	3.88E-03	7.97E-04	5.11E-04	1.41E-07	1.93E-03	9.90E-04
9	D24	60	Single Unit Short Haul Truck	37	0.00E+00	1.10E-05	5.49E-07	6.99E+00	9.04E-06	1.35E-02	1.17E-05	5.23E-03	8.88E-04	1.61E-04	1.33E-03	3.29E-04	3.34E-04	6.99E-04	2.82E-05	1.16E-08	9.98E-04	9.80E-04
9	D24	60	Single Unit Long Haul Truck	2	0.00E+00	4.79E-07	2.38E-08	2.98E-01	3.93E-07	5.74E-04	5.11E-07	2.26E-04	3.99E-05	7.13E-06	5.84E-05	1.43E-05	1.45E-05	2.98E-05	1.21E-06	4.95E-10	4.38E-05	4.24E-05
9	D24	60	Combination Short Haul Truck	22	0.00E+00	1.29E-05	9.00E-07	8.41E+00	4.58E-08	1.13E-02	9.59E-06	1.40E-02	1.20E-03	2.38E-04	8.22E-04	2.68E-04	2.69E-04	1.27E-03	2.81E-05	0.00E+00	5.54E-04	2.64E-03
9	D24	60	Combination Long Haul Truck	20	0.00E+00	1.16E-05	7.55E-07	7.88E+00	5.25E-08	1.22E-02	8.94E-06	1.39E-02	1.21E-03	2.05E-04	8.47E-04	2.30E-04	2.33E-04	1.20E-03	2.64E-05	0.00E+00	6.14E-04	2.62E-03
9	D25	60	Passenger Car	875	0.00E+00	1.31E-05	1.42E-06	4.39E+01	9.12E-05	3.39E-01	2.91E-05	1.78E-03	8.88E-03	1.36E-03	2.84E-03	1.83E-03	1.88E-03	1.83E-04	2.20E-04	6.06E-08	9.60E-04	2.79E-04
9	D25	60	Passenger Truck	1465	0.00E+00	2.89E-05	3.05E-06	1.00E+02	1.81E-04	6.04E-01	5.96E-05	5.82E-03	1.63E-02	2.53E-03	5.66E-03	3.69E-03	3.78E-03	7.76E-04	4.98E-04	1.38E-07	1.88E-03	9.64E-04
9	D25	60	Single Unit Short Haul Truck	45	0.00E+00	1.32E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.30E-03	1.07E-03	1.94E-04	1.61E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	D25	60	Single Unit Long Haul Truck	2	0.00E+00	5.77E-07	2.87E-08	3.59E-01	4.73E-07	6.92E-04	6.16E-07	2.72E-04	4.81E-05	8.59E-06	7.04E-05	1.72E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.11E-05
9	D25	60	Combination Short Haul Truck	25	0.00E+00	1.45E-05	1.01E-06	9.41E+00	5.12E-08	1.26E-02	1.07E-05	1.57E-02	1.35E-03	2.66E-04	9.20E-04	3.00E-04	3.01E-04	1.42E-03	3.15E-05	0.00E+00	6.19E-04	2.95E-03
9	D25	60	Combination Long Haul Truck	22	0.00E+00	1.30E-05	8.45E-07	8.82E+00	5.87E-08	1.36E-02	1.00E-05	1.55E-02	1.35E-03	2.30E-04	9.48E-04	2.58E-04	2.61E-04	1.35E-03	2.95E-05	0.00E+00	6.87E-04	2.93E-03
9	D26	60	Passenger Car	1120	0.00E+00	1.68E-05	1.81E-06	5.62E+01	1.17E-04	4.34E-01	3.73E-05	2.28E-03	1.14E-02	1.75E-03	3.63E-03	2.34E-03	2.40E-03	2.34E-04	2.82E-04	7.76E-08	1.23E-03	3.57E-04
9	D26

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D30	80	Passenger Truck	517	0.00E+00	8.07E-06	8.56E-07	3.32E+01	5.17E-05	1.84E-01	1.69E-05	1.88E-03	3.05E-03	5.41E-04	1.62E-03	1.05E-03	1.08E-03	2.32E-04	1.66E-04	4.52E-08	5.41E-04	3.08E-04
11	D30	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.44E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	D30	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.54E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.66E-04
11	D30	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.43E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.47E-04
11	D31	80	Passenger Car	396	0.00E+00	4.82E-06	5.21E-07	1.85E+01	3.36E-05	1.28E-01	1.07E-05	8.14E-04	2.18E-03	3.79E-04	1.04E-03	6.73E-04	6.90E-04	6.21E-05	9.30E-05	2.61E-08	3.53E-04	1.27E-04
11	D31	80	Passenger Truck	664	0.00E+00	1.04E-05	1.10E-06	4.27E+01	6.63E-05	2.36E-01	2.17E-05	2.42E-03	3.91E-03	6.94E-04	2.08E-03	1.35E-03	1.38E-03	2.98E-04	2.13E-04	5.81E-08	6.95E-04	3.95E-04
11	D31	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.35E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.57E-05	9.73E-05	3.18E-04	1.28E-05	5.07E-09	2.96E-04	3.10E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.41E-07	6.92E-09	1.34E-01	1.11E-07	2.64E-04	1.49E-07	7.08E-05	9.27E-06	2.03E-06	1.72E-05	4.12E-06	4.19E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.32E-05
11	D31	80	Combination Short Haul Truck	14	0.00E+00	6.21E-06	4.44E-07	5.13E+00	1.96E-08	5.50E-03	4.54E-06	6.36E-03	3.76E-04	9.26E-05	3.70E-04	1.31E-04	1.30E-04	7.74E-04	1.72E-05	0.00E+00	2.40E-04	1.20E-03
11	D31	80	Combination Long Haul Truck	13	0.00E+00	5.56E-06	3.74E-07	4.74E+00	2.26E-08	5.70E-03	4.21E-06	6.18E-03	3.67E-04	7.39E-05	3.82E-04	1.13E-04	1.13E-04	7.25E-04	1.59E-05	0.00E+00	2.68E-04	1.16E-03
11	D32	80	Passenger Car	220	0.00E+00	2.67E-06	2.89E-07	1.02E+01	1.86E-05	7.11E-02	5.95E-06	4.52E-04	1.21E-03	2.10E-04	5.79E-04	3.73E-04	3.83E-04	3.44E-05	5.16E-05	1.45E-08	1.96E-04	7.06E-05
11	D32	80	Passenger Truck	368	0.00E+00	5.74E-06	6.09E-07	2.37E+01	3.68E-05	1.31E-01	1.20E-05	1.34E-03	2.17E-03	3.85E-04	1.15E-03	7.48E-04	7.66E-04	1.65E-04	1.18E-04	3.22E-08	3.85E-04	2.19E-04
11	D32	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	D32	80	Combination Short Haul Truck	7	0.00E+00	2.99E-06	2.14E-07	2.47E+00	9.43E-09	2.65E-03	2.18E-06	3.06E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.26E-05	3.73E-04	8.27E-06	0.00E+00	1.15E-04	5.77E-04
11	D32	80	Combination Long Haul Truck	6	0.00E+00	2.68E-06	1.80E-07	2.28E+00	1.09E-08	2.74E-03	2.03E-06	2.97E-03	1.77E-04	3.56E-05	1.84E-04	5.43E-05	5.46E-05	3.49E-04	7.65E-06	0.00E+00	1.29E-04	5.60E-04
9	D33	60	Passenger Car	221	0.00E+00	3.30E-06	3.57E-07	1.11E+01	2.30E-05	8.54E-02	7.35E-06	4.50E-04	2.24E-03	3.44E-04	7.15E-04	4.61E-04	4.73E-04	4.61E-05	5.55E-05	1.53E-08	2.42E-04	7.03E-05
9	D33	60	Passenger Truck	369	0.00E+00	7.29E-06	7.69E-07	2.52E+01	4.56E-05	1.52E-01	1.50E-05	1.47E-03	4.11E-03	6.38E-04	1.43E-03	9.30E-04	9.53E-04	1.96E-04	1.25E-04	3.47E-08	4.75E-04	2.43E-04
9	D33	60	Single Unit Short Haul Truck	6	0.00E+00	1.69E-06	8.44E-08	1.07E+00	1.39E-06	2.08E-03	1.80E-06	8.04E-04	1.37E-04	2.48E-05	2.05E-04	5.06E-05	5.14E-05	1.08E-04	4.34E-06	1.79E-09	1.54E-04	1.51E-04
9	D33	60	Combination Short Haul Truck	6	0.00E+00	3.69E-06	2.57E-07	2.40E+00	1.31E-08	3.23E-03	2.74E-06	4.00E-03	3.44E-04	6.80E-05	2.35E-04	7.66E-05	7.68E-05	3.62E-04	8.04E-06	0.00E+00	1.58E-04	7.54E-04
9	D33	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.25E+00	1.50E-08	3.48E-03	2.56E-06	3.97E-03	3.46E-04	5.86E-05	2.42E-04	6.58E-05	6.67E-05	3.44E-04	7.54E-06	0.00E+00	1.75E-04	7.47E-04
9	D34	60	Passenger Car	338	0.00E+00	5.07E-06	5.48E-07	1.70E+01	3.53E-05	1.31E-01	1.13E-05	6.90E-04	3.43E-03	5.27E-04	1.10E-03	7.07E-04	7.26E-04	7.07E-05	8.51E-05	2.34E-08	3.71E-04	1.08E-04
9	D34	60	Passenger Truck	567	0.00E+00	1.12E-05	1.18E-06	3.87E+01	6.99E-05	2.34E-01	2.30E-05	2.25E-03	6.30E-03	9.78E-04	2.19E-03	1.43E-03	1.46E-03	3.00E-04	1.92E-04	5.32E-08	7.28E-04	3.73E-04
9	D34	60	Single Unit Short Haul Truck	11	0.00E+00	3.37E-06	1.69E-07	2.15E+00	2.78E-06	4.16E-03	3.60E-06	1.61E-03	2.73E-04	4.96E-05	4.10E-04	1.01E-04	1.03E-04	2.15E-04	8.68E-06	3.58E-09	3.07E-04	3.01E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.33E-09	9.18E-02	1.21E-07	1.77E-04	1.57E-07	6.96E-05	1.23E-05	2.19E-06	1.80E-05	4.40E-06	4.48E-06	9.16E-06	3.71E-07	1.52E-10	1.35E-05	1.30E-05
9	D34	60	Combination Short Haul Truck	10	0.00E+00	5.85E-06	4.07E-07	3.80E+00	2.07E-08	5.11E-03	4.34E-06	6.34E-03	5.44E-04	1.08E-04	3.72E-04	1.21E-04	1.22E-04	5.73E-04	1.27E-05	0.00E+00	2.50E-04	1.19E-03
9	D34	60	Combination Long Haul Truck	9	0.00E+00	5.25E-06	3.41E-07	3.57E+00	2.37E-08	5.51E-03	4.05E-06	6.28E-03	5.47E-04	9.28E-05	3.83E-04	1.04E-04	1.06E-04	5.45E-04	1.19E-05	0.00E+00	2.78E-04	1.18E-03
9	D35	60	Passenger Car	209	0.00E+00	3.14E-06	3.39E-07	1.05E+01	2.18E-05	8.10E-02	6.97E-06	4.27E-04	2.13E-03	3.26E-04	6.79E-04	4.37E-04	4.49E-04	4.37E-05	5.27E-05	1.45E-08	2.30E-04	6.67E-05
9	D35	60	Passenger Truck	351	0.00E+00	6.92E-06	7.30E-07	2.40E+01	4.32E-05	1.45E-01	1.43E-05	1.39E-03	3.90E-03	6.05E-04	1.36E-03	8.83E-04	9.04E-04	1.86E-04	1.19E-04	3.29E-08	4.51E-04	2.31E-04
9	D35	60	Single Unit Short Haul Truck	6	0.00E+00	1.69E-06	8.44E-08	1.07E+00	1.39E-06	2.08E-03	1.80E-06	8.04E-04	1.37E-04	2.48E-05	2.05E-04	5.06E-05	5.14E-05	1.08E-04	4.34E-06	1.79E-09	1.54E-04	1.51E-04
9	D35	60	Combination Short Haul Truck	5	0.00E+00	3.08E-06	2.14E-07	2.00E+00	1.09E-08	2.69E-03	2.28E-06	3.34E-03	2.86E-04	5.67E-05	1.96E-04	6.39E-05	6.40E-05	3.02E-04	6.70E-06	0.00E+00	1.32E-04	6.28E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.31E-03	2.88E-04	4.89E-05	2.02E-04	5.49E-05	5.56E-05	2.87E-04	6.28E-06	0.00E+00	1.46E-04	6.23E-04
9	D36	60	Passenger Car	338	0.00E+00	5.06E-06	5.48E-07	1.69E+01	3.52E-05	1.31E-01	1.13E-05	6.89E-04	3.43E-03	5.27E-04	1.10E-03	7.06E-04	7.25E-04	7.06E-05	8.50E-05	2.34E-08	3.71E-04	1.08E-04
9	D36	60	Passenger Truck	566	0.00E+00	1.12E-05	1.18E-06	3.87E+01	6.98E-05	2.33E-01	2.30E-05	2.25E-03	6.29E-03	9.77E-04	2.19E-03	1.43E-03	1.46E-03	3.00E-04	1.92E-04	5.31E-08	7.28E-04	3.72E-04
9	D36	60	Single Unit Short Haul Truck	7	0.00E+00	1.97E-06	9.85E-08	1.25E+00	1.62E-06	2.43E-03	2.10E-06	9.38E-04	1.59E-04	2.89E-05	2.39E-04	5.90E-05	6.00E-05	1.26E-04	5.07E-06	2.09E-09	1.79E-04	1.76E-04
9	D36	60	Combination Short Haul Truck	7	0.00E+00	4.00E-06	2.79E-07	2.60E+00	1.42E-08	3.50E-03	2.97E-06	4.34E-03	3.72E-04	7.37E-05	2.54E-04	8.30E-05	8.32E-05	3.92E-04	8.71E-06	0.00E+00	1.71E-04	8.17E-04
9	D36	60	Combination Long Haul Truck	6	0.00E+00	3.59E-06	2.34E-07	2.44E+00	1.62E-08	3.77E-03	2.77E-06	4.30E-03	3.74E-04	6.35E-05	2.62E-04	7.13E-05	7.22E-05	3.73E-04	8.17E-06	0.00E+00	1.90E-04	8.10E-04
9	D37	60	Passenger Car	437	0.00E+00	6.55E-06	7.09E-07	2.19E+01	4.56E-05	1.69E-01	1.46E-05	8.92E-04	4.44E-03	6.82E-04	1.42E-03	9.14E-04	9.38E-04	9.14E-05	1.10E-04	3.03E-08	4.80E-04	1.39E-04
9	D37	60	Passenger Truck	733	0.00E+00	1.44E-05	1.53E-06	5.01E+01	9.03E-05	3.02E-01	2.98E-05	2.91E-03	8.15E-03	1.26E-03	2.83E-03	1.84E-03	1.89E-03	3.88E-04	2.49E-04	6.88E-08	9.42E-04	4.82E-04
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.68E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.02E-05
9	D37	60	Combination Short Haul Truck	10	0.00E+00	6.15E-06	4.29E-07	4.00E+00	2.18E-08	5.38E-03	4.57E-06	6.67E-03	5.73E-04	1.13E-04	3.92E-04	1.28E-04	1.28E-04	6.03E-04	1.34E-05	0.00E+00	2.64E-04	1.26E-03
9	D37	60	Combination Long Haul Truck	10	0.00E+00	5.52E-06	3.59E-07	3.75E+00	2.50E-08	5.80E-03	4.26E-06	6.61E-03	5.76E-04	9.77E-05	4.04E-04	1.10E-04	1.11E-04	5.74E-04	1.26E-05	0.00E+00	2.92E-04	1.25E-03
9	D38	60	Passenger Car	241	0.00E+00	3.61E-06	3.90E-07	1.21E+01	2.51E-05	9.32E-02	8.02E-06	4.91E-04	2.44E-03	3.75E-04	7.80E-04	5.03E-04	5.16E-04	5.03E-05	6.06E-05	1.67E-08	2.64E-04	7.67E-05
9	D38	60	Passenger Truck	403	0.00E+00	7.95E-06	8.40E-07	2.76E+01	4.97E-05	1.66E-01	1.64E-05	1.60E-03	4.48E-03	6.96E-04	1.56E-03	1.02E-03	1.04E-03	2.13E-04	1.37E-04	3.79E-08	5.18E-04	2.65E-04
9	D38	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.36E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.00E-04
9	D38	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.00E-03	1.72E-04	3.40E-05	1.17E-04	3.83E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.77E-04
9	D38	60	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.98E-03	1.73E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.77E-05	3.74E-04
9	D39	60	Passenger Car	258	0.00E+00	3.86E-06	4.17E-07	1.29E+01	2.69E-05	9.97E-02	8.58E-06	5.25E-04	2.61E-03	4.01E-04	8.35E-04	5.38E-04	5.52E-04	5.38E-05	6.48E-05	1.78E-08	2.83E-04	8.21E-05
9	D39	60	Passenger Truck	431	0.00E+00	8.51E-06	8.99E-07	2.95E+01	5.32E-05	1.78E-01	1.75E-05	1.71E-03	4.80E-03	7.45E-04	1.67E-03	1.09E-03	1.11E-03	2.28E-04	1.47E-04	4.05E-08	5.55E-04	2.84E-04
9	D39	60	Combination Short Haul Truck	7	0.00E+00	4.00E-06	2.79E-07	2.60E+00	1.42E-08	3.50E-03	2.97E-06	4.34E-03	3.72E-04	7.37E-05	2.54E-04	8.30E-05	8.32E-05	3.92E-04	8.71E-06	0.00E+00	1.71E-04	8.17E-04
9	D39	60	Combination Long Haul Truck	6	0.00E+00	3.59E-06	2.34E-07	2.44E+00	1.62E-08	3.77E-03	2.77E-06	4.30E-03	3.74E-04	6.35E-05	2.62E-04	7.13E-05	7.22E-05	3.73E-04	8.17E-06	0.00E+00	1.90E-04	8.10E-04
9	D40	60	Passenger Car	161	0.00E+00	2.41E-06	2.61E-07	8.08E+00	1.68E-05	6.24E-02	5.37E-06	3.29E-04	1.64E-03	2.51E-04	5.22E-04	3.37E-04	3.46E-04	3.37E-05	4.05E-05	1.12E-08	1.77E-04	5.14E-05
9	D40	60	Passenger Truck	270	0.00E+00	5.32E-06	5.62E-07	1.84E+01	3.33E-05	1.11E-01	1.10E-05	1.07E-03	3.00E-03	4.66E-04	1.04E-03	6.80E-04	6.96E-04	1.43E-04	9.17E-05	2.53E-08	3.47E-04	1.78E-04
9	D40	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.67E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D40	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.61E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
9	D41	60	Passenger Car	50	0.00E+00	7.45E-07	8.06E-08	2.49E+00	5.18E-06	1.92E-02	1.66E-06	1.01E-04	5.05E-04	7.75E-05	1.61E-04	1.04E-04	1.07E-04	1.04E-05	1.25E-05	3.45E-09	5.46E-05	1.58E-05
9	D41	60	Passenger Truck	83	0.00E+00	1.64E-06	1.73E-07	5.69E+00	1.03E-05	3.43E-02	3.38E-06	3.31E-04	9.26E-04	1.44E-04	3.22E-04	2.10E-04	2.15E-04	4.41E-05	2.83E-05	7.82E-09	1.07E-04	5.48E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	D41	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.07E-07	1.00E+00	5.45E-09	1.35E-03	1.14E-06	1.67E-03	1.43E-04	2.84E-05	9.79E-05	3.19E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.14E-04
9	D41	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	8.99E-08	9.38E-01	6.25E-09	1.45E-03	1.06E-06	1.65E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.31E-05	3.11E-04
9	D42	60	Passenger Car	187	0.00E+00	2.81E-06	3.03E-07	9.39E+00	1.95E-05	7.25E-02	6.24E-06	3.82E-04	1.90E-03	2.92E-04	6.07E-04	3.91E-04	4.02E-04	3.91E-05	4.71E-05	1.30E-08	2.06E-04	5.97E-05
9	D42	60	Passenger Truck	314	0.00E+00	6.19E-06	6.53E-07	2.14E+01	3.87E-05	1.29E-01	1.27E-05	1.25E-03	3.49E-03	5.41E-04	1.21E-03	7.90E-04	8.09E-04	1.66E-04	1.07E-04	2.94E-08	4.03E-04	2.06E-04
9	D42	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	D42	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.67E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D42	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.61E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
9	D43	60	Passenger Car	134	0.00E+00	2.00E-06	2.17E-07	6.71E+00	1.40E-05	5.18E-02	4.46E-06	2.73E-04	1.36E-03	2.09E-04	4.34E-04	2.80E-04	2.87E-04	2.80E-05	3.37E-05	9.27E-09	1.47E-04	4.27E-05
9	D43	60	Passenger Truck	224	0.00E+00	4.42E-06	4.67E-07	1.53E+01	2.76E-05	9.24E-02	9.11E-06	8.90E-04	2.49E-03	3.87E-04	8.66E-04	5.65E-04	5.78E-04	1.19E-04	7.61E-05	2.10E-08	2.88E-04	1.48E-04
9	D43	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.86E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	D43	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.22E-07	3.00E+00	1.63E-08	4.04E-03	3.42E-06	5.00E-03	4.30E-04	8.51E-05	2.94E-04	9.58E-05	9.59E-05	4.53E-04	1.01E-05	0.00E+00	1.98E-04	9.43E-04
9	D43	60	Combination Long Haul Truck	7	0.00E+00	4.14E-06	2.70E-07	2.81E+00	1.87E-08	4.35E-03	3.19E-06	4.96E-03	4.32E-04	7.33E-05	3.03E-04	8.23E-05	8.34E-05	4.30E-04	9.43E-06	0.00E+00	2.19E-04	9.34E-04
9	D44	60	Passenger Car	266	0.00E+00	3.98E-06	4.31E-07	1.33E+01	2.77E-05	1.03E-01	8.85E-06	5.42E-04	2.70E-03	4.14E-04	8.62E-04	5.55E-04	5.70E-04	5.55E-05	6.69E-05	1.84E-08	2.92E-04	8.47E-05
9	D44	60	Passenger Truck	445	0.00E+00	8.78E-06	9.27E-07	3.04E+01	5.49E-05	1.83E-01	1.81E-05	1.77E-03	4.95E-03	7.68E-04	1.72E-03	1.12E-03	1.15E-03	2.36E-04	1.51E-04	4.18E-08	5.72E-04	2.93E-04
9	D44	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	D44	60	Combination Short Haul Truck	2	0.00E+00	9.23E-07	6.43E-08	6.00E-01	3.27E-09	8.07E-04	6.85E-07	1.00E-03	8.59E-05	1.70E-05	5.87E-05	1.92E-05	1.92E-05	9.05E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	D44	60	Combination Long Haul Truck	1	0.00E+00	8.29E-07	5.39E-08	5.63E-01	3.75E-09	8.70E-04	6.39E-07	9.92E-04	8.64E-05	1.47E-05	6.05E-05	1.65E-05	1.67E-05	8.60E-05	1.89E-06	0.00E+00	4.39E-05	1.87E-04
9	D45	60	Passenger Car	521	0.00E+00	7.80E-06	8.44E-07	2.61E+01	5.43E-05	2.02E-01	1.73E-05	1.06E-03	5.29E-03	8.12E-04	1.69E-03	1.09E-03	1.12E-03	1.09E-04	1.31E-04	3.61E-08	5.71E-04	1.66E-04
9	D45	60	Passenger Truck	872	0.00E+00	1.72E-05	1.82E-06	5.96E+01	1.08E-04	3.59E-01	3.55E-05	3.46E-03	9.70E-03	1.51E-03	3.37E-03	2.20E-03	2.25E-03	4.62E-04	2.96E-04	8.19E-08	1.12E-03	5.74E-04
9	D45	60	Combination Short Haul Truck	46	0.00E+00	1.35E-05	6.75E-07	8.60E+00	1.11E-05	1.66E-02	1.44E-05	6.43E-03	1.09E-03	1.98E-04	1.64E-03	4.05E-04	4.12E-04	8.61E-04	3.47E-05	1.43E-08	1.23E-03	1.21E-03
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	5.89E-07	2.93E-08	3.67E-01	4.83E-07	7.07E-04	6.29E-07	2.78E-04	4.91E-05	8.77E-06	7.19E-05	1.76E-05	1.79E-05	3.67E-05	1.48E-06	6.09E-10	5.40E-05	5.21E-05
9	D45	60	Combination Short Haul Truck	31	0.00E+00	1.85E-05	1.29E-06	1.20E+01	6.54E-08	1.61E-02	1.37E-05	2.00E-02	1.72E-03	3.40E-04	1.17E-03	3.83E-04	3.84E-04	1.81E-03	4.02E-05	0.00E+00	7.91E-04	3.77E-03
9	D45	60	Combination Long Haul Truck	29	0.00E+00	1.66E-05	1.08E-06	1.13E+01	7.50E-08	1.74E-02	1.28E-05	1.98E-02	1.73E-03	2.93E-04	1.21E-03	3.29E-04	3.33E-04	1.72E-03	3.77E-05	0.00E+00	8.77E-04	3.74E-03
9	D46	60	Passenger Car	481	0.00E+00	7.20E-06	7.79E-07	2.41E+01	5.01E-05	1.86E-01	1.60E-05	9.81E-04	4.88E-03	7.49E-04	1.56E-03	1.00E-03	1.03E-03	1.00E-04	1.21E-04	3.33E-08	5.28E-04	1.53E-04
9	D46	60	Passenger Truck	805	0.00E+00	1.59E-05	1.68E-06	5.50E

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D50	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.89E-07	8.78E+00	1.14E-05	1.70E-02	1.47E-05	6.57E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	D50	60	Single Unit Long Haul Truck	2	0.00E+00	6.02E-07	2.99E-08	3.75E-01	4.93E-07	7.21E-04	6.43E-07	2.84E-04	5.01E-05	8.96E-06	7.34E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.32E-05
9	D50	60	Combination Short Haul Truck	36	0.00E+00	2.12E-05	1.48E-06	1.38E+01	7.52E-08	1.86E-02	1.58E-05	2.30E-02	1.98E-03	3.91E-04	1.35E-03	4.41E-04	4.41E-04	2.08E-03	4.62E-05	0.00E+00	9.09E-04	4.34E-03
9	D50	60	Combination Long Haul Truck	33	0.00E+00	1.91E-05	1.24E-06	1.29E+01	8.62E-08	2.00E-02	1.47E-05	2.28E-02	1.99E-03	3.37E-04	1.39E-03	3.79E-04	3.83E-04	1.98E-03	4.34E-05	0.00E+00	1.01E-03	4.30E-03
9	D51	60	Passenger Car	248	0.00E+00	3.72E-06	4.02E-07	1.24E+01	2.59E-05	9.61E-02	8.27E-06	5.06E-04	2.52E-03	3.87E-04	8.05E-04	5.19E-04	5.32E-04	5.19E-05	6.24E-05	1.72E-08	2.72E-04	7.91E-05
9	D51	60	Passenger Truck	416	0.00E+00	8.20E-06	8.66E-07	2.84E+01	5.13E-05	1.71E-01	1.69E-05	1.65E-03	4.62E-03	7.17E-04	1.61E-03	1.05E-03	1.07E-03	2.20E-04	1.41E-04	3.90E-08	5.34E-04	2.74E-04
9	D51	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.86E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	D51	60	Combination Short Haul Truck	7	0.00E+00	4.00E-06	2.79E-07	2.60E+00	1.42E-08	3.50E-03	2.97E-06	4.34E-03	3.72E-04	7.37E-05	2.54E-04	8.30E-05	8.32E-05	3.92E-04	8.71E-06	0.00E+00	1.71E-04	8.17E-04
9	D51	60	Combination Long Haul Truck	6	0.00E+00	3.59E-06	2.34E-07	2.44E+00	1.62E-08	3.77E-03	2.77E-06	4.30E-03	3.74E-04	6.35E-05	2.62E-04	7.13E-05	7.22E-05	3.73E-04	8.17E-06	0.00E+00	1.90E-04	8.10E-04
9	D52	60	Passenger Car	262	0.00E+00	3.93E-06	4.25E-07	1.31E+01	2.73E-05	1.01E-01	8.73E-06	5.35E-04	2.66E-03	4.08E-04	8.50E-04	5.48E-04	5.62E-04	5.48E-05	6.59E-05	1.82E-08	2.88E-04	8.35E-05
9	D52	60	Passenger Truck	439	0.00E+00	8.66E-06	9.14E-07	3.00E+01	5.41E-05	1.81E-01	1.78E-05	1.74E-03	4.88E-03	7.57E-04	1.70E-03	1.11E-03	1.13E-03	2.32E-04	1.49E-04	4.12E-08	5.64E-04	2.89E-04
9	D52	60	Single Unit Short Haul Truck	25	0.00E+00	7.31E-06	3.66E-07	4.66E+00	6.03E-06	9.02E-03	7.80E-06	3.49E-03	5.92E-04	1.07E-04	8.89E-04	2.19E-04	2.23E-04	4.66E-04	1.88E-05	7.75E-09	6.66E-04	6.53E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	3.19E-07	1.59E-08	1.99E-01	2.62E-07	3.83E-04	3.41E-07	1.51E-04	2.66E-05	4.75E-06	3.89E-05	9.54E-06	9.70E-06	1.99E-05	8.04E-07	3.30E-10	2.92E-05	2.82E-05
9	D52	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	9.01E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	D52	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.93E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.68E-03
9	D53	60	Passenger Car	388	0.00E+00	5.81E-06	6.29E-07	1.95E+01	4.05E-05	1.50E-01	1.29E-05	7.92E-04	3.94E-03	6.05E-04	1.26E-03	8.11E-04	8.32E-04	8.11E-05	9.76E-05	2.69E-08	4.26E-04	1.24E-04
9	D53	60	Passenger Truck	650	0.00E+00	1.28E-05	1.35E-06	4.44E+01	8.01E-05	2.68E-01	2.64E-05	2.58E-03	7.23E-03	1.12E-03	2.51E-03	1.64E-03	1.68E-03	3.44E-04	2.21E-04	6.10E-08	8.36E-04	4.28E-04
9	D53	60	Single Unit Short Haul Truck	17	0.00E+00	5.06E-06	2.53E-07	3.22E+00	4.17E-06	6.24E-03	5.40E-06	2.41E-03	4.10E-04	7.43E-05	6.15E-04	1.52E-04	1.54E-04	3.23E-04	1.30E-05	5.37E-09	4.61E-04	4.52E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	2.21E-07	1.10E-08	1.38E-01	1.81E-07	2.65E-04	2.36E-07	1.04E-04	1.84E-05	3.29E-06	2.69E-05	6.60E-06	6.71E-06	1.37E-05	5.56E-07	2.28E-10	2.02E-05	1.96E-05
9	D53	60	Combination Short Haul Truck	7	0.00E+00	4.31E-06	3.00E-07	2.80E+00	1.53E-08	3.77E-03	3.20E-06	4.67E-03	4.01E-04	7.94E-05	2.74E-04	8.94E-05	8.96E-05	4.22E-04	9.38E-06	0.00E+00	1.85E-04	8.80E-04
9	D53	60	Combination Long Haul Truck	7	0.00E+00	3.87E-06	2.52E-07	2.63E+00	1.75E-08	4.06E-03	2.98E-06	4.63E-03	4.03E-04	6.84E-05	2.82E-04	7.68E-05	7.78E-05	4.01E-04	8.80E-06	0.00E+00	2.05E-04	8.72E-04
9	D54	60	Passenger Car	278	0.00E+00	4.16E-06	4.50E-07	1.39E+01	2.90E-05	1.08E-01	9.25E-06	5.67E-04	2.82E-03	4.33E-04	9.00E-04	5.80E-04	5.96E-04	5.80E-05	6.99E-05	1.92E-08	3.05E-04	8.85E-05
9	D54	60	Passenger Truck	465	0.00E+00	9.18E-06	9.69E-07	3.18E+01	5.74E-05	1.92E-01	1.89E-05	1.85E-03	5.17E-03	8.03E-04	1.80E-03	1.17E-03	1.20E-03	2.46E-04	1.58E-04	4.37E-08	5.98E-04	3.06E-04
9	D54	60	Single Unit Short Haul Truck	25	0.00E+00	7.31E-06	3.66E-07	4.66E+00	6.03E-06	9.02E-03	7.80E-06	3.49E-03	5.92E-04	1.07E-04	8.89E-04	2.19E-04	2.23E-04	4.66E-04	1.88E-05	7.75E-09	6.66E-04	6.53E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	3.19E-07	1.59E-08	1.99E-01	2.62E-07	3.83E-04	3.41E-07	1.51E-04	2.66E-05	4.75E-06	3.89E-05	9.54E-06	9.70E-06	1.99E-05	8.04E-07	3.30E-10	2.92E-05	2.82E-05
9	D54	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	9.01E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	D54	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.93E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.68E-03
11	D55	80	Passenger Car	380	0.00E+00	4.62E-06	5.00E-07	1.77E+01	3.22E-05	1.23E-01	1.03E-05	7.80E-04	2.09E-03	3.63E-04	1.00E-03	6.45E-04	6.61E-04	5.95E-05	8.92E-05	2.50E-08	3.38E-04	1.22E-04
11	D55	80	Passenger Truck	636	0.00E+00	9.92E-06	1.05E-06	4.09E+01	6.36E-05	2.26E-01	2.08E-05	2.32E-03	3.75E-03	6.65E-04	1.99E-03	1.29E-03	1.32E-03	2.86E-04	2.04E-04	5.56E-08	6.66E-04	3.79E-04
11	D55	80	Single Unit Short Haul Truck	31	0.00E+00	5.74E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.94E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.01E-09	5.26E-04	5.51E-04
11	D55	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.97E-07	4.70E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.45E-06	2.38E-05	9.63E-07	3.76E-10	2.31E-05	2.35E-05
11	D55	80	Combination Short Haul Truck	24	0.00E+00	1.03E-05	7.40E-07	8.55E+00	3.26E-08	9.16E-03	7.56E-06	1.06E-02	6.26E-04	1.54E-04	6.16E-04	2.18E-04	2.17E-04	1.29E-03	2.86E-05	0.00E+00	3.99E-04	2.00E-03
11	D55	80	Combination Long Haul Truck	21	0.00E+00	9.27E-06	6.23E-07	7.91E+00	3.77E-08	9.50E-03	7.02E-06	1.03E-02	6.12E-04	1.23E-04	6.36E-04	1.88E-04	1.89E-04	1.21E-03	2.65E-05	0.00E+00	4.47E-04	1.94E-03
11	D56	80	Passenger Car	471	0.00E+00	5.73E-06	6.19E-07	2.19E+01	3.98E-05	1.52E-01	1.27E-05	9.67E-04	2.59E-03	4.50E-04	1.24E-03	7.99E-04	8.20E-04	7.38E-05	1.10E-04	3.10E-08	4.19E-04	1.51E-04
11	D56	80	Passenger Truck	788	0.00E+00	1.23E-05	1.30E-06	5.07E+01	7.88E-05	2.80E-01	2.58E-05	2.87E-03	4.64E-03	8.24E-04	2.47E-03	1.60E-03	1.64E-03	3.54E-04	2.53E-04	6.89E-08	8.25E-04	4.69E-04
11	D56	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.19E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	D56	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.84E-08	1.08E-02	8.90E-06	1.25E-02	7.37E-04	1.82E-04	7.26E-04	2.57E-04	2.55E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.35E-03
11	D56	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.34E-07	9.31E+00	4.44E-08	1.12E-02	8.27E-06	1.21E-02	7.21E-04	1.45E-04	7.49E-04	2.21E-04	2.23E-04	1.42E-03	3.12E-05	0.00E+00	5.27E-04	2.28E-03
11	D57	80	Passenger Car	440	0.00E+00	5.35E-06	5.79E-07	2.05E+01	3.73E-05	1.42E-01	1.19E-05	9.04E-04	2.42E-03	4.21E-04	1.16E-03	7.47E-04	7.66E-04	6.90E-05	1.03E-04	2.89E-08	3.92E-04	1.41E-04
11	D57	80	Passenger Truck	737	0.00E+00	1.15E-05	1.22E-06	4.74E+01	7.36E-05	2.62E-01	2.41E-05	2.69E-03	4.34E-03	7.70E-04	2.31E-03	1.50E-03	1.53E-03	3.31E-04	2.37E-04	6.45E-08	7.71E-04	4.39E-04
11	D57	80	Single Unit Short Haul Truck	32	0.00E+00	5.92E-06	2.94E-07	5.81E+00	4.77E-06	1.16E-02	6.30E-06	3.03E-03	3.72E-04	8.42E-05	7.21E-04	1.75E-04	1.78E-04	5.83E-04	2.34E-05	9.29E-09	5.42E-04	5.68E-04
11	D57	80	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.27E-08	2.46E-01	2.04E-07	4.85E-04	2.74E-07	1.30E-04	1.70E-05	3.72E-06	2.81E-05	7.55E-06	7.68E-06	2.46E-05	9.93E-07	3.87E-10	2.38E-05	2.43E-05
11	D57	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.22E-07	9.50E+00	3.63E-08	1.02E-02	8.40E-06	1.18E-02	6.96E-04	1.71E-04	6.85E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.22E-03
11	D57	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.92E-07	8.79E+00	4.19E-08	1.06E-02	7.80E-06	1.14E-02	6.80E-04	1.37E-04	7.07E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.16E-03
11	D58	80	Passenger Car	536	0.00E+00	6.52E-06	7.05E-07	2.50E+01	4.54E-05	1.73E-01	1.45E-05	1.10E-03	2.95E-03	5.13E-04	1.41E-03	9.10E-04	9.34E-04	8.40E-05	1.26E-04	3.53E-08	4.78E-04	1.72E-04
11	D58	80	Passenger Truck	898	0.00E+00	1.40E-05	1.49E-06	5.77E+01	8.97E-05	3.19E-01	2.93E-05	3.27E-03	5.29E-03	9.39E-04	2.81E-03	1.82E-03	1.87E-03	4.03E-04	2.88E-04	7.85E-08	9.40E-04	5.34E-04
11	D58	80	Single Unit Short Haul Truck	51	0.00E+00	9.51E-06	4.72E-07	9.33E+00	7.65E-06	1.87E-02	1.01E-05	4.87E-03	5.98E-04	1.35E-04	1.16E-03	2.82E-04	2.86E-04	9.37E-04	3.76E-05	1.49E-08	8.71E-04	9.12E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	4.14E-07	2.04E-08	3.95E-01	3.27E-07	7.79E-04	4.40E-07	2.08E-04	2.73E-05	5.97E-06	5.05E-05	1.21E-05	1.23E-05	3.94E-05	1.59E-06	6.22E-10	3.82E-05	3.90E-05
11	D58	80	Combination Short Haul Truck	35	0.00E+00	1.54E-05	1.10E-06	1.27E+01	4.86E-08	1.36E-02	1.13E-05	1.58E-02	9.32E-04	2.30E-04	9.17E-04	3.25E-04	3.23E-04	1.92E-03	4.26E-05	0.00E+00	5.95E-04	2.98E-03
11	D58	80	Combination Long Haul Truck	32	0.00E+00	1.38E-05	9.27E-07	1.18E+01	5.62E-08	1.41E-02	1.05E-05	1.53E-02	9.12E-04	1.83E-04	9.47E-04	2.80E-04	2.81E-04	1.80E-03	3.94E-05	0.00E+00	6.66E-04	2.89E-03
11	D59	80	Passenger Car	440	0.00E+00	5.35E-06	5.79E-07	2.05E+01	3.73E-05	1.42E-01	1.19E-05	9.04E-04	2.42E-03	4.21E-04	1.16E-03	7.47E-04	7.66E-04	6.90E-05	1.03E-04	2.89E-08	3.92E-04	1.41E-04
11	D59	80	Passenger Truck	737	0.00E+00	1.15E-05	1.22E-06	4.74E+01	7.36E-05	2.62E-01	2.41E-05	2.69E-03	4.34E-03	7.70E-04	2.31E-03	1.50E-03	1.53E-03	3.31E-04	2.37E-04	6.45E-08	7.71E-04	4.39E-04
11	D59	80	Single Unit Short Haul Truck	32	0.00E+00	5.92E-06	2.94E-07	5.81E+00	4.77E-06	1.16E-02	6.30E-06	3.03E-03	3.72E-04	8.42E-05	7.21E-04	1.75E-04	1.78E-04	5.83E-04	2.34E-05	9.29E-09	5.42E-04	5.68E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.27E-08	2.46E-01	2.04E-07	4.85E-04	2.74E-07	1.30E-04	1.70E-05	3.72E-06	3.15E-05	7.55E-06	7.68E-06	2.46E-05	9.93E-07	3.87E-10	2.38E-05	2.43E-05
11	D59	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.22E-07	9.50E+00	3.63E-08	1.02E-02	8.40E-06	1.18E-02	6.96E-04	1.71E-04	6.85E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.22E-03
11	D59	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.92E-07	8.79E+00	4.19E-08	1.06E-02	7.80E-06	1.14E-02	6.80E-04	1.37E-04	7.07E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.16E-03
11	D60	80	Passenger Car	536	0.00E+00	6.52E-06	7.05E-07	2.50E+01	4.54E-05	1.73E-01	1.45E-05	1.10E-03	2.95E-03	5.13E-04	1.41E-03	9.10E-04	9.34E-04	8.40E-05	1.26E-04	3.53E-08	4.78E-04	1.72E-04
11	D60	80	Passenger Truck	898	0.00E+00	1.40E-05	1.49E-06	5.77E+01	8.97E-05	3.19E-01	2.93E-05	3.27E-03	5.29E-03	9.39E-04	2.81E-03	1.82E-03	1.87E-03	4.03E-04	2.88E-04	7.85E-08	9.40E-04	5.34E-04
11	D60	80	Single Unit Short Haul Truck	51	0.00E+00	9.51E-06	4.72E-07	9.33E+00	7.65E-06	1.87E-02	1.01E-05	4.87E-03	5.98E-04	1.35E-04	1.16E-03	2.82E-04	2.86E-04	9.37E-04	3.76E-05	1.49E-08	8.71E-04	9.12E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	4.14E-07	2.04E-08	3.95E-01	3.27E-07	7.79E-04	4.40E-07	2.08E-04	2.73E-05	5.97E-06	5.05E-05	1.21E-05	1.23E-05	3.94E-05	1.59E-06	6.22E-10	3.82E-05	3.90E-05
11	D60	80	Combination Short Haul Truck	35	0.00E+00	1.54E-05	1.10E-06	1.27E+01	4.86E-08	1.36E-02	1.13E-05	1.58E-02	9.32E-04	2.30E-04	9.17E-04	3.25E-04	3.23E-04	1.92E-03	4.26E-05	0.00E+00	5.95E-04	2.98E-03
11	D60	80	Combination Long Haul Truck	32	0.00E+00	1.38E-05	9.27E-07	1.18E+01	5.62E-08	1.41E-02	1.05E-05	1.53E-02	9.12E-04	1.83E-04	9.47E-04	2.80E-04	2.81E-04	1.80E-03	3.94E-05	0.00E+00	6.66E-04	2.89E-03
11	D61	80	Passenger Car	138	0.00E+00	1.68E-06	1.82E-07	6.42E+00	1.17E-05	4.46E-02	3.73E-06	2.83E-04	7.59E-04	1.32E-04	3.63E-04	2.34E-04	2.40E-04	2.16E-05	3.24E-05	9.08E-09	1.23E-04	4.43E-05
11	D61	80	Passenger Truck	231	0.00E+00	3.60E-06	3.82E-07	1.48E+01	2.31E-05	8.21E-02	7.55E-06	8.42E-04	1.36E-03	2.42E-04	7.23E-04	4.69E-04	4.81E-04	1.04E-04	7.42E-05	2.02E-08	2.42E-04	1.38E-04
11	D61	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.28E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	D61	80	Single Unit Long Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.41E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.66E-04
11	D61	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.37E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	D62	80	Passenger Car	70	0.00E+00	8.46E-07	9.15E-08	3.24E+00	5.89E-06	2.25E-02	1.88E-06	1.43E-04	3.82E-04	6.65E-05	1.83E-04	1.18E-04	1.21E-04	1.09E-05	1.63E-05	4.57E-09	6.20E-05	2.23E-05
11	D62	80	Passenger Truck	116	0.00E+00	1.82E-06	1.93E-07	7.48E+00	1.16E-05	4.14E-02	3.81E-06	4.24E-04	6.86E-04	1.22E-04	3.64E-04	2.37E-04	2.42E-04	5.23E-05	3.74E-05	1.02E-08	1.22E-04	6.93E-05
11	D62	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.60E-05
11	D62	80	Single Unit Long Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.43E-03	1.18E-06	1.65E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.37E-05	2.01E-04	4.45E-06	0.00E+00	6.21E-05	3.11E-04
11	D62	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.69E-08	1.23E+00	5.87E-09	1.48E-03	1.09E-06	1.60E-03	9.53E-05	1.92E-05	9.90E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.02E-04
10	D63	70	Passenger Car	40	0.00E+00	5.18E-07	5.60E-08	1.90E+00	3.60E-06	1.34E-02	1.15E-06	7.94E-05	3.07E-04	4.93E-05	1.12E-04	7.22E-05	7.41E-05	7.10E-06	9.56E-06	2.60E-09	3.79E-05	1.24E-05
10	D63	70	Passenger Truck	66	0.00E+00	1.13E-06	1.20E-07	4.38E+00	7.17E-06	2.47E-02	2.36E-06	2.48E-04	5.59E-04	9.09E-05	2.25E-04	1.46E-04	1.50E-04	3.22E-05	2.18E-05	5.84E-09	7.50E-05	4.09E-05
10	D63	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.23E-05
10	D63	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.71E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D63	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.63E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	D64	70	Passenger Car	78	0.00E+00	1.02E-06	1.10E-07	3.75E+00	7.10E-06	2.65E-02	2.27E-06	1.57E-04	6.06E-04	9.72E-05	2.21E-04	1.42E-04	1.46E-04	1.40E-05	1.88E-05	5.13E-09	7.48E-05	2.45E-05
10	D64	70	Passenger Truck	131	0.00E+00	2.24E-06	2.37E-07	8.63E+00	1.41E-05	4.88E-02	4.65E-06	4.90E-04	1.10E-03	1.79E-04	4.43E-04	2.88E-04	2.95E-04	6.34E-05	4.30E-05	1.15E-08	1.48E-04	8.05E-05
10	D64	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.94E-06	5.64E-03	3.84E-06	1.77E-03	2.53E-04	5.07E-05	4.37E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.59E-09	3.27E-04	3.32E-04
10	D64	70	Single Un

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D68	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.19E-04
11	D68	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	D68	80	Combination Short Haul Truck	30	0.00E+00	1.33E-05	9.54E-07	1.10E+01	4.21E-08	1.18E-02	9.74E-06	1.37E-02	8.07E-04	1.99E-04	7.94E-04	2.82E-04	2.79E-04	1.66E-03	3.69E-05	0.00E+00	5.15E-04	2.58E-03
11	D68	80	Combination Long Haul Truck	28	0.00E+00	1.19E-05	8.03E-07	1.02E+01	4.86E-08	1.22E-02	9.05E-06	1.33E-02	7.89E-04	1.59E-04	8.20E-04	2.42E-04	2.44E-04	1.56E-03	3.41E-05	0.00E+00	5.77E-04	2.50E-03
11	D69	80	Passenger Car	113	0.00E+00	1.37E-06	1.49E-07	5.26E+00	9.56E-06	3.65E-02	3.05E-06	2.32E-04	6.21E-04	1.08E-04	2.97E-04	1.92E-04	1.97E-04	1.77E-05	2.65E-05	7.43E-09	1.01E-04	3.62E-05
11	D69	80	Passenger Truck	189	0.00E+00	2.95E-06	3.13E-07	1.22E+01	1.89E-05	6.72E-02	6.18E-06	6.89E-04	1.11E-03	1.98E-04	5.92E-04	3.84E-04	3.94E-04	8.49E-05	6.07E-05	1.65E-08	1.98E-04	1.13E-04
11	D69	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.70E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.35E-09	3.12E-04	3.27E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.47E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.42E-06	1.41E-05	5.72E-07	2.23E-10	1.37E-05	1.40E-05
11	D69	80	Combination Short Haul Truck	13	0.00E+00	5.75E-06	4.11E-07	4.75E+00	1.81E-08	5.09E-03	4.20E-06	5.89E-03	3.48E-04	8.57E-05	3.42E-04	1.21E-04	1.20E-04	7.17E-04	1.59E-05	0.00E+00	2.22E-04	1.11E-03
11	D69	80	Combination Long Haul Truck	12	0.00E+00	5.15E-06	3.46E-07	4.39E+00	2.10E-08	5.28E-03	3.90E-06	5.72E-03	3.40E-04	6.85E-05	3.54E-04	1.04E-04	1.05E-04	6.71E-04	1.47E-05	0.00E+00	2.49E-04	1.08E-03
11	D70	80	Passenger Car	99	0.00E+00	1.21E-06	1.31E-07	4.63E+00	8.42E-06	3.22E-02	2.69E-06	2.04E-04	5.47E-04	9.51E-05	2.62E-04	1.69E-04	1.73E-04	1.56E-05	2.33E-05	6.54E-09	8.86E-05	3.19E-05
11	D70	80	Passenger Truck	167	0.00E+00	2.60E-06	2.76E-07	1.07E+01	1.66E-05	5.92E-02	5.44E-06	6.07E-04	9.81E-04	1.74E-04	5.21E-04	3.38E-04	3.47E-04	7.48E-05	5.35E-05	1.46E-08	1.74E-04	9.91E-05
11	D70	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.70E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.35E-09	3.12E-04	3.27E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.47E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.42E-06	1.41E-05	5.72E-07	2.23E-10	1.37E-05	1.40E-05
11	D70	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.13E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.15E-03
11	D70	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.95E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
10	D71	70	Passenger Car	175	0.00E+00	2.29E-06	2.47E-07	8.39E+00	1.59E-05	5.93E-02	5.08E-06	3.51E-04	1.36E-03	2.18E-04	4.95E-04	3.19E-04	3.27E-04	3.13E-05	4.22E-05	1.15E-08	1.67E-04	5.48E-05
10	D71	70	Passenger Truck	293	0.00E+00	5.01E-06	5.30E-07	1.93E+01	3.17E-05	1.09E-01	1.04E-05	1.10E-03	2.47E-03	4.01E-04	9.92E-04	6.46E-04	6.61E-04	1.42E-04	9.64E-05	2.58E-08	3.31E-04	1.80E-04
10	D71	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.89E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.53E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.11E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	D71	70	Combination Short Haul Truck	23	0.00E+00	1.20E-05	8.51E-07	8.68E+00	3.89E-08	1.03E-02	8.78E-06	1.26E-02	9.11E-04	1.99E-04	7.29E-04	2.52E-04	2.51E-04	1.31E-03	2.90E-05	0.00E+00	4.78E-04	2.37E-03
10	D71	70	Combination Long Haul Truck	21	0.00E+00	1.08E-05	7.24E-07	8.10E+00	4.48E-08	1.09E-02	8.22E-06	1.24E-02	9.05E-04	1.65E-04	7.54E-04	2.19E-04	2.21E-04	1.24E-03	2.71E-05	0.00E+00	5.33E-04	2.33E-03
10	D72	70	Passenger Car	210	0.00E+00	2.74E-06	2.97E-07	1.01E+01	1.91E-05	7.13E-02	6.10E-06	4.21E-04	1.63E-03	2.61E-04	5.94E-04	3.83E-04	3.93E-04	3.76E-05	5.07E-05	1.38E-08	2.01E-04	6.58E-05
10	D72	70	Passenger Truck	352	0.00E+00	6.01E-06	6.37E-07	2.32E+01	3.80E-05	1.31E-01	1.25E-05	1.32E-03	2.96E-03	4.82E-04	1.19E-03	7.75E-04	7.94E-04	1.71E-04	1.16E-04	3.10E-08	3.98E-04	2.17E-04
10	D72	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.89E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.53E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.11E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	D72	70	Combination Short Haul Truck	10	0.00E+00	5.17E-06	3.67E-07	3.75E+00	1.68E-08	4.45E-03	3.79E-06	5.43E-03	3.93E-04	8.58E-05	3.15E-04	1.09E-04	1.09E-04	5.65E-04	1.25E-05	0.00E+00	2.06E-04	1.02E-03
10	D72	70	Combination Long Haul Truck	9	0.00E+00	4.67E-06	3.12E-07	3.50E+00	1.93E-08	4.71E-03	3.55E-06	5.35E-03	3.91E-04	7.13E-05	3.26E-04	9.44E-05	9.55E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
10	D73	70	Passenger Car	130	0.00E+00	1.69E-06	1.83E-07	6.22E+00	1.18E-05	4.40E-02	3.77E-06	2.60E-04	1.01E-03	1.61E-04	3.67E-04	2.36E-04	2.43E-04	2.32E-05	3.13E-05	8.52E-09	1.24E-04	4.06E-05
10	D73	70	Passenger Truck	217	0.00E+00	3.71E-06	3.93E-07	1.43E+01	2.35E-05	8.09E-02	7.71E-06	8.13E-04	1.83E-03	2.97E-04	7.36E-04	4.79E-04	4.90E-04	1.05E-04	7.15E-05	1.91E-08	2.46E-04	1.34E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	D73	70	Combination Short Haul Truck	8	0.00E+00	4.35E-06	3.09E-07	3.16E+00	1.41E-08	3.75E-03	3.19E-06	4.57E-03	3.31E-04	7.23E-05	2.65E-04	9.15E-05	9.14E-05	4.76E-04	1.06E-05	0.00E+00	1.74E-04	8.61E-04
10	D73	70	Combination Long Haul Truck	8	0.00E+00	3.93E-06	2.63E-07	2.94E+00	1.63E-08	3.97E-03	2.99E-06	4.50E-03	3.29E-04	6.00E-05	2.74E-04	7.95E-05	8.04E-05	4.50E-04	9.86E-06	0.00E+00	1.94E-04	8.48E-04
10	D74	70	Passenger Car	193	0.00E+00	2.52E-06	2.73E-07	9.25E+00	1.75E-05	6.54E-02	5.60E-06	3.87E-04	1.50E-03	2.40E-04	5.45E-04	3.52E-04	3.61E-04	3.45E-05	4.65E-05	1.27E-08	1.85E-04	6.04E-05
10	D74	70	Passenger Truck	323	0.00E+00	5.52E-06	5.84E-07	2.13E+01	3.49E-05	1.20E-01	1.15E-05	1.21E-03	2.72E-03	4.42E-04	1.09E-03	7.12E-04	7.29E-04	1.57E-04	1.06E-04	2.84E-08	3.65E-04	1.99E-04
10	D74	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
10	D74	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	D74	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
11	D75	80	Passenger Car	106	0.00E+00	1.29E-06	1.40E-07	4.94E+00	8.99E-06	3.43E-02	2.87E-06	2.18E-04	5.84E-04	1.02E-04	2.80E-04	1.80E-04	1.85E-04	1.66E-05	2.49E-05	6.99E-09	9.46E-05	3.41E-05
11	D75	80	Passenger Truck	178	0.00E+00	2.77E-06	2.94E-07	1.14E+01	1.78E-05	6.32E-02	5.81E-06	6.48E-04	1.05E-03	1.86E-04	5.56E-04	3.61E-04	3.70E-04	7.99E-05	5.71E-05	1.56E-08	1.86E-04	1.06E-04
11	D75	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.11E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	D75	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.04E-03	1.68E-06	2.36E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.87E-04	6.36E-06	0.00E+00	8.88E-05	4.44E-04
11	D75	80	Combination Long Haul Truck	5	0.00E+00	2.06E-06	1.38E-07	1.76E+00	8.38E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.41E-04	4.18E-05	4.20E-05	2.68E-04	5.88E-06	0.00E+00	9.94E-05	4.31E-04
11	D76	80	Passenger Car	133	0.00E+00	1.62E-06	1.76E-07	6.21E+00	1.13E-05	4.32E-02	3.61E-06	2.74E-04	7.34E-04	1.28E-04	3.51E-04	2.26E-04	2.32E-04	2.09E-05	3.13E-05	8.78E-09	1.19E-04	4.28E-05
11	D76	80	Passenger Truck	224	0.00E+00	3.49E-06	3.70E-07	1.44E+01	2.23E-05	7.94E-02	7.31E-06	8.15E-04	1.32E-03	2.34E-04	6.99E-04	4.54E-04	4.65E-04	1.00E-04	7.18E-05	1.96E-08	2.34E-04	1.33E-04
11	D76	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D76	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.30E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.22E-04
11	D76	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.20E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.03E-04
11	D77	80	Passenger Car	101	0.00E+00	1.23E-06	1.33E-07	4.70E+00	8.55E-06	3.26E-02	2.73E-06	2.07E-04	5.55E-04	9.65E-05	2.66E-04	1.71E-04	1.76E-04	1.58E-05	2.37E-05	6.64E-09	8.99E-05	3.24E-05
11	D77	80	Passenger Truck	169	0.00E+00	2.64E-06	2.80E-07	1.09E+01	1.69E-05	6.01E-02	5.53E-06	6.16E-04	9.96E-04	1.77E-04	5.29E-04	3.43E-04	3.52E-04	7.59E-05	5.43E-05	1.48E-08	1.77E-04	1.01E-04
11	D77	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.64E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.50E-05	8.65E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.75E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.15E-09	1.19E-01	9.87E-08	2.35E-04	1.33E-07	6.29E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	D77	80	Combination Short Haul Truck	7	0.00E+00	2.99E-06	2.14E-07	2.47E+00	9.43E-09	2.65E-03	2.18E-06	3.06E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.26E-05	3.73E-04	8.27E-06	0.00E+00	1.15E-04	5.77E-04
11	D77	80	Combination Long Haul Truck	6	0.00E+00	2.68E-06	1.80E-07	2.28E+00	1.09E-08	2.74E-03	2.03E-06	2.97E-03	1.77E-04	3.56E-05	1.84E-04	5.43E-05	5.46E-05	3.49E-04	7.65E-06	0.00E+00	1.29E-04	5.60E-04
11	D78	80	Passenger Car	71	0.00E+00	8.64E-07	9.35E-08	3.31E+00	6.01E-06	2.30E-02	1.92E-06	1.46E-04	3.91E-04	6.79E-05	1.87E-04	1.21E-04	1.24E-04	1.11E-05	1.67E-05	4.67E-09	6.33E-05	2.28E-05
11	D78	80	Passenger Truck	119	0.00E+00	1.86E-06	1.97E-07	7.65E+00	1.19E-05	4.23E-02	3.89E-06	4.34E-04	7.01E-04	1.24E-04	3.72E-04	2.42E-04	2.48E-04	5.34E-05	3.82E-05	1.04E-08	1.25E-04	7.08E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D78	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.30E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.22E-04
11	D78	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.20E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.03E-04
10	D79	70	Passenger Car	178	0.00E+00	2.33E-06	2.52E-07	8.55E+00	1.62E-05	6.05E-02	5.18E-06	3.57E-04	1.38E-03	2.22E-04	5.04E-04	3.25E-04	3.33E-04	3.19E-05	4.30E-05	1.17E-08	1.71E-04	5.58E-05
10	D79	70	Passenger Truck	299	0.00E+00	5.10E-06	5.40E-07	1.97E+01	3.23E-05	1.11E-01	1.06E-05	1.12E-03	2.52E-03	4.09E-04	1.01E-03	6.58E-04	6.74E-04	1.45E-04	9.82E-05	2.63E-08	3.37E-04	1.84E-04
10	D79	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.91E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.68E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	D79	70	Combination Short Haul Truck	14	0.00E+00	7.35E-06	5.22E-07	5.32E+00	2.39E-08	6.32E-03	5.39E-06	7.71E-03	5.59E-04	1.22E-04	4.47E-04	1.54E-04	1.54E-04	8.03E-04	1.78E-05	0.00E+00	2.93E-04	1.45E-03
10	D79	70	Combination Long Haul Truck	13	0.00E+00	6.64E-06	4.44E-07	4.97E+00	2.75E-08	6.70E-03	5.04E-06	7.60E-03	5.55E-04	1.01E-04	4.63E-04	1.34E-04	1.36E-04	7.59E-04	1.66E-05	0.00E+00	3.27E-04	1.43E-03
10	D80	70	Passenger Car	400	0.00E+00	5.22E-06	5.65E-07	1.92E+01	3.63E-05	1.36E-01	1.16E-05	8.01E-04	3.10E-03	4.97E-04	1.13E-03	7.28E-04	7.47E-04	7.16E-05	9.64E-05	2.63E-08	3.82E-04	1.25E-04
10	D80	70	Passenger Truck	669	0.00E+00	1.14E-05	1.21E-06	4.42E+01	7.24E-05	2.49E-01	2.38E-05	2.50E-03	5.64E-03	9.16E-04	2.27E-03	1.47E-03	1.51E-03	3.24E-04	2.20E-04	5.89E-08	7.56E-04	4.12E-04
10	D80	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.66E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.12E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.15E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	D80	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.85E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
10	D80	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.73E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.64E-03
10	D81	70	Passenger Car	140	0.00E+00	1.83E-06	1.98E-07	6.71E+00	1.27E-05	4.74E-02	4.06E-06	2.80E-04	1.08E-03	1.74E-04	3.95E-04	2.55E-04	2.61E-04	2.50E-05	3.37E-05	9.19E-09	1.34E-04	4.38E-05
10	D81	70	Passenger Truck	234	0.00E+00	4.00E-06	4.24E-07	1.55E+01	2.53E-05	8.72E-02	8.31E-06	8.76E-04	1.97E-03	3.21E-04	7.93E-04	5.16E-04	5.29E-04	1.14E-04	7.70E-05	2.06E-08	2.65E-04	1.44E-04
10	D81	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	D81	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.71E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D81	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.63E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	D82	70	Passenger Car	200	0.00E+00	2.62E-06	2.83E-07	9.61E+00	1.82E-05	6.80E-02	5.82E-06	4.02E-04	1.55E-03	2.49E-04	5.66E-04	3.65E-04	3.75E-04	3.59E-05	4.83E-05	1.32E-08	1.92E-04	6.27E-05
10	D82	70	Passenger Truck	336	0.00E+00	5.74E-06	6.07E-07	2.21E+01	3.63E-05	1.25E-01	1.19E-05	1.26E-03	2.83E-03	4.59E-04	1.14E-03	7.39E-04	7.57E-04	1.63E-04	1.10E-04	2.95E-08	3.79E-04	2.07E-04
11	D83	80	Passenger Car	932	0.00E+00	1.13E-05	1.23E-06	4.34E+01	7.89E-05	3.02E-01	2.52E-05	1.92E-03	5.13E-03	8.92E-04	2.45E-03	1.58E-03	1.62E-03	1.46E-04	2.19E-04	6.13E-08	8.31E-04	2.99E-04
11	D83	80	Passenger Truck	1562	0.00E+00	2.44E-05	2.58E-06	1.00E+02	1.56E-04	5.55E-01	5.10E-05	5.69E-03	9.20E-03	1.63E-03	4.89E-03	3.17E-03	3.25E-03	7.01E-04	5.02E-04	1.37E-07	1.63E-03	9.30E-04
11	D83	80	Single Unit Short Haul Truck	59	0.00E+00	1.11E-05	5.53E-07	1.09E+01	8.95E-06	2.19E-02	1.18E-05	5.70E-03	6.99E-04	1.58E-04	1.35E-03	3.30E-04	3.35E-04	1.10E-03	4.40E-05	1.75E-08	1.02E-03	1.07E-03
11	D83	80	Single Unit Long Haul Truck	3	0

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D87	80	Single Unit Short Haul Truck	46	0.00E+00	8.61E-06	4.28E-07	8.45E+00	6.93E-06	1.69E-02	9.17E-06	4.41E-03	5.41E-04	1.22E-04	1.05E-03	2.55E-04	2.59E-04	8.48E-04	3.41E-05	1.35E-08	7.89E-04	8.26E-04
11	D87	80	Single Unit Long Haul Truck	2	0.00E+00	3.75E-07	1.85E-08	3.58E-01	2.96E-07	7.05E-04	3.99E-07	1.89E-04	2.47E-05	5.40E-06	4.57E-05	1.10E-05	1.12E-05	3.57E-05	1.44E-06	5.63E-10	3.46E-05	3.53E-05
11	D87	80	Combination Short Haul Truck	51	0.00E+00	2.23E-05	1.59E-06	1.84E+01	7.04E-08	1.98E-02	1.63E-05	2.29E-02	1.35E-03	3.33E-04	1.33E-03	4.71E-04	4.67E-04	2.78E-03	6.17E-05	0.00E+00	8.61E-04	4.31E-03
11	D87	80	Combination Long Haul Truck	46	0.00E+00	2.00E-05	1.34E-06	1.70E+01	8.13E-08	2.05E-02	1.51E-05	2.22E-02	1.32E-03	2.66E-04	1.37E-03	4.05E-04	4.07E-04	2.60E-03	5.71E-05	0.00E+00	9.64E-04	4.18E-03
11	D88	80	Passenger Car	405	0.00E+00	4.92E-06	5.32E-07	1.88E+01	3.42E-05	1.31E-01	1.09E-05	8.31E-04	2.22E-03	3.87E-04	1.06E-03	6.86E-04	7.04E-04	6.34E-05	9.50E-05	2.66E-08	3.60E-04	1.30E-04
11	D88	80	Passenger Truck	677	0.00E+00	1.06E-05	1.12E-06	4.35E+01	6.77E-05	2.41E-01	2.21E-05	2.47E-03	3.99E-03	7.08E-04	2.12E-03	1.38E-03	1.41E-03	3.04E-04	2.18E-04	5.93E-08	7.09E-04	4.03E-04
11	D88	80	Single Unit Short Haul Truck	44	0.00E+00	8.26E-06	4.10E-07	8.10E+00	6.64E-06	1.62E-02	8.79E-06	4.23E-03	5.19E-04	1.17E-04	1.00E-03	2.45E-04	2.49E-04	8.13E-04	3.26E-05	1.30E-08	7.56E-04	7.91E-04
11	D88	80	Single Unit Long Haul Truck	2	0.00E+00	3.59E-07	1.77E-08	3.43E-01	2.84E-07	6.76E-04	3.82E-07	1.81E-04	2.37E-05	5.18E-06	4.38E-05	1.05E-05	1.07E-05	3.42E-05	1.38E-06	5.40E-10	3.31E-05	3.38E-05
11	D88	80	Combination Short Haul Truck	47	0.00E+00	2.07E-05	1.48E-06	1.71E+01	6.53E-08	1.83E-02	1.51E-05	2.12E-02	1.25E-03	3.09E-04	1.23E-03	4.37E-04	4.33E-04	2.58E-03	5.73E-05	0.00E+00	7.99E-04	4.00E-03
11	D88	80	Combination Long Haul Truck	43	0.00E+00	1.85E-05	1.25E-06	1.58E+01	7.54E-08	1.90E-02	1.40E-05	2.06E-02	1.22E-03	2.46E-04	1.27E-03	3.76E-04	3.78E-04	2.42E-03	5.30E-05	0.00E+00	8.95E-04	3.88E-03
9	D89	60	Passenger Car	49	0.00E+00	7.34E-07	7.94E-08	2.46E+00	5.11E-06	1.90E-02	1.63E-06	9.99E-05	4.97E-04	7.63E-05	1.59E-04	1.02E-04	1.05E-04	1.02E-05	1.23E-05	3.39E-09	5.37E-05	1.56E-05
9	D89	60	Passenger Truck	82	0.00E+00	1.62E-06	1.71E-07	5.60E+00	1.01E-05	3.38E-02	3.33E-06	3.26E-04	9.12E-04	1.42E-04	3.17E-04	2.07E-04	2.12E-04	4.34E-05	2.79E-05	7.70E-09	1.05E-04	5.40E-05
9	D89	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.02E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.53E-05
9	D89	60	Single Unit Long Haul Truck	2	0.00E+00	4.84E-07	2.39E-08	4.62E-01	3.82E-07	9.09E-04	5.06E-07	2.42E-04	3.19E-05	6.97E-06	5.89E-05	1.41E-05	1.44E-05	4.60E-05	1.86E-06	7.27E-10	4.45E-05	4.55E-05
9	D89	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.07E-07	1.00E+00	5.45E-09	1.35E-03	1.14E-06	1.67E-03	1.43E-04	2.84E-05	9.79E-05	3.19E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.14E-04
9	D89	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	8.99E-08	9.38E-01	6.25E-09	1.45E-03	1.06E-06	1.65E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.31E-05	3.11E-04
9	D90	60	Passenger Car	27	0.00E+00	3.98E-07	4.30E-08	1.33E+00	2.77E-06	1.03E-02	8.84E-07	5.41E-05	2.69E-04	4.14E-05	8.60E-05	5.55E-05	5.69E-05	5.55E-06	6.68E-06	1.84E-09	2.91E-05	8.46E-06
9	D90	60	Passenger Truck	44	0.00E+00	8.77E-07	9.26E-08	3.04E+00	5.48E-06	1.83E-02	1.81E-06	1.76E-04	4.94E-04	7.67E-05	1.72E-04	1.12E-04	1.15E-04	2.35E-05	1.51E-05	4.17E-09	5.72E-05	2.93E-05
9	D90	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.02E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.53E-05
9	D90	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.67E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D90	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.61E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
10	D91	70	Passenger Car	107	0.00E+00	1.40E-06	1.51E-07	5.13E+00	9.72E-06	3.63E-02	3.11E-06	2.14E-04	8.29E-04	1.33E-04	3.02E-04	1.95E-04	2.00E-04	1.91E-05	2.58E-05	7.03E-09	1.02E-04	3.35E-05
10	D91	70	Passenger Truck	179	0.00E+00	3.06E-06	3.24E-07	1.18E+01	1.94E-05	6.67E-02	6.36E-06	6.70E-04	1.51E-03	2.45E-04	6.07E-04	3.95E-04	4.04E-04	8.68E-05	5.89E-05	1.58E-08	2.02E-04	1.10E-04
10	D91	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.82E-03	1.92E-06	8.87E-04	1.27E-04	2.54E-05	2.18E-04	5.39E-05	5.47E-05	1.41E-04	5.69E-06	2.30E-09	1.64E-04	1.66E-04
10	D91	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.71E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	6.99E-04
10	D91	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.66E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.89E-04
10	D92	70	Passenger Car	248	0.00E+00	3.24E-06	3.50E-07	1.19E+01	2.25E-05	8.41E-02	7.20E-06	4.97E-04	1.92E-03	3.08E-04	7.01E-04	4.52E-04	4.64E-04	4.44E-05	5.98E-05	1.63E-08	2.37E-04	7.76E-05
10	D92	70	Passenger Truck	415	0.00E+00	7.10E-06	7.51E-07	2.74E+01	4.49E-05	1.55E-01	1.47E-05	1.55E-03	3.50E-03	5.68E-04	1.41E-03	9.15E-04	9.37E-04	2.01E-04	1.37E-04	3.65E-08	4.69E-04	2.56E-04
10	D92	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.65E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	D92	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	D92	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
10	D93	70	Passenger Car	98	0.00E+00	1.28E-06	1.39E-07	4.72E+00	8.94E-06	3.34E-02	2.86E-06	1.97E-04	7.62E-04	1.22E-04	2.78E-04	1.79E-04	1.84E-04	1.76E-05	2.37E-05	6.46E-09	9.41E-05	3.08E-05
10	D93	70	Passenger Truck	165	0.00E+00	2.81E-06	2.98E-07	1.09E+01	1.78E-05	6.14E-02	5.85E-06	6.16E-04	1.39E-03	2.25E-04	5.58E-04	3.63E-04	3.72E-04	7.98E-05	5.42E-05	1.45E-08	1.86E-04	1.01E-04
10	D93	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.89E-08	1.23E+00	1.29E-06	2.47E-03	1.68E-06	7.76E-04	1.11E-04	2.22E-05	1.91E-04	4.71E-05	4.79E-05	1.24E-04	4.98E-06	2.01E-09	1.43E-04	1.45E-04
10	D93	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.14E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.92E-04
10	D93	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.83E-04
10	D94	70	Passenger Car	237	0.00E+00	3.09E-06	3.34E-07	1.14E+01	2.15E-05	8.03E-02	6.87E-06	4.74E-04	1.83E-03	2.94E-04	6.69E-04	4.31E-04	4.43E-04	4.24E-05	5.71E-05	1.55E-08	2.26E-04	7.41E-05
10	D94	70	Passenger Truck	396	0.00E+00	6.77E-06	7.17E-07	2.62E+01	4.28E-05	1.48E-01	1.41E-05	1.48E-03	3.34E-03	5.43E-04	1.34E-03	8.73E-04	8.95E-04	1.92E-04	1.30E-04	3.49E-08	4.48E-04	2.44E-04
10	D94	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.55E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	D94	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.57E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.61E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.44E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
9	E01	60	Passenger Car	206	0.00E+00	3.08E-06	3.33E-07	1.03E+01	2.14E-05	7.96E-02	6.85E-06	4.19E-04	2.09E-03	3.20E-04	6.67E-04	4.30E-04	4.41E-04	4.30E-05	5.17E-05	1.42E-08	2.26E-04	6.55E-05
9	E01	60	Passenger Truck	344	0.00E+00	6.79E-06	7.17E-07	2.35E+01	4.25E-05	1.42E-01	1.40E-05	1.37E-03	3.83E-03	5.94E-04	1.33E-03	8.67E-04	8.88E-04	1.82E-04	1.17E-04	3.23E-08	4.43E-04	2.27E-04
9	E01	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.88E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.12E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	E01	60	Combination Short Haul Truck	10	0.00E+00	5.85E-06	4.07E-07	3.80E+00	2.07E-08	5.11E-03	4.34E-06	6.34E-03	5.44E-04	1.08E-04	3.72E-04	1.21E-04	1.22E-04	5.73E-04	1.27E-05	0.00E+00	2.50E-04	1.19E-03
9	E01	60	Combination Long Haul Truck	9	0.00E+00	5.25E-06	3.41E-07	3.57E+00	2.37E-08	5.51E-03	4.05E-06	6.28E-03	5.47E-04	9.28E-05	3.83E-04	1.04E-04	1.06E-04	5.45E-04	1.19E-05	0.00E+00	2.78E-04	1.18E-03
9	E02	60	Passenger Car	226	0.00E+00	3.39E-06	3.66E-07	1.13E+01	2.36E-05	8.76E-02	7.53E-06	4.61E-04	2.30E-03	3.52E-04	7.33E-04	4.73E-04	4.85E-04	4.73E-05	5.69E-05	1.57E-08	2.48E-04	7.21E-05
9	E02	60	Passenger Truck	379	0.00E+00	7.47E-06	7.89E-07	2.59E+01	4.67E-05	1.56E-01	1.54E-05	1.50E-03	4.21E-03	6.54E-04	1.46E-03	9.54E-04	9.77E-04	2.01E-04	1.29E-04	3.56E-08	4.87E-04	2.49E-04
9	E02	60	Single Unit Short Haul Truck	10	0.00E+00	2.81E-06	1.41E-07	1.79E+00	2.32E-06	3.47E-03	3.00E-06	1.34E-03	2.28E-04	4.13E-05	3.42E-04	8.43E-05	8.57E-05	1.79E-04	7.24E-06	2.98E-09	2.56E-04	2.51E-04
9	E02	60	Combination Short Haul Truck	8	0.00E+00	4.92E-06	3.43E-07	3.20E+00	1.74E-08	4.31E-03	3.65E-06	5.34E-03	4.58E-04	9.07E-05	3.13E-04	1.02E-04	1.02E-04	4.83E-04	1.07E-05	0.00E+00	2.11E-04	1.01E-03
9	E02	60	Combination Long Haul Truck	8	0.00E+00	4.42E-06	2.88E-07	3.00E+00	2.00E-08	4.64E-03	3.41E-06	5.29E-03	4.61E-04	7.82E-05	3.23E-04	8.78E-05	8.89E-05	4.59E-04	1.01E-05	0.00E+00	2.34E-04	9.97E-04
11	E03	80	Passenger Car	156	0.00E+00	1.89E-06	2.05E-07	7.24E+00	1.32E-05	5.03E-02	4.21E-06	3.19E-04	8.55E-04	1.49E-04	4.09E-04	2.64E-04	2.71E-04	2.44E-05	3.65E-05	1.02E-08	1.39E-04	4.99E-05
11	E03	80	Passenger Truck	260	0.00E+00	4.06E-06	4.31E-07	1.67E+01	2.60E-05	9.26E-02	8.51E-06	9.49E-04	1.53E-03	2.72E-04	8.15E-04	5.29E-04	5.42E-04	1.17E-04	8.37E-05	2.28E-08	2.73E-04	1.55E-04
11	E03	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.76E-03	4.20E-06	2.02E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.19E-09	3.62E-04	3.78E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.46E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.65E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.12E-06	1.64E-05	6.62E-07	2.58E-10	1.58E-05	1.62E-05
11	E03	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.13E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.15E-03
11	E03	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.95E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E04	80	Passenger Car	250	0.00E+00	3.04E-06	3.29E-07	1.16E+01	2.11E-05	8.08E-02	6.75E-06	5.13E-04	1.37E-03	2.39E-04	6.57E-04	4.24E-04	4.35E-04	3.91E-05	5.86E-05	1.64E-08	2.23E-04	8.02E-05
11	E04	80	Passenger Truck	418	0.00E+00	6.52E-06	6.92E-07	2.69E+01	4.18E-05	1.49E-01	1.37E-05	1.52E-03	2.46E-03	4.37E-04	1.31E-03	8.50E-04	8.71E-04	1.88E-04	1.34E-04	3.66E-08	4.38E-04	2.49E-04
11	E04	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.00E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.04E-05	9.19E-05	3.00E-04	1.21E-05	4.79E-09	2.79E-04	2.92E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.50E-04	1.41E-07	6.69E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.96E-06	1.26E-05	5.11E-07	2.00E-10	1.22E-05	1.25E-05
11	E04	80	Combination Short Haul Truck	9	0.00E+00	4.14E-06	2.96E-07	3.42E+00	1.31E-08	3.67E-03	3.02E-06	4.24E-03	2.50E-04	6.17E-05	2.46E-04	8.74E-05	8.67E-05	5.16E-04	1.15E-05	0.00E+00	1.60E-04	7.99E-04
11	E04	80	Combination Long Haul Truck	9	0.00E+00	3.71E-06	2.49E-07	3.16E+00	1.51E-08	3.80E-03	2.81E-06	4.12E-03	2.45E-04	4.93E-05	2.55E-04	7.52E-05	7.56E-05	4.83E-04	1.06E-05	0.00E+00	1.79E-04	7.76E-04
11	E05	80	Passenger Car	160	0.00E+00	1.95E-06	2.11E-07	7.45E+00	1.35E-05	5.17E-02	4.33E-06	3.29E-04	8.80E-04	1.53E-04	4.21E-04	2.72E-04	2.79E-04	2.51E-05	3.76E-05	1.05E-08	1.43E-04	5.14E-05
11	E05	80	Passenger Truck	268	0.00E+00	4.18E-06	4.43E-07	1.72E+01	2.68E-05	9.52E-02	8.76E-06	9.77E-04	1.58E-03	2.80E-04	8.38E-04	5.44E-04	5.58E-04	1.20E-04	8.61E-05	2.34E-08	2.81E-04	1.60E-04
11	E05	80	Single Unit Short Haul Truck	20	0.00E+00	3.77E-06	1.87E-07	3.70E+00	3.03E-06	7.41E-03	4.01E-06	1.93E-03	2.37E-04	5.36E-05	4.59E-04	1.12E-04	1.14E-04	3.71E-04	1.49E-05	5.91E-09	3.45E-04	3.61E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	1.64E-07	8.08E-09	1.56E-01	1.30E-07	3.09E-04	1.74E-07	8.26E-05	1.08E-05	2.36E-06	2.00E-05	4.80E-06	4.89E-06	1.56E-05	6.32E-07	2.47E-10	1.51E-05	1.55E-05
11	E05	80	Combination Short Haul Truck	13	0.00E+00	5.52E-06	3.95E-07	4.56E+00	1.74E-08	4.89E-03	4.03E-06	5.66E-03	3.34E-04	8.23E-05	3.29E-04	1.17E-04	1.16E-04	6.88E-04	1.53E-05	0.00E+00	2.13E-04	1.07E-03
11	E05	80	Combination Long Haul Truck	11	0.00E+00	4.94E-06	3.32E-07	4.22E+00	2.01E-08	5.06E-03	3.74E-06	5.49E-03	3.27E-04	6.57E-05	3.39E-04	1.00E-04	1.01E-04	6.44E-04	1.41E-05	0.00E+00	2.39E-04	1.03E-03
11	E06	80	Passenger Car	95	0.00E+00	1.16E-06	1.25E-07	4.42E+00	8.04E-06	3.07E-02	2.57E-06	1.95E-04	5.22E-04	9.08E-05	2.50E-04	1.61E-04	1.65E-04	1.49E-05	2.23E-05	6.25E-09	8.46E-05	3.05E-05
11	E06	80	Passenger Truck	159	0.00E+00	2.48E-06	2.63E-07	1.02E+01	1.59E-05	5.65E-02	5.20E-06	5.80E-04	9.37E-04	1.66E-04	4.98E-04	3.23E-04	3.31E-04	7.14E-05	5.11E-05	1.39E-08	1.66E-04	9.47E-05
11	E06	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.64E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.50E-05	8.65E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.75E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.15E-09	1.19E-01	9.87E-08	2.35E-04	1.33E-07	6.29E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	E06	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.77E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	E06	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.66E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.90E-04
9	E07	60	Passenger Car	841	0.00E+00	1.26E-05	1.36E-06	4.22E+01	8.77E-05	3.26E-01	2.80E-05	1.72E-03	8.54E-03	1.31E-03	2.73E-03	1.76E-03	1.80E-03	1.76E-04	2.12E-04	5.83E-08	9.23E-04	2.68E-04
9	E07	60	Passenger Truck	1409	0.00E+00	2.78E-05	2.93E-06	9.63E+01	1.74E-04	5.81E-01	5.73E-05	5.59E-03	1.57E-02	2.43E-03	5.44E-03	3.55E-03	3.63E-03	7.46E-04	4.79E-04	1.32E-07	1.81E-03	9.27E-04
9	E07	60	Single Unit Short Haul Truck	45	0.00E+00	1.32E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.30E-03	1.07E-03	1.94E-04	1.61E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	E07	60	Single Unit Long Haul Truck	2	0.00E+00	5.77E-07	2.87E-08	3.59E-01	4.73E-07	6.92E-04	6.16E-07	2.72E-04	4.81E-05	8.59E-06	7.04E-05	1.72E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.11E-05
9	E07	60	Combination Short Haul Truck	47	0.00E+00	2.77E-05	1.93E-06	1.80E+01	9.81E-08	2.42E-02	2.05E-05	3.00E-02	2.58E-03	5.10E-04	1.76E-03	5.75E-04	5.76E-04	2.72E-03	6.03E-05	0.00E+00	1.19E-03	5.66E-03
9	E07	60	Combination Long Haul Truck	43	0.00E+00	2.49E-05	1.62E-06	1.69E+01	1.12E-07	2.61E-02	1.92E-05	2.98E-02	2.59E-03	4.40E-04	1.82E-03	4.94E-04	5.00E-04	2.58E-03	5.66E-05	0.00E+00	1.32E-03	5.61E-03
9	E08	60	Passenger Car	1055

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E12	60	Passenger Car	1294	0.00E+00	1.94E-05	2.10E-06	6.49E+01	1.35E-04	5.01E-01	4.31E-05	2.64E-03	1.31E-02	2.02E-03	4.19E-03	2.70E-03	2.77E-03	2.70E-04	3.25E-04	8.97E-08	1.42E-03	4.12E-04
9	E12	60	Passenger Truck	2167	0.00E+00	4.27E-05	4.51E-06	1.48E+02	2.67E-04	8.93E-01	8.81E-05	8.60E-03	2.41E-02	3.74E-03	8.38E-03	5.46E-03	5.59E-03	1.15E-03	7.36E-04	2.03E-07	2.79E-03	1.43E-03
9	E12	60	Single Unit Short Haul Truck	85	0.00E+00	2.50E-05	1.25E-06	1.59E+01	2.06E-05	3.09E-02	2.67E-05	1.19E-02	2.03E-03	3.68E-04	3.04E-03	7.51E-04	7.63E-04	1.60E-03	6.44E-05	2.65E-08	2.28E-03	2.24E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	1.09E-06	5.44E-08	6.81E-01	8.96E-07	1.31E-03	1.17E-06	5.16E-04	9.10E-05	1.63E-05	1.33E-04	3.27E-05	3.32E-05	6.80E-05	2.75E-06	1.13E-09	1.00E-04	9.67E-05
9	E12	60	Combination Short Haul Truck	80	0.00E+00	4.68E-05	3.26E-06	3.04E+01	1.66E-07	4.09E-02	3.47E-05	5.07E-02	4.35E-03	8.62E-04	2.98E-03	9.71E-04	9.72E-04	4.59E-03	1.02E-04	0.00E+00	2.00E-03	9.55E-03
9	E12	60	Combination Long Haul Truck	72	0.00E+00	4.20E-05	2.73E-06	2.85E+01	1.90E-07	4.41E-02	3.24E-05	5.03E-02	4.38E-03	7.43E-04	3.07E-03	8.34E-04	8.45E-04	4.36E-03	9.55E-05	0.00E+00	2.22E-03	9.47E-03
11	E13	80	Passenger Car	330	0.00E+00	4.02E-06	4.34E-07	1.54E+01	2.79E-05	1.07E-01	8.93E-06	6.78E-04	1.82E-03	3.16E-04	8.69E-04	5.60E-04	5.75E-04	5.17E-05	7.75E-05	2.17E-08	2.94E-04	1.06E-04
11	E13	80	Passenger Truck	553	0.00E+00	8.62E-06	9.15E-07	3.55E+01	5.52E-05	1.96E-01	1.81E-05	2.01E-03	3.26E-03	5.78E-04	1.73E-03	1.12E-03	1.15E-03	2.48E-04	1.78E-04	4.84E-08	5.79E-04	3.29E-04
11	E13	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.82E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.77E-05	7.04E-09	4.11E-04	4.30E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.83E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.82E-06	1.86E-05	7.52E-07	2.93E-10	1.80E-05	1.84E-05
11	E13	80	Combination Short Haul Truck	15	0.00E+00	6.44E-06	4.60E-07	5.32E+00	2.03E-08	5.70E-03	4.70E-06	6.60E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.03E-04	1.78E-05	0.00E+00	2.49E-04	1.24E-03
11	E13	80	Combination Long Haul Truck	13	0.00E+00	5.77E-06	3.88E-07	4.92E+00	2.35E-08	5.91E-03	4.37E-06	6.41E-03	3.81E-04	7.67E-05	3.96E-04	1.17E-04	1.18E-04	7.52E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	E14	80	Passenger Car	204	0.00E+00	2.48E-06	2.69E-07	9.50E+00	1.73E-05	6.60E-02	5.52E-06	4.19E-04	1.12E-03	1.95E-04	5.37E-04	3.46E-04	3.55E-04	3.20E-05	4.79E-05	1.34E-08	1.82E-04	6.55E-05
11	E14	80	Passenger Truck	342	0.00E+00	5.33E-06	5.66E-07	2.20E+01	3.42E-05	1.21E-01	1.12E-05	1.25E-03	2.01E-03	3.57E-04	1.07E-03	6.95E-04	7.12E-04	1.54E-04	1.10E-04	2.99E-08	3.58E-04	2.04E-04
11	E14	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.23E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.38E-05	6.49E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.06E-04
11	E14	80	Single Unit Long Haul Truck	1	0.00E+00	9.37E-08	4.62E-09	8.94E-02	7.40E-08	1.76E-04	9.96E-08	4.72E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.61E-07	1.41E-10	8.64E-06	8.83E-06
11	E14	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.77E-04
11	E14	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.03E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.48E-04
11	E15	80	Passenger Car	261	0.00E+00	3.17E-06	3.43E-07	1.22E+01	2.21E-05	8.44E-02	7.06E-06	5.36E-04	1.44E-03	2.50E-04	6.87E-04	4.43E-04	4.54E-04	4.09E-05	6.13E-05	1.72E-08	2.33E-04	8.38E-05
11	E15	80	Passenger Truck	437	0.00E+00	6.82E-06	7.23E-07	2.81E+01	4.37E-05	1.55E-01	1.43E-05	1.59E-03	2.57E-03	4.57E-04	1.37E-03	8.88E-04	9.10E-04	1.96E-04	1.40E-04	3.82E-08	4.58E-04	2.60E-04
11	E15	80	Single Unit Short Haul Truck	10	0.00E+00	1.79E-06	8.91E-08	1.76E+00	1.44E-06	3.53E-03	1.91E-06	9.19E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	E15	80	Combination Short Haul Truck	15	0.00E+00	6.67E-06	4.77E-07	5.51E+00	2.10E-08	5.90E-03	4.87E-06	6.84E-03	4.03E-04	9.94E-05	3.97E-04	1.41E-04	1.40E-04	8.31E-04	1.85E-05	0.00E+00	2.57E-04	1.29E-03
11	E15	80	Combination Long Haul Truck	14	0.00E+00	5.97E-06	4.01E-07	5.10E+00	2.43E-08	6.12E-03	4.52E-06	6.64E-03	3.95E-04	7.94E-05	4.10E-04	1.21E-04	1.22E-04	7.79E-04	1.71E-05	0.00E+00	2.88E-04	1.25E-03
11	E16	80	Passenger Car	267	0.00E+00	3.24E-06	3.51E-07	1.24E+01	2.26E-05	8.62E-02	7.21E-06	5.48E-04	1.47E-03	2.55E-04	7.02E-04	4.52E-04	4.64E-04	4.18E-05	6.26E-05	1.75E-08	2.38E-04	8.56E-05
11	E16	80	Passenger Truck	446	0.00E+00	6.96E-06	7.39E-07	2.87E+01	4.46E-05	1.59E-01	1.46E-05	1.63E-03	2.63E-03	4.67E-04	1.40E-03	9.07E-04	9.29E-04	2.01E-04	1.43E-04	3.90E-08	4.67E-04	2.66E-04
11	E16	80	Single Unit Short Haul Truck	10	0.00E+00	1.79E-06	8.91E-08	1.76E+00	1.44E-06	3.53E-03	1.91E-06	9.19E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	E16	80	Combination Short Haul Truck	15	0.00E+00	6.44E-06	4.60E-07	5.32E+00	2.03E-08	5.70E-03	4.70E-06	6.60E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.03E-04	1.78E-05	0.00E+00	2.49E-04	1.24E-03
11	E16	80	Combination Long Haul Truck	13	0.00E+00	5.77E-06	3.88E-07	4.92E+00	2.35E-08	5.91E-03	4.37E-06	6.41E-03	3.81E-04	7.67E-05	3.96E-04	1.17E-04	1.18E-04	7.52E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	E17	80	Passenger Car	198	0.00E+00	2.41E-06	2.60E-07	9.21E+00	1.67E-05	6.40E-02	5.35E-06	4.06E-04	1.09E-03	1.89E-04	5.21E-04	3.36E-04	3.44E-04	3.10E-05	4.64E-05	1.30E-08	1.76E-04	6.35E-05
11	E17	80	Passenger Truck	331	0.00E+00	5.17E-06	5.48E-07	2.13E+01	3.31E-05	1.18E-01	1.08E-05	1.21E-03	1.95E-03	3.46E-04	1.04E-03	6.73E-04	6.89E-04	1.49E-04	1.06E-04	2.90E-08	3.47E-04	1.97E-04
11	E17	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.23E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.38E-05	6.49E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.06E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	9.37E-08	4.62E-09	8.94E-02	7.40E-08	1.76E-04	9.96E-08	4.72E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.61E-07	1.41E-10	8.64E-06	8.83E-06
11	E17	80	Combination Short Haul Truck	9	0.00E+00	3.91E-06	2.80E-07	3.23E+00	1.23E-08	3.46E-03	2.86E-06	4.01E-03	2.36E-04	5.83E-05	2.33E-04	8.25E-05	8.19E-05	4.87E-04	1.08E-05	0.00E+00	1.51E-04	7.55E-04
11	E17	80	Combination Long Haul Truck	8	0.00E+00	3.50E-06	2.35E-07	2.99E+00	1.42E-08	3.59E-03	2.65E-06	3.89E-03	2.31E-04	4.66E-05	2.40E-04	7.10E-05	7.14E-05	4.56E-04	1.00E-05	0.00E+00	1.69E-04	7.33E-04
11	E18	80	Passenger Car	148	0.00E+00	1.80E-06	1.95E-07	6.89E+00	1.25E-05	4.79E-02	4.00E-06	3.04E-04	8.14E-04	1.42E-04	3.90E-04	2.51E-04	2.58E-04	2.32E-05	3.48E-05	9.74E-09	1.32E-04	4.75E-05
11	E18	80	Passenger Truck	248	0.00E+00	3.87E-06	4.10E-07	1.59E+01	2.48E-05	8.81E-02	8.10E-06	9.04E-04	1.46E-03	2.59E-04	7.76E-04	5.04E-04	5.16E-04	1.11E-04	7.96E-05	2.17E-08	2.60E-04	1.48E-04
11	E18	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	E18	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.77E-04
11	E18	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.03E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.48E-04
9	E19	60	Passenger Car	401	0.00E+00	6.00E-06	6.49E-07	2.01E+01	4.18E-05	1.55E-01	1.33E-05	8.17E-04	4.07E-03	6.25E-04	1.30E-03	8.37E-04	8.59E-04	8.37E-05	1.01E-04	2.78E-08	4.40E-04	1.28E-04
9	E19	60	Passenger Truck	671	0.00E+00	1.32E-05	1.40E-06	4.59E+01	8.28E-05	2.77E-01	2.73E-05	2.66E-03	7.46E-03	1.16E-03	2.59E-03	1.69E-03	1.73E-03	3.55E-04	2.28E-04	6.30E-08	8.63E-04	4.42E-04
9	E19	60	Single Unit Short Haul Truck	27	0.00E+00	7.87E-06	3.94E-07	5.02E+00	6.49E-06	9.71E-03	8.40E-06	3.75E-03	6.38E-04	1.16E-04	9.57E-04	2.36E-04	2.40E-04	5.02E-04	2.03E-05	8.35E-09	7.17E-04	7.03E-04
9	E19	60	Single Unit Long Haul Truck	1	0.00E+00	3.44E-07	1.71E-08	2.14E-01	2.82E-07	4.12E-04	3.67E-07	1.62E-04	2.86E-05	5.12E-06	4.19E-05	1.03E-05	1.04E-05	2.14E-05	8.66E-07	3.55E-10	3.15E-05	3.04E-05
9	E19	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	9.01E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	E19	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.93E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.68E-03
9	E20	60	Passenger Car	532	0.00E+00	7.96E-06	8.61E-07	2.67E+01	5.54E-05	2.06E-01	1.77E-05	1.08E-03	5.40E-03	8.28E-04	1.72E-03	1.11E-03	1.14E-03	1.11E-04	1.34E-04	3.68E-08	5.83E-04	1.69E-04
9	E20	60	Passenger Truck	890	0.00E+00	1.76E-05	1.85E-06	6.08E+01	1.10E-04	3.67E-01	3.62E-05	3.53E-03	9.90E-03	1.54E-03	3.44E-03	2.24E-03	2.30E-03	4.71E-04	3.02E-04	8.36E-08	1.14E-03	5.86E-04
9	E20	60	Single Unit Short Haul Truck	28	0.00E+00	8.15E-06	4.08E-07	5.20E+00	6.72E-06	1.01E-02	8.70E-06	3.89E-03	6.61E-04	1.20E-04	9.91E-04	2.45E-04	2.49E-04	5.20E-04	2.10E-05	8.65E-09	7.42E-04	7.28E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	3.56E-07	1.77E-08	2.22E-01	2.92E-07	4.27E-04	3.80E-07	1.68E-04	2.97E-05	5.30E-06	4.34E-05	1.06E-05	1.08E-05	2.21E-05	8.97E-07	3.68E-10	3.26E-05	3.15E-05
9	E20	60	Combination Short Haul Truck	20	0.00E+00	1.17E-05	8.15E-07	7.61E+00	4.14E-08	1.02E-02	8.67E-06	1.27E-02	1.09E-03	2.15E-04	7.44E-04	2.43E-04	2.43E-04	1.15E-03	2.55E-05	0.00E+00	5.01E-04	2.39E-03
9	E20	60	Combination Long Haul Truck	18	0.00E+00	1.05E-05	6.83E-07	7.13E+00	4.75E-08	1.10E-02	8.09E-06	1.26E-02	1.09E-03	1.86E-04	7.67E-04	2.08E-04	2.11E-04	1.09E-03	2.39E-05	0.00E+00	5.56E-04	2.37E-03
11	E21	80	Passenger Car	133	0.00E+00	1.61E-06	1.75E-07	6.18E+00	1.12E-05	4.29E-02	3.59E-06	2.73E-04	7.30E-04	1.27E-04	3.49E-04	2.25E-04	2.31E-04	2.08E-05	3.12E-05	8.73E-09	1.18E-04	4.26E-05
11	E21	80	Passenger Truck	222	0.00E+00	3.47E-06	3.68E-07	1.43E+01	2.22E-05	7.90E-02	7.27E-06	8.10E-04	1.31E-03	2.32E-04	6.95E-04	4.52E-04	4.63E-04	9.98E-05	7.14E-05	1.94E-08	2.33E-04	1.32E-04
11	E21	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.44E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	E21	80	Combination Short Haul Truck	6	0.00E+00	2.76E-06	1.97E-07	2.28E+00	8.70E-09	2.44E-03	2.02E-06	2.83E-03	1.67E-04	4.11E-05	1.64E-04	5.83E-05	5.78E-05	3.44E-04	7.64E-06	0.00E+00	1.07E-04	5.33E-04
11	E21	80	Combination Long Haul Truck	6	0.00E+00	2.47E-06	1.66E-07	2.11E+00	1.01E-08	2.53E-03	1.87E-06	2.75E-03	1.63E-04	3.29E-05	1.70E-04	5.01E-05	5.04E-05	3.22E-04	7.06E-06	0.00E+00	1.19E-04	5.17E-04
11	E22	80	Passenger Car	10	0.00E+00	1.18E-07	1.28E-08	4.53E-01	8.23E-07	3.14E-03	2.63E-07	2.00E-05	5.35E-05	9.29E-06	2.56E-05	1.65E-05	1.69E-05	1.52E-06	2.28E-06	6.39E-10	8.66E-06	3.12E-06
11	E22	80	Passenger Truck	16	0.00E+00	2.54E-07	2.69E-08	1.05E+00	1.63E-06	5.79E-03	5.32E-07	5.93E-05	9.59E-05	1.70E-05	5.09E-05	3.31E-05	3.39E-05	7.31E-06	5.23E-06	1.42E-09	1.70E-05	9.69E-06
11	E22	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.19E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E22	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.71E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.88E-05
11	E22	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.58E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.62E-05
11	E23	80	Passenger Car	133	0.00E+00	1.61E-06	1.75E-07	6.18E+00	1.12E-05	4.29E-02	3.59E-06	2.73E-04	7.30E-04	1.27E-04	3.49E-04	2.25E-04	2.31E-04	2.08E-05	3.12E-05	8.73E-09	1.18E-04	4.26E-05
11	E23	80	Passenger Truck	222	0.00E+00	3.47E-06	3.68E-07	1.43E+01	2.22E-05	7.90E-02	7.27E-06	8.10E-04	1.31E-03	2.32E-04	6.95E-04	4.52E-04	4.63E-04	9.98E-05	7.14E-05	1.94E-08	2.33E-04	1.32E-04
11	E23	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.44E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	E23	80	Combination Short Haul Truck	6	0.00E+00	2.76E-06	1.97E-07	2.28E+00	8.70E-09	2.44E-03	2.02E-06	2.83E-03	1.67E-04	4.11E-05	1.64E-04	5.83E-05	5.78E-05	3.44E-04	7.64E-06	0.00E+00	1.07E-04	5.33E-04
11	E23	80	Combination Long Haul Truck	6	0.00E+00	2.47E-06	1.66E-07	2.11E+00	1.01E-08	2.53E-03	1.87E-06	2.75E-03	1.63E-04	3.29E-05	1.70E-04	5.01E-05	5.04E-05	3.22E-04	7.06E-06	0.00E+00	1.19E-04	5.17E-04
11	E24	80	Passenger Car	10	0.00E+00	1.18E-07	1.28E-08	4.53E-01	8.23E-07	3.14E-03	2.63E-07	2.00E-05	5.35E-05	9.29E-06	2.56E-05	1.65E-05	1.69E-05	1.52E-06	2.28E-06	6.39E-10	8.66E-06	3.12E-06
11	E24	80	Passenger Truck	16	0.00E+00	2.54E-07	2.69E-08	1.05E+00	1.63E-06	5.79E-03	5.32E-07	5.93E-05	9.59E-05	1.70E-05	5.09E-05	3.31E-05	3.39E-05	7.31E-06	5.23E-06	1.42E-09	1.70E-05	9.69E-06
11	E24	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.19E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E24	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.71E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.88E-05
11	E24	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.58E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.62E-05
10	E25	70	Passenger Car	227	0.00E+00	2.97E-06	3.21E-07	1.09E+01	2.07E-05	7.71E-02	6.60E-06	4.55E-04	1.76E-03	2.83E-04	6.43E-04	4.14E-04	4.25E-04	4.07E-05	5.48E-05	1.49E-08	2.17E-04	7.12E-05
10	E25	70	Passenger Truck	381	0.00E+00	6.51E-06	6.89E-07	2.51E+01	4.12E-05	1.42E-01	1.35E-05	1.42E-03	3.21E-03	5.21E-04	1.29E-03	8.39E-04	8.59E-04	1.85E-04	1.25E-04	3.35E-08	4.30E-04	2.34E-04
10	E25	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
10	E25	70	Single Unit Long Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.18E+00	5.30E-09	1.41E-03	1.20E-06	1.71E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.78E-04	3.96E-06	0.00E+00	6.52E-05	3.23E-04
10	E25	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.87E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.18E-04
10	E26	70	Passenger Car	286	0.00E+00	3.74E-06	4.05E-07	1.37E+01	2.60E-05	9.71E-02	8.32E-06	5.74E-04	2.22E-03	3.56E-04	8.10E-04	5.22E-04	5.36E-04	5.13E-05	6.91E-05	1.88E-08	2.74E-04	8.97E-05
10	E26	70	Passenger Truck	480	0.00E+00	8.20E-06	8.68E-07	3.16E+01	5.18E-05	1.79E-01	1.70E-05	1.79E-03	4.04E-03	6.57E-04	1.62E-03	1.06E-03	1.08E-03	2.33E-04	1.58E-04	4.22E-08	5.42E-04	2.95E-04
10	E26	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.23E-05
10	E26	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E26	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.65E-04
10	E27	70	Passenger Car	287	0.00E+00

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E32	70	Passenger Car	114	0.00E+00	1.48E-06	1.61E-07	5.45E+00	1.03E-05	3.86E-02	3.30E-06	2.28E-04	8.81E-04	1.41E-04	3.21E-04	2.07E-04	2.13E-04	2.04E-05	2.74E-05	7.47E-09	1.09E-04	3.56E-05
10	E32	70	Passenger Truck	190	0.00E+00	3.25E-06	3.44E-07	1.26E+01	2.06E-05	7.09E-02	6.76E-06	7.12E-04	1.60E-03	2.61E-04	6.45E-04	4.19E-04	4.30E-04	9.23E-05	6.26E-05	1.67E-08	2.15E-04	1.17E-04
10	E32	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.01E-07	1.59E+00	1.66E-06	3.17E-03	2.16E-06	9.98E-04	1.43E-04	2.85E-05	2.46E-04	6.06E-05	6.16E-05	1.59E-04	6.40E-06	2.58E-09	1.84E-04	1.87E-04
10	E32	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.97E+00	8.84E-09	2.34E-03	2.00E-06	2.86E-03	2.07E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.97E-04	6.60E-06	0.00E+00	1.09E-04	5.38E-04
10	E32	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.81E-03	2.06E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.30E-04
9	E33	60	Passenger Car	624	0.00E+00	9.35E-06	1.01E-06	3.13E+01	6.51E-05	2.42E-01	2.08E-05	1.27E-03	6.34E-03	9.73E-04	2.02E-03	1.30E-03	1.34E-03	1.30E-04	1.57E-04	4.33E-08	6.85E-04	1.99E-04
9	E33	60	Passenger Truck	1046	0.00E+00	2.06E-05	2.18E-06	7.14E+01	1.29E-04	4.31E-01	4.25E-05	4.15E-03	1.16E-02	1.80E-03	4.04E-03	2.63E-03	2.70E-03	5.54E-04	3.55E-04	9.82E-08	1.34E-03	6.88E-04
9	E33	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.88E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.12E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	E33	60	Combination Short Haul Truck	15	0.00E+00	8.92E-06	6.22E-07	5.80E+00	3.16E-08	7.80E-03	6.62E-06	9.67E-03	8.31E-04	1.64E-04	5.68E-04	1.85E-04	1.86E-04	8.75E-04	1.94E-05	0.00E+00	3.82E-04	1.82E-03
9	E33	60	Combination Long Haul Truck	14	0.00E+00	8.01E-06	5.21E-07	5.44E+00	3.62E-08	8.41E-03	6.17E-06	9.59E-03	8.35E-04	1.42E-04	5.85E-04	1.59E-04	1.61E-04	8.32E-04	1.82E-05	0.00E+00	4.24E-04	1.81E-03
9	E34	60	Passenger Car	355	0.00E+00	5.32E-06	5.75E-07	1.78E+01	3.70E-05	1.37E-01	1.18E-05	7.24E-04	3.61E-03	5.53E-04	1.15E-03	7.42E-04	7.62E-04	7.42E-05	8.93E-05	2.46E-08	3.90E-04	1.13E-04
9	E34	60	Passenger Truck	595	0.00E+00	1.17E-05	1.24E-06	4.06E+01	7.33E-05	2.45E-01	2.42E-05	2.36E-03	6.61E-03	1.03E-03	2.30E-03	1.50E-03	1.53E-03	3.15E-04	2.02E-04	5.58E-08	7.65E-04	3.91E-04
9	E34	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	E34	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.86E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	E34	60	Combination Short Haul Truck	18	0.00E+00	1.05E-05	7.29E-07	6.80E+00	3.71E-08	9.15E-03	7.76E-06	1.13E-02	9.74E-04	1.93E-04	6.66E-04	2.17E-04	2.17E-04	1.03E-03	2.28E-05	0.00E+00	4.48E-04	2.14E-03
9	E34	60	Combination Long Haul Truck	16	0.00E+00	9.39E-06	6.11E-07	6.38E+00	4.25E-08	9.86E-03	7.24E-06	1.12E-02	9.79E-04	1.66E-04	6.86E-04	1.87E-04	1.89E-04	9.75E-04	2.14E-05	0.00E+00	4.97E-04	2.12E-03
9	E35	60	Passenger Car	494	0.00E+00	7.39E-06	8.00E-07	2.47E+01	5.14E-05	1.91E-01	1.64E-05	1.01E-03	5.01E-03	7.69E-04	1.60E-03	1.03E-03	1.06E-03	1.03E-04	1.24E-04	3.42E-08	5.41E-04	1.57E-04
9	E35	60	Passenger Truck	826	0.00E+00	1.63E-05	1.72E-06	5.65E+01	1.02E-04	3.41E-01	3.36E-05	3.28E-03	9.19E-03	1.43E-03	3.19E-03	2.08E-03	2.13E-03	4.38E-04	2.81E-04	7.76E-08	1.06E-03	5.44E-04
9	E35	60	Single Unit Short Haul Truck	18	0.00E+00	5.34E-06	2.67E-07	3.40E+00	4.40E-06	6.59E-03	5.70E-06	2.55E-03	4.33E-04	7.85E-05	6.49E-04	1.60E-04	1.63E-04	3.41E-04	1.37E-05	5.66E-09	4.86E-04	4.77E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	1.16E-08	1.45E-01	1.91E-07	2.80E-04	2.49E-07	1.10E-04	1.94E-05	3.47E-06	2.84E-05	6.97E-06	7.09E-06	1.45E-05	5.87E-07	2.41E-10	2.14E-05	2.06E-05
9	E35	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.33E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.51E-03
9	E35	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.32E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.49E-03
9	E36	60	Passenger Car	187	0.00E+00	2.80E-06	3.03E-07	9.37E+00	1.95E-05	7.24E-02	6.22E-06	3.81E-04	1.90E-03	2.91E-04	6.06E-04	3.91E-04	4.01E-04	3.91E-05	4.70E-05	1.30E-08	2.05E-04	5.96E-05
9	E36	60	Passenger Truck	313	0.00E+00	6.17E-06	6.52E-07	2.14E+01	3.86E-05	1.29E-01	1.27E-05	1.24E-03	3.48E-03	5.40E-04	1.21E-03	7.88E-04	8.08E-04	1.66E-04	1.06E-04	2.94E-08	4.02E-04	2.06E-04
9	E36	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	E36	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.86E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	E36	60	Combination Short Haul Truck	17	0.00E+00	9.84E-06	6.86E-07	6.40E+00	3.49E-08	8.61E-03	7.30E-06	1.07E-02	9.17E-04	1.81E-04	6.26E-04	2.04E-04	2.05E-04	9.65E-04	2.14E-05	0.00E+00	4.22E-04	2.01E-03
9	E36	60	Combination Long Haul Truck	15	0.00E+00	8.84E-06	5.75E-07	6.00E+00	4.00E-08	9.28E-03	6.81E-06	1.06E-02	9.22E-04	1.56E-04	6.46E-04	1.76E-04	1.78E-04	9.18E-04	2.01E-05	0.00E+00	4.68E-04	1.99E-03
9	E37	60	Passenger Car	494	0.00E+00	7.39E-06	8.00E-07	2.47E+01	5.14E-05	1.91E-01	1.64E-05	1.01E-03	5.01E-03	7.69E-04	1.60E-03	1.03E-03	1.06E-03	1.03E-04	1.24E-04	3.42E-08	5.41E-04	1.57E-04
9	E37	60	Passenger Truck	826	0.00E+00	1.63E-05	1.72E-06	5.65E+01	1.02E-04	3.41E-01	3.36E-05	3.28E-03	9.19E-03	1.43E-03	3.19E-03	2.08E-03	2.13E-03	4.38E-04	2.81E-04	7.76E-08	1.06E-03	5.44E-04
9	E37	60	Single Unit Short Haul Truck	18	0.00E+00	5.34E-06	2.67E-07	3.40E+00	4.40E-06	6.59E-03	5.70E-06	2.55E-03	4.33E-04	7.85E-05	6.49E-04	1.60E-04	1.63E-04	3.41E-04	1.37E-05	5.66E-09	4.86E-04	4.77E-04
9	E37	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	1.16E-08	1.45E-01	1.91E-07	2.80E-04	2.49E-07	1.10E-04	1.94E-05	3.47E-06	2.84E-05	6.97E-06	7.09E-06	1.45E-05	5.87E-07	2.41E-10	2.14E-05	2.06E-05
9	E37	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.33E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.51E-03
9	E37	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.32E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.49E-03
9	E38	60	Passenger Car	187	0.00E+00	2.80E-06	3.03E-07	9.37E+00	1.95E-05	7.24E-02	6.22E-06	3.81E-04	1.90E-03	2.91E-04	6.06E-04	3.91E-04	4.01E-04	3.91E-05	4.70E-05	1.30E-08	2.05E-04	5.96E-05
9	E38	60	Passenger Truck	313	0.00E+00	6.17E-06	6.52E-07	2.14E+01	3.86E-05	1.29E-01	1.27E-05	1.24E-03	3.48E-03	5.40E-04	1.21E-03	7.88E-04	8.08E-04	1.66E-04	1.06E-04	2.94E-08	4.02E-04	2.06E-04
9	E38	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.86E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	E38	60	Combination Short Haul Truck	17	0.00E+00	9.84E-06	6.86E-07	6.40E+00	3.49E-08	8.61E-03	7.30E-06	1.07E-02	9.17E-04	1.81E-04	6.26E-04	2.04E-04	2.05E-04	9.65E-04	2.14E-05	0.00E+00	4.22E-04	2.01E-03
9	E38	60	Combination Long Haul Truck	15	0.00E+00	8.84E-06	5.75E-07	6.00E+00	4.00E-08	9.28E-03	6.81E-06	1.06E-02	9.22E-04	1.56E-04	6.46E-04	1.76E-04	1.78E-04	9.18E-04	2.01E-05	0.00E+00	4.68E-04	1.99E-03
10	E39	70	Passenger Car	233	0.00E+00	3.04E-06	3.29E-07	1.12E+01	2.12E-05	7.90E-02	6.76E-06	4.67E-04	1.81E-03	2.90E-04	6.58E-04	4.24E-04	4.36E-04	4.17E-05	5.62E-05	1.53E-08	2.23E-04	7.29E-05
10	E39	70	Passenger Truck	390	0.00E+00	6.67E-06	7.06E-07	2.57E+01	4.22E-05	1.45E-01	1.39E-05	1.46E-03	3.29E-03	5.34E-04	1.32E-03	8.59E-04	8.80E-04	1.89E-04	1.28E-04	3.43E-08	4.41E-04	2.40E-04
10	E39	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.91E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.68E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	E39	70	Combination Short Haul Truck	14	0.00E+00	7.07E-06	5.03E-07	5.13E+00	2.30E-08	6.09E-03	5.19E-06	7.42E-03	5.38E-04	1.17E-04	4.31E-04	1.49E-04	1.49E-04	7.73E-04	1.72E-05	0.00E+00	2.82E-04	1.40E-03
10	E39	70	Combination Long Haul Truck	12	0.00E+00	6.39E-06	4.28E-07	4.79E+00	2.65E-08	6.45E-03	4.86E-06	7.32E-03	5.35E-04	9.75E-05	4.45E-04	1.29E-04	1.31E-04	7.31E-04	1.60E-05	0.00E+00	3.15E-04	1.38E-03
10	E40	70	Passenger Car	318	0.00E+00	4.15E-06	4.49E-07	1.52E+01	2.89E-05	1.08E-01	9.23E-06	6.37E-04	2.46E-03	3.95E-04	8.98E-04	5.79E-04	5.94E-04	5.69E-05	7.66E-05	2.09E-08	3.04E-04	9.95E-05
10	E40	70	Passenger Truck	532	0.00E+00	9.10E-06	9.63E-07	3.51E+01	5.75E-05	1.98E-01	1.89E-05	1.99E-03	4.48E-03	7.29E-04	1.80E-03	1.17E-03	1.20E-03	2.58E-04	1.75E-04	4.68E-08	6.01E-04	3.28E-04
10	E40	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E40	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E40	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.65E-04
10	E41	70	Passenger Car	211	0.00E+00	2.76E-06	2.98E-07	1.01E+01	1.92E-05	7.16E-02	6.13E-06	4.23E-04	1.64E-03	2.63E-04	5.97E-04	3.85E-04	3.95E-04	3.78E-05	5.09E-05	1.39E-08	2.02E-04	6.61E-05
10	E41	70	Passenger Truck	354	0.00E+00	6.05E-06	6.40E-07	2.33E+01	3.82E-05	1.32E-01	1.26E-05	1.32E-03	2.98E-03	4.84E-04	1.20E-03	7.79E-04	7.98E-04	1.71E-04	1.16E-04	3.11E-08	4.00E-04	2.18E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
10	E41	70	Single Unit Long Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.18E+00	5.30E-09	1.41E-03	1.20E-06	1.71E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.78E-04	3.96E-06	0.00E+00	6.52E-05	3.23E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.87E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.18E-04
10	E42	70	Passenger Car	282	0.00E+00	3.68E-06	3.98E-07	1.35E+01	2.56E-05	9.55E-02	8.18E-06	5.64E-04	2.18E-03	3.50E-04	7.96E-04	5.13E-04	5.26E-04	5.04E-05	6.79E-05	1.85E-08	2.69E-04	8.81E-05
10	E42	70	Passenger Truck	471	0.00E+00	8.06E-06	8.53E-07	3.11E+01	5.10E-05	1.76E-01	1.67E-05	1.76E-03	3.97E-03	6.45E-04	1.60E-03	1.04E-03	1.06E-03	2.29E-04	1.55E-04	4.15E-08	5.33E-04	2.90E-04
10	E42	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E42	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E42	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.65E-04
10	E43	70	Passenger Car	162	0.00E+00	2.11E-06	2.28E-07	7.75E+00	1.47E-05	5.48E-02	4.69E-06	3.24E-04	1.25E-03	2.01E-04	4.57E-04	2.94E-04	3.02E-04	2.89E-05	3.90E-05	1.06E-08	1.55E-04	5.06E-05
10	E43	70	Passenger Truck	270	0.00E+00	4.62E-06	4.89E-07	1.78E+01	2.92E-05	1.01E-01	9.60E-06	1.01E-03	2.28E-03	3.70E-04	9.16E-04	5.96E-04	6.10E-04	1.31E-04	8.90E-05	2.38E-08	3.06E-04	1.66E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.71E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E43	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.63E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	E44	70	Passenger Car	285	0.00E+00	3.72E-06	4.02E-07	1.36E+01	2.59E-05	9.65E-02	8.26E-06	5.70E-04	2.21E-03	3.54E-04	8.04E-04	5.18E-04	5.32E-04	5.10E-05	6.86E-05	1.87E-08	2.72E-04	8.91E-05
10	E44	70	Passenger Truck	476	0.00E+00	8.14E-06	8.62E-07	3.14E+01	5.15E-05	1.78E-01	1.69E-05	1.78E-03	4.01E-03	6.52E-04	1.61E-03	1.05E-03	1.08E-03	2.31E-04	1.57E-04	4.19E-08	5.38E-04	2.93E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E44	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.71E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E44	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.63E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
11	E45	80	Passenger Car	194	0.00E+00	2.36E-06	2.56E-07	9.05E+00	1.65E-05	6.29E-02	5.26E-06	3.99E-04	1.07E-03	1.86E-04	5.12E-04	3.30E-04	3.39E-04	3.05E-05	4.56E-05	1.28E-08	1.73E-04	6.24E-05
11	E45	80	Passenger Truck	326	0.00E+00	5.08E-06	5.39E-07	2.09E+01	3.25E-05	1.16E-01	1.06E-05	1.19E-03	1.92E-03	3.40E-04	1.02E-03	6.61E-04	6.78E-04	1.46E-04	1.05E-04	2.85E-08	3.41E-04	1.94E-04
11	E45	80	Single Unit Short Haul Truck	33	0.00E+00	6.10E-06	3.03E-07	5.99E+00	4.91E-06	1.20E-02	6.50E-06	3.13E-03	3.83E-04	8.67E-05	7.43E-04	1.81E-04	1.84E-04	6.01E-04	2.41E-05	9.57E-09	5.59E-04	5.85E-04
11	E45	80	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.31E-08	2.53E-01	2.10E-07	5.00E-04	2.82E-07	1.34E-04	1.75E-05	3.83E-06	3.24E-05	7.78E-06	7.91E-06	2.53E-05	1.02E-06	3.99E-10	2.45E-05	2.50E-05
11	E45	80	Combination Short Haul Truck	20	0.00E+00	8.74E-06	6.25E-07	7.22E+00	2.76E-08	7.74E-03	6.38E-06	8.96E-03	5.29E-04	1.30E-04	5.20E-04	1.84E-04	1.83E-04	1.09E-03	2.42E-05	0.00E+00	3.37E-04	1.69E-03
11	E45	80	Combination Long Haul Truck	18	0.00E+00	7.83E-06	5.26E-07	6.68E+00	3.19E-08	8.02E-03	5.93E-06	8.69E-03	5.17E-04	1.04E-04	5.37E-04	1.59E-04	1.60E-04	1.02E-03	2.24E-05	0.00E+00	3.78E-04	1.64E-03
11	E46	80	Passenger Car	96	0.00E+00	1.16E-06	1.26E-07	4.46E+00	8.10E-06	3.10E-02	2.59E-06	1.97E-04	5.26E-04	9.15E-05	2.52E-04	1.62E-04	1.67E-04	1.50E-05	2.25E-05	6.30E-09	8.53E-05	3.07E-05
11	E46	80	Passenger Truck	160	0.00E+00	2.50E-06	2.65E-07	1.03E+01	1.60E-05	5.70E-02	5.24E-06	5.84E-04	9.44E-04	1.68E-04	5.01E-04	3.26E-04	3.34E-04	7.20E-05	5.15E-05	1.40E-08	1.68E-04	9.54E-05
11	E46	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	E46	80	Combination Short Haul Truck	17	0

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E50	80	Combination Long Haul Truck	2	0.00E+00	8.24E-07	5.54E-08	7.03E-01	3.35E-09	8.44E-04	6.24E-07	9.15E-04	5.44E-05	1.10E-05	5.66E-05	1.67E-05	1.68E-05	1.07E-04	2.35E-06	0.00E+00	3.98E-05	1.72E-04
11	E51	80	Passenger Car	186	0.00E+00	2.26E-06	2.45E-07	8.65E+00	1.57E-05	6.01E-02	5.03E-06	3.82E-04	1.02E-03	1.78E-04	4.89E-04	3.15E-04	3.24E-04	2.91E-05	4.36E-05	1.22E-08	1.66E-04	5.97E-05
11	E51	80	Passenger Truck	311	0.00E+00	4.85E-06	5.15E-07	2.00E+01	3.11E-05	1.11E-01	1.02E-05	1.13E-03	1.83E-03	3.25E-04	9.74E-04	6.32E-04	6.48E-04	1.40E-04	9.99E-05	2.72E-08	3.26E-04	1.85E-04
11	E51	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.19E-04
11	E51	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	E51	80	Combination Short Haul Truck	21	0.00E+00	9.43E-06	6.74E-07	7.79E+00	2.97E-08	8.35E-03	6.89E-06	9.66E-03	5.70E-04	1.41E-04	5.61E-04	1.99E-04	1.97E-04	1.18E-03	2.61E-05	0.00E+00	3.64E-04	1.82E-03
11	E51	80	Combination Long Haul Truck	20	0.00E+00	8.44E-06	5.67E-07	7.20E+00	3.44E-08	8.65E-03	6.40E-06	9.38E-03	5.58E-04	1.12E-04	5.80E-04	1.71E-04	1.72E-04	1.10E-03	2.41E-05	0.00E+00	4.08E-04	1.77E-03
11	E52	80	Passenger Car	32	0.00E+00	3.91E-07	4.23E-08	1.50E+00	2.72E-06	1.04E-02	8.70E-07	6.60E-05	1.77E-04	3.07E-05	8.46E-05	5.46E-05	5.60E-05	5.04E-06	7.55E-06	2.12E-09	2.86E-05	1.03E-05
11	E52	80	Passenger Truck	54	0.00E+00	8.40E-07	8.91E-08	3.46E+00	5.38E-06	1.91E-02	1.76E-06	1.96E-04	3.17E-04	5.63E-05	1.68E-04	1.09E-04	1.12E-04	2.42E-05	1.73E-05	4.71E-09	5.64E-05	3.21E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.44E-05
11	E53	80	Passenger Car	322	0.00E+00	3.91E-06	4.23E-07	1.50E+01	2.72E-05	1.04E-01	8.70E-06	6.60E-04	1.77E-03	3.07E-04	8.46E-04	5.46E-04	5.60E-04	5.04E-05	7.55E-05	2.12E-08	2.86E-04	1.03E-04
11	E53	80	Passenger Truck	538	0.00E+00	8.40E-06	8.91E-07	3.46E+01	5.38E-05	1.91E-01	1.76E-05	1.96E-03	3.17E-03	5.63E-04	1.68E-03	1.09E-03	1.12E-03	2.42E-04	1.73E-04	4.71E-08	5.64E-04	3.21E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.76E-03	4.20E-06	2.02E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.19E-09	3.62E-04	3.78E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.46E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.65E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.12E-06	1.64E-05	6.62E-07	2.58E-10	1.58E-05	1.62E-05
11	E53	80	Combination Short Haul Truck	17	0.00E+00	7.36E-06	5.26E-07	6.08E+00	2.32E-08	6.52E-03	5.38E-06	7.54E-03	4.45E-04	1.10E-04	4.38E-04	1.55E-04	1.54E-04	9.17E-04	2.04E-05	0.00E+00	2.84E-04	1.42E-03
11	E53	80	Combination Long Haul Truck	15	0.00E+00	6.59E-06	4.43E-07	5.62E+00	2.68E-08	6.75E-03	4.99E-06	7.32E-03	4.35E-04	8.76E-05	4.53E-04	1.34E-04	1.34E-04	8.59E-04	1.88E-05	0.00E+00	3.18E-04	1.38E-03
11	E54	80	Passenger Car	74	0.00E+00	9.01E-07	9.74E-08	3.45E+00	6.27E-06	2.39E-02	2.00E-06	1.52E-04	4.07E-04	7.08E-05	1.95E-04	1.26E-04	1.29E-04	1.16E-05	1.74E-05	4.87E-09	6.60E-05	2.38E-05
11	E54	80	Passenger Truck	124	0.00E+00	1.93E-06	2.05E-07	7.97E+00	1.24E-05	4.41E-02	4.05E-06	4.52E-04	7.30E-04	1.30E-04	3.88E-04	2.52E-04	2.58E-04	5.57E-05	3.98E-05	1.08E-08	1.30E-04	7.38E-05
11	E54	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.60E-05
11	E54	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.54E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.66E-04
11	E54	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.43E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.47E-04
11	E55	80	Passenger Car	322	0.00E+00	3.91E-06	4.23E-07	1.50E+01	2.72E-05	1.04E-01	8.70E-06	6.60E-04	1.77E-03	3.07E-04	8.46E-04	5.46E-04	5.60E-04	5.04E-05	7.55E-05	2.12E-08	2.86E-04	1.03E-04
11	E55	80	Passenger Truck	538	0.00E+00	8.40E-06	8.91E-07	3.46E+01	5.38E-05	1.91E-01	1.76E-05	1.96E-03	3.17E-03	5.63E-04	1.68E-03	1.09E-03	1.12E-03	2.42E-04	1.73E-04	4.71E-08	5.64E-04	3.21E-04
11	E55	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.76E-03	4.20E-06	2.02E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.19E-09	3.62E-04	3.78E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.46E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.65E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.12E-06	1.64E-05	6.62E-07	2.58E-10	1.58E-05	1.62E-05
11	E55	80	Combination Short Haul Truck	17	0.00E+00	7.36E-06	5.26E-07	6.08E+00	2.32E-08	6.52E-03	5.38E-06	7.54E-03	4.45E-04	1.10E-04	4.38E-04	1.55E-04	1.54E-04	9.17E-04	2.04E-05	0.00E+00	2.84E-04	1.42E-03
11	E55	80	Combination Long Haul Truck	15	0.00E+00	6.59E-06	4.43E-07	5.62E+00	2.68E-08	6.75E-03	4.99E-06	7.32E-03	4.35E-04	8.76E-05	4.53E-04	1.34E-04	1.34E-04	8.59E-04	1.88E-05	0.00E+00	3.18E-04	1.38E-03
11	E56	80	Passenger Car	74	0.00E+00	9.01E-07	9.74E-08	3.45E+00	6.27E-06	2.39E-02	2.00E-06	1.52E-04	4.07E-04	7.08E-05	1.95E-04	1.26E-04	1.29E-04	1.16E-05	1.74E-05	4.87E-09	6.60E-05	2.38E-05
11	E56	80	Passenger Truck	124	0.00E+00	1.93E-06	2.05E-07	7.97E+00	1.24E-05	4.41E-02	4.05E-06	4.52E-04	7.30E-04	1.30E-04	3.88E-04	2.52E-04	2.58E-04	5.57E-05	3.98E-05	1.08E-08	1.30E-04	7.38E-05
11	E56	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.60E-05
11	E56	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.54E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.66E-04
11	E56	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.43E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.47E-04
9	F31	60	Passenger Car	839	0.00E+00	1.26E-05	1.36E-06	4.20E+01	8.74E-05	3.25E-01	2.79E-05	1.71E-03	8.51E-03	1.31E-03	2.72E-03	1.75E-03	1.80E-03	1.75E-04	2.11E-04	5.81E-08	9.20E-04	2.67E-04
9	F31	60	Passenger Truck	1404	0.00E+00	2.77E-05	2.93E-06	9.60E+01	1.73E-04	5.79E-01	5.71E-05	5.58E-03	1.56E-02	2.42E-03	5.43E-03	3.54E-03	3.62E-03	7.44E-04	4.77E-04	1.32E-07	1.81E-03	9.24E-04
9	F31	60	Single Unit Short Haul Truck	26	0.00E+00	7.59E-06	3.80E-07	4.84E+00	6.26E-06	9.36E-03	8.10E-06	3.62E-03	6.15E-04	1.12E-04	9.23E-04	2.28E-04	2.31E-04	4.84E-04	1.95E-05	8.05E-09	6.91E-04	6.78E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.06E-01	2.72E-07	3.97E-04	3.54E-07	1.57E-04	2.76E-05	4.93E-06	4.04E-05	9.91E-06	1.01E-05	2.06E-05	8.35E-07	3.42E-10	3.03E-05	2.93E-05
9	F31	60	Combination Short Haul Truck	31	0.00E+00	1.82E-05	1.26E-06	1.18E+01	6.43E-08	1.59E-02	1.35E-05	1.97E-02	1.69E-03	3.35E-04	1.15E-03	3.77E-04	3.77E-04	1.78E-03	3.95E-05	0.00E+00	7.78E-04	3.71E-03
9	F31	60	Combination Long Haul Truck	28	0.00E+00	1.63E-05	1.06E-06	1.11E+01	7.37E-08	1.71E-02	1.26E-05	1.95E-02	1.70E-03	2.88E-04	1.19E-03	3.24E-04	3.28E-04	1.69E-03	3.71E-05	0.00E+00	8.63E-04	3.68E-03
9	F32	60	Passenger Car	873	0.00E+00	1.31E-05	1.41E-06	4.38E+01	9.10E-05	3.38E-01	2.91E-05	1.78E-03	8.86E-03	1.36E-03	2.83E-03	1.82E-03	1.87E-03	1.82E-04	2.19E-04	6.05E-08	9.57E-04	2.78E-04
9	F32	60	Passenger Truck	1461	0.00E+00	2.88E-05	3.04E-06	9.98E+01	1.80E-04	6.02E-01	5.94E-05	5.80E-03	1.62E-02	2.52E-03	5.65E-03	3.68E-03	3.77E-03	7.74E-04	4.96E-04	1.37E-07	1.88E-03	9.62E-04
9	F32	60	Single Unit Short Haul Truck	7	0.00E+00	1.97E-06	9.85E-08	1.25E+00	1.62E-06	2.43E-03	2.10E-06	9.38E-04	1.59E-04	2.89E-05	2.39E-04	5.90E-05	6.00E-05	1.26E-04	5.07E-06	2.09E-09	1.79E-04	1.76E-04
9	F32	60	Combination Short Haul Truck	15	0.00E+00	8.61E-06	6.00E-07	5.60E+00	3.05E-08	7.53E-03	6.39E-06	9.34E-03	8.02E-04	1.59E-04	5.48E-04	1.79E-04	1.79E-04	8.45E-04	1.88E-05	0.00E+00	3.69E-04	1.76E-03
9	F32	60	Combination Long Haul Truck	13	0.00E+00	7.73E-06	5.03E-07	5.25E+00	3.50E-08	8.12E-03	5.96E-06	9.26E-03	8.06E-04	1.37E-04	5.65E-04	1.54E-04	1.56E-04	8.03E-04	1.76E-05	0.00E+00	4.09E-04	1.74E-03
9	F33	60	Passenger Car	258	0.00E+00	3.86E-06	4.17E-07	1.29E+01	2.69E-05	9.97E-02	8.58E-06	5.25E-04	2.61E-03	4.01E-04	8.35E-04	5.38E-04	5.52E-04	5.38E-05	6.48E-05	1.78E-08	2.83E-04	8.21E-05
9	F33	60	Passenger Truck	431	0.00E+00	8.51E-06	8.99E-07	2.95E+01	5.32E-05	1.78E-01	1.75E-05	1.71E-03	4.80E-03	7.45E-04	1.67E-03	1.09E-03	1.11E-03	2.28E-04	1.47E-04	4.05E-08	5.55E-04	2.84E-04
9	F33	60	Combination Short Haul Truck	7	0.00E+00	4.00E-06	2.79E-07	2.60E+00	1.42E-08	3.50E-03	2.97E-06	4.34E-03	3.72E-04	7.37E-05	2.54E-04	8.30E-05	8.32E-05	3.92E-04	8.71E-06	0.00E+00	1.71E-04	8.17E-04
9	F33	60	Combination Long Haul Truck	6	0.00E+00	3.59E-06	2.34E-07	2.44E+00	1.62E-08	3.77E-03	2.77E-06	4.30E-03	3.74E-04	6.35E-05	2.62E-04	7.13E-05	7.22E-05	3.73E-04	8.17E-06	0.00E+00	1.90E-04	8.10E-04
9	F34	60	Passenger Car	161	0.00E+00	2.41E-06	2.61E-07	8.08E+00	1.68E-05	6.24E-02	5.37E-06	3.29E-04	1.64E-03	2.51E-04	5.22E-04	3.37E-04	3.46E-04	3.37E-05	4.05E-05	1.12E-08	1.77E-04	5.14E-05
9	F34	60	Passenger Truck	270	0.00E+00	5.32E-06	5.62E-07	1.84E+01	3.33E-05	1.11E-01	1.10E-05	1.07E-03	3.00E-03	4.66E-04	1.04E-03	6.80E-04	6.96E-04	1.43E-04	9.17E-05	2.53E-08	3.47E-04	1.78E-04
9	F34	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.67E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	F34	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.61E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
11	F35	80	Passenger Car	171	0.00E+00	2.08E-06	2.25E-07	7.96E+00	1.45E-05	5.53E-02	4.62E-06	3.51E-04	9.40E-04	1.63E-04	4.50E-04	2.90E-04	2.98E-04	2.68E-05	4.01E-05	1.12E-08	1.52E-04	5.48E-05
11	F35	80	Passenger Truck	286	0.00E+00	4.46E-06	4.73E-07	1.84E+01	2.86E-05	1.02E-01	9.35E-06	1.04E-03	1.69E-03	2.99E-04	8.95E-04	5.81E-04	5.96E-04	1.29E-04	9.19E-05	2.50E-08	3.00E-04	1.70E-04
11	F35	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	F35	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	F35	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.77E-04
11	F35	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.03E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.48E-04
11	F36	80	Passenger Car	96	0.00E+00	1.17E-06	1.27E-07	4.49E+00	8.17E-06	3.12E-02	2.61E-06	1.98E-04	5.31E-04	9.22E-05	2.54E-04	1.64E-04	1.68E-04	1.51E-05	2.26E-05	6.35E-09	8.59E-05	3.10E-05
11	F36	80	Passenger Truck	162	0.00E+00	2.52E-06	2.67E-07	1.04E+01	1.61E-05	5.74E-02	5.28E-06	5.89E-04	9.51E-04	1.69E-04	5.05E-04	3.28E-04	3.36E-04	7.26E-05	5.19E-05	1.41E-08	1.69E-04	9.62E-05
11	F36	80	Single Unit Short Haul Truck	14	0.00E+00	2.69E-06	1.34E-07	2.64E+00	2.17E-06	5.29E-03	2.87E-06	1.38E-03	1.69E-04	3.83E-05	3.28E-04	7.97E-05	8.11E-05	2.65E-04	1.06E-05	4.22E-09	2.47E-04	2.58E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	5.77E-09	1.12E-01	9.25E-08	2.20E-04	1.25E-07	5.90E-05	7.73E-06	1.69E-06	1.43E-05	3.43E-06	3.49E-06	1.12E-05	4.51E-07	1.76E-10	1.08E-05	1.10E-05
11	F36	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.30E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.22E-04
11	F36	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.20E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.03E-04
9	F37	60	Passenger Car	692	0.00E+00	1.04E-05	1.12E-06	3.47E+01	7.21E-05	2.68E-01	2.30E-05	1.41E-03	7.02E-03	1.08E-03	2.24E-03	1.45E-03	1.48E-03	1.45E-04	1.74E-04	4.79E-08	7.59E-04	2.20E-04
9	F37	60	Passenger Truck	1158	0.00E+00	2.28E-05	2.41E-06	7.91E+01	1.43E-04	4.77E-01	4.71E-05	4.60E-03	1.29E-02	2.00E-03	4.48E-03	2.92E-03	2.99E-03	6.13E-04	3.93E-04	1.09E-07	1.49E-03	7.62E-04
9	F37	60	Single Unit Short Haul Truck	70	0.00E+00	2.05E-05	1.03E-06	1.31E+01	1.69E-05	2.53E-02	2.19E-05	9.79E-03	1.66E-03	3.02E-04	2.49E-03	6.16E-04	6.26E-04	1.31E-03	5.28E-05	2.18E-08	1.87E-03	1.83E-03
9	F37	60	Single Unit Long Haul Truck	3	0.00E+00	8.96E-07	4.46E-08	5.58E-01	7.35E-07	1.07E-03	9.57E-07	4.23E-04	7.47E-05	1.33E-05	1.09E-04	2.68E-05	2.72E-05	5.57E-05	2.26E-06	9.26E-10	8.21E-05	7.93E-05
9	F37	60	Combination Short Haul Truck	73	0.00E+00	4.31E-05	3.00E-06	2.80E+01	1.53E-07	3.77E-02	3.20E-05	4.67E-02	4.01E-03	7.94E-04	2.74E-03	8.94E-04	8.96E-04	4.22E-03	9.38E-05	0.00E+00	1.85E-03	8.80E-03
9	F37	60	Combination Long Haul Truck	67	0.00E+00	3.87E-05	2.52E-06	2.63E+01	1.75E-07	4.06E-02	2.98E-05	4.63E-02	4.03E-03	6.84E-04	2.82E-03	7.68E-04	7.78E-04	4.01E-03	8.80E-05	0.00E+00	2.05E-03	8.72E-03
9	F38	60	Passenger Car	888	0.00E+00	1.33E-05	1.44E-06	4.45E+01	9.25E-05	3.44E-01	2.96E-05	1.81E-03	9.01E-03	1.38E-03	2.88E-03	1.85E-03	1.90E-03	1.85E-04	2.23E-04	6.15E-08	9.74E-04	2.83E-04
9	F38	60	Passenger Truck	1486	0.00E+00	2.93E-05	3.10E-06	1.02E+02	1.83E-04	6.13E-01	6.04E-05	5.90E-03	1.65E-02	2.57E-03	5.74E-03	3.74E-03	3.83E-03	7.87E-04	5.05E-04	1.40E-07	1.91E-03	9.78E-04
9	F38	60	Single Unit Short Haul Truck	57	0.00E+00	1.69E-05	8.44E-07	1.07E+01	1.39E-05	2.08E-02	1.80E-05	8.04E-03	1.37E-03	2.48E-04	2.05E-03	5.06E-04	5.14E-04	1.08E-03	4.34E-05	1.79E-08	1.54E-03	1.51E-03
9	F38	60	Single Unit Long Haul Truck	3	0.00E+00	7.37E-07	3.67E-08	4.59E-01	6.04E-07	8.83E-04	7.87E-07	3.48E-04	6.14E-05	1.10E-05	8.98E-05	2.20E-05	2.24E-05	4.58E-05	1.85E-06	7.61E-10	6.74E-05	6.52E-05
9	F38	60	Combination Short Haul Truck	59	0.00E+00	3.45E-05	2.40E-06	2.24E+01	1.22E-07	3.01E-02	2.56E-05	3.74E-02	3.21E-03	6.35E-04	2.19E-03	7.15E-04	7.16E-04	3.38E-03	7.50E-05	0.00E+00	1.48E-03	7.04E-03
9	F38	60	Combination Long Haul Truck	53	0.00E+00	3.09E-05	2.01E-06	2.10E+01	1.40E-07	3.25E-02	2.38E-05	3.70E-02	3.23E-03	5.47E-04	2.26E-03	6.14E-04	6.22E-04	3.21E-03	7.04E-05	0.00E+00	1.64E-03	6.98E-03
11	F39	80	Passenger Car	199	0.00E+00	2.41E-06	2.61E-07	9.24E+00	1.68E-05	6.42E-02	5.37E-06	4.08E-04	1.09E-03	1.90E-04	5.23E-04	3.37E-04	3.46E-04	3.11E-05	4.66E-05	1.31E-08	1.77E-04	6.37E-05
11	F39	80	Passenger Truck	332	0.00E+00	5.19E-06	5.50E-07	2.14E+01	3.32E-05	1.18E-01	1.09E-05	1.21E-03	1.96E-03	3.48E-04	1.04E-03	6.75E-04	6.92E-04	1.49E-04	1.07E-04	2.91E-08	3.48E-04	1.98E-04
11	F39	80	Single Unit Short Haul Truck	8	0.00E+00	1.44E-06	7.13E-08	1.41E+00	1.16E-06	2.82E-03	1.53E-06	7.36E-04	9.02E-05	2.04E-05	1.75E-04	4.25E-05	4.32E-05	1.41E-04	5.68E-06	2.25E-09	1.32E-04	1.38E-04
11	F39	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.77E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	F39	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.66E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.90E-04
11	F40	80	Passenger Car	66	0.00E+00	8.00E-07	8.66E-08	3.06E+00	5.57E-06	2.13E-02	1.78E-06	1.35E-04	3.62E-04	6.29E-05	1.73E-04	1.12E-04	1.15E-04	1.03E-05	1.54E-05	4.33E-09	5.86E-05	2.11E-05
11	F40	80	Passenger Truck	110	0.00E+00	1.72E-06	1.82E-07	7.08E+00	1.10E-05	3.92E-02	3.60E-06	4.02E-04	6.49E-04	1.15E-04	3.45E-04	2.24E-04	2.29E-04	4.95E-05	3.54E-05	9.64E-09	1.15E-04	6.56E-05
11	F40	80	Single Unit Short Haul Truck	4	0.00E+00	7.18E-07

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	F86	70	Single Unit Short Haul Truck	11	0.00E+00	2.70E-06	1.35E-07	2.12E+00	2.21E-06	4.23E-03	2.88E-06	1.33E-03	1.90E-04	3.81E-05	3.28E-04	8.08E-05	8.21E-05	2.12E-04	8.53E-06	3.44E-09	2.46E-04	2.49E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	1.18E-07	5.85E-09	8.98E-02	9.53E-08	1.78E-04	1.25E-07	5.72E-05	8.68E-06	1.69E-06	1.43E-05	3.50E-06	3.56E-06	8.97E-06	3.63E-07	1.45E-10	1.08E-05	1.07E-05
53	F86	70	Combination Short Haul Truck	20	0.00E+00	1.03E-05	7.35E-07	7.49E+00	3.36E-08	8.90E-03	7.58E-06	1.09E-02	7.87E-04	1.72E-04	6.30E-04	2.17E-04	2.17E-04	1.13E-03	2.51E-05	0.00E+00	4.13E-04	2.04E-03
53	F86	70	Combination Long Haul Truck	18	0.00E+00	9.34E-06	6.25E-07	6.99E+00	3.87E-08	9.43E-03	7.10E-06	1.07E-02	7.81E-04	1.43E-04	6.51E-04	1.89E-04	1.91E-04	1.07E-03	2.34E-05	0.00E+00	4.60E-04	2.02E-03
52	F87	60	Passenger Car	340	0.00E+00	4.68E-06	5.06E-07	1.70E+01	3.25E-05	1.20E-01	1.04E-05	6.68E-04	3.35E-03	5.15E-04	1.01E-03	6.52E-04	6.70E-04	7.10E-05	8.54E-05	2.28E-08	3.43E-04	1.04E-04
52	F87	60	Passenger Truck	569	0.00E+00	1.03E-05	1.08E-06	3.89E+01	6.41E-05	2.15E-01	2.11E-05	2.15E-03	5.98E-03	9.24E-04	2.01E-03	1.31E-03	1.34E-03	2.95E-04	1.93E-04	4.84E-08	6.68E-04	3.55E-04
52	F87	60	Single Unit Short Haul Truck	50	0.00E+00	1.46E-05	7.31E-07	9.32E+00	1.21E-05	1.80E-02	1.56E-05	6.97E-03	1.18E-03	2.15E-04	1.78E-03	4.39E-04	4.46E-04	9.32E-04	3.76E-05	1.55E-08	1.33E-03	1.31E-03
52	F87	60	Single Unit Long Haul Truck	2	0.00E+00	6.39E-07	3.18E-08	3.98E-01	5.24E-07	7.66E-04	6.82E-07	3.01E-04	5.32E-05	9.50E-06	7.78E-05	1.91E-05	1.94E-05	3.97E-05	1.61E-06	6.59E-10	5.84E-05	5.65E-05
52	F87	60	Combination Short Haul Truck	30	0.00E+00	1.75E-05	1.22E-06	1.14E+01	6.21E-08	1.53E-02	1.30E-05	1.90E-02	1.63E-03	3.23E-04	1.12E-03	3.64E-04	3.65E-04	1.72E-03	3.82E-05	0.00E+00	7.51E-04	3.58E-03
52	F87	60	Combination Long Haul Truck	27	0.00E+00	1.57E-05	1.02E-06	1.07E+01	7.12E-08	1.65E-02	1.21E-05	1.88E-02	1.64E-03	2.78E-04	1.15E-03	3.13E-04	3.17E-04	1.63E-03	3.58E-05	0.00E+00	8.33E-04	3.55E-03
50	F88	40	Passenger Car	211	0.00E+00	3.54E-06	3.83E-07	1.22E+01	2.47E-05	9.09E-02	7.88E-06	3.81E-04	3.65E-03	5.21E-04	7.67E-04	4.94E-04	5.07E-04	6.61E-05	6.08E-05	1.48E-08	2.60E-04	5.96E-05
50	F88	40	Passenger Truck	353	0.00E+00	8.10E-06	8.49E-07	2.73E+01	4.86E-05	1.56E-01	1.62E-05	1.44E-03	6.48E-03	9.21E-04	1.53E-03	1.00E-03	1.02E-03	2.34E-04	1.34E-04	2.88E-08	5.04E-04	2.44E-04
50	F88	40	Single Unit Short Haul Truck	9	0.00E+00	3.82E-06	2.01E-07	1.84E+00	3.33E-06	3.16E-03	4.07E-06	1.87E-03	3.49E-04	5.80E-05	4.52E-04	1.19E-04	1.21E-04	1.86E-04	7.41E-06	3.14E-09	3.31E-04	3.51E-04
50	F88	40	Combination Short Haul Truck	15	0.00E+00	1.30E-05	9.01E-07	6.58E+00	4.66E-08	1.13E-02	9.65E-06	1.45E-02	1.51E-03	2.72E-04	8.41E-04	2.69E-04	2.71E-04	9.92E-04	2.20E-05	0.00E+00	5.69E-04	2.72E-03
50	F88	40	Combination Long Haul Truck	13	0.00E+00	1.18E-05	7.71E-07	6.26E+00	5.30E-08	1.26E-02	9.10E-06	1.45E-02	1.52E-03	2.42E-04	8.66E-04	2.35E-04	2.40E-04	9.57E-04	2.10E-05	0.00E+00	6.26E-04	2.73E-03
50	F89	40	Passenger Car	206	0.00E+00	3.47E-06	3.75E-07	1.20E+01	2.41E-05	8.89E-02	7.71E-06	3.73E-04	3.57E-03	5.10E-04	7.50E-04	4.84E-04	4.96E-04	6.47E-05	5.95E-05	1.45E-08	2.54E-04	5.83E-05
50	F89	40	Passenger Truck	346	0.00E+00	7.93E-06	8.31E-07	2.67E+01	4.76E-05	1.53E-01	1.59E-05	1.41E-03	6.34E-03	9.01E-04	1.50E-03	9.79E-04	1.00E-03	2.29E-04	1.32E-04	2.82E-08	4.94E-04	2.39E-04
50	F89	40	Single Unit Short Haul Truck	53	0.00E+00	2.34E-05	1.23E-06	1.12E+01	2.04E-05	1.93E-02	2.49E-05	1.14E-02	2.14E-03	3.55E-04	2.76E-03	7.30E-04	7.41E-04	1.13E-03	4.53E-05	1.92E-08	2.02E-03	2.14E-03
50	F89	40	Single Unit Long Haul Truck	2	0.00E+00	1.02E-06	5.35E-08	4.85E-01	8.92E-07	8.42E-04	1.09E-06	4.97E-04	9.56E-05	1.58E-05	1.22E-04	3.19E-05	3.24E-05	4.90E-05	1.96E-06	8.32E-10	8.92E-05	9.33E-05
50	F89	40	Combination Short Haul Truck	51	0.00E+00	4.49E-05	3.12E-06	2.28E+01	1.62E-07	3.92E-02	3.34E-05	5.01E-02	5.23E-03	9.43E-04	2.91E-03	9.31E-04	9.39E-04	3.44E-03	7.64E-05	0.00E+00	1.97E-03	9.44E-03
50	F89	40	Combination Long Haul Truck	46	0.00E+00	4.09E-05	2.67E-06	2.17E+01	1.84E-07	4.35E-02	3.15E-05	5.02E-02	5.25E-03	8.37E-04	3.00E-03	8.15E-04	8.30E-04	3.31E-03	7.26E-05	0.00E+00	2.17E-03	9.46E-03
53	G07	70	Passenger Car	56	0.00E+00	7.15E-07	7.73E-08	2.74E+00	4.97E-06	1.84E-02	1.59E-06	1.15E-04	4.31E-04	6.95E-05	1.55E-04	9.97E-05	1.02E-04	1.01E-05	1.38E-05	3.75E-09	5.24E-05	1.80E-05
53	G07	70	Passenger Truck	95	0.00E+00	1.56E-06	1.65E-07	6.31E+00	9.85E-06	3.38E-02	3.24E-06	3.52E-04	7.74E-04	1.26E-04	3.09E-04	2.01E-04	2.06E-04	4.56E-05	3.15E-05	8.24E-09	1.03E-04	5.78E-05
53	G07	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
53	G07	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.77E-04
53	G07	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.71E-04
50	G09	40	Passenger Car	37	0.00E+00	6.22E-07	6.73E-08	2.15E+00	4.33E-06	1.60E-02	1.38E-06	6.69E-05	6.40E-04	9.14E-05	1.35E-04	8.68E-05	8.90E-05	1.16E-05	1.07E-05	2.60E-09	4.56E-05	1.05E-05
50	G09	40	Passenger Truck	62	0.00E+00	1.42E-06	1.49E-07	4.79E+00	8.53E-06	2.75E-02	2.85E-06	2.53E-04	1.14E-03	1.62E-04	2.68E-04	1.76E-04	1.80E-04	4.10E-05	2.36E-05	5.05E-09	8.85E-05	4.29E-05
50	G09	40	Single Unit Short Haul Truck	3	0.00E+00	1.27E-06	6.69E-08	6.12E-01	1.11E-06	1.05E-03	1.36E-06	6.24E-04	1.16E-04	1.93E-05	1.51E-04	3.98E-05	4.04E-05	6.19E-05	2.47E-06	1.05E-09	1.10E-04	1.17E-04
50	G09	40	Combination Short Haul Truck	10	0.00E+00	8.80E-06	6.11E-07	4.47E+00	3.17E-08	7.68E-03	6.55E-06	9.81E-03	1.02E-03	1.85E-04	5.70E-04	1.82E-04	1.84E-04	6.73E-04	1.50E-05	0.00E+00	3.86E-04	1.85E-03
50	G09	40	Combination Long Haul Truck	9	0.00E+00	8.02E-06	5.23E-07	4.25E+00	3.60E-08	8.52E-03	6.17E-06	9.84E-03	1.03E-03	1.64E-04	5.87E-04	1.60E-04	1.63E-04	6.49E-04	1.42E-05	0.00E+00	4.25E-04	1.85E-03
53	G10	70	Passenger Car	56	0.00E+00	7.15E-07	7.73E-08	2.74E+00	4.97E-06	1.84E-02	1.59E-06	1.15E-04	4.31E-04	6.95E-05	1.55E-04	9.97E-05	1.02E-04	1.01E-05	1.38E-05	3.75E-09	5.24E-05	1.80E-05
53	G10	70	Passenger Truck	95	0.00E+00	1.56E-06	1.65E-07	6.31E+00	9.85E-06	3.38E-02	3.24E-06	3.52E-04	7.74E-04	1.26E-04	3.09E-04	2.01E-04	2.06E-04	4.56E-05	3.15E-05	8.24E-09	1.03E-04	5.78E-05
53	G10	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.15E-05
53	G10	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.77E-04
53	G10	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.71E-04
16	H01	100	Passenger Car	2518	0.00E+00	2.75E-05	2.98E-06	1.13E+02	1.92E-04	7.53E-01	6.12E-05	5.38E-03	8.17E-03	1.65E-03	5.96E-03	3.84E-03	3.94E-03	3.16E-04	5.72E-04	1.58E-07	2.02E-03	8.41E-04
16	H01	100	Passenger Truck	4216	0.00E+00	5.94E-05	6.33E-06	2.67E+02	3.89E-04	1.52E+00	1.27E-04	1.53E-02	1.44E-02	3.07E-03	1.22E-02	7.88E-03	8.08E-03	1.70E-03	1.34E-03	3.67E-07	4.09E-03	2.47E-03
16	H01	100	Single Unit Short Haul Truck	362	0.00E+00	4.86E-05	2.41E-06	6.61E+01	4.24E-05	1.53E-01	5.26E-05	2.63E-02	2.50E-03	7.26E-04	6.01E-03	1.49E-03	1.51E-03	6.66E-03	2.66E-04	1.09E-07	4.50E-03	4.91E-03
16	H01	100	Single Unit Long Haul Truck	16	0.00E+00	2.11E-06	1.02E-07	2.78E+00	1.76E-06	6.25E-03	2.27E-06	1.11E-03	1.13E-04	3.14E-05	2.62E-04	6.30E-05	6.40E-05	2.79E-04	1.12E-05	4.44E-09	1.98E-04	2.07E-04
16	H01	100	Combination Short Haul Truck	447	0.00E+00	1.54E-04	1.12E-05	1.62E+02	4.37E-07	1.50E-01	1.11E-04	1.64E-01	5.21E-03	1.85E-03	8.61E-03	3.29E-03	3.23E-03	2.44E-02	5.41E-04	0.00E+00	5.38E-03	3.09E-02
16	H01	100	Combination Long Haul Truck	408	0.00E+00	1.34E-04	9.16E-06	1.46E+02	5.06E-07	1.50E-01	1.00E-04	1.56E-01	4.82E-03	1.34E-03	8.76E-03	2.75E-03	2.74E-03	2.24E-02	4.90E-04	0.00E+00	6.02E-03	2.93E-02
16	H02	100	Passenger Car	2518	0.00E+00	2.75E-05	2.98E-06	1.13E+02	1.92E-04	7.53E-01	6.12E-05	5.38E-03	8.17E-03	1.65E-03	5.96E-03	3.84E-03	3.94E-03	3.16E-04	5.72E-04	1.58E-07	2.02E-03	8.41E-04
16	H02	100	Passenger Truck	4216	0.00E+00	5.94E-05	6.33E-06	2.67E+02	3.89E-04	1.52E+00	1.27E-04	1.53E-02	1.44E-02	3.07E-03	1.22E-02	7.88E-03	8.08E-03	1.70E-03	1.34E-03	3.67E-07	4.09E-03	2.47E-03
16	H02	100	Single Unit Short Haul Truck	362	0.00E+00	4.86E-05	2.41E-06	6.61E+01	4.24E-05	1.53E-01	5.26E-05	2.63E-02	2.50E-03	7.26E-04	6.01E-03	1.49E-03	1.51E-03	6.66E-03	2.66E-04	1.09E-07	4.50E-03	4.91E-03
16	H02	100	Single Unit Long Haul Truck	16	0.00E+00	2.11E-06	1.02E-07	2.78E+00	1.76E-06	6.25E-03	2.27E-06	1.11E-03	1.13E-04	3.14E-05	2.62E-04	6.30E-05	6.40E-05	2.79E-04	1.12E-05	4.44E-09	1.98E-04	2.07E-04
16	H02	100	Combination Short Haul Truck	447	0.00E+00	1.54E-04	1.12E-05	1.62E+02	4.37E-07	1.50E-01	1.11E-04	1.64E-01	5.21E-03	1.85E-03	8.61E-03	3.29E-03	3.23E-03	2.44E-02	5.41E-04	0.00E+00	5.38E-03	3.09E-02
16	H02	100	Combination Long Haul Truck	408	0.00E+00	1.34E-04	9.16E-06	1.46E+02	5.06E-07	1.50E-01	1.00E-04	1.56E-01	4.82E-03	1.34E-03	8.76E-03	2.75E-03	2.74E-03	2.24E-02	4.90E-04	0.00E+00	6.02E-03	2.93E-02
16	H03	100	Passenger Car	2322	0.00E+00	2.54E-05	2.75E-06	1.04E+02	1.77E-04	6.95E-01	5.65E-05	4.96E-03	7.53E-03	1.52E-03	5.50E-03	3.54E-03	3.64E-03	2.91E-04	5.28E-04	1.45E-07	1.86E-03	7.75E-04
16	H03	100	Passenger Truck	3889	0.00E+00	5.48E-05	5.84E-06	2.46E+02	3.59E-04	1.40E+00	1.17E-04	1.41E-02	1.33E-02	2.83E-03	1.12E-02	7.27E-03	7.45E-03	1.57E-03	1.24E-03	3.39E-07	3.77E-03	2.28E-03
16	H03	100	Single Unit Short Haul Truck	344	0.00E+00	4.62E-05	2.29E-06	6.28E+01	4.03E-05	1.45E-01	5.00E-05	2.50E-02	2.37E-03	6.90E-04	5.71E-03	1.42E-03	1.44E-03	6.33E-03	2.52E-04	1.03E-07	4.27E-03	4.66E-03
16	H03	100	Single Unit Long Haul Truck	15	0.00E+00	2.00E-06	9.73E-08	2.64E+00	1.67E-06	5.94E-03	2.16E-06	1.05E-03	1.07E-04	2.98E-05	2.49E-04	5.98E-05	6.08E-05	2.65E-04	1.06E-05	4.22E-09	1.88E-04	1.96E-04
16	H03	100	Combination Short Haul Truck	413	0.00E+00	1.42E-04	1.03E-05	1.49E+02	4.03E-07	1.38E-01	1.02E-04	1.51E-01	4.80E-03	1.71E-03	7.95E-03	3.03E-03	2.98E-03	2.25E-02	5.00E-04	0.00E+00	4.96E-03	2.85E-02
16	H03	100	Combination Long Haul Truck	376	0.00E+00	1.23E-04	8.46E-06	1.35E+02	4.67E-07	1.38E-01	9.24E-05	1.44E-01	4.45E-03	1.24E-03	8.09E-03	2.53E-03	2.53E-03	2.06E-02	4.53E-04	0.00E+00	5.56E-03	2.71E-02
16	H04	100	Passenger Car	3016	0.00E+00	3.30E-05	3.57E-06	1.35E+02	2.30E-04	9.02E-01	7.34E-05	6.44E-03	9.78E-03	1.97E-03	7.14E-03	4.60E-03	4.72E-03	3.78E-04	6.86E-04	1.89E-07	2.42E-03	1.01E-03
16	H04	100	Passenger Truck	5051	0.00E+00	7.12E-05	7.58E-06	3.20E+02	4.66E-04	1.82E+00	1.52E-04	1.83E-02	1.73E-02	3.67E-03	1.46E-02	9.44E-03	9.68E-03	2.04E-03	1.60E-03	4.40E-07	4.90E-03	2.96E-03
16	H04	100	Single Unit Short Haul Truck	280	0.00E+00	3.76E-05	1.86E-06	5.11E+01	3.28E-05	1.18E-01	4.07E-05	2.03E-02	1.93E-03	5.61E-04	4.64E-03	1.15E-03	1.17E-03	5.15E-03	2.05E-04	8.39E-08	3.47E-03	3.79E-03
16	H04	100	Single Unit Long Haul Truck	12	0.00E+00	1.63E-06	7.91E-08	2.15E+00	1.36E-06	4.83E-03	1.76E-06	8.56E-04	8.72E-05	2.42E-05	2.02E-04	4.86E-05	4.94E-05	2.16E-04	8.66E-06	3.43E-09	1.53E-04	1.60E-04
16	H04	100	Combination Short Haul Truck	509	0.00E+00	1.75E-04	1.28E-05	1.84E+02	4.98E-07	1.71E-01	1.26E-04	1.87E-01	5.93E-03	2.11E-03	9.81E-03	3.74E-03	3.68E-03	2.78E-02	6.17E-04	0.00E+00	6.13E-03	3.52E-02
16	H04	100	Combination Long Haul Truck	465	0.00E+00	1.52E-04	1.04E-05	1.67E+02	5.77E-07	1.71E-01	1.14E-04	1.77E-01	5.49E-03	1.53E-03	9.98E-03	3.13E-03	3.12E-03	2.55E-02	5.59E-04	0.00E+00	6.86E-03	3.34E-02
56	H05	100	Passenger Car	1301	0.00E+00	1.42E-05	1.54E-06	5.84E+01	9.90E-05	3.89E-01	3.16E-05	2.78E-03	4.22E-03	8.51E-04	3.08E-03	1.99E-03	2.04E-03	1.63E-04	2.96E-04	8.15E-08	1.04E-03	4.34E-04
56	H05	100	Passenger Truck	2178	0.00E+00	3.07E-05	3.27E-06	1.38E+02	2.01E-04	7.83E-01	6.54E-05	7.91E-03	7.46E-03	1.58E-03	6.29E-03	4.07E-03	4.17E-03	8.78E-04	6.92E-04	1.90E-07	2.11E-03	1.28E-03
56	H05	100	Single Unit Short Haul Truck	166	0.00E+00	2.23E-05	1.10E-06	3.02E+01	1.94E-05	7.00E-02	2.41E-05	1.20E-02	1.14E-03	3.32E-04	2.75E-03	6.82E-04	6.93E-04	3.05E-03	1.22E-04	4.97E-08	2.06E-03	2.25E-03
56	H05	100	Single Unit Long Haul Truck	7	0.00E+00	9.65E-07	4.69E-08	1.27E+00	8.04E-07	2.86E-03	1.04E-06	5.07E-04	5.17E-05	1.44E-05	1.20E-04	2.88E-05	2.93E-05	1.28E-04	5.13E-06	2.03E-09	9.07E-05	9.47E-05
56	H05	100	Combination Short Haul Truck	229	0.00E+00	7.85E-05	5.73E-06	8.27E+01	2.23E-07	7.66E-02	5.67E-05	8.38E-02	2.66E-03	9.48E-04	4.40E-03	1.68E-03	1.65E-03	1.25E-02	2.77E-04	0.00E+00	2.75E-03	1.58E-02
56	H05	100	Combination Long Haul Truck	208	0.00E+00	6.83E-05	4.68E-06	7.49E+01	2.59E-07	7.65E-02	5.12E-05	7.96E-02	2.46E-03	6.85E-04	4.48E-03	1.40E-03	1.40E-03	1.14E-02	2.51E-04	0.00E+00	3.08E-03	1.50E-02
56	H06	100	Passenger Car	1715	0.00E+00	1.88E-05	2.03E-06	7.71E+01	1.31E-04	5.13E-01	4.17E-05	3.67E-03	5.56E-03	1.12E-03	4.06E-03	2.62E-03	2.69E-03	2.15E-04	3.90E-04	1.07E-07	1.37E-03	5.73E-04
56	H06	100	Passenger Truck	2873	0.00E+00	4.05E-05	4.31E-06	1.82E+02	2.65E-04	1.03E+00	8.62E-05	1.04E-02	9.84E-03	2.09E-03	8.29E-03	5.37E-03	5.50E-03	1.16E-03	9.13E-04	2.50E-07	2.79E-03	1.69E-03
56	H06	100	Single Unit Short Haul Truck	114	0.00E+00	1.53E-05	7.58E-07	2.08E+01	1.34E-05	4.82E-02	1.66E-05	8.28E-03	7.86E-04	2.29E-04	1.89E-03	4.69E-04	4.77E-04	2.10E-03	8.36E-05	3.42E-08	1.42E-03	1.55E-03
56	H06	100	Single Unit Long Haul Truck	5	0.00E+00	6.64E-07	3.22E-08	8.76E-01	5.53E-07	1.97E-03	7.16E-07	3.49E-04	3.55E-05	9.88E-06	8.25E-05	1.98E-05	2.01E-05	8.78E-05	3.53E-06	1.40E-09	6.24E-05	6.51E-05
56	H06	100	Combination Short Haul Truck	281	0.00E+00	9.65E-05	7.04E-06	1.02E+02	2.74E-07	9.41E-02	6.96E-05	1.03E-01	3.27E-03	1.16E-03	5.41E-03	2.06E-03	2.03E-03	1.53E-02	3.40E-04	0.00E+00	3.38E-03	1.94E-02
56	H06	100	Combination Long Haul Truck	256	0.00E+00	8.40E-05	5.76E-06	9.20E+01	3.18E-07	9.40E-02	6.29E-05	9.78E-02	3.03E-03	8.42E-04	5.50E-03	1.72E-03	1.72E-03	1.40E-02	3.08E-04	0.00E+00	3.78E-03	1.84E-02
16	H07	100	Passenger Car	3128	0.00E+00	3.42E-05	3.70E-06	1.41E+02	2.38E-04	9.36E-01	7.61E-05	6.68E-03	1.01E-02	2.05E-03	7.41E-03	4.77E-03	4.90E-03	3.92E-04	7.11E-04	1.96E-07	2.51E-03	1.04E-03
16	H07	100	Passenger Truck	5239	0.00E+00	7.39E-05	7.87E-06	3.32E+02	4.84E-04	1.88E+00	1.57E-04	1.90E-02	1.79E-02	3.81E-03	1.51E-02	9.79E-03	1.00E-02	2.11E-03	1.66E-03	4.56E-07	5.08E-03	3.07E-03
16	H07	100	Single Unit Short Haul Truck	283	0.00E+00	3.80E-05	1.88E-06	5.16E+01	3.31E-05	1.19E-01	4.11E-05	2.05E-02	1.95E-03	5.67E-04	4.69E-03	1.16E-03	1.18E-03	5.20E-03	2.07E-04	8.47E-08	3.51E-03	3.83E-03
16	H07	100	Single Unit Long Haul Truck	12	0.00E+00	1.65E-06	7.99E-08	2.17E+00	1.37E-06	4.88E-03	1.77E-06	8.64E-04	8.81E-05	2.45E-05	2.05E-04	4.91E-05	4.99E-05	2.18E-04	8.75E-06	3.47E-09	1.55E-04	1.61E-04
16	H07	100	Combination Short Haul Truck	517	0.00E+00	1.78E-04	1.30E-05	1.87E+02	5.06E-07	1.73E-01	1.28E-04	1.90E-01	6.02E-03	2.14E-03	9.96E-03	3.80E-03	3.74E-03	2.82E-02	6.26E-04	0.00E+00	6.22E-03	3.57E-02
16	H07	100	Combination Long Haul Truck	472	0.00E+00	1.55E-04	1.06E-05	1.69E+02	5.86E-07	1.73E-01	1.16E-04	1.80E-01	5.58E-03	1.55E-03	1.01E-02	3.18E-03	3.17E-03	2.59E-02	5.67E-04	0.00E+00	6.97E-03	3.39E-02
52	H08	60	Passenger Car	307	0.00E+00	4.23E-06	4.58E-07	1.54E+01	2.94E-05	1.09E-01	9.40E-06	6.04E-04	3.03E-03	4.66E-04	9.15E-04	5.90E-04	6.05E-04	6.42E-05	7.73E-05	2.06E-08	3.10E-04	9.44E-05
52	H08	60	Passenger Truck	515	0.00E+00	9.29E-06	9.81E-07	3.51E+01	5.79E-05	1.94E-01	1.91E-05	1.94E-03	5.40E-03	8.36E-04	1.82E-03	1.18E-03	1.21E-03	2.67E-04	1.75E-04	4.38E-08	6.04E-04	3.21E-04
52	H08	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.55E-07	1.97E+00	2.55E-06	3.81E-03	3.30E-06	1.47E-03	2.51E-04	4.54E-05	3.76E-04	9.28E-05	9.43E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.76E-04
52	H08	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.33E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.51E-03
52	H08

Appendix F.2.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B05	0.00E+00	1.03E-05	1.10E-06	4.50E+01	6.88E-05	2.69E-01	2.22E-05	2.45E-03	2.68E-03	5.58E-04	2.15E-03	1.39E-03	1.42E-03	2.39E-04	2.26E-04	6.21E-08	7.23E-04	3.92E-04
B06	0.00E+00	3.28E-05	3.51E-06	1.43E+02	2.19E-04	8.55E-01	7.07E-05	7.79E-03	8.51E-03	1.77E-03	6.83E-03	4.42E-03	4.53E-03	7.59E-04	7.20E-04	1.98E-07	2.30E-03	1.25E-03
B07	0.00E+00	2.58E-05	2.70E-06	1.08E+02	1.64E-04	6.41E-01	5.40E-05	6.92E-03	6.41E-03	1.34E-03	5.22E-03	3.33E-03	3.41E-03	7.67E-04	5.43E-04	1.49E-07	1.80E-03	1.14E-03
B08	0.00E+00	1.02E-04	7.92E-06	2.47E+02	2.89E-04	1.15E+00	1.41E-04	6.04E-02	1.28E-02	2.93E-03	1.40E-02	6.88E-03	7.02E-03	1.03E-02	1.14E-03	3.07E-07	6.93E-03	1.11E-02
B09	0.00E+00	9.78E-05	8.29E-06	2.47E+02	2.91E-04	1.18E+00	1.35E-04	6.69E-02	1.31E-02	2.95E-03	1.27E-02	6.96E-03	7.10E-03	9.78E-03	1.15E-03	2.74E-07	5.61E-03	1.23E-02
B10	0.00E+00	7.77E-05	6.52E-06	1.91E+02	2.20E-04	8.99E-01	1.05E-04	5.45E-02	1.00E-02	2.27E-03	9.86E-03	5.34E-03	5.45E-03	7.99E-03	8.81E-04	2.08E-07	4.41E-03	1.01E-02
B13	0.00E+00	4.39E-05	3.65E-06	1.05E+02	1.19E-04	4.88E-01	5.83E-05	3.13E-02	5.50E-03	1.25E-03	5.47E-03	2.93E-03	2.99E-03	4.62E-03	4.84E-04	1.14E-07	2.48E-03	5.78E-03
B14	0.00E+00	7.18E-05	6.07E-06	1.81E+02	2.14E-04	8.68E-01	9.93E-05	4.88E-02	9.61E-03	2.16E-03	9.36E-03	5.11E-03	5.21E-03	7.16E-03	8.42E-04	2.03E-07	4.15E-03	8.97E-03
D01	0.00E+00	8.76E-05	7.22E-06	1.56E+02	2.32E-04	8.44E-01	1.15E-04	6.33E-02	2.62E-02	4.21E-03	1.09E-02	5.74E-03	5.86E-03	5.93E-03	7.21E-04	1.71E-07	5.05E-03	1.18E-02
D02	0.00E+00	7.54E-05	6.75E-06	1.75E+02	2.99E-04	1.05E+00	1.20E-04	3.84E-02	3.00E-02	4.72E-03	1.15E-02	6.63E-03	6.78E-03	3.84E-03	8.44E-04	2.20E-07	4.77E-03	7.02E-03
D03	0.00E+00	9.55E-05	8.03E-06	1.86E+02	2.94E-04	1.05E+00	1.35E-04	6.06E-02	3.15E-02	5.01E-03	1.29E-02	6.95E-03	7.11E-03	5.85E-03	8.75E-04	2.18E-07	5.81E-03	1.12E-02
D04	0.00E+00	1.18E-04	9.93E-06	2.26E+02	3.53E-04	1.26E+00	1.65E-04	7.80E-02	3.83E-02	6.10E-03	1.57E-02	8.43E-03	8.61E-03	7.45E-03	1.06E-03	2.61E-07	7.07E-03	1.45E-02
D05	0.00E+00	8.89E-05	7.52E-06	1.79E+02	2.88E-04	1.02E+00	1.29E-04	5.35E-02	3.03E-02	4.81E-03	1.24E-02	6.71E-03	6.86E-03	5.24E-03	8.45E-04	2.14E-07	5.51E-03	9.88E-03
D06	0.00E+00	1.22E-04	1.08E-05	2.70E+02	4.46E-04	1.58E+00	1.86E-04	7.05E-02	4.61E-02	7.28E-03	1.78E-02	1.01E-02	1.03E-02	6.82E-03	1.29E-03	3.27E-07	7.41E-03	1.30E-02
D07	0.00E+00	8.54E-05	7.12E-06	1.90E+02	2.48E-04	9.34E-01	1.17E-04	5.48E-02	1.78E-02	3.28E-03	1.12E-02	5.97E-03	6.09E-03	6.82E-03	8.86E-04	2.17E-07	5.08E-03	1.01E-02
D08	0.00E+00	7.47E-05	6.72E-06	2.02E+02	2.90E-04	1.08E+00	1.18E-04	4.00E-02	1.94E-02	3.52E-03	1.12E-02	6.48E-03	6.63E-03	4.88E-03	9.70E-04	2.48E-07	4.58E-03	7.28E-03
D09	0.00E+00	5.83E-05	5.10E-06	1.47E+02	2.06E-04	7.67E-01	8.75E-05	3.35E-02	1.41E-02	2.56E-03	8.33E-03	4.70E-03	4.80E-03	4.11E-03	7.02E-04	1.77E-07	3.53E-03	6.13E-03
D10	0.00E+00	6.11E-05	5.83E-06	1.91E+02	2.90E-04	1.07E+00	1.07E-04	2.66E-02	1.87E-02	3.34E-03	1.02E-02	6.20E-03	6.35E-03	3.18E-03	9.34E-04	2.46E-07	3.87E-03	4.77E-03
D11	0.00E+00	5.66E-05	4.92E-06	1.41E+02	1.95E-04	7.27E-01	8.39E-05	3.31E-02	1.34E-02	2.44E-03	7.98E-03	4.47E-03	4.57E-03	4.07E-03	6.68E-04	1.68E-07	3.41E-03	6.07E-03
D12	0.00E+00	7.32E-05	6.77E-06	2.12E+02	3.12E-04	1.15E+00	1.21E-04	3.62E-02	2.05E-02	3.69E-03	1.15E-02	6.82E-03	6.98E-03	4.37E-03	1.02E-03	2.65E-07	4.53E-03	6.56E-03
D13	0.00E+00	5.12E-05	4.18E-06	9.37E+01	1.46E-04	5.16E-01	7.02E-05	3.30E-02	1.58E-02	2.52E-03	6.75E-03	3.51E-03	3.59E-03	3.22E-03	4.38E-04	1.09E-07	3.17E-03	6.12E-03
D14	0.00E+00	4.48E-05	3.46E-06	7.01E+01	1.02E-04	3.60E-01	5.62E-05	3.17E-02	1.16E-02	1.88E-03	5.44E-03	2.62E-03	2.67E-03	3.08E-03	3.21E-04	7.77E-08	2.77E-03	5.90E-03
D15	0.00E+00	6.22E-05	5.02E-06	1.10E+02	1.70E-04	6.01E-01	8.39E-05	4.08E-02	1.85E-02	2.97E-03	8.09E-03	4.14E-03	4.23E-03	3.98E-03	5.14E-04	1.28E-07	3.86E-03	7.56E-03
D16	0.00E+00	8.05E-05	6.49E-06	1.44E+02	2.23E-04	7.86E-01	1.09E-04	5.18E-02	2.42E-02	3.86E-03	1.06E-02	5.41E-03	5.52E-03	5.08E-03	6.72E-04	1.68E-07	5.04E-03	9.61E-03
D17	0.00E+00	2.42E-05	2.03E-06	5.06E+01	7.14E-05	2.61E-01	3.34E-05	1.56E-02	6.65E-03	1.12E-03	3.17E-03	1.71E-03	1.75E-03	1.69E-03	2.38E-04	5.72E-08	1.43E-03	2.89E-03
D18	0.00E+00	8.39E-06	7.63E-07	2.27E+01	3.59E-05	1.28E-01	1.40E-05	3.80E-03	3.05E-03	5.02E-04	1.35E-03	7.82E-04	8.00E-04	4.33E-04	1.10E-04	2.87E-08	5.45E-04	6.87E-04
D19	0.00E+00	1.17E-04	8.70E-06	1.97E+02	2.18E-04	8.22E-01	1.37E-04	8.43E-02	1.74E-02	3.34E-03	1.33E-02	6.01E-03	6.12E-03	1.11E-02	8.76E-04	2.08E-07	7.19E-03	1.57E-02
D20	0.00E+00	8.39E-05	7.36E-06	2.16E+02	3.06E-04	1.13E+00	1.28E-04	4.60E-02	2.07E-02	3.76E-03	1.23E-02	6.92E-03	7.08E-03	5.74E-03	1.03E-03	2.65E-07	5.21E-03	8.41E-03
D21	0.00E+00	1.22E-04	9.14E-06	2.12E+02	2.41E-04	9.08E-01	1.46E-04	8.57E-02	1.89E-02	3.60E-03	1.42E-02	6.51E-03	6.64E-03	1.13E-02	9.51E-04	2.29E-07	7.56E-03	1.59E-02
D22	0.00E+00	7.45E-05	6.35E-06	1.78E+02	2.44E-04	9.08E-01	1.08E-04	4.40E-02	1.69E-02	3.09E-03	1.03E-02	5.66E-03	5.79E-03	5.51E-03	8.44E-04	2.13E-07	4.55E-03	8.08E-03
D23	0.00E+00	8.69E-05	6.88E-06	1.50E+02	2.30E-04	8.06E-01	1.16E-04	5.59E-02	2.50E-02	4.01E-03	1.13E-02	5.64E-03	5.77E-03	5.54E-03	6.96E-04	1.75E-07	5.54E-03	1.04E-02
D24	0.00E+00	7.91E-05	6.82E-06	1.71E+02	2.89E-04	1.01E+00	1.22E-04	4.12E-02	2.92E-02	4.61E-03	1.18E-02	6.51E-03	6.66E-03	4.18E-03	8.21E-04	2.16E-07	5.13E-03	7.55E-03
D25	0.00E+00	8.32E-05	7.01E-06	1.71E+02	2.83E-04	9.86E-01	1.24E-04	4.54E-02	2.90E-02	4.59E-03	1.20E-02	6.49E-03	6.64E-03	4.60E-03	8.14E-04	2.13E-07	5.41E-03	8.36E-03
D26	0.00E+00	7.19E-05	6.84E-06	1.96E+02	3.53E-04	1.23E+00	1.29E-04	2.65E-02	3.39E-02	5.29E-03	1.24E-02	7.49E-03	7.67E-03	2.84E-03	9.61E-04	2.60E-07	4.76E-03	4.74E-03
D27	0.00E+00	5.01E-05	4.42E-06	1.32E+02	1.88E-04	6.98E-01	7.78E-05	2.67E-02	1.26E-02	2.29E-03	7.46E-03	4.23E-03	4.33E-03	3.33E-03	6.33E-04	1.63E-07	3.13E-03	4.86E-03
D28	0.00E+00	1.97E-05	1.78E-06	5.44E+01	7.89E-05	2.92E-01	3.15E-05	1.02E-02	5.24E-03	9.47E-04	3.01E-03	1.75E-03	1.79E-03	1.24E-03	2.62E-04	6.76E-08	1.22E-03	1.85E-03
D29	0.00E+00	5.01E-05	4.42E-06	1.32E+02	1.88E-04	6.98E-01	7.78E-05	2.67E-02	1.26E-02	2.29E-03	7.46E-03	4.23E-03	4.33E-03	3.33E-03	6.33E-04	1.63E-07	3.13E-03	4.86E-03
D30	0.00E+00	1.97E-05	1.78E-06	5.44E+01	7.89E-05	2.92E-01	3.15E-05	1.02E-02	5.24E-03	9.47E-04	3.01E-03	1.75E-03	1.79E-03	1.24E-03	2.62E-04	6.76E-08	1.22E-03	1.85E-03
D31	0.00E+00	3.03E-05	2.60E-06	7.43E+01	1.03E-04	3.82E-01	4.47E-05	1.75E-02	7.04E-03	1.29E-03	4.28E-03	2.36E-03	2.42E-03	2.19E-03	3.53E-04	8.94E-08	1.86E-03	3.21E-03
D32	0.00E+00	1.52E-05	1.35E-06	3.98E+01	5.63E-05	2.10E-01	2.34E-05	8.41E-03	3.81E-03	6.91E-04	2.23E-03	1.27E-03	1.30E-03	1.03E-03	1.90E-04	4.84E-08	9.29E-04	1.54E-03
D33	0.00E+00	1.94E-05	1.69E-06	4.21E+01	7.00E-05	2.47E-01	2.95E-05	1.07E-02	7.18E-03	1.13E-03	2.83E-03	1.59E-03	1.62E-03	1.06E-03	2.01E-04	5.18E-08	1.21E-03	1.97E-03
D34	0.00E+00	3.09E-05	2.65E-06	6.53E+01	1.08E-04	3.79E-01	4.64E-05	1.72E-02	1.11E-02	1.76E-03	4.47E-03	2.47E-03	2.52E-03	1.71E-03	3.11E-04	8.04E-08	1.95E-03	3.17E-03
D35	0.00E+00	1.77E-05	1.55E-06	3.95E+01	6.65E-05	2.33E-01	2.75E-05	9.30E-03	6.74E-03	1.06E-03	2.65E-03	1.49E-03	1.53E-03	9.30E-04	1.89E-04	4.93E-08	1.12E-03	1.71E-03
D36	0.00E+00	2.59E-05	2.34E-06	6.20E+01	1.07E-04	3.74E-01	4.22E-05	1.25E-02	1.06E-02	1.67E-03	4.05E-03	2.35E-03	2.40E-03	1.27E-03	2.99E-04	7.87E-08	1.65E-03	2.29E-03
D37	0.00E+00	3.33E-05	3.05E-06	8.01E+01	1.36E-04	4.83E-01	5.38E-05	1.74E-02	1.38E-02	2.17E-03	5.12E-03	3.01E-03	3.08E-03	1.69E-03	3.86E-04	9.97E-08	2.03E-03	3.18E-03
D38	0.00E+00	1.62E-05	1.53E-06	4.27E+01	7.58E-05	2.64E-01	2.83E-05	6.64E-03	7.37E-03	1.15E-03	2.72E-03	1.63E-03	1.66E-03	6.92E-04	2.08E-04	5.58E-08	1.06E-03	1.20E-03
D39	0.00E+00	2.00E-05	1.83E-06	4.74E+01	8.01E-05	2.85E-01	3.18E-05	1.09E-02	8.16E-03	1.28E-03	3.02E-03	1.78E-03	1.82E-03	1.05E-03	2.28E-04	5.83E-08	1.20E-03	1.99E-03
D40	0.00E+00	8.90E-06	9.02E-07	2.73E+01	5.01E-05	1.75E-01	1.72E-05	2.73E-03	4.75E-03	7.38E-04	1.64E-03	1.04E-03	1.07E-03	2.94E-04	1.35E-04	3.65E-08	5.79E-04	4.79E-04
D41	0.00E+00	5.60E-06	4.66E-07	1.03E+01	1.57E-05	5.67E-02	7.56E-06	3.89E-03	1.74E-03	2.78E-04	7.17E-04	3.82E-04	3.90E-04	3.67E-04	4.80E-05	1.16E-08	3.27E-04	7.23E-04
D42	0.00E+00	1.05E-05	1.05E-06	3.18E+01	5.85E-05	2.03E-01	2.02E-05	3.10E-03	5.53E-03	8.59E-04	1.93E-03	1.21E-03	1.24E-03	3.42E-04	1.57E-04	4.27E-08	6.91E-04	5.43E-04
D43	0.00E+00	2.02E-05	1.52E-06	3.10E+01	4.57E-05	1.59E-01	2.55E-05	1.35E-02	5.12E-03	8.27E-04	2.50E-03	1.17E-03	1.20E-03	1.35E-03	1.42E-04	3.56E-08	1.31E-03	2.51E-03
D44	0.00E+00	1.48E-05	1.49E-06	4.51E+01	8.29E-05	2.88E-01	2.86E-05	4.44E-03	7.84E-03	1.22E-03	2.74E-03	1.72E-03	1.76E-03	4.86E-04	2.23E-04	6.05E-08	9.74E-04	7.79E-04
D45	0.00E+00	7.41E-05	5.73E-06	1.18E+02	1.74E-04	6.12E-01	9.43E-05	5.11E-02	1.96E-02	3.16E-03	9.16E-03	4.42E-03	4.51E-03	5.00E-03	5.41E-04	1.33E-07	4.64E-03	9.51E-03
D46	0.00E+00	7.69E-05	5.85E-06	1.14E+02	1.61E-04	5.73E-01	9.36E-05	5.64E-02	1.89E-02	3.07E-03	9.05E-03	4.26E-03	4.34E-03	5.45E-03	5.19E-04	1.23E-07	4.71E-03	1.05E-02
D47	0.00E+00	8.73E-05	7.03E-06	1.56E+02	2.42E-04	8.51E-01	1.19E-04	5.58E-02	2.62E-02	4.18E-03	1.15E-02	5.86E-03	5.99E-03	5.49E-03	7.28E-04	1.83E-07	5.50E-03	1.03E-02
D48	0.00E+00	8.90E-06	9.02E-07	2.73E+01	5.01E-05	1.75E-01	1.72E-05	2.73E-03	4.75E-03	7.38E-04	1.64E-03	1.04E-03	1.07E-03	2.94E-04	1.35E-04	3.65E-08	5.79E-04	4.79E-04
D49	0.00E+00	8.73E-05	7.03E-06	1.56E+02	2.42E-04	8.51E-01	1.19E-04	5.58E-02	2.62E-02	4.18E-03	1.15E-02	5.86E-03	5.99E-03	5.49E-03	7.28E-04	1.83E-07	5.50E-03	1.03E-02
D50	0.00E+00	8.35E-05	6.51E-06	1.35E+02	1.99E-04	7.04E-01	1.07E-04	5.79E-02	2.24E-02	3.61E-03	1.03E-02	5.04E-03	5.15E-03	5.63E-03	6.20E-04	1.51E-07	5.18E-03	1.08E-02
D51	0.00E+00	2.45E-05	2.03E-06	4.91E+01	8.13E-05	2.81E-01	3.62E-05	1.32E-02	8.29E-03	1.31E-03	3.53E-03	1.87E-03	1.91E-03	1.35E-03	2.33E-04	6.15E-08	1.62E-03	2.42E-03
D52	0.00E+00	3.60E-05	2.78E-06	5.85E+01	8.78E-05	3.07E-01	4.66E-05	2.38E-02	9.71E-03	1.56E-03	4.55E-03	2.20E-03	2.25E-03	2.36E-03	2.70E-04	6.74E-08	2.30E-03	4.43E-03
D53	0.00E+00	3.21E-05	2.80E-06	7.27E+01	1.25E-04	4.32E-01	5.12E-05	1.52E-02	1.24E-02	1.95E-03	4.97E-03	2.77E-03	2.84E-03	1.59E-03	3.50E-04	9.35E-08	2.13E-03	2.77E-03
D54	0.00E+00	3.67E-05	2.86E-06	6.10E+01	9.27E-05	3.24E-01	4.82E-05	2.40E-02	1.02E-02	1.63E-03	4.70E-03	2.30E-03	2.35E-03	2.38E-03	2.83E-04	7.10E-08	2.35E-03	4.45E-03
D55	0.00E+00	4.01E-05	3.21E-06	8.09E+01	1.01E-04	3.79E-01	5.20E-05	2.71E-02	7.45E-03	1.39E-03	4.97E-03	2.52E-03	2.57E-03	3.43E-03	3.72E-04	9.00E-08	2.40E-03	5.01E-03
D56	0.00E+00	4.79E-05	3.86E-06	9.86E+01	1.24E-04	4.68E-01	6.28E-05	3.19E-02	9.11E-03	1.70E-03	6.00E-03	3.08E-03	3.14E-03	4.03E-03	4.55E-04	1.10E-07	2.86E-03	5.90E-03
D57	0.00E+00	4.48E-05	3.62E-06	9.22E+01	1.16E-04	4.37E-01	5.88E-05	3.00E-02	8.53E-03	1.59E-03	5.61E-03	2.88E-03	2.94E-03	3.78E-03	4.26E-04	1.03E-07	2.67E-03	5.55E-03
D58	0.00E+00	5.97E-05	4.71E-06	1.17E+02	1.43E-04	5.40E-01	7.61E-05	4.06E-02	1.07E-02	2.01E-03	7.29E-03	3.63E-03	3.71E-03	5.18E-03	5.36E-04	1.29E-07	3.59E-03	7.52E-03
D59	0.00E+00	4.48E-05	3.62E-06	9.22E+01	1.16E-04	4.37E-01	5.88E-05	3.00E-02	8.53E-03	1.59E-03	5.61E-03	2.88E-03	2.94E-03	3.78E-03	4.26E-04	1.03E-07	2.67E-03	5.55E-03
D60	0.00E+00	5.97E-05	4.71E-06	1.17E+02	1.43E-04	5.40E-01	7.61E-05	4.06E-02	1.07E-02	2.01E-03	7.29E-03	3.63E-03	3.71E-03	5.18E-03	5.36E-04	1.29E-07	3.59E-03	7.52E-03
D61	0.00E+00	9.58E-06	8.29E-07	2.51E+01	3.61E-05	1.33E-01	1.50E-05	4.78E-03	2.39E-03	4.34E-04	1.46E-03	8.08E-04	8.26E-04	6.24E-04	1.21E-04	3.19E-08	6.32E-04	8.68E-04
D62	0.00E+00	6.65E-06	5.43E-07	1.42E+01	1.83E-05	6.86E-02	8.95E-06	4.30E-03	1.32E-03	2.45E-04	8.56E-04	4.46E-04	4.55E-04	5.44E-04	6.60E-05	1.62E-08	4.01E-04	7.94E-04
D63	0.00E+00	3.39E-06	2.83E-07	7.59E+00	1.14E-05	4.02E-02	5.03E-06	1.81E-03	9.98E-04	1.67E-04	4.90E-04	2.61E-04	2.67E-04	2.10E-04	3.62E-05	9.34E-09	2.23E-04	3.32E-04
D64	0.00E+00	1.74E-05	1.25E-06	2.29E+01	2.44E-05	9.08E-02	1.86E-05	1.38E-02	2.80E-03	4.95E-04	1.79E-03	7.57E-04	7.70E-04	1.53E-03	9.93E-05	2.14E-08	1.02E-03	2.59E-03
D65	0.00E+00	3.25E-05	2.36E-06	4.94E+01	4.94E-05	1.91E-01	3.57E-05	2.50E-02	4.29E-03	8.35E-04	3.43E-03	1.48E-03	1.51E-03	3.24E-03	2.15E-04	4.79E-08	1.92E-03	4.67E-03
D66	0.00E+00	3.92E-05	2.86E-06	5.68E+01	5.28E-05	2.10E-01	4.13E-05	3.19E-02	4.90E-03	9.62E-04	3.91E-03	1.68E-03	1.71E-03	4.05E-03	2.43E-04	5.04E-08	2.21E-03	5.97E-03
D67	0.00E+00	3.25E-05	2.36E-06	4.94E+01	4.94E-05	1.91E-01	3.57E-05	2.50E-02	4.29E-03	8.35E-04	3.43E-03	1.48E-03	1.51E-03	3.24E-03	2.15E-04	4.79E-08	1.92E-03	4.67E-03
D68	0.00E+00	3.92E-05	2.86E-06	5.68E+01	5.28E-05	2.10E-01	4.13E-05	3.19E-02	4.90E-03	9.62E-04	3.91E-03	1.68E-03	1.71E-03	4.05E-03	2.43E-04	5.04E-08	2.21E-03	5.97E-03
D69	0.00E+00	1.88E-05	1.40E-06	3.00E+01	3.14E-05	1.21E-01	2.11E-05	1.44E-02	2.65E-03	5.10E-04	2.02E-03	9.07E-04	9.23E-04	1.84E-03	1.32E-04	2.95E-08	1.09E-03	2.68E-03
D70	0.00E+00	1.87E-05	1.37E-06	2.83E+01	2.80E-05	1.09E-01	2.03E-05	1.47E-02	2.47E-03	4.80E-04	1.94E-03	8.47E-04	8.61E-04	1.88E-03	1.23E-04	2.67E-08	1.08E-03	2.75E-03
D71	0.00E+00	3.41E-05	2.55E-06	4.76E+01	5.09E-05	1.96E-01	3.67E-05	2.84E-02	5.92E-03	1.04E-03	3.45E-03	1.55E-03	1.58E-03	3.03E-03	2.07E-04	4.24E-08	1.87E-03	5.30E-03
D72	0.00E+00	2.26E-05	1.81E-06	4.37E+01	6.04E-05	2.18E-01	3.02E-05	1.45E-02	5.66E-03	9.56E-04	2.91E-03	1.48E-03	1.51E-03	1.62E-03	2.03E-04	4.98E-08	1.40E-03	2.68E-03
D73	0.00E+00	1.46E-05	1.20E-06	2.74E+01	3.61E-05	1.34E-01	1.87E-05	1.06E-02	3.56E-03	6.04E-04	1.76E-03	9.14E-04	9.33E-04	1.13E-03	1.26E-04	2.88E-08	8.23E-04	1.97E-03
D74	0.00E+00	1.06E-05	1.02E-06	3.25E+01	5.29E-05	1.88E-01	1.91E-05	4.09E-03	4.41E-03	7.22E-04	1.83E-03	1.12E-03	1.15E-03	4.59E-04	1.59E-04	4.17E-08	6.84E-04	7.30E-04
D75	0.00E+00	1.09E-05	8.58E-07	2.24E+01	2.87E-05	1.06E-01	1.45E-05	6.76E-03	2.06E-03	3.84E-04	1.41E-03	7.04E-04	7.19E-04	8.91E-04	1.04E-04	2.64E-08	6.92E-04	1.25E-03
D76	0.00E+00	1.33E-05	1.07E-06	2.77E+01	3.53E-05	1.32E-01	1.76E-05	8.65E-03	2.57E-03	4.77E-04	1.69E-03	8.68E-04	8.86E-04	1.10E-03	1.28E-04	3.16E-08	8.05E-04	1.60E-03
D77	0.00E+00	1.25E-05	9.55E-07	2.33E+01	2.79E-05	1.04E-01	1.57E-05	8.40E-03	2.10E-03	3.96E-04	1.52E-03	7.21E-04	7.35E-04	1.11E-03	1.06E-04	2.61E-08	7.86E-04	1.56E-03
D78	0.00E+00	1.09E-05	8.17E-07	1.81E+01	1.96E-05	7.51E-02	1.25E-05	8.14E-03	1.61E-03	3.08E-04	1.20E-03	5.50E-04	5.60E-04	1.04E-03	8.02E-05	1.83E-08	6.40E-04	1.52E-03
D79	0.00E+00	2.47E-05	1.92E-06	4.11E+01	5.12E-05	1.90E-01	2.97E-05	1.84E-02	5.24E-03	9.00E-04	2.82E-03	1.37E-03	1.40E-03	2.00E-03	1.86E-04	4.22E-08	1.43E-03	3.43E-03
D80	0.00E+00	3.62E-05	3.06E-06	7.79E+01	1.12E-04	4.05E-01	5.11E-05	2.26E-02	1.03E-02	1.72E-03	4.87E-03	2.64E-03	2.70E-03	2.47E-03	3.67E-04	8.96E-08	2.17E-03	4.17E-03
D81	0.00E+00	7.10E-06	7.04E-07	2.31E+01	3.82E-05	1.36E-01	1.34E-05	2.41E-03	3.16E-03	5.14E-04	1.28E-03	7.99E-04	8.19E-04	2.73E-04	1.14E-04	3.01E-08	4.66E-04	4.23E-04
D82	0.00E+00	8.35E-06	8.90E-07	3.18E+01	5.45E-05	1.93E-01	1.77E-05	1.66E-03	4.38E-03	7.09E-04	1.70E-03	1.10E-03	1.13E-03	1.99E-04	1.59E-04	4.27E-08	5.71E-04	2.69E-04
D83	0.00E+00	1.03E-04	8.23E-06	2.02E+02	2.45E-04	9.32E-01	1.30E-04	7.25E-02	1.86E-02	3.47E-03	1.23E-02	6.25E-03	6.37E-03	9.04E-03	9.22E-04	2.16E-07	5.92E-03	1.35E-02
D84	0.00E+00	7.80E-05	5.83E-06	1.21E+02	1.22E-04	4.79E-01	8.54E-05	6.23E-02	1.07E-02	2.07E-03	8.05E-03	3.64E-03	3.70E-03	7.84E-03	5.29E-04	1.12E-07	4.35E-03	1.16E-02
D85	0.00E+00	7.92E-05	6.36E-06	1.57E+02	1.91E-04	7.27E-01	1.01E-04	5.56E-02	1.44E-02	2.70E-03	9.53E-03	4.86E-03	4.95E-03	6.93E-03	7.17E-04	1.69E-07	4.58E-03	1.03E-02
D86	0.00E+00	6.33E-05	4.81E-06	1.04E+02	1.09E-04	4.26E-01	7.14E-05	4.95E-02	9.23E-03	1.77E-03	6.74E-03	3.13E-03	3.19E-03

Appendix F.2.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E08	0.00E+00	1.18E-04	9.71E-06	2.18E+02	3.38E-04	1.20E+00	1.62E-04	7.75E-02	3.67E-02	5.87E-03	1.55E-02	8.14E-03	8.32E-03	7.47E-03	1.02E-03	2.52E-07	7.16E-03	1.44E-02
E09	0.00E+00	8.69E-05	7.10E-06	1.58E+02	2.44E-04	8.67E-01	1.18E-04	5.73E-02	2.66E-02	4.25E-03	1.13E-02	5.90E-03	6.03E-03	5.54E-03	7.37E-04	1.82E-07	5.32E-03	1.06E-02
E10	0.00E+00	9.82E-05	8.13E-06	1.84E+02	2.87E-04	1.02E+00	1.36E-04	6.42E-02	3.10E-02	4.95E-03	1.30E-02	6.87E-03	7.02E-03	6.19E-03	8.61E-04	2.13E-07	5.96E-03	1.19E-02
E11	0.00E+00	1.71E-04	1.28E-05	2.35E+02	3.08E-04	1.12E+00	1.97E-04	1.35E-01	3.85E-02	6.30E-03	1.89E-02	8.64E-03	8.81E-03	1.28E-02	1.05E-03	2.36E-07	1.01E-02	2.51E-02
E12	0.00E+00	1.77E-04	1.39E-05	2.89E+02	4.24E-04	1.51E+00	2.26E-04	1.25E-01	4.81E-02	7.74E-03	2.18E-02	1.07E-02	1.10E-02	1.20E-02	1.33E-03	3.21E-07	1.08E-02	2.32E-02
E13	0.00E+00	2.95E-05	2.43E-06	6.57E+01	8.70E-05	3.24E-01	4.11E-05	1.81E-02	6.14E-03	1.13E-03	3.95E-03	2.07E-03	2.12E-03	2.31E-03	3.08E-04	7.74E-08	1.83E-03	3.33E-03
E14	0.00E+00	1.97E-05	1.61E-06	4.17E+01	5.33E-05	2.01E-01	2.62E-05	1.30E-02	3.88E-03	7.20E-04	2.49E-03	1.31E-03	1.33E-03	1.63E-03	1.94E-04	4.69E-08	1.16E-03	2.41E-03
E15	0.00E+00	2.45E-05	2.04E-06	5.27E+01	6.73E-05	2.55E-01	3.27E-05	1.66E-02	4.92E-03	9.12E-04	3.09E-03	1.65E-03	1.68E-03	2.03E-03	2.45E-04	5.83E-08	1.41E-03	3.06E-03
E16	0.00E+00	2.43E-05	2.03E-06	5.32E+01	6.87E-05	2.60E-01	3.29E-05	1.61E-02	4.98E-03	9.21E-04	3.11E-03	1.67E-03	1.70E-03	1.98E-03	2.48E-04	5.95E-08	1.40E-03	2.98E-03
E17	0.00E+00	1.72E-05	1.43E-06	3.89E+01	5.17E-05	1.93E-01	2.41E-05	1.07E-02	3.65E-03	6.72E-04	2.30E-03	1.23E-03	1.25E-03	1.34E-03	1.83E-04	4.55E-08	1.05E-03	1.96E-03
E18	0.00E+00	1.90E-05	1.46E-06	3.45E+01	4.04E-05	1.52E-01	2.32E-05	1.33E-02	3.12E-03	5.90E-04	2.23E-03	1.06E-03	1.09E-03	1.72E-03	1.56E-04	3.73E-08	1.15E-03	2.48E-03
E19	0.00E+00	4.32E-05	3.52E-06	8.17E+01	1.31E-04	4.57E-01	6.13E-05	2.53E-02	1.37E-02	2.19E-03	5.97E-03	3.09E-03	3.16E-03	2.55E-03	3.85E-04	9.95E-08	2.80E-03	4.68E-03
E20	0.00E+00	5.62E-05	4.64E-06	1.08E+02	1.72E-04	6.04E-01	7.97E-05	3.39E-02	1.82E-02	2.89E-03	7.71E-03	4.06E-03	4.15E-03	3.36E-03	5.07E-04	1.29E-07	3.56E-03	6.27E-03
E21	0.00E+00	1.16E-05	9.71E-07	2.61E+01	3.45E-05	1.29E-01	1.61E-05	7.33E-03	2.45E-03	4.52E-04	1.54E-03	8.24E-04	8.41E-04	9.16E-04	1.22E-04	3.02E-08	6.97E-04	1.35E-03
E22	0.00E+00	1.43E-06	1.10E-07	2.41E+00	2.60E-06	1.01E-02	1.64E-06	1.10E-03	2.16E-04	4.13E-05	1.55E-04	7.32E-05	7.45E-05	1.38E-04	1.07E-05	2.36E-09	8.05E-05	2.06E-04
E23	0.00E+00	1.16E-05	9.71E-07	2.61E+01	3.45E-05	1.29E-01	1.61E-05	7.33E-03	2.45E-03	4.52E-04	1.54E-03	8.24E-04	8.41E-04	9.16E-04	1.22E-04	3.02E-08	6.97E-04	1.35E-03
E24	0.00E+00	1.43E-06	1.10E-07	2.41E+00	2.60E-06	1.01E-02	1.64E-06	1.10E-03	2.16E-04	4.13E-05	1.55E-04	7.32E-05	7.45E-05	1.38E-04	1.07E-05	2.36E-09	8.05E-05	2.06E-04
E25	0.00E+00	1.31E-05	1.25E-06	3.87E+01	6.22E-05	2.23E-01	2.29E-05	5.51E-03	5.25E-03	8.60E-04	2.19E-03	1.33E-03	1.36E-03	6.09E-04	1.89E-04	4.90E-08	8.28E-04	9.90E-04
E26	0.00E+00	1.52E-05	1.49E-06	4.78E+01	7.85E-05	2.79E-01	2.80E-05	5.55E-03	6.52E-03	1.06E-03	2.69E-03	1.65E-03	1.69E-03	6.28E-04	2.35E-04	6.19E-08	9.95E-04	9.84E-04
E27	0.00E+00	2.09E-05	1.87E-06	5.21E+01	7.91E-05	2.86E-01	3.25E-05	1.15E-02	6.98E-03	1.16E-03	3.09E-03	1.78E-03	1.82E-03	1.24E-03	2.50E-04	6.27E-08	1.27E-03	2.10E-03
E28	0.00E+00	1.10E-05	1.15E-06	4.01E+01	6.81E-05	2.42E-01	2.26E-05	2.64E-03	5.52E-03	8.94E-04	2.16E-03	1.39E-03	1.43E-03	3.06E-04	2.00E-04	5.34E-08	7.37E-04	4.43E-04
E29	0.00E+00	9.72E-06	8.53E-07	2.39E+01	3.65E-05	1.30E-01	1.51E-05	5.06E-03	3.18E-03	5.28E-04	1.45E-03	8.18E-04	8.37E-04	5.69E-04	1.15E-04	2.93E-08	6.16E-04	9.25E-04
E30	0.00E+00	3.89E-06	3.62E-07	1.09E+01	1.73E-05	6.18E-02	6.58E-06	1.77E-03	1.47E-03	2.42E-04	6.30E-04	3.75E-04	3.83E-04	1.96E-04	5.30E-05	1.37E-08	2.46E-04	3.20E-04
E31	0.00E+00	1.65E-05	1.38E-06	3.60E+01	5.27E-05	1.89E-01	2.38E-05	9.61E-03	4.74E-03	7.93E-04	2.30E-03	1.23E-03	1.26E-03	1.08E-03	1.71E-04	4.29E-08	1.04E-03	1.77E-03
E32	0.00E+00	1.20E-05	9.69E-07	2.35E+01	3.27E-05	1.18E-01	1.62E-05	7.65E-03	3.05E-03	5.14E-04	1.56E-03	7.97E-04	8.14E-04	8.57E-04	1.09E-04	2.69E-08	7.46E-04	1.42E-03
E33	0.00E+00	5.10E-05	4.54E-06	1.17E+02	1.97E-04	6.94E-01	8.05E-05	2.66E-02	2.00E-02	3.14E-03	7.72E-03	4.41E-03	4.51E-03	2.65E-03	5.60E-04	1.46E-07	3.21E-03	4.88E-03
E34	0.00E+00	4.19E-05	3.40E-06	7.48E+01	1.15E-04	4.08E-01	5.63E-05	2.80E-02	1.26E-02	2.01E-03	5.41E-03	2.79E-03	2.85E-03	2.71E-03	3.48E-04	8.57E-08	2.55E-03	5.20E-03
E35	0.00E+00	5.26E-05	4.38E-06	1.00E+02	1.58E-04	5.61E-01	7.36E-05	3.35E-02	1.69E-02	2.70E-03	7.06E-03	3.75E-03	3.84E-03	3.25E-03	4.71E-04	1.18E-07	3.22E-03	6.20E-03
E36	0.00E+00	3.26E-05	2.47E-06	4.63E+01	6.23E-05	2.25E-01	3.84E-05	2.53E-02	7.62E-03	1.24E-03	3.69E-03	1.71E-03	1.74E-03	2.41E-03	2.08E-04	4.76E-08	1.95E-03	4.72E-03
E37	0.00E+00	5.26E-05	4.38E-06	1.00E+02	1.58E-04	5.61E-01	7.36E-05	3.35E-02	1.69E-02	2.70E-03	7.06E-03	3.75E-03	3.84E-03	3.25E-03	4.71E-04	1.18E-07	3.22E-03	6.20E-03
E38	0.00E+00	3.26E-05	2.47E-06	4.63E+01	6.23E-05	2.25E-01	3.84E-05	2.53E-02	7.62E-03	1.24E-03	3.69E-03	1.71E-03	1.74E-03	2.41E-03	2.08E-04	4.76E-08	1.95E-03	4.72E-03
E39	0.00E+00	2.65E-05	2.13E-06	4.94E+01	6.61E-05	2.42E-01	3.42E-05	1.83E-02	6.40E-03	1.09E-03	3.25E-03	1.66E-03	1.70E-03	1.99E-03	2.28E-04	5.38E-08	1.56E-03	3.39E-03
E40	0.00E+00	1.61E-05	1.60E-06	5.24E+01	8.66E-05	3.09E-01	3.03E-05	5.58E-03	7.17E-03	1.17E-03	2.90E-03	1.81E-03	1.86E-03	6.23E-04	2.59E-04	6.80E-08	1.04E-03	9.83E-04
E41	0.00E+00	1.24E-05	1.18E-06	3.61E+01	5.78E-05	2.07E-01	2.15E-05	5.38E-03	4.90E-03	8.03E-04	2.05E-03	1.24E-03	1.27E-03	5.93E-04	1.76E-04	4.56E-08	7.82E-04	9.68E-04
E42	0.00E+00	1.46E-05	1.44E-06	4.67E+01	7.68E-05	2.74E-01	2.71E-05	5.28E-03	6.38E-03	1.04E-03	2.59E-03	1.61E-03	1.65E-03	5.87E-04	2.30E-04	6.03E-08	9.38E-04	9.34E-04
E43	0.00E+00	8.00E-06	8.01E-07	2.65E+01	4.41E-05	1.57E-01	1.53E-05	2.59E-03	3.63E-03	5.91E-04	1.47E-03	9.19E-04	9.41E-04	2.94E-04	1.31E-04	3.47E-08	5.27E-04	4.52E-04
E44	0.00E+00	1.31E-05	1.35E-06	4.60E+01	7.76E-05	2.75E-01	2.62E-05	3.60E-03	6.32E-03	1.03E-03	2.51E-03	1.60E-03	1.64E-03	4.16E-04	2.29E-04	6.09E-08	8.78E-04	6.18E-04
E45	0.00E+00	3.04E-05	2.26E-06	5.01E+01	5.42E-05	2.07E-01	3.50E-05	2.25E-02	4.43E-03	8.51E-04	3.36E-03	1.52E-03	1.55E-03	2.91E-03	2.22E-04	5.12E-08	1.81E-03	4.19E-03
E46	0.00E+00	2.18E-05	1.58E-06	3.05E+01	2.72E-05	1.09E-01	2.25E-05	1.80E-02	2.61E-03	5.16E-04	2.13E-03	8.97E-04	9.11E-04	2.29E-03	1.29E-04	2.62E-08	1.22E-03	3.37E-03
E47	0.00E+00	2.81E-05	2.09E-06	4.64E+01	5.02E-05	1.91E-01	3.24E-05	2.08E-02	4.10E-03	7.88E-04	3.12E-03	1.41E-03	1.44E-03	2.70E-03	2.05E-04	4.76E-08	1.68E-03	3.87E-03
E48	0.00E+00	7.11E-06	5.76E-07	1.47E+01	1.85E-05	6.97E-02	9.34E-06	4.77E-03	1.36E-03	2.53E-04	8.90E-04	4.58E-04	4.68E-04	6.00E-04	6.78E-05	1.64E-08	4.22E-04	8.82E-04
E49	0.00E+00	3.23E-05	2.38E-06	5.10E+01	5.30E-05	2.04E-01	3.62E-05	2.45E-02	4.48E-03	8.65E-04	3.47E-03	1.54E-03	1.57E-03	3.17E-03	2.24E-04	5.06E-08	1.91E-03	4.57E-03
E50	0.00E+00	5.42E-06	4.93E-07	1.51E+01	2.21E-05	8.17E-02	8.76E-06	2.75E-03	1.46E-03	2.64E-04	8.37E-04	4.88E-04	4.99E-04	3.37E-04	7.31E-05	1.89E-08	3.38E-04	5.00E-04
E51	0.00E+00	3.17E-05	2.34E-06	5.03E+01	5.23E-05	2.01E-01	3.57E-05	2.40E-02	4.41E-03	8.52E-04	3.42E-03	1.52E-03	1.54E-03	3.11E-03	2.20E-04	5.00E-08	1.88E-03	4.48E-03
E52	0.00E+00	1.67E-06	1.62E-07	5.32E+00	8.10E-06	2.99E-02	2.95E-06	7.27E-04	5.21E-04	9.32E-05	2.81E-04	1.73E-04	1.77E-04	8.47E-05	2.61E-05	6.82E-09	1.04E-04	1.30E-04
E53	0.00E+00	3.04E-05	2.49E-06	6.53E+01	8.44E-05	3.17E-01	4.11E-05	1.96E-02	6.08E-03	1.13E-03	3.92E-03	2.05E-03	2.09E-03	2.47E-03	3.04E-04	7.47E-08	1.83E-03	3.62E-03
E54	0.00E+00	1.03E-05	8.03E-07	1.78E+01	1.94E-05	7.61E-02	1.19E-05	8.05E-03	1.61E-03	3.06E-04	1.11E-03	5.41E-04	5.50E-04	9.92E-04	7.93E-05	1.72E-08	5.64E-04	1.50E-03
E55	0.00E+00	3.04E-05	2.49E-06	6.53E+01	8.44E-05	3.17E-01	4.11E-05	1.96E-02	6.08E-03	1.13E-03	3.92E-03	2.05E-03	2.09E-03	2.47E-03	3.04E-04	7.47E-08	1.83E-03	3.62E-03
E56	0.00E+00	1.03E-05	8.03E-07	1.78E+01	1.94E-05	7.61E-02	1.19E-05	8.05E-03	1.61E-03	3.06E-04	1.11E-03	5.41E-04	5.50E-04	9.92E-04	7.93E-05	1.72E-08	5.64E-04	1.50E-03
F31	0.00E+00	8.26E-05	7.01E-06	1.66E+02	2.67E-04	9.46E-01	1.19E-04	5.02E-02	2.82E-02	4.47E-03	1.15E-02	6.23E-03	6.37E-03	4.90E-03	7.85E-04	1.98E-07	5.09E-03	9.28E-03
F32	0.00E+00	6.03E-05	5.66E-06	1.56E+02	2.73E-04	9.58E-01	1.03E-04	2.72E-02	2.69E-02	4.21E-03	9.84E-03	5.90E-03	6.04E-03	2.73E-03	7.57E-04	2.00E-07	3.80E-03	4.93E-03
F33	0.00E+00	2.00E-05	1.83E-06	4.74E+01	8.01E-05	2.85E-01	3.18E-05	1.09E-02	8.16E-03	1.28E-03	3.02E-03	1.78E-03	1.82E-03	1.05E-03	2.28E-04	5.83E-08	1.20E-03	1.99E-03
F34	0.00E+00	8.90E-06	9.02E-07	2.73E+01	5.01E-05	1.75E-01	1.72E-05	2.73E-03	4.75E-03	7.38E-04	1.64E-03	1.04E-03	1.07E-03	2.94E-04	1.35E-04	3.65E-08	5.79E-04	4.79E-04
F35	0.00E+00	1.99E-05	1.55E-06	3.81E+01	4.61E-05	1.73E-01	2.51E-05	1.35E-02	3.47E-03	6.51E-04	2.41E-03	1.18E-03	1.20E-03	1.74E-03	1.74E-04	4.21E-08	1.21E-03	2.51E-03
F36	0.00E+00	1.26E-05	9.58E-07	2.27E+01	2.66E-05	9.99E-02	1.54E-05	8.73E-03	2.04E-03	3.87E-04	1.49E-03	7.01E-04	7.15E-04	1.14E-03	1.03E-04	2.49E-08	7.76E-04	1.62E-03
F37	0.00E+00	1.36E-04	1.01E-05	1.82E+02	2.33E-04	8.50E-01	1.55E-04	1.09E-01	2.97E-02	4.87E-03	1.49E-02	6.67E-03	6.80E-03	1.04E-02	8.04E-04	1.79E-07	8.09E-03	2.04E-02
F38	0.00E+00	1.26E-04	9.83E-06	2.01E+02	2.91E-04	1.04E+00	1.58E-04	9.05E-02	3.34E-02	5.39E-03	1.52E-02	7.46E-03	7.61E-03	8.68E-03	9.19E-04	2.20E-07	7.60E-03	1.68E-02
F39	0.00E+00	1.61E-05	1.37E-06	3.79E+01	5.13E-05	1.92E-01	2.30E-05	9.82E-03	3.58E-03	6.57E-04	2.19E-03	1.20E-03	1.23E-03	1.22E-03	1.79E-04	4.45E-08	9.63E-04	1.81E-03
F40	0.00E+00	6.32E-06	5.18E-07	1.34E+01	1.72E-05	6.48E-02	8.45E-06	4.17E-03	1.25E-03	2.32E-04	8.04E-04	4.21E-04	4.30E-04	5.22E-04	6.24E-05	1.51E-08	3.74E-04	7.71E-04
F41	0.00E+00	1.03E-05	1.01E-06	3.30E+01	5.45E-05	1.94E-01	1.93E-05	3.58E-03	4.50E-03	7.35E-04	1.85E-03	1.14E-03	1.17E-03	4.08E-04	1.63E-04	4.30E-08	6.78E-04	6.31E-04
F42	0.00E+00	1.14E-05	1.20E-06	4.27E+01	7.32E-05	2.59E-01	2.40E-05	2.34E-03	5.88E-03	9.53E-04	2.31E-03	1.49E-03	1.52E-03	2.84E-04	2.13E-04	5.75E-08	7.86E-04	3.82E-04
F84	0.00E+00	4.04E-05	3.11E-06	5.43E+01	7.68E-05	2.75E-01	4.71E-05	3.27E-02	1.35E-02	2.02E-03	4.47E-03	2.12E-03	2.17E-03	2.44E-03	2.46E-04	4.68E-08	2.31E-03	6.12E-03
F85	0.00E+00	2.47E-05	1.99E-06	4.56E+01	6.39E-05	2.28E-01	3.24E-05	1.71E-02	7.38E-03	1.18E-03	3.11E-03	1.58E-03	1.62E-03	1.66E-03	2.12E-04	4.84E-08	1.49E-03	3.18E-03
F86	0.00E+00	3.57E-05	2.91E-06	6.93E+01	8.85E-05	3.26E-01	4.57E-05	2.56E-02	8.76E-03	1.49E-03	4.31E-03	2.24E-03	2.28E-03	2.74E-03	3.20E-04	7.32E-08	2.03E-03	4.76E-03
F87	0.00E+00	6.35E-05	4.60E-06	8.77E+01	1.09E-04	3.85E-01	7.30E-05	4.79E-02	1.38E-02	2.27E-03	7.14E-03	3.10E-03	3.16E-03	4.69E-03	3.92E-04	8.74E-08	3.98E-03	8.95E-03
F88	0.00E+00	4.04E-05	3.11E-06	5.43E+01	7.68E-05	2.75E-01	4.71E-05	3.27E-02	1.35E-02	2.02E-03	4.47E-03	2.12E-03	2.17E-03	2.44E-03	2.46E-04	4.68E-08	2.31E-03	6.12E-03
F89	0.00E+00	1.22E-04	8.28E-06	9.49E+01	9.33E-05	3.45E-01	1.14E-04	1.14E-01	2.26E-02	3.56E-03	1.10E-02	3.97E-03	4.04E-03	8.23E-03	3.87E-04	6.26E-08	7.00E-03	2.14E-02
G07	0.00E+00	6.37E-06	5.16E-07	1.21E+01	1.52E-05	5.63E-02	8.03E-06	4.67E-03	1.53E-03	2.60E-04	7.56E-04	3.89E-04	3.97E-04	4.98E-04	5.57E-05	1.26E-08	3.59E-04	8.67E-04
G09	0.00E+00	2.02E-05	1.42E-06	1.63E+01	1.41E-05	6.07E-02	1.84E-05	2.06E-02	3.95E-03	6.22E-04	1.72E-03	6.46E-04	6.58E-04	1.44E-03	6.60E-05	8.74E-09	1.06E-03	3.88E-03
G10	0.00E+00	6.37E-06	5.16E-07	1.21E+01	1.52E-05	5.63E-02	8.03E-06	4.67E-03	1.53E-03	2.60E-04	7.56E-04	3.89E-04	3.97E-04	4.98E-04	5.57E-05	1.26E-08	3.59E-04	8.67E-04
H01	0.00E+00	4.25E-04	3.22E-05	7.57E+02	6.26E-04	2.73E+00	4.54E-04	3.68E-01	3.52E-02	8.67E-03	4.18E-02	1.93E-02	1.96E-02	5.57E-02	3.22E-03	6.38E-07	2.22E-02	6.86E-02
H02	0.00E+00	4.25E-04	3.22E-05	7.57E+02	6.26E-04	2.73E+00	4.54E-04	3.68E-01	3.52E-02	8.67E-03	4.18E-02	1.93E-02	1.96E-02	5.57E-02	3.22E-03	6.38E-07	2.22E-02	6.86E-02
H03	0.00E+00	3.94E-04	2.98E-05	7.00E+02	5.79E-04	2.52E+00	4.20E-04	3.40E-01	3.26E-02	8.01E-03	3.87E-02	1.79E-02	1.81E-02	5.16E-02	2.98E-03	5.91E-07	2.06E-02	6.35E-02
H04	0.00E+00	4.71E-04	3.63E-05	8.60E+02	7.31E-04	3.18E+00	5.08E-04	4.10E-01	4.05E-02	9.87E-03	4.64E-02	2.21E-02	2.24E-02	6.10E-02	3.68E-03	7.16E-07	2.39E-02	7.65E-02
H05	0.00E+00	2.15E-04	1.64E-05	3.85E+02	3.21E-04	1.40E+00	2.30E-04	1.87E-01	1.80E-02	4.41E-03	2.11E-02	9.85E-03	9.99E-03	2.81E-02	1.64E-03	3.23E-07	1.11E-02	3.48E-02
H06	0.00E+00	2.56E-04	1.99E-05	4.74E+02	4.10E-04	1.78E+00	2.78E-04	2.23E-01	2.25E-02	5.46E-03	2.52E-02	1.23E-02	1.24E-02	3.29E-02	2.04E-03	3.93E-07	1.28E-02	4.17E-02
H07	0.00E+00	4.80E-04	3.71E-05	8.82E+02	7.57E-04	3.29E+00	5.20E-04	4.17E-01	4.17E-02	1.01E-02	4.75E-02	2.28E-02	2.31E-02	6.20E-02	3.79E-03	7.40E-07	2.44E-02	7.78E-02
H08	0.00E+00	4.01E-05	3.18E-06	6.81E+01	9.01E-05	3.29E-01	4.96E-05	3.06E-02	1.10E-02	1.77E-03	4.71E-03	2.35E-03	2.39E-03	2.89E-03	3.12E-04	6.79E-08	2.32E-03	5.71E-03
H09	0.00E+00	1.19E-05	9.44E-07	1.75E+01	2.57E-05	9.18E-02	1.45E-05	9.33E-03	4.39E-03	6.51E-04	1.37E-03	6.80E-04	6.95E-04	7.02E-04	8.05E-05	1.56E-08	6.78E-04	1.74E-03
H14	0.00E+00	1.73E-05	1.44E-06	3.58E+01	4.70E-05	1.73E-01	2.30E-05	1.21E-02	4.56E-03	7.72E-04	2.16E-03	1.16E-03	1.18E-03	1.29E-03	1.67E-04	3.85E-08	9.82E-04	2.25E-03
H16	0.00E+00	3.92E-05	3.26E-06	8.37E+01	1.13E-04	4.10E-01	5.37E-05	2.54E-02	1.07E-02	1.80E-03	5.12E-03	2.73E-03	2.78E-03	2.77E-03	3.93E-04	9.42E-08	2.34E-03	4.69E-03

Appendix F.3.1: MOVES Emission Factors by Road Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.89E-05	4.21E-06	1.60E+02	2.71E-04	1.03E+00	8.64E-05	7.69E-03	1.17E-02	2.35E-03	8.41E-03	5.42E-03	5.57E-03	4.51E-04	8.19E-04	2.25E-07	2.85E-03	1.20E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	5.01E-05	5.34E-06	2.26E+02	3.28E-04	1.23E+00	1.07E-04	1.31E-02	1.23E-02	2.62E-03	1.03E-02	6.65E-03	6.81E-03	1.45E-03	1.14E-03	3.13E-07	3.45E-03	2.11E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	6.07E-05	6.33E-06	2.54E+02	3.68E-04	1.13E+00	1.22E-04	1.82E-02	1.37E-02	3.15E-03	1.09E-02	7.55E-03	7.66E-03	3.12E-03	1.26E-03	5.42E-07	3.26E-03	3.04E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.16E-03	5.08E-05	1.14E+03	1.77E-03	1.11E+01	6.17E-03	7.09E-01	3.80E-02	9.10E-03	9.32E-01	7.42E-02	7.67E-02	1.06E-01	4.78E-03	1.34E-06	8.55E-01	1.30E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.33E-03	5.03E-05	1.14E+03	1.70E-03	1.06E+01	6.37E-03	6.08E-01	2.86E-02	7.75E-03	9.65E-01	7.42E-02	7.68E-02	1.04E-01	4.73E-03	1.37E-06	8.88E-01	1.11E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	6.14E-04	2.47E-05	8.33E+02	3.47E-04	1.98E+00	6.54E-04	4.04E-01	3.51E-02	9.53E-03	8.12E-02	1.47E-02	1.50E-02	1.10E-01	3.03E-03	3.13E-07	6.61E-02	7.57E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	5.73E-03	3.85E-05	1.14E+03	1.04E-04	3.91E+00	6.52E-03	9.47E-01	3.50E-02	8.51E-03	1.02E+00	4.92E-02	5.25E-02	1.64E-01	4.03E-03	1.34E-09	9.72E-01	1.76E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.84E-04	2.39E-05	6.57E+02	4.22E-04	1.52E+00	5.23E-04	2.62E-01	2.48E-02	7.22E-03	5.98E-02	1.48E-02	1.51E-02	6.63E-02	2.64E-03	1.08E-06	4.47E-02	4.89E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.50E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.67E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.96E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	3.56E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.49E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.38E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.60E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.00E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.11E-05	4.44E-06	1.67E+02	2.86E-04	1.24E+00	9.13E-05	8.44E-03	8.94E-03	2.08E-03	8.89E-03	5.73E-03	5.88E-03	4.10E-04	8.52E-04	2.52E-07	3.01E-03	1.32E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.32E-05	5.68E-06	2.38E+02	3.53E-04	1.52E+00	1.14E-04	1.41E-02	9.26E-03	2.33E-03	1.10E-02	7.13E-03	7.30E-03	1.43E-03	1.20E-03	3.53E-07	3.71E-03	2.27E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.03E-05	6.30E-06	2.63E+02	3.71E-04	1.38E+00	1.23E-04	1.87E-02	1.05E-02	2.82E-03	1.11E-02	7.60E-03	7.72E-03	3.13E-03	1.31E-03	5.70E-07	3.40E-03	3.11E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.37E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.54E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.11E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.30E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.37E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.18E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.07E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.99E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.78E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.19E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.62E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.89E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.18E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.94E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.46E+00	3.86E-02	1.53E-02	7.18E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.75E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.55E+00	3.81E-02	1.16E-02	8.06E-02	2.86E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.92E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.62E-05	5.00E-06	1.76E+02	3.22E-04	1.62E+00	1.03E-04	9.41E-03	7.63E-03	2.07E-03	1.00E-02	6.45E-03	6.62E-03	3.76E-04	9.00E-04	3.03E-07	3.39E-03	1.47E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	5.96E-05	6.37E-06	2.52E+02	3.98E-04	2.01E+00	1.29E-04	1.55E-02	7.92E-03	2.31E-03	1.24E-02	8.03E-03	8.23E-03	1.41E-03	1.28E-03	4.07E-07	4.18E-03	2.49E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.52E-05	6.83E-06	2.73E+02	4.07E-04	1.77E+00	1.34E-04	1.99E-02	8.94E-03	2.77E-03	1.23E-02	8.31E-03	8.46E-03	3.14E-03	1.36E-03	6.29E-07	3.79E-03	3.30E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.61E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.77E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.10E-01	1.96E-02	5.03E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.73E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.23E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.17E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.39E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.23E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.04E-05	7.61E-06	2.42E+02	4.90E-04	1.65E+00	1.56E-04	6.70E-03	8.50E-02	1.19E-02	1.52E-02	9.82E-03	1.01E-02	1.50E-03	1.21E-03	2.76E-07	5.16E-03	1.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	9.96E-05	1.04E-05	3.21E+02	5.84E-04	1.69E+00	1.96E-04	1.70E-02	9.19E-02	1.27E-02	1.84E-02	1.21E-02	1.24E-02	2.97E-03	1.60E-03	3.07E-07	6.04E-03	2.92E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.99E-04	2.06E-05	3.73E+02	1.11E-03	1.66E+00	3.79E-04	3.43E-02	9.51E-02	1.39E-02	3.09E-02	2.31E-02	2.33E-02	5.27E-03	1.83E-03	7.72E-07	7.62E-03	6.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.63E+00	4.80E-01	6.85E-02	3.89E+00	2.20E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.87E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.44E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.39E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.51E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.92E-03	1.32E-04	1.24E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.28E-02	3.44E-01	6.20E-02	6.38E-02	1.62E-01	4.53E-03	5.76E-07	2.80E-01	3.24E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.47E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.44E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.89E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.97E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.87E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.11E+03	4.76E-03	2.76E+00	9.87E-03	7.40E-01	2.64E-01	4.34E-02	1.31E-01	5.89E-02	6.03E-02	5.68E-02	5.50E-03	3.27E-05	2.33E-02	1.42E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.35E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.19E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.79E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	9.02E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.98E-05	6.47E-06	2.07E+02	4.16E-04	1.48E+00	1.33E-04	6.51E-03	6.23E-02	8.89E-03	1.29E-02	8.34E-03	8.56E-03	1.13E-03	1.04E-03	2.52E-07	4.38E-03	1.02E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.16E-05	8.56E-06	2.75E+02	4.90E-04	1.52E+00	1.63E-04	1.47E-02	6.60E-02	9.39E-03	1.54E-02	1.01E-02	1.03E-02	2.38E-03	1.37E-03	2.93E-07	5.08E-03	2.49E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.51E-04	1.56E-05	3.17E+02	8.50E-04	1.47E+00	2.90E-04	2.78E-02	6.96E-02	1.05E-02	2.39E-02	1.77E-02	1.78E-02	4.37E-03	1.56E-03	6.77E-07	6.08E-03	4.86E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.01E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.72E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.44E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.31E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.46E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.81E+00	3.55E-01	5.20E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.58E-09	3.26E+00	5.20E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.83E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.72E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.91E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.72E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.92E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.38E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.44E-05	5.89E-06	1.87E+02	3.79E-04	1.34E+00	1.21E-04	6.70E-03	4.71E-02	6.95E-03	1.18E-02	7.59E-03	7.78E-03	9.03E-04	9.42E-04	2.46E-07	3.99E-03	1.05E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.21E-05	7.59E-06	2.51E+02	4.42E-04	1.39E+00	1.47E-04	1.38E-02	4.99E-02	7.34E-03	1.39E-02	9.06E-03	9.28E-03	2.05E-03	1.25E-03	2.95E-07	4.56E-03	2.31E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.29E-04	1.34E-05	2.85E+02	7.16E-04	1.34E+00	2.50E-04	2.40E-02	5.91E-02	9.00E-03	2.03E-02	1.50E-02	1.50E-02	3.90E-03	1.43E-03	6.34E-07	5.29E-03	4.19E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.73E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.20E-01
2	RuralR

Appendix F.3.1: MOVES Emission Factors by Road Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.50E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.67E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.96E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	3.56E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.49E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.38E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.60E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.11E-05	4.44E-06	1.67E+02	2.86E-04	1.24E+00	9.13E-05	8.44E-03	8.94E-03	2.08E-03	8.89E-03	5.73E-03	5.88E-03	4.10E-04	8.52E-04	2.52E-07	3.01E-03	1.32E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.32E-05	5.68E-06	2.38E+02	3.53E-04	1.52E+00	1.14E-04	1.41E-02	9.26E-03	2.33E-03	1.10E-02	7.13E-03	7.30E-03	1.43E-03	1.20E-03	3.53E-07	3.71E-03	2.27E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.03E-05	6.30E-06	2.63E+02	3.71E-04	1.38E+00	1.23E-04	1.87E-02	1.05E-02	2.82E-03	1.11E-02	7.60E-03	7.72E-03	3.13E-03	1.31E-03	5.70E-07	3.40E-03	3.11E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.37E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.54E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.11E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.30E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.37E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.18E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.07E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.99E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.78E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.19E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.62E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.89E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.18E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.94E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.46E+00	3.86E-02	1.53E-02	7.18E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.75E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.55E+00	3.81E-02	1.16E-02	8.06E-02	2.86E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.92E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.62E-05	5.00E-06	1.76E+02	3.22E-04	1.62E+00	1.03E-04	9.41E-03	7.63E-03	2.07E-03	1.00E-02	6.45E-03	6.62E-03	3.76E-04	9.00E-04	3.03E-07	3.39E-03	1.47E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	5.96E-05	6.37E-06	2.52E+02	3.98E-04	2.01E+00	1.29E-04	1.55E-02	7.92E-03	2.31E-03	1.24E-02	8.03E-03	8.23E-03	1.41E-03	1.28E-03	4.07E-07	4.18E-03	2.49E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.52E-05	6.83E-06	2.73E+02	4.07E-04	1.77E+00	1.34E-04	1.99E-02	8.94E-03	2.77E-03	1.23E-02	8.31E-03	8.46E-03	3.14E-03	1.36E-03	6.29E-07	3.79E-03	3.30E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.61E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.77E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.10E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.73E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.23E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.17E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.39E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.23E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.31E-05	7.91E-06	2.17E+02	5.09E-04	1.66E+00	1.63E-04	8.50E-03	6.58E-02	9.49E-03	1.58E-02	1.02E-02	1.05E-02	1.13E-03	1.10E-03	3.00E-07	5.35E-03	1.33E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.81E-05	1.03E-05	2.93E+02	5.99E-04	1.73E+00	1.99E-04	1.81E-02	7.26E-02	1.06E-02	1.88E-02	1.23E-02	1.26E-02	2.54E-03	1.46E-03	4.14E-07	6.23E-03	3.03E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.70E-04	1.76E-05	3.37E+02	9.66E-04	1.64E+00	3.28E-04	3.30E-02	7.50E-02	1.15E-02	2.74E-02	2.01E-02	2.03E-02	4.79E-03	1.66E-03	8.23E-07	7.13E-03	5.73E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.01E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.72E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	6.63E+00	1.83E-02	1.84E+00	1.91E-01	3.07E-02	2.86E+00	1.61E-01	1.70E-01	1.41E-01	5.82E-03	1.89E-06	2.69E+00	3.39E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.43E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.32E-03	1.34E-05	1.44E+03	3.31E-04	5.95E+00	2.19E-02	2.61E+00	3.30E-02	2.20E-02	3.48E+00	1.66E-01	1.77E-01	2.08E-01	4.97E-03	2.23E-05	1.20E-01	
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.83E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	3.31E-06	1.38E-01	1.47E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.72E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.91E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.72E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.92E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.38E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.30E-05	6.81E-06	1.90E+02	4.38E-04	1.56E+00	1.40E-04	7.54E-03	4.89E-02	7.24E-03	1.36E-02	8.78E-03	9.01E-03	9.03E-04	9.58E-04	2.68E-07	4.61E-03	1.18E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.34E-05	8.79E-06	2.55E+02	5.15E-04	1.61E+00	1.71E-04	1.55E-02	5.39E-02	8.06E-03	1.62E-02	1.05E-02	1.08E-02	2.13E-03	1.28E-03	3.69E-07	5.36E-03	2.59E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.40E-04	1.46E-05	2.93E+02	8.09E-04	1.53E+00	2.73E-04	2.76E-02	5.61E-02	8.92E-03	2.30E-02	1.68E-02	1.69E-02	4.09E-03	1.44E-03	7.34E-07	6.03E-03	4.78E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.73E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.20E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.41E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.59E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.87E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.45E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.66E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.25E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.56E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.02E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.32E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.80E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.37E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.44E+02	2.75E-02	1.00E+01	8.72E-03	6.96E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.43E-05	5.88E-06	1.79E+02	3.78E-04	1.33E+00	1.21E-04	7.58E-03	3.60E-02	5.56E-03	1.18E-02	7.58E-03	7.78E-03	7.52E-04	9.10E-04	2.57E-07	3.98E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.09E-05	7.49E-06	2.45E+02	4.44E-04	1.41E+00	1.46E-04	1.45E-02	3.94E-02	6.19E-03	1.39E-02	9.07E-03	9.29E-03	1.90E-03	1.23E-03	3.58E-07	4.63E-03	2.41E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.11E-04	1.15E-05	2.80E+02	6.45E-04	1.34E+00	2.17E-04	2.43E-02	4.13E-02	6.95E-03	1.85E-02	1.33E-02	1.35E-02	3.78E-03	1.38E-03	6.78E-07	5.01E-03	4.16E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.39E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.12E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.05E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.84E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.76E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.27E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.05E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.46E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.28E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.76E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.96E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.34E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17

Appendix F.3.1: MOVES Emission Factors by Road Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.61E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.77E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.10E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.73E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.23E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.17E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.39E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.23E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.04E-05	7.61E-06	2.42E+02	4.90E-04	1.65E+00	1.56E-04	6.70E-03	8.50E-02	1.19E-02	1.52E-02	9.82E-03	1.01E-02	1.50E-03	1.21E-03	2.76E-07	5.16E-03	1.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	9.96E-05	1.04E-05	3.21E+02	5.84E-04	1.69E+00	1.96E-04	1.70E-02	9.19E-02	1.27E-02	1.84E-02	1.21E-02	1.24E-02	2.97E-03	1.60E-03	3.07E-07	6.04E-03	2.92E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.99E-04	2.06E-05	3.73E+02	1.11E-03	1.66E+00	3.79E-04	3.43E-02	9.51E-02	1.39E-02	3.09E-02	2.31E-02	2.33E-02	5.27E-03	1.83E-03	7.72E-07	7.62E-03	6.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.63E+00	4.80E-01	6.85E-02	3.89E+00	2.20E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.87E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.44E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.38E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.51E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.32E-03	1.32E-04	1.14E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.23E-02	3.44E-01	6.20E-02	6.28E-02	1.62E-01	4.53E-03	5.76E-06	1.80E-01	3.74E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.47E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.44E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.89E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.97E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.87E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.16E+03	4.76E-03	2.76E+00	1.87E-03	7.60E-01	2.64E-01	4.14E-02	1.31E-01	1.08E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-06	2.33E-02	1.42E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.35E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.19E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.79E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	9.02E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.98E-05	6.47E-06	2.07E+02	4.16E-04	1.48E+00	1.33E-04	6.51E-03	6.23E-02	8.89E-03	1.29E-02	8.34E-03	8.56E-03	1.13E-03	1.04E-03	2.52E-07	4.38E-03	1.02E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.81E-05	8.54E-06	2.75E+02	4.90E-04	1.52E+00	1.63E-04	1.47E-02	6.60E-02	9.39E-03	1.54E-02	1.01E-02	1.02E-02	2.38E-03	1.37E-03	2.59E-07	5.08E-03	2.43E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.51E-04	1.56E-05	3.17E+02	8.50E-04	1.47E+00	2.90E-04	2.78E-02	6.96E-02	1.05E-02	2.39E-02	1.77E-02	1.78E-02	4.37E-03	1.56E-03	6.77E-07	6.08E-03	4.86E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.01E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.72E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.44E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.31E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.46E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.81E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.22E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.83E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.72E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.91E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.42E-01	6.72E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.92E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.38E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.44E-05	5.89E-06	1.87E+02	3.79E-04	1.34E+00	1.21E-04	6.70E-03	4.71E-02	6.95E-03	1.18E-02	7.59E-03	7.79E-03	9.03E-04	9.42E-04	2.46E-07	3.99E-03	1.05E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.21E-05	7.59E-06	2.51E+02	4.42E-04	1.39E+00	1.47E-04	1.38E-02	4.99E-02	7.34E-03	1.39E-02	9.06E-03	9.28E-03	2.05E-03	1.25E-03	2.96E-07	4.59E-03	2.31E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.25E-04	1.30E-05	2.89E+02	7.16E-04	1.34E+00	2.43E-04	2.48E-02	5.34E-02	8.35E-03	2.03E-02	1.49E-02	1.50E-02	3.90E-03	1.43E-03	6.39E-07	5.29E-03	4.29E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.73E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.20E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.36E-02	9.69E-05	1.28E+03	1.61E-03	5.47E+00	1.57E-02	1.60E+00	1.99E-01	3.11E-02	2.44E+00	1.39E-01	1.47E-01	1.27E-01	5.24E-03	1.73E-06	2.30E+00	2.96E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.84E-03	8.42E-05	1.04E+03	5.64E-04	1.41E+00	1.78E-03	1.09E+00	2.12E-01	3.77E-02	2.14E-01	3.84E-02	3.96E-02	1.37E-01	3.79E-03	4.47E-07	1.74E-01	2.05E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.45E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.66E-01	1.19E-01	2.00E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.31E-06	1.37E-01	1.19E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.56E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.02E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.32E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.80E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.37E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.89E-05	5.29E-06	1.79E+02	3.41E-04	1.21E+00	1.09E-04	7.07E-03	3.55E-02	5.46E-03	1.06E-02	6.83E-03	7.01E-03	7.52E-04	9.05E-04	2.42E-07	3.58E-03	1.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	6.42E-05	6.78E-06	2.43E+02	4.00E-04	1.29E+00	1.32E-04	1.36E-02	3.78E-02	5.85E-03	1.26E-02	8.18E-03	8.38E-03	1.87E-03	1.22E-03	3.06E-07	4.17E-03	2.25E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.02E-04	1.06E-05	2.79E+02	5.93E-04	1.24E+00	2.00E-04	2.26E-02	4.04E-02	6.68E-03	1.70E-02	1.23E-02	1.24E-02	3.67E-03	1.38E-03	6.14E-07	4.57E-03	3.88E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.53E-06	1.83E+00	2.29E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.11E-02	7.41E-05	1.14E+03	1.42E-03	5.95E+00	1.30E-02	1.19E+00	1.39E-01	2.26E-02	2.02E+00	1.15E-01	1.21E-01	1.11E-01	4.69E-03	1.52E-06	1.90E+00	2.19E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.41E-03	6.01E-05	8.92E+02	4.77E-04	1.48E+00	1.40E-03	8.14E-01	1.48E-01	2.64E-02	1.73E-01	2.93E-02	3.02E-02	1.18E-01	3.26E-03	3.62E-07	1.43E-01	1.53E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.76E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.27E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.05E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.46E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.28E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.76E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.96E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.34E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.72E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.66E-03	4.01E-04	3.65E+02	2.62E-02	1.12E+01	8.32E-03	7.10E-01	3.43E-02	1.78E-02	6.08E-01	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.41E-06	8.87E-02	3.15E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.50E-05	4.87E-06	1.73E+02	3.13E-04	1.12E+00	1.00E-04	7.34E-03	2.75E-02	4.43E-03	9.74E-03	6.28E-03	6.44E-03	6.45E-04	8.78E-04	2.39E-07	3.30E-03	1.15E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	5.85E-05	6.20E-06	2.38E+02	3.71E-04	1.23E+00	1.22E-04	1.34E-02	2.95E-02	4.81E-03	1.16E-02	7.55E-03	7.74E-03	1.74E-03	1.20E-03	3.14E-07	3.88E-03	2.20E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	8.62E-05	8.96E-06	2.73E+02	5.05E-04	1.17E+00	1.70E-04	2.11E-02	3.15E-02	5.52E-03	1.46E-02	1.04E-02	1.06E-02	3.51E-03	1.35E-03	5.96E-07	4.05E-03	3.58E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.05E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.93E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.16E-03	6.05E-05	1.11E+03	1.30E-03	6.40E+00	1.07E-02	9.52E-01	8.96E-02	1.61E-02	1.66E+00	9.65E-02	1.01E-01	1.07E-01	4.58E-03	1.50E-06	1.56E+00	1.75E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.12E-03	4.59E-05	8.51E+02	3.98E-04	1.52E+00	1.13E-03	6.55E-01	1.02E-01	1.93E-02	1.40E-01	2.32E-02	2.38E-02	1.12E-01	3.11E-03	3.31E-07	1.17E-01	1.23E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.49E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.77E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/m

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.31E-05	7.91E-06	2.17E+02	5.09E-04	1.66E+00	1.63E-04	8.50E-03	6.58E-02	9.49E-03	1.58E-02	1.02E-02	1.05E-02	1.13E-03	1.10E-03	3.00E-07	5.35E-03	1.33E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.81E-05	1.03E-05	2.93E+02	5.99E-04	1.73E+00	1.99E-04	1.81E-02	7.26E-02	1.06E-02	1.88E-02	1.23E-02	1.26E-02	2.54E-03	1.46E-03	4.14E-07	6.23E-03	3.03E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.70E-04	1.76E-05	3.37E+02	9.66E-04	1.64E+00	3.28E-04	3.30E-02	7.50E-02	1.15E-02	2.74E-02	2.01E-02	2.03E-02	4.79E-03	1.66E-03	8.23E-07	7.13E-03	5.73E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.01E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.72E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	6.63E+00	1.83E-02	1.84E+00	1.91E-01	3.07E-02	2.86E+00	1.61E-01	1.70E-01	1.41E-01	5.82E-03	1.89E-06	2.69E+00	3.39E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.43E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.81E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.22E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.83E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.72E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.91E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.72E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.92E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.38E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.30E-05	6.81E-06	1.90E+02	4.38E-04	1.56E+00	1.40E-04	7.54E-03	4.89E-02	7.24E-03	1.36E-02	8.78E-03	9.01E-03	9.03E-04	9.58E-04	2.68E-07	4.61E-03	1.18E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.34E-05	8.79E-06	2.55E+02	5.15E-04	1.61E+00	1.70E-04	1.55E-02	5.39E-02	8.06E-03	1.62E-02	1.05E-02	1.08E-02	2.13E-03	1.28E-03	3.69E-07	5.36E-03	2.59E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.40E-04	1.46E-05	2.92E+02	8.09E-04	1.53E+00	2.73E-04	2.76E-02	5.61E-02	8.92E-03	2.30E-02	1.68E-02	1.69E-02	4.09E-03	1.44E-03	7.34E-07	6.03E-03	4.78E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.73E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.20E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.41E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.59E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.87E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.45E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.66E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.25E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.56E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.02E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.32E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.80E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.37E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.33E-05	5.76E-06	1.79E+02	3.71E-04	1.33E+00	1.18E-04	7.34E-03	3.65E-02	5.61E-03	1.15E-02	7.43E-03	7.63E-03	7.52E-04	9.05E-04	2.49E-07	3.90E-03	1.15E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.02E-05	7.41E-06	2.44E+02	4.39E-04	1.41E+00	1.45E-04	1.43E-02	4.00E-02	6.21E-03	1.37E-02	8.96E-03	9.18E-03	1.91E-03	1.22E-03	3.38E-07	4.57E-03	2.37E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.11E-04	1.15E-05	2.79E+02	6.43E-04	1.34E+00	2.17E-04	2.40E-02	4.20E-02	6.96E-03	1.84E-02	1.33E-02	1.34E-02	3.77E-03	1.38E-03	6.55E-07	4.96E-03	4.12E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.39E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.12E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.05E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.84E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.76E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.27E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.05E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.46E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.28E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.76E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.96E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.34E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.72E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.64E-05	5.02E-06	1.71E+02	3.23E-04	1.16E+00	1.03E-04	7.21E-03	2.79E-02	4.48E-03	1.00E-02	6.48E-03	6.65E-03	6.45E-04	8.68E-04	2.37E-07	3.40E-03	1.13E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	6.08E-05	6.43E-06	2.35E+02	3.84E-04	1.28E+00	1.26E-04	1.35E-02	3.03E-02	4.93E-03	1.20E-02	7.84E-03	8.03E-03	1.75E-03	1.18E-03	3.17E-07	4.02E-03	2.22E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	8.97E-05	9.33E-06	2.69E+02	5.24E-04	1.21E+00	1.76E-04	2.14E-02	3.21E-02	5.60E-03	1.52E-02	1.08E-02	1.10E-02	3.53E-03	1.33E-03	6.00E-07	4.20E-03	3.65E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.05E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.93E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.33E-03	5.90E-05	1.17E+03	1.38E-03	7.54E+00	9.75E-03	9.11E-01	7.26E-02	1.41E-02	1.51E+00	9.17E-02	9.61E-02	1.12E-01	4.85E-03	1.57E-06	1.42E+00	1.67E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.05E-03	4.36E-05	9.10E+02	3.85E-04	1.63E+00	1.05E-03	6.39E-01	8.00E-02	1.72E-02	1.31E-01	2.20E-02	2.27E-02	1.20E-01	3.32E-03	3.53E-07	1.08E-01	1.20E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.49E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.77E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.46E-04	4.24E-05	6.63E+02	6.92E-04	1.33E+00	9.01E-04	4.18E-01	5.95E-02	1.19E-02	1.03E-01	2.53E-02	2.57E-02	6.64E-02	2.67E-03	1.08E-06	7.69E-02	7.82E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	8.36E-04	4.16E-05	6.38E+02	6.77E-04	1.26E+00	8.90E-04	4.07E-01	6.16E-02	1.20E-02	1.02E-01	2.48E-02	2.52E-02	6.37E-02	2.57E-03	1.03E-06	7.65E-02	7.63E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	4.85E-04	4.80E-05	8.21E+02	1.92E-03	3.81E+00	7.48E-04	3.08E-01	7.03E-02	1.40E-02	5.27E-02	4.36E-02	4.35E-02	3.96E-02	3.89E-03	2.22E-06	9.28E-03	5.70E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.87E-03	1.33E-04	1.36E+03	6.08E-06	1.61E+00	1.37E-03	1.97E+00	1.42E-01	3.11E-02	1.14E-01	3.94E-02	3.93E-02	2.05E-01	4.54E-03	0.00E+00	7.47E-02	3.71E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.86E-03	1.24E-04	1.39E+03	7.68E-06	1.87E+00	1.41E-03	2.13E+00	1.55E-01	2.83E-02	1.29E-01	3.75E-02	3.79E-02	2.12E-01	4.65E-03	0.00E+00	9.14E-02	4.02E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	4.32E-05	4.68E-06	1.66E+02	3.01E-04	1.11E+00	9.61E-05	7.40E-03	1.98E-02	3.44E-03	9.36E-03	6.03E-03	6.19E-03	5.64E-04	8.45E-04	2.37E-07	3.17E-03	1.16E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	5.55E-05	5.88E-06	2.29E+02	3.55E-04	1.22E+00	1.16E-04	1.31E-02	2.12E-02	3.76E-03	1.11E-02	7.22E-03	7.40E-03	1.62E-03	1.16E-03	3.15E-07	3.72E-03	2.14E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	7.60E-05	7.91E-06	2.60E+02	4.49E-04	1.14E+00	1.51E-04	1.98E-02	2.30E-02	4.40E-03	1.31E-02	9.27E-03	9.39E-03	3.33E-03	1.29E-03	5.76E-07	3.74E-03	3.35E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.18E-03	4.98E-05	1.11E+03	1.29E-03	7.43E+00	8.44E-03	8.62E-01	7.53E-02	1.43E-02	1.31E+00	8.06E-02	8.43E-02	1.05E-01	4.59E-03	1.48E-06	1.22E+00	1.59E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.08E-03	5.01E-05	1.13E+03	1.31E-03	7.69E+00	8.32E-03	7.56E-01	5.20E-02	1.12E-02	1.29E+00	8.01E-02	8.38E-02	1.07E-01	4.69E-03	1.52E-06	1.20E+00	1.38E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	8.51E-04	3.45E-05	8.69E+02	3.40E-04	1.63E+00	8.69E-04	5.30E-01	6.01E-02	1.37E-02	1.08E-01	1.82E-02	1.87E-02	1.15E-01	3.17E-03	3.29E-07	8.98E-02	9.94E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.35E-03	5.50E-05	1.14E+03	1.46E-04	4.06E+00	9.49E-03	1.20E+00	8.67E-02	1.55E-02	1.49E+00	7.14E-02	7.61E-02	1.65E-01	4.03E-03	1.29E-09	1.42E+00	2.23E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.75E-04	3.35E-05	6.62E+02	5.43E-04	1.33E+00	7.18E-04	3.46E-01	4.24E-02	9.59E-03	8.21E-02	2.00E-02	2.03E-02	6.64E-02	2.67E-03	1.06E-06	6.18E-02	6.48E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.65E-04	3.28E-05	6.35E+02	5.26E-04	1.25E+00	7.08E-04	3.36E-01	4.39E-02	9.59E-03	8.12E-02	1.95E-02	1.98E-02	6.34E-02	2.56E-03	1.00E-06	6.14E-02	6.28E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	3.97E-04	3.95E-05	8.13E+02	1.64E-03	4.12E+00	6.28E-04	2.56E-01	4.92E-02	1.13E-02	4.44E-02	3.68E-02	3.67E-02	3.91E-02	3.85E-03	2.22E-06	7.68E-03	4.70E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.58E-03	1.13E-04	1.31E+03	4.99E-06	1.40E+00	1.16E-03	1.63E+00	9.58E-02	2.36E-02	9.42E-02	3.34E-02	3.32E-02	1.97E-01	4.38E-03	0.00E+00	6.11E-02	3.07E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.04E-04	1.33E+03	6.33E-06	1.59E+00	1.18E-03	1.73E+00	1.03E-01	2.07E-02	1.07E-01	3.15E-02	3.17E-02	2.03E-01	4.44E-03	0.00E+00	7.50E-02	3.26E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	4.11E-05	4.45E-06	1.63E+02	2.86E-04	1.10E+00	9.14E-05	7.62E-03	1.47E-02	2.79E-03	8.89E-03	5.73E-03	5.88E-03	5.01E-04	8.33E-04	2.38E-07	3.01E-03	1.19E-03
5	UrbanUnrestrictedA

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1121	0.00E+00	1.28E-05	1.38E-06	5.20E+01	8.90E-05	3.86E-01	2.84E-05	2.63E-03	2.78E-03	6.47E-04	2.77E-03	1.78E-03	1.83E-03	1.28E-04	2.65E-04	7.84E-08	9.37E-04	4.11E-04
17	A01	110	Passenger Truck	1877	0.00E+00	2.77E-05	2.96E-06	1.24E+02	1.84E-04	7.92E-01	5.94E-05	7.35E-03	4.83E-03	1.21E-03	5.73E-03	3.72E-03	3.81E-03	7.45E-04	6.26E-04	1.84E-07	1.93E-03	1.18E-03
17	A01	110	Single Unit Short Haul Truck	476	0.00E+00	6.30E-05	3.33E-06	9.13E+01	6.46E-05	2.51E-01	6.92E-05	3.68E-02	2.85E-03	9.41E-04	7.62E-03	2.13E-03	2.16E-03	9.34E-03	3.65E-04	1.63E-07	5.47E-03	6.87E-03
17	A01	110	Single Unit Long Haul Truck	21	0.00E+00	2.70E-06	1.39E-07	3.83E+00	2.59E-06	9.92E-03	2.95E-06	1.53E-03	1.27E-04	4.03E-05	3.30E-04	8.75E-05	8.87E-05	3.90E-04	1.53E-05	6.65E-09	2.41E-04	2.85E-04
17	A01	110	Combination Short Haul Truck	246	0.00E+00	9.30E-05	6.97E-06	9.36E+01	2.21E-07	8.41E-02	6.58E-05	9.98E-02	2.64E-03	1.05E-03	4.91E-03	2.03E-03	2.01E-03	1.41E-02	3.14E-04	0.00E+00	2.90E-03	1.88E-02
17	A01	110	Combination Long Haul Truck	224	0.00E+00	8.41E-05	6.06E-06	8.48E+01	2.54E-07	8.29E-02	6.11E-05	9.66E-02	2.37E-03	7.23E-04	5.02E-03	1.78E-03	1.79E-03	1.30E-02	2.84E-04	0.00E+00	3.23E-03	1.82E-02
17	A02	110	Passenger Car	1630	0.00E+00	1.86E-05	2.01E-06	7.56E+01	1.29E-04	5.61E-01	4.13E-05	3.82E-03	4.05E-03	9.42E-04	4.02E-03	2.59E-03	2.66E-03	1.86E-04	3.86E-04	1.14E-07	1.36E-03	5.98E-04
17	A02	110	Passenger Truck	2729	0.00E+00	4.03E-05	4.31E-06	1.80E+02	2.68E-04	1.15E+00	8.64E-05	1.07E-02	7.02E-03	1.77E-03	8.34E-03	5.41E-03	5.53E-03	1.08E-03	9.10E-04	2.68E-07	2.81E-03	1.72E-03
17	A02	110	Single Unit Short Haul Truck	438	0.00E+00	5.79E-05	3.07E-06	8.39E+01	5.94E-05	2.31E-01	6.36E-05	3.38E-02	2.62E-03	8.65E-04	7.01E-03	1.96E-03	1.98E-03	8.59E-03	3.36E-04	1.50E-07	5.02E-03	6.31E-03
17	A02	110	Single Unit Long Haul Truck	19	0.00E+00	2.48E-06	1.28E-07	3.52E+00	2.38E-06	9.12E-03	2.71E-06	1.41E-03	1.17E-04	3.70E-05	3.04E-04	8.05E-05	8.15E-05	3.58E-04	1.41E-05	6.12E-09	2.22E-04	2.62E-04
17	A02	110	Combination Short Haul Truck	216	0.00E+00	8.18E-05	6.13E-06	8.24E+01	1.95E-07	7.40E-02	5.78E-05	8.78E-02	2.32E-03	9.20E-04	4.32E-03	1.79E-03	1.77E-03	1.24E-02	2.77E-04	0.00E+00	2.56E-03	1.65E-02
17	A02	110	Combination Long Haul Truck	197	0.00E+00	7.40E-05	5.33E-06	7.46E+01	2.23E-07	7.29E-02	5.37E-05	8.50E-02	2.09E-03	6.36E-04	4.42E-03	1.57E-03	1.58E-03	1.14E-02	2.50E-04	0.00E+00	2.85E-03	1.60E-02
17	A03	110	Passenger Car	1293	0.00E+00	1.48E-05	1.59E-06	6.00E+01	1.03E-04	4.45E-01	3.28E-05	3.03E-03	3.21E-03	7.47E-04	3.19E-03	2.06E-03	2.11E-03	1.47E-04	3.06E-04	9.05E-08	1.08E-03	4.74E-04
17	A03	110	Passenger Truck	2165	0.00E+00	3.20E-05	3.42E-06	1.43E+02	2.12E-04	9.14E-01	6.85E-05	8.48E-03	5.57E-03	1.40E-03	6.61E-03	4.29E-03	4.39E-03	8.60E-04	7.22E-04	2.12E-07	2.23E-03	1.36E-03
17	A03	110	Single Unit Short Haul Truck	460	0.00E+00	6.08E-05	3.22E-06	8.81E+01	6.23E-05	2.43E-01	6.68E-05	3.55E-02	2.75E-03	9.08E-04	7.36E-03	2.06E-03	2.08E-03	9.02E-03	3.52E-04	1.57E-07	5.27E-03	6.63E-03
17	A03	110	Single Unit Long Haul Truck	20	0.00E+00	2.60E-06	1.34E-07	3.69E+00	2.50E-06	9.58E-03	2.84E-06	1.48E-03	1.23E-04	3.89E-05	3.19E-04	8.45E-05	8.56E-05	3.76E-04	1.48E-05	6.42E-09	2.33E-04	2.75E-04
17	A03	110	Combination Short Haul Truck	232	0.00E+00	8.76E-05	6.57E-06	8.83E+01	2.09E-07	7.92E-02	6.20E-05	9.41E-02	2.49E-03	9.86E-04	4.63E-03	1.91E-03	1.89E-03	1.33E-02	2.96E-04	0.00E+00	2.74E-03	1.77E-02
17	A03	110	Combination Long Haul Truck	211	0.00E+00	7.93E-05	5.71E-06	7.99E+01	2.39E-07	7.81E-02	5.76E-05	9.11E-02	2.24E-03	6.81E-04	4.73E-03	1.68E-03	1.69E-03	1.22E-02	2.68E-04	0.00E+00	3.05E-03	1.72E-02
17	A04	110	Passenger Car	1918	0.00E+00	2.19E-05	2.37E-06	8.90E+01	1.52E-04	6.61E-01	4.86E-05	4.50E-03	4.76E-03	1.11E-03	4.74E-03	3.05E-03	3.13E-03	2.18E-04	4.54E-04	1.34E-07	1.60E-03	7.03E-04
17	A04	110	Passenger Truck	3212	0.00E+00	4.75E-05	5.07E-06	2.12E+02	3.15E-04	1.36E+00	1.02E-04	1.26E-02	8.26E-03	2.08E-03	9.82E-03	6.36E-03	6.51E-03	1.28E-03	1.07E-03	3.15E-07	3.31E-03	2.03E-03
17	A04	110	Single Unit Short Haul Truck	442	0.00E+00	5.84E-05	3.09E-06	8.47E+01	5.99E-05	2.33E-01	6.42E-05	3.41E-02	2.64E-03	8.73E-04	7.07E-03	1.98E-03	2.00E-03	8.67E-03	3.39E-04	1.51E-07	5.07E-03	6.37E-03
17	A04	110	Single Unit Long Haul Truck	19	0.00E+00	2.50E-06	1.29E-07	3.55E+00	2.40E-06	9.21E-03	2.73E-06	1.42E-03	1.18E-04	3.74E-05	3.07E-04	8.12E-05	8.23E-05	3.62E-04	1.42E-05	6.17E-09	2.24E-04	2.65E-04
17	A04	110	Combination Short Haul Truck	206	0.00E+00	7.78E-05	5.84E-06	7.84E+01	1.85E-07	7.04E-02	5.51E-05	8.36E-02	2.21E-03	8.76E-04	4.11E-03	1.70E-03	1.68E-03	1.18E-02	2.63E-04	0.00E+00	2.43E-03	1.57E-02
17	A04	110	Combination Long Haul Truck	188	0.00E+00	7.05E-05	5.07E-06	7.10E+01	2.12E-07	6.94E-02	5.11E-05	8.09E-02	1.99E-03	6.05E-04	4.21E-03	1.49E-03	1.50E-03	1.09E-02	2.38E-04	0.00E+00	2.71E-03	1.52E-02
17	A05	110	Passenger Car	1127	0.00E+00	1.29E-05	1.39E-06	5.23E+01	8.95E-05	3.88E-01	2.86E-05	2.64E-03	2.80E-03	6.51E-04	2.78E-03	1.79E-03	1.84E-03	1.28E-04	2.67E-04	7.89E-08	9.42E-04	4.13E-04
17	A05	110	Passenger Truck	1887	0.00E+00	2.79E-05	2.98E-06	1.25E+02	1.85E-04	7.97E-01	5.98E-05	7.39E-03	4.85E-03	1.22E-03	5.77E-03	3.74E-03	3.83E-03	7.50E-04	6.29E-04	1.85E-07	1.94E-03	1.19E-03
17	A05	110	Single Unit Short Haul Truck	372	0.00E+00	4.92E-05	2.60E-06	7.13E+01	5.04E-05	1.96E-01	5.40E-05	2.87E-02	2.22E-03	7.35E-04	5.95E-03	1.66E-03	1.68E-03	7.30E-03	2.85E-04	1.27E-07	4.27E-03	5.36E-03
17	A05	110	Single Unit Long Haul Truck	16	0.00E+00	2.11E-06	1.08E-07	2.99E+00	2.02E-06	7.75E-03	2.30E-06	1.19E-03	9.94E-05	3.14E-05	2.58E-04	6.84E-05	6.93E-05	3.04E-04	1.20E-05	5.20E-09	1.88E-04	2.23E-04
17	A05	110	Combination Short Haul Truck	193	0.00E+00	7.30E-05	5.47E-06	7.35E+01	1.74E-07	6.60E-02	5.16E-05	7.83E-02	2.07E-03	8.21E-04	3.85E-03	1.59E-03	1.58E-03	1.11E-02	2.47E-04	0.00E+00	2.28E-03	1.48E-02
17	A05	110	Combination Long Haul Truck	176	0.00E+00	6.60E-05	4.76E-06	6.65E+01	1.99E-07	6.51E-02	4.79E-05	7.58E-02	1.86E-03	5.68E-04	3.94E-03	1.40E-03	1.41E-03	1.02E-02	2.23E-04	0.00E+00	2.54E-03	1.43E-02
17	A06	110	Passenger Car	1478	0.00E+00	1.69E-05	1.82E-06	6.86E+01	1.17E-04	5.09E-01	3.75E-05	3.46E-03	3.67E-03	8.54E-04	3.65E-03	2.35E-03	2.41E-03	1.68E-04	3.50E-04	1.03E-07	1.24E-03	5.42E-04
17	A06	110	Passenger Truck	2475	0.00E+00	3.66E-05	3.90E-06	1.64E+02	2.43E-04	1.04E+00	7.84E-05	9.69E-03	6.37E-03	1.60E-03	7.56E-03	4.90E-03	5.02E-03	9.83E-04	8.25E-04	2.43E-07	2.55E-03	1.56E-03
17	A06	110	Single Unit Short Haul Truck	350	0.00E+00	4.62E-05	2.45E-06	6.70E+01	4.74E-05	1.84E-01	5.08E-05	2.70E-02	2.09E-03	6.90E-04	5.59E-03	1.56E-03	1.58E-03	6.85E-03	2.68E-04	1.19E-07	4.01E-03	5.04E-03
17	A06	110	Single Unit Long Haul Truck	15	0.00E+00	1.98E-06	1.02E-07	2.81E+00	1.90E-06	7.28E-03	2.16E-06	1.12E-03	9.33E-05	2.95E-05	2.42E-04	6.42E-05	6.51E-05	2.86E-04	1.13E-05	4.88E-09	1.77E-04	2.09E-04
17	A06	110	Combination Short Haul Truck	170	0.00E+00	6.43E-05	4.82E-06	6.47E+01	1.53E-07	5.81E-02	4.55E-05	6.90E-02	1.82E-03	7.23E-04	3.39E-03	1.40E-03	1.39E-03	9.78E-03	2.17E-04	0.00E+00	2.01E-03	1.30E-02
17	A06	110	Combination Long Haul Truck	155	0.00E+00	5.82E-05	4.19E-06	5.86E+01	1.75E-07	5.73E-02	4.22E-05	6.68E-02	1.64E-03	5.00E-04	3.47E-03	1.23E-03	1.24E-03	8.96E-03	1.97E-04	0.00E+00	2.24E-03	1.26E-02
17	A07	110	Passenger Car	1060	0.00E+00	1.21E-05	1.31E-06	4.92E+01	8.42E-05	3.65E-01	2.69E-05	2.48E-03	2.63E-03	6.12E-04	2.62E-03	1.69E-03	1.73E-03	1.21E-04	2.51E-04	7.42E-08	8.86E-04	3.89E-04
17	A07	110	Passenger Truck	1775	0.00E+00	2.62E-05	2.80E-06	1.17E+02	1.74E-04	7.49E-01	5.62E-05	6.95E-03	4.57E-03	1.15E-03	5.42E-03	3.52E-03	3.60E-03	7.05E-04	5.92E-04	1.74E-07	1.83E-03	1.12E-03
17	A07	110	Single Unit Short Haul Truck	371	0.00E+00	4.91E-05	2.60E-06	7.12E+01	5.03E-05	1.96E-01	5.40E-05	2.87E-02	2.22E-03	7.33E-04	5.94E-03	1.66E-03	1.68E-03	7.28E-03	2.85E-04	1.27E-07	4.26E-03	5.35E-03
17	A07	110	Single Unit Long Haul Truck	16	0.00E+00	2.10E-06	1.08E-07	2.98E+00	2.02E-06	7.73E-03	2.30E-06	1.19E-03	9.92E-05	3.14E-05	2.58E-04	6.82E-05	6.92E-05	3.04E-04	1.20E-05	5.19E-09	1.88E-04	2.22E-04
17	A07	110	Combination Short Haul Truck	203	0.00E+00	7.69E-05	5.76E-06	7.74E+01	1.83E-07	6.95E-02	5.44E-05	8.25E-02	2.18E-03	8.65E-04	4.06E-03	1.68E-03	1.66E-03	1.17E-02	2.60E-04	0.00E+00	2.40E-03	1.55E-02
17	A07	110	Combination Long Haul Truck	186	0.00E+00	6.96E-05	5.01E-06	7.01E+01	2.10E-07	6.85E-02	5.05E-05	7.99E-02	1.96E-03	5.98E-04	4.15E-03	1.47E-03	1.48E-03	1.07E-02	2.35E-04	0.00E+00	2.67E-03	1.50E-02
17	A08	110	Passenger Car	1247	0.00E+00	1.42E-05	1.54E-06	5.79E+01	9.91E-05	4.30E-01	3.16E-05	2.92E-03	3.10E-03	7.21E-04	3.08E-03	1.99E-03	2.04E-03	1.42E-04	2.95E-04	8.73E-08	1.04E-03	4.57E-04
17	A08	110	Passenger Truck	2089	0.00E+00	3.09E-05	3.30E-06	1.38E+02	2.05E-04	8.82E-01	6.61E-05	8.18E-03	5.37E-03	1.35E-03	6.38E-03	4.14E-03	4.24E-03	8.30E-04	6.96E-04	2.05E-07	2.15E-03	1.32E-03
17	A08	110	Single Unit Short Haul Truck	347	0.00E+00	4.59E-05	2.43E-06	6.66E+01	4.71E-05	1.83E-01	5.04E-05	2.68E-02	2.07E-03	6.86E-04	5.56E-03	1.55E-03	1.57E-03	6.81E-03	2.66E-04	1.19E-07	3.98E-03	5.01E-03
17	A08	110	Single Unit Long Haul Truck	15	0.00E+00	1.97E-06	1.01E-07	2.79E+00	1.89E-06	7.23E-03	2.15E-06	1.11E-03	9.27E-05	2.94E-05	2.41E-04	6.38E-05	6.47E-05	2.84E-04	1.12E-05	4.85E-09	1.76E-04	2.08E-04
17	A08	110	Combination Short Haul Truck	180	0.00E+00	6.80E-05	5.10E-06	6.85E+01	1.62E-07	6.15E-02	4.81E-05	7.30E-02	1.93E-03	7.65E-04	3.59E-03	1.48E-03	1.47E-03	1.03E-02	2.30E-04	0.00E+00	2.12E-03	1.37E-02
17	A08	110	Combination Long Haul Truck	164	0.00E+00	6.15E-05	4.43E-06	6.20E+01	1.86E-07	6.06E-02	4.47E-05	7.07E-02	1.74E-03	5.29E-04	3.67E-03	1.30E-03	1.31E-03	9.48E-03	2.08E-04	0.00E+00	2.37E-03	1.33E-02
17	A09	110	Passenger Car	1393	0.00E+00	1.59E-05	1.72E-06	6.46E+01	1.11E-04	4.80E-01	3.53E-05	3.27E-03	3.46E-03	8.05E-04	3.44E-03	2.22E-03	2.27E-03	1.59E-04	3.30E-04	9.75E-08	1.16E-03	5.11E-04
17	A09	110	Passenger Truck	2332	0.00E+00	3.45E-05	3.68E-06	1.54E+02	2.29E-04	9.85E-01	7.39E-05	9.14E-03	6.00E-03	1.51E-03	7.13E-03	4.62E-03	4.73E-03	9.26E-04	7.77E-04	2.29E-07	2.40E-03	1.47E-03
17	A09	110	Single Unit Short Haul Truck	460	0.00E+00	6.08E-05	3.22E-06	8.81E+01	6.23E-05	2.43E-01	6.68E-05	3.55E-02	2.75E-03	9.08E-04	7.36E-03	2.06E-03	2.08E-03	9.02E-03	3.53E-04	1.57E-07	5.28E-03	6.63E-03
17	A09	110	Single Unit Long Haul Truck	20	0.00E+00	2.60E-06	1.34E-07	3.70E+00	2.50E-06	9.58E-03	2.85E-06	1.48E-03	1.23E-04	3.89E-05	3.19E-04	8.45E-05	8.56E-05	3.76E-04	1.48E-05	6.42E-09	2.33E-04	2.76E-04
17	A09	110	Combination Short Haul Truck	254	0.00E+00	9.59E-05	7.19E-06	9.66E+01	2.28E-07	8.67E-02	6.78E-05	1.03E-01	2.72E-03	1.08E-03	5.06E-03	2.09E-03	2.07E-03	1.46E-02	3.24E-04	0.00E+00	3.00E-03	1.94E-02
17	A09	110	Combination Long Haul Truck	231	0.00E+00	8.68E-05	6.25E-06	8.74E+01	2.62E-07	8.55E-02	6.30E-05	9.96E-02	2.45E-03	7.46E-04	5.18E-03	1.84E-03	1.85E-03	1.34E-02	2.93E-04	0.00E+00	3.34E-03	1.88E-02
17	A10	110	Passenger Car	1284	0.00E+00	1.47E-05	1.58E-06	5.96E+01	1.02E-04	4.42E-01	3.26E-05	3.01E-03	3.19E-03	7.42E-04	3.17E-03	2.04E-03	2.10E-03	1.46E-04	3.04E-04	8.99E-08	1.07E-03	4.71E-04
17	A10	110	Passenger Truck	2150	0.00E+00	3.18E-05	3.39E-06	1.42E+02	2.11E-04	9.08E-01	6.81E-05	8.42E-03	5.53E-03	1.39E-03	6.57E-03	4.26E-03	4.36E-03	8.54E-04	7.17E-04	2.11E-07	2.22E-03	1.36E-03
17	A10	110	Single Unit Short Haul Truck	399	0.00E+00	5.27E-05	2.79E-06	7.64E+01	5.40E-05	2.10E-01	5.79E-05	3.08E-02	2.38E-03	7.87E-04	6.38E-03	1.78E-03	1.80E-03	7.82E-03	3.06E-04	1.36E-07	4.57E-03	5.75E-03
17	A10	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.16E-07	3.20E+00	2.17E-06	8.30E-03	2.47E-06	1.28E-03	1.06E-04	3.37E-05	2.76E-04	7.32E-05	7.42E-05	3.26E-04	1.28E-05	5.57E-09	2.02E-04	2.39E-04
17	A10	110	Combination Short Haul Truck	222	0.00E+00	8.37E-05	6.28E-06	8.43E+01	1.99E-07	7.57E-02	5.92E-05	8.98E-02	2.38E-03	9.42E-04	4.42E-03	1.83E-03	1.81E-03	1.27E-02	2.83E-04	0.00E+00	2.62E-03	1.69E-02
17	A10	110	Combination Long Haul Truck	202	0.00E+00	7.58E-05	5.45E-06	7.63E+01	2.28E-07	7.46E-02	5.50E-05	8.70E-02	2.14E-03	6.51E-04	4.52E-03	1.60E-03	1.62E-03	1.17E-02	2.56E-04	0.00E+00	2.91E-03	1.64E-02
17	A11	110	Passenger Car	1678	0.00E+00	1.92E-05	2.07E-06	7.79E+01	1.33E-04	5.78E-01	4.26E-05	3.93E-03	4.17E-03	9.70E-04	4.14E-03	2.67E-03	2.74E-03	1.91E-04	3.97E-04	1.17E-07	1.40E-03	6.15E-04
17	A11	110	Passenger Truck	2810	0.00E+00	4.15E-05	4.43E-06	1.86E+02	2.76E-04	1.19E+00	8.90E-05	1.10E-02	7.23E-03	1.82E-03	8.59E-03	5.57E-03	5.70E-03	1.12E-03	9.37E-04	2.76E-07	2.90E-03	1.77E-03
17	A11	110	Single Unit Short Haul Truck	524	0.00E+00	6.93E-05	3.67E-06	1.01E+02	7.11E-05	2.77E-01	7.62E-05	4.05E-02	3.13E-03	1.04E-03	8.39E-03	2.35E-03	2.37E-03	1.03E-02	4.02E-04	1.79E-07	6.02E-03	7.56E-03
17	A11	110	Single Unit Long Haul Truck	23	0.00E+00	2.97E-06	1.53E-07	4.21E+00	2.85E-06	1.09E-02	3.24E-06	1.68E-03	1.40E-04	4.43E-05	3.64E-04	9.64E-05	9.76E-05	4.29E-04	1.69E-05	7.32E-09	2.65E-04	3.14E-04
17	A11	110	Combination Short Haul Truck	325	0.00E+00	1.23E-04	9.19E-06	1.24E+02	2.92E-07	1.11E-01	8.67E-05	1.32E-01	3.48E-03	1.38E-03	6.47E-03	2.68E-03	2.65E-03	1.87E-02	4.15E-04	0.00E+00	3.83E-03	2.48E-02
17	A11	110	Combination Long Haul Truck	296	0.00E+00	1.11E-04	7.99E-06	1.12E+02	3.35E-07	1.09E-01	8.06E-05	1.27E-01	3.13E-03	9.54E-04	6.63E-03	2.35E-03	2.37E-03	1.71E-02	3.75E-04	0.00E+00	4.27E-03	2.40E-02
17	A12	110	Passenger Car	1302	0.00E+00	1.49E-05	1.61E-06	6.04E+01	1.03E-04	4.48E-01	3.30E-05	3.05E-03	3.23E-03	7.52E-04	3.22E-03	2.07E-03	2.13E-03	1.48E-04	3.08E-04	9.11E-08	1.09E-03	4.77E-04
17	A12	110	Passenger Truck	2180	0.00E+00	3.22E-05	3.44E-06	1.44E+02	2.14E-04	9.21E-01	6.90E-05	8.54E-03	5.61E-03	1.41E-03	6.66E-03	4.32E-03	4.42E-03	8.66E-04	7.27E-04	2.14E-07	2.25E-03	1.37E-03
17	A12	110	Single Unit Short Haul Truck	467	0.00E+00	6.18E-05	3.27E-06	8.96E+01	6.33E-05	2.47E-01	6.79E-05	3.61E-02	2.79E-03	9.23E-04	7.48E-03	2.09E-03	2.12E-03	9.16E-03	3.58E-04	1.60E-07	5.36E-03	6.74E-03
17	A12	110	Single Unit Long Haul Truck	21	0.00E+00	2.64E-06	1.36E-07	3.76E+00	2.54E-06	9.73E-03	2.89E-06	1.50E-03	1.25E-04	3.95E-05	3.24E-04	8.59E-05	8.70E-05	3.82E-04	1.51E-05	6.53E-09	2.36E-04	2.80E-04
17	A12	110	Combination Short Haul Truck	265	0.00E+00	1.00E-04	7.50E-06	1.01E+02	2.38E-07	9.04E-02	7.07E-05	1.07E-01	2.84E-03	1.13E-03	5.28E-03	2.18E-03	2.16E-03	1.52E-02	3.38E-04	0.00E+00	3.13E-03	2.02E-02
17	A12	110	Combination Long Haul Truck	241	0.00E+00	9.05E-05	6.52E-06	9.12E+01	2.73E-07	8.92E-02	6.57E-05	1.04E-01	2.55E-03	7.78E-04	5.40E-03	1.92E-03	1.93E-03	1.39E-02	3.06E-04	0.00E+00	3.48E-03	1.96E-02
17	A13	110	Passenger Car	1503	0.00E+00	1.72E-05	1.85E-06	6.97E+01	1.19E-04	5.18E-01	3.81E-05	3.52E-03	3.73E-03	8.68E-04	3.71E-03	2.39E-03	2.45E-03	1.71E-04	3.56E-04	1.05E-07	1.26E-03	5.51E-04
17	A13	110	Passenger Truck	2516	0.00E+00	3.72E-05	3.97E-06	1.66E+02	2.47E-04	1.06E+00	7.97E-05	9.86E-03	6.47E-03	1.63E-03	7.69E-03	4.98E-03	5.10E-03	1.00E-03	8.39E-04	2.47E-07	2.59E-03	1.59E-03
17	A13	110	Single Unit Short Haul Truck	538	0.00E+00	7.11E-05	3.77E-06	1.03E+02	7.29E-05	2.84E-01	7.81E-05	4.15E-02	3.21E-03	1.06E-03	8.61E-03	2.41E-03	2.44E-03	1.05E-02	4.12E-04	1.84E-07	6.17E-03	7.75E-03
17	A13	110	Single Unit Long Haul Truck	24	0.00E+00	3.04E-06	1.57E-07	4.32E+00	2.93E-06	1.12E-02	3.33E-06	1.73E-03	1.44E-04	4.55E-05	3.73E-04	9.88E-05	1.00E-04	4.40E-04	1.73E-05	7.51E-09	2.72E-04	3.22E-04
17	A13	110	Combination Short Haul Truck	292	0.00E+00	1.10E-04	8.28E-06	1.11E+02	2.63E-07	9.98E-02	7.81E-05	1.18E-01	3.13E-03	1.24E-03	5.83E-03	2.41E-03	2.39E-03	1.68E-02	3.73E-04	0.00E+00	3.45E-03	2.23E-02
17	A13	110	Combination Long Haul Truck	266	0.00E+00	9.99E-05	7.19E-06	1.01E+02	3.01E-07	9.84E-02	7.25E-05	1.15E-01	2.82E-03	8.58E-04	5.96E-03	2.12E-03	2.13E-03	1.54E-02	3.37E-04	0.00E+00	3.84E-03	2.16E-02
17	A14	110	Passenger Car	1492	0.00E+00	1.70E-05	1.84E-06	6.92E+01	1.19E-04	5.14E-01	3.79E-05	3.50E-03	3.71E-03	8.62E-04	3.69E-03	2.38E-03	2.44E-03	1.70E-04	3.53E-04	1.04E-07	1.25E-03	5.47E-04
17	A14	110	Passenger Truck	2499	0.00E+00	3.69E-05	3.94E-06	1.65E+02	2.45E-04	1.06E+00	7.91E-05	9.79E-03	6.43E-03	1.62E-03	7.64E-03	4.95E-03	5.07E-03	9.93E-04	8.33E-04	2.45E-07	2.58E-03	1.58E-03
17	A14	110	Single Unit Short Haul Truck	461	0.00E+00	6.09E-05	3.23E-06	8.83E+01	6.25E-05	2.43E-01	6.69E-05	3.56E-02	2.75E-03	9.10E-04	7.37E-03	2.06E-03	2.09E-03	9.04E-03	3.53E-04	1.57E-07	5.29E-03	6.64E-03
17	A14	110	Single Unit Long Haul Truck	20	0.00E+00	2.61E-06	1.34E-07	3.70E+00	2.51E-06	9.60E-03	2.85E-06	1.48E-03	1.23E-04	3.89E-05	3.19E-04	8.47E-05	8.58E-05	3.77E-04	1.48E-05	6.43E-09	2.33E-04

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A18	110	Single Unit Long Haul Truck	23	0.00E+00	2.94E-06	1.52E-07	4.18E+00	2.83E-06	1.08E-02	3.22E-06	1.67E-03	1.39E-04	4.40E-05	3.61E-04	9.55E-05	9.68E-05	4.26E-04	1.68E-05	7.26E-09	2.63E-04	3.11E-04
17	A18	110	Combination Short Haul Truck	299	0.00E+00	1.13E-04	8.47E-06	1.14E+02	2.69E-07	1.02E-01	7.99E-05	1.21E-01	3.20E-03	1.27E-03	5.96E-03	2.47E-03	2.44E-03	1.72E-02	3.82E-04	0.00E+00	3.53E-03	2.28E-02
17	A18	110	Combination Long Haul Truck	273	0.00E+00	1.02E-04	7.36E-06	1.03E+02	3.08E-07	1.01E-01	7.42E-05	1.17E-01	2.88E-03	8.78E-04	6.10E-03	2.17E-03	2.18E-03	1.57E-02	3.45E-04	0.00E+00	3.93E-03	2.21E-02
17	A19	110	Passenger Car	1278	0.00E+00	1.46E-05	1.58E-06	5.93E+01	1.02E-04	4.40E-01	3.24E-05	3.00E-03	3.17E-03	7.38E-04	3.16E-03	2.03E-03	2.09E-03	1.46E-04	3.02E-04	8.95E-08	1.07E-03	4.69E-04
17	A19	110	Passenger Truck	2140	0.00E+00	3.16E-05	3.38E-06	1.42E+02	2.10E-04	9.04E-01	6.78E-05	8.38E-03	5.51E-03	1.39E-03	6.54E-03	4.24E-03	4.34E-03	8.50E-04	7.13E-04	2.10E-07	2.21E-03	1.35E-03
17	A19	110	Single Unit Short Haul Truck	513	0.00E+00	6.78E-05	3.59E-06	9.83E+01	6.95E-05	2.71E-01	7.45E-05	3.96E-02	3.06E-03	1.01E-03	8.20E-03	2.29E-03	2.32E-03	1.01E-02	3.93E-04	1.75E-07	5.88E-03	7.39E-03
17	A19	110	Single Unit Long Haul Truck	23	0.00E+00	2.90E-06	1.50E-07	4.12E+00	2.79E-06	1.07E-02	3.17E-06	1.65E-03	1.37E-04	4.33E-05	3.56E-04	9.42E-05	9.55E-05	4.20E-04	1.65E-05	7.16E-09	2.59E-04	3.07E-04
17	A19	110	Combination Short Haul Truck	296	0.00E+00	1.12E-04	8.37E-06	1.12E+02	2.66E-07	1.01E-01	7.90E-05	1.20E-01	3.17E-03	1.26E-03	5.89E-03	2.44E-03	2.41E-03	1.70E-02	3.78E-04	0.00E+00	3.49E-03	2.26E-02
17	A19	110	Combination Long Haul Truck	269	0.00E+00	1.01E-04	7.28E-06	1.02E+02	3.05E-07	9.96E-02	7.34E-05	1.16E-01	2.85E-03	8.68E-04	6.03E-03	2.14E-03	2.16E-03	1.56E-02	3.41E-04	0.00E+00	3.88E-03	2.19E-02
17	A20	110	Passenger Car	1065	0.00E+00	1.22E-05	1.31E-06	4.94E+01	8.46E-05	3.67E-01	2.70E-05	2.50E-03	2.64E-03	6.15E-04	2.63E-03	1.69E-03	1.74E-03	1.21E-04	2.52E-04	7.45E-08	8.90E-04	3.90E-04
17	A20	110	Passenger Truck	1783	0.00E+00	2.63E-05	2.81E-06	1.18E+02	1.75E-04	7.53E-01	5.65E-05	6.98E-03	4.59E-03	1.15E-03	5.45E-03	3.53E-03	3.62E-03	7.08E-04	5.94E-04	1.75E-07	1.84E-03	1.12E-03
17	A20	110	Single Unit Short Haul Truck	496	0.00E+00	6.56E-05	3.47E-06	9.51E+01	6.73E-05	2.62E-01	7.21E-05	3.83E-02	2.96E-03	9.80E-04	7.94E-03	2.22E-03	2.25E-03	9.73E-03	3.81E-04	1.70E-07	5.69E-03	7.16E-03
17	A20	110	Single Unit Long Haul Truck	22	0.00E+00	2.81E-06	1.45E-07	3.99E+00	2.70E-06	1.03E-02	3.07E-06	1.59E-03	1.33E-04	4.20E-05	3.44E-04	9.12E-05	9.24E-05	4.06E-04	1.60E-05	6.93E-09	2.51E-04	2.97E-04
17	A20	110	Combination Short Haul Truck	283	0.00E+00	1.07E-04	8.02E-06	1.08E+02	2.55E-07	9.67E-02	7.56E-05	1.15E-01	3.03E-03	1.20E-03	5.64E-03	2.33E-03	2.31E-03	1.63E-02	3.61E-04	0.00E+00	3.34E-03	2.16E-02
17	A20	110	Combination Long Haul Truck	258	0.00E+00	9.67E-05	6.97E-06	9.75E+01	2.92E-07	9.53E-02	7.02E-05	1.11E-01	2.73E-03	8.31E-04	5.78E-03	2.05E-03	2.06E-03	1.49E-02	3.27E-04	0.00E+00	3.72E-03	2.09E-02
17	A21	110	Passenger Car	1546	0.00E+00	1.76E-05	1.91E-06	7.17E+01	1.23E-04	5.32E-01	3.92E-05	3.62E-03	3.84E-03	8.93E-04	3.82E-03	2.46E-03	2.52E-03	1.76E-04	3.66E-04	1.08E-07	1.29E-03	5.67E-04
17	A21	110	Passenger Truck	2588	0.00E+00	3.82E-05	4.08E-06	1.71E+02	2.54E-04	1.09E+00	8.20E-05	1.01E-02	6.66E-03	1.68E-03	7.91E-03	5.13E-03	5.25E-03	1.03E-03	8.63E-04	2.54E-07	2.67E-03	1.63E-03
17	A21	110	Single Unit Short Haul Truck	621	0.00E+00	8.21E-05	4.35E-06	1.19E+02	8.42E-05	3.28E-01	9.02E-05	4.80E-02	3.71E-03	1.23E-03	9.94E-03	2.78E-03	2.81E-03	1.22E-02	4.76E-04	2.12E-07	7.12E-03	8.95E-03
17	A21	110	Single Unit Long Haul Truck	27	0.00E+00	3.52E-06	1.81E-07	4.99E+00	3.38E-06	1.29E-02	3.84E-06	1.99E-03	1.66E-04	5.25E-05	4.31E-04	1.14E-04	1.16E-04	5.08E-04	2.00E-05	8.67E-09	3.14E-04	3.72E-04
17	A21	110	Combination Short Haul Truck	355	0.00E+00	1.34E-04	1.01E-05	1.35E+02	3.20E-07	1.21E-01	9.50E-05	1.44E-01	3.81E-03	1.51E-03	7.09E-03	2.93E-03	2.90E-03	2.04E-02	4.54E-04	0.00E+00	4.20E-03	2.71E-02
17	A21	110	Combination Long Haul Truck	324	0.00E+00	1.22E-04	8.75E-06	1.22E+02	3.66E-07	1.20E-01	8.82E-05	1.40E-01	3.43E-03	1.04E-03	7.26E-03	2.57E-03	2.59E-03	1.87E-02	4.11E-04	0.00E+00	4.67E-03	2.63E-02
17	A22	110	Passenger Car	1414	0.00E+00	1.61E-05	1.74E-06	6.56E+01	1.12E-04	4.87E-01	3.59E-05	3.32E-03	3.51E-03	8.17E-04	3.49E-03	2.25E-03	2.31E-03	1.61E-04	3.35E-04	9.90E-08	1.18E-03	5.19E-04
17	A22	110	Passenger Truck	2369	0.00E+00	3.50E-05	3.74E-06	1.57E+02	2.32E-04	1.00E+00	7.50E-05	9.28E-03	6.09E-03	1.53E-03	7.24E-03	4.69E-03	4.80E-03	9.41E-04	7.90E-04	2.32E-07	2.44E-03	1.49E-03
17	A22	110	Single Unit Short Haul Truck	568	0.00E+00	7.52E-05	3.98E-06	1.09E+02	7.71E-05	3.00E-01	8.26E-05	4.39E-02	3.39E-03	1.12E-03	9.10E-03	2.54E-03	2.57E-03	1.11E-02	4.36E-04	1.94E-07	6.52E-03	8.20E-03
17	A22	110	Single Unit Long Haul Truck	25	0.00E+00	3.22E-06	1.66E-07	4.57E+00	3.09E-06	1.18E-02	3.52E-06	1.82E-03	1.52E-04	4.81E-05	3.94E-04	1.04E-04	1.06E-04	4.65E-04	1.83E-05	7.94E-09	2.88E-04	3.41E-04
17	A22	110	Combination Short Haul Truck	309	0.00E+00	1.17E-04	8.75E-06	1.18E+02	2.78E-07	1.06E-01	8.26E-05	1.25E-01	3.31E-03	1.31E-03	6.16E-03	2.55E-03	2.52E-03	1.78E-02	3.95E-04	0.00E+00	3.65E-03	2.36E-02
17	A22	110	Combination Long Haul Truck	282	0.00E+00	1.06E-04	7.61E-06	1.06E+02	3.18E-07	1.04E-01	7.67E-05	1.21E-01	2.98E-03	9.08E-04	6.31E-03	2.24E-03	2.25E-03	1.63E-02	3.57E-04	0.00E+00	4.06E-03	2.28E-02
17	A23	110	Passenger Car	1259	0.00E+00	1.44E-05	1.55E-06	5.84E+01	1.00E-04	4.34E-01	3.19E-05	2.95E-03	3.13E-03	7.27E-04	3.11E-03	2.00E-03	2.06E-03	1.43E-04	2.98E-04	8.81E-08	1.05E-03	4.62E-04
17	A23	110	Passenger Truck	2108	0.00E+00	3.12E-05	3.33E-06	1.39E+02	2.07E-04	8.90E-01	6.68E-05	8.26E-03	5.42E-03	1.36E-03	6.44E-03	4.18E-03	4.28E-03	8.37E-04	7.03E-04	2.07E-07	2.17E-03	1.33E-03
17	A23	110	Single Unit Short Haul Truck	610	0.00E+00	8.07E-05	4.27E-06	1.17E+02	8.27E-05	3.22E-01	8.87E-05	4.71E-02	3.65E-03	1.21E-03	9.77E-03	2.73E-03	2.76E-03	1.20E-02	4.68E-04	2.09E-07	7.00E-03	8.80E-03
17	A23	110	Single Unit Long Haul Truck	27	0.00E+00	3.46E-06	1.78E-07	4.91E+00	3.32E-06	1.27E-02	3.78E-06	1.96E-03	1.63E-04	5.16E-05	4.23E-04	1.12E-04	1.14E-04	5.00E-04	1.97E-05	8.53E-09	3.09E-04	3.66E-04
17	A23	110	Combination Short Haul Truck	339	0.00E+00	1.28E-04	9.59E-06	1.29E+02	3.05E-07	1.16E-01	9.05E-05	1.37E-01	3.63E-03	1.44E-03	6.75E-03	2.79E-03	2.77E-03	1.95E-02	4.33E-04	0.00E+00	4.00E-03	2.59E-02
17	A23	110	Combination Long Haul Truck	309	0.00E+00	1.16E-04	8.34E-06	1.17E+02	3.49E-07	1.14E-01	8.41E-05	1.33E-01	3.27E-03	9.95E-04	6.91E-03	2.45E-03	2.47E-03	1.78E-02	3.91E-04	0.00E+00	4.45E-03	2.50E-02
17	A24	110	Passenger Car	1749	0.00E+00	2.00E-05	2.16E-06	8.11E+01	1.39E-04	6.02E-01	4.44E-05	4.10E-03	4.34E-03	1.01E-03	4.32E-03	2.78E-03	2.86E-03	1.99E-04	4.14E-04	1.22E-07	1.46E-03	6.41E-04
17	A24	110	Passenger Truck	2929	0.00E+00	4.33E-05	4.62E-06	1.94E+02	2.87E-04	1.24E+00	9.27E-05	1.15E-02	7.53E-03	1.90E-03	8.95E-03	5.80E-03	5.94E-03	1.16E-03	9.76E-04	2.87E-07	3.02E-03	1.85E-03
17	A24	110	Single Unit Short Haul Truck	517	0.00E+00	6.84E-05	3.62E-06	9.91E+01	7.01E-05	2.73E-01	7.51E-05	3.99E-02	3.09E-03	1.02E-03	8.27E-03	2.31E-03	2.34E-03	1.01E-02	3.97E-04	1.77E-07	5.93E-03	7.46E-03
17	A24	110	Single Unit Long Haul Truck	23	0.00E+00	2.93E-06	1.51E-07	4.16E+00	2.81E-06	1.08E-02	3.20E-06	1.66E-03	1.38E-04	4.37E-05	3.59E-04	9.50E-05	9.63E-05	4.23E-04	1.67E-05	7.22E-09	2.62E-04	3.10E-04
17	A24	110	Combination Short Haul Truck	260	0.00E+00	9.81E-05	7.36E-06	9.88E+01	2.34E-07	8.87E-02	6.94E-05	1.05E-01	2.78E-03	1.10E-03	5.18E-03	2.14E-03	2.12E-03	1.49E-02	3.32E-04	0.00E+00	3.06E-03	1.98E-02
17	A24	110	Combination Long Haul Truck	237	0.00E+00	8.88E-05	6.39E-06	8.94E+01	2.68E-07	8.75E-02	6.44E-05	1.02E-01	2.51E-03	7.63E-04	5.30E-03	1.88E-03	1.89E-03	1.37E-02	3.00E-04	0.00E+00	3.41E-03	1.92E-02
16	B09	100	Passenger Car	754	0.00E+00	8.15E-06	8.82E-07	3.35E+01	5.68E-05	2.16E-01	1.81E-05	1.61E-03	2.45E-03	4.92E-04	1.76E-03	1.14E-03	1.17E-03	9.45E-05	1.72E-04	4.71E-08	5.97E-04	2.51E-04
16	B09	100	Passenger Truck	1263	0.00E+00	1.76E-05	1.87E-06	7.93E+01	1.15E-04	4.32E-01	3.75E-05	4.60E-03	4.32E-03	9.19E-04	3.61E-03	2.33E-03	2.39E-03	5.09E-04	4.00E-04	1.10E-07	1.21E-03	7.40E-04
16	B09	100	Single Unit Short Haul Truck	146	0.00E+00	1.96E-05	9.67E-07	2.66E+01	1.71E-05	6.15E-02	2.12E-05	1.06E-02	1.00E-03	2.92E-04	2.42E-03	5.99E-04	6.11E-04	2.68E-03	1.07E-04	4.37E-08	1.81E-03	1.98E-03
16	B09	100	Single Unit Long Haul Truck	6	0.00E+00	8.48E-07	4.12E-08	1.12E+00	7.07E-07	2.52E-03	9.15E-07	4.46E-04	4.53E-05	1.26E-05	1.05E-04	2.53E-05	2.57E-05	1.12E-04	4.51E-06	1.78E-09	7.98E-05	8.33E-05
16	B09	100	Combination Short Haul Truck	77	0.00E+00	2.67E-05	1.94E-06	2.80E+01	7.57E-08	2.60E-02	1.92E-05	2.84E-02	9.01E-04	3.21E-04	1.49E-03	5.70E-04	5.59E-04	4.22E-03	9.38E-05	0.00E+00	9.32E-04	5.36E-03
16	B09	100	Combination Long Haul Truck	71	0.00E+00	2.31E-05	1.59E-06	2.53E+01	8.77E-08	2.59E-02	1.73E-05	2.71E-02	8.36E-04	2.31E-04	1.52E-03	4.75E-04	4.75E-04	3.86E-03	8.49E-05	0.00E+00	1.04E-03	5.10E-03
16	B10	100	Passenger Car	1540	0.00E+00	1.66E-05	1.80E-06	6.85E+01	1.16E-04	4.41E-01	3.70E-05	3.29E-03	5.01E-03	1.01E-03	3.60E-03	2.32E-03	2.38E-03	1.93E-04	3.50E-04	9.63E-08	1.22E-03	5.13E-04
16	B10	100	Passenger Truck	2580	0.00E+00	3.59E-05	3.83E-06	1.62E+02	2.35E-04	8.81E-01	7.67E-05	9.39E-03	8.81E-03	1.88E-03	7.38E-03	4.77E-03	4.88E-03	1.04E-03	8.17E-04	2.24E-07	2.47E-03	1.51E-03
16	B10	100	Single Unit Short Haul Truck	115	0.00E+00	1.54E-05	7.63E-07	2.10E+01	1.35E-05	4.85E-02	1.67E-05	8.36E-03	7.91E-04	2.30E-04	1.91E-03	4.72E-04	4.82E-04	2.12E-03	8.42E-05	3.45E-08	1.43E-03	1.56E-03
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	6.68E-07	3.25E-08	8.84E-01	5.57E-07	1.98E-03	7.22E-07	3.52E-04	3.57E-05	9.95E-06	8.32E-05	2.00E-05	2.03E-05	8.85E-05	3.56E-06	1.41E-09	6.29E-05	6.57E-05
16	B10	100	Combination Short Haul Truck	216	0.00E+00	7.43E-05	5.41E-06	7.79E+01	2.11E-07	7.25E-02	5.35E-05	7.91E-02	2.51E-03	8.93E-04	4.15E-03	1.59E-03	1.56E-03	1.17E-02	2.61E-04	0.00E+00	2.60E-03	1.49E-02
16	B10	100	Combination Long Haul Truck	197	0.00E+00	6.45E-05	4.42E-06	7.05E+01	2.44E-07	7.21E-02	4.83E-05	7.54E-02	2.33E-03	6.45E-04	4.23E-03	1.32E-03	1.32E-03	1.08E-02	2.37E-04	0.00E+00	2.91E-03	1.42E-02
16	B11	100	Passenger Car	284	0.00E+00	3.07E-06	3.32E-07	1.26E+01	2.14E-05	8.12E-02	6.81E-06	6.06E-04	9.22E-04	1.85E-04	6.63E-04	4.27E-04	4.39E-04	3.55E-05	6.45E-05	1.77E-08	2.25E-04	9.46E-05
16	B11	100	Passenger Truck	475	0.00E+00	6.61E-06	7.05E-07	2.98E+01	4.33E-05	1.62E-01	1.41E-05	1.73E-03	1.62E-03	3.46E-04	1.36E-03	8.78E-04	8.99E-04	1.91E-04	1.50E-04	4.13E-08	4.55E-04	2.78E-04
16	B11	100	Single Unit Short Haul Truck	83	0.00E+00	1.11E-05	5.50E-07	1.51E+01	9.71E-06	3.50E-02	1.20E-05	6.03E-03	5.71E-04	1.66E-04	1.38E-03	3.40E-04	3.47E-04	1.53E-03	6.07E-05	2.48E-08	1.03E-03	1.12E-03
16	B11	100	Single Unit Long Haul Truck	4	0.00E+00	4.82E-07	2.34E-08	6.37E-01	4.02E-07	1.43E-03	5.20E-07	2.54E-04	2.58E-05	7.17E-06	6.00E-05	1.44E-05	1.46E-05	6.38E-05	2.57E-06	1.01E-09	4.54E-05	4.74E-05
16	B11	100	Combination Short Haul Truck	38	0.00E+00	1.31E-05	9.56E-07	1.38E+01	3.73E-08	1.28E-02	9.44E-06	1.40E-02	4.44E-04	1.58E-04	7.34E-04	2.81E-04	2.75E-04	2.08E-03	4.62E-05	0.00E+00	4.58E-04	2.64E-03
16	B11	100	Combination Long Haul Truck	35	0.00E+00	1.14E-05	7.81E-07	1.25E+01	4.32E-08	1.27E-02	8.53E-06	1.33E-02	4.11E-04	1.14E-04	7.47E-04	2.34E-04	2.34E-04	1.90E-03	4.18E-05	0.00E+00	5.14E-04	2.51E-03
16	B12	100	Passenger Car	650	0.00E+00	7.02E-06	7.60E-07	2.89E+01	4.89E-05	1.86E-01	1.56E-05	1.39E-03	2.11E-03	4.24E-04	1.52E-03	9.78E-04	1.01E-03	8.14E-05	1.48E-04	4.06E-08	5.14E-04	2.17E-04
16	B12	100	Passenger Truck	1088	0.00E+00	1.51E-05	1.61E-06	6.83E+01	9.91E-05	3.72E-01	3.23E-05	3.96E-03	3.72E-03	7.92E-04	3.11E-03	2.01E-03	2.06E-03	4.38E-04	3.45E-04	9.46E-08	1.04E-03	6.38E-04
16	B12	100	Single Unit Short Haul Truck	63	0.00E+00	8.44E-06	4.17E-07	1.15E+01	7.35E-06	2.65E-02	9.12E-06	4.57E-03	4.32E-04	1.26E-04	1.04E-03	2.58E-04	2.63E-04	1.16E-03	4.60E-05	1.88E-08	7.79E-04	8.52E-04
16	B12	100	Single Unit Long Haul Truck	3	0.00E+00	3.65E-07	1.78E-08	4.83E-01	3.04E-07	1.08E-03	3.94E-07	1.92E-04	1.95E-05	5.43E-06	4.54E-05	1.09E-05	1.11E-05	4.83E-05	1.94E-06	7.69E-10	3.44E-05	3.59E-05
16	B12	100	Combination Short Haul Truck	70	0.00E+00	2.40E-05	1.75E-06	2.52E+01	6.82E-08	2.34E-02	1.73E-05	2.56E-02	8.12E-04	2.89E-04	1.34E-03	5.13E-04	5.04E-04	3.80E-03	8.45E-05	0.00E+00	8.39E-04	4.82E-03
16	B12	100	Combination Long Haul Truck	64	0.00E+00	2.08E-05	1.43E-06	2.28E+01	7.90E-08	2.33E-02	1.56E-05	2.44E-02	7.53E-04	2.08E-04	1.37E-03	4.28E-04	4.28E-04	3.48E-03	7.65E-05	0.00E+00	9.40E-04	4.59E-03
16	B13	100	Passenger Car	728	0.00E+00	7.87E-06	8.51E-07	3.24E+01	5.48E-05	2.08E-01	1.75E-05	1.56E-03	2.37E-03	4.75E-04	1.70E-03	1.10E-03	1.13E-03	9.12E-05	1.66E-04	4.55E-08	5.76E-04	2.43E-04
16	B13	100	Passenger Truck	1219	0.00E+00	1.70E-05	1.81E-06	7.65E+01	1.11E-04	4.17E-01	3.62E-05	4.44E-03	4.17E-03	8.87E-04	3.49E-03	2.25E-03	2.31E-03	4.91E-04	3.86E-04	1.06E-07	1.17E-03	7.15E-04
16	B13	100	Single Unit Short Haul Truck	70	0.00E+00	9.42E-06	4.65E-07	1.28E+01	8.21E-06	2.96E-02	1.02E-05	5.10E-03	4.83E-04	1.41E-04	1.16E-03	2.88E-04	2.94E-04	1.29E-03	5.14E-05	2.10E-08	8.70E-04	9.52E-04
16	B13	100	Single Unit Long Haul Truck	3	0.00E+00	4.08E-07	1.98E-08	5.39E-01	3.40E-07	1.21E-03	4.40E-07	2.15E-04	2.18E-05	6.07E-06	5.07E-05	1.22E-05	1.24E-05	5.40E-05	2.17E-06	8.58E-10	3.84E-05	4.01E-05
16	B13	100	Combination Short Haul Truck	97	0.00E+00	3.35E-05	2.44E-06	3.51E+01	9.51E-08	3.27E-02	2.41E-05	3.57E-02	1.13E-03	4.03E-04	1.87E-03	7.16E-04	7.02E-04	5.29E-03	1.18E-04	0.00E+00	1.17E-03	6.73E-03
16	B13	100	Combination Long Haul Truck	89	0.00E+00	2.91E-05	1.99E-06	3.18E+01	1.10E-07	3.25E-02	2.18E-05	3.40E-02	1.05E-03	2.91E-04	1.91E-03	5.96E-04	5.96E-04	4.85E-03	1.07E-04	0.00E+00	1.31E-03	6.40E-03
16	B14	100	Passenger Car	294	0.00E+00	3.17E-06	3.43E-07	1.30E+01	2.21E-05	8.40E-02	7.05E-06	6.27E-04	9.54E-04	1.92E-04	6.86E-04	4.42E-04	4.54E-04	3.68E-05	6.68E-05	1.83E-08	2.32E-04	9.79E-05
16	B14	100	Passenger Truck	492	0.00E+00	6.84E-06	7.29E-07	3.09E+01	4.48E-05	1.68E-01	1.46E-05	1.79E-03	1.68E-03	3.58E-04	1.41E-03	9.08E-04	9.30E-04	1.98E-04	1.56E-04	4.27E-08	4.71E-04	2.88E-04
16	B14	100	Single Unit Short Haul Truck	72	0.00E+00	9.70E-06	4.79E-07	1.32E+01	8.46E-06	3.05E-02	1.05E-05	5.25E-03	4.97E-04	1.45E-04	1.20E-03	2.97E-04	3.03E-04	1.33E-03	5.29E-05	2.16E-08	8.96E-04	9.80E-04
16	B14	100	Single Unit Long Haul Truck	3	0.00E+00	4.20E-07	2.04E-08	5.55E-01	3.50E-07	1.25E-03	4.53E-07	2.21E-04	2.24E-05	6.25E-06	5.22E-05	1.25E-05	1.27E-05	5.56E-05	2.24E-06	8.84E-10	3.95E-05	4.13E-05
16	B14	100	Combination Short Haul Truck	35	0.00E+00	1.22E-05	8.90E-07	1.28E+01	3.47E-08	1.19E-02	8.79E-06	1.30E-02	4.13E-04	1.47E-04	6.83E-04	2.61E-04	2.56E-04	1.93E-03	4.30E-05	0.00E+00	4.27E-04	2.45E-03
16	B14	100	Combination Long Haul Truck	32	0.00E+00	1.06E-05	7.27E-07	1.16E+01	4.02E-08	1.19E-02	7.94E-06	1.24E-02	3.83E-04	1.06E-04	6.96E-04	2.17E-04	2.17E-04	1.77E-03	3.89E-05	0.00E+00	4.78E-04	2.34E-03
16	B15	100	Passenger Car	796	0.00E+00	8.60E-06	9.30E-07	3.54E+01	5.99E-05	2.28E-01	1.91E-05	1.70E-03	2.59E-03	5.19E-04	1.86E-03	1.20E-03	1.23E-03	9.97E-05	1.81E-04	4.97E-08	6.30E-04	2.65E-04
16	B15	100	Passenger Truck	1332	0.00E+00	1.85E-05	1.98E-06	8.36E+01	1.21E-04	4.55E-01	3.96E-05	4.85E-03	4.55E-03	9.70E-04	3.81E-03	2.46E-03	2.52E-03	5.37E-04	4.22E-04	1.16E-07	1.28E-03	7.81E-04
16	B15	100	Single Unit Short Haul Truck	139	0.00E+00	1.87E-05	9.25E-07	2.54E+01	1.63E-05	5.88E-02	2.02E-05	1.01E-02	9.59E-04	2.79E-04	2.31E-03	5.73E-04	5.84E-04	2.56E-03	1.02E-04	4.18E-08	1.73E-03	1.89E-03
16	B15	100	Single Unit Long Haul Truck	6	0.00E+00	8.10E-07	3.94E-08	1.07E+00	6.76E-07	2.41E-03	8.75E-07	4.27E-04	4.33E-05	1.21E-05	1.01E-04	2.42E-05	2.46E-05	1.07E-04	4.32E-06	1.71E-09	7.63E-05	7.97E-05
16	B15	100	Combination Short Haul Truck	69	0.00E+00	2.36E-05	1.72E-06	2.48E+01	6.70E-08	2.30E-02	1.70E-05	2.51E-02	7.98E-04	2.84E-04	1.32E-03	5.05E-04	4.95E-04	3.73E-03	8.30E-05	0.00E+00	8.24E-04	4.74E-03
16	B15	100	Combination Long Haul Truck	63	0.00E+00	2.05E-05	1.40E-06	2.24E+01	7.76E-08	2.29E-02	1.53E-05	2.40E-02	7.40E-04	2.05E-04	1.34E-03	4.20E-04	4.20E-04	3.42E-03	7.52E-05	0.00E+00	9.24E-04	4.51E-03
16	B16	100	Passenger Car	1512	0.00E+00	1.63E-05	1.77E-06	6.72E+01	1.14E-04	4.32E-01	3.63E-05	3.23E-03	4.91E-03	9.87E-04	3.53E-03	2.28E-03	2.34E-03	1.89E-04	3.44E-04	9.45E-08	1.20E-03	5.04E-04

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	C13	40	Passenger Truck	184	0.00E+00	4.17E-06	4.38E-07	1.41E+01	2.51E-05	7.77E-02	8.34E-06	7.52E-04	3.38E-03	4.80E-04	7.88E-04	5.17E-04	5.27E-04	1.22E-04	7.01E-05	1.50E-08	2.60E-04	1.27E-04
50	C13	40	Single Unit Short Haul Truck	13	0.00E+00	5.97E-06	3.13E-07	2.86E+00	5.19E-06	4.93E-03	6.35E-06	2.92E-03	5.45E-04	9.03E-05	7.06E-04	1.86E-04	1.89E-04	2.89E-04	1.16E-05	4.89E-09	5.15E-04	5.49E-04
50	C13	40	Single Unit Long Haul Truck	1	0.00E+00	2.62E-07	1.36E-08	1.24E-01	2.27E-07	2.14E-04	2.78E-07	1.27E-04	2.44E-05	4.02E-06	3.10E-05	8.15E-06	8.27E-06	1.25E-05	4.99E-07	2.12E-10	2.27E-05	2.39E-05
50	C13	40	Combination Short Haul Truck	8	0.00E+00	6.66E-06	4.61E-07	3.38E+00	2.40E-08	5.81E-03	4.95E-06	7.43E-03	7.75E-04	1.40E-04	4.32E-04	1.38E-04	1.39E-04	5.10E-04	1.13E-05	0.00E+00	2.92E-04	1.40E-03
50	C13	40	Combination Long Haul Truck	7	0.00E+00	6.07E-06	3.96E-07	3.22E+00	2.72E-08	6.45E-03	4.67E-06	7.46E-03	7.79E-04	1.24E-04	4.44E-04	1.21E-04	1.23E-04	4.91E-04	1.08E-05	0.00E+00	3.22E-04	1.41E-03
53	C14	70	Passenger Car	543	0.00E+00	6.79E-06	7.34E-07	2.61E+01	4.72E-05	1.69E-01	1.51E-05	1.11E-03	4.15E-03	6.68E-04	1.47E-03	9.47E-04	9.71E-04	9.73E-05	1.32E-04	3.60E-08	4.98E-04	1.73E-04
53	C14	70	Passenger Truck	909	0.00E+00	1.48E-05	1.57E-06	6.01E+01	9.37E-05	3.11E-01	3.08E-05	3.38E-03	7.45E-03	1.21E-03	2.93E-03	1.91E-03	1.95E-03	4.39E-04	3.03E-04	7.93E-08	9.80E-04	5.56E-04
53	C14	70	Single Unit Short Haul Truck	30	0.00E+00	7.16E-06	3.59E-07	5.61E+00	5.86E-06	1.13E-02	7.63E-06	3.54E-03	5.04E-04	1.01E-04	8.72E-04	2.14E-04	2.18E-04	5.62E-04	2.26E-05	9.14E-09	6.51E-04	6.62E-04
53	C14	70	Single Unit Long Haul Truck	1	0.00E+00	3.12E-07	1.55E-08	2.38E-01	2.53E-07	4.70E-04	3.32E-07	1.52E-04	2.30E-05	4.48E-06	3.81E-05	9.26E-06	9.41E-06	2.38E-05	9.60E-07	3.85E-10	2.86E-05	2.85E-05
53	C14	70	Combination Short Haul Truck	15	0.00E+00	7.71E-06	5.48E-07	5.61E+00	2.51E-08	6.64E-03	5.65E-06	8.12E-03	5.85E-04	1.28E-04	4.70E-04	1.62E-04	1.62E-04	8.45E-04	1.87E-05	0.00E+00	3.08E-04	1.53E-03
53	C14	70	Combination Long Haul Truck	14	0.00E+00	6.99E-06	4.66E-07	5.23E+00	2.89E-08	7.03E-03	5.30E-06	8.01E-03	5.83E-04	1.06E-04	4.85E-04	1.41E-04	1.42E-04	7.97E-04	1.75E-05	0.00E+00	3.44E-04	1.51E-03
50	C15	40	Passenger Car	118	0.00E+00	1.95E-06	2.11E-07	6.76E+00	1.36E-05	4.84E-02	4.35E-06	2.13E-04	2.04E-03	2.90E-04	4.21E-04	2.73E-04	2.80E-04	3.69E-05	3.40E-05	8.23E-09	1.43E-04	3.33E-05
50	C15	40	Passenger Truck	197	0.00E+00	4.47E-06	4.68E-07	1.50E+01	2.68E-05	8.32E-02	8.92E-06	8.04E-04	3.61E-03	5.14E-04	8.43E-04	5.53E-04	5.64E-04	1.30E-04	7.50E-05	1.60E-08	2.78E-04	1.36E-04
50	C15	40	Single Unit Short Haul Truck	19	0.00E+00	8.42E-06	4.41E-07	4.04E+00	7.32E-06	6.95E-03	8.95E-06	4.12E-03	7.69E-04	1.27E-04	9.95E-04	2.63E-04	2.67E-04	4.08E-04	1.63E-05	6.90E-09	7.26E-04	7.74E-04
50	C15	40	Single Unit Long Haul Truck	1	0.00E+00	3.69E-07	1.92E-08	1.74E-01	3.20E-07	3.02E-04	3.92E-07	1.79E-04	3.44E-05	5.67E-06	4.37E-05	1.15E-05	1.17E-05	1.76E-05	7.04E-07	3.00E-10	3.20E-05	3.37E-05
50	C15	40	Combination Short Haul Truck	19	0.00E+00	1.67E-05	1.16E-06	8.50E+00	6.03E-08	1.46E-02	1.24E-05	1.87E-02	1.95E-03	3.51E-04	1.09E-03	3.46E-04	3.50E-04	1.28E-03	2.84E-05	0.00E+00	7.34E-04	3.52E-03
50	C15	40	Combination Long Haul Truck	17	0.00E+00	1.53E-05	9.95E-07	8.08E+00	6.84E-08	1.62E-02	1.17E-05	1.87E-02	1.96E-03	3.11E-04	1.11E-03	3.03E-04	3.09E-04	1.23E-03	2.70E-05	0.00E+00	8.08E-04	3.53E-03
52	C16	60	Passenger Car	137	0.00E+00	1.86E-06	2.01E-07	6.79E+00	1.29E-05	4.59E-02	4.14E-06	2.68E-04	1.35E-03	2.07E-04	4.02E-04	2.59E-04	2.66E-04	2.85E-05	3.43E-05	9.18E-09	1.36E-04	4.21E-05
52	C16	60	Passenger Truck	229	0.00E+00	4.08E-06	4.31E-07	1.54E+01	2.54E-05	8.20E-02	8.39E-06	8.64E-04	2.40E-03	3.72E-04	8.01E-04	5.20E-04	5.33E-04	1.19E-04	7.75E-05	1.94E-08	2.65E-04	1.43E-04
52	C16	60	Single Unit Short Haul Truck	7	0.00E+00	2.18E-06	1.09E-07	1.39E+00	1.79E-06	2.68E-03	2.33E-06	1.04E-03	1.76E-04	3.19E-05	2.64E-04	6.53E-05	6.63E-05	1.39E-04	5.60E-06	2.31E-09	1.98E-04	1.95E-04
52	C16	60	Combination Short Haul Truck	6	0.00E+00	3.76E-06	2.62E-07	2.45E+00	1.33E-08	3.28E-03	2.78E-06	4.08E-03	3.49E-04	6.91E-05	2.39E-04	7.80E-05	7.80E-05	3.69E-04	8.17E-06	0.00E+00	1.61E-04	7.69E-04
52	C16	60	Combination Long Haul Truck	6	0.00E+00	3.36E-06	2.20E-07	2.30E+00	1.52E-08	3.54E-03	2.60E-06	4.04E-03	3.51E-04	5.96E-05	2.46E-04	6.69E-05	6.77E-05	3.49E-04	7.66E-06	0.00E+00	1.78E-04	7.63E-04
53	C17	70	Passenger Car	337	0.00E+00	4.21E-06	4.56E-07	1.62E+01	2.93E-05	1.05E-01	9.36E-06	6.87E-04	2.57E-03	4.15E-04	9.12E-04	5.88E-04	6.03E-04	6.04E-05	8.22E-05	2.24E-08	3.09E-04	1.08E-04
53	C17	70	Passenger Truck	564	0.00E+00	9.17E-06	9.72E-07	3.73E+01	5.82E-05	1.93E-01	1.91E-05	2.10E-03	4.63E-03	7.54E-04	1.82E-03	1.18E-03	1.21E-03	2.73E-04	1.88E-04	4.92E-08	6.08E-04	3.45E-04
53	C17	70	Single Unit Short Haul Truck	111	0.00E+00	2.61E-05	1.31E-06	2.04E+01	2.13E-05	4.10E-02	2.78E-05	1.29E-02	1.83E-03	3.67E-04	3.17E-03	7.80E-04	7.92E-04	2.05E-03	8.23E-05	3.33E-08	2.37E-03	2.41E-03
53	C17	70	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	5.65E-08	8.67E-01	9.20E-07	1.71E-03	1.21E-06	5.53E-04	8.37E-05	1.63E-05	1.39E-04	3.37E-05	3.43E-05	8.66E-05	3.49E-06	1.40E-09	1.04E-04	1.04E-04
53	C17	70	Combination Short Haul Truck	49	0.00E+00	2.54E-05	1.80E-06	1.84E+01	8.25E-08	2.18E-02	1.86E-05	2.67E-02	1.93E-03	4.22E-04	1.55E-03	5.34E-04	5.33E-04	2.78E-03	6.16E-05	0.00E+00	1.01E-03	5.03E-03
53	C17	70	Combination Long Haul Truck	45	0.00E+00	2.30E-05	1.53E-06	1.72E+01	9.50E-08	2.31E-02	1.74E-05	2.63E-02	1.92E-03	3.50E-04	1.60E-03	4.64E-04	4.69E-04	2.62E-03	5.75E-05	0.00E+00	1.13E-03	4.97E-03
52	C18	60	Passenger Car	131	0.00E+00	1.78E-06	1.93E-07	6.52E+00	1.24E-05	4.41E-02	3.97E-06	2.57E-04	1.29E-03	1.99E-04	3.86E-04	2.49E-04	2.55E-04	2.74E-05	3.29E-05	8.81E-09	1.30E-04	4.04E-05
52	C18	60	Passenger Truck	219	0.00E+00	3.91E-06	4.13E-07	1.48E+01	2.44E-05	7.87E-02	8.05E-06	8.29E-04	2.30E-03	3.57E-04	7.68E-04	4.99E-04	5.11E-04	1.14E-04	7.44E-05	1.87E-08	2.54E-04	1.37E-04
52	C18	60	Single Unit Short Haul Truck	19	0.00E+00	5.62E-06	2.81E-07	3.57E+00	4.62E-06	6.90E-03	6.00E-06	2.68E-03	4.54E-04	8.22E-05	6.79E-04	1.68E-04	1.71E-04	3.58E-04	1.44E-05	5.94E-09	5.10E-04	5.02E-04
52	C18	60	Single Unit Long Haul Truck	1	0.00E+00	2.46E-07	1.22E-08	1.53E-01	2.01E-07	2.93E-04	2.62E-07	1.16E-04	2.04E-05	3.65E-06	3.00E-05	7.32E-06	7.44E-06	1.52E-05	6.15E-07	2.53E-10	2.24E-05	2.17E-05
52	C18	60	Combination Short Haul Truck	8	0.00E+00	4.66E-06	3.26E-07	3.04E+00	1.65E-08	4.07E-03	3.45E-06	5.06E-03	4.33E-04	8.58E-05	2.97E-04	9.68E-05	9.68E-05	4.57E-04	1.01E-05	0.00E+00	1.99E-04	9.55E-04
52	C18	60	Combination Long Haul Truck	7	0.00E+00	4.17E-06	2.73E-07	2.85E+00	1.89E-08	4.39E-03	3.23E-06	5.01E-03	4.35E-04	7.40E-05	3.05E-04	8.30E-05	8.40E-05	4.33E-04	9.51E-06	0.00E+00	2.21E-04	9.47E-04
50	C19	40	Passenger Car	40	0.00E+00	6.69E-07	7.24E-08	2.32E+00	4.65E-06	1.66E-02	1.49E-06	7.28E-05	6.97E-04	9.95E-05	1.44E-04	9.33E-05	9.58E-05	1.26E-05	1.16E-05	2.82E-09	4.90E-05	1.14E-05
50	C19	40	Passenger Truck	67	0.00E+00	1.53E-06	1.60E-07	5.15E+00	9.18E-06	2.85E-02	3.05E-06	2.75E-04	1.24E-03	1.76E-04	2.89E-04	1.89E-04	1.93E-04	4.46E-05	2.57E-05	5.49E-09	9.52E-05	4.67E-05
50	C19	40	Single Unit Short Haul Truck	4	0.00E+00	1.84E-06	9.63E-08	8.81E-01	1.60E-06	1.52E-03	1.95E-06	8.99E-04	1.68E-04	2.78E-05	2.17E-04	5.73E-05	5.82E-05	8.90E-05	3.56E-06	1.50E-09	1.59E-04	1.69E-04
50	C19	40	Combination Short Haul Truck	2	0.00E+00	1.90E-06	1.32E-07	9.65E-01	6.85E-09	1.66E-03	1.41E-06	2.12E-03	2.21E-04	3.98E-05	1.23E-04	3.93E-05	3.97E-05	1.45E-04	3.23E-06	0.00E+00	8.34E-05	4.00E-04
50	C19	40	Combination Long Haul Truck	2	0.00E+00	1.73E-06	1.13E-07	9.18E-01	7.77E-09	1.84E-03	1.33E-06	2.13E-03	2.22E-04	3.54E-05	1.27E-04	3.44E-05	3.51E-05	1.40E-04	3.07E-06	0.00E+00	9.18E-05	4.01E-04
53	C20	70	Passenger Car	76	0.00E+00	9.52E-07	1.03E-07	3.66E+00	6.63E-06	2.37E-02	2.12E-06	1.55E-04	5.82E-04	9.38E-05	2.06E-04	1.33E-04	1.36E-04	1.37E-05	1.86E-05	5.06E-09	6.98E-05	2.43E-05
53	C20	70	Passenger Truck	128	0.00E+00	2.07E-06	2.20E-07	8.44E+00	1.32E-05	4.36E-02	4.32E-06	4.75E-04	1.05E-03	1.70E-04	4.11E-04	2.68E-04	2.74E-04	6.17E-05	4.25E-05	1.11E-08	1.38E-04	7.80E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	1.09E-06	5.44E-08	8.51E-01	8.88E-07	1.71E-03	1.16E-06	5.36E-04	7.63E-05	1.53E-05	1.32E-04	3.25E-05	3.30E-05	8.52E-05	3.43E-06	1.39E-09	9.87E-05	1.00E-04
53	C20	70	Combination Short Haul Truck	2	0.00E+00	9.74E-07	6.93E-08	7.09E-01	3.17E-09	8.39E-04	7.14E-07	1.03E-03	7.40E-05	1.62E-05	5.94E-05	2.05E-05	2.05E-05	1.07E-04	2.37E-06	0.00E+00	3.89E-05	1.93E-04
53	C20	70	Combination Long Haul Truck	2	0.00E+00	8.84E-07	5.89E-08	6.60E-01	3.65E-09	8.88E-04	6.70E-07	1.01E-03	7.36E-05	1.34E-05	6.13E-05	1.78E-05	1.80E-05	1.01E-04	2.21E-06	0.00E+00	4.34E-05	1.91E-04
50	C21	40	Passenger Car	287	0.00E+00	4.76E-06	5.15E-07	1.65E+01	3.31E-05	1.18E-01	1.06E-05	5.19E-04	4.96E-03	7.08E-04	1.03E-03	6.64E-04	6.82E-04	9.00E-05	8.28E-05	2.01E-08	3.49E-04	8.13E-05
50	C21	40	Passenger Truck	480	0.00E+00	1.09E-05	1.14E-06	3.67E+01	6.54E-05	2.03E-01	2.17E-05	1.96E-03	8.80E-03	1.25E-03	2.05E-03	1.35E-03	1.37E-03	3.17E-04	1.83E-04	3.91E-08	6.78E-04	3.32E-04
50	C21	40	Single Unit Short Haul Truck	79	0.00E+00	3.53E-05	1.85E-06	1.69E+01	3.07E-05	2.91E-02	3.75E-05	1.73E-02	3.22E-03	5.34E-04	4.17E-03	1.10E-03	1.12E-03	1.71E-03	6.84E-05	2.89E-08	3.04E-03	3.24E-03
50	C21	40	Single Unit Long Haul Truck	4	0.00E+00	1.55E-06	8.06E-08	7.31E-01	1.34E-06	1.26E-03	1.64E-06	7.51E-04	1.44E-04	2.37E-05	1.83E-04	4.82E-05	4.88E-05	7.39E-05	2.95E-06	1.26E-09	1.34E-04	1.41E-04
50	C21	40	Combination Short Haul Truck	31	0.00E+00	2.78E-05	1.93E-06	1.41E+01	1.00E-07	2.42E-02	2.07E-05	3.10E-02	3.23E-03	5.83E-04	1.80E-03	5.75E-04	5.81E-04	2.13E-03	4.72E-05	0.00E+00	1.22E-03	5.86E-03
50	C21	40	Combination Long Haul Truck	29	0.00E+00	2.53E-05	1.65E-06	1.34E+01	1.14E-07	2.69E-02	1.95E-05	3.11E-02	3.25E-03	5.17E-04	1.85E-03	5.04E-04	5.13E-04	2.05E-03	4.49E-05	0.00E+00	1.34E-03	5.86E-03
52	C22	60	Passenger Car	230	0.00E+00	3.12E-06	3.38E-07	1.14E+01	2.18E-05	7.72E-02	6.96E-06	4.51E-04	2.27E-03	3.49E-04	6.77E-04	4.36E-04	4.47E-04	4.80E-05	5.78E-05	1.54E-08	2.29E-04	7.09E-05
52	C22	60	Passenger Truck	385	0.00E+00	6.86E-06	7.25E-07	2.60E+01	4.28E-05	1.38E-01	1.41E-05	1.45E-03	4.04E-03	6.25E-04	1.35E-03	8.74E-04	8.96E-04	2.00E-04	1.30E-04	3.27E-08	4.46E-04	2.41E-04
52	C22	60	Single Unit Short Haul Truck	18	0.00E+00	5.21E-06	2.60E-07	3.31E+00	4.29E-06	6.40E-03	5.56E-06	2.48E-03	4.21E-04	7.63E-05	6.30E-04	1.56E-04	1.58E-04	3.32E-04	1.34E-05	5.51E-09	4.73E-04	4.65E-04
52	C22	60	Single Unit Long Haul Truck	1	0.00E+00	2.28E-07	1.13E-08	1.41E-01	1.86E-07	2.71E-04	2.43E-07	1.07E-04	1.89E-05	3.38E-06	2.78E-05	6.79E-06	6.90E-06	1.41E-05	5.71E-07	2.34E-10	2.08E-05	2.01E-05
52	C22	60	Combination Short Haul Truck	6	0.00E+00	3.78E-06	2.64E-07	2.46E+00	1.34E-08	3.29E-03	2.80E-06	4.10E-03	3.51E-04	6.95E-05	2.40E-04	7.84E-05	7.84E-05	3.70E-04	8.21E-06	0.00E+00	1.62E-04	7.73E-04
52	C22	60	Combination Long Haul Truck	6	0.00E+00	3.38E-06	2.21E-07	2.31E+00	1.53E-08	3.56E-03	2.61E-06	4.06E-03	3.52E-04	5.99E-05	2.47E-04	6.72E-05	6.80E-05	3.51E-04	7.70E-06	0.00E+00	1.79E-04	7.67E-04
53	C23	70	Passenger Car	376	0.00E+00	4.71E-06	5.09E-07	1.81E+01	3.27E-05	1.17E-01	1.05E-05	7.67E-04	2.88E-03	4.63E-04	1.02E-03	6.57E-04	6.73E-04	6.74E-05	9.18E-05	2.50E-08	3.45E-04	1.20E-04
53	C23	70	Passenger Truck	630	0.00E+00	1.02E-05	1.09E-06	4.17E+01	6.50E-05	2.15E-01	2.14E-05	2.35E-03	5.17E-03	8.42E-04	2.03E-03	1.32E-03	1.36E-03	3.05E-04	2.10E-04	5.50E-08	6.79E-04	3.85E-04
53	C23	70	Single Unit Short Haul Truck	63	0.00E+00	1.48E-05	7.44E-07	1.16E+01	1.21E-05	2.33E-02	1.58E-05	7.33E-03	1.04E-03	2.09E-04	1.81E-03	4.44E-04	4.51E-04	1.16E-03	4.68E-05	1.89E-08	1.35E-03	1.37E-03
53	C23	70	Single Unit Long Haul Truck	3	0.00E+00	6.47E-07	3.22E-08	4.94E-01	5.24E-07	9.75E-04	6.88E-07	3.15E-04	4.77E-05	9.28E-06	7.89E-05	1.92E-05	1.95E-05	4.93E-05	1.99E-06	7.97E-10	5.92E-05	5.90E-05
53	C23	70	Combination Short Haul Truck	24	0.00E+00	1.23E-05	8.76E-07	8.96E+00	4.01E-08	1.06E-02	9.03E-06	1.30E-02	9.36E-04	2.05E-04	7.51E-04	2.60E-04	2.59E-04	1.35E-03	2.99E-05	0.00E+00	4.92E-04	2.44E-03
53	C23	70	Combination Long Haul Truck	22	0.00E+00	1.12E-05	7.45E-07	8.35E+00	4.62E-08	1.12E-02	8.47E-06	1.28E-02	9.31E-04	1.70E-04	7.75E-04	2.25E-04	2.28E-04	1.27E-03	2.79E-05	0.00E+00	5.49E-04	2.42E-03
52	C24	60	Passenger Car	68	0.00E+00	9.20E-07	9.96E-08	3.37E+00	6.42E-06	2.28E-02	2.05E-06	1.33E-04	6.68E-04	1.03E-04	1.99E-04	1.29E-04	1.32E-04	1.42E-05	1.70E-05	4.55E-09	6.74E-05	2.09E-05
52	C24	60	Passenger Truck	113	0.00E+00	2.02E-06	2.14E-07	7.66E+00	1.26E-05	4.07E-02	4.16E-06	4.29E-04	1.19E-03	1.84E-04	3.97E-04	2.58E-04	2.64E-04	5.89E-05	3.84E-05	9.64E-09	1.31E-04	7.09E-05
52	C24	60	Single Unit Short Haul Truck	1	0.00E+00	3.50E-07	1.75E-08	2.22E-01	2.87E-07	4.29E-04	3.73E-07	1.67E-04	2.83E-05	5.12E-06	4.22E-05	1.05E-05	1.06E-05	2.22E-05	8.98E-07	3.70E-10	3.18E-05	3.12E-05
52	C24	60	Combination Short Haul Truck	1	0.00E+00	8.57E-07	5.98E-08	5.58E-01	3.03E-09	7.47E-04	6.34E-07	9.29E-04	7.96E-05	1.58E-05	5.45E-05	1.78E-05	1.78E-05	8.40E-05	1.86E-06	0.00E+00	3.66E-05	1.75E-04
52	C24	60	Combination Long Haul Truck	1	0.00E+00	7.66E-07	5.01E-08	5.23E-01	3.47E-09	8.07E-04	5.93E-07	9.21E-04	7.99E-05	1.36E-05	5.60E-05	1.53E-05	1.54E-05	7.96E-05	1.75E-06	0.00E+00	4.05E-05	1.74E-04
50	C25	40	Passenger Car	242	0.00E+00	4.02E-06	4.35E-07	1.39E+01	2.79E-05	9.94E-02	8.93E-06	4.37E-04	4.18E-03	5.97E-04	8.66E-04	5.60E-04	5.75E-04	7.59E-05	6.98E-05	1.69E-08	2.94E-04	6.85E-05
50	C25	40	Passenger Truck	405	0.00E+00	9.18E-06	9.63E-07	3.09E+01	5.51E-05	1.71E-01	1.83E-05	1.65E-03	7.42E-03	1.06E-03	1.73E-03	1.14E-03	1.16E-03	2.68E-04	1.54E-04	3.30E-08	5.71E-04	2.80E-04
50	C25	40	Single Unit Short Haul Truck	61	0.00E+00	2.73E-05	1.43E-06	1.31E+01	2.37E-05	2.25E-02	2.90E-05	1.33E-02	2.49E-03	4.12E-04	3.22E-03	8.50E-04	8.63E-04	1.32E-03	5.28E-05	2.23E-08	2.35E-03	2.50E-03
50	C25	40	Single Unit Long Haul Truck	3	0.00E+00	1.19E-06	6.22E-08	5.64E-01	1.04E-06	9.76E-04	1.27E-06	5.80E-04	1.11E-04	1.83E-05	1.41E-04	3.72E-05	3.77E-05	5.70E-05	2.28E-06	9.69E-10	1.04E-04	1.09E-04
50	C25	40	Combination Short Haul Truck	33	0.00E+00	2.89E-05	2.00E-06	1.47E+01	1.04E-07	2.52E-02	2.14E-05	3.22E-02	3.36E-03	6.05E-04	1.87E-03	5.97E-04	6.03E-04	2.21E-03	4.90E-05	0.00E+00	1.27E-03	6.08E-03
50	C25	40	Combination Long Haul Truck	30	0.00E+00	2.63E-05	1.72E-06	1.39E+01	1.18E-07	2.80E-02	2.02E-05	3.23E-02	3.37E-03	5.37E-04	1.92E-03	5.23E-04	5.33E-04	2.13E-03	4.66E-05	0.00E+00	1.39E-03	6.09E-03
53	C26	70	Passenger Car	265	0.00E+00	3.31E-06	3.58E-07	1.27E+01	2.30E-05	8.23E-02	7.35E-06	5.40E-04	2.02E-03	3.26E-04	7.16E-04	4.62E-04	4.73E-04	4.74E-05	6.46E-05	1.76E-08	2.43E-04	8.45E-05
53	C26	70	Passenger Truck	443	0.00E+00	7.20E-06	7.63E-07	2.93E+01	4.57E-05	1.51E-01	1.50E-05	1.65E-03	3.63E-03	5.92E-04	1.43E-03	9.30E-04	9.53E-04	2.14E-04	1.48E-04	3.87E-08	4.78E-04	2.71E-04
53	C26	70	Single Unit Short Haul Truck	59	0.00E+00	1.40E-05	7.00E-07	1.09E+01	1.14E-05	2.20E-02	1.49E-05	6.90E-03	9.82E-04	1.96E-04	1.70E-03	4.18E-04	4.24E-04	1.10E-03	4.41E-05	1.78E-08	1.27E-03	1.29E-03
53	C26	70	Single Unit Long Haul Truck	3	0.00E+00	6.09E-07	3.03E-08	4.65E-01	4.93E-07	9.17E-04	6.48E-07	2.96E-04	4.49E-05	8.74E-06	7.43E-05	1.81E-05	1.83E-05	4.64E-05	1.87E-06	7.50E-10	5.57E-05	5.56E-05
53	C26	70	Combination Short Haul Truck	31	0.00E+00	1.61E-05	1.14E-06	1.17E+01	5.23E-08	1.38E-02	1.18E-05	1.69E-02	1.22E-03	2.67E-04	9.80E-04	3.39E-04	3.38E-04	1.76E-03	3.90E-05	0.00E+00	6.42E-04	3.19E-03
53	C26	70	Combination Long Haul Truck	28	0.00E+00	1.46E-05	9.72E-07	1.09E+01	6.02E-08	1.47E-02	1.11E-05	1.67E-02	1.22E-03	2.22E-04	1.01E-03	2.94E-04	2.97E-04	1.66E-03	3.65E-05	0.00E+00	7.17E-04	3.15E-03
50	C27	40	Passenger Car	338	0.00E+00	5.62E-06	6.08E-07	1.94E+01	3.91E-05	1.39E-01	1.25E-05	6.11E-04	5.85E-03	8.35E-04	1.21E-03	7.83E-04	8.04E-04	1.06E-04	9.77E-05	2.37E-08	4.11E-04	9.58E-05
50	C27	40	Passenger Truck	566	0.00E+00	1.28E-05	1.35E-06	4.33E+01	7.71E-05	2.39E-01	2.56E-05	2.31E-03	1.04E-02	1.48E-03	2.42E-03	1.59E-03	1.62E-03	3.74E-04	2.15E-04	4.61E-08	7.99E-04	3.92E-04
50	C27	40	Single Unit Short Haul Truck	56	0.00E+00	2.51E-05	1.31E-06	1.20E+01	2.18E-05	2.07E-02	2.67E-05	1.23E-02	2.29E-03	3.79E-04	2.96E-03	7.82E-04	7.95E-04	1.22E-03	4.86E-05	2.05E-08	2.16E-03	2.31E-03
50	C27	40	Single Unit Long Haul Truck

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C31	60	Combination Short Haul Truck	19	0.00E+00	1.09E-05	7.63E-07	7.11E+00	3.86E-08	9.53E-03	8.09E-06	1.19E-02	1.02E-03	2.01E-04	6.96E-04	2.27E-04	2.27E-04	1.07E-03	2.38E-05	0.00E+00	4.67E-04	2.24E-03
52	C31	60	Combination Long Haul Truck	17	0.00E+00	9.77E-06	6.39E-07	6.67E+00	4.43E-08	1.03E-02	7.56E-06	1.17E-02	1.02E-03	1.73E-04	7.14E-04	1.95E-04	1.97E-04	1.01E-03	2.23E-05	0.00E+00	5.17E-04	2.22E-03
53	C32	70	Passenger Car	157	0.00E+00	1.96E-06	2.13E-07	7.55E+00	1.37E-05	4.89E-02	4.36E-06	3.20E-04	1.20E-03	1.93E-04	4.25E-04	2.74E-04	2.81E-04	2.81E-05	3.83E-05	1.04E-08	1.44E-04	5.02E-05
53	C32	70	Passenger Truck	263	0.00E+00	4.28E-06	4.53E-07	1.74E+01	2.71E-05	8.99E-02	8.92E-06	9.79E-04	2.16E-03	3.52E-04	8.48E-04	5.52E-04	5.66E-04	1.27E-04	8.77E-05	2.29E-08	2.84E-04	1.61E-04
53	C32	70	Single Unit Short Haul Truck	60	0.00E+00	1.41E-05	7.08E-07	1.11E+01	1.16E-05	2.22E-02	1.51E-05	6.98E-03	9.94E-04	1.99E-04	1.72E-03	4.23E-04	4.29E-04	1.11E-03	4.46E-05	1.80E-08	1.28E-03	1.31E-03
53	C32	70	Single Unit Long Haul Truck	3	0.00E+00	6.16E-07	3.06E-08	4.70E-01	4.99E-07	9.28E-04	6.56E-07	3.00E-04	4.54E-05	8.84E-06	7.51E-05	1.83E-05	1.86E-05	4.69E-05	1.89E-06	7.59E-10	5.64E-05	5.62E-05
53	C32	70	Combination Short Haul Truck	44	0.00E+00	2.29E-05	1.63E-06	1.67E+01	7.45E-08	1.97E-02	1.68E-05	2.41E-02	1.74E-03	3.81E-04	1.40E-03	4.83E-04	4.82E-04	2.51E-03	5.56E-05	0.00E+00	9.16E-04	4.55E-03
53	C32	70	Combination Long Haul Truck	40	0.00E+00	2.08E-05	1.39E-06	1.55E+01	8.58E-08	2.09E-02	1.58E-05	2.38E-02	1.73E-03	3.16E-04	1.44E-03	4.19E-04	4.24E-04	2.37E-03	5.20E-05	0.00E+00	1.02E-03	4.49E-03
52	C33	60	Passenger Car	51	0.00E+00	6.86E-07	7.42E-08	2.51E+00	4.78E-06	1.70E-02	1.53E-06	9.92E-05	4.98E-04	7.66E-05	1.49E-04	9.58E-05	9.83E-05	1.05E-05	1.27E-05	3.39E-09	5.02E-05	1.56E-05
52	C33	60	Passenger Truck	85	0.00E+00	1.51E-06	1.59E-07	5.71E+00	9.40E-06	3.03E-02	3.10E-06	3.19E-04	8.88E-04	1.37E-04	2.96E-04	1.92E-04	1.97E-04	4.39E-05	2.87E-05	7.19E-09	9.80E-05	5.29E-05
52	C33	60	Single Unit Short Haul Truck	2	0.00E+00	6.74E-07	3.36E-08	4.28E-01	5.54E-07	8.27E-04	7.19E-07	3.21E-04	5.44E-05	9.86E-06	8.14E-05	2.02E-05	2.05E-05	4.29E-05	1.73E-06	7.12E-10	6.12E-05	6.02E-05
50	C34	40	Passenger Car	70	0.00E+00	1.16E-06	1.26E-07	4.03E+00	8.09E-06	2.88E-02	2.59E-06	1.27E-04	1.21E-03	1.73E-04	2.51E-04	1.62E-04	1.67E-04	2.20E-05	2.02E-05	4.90E-09	8.52E-05	1.98E-05
50	C34	40	Passenger Truck	117	0.00E+00	2.66E-06	2.79E-07	8.96E+00	1.60E-05	4.95E-02	5.31E-06	4.79E-04	2.15E-03	3.06E-04	5.02E-04	3.29E-04	3.36E-04	7.75E-05	4.46E-05	9.55E-09	1.66E-04	8.11E-05
50	C34	40	Single Unit Short Haul Truck	7	0.00E+00	2.92E-06	1.53E-07	1.40E+00	2.54E-06	2.41E-03	3.10E-06	1.43E-03	2.66E-04	4.41E-05	3.45E-04	9.10E-05	9.25E-05	1.41E-04	5.65E-06	2.39E-09	2.52E-04	2.68E-04
50	C34	40	Combination Short Haul Truck	3	0.00E+00	2.25E-06	1.56E-07	1.14E+00	8.12E-09	1.96E-03	1.67E-06	2.51E-03	2.62E-04	4.72E-05	1.46E-04	4.66E-05	4.71E-05	1.72E-04	3.82E-06	0.00E+00	9.88E-05	4.74E-04
50	C34	40	Combination Long Haul Truck	2	0.00E+00	2.05E-06	1.34E-07	1.09E+00	9.20E-09	2.18E-03	1.58E-06	2.52E-03	2.63E-04	4.19E-05	1.50E-04	4.08E-05	4.16E-05	1.66E-04	3.64E-06	0.00E+00	1.09E-04	4.75E-04
53	C35	70	Passenger Car	110	0.00E+00	1.38E-06	1.49E-07	5.31E+00	9.60E-06	3.44E-02	3.07E-06	2.25E-04	8.44E-04	1.36E-04	2.99E-04	1.93E-04	1.98E-04	1.98E-05	2.69E-05	7.33E-09	1.01E-04	3.53E-05
53	C35	70	Passenger Truck	185	0.00E+00	3.01E-06	3.19E-07	1.22E+01	1.91E-05	6.32E-02	6.27E-06	6.89E-04	1.52E-03	2.47E-04	5.96E-04	3.88E-04	3.98E-04	8.94E-05	6.17E-05	1.61E-08	1.99E-04	1.13E-04
53	C35	70	Single Unit Short Haul Truck	16	0.00E+00	3.85E-06	1.93E-07	3.02E+00	3.15E-06	6.06E-03	4.11E-06	1.90E-03	2.71E-04	5.42E-05	4.69E-04	1.15E-04	1.17E-04	3.03E-04	1.22E-05	4.92E-09	3.50E-04	3.56E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.68E-07	8.36E-09	1.28E-01	1.36E-07	2.53E-04	1.79E-07	8.18E-05	1.24E-05	2.41E-06	2.05E-05	4.98E-06	5.06E-06	1.28E-05	5.16E-07	2.07E-10	1.54E-05	1.53E-05
53	C35	70	Combination Short Haul Truck	13	0.00E+00	6.57E-06	4.67E-07	4.78E+00	2.14E-08	5.66E-03	4.81E-06	6.92E-03	4.99E-04	1.09E-04	4.01E-04	1.38E-04	1.38E-04	7.20E-04	1.60E-05	0.00E+00	2.63E-04	1.30E-03
53	C35	70	Combination Long Haul Truck	12	0.00E+00	5.96E-06	3.97E-07	4.45E+00	2.46E-08	5.99E-03	4.52E-06	6.83E-03	4.97E-04	9.07E-05	4.13E-04	1.20E-04	1.21E-04	6.79E-04	1.49E-05	0.00E+00	2.93E-04	1.29E-03
50	C36	40	Passenger Car	305	0.00E+00	5.06E-06	5.47E-07	1.75E+01	3.52E-05	1.25E-01	1.13E-05	5.51E-04	5.27E-03	7.52E-04	1.09E-03	7.06E-04	7.24E-04	9.56E-05	8.80E-05	2.13E-08	3.71E-04	8.63E-05
50	C36	40	Passenger Truck	510	0.00E+00	1.16E-05	1.21E-06	3.90E+01	6.94E-05	2.15E-01	2.31E-05	2.08E-03	9.35E-03	1.33E-03	2.18E-03	1.43E-03	1.46E-03	3.37E-04	1.94E-04	4.15E-08	7.20E-04	3.53E-04
50	C36	40	Single Unit Short Haul Truck	45	0.00E+00	2.00E-05	1.05E-06	9.60E+00	1.74E-05	1.65E-02	2.13E-05	9.81E-03	1.83E-03	3.03E-04	2.37E-03	6.25E-04	6.35E-04	9.71E-04	3.88E-05	1.64E-08	1.73E-03	1.84E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	8.78E-07	4.57E-08	4.15E-01	7.62E-07	7.18E-04	9.33E-07	4.26E-04	8.17E-05	1.35E-05	1.04E-04	2.73E-05	2.77E-05	4.19E-05	1.67E-06	7.12E-10	7.62E-05	8.01E-05
50	C36	40	Combination Short Haul Truck	59	0.00E+00	5.19E-05	3.59E-06	2.63E+01	1.87E-07	4.52E-02	3.85E-05	5.79E-02	6.03E-03	1.09E-03	3.37E-03	1.07E-03	1.08E-03	3.97E-03	8.81E-05	0.00E+00	2.28E-03	1.09E-02
50	C36	40	Combination Long Haul Truck	53	0.00E+00	4.73E-05	3.08E-06	2.51E+01	2.12E-07	5.03E-02	3.63E-05	5.81E-02	6.06E-03	9.65E-04	3.45E-03	9.40E-04	9.58E-04	3.82E-03	8.38E-05	0.00E+00	2.51E-03	1.09E-02
52	C37	60	Passenger Car	91	0.00E+00	1.24E-06	1.34E-07	4.54E+00	8.65E-06	3.07E-02	2.77E-06	1.79E-04	9.01E-04	1.39E-04	2.69E-04	1.73E-04	1.78E-04	1.91E-05	2.30E-05	6.14E-09	9.08E-05	2.82E-05
52	C37	60	Passenger Truck	153	0.00E+00	2.73E-06	2.88E-07	1.03E+01	1.70E-05	5.48E-02	5.61E-06	5.78E-04	1.61E-03	2.49E-04	5.35E-04	3.48E-04	3.56E-04	7.95E-05	5.18E-05	1.30E-08	1.77E-04	9.56E-05
52	C37	60	Single Unit Short Haul Truck	36	0.00E+00	1.05E-05	5.26E-07	6.69E+00	8.66E-06	1.29E-02	1.12E-05	5.02E-03	8.51E-04	1.54E-04	1.27E-03	3.15E-04	3.20E-04	6.70E-04	2.71E-05	1.11E-08	9.57E-04	9.41E-04
52	C37	60	Single Unit Long Haul Truck	2	0.00E+00	4.61E-07	2.29E-08	2.86E-01	3.76E-07	5.48E-04	4.91E-07	2.17E-04	3.82E-05	6.84E-06	5.61E-05	1.37E-05	1.39E-05	2.86E-05	1.15E-06	4.74E-10	4.20E-05	4.07E-05
52	C37	60	Combination Short Haul Truck	25	0.00E+00	1.47E-05	1.02E-06	9.54E+00	5.19E-08	1.28E-02	1.09E-05	1.59E-02	1.36E-03	2.70E-04	9.34E-04	3.04E-04	3.04E-04	1.44E-03	3.19E-05	0.00E+00	6.27E-04	3.00E-03
52	C37	60	Combination Long Haul Truck	23	0.00E+00	1.31E-05	8.58E-07	8.96E+00	5.95E-08	1.38E-02	1.02E-05	1.58E-02	1.37E-03	2.33E-04	9.59E-04	2.61E-04	2.64E-04	1.36E-03	2.99E-05	0.00E+00	6.94E-04	2.98E-03
53	C38	70	Passenger Car	124	0.00E+00	1.55E-06	1.68E-07	5.95E+00	1.08E-05	3.85E-02	3.44E-06	2.52E-04	9.46E-04	1.52E-04	3.35E-04	2.16E-04	2.22E-04	2.22E-05	3.02E-05	8.22E-09	1.14E-04	3.96E-05
53	C38	70	Passenger Truck	207	0.00E+00	3.37E-06	3.57E-07	1.37E+01	2.14E-05	7.08E-02	7.03E-06	7.72E-04	1.70E-03	2.77E-04	6.68E-04	4.35E-04	4.46E-04	1.00E-04	6.91E-05	1.81E-08	2.23E-04	1.27E-04
53	C38	70	Single Unit Short Haul Truck	77	0.00E+00	1.81E-05	9.06E-07	1.42E+01	1.48E-05	2.84E-02	1.93E-05	8.94E-03	1.27E-03	2.54E-04	2.20E-03	5.41E-04	5.49E-04	1.42E-03	5.71E-05	2.31E-08	1.64E-03	1.67E-03
53	C38	70	Single Unit Long Haul Truck	3	0.00E+00	7.88E-07	3.92E-08	6.02E-01	6.38E-07	1.19E-03	8.39E-07	3.84E-04	5.81E-05	1.13E-05	9.62E-05	2.34E-05	2.38E-05	6.01E-05	2.42E-06	9.71E-10	7.21E-05	7.19E-05
53	C38	70	Combination Short Haul Truck	53	0.00E+00	2.74E-05	1.95E-06	1.99E+01	8.91E-08	2.36E-02	2.01E-05	2.89E-02	2.08E-03	4.56E-04	1.67E-03	5.78E-04	5.76E-04	3.01E-03	6.66E-05	0.00E+00	1.10E-03	5.44E-03
53	C38	70	Combination Long Haul Truck	48	0.00E+00	2.49E-05	1.66E-06	1.86E+01	1.03E-07	2.50E-02	1.88E-05	2.85E-02	2.07E-03	3.78E-04	1.72E-03	5.01E-04	5.07E-04	2.83E-03	6.22E-05	0.00E+00	1.22E-03	5.37E-03
52	C39	60	Passenger Car	106	0.00E+00	1.44E-06	1.55E-07	5.25E+00	1.00E-05	3.55E-02	3.20E-06	2.08E-04	1.04E-03	1.60E-04	3.11E-04	2.00E-04	2.06E-04	2.21E-05	2.66E-05	7.10E-09	1.05E-04	3.26E-05
52	C39	60	Passenger Truck	177	0.00E+00	3.16E-06	3.33E-07	1.19E+01	1.97E-05	6.34E-02	6.49E-06	6.69E-04	1.86E-03	2.88E-04	6.19E-04	4.02E-04	4.12E-04	9.19E-05	6.00E-05	1.50E-08	2.05E-04	1.11E-04
52	C39	60	Single Unit Short Haul Truck	8	0.00E+00	2.42E-06	1.21E-07	1.53E+00	1.98E-06	2.96E-03	2.57E-06	1.15E-03	1.95E-04	3.53E-05	2.92E-04	7.22E-05	7.34E-05	1.54E-04	6.20E-06	2.55E-09	2.19E-04	2.16E-04
52	C39	60	Combination Short Haul Truck	10	0.00E+00	5.65E-06	3.95E-07	3.68E+00	2.00E-08	4.93E-03	4.19E-06	6.13E-03	5.25E-04	1.04E-04	3.60E-04	1.17E-04	1.17E-04	5.55E-04	1.23E-05	0.00E+00	2.42E-04	1.16E-03
52	C39	60	Combination Long Haul Truck	9	0.00E+00	5.06E-06	3.31E-07	3.45E+00	2.29E-08	5.33E-03	3.91E-06	6.08E-03	5.28E-04	8.97E-05	3.70E-04	1.01E-04	1.02E-04	5.25E-04	1.15E-05	0.00E+00	2.67E-04	1.15E-03
50	C40	40	Passenger Car	106	0.00E+00	1.76E-06	1.90E-07	6.08E+00	1.22E-05	4.34E-02	3.90E-06	1.91E-04	1.83E-03	2.61E-04	3.79E-04	2.45E-04	2.51E-04	3.32E-05	3.05E-05	7.40E-09	1.29E-04	2.99E-05
50	C40	40	Passenger Truck	177	0.00E+00	4.01E-06	4.21E-07	1.35E+01	2.41E-05	7.47E-02	8.01E-06	7.23E-04	3.24E-03	4.62E-04	7.57E-04	4.97E-04	5.06E-04	1.17E-04	6.73E-05	1.44E-08	2.50E-04	1.22E-04
50	C40	40	Single Unit Short Haul Truck	8	0.00E+00	3.65E-06	1.91E-07	1.75E+00	3.17E-06	3.01E-03	3.87E-06	1.78E-03	3.33E-04	5.51E-05	4.31E-04	1.14E-04	1.16E-04	1.77E-04	7.06E-06	2.98E-09	3.14E-04	3.35E-04
50	C40	40	Combination Short Haul Truck	10	0.00E+00	8.51E-06	5.89E-07	4.32E+00	3.07E-08	7.41E-03	6.32E-06	9.49E-03	9.89E-04	1.78E-04	5.52E-04	1.76E-04	1.78E-04	6.51E-04	1.45E-05	0.00E+00	3.73E-04	1.79E-03
50	C40	40	Combination Long Haul Truck	9	0.00E+00	7.76E-06	5.06E-07	4.11E+00	3.48E-08	8.24E-03	5.96E-06	9.53E-03	9.95E-04	1.58E-04	5.67E-04	1.54E-04	1.57E-04	6.27E-04	1.37E-05	0.00E+00	4.11E-04	1.79E-03
55	C41	90	Passenger Car	335	0.00E+00	3.73E-06	4.03E-07	1.51E+01	2.59E-05	9.58E-02	8.29E-06	6.91E-04	1.44E-03	2.63E-04	8.06E-04	5.20E-04	5.34E-04	4.66E-05	7.65E-05	2.05E-08	2.73E-04	1.08E-04
55	C41	90	Passenger Truck	561	0.00E+00	8.07E-06	8.58E-07	3.52E+01	5.23E-05	1.87E-01	1.70E-05	2.01E-03	2.59E-03	4.87E-04	1.64E-03	1.06E-03	1.09E-03	2.35E-04	1.78E-04	4.70E-08	5.48E-04	3.27E-04
55	C41	90	Single Unit Short Haul Truck	37	0.00E+00	5.52E-06	2.71E-07	6.73E+00	4.38E-06	1.35E-02	5.87E-06	2.95E-03	3.05E-04	8.04E-05	6.76E-04	1.62E-04	1.65E-04	6.75E-04	2.71E-05	1.06E-08	5.11E-04	5.52E-04
55	C41	90	Single Unit Long Haul Truck	2	0.00E+00	2.40E-07	1.16E-08	2.84E-01	1.85E-07	5.61E-04	2.55E-07	1.25E-04	1.39E-05	3.51E-06	2.95E-05	6.91E-06	7.05E-06	2.83E-05	1.14E-06	4.39E-10	2.24E-05	2.34E-05
55	C41	90	Combination Short Haul Truck	53	0.00E+00	1.85E-05	1.32E-06	1.83E+01	5.99E-08	1.80E-02	1.36E-05	1.91E-02	8.37E-04	2.47E-04	1.10E-03	3.90E-04	3.83E-04	2.76E-03	6.13E-05	0.00E+00	7.13E-04	3.61E-03
55	C41	90	Combination Long Haul Truck	48	0.00E+00	1.60E-05	1.06E-06	1.66E+01	6.94E-08	1.81E-02	1.23E-05	1.81E-02	8.00E-04	1.89E-04	1.12E-03	3.21E-04	3.20E-04	2.54E-03	5.59E-05	0.00E+00	8.00E-04	3.41E-03
55	C42	90	Passenger Car	315	0.00E+00	3.51E-06	3.79E-07	1.42E+01	2.44E-05	9.01E-02	7.80E-06	6.50E-04	1.36E-03	2.48E-04	7.59E-04	4.89E-04	5.02E-04	4.38E-05	7.20E-05	1.92E-08	2.57E-04	1.01E-04
55	C42	90	Passenger Truck	528	0.00E+00	7.59E-06	8.07E-07	3.31E+01	4.92E-05	1.76E-01	1.60E-05	1.89E-03	2.43E-03	4.59E-04	1.54E-03	9.98E-04	1.02E-03	2.21E-04	1.67E-04	4.43E-08	5.16E-04	3.08E-04
55	C42	90	Single Unit Short Haul Truck	26	0.00E+00	3.93E-06	1.93E-07	4.79E+00	3.12E-06	9.64E-03	4.18E-06	2.10E-03	2.17E-04	5.73E-05	4.81E-04	1.15E-04	1.17E-04	4.81E-04	1.93E-05	7.54E-09	3.64E-04	3.93E-04
55	C42	90	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	8.28E-09	2.02E-01	1.31E-07	4.00E-04	1.81E-07	8.92E-05	9.88E-06	2.50E-06	2.10E-05	4.92E-06	5.02E-06	2.02E-05	8.15E-07	3.12E-10	1.60E-05	1.67E-05
55	C42	90	Combination Short Haul Truck	17	0.00E+00	6.06E-06	4.30E-07	5.96E+00	1.96E-08	5.87E-03	4.43E-06	6.25E-03	2.73E-04	8.06E-05	3.58E-04	1.27E-04	1.25E-04	9.02E-04	2.00E-05	0.00E+00	2.33E-04	1.18E-03
55	C42	90	Combination Long Haul Truck	16	0.00E+00	5.22E-06	3.45E-07	5.44E+00	2.27E-08	5.92E-03	4.00E-06	5.92E-03	2.61E-04	6.18E-05	3.66E-04	1.05E-04	1.04E-04	8.31E-04	1.83E-05	0.00E+00	2.61E-04	1.11E-03
55	C43	90	Passenger Car	159	0.00E+00	1.77E-06	1.91E-07	7.16E+00	1.23E-05	4.55E-02	3.94E-06	3.28E-04	6.85E-04	1.25E-04	3.83E-04	2.47E-04	2.54E-04	2.21E-05	3.64E-05	9.73E-09	1.30E-04	5.13E-05
55	C43	90	Passenger Truck	267	0.00E+00	3.83E-06	4.08E-07	1.67E+01	2.49E-05	8.88E-02	8.07E-06	9.55E-04	1.23E-03	2.32E-04	7.77E-04	5.04E-04	5.17E-04	1.12E-04	8.44E-05	2.24E-08	2.61E-04	1.55E-04
55	C43	90	Single Unit Short Haul Truck	50	0.00E+00	7.55E-06	3.71E-07	9.21E+00	5.99E-06	1.85E-02	8.04E-06	4.04E-03	4.18E-04	1.10E-04	9.25E-04	2.22E-04	2.26E-04	9.24E-04	3.71E-05	1.45E-08	6.99E-04	7.55E-04
55	C43	90	Single Unit Long Haul Truck	2	0.00E+00	3.28E-07	1.59E-08	3.89E-01	2.53E-07	7.68E-04	3.48E-07	1.71E-04	1.90E-05	4.80E-06	4.03E-05	9.46E-06	9.65E-06	3.88E-05	1.57E-06	6.00E-10	3.07E-05	3.21E-05
55	C43	90	Combination Short Haul Truck	20	0.00E+00	7.12E-06	5.05E-07	7.01E+00	2.30E-08	6.90E-03	5.20E-06	7.35E-03	3.21E-04	9.48E-05	4.21E-04	1.50E-04	1.47E-04	1.06E-03	2.36E-05	0.00E+00	2.74E-04	1.39E-03
55	C43	90	Combination Long Haul Truck	18	0.00E+00	6.14E-06	4.06E-07	6.39E+00	2.66E-08	6.96E-03	4.71E-06	6.96E-03	3.07E-04	7.26E-05	4.31E-04	1.23E-04	1.23E-04	9.77E-04	2.15E-05	0.00E+00	3.07E-04	1.31E-03
55	C44	90	Passenger Car	125	0.00E+00	1.39E-06	1.50E-07	5.61E+00	9.65E-06	3.56E-02	3.08E-06	2.57E-04	5.36E-04	9.79E-05	3.00E-04	1.93E-04	1.99E-04	1.73E-05	2.85E-05	7.61E-09	1.02E-04	4.01E-05
55	C44	90	Passenger Truck	209	0.00E+00	3.00E-06	3.19E-07	1.31E+01	1.95E-05	6.95E-02	6.32E-06	7.48E-04	9.62E-04	1.81E-04	6.08E-04	3.95E-04	4.05E-04	8.75E-05	6.61E-05	1.75E-08	2.04E-04	1.22E-04
55	C44	90	Single Unit Short Haul Truck	33	0.00E+00	4.92E-06	2.41E-07	6.00E+00	3.90E-06	1.21E-02	5.23E-06	2.63E-03	2.72E-04	7.17E-05	6.02E-04	1.44E-04	1.47E-04	6.01E-04	2.41E-05	9.43E-09	4.55E-04	4.92E-04
55	C44	90	Single Unit Long Haul Truck	1	0.00E+00	2.14E-07	1.04E-08	2.53E-01	1.64E-07	5.00E-04	2.27E-07	1.12E-04	1.24E-05	3.12E-06	2.62E-05	6.16E-06	6.28E-06	2.52E-05	1.02E-06	3.91E-10	2.00E-05	2.09E-05
55	C44	90	Combination Short Haul Truck	18	0.00E+00	6.32E-06	4.49E-07	6.22E+00	2.04E-08	6.12E-03	4.62E-06	6.52E-03	2.85E-04	8.41E-05	3.73E-04	1.33E-04	1.30E-04	9.41E-04	2.09E-05	0.00E+00	2.43E-04	1.23E-03
55	C44	90	Combination Long Haul Truck	16	0.00E+00	5.45E-06	3.60E-07	5.68E+00	2.37E-08	6.17E-03	4.18E-06	6.17E-03	2.73E-04	6.45E-05	3.82E-04	1.09E-04	1.09E-04	8.67E-04	1.91E-05	0.00E+00	2.73E-04	1.16E-03
53	C45	70	Passenger Car	170	0.00E+00	2.12E-06	2.29E-07	8.15E+00	1.47E-05	5.27E-02	4.71E-06	3.46E-04	1.29E-03	2.09E-04	4.59E-04	2.96E-04	3.03E-04	3.04E-05	4.13E-05	1.13E-08	1.55E-04	5.41E-05
53	C45	70	Passenger Truck	284	0.00E+00	4.61E-06	4.89E-07	1.88E+01	2.93E-05	9.70E-02	9.62E-06	1.06E-03	2.33E-03	3.79E-04	9.15E-04	5.95E-04	6.10E-04	1.37E-04	9.46E-05	2.48E-08	3.06E-04	1.73E-04
53	C45	70	Single Unit Short Haul Truck	49	0.00E+00	1.15E-05	5.74E-07	8.98E+00	9.37E-06	1.80E-02	1.22E-05	5.66E-03	8.06E-04	1.61E-04	1.39E-03	3.43E-04	3.48E-04	8.99E-04	3.62E-05	1.46E-08	1.04E-03	1.06E-03
53	C45	70	Single Unit Long Haul Truck	2	0.00E+00	4.99E-07	2.48E-08	3.81E-01	4.04E-07	7.53E-04	5.32E-07	2.43E-04	3.68E-05	7.17E-06	6.09E-05	1.48E-05	1.51E-05	3.80E-05	1.53E-06	6.15E-10	4.57E-05	4.56E-05
53	C45	70	Combination Short Haul Truck	20	0.00E+00	1.04E-05	7.38E-07	7.55E+00	3.37E-08	8.93E-03	7.60E-06	1.09E-02	7.88E-04	1.73E-04	6.33E-04	2.19E-04	2.18E-04	1.14E-03	2.52E-05	0.00E+00	4.15E-04	2.06E-03
53	C45	70	Combination Long Haul Truck	18	0.00E+00	9.41E-06	6.27E-07	7.03E+00	3.89E-08	9.46E-03	7.14E-06	1.08E-02	7.84E-04	1.43E-04	6.53E-04	1.90E-04	1.92E-04	1.07E-03	2.35E-05	0.00E+00	4.63E-04	2.03E-03
50	C46	40	Passenger Car	111	0.00E+00	1.84E-06	1.99E-07	6.37E+00	1.28E-05	4.55E-02	4.09E-06	2.00E-04	1.92E-03	2.73E-04	3.97E-04	2.57E-04	2.63E-04	3.48E-05	3.20E-05	7.75E-09	1.35E-04	3.14E-05
50	C46	40	Passenger Truck	185	0.00E+00	4.20E-06	4.41E-07	1.42E+01	2.52E-05	7.83E-02	8.40E-06	7.57E-04	3.40E-03	4.84E-04	7.93E-04	5.20E-04	5.31E-04	1.23E-04	7.06E-05	1.51E-08	2.62E-04	1.28E-04
50	C46	40	Single Unit Short Haul Truck	54	0.00

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C51	70	Single Unit Long Haul Truck	1	0.00E+00	2.54E-07	1.26E-08	1.94E-01	2.06E-07	3.83E-04	2.71E-07	1.24E-04	1.87E-05	3.65E-06	3.10E-05	7.54E-06	7.66E-06	1.94E-05	7.81E-07	3.13E-10	2.33E-05	2.32E-05
53	C51	70	Combination Short Haul Truck	10	0.00E+00	5.08E-06	3.62E-07	3.70E+00	1.65E-08	4.38E-03	3.72E-06	5.36E-03	3.86E-04	8.46E-05	3.10E-04	1.07E-04	1.07E-04	5.57E-04	1.23E-05	0.00E+00	2.03E-04	1.01E-03
53	C51	70	Combination Long Haul Truck	9	0.00E+00	4.61E-06	3.07E-07	3.45E+00	1.90E-08	4.64E-03	3.50E-06	5.28E-03	3.84E-04	7.02E-05	3.20E-04	9.30E-05	9.40E-05	5.26E-04	1.15E-05	0.00E+00	2.27E-04	9.97E-04
50	C52	40	Passenger Car	74	0.00E+00	1.22E-06	1.33E-07	4.24E+00	8.52E-06	3.03E-02	2.72E-06	1.33E-04	1.28E-03	1.82E-04	2.64E-04	1.71E-04	1.75E-04	2.31E-05	2.13E-05	5.16E-09	8.97E-05	2.09E-05
50	C52	40	Passenger Truck	123	0.00E+00	2.80E-06	2.94E-07	9.43E+00	1.68E-05	5.21E-02	5.59E-06	5.04E-04	2.26E-03	3.22E-04	5.28E-04	3.46E-04	3.53E-04	8.16E-05	4.70E-05	1.01E-08	1.74E-04	8.54E-05
50	C52	40	Single Unit Short Haul Truck	10	0.00E+00	4.38E-06	2.30E-07	2.10E+00	3.81E-06	3.62E-03	4.66E-06	2.14E-03	4.00E-04	6.63E-05	5.18E-04	1.37E-04	1.39E-04	2.12E-04	8.49E-06	3.59E-09	3.78E-04	4.03E-04
50	C52	40	Combination Short Haul Truck	5	0.00E+00	4.35E-06	3.01E-07	2.21E+00	1.57E-08	3.79E-03	3.23E-06	4.85E-03	5.06E-04	9.12E-05	2.82E-04	9.00E-05	9.09E-05	3.33E-04	7.39E-06	0.00E+00	1.91E-04	9.16E-04
50	C52	40	Combination Long Haul Truck	4	0.00E+00	3.97E-06	2.59E-07	2.10E+00	1.78E-08	4.21E-03	3.05E-06	4.87E-03	5.08E-04	8.09E-05	2.90E-04	7.88E-05	8.03E-05	3.21E-04	7.02E-06	0.00E+00	2.10E-04	9.17E-04
52	C53	60	Passenger Car	95	0.00E+00	1.29E-06	1.39E-07	4.70E+00	8.96E-06	3.18E-02	2.86E-06	1.86E-04	9.33E-04	1.44E-04	2.79E-04	1.80E-04	1.84E-04	1.98E-05	2.38E-05	6.36E-09	9.41E-05	2.92E-05
52	C53	60	Passenger Truck	158	0.00E+00	2.83E-06	2.98E-07	1.07E+01	1.76E-05	5.68E-02	5.81E-06	5.99E-04	1.66E-03	2.57E-04	5.55E-04	3.60E-04	3.69E-04	8.23E-05	5.37E-05	1.35E-08	1.84E-04	9.90E-05
52	C53	60	Single Unit Short Haul Truck	11	0.00E+00	3.33E-06	1.66E-07	2.11E+00	2.74E-06	4.08E-03	3.55E-06	1.59E-03	2.69E-04	4.87E-05	4.02E-04	9.96E-05	1.01E-04	2.12E-04	8.54E-06	3.52E-09	3.02E-04	2.97E-04
52	C53	60	Combination Short Haul Truck	7	0.00E+00	3.95E-06	2.76E-07	2.57E+00	1.40E-08	3.45E-03	2.93E-06	4.29E-03	3.67E-04	7.27E-05	2.52E-04	8.20E-05	8.20E-05	3.88E-04	8.59E-06	0.00E+00	1.69E-04	8.09E-04
52	C53	60	Combination Long Haul Truck	6	0.00E+00	3.54E-06	2.31E-07	2.41E+00	1.60E-08	3.72E-03	2.74E-06	4.25E-03	3.69E-04	6.27E-05	2.58E-04	7.04E-05	7.12E-05	3.67E-04	8.06E-06	0.00E+00	1.87E-04	8.02E-04
53	C54	70	Passenger Car	114	0.00E+00	1.43E-06	1.54E-07	5.49E+00	9.93E-06	3.55E-02	3.17E-06	2.33E-04	8.72E-04	1.40E-04	3.09E-04	1.99E-04	2.04E-04	2.05E-05	2.78E-05	7.58E-09	1.05E-04	3.65E-05
53	C54	70	Passenger Truck	191	0.00E+00	3.11E-06	3.29E-07	1.26E+01	1.97E-05	6.53E-02	6.48E-06	7.12E-04	1.57E-03	2.55E-04	6.16E-04	4.01E-04	4.11E-04	9.24E-05	6.37E-05	1.67E-08	2.06E-04	1.17E-04
53	C54	70	Single Unit Short Haul Truck	25	0.00E+00	5.97E-06	2.99E-07	4.68E+00	4.88E-06	9.39E-03	6.36E-06	2.95E-03	4.20E-04	8.40E-05	7.27E-04	1.79E-04	1.81E-04	4.69E-04	1.88E-05	7.62E-09	5.43E-04	5.52E-04
53	C54	70	Single Unit Long Haul Truck	1	0.00E+00	2.60E-07	1.30E-08	1.99E-01	2.11E-07	3.92E-04	2.77E-07	1.27E-04	1.92E-05	3.74E-06	3.18E-05	7.72E-06	7.85E-06	1.98E-05	8.00E-07	3.21E-10	2.38E-05	2.38E-05
53	C54	70	Combination Short Haul Truck	12	0.00E+00	6.43E-06	4.57E-07	4.68E+00	2.09E-08	5.54E-03	4.71E-06	6.77E-03	4.88E-04	1.07E-04	3.92E-04	1.35E-04	1.35E-04	7.05E-04	1.56E-05	0.00E+00	2.57E-04	1.28E-03
53	C54	70	Combination Long Haul Truck	11	0.00E+00	5.83E-06	3.89E-07	4.36E+00	2.41E-08	5.86E-03	4.42E-06	6.68E-03	4.86E-04	8.87E-05	4.04E-04	1.18E-04	1.19E-04	6.65E-04	1.46E-05	0.00E+00	2.87E-04	1.26E-03
52	C55	60	Passenger Car	183	0.00E+00	2.48E-06	2.69E-07	9.09E+00	1.73E-05	6.15E-02	5.54E-06	3.59E-04	1.80E-03	2.77E-04	5.39E-04	3.47E-04	3.56E-04	3.82E-05	4.60E-05	1.23E-08	1.82E-04	5.64E-05
52	C55	60	Passenger Truck	306	0.00E+00	5.46E-06	5.77E-07	2.07E+01	3.40E-05	1.10E-01	1.12E-05	1.16E-03	3.22E-03	4.98E-04	1.07E-03	6.96E-04	7.13E-04	1.59E-04	1.04E-04	2.60E-08	3.55E-04	1.91E-04
52	C55	60	Single Unit Short Haul Truck	29	0.00E+00	8.66E-06	4.32E-07	5.50E+00	7.12E-06	1.06E-02	9.23E-06	4.13E-03	6.99E-04	1.27E-04	1.05E-03	2.59E-04	2.63E-04	5.51E-04	2.22E-05	9.15E-09	7.86E-04	7.73E-04
52	C55	60	Single Unit Long Haul Truck	1	0.00E+00	3.78E-07	1.88E-08	2.35E-01	3.09E-07	4.51E-04	4.04E-07	1.78E-04	3.14E-05	5.62E-06	4.61E-05	1.13E-05	1.15E-05	2.35E-05	9.48E-07	3.89E-10	3.45E-05	3.34E-05
52	C55	60	Combination Short Haul Truck	19	0.00E+00	1.10E-05	7.66E-07	7.15E+00	3.88E-08	9.58E-03	8.13E-06	1.19E-02	1.02E-03	2.02E-04	6.99E-04	2.28E-04	2.28E-04	1.08E-03	2.39E-05	0.00E+00	4.70E-04	2.25E-03
52	C55	60	Combination Long Haul Truck	17	0.00E+00	9.82E-06	6.42E-07	6.71E+00	4.45E-08	1.03E-02	7.60E-06	1.18E-02	1.02E-03	1.74E-04	7.18E-04	1.95E-04	1.98E-04	1.02E-03	2.24E-05	0.00E+00	5.19E-04	2.23E-03
50	C56	40	Passenger Car	5	0.00E+00	8.03E-08	8.69E-09	2.78E-01	5.59E-07	1.99E-03	1.79E-07	8.74E-06	8.37E-05	1.19E-05	1.73E-05	1.12E-05	1.15E-05	1.52E-06	1.40E-06	3.38E-10	5.88E-06	1.37E-06
50	C56	40	Passenger Truck	8	0.00E+00	1.84E-07	1.93E-08	6.18E-01	1.10E-06	3.42E-03	3.67E-07	3.31E-05	1.48E-04	2.11E-05	3.46E-05	2.27E-05	2.32E-05	5.35E-06	3.08E-06	6.59E-10	1.14E-05	5.60E-06
50	C56	40	Single Unit Short Haul Truck	3	0.00E+00	1.20E-06	6.28E-08	5.75E-01	1.04E-06	9.89E-04	1.27E-06	5.87E-04	1.09E-04	1.81E-05	1.42E-04	3.74E-05	3.80E-05	5.81E-05	2.32E-06	9.81E-10	1.03E-04	1.10E-04
50	C56	40	Combination Short Haul Truck	1	0.00E+00	7.46E-07	5.17E-08	3.79E-01	2.69E-09	6.50E-04	5.54E-07	8.33E-04	8.68E-05	1.56E-05	4.84E-05	1.54E-05	1.56E-05	5.71E-05	1.27E-06	0.00E+00	3.27E-05	1.57E-04
50	C56	40	Combination Long Haul Truck	1	0.00E+00	6.80E-07	4.44E-08	3.60E-01	3.05E-09	7.23E-04	5.22E-07	8.36E-04	8.72E-05	1.39E-05	4.97E-05	1.35E-05	1.38E-05	5.50E-05	1.20E-06	0.00E+00	3.60E-05	1.57E-04
53	C57	70	Passenger Car	195	0.00E+00	2.44E-06	2.64E-07	9.36E+00	1.69E-05	6.06E-02	5.41E-06	3.97E-04	1.49E-03	2.40E-04	5.27E-04	3.40E-04	3.49E-04	3.49E-05	4.75E-05	1.29E-08	1.79E-04	6.22E-05
53	C57	70	Passenger Truck	326	0.00E+00	5.30E-06	5.62E-07	2.16E+01	3.36E-05	1.11E-01	1.11E-05	1.21E-03	2.67E-03	4.36E-04	1.05E-03	6.84E-04	7.02E-04	1.58E-04	1.09E-04	2.85E-08	3.52E-04	1.99E-04
53	C57	70	Single Unit Short Haul Truck	28	0.00E+00	6.63E-06	3.32E-07	5.19E+00	5.42E-06	1.04E-02	7.06E-06	3.27E-03	4.66E-04	9.32E-05	8.07E-04	1.98E-04	2.01E-04	5.20E-04	2.09E-05	8.46E-09	6.02E-04	6.13E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.44E-08	2.20E-01	2.34E-07	4.35E-04	3.08E-07	1.41E-04	2.13E-05	4.15E-06	3.52E-05	8.57E-06	8.71E-06	2.20E-05	8.88E-07	3.56E-10	2.64E-05	2.64E-05
53	C57	70	Combination Short Haul Truck	13	0.00E+00	6.50E-06	4.62E-07	4.73E+00	2.11E-08	5.59E-03	4.76E-06	6.85E-03	4.93E-04	1.08E-04	3.96E-04	1.37E-04	1.37E-04	7.12E-04	1.58E-05	0.00E+00	2.60E-04	1.29E-03
53	C57	70	Combination Long Haul Truck	11	0.00E+00	5.89E-06	3.93E-07	4.40E+00	2.43E-08	5.93E-03	4.47E-06	6.75E-03	4.91E-04	8.97E-05	4.09E-04	1.19E-04	1.20E-04	6.72E-04	1.47E-05	0.00E+00	2.90E-04	1.27E-03
50	C58	40	Passenger Car	53	0.00E+00	8.82E-07	9.54E-08	3.05E+00	6.14E-06	2.18E-02	1.96E-06	9.60E-05	9.19E-04	1.31E-04	1.90E-04	1.23E-04	1.26E-04	1.67E-05	1.53E-05	3.72E-09	6.46E-05	1.50E-05
50	C58	40	Passenger Truck	89	0.00E+00	2.02E-06	2.11E-07	6.79E+00	1.21E-05	3.75E-02	4.03E-06	3.63E-04	1.63E-03	2.32E-04	3.80E-04	2.49E-04	2.54E-04	5.88E-05	3.38E-05	7.24E-09	1.25E-04	6.15E-05
50	C58	40	Single Unit Short Haul Truck	2	0.00E+00	7.06E-07	3.70E-08	3.38E-01	6.13E-07	5.82E-04	7.50E-07	3.45E-04	6.44E-05	1.07E-05	8.34E-05	2.20E-05	2.24E-05	3.42E-05	1.37E-06	5.78E-10	6.09E-05	6.49E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	6.24E-07	4.32E-08	3.17E-01	2.25E-09	5.44E-04	4.64E-07	6.96E-04	7.26E-05	1.31E-05	4.05E-05	1.29E-05	1.30E-05	4.77E-05	1.06E-06	0.00E+00	2.74E-05	1.31E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	5.69E-07	3.71E-08	3.01E-01	2.55E-09	6.05E-04	4.37E-07	6.99E-04	7.30E-05	1.16E-05	4.16E-05	1.13E-05	1.15E-05	4.60E-05	1.01E-06	0.00E+00	3.01E-05	1.32E-04
53	C59	70	Passenger Car	46	0.00E+00	5.73E-07	6.20E-08	2.20E+00	3.98E-06	1.43E-02	1.27E-06	9.34E-05	3.50E-04	5.64E-05	1.24E-04	7.99E-05	8.20E-05	8.21E-06	1.12E-05	3.04E-09	4.20E-05	1.46E-05
53	C59	70	Passenger Truck	77	0.00E+00	1.25E-06	1.32E-07	5.07E+00	7.91E-06	2.62E-02	2.60E-06	2.86E-04	6.29E-04	1.03E-04	2.47E-04	1.61E-04	1.65E-04	3.71E-05	2.56E-05	6.69E-09	8.27E-05	4.69E-05
53	C59	70	Single Unit Short Haul Truck	3	0.00E+00	7.21E-07	3.61E-08	5.65E-01	5.90E-07	1.13E-03	7.68E-07	3.56E-04	5.07E-05	1.01E-05	8.78E-05	2.16E-05	2.19E-05	5.66E-05	2.28E-06	9.21E-10	6.56E-05	6.67E-05
53	C59	70	Combination Short Haul Truck	1	0.00E+00	4.59E-07	3.27E-08	3.34E-01	1.49E-09	3.96E-04	3.37E-07	4.84E-04	3.49E-05	7.64E-06	2.80E-05	9.68E-06	9.66E-06	5.04E-05	1.12E-06	0.00E+00	1.84E-05	9.12E-05
53	C59	70	Combination Long Haul Truck	1	0.00E+00	4.17E-07	2.78E-08	3.11E-01	1.72E-09	4.19E-04	3.16E-07	4.77E-04	3.47E-05	6.34E-06	2.89E-05	8.40E-06	8.49E-06	4.75E-05	1.04E-06	0.00E+00	2.05E-05	9.01E-05
52	C60	60	Passenger Car	174	0.00E+00	2.37E-06	2.56E-07	8.67E+00	1.65E-05	5.86E-02	5.28E-06	3.42E-04	1.72E-03	2.65E-04	5.14E-04	3.31E-04	3.40E-04	3.64E-05	4.38E-05	1.17E-08	1.73E-04	5.38E-05
52	C60	60	Passenger Truck	292	0.00E+00	5.21E-06	5.50E-07	1.97E+01	3.25E-05	1.05E-01	1.07E-05	1.10E-03	3.07E-03	4.75E-04	1.02E-03	6.64E-04	6.80E-04	1.52E-04	9.90E-05	2.48E-08	3.38E-04	1.83E-04
52	C60	60	Single Unit Short Haul Truck	27	0.00E+00	7.84E-06	3.91E-07	4.98E+00	6.44E-06	9.61E-03	8.35E-06	3.73E-03	6.33E-04	1.15E-04	9.46E-04	2.34E-04	2.38E-04	4.98E-04	2.01E-05	8.28E-09	7.11E-04	6.99E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	3.42E-07	1.70E-08	2.13E-01	2.80E-07	4.08E-04	3.65E-07	1.61E-04	2.84E-05	5.09E-06	4.17E-05	1.02E-05	1.04E-05	2.12E-05	8.58E-07	3.52E-10	3.12E-05	3.03E-05
52	C60	60	Combination Short Haul Truck	17	0.00E+00	9.94E-06	6.94E-07	6.47E+00	3.52E-08	8.67E-03	7.36E-06	1.08E-02	9.24E-04	1.83E-04	6.33E-04	2.06E-04	2.06E-04	9.75E-04	2.16E-05	0.00E+00	4.25E-04	2.03E-03
52	C60	60	Combination Long Haul Truck	15	0.00E+00	8.89E-06	5.81E-07	6.07E+00	4.03E-08	9.36E-03	6.88E-06	1.07E-02	9.28E-04	1.58E-04	6.50E-04	1.77E-04	1.79E-04	9.23E-04	2.03E-05	0.00E+00	4.70E-04	2.02E-03
53	C61	70	Passenger Car	231	0.00E+00	2.89E-06	3.13E-07	1.11E+01	2.01E-05	7.20E-02	6.43E-06	4.72E-04	1.77E-03	2.85E-04	6.26E-04	4.04E-04	4.14E-04	4.15E-05	5.64E-05	1.54E-08	2.12E-04	7.39E-05
53	C61	70	Passenger Truck	388	0.00E+00	6.30E-06	6.67E-07	2.56E+01	3.99E-05	1.32E-01	1.31E-05	1.44E-03	3.18E-03	5.18E-04	1.25E-03	8.13E-04	8.33E-04	1.87E-04	1.29E-04	3.38E-08	4.18E-04	2.37E-04
53	C61	70	Single Unit Short Haul Truck	13	0.00E+00	3.17E-06	1.59E-07	2.48E+00	2.59E-06	4.98E-03	3.38E-06	1.57E-03	2.23E-04	4.46E-05	3.86E-04	9.48E-05	9.63E-05	2.49E-04	1.00E-05	4.05E-09	2.88E-04	2.93E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	1.38E-07	6.88E-09	1.05E-01	1.12E-07	2.08E-04	1.47E-07	6.73E-05	1.02E-05	1.98E-06	1.69E-05	4.10E-06	4.17E-06	1.05E-05	4.25E-07	1.70E-10	1.26E-05	1.26E-05
53	C61	70	Combination Short Haul Truck	4	0.00E+00	2.08E-06	1.48E-07	1.51E+00	6.76E-09	1.79E-03	1.52E-06	2.19E-03	1.58E-04	3.46E-05	1.27E-04	4.38E-05	4.37E-05	2.28E-04	5.05E-06	0.00E+00	8.31E-05	4.13E-04
53	C61	70	Combination Long Haul Truck	4	0.00E+00	1.89E-06	1.26E-07	1.41E+00	7.79E-09	1.90E-03	1.43E-06	2.16E-03	1.57E-04	2.87E-05	1.31E-04	3.80E-05	3.84E-05	2.15E-04	4.71E-06	0.00E+00	9.27E-05	4.08E-04
50	C62	40	Passenger Car	194	0.00E+00	3.22E-06	3.49E-07	1.12E+01	2.24E-05	7.98E-02	7.17E-06	3.51E-04	3.36E-03	4.79E-04	6.95E-04	4.50E-04	4.61E-04	6.09E-05	5.61E-05	1.36E-08	2.36E-04	5.50E-05
50	C62	40	Passenger Truck	325	0.00E+00	7.37E-06	7.73E-07	2.48E+01	4.42E-05	1.37E-01	1.47E-05	1.33E-03	5.96E-03	8.48E-04	1.39E-03	9.12E-04	9.30E-04	2.15E-04	1.24E-04	2.64E-08	4.59E-04	2.25E-04
50	C62	40	Single Unit Short Haul Truck	15	0.00E+00	6.56E-06	3.44E-07	3.15E+00	5.70E-06	5.42E-03	6.97E-06	3.21E-03	5.99E-04	9.93E-05	7.75E-04	2.05E-04	2.08E-04	3.18E-04	1.27E-05	5.37E-09	5.66E-04	6.03E-04
50	C62	40	Single Unit Long Haul Truck	1	0.00E+00	2.88E-07	1.50E-08	1.36E-01	2.50E-07	2.35E-04	3.06E-07	1.40E-04	2.68E-05	4.42E-06	3.40E-05	8.96E-06	9.08E-06	1.37E-05	5.48E-07	2.33E-10	2.50E-05	2.62E-05
50	C62	40	Combination Short Haul Truck	6	0.00E+00	4.98E-06	3.45E-07	2.53E+00	1.79E-08	4.34E-03	3.70E-06	5.56E-03	5.79E-04	1.04E-04	3.23E-04	1.03E-04	1.04E-04	3.81E-04	8.46E-06	0.00E+00	2.18E-04	1.05E-03
50	C62	40	Combination Long Haul Truck	5	0.00E+00	4.54E-06	2.96E-07	2.41E+00	2.04E-08	4.82E-03	3.49E-06	5.58E-03	5.82E-04	9.26E-05	3.32E-04	9.02E-05	9.19E-05	3.67E-04	8.04E-06	0.00E+00	2.41E-04	1.05E-03
52	C63	60	Passenger Car	305	0.00E+00	4.14E-06	4.48E-07	1.52E+01	2.89E-05	1.02E-01	9.23E-06	5.99E-04	3.01E-03	4.62E-04	8.98E-04	5.78E-04	5.94E-04	6.37E-05	7.66E-05	2.05E-08	3.03E-04	9.40E-05
52	C63	60	Passenger Truck	511	0.00E+00	9.10E-06	9.62E-07	3.45E+01	5.67E-05	1.83E-01	1.87E-05	1.93E-03	5.36E-03	8.30E-04	1.79E-03	1.16E-03	1.19E-03	2.65E-04	1.73E-04	4.34E-08	5.91E-04	3.19E-04
52	C63	60	Single Unit Short Haul Truck	107	0.00E+00	3.15E-05	1.57E-06	2.00E+01	2.59E-05	3.86E-02	3.36E-05	1.50E-02	2.54E-03	4.61E-04	3.80E-03	9.42E-04	9.57E-04	2.00E-03	8.08E-05	3.33E-08	2.86E-03	2.81E-03
52	C63	60	Single Unit Long Haul Truck	5	0.00E+00	1.38E-06	6.83E-08	8.54E-01	1.12E-06	1.64E-03	1.47E-06	6.49E-04	1.14E-04	2.04E-05	1.68E-04	4.10E-05	4.17E-05	8.53E-05	3.45E-06	1.42E-09	1.26E-04	1.22E-04
52	C63	60	Combination Short Haul Truck	58	0.00E+00	3.43E-05	2.40E-06	2.23E+01	1.21E-07	3.00E-02	2.54E-05	3.72E-02	3.19E-03	6.32E-04	2.19E-03	7.13E-04	7.13E-04	3.37E-03	7.47E-05	0.00E+00	1.47E-03	7.03E-03
52	C63	60	Combination Long Haul Truck	53	0.00E+00	3.07E-05	2.01E-06	2.10E+01	1.39E-07	3.23E-02	2.38E-05	3.69E-02	3.20E-03	5.45E-04	2.24E-03	6.11E-04	6.19E-04	3.19E-03	7.00E-05	0.00E+00	1.62E-03	6.97E-03
53	C64	70	Passenger Car	419	0.00E+00	5.24E-06	5.67E-07	2.01E+01	3.64E-05	1.30E-01	1.16E-05	8.55E-04	3.20E-03	5.16E-04	1.13E-03	7.31E-04	7.50E-04	7.51E-05	1.02E-04	2.78E-08	3.84E-04	1.34E-04
53	C64	70	Passenger Truck	702	0.00E+00	1.14E-05	1.21E-06	4.64E+01	7.24E-05	2.40E-01	2.38E-05	2.61E-03	5.75E-03	9.38E-04	2.26E-03	1.47E-03	1.51E-03	3.39E-04	2.34E-04	6.12E-08	7.57E-04	4.29E-04
53	C64	70	Single Unit Short Haul Truck	90	0.00E+00	2.11E-05	1.06E-06	1.66E+01	1.73E-05	3.32E-02	2.25E-05	1.04E-02	1.49E-03	2.97E-04	2.57E-03	6.32E-04	6.42E-04	1.66E-03	6.67E-05	2.70E-08	1.92E-03	1.95E-03
53	C64	70	Single Unit Long Haul Truck	4	0.00E+00	9.21E-07	4.58E-08	7.03E-01	7.46E-07	1.39E-03	9.81E-07	4.49E-04	6.79E-05	1.32E-05	1.12E-04	2.73E-05	2.78E-05	7.02E-05	2.83E-06	1.14E-09	8.43E-05	8.41E-05
53	C64	70	Combination Short Haul Truck	37	0.00E+00	1.91E-05	1.36E-06	1.39E+01	6.21E-08	1.64E-02	1.40E-05	2.01E-02	1.45E-03	3.18E-04	1.16E-03	4.02E-04	4.01E-04	2.09E-03	4.64E-05	0.00E+00	7.63E-04	3.79E-03
53	C64	70	Combination Long Haul Truck	34	0.00E+00	1.73E-05	1.15E-06	1.29E+01	7.15E-08	1.74E-02	1.31E-05	1.98E-02	1.44E-03	2.64E-04	1.20E-03	3.49E-04	3.53E-04	1.97E-03	4.33E-05	0.00E+00	8.51E-04	3.74E-03
52	C65	60	Passenger Car	10	0.00E+00	1.32E-07	1.43E-08	4.84E-01	9.23E-07	3.27E-03	2.95E-07	1.91E-05	9.61E-05	1.48E-05	2.87E-05	1.85E-05	1.90E-05	2.03E-06	2.45E-06	6.55E-10	9.69E-06	3.00E-06
52	C65	60	Passenger Truck	16	0.00E+00	2.91E-07	3.07E-08	1.10E+00	1.81E-06	5.85E-03	5.98E-07	6.16E-05	1.71E-04	2.65E-05	5.71E-05	3.71E-05	3.80E-05	8.47E-06	5.53E-06	1.39E-09	1.89E-05	1.02E-05
50	C66	40	Passenger Car	60	0.00E+00	9.91E-07	1.07E-07	3.43E+00	6.89E-06	2.45E-02	2.20E-06	1.08E-04	1.03E-03	1.47E-04	2.14E-04	1.38E-04	1.42E-04	1.87E-05	1.72E-05	4.18E-09	7.26E-05	1.69E-05
50	C66	40	Passenger Truck	100	0.00E+00	2.26E-06	2.38E-07	7.63E+00	1.36E-05	4.22E-02	4.52E-06	4.08E-04	1.83E-03	2.61E-04	4.27E-04	2.80E-04	2.86E-04	6.61E-05	3.80E-05	8.13E-09	1.41E-04	6.91E-05
50	C66	40	Single Unit Short Haul Truck	18	0.00E+00	7.96E-06	4.17E-07	3.82E+00	6.92E-06	6.57E-03	8.46E-06	3.90E-03	7.27E-04	1.20E-04	9.41E-04	2.48E-04	2.52E-04	3.86E-04	1.54E-05	6.52E-09	6.87E-04	7.32E-04
50	C66	40	Single Unit Long Haul Truck	1	0.00E+00	3.49E-07	1.82E-08	1.65E-01	3.03E-07	2.85E-04	3.71E-07	1.69E-04	3.25E-05	5.36E-06	4.13E-05	1.09E-05	1.10E-05	1.67E-05	6.65E-07	2.83E-10	3.03E-05	3.18E-05
50	C66	40	Combination Short Haul Truck	11	0.00E+

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
55	C70	90	Single Unit Long Haul Truck	8	0.00E+00	1.14E-06	5.51E-08	1.35E+00	8.74E-07	2.66E-03	1.21E-06	5.93E-04	6.57E-05	1.66E-05	1.40E-04	3.28E-05	3.34E-05	1.34E-04	5.42E-06	2.08E-09	1.06E-04	1.11E-04
55	C70	90	Combination Short Haul Truck	91	0.00E+00	3.22E-05	2.28E-06	3.16E+01	1.04E-07	3.11E-02	2.35E-05	3.32E-02	1.45E-03	4.28E-04	1.90E-03	6.76E-04	6.63E-04	4.79E-03	1.06E-04	0.00E+00	1.24E-03	6.25E-03
55	C70	90	Combination Long Haul Truck	83	0.00E+00	2.77E-05	1.83E-06	2.89E+01	1.20E-07	3.14E-02	2.12E-05	3.14E-02	1.39E-03	3.28E-04	1.94E-03	5.56E-04	5.54E-04	4.41E-03	9.70E-05	0.00E+00	1.39E-03	5.91E-03
53	C71	70	Passenger Car	245	0.00E+00	3.07E-06	3.32E-07	1.18E+01	2.13E-05	7.63E-02	6.81E-06	5.00E-04	1.87E-03	3.02E-04	6.63E-04	4.28E-04	4.39E-04	4.39E-05	5.98E-05	1.63E-08	2.25E-04	7.83E-05
53	C71	70	Passenger Truck	411	0.00E+00	6.67E-06	7.07E-07	2.71E+01	4.23E-05	1.40E-01	1.39E-05	1.53E-03	3.37E-03	5.49E-04	1.32E-03	8.61E-04	8.83E-04	1.98E-04	1.37E-04	3.58E-08	4.43E-04	2.51E-04
53	C71	70	Single Unit Short Haul Truck	51	0.00E+00	1.20E-05	6.00E-07	9.39E+00	9.80E-06	1.88E-02	1.28E-05	5.92E-03	8.42E-04	1.68E-04	1.46E-03	3.58E-04	3.64E-04	9.40E-04	3.78E-05	1.53E-08	1.09E-03	1.11E-03
53	C71	70	Single Unit Long Haul Truck	2	0.00E+00	5.22E-07	2.60E-08	3.98E-01	4.23E-07	7.87E-04	5.56E-07	2.54E-04	3.85E-05	7.49E-06	6.37E-05	1.55E-05	1.57E-05	3.98E-05	1.60E-06	6.43E-10	4.78E-05	4.76E-05
53	C71	70	Combination Short Haul Truck	25	0.00E+00	1.32E-05	9.41E-07	9.62E+00	4.30E-08	1.14E-02	9.69E-06	1.39E-02	1.00E-03	2.20E-04	8.06E-04	2.79E-04	2.78E-04	1.45E-03	3.21E-05	0.00E+00	5.28E-04	2.62E-03
53	C71	70	Combination Long Haul Truck	23	0.00E+00	1.20E-05	8.00E-07	8.97E+00	4.95E-08	1.21E-02	9.09E-06	1.37E-02	1.00E-03	1.83E-04	8.32E-04	2.42E-04	2.44E-04	1.37E-03	3.00E-05	0.00E+00	5.90E-04	2.59E-03
52	C74	60	Passenger Car	736	0.00E+00	1.00E-05	1.08E-06	3.66E+01	6.97E-05	2.47E-01	2.23E-05	1.45E-03	7.26E-03	1.12E-03	2.17E-03	1.40E-03	1.43E-03	1.54E-04	1.85E-04	4.95E-08	7.32E-04	2.27E-04
52	C74	60	Passenger Truck	1233	0.00E+00	2.20E-05	2.32E-06	8.32E+01	1.37E-04	4.42E-01	4.52E-05	4.66E-03	1.29E-02	2.00E-03	4.32E-03	2.80E-03	2.87E-03	6.40E-04	4.18E-04	1.05E-07	1.43E-03	7.71E-04
52	C74	60	Single Unit Short Haul Truck	166	0.00E+00	4.89E-05	2.44E-06	3.11E+01	4.02E-05	6.00E-02	5.22E-05	2.33E-02	3.95E-03	7.16E-04	5.91E-03	1.46E-03	1.49E-03	3.11E-03	1.26E-04	5.17E-08	4.44E-03	4.37E-03
52	C74	60	Single Unit Long Haul Truck	7	0.00E+00	2.14E-06	1.06E-07	1.33E+00	1.75E-06	2.55E-03	2.28E-06	1.01E-03	1.78E-04	3.18E-05	2.61E-04	6.37E-05	6.48E-05	1.33E-04	5.36E-06	2.20E-09	1.95E-04	1.89E-04
52	C74	60	Combination Short Haul Truck	74	0.00E+00	4.33E-05	3.02E-06	2.82E+01	1.53E-07	3.78E-02	3.21E-05	4.70E-02	4.03E-03	7.97E-04	2.76E-03	8.99E-04	8.99E-04	4.25E-03	9.42E-05	0.00E+00	1.85E-03	8.87E-03
52	C74	60	Combination Long Haul Truck	67	0.00E+00	3.88E-05	2.53E-06	2.65E+01	1.76E-07	4.08E-02	3.00E-05	4.66E-02	4.04E-03	6.88E-04	2.83E-03	7.72E-04	7.81E-04	4.03E-03	8.83E-05	0.00E+00	2.05E-03	8.80E-03
11	D27	80	Passenger Car	544	0.00E+00	6.53E-06	7.07E-07	2.51E+01	4.55E-05	1.68E-01	1.45E-05	1.12E-03	2.99E-03	5.20E-04	1.41E-03	9.11E-04	9.35E-04	8.52E-05	1.28E-04	3.58E-08	4.79E-04	1.75E-04
11	D27	80	Passenger Truck	911	0.00E+00	1.40E-05	1.49E-06	5.80E+01	8.98E-05	3.09E-01	2.94E-05	3.32E-03	5.37E-03	9.52E-04	2.81E-03	1.83E-03	1.87E-03	4.10E-04	2.94E-04	7.97E-08	9.41E-04	5.42E-04
11	D27	80	Single Unit Short Haul Truck	30	0.00E+00	5.54E-06	2.75E-07	5.44E+00	4.46E-06	1.09E-02	5.90E-06	2.84E-03	3.48E-04	7.88E-05	6.74E-04	1.64E-04	1.67E-04	5.45E-04	2.19E-05	8.70E-09	5.07E-04	5.32E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	2.41E-07	1.19E-08	2.30E-01	1.91E-07	4.53E-04	2.56E-07	1.22E-04	1.59E-05	3.47E-06	2.94E-05	7.06E-06	7.17E-06	2.30E-05	9.27E-07	3.62E-10	2.22E-05	2.27E-05
11	D27	80	Combination Short Haul Truck	18	0.00E+00	7.86E-06	5.62E-07	6.52E+00	2.48E-08	6.97E-03	5.77E-06	8.11E-03	4.77E-04	1.17E-04	4.69E-04	1.66E-04	1.65E-04	9.80E-04	2.18E-05	0.00E+00	3.04E-04	1.53E-03
11	D27	80	Combination Long Haul Truck	16	0.00E+00	7.03E-06	4.72E-07	6.03E+00	2.87E-08	7.21E-03	5.35E-06	7.85E-03	4.67E-04	9.39E-05	4.85E-04	1.43E-04	1.44E-04	9.21E-04	2.01E-05	0.00E+00	3.40E-04	1.48E-03
11	D28	80	Passenger Car	1054	0.00E+00	1.27E-05	1.37E-06	4.86E+01	8.82E-05	3.25E-01	2.81E-05	2.17E-03	5.80E-03	1.01E-03	2.74E-03	1.77E-03	1.81E-03	1.65E-04	2.47E-04	6.94E-08	9.28E-04	3.40E-04
11	D28	80	Passenger Truck	1766	0.00E+00	2.72E-05	2.88E-06	1.12E+02	1.74E-04	5.98E-01	5.69E-05	6.43E-03	1.04E-02	1.84E-03	5.44E-03	3.54E-03	3.63E-03	7.95E-04	5.69E-04	1.55E-07	1.82E-03	1.05E-03
11	D28	80	Single Unit Short Haul Truck	75	0.00E+00	1.41E-05	7.00E-07	1.38E+01	1.14E-05	2.78E-02	1.50E-05	7.23E-03	8.86E-04	2.00E-04	1.72E-03	4.18E-04	4.24E-04	1.39E-03	5.58E-05	2.22E-08	1.29E-03	1.35E-03
11	D28	80	Single Unit Long Haul Truck	3	0.00E+00	6.13E-07	3.02E-08	5.86E-01	4.85E-07	1.15E-03	6.53E-07	3.10E-04	4.05E-05	8.84E-06	7.49E-05	1.80E-05	1.83E-05	5.85E-05	2.36E-06	9.22E-10	5.66E-05	5.79E-05
11	D28	80	Combination Short Haul Truck	47	0.00E+00	2.07E-05	1.48E-06	1.72E+01	6.55E-08	1.84E-02	1.52E-05	2.14E-02	1.26E-03	3.10E-04	1.24E-03	4.39E-04	4.36E-04	2.59E-03	5.75E-05	0.00E+00	8.02E-04	4.03E-03
11	D28	80	Combination Long Haul Truck	43	0.00E+00	1.86E-05	1.25E-06	1.59E+01	7.58E-08	1.90E-02	1.41E-05	2.07E-02	1.23E-03	2.48E-04	1.28E-03	3.77E-04	3.80E-04	2.43E-03	5.32E-05	0.00E+00	8.98E-04	3.90E-03
11	D29	80	Passenger Car	445	0.00E+00	5.34E-06	5.79E-07	2.05E+01	3.72E-05	1.37E-01	1.19E-05	9.15E-04	2.45E-03	4.25E-04	1.16E-03	7.46E-04	7.66E-04	6.98E-05	1.05E-04	2.93E-08	3.92E-04	1.43E-04
11	D29	80	Passenger Truck	746	0.00E+00	1.15E-05	1.22E-06	4.74E+01	7.35E-05	2.53E-01	2.40E-05	2.71E-03	4.39E-03	7.79E-04	2.30E-03	1.50E-03	1.53E-03	3.36E-04	2.40E-04	6.52E-08	7.71E-04	4.43E-04
11	D29	80	Single Unit Short Haul Truck	42	0.00E+00	7.84E-06	3.89E-07	7.69E+00	6.31E-06	1.54E-02	8.34E-06	4.02E-03	4.92E-04	1.11E-04	9.54E-04	2.32E-04	2.36E-04	7.71E-04	3.10E-05	1.23E-08	7.18E-04	7.53E-04
11	D29	80	Single Unit Long Haul Truck	2	0.00E+00	3.41E-07	1.68E-08	3.25E-01	2.69E-07	6.40E-04	3.63E-07	1.72E-04	2.25E-05	4.91E-06	4.16E-05	9.99E-06	1.01E-05	3.25E-05	1.31E-06	5.12E-10	3.15E-05	3.22E-05
11	D29	80	Combination Short Haul Truck	24	0.00E+00	1.04E-05	7.47E-07	8.66E+00	3.30E-08	9.25E-03	7.67E-06	1.08E-02	6.33E-04	1.56E-04	6.23E-04	2.21E-04	2.19E-04	1.30E-03	2.89E-05	0.00E+00	4.04E-04	2.03E-03
11	D29	80	Combination Long Haul Truck	22	0.00E+00	9.34E-06	6.27E-07	8.02E+00	3.81E-08	9.58E-03	7.11E-06	1.04E-02	6.21E-04	1.25E-04	6.45E-04	1.90E-04	1.91E-04	1.22E-03	2.68E-05	0.00E+00	4.52E-04	1.96E-03
11	D30	80	Passenger Car	839	0.00E+00	1.01E-05	1.09E-06	3.87E+01	7.01E-05	2.59E-01	2.24E-05	1.72E-03	4.61E-03	8.02E-04	2.18E-03	1.41E-03	1.44E-03	1.31E-04	1.97E-04	5.52E-08	7.39E-04	2.70E-04
11	D30	80	Passenger Truck	1405	0.00E+00	2.17E-05	2.29E-06	8.94E+01	1.39E-04	4.76E-01	4.53E-05	5.11E-03	8.27E-03	1.47E-03	4.33E-03	2.82E-03	2.89E-03	6.32E-04	4.53E-04	1.23E-07	1.45E-03	8.35E-04
11	D30	80	Single Unit Short Haul Truck	67	0.00E+00	1.25E-05	6.21E-07	1.23E+01	1.01E-05	2.47E-02	1.33E-05	6.42E-03	7.86E-04	1.78E-04	1.52E-03	3.71E-04	3.76E-04	1.23E-03	4.95E-05	1.97E-08	1.15E-03	1.20E-03
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	5.44E-07	2.68E-08	5.19E-01	4.30E-07	1.02E-03	5.79E-07	2.75E-04	3.59E-05	7.84E-06	6.64E-05	1.59E-05	1.62E-05	5.19E-05	2.09E-06	8.18E-10	5.02E-05	5.14E-05
11	D30	80	Combination Short Haul Truck	49	0.00E+00	2.17E-05	1.55E-06	1.80E+01	6.85E-08	1.92E-02	1.59E-05	2.24E-02	1.32E-03	3.24E-04	1.29E-03	4.59E-04	4.56E-04	2.70E-03	6.01E-05	0.00E+00	8.39E-04	4.22E-03
11	D30	80	Combination Long Haul Truck	45	0.00E+00	1.94E-05	1.30E-06	1.67E+01	7.93E-08	1.99E-02	1.48E-05	2.17E-02	1.29E-03	2.59E-04	1.34E-03	3.94E-04	3.97E-04	2.54E-03	5.56E-05	0.00E+00	9.39E-04	4.08E-03
11	D31	80	Passenger Car	173	0.00E+00	2.08E-06	2.25E-07	7.99E+00	1.45E-05	5.34E-02	4.62E-06	3.56E-04	9.52E-04	1.65E-04	4.50E-04	2.90E-04	2.98E-04	2.71E-05	4.06E-05	1.14E-08	1.52E-04	5.58E-05
11	D31	80	Passenger Truck	290	0.00E+00	4.47E-06	4.74E-07	1.84E+01	2.86E-05	9.83E-02	9.34E-06	1.06E-03	1.71E-03	3.03E-04	8.94E-04	5.82E-04	5.96E-04	1.31E-04	9.34E-05	2.54E-08	3.00E-04	1.72E-04
11	D31	80	Single Unit Short Haul Truck	22	0.00E+00	4.17E-06	2.07E-07	4.09E+00	3.36E-06	8.22E-03	4.44E-06	2.14E-03	2.62E-04	5.93E-05	5.07E-04	1.24E-04	1.25E-04	4.10E-04	1.65E-05	6.55E-09	3.82E-04	4.00E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.81E-07	8.94E-09	1.73E-01	1.43E-07	3.41E-04	1.93E-07	9.16E-05	1.20E-05	2.61E-06	2.21E-05	5.32E-06	5.40E-06	1.73E-05	6.98E-07	2.73E-10	1.67E-05	1.71E-05
11	D31	80	Combination Short Haul Truck	13	0.00E+00	5.81E-06	4.16E-07	4.82E+00	1.84E-08	5.15E-03	4.27E-06	5.99E-03	3.52E-04	8.68E-05	3.46E-04	1.23E-04	1.22E-04	7.25E-04	1.61E-05	0.00E+00	2.25E-04	1.13E-03
11	D31	80	Combination Long Haul Truck	12	0.00E+00	5.20E-06	3.49E-07	4.46E+00	2.12E-08	5.33E-03	3.96E-06	5.80E-03	3.45E-04	6.94E-05	3.59E-04	1.06E-04	1.06E-04	6.81E-04	1.49E-05	0.00E+00	2.52E-04	1.09E-03
11	D32	80	Passenger Car	349	0.00E+00	4.19E-06	4.53E-07	1.61E+01	2.92E-05	1.08E-01	9.31E-06	7.17E-04	1.92E-03	3.33E-04	9.07E-04	5.84E-04	6.00E-04	5.46E-05	8.19E-05	2.30E-08	3.07E-04	1.12E-04
11	D32	80	Passenger Truck	584	0.00E+00	9.01E-06	9.54E-07	3.72E+01	5.76E-05	1.98E-01	1.88E-05	2.13E-03	3.44E-03	6.10E-04	1.80E-03	1.17E-03	1.20E-03	2.63E-04	1.88E-04	5.11E-08	6.04E-04	3.47E-04
11	D32	80	Single Unit Short Haul Truck	29	0.00E+00	5.37E-06	2.67E-07	5.27E+00	4.32E-06	1.06E-02	5.72E-06	2.75E-03	3.38E-04	7.63E-05	6.54E-04	1.59E-04	1.62E-04	5.29E-04	2.13E-05	8.44E-09	4.92E-04	5.16E-04
11	D32	80	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	1.15E-08	2.23E-01	1.85E-07	4.39E-04	2.49E-07	1.18E-04	1.54E-05	3.37E-06	2.85E-05	6.85E-06	6.95E-06	2.23E-05	8.99E-07	3.51E-10	2.16E-05	2.20E-05
11	D32	80	Combination Short Haul Truck	25	0.00E+00	1.08E-05	7.73E-07	8.96E+00	3.41E-08	9.57E-03	7.93E-06	1.11E-02	6.55E-04	1.61E-04	6.44E-04	2.28E-04	2.27E-04	1.35E-03	3.00E-05	0.00E+00	4.18E-04	2.10E-03
11	D32	80	Combination Long Haul Truck	22	0.00E+00	9.67E-06	6.49E-07	8.29E+00	3.95E-08	9.91E-03	7.36E-06	1.08E-02	6.42E-04	1.29E-04	6.67E-04	1.96E-04	1.98E-04	1.27E-03	2.77E-05	0.00E+00	4.68E-04	2.03E-03
9	D33	60	Passenger Car	272	0.00E+00	4.03E-06	4.35E-07	1.35E+01	2.80E-05	1.00E-01	8.91E-06	5.54E-04	2.76E-03	4.24E-04	8.68E-04	5.61E-04	5.76E-04	5.68E-05	6.83E-05	1.88E-08	2.95E-04	8.68E-05
9	D33	60	Passenger Truck	455	0.00E+00	8.88E-06	9.37E-07	3.09E+01	5.55E-05	1.78E-01	1.83E-05	1.81E-03	5.06E-03	7.85E-04	1.73E-03	1.13E-03	1.16E-03	2.42E-04	1.54E-04	4.27E-08	5.78E-04	3.00E-04
9	D33	60	Single Unit Short Haul Truck	42	0.00E+00	1.25E-05	6.24E-07	7.94E+00	1.03E-05	1.53E-02	1.33E-05	5.96E-03	1.01E-03	1.83E-04	1.51E-03	3.74E-04	3.80E-04	7.95E-04	3.21E-05	1.32E-08	1.13E-03	1.12E-03
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	5.46E-07	2.71E-08	3.39E-01	4.46E-07	6.50E-04	5.83E-07	2.58E-04	4.54E-05	8.12E-06	6.66E-05	1.63E-05	1.65E-05	3.39E-05	1.37E-06	5.62E-10	4.98E-05	4.83E-05
9	D33	60	Combination Short Haul Truck	27	0.00E+00	1.62E-05	1.13E-06	1.05E+01	5.73E-08	1.41E-02	1.20E-05	1.76E-02	1.50E-03	2.98E-04	1.03E-03	3.36E-04	3.36E-04	1.59E-03	3.52E-05	0.00E+00	6.92E-04	3.31E-03
9	D33	60	Combination Long Haul Truck	25	0.00E+00	1.45E-05	9.47E-07	9.89E+00	6.56E-08	1.52E-02	1.12E-05	1.74E-02	1.51E-03	2.57E-04	1.06E-03	2.88E-04	2.92E-04	1.50E-03	3.30E-05	0.00E+00	7.66E-04	3.29E-03
9	D34	60	Passenger Car	280	0.00E+00	4.15E-06	4.49E-07	1.39E+01	2.89E-05	1.04E-01	9.19E-06	5.72E-04	2.84E-03	4.37E-04	8.95E-04	5.79E-04	5.94E-04	5.86E-05	7.05E-05	1.94E-08	3.04E-04	8.95E-05
9	D34	60	Passenger Truck	469	0.00E+00	9.15E-06	9.66E-07	3.18E+01	5.72E-05	1.84E-01	1.89E-05	1.86E-03	5.22E-03	8.10E-04	1.79E-03	1.17E-03	1.20E-03	2.49E-04	1.59E-04	4.41E-08	5.96E-04	3.09E-04
9	D34	60	Single Unit Short Haul Truck	16	0.00E+00	4.73E-06	2.36E-07	3.00E+00	3.89E-06	5.80E-03	5.05E-06	2.25E-03	3.82E-04	6.92E-05	5.71E-04	1.42E-04	1.44E-04	3.01E-04	1.21E-05	5.00E-09	4.30E-04	4.22E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	2.07E-07	1.03E-08	1.28E-01	1.69E-07	2.46E-04	2.21E-07	9.75E-05	1.72E-05	3.07E-06	2.52E-05	6.16E-06	6.26E-06	1.28E-05	5.18E-07	2.13E-10	1.89E-05	1.83E-05
9	D34	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.22E-07	3.00E+00	1.63E-08	4.03E-03	3.42E-06	5.00E-03	4.29E-04	8.49E-05	2.94E-04	9.57E-05	9.57E-05	4.53E-04	1.00E-05	0.00E+00	1.97E-04	9.44E-04
9	D34	60	Combination Long Haul Truck	7	0.00E+00	4.13E-06	2.70E-07	2.82E+00	1.87E-08	4.35E-03	3.19E-06	4.96E-03	4.31E-04	7.32E-05	3.02E-04	8.21E-05	8.31E-05	4.29E-04	9.40E-06	0.00E+00	2.18E-04	9.36E-04
9	D35	60	Passenger Car	390	0.00E+00	5.78E-06	6.24E-07	1.94E+01	4.02E-05	1.44E-01	1.28E-05	7.95E-04	3.96E-03	6.08E-04	1.25E-03	8.05E-04	8.27E-04	8.15E-05	9.81E-05	2.70E-08	4.23E-04	1.25E-04
9	D35	60	Passenger Truck	653	0.00E+00	1.27E-05	1.34E-06	4.43E+01	7.97E-05	2.56E-01	2.63E-05	2.59E-03	7.26E-03	1.13E-03	2.49E-03	1.63E-03	1.67E-03	3.47E-04	2.21E-04	6.13E-08	8.29E-04	4.30E-04
9	D35	60	Single Unit Short Haul Truck	17	0.00E+00	4.98E-06	2.48E-07	3.16E+00	4.09E-06	6.11E-03	5.31E-06	2.37E-03	4.02E-04	7.28E-05	6.01E-04	1.49E-04	1.51E-04	3.17E-04	1.28E-05	5.26E-09	4.52E-04	4.44E-04
9	D35	60	Single Unit Long Haul Truck	1	0.00E+00	2.17E-07	1.08E-08	1.35E-01	1.78E-07	2.59E-04	2.32E-07	1.03E-04	1.81E-05	3.23E-06	2.65E-05	6.48E-06	6.59E-06	1.35E-05	5.45E-07	2.24E-10	1.98E-05	1.92E-05
9	D35	60	Combination Short Haul Truck	13	0.00E+00	7.45E-06	5.20E-07	4.85E+00	2.63E-08	6.50E-03	5.51E-06	8.08E-03	6.92E-04	1.37E-04	4.74E-04	1.55E-04	1.55E-04	7.30E-04	1.62E-05	0.00E+00	3.19E-04	1.52E-03
9	D35	60	Combination Long Haul Truck	12	0.00E+00	6.66E-06	4.36E-07	4.55E+00	3.02E-08	7.01E-03	5.16E-06	8.01E-03	6.95E-04	1.18E-04	4.87E-04	1.33E-04	1.34E-04	6.92E-04	1.52E-05	0.00E+00	3.52E-04	1.51E-03
9	D36	60	Passenger Car	164	0.00E+00	2.42E-06	2.62E-07	8.14E+00	1.69E-05	6.05E-02	5.36E-06	3.34E-04	1.66E-03	2.55E-04	5.23E-04	3.38E-04	3.47E-04	3.42E-05	4.11E-05	1.13E-08	1.77E-04	5.23E-05
9	D36	60	Passenger Truck	274	0.00E+00	5.34E-06	5.64E-07	1.86E+01	3.34E-05	1.07E-01	1.10E-05	1.09E-03	3.04E-03	4.73E-04	1.04E-03	6.82E-04	6.99E-04	1.45E-04	9.29E-05	2.57E-08	3.48E-04	1.80E-04
9	D36	60	Single Unit Short Haul Truck	25	0.00E+00	7.29E-06	3.64E-07	4.63E+00	5.99E-06	8.94E-03	7.77E-06	3.47E-03	5.89E-04	1.07E-04	8.81E-04	2.18E-04	2.22E-04	4.64E-04	1.87E-05	7.71E-09	6.62E-04	6.51E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	3.19E-07	1.58E-08	1.98E-01	2.60E-07	3.79E-04	3.40E-07	1.50E-04	2.65E-05	4.73E-06	3.88E-05	9.50E-06	9.65E-06	1.98E-05	7.98E-07	3.28E-10	2.91E-05	2.82E-05
9	D36	60	Combination Short Haul Truck	18	0.00E+00	1.06E-05	7.41E-07	6.91E+00	3.76E-08	9.27E-03	7.86E-06	1.15E-02	9.87E-04	1.95E-04	6.76E-04	2.20E-04	2.20E-04	1.04E-03	2.31E-05	0.00E+00	4.54E-04	2.17E-03
9	D36	60	Combination Long Haul Truck	16	0.00E+00	9.50E-06	6.21E-07	6.49E+00	4.31E-08	1.00E-02	7.35E-06	1.14E-02	9.91E-04	1.69E-04	6.94E-04	1.89E-04	1.91E-04	9.87E-04	2.17E-05	0.00E+00	5.02E-04	2.16E-03
9	D37	60	Passenger Car	73	0.00E+00	1.09E-06	1.18E-07	3.65E+00	7.57E-06	2.71E-02	2.41E-06	1.50E-04	7.45E-04	1.14E-04	2.35E-04	1.52E-04	1.56E-04	1.53E-05	1.85E-05	5.08E-09	7.96E-05	2.35E-05
9	D37	60	Passenger Truck	123	0.00E+00	2.40E-06	2.53E-07	8.34E+00	1.50E-05	4.82E-02	4.96E-06	4.89E-04	1.37E-03	2.12E-04	4.68E-04	3.06E-04	3.14E-04	6.53E-05	4.17E-05	1.16E-08	1.56E-04	8.10E-05
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	6.02E-07	3.00E-08	3.82E-01	4.94E-07	7.38E-04	6.41E-07	2.87E-04	4.86E-05	8.80E-06	7.27E-05	1.80E-05	1.83E-05	3.83E-05	1.54E-06	6.36E-10	5.46E-05	5.37E-05
9	D37	60	Combination Short Haul Truck	4	0.00E+00	2.31E-06	1.61E-07	1.50E+00	8.16E-09	2.01E-03	1.71E-06	2.50E-03	2.14E-04	4.25E-05	1.47E-04	4.79E-05	4.79E-05	2.26E-04	5.02E-06	0.00E+00	9.87E-05	4.72E-04
9	D37	60	Combination Long Haul Truck	4	0.00E+00	2.06E-06	1.35E-07	1.41E+00	9.36E-09	2.17E-03	1.60E-06	2.48E-03	2.15E-04	3.66E-05	1.51E-04	4.11E-05	4.16E-05	2.14E-04	4.71E-06	0.00E+00	1.09E-04	4.69E-04
9	D38	60	Passenger Car	261	0.00E+00	3.87E-06	4.18E-07	1.30E+01	2.69E-05	9.65E-02	8.56E-06	5.32E-04	2.65E-03	4.07E-04	8.34E-04	5.39E-04	5.53E-04	5.45E-05	6.56E-05	1.81E-08	2.83E-04	8.34E-05
9	D38	60	Passenger Truck	437	0.00E+00	8.53E-06	9.00E-07	2.96E+01	5.33E-05	1.71E-01	1.76E-05	1.74E-03	4.86E-03	7.54E-04	1.66E-03	1.09E-03	1.11E-03	2.32E-04	1.48E-04	4.11E-08	5.55E-04	2.88E-04
9	D38	60	Single Unit

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D42	60	Combination Long Haul Truck	8	0.00E+00	4.34E-06	2.84E-07	2.96E+00	1.97E-08	4.57E-03	3.36E-06	5.21E-03	4.53E-04	7.70E-05	3.17E-04	8.64E-05	8.74E-05	4.51E-04	9.89E-06	0.00E+00	2.29E-04	9.84E-04
9	D43	60	Passenger Car	344	0.00E+00	5.09E-06	5.50E-07	1.71E+01	3.54E-05	1.27E-01	1.13E-05	7.01E-04	3.48E-03	5.36E-04	1.10E-03	7.09E-04	7.28E-04	7.18E-05	8.64E-05	2.38E-08	3.72E-04	1.10E-04
9	D43	60	Passenger Truck	575	0.00E+00	1.12E-05	1.18E-06	3.90E+01	7.02E-05	2.25E-01	2.32E-05	2.29E-03	6.39E-03	9.93E-04	2.19E-03	1.43E-03	1.47E-03	3.05E-04	1.95E-04	5.40E-08	7.31E-04	3.79E-04
9	D43	60	Combination Short Haul Truck	1	0.00E+00	8.31E-07	5.80E-08	5.41E-01	2.94E-09	7.25E-04	6.15E-07	9.02E-04	7.72E-05	1.53E-05	5.29E-05	1.72E-05	1.72E-05	8.15E-05	1.81E-06	0.00E+00	3.56E-05	1.70E-04
9	D43	60	Combination Long Haul Truck	1	0.00E+00	7.44E-07	4.86E-08	5.08E-01	3.37E-09	7.83E-04	5.76E-07	8.94E-04	7.76E-05	1.32E-05	5.43E-05	1.48E-05	1.50E-05	7.72E-05	1.69E-06	0.00E+00	3.93E-05	1.69E-04
9	D44	60	Passenger Car	160	0.00E+00	2.37E-06	2.56E-07	7.97E+00	1.65E-05	5.92E-02	5.25E-06	3.27E-04	1.63E-03	2.50E-04	5.12E-04	3.31E-04	3.40E-04	3.35E-05	4.03E-05	1.11E-08	1.74E-04	5.12E-05
9	D44	60	Passenger Truck	268	0.00E+00	5.23E-06	5.53E-07	1.82E+01	3.27E-05	1.05E-01	1.08E-05	1.07E-03	2.98E-03	4.63E-04	1.02E-03	6.68E-04	6.85E-04	1.42E-04	9.10E-05	2.52E-08	3.41E-04	1.77E-04
9	D44	60	Single Unit Short Haul Truck	21	0.00E+00	6.20E-06	3.09E-07	3.94E+00	5.10E-06	7.61E-03	6.61E-06	2.95E-03	5.01E-04	9.07E-05	7.49E-04	1.85E-04	1.88E-04	3.94E-04	1.59E-05	6.55E-09	5.63E-04	5.53E-04
9	D44	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.34E-08	1.68E-01	2.21E-07	3.23E-04	2.89E-07	1.28E-04	2.25E-05	4.03E-06	3.30E-05	8.08E-06	8.20E-06	1.68E-05	6.79E-07	2.79E-10	2.47E-05	2.39E-05
9	D44	60	Combination Short Haul Truck	12	0.00E+00	7.29E-06	5.09E-07	4.75E+00	2.58E-08	6.36E-03	5.40E-06	7.91E-03	6.78E-04	1.34E-04	4.64E-04	1.51E-04	1.51E-04	7.15E-04	1.59E-05	0.00E+00	3.12E-04	1.49E-03
9	D44	60	Combination Long Haul Truck	11	0.00E+00	6.52E-06	4.27E-07	4.45E+00	2.96E-08	6.87E-03	5.05E-06	7.84E-03	6.81E-04	1.16E-04	4.77E-04	1.30E-04	1.31E-04	6.77E-04	1.49E-05	0.00E+00	3.45E-04	1.48E-03
9	D45	60	Passenger Car	463	0.00E+00	6.85E-06	7.40E-07	2.30E+01	4.77E-05	1.71E-01	1.52E-05	9.43E-04	4.69E-03	7.21E-04	1.48E-03	9.55E-04	9.81E-04	9.66E-05	1.16E-04	3.20E-08	5.01E-04	1.48E-04
9	D45	60	Passenger Truck	775	0.00E+00	1.51E-05	1.59E-06	5.25E+01	9.45E-05	3.03E-01	3.12E-05	3.08E-03	8.61E-03	1.34E-03	2.95E-03	1.93E-03	1.98E-03	4.11E-04	2.63E-04	7.27E-08	9.83E-04	5.10E-04
9	D45	60	Single Unit Short Haul Truck	56	0.00E+00	1.66E-05	8.29E-07	1.05E+01	1.36E-05	2.04E-02	1.77E-05	7.91E-03	1.34E-03	2.43E-04	2.01E-03	4.97E-04	5.05E-04	1.06E-03	4.26E-05	1.76E-08	1.51E-03	1.48E-03
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	7.26E-07	3.60E-08	4.51E-01	5.93E-07	8.64E-04	7.74E-07	3.42E-04	6.03E-05	1.08E-05	8.85E-05	2.16E-05	2.20E-05	4.50E-05	1.82E-06	7.46E-10	6.62E-05	6.41E-05
9	D45	60	Combination Short Haul Truck	46	0.00E+00	2.73E-05	1.91E-06	1.78E+01	9.67E-08	2.39E-02	2.03E-05	2.97E-02	2.54E-03	5.03E-04	1.74E-03	5.68E-04	5.68E-04	2.68E-03	5.95E-05	0.00E+00	1.17E-03	5.60E-03
9	D45	60	Combination Long Haul Truck	42	0.00E+00	2.45E-05	1.60E-06	1.67E+01	1.11E-07	2.58E-02	1.89E-05	2.94E-02	2.55E-03	4.34E-04	1.79E-03	4.87E-04	4.93E-04	2.54E-03	5.57E-05	0.00E+00	1.29E-03	5.55E-03
9	D46	60	Passenger Car	452	0.00E+00	6.68E-06	7.22E-07	2.25E+01	4.65E-05	1.67E-01	1.48E-05	9.21E-04	4.58E-03	7.04E-04	1.44E-03	9.32E-04	9.57E-04	9.43E-05	1.14E-04	3.12E-08	4.89E-04	1.44E-04
9	D46	60	Passenger Truck	756	0.00E+00	1.47E-05	1.56E-06	5.12E+01	9.22E-05	2.96E-01	3.05E-05	3.00E-03	8.40E-03	1.30E-03	2.88E-03	1.88E-03	1.93E-03	4.01E-04	2.56E-04	7.10E-08	9.60E-04	4.98E-04
9	D46	60	Single Unit Short Haul Truck	63	0.00E+00	1.87E-05	9.31E-07	1.18E+01	1.53E-05	2.29E-02	1.99E-05	8.89E-03	1.51E-03	2.73E-04	2.25E-03	5.58E-04	5.67E-04	1.19E-03	4.79E-05	1.97E-08	1.69E-03	1.67E-03
9	D46	60	Single Unit Long Haul Truck	3	0.00E+00	8.15E-07	4.04E-08	5.06E-01	6.66E-07	9.70E-04	8.70E-07	3.84E-04	6.77E-05	1.21E-05	9.94E-05	2.43E-05	2.47E-05	5.05E-05	2.04E-06	8.38E-10	7.44E-05	7.20E-05
9	D46	60	Combination Short Haul Truck	50	0.00E+00	2.95E-05	2.06E-06	1.92E+01	1.04E-07	2.57E-02	2.18E-05	3.20E-02	2.74E-03	5.42E-04	1.88E-03	6.11E-04	6.11E-04	2.89E-03	6.40E-05	0.00E+00	1.26E-03	6.03E-03
9	D46	60	Combination Long Haul Truck	46	0.00E+00	2.63E-05	1.72E-06	1.80E+01	1.19E-07	2.77E-02	2.04E-05	3.17E-02	2.75E-03	4.67E-04	1.93E-03	5.24E-04	5.31E-04	2.74E-03	6.00E-05	0.00E+00	1.39E-03	5.98E-03
9	D47	60	Passenger Car	740	0.00E+00	1.09E-05	1.18E-06	3.68E+01	7.62E-05	2.73E-01	2.42E-05	1.51E-03	7.50E-03	1.15E-03	2.36E-03	1.53E-03	1.57E-03	1.54E-04	1.86E-04	5.12E-08	8.01E-04	2.36E-04
9	D47	60	Passenger Truck	1239	0.00E+00	2.42E-05	2.55E-06	8.39E+01	1.51E-04	4.85E-01	4.99E-05	4.92E-03	1.38E-02	2.14E-03	4.71E-03	3.08E-03	3.16E-03	6.57E-04	4.20E-04	1.16E-07	1.57E-03	8.15E-04
9	D47	60	Single Unit Short Haul Truck	75	0.00E+00	2.21E-05	1.10E-06	1.40E+01	1.82E-05	2.71E-02	2.36E-05	1.05E-02	1.78E-03	3.23E-04	2.67E-03	6.61E-04	6.71E-04	1.40E-03	5.67E-05	2.33E-08	2.00E-03	1.97E-03
9	D47	60	Single Unit Long Haul Truck	3	0.00E+00	9.65E-07	4.79E-08	5.99E-01	7.89E-07	1.15E-03	1.03E-06	4.55E-04	8.02E-05	1.43E-05	1.18E-04	2.88E-05	2.92E-05	5.98E-05	2.42E-06	9.93E-10	8.81E-05	8.53E-05
9	D47	60	Combination Short Haul Truck	51	0.00E+00	2.99E-05	2.09E-06	1.95E+01	1.06E-07	2.61E-02	2.22E-05	3.25E-02	2.78E-03	5.51E-04	1.91E-03	6.21E-04	6.21E-04	2.94E-03	6.51E-05	0.00E+00	1.28E-03	6.13E-03
9	D47	60	Combination Long Haul Truck	46	0.00E+00	2.68E-05	1.75E-06	1.83E+01	1.21E-07	2.82E-02	2.07E-05	3.22E-02	2.79E-03	4.75E-04	1.96E-03	5.33E-04	5.40E-04	2.78E-03	6.10E-05	0.00E+00	1.42E-03	6.08E-03
9	D48	60	Passenger Car	350	0.00E+00	5.18E-06	5.60E-07	1.74E+01	3.61E-05	1.29E-01	1.15E-05	7.14E-04	3.55E-03	5.46E-04	1.12E-03	7.23E-04	7.42E-04	7.32E-05	8.80E-05	2.42E-08	3.79E-04	1.12E-04
9	D48	60	Passenger Truck	586	0.00E+00	1.14E-05	1.21E-06	3.97E+01	7.15E-05	2.30E-01	2.36E-05	2.33E-03	6.52E-03	1.01E-03	2.23E-03	1.46E-03	1.50E-03	3.11E-04	1.99E-04	5.51E-08	7.44E-04	3.86E-04
9	D48	60	Single Unit Short Haul Truck	21	0.00E+00	6.27E-06	3.13E-07	3.98E+00	5.15E-06	7.69E-03	6.68E-06	2.99E-03	5.06E-04	9.17E-05	7.57E-04	1.87E-04	1.90E-04	3.99E-04	1.61E-05	6.62E-09	5.69E-04	5.60E-04
9	D48	60	Single Unit Long Haul Truck	1	0.00E+00	2.74E-07	1.36E-08	1.70E-01	2.24E-07	3.26E-04	2.92E-07	1.29E-04	2.27E-05	4.07E-06	3.34E-05	8.16E-06	8.30E-06	1.70E-05	6.86E-07	2.82E-10	2.50E-05	2.42E-05
9	D48	60	Combination Short Haul Truck	19	0.00E+00	1.14E-05	7.97E-07	7.43E+00	4.04E-08	9.96E-03	8.45E-06	1.24E-02	1.06E-03	2.10E-04	7.27E-04	2.37E-04	2.37E-04	1.12E-03	2.48E-05	0.00E+00	4.88E-04	2.34E-03
9	D48	60	Combination Long Haul Truck	18	0.00E+00	1.02E-05	6.67E-07	6.97E+00	4.63E-08	1.07E-02	7.90E-06	1.23E-02	1.06E-03	1.81E-04	7.46E-04	2.03E-04	2.06E-04	1.06E-03	2.33E-05	0.00E+00	5.40E-04	2.32E-03
9	D49	60	Passenger Car	782	0.00E+00	1.16E-05	1.25E-06	3.89E+01	8.06E-05	2.89E-01	2.56E-05	1.60E-03	7.93E-03	1.22E-03	2.50E-03	1.61E-03	1.66E-03	1.63E-04	1.97E-04	5.41E-08	8.48E-04	2.50E-04
9	D49	60	Passenger Truck	1310	0.00E+00	2.55E-05	2.70E-06	8.88E+01	1.60E-04	5.13E-01	5.28E-05	5.20E-03	1.46E-02	2.26E-03	4.99E-03	3.26E-03	3.34E-03	6.95E-04	4.44E-04	1.23E-07	1.66E-03	8.63E-04
9	D49	60	Single Unit Short Haul Truck	164	0.00E+00	4.83E-05	2.41E-06	3.07E+01	3.97E-05	5.93E-02	5.15E-05	2.30E-02	3.90E-03	7.07E-04	5.83E-03	1.45E-03	1.47E-03	3.07E-03	1.24E-04	5.11E-08	4.39E-03	4.31E-03
9	D49	60	Single Unit Long Haul Truck	7	0.00E+00	2.11E-06	1.05E-07	1.31E+00	1.73E-06	2.51E-03	2.25E-06	9.95E-04	1.75E-04	3.14E-05	2.57E-04	6.29E-05	6.39E-05	1.31E-04	5.29E-06	2.17E-09	1.93E-04	1.87E-04
9	D49	60	Combination Short Haul Truck	91	0.00E+00	5.37E-05	3.75E-06	3.50E+01	1.90E-07	4.69E-02	3.98E-05	5.83E-02	4.99E-03	9.88E-04	3.42E-03	1.12E-03	1.12E-03	5.27E-03	1.17E-04	0.00E+00	2.30E-03	1.10E-02
9	D49	60	Combination Long Haul Truck	83	0.00E+00	4.81E-05	3.14E-06	3.28E+01	2.18E-07	5.06E-02	3.72E-05	5.78E-02	5.02E-03	8.53E-04	3.51E-03	9.57E-04	9.68E-04	4.99E-03	1.10E-04	0.00E+00	2.54E-03	1.09E-02
9	D50	60	Passenger Car	986	0.00E+00	1.46E-05	1.58E-06	4.90E+01	1.02E-04	3.64E-01	3.23E-05	2.01E-03	1.00E-02	1.54E-03	3.15E-03	2.04E-03	2.09E-03	2.06E-04	2.48E-04	6.82E-08	1.07E-03	3.15E-04
9	D50	60	Passenger Truck	1652	0.00E+00	3.22E-05	3.40E-06	1.12E+02	2.01E-04	6.47E-01	6.65E-05	6.56E-03	1.84E-02	2.85E-03	6.28E-03	4.11E-03	4.21E-03	8.76E-04	5.60E-04	1.55E-07	2.10E-03	1.09E-03
9	D50	60	Single Unit Short Haul Truck	161	0.00E+00	4.75E-05	2.37E-06	3.01E+01	3.90E-05	5.82E-02	5.06E-05	2.26E-02	3.83E-03	6.94E-04	5.73E-03	1.42E-03	1.44E-03	3.02E-03	1.22E-04	5.02E-08	4.31E-03	4.24E-03
9	D50	60	Single Unit Long Haul Truck	7	0.00E+00	2.07E-06	1.03E-07	1.29E+00	1.69E-06	2.47E-03	2.21E-06	9.78E-04	1.72E-04	3.08E-05	2.53E-04	6.18E-05	6.28E-05	1.29E-04	5.20E-06	2.13E-09	1.89E-04	1.83E-04
9	D50	60	Combination Short Haul Truck	89	0.00E+00	5.23E-05	3.65E-06	3.41E+01	1.85E-07	4.57E-02	3.88E-05	5.68E-02	4.86E-03	9.63E-04	3.33E-03	1.09E-03	1.09E-03	5.13E-03	1.14E-04	0.00E+00	2.24E-03	1.07E-02
9	D50	60	Combination Long Haul Truck	81	0.00E+00	4.68E-05	3.06E-06	3.20E+01	2.12E-07	4.93E-02	3.62E-05	5.63E-02	4.88E-03	8.31E-04	3.42E-03	9.32E-04	9.43E-04	4.86E-03	1.07E-04	0.00E+00	2.48E-03	1.06E-02
9	D51	60	Passenger Car	179	0.00E+00	2.65E-06	2.87E-07	8.90E+00	1.85E-05	6.62E-02	5.87E-06	3.65E-04	1.82E-03	2.79E-04	5.72E-04	3.70E-04	3.80E-04	3.74E-05	4.50E-05	1.24E-08	1.94E-04	5.72E-05
9	D51	60	Passenger Truck	300	0.00E+00	5.85E-06	6.17E-07	2.03E+01	3.66E-05	1.17E-01	1.21E-05	1.19E-03	3.33E-03	5.17E-04	1.14E-03	7.46E-04	7.65E-04	1.59E-04	1.02E-04	2.82E-08	3.81E-04	1.97E-04
9	D51	60	Single Unit Short Haul Truck	22	0.00E+00	6.49E-06	3.24E-07	4.12E+00	5.33E-06	7.95E-03	6.91E-06	3.09E-03	5.24E-04	9.48E-05	7.83E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.85E-09	5.89E-04	5.79E-04
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	2.83E-07	1.41E-08	1.76E-01	2.32E-07	3.37E-04	3.02E-07	1.34E-04	2.35E-05	4.21E-06	3.45E-05	8.45E-06	8.58E-06	1.76E-05	7.10E-07	2.91E-10	2.59E-05	2.50E-05
9	D51	60	Combination Short Haul Truck	12	0.00E+00	6.78E-06	4.73E-07	4.41E+00	2.40E-08	5.91E-03	5.02E-06	7.35E-03	6.30E-04	1.25E-04	4.32E-04	1.41E-04	1.41E-04	6.65E-04	1.47E-05	0.00E+00	2.90E-04	1.39E-03
9	D51	60	Combination Long Haul Truck	10	0.00E+00	6.06E-06	3.96E-07	4.14E+00	2.75E-08	6.38E-03	4.69E-06	7.29E-03	6.32E-04	1.08E-04	4.43E-04	1.21E-04	1.22E-04	6.30E-04	1.38E-05	0.00E+00	3.21E-04	1.38E-03
9	D52	60	Passenger Car	192	0.00E+00	2.85E-06	3.07E-07	9.56E+00	1.98E-05	7.10E-02	6.30E-06	3.92E-04	1.95E-03	2.99E-04	6.14E-04	3.97E-04	4.07E-04	4.01E-05	4.83E-05	1.33E-08	2.08E-04	6.14E-05
9	D52	60	Passenger Truck	322	0.00E+00	6.28E-06	6.62E-07	2.18E+01	3.92E-05	1.26E-01	1.30E-05	1.28E-03	3.58E-03	5.55E-04	1.22E-03	8.01E-04	8.21E-04	1.71E-04	1.09E-04	3.02E-08	4.09E-04	2.12E-04
9	D52	60	Single Unit Short Haul Truck	15	0.00E+00	4.51E-06	2.25E-07	2.86E+00	3.71E-06	5.53E-03	4.81E-06	2.15E-03	3.64E-04	6.60E-05	5.45E-04	1.35E-04	1.37E-04	2.87E-04	1.16E-05	4.77E-09	4.09E-04	4.03E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	1.97E-07	9.78E-09	1.22E-01	1.61E-07	2.35E-04	2.10E-07	9.29E-05	1.64E-05	2.93E-06	2.40E-05	5.88E-06	5.97E-06	1.22E-05	4.94E-07	2.03E-10	1.80E-05	1.74E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	4.93E-06	3.44E-07	3.21E+00	1.74E-08	4.30E-03	3.65E-06	5.35E-03	4.58E-04	9.07E-05	3.14E-04	1.02E-04	1.02E-04	4.84E-04	1.07E-05	0.00E+00	2.11E-04	1.01E-03
9	D52	60	Combination Long Haul Truck	8	0.00E+00	4.41E-06	2.88E-07	3.01E+00	2.00E-08	4.64E-03	3.41E-06	5.30E-03	4.60E-04	7.82E-05	3.22E-04	8.78E-05	8.88E-05	4.58E-04	1.00E-05	0.00E+00	2.33E-04	1.00E-03
9	D53	60	Passenger Car	263	0.00E+00	3.90E-06	4.21E-07	1.31E+01	2.71E-05	9.72E-02	8.63E-06	5.37E-04	2.67E-03	4.10E-04	8.41E-04	5.43E-04	5.58E-04	5.50E-05	6.62E-05	1.82E-08	2.85E-04	8.41E-05
9	D53	60	Passenger Truck	441	0.00E+00	8.60E-06	9.07E-07	2.99E+01	5.38E-05	1.73E-01	1.78E-05	1.75E-03	4.90E-03	7.60E-04	1.68E-03	1.10E-03	1.12E-03	2.34E-04	1.49E-04	4.14E-08	5.60E-04	2.90E-04
9	D53	60	Single Unit Short Haul Truck	29	0.00E+00	8.46E-06	4.22E-07	5.37E+00	6.95E-06	1.04E-02	9.02E-06	4.03E-03	6.83E-04	1.24E-04	1.02E-03	2.53E-04	2.57E-04	5.38E-04	2.17E-05	8.94E-09	7.68E-04	7.55E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	3.70E-07	1.83E-08	2.30E-01	3.02E-07	4.40E-04	3.94E-07	1.74E-04	3.07E-05	5.49E-06	4.51E-05	1.10E-05	1.12E-05	2.29E-05	9.26E-07	3.80E-10	3.37E-05	3.27E-05
9	D53	60	Combination Short Haul Truck	16	0.00E+00	9.55E-06	6.67E-07	6.22E+00	3.38E-08	8.33E-03	7.07E-06	1.04E-02	8.87E-04	1.76E-04	6.08E-04	1.98E-04	1.98E-04	9.37E-04	2.08E-05	0.00E+00	4.09E-04	1.95E-03
9	D53	60	Combination Long Haul Truck	15	0.00E+00	8.54E-06	5.59E-07	5.83E+00	3.87E-08	8.99E-03	6.61E-06	1.03E-02	8.91E-04	1.52E-04	6.24E-04	1.70E-04	1.72E-04	8.87E-04	1.95E-05	0.00E+00	4.52E-04	1.94E-03
9	D54	60	Passenger Car	295	0.00E+00	4.37E-06	4.72E-07	1.47E+01	3.04E-05	1.09E-01	9.67E-06	6.01E-04	2.99E-03	4.60E-04	9.42E-04	6.09E-04	6.25E-04	6.16E-05	7.42E-05	2.04E-08	3.20E-04	9.42E-05
9	D54	60	Passenger Truck	494	0.00E+00	9.63E-06	1.02E-06	3.35E+01	6.02E-05	1.93E-01	1.99E-05	1.96E-03	5.49E-03	8.52E-04	1.88E-03	1.23E-03	1.26E-03	2.62E-04	1.67E-04	4.64E-08	6.27E-04	3.25E-04
9	D54	60	Single Unit Short Haul Truck	30	0.00E+00	8.74E-06	4.36E-07	5.55E+00	7.18E-06	1.07E-02	9.32E-06	4.16E-03	7.06E-04	1.28E-04	1.06E-03	2.61E-04	2.66E-04	5.56E-04	2.24E-05	9.24E-09	7.93E-04	7.80E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	3.82E-07	1.90E-08	2.37E-01	3.12E-07	4.55E-04	4.07E-07	1.80E-04	3.17E-05	5.67E-06	4.66E-05	1.14E-05	1.16E-05	2.37E-05	9.57E-07	3.93E-10	3.48E-05	3.38E-05
9	D54	60	Combination Short Haul Truck	13	0.00E+00	7.70E-06	5.38E-07	5.01E+00	2.72E-08	6.72E-03	5.70E-06	8.35E-03	7.16E-04	1.42E-04	4.90E-04	1.60E-04	1.60E-04	7.56E-04	1.67E-05	0.00E+00	3.29E-04	1.58E-03
9	D54	60	Combination Long Haul Truck	12	0.00E+00	6.89E-06	4.50E-07	4.70E+00	3.12E-08	7.25E-03	5.33E-06	8.28E-03	7.19E-04	1.22E-04	5.03E-04	1.37E-04	1.39E-04	7.15E-04	1.57E-05	0.00E+00	3.64E-04	1.56E-03
11	D55	80	Passenger Car	614	0.00E+00	7.37E-06	7.99E-07	2.83E+01	5.14E-05	1.89E-01	1.64E-05	1.26E-03	3.38E-03	5.87E-04	1.60E-03	1.03E-03	1.06E-03	9.62E-05	1.44E-04	4.04E-08	5.41E-04	1.98E-04
11	D55	80	Passenger Truck	1029	0.00E+00	1.59E-05	1.68E-06	6.54E+01	1.01E-04	3.49E-01	3.31E-05	3.74E-03	6.06E-03	1.07E-03	3.17E-03	2.06E-03	2.11E-03	4.63E-04	3.31E-04	9.00E-08	1.06E-03	6.12E-04
11	D55	80	Single Unit Short Haul Truck	95	0.00E+00	1.78E-05	8.81E-07	1.74E+01	1.43E-05	3.50E-02	1.89E-05	9.10E-03	1.12E-03	2.52E-04	2.16E-03	5.26E-04	5.34E-04	1.75E-03	7.02E-05	2.79E-08	1.63E-03	1.70E-03
11	D55	80	Single Unit Long Haul Truck	4	0.00E+00	7.71E-07	3.81E-08	7.37E-01	6.10E-07	1.45E-03	8.21E-07	3.90E-04	5.09E-05	1.11E-05	9.42E-05	2.26E-05	2.30E-05	7.35E-05	2.97E-06	1.16E-09	7.12E-05	7.29E-05
11	D55	80	Combination Short Haul Truck	58	0.00E+00	2.57E-05	1.84E-06	2.13E+01	8.11E-08	2.27E-02	1.88E-05	2.65E-02	1.56E-03	3.83E-04	1.53E-03	5.43E-04	5.39E-04	3.20E-03	7.12E-05	0.00E+00	9.93E-04	4.99E-03
11	D55	80	Combination Long Haul Truck	53	0.00E+00	2.30E-05	1.54E-06	1.97E+01	9.38E-08	2.36E-02	1.75E-05	2.56E-02	1.53E-03	3.07E-04	1.59E-03	4.67E-04	4.70E-04	3.01E-03	6.58E-05	0.00E+00	1.11E-03	4.83E-03
11	D56	80	Passenger Car	355	0.00E+00	4.26E-06	4.61E-07	1.64E+01	2.97E-05	1.09E-01	9.47E-06	7.29E-04	1.95E-03	3.39E-04	9.22E-04	5.94E-04	6.10E-04	5.56E-05	8.33E-05	2.34E-08	3.12E-04	1.14E-04
11	D56	80	Passenger Truck	594	0.00E+00	9.16E-06	9.70E-07	3.78E+01	5.86E-05	2.01E-01	1.91E-05	2.16E-03	3.50E-03	6.20E-04	1.83E-03	1.19E-03	1.22E-03	2.67E-04	1.91E-04	5.20E-08	6.14E-04	3.53E-04
11	D56	80	Single Unit Short Haul Truck	73	0.00E+00	1.37E-05	6.78E-07	1.34E+01	1.10E-05	2.69E-02	1.45E-05	7.00E-03	8.58E-04	1.94E-04	1.66E-03	4.05E-04	4.11E-04	1.34E-03	5.40E-05	2.14E-08	1.25E-03	1.31E-03
11	D56	80	Single Unit Long Haul Truck	3	0.00E+00	5.93E-07	2.93E-08	5.66E-01	4.69E-07	1.12E-03	6.32E-07	3.00E-04	3.92E-05	8.55E-06	7.24E-05	1.74E-05	1.77E-05	5.66E-05	2.28E-06	8.92E-10	5.48E-05	5.60E-05
11	D56	80	Combination Short Haul Truck	41	0.00E+00	1.78E-05	1.27E-06	1.48E+01	5.62E-08	1.58E-02	1.31E-05	1.84E-02	1.08E-03	2.66E-04	1.06E-03	3.76E-04	3.74E-04	2.22E-03	4.93E-05	0.00E+00	6.88E-04	3.46E-03
11	D56	80	Combination Long

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D60	80	Combination Short Haul Truck	27	0.00E+00	1.18E-05	8.43E-07	9.77E+00	3.72E-08	1.04E-02	8.65E-06	1.22E-02	7.14E-04	1.76E-04	7.02E-04	2.49E-04	2.48E-04	1.47E-03	3.27E-05	0.00E+00	4.56E-04	2.29E-03
11	D60	80	Combination Long Haul Truck	24	0.00E+00	1.05E-05	7.07E-07	9.04E+00	4.30E-08	1.08E-02	8.02E-06	1.18E-02	7.00E-04	1.41E-04	7.27E-04	2.14E-04	2.16E-04	1.38E-03	3.02E-05	0.00E+00	5.10E-04	2.22E-03
11	D61	80	Passenger Car	55	0.00E+00	6.60E-07	7.14E-08	2.53E+00	4.60E-06	1.69E-02	1.47E-06	1.13E-04	3.02E-04	5.25E-05	1.43E-04	9.21E-05	9.45E-05	8.61E-06	1.29E-05	3.62E-09	4.84E-05	1.77E-05
11	D61	80	Passenger Truck	92	0.00E+00	1.42E-06	1.50E-07	5.85E+00	9.08E-06	3.12E-02	2.97E-06	3.35E-04	5.42E-04	9.61E-05	2.84E-04	1.85E-04	1.89E-04	4.14E-05	2.97E-05	8.05E-09	9.51E-05	5.47E-05
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	D61	80	Combination Short Haul Truck	5	0.00E+00	2.07E-06	1.48E-07	1.71E+00	6.53E-09	1.83E-03	1.52E-06	2.13E-03	1.25E-04	3.09E-05	1.23E-04	4.37E-05	4.34E-05	2.58E-04	5.73E-06	0.00E+00	7.99E-05	4.01E-04
11	D61	80	Combination Long Haul Truck	4	0.00E+00	1.85E-06	1.24E-07	1.59E+00	7.55E-09	1.90E-03	1.41E-06	2.06E-03	1.23E-04	2.47E-05	1.28E-04	3.76E-05	3.78E-05	2.42E-04	5.29E-06	0.00E+00	8.94E-05	3.89E-04
11	D62	80	Passenger Car	144	0.00E+00	1.72E-06	1.87E-07	6.62E+00	1.20E-05	4.43E-02	3.83E-06	2.95E-04	7.90E-04	1.37E-04	3.73E-04	2.40E-04	2.47E-04	2.25E-05	3.37E-05	9.45E-09	1.26E-04	4.63E-05
11	D62	80	Passenger Truck	240	0.00E+00	3.71E-06	3.93E-07	1.53E+01	2.37E-05	8.15E-02	7.75E-06	8.75E-04	1.42E-03	2.51E-04	7.41E-04	4.82E-04	4.94E-04	1.08E-04	7.75E-05	2.10E-08	2.48E-04	1.43E-04
11	D62	80	Single Unit Short Haul Truck	28	0.00E+00	5.21E-06	2.58E-07	5.11E+00	4.19E-06	1.03E-02	5.54E-06	2.67E-03	3.27E-04	7.40E-05	6.33E-04	1.54E-04	1.57E-04	5.12E-04	2.06E-05	8.18E-09	4.77E-04	5.00E-04
11	D62	80	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	2.16E-01	1.79E-07	4.25E-04	2.41E-07	1.14E-04	1.49E-05	3.26E-06	2.76E-05	6.64E-06	6.74E-06	2.16E-05	8.71E-07	3.40E-10	2.09E-05	2.14E-05
11	D62	80	Combination Short Haul Truck	12	0.00E+00	5.05E-06	3.61E-07	4.19E+00	1.60E-08	4.47E-03	3.71E-06	5.21E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.30E-04	1.40E-05	0.00E+00	1.95E-04	9.81E-04
11	D62	80	Combination Long Haul Truck	10	0.00E+00	4.52E-06	3.03E-07	3.88E+00	1.85E-08	4.63E-03	3.44E-06	5.04E-03	3.00E-04	6.03E-05	3.12E-04	9.18E-05	9.24E-05	5.92E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
10	D63	70	Passenger Car	50	0.00E+00	6.46E-07	6.99E-08	2.38E+00	4.50E-06	1.61E-02	1.43E-06	1.00E-04	3.88E-04	6.23E-05	1.39E-04	9.02E-05	9.25E-05	8.98E-06	1.21E-05	3.30E-09	4.73E-05	1.57E-05
10	D63	70	Passenger Truck	84	0.00E+00	1.42E-06	1.50E-07	5.48E+00	8.95E-06	2.98E-02	2.94E-06	3.15E-04	7.06E-04	1.15E-04	2.80E-04	1.83E-04	1.87E-04	4.08E-05	2.75E-05	7.39E-09	9.37E-05	5.17E-05
10	D63	70	Single Unit Short Haul Truck	24	0.00E+00	5.63E-06	2.82E-07	4.41E+00	4.60E-06	8.85E-03	5.99E-06	2.78E-03	3.96E-04	7.91E-05	6.85E-04	1.68E-04	1.71E-04	4.42E-04	1.78E-05	7.18E-09	5.11E-04	5.20E-04
10	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.87E-01	1.99E-07	3.70E-04	2.61E-07	1.19E-04	1.81E-05	3.52E-06	2.99E-05	7.27E-06	7.39E-06	1.87E-05	7.54E-07	3.02E-10	2.24E-05	2.24E-05
10	D63	70	Combination Short Haul Truck	10	0.00E+00	5.43E-06	3.86E-07	3.95E+00	1.77E-08	4.68E-03	3.98E-06	5.72E-03	4.13E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.96E-04	1.32E-05	0.00E+00	2.17E-04	1.08E-03
10	D63	70	Combination Long Haul Truck	10	0.00E+00	4.93E-06	3.29E-07	3.68E+00	2.04E-08	4.96E-03	3.74E-06	5.64E-03	4.11E-04	7.50E-05	3.42E-04	9.94E-05	1.00E-04	5.62E-04	1.23E-05	0.00E+00	2.42E-04	1.07E-03
10	D64	70	Passenger Car	24	0.00E+00	3.13E-07	3.39E-08	1.15E+00	2.18E-06	7.83E-03	6.95E-07	4.87E-05	1.88E-04	3.02E-05	6.75E-05	4.37E-05	4.49E-05	4.35E-06	5.86E-06	1.60E-09	2.30E-05	7.63E-06
10	D64	70	Passenger Truck	41	0.00E+00	6.87E-07	7.27E-08	2.66E+00	4.34E-06	1.45E-02	1.42E-06	1.53E-04	3.43E-04	5.57E-05	1.36E-04	8.86E-05	9.08E-05	1.98E-05	1.33E-05	3.58E-09	4.54E-05	2.51E-05
10	D64	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.82E-01	9.21E-07	1.77E-03	1.20E-06	5.56E-04	7.91E-05	1.58E-05	1.37E-04	3.37E-05	3.42E-05	8.83E-05	3.55E-06	1.44E-09	1.02E-04	1.04E-04
10	D64	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	D64	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.60E-04
11	D65	80	Passenger Car	373	0.00E+00	4.48E-06	4.85E-07	1.72E+01	3.12E-05	1.15E-01	9.97E-06	7.67E-04	2.05E-03	3.57E-04	9.71E-04	6.25E-04	6.42E-04	5.85E-05	8.76E-05	2.46E-08	3.29E-04	1.20E-04
11	D65	80	Passenger Truck	625	0.00E+00	9.64E-06	1.02E-06	3.98E+01	6.17E-05	2.12E-01	2.01E-05	2.28E-03	3.68E-03	6.53E-04	1.93E-03	1.25E-03	1.29E-03	2.81E-04	2.01E-04	5.47E-08	6.46E-04	3.72E-04
11	D65	80	Single Unit Short Haul Truck	65	0.00E+00	1.22E-05	6.06E-07	1.20E+01	9.82E-06	2.41E-02	1.30E-05	6.26E-03	7.67E-04	1.73E-04	1.48E-03	3.62E-04	3.67E-04	1.20E-03	4.83E-05	1.92E-08	1.12E-03	1.17E-03
11	D65	80	Single Unit Long Haul Truck	3	0.00E+00	5.30E-07	2.62E-08	5.06E-01	4.20E-07	9.97E-04	5.65E-07	2.68E-04	3.50E-05	7.65E-06	6.48E-05	1.56E-05	1.58E-05	5.06E-05	2.04E-06	7.98E-10	4.90E-05	5.01E-05
11	D65	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.85E-08	1.08E-02	8.94E-06	1.26E-02	7.38E-04	1.82E-04	7.26E-04	2.57E-04	2.56E-04	1.52E-03	3.38E-05	0.00E+00	4.71E-04	2.37E-03
11	D65	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.31E-07	9.35E+00	4.45E-08	1.12E-02	8.29E-06	1.22E-02	7.24E-04	1.45E-04	7.52E-04	2.21E-04	2.23E-04	1.43E-03	3.12E-05	0.00E+00	5.27E-04	2.29E-03
11	D66	80	Passenger Car	236	0.00E+00	2.83E-06	3.07E-07	1.09E+01	1.97E-05	7.28E-02	6.30E-06	4.85E-04	1.30E-03	2.26E-04	6.14E-04	3.96E-04	4.06E-04	3.70E-05	5.54E-05	1.55E-08	2.08E-04	7.61E-05
11	D66	80	Passenger Truck	395	0.00E+00	6.10E-06	6.46E-07	2.52E+01	3.90E-05	1.34E-01	1.27E-05	1.44E-03	2.33E-03	4.13E-04	1.22E-03	7.93E-04	8.13E-04	1.78E-04	1.27E-04	3.46E-08	4.09E-04	2.35E-04
11	D66	80	Single Unit Short Haul Truck	48	0.00E+00	8.94E-06	4.44E-07	8.77E+00	7.19E-06	1.76E-02	9.51E-06	4.58E-03	5.62E-04	1.27E-04	1.09E-03	2.65E-04	2.69E-04	8.80E-04	3.54E-05	1.40E-08	8.19E-04	8.58E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	3.89E-07	1.92E-08	3.71E-01	3.07E-07	7.30E-04	4.14E-07	1.96E-04	2.56E-05	5.60E-06	4.74E-05	1.14E-05	1.16E-05	3.70E-05	1.50E-06	5.84E-10	3.59E-05	3.67E-05
11	D66	80	Combination Short Haul Truck	32	0.00E+00	1.39E-05	9.97E-07	1.16E+01	4.40E-08	1.23E-02	1.02E-05	1.44E-02	8.45E-04	2.08E-04	8.31E-04	2.95E-04	2.93E-04	1.74E-03	3.86E-05	0.00E+00	5.39E-04	2.71E-03
11	D66	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.37E-07	1.07E+01	5.09E-08	1.28E-02	9.49E-06	1.39E-02	8.28E-04	1.66E-04	8.61E-04	2.53E-04	2.55E-04	1.63E-03	3.57E-05	0.00E+00	6.03E-04	2.62E-03
11	D67	80	Passenger Car	126	0.00E+00	1.51E-06	1.63E-07	5.80E+00	1.05E-05	3.88E-02	3.36E-06	2.58E-04	6.91E-04	1.20E-04	3.27E-04	2.11E-04	2.16E-04	1.97E-05	2.95E-05	8.28E-09	1.11E-04	4.05E-05
11	D67	80	Passenger Truck	211	0.00E+00	3.25E-06	3.44E-07	1.34E+01	2.08E-05	7.13E-02	6.78E-06	7.66E-04	1.24E-03	2.20E-04	6.49E-04	4.22E-04	4.33E-04	9.47E-05	6.78E-05	1.84E-08	2.18E-04	1.25E-04
11	D67	80	Single Unit Short Haul Truck	55	0.00E+00	1.03E-05	5.11E-07	1.01E+01	8.28E-06	2.03E-02	1.10E-05	5.28E-03	6.47E-04	1.46E-04	1.25E-03	3.05E-04	3.10E-04	1.01E-03	4.07E-05	1.62E-08	9.43E-04	9.89E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	4.47E-07	2.21E-08	4.27E-01	3.54E-07	8.41E-04	4.76E-07	2.26E-04	2.95E-05	6.45E-06	5.46E-05	1.31E-05	1.33E-05	4.27E-05	1.72E-06	6.73E-10	4.13E-05	4.23E-05
11	D67	80	Combination Short Haul Truck	36	0.00E+00	1.57E-05	1.12E-06	1.30E+01	4.96E-08	1.39E-02	1.15E-05	1.62E-02	9.52E-04	2.34E-04	9.36E-04	3.32E-04	3.30E-04	1.96E-03	4.35E-05	0.00E+00	6.07E-04	3.05E-03
11	D67	80	Combination Long Haul Truck	33	0.00E+00	1.40E-05	9.42E-07	1.20E+01	5.73E-08	1.44E-02	1.07E-05	1.57E-02	9.33E-04	1.88E-04	9.69E-04	2.85E-04	2.87E-04	1.84E-03	4.02E-05	0.00E+00	6.79E-04	2.95E-03
11	D68	80	Passenger Car	285	0.00E+00	3.42E-06	3.70E-07	1.31E+01	2.38E-05	8.78E-02	7.60E-06	5.85E-04	1.57E-03	2.72E-04	7.40E-04	4.77E-04	4.90E-04	4.46E-05	6.68E-05	1.87E-08	2.51E-04	9.18E-05
11	D68	80	Passenger Truck	477	0.00E+00	7.35E-06	7.79E-07	3.03E+01	4.70E-05	1.62E-01	1.54E-05	1.74E-03	2.81E-03	4.98E-04	1.47E-03	9.56E-04	9.80E-04	2.15E-04	1.54E-04	4.17E-08	4.93E-04	2.84E-04
11	D68	80	Single Unit Short Haul Truck	75	0.00E+00	1.40E-05	6.95E-07	1.37E+01	1.13E-05	2.76E-02	1.49E-05	7.18E-03	8.80E-04	1.99E-04	1.70E-03	4.15E-04	4.21E-04	1.38E-03	5.54E-05	2.20E-08	1.28E-03	1.35E-03
11	D68	80	Single Unit Long Haul Truck	3	0.00E+00	6.09E-07	3.00E-08	5.81E-01	4.82E-07	1.14E-03	6.48E-07	3.08E-04	4.02E-05	8.78E-06	7.43E-05	1.79E-05	1.81E-05	5.80E-05	2.34E-06	9.16E-10	5.62E-05	5.75E-05
11	D68	80	Combination Short Haul Truck	48	0.00E+00	2.13E-05	1.52E-06	1.76E+01	6.72E-08	1.89E-02	1.56E-05	2.20E-02	1.29E-03	3.18E-04	1.27E-03	4.50E-04	4.47E-04	2.65E-03	5.90E-05	0.00E+00	8.23E-04	4.14E-03
11	D68	80	Combination Long Haul Truck	44	0.00E+00	1.90E-05	1.28E-06	1.63E+01	7.78E-08	1.95E-02	1.45E-05	2.13E-02	1.27E-03	2.54E-04	1.31E-03	3.87E-04	3.89E-04	2.49E-03	5.45E-05	0.00E+00	9.21E-04	4.00E-03
11	D69	80	Passenger Car	27	0.00E+00	3.21E-07	3.47E-08	1.23E+00	2.23E-06	8.24E-03	7.13E-07	5.49E-05	1.47E-04	2.55E-05	6.95E-05	4.47E-05	4.59E-05	4.19E-06	6.27E-06	1.76E-09	2.35E-05	8.61E-06
11	D69	80	Passenger Truck	45	0.00E+00	6.90E-07	7.31E-08	2.85E+00	4.41E-06	1.52E-02	1.44E-06	1.63E-04	2.63E-04	4.67E-05	1.38E-04	8.97E-05	9.20E-05	2.01E-05	1.44E-05	3.91E-09	4.62E-05	2.66E-05
11	D69	80	Single Unit Short Haul Truck	15	0.00E+00	2.91E-06	1.44E-07	2.85E+00	2.34E-06	5.73E-03	3.09E-06	1.49E-03	1.83E-04	4.13E-05	3.53E-04	8.61E-05	8.74E-05	2.86E-04	1.15E-05	4.56E-09	2.66E-04	2.79E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	6.23E-09	1.21E-01	9.99E-08	2.37E-04	1.34E-07	6.38E-05	8.34E-06	1.82E-06	1.54E-05	3.70E-06	3.76E-06	1.20E-05	4.86E-07	1.90E-10	1.17E-05	1.19E-05
11	D69	80	Combination Short Haul Truck	8	0.00E+00	3.30E-06	2.36E-07	2.74E+00	1.04E-08	2.93E-03	2.42E-06	3.41E-03	2.00E-04	4.93E-05	1.97E-04	6.98E-05	6.94E-05	4.12E-04	9.15E-06	0.00E+00	1.28E-04	6.42E-04
11	D69	80	Combination Long Haul Truck	7	0.00E+00	2.95E-06	1.98E-07	2.53E+00	1.21E-08	3.03E-03	2.25E-06	3.30E-03	1.96E-04	3.95E-05	2.04E-04	6.00E-05	6.04E-05	3.87E-04	8.46E-06	0.00E+00	1.43E-04	6.21E-04
11	D70	80	Passenger Car	126	0.00E+00	1.51E-06	1.64E-07	5.82E+00	1.06E-05	3.89E-02	3.37E-06	2.59E-04	6.94E-04	1.21E-04	3.28E-04	2.11E-04	2.17E-04	1.98E-05	2.96E-05	8.31E-09	1.11E-04	4.07E-05
11	D70	80	Passenger Truck	211	0.00E+00	3.26E-06	3.45E-07	1.34E+01	2.08E-05	7.16E-02	6.81E-06	7.69E-04	1.24E-03	2.21E-04	6.52E-04	4.24E-04	4.34E-04	9.51E-05	6.81E-05	1.85E-08	2.18E-04	1.26E-04
11	D70	80	Single Unit Short Haul Truck	37	0.00E+00	6.92E-06	3.43E-07	6.79E+00	5.57E-06	1.36E-02	7.36E-06	3.55E-03	4.35E-04	9.83E-05	8.42E-04	2.05E-04	2.08E-04	6.81E-04	2.74E-05	1.09E-08	6.34E-04	6.64E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	3.01E-07	1.48E-08	2.87E-01	2.38E-07	5.65E-04	3.20E-07	1.52E-04	1.98E-05	4.34E-06	3.67E-05	8.82E-06	8.95E-06	2.87E-05	1.16E-06	4.52E-10	2.78E-05	2.84E-05
11	D70	80	Combination Short Haul Truck	24	0.00E+00	1.04E-05	7.45E-07	8.63E+00	3.29E-08	9.23E-03	7.64E-06	1.07E-02	6.31E-04	1.56E-04	6.21E-04	2.20E-04	2.19E-04	1.30E-03	2.89E-05	0.00E+00	4.03E-04	2.02E-03
11	D70	80	Combination Long Haul Truck	22	0.00E+00	9.31E-06	6.25E-07	7.99E+00	3.80E-08	9.55E-03	7.09E-06	1.04E-02	6.19E-04	1.24E-04	6.43E-04	1.89E-04	1.90E-04	1.22E-03	2.67E-05	0.00E+00	4.51E-04	1.96E-03
11	D71	70	Passenger Car	187	0.00E+00	2.42E-06	2.61E-07	8.90E+00	1.68E-05	6.04E-02	5.36E-06	3.75E-04	1.45E-03	2.33E-04	5.21E-04	3.37E-04	3.46E-04	3.36E-05	4.52E-05	1.23E-08	1.77E-04	5.88E-05
10	D71	70	Passenger Truck	314	0.00E+00	5.30E-06	5.61E-07	2.05E+01	3.35E-05	1.12E-01	1.10E-05	1.18E-03	2.64E-03	4.30E-04	1.05E-03	6.84E-04	7.00E-04	1.53E-04	1.03E-04	2.76E-08	3.50E-04	1.94E-04
10	D71	70	Single Unit Short Haul Truck	37	0.00E+00	8.78E-06	4.40E-07	6.88E+00	7.18E-06	1.38E-02	9.35E-06	4.34E-03	6.17E-04	1.23E-04	1.07E-03	2.63E-04	2.67E-04	6.89E-04	2.77E-05	1.12E-08	7.98E-04	8.12E-04
10	D71	70	Single Unit Long Haul Truck	2	0.00E+00	3.83E-07	1.90E-08	2.92E-01	3.10E-07	5.77E-04	4.07E-07	1.86E-04	2.82E-05	5.49E-06	4.67E-05	1.14E-05	1.15E-05	2.92E-05	1.18E-06	4.71E-10	3.50E-05	3.49E-05
10	D71	70	Combination Short Haul Truck	34	0.00E+00	1.75E-05	1.25E-06	1.27E+01	5.70E-08	1.51E-02	1.28E-05	1.85E-02	1.33E-03	2.91E-04	1.07E-03	3.69E-04	3.68E-04	1.92E-03	4.25E-05	0.00E+00	7.00E-04	3.48E-03
10	D71	70	Combination Long Haul Truck	31	0.00E+00	1.59E-05	1.06E-06	1.19E+01	6.56E-08	1.60E-02	1.20E-05	1.82E-02	1.32E-03	2.42E-04	1.10E-03	3.20E-04	3.24E-04	1.81E-03	3.97E-05	0.00E+00	7.81E-04	3.43E-03
10	D72	70	Passenger Car	145	0.00E+00	1.87E-06	2.03E-07	6.91E+00	1.31E-05	4.69E-02	4.16E-06	2.91E-04	1.13E-03	1.81E-04	4.04E-04	2.62E-04	2.69E-04	2.61E-05	3.51E-05	9.58E-09	1.37E-04	4.57E-05
10	D72	70	Passenger Truck	244	0.00E+00	4.11E-06	4.35E-07	1.59E+01	2.60E-05	8.66E-02	8.53E-06	9.13E-04	2.05E-03	3.34E-04	8.12E-04	5.30E-04	5.43E-04	1.18E-04	7.98E-05	2.14E-08	2.72E-04	1.50E-04
10	D72	70	Single Unit Short Haul Truck	43	0.00E+00	1.01E-05	5.08E-07	7.94E+00	8.29E-06	1.59E-02	1.08E-05	5.01E-03	7.13E-04	1.43E-04	1.23E-03	3.03E-04	3.08E-04	7.95E-04	3.20E-05	1.29E-08	9.21E-04	9.37E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	4.42E-07	2.20E-08	3.37E-01	3.58E-07	6.66E-04	4.70E-07	2.15E-04	3.25E-05	6.34E-06	5.39E-05	1.31E-05	1.33E-05	3.36E-05	1.36E-06	5.44E-10	4.04E-05	4.03E-05
10	D72	70	Combination Short Haul Truck	32	0.00E+00	1.68E-05	1.19E-06	1.22E+01	5.45E-08	1.44E-02	1.23E-05	1.77E-02	1.27E-03	2.79E-04	1.02E-03	3.53E-04	3.53E-04	1.84E-03	4.07E-05	0.00E+00	6.70E-04	3.33E-03
10	D72	70	Combination Long Haul Truck	29	0.00E+00	1.52E-05	1.01E-06	1.14E+01	6.28E-08	1.53E-02	1.15E-05	1.74E-02	1.27E-03	2.31E-04	1.06E-03	3.07E-04	3.10E-04	1.73E-03	3.80E-05	0.00E+00	7.48E-04	3.29E-03
10	D73	70	Passenger Car	105	0.00E+00	1.35E-06	1.46E-07	4.97E+00	9.39E-06	3.37E-02	3.00E-06	2.10E-04	8.11E-04	1.30E-04	2.91E-04	1.88E-04	1.93E-04	1.88E-05	2.52E-05	6.89E-09	9.89E-05	3.29E-05
10	D73	70	Passenger Truck	175	0.00E+00	2.96E-06	3.13E-07	1.14E+01	1.87E-05	6.23E-02	6.14E-06	6.58E-04	1.48E-03	2.40E-04	5.85E-04	3.82E-04	3.91E-04	8.52E-05	5.75E-05	1.54E-08	1.96E-04	1.08E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	9.04E-07	4.53E-08	7.08E-01	7.39E-07	1.42E-03	9.62E-07	4.46E-04	6.36E-05	1.27E-05	1.10E-04	2.70E-05	2.75E-05	7.09E-05	2.85E-06	1.15E-09	8.21E-05	8.35E-05
10	D73	70	Single Unit Long Haul Truck	11	0.00E+00	5.87E-06	4.18E-07	4.27E+00	1.91E-08	5.06E-03	4.30E-06	6.19E-03	4.46E-04	9.77E-05	3.58E-04	1.24E-04	1.23E-04	6.44E-04	1.43E-05	0.00E+00	2.35E-04	1.17E-03
10	D73	70	Combination Long Haul Truck	10	0.00E+00	5.33E-06	3.55E-07	3.98E+00	2.20E-08	5.36E-03	4.04E-06	6.10E-03	4.44E-04	8.11E-05	3.70E-04	1.07E-04	1.09E-04	6.07E-04	1.33E-05	0.00E+00	2.62E-04	1.15E-03
10	D74	70	Passenger Car	122	0.00E+00	1.58E-06	1.71E-07	5.81E+00	1.10E-05	3.94E-02	3.50E-06	2.45E-04	9.48E-04	1.52E-04	3.40E-04	2.20E-04	2.26E-04	2.19E-05	2.95E-05	8.05E-09	1.16E-04	3.84E-05
10	D74	70	Passenger Truck	205	0.00E+00	3.46E-06	3.66E-07	1.34E+01	2.19E-05	7.28E-02	7.17E-06	7.68E-04	1.72E-03	2.81E-04	6.83E-04	4.46E-04	4.57E-04	9.96E-05	6.71E-05	1.80E-08	2.29E-04	1.26E-04
10	D74	70	Single Unit Short Haul Truck	8	0.00E+00	1.88E-06	9.44E-08	1.48E+00	1.54E-06	2.96E-03	2.01E-06	9.30E-04	1.32E-04	2.65E-05	2.29E-04	5.63E-05	5.72E-05	1.48E-04	5.94E-06	2.40E-09	1.71E-04	1.74E-04
10	D74	70	Combination Short Haul Truck	6	0.00E+00	3.33E-06	2.37E-07	2.42E+00	1.08E-08	2.87E-03	2.44E-06	3.51E-03	2.53E-04	5.54E-05	2.03E-04	7.01E-05	7.00E-05	3.65E-04	8.08E-06	0.00E+00	1.33E-04	6.60E-04
10	D74	70	Combination Long Haul Truck	6	0.00E+00	3.02E-06	2.01E-07	2.26E+00	1.25E-08	3.04E-03	2.29E-06	3.46E-03	2.52E-04	4.59E-05	2.09E-04	6.09E-05	6.15E-05	3.44E-04	7.55E-06	0.00E+00	1.48E-04	6.53E-04
11	D75	80	Passenger Car	104

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D79	70	Passenger Car	156	0.00E+00	2.01E-06	2.17E-07	7.41E+00	1.40E-05	5.02E-02	4.46E-06	3.12E-04	1.21E-03	1.94E-04	4.33E-04	2.81E-04	2.88E-04	2.79E-05	3.76E-05	1.03E-08	1.47E-04	4.89E-05
10	D79	70	Passenger Truck	261	0.00E+00	4.41E-06	4.66E-07	1.70E+01	2.79E-05	9.28E-02	9.14E-06	9.79E-04	2.20E-03	3.58E-04	8.70E-04	5.69E-04	5.82E-04	1.27E-04	8.56E-05	2.30E-08	2.92E-04	1.61E-04
10	D79	70	Single Unit Short Haul Truck	43	0.00E+00	1.00E-05	5.02E-07	7.84E+00	8.19E-06	1.57E-02	1.07E-05	4.95E-03	7.04E-04	1.41E-04	1.22E-03	2.99E-04	3.04E-04	7.86E-04	3.16E-05	1.28E-08	9.10E-04	9.25E-04
10	D79	70	Single Unit Long Haul Truck	2	0.00E+00	4.36E-07	2.17E-08	3.33E-01	3.53E-07	6.57E-04	4.64E-07	2.12E-04	3.21E-05	6.26E-06	5.32E-05	1.29E-05	1.31E-05	3.32E-05	1.34E-06	5.37E-10	3.99E-05	3.98E-05
10	D79	70	Combination Short Haul Truck	28	0.00E+00	1.47E-05	1.05E-06	1.07E+01	4.78E-08	1.27E-02	1.08E-05	1.55E-02	1.12E-03	2.44E-04	8.96E-04	3.10E-04	3.09E-04	1.61E-03	3.57E-05	0.00E+00	5.87E-04	2.92E-03
10	D79	70	Combination Long Haul Truck	26	0.00E+00	1.33E-05	8.89E-07	9.96E+00	5.50E-08	1.34E-02	1.01E-05	1.53E-02	1.11E-03	2.03E-04	9.24E-04	2.69E-04	2.72E-04	1.52E-03	3.33E-05	0.00E+00	6.55E-04	2.88E-03
10	D80	70	Passenger Car	180	0.00E+00	2.31E-06	2.50E-07	8.53E+00	1.61E-05	5.78E-02	5.14E-06	3.60E-04	1.39E-03	2.23E-04	4.99E-04	3.23E-04	3.32E-04	3.22E-05	4.33E-05	1.18E-08	1.70E-04	5.63E-05
10	D80	70	Passenger Truck	301	0.00E+00	5.08E-06	5.37E-07	1.96E+01	3.21E-05	1.07E-01	1.05E-05	1.13E-03	2.53E-03	4.12E-04	1.00E-03	6.55E-04	6.71E-04	1.46E-04	9.85E-05	2.65E-08	3.36E-04	1.85E-04
10	D80	70	Single Unit Short Haul Truck	38	0.00E+00	8.98E-06	4.50E-07	7.04E+00	7.34E-06	1.41E-02	9.56E-06	4.44E-03	6.31E-04	1.26E-04	1.09E-03	2.69E-04	2.73E-04	7.05E-04	2.83E-05	1.15E-08	8.16E-04	8.30E-04
10	D80	70	Single Unit Long Haul Truck	2	0.00E+00	3.91E-07	1.95E-08	2.99E-01	3.17E-07	5.90E-04	4.17E-07	1.91E-04	2.88E-05	5.62E-06	4.77E-05	1.16E-05	1.18E-05	2.98E-05	1.20E-06	4.82E-10	3.58E-05	3.57E-05
10	D80	70	Combination Short Haul Truck	19	0.00E+00	9.70E-06	6.90E-07	7.06E+00	3.15E-08	8.35E-03	7.11E-06	1.02E-02	7.37E-04	1.61E-04	5.91E-04	2.04E-04	2.04E-04	1.06E-03	2.36E-05	0.00E+00	3.88E-04	1.92E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	8.80E-06	5.87E-07	6.58E+00	3.63E-08	8.85E-03	6.67E-06	1.01E-02	7.33E-04	1.34E-04	6.10E-04	1.77E-04	1.79E-04	1.00E-03	2.20E-05	0.00E+00	4.32E-04	1.90E-03
10	D81	70	Passenger Car	171	0.00E+00	2.20E-06	2.38E-07	8.11E+00	1.53E-05	5.50E-02	4.88E-06	3.42E-04	1.32E-03	2.12E-04	4.74E-04	3.07E-04	3.15E-04	3.06E-05	4.11E-05	1.12E-08	1.61E-04	5.36E-05
10	D81	70	Passenger Truck	286	0.00E+00	4.83E-06	5.10E-07	1.87E+01	3.05E-05	1.02E-01	1.00E-05	1.07E-03	2.41E-03	3.91E-04	9.53E-04	6.22E-04	6.37E-04	1.39E-04	9.37E-05	2.52E-08	3.19E-04	1.76E-04
10	D81	70	Single Unit Short Haul Truck	5	0.00E+00	1.28E-06	6.43E-08	1.01E+00	1.05E-06	2.02E-03	1.37E-06	6.34E-04	9.02E-05	1.80E-05	1.56E-04	3.84E-05	3.90E-05	1.01E-04	4.05E-06	1.64E-09	1.17E-04	1.19E-04
10	D81	70	Combination Short Haul Truck	4	0.00E+00	2.19E-06	1.56E-07	1.59E+00	7.13E-09	1.89E-03	1.61E-06	2.31E-03	1.67E-04	3.65E-05	1.34E-04	4.62E-05	4.61E-05	2.40E-04	5.32E-06	0.00E+00	8.76E-05	4.35E-04
10	D81	70	Combination Long Haul Truck	4	0.00E+00	1.99E-06	1.33E-07	1.49E+00	8.21E-09	2.00E-03	1.51E-06	2.28E-03	1.66E-04	3.03E-05	1.38E-04	4.01E-05	4.05E-05	2.27E-04	4.97E-06	0.00E+00	9.77E-05	4.30E-04
10	D82	70	Passenger Car	105	0.00E+00	1.36E-06	1.47E-07	5.00E+00	9.44E-06	3.39E-02	3.01E-06	2.11E-04	8.16E-04	1.31E-04	2.92E-04	1.89E-04	1.94E-04	1.89E-05	2.54E-05	6.93E-09	9.94E-05	3.30E-05
10	D82	70	Passenger Truck	176	0.00E+00	2.98E-06	3.15E-07	1.15E+01	1.88E-05	6.27E-02	6.17E-06	6.61E-04	1.48E-03	2.41E-04	5.88E-04	3.84E-04	3.93E-04	8.57E-05	5.78E-05	1.55E-08	1.97E-04	1.09E-04
10	D82	70	Single Unit Short Haul Truck	2	0.00E+00	5.25E-07	2.63E-08	4.11E-01	4.29E-07	8.25E-04	5.59E-07	2.59E-04	3.69E-05	7.38E-06	6.39E-05	1.57E-05	1.59E-05	4.12E-05	1.66E-06	6.70E-10	4.77E-05	4.85E-05
10	D82	70	Combination Short Haul Truck	2	0.00E+00	9.45E-07	6.72E-08	6.87E-01	3.07E-09	8.13E-04	6.92E-07	9.95E-04	7.17E-05	1.57E-05	5.76E-05	1.99E-05	1.99E-05	1.04E-04	2.29E-06	0.00E+00	3.77E-05	1.87E-04
10	D82	70	Combination Long Haul Truck	2	0.00E+00	8.57E-07	5.71E-08	6.40E-01	3.54E-09	8.61E-04	6.49E-07	9.81E-04	7.14E-05	1.30E-05	5.94E-05	1.73E-05	1.75E-05	9.76E-05	2.14E-06	0.00E+00	4.21E-05	1.85E-04
11	D83	80	Passenger Car	302	0.00E+00	3.63E-06	3.93E-07	1.39E+01	2.53E-05	9.32E-02	8.07E-06	6.22E-04	1.66E-03	2.89E-04	7.86E-04	5.07E-04	5.20E-04	4.74E-05	7.10E-05	1.99E-08	2.66E-04	9.74E-05
11	D83	80	Passenger Truck	506	0.00E+00	7.81E-06	8.27E-07	3.22E+01	4.99E-05	1.72E-01	1.63E-05	1.84E-03	2.98E-03	5.29E-04	1.56E-03	1.02E-03	1.04E-03	2.28E-04	1.63E-04	4.43E-08	5.23E-04	3.01E-04
11	D83	80	Single Unit Short Haul Truck	75	0.00E+00	1.41E-05	7.01E-07	1.38E+01	1.14E-05	2.78E-02	1.50E-05	7.24E-03	8.87E-04	2.01E-04	1.72E-03	4.18E-04	4.25E-04	1.39E-03	5.58E-05	2.22E-08	1.29E-03	1.36E-03
11	D83	80	Single Unit Long Haul Truck	3	0.00E+00	6.13E-07	3.03E-08	5.86E-01	4.85E-07	1.15E-03	6.53E-07	3.10E-04	4.05E-05	8.85E-06	7.49E-05	1.80E-05	1.83E-05	5.85E-05	2.36E-06	9.23E-10	5.66E-05	5.79E-05
11	D83	80	Combination Short Haul Truck	44	0.00E+00	1.92E-05	1.37E-06	1.59E+01	6.05E-08	1.70E-02	1.41E-05	1.98E-02	1.16E-03	2.86E-04	1.14E-03	4.05E-04	4.03E-04	2.39E-03	5.31E-05	0.00E+00	7.41E-04	3.72E-03
11	D83	80	Combination Long Haul Truck	40	0.00E+00	1.71E-05	1.15E-06	1.47E+01	7.00E-08	1.76E-02	1.31E-05	1.91E-02	1.14E-03	2.29E-04	1.18E-03	3.49E-04	3.51E-04	2.25E-03	4.91E-05	0.00E+00	8.30E-04	3.61E-03
11	D84	80	Passenger Car	333	0.00E+00	4.00E-06	4.33E-07	1.54E+01	2.79E-05	1.03E-01	8.90E-06	6.85E-04	1.83E-03	3.19E-04	8.67E-04	5.58E-04	5.73E-04	5.22E-05	7.82E-05	2.19E-08	2.94E-04	1.07E-04
11	D84	80	Passenger Truck	558	0.00E+00	8.61E-06	9.12E-07	3.55E+01	5.50E-05	1.89E-01	1.80E-05	2.03E-03	3.29E-03	5.83E-04	1.72E-03	1.12E-03	1.15E-03	2.51E-04	1.80E-04	4.88E-08	5.77E-04	3.32E-04
11	D84	80	Single Unit Short Haul Truck	39	0.00E+00	7.28E-06	3.61E-07	7.14E+00	5.86E-06	1.43E-02	7.74E-06	3.73E-03	4.57E-04	1.03E-04	8.85E-04	2.16E-04	2.19E-04	7.16E-04	2.88E-05	1.14E-08	6.66E-04	6.99E-04
11	D84	80	Single Unit Long Haul Truck	2	0.00E+00	3.16E-07	1.56E-08	3.02E-01	2.50E-07	5.95E-04	3.37E-07	1.60E-04	2.09E-05	4.56E-06	3.86E-05	9.28E-06	9.42E-06	3.02E-05	1.22E-06	4.76E-10	2.92E-05	2.99E-05
11	D84	80	Combination Short Haul Truck	69	0.00E+00	3.03E-05	2.17E-06	2.51E+01	9.57E-08	2.69E-02	2.23E-05	3.13E-02	1.84E-03	4.53E-04	1.81E-03	6.41E-04	6.37E-04	3.78E-03	8.40E-05	0.00E+00	1.17E-03	5.89E-03
11	D84	80	Combination Long Haul Truck	63	0.00E+00	2.71E-05	1.82E-06	2.33E+01	1.11E-07	2.78E-02	2.06E-05	3.03E-02	1.80E-03	3.62E-04	1.87E-03	5.51E-04	5.55E-04	3.55E-03	7.77E-05	0.00E+00	1.31E-03	5.70E-03
11	D85	80	Passenger Car	251	0.00E+00	3.01E-06	3.26E-07	1.16E+01	2.10E-05	7.73E-02	6.70E-06	5.16E-04	1.38E-03	2.40E-04	6.52E-04	4.20E-04	4.31E-04	3.93E-05	5.89E-05	1.65E-08	2.21E-04	8.08E-05
11	D85	80	Passenger Truck	420	0.00E+00	6.48E-06	6.86E-07	2.67E+01	4.14E-05	1.42E-01	1.35E-05	1.53E-03	2.47E-03	4.39E-04	1.30E-03	8.42E-04	8.63E-04	1.89E-04	1.35E-04	3.68E-08	4.34E-04	2.50E-04
11	D85	80	Single Unit Short Haul Truck	69	0.00E+00	1.30E-05	6.45E-07	1.27E+01	1.04E-05	2.56E-02	1.38E-05	6.66E-03	8.16E-04	1.85E-04	1.58E-03	3.85E-04	3.91E-04	1.28E-03	5.14E-05	2.04E-08	1.19E-03	1.25E-03
11	D85	80	Single Unit Long Haul Truck	3	0.00E+00	5.64E-07	2.78E-08	5.39E-01	4.46E-07	1.06E-03	6.01E-07	2.85E-04	3.73E-05	8.14E-06	6.89E-05	1.65E-05	1.68E-05	5.38E-05	2.17E-06	8.49E-10	5.21E-05	5.33E-05
11	D85	80	Combination Short Haul Truck	48	0.00E+00	2.13E-05	1.52E-06	1.76E+01	6.72E-08	1.89E-02	1.56E-05	2.20E-02	1.29E-03	3.18E-04	1.27E-03	4.50E-04	4.47E-04	2.65E-03	5.90E-05	0.00E+00	8.23E-04	4.14E-03
11	D85	80	Combination Long Haul Truck	44	0.00E+00	1.90E-05	1.28E-06	1.63E+01	7.78E-08	1.95E-02	1.45E-05	2.12E-02	1.27E-03	2.54E-04	1.31E-03	3.87E-04	3.89E-04	2.49E-03	5.45E-05	0.00E+00	9.21E-04	4.00E-03
11	D86	80	Passenger Car	371	0.00E+00	4.45E-06	4.82E-07	1.71E+01	3.10E-05	1.14E-01	9.90E-06	7.62E-04	2.04E-03	3.54E-04	9.64E-04	6.21E-04	6.37E-04	5.81E-05	8.70E-05	2.44E-08	3.26E-04	1.19E-04
11	D86	80	Passenger Truck	621	0.00E+00	9.57E-06	1.01E-06	3.95E+01	6.12E-05	2.10E-01	2.00E-05	2.26E-03	3.66E-03	6.48E-04	1.91E-03	1.25E-03	1.28E-03	2.79E-04	2.00E-04	5.43E-08	6.42E-04	3.69E-04
11	D86	80	Single Unit Short Haul Truck	32	0.00E+00	5.93E-06	2.94E-07	5.82E+00	4.77E-06	1.17E-02	6.31E-06	3.04E-03	3.73E-04	8.43E-05	7.21E-04	1.76E-04	1.78E-04	5.83E-04	2.35E-05	9.31E-09	5.43E-04	5.69E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.27E-08	2.46E-01	2.04E-07	4.84E-04	2.74E-07	1.30E-04	1.70E-05	3.72E-06	3.15E-05	7.56E-06	7.67E-06	2.46E-05	9.92E-07	3.88E-10	2.38E-05	2.43E-05
11	D86	80	Combination Short Haul Truck	67	0.00E+00	2.93E-05	2.09E-06	2.43E+01	9.24E-08	2.59E-02	2.15E-05	3.02E-02	1.77E-03	4.37E-04	1.74E-03	6.18E-04	6.15E-04	3.65E-03	8.11E-05	0.00E+00	1.13E-03	5.68E-03
11	D86	80	Combination Long Haul Truck	61	0.00E+00	2.62E-05	1.76E-06	2.25E+01	1.07E-07	2.68E-02	1.99E-05	2.92E-02	1.74E-03	3.50E-04	1.81E-03	5.32E-04	5.35E-04	3.43E-03	7.50E-05	0.00E+00	1.27E-03	5.50E-03
11	D87	80	Passenger Car	337	0.00E+00	4.04E-06	4.38E-07	1.55E+01	2.82E-05	1.04E-01	8.99E-06	6.92E-04	1.85E-03	3.22E-04	8.75E-04	5.64E-04	5.79E-04	5.27E-05	7.90E-05	2.22E-08	2.96E-04	1.08E-04
11	D87	80	Passenger Truck	564	0.00E+00	8.69E-06	9.21E-07	3.59E+01	5.56E-05	1.91E-01	1.82E-05	2.05E-03	3.32E-03	5.89E-04	1.74E-03	1.13E-03	1.16E-03	2.54E-04	1.82E-04	4.93E-08	5.83E-04	3.35E-04
11	D87	80	Single Unit Short Haul Truck	124	0.00E+00	2.33E-05	1.16E-06	2.28E+01	1.87E-05	4.59E-02	2.48E-05	1.19E-02	1.46E-03	3.31E-04	2.83E-03	6.90E-04	7.01E-04	2.29E-03	9.22E-05	3.66E-08	2.13E-03	2.24E-03
11	D87	80	Single Unit Long Haul Truck	5	0.00E+00	1.01E-06	4.99E-08	9.67E-01	8.01E-07	1.90E-03	1.08E-06	5.11E-04	6.68E-05	1.46E-05	1.24E-04	2.97E-05	3.01E-05	9.65E-05	3.90E-06	1.52E-09	9.35E-05	9.56E-05
11	D87	80	Combination Short Haul Truck	85	0.00E+00	3.73E-05	2.66E-06	3.09E+01	1.18E-07	3.30E-02	2.74E-05	3.84E-02	2.26E-03	5.56E-04	2.22E-03	7.88E-04	7.83E-04	4.65E-03	1.03E-04	0.00E+00	1.44E-03	7.24E-03
11	D87	80	Combination Long Haul Truck	77	0.00E+00	3.33E-05	2.24E-06	2.86E+01	1.36E-07	3.42E-02	2.54E-05	3.72E-02	2.21E-03	4.45E-04	2.30E-03	6.77E-04	6.82E-04	4.36E-03	9.55E-05	0.00E+00	1.61E-03	7.01E-03
11	D88	80	Passenger Car	724	0.00E+00	8.69E-06	9.41E-07	3.34E+01	6.05E-05	2.23E-01	1.93E-05	1.49E-03	3.98E-03	6.92E-04	1.88E-03	1.21E-03	1.24E-03	1.13E-04	1.70E-04	4.77E-08	6.37E-04	2.33E-04
11	D88	80	Passenger Truck	1212	0.00E+00	1.87E-05	1.98E-06	7.71E+01	1.20E-04	4.11E-01	3.91E-05	4.41E-03	7.14E-03	1.27E-03	3.74E-03	2.43E-03	2.49E-03	5.46E-04	3.91E-04	1.06E-07	1.25E-03	7.21E-04
11	D88	80	Single Unit Short Haul Truck	82	0.00E+00	1.54E-05	7.66E-07	1.51E+01	1.24E-05	3.04E-02	1.64E-05	7.91E-03	9.70E-04	2.19E-04	1.88E-03	4.57E-04	4.64E-04	1.52E-03	6.11E-05	2.42E-08	1.41E-03	1.48E-03
11	D88	80	Single Unit Long Haul Truck	4	0.00E+00	6.71E-07	3.31E-08	6.41E-01	5.31E-07	1.26E-03	7.14E-07	3.39E-04	4.43E-05	9.67E-06	8.19E-05	1.97E-05	2.00E-05	6.40E-05	2.58E-06	1.01E-09	6.19E-05	6.34E-05
11	D88	80	Combination Short Haul Truck	131	0.00E+00	5.73E-05	4.10E-06	4.75E+01	1.81E-07	5.08E-02	4.21E-05	5.92E-02	3.48E-03	8.57E-04	3.42E-03	1.21E-03	1.20E-03	7.15E-03	1.59E-04	0.00E+00	2.22E-03	1.11E-02
11	D88	80	Combination Long Haul Truck	119	0.00E+00	5.13E-05	3.44E-06	4.40E+01	2.09E-07	5.26E-02	3.91E-05	5.73E-02	3.41E-03	6.85E-04	3.54E-03	1.04E-03	1.05E-03	6.72E-03	1.47E-04	0.00E+00	2.48E-03	1.08E-02
9	D89	60	Passenger Car	49	0.00E+00	7.20E-07	7.78E-08	2.42E+00	5.01E-06	1.80E-02	1.59E-06	9.91E-05	4.93E-04	7.57E-05	1.55E-04	1.00E-04	1.03E-04	1.02E-05	1.22E-05	3.36E-09	5.27E-05	1.55E-05
9	D89	60	Passenger Truck	81	0.00E+00	1.59E-06	1.68E-07	5.52E+00	9.93E-06	3.19E-02	3.28E-06	3.23E-04	9.04E-04	1.40E-04	3.10E-04	2.03E-04	2.08E-04	4.32E-05	2.76E-05	7.64E-09	1.03E-04	5.36E-05
9	D89	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	D89	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.01E-03	1.72E-04	3.40E-05	1.18E-04	3.84E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.78E-04
9	D89	60	Combination Long Haul Truck	3	0.00E+00	1.65E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.99E-03	1.72E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.74E-05	3.75E-04
9	D90	60	Passenger Car	76	0.00E+00	1.12E-06	1.21E-07	3.77E+00	7.82E-06	2.80E-02	2.49E-06	1.55E-04	7.70E-04	1.18E-04	2.42E-04	1.57E-04	1.61E-04	1.59E-05	1.91E-05	5.25E-09	8.22E-05	2.42E-05
9	D90	60	Passenger Truck	127	0.00E+00	2.48E-06	2.62E-07	8.61E+00	1.55E-05	4.98E-02	5.12E-06	5.05E-04	1.41E-03	2.19E-04	4.84E-04	3.16E-04	3.24E-04	6.74E-05	4.31E-05	1.19E-08	1.61E-04	8.37E-05
9	D90	60	Single Unit Short Haul Truck	11	0.00E+00	3.10E-06	1.55E-07	1.97E+00	2.55E-06	3.80E-03	3.31E-06	1.48E-03	2.51E-04	4.54E-05	3.75E-04	9.28E-05	9.42E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.77E-04
9	D90	60	Combination Short Haul Truck	6	0.00E+00	3.70E-06	2.58E-07	2.41E+00	1.31E-08	3.23E-03	2.74E-06	4.01E-03	3.43E-04	6.80E-05	2.35E-04	7.67E-05	7.67E-05	3.63E-04	8.04E-06	0.00E+00	1.58E-04	7.57E-04
9	D90	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.26E+00	1.50E-08	3.48E-03	2.56E-06	3.97E-03	3.45E-04	5.87E-05	2.42E-04	6.58E-05	6.66E-05	3.43E-04	7.54E-06	0.00E+00	1.75E-04	7.50E-04
10	D91	70	Passenger Car	243	0.00E+00	3.13E-06	3.38E-07	1.15E+01	2.18E-05	7.82E-02	6.94E-06	4.86E-04	1.88E-03	3.02E-04	6.74E-04	4.37E-04	4.48E-04	4.35E-05	5.85E-05	1.60E-08	2.29E-04	7.62E-05
10	D91	70	Passenger Truck	406	0.00E+00	6.86E-06	7.26E-07	2.65E+01	4.33E-05	1.44E-01	1.42E-05	1.52E-03	3.42E-03	5.56E-04	1.35E-03	8.85E-04	9.06E-04	1.98E-04	1.33E-04	3.58E-08	4.54E-04	2.51E-04
10	D91	70	Single Unit Short Haul Truck	12	0.00E+00	2.93E-06	1.47E-07	2.29E+00	2.39E-06	4.60E-03	3.12E-06	1.45E-03	2.06E-04	4.12E-05	3.56E-04	8.75E-05	8.89E-05	2.30E-04	9.23E-06	3.74E-09	2.66E-04	2.70E-04
10	D91	70	Single Unit Long Haul Truck	1	0.00E+00	1.28E-07	6.35E-09	9.73E-02	1.03E-07	1.92E-04	1.36E-07	6.21E-05	9.40E-06	1.83E-06	1.56E-05	3.78E-06	3.84E-06	9.72E-06	3.92E-07	1.57E-10	1.17E-05	1.16E-05
10	D91	70	Combination Short Haul Truck	8	0.00E+00	4.35E-06	3.09E-07	3.16E+00	1.41E-08	3.74E-03	3.18E-06	4.58E-03	3.30E-04	7.23E-05	2.65E-04	9.16E-05	9.14E-05	4.77E-04	1.06E-05	0.00E+00	1.74E-04	8.62E-04
10	D91	70	Combination Long Haul Truck	8	0.00E+00	3.94E-06	2.63E-07	2.95E+00	1.63E-08	3.96E-03	2.99E-06	4.52E-03	3.29E-04	6.00E-05	2.73E-04	7.95E-05	8.03E-05	4.49E-04	9.86E-06	0.00E+00	1.94E-04	8.52E-04
10	D92	70	Passenger Car	62	0.00E+00	8.05E-07	8.71E-08	2.97E+00	5.60E-06	2.01E-02	1.79E-06	1.25E-04	4.84E-04	7.77E-05	1.73E-04	1.12E-04	1.15E-04	1.12E-05	1.51E-05	4.11E-09	5.90E-05	1.96E-05
10	D92	70	Passenger Truck	105	0.00E+00	1.77E-06	1.87E-07	6.83E+00	1.12E-05	3.72E-02	3.66E-06	3.92E-04	8.80E-04	1.43E-04	3.49E-04	2.28E-04	2.33E-04	5.08E-05	3.43E-05	9.21E-09	1.17E-04	6.45E-05
10	D92	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.34E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.24E-05
10	D92	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	D92	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	D93	70	Passenger Car	219	0.00E+00	2.82E-06	3.06E-07	1.04E+01	1.97E-05	7.06E-02	6.27E-06	4.39E-04	1.70E-03	2.73E-04	6.09E-04	3.94E-04	4.05E-04	3.93E-05	5.28E-05	1.44E-08	2.07E-04	6.88E-05
10	D93	70	Passenger Truck	367	0.00E+00	6.20E-06	6.55E-07	2.40E+01	3.91E-05	1.30E-01	1.28E-05	1.38E-03	3.09E-03	5.02E-04	1.22E-03	7.99E-04	8.18E-04	1.78E-04	1.20E-04	3.23E-08	4.10E-04	2.26E-04
10	D93	70	Single Unit Short Haul Truck	12	0.00E+00	2.93E-06	1.47E-07	2.29E+00	2.39E-06	4.60E-03	3.12E-06	1.45E-03	2.06E-04	4.12E-05	3.56E-04	8.75E-05	8.89E-05	2.30E-04	9.23E-06	3.74E-09	2.66E-04	2.70E-04
10	D93	70	Single Unit Long Haul Truck	1	0.

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E03	80	Combination Short Haul Truck	7	0.00E+00	2.89E-06	2.07E-07	2.39E+00	9.12E-09	2.56E-03	2.12E-06	2.98E-03	1.75E-04	4.31E-05	1.72E-04	6.11E-05	6.07E-05	3.60E-04	8.01E-06	0.00E+00	1.12E-04	5.61E-04
11	E03	80	Combination Long Haul Truck	6	0.00E+00	2.58E-06	1.73E-07	2.22E+00	1.06E-08	2.65E-03	1.97E-06	2.88E-03	1.72E-04	3.45E-05	1.78E-04	5.25E-05	5.28E-05	3.38E-04	7.40E-06	0.00E+00	1.25E-04	5.43E-04
11	E04	80	Passenger Car	145	0.00E+00	1.74E-06	1.89E-07	6.70E+00	1.21E-05	4.48E-02	3.88E-06	2.98E-04	7.99E-04	1.39E-04	3.78E-04	2.43E-04	2.50E-04	2.28E-05	3.41E-05	9.56E-09	1.28E-04	4.68E-05
11	E04	80	Passenger Truck	243	0.00E+00	3.75E-06	3.97E-07	1.55E+01	2.40E-05	8.24E-02	7.84E-06	8.85E-04	1.43E-03	2.54E-04	7.50E-04	4.88E-04	5.00E-04	1.09E-04	7.84E-05	2.13E-08	2.51E-04	1.45E-04
11	E04	80	Single Unit Short Haul Truck	14	0.00E+00	2.62E-06	1.30E-07	2.57E+00	2.11E-06	5.16E-03	2.78E-06	1.34E-03	1.64E-04	3.72E-05	3.18E-04	7.75E-05	7.87E-05	2.57E-04	1.04E-05	4.11E-09	2.40E-04	2.51E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	5.61E-09	1.09E-01	9.00E-08	2.14E-04	1.21E-07	5.75E-05	7.51E-06	1.64E-06	1.39E-05	3.33E-06	3.39E-06	1.08E-05	4.38E-07	1.71E-10	1.05E-05	1.07E-05
11	E04	80	Combination Short Haul Truck	12	0.00E+00	5.23E-06	3.74E-07	4.34E+00	1.65E-08	4.64E-03	3.84E-06	5.40E-03	3.17E-04	7.82E-05	3.12E-04	1.11E-04	1.10E-04	6.52E-04	1.45E-05	0.00E+00	2.02E-04	1.02E-03
11	E04	80	Combination Long Haul Truck	11	0.00E+00	4.68E-06	3.14E-07	4.02E+00	1.91E-08	4.80E-03	3.56E-06	5.22E-03	3.11E-04	6.25E-05	3.23E-04	9.51E-05	9.57E-05	6.13E-04	1.34E-05	0.00E+00	2.27E-04	9.85E-04
11	E05	80	Passenger Car	65	0.00E+00	7.76E-07	8.41E-08	2.98E+00	5.41E-06	1.99E-02	1.73E-06	1.33E-04	3.56E-04	6.18E-05	1.68E-04	1.08E-04	1.11E-04	1.01E-05	1.52E-05	4.26E-09	5.70E-05	2.08E-05
11	E05	80	Passenger Truck	108	0.00E+00	1.67E-06	1.77E-07	6.89E+00	1.07E-05	3.67E-02	3.49E-06	3.94E-04	6.38E-04	1.13E-04	3.34E-04	2.17E-04	2.23E-04	4.87E-05	3.49E-05	9.48E-09	1.12E-04	6.44E-05
11	E05	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	E05	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.03E-03	1.69E-06	2.37E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.86E-04	6.36E-06	0.00E+00	8.88E-05	4.46E-04
11	E05	80	Combination Long Haul Truck	5	0.00E+00	2.05E-06	1.38E-07	1.76E+00	8.39E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.42E-04	4.17E-05	4.20E-05	2.69E-04	5.88E-06	0.00E+00	9.94E-05	4.32E-04
11	E06	80	Passenger Car	172	0.00E+00	2.06E-06	2.23E-07	7.91E+00	1.43E-05	5.29E-02	4.58E-06	3.53E-04	9.44E-04	1.64E-04	4.46E-04	2.87E-04	2.95E-04	2.69E-05	4.03E-05	1.13E-08	1.51E-04	5.53E-05
11	E06	80	Passenger Truck	287	0.00E+00	4.43E-06	4.69E-07	1.83E+01	2.83E-05	9.74E-02	9.26E-06	1.05E-03	1.69E-03	3.00E-04	8.86E-04	5.76E-04	5.91E-04	1.29E-04	9.26E-05	2.51E-08	2.97E-04	1.71E-04
11	E06	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.02E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.05E-05	9.18E-05	3.00E-04	1.21E-05	4.79E-09	2.80E-04	2.93E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.49E-04	1.41E-07	6.70E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.95E-06	1.26E-05	5.11E-07	1.99E-10	1.22E-05	1.25E-05
11	E06	80	Combination Short Haul Truck	9	0.00E+00	3.90E-06	2.79E-07	3.24E+00	1.23E-08	3.46E-03	2.87E-06	4.03E-03	2.37E-04	5.83E-05	2.33E-04	8.25E-05	8.20E-05	4.87E-04	1.08E-05	0.00E+00	1.51E-04	7.58E-04
11	E06	80	Combination Long Haul Truck	8	0.00E+00	3.49E-06	2.34E-07	3.00E+00	1.43E-08	3.58E-03	2.66E-06	3.90E-03	2.32E-04	4.66E-05	2.41E-04	7.09E-05	7.14E-05	4.57E-04	1.00E-05	0.00E+00	1.69E-04	7.34E-04
9	E07	60	Passenger Car	1083	0.00E+00	1.60E-05	1.73E-06	5.38E+01	1.12E-04	4.00E-01	3.55E-05	2.21E-03	1.10E-02	1.69E-03	3.46E-03	2.23E-03	2.30E-03	2.26E-04	2.72E-04	7.49E-08	1.17E-03	3.46E-04
9	E07	60	Passenger Truck	1813	0.00E+00	3.54E-05	3.73E-06	1.23E+02	2.21E-04	7.10E-01	7.30E-05	7.20E-03	2.01E-02	3.13E-03	6.90E-03	4.51E-03	4.62E-03	9.62E-04	6.15E-04	1.70E-07	2.30E-03	1.19E-03
9	E07	60	Single Unit Short Haul Truck	121	0.00E+00	3.57E-05	1.78E-06	2.27E+01	2.94E-05	4.38E-02	3.81E-05	1.70E-02	2.89E-03	5.23E-04	4.32E-03	1.07E-03	1.09E-03	2.27E-03	9.17E-05	3.78E-08	3.24E-03	3.19E-03
9	E07	60	Single Unit Long Haul Truck	5	0.00E+00	1.56E-06	7.75E-08	9.70E-01	1.28E-06	1.86E-03	1.67E-06	7.36E-04	1.30E-04	2.32E-05	1.90E-04	4.66E-05	4.73E-05	9.68E-05	3.91E-06	1.61E-09	1.42E-04	1.38E-04
9	E07	60	Combination Short Haul Truck	91	0.00E+00	5.35E-05	3.73E-06	3.48E+01	1.89E-07	4.67E-02	3.96E-05	5.80E-02	4.97E-03	9.83E-04	3.40E-03	1.11E-03	1.11E-03	5.25E-03	1.16E-04	0.00E+00	2.29E-03	1.09E-02
9	E07	60	Combination Long Haul Truck	83	0.00E+00	4.78E-05	3.13E-06	3.27E+01	2.17E-07	5.04E-02	3.70E-05	5.75E-02	4.99E-03	8.49E-04	3.50E-03	9.52E-04	9.64E-04	4.97E-03	1.09E-04	0.00E+00	2.53E-03	1.09E-02
9	E08	60	Passenger Car	668	0.00E+00	9.90E-06	1.07E-06	3.32E+01	6.89E-05	2.47E-01	2.19E-05	1.36E-03	6.78E-03	1.04E-03	2.14E-03	1.38E-03	1.42E-03	1.40E-04	1.68E-04	4.62E-08	7.24E-04	2.14E-04
9	E08	60	Passenger Truck	1119	0.00E+00	2.18E-05	2.30E-06	7.59E+01	1.37E-04	4.38E-01	4.51E-05	4.45E-03	1.24E-02	1.93E-03	4.26E-03	2.79E-03	2.85E-03	5.94E-04	3.79E-04	1.05E-07	1.42E-03	7.37E-04
9	E08	60	Single Unit Short Haul Truck	98	0.00E+00	2.88E-05	1.44E-06	1.83E+01	2.36E-05	3.53E-02	3.07E-05	1.37E-02	2.32E-03	4.21E-04	3.47E-03	8.60E-04	8.74E-04	1.83E-03	7.38E-05	3.04E-08	2.61E-03	2.57E-03
9	E08	60	Single Unit Long Haul Truck	4	0.00E+00	1.26E-06	6.24E-08	7.81E-01	1.03E-06	1.50E-03	1.34E-06	5.93E-04	1.04E-04	1.87E-05	1.53E-04	3.75E-05	3.81E-05	7.79E-05	3.15E-06	1.29E-09	1.15E-04	1.11E-04
9	E08	60	Combination Short Haul Truck	47	0.00E+00	2.78E-05	1.94E-06	1.81E+01	9.84E-08	2.43E-02	2.06E-05	3.02E-02	2.59E-03	5.12E-04	1.77E-03	5.78E-04	5.78E-04	2.73E-03	6.05E-05	0.00E+00	1.19E-03	5.70E-03
9	E08	60	Combination Long Haul Truck	43	0.00E+00	2.49E-05	1.63E-06	1.70E+01	1.13E-07	2.62E-02	1.93E-05	2.99E-02	2.60E-03	4.42E-04	1.82E-03	4.96E-04	5.02E-04	2.59E-03	5.67E-05	0.00E+00	1.32E-03	5.65E-03
9	E09	60	Passenger Car	1011	0.00E+00	1.50E-05	1.62E-06	5.02E+01	1.04E-04	3.73E-01	3.31E-05	2.06E-03	1.02E-02	1.57E-03	3.23E-03	2.09E-03	2.14E-03	2.11E-04	2.54E-04	6.99E-08	1.09E-03	3.23E-04
9	E09	60	Passenger Truck	1692	0.00E+00	3.30E-05	3.48E-06	1.15E+02	2.06E-04	6.63E-01	6.82E-05	6.72E-03	1.88E-02	2.92E-03	6.44E-03	4.21E-03	4.32E-03	8.98E-04	5.74E-04	1.59E-07	2.15E-03	1.11E-03
9	E09	60	Single Unit Short Haul Truck	99	0.00E+00	2.91E-05	1.45E-06	1.85E+01	2.39E-05	3.57E-02	3.10E-05	1.39E-02	2.35E-03	4.25E-04	3.51E-03	8.70E-04	8.84E-04	1.85E-03	7.46E-05	3.07E-08	2.64E-03	2.60E-03
9	E09	60	Single Unit Long Haul Truck	4	0.00E+00	1.27E-06	6.31E-08	7.89E-01	1.04E-06	1.51E-03	1.36E-06	5.99E-04	1.06E-04	1.89E-05	1.55E-04	3.79E-05	3.85E-05	7.88E-05	3.18E-06	1.31E-09	1.16E-04	1.12E-04
9	E09	60	Combination Short Haul Truck	78	0.00E+00	4.62E-05	3.22E-06	3.01E+01	1.63E-07	4.03E-02	3.42E-05	5.01E-02	4.29E-03	8.49E-04	2.94E-03	9.58E-04	9.58E-04	4.53E-03	1.00E-04	0.00E+00	1.98E-03	9.45E-03
9	E09	60	Combination Long Haul Truck	71	0.00E+00	4.13E-05	2.70E-06	2.82E+01	1.87E-07	4.35E-02	3.20E-05	4.96E-02	4.31E-03	7.33E-04	3.02E-03	8.22E-04	8.32E-04	4.29E-03	9.41E-05	0.00E+00	2.18E-03	9.37E-03
9	E10	60	Passenger Car	718	0.00E+00	1.06E-05	1.15E-06	3.57E+01	7.40E-05	2.65E-01	2.35E-05	1.46E-03	7.28E-03	1.12E-03	2.29E-03	1.48E-03	1.52E-03	1.50E-04	1.81E-04	4.97E-08	7.78E-04	2.29E-04
9	E10	60	Passenger Truck	1203	0.00E+00	2.35E-05	2.48E-06	8.15E+01	1.47E-04	4.71E-01	4.84E-05	4.78E-03	1.34E-02	2.07E-03	4.58E-03	2.99E-03	3.07E-03	6.38E-04	4.08E-04	1.13E-07	1.53E-03	7.92E-04
9	E10	60	Single Unit Short Haul Truck	89	0.00E+00	2.62E-05	1.31E-06	1.67E+01	2.16E-05	3.22E-02	2.80E-05	1.25E-02	2.12E-03	3.84E-04	3.17E-03	7.85E-04	7.97E-04	1.67E-03	6.74E-05	2.77E-08	2.38E-03	2.34E-03
9	E10	60	Single Unit Long Haul Truck	4	0.00E+00	1.15E-06	5.69E-08	7.12E-01	9.37E-07	1.37E-03	1.22E-06	5.41E-04	9.52E-05	1.70E-05	1.40E-04	3.42E-05	3.47E-05	7.11E-05	2.87E-06	1.18E-09	1.05E-04	1.01E-04
9	E10	60	Combination Short Haul Truck	46	0.00E+00	2.69E-05	1.88E-06	1.75E+01	9.51E-08	2.35E-02	1.99E-05	2.92E-02	2.50E-03	4.95E-04	1.71E-03	5.58E-04	5.58E-04	2.64E-03	5.85E-05	0.00E+00	1.15E-03	5.51E-03
9	E10	60	Combination Long Haul Truck	42	0.00E+00	2.41E-05	1.57E-06	1.64E+01	1.09E-07	2.53E-02	1.86E-05	2.89E-02	2.51E-03	4.27E-04	1.76E-03	4.79E-04	4.85E-04	2.50E-03	5.48E-05	0.00E+00	1.27E-03	5.46E-03
9	E11	60	Passenger Car	1030	0.00E+00	1.53E-05	1.65E-06	5.12E+01	1.06E-04	3.81E-01	3.38E-05	2.10E-03	1.04E-02	1.61E-03	3.29E-03	2.13E-03	2.18E-03	2.15E-04	2.59E-04	7.13E-08	1.12E-03	3.29E-04
9	E11	60	Passenger Truck	1726	0.00E+00	3.36E-05	3.55E-06	1.17E+02	2.10E-04	6.76E-01	6.95E-05	6.85E-03	1.92E-02	2.98E-03	6.57E-03	4.29E-03	4.40E-03	9.15E-04	5.85E-04	1.62E-07	2.19E-03	1.14E-03
9	E11	60	Single Unit Short Haul Truck	110	0.00E+00	3.23E-05	1.61E-06	2.05E+01	2.65E-05	3.96E-02	3.44E-05	1.54E-02	2.61E-03	4.72E-04	3.90E-03	9.65E-04	9.80E-04	2.05E-03	8.28E-05	3.41E-08	2.93E-03	2.88E-03
9	E11	60	Single Unit Long Haul Truck	5	0.00E+00	1.41E-06	7.00E-08	8.76E-01	1.15E-06	1.68E-03	1.50E-06	6.65E-04	1.17E-04	2.09E-05	1.72E-04	4.20E-05	4.27E-05	8.74E-05	3.53E-06	1.45E-09	1.29E-04	1.25E-04
9	E11	60	Combination Short Haul Truck	68	0.00E+00	3.98E-05	2.78E-06	2.59E+01	1.41E-07	3.47E-02	2.95E-05	4.32E-02	3.70E-03	7.32E-04	2.53E-03	8.26E-04	8.26E-04	3.90E-03	8.65E-05	0.00E+00	1.70E-03	8.14E-03
9	E11	60	Combination Long Haul Truck	62	0.00E+00	3.56E-05	2.33E-06	2.43E+01	1.61E-07	3.75E-02	2.75E-05	4.28E-02	3.71E-03	6.31E-04	2.60E-03	7.08E-04	7.17E-04	3.70E-03	8.11E-05	0.00E+00	1.88E-03	8.08E-03
9	E12	60	Passenger Car	724	0.00E+00	1.07E-05	1.16E-06	3.60E+01	7.46E-05	2.67E-01	2.37E-05	1.48E-03	7.34E-03	1.13E-03	2.31E-03	1.49E-03	1.53E-03	1.51E-04	1.82E-04	5.00E-08	7.84E-04	2.31E-04
9	E12	60	Passenger Truck	1212	0.00E+00	2.36E-05	2.49E-06	8.21E+01	1.48E-04	4.75E-01	4.88E-05	4.81E-03	1.35E-02	2.09E-03	4.61E-03	3.02E-03	3.09E-03	6.43E-04	4.11E-04	1.14E-07	1.54E-03	7.98E-04
9	E12	60	Single Unit Short Haul Truck	91	0.00E+00	2.69E-05	1.34E-06	1.71E+01	2.21E-05	3.30E-02	2.87E-05	1.28E-02	2.17E-03	3.93E-04	3.25E-03	8.04E-04	8.17E-04	1.71E-03	6.90E-05	2.84E-08	2.44E-03	2.40E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	1.17E-06	5.83E-08	7.29E-01	9.60E-07	1.40E-03	1.25E-06	5.54E-04	9.75E-05	1.74E-05	1.43E-04	3.50E-05	3.56E-05	7.28E-05	2.94E-06	1.21E-09	1.07E-04	1.04E-04
9	E12	60	Combination Short Haul Truck	80	0.00E+00	4.70E-05	3.28E-06	3.06E+01	1.66E-07	4.10E-02	3.48E-05	5.09E-02	4.36E-03	8.64E-04	2.99E-03	9.74E-04	9.74E-04	4.61E-03	1.02E-04	0.00E+00	2.01E-03	9.61E-03
9	E12	60	Combination Long Haul Truck	73	0.00E+00	4.20E-05	2.75E-06	2.87E+01	1.90E-07	4.42E-02	3.25E-05	5.05E-02	4.38E-03	7.45E-04	3.07E-03	8.36E-04	8.46E-04	4.36E-03	9.57E-05	0.00E+00	2.22E-03	9.53E-03
11	E13	80	Passenger Car	272	0.00E+00	3.26E-06	3.53E-07	1.25E+01	2.27E-05	8.38E-02	7.25E-06	5.58E-04	1.49E-03	2.60E-04	7.06E-04	4.55E-04	4.67E-04	4.26E-05	6.38E-05	1.79E-08	2.39E-04	8.75E-05
11	E13	80	Passenger Truck	455	0.00E+00	7.01E-06	7.43E-07	2.89E+01	4.49E-05	1.54E-01	1.47E-05	1.66E-03	2.68E-03	4.75E-04	1.40E-03	9.12E-04	9.35E-04	2.05E-04	1.47E-04	3.98E-08	4.70E-04	2.70E-04
11	E13	80	Single Unit Short Haul Truck	30	0.00E+00	5.56E-06	2.76E-07	5.45E+00	4.47E-06	1.10E-02	5.91E-06	2.85E-03	3.49E-04	7.90E-05	6.76E-04	1.65E-04	1.67E-04	5.47E-04	2.20E-05	8.73E-09	5.09E-04	5.34E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	1.19E-08	2.31E-01	1.91E-07	4.54E-04	2.57E-07	1.22E-04	1.59E-05	3.48E-06	2.95E-05	7.08E-06	7.19E-06	2.30E-05	9.30E-07	3.63E-10	2.23E-05	2.28E-05
11	E13	80	Combination Short Haul Truck	13	0.00E+00	5.66E-06	4.05E-07	4.70E+00	1.79E-08	5.02E-03	4.16E-06	5.84E-03	3.43E-04	8.46E-05	3.38E-04	1.20E-04	1.19E-04	7.06E-04	1.57E-05	0.00E+00	2.19E-04	1.10E-03
11	E13	80	Combination Long Haul Truck	12	0.00E+00	5.07E-06	3.40E-07	4.35E+00	2.07E-08	5.20E-03	3.86E-06	5.65E-03	3.37E-04	6.77E-05	3.50E-04	1.03E-04	1.04E-04	6.63E-04	1.45E-05	0.00E+00	2.45E-04	1.07E-03
11	E14	80	Passenger Car	464	0.00E+00	5.56E-06	6.03E-07	2.14E+01	3.88E-05	1.43E-01	1.24E-05	9.53E-04	2.55E-03	4.43E-04	1.21E-03	7.76E-04	7.97E-04	7.26E-05	1.09E-04	3.05E-08	4.08E-04	1.49E-04
11	E14	80	Passenger Truck	776	0.00E+00	1.20E-05	1.27E-06	4.94E+01	7.65E-05	2.63E-01	2.50E-05	2.82E-03	4.57E-03	8.11E-04	2.39E-03	1.56E-03	1.60E-03	3.49E-04	2.50E-04	6.79E-08	8.02E-04	4.61E-04
11	E14	80	Single Unit Short Haul Truck	55	0.00E+00	1.03E-05	5.11E-07	1.01E+01	8.27E-06	2.03E-02	1.09E-05	5.27E-03	6.46E-04	1.46E-04	1.25E-03	3.05E-04	3.09E-04	1.01E-03	4.07E-05	1.62E-08	9.42E-04	9.88E-04
11	E14	80	Single Unit Long Haul Truck	2	0.00E+00	4.47E-07	2.20E-08	4.27E-01	3.54E-07	8.40E-04	4.76E-07	2.26E-04	2.95E-05	6.45E-06	5.46E-05	1.31E-05	1.33E-05	4.26E-05	1.72E-06	6.72E-10	4.13E-05	4.22E-05
11	E14	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	1.00E-06	1.16E+01	4.44E-08	1.24E-02	1.03E-05	1.45E-02	8.52E-04	2.10E-04	8.37E-04	2.97E-04	2.95E-04	1.75E-03	3.89E-05	0.00E+00	5.43E-04	2.73E-03
11	E14	80	Combination Long Haul Truck	29	0.00E+00	1.26E-05	8.43E-07	1.08E+01	5.13E-08	1.29E-02	9.57E-06	1.40E-02	8.35E-04	1.68E-04	8.67E-04	2.55E-04	2.57E-04	1.65E-03	3.60E-05	0.00E+00	6.08E-04	2.64E-03
11	E15	80	Passenger Car	146	0.00E+00	1.75E-06	1.90E-07	6.73E+00	1.22E-05	4.50E-02	3.89E-06	3.00E-04	8.02E-04	1.39E-04	3.79E-04	2.44E-04	2.51E-04	2.29E-05	3.42E-05	9.60E-09	1.28E-04	4.70E-05
11	E15	80	Passenger Truck	244	0.00E+00	3.77E-06	3.99E-07	1.55E+01	2.41E-05	8.28E-02	7.87E-06	8.89E-04	1.44E-03	2.55E-04	7.53E-04	4.90E-04	5.02E-04	1.10E-04	7.87E-05	2.14E-08	2.52E-04	1.45E-04
11	E15	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.28E+00	1.87E-06	4.59E-03	2.48E-06	1.19E-03	1.46E-04	3.31E-05	2.83E-04	6.90E-05	7.00E-05	2.29E-04	9.21E-06	3.66E-09	2.13E-04	2.23E-04
11	E15	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	4.99E-09	9.66E-02	8.00E-08	1.90E-04	1.08E-07	5.11E-05	6.68E-06	1.46E-06	1.23E-05	2.97E-06	3.01E-06	9.64E-06	3.89E-07	1.52E-10	9.34E-06	9.55E-06
11	E15	80	Combination Short Haul Truck	7	0.00E+00	3.14E-06	2.24E-07	2.60E+00	9.91E-09	2.78E-03	2.30E-06	3.24E-03	1.90E-04	4.69E-05	1.87E-04	6.63E-05	6.59E-05	3.91E-04	8.70E-06	0.00E+00	1.21E-04	6.10E-04
11	E15	80	Combination Long Haul Truck	7	0.00E+00	2.81E-06	1.88E-07	2.41E+00	1.15E-08	2.88E-03	2.14E-06	3.13E-03	1.86E-04	3.75E-05	1.94E-04	5.70E-05	5.74E-05	3.68E-04	8.04E-06	0.00E+00	1.36E-04	5.90E-04
11	E16	80	Passenger Car	248	0.00E+00	2.97E-06	3.22E-07	1.14E+01	2.07E-05	7.63E-02	6.61E-06	5.09E-04	1.36E-03	2.37E-04	6.44E-04	4.15E-04	4.26E-04	3.88E-05	5.81E-05	1.63E-08	2.18E-04	7.98E-05
11	E16	80	Passenger Truck	414	0.00E+00	6.39E-06	6.77E-07	2.64E+01	4.09E-05	1.40E-01	1.34E-05	1.51E-03	2.44E-03	4.33E-04	1.28E-03	8.31E-04	8.52E-04	1.87E-04	1.34E-04	3.63E-08	4.28E-04	2.46E-04
11	E16	80	Single Unit Short Haul Truck	11	0.00E+00	2.00E-06	9.94E-08	1.96E+00	1.61E-06	3.94E-03	2.13E-06	1.03E-03	1.26E-04	2.84E-05	2.44E-04	5.93E-05	6.02E-05	1.97E-04	7.92E-06	3.14E-09	1.83E-04	1.92E-04
11	E16	80	Combination Short Haul Truck	31	0.00E+00	1.34E-05	9.61E-07	1.11E+01	4.24E-08	1.19E-02	9.86E-06	1.39E-02	8.14E-04	2.01E-04	8.01E-04	2.84E-04	2.82E-04	1.67E-03	3.72E-05	0.00E+00	5.19E-04	2.61E-03
11	E16	80	Combination Long Haul Truck	28	0.00E+00	1.20E-05	8.06E-07	1.03E+01	4.91E-08	1.23E-02	9.15E-06	1.34E-02	7.98E-04	1.60E-04	8.30E-04	2.44E-04	2.46E-04	1.57E-03	3.44E-05	0.00E+00	5.81E-04	2.53E-03
11	E17	80	Passenger Car	67	0.00E+00	8.03E-07	8.70E-08	3.09E+00	5.60E-06	2.06E-02	1.79E-06	1.38E-04	3.68E-04	6.40E-05	1.74E-04	1.12E-04	1.15E-04	1.05E-05	1.57E-05	4.41E-09	5.89E-05	2.16E-05
11	E17	80	Passenger Truck	112	0.00E+00	1.73E-06	1.83E-07	7.13E+00	1.11E-05	3.80E-02	3.61E-06	4.08E-04	6.60E-04	1.17E-04	3.46E-04	2.25E-04	2.30E-04	5.04E-05	3.61E-05	9.81E-09	1.16E-04	6.66E-05
11	E17	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.72E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.36E-09	3.12E-04	3.28E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.49E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.41E-06	1.41E-05	5.71E-07	2.23E-10	1.37E-05	1.40E-05
11	E17	80

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E21	80	Combination Long Haul Truck	2	0.00E+00	6.52E-07	4.38E-08	5.60E-01	2.66E-09	6.69E-04	4.97E-07	7.28E-04	4.33E-05	8.71E-06	4.50E-05	1.33E-05	1.33E-05	8.54E-05	1.87E-06	0.00E+00	3.16E-05	1.37E-04
11	E22	80	Passenger Car	60	0.00E+00	7.25E-07	7.86E-08	2.79E+00	5.05E-06	1.86E-02	1.61E-06	1.24E-04	3.32E-04	5.78E-05	1.57E-04	1.01E-04	1.04E-04	9.47E-06	1.42E-05	3.98E-09	5.32E-05	1.95E-05
11	E22	80	Passenger Truck	101	0.00E+00	1.56E-06	1.65E-07	6.44E+00	9.98E-06	3.43E-02	3.26E-06	3.68E-04	5.96E-04	1.06E-04	3.12E-04	2.03E-04	2.08E-04	4.55E-05	3.26E-05	8.86E-09	1.05E-04	6.02E-05
11	E22	80	Single Unit Short Haul Truck	7	0.00E+00	1.24E-06	6.17E-08	1.22E+00	1.00E-06	2.45E-03	1.32E-06	6.37E-04	7.81E-05	1.77E-05	1.51E-04	3.68E-05	3.74E-05	1.22E-04	4.92E-06	1.95E-09	1.14E-04	1.19E-04
11	E22	80	Combination Short Haul Truck	6	0.00E+00	2.63E-06	1.88E-07	2.18E+00	8.32E-09	2.33E-03	1.93E-06	2.72E-03	1.60E-04	3.93E-05	1.57E-04	5.57E-05	5.53E-05	3.28E-04	7.30E-06	0.00E+00	1.02E-04	5.12E-04
11	E22	80	Combination Long Haul Truck	5	0.00E+00	2.36E-06	1.58E-07	2.02E+00	9.62E-09	2.42E-03	1.79E-06	2.63E-03	1.57E-04	3.15E-05	1.63E-04	4.79E-05	4.82E-05	3.09E-04	6.75E-06	0.00E+00	1.14E-04	4.96E-04
11	E23	80	Passenger Car	178	0.00E+00	2.13E-06	2.31E-07	8.20E+00	1.49E-05	5.48E-02	4.75E-06	3.66E-04	9.78E-04	1.70E-04	4.62E-04	2.98E-04	3.06E-04	2.79E-05	4.17E-05	1.17E-08	1.57E-04	5.73E-05
11	E23	80	Passenger Truck	298	0.00E+00	4.59E-06	4.86E-07	1.89E+01	2.94E-05	1.01E-01	9.60E-06	1.08E-03	1.75E-03	3.11E-04	9.18E-04	5.97E-04	6.12E-04	1.34E-04	9.60E-05	2.61E-08	3.08E-04	1.77E-04
11	E23	80	Single Unit Short Haul Truck	146	0.00E+00	2.74E-05	1.36E-06	2.68E+01	2.20E-05	5.39E-02	2.91E-05	1.40E-02	1.72E-03	3.89E-04	3.33E-03	8.11E-04	8.23E-04	2.69E-03	1.08E-04	4.30E-08	2.51E-03	2.63E-03
11	E23	80	Single Unit Long Haul Truck	6	0.00E+00	1.19E-06	5.86E-08	1.14E+00	9.40E-07	2.23E-03	1.27E-06	6.01E-04	7.85E-05	1.71E-05	1.45E-04	3.49E-05	3.54E-05	1.13E-04	4.58E-06	1.79E-09	1.10E-04	1.12E-04
11	E23	80	Combination Short Haul Truck	82	0.00E+00	3.62E-05	2.59E-06	3.00E+01	1.14E-07	3.21E-02	2.66E-05	3.73E-02	2.19E-03	5.40E-04	2.16E-03	7.65E-04	7.60E-04	4.51E-03	1.00E-04	0.00E+00	1.40E-03	7.03E-03
11	E23	80	Combination Long Haul Truck	75	0.00E+00	3.24E-05	2.17E-06	2.78E+01	1.32E-07	3.32E-02	2.46E-05	3.61E-02	2.15E-03	4.32E-04	2.23E-03	6.58E-04	6.62E-04	4.24E-03	9.27E-05	0.00E+00	1.57E-03	6.81E-03
11	E24	80	Passenger Car	398	0.00E+00	4.77E-06	5.17E-07	1.83E+01	3.32E-05	1.23E-01	1.06E-05	8.17E-04	2.19E-03	3.80E-04	1.03E-03	6.66E-04	6.84E-04	6.23E-05	9.33E-05	2.62E-08	3.50E-04	1.28E-04
11	E24	80	Passenger Truck	666	0.00E+00	1.03E-05	1.09E-06	4.23E+01	6.56E-05	2.26E-01	2.15E-05	2.42E-03	3.92E-03	6.95E-04	2.05E-03	1.34E-03	1.37E-03	3.00E-04	2.15E-04	5.83E-08	6.88E-04	3.96E-04
11	E24	80	Single Unit Short Haul Truck	91	0.00E+00	1.70E-05	8.46E-07	1.67E+01	1.37E-05	3.36E-02	1.81E-05	8.74E-03	1.07E-03	2.42E-04	2.07E-03	5.05E-04	5.13E-04	1.68E-03	6.74E-05	2.68E-08	1.56E-03	1.64E-03
11	E24	80	Single Unit Long Haul Truck	4	0.00E+00	7.41E-07	3.65E-08	7.07E-01	5.86E-07	1.39E-03	7.89E-07	3.74E-04	4.89E-05	1.07E-05	9.04E-05	2.17E-05	2.21E-05	7.06E-05	2.85E-06	1.11E-09	6.84E-05	6.99E-05
11	E24	80	Combination Short Haul Truck	58	0.00E+00	2.55E-05	1.82E-06	2.11E+01	8.05E-08	2.26E-02	1.87E-05	2.63E-02	1.54E-03	3.81E-04	1.52E-03	5.39E-04	5.35E-04	3.18E-03	7.06E-05	0.00E+00	9.85E-04	4.95E-03
11	E24	80	Combination Long Haul Truck	53	0.00E+00	2.28E-05	1.53E-06	1.96E+01	9.31E-08	2.34E-02	1.74E-05	2.54E-02	1.51E-03	3.04E-04	1.57E-03	4.63E-04	4.66E-04	2.99E-03	6.53E-05	0.00E+00	1.10E-03	4.79E-03
10	E25	70	Passenger Car	215	0.00E+00	2.77E-06	3.00E-07	1.02E+01	1.93E-05	6.92E-02	6.15E-06	4.30E-04	1.66E-03	2.67E-04	5.97E-04	3.87E-04	3.97E-04	3.85E-05	5.18E-05	1.41E-08	2.03E-04	6.74E-05
10	E25	70	Passenger Truck	360	0.00E+00	6.07E-06	6.42E-07	2.35E+01	3.84E-05	1.28E-01	1.26E-05	1.35E-03	3.03E-03	4.93E-04	1.20E-03	7.83E-04	8.02E-04	1.75E-04	1.18E-04	3.17E-08	4.02E-04	2.22E-04
10	E25	70	Single Unit Short Haul Truck	10	0.00E+00	2.29E-06	1.15E-07	1.79E+00	1.87E-06	3.59E-03	2.43E-06	1.13E-03	1.61E-04	3.22E-05	2.78E-04	6.84E-05	6.94E-05	1.79E-04	7.21E-06	2.92E-09	2.08E-04	2.11E-04
10	E25	70	Combination Short Haul Truck	8	0.00E+00	4.33E-06	3.08E-07	3.15E+00	1.41E-08	3.72E-03	3.17E-06	4.56E-03	3.28E-04	7.19E-05	2.64E-04	9.11E-05	9.09E-05	4.74E-04	1.05E-05	0.00E+00	1.73E-04	8.58E-04
10	E25	70	Combination Long Haul Truck	8	0.00E+00	3.92E-06	2.62E-07	2.93E+00	1.62E-08	3.94E-03	2.97E-06	4.49E-03	3.27E-04	5.97E-05	2.72E-04	7.91E-05	8.00E-05	4.47E-04	9.81E-06	0.00E+00	1.93E-04	8.48E-04
10	E26	70	Passenger Car	194	0.00E+00	2.51E-06	2.71E-07	9.23E+00	1.74E-05	6.26E-02	5.56E-06	3.89E-04	1.51E-03	2.42E-04	5.40E-04	3.50E-04	3.59E-04	3.48E-05	4.69E-05	1.28E-08	1.84E-04	6.10E-05
10	E26	70	Passenger Truck	325	0.00E+00	5.50E-06	5.81E-07	2.12E+01	3.47E-05	1.16E-01	1.14E-05	1.22E-03	2.74E-03	4.46E-04	1.08E-03	7.09E-04	7.26E-04	1.58E-04	1.07E-04	2.87E-08	3.63E-04	2.01E-04
10	E26	70	Single Unit Short Haul Truck	3	0.00E+00	8.04E-07	4.03E-08	6.30E-01	6.58E-07	1.26E-03	8.56E-07	3.97E-04	5.66E-05	1.13E-05	9.79E-05	2.40E-05	2.44E-05	6.31E-05	2.54E-06	1.03E-09	7.31E-05	7.43E-05
10	E26	70	Combination Short Haul Truck	5	0.00E+00	2.40E-06	1.71E-07	1.74E+00	7.80E-09	2.07E-03	1.76E-06	2.53E-03	1.82E-04	3.99E-05	1.46E-04	5.05E-05	5.04E-05	2.63E-04	5.82E-06	0.00E+00	9.58E-05	4.76E-04
10	E26	70	Combination Long Haul Truck	4	0.00E+00	2.18E-06	1.45E-07	1.63E+00	8.98E-09	2.19E-03	1.65E-06	2.49E-03	1.81E-04	3.31E-05	1.51E-04	4.39E-05	4.43E-05	2.48E-04	5.44E-06	0.00E+00	1.07E-04	4.70E-04
10	E27	70	Passenger Car	200	0.00E+00	2.58E-06	2.79E-07	9.50E+00	1.79E-05	6.44E-02	5.72E-06	4.01E-04	1.55E-03	2.49E-04	5.56E-04	3.60E-04	3.69E-04	3.58E-05	4.82E-05	1.32E-08	1.89E-04	6.28E-05
10	E27	70	Passenger Truck	335	0.00E+00	5.66E-06	5.98E-07	2.19E+01	3.57E-05	1.19E-01	1.17E-05	1.26E-03	2.82E-03	4.59E-04	1.12E-03	7.29E-04	7.47E-04	1.63E-04	1.10E-04	2.95E-08	3.74E-04	2.07E-04
10	E27	70	Single Unit Short Haul Truck	18	0.00E+00	4.27E-06	2.14E-07	3.35E+00	3.50E-06	6.72E-03	4.55E-06	2.11E-03	3.01E-04	6.01E-05	5.20E-04	1.28E-04	1.30E-04	3.35E-04	1.35E-05	5.46E-09	3.88E-04	3.95E-04
10	E27	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.98E-07	9.07E-05	1.37E-05	2.67E-06	2.27E-05	5.52E-06	5.61E-06	1.42E-05	5.73E-07	2.29E-10	1.70E-05	1.70E-05
10	E27	70	Combination Short Haul Truck	13	0.00E+00	6.51E-06	4.63E-07	4.73E+00	2.12E-08	5.60E-03	4.77E-06	6.86E-03	4.94E-04	1.08E-04	3.97E-04	1.37E-04	1.37E-04	7.14E-04	1.58E-05	0.00E+00	2.60E-04	1.29E-03
10	E27	70	Combination Long Haul Truck	11	0.00E+00	5.90E-06	3.94E-07	4.41E+00	2.44E-08	5.94E-03	4.48E-06	6.76E-03	4.92E-04	8.98E-05	4.09E-04	1.19E-04	1.20E-04	6.73E-04	1.48E-05	0.00E+00	2.90E-04	1.28E-03
10	E28	70	Passenger Car	69	0.00E+00	8.94E-07	9.68E-08	3.30E+00	6.23E-06	2.24E-02	1.99E-06	1.39E-04	5.38E-04	8.63E-05	1.93E-04	1.25E-04	1.28E-04	1.24E-05	1.67E-05	4.57E-09	6.55E-05	2.18E-05
10	E28	70	Passenger Truck	116	0.00E+00	1.96E-06	2.08E-07	7.59E+00	1.24E-05	4.13E-02	4.07E-06	4.36E-04	9.78E-04	1.59E-04	3.87E-04	2.53E-04	2.59E-04	5.65E-05	3.81E-05	1.02E-08	1.30E-04	7.17E-05
10	E28	70	Single Unit Short Haul Truck	3	0.00E+00	7.81E-07	3.91E-08	6.12E-01	6.39E-07	1.23E-03	8.32E-07	3.86E-04	5.49E-05	1.10E-05	9.51E-05	2.34E-05	2.37E-05	6.13E-05	2.46E-06	9.97E-10	7.10E-05	7.22E-05
10	E28	70	Combination Short Haul Truck	2	0.00E+00	1.02E-06	7.27E-08	7.44E-01	3.33E-09	8.81E-04	7.49E-07	1.08E-03	7.77E-05	1.70E-05	6.23E-05	2.15E-05	2.15E-05	1.12E-04	2.48E-06	0.00E+00	4.09E-05	2.03E-04
10	E28	70	Combination Long Haul Truck	2	0.00E+00	9.28E-07	6.18E-08	6.93E-01	3.83E-09	9.33E-04	7.03E-07	1.06E-03	7.73E-05	1.41E-05	6.43E-05	1.87E-05	1.89E-05	1.06E-04	2.32E-06	0.00E+00	4.56E-05	2.00E-04
10	E29	70	Passenger Car	33	0.00E+00	4.24E-07	4.59E-08	1.56E+00	2.95E-06	1.06E-02	9.41E-07	6.59E-05	2.55E-04	4.09E-05	9.14E-05	5.92E-05	6.08E-05	5.89E-06	7.93E-06	2.17E-09	3.11E-05	1.03E-05
10	E29	70	Passenger Truck	55	0.00E+00	9.31E-07	9.84E-08	3.60E+00	5.88E-06	1.96E-02	1.93E-06	2.07E-04	4.64E-04	7.55E-05	1.84E-04	1.20E-04	1.23E-04	2.68E-05	1.81E-05	4.85E-09	6.15E-05	3.40E-05
10	E29	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E29	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	E29	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.60E-04
10	E30	70	Passenger Car	177	0.00E+00	2.28E-06	2.47E-07	8.40E+00	1.59E-05	5.70E-02	5.06E-06	3.54E-04	1.37E-03	2.20E-04	4.91E-04	3.18E-04	3.27E-04	3.17E-05	4.26E-05	1.16E-08	1.67E-04	5.55E-05
10	E30	70	Passenger Truck	296	0.00E+00	5.00E-06	5.29E-07	1.93E+01	3.16E-05	1.05E-01	1.04E-05	1.11E-03	2.49E-03	4.06E-04	9.87E-04	6.45E-04	6.61E-04	1.44E-04	9.71E-05	2.61E-08	3.31E-04	1.83E-04
10	E30	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.95E-03	3.36E-06	1.56E-03	2.22E-04	4.43E-05	3.84E-04	9.42E-05	9.57E-05	2.47E-04	9.94E-06	4.02E-09	2.86E-04	2.91E-04
10	E30	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.69E-05	1.01E-05	1.97E-06	1.68E-05	4.07E-06	4.14E-06	1.05E-05	4.22E-07	1.69E-10	1.26E-05	1.25E-05
10	E30	70	Combination Short Haul Truck	9	0.00E+00	4.62E-06	3.29E-07	3.36E+00	1.50E-08	3.98E-03	3.38E-06	4.87E-03	3.51E-04	7.68E-05	2.82E-04	9.73E-05	9.71E-05	5.06E-04	1.12E-05	0.00E+00	1.85E-04	9.16E-04
10	E30	70	Combination Long Haul Truck	8	0.00E+00	4.19E-06	2.79E-07	3.13E+00	1.73E-08	4.21E-03	3.18E-06	4.80E-03	3.49E-04	6.37E-05	2.91E-04	8.45E-05	8.54E-05	4.77E-04	1.05E-05	0.00E+00	2.06E-04	9.05E-04
10	E31	70	Passenger Car	77	0.00E+00	9.98E-07	1.08E-07	3.68E+00	6.94E-06	2.49E-02	2.21E-06	1.55E-04	6.00E-04	9.63E-05	2.15E-04	1.39E-04	1.43E-04	1.39E-05	1.87E-05	5.10E-09	7.31E-05	2.43E-05
10	E31	70	Passenger Truck	130	0.00E+00	2.19E-06	2.31E-07	8.46E+00	1.38E-05	4.61E-02	4.54E-06	4.86E-04	1.09E-03	1.77E-04	4.32E-04	2.82E-04	2.89E-04	6.30E-05	4.25E-05	1.14E-08	1.45E-04	7.99E-05
10	E31	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.54E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.74E-04	6.73E-05	6.84E-05	1.77E-04	7.10E-06	2.87E-09	2.05E-04	2.08E-04
10	E31	70	Combination Short Haul Truck	4	0.00E+00	2.17E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.59E-06	2.29E-03	1.65E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.68E-05	4.31E-04
10	E31	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.31E-07	1.47E+00	8.14E-09	1.98E-03	1.49E-06	2.26E-03	1.64E-04	3.00E-05	1.37E-04	3.97E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.26E-04
10	E32	70	Passenger Car	327	0.00E+00	4.22E-06	4.56E-07	1.55E+01	2.94E-05	1.05E-01	9.36E-06	6.55E-04	2.54E-03	4.07E-04	9.09E-04	5.89E-04	6.04E-04	5.86E-05	7.89E-05	2.15E-08	3.09E-04	1.03E-04
10	E32	70	Passenger Truck	548	0.00E+00	9.25E-06	9.79E-07	3.58E+01	5.84E-05	1.95E-01	1.92E-05	2.05E-03	4.61E-03	7.50E-04	1.83E-03	1.19E-03	1.22E-03	2.66E-04	1.80E-04	4.82E-08	6.12E-04	3.38E-04
10	E32	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.95E-06	5.66E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.38E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.60E-09	3.27E-04	3.33E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.64E-05	1.16E-05	2.25E-06	1.91E-05	4.66E-06	4.73E-06	1.20E-05	4.82E-07	1.93E-10	1.44E-05	1.43E-05
10	E32	70	Combination Short Haul Truck	10	0.00E+00	5.16E-06	3.67E-07	3.75E+00	1.68E-08	4.44E-03	3.78E-06	5.44E-03	3.92E-04	8.59E-05	3.15E-04	1.09E-04	1.08E-04	5.66E-04	1.25E-05	0.00E+00	2.06E-04	1.02E-03
10	E32	70	Combination Long Haul Truck	9	0.00E+00	4.68E-06	3.12E-07	3.50E+00	1.93E-08	4.71E-03	3.55E-06	5.36E-03	3.90E-04	7.12E-05	3.25E-04	9.44E-05	9.54E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
9	E33	60	Passenger Car	168	0.00E+00	2.49E-06	2.69E-07	8.35E+00	1.73E-05	6.20E-02	5.50E-06	3.42E-04	1.70E-03	2.62E-04	5.36E-04	3.47E-04	3.56E-04	3.51E-05	4.22E-05	1.16E-08	1.82E-04	5.36E-05
9	E33	60	Passenger Truck	281	0.00E+00	5.48E-06	5.79E-07	1.91E+01	3.43E-05	1.10E-01	1.13E-05	1.12E-03	3.12E-03	4.85E-04	1.07E-03	7.00E-04	7.17E-04	1.49E-04	9.53E-05	2.64E-08	3.57E-04	1.85E-04
9	E33	60	Single Unit Short Haul Truck	15	0.00E+00	4.35E-06	2.17E-07	2.76E+00	3.57E-06	5.33E-03	4.63E-06	2.07E-03	3.51E-04	6.35E-05	5.25E-04	1.30E-04	1.32E-04	2.76E-04	1.12E-05	4.59E-09	3.94E-04	3.88E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.90E-07	9.42E-09	1.18E-01	1.55E-07	2.26E-04	2.03E-07	8.95E-05	1.58E-05	2.82E-06	2.31E-05	5.66E-06	5.75E-06	1.18E-05	4.76E-07	1.95E-10	1.73E-05	1.68E-05
9	E33	60	Combination Short Haul Truck	8	0.00E+00	4.90E-06	3.42E-07	3.19E+00	1.73E-08	4.27E-03	3.63E-06	5.31E-03	4.55E-04	9.01E-05	3.12E-04	1.02E-04	1.02E-04	4.80E-04	1.06E-05	0.00E+00	2.09E-04	1.00E-03
9	E33	60	Combination Long Haul Truck	8	0.00E+00	4.38E-06	2.86E-07	2.99E+00	1.99E-08	4.61E-03	3.39E-06	5.27E-03	4.57E-04	7.77E-05	3.20E-04	8.72E-05	8.83E-05	4.55E-04	9.98E-06	0.00E+00	2.32E-04	9.94E-04
9	E34	60	Passenger Car	497	0.00E+00	7.37E-06	7.96E-07	2.47E+01	5.13E-05	1.84E-01	1.63E-05	1.01E-03	5.04E-03	7.75E-04	1.59E-03	1.03E-03	1.05E-03	1.04E-04	1.25E-04	3.44E-08	5.39E-04	1.59E-04
9	E34	60	Passenger Truck	833	0.00E+00	1.62E-05	1.71E-06	5.65E+01	1.02E-04	3.26E-01	3.36E-05	3.31E-03	9.26E-03	1.44E-03	3.17E-03	2.07E-03	2.12E-03	4.42E-04	2.82E-04	7.82E-08	1.06E-03	5.48E-04
9	E34	60	Single Unit Short Haul Truck	41	0.00E+00	1.20E-05	5.98E-07	7.61E+00	9.85E-06	1.47E-02	1.28E-05	5.71E-03	9.68E-04	1.75E-04	1.45E-03	3.58E-04	3.64E-04	7.62E-04	3.07E-05	1.27E-08	1.09E-03	1.07E-03
9	E34	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.60E-08	3.25E-01	4.28E-07	6.23E-04	5.58E-07	2.47E-04	4.35E-05	7.78E-06	6.38E-05	1.56E-05	1.59E-05	3.25E-05	1.31E-06	5.38E-10	4.78E-05	4.63E-05
9	E34	60	Combination Short Haul Truck	29	0.00E+00	1.68E-05	1.18E-06	1.10E+01	5.96E-08	1.47E-02	1.25E-05	1.83E-02	1.56E-03	3.10E-04	1.07E-03	3.49E-04	3.49E-04	1.65E-03	3.66E-05	0.00E+00	7.20E-04	3.45E-03
9	E34	60	Combination Long Haul Truck	26	0.00E+00	1.51E-05	9.85E-07	1.03E+01	6.83E-08	1.59E-02	1.17E-05	1.81E-02	1.57E-03	2.67E-04	1.10E-03	3.00E-04	3.03E-04	1.56E-03	3.43E-05	0.00E+00	7.97E-04	3.42E-03
9	E35	60	Passenger Car	247	0.00E+00	3.65E-06	3.95E-07	1.23E+01	2.54E-05	9.11E-02	8.08E-06	5.03E-04	2.50E-03	3.84E-04	7.88E-04	5.09E-04	5.23E-04	5.15E-05	6.20E-05	1.71E-08	2.67E-04	7.88E-05
9	E35	60	Passenger Truck	413	0.00E+00	8.05E-06	8.50E-07	2.80E+01	5.04E-05	1.62E-01	1.66E-05	1.64E-03	4.59E-03	7.12E-04	1.57E-03	1.03E-03	1.05E-03	2.19E-04	1.40E-04	3.88E-08	5.24E-04	2.72E-04
9	E35	60	Single Unit Short Haul Truck	27	0.00E+00	7.84E-06	3.91E-07	4.98E+00	6.44E-06	9.62E-03	8.36E-06	3.74E-03	6.33E-04	1.15E-04	9.47E-04	2.34E-04	2.38E-04	4.99E-04	2.01E-05	8.29E-09	7.12E-04	7.00E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	3.43E-07	1.70E-08	2.13E-01	2.80E-07	4.08E-04	3.65E-07	1.61E-04	2.84E-05	5.09E-06	4.18E-05	1.02E-05	1.04E-05	2.12E-05	8.58E-07	3.52E-10	3.13E-05	3.03E-05
9	E35	60	Combination Short Haul Truck	17	0.00E+00	9.76E-06	6.82E-07	6.36E+00	3.45E-08	8.52E-03	7.23E-06	1.06E-02	9.07E-04	1.80E-04	6.22E-04	2.03E-04	2.03E-04	9.58E-04	2.12E-05	0.00E+00	4.18E-04	2.00E-03
9	E35	60	Combination Long Haul Truck	15	0.00E+00	8.74E-06	5.71E-07	5.96E+00	3.96E-08	9.20E-03	6.76E-06	1.05E-02	9.11E-04	1.55E-04	6.38E-04	1.74E-04	1.76E-04	9.07E-04	1.99E-05	0.00E+00	4.62E-04	1.98E-03
9	E36	60	Passenger Car	446	0.00E+00	6.60E-06	7.13E-07	2.22E+01	4.59E-05	1.65E-01	1.46E-05	9.09E-04	4.52E-03	6.94E-04	1.42E-03	9.20E-04	9.44E-04	9.31E-05	1.12E-04	3.08E-08	4.83E-04	1.42E-04
9	E36	60	Passenger Truck	746	0.00E+00	1.46E-05	1.54E-06	5.06E+01	9.10E-05	2.92E-01	3.01E-05	2.96E-03	8.29E-03	1.29E-03	2.84E-03	1.86E-03	1.90E-03	3.96E-04	2.53E-04	7.01E-08	9.47E-04	4.91E-04
9	E36	60	Single Unit Short Haul Truck	38	0.00E+00	1.11E-05	5.54E-07	7.05E+00	9.12E-06	1.36E-02	1.18E-05	5.29E-03	8.97E-04	1.62E-04	1.34E-03	3.32E-04	3.37E-04	7.06E-04	2.85E-05	1.17E-08	1.01E-03	9.91E-04
9	E36	60	Single Unit Long Haul Truck	2	0.00E+

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E40	70	Single Unit Short Haul Truck	6	0.00E+00	1.44E-06	7.24E-08	1.13E+00	1.18E-06	2.27E-03	1.54E-06	7.14E-04	1.02E-04	2.03E-05	1.76E-04	4.32E-05	4.39E-05	1.13E-04	4.56E-06	1.84E-09	1.31E-04	1.34E-04
10	E40	70	Combination Short Haul Truck	4	0.00E+00	2.21E-06	1.57E-07	1.61E+00	7.18E-09	1.90E-03	1.62E-06	2.33E-03	1.68E-04	3.67E-05	1.35E-04	4.65E-05	4.64E-05	2.42E-04	5.36E-06	0.00E+00	8.82E-05	4.38E-04
10	E40	70	Combination Long Haul Truck	4	0.00E+00	2.00E-06	1.34E-07	1.50E+00	8.27E-09	2.01E-03	1.52E-06	2.29E-03	1.67E-04	3.05E-05	1.39E-04	4.04E-05	4.08E-05	2.28E-04	5.01E-06	0.00E+00	9.84E-05	4.33E-04
10	E41	70	Passenger Car	212	0.00E+00	2.74E-06	2.96E-07	1.01E+01	1.91E-05	6.84E-02	6.08E-06	4.25E-04	1.65E-03	2.64E-04	5.90E-04	3.82E-04	3.92E-04	3.81E-05	5.12E-05	1.40E-08	2.01E-04	6.67E-05
10	E41	70	Passenger Truck	356	0.00E+00	6.01E-06	6.35E-07	2.32E+01	3.79E-05	1.26E-01	1.24E-05	1.33E-03	2.99E-03	4.87E-04	1.19E-03	7.75E-04	7.93E-04	1.73E-04	1.17E-04	3.13E-08	3.97E-04	2.19E-04
10	E41	70	Single Unit Short Haul Truck	1	0.00E+00	1.82E-07	9.10E-09	1.42E-01	1.48E-07	2.85E-04	1.93E-07	8.97E-05	1.28E-05	2.55E-06	2.21E-05	5.43E-06	5.51E-06	1.42E-05	5.73E-07	2.32E-10	1.65E-05	1.68E-05
10	E41	70	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.57E-08	6.72E-01	3.00E-09	7.95E-04	6.77E-07	9.73E-04	7.02E-05	1.54E-05	5.63E-05	1.95E-05	1.94E-05	1.01E-04	2.24E-06	0.00E+00	3.69E-05	1.83E-04
10	E41	70	Combination Long Haul Truck	2	0.00E+00	8.38E-07	5.59E-08	6.26E-01	3.46E-09	8.43E-04	6.35E-07	9.60E-04	6.98E-05	1.28E-05	5.81E-05	1.69E-05	1.71E-05	9.55E-05	2.10E-06	0.00E+00	4.12E-05	1.81E-04
10	E42	70	Passenger Car	134	0.00E+00	1.73E-06	1.87E-07	6.37E+00	1.20E-05	4.32E-02	3.84E-06	2.69E-04	1.04E-03	1.67E-04	3.72E-04	2.41E-04	2.48E-04	2.40E-05	3.23E-05	8.83E-09	1.27E-04	4.21E-05
10	E42	70	Passenger Truck	225	0.00E+00	3.79E-06	4.01E-07	1.47E+01	2.40E-05	7.98E-02	7.86E-06	8.42E-04	1.89E-03	3.07E-04	7.48E-04	4.89E-04	5.01E-04	1.09E-04	7.36E-05	1.98E-08	2.51E-04	1.38E-04
10	E42	70	Single Unit Short Haul Truck	4	0.00E+00	8.82E-07	4.42E-08	6.91E-01	7.21E-07	1.39E-03	9.39E-07	4.36E-04	6.20E-05	1.24E-05	1.07E-04	2.64E-05	2.68E-05	6.92E-05	2.78E-06	1.13E-09	8.01E-05	8.15E-05
10	E42	70	Combination Short Haul Truck	5	0.00E+00	2.61E-06	1.86E-07	1.90E+00	8.48E-09	2.25E-03	1.91E-06	2.75E-03	1.98E-04	4.34E-05	1.59E-04	5.50E-05	5.48E-05	2.86E-04	6.33E-06	0.00E+00	1.04E-04	5.18E-04
10	E42	70	Combination Long Haul Truck	5	0.00E+00	2.37E-06	1.58E-07	1.77E+00	9.77E-09	2.38E-03	1.79E-06	2.71E-03	1.97E-04	3.60E-05	1.64E-04	4.77E-05	4.82E-05	2.70E-04	5.92E-06	0.00E+00	1.16E-04	5.11E-04
10	E43	70	Passenger Car	198	0.00E+00	2.55E-06	2.75E-07	9.38E+00	1.77E-05	6.36E-02	5.65E-06	3.96E-04	1.53E-03	2.46E-04	5.49E-04	3.56E-04	3.65E-04	3.54E-05	4.76E-05	1.30E-08	1.87E-04	6.20E-05
10	E43	70	Passenger Truck	331	0.00E+00	5.59E-06	5.91E-07	2.16E+01	3.53E-05	1.18E-01	1.16E-05	1.24E-03	2.78E-03	4.53E-04	1.10E-03	7.20E-04	7.38E-04	1.61E-04	1.08E-04	2.91E-08	3.69E-04	2.04E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	1.55E-07	7.75E-09	1.21E-01	1.26E-07	2.43E-04	1.65E-07	7.64E-05	1.09E-05	2.17E-06	1.88E-05	4.62E-06	4.70E-06	1.21E-05	4.88E-07	1.97E-10	1.41E-05	1.43E-05
10	E44	70	Passenger Car	172	0.00E+00	2.22E-06	2.40E-07	8.18E+00	1.55E-05	5.55E-02	4.93E-06	3.45E-04	1.34E-03	2.14E-04	4.79E-04	3.10E-04	3.18E-04	3.09E-05	4.15E-05	1.13E-08	1.63E-04	5.41E-05
10	E44	70	Passenger Truck	289	0.00E+00	4.87E-06	5.15E-07	1.88E+01	3.08E-05	1.03E-01	1.01E-05	1.08E-03	2.43E-03	3.95E-04	9.62E-04	6.28E-04	6.44E-04	1.40E-04	9.46E-05	2.54E-08	3.22E-04	1.78E-04
10	E44	70	Single Unit Short Haul Truck	4	0.00E+00	9.29E-07	4.66E-08	7.28E-01	7.60E-07	1.46E-03	9.89E-07	4.59E-04	6.53E-05	1.31E-05	1.13E-04	2.78E-05	2.82E-05	7.29E-05	2.93E-06	1.19E-09	8.44E-05	8.59E-05
10	E44	70	Combination Short Haul Truck	3	0.00E+00	1.59E-06	1.13E-07	1.15E+00	5.16E-09	1.37E-03	1.16E-06	1.67E-03	1.20E-04	2.64E-05	9.67E-05	3.34E-05	3.33E-05	1.74E-04	3.85E-06	0.00E+00	6.34E-05	3.15E-04
10	E44	70	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.59E-08	1.07E+00	5.94E-09	1.45E-03	1.09E-06	1.65E-03	1.20E-04	2.19E-05	9.98E-05	2.90E-05	2.93E-05	1.64E-04	3.60E-06	0.00E+00	7.07E-05	3.11E-04
11	E45	80	Passenger Car	43	0.00E+00	5.11E-07	5.54E-08	1.97E+00	3.56E-06	1.31E-02	1.14E-06	8.76E-05	2.34E-04	4.07E-05	1.11E-04	7.14E-05	7.33E-05	6.68E-06	1.00E-05	2.81E-09	3.75E-05	1.37E-05
11	E45	80	Passenger Truck	71	0.00E+00	1.10E-06	1.17E-07	4.54E+00	7.04E-06	2.42E-02	2.30E-06	2.60E-04	4.20E-04	7.46E-05	2.20E-04	1.43E-04	1.47E-04	3.21E-05	2.30E-05	6.25E-09	7.38E-05	4.24E-05
11	E45	80	Single Unit Short Haul Truck	4	0.00E+00	7.18E-07	3.56E-08	7.04E-01	5.78E-07	1.42E-03	7.64E-07	3.68E-04	4.51E-05	1.02E-05	8.74E-05	2.13E-05	2.16E-05	7.07E-05	2.84E-06	1.13E-09	6.58E-05	6.90E-05
11	E45	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.23E-04
11	E45	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E46	80	Passenger Car	216	0.00E+00	2.59E-06	2.81E-07	9.96E+00	1.81E-05	6.66E-02	5.77E-06	4.44E-04	1.19E-03	2.06E-04	5.62E-04	3.62E-04	3.72E-04	3.39E-05	5.07E-05	1.42E-08	1.90E-04	6.96E-05
11	E46	80	Passenger Truck	362	0.00E+00	5.58E-06	5.91E-07	2.30E+01	3.57E-05	1.23E-01	1.17E-05	1.32E-03	2.13E-03	3.78E-04	1.12E-03	7.26E-04	7.44E-04	1.63E-04	1.17E-04	3.17E-08	3.74E-04	2.15E-04
11	E46	80	Single Unit Short Haul Truck	25	0.00E+00	4.67E-06	2.32E-07	4.58E+00	3.76E-06	9.20E-03	4.97E-06	2.39E-03	2.93E-04	6.63E-05	5.68E-04	1.38E-04	1.40E-04	4.59E-04	1.85E-05	7.33E-09	4.27E-04	4.48E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	2.03E-07	1.00E-08	1.94E-01	1.60E-07	3.81E-04	2.16E-07	1.03E-04	1.34E-05	2.93E-06	2.48E-05	5.95E-06	6.04E-06	1.93E-05	7.81E-07	3.05E-10	1.87E-05	1.92E-05
11	E46	80	Combination Short Haul Truck	11	0.00E+00	4.82E-06	3.45E-07	4.00E+00	1.52E-08	4.27E-03	3.54E-06	4.97E-03	2.92E-04	7.20E-05	2.87E-04	1.02E-04	1.01E-04	6.01E-04	1.34E-05	0.00E+00	1.86E-04	9.37E-04
11	E46	80	Combination Long Haul Truck	10	0.00E+00	4.31E-06	2.89E-07	3.70E+00	1.76E-08	4.42E-03	3.28E-06	4.81E-03	2.87E-04	5.76E-05	2.98E-04	8.76E-05	8.82E-05	5.65E-04	1.24E-05	0.00E+00	2.09E-04	9.07E-04
11	E47	80	Passenger Car	36	0.00E+00	4.35E-07	4.71E-08	1.67E+00	3.03E-06	1.12E-02	9.68E-07	7.45E-05	1.99E-04	3.47E-05	9.43E-05	6.07E-05	6.24E-05	5.68E-06	8.51E-06	2.39E-09	3.19E-05	1.17E-05
11	E47	80	Passenger Truck	61	0.00E+00	9.36E-07	9.92E-08	3.86E+00	5.99E-06	2.06E-02	1.96E-06	2.21E-04	3.58E-04	6.34E-05	1.87E-04	1.22E-04	1.25E-04	2.73E-05	1.96E-05	5.31E-09	6.28E-05	3.61E-05
11	E47	80	Single Unit Short Haul Truck	5	0.00E+00	8.98E-07	4.46E-08	8.81E-01	7.22E-07	1.77E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.62E-05
11	E47	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.23E-04
11	E47	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E48	80	Passenger Car	337	0.00E+00	4.05E-06	4.38E-07	1.56E+01	2.82E-05	1.04E-01	9.00E-06	6.93E-04	1.85E-03	3.22E-04	8.77E-04	5.65E-04	5.80E-04	5.28E-05	7.92E-05	2.22E-08	2.97E-04	1.09E-04
11	E48	80	Passenger Truck	565	0.00E+00	8.71E-06	9.22E-07	3.59E+01	5.57E-05	1.91E-01	1.82E-05	2.06E-03	3.33E-03	5.90E-04	1.74E-03	1.13E-03	1.16E-03	2.54E-04	1.82E-04	4.94E-08	5.84E-04	3.36E-04
11	E48	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.37E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.58E-05	9.72E-05	3.18E-04	1.28E-05	5.08E-09	2.96E-04	3.10E-04
11	E48	80	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	6.93E-09	1.34E-01	1.11E-07	2.64E-04	1.50E-07	7.10E-05	9.27E-06	2.03E-06	1.71E-05	4.12E-06	4.18E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.33E-05
11	E48	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.79E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.14E-04
11	E48	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
11	E49	80	Passenger Car	43	0.00E+00	5.12E-07	5.55E-08	1.97E+00	3.57E-06	1.32E-02	1.14E-06	8.77E-05	2.35E-04	4.08E-05	1.11E-04	7.15E-05	7.34E-05	6.69E-06	1.00E-05	2.81E-09	3.76E-05	1.38E-05
11	E49	80	Passenger Truck	71	0.00E+00	1.10E-06	1.17E-07	4.55E+00	7.05E-06	2.42E-02	2.30E-06	2.60E-04	4.21E-04	7.46E-05	2.20E-04	1.43E-04	1.47E-04	3.22E-05	2.30E-05	6.25E-09	7.38E-05	4.25E-05
11	E49	80	Single Unit Short Haul Truck	1	0.00E+00	2.01E-07	1.00E-08	1.98E-01	1.62E-07	3.97E-04	2.14E-07	1.03E-04	1.27E-05	2.86E-06	2.45E-05	5.97E-06	6.06E-06	1.98E-05	7.97E-07	3.16E-10	1.84E-05	1.93E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	1.27E-06	9.09E-08	1.05E+00	4.02E-09	1.13E-03	9.34E-07	1.31E-03	7.71E-05	1.90E-05	7.58E-05	2.69E-05	2.67E-05	1.59E-04	3.52E-06	0.00E+00	4.92E-05	2.47E-04
11	E49	80	Combination Long Haul Truck	3	0.00E+00	1.14E-06	7.63E-08	9.76E-01	4.65E-09	1.17E-03	8.66E-07	1.27E-03	7.56E-05	1.52E-05	7.85E-05	2.31E-05	2.33E-05	1.49E-04	3.26E-06	0.00E+00	5.50E-05	2.39E-04
11	E50	80	Passenger Car	265	0.00E+00	3.18E-06	3.45E-07	1.22E+01	2.22E-05	8.18E-02	7.08E-06	5.45E-04	1.46E-03	2.54E-04	6.90E-04	4.44E-04	4.56E-04	4.16E-05	6.23E-05	1.75E-08	2.34E-04	8.55E-05
11	E50	80	Passenger Truck	444	0.00E+00	6.85E-06	7.26E-07	2.83E+01	4.38E-05	1.51E-01	1.43E-05	1.62E-03	2.62E-03	4.64E-04	1.37E-03	8.91E-04	9.13E-04	2.00E-04	1.43E-04	3.89E-08	4.59E-04	2.64E-04
11	E50	80	Single Unit Short Haul Truck	53	0.00E+00	9.96E-06	4.94E-07	9.77E+00	8.01E-06	1.96E-02	1.06E-05	5.11E-03	6.26E-04	1.41E-04	1.21E-03	2.95E-04	3.00E-04	9.80E-04	3.94E-05	1.56E-08	9.12E-04	9.56E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	2.13E-08	4.13E-01	3.42E-07	8.13E-04	4.61E-07	2.19E-04	2.86E-05	6.24E-06	5.28E-05	1.27E-05	1.29E-05	4.13E-05	1.67E-06	6.51E-10	4.00E-05	4.09E-05
11	E50	80	Combination Short Haul Truck	43	0.00E+00	1.88E-05	1.35E-06	1.56E+01	5.95E-08	1.67E-02	1.38E-05	1.94E-02	1.14E-03	2.82E-04	1.12E-03	3.98E-04	3.96E-04	2.35E-03	5.22E-05	0.00E+00	7.29E-04	3.66E-03
11	E50	80	Combination Long Haul Truck	39	0.00E+00	1.69E-05	1.13E-06	1.45E+01	6.89E-08	1.73E-02	1.28E-05	1.88E-02	1.12E-03	2.25E-04	1.16E-03	3.43E-04	3.45E-04	2.21E-03	4.83E-05	0.00E+00	8.16E-04	3.55E-03
11	E51	80	Passenger Car	13	0.00E+00	1.55E-07	1.68E-08	5.97E-01	1.08E-06	3.99E-03	3.46E-07	2.66E-05	7.12E-05	1.24E-05	3.37E-05	2.17E-05	2.23E-05	2.03E-06	3.04E-06	8.53E-10	1.14E-05	4.17E-06
11	E51	80	Passenger Truck	22	0.00E+00	3.34E-07	3.54E-08	1.38E+00	2.14E-06	7.35E-03	6.99E-07	7.89E-05	1.28E-04	2.27E-05	6.69E-05	4.35E-05	4.46E-05	9.76E-06	6.99E-06	1.90E-09	2.24E-05	1.29E-05
11	E51	80	Combination Short Haul Truck	1	0.00E+00	3.84E-07	2.74E-08	3.18E-01	1.21E-09	3.40E-04	2.82E-07	3.96E-04	2.33E-05	5.73E-06	2.29E-05	8.11E-06	8.06E-06	4.78E-05	1.06E-06	0.00E+00	1.48E-05	7.45E-05
11	E51	80	Combination Long Haul Truck	1	0.00E+00	3.43E-07	2.30E-08	2.94E-01	1.40E-09	3.52E-04	2.61E-07	3.83E-04	2.28E-05	4.58E-06	2.37E-05	6.97E-06	7.02E-06	4.49E-05	9.83E-07	0.00E+00	1.66E-05	7.22E-05
11	E52	80	Passenger Car	183	0.00E+00	2.19E-06	2.37E-07	8.42E+00	1.53E-05	5.63E-02	4.87E-06	3.75E-04	1.00E-03	1.74E-04	4.75E-04	3.06E-04	3.14E-04	2.86E-05	4.28E-05	1.20E-08	1.61E-04	5.88E-05
11	E52	80	Passenger Truck	306	0.00E+00	4.71E-06	4.99E-07	1.94E+01	3.01E-05	1.04E-01	9.85E-06	1.11E-03	1.80E-03	3.19E-04	9.43E-04	6.13E-04	6.28E-04	1.38E-04	9.85E-05	2.67E-08	3.16E-04	1.82E-04
11	E52	80	Single Unit Short Haul Truck	52	0.00E+00	9.72E-06	4.82E-07	9.53E+00	7.82E-06	1.92E-02	1.03E-05	4.98E-03	6.11E-04	1.38E-04	1.18E-03	2.88E-04	2.92E-04	9.56E-04	3.84E-05	1.53E-08	8.90E-04	9.33E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.08E-08	4.03E-01	3.34E-07	7.94E-04	4.50E-07	2.13E-04	2.79E-05	6.09E-06	5.16E-05	1.24E-05	1.26E-05	4.03E-05	1.63E-06	6.35E-10	3.90E-05	3.99E-05
11	E52	80	Combination Short Haul Truck	42	0.00E+00	1.82E-05	1.30E-06	1.51E+01	5.76E-08	1.62E-02	1.34E-05	1.88E-02	1.11E-03	2.72E-04	1.09E-03	3.86E-04	3.83E-04	2.27E-03	5.06E-05	0.00E+00	7.05E-04	3.54E-03
11	E52	80	Combination Long Haul Truck	38	0.00E+00	1.63E-05	1.09E-06	1.40E+01	6.66E-08	1.67E-02	1.24E-05	1.82E-02	1.08E-03	2.18E-04	1.13E-03	3.32E-04	3.34E-04	2.14E-03	4.67E-05	0.00E+00	7.90E-04	3.43E-03
11	E53	80	Passenger Car	131	0.00E+00	1.58E-06	1.71E-07	6.06E+00	1.10E-05	4.05E-02	3.51E-06	2.70E-04	7.23E-04	1.26E-04	3.42E-04	2.20E-04	2.26E-04	2.06E-05	3.08E-05	8.65E-09	1.16E-04	4.23E-05
11	E53	80	Passenger Truck	220	0.00E+00	3.39E-06	3.59E-07	1.40E+01	2.17E-05	7.46E-02	7.09E-06	8.01E-04	1.30E-03	2.30E-04	6.79E-04	4.41E-04	4.52E-04	9.90E-05	7.09E-05	1.93E-08	2.27E-04	1.31E-04
11	E53	80	Single Unit Short Haul Truck	32	0.00E+00	6.01E-06	2.98E-07	5.89E+00	4.83E-06	1.18E-02	6.39E-06	3.08E-03	3.77E-04	8.53E-05	7.31E-04	1.78E-04	1.81E-04	5.91E-04	2.38E-05	9.43E-09	5.50E-04	5.77E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.29E-08	2.49E-01	2.06E-07	4.91E-04	2.78E-07	1.32E-04	1.72E-05	3.76E-06	3.19E-05	7.65E-06	7.77E-06	2.49E-05	1.00E-06	3.92E-10	2.41E-05	2.46E-05
11	E53	80	Combination Short Haul Truck	23	0.00E+00	1.00E-05	7.17E-07	8.31E+00	3.17E-08	8.88E-03	7.36E-06	1.03E-02	6.08E-04	1.50E-04	5.98E-04	2.12E-04	2.11E-04	1.25E-03	2.78E-05	0.00E+00	3.88E-04	1.95E-03
11	E53	80	Combination Long Haul Truck	21	0.00E+00	8.97E-06	6.02E-07	7.70E+00	3.66E-08	9.20E-03	6.83E-06	1.00E-02	5.96E-04	1.20E-04	6.19E-04	1.82E-04	1.83E-04	1.17E-03	2.57E-05	0.00E+00	4.34E-04	1.89E-03
11	E54	80	Passenger Car	353	0.00E+00	4.24E-06	4.59E-07	1.63E+01	2.95E-05	1.09E-01	9.42E-06	7.26E-04	1.94E-03	3.37E-04	9.18E-04	5.91E-04	6.07E-04	5.53E-05	8.29E-05	2.32E-08	3.11E-04	1.14E-04
11	E54	80	Passenger Truck	591	0.00E+00	9.11E-06	9.66E-07	3.76E+01	5.83E-05	2.00E-01	1.90E-05	2.15E-03	3.48E-03	6.17E-04	1.82E-03	1.19E-03	1.22E-03	2.66E-04	1.90E-04	5.17E-08	6.11E-04	3.51E-04
11	E54	80	Single Unit Short Haul Truck	54	0.00E+00	1.01E-05	5.02E-07	9.92E+00	8.14E-06	1.99E-02	1.08E-05	5.18E-03	6.35E-04	1.44E-04	1.23E-03	3.00E-04	3.04E-04	9.95E-04	4.00E-05	1.59E-08	9.26E-04	9.71E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	4.39E-07	2.17E-08	4.20E-01	3.48E-07	8.26E-04	4.68E-07	2.22E-04	2.90E-05	6.34E-06	5.37E-05	1.29E-05	1.31E-05	4.19E-05	1.69E-06	6.61E-10	4.06E-05	4.15E-05
11	E54	80	Combination Short Haul Truck	39	0.00E+00	1.71E-05	1.22E-06	1.41E+01	5.39E-08	1.51E-02	1.25E-05	1.76E-02	1.03E-03	2.55E-04	1.02E-03	3.61E-04	3.59E-04	2.13E-03	4.73E-05	0.00E+00	6.60E-04	3.32E-03
11	E54	80	Combination Long Haul Truck	35	0.00E+00	1.53E-05	1.02E-06	1.31E+01	6.23E-08	1.57E-02	1.16E-05	1.70E-02	1.01E-03	2.04E-04	1.05E-03	3.10E-04	3.12E-04	2.00E-03	4.37E-05	0.00E+00	7.39E-04	3.21E-03
11	E55	80	Passenger Car	72	0.00E+00	8.64E-07	9.36E-08	3.32E+00	6.02E-06	2.22E-02	1.92E-06	1.48E-04	3.96E-04	6.88E-05	1.87E-04	1.21E-04	1.24E-04	1.13E-05	1.69E-05	4.74E-09	6.34E-05	2.32E-05
11	E55	80	Passenger Truck	121	0.00E+00	1.86E-06	1.97E-07	7.67E+00	1.19E-05	4.08E-02	3.88E-06	4.39E-04	7.10E-04	1.26E-04	3.72E-04	2.42E-04	2.48E-04	5.42E-05	3.88E-05	1.05E-08	1.25E-04	7.16E-05
11	E55	80	Single Unit Short Haul Truck	22	0.00E+00	4.11E-06	2.04E-07	4.03E+00	3.31E-06	8.10E-03	4.37E-06	2.11E-03	2.58E-04	5.84E-05	5.00E-04	1.22E-04	1.24E-04	4.04E-04	1.63E-05	6.46E-09	3.76E-04	3.95E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.81E-09	1.71E-01	1.41E-07	3.36E-04	1.90E-07	9.03E-05	1.18E-05	2.58E-06	2.18E-05	5.24E-06	5.32E-06	1.70E-05	6.88E-07	2.69E-10	1.65E-05	1.69E-05
11	E55	80	Combination Short Haul Truck	13	0.00E+00	5.81E-06	4.15E-07	4.82E+00	1.83E-08	5.15E-03	4.26E-06	5.99E-03	3.52E-04	8.68E-05	3.46E-04	1.23E-04	1.22E-04	7.24E-04	1.61E-05	0.00E+00	2.25E-04	1.13E-03
11	E55	80	Combination Long Haul Truck	12	0.00E+00	5.20E-06	3.49E-07	4.46E+00	2.12E-08	5.33E-03	3.96E-06	5.80E-03	3.45E-04	6.94E-05	3.59E-04	1.06E-04	1.06E-04	6.81E-04	1.49E-05	0.00E+00	2.51E-04	1.09E-03
11	E56	80	Passenger Car	280	0.00E+00	3.37E-

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E60	80	Passenger Car	507	0.00E+00	6.08E-06	6.59E-07	2.34E+01	4.24E-05	1.56E-01	1.35E-05	1.04E-03	2.79E-03	4.84E-04	1.32E-03	8.49E-04	8.72E-04	7.94E-05	1.19E-04	3.34E-08	4.46E-04	1.63E-04
11	E60	80	Passenger Truck	849	0.00E+00	1.31E-05	1.39E-06	5.40E+01	8.37E-05	2.88E-01	2.74E-05	3.09E-03	5.00E-03	8.87E-04	2.62E-03	1.70E-03	1.75E-03	3.82E-04	2.74E-04	7.43E-08	8.77E-04	5.05E-04
11	E60	80	Single Unit Short Haul Truck	99	0.00E+00	1.87E-05	9.26E-07	1.83E+01	1.50E-05	3.67E-02	1.98E-05	9.56E-03	1.17E-03	2.65E-04	2.27E-03	5.53E-04	5.61E-04	1.83E-03	7.38E-05	2.93E-08	1.71E-03	1.79E-03
11	E60	80	Single Unit Long Haul Truck	4	0.00E+00	8.10E-07	4.00E-08	7.74E-01	6.41E-07	1.52E-03	8.63E-07	4.09E-04	5.35E-05	1.17E-05	9.90E-05	2.38E-05	2.41E-05	7.73E-05	3.12E-06	1.22E-09	7.48E-05	7.65E-05
11	E60	80	Combination Short Haul Truck	44	0.00E+00	1.93E-05	1.38E-06	1.60E+01	6.10E-08	1.71E-02	1.42E-05	1.99E-02	1.17E-03	2.88E-04	1.15E-03	4.08E-04	4.06E-04	2.41E-03	5.35E-05	0.00E+00	7.47E-04	3.75E-03
11	E60	80	Combination Long Haul Truck	40	0.00E+00	1.73E-05	1.16E-06	1.48E+01	7.05E-08	1.77E-02	1.31E-05	1.93E-02	1.15E-03	2.31E-04	1.19E-03	3.51E-04	3.53E-04	2.26E-03	4.95E-05	0.00E+00	8.36E-04	3.63E-03
11	E61	80	Passenger Car	266	0.00E+00	3.19E-06	3.46E-07	1.23E+01	2.22E-05	8.20E-02	7.10E-06	5.46E-04	1.46E-03	2.54E-04	6.91E-04	4.45E-04	4.57E-04	4.16E-05	6.24E-05	1.75E-08	2.34E-04	8.57E-05
11	E61	80	Passenger Truck	445	0.00E+00	6.86E-06	7.27E-07	2.83E+01	4.39E-05	1.51E-01	1.43E-05	1.62E-03	2.62E-03	4.65E-04	1.37E-03	8.93E-04	9.15E-04	2.00E-04	1.43E-04	3.90E-08	4.60E-04	2.65E-04
11	E61	80	Single Unit Short Haul Truck	9	0.00E+00	1.67E-06	8.29E-08	1.64E+00	1.34E-06	3.29E-03	1.78E-06	8.56E-04	1.05E-04	2.37E-05	2.03E-04	4.95E-05	5.02E-05	1.64E-04	6.61E-06	2.62E-09	1.53E-04	1.60E-04
11	E61	80	Combination Short Haul Truck	3	0.00E+00	1.52E-06	1.09E-07	1.26E+00	4.82E-09	1.35E-03	1.12E-06	1.57E-03	9.24E-05	2.28E-05	9.09E-05	3.22E-05	3.20E-05	1.90E-04	4.23E-06	0.00E+00	5.90E-05	2.96E-04
11	E61	80	Combination Long Haul Truck	3	0.00E+00	1.36E-06	9.15E-08	1.17E+00	5.57E-09	1.40E-03	1.04E-06	1.52E-03	9.06E-05	1.82E-05	9.42E-05	2.77E-05	2.79E-05	1.79E-04	3.91E-06	0.00E+00	6.60E-05	2.87E-04
11	E62	80	Passenger Car	248	0.00E+00	2.98E-06	3.23E-07	1.15E+01	2.08E-05	7.66E-02	6.63E-06	5.11E-04	1.37E-03	2.37E-04	6.46E-04	4.16E-04	4.27E-04	3.89E-05	5.83E-05	1.64E-08	2.19E-04	8.00E-05
11	E62	80	Passenger Truck	416	0.00E+00	6.41E-06	6.79E-07	2.65E+01	4.10E-05	1.41E-01	1.34E-05	1.51E-03	2.45E-03	4.34E-04	1.28E-03	8.34E-04	8.55E-04	1.87E-04	1.34E-04	3.64E-08	4.30E-04	2.47E-04
11	E62	80	Single Unit Short Haul Truck	18	0.00E+00	3.40E-06	1.69E-07	3.33E+00	2.73E-06	6.69E-03	3.61E-06	1.74E-03	2.13E-04	4.83E-05	4.13E-04	1.01E-04	1.02E-04	3.34E-04	1.34E-05	5.33E-09	3.11E-04	3.26E-04
11	E62	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.28E-09	1.41E-01	1.17E-07	2.77E-04	1.57E-07	7.46E-05	9.74E-06	2.13E-06	1.80E-05	4.33E-06	4.39E-06	1.41E-05	5.68E-07	2.22E-10	1.36E-05	1.39E-05
11	E62	80	Combination Short Haul Truck	11	0.00E+00	4.89E-06	3.50E-07	4.05E+00	1.54E-08	4.33E-03	3.59E-06	5.04E-03	2.96E-04	7.30E-05	2.91E-04	1.03E-04	1.03E-04	6.09E-04	1.36E-05	0.00E+00	1.89E-04	9.50E-04
11	E62	80	Combination Long Haul Truck	10	0.00E+00	4.37E-06	2.93E-07	3.75E+00	1.79E-08	4.49E-03	3.33E-06	4.88E-03	2.91E-04	5.84E-05	3.02E-04	8.89E-05	8.94E-05	5.73E-04	1.25E-05	0.00E+00	2.12E-04	9.20E-04
10	E63	70	Passenger Car	728	0.00E+00	9.39E-06	1.02E-06	3.46E+01	6.54E-05	2.35E-01	2.08E-05	1.46E-03	5.65E-03	9.06E-04	2.02E-03	1.31E-03	1.35E-03	1.31E-04	1.76E-04	4.80E-08	6.88E-04	2.29E-04
10	E63	70	Passenger Truck	1220	0.00E+00	2.06E-05	2.18E-06	7.96E+01	1.30E-04	4.34E-01	4.27E-05	4.57E-03	1.03E-02	1.67E-03	4.07E-03	2.66E-03	2.72E-03	5.93E-04	4.00E-04	1.07E-07	1.36E-03	7.52E-04
10	E63	70	Single Unit Short Haul Truck	123	0.00E+00	2.89E-05	1.45E-06	2.27E+01	2.36E-05	4.54E-02	3.08E-05	1.43E-02	2.03E-03	4.07E-04	3.52E-03	8.64E-04	8.78E-04	2.27E-03	9.12E-05	3.69E-08	2.63E-03	2.67E-03
10	E63	70	Single Unit Long Haul Truck	5	0.00E+00	1.26E-06	6.27E-08	9.61E-01	1.02E-06	1.90E-03	1.34E-06	6.13E-04	9.28E-05	1.81E-05	1.54E-04	3.74E-05	3.80E-05	9.60E-05	3.87E-06	1.55E-09	1.15E-04	1.15E-04
10	E63	70	Combination Short Haul Truck	78	0.00E+00	4.07E-05	2.90E-06	2.96E+01	1.32E-07	3.51E-02	2.99E-05	4.29E-02	3.09E-03	6.78E-04	2.48E-03	8.59E-04	8.56E-04	4.47E-03	9.89E-05	0.00E+00	1.63E-03	8.08E-03
10	E63	70	Combination Long Haul Truck	72	0.00E+00	3.70E-05	2.46E-06	2.76E+01	1.53E-07	3.72E-02	2.80E-05	4.23E-02	3.08E-03	5.62E-04	2.56E-03	7.45E-04	7.53E-04	4.21E-03	9.24E-05	0.00E+00	1.82E-03	7.99E-03
10	E64	70	Passenger Car	462	0.00E+00	5.96E-06	6.44E-07	2.19E+01	4.15E-05	1.49E-01	1.32E-05	9.25E-04	3.58E-03	5.75E-04	1.28E-03	8.32E-04	8.54E-04	8.28E-05	1.11E-04	3.04E-08	4.36E-04	1.45E-04
10	E64	70	Passenger Truck	774	0.00E+00	1.31E-05	1.38E-06	5.05E+01	8.25E-05	2.75E-01	2.71E-05	2.90E-03	6.51E-03	1.06E-03	2.58E-03	1.69E-03	1.73E-03	3.76E-04	2.54E-04	6.81E-08	8.64E-04	4.77E-04
10	E64	70	Single Unit Short Haul Truck	88	0.00E+00	2.07E-05	1.04E-06	1.62E+01	1.69E-05	3.25E-02	2.20E-05	1.02E-02	1.46E-03	2.91E-04	2.52E-03	6.19E-04	6.29E-04	1.62E-03	6.53E-05	2.64E-08	1.88E-03	1.91E-03
10	E64	70	Single Unit Long Haul Truck	4	0.00E+00	9.02E-07	4.49E-08	6.89E-01	7.31E-07	1.36E-03	9.60E-07	4.39E-04	6.65E-05	1.30E-05	1.10E-04	2.68E-05	2.72E-05	6.87E-05	2.77E-06	1.11E-09	8.26E-05	8.23E-05
10	E64	70	Combination Short Haul Truck	48	0.00E+00	2.51E-05	1.78E-06	1.82E+01	8.15E-08	2.16E-02	1.84E-05	2.64E-02	1.90E-03	4.17E-04	1.53E-03	5.28E-04	5.27E-04	2.75E-03	6.08E-05	0.00E+00	1.00E-03	4.97E-03
10	E64	70	Combination Long Haul Truck	44	0.00E+00	2.27E-05	1.52E-06	1.70E+01	9.38E-08	2.28E-02	1.72E-05	2.60E-02	1.89E-03	3.46E-04	1.58E-03	4.58E-04	4.63E-04	2.59E-03	5.68E-05	0.00E+00	1.12E-03	4.91E-03
10	E65	70	Passenger Car	730	0.00E+00	9.40E-06	1.02E-06	3.47E+01	6.55E-05	2.35E-01	2.09E-05	1.46E-03	5.65E-03	9.08E-04	2.03E-03	1.31E-03	1.35E-03	1.31E-04	1.76E-04	4.80E-08	6.89E-04	2.29E-04
10	E65	70	Passenger Truck	1222	0.00E+00	2.06E-05	2.18E-06	7.98E+01	1.30E-04	4.34E-01	4.28E-05	4.58E-03	1.03E-02	1.67E-03	4.07E-03	2.66E-03	2.73E-03	5.94E-04	4.00E-04	1.08E-07	1.36E-03	7.53E-04
10	E65	70	Single Unit Short Haul Truck	30	0.00E+00	7.11E-06	3.56E-07	5.57E+00	5.81E-06	1.12E-02	7.57E-06	3.51E-03	5.00E-04	1.00E-04	8.65E-04	2.13E-04	2.16E-04	5.58E-04	2.24E-05	9.07E-09	6.46E-04	6.57E-04
10	E65	70	Single Unit Long Haul Truck	1	0.00E+00	3.10E-07	1.54E-08	2.36E-01	2.51E-07	4.67E-04	3.30E-07	1.51E-04	2.28E-05	4.45E-06	3.78E-05	9.19E-06	9.34E-06	2.36E-05	9.52E-07	3.82E-10	2.83E-05	2.83E-05
10	E65	70	Combination Short Haul Truck	25	0.00E+00	1.29E-05	9.18E-07	9.38E+00	4.20E-08	1.11E-02	9.45E-06	1.36E-02	9.80E-04	2.15E-04	7.87E-04	2.72E-04	2.71E-04	1.41E-03	3.13E-05	0.00E+00	5.15E-04	2.56E-03
10	E65	70	Combination Long Haul Truck	23	0.00E+00	1.17E-05	7.80E-07	8.75E+00	4.83E-08	1.18E-02	8.87E-06	1.34E-02	9.75E-04	1.78E-04	8.12E-04	2.36E-04	2.38E-04	1.33E-03	2.93E-05	0.00E+00	5.75E-04	2.53E-03
10	E66	70	Passenger Car	359	0.00E+00	4.62E-06	5.00E-07	1.70E+01	3.22E-05	1.16E-01	1.03E-05	7.18E-04	2.78E-03	4.46E-04	9.96E-04	6.46E-04	6.62E-04	6.43E-05	8.65E-05	2.36E-08	3.39E-04	1.13E-04
10	E66	70	Passenger Truck	601	0.00E+00	1.01E-05	1.07E-06	3.92E+01	6.41E-05	2.14E-01	2.10E-05	2.25E-03	5.05E-03	8.22E-04	2.00E-03	1.31E-03	1.34E-03	2.92E-04	1.97E-04	5.29E-08	6.71E-04	3.70E-04
10	E66	70	Single Unit Short Haul Truck	24	0.00E+00	5.66E-06	2.83E-07	4.43E+00	4.63E-06	8.89E-03	6.02E-06	2.79E-03	3.98E-04	7.96E-05	6.89E-04	1.69E-04	1.72E-04	4.44E-04	1.78E-05	7.22E-09	5.14E-04	5.23E-04
10	E66	70	Single Unit Long Haul Truck	1	0.00E+00	2.46E-07	1.23E-08	1.88E-01	2.00E-07	3.71E-04	2.62E-07	1.20E-04	1.82E-05	3.54E-06	3.01E-05	7.31E-06	7.43E-06	1.88E-05	7.58E-07	3.04E-10	2.26E-05	2.25E-05
10	E66	70	Combination Short Haul Truck	22	0.00E+00	1.16E-05	8.23E-07	8.41E+00	3.76E-08	9.96E-03	8.47E-06	1.22E-02	8.78E-04	1.92E-04	7.05E-04	2.44E-04	2.43E-04	1.27E-03	2.81E-05	0.00E+00	4.62E-04	2.29E-03
10	E66	70	Combination Long Haul Truck	20	0.00E+00	1.05E-05	6.99E-07	7.84E+00	4.33E-08	1.05E-02	7.95E-06	1.20E-02	8.74E-04	1.60E-04	7.28E-04	2.12E-04	2.14E-04	1.20E-03	2.62E-05	0.00E+00	5.16E-04	2.27E-03
11	E67	80	Passenger Car	244	0.00E+00	2.93E-06	3.17E-07	1.12E+01	2.04E-05	7.52E-02	6.51E-06	5.01E-04	1.34E-03	2.33E-04	6.34E-04	4.08E-04	4.19E-04	3.82E-05	5.72E-05	1.60E-08	2.15E-04	7.85E-05
11	E67	80	Passenger Truck	408	0.00E+00	6.29E-06	6.67E-07	2.60E+01	4.03E-05	1.38E-01	1.32E-05	1.49E-03	2.40E-03	4.26E-04	1.26E-03	8.19E-04	8.39E-04	1.84E-04	1.32E-04	3.57E-08	4.22E-04	2.43E-04
11	E67	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	E67	80	Combination Short Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.42E-03	1.18E-06	1.66E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.38E-05	2.00E-04	4.45E-06	0.00E+00	6.21E-05	3.12E-04
11	E67	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.65E-08	1.23E+00	5.87E-09	1.47E-03	1.09E-06	1.60E-03	9.55E-05	1.92E-05	9.92E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.02E-04
11	E68	80	Passenger Car	264	0.00E+00	3.17E-06	3.44E-07	1.22E+01	2.21E-05	8.15E-02	7.06E-06	5.43E-04	1.45E-03	2.53E-04	6.87E-04	4.43E-04	4.55E-04	4.14E-05	6.20E-05	1.74E-08	2.33E-04	8.52E-05
11	E68	80	Passenger Truck	443	0.00E+00	6.82E-06	7.23E-07	2.82E+01	4.37E-05	1.50E-01	1.43E-05	1.61E-03	2.61E-03	4.62E-04	1.36E-03	8.88E-04	9.10E-04	1.99E-04	1.43E-04	3.87E-08	4.57E-04	2.63E-04
11	E68	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.78E-03	4.20E-06	2.03E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.20E-09	3.62E-04	3.79E-04
11	E68	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.47E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.67E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.11E-06	1.64E-05	6.61E-07	2.58E-10	1.58E-05	1.62E-05
11	E68	80	Combination Short Haul Truck	12	0.00E+00	5.28E-06	3.78E-07	4.38E+00	1.67E-08	4.68E-03	3.88E-06	5.45E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.58E-04	1.46E-05	0.00E+00	2.04E-04	1.03E-03
11	E68	80	Combination Long Haul Truck	11	0.00E+00	4.72E-06	3.17E-07	4.05E+00	1.93E-08	4.85E-03	3.60E-06	5.27E-03	3.14E-04	6.31E-05	3.26E-04	9.60E-05	9.66E-05	6.19E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
10	E69	70	Passenger Car	270	0.00E+00	3.48E-06	3.77E-07	1.28E+01	2.43E-05	8.71E-02	7.73E-06	5.41E-04	2.09E-03	3.36E-04	7.51E-04	4.87E-04	4.99E-04	4.84E-05	6.52E-05	1.78E-08	2.55E-04	8.48E-05
10	E69	70	Passenger Truck	453	0.00E+00	7.65E-06	8.09E-07	2.96E+01	4.83E-05	1.61E-01	1.58E-05	1.70E-03	3.81E-03	6.20E-04	1.51E-03	9.86E-04	1.01E-03	2.20E-04	1.48E-04	3.99E-08	5.05E-04	2.79E-04
10	E69	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E69	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	E70	70	Passenger Car	418	0.00E+00	5.39E-06	5.83E-07	1.99E+01	3.75E-05	1.35E-01	1.20E-05	8.37E-04	3.24E-03	5.20E-04	1.16E-03	7.52E-04	7.72E-04	7.49E-05	1.01E-04	2.75E-08	3.95E-04	1.31E-04
10	E70	70	Passenger Truck	700	0.00E+00	1.18E-05	1.25E-06	4.57E+01	7.47E-05	2.49E-01	2.45E-05	2.63E-03	5.89E-03	9.59E-04	2.33E-03	1.52E-03	1.56E-03	3.40E-04	2.29E-04	6.16E-08	7.82E-04	4.32E-04
10	E70	70	Single Unit Short Haul Truck	22	0.00E+00	5.18E-06	2.59E-07	4.06E+00	4.23E-06	8.14E-03	5.51E-06	2.56E-03	3.64E-04	7.28E-05	6.30E-04	1.55E-04	1.57E-04	4.06E-04	1.63E-05	6.61E-09	4.71E-04	4.79E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	1.72E-01	1.83E-07	3.40E-04	2.40E-07	1.10E-04	1.66E-05	3.24E-06	2.75E-05	6.69E-06	6.80E-06	1.72E-05	6.94E-07	2.78E-10	2.06E-05	2.06E-05
10	E70	70	Combination Short Haul Truck	6	0.00E+00	3.26E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.87E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	E70	70	Combination Long Haul Truck	6	0.00E+00	2.96E-06	1.97E-07	2.21E+00	1.22E-08	2.97E-03	2.24E-06	3.39E-03	2.46E-04	4.50E-05	2.05E-04	5.96E-05	6.03E-05	3.37E-04	7.39E-06	0.00E+00	1.45E-04	6.39E-04
10	E71	70	Passenger Car	560	0.00E+00	7.21E-06	7.80E-07	2.66E+01	5.02E-05	1.80E-01	1.60E-05	1.12E-03	4.34E-03	6.97E-04	1.55E-03	1.01E-03	1.03E-03	1.00E-04	1.35E-04	3.68E-08	5.29E-04	1.76E-04
10	E71	70	Passenger Truck	937	0.00E+00	1.58E-05	1.67E-06	6.12E+01	1.00E-04	3.33E-01	3.28E-05	3.51E-03	7.89E-03	1.28E-03	3.12E-03	2.04E-03	2.09E-03	4.56E-04	3.07E-04	8.25E-08	1.05E-03	5.78E-04
10	E71	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E71	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	E71	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.60E-04
10	E72	70	Passenger Car	508	0.00E+00	6.54E-06	7.08E-07	2.41E+01	4.56E-05	1.64E-01	1.45E-05	1.02E-03	3.93E-03	6.32E-04	1.41E-03	9.14E-04	9.38E-04	9.10E-05	1.22E-04	3.34E-08	4.80E-04	1.59E-04
10	E72	70	Passenger Truck	850	0.00E+00	1.44E-05	1.52E-06	5.55E+01	9.07E-05	3.02E-01	2.98E-05	3.19E-03	7.16E-03	1.16E-03	2.83E-03	1.85E-03	1.90E-03	4.13E-04	2.79E-04	7.49E-08	9.49E-04	5.24E-04
10	E72	70	Single Unit Short Haul Truck	26	0.00E+00	6.08E-06	3.05E-07	4.76E+00	4.97E-06	9.55E-03	6.47E-06	3.00E-03	4.27E-04	8.55E-05	7.40E-04	1.82E-04	1.85E-04	4.77E-04	1.92E-05	7.76E-09	5.52E-04	5.62E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.32E-08	2.02E-01	2.14E-07	3.99E-04	2.82E-07	1.29E-04	1.95E-05	3.80E-06	3.23E-05	7.86E-06	7.98E-06	2.02E-05	8.14E-07	3.26E-10	2.42E-05	2.42E-05
10	E72	70	Combination Short Haul Truck	7	0.00E+00	3.80E-06	2.71E-07	2.77E+00	1.24E-08	3.27E-03	2.79E-06	4.01E-03	2.89E-04	6.33E-05	2.32E-04	8.01E-05	7.99E-05	4.17E-04	9.23E-06	0.00E+00	1.52E-04	7.55E-04
10	E72	70	Combination Long Haul Truck	7	0.00E+00	3.45E-06	2.30E-07	2.58E+00	1.42E-08	3.47E-03	2.62E-06	3.95E-03	2.87E-04	5.25E-05	2.39E-04	6.96E-05	7.03E-05	3.93E-04	8.62E-06	0.00E+00	1.70E-04	7.46E-04
9	E73	60	Passenger Car	103	0.00E+00	1.53E-06	1.65E-07	5.13E+00	1.06E-05	3.81E-02	3.38E-06	2.10E-04	1.05E-03	1.61E-04	3.29E-04	2.13E-04	2.19E-04	2.15E-05	2.59E-05	7.13E-09	1.12E-04	3.29E-05
9	E73	60	Passenger Truck	173	0.00E+00	3.37E-06	3.56E-07	1.17E+01	2.11E-05	6.77E-02	6.96E-06	6.86E-04	1.92E-03	2.98E-04	6.57E-04	4.30E-04	4.40E-04	9.16E-05	5.85E-05	1.62E-08	2.19E-04	1.14E-04
9	E73	60	Single Unit Short Haul Truck	7	0.00E+00	2.15E-06	1.07E-07	1.37E+00	1.77E-06	2.64E-03	2.29E-06	1.02E-03	1.74E-04	3.14E-05	2.60E-04	6.43E-05	6.53E-05	1.37E-04	5.52E-06	2.27E-09	1.95E-04	1.92E-04
9	E73	60	Combination Short Haul Truck	8	0.00E+00	4.59E-06	3.20E-07	2.99E+00	1.62E-08	4.01E-03	3.40E-06	4.98E-03	4.27E-04	8.44E-05	2.92E-04	9.53E-05	9.53E-05	4.50E-04	9.98E-06	0.00E+00	1.96E-04	9.40E-04
9	E73	60	Combination Long Haul Truck	7	0.00E+00	4.11E-06	2.68E-07	2.80E+00	1.86E-08	4.32E-03	3.18E-06	4.94E-03	4.28E-04	7.28E-05	3.00E-04	8.17E-05	8.27E-05	4.26E-04	9.36E-06	0.00E+00	2.17E-04	9.32E-04
9	E74	60	Passenger Car	52	0.00E+00	7.70E-07	8.32E-08	2.59E+00	5.36E-06	1.92E-02	1.70E-06	1.06E-04	5.27E-04	8.11E-05	1.66E-04	1.07E-04	1.10E-04	1.09E-05	1.31E-05	3.60E-09	5.63E-05	1.66E-05
9	E74	60	Passenger Truck	87	0.00E+00	1.70E-06	1.79E-07	5.90E+00	1.06E-05	3.41E-02	3.51E-06	3.46E-04	9.68E-04	1.50E-04	3.31E-04	2.17E-04	2.22E-04	4.62E-05	2.95E-05	8.18E-09	1.11E-04	5.73E-05
53	E75	70	Passenger Car	637	0.00E+00	7.97E-06	8.62E-07	3.06E+01	5.54E-05	1.98E-01	1.77E-05	1.30E-03	4.87E-03	7.84E-04	1.72E-03	1.11E-03	1.14E-03	1.14E-04	1.55E-04	4.23E-08	5.84E-04	2.04E-04
53	E75	70	Passenger Truck	1067	0.00E+00	1.73E-05	1.84E-06	7.05E+01	1.10E-04	3.65E-01	3.62E-05	3.97E-03	8.74E-03	1.43E-03	3.44E-03	2.24E-03	2.29E-03	5.16E-04	3.56E-04	9.31E-08	1.15E-03	6.52E-04
53	E75	70	Single Unit Short Haul Truck	31	0.00E+00	7.

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	E79	70	Passenger Truck	1238	0.00E+00	2.01E-05	2.13E-06	8.18E+01	1.28E-04	4.23E-01	4.19E-05	4.61E-03	1.01E-02	1.65E-03	3.99E-03	2.60E-03	2.66E-03	5.98E-04	4.13E-04	1.08E-07	1.33E-03	7.56E-04
53	E79	70	Single Unit Short Haul Truck	47	0.00E+00	1.10E-05	5.53E-07	8.64E+00	9.02E-06	1.73E-02	1.17E-05	5.45E-03	7.76E-04	1.55E-04	1.34E-03	3.30E-04	3.35E-04	8.66E-04	3.48E-05	1.41E-08	1.00E-03	1.02E-03
53	E79	70	Single Unit Long Haul Truck	2	0.00E+00	4.81E-07	2.39E-08	3.67E-01	3.89E-07	7.24E-04	5.12E-07	2.34E-04	3.54E-05	6.90E-06	5.86E-05	1.43E-05	1.45E-05	3.66E-05	1.48E-06	5.92E-10	4.40E-05	4.39E-05
53	E79	70	Combination Short Haul Truck	17	0.00E+00	8.97E-06	6.38E-07	6.52E+00	2.92E-08	7.72E-03	6.57E-06	9.45E-03	6.81E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.83E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
53	E79	70	Combination Long Haul Truck	16	0.00E+00	8.13E-06	5.42E-07	6.08E+00	3.36E-08	8.18E-03	6.16E-06	9.31E-03	6.78E-04	1.24E-04	5.64E-04	1.64E-04	1.66E-04	9.27E-04	2.03E-05	0.00E+00	4.00E-04	1.76E-03
53	E80	70	Passenger Car	184	0.00E+00	2.29E-06	2.48E-07	8.82E+00	1.60E-05	5.71E-02	5.10E-06	3.74E-04	1.40E-03	2.26E-04	4.97E-04	3.20E-04	3.28E-04	3.29E-05	4.48E-05	1.22E-08	1.68E-04	5.86E-05
53	E80	70	Passenger Truck	307	0.00E+00	5.00E-06	5.29E-07	2.03E+01	3.17E-05	1.05E-01	1.04E-05	1.14E-03	2.52E-03	4.11E-04	9.91E-04	6.45E-04	6.61E-04	1.49E-04	1.02E-04	2.68E-08	3.31E-04	1.88E-04
53	E80	70	Single Unit Short Haul Truck	43	0.00E+00	1.01E-05	5.08E-07	7.94E+00	8.28E-06	1.59E-02	1.08E-05	5.00E-03	7.12E-04	1.42E-04	1.23E-03	3.03E-04	3.08E-04	7.95E-04	3.20E-05	1.29E-08	9.21E-04	9.36E-04
53	E80	70	Single Unit Long Haul Truck	2	0.00E+00	4.41E-07	2.20E-08	3.37E-01	3.57E-07	6.65E-04	4.70E-07	2.15E-04	3.25E-05	6.34E-06	5.39E-05	1.31E-05	1.33E-05	3.36E-05	1.36E-06	5.44E-10	4.04E-05	4.03E-05
53	E80	70	Combination Short Haul Truck	27	0.00E+00	1.39E-05	9.86E-07	1.01E+01	4.51E-08	1.19E-02	1.02E-05	1.46E-02	1.05E-03	2.30E-04	8.45E-04	2.92E-04	2.91E-04	1.52E-03	3.36E-05	0.00E+00	5.54E-04	2.75E-03
53	E80	70	Combination Long Haul Truck	24	0.00E+00	1.26E-05	8.38E-07	9.39E+00	5.19E-08	1.26E-02	9.53E-06	1.44E-02	1.05E-03	1.91E-04	8.72E-04	2.53E-04	2.56E-04	1.43E-03	3.14E-05	0.00E+00	6.18E-04	2.72E-03
9	E81	60	Passenger Car	8	0.00E+00	1.16E-07	1.26E-08	3.90E-01	8.09E-07	2.90E-03	2.57E-07	1.60E-05	7.96E-05	1.22E-05	2.51E-05	1.62E-05	1.66E-05	1.64E-06	1.97E-06	5.43E-10	8.51E-06	2.51E-06
9	E81	60	Passenger Truck	13	0.00E+00	2.56E-07	2.71E-08	8.91E-01	1.60E-06	5.15E-03	5.30E-07	5.22E-05	1.46E-04	2.27E-05	5.00E-05	3.27E-05	3.35E-05	6.98E-06	4.46E-06	1.23E-09	1.67E-05	8.66E-06
9	E82	60	Passenger Car	125	0.00E+00	1.85E-06	2.00E-07	6.23E+00	1.29E-05	4.63E-02	4.11E-06	2.55E-04	1.27E-03	1.95E-04	4.00E-04	2.59E-04	2.65E-04	2.62E-05	3.15E-05	8.66E-09	1.36E-04	4.00E-05
9	E82	60	Passenger Truck	210	0.00E+00	4.09E-06	4.32E-07	1.42E+01	2.56E-05	8.22E-02	8.45E-06	8.33E-04	2.33E-03	3.62E-04	7.98E-04	5.22E-04	5.35E-04	1.11E-04	7.11E-05	1.97E-08	2.66E-04	1.38E-04
9	E82	60	Single Unit Short Haul Truck	4	0.00E+00	1.13E-06	5.63E-08	7.16E-01	9.27E-07	1.38E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.36E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	E82	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.60E-08	8.02E-01	4.36E-09	1.08E-03	9.12E-07	1.34E-03	1.14E-04	2.27E-05	7.85E-05	2.56E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	E82	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.21E-08	7.53E-01	5.00E-09	1.16E-03	8.53E-07	1.32E-03	1.15E-04	1.96E-05	8.06E-05	2.19E-05	2.22E-05	1.14E-04	2.51E-06	0.00E+00	5.83E-05	2.50E-04
10	E83	70	Passenger Car	186	0.00E+00	2.40E-06	2.59E-07	8.83E+00	1.67E-05	5.99E-02	5.32E-06	3.72E-04	1.44E-03	2.31E-04	5.17E-04	3.35E-04	3.43E-04	3.33E-05	4.48E-05	1.22E-08	1.76E-04	5.84E-05
10	E83	70	Passenger Truck	311	0.00E+00	5.26E-06	5.56E-07	2.03E+01	3.32E-05	1.11E-01	1.09E-05	1.17E-03	2.62E-03	4.26E-04	1.04E-03	6.78E-04	6.95E-04	1.51E-04	1.02E-04	2.74E-08	3.48E-04	1.92E-04
10	E83	70	Single Unit Short Haul Truck	15	0.00E+00	3.57E-06	1.79E-07	2.80E+00	2.92E-06	5.61E-03	3.80E-06	1.76E-03	2.51E-04	5.02E-05	4.35E-04	1.07E-04	1.08E-04	2.80E-04	1.13E-05	4.56E-09	3.25E-04	3.30E-04
10	E83	70	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.75E-09	1.19E-01	1.26E-07	2.35E-04	1.66E-07	7.58E-05	1.15E-05	2.23E-06	1.90E-05	4.62E-06	4.69E-06	1.19E-05	4.79E-07	1.92E-10	1.42E-05	1.42E-05
10	E83	70	Combination Short Haul Truck	15	0.00E+00	7.90E-06	5.62E-07	5.74E+00	2.57E-08	6.80E-03	5.79E-06	8.32E-03	6.00E-04	1.31E-04	4.82E-04	1.66E-04	1.66E-04	8.66E-04	1.92E-05	0.00E+00	3.16E-04	1.57E-03
10	E83	70	Combination Long Haul Truck	14	0.00E+00	7.16E-06	4.78E-07	5.35E+00	2.96E-08	7.20E-03	5.43E-06	8.20E-03	5.97E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.17E-04	1.79E-05	0.00E+00	3.52E-04	1.55E-03
10	E84	70	Passenger Car	186	0.00E+00	2.39E-06	2.59E-07	8.82E+00	1.67E-05	5.99E-02	5.32E-06	3.72E-04	1.44E-03	2.31E-04	5.16E-04	3.34E-04	3.43E-04	3.33E-05	4.48E-05	1.22E-08	1.75E-04	5.83E-05
10	E84	70	Passenger Truck	311	0.00E+00	5.25E-06	5.56E-07	2.03E+01	3.32E-05	1.11E-01	1.09E-05	1.17E-03	2.62E-03	4.26E-04	1.04E-03	6.78E-04	6.94E-04	1.51E-04	1.02E-04	2.74E-08	3.47E-04	1.92E-04
10	E84	70	Single Unit Short Haul Truck	2	0.00E+00	3.63E-07	1.82E-08	2.85E-01	2.97E-07	5.71E-04	3.87E-07	1.79E-04	2.55E-05	5.11E-06	4.42E-05	1.09E-05	1.10E-05	2.85E-05	1.15E-06	4.64E-10	3.30E-05	3.36E-05
10	E84	70	Combination Short Haul Truck	7	0.00E+00	3.65E-06	2.60E-07	2.66E+00	1.19E-08	3.14E-03	2.67E-06	3.85E-03	2.77E-04	6.07E-05	2.23E-04	7.69E-05	7.67E-05	4.00E-04	8.86E-06	0.00E+00	1.46E-04	7.24E-04
10	E84	70	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.21E-07	2.47E+00	1.37E-08	3.33E-03	2.51E-06	3.79E-03	2.76E-04	5.04E-05	2.30E-04	6.68E-05	6.75E-05	3.77E-04	8.28E-06	0.00E+00	1.63E-04	7.16E-04
9	E85	60	Passenger Car	1053	0.00E+00	1.56E-05	1.69E-06	5.24E+01	1.09E-04	3.89E-01	3.45E-05	2.15E-03	1.07E-02	1.64E-03	3.37E-03	2.17E-03	2.23E-03	2.20E-04	2.65E-04	7.29E-08	1.14E-03	3.37E-04
9	E85	60	Passenger Truck	1764	0.00E+00	3.44E-05	3.63E-06	1.20E+02	2.15E-04	6.91E-01	7.11E-05	7.01E-03	1.96E-02	3.04E-03	6.71E-03	4.39E-03	4.50E-03	9.36E-04	5.98E-04	1.66E-07	2.24E-03	1.16E-03
9	E85	60	Single Unit Short Haul Truck	55	0.00E+00	1.63E-05	8.14E-07	1.04E+01	1.34E-05	2.00E-02	1.74E-05	7.77E-03	1.32E-03	2.39E-04	1.97E-03	4.88E-04	4.96E-04	1.04E-03	4.19E-05	1.72E-08	1.48E-03	1.46E-03
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	7.13E-07	3.54E-08	4.43E-01	5.83E-07	8.49E-04	7.60E-07	3.36E-04	5.92E-05	1.06E-05	8.69E-05	2.13E-05	2.16E-05	4.42E-05	1.79E-06	7.33E-10	6.50E-05	6.30E-05
9	E85	60	Combination Short Haul Truck	34	0.00E+00	2.03E-05	1.41E-06	1.32E+01	7.17E-08	1.77E-02	1.50E-05	2.20E-02	1.88E-03	3.73E-04	1.29E-03	4.21E-04	4.21E-04	1.99E-03	4.41E-05	0.00E+00	8.67E-04	4.15E-03
9	E85	60	Combination Long Haul Truck	31	0.00E+00	1.81E-05	1.19E-06	1.24E+01	8.22E-08	1.91E-02	1.40E-05	2.18E-02	1.89E-03	3.22E-04	1.33E-03	3.61E-04	3.65E-04	1.88E-03	4.13E-05	0.00E+00	9.59E-04	4.11E-03
9	E86	60	Passenger Car	1132	0.00E+00	1.68E-05	1.81E-06	5.63E+01	1.17E-04	4.18E-01	3.71E-05	2.31E-03	1.15E-02	1.76E-03	3.62E-03	2.34E-03	2.40E-03	2.36E-04	2.85E-04	7.83E-08	1.23E-03	3.62E-04
9	E86	60	Passenger Truck	1895	0.00E+00	3.70E-05	3.90E-06	1.28E+02	2.31E-04	7.42E-01	7.63E-05	7.53E-03	2.11E-02	3.27E-03	7.21E-03	4.72E-03	4.83E-03	1.01E-03	6.42E-04	1.78E-07	2.41E-03	1.25E-03
9	E86	60	Single Unit Short Haul Truck	49	0.00E+00	1.43E-05	7.16E-07	9.11E+00	1.18E-05	1.76E-02	1.53E-05	6.83E-03	1.16E-03	2.10E-04	1.73E-03	4.29E-04	4.36E-04	9.12E-04	3.68E-05	1.52E-08	1.30E-03	1.28E-03
9	E86	60	Single Unit Long Haul Truck	2	0.00E+00	6.27E-07	3.11E-08	3.89E-01	5.12E-07	7.46E-04	6.69E-07	2.95E-04	5.21E-05	9.31E-06	7.64E-05	1.87E-05	1.90E-05	3.89E-05	1.57E-06	6.45E-10	5.72E-05	5.54E-05
9	E86	60	Combination Short Haul Truck	33	0.00E+00	1.92E-05	1.34E-06	1.25E+01	6.80E-08	1.68E-02	1.42E-05	2.09E-02	1.79E-03	3.54E-04	1.22E-03	3.99E-04	3.99E-04	1.89E-03	4.18E-05	0.00E+00	8.22E-04	3.93E-03
9	E86	60	Combination Long Haul Truck	30	0.00E+00	1.72E-05	1.12E-06	1.17E+01	7.80E-08	1.81E-02	1.33E-05	2.07E-02	1.79E-03	3.05E-04	1.26E-03	3.42E-04	3.46E-04	1.79E-03	3.92E-05	0.00E+00	9.09E-04	3.90E-03
9	E87	60	Passenger Car	890	0.00E+00	1.32E-05	1.42E-06	4.43E+01	9.17E-05	3.29E-01	2.92E-05	1.81E-03	9.02E-03	1.39E-03	2.84E-03	1.84E-03	1.89E-03	1.86E-04	2.24E-04	6.16E-08	9.64E-04	2.84E-04
9	E87	60	Passenger Truck	1491	0.00E+00	2.91E-05	3.07E-06	1.01E+02	1.82E-04	5.84E-01	6.00E-05	5.92E-03	1.66E-02	2.57E-03	5.67E-03	3.71E-03	3.80E-03	7.91E-04	5.05E-04	1.40E-07	1.89E-03	9.81E-04
9	E87	60	Single Unit Short Haul Truck	154	0.00E+00	4.52E-05	2.26E-06	2.87E+01	3.71E-05	5.54E-02	4.82E-05	2.15E-02	3.65E-03	6.61E-04	5.46E-03	1.35E-03	1.37E-03	2.87E-03	1.16E-04	4.78E-08	4.10E-03	4.03E-03
9	E87	60	Single Unit Long Haul Truck	7	0.00E+00	1.97E-06	9.80E-08	1.23E+00	1.61E-06	2.35E-03	2.11E-06	9.31E-04	1.64E-04	2.93E-05	2.41E-04	5.89E-05	5.98E-05	1.22E-04	4.95E-06	2.03E-09	1.80E-04	1.75E-04
9	E87	60	Combination Short Haul Truck	77	0.00E+00	4.53E-05	3.16E-06	2.95E+01	1.60E-07	3.95E-02	3.35E-05	4.91E-02	4.21E-03	8.33E-04	2.88E-03	9.40E-04	9.40E-04	4.44E-03	9.85E-05	0.00E+00	1.94E-03	9.27E-03
9	E87	60	Combination Long Haul Truck	70	0.00E+00	4.05E-05	2.65E-06	2.77E+01	1.84E-07	4.27E-02	3.14E-05	4.87E-02	4.23E-03	7.19E-04	2.96E-03	8.07E-04	8.16E-04	4.21E-03	9.23E-05	0.00E+00	2.14E-03	9.20E-03
9	E88	60	Passenger Car	881	0.00E+00	1.30E-05	1.41E-06	4.38E+01	9.08E-05	3.25E-01	2.89E-05	1.80E-03	8.93E-03	1.37E-03	2.81E-03	1.82E-03	1.87E-03	1.84E-04	2.21E-04	6.09E-08	9.54E-04	2.81E-04
9	E88	60	Passenger Truck	1475	0.00E+00	2.88E-05	3.04E-06	1.00E+02	1.80E-04	5.78E-01	5.94E-05	5.86E-03	1.64E-02	2.55E-03	5.61E-03	3.67E-03	3.76E-03	7.83E-04	5.00E-04	1.39E-07	1.87E-03	9.71E-04
9	E88	60	Single Unit Short Haul Truck	114	0.00E+00	3.36E-05	1.68E-06	2.13E+01	2.76E-05	4.12E-02	3.58E-05	1.60E-02	2.71E-03	4.91E-04	4.05E-03	1.00E-03	1.02E-03	2.13E-03	8.61E-05	3.55E-08	3.05E-03	3.00E-03
9	E88	60	Single Unit Long Haul Truck	5	0.00E+00	1.47E-06	7.28E-08	9.11E-01	1.20E-06	1.75E-03	1.56E-06	6.91E-04	1.22E-04	2.18E-05	1.79E-04	4.37E-05	4.44E-05	9.09E-05	3.67E-06	1.51E-09	1.34E-04	1.30E-04
9	E88	60	Combination Short Haul Truck	59	0.00E+00	3.46E-05	2.42E-06	2.25E+01	1.22E-07	3.02E-02	2.56E-05	3.75E-02	3.22E-03	6.37E-04	2.20E-03	7.18E-04	7.18E-04	3.40E-03	7.53E-05	0.00E+00	1.48E-03	7.08E-03
9	E88	60	Combination Long Haul Truck	54	0.00E+00	3.10E-05	2.02E-06	2.11E+01	1.40E-07	3.26E-02	2.40E-05	3.72E-02	3.23E-03	5.49E-04	2.26E-03	6.16E-04	6.24E-04	3.22E-03	7.06E-05	0.00E+00	1.64E-03	7.03E-03
9	E89	60	Passenger Car	53	0.00E+00	7.92E-07	8.55E-08	2.66E+00	5.51E-06	1.98E-02	1.75E-06	1.09E-04	5.42E-04	8.33E-05	1.71E-04	1.10E-04	1.13E-04	1.12E-05	1.34E-05	3.70E-09	5.79E-05	1.71E-05
9	E89	60	Passenger Truck	90	0.00E+00	1.75E-06	1.84E-07	6.07E+00	1.09E-05	3.51E-02	3.61E-06	3.56E-04	9.95E-04	1.54E-04	3.41E-04	2.23E-04	2.28E-04	4.75E-05	3.03E-05	8.41E-09	1.14E-04	5.89E-05
9	E89	60	Single Unit Short Haul Truck	4	0.00E+00	1.13E-06	5.63E-08	7.16E-01	9.27E-07	1.38E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.36E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	E89	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.15E-08	2.01E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.39E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.31E-05
9	E90	60	Passenger Car	47	0.00E+00	7.03E-07	7.60E-08	2.36E+00	4.89E-06	1.75E-02	1.56E-06	9.68E-05	4.81E-04	7.40E-05	1.52E-04	9.80E-05	1.01E-04	9.92E-06	1.19E-05	3.28E-09	5.14E-05	1.52E-05
9	E90	60	Passenger Truck	80	0.00E+00	1.55E-06	1.64E-07	5.39E+00	9.70E-06	3.11E-02	3.20E-06	3.16E-04	8.84E-04	1.37E-04	3.03E-04	1.98E-04	2.03E-04	4.22E-05	2.69E-05	7.47E-09	1.01E-04	5.23E-05
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	E90	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.60E-08	8.02E-01	4.36E-09	1.08E-03	9.12E-07	1.34E-03	1.14E-04	2.27E-05	7.85E-05	2.56E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	E90	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.21E-08	7.53E-01	5.00E-09	1.16E-03	8.53E-07	1.32E-03	1.15E-04	1.96E-05	8.06E-05	2.19E-05	2.22E-05	1.14E-04	2.51E-06	0.00E+00	5.83E-05	2.50E-04
9	E91	60	Passenger Car	4	0.00E+00	5.54E-08	5.98E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.72E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.05E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.45E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.38E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.95E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.54E-08	5.98E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.72E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.05E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.45E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.38E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.95E-06	4.12E-06
9	E93	60	Passenger Car	56	0.00E+00	8.36E-07	9.03E-08	2.81E+00	5.82E-06	2.09E-02	1.85E-06	1.15E-04	5.72E-04	8.80E-05	1.80E-04	1.17E-04	1.20E-04	1.18E-05	1.42E-05	3.90E-09	6.12E-05	1.80E-05
9	E93	60	Passenger Truck	95	0.00E+00	1.84E-06	1.95E-07	6.41E+00	1.15E-05	3.70E-02	3.81E-06	3.76E-04	1.05E-03	1.63E-04	3.60E-04	2.35E-04	2.41E-04	5.02E-05	3.20E-05	8.88E-09	1.20E-04	6.22E-05
9	E93	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	E93	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.08E-07	1.00E+00	5.45E-09	1.34E-03	1.14E-06	1.67E-03	1.43E-04	2.83E-05	9.81E-05	3.20E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	9.01E-08	9.41E-01	6.25E-09	1.45E-03	1.07E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.29E-05	3.13E-04
9	E94	60	Passenger Car	108	0.00E+00	1.61E-06	1.73E-07	5.39E+00	1.12E-05	4.01E-02	3.55E-06	2.21E-04	1.10E-03	1.69E-04	3.46E-04	2.24E-04	2.30E-04	2.26E-05	2.73E-05	7.50E-09	1.17E-04	3.46E-05
9	E94	60	Passenger Truck	182	0.00E+00	3.54E-06	3.74E-07	1.23E+01	2.21E-05	7.11E-02	7.31E-06	7.21E-04	2.02E-03	3.13E-04	6.91E-04	4.52E-04	4.63E-04	9.63E-05	6.15E-05	1.70E-08	2.30E-04	1.20E-04
9	E94	60	Single Unit Short Haul Truck	5	0.00E+00	1.41E-06	7.04E-08	8.95E-01	1.16E-06	1.73E-03	1.50E-06	6.72E-04	1.14E-04	2.06E-05	1.70E-04	4.22E-05	4.28E-05	8.97E-05	3.62E-06	1.49E-09	1.28E-04	1.26E-04
9	E94	60	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.45E-08	6.02E-01	3.27E-09	8.06E-04	6.84E-07	1.00E-03	8.59E-05	1.70E-05	5.88E-05	1.92E-05	1.92E-05	9.07E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	E94	60	Combination Long Haul Truck	1	0.00E+00	8.27E-07	5.41E-08	5.64E-01	3.75E-09	8.70E-04	6.40E-07	9.94E-04	8.62E-05	1.47E-05	6.04E-05	1.65E-05	1.67E-05	8.59E-05	1.88E-06	0.00E+00	4.37E-05	1.88E-04
54	E95	80	Passenger Car	376	0.00E+00	4.41E-06	4.76E-07	1.74E+01	3.07E-05	1.11E-01	9.79E-06	7.76E-04	2.17E-03	3.71E-04	9.53E-04	6.15E-04	6.31E-04	5.89E-05	8.88E-05	2.41E-08	3.23E-04	1.21E-04
54	E95	80	Passenger Truck	630	0.00E+00	9.55E-06	1.01E-06	4.06E+01	6.12E-05	2.10E-01	2.01E-05	2.31E-03	3.92E-03	6.82E-04	1.92E-03	1.25E-03	1.28E-03	2.83E-04	2.05E-04	5.44E-08	6.42E-04	3.76E-04
54	E95	80	Single Unit Short Haul Truck	62	0.00E+00	1.16E-05	5.74E-07	1.13E+01	9.30E-06	2.28E-02	1.23E-05	5.93E-03	7.27E-04	1.64E-04	1.41E-03	3.43E-04	3.48E-04	1.14E-03	4.58E-05	1.82E-08	1.06E-03	1.11E-03
54	E95	80	Single Unit Long Haul Truck	3	0.00E+00	5.03E-07	2.48E-08	4.80E-01	3.98E-07	9.45E-04	5.35E-07	2.54E-04	3.32E-05	7.25E-06	6.14E-05	1.47E-05	1.50E-05	4.79E-05	1.93E-06	7.56E-10	4.64E-05	4.75E-05
54	E95	80	Combination Short Haul Truck	32	0.00E+00	1.42E-05	1.01E-06	1.17E+01	4.47E-08	1.25E-02	1.04E-05	1.46E-02	8.58E-04	2.11E-04	8.44E-04	2.99E-04	2.97E-04	1.76E-03	3.92E-05	0.00E+00	5.47E-04	2.75E-03
54	E95	80	Combination Long Haul Truck	29	0.00E+00	1.27E-05	8.50E-07	1.09E+01	5.17E-08	1.30E-02	9.64E-06	1.41E-02	8.41E-04	1.69E-04	8.74E-04	2.57E-04	2.59E-04	1.66E-03	3.63E-05	0.00E+00	6.13E-04	2.66E-03
54	E96	80	Passenger Car	630	0.00E+00	7.39E-06	7.

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F34	60	Passenger Car	350	0.00E+00	5.18E-06	5.60E-07	1.74E+01	3.61E-05	1.29E-01	1.15E-05	7.14E-04	3.55E-03	5.46E-04	1.12E-03	7.23E-04	7.42E-04	7.32E-05	8.80E-05	2.42E-08	3.79E-04	1.12E-04
9	F34	60	Passenger Truck	586	0.00E+00	1.14E-05	1.21E-06	3.97E+01	7.15E-05	2.30E-01	2.36E-05	2.33E-03	6.52E-03	1.01E-03	2.23E-03	1.46E-03	1.50E-03	3.11E-04	1.99E-04	5.51E-08	7.44E-04	3.86E-04
9	F34	60	Single Unit Short Haul Truck	21	0.00E+00	6.27E-06	3.13E-07	3.98E+00	5.15E-06	7.69E-03	6.68E-06	2.99E-03	5.06E-04	9.17E-05	7.57E-04	1.87E-04	1.90E-04	3.99E-04	1.61E-05	6.62E-09	5.69E-04	5.60E-04
9	F34	60	Single Unit Long Haul Truck	1	0.00E+00	2.74E-07	1.36E-08	1.70E-01	2.24E-07	3.26E-04	2.92E-07	1.29E-04	2.27E-05	4.07E-06	3.34E-05	8.16E-06	8.30E-06	1.70E-05	6.86E-07	2.82E-10	2.50E-05	2.42E-05
9	F34	60	Combination Short Haul Truck	19	0.00E+00	1.14E-05	7.97E-07	7.43E+00	4.04E-08	9.96E-03	8.45E-06	1.24E-02	1.06E-03	2.10E-04	7.27E-04	2.37E-04	2.37E-04	1.12E-03	2.48E-05	0.00E+00	4.88E-04	2.34E-03
9	F34	60	Combination Long Haul Truck	18	0.00E+00	1.02E-05	6.67E-07	6.97E+00	4.63E-08	1.07E-02	7.90E-06	1.23E-02	1.06E-03	1.81E-04	7.46E-04	2.03E-04	2.06E-04	1.06E-03	2.33E-05	0.00E+00	5.40E-04	2.32E-03
11	F35	80	Passenger Car	49	0.00E+00	5.92E-07	6.42E-08	2.28E+00	4.13E-06	1.52E-02	1.32E-06	1.01E-04	2.71E-04	4.72E-05	1.28E-04	8.27E-05	8.49E-05	7.73E-06	1.16E-05	3.25E-09	4.35E-05	1.59E-05
11	F35	80	Passenger Truck	83	0.00E+00	1.27E-06	1.35E-07	5.26E+00	8.15E-06	2.80E-02	2.66E-06	3.01E-04	4.87E-04	8.63E-05	2.55E-04	1.66E-04	1.70E-04	3.72E-05	2.66E-05	7.23E-09	8.54E-05	4.91E-05
11	F35	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.48E-03	1.34E-06	6.44E-04	7.90E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.21E-04
11	F35	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.23E-04
11	F35	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	F36	80	Passenger Car	166	0.00E+00	2.00E-06	2.16E-07	7.67E+00	1.39E-05	5.13E-02	4.44E-06	3.42E-04	9.15E-04	1.59E-04	4.33E-04	2.79E-04	2.86E-04	2.61E-05	3.91E-05	1.10E-08	1.47E-04	5.36E-05
11	F36	80	Passenger Truck	279	0.00E+00	4.30E-06	4.55E-07	1.77E+01	2.75E-05	9.44E-02	8.98E-06	1.01E-03	1.64E-03	2.91E-04	8.59E-04	5.59E-04	5.73E-04	1.25E-04	8.98E-05	2.44E-08	2.88E-04	1.66E-04
11	F36	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.60E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.92E-05	7.02E-05	2.30E-04	9.23E-06	3.67E-09	2.14E-04	2.24E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.13E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.02E-06	9.67E-06	3.90E-07	1.53E-10	9.37E-06	9.58E-06
11	F36	80	Combination Short Haul Truck	6	0.00E+00	2.75E-06	1.97E-07	2.28E+00	8.70E-09	2.44E-03	2.02E-06	2.84E-03	1.67E-04	4.11E-05	1.64E-04	5.82E-05	5.79E-05	3.43E-04	7.64E-06	0.00E+00	1.07E-04	5.35E-04
11	F36	80	Combination Long Haul Truck	6	0.00E+00	2.46E-06	1.65E-07	2.11E+00	1.01E-08	2.53E-03	1.88E-06	2.75E-03	1.64E-04	3.29E-05	1.70E-04	5.01E-05	5.04E-05	3.23E-04	7.06E-06	0.00E+00	1.19E-04	5.18E-04
9	F37	60	Passenger Car	760	0.00E+00	1.13E-05	1.22E-06	3.78E+01	7.83E-05	2.81E-01	2.49E-05	1.55E-03	7.71E-03	1.18E-03	2.43E-03	1.57E-03	1.61E-03	1.59E-04	1.91E-04	5.26E-08	8.23E-04	2.43E-04
9	F37	60	Passenger Truck	1273	0.00E+00	2.48E-05	2.62E-06	8.63E+01	1.55E-04	4.99E-01	5.13E-05	5.06E-03	1.41E-02	2.20E-03	4.84E-03	3.17E-03	3.25E-03	6.75E-04	4.31E-04	1.20E-07	1.62E-03	8.38E-04
9	F37	60	Single Unit Short Haul Truck	69	0.00E+00	2.03E-05	1.01E-06	1.29E+01	1.67E-05	2.49E-02	2.17E-05	9.68E-03	1.64E-03	2.97E-04	2.45E-03	6.07E-04	6.17E-04	1.29E-03	5.21E-05	2.15E-08	1.84E-03	1.81E-03
9	F37	60	Single Unit Long Haul Truck	3	0.00E+00	8.87E-07	4.40E-08	5.51E-01	7.25E-07	1.06E-03	9.46E-07	4.18E-04	7.37E-05	1.32E-05	1.08E-04	2.65E-05	2.69E-05	5.50E-05	2.22E-06	9.13E-10	8.10E-05	7.84E-05
9	F37	60	Combination Short Haul Truck	51	0.00E+00	3.00E-05	2.10E-06	1.95E+01	1.06E-07	2.62E-02	2.22E-05	3.26E-02	2.79E-03	5.52E-04	1.91E-03	6.23E-04	6.23E-04	2.95E-03	6.53E-05	0.00E+00	1.28E-03	6.15E-03
9	F37	60	Combination Long Haul Truck	46	0.00E+00	2.69E-05	1.76E-06	1.83E+01	1.22E-07	2.83E-02	2.08E-05	3.23E-02	2.80E-03	4.76E-04	1.96E-03	5.35E-04	5.41E-04	2.79E-03	6.12E-05	0.00E+00	1.42E-03	6.09E-03
9	F38	60	Passenger Car	530	0.00E+00	7.85E-06	8.48E-07	2.64E+01	5.46E-05	1.96E-01	1.74E-05	1.08E-03	5.37E-03	8.26E-04	1.69E-03	1.09E-03	1.12E-03	1.11E-04	1.33E-04	3.67E-08	5.74E-04	1.69E-04
9	F38	60	Passenger Truck	887	0.00E+00	1.73E-05	1.83E-06	6.02E+01	1.08E-04	3.48E-01	3.57E-05	3.53E-03	9.86E-03	1.53E-03	3.38E-03	2.21E-03	2.26E-03	4.71E-04	3.01E-04	8.33E-08	1.13E-03	5.84E-04
9	F38	60	Single Unit Short Haul Truck	70	0.00E+00	2.06E-05	1.03E-06	1.31E+01	1.69E-05	2.53E-02	2.20E-05	9.82E-03	1.66E-03	3.01E-04	2.49E-03	6.16E-04	6.26E-04	1.31E-03	5.29E-05	2.18E-08	1.87E-03	1.84E-03
9	F38	60	Single Unit Long Haul Truck	3	0.00E+00	9.01E-07	4.47E-08	5.59E-01	7.36E-07	1.07E-03	9.61E-07	4.25E-04	7.48E-05	1.34E-05	1.10E-04	2.68E-05	2.73E-05	5.58E-05	2.26E-06	9.26E-10	8.22E-05	7.96E-05
9	F38	60	Combination Short Haul Truck	48	0.00E+00	2.85E-05	1.99E-06	1.86E+01	1.01E-07	2.49E-02	2.11E-05	3.09E-02	2.65E-03	5.25E-04	1.82E-03	5.92E-04	5.92E-04	2.80E-03	6.20E-05	0.00E+00	1.22E-03	5.84E-03
9	F38	60	Combination Long Haul Truck	44	0.00E+00	2.55E-05	1.67E-06	1.74E+01	1.16E-07	2.69E-02	1.98E-05	3.07E-02	2.66E-03	4.53E-04	1.86E-03	5.08E-04	5.14E-04	2.65E-03	5.81E-05	0.00E+00	1.35E-03	5.79E-03
11	F39	80	Passenger Car	52	0.00E+00	6.23E-07	6.75E-08	2.39E+00	4.34E-06	1.60E-02	1.39E-06	1.07E-04	2.86E-04	4.96E-05	1.35E-04	8.70E-05	8.93E-05	8.13E-06	1.22E-05	3.42E-09	4.57E-05	1.67E-05
11	F39	80	Passenger Truck	87	0.00E+00	1.34E-06	1.42E-07	5.53E+00	8.57E-06	2.95E-02	2.80E-06	3.16E-04	5.12E-04	9.08E-05	2.68E-04	1.74E-04	1.79E-04	3.91E-05	2.80E-05	7.61E-09	8.99E-05	5.17E-05
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	1.11E-06	5.53E-08	1.09E+00	8.96E-07	2.19E-03	1.18E-06	5.71E-04	7.00E-05	1.58E-05	1.35E-04	3.30E-05	3.35E-05	1.10E-04	4.41E-06	1.75E-09	1.02E-04	1.07E-04
11	F39	80	Combination Short Haul Truck	5	0.00E+00	2.26E-06	1.62E-07	1.88E+00	7.15E-09	2.00E-03	1.66E-06	2.33E-03	1.37E-04	3.38E-05	1.35E-04	4.78E-05	4.75E-05	2.82E-04	6.27E-06	0.00E+00	8.75E-05	4.40E-04
11	F39	80	Combination Long Haul Truck	5	0.00E+00	2.02E-06	1.36E-07	1.74E+00	8.27E-09	2.08E-03	1.54E-06	2.26E-03	1.35E-04	2.70E-05	1.40E-04	4.11E-05	4.14E-05	2.65E-04	5.80E-06	0.00E+00	9.79E-05	4.26E-04
11	F40	80	Passenger Car	225	0.00E+00	2.70E-06	2.92E-07	1.04E+01	1.88E-05	6.93E-02	6.00E-06	4.62E-04	1.24E-03	2.15E-04	5.84E-04	3.76E-04	3.86E-04	3.52E-05	5.27E-05	1.48E-08	1.98E-04	7.24E-05
11	F40	80	Passenger Truck	376	0.00E+00	5.80E-06	6.14E-07	2.39E+01	3.71E-05	1.27E-01	1.21E-05	1.37E-03	2.22E-03	3.93E-04	1.16E-03	7.54E-04	7.73E-04	1.69E-04	1.21E-04	3.29E-08	3.89E-04	2.24E-04
11	F40	80	Single Unit Short Haul Truck	6	0.00E+00	1.10E-06	5.47E-08	1.08E+00	8.87E-07	2.17E-03	1.17E-06	5.65E-04	6.92E-05	1.57E-05	1.34E-04	3.27E-05	3.32E-05	1.08E-04	4.36E-06	1.73E-09	1.01E-04	1.06E-04
11	F40	80	Combination Short Haul Truck	8	0.00E+00	3.43E-06	2.46E-07	2.85E+00	1.08E-08	3.04E-03	2.52E-06	3.54E-03	2.08E-04	5.13E-05	2.05E-04	7.26E-05	7.22E-05	4.28E-04	9.52E-06	0.00E+00	1.33E-04	6.67E-04
11	F40	80	Combination Long Haul Truck	7	0.00E+00	3.07E-06	2.06E-07	2.64E+00	1.25E-08	3.15E-03	2.34E-06	3.43E-03	2.04E-04	4.10E-05	2.12E-04	6.24E-05	6.28E-05	4.02E-04	8.80E-06	0.00E+00	1.49E-04	6.46E-04
10	F41	70	Passenger Car	232	0.00E+00	2.99E-06	3.23E-07	1.10E+01	2.08E-05	7.47E-02	6.63E-06	4.64E-04	1.80E-03	2.89E-04	6.44E-04	4.17E-04	4.28E-04	4.15E-05	5.59E-05	1.53E-08	2.19E-04	7.28E-05
10	F41	70	Passenger Truck	388	0.00E+00	6.56E-06	6.94E-07	2.53E+01	4.14E-05	1.38E-01	1.36E-05	1.46E-03	3.27E-03	5.32E-04	1.29E-03	8.46E-04	8.66E-04	1.89E-04	1.27E-04	3.42E-08	4.34E-04	2.39E-04
10	F41	70	Single Unit Short Haul Truck	1	0.00E+00	1.29E-07	6.45E-09	1.01E-01	1.05E-07	2.02E-04	1.37E-07	6.36E-05	9.06E-06	1.81E-06	1.57E-05	3.85E-06	3.91E-06	1.01E-05	4.06E-07	1.64E-10	1.17E-05	1.19E-05
10	F41	70	Combination Short Haul Truck	2	0.00E+00	1.08E-06	7.65E-08	7.82E-01	3.50E-09	9.26E-04	7.88E-07	1.13E-03	8.17E-05	1.79E-05	6.56E-05	2.27E-05	2.26E-05	1.18E-04	2.61E-06	0.00E+00	4.30E-05	2.13E-04
10	F41	70	Combination Long Haul Truck	2	0.00E+00	9.76E-07	6.50E-08	7.29E-01	4.03E-09	9.81E-04	7.40E-07	1.12E-03	8.13E-05	1.48E-05	6.77E-05	1.97E-05	1.99E-05	1.11E-04	2.44E-06	0.00E+00	4.79E-05	2.11E-04
10	F42	70	Passenger Car	92	0.00E+00	1.18E-06	1.28E-07	4.35E+00	8.21E-06	2.95E-02	2.62E-06	1.83E-04	7.10E-04	1.14E-04	2.54E-04	1.65E-04	1.69E-04	1.64E-05	2.21E-05	6.03E-09	8.65E-05	2.87E-05
10	F42	70	Passenger Truck	153	0.00E+00	2.59E-06	2.74E-07	1.00E+01	1.64E-05	5.45E-02	5.37E-06	5.75E-04	1.29E-03	2.10E-04	5.11E-04	3.34E-04	3.42E-04	7.45E-05	5.03E-05	1.35E-08	1.71E-04	9.45E-05
10	F45	70	Passenger Car	186	0.00E+00	2.40E-06	2.59E-07	8.83E+00	1.67E-05	5.99E-02	5.32E-06	3.72E-04	1.44E-03	2.31E-04	5.17E-04	3.35E-04	3.43E-04	3.33E-05	4.48E-05	1.22E-08	1.76E-04	5.84E-05
10	F45	70	Passenger Truck	311	0.00E+00	5.26E-06	5.56E-07	2.03E+01	3.32E-05	1.11E-01	1.09E-05	1.17E-03	2.62E-03	4.26E-04	1.04E-03	6.78E-04	6.95E-04	1.51E-04	1.02E-04	2.74E-08	3.48E-04	1.92E-04
10	F45	70	Single Unit Short Haul Truck	15	0.00E+00	3.57E-06	1.79E-07	2.80E+00	2.92E-06	5.61E-03	3.80E-06	1.76E-03	2.51E-04	5.02E-05	4.35E-04	1.07E-04	1.08E-04	2.80E-04	1.13E-05	4.56E-09	3.25E-04	3.30E-04
10	F45	70	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.75E-09	1.19E-01	1.26E-07	2.35E-04	1.66E-07	7.58E-05	1.15E-05	2.23E-06	1.90E-05	4.62E-06	4.69E-06	1.19E-05	4.79E-07	1.92E-10	1.42E-05	1.42E-05
10	F45	70	Combination Short Haul Truck	15	0.00E+00	7.90E-06	5.62E-07	5.74E+00	2.57E-08	6.80E-03	5.79E-06	8.32E-03	6.00E-04	1.31E-04	4.82E-04	1.66E-04	1.66E-04	8.66E-04	1.92E-05	0.00E+00	3.16E-04	1.57E-03
10	F45	70	Combination Long Haul Truck	14	0.00E+00	7.16E-06	4.78E-07	5.35E+00	2.96E-08	7.20E-03	5.43E-06	8.20E-03	5.97E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.17E-04	1.79E-05	0.00E+00	3.52E-04	1.55E-03
10	F46	70	Passenger Car	186	0.00E+00	2.39E-06	2.59E-07	8.82E+00	1.67E-05	5.99E-02	5.32E-06	3.72E-04	1.44E-03	2.31E-04	5.16E-04	3.34E-04	3.43E-04	3.33E-05	4.48E-05	1.22E-08	1.75E-04	5.83E-05
10	F46	70	Passenger Truck	311	0.00E+00	5.25E-06	5.56E-07	2.03E+01	3.32E-05	1.11E-01	1.09E-05	1.17E-03	2.62E-03	4.26E-04	1.04E-03	6.78E-04	6.94E-04	1.51E-04	1.02E-04	2.74E-08	3.47E-04	1.92E-04
10	F46	70	Single Unit Short Haul Truck	2	0.00E+00	3.63E-07	1.82E-08	2.85E-01	2.97E-07	5.71E-04	3.87E-07	1.79E-04	2.55E-05	5.11E-06	4.42E-05	1.09E-05	1.10E-05	2.85E-05	1.15E-06	4.64E-10	3.30E-05	3.36E-05
10	F46	70	Combination Short Haul Truck	7	0.00E+00	3.65E-06	2.60E-07	2.66E+00	1.19E-08	3.14E-03	2.67E-06	3.85E-03	2.77E-04	6.07E-05	2.23E-04	7.69E-05	7.67E-05	4.00E-04	8.86E-06	0.00E+00	1.46E-04	7.24E-04
10	F46	70	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.21E-07	2.47E+00	1.37E-08	3.33E-03	2.51E-06	3.79E-03	2.76E-04	5.04E-05	2.30E-04	6.68E-05	6.75E-05	3.77E-04	8.28E-06	0.00E+00	1.63E-04	7.16E-04
9	F47	60	Passenger Car	9	0.00E+00	1.31E-07	1.41E-08	4.39E-01	9.10E-07	3.26E-03	2.89E-07	1.80E-05	8.95E-05	1.38E-05	2.82E-05	1.82E-05	1.87E-05	1.84E-06	2.22E-06	6.11E-10	9.56E-06	2.82E-06
9	F47	60	Passenger Truck	15	0.00E+00	2.88E-07	3.04E-08	1.00E+00	1.80E-06	5.79E-03	5.95E-07	5.87E-05	1.64E-04	2.55E-05	5.63E-05	3.68E-05	3.77E-05	7.84E-06	5.01E-06	1.39E-09	1.88E-05	9.73E-06
9	F47	60	Combination Short Haul Truck	1	0.00E+00	3.81E-07	2.66E-08	2.48E-01	1.35E-09	3.33E-04	2.82E-07	4.14E-04	3.54E-05	7.01E-06	2.43E-05	7.91E-06	7.91E-06	3.74E-05	8.29E-07	0.00E+00	1.63E-05	7.81E-05
9	F47	60	Combination Long Haul Truck	1	0.00E+00	3.41E-07	2.23E-08	2.33E-01	1.55E-09	3.59E-04	2.64E-07	4.10E-04	3.56E-05	6.05E-06	2.49E-05	6.79E-06	6.87E-06	3.54E-05	7.77E-07	0.00E+00	1.80E-05	7.74E-05
9	F48	60	Passenger Car	1	0.00E+00	2.10E-08	2.27E-09	7.06E-02	1.46E-07	5.24E-04	4.65E-08	2.89E-06	1.44E-05	2.21E-06	4.53E-06	2.93E-06	3.01E-06	2.96E-07	3.57E-07	9.82E-11	1.54E-06	4.53E-07
9	F48	60	Passenger Truck	2	0.00E+00	4.63E-08	4.89E-09	1.61E-01	2.90E-07	9.31E-04	9.57E-08	9.44E-06	2.64E-05	4.10E-06	9.04E-06	5.91E-06	6.06E-06	1.26E-06	8.05E-07	2.23E-10	3.02E-06	1.56E-06
53	F77	70	Passenger Car	382	0.00E+00	4.78E-06	5.17E-07	1.84E+01	3.32E-05	1.19E-01	1.06E-05	7.80E-04	2.92E-03	4.71E-04	1.03E-03	6.67E-04	6.84E-04	6.85E-05	9.33E-05	2.54E-08	3.51E-04	1.22E-04
53	F77	70	Passenger Truck	640	0.00E+00	1.04E-05	1.10E-06	4.23E+01	6.60E-05	2.19E-01	2.17E-05	2.38E-03	5.25E-03	8.56E-04	2.06E-03	1.34E-03	1.38E-03	3.10E-04	2.13E-04	5.59E-08	6.90E-04	3.91E-04
53	F77	70	Single Unit Short Haul Truck	89	0.00E+00	2.09E-05	1.05E-06	1.64E+01	1.71E-05	3.29E-02	2.23E-05	1.03E-02	1.47E-03	2.95E-04	2.55E-03	6.26E-04	6.36E-04	1.64E-03	6.61E-05	2.67E-08	1.90E-03	1.94E-03
53	F77	70	Single Unit Long Haul Truck	4	0.00E+00	9.13E-07	4.54E-08	6.97E-01	7.39E-07	1.38E-03	9.72E-07	4.44E-04	6.73E-05	1.31E-05	1.11E-04	2.71E-05	2.75E-05	6.95E-05	2.81E-06	1.12E-09	8.35E-05	8.33E-05
53	F77	70	Combination Short Haul Truck	42	0.00E+00	2.16E-05	1.54E-06	1.57E+01	7.03E-08	1.86E-02	1.58E-05	2.28E-02	1.64E-03	3.60E-04	1.32E-03	4.55E-04	4.54E-04	2.37E-03	5.25E-05	0.00E+00	8.64E-04	4.29E-03
53	F77	70	Combination Long Haul Truck	38	0.00E+00	1.96E-05	1.31E-06	1.47E+01	8.10E-08	1.97E-02	1.49E-05	2.25E-02	1.63E-03	2.98E-04	1.36E-03	3.95E-04	4.00E-04	2.23E-03	4.90E-05	0.00E+00	9.63E-04	4.24E-03
50	F78	40	Passenger Car	301	0.00E+00	5.00E-06	5.41E-07	1.73E+01	3.48E-05	1.24E-01	1.11E-05	5.44E-04	5.21E-03	7.43E-04	1.08E-03	6.97E-04	7.16E-04	9.45E-05	8.70E-05	2.11E-08	3.66E-04	8.53E-05
50	F78	40	Passenger Truck	504	0.00E+00	1.14E-05	1.20E-06	3.85E+01	6.86E-05	2.13E-01	2.28E-05	2.06E-03	9.24E-03	1.32E-03	2.16E-03	1.41E-03	1.44E-03	3.33E-04	1.92E-04	4.10E-08	7.11E-04	3.49E-04
50	F78	40	Single Unit Short Haul Truck	2	0.00E+00	1.02E-06	5.33E-08	4.88E-01	8.85E-07	8.40E-04	1.08E-06	4.98E-04	9.29E-05	1.54E-05	1.20E-04	3.18E-05	3.23E-05	4.93E-05	1.97E-06	8.34E-10	8.79E-05	9.36E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	5.55E-07	3.85E-08	2.82E-01	2.00E-09	4.84E-04	4.12E-07	6.20E-04	6.46E-05	1.16E-05	3.60E-05	1.15E-05	1.16E-05	4.25E-05	9.43E-07	0.00E+00	2.44E-05	1.17E-04
50	F78	40	Combination Long Haul Truck	1	0.00E+00	5.06E-07	3.30E-08	2.68E-01	2.27E-09	5.38E-04	3.89E-07	6.22E-04	6.49E-05	1.03E-05	3.70E-05	1.01E-05	1.03E-05	4.09E-05	8.97E-07	0.00E+00	2.68E-05	1.17E-04
52	F79	60	Passenger Car	455	0.00E+00	6.18E-06	6.69E-07	2.26E+01	4.31E-05	1.53E-01	1.38E-05	8.94E-04	4.49E-03	6.90E-04	1.34E-03	8.63E-04	8.86E-04	9.51E-05	1.14E-04	3.06E-08	4.53E-04	1.40E-04
52	F79	60	Passenger Truck	762	0.00E+00	1.36E-05	1.44E-06	5.14E+01	8.47E-05	2.73E-01	2.79E-05	2.88E-03	8.00E-03	1.24E-03	2.67E-03	1.73E-03	1.77E-03	3.96E-04	2.58E-04	6.48E-08	8.83E-04	4.76E-04
52	F79	60	Single Unit Short Haul Truck	13	0.00E+00	3.86E-06	1.93E-07	2.45E+00	3.17E-06	4.73E-03	4.11E-06	1.84E-03	3.12E-04	5.64E-05	4.66E-04	1.15E-04	1.17E-04	2.45E-04	9.90E-06	4.08E-09	3.50E-04	3.44E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.69E-07	8.36E-09	1.05E-01	1.38E-07	2.01E-04	1.80E-07	7.95E-05	1.40E-05	2.50E-06	2.05E-05	5.02E-06	5.10E-06	1.05E-05	4.22E-07	1.73E-10	1.54E-05	1.49E-05
52	F79	60	Combination Short Haul Truck	8	0.00E+00	4.73E-06	3.30E-07	3.08E+00	1.67E-08	4.13E-03	3.50E-06	5.13E-03	4.40E-04	8.71E-05	3.01E-04	9.82E-05	9.82E-05	4.64E-04	1.03E-05	0.00E+00	2.02E-04	9.69E-04
52	F79	60	Combination Long Haul Truck	7	0.00E+00	4.23E-06	2.77E-07	2.89E+00	1.92E-08	4.46E-03	3.28E-06	5.09E-03	4.42E-04	7.51E-05	3.09E-04	8.43E-05	8.53E-05	4.40E-04	9.65E-06	0.00E+00	2.24E-04	9.61E-04
53	F80	70	Passenger Car	548	0.00E+00	6.85E-06	7.41E-07	2.63E+01	4.76E-05	1.70E-01	1.52E-05	1.12E-03	4.18E-03	6.74E-04	1.48E-03	9.56E-04	9.80E-04	9.81E-05	1.34E-04	3.64E-08	5.02E-04	1.75E-04
53	F80	70	Passenger Truck	917	0.00E+00	1.49E-05	1.58E-06	6.06E+01	9.45E-05	3.13E-01	3.11E-05	3.41E-03	7.52E-03	1.23E-03	2.96E-03	1.92E-03	1.97E-03	4.43E-04	3.06E-04	8.00E-08	9.89E-04	5.61E-04
53	F80	70	Single Unit Short Haul Truck	14	0.00E+00	3.30E-06	1.66E-07	2.59E

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	F84	40	Passenger Truck	104	0.00E+00	2.35E-06	2.46E-07	7.91E+00	1.41E-05	4.37E-02	4.69E-06	4.23E-04	1.90E-03	2.70E-04	4.43E-04	2.91E-04	2.96E-04	6.85E-05	3.94E-05	8.43E-09	1.46E-04	7.16E-05
50	F84	40	Single Unit Short Haul Truck	1	0.00E+00	3.32E-07	1.74E-08	1.59E-01	2.88E-07	2.74E-04	3.53E-07	1.63E-04	3.03E-05	5.02E-06	3.92E-05	1.04E-05	1.05E-05	1.61E-05	6.43E-07	2.72E-10	2.86E-05	3.05E-05
50	F84	40	Combination Short Haul Truck	36	0.00E+00	3.20E-05	2.22E-06	1.62E+01	1.15E-07	2.79E-02	2.38E-05	3.57E-02	3.72E-03	6.71E-04	2.08E-03	6.62E-04	6.69E-04	2.45E-03	5.43E-05	0.00E+00	1.40E-03	6.74E-03
50	F84	40	Combination Long Haul Truck	33	0.00E+00	2.92E-05	1.90E-06	1.55E+01	1.31E-07	3.10E-02	2.24E-05	3.58E-02	3.74E-03	5.95E-04	2.13E-03	5.80E-04	5.91E-04	2.36E-03	5.17E-05	0.00E+00	1.55E-03	6.75E-03
52	F85	60	Passenger Car	194	0.00E+00	2.63E-06	2.85E-07	9.64E+00	1.84E-05	6.52E-02	5.87E-06	3.81E-04	1.91E-03	2.94E-04	5.71E-04	3.68E-04	3.78E-04	4.05E-05	4.87E-05	1.30E-08	1.93E-04	5.98E-05
52	F85	60	Passenger Truck	325	0.00E+00	5.79E-06	6.12E-07	2.19E+01	3.61E-05	1.16E-01	1.19E-05	1.23E-03	3.41E-03	5.28E-04	1.14E-03	7.38E-04	7.56E-04	1.69E-04	1.10E-04	2.76E-08	3.76E-04	2.03E-04
52	F85	60	Single Unit Short Haul Truck	5	0.00E+00	1.49E-06	7.45E-08	9.47E-01	1.23E-06	1.83E-03	1.59E-06	7.11E-04	1.21E-04	2.18E-05	1.80E-04	4.46E-05	4.53E-05	9.49E-05	3.83E-06	1.58E-09	1.35E-04	1.33E-04
52	F85	60	Combination Short Haul Truck	28	0.00E+00	1.64E-05	1.14E-06	1.07E+01	5.79E-08	1.43E-02	1.21E-05	1.78E-02	1.52E-03	3.01E-04	1.04E-03	3.40E-04	3.40E-04	1.61E-03	3.56E-05	0.00E+00	7.01E-04	3.35E-03
52	F85	60	Combination Long Haul Truck	25	0.00E+00	1.46E-05	9.58E-07	1.00E+01	6.64E-08	1.54E-02	1.13E-05	1.76E-02	1.53E-03	2.60E-04	1.07E-03	2.92E-04	2.95E-04	1.52E-03	3.34E-05	0.00E+00	7.75E-04	3.32E-03
53	F86	70	Passenger Car	270	0.00E+00	3.38E-06	3.66E-07	1.30E+01	2.35E-05	8.41E-02	7.51E-06	5.51E-04	2.06E-03	3.33E-04	7.31E-04	4.72E-04	4.84E-04	4.84E-05	6.59E-05	1.79E-08	2.48E-04	8.64E-05
53	F86	70	Passenger Truck	453	0.00E+00	7.36E-06	7.80E-07	2.99E+01	4.67E-05	1.55E-01	1.53E-05	1.69E-03	3.71E-03	6.05E-04	1.46E-03	9.49E-04	9.73E-04	2.19E-04	1.51E-04	3.95E-08	4.88E-04	2.77E-04
53	F86	70	Single Unit Short Haul Truck	22	0.00E+00	5.09E-06	2.55E-07	3.99E+00	4.16E-06	8.00E-03	5.42E-06	2.51E-03	3.58E-04	7.16E-05	6.20E-04	1.52E-04	1.55E-04	3.99E-04	1.61E-05	6.50E-09	4.63E-04	4.70E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	2.22E-07	1.10E-08	1.69E-01	1.80E-07	3.34E-04	2.36E-07	1.08E-04	1.63E-05	3.18E-06	2.71E-05	6.58E-06	6.69E-06	1.69E-05	6.82E-07	2.73E-10	2.03E-05	2.02E-05
53	F86	70	Combination Short Haul Truck	20	0.00E+00	1.04E-05	7.36E-07	7.53E+00	3.37E-08	8.91E-03	7.58E-06	1.09E-02	7.86E-04	1.72E-04	6.31E-04	2.18E-04	2.18E-04	1.13E-03	2.51E-05	0.00E+00	4.13E-04	2.05E-03
53	F86	70	Combination Long Haul Truck	18	0.00E+00	9.39E-06	6.26E-07	7.02E+00	3.88E-08	9.44E-03	7.12E-06	1.08E-02	7.82E-04	1.43E-04	6.51E-04	1.89E-04	1.91E-04	1.07E-03	2.35E-05	0.00E+00	4.61E-04	2.03E-03
52	F87	60	Passenger Car	33	0.00E+00	4.42E-07	4.78E-08	1.62E+00	3.08E-06	1.09E-02	9.84E-07	6.39E-05	3.21E-04	4.93E-05	9.57E-05	6.17E-05	6.33E-05	6.79E-06	8.17E-06	2.19E-09	3.23E-05	1.00E-05
52	F87	60	Passenger Truck	54	0.00E+00	9.71E-07	1.03E-07	3.68E+00	6.05E-06	1.95E-02	2.00E-06	2.06E-04	5.72E-04	8.85E-05	1.91E-04	1.24E-04	1.27E-04	2.83E-05	1.85E-05	4.63E-09	6.31E-05	3.40E-05
52	F87	60	Single Unit Short Haul Truck	11	0.00E+00	3.18E-06	1.59E-07	2.02E+00	2.61E-06	3.90E-03	3.39E-06	1.51E-03	2.57E-04	4.65E-05	3.84E-04	9.50E-05	9.65E-05	2.02E-04	8.16E-06	3.36E-09	2.88E-04	2.84E-04
52	F87	60	Combination Short Haul Truck	4	0.00E+00	2.53E-06	1.76E-07	1.64E+00	8.94E-09	2.20E-03	1.87E-06	2.74E-03	2.35E-04	4.65E-05	1.61E-04	5.24E-05	5.24E-05	2.48E-04	5.49E-06	0.00E+00	1.08E-04	5.17E-04
52	F87	60	Combination Long Haul Truck	4	0.00E+00	2.26E-06	1.48E-07	1.54E+00	1.02E-08	2.38E-03	1.75E-06	2.72E-03	2.36E-04	4.01E-05	1.65E-04	4.50E-05	4.55E-05	2.35E-04	5.15E-06	0.00E+00	1.20E-04	5.13E-04
50	F88	40	Passenger Car	61	0.00E+00	1.01E-06	1.09E-07	3.49E+00	7.02E-06	2.50E-02	2.24E-06	1.10E-04	1.05E-03	1.50E-04	2.18E-04	1.41E-04	1.44E-04	1.91E-05	1.75E-05	4.25E-09	7.39E-05	1.72E-05
50	F88	40	Passenger Truck	102	0.00E+00	2.30E-06	2.42E-07	7.77E+00	1.38E-05	4.29E-02	4.60E-06	4.15E-04	1.86E-03	2.65E-04	4.35E-04	2.85E-04	2.91E-04	6.72E-05	3.87E-05	8.28E-09	1.43E-04	7.03E-05
50	F88	40	Single Unit Short Haul Truck	20	0.00E+00	8.95E-06	4.69E-07	4.29E+00	7.78E-06	7.39E-03	9.51E-06	4.38E-03	8.17E-04	1.35E-04	1.06E-03	2.79E-04	2.84E-04	4.34E-04	1.74E-05	7.33E-09	7.72E-04	8.23E-04
50	F88	40	Single Unit Long Haul Truck	1	0.00E+00	3.92E-07	2.04E-08	1.85E-01	3.41E-07	3.21E-04	4.17E-07	1.91E-04	3.65E-05	6.02E-06	4.64E-05	1.22E-05	1.24E-05	1.87E-05	7.48E-07	3.18E-10	3.41E-05	3.58E-05
50	F88	40	Combination Short Haul Truck	12	0.00E+00	1.04E-05	7.23E-07	5.30E+00	3.76E-08	9.10E-03	7.76E-06	1.16E-02	1.21E-03	2.19E-04	6.77E-04	2.16E-04	2.18E-04	7.98E-04	1.77E-05	0.00E+00	4.58E-04	2.20E-03
50	F88	40	Combination Long Haul Truck	11	0.00E+00	9.52E-06	6.21E-07	5.04E+00	4.27E-08	1.01E-02	7.31E-06	1.17E-02	1.22E-03	1.94E-04	6.95E-04	1.89E-04	1.93E-04	7.70E-04	1.69E-05	0.00E+00	5.04E-04	2.20E-03

Appendix F.3.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	2.83E-04	2.08E-05	4.50E+02	3.41E-04	1.61E+00	2.87E-04	2.45E-01	1.56E-02	4.61E-03	2.64E-02	1.15E-02	1.17E-02	3.77E-02	1.87E-03	4.32E-07	1.47E-02	4.57E-02
A02	0.00E+00	2.75E-04	2.10E-05	5.00E+02	4.59E-04	2.10E+00	3.06E-04	2.23E-01	1.82E-02	5.17E-03	2.84E-02	1.34E-02	1.36E-02	3.41E-02	2.17E-03	5.37E-07	1.48E-02	4.14E-02
A03	0.00E+00	2.77E-04	2.06E-05	4.63E+02	3.80E-04	1.77E+00	2.90E-04	2.34E-01	1.64E-02	4.76E-03	2.68E-02	1.21E-02	1.23E-02	3.60E-02	1.96E-03	4.66E-07	1.46E-02	4.36E-02
A04	0.00E+00	2.79E-04	2.16E-05	5.39E+02	5.30E-04	2.40E+00	3.24E-04	2.17E-01	2.00E-02	5.58E-03	3.02E-02	1.47E-02	1.49E-02	3.32E-02	2.38E-03	6.06E-07	1.54E-02	4.03E-02
A05	0.00E+00	2.31E-04	1.73E-05	3.91E+02	3.27E-04	1.52E+00	2.44E-04	1.94E-01	1.39E-02	4.03E-03	2.26E-02	1.03E-02	1.04E-02	2.98E-02	1.66E-03	3.96E-07	1.22E-02	3.62E-02
A06	0.00E+00	2.24E-04	1.73E-05	4.25E+02	4.10E-04	1.86E+00	2.56E-04	1.77E-01	1.57E-02	4.40E-03	2.39E-02	1.15E-02	1.17E-02	2.70E-02	1.87E-03	4.70E-07	1.22E-02	3.29E-02
A07	0.00E+00	2.36E-04	1.76E-05	3.88E+02	3.11E-04	1.46E+00	2.44E-04	2.02E-01	1.37E-02	3.99E-03	2.25E-02	1.01E-02	1.02E-02	3.08E-02	1.63E-03	3.80E-07	1.22E-02	3.77E-02
A08	0.00E+00	2.23E-04	1.69E-05	3.96E+02	3.53E-04	1.62E+00	2.43E-04	1.83E-01	1.43E-02	4.08E-03	2.25E-02	1.05E-02	1.07E-02	2.79E-02	1.71E-03	4.16E-07	1.18E-02	3.40E-02
A09	0.00E+00	2.96E-04	2.22E-05	4.95E+02	4.05E-04	1.89E+00	3.10E-04	2.52E-01	1.75E-02	5.09E-03	2.85E-02	1.29E-02	1.31E-02	3.84E-02	2.09E-03	4.90E-07	1.54E-02	4.70E-02
A10	0.00E+00	2.61E-04	1.96E-05	4.42E+02	3.69E-04	1.72E+00	2.75E-04	2.20E-01	1.57E-02	4.55E-03	2.53E-02	1.16E-02	1.18E-02	3.36E-02	1.88E-03	4.42E-07	1.36E-02	4.11E-02
A11	0.00E+00	3.67E-04	2.75E-05	6.04E+02	4.83E-04	2.27E+00	3.78E-04	3.16E-01	2.13E-02	6.20E-03	3.46E-02	1.57E-02	1.59E-02	4.78E-02	2.54E-03	5.80E-07	1.87E-02	5.91E-02
A12	0.00E+00	3.02E-04	2.25E-05	4.90E+02	3.84E-04	1.81E+00	3.09E-04	2.60E-01	1.72E-02	5.03E-03	2.84E-02	1.27E-02	1.28E-02	3.97E-02	2.05E-03	4.71E-07	1.55E-02	4.87E-02
A13	0.00E+00	3.39E-04	2.52E-05	5.55E+02	4.43E-04	2.07E+00	3.50E-04	2.90E-01	1.95E-02	5.70E-03	3.22E-02	1.44E-02	1.46E-02	4.43E-02	2.33E-03	5.43E-07	1.76E-02	5.41E-02
A14	0.00E+00	3.07E-04	2.31E-05	5.18E+02	4.29E-04	2.00E+00	3.23E-04	2.61E-01	1.84E-02	5.33E-03	2.97E-02	1.36E-02	1.38E-02	3.97E-02	2.20E-03	5.13E-07	1.59E-02	4.87E-02
A15	0.00E+00	3.47E-04	2.57E-05	5.57E+02	4.29E-04	2.02E+00	3.53E-04	3.00E-01	1.94E-02	5.71E-03	3.23E-02	1.43E-02	1.45E-02	4.59E-02	2.32E-03	5.31E-07	1.78E-02	5.61E-02
A16	0.00E+00	3.39E-04	2.50E-05	5.26E+02	3.84E-04	1.83E+00	3.37E-04	2.98E-01	1.81E-02	5.39E-03	3.08E-02	1.34E-02	1.36E-02	4.55E-02	2.17E-03	4.84E-07	1.72E-02	5.57E-02
A17	0.00E+00	3.47E-04	2.57E-05	5.54E+02	4.23E-04	2.00E+00	3.51E-04	3.01E-01	1.93E-02	5.68E-03	3.22E-02	1.42E-02	1.44E-02	4.60E-02	2.31E-03	5.24E-07	1.78E-02	5.63E-02
A18	0.00E+00	3.30E-04	2.42E-05	5.08E+02	3.65E-04	1.74E+00	3.26E-04	2.91E-01	1.74E-02	5.20E-03	2.98E-02	1.29E-02	1.31E-02	4.45E-02	2.09E-03	4.64E-07	1.67E-02	5.44E-02
A19	0.00E+00	3.30E-04	2.43E-05	5.17E+02	3.84E-04	1.83E+00	3.30E-04	2.88E-01	1.79E-02	5.30E-03	3.02E-02	1.32E-02	1.34E-02	4.40E-02	2.14E-03	4.82E-07	1.68E-02	5.39E-02
A20	0.00E+00	3.11E-04	2.27E-05	4.72E+02	3.30E-04	1.58E+00	3.04E-04	2.75E-01	1.61E-02	4.82E-03	2.78E-02	1.19E-02	1.21E-02	4.21E-02	1.93E-03	4.26E-07	1.57E-02	5.15E-02
A21	0.00E+00	3.97E-04	2.93E-05	6.25E+02	4.65E-04	2.21E+00	3.98E-04	3.47E-01	2.16E-02	6.40E-03	3.64E-02	1.60E-02	1.62E-02	5.31E-02	2.59E-03	5.83E-07	2.03E-02	6.50E-02
A22	0.00E+00	3.52E-04	2.60E-05	5.60E+02	4.25E-04	2.01E+00	3.56E-04	3.05E-01	1.94E-02	5.74E-03	3.27E-02	1.44E-02	1.46E-02	4.68E-02	2.33E-03	5.33E-07	1.81E-02	5.70E-02
A23	0.00E+00	3.73E-04	2.73E-05	5.65E+02	3.93E-04	1.89E+00	3.66E-04	3.31E-01	1.93E-02	5.78E-03	3.34E-02	1.43E-02	1.44E-02	5.08E-02	2.31E-03	5.12E-07	1.90E-02	6.19E-02
A24	0.00E+00	3.21E-04	2.43E-05	5.66E+02	5.00E-04	2.30E+00	3.49E-04	2.64E-01	2.04E-02	5.84E-03	3.24E-02	1.50E-02	1.52E-02	4.05E-02	2.43E-03	5.94E-07	1.72E-02	4.93E-02
B09	0.00E+00	9.60E-05	7.29E-06	1.94E+02	1.90E-04	7.63E-01	1.14E-04	7.27E-02	9.55E-03	2.27E-03	1.09E-02	5.14E-03	5.23E-03	1.15E-02	8.62E-04	2.02E-07	5.67E-03	1.35E-02
B10	0.00E+00	2.07E-04	1.63E-05	4.01E+02	3.65E-04	1.52E+00	2.33E-04	1.76E-01	1.95E-02	4.66E-03	2.14E-02	1.05E-02	1.06E-02	2.60E-02	1.75E-03	3.56E-07	1.07E-02	3.28E-02
B11	0.00E+00	4.58E-05	3.35E-06	8.44E+01	7.48E-05	3.05E-01	5.15E-05	3.59E-02	4.00E-03	9.76E-04	4.94E-03	2.17E-03	2.21E-03	5.79E-03	3.66E-04	8.49E-08	2.73E-03	6.69E-03
B12	0.00E+00	7.58E-05	5.99E-06	1.57E+02	1.56E-04	6.32E-01	9.03E-05	6.01E-02	7.85E-03	1.84E-03	8.43E-03	4.20E-03	4.27E-03	9.00E-03	7.01E-04	1.55E-07	4.15E-03	1.12E-02
B13	0.00E+00	9.72E-05	7.58E-06	1.89E+02	1.75E-04	7.21E-01	1.10E-04	8.10E-02	9.22E-03	2.20E-03	1.02E-02	4.96E-03	5.04E-03	1.21E-02	8.30E-04	1.73E-07	5.13E-03	1.51E-02
B14	0.00E+00	4.30E-05	3.19E-06	8.20E+01	7.58E-05	3.07E-01	4.93E-05	3.33E-02	3.95E-03	9.53E-04	4.72E-03	2.14E-03	2.17E-03	5.32E-03	3.60E-04	8.36E-08	2.54E-03	6.20E-03
B15	0.00E+00	9.08E-05	7.00E-06	1.93E+02	1.98E-04	7.90E-01	1.12E-04	6.62E-02	9.68E-03	2.27E-03	1.07E-02	5.18E-03	5.28E-03	1.05E-02	8.68E-04	2.09E-07	5.46E-03	1.23E-02
B16	0.00E+00	1.08E-04	9.11E-06	2.93E+02	3.62E-04	1.40E+00	1.60E-04	6.41E-02	1.59E-02	3.54E-03	1.55E-02	8.34E-03	8.52E-03	9.92E-03	1.39E-03	3.60E-07	6.95E-03	1.17E-02
B17	0.00E+00	1.33E-04	9.26E-06	2.11E+02	1.50E-04	6.39E-01	1.35E-04	1.11E-01	9.25E-03	2.38E-03	1.29E-02	5.14E-03	5.20E-03	1.81E-02	8.72E-04	1.89E-07	7.72E-03	2.09E-02
B18	0.00E+00	1.27E-04	9.76E-06	2.74E+02	2.86E-04	1.13E+00	1.59E-04	9.02E-02	1.38E-02	3.23E-03	1.54E-02	7.38E-03	7.52E-03	1.45E-02	1.24E-03	3.05E-07	7.85E-03	1.67E-02
C12	0.00E+00	1.67E-05	1.66E-06	5.43E+01	9.15E-05	3.05E-01	3.19E-05	5.05E-03	9.10E-03	1.41E-03	3.08E-03	1.90E-03	1.95E-03	5.80E-04	2.71E-04	6.87E-08	1.12E-03	8.85E-04
C13	0.00E+00	2.50E-05	1.82E-06	3.00E+01	4.32E-05	1.40E-01	2.86E-05	1.89E-02	7.40E-03	1.11E-03	2.79E-03	1.22E-03	1.25E-03	1.46E-03	1.36E-04	2.78E-08	1.55E-03	3.54E-03
C14	0.00E+00	4.37E-05	3.69E-06	1.03E+02	1.47E-04	5.05E-01	6.48E-05	2.43E-02	1.33E-02	2.22E-03	6.26E-03	3.38E-03	3.46E-03	2.76E-03	4.95E-04	1.25E-07	2.81E-03	4.46E-03
C15	0.00E+00	4.72E-05	3.29E-06	4.26E+01	4.82E-05	1.70E-01	4.68E-05	4.27E-02	1.04E-02	1.60E-03	4.50E-03	1.75E-03	1.78E-03	3.11E-03	1.81E-04	3.15E-08	2.72E-03	8.03E-03
C16	0.00E+00	1.53E-05	1.23E-06	2.84E+01	4.03E-05	1.38E-01	2.03E-05	1.03E-02	4.63E-03	7.41E-04	1.96E-03	9.92E-04	1.01E-03	1.01E-03	1.34E-04	3.10E-08	9.46E-04	1.92E-03
C17	0.00E+00	8.90E-05	6.13E-06	1.10E+02	1.10E-04	3.85E-01	9.35E-05	6.93E-02	1.30E-02	2.32E-03	9.19E-03	3.58E-03	3.64E-03	7.87E-03	4.75E-04	1.06E-07	5.54E-03	1.30E-02
C18	0.00E+00	2.04E-05	1.50E-06	3.09E+01	4.17E-05	1.38E-01	2.50E-05	1.40E-02	4.94E-03	8.01E-04	2.47E-03	1.10E-03	1.13E-03	1.40E-03	1.42E-04	3.37E-08	1.34E-03	2.60E-03
C19	0.00E+00	7.75E-06	5.78E-07	1.03E+01	1.55E-05	5.01E-02	9.32E-06	5.54E-03	2.55E-03	3.80E-04	9.09E-04	4.16E-04	4.24E-04	4.36E-04	4.73E-05	9.88E-09	4.85E-04	1.04E-03
C20	0.00E+00	6.02E-06	5.08E-07	1.44E+01	2.07E-05	7.08E-02	9.03E-06	3.23E-03	1.86E-03	3.10E-04	8.76E-04	4.73E-04	4.84E-04	3.72E-04	6.93E-05	1.76E-08	3.93E-04	5.91E-04
C21	0.00E+00	1.06E-04	7.16E-06	9.84E+01	1.31E-04	4.02E-01	1.12E-04	8.27E-02	2.36E-02	3.62E-03	1.11E-02	4.24E-03	4.32E-03	6.37E-03	4.29E-04	8.93E-08	6.77E-03	1.55E-02
C22	0.00E+00	2.26E-05	1.82E-06	4.56E+01	6.90E-05	2.29E-01	3.23E-05	1.27E-02	7.45E-03	1.18E-03	3.17E-03	1.62E-03	1.66E-03	1.31E-03	2.18E-04	5.39E-08	1.51E-03	2.34E-03
C23	0.00E+00	5.39E-05	3.99E-06	8.92E+01	1.10E-04	3.79E-01	6.58E-05	3.65E-02	1.10E-02	1.90E-03	6.46E-03	2.93E-03	2.99E-03	4.21E-03	4.09E-04	9.97E-08	3.47E-03	6.80E-03
C24	0.00E+00	4.93E-06	4.41E-07	1.23E+01	1.93E-05	6.54E-02	7.83E-06	2.59E-03	2.05E-03	3.22E-04	7.51E-04	4.30E-04	4.40E-04	2.60E-04	6.00E-05	1.46E-08	3.09E-04	4.74E-04
C25	0.00E+00	9.68E-05	6.60E-06	8.71E+01	1.08E-04	3.47E-01	9.91E-05	8.06E-02	2.09E-02	3.23E-03	9.75E-03	3.70E-03	3.77E-03	6.06E-03	3.75E-04	7.32E-08	5.98E-03	1.51E-02
C26	0.00E+00	5.58E-05	3.97E-06	7.60E+01	8.07E-05	2.85E-01	6.07E-05	4.30E-02	9.12E-03	1.61E-03	5.91E-03	2.46E-03	2.50E-03	4.83E-03	3.34E-04	7.48E-08	3.40E-03	8.04E-03
C27	0.00E+00	7.44E-05	5.33E-06	9.06E+01	1.39E-04	4.28E-01	8.84E-05	5.05E-02	2.22E-02	3.32E-03	8.77E-03	3.79E-03	3.87E-03	4.08E-03	4.15E-04	9.12E-08	4.90E-03	9.45E-03
C28	0.00E+00	1.25E-05	1.08E-06	2.93E+01	4.55E-05	1.53E-01	1.92E-05	6.65E-03	4.84E-03	7.62E-04	1.85E-03	1.03E-03	1.05E-03	6.77E-04	1.42E-04	3.46E-08	7.99E-04	1.22E-03
C29	0.00E+00	3.55E-06	2.87E-07	6.59E+00	8.10E-06	2.93E-02	4.39E-06	2.70E-03	8.37E-04	1.43E-04	4.11E-04	2.11E-04	2.15E-04	2.85E-04	3.04E-05	6.75E-09	1.96E-04	5.02E-04
C30	0.00E+00	8.38E-05	5.56E-06	5.94E+01	5.46E-05	1.91E-01	7.72E-05	7.82E-02	1.40E-02	2.23E-03	7.52E-03	2.55E-03	2.60E-03	5.66E-03	2.38E-04	3.88E-08	4.92E-03	1.47E-02
C31	0.00E+00	4.57E-05	3.28E-06	6.44E+01	8.36E-05	2.77E-01	5.40E-05	3.23E-02	1.02E-02	1.67E-03	5.35E-03	2.30E-03	2.35E-03	3.24E-03	2.92E-04	6.85E-08	3.00E-03	6.04E-03
C32	0.00E+00	6.47E-05	4.42E-06	6.87E+01	5.30E-05	2.03E-01	6.15E-05	5.65E-02	7.87E-03	1.45E-03	5.91E-03	2.17E-03	2.20E-03	6.19E-03	2.80E-04	5.22E-08	3.71E-03	1.06E-02
C33	0.00E+00	2.90E-06	2.69E-07	8.67E+00	1.48E-05	4.81E-02	5.38E-06	7.54E-04	1.44E-03	2.24E-04	5.30E-04	3.09E-04	3.17E-04	9.92E-05	4.32E-05	1.13E-08	2.12E-04	1.31E-04
C34	0.00E+00	1.12E-05	8.54E-07	1.67E+01	2.67E-05	8.50E-02	1.44E-05	7.13E-03	4.17E-03	6.14E-04	1.41E-03	6.74E-04	6.87E-04	5.85E-04	7.82E-05	1.69E-08	7.21E-04	1.33E-03
C35	0.00E+00	2.09E-05	1.53E-06	2.99E+01	3.20E-05	1.16E-01	2.30E-05	1.66E-02	3.64E-03	6.40E-04	2.20E-03	9.60E-04	9.77E-04	1.82E-03	1.32E-04	2.86E-08	1.22E-03	3.11E-03
C36	0.00E+00	1.37E-04	9.53E-06	1.18E+02	1.23E-04	4.53E-01	1.31E-04	1.29E-01	2.86E-02	4.45E-03	1.26E-02	4.80E-03	4.89E-03	9.24E-03	4.94E-04	8.00E-08	7.68E-03	2.42E-02
C37	0.00E+00	4.28E-05	2.85E-06	4.03E+01	3.48E-05	1.26E-01	4.11E-05	3.77E-02	6.13E-03	1.05E-03	4.03E-03	1.42E-03	1.44E-03	3.60E-03	1.65E-04	3.08E-08	2.59E-03	7.08E-03
C38	0.00E+00	7.61E-05	5.08E-06	7.30E+01	4.78E-05	1.88E-01	6.95E-05	6.77E-02	8.13E-03	1.53E-03	6.70E-03	2.29E-03	2.32E-03	7.44E-03	2.88E-04	5.04E-08	4.37E-03	1.27E-02
C39	0.00E+00	1.78E-05	1.34E-06	2.59E+01	3.18E-05	1.12E-01	2.05E-05	1.43E-02	4.16E-03	6.78E-04	1.96E-03	8.96E-04	9.14E-04	1.35E-03	1.17E-04	2.48E-08	1.05E-03	2.67E-03
C40	0.00E+00	2.58E-05	1.91E-06	2.98E+01	3.97E-05	1.37E-01	2.82E-05	2.18E-02	7.40E-03	1.12E-03	2.70E-03	1.19E-03	1.21E-03	1.61E-03	1.33E-04	2.49E-08	1.49E-03	4.09E-03
C41	0.00E+00	5.21E-05	3.92E-06	9.22E+01	8.30E-05	3.33E-01	5.72E-05	4.30E-02	5.98E-03	1.27E-03	5.36E-03	2.46E-03	2.50E-03	6.29E-03	4.00E-04	7.85E-08	2.87E-03	8.03E-03
C42	0.00E+00	2.65E-05	2.16E-06	6.37E+01	7.69E-05	2.88E-01	3.66E-05	1.69E-02	4.55E-03	9.08E-04	3.52E-03	1.84E-03	1.88E-03	2.50E-03	2.97E-04	7.14E-08	1.65E-03	3.11E-03
C43	0.00E+00	2.67E-05	1.90E-06	4.69E+01	4.35E-05	1.68E-01	3.03E-05	1.98E-02	2.98E-03	6.39E-04	2.98E-03	1.26E-03	1.28E-03	3.13E-03	2.04E-04	4.72E-08	1.70E-03	3.69E-03
C44	0.00E+00	2.13E-05	1.53E-06	3.69E+01	3.32E-05	1.30E-01	2.37E-05	1.64E-02	2.34E-03	5.03E-04	2.29E-03	9.81E-04	9.96E-04	2.54E-03	1.60E-04	3.49E-08	1.30E-03	3.07E-03
C45	0.00E+00	3.85E-05	2.68E-06	5.09E+01	5.38E-05	1.87E-01	4.18E-05	2.90E-02	6.04E-03	1.07E-03	4.11E-03	1.66E-03	1.69E-03	3.32E-03	2.22E-04	5.13E-08	2.43E-03	5.43E-03
C46	0.00E+00	8.75E-05	5.75E-06	6.18E+01	6.00E-05	1.99E-01	8.17E-05	7.92E-02	1.45E-02	2.30E-03	8.03E-03	2.70E-03	2.75E-03	5.80E-03	2.49E-04	4.33E-08	5.28E-03	1.49E-02
C47	0.00E+00	3.16E-10	2.79E-11	7.87E-04	1.24E-09	4.17E-06	5.05E-10	1.56E-07	1.30E-07	2.05E-08	4.88E-08	2.76E-08	2.82E-08	1.61E-08	3.83E-09	9.46E-13	2.05E-08	2.85E-08
C48	0.00E+00	9.14E-05	5.93E-06	7.63E+01	3.62E-05	1.52E-01	7.93E-05	8.32E-02	8.14E-03	1.58E-03	7.68E-03	2.38E-03	2.41E-03	9.17E-03	2.85E-04	4.45E-08	5.27E-03	1.56E-02
C49	0.00E+00	4.69E-05	3.45E-06	6.83E+01	8.75E-05	2.98E-01	5.53E-05	3.48E-02	1.09E-02	1.78E-03	5.40E-03	2.41E-03	2.45E-03	3.40E-03	3.10E-04	7.01E-08	2.94E-03	6.50E-03
C50	0.00E+00	2.57E-06	1.85E-07	2.32E+00	2.24E-06	9.20E-03	2.41E-06	2.61E-03	5.73E-04	8.89E-05	2.24E-04	9.02E-05	9.18E-05	1.82E-04	9.72E-06	1.36E-09	1.32E-04	4.90E-04
C51	0.00E+00	2.34E-05	1.79E-06	4.25E+01	5.49E-05	1.88E-01	3.00E-05	1.52E-02	5.31E-03	9.08E-04	2.93E-03	1.39E-03	1.42E-03	1.75E-03	1.97E-04	4.86E-08	1.51E-03	2.83E-03
C52	0.00E+00	1.69E-05	1.23E-06	2.02E+01	2.93E-05	9.42E-02	1.95E-05	1.26E-02	4.97E-03	7.46E-04	1.90E-03	8.29E-04	8.45E-04	9.80E-04	9.16E-05	1.90E-08	1.06E-03	2.36E-03
C53	0.00E+00	1.51E-05	1.12E-06	2.26E+01	2.95E-05	1.00E-01	1.80E-05	1.10E-02	3.61E-03	5.87E-04	1.76E-03	7.96E-04	8.12E-04	1.08E-03	1.03E-04	2.35E-08	9.49E-04	2.05E-03
C54	0.00E+00	2.30E-05	1.64E-06	3.20E+01	3.48E-05	1.22E-01	2.54E-05	1.75E-02	3.85E-03	6.79E-04	2.48E-03	1.04E-03	1.06E-03	1.97E-03	1.41E-04	3.22E-08	1.42E-03	3.27E-03
C55	0.00E+00	3.78E-05	2.71E-06	4.94E+01	5.89E-05	2.02E-01	4.21E-05	2.95E-02	7.80E-03	1.28E-03	4.12E-03	1.74E-03	1.77E-03	2.87E-03	2.19E-04	4.79E-08	2.35E-03	5.53E-03
C56	0.00E+00	2.94E-06	1.89E-07	2.24E+00	2.75E-06	7.81E-03	2.95E-06	2.32E-03	5.20E-04	8.15E-05	2.98E-04	1.02E-04	1.04E-04	1.80E-04	9.37E-06	2.02E-09	1.94E-04	4.36E-04
C57	0.00E+00	2.70E-05	2.03E-06	4.55E+01	5.63E-05	1.94E-01	3.31E-05	1.86E-02	5.63E-03	9.71E-04	3.23E-03	1.49E-03	1.52E-03	2.12E-03	2.09E-04	5.02E-08	1.71E-03	3.46E-03
C58	0.00E+00	4.83E-06	4.26E-07	1.08E+01	1.89E-05	6.11E-02	7.67E-06	2.22E-03	2.76E-03	3.99E-04	7.40E-04	4.20E-04	4.29E-04	2.05E-04	5.27E-05	1.16E-08	3.11E-04	4.07E-04
C59	0.00E+00	3.45E-06	2.92E-07	8.51E+00	1.25E-05	4.25E-02	5.33E-06	1.71E-03	1.10E-03	1.83E-04	5.20E-04	2.81E-04	2.88E-04	2.02E-04	4.13E-05	1.07E-08	2.32E-04	3.12E-04
C60	0.00E+00	3.46E-05	2.49E-06	4.61E+01	5.58E-05	1.91E-01	3.90E-05	2.68E-02	7.30E-03	1.20E-03	3.81E-03	1.62E-03	1.65E-03	2.61E-03	2.06E-04	4.52E-08	2.15E-03	5.02E-03
C61	0.00E+00	1.65E-05	1.42E-06	4.23E+01	6.28E-05	2.13E-01	2.60E-05	7.90E-03	5.49E-03	9.12E-04	2.54E-03	1.40E-03	1.43E-03	9.31E-04	2.06E-04	5.34E-08	1.11E-03	1.44E-03
C62	0.00E+00	2.70E-05	2.12E-06	4.42E+01	7.26E-05	2.32E-01	3.63E-05	1.62E-02	1.11E-02	1.63E-03	3.55E-03	1.77E-03	1.80E-03	1.36E-03	2.09E-04	4.56E-08	1.74E-03	3.01E-03
C63	0.00E+00	1.11E-04	7.45E-06	1.14E+02	1.13E-04	3.88E-01	1.12E-04	9.23E-02	1.74E-02	2.95E-03	1.11E-02	4.05E-03	4.11E-03	8.97E-03	4.79E-04	9.86E-08	6.97E-03	1.73E-02
C64	0.00E+00	7.51E-05	5.39E-06	1.11E+02	1.27E-04	4.39E-01	8.61E-05	5.43E-02	1.34E-02	2.35E-03	8.45E-03	3.61E-03	3.68E-03	6.21E-03	4.95E-04	1.17E-07	4.76E-03	1.01E-02
C65	0.00E+00	4.23E-07	4.50E-08	1.59E+00	2.74E-06	9.12E-03	8.93E-07	8.08E-05	2.67E-04	4.13E-05	8.58E-05	5.55E-05	5.69E-05	1.05E-05	7.98E-06	2.04E-09	2.86E-05	1.32E-05
C66	0.00E+00	2.98E-05	2.01E-06	2.45E+01	2.78E-05	9.11E-02	2.93E-05	2.59E-02	5.84E-03	9.11E-04	2.87E-03	1.05E-03	1.07E-03	1.92E-03	1.03E-04	1.91E-08	1.81E-03	4.86E-03
C67	0.00E+00	6.24E-05	4.59E-06	1.17E+02	1.17E-04	4.48E-01	7.34E-05	4.56E-02	7.72E-03	1.62E-03	7.14E-03	3.21E-03	3.26E-03	7.06E-03	5.21E-04	1.19E-07	3.88E-03	8.49E-03
C68	0.00E+00	7.10E-05	5.43E-06	1.55E+02	1.77E-04	6.58E-01	9.30E-05	4.55E-02	1.07E-02	2.17E-03	9.15E-03	4.39E-03	4.47E-03	7.15E-03	7.11E-04	1.76E-07	4.68E-03	8.40E-03
C69	0.00E+00	4.87E-05	3.27E-06	6.31E+01	5.30E-05	1.95E-01	5.00E-05	3.76E-02	5.31E-03	1.06E-03	4.93E-03	1.83E-03	1.86E-03	5.10E-03	2.65E-04	6.00E-08	3.07E-03	7.05E-03
C70	0.00E+00	9.97E-05	6.79E-06	1.47E+02	1.05E-04	4.29E-01	1.01E-04	8.20E-02	8.63E-03	1.95E-03	9.78E-03	3.71E-03	3.75E-03	1.28E-02	6.07E-04	1.24E-07	6.02E-03	1.54E-02
C71	0.00E+00	4.75E-05	3.41E-06	6.73E+01	7.40E-05	2.60E-01	5.28E-05	3.59E-02	8.12E-03	1.43E-03	5.15E-03	2.18E-03	2.22E-03

Appendix F.3.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D41	0.00E+00	8.68E-06	7.26E-07	1.73E+01	2.80E-05	9.46E-02	1.26E-05	5.06E-03	2.94E-03	4.67E-04	1.21E-03	6.51E-04	6.66E-04	5.04E-04	8.23E-05	2.12E-08	5.52E-04	9.36E-04
D42	0.00E+00	1.45E-05	1.11E-06	2.05E+01	2.65E-05	9.49E-02	1.67E-05	1.19E-02	3.39E-03	5.53E-04	1.59E-03	7.43E-04	7.58E-04	1.11E-03	9.15E-05	2.02E-08	8.33E-04	2.22E-03
D43	0.00E+00	1.80E-05	1.85E-06	5.72E+01	1.06E-04	3.54E-01	3.58E-05	4.83E-03	1.00E-02	1.56E-03	3.41E-03	2.18E-03	2.23E-03	5.43E-04	2.85E-04	7.79E-08	1.19E-03	8.37E-04
D44	0.00E+00	2.79E-05	2.07E-06	3.95E+01	5.46E-05	1.86E-01	3.34E-05	2.02E-02	6.49E-03	1.06E-03	3.26E-03	1.47E-03	1.50E-03	1.98E-03	1.79E-04	4.31E-08	1.76E-03	3.78E-03
D45	0.00E+00	9.11E-05	6.71E-06	1.21E+02	1.57E-04	5.45E-01	1.04E-04	7.13E-02	1.98E-02	3.25E-03	1.00E-02	4.46E-03	4.54E-03	6.83E-03	5.39E-04	1.23E-07	5.52E-03	1.34E-02
D46	0.00E+00	9.67E-05	7.03E-06	1.23E+02	1.55E-04	5.40E-01	1.08E-04	7.68E-02	2.00E-02	3.30E-03	1.05E-02	4.53E-03	4.62E-03	7.36E-03	5.44E-04	1.23E-07	5.87E-03	1.44E-02
D47	0.00E+00	1.15E-04	8.73E-06	1.73E+02	2.46E-04	8.41E-01	1.42E-04	8.21E-02	2.87E-02	4.65E-03	1.37E-02	6.45E-03	6.59E-03	8.00E-03	7.91E-04	1.92E-07	7.16E-03	1.53E-02
D48	0.00E+00	4.48E-05	3.56E-06	7.57E+01	1.13E-04	3.88E-01	5.84E-05	3.08E-02	1.27E-02	2.04E-03	5.61E-03	2.82E-03	2.88E-03	2.98E-03	3.52E-04	8.62E-08	2.75E-03	5.73E-03
D49	0.00E+00	1.89E-04	1.34E-05	2.27E+02	2.82E-04	9.62E-01	2.09E-04	1.47E-01	3.66E-02	6.06E-03	2.05E-02	8.46E-03	8.61E-03	1.43E-02	9.96E-04	2.30E-07	1.19E-02	2.75E-02
D50	0.00E+00	1.96E-04	1.42E-05	2.58E+02	3.44E-04	1.17E+00	2.27E-04	1.45E-01	4.21E-02	6.90E-03	2.22E-02	9.65E-03	9.84E-03	1.42E-02	1.16E-03	2.76E-07	1.24E-02	2.72E-02
D51	0.00E+00	2.81E-05	2.11E-06	4.21E+01	6.06E-05	2.04E-01	3.49E-05	1.94E-02	6.96E-03	1.13E-03	3.41E-03	1.58E-03	1.61E-03	1.92E-03	1.93E-04	4.77E-08	1.80E-03	3.62E-03
D52	0.00E+00	2.32E-05	1.84E-06	4.06E+01	6.30E-05	2.12E-01	3.13E-05	1.46E-02	6.82E-03	1.09E-03	3.04E-03	1.53E-03	1.56E-03	1.45E-03	1.90E-04	4.85E-08	1.49E-03	2.70E-03
D53	0.00E+00	3.94E-05	2.99E-06	6.06E+01	8.82E-05	2.98E-01	4.95E-05	2.71E-02	1.01E-02	1.63E-03	4.82E-03	2.27E-03	2.32E-03	2.67E-03	2.78E-04	6.89E-08	2.51E-03	5.06E-03
D54	0.00E+00	3.77E-05	2.93E-06	6.37E+01	9.82E-05	3.28E-01	5.03E-05	2.35E-02	1.07E-02	1.71E-03	4.92E-03	2.41E-03	2.46E-03	2.37E-03	2.97E-04	7.64E-08	2.47E-03	4.37E-03
D55	0.00E+00	9.04E-05	6.77E-06	1.53E+02	1.68E-04	6.21E-01	1.06E-04	6.66E-02	1.37E-02	2.61E-03	1.01E-02	4.65E-03	4.74E-03	8.59E-03	6.86E-04	1.59E-07	5.40E-03	1.24E-02
D56	0.00E+00	6.14E-05	4.48E-06	9.65E+01	9.98E-05	3.71E-01	6.89E-05	4.63E-02	8.48E-03	1.64E-03	6.65E-03	2.91E-03	2.96E-03	6.03E-03	4.26E-04	9.77E-08	3.69E-03	8.64E-03
D57	0.00E+00	1.06E-04	7.91E-06	1.78E+02	1.95E-04	7.22E-01	1.24E-04	7.79E-02	1.59E-02	3.05E-03	1.19E-02	5.42E-03	5.53E-03	1.01E-02	7.99E-04	1.87E-07	6.37E-03	1.45E-02
D58	0.00E+00	7.50E-05	5.81E-06	1.41E+02	1.68E-04	6.15E-01	9.36E-05	5.20E-02	1.29E-02	2.43E-03	9.00E-03	4.36E-03	4.45E-03	6.69E-03	6.49E-04	1.56E-07	4.55E-03	9.65E-03
D59	0.00E+00	7.82E-05	5.70E-06	1.24E+02	1.30E-04	4.81E-01	8.86E-05	5.81E-02	1.09E-02	2.11E-03	8.57E-03	3.75E-03	3.82E-03	7.61E-03	5.50E-04	1.28E-07	4.76E-03	1.08E-02
D60	0.00E+00	5.41E-05	4.30E-06	1.13E+02	1.44E-04	5.19E-01	7.25E-05	3.41E-02	1.05E-02	1.95E-03	7.02E-03	3.53E-03	3.61E-03	4.45E-03	5.28E-04	1.33E-07	3.42E-03	6.30E-03
D61	0.00E+00	8.05E-06	5.96E-07	1.37E+01	1.53E-05	5.59E-02	9.55E-06	5.70E-03	1.22E-03	2.33E-04	9.28E-04	4.19E-04	4.27E-04	7.52E-04	6.17E-05	1.49E-08	5.02E-04	1.06E-03
D62	0.00E+00	2.04E-05	1.51E-06	3.53E+01	4.01E-05	1.46E-01	2.45E-05	1.42E-02	3.15E-03	6.01E-04	2.39E-03	1.08E-03	1.10E-03	1.89E-03	1.60E-04	3.90E-08	1.29E-03	2.64E-03
D63	0.00E+00	1.83E-05	1.23E-06	2.01E+01	1.83E-05	6.48E-02	1.83E-05	1.47E-02	2.33E-03	4.25E-04	1.81E-03	6.62E-04	6.73E-04	1.67E-03	8.36E-05	1.82E-08	1.13E-03	2.75E-03
D64	0.00E+00	3.73E-06	2.73E-07	5.88E+00	7.49E-06	2.56E-02	4.53E-06	2.49E-03	7.37E-04	1.27E-04	4.47E-04	2.00E-04	2.04E-04	2.90E-04	2.67E-05	6.68E-09	2.44E-04	4.63E-04
D65	0.00E+00	4.99E-05	3.74E-06	8.89E+01	1.03E-04	3.74E-01	6.09E-05	3.43E-02	8.00E-03	1.52E-03	5.93E-03	2.74E-03	2.79E-03	4.54E-03	4.04E-04	9.93E-08	3.14E-03	6.37E-03
D66	0.00E+00	4.47E-05	3.25E-06	6.74E+01	6.63E-05	2.50E-01	4.87E-05	3.50E-02	5.89E-03	1.15E-03	4.66E-03	2.01E-03	2.05E-03	4.50E-03	2.94E-04	6.48E-08	2.61E-03	6.54E-03
D67	0.00E+00	4.52E-05	3.10E-06	5.48E+01	4.00E-05	1.60E-01	4.38E-05	3.84E-02	4.49E-03	9.15E-04	4.19E-03	1.57E-03	1.59E-03	4.97E-03	2.24E-04	4.35E-08	2.60E-03	7.20E-03
D68	0.00E+00	6.57E-05	4.67E-06	9.18E+01	8.27E-05	3.17E-01	6.86E-05	5.30E-02	7.85E-03	1.55E-03	6.57E-03	2.70E-03	2.75E-03	6.84E-03	3.92E-04	8.34E-08	3.83E-03	9.92E-03
D69	0.00E+00	1.03E-05	6.93E-07	1.23E+01	9.11E-06	3.53E-02	1.01E-05	8.48E-03	9.98E-04	2.04E-04	9.77E-04	3.54E-04	3.59E-04	1.12E-03	5.03E-05	1.04E-08	6.18E-04	1.59E-03
D70	0.00E+00	3.17E-05	2.24E-06	4.30E+01	3.73E-05	1.44E-01	3.26E-05	2.59E-02	3.64E-03	7.24E-04	3.12E-03	1.26E-03	1.28E-03	3.34E-03	1.82E-04	3.81E-08	1.84E-03	4.84E-03
D71	0.00E+00	5.03E-05	3.59E-06	6.12E+01	5.79E-05	2.17E-01	5.10E-05	4.27E-02	7.39E-03	1.33E-03	4.85E-03	1.98E-03	2.02E-03	4.64E-03	2.59E-04	5.17E-08	2.84E-03	8.01E-03
D72	0.00E+00	4.86E-05	3.37E-06	5.47E+01	4.78E-05	1.80E-01	4.78E-05	4.15E-02	6.46E-03	1.17E-03	4.58E-03	1.77E-03	1.80E-03	4.55E-03	2.27E-04	4.45E-08	2.79E-03	7.79E-03
D73	0.00E+00	1.65E-05	1.28E-06	2.54E+01	2.89E-05	1.08E-01	1.85E-05	1.36E-02	3.24E-03	5.62E-04	1.72E-03	8.30E-04	8.45E-04	1.43E-03	1.13E-04	2.35E-08	8.77E-04	2.55E-03
D74	0.00E+00	1.34E-05	1.07E-06	2.54E+01	3.45E-05	1.21E-01	1.75E-05	8.95E-03	3.32E-03	5.62E-04	1.67E-03	8.56E-04	8.74E-04	9.85E-04	1.18E-04	2.86E-08	8.04E-04	1.66E-03
D75	0.00E+00	1.06E-05	8.45E-07	2.17E+01	2.74E-05	9.93E-02	1.40E-05	6.93E-03	2.02E-03	3.76E-04	1.34E-03	6.78E-04	6.92E-04	8.89E-04	1.01E-04	2.50E-08	6.50E-04	1.28E-03
D76	0.00E+00	1.31E-05	9.85E-07	2.29E+01	2.61E-05	9.53E-02	1.57E-05	9.30E-03	2.06E-03	3.92E-04	1.52E-03	7.02E-04	7.16E-04	1.21E-03	1.04E-04	2.49E-08	8.05E-04	1.73E-03
D77	0.00E+00	1.97E-05	1.37E-06	2.70E+01	2.41E-05	9.09E-02	2.06E-05	1.55E-02	2.28E-03	4.52E-04	2.00E-03	7.95E-04	8.07E-04	2.05E-03	1.15E-04	2.54E-08	1.19E-03	2.91E-03
D78	0.00E+00	3.08E-05	2.22E-06	4.65E+01	4.62E-05	1.73E-01	3.38E-05	2.37E-02	4.05E-03	7.89E-04	3.26E-03	1.39E-03	1.42E-03	3.09E-03	2.03E-04	4.58E-08	1.84E-03	4.43E-03
D79	0.00E+00	4.49E-05	3.14E-06	5.33E+01	5.05E-05	1.86E-01	4.56E-05	3.72E-02	6.37E-03	1.15E-03	4.40E-03	1.74E-03	1.77E-03	4.10E-03	2.25E-04	4.66E-08	2.63E-03	6.97E-03
D80	0.00E+00	3.53E-05	2.53E-06	4.91E+01	5.59E-05	1.97E-01	3.94E-05	2.64E-02	6.05E-03	1.06E-03	3.84E-03	1.64E-03	1.67E-03	2.98E-03	2.17E-04	5.02E-08	2.18E-03	4.93E-03
D81	0.00E+00	1.25E-05	1.10E-06	3.09E+01	4.69E-05	1.63E-01	1.94E-05	6.66E-03	4.15E-03	6.89E-04	1.86E-03	1.06E-03	1.08E-03	7.42E-04	1.49E-04	3.81E-08	7.87E-04	1.22E-03
D82	0.00E+00	6.68E-06	6.13E-07	1.83E+01	2.87E-05	9.91E-02	1.11E-05	3.12E-03	2.48E-03	4.09E-04	1.06E-03	6.27E-04	6.42E-04	3.49E-04	8.93E-05	2.31E-08	4.26E-04	5.65E-04
D83	0.00E+00	6.25E-05	4.47E-06	9.12E+01	8.72E-05	3.28E-01	6.72E-05	4.89E-02	7.88E-03	1.54E-03	6.47E-03	2.71E-03	2.76E-03	6.36E-03	3.95E-04	8.73E-08	3.71E-03	9.14E-03
D84	0.00E+00	7.76E-05	5.71E-06	1.07E+02	8.92E-05	3.62E-01	7.79E-05	6.81E-02	9.24E-03	1.82E-03	7.19E-03	3.09E-03	3.14E-03	8.38E-03	4.50E-04	8.27E-08	4.05E-03	1.28E-02
D85	0.00E+00	6.34E-05	4.48E-06	8.55E+01	7.34E-05	2.85E-01	6.48E-05	5.22E-02	7.26E-03	1.44E-03	6.18E-03	2.50E-03	2.54E-03	6.71E-03	3.61E-04	7.45E-08	3.64E-03	9.77E-03
D86	0.00E+00	7.56E-05	5.65E-06	1.09E+02	9.74E-05	3.90E-01	7.79E-05	6.56E-02	9.60E-03	1.88E-03	7.18E-03	3.20E-03	3.25E-03	8.02E-03	4.68E-04	8.84E-08	3.93E-03	1.23E-02
D87	0.00E+00	1.08E-04	7.47E-06	1.35E+02	1.04E-04	4.10E-01	1.06E-04	9.08E-02	1.12E-02	2.26E-03	1.01E-02	3.88E-03	3.93E-03	1.17E-02	5.56E-04	1.10E-07	6.16E-03	1.70E-02
D88	0.00E+00	1.52E-04	1.13E-05	2.18E+02	1.93E-04	7.69E-01	1.57E-04	1.31E-01	1.90E-02	3.73E-03	1.45E-02	6.38E-03	6.48E-03	1.61E-02	9.30E-04	1.79E-07	8.07E-03	2.44E-02
D89	0.00E+00	6.69E-06	5.26E-07	1.08E+01	1.57E-05	5.43E-02	8.46E-06	4.84E-03	1.81E-03	2.92E-04	8.10E-04	4.01E-04	4.09E-04	4.62E-04	4.99E-05	1.19E-08	4.03E-04	9.01E-04
D90	0.00E+00	1.38E-05	1.02E-06	1.91E+01	2.60E-05	8.85E-02	1.64E-05	1.02E-02	3.13E-03	5.12E-04	1.59E-03	7.12E-04	7.27E-04	9.95E-04	8.60E-05	2.06E-08	8.70E-04	1.90E-03
D91	0.00E+00	2.13E-05	1.79E-06	4.65E+01	6.76E-05	2.35E-01	3.06E-05	1.26E-02	6.17E-03	1.03E-03	2.94E-03	1.58E-03	1.62E-03	1.41E-03	2.22E-04	5.56E-08	1.33E-03	2.32E-03
D92	0.00E+00	5.87E-06	4.88E-07	1.23E+01	1.73E-05	6.08E-02	8.13E-06	3.71E-03	1.62E-03	2.72E-04	7.76E-04	4.15E-04	4.24E-04	4.07E-04	5.79E-05	1.42E-08	3.55E-04	6.85E-04
D93	0.00E+00	1.98E-05	1.65E-06	4.25E+01	6.13E-05	2.13E-01	2.81E-05	1.18E-02	5.62E-03	9.42E-04	2.71E-03	1.45E-03	1.48E-03	1.33E-03	2.02E-04	5.06E-08	1.24E-03	2.18E-03
D94	0.00E+00	4.29E-06	3.59E-07	9.44E+00	1.38E-05	4.78E-02	6.21E-06	2.46E-03	1.25E-03	2.09E-04	5.99E-04	3.22E-04	3.29E-04	2.78E-04	4.50E-05	1.14E-08	2.72E-04	4.53E-04
E01	0.00E+00	1.70E-05	1.28E-06	2.59E+01	3.81E-05	1.27E-01	2.15E-05	1.13E-02	4.28E-03	6.92E-04	2.11E-03	9.78E-04	9.99E-04	1.13E-03	1.19E-04	3.02E-08	1.12E-03	2.10E-03
E02	0.00E+00	4.45E-05	3.20E-06	5.55E+01	6.95E-05	2.40E-01	4.95E-05	3.51E-02	9.00E-03	1.49E-03	4.82E-03	2.05E-03	2.09E-03	3.38E-03	2.44E-04	5.56E-08	2.73E-03	6.57E-03
E03	0.00E+00	1.44E-05	1.21E-06	3.41E+01	4.64E-05	1.67E-01	2.08E-05	8.41E-03	3.24E-03	5.93E-04	2.00E-03	1.08E-03	1.10E-03	1.07E-03	1.63E-04	4.15E-08	8.99E-04	1.54E-03
E04	0.00E+00	1.81E-05	1.41E-06	3.32E+01	3.84E-05	1.42E-01	2.20E-05	1.32E-02	3.03E-03	5.72E-04	2.09E-03	1.02E-03	1.04E-03	1.67E-03	1.51E-04	3.51E-08	1.06E-03	2.45E-03
E05	0.00E+00	8.86E-06	6.65E-07	1.56E+01	1.78E-05	6.48E-02	1.07E-05	6.24E-03	1.40E-03	2.66E-04	1.03E-03	4.77E-04	4.86E-04	8.17E-04	7.05E-05	1.70E-08	5.46E-04	1.16E-03
E06	0.00E+00	1.71E-05	1.36E-06	3.55E+01	4.53E-05	1.64E-01	2.28E-05	1.10E-02	3.31E-03	6.14E-04	2.19E-03	1.11E-03	1.13E-03	1.41E-03	1.66E-04	4.14E-08	1.06E-03	2.02E-03
E07	0.00E+00	1.90E-04	1.42E-05	2.68E+02	3.64E-04	1.25E+00	2.25E-04	1.43E-01	4.41E-02	7.19E-03	2.18E-02	9.93E-03	1.01E-02	1.38E-02	1.21E-03	2.85E-07	1.17E-02	2.67E-02
E08	0.00E+00	1.14E-04	8.44E-06	1.63E+02	2.30E-04	7.73E-01	1.39E-04	8.02E-02	2.68E-02	4.37E-03	1.36E-02	6.14E-03	6.26E-03	7.96E-03	7.42E-04	1.83E-07	7.38E-03	1.50E-02
E09	0.00E+00	1.66E-04	1.25E-05	2.42E+02	3.36E-04	1.16E+00	2.00E-04	1.23E-01	4.01E-02	6.52E-03	1.93E-02	8.99E-03	9.17E-03	1.19E-02	1.10E-03	2.61E-07	1.02E-02	2.30E-02
E10	0.00E+00	1.12E-04	8.44E-06	1.69E+02	2.43E-04	8.19E-01	1.40E-04	7.74E-02	2.79E-02	4.52E-03	1.37E-02	6.33E-03	6.46E-03	7.67E-03	7.72E-04	1.92E-07	7.21E-03	1.44E-02
E11	0.00E+00	1.58E-04	1.20E-05	2.40E+02	3.45E-04	1.17E+00	1.96E-04	1.11E-01	3.98E-02	6.44E-03	1.91E-02	8.96E-03	9.15E-03	1.09E-02	1.10E-03	2.69E-07	9.95E-03	2.07E-02
E12	0.00E+00	1.51E-04	1.11E-05	1.95E+02	2.46E-04	8.61E-01	1.70E-04	1.21E-01	3.18E-02	5.24E-03	1.64E-02	7.16E-03	7.30E-03	1.15E-02	8.62E-04	1.93E-07	9.10E-03	2.27E-02
E13	0.00E+00	2.68E-05	2.13E-06	5.62E+01	7.23E-05	2.60E-01	3.61E-05	1.67E-02	5.22E-03	9.69E-04	3.50E-03	1.76E-03	1.80E-03	2.19E-03	2.63E-04	6.68E-08	1.70E-03	3.08E-03
E14	0.00E+00	5.49E-05	4.25E-06	1.04E+02	1.24E-04	4.52E-01	6.87E-05	3.78E-02	9.48E-03	1.78E-03	6.61E-03	3.20E-03	3.27E-03	4.87E-03	4.76E-04	1.15E-07	3.34E-03	7.01E-03
E15	0.00E+00	1.39E-05	1.12E-06	2.97E+01	3.83E-05	1.38E-01	1.88E-05	8.80E-03	2.77E-03	5.13E-04	1.81E-03	9.29E-04	9.49E-04	1.13E-03	1.39E-04	3.48E-08	8.60E-04	1.62E-03
E16	0.00E+00	3.69E-05	2.87E-06	6.13E+01	6.33E-05	2.45E-01	4.12E-05	3.04E-02	5.55E-03	1.06E-03	3.81E-03	1.84E-03	1.87E-03	3.68E-03	2.72E-04	5.58E-08	1.94E-03	5.66E-03
E17	0.00E+00	1.09E-05	7.79E-07	1.77E+01	1.95E-05	7.02E-02	1.28E-05	7.50E-03	1.56E-03	3.00E-04	1.26E-03	5.42E-04	5.52E-04	1.02E-03	7.94E-05	1.98E-08	7.08E-04	1.40E-03
E18	0.00E+00	1.41E-05	1.26E-06	3.86E+01	5.57E-05	1.99E-01	2.25E-05	7.21E-03	3.74E-03	6.76E-04	2.16E-03	1.24E-03	1.27E-03	9.02E-04	1.88E-04	4.89E-08	8.97E-04	1.31E-03
E19	0.00E+00	7.40E-05	5.44E-06	1.05E+02	1.47E-04	4.93E-01	8.95E-05	5.18E-02	1.72E-02	2.80E-03	8.79E-03	3.94E-03	4.02E-03	5.15E-03	4.75E-04	1.17E-07	4.79E-03	9.67E-03
E20	0.00E+00	3.64E-05	2.71E-06	5.57E+01	8.32E-05	2.74E-01	4.64E-05	2.33E-02	9.20E-03	1.49E-03	4.58E-03	2.12E-03	2.16E-03	2.37E-03	2.57E-04	6.62E-08	2.43E-03	4.33E-03
E21	0.00E+00	1.85E-06	1.36E-07	2.51E+00	2.06E-06	8.38E-03	1.84E-06	1.63E-03	2.17E-04	4.29E-05	1.70E-04	7.25E-05	7.36E-05	2.01E-04	1.05E-05	1.91E-09	9.61E-05	3.06E-04
E22	0.00E+00	8.57E-06	6.55E-07	1.47E+01	1.61E-05	6.02E-02	9.98E-06	6.50E-03	1.33E-03	2.53E-04	9.47E-04	4.46E-04	4.55E-04	8.20E-04	6.60E-05	1.49E-08	4.93E-04	1.21E-03
E23	0.00E+00	1.04E-04	6.89E-06	1.13E+02	6.74E-05	2.77E-01	9.59E-05	8.95E-02	8.87E-03	1.86E-03	9.24E-03	3.16E-03	3.20E-03	1.17E-02	4.44E-04	8.25E-08	6.04E-03	1.68E-02
E24	0.00E+00	8.11E-05	5.84E-06	1.19E+02	1.13E-04	4.29E-01	8.70E-05	6.41E-02	1.03E-02	2.01E-03	8.34E-03	3.53E-03	3.59E-03	8.27E-03	5.14E-04	1.12E-07	4.76E-03	1.20E-02
E25	0.00E+00	1.95E-05	1.63E-06	4.16E+01	5.96E-05	2.09E-01	2.74E-05	1.20E-02	5.52E-03	9.25E-04	2.62E-03	1.41E-03	1.44E-03	1.32E-03	1.98E-04	4.89E-08	1.19E-03	2.22E-03
E26	0.00E+00	1.34E-05	1.21E-06	3.45E+01	5.29E-05	1.84E-01	2.13E-05	7.04E-03	4.67E-03	7.72E-04	2.02E-03	1.18E-03	1.21E-03	7.70E-04	1.67E-04	4.25E-08	8.26E-04	1.29E-03
E27	0.00E+00	2.51E-05	1.96E-06	4.40E+01	5.74E-05	2.02E-01	3.14E-05	1.75E-02	5.67E-03	9.68E-04	3.02E-03	1.48E-03	1.51E-03	1.93E-03	2.03E-04	4.83E-08	1.52E-03	3.25E-03
E28	0.00E+00	5.62E-06	4.80E-07	1.30E+01	1.93E-05	6.68E-02	8.37E-06	3.12E-03	1.73E-03	2.88E-04	8.06E-04	4.43E-04	4.53E-04	3.51E-04	6.22E-05	1.58E-08	3.56E-04	5.72E-04
E29	0.00E+00	3.38E-06	2.75E-07	6.67E+00	9.22E-06	3.24E-02	4.53E-06	2.21E-03	8.75E-04	1.48E-04	4.33E-04	2.25E-04	2.30E-04	2.43E-04	3.13E-05	7.62E-09	2.04E-04	4.09E-04
E30	0.00E+00	1.94E-05	1.55E-06	3.68E+01	5.02E-05	1.76E-01	2.55E-05	1.28E-02	4.79E-03	8.12E-04	2.45E-03	1.24E-03	1.27E-03	1.42E-03	1.72E-04	4.19E-08	1.19E-03	2.36E-03
E31	0.00E+00	9.68E-06	7.43E-07	1.70E+01	2.27E-05	7.86E-02	1.23E-05	6.35E-03	2.19E-03	3.73E-04	1.20E-03	5.77E-04	5.89E-04	7.24E-04	7.88E-05	1.95E-08	6.15E-04	1.18E-03
E32	0.00E+00	2.71E-05	2.30E-06	6.15E+01	9.09E-05	3.15E-01	3.99E-05	1.54E-02	8.19E-03	1.37E-03	3.83E-03	2.10E-03	2.14E-03	1.72E-03	2.95E-04	7.46E-08	1.70E-03	2.82E-03
E33	0.00E+00	2.18E-05	1.70E-06	3.65E+01	5.54E-05	1.87E-01	2.87E-05	1.42E-02	6.11E-03	9.81E-04	2.79E-03	1.37E-03	1.40E-03	1.41E-03	1.70E-04	4.28E-08	1.39E-03	2.64E-03
E34	0.00E+00	6.80E-05	5.29E-06	1.10E+02	1.63E-04	5.56E-01	8.73E-05	4.66E-02	1.84E-02	2.97E-03	8.44E-03	4.12E-03	4.21E-03	4.56E-03	5.10E-04	1.26E-07	4.25E-03	8.69E-03
E35	0.00E+00	3.84E-05	2.91E-06	5.78E+01	8.26E-05	2.81E-01	4.74E-05	2.71E-02	9.57E-03	1.55E-03	4.61E-03	2.16E-03	2.20E-03	2.66E-03	2.64E-04	6.45E-08	2.41E-03	5.06E-03
E36	0.00E+00	6.21E-05	4.81E-06	9.96E+01	1.47E-04	4.99E-01	7.92E-05	4.28E-02	1.66E-02	2.68E-03	7.66E-03	3.72E-03	3.80E-03	4.18E-03	4.60E-04	1.13E-07	3.88E-03	7.98E-03
E37	0.00E+00	4.95E-05	3.54E-06	6.26E+01	8.12E-05	2.75E-01	5.63E-05	3.73E-02	1.01E-02	1.67E-03	5.52E-03	2.34E-03	2.38E-03	3.66E-03	2.78E-04	6.57E-08	3.15E-03	6.98E-03
E38	0.00E+00	8.65E-05	6.42E-06	1.20E+02	1.61E-04	5.55E-01	1.02E-04	6.52E-02	1.97E-02	3.21E-03	9.84E-03	4.44E-03	4.53E-03	6.30E-03	5.39E-04	1.27E-07	5.33E-03	1.22E-02
E39	0.00E+00	2.21E-05	1.81E-06	4.66E+01	6.74E-05	2.33E-01	3.12E-05	1.30E-02	6.15E-03	1.03E-03	3.02E-03	1.59E-03	1.62E-03	1.47E-03	2.21E-04	5.61E-08	1.40E-03	2.39E-03
E40	0.00E+00	1.39E-05	1.24E-06	3.55E+01	5.46E-05	1.89E-01	2.21E-05	7.01E-03	4.79E-03	7.92E-04	2.12E-03	1.22E-03	1.24E-03

Appendix F.3.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E56	0.00E+00	4.64E-05	3.46E-06	7.41E+01	7.63E-05	2.88E-01	5.19E-05	3.62E-02	6.57E-03	1.27E-03	4.93E-03	2.23E-03	2.26E-03	4.59E-03	3.27E-04	7.21E-08	2.67E-03	6.75E-03
E57	0.00E+00	2.06E-05	1.70E-06	4.21E+01	5.91E-05	2.07E-01	2.82E-05	1.31E-02	5.54E-03	9.33E-04	2.70E-03	1.42E-03	1.45E-03	1.45E-03	1.98E-04	4.87E-08	1.25E-03	2.43E-03
E58	0.00E+00	2.08E-05	1.64E-06	3.72E+01	4.88E-05	1.73E-01	2.62E-05	1.45E-02	4.82E-03	8.21E-04	2.51E-03	1.25E-03	1.27E-03	1.60E-03	1.72E-04	4.07E-08	1.24E-03	2.70E-03
E59	0.00E+00	9.98E-05	7.07E-06	1.41E+02	1.30E-04	4.91E-01	1.06E-04	7.88E-02	1.21E-02	2.38E-03	1.02E-02	4.17E-03	4.24E-03	1.03E-02	6.05E-04	1.33E-07	5.95E-03	1.47E-02
E60	0.00E+00	7.52E-05	5.55E-06	1.27E+02	1.42E-04	5.17E-01	8.89E-05	5.33E-02	1.13E-02	2.17E-03	8.65E-03	3.89E-03	3.96E-03	7.04E-03	5.72E-04	1.38E-07	4.69E-03	9.92E-03
E61	0.00E+00	1.47E-05	1.36E-06	4.47E+01	6.75E-05	2.39E-01	2.55E-05	6.15E-03	4.38E-03	7.85E-04	2.46E-03	1.45E-03	1.48E-03	7.82E-04	2.21E-04	5.92E-08	9.79E-04	1.10E-03
E62	0.00E+00	2.22E-05	1.82E-06	4.92E+01	6.47E-05	2.33E-01	3.07E-05	1.38E-02	4.63E-03	8.54E-04	2.95E-03	1.55E-03	1.58E-03	1.76E-03	2.32E-04	5.83E-08	1.37E-03	2.54E-03
E63	0.00E+00	1.38E-04	1.01E-05	1.95E+02	2.20E-04	7.88E-01	1.54E-04	1.06E-01	2.42E-02	4.24E-03	1.48E-02	6.47E-03	6.59E-03	1.18E-02	8.62E-04	1.94E-07	8.24E-03	1.98E-02
E64	0.00E+00	8.84E-05	6.41E-06	1.25E+02	1.42E-04	5.02E-01	9.89E-05	6.69E-02	1.54E-02	2.70E-03	9.60E-03	4.15E-03	4.23E-03	7.49E-03	5.51E-04	1.26E-07	5.38E-03	1.25E-02
E65	0.00E+00	6.21E-05	5.27E-06	1.38E+02	2.02E-04	7.04E-01	8.99E-05	3.67E-02	1.84E-02	3.08E-03	8.60E-03	4.70E-03	4.81E-03	4.05E-03	6.60E-04	1.65E-07	3.82E-03	6.76E-03
E66	0.00E+00	4.27E-05	3.39E-06	7.71E+01	1.01E-04	3.59E-01	5.40E-05	3.01E-02	1.00E-02	1.70E-03	5.15E-03	2.59E-03	2.64E-03	3.28E-03	3.56E-04	8.40E-08	2.52E-03	5.59E-03
E67	0.00E+00	1.43E-05	1.30E-06	4.18E+01	6.23E-05	2.20E-01	2.41E-05	6.30E-03	4.07E-03	7.32E-04	2.34E-03	1.35E-03	1.38E-03	8.13E-04	2.05E-04	5.50E-08	9.57E-04	1.13E-03
E68	0.00E+00	2.41E-05	1.97E-06	5.28E+01	6.91E-05	2.49E-01	3.32E-05	1.50E-02	4.95E-03	9.15E-04	3.19E-03	1.66E-03	1.70E-03	1.92E-03	2.49E-04	6.26E-08	1.50E-03	2.76E-03
E69	0.00E+00	1.21E-05	1.24E-06	4.31E+01	7.29E-05	2.49E-01	2.45E-05	3.04E-03	5.98E-03	9.71E-04	2.35E-03	1.50E-03	1.53E-03	3.63E-04	2.16E-04	5.83E-08	8.26E-04	5.15E-04
E70	0.00E+00	2.88E-05	2.53E-06	7.44E+01	1.17E-04	3.98E-01	4.68E-05	1.30E-02	1.00E-02	1.65E-03	4.56E-03	2.57E-03	2.63E-03	1.53E-03	3.63E-04	9.60E-08	1.94E-03	2.35E-03
E71	0.00E+00	2.51E-05	2.59E-06	8.93E+01	1.51E-04	5.16E-01	5.05E-05	6.57E-03	1.24E-02	2.01E-03	4.84E-03	3.09E-03	3.17E-03	7.66E-04	4.47E-04	1.20E-07	1.69E-03	1.12E-03
E72	0.00E+00	3.45E-05	3.04E-06	8.99E+01	1.41E-04	4.83E-01	5.64E-05	1.53E-02	1.21E-02	2.00E-03	5.49E-03	3.10E-03	3.18E-03	1.81E-03	4.39E-04	1.16E-07	2.33E-03	2.77E-03
E73	0.00E+00	1.58E-05	1.22E-06	2.41E+01	3.36E-05	1.17E-01	1.93E-05	1.19E-02	4.00E-03	6.49E-04	1.85E-03	8.87E-04	9.05E-04	1.13E-03	1.10E-04	2.57E-08	9.48E-04	2.22E-03
E74	0.00E+00	2.97E-06	2.96E-07	8.82E+00	1.60E-05	5.38E-02	5.60E-06	1.02E-03	1.54E-03	2.40E-04	5.33E-04	3.35E-04	3.43E-04	1.07E-04	4.37E-05	1.18E-08	1.92E-04	1.80E-04
E75	0.00E+00	7.03E-05	5.66E-06	1.35E+02	1.72E-04	6.10E-01	8.98E-05	5.00E-02	1.71E-02	2.91E-03	8.52E-03	4.35E-03	4.44E-03	5.40E-03	6.27E-04	1.45E-07	4.08E-03	9.28E-03
E76	0.00E+00	1.19E-04	9.27E-06	2.03E+02	2.41E-04	8.70E-01	1.41E-04	9.10E-02	2.55E-02	4.38E-03	1.33E-02	6.51E-03	6.64E-03	9.76E-03	9.26E-04	2.05E-07	6.72E-03	1.70E-02
E77	0.00E+00	8.35E-05	6.78E-06	1.63E+02	2.10E-04	7.45E-01	1.08E-04	5.91E-02	2.08E-02	3.53E-03	1.02E-02	5.27E-03	5.38E-03	6.36E-03	7.62E-04	1.76E-07	4.83E-03	1.10E-02
E78	0.00E+00	1.32E-04	1.03E-05	2.25E+02	2.67E-04	9.63E-01	1.57E-04	1.01E-01	2.82E-02	4.86E-03	1.49E-02	7.22E-03	7.37E-03	1.09E-02	1.03E-03	2.28E-07	7.51E-03	1.89E-02
E79	0.00E+00	5.80E-05	4.89E-06	1.39E+02	2.01E-04	6.87E-01	8.75E-05	3.06E-02	1.80E-02	3.00E-03	8.50E-03	4.58E-03	4.69E-03	3.54E-03	6.71E-04	1.72E-07	3.82E-03	5.59E-03
E80	0.00E+00	4.43E-05	3.13E-06	5.69E+01	5.64E-05	2.03E-01	4.65E-05	3.57E-02	6.77E-03	1.21E-03	4.49E-03	1.83E-03	1.86E-03	3.96E-03	2.46E-04	5.25E-08	2.63E-03	6.69E-03
E81	0.00E+00	3.73E-07	3.96E-08	1.28E+00	2.41E-06	8.05E-03	7.87E-07	6.82E-05	2.26E-04	3.49E-05	7.51E-05	4.89E-05	5.02E-05	8.62E-06	6.43E-06	1.78E-09	2.52E-05	1.12E-05
E82	0.00E+00	9.46E-06	8.49E-07	2.27E+01	3.95E-05	1.32E-01	1.56E-05	4.31E-03	3.93E-03	6.16E-04	1.50E-03	8.63E-04	8.84E-04	4.48E-04	1.11E-04	2.96E-08	6.20E-04	7.85E-04
E83	0.00E+00	2.64E-05	2.04E-06	4.32E+01	5.30E-05	1.90E-01	3.14E-05	1.99E-02	5.52E-03	9.51E-04	2.99E-03	1.44E-03	1.46E-03	2.16E-03	1.96E-04	4.44E-08	1.53E-03	3.71E-03
E84	0.00E+00	1.50E-05	1.31E-06	3.46E+01	5.02E-05	1.78E-01	2.18E-05	9.36E-03	4.64E-03	7.74E-04	2.05E-03	1.17E-03	1.19E-03	9.92E-04	1.65E-04	4.01E-08	8.66E-04	1.73E-03
E85	0.00E+00	1.05E-04	8.77E-06	2.08E+02	3.38E-04	1.14E+00	1.53E-04	6.10E-02	3.54E-02	5.63E-03	1.48E-02	7.86E-03	8.03E-03	6.11E-03	9.92E-04	2.56E-07	6.75E-03	1.13E-02
E86	0.00E+00	1.05E-04	8.93E-06	2.18E+02	3.60E-04	1.21E+00	1.57E-04	5.85E-02	3.73E-02	5.91E-03	1.51E-02	8.24E-03	8.43E-03	5.86E-03	1.05E-03	2.72E-07	6.72E-03	1.08E-02
E87	0.00E+00	1.75E-04	1.27E-05	2.32E+02	3.13E-04	1.05E+00	2.04E-04	1.28E-01	3.78E-02	6.20E-03	2.01E-02	8.70E-03	8.88E-03	1.26E-02	1.04E-03	2.51E-07	1.12E-02	2.39E-02
E88	0.00E+00	1.42E-04	1.06E-05	2.10E+02	3.00E-04	1.01E+00	1.75E-04	9.91E-02	3.46E-02	5.62E-03	1.71E-02	7.87E-03	8.04E-03	9.80E-03	9.57E-04	2.36E-07	9.13E-03	1.85E-02
E89	0.00E+00	4.30E-06	3.68E-07	9.86E+00	1.74E-05	5.68E-02	7.06E-06	1.69E-03	1.69E-03	2.66E-04	6.93E-04	3.80E-04	3.89E-04	1.92E-04	4.81E-05	1.33E-08	3.06E-04	3.07E-04
E90	0.00E+00	5.47E-06	4.42E-07	9.87E+00	1.53E-05	5.20E-02	7.47E-06	3.49E-03	1.67E-03	2.66E-04	7.20E-04	3.70E-04	3.78E-04	3.44E-04	4.63E-05	1.17E-08	3.44E-04	6.49E-04
E91	0.00E+00	1.77E-07	1.89E-08	6.10E-01	1.15E-06	3.83E-03	3.75E-07	3.25E-05	1.07E-04	1.66E-05	3.58E-05	2.33E-05	2.39E-05	4.10E-06	3.06E-06	8.46E-10	1.20E-05	5.32E-06
E92	0.00E+00	1.77E-07	1.89E-08	6.10E-01	1.15E-06	3.83E-03	3.75E-07	3.25E-05	1.07E-04	1.66E-05	3.58E-05	2.33E-05	2.39E-05	4.10E-06	3.06E-06	8.46E-10	1.20E-05	5.32E-06
E93	0.00E+00	6.48E-06	5.27E-07	1.17E+01	1.81E-05	6.18E-02	8.81E-06	4.24E-03	1.98E-03	3.17E-04	8.46E-04	4.38E-04	4.47E-04	4.12E-04	5.50E-05	1.37E-08	4.00E-04	7.87E-04
E94	0.00E+00	8.37E-06	7.39E-07	1.98E+01	3.45E-05	1.15E-01	1.38E-05	3.64E-03	3.41E-03	5.35E-04	1.33E-03	7.55E-04	7.73E-04	3.89E-04	9.65E-05	2.61E-08	5.65E-04	6.62E-04
E95	0.00E+00	5.28E-05	3.95E-06	9.24E+01	1.02E-04	3.70E-01	6.28E-05	3.80E-02	8.55E-03	1.60E-03	6.06E-03	2.77E-03	2.83E-03	4.95E-03	4.17E-04	9.74E-08	3.23E-03	7.07E-03
E96	0.00E+00	8.28E-05	6.39E-06	1.49E+02	1.64E-04	6.06E-01	9.82E-05	6.23E-02	1.40E-02	2.61E-03	9.31E-03	4.46E-03	4.54E-03	7.81E-03	6.72E-04	1.50E-07	4.76E-03	1.16E-02
F01	0.00E+00	4.95E-05	3.62E-06	6.62E+01	8.76E-05	3.00E-01	5.73E-05	3.75E-02	1.08E-02	1.77E-03	5.57E-03	2.46E-03	2.51E-03	3.64E-03	2.96E-04	6.95E-08	3.07E-03	7.01E-03
F02	0.00E+00	3.02E-05	2.56E-06	6.29E+01	1.04E-04	3.49E-01	4.53E-05	1.65E-02	1.07E-02	1.70E-03	4.38E-03	2.38E-03	2.43E-03	1.67E-03	3.01E-04	7.89E-08	1.96E-03	3.03E-03
F33	0.00E+00	7.31E-06	6.79E-07	1.84E+01	3.18E-05	1.08E-01	1.22E-05	3.49E-03	3.19E-03	5.00E-04	1.16E-03	6.92E-04	7.09E-04	3.48E-04	8.97E-05	2.35E-08	4.57E-04	6.37E-04
F34	0.00E+00	4.48E-05	3.56E-06	7.57E+01	1.13E-04	3.88E-01	5.84E-05	3.08E-02	1.27E-02	2.04E-03	5.61E-03	2.82E-03	2.88E-03	2.98E-03	3.52E-04	8.62E-08	2.75E-03	5.73E-03
F35	0.00E+00	5.35E-06	4.15E-07	1.07E+01	1.33E-05	4.79E-02	7.00E-06	3.40E-03	9.79E-04	1.83E-04	6.82E-04	3.32E-04	3.39E-04	4.51E-04	4.95E-05	1.25E-08	3.43E-04	6.30E-04
F36	0.00E+00	1.39E-05	1.15E-06	3.22E+01	4.34E-05	1.55E-01	1.99E-05	8.20E-03	3.04E-03	5.59E-04	1.92E-03	1.02E-03	1.04E-03	1.06E-03	1.53E-04	3.92E-08	8.83E-04	1.51E-03
F37	0.00E+00	1.14E-04	8.75E-06	1.75E+02	2.51E-04	8.60E-01	1.42E-04	8.16E-02	2.92E-02	4.72E-03	1.37E-02	6.53E-03	6.67E-03	7.92E-03	8.03E-04	1.94E-07	7.07E-03	1.52E-02
F38	0.00E+00	1.01E-04	7.41E-06	1.36E+02	1.81E-04	6.21E-01	1.17E-04	7.65E-02	2.23E-02	3.65E-03	1.14E-02	5.05E-03	5.15E-03	7.40E-03	6.09E-04	1.43E-07	6.22E-03	1.43E-02
F39	0.00E+00	7.41E-06	5.65E-07	1.27E+01	1.39E-05	5.18E-02	8.63E-06	5.61E-03	1.14E-03	2.18E-04	8.19E-04	3.85E-04	3.92E-04	7.09E-04	5.69E-05	1.28E-08	4.27E-04	1.05E-03
F40	0.00E+00	1.61E-05	1.42E-06	4.09E+01	5.68E-05	2.05E-01	2.42E-05	9.39E-03	3.94E-03	7.16E-04	2.30E-03	1.30E-03	1.33E-03	1.15E-03	1.97E-04	4.95E-08	9.73E-04	1.72E-03
F41	0.00E+00	1.17E-05	1.17E-06	3.80E+01	6.23E-05	2.15E-01	2.19E-05	4.24E-03	5.24E-03	8.55E-04	2.09E-03	1.31E-03	1.34E-03	4.70E-04	1.89E-04	4.96E-08	7.56E-04	7.49E-04
F42	0.00E+00	3.81E-06	4.04E-07	1.44E+01	2.46E-05	8.40E-02	8.02E-06	7.96E-04	2.00E-03	3.24E-04	7.68E-04	5.00E-04	5.12E-04	9.49E-05	7.24E-05	1.95E-08	2.60E-04	1.30E-04
F45	0.00E+00	2.64E-05	2.04E-06	4.32E+01	5.30E-05	1.90E-01	3.14E-05	1.99E-02	5.52E-03	9.51E-04	2.99E-03	1.44E-03	1.46E-03	2.16E-03	1.96E-04	4.44E-08	1.53E-03	3.71E-03
F46	0.00E+00	1.50E-05	1.31E-06	3.46E+01	5.02E-05	1.78E-01	2.18E-05	9.36E-03	4.64E-03	7.74E-04	2.05E-03	1.17E-03	1.19E-03	9.92E-04	1.65E-04	4.01E-08	8.66E-04	1.73E-03
F47	0.00E+00	1.24E-06	9.86E-08	1.99E+00	2.80E-06	9.87E-03	1.54E-06	9.49E-04	3.33E-04	5.38E-05	1.46E-04	7.28E-05	7.43E-05	8.90E-05	9.10E-06	2.11E-09	7.19E-05	1.77E-04
F48	0.00E+00	3.69E-07	2.69E-08	4.31E-01	4.68E-07	1.75E-03	3.82E-07	3.31E-04	6.98E-05	1.16E-05	3.61E-05	1.53E-05	1.56E-05	3.05E-05	1.84E-06	3.61E-10	2.05E-05	6.22E-05
F77	0.00E+00	7.83E-05	5.56E-06	1.08E+02	1.17E-04	4.10E-01	8.63E-05	5.92E-02	1.30E-02	2.29E-03	8.44E-03	3.51E-03	3.58E-03	6.70E-03	4.77E-04	1.09E-07	4.85E-03	1.11E-02
F78	0.00E+00	1.86E-05	1.87E-06	5.69E+01	1.04E-04	3.39E-01	3.59E-05	4.36E-03	1.47E-02	2.10E-03	3.43E-03	2.17E-03	2.21E-03	5.63E-04	2.83E-04	6.30E-08	1.22E-03	7.66E-04
F79	0.00E+00	3.28E-05	2.91E-06	8.26E+01	1.31E-04	4.40E-01	5.28E-05	1.59E-02	1.37E-02	2.15E-03	5.10E-03	2.90E-03	2.97E-03	1.65E-03	4.03E-04	9.96E-08	2.13E-03	2.91E-03
F80	0.00E+00	3.15E-05	2.93E-06	9.43E+01	1.45E-04	4.95E-01	5.46E-05	1.31E-02	1.24E-02	2.05E-03	5.26E-03	3.11E-03	3.19E-03	1.51E-03	4.66E-04	1.21E-07	2.08E-03	2.35E-03
F81	0.00E+00	1.08E-04	6.97E-06	9.91E+01	9.14E-05	3.05E-01	1.06E-04	8.88E-02	1.49E-02	2.55E-03	1.06E-02	3.58E-03	3.64E-03	8.73E-03	4.07E-04	8.47E-08	6.93E-03	1.67E-02
F82	0.00E+00	1.81E-05	1.25E-06	1.78E+01	2.35E-05	7.48E-02	1.93E-05	1.45E-02	4.30E-03	6.56E-04	1.90E-03	7.49E-04	7.63E-04	1.11E-03	7.79E-05	1.57E-08	1.13E-03	2.73E-03
F83	0.00E+00	2.45E-05	1.72E-06	3.04E+01	2.90E-05	1.05E-01	2.52E-05	2.01E-02	3.59E-03	6.44E-04	2.44E-03	9.73E-04	9.89E-04	2.22E-03	1.30E-04	2.72E-08	1.45E-03	3.76E-03
F84	0.00E+00	6.49E-05	4.49E-06	4.33E+01	2.18E-05	1.28E-01	5.35E-05	7.22E-02	1.05E-02	1.69E-03	4.91E-03	1.69E-03	1.71E-03	4.91E-03	1.64E-04	1.30E-08	3.20E-03	1.36E-02
F85	0.00E+00	4.10E-05	3.08E-06	5.32E+01	5.58E-05	2.13E-01	4.29E-05	3.77E-02	8.50E-03	1.41E-03	4.01E-03	1.78E-03	1.82E-03	3.44E-03	2.32E-04	4.23E-08	2.19E-03	7.08E-03
F86	0.00E+00	3.58E-05	2.77E-06	6.16E+01	7.46E-05	2.65E-01	4.32E-05	2.65E-02	7.72E-03	1.33E-03	4.12E-03	1.99E-03	2.03E-03	2.89E-03	2.82E-04	6.42E-08	2.09E-03	4.94E-03
F87	0.00E+00	9.52E-06	6.40E-07	1.06E+01	1.19E-05	3.91E-02	1.01E-05	7.31E-03	1.63E-03	2.73E-04	1.01E-03	3.82E-04	3.89E-04	7.28E-04	4.58E-05	1.03E-08	6.24E-04	1.37E-03
F88	0.00E+00	3.26E-05	2.18E-06	2.61E+01	2.91E-05	9.48E-02	3.18E-05	2.84E-02	6.20E-03	9.70E-04	3.13E-03	1.12E-03	1.14E-03	2.11E-03	1.09E-04	2.02E-08	1.99E-03	5.35E-03

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1346	0.00E+00	1.54E-05	1.66E-06	6.24E+01	1.07E-04	4.64E-01	3.41E-05	3.15E-03	3.34E-03	7.78E-04	3.32E-03	2.14E-03	2.20E-03	1.53E-04	3.18E-04	9.42E-08	1.13E-03	4.93E-04
17	A01	110	Passenger Truck	2254	0.00E+00	3.33E-05	3.56E-06	1.49E+02	2.21E-04	9.52E-01	7.14E-05	8.83E-03	5.80E-03	1.46E-03	6.89E-03	4.46E-03	4.57E-03	8.95E-04	7.51E-04	2.21E-07	2.32E-03	1.42E-03
17	A01	110	Single Unit Short Haul Truck	298	0.00E+00	3.94E-05	2.09E-06	5.72E+01	4.04E-05	1.57E-01	4.33E-05	2.30E-02	1.78E-03	5.89E-04	4.77E-03	1.33E-03	1.35E-03	5.85E-03	2.29E-04	1.02E-07	3.42E-03	4.30E-03
17	A01	110	Single Unit Long Haul Truck	13	0.00E+00	1.69E-06	8.69E-08	2.40E+00	1.62E-06	6.21E-03	1.84E-06	9.57E-04	7.96E-05	2.52E-05	2.07E-04	5.48E-05	5.55E-05	2.44E-04	9.61E-06	4.16E-09	1.51E-04	1.79E-04
17	A01	110	Combination Short Haul Truck	220	0.00E+00	8.30E-05	6.22E-06	8.36E+01	1.98E-07	7.50E-02	5.87E-05	8.91E-02	2.35E-03	9.33E-04	4.38E-03	1.81E-03	1.79E-03	1.26E-02	2.81E-04	0.00E+00	2.59E-03	1.68E-02
17	A01	110	Combination Long Haul Truck	200	0.00E+00	7.51E-05	5.41E-06	7.56E+01	2.26E-07	7.40E-02	5.45E-05	8.62E-02	2.12E-03	6.45E-04	4.48E-03	1.59E-03	1.60E-03	1.16E-02	2.54E-04	0.00E+00	2.89E-03	1.62E-02
17	A02	110	Passenger Car	1269	0.00E+00	1.45E-05	1.57E-06	5.89E+01	1.01E-04	4.37E-01	3.22E-05	2.98E-03	3.15E-03	7.33E-04	3.13E-03	2.02E-03	2.07E-03	1.45E-04	3.00E-04	8.89E-08	1.06E-03	4.65E-04
17	A02	110	Passenger Truck	2126	0.00E+00	3.14E-05	3.35E-06	1.41E+02	2.08E-04	8.98E-01	6.73E-05	8.33E-03	5.47E-03	1.38E-03	6.50E-03	4.21E-03	4.31E-03	8.44E-04	7.09E-04	2.08E-07	2.19E-03	1.34E-03
17	A02	110	Single Unit Short Haul Truck	357	0.00E+00	4.73E-05	2.50E-06	6.85E+01	4.84E-05	1.89E-01	5.19E-05	2.76E-02	2.13E-03	7.06E-04	5.72E-03	1.60E-03	1.62E-03	7.01E-03	2.74E-04	1.22E-07	4.10E-03	5.15E-03
17	A02	110	Single Unit Long Haul Truck	16	0.00E+00	2.02E-06	1.04E-07	2.87E+00	1.94E-06	7.44E-03	2.21E-06	1.15E-03	9.54E-05	3.02E-05	2.48E-04	6.57E-05	6.65E-05	2.92E-04	1.15E-05	4.99E-09	1.81E-04	2.14E-04
17	A02	110	Combination Short Haul Truck	218	0.00E+00	8.24E-05	6.18E-06	8.30E+01	1.96E-07	7.46E-02	5.83E-05	8.85E-02	2.34E-03	9.27E-04	4.35E-03	1.80E-03	1.78E-03	1.25E-02	2.79E-04	0.00E+00	2.58E-03	1.67E-02
17	A02	110	Combination Long Haul Truck	199	0.00E+00	7.46E-05	5.37E-06	7.52E+01	2.25E-07	7.35E-02	5.42E-05	8.57E-02	2.11E-03	6.41E-04	4.46E-03	1.58E-03	1.59E-03	1.15E-02	2.52E-04	0.00E+00	2.87E-03	1.61E-02
17	A03	110	Passenger Car	1768	0.00E+00	2.02E-05	2.18E-06	8.20E+01	1.40E-04	6.09E-01	4.48E-05	4.14E-03	4.39E-03	1.02E-03	4.37E-03	2.81E-03	2.89E-03	2.01E-04	4.18E-04	1.24E-07	1.48E-03	6.48E-04
17	A03	110	Passenger Truck	2960	0.00E+00	4.37E-05	4.67E-06	1.96E+02	2.90E-04	1.25E+00	9.37E-05	1.16E-02	7.61E-03	1.92E-03	9.05E-03	5.86E-03	6.00E-03	1.18E-03	9.87E-04	2.90E-07	3.05E-03	1.87E-03
17	A03	110	Single Unit Short Haul Truck	301	0.00E+00	3.98E-05	2.11E-06	5.78E+01	4.09E-05	1.59E-01	4.38E-05	2.33E-02	1.80E-03	5.95E-04	4.82E-03	1.35E-03	1.36E-03	5.91E-03	2.31E-04	1.03E-07	3.46E-03	4.34E-03
17	A03	110	Single Unit Long Haul Truck	13	0.00E+00	1.71E-06	8.79E-08	2.42E+00	1.64E-06	6.28E-03	1.86E-06	9.67E-04	8.05E-05	2.55E-05	2.09E-04	5.54E-05	5.61E-05	2.47E-04	9.71E-06	4.21E-09	1.52E-04	1.81E-04
17	A03	110	Combination Short Haul Truck	210	0.00E+00	7.93E-05	5.95E-06	7.99E+01	1.89E-07	7.17E-02	5.61E-05	8.51E-02	2.25E-03	8.92E-04	4.19E-03	1.73E-03	1.71E-03	1.21E-02	2.68E-04	0.00E+00	2.48E-03	1.60E-02
17	A03	110	Combination Long Haul Truck	191	0.00E+00	7.18E-05	5.17E-06	7.23E+01	2.16E-07	7.07E-02	5.21E-05	8.24E-02	2.03E-03	6.17E-04	4.28E-03	1.52E-03	1.53E-03	1.11E-02	2.42E-04	0.00E+00	2.76E-03	1.55E-02
17	A04	110	Passenger Car	1358	0.00E+00	1.55E-05	1.67E-06	6.30E+01	1.08E-04	4.68E-01	3.44E-05	3.18E-03	3.37E-03	7.85E-04	3.35E-03	2.16E-03	2.22E-03	1.55E-04	3.21E-04	9.51E-08	1.14E-03	4.98E-04
17	A04	110	Passenger Truck	2274	0.00E+00	3.36E-05	3.59E-06	1.50E+02	2.23E-04	9.60E-01	7.20E-05	8.91E-03	5.85E-03	1.47E-03	6.95E-03	4.50E-03	4.61E-03	9.03E-04	7.58E-04	2.23E-07	2.34E-03	1.43E-03
17	A04	110	Single Unit Short Haul Truck	360	0.00E+00	4.76E-05	2.52E-06	6.90E+01	4.88E-05	1.90E-01	5.23E-05	2.78E-02	2.15E-03	7.11E-04	5.76E-03	1.61E-03	1.63E-03	7.06E-03	2.76E-04	1.23E-07	4.13E-03	5.19E-03
17	A04	110	Single Unit Long Haul Truck	16	0.00E+00	2.04E-06	1.05E-07	2.90E+00	1.96E-06	7.50E-03	2.23E-06	1.16E-03	9.62E-05	3.05E-05	2.50E-04	6.62E-05	6.71E-05	2.95E-04	1.16E-05	5.03E-09	1.82E-04	2.16E-04
17	A04	110	Combination Short Haul Truck	216	0.00E+00	8.15E-05	6.11E-06	8.21E+01	1.94E-07	7.37E-02	5.76E-05	8.75E-02	2.31E-03	9.17E-04	4.30E-03	1.78E-03	1.76E-03	1.24E-02	2.76E-04	0.00E+00	2.55E-03	1.65E-02
17	A04	110	Combination Long Haul Truck	197	0.00E+00	7.38E-05	5.31E-06	7.43E+01	2.22E-07	7.27E-02	5.35E-05	8.47E-02	2.08E-03	6.34E-04	4.40E-03	1.56E-03	1.57E-03	1.14E-02	2.49E-04	0.00E+00	2.84E-03	1.60E-02
17	A05	110	Passenger Car	1334	0.00E+00	1.52E-05	1.65E-06	6.19E+01	1.06E-04	4.60E-01	3.38E-05	3.13E-03	3.31E-03	7.71E-04	3.29E-03	2.12E-03	2.18E-03	1.52E-04	3.16E-04	9.34E-08	1.12E-03	4.89E-04
17	A05	110	Passenger Truck	2234	0.00E+00	3.30E-05	3.53E-06	1.48E+02	2.19E-04	9.43E-01	7.08E-05	8.75E-03	5.75E-03	1.45E-03	6.83E-03	4.43E-03	4.53E-03	8.87E-04	7.45E-04	2.19E-07	2.30E-03	1.41E-03
17	A05	110	Single Unit Short Haul Truck	249	0.00E+00	3.29E-05	1.74E-06	4.77E+01	3.38E-05	1.31E-01	3.62E-05	1.92E-02	1.49E-03	4.92E-04	3.99E-03	1.11E-03	1.13E-03	4.89E-03	1.91E-04	8.51E-08	2.86E-03	3.59E-03
17	A05	110	Single Unit Long Haul Truck	11	0.00E+00	1.41E-06	7.26E-08	2.00E+00	1.36E-06	5.19E-03	1.54E-06	8.00E-04	6.65E-05	2.11E-05	1.73E-04	4.58E-05	4.64E-05	2.04E-04	8.03E-06	3.48E-09	1.26E-04	1.49E-04
17	A05	110	Combination Short Haul Truck	182	0.00E+00	6.89E-05	5.17E-06	6.94E+01	1.64E-07	6.23E-02	4.87E-05	7.40E-02	1.96E-03	7.75E-04	3.64E-03	1.50E-03	1.49E-03	1.05E-02	2.33E-04	0.00E+00	2.15E-03	1.39E-02
17	A05	110	Combination Long Haul Truck	166	0.00E+00	6.24E-05	4.49E-06	6.28E+01	1.88E-07	6.14E-02	4.53E-05	7.16E-02	1.76E-03	5.36E-04	3.72E-03	1.32E-03	1.33E-03	9.61E-03	2.11E-04	0.00E+00	2.40E-03	1.35E-02
17	A06	110	Passenger Car	1117	0.00E+00	1.28E-05	1.38E-06	5.18E+01	8.88E-05	3.85E-01	2.83E-05	2.62E-03	2.77E-03	6.46E-04	2.76E-03	1.78E-03	1.83E-03	1.27E-04	2.64E-04	7.82E-08	9.34E-04	4.10E-04
17	A06	110	Passenger Truck	1871	0.00E+00	2.77E-05	2.95E-06	1.24E+02	1.83E-04	7.90E-01	5.93E-05	7.33E-03	4.81E-03	1.21E-03	5.72E-03	3.71E-03	3.79E-03	7.43E-04	6.24E-04	1.83E-07	1.93E-03	1.18E-03
17	A06	110	Single Unit Short Haul Truck	297	0.00E+00	3.93E-05	2.08E-06	5.69E+01	4.03E-05	1.57E-01	4.31E-05	2.29E-02	1.77E-03	5.87E-04	4.75E-03	1.33E-03	1.34E-03	5.82E-03	2.28E-04	1.01E-07	3.41E-03	4.28E-03
17	A06	110	Single Unit Long Haul Truck	13	0.00E+00	1.68E-06	8.66E-08	2.39E+00	1.62E-06	6.19E-03	1.84E-06	9.53E-04	7.93E-05	2.51E-05	2.06E-04	5.46E-05	5.53E-05	2.43E-04	9.57E-06	4.15E-09	1.50E-04	1.78E-04
17	A06	110	Combination Short Haul Truck	201	0.00E+00	7.61E-05	5.70E-06	7.66E+01	1.81E-07	6.88E-02	5.38E-05	8.17E-02	2.16E-03	8.56E-04	4.02E-03	1.66E-03	1.64E-03	1.16E-02	2.57E-04	0.00E+00	2.38E-03	1.54E-02
17	A06	110	Combination Long Haul Truck	184	0.00E+00	6.88E-05	4.96E-06	6.94E+01	2.08E-07	6.78E-02	5.00E-05	7.90E-02	1.94E-03	5.92E-04	4.11E-03	1.46E-03	1.47E-03	1.06E-02	2.33E-04	0.00E+00	2.65E-03	1.49E-02
17	A07	110	Passenger Car	1158	0.00E+00	1.32E-05	1.43E-06	5.37E+01	9.20E-05	3.99E-01	2.94E-05	2.72E-03	2.88E-03	6.69E-04	2.86E-03	1.84E-03	1.89E-03	1.32E-04	2.74E-04	8.11E-08	9.69E-04	4.25E-04
17	A07	110	Passenger Truck	1940	0.00E+00	2.87E-05	3.06E-06	1.28E+02	1.90E-04	8.19E-01	6.14E-05	7.60E-03	4.99E-03	1.26E-03	5.93E-03	3.84E-03	3.93E-03	7.71E-04	6.47E-04	1.90E-07	2.00E-03	1.22E-03
17	A07	110	Single Unit Short Haul Truck	256	0.00E+00	3.39E-05	1.79E-06	4.91E+01	3.47E-05	1.35E-01	3.72E-05	1.98E-02	1.53E-03	5.06E-04	4.10E-03	1.15E-03	1.16E-03	5.02E-03	1.96E-04	8.75E-08	2.94E-03	3.69E-03
17	A07	110	Single Unit Long Haul Truck	11	0.00E+00	1.45E-06	7.47E-08	2.06E+00	1.39E-06	5.34E-03	1.59E-06	8.22E-04	6.84E-05	2.17E-05	1.78E-04	4.71E-05	4.77E-05	2.10E-04	8.26E-06	3.58E-09	1.30E-04	1.54E-04
17	A07	110	Combination Short Haul Truck	199	0.00E+00	7.51E-05	5.63E-06	7.56E+01	1.79E-07	6.79E-02	5.31E-05	8.06E-02	2.13E-03	8.45E-04	3.96E-03	1.64E-03	1.62E-03	1.14E-02	2.54E-04	0.00E+00	2.35E-03	1.52E-02
17	A07	110	Combination Long Haul Truck	181	0.00E+00	6.80E-05	4.89E-06	6.85E+01	2.05E-07	6.70E-02	4.93E-05	7.80E-02	1.92E-03	5.84E-04	4.06E-03	1.44E-03	1.45E-03	1.05E-02	2.30E-04	0.00E+00	2.61E-03	1.47E-02
17	A08	110	Passenger Car	997	0.00E+00	1.14E-05	1.23E-06	4.62E+01	7.92E-05	3.43E-01	2.53E-05	2.34E-03	2.48E-03	5.76E-04	2.46E-03	1.59E-03	1.63E-03	1.14E-04	2.36E-04	6.98E-08	8.34E-04	3.66E-04
17	A08	110	Passenger Truck	1669	0.00E+00	2.47E-05	2.63E-06	1.10E+02	1.64E-04	7.05E-01	5.29E-05	6.54E-03	4.29E-03	1.08E-03	5.10E-03	3.31E-03	3.39E-03	6.63E-04	5.56E-04	1.64E-07	1.72E-03	1.05E-03
17	A08	110	Single Unit Short Haul Truck	313	0.00E+00	4.14E-05	2.19E-06	6.00E+01	4.24E-05	1.65E-01	4.55E-05	2.42E-02	1.87E-03	6.18E-04	5.01E-03	1.40E-03	1.42E-03	6.14E-03	2.40E-04	1.07E-07	3.59E-03	4.51E-03
17	A08	110	Single Unit Long Haul Truck	14	0.00E+00	1.77E-06	9.13E-08	2.52E+00	1.70E-06	6.52E-03	1.94E-06	1.00E-03	8.36E-05	2.65E-05	2.17E-04	5.75E-05	5.83E-05	2.56E-04	1.01E-05	4.37E-09	1.58E-04	1.88E-04
17	A08	110	Combination Short Haul Truck	219	0.00E+00	8.29E-05	6.21E-06	8.35E+01	1.97E-07	7.49E-02	5.86E-05	8.90E-02	2.35E-03	9.32E-04	4.37E-03	1.81E-03	1.79E-03	1.26E-02	2.80E-04	0.00E+00	2.59E-03	1.68E-02
17	A08	110	Combination Long Haul Truck	200	0.00E+00	7.50E-05	5.40E-06	7.56E+01	2.26E-07	7.39E-02	5.44E-05	8.61E-02	2.12E-03	6.45E-04	4.48E-03	1.59E-03	1.60E-03	1.16E-02	2.53E-04	0.00E+00	2.88E-03	1.62E-02
17	A09	110	Passenger Car	1227	0.00E+00	1.40E-05	1.51E-06	5.69E+01	9.75E-05	4.23E-01	3.11E-05	2.88E-03	3.05E-03	7.09E-04	3.03E-03	1.95E-03	2.00E-03	1.40E-04	2.90E-04	8.59E-08	1.03E-03	4.50E-04
17	A09	110	Passenger Truck	2055	0.00E+00	3.04E-05	3.24E-06	1.36E+02	2.01E-04	8.67E-01	6.51E-05	8.05E-03	5.28E-03	1.33E-03	6.28E-03	4.07E-03	4.17E-03	8.16E-04	6.85E-04	2.01E-07	2.12E-03	1.30E-03
17	A09	110	Single Unit Short Haul Truck	292	0.00E+00	3.86E-05	2.04E-06	5.60E+01	3.96E-05	1.54E-01	4.24E-05	2.26E-02	1.74E-03	5.77E-04	4.67E-03	1.31E-03	1.32E-03	5.73E-03	2.24E-04	9.98E-08	3.35E-03	4.21E-03
17	A09	110	Single Unit Long Haul Truck	13	0.00E+00	1.65E-06	8.51E-08	2.35E+00	1.59E-06	6.08E-03	1.81E-06	9.37E-04	7.80E-05	2.47E-05	2.02E-04	5.37E-05	5.44E-05	2.39E-04	9.41E-06	4.08E-09	1.48E-04	1.75E-04
17	A09	110	Combination Short Haul Truck	232	0.00E+00	8.78E-05	6.58E-06	8.84E+01	2.09E-07	7.94E-02	6.21E-05	9.42E-02	2.49E-03	9.88E-04	4.63E-03	1.92E-03	1.90E-03	1.34E-02	2.97E-04	0.00E+00	2.74E-03	1.77E-02
17	A09	110	Combination Long Haul Truck	212	0.00E+00	7.95E-05	5.72E-06	8.00E+01	2.40E-07	7.83E-02	5.77E-05	9.12E-02	2.24E-03	6.83E-04	4.74E-03	1.68E-03	1.70E-03	1.22E-02	2.68E-04	0.00E+00	3.05E-03	1.72E-02
17	A10	110	Passenger Car	1209	0.00E+00	1.38E-05	1.49E-06	5.61E+01	9.60E-05	4.16E-01	3.07E-05	2.83E-03	3.00E-03	6.98E-04	2.98E-03	1.92E-03	1.97E-03	1.38E-04	2.86E-04	8.46E-08	1.01E-03	4.43E-04
17	A10	110	Passenger Truck	2024	0.00E+00	2.99E-05	3.19E-06	1.34E+02	1.98E-04	8.55E-01	6.41E-05	7.93E-03	5.21E-03	1.31E-03	6.18E-03	4.01E-03	4.10E-03	8.04E-04	6.75E-04	1.98E-07	2.09E-03	1.28E-03
17	A10	110	Single Unit Short Haul Truck	369	0.00E+00	4.87E-05	2.58E-06	7.06E+01	5.00E-05	1.95E-01	5.35E-05	2.85E-02	2.20E-03	7.28E-04	5.90E-03	1.65E-03	1.67E-03	7.23E-03	2.83E-04	1.26E-07	4.23E-03	5.31E-03
17	A10	110	Single Unit Long Haul Truck	16	0.00E+00	2.09E-06	1.07E-07	2.96E+00	2.00E-06	7.68E-03	2.28E-06	1.18E-03	9.84E-05	3.12E-05	2.56E-04	6.77E-05	6.86E-05	3.02E-04	1.19E-05	5.15E-09	1.86E-04	2.21E-04
17	A10	110	Combination Short Haul Truck	263	0.00E+00	9.92E-05	7.44E-06	9.99E+01	2.36E-07	8.97E-02	7.01E-05	1.06E-01	2.81E-03	1.12E-03	5.24E-03	2.17E-03	2.14E-03	1.51E-02	3.35E-04	0.00E+00	3.10E-03	2.01E-02
17	A10	110	Combination Long Haul Truck	239	0.00E+00	8.98E-05	6.46E-06	9.04E+01	2.71E-07	8.84E-02	6.52E-05	1.03E-01	2.53E-03	7.71E-04	5.36E-03	1.90E-03	1.92E-03	1.38E-02	3.03E-04	0.00E+00	3.45E-03	1.94E-02
17	A11	110	Passenger Car	1255	0.00E+00	1.43E-05	1.55E-06	5.82E+01	9.97E-05	4.32E-01	3.18E-05	2.94E-03	3.12E-03	7.25E-04	3.10E-03	2.00E-03	2.05E-03	1.43E-04	2.97E-04	8.78E-08	1.05E-03	4.60E-04
17	A11	110	Passenger Truck	2101	0.00E+00	3.11E-05	3.32E-06	1.39E+02	2.06E-04	8.87E-01	6.65E-05	8.23E-03	5.41E-03	1.36E-03	6.42E-03	4.16E-03	4.26E-03	8.35E-04	7.00E-04	2.06E-07	2.17E-03	1.33E-03
17	A11	110	Single Unit Short Haul Truck	338	0.00E+00	4.47E-05	2.37E-06	6.48E+01	4.58E-05	1.78E-01	4.91E-05	2.61E-02	2.02E-03	6.67E-04	5.41E-03	1.51E-03	1.53E-03	6.63E-03	2.59E-04	1.15E-07	3.88E-03	4.87E-03
17	A11	110	Single Unit Long Haul Truck	15	0.00E+00	1.91E-06	9.85E-08	2.72E+00	1.84E-06	7.04E-03	2.09E-06	1.08E-03	9.03E-05	2.86E-05	2.34E-04	6.21E-05	6.29E-05	2.77E-04	1.09E-05	4.72E-09	1.71E-04	2.02E-04
17	A11	110	Combination Short Haul Truck	282	0.00E+00	1.06E-04	7.99E-06	1.07E+02	2.54E-07	9.63E-02	7.53E-05	1.14E-01	3.02E-03	1.20E-03	5.62E-03	2.33E-03	2.30E-03	1.62E-02	3.60E-04	0.00E+00	3.33E-03	2.15E-02
17	A11	110	Combination Long Haul Truck	257	0.00E+00	9.64E-05	6.94E-06	9.71E+01	2.91E-07	9.50E-02	7.00E-05	1.11E-01	2.72E-03	8.28E-04	5.75E-03	2.04E-03	2.06E-03	1.48E-02	3.26E-04	0.00E+00	3.71E-03	2.08E-02
17	A12	110	Passenger Car	1596	0.00E+00	1.82E-05	1.97E-06	7.41E+01	1.27E-04	5.50E-01	4.05E-05	3.74E-03	3.96E-03	9.22E-04	3.94E-03	2.54E-03	2.61E-03	1.82E-04	3.78E-04	1.12E-07	1.33E-03	5.85E-04
17	A12	110	Passenger Truck	2673	0.00E+00	3.95E-05	4.22E-06	1.77E+02	2.62E-04	1.13E+00	8.47E-05	1.05E-02	6.88E-03	1.73E-03	8.17E-03	5.29E-03	5.42E-03	1.06E-03	8.91E-04	2.62E-07	2.76E-03	1.69E-03
17	A12	110	Single Unit Short Haul Truck	405	0.00E+00	5.35E-05	2.83E-06	7.76E+01	5.49E-05	2.14E-01	5.88E-05	3.13E-02	2.42E-03	8.00E-04	6.48E-03	1.81E-03	1.83E-03	7.94E-03	3.10E-04	1.38E-07	4.64E-03	5.84E-03
17	A12	110	Single Unit Long Haul Truck	18	0.00E+00	2.29E-06	1.18E-07	3.25E+00	2.20E-06	8.43E-03	2.50E-06	1.30E-03	1.08E-04	3.42E-05	2.81E-04	7.44E-05	7.54E-05	3.31E-04	1.30E-05	5.65E-09	2.05E-04	2.43E-04
17	A12	110	Combination Short Haul Truck	309	0.00E+00	1.17E-04	8.76E-06	1.18E+02	2.78E-07	1.06E-01	8.27E-05	1.25E-01	3.32E-03	1.31E-03	6.17E-03	2.55E-03	2.53E-03	1.78E-02	3.95E-04	0.00E+00	3.65E-03	2.36E-02
17	A12	110	Combination Long Haul Truck	282	0.00E+00	1.06E-04	7.62E-06	1.07E+02	3.19E-07	1.04E-01	7.68E-05	1.21E-01	2.99E-03	9.09E-04	6.32E-03	2.24E-03	2.26E-03	1.63E-02	3.57E-04	0.00E+00	4.07E-03	2.29E-02
17	A13	110	Passenger Car	1395	0.00E+00	1.59E-05	1.72E-06	6.47E+01	1.11E-04	4.81E-01	3.54E-05	3.27E-03	3.46E-03	8.06E-04	3.45E-03	2.22E-03	2.28E-03	1.59E-04	3.30E-04	9.77E-08	1.17E-03	5.12E-04
17	A13	110	Passenger Truck	2336	0.00E+00	3.45E-05	3.69E-06	1.54E+02	2.29E-04	9.86E-01	7.40E-05	9.15E-03	6.01E-03	1.51E-03	7.14E-03	4.63E-03	4.74E-03	9.28E-04	7.79E-04	2.29E-07	2.41E-03	1.47E-03
17	A13	110	Single Unit Short Haul Truck	347	0.00E+00	4.59E-05	2.43E-06	6.65E+01	4.70E-05	1.83E-01	5.04E-05	2.68E-02	2.07E-03	6.85E-04	5.55E-03	1.55E-03	1.57E-03	6.80E-03	2.66E-04	1.18E-07	3.98E-03	5.00E-03
17	A13	110	Single Unit Long Haul Truck	15	0.00E+00	1.96E-06	1.01E-07	2.79E+00	1.89E-06	7.22E-03	2.15E-06	1.11E-03	9.26E-05	2.93E-05	2.40E-04	6.37E-05	6.46E-05	2.84E-04	1.12E-05	4.84E-09	1.75E-04	2.08E-04
17	A13	110	Combination Short Haul Truck	285	0.00E+00	1.08E-04	8.08E-06	1.08E+02	2.57E-07	9.74E-02	7.62E-05	1.16E-01	3.06E-03	1.21E-03	5.69E-03	2.35E-03	2.33E-03	1.64E-02	3.64E-04	0.00E+00	3.37E-03	2.18E-02
17	A13	110	Combination Long Haul Truck	260	0.00E+00	9.75E-05	7.02E-06	9.82E+01	2.94E-07	9.60E-02	7.08E-05	1.12E-01	2.75E-03	8.38E-04	5.82E-03	2.07E-03	2.08E-03	1.50E-02	3.29E-04	0.00E+00	3.75E-03	2.11E-02
17	A14	110	Passenger Car	1402	0.00E+00	1.60E-05	1.73E-06	6.50E+01	1.11E-04	4.83E-01	3.56E-05	3.29E-03	3.48E-03	8.10E-04	3.46E-03	2.23E-03	2.29E-03	1.60E-04	3.32E-04	9.81E-08	1.17E-03	5.14E-04
17	A14	110	Passenger Truck	2348	0.00E+00	3.47E-05	3.70E-06	1.55E+02	2.30E-04	9.91E-01	7.43E-05	9.19E-03	6.04E-03	1.52E-03	7.17E-03	4.65E-03	4.76E-03	9.33E-04	7.83E-04	2.30E-07	2.42E-03	1.48E-03
17	A14	110	Single Unit Short Haul Truck	431	0.00E+00	5.70E-05	3.02E-06	8.26E+01	5.84E-05	2.28E-01	6.26E-05	3.33E-02	2.57E-03	8.51E-04	6.90E-03	1.93E-03	1.95E-03	8.45E-03	3.31E-04	1.47E-07	4.95E-03	6.22E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	2.44E-06	1.26E-07	3.46E+00	2.35E-06	8.98E-03	2.67E-06	1.38E-03	1.15E-04	3.64E-05	2.99E-04	7.92E-05	8.03E-05	3.53E-04	1.39E-05	6.02E-09	2.18E-04

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A18	110	Single Unit Long Haul Truck	20	0.00E+00	2.51E-06	1.29E-07	3.57E+00	2.41E-06	9.25E-03	2.75E-06	1.43E-03	1.19E-04	3.75E-05	3.08E-04	8.16E-05	8.27E-05	3.63E-04	1.43E-05	6.20E-09	2.25E-04	2.66E-04
17	A18	110	Combination Short Haul Truck	332	0.00E+00	1.25E-04	9.41E-06	1.26E+02	2.99E-07	1.13E-01	8.87E-05	1.35E-01	3.56E-03	1.41E-03	6.62E-03	2.74E-03	2.71E-03	1.91E-02	4.24E-04	0.00E+00	3.92E-03	2.54E-02
17	A18	110	Combination Long Haul Truck	303	0.00E+00	1.14E-04	8.17E-06	1.14E+02	3.42E-07	1.12E-01	8.24E-05	1.30E-01	3.20E-03	9.76E-04	6.78E-03	2.41E-03	2.42E-03	1.75E-02	3.84E-04	0.00E+00	4.36E-03	2.46E-02
17	A19	110	Passenger Car	1026	0.00E+00	1.17E-05	1.27E-06	4.76E+01	8.15E-05	3.53E-01	2.60E-05	2.41E-03	2.55E-03	5.93E-04	2.53E-03	1.63E-03	1.68E-03	1.17E-04	2.43E-04	7.18E-08	8.58E-04	3.76E-04
17	A19	110	Passenger Truck	1718	0.00E+00	2.54E-05	2.71E-06	1.14E+02	1.68E-04	7.25E-01	5.44E-05	6.73E-03	4.42E-03	1.11E-03	5.25E-03	3.40E-03	3.48E-03	6.82E-04	5.73E-04	1.68E-07	1.77E-03	1.08E-03
17	A19	110	Single Unit Short Haul Truck	337	0.00E+00	4.46E-05	2.36E-06	6.47E+01	4.57E-05	1.78E-01	4.90E-05	2.61E-02	2.02E-03	6.67E-04	5.40E-03	1.51E-03	1.53E-03	6.62E-03	2.59E-04	1.15E-07	3.87E-03	4.87E-03
17	A19	110	Single Unit Long Haul Truck	15	0.00E+00	1.91E-06	9.84E-08	2.71E+00	1.84E-06	7.03E-03	2.09E-06	1.08E-03	9.01E-05	2.85E-05	2.34E-04	6.20E-05	6.28E-05	2.76E-04	1.09E-05	4.71E-09	1.71E-04	2.02E-04
17	A19	110	Combination Short Haul Truck	285	0.00E+00	1.08E-04	8.07E-06	1.08E+02	2.56E-07	9.73E-02	7.61E-05	1.15E-01	3.05E-03	1.21E-03	5.68E-03	2.35E-03	2.33E-03	1.64E-02	3.64E-04	0.00E+00	3.36E-03	2.18E-02
17	A19	110	Combination Long Haul Truck	260	0.00E+00	9.74E-05	7.01E-06	9.81E+01	2.94E-07	9.59E-02	7.07E-05	1.12E-01	2.75E-03	8.37E-04	5.81E-03	2.06E-03	2.08E-03	1.50E-02	3.29E-04	0.00E+00	3.74E-03	2.11E-02
17	A20	110	Passenger Car	1197	0.00E+00	1.37E-05	1.48E-06	5.55E+01	9.51E-05	4.12E-01	3.04E-05	2.81E-03	2.97E-03	6.91E-04	2.96E-03	1.90E-03	1.95E-03	1.36E-04	2.83E-04	8.38E-08	1.00E-03	4.39E-04
17	A20	110	Passenger Truck	2004	0.00E+00	2.96E-05	3.16E-06	1.32E+02	1.97E-04	8.46E-01	6.35E-05	7.85E-03	5.16E-03	1.30E-03	6.12E-03	3.97E-03	4.06E-03	7.96E-04	6.68E-04	1.97E-07	2.07E-03	1.26E-03
17	A20	110	Single Unit Short Haul Truck	435	0.00E+00	5.76E-05	3.05E-06	8.35E+01	5.90E-05	2.30E-01	6.33E-05	3.36E-02	2.60E-03	8.60E-04	6.97E-03	1.95E-03	1.97E-03	8.54E-03	3.34E-04	1.49E-07	5.00E-03	6.28E-03
17	A20	110	Single Unit Long Haul Truck	19	0.00E+00	2.46E-06	1.27E-07	3.50E+00	2.37E-06	9.07E-03	2.69E-06	1.40E-03	1.16E-04	3.68E-05	3.02E-04	8.00E-05	8.11E-05	3.56E-04	1.40E-05	6.08E-09	2.20E-04	2.61E-04
17	A20	110	Combination Short Haul Truck	327	0.00E+00	1.24E-04	9.28E-06	1.25E+02	2.95E-07	1.12E-01	8.75E-05	1.33E-01	3.51E-03	1.39E-03	6.53E-03	2.70E-03	2.67E-03	1.88E-02	4.18E-04	0.00E+00	3.86E-03	2.50E-02
17	A20	110	Combination Long Haul Truck	299	0.00E+00	1.12E-04	8.06E-06	1.13E+02	3.37E-07	1.10E-01	8.13E-05	1.29E-01	3.16E-03	9.62E-04	6.68E-03	2.37E-03	2.39E-03	1.72E-02	3.78E-04	0.00E+00	4.30E-03	2.42E-02
17	A21	110	Passenger Car	1489	0.00E+00	1.70E-05	1.84E-06	6.91E+01	1.18E-04	5.13E-01	3.78E-05	3.49E-03	3.70E-03	8.60E-04	3.68E-03	2.37E-03	2.43E-03	1.70E-04	3.52E-04	1.04E-07	1.24E-03	5.46E-04
17	A21	110	Passenger Truck	2493	0.00E+00	3.68E-05	3.93E-06	1.65E+02	2.44E-04	1.05E+00	7.89E-05	9.76E-03	6.41E-03	1.61E-03	7.62E-03	4.94E-03	5.05E-03	9.90E-04	8.31E-04	2.44E-07	2.57E-03	1.57E-03
17	A21	110	Single Unit Short Haul Truck	400	0.00E+00	5.29E-05	2.80E-06	7.66E+01	5.42E-05	2.11E-01	5.81E-05	3.09E-02	2.39E-03	7.89E-04	6.40E-03	1.79E-03	1.81E-03	7.84E-03	3.06E-04	1.37E-07	4.59E-03	5.76E-03
17	A21	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.17E-07	3.21E+00	2.17E-06	8.33E-03	2.47E-06	1.28E-03	1.07E-04	3.38E-05	2.77E-04	7.35E-05	7.44E-05	3.27E-04	1.29E-05	5.58E-09	2.02E-04	2.39E-04
17	A21	110	Combination Short Haul Truck	336	0.00E+00	1.27E-04	9.53E-06	1.28E+02	3.03E-07	1.15E-01	8.99E-05	1.36E-01	3.61E-03	1.43E-03	6.71E-03	2.77E-03	2.75E-03	1.93E-02	4.30E-04	0.00E+00	3.97E-03	2.57E-02
17	A21	110	Combination Long Haul Truck	307	0.00E+00	1.15E-04	8.28E-06	1.16E+02	3.47E-07	1.13E-01	8.35E-05	1.32E-01	3.24E-03	9.88E-04	6.86E-03	2.44E-03	2.45E-03	1.77E-02	3.88E-04	0.00E+00	4.42E-03	2.49E-02
17	A22	110	Passenger Car	1561	0.00E+00	1.78E-05	1.92E-06	7.24E+01	1.24E-04	5.38E-01	3.96E-05	3.66E-03	3.88E-03	9.02E-04	3.85E-03	2.48E-03	2.55E-03	1.78E-04	3.69E-04	1.09E-07	1.30E-03	5.72E-04
17	A22	110	Passenger Truck	2614	0.00E+00	3.86E-05	4.12E-06	1.73E+02	2.56E-04	1.10E+00	8.28E-05	1.02E-02	6.72E-03	1.69E-03	7.99E-03	5.18E-03	5.30E-03	1.04E-03	8.71E-04	2.56E-07	2.69E-03	1.65E-03
17	A22	110	Single Unit Short Haul Truck	474	0.00E+00	6.26E-05	3.32E-06	9.08E+01	6.42E-05	2.50E-01	6.88E-05	3.66E-02	2.83E-03	9.35E-04	7.58E-03	2.12E-03	2.14E-03	9.29E-03	3.63E-04	1.62E-07	5.43E-03	6.83E-03
17	A22	110	Single Unit Long Haul Truck	21	0.00E+00	2.68E-06	1.38E-07	3.81E+00	2.58E-06	9.86E-03	2.93E-06	1.52E-03	1.26E-04	4.00E-05	3.28E-04	8.70E-05	8.82E-05	3.88E-04	1.53E-05	6.61E-09	2.40E-04	2.84E-04
17	A22	110	Combination Short Haul Truck	353	0.00E+00	1.33E-04	1.00E-05	1.34E+02	3.18E-07	1.21E-01	9.43E-05	1.43E-01	3.78E-03	1.50E-03	7.04E-03	2.91E-03	2.88E-03	2.03E-02	4.51E-04	0.00E+00	4.17E-03	2.70E-02
17	A22	110	Combination Long Haul Truck	322	0.00E+00	1.21E-04	8.69E-06	1.22E+02	3.64E-07	1.19E-01	8.76E-05	1.39E-01	3.41E-03	1.04E-03	7.21E-03	2.56E-03	2.57E-03	1.86E-02	4.08E-04	0.00E+00	4.64E-03	2.61E-02
17	A23	110	Passenger Car	1621	0.00E+00	1.85E-05	2.00E-06	7.52E+01	1.29E-04	5.58E-01	4.11E-05	3.80E-03	4.03E-03	9.37E-04	4.00E-03	2.58E-03	2.65E-03	1.85E-04	3.84E-04	1.13E-07	1.36E-03	5.94E-04
17	A23	110	Passenger Truck	2715	0.00E+00	4.01E-05	4.28E-06	1.79E+02	2.66E-04	1.15E+00	8.60E-05	1.06E-02	6.98E-03	1.76E-03	8.30E-03	5.38E-03	5.50E-03	1.08E-03	9.05E-04	2.66E-07	2.80E-03	1.71E-03
17	A23	110	Single Unit Short Haul Truck	385	0.00E+00	5.09E-05	2.70E-06	7.39E+01	5.22E-05	2.03E-01	5.60E-05	2.98E-02	2.30E-03	7.61E-04	6.16E-03	1.72E-03	1.74E-03	7.56E-03	2.95E-04	1.32E-07	4.42E-03	5.55E-03
17	A23	110	Single Unit Long Haul Truck	17	0.00E+00	2.18E-06	1.12E-07	3.10E+00	2.10E-06	8.02E-03	2.38E-06	1.24E-03	1.03E-04	3.26E-05	2.67E-04	7.08E-05	7.18E-05	3.15E-04	1.24E-05	5.38E-09	1.95E-04	2.31E-04
17	A23	110	Combination Short Haul Truck	336	0.00E+00	1.27E-04	9.53E-06	1.28E+02	3.03E-07	1.15E-01	8.98E-05	1.36E-01	3.60E-03	1.43E-03	6.71E-03	2.77E-03	2.75E-03	1.93E-02	4.30E-04	0.00E+00	3.97E-03	2.57E-02
17	A23	110	Combination Long Haul Truck	307	0.00E+00	1.15E-04	8.28E-06	1.16E+02	3.47E-07	1.13E-01	8.35E-05	1.32E-01	3.24E-03	9.88E-04	6.86E-03	2.44E-03	2.45E-03	1.77E-02	3.88E-04	0.00E+00	4.42E-03	2.49E-02
17	A24	110	Passenger Car	1302	0.00E+00	1.49E-05	1.61E-06	6.04E+01	1.03E-04	4.48E-01	3.30E-05	3.05E-03	3.23E-03	7.52E-04	3.22E-03	2.07E-03	2.13E-03	1.48E-04	3.08E-04	9.11E-08	1.09E-03	4.77E-04
17	A24	110	Passenger Truck	2180	0.00E+00	3.22E-05	3.44E-06	1.44E+02	2.14E-04	9.21E-01	6.90E-05	8.54E-03	5.61E-03	1.41E-03	6.66E-03	4.32E-03	4.42E-03	8.66E-04	7.27E-04	2.14E-07	2.25E-03	1.37E-03
17	A24	110	Single Unit Short Haul Truck	420	0.00E+00	5.56E-05	2.94E-06	8.05E+01	5.70E-05	2.22E-01	6.10E-05	3.24E-02	2.51E-03	8.30E-04	6.72E-03	1.88E-03	1.90E-03	8.24E-03	3.22E-04	1.44E-07	4.82E-03	6.06E-03
17	A24	110	Single Unit Long Haul Truck	19	0.00E+00	2.38E-06	1.23E-07	3.38E+00	2.29E-06	8.75E-03	2.60E-06	1.35E-03	1.12E-04	3.55E-05	2.91E-04	7.72E-05	7.82E-05	3.44E-04	1.35E-05	5.87E-09	2.13E-04	2.52E-04
17	A24	110	Combination Short Haul Truck	325	0.00E+00	1.23E-04	9.21E-06	1.24E+02	2.92E-07	1.11E-01	8.68E-05	1.32E-01	3.48E-03	1.38E-03	6.48E-03	2.68E-03	2.65E-03	1.87E-02	4.15E-04	0.00E+00	3.84E-03	2.48E-02
17	A24	110	Combination Long Haul Truck	296	0.00E+00	1.11E-04	8.00E-06	1.12E+02	3.35E-07	1.09E-01	8.07E-05	1.28E-01	3.14E-03	9.55E-04	6.63E-03	2.35E-03	2.37E-03	1.71E-02	3.75E-04	0.00E+00	4.27E-03	2.40E-02
16	B09	100	Passenger Car	1308	0.00E+00	1.41E-05	1.53E-06	5.81E+01	9.85E-05	3.74E-01	3.14E-05	2.79E-03	4.25E-03	8.54E-04	3.06E-03	1.97E-03	2.02E-03	1.64E-04	2.98E-04	8.17E-08	1.04E-03	4.36E-04
16	B09	100	Passenger Truck	2190	0.00E+00	3.05E-05	3.25E-06	1.38E+02	2.00E-04	7.48E-01	6.51E-05	7.97E-03	7.48E-03	1.59E-03	6.27E-03	4.05E-03	4.14E-03	8.82E-04	6.94E-04	1.90E-07	2.10E-03	1.28E-03
16	B09	100	Single Unit Short Haul Truck	62	0.00E+00	8.38E-06	4.14E-07	1.14E+01	7.30E-06	2.63E-02	9.05E-06	4.53E-03	4.29E-04	1.25E-04	1.03E-03	2.56E-04	2.61E-04	1.15E-03	4.57E-05	1.87E-08	7.74E-04	8.46E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	3.63E-07	1.76E-08	4.79E-01	3.02E-07	1.08E-03	3.92E-07	1.91E-04	1.94E-05	5.40E-06	4.51E-05	1.08E-05	1.10E-05	4.80E-05	1.93E-06	7.63E-10	3.41E-05	3.56E-05
16	B09	100	Combination Short Haul Truck	72	0.00E+00	2.47E-05	1.80E-06	2.59E+01	7.02E-08	2.41E-02	1.78E-05	2.63E-02	8.36E-04	2.97E-04	1.38E-03	5.29E-04	5.19E-04	3.91E-03	8.70E-05	0.00E+00	8.64E-04	4.97E-03
16	B09	100	Combination Long Haul Truck	65	0.00E+00	2.15E-05	1.47E-06	2.35E+01	8.13E-08	2.40E-02	1.61E-05	2.51E-02	7.75E-04	2.15E-04	1.41E-03	4.40E-04	4.40E-04	3.58E-03	7.88E-05	0.00E+00	9.68E-04	4.73E-03
16	B10	100	Passenger Car	1058	0.00E+00	1.14E-05	1.24E-06	4.70E+01	7.96E-05	3.03E-01	2.54E-05	2.26E-03	3.44E-03	6.91E-04	2.47E-03	1.59E-03	1.64E-03	1.33E-04	2.41E-04	6.61E-08	8.37E-04	3.53E-04
16	B10	100	Passenger Truck	1772	0.00E+00	2.47E-05	2.63E-06	1.11E+02	1.61E-04	6.05E-01	5.27E-05	6.45E-03	6.05E-03	1.29E-03	5.07E-03	3.27E-03	3.35E-03	7.14E-04	5.61E-04	1.54E-07	1.70E-03	1.04E-03
16	B10	100	Single Unit Short Haul Truck	76	0.00E+00	1.02E-05	5.03E-07	1.38E+01	8.88E-06	3.20E-02	1.10E-05	5.51E-03	5.22E-04	1.52E-04	1.26E-03	3.11E-04	3.18E-04	1.40E-03	5.56E-05	2.27E-08	9.41E-04	1.03E-03
16	B10	100	Single Unit Long Haul Truck	3	0.00E+00	4.41E-07	2.14E-08	5.83E-01	3.68E-07	1.31E-03	4.76E-07	2.32E-04	2.36E-05	6.56E-06	5.49E-05	1.32E-05	1.34E-05	5.84E-05	2.35E-06	9.28E-10	4.15E-05	4.33E-05
16	B10	100	Combination Short Haul Truck	77	0.00E+00	2.66E-05	1.94E-06	2.79E+01	7.55E-08	2.59E-02	1.91E-05	2.83E-02	8.98E-04	3.19E-04	1.49E-03	5.68E-04	5.57E-04	4.20E-03	9.35E-05	0.00E+00	9.28E-04	5.34E-03
16	B10	100	Combination Long Haul Truck	70	0.00E+00	2.31E-05	1.58E-06	2.52E+01	8.74E-08	2.58E-02	1.73E-05	2.70E-02	8.33E-04	2.31E-04	1.51E-03	4.73E-04	4.73E-04	3.85E-03	8.46E-05	0.00E+00	1.04E-03	5.08E-03
16	B11	100	Passenger Car	615	0.00E+00	6.64E-06	7.19E-07	2.73E+01	4.63E-05	1.76E-01	1.48E-05	1.31E-03	2.00E-03	4.01E-04	1.44E-03	9.26E-04	9.51E-04	7.70E-05	1.40E-04	3.84E-08	4.87E-04	2.05E-04
16	B11	100	Passenger Truck	1030	0.00E+00	1.43E-05	1.53E-06	6.46E+01	9.38E-05	3.52E-01	3.06E-05	3.75E-03	3.52E-03	7.49E-04	2.95E-03	1.90E-03	1.95E-03	4.15E-04	3.26E-04	8.95E-08	9.87E-04	6.03E-04
16	B11	100	Single Unit Short Haul Truck	24	0.00E+00	3.22E-06	1.59E-07	4.36E+00	2.80E-06	1.01E-02	3.47E-06	1.74E-03	1.65E-04	4.80E-05	3.97E-04	9.83E-05	1.00E-04	4.40E-04	1.75E-05	7.17E-09	2.97E-04	3.25E-04
16	B11	100	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	6.77E-09	1.84E-01	1.16E-07	4.13E-04	1.50E-07	7.32E-05	7.44E-06	2.07E-06	1.73E-05	4.16E-06	4.22E-06	1.84E-05	7.41E-07	2.93E-10	1.31E-05	1.37E-05
16	B11	100	Combination Short Haul Truck	29	0.00E+00	9.91E-06	7.22E-07	1.04E+01	2.81E-08	9.67E-03	7.13E-06	1.05E-02	3.35E-04	1.19E-04	5.54E-04	2.12E-04	2.08E-04	1.57E-03	3.48E-05	0.00E+00	3.46E-04	1.99E-03
16	B11	100	Combination Long Haul Truck	26	0.00E+00	8.60E-06	5.90E-07	9.40E+00	3.26E-08	9.62E-03	6.44E-06	1.01E-02	3.10E-04	8.60E-05	5.64E-04	1.76E-04	1.76E-04	1.44E-03	3.16E-05	0.00E+00	3.88E-04	1.89E-03
16	B12	100	Passenger Car	280	0.00E+00	3.03E-06	3.27E-07	1.24E+01	2.11E-05	8.01E-02	6.72E-06	5.98E-04	9.10E-04	1.83E-04	6.54E-04	4.22E-04	4.33E-04	3.51E-05	6.37E-05	1.75E-08	2.22E-04	9.33E-05
16	B12	100	Passenger Truck	469	0.00E+00	6.53E-06	6.96E-07	2.94E+01	4.27E-05	1.60E-01	1.39E-05	1.71E-03	1.60E-03	3.41E-04	1.34E-03	8.66E-04	8.87E-04	1.89E-04	1.48E-04	4.08E-08	4.49E-04	2.75E-04
16	B12	100	Single Unit Short Haul Truck	41	0.00E+00	5.55E-06	2.74E-07	7.53E+00	4.84E-06	1.74E-02	6.00E-06	3.00E-03	2.84E-04	8.28E-05	6.86E-04	1.70E-04	1.73E-04	7.60E-04	3.03E-05	1.24E-08	5.13E-04	5.61E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	2.40E-07	1.17E-08	3.18E-01	2.00E-07	7.13E-04	2.59E-07	1.26E-04	1.28E-05	3.58E-06	2.99E-05	7.18E-06	7.28E-06	3.18E-05	1.28E-06	5.06E-10	2.26E-05	2.36E-05
16	B12	100	Combination Short Haul Truck	29	0.00E+00	9.93E-06	7.23E-07	1.04E+01	2.82E-08	9.69E-03	7.14E-06	1.06E-02	3.35E-04	1.19E-04	5.55E-04	2.12E-04	2.08E-04	1.57E-03	3.49E-05	0.00E+00	3.47E-04	1.99E-03
16	B12	100	Combination Long Haul Truck	26	0.00E+00	8.62E-06	5.91E-07	9.42E+00	3.26E-08	9.64E-03	6.45E-06	1.01E-02	3.11E-04	8.62E-05	5.65E-04	1.77E-04	1.77E-04	1.44E-03	3.16E-05	0.00E+00	3.88E-04	1.90E-03
16	B13	100	Passenger Car	438	0.00E+00	4.74E-06	5.13E-07	1.95E+01	3.30E-05	1.25E-01	1.05E-05	9.37E-04	1.42E-03	2.86E-04	1.02E-03	6.60E-04	6.78E-04	5.49E-05	9.97E-05	2.74E-08	3.47E-04	1.46E-04
16	B13	100	Passenger Truck	734	0.00E+00	1.02E-05	1.09E-06	4.61E+01	6.69E-05	2.51E-01	2.18E-05	2.67E-03	2.51E-03	5.34E-04	2.10E-03	1.36E-03	1.39E-03	2.96E-04	2.33E-04	6.38E-08	7.04E-04	4.30E-04
16	B13	100	Single Unit Short Haul Truck	30	0.00E+00	4.00E-06	1.97E-07	5.42E+00	3.48E-06	1.26E-02	4.32E-06	2.16E-03	2.05E-04	5.96E-05	4.94E-04	1.22E-04	1.25E-04	5.47E-04	2.18E-05	8.92E-09	3.69E-04	4.04E-04
16	B13	100	Single Unit Long Haul Truck	1	0.00E+00	1.73E-07	8.41E-09	2.29E-01	1.44E-07	5.13E-04	1.87E-07	9.10E-05	9.25E-06	2.57E-06	2.15E-05	5.17E-06	5.24E-06	2.29E-05	9.21E-07	3.64E-10	1.63E-05	1.70E-05
16	B13	100	Combination Short Haul Truck	34	0.00E+00	1.16E-05	8.46E-07	1.22E+01	3.30E-08	1.13E-02	8.35E-06	1.24E-02	3.92E-04	1.40E-04	6.49E-04	2.48E-04	2.43E-04	1.84E-03	4.08E-05	0.00E+00	4.05E-04	2.33E-03
16	B13	100	Combination Long Haul Truck	31	0.00E+00	1.01E-05	6.91E-07	1.10E+01	3.82E-08	1.13E-02	7.55E-06	1.18E-02	3.64E-04	1.01E-04	6.61E-04	2.07E-04	2.07E-04	1.68E-03	3.70E-05	0.00E+00	4.54E-04	2.22E-03
16	B14	100	Passenger Car	593	0.00E+00	6.41E-06	6.94E-07	2.64E+01	4.47E-05	1.70E-01	1.42E-05	1.27E-03	1.93E-03	3.87E-04	1.39E-03	8.93E-04	9.18E-04	7.43E-05	1.35E-04	3.71E-08	4.70E-04	1.98E-04
16	B14	100	Passenger Truck	994	0.00E+00	1.38E-05	1.47E-06	6.24E+01	9.05E-05	3.39E-01	2.95E-05	3.62E-03	3.39E-03	7.23E-04	2.84E-03	1.84E-03	1.88E-03	4.00E-04	3.15E-04	8.64E-08	9.52E-04	5.82E-04
16	B14	100	Single Unit Short Haul Truck	36	0.00E+00	4.81E-06	2.38E-07	6.53E+00	4.20E-06	1.51E-02	5.20E-06	2.61E-03	2.47E-04	7.18E-05	5.95E-04	1.47E-04	1.50E-04	6.59E-04	2.63E-05	1.07E-08	4.44E-04	4.86E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.08E-07	1.01E-08	2.75E-01	1.74E-07	6.18E-04	2.25E-07	1.10E-04	1.11E-05	3.10E-06	2.59E-05	6.23E-06	6.32E-06	2.76E-05	1.11E-06	4.39E-10	1.96E-05	2.05E-05
16	B14	100	Combination Short Haul Truck	33	0.00E+00	1.13E-05	8.24E-07	1.19E+01	3.21E-08	1.10E-02	8.14E-06	1.20E-02	3.82E-04	1.36E-04	6.33E-04	2.42E-04	2.37E-04	1.79E-03	3.98E-05	0.00E+00	3.95E-04	2.27E-03
16	B14	100	Combination Long Haul Truck	30	0.00E+00	9.82E-06	6.73E-07	1.07E+01	3.72E-08	1.10E-02	7.36E-06	1.15E-02	3.55E-04	9.82E-05	6.44E-04	2.01E-04	2.01E-04	1.64E-03	3.60E-05	0.00E+00	4.43E-04	2.16E-03
16	B15	100	Passenger Car	1642	0.00E+00	1.77E-05	1.92E-06	7.30E+01	1.24E-04	4.70E-01	3.94E-05	3.51E-03	5.34E-03	1.07E-03	3.84E-03	2.47E-03	2.54E-03	2.06E-04	3.74E-04	1.03E-07	1.30E-03	5.47E-04
16	B15	100	Passenger Truck	2750	0.00E+00	3.83E-05	4.08E-06	1.73E+02	2.51E-04	9.39E-01	8.17E-05	1.00E-02	9.39E-03	2.00E-03	7.87E-03	5.08E-03	5.20E-03	1.11E-03	8.71E-04	2.39E-07	2.63E-03	1.61E-03
16	B15	100	Single Unit Short Haul Truck	110	0.00E+00	1.47E-05	7.28E-07	2.00E+01	1.28E-05	4.63E-02	1.59E-05	7.98E-03	7.55E-04	2.20E-04	1.82E-03	4.51E-04	4.60E-04	2.02E-03	8.04E-05	3.29E-08	1.36E-03	1.49E-03
16	B15	100	Single Unit Long Haul Truck	5	0.00E+00	6.38E-07	3.10E-08	8.43E-01	5.32E-07	1.89E-03	6.89E-07	3.36E-04	3.41E-05	9.49E-06	7.93E-05	1.91E-05	1.93E-05	8.44E-05	3.40E-06	1.34E-09	6.00E-05	6.27E-05
16	B15	100	Combination Short Haul Truck	87	0.00E+00	3.00E-05	2.19E-06	3.15E+01	8.52E-08	2.93E-02	2.16E-05	3.20E-02	1.01E-03	3.61E-04	1.68E-03	6.41E-04	6.29E-04	4.74E-03	1.06E-04	0.00E+00	1.05E-03	6.03E-03
16	B15	100	Combination Long Haul Truck	79	0.00E+00	2.60E-05	1.79E-06	2.85E+01	9.87E-08	2.91E-02	1.95E-05	3.05E-02	9.40E-04	2.60E-04	1.71E-03	5.34E-04	5.34E-04	4.35E-03	9.56E-05	0.00E+00	1.17E-03	5.74E-03
16	B16	100	Passenger Car	994	0.00E+00	1.07E-05	1.16E-06	4.42E+01	7.49E-05	2.85E-01	2.39E-05	2.12E-03	3.23E-03	6.49E-04	2.32E-03	1.50E-03	1.54E-03	1.25E-04	2.26E-04	6.22E-08	7.87E-04	3.31E-04

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	C13	40	Passenger Car	172	0.00E+00	2.86E-06	3.09E-07	9.90E+00	1.99E-05	7.08E-02	6.36E-06	3.11E-04	2.98E-03	4.25E-04	6.17E-04	3.99E-04	4.09E-04	5.40E-05	4.97E-05	1.21E-08	2.09E-04	4.88E-05
50	C13	40	Passenger Truck	288	0.00E+00	6.54E-06	6.86E-07	2.20E+01	3.92E-05	1.22E-01	1.31E-05	1.18E-03	5.29E-03	7.52E-04	1.23E-03	8.09E-04	8.25E-04	1.91E-04	1.10E-04	2.35E-08	4.07E-04	1.99E-04
50	C13	40	Single Unit Short Haul Truck	13	0.00E+00	5.66E-06	2.96E-07	2.71E+00	4.92E-06	4.67E-03	6.01E-06	2.77E-03	5.16E-04	8.56E-05	6.68E-04	1.76E-04	1.79E-04	2.74E-04	1.10E-05	4.63E-09	4.88E-04	5.20E-04
50	C13	40	Single Unit Long Haul Truck	1	0.00E+00	2.48E-07	1.29E-08	1.17E-01	2.15E-07	2.03E-04	2.64E-07	1.20E-04	2.31E-05	3.81E-06	2.93E-05	7.72E-06	7.83E-06	1.18E-05	4.73E-07	2.01E-10	2.15E-05	2.26E-05
50	C13	40	Combination Short Haul Truck	11	0.00E+00	1.00E-05	6.95E-07	5.10E+00	3.62E-08	8.75E-03	7.46E-06	1.12E-02	1.17E-03	2.10E-04	6.51E-04	2.08E-04	2.10E-04	7.68E-04	1.71E-05	0.00E+00	4.40E-04	2.11E-03
50	C13	40	Combination Long Haul Truck	10	0.00E+00	9.15E-06	5.97E-07	4.85E+00	4.10E-08	9.72E-03	7.03E-06	1.12E-02	1.17E-03	1.87E-04	6.68E-04	1.82E-04	1.85E-04	7.40E-04	1.62E-05	0.00E+00	4.85E-04	2.12E-03
53	C14	70	Passenger Car	385	0.00E+00	4.81E-06	5.21E-07	1.85E+01	3.35E-05	1.20E-01	1.07E-05	7.85E-04	2.94E-03	4.74E-04	1.04E-03	6.71E-04	6.88E-04	6.90E-05	9.39E-05	2.55E-08	3.53E-04	1.23E-04
53	C14	70	Passenger Truck	644	0.00E+00	1.05E-05	1.11E-06	4.26E+01	6.64E-05	2.20E-01	2.18E-05	2.40E-03	5.28E-03	8.61E-04	2.08E-03	1.35E-03	1.39E-03	3.12E-04	2.15E-04	5.62E-08	6.95E-04	3.94E-04
53	C14	70	Single Unit Short Haul Truck	30	0.00E+00	7.10E-06	3.56E-07	5.57E+00	5.81E-06	1.12E-02	7.57E-06	3.51E-03	5.00E-04	9.99E-05	8.65E-04	2.12E-04	2.16E-04	5.58E-04	2.24E-05	9.07E-09	6.46E-04	6.57E-04
53	C14	70	Single Unit Long Haul Truck	1	0.00E+00	3.10E-07	1.54E-08	2.36E-01	2.51E-07	4.67E-04	3.30E-07	1.51E-04	2.28E-05	4.44E-06	3.78E-05	9.19E-06	9.33E-06	2.36E-05	9.52E-07	3.81E-10	2.83E-05	2.83E-05
53	C14	70	Combination Short Haul Truck	29	0.00E+00	1.53E-05	1.09E-06	1.11E+01	4.96E-08	1.31E-02	1.12E-05	1.61E-02	1.16E-03	2.54E-04	9.31E-04	3.22E-04	3.21E-04	1.67E-03	3.71E-05	0.00E+00	6.10E-04	3.03E-03
53	C14	70	Combination Long Haul Truck	27	0.00E+00	1.38E-05	9.23E-07	1.04E+01	5.72E-08	1.39E-02	1.05E-05	1.59E-02	1.15E-03	2.11E-04	9.61E-04	2.79E-04	2.82E-04	1.58E-03	3.46E-05	0.00E+00	6.81E-04	2.99E-03
50	C15	40	Passenger Car	192	0.00E+00	3.19E-06	3.45E-07	1.10E+01	2.22E-05	7.89E-02	7.09E-06	3.47E-04	3.32E-03	4.74E-04	6.88E-04	4.45E-04	4.57E-04	6.03E-05	5.55E-05	1.34E-08	2.34E-04	5.44E-05
50	C15	40	Passenger Truck	322	0.00E+00	7.29E-06	7.65E-07	2.46E+01	4.38E-05	1.36E-01	1.46E-05	1.31E-03	5.90E-03	8.39E-04	1.38E-03	9.02E-04	9.20E-04	2.13E-04	1.22E-04	2.62E-08	4.54E-04	2.22E-04
50	C15	40	Single Unit Short Haul Truck	23	0.00E+00	1.03E-05	5.38E-07	4.92E+00	8.92E-06	8.47E-03	1.09E-05	5.02E-03	9.37E-04	1.55E-04	1.21E-03	3.20E-04	3.25E-04	4.97E-04	1.99E-05	8.40E-09	8.85E-04	9.43E-04
50	C15	40	Single Unit Long Haul Truck	1	0.00E+00	4.50E-07	2.34E-08	2.12E-01	3.90E-07	3.68E-04	4.78E-07	2.18E-04	4.19E-05	6.90E-06	5.32E-05	1.40E-05	1.42E-05	2.15E-05	8.57E-07	3.65E-10	3.90E-05	4.10E-05
50	C15	40	Combination Short Haul Truck	31	0.00E+00	2.73E-05	1.89E-06	1.39E+01	9.84E-08	2.38E-02	2.03E-05	3.05E-02	3.18E-03	5.73E-04	1.77E-03	5.65E-04	5.71E-04	2.09E-03	4.64E-05	0.00E+00	1.20E-03	5.75E-03
50	C15	40	Combination Long Haul Truck	28	0.00E+00	2.49E-05	1.62E-06	1.32E+01	1.12E-07	2.65E-02	1.91E-05	3.06E-02	3.19E-03	5.08E-04	1.82E-03	4.95E-04	5.04E-04	2.01E-03	4.41E-05	0.00E+00	1.32E-03	5.76E-03
52	C16	60	Passenger Car	104	0.00E+00	1.42E-06	1.53E-07	5.19E+00	9.88E-06	3.51E-02	3.16E-06	2.05E-04	1.03E-03	1.58E-04	3.07E-04	1.98E-04	2.03E-04	2.18E-05	2.62E-05	7.01E-09	1.04E-04	3.22E-05
52	C16	60	Passenger Truck	175	0.00E+00	3.12E-06	3.29E-07	1.18E+01	1.94E-05	6.26E-02	6.41E-06	6.60E-04	1.83E-03	2.84E-04	6.11E-04	3.97E-04	4.07E-04	9.08E-05	5.92E-05	1.49E-08	2.02E-04	1.09E-04
52	C16	60	Single Unit Short Haul Truck	4	0.00E+00	1.25E-06	6.26E-08	7.96E-01	1.03E-06	1.54E-03	1.34E-06	5.97E-04	1.01E-04	1.83E-05	1.51E-04	3.75E-05	3.81E-05	7.97E-05	3.22E-06	1.33E-09	1.14E-04	1.12E-04
52	C16	60	Combination Short Haul Truck	1	0.00E+00	6.42E-07	4.48E-08	4.18E-01	2.27E-09	5.60E-04	4.76E-07	6.97E-04	5.97E-05	1.18E-05	4.09E-05	1.33E-05	1.33E-05	6.30E-05	1.40E-06	0.00E+00	2.75E-05	1.31E-04
52	C16	60	Combination Long Haul Truck	1	0.00E+00	5.74E-07	3.76E-08	3.92E-01	2.60E-09	6.05E-04	4.45E-07	6.90E-04	5.99E-05	1.02E-05	4.20E-05	1.14E-05	1.16E-05	5.97E-05	1.31E-06	0.00E+00	3.04E-05	1.30E-04
53	C17	70	Passenger Car	511	0.00E+00	6.39E-06	6.92E-07	2.46E+01	4.44E-05	1.59E-01	1.42E-05	1.04E-03	3.90E-03	6.29E-04	1.38E-03	8.92E-04	9.14E-04	9.16E-05	1.25E-04	3.39E-08	4.69E-04	1.63E-04
53	C17	70	Passenger Truck	856	0.00E+00	1.39E-05	1.47E-06	5.66E+01	8.82E-05	2.92E-01	2.90E-05	3.19E-03	7.01E-03	1.14E-03	2.76E-03	1.80E-03	1.84E-03	4.14E-04	2.85E-04	7.47E-08	9.23E-04	5.23E-04
53	C17	70	Single Unit Short Haul Truck	61	0.00E+00	1.44E-05	7.24E-07	1.13E+01	1.18E-05	2.27E-02	1.54E-05	7.14E-03	1.02E-03	2.03E-04	1.76E-03	4.32E-04	4.39E-04	1.13E-03	4.56E-05	1.84E-08	1.31E-03	1.34E-03
53	C17	70	Single Unit Long Haul Truck	3	0.00E+00	6.30E-07	3.13E-08	4.81E-01	5.10E-07	9.49E-04	6.70E-07	3.07E-04	4.64E-05	9.04E-06	7.68E-05	1.87E-05	1.90E-05	4.80E-05	1.94E-06	7.76E-10	5.76E-05	5.75E-05
53	C17	70	Combination Short Haul Truck	32	0.00E+00	1.64E-05	1.17E-06	1.20E+01	5.35E-08	1.42E-02	1.20E-05	1.73E-02	1.25E-03	2.74E-04	1.00E-03	3.47E-04	3.46E-04	1.80E-03	3.99E-05	0.00E+00	6.57E-04	3.26E-03
53	C17	70	Combination Long Haul Truck	29	0.00E+00	1.49E-05	9.94E-07	1.11E+01	6.16E-08	1.50E-02	1.13E-05	1.71E-02	1.24E-03	2.27E-04	1.03E-03	3.01E-04	3.04E-04	1.70E-03	3.73E-05	0.00E+00	7.33E-04	3.22E-03
52	C18	60	Passenger Car	72	0.00E+00	9.73E-07	1.05E-07	3.56E+00	6.79E-06	2.41E-02	2.17E-06	1.41E-04	7.07E-04	1.09E-04	2.11E-04	1.36E-04	1.40E-04	1.50E-05	1.80E-05	4.82E-09	7.13E-05	2.21E-05
52	C18	60	Passenger Truck	120	0.00E+00	2.14E-06	2.26E-07	8.10E+00	1.33E-05	4.30E-02	4.40E-06	4.53E-04	1.26E-03	1.95E-04	4.20E-04	2.73E-04	2.79E-04	6.23E-05	4.07E-05	1.02E-08	1.39E-04	7.50E-05
52	C18	60	Single Unit Short Haul Truck	9	0.00E+00	2.64E-06	1.32E-07	1.68E+00	2.17E-06	3.24E-03	2.81E-06	1.26E-03	2.13E-04	3.86E-05	3.19E-04	7.89E-05	8.02E-05	1.68E-04	6.77E-06	2.79E-09	2.40E-04	2.36E-04
52	C18	60	Combination Short Haul Truck	4	0.00E+00	2.37E-06	1.66E-07	1.54E+00	8.39E-09	2.07E-03	1.76E-06	2.57E-03	2.20E-04	4.36E-05	1.51E-04	4.92E-05	4.92E-05	2.33E-04	5.16E-06	0.00E+00	1.01E-04	4.86E-04
52	C18	60	Combination Long Haul Truck	4	0.00E+00	2.12E-06	1.39E-07	1.45E+00	9.62E-09	2.23E-03	1.64E-06	2.55E-03	2.21E-04	3.76E-05	1.55E-04	4.22E-05	4.27E-05	2.20E-04	4.84E-06	0.00E+00	1.12E-04	4.82E-04
50	C19	40	Passenger Car	6	0.00E+00	9.84E-08	1.06E-08	3.41E-01	6.84E-07	2.43E-03	2.19E-07	1.07E-05	1.02E-04	1.46E-05	2.12E-05	1.37E-05	1.41E-05	1.86E-06	1.71E-06	4.15E-10	7.21E-06	1.68E-06
50	C19	40	Passenger Truck	10	0.00E+00	2.25E-07	2.36E-08	7.58E-01	1.35E-06	4.19E-03	4.49E-07	4.05E-05	1.82E-04	2.59E-05	4.24E-05	2.78E-05	2.84E-05	6.56E-06	3.77E-06	8.07E-10	1.40E-05	6.86E-06
53	C20	70	Passenger Car	132	0.00E+00	1.65E-06	1.79E-07	6.35E+00	1.15E-05	4.11E-02	3.67E-06	2.69E-04	1.01E-03	1.63E-04	3.57E-04	2.30E-04	2.36E-04	2.37E-05	3.22E-05	8.77E-09	1.21E-04	4.22E-05
53	C20	70	Passenger Truck	221	0.00E+00	3.59E-06	3.81E-07	1.46E+01	2.28E-05	7.56E-02	7.50E-06	8.23E-04	1.81E-03	2.96E-04	7.13E-04	4.64E-04	4.76E-04	1.07E-04	7.37E-05	1.93E-08	2.38E-04	1.35E-04
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	1.22E-06	6.11E-08	9.55E-01	9.96E-07	1.92E-03	1.30E-06	6.02E-04	8.57E-05	1.71E-05	1.48E-04	3.64E-05	3.70E-05	9.56E-05	3.84E-06	1.56E-09	1.11E-04	1.13E-04
53	C20	70	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.33E+00	5.97E-09	1.58E-03	1.34E-06	1.93E-03	1.39E-04	3.05E-05	1.12E-04	3.87E-05	3.86E-05	2.01E-04	4.46E-06	0.00E+00	7.33E-05	3.64E-04
53	C20	70	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.11E-07	1.24E+00	6.87E-09	1.67E-03	1.26E-06	1.91E-03	1.39E-04	2.53E-05	1.15E-04	3.36E-05	3.39E-05	1.90E-04	4.16E-06	0.00E+00	8.18E-05	3.60E-04
50	C21	40	Passenger Car	287	0.00E+00	4.77E-06	5.16E-07	1.65E+01	3.32E-05	1.18E-01	1.06E-05	5.19E-04	4.97E-03	7.09E-04	1.03E-03	6.65E-04	6.83E-04	9.01E-05	8.29E-05	2.01E-08	3.49E-04	8.13E-05
50	C21	40	Passenger Truck	481	0.00E+00	1.09E-05	1.14E-06	3.67E+01	6.54E-05	2.03E-01	2.18E-05	1.96E-03	8.81E-03	1.25E-03	2.06E-03	1.35E-03	1.38E-03	3.18E-04	1.83E-04	3.91E-08	6.78E-04	3.33E-04
50	C21	40	Single Unit Short Haul Truck	66	0.00E+00	2.95E-05	1.55E-06	1.41E+01	2.56E-05	2.43E-02	3.13E-05	1.44E-02	2.69E-03	4.46E-04	3.49E-03	9.20E-04	9.35E-04	1.43E-03	5.72E-05	2.42E-08	2.54E-03	2.71E-03
50	C21	40	Single Unit Long Haul Truck	3	0.00E+00	1.29E-06	6.73E-08	6.11E-01	1.12E-06	1.06E-03	1.37E-06	6.28E-04	1.20E-04	1.98E-05	1.53E-04	4.03E-05	4.08E-05	6.17E-05	2.46E-06	1.05E-09	1.12E-04	1.18E-04
50	C21	40	Combination Short Haul Truck	16	0.00E+00	1.46E-05	1.01E-06	7.40E+00	5.26E-08	1.27E-02	1.08E-05	1.63E-02	1.70E-03	3.06E-04	9.46E-04	3.02E-04	3.05E-04	1.12E-03	2.48E-05	0.00E+00	6.40E-04	3.07E-03
50	C21	40	Combination Long Haul Truck	15	0.00E+00	1.33E-05	8.67E-07	7.04E+00	5.96E-08	1.41E-02	1.02E-05	1.63E-02	1.70E-03	2.71E-04	9.71E-04	2.64E-04	2.69E-04	1.08E-03	2.35E-05	0.00E+00	7.04E-04	3.08E-03
52	C22	60	Passenger Car	86	0.00E+00	1.16E-06	1.26E-07	4.25E+00	8.10E-06	2.88E-02	2.59E-06	1.68E-04	8.44E-04	1.30E-04	2.52E-04	1.62E-04	1.67E-04	1.79E-05	2.15E-05	5.75E-09	8.51E-05	2.64E-05
52	C22	60	Passenger Truck	143	0.00E+00	2.56E-06	2.70E-07	9.67E+00	1.59E-05	5.13E-02	5.25E-06	5.41E-04	1.50E-03	2.33E-04	5.01E-04	3.26E-04	3.34E-04	7.44E-05	4.86E-05	1.22E-08	1.66E-04	8.95E-05
52	C22	60	Single Unit Short Haul Truck	2	0.00E+00	6.03E-07	3.01E-08	3.83E-01	4.96E-07	7.40E-04	6.43E-07	2.87E-04	4.87E-05	8.82E-06	7.29E-05	1.80E-05	1.83E-05	3.84E-05	1.55E-06	6.38E-10	5.48E-05	5.39E-05
52	C22	60	Combination Short Haul Truck	1	0.00E+00	8.58E-07	5.99E-08	5.58E-01	3.03E-09	7.49E-04	6.35E-07	9.31E-04	7.97E-05	1.58E-05	5.46E-05	1.78E-05	1.78E-05	8.42E-05	1.87E-06	0.00E+00	3.67E-05	1.76E-04
52	C22	60	Combination Long Haul Truck	1	0.00E+00	7.67E-07	5.02E-08	5.24E-01	3.48E-09	8.08E-04	5.94E-07	9.22E-04	8.01E-05	1.36E-05	5.61E-05	1.53E-05	1.55E-05	7.97E-05	1.75E-06	0.00E+00	4.06E-05	1.74E-04
53	C23	70	Passenger Car	427	0.00E+00	5.33E-06	5.77E-07	2.05E+01	3.71E-05	1.33E-01	1.19E-05	8.70E-04	3.26E-03	5.25E-04	1.15E-03	7.45E-04	7.63E-04	7.65E-05	1.04E-04	2.83E-08	3.91E-04	1.36E-04
53	C23	70	Passenger Truck	715	0.00E+00	1.16E-05	1.23E-06	4.73E+01	7.37E-05	2.44E-01	2.42E-05	2.66E-03	5.86E-03	9.55E-04	2.30E-03	1.50E-03	1.54E-03	3.45E-04	2.38E-04	6.23E-08	7.70E-04	4.37E-04
53	C23	70	Single Unit Short Haul Truck	32	0.00E+00	7.57E-06	3.80E-07	5.93E+00	6.19E-06	1.19E-02	8.06E-06	3.74E-03	5.33E-04	1.07E-04	9.22E-04	2.26E-04	2.30E-04	5.94E-04	2.39E-05	9.67E-09	6.88E-04	7.00E-04
53	C23	70	Single Unit Long Haul Truck	1	0.00E+00	3.30E-07	1.64E-08	2.52E-01	2.67E-07	4.97E-04	3.51E-07	1.61E-04	2.43E-05	4.74E-06	4.03E-05	9.79E-06	9.95E-06	2.51E-05	1.01E-06	4.07E-10	3.02E-05	3.01E-05
53	C23	70	Combination Short Haul Truck	16	0.00E+00	8.25E-06	5.87E-07	6.00E+00	2.68E-08	7.10E-03	6.04E-06	8.69E-03	6.26E-04	1.37E-04	5.03E-04	1.74E-04	1.73E-04	9.04E-04	2.00E-05	0.00E+00	3.29E-04	1.64E-03
53	C23	70	Combination Long Haul Truck	14	0.00E+00	7.48E-06	4.99E-07	5.59E+00	3.09E-08	7.52E-03	5.67E-06	8.57E-03	6.23E-04	1.14E-04	5.19E-04	1.51E-04	1.52E-04	8.53E-04	1.87E-05	0.00E+00	3.68E-04	1.62E-03
52	C24	60	Passenger Car	56	0.00E+00	7.65E-07	8.28E-08	2.80E+00	5.34E-06	1.89E-02	1.71E-06	1.11E-04	5.55E-04	8.54E-05	1.66E-04	1.07E-04	1.10E-04	1.18E-05	1.42E-05	3.79E-09	5.60E-05	1.74E-05
52	C24	60	Passenger Truck	94	0.00E+00	1.68E-06	1.78E-07	6.37E+00	1.05E-05	3.38E-02	3.46E-06	3.56E-04	9.91E-04	1.53E-04	3.30E-04	2.14E-04	2.20E-04	4.90E-05	3.20E-05	8.02E-09	1.09E-04	5.90E-05
50	C25	40	Passenger Car	195	0.00E+00	3.24E-06	3.50E-07	1.12E+01	2.25E-05	8.01E-02	7.20E-06	3.52E-04	3.37E-03	4.81E-04	6.98E-04	4.51E-04	4.63E-04	6.11E-05	5.63E-05	1.36E-08	2.37E-04	5.52E-05
50	C25	40	Passenger Truck	326	0.00E+00	7.39E-06	7.76E-07	2.49E+01	4.44E-05	1.38E-01	1.48E-05	1.33E-03	5.98E-03	8.51E-04	1.40E-03	9.15E-04	9.33E-04	2.16E-04	1.24E-04	2.65E-08	4.60E-04	2.26E-04
50	C25	40	Single Unit Short Haul Truck	39	0.00E+00	1.74E-05	9.10E-07	8.32E+00	1.51E-05	1.43E-02	1.85E-05	8.50E-03	1.58E-03	2.63E-04	2.05E-03	5.42E-04	5.50E-04	8.41E-04	3.36E-05	1.42E-08	1.50E-03	1.60E-03
50	C25	40	Single Unit Long Haul Truck	2	0.00E+00	7.61E-07	3.96E-08	3.60E-01	6.61E-07	6.22E-04	8.09E-07	3.70E-04	7.08E-05	1.17E-05	9.00E-05	2.37E-05	2.40E-05	3.63E-05	1.45E-06	6.18E-10	6.61E-05	6.94E-05
50	C25	40	Combination Short Haul Truck	32	0.00E+00	2.81E-05	1.95E-06	1.43E+01	1.01E-07	2.45E-02	2.09E-05	3.14E-02	3.27E-03	5.90E-04	1.83E-03	5.82E-04	5.88E-04	2.15E-03	4.78E-05	0.00E+00	1.24E-03	5.93E-03
50	C25	40	Combination Long Haul Truck	29	0.00E+00	2.57E-05	1.67E-06	1.36E+01	1.15E-07	2.73E-02	1.97E-05	3.15E-02	3.29E-03	5.24E-04	1.87E-03	5.10E-04	5.20E-04	2.08E-03	4.55E-05	0.00E+00	1.36E-03	5.94E-03
53	C26	70	Passenger Car	293	0.00E+00	3.66E-06	3.96E-07	1.41E+01	2.54E-05	9.11E-02	8.13E-06	5.97E-04	2.24E-03	3.60E-04	7.92E-04	5.11E-04	5.24E-04	5.24E-05	7.14E-05	1.94E-08	2.68E-04	9.35E-05
53	C26	70	Passenger Truck	490	0.00E+00	7.97E-06	8.44E-07	3.24E+01	5.05E-05	1.67E-01	1.66E-05	1.82E-03	4.02E-03	6.55E-04	1.58E-03	1.03E-03	1.05E-03	2.37E-04	1.63E-04	4.28E-08	5.28E-04	3.00E-04
53	C26	70	Single Unit Short Haul Truck	47	0.00E+00	1.12E-05	5.59E-07	8.74E+00	9.13E-06	1.75E-02	1.19E-05	5.51E-03	7.85E-04	1.57E-04	1.36E-03	3.34E-04	3.39E-04	8.76E-04	3.52E-05	1.42E-08	1.01E-03	1.03E-03
53	C26	70	Single Unit Long Haul Truck	2	0.00E+00	4.86E-07	2.42E-08	3.71E-01	3.94E-07	7.33E-04	5.18E-07	2.37E-04	3.58E-05	6.98E-06	5.93E-05	1.44E-05	1.47E-05	3.71E-05	1.50E-06	5.99E-10	4.45E-05	4.44E-05
53	C26	70	Combination Short Haul Truck	30	0.00E+00	1.56E-05	1.11E-06	1.13E+01	5.07E-08	1.34E-02	1.14E-05	1.64E-02	1.19E-03	2.60E-04	9.51E-04	3.29E-04	3.28E-04	1.71E-03	3.79E-05	0.00E+00	6.23E-04	3.10E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.42E-05	9.44E-07	1.06E+01	5.84E-08	1.42E-02	1.07E-05	1.62E-02	1.18E-03	2.15E-04	9.82E-04	2.85E-04	2.88E-04	1.61E-03	3.54E-05	0.00E+00	6.96E-04	3.06E-03
50	C27	40	Passenger Car	139	0.00E+00	2.30E-06	2.49E-07	7.98E+00	1.60E-05	5.70E-02	5.12E-06	2.51E-04	2.40E-03	3.43E-04	4.97E-04	3.21E-04	3.30E-04	4.35E-05	4.01E-05	9.71E-09	1.69E-04	3.93E-05
50	C27	40	Passenger Truck	232	0.00E+00	5.27E-06	5.52E-07	1.77E+01	3.16E-05	9.81E-02	1.05E-05	9.49E-04	4.26E-03	6.06E-04	9.94E-04	6.52E-04	6.65E-04	1.54E-04	8.84E-05	1.89E-08	3.28E-04	1.61E-04
50	C27	40	Single Unit Short Haul Truck	30	0.00E+00	1.33E-05	6.94E-07	6.35E+00	1.15E-05	1.09E-02	1.41E-05	6.49E-03	1.21E-03	2.00E-04	1.57E-03	4.13E-04	4.20E-04	6.42E-04	2.57E-05	1.09E-08	1.14E-03	1.22E-03
50	C27	40	Single Unit Long Haul Truck	1	0.00E+00	5.81E-07	3.03E-08	2.74E-01	5.04E-07	4.75E-04	6.17E-07	2.82E-04	5.41E-05	8.91E-06	6.87E-05	1.81E-05	1.83E-05	2.77E-05	1.11E-06	4.71E-10	5.04E-05	5.30E-05
50	C27	40	Combination Short Haul Truck	11	0.00E+00	9.76E-06	6.76E-07	4.96E+00	3.52E-08	8.51E-03	7.25E-06	1.09E-02	1.14E-03	2.05E-04	6.33E-04	2.02E-04	2.04E-04	7.47E-04	1.66E-05	0.00E+00	4.28E-04	2.06E-03
50	C27	40	Combination Long Haul Truck	10	0.00E+00	8.90E-06	5.80E-07	4.72E+00	3.99E-08	9.46E-03	6.84E-06	1.09E-02	1.14E-03	1.82E-04	6.50E-04	1.77E-04	1.80E-04	7.20E-04	1.58E-05	0.00E+00	4.72E-04	2.06E-03
52	C28	60	Passenger Car	274	0.00E+00	3.73E-06	4.03E-07	1.36E+01	2.60E-05	9.23E-02	8.31E-06	5.39E-04	2.71E-03	4.16E-04	8.08E-04	5.21E-04	5.34E-04	5.73E-05	6.90E-05	1.85E-08	2.73E-04	8.46E-05
52	C28	60	Passenger Truck	460	0.00E+00	8.20E-06	8.66E-07	3.10E+01	5.11E-05	1.65E-01	1.69E-05	1.74E-03	4.83E-03	7.47E-04	1.61E-03	1.04E-03	1.07E-03	2.39E-04	1.56E-04	3.91E-08	5.32E-04	2.87E-04
52	C28	60	Single Unit Short Haul Truck	2	0.00E+00	4.71E-07	2.35E-08	2.99E-01	3.87E-07	5.77E-04	5.02E-07	2.24E-04	3.80E-05	6.88E-06	5.68E-05	1.41E-05	1.43E-05	2.99E-05	1.21E-06	4.97E-10	4.27E-05	4.20E-05
52	C28	60	Combination Short Haul Truck	1	0.00E+00	5.95E-07	4.15E-08	3.87E-01	2.10E-09	5.19E-04	4.41E-07	6.46E-04	5.53E-05	1.09E-05	3.79E-05	1.23E-05	1.23E-05	5.84E-05	1.29E-06	0.00E+00	2.55E-05	1.22E-04
52	C28	60	Combination Long Haul Truck	1	0.00E+00	5.32E-07

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C32	70	Combination Long Haul Truck	41	0.00E+00	2.09E-05	1.40E-06	1.56E+01	8.65E-08	2.11E-02	1.59E-05	2.40E-02	1.74E-03	3.19E-04	1.45E-03	4.22E-04	4.27E-04	2.39E-03	5.23E-05	0.00E+00	1.03E-03	4.53E-03
52	C33	60	Passenger Car	34	0.00E+00	4.69E-07	5.07E-08	1.72E+00	3.27E-06	1.16E-02	1.04E-06	6.77E-05	3.40E-04	5.23E-05	1.02E-04	6.54E-05	6.72E-05	7.21E-06	8.67E-06	2.32E-09	3.43E-05	1.06E-05
52	C33	60	Passenger Truck	58	0.00E+00	1.03E-06	1.09E-07	3.90E+00	6.42E-06	2.07E-02	2.12E-06	2.18E-04	6.07E-04	9.39E-05	2.02E-04	1.31E-04	1.34E-04	3.00E-05	1.96E-05	4.91E-09	6.69E-05	3.61E-05
52	C33	60	Single Unit Short Haul Truck	1	0.00E+00	3.14E-07	1.57E-08	2.00E-01	2.58E-07	3.85E-04	3.35E-07	1.50E-04	2.54E-05	4.59E-06	3.79E-05	9.40E-06	9.55E-06	2.00E-05	8.06E-07	3.32E-10	2.85E-05	2.80E-05
50	C34	40	Passenger Car	23	0.00E+00	3.83E-07	4.15E-08	1.33E+00	2.67E-06	9.48E-03	8.52E-07	4.17E-05	3.99E-04	5.70E-05	8.27E-05	5.34E-05	5.49E-05	7.24E-06	6.66E-06	1.61E-09	2.81E-05	6.54E-06
50	C34	40	Passenger Truck	39	0.00E+00	8.76E-07	9.19E-08	2.95E+00	5.26E-06	1.63E-02	1.75E-06	1.58E-04	7.08E-04	1.01E-04	1.65E-04	1.08E-04	1.11E-04	2.55E-05	1.47E-05	3.14E-09	5.45E-05	2.67E-05
50	C34	40	Single Unit Short Haul Truck	4	0.00E+00	1.86E-06	9.76E-08	8.94E-01	1.62E-06	1.54E-03	1.98E-06	9.12E-04	1.70E-04	2.82E-05	2.20E-04	5.81E-05	5.91E-05	9.03E-05	3.61E-06	1.53E-09	1.61E-04	1.71E-04
50	C34	40	Combination Short Haul Truck	1	0.00E+00	1.00E-06	6.94E-08	5.09E-01	3.61E-09	8.73E-04	7.45E-07	1.12E-03	1.17E-04	2.10E-05	6.50E-05	2.07E-05	2.10E-05	7.67E-05	1.70E-06	0.00E+00	4.40E-05	2.11E-04
50	C34	40	Combination Long Haul Truck	1	0.00E+00	9.14E-07	5.96E-08	4.84E-01	4.10E-09	9.71E-04	7.02E-07	1.12E-03	1.17E-04	1.87E-05	6.68E-05	1.82E-05	1.85E-05	7.39E-05	1.62E-06	0.00E+00	4.84E-05	2.11E-04
53	C35	70	Passenger Car	133	0.00E+00	1.66E-06	1.80E-07	6.39E+00	1.16E-05	4.14E-02	3.69E-06	2.71E-04	1.02E-03	1.64E-04	3.60E-04	2.32E-04	2.38E-04	2.38E-05	3.24E-05	8.83E-09	1.22E-04	4.25E-05
53	C35	70	Passenger Truck	223	0.00E+00	3.62E-06	3.83E-07	1.47E+01	2.29E-05	7.61E-02	7.54E-06	8.29E-04	1.82E-03	2.97E-04	7.17E-04	4.67E-04	4.79E-04	1.08E-04	7.42E-05	1.94E-08	2.40E-04	1.36E-04
53	C35	70	Single Unit Short Haul Truck	12	0.00E+00	2.85E-06	1.43E-07	2.24E+00	2.33E-06	4.48E-03	3.04E-06	1.41E-03	2.01E-04	4.01E-05	3.47E-04	8.53E-05	8.67E-05	2.24E-04	9.00E-06	3.64E-09	2.59E-04	2.64E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.24E-07	6.19E-09	9.49E-02	1.01E-07	1.87E-04	1.32E-07	6.05E-05	9.16E-06	1.78E-06	1.52E-05	3.69E-06	3.75E-06	9.47E-06	3.82E-07	1.53E-10	1.14E-05	1.13E-05
53	C35	70	Combination Short Haul Truck	5	0.00E+00	2.42E-06	1.72E-07	1.76E+00	7.88E-09	2.09E-03	1.78E-06	2.55E-03	1.84E-04	4.03E-05	1.48E-04	5.11E-05	5.10E-05	2.66E-04	5.89E-06	0.00E+00	9.69E-05	4.81E-04
53	C35	70	Combination Long Haul Truck	4	0.00E+00	2.20E-06	1.47E-07	1.64E+00	9.08E-09	2.21E-03	1.67E-06	2.52E-03	1.83E-04	3.35E-05	1.53E-04	4.43E-05	4.48E-05	2.51E-04	5.50E-06	0.00E+00	1.08E-04	4.75E-04
50	C36	40	Passenger Car	110	0.00E+00	1.83E-06	1.98E-07	6.33E+00	1.27E-05	4.52E-02	4.07E-06	1.99E-04	1.90E-03	2.72E-04	3.94E-04	2.55E-04	2.62E-04	3.45E-05	3.18E-05	7.70E-09	1.34E-04	3.12E-05
50	C36	40	Passenger Truck	184	0.00E+00	4.18E-06	4.38E-07	1.41E+01	2.51E-05	7.78E-02	8.34E-06	7.52E-04	3.38E-03	4.81E-04	7.88E-04	5.17E-04	5.27E-04	1.22E-04	7.01E-05	1.50E-08	2.60E-04	1.27E-04
50	C36	40	Single Unit Short Haul Truck	43	0.00E+00	1.89E-05	9.90E-07	9.06E+00	1.64E-05	1.56E-02	2.01E-05	9.25E-03	1.72E-03	2.86E-04	2.23E-03	5.90E-04	5.99E-04	9.16E-04	3.66E-05	1.55E-08	1.63E-03	1.74E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	8.29E-07	4.31E-08	3.91E-01	7.19E-07	6.77E-04	8.81E-07	4.02E-04	7.71E-05	1.27E-05	9.80E-05	2.58E-05	2.62E-05	3.96E-05	1.58E-06	6.72E-10	7.19E-05	7.56E-05
50	C36	40	Combination Short Haul Truck	40	0.00E+00	3.53E-05	2.44E-06	1.79E+01	1.27E-07	3.07E-02	2.62E-05	3.94E-02	4.10E-03	7.40E-04	2.29E-03	7.30E-04	7.38E-04	2.70E-03	5.99E-05	0.00E+00	1.55E-03	7.43E-03
50	C36	40	Combination Long Haul Truck	36	0.00E+00	3.22E-05	2.10E-06	1.70E+01	1.44E-07	3.42E-02	2.47E-05	3.95E-02	4.12E-03	6.57E-04	2.35E-03	6.39E-04	6.52E-04	2.60E-03	5.70E-05	0.00E+00	1.70E-03	7.44E-03
52	C37	60	Passenger Car	51	0.00E+00	6.91E-07	7.48E-08	2.53E+00	4.82E-06	1.71E-02	1.54E-06	9.99E-05	5.02E-04	7.72E-05	1.50E-04	9.65E-05	9.91E-05	1.06E-05	1.28E-05	3.42E-09	5.06E-05	1.57E-05
52	C37	60	Passenger Truck	85	0.00E+00	1.52E-06	1.60E-07	5.75E+00	9.47E-06	3.05E-02	3.12E-06	3.22E-04	8.95E-04	1.38E-04	2.98E-04	1.94E-04	1.98E-04	4.43E-05	2.89E-05	7.24E-09	9.87E-05	5.33E-05
52	C37	60	Single Unit Short Haul Truck	16	0.00E+00	4.57E-06	2.28E-07	2.90E+00	3.75E-06	5.60E-03	4.87E-06	2.18E-03	3.69E-04	6.68E-05	5.52E-04	1.37E-04	1.39E-04	2.90E-04	1.17E-05	4.83E-09	4.15E-04	4.08E-04
52	C37	60	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	9.90E-09	1.24E-01	1.63E-07	2.38E-04	2.13E-07	9.41E-05	1.66E-05	2.97E-06	2.43E-05	5.95E-06	6.04E-06	1.24E-05	5.00E-07	2.05E-10	1.82E-05	1.76E-05
52	C37	60	Combination Short Haul Truck	14	0.00E+00	8.45E-06	5.90E-07	5.50E+00	2.99E-08	7.37E-03	6.26E-06	9.16E-03	7.85E-04	1.55E-04	5.38E-04	1.75E-04	1.75E-04	8.29E-04	1.84E-05	0.00E+00	3.61E-04	1.73E-03
52	C37	60	Combination Long Haul Truck	13	0.00E+00	7.56E-06	4.94E-07	5.16E+00	3.43E-08	7.96E-03	5.85E-06	9.08E-03	7.88E-04	1.34E-04	5.52E-04	1.50E-04	1.52E-04	7.85E-04	1.72E-05	0.00E+00	4.00E-04	1.71E-03
53	C38	70	Passenger Car	466	0.00E+00	5.83E-06	6.30E-07	2.24E+01	4.05E-05	1.45E-01	1.29E-05	9.50E-04	3.56E-03	5.73E-04	1.26E-03	8.13E-04	8.34E-04	8.35E-05	1.14E-04	3.09E-08	4.27E-04	1.49E-04
53	C38	70	Passenger Truck	780	0.00E+00	1.27E-05	1.34E-06	5.16E+01	8.04E-05	2.67E-01	2.64E-05	2.90E-03	6.40E-03	1.04E-03	2.51E-03	1.64E-03	1.68E-03	3.77E-04	2.60E-04	6.81E-08	8.41E-04	4.77E-04
53	C38	70	Single Unit Short Haul Truck	54	0.00E+00	1.26E-05	6.32E-07	9.88E+00	1.03E-05	1.98E-02	1.34E-05	6.23E-03	8.87E-04	1.77E-04	1.53E-03	3.77E-04	3.83E-04	9.89E-04	3.98E-05	1.61E-08	1.15E-03	1.17E-03
53	C38	70	Single Unit Long Haul Truck	2	0.00E+00	5.49E-07	2.73E-08	4.19E-01	4.45E-07	8.28E-04	5.85E-07	2.67E-04	4.05E-05	7.89E-06	6.70E-05	1.63E-05	1.66E-05	4.19E-05	1.69E-06	6.77E-10	5.03E-05	5.01E-05
53	C38	70	Combination Short Haul Truck	54	0.00E+00	2.80E-05	1.99E-06	2.04E+01	9.12E-08	2.41E-02	2.05E-05	2.95E-02	2.13E-03	4.66E-04	1.71E-03	5.91E-04	5.89E-04	3.07E-03	6.81E-05	0.00E+00	1.12E-03	5.56E-03
53	C38	70	Combination Long Haul Truck	49	0.00E+00	2.54E-05	1.70E-06	1.90E+01	1.05E-07	2.56E-02	1.93E-05	2.91E-02	2.12E-03	3.87E-04	1.76E-03	5.13E-04	5.18E-04	2.90E-03	6.36E-05	0.00E+00	1.25E-03	5.50E-03
52	C39	60	Passenger Car	78	0.00E+00	1.06E-06	1.15E-07	3.89E+00	7.42E-06	2.63E-02	2.37E-06	1.54E-04	7.72E-04	1.19E-04	2.31E-04	1.49E-04	1.52E-04	1.64E-05	1.97E-05	5.26E-09	7.79E-05	2.41E-05
52	C39	60	Passenger Truck	131	0.00E+00	2.34E-06	2.47E-07	8.85E+00	1.46E-05	4.70E-02	4.81E-06	4.95E-04	1.38E-03	2.13E-04	4.59E-04	2.98E-04	3.05E-04	6.81E-05	4.44E-05	1.11E-08	1.52E-04	8.20E-05
52	C39	60	Single Unit Short Haul Truck	17	0.00E+00	5.10E-06	2.55E-07	3.24E+00	4.19E-06	6.26E-03	5.44E-06	2.43E-03	4.12E-04	7.46E-05	6.16E-04	1.53E-04	1.55E-04	3.24E-04	1.31E-05	5.39E-09	4.63E-04	4.55E-04
52	C39	60	Single Unit Long Haul Truck	1	0.00E+00	2.23E-07	1.11E-08	1.38E-01	1.82E-07	2.65E-04	2.38E-07	1.05E-04	1.85E-05	3.31E-06	2.72E-05	6.65E-06	6.75E-06	1.38E-05	5.58E-07	2.29E-10	2.03E-05	1.97E-05
52	C39	60	Combination Short Haul Truck	7	0.00E+00	4.20E-06	2.93E-07	2.73E+00	1.49E-08	3.67E-03	3.11E-06	4.56E-03	3.90E-04	7.73E-05	2.68E-04	8.72E-05	8.72E-05	4.12E-04	9.14E-06	0.00E+00	1.80E-04	8.60E-04
52	C39	60	Combination Long Haul Truck	7	0.00E+00	3.76E-06	2.46E-07	2.57E+00	1.70E-08	3.96E-03	2.91E-06	4.52E-03	3.92E-04	6.67E-05	2.75E-04	7.48E-05	7.57E-05	3.90E-04	8.57E-06	0.00E+00	1.99E-04	8.53E-04
50	C40	40	Passenger Car	78	0.00E+00	1.30E-06	1.41E-07	4.50E+00	9.05E-06	3.22E-02	2.89E-06	1.42E-04	1.36E-03	1.93E-04	2.81E-04	1.81E-04	1.86E-04	2.46E-05	2.26E-05	5.48E-09	9.53E-05	2.22E-05
50	C40	40	Passenger Truck	131	0.00E+00	2.97E-06	3.12E-07	1.00E+01	1.79E-05	5.54E-02	5.94E-06	5.36E-04	2.40E-03	3.42E-04	5.61E-04	3.68E-04	3.75E-04	8.67E-05	4.99E-05	1.07E-08	1.85E-04	9.07E-05
50	C40	40	Single Unit Short Haul Truck	17	0.00E+00	7.70E-06	4.03E-07	3.69E+00	6.69E-06	6.36E-03	8.18E-06	3.77E-03	7.03E-04	1.17E-04	9.10E-04	2.40E-04	2.44E-04	3.73E-04	1.49E-05	6.31E-09	6.64E-04	7.08E-04
50	C40	40	Single Unit Long Haul Truck	1	0.00E+00	3.38E-07	1.76E-08	1.59E-01	2.93E-07	2.76E-04	3.59E-07	1.64E-04	3.14E-05	5.18E-06	3.99E-05	1.05E-05	1.07E-05	1.61E-05	6.43E-07	2.74E-10	2.93E-05	3.08E-05
50	C40	40	Combination Short Haul Truck	7	0.00E+00	6.32E-06	4.38E-07	3.21E+00	2.28E-08	5.51E-03	4.70E-06	7.05E-03	7.35E-04	1.33E-04	4.10E-04	1.31E-04	1.32E-04	4.84E-04	1.07E-05	0.00E+00	2.77E-04	1.33E-03
50	C40	40	Combination Long Haul Truck	7	0.00E+00	5.76E-06	3.76E-07	3.05E+00	2.58E-08	6.13E-03	4.43E-06	7.08E-03	7.39E-04	1.18E-04	4.21E-04	1.15E-04	1.17E-04	4.66E-04	1.02E-05	0.00E+00	3.05E-04	1.33E-03
55	C41	90	Passenger Car	78	0.00E+00	8.73E-07	9.43E-08	3.53E+00	6.07E-06	2.24E-02	1.94E-06	1.62E-04	3.37E-04	6.16E-05	1.89E-04	1.22E-04	1.25E-04	1.09E-05	1.79E-05	4.79E-09	6.40E-05	2.53E-05
55	C41	90	Passenger Truck	131	0.00E+00	1.89E-06	2.01E-07	8.24E+00	1.22E-05	4.37E-02	3.97E-06	4.70E-04	6.05E-04	1.14E-04	3.83E-04	2.48E-04	2.54E-04	5.50E-05	4.16E-05	1.10E-08	1.28E-04	7.66E-05
55	C41	90	Single Unit Short Haul Truck	2	0.00E+00	3.00E-07	1.47E-08	3.66E-01	2.38E-07	7.36E-04	3.19E-07	1.60E-04	1.66E-05	4.37E-06	3.67E-05	8.80E-06	8.96E-06	3.67E-05	1.47E-06	5.75E-10	2.78E-05	3.00E-05
55	C41	90	Combination Short Haul Truck	3	0.00E+00	1.07E-06	7.57E-08	1.05E+00	3.45E-09	1.03E-03	7.80E-07	1.10E-03	4.82E-05	1.42E-05	6.30E-05	2.24E-05	2.20E-05	1.59E-04	3.53E-06	0.00E+00	4.10E-05	2.08E-04
55	C41	90	Combination Long Haul Truck	3	0.00E+00	9.20E-07	6.08E-08	9.58E-01	3.99E-09	1.04E-03	7.05E-07	1.04E-03	4.61E-05	1.09E-05	6.45E-05	1.85E-05	1.84E-05	1.46E-04	3.22E-06	0.00E+00	4.61E-05	1.96E-04
55	C42	90	Passenger Car	202	0.00E+00	2.25E-06	2.43E-07	9.07E+00	1.56E-05	5.77E-02	4.99E-06	4.16E-04	8.68E-04	1.58E-04	4.86E-04	3.13E-04	3.21E-04	2.81E-05	4.61E-05	1.23E-08	1.65E-04	6.50E-05
55	C42	90	Passenger Truck	338	0.00E+00	4.86E-06	5.17E-07	2.12E+01	3.15E-05	1.13E-01	1.02E-05	1.21E-03	1.56E-03	2.94E-04	9.85E-04	6.39E-04	6.55E-04	1.42E-04	1.07E-04	2.83E-08	3.30E-04	1.97E-04
55	C42	90	Single Unit Short Haul Truck	39	0.00E+00	5.92E-06	2.90E-07	7.21E+00	4.69E-06	1.45E-02	6.30E-06	3.17E-03	3.27E-04	8.62E-05	7.25E-04	1.74E-04	1.77E-04	7.24E-04	2.90E-05	1.14E-08	5.48E-04	5.92E-04
55	C42	90	Single Unit Long Haul Truck	2	0.00E+00	2.57E-07	1.25E-08	3.05E-01	1.98E-07	6.02E-04	2.73E-07	1.34E-04	1.49E-05	3.76E-06	3.16E-05	7.41E-06	7.56E-06	3.04E-05	1.23E-06	4.70E-10	2.40E-05	2.51E-05
55	C42	90	Combination Short Haul Truck	26	0.00E+00	9.10E-06	6.46E-07	8.96E+00	2.94E-08	8.81E-03	6.65E-06	9.39E-03	4.11E-04	1.21E-04	5.37E-04	1.91E-04	1.88E-04	1.35E-03	3.01E-05	0.00E+00	3.50E-04	1.77E-03
55	C42	90	Combination Long Haul Truck	24	0.00E+00	7.84E-06	5.18E-07	8.17E+00	3.40E-08	8.89E-03	6.01E-06	8.89E-03	3.93E-04	9.28E-05	5.50E-04	1.57E-04	1.57E-04	1.25E-03	2.74E-05	0.00E+00	3.93E-04	1.67E-03
55	C43	90	Passenger Car	219	0.00E+00	2.44E-06	2.63E-07	9.84E+00	1.70E-05	6.26E-02	5.41E-06	4.51E-04	9.42E-04	1.72E-04	5.27E-04	3.40E-04	3.49E-04	3.04E-05	5.00E-05	1.34E-08	1.79E-04	7.05E-05
55	C43	90	Passenger Truck	366	0.00E+00	5.27E-06	5.61E-07	2.30E+01	3.42E-05	1.22E-01	1.11E-05	1.31E-03	1.69E-03	3.18E-04	1.07E-03	6.93E-04	7.10E-04	1.54E-04	1.16E-04	3.07E-08	3.58E-04	2.14E-04
55	C43	90	Single Unit Short Haul Truck	11	0.00E+00	1.64E-06	8.03E-08	2.00E+00	1.30E-06	4.02E-03	1.74E-06	8.76E-04	9.06E-05	2.39E-05	2.01E-04	4.80E-05	4.89E-05	2.00E-04	8.03E-06	3.14E-09	1.52E-04	1.64E-04
55	C43	90	Combination Short Haul Truck	6	0.00E+00	2.20E-06	1.56E-07	2.17E+00	7.11E-09	2.13E-03	1.61E-06	2.27E-03	9.93E-05	2.93E-05	1.30E-04	4.63E-05	4.54E-05	3.28E-04	7.28E-06	0.00E+00	8.46E-05	4.28E-04
55	C43	90	Combination Long Haul Truck	6	0.00E+00	1.90E-06	1.25E-07	1.98E+00	8.23E-09	2.15E-03	1.45E-06	2.15E-03	9.50E-05	2.24E-05	1.33E-04	3.81E-05	3.79E-05	3.02E-04	6.64E-06	0.00E+00	9.50E-05	4.05E-04
55	C44	90	Passenger Car	396	0.00E+00	4.41E-06	4.76E-07	1.78E+01	3.07E-05	1.13E-01	9.80E-06	8.18E-04	1.71E-03	3.11E-04	9.54E-04	6.15E-04	6.32E-04	5.51E-05	9.06E-05	2.42E-08	3.23E-04	1.28E-04
55	C44	90	Passenger Truck	663	0.00E+00	9.54E-06	1.02E-06	4.16E+01	6.19E-05	2.21E-01	2.01E-05	2.38E-03	3.06E-03	5.77E-04	1.93E-03	1.25E-03	1.29E-03	2.78E-04	2.10E-04	5.56E-08	6.49E-04	3.87E-04
55	C44	90	Single Unit Short Haul Truck	13	0.00E+00	1.96E-06	9.64E-08	2.40E+00	1.56E-06	4.82E-03	2.09E-06	1.05E-03	1.09E-04	2.86E-05	2.41E-04	5.76E-05	5.87E-05	2.40E-04	9.64E-06	3.77E-09	1.82E-04	1.96E-04
55	C44	90	Single Unit Long Haul Truck	1	0.00E+00	8.53E-08	4.14E-09	1.01E-01	6.57E-08	2.00E-04	9.06E-08	4.46E-05	4.94E-06	1.25E-06	1.05E-05	2.46E-06	2.51E-06	1.01E-05	4.08E-07	1.56E-10	7.97E-06	8.34E-06
55	C44	90	Combination Short Haul Truck	23	0.00E+00	7.95E-06	5.64E-07	7.82E+00	2.57E-08	7.70E-03	5.81E-06	8.20E-03	3.59E-04	1.06E-04	4.69E-04	1.67E-04	1.64E-04	1.18E-03	2.63E-05	0.00E+00	3.05E-04	1.55E-03
55	C44	90	Combination Long Haul Truck	21	0.00E+00	6.85E-06	4.53E-07	7.13E+00	2.97E-08	7.76E-03	5.25E-06	7.76E-03	3.43E-04	8.10E-05	4.81E-04	1.38E-04	1.37E-04	1.09E-03	2.40E-05	0.00E+00	3.43E-04	1.46E-03
53	C45	70	Passenger Car	203	0.00E+00	2.54E-06	2.75E-07	9.76E+00	1.77E-05	6.32E-02	5.64E-06	4.14E-04	1.55E-03	2.50E-04	5.49E-04	3.54E-04	3.63E-04	3.64E-05	4.95E-05	1.35E-08	1.86E-04	6.49E-05
53	C45	70	Passenger Truck	340	0.00E+00	5.53E-06	5.86E-07	2.25E+01	3.50E-05	1.16E-01	1.15E-05	1.27E-03	2.79E-03	4.54E-04	1.10E-03	7.13E-04	7.31E-04	1.64E-04	1.13E-04	2.97E-08	3.66E-04	2.08E-04
53	C45	70	Single Unit Short Haul Truck	17	0.00E+00	4.10E-06	2.05E-07	3.21E+00	3.35E-06	6.44E-03	4.37E-06	2.03E-03	2.88E-04	5.77E-05	4.99E-04	1.23E-04	1.25E-04	3.22E-04	1.29E-05	5.23E-09	3.73E-04	3.79E-04
53	C45	70	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.89E-09	1.36E-01	1.45E-07	2.69E-04	1.90E-07	8.70E-05	1.32E-05	2.56E-06	2.18E-05	5.30E-06	5.38E-06	1.36E-05	5.49E-07	2.20E-10	1.63E-05	1.63E-05
53	C45	70	Combination Short Haul Truck	12	0.00E+00	6.14E-06	4.37E-07	4.47E+00	2.00E-08	5.29E-03	4.50E-06	6.47E-03	4.66E-04	1.02E-04	3.74E-04	1.29E-04	1.29E-04	6.73E-04	1.49E-05	0.00E+00	2.45E-04	1.22E-03
53	C45	70	Combination Long Haul Truck	11	0.00E+00	5.57E-06	3.71E-07	4.16E+00	2.30E-08	5.60E-03	4.22E-06	6.38E-03	4.64E-04	8.47E-05	3.86E-04	1.12E-04	1.13E-04	6.35E-04	1.39E-05	0.00E+00	2.74E-04	1.20E-03
50	C46	40	Passenger Car	61	0.00E+00	1.01E-06	1.09E-07	3.49E+00	7.01E-06	2.49E-02	2.24E-06	1.10E-04	1.05E-03	1.50E-04	2.17E-04	1.40E-04	1.44E-04	1.90E-05	1.75E-05	4.24E-09	7.38E-05	1.72E-05
50	C46	40	Passenger Truck	102	0.00E+00	2.30E-06	2.41E-07	7.76E+00	1.38E-05	4.29E-02	4.60E-06	4.15E-04	1.86E-03	2.65E-04	4.34E-04	2.85E-04	2.90E-04	6.71E-05	3.86E-05	8.26E-09	1.43E-04	7.02E-05
50	C46	40	Single Unit Short Haul Truck	46	0.00E+00	2.03E-05	1.06E-06	9.75E+00	1.77E-05	1.68E-02	2.16E-05	9.95E-03	1.86E-03	3.08E-04	2.40E-03	6.34E-04	6.44E-04	9.85E-04	3.94E-05	1.66E-08	1.75E-03	1.87E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	8.91E-07	4.64E-08	4.21E-01	7.73E-07	7.29E-04	9.47E-07	4.33E-04	8.30E-05	1.37E-05	1.05E-04	2.77E-05	2.81E-05	4.25E-05	1.70E-06	7.23E-10	7.73E-05	8.13E-05
50	C46	40	Combination Short Haul Truck	40	0.00E+00	3.57E-05	2.48E-06	1.82E+01	1.29E-07	3.11E-02	2.66E-05	3.99E-02	4.16E-03	7.50E-04	2.32E-03	7.40E-04	7.47E-04	2.73E-03	6.07E-05	0.00E+00	1.57E-03	7.53E-03
50	C46	40	Combination Long Haul Truck	37	0.00E+00	3.26E-05	2.13E-06	1.73E+01	1.46E-07	3.46E-02	2.50E-05	4.01E-02	4.18E-03	6.65E-04	2.38E-03	6.48E-04	6.60E-04	2.64E-03	5.77E-05	0.00E+00	1.73E-03	7.54E-03
52	C47	60	Passenger Car	22	0.00E+00	3.00E-07	3.24E-08	1.10E+00	2.09E-06	7.42E-03	6.68E-07	4.34E-05	2.18E-04	3.35E-05	6.50E-05	4.19E-05	4.30E-05	4.61E-06	5.55E-06	1.48E-09	2.20E-05	6.81E-06
52	C47	60	Passenger Truck	37	0.00E+00	6.59E-07	6.96E-08	2.50E+00	4.11E-06	1.32E-02	1.36E-06	1.40E-04	3.88E-04	6.01E-05	1.29E-04	8.40E-05	8.61E-05	1.92E-05	1.25E-05	3.14E-09	4.28E-05	2.31E-05
52	C47	60	Single Unit Short Haul Truck	1	0.00E+00	1.73E-07	8.64E-09	1.10E-01	1.42E-07	2.12E-04	1.84E-07	8.24E-05	1.40E-05	2.53E-06	2.09E-05	5.17E-06	5.26E-06	1.10E-05	4.44E-07	1.83E-10	1.57E-05	1.54E-05
53	C48	70	Passenger Car	126	0.00E+00

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	C52	40	Combination Short Haul Truck	6	0.00E+00	5.36E-06	3.71E-07	2.72E+00	1.93E-08	4.67E-03	3.98E-06	5.98E-03	6.23E-04	1.12E-04	3.48E-04	1.11E-04	1.12E-04	4.10E-04	9.10E-06	0.00E+00	2.35E-04	1.13E-03
50	C52	40	Combination Long Haul Truck	6	0.00E+00	4.89E-06	3.19E-07	2.59E+00	2.19E-08	5.19E-03	3.75E-06	6.00E-03	6.26E-04	9.97E-05	3.57E-04	9.71E-05	9.89E-05	3.95E-04	8.65E-06	0.00E+00	2.59E-04	1.13E-03
52	C53	60	Passenger Car	45	0.00E+00	6.16E-07	6.67E-08	2.26E+00	4.30E-06	1.53E-02	1.37E-06	8.91E-05	4.48E-04	6.88E-05	1.34E-04	8.61E-05	8.84E-05	9.48E-06	1.14E-05	3.05E-09	4.51E-05	1.40E-05
52	C53	60	Passenger Truck	76	0.00E+00	1.36E-06	1.43E-07	5.13E+00	8.44E-06	2.72E-02	2.79E-06	2.87E-04	7.98E-04	1.24E-04	2.66E-04	1.73E-04	1.77E-04	3.95E-05	2.58E-05	6.46E-09	8.80E-05	4.75E-05
53	C54	70	Passenger Car	64	0.00E+00	7.98E-07	8.64E-08	3.07E+00	5.55E-06	1.99E-02	1.77E-06	1.30E-04	4.88E-04	7.86E-05	1.73E-04	1.11E-04	1.14E-04	1.14E-05	1.56E-05	4.24E-09	5.86E-05	2.04E-05
53	C54	70	Passenger Truck	107	0.00E+00	1.74E-06	1.84E-07	7.07E+00	1.10E-05	3.65E-02	3.62E-06	3.98E-04	8.77E-04	1.43E-04	3.45E-04	2.24E-04	2.30E-04	5.17E-05	3.57E-05	9.33E-09	1.15E-04	6.54E-05
53	C54	70	Single Unit Short Haul Truck	8	0.00E+00	1.91E-06	9.57E-08	1.50E+00	1.56E-06	3.00E-03	2.03E-06	9.43E-04	1.34E-04	2.69E-05	2.32E-04	5.71E-05	5.80E-05	1.50E-04	6.03E-06	2.44E-09	1.74E-04	1.77E-04
53	C54	70	Combination Short Haul Truck	5	0.00E+00	2.38E-06	1.70E-07	1.73E+00	7.75E-09	2.05E-03	1.75E-06	2.51E-03	1.81E-04	3.96E-05	1.45E-04	5.02E-05	5.01E-05	2.61E-04	5.79E-06	0.00E+00	9.52E-05	4.73E-04
53	C54	70	Combination Long Haul Truck	4	0.00E+00	2.16E-06	1.44E-07	1.62E+00	8.93E-09	2.17E-03	1.64E-06	2.48E-03	1.80E-04	3.29E-05	1.50E-04	4.36E-05	4.41E-05	2.46E-04	5.41E-06	0.00E+00	1.06E-04	4.67E-04
52	C55	60	Passenger Car	16	0.00E+00	2.21E-07	2.39E-08	8.10E-01	1.54E-06	5.48E-03	4.93E-07	3.20E-05	1.61E-04	2.47E-05	4.80E-05	3.09E-05	3.17E-05	3.40E-06	4.10E-06	1.10E-09	1.62E-05	5.02E-06
52	C55	60	Passenger Truck	27	0.00E+00	4.87E-07	5.14E-08	1.84E+00	3.03E-06	9.78E-03	1.00E-06	1.03E-04	2.86E-04	4.43E-05	9.55E-05	6.20E-05	6.35E-05	1.42E-05	9.25E-06	2.32E-09	3.16E-05	1.71E-05
52	C55	60	Single Unit Short Haul Truck	4	0.00E+00	1.15E-06	5.74E-08	7.31E-01	9.45E-07	1.41E-03	1.23E-06	5.48E-04	9.29E-05	1.68E-05	1.39E-04	3.44E-05	3.50E-05	7.32E-05	2.95E-06	1.22E-09	1.04E-04	1.03E-04
52	C55	60	Combination Short Haul Truck	2	0.00E+00	1.14E-06	7.95E-08	7.42E-01	4.03E-09	9.94E-04	8.44E-07	1.24E-03	1.06E-04	2.10E-05	7.25E-05	2.36E-05	2.36E-05	1.12E-04	2.48E-06	0.00E+00	4.87E-05	2.33E-04
52	C55	60	Combination Long Haul Truck	2	0.00E+00	1.02E-06	6.66E-08	6.96E-01	4.62E-09	1.07E-03	7.89E-07	1.23E-03	1.06E-04	1.81E-05	7.45E-05	2.03E-05	2.05E-05	1.06E-04	2.32E-06	0.00E+00	5.39E-05	2.31E-04
50	C56	40	Passenger Car	30	0.00E+00	4.97E-07	5.37E-08	1.72E+00	3.46E-06	1.23E-02	1.10E-06	5.41E-05	5.17E-04	7.38E-05	1.07E-04	6.93E-05	7.11E-05	9.39E-06	8.64E-06	2.09E-09	3.64E-05	8.47E-06
50	C56	40	Passenger Truck	50	0.00E+00	1.13E-06	1.19E-07	3.82E+00	6.82E-06	2.11E-02	2.27E-06	2.04E-04	9.18E-04	1.31E-04	2.14E-04	1.40E-04	1.43E-04	3.31E-05	1.91E-05	4.08E-09	7.07E-05	3.46E-05
50	C56	40	Single Unit Short Haul Truck	11	0.00E+00	4.72E-06	2.47E-07	2.26E+00	4.10E-06	3.90E-03	5.02E-06	2.31E-03	4.31E-04	7.14E-05	5.58E-04	1.47E-04	1.50E-04	2.29E-04	9.15E-06	3.87E-09	4.07E-04	4.34E-04
50	C56	40	Combination Short Haul Truck	5	0.00E+00	4.59E-06	3.18E-07	2.33E+00	1.66E-08	4.00E-03	3.41E-06	5.12E-03	5.34E-04	9.63E-05	2.98E-04	9.50E-05	9.60E-05	3.51E-04	7.80E-06	0.00E+00	2.02E-04	9.67E-04
50	C56	40	Combination Long Haul Truck	5	0.00E+00	4.19E-06	2.73E-07	2.22E+00	1.88E-08	4.45E-03	3.22E-06	5.15E-03	5.37E-04	8.54E-05	3.06E-04	8.32E-05	8.48E-05	3.39E-04	7.42E-06	0.00E+00	2.22E-04	9.69E-04
53	C57	70	Passenger Car	153	0.00E+00	1.91E-06	2.07E-07	7.35E+00	1.33E-05	4.76E-02	4.25E-06	3.12E-04	1.17E-03	1.88E-04	4.14E-04	2.67E-04	2.74E-04	2.74E-05	3.73E-05	1.02E-08	1.40E-04	4.89E-05
53	C57	70	Passenger Truck	256	0.00E+00	4.16E-06	4.41E-07	1.69E+01	2.64E-05	8.75E-02	8.68E-06	9.54E-04	2.10E-03	3.42E-04	8.26E-04	5.37E-04	5.51E-04	1.24E-04	8.54E-05	2.23E-08	2.76E-04	1.57E-04
53	C57	70	Single Unit Short Haul Truck	19	0.00E+00	4.54E-06	2.28E-07	3.56E+00	3.72E-06	7.14E-03	4.84E-06	2.25E-03	3.20E-04	6.39E-05	5.53E-04	1.36E-04	1.38E-04	3.57E-04	1.43E-05	5.80E-09	4.13E-04	4.20E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	9.86E-09	1.51E-01	1.60E-07	2.99E-04	2.11E-07	9.64E-05	1.46E-05	2.84E-06	2.42E-05	5.88E-06	5.97E-06	1.51E-05	6.09E-07	2.44E-10	1.81E-05	1.81E-05
53	C57	70	Combination Short Haul Truck	18	0.00E+00	9.16E-06	6.51E-07	6.66E+00	2.98E-08	7.88E-03	6.71E-06	9.65E-03	6.95E-04	1.52E-04	5.58E-04	1.93E-04	1.92E-04	1.00E-03	2.22E-05	0.00E+00	3.66E-04	1.82E-03
53	C57	70	Combination Long Haul Truck	16	0.00E+00	8.30E-06	5.54E-07	6.21E+00	3.43E-08	8.35E-03	6.30E-06	9.51E-03	6.92E-04	1.26E-04	5.76E-04	1.67E-04	1.69E-04	9.47E-04	2.08E-05	0.00E+00	4.08E-04	1.79E-03
50	C58	40	Passenger Car	32	0.00E+00	5.35E-07	5.79E-08	1.85E+00	3.72E-06	1.32E-02	1.19E-06	5.82E-05	5.57E-04	7.95E-05	1.15E-04	7.46E-05	7.66E-05	1.01E-05	9.30E-06	2.25E-09	3.92E-05	9.12E-06
50	C58	40	Passenger Truck	54	0.00E+00	1.22E-06	1.28E-07	4.12E+00	7.34E-06	2.28E-02	2.44E-06	2.20E-04	9.89E-04	1.41E-04	2.31E-04	1.51E-04	1.54E-04	3.57E-05	2.05E-05	4.39E-09	7.61E-05	3.73E-05
50	C58	40	Single Unit Short Haul Truck	1	0.00E+00	5.06E-07	2.65E-08	2.43E-01	4.40E-07	4.18E-04	5.38E-07	2.48E-04	4.62E-05	7.66E-06	5.98E-05	1.58E-05	1.60E-05	2.45E-05	9.81E-07	4.15E-10	4.37E-05	4.65E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	1.30E-06	9.02E-08	6.62E-01	4.70E-09	1.14E-03	9.68E-07	1.45E-03	1.52E-04	2.73E-05	8.45E-05	2.70E-05	2.72E-05	9.96E-05	2.21E-06	0.00E+00	5.72E-05	2.74E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	1.19E-06	7.75E-08	6.29E-01	5.32E-09	1.26E-03	9.12E-07	1.46E-03	1.52E-04	2.42E-05	8.68E-05	2.36E-05	2.41E-05	9.61E-05	2.10E-06	0.00E+00	6.29E-05	2.75E-04
53	C59	70	Passenger Car	106	0.00E+00	1.32E-06	1.43E-07	5.08E+00	9.20E-06	3.29E-02	2.94E-06	2.16E-04	8.08E-04	1.30E-04	2.86E-04	1.85E-04	1.89E-04	1.90E-05	2.58E-05	7.02E-09	9.70E-05	3.38E-05
53	C59	70	Passenger Truck	177	0.00E+00	2.88E-06	3.05E-07	1.17E+01	1.83E-05	6.05E-02	6.00E-06	6.60E-04	1.45E-03	2.37E-04	5.71E-04	3.72E-04	3.81E-04	8.56E-05	5.91E-05	1.55E-08	1.91E-04	1.08E-04
53	C59	70	Single Unit Short Haul Truck	8	0.00E+00	1.83E-06	9.15E-08	1.43E+00	1.49E-06	2.87E-03	1.94E-06	9.02E-04	1.28E-04	2.57E-05	2.22E-04	5.46E-05	5.55E-05	1.43E-04	5.76E-06	2.33E-09	1.66E-04	1.69E-04
53	C59	70	Combination Short Haul Truck	5	0.00E+00	2.76E-06	1.96E-07	2.01E+00	8.97E-09	2.38E-03	2.02E-06	2.91E-03	2.10E-04	4.59E-05	1.68E-04	5.82E-05	5.80E-05	3.03E-04	6.70E-06	0.00E+00	1.10E-04	5.48E-04
53	C59	70	Combination Long Haul Truck	5	0.00E+00	2.50E-06	1.67E-07	1.87E+00	1.03E-08	2.52E-03	1.90E-06	2.87E-03	2.09E-04	3.81E-05	1.74E-04	5.05E-05	5.10E-05	2.85E-04	6.26E-06	0.00E+00	1.23E-04	5.41E-04
52	C60	60	Passenger Car	229	0.00E+00	3.11E-06	3.36E-07	1.14E+01	2.17E-05	7.69E-02	6.93E-06	4.49E-04	2.26E-03	3.47E-04	6.74E-04	4.34E-04	4.46E-04	4.78E-05	5.75E-05	1.54E-08	2.28E-04	7.06E-05
52	C60	60	Passenger Truck	383	0.00E+00	6.83E-06	7.22E-07	2.59E+01	4.26E-05	1.37E-01	1.41E-05	1.45E-03	4.02E-03	6.23E-04	1.34E-03	8.71E-04	8.92E-04	1.99E-04	1.30E-04	3.26E-08	4.44E-04	2.39E-04
52	C60	60	Single Unit Short Haul Truck	16	0.00E+00	4.80E-06	2.40E-07	3.05E+00	3.94E-06	5.89E-03	5.12E-06	2.29E-03	3.88E-04	7.02E-05	5.80E-04	1.44E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.36E-04	4.28E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	2.10E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.24E-07	9.88E-05	1.74E-05	3.12E-06	2.56E-05	6.25E-06	6.35E-06	1.30E-05	5.25E-07	2.16E-10	1.91E-05	1.85E-05
52	C60	60	Combination Short Haul Truck	10	0.00E+00	5.88E-06	4.10E-07	3.83E+00	2.08E-08	5.13E-03	4.35E-06	6.38E-03	5.46E-04	1.08E-04	3.74E-04	1.22E-04	1.22E-04	5.77E-04	1.28E-05	0.00E+00	2.52E-04	1.20E-03
52	C60	60	Combination Long Haul Truck	9	0.00E+00	5.26E-06	3.44E-07	3.59E+00	2.38E-08	5.54E-03	4.07E-06	6.32E-03	5.49E-04	9.33E-05	3.84E-04	1.05E-04	1.06E-04	5.46E-04	1.20E-05	0.00E+00	2.78E-04	1.19E-03
53	C61	70	Passenger Car	108	0.00E+00	1.35E-06	1.46E-07	5.20E+00	9.40E-06	3.36E-02	3.00E-06	2.20E-04	8.26E-04	1.33E-04	2.93E-04	1.89E-04	1.93E-04	1.94E-05	2.64E-05	7.18E-09	9.91E-05	3.45E-05
53	C61	70	Passenger Truck	181	0.00E+00	2.94E-06	3.12E-07	1.20E+01	1.87E-05	6.19E-02	6.14E-06	6.74E-04	1.48E-03	2.42E-04	5.83E-04	3.80E-04	3.89E-04	8.75E-05	6.04E-05	1.58E-08	1.95E-04	1.11E-04
53	C61	70	Single Unit Short Haul Truck	11	0.00E+00	2.68E-06	1.34E-07	2.10E+00	2.19E-06	4.21E-03	2.85E-06	1.32E-03	1.88E-04	3.76E-05	3.26E-04	8.00E-05	8.13E-05	2.10E-04	8.45E-06	3.42E-09	2.43E-04	2.47E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	5.80E-09	8.90E-02	9.44E-08	1.76E-04	1.24E-07	5.68E-05	8.59E-06	1.67E-06	1.42E-05	3.46E-06	3.52E-06	8.89E-06	3.59E-07	1.44E-10	1.07E-05	1.06E-05
53	C61	70	Combination Short Haul Truck	9	0.00E+00	4.48E-06	3.18E-07	3.26E+00	1.46E-08	3.85E-03	3.28E-06	4.72E-03	3.40E-04	7.45E-05	2.73E-04	9.43E-05	9.41E-05	4.91E-04	1.09E-05	0.00E+00	1.79E-04	8.88E-04
53	C61	70	Combination Long Haul Truck	8	0.00E+00	4.06E-06	2.71E-07	3.03E+00	1.68E-08	4.08E-03	3.08E-06	4.65E-03	3.38E-04	6.18E-05	2.82E-04	8.19E-05	8.27E-05	4.63E-04	1.02E-05	0.00E+00	2.00E-04	8.78E-04
50	C62	40	Passenger Car	316	0.00E+00	5.25E-06	5.68E-07	1.82E+01	3.65E-05	1.30E-01	1.17E-05	5.72E-04	5.47E-03	7.80E-04	1.13E-03	7.32E-04	7.52E-04	9.92E-05	9.13E-05	2.21E-08	3.85E-04	8.96E-05
50	C62	40	Passenger Truck	529	0.00E+00	1.20E-05	1.26E-06	4.04E+01	7.20E-05	2.23E-01	2.40E-05	2.16E-03	9.70E-03	1.38E-03	2.26E-03	1.48E-03	1.51E-03	3.50E-04	2.01E-04	4.31E-08	7.47E-04	3.66E-04
50	C62	40	Single Unit Short Haul Truck	5	0.00E+00	2.36E-06	1.24E-07	1.13E+00	2.05E-06	1.95E-03	2.51E-06	1.16E-03	2.16E-04	3.58E-05	2.79E-04	7.37E-05	7.49E-05	1.14E-04	4.58E-06	1.94E-09	2.04E-04	2.17E-04
50	C62	40	Combination Short Haul Truck	3	0.00E+00	2.62E-06	1.82E-07	1.33E+00	9.45E-09	2.28E-03	1.95E-06	2.93E-03	3.05E-04	5.50E-05	1.70E-04	5.42E-05	5.48E-05	2.01E-04	4.45E-06	0.00E+00	1.15E-04	5.52E-04
50	C62	40	Combination Long Haul Truck	3	0.00E+00	2.39E-06	1.56E-07	1.27E+00	1.07E-08	2.54E-03	1.84E-06	2.94E-03	3.06E-04	4.88E-05	1.75E-04	4.75E-05	4.84E-05	1.93E-04	4.23E-06	0.00E+00	1.27E-04	5.53E-04
52	C63	60	Passenger Car	255	0.00E+00	3.46E-06	3.74E-07	1.27E+01	2.41E-05	8.56E-02	7.71E-06	5.00E-04	2.51E-03	3.86E-04	7.50E-04	4.83E-04	4.96E-04	5.32E-05	6.40E-05	1.71E-08	2.53E-04	7.85E-05
52	C63	60	Passenger Truck	426	0.00E+00	7.61E-06	8.03E-07	2.88E+01	4.74E-05	1.53E-01	1.56E-05	1.61E-03	4.48E-03	6.93E-04	1.49E-03	9.69E-04	9.93E-04	2.22E-04	1.45E-04	3.63E-08	4.94E-04	2.67E-04
52	C63	60	Single Unit Short Haul Truck	68	0.00E+00	2.01E-05	1.00E-06	1.28E+01	1.65E-05	2.47E-02	2.14E-05	9.58E-03	1.62E-03	2.94E-04	2.43E-03	6.01E-04	6.11E-04	1.28E-03	5.16E-05	2.13E-08	1.83E-03	1.79E-03
52	C63	60	Single Unit Long Haul Truck	3	0.00E+00	8.79E-07	4.36E-08	5.46E-01	7.18E-07	1.05E-03	9.37E-07	4.14E-04	7.30E-05	1.31E-05	1.07E-04	2.62E-05	2.66E-05	5.45E-05	2.20E-06	9.04E-10	8.02E-05	7.77E-05
52	C63	60	Combination Short Haul Truck	57	0.00E+00	3.36E-05	2.35E-06	2.19E+01	1.19E-07	2.94E-02	2.49E-05	3.65E-02	3.13E-03	6.19E-04	2.14E-03	6.98E-04	6.98E-04	3.30E-03	7.32E-05	0.00E+00	1.44E-03	6.89E-03
52	C63	60	Combination Long Haul Truck	52	0.00E+00	3.01E-05	1.97E-06	2.05E+01	1.36E-07	3.17E-02	2.33E-05	3.62E-02	3.14E-03	5.34E-04	2.20E-03	5.99E-04	6.06E-04	3.13E-03	6.86E-05	0.00E+00	1.59E-03	6.83E-03
53	C64	70	Passenger Car	494	0.00E+00	6.18E-06	6.69E-07	2.38E+01	4.30E-05	1.54E-01	1.37E-05	1.01E-03	3.78E-03	6.08E-04	1.34E-03	8.62E-04	8.84E-04	8.86E-05	1.21E-04	3.28E-08	4.53E-04	1.58E-04
53	C64	70	Passenger Truck	828	0.00E+00	1.35E-05	1.43E-06	5.47E+01	8.53E-05	2.83E-01	2.81E-05	3.08E-03	6.78E-03	1.11E-03	2.67E-03	1.74E-03	1.78E-03	4.00E-04	2.76E-04	7.22E-08	8.92E-04	5.06E-04
53	C64	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.22E-07	8.17E+00	8.52E-06	1.64E-02	1.11E-05	5.15E-03	7.33E-04	1.47E-04	1.27E-03	3.12E-04	3.17E-04	8.18E-04	3.29E-05	1.33E-08	9.47E-04	9.63E-04
53	C64	70	Single Unit Long Haul Truck	2	0.00E+00	4.54E-07	2.26E-08	3.47E-01	3.68E-07	6.85E-04	4.84E-07	2.21E-04	3.35E-05	6.52E-06	5.54E-05	1.35E-05	1.37E-05	3.46E-05	1.40E-06	5.60E-10	4.16E-05	4.15E-05
53	C64	70	Combination Short Haul Truck	30	0.00E+00	1.54E-05	1.10E-06	1.12E+01	5.02E-08	1.33E-02	1.13E-05	1.62E-02	1.17E-03	2.57E-04	9.40E-04	3.25E-04	3.24E-04	1.69E-03	3.74E-05	0.00E+00	6.16E-04	3.06E-03
53	C64	70	Combination Long Haul Truck	27	0.00E+00	1.40E-05	9.33E-07	1.05E+01	5.78E-08	1.41E-02	1.06E-05	1.60E-02	1.17E-03	2.13E-04	9.70E-04	2.82E-04	2.85E-04	1.59E-03	3.50E-05	0.00E+00	6.87E-04	3.02E-03
52	C65	60	Passenger Car	6	0.00E+00	8.57E-08	9.27E-09	3.14E-01	5.98E-07	2.12E-03	1.91E-07	1.24E-05	6.22E-05	9.57E-06	1.86E-05	1.20E-05	1.23E-05	1.32E-06	1.59E-06	4.24E-10	6.27E-06	1.95E-06
52	C65	60	Passenger Truck	11	0.00E+00	1.88E-07	1.99E-08	7.13E-01	1.17E-06	3.79E-03	3.87E-07	3.99E-05	1.11E-04	1.72E-05	3.70E-05	2.40E-05	2.46E-05	5.49E-06	3.58E-06	8.98E-10	1.22E-05	6.60E-06
50	C66	40	Passenger Car	124	0.00E+00	2.06E-06	2.23E-07	7.14E+00	1.44E-05	5.11E-02	4.59E-06	2.25E-04	2.15E-03	3.07E-04	4.45E-04	2.88E-04	2.95E-04	3.90E-05	3.59E-05	8.69E-09	1.51E-04	3.52E-05
50	C66	40	Passenger Truck	208	0.00E+00	4.71E-06	4.95E-07	1.59E+01	2.83E-05	8.78E-02	9.42E-06	8.49E-04	3.81E-03	5.42E-04	8.90E-04	5.83E-04	5.95E-04	1.37E-04	7.91E-05	1.69E-08	2.93E-04	1.44E-04
50	C66	40	Single Unit Short Haul Truck	6	0.00E+00	2.73E-06	1.43E-07	1.31E+00	2.37E-06	2.25E-03	2.90E-06	1.33E-03	2.49E-04	4.12E-05	3.22E-04	8.51E-05	8.64E-05	1.32E-04	5.28E-06	2.23E-09	2.35E-04	2.51E-04
50	C66	40	Combination Short Haul Truck	4	0.00E+00	3.59E-06	2.48E-07	1.82E+00	1.29E-08	3.13E-03	2.66E-06	4.00E-03	4.17E-04	7.52E-05	2.33E-04	7.42E-05	7.50E-05	2.74E-04	6.09E-06	0.00E+00	1.57E-04	7.56E-04
50	C66	40	Combination Long Haul Truck	4	0.00E+00	3.27E-06	2.13E-07	1.73E+00	1.47E-08	3.48E-03	2.51E-06	4.02E-03	4.19E-04	6.67E-05	2.39E-04	6.50E-05	6.62E-05	2.65E-04	5.79E-06	0.00E+00	1.73E-04	7.57E-04
55	C67	90	Passenger Car	413	0.00E+00	4.60E-06	4.97E-07	1.86E+01	3.20E-05	1.18E-01	1.02E-05	8.52E-04	1.78E-03	3.25E-04	9.94E-04	6.41E-04	6.58E-04	5.75E-05	9.44E-05	2.52E-08	3.37E-04	1.33E-04
55	C67	90	Passenger Truck	691	0.00E+00	9.95E-06	1.06E-06	4.34E+01	6.45E-05	2.30E-01	2.09E-05	2.48E-03	3.19E-03	6.01E-04	2.02E-03	1.31E-03	1.34E-03	2.90E-04	2.19E-04	5.80E-08	6.76E-04	4.03E-04
55	C67	90	Single Unit Short Haul Truck	67	0.00E+00	1.01E-05	4.96E-07	1.23E+01	8.01E-06	2.48E-02	1.08E-05	5.40E-03	5.59E-04	1.47E-04	1.24E-03	2.96E-04	3.02E-04	1.24E-03	4.96E-05	1.94E-08	9.36E-04	1.01E-03
55	C67	90	Single Unit Long Haul Truck	3	0.00E+00	4.39E-07	2.13E-08	5.20E-01	3.38E-07	1.03E-03	4.66E-07	2.29E-04	2.54E-05	6.42E-06	5.39E-05	1.27E-05	1.29E-05	5.19E-05	2.10E-06	8.03E-10	4.10E-05	4.29E-05
55	C67	90	Combination Short Haul Truck	55	0.00E+00	1.96E-05	1.39E-06	1.92E+01	6.31E-08	1.89E-02	1.43E-05	2.02E-02	8.82E-04	2.60E-04	1.15E-03	4.11E-04	4.03E-04	2.91E-03	6.47E-05	0.00E+00	7.51E-04	3.80E-03
55	C67	90	Combination Long Haul Truck	51	0.00E+00	1.68E-05	1.11E-06	1.76E+01	7.32E-08	1.91E-02	1.29E-05	1.91E-02	8.44E-04	1.99E-04	1.18E-03	3.38E-04	3.37E-04	2.68E-03	5.90E-05	0.00E+00	8.44E-04	3.59E-03
55	C68	90	Passenger Car	359	0.00E+00	4.00E-06	4.31E-07	1.61E+01	2.78E-05	1.03E-01	8.88E-06	7.40E-04	1.54E-03	2.82E-04	8.64E-04	5.57E-04	5.72E-04	4.99E-05	8.20E-05	2.19E-08	2.93E-04	1.16E-04
55	C68	90	Passenger Truck	601	0.00E+00	8.64E-06	9.20E-07	3.77E+01	5.61E-05	2.00E-01	1.82E-05	2.15E-03	2.77E-03	5.22E-04	1.75E-03	1.14E-03	1.16E-03	2.52E-04	1.90E-04	5.04E-08	5.87E-04	3.50E-04
55	C68	90	Single Unit Short Haul Truck	57	0.00E+00	8.65E-06	4.25E-07	1.06E+01	6.86E-06	2.12E-02	9.21E-06	4.63E-03	4.79E-04	1.26E-04	1.06E-03	2.54E-04	2.59E-04	1.06E-03	4.25E-05	1.66E-08	8.01E-04	8.65E-04
55	C68	90	Single Unit Long Haul Truck	3	0.00E+00	3.76E-07	1.82E-08	4.46E-01	2.89E-07	8.80E-04	3.99E-07	1.96E-04	2.18E-05	5.50E-06	4.62E-05	1.08E-05	1.11E-05	4.44E-05	1.80E-06	6.88E-10	3.51E-05	3.67E-05
55	C68	90	Combination Short Haul Truck	42	0.00E+00	1.48E-05	1.05E-06	1.45E+01	4.77E-08	1.43E-02	1.08E-05	1.52E-02	6.66E-04	1.96E-04	8.72E-04	3.10E-04	3.05E-04	2.20E-03	4.88E-05	0.00E+00	5.67E-04	2.87E-03
55	C68	90	Combination Long Haul Truck	38	0.00E+00	1.27E-05	8.

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C74	60	Combination Short Haul Truck	50	0.00E+00	2.93E-05	2.04E-06	1.91E+01	1.04E-07	2.56E-02	2.17E-05	3.18E-02	2.72E-03	5.39E-04	1.87E-03	6.08E-04	6.08E-04	2.87E-03	6.37E-05	0.00E+00	1.25E-03	6.00E-03
52	C74	60	Combination Long Haul Truck	45	0.00E+00	2.62E-05	1.71E-06	1.79E+01	1.19E-07	2.76E-02	2.03E-05	3.15E-02	2.73E-03	4.65E-04	1.91E-03	5.22E-04	5.28E-04	2.72E-03	5.97E-05	0.00E+00	1.39E-03	5.95E-03
11	D27	80	Passenger Car	1181	0.00E+00	1.42E-05	1.54E-06	5.45E+01	9.88E-05	3.64E-01	3.15E-05	2.43E-03	6.50E-03	1.13E-03	3.07E-03	1.98E-03	2.03E-03	1.85E-04	2.77E-04	7.78E-08	1.04E-03	3.81E-04
11	D27	80	Passenger Truck	1978	0.00E+00	3.05E-05	3.23E-06	1.26E+02	1.95E-04	6.70E-01	6.37E-05	7.20E-03	1.16E-02	2.07E-03	6.10E-03	3.97E-03	4.07E-03	8.90E-04	6.37E-04	1.73E-07	2.04E-03	1.18E-03
11	D27	80	Single Unit Short Haul Truck	33	0.00E+00	6.10E-06	3.03E-07	5.98E+00	4.91E-06	1.20E-02	6.49E-06	3.13E-03	3.83E-04	8.67E-05	7.42E-04	1.81E-04	1.84E-04	6.00E-04	2.41E-05	9.58E-09	5.59E-04	5.86E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.31E-08	2.53E-01	2.10E-07	4.98E-04	2.82E-07	1.34E-04	1.75E-05	3.82E-06	3.24E-05	7.77E-06	7.89E-06	2.53E-05	1.02E-06	3.99E-10	2.45E-05	2.50E-05
11	D27	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.73E-07	1.01E+01	3.86E-08	1.08E-02	8.97E-06	1.26E-02	7.40E-04	1.82E-04	7.28E-04	2.58E-04	2.57E-04	1.52E-03	3.39E-05	0.00E+00	4.72E-04	2.37E-03
11	D27	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.33E-07	9.37E+00	4.46E-08	1.12E-02	8.32E-06	1.22E-02	7.26E-04	1.46E-04	7.54E-04	2.22E-04	2.23E-04	1.43E-03	3.13E-05	0.00E+00	5.29E-04	2.30E-03
11	D28	80	Passenger Car	516	0.00E+00	6.19E-06	6.71E-07	2.38E+01	4.31E-05	1.59E-01	1.38E-05	1.06E-03	2.84E-03	4.93E-04	1.34E-03	8.64E-04	8.87E-04	8.08E-05	1.21E-04	3.40E-08	4.54E-04	1.66E-04
11	D28	80	Passenger Truck	864	0.00E+00	1.33E-05	1.41E-06	5.49E+01	8.52E-05	2.93E-01	2.78E-05	3.14E-03	5.09E-03	9.02E-04	2.66E-03	1.73E-03	1.78E-03	3.89E-04	2.78E-04	7.56E-08	8.93E-04	5.14E-04
11	D28	80	Single Unit Short Haul Truck	9	0.00E+00	1.73E-06	8.58E-08	1.69E+00	1.39E-06	3.40E-03	1.84E-06	8.86E-04	1.09E-04	2.46E-05	2.10E-04	5.12E-05	5.20E-05	1.70E-04	6.84E-06	2.71E-09	1.58E-04	1.66E-04
11	D28	80	Combination Short Haul Truck	11	0.00E+00	4.97E-06	3.55E-07	4.12E+00	1.57E-08	4.40E-03	3.65E-06	5.13E-03	3.01E-04	7.42E-05	2.96E-04	1.05E-04	1.04E-04	6.19E-04	1.38E-05	0.00E+00	1.92E-04	9.65E-04
11	D28	80	Combination Long Haul Truck	10	0.00E+00	4.44E-06	2.98E-07	3.81E+00	1.81E-08	4.56E-03	3.38E-06	4.96E-03	2.95E-04	5.94E-05	3.07E-04	9.03E-05	9.09E-05	5.82E-04	1.27E-05	0.00E+00	2.15E-04	9.35E-04
11	D29	80	Passenger Car	866	0.00E+00	1.04E-05	1.13E-06	3.99E+01	7.24E-05	2.67E-01	2.31E-05	1.78E-03	4.76E-03	8.27E-04	2.25E-03	1.45E-03	1.49E-03	1.36E-04	2.03E-04	5.70E-08	7.62E-04	2.79E-04
11	D29	80	Passenger Truck	1450	0.00E+00	2.23E-05	2.37E-06	9.22E+01	1.43E-04	4.91E-01	4.67E-05	5.28E-03	8.54E-03	1.51E-03	4.47E-03	2.91E-03	2.98E-03	6.52E-04	4.67E-04	1.27E-07	1.50E-03	8.62E-04
11	D29	80	Single Unit Short Haul Truck	45	0.00E+00	8.35E-06	4.14E-07	8.18E+00	6.71E-06	1.64E-02	8.88E-06	4.28E-03	5.24E-04	1.19E-04	1.02E-03	2.47E-04	2.51E-04	8.21E-04	3.30E-05	1.31E-08	7.64E-04	8.01E-04
11	D29	80	Single Unit Long Haul Truck	2	0.00E+00	3.63E-07	1.79E-08	3.46E-01	2.87E-07	6.82E-04	3.86E-07	1.83E-04	2.39E-05	5.23E-06	4.43E-05	1.06E-05	1.08E-05	3.46E-05	1.40E-06	5.45E-10	3.35E-05	3.42E-05
11	D29	80	Combination Short Haul Truck	43	0.00E+00	1.91E-05	1.36E-06	1.58E+01	6.02E-08	1.69E-02	1.40E-05	1.97E-02	1.16E-03	2.85E-04	1.14E-03	4.03E-04	4.01E-04	2.38E-03	5.29E-05	0.00E+00	7.38E-04	3.71E-03
11	D29	80	Combination Long Haul Truck	40	0.00E+00	1.71E-05	1.14E-06	1.46E+01	6.97E-08	1.75E-02	1.30E-05	1.90E-02	1.13E-03	2.28E-04	1.18E-03	3.47E-04	3.49E-04	2.23E-03	4.89E-05	0.00E+00	8.26E-04	3.59E-03
11	D30	80	Passenger Car	534	0.00E+00	6.41E-06	6.94E-07	2.46E+01	4.46E-05	1.65E-01	1.42E-05	1.10E-03	2.94E-03	5.10E-04	1.39E-03	8.94E-04	9.18E-04	8.36E-05	1.25E-04	3.51E-08	4.70E-04	1.72E-04
11	D30	80	Passenger Truck	894	0.00E+00	1.38E-05	1.46E-06	5.69E+01	8.81E-05	3.03E-01	2.88E-05	3.25E-03	5.26E-03	9.34E-04	2.76E-03	1.79E-03	1.84E-03	4.02E-04	2.88E-04	7.82E-08	9.24E-04	5.31E-04
11	D30	80	Single Unit Short Haul Truck	22	0.00E+00	4.03E-06	2.00E-07	3.95E+00	3.24E-06	7.94E-03	4.29E-06	2.07E-03	2.53E-04	5.73E-05	4.90E-04	1.19E-04	1.21E-04	3.97E-04	1.59E-05	6.33E-09	3.69E-04	3.87E-04
11	D30	80	Single Unit Long Haul Truck	1	0.00E+00	1.75E-07	8.64E-09	1.67E-01	1.39E-07	3.29E-04	1.87E-07	8.85E-05	1.16E-05	2.53E-06	2.14E-05	5.14E-06	5.22E-06	1.67E-05	6.74E-07	2.63E-10	1.62E-05	1.65E-05
11	D30	80	Combination Short Haul Truck	20	0.00E+00	8.66E-06	6.20E-07	7.18E+00	2.74E-08	7.68E-03	6.36E-06	8.94E-03	5.25E-04	1.29E-04	5.17E-04	1.83E-04	1.82E-04	1.08E-03	2.40E-05	0.00E+00	3.35E-04	1.68E-03
11	D30	80	Combination Long Haul Truck	18	0.00E+00	7.75E-06	5.20E-07	6.65E+00	3.17E-08	7.95E-03	5.90E-06	8.65E-03	5.15E-04	1.04E-04	5.35E-04	1.58E-04	1.59E-04	1.02E-03	2.22E-05	0.00E+00	3.75E-04	1.63E-03
11	D31	80	Passenger Car	345	0.00E+00	4.14E-06	4.49E-07	1.59E+01	2.89E-05	1.06E-01	9.21E-06	7.09E-04	1.90E-03	3.30E-04	8.97E-04	5.78E-04	5.93E-04	5.41E-05	8.10E-05	2.27E-08	3.04E-04	1.11E-04
11	D31	80	Passenger Truck	578	0.00E+00	8.91E-06	9.44E-07	3.68E+01	5.70E-05	1.96E-01	1.86E-05	2.10E-03	3.40E-03	6.04E-04	1.78E-03	1.16E-03	1.19E-03	2.60E-04	1.86E-04	5.06E-08	5.97E-04	3.44E-04
11	D31	80	Single Unit Short Haul Truck	12	0.00E+00	2.22E-06	1.10E-07	2.18E+00	1.79E-06	4.38E-03	2.36E-06	1.14E-03	1.40E-04	3.16E-05	2.70E-04	6.59E-05	6.68E-05	2.19E-04	8.79E-06	3.49E-09	2.04E-04	2.13E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	9.66E-08	4.76E-09	9.22E-02	7.64E-08	1.82E-04	1.03E-07	4.88E-05	6.38E-06	1.39E-06	1.18E-05	2.83E-06	2.88E-06	9.21E-06	3.72E-07	1.45E-10	8.92E-06	9.12E-06
11	D31	80	Combination Short Haul Truck	9	0.00E+00	4.07E-06	2.91E-07	3.38E+00	1.29E-08	3.61E-03	2.99E-06	4.20E-03	2.47E-04	6.08E-05	2.43E-04	8.61E-05	8.56E-05	5.08E-04	1.13E-05	0.00E+00	1.57E-04	7.91E-04
11	D31	80	Combination Long Haul Truck	8	0.00E+00	3.64E-06	2.44E-07	3.13E+00	1.49E-08	3.74E-03	2.77E-06	4.07E-03	2.42E-04	4.87E-05	2.51E-04	7.40E-05	7.45E-05	4.77E-04	1.04E-05	0.00E+00	1.76E-04	7.66E-04
11	D32	80	Passenger Car	208	0.00E+00	2.50E-06	2.71E-07	9.61E+00	1.74E-05	6.43E-02	5.57E-06	4.29E-04	1.15E-03	1.99E-04	5.42E-04	3.49E-04	3.58E-04	3.27E-05	4.89E-05	1.37E-08	1.84E-04	6.72E-05
11	D32	80	Passenger Truck	349	0.00E+00	5.38E-06	5.70E-07	2.22E+01	3.44E-05	1.18E-01	1.13E-05	1.27E-03	2.06E-03	3.65E-04	1.08E-03	7.00E-04	7.18E-04	1.57E-04	1.13E-04	3.06E-08	3.61E-04	2.08E-04
11	D32	80	Single Unit Short Haul Truck	2	0.00E+00	3.13E-07	1.56E-08	3.07E-01	2.52E-07	6.18E-04	3.33E-07	1.61E-04	1.97E-05	4.45E-06	3.81E-05	9.29E-06	9.43E-06	3.08E-05	1.24E-06	4.92E-10	2.87E-05	3.01E-05
11	D32	80	Combination Short Haul Truck	5	0.00E+00	2.15E-06	1.54E-07	1.78E+00	6.79E-09	1.90E-03	1.58E-06	2.22E-03	1.30E-04	3.21E-05	1.28E-04	4.54E-05	4.52E-05	2.68E-04	5.96E-06	0.00E+00	8.31E-05	4.18E-04
11	D32	80	Combination Long Haul Truck	4	0.00E+00	1.92E-06	1.29E-07	1.65E+00	7.85E-09	1.97E-03	1.46E-06	2.15E-03	1.28E-04	2.57E-05	1.33E-04	3.91E-05	3.93E-05	2.52E-04	5.51E-06	0.00E+00	9.30E-05	4.04E-04
9	D33	60	Passenger Car	247	0.00E+00	3.66E-06	3.95E-07	1.23E+01	2.54E-05	9.12E-02	8.09E-06	5.03E-04	2.50E-03	3.85E-04	7.89E-04	5.10E-04	5.23E-04	5.16E-05	6.21E-05	1.71E-08	2.68E-04	7.89E-05
9	D33	60	Passenger Truck	414	0.00E+00	8.06E-06	8.51E-07	2.80E+01	5.04E-05	1.62E-01	1.67E-05	1.64E-03	4.59E-03	7.13E-04	1.57E-03	1.03E-03	1.05E-03	2.19E-04	1.40E-04	3.88E-08	5.25E-04	2.72E-04
9	D33	60	Single Unit Short Haul Truck	13	0.00E+00	3.70E-06	1.85E-07	2.35E+00	3.04E-06	4.54E-03	3.95E-06	1.76E-03	2.99E-04	5.41E-05	4.47E-04	1.11E-04	1.12E-04	2.35E-04	9.50E-06	3.91E-09	3.36E-04	3.30E-04
9	D33	60	Single Unit Long Haul Truck	1	0.00E+00	1.62E-07	8.02E-09	1.00E-01	1.32E-07	1.93E-04	1.72E-07	7.62E-05	1.34E-05	2.40E-06	1.97E-05	4.82E-06	4.90E-06	1.00E-05	4.05E-07	1.66E-10	1.48E-05	1.43E-05
9	D33	60	Combination Short Haul Truck	12	0.00E+00	6.97E-06	4.87E-07	4.54E+00	2.47E-08	6.08E-03	5.16E-06	7.56E-03	6.48E-04	1.28E-04	4.44E-04	1.45E-04	1.45E-04	6.84E-04	1.52E-05	0.00E+00	2.98E-04	1.43E-03
9	D33	60	Combination Long Haul Truck	11	0.00E+00	6.24E-06	4.08E-07	4.26E+00	2.83E-08	6.57E-03	4.83E-06	7.50E-03	6.51E-04	1.11E-04	4.56E-04	1.24E-04	1.26E-04	6.48E-04	1.42E-05	0.00E+00	3.30E-04	1.42E-03
9	D34	60	Passenger Car	317	0.00E+00	4.69E-06	5.07E-07	1.58E+01	3.26E-05	1.17E-01	1.04E-05	6.46E-04	3.21E-03	4.94E-04	1.01E-03	6.54E-04	6.71E-04	6.62E-05	7.96E-05	2.19E-08	3.43E-04	1.01E-04
9	D34	60	Passenger Truck	530	0.00E+00	1.03E-05	1.09E-06	3.60E+01	6.47E-05	2.08E-01	2.14E-05	2.11E-03	5.89E-03	9.15E-04	2.02E-03	1.32E-03	1.35E-03	2.81E-04	1.80E-04	4.98E-08	6.73E-04	3.49E-04
9	D34	60	Single Unit Short Haul Truck	28	0.00E+00	8.23E-06	4.11E-07	5.23E+00	6.76E-06	1.01E-02	8.78E-06	3.92E-03	6.65E-04	1.20E-04	9.94E-04	2.46E-04	2.50E-04	5.23E-04	2.11E-05	8.70E-09	7.47E-04	7.35E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	3.60E-07	1.78E-08	2.23E-01	2.94E-07	4.28E-04	3.84E-07	1.70E-04	2.99E-05	5.34E-06	4.38E-05	1.07E-05	1.09E-05	2.23E-05	9.01E-07	3.70E-10	3.28E-05	3.18E-05
9	D34	60	Combination Short Haul Truck	30	0.00E+00	1.77E-05	1.24E-06	1.15E+01	6.27E-08	1.55E-02	1.31E-05	1.92E-02	1.65E-03	3.26E-04	1.13E-03	3.68E-04	3.68E-04	1.74E-03	3.85E-05	0.00E+00	7.58E-04	3.63E-03
9	D34	60	Combination Long Haul Truck	27	0.00E+00	1.59E-05	1.04E-06	1.08E+01	7.19E-08	1.67E-02	1.23E-05	1.91E-02	1.65E-03	2.81E-04	1.16E-03	3.16E-04	3.19E-04	1.65E-03	3.61E-05	0.00E+00	8.39E-04	3.60E-03
9	D35	60	Passenger Car	268	0.00E+00	3.97E-06	4.29E-07	1.33E+01	2.76E-05	9.90E-02	8.79E-06	5.47E-04	2.72E-03	4.18E-04	8.56E-04	5.53E-04	5.68E-04	5.60E-05	6.74E-05	1.85E-08	2.90E-04	8.56E-05
9	D35	60	Passenger Truck	449	0.00E+00	8.75E-06	9.24E-07	3.04E+01	5.47E-05	1.76E-01	1.81E-05	1.78E-03	4.99E-03	7.74E-04	1.71E-03	1.12E-03	1.14E-03	2.38E-04	1.52E-04	4.21E-08	5.70E-04	2.96E-04
9	D35	60	Single Unit Short Haul Truck	10	0.00E+00	2.96E-06	1.48E-07	1.88E+00	2.43E-06	3.63E-03	3.15E-06	1.41E-03	2.39E-04	4.32E-05	3.57E-04	8.84E-05	8.98E-05	1.88E-04	7.59E-06	3.12E-09	2.68E-04	2.64E-04
9	D35	60	Combination Short Haul Truck	5	0.00E+00	3.15E-06	2.20E-07	2.05E+00	1.12E-08	2.75E-03	2.33E-06	3.42E-03	2.93E-04	5.80E-05	2.01E-04	6.54E-05	6.54E-05	3.09E-04	6.85E-06	0.00E+00	1.35E-04	6.45E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.82E-06	1.84E-07	1.93E+00	1.28E-08	2.97E-03	2.18E-06	3.39E-03	2.94E-04	5.00E-05	2.06E-04	5.61E-05	5.68E-05	2.93E-04	6.43E-06	0.00E+00	1.49E-04	6.40E-04
9	D36	60	Passenger Car	394	0.00E+00	5.83E-06	6.30E-07	1.96E+01	4.06E-05	1.45E-01	1.29E-05	8.02E-04	3.99E-03	6.13E-04	1.26E-03	8.12E-04	8.34E-04	8.22E-05	9.89E-05	2.72E-08	4.26E-04	1.26E-04
9	D36	60	Passenger Truck	659	0.00E+00	1.29E-05	1.36E-06	4.47E+01	8.04E-05	2.58E-01	2.65E-05	2.62E-03	7.32E-03	1.14E-03	2.51E-03	1.64E-03	1.68E-03	3.50E-04	2.23E-04	6.19E-08	8.37E-04	4.34E-04
9	D36	60	Single Unit Short Haul Truck	7	0.00E+00	2.20E-06	1.10E-07	1.40E+00	1.81E-06	2.70E-03	2.35E-06	1.05E-03	1.78E-04	3.22E-05	2.66E-04	6.58E-05	6.69E-05	1.40E-04	5.65E-06	2.33E-09	2.00E-04	1.96E-04
9	D36	60	Combination Short Haul Truck	6	0.00E+00	3.79E-06	2.65E-07	2.47E+00	1.34E-08	3.31E-03	2.81E-06	4.11E-03	3.52E-04	6.97E-05	2.41E-04	7.87E-05	7.87E-05	3.72E-04	8.24E-06	0.00E+00	1.62E-04	7.76E-04
9	D36	60	Combination Long Haul Truck	6	0.00E+00	3.39E-06	2.22E-07	2.31E+00	1.54E-08	3.57E-03	2.62E-06	4.08E-03	3.54E-04	6.01E-05	2.48E-04	6.75E-05	6.83E-05	3.52E-04	7.73E-06	0.00E+00	1.79E-04	7.69E-04
9	D37	60	Passenger Car	270	0.00E+00	4.00E-06	4.32E-07	1.34E+01	2.78E-05	9.97E-02	8.85E-06	5.50E-04	2.74E-03	4.21E-04	8.62E-04	5.57E-04	5.72E-04	5.64E-05	6.79E-05	1.87E-08	2.92E-04	8.62E-05
9	D37	60	Passenger Truck	452	0.00E+00	8.82E-06	9.31E-07	3.06E+01	5.51E-05	1.77E-01	1.82E-05	1.80E-03	5.02E-03	7.80E-04	1.72E-03	1.13E-03	1.15E-03	2.40E-04	1.53E-04	4.25E-08	5.74E-04	2.98E-04
9	D37	60	Single Unit Short Haul Truck	1	0.00E+00	3.89E-07	1.94E-08	2.47E-01	3.19E-07	4.77E-04	4.14E-07	1.85E-04	3.14E-05	5.68E-06	4.69E-05	1.16E-05	1.18E-05	2.47E-05	9.97E-07	4.11E-10	3.53E-05	3.47E-05
9	D37	60	Combination Short Haul Truck	8	0.00E+00	4.58E-06	3.20E-07	2.98E+00	1.62E-08	4.00E-03	3.39E-06	4.97E-03	4.26E-04	8.42E-05	2.92E-04	9.50E-05	9.50E-05	4.49E-04	9.96E-06	0.00E+00	1.96E-04	9.37E-04
9	D37	60	Combination Long Haul Truck	7	0.00E+00	4.10E-06	2.68E-07	2.80E+00	1.86E-08	4.31E-03	3.17E-06	4.92E-03	4.27E-04	7.27E-05	2.99E-04	8.15E-05	8.25E-05	4.25E-04	9.34E-06	0.00E+00	2.17E-04	9.30E-04
9	D38	60	Passenger Car	108	0.00E+00	1.60E-06	1.73E-07	5.39E+00	1.12E-05	4.00E-02	3.55E-06	2.21E-04	1.10E-03	1.69E-04	3.46E-04	2.24E-04	2.30E-04	2.26E-05	2.72E-05	7.50E-09	1.17E-04	3.46E-05
9	D38	60	Passenger Truck	181	0.00E+00	3.54E-06	3.74E-07	1.23E+01	2.21E-05	7.11E-02	7.31E-06	7.21E-04	2.02E-03	3.13E-04	6.91E-04	4.52E-04	4.63E-04	9.63E-05	6.15E-05	1.70E-08	2.30E-04	1.19E-04
9	D38	60	Single Unit Short Haul Truck	3	0.00E+00	7.65E-07	3.82E-08	4.86E-01	6.28E-07	9.38E-04	8.15E-07	3.64E-04	6.18E-05	1.12E-05	9.24E-05	2.29E-05	2.32E-05	4.86E-05	1.96E-06	8.08E-10	6.94E-05	6.83E-05
9	D38	60	Combination Short Haul Truck	2	0.00E+00	1.20E-06	8.34E-08	7.78E-01	4.23E-09	1.04E-03	8.85E-07	1.30E-03	1.11E-04	2.20E-05	7.61E-05	2.48E-05	2.48E-05	1.17E-04	2.60E-06	0.00E+00	5.11E-05	2.45E-04
9	D38	60	Combination Long Haul Truck	2	0.00E+00	1.07E-06	6.99E-08	7.30E-01	4.85E-09	1.13E-03	8.28E-07	1.29E-03	1.12E-04	1.90E-05	7.81E-05	2.13E-05	2.15E-05	1.11E-04	2.44E-06	0.00E+00	5.65E-05	2.43E-04
9	D39	60	Passenger Car	276	0.00E+00	4.09E-06	4.42E-07	1.37E+01	2.85E-05	1.02E-01	9.05E-06	5.63E-04	2.80E-03	4.30E-04	8.82E-04	5.70E-04	5.85E-04	5.77E-05	6.94E-05	1.91E-08	2.99E-04	8.82E-05
9	D39	60	Passenger Truck	462	0.00E+00	9.02E-06	9.52E-07	3.13E+01	5.64E-05	1.81E-01	1.86E-05	1.84E-03	5.14E-03	7.98E-04	1.76E-03	1.15E-03	1.18E-03	2.45E-04	1.57E-04	4.34E-08	5.87E-04	3.04E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.38E-07	1.19E-08	1.51E-01	1.95E-07	2.92E-04	2.54E-07	1.13E-04	1.92E-05	3.48E-06	2.87E-05	7.11E-06	7.22E-06	1.51E-05	6.10E-07	2.51E-10	2.16E-05	2.12E-05
9	D39	60	Combination Short Haul Truck	7	0.00E+00	4.36E-06	3.04E-07	2.84E+00	1.54E-08	3.80E-03	3.23E-06	4.73E-03	4.05E-04	8.02E-05	2.78E-04	9.05E-05	9.05E-05	4.28E-04	9.48E-06	0.00E+00	1.87E-04	8.92E-04
9	D39	60	Combination Long Haul Truck	7	0.00E+00	3.90E-06	2.55E-07	2.66E+00	1.77E-08	4.11E-03	3.02E-06	4.69E-03	4.07E-04	6.92E-05	2.85E-04	7.76E-05	7.86E-05	4.05E-04	8.89E-06	0.00E+00	2.06E-04	8.85E-04
9	D40	60	Passenger Car	176	0.00E+00	2.60E-06	2.81E-07	8.74E+00	1.81E-05	6.50E-02	5.76E-06	3.59E-04	1.78E-03	2.74E-04	5.62E-04	3.63E-04	3.73E-04	3.67E-05	4.42E-05	1.22E-08	1.91E-04	5.62E-05
9	D40	60	Passenger Truck	294	0.00E+00	5.74E-06	6.06E-07	2.00E+01	3.59E-05	1.15E-01	1.19E-05	1.17E-03	3.27E-03	5.08E-04	1.12E-03	7.33E-04	7.51E-04	1.56E-04	9.98E-05	2.76E-08	3.74E-04	1.94E-04
9	D40	60	Single Unit Short Haul Truck	3	0.00E+00	8.76E-07	4.37E-08	5.56E-01	7.20E-07	1.07E-03	9.34E-07	4.17E-04	7.07E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.82E-05
9	D40	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.08E-08	8.47E-01	4.60E-09	1.14E-03	9.63E-07	1.41E-03	1.21E-04	2.39E-05	8.28E-05	2.70E-05	2.70E-05	1.28E-04	2.83E-06	0.00E+00	5.57E-05	2.66E-04
9	D40	60	Combination Long Haul Truck	2	0.00E+00	1.16E-06	7.61E-08	7.95E-01	5.28E-09	1.23E-03	9.01E-07	1.40E-03	1.21E-04	2.06E-05	8.51E-05	2.32E-05	2.34E-05	1.21E-04	2.65E-06	0.00E+00	6.16E-05	2.64E-04
9	D41	60	Passenger Car	51	0.00E+00	7.56E-07	8.17E-08	2.54E+00	5.26E-06	1.89E-02	1.67E-06	1.04E-04	5.18E-04	7.96E-05	1.63E-04	1.05E-04	1.08E-04	1.07E-05	1.28E-05	3.53E-09	5.53E-05	1.63E-05
9	D41	60	Passenger Truck	86	0.00E+00	1.67E-06	1.76E-07	5.80E+00	1.04E-05	3.35E-02	3.44E-06	3.40E-04	9.50E-04	1.48E-04	3.25E-04	2.13E-04	2.18E-04	4.54E-05	2.90E-05	8.03E-09	1.09E-04	5.63E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	3.44E-07	1.72E-08	2.19E-01	2.83E-07	4.22E-04	3.67E-07	1.64E-04	2.78E-05	5.03E-06	4.16E-05	1.03E-05	1.05E-05	2.19E-05	8.83E-07	3.64E-10	3.12E-05	3.07E-05
9	D41	60	Combination Short Haul Truck	4	0.00E+00	2.24E-06	1.57E-07	1.46E+00	7.94E-09	1.96E-03	1.66E-06	2.44E-03	2.09E-04	4.13E-05	1.43E-04	4.66E-05	4.66E-05	2.20E-04	4.88E-06	0.00E+00	9.60E-05	4.60E-04
9	D41	60	Combination Long Haul Truck	3	0.00E+00

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES L nkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D46	60	Passenger Truck	725	0.00E+00	1.41E-05	1.49E-06	4.92E+01	8.84E-05	2.84E-01	2.92E-05	2.88E-03	8.06E-03	1.25E-03	2.76E-03	1.81E-03	1.85E-03	3.85E-04	2.46E-04	6.81E-08	9.21E-04	4.77E-04
9	D46	60	Single Unit Short Haul Truck	26	0.00E+00	7.62E-06	3.80E-07	4.84E+00	6.26E-06	9.35E-03	8.13E-06	3.63E-03	6.16E-04	1.11E-04	9.21E-04	2.28E-04	2.32E-04	4.85E-04	1.96E-05	8.06E-09	6.92E-04	6.80E-04
9	D46	60	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.65E-08	2.07E-01	2.72E-07	3.97E-04	3.55E-07	1.57E-04	2.77E-05	4.95E-06	4.06E-05	9.93E-06	1.01E-05	2.07E-05	8.34E-07	3.43E-10	3.04E-05	2.94E-05
9	D46	60	Combination Short Haul Truck	43	0.00E+00	2.54E-05	1.77E-06	1.65E+01	8.98E-08	2.21E-02	1.88E-05	2.75E-02	2.36E-03	4.67E-04	1.62E-03	5.27E-04	5.27E-04	2.49E-03	5.52E-05	0.00E+00	1.09E-03	5.19E-03
9	D46	60	Combination Long Haul Truck	39	0.00E+00	2.27E-05	1.48E-06	1.55E+01	1.03E-07	2.39E-02	1.76E-05	2.73E-02	2.37E-03	4.03E-04	1.66E-03	4.52E-04	4.57E-04	2.36E-03	5.17E-05	0.00E+00	1.20E-03	5.15E-03
9	D47	60	Passenger Car	692	0.00E+00	1.02E-05	1.11E-06	3.44E+01	7.13E-05	2.56E-01	2.27E-05	1.41E-03	7.01E-03	1.08E-03	2.21E-03	1.43E-03	1.47E-03	1.45E-04	1.74E-04	4.79E-08	7.50E-04	2.21E-04
9	D47	60	Passenger Truck	1159	0.00E+00	2.26E-05	2.38E-06	7.85E+01	1.41E-04	4.54E-01	4.67E-05	4.60E-03	1.29E-02	2.00E-03	4.41E-03	2.88E-03	2.95E-03	6.15E-04	3.93E-04	1.09E-07	1.47E-03	7.63E-04
9	D47	60	Single Unit Short Haul Truck	34	0.00E+00	9.89E-06	4.93E-07	6.28E+00	8.12E-06	1.21E-02	1.05E-05	4.71E-03	7.98E-04	1.45E-04	1.19E-03	2.96E-04	3.00E-04	6.29E-04	2.54E-05	1.04E-08	8.97E-04	8.82E-04
9	D47	60	Single Unit Long Haul Truck	1	0.00E+00	4.32E-07	2.14E-08	2.68E-01	3.53E-07	5.14E-04	4.61E-07	2.04E-04	3.59E-05	6.42E-06	5.27E-05	1.29E-05	1.31E-05	2.68E-05	1.08E-06	4.44E-10	3.94E-05	3.82E-05
9	D47	60	Combination Short Haul Truck	24	0.00E+00	1.43E-05	9.97E-07	9.30E+00	5.05E-08	1.25E-02	1.06E-05	1.55E-02	1.33E-03	2.63E-04	9.10E-04	2.96E-04	2.96E-04	1.40E-03	3.11E-05	0.00E+00	6.11E-04	2.92E-03
9	D47	60	Combination Long Haul Truck	22	0.00E+00	1.28E-05	8.36E-07	8.72E+00	5.79E-08	1.35E-02	9.89E-06	1.54E-02	1.33E-03	2.27E-04	9.34E-04	2.54E-04	2.57E-04	1.33E-03	2.91E-05	0.00E+00	6.76E-04	2.90E-03
9	D48	60	Passenger Car	176	0.00E+00	2.60E-06	2.81E-07	8.74E+00	1.81E-05	6.50E-02	5.76E-06	3.59E-04	1.78E-03	2.74E-04	5.62E-04	3.63E-04	3.73E-04	3.67E-05	4.42E-05	1.22E-08	1.91E-04	5.62E-05
9	D48	60	Passenger Truck	294	0.00E+00	5.74E-06	6.06E-07	2.00E+01	3.59E-05	1.15E-01	1.19E-05	1.17E-03	3.27E-03	5.08E-04	1.12E-03	7.33E-04	7.51E-04	1.56E-04	9.98E-05	2.76E-08	3.74E-04	1.94E-04
9	D48	60	Single Unit Short Haul Truck	3	0.00E+00	8.76E-07	4.37E-08	5.56E-01	7.20E-07	1.07E-03	9.34E-07	4.17E-04	7.07E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.82E-05
9	D48	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.08E-08	8.47E-01	4.60E-09	1.14E-03	9.63E-07	1.41E-03	1.21E-04	2.39E-05	8.28E-05	2.70E-05	2.70E-05	1.28E-04	2.83E-06	0.00E+00	5.57E-05	2.66E-04
9	D48	60	Combination Long Haul Truck	2	0.00E+00	1.16E-06	7.61E-08	7.95E-01	5.28E-09	1.23E-03	9.01E-07	1.40E-03	1.21E-04	2.06E-05	8.51E-05	2.32E-05	2.34E-05	1.21E-04	2.65E-06	0.00E+00	6.16E-05	2.64E-04
9	D49	60	Passenger Car	1086	0.00E+00	1.61E-05	1.74E-06	5.40E+01	1.12E-04	4.01E-01	3.56E-05	2.21E-03	1.10E-02	1.69E-03	3.47E-03	2.24E-03	2.30E-03	2.27E-04	2.73E-04	7.51E-08	1.18E-03	3.47E-04
9	D49	60	Passenger Truck	1818	0.00E+00	3.55E-05	3.74E-06	1.23E+02	2.22E-04	7.12E-01	7.32E-05	7.22E-03	2.02E-02	3.14E-03	6.92E-03	4.53E-03	4.64E-03	9.65E-04	6.16E-04	1.71E-07	2.31E-03	1.20E-03
9	D49	60	Single Unit Short Haul Truck	93	0.00E+00	2.73E-05	1.36E-06	1.73E+01	2.24E-05	3.35E-02	2.91E-05	1.30E-02	2.20E-03	3.99E-04	3.30E-03	8.16E-04	8.29E-04	1.74E-03	7.01E-05	2.88E-08	2.48E-03	2.44E-03
9	D49	60	Single Unit Long Haul Truck	4	0.00E+00	1.19E-06	5.92E-08	7.41E-01	9.75E-07	1.42E-03	1.27E-06	5.62E-04	9.90E-05	1.77E-05	1.45E-04	3.56E-05	3.61E-05	7.39E-05	2.99E-06	1.23E-09	1.09E-04	1.05E-04
9	D49	60	Combination Short Haul Truck	56	0.00E+00	3.28E-05	2.29E-06	2.13E+01	1.16E-07	2.86E-02	2.43E-05	3.56E-02	3.05E-03	6.03E-04	2.09E-03	6.80E-04	6.80E-04	3.22E-03	7.13E-05	0.00E+00	1.40E-03	6.71E-03
9	D49	60	Combination Long Haul Truck	51	0.00E+00	2.93E-05	1.92E-06	2.00E+01	1.33E-07	3.09E-02	2.27E-05	3.52E-02	3.06E-03	5.20E-04	2.14E-03	5.84E-04	5.91E-04	3.05E-03	6.68E-05	0.00E+00	1.55E-03	6.65E-03
9	D50	60	Passenger Car	791	0.00E+00	1.17E-05	1.27E-06	3.93E+01	8.15E-05	2.92E-01	2.59E-05	1.61E-03	8.02E-03	1.23E-03	2.53E-03	1.63E-03	1.68E-03	1.65E-04	1.99E-04	5.47E-08	8.57E-04	2.53E-04
9	D50	60	Passenger Truck	1325	0.00E+00	2.58E-05	2.73E-06	8.98E+01	1.62E-04	5.19E-01	5.34E-05	5.26E-03	1.47E-02	2.29E-03	5.04E-03	3.30E-03	3.38E-03	7.03E-04	4.49E-04	1.24E-07	1.68E-03	8.72E-04
9	D50	60	Single Unit Short Haul Truck	98	0.00E+00	2.89E-05	1.44E-06	1.84E+01	2.38E-05	3.55E-02	3.08E-05	1.38E-02	2.34E-03	4.23E-04	3.49E-03	8.65E-04	8.79E-04	1.84E-03	7.42E-05	3.06E-08	2.62E-03	2.58E-03
9	D50	60	Single Unit Long Haul Truck	4	0.00E+00	1.26E-06	6.27E-08	7.85E-01	1.03E-06	1.50E-03	1.35E-06	5.96E-04	1.05E-04	1.88E-05	1.54E-04	3.77E-05	3.83E-05	7.83E-05	3.16E-06	1.30E-09	1.15E-04	1.12E-04
9	D50	60	Combination Short Haul Truck	62	0.00E+00	3.65E-05	2.55E-06	2.38E+01	1.29E-07	3.18E-02	2.70E-05	3.96E-02	3.39E-03	6.71E-04	2.32E-03	7.57E-04	7.57E-04	3.58E-03	7.93E-05	0.00E+00	1.56E-03	7.47E-03
9	D50	60	Combination Long Haul Truck	56	0.00E+00	3.26E-05	2.13E-06	2.23E+01	1.48E-07	3.44E-02	2.53E-05	3.92E-02	3.41E-03	5.79E-04	2.39E-03	6.50E-04	6.58E-04	3.39E-03	7.44E-05	0.00E+00	1.73E-03	7.41E-03
9	D51	60	Passenger Car	199	0.00E+00	2.94E-06	3.18E-07	9.87E+00	2.05E-05	7.33E-02	6.51E-06	4.05E-04	2.01E-03	3.09E-04	6.34E-04	4.10E-04	4.21E-04	4.15E-05	4.99E-05	1.37E-08	2.15E-04	6.34E-05
9	D51	60	Passenger Truck	332	0.00E+00	6.48E-06	6.84E-07	2.25E+01	4.05E-05	1.30E-01	1.34E-05	1.32E-03	3.69E-03	5.74E-04	1.27E-03	8.27E-04	8.48E-04	1.76E-04	1.13E-04	3.12E-08	4.22E-04	2.19E-04
9	D51	60	Single Unit Short Haul Truck	9	0.00E+00	2.54E-06	1.27E-07	1.61E+00	2.09E-06	3.11E-03	2.71E-06	1.21E-03	2.05E-04	3.71E-05	3.06E-04	7.59E-05	7.71E-05	1.61E-04	6.51E-06	2.68E-09	2.30E-04	2.27E-04
9	D51	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.08E-07	1.00E+00	5.45E-09	1.34E-03	1.14E-06	1.67E-03	1.43E-04	2.83E-05	9.81E-05	3.20E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	D51	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	9.01E-08	9.41E-01	6.25E-09	1.45E-03	1.07E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.29E-05	3.13E-04
9	D52	60	Passenger Car	144	0.00E+00	2.13E-06	2.30E-07	7.16E+00	1.48E-05	5.32E-02	4.72E-06	2.93E-04	1.46E-03	2.24E-04	4.60E-04	2.97E-04	3.05E-04	3.01E-05	3.62E-05	9.96E-09	1.56E-04	4.60E-05
9	D52	60	Passenger Truck	241	0.00E+00	4.70E-06	4.96E-07	1.63E+01	2.94E-05	9.44E-02	9.71E-06	9.58E-04	2.68E-03	4.16E-04	9.17E-04	6.00E-04	6.15E-04	1.28E-04	8.17E-05	2.26E-08	3.06E-04	1.59E-04
9	D52	60	Single Unit Short Haul Truck	7	0.00E+00	1.97E-06	9.85E-08	1.25E+00	1.62E-06	2.42E-03	2.10E-06	9.40E-04	1.59E-04	2.89E-05	2.38E-04	5.90E-05	6.00E-05	1.26E-04	5.07E-06	2.09E-09	1.79E-04	1.76E-04
9	D52	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.08E-07	1.00E+00	5.45E-09	1.34E-03	1.14E-06	1.67E-03	1.43E-04	2.83E-05	9.81E-05	3.20E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	D52	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	9.01E-08	9.41E-01	6.25E-09	1.45E-03	1.07E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.29E-05	3.13E-04
9	D53	60	Passenger Car	230	0.00E+00	3.40E-06	3.67E-07	1.14E+01	2.37E-05	8.48E-02	7.52E-06	4.68E-04	2.33E-03	3.58E-04	7.33E-04	4.74E-04	4.87E-04	4.80E-05	5.77E-05	1.59E-08	2.49E-04	7.33E-05
9	D53	60	Passenger Truck	384	0.00E+00	7.50E-06	7.91E-07	2.61E+01	4.69E-05	1.51E-01	1.55E-05	1.53E-03	4.27E-03	6.63E-04	1.46E-03	9.57E-04	9.80E-04	2.04E-04	1.30E-04	3.61E-08	4.88E-04	2.53E-04
9	D53	60	Single Unit Short Haul Truck	10	0.00E+00	2.82E-06	1.41E-07	1.79E+00	2.32E-06	3.46E-03	3.01E-06	1.34E-03	2.28E-04	4.12E-05	3.41E-04	8.43E-05	8.57E-05	1.79E-04	7.24E-06	2.98E-09	2.56E-04	2.52E-04
9	D53	60	Combination Short Haul Truck	5	0.00E+00	3.08E-06	2.15E-07	2.01E+00	1.09E-08	2.69E-03	2.28E-06	3.34E-03	2.86E-04	5.67E-05	1.96E-04	6.39E-05	6.39E-05	3.02E-04	6.70E-06	0.00E+00	1.32E-04	6.31E-04
9	D53	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.31E-03	2.87E-04	4.89E-05	2.01E-04	5.48E-05	5.55E-05	2.86E-04	6.28E-06	0.00E+00	1.46E-04	6.25E-04
9	D54	60	Passenger Car	165	0.00E+00	2.44E-06	2.63E-07	8.18E+00	1.70E-05	6.08E-02	5.39E-06	3.35E-04	1.67E-03	2.56E-04	5.26E-04	3.40E-04	3.49E-04	3.44E-05	4.14E-05	1.14E-08	1.78E-04	5.26E-05
9	D54	60	Passenger Truck	275	0.00E+00	5.37E-06	5.67E-07	1.87E+01	3.36E-05	1.08E-01	1.11E-05	1.09E-03	3.06E-03	4.75E-04	1.05E-03	6.86E-04	7.03E-04	1.46E-04	9.34E-05	2.59E-08	3.50E-04	1.81E-04
9	D54	60	Single Unit Short Haul Truck	9	0.00E+00	2.54E-06	1.27E-07	1.61E+00	2.09E-06	3.11E-03	2.71E-06	1.21E-03	2.05E-04	3.71E-05	3.06E-04	7.59E-05	7.71E-05	1.61E-04	6.51E-06	2.68E-09	2.30E-04	2.27E-04
9	D54	60	Combination Short Haul Truck	5	0.00E+00	3.08E-06	2.15E-07	2.01E+00	1.09E-08	2.69E-03	2.28E-06	3.34E-03	2.86E-04	5.67E-05	1.96E-04	6.39E-05	6.39E-05	3.02E-04	6.70E-06	0.00E+00	1.32E-04	6.31E-04
9	D54	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.31E-03	2.87E-04	4.89E-05	2.01E-04	5.48E-05	5.55E-05	2.86E-04	6.28E-06	0.00E+00	1.46E-04	6.25E-04
11	D55	80	Passenger Car	408	0.00E+00	4.90E-06	5.31E-07	1.88E+01	3.41E-05	1.26E-01	1.09E-05	8.39E-04	2.25E-03	3.90E-04	1.06E-03	6.84E-04	7.02E-04	6.40E-05	9.59E-05	2.69E-08	3.60E-04	1.32E-04
11	D55	80	Passenger Truck	684	0.00E+00	1.05E-05	1.12E-06	4.35E+01	6.74E-05	2.32E-01	2.20E-05	2.49E-03	4.03E-03	7.14E-04	2.11E-03	1.37E-03	1.41E-03	3.08E-04	2.20E-04	5.98E-08	7.07E-04	4.07E-04
11	D55	80	Single Unit Short Haul Truck	47	0.00E+00	8.80E-06	4.37E-07	8.63E+00	7.08E-06	1.73E-02	9.36E-06	4.51E-03	5.53E-04	1.25E-04	1.07E-03	2.61E-04	2.65E-04	8.66E-04	3.48E-05	1.38E-08	8.06E-04	8.45E-04
11	D55	80	Single Unit Long Haul Truck	2	0.00E+00	3.82E-07	1.89E-08	3.65E-01	3.02E-07	7.19E-04	4.07E-07	1.93E-04	2.52E-05	5.51E-06	4.67E-05	1.12E-05	1.14E-05	3.65E-05	1.47E-06	5.75E-10	3.53E-05	3.61E-05
11	D55	80	Combination Short Haul Truck	36	0.00E+00	1.58E-05	1.13E-06	1.31E+01	4.98E-08	1.40E-02	1.16E-05	1.63E-02	9.56E-04	2.36E-04	9.40E-04	3.33E-04	3.31E-04	1.97E-03	4.37E-05	0.00E+00	6.10E-04	3.06E-03
11	D55	80	Combination Long Haul Truck	33	0.00E+00	1.41E-05	9.47E-07	1.21E+01	5.76E-08	1.45E-02	1.07E-05	1.57E-02	9.37E-04	1.88E-04	9.74E-04	2.87E-04	2.89E-04	1.85E-03	4.04E-05	0.00E+00	6.83E-04	2.97E-03
11	D56	80	Passenger Car	581	0.00E+00	6.97E-06	7.55E-07	2.68E+01	4.85E-05	1.79E-01	1.55E-05	1.19E-03	3.19E-03	5.55E-04	1.51E-03	9.72E-04	9.98E-04	9.09E-05	1.36E-04	3.82E-08	5.11E-04	1.87E-04
11	D56	80	Passenger Truck	972	0.00E+00	1.50E-05	1.59E-06	6.18E+01	9.59E-05	3.29E-01	3.13E-05	3.54E-03	5.72E-03	1.02E-03	3.00E-03	1.95E-03	2.00E-03	4.37E-04	3.13E-04	8.51E-08	1.00E-03	5.78E-04
11	D56	80	Single Unit Short Haul Truck	58	0.00E+00	1.09E-05	5.40E-07	1.07E+01	8.75E-06	2.14E-02	1.16E-05	5.58E-03	6.83E-04	1.55E-04	1.32E-03	3.22E-04	3.27E-04	1.07E-03	4.30E-05	1.71E-08	9.96E-04	1.04E-03
11	D56	80	Single Unit Long Haul Truck	3	0.00E+00	4.73E-07	2.33E-08	4.51E-01	3.74E-07	8.89E-04	5.03E-07	2.39E-04	3.12E-05	6.82E-06	5.77E-05	1.39E-05	1.41E-05	4.51E-05	1.82E-06	7.11E-10	4.36E-05	4.46E-05
11	D56	80	Combination Short Haul Truck	35	0.00E+00	1.53E-05	1.10E-06	1.27E+01	4.84E-08	1.36E-02	1.13E-05	1.58E-02	9.30E-04	2.29E-04	9.15E-04	3.24E-04	3.22E-04	1.91E-03	4.25E-05	0.00E+00	5.93E-04	2.98E-03
11	D56	80	Combination Long Haul Truck	32	0.00E+00	1.37E-05	9.21E-07	1.18E+01	5.60E-08	1.41E-02	1.04E-05	1.53E-02	9.12E-04	1.83E-04	9.47E-04	2.79E-04	2.81E-04	1.80E-03	3.93E-05	0.00E+00	6.64E-04	2.89E-03
11	D57	80	Passenger Car	693	0.00E+00	8.31E-06	9.01E-07	3.19E+01	5.79E-05	2.14E-01	1.85E-05	1.42E-03	3.81E-03	6.62E-04	1.80E-03	1.16E-03	1.19E-03	1.09E-04	1.63E-04	4.56E-08	6.10E-04	2.23E-04
11	D57	80	Passenger Truck	1160	0.00E+00	1.79E-05	1.90E-06	7.38E+01	1.14E-04	3.93E-01	3.74E-05	4.22E-03	6.83E-03	1.21E-03	3.58E-03	2.33E-03	2.39E-03	5.22E-04	3.74E-04	1.02E-07	1.20E-03	6.90E-04
11	D57	80	Single Unit Short Haul Truck	47	0.00E+00	8.88E-06	4.41E-07	8.71E+00	7.14E-06	1.75E-02	9.44E-06	4.55E-03	5.58E-04	1.26E-04	1.08E-03	2.63E-04	2.67E-04	8.73E-04	3.51E-05	1.39E-08	8.13E-04	8.52E-04
11	D57	80	Single Unit Long Haul Truck	2	0.00E+00	3.86E-07	1.90E-08	3.68E-01	3.05E-07	7.25E-04	4.11E-07	1.95E-04	2.55E-05	5.56E-06	4.71E-05	1.13E-05	1.15E-05	3.68E-05	1.49E-06	5.80E-10	3.56E-05	3.64E-05
11	D57	80	Combination Short Haul Truck	38	0.00E+00	1.69E-05	1.21E-06	1.40E+01	5.33E-08	1.50E-02	1.24E-05	1.74E-02	1.02E-03	2.52E-04	1.01E-03	3.57E-04	3.55E-04	2.11E-03	4.68E-05	0.00E+00	6.53E-04	3.28E-03
11	D57	80	Combination Long Haul Truck	35	0.00E+00	1.51E-05	1.01E-06	1.30E+01	6.17E-08	1.55E-02	1.15E-05	1.69E-02	1.00E-03	2.02E-04	1.04E-03	3.07E-04	3.09E-04	1.98E-03	4.33E-05	0.00E+00	7.31E-04	3.18E-03
11	D58	80	Passenger Car	707	0.00E+00	8.49E-06	9.19E-07	3.26E+01	5.91E-05	2.18E-01	1.89E-05	1.45E-03	3.89E-03	6.76E-04	1.84E-03	1.18E-03	1.22E-03	1.11E-04	1.66E-04	4.66E-08	6.23E-04	2.28E-04
11	D58	80	Passenger Truck	1184	0.00E+00	1.83E-05	1.93E-06	7.53E+01	1.17E-04	4.01E-01	3.82E-05	4.31E-03	6.98E-03	1.24E-03	3.65E-03	2.38E-03	2.43E-03	5.33E-04	3.82E-04	1.04E-07	1.22E-03	7.04E-04
11	D58	80	Single Unit Short Haul Truck	71	0.00E+00	1.33E-05	6.61E-07	1.31E+01	1.07E-05	2.63E-02	1.42E-05	6.83E-03	8.37E-04	1.89E-04	1.62E-03	3.95E-04	4.01E-04	1.31E-03	5.27E-05	2.09E-08	1.22E-03	1.28E-03
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	5.79E-07	2.86E-08	5.53E-01	4.58E-07	1.09E-03	6.16E-07	2.93E-04	3.82E-05	8.35E-06	7.07E-05	1.70E-05	1.72E-05	5.52E-05	2.23E-06	8.71E-10	5.35E-05	5.47E-05
11	D58	80	Combination Short Haul Truck	41	0.00E+00	1.81E-05	1.29E-06	1.50E+01	5.71E-08	1.60E-02	1.33E-05	1.87E-02	1.10E-03	2.70E-04	1.08E-03	3.82E-04	3.80E-04	2.26E-03	5.02E-05	0.00E+00	7.00E-04	3.52E-03
11	D58	80	Combination Long Haul Truck	38	0.00E+00	1.62E-05	1.09E-06	1.39E+01	6.61E-08	1.66E-02	1.23E-05	1.81E-02	1.08E-03	2.16E-04	1.12E-03	3.29E-04	3.31E-04	2.12E-03	4.64E-05	0.00E+00	7.83E-04	3.40E-03
11	D59	80	Passenger Car	546	0.00E+00	6.55E-06	7.10E-07	2.52E+01	4.57E-05	1.68E-01	1.46E-05	1.12E-03	3.00E-03	5.22E-04	1.42E-03	9.15E-04	9.39E-04	8.56E-05	1.28E-04	3.60E-08	4.81E-04	1.76E-04
11	D59	80	Passenger Truck	915	0.00E+00	1.41E-05	1.49E-06	5.82E+01	9.02E-05	3.10E-01	2.95E-05	3.33E-03	5.39E-03	9.55E-04	2.82E-03	1.83E-03	1.88E-03	4.12E-04	2.95E-04	8.00E-08	9.45E-04	5.44E-04
11	D59	80	Single Unit Short Haul Truck	33	0.00E+00	6.15E-06	3.05E-07	6.03E+00	4.95E-06	1.21E-02	6.54E-06	3.15E-03	3.86E-04	8.74E-05	7.48E-04	1.82E-04	1.85E-04	6.05E-04	2.43E-05	9.66E-09	5.63E-04	5.91E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	2.67E-07	1.32E-08	2.55E-01	2.11E-07	5.02E-04	2.85E-07	1.35E-04	1.76E-05	3.85E-06	3.26E-05	7.84E-06	7.96E-06	2.55E-05	1.03E-06	4.02E-10	2.47E-05	2.52E-05
11	D59	80	Combination Short Haul Truck	20	0.00E+00	8.96E-06	6.41E-07	7.43E+00	2.83E-08	7.94E-03	6.58E-06	9.24E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.74E-03
11	D59	80	Combination Long Haul Truck	19	0.00E+00	8.01E-06	5.38E-07	6.88E+00	3.27E-08	8.22E-03	6.10E-06	8.95E-03	5.33E-04	1.07E-04	5.53E-04	1.63E-04	1.64E-04	1.05E-03	2.30E-05	0.00E+00	3.88E-04	1.69E-03
11	D60	80	Passenger Car	505	0.00E+00	6.06E-06	6.57E-07	2.33E+01	4.23E-05	1.56E-01	1.35E-05	1.04E-03	2.78E-03	4.83E-04	1.31E-03	8.46E-04	8.69E-04	7.92E-05	1.19E-04	3.33E-08	4.45E-04	1.63E-04
11	D60	80	Passenger Truck	846	0.00E+00	1.30E-05	1.38E-06	5.38E+01	8.34E-05	2.87E-01	2.73E-05	3.08E-03	4.98E-03	8.84E-04	2.61E-03	1.70E-03	1.74E-03	3.81E-04	2.73E-04	7.40E-08	8.74E-04	5.03E-04
11	D60	80	Single Unit Short Haul Truck	48	0.00E+00	8.92E-06	4.43E-07	8.75E+00	7.17E-06	1.76E-02	9.49E-06	4.57E-03	5.60E-04	1.27E-04	1.08E-03	2.64E-04	2.68E-04	8.77E-04	3.53E-05	1.40E-08	8.17E-04	8.56E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	3.88E-07	1.91E-08	3.70E-01	3.07E-07	7.28E-04	4.13E-07	1.96E-04	2.56E-05	5.59E-06	4.73E-05	1.14E-05	1.15E-05	3.69E-05	1.49E-06	5.83E-10	3.58E-05	3.66E-05
11	D60	80	Combination Short Haul Truck	21	0.00E+00	9.43E-06	6.75E-07	7.82E+00	2.98E-08	8.36E-03	6.93E-06	9.73E-03	5.72E-04	1.41E-04	5.62E-04	1.99E-04	1.98E-04	1.18E-03	2.61E-05	0.00E+00	3.65E-04	1.83E-03
11	D60	80	Combination Long Haul Truck	20	0.00E+00	8.44E-06	5.66E-07	7.24E+00	3.45E-08	8.66E-03	6.42E-06	9.42E-03	5.61E-04	1.13E-04	5.82E-04	1.71E-04	1.73E-04	1.11E-03	2.42E-05	0.00E+00	4.08E-04	1.77E-03
11	D61	80	Passenger Car	98	0.00E+00	1.18E-06	1.27E-07	4.52E+00	8.19E-06	3.02E-02	2.61E-06	2.01E-04	5.39E-04	9.36E-05	2.55E-04	1.64E-04	1.68E-04	1.53E-05	2.30E-05	6.45E-09	8.63E-05	3.16E-05
11	D61	80	Passenger Truck	164	0.00E+00	2.53E-06	2.68E-07	1.04E+01	1.62E-05	5.56E-02	5.29E-06	5.97E-04	9.66E-04	1.71E-04	5.06E-04	3.29E-04	3.37E-04	7.38E-05	5.29E-05	1.44E-08	1.70E-04	9.75E-05
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	D61	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.85E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.42E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.68E-04
11	D61	80	Combination Long Haul Truck	3	0.00E+00	1.23E-06	8.27E-08	1.06E+00	5.03E-09	1.26E-03	9.38E-07	1.38E-03	8.19E-05	1.65E-05	8.51E-05	2.50E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	D62	80	Passenger Car	71	0.00E+00	8.57E-07	9.28E-08	3.29E+00	5.97E-06	2.20E-02	1.91E-06	1.47E-04	3.93E-04	6.82E-05	1.86E-04	1.20E-04	1.23E-04	1.12E-05	1.68E-05	4.70E-09	6.29E-05	2.30E-05
11	D62	80	Passenger Truck	120	0.00E+00	1.84E-06	1.95E-07	7.61E+00	1.18E-05	4.05E-02	3.85E-06	4.35E-04	7.04E-04	1.25E-04	3.69E-04	2.40E-04	2.46E-04	5.38E-05	3.85E-05	1.05E-08	1.24E-04	7.11E-05
11	D62	80	Single Unit Short Haul Truck	8	0.00E+00	1.44E-06	7.13E-08	1.41E+00	1.16E-06	2.83E-03	1.53E-06	7.36E-04	9.02E-05	2.04E-05	1.75E-04	4.26E-05	4.32E-05	1.41E-04	5.68E-06	2.26E-09	1.32E-04	1.38E-04
11	D62	80	Combination Short Haul Truck	5	0.00E+00	2.07E-06	1.48E-07	1.71E+00	6.53E-09	1.83E-03	1.52E-06	2.13E-03	1.25E-04	3.09E-05	1.23E-04	4.37E-05	4.34E-05	2.58E-04	5.73E-06	0.00E+00	7.99E-05	4.01E-04
11	D62	80	Combination Long Haul Truck	4	0.00E+00	1.85E-06	1.24E-07	1.59E+00	7.55E-09	1.90E-03	1.41E-06	2.06E-03	1.23E-04	2.47E-05	1.28E-04	3.76E-05	3.78E-05	2.42E-04	5.29E-06	0.00E+00	8.94E-05	3.89E-04
10	D63	70	Passenger Car	4	0.00E+00	4.82E-08	5.21E-09	1.78E-01	3.35E-07	1.20E-03	1.07E-07	7.49E-06	2.90E-05	4.65E-06	1.04E-05	6.73E-06	6.91E-06	6.70E-07	9.01E-07	2.46E-10	3.53E-06	1.17E-06
10	D63	70	Passenger Truck	6	0.00E+00	1.06E-07	1.12E-08	4.09E-01	6.68E-07	2.23E-03	2.19E-07	2.35E-05	5.27E-05	8.57E-06	2.09E-05	1.36E-05	1.40E-05	3.04E-06	2.05E-06	5.51E-10	6.99E-06	3.86E-06
10	D64	70	Passenger Car	43	0.00E+00	5.59E-07	6.05E-08	2.06E+00	3.89E-06	1.40E-02	1.24E-06	8.69E-05	3.36E-04	5.40E-05	1.20E-04	7.81E-05	8.01E-05	7.77E-06	1.05E-05	2.86E-09	4.10E-05	1.36E-05
10	D64	70	Passenger Truck	73	0.00E+00	1.23E-06	1.30E-07	4.74E+00	7.75E-06	2.58E-02	2.54E-06	2.72E-04	6.11E-04	9.95E-05	2.42E-04	1.58E-04	1.62E-04	3.53E-05	2.38E-05	6.40E-09	8.11E-05	4.48E-05
10	D64	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.83E-03	1.92E-06	8.90E-04	1.27E-04	2.53E-05	2.19E-04	5.38E-05	5.47E-05	1.41E-04	5.68E-06	2.30E-09	1.64E-04	1.66E-04
10	D64	70	Combination Short Haul Truck	6	0.00E+00	3.26E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.87E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	D64	70	Combination Long Haul Truck	6	0.00E+00	2.96E-06	1.97E-07	2.21E+00	1.22E-08	2.97E-03	2.24E-06	3.39E-03	2.46E-04	4.50E-05	2.05E-04	5.96E-05	6.03E-05	3.37E-04	7.39E-06	0.00E+00	1.45E-04	6.39E-04
11	D65	80	Passenger Car	186	0.00E+00	2.23E-06	2.41E-07	8.55E+00	1.55E-05	5.72E-02	4.95E-06	3.81E-04	1.02E-03	1.77E-04	4.82E-04	3.11E-04	3.19E-04	2.91E-05	4.35E-05	1.22E-08	1.63E-04	5.98E-05
11	D65	80	Passenger Truck	311	0.00E+00	4.79E-06	5.07E-07	1.98E+01	3.06E-05	1.05E-01	1.00E-05	1.13E-03	1.83E-03	3.24E-04	9.58E-04	6.23E-04	6.39E-04	1.40E-04	1.00E-04	2.72E-08	3.21E-04	1.85E-04
11	D65	80	Single Unit Short Haul Truck	29	0.00E+00	5.53E-06	2.74E-07	5.42E+00	4.45E-06	1.09E-02	5.88E-06	2.83E-03	3.47E-04	7.85E-05	6.72E-04	1.64E-04	1.66E-04	5.44E-04	2.19E-05	8.68E-09	5.06E-04	5.31E-04
11	D65	80	Single Unit Long Haul Truck	1	0.00E+00	2.40E-07	1.18E-08	2.29E-01	1.90E-07	4.51E-04	2.56E-07	1.21E-04	1.59E-05	3.46E-06	2.93E-05	7.04E-06	7.15E-06	2.29E-05	9.25E-07	3.61E-10	2.22E-05	2.27E-05

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D65	80	Combination Short Haul Truck	22	0.00E+00	9.85E-06	7.05E-07	8.17E+00	3.11E-08	8.73E-03	7.23E-06	1.02E-02	5.97E-04	1.47E-04	5.87E-04	2.08E-04	2.07E-04	1.23E-03	2.73E-05	0.00E+00	3.81E-04	1.91E-03
11	D65	80	Combination Long Haul Truck	20	0.00E+00	8.81E-06	5.91E-07	7.56E+00	3.60E-08	9.04E-03	6.71E-06	9.84E-03	5.86E-04	1.18E-04	6.08E-04	1.79E-04	1.80E-04	1.15E-03	2.52E-05	0.00E+00	4.27E-04	1.85E-03
11	D66	80	Passenger Car	285	0.00E+00	3.42E-06	3.70E-07	1.31E+01	2.38E-05	8.79E-02	7.61E-06	5.86E-04	1.57E-03	2.72E-04	7.41E-04	4.77E-04	4.90E-04	4.46E-05	6.69E-05	1.88E-08	2.51E-04	9.18E-05
11	D66	80	Passenger Truck	477	0.00E+00	7.36E-06	7.80E-07	3.04E+01	4.71E-05	1.62E-01	1.54E-05	1.74E-03	2.81E-03	4.98E-04	1.47E-03	9.57E-04	9.81E-04	2.15E-04	1.54E-04	4.18E-08	4.93E-04	2.84E-04
11	D66	80	Single Unit Short Haul Truck	33	0.00E+00	6.17E-06	3.06E-07	6.05E+00	4.96E-06	1.22E-02	6.56E-06	3.16E-03	3.88E-04	8.76E-05	7.50E-04	1.83E-04	1.86E-04	6.07E-04	2.44E-05	9.69E-09	5.65E-04	5.92E-04
11	D66	80	Single Unit Long Haul Truck	1	0.00E+00	2.68E-07	1.32E-08	2.56E-01	2.12E-07	5.04E-04	2.85E-07	1.35E-04	1.77E-05	3.87E-06	3.27E-05	7.86E-06	7.98E-06	2.56E-05	1.03E-06	4.03E-10	2.47E-05	2.53E-05
11	D66	80	Combination Short Haul Truck	26	0.00E+00	1.13E-05	8.10E-07	9.39E+00	3.58E-08	1.00E-02	8.32E-06	1.17E-02	6.87E-04	1.69E-04	6.75E-04	2.39E-04	2.38E-04	1.41E-03	3.14E-05	0.00E+00	4.38E-04	2.20E-03
11	D66	80	Combination Long Haul Truck	24	0.00E+00	1.01E-05	6.80E-07	8.69E+00	4.14E-08	1.04E-02	7.71E-06	1.13E-02	6.73E-04	1.35E-04	6.99E-04	2.06E-04	2.07E-04	1.33E-03	2.90E-05	0.00E+00	4.90E-04	2.13E-03
11	D67	80	Passenger Car	202	0.00E+00	2.42E-06	2.62E-07	9.30E+00	1.69E-05	6.22E-02	5.38E-06	4.14E-04	1.11E-03	1.93E-04	5.24E-04	3.38E-04	3.47E-04	3.16E-05	4.73E-05	1.33E-08	1.78E-04	6.50E-05
11	D67	80	Passenger Truck	338	0.00E+00	5.21E-06	5.52E-07	2.15E+01	3.33E-05	1.14E-01	1.09E-05	1.23E-03	1.99E-03	3.53E-04	1.04E-03	6.77E-04	6.94E-04	1.52E-04	1.09E-04	2.95E-08	3.49E-04	2.01E-04
11	D67	80	Single Unit Short Haul Truck	49	0.00E+00	9.22E-06	4.57E-07	9.04E+00	7.41E-06	1.82E-02	9.80E-06	4.72E-03	5.79E-04	1.31E-04	1.12E-03	2.73E-04	2.77E-04	9.07E-04	3.65E-05	1.45E-08	8.44E-04	8.85E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	4.00E-07	1.98E-08	3.82E-01	3.17E-07	7.53E-04	4.26E-07	2.02E-04	2.64E-05	5.77E-06	4.89E-05	1.17E-05	1.19E-05	3.82E-05	1.54E-06	6.02E-10	3.70E-05	3.78E-05
11	D67	80	Combination Short Haul Truck	38	0.00E+00	1.67E-05	1.19E-06	1.38E+01	5.26E-08	1.48E-02	1.22E-05	1.72E-02	1.01E-03	2.49E-04	9.94E-04	3.52E-04	3.50E-04	2.08E-03	4.62E-05	0.00E+00	6.44E-04	3.24E-03
11	D67	80	Combination Long Haul Truck	35	0.00E+00	1.49E-05	1.00E-06	1.28E+01	6.09E-08	1.53E-02	1.13E-05	1.66E-02	9.91E-04	1.99E-04	1.03E-03	3.03E-04	3.05E-04	1.95E-03	4.27E-05	0.00E+00	7.21E-04	3.14E-03
11	D68	80	Passenger Car	158	0.00E+00	1.89E-06	2.05E-07	7.27E+00	1.32E-05	4.86E-02	4.21E-06	3.24E-04	8.68E-04	1.51E-04	4.10E-04	2.64E-04	2.71E-04	2.47E-05	3.70E-05	1.04E-08	1.39E-04	5.08E-05
11	D68	80	Passenger Truck	264	0.00E+00	4.07E-06	4.32E-07	1.68E+01	2.61E-05	8.95E-02	8.51E-06	9.61E-04	1.56E-03	2.76E-04	8.15E-04	5.30E-04	5.43E-04	1.19E-04	8.51E-05	2.31E-08	2.73E-04	1.57E-04
11	D68	80	Single Unit Short Haul Truck	33	0.00E+00	6.16E-06	3.06E-07	6.05E+00	4.96E-06	1.21E-02	6.56E-06	3.16E-03	3.87E-04	8.76E-05	7.50E-04	1.83E-04	1.85E-04	6.06E-04	2.44E-05	9.68E-09	5.64E-04	5.92E-04
11	D68	80	Single Unit Long Haul Truck	1	0.00E+00	2.68E-07	1.32E-08	2.56E-01	2.12E-07	5.03E-04	2.85E-07	1.35E-04	1.77E-05	3.86E-06	3.27E-05	7.85E-06	7.97E-06	2.55E-05	1.03E-06	4.03E-10	2.47E-05	2.53E-05
11	D68	80	Combination Short Haul Truck	32	0.00E+00	1.39E-05	9.98E-07	1.16E+01	4.41E-08	1.24E-02	1.02E-05	1.44E-02	8.46E-04	2.08E-04	8.32E-04	2.95E-04	2.93E-04	1.74E-03	3.87E-05	0.00E+00	5.39E-04	2.71E-03
11	D68	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.37E-07	1.07E+01	5.10E-08	1.28E-02	9.50E-06	1.39E-02	8.29E-04	1.67E-04	8.61E-04	2.54E-04	2.55E-04	1.63E-03	3.57E-05	0.00E+00	6.04E-04	2.62E-03
11	D69	80	Passenger Car	128	0.00E+00	1.53E-06	1.66E-07	5.89E+00	1.07E-05	3.94E-02	3.41E-06	2.63E-04	7.02E-04	1.22E-04	3.32E-04	2.14E-04	2.20E-04	2.00E-05	3.00E-05	8.41E-09	1.12E-04	4.12E-05
11	D69	80	Passenger Truck	214	0.00E+00	3.30E-06	3.49E-07	1.36E+01	2.11E-05	7.25E-02	6.89E-06	7.78E-04	1.26E-03	2.23E-04	6.60E-04	4.29E-04	4.40E-04	9.63E-05	6.89E-05	1.87E-08	2.21E-04	1.27E-04
11	D69	80	Single Unit Short Haul Truck	12	0.00E+00	2.24E-06	1.11E-07	2.19E+00	1.80E-06	4.41E-03	2.38E-06	1.15E-03	1.40E-04	3.18E-05	2.72E-04	6.63E-05	6.73E-05	2.20E-04	8.85E-06	3.51E-09	2.05E-04	2.15E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	9.72E-08	4.79E-09	9.28E-02	7.69E-08	1.83E-04	1.03E-07	4.91E-05	6.42E-06	1.40E-06	1.19E-05	2.85E-06	2.89E-06	9.27E-06	3.74E-07	1.46E-10	8.97E-06	9.18E-06
11	D69	80	Combination Short Haul Truck	11	0.00E+00	4.90E-06	3.50E-07	4.06E+00	1.55E-08	4.34E-03	3.60E-06	5.05E-03	2.97E-04	7.32E-05	2.92E-04	1.04E-04	1.03E-04	6.11E-04	1.36E-05	0.00E+00	1.89E-04	9.52E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	4.38E-06	2.94E-07	3.76E+00	1.79E-08	4.49E-03	3.34E-06	4.89E-03	2.91E-04	5.85E-05	3.02E-04	8.90E-05	8.96E-05	5.74E-04	1.26E-05	0.00E+00	2.12E-04	9.21E-04
11	D70	80	Passenger Car	64	0.00E+00	7.74E-07	8.38E-08	2.97E+00	5.39E-06	1.99E-02	1.72E-06	1.33E-04	3.55E-04	6.16E-05	1.68E-04	1.08E-04	1.11E-04	1.01E-05	1.51E-05	4.24E-09	5.68E-05	2.08E-05
11	D70	80	Passenger Truck	108	0.00E+00	1.66E-06	1.76E-07	6.87E+00	1.06E-05	3.66E-02	3.48E-06	3.93E-04	6.36E-04	1.13E-04	3.33E-04	2.16E-04	2.22E-04	4.86E-05	3.48E-05	9.45E-09	1.12E-04	6.42E-05
11	D70	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.28E+00	1.87E-06	4.59E-03	2.48E-06	1.19E-03	1.46E-04	3.31E-05	2.83E-04	6.90E-05	7.00E-05	2.29E-04	9.21E-06	3.65E-09	2.13E-04	2.23E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	4.99E-09	9.66E-02	8.00E-08	1.90E-04	1.08E-07	5.11E-05	6.68E-06	1.46E-06	1.23E-05	2.97E-06	3.01E-06	9.64E-06	3.89E-07	1.52E-10	9.34E-06	9.55E-06
11	D70	80	Combination Short Haul Truck	10	0.00E+00	4.44E-06	3.18E-07	3.68E+00	1.40E-08	3.94E-03	3.26E-06	4.58E-03	2.69E-04	6.64E-05	2.65E-04	9.39E-05	9.33E-05	5.54E-04	1.23E-05	0.00E+00	1.72E-04	8.63E-04
11	D70	80	Combination Long Haul Truck	9	0.00E+00	3.97E-06	2.67E-07	3.41E+00	1.62E-08	4.08E-03	3.03E-06	4.44E-03	2.64E-04	5.31E-05	2.74E-04	8.08E-05	8.13E-05	5.20E-04	1.14E-05	0.00E+00	1.92E-04	8.36E-04
10	D71	70	Passenger Car	145	0.00E+00	1.86E-06	2.02E-07	6.87E+00	1.30E-05	4.66E-02	4.14E-06	2.90E-04	1.12E-03	1.80E-04	4.02E-04	2.60E-04	2.67E-04	2.59E-05	3.49E-05	9.52E-09	1.37E-04	4.54E-05
10	D71	70	Passenger Truck	242	0.00E+00	4.09E-06	4.33E-07	1.58E+01	2.58E-05	8.61E-02	8.48E-06	9.08E-04	2.04E-03	3.32E-04	8.07E-04	5.28E-04	5.40E-04	1.18E-04	7.94E-05	2.13E-08	2.70E-04	1.49E-04
10	D71	70	Single Unit Short Haul Truck	24	0.00E+00	5.70E-06	2.85E-07	4.46E+00	4.66E-06	8.95E-03	6.07E-06	2.81E-03	4.01E-04	8.01E-05	6.93E-04	1.70E-04	1.73E-04	4.47E-04	1.80E-05	7.27E-09	5.18E-04	5.26E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.48E-07	1.24E-08	1.89E-01	2.01E-07	3.74E-04	2.64E-07	1.21E-04	1.83E-05	3.56E-06	3.03E-05	7.36E-06	7.48E-06	1.89E-05	7.63E-07	3.06E-10	2.27E-05	2.27E-05
10	D71	70	Combination Short Haul Truck	29	0.00E+00	1.49E-05	1.06E-06	1.08E+01	4.83E-08	1.28E-02	1.09E-05	1.56E-02	1.13E-03	2.47E-04	9.06E-04	3.13E-04	3.12E-04	1.63E-03	3.61E-05	0.00E+00	5.93E-04	2.95E-03
10	D71	70	Combination Long Haul Truck	26	0.00E+00	1.35E-05	8.98E-07	1.01E+01	5.56E-08	1.35E-02	1.02E-05	1.54E-02	1.12E-03	2.05E-04	9.34E-04	2.72E-04	2.75E-04	1.54E-03	3.37E-05	0.00E+00	6.62E-04	2.91E-03
10	D72	70	Passenger Car	176	0.00E+00	2.26E-06	2.45E-07	8.34E+00	1.57E-05	5.66E-02	5.02E-06	3.52E-04	1.36E-03	2.18E-04	4.88E-04	3.16E-04	3.24E-04	3.15E-05	4.23E-05	1.16E-08	1.66E-04	5.51E-05
10	D72	70	Passenger Truck	294	0.00E+00	4.96E-06	5.25E-07	1.92E+01	3.14E-05	1.05E-01	1.03E-05	1.10E-03	2.47E-03	4.03E-04	9.80E-04	6.40E-04	6.56E-04	1.43E-04	9.64E-05	2.59E-08	3.28E-04	1.81E-04
10	D72	70	Single Unit Short Haul Truck	42	0.00E+00	9.79E-06	4.91E-07	7.67E+00	8.01E-06	1.54E-02	1.04E-05	4.84E-03	6.88E-04	1.38E-04	1.19E-03	2.93E-04	2.97E-04	7.68E-04	3.09E-05	1.25E-08	8.90E-04	9.05E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	4.27E-07	2.12E-08	3.26E-01	3.45E-07	6.43E-04	4.54E-07	2.08E-04	3.14E-05	6.12E-06	5.20E-05	1.27E-05	1.29E-05	3.25E-05	1.31E-06	5.26E-10	3.90E-05	3.89E-05
10	D72	70	Combination Short Haul Truck	31	0.00E+00	1.62E-05	1.15E-06	1.18E+01	5.27E-08	1.40E-02	1.19E-05	1.71E-02	1.23E-03	2.70E-04	9.88E-04	3.42E-04	3.41E-04	1.78E-03	3.94E-05	0.00E+00	6.48E-04	3.22E-03
10	D72	70	Combination Long Haul Truck	28	0.00E+00	1.47E-05	9.80E-07	1.10E+01	6.07E-08	1.48E-02	1.11E-05	1.68E-02	1.23E-03	2.24E-04	1.02E-03	2.96E-04	3.00E-04	1.68E-03	3.68E-05	0.00E+00	7.23E-04	3.18E-03
10	D73	70	Passenger Car	79	0.00E+00	1.02E-06	1.11E-07	3.77E+00	7.11E-06	2.55E-02	2.27E-06	1.59E-04	6.15E-04	9.87E-05	2.20E-04	1.43E-04	1.46E-04	1.42E-05	1.91E-05	5.22E-09	7.49E-05	2.49E-05
10	D73	70	Passenger Truck	133	0.00E+00	2.24E-06	2.37E-07	8.67E+00	1.42E-05	4.72E-02	4.65E-06	4.98E-04	1.12E-03	1.82E-04	4.43E-04	2.89E-04	2.96E-04	6.45E-05	4.35E-05	1.17E-08	1.48E-04	8.19E-05
10	D73	70	Single Unit Short Haul Truck	3	0.00E+00	6.78E-07	3.40E-08	5.32E-01	5.55E-07	1.07E-03	7.22E-07	3.35E-04	4.77E-05	9.54E-06	8.26E-05	2.03E-05	2.06E-05	5.32E-05	2.14E-06	8.66E-10	6.17E-05	6.27E-05
10	D73	70	Combination Short Haul Truck	6	0.00E+00	3.35E-06	2.38E-07	2.44E+00	1.09E-08	2.88E-03	2.45E-06	3.53E-03	2.54E-04	5.57E-05	2.04E-04	7.06E-05	7.04E-05	3.67E-04	8.13E-06	0.00E+00	1.34E-04	6.64E-04
10	D73	70	Combination Long Haul Truck	6	0.00E+00	3.04E-06	2.03E-07	2.27E+00	1.25E-08	3.05E-03	2.30E-06	3.48E-03	2.53E-04	4.62E-05	2.11E-04	6.12E-05	6.19E-05	3.46E-04	7.59E-06	0.00E+00	1.49E-04	6.57E-04
10	D74	70	Passenger Car	130	0.00E+00	1.67E-06	1.81E-07	6.16E+00	1.16E-05	4.18E-02	3.71E-06	2.60E-04	1.00E-03	1.61E-04	3.60E-04	2.33E-04	2.39E-04	2.32E-05	3.12E-05	8.53E-09	1.22E-04	4.07E-05
10	D74	70	Passenger Truck	217	0.00E+00	3.67E-06	3.88E-07	1.42E+01	2.31E-05	7.72E-02	7.60E-06	8.14E-04	1.83E-03	2.97E-04	7.23E-04	4.73E-04	4.84E-04	1.05E-04	7.11E-05	1.91E-08	2.42E-04	1.34E-04
10	D74	70	Single Unit Short Haul Truck	4	0.00E+00	8.32E-07	4.17E-08	6.52E-01	6.81E-07	1.31E-03	8.87E-07	4.11E-04	5.86E-05	1.17E-05	1.01E-04	2.49E-05	2.53E-05	6.53E-05	2.63E-06	1.06E-09	7.57E-05	7.70E-05
10	D74	70	Combination Short Haul Truck	4	0.00E+00	2.03E-06	1.44E-07	1.48E+00	6.60E-09	1.75E-03	1.49E-06	2.14E-03	1.54E-04	3.38E-05	1.24E-04	4.28E-05	4.27E-05	2.23E-04	4.93E-06	0.00E+00	8.11E-05	4.03E-04
10	D74	70	Combination Long Haul Truck	4	0.00E+00	1.84E-06	1.23E-07	1.38E+00	7.61E-09	1.85E-03	1.40E-06	2.11E-03	1.53E-04	2.80E-05	1.28E-04	3.71E-05	3.75E-05	2.10E-04	4.60E-06	0.00E+00	9.05E-05	3.98E-04
11	D75	80	Passenger Car	84	0.00E+00	1.00E-06	1.09E-07	3.86E+00	7.00E-06	2.58E-02	2.24E-06	1.72E-04	4.61E-04	8.00E-05	2.18E-04	1.40E-04	1.44E-04	1.31E-05	1.97E-05	5.51E-09	7.37E-05	2.70E-05
11	D75	80	Passenger Truck	140	0.00E+00	2.16E-06	2.29E-07	8.92E+00	1.38E-05	4.75E-02	4.52E-06	5.10E-04	8.26E-04	1.46E-04	4.32E-04	2.81E-04	2.88E-04	6.31E-05	4.52E-05	1.23E-08	1.45E-04	8.34E-05
11	D75	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.18E-03	1.72E-06	8.28E-04	1.02E-04	2.30E-05	1.97E-04	4.79E-05	4.86E-05	1.59E-04	6.39E-06	2.54E-09	1.48E-04	1.55E-04
11	D75	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.23E-04
11	D75	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	D76	80	Passenger Car	86	0.00E+00	1.03E-06	1.11E-07	3.95E+00	7.16E-06	2.64E-02	2.29E-06	1.76E-04	4.71E-04	8.18E-05	2.23E-04	1.43E-04	1.47E-04	1.34E-05	2.01E-05	5.64E-09	7.54E-05	2.76E-05
11	D76	80	Passenger Truck	143	0.00E+00	2.21E-06	2.34E-07	9.12E+00	1.41E-05	4.86E-02	4.62E-06	5.22E-04	8.44E-04	1.50E-04	4.42E-04	2.88E-04	2.95E-04	6.45E-05	4.62E-05	1.25E-08	1.48E-04	8.52E-05
11	D76	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.48E-03	1.34E-06	6.44E-04	7.90E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.21E-04
11	D76	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.52E+00	5.80E-09	1.63E-03	1.35E-06	1.89E-03	1.11E-04	2.74E-05	1.09E-04	3.88E-05	3.86E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.57E-04
11	D76	80	Combination Long Haul Truck	4	0.00E+00	1.64E-06	1.10E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.46E-04
11	D77	80	Passenger Car	139	0.00E+00	1.67E-06	1.81E-07	6.41E+00	1.16E-05	4.29E-02	3.71E-06	2.86E-04	7.65E-04	1.33E-04	3.62E-04	2.33E-04	2.39E-04	2.18E-05	3.26E-05	9.16E-09	1.22E-04	4.48E-05
11	D77	80	Passenger Truck	233	0.00E+00	3.59E-06	3.80E-07	1.48E+01	2.30E-05	7.89E-02	7.51E-06	8.48E-04	1.37E-03	2.43E-04	7.18E-04	4.67E-04	4.79E-04	1.05E-04	7.51E-05	2.04E-08	2.41E-04	1.38E-04
11	D77	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.08E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.64E-09	3.29E-04	3.45E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.70E-09	1.49E-01	1.23E-07	2.93E-04	1.66E-07	7.89E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.01E-07	2.35E-10	1.44E-05	1.47E-05
11	D77	80	Combination Short Haul Truck	10	0.00E+00	4.36E-06	3.12E-07	3.62E+00	1.38E-08	3.86E-03	3.20E-06	4.50E-03	2.64E-04	6.51E-05	2.60E-04	9.22E-05	9.16E-05	5.44E-04	1.21E-05	0.00E+00	1.69E-04	8.47E-04
11	D77	80	Combination Long Haul Truck	9	0.00E+00	3.90E-06	2.62E-07	3.35E+00	1.59E-08	4.00E-03	2.97E-06	4.35E-03	2.59E-04	5.21E-05	2.69E-04	7.93E-05	7.98E-05	5.11E-04	1.12E-05	0.00E+00	1.89E-04	8.21E-04
11	D78	80	Passenger Car	73	0.00E+00	8.79E-07	9.53E-08	3.38E+00	6.13E-06	2.26E-02	1.96E-06	1.51E-04	4.03E-04	7.00E-05	1.91E-04	1.23E-04	1.26E-04	1.15E-05	1.72E-05	4.82E-09	6.45E-05	2.36E-05
11	D78	80	Passenger Truck	123	0.00E+00	1.89E-06	2.00E-07	7.81E+00	1.21E-05	4.16E-02	3.95E-06	4.47E-04	7.23E-04	1.28E-04	3.78E-04	2.46E-04	2.52E-04	5.52E-05	3.95E-05	1.07E-08	1.27E-04	7.29E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.25E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.39E-05	6.48E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.07E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	9.36E-08	4.62E-09	8.94E-02	7.41E-08	1.76E-04	9.97E-08	4.73E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.60E-07	1.41E-10	8.65E-06	8.84E-06
11	D78	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.79E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.14E-04
11	D78	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
11	D79	70	Passenger Car	122	0.00E+00	1.57E-06	1.70E-07	5.80E+00	1.10E-05	3.93E-02	3.49E-06	2.44E-04	9.46E-04	1.52E-04	3.39E-04	2.20E-04	2.25E-04	2.19E-05	2.94E-05	8.04E-09	1.15E-04	3.83E-05
11	D79	70	Passenger Truck	204	0.00E+00	3.45E-06	3.65E-07	1.33E+01	2.18E-05	7.27E-02	7.15E-06	7.67E-04	1.72E-03	2.80E-04	6.81E-04	4.45E-04	4.56E-04	9.94E-05	6.70E-05	1.80E-08	2.28E-04	1.26E-04
11	D79	70	Single Unit Short Haul Truck	22	0.00E+00	5.28E-06	2.64E-07	4.13E+00	4.32E-06	8.29E-03	5.62E-06	2.61E-03	3.71E-04	7.42E-05	6.42E-04	1.58E-04	1.60E-04	4.14E-04	1.66E-05	6.73E-09	4.80E-04	4.88E-04
11	D79	70	Single Unit Long Haul Truck	1	0.00E+00	2.30E-07	1.14E-08	1.75E-01	1.86E-07	3.47E-04	2.45E-07	1.12E-04	1.69E-05	3.30E-06	2.81E-05	6.82E-06	6.93E-06	1.75E-05	7.07E-07	2.83E-10	2.10E-05	2.10E-05
11	D79	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.55E-07	7.72E+00	3.45E-08	9.14E-03	7.78E-06	1.12E-02	8.06E-04	1.77E-04	6.47E-04	2.24E-04	2.23E-04	1.16E-03	2.58E-05	0.00E+00	4.24E-04	2.11E-03
11	D79	70	Combination Long Haul Truck	19	0.00E+00	9.63E-06	6.42E-07	7.19E+00	3.98E-08	9.68E-03	7.30E-06	1.10E-02	8.02E-04	1.46E-04	6.68E-04	1.94E-04	1.96E-04	1.10E-03	2.41E-05	0.00E+00	4.73E-04	2.08E-03
11	D80	70	Passenger Car	340	0

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D84	80	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	9.41E-09	1.82E-01	1.51E-07	3.59E-04	2.03E-07	9.64E-05	1.26E-05	2.75E-06	2.33E-05	5.59E-06	5.68E-06	1.82E-05	7.34E-07	2.87E-10	1.76E-05	1.80E-05
11	D84	80	Combination Short Haul Truck	27	0.00E+00	1.18E-05	8.44E-07	9.79E+00	3.73E-08	1.05E-02	8.67E-06	1.22E-02	7.16E-04	1.76E-04	7.04E-04	2.50E-04	2.48E-04	1.47E-03	3.27E-05	0.00E+00	4.57E-04	2.29E-03
11	D84	80	Combination Long Haul Truck	25	0.00E+00	1.06E-05	7.09E-07	9.06E+00	4.31E-08	1.08E-02	8.04E-06	1.18E-02	7.02E-04	1.41E-04	7.29E-04	2.15E-04	2.16E-04	1.38E-03	3.03E-05	0.00E+00	5.11E-04	2.22E-03
11	D85	80	Passenger Car	292	0.00E+00	3.50E-06	3.79E-07	1.35E+01	2.44E-05	9.00E-02	7.79E-06	6.00E-04	1.61E-03	2.79E-04	7.59E-04	4.89E-04	5.02E-04	4.57E-05	6.85E-05	1.92E-08	2.57E-04	9.40E-05
11	D85	80	Passenger Truck	489	0.00E+00	7.54E-06	7.98E-07	3.11E+01	4.82E-05	1.66E-01	1.57E-05	1.78E-03	2.88E-03	5.10E-04	1.51E-03	9.80E-04	1.00E-03	2.20E-04	1.57E-04	4.28E-08	5.05E-04	2.91E-04
11	D85	80	Single Unit Short Haul Truck	27	0.00E+00	5.07E-06	2.52E-07	4.97E+00	4.08E-06	9.99E-03	5.39E-06	2.60E-03	3.18E-04	7.20E-05	6.17E-04	1.50E-04	1.52E-04	4.99E-04	2.01E-05	7.96E-09	4.64E-04	4.87E-04
11	D85	80	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	1.09E-08	2.10E-01	1.74E-07	4.14E-04	2.34E-07	1.11E-04	1.45E-05	3.18E-06	2.69E-05	6.46E-06	6.56E-06	2.10E-05	8.48E-07	3.31E-10	2.03E-05	2.08E-05
11	D85	80	Combination Short Haul Truck	31	0.00E+00	1.38E-05	9.84E-07	1.14E+01	4.35E-08	1.22E-02	1.01E-05	1.42E-02	8.34E-04	2.06E-04	8.20E-04	2.91E-04	2.89E-04	1.72E-03	3.81E-05	0.00E+00	5.32E-04	2.67E-03
11	D85	80	Combination Long Haul Truck	29	0.00E+00	1.23E-05	8.26E-07	1.06E+01	5.03E-08	1.26E-02	9.37E-06	1.37E-02	8.18E-04	1.64E-04	8.50E-04	2.50E-04	2.52E-04	1.61E-03	3.53E-05	0.00E+00	5.96E-04	2.59E-03
11	D86	80	Passenger Car	337	0.00E+00	4.04E-06	4.38E-07	1.55E+01	2.82E-05	1.04E-01	8.99E-06	6.92E-04	1.85E-03	3.22E-04	8.75E-04	5.64E-04	5.79E-04	5.28E-05	7.90E-05	2.22E-08	2.97E-04	1.09E-04
11	D86	80	Passenger Truck	564	0.00E+00	8.69E-06	9.21E-07	3.59E+01	5.56E-05	1.91E-01	1.82E-05	2.05E-03	3.32E-03	5.89E-04	1.74E-03	1.13E-03	1.16E-03	2.54E-04	1.82E-04	4.93E-08	5.83E-04	3.35E-04
11	D86	80	Single Unit Short Haul Truck	17	0.00E+00	3.10E-06	1.54E-07	3.04E+00	2.49E-06	6.10E-03	3.29E-06	1.59E-03	1.95E-04	4.40E-05	3.77E-04	9.18E-05	9.31E-05	3.05E-04	1.22E-05	4.86E-09	2.84E-04	2.97E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	1.35E-07	6.64E-09	1.28E-01	1.06E-07	2.53E-04	1.43E-07	6.80E-05	8.88E-06	1.94E-06	1.64E-05	3.95E-06	4.01E-06	1.28E-05	5.18E-07	2.02E-10	1.24E-05	1.27E-05
11	D86	80	Combination Short Haul Truck	24	0.00E+00	1.07E-05	7.62E-07	8.83E+00	3.36E-08	9.44E-03	7.82E-06	1.10E-02	6.46E-04	1.59E-04	6.35E-04	2.25E-04	2.24E-04	1.33E-03	2.95E-05	0.00E+00	4.12E-04	2.07E-03
11	D86	80	Combination Long Haul Truck	22	0.00E+00	9.53E-06	6.40E-07	8.18E+00	3.89E-08	9.78E-03	7.26E-06	1.06E-02	6.33E-04	1.27E-04	6.58E-04	1.94E-04	1.95E-04	1.25E-03	2.73E-05	0.00E+00	4.61E-04	2.00E-03
11	D87	80	Passenger Car	760	0.00E+00	9.12E-06	9.88E-07	3.50E+01	6.35E-05	2.34E-01	2.03E-05	1.56E-03	4.18E-03	7.26E-04	1.98E-03	1.27E-03	1.31E-03	1.19E-04	1.78E-04	5.00E-08	6.69E-04	2.45E-04
11	D87	80	Passenger Truck	1273	0.00E+00	1.96E-05	2.08E-06	8.10E+01	1.26E-04	4.31E-01	4.10E-05	4.63E-03	7.50E-03	1.33E-03	3.92E-03	2.55E-03	2.62E-03	5.73E-04	4.10E-04	1.11E-07	1.32E-03	7.57E-04
11	D87	80	Single Unit Short Haul Truck	75	0.00E+00	1.40E-05	6.97E-07	1.38E+01	1.13E-05	2.77E-02	1.49E-05	7.20E-03	8.82E-04	1.99E-04	1.71E-03	4.16E-04	4.22E-04	1.38E-03	5.55E-05	2.20E-08	1.29E-03	1.35E-03
11	D87	80	Single Unit Long Haul Truck	3	0.00E+00	6.10E-07	3.01E-08	5.82E-01	4.82E-07	1.15E-03	6.49E-07	3.08E-04	4.03E-05	8.80E-06	7.45E-05	1.79E-05	1.82E-05	5.82E-05	2.35E-06	9.17E-10	5.63E-05	5.76E-05
11	D87	80	Combination Short Haul Truck	72	0.00E+00	3.16E-05	2.26E-06	2.62E+01	9.98E-08	2.80E-02	2.32E-05	3.26E-02	1.92E-03	4.72E-04	1.88E-03	6.68E-04	6.64E-04	3.94E-03	8.76E-05	0.00E+00	1.22E-03	6.14E-03
11	D87	80	Combination Long Haul Truck	66	0.00E+00	2.83E-05	1.90E-06	2.43E+01	1.15E-07	2.90E-02	2.15E-05	3.15E-02	1.88E-03	3.77E-04	1.95E-03	5.74E-04	5.78E-04	3.70E-03	8.10E-05	0.00E+00	1.37E-03	5.94E-03
11	D88	80	Passenger Car	445	0.00E+00	5.34E-06	5.79E-07	2.05E+01	3.72E-05	1.37E-01	1.19E-05	9.15E-04	2.45E-03	4.25E-04	1.16E-03	7.46E-04	7.65E-04	6.97E-05	1.04E-04	2.93E-08	3.92E-04	1.43E-04
11	D88	80	Passenger Truck	745	0.00E+00	1.15E-05	1.22E-06	4.74E+01	7.35E-05	2.53E-01	2.40E-05	2.71E-03	4.39E-03	7.79E-04	2.30E-03	1.50E-03	1.53E-03	3.35E-04	2.40E-04	6.52E-08	7.70E-04	4.43E-04
11	D88	80	Single Unit Short Haul Truck	74	0.00E+00	1.39E-05	6.88E-07	1.36E+01	1.12E-05	2.73E-02	1.47E-05	7.11E-03	8.71E-04	1.97E-04	1.69E-03	4.11E-04	4.17E-04	1.36E-03	5.48E-05	2.18E-08	1.27E-03	1.33E-03
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	6.02E-07	2.97E-08	5.75E-01	4.76E-07	1.13E-03	6.41E-07	3.04E-04	3.98E-05	8.69E-06	7.36E-05	1.77E-05	1.79E-05	5.74E-05	2.32E-06	9.06E-10	5.56E-05	5.69E-05
11	D88	80	Combination Short Haul Truck	68	0.00E+00	2.97E-05	2.12E-06	2.46E+01	9.36E-08	2.63E-02	2.18E-05	3.06E-02	1.80E-03	4.43E-04	1.77E-03	6.27E-04	6.23E-04	3.70E-03	8.22E-05	0.00E+00	1.15E-03	5.76E-03
11	D88	80	Combination Long Haul Truck	62	0.00E+00	2.65E-05	1.78E-06	2.28E+01	1.08E-07	2.72E-02	2.02E-05	2.96E-02	1.76E-03	3.54E-04	1.83E-03	5.39E-04	5.42E-04	3.47E-03	7.60E-05	0.00E+00	1.28E-03	5.58E-03
9	D89	60	Passenger Car	39	0.00E+00	5.81E-07	6.28E-08	1.95E+00	4.05E-06	1.45E-02	1.29E-06	8.00E-05	3.98E-04	6.12E-05	1.25E-04	8.10E-05	8.32E-05	8.20E-06	9.87E-06	2.72E-09	4.25E-05	1.25E-05
9	D89	60	Passenger Truck	66	0.00E+00	1.28E-06	1.35E-07	4.46E+00	8.02E-06	2.57E-02	2.65E-06	2.61E-04	7.30E-04	1.13E-04	2.50E-04	1.64E-04	1.68E-04	3.49E-05	2.23E-05	6.17E-09	8.35E-05	4.33E-05
9	D89	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	D89	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.60E-08	8.02E-01	4.36E-09	1.08E-03	9.12E-07	1.34E-03	1.14E-04	2.27E-05	7.85E-05	2.56E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	D89	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.21E-08	7.53E-01	5.00E-09	1.16E-03	8.53E-07	1.32E-03	1.15E-04	1.96E-05	8.06E-05	2.19E-05	2.22E-05	1.14E-04	2.51E-06	0.00E+00	5.83E-05	2.50E-04
9	D90	60	Passenger Car	24	0.00E+00	3.54E-07	3.83E-08	1.19E+00	2.47E-06	8.84E-03	7.84E-07	4.88E-05	2.43E-04	3.73E-05	7.64E-05	4.94E-05	5.07E-05	5.00E-06	6.02E-06	1.66E-09	2.59E-05	7.64E-06
9	D90	60	Passenger Truck	40	0.00E+00	7.81E-07	8.25E-08	2.72E+00	4.89E-06	1.57E-02	1.61E-06	1.59E-04	4.45E-04	6.91E-05	1.52E-04	9.97E-05	1.02E-04	2.13E-05	1.36E-05	3.76E-09	5.09E-05	2.64E-05
9	D90	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	D90	60	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.45E-08	6.02E-01	3.27E-09	8.06E-04	6.84E-07	1.00E-03	8.59E-05	1.70E-05	5.88E-05	1.92E-05	1.92E-05	9.07E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	D90	60	Combination Long Haul Truck	1	0.00E+00	8.27E-07	5.41E-08	5.64E-01	3.75E-09	8.70E-04	6.40E-07	9.94E-04	8.62E-05	1.47E-05	6.04E-05	1.65E-05	1.67E-05	8.59E-05	1.88E-06	0.00E+00	4.37E-05	1.88E-04
10	D91	70	Passenger Car	55	0.00E+00	7.04E-07	7.61E-08	2.59E+00	4.90E-06	1.76E-02	1.56E-06	1.09E-04	4.23E-04	6.79E-05	1.52E-04	9.83E-05	1.01E-04	9.78E-06	1.32E-05	3.59E-09	5.16E-05	1.71E-05
10	D91	70	Passenger Truck	91	0.00E+00	1.54E-06	1.63E-07	5.97E+00	9.75E-06	3.25E-02	3.20E-06	3.43E-04	7.69E-04	1.25E-04	3.05E-04	1.99E-04	2.04E-04	4.44E-05	3.00E-05	8.05E-09	1.02E-04	5.64E-05
10	D91	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	D91	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	D91	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.60E-04
10	D92	70	Passenger Car	191	0.00E+00	2.47E-06	2.67E-07	9.09E+00	1.72E-05	6.17E-02	5.48E-06	3.83E-04	1.48E-03	2.38E-04	5.32E-04	3.45E-04	3.54E-04	3.43E-05	4.62E-05	1.26E-08	1.81E-04	6.01E-05
10	D92	70	Passenger Truck	321	0.00E+00	5.41E-06	5.73E-07	2.09E+01	3.42E-05	1.14E-01	1.12E-05	1.20E-03	2.70E-03	4.39E-04	1.07E-03	6.98E-04	7.15E-04	1.56E-04	1.05E-04	2.82E-08	3.58E-04	1.98E-04
10	D92	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.82E-01	9.21E-07	1.77E-03	1.20E-06	5.56E-04	7.91E-05	1.58E-05	1.37E-04	3.37E-05	3.42E-05	8.83E-05	3.55E-06	1.44E-09	1.02E-04	1.04E-04
10	D92	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	D93	70	Passenger Car	46	0.00E+00	5.93E-07	6.41E-08	2.18E+00	4.13E-06	1.48E-02	1.32E-06	9.21E-05	3.56E-04	5.72E-05	1.28E-04	8.28E-05	8.49E-05	8.24E-06	1.11E-05	3.03E-09	4.34E-05	1.44E-05
10	D93	70	Passenger Truck	77	0.00E+00	1.30E-06	1.38E-07	5.03E+00	8.21E-06	2.74E-02	2.70E-06	2.89E-04	6.48E-04	1.05E-04	2.57E-04	1.68E-04	1.72E-04	3.74E-05	2.52E-05	6.78E-09	8.60E-05	4.75E-05
10	D93	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	D93	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	D94	70	Passenger Car	165	0.00E+00	2.12E-06	2.29E-07	7.81E+00	1.48E-05	5.30E-02	4.71E-06	3.29E-04	1.27E-03	2.05E-04	4.57E-04	2.96E-04	3.04E-04	2.95E-05	3.97E-05	1.08E-08	1.55E-04	5.16E-05
10	D94	70	Passenger Truck	275	0.00E+00	4.65E-06	4.92E-07	1.80E+01	2.94E-05	9.80E-02	9.64E-06	1.03E-03	2.32E-03	3.77E-04	9.18E-04	6.00E-04	6.15E-04	1.34E-04	9.03E-05	2.43E-08	3.08E-04	1.70E-04
10	D94	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.34E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.24E-05
10	D94	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.07E-04
9	E01	60	Passenger Car	194	0.00E+00	2.87E-06	3.10E-07	9.62E+00	1.99E-05	7.15E-02	6.34E-06	3.95E-04	1.96E-03	3.02E-04	6.18E-04	4.00E-04	4.10E-04	4.04E-05	4.87E-05	1.34E-08	2.10E-04	6.18E-05
9	E01	60	Passenger Truck	324	0.00E+00	6.32E-06	6.67E-07	2.20E+01	3.95E-05	1.27E-01	1.31E-05	1.29E-03	3.60E-03	5.59E-04	1.23E-03	8.07E-04	8.27E-04	1.72E-04	1.10E-04	3.04E-08	4.12E-04	2.13E-04
9	E01	60	Single Unit Short Haul Truck	12	0.00E+00	3.43E-06	1.71E-07	2.18E+00	2.82E-06	4.20E-03	3.65E-06	1.63E-03	2.77E-04	5.01E-05	4.14E-04	1.03E-04	1.04E-04	2.18E-04	8.80E-06	3.62E-09	3.11E-04	3.06E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.50E-07	7.43E-09	9.30E-02	1.22E-07	1.78E-04	1.60E-07	7.06E-05	1.24E-05	2.23E-06	1.83E-05	4.46E-06	4.54E-06	9.29E-06	3.75E-07	1.54E-10	1.37E-05	1.32E-05
9	E01	60	Combination Short Haul Truck	8	0.00E+00	4.97E-06	3.47E-07	3.23E+00	1.76E-08	4.33E-03	3.68E-06	5.39E-03	4.62E-04	9.14E-05	3.16E-04	1.03E-04	1.03E-04	4.87E-04	1.08E-05	0.00E+00	2.12E-04	1.02E-03
9	E01	60	Combination Long Haul Truck	8	0.00E+00	4.44E-06	2.91E-07	3.03E+00	2.01E-08	4.68E-03	3.44E-06	5.34E-03	4.64E-04	7.88E-05	3.25E-04	8.84E-05	8.95E-05	4.61E-04	1.01E-05	0.00E+00	2.35E-04	1.01E-03
9	E02	60	Passenger Car	138	0.00E+00	2.04E-06	2.21E-07	6.86E+00	1.42E-05	5.10E-02	4.52E-06	2.81E-04	1.40E-03	2.15E-04	4.41E-04	2.85E-04	2.92E-04	2.88E-05	3.47E-05	9.54E-09	1.49E-04	4.41E-05
9	E02	60	Passenger Truck	231	0.00E+00	4.50E-06	4.75E-07	1.57E+01	2.82E-05	9.05E-02	9.30E-06	9.17E-04	2.57E-03	3.98E-04	8.79E-04	5.75E-04	5.89E-04	1.23E-04	7.83E-05	2.17E-08	2.93E-04	1.52E-04
9	E02	60	Single Unit Short Haul Truck	8	0.00E+00	2.23E-06	1.11E-07	1.42E+00	1.83E-06	2.74E-03	2.38E-06	1.06E-03	1.80E-04	3.26E-05	2.70E-04	6.68E-05	6.78E-05	1.42E-04	5.73E-06	2.36E-09	2.03E-04	1.99E-04
9	E02	60	Combination Short Haul Truck	7	0.00E+00	3.89E-06	2.72E-07	2.53E+00	1.38E-08	3.39E-03	2.88E-06	4.22E-03	3.61E-04	7.15E-05	2.48E-04	8.07E-05	8.07E-05	3.82E-04	8.46E-06	0.00E+00	1.66E-04	7.96E-04
9	E02	60	Combination Long Haul Truck	6	0.00E+00	3.48E-06	2.28E-07	2.38E+00	1.58E-08	3.66E-03	2.69E-06	4.18E-03	3.63E-04	6.17E-05	2.54E-04	6.93E-05	7.01E-05	3.61E-04	7.93E-06	0.00E+00	1.84E-04	7.90E-04
11	E03	80	Passenger Car	103	0.00E+00	1.23E-06	1.33E-07	4.73E+00	8.57E-06	3.16E-02	2.74E-06	2.11E-04	5.64E-04	9.80E-05	2.67E-04	1.72E-04	1.76E-04	1.61E-05	2.41E-05	6.75E-09	9.03E-05	3.30E-05
11	E03	80	Passenger Truck	172	0.00E+00	2.65E-06	2.80E-07	1.09E+01	1.69E-05	5.82E-02	5.53E-06	6.25E-04	1.01E-03	1.79E-04	5.29E-04	3.44E-04	3.53E-04	7.73E-05	5.53E-05	1.50E-08	1.77E-04	1.02E-04
11	E03	80	Single Unit Short Haul Truck	11	0.00E+00	2.14E-06	1.06E-07	2.10E+00	1.72E-06	4.21E-03	2.27E-06	1.10E-03	1.34E-04	3.04E-05	2.60E-04	6.33E-05	6.43E-05	2.10E-04	8.45E-06	3.36E-09	1.96E-04	2.05E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	9.28E-08	4.58E-09	8.87E-02	7.34E-08	1.75E-04	9.88E-08	4.69E-05	6.13E-06	1.34E-06	1.13E-05	2.72E-06	2.76E-06	8.85E-06	3.57E-07	1.40E-10	8.57E-06	8.77E-06
11	E03	80	Combination Short Haul Truck	6	0.00E+00	2.82E-06	2.01E-07	2.33E+00	8.89E-09	2.49E-03	2.07E-06	2.90E-03	1.71E-04	4.21E-05	1.68E-04	5.95E-05	5.92E-05	3.51E-04	7.81E-06	0.00E+00	1.09E-04	5.47E-04
11	E03	80	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.69E-07	2.16E+00	1.03E-08	2.58E-03	1.92E-06	2.81E-03	1.67E-04	3.36E-05	1.74E-04	5.12E-05	5.15E-05	3.30E-04	7.22E-06	0.00E+00	1.22E-04	5.30E-04
11	E04	80	Passenger Car	156	0.00E+00	1.87E-06	2.03E-07	7.18E+00	1.30E-05	4.80E-02	4.16E-06	3.20E-04	8.57E-04	1.49E-04	4.05E-04	2.61E-04	2.68E-04	2.44E-05	3.66E-05	1.03E-08	1.37E-04	5.02E-05
11	E04	80	Passenger Truck	261	0.00E+00	4.02E-06	4.26E-07	1.66E+01	2.57E-05	8.84E-02	8.41E-06	9.50E-04	1.54E-03	2.73E-04	8.05E-04	5.23E-04	5.36E-04	1.17E-04	8.41E-05	2.28E-08	2.70E-04	1.55E-04
11	E04	80	Single Unit Short Haul Truck	4	0.00E+00	6.84E-07	3.39E-08	6.70E-01	5.50E-07	1.35E-03	7.27E-07	3.50E-04	4.29E-05	9.71E-06	8.31E-05	2.03E-05	2.06E-05	6.72E-05	2.70E-06	1.07E-09	6.26E-05	6.56E-05
11	E04	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.20E-08	9.51E-01	3.62E-09	1.02E-03	8.42E-07	1.18E-03	6.95E-05	1.71E-05	6.84E-05	2.42E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.43E-05	2.23E-04
11	E04	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.88E-08	8.80E-01	4.19E-09	1.05E-03	7.81E-07	1.14E-03	6.82E-05	1.37E-05	7.08E-05	2.08E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.96E-05	2.16E-04
11	E05	80	Passenger Car	123	0.00E+00	1.47E-06	1.59E-07	5.65E+00	1.03E-05	3.78E-02	3.27E-06	2.52E-04	6.74E-04	1.17E-04	3.19E-04	2.05E-04	2.11E-04	1.92E-05	2.88E-05	8.07E-09	1.08E-04	3.95E-05
11	E05	80	Passenger Truck	205	0.00E+00	3.17E-06	3.35E-07	1.31E+01	2.03E-05	6.96E-02	6.62E-06	7.47E-04	1.21E-03	2.14E-04	6.33E-04	4.12E-04	4.22E-04	9.24E-05	6.62E-05	1.80E-08	2.12E-04	1.22E-04
11	E05	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	E05	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.61E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.31E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.91E-04
11	E05	80	Combination Long Haul Truck	5	0.00E+00	2.26E-06	1.52E-07	1.94E+00	9.23E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.02E-05	1.56E-04	4.59E-05	4.62E-05	2.96E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	E06	80	Passenger Car	46	0.00E+00	5.52E

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E10	60	Passenger Truck	1565	0.00E+00	3.05E-05	3.22E-06	1.06E+02	1.91E-04	6.13E-01	6.30E-05	6.22E-03	1.74E-02	2.70E-03	5.96E-03	3.90E-03	3.99E-03	8.30E-04	5.30E-04	1.47E-07	1.99E-03	1.03E-03
9	E10	60	Single Unit Short Haul Truck	27	0.00E+00	7.89E-06	3.94E-07	5.01E+00	6.48E-06	9.67E-03	8.41E-06	3.76E-03	6.37E-04	1.15E-04	9.52E-04	2.36E-04	2.40E-04	5.02E-04	2.02E-05	8.33E-09	7.16E-04	7.04E-04
9	E10	60	Single Unit Long Haul Truck	1	0.00E+00	3.45E-07	1.71E-08	2.14E-01	2.82E-07	4.10E-04	3.68E-07	1.62E-04	2.86E-05	5.12E-06	4.20E-05	1.03E-05	1.04E-05	2.14E-05	8.63E-07	3.54E-10	3.14E-05	3.05E-05
9	E10	60	Combination Short Haul Truck	25	0.00E+00	1.45E-05	1.01E-06	9.46E+00	5.14E-08	1.27E-02	1.08E-05	1.58E-02	1.35E-03	2.67E-04	9.25E-04	3.02E-04	3.02E-04	1.43E-03	3.16E-05	0.00E+00	6.22E-04	2.97E-03
9	E10	60	Combination Long Haul Truck	23	0.00E+00	1.30E-05	8.50E-07	8.88E+00	5.89E-08	1.37E-02	1.01E-05	1.56E-02	1.36E-03	2.31E-04	9.50E-04	2.59E-04	2.62E-04	1.35E-03	2.96E-05	0.00E+00	6.88E-04	2.95E-03
9	E11	60	Passenger Car	761	0.00E+00	1.13E-05	1.22E-06	3.79E+01	7.85E-05	2.81E-01	2.50E-05	1.55E-03	7.72E-03	1.19E-03	2.43E-03	1.57E-03	1.61E-03	1.59E-04	1.91E-04	5.27E-08	8.25E-04	2.43E-04
9	E11	60	Passenger Truck	1275	0.00E+00	2.49E-05	2.62E-06	8.64E+01	1.55E-04	4.99E-01	5.14E-05	5.06E-03	1.42E-02	2.20E-03	4.85E-03	3.17E-03	3.25E-03	6.76E-04	4.32E-04	1.20E-07	1.62E-03	8.39E-04
9	E11	60	Single Unit Short Haul Truck	38	0.00E+00	1.11E-05	5.56E-07	7.07E+00	9.15E-06	1.37E-02	1.19E-05	5.31E-03	8.99E-04	1.63E-04	1.34E-03	3.33E-04	3.38E-04	7.08E-04	2.86E-05	1.18E-08	1.01E-03	9.94E-04
9	E11	60	Single Unit Long Haul Truck	2	0.00E+00	4.87E-07	2.41E-08	3.02E-01	3.98E-07	5.79E-04	5.19E-07	2.29E-04	4.04E-05	7.23E-06	5.93E-05	1.45E-05	1.47E-05	3.02E-05	1.22E-06	5.00E-10	4.44E-05	4.30E-05
9	E11	60	Combination Short Haul Truck	39	0.00E+00	2.32E-05	1.62E-06	1.51E+01	8.21E-08	2.02E-02	1.72E-05	2.52E-02	2.16E-03	4.27E-04	1.48E-03	4.82E-04	4.82E-04	2.28E-03	5.05E-05	0.00E+00	9.93E-04	4.75E-03
9	E11	60	Combination Long Haul Truck	36	0.00E+00	2.08E-05	1.36E-06	1.42E+01	9.41E-08	2.19E-02	1.61E-05	2.50E-02	2.17E-03	3.68E-04	1.52E-03	4.13E-04	4.18E-04	2.16E-03	4.73E-05	0.00E+00	1.10E-03	4.71E-03
9	E12	60	Passenger Car	1112	0.00E+00	1.65E-05	1.78E-06	5.53E+01	1.15E-04	4.11E-01	3.65E-05	2.27E-03	1.13E-02	1.73E-03	3.55E-03	2.30E-03	2.36E-03	2.32E-04	2.80E-04	7.69E-08	1.21E-03	3.55E-04
9	E12	60	Passenger Truck	1863	0.00E+00	3.63E-05	3.83E-06	1.26E+02	2.27E-04	7.30E-01	7.50E-05	7.40E-03	2.07E-02	3.21E-03	7.09E-03	4.64E-03	4.75E-03	9.88E-04	6.31E-04	1.75E-07	2.36E-03	1.23E-03
9	E12	60	Single Unit Short Haul Truck	29	0.00E+00	8.64E-06	4.31E-07	5.48E+00	7.10E-06	1.06E-02	9.21E-06	4.11E-03	6.97E-04	1.26E-04	1.04E-03	2.58E-04	2.62E-04	5.49E-04	2.22E-05	9.13E-09	7.84E-04	7.71E-04
9	E12	60	Single Unit Long Haul Truck	1	0.00E+00	3.77E-07	1.87E-08	2.34E-01	3.08E-07	4.49E-04	4.02E-07	1.78E-04	3.13E-05	5.61E-06	4.60E-05	1.12E-05	1.14E-05	2.34E-05	9.45E-07	3.88E-10	3.44E-05	3.33E-05
9	E12	60	Combination Short Haul Truck	32	0.00E+00	1.86E-05	1.30E-06	1.21E+01	6.58E-08	1.62E-02	1.38E-05	2.02E-02	1.73E-03	3.42E-04	1.19E-03	3.86E-04	3.86E-04	1.83E-03	4.05E-05	0.00E+00	7.96E-04	3.81E-03
9	E12	60	Combination Long Haul Truck	29	0.00E+00	1.66E-05	1.09E-06	1.14E+01	7.55E-08	1.75E-02	1.29E-05	2.00E-02	1.74E-03	2.95E-04	1.22E-03	3.31E-04	3.35E-04	1.73E-03	3.79E-05	0.00E+00	8.81E-04	3.78E-03
11	E13	80	Passenger Car	362	0.00E+00	4.34E-06	4.70E-07	1.67E+01	3.03E-05	1.12E-01	9.66E-06	7.44E-04	1.99E-03	3.46E-04	9.41E-04	6.06E-04	6.22E-04	5.67E-05	8.49E-05	2.38E-08	3.19E-04	1.17E-04
11	E13	80	Passenger Truck	606	0.00E+00	9.34E-06	9.90E-07	3.85E+01	5.98E-05	2.05E-01	1.95E-05	2.21E-03	3.57E-03	6.33E-04	1.87E-03	1.22E-03	1.25E-03	2.73E-04	1.95E-04	5.30E-08	6.26E-04	3.60E-04
11	E13	80	Single Unit Short Haul Truck	20	0.00E+00	3.78E-06	1.87E-07	3.70E+00	3.04E-06	7.44E-03	4.02E-06	1.94E-03	2.37E-04	5.37E-05	4.59E-04	1.12E-04	1.14E-04	3.72E-04	1.49E-05	5.93E-09	3.46E-04	3.63E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.64E-07	8.09E-09	1.57E-01	1.30E-07	3.08E-04	1.75E-07	8.29E-05	1.08E-05	2.37E-06	2.00E-05	4.81E-06	4.89E-06	1.56E-05	6.32E-07	2.47E-10	1.52E-05	1.55E-05
11	E13	80	Combination Short Haul Truck	14	0.00E+00	6.17E-06	4.41E-07	5.11E+00	1.95E-08	5.47E-03	4.53E-06	6.36E-03	3.74E-04	9.21E-05	3.68E-04	1.30E-04	1.30E-04	7.69E-04	1.71E-05	0.00E+00	2.39E-04	1.20E-03
11	E13	80	Combination Long Haul Truck	13	0.00E+00	5.52E-06	3.70E-07	4.74E+00	2.25E-08	5.66E-03	4.20E-06	6.16E-03	3.67E-04	7.37E-05	3.81E-04	1.12E-04	1.13E-04	7.23E-04	1.58E-05	0.00E+00	2.67E-04	1.16E-03
11	E14	80	Passenger Car	305	0.00E+00	3.66E-06	3.97E-07	1.41E+01	2.55E-05	9.41E-02	8.15E-06	6.27E-04	1.68E-03	2.92E-04	7.94E-04	5.11E-04	5.25E-04	4.78E-05	7.17E-05	2.01E-08	2.69E-04	9.84E-05
11	E14	80	Passenger Truck	511	0.00E+00	7.88E-06	8.35E-07	3.25E+01	5.04E-05	1.73E-01	1.65E-05	1.86E-03	3.01E-03	5.34E-04	1.58E-03	1.03E-03	1.05E-03	2.30E-04	1.65E-04	4.47E-08	5.28E-04	3.04E-04
11	E14	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.06E-08	1.59E+00	1.31E-06	3.20E-03	1.73E-06	8.32E-04	1.02E-04	2.31E-05	1.97E-04	4.81E-05	4.88E-05	1.60E-04	6.42E-06	2.55E-09	1.49E-04	1.56E-04
11	E14	80	Combination Short Haul Truck	9	0.00E+00	3.73E-06	2.67E-07	3.09E+00	1.18E-08	3.31E-03	2.74E-06	3.85E-03	2.26E-04	5.57E-05	2.22E-04	7.89E-05	7.84E-05	4.65E-04	1.03E-05	0.00E+00	1.44E-04	7.25E-04
11	E14	80	Combination Long Haul Truck	8	0.00E+00	3.34E-06	2.24E-07	2.86E+00	1.36E-08	3.42E-03	2.54E-06	3.73E-03	2.22E-04	4.46E-05	2.30E-04	6.78E-05	6.83E-05	4.37E-04	9.56E-06	0.00E+00	1.62E-04	7.02E-04
11	E15	80	Passenger Car	204	0.00E+00	2.45E-06	2.65E-07	9.41E+00	1.71E-05	6.29E-02	5.45E-06	4.19E-04	1.12E-03	1.95E-04	5.30E-04	3.42E-04	3.51E-04	3.20E-05	4.79E-05	1.34E-08	1.80E-04	6.57E-05
11	E15	80	Passenger Truck	342	0.00E+00	5.27E-06	5.58E-07	2.17E+01	3.37E-05	1.16E-01	1.10E-05	1.24E-03	2.01E-03	3.57E-04	1.05E-03	6.85E-04	7.02E-04	1.54E-04	1.10E-04	2.99E-08	3.53E-04	2.03E-04
11	E15	80	Single Unit Short Haul Truck	4	0.00E+00	8.40E-07	4.17E-08	8.23E-01	6.75E-07	1.65E-03	8.93E-07	4.30E-04	5.27E-05	1.19E-05	1.02E-04	2.49E-05	2.53E-05	8.26E-05	3.32E-06	1.32E-09	7.69E-05	8.06E-05
11	E15	80	Combination Short Haul Truck	9	0.00E+00	4.16E-06	2.98E-07	3.45E+00	1.31E-08	3.69E-03	3.06E-06	4.29E-03	2.52E-04	6.22E-05	2.48E-04	8.80E-05	8.75E-05	5.19E-04	1.15E-05	0.00E+00	1.61E-04	8.09E-04
11	E15	80	Combination Long Haul Truck	9	0.00E+00	3.72E-06	2.50E-07	3.20E+00	1.52E-08	3.82E-03	2.83E-06	4.16E-03	2.47E-04	4.97E-05	2.57E-04	7.57E-05	7.62E-05	4.88E-04	1.07E-05	0.00E+00	1.80E-04	7.83E-04
11	E16	80	Passenger Car	210	0.00E+00	2.52E-06	2.73E-07	9.67E+00	1.75E-05	6.46E-02	5.60E-06	4.31E-04	1.15E-03	2.00E-04	5.45E-04	3.51E-04	3.60E-04	3.28E-05	4.92E-05	1.38E-08	1.85E-04	6.75E-05
11	E16	80	Passenger Truck	351	0.00E+00	5.41E-06	5.73E-07	2.23E+01	3.46E-05	1.19E-01	1.13E-05	1.28E-03	2.07E-03	3.67E-04	1.08E-03	7.04E-04	7.22E-04	1.58E-04	1.13E-04	3.07E-08	3.63E-04	2.09E-04
11	E16	80	Single Unit Short Haul Truck	5	0.00E+00	8.93E-07	4.43E-08	8.75E-01	7.18E-07	1.76E-03	9.50E-07	4.58E-04	5.61E-05	1.27E-05	1.09E-04	2.65E-05	2.68E-05	8.78E-05	3.53E-06	1.40E-09	8.17E-05	8.57E-05
11	E16	80	Combination Short Haul Truck	7	0.00E+00	3.29E-06	2.35E-07	2.73E+00	1.04E-08	2.91E-03	2.41E-06	3.39E-03	1.99E-04	4.91E-05	1.96E-04	6.95E-05	6.91E-05	4.10E-04	9.11E-06	0.00E+00	1.27E-04	6.39E-04
11	E16	80	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.97E-07	2.52E+00	1.20E-08	3.02E-03	2.24E-06	3.28E-03	1.95E-04	3.93E-05	2.03E-04	5.98E-05	6.02E-05	3.85E-04	8.42E-06	0.00E+00	1.42E-04	6.19E-04
11	E17	80	Passenger Car	172	0.00E+00	2.06E-06	2.24E-07	7.93E+00	1.44E-05	5.30E-02	4.59E-06	3.54E-04	9.46E-04	1.64E-04	4.47E-04	2.88E-04	2.96E-04	2.69E-05	4.04E-05	1.13E-08	1.51E-04	5.54E-05
11	E17	80	Passenger Truck	288	0.00E+00	4.44E-06	4.70E-07	1.83E+01	2.84E-05	9.76E-02	9.28E-06	1.05E-03	1.70E-03	3.01E-04	8.88E-04	5.78E-04	5.92E-04	1.30E-04	9.28E-05	2.52E-08	2.98E-04	1.71E-04
11	E17	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.18E-03	1.72E-06	8.28E-04	1.02E-04	2.30E-05	1.97E-04	4.79E-05	4.86E-05	1.59E-04	6.39E-06	2.54E-09	1.48E-04	1.55E-04
11	E17	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.03E-03	1.69E-06	2.37E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.86E-04	6.36E-06	0.00E+00	8.88E-05	4.46E-04
11	E17	80	Combination Long Haul Truck	5	0.00E+00	2.05E-06	1.38E-07	1.76E+00	8.39E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.42E-04	4.17E-05	4.20E-05	2.69E-04	5.88E-06	0.00E+00	9.94E-05	4.32E-04
11	E18	80	Passenger Car	102	0.00E+00	1.22E-06	1.32E-07	4.69E+00	8.50E-06	3.14E-02	2.71E-06	2.09E-04	5.59E-04	9.72E-05	2.64E-04	1.70E-04	1.75E-04	1.59E-05	2.39E-05	6.69E-09	8.95E-05	3.28E-05
11	E18	80	Passenger Truck	170	0.00E+00	2.63E-06	2.78E-07	1.08E+01	1.68E-05	5.77E-02	5.49E-06	6.20E-04	1.00E-03	1.78E-04	5.25E-04	3.42E-04	3.50E-04	7.66E-05	5.49E-05	1.49E-08	1.76E-04	1.01E-04
11	E18	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.25E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.39E-05	6.48E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.07E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	9.36E-08	4.62E-09	8.94E-02	7.41E-08	1.76E-04	9.97E-08	4.73E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.60E-07	1.41E-10	8.65E-06	8.84E-06
11	E18	80	Combination Short Haul Truck	7	0.00E+00	2.98E-06	2.13E-07	2.47E+00	9.43E-09	2.64E-03	2.19E-06	3.08E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.27E-05	3.72E-04	8.27E-06	0.00E+00	1.15E-04	5.80E-04
11	E18	80	Combination Long Haul Truck	6	0.00E+00	2.67E-06	1.79E-07	2.29E+00	1.09E-08	2.74E-03	2.03E-06	2.98E-03	1.77E-04	3.57E-05	1.84E-04	5.43E-05	5.46E-05	3.50E-04	7.65E-06	0.00E+00	1.29E-04	5.61E-04
9	E19	60	Passenger Car	246	0.00E+00	3.64E-06	3.94E-07	1.22E+01	2.54E-05	9.09E-02	8.06E-06	5.02E-04	2.49E-03	3.83E-04	7.86E-04	5.08E-04	5.21E-04	5.14E-05	6.18E-05	1.70E-08	2.67E-04	7.86E-05
9	E19	60	Passenger Truck	412	0.00E+00	8.03E-06	8.48E-07	2.79E+01	5.02E-05	1.61E-01	1.66E-05	1.64E-03	4.58E-03	7.11E-04	1.57E-03	1.03E-03	1.05E-03	2.19E-04	1.40E-04	3.87E-08	5.23E-04	2.71E-04
9	E19	60	Single Unit Short Haul Truck	24	0.00E+00	7.05E-06	3.52E-07	4.48E+00	5.79E-06	8.65E-03	7.52E-06	3.36E-03	5.69E-04	1.03E-04	8.51E-04	2.11E-04	2.14E-04	4.48E-04	1.81E-05	7.45E-09	6.40E-04	6.29E-04
9	E19	60	Single Unit Long Haul Truck	1	0.00E+00	3.08E-07	1.53E-08	1.91E-01	2.52E-07	3.67E-04	3.29E-07	1.45E-04	2.56E-05	4.58E-06	3.75E-05	9.18E-06	9.33E-06	1.91E-05	7.71E-07	3.17E-10	2.81E-05	2.72E-05
9	E19	60	Combination Short Haul Truck	17	0.00E+00	1.02E-05	7.10E-07	6.62E+00	3.60E-08	8.87E-03	7.53E-06	1.10E-02	9.45E-04	1.87E-04	6.47E-04	2.11E-04	2.11E-04	9.97E-04	2.21E-05	0.00E+00	4.35E-04	2.08E-03
9	E19	60	Combination Long Haul Truck	16	0.00E+00	9.09E-06	5.95E-07	6.21E+00	4.12E-08	9.57E-03	7.04E-06	1.09E-02	9.49E-04	1.61E-04	6.65E-04	1.81E-04	1.83E-04	9.44E-04	2.07E-05	0.00E+00	4.81E-04	2.06E-03
9	E20	60	Passenger Car	412	0.00E+00	6.10E-06	6.59E-07	2.05E+01	4.25E-05	1.52E-01	1.35E-05	8.40E-04	4.18E-03	6.42E-04	1.32E-03	8.50E-04	8.73E-04	8.61E-05	1.04E-04	2.85E-08	4.46E-04	1.32E-04
9	E20	60	Passenger Truck	690	0.00E+00	1.35E-05	1.42E-06	4.68E+01	8.41E-05	2.70E-01	2.78E-05	2.74E-03	7.67E-03	1.19E-03	2.63E-03	1.72E-03	1.76E-03	3.66E-04	2.34E-04	6.48E-08	8.76E-04	4.54E-04
9	E20	60	Single Unit Short Haul Truck	20	0.00E+00	5.92E-06	2.96E-07	3.76E+00	4.87E-06	7.26E-03	6.31E-06	2.82E-03	4.78E-04	8.66E-05	7.15E-04	1.77E-04	1.80E-04	3.77E-04	1.52E-05	6.26E-09	5.37E-04	5.29E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	2.59E-07	1.28E-08	1.61E-01	2.11E-07	3.08E-04	2.76E-07	1.22E-04	2.15E-05	3.84E-06	3.15E-05	7.71E-06	7.84E-06	1.60E-05	6.48E-07	2.66E-10	2.36E-05	2.29E-05
9	E20	60	Combination Short Haul Truck	11	0.00E+00	6.47E-06	4.52E-07	4.21E+00	2.29E-08	5.64E-03	4.79E-06	7.02E-03	6.01E-04	1.19E-04	4.12E-04	1.34E-04	1.34E-04	6.35E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
9	E20	60	Combination Long Haul Truck	10	0.00E+00	5.79E-06	3.78E-07	3.95E+00	2.62E-08	6.09E-03	4.48E-06	6.96E-03	6.04E-04	1.03E-04	4.23E-04	1.15E-04	1.17E-04	6.01E-04	1.32E-05	0.00E+00	3.06E-04	1.31E-03
11	E21	80	Passenger Car	82	0.00E+00	9.87E-07	1.07E-07	3.79E+00	6.88E-06	2.54E-02	2.20E-06	1.69E-04	4.52E-04	7.86E-05	2.14E-04	1.38E-04	1.41E-04	1.29E-05	1.93E-05	5.41E-09	7.24E-05	2.65E-05
11	E21	80	Passenger Truck	138	0.00E+00	2.12E-06	2.25E-07	8.76E+00	1.36E-05	4.67E-02	4.44E-06	5.01E-04	8.11E-04	1.44E-04	4.25E-04	2.76E-04	2.83E-04	6.20E-05	4.44E-05	1.21E-08	1.42E-04	8.19E-05
11	E21	80	Single Unit Short Haul Truck	3	0.00E+00	5.72E-07	2.84E-08	5.61E-01	4.60E-07	1.13E-03	6.09E-07	2.93E-04	3.60E-05	8.13E-06	6.96E-05	1.70E-05	1.72E-05	5.63E-05	2.26E-06	8.99E-10	5.24E-05	5.50E-05
11	E21	80	Combination Short Haul Truck	4	0.00E+00	1.79E-06	1.28E-07	1.48E+00	5.64E-09	1.58E-03	1.31E-06	1.84E-03	1.08E-04	2.67E-05	1.06E-04	3.77E-05	3.75E-05	2.23E-04	4.95E-06	0.00E+00	6.90E-05	3.47E-04
11	E21	80	Combination Long Haul Truck	4	0.00E+00	1.60E-06	1.07E-07	1.37E+00	6.52E-09	1.64E-03	1.22E-06	1.78E-03	1.06E-04	2.13E-05	1.10E-04	3.25E-05	3.27E-05	2.09E-04	4.58E-06	0.00E+00	7.73E-05	3.36E-04
11	E22	80	Passenger Car	13	0.00E+00	1.58E-07	1.71E-08	6.08E-01	1.10E-06	4.06E-03	3.52E-07	2.71E-05	7.25E-06	1.26E-05	3.43E-05	2.21E-05	2.27E-05	2.06E-06	3.09E-06	8.67E-10	1.16E-05	4.25E-06
11	E22	80	Passenger Truck	22	0.00E+00	3.40E-07	3.60E-08	1.40E+00	2.18E-06	7.48E-03	7.11E-07	8.03E-05	1.30E-04	2.30E-05	6.80E-05	4.43E-05	4.54E-05	9.93E-06	7.11E-06	1.93E-09	2.28E-05	1.31E-05
11	E22	80	Combination Short Haul Truck	1	0.00E+00	5.22E-07	3.73E-08	4.33E-01	1.65E-09	4.63E-04	3.83E-07	5.39E-04	3.17E-05	7.80E-06	3.11E-05	1.10E-05	1.10E-05	6.51E-05	1.45E-06	0.00E+00	2.02E-05	1.01E-04
11	E22	80	Combination Long Haul Truck	1	0.00E+00	4.67E-07	3.13E-08	4.01E-01	1.91E-09	4.79E-04	3.56E-07	5.21E-04	3.10E-05	6.24E-06	3.22E-05	9.49E-06	9.55E-06	6.12E-05	1.34E-06	0.00E+00	2.26E-05	9.82E-05
11	E23	80	Passenger Car	355	0.00E+00	4.26E-06	4.62E-07	1.64E+01	2.97E-05	1.10E-01	9.48E-06	7.30E-04	1.95E-03	3.39E-04	9.24E-04	5.95E-04	6.11E-04	5.57E-05	8.34E-05	2.34E-08	3.13E-04	1.14E-04
11	E23	80	Passenger Truck	595	0.00E+00	9.17E-06	9.72E-07	3.78E+01	5.87E-05	2.02E-01	1.92E-05	2.16E-03	3.50E-03	6.21E-04	1.83E-03	1.19E-03	1.22E-03	2.68E-04	1.92E-04	5.21E-08	6.15E-04	3.54E-04
11	E23	80	Single Unit Short Haul Truck	78	0.00E+00	1.47E-05	7.28E-07	1.44E+01	1.18E-05	2.89E-02	1.56E-05	7.52E-03	9.21E-04	2.08E-04	1.78E-03	4.34E-04	4.41E-04	1.44E-03	5.80E-05	2.30E-08	1.34E-03	1.41E-03
11	E23	80	Single Unit Long Haul Truck	3	0.00E+00	6.37E-07	3.14E-08	6.08E-01	5.04E-07	1.20E-03	6.78E-07	3.22E-04	4.21E-05	9.19E-06	7.78E-05	1.87E-05	1.90E-05	6.07E-05	2.45E-06	9.58E-10	5.88E-05	6.02E-05
11	E23	80	Combination Short Haul Truck	57	0.00E+00	2.48E-05	1.77E-06	2.06E+01	7.84E-08	2.20E-02	1.82E-05	2.56E-02	1.50E-03	3.71E-04	1.48E-03	5.24E-04	5.21E-04	3.09E-03	6.88E-05	0.00E+00	9.59E-04	4.82E-03
11	E23	80	Combination Long Haul Truck	52	0.00E+00	2.22E-05	1.49E-06	1.90E+01	9.06E-08	2.28E-02	1.69E-05	2.48E-02	1.47E-03	2.96E-04	1.53E-03	4.51E-04	4.54E-04	2.91E-03	6.36E-05	0.00E+00	1.07E-03	4.67E-03
11	E24	80	Passenger Car	266	0.00E+00	3.19E-06	3.45E-07	1.22E+01	2.22E-05	8.19E-02	7.09E-06	5.46E-04	1.46E-03	2.54E-04	6.90E-04	4.45E-04	4.57E-04	4.16E-05	6.23E-05	1.75E-08	2.34E-04	8.56E-05
11	E24	80	Passenger Truck	445	0.00E+00	6.86E-06	7.26E-07	2.83E+01	4.39E-05	1.51E-01	1.43E-05	1.62E-03	2.62E-03	4.64E-04	1.37E-03	8.92E-04	9.14E-04	2.00E-04	1.43E-04	3.89E-08	4.60E-04	2.64E-04
11	E24	80	Single Unit Short Haul Truck	85	0.00E+00	1.60E-05	7.92E-07	1.57E+01	1.28E-05	3.14E-02	1.70E-05	8.18E-03	1.00E-03	2.27E-04	1.94E-03	4.73E-04	4.80E-04	1.57E-03	6.31E-05	2.51E-08	1.46E-03	1.53E-03
11	E24	80	Single Unit Long Haul Truck	4	0.00E+00	6.93E-07	3.42E-08	6.62E-01	5.49E-07	1.30E-03	7.38E-07	3.50E-04	4.58E-05	1.00E-05	8.47E-05	2.03E-05	2.06E-05	6.61E-05	2.67E-06	1.04E-09	6.40E-05	6.55E-05
11	E24	80	Combination Short Haul Truck	61	0.00E+00	2.66E-05	1.91E-06	2.21E+01	8.41E-08	2.36E-02	1.96E-05	2.75E-02	1.62E-03	3.98E-04	1.59E-03	5.63E-04	5.60E-04	3.32E-03	7.39E-05	0.00E+00	1.03E-03	5.18E-03
11	E24	80	Combination Long Haul Truck	55	0.00E+00	2.38E-05	1.60E-06	2.05E+01	9.73E-08	2.44E-02	1.81E-05	2.66E-02	1.58E-03	3.18E-04	1.65E-03	4.84E-04	4.87E-04	3.12E-03	6.83E-05	0.00E+00	1.15E-03	5.01E-03
10	E25	70	Passenger Car	159	0.00

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E29	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E29	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E30	70	Passenger Car	55	0.00E+00	7.13E-07	7.72E-08	2.63E+00	4.96E-06	1.78E-02	1.58E-06	1.11E-04	4.29E-04	6.89E-05	1.54E-04	9.96E-05	1.02E-04	9.91E-06	1.33E-05	3.64E-09	5.23E-05	1.74E-05
10	E30	70	Passenger Truck	93	0.00E+00	1.57E-06	1.66E-07	6.05E+00	9.88E-06	3.29E-02	3.24E-06	3.47E-04	7.80E-04	1.27E-04	3.09E-04	2.02E-04	2.07E-04	4.50E-05	3.04E-05	8.16E-09	1.03E-04	5.71E-05
10	E30	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.34E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.24E-05
10	E30	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E30	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.07E-04
10	E31	70	Passenger Car	238	0.00E+00	3.07E-06	3.32E-07	1.13E+01	2.14E-05	7.67E-02	6.81E-06	4.77E-04	1.85E-03	2.96E-04	6.62E-04	4.29E-04	4.40E-04	4.27E-05	5.74E-05	1.57E-08	2.25E-04	7.48E-05
10	E31	70	Passenger Truck	399	0.00E+00	6.74E-06	7.12E-07	2.60E+01	4.25E-05	1.42E-01	1.40E-05	1.50E-03	3.36E-03	5.46E-04	1.33E-03	8.69E-04	8.90E-04	1.94E-04	1.31E-04	3.51E-08	4.45E-04	2.46E-04
10	E31	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.10E-05	1.06E-04	4.26E-06	1.72E-09	1.23E-04	1.25E-04
10	E31	70	Combination Short Haul Truck	4	0.00E+00	2.17E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.59E-06	2.29E-03	1.65E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.68E-05	4.31E-04
10	E31	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.31E-07	1.47E+00	8.14E-09	1.98E-03	1.49E-06	2.26E-03	1.64E-04	3.00E-05	1.37E-04	3.97E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.26E-04
10	E32	70	Passenger Car	121	0.00E+00	1.56E-06	1.69E-07	5.75E+00	1.09E-05	3.90E-02	3.47E-06	2.43E-04	9.39E-04	1.51E-04	3.36E-04	2.18E-04	2.24E-04	2.17E-05	2.92E-05	7.97E-09	1.14E-04	3.80E-05
10	E32	70	Passenger Truck	203	0.00E+00	3.43E-06	3.62E-07	1.32E+01	2.16E-05	7.21E-02	7.10E-06	7.61E-04	1.71E-03	2.78E-04	6.76E-04	4.42E-04	4.52E-04	9.86E-05	6.65E-05	1.79E-08	2.27E-04	1.25E-04
10	E32	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.82E-01	9.21E-07	1.77E-03	1.20E-06	5.56E-04	7.91E-05	1.58E-05	1.37E-04	3.37E-05	3.42E-05	8.83E-05	3.55E-06	1.44E-09	1.02E-04	1.04E-04
10	E32	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	E32	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.20E-04
9	E33	60	Passenger Car	473	0.00E+00	7.00E-06	7.57E-07	2.35E+01	4.88E-05	1.75E-01	1.55E-05	9.65E-04	4.80E-03	7.37E-04	1.51E-03	9.76E-04	1.00E-03	9.88E-05	1.19E-04	3.27E-08	5.12E-04	1.51E-04
9	E33	60	Passenger Truck	792	0.00E+00	1.54E-05	1.63E-06	5.37E+01	9.66E-05	3.10E-01	3.19E-05	3.15E-03	8.80E-03	1.37E-03	3.01E-03	1.97E-03	2.02E-03	4.20E-04	2.68E-04	7.44E-08	1.01E-03	5.22E-04
9	E33	60	Single Unit Short Haul Truck	16	0.00E+00	4.57E-06	2.28E-07	2.90E+00	3.76E-06	5.61E-03	4.88E-06	2.18E-03	3.69E-04	6.69E-05	5.52E-04	1.37E-04	1.39E-04	2.91E-04	1.17E-05	4.83E-09	4.15E-04	4.08E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	9.92E-09	1.24E-01	1.63E-07	2.38E-04	2.13E-07	9.42E-05	1.66E-05	2.97E-06	2.44E-05	5.96E-06	6.05E-06	1.24E-05	5.01E-07	2.06E-10	1.82E-05	1.77E-05
9	E33	60	Combination Short Haul Truck	16	0.00E+00	9.14E-06	6.38E-07	5.95E+00	3.23E-08	7.98E-03	6.77E-06	9.92E-03	8.49E-04	1.68E-04	5.82E-04	1.90E-04	1.90E-04	8.97E-04	1.99E-05	0.00E+00	3.91E-04	1.87E-03
9	E33	60	Combination Long Haul Truck	14	0.00E+00	8.18E-06	5.35E-07	5.58E+00	3.71E-08	8.61E-03	6.33E-06	9.83E-03	8.53E-04	1.45E-04	5.98E-04	1.63E-04	1.65E-04	8.49E-04	1.86E-05	0.00E+00	4.33E-04	1.86E-03
9	E34	60	Passenger Car	301	0.00E+00	4.46E-06	4.81E-07	1.50E+01	3.10E-05	1.11E-01	9.86E-06	6.14E-04	3.05E-03	4.69E-04	9.61E-04	6.21E-04	6.38E-04	6.29E-05	7.56E-05	2.08E-08	3.26E-04	9.61E-05
9	E34	60	Passenger Truck	504	0.00E+00	9.83E-06	1.04E-06	3.42E+01	6.14E-05	1.97E-01	2.03E-05	2.00E-03	5.60E-03	8.69E-04	1.92E-03	1.25E-03	1.28E-03	2.67E-04	1.71E-04	4.73E-08	6.40E-04	3.32E-04
9	E34	60	Single Unit Short Haul Truck	11	0.00E+00	3.12E-06	1.56E-07	1.98E+00	2.57E-06	3.83E-03	3.33E-06	1.49E-03	2.52E-04	4.57E-05	3.77E-04	9.34E-05	9.49E-05	1.99E-04	8.02E-06	3.30E-09	2.83E-04	2.79E-04
9	E34	60	Combination Short Haul Truck	10	0.00E+00	6.14E-06	4.29E-07	4.00E+00	2.17E-08	5.36E-03	4.55E-06	6.66E-03	5.71E-04	1.13E-04	3.91E-04	1.27E-04	1.27E-04	6.03E-04	1.34E-05	0.00E+00	2.63E-04	1.26E-03
9	E34	60	Combination Long Haul Truck	10	0.00E+00	5.50E-06	3.59E-07	3.75E+00	2.49E-08	5.79E-03	4.25E-06	6.61E-03	5.73E-04	9.75E-05	4.02E-04	1.09E-04	1.11E-04	5.71E-04	1.25E-05	0.00E+00	2.91E-04	1.25E-03
9	E35	60	Passenger Car	373	0.00E+00	5.53E-06	5.98E-07	1.86E+01	3.85E-05	1.38E-01	1.22E-05	7.61E-04	3.79E-03	5.82E-04	1.19E-03	7.71E-04	7.92E-04	7.80E-05	9.39E-05	2.58E-08	4.05E-04	1.19E-04
9	E35	60	Passenger Truck	625	0.00E+00	1.22E-05	1.29E-06	4.24E+01	7.63E-05	2.45E-01	2.52E-05	2.48E-03	6.95E-03	1.08E-03	2.38E-03	1.56E-03	1.59E-03	3.32E-04	2.12E-04	5.87E-08	7.94E-04	4.12E-04
9	E35	60	Single Unit Short Haul Truck	17	0.00E+00	4.97E-06	2.48E-07	3.16E+00	4.09E-06	6.10E-03	5.30E-06	2.37E-03	4.02E-04	7.27E-05	6.01E-04	1.49E-04	1.51E-04	3.16E-04	1.28E-05	5.25E-09	4.51E-04	4.44E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.17E-07	1.08E-08	1.35E-01	1.78E-07	2.59E-04	2.32E-07	1.02E-04	1.80E-05	3.23E-06	2.65E-05	6.48E-06	6.58E-06	1.35E-05	5.44E-07	2.23E-10	1.98E-05	1.92E-05
9	E35	60	Combination Short Haul Truck	19	0.00E+00	1.10E-05	7.67E-07	7.15E+00	3.89E-08	9.59E-03	8.14E-06	1.19E-02	1.02E-03	2.02E-04	7.00E-04	2.28E-04	2.28E-04	1.08E-03	2.39E-05	0.00E+00	4.70E-04	2.25E-03
9	E35	60	Combination Long Haul Truck	17	0.00E+00	9.83E-06	6.43E-07	6.71E+00	4.46E-08	1.03E-02	7.61E-06	1.18E-02	1.03E-03	1.74E-04	7.18E-04	1.96E-04	1.98E-04	1.02E-03	2.24E-05	0.00E+00	5.20E-04	2.23E-03
9	E36	60	Passenger Car	213	0.00E+00	3.15E-06	3.40E-07	1.06E+01	2.19E-05	7.86E-02	6.97E-06	4.34E-04	2.16E-03	3.32E-04	6.80E-04	4.39E-04	4.51E-04	4.44E-05	5.35E-05	1.47E-08	2.30E-04	6.80E-05
9	E36	60	Passenger Truck	356	0.00E+00	6.95E-06	7.33E-07	2.41E+01	4.34E-05	1.40E-01	1.43E-05	1.42E-03	3.96E-03	6.15E-04	1.36E-03	8.87E-04	9.08E-04	1.89E-04	1.21E-04	3.34E-08	4.52E-04	2.35E-04
9	E36	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.54E-07	1.96E+00	2.54E-06	3.79E-03	3.30E-06	1.47E-03	2.50E-04	4.52E-05	3.74E-04	9.25E-05	9.40E-05	1.97E-04	7.94E-06	3.27E-09	2.81E-04	2.76E-04
9	E36	60	Combination Short Haul Truck	10	0.00E+00	5.98E-06	4.17E-07	3.89E+00	2.11E-08	5.21E-03	4.43E-06	6.48E-03	5.55E-04	1.10E-04	3.81E-04	1.24E-04	1.24E-04	5.86E-04	1.30E-05	0.00E+00	2.56E-04	1.22E-03
9	E36	60	Combination Long Haul Truck	9	0.00E+00	5.35E-06	3.50E-07	3.65E+00	2.42E-08	5.63E-03	4.14E-06	6.43E-03	5.58E-04	9.48E-05	3.91E-04	1.06E-04	1.08E-04	5.55E-04	1.22E-05	0.00E+00	2.83E-04	1.21E-03
9	E37	60	Passenger Car	520	0.00E+00	7.70E-06	8.32E-07	2.59E+01	5.36E-05	1.92E-01	1.71E-05	1.06E-03	5.27E-03	8.11E-04	1.66E-03	1.07E-03	1.10E-03	1.09E-04	1.31E-04	3.60E-08	5.64E-04	1.66E-04
9	E37	60	Passenger Truck	871	0.00E+00	1.70E-05	1.79E-06	5.90E+01	1.06E-04	3.41E-01	3.51E-05	3.46E-03	9.68E-03	1.50E-03	3.32E-03	2.17E-03	2.22E-03	4.62E-04	2.95E-04	8.18E-08	1.11E-03	5.74E-04
9	E37	60	Single Unit Short Haul Truck	34	0.00E+00	1.01E-05	5.05E-07	6.42E+00	8.31E-06	1.24E-02	1.08E-05	4.82E-03	8.17E-04	1.48E-04	1.22E-03	3.02E-04	3.07E-04	6.43E-04	2.59E-05	1.07E-08	9.18E-04	9.03E-04
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	4.42E-07	2.19E-08	2.74E-01	3.61E-07	5.26E-04	4.71E-07	2.08E-04	3.67E-05	6.56E-06	5.39E-05	1.32E-05	1.34E-05	2.74E-05	1.11E-06	4.54E-10	4.03E-05	3.90E-05
9	E37	60	Combination Short Haul Truck	33	0.00E+00	1.95E-05	1.36E-06	1.27E+01	6.89E-08	1.70E-02	1.44E-05	2.11E-02	1.81E-03	3.58E-04	1.24E-03	4.04E-04	4.04E-04	1.91E-03	4.24E-05	0.00E+00	8.34E-04	3.99E-03
9	E37	60	Combination Long Haul Truck	30	0.00E+00	1.74E-05	1.14E-06	1.19E+01	7.90E-08	1.84E-02	1.35E-05	2.10E-02	1.82E-03	3.09E-04	1.27E-03	3.47E-04	3.51E-04	1.81E-03	3.97E-05	0.00E+00	9.22E-04	3.96E-03
9	E38	60	Passenger Car	214	0.00E+00	3.16E-06	3.42E-07	1.06E+01	2.20E-05	7.89E-02	7.00E-06	4.36E-04	2.17E-03	3.33E-04	6.83E-04	4.41E-04	4.53E-04	4.46E-05	5.37E-05	1.48E-08	2.32E-04	6.83E-05
9	E38	60	Passenger Truck	358	0.00E+00	6.98E-06	7.37E-07	2.43E+01	4.36E-05	1.40E-01	1.44E-05	1.42E-03	3.98E-03	6.17E-04	1.36E-03	8.91E-04	9.13E-04	1.90E-04	1.21E-04	3.36E-08	4.54E-04	2.36E-04
9	E38	60	Single Unit Short Haul Truck	14	0.00E+00	4.23E-06	2.11E-07	2.68E+00	3.47E-06	5.18E-03	4.50E-06	2.01E-03	3.41E-04	6.18E-05	5.10E-04	1.26E-04	1.28E-04	2.69E-04	1.08E-05	4.46E-09	3.83E-04	3.77E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	1.85E-07	9.16E-09	1.15E-01	1.51E-07	2.20E-04	1.97E-07	8.70E-05	1.53E-05	2.74E-06	2.25E-05	5.50E-06	5.59E-06	1.14E-05	4.62E-07	1.90E-10	1.68E-05	1.63E-05
9	E38	60	Combination Short Haul Truck	14	0.00E+00	8.23E-06	5.74E-07	5.35E+00	2.91E-08	7.18E-03	6.09E-06	8.92E-03	7.64E-04	1.51E-04	5.24E-04	1.71E-04	1.71E-04	8.07E-04	1.79E-05	0.00E+00	3.52E-04	1.68E-03
9	E38	60	Combination Long Haul Truck	13	0.00E+00	7.36E-06	4.81E-07	5.02E+00	3.34E-08	7.75E-03	5.70E-06	8.85E-03	7.68E-04	1.31E-04	5.38E-04	1.46E-04	1.48E-04	7.64E-04	1.68E-05	0.00E+00	3.89E-04	1.67E-03
10	E39	70	Passenger Car	215	0.00E+00	2.77E-06	2.99E-07	1.02E+01	1.93E-05	6.92E-02	6.14E-06	4.30E-04	1.66E-03	2.67E-04	5.97E-04	3.87E-04	3.97E-04	3.85E-05	5.18E-05	1.41E-08	2.03E-04	6.74E-05
10	E39	70	Passenger Truck	360	0.00E+00	6.07E-06	6.42E-07	2.35E+01	3.84E-05	1.28E-01	1.26E-05	1.35E-03	3.03E-03	4.93E-04	1.20E-03	7.83E-04	8.02E-04	1.75E-04	1.18E-04	3.17E-08	4.02E-04	2.22E-04
10	E39	70	Single Unit Short Haul Truck	7	0.00E+00	1.55E-06	7.75E-08	1.21E+00	1.26E-06	2.43E-03	1.65E-06	7.64E-04	1.09E-04	2.17E-05	1.88E-04	4.62E-05	4.70E-05	1.21E-04	4.88E-06	1.97E-09	1.40E-04	1.43E-04
10	E39	70	Combination Short Haul Truck	5	0.00E+00	2.47E-06	1.76E-07	1.80E+00	8.04E-09	2.13E-03	1.81E-06	2.60E-03	1.88E-04	4.11E-05	1.51E-04	5.21E-05	5.20E-05	2.71E-04	6.00E-06	0.00E+00	9.88E-05	4.91E-04
10	E39	70	Combination Long Haul Truck	4	0.00E+00	2.24E-06	1.50E-07	1.68E+00	9.26E-09	2.25E-03	1.70E-06	2.57E-03	1.87E-04	3.41E-05	1.56E-04	4.52E-05	4.57E-05	2.56E-04	5.61E-06	0.00E+00	1.10E-04	4.85E-04
10	E40	70	Passenger Car	241	0.00E+00	3.11E-06	3.36E-07	1.14E+01	2.16E-05	7.77E-02	6.90E-06	4.83E-04	1.87E-03	3.00E-04	6.70E-04	4.34E-04	4.45E-04	4.32E-05	5.81E-05	1.59E-08	2.28E-04	7.57E-05
10	E40	70	Passenger Truck	404	0.00E+00	6.82E-06	7.21E-07	2.64E+01	4.31E-05	1.44E-01	1.41E-05	1.51E-03	3.40E-03	5.53E-04	1.35E-03	8.79E-04	9.00E-04	1.96E-04	1.32E-04	3.55E-08	4.51E-04	2.49E-04
10	E40	70	Single Unit Short Haul Truck	10	0.00E+00	2.44E-06	1.23E-07	1.92E+00	2.00E-06	3.84E-03	2.60E-06	1.21E-03	1.72E-04	3.44E-05	2.98E-04	7.31E-05	7.43E-05	1.92E-04	7.72E-06	3.12E-09	2.22E-04	2.26E-04
10	E40	70	Combination Short Haul Truck	6	0.00E+00	3.36E-06	2.39E-07	2.45E+00	1.09E-08	2.90E-03	2.46E-06	3.54E-03	2.55E-04	5.59E-05	2.05E-04	7.09E-05	7.07E-05	3.69E-04	8.17E-06	0.00E+00	1.34E-04	6.67E-04
10	E40	70	Combination Long Haul Truck	6	0.00E+00	3.05E-06	2.03E-07	2.28E+00	1.26E-08	3.07E-03	2.31E-06	3.49E-03	2.54E-04	4.64E-05	2.12E-04	6.15E-05	6.22E-05	3.48E-04	7.63E-06	0.00E+00	1.50E-04	6.59E-04
10	E41	70	Passenger Car	166	0.00E+00	2.14E-06	2.32E-07	7.90E+00	1.49E-05	5.36E-02	4.76E-06	3.33E-04	1.29E-03	2.07E-04	4.62E-04	2.99E-04	3.07E-04	2.98E-05	4.01E-05	1.10E-08	1.57E-04	5.22E-05
10	E41	70	Passenger Truck	279	0.00E+00	4.70E-06	4.98E-07	1.82E+01	2.97E-05	9.90E-02	9.75E-06	1.04E-03	2.34E-03	3.81E-04	9.29E-04	6.07E-04	6.21E-04	1.35E-04	9.13E-05	2.45E-08	3.11E-04	1.72E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	3.91E-07	1.96E-08	3.07E-01	3.20E-07	6.15E-04	4.17E-07	1.93E-04	2.75E-05	5.50E-06	4.76E-05	1.17E-05	1.19E-05	3.07E-05	1.23E-06	4.99E-10	3.56E-05	3.62E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.09E-07	1.12E+00	5.00E-09	1.32E-03	1.13E-06	1.62E-03	1.17E-04	2.56E-05	9.38E-05	3.24E-05	3.23E-05	1.69E-04	3.73E-06	0.00E+00	6.14E-05	3.05E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.40E-06	9.30E-08	1.04E+00	5.76E-09	1.40E-03	1.06E-06	1.60E-03	1.16E-04	2.12E-05	9.68E-05	2.81E-05	2.84E-05	1.59E-04	3.49E-06	0.00E+00	6.86E-05	3.02E-04
10	E42	70	Passenger Car	226	0.00E+00	2.91E-06	3.14E-07	1.07E+01	2.02E-05	7.27E-02	6.45E-06	4.52E-04	1.75E-03	2.81E-04	6.26E-04	4.06E-04	4.17E-04	4.04E-05	5.44E-05	1.48E-08	2.13E-04	7.08E-05
10	E42	70	Passenger Truck	378	0.00E+00	6.38E-06	6.75E-07	2.47E+01	4.03E-05	1.34E-01	1.32E-05	1.42E-03	3.18E-03	5.17E-04	1.26E-03	8.22E-04	8.42E-04	1.84E-04	1.24E-04	3.33E-08	4.22E-04	2.33E-04
10	E42	70	Single Unit Short Haul Truck	5	0.00E+00	1.23E-06	6.18E-08	9.67E-01	1.01E-06	1.94E-03	1.31E-06	6.10E-04	8.68E-05	1.74E-05	1.50E-04	3.69E-05	3.75E-05	9.68E-05	3.89E-06	1.57E-09	1.12E-04	1.14E-04
10	E42	70	Combination Short Haul Truck	4	0.00E+00	2.16E-06	1.54E-07	1.57E+00	7.04E-09	1.86E-03	1.59E-06	2.28E-03	1.64E-04	3.60E-05	1.32E-04	4.56E-05	4.55E-05	2.37E-04	5.25E-06	0.00E+00	8.65E-05	4.29E-04
10	E42	70	Combination Long Haul Truck	4	0.00E+00	1.96E-06	1.31E-07	1.47E+00	8.11E-09	1.97E-03	1.49E-06	2.25E-03	1.64E-04	2.99E-05	1.36E-04	3.96E-05	4.00E-05	2.24E-04	4.91E-06	0.00E+00	9.65E-05	4.24E-04
10	E43	70	Passenger Car	150	0.00E+00	1.93E-06	2.09E-07	7.11E+00	1.34E-05	4.82E-02	4.28E-06	3.00E-04	1.16E-03	1.86E-04	4.16E-04	2.69E-04	2.77E-04	2.68E-05	3.61E-05	9.85E-09	1.41E-04	4.70E-05
10	E43	70	Passenger Truck	251	0.00E+00	4.23E-06	4.48E-07	1.64E+01	2.67E-05	8.91E-02	8.77E-06	9.40E-04	2.11E-03	3.43E-04	8.36E-04	5.46E-04	5.59E-04	1.22E-04	8.22E-05	2.21E-08	2.80E-04	1.55E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	1.72E-07	8.60E-09	1.34E-01	1.40E-07	2.70E-04	1.83E-07	8.48E-05	1.21E-05	2.41E-06	2.09E-05	5.13E-06	5.21E-06	1.35E-05	5.41E-07	2.19E-10	1.56E-05	1.59E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	7.59E-07	5.40E-08	5.52E-01	2.47E-09	6.54E-04	5.56E-07	8.00E-04	5.77E-05	1.26E-05	4.63E-05	1.60E-05	1.60E-05	8.33E-05	1.84E-06	0.00E+00	3.03E-05	1.51E-04
10	E43	70	Combination Long Haul Truck	1	0.00E+00	6.89E-07	4.59E-08	5.15E-01	2.84E-09	6.92E-04	5.22E-07	7.89E-04	5.74E-05	1.05E-05	4.78E-05	1.39E-05	1.40E-05	7.85E-05	1.72E-06	0.00E+00	3.38E-05	1.49E-04
10	E44	70	Passenger Car	203	0.00E+00	2.61E-06	2.83E-07	9.63E+00	1.82E-05	6.53E-02	5.80E-06	4.06E-04	1.57E-03	2.52E-04	5.63E-04	3.65E-04	3.75E-04	3.63E-05	4.89E-05	1.34E-08	1.92E-04	6.37E-05
10	E44	70	Passenger Truck	340	0.00E+00	5.74E-06	6.07E-07	2.22E+01	3.62E-05	1.21E-01	1.19E-05	1.27E-03	2.86E-03	4.65E-04	1.13E-03	7.40E-04	7.58E-04	1.65E-04	1.11E-04	2.99E-08	3.79E-04	2.09E-04
10	E44	70	Single Unit Short Haul Truck	2	0.00E+00	5.13E-07	2.57E-08	4.02E-01	4.19E-07	8.06E-04	5.46E-07	2.53E-04	3.61E-05	7.21E-06	6.24E-05	1.53E-05	1.56E-05	4.02E-05	1.62E-06	6.55E-10	4.66E-05	4.74E-05
10	E44	70	Combination Short Haul Truck	3	0.00E+00	1.37E-06	9.77E-08	9.99E-01	4.46E-09	1.18E-03	1.01E-06	1.45E-03	1.04E-04	2.28E-05	8.37E-05	2.89E-05	2.89E-05	1.51E-04	3.33E-06	0.00E+00	5.48E-05	2.72E-04
10	E44	70	Combination Long Haul Truck	2	0.00E+00	1.25E-06	8.30E-08	9.31E-01	5.14E-09	1.25E-03	9.44E-07	1.43E-03	1.04E-04	1.89E-05	8.64E-05	2.51E-05	2.54E-05	1.42E-04	3.11E-06	0.00E+00	6.12E-05	2.69E-04
11	E45	80	Passenger Car	175	0.00E+00	2.10E-06	2.27E-07	8.05E+00	1.46E-05	5.38E-02	4.66E-06	3.59E-04	9.60E-04	1.67E-04	4.54E-04	2.92E-04	3.00E-04	2.74E-05	4.10E-05	1.15E-08	1.54E-04	5.63E-05
11	E45	80	Passenger Truck	292	0.00E+00	4.51E-06	4.78E-07

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E49	80	Single Unit Short Haul Truck	22	0.00E+00	4.10E-06	2.04E-07	4.02E+00	3.30E-06	8.08E-03	4.36E-06	2.10E-03	2.58E-04	5.83E-05	4.99E-04	1.21E-04	1.23E-04	4.03E-04	1.62E-05	6.44E-09	3.75E-04	3.94E-04
11	E49	80	Single Unit Long Haul Truck	1	0.00E+00	1.78E-07	8.79E-09	1.70E-01	1.41E-07	3.35E-04	1.90E-07	9.00E-05	1.18E-05	2.57E-06	2.18E-05	5.22E-06	5.30E-06	1.70E-05	6.86E-07	2.68E-10	1.65E-05	1.68E-05
11	E49	80	Combination Short Haul Truck	12	0.00E+00	5.21E-06	3.72E-07	4.32E+00	1.64E-08	4.61E-03	3.82E-06	5.37E-03	3.16E-04	7.78E-05	3.10E-04	1.10E-04	1.09E-04	6.49E-04	1.44E-05	0.00E+00	2.01E-04	1.01E-03
11	E49	80	Combination Long Haul Truck	11	0.00E+00	4.66E-06	3.13E-07	4.00E+00	1.90E-08	4.78E-03	3.55E-06	5.20E-03	3.10E-04	6.22E-05	3.22E-04	9.47E-05	9.53E-05	6.10E-04	1.33E-05	0.00E+00	2.25E-04	9.80E-04
11	E50	80	Passenger Car	67	0.00E+00	8.07E-07	8.74E-08	3.10E+00	5.62E-06	2.07E-02	1.79E-06	1.38E-04	3.70E-04	6.42E-05	1.75E-04	1.13E-04	1.16E-04	1.05E-05	1.58E-05	4.43E-09	5.92E-05	2.17E-05
11	E50	80	Passenger Truck	113	0.00E+00	1.74E-06	1.84E-07	7.16E+00	1.11E-05	3.82E-02	3.63E-06	4.10E-04	6.63E-04	1.18E-04	3.47E-04	2.26E-04	2.31E-04	5.07E-05	3.63E-05	9.85E-09	1.16E-04	6.69E-05
11	E50	80	Single Unit Short Haul Truck	1	0.00E+00	2.23E-07	1.10E-08	2.18E-01	1.79E-07	4.39E-04	2.37E-07	1.14E-04	1.40E-05	3.16E-06	2.71E-05	6.60E-06	6.69E-06	2.19E-05	8.80E-07	3.50E-10	2.04E-05	2.14E-05
11	E50	80	Combination Short Haul Truck	1	0.00E+00	6.34E-07	4.54E-08	5.26E-01	2.00E-09	5.62E-04	4.66E-07	6.55E-04	3.85E-05	9.48E-06	3.78E-05	1.34E-05	1.33E-05	7.91E-05	1.76E-06	0.00E+00	2.45E-05	1.23E-04
11	E50	80	Combination Long Haul Truck	1	0.00E+00	5.68E-07	3.81E-08	4.87E-01	2.32E-09	5.82E-04	4.32E-07	6.33E-04	3.77E-05	7.58E-06	3.92E-05	1.15E-05	1.16E-05	7.43E-05	1.63E-06	0.00E+00	2.75E-05	1.19E-04
11	E51	80	Passenger Car	198	0.00E+00	2.37E-06	2.57E-07	9.12E+00	1.65E-05	6.10E-02	5.28E-06	4.07E-04	1.09E-03	1.89E-04	5.14E-04	3.31E-04	3.40E-04	3.10E-05	4.64E-05	1.30E-08	1.74E-04	6.37E-05
11	E51	80	Passenger Truck	331	0.00E+00	5.11E-06	5.41E-07	2.11E+01	3.27E-05	1.12E-01	1.07E-05	1.21E-03	1.95E-03	3.46E-04	1.02E-03	6.64E-04	6.81E-04	1.49E-04	1.07E-04	2.90E-08	3.42E-04	1.97E-04
11	E51	80	Single Unit Short Haul Truck	19	0.00E+00	3.48E-06	1.73E-07	3.42E+00	2.80E-06	6.87E-03	3.71E-06	1.79E-03	2.19E-04	4.95E-05	4.24E-04	1.03E-04	1.05E-04	3.43E-04	1.38E-05	5.47E-09	3.19E-04	3.35E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.51E-07	7.47E-09	1.45E-01	1.20E-07	2.85E-04	1.61E-07	7.65E-05	1.00E-05	2.18E-06	1.85E-05	4.44E-06	4.51E-06	1.44E-05	5.83E-07	2.28E-10	1.40E-05	1.43E-05
11	E51	80	Combination Short Haul Truck	11	0.00E+00	4.82E-06	3.45E-07	3.99E+00	1.52E-08	4.27E-03	3.54E-06	4.97E-03	2.92E-04	7.19E-05	2.87E-04	1.02E-04	1.01E-04	6.01E-04	1.34E-05	0.00E+00	1.86E-04	9.36E-04
11	E51	80	Combination Long Haul Truck	10	0.00E+00	4.31E-06	2.89E-07	3.70E+00	1.76E-08	4.42E-03	3.28E-06	4.81E-03	2.86E-04	5.75E-05	2.97E-04	8.76E-05	8.81E-05	5.64E-04	1.23E-05	0.00E+00	2.09E-04	9.06E-04
11	E52	80	Passenger Car	35	0.00E+00	4.18E-07	4.52E-08	1.60E+00	2.91E-06	1.07E-02	9.29E-07	7.15E-05	1.91E-04	3.33E-05	9.05E-05	5.83E-05	5.98E-05	5.45E-06	8.17E-06	2.29E-09	3.06E-05	1.12E-05
11	E52	80	Passenger Truck	58	0.00E+00	8.98E-07	9.52E-08	3.71E+00	5.75E-06	1.97E-02	1.88E-06	2.12E-04	3.43E-04	6.09E-05	1.80E-04	1.17E-04	1.20E-04	2.62E-05	1.88E-05	5.10E-09	6.02E-05	3.46E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	2.55E-07	1.82E-08	2.11E-01	8.04E-10	2.26E-04	1.87E-07	2.63E-04	1.54E-05	3.80E-06	1.52E-05	5.38E-06	5.35E-06	3.17E-05	7.06E-07	0.00E+00	9.84E-06	4.95E-05
11	E52	80	Combination Long Haul Truck	1	0.00E+00	2.28E-07	1.53E-08	1.95E-01	9.30E-10	2.34E-04	1.73E-07	2.54E-04	1.51E-05	3.04E-06	1.57E-05	4.63E-06	4.66E-06	2.98E-05	6.52E-07	0.00E+00	1.10E-05	4.79E-05
11	E53	80	Passenger Car	287	0.00E+00	3.44E-06	3.73E-07	1.32E+01	2.40E-05	8.85E-02	7.66E-06	5.90E-04	1.58E-03	2.74E-04	7.46E-04	4.81E-04	4.94E-04	4.50E-05	6.74E-05	1.89E-08	2.53E-04	9.25E-05
11	E53	80	Passenger Truck	481	0.00E+00	7.41E-06	7.85E-07	3.06E+01	4.74E-05	1.63E-01	1.55E-05	1.75E-03	2.83E-03	5.02E-04	1.48E-03	9.64E-04	9.88E-04	2.16E-04	1.55E-04	4.21E-08	4.97E-04	2.86E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	3.94E-06	1.96E-07	3.86E+00	3.17E-06	7.76E-03	4.19E-06	2.02E-03	2.47E-04	5.60E-05	4.79E-04	1.17E-04	1.18E-04	3.88E-04	1.56E-05	6.19E-09	3.61E-04	3.78E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	8.44E-09	1.63E-01	1.35E-07	3.22E-04	1.82E-07	8.65E-05	1.13E-05	2.47E-06	2.09E-05	5.02E-06	5.10E-06	1.63E-05	6.59E-07	2.57E-10	1.58E-05	1.62E-05
11	E53	80	Combination Short Haul Truck	16	0.00E+00	7.14E-06	5.11E-07	5.92E+00	2.26E-08	6.33E-03	5.24E-06	7.37E-03	4.33E-04	1.07E-04	4.26E-04	1.51E-04	1.50E-04	8.90E-04	1.98E-05	0.00E+00	2.76E-04	1.39E-03
11	E53	80	Combination Long Haul Truck	15	0.00E+00	6.39E-06	4.29E-07	5.48E+00	2.61E-08	6.55E-03	4.86E-06	7.13E-03	4.25E-04	8.53E-05	4.41E-04	1.30E-04	1.31E-04	8.37E-04	1.83E-05	0.00E+00	3.09E-04	1.34E-03
11	E54	80	Passenger Car	173	0.00E+00	2.07E-06	2.25E-07	7.97E+00	1.44E-05	5.33E-02	4.61E-06	3.55E-04	9.51E-04	1.65E-04	4.49E-04	2.89E-04	2.97E-04	2.71E-05	4.06E-05	1.14E-08	1.52E-04	5.57E-05
11	E54	80	Passenger Truck	289	0.00E+00	4.46E-06	4.73E-07	1.84E+01	2.85E-05	9.81E-02	9.33E-06	1.05E-03	1.70E-03	3.02E-04	8.92E-04	5.80E-04	5.95E-04	1.30E-04	9.33E-05	2.53E-08	2.99E-04	1.72E-04
11	E54	80	Single Unit Short Haul Truck	22	0.00E+00	4.12E-06	2.04E-07	4.04E+00	3.31E-06	8.11E-03	4.38E-06	2.11E-03	2.59E-04	5.85E-05	5.01E-04	1.22E-04	1.24E-04	4.05E-04	1.63E-05	6.46E-09	3.77E-04	3.95E-04
11	E54	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.82E-09	1.71E-01	1.41E-07	3.36E-04	1.90E-07	9.04E-05	1.18E-05	2.58E-06	2.18E-05	5.25E-06	5.33E-06	1.71E-05	6.89E-07	2.69E-10	1.65E-05	1.69E-05
11	E54	80	Combination Short Haul Truck	22	0.00E+00	9.79E-06	7.00E-07	8.12E+00	3.09E-08	8.67E-03	7.19E-06	1.01E-02	5.94E-04	1.46E-04	5.84E-04	2.07E-04	2.06E-04	1.22E-03	2.71E-05	0.00E+00	3.79E-04	1.90E-03
11	E54	80	Combination Long Haul Truck	20	0.00E+00	8.76E-06	5.88E-07	7.51E+00	3.58E-08	8.98E-03	6.67E-06	9.77E-03	5.82E-04	1.17E-04	6.04E-04	1.78E-04	1.79E-04	1.15E-03	2.51E-05	0.00E+00	4.24E-04	1.84E-03
11	E55	80	Passenger Car	325	0.00E+00	3.90E-06	4.23E-07	1.50E+01	2.72E-05	1.00E-01	8.68E-06	6.68E-04	1.79E-03	3.11E-04	8.45E-04	5.44E-04	5.59E-04	5.09E-05	7.63E-05	2.14E-08	2.86E-04	1.05E-04
11	E55	80	Passenger Truck	544	0.00E+00	8.39E-06	8.89E-07	3.46E+01	5.37E-05	1.84E-01	1.75E-05	1.98E-03	3.21E-03	5.68E-04	1.68E-03	1.09E-03	1.12E-03	2.45E-04	1.75E-04	4.76E-08	5.62E-04	3.24E-04
11	E55	80	Single Unit Short Haul Truck	18	0.00E+00	3.36E-06	1.67E-07	3.29E+00	2.70E-06	6.61E-03	3.57E-06	1.72E-03	2.11E-04	4.77E-05	4.08E-04	9.95E-05	1.01E-04	3.30E-04	1.33E-05	5.27E-09	3.07E-04	3.22E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.46E-07	7.19E-09	1.39E-01	1.15E-07	2.74E-04	1.55E-07	7.37E-05	9.63E-06	2.10E-06	1.78E-05	4.28E-06	4.34E-06	1.39E-05	5.61E-07	2.19E-10	1.35E-05	1.38E-05
11	E55	80	Combination Short Haul Truck	15	0.00E+00	6.37E-06	4.56E-07	5.29E+00	2.01E-08	5.65E-03	4.68E-06	6.58E-03	3.87E-04	9.52E-05	3.80E-04	1.35E-04	1.34E-04	7.95E-04	1.77E-05	0.00E+00	2.47E-04	1.24E-03
11	E55	80	Combination Long Haul Truck	13	0.00E+00	5.70E-06	3.83E-07	4.89E+00	2.33E-08	5.85E-03	4.34E-06	6.36E-03	3.79E-04	7.62E-05	3.94E-04	1.16E-04	1.17E-04	7.47E-04	1.63E-05	0.00E+00	2.76E-04	1.20E-03
11	E56	80	Passenger Car	213	0.00E+00	2.56E-06	2.77E-07	9.82E+00	1.78E-05	6.57E-02	5.69E-06	4.38E-04	1.17E-03	2.04E-04	5.54E-04	3.57E-04	3.66E-04	3.34E-05	5.00E-05	1.40E-08	1.88E-04	6.86E-05
11	E56	80	Passenger Truck	357	0.00E+00	5.50E-06	5.83E-07	2.27E+01	3.52E-05	1.21E-01	1.15E-05	1.30E-03	2.10E-03	3.73E-04	1.10E-03	7.15E-04	7.33E-04	1.61E-04	1.15E-04	3.12E-08	3.69E-04	2.12E-04
11	E56	80	Single Unit Short Haul Truck	9	0.00E+00	1.72E-06	8.54E-08	1.69E+00	1.38E-06	3.39E-03	1.83E-06	8.82E-04	1.08E-04	2.45E-05	2.09E-04	5.10E-05	5.18E-05	1.69E-04	6.81E-06	2.70E-09	1.58E-04	1.65E-04
11	E56	80	Combination Short Haul Truck	9	0.00E+00	3.98E-06	2.85E-07	3.30E+00	1.26E-08	3.53E-03	2.92E-06	4.11E-03	2.41E-04	5.95E-05	2.37E-04	8.42E-05	8.37E-05	4.96E-04	1.10E-05	0.00E+00	1.54E-04	7.74E-04
11	E56	80	Combination Long Haul Truck	8	0.00E+00	3.56E-06	2.39E-07	3.06E+00	1.45E-08	3.65E-03	2.71E-06	3.97E-03	2.37E-04	4.76E-05	2.46E-04	7.24E-05	7.28E-05	4.66E-04	1.02E-05	0.00E+00	1.72E-04	7.49E-04
10	E57	70	Passenger Car	155	0.00E+00	2.00E-06	2.17E-07	7.38E+00	1.39E-05	5.01E-02	4.45E-06	3.11E-04	1.20E-03	1.93E-04	4.32E-04	2.80E-04	2.87E-04	2.78E-05	3.75E-05	1.02E-08	1.47E-04	4.88E-05
10	E57	70	Passenger Truck	260	0.00E+00	4.39E-06	4.65E-07	1.70E+01	2.78E-05	9.25E-02	9.11E-06	9.76E-04	2.19E-03	3.56E-04	8.67E-04	5.67E-04	5.80E-04	1.26E-04	8.53E-05	2.29E-08	2.91E-04	1.60E-04
10	E57	70	Single Unit Short Haul Truck	4	0.00E+00	8.30E-07	4.16E-08	6.51E-01	6.79E-07	1.31E-03	8.84E-07	4.10E-04	5.84E-05	1.17E-05	1.01E-04	2.48E-05	2.52E-05	6.52E-05	2.62E-06	1.06E-09	7.55E-05	7.67E-05
10	E57	70	Combination Short Haul Truck	5	0.00E+00	2.83E-06	2.02E-07	2.06E+00	9.21E-09	2.44E-03	2.08E-06	2.98E-03	2.15E-04	4.71E-05	1.73E-04	5.97E-05	5.95E-05	3.11E-04	6.88E-06	0.00E+00	1.13E-04	5.62E-04
10	E57	70	Combination Long Haul Truck	5	0.00E+00	2.57E-06	1.71E-07	1.92E+00	1.06E-08	2.58E-03	1.95E-06	2.94E-03	2.14E-04	3.91E-05	1.78E-04	5.18E-05	5.24E-05	2.93E-04	6.42E-06	0.00E+00	1.26E-04	5.55E-04
10	E58	70	Passenger Car	173	0.00E+00	2.23E-06	2.41E-07	8.21E+00	1.55E-05	5.57E-02	4.95E-06	3.46E-04	1.34E-03	2.15E-04	4.80E-04	3.11E-04	3.19E-04	3.10E-05	4.17E-05	1.14E-08	1.63E-04	5.43E-05
10	E58	70	Passenger Truck	290	0.00E+00	4.89E-06	5.17E-07	1.89E+01	3.09E-05	1.03E-01	1.01E-05	1.09E-03	2.44E-03	3.97E-04	9.65E-04	6.31E-04	6.46E-04	1.41E-04	9.49E-05	2.55E-08	3.23E-04	1.79E-04
10	E58	70	Single Unit Short Haul Truck	7	0.00E+00	1.72E-06	8.60E-08	1.34E+00	1.40E-06	2.70E-03	1.83E-06	8.47E-04	1.21E-04	2.41E-05	2.09E-04	5.13E-05	5.21E-05	1.35E-04	5.41E-06	2.19E-09	1.56E-04	1.59E-04
10	E58	70	Combination Short Haul Truck	7	0.00E+00	3.73E-06	2.65E-07	2.71E+00	1.21E-08	3.21E-03	2.73E-06	3.93E-03	2.83E-04	6.20E-05	2.27E-04	7.86E-05	7.84E-05	4.09E-04	9.06E-06	0.00E+00	1.49E-04	7.40E-04
10	E58	70	Combination Long Haul Truck	7	0.00E+00	3.38E-06	2.26E-07	2.53E+00	1.40E-08	3.40E-03	2.56E-06	3.87E-03	2.82E-04	5.15E-05	2.35E-04	6.82E-05	6.89E-05	3.86E-04	8.46E-06	0.00E+00	1.66E-04	7.31E-04
11	E59	80	Passenger Car	500	0.00E+00	5.99E-06	6.49E-07	2.30E+01	4.18E-05	1.54E-01	1.33E-05	1.03E-03	2.75E-03	4.77E-04	1.30E-03	8.37E-04	8.59E-04	7.83E-05	1.17E-04	3.29E-08	4.40E-04	1.61E-04
11	E59	80	Passenger Truck	837	0.00E+00	1.29E-05	1.37E-06	5.32E+01	8.25E-05	2.84E-01	2.70E-05	3.04E-03	4.93E-03	8.74E-04	2.58E-03	1.68E-03	1.72E-03	3.76E-04	2.70E-04	7.32E-08	8.64E-04	4.97E-04
11	E59	80	Single Unit Short Haul Truck	76	0.00E+00	1.42E-05	7.04E-07	1.39E+01	1.14E-05	2.79E-02	1.51E-05	7.27E-03	8.91E-04	2.01E-04	1.72E-03	4.20E-04	4.26E-04	1.39E-03	5.61E-05	2.23E-08	1.30E-03	1.36E-03
11	E59	80	Single Unit Long Haul Truck	3	0.00E+00	6.16E-07	3.04E-08	5.88E-01	4.87E-07	1.16E-03	6.56E-07	3.11E-04	4.07E-05	8.89E-06	7.52E-05	1.81E-05	1.83E-05	5.87E-05	2.37E-06	9.26E-10	5.69E-05	5.82E-05
11	E59	80	Combination Short Haul Truck	65	0.00E+00	2.87E-05	2.06E-06	2.38E+01	9.07E-08	2.55E-02	2.11E-05	2.96E-02	1.74E-03	4.29E-04	1.71E-03	6.07E-04	6.04E-04	3.58E-03	7.97E-05	0.00E+00	1.11E-03	5.58E-03
11	E59	80	Combination Long Haul Truck	60	0.00E+00	2.57E-05	1.72E-06	2.21E+01	1.05E-07	2.64E-02	1.96E-05	2.87E-02	1.71E-03	3.43E-04	1.77E-03	5.22E-04	5.26E-04	3.37E-03	7.36E-05	0.00E+00	1.24E-03	5.41E-03
11	E60	80	Passenger Car	386	0.00E+00	4.63E-06	5.02E-07	1.78E+01	3.23E-05	1.19E-01	1.03E-05	7.94E-04	2.12E-03	3.69E-04	1.00E-03	6.47E-04	6.64E-04	6.05E-05	9.07E-05	2.54E-08	3.40E-04	1.24E-04
11	E60	80	Passenger Truck	647	0.00E+00	9.97E-06	1.06E-06	4.11E+01	6.38E-05	2.19E-01	2.08E-05	2.35E-03	3.81E-03	6.76E-04	1.99E-03	1.30E-03	1.33E-03	2.91E-04	2.08E-04	5.66E-08	6.68E-04	3.84E-04
11	E60	80	Single Unit Short Haul Truck	43	0.00E+00	8.05E-06	3.99E-07	7.89E+00	6.47E-06	1.59E-02	8.56E-06	4.12E-03	5.05E-04	1.14E-04	9.79E-04	2.38E-04	2.42E-04	7.92E-04	3.18E-05	1.26E-08	7.37E-04	7.72E-04
11	E60	80	Single Unit Long Haul Truck	2	0.00E+00	3.50E-07	1.72E-08	3.34E-01	2.77E-07	6.57E-04	3.72E-07	1.77E-04	2.31E-05	5.04E-06	4.27E-05	1.03E-05	1.04E-05	3.33E-05	1.35E-06	5.26E-10	3.23E-05	3.30E-05
11	E60	80	Combination Short Haul Truck	33	0.00E+00	1.45E-05	1.04E-06	1.20E+01	4.58E-08	1.29E-02	1.07E-05	1.50E-02	8.80E-04	2.17E-04	8.65E-04	3.07E-04	3.05E-04	1.81E-03	4.02E-05	0.00E+00	5.61E-04	2.82E-03
11	E60	80	Combination Long Haul Truck	30	0.00E+00	1.30E-05	8.71E-07	1.11E+01	5.30E-08	1.33E-02	9.88E-06	1.45E-02	8.63E-04	1.73E-04	8.96E-04	2.64E-04	2.65E-04	1.70E-03	3.72E-05	0.00E+00	6.28E-04	2.73E-03
11	E61	80	Passenger Car	342	0.00E+00	4.10E-06	4.44E-07	1.58E+01	2.86E-05	1.05E-01	9.12E-06	7.02E-04	1.88E-03	3.26E-04	8.88E-04	5.72E-04	5.87E-04	5.35E-05	8.02E-05	2.25E-08	3.01E-04	1.10E-04
11	E61	80	Passenger Truck	572	0.00E+00	8.82E-06	9.35E-07	3.64E+01	5.64E-05	1.94E-01	1.84E-05	2.08E-03	3.37E-03	5.98E-04	1.76E-03	1.15E-03	1.18E-03	2.57E-04	1.84E-04	5.01E-08	5.91E-04	3.40E-04
11	E61	80	Single Unit Short Haul Truck	12	0.00E+00	2.31E-06	1.15E-07	2.27E+00	1.86E-06	4.55E-03	2.46E-06	1.18E-03	1.45E-04	3.28E-05	2.81E-04	6.85E-05	6.95E-05	2.27E-04	9.14E-06	3.63E-09	2.12E-04	2.22E-04
11	E61	80	Single Unit Long Haul Truck	1	0.00E+00	1.00E-07	4.95E-09	9.59E-02	7.94E-08	1.89E-04	1.07E-07	5.07E-05	6.63E-06	1.45E-06	1.23E-05	2.94E-06	2.99E-06	9.57E-06	3.86E-07	1.51E-10	9.27E-06	9.48E-06
11	E61	80	Combination Short Haul Truck	10	0.00E+00	4.33E-06	3.10E-07	3.59E+00	1.37E-08	3.84E-03	3.18E-06	4.47E-03	2.62E-04	6.47E-05	2.58E-04	9.15E-05	9.10E-05	5.40E-04	1.20E-05	0.00E+00	1.67E-04	8.41E-04
11	E61	80	Combination Long Haul Truck	9	0.00E+00	3.87E-06	2.60E-07	3.32E+00	1.58E-08	3.97E-03	2.95E-06	4.32E-03	2.57E-04	5.17E-05	2.67E-04	7.87E-05	7.92E-05	5.07E-04	1.11E-05	0.00E+00	1.87E-04	8.14E-04
11	E62	80	Passenger Car	327	0.00E+00	3.93E-06	4.25E-07	1.51E+01	2.73E-05	1.01E-01	8.73E-06	6.72E-04	1.80E-03	3.13E-04	8.50E-04	5.48E-04	5.62E-04	5.12E-05	7.68E-05	2.15E-08	2.88E-04	1.05E-04
11	E62	80	Passenger Truck	548	0.00E+00	8.44E-06	8.95E-07	3.48E+01	5.40E-05	1.86E-01	1.77E-05	1.99E-03	3.23E-03	5.72E-04	1.69E-03	1.10E-03	1.13E-03	2.46E-04	1.77E-04	4.79E-08	5.66E-04	3.26E-04
11	E62	80	Single Unit Short Haul Truck	4	0.00E+00	6.96E-07	3.46E-08	6.83E-01	5.60E-07	1.37E-03	7.41E-07	3.57E-04	4.37E-05	9.89E-06	8.47E-05	2.06E-05	2.09E-05	6.85E-05	2.75E-06	1.09E-09	6.37E-05	6.68E-05
11	E62	80	Combination Short Haul Truck	3	0.00E+00	1.47E-06	1.05E-07	1.22E+00	4.63E-09	1.30E-03	1.08E-06	1.51E-03	8.89E-05	2.19E-05	8.74E-05	3.10E-05	3.08E-05	1.83E-04	4.07E-06	0.00E+00	5.67E-05	2.85E-04
11	E62	80	Combination Long Haul Truck	3	0.00E+00	1.31E-06	8.80E-08	1.13E+00	5.36E-09	1.35E-03	9.99E-07	1.46E-03	8.72E-05	1.75E-05	9.06E-05	2.67E-05	2.68E-05	1.72E-04	3.76E-06	0.00E+00	6.35E-05	2.76E-04
10	E63	70	Passenger Car	518	0.00E+00	6.68E-06	7.23E-07	2.46E+01	4.65E-05	1.67E-01	1.48E-05	1.04E-03	4.02E-03	6.45E-04	1.44E-03	9.33E-04	9.57E-04	9.29E-05	1.25E-04	3.41E-08	4.90E-04	1.63E-04
10	E63	70	Passenger Truck	868	0.00E+00	1.47E-05	1.55E-06	5.67E+01	9.26E-05	3.09E-01	3.04E-05	3.26E-03	7.31E-03	1.19E-03	2.89E-03	1.89E-03	1.94E-03	4.22E-04	2.85E-04	7.64E-08	9.69E-04	5.35E-04
10	E63	70	Single Unit Short Haul Truck	68	0.00E+00	1.60E-05	8.02E-07	1.25E+01	1.31E-05	2.51E-02	1.70E-05	7.90E-03	1.13E-03	2.25E-04	1.95E-03	4.78E-04	4.86E-04	1.26E-03	5.05E-05	2.04E-08	1.45E-03	1.48E-03
10	E63	70	Single Unit Long Haul Truck	3	0.00E+00	6.97E-07	3.47E-08	5.32E-01	5.65E-07	1.05E-03	7.42E-07	3.39E-04	5.14E-05	1.00E-05	8.51E-05	2.07E-05	2.10E-05	5.31E-05	2.14E-06	8.59E-10	6.38E-05	6.36E-05
10	E63	70	Combination Short Haul Truck	58	0.00E+00	3.02E-05	2.15E-06	2.20E+01	9.83E-08	2.60E-02	2.21E-05	3.18E-02	2.29E-03	5.03E-04	1.84E-03	6.37E-04	6.35E-04	3.31E-03	7.34E-05	0.00E+00	1.21E-03	6.00E-03
10	E63	70	Combination Long Haul Truck	53	0.00E+00	2.74E-05	1.83E-06	2.05E+01	1.13E-07	2.76E-02	2.08E-05	3.14E-02	2.28E-03	4.17E-04	1.90E-03	5.53E-04	5.59E-04	3.12E-03	6.85E-05	0.00E+00	1.35E-03	5.92E-03
10	E64	70	Passenger Car	694	0.00E+00	8.94E-06	9.67E-07	3.30E+01	6.22E-05	2.24E-01	1.98E-05	1.39E-03	5.38E-03	8.63E-04	1.93E-03	1.25E-03	1.28E-03	1.24E-04	1.67E-04	4.57E-08	6.55E-04	2.18E-04
10	E64	70	Passenger Truck	1162	0.00E+00

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E68	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.52E+00	5.80E-09	1.63E-03	1.35E-06	1.89E-03	1.11E-04	2.74E-05	1.09E-04	3.88E-05	3.86E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.57E-04
11	E68	80	Combination Long Haul Truck	4	0.00E+00	1.64E-06	1.10E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.46E-04
10	E69	70	Passenger Car	368	0.00E+00	4.74E-06	5.12E-07	1.75E+01	3.30E-05	1.18E-01	1.05E-05	7.36E-04	2.85E-03	4.57E-04	1.02E-03	6.62E-04	6.79E-04	6.58E-05	8.86E-05	2.42E-08	3.47E-04	1.15E-04
10	E69	70	Passenger Truck	615	0.00E+00	1.04E-05	1.10E-06	4.02E+01	6.57E-05	2.19E-01	2.15E-05	2.31E-03	5.18E-03	8.43E-04	2.05E-03	1.34E-03	1.37E-03	2.99E-04	2.02E-04	5.42E-08	6.87E-04	3.80E-04
10	E69	70	Single Unit Short Haul Truck	11	0.00E+00	2.70E-06	1.35E-07	2.12E+00	2.21E-06	4.25E-03	2.88E-06	1.33E-03	1.90E-04	3.80E-05	3.29E-04	8.08E-05	8.20E-05	2.12E-04	8.52E-06	3.45E-09	2.46E-04	2.50E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.18E-07	5.86E-09	8.98E-02	9.53E-08	1.77E-04	1.25E-07	5.73E-05	8.67E-06	1.69E-06	1.44E-05	3.49E-06	3.55E-06	8.97E-06	3.62E-07	1.45E-10	1.08E-05	1.07E-05
10	E69	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	E69	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.20E-04
10	E70	70	Passenger Car	309	0.00E+00	3.98E-06	4.31E-07	1.47E+01	2.77E-05	9.95E-02	8.84E-06	6.19E-04	2.39E-03	3.84E-04	8.58E-04	5.56E-04	5.70E-04	5.53E-05	7.45E-05	2.03E-08	2.92E-04	9.69E-05
10	E70	70	Passenger Truck	517	0.00E+00	8.73E-06	9.24E-07	3.38E+01	5.52E-05	1.84E-01	1.81E-05	1.94E-03	4.35E-03	7.08E-04	1.72E-03	1.13E-03	1.15E-03	2.51E-04	1.70E-04	4.55E-08	5.78E-04	3.19E-04
10	E70	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E70	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	E70	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.60E-04
10	E71	70	Passenger Car	460	0.00E+00	5.93E-06	6.41E-07	2.18E+01	4.13E-05	1.48E-01	1.32E-05	9.21E-04	3.56E-03	5.72E-04	1.28E-03	8.28E-04	8.49E-04	8.24E-05	1.11E-04	3.03E-08	4.34E-04	1.44E-04
10	E71	70	Passenger Truck	770	0.00E+00	1.30E-05	1.38E-06	5.03E+01	8.21E-05	2.74E-01	2.70E-05	2.89E-03	6.48E-03	1.05E-03	2.57E-03	1.68E-03	1.72E-03	3.74E-04	2.52E-04	6.78E-08	8.60E-04	4.75E-04
10	E71	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.67E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	E71	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.98E+00	8.83E-09	2.34E-03	1.99E-06	2.86E-03	2.06E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.98E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E71	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.05E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.33E-04
10	E72	70	Passenger Car	541	0.00E+00	6.97E-06	7.54E-07	2.57E+01	4.85E-05	1.74E-01	1.55E-05	1.08E-03	4.19E-03	6.73E-04	1.50E-03	9.74E-04	9.99E-04	9.69E-05	1.30E-04	3.56E-08	5.11E-04	1.70E-04
10	E72	70	Passenger Truck	906	0.00E+00	1.53E-05	1.62E-06	5.91E+01	9.66E-05	3.22E-01	3.17E-05	3.40E-03	7.63E-03	1.24E-03	3.02E-03	1.97E-03	2.02E-03	4.40E-04	2.97E-04	7.98E-08	1.01E-03	5.59E-04
10	E72	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	E72	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.90E-01	3.53E-09	9.36E-04	7.96E-07	1.14E-03	8.25E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.16E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	9.86E-07	6.57E-08	7.37E-01	4.07E-09	9.91E-04	7.47E-07	1.13E-03	8.21E-05	1.50E-05	6.84E-05	1.99E-05	2.01E-05	1.12E-04	2.46E-06	0.00E+00	4.84E-05	2.13E-04
9	E73	60	Passenger Car	51	0.00E+00	7.57E-07	8.18E-08	2.54E+00	5.27E-06	1.89E-02	1.68E-06	1.04E-04	5.18E-04	7.96E-05	1.63E-04	1.05E-04	1.08E-04	1.07E-05	1.28E-05	3.53E-09	5.54E-05	1.63E-05
9	E73	60	Passenger Truck	86	0.00E+00	1.67E-06	1.76E-07	5.80E+00	1.04E-05	3.35E-02	3.45E-06	3.40E-04	9.51E-04	1.48E-04	3.26E-04	2.13E-04	2.18E-04	4.54E-05	2.90E-05	8.04E-09	1.09E-04	5.63E-05
9	E74	60	Passenger Car	117	0.00E+00	1.73E-06	1.87E-07	5.81E+00	1.20E-05	4.32E-02	3.83E-06	2.38E-04	1.18E-03	1.82E-04	3.73E-04	2.41E-04	2.48E-04	2.44E-05	2.94E-05	8.08E-09	1.27E-04	3.73E-05
9	E74	60	Passenger Truck	196	0.00E+00	3.82E-06	4.03E-07	1.33E+01	2.39E-05	7.67E-02	7.88E-06	7.77E-04	2.17E-03	3.38E-04	7.45E-04	4.87E-04	4.99E-04	1.04E-04	6.63E-05	1.84E-08	2.48E-04	1.29E-04
53	E75	70	Passenger Car	789	0.00E+00	9.86E-06	1.07E-06	3.79E+01	6.86E-05	2.45E-01	2.19E-05	1.61E-03	6.03E-03	9.71E-04	2.13E-03	1.38E-03	1.41E-03	1.41E-04	1.92E-04	5.24E-08	7.23E-04	2.52E-04
53	E75	70	Passenger Truck	1321	0.00E+00	2.15E-05	2.28E-06	8.74E+01	1.36E-04	4.51E-01	4.48E-05	4.92E-03	1.08E-02	1.77E-03	4.26E-03	2.77E-03	2.84E-03	6.39E-04	4.40E-04	1.15E-07	1.42E-03	8.08E-04
53	E75	70	Single Unit Short Haul Truck	23	0.00E+00	5.30E-06	2.65E-07	4.15E+00	4.33E-06	8.33E-03	5.64E-06	2.62E-03	3.73E-04	7.45E-05	6.45E-04	1.58E-04	1.61E-04	4.16E-04	1.67E-05	6.76E-09	4.81E-04	4.90E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	2.31E-07	1.15E-08	1.76E-01	1.87E-07	3.48E-04	2.46E-07	1.12E-04	1.70E-05	3.31E-06	2.82E-05	6.85E-06	6.96E-06	1.76E-05	7.10E-07	2.84E-10	2.11E-05	2.11E-05
53	E75	70	Combination Short Haul Truck	26	0.00E+00	1.33E-05	9.48E-07	9.69E+00	4.33E-08	1.15E-02	9.77E-06	1.40E-02	1.01E-03	2.22E-04	8.13E-04	2.81E-04	2.80E-04	1.46E-03	3.24E-05	0.00E+00	5.32E-04	2.64E-03
53	E75	70	Combination Long Haul Truck	23	0.00E+00	1.21E-05	8.06E-07	9.03E+00	4.99E-08	1.22E-02	9.16E-06	1.38E-02	1.01E-03	1.84E-04	8.38E-04	2.44E-04	2.46E-04	1.38E-03	3.02E-05	0.00E+00	5.94E-04	2.61E-03
53	E76	70	Passenger Car	652	0.00E+00	8.14E-06	8.81E-07	3.13E+01	5.66E-05	2.03E-01	1.81E-05	1.33E-03	4.98E-03	8.02E-04	1.76E-03	1.14E-03	1.17E-03	1.17E-04	1.59E-04	4.33E-08	5.97E-04	2.08E-04
53	E76	70	Passenger Truck	1091	0.00E+00	1.77E-05	1.88E-06	7.21E+01	1.12E-04	3.73E-01	3.70E-05	4.06E-03	8.94E-03	1.46E-03	3.52E-03	2.29E-03	2.35E-03	5.27E-04	3.64E-04	9.52E-08	1.18E-03	6.67E-04
53	E76	70	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.50E-07	2.35E+00	2.45E-06	4.71E-03	3.19E-06	1.48E-03	2.10E-04	4.21E-05	3.64E-04	8.95E-05	9.09E-05	2.35E-04	9.45E-06	3.82E-09	2.72E-04	2.77E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.30E-07	6.49E-09	9.95E-02	1.06E-07	1.97E-04	1.39E-07	6.35E-05	9.61E-06	1.87E-06	1.59E-05	3.87E-06	3.93E-06	9.94E-06	4.01E-07	1.61E-10	1.19E-05	1.19E-05
53	E76	70	Combination Short Haul Truck	10	0.00E+00	5.17E-06	3.68E-07	3.76E+00	1.68E-08	4.45E-03	3.79E-06	5.45E-03	3.93E-04	8.60E-05	3.15E-04	1.09E-04	1.09E-04	5.67E-04	1.25E-05	0.00E+00	2.06E-04	1.03E-03
53	E76	70	Combination Long Haul Truck	9	0.00E+00	4.69E-06	3.13E-07	3.50E+00	1.94E-08	4.71E-03	3.55E-06	5.37E-03	3.91E-04	7.13E-05	3.25E-04	9.45E-05	9.55E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
53	E77	70	Passenger Car	867	0.00E+00	1.08E-05	1.17E-06	4.17E+01	7.54E-05	2.70E-01	2.41E-05	1.77E-03	6.63E-03	1.07E-03	2.35E-03	1.51E-03	1.55E-03	1.55E-04	2.12E-04	5.76E-08	7.95E-04	2.77E-04
53	E77	70	Passenger Truck	1452	0.00E+00	2.36E-05	2.50E-06	9.60E+01	1.50E-04	4.96E-01	4.92E-05	5.41E-03	1.19E-02	1.94E-03	4.68E-03	3.05E-03	3.12E-03	7.02E-04	4.84E-04	1.27E-07	1.57E-03	8.88E-04
53	E77	70	Single Unit Short Haul Truck	24	0.00E+00	5.74E-06	2.88E-07	4.50E+00	4.69E-06	9.02E-03	6.11E-06	2.83E-03	4.03E-04	8.07E-05	6.98E-04	1.72E-04	1.74E-04	4.50E-04	1.81E-05	7.32E-09	5.21E-04	5.30E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.24E-08	1.91E-01	2.02E-07	3.77E-04	2.66E-07	1.22E-04	1.84E-05	3.59E-06	3.05E-05	7.42E-06	7.54E-06	1.91E-05	7.69E-07	3.08E-10	2.29E-05	2.28E-05
53	E77	70	Combination Short Haul Truck	27	0.00E+00	1.38E-05	9.83E-07	1.01E+01	4.50E-08	1.19E-02	1.01E-05	1.46E-02	1.05E-03	2.30E-04	8.43E-04	2.91E-04	2.91E-04	1.52E-03	3.36E-05	0.00E+00	5.52E-04	2.74E-03
53	E77	70	Combination Long Haul Truck	24	0.00E+00	1.25E-05	8.36E-07	9.37E+00	5.18E-08	1.26E-02	9.51E-06	1.44E-02	1.05E-03	1.91E-04	8.70E-04	2.53E-04	2.56E-04	1.43E-03	3.14E-05	0.00E+00	6.16E-04	2.71E-03
53	E78	70	Passenger Car	804	0.00E+00	1.01E-05	1.09E-06	3.86E+01	6.99E-05	2.50E-01	2.23E-05	1.64E-03	6.14E-03	9.90E-04	2.18E-03	1.40E-03	1.44E-03	1.44E-04	1.96E-04	5.34E-08	7.37E-04	2.57E-04
53	E78	70	Passenger Truck	1347	0.00E+00	2.19E-05	2.32E-06	8.90E+01	1.39E-04	4.60E-01	4.56E-05	5.01E-03	1.10E-02	1.80E-03	4.34E-03	2.82E-03	2.90E-03	6.51E-04	4.49E-04	1.17E-07	1.45E-03	8.23E-04
53	E78	70	Single Unit Short Haul Truck	14	0.00E+00	3.33E-06	1.67E-07	2.61E+00	2.73E-06	5.24E-03	3.55E-06	1.65E-03	2.34E-04	4.69E-05	4.06E-04	9.97E-05	1.01E-04	2.62E-04	1.05E-05	4.26E-09	3.03E-04	3.08E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.45E-07	7.23E-09	1.11E-01	1.18E-07	2.19E-04	1.55E-07	7.07E-05	1.07E-05	2.09E-06	1.77E-05	4.31E-06	4.38E-06	1.11E-05	4.47E-07	1.79E-10	1.33E-05	1.33E-05
53	E78	70	Combination Short Haul Truck	13	0.00E+00	6.66E-06	4.74E-07	4.85E+00	2.17E-08	5.74E-03	4.88E-06	7.02E-03	5.06E-04	1.11E-04	4.06E-04	1.40E-04	1.40E-04	7.31E-04	1.62E-05	0.00E+00	2.66E-04	1.32E-03
53	E78	70	Combination Long Haul Truck	12	0.00E+00	6.05E-06	4.03E-07	4.52E+00	2.50E-08	6.08E-03	4.58E-06	6.92E-03	5.04E-04	9.20E-05	4.19E-04	1.22E-04	1.23E-04	6.89E-04	1.51E-05	0.00E+00	2.97E-04	1.31E-03
53	E79	70	Passenger Car	877	0.00E+00	1.10E-05	1.19E-06	4.21E+01	7.62E-05	2.73E-01	2.44E-05	1.79E-03	6.70E-03	1.08E-03	2.37E-03	1.53E-03	1.57E-03	1.57E-04	2.14E-04	5.82E-08	8.04E-04	2.80E-04
53	E79	70	Passenger Truck	1468	0.00E+00	2.39E-05	2.53E-06	9.71E+01	1.51E-04	5.02E-01	4.98E-05	5.47E-03	1.20E-02	1.96E-03	4.73E-03	3.08E-03	3.16E-03	7.10E-04	4.89E-04	1.28E-07	1.58E-03	8.97E-04
53	E79	70	Single Unit Short Haul Truck	24	0.00E+00	5.63E-06	2.82E-07	4.41E+00	4.60E-06	8.85E-03	5.99E-06	2.78E-03	3.96E-04	7.91E-05	6.85E-04	1.68E-04	1.71E-04	4.42E-04	1.78E-05	7.18E-09	5.11E-04	5.20E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.87E-01	1.99E-07	3.70E-04	2.61E-07	1.19E-04	1.81E-05	3.52E-06	2.99E-05	7.27E-06	7.39E-06	1.87E-05	7.54E-07	3.02E-10	2.24E-05	2.24E-05
53	E79	70	Combination Short Haul Truck	14	0.00E+00	7.34E-06	5.22E-07	5.34E+00	2.39E-08	6.32E-03	5.37E-06	7.73E-03	5.57E-04	1.22E-04	4.47E-04	1.55E-04	1.54E-04	8.04E-04	1.78E-05	0.00E+00	2.93E-04	1.46E-03
53	E79	70	Combination Long Haul Truck	13	0.00E+00	6.65E-06	4.44E-07	4.97E+00	2.75E-08	6.69E-03	5.04E-06	7.62E-03	5.54E-04	1.01E-04	4.61E-04	1.34E-04	1.36E-04	7.58E-04	1.66E-05	0.00E+00	3.27E-04	1.44E-03
53	E80	70	Passenger Car	751	0.00E+00	9.39E-06	1.02E-06	3.61E+01	6.53E-05	2.34E-01	2.09E-05	1.53E-03	5.74E-03	9.24E-04	2.03E-03	1.31E-03	1.34E-03	1.35E-04	1.83E-04	4.99E-08	6.89E-04	2.40E-04
53	E80	70	Passenger Truck	1258	0.00E+00	2.04E-05	2.17E-06	8.32E+01	1.30E-04	4.30E-01	4.26E-05	4.68E-03	1.03E-02	1.68E-03	4.05E-03	2.64E-03	2.70E-03	6.08E-04	4.19E-04	1.10E-07	1.36E-03	7.69E-04
53	E80	70	Single Unit Short Haul Truck	23	0.00E+00	5.40E-06	2.71E-07	4.23E+00	4.42E-06	8.49E-03	5.75E-06	2.67E-03	3.80E-04	7.60E-05	6.58E-04	1.62E-04	1.64E-04	4.24E-04	1.70E-05	6.90E-09	4.91E-04	4.99E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	1.17E-08	1.80E-01	1.91E-07	3.55E-04	2.51E-07	1.15E-04	1.73E-05	3.38E-06	2.87E-05	6.98E-06	7.10E-06	1.79E-05	7.24E-07	2.90E-10	2.15E-05	2.15E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	8.97E-06	6.38E-07	6.52E+00	2.92E-08	7.72E-03	6.57E-06	9.45E-03	6.81E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.83E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00	8.13E-06	5.42E-07	6.08E+00	3.36E-08	8.18E-03	6.16E-06	9.31E-03	6.78E-04	1.24E-04	5.64E-04	1.64E-04	1.66E-04	9.27E-04	2.03E-05	0.00E+00	4.00E-04	1.76E-03
9	E81	60	Passenger Car	22	0.00E+00	3.32E-07	3.59E-08	1.12E+00	2.31E-06	8.29E-03	7.35E-07	4.57E-05	2.27E-04	3.50E-05	7.17E-05	4.63E-05	4.75E-05	4.69E-06	5.64E-06	1.55E-09	2.43E-05	7.17E-06
9	E81	60	Passenger Truck	38	0.00E+00	7.33E-07	7.73E-08	2.55E+00	4.58E-06	1.47E-02	1.51E-06	1.49E-04	4.17E-04	6.48E-05	1.43E-04	9.35E-05	9.58E-05	1.99E-05	1.27E-05	3.53E-09	4.77E-05	2.47E-05
9	E81	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E82	60	Passenger Car	9	0.00E+00	1.38E-07	1.50E-08	4.65E-01	9.63E-07	3.45E-03	3.06E-07	1.91E-05	9.48E-05	1.46E-05	2.99E-05	1.93E-05	1.98E-05	1.95E-06	2.35E-06	6.47E-10	1.01E-05	2.99E-06
9	E82	60	Passenger Truck	16	0.00E+00	3.05E-07	3.22E-08	1.06E+00	1.91E-06	6.13E-03	6.30E-07	6.22E-05	1.74E-04	2.70E-05	5.96E-05	3.90E-05	3.99E-05	8.30E-06	5.30E-06	1.47E-09	1.99E-05	1.03E-05
10	E83	70	Passenger Car	197	0.00E+00	2.53E-06	2.74E-07	9.34E+00	1.76E-05	6.33E-02	5.62E-06	3.94E-04	1.52E-03	2.45E-04	5.46E-04	3.54E-04	3.63E-04	3.52E-05	4.74E-05	1.29E-08	1.86E-04	6.17E-05
10	E83	70	Passenger Truck	329	0.00E+00	5.56E-06	5.88E-07	2.15E+01	3.51E-05	1.17E-01	1.15E-05	1.23E-03	2.77E-03	4.51E-04	1.10E-03	7.17E-04	7.34E-04	1.60E-04	1.08E-04	2.90E-08	3.68E-04	2.03E-04
10	E83	70	Single Unit Short Haul Truck	1	0.00E+00	3.31E-07	1.66E-08	2.59E-01	2.71E-07	5.20E-04	3.52E-07	1.63E-04	2.33E-05	4.65E-06	4.03E-05	9.89E-06	1.00E-05	2.60E-05	1.04E-06	4.22E-10	3.01E-05	3.06E-05
10	E83	70	Single Unit Long Haul Truck	3	0.00E+00	1.42E-06	1.01E-07	1.03E+00	4.62E-09	1.22E-03	1.04E-06	1.50E-03	1.08E-04	2.36E-05	8.65E-05	2.99E-05	2.98E-05	1.56E-04	3.45E-06	0.00E+00	5.67E-05	2.82E-04
10	E83	70	Combination Long Haul Truck	2	0.00E+00	1.29E-06	8.58E-08	9.62E-01	5.32E-09	1.29E-03	9.76E-07	1.47E-03	1.07E-04	1.96E-05	8.93E-05	2.60E-05	2.62E-05	1.47E-04	3.22E-06	0.00E+00	6.33E-05	2.78E-04
10	E84	70	Passenger Car	188	0.00E+00	2.42E-06	2.62E-07	8.92E+00	1.69E-05	6.05E-02	5.37E-06	3.76E-04	1.46E-03	2.34E-04	5.22E-04	3.38E-04	3.47E-04	3.37E-05	4.53E-05	1.24E-08	1.77E-04	5.90E-05
10	E84	70	Passenger Truck	315	0.00E+00	5.31E-06	5.62E-07	2.05E+01	3.36E-05	1.12E-01	1.10E-05	1.18E-03	2.65E-03	4.31E-04	1.05E-03	6.85E-04	7.02E-04	1.53E-04	1.03E-04	2.77E-08	3.51E-04	1.94E-04
10	E84	70	Single Unit Short Haul Truck	2	0.00E+00	4.40E-07	2.21E-08	3.45E-01	3.60E-07	6.92E-04	4.69E-07	2.18E-04	3.10E-05	6.19E-06	5.36E-05	1.32E-05	1.34E-05	3.46E-05	1.39E-06	5.62E-10	4.00E-05	4.07E-05
10	E84	70	Combination Short Haul Truck	1	0.00E+00	5.12E-07	3.64E-08	3.72E-01	1.66E-09	4.41E-04	3.75E-07	5.39E-04	3.89E-05	8.51E-06	3.12E-05	1.08E-05	1.08E-05	5.61E-05	1.24E-06	0.00E+00	2.04E-05	1.02E-04
10	E84	70	Combination Long Haul Truck	1	0.00E+00	4.64E-07	3.10E-08	3.47E-01	1.92E-09	4.67E-04	3.52E-07	5.32E-04	3.87E-05	7.06E-06	3.22E-05	9.36E-06	9.46E-06	5.29E-05	1.16E-06	0.00E+00	2.28E-05	1.00E-04
9	E85	60	Passenger Car	1102	0.00E+00	1.63E-05	1.76E-06	5.48E+01	1.14E-04	4.07E-01	3.61E-05	2.25E-03	1.12E-02	1.72E-03	3.52E-03	2.28E-03	2.34E-03	2.30E-04	2.77E-04	7.62E-08	1.19E-03	3.52E-04
9	E85	60	Passenger Truck	1846	0.00E+00	3.60E-05	3.80E-06	1.25E+02	2.25E-04	7.23E-01	7.44E-05	7.33E-03	2.05E-02	3.18E-03	7.03E-03	4.59E-03	4.71E-03	9.79E-04	6.26E-04	1.73E-07	2.34E-03	1.22E-03
9	E85	60	Single Unit Short Haul Truck	26	0.00E+00	7.72E-06	3.85E-07	4.90E+00	6.34E-06	9.47E-03	8.23E-06	3.68E-03	6.24E-04	1.13E-04	9.32E-04	2.31E-04	2.35E-04	4.91E-04	1.98E-05	8.16E-09	7.01E-04	6.89E-04
9	E85	60	Single Unit Long Haul Truck	1	0.00E+00	3.37E-07

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E90	60	Passenger Car	37	0.00E+00	5.54E-07	5.98E-08	1.86E+00	3.85E-06	1.38E-02	1.23E-06	7.62E-05	3.79E-04	5.83E-05	1.19E-04	7.72E-05	7.92E-05	7.81E-06	9.40E-06	2.59E-09	4.05E-05	1.19E-05
9	E90	60	Passenger Truck	63	0.00E+00	1.22E-06	1.29E-07	4.24E+00	7.64E-06	2.45E-02	2.52E-06	2.49E-04	6.96E-04	1.08E-04	2.38E-04	1.56E-04	1.60E-04	3.32E-05	2.12E-05	5.88E-09	7.95E-05	4.12E-05
9	E90	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.15E-08	2.01E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.39E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.31E-05
9	E91	60	Passenger Car	4	0.00E+00	5.54E-08	5.98E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.72E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.05E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.45E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.38E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.95E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.54E-08	5.98E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.72E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.05E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.45E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.38E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.95E-06	4.12E-06
9	E93	60	Passenger Car	83	0.00E+00	1.23E-06	1.33E-07	4.15E+00	8.59E-06	3.08E-02	2.73E-06	1.70E-04	8.45E-04	1.30E-04	2.66E-04	1.72E-04	1.77E-04	1.74E-05	2.10E-05	5.77E-09	9.03E-05	2.66E-05
9	E93	60	Passenger Truck	140	0.00E+00	2.72E-06	2.87E-07	9.46E+00	1.70E-05	5.47E-02	5.62E-06	5.55E-04	1.55E-03	2.41E-04	5.31E-04	3.48E-04	3.56E-04	7.41E-05	4.73E-05	1.31E-08	1.77E-04	9.19E-05
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.69E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	E93	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	E94	60	Passenger Car	27	0.00E+00	3.99E-07	4.31E-08	1.34E+00	2.77E-06	9.95E-03	8.82E-07	5.49E-05	2.73E-04	4.19E-05	8.60E-05	5.56E-05	5.71E-05	5.62E-06	6.77E-06	1.86E-09	2.92E-05	8.60E-06
9	E94	60	Passenger Truck	45	0.00E+00	8.79E-07	9.28E-08	3.06E+00	5.50E-06	1.77E-02	1.82E-06	1.79E-04	5.01E-04	7.78E-05	1.72E-04	1.12E-04	1.15E-04	2.39E-05	1.53E-05	4.23E-09	5.72E-05	2.97E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.69E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
54	E95	80	Passenger Car	578	0.00E+00	6.78E-06	7.33E-07	2.68E+01	4.72E-05	1.70E-01	1.51E-05	1.19E-03	3.34E-03	5.70E-04	1.47E-03	9.46E-04	9.70E-04	9.06E-05	1.37E-04	3.71E-08	4.96E-04	1.86E-04
54	E95	80	Passenger Truck	969	0.00E+00	1.47E-05	1.56E-06	6.24E+01	9.42E-05	3.23E-01	3.09E-05	3.55E-03	6.03E-03	1.05E-03	2.96E-03	1.92E-03	1.96E-03	4.36E-04	3.15E-04	8.37E-08	9.87E-04	5.78E-04
54	E95	80	Single Unit Short Haul Truck	31	0.00E+00	5.87E-06	2.91E-07	5.76E+00	4.72E-06	1.16E-02	6.24E-06	3.01E-03	3.69E-04	8.34E-05	7.14E-04	1.74E-04	1.76E-04	5.77E-04	2.32E-05	9.22E-09	5.37E-04	5.63E-04
54	E95	80	Single Unit Long Haul Truck	1	0.00E+00	2.55E-07	1.26E-08	2.43E-01	2.02E-07	4.79E-04	2.71E-07	1.29E-04	1.68E-05	3.68E-06	3.11E-05	7.48E-06	7.59E-06	2.43E-05	9.82E-07	3.83E-10	2.35E-05	2.41E-05
54	E95	80	Combination Short Haul Truck	32	0.00E+00	1.42E-05	1.02E-06	1.18E+01	4.49E-08	1.26E-02	1.04E-05	1.47E-02	8.62E-04	2.12E-04	8.48E-04	3.01E-04	2.99E-04	1.77E-03	3.94E-05	0.00E+00	5.50E-04	2.76E-03
54	E95	80	Combination Long Haul Truck	30	0.00E+00	1.27E-05	8.54E-07	1.09E+01	5.20E-08	1.31E-02	9.69E-06	1.42E-02	8.45E-04	1.70E-04	8.78E-04	2.59E-04	2.60E-04	1.67E-03	3.64E-05	0.00E+00	6.16E-04	2.68E-03
54	E96	80	Passenger Car	434	0.00E+00	5.09E-06	5.50E-07	2.01E+01	3.55E-05	1.28E-01	1.13E-05	8.96E-04	2.51E-03	4.28E-04	1.10E-03	7.10E-04	7.28E-04	6.80E-05	1.02E-04	2.79E-08	3.73E-04	1.40E-04
54	E96	80	Passenger Truck	727	0.00E+00	1.10E-05	1.17E-06	4.68E+01	7.07E-05	2.42E-01	2.32E-05	2.67E-03	4.52E-03	7.88E-04	2.22E-03	1.44E-03	1.47E-03	3.27E-04	2.36E-04	6.28E-08	7.41E-04	4.34E-04
54	E96	80	Single Unit Short Haul Truck	39	0.00E+00	7.33E-06	3.64E-07	7.19E+00	5.90E-06	1.44E-02	7.80E-06	3.76E-03	4.61E-04	1.04E-04	8.92E-04	2.17E-04	2.21E-04	7.21E-04	2.90E-05	1.15E-08	6.71E-04	7.04E-04
54	E96	80	Single Unit Long Haul Truck	2	0.00E+00	3.19E-07	1.57E-08	3.04E-01	2.52E-07	5.99E-04	3.39E-07	1.61E-04	2.10E-05	4.60E-06	3.89E-05	9.34E-06	9.49E-06	3.04E-05	1.23E-06	4.79E-10	2.94E-05	3.01E-05
54	E96	80	Combination Short Haul Truck	38	0.00E+00	1.66E-05	1.19E-06	1.37E+01	5.24E-08	1.47E-02	1.22E-05	1.71E-02	1.01E-03	2.48E-04	9.88E-04	3.50E-04	3.48E-04	2.07E-03	4.60E-05	0.00E+00	6.41E-04	3.22E-03
54	E96	80	Combination Long Haul Truck	34	0.00E+00	1.48E-05	9.95E-07	1.27E+01	6.06E-08	1.52E-02	1.13E-05	1.66E-02	9.85E-04	1.98E-04	1.02E-03	3.01E-04	3.03E-04	1.94E-03	4.25E-05	0.00E+00	7.18E-04	3.12E-03
9	F01	60	Passenger Car	322	0.00E+00	4.77E-06	5.16E-07	1.60E+01	3.32E-05	1.19E-01	1.06E-05	6.57E-04	3.27E-03	5.02E-04	1.03E-03	6.65E-04	6.83E-04	6.73E-05	8.10E-05	2.23E-08	3.49E-04	1.03E-04
9	F01	60	Passenger Truck	540	0.00E+00	1.05E-05	1.11E-06	3.66E+01	6.58E-05	2.11E-01	2.17E-05	2.14E-03	6.00E-03	9.31E-04	2.05E-03	1.34E-03	1.38E-03	2.86E-04	1.83E-04	5.07E-08	6.85E-04	3.55E-04
9	F01	60	Single Unit Short Haul Truck	31	0.00E+00	8.98E-06	4.48E-07	5.70E+00	7.38E-06	1.10E-02	9.57E-06	4.28E-03	7.25E-04	1.31E-04	1.08E-03	2.69E-04	2.73E-04	5.71E-04	2.30E-05	9.49E-09	8.15E-04	8.01E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	3.92E-07	1.95E-08	2.44E-01	3.21E-07	4.67E-04	4.19E-07	1.85E-04	3.26E-05	5.83E-06	4.78E-05	1.17E-05	1.19E-05	2.43E-05	9.83E-07	4.04E-10	3.58E-05	3.47E-05
9	F01	60	Combination Short Haul Truck	24	0.00E+00	1.43E-05	1.00E-06	9.34E+00	5.08E-08	1.25E-02	1.06E-05	1.56E-02	1.33E-03	2.64E-04	9.14E-04	2.98E-04	2.98E-04	1.41E-03	3.12E-05	0.00E+00	6.14E-04	2.94E-03
9	F01	60	Combination Long Haul Truck	22	0.00E+00	1.28E-05	8.39E-07	8.76E+00	5.82E-08	1.35E-02	9.94E-06	1.54E-02	1.34E-03	2.28E-04	9.38E-04	2.56E-04	2.59E-04	1.33E-03	2.93E-05	0.00E+00	6.79E-04	2.91E-03
9	F02	60	Passenger Car	213	0.00E+00	3.15E-06	3.41E-07	1.06E+01	2.19E-05	7.86E-02	6.98E-06	4.34E-04	2.16E-03	3.32E-04	6.80E-04	4.39E-04	4.51E-04	4.45E-05	5.35E-05	1.47E-08	2.31E-04	6.80E-05
9	F02	60	Passenger Truck	356	0.00E+00	6.95E-06	7.34E-07	2.42E+01	4.35E-05	1.40E-01	1.44E-05	1.42E-03	3.96E-03	6.15E-04	1.36E-03	8.87E-04	9.09E-04	1.89E-04	1.21E-04	3.35E-08	4.52E-04	2.35E-04
9	F02	60	Single Unit Short Haul Truck	11	0.00E+00	3.35E-06	1.67E-07	2.13E+00	2.75E-06	4.11E-03	3.57E-06	1.60E-03	2.70E-04	4.90E-05	4.04E-04	1.00E-04	1.02E-04	2.13E-04	8.59E-06	3.54E-09	3.04E-04	2.99E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	1.46E-07	7.26E-09	9.08E-02	1.20E-07	1.74E-04	1.56E-07	6.90E-05	1.21E-05	2.17E-06	1.78E-05	4.36E-06	4.43E-06	9.07E-06	3.66E-07	1.50E-10	1.33E-05	1.29E-05
9	F02	60	Combination Short Haul Truck	10	0.00E+00	5.73E-06	4.00E-07	3.73E+00	2.03E-08	5.00E-03	4.24E-06	6.21E-03	5.32E-04	1.05E-04	3.65E-04	1.19E-04	1.19E-04	5.62E-04	1.25E-05	0.00E+00	2.45E-04	1.17E-03
9	F02	60	Combination Long Haul Truck	9	0.00E+00	5.13E-06	3.35E-07	3.50E+00	2.32E-08	5.40E-03	3.97E-06	6.16E-03	5.35E-04	9.09E-05	3.75E-04	1.02E-04	1.03E-04	5.32E-04	1.17E-05	0.00E+00	2.71E-04	1.16E-03
9	F33	60	Passenger Car	276	0.00E+00	4.09E-06	4.42E-07	1.37E+01	2.85E-05	1.02E-01	9.05E-06	5.63E-04	2.80E-03	4.30E-04	8.82E-04	5.70E-04	5.85E-04	5.77E-05	6.94E-05	1.91E-08	2.99E-04	8.82E-05
9	F33	60	Passenger Truck	462	0.00E+00	9.02E-06	9.52E-07	3.13E+01	5.64E-05	1.81E-01	1.86E-05	1.84E-03	5.14E-03	7.98E-04	1.76E-03	1.15E-03	1.18E-03	2.45E-04	1.57E-04	4.34E-08	5.87E-04	3.04E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.38E-07	1.19E-08	1.51E-01	1.95E-07	2.92E-04	2.54E-07	1.13E-04	1.92E-05	3.48E-06	2.87E-05	7.11E-06	7.22E-06	1.51E-05	6.10E-07	2.51E-10	2.16E-05	2.12E-05
9	F33	60	Combination Short Haul Truck	7	0.00E+00	4.36E-06	3.04E-07	2.84E+00	1.54E-08	3.80E-03	3.23E-06	4.73E-03	4.05E-04	8.02E-05	2.78E-04	9.05E-05	9.05E-05	4.28E-04	9.48E-06	0.00E+00	1.87E-04	8.92E-04
9	F33	60	Combination Long Haul Truck	7	0.00E+00	3.90E-06	2.55E-07	2.66E+00	1.77E-08	4.11E-03	3.02E-06	4.69E-03	4.07E-04	6.92E-05	2.85E-04	7.76E-05	7.86E-05	4.05E-04	8.89E-06	0.00E+00	2.06E-04	8.85E-04
9	F34	60	Passenger Car	176	0.00E+00	2.60E-06	2.81E-07	8.74E+00	1.81E-05	6.50E-02	5.76E-06	3.59E-04	1.78E-03	2.74E-04	5.62E-04	3.63E-04	3.73E-04	3.67E-05	4.42E-05	1.22E-08	1.91E-04	5.62E-05
9	F34	60	Passenger Truck	294	0.00E+00	5.74E-06	6.06E-07	2.00E+01	3.59E-05	1.15E-01	1.19E-05	1.17E-03	3.27E-03	5.08E-04	1.12E-03	7.33E-04	7.51E-04	1.56E-04	9.98E-05	2.76E-08	3.74E-04	1.94E-04
9	F34	60	Single Unit Short Haul Truck	3	0.00E+00	8.76E-07	4.37E-08	5.56E-01	7.20E-07	1.07E-03	9.34E-07	4.17E-04	7.07E-05	1.28E-05	1.06E-04	2.62E-05	2.66E-05	5.57E-05	2.25E-06	9.26E-10	7.95E-05	7.82E-05
9	F34	60	Combination Short Haul Truck	2	0.00E+00	1.30E-06	9.08E-08	8.47E-01	4.60E-09	1.14E-03	9.63E-07	1.41E-03	1.21E-04	2.39E-05	8.28E-05	2.70E-05	2.70E-05	1.28E-04	2.83E-06	0.00E+00	5.57E-05	2.66E-04
9	F34	60	Combination Long Haul Truck	2	0.00E+00	1.16E-06	7.61E-08	7.95E-01	5.28E-09	1.23E-03	9.01E-07	1.40E-03	1.21E-04	2.06E-05	8.51E-05	2.32E-05	2.34E-05	1.21E-04	2.65E-06	0.00E+00	6.16E-05	2.64E-04
11	F35	80	Passenger Car	132	0.00E+00	1.58E-06	1.71E-07	6.07E+00	1.10E-05	4.06E-02	3.51E-06	2.71E-04	7.24E-04	1.26E-04	3.42E-04	2.20E-04	2.26E-04	2.06E-05	3.09E-05	8.66E-09	1.16E-04	4.24E-05
11	F35	80	Passenger Truck	220	0.00E+00	3.40E-06	3.60E-07	1.40E+01	2.17E-05	7.47E-02	7.10E-06	8.02E-04	1.30E-03	2.30E-04	6.80E-04	4.42E-04	4.53E-04	9.92E-05	7.10E-05	1.93E-08	2.28E-04	1.31E-04
11	F35	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	F35	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.03E-03	1.69E-06	2.37E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.86E-04	6.36E-06	0.00E+00	8.88E-05	4.46E-04
11	F35	80	Combination Long Haul Truck	5	0.00E+00	2.05E-06	1.38E-07	1.76E+00	8.39E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.42E-04	4.17E-05	4.20E-05	2.69E-04	5.88E-06	0.00E+00	9.94E-05	4.32E-04
11	F36	80	Passenger Car	37	0.00E+00	4.40E-07	4.76E-08	1.69E+00	3.06E-06	1.13E-02	9.78E-07	7.53E-05	2.02E-04	3.50E-05	9.53E-05	6.14E-05	6.30E-05	5.74E-06	8.60E-06	2.41E-09	3.23E-05	1.18E-05
11	F36	80	Passenger Truck	61	0.00E+00	9.46E-07	1.00E-07	3.90E+00	6.05E-06	2.08E-02	1.98E-06	2.23E-04	3.61E-04	6.41E-05	1.89E-04	1.23E-04	1.26E-04	2.76E-05	1.98E-05	5.37E-09	6.34E-05	3.65E-05
11	F36	80	Single Unit Short Haul Truck	3	0.00E+00	5.39E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.60E-05	1.62E-05	5.30E-05	2.13E-06	8.46E-10	4.93E-05	5.17E-05
11	F36	80	Combination Short Haul Truck	1	0.00E+00	4.59E-07	3.28E-08	3.81E-01	1.45E-09	4.07E-04	3.37E-07	4.74E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.65E-06	5.72E-05	1.27E-06	0.00E+00	1.78E-05	8.92E-05
11	F36	80	Combination Long Haul Truck	1	0.00E+00	4.11E-07	2.76E-08	3.52E-01	1.68E-09	4.21E-04	3.13E-07	4.58E-04	2.73E-05	5.48E-06	2.84E-05	8.35E-06	8.40E-06	5.38E-05	1.18E-06	0.00E+00	1.99E-05	8.64E-05
9	F37	60	Passenger Car	601	0.00E+00	8.91E-06	9.62E-07	2.99E+01	6.20E-05	2.22E-01	1.97E-05	1.23E-03	6.10E-03	9.37E-04	1.92E-03	1.24E-03	1.27E-03	1.26E-04	1.51E-04	4.16E-08	6.52E-04	1.92E-04
9	F37	60	Passenger Truck	1007	0.00E+00	1.96E-05	2.07E-06	6.83E+01	1.23E-04	3.95E-01	4.06E-05	4.00E-03	1.12E-02	1.74E-03	3.83E-03	2.51E-03	2.57E-03	5.34E-04	3.41E-04	9.46E-08	1.28E-03	6.63E-04
9	F37	60	Single Unit Short Haul Truck	41	0.00E+00	1.20E-05	5.97E-07	7.59E+00	9.83E-06	1.47E-02	1.27E-05	5.70E-03	9.66E-04	1.75E-04	1.44E-03	3.58E-04	3.63E-04	7.60E-04	3.07E-05	1.26E-08	1.09E-03	1.07E-03
9	F37	60	Single Unit Long Haul Truck	2	0.00E+00	5.22E-07	2.59E-08	3.24E-01	4.27E-07	6.22E-04	5.57E-07	2.46E-04	4.34E-05	7.76E-06	6.37E-05	1.56E-05	1.58E-05	3.24E-05	1.31E-06	5.37E-10	4.77E-05	4.62E-05
9	F37	60	Combination Short Haul Truck	38	0.00E+00	2.26E-05	1.58E-06	1.47E+01	7.98E-08	1.97E-02	1.67E-05	2.45E-02	2.10E-03	4.15E-04	1.44E-03	4.68E-04	4.68E-04	2.21E-03	4.91E-05	0.00E+00	9.66E-04	4.62E-03
9	F37	60	Combination Long Haul Truck	35	0.00E+00	2.02E-05	1.32E-06	1.38E+01	9.15E-08	2.13E-02	1.56E-05	2.43E-02	2.11E-03	3.58E-04	1.48E-03	4.02E-04	4.07E-04	2.10E-03	4.60E-05	0.00E+00	1.07E-03	4.58E-03
9	F38	60	Passenger Car	793	0.00E+00	1.17E-05	1.27E-06	3.94E+01	8.17E-05	2.93E-01	2.60E-05	1.62E-03	8.04E-03	1.24E-03	2.53E-03	1.64E-03	1.68E-03	1.66E-04	1.99E-04	5.48E-08	8.59E-04	2.53E-04
9	F38	60	Passenger Truck	1327	0.00E+00	2.59E-05	2.73E-06	9.00E+01	1.62E-04	5.20E-01	5.35E-05	5.27E-03	1.47E-02	2.29E-03	5.05E-03	3.30E-03	3.39E-03	7.04E-04	4.50E-04	1.25E-07	1.69E-03	8.74E-04
9	F38	60	Single Unit Short Haul Truck	20	0.00E+00	5.90E-06	2.95E-07	3.75E+00	4.85E-06	7.24E-03	6.29E-06	2.81E-03	4.77E-04	8.63E-05	7.13E-04	1.77E-04	1.79E-04	3.75E-04	1.52E-05	6.24E-09	5.36E-04	5.27E-04
9	F38	60	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.28E-08	1.60E-01	2.11E-07	3.07E-04	2.75E-07	1.22E-04	2.14E-05	3.83E-06	3.14E-05	7.69E-06	7.81E-06	1.60E-05	6.46E-07	2.65E-10	2.35E-05	2.28E-05
9	F38	60	Combination Short Haul Truck	25	0.00E+00	1.49E-05	1.04E-06	9.70E+00	5.27E-08	1.30E-02	1.10E-05	1.62E-02	1.38E-03	2.74E-04	9.49E-04	3.09E-04	3.09E-04	1.46E-03	3.24E-05	0.00E+00	6.38E-04	3.05E-03
9	F38	60	Combination Long Haul Truck	23	0.00E+00	1.33E-05	8.72E-07	9.10E+00	6.04E-08	1.40E-02	1.03E-05	1.60E-02	1.39E-03	2.37E-04	9.74E-04	2.65E-04	2.69E-04	1.38E-03	3.04E-05	0.00E+00	7.05E-04	3.03E-03
11	F39	80	Passenger Car	153	0.00E+00	1.84E-06	1.99E-07	7.07E+00	1.28E-05	4.73E-02	4.09E-06	3.15E-04	8.44E-04	1.47E-04	3.99E-04	2.57E-04	2.64E-04	2.40E-05	3.60E-05	1.01E-08	1.35E-04	4.94E-05
11	F39	80	Passenger Truck	257	0.00E+00	3.96E-06	4.20E-07	1.63E+01	2.53E-05	8.71E-02	8.28E-06	9.35E-04	1.51E-03	2.68E-04	7.92E-04	5.15E-04	5.28E-04	1.16E-04	8.28E-05	2.25E-08	2.65E-04	1.53E-04
11	F39	80	Single Unit Short Haul Truck	4	0.00E+00	6.83E-07	3.39E-08	6.70E-01	5.50E-07	1.35E-03	7.27E-07	3.50E-04	4.29E-05	9.71E-06	8.31E-05	2.03E-05	2.06E-05	6.72E-05	2.70E-06	1.07E-09	6.26E-05	6.56E-05
11	F39	80	Combination Short Haul Truck	5	0.00E+00	2.27E-06	1.63E-07	1.88E+00	7.18E-09	2.01E-03	1.67E-06	2.34E-03	1.38E-04	3.39E-05	1.35E-04	4.80E-05	4.77E-05	2.83E-04	6.30E-06	0.00E+00	8.79E-05	4.41E-04
11	F39	80	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.36E-07	1.74E+00	8.30E-09	2.09E-03	1.55E-06	2.27E-03	1.35E-04	2.71E-05	1.40E-04	4.13E-05	4.16E-05	2.66E-04	5.82E-06	0.00E+00	9.84E-05	4.28E-04
11	F40	80	Passenger Car	64	0.00E+00	7.64E-07	8.27E-08	2.93E+00	5.32E-06	1.96E-02	1.70E-06	1.31E-04	3.50E-04	6.08E-05	1.65E-04	1.07E-04	1.09E-04	9.97E-06	1.49E-05	4.19E-09	5.60E-05	2.05E-05
11	F40	80	Passenger Truck	107	0.00E+00	1.64E-06	1.74E-07	6.78E+00	1.05E-05	3.61E-02	3.43E-06	3.88E-04	6.28E-04	1.11E-04	3.29E-04	2.14E-04	2.19E-04	4.80E-05	3.43E-05	9.32E-09	1.10E-04	6.33E-05
11	F40	80	Single Unit Short Haul Truck	2	0.00E+00	3.45E-07	1.71E-08	3.38E-01	2.77E-07	6.79E-04	3.67E-07	1.77E-04	2.16E-05	4.90E-06	4.19E-05	1.02E-05	1.04E-05	3.39E-05	1.36E-06	5.41E-10	3.15E-05	3.31E-05
11	F40	80	Combination Short Haul Truck	4	0.00E+00	1.80E-06	1.28E-07	1.49E+00	5.67E-09	1.59E-03	1.32E-06	1.85E-03	1.09E-04	2.68E-05	1.07E-04	3.79E-05	3.77E-05	2.24E-04	4.98E-06	0.00E+00	6.94E-05	3.49E-04
11	F40	80	Combination Long Haul Truck	4	0.00E+00	1.61E-06	1.08E-07	1

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	F77	70	Passenger Car	241	0.00E+00	3.02E-06	3.26E-07	1.16E+01	2.10E-05	7.51E-02	6.70E-06	4.92E-04	1.84E-03	2.97E-04	6.53E-04	4.21E-04	4.32E-04	4.32E-05	5.89E-05	1.60E-08	2.21E-04	7.71E-05
53	F77	70	Passenger Truck	404	0.00E+00	6.57E-06	6.96E-07	2.67E+01	4.16E-05	1.38E-01	1.37E-05	1.50E-03	3.31E-03	5.40E-04	1.30E-03	8.48E-04	8.69E-04	1.95E-04	1.35E-04	3.53E-08	4.36E-04	2.47E-04
53	F77	70	Single Unit Short Haul Truck	61	0.00E+00	1.42E-05	7.14E-07	1.12E+01	1.16E-05	2.24E-02	1.52E-05	7.04E-03	1.00E-03	2.00E-04	1.73E-03	4.26E-04	4.33E-04	1.12E-03	4.49E-05	1.82E-08	1.29E-03	1.32E-03
53	F77	70	Single Unit Long Haul Truck	3	0.00E+00	6.21E-07	3.09E-08	4.74E-01	5.03E-07	9.35E-04	6.61E-07	3.02E-04	4.57E-05	8.91E-06	7.57E-05	1.84E-05	1.87E-05	4.73E-05	1.91E-06	7.65E-10	5.68E-05	5.66E-05
53	F77	70	Combination Short Haul Truck	48	0.00E+00	2.49E-05	1.77E-06	1.81E+01	8.08E-08	2.14E-02	1.82E-05	2.62E-02	1.89E-03	4.13E-04	1.52E-03	5.24E-04	5.22E-04	2.72E-03	6.03E-05	0.00E+00	9.93E-04	4.93E-03
53	F77	70	Combination Long Haul Truck	44	0.00E+00	2.25E-05	1.50E-06	1.68E+01	9.31E-08	2.27E-02	1.71E-05	2.58E-02	1.88E-03	3.43E-04	1.56E-03	4.55E-04	4.59E-04	2.57E-03	5.64E-05	0.00E+00	1.11E-03	4.87E-03
50	F78	40	Passenger Car	87	0.00E+00	1.45E-06	1.57E-07	5.01E+00	1.01E-05	3.58E-02	3.22E-06	1.58E-04	1.51E-03	2.15E-04	3.12E-04	2.02E-04	2.07E-04	2.74E-05	2.52E-05	6.10E-09	1.06E-04	2.47E-05
50	F78	40	Passenger Truck	146	0.00E+00	3.31E-06	3.47E-07	1.12E+01	1.99E-05	6.17E-02	6.61E-06	5.96E-04	2.68E-03	3.81E-04	6.25E-04	4.10E-04	4.18E-04	9.65E-05	5.56E-05	1.19E-08	2.06E-04	1.01E-04
50	F78	40	Single Unit Short Haul Truck	1	0.00E+00	5.93E-07	3.10E-08	2.84E-01	5.15E-07	4.89E-04	6.30E-07	2.90E-04	5.41E-05	8.96E-06	7.00E-05	1.85E-05	1.88E-05	2.87E-05	1.15E-06	4.85E-10	5.11E-05	5.44E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	1.03E-06	7.15E-08	5.24E-01	3.72E-09	9.00E-04	7.67E-07	1.15E-03	1.20E-04	2.16E-05	6.70E-05	2.14E-05	2.16E-05	7.90E-05	1.75E-06	0.00E+00	4.53E-05	2.17E-04
50	F78	40	Combination Long Haul Truck	1	0.00E+00	9.41E-07	6.14E-08	4.99E-01	4.22E-09	1.00E-03	7.23E-07	1.16E-03	1.21E-04	1.92E-05	6.88E-05	1.87E-05	1.91E-05	7.61E-05	1.67E-06	0.00E+00	4.99E-05	2.18E-04
52	F79	60	Passenger Car	377	0.00E+00	5.12E-06	5.54E-07	1.87E+01	3.57E-05	1.27E-01	1.14E-05	7.40E-04	3.72E-03	5.72E-04	1.11E-03	7.15E-04	7.34E-04	7.88E-05	9.48E-05	2.53E-08	3.75E-04	1.16E-04
52	F79	60	Passenger Truck	631	0.00E+00	1.13E-05	1.19E-06	4.26E+01	7.02E-05	2.26E-01	2.32E-05	2.39E-03	6.63E-03	1.03E-03	2.21E-03	1.43E-03	1.47E-03	3.28E-04	2.14E-04	5.37E-08	7.31E-04	3.95E-04
52	F79	60	Single Unit Short Haul Truck	7	0.00E+00	2.06E-06	1.03E-07	1.31E+00	1.69E-06	2.52E-03	2.19E-06	9.80E-04	1.66E-04	3.01E-05	2.48E-04	6.15E-05	6.25E-05	1.31E-04	5.28E-06	2.17E-09	1.87E-04	1.84E-04
52	F79	60	Combination Short Haul Truck	4	0.00E+00	2.53E-06	1.77E-07	1.65E+00	8.96E-09	2.21E-03	1.88E-06	2.75E-03	2.35E-04	4.66E-05	1.61E-04	5.26E-05	5.26E-05	2.49E-04	5.51E-06	0.00E+00	1.08E-04	5.19E-04
52	F79	60	Combination Long Haul Truck	4	0.00E+00	2.27E-06	1.48E-07	1.55E+00	1.03E-08	2.39E-03	1.75E-06	2.72E-03	2.36E-04	4.02E-05	1.66E-04	4.51E-05	4.56E-05	2.35E-04	5.16E-06	0.00E+00	1.20E-04	5.14E-04
53	F80	70	Passenger Car	831	0.00E+00	1.04E-05	1.12E-06	3.99E+01	7.22E-05	2.58E-01	2.31E-05	1.69E-03	6.35E-03	1.02E-03	2.25E-03	1.45E-03	1.49E-03	1.49E-04	2.03E-04	5.52E-08	7.62E-04	2.65E-04
53	F80	70	Passenger Truck	1391	0.00E+00	2.26E-05	2.40E-06	9.20E+01	1.43E-04	4.75E-01	4.71E-05	5.18E-03	1.14E-02	1.86E-03	4.48E-03	2.92E-03	2.99E-03	6.72E-04	4.64E-04	1.21E-07	1.50E-03	8.50E-04
53	F80	70	Single Unit Short Haul Truck	16	0.00E+00	3.80E-06	1.91E-07	2.98E+00	3.11E-06	5.98E-03	4.05E-06	1.88E-03	2.67E-04	5.35E-05	4.63E-04	1.14E-04	1.16E-04	2.98E-04	1.20E-05	4.86E-09	3.46E-04	3.52E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	8.25E-09	1.26E-01	1.34E-07	2.50E-04	1.76E-07	8.07E-05	1.22E-05	2.38E-06	2.02E-05	4.92E-06	5.00E-06	1.26E-05	5.10E-07	2.04E-10	1.52E-05	1.51E-05
53	F80	70	Combination Short Haul Truck	8	0.00E+00	4.23E-06	3.01E-07	3.08E+00	1.38E-08	3.64E-03	3.10E-06	4.46E-03	3.21E-04	7.03E-05	2.58E-04	8.91E-05	8.89E-05	4.64E-04	1.03E-05	0.00E+00	1.69E-04	8.39E-04
53	F80	70	Combination Long Haul Truck	7	0.00E+00	3.84E-06	2.56E-07	2.87E+00	1.58E-08	3.86E-03	2.91E-06	4.39E-03	3.20E-04	5.84E-05	2.66E-04	7.73E-05	7.82E-05	4.37E-04	9.59E-06	0.00E+00	1.89E-04	8.29E-04
52	F81	60	Passenger Car	222	0.00E+00	3.02E-06	3.27E-07	1.11E+01	2.11E-05	7.48E-02	6.74E-06	4.37E-04	2.19E-03	3.37E-04	6.55E-04	4.22E-04	4.33E-04	4.65E-05	5.59E-05	1.50E-08	2.21E-04	6.86E-05
52	F81	60	Passenger Truck	373	0.00E+00	6.64E-06	7.02E-07	2.51E+01	4.14E-05	1.34E-01	1.37E-05	1.41E-03	3.91E-03	6.05E-04	1.30E-03	8.47E-04	8.67E-04	1.94E-04	1.26E-04	3.17E-08	4.32E-04	2.33E-04
52	F81	60	Single Unit Short Haul Truck	68	0.00E+00	2.01E-05	1.01E-06	1.28E+01	1.66E-05	2.47E-02	2.15E-05	9.60E-03	1.63E-03	2.95E-04	2.43E-03	6.02E-04	6.12E-04	1.28E-03	5.17E-05	2.13E-08	1.83E-03	1.80E-03
52	F81	60	Single Unit Long Haul Truck	3	0.00E+00	8.80E-07	4.37E-08	5.46E-01	7.19E-07	1.05E-03	9.39E-07	4.15E-04	7.31E-05	1.31E-05	1.07E-04	2.62E-05	2.67E-05	5.46E-05	2.20E-06	9.05E-10	8.03E-05	7.78E-05
52	F81	60	Combination Short Haul Truck	45	0.00E+00	2.66E-05	1.86E-06	1.73E+01	9.41E-08	2.32E-02	1.97E-05	2.89E-02	2.47E-03	4.89E-04	1.69E-03	5.52E-04	5.52E-04	2.61E-03	5.78E-05	0.00E+00	1.14E-03	5.44E-03
52	F81	60	Combination Long Haul Truck	41	0.00E+00	2.38E-05	1.56E-06	1.62E+01	1.08E-07	2.51E-02	1.84E-05	2.86E-02	2.48E-03	4.22E-04	1.74E-03	4.74E-04	4.79E-04	2.47E-03	5.42E-05	0.00E+00	1.26E-03	5.40E-03
50	F82	40	Passenger Car	129	0.00E+00	2.15E-06	2.32E-07	7.43E+00	1.49E-05	5.31E-02	4.77E-06	2.34E-04	2.24E-03	3.19E-04	4.63E-04	2.99E-04	3.07E-04	4.05E-05	3.73E-05	9.04E-09	1.57E-04	3.66E-05
50	F82	40	Passenger Truck	216	0.00E+00	4.90E-06	5.14E-07	1.65E+01	2.94E-05	9.13E-02	9.80E-06	8.83E-04	3.97E-03	5.64E-04	9.25E-04	6.07E-04	6.19E-04	1.43E-04	8.23E-05	1.76E-08	3.05E-04	1.50E-04
50	F82	40	Single Unit Short Haul Truck	2	0.00E+00	7.72E-07	4.04E-08	3.70E-01	6.71E-07	6.37E-04	8.20E-07	3.78E-04	7.04E-05	1.17E-05	9.12E-05	2.41E-05	2.45E-05	3.74E-05	1.50E-06	6.32E-10	6.66E-05	7.09E-05
50	F82	40	Combination Short Haul Truck	1	0.00E+00	9.37E-07	6.49E-08	4.76E-01	3.38E-09	8.16E-04	6.96E-07	1.05E-03	1.09E-04	1.96E-05	6.08E-05	1.94E-05	1.96E-05	7.16E-05	1.59E-06	0.00E+00	4.11E-05	1.97E-04
50	F82	40	Combination Long Haul Truck	1	0.00E+00	8.54E-07	5.57E-08	4.53E-01	3.83E-09	9.08E-04	6.56E-07	1.05E-03	1.10E-04	1.74E-05	6.24E-05	1.70E-05	1.73E-05	6.91E-05	1.51E-06	0.00E+00	4.53E-05	1.98E-04
53	F83	70	Passenger Car	9	0.00E+00	1.18E-07	1.28E-08	4.54E-01	8.22E-07	2.94E-03	2.63E-07	1.93E-05	7.22E-05	1.16E-05	2.56E-05	1.65E-05	1.69E-05	1.69E-06	2.31E-06	6.28E-10	8.67E-06	3.02E-06
53	F83	70	Passenger Truck	16	0.00E+00	2.57E-07	2.73E-08	1.05E+00	1.63E-06	5.41E-03	5.37E-07	5.90E-05	1.30E-04	2.12E-05	5.10E-05	3.32E-05	3.41E-05	7.66E-06	5.28E-06	1.38E-09	1.71E-05	9.68E-06
53	F83	70	Single Unit Short Haul Truck	1	0.00E+00	1.98E-07	9.95E-09	1.56E-01	1.62E-07	3.12E-04	2.11E-07	9.81E-05	1.40E-05	2.79E-06	2.42E-05	5.93E-06	6.03E-06	1.56E-05	6.26E-07	2.53E-10	1.80E-05	1.83E-05
50	F84	40	Passenger Car	183	0.00E+00	3.04E-06	3.29E-07	1.05E+01	2.12E-05	7.52E-02	6.76E-06	3.31E-04	3.17E-03	4.52E-04	6.56E-04	4.24E-04	4.35E-04	5.75E-05	5.29E-05	1.28E-08	2.23E-04	5.19E-05
50	F84	40	Passenger Truck	307	0.00E+00	6.95E-06	7.29E-07	2.34E+01	4.17E-05	1.29E-01	1.39E-05	1.25E-03	5.62E-03	8.00E-04	1.31E-03	8.60E-04	8.77E-04	2.03E-04	1.17E-04	2.49E-08	4.33E-04	2.12E-04
50	F84	40	Single Unit Short Haul Truck	2	0.00E+00	1.08E-06	5.66E-08	5.18E-01	9.38E-07	8.91E-04	1.15E-06	5.29E-04	9.85E-05	1.63E-05	1.28E-04	3.37E-05	3.42E-05	5.23E-05	2.09E-06	8.84E-10	9.31E-05	9.92E-05
50	F84	40	Combination Short Haul Truck	7	0.00E+00	6.64E-06	4.60E-07	3.37E+00	2.39E-08	5.78E-03	4.93E-06	7.40E-03	7.72E-04	1.39E-04	4.31E-04	1.37E-04	1.39E-04	5.08E-04	1.13E-05	0.00E+00	2.91E-04	1.40E-03
50	F84	40	Combination Long Haul Truck	7	0.00E+00	6.05E-06	3.95E-07	3.21E+00	2.71E-08	6.43E-03	4.65E-06	7.44E-03	7.76E-04	1.23E-04	4.42E-04	1.20E-04	1.23E-04	4.89E-04	1.07E-05	0.00E+00	3.21E-04	1.40E-03
52	F85	60	Passenger Car	166	0.00E+00	2.25E-06	2.44E-07	8.25E+00	1.57E-05	5.58E-02	5.02E-06	3.26E-04	1.64E-03	2.52E-04	4.88E-04	3.15E-04	3.23E-04	3.46E-05	4.17E-05	1.12E-08	1.65E-04	5.11E-05
52	F85	60	Passenger Truck	278	0.00E+00	4.95E-06	5.23E-07	1.87E+01	3.09E-05	9.95E-02	1.02E-05	1.05E-03	2.92E-03	4.51E-04	9.72E-04	6.31E-04	6.47E-04	1.44E-04	9.41E-05	2.36E-08	3.22E-04	1.74E-04
52	F85	60	Single Unit Short Haul Truck	3	0.00E+00	9.35E-07	4.67E-08	5.94E-01	7.69E-07	1.15E-03	9.97E-07	4.46E-04	7.55E-05	1.37E-05	1.13E-04	2.80E-05	2.84E-05	5.95E-05	2.40E-06	9.88E-10	8.49E-05	8.35E-05
52	F85	60	Combination Short Haul Truck	8	0.00E+00	4.47E-06	3.12E-07	2.91E+00	1.58E-08	3.90E-03	3.31E-06	4.85E-03	4.16E-04	8.23E-05	2.85E-04	9.29E-05	9.29E-05	4.39E-04	9.73E-06	0.00E+00	1.91E-04	9.16E-04
52	F85	60	Combination Long Haul Truck	7	0.00E+00	4.00E-06	2.62E-07	2.73E+00	1.81E-08	4.21E-03	3.10E-06	4.81E-03	4.18E-04	7.10E-05	2.93E-04	7.97E-05	8.06E-05	4.16E-04	9.12E-06	0.00E+00	2.12E-04	9.08E-04
53	F86	70	Passenger Car	132	0.00E+00	1.65E-06	1.79E-07	6.34E+00	1.15E-05	4.11E-02	3.67E-06	2.69E-04	1.01E-03	1.62E-04	3.57E-04	2.30E-04	2.36E-04	2.37E-05	3.22E-05	8.77E-09	1.21E-04	4.22E-05
53	F86	70	Passenger Truck	221	0.00E+00	3.59E-06	3.81E-07	1.46E+01	2.28E-05	7.55E-02	7.49E-06	8.23E-04	1.81E-03	2.95E-04	7.12E-04	4.64E-04	4.75E-04	1.07E-04	7.37E-05	1.93E-08	2.38E-04	1.35E-04
53	F86	70	Single Unit Short Haul Truck	5	0.00E+00	1.11E-06	5.59E-08	8.73E-01	9.12E-07	1.75E-03	1.19E-06	5.51E-04	7.84E-05	1.57E-05	1.36E-04	3.33E-05	3.39E-05	8.75E-05	3.52E-06	1.42E-09	1.01E-04	1.03E-04
53	F86	70	Combination Short Haul Truck	12	0.00E+00	6.44E-06	4.58E-07	4.69E+00	2.09E-08	5.55E-03	4.72E-06	6.79E-03	4.89E-04	1.07E-04	3.93E-04	1.36E-04	1.35E-04	7.06E-04	1.56E-05	0.00E+00	2.57E-04	1.28E-03
53	F86	70	Combination Long Haul Truck	11	0.00E+00	5.84E-06	3.90E-07	4.37E+00	2.41E-08	5.87E-03	4.43E-06	6.69E-03	4.87E-04	8.89E-05	4.05E-04	1.18E-04	1.19E-04	6.66E-04	1.46E-05	0.00E+00	2.87E-04	1.26E-03
52	F87	60	Passenger Car	26	0.00E+00	3.58E-07	3.87E-08	1.31E+00	2.49E-06	8.85E-03	7.97E-07	5.17E-05	2.60E-04	3.99E-05	7.76E-05	5.00E-05	5.13E-05	5.50E-06	6.62E-06	1.77E-09	2.62E-05	8.12E-06
52	F87	60	Passenger Truck	44	0.00E+00	7.87E-07	8.31E-08	2.98E+00	4.90E-06	1.58E-02	1.62E-06	1.67E-04	4.63E-04	7.17E-05	1.54E-04	1.00E-04	1.03E-04	2.29E-05	1.49E-05	3.75E-09	5.11E-05	2.76E-05
52	F87	60	Single Unit Short Haul Truck	2	0.00E+00	5.90E-07	2.95E-08	3.75E-01	4.85E-07	7.24E-04	6.29E-07	2.81E-04	4.77E-05	8.63E-06	7.13E-05	1.77E-05	1.79E-05	3.75E-05	1.51E-06	6.24E-10	5.36E-05	5.27E-05
52	F87	60	Combination Short Haul Truck	2	0.00E+00	1.12E-06	7.83E-08	7.30E-01	3.97E-09	9.79E-04	8.31E-07	1.22E-03	1.04E-04	2.06E-05	7.14E-05	2.33E-05	2.33E-05	1.10E-04	2.44E-06	0.00E+00	4.80E-05	2.30E-04
52	F87	60	Combination Long Haul Truck	2	0.00E+00	1.00E-06	6.56E-08	6.85E-01	4.55E-09	1.06E-03	7.77E-07	1.21E-03	1.05E-04	1.78E-05	7.33E-05	2.00E-05	2.02E-05	1.04E-04	2.29E-06	0.00E+00	5.31E-05	2.28E-04
50	F88	40	Passenger Car	6	0.00E+00	9.65E-08	1.04E-08	3.34E-01	6.71E-07	2.39E-03	2.15E-07	1.05E-05	1.01E-04	1.43E-05	2.08E-05	1.35E-05	1.38E-05	1.82E-06	1.68E-06	4.07E-10	7.07E-06	1.65E-06
50	F88	40	Passenger Truck	10	0.00E+00	2.21E-07	2.31E-08	7.43E-01	1.32E-06	4.11E-03	4.41E-07	3.97E-05	1.78E-04	2.54E-05	4.16E-05	2.73E-05	2.78E-05	6.43E-06	3.70E-06	7.92E-10	1.37E-05	6.73E-06

Appendix F.3.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	2.48E-04	1.90E-05	4.30E+02	3.70E-04	1.73E+00	2.64E-04	2.11E-01	1.55E-02	4.43E-03	2.40E-02	1.14E-02	1.16E-02	3.13E-02	1.84E-03	4.21E-07	1.25E-02	3.94E-02
A02	0.00E+00	2.52E-04	1.91E-05	4.29E+02	3.60E-04	1.68E+00	2.66E-04	2.14E-01	1.53E-02	4.41E-03	2.44E-02	1.13E-02	1.14E-02	3.23E-02	1.83E-03	4.24E-07	1.30E-02	4.00E-02
A03	0.00E+00	2.57E-04	2.02E-05	4.90E+02	4.74E-04	2.17E+00	2.92E-04	2.07E-01	1.82E-02	5.07E-03	2.69E-02	1.33E-02	1.36E-02	3.07E-02	2.16E-03	5.21E-07	1.34E-02	3.86E-02
A04	0.00E+00	2.54E-04	1.93E-05	4.42E+02	3.82E-04	1.77E+00	2.72E-04	2.13E-01	1.59E-02	4.55E-03	2.50E-02	1.17E-02	1.19E-02	3.22E-02	1.89E-03	4.46E-07	1.32E-02	3.98E-02
A05	0.00E+00	2.14E-04	1.66E-05	3.92E+02	3.61E-04	1.66E+00	2.36E-04	1.77E-01	1.43E-02	4.04E-03	2.16E-02	1.05E-02	1.07E-02	2.62E-02	1.70E-03	4.01E-07	1.10E-02	3.31E-02
A06	0.00E+00	2.26E-04	1.72E-05	3.81E+02	3.15E-04	1.47E+00	2.36E-04	1.95E-01	1.35E-02	3.92E-03	2.16E-02	9.99E-03	1.01E-02	2.91E-02	1.62E-03	3.67E-07	1.14E-02	3.63E-02
A07	0.00E+00	2.20E-04	1.69E-05	3.77E+02	3.19E-04	1.49E+00	2.32E-04	1.90E-01	1.35E-02	3.88E-03	2.11E-02	9.96E-03	1.01E-02	2.80E-02	1.61E-03	3.62E-07	1.10E-02	3.54E-02
A08	0.00E+00	2.37E-04	1.78E-05	3.78E+02	2.87E-04	1.37E+00	2.39E-04	2.09E-01	1.32E-02	3.88E-03	2.16E-02	9.75E-03	9.88E-03	3.13E-02	1.58E-03	3.45E-07	1.18E-02	3.91E-02
A09	0.00E+00	2.52E-04	1.92E-05	4.20E+02	3.41E-04	1.61E+00	2.60E-04	2.20E-01	1.49E-02	4.31E-03	2.36E-02	1.10E-02	1.11E-02	3.25E-02	1.77E-03	3.91E-07	1.24E-02	4.11E-02
A10	0.00E+00	2.83E-04	2.13E-05	4.54E+02	3.47E-04	1.65E+00	2.86E-04	2.50E-01	1.59E-02	4.65E-03	2.59E-02	1.17E-02	1.19E-02	3.74E-02	1.89E-03	4.14E-07	1.41E-02	4.67E-02
A11	0.00E+00	2.95E-04	2.23E-05	4.69E+02	3.54E-04	1.70E+00	2.95E-04	2.63E-01	1.64E-02	4.81E-03	2.65E-02	1.21E-02	1.23E-02	3.89E-02	1.95E-03	4.14E-07	1.43E-02	4.92E-02
A12	0.00E+00	3.36E-04	2.55E-05	5.56E+02	4.47E-04	2.11E+00	3.46E-04	2.94E-01	1.97E-02	5.71E-03	3.14E-02	1.45E-02	1.47E-02	4.36E-02	2.34E-03	5.18E-07	1.67E-02	5.49E-02
A13	0.00E+00	3.03E-04	2.30E-05	4.95E+02	3.89E-04	1.85E+00	3.09E-04	2.68E-01	1.74E-02	5.08E-03	2.79E-02	1.29E-02	1.31E-02	3.96E-02	2.08E-03	4.50E-07	1.48E-02	5.01E-02
A14	0.00E+00	3.35E-04	2.51E-05	5.33E+02	4.03E-04	1.92E+00	3.36E-04	2.97E-01	1.86E-02	5.46E-03	3.04E-02	1.37E-02	1.39E-02	4.43E-02	2.22E-03	4.82E-07	1.66E-02	5.55E-02
A15	0.00E+00	3.24E-04	2.43E-05	5.03E+02	3.64E-04	1.76E+00	3.19E-04	2.92E-01	1.74E-02	5.15E-03	2.86E-02	1.29E-02	1.30E-02	4.33E-02	2.08E-03	4.32E-07	1.56E-02	5.47E-02
A16	0.00E+00	3.50E-04	2.60E-05	5.37E+02	3.81E-04	1.84E+00	3.43E-04	3.15E-01	1.85E-02	5.50E-03	3.09E-02	1.37E-02	1.38E-02	4.71E-02	2.21E-03	4.65E-07	1.71E-02	5.89E-02
A17	0.00E+00	3.07E-04	2.30E-05	4.69E+02	3.30E-04	1.61E+00	2.99E-04	2.79E-01	1.61E-02	4.80E-03	2.68E-02	1.19E-02	1.21E-02	4.13E-02	1.93E-03	3.95E-07	1.47E-02	5.22E-02
A18	0.00E+00	3.48E-04	2.59E-05	5.37E+02	3.85E-04	1.86E+00	3.42E-04	3.12E-01	1.85E-02	5.49E-03	3.08E-02	1.37E-02	1.39E-02	4.67E-02	2.21E-03	4.67E-07	1.70E-02	5.85E-02
A19	0.00E+00	2.89E-04	2.15E-05	4.35E+02	2.98E-04	1.46E+00	2.78E-04	2.64E-01	1.49E-02	4.45E-03	2.49E-02	1.10E-02	1.12E-02	3.91E-02	1.78E-03	3.60E-07	1.38E-02	4.93E-02
A20	0.00E+00	3.39E-04	2.51E-05	5.12E+02	3.54E-04	1.72E+00	3.29E-04	3.07E-01	1.75E-02	5.24E-03	2.96E-02	1.30E-02	1.31E-02	4.59E-02	2.10E-03	4.35E-07	1.65E-02	5.75E-02
A21	0.00E+00	3.51E-04	2.65E-05	5.57E+02	4.20E-04	2.01E+00	3.51E-04	3.14E-01	1.95E-02	5.71E-03	3.15E-02	1.44E-02	1.46E-02	4.64E-02	2.32E-03	4.91E-07	1.70E-02	5.87E-02
A22	0.00E+00	3.76E-04	2.82E-05	5.96E+02	4.48E-04	2.14E+00	3.76E-04	3.34E-01	2.07E-02	6.11E-03	3.40E-02	1.53E-02	1.55E-02	4.98E-02	2.48E-03	5.34E-07	1.85E-02	6.24E-02
A23	0.00E+00	3.54E-04	2.69E-05	5.75E+02	4.50E-04	2.14E+00	3.59E-04	3.14E-01	2.03E-02	5.90E-03	3.23E-02	1.50E-02	1.52E-02	4.62E-02	2.41E-03	5.17E-07	1.72E-02	5.86E-02
A24	0.00E+00	3.39E-04	2.53E-05	5.24E+02	3.77E-04	1.82E+00	3.33E-04	3.05E-01	1.81E-02	5.37E-03	3.00E-02	1.34E-02	1.36E-02	4.54E-02	2.16E-03	4.54E-07	1.65E-02	5.70E-02
B09	0.00E+00	9.96E-05	8.48E-06	2.57E+02	3.06E-04	1.20E+00	1.40E-04	6.69E-02	1.38E-02	3.09E-03	1.32E-02	7.25E-03	7.40E-03	9.74E-03	1.20E-03	2.92E-07	5.77E-03	1.23E-02
B10	0.00E+00	9.64E-05	7.91E-06	2.26E+02	2.50E-04	9.93E-01	1.26E-04	6.97E-02	1.18E-02	2.69E-03	1.19E-02	6.23E-03	6.35E-03	1.04E-02	1.04E-03	2.44E-07	5.49E-03	1.29E-02
B11	0.00E+00	4.28E-05	3.72E-06	1.16E+02	1.43E-04	5.58E-01	6.26E-05	2.75E-02	6.33E-03	1.41E-03	5.91E-03	3.32E-03	3.39E-03	3.95E-03	5.51E-04	1.35E-07	2.52E-03	5.03E-03
B12	0.00E+00	3.39E-05	2.62E-06	6.96E+01	6.89E-05	2.78E-01	4.05E-05	2.61E-02	3.46E-03	8.16E-04	3.83E-03	1.85E-03	1.89E-03	4.02E-03	3.10E-04	7.12E-08	1.94E-03	4.84E-03
B13	0.00E+00	4.08E-05	3.34E-06	9.44E+01	1.04E-04	4.12E-01	5.28E-05	3.00E-02	4.90E-03	1.12E-03	4.95E-03	2.60E-03	2.65E-03	4.44E-03	4.33E-04	1.01E-07	2.30E-03	5.55E-03
B14	0.00E+00	4.64E-05	3.91E-06	1.18E+02	1.40E-04	5.47E-01	6.47E-05	3.11E-02	6.32E-03	1.42E-03	6.13E-03	3.33E-03	3.39E-03	4.59E-03	5.53E-04	1.35E-07	2.72E-03	5.72E-03
B15	0.00E+00	1.27E-04	1.07E-05	3.26E+02	3.88E-04	1.52E+00	1.79E-04	8.42E-02	1.75E-02	3.92E-03	1.70E-02	9.20E-03	9.38E-03	1.25E-02	1.53E-03	3.76E-07	7.58E-03	1.55E-02
B16	0.00E+00	7.94E-05	6.64E-06	2.00E+02	2.36E-04	9.22E-01	1.10E-04	5.30E-02	1.07E-02	2.40E-03	1.05E-02	5.62E-03	5.74E-03	7.91E-03	9.36E-04	2.30E-07	4.72E-03	9.74E-03
B17	0.00E+00	1.43E-04	1.11E-05	2.91E+02	2.85E-04	1.15E+00	1.70E-04	1.12E-01	1.44E-02	3.41E-03	1.60E-02	7.74E-03	7.87E-03	1.71E-02	1.30E-03	2.93E-07	8.10E-03	2.08E-02
B18	0.00E+00	1.06E-04	8.12E-06	2.06E+02	1.91E-04	7.82E-01	1.22E-04	8.55E-02	1.00E-02	2.40E-03	1.14E-02	5.39E-03	5.48E-03	1.32E-02	9.04E-04	1.99E-07	5.95E-03	1.59E-02
C12	0.00E+00	4.05E-05	3.57E-06	9.86E+01	1.54E-04	5.20E-01	6.35E-05	2.12E-02	1.63E-02	2.57E-03	6.12E-03	3.45E-03	3.53E-03	2.15E-03	4.79E-04	1.17E-07	2.58E-03	3.88E-03
C13	0.00E+00	3.45E-05	2.60E-06	4.47E+01	6.43E-05	2.16E-01	4.02E-05	2.68E-02	1.11E-02	1.66E-03	3.87E-03	1.78E-03	1.82E-03	2.04E-03	2.04E-04	4.04E-08	2.05E-03	5.02E-03
C14	0.00E+00	5.18E-05	4.01E-06	8.84E+01	1.06E-04	3.79E-01	6.21E-05	3.88E-02	1.11E-02	1.90E-03	5.91E-03	2.85E-03	2.90E-03	4.21E-03	4.04E-04	9.12E-08	3.01E-03	7.22E-03
C15	0.00E+00	7.34E-05	5.19E-06	6.78E+01	7.55E-05	2.74E-01	7.24E-05	6.80E-02	1.66E-02	2.56E-03	6.92E-03	2.74E-03	2.79E-03	4.89E-03	2.89E-04	4.84E-08	4.13E-03	1.28E-02
C16	0.00E+00	7.06E-06	6.30E-07	1.86E+01	3.04E-05	1.00E-01	1.19E-05	2.88E-03	3.09E-03	4.83E-04	1.16E-03	6.59E-04	6.74E-04	3.18E-04	9.15E-05	2.32E-08	4.83E-04	5.20E-04
C17	0.00E+00	6.67E-05	5.09E-06	1.16E+02	1.45E-04	5.04E-01	8.26E-05	4.61E-02	1.45E-02	2.49E-03	8.01E-03	3.79E-03	3.86E-03	5.19E-03	5.35E-04	1.28E-07	4.15E-03	8.57E-03
C18	0.00E+00	1.04E-05	7.73E-07	1.64E+01	2.24E-05	7.48E-02	1.29E-05	7.03E-03	2.63E-03	4.25E-04	1.27E-03	5.82E-04	5.95E-04	7.05E-04	7.57E-05	1.79E-08	6.74E-04	1.31E-03
C19	0.00E+00	6.94E-07	5.73E-08	1.29E+00	2.14E-06	6.96E-03	9.86E-07	4.00E-04	3.26E-04	4.75E-05	9.52E-05	5.04E-05	5.15E-05	3.38E-05	6.15E-06	1.32E-09	4.38E-05	7.43E-05
C20	0.00E+00	1.00E-05	8.65E-07	2.45E+01	3.53E-05	1.22E-01	1.51E-05	5.56E-03	3.19E-03	5.32E-04	1.45E-03	8.05E-04	8.23E-04	6.21E-04	1.19E-04	2.97E-08	6.30E-04	1.02E-03
C21	0.00E+00	7.43E-05	5.15E-06	8.24E+01	1.25E-04	3.73E-01	8.61E-05	5.02E-02	2.00E-02	3.01E-03	8.64E-03	3.54E-03	3.61E-03	4.09E-03	3.74E-04	8.44E-08	5.03E-03	9.39E-03
C22	0.00E+00	5.97E-06	5.37E-07	1.54E+01	2.45E-05	8.24E-02	9.74E-06	2.86E-03	2.56E-03	4.01E-04	9.40E-04	5.40E-04	5.52E-04	2.96E-04	7.53E-05	1.86E-08	3.85E-04	5.22E-04
C23	0.00E+00	4.06E-05	3.29E-06	8.55E+01	1.17E-04	4.04E-01	5.62E-05	2.47E-02	1.09E-02	1.84E-03	5.44E-03	2.80E-03	2.87E-03	2.80E-03	4.06E-04	1.01E-07	2.58E-03	4.56E-03
C24	0.00E+00	3.06E-06	3.00E-07	9.57E+00	1.59E-05	5.33E-02	5.65E-06	1.11E-03	1.60E-03	2.49E-04	5.42E-04	3.34E-04	3.43E-04	1.19E-04	4.75E-05	1.19E-08	1.98E-04	1.97E-04
C25	0.00E+00	8.26E-05	5.70E-06	7.27E+01	8.29E-05	2.85E-01	8.18E-05	7.35E-02	1.76E-02	2.72E-03	7.94E-03	3.02E-03	3.08E-03	5.38E-03	3.09E-04	5.50E-08	4.86E-03	1.38E-02
C26	0.00E+00	5.30E-05	3.88E-06	7.75E+01	8.56E-05	3.04E-01	5.93E-05	4.08E-02	9.44E-03	1.65E-03	5.72E-03	2.50E-03	2.55E-03	4.53E-03	3.45E-04	7.70E-08	3.17E-03	7.62E-03
C27	0.00E+00	4.01E-05	2.78E-06	4.20E+01	5.97E-05	1.84E-01	4.44E-05	2.98E-02	1.02E-02	1.54E-03	4.41E-03	1.78E-03	1.82E-03	2.33E-03	1.88E-04	3.99E-08	2.59E-03	5.59E-03
C28	0.00E+00	1.35E-05	1.37E-06	4.57E+01	7.75E-05	2.59E-01	2.65E-05	3.79E-03	7.68E-03	1.19E-03	2.55E-03	1.60E-03	1.64E-03	4.41E-04	2.29E-04	5.80E-08	9.04E-04	6.58E-04
C29	0.00E+00	4.42E-06	3.77E-07	1.04E+01	1.46E-05	5.07E-02	6.46E-06	2.61E-03	1.34E-03	2.24E-04	6.19E-04	3.38E-04	3.46E-04	2.88E-04	4.97E-05	1.23E-08	2.73E-04	4.80E-04
C30	0.00E+00	4.90E-05	3.26E-06	3.28E+01	2.57E-05	9.87E-02	4.36E-05	4.79E-02	7.73E-03	1.24E-03	4.20E-03	1.39E-03	1.42E-03	3.41E-03	1.28E-04	1.83E-08	2.78E-03	9.02E-03
C31	0.00E+00	2.38E-05	1.64E-06	2.55E+01	2.49E-05	8.98E-02	2.39E-05	2.07E-02	3.95E-03	6.66E-04	2.32E-03	8.87E-04	9.01E-04	1.96E-03	1.08E-04	2.08E-08	1.42E-03	3.88E-03
C32	0.00E+00	6.96E-05	4.93E-06	8.69E+01	8.22E-05	3.02E-01	7.14E-05	5.79E-02	1.03E-02	1.85E-03	6.86E-03	2.77E-03	2.82E-03	6.35E-03	3.71E-04	7.62E-08	4.04E-03	1.08E-02
C33	0.00E+00	1.99E-06	1.87E-07	5.93E+00	9.96E-06	3.29E-02	3.64E-06	6.27E-04	9.89E-04	1.54E-04	3.54E-04	2.10E-04	2.15E-04	7.44E-05	2.95E-05	7.58E-09	1.39E-04	1.11E-04
C34	0.00E+00	5.12E-06	3.64E-07	6.20E+00	9.62E-06	2.92E-02	6.12E-06	3.39E-03	1.52E-03	2.27E-04	6.10E-04	2.61E-04	2.67E-04	2.78E-04	2.85E-05	6.35E-09	3.43E-04	6.35E-04
C35	0.00E+00	1.29E-05	1.03E-06	2.68E+01	3.70E-05	1.26E-01	1.79E-05	7.64E-03	3.42E-03	5.77E-04	1.74E-03	8.83E-04	9.03E-04	8.81E-04	1.27E-04	3.20E-08	8.37E-04	1.41E-03
C36	0.00E+00	9.32E-05	6.21E-06	6.48E+01	5.52E-05	2.04E-01	8.43E-05	8.95E-02	1.53E-02	2.45E-03	8.15E-03	2.76E-03	2.80E-03	6.41E-03	2.57E-04	3.89E-08	5.35E-03	1.68E-02
C37	0.00E+00	2.30E-05	1.56E-06	2.20E+01	1.83E-05	6.88E-02	2.19E-05	2.09E-02	3.36E-03	5.75E-04	2.11E-03	7.58E-04	7.70E-04	1.97E-03	8.95E-05	1.57E-08	1.34E-03	3.94E-03
C38	0.00E+00	8.51E-05	6.32E-06	1.24E+02	1.32E-04	4.82E-01	9.32E-05	6.90E-02	1.51E-02	2.65E-03	8.85E-03	3.95E-03	4.02E-03	7.46E-03	5.47E-04	1.16E-07	4.83E-03	1.29E-02
C39	0.00E+00	1.67E-05	1.17E-06	2.14E+01	2.64E-05	8.75E-02	1.89E-05	1.23E-02	3.36E-03	5.54E-04	1.88E-03	7.68E-04	7.82E-04	1.23E-03	9.55E-05	2.20E-08	1.09E-03	2.29E-03
C40	0.00E+00	2.44E-05	1.69E-06	2.46E+01	3.39E-05	1.06E-01	2.65E-05	1.87E-02	5.97E-03	9.07E-04	2.62E-03	1.05E-03	1.07E-03	1.45E-03	1.09E-04	2.27E-08	1.56E-03	3.52E-03
C41	0.00E+00	5.06E-06	4.47E-07	1.42E+01	1.86E-05	6.90E-02	7.73E-06	2.94E-03	1.05E-03	2.05E-04	7.37E-04	4.20E-04	4.29E-04	4.09E-04	6.78E-05	1.64E-08	3.08E-04	5.37E-04
C42	0.00E+00	3.02E-05	2.23E-06	5.49E+01	5.21E-05	2.03E-01	3.44E-05	2.32E-02	3.57E-03	7.56E-04	3.31E-03	1.48E-03	1.51E-03	3.53E-03	2.41E-04	5.25E-08	1.81E-03	4.32E-03
C43	0.00E+00	1.35E-05	1.19E-06	3.91E+01	5.25E-05	1.93E-01	2.14E-05	7.10E-03	2.92E-03	5.67E-04	2.07E-03	1.17E-03	1.19E-03	1.02E-03	1.88E-04	4.74E-08	8.75E-04	1.29E-03
C44	0.00E+00	3.08E-05	2.61E-06	7.69E+01	9.43E-05	3.55E-01	4.31E-05	2.02E-02	5.58E-03	1.10E-03	4.09E-03	2.23E-03	2.28E-03	2.86E-03	3.61E-04	8.38E-08	1.81E-03	3.73E-03
C45	0.00E+00	2.41E-05	1.88E-06	4.42E+01	5.62E-05	1.97E-01	3.04E-05	1.66E-02	5.57E-03	9.51E-04	2.93E-03	1.44E-03	1.47E-03	1.84E-03	2.05E-04	4.86E-08	1.46E-03	3.09E-03
C46	0.00E+00	9.29E-05	6.06E-06	5.68E+01	3.95E-05	1.51E-01	8.10E-05	9.08E-02	1.32E-02	2.15E-03	7.86E-03	2.47E-03	2.51E-03	6.48E-03	2.16E-04	2.99E-08	5.34E-03	1.71E-02
C47	0.00E+00	1.68E-06	1.47E-07	4.07E+00	6.35E-06	2.14E-02	2.62E-06	8.81E-04	6.73E-04	1.06E-04	2.53E-04	1.42E-04	1.46E-04	8.94E-05	1.97E-05	4.82E-09	1.07E-04	1.62E-04
C48	0.00E+00	6.07E-05	4.10E-06	6.17E+01	4.46E-05	1.72E-01	5.67E-05	5.35E-02	6.99E-03	1.30E-03	5.45E-03	1.95E-03	1.97E-03	5.86E-03	2.48E-04	4.51E-08	3.48E-03	1.00E-02
C49	0.00E+00	4.22E-05	2.98E-06	5.42E+01	6.56E-05	2.21E-01	4.73E-05	3.19E-02	8.53E-03	1.41E-03	4.66E-03	1.93E-03	1.96E-03	3.15E-03	2.41E-04	5.42E-08	2.70E-03	5.98E-03
C50	0.00E+00	2.37E-06	2.16E-07	5.57E+00	9.60E-06	3.17E-02	3.81E-06	1.17E-03	1.43E-03	2.06E-04	3.62E-04	2.13E-04	2.17E-04	1.03E-04	2.71E-05	5.80E-09	1.45E-04	2.14E-04
C51	0.00E+00	3.49E-05	2.62E-06	5.48E+01	6.31E-05	2.24E-01	4.04E-05	2.64E-02	6.75E-03	1.17E-03	3.88E-03	1.77E-03	1.80E-03	2.91E-03	2.47E-04	5.57E-08	2.08E-03	4.93E-03
C52	0.00E+00	1.61E-05	1.14E-06	1.58E+01	1.94E-05	6.65E-02	1.66E-05	1.40E-02	3.86E-03	5.91E-04	1.61E-03	6.48E-04	6.60E-04	1.03E-03	6.88E-05	1.26E-08	9.48E-04	2.63E-03
C53	0.00E+00	2.56E-06	2.47E-07	7.77E+00	1.29E-05	4.31E-02	4.65E-06	9.45E-04	1.30E-03	2.02E-04	4.47E-04	2.72E-04	2.79E-04	1.02E-04	3.85E-05	9.67E-09	1.67E-04	1.69E-04
C54	0.00E+00	9.08E-06	6.84E-07	1.51E+01	1.82E-05	6.38E-02	1.09E-05	6.50E-03	1.87E-03	3.22E-04	1.06E-03	4.89E-04	4.99E-04	7.27E-04	6.87E-05	1.61E-08	5.57E-04	1.21E-03
C55	0.00E+00	4.07E-06	2.81E-07	4.85E+00	5.57E-06	1.88E-02	4.41E-06	3.17E-03	7.56E-04	1.26E-04	4.36E-04	1.73E-04	1.76E-04	3.11E-04	2.12E-05	4.68E-09	2.59E-04	5.94E-04
C56	0.00E+00	1.53E-05	1.02E-06	1.25E+01	1.46E-05	4.60E-02	1.52E-05	1.29E-02	2.96E-03	4.61E-04	1.51E-03	5.42E-04	5.51E-04	9.71E-04	5.25E-05	1.02E-08	9.56E-04	2.43E-03
C57	0.00E+00	2.83E-05	2.09E-06	4.09E+01	4.37E-05	1.59E-01	3.10E-05	2.28E-02	4.99E-03	8.76E-04	2.95E-03	1.31E-03	1.33E-03	2.47E-03	1.81E-04	3.86E-08	1.62E-03	4.25E-03
C58	0.00E+00	4.78E-06	3.81E-07	7.52E+00	1.15E-05	3.88E-02	6.07E-06	3.45E-03	1.90E-03	2.80E-04	5.80E-04	2.93E-04	2.99E-04	2.67E-04	3.52E-05	7.08E-09	2.81E-04	6.44E-04
C59	0.00E+00	1.14E-05	9.07E-07	2.22E+01	2.90E-05	1.01E-01	1.49E-05	7.59E-03	2.81E-03	4.78E-04	1.43E-03	7.22E-04	7.37E-04	8.42E-04	1.04E-04	2.49E-08	6.95E-04	1.41E-03
C60	0.00E+00	2.61E-05	2.06E-06	4.78E+01	6.84E-05	2.31E-01	3.47E-05	1.70E-02	7.78E-03	1.24E-03	3.38E-03	1.68E-03	1.72E-03	1.69E-03	2.25E-04	5.32E-08	1.66E-03	3.15E-03
C61	0.00E+00	1.56E-05	1.19E-06	2.56E+01	3.04E-05	1.08E-01	1.85E-05	1.16E-02	3.18E-03	5.51E-04	1.77E-03	8.28E-04	8.44E-04	1.28E-03	1.17E-04	2.65E-08	9.27E-04	2.17E-03
C62	0.00E+00	2.47E-05	2.29E-06	6.24E+01	1.11E-04	3.60E-01	4.20E-05	9.80E-03	1.60E-02	2.30E-03	4.03E-03	2.40E-03	2.45E-03	9.62E-04	3.06E-04	6.72E-08	1.59E-03	1.79E-03
C63	0.00E+00	9.58E-05	6.54E-06	9.72E+01	8.90E-05	3.25E-01	9.39E-05	8.48E-02	1.50E-02	2.54E-03	9.12E-03	3.38E-03	3.43E-03	8.03E-03	4.04E-04	7.55E-08	5.68E-03	1.59E-02
C64	0.00E+00	5.99E-05	4.67E-06	1.09E+02	1.37E-04	4.81E-01	7.53E-05	4.17E-02	1.37E-02	2.34E-03	7.24E-03	3.53E-03	3.60E-03	4.63E-03	5.03E-04	1.19E-07	3.64E-03	7.75E-03
C65	0.00E+00	3.68E-07	3.51E-08	1.09E+00	1.79E-06	6.00E-03	6.56E-07	1.45E-04	1.82E-04	2.84E-05	6.31E-05	3.81E-05	3.90E-05	1.55E-05	5.38E-06	1.35E-09	2.39E-05	2.60E-05
C66	0.00E+00	1.65E-05	1.33E-06	2.79E+01	4.52E-05	1.48E-01	2.22E-05	1.05E-02	7.06E-03	1.03E-03	2.14E-03	1.10E-03	1.12E-03	8.53E-04	1.32E-04	2.80E-08	1.02E-03	1.95E-03
C67	0.00E+00	6.15E-05	4.57E-06	1.12E+02	1.05E-04	4.12E-01	6.96E-05	4.82E-02	7.28E-03	1.54E-03	6.64E-03	3.01E-03	3.05E-03	7.23E-03	4.89E-04	1.03E-07	3.58E-03	8.99E-03
C68	0.00E+00	4.92E-05	3.68E-06	9.26E+01	9.11E-05	3.54E-01	5.72E-05	3.74E-02	6.12E-03	1.28E-03	5.49E-03	2.52E-03	2.57E-03	5.63E-03	4.10E-04	8.96E-08	2.92E-03	6.95E-03
C69	0.00E+00	7.66E-05	5.87E-06	1.33E+02	1.42E-04	5.29E-01	8.88E-05	5.91E-02	1.24E-02	2.33E-03	8.38E-03	3.96E-03	4.03E-03	7.39E-03	5.96E-04	1.30E-07	4.34E-03	1.10E-02
C70	0.00E+00	8.50E-05	6.33E-06	1.60E+02	1.58E-04	6.12E-01	9.94E-05	6.37E-02	1.06E-02	2.22E-03	9.58E-03	4.37E-03	4.44E-03	9.69E-03	7.10E-04	1.58E-07	5.14E-03	1.19E-02
C71	0.00E+00	6.70E-05	4.87E-06	9.46E+01	1.01E-04	3.63E-01	7.34E-05	5.28E-02	1.15E-02	2.02E-03	7.06E-03	3.04E-03	3.10E-03

Appendix F.3.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D41	0.00E+00	7.04E-06	5.64E-07	1.14E+01	1.60E-05	5.69E-02	8.72E-06	5.46E-03	1.91E-03	3.09E-04	8.22E-04	4.16E-04	4.24E-04	5.08E-04	5.22E-05	1.19E-08	3.99E-04	1.02E-03
D42	0.00E+00	6.27E-06	5.48E-07	1.38E+01	2.29E-05	7.76E-02	9.61E-06	3.46E-03	2.36E-03	3.73E-04	9.20E-04	5.17E-04	5.29E-04	3.42E-04	6.62E-05	1.71E-08	3.93E-04	6.36E-04
D43	0.00E+00	1.84E-05	1.45E-06	3.14E+01	4.82E-05	1.62E-01	2.45E-05	1.18E-02	5.27E-03	8.46E-04	2.38E-03	1.18E-03	1.21E-03	1.18E-03	1.47E-04	3.72E-08	1.18E-03	2.20E-03
D44	0.00E+00	1.71E-05	1.75E-06	5.43E+01	1.00E-04	3.36E-01	3.40E-05	4.62E-03	9.53E-03	1.48E-03	3.24E-03	2.07E-03	2.12E-03	5.19E-04	2.71E-04	7.40E-08	1.13E-03	8.01E-04
D45	0.00E+00	5.76E-05	4.60E-06	1.00E+02	1.53E-04	5.21E-01	7.69E-05	3.80E-02	1.69E-02	2.71E-03	7.41E-03	3.75E-03	3.83E-03	3.71E-03	4.69E-04	1.17E-07	3.60E-03	7.06E-03
D46	0.00E+00	7.66E-05	5.84E-06	1.08E+02	1.40E-04	5.00E-01	8.82E-05	6.24E-02	1.78E-02	2.91E-03	8.38E-03	3.92E-03	3.99E-03	5.83E-03	4.82E-04	1.06E-07	4.40E-03	1.17E-02
D47	0.00E+00	7.02E-05	5.84E-06	1.37E+02	2.21E-04	7.48E-01	1.01E-04	4.18E-02	2.34E-02	3.72E-03	9.71E-03	5.17E-03	5.29E-03	4.14E-03	6.53E-04	1.68E-07	4.44E-03	7.73E-03
D48	0.00E+00	1.17E-05	1.10E-06	3.09E+01	5.48E-05	1.84E-01	2.05E-05	4.77E-03	5.37E-03	8.40E-04	1.96E-03	1.17E-03	1.20E-03	5.00E-04	1.52E-04	4.08E-08	7.65E-04	8.62E-04
D49	0.00E+00	1.42E-04	1.11E-05	2.37E+02	3.57E-04	1.21E+00	1.86E-04	9.38E-02	3.96E-02	6.37E-03	1.81E-02	8.88E-03	9.07E-03	9.26E-03	1.10E-03	2.76E-07	9.02E-03	1.74E-02
D50	0.00E+00	1.37E-04	1.02E-05	1.94E+02	2.68E-04	9.15E-01	1.64E-04	1.00E-01	3.20E-02	5.21E-03	1.59E-02	7.24E-03	7.39E-03	9.76E-03	8.79E-04	2.11E-07	8.57E-03	1.87E-02
D51	0.00E+00	1.50E-05	1.33E-06	3.60E+01	6.32E-05	2.10E-01	2.49E-05	6.31E-03	6.21E-03	9.74E-04	2.42E-03	1.38E-03	1.41E-03	6.80E-04	1.76E-04	4.77E-08	1.02E-03	1.15E-03
D52	0.00E+00	1.18E-05	1.03E-06	2.67E+01	4.59E-05	1.53E-01	1.88E-05	5.56E-03	4.59E-03	7.23E-04	1.82E-03	1.02E-03	1.04E-03	5.83E-04	1.30E-04	3.48E-08	7.88E-04	1.02E-03
D53	0.00E+00	1.97E-05	1.70E-06	4.32E+01	7.30E-05	2.45E-01	3.06E-05	1.01E-02	7.41E-03	1.17E-03	2.95E-03	1.64E-03	1.68E-03	1.03E-03	2.09E-04	5.51E-08	1.28E-03	1.84E-03
D54	0.00E+00	1.63E-05	1.36E-06	3.24E+01	5.27E-05	1.78E-01	2.37E-05	9.35E-03	5.52E-03	8.76E-04	2.29E-03	1.22E-03	1.25E-03	9.37E-04	1.54E-04	4.00E-08	1.05E-03	1.73E-03
D55	0.00E+00	5.45E-05	4.18E-06	9.65E+01	1.09E-04	4.04E-01	6.50E-05	4.00E-02	8.75E-03	1.66E-03	6.20E-03	2.95E-03	3.00E-03	5.09E-03	4.37E-04	1.01E-07	3.20E-03	7.45E-03
D56	0.00E+00	6.24E-05	4.92E-06	1.24E+02	1.54E-04	5.58E-01	8.06E-05	4.17E-02	1.15E-02	2.14E-03	7.75E-03	3.86E-03	3.94E-03	5.35E-03	5.76E-04	1.41E-07	3.81E-03	7.72E-03
D57	0.00E+00	6.75E-05	5.48E-06	1.42E+02	1.80E-04	6.56E-01	8.96E-05	4.47E-02	1.33E-02	2.46E-03	8.56E-03	4.43E-03	4.52E-03	5.63E-03	6.63E-04	1.62E-07	4.04E-03	8.26E-03
D58	0.00E+00	7.49E-05	5.92E-06	1.50E+02	1.87E-04	6.79E-01	9.74E-05	4.96E-02	1.39E-02	2.60E-03	9.38E-03	4.68E-03	4.78E-03	6.39E-03	6.99E-04	1.72E-07	4.60E-03	9.19E-03
D59	0.00E+00	4.40E-05	3.70E-06	1.04E+02	1.41E-04	5.07E-01	6.36E-05	2.59E-02	9.87E-03	1.81E-03	6.11E-03	3.29E-03	3.36E-03	3.29E-03	4.96E-04	1.26E-07	2.75E-03	4.76E-03
D60	0.00E+00	4.63E-05	3.74E-06	1.01E+02	1.33E-04	4.78E-01	6.40E-05	2.80E-02	9.48E-03	1.75E-03	6.20E-03	3.19E-03	3.26E-03	3.66E-03	4.78E-04	1.22E-07	2.94E-03	5.17E-03
D61	0.00E+00	8.38E-06	6.79E-07	1.92E+01	2.60E-05	9.23E-02	1.20E-05	4.65E-03	1.80E-03	3.31E-04	1.18E-03	6.08E-04	6.22E-04	6.25E-04	9.13E-05	2.40E-08	5.57E-04	8.54E-04
D62	0.00E+00	8.11E-06	6.34E-07	1.57E+01	1.90E-05	6.92E-02	1.03E-05	5.54E-03	1.44E-03	2.70E-04	9.88E-04	4.85E-04	4.95E-04	7.12E-04	7.22E-05	1.75E-08	4.93E-04	1.03E-03
D63	0.00E+00	3.33E-07	2.83E-08	7.19E-01	1.02E-06	3.61E-03	4.67E-07	2.13E-04	9.57E-05	1.60E-05	4.42E-05	2.43E-05	2.48E-05	2.29E-05	3.41E-06	8.27E-10	1.95E-05	3.94E-05
D64	0.00E+00	9.88E-06	7.13E-07	1.29E+01	1.32E-05	4.85E-02	1.04E-05	8.11E-03	1.57E-03	2.79E-04	9.95E-04	4.21E-04	4.28E-04	8.85E-04	5.55E-05	1.16E-08	5.68E-04	1.52E-03
D65	0.00E+00	3.15E-05	2.33E-06	4.97E+01	5.08E-05	1.92E-01	3.50E-05	2.45E-02	4.40E-03	8.49E-04	3.34E-03	1.49E-03	1.52E-03	3.12E-03	2.19E-04	4.84E-08	1.82E-03	4.57E-03
D66	0.00E+00	3.87E-05	2.96E-06	6.79E+01	7.61E-05	2.83E-01	4.59E-05	2.86E-02	6.14E-03	1.17E-03	4.37E-03	2.07E-03	2.11E-03	3.63E-03	3.07E-04	7.06E-08	2.26E-03	5.32E-03
D67	0.00E+00	4.88E-05	3.48E-06	6.68E+01	5.80E-05	2.26E-01	5.01E-05	4.04E-02	5.70E-03	1.13E-03	4.76E-03	1.95E-03	1.98E-03	5.16E-03	2.83E-04	5.79E-08	2.77E-03	7.56E-03
D68	0.00E+00	3.88E-05	2.79E-06	5.27E+01	4.45E-05	1.76E-01	3.93E-05	3.29E-02	4.50E-03	8.93E-04	3.70E-03	1.53E-03	1.56E-03	4.15E-03	2.22E-04	4.36E-08	2.14E-03	6.16E-03
D69	0.00E+00	1.64E-05	1.28E-06	2.96E+01	3.37E-05	1.25E-01	1.97E-05	1.22E-02	2.70E-03	5.10E-04	1.87E-03	9.05E-04	9.22E-04	1.53E-03	1.34E-04	3.08E-08	9.49E-04	2.27E-03
D70	0.00E+00	1.33E-05	9.65E-07	1.93E+01	1.80E-05	6.92E-02	1.41E-05	1.08E-02	1.68E-03	3.28E-04	1.34E-03	5.71E-04	5.80E-04	1.37E-03	8.32E-05	1.75E-08	7.55E-04	2.02E-03
D71	0.00E+00	4.02E-05	2.89E-06	4.82E+01	4.38E-05	1.68E-01	4.00E-05	3.52E-02	5.83E-03	1.05E-03	3.77E-03	1.55E-03	1.57E-03	3.77E-03	2.03E-04	3.84E-08	2.20E-03	6.60E-03
D72	0.00E+00	4.84E-05	3.41E-06	5.83E+01	5.56E-05	2.06E-01	4.92E-05	4.04E-02	7.01E-03	1.26E-03	4.72E-03	1.90E-03	1.93E-03	4.43E-03	2.47E-04	5.05E-08	2.79E-03	7.57E-03
D73	0.00E+00	1.04E-05	8.24E-07	1.77E+01	2.19E-05	7.98E-02	1.24E-05	8.01E-03	2.29E-03	3.92E-04	1.16E-03	5.85E-04	5.96E-04	8.48E-04	8.06E-05	1.78E-08	5.71E-04	1.49E-03
D74	0.00E+00	1.01E-05	8.79E-07	2.39E+01	3.55E-05	1.24E-01	1.51E-05	5.75E-03	3.20E-03	5.32E-04	1.44E-03	8.12E-04	8.30E-04	6.29E-04	1.15E-04	2.87E-08	6.15E-04	1.06E-03
D75	0.00E+00	7.03E-06	5.73E-07	1.63E+01	2.22E-05	7.87E-02	1.02E-05	3.88E-03	1.53E-03	2.81E-04	9.95E-04	5.17E-04	5.28E-04	5.20E-04	7.76E-05	2.04E-08	4.67E-04	7.11E-04
D76	0.00E+00	8.03E-06	6.52E-07	1.73E+01	2.24E-05	8.09E-02	1.09E-05	5.10E-03	1.62E-03	3.00E-04	1.05E-03	5.42E-04	5.54E-04	6.51E-04	8.13E-05	2.02E-08	4.94E-04	9.41E-04
D77	0.00E+00	1.73E-05	1.32E-06	3.19E+01	3.76E-05	1.37E-01	2.14E-05	1.19E-02	2.90E-03	5.47E-04	2.07E-03	9.83E-04	1.00E-03	1.55E-03	1.46E-04	3.54E-08	1.06E-03	2.21E-03
D78	0.00E+00	1.20E-05	8.90E-07	1.93E+01	2.01E-05	7.52E-02	1.35E-05	9.21E-03	1.71E-03	3.29E-04	1.29E-03	5.80E-04	5.90E-04	1.18E-03	8.52E-05	1.91E-08	6.98E-04	1.72E-03
D79	0.00E+00	3.08E-05	2.21E-06	3.84E+01	3.73E-05	1.39E-01	3.16E-05	2.59E-02	4.66E-03	8.32E-04	3.01E-03	1.25E-03	1.27E-03	2.81E-03	1.64E-04	3.31E-08	1.74E-03	4.86E-03
D80	0.00E+00	3.58E-05	2.93E-06	6.96E+01	9.45E-05	3.35E-01	4.71E-05	2.45E-02	9.13E-03	1.54E-03	4.48E-03	2.34E-03	2.39E-03	2.65E-03	3.25E-04	7.74E-08	2.10E-03	4.54E-03
D81	0.00E+00	6.55E-06	6.01E-07	1.76E+01	2.74E-05	9.52E-02	1.07E-05	3.25E-03	2.39E-03	3.95E-04	1.02E-03	6.03E-04	6.17E-04	3.56E-04	8.59E-05	2.20E-08	4.06E-04	5.91E-04
D82	0.00E+00	5.97E-06	6.23E-07	2.19E+01	3.72E-05	1.27E-01	1.23E-05	1.37E-03	3.04E-03	4.93E-04	1.18E-03	7.59E-04	7.78E-04	1.64E-04	1.10E-04	2.96E-08	4.08E-04	2.29E-04
D83	0.00E+00	5.18E-05	4.17E-06	1.03E+02	1.25E-04	4.62E-01	6.58E-05	3.67E-02	9.57E-03	1.79E-03	6.22E-03	3.18E-03	3.25E-03	4.55E-03	4.76E-04	1.11E-07	2.97E-03	6.81E-03
D84	0.00E+00	4.01E-05	3.19E-06	7.66E+01	9.05E-05	3.36E-01	4.97E-05	2.92E-02	7.06E-03	1.33E-03	4.70E-03	2.36E-03	2.40E-03	3.62E-03	3.51E-04	8.12E-08	2.30E-03	5.41E-03
D85	0.00E+00	4.24E-05	3.25E-06	7.17E+01	7.69E-05	2.91E-01	4.86E-05	3.30E-02	6.47E-03	1.23E-03	4.58E-03	2.17E-03	2.21E-03	4.11E-03	3.20E-04	7.03E-08	2.37E-03	6.15E-03
D86	0.00E+00	3.62E-05	2.92E-06	7.16E+01	8.64E-05	3.20E-01	4.57E-05	2.60E-02	6.66E-03	1.24E-03	4.30E-03	2.21E-03	2.25E-03	3.20E-03	3.30E-04	7.66E-08	2.05E-03	4.83E-03
D87	0.00E+00	1.03E-04	7.95E-06	1.81E+02	2.01E-04	7.51E-01	1.22E-04	7.78E-02	1.64E-02	3.11E-03	1.15E-02	5.50E-03	5.61E-03	9.77E-03	8.15E-04	1.84E-07	5.92E-03	1.45E-02
D88	0.00E+00	8.75E-05	6.41E-06	1.29E+02	1.23E-04	4.72E-01	9.33E-05	7.12E-02	1.13E-02	2.21E-03	8.81E-03	3.84E-03	3.90E-03	9.00E-03	5.60E-04	1.17E-07	4.92E-03	1.33E-02
D89	0.00E+00	5.08E-06	4.00E-07	8.52E+00	1.28E-05	4.36E-02	6.64E-06	3.42E-03	1.43E-03	2.30E-04	6.41E-04	3.19E-04	3.25E-04	3.35E-04	3.96E-05	9.82E-09	3.17E-04	6.37E-04
D90	0.00E+00	3.77E-06	2.83E-07	5.63E+00	8.08E-06	2.73E-02	4.66E-06	2.62E-03	9.31E-04	1.51E-04	4.55E-04	2.11E-04	2.16E-04	2.59E-04	2.58E-05	6.35E-09	2.40E-04	4.90E-04
D91	0.00E+00	4.04E-06	3.58E-07	9.89E+00	1.48E-05	5.19E-02	6.17E-06	2.27E-03	1.33E-03	2.21E-04	5.86E-04	3.36E-04	3.44E-04	2.46E-04	4.77E-05	1.19E-08	2.44E-04	4.17E-04
D92	0.00E+00	9.57E-06	9.34E-07	3.13E+01	5.23E-05	1.78E-01	1.83E-05	2.73E-03	4.31E-03	7.02E-04	1.78E-03	1.09E-03	1.12E-03	3.40E-04	1.56E-04	4.23E-08	6.69E-04	4.73E-04
D93	0.00E+00	2.65E-06	2.49E-07	7.78E+00	1.25E-05	4.31E-02	4.65E-06	1.07E-03	1.06E-03	1.74E-04	4.47E-04	2.68E-04	2.75E-04	1.22E-04	3.83E-05	1.01E-08	1.74E-04	1.91E-04
D94	0.00E+00	8.51E-06	8.28E-07	2.71E+01	4.47E-05	1.53E-01	1.59E-05	2.85E-03	3.73E-03	6.08E-04	1.53E-03	9.39E-04	9.61E-04	3.34E-04	1.35E-04	3.60E-08	5.73E-04	5.01E-04
E01	0.00E+00	2.22E-05	1.79E-06	4.01E+01	6.25E-05	2.12E-01	3.03E-05	1.41E-02	6.78E-03	1.08E-03	2.93E-03	1.50E-03	1.54E-03	1.39E-03	1.89E-04	4.76E-08	1.39E-03	2.62E-03
E02	0.00E+00	1.62E-05	1.31E-06	2.89E+01	4.43E-05	1.51E-01	2.19E-05	1.07E-02	4.88E-03	7.81E-04	2.10E-03	1.08E-03	1.10E-03	1.04E-03	1.35E-04	3.37E-08	1.00E-03	1.99E-03
E03	0.00E+00	1.14E-05	8.95E-07	2.23E+01	2.73E-05	9.93E-02	1.46E-05	7.69E-03	2.05E-03	3.85E-04	1.41E-03	6.93E-04	7.07E-04	9.93E-04	1.03E-04	2.53E-08	7.03E-04	1.43E-03
E04	0.00E+00	8.78E-06	8.15E-07	2.63E+01	3.93E-05	1.40E-01	1.49E-05	3.96E-03	2.58E-03	4.62E-04	1.44E-03	8.51E-04	8.71E-04	4.89E-04	1.30E-04	3.42E-08	5.66E-04	7.12E-04
E05	0.00E+00	1.15E-05	9.29E-07	2.48E+01	3.22E-05	1.16E-01	1.57E-05	7.18E-03	2.32E-03	4.29E-04	1.51E-03	7.78E-04	7.94E-04	9.25E-04	1.17E-04	2.93E-08	7.16E-04	1.33E-03
E06	0.00E+00	2.92E-06	2.53E-07	8.12E+00	1.20E-05	4.22E-02	4.83E-06	1.22E-03	7.81E-04	1.41E-04	4.76E-04	2.63E-04	2.69E-04	1.71E-04	3.98E-05	1.09E-08	2.08E-04	2.20E-04
E07	0.00E+00	1.01E-04	8.15E-06	1.77E+02	2.69E-04	9.24E-01	1.35E-04	6.82E-02	2.99E-02	4.80E-03	1.29E-02	6.61E-03	6.75E-03	6.59E-03	8.29E-04	2.04E-07	6.18E-03	1.27E-02
E08	0.00E+00	9.12E-05	7.96E-06	2.00E+02	3.33E-04	1.13E+00	1.40E-04	4.99E-02	3.44E-02	5.43E-03	1.34E-02	7.53E-03	7.70E-03	4.95E-03	9.62E-04	2.49E-07	5.73E-03	9.19E-03
E09	0.00E+00	9.18E-05	7.52E-06	1.69E+02	2.63E-04	8.98E-01	1.26E-04	5.96E-02	2.86E-02	4.57E-03	1.21E-02	6.31E-03	6.45E-03	5.79E-03	7.95E-04	1.99E-07	5.65E-03	1.11E-02
E10	0.00E+00	8.01E-05	6.99E-06	1.76E+02	2.94E-04	9.95E-01	1.23E-04	4.34E-02	3.02E-02	4.78E-03	1.18E-02	6.63E-03	6.79E-03	4.32E-03	8.48E-04	2.20E-07	5.06E-03	7.99E-03
E11	0.00E+00	9.17E-05	7.40E-06	1.61E+02	2.44E-04	8.37E-01	1.22E-04	6.23E-02	2.71E-02	4.35E-03	1.17E-02	5.99E-03	6.12E-03	6.01E-03	7.51E-04	1.85E-07	5.59E-03	1.16E-02
E12	0.00E+00	9.71E-05	8.45E-06	2.11E+02	3.49E-04	1.19E+00	1.48E-04	5.42E-02	3.62E-02	5.72E-03	1.41E-02	7.92E-03	8.10E-03	5.35E-03	1.01E-03	2.61E-07	6.06E-03	9.97E-03
E13	0.00E+00	2.93E-05	2.47E-06	6.89E+01	9.32E-05	3.36E-01	4.21E-05	1.75E-02	6.55E-03	1.20E-03	4.04E-03	2.18E-03	2.23E-03	2.21E-03	3.29E-04	8.30E-08	1.81E-03	3.21E-03
E14	0.00E+00	2.03E-05	1.81E-06	5.42E+01	7.73E-05	2.77E-01	3.17E-05	1.09E-02	5.24E-03	9.50E-04	3.03E-03	1.73E-03	1.77E-03	1.35E-03	2.63E-04	6.75E-08	1.26E-03	1.99E-03
E15	0.00E+00	1.65E-05	1.41E-06	3.86E+01	5.15E-05	1.88E-01	2.33E-05	1.06E-02	3.69E-03	6.76E-04	2.20E-03	1.22E-03	1.24E-03	1.28E-03	1.84E-04	4.47E-08	9.54E-04	1.94E-03
E16	0.00E+00	1.51E-05	1.32E-06	3.82E+01	5.29E-05	1.91E-01	2.26E-05	8.86E-03	3.67E-03	6.69E-04	2.14E-03	1.21E-03	1.24E-03	1.08E-03	1.84E-04	4.60E-08	9.02E-04	1.62E-03
E17	0.00E+00	1.25E-05	1.08E-06	3.16E+01	4.42E-05	1.58E-01	1.89E-05	6.93E-03	3.02E-03	5.51E-04	1.82E-03	1.01E-03	1.03E-03	8.77E-04	1.52E-04	3.92E-08	7.92E-04	1.27E-03
E18	0.00E+00	1.17E-05	9.14E-07	2.25E+01	2.71E-05	9.89E-02	1.48E-05	8.04E-03	2.06E-03	3.87E-04	1.43E-03	6.96E-04	7.10E-04	1.04E-03	1.04E-04	2.51E-08	7.16E-04	1.49E-03
E19	0.00E+00	3.83E-05	2.91E-06	5.76E+01	8.17E-05	2.80E-01	4.71E-05	2.76E-02	9.56E-03	1.55E-03	4.55E-03	2.15E-03	2.19E-03	2.68E-03	2.63E-04	6.35E-08	2.37E-03	5.15E-03
E20	0.00E+00	3.80E-05	3.22E-06	7.93E+01	1.32E-04	4.42E-01	5.72E-05	2.05E-02	1.35E-02	2.14E-03	5.52E-03	3.00E-03	3.07E-03	2.08E-03	3.81E-04	9.98E-08	2.47E-03	3.77E-03
E21	0.00E+00	7.09E-06	5.96E-07	1.60E+01	2.09E-05	7.64E-02	9.79E-06	4.60E-03	1.52E-03	2.79E-04	9.28E-04	5.02E-04	5.13E-04	5.65E-04	7.56E-05	1.84E-08	4.16E-04	8.48E-04
E22	0.00E+00	1.56E-06	1.25E-07	2.91E+00	3.34E-06	1.26E-02	1.87E-06	1.20E-03	2.69E-04	5.06E-05	1.74E-04	8.89E-05	9.06E-05	1.45E-04	1.33E-05	2.90E-09	8.34E-05	2.24E-04
E23	0.00E+00	7.57E-05	5.46E-06	1.09E+02	1.01E-04	3.86E-01	8.00E-05	6.11E-02	9.40E-03	1.85E-03	7.63E-03	3.22E-03	3.27E-03	7.83E-03	4.68E-04	9.94E-08	4.36E-03	1.14E-02
E24	0.00E+00	7.72E-05	5.40E-06	9.94E+01	7.96E-05	3.13E-01	7.68E-05	6.48E-02	8.33E-03	1.67E-03	7.32E-03	2.88E-03	2.92E-03	8.32E-03	4.14E-04	8.25E-08	4.40E-03	1.21E-02
E25	0.00E+00	8.71E-06	8.43E-07	2.66E+01	4.29E-05	1.48E-01	1.56E-05	3.56E-03	3.65E-03	5.98E-04	1.48E-03	9.14E-04	9.36E-04	3.92E-04	1.31E-04	3.42E-08	5.53E-04	6.37E-04
E26	0.00E+00	1.24E-05	1.18E-06	3.60E+01	5.72E-05	1.98E-01	2.14E-05	5.58E-03	4.92E-03	8.08E-04	2.03E-03	1.23E-03	1.26E-03	6.11E-04	1.77E-04	4.57E-08	7.78E-04	1.01E-03
E27	0.00E+00	1.27E-05	1.15E-06	3.24E+01	4.93E-05	1.72E-01	2.00E-05	6.89E-03	4.38E-03	7.26E-04	1.90E-03	1.10E-03	1.13E-03	7.46E-04	1.57E-04	3.96E-08	7.73E-04	1.26E-03
E28	0.00E+00	9.46E-06	9.46E-07	3.14E+01	5.21E-05	1.79E-01	1.81E-05	3.09E-03	4.34E-03	7.07E-04	1.73E-03	1.09E-03	1.11E-03	3.51E-04	1.57E-04	4.15E-08	6.22E-04	5.42E-04
E29	0.00E+00	8.53E-06	7.59E-07	2.17E+01	3.34E-05	1.15E-01	1.35E-05	4.31E-03	2.93E-03	4.84E-04	1.30E-03	7.43E-04	7.61E-04	4.84E-04	1.05E-04	2.71E-08	5.42E-04	7.86E-04
E30	0.00E+00	4.02E-06	3.49E-07	9.99E+00	1.54E-05	5.28E-02	6.35E-06	1.94E-03	1.34E-03	2.22E-04	6.16E-04	3.44E-04	3.52E-04	2.26E-04	4.85E-05	1.27E-08	2.66E-04	3.54E-04
E31	0.00E+00	1.54E-05	1.40E-06	4.15E+01	6.51E-05	2.25E-01	2.54E-05	7.22E-03	5.63E-03	9.29E-04	2.43E-03	1.42E-03	1.46E-03	8.10E-04	2.03E-04	5.26E-08	9.82E-04	1.31E-03
E32	0.00E+00	9.27E-06	8.05E-07	2.22E+01	3.35E-05	1.16E-01	1.41E-05	4.99E-03	2.98E-03	4.95E-04	1.36E-03	7.59E-04	7.76E-04	5.60E-04	1.07E-04	2.73E-08	5.85E-04	9.15E-04
E33	0.00E+00	4.45E-05	3.80E-06	9.18E+01	1.49E-04	5.07E-01	6.56E-05	2.61E-02	1.57E-02	2.49E-03	6.28E-03	3.44E-03	3.52E-03	2.57E-03	4.38E-04	1.12E-07	2.78E-03	4.83E-03
E34	0.00E+00	2.92E-05	2.47E-06	5.89E+01	9.52E-05	3.24E-01	4.24E-05	1.74E-02	1.01E-02	1.60E-03	4.07E-03	2.21E-03	2.26E-03	1.71E-03	2.81E-04	7.16E-08	1.82E-03	3.22E-03
E35	0.00E+00	4.37E-05	3.55E-06	7.81E+01	1.19E-04	4.09E-01	5.87E-05	2.95E-02	1.32E-02	2.11E-03	5.62E-03	2.91E-03	2.97E-03	2.84E-03	3.65E-04	9.00E-08	2.66E-03	5.47E-03
E36	0.00E+00	2.46E-05	2.00E-06	4.43E+01	6.81E-05	2.33E-01	3.33E-05	1.63E-02	7.49E-03	1.20E-03	3.20E-03	1.65E-03	1.69E-03	1.58E-03	2.08E-04	5.16E-08	1.51E-03	3.03E-03
E37	0.00E+00	7.22E-05	5.65E-06	1.16E+02	1.69E-04	5.82E-01	9.13E-05	5.16E-02	1.94E-02	3.14E-03	8.77E-03	4.31E-03	4.40E-03	4.96E-03	5.35E-04	1.29E-07	4.38E-03	9.63E-03
E38	0.00E+00	3.01E-05	2.35E-06	4.81E+01	6.93E-05	2.39E-01	3.79E-05	2.17E-02	8.03E-03	1.30E-03	3.64E-03	1.78E-03	1.82E-03	2.09E-03	2.21E-04	5.30E-08	1.83E-03	4.05E-03
E39	0.00E+00	1.52E-05	1.35E-06	3.84E+01	5.90E-05	2.04E-01	2.40E-05	7.75E-03	5.18E-03	8.58E-04	2.30E-03	1.32E-03	1.35E-03	8.66E-04	1.86E-04	4.79E-08	9.60E-04	1.41E-03
E40	0.00E+00	1.89E-05	1.63E-06	4.45E+01	6.68E-05	2.31E-01	2.85E-05	1.03E-02	5.96E-03	9.91E-04	2.74E-03	1.52E-03	1.56E-03	1

Appendix F.3.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E56	0.00E+00	1.74E-05	1.47E-06	4.06E+01	5.45E-05	1.97E-01	2.47E-05	1.07E-02	3.86E-03	7.09E-04	2.36E-03	1.28E-03	1.31E-03	1.33E-03	1.93E-04	4.80E-08	1.05E-03	1.98E-03
E57	0.00E+00	1.27E-05	1.10E-06	2.90E+01	4.24E-05	1.49E-01	1.85E-05	7.64E-03	3.88E-03	6.48E-04	1.76E-03	9.84E-04	1.01E-03	8.26E-04	1.39E-04	3.42E-08	7.56E-04	1.41E-03
E58	0.00E+00	1.60E-05	1.34E-06	3.38E+01	4.79E-05	1.68E-01	2.23E-05	1.01E-02	4.47E-03	7.51E-04	2.13E-03	1.14E-03	1.17E-03	1.11E-03	1.60E-04	3.92E-08	9.65E-04	1.87E-03
E59	0.00E+00	8.81E-05	6.53E-06	1.37E+02	1.36E-04	5.18E-01	9.67E-05	7.00E-02	1.21E-02	2.33E-03	9.17E-03	4.08E-03	4.15E-03	8.86E-03	5.99E-04	1.29E-07	5.01E-03	1.31E-02
E60	0.00E+00	5.05E-05	3.88E-06	9.03E+01	1.03E-04	3.81E-01	6.06E-05	3.69E-02	8.20E-03	1.55E-03	5.78E-03	2.76E-03	2.82E-03	4.69E-03	4.10E-04	9.52E-08	2.97E-03	6.86E-03
E61	0.00E+00	2.35E-05	2.07E-06	6.14E+01	8.70E-05	3.12E-01	3.62E-05	1.28E-02	5.92E-03	1.07E-03	3.47E-03	1.96E-03	2.01E-03	1.59E-03	2.97E-04	7.63E-08	1.47E-03	2.34E-03
E62	0.00E+00	1.59E-05	1.55E-06	5.30E+01	8.20E-05	2.91E-01	2.92E-05	6.01E-03	5.25E-03	9.34E-04	2.81E-03	1.73E-03	1.77E-03	7.24E-04	2.64E-04	7.06E-08	1.04E-03	1.06E-03
E63	0.00E+00	9.57E-05	7.09E-06	1.37E+02	1.53E-04	5.55E-01	1.06E-04	7.58E-02	1.71E-02	2.99E-03	1.01E-02	4.51E-03	4.59E-03	8.26E-03	6.04E-04	1.32E-07	5.53E-03	1.42E-02
E64	0.00E+00	7.05E-05	5.79E-06	1.40E+02	1.93E-04	6.81E-01	9.43E-05	4.70E-02	1.84E-02	3.11E-03	8.97E-03	4.72E-03	4.82E-03	5.11E-03	6.57E-04	1.58E-07	4.18E-03	8.70E-03
E65	0.00E+00	2.37E-05	2.26E-06	7.04E+01	1.13E-04	3.90E-01	4.17E-05	9.81E-03	9.63E-03	1.58E-03	3.99E-03	2.42E-03	2.48E-03	1.10E-03	3.47E-04	9.08E-08	1.53E-03	1.76E-03
E66	0.00E+00	4.67E-05	4.31E-06	1.26E+02	1.96E-04	6.81E-01	7.62E-05	2.36E-02	1.71E-02	2.83E-03	7.24E-03	4.31E-03	4.41E-03	2.55E-03	6.15E-04	1.56E-07	2.86E-03	4.29E-03
E67	0.00E+00	1.46E-05	1.33E-06	4.30E+01	6.43E-05	2.27E-01	2.48E-05	6.37E-03	4.19E-03	7.53E-04	2.40E-03	1.39E-03	1.42E-03	8.20E-04	2.12E-04	5.67E-08	9.77E-04	1.14E-03
E68	0.00E+00	1.56E-05	1.44E-06	4.71E+01	7.08E-05	2.51E-01	2.67E-05	6.78E-03	4.61E-03	8.27E-04	2.58E-03	1.52E-03	1.56E-03	8.46E-04	2.32E-04	6.17E-08	1.02E-03	1.21E-03
E69	0.00E+00	2.11E-05	1.97E-06	6.21E+01	1.01E-04	3.45E-01	3.74E-05	7.85E-03	8.47E-03	1.39E-03	3.62E-03	2.15E-03	2.20E-03	9.33E-04	3.07E-04	8.20E-08	1.43E-03	1.40E-03
E70	0.00E+00	1.47E-05	1.49E-06	4.99E+01	8.33E-05	2.86E-01	2.86E-05	4.50E-03	6.90E-03	1.12E-03	2.74E-03	1.73E-03	1.77E-03	5.17E-04	2.49E-04	6.65E-08	9.81E-04	7.81E-04
E71	0.00E+00	2.76E-05	2.55E-06	7.87E+01	1.26E-04	4.32E-01	4.77E-05	1.12E-02	1.07E-02	1.76E-03	4.61E-03	2.72E-03	2.78E-03	1.31E-03	3.87E-04	1.03E-07	1.84E-03	2.02E-03
E72	0.00E+00	2.46E-05	2.53E-06	8.65E+01	1.45E-04	4.99E-01	4.90E-05	6.87E-03	1.20E-02	1.95E-03	4.69E-03	3.00E-03	3.07E-03	7.87E-04	4.33E-04	1.16E-07	1.64E-03	1.18E-03
E73	0.00E+00	2.59E-06	2.69E-07	8.45E+00	1.57E-05	5.26E-02	5.26E-06	6.14E-04	1.48E-03	2.30E-04	5.02E-04	3.22E-04	3.30E-04	7.18E-05	4.22E-05	1.16E-08	1.73E-04	1.05E-04
E74	0.00E+00	5.92E-06	6.15E-07	1.93E+01	3.59E-05	1.20E-01	1.20E-05	1.42E-03	3.40E-03	5.26E-04	1.15E-03	7.36E-04	7.55E-04	1.65E-04	9.66E-05	2.65E-08	3.95E-04	2.42E-04
E75	0.00E+00	6.23E-05	5.37E-06	1.48E+02	2.09E-04	7.29E-01	9.15E-05	3.71E-02	1.93E-02	3.22E-03	8.72E-03	4.84E-03	4.95E-03	4.05E-03	7.13E-04	1.75E-07	3.78E-03	6.83E-03
E76	0.00E+00	3.89E-05	3.60E-06	1.13E+02	1.72E-04	5.90E-01	6.57E-05	1.77E-02	1.49E-02	2.46E-03	6.30E-03	3.72E-03	3.81E-03	1.99E-03	5.57E-04	1.42E-07	2.49E-03	3.20E-03
E77	0.00E+00	6.68E-05	5.79E-06	1.62E+02	2.30E-04	8.00E-01	9.93E-05	3.91E-02	2.10E-02	3.51E-03	9.47E-03	5.28E-03	5.40E-03	4.27E-03	7.79E-04	1.92E-07	4.07E-03	7.17E-03
E78	0.00E+00	4.81E-05	4.46E-06	1.40E+02	2.12E-04	7.28E-01	8.12E-05	2.23E-02	1.84E-02	3.04E-03	7.76E-03	4.59E-03	4.70E-03	2.49E-03	6.87E-04	1.75E-07	3.07E-03	4.03E-03
E79	0.00E+00	5.47E-05	4.97E-06	1.54E+02	2.32E-04	7.97E-01	9.08E-05	2.55E-02	2.03E-02	3.35E-03	8.73E-03	5.07E-03	5.19E-03	2.89E-03	7.56E-04	1.94E-07	3.54E-03	4.61E-03
E80	0.00E+00	5.26E-05	4.64E-06	1.36E+02	2.00E-04	6.88E-01	8.22E-05	2.78E-02	1.78E-02	2.96E-03	7.88E-03	4.47E-03	4.57E-03	3.09E-03	6.62E-04	1.67E-07	3.31E-03	5.07E-03
E81	0.00E+00	1.36E-06	1.28E-07	3.85E+00	7.13E-06	2.34E-02	2.56E-06	3.35E-04	6.69E-04	1.04E-04	2.50E-04	1.49E-04	1.52E-04	4.33E-05	1.91E-05	5.39E-09	9.87E-05	5.82E-05
E82	0.00E+00	4.44E-07	4.72E-08	1.53E+00	2.87E-06	9.58E-03	9.37E-07	8.12E-05	2.69E-04	4.16E-05	8.94E-05	5.82E-05	5.97E-05	1.03E-05	7.65E-06	2.12E-09	3.00E-05	1.33E-05
E83	0.00E+00	1.11E-05	1.07E-06	3.31E+01	5.30E-05	1.83E-01	1.95E-05	4.77E-03	4.53E-03	7.43E-04	1.86E-03	1.14E-03	1.16E-03	5.25E-04	1.63E-04	4.24E-08	7.05E-04	8.57E-04
E84	0.00E+00	9.17E-06	9.14E-07	3.05E+01	5.08E-05	1.74E-01	1.76E-05	2.85E-03	4.21E-03	6.87E-04	1.69E-03	1.06E-03	1.08E-03	3.32E-04	1.52E-04	4.07E-08	6.14E-04	4.97E-04
E85	0.00E+00	7.86E-05	7.20E-06	1.97E+02	3.45E-04	1.16E+00	1.33E-04	3.42E-02	3.41E-02	5.35E-03	1.28E-02	7.48E-03	7.66E-03	3.56E-03	9.64E-04	2.58E-07	5.14E-03	6.22E-03
E86	0.00E+00	8.29E-05	7.22E-06	1.85E+02	3.14E-04	1.05E+00	1.30E-04	4.17E-02	3.18E-02	5.01E-03	1.25E-02	7.02E-03	7.18E-03	4.27E-03	8.95E-04	2.37E-07	5.40E-03	7.65E-03
E87	0.00E+00	1.24E-04	9.27E-06	1.78E+02	2.47E-04	8.43E-01	1.49E-04	9.08E-02	2.94E-02	4.78E-03	1.45E-02	6.63E-03	6.76E-03	8.83E-03	8.07E-04	1.93E-07	7.72E-03	1.70E-02
E88	0.00E+00	1.35E-04	1.07E-05	2.27E+02	3.40E-04	1.16E+00	1.76E-04	9.19E-02	3.81E-02	6.12E-03	1.70E-02	8.47E-03	8.65E-03	8.95E-03	1.05E-03	2.60E-07	8.39E-03	1.71E-02
E89	0.00E+00	8.50E-07	7.15E-08	1.93E+00	3.46E-06	1.12E-02	1.41E-06	2.98E-04	3.30E-04	5.19E-05	1.40E-04	7.52E-05	7.70E-05	3.61E-05	9.46E-06	2.68E-09	6.31E-05	5.37E-05
E90	0.00E+00	2.65E-06	2.43E-07	6.68E+00	1.17E-05	3.93E-02	4.50E-06	1.13E-03	1.16E-03	1.81E-04	4.33E-04	2.54E-04	2.60E-04	1.19E-04	3.27E-05	8.78E-09	1.74E-04	2.05E-04
E91	0.00E+00	1.77E-07	1.89E-08	6.10E-01	1.15E-06	3.83E-03	3.75E-07	3.25E-05	1.07E-04	1.66E-05	3.58E-05	2.33E-05	2.39E-05	4.10E-06	3.06E-06	8.46E-10	1.20E-05	5.32E-06
E92	0.00E+00	1.77E-07	1.89E-08	6.10E-01	1.15E-06	3.83E-03	3.75E-07	3.25E-05	1.07E-04	1.66E-05	3.58E-05	2.33E-05	2.39E-05	4.10E-06	3.06E-06	8.46E-10	1.20E-05	5.32E-06
E93	0.00E+00	5.71E-06	5.29E-07	1.48E+01	2.61E-05	8.73E-02	9.87E-06	2.34E-03	2.56E-03	4.01E-04	9.48E-04	5.61E-04	5.75E-04	2.47E-04	7.24E-05	1.95E-08	3.77E-04	4.22E-04
E94	0.00E+00	1.92E-06	1.69E-07	4.81E+00	8.76E-06	2.84E-02	3.37E-06	5.81E-04	8.27E-04	1.29E-04	3.33E-04	1.87E-04	1.91E-04	7.28E-05	2.37E-05	6.72E-09	1.43E-04	1.03E-04
E95	0.00E+00	5.45E-05	4.47E-06	1.18E+02	1.46E-04	5.31E-01	7.27E-05	3.68E-02	1.15E-02	2.09E-03	6.90E-03	3.60E-03	3.68E-03	4.57E-03	5.51E-04	1.30E-07	3.21E-03	6.79E-03
E96	0.00E+00	5.52E-05	4.28E-06	1.01E+02	1.12E-04	4.15E-01	6.61E-05	4.11E-02	9.50E-03	1.77E-03	6.27E-03	3.03E-03	3.08E-03	5.16E-03	4.57E-04	1.03E-07	3.17E-03	7.65E-03
F01	0.00E+00	5.19E-05	3.94E-06	7.67E+01	1.07E-04	3.68E-01	6.29E-05	3.83E-02	1.27E-02	2.06E-03	6.07E-03	2.84E-03	2.90E-03	3.69E-03	3.48E-04	8.29E-08	3.18E-03	7.14E-03
F02	0.00E+00	2.44E-05	1.98E-06	4.42E+01	6.83E-05	2.33E-01	3.33E-05	1.59E-02	7.47E-03	1.19E-03	3.20E-03	1.65E-03	1.69E-03	1.55E-03	2.07E-04	5.19E-08	1.52E-03	2.95E-03
F33	0.00E+00	2.16E-05	1.97E-06	5.07E+01	8.51E-05	2.91E-01	3.42E-05	1.19E-02	8.77E-03	1.38E-03	3.23E-03	1.90E-03	1.94E-03	1.15E-03	2.45E-04	6.28E-08	1.30E-03	2.19E-03
F34	0.00E+00	1.17E-05	1.10E-06	3.09E+01	5.48E-05	1.84E-01	2.05E-05	4.77E-03	5.37E-03	8.40E-04	1.96E-03	1.17E-03	1.20E-03	5.00E-04	1.52E-04	4.08E-08	7.65E-04	8.62E-04
F35	0.00E+00	1.14E-05	9.35E-07	2.58E+01	3.44E-05	1.23E-01	1.61E-05	6.79E-03	2.43E-03	4.47E-04	1.55E-03	8.14E-04	8.32E-04	8.77E-04	1.22E-04	3.12E-08	7.21E-04	1.25E-03
F36	0.00E+00	2.82E-06	2.36E-07	6.88E+00	9.57E-06	3.40E-02	4.20E-06	1.52E-03	6.53E-04	1.19E-04	4.09E-04	2.19E-04	2.24E-04	2.00E-04	3.30E-05	8.66E-09	1.85E-04	2.78E-04
F37	0.00E+00	8.38E-05	6.55E-06	1.35E+02	1.95E-04	6.73E-01	1.06E-04	5.99E-02	2.25E-02	3.63E-03	1.02E-02	4.99E-03	5.10E-03	5.76E-03	6.20E-04	1.49E-07	5.10E-03	1.12E-02
F38	0.00E+00	7.20E-05	6.22E-06	1.52E+02	2.49E-04	8.47E-01	1.07E-04	4.20E-02	2.61E-02	4.13E-03	1.03E-02	5.70E-03	5.83E-03	4.11E-03	7.28E-04	1.86E-07	4.45E-03	7.75E-03
F39	0.00E+00	1.08E-05	9.53E-07	2.77E+01	3.87E-05	1.40E-01	1.63E-05	6.23E-03	2.67E-03	4.86E-04	1.55E-03	8.83E-04	9.03E-04	7.59E-04	1.34E-04	3.37E-08	6.52E-04	1.14E-03
F40	0.00E+00	6.17E-06	5.11E-07	1.29E+01	1.61E-05	5.97E-02	8.05E-06	4.35E-03	1.22E-03	2.25E-04	7.56E-04	4.02E-04	4.10E-04	5.27E-04	6.03E-05	1.41E-08	3.46E-04	8.05E-04
F41	0.00E+00	5.88E-06	6.01E-07	2.05E+01	3.45E-05	1.18E-01	1.17E-05	1.63E-03	2.85E-03	4.63E-04	1.12E-03	7.12E-04	7.29E-04	1.90E-04	1.03E-04	2.75E-08	3.94E-04	2.80E-04
F42	0.00E+00	8.45E-06	8.92E-07	3.17E+01	5.41E-05	1.85E-01	1.77E-05	1.77E-03	4.41E-03	7.15E-04	1.70E-03	1.10E-03	1.13E-03	2.14E-04	1.60E-04	4.31E-08	5.79E-04	2.91E-04
F45	0.00E+00	1.11E-05	1.07E-06	3.31E+01	5.30E-05	1.83E-01	1.95E-05	4.77E-03	4.53E-03	7.43E-04	1.86E-03	1.14E-03	1.16E-03	5.25E-04	1.63E-04	4.24E-08	7.05E-04	8.57E-04
F46	0.00E+00	9.17E-06	9.14E-07	3.05E+01	5.08E-05	1.74E-01	1.76E-05	2.85E-03	4.21E-03	6.87E-04	1.69E-03	1.06E-03	1.08E-03	3.32E-04	1.52E-04	4.07E-08	6.14E-04	4.97E-04
F47	0.00E+00	3.07E-07	2.43E-08	5.18E-01	7.80E-07	2.66E-03	4.03E-07	2.06E-04	8.70E-05	1.40E-05	3.88E-05	1.94E-05	1.98E-05	2.02E-05	2.41E-06	5.98E-10	1.91E-05	3.84E-05
F48	0.00E+00	2.92E-06	2.38E-07	5.22E+00	7.93E-06	2.73E-02	3.91E-06	1.99E-03	8.83E-04	1.41E-04	3.73E-04	1.94E-04	1.98E-04	1.91E-04	2.44E-05	5.98E-09	1.76E-04	3.70E-04
F77	0.00E+00	7.18E-05	5.04E-06	8.49E+01	7.50E-05	2.81E-01	7.15E-05	6.13E-02	9.97E-03	1.80E-03	6.84E-03	2.69E-03	2.73E-03	6.70E-03	3.57E-04	7.02E-08	4.11E-03	1.15E-02
F78	0.00E+00	7.35E-06	6.69E-07	1.75E+01	3.05E-05	9.99E-02	1.20E-05	3.37E-03	4.48E-03	6.46E-04	1.15E-03	6.71E-04	6.85E-04	3.09E-04	8.54E-05	1.85E-08	4.61E-04	6.18E-04
F79	0.00E+00	2.33E-05	2.18E-06	6.59E+01	1.08E-04	3.60E-01	4.05E-05	9.62E-03	1.10E-02	1.72E-03	3.91E-03	2.31E-03	2.37E-03	1.03E-03	3.25E-04	8.13E-08	1.53E-03	1.74E-03
F80	0.00E+00	4.50E-05	4.28E-06	1.41E+02	2.19E-04	7.48E-01	8.05E-05	1.77E-02	1.87E-02	3.07E-03	7.74E-03	4.65E-03	4.77E-03	2.03E-03	6.99E-04	1.82E-07	2.98E-03	3.15E-03
F81	0.00E+00	8.11E-05	5.49E-06	8.31E+01	7.99E-05	2.82E-01	8.09E-05	6.93E-02	1.28E-02	2.16E-03	7.93E-03	2.92E-03	2.97E-03	6.66E-03	3.48E-04	6.88E-08	4.96E-03	1.30E-02
F82	0.00E+00	9.65E-06	9.09E-07	2.53E+01	4.51E-05	1.47E-01	1.68E-05	3.61E-03	6.49E-03	9.33E-04	1.61E-03	9.68E-04	9.89E-04	3.63E-04	1.24E-04	2.73E-08	6.18E-04	6.55E-04
F83	0.00E+00	1.02E-06	8.09E-08	1.99E+00	2.63E-06	9.09E-03	1.35E-06	6.65E-04	2.52E-04	4.28E-05	1.31E-04	6.50E-05	6.64E-05	7.49E-05	9.33E-06	2.27E-09	6.41E-05	1.23E-04
F84	0.00E+00	2.38E-05	1.97E-06	4.11E+01	6.39E-05	2.18E-01	3.14E-05	1.70E-02	1.04E-02	1.53E-03	2.97E-03	1.58E-03	1.61E-03	1.31E-03	1.94E-04	3.87E-08	1.36E-03	3.16E-03
F85	0.00E+00	1.67E-05	1.39E-06	3.33E+01	4.74E-05	1.65E-01	2.27E-05	1.15E-02	5.46E-03	8.71E-04	2.16E-03	1.15E-03	1.17E-03	1.10E-03	1.57E-04	3.58E-08	9.78E-04	2.14E-03
F86	0.00E+00	1.87E-05	1.47E-06	3.09E+01	3.53E-05	1.30E-01	2.15E-05	1.51E-02	3.88E-03	6.70E-04	2.01E-03	9.82E-04	1.00E-03	1.59E-03	1.40E-04	2.95E-08	1.01E-03	2.83E-03
F87	0.00E+00	3.89E-06	2.96E-07	6.09E+00	7.91E-06	2.74E-02	4.68E-06	2.93E-03	9.82E-04	1.59E-04	4.51E-04	2.12E-04	2.16E-04	2.82E-04	2.79E-05	6.17E-09	2.34E-04	5.48E-04
F88	0.00E+00	9.05E-07	7.21E-08	1.38E+00	2.06E-06	7.05E-03	1.12E-06	6.92E-04	3.49E-04	5.15E-05	1.06E-04	5.34E-05	5.45E-05	5.24E-05	6.41E-06	1.25E-09	5.17E-05	1.29E-04

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B09	100	Passenger Car	598	0.00E+00	6.46E-06	7.00E-07	2.66E+01	4.50E-05	1.71E-01	1.44E-05	1.28E-03	1.94E-03	3.90E-04	1.40E-03	9.01E-04	9.26E-04	7.49E-05	1.36E-04	3.74E-08	4.74E-04	1.99E-04
16	B09	100	Passenger Truck	1002	0.00E+00	1.39E-05	1.49E-06	6.29E+01	9.13E-05	3.42E-01	2.98E-05	3.65E-03	3.42E-03	7.29E-04	2.87E-03	1.85E-03	1.90E-03	4.03E-04	3.17E-04	8.71E-08	9.60E-04	5.87E-04
16	B09	100	Single Unit Short Haul Truck	152	0.00E+00	2.05E-05	1.01E-06	2.78E+01	1.79E-05	6.43E-02	2.21E-05	1.11E-02	1.05E-03	3.05E-04	2.53E-03	6.26E-04	6.39E-04	2.80E-03	1.12E-04	4.57E-08	1.89E-03	2.07E-03
16	B09	100	Single Unit Long Haul Truck	7	0.00E+00	8.86E-07	4.31E-08	1.17E+00	7.39E-07	2.63E-03	9.57E-07	4.66E-04	4.74E-05	1.32E-05	1.10E-04	2.65E-05	2.69E-05	1.17E-04	4.72E-06	1.87E-09	8.34E-05	8.71E-05
16	B09	100	Combination Short Haul Truck	87	0.00E+00	2.99E-05	2.18E-06	3.14E+01	8.49E-08	2.92E-02	2.15E-05	3.18E-02	1.01E-03	3.59E-04	1.67E-03	6.39E-04	6.27E-04	4.73E-03	1.05E-04	0.00E+00	1.04E-03	6.01E-03
16	B09	100	Combination Long Haul Truck	79	0.00E+00	2.60E-05	1.78E-06	2.84E+01	9.83E-08	2.90E-02	1.94E-05	3.04E-02	9.37E-04	2.60E-04	1.70E-03	5.32E-04	5.32E-04	4.33E-03	9.52E-05	0.00E+00	1.17E-03	5.72E-03
16	B10	100	Passenger Car	1454	0.00E+00	1.57E-05	1.70E-06	6.46E+01	1.09E-04	4.16E-01	3.49E-05	3.11E-03	4.73E-03	9.49E-04	3.40E-03	2.19E-03	2.25E-03	1.82E-04	3.31E-04	9.09E-08	1.15E-03	4.85E-04
16	B10	100	Passenger Truck	2435	0.00E+00	3.39E-05	3.61E-06	1.53E+02	2.22E-04	8.32E-01	7.24E-05	8.86E-03	8.32E-03	1.77E-03	6.97E-03	4.50E-03	4.61E-03	9.81E-04	7.71E-04	2.12E-07	2.33E-03	1.43E-03
16	B10	100	Single Unit Short Haul Truck	103	0.00E+00	1.39E-05	6.87E-07	1.89E+01	1.21E-05	4.37E-02	1.50E-05	7.53E-03	7.13E-04	2.07E-04	1.72E-03	4.25E-04	4.34E-04	1.90E-03	7.59E-05	3.10E-08	1.28E-03	1.41E-03
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	6.02E-07	2.93E-08	7.96E-01	5.02E-07	1.79E-03	6.50E-07	3.17E-04	3.22E-05	8.96E-06	7.49E-05	1.80E-05	1.82E-05	7.97E-05	3.21E-06	1.27E-09	5.66E-05	5.92E-05
16	B10	100	Combination Short Haul Truck	215	0.00E+00	7.40E-05	5.39E-06	7.76E+01	2.10E-07	7.23E-02	5.33E-05	7.88E-02	2.50E-03	8.90E-04	4.14E-03	1.58E-03	1.55E-03	1.17E-02	2.60E-04	0.00E+00	2.59E-03	1.49E-02
16	B10	100	Combination Long Haul Truck	196	0.00E+00	6.43E-05	4.41E-06	7.02E+01	2.43E-07	7.19E-02	4.81E-05	7.51E-02	2.32E-03	6.43E-04	4.21E-03	1.32E-03	1.32E-03	1.07E-02	2.36E-04	0.00E+00	2.90E-03	1.42E-02
16	B13	100	Passenger Car	864	0.00E+00	9.34E-06	1.01E-06	3.84E+01	6.51E-05	2.47E-01	2.07E-05	1.85E-03	2.81E-03	5.64E-04	2.02E-03	1.30E-03	1.34E-03	1.08E-04	1.97E-04	5.40E-08	6.84E-04	2.88E-04
16	B13	100	Passenger Truck	1448	0.00E+00	2.01E-05	2.15E-06	9.09E+01	1.32E-04	4.95E-01	4.30E-05	5.27E-03	4.95E-03	1.05E-03	4.14E-03	2.67E-03	2.74E-03	5.83E-04	4.58E-04	1.26E-07	1.39E-03	8.48E-04
16	B13	100	Single Unit Short Haul Truck	80	0.00E+00	1.08E-05	5.34E-07	1.47E+01	9.43E-06	3.40E-02	1.17E-05	5.86E-03	5.54E-04	1.61E-04	1.34E-03	3.31E-04	3.37E-04	1.48E-03	5.90E-05	2.41E-08	9.99E-04	1.09E-03
16	B13	100	Single Unit Long Haul Truck	4	0.00E+00	4.68E-07	2.28E-08	6.19E-01	3.90E-07	1.39E-03	5.06E-07	2.46E-04	2.50E-05	6.97E-06	5.83E-05	1.40E-05	1.42E-05	6.20E-05	2.49E-06	9.86E-10	4.41E-05	4.60E-05
16	B13	100	Combination Short Haul Truck	137	0.00E+00	4.70E-05	3.42E-06	4.93E+01	1.33E-07	4.59E-02	3.38E-05	5.01E-02	1.59E-03	5.65E-04	2.63E-03	1.00E-03	9.86E-04	7.43E-03	1.65E-04	0.00E+00	1.64E-03	9.44E-03
16	B13	100	Combination Long Haul Truck	124	0.00E+00	4.08E-05	2.80E-06	4.46E+01	1.55E-07	4.56E-02	3.06E-05	4.77E-02	1.47E-03	4.08E-04	2.68E-03	8.37E-04	8.37E-04	6.81E-03	1.50E-04	0.00E+00	1.84E-03	8.99E-03
16	B14	100	Passenger Car	391	0.00E+00	4.23E-06	4.58E-07	1.74E+01	2.95E-05	1.12E-01	9.39E-06	8.36E-04	1.27E-03	2.56E-04	9.14E-04	5.89E-04	6.06E-04	4.90E-05	8.91E-05	2.45E-08	3.10E-04	1.30E-04
16	B14	100	Passenger Truck	656	0.00E+00	9.12E-06	9.72E-07	4.12E+01	5.97E-05	2.24E-01	1.95E-05	2.39E-03	2.24E-03	4.77E-04	1.88E-03	1.21E-03	1.24E-03	2.64E-04	2.08E-04	5.70E-08	6.28E-04	3.84E-04
16	B14	100	Single Unit Short Haul Truck	120	0.00E+00	1.61E-05	7.95E-07	2.18E+01	1.40E-05	5.05E-02	1.74E-05	8.71E-03	8.25E-04	2.40E-04	1.99E-03	4.92E-04	5.02E-04	2.20E-03	8.78E-05	3.59E-08	1.49E-03	1.63E-03
16	B14	100	Single Unit Long Haul Truck	5	0.00E+00	6.97E-07	3.39E-08	9.21E-01	5.81E-07	2.07E-03	7.52E-07	3.67E-04	3.73E-05	1.04E-05	8.67E-05	2.08E-05	2.11E-05	9.23E-05	3.71E-06	1.47E-09	6.56E-05	6.85E-05
16	B14	100	Combination Short Haul Truck	65	0.00E+00	2.23E-05	1.63E-06	2.34E+01	6.34E-08	2.18E-02	1.61E-05	2.38E-02	7.55E-04	2.68E-04	1.25E-03	4.77E-04	4.68E-04	3.53E-03	7.85E-05	0.00E+00	7.80E-04	4.49E-03
16	B14	100	Combination Long Haul Truck	59	0.00E+00	1.94E-05	1.33E-06	2.12E+01	7.34E-08	2.17E-02	1.45E-05	2.27E-02	7.00E-04	1.94E-04	1.27E-03	3.98E-04	3.98E-04	3.24E-03	7.11E-05	0.00E+00	8.74E-04	4.27E-03
16	B15	100	Passenger Car	672	0.00E+00	7.26E-06	7.86E-07	2.99E+01	5.06E-05	1.92E-01	1.61E-05	1.44E-03	2.18E-03	4.39E-04	1.57E-03	1.01E-03	1.04E-03	8.42E-05	1.53E-04	4.20E-08	5.32E-04	2.24E-04
16	B15	100	Passenger Truck	1125	0.00E+00	1.57E-05	1.67E-06	7.06E+01	1.03E-04	3.84E-01	3.34E-05	4.09E-03	3.84E-03	8.19E-04	3.22E-03	2.08E-03	2.13E-03	4.53E-04	3.56E-04	9.78E-08	1.08E-03	6.59E-04
16	B15	100	Single Unit Short Haul Truck	33	0.00E+00	4.38E-06	2.16E-07	5.94E+00	3.82E-06	1.37E-02	4.73E-06	2.37E-03	2.24E-04	6.53E-05	5.41E-04	1.34E-04	1.37E-04	6.00E-04	2.39E-05	9.77E-09	4.04E-04	4.42E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.89E-07	9.22E-09	2.51E-01	1.58E-07	5.63E-04	2.05E-07	9.97E-05	1.01E-05	2.82E-06	2.36E-05	5.67E-06	5.74E-06	2.51E-05	1.01E-06	3.99E-10	1.78E-05	1.86E-05
16	B15	100	Combination Short Haul Truck	11	0.00E+00	3.78E-06	2.76E-07	3.97E+00	1.07E-08	3.69E-03	2.72E-06	4.03E-03	1.28E-04	4.55E-05	2.11E-04	8.09E-05	7.93E-05	5.98E-04	1.33E-05	0.00E+00	1.32E-04	7.60E-04
16	B15	100	Combination Long Haul Truck	10	0.00E+00	3.28E-06	2.25E-07	3.59E+00	1.24E-08	3.67E-03	2.46E-06	3.84E-03	1.19E-04	3.28E-05	2.15E-04	6.73E-05	6.73E-05	5.48E-04	1.20E-05	0.00E+00	1.48E-04	7.23E-04
16	B16	100	Passenger Car	1205	0.00E+00	1.30E-05	1.41E-06	5.36E+01	9.07E-05	3.45E-01	2.89E-05	2.57E-03	3.92E-03	7.87E-04	2.82E-03	1.81E-03	1.87E-03	1.51E-04	2.74E-04	7.53E-08	9.54E-04	4.02E-04
16	B16	100	Passenger Truck	2019	0.00E+00	2.81E-05	2.99E-06	1.27E+02	1.84E-04	6.90E-01	6.00E-05	7.35E-03	6.90E-03	1.47E-03	5.78E-03	3.73E-03	3.82E-03	8.13E-04	6.39E-04	1.76E-07	1.93E-03	1.18E-03
16	B16	100	Single Unit Short Haul Truck	38	0.00E+00	5.15E-06	2.54E-07	6.99E+00	4.49E-06	1.62E-02	5.57E-06	2.79E-03	2.64E-04	7.68E-05	6.36E-04	1.57E-04	1.61E-04	7.06E-04	2.81E-05	1.15E-08	4.76E-04	5.20E-04
16	B16	100	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	1.08E-08	2.95E-01	1.86E-07	6.62E-04	2.41E-07	1.17E-04	1.19E-05	3.32E-06	2.77E-05	6.66E-06	6.76E-06	2.95E-05	1.19E-06	4.69E-10	2.10E-05	2.19E-05
16	B16	100	Combination Short Haul Truck	21	0.00E+00	7.39E-06	5.38E-07	7.74E+00	2.10E-08	7.21E-03	5.31E-06	7.86E-03	2.50E-04	8.88E-05	4.13E-04	1.58E-04	1.55E-04	1.17E-03	2.60E-05	0.00E+00	2.58E-04	1.48E-03
16	B16	100	Combination Long Haul Truck	20	0.00E+00	6.41E-06	4.39E-07	7.01E+00	2.43E-08	7.17E-03	4.80E-06	7.50E-03	2.31E-04	6.41E-05	4.20E-04	1.31E-04	1.31E-04	1.07E-03	2.35E-05	0.00E+00	2.89E-04	1.41E-03
11	D27	80	Passenger Car	226	0.00E+00	2.71E-06	2.94E-07	1.04E+01	1.89E-05	6.97E-02	6.04E-06	4.65E-04	1.24E-03	2.16E-04	5.88E-04	3.79E-04	3.89E-04	3.54E-05	5.31E-05	1.49E-08	1.99E-04	7.29E-05
11	D27	80	Passenger Truck	379	0.00E+00	5.84E-06	6.19E-07	2.41E+01	3.74E-05	1.28E-01	1.22E-05	1.38E-03	2.23E-03	3.96E-04	1.17E-03	7.60E-04	7.79E-04	1.70E-04	1.22E-04	3.31E-08	3.91E-04	2.25E-04
11	D27	80	Single Unit Short Haul Truck	22	0.00E+00	4.13E-06	2.05E-07	4.05E+00	3.32E-06	8.14E-03	4.39E-06	2.12E-03	2.59E-04	5.87E-05	5.02E-04	1.22E-04	1.24E-04	4.06E-04	1.63E-05	6.49E-09	3.78E-04	3.97E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.85E-09	1.71E-01	1.42E-07	3.37E-04	1.91E-07	9.07E-05	1.18E-05	2.59E-06	2.19E-05	5.26E-06	5.34E-06	1.71E-05	6.91E-07	2.70E-10	1.66E-05	1.69E-05
11	D27	80	Combination Short Haul Truck	15	0.00E+00	6.43E-06	4.60E-07	5.33E+00	2.03E-08	5.70E-03	4.72E-06	6.63E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.01E-04	1.78E-05	0.00E+00	2.49E-04	1.25E-03
11	D27	80	Combination Long Haul Truck	13	0.00E+00	5.75E-06	3.86E-07	4.93E+00	2.35E-08	5.90E-03	4.38E-06	6.42E-03	3.82E-04	7.68E-05	3.97E-04	1.17E-04	1.18E-04	7.53E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	D28	80	Passenger Car	734	0.00E+00	8.80E-06	9.54E-07	3.38E+01	6.13E-05	2.26E-01	1.96E-05	1.51E-03	4.03E-03	7.01E-04	1.91E-03	1.23E-03	1.26E-03	1.15E-04	1.72E-04	4.83E-08	6.46E-04	2.36E-04
11	D28	80	Passenger Truck	1228	0.00E+00	1.89E-05	2.01E-06	7.81E+01	1.21E-04	4.16E-01	3.96E-05	4.47E-03	7.23E-03	1.28E-03	3.79E-03	2.46E-03	2.53E-03	5.53E-04	3.96E-04	1.07E-07	1.27E-03	7.30E-04
11	D28	80	Single Unit Short Haul Truck	57	0.00E+00	1.08E-05	5.35E-07	1.06E+01	8.67E-06	2.12E-02	1.15E-05	5.52E-03	6.77E-04	1.53E-04	1.31E-03	3.19E-04	3.24E-04	1.06E-03	4.26E-05	1.69E-08	9.86E-04	1.03E-03
11	D28	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	2.31E-08	4.47E-01	3.70E-07	8.80E-04	4.98E-07	2.37E-04	3.09E-05	6.75E-06	5.72E-05	1.37E-05	1.39E-05	4.46E-05	1.80E-06	7.04E-10	4.32E-05	4.42E-05
11	D28	80	Combination Short Haul Truck	42	0.00E+00	1.86E-05	1.33E-06	1.54E+01	5.87E-08	1.65E-02	1.37E-05	1.92E-02	1.13E-03	2.78E-04	1.11E-03	3.93E-04	3.91E-04	2.32E-03	5.15E-05	0.00E+00	7.19E-04	3.61E-03
11	D28	80	Combination Long Haul Truck	39	0.00E+00	1.66E-05	1.12E-06	1.43E+01	6.79E-08	1.71E-02	1.27E-05	1.86E-02	1.11E-03	2.22E-04	1.15E-03	3.38E-04	3.40E-04	2.18E-03	4.76E-05	0.00E+00	8.05E-04	3.50E-03
11	D29	80	Passenger Car	226	0.00E+00	2.71E-06	2.94E-07	1.04E+01	1.89E-05	6.97E-02	6.04E-06	4.65E-04	1.24E-03	2.16E-04	5.88E-04	3.79E-04	3.89E-04	3.54E-05	5.31E-05	1.49E-08	1.99E-04	7.29E-05
11	D29	80	Passenger Truck	379	0.00E+00	5.84E-06	6.19E-07	2.41E+01	3.74E-05	1.28E-01	1.22E-05	1.38E-03	2.23E-03	3.96E-04	1.17E-03	7.60E-04	7.79E-04	1.70E-04	1.22E-04	3.31E-08	3.91E-04	2.25E-04
11	D29	80	Single Unit Short Haul Truck	22	0.00E+00	4.13E-06	2.05E-07	4.05E+00	3.32E-06	8.14E-03	4.39E-06	2.12E-03	2.59E-04	5.87E-05	5.02E-04	1.22E-04	1.24E-04	4.06E-04	1.63E-05	6.49E-09	3.78E-04	3.97E-04
11	D29	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.85E-09	1.71E-01	1.42E-07	3.37E-04	1.91E-07	9.07E-05	1.18E-05	2.59E-06	2.19E-05	5.26E-06	5.34E-06	1.71E-05	6.91E-07	2.70E-10	1.66E-05	1.69E-05
11	D29	80	Combination Short Haul Truck	15	0.00E+00	6.43E-06	4.60E-07	5.33E+00	2.03E-08	5.70E-03	4.72E-06	6.63E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.01E-04	1.78E-05	0.00E+00	2.49E-04	1.25E-03
11	D29	80	Combination Long Haul Truck	13	0.00E+00	5.75E-06	3.86E-07	4.93E+00	2.35E-08	5.90E-03	4.38E-06	6.42E-03	3.82E-04	7.68E-05	3.97E-04	1.17E-04	1.18E-04	7.53E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	D30	80	Passenger Car	734	0.00E+00	8.80E-06	9.54E-07	3.38E+01	6.13E-05	2.26E-01	1.96E-05	1.51E-03	4.03E-03	7.01E-04	1.91E-03	1.23E-03	1.26E-03	1.15E-04	1.72E-04	4.83E-08	6.46E-04	2.36E-04
11	D30	80	Passenger Truck	1228	0.00E+00	1.89E-05	2.01E-06	7.81E+01	1.21E-04	4.16E-01	3.96E-05	4.47E-03	7.23E-03	1.28E-03	3.79E-03	2.46E-03	2.53E-03	5.53E-04	3.96E-04	1.07E-07	1.27E-03	7.30E-04
11	D30	80	Single Unit Short Haul Truck	57	0.00E+00	1.08E-05	5.35E-07	1.06E+01	8.67E-06	2.12E-02	1.15E-05	5.52E-03	6.77E-04	1.53E-04	1.31E-03	3.19E-04	3.24E-04	1.06E-03	4.26E-05	1.69E-08	9.86E-04	1.03E-03
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	2.31E-08	4.47E-01	3.70E-07	8.80E-04	4.98E-07	2.37E-04	3.09E-05	6.75E-06	5.72E-05	1.37E-05	1.39E-05	4.46E-05	1.80E-06	7.04E-10	4.32E-05	4.42E-05
11	D30	80	Combination Short Haul Truck	42	0.00E+00	1.86E-05	1.33E-06	1.54E+01	5.87E-08	1.65E-02	1.37E-05	1.92E-02	1.13E-03	2.78E-04	1.11E-03	3.93E-04	3.91E-04	2.32E-03	5.15E-05	0.00E+00	7.19E-04	3.61E-03
11	D30	80	Combination Long Haul Truck	39	0.00E+00	1.66E-05	1.12E-06	1.43E+01	6.79E-08	1.71E-02	1.27E-05	1.86E-02	1.11E-03	2.22E-04	1.15E-03	3.38E-04	3.40E-04	2.18E-03	4.76E-05	0.00E+00	8.05E-04	3.50E-03
11	D31	80	Passenger Car	202	0.00E+00	2.42E-06	2.62E-07	9.31E+00	1.69E-05	6.23E-02	5.39E-06	4.15E-04	1.11E-03	1.93E-04	5.25E-04	3.38E-04	3.47E-04	3.16E-05	4.74E-05	1.33E-08	1.78E-04	6.51E-05
11	D31	80	Passenger Truck	338	0.00E+00	5.21E-06	5.52E-07	2.15E+01	3.33E-05	1.15E-01	1.09E-05	1.23E-03	1.99E-03	3.53E-04	1.04E-03	6.78E-04	6.95E-04	1.52E-04	1.09E-04	2.96E-08	3.49E-04	2.01E-04
11	D31	80	Single Unit Short Haul Truck	28	0.00E+00	5.21E-06	2.58E-07	5.11E+00	4.19E-06	1.03E-02	5.54E-06	2.67E-03	3.27E-04	7.40E-05	6.33E-04	1.54E-04	1.57E-04	5.12E-04	2.06E-05	8.18E-09	4.77E-04	5.00E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	2.16E-01	1.79E-07	4.25E-04	2.41E-07	1.14E-04	1.49E-05	3.26E-06	2.76E-05	6.64E-06	6.74E-06	2.16E-05	8.71E-07	3.40E-10	2.09E-05	2.14E-05
11	D31	80	Combination Short Haul Truck	15	0.00E+00	6.43E-06	4.60E-07	5.33E+00	2.03E-08	5.70E-03	4.72E-06	6.63E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.01E-04	1.78E-05	0.00E+00	2.49E-04	1.25E-03
11	D31	80	Combination Long Haul Truck	13	0.00E+00	5.75E-06	3.86E-07	4.93E+00	2.35E-08	5.90E-03	4.38E-06	6.42E-03	3.82E-04	7.68E-05	3.97E-04	1.17E-04	1.18E-04	7.53E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	D32	80	Passenger Car	416	0.00E+00	4.99E-06	5.40E-07	1.92E+01	3.48E-05	1.28E-01	1.11E-05	8.55E-04	2.29E-03	3.97E-04	1.08E-03	6.96E-04	7.15E-04	6.51E-05	9.76E-05	2.74E-08	3.66E-04	1.34E-04
11	D32	80	Passenger Truck	696	0.00E+00	1.07E-05	1.14E-06	4.43E+01	6.87E-05	2.36E-01	2.24E-05	2.53E-03	4.10E-03	7.27E-04	2.15E-03	1.40E-03	1.43E-03	3.13E-04	2.24E-04	6.09E-08	7.19E-04	4.14E-04
11	D32	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.14E-03	5.08E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.20E-05	1.27E-08	7.40E-04	7.76E-04
11	D32	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.60E-04	3.74E-07	1.77E-04	2.32E-05	5.06E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.32E-05
11	D32	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	1.00E-06	1.16E+01	4.42E-08	1.24E-02	1.03E-05	1.44E-02	8.49E-04	2.09E-04	8.35E-04	2.96E-04	2.94E-04	1.75E-03	3.88E-05	0.00E+00	5.42E-04	2.72E-03
11	D32	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.40E-07	1.07E+01	5.12E-08	1.28E-02	9.54E-06	1.40E-02	8.32E-04	1.67E-04	8.65E-04	2.55E-04	2.56E-04	1.64E-03	3.59E-05	0.00E+00	6.06E-04	2.63E-03
9	D33	60	Passenger Car	274	0.00E+00	4.06E-06	4.39E-07	1.36E+01	2.83E-05	1.01E-01	9.00E-06	5.60E-04	2.78E-03	4.28E-04	8.77E-04	5.66E-04	5.82E-04	5.73E-05	6.90E-05	1.90E-08	2.97E-04	8.77E-05
9	D33	60	Passenger Truck	460	0.00E+00	8.96E-06	9.46E-07	3.11E+01	5.60E-05	1.80E-01	1.85E-05	1.83E-03	5.11E-03	7.93E-04	1.75E-03	1.14E-03	1.17E-03	2.44E-04	1.56E-04	4.31E-08	5.83E-04	3.03E-04
9	D33	60	Single Unit Short Haul Truck	40	0.00E+00	1.18E-05	5.91E-07	7.52E+00	9.73E-06	1.45E-02	1.26E-05	5.64E-03	9.56E-04	1.73E-04	1.43E-03	3.54E-04	3.60E-04	7.53E-04	3.04E-05	1.25E-08	1.07E-03	1.06E-03
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	5.17E-07	2.57E-08	3.21E-01	4.23E-07	6.16E-04	5.52E-07	2.44E-04	4.30E-05	7.69E-06	6.31E-05	1.54E-05	1.57E-05	3.21E-05	1.30E-06	5.32E-10	4.72E-05	4.57E-05
9	D33	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.82E+00	5.34E-08	1.32E-02	1.12E-05	1.64E-02	1.40E-03	2.78E-04	9.61E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.09E-03
9	D33	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.83E-07	9.22E+00	6.12E-08	1.42E-02	1.05E-05	1.62E-02	1.41E-03	2.40E-04	9.87E-04	2.69E-04	2.72E-04	1.40E-03	3.08E-05	0.00E+00	7.14E-04	3.06E-03
9	D34	60	Passenger Car	230	0.00E+00	3.41E-06	3.68E-07	1.15E+01	2.37E-05	8.51E-02	7.55E-06	4.70E-04	2.34E-03	3.59E-04	7.36E-04	4.75E-04	4.88E-04	4.81E-05	5.79E-05	1.59E-08	2.50E-04	7.36E-05
9	D34	60	Passenger Truck	386	0.00E+00	7.52E-06	7.94E-07	2.61E+01	4.70E-05	1.51E-01	1.55E-05	1.53E-03	4.29E-03	6.65E-04	1.47E-03	9.60E-04	9.84E-04	2.05E-04	1.31E-04	3.62E-08	4.90E-04	2.54E-04
9	D34	60	Single Unit Short Haul Truck	9	0.00E+00	2.54E-06	1.27E-07	1.61E+00	2.09E-06	3.11E-03	2.71E-06	1.21E-03	2.05E-04	3.71E-05	3.06E-04	7.59E-05	7.71E-05	1.61E-04	6.51E-06	2.68E-09	2.30E-04	2.27E-04
9	D34	60	Combination Short Haul Truck	4	0.00E+00	2.16E-06	1.51E-07	1.40E+00	7.63E-09	1.88E-03	1.60E-06	2.34E-03	2.00E-04	3.97E-05	1.37E-04	4.47E-05	4.47E-05	2.12E-04	4.69E-06	0.00E+00	9.22E-05	4.41E-04
9	D34

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D39	60	Passenger Car	132	0.00E+00	1.95E-06	2.11E-07	6.54E+00	1.36E-05	4.86E-02	4.31E-06	2.68E-04	1.33E-03	2.05E-04	4.20E-04	2.72E-04	2.79E-04	2.75E-05	3.31E-05	9.10E-09	1.43E-04	4.20E-05
9	D39	60	Passenger Truck	220	0.00E+00	4.30E-06	4.54E-07	1.49E+01	2.69E-05	8.63E-02	8.88E-06	8.75E-04	2.45E-03	3.80E-04	8.39E-04	5.49E-04	5.62E-04	1.17E-04	7.47E-05	2.07E-08	2.80E-04	1.45E-04
9	D39	60	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.45E-08	6.02E-01	3.27E-09	8.06E-04	6.84E-07	1.00E-03	8.59E-05	1.70E-05	5.88E-05	1.92E-05	1.92E-05	9.07E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	D39	60	Combination Long Haul Truck	1	0.00E+00	8.27E-07	5.41E-08	5.64E-01	3.75E-09	8.70E-04	6.40E-07	9.94E-04	8.62E-05	1.47E-05	6.04E-05	1.65E-05	1.67E-05	8.59E-05	1.88E-06	0.00E+00	4.37E-05	1.88E-04
9	D40	60	Passenger Car	321	0.00E+00	4.75E-06	5.14E-07	1.60E+01	3.31E-05	1.19E-01	1.05E-05	6.55E-04	3.26E-03	5.00E-04	1.03E-03	6.63E-04	6.81E-04	6.71E-05	8.07E-05	2.22E-08	3.48E-04	1.03E-04
9	D40	60	Passenger Truck	538	0.00E+00	1.05E-05	1.11E-06	3.65E+01	6.56E-05	2.11E-01	2.17E-05	2.14E-03	5.98E-03	9.28E-04	2.05E-03	1.34E-03	1.37E-03	2.85E-04	1.82E-04	5.05E-08	6.83E-04	3.54E-04
9	D40	60	Single Unit Short Haul Truck	13	0.00E+00	3.95E-06	1.97E-07	2.51E+00	3.24E-06	4.84E-03	4.21E-06	1.88E-03	3.19E-04	5.77E-05	4.77E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.05E-04	1.84E-07	8.13E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.32E-07	1.77E-10	1.57E-05	1.52E-05
9	D40	60	Combination Short Haul Truck	16	0.00E+00	9.24E-06	6.45E-07	6.02E+00	3.27E-08	8.06E-03	6.84E-06	1.00E-02	8.59E-04	1.70E-04	5.88E-04	1.92E-04	1.92E-04	9.07E-04	2.01E-05	0.00E+00	3.95E-04	1.89E-03
9	D40	60	Combination Long Haul Truck	14	0.00E+00	8.27E-06	5.41E-07	5.64E+00	3.75E-08	8.70E-03	6.40E-06	9.94E-03	8.62E-04	1.47E-04	6.04E-04	1.65E-04	1.67E-04	8.59E-04	1.88E-05	0.00E+00	4.37E-04	1.88E-03
9	D41	60	Passenger Car	218	0.00E+00	3.22E-06	3.48E-07	1.08E+01	2.24E-05	8.04E-02	7.13E-06	4.44E-04	2.21E-03	3.39E-04	6.95E-04	4.49E-04	4.61E-04	4.55E-05	5.47E-05	1.51E-08	2.36E-04	6.95E-05
9	D41	60	Passenger Truck	364	0.00E+00	7.11E-06	7.50E-07	2.47E+01	4.44E-05	1.43E-01	1.47E-05	1.45E-03	4.05E-03	6.29E-04	1.39E-03	9.07E-04	9.29E-04	1.93E-04	1.23E-04	3.42E-08	4.63E-04	2.40E-04
9	D41	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D41	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	D42	60	Passenger Car	65	0.00E+00	9.58E-07	1.03E-07	3.22E+00	6.67E-06	2.39E-02	2.12E-06	1.32E-04	6.56E-04	1.01E-04	2.07E-04	1.33E-04	1.37E-04	1.35E-05	1.63E-05	4.47E-09	7.01E-05	2.07E-05
9	D42	60	Passenger Truck	108	0.00E+00	2.11E-06	2.23E-07	7.34E+00	1.32E-05	4.24E-02	4.36E-06	4.30E-04	1.20E-03	1.87E-04	4.12E-04	2.70E-04	2.76E-04	5.75E-05	3.67E-05	1.02E-08	1.38E-04	7.13E-05
9	D42	60	Single Unit Short Haul Truck	4	0.00E+00	1.13E-06	5.63E-08	7.16E-01	9.27E-07	1.38E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.36E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	D42	60	Combination Short Haul Truck	8	0.00E+00	4.62E-06	3.23E-07	3.01E+00	1.63E-08	4.03E-03	3.42E-06	5.01E-03	4.29E-04	8.50E-05	2.94E-04	9.59E-05	9.59E-05	4.53E-04	1.00E-05	0.00E+00	1.98E-04	9.46E-04
9	D42	60	Combination Long Haul Truck	7	0.00E+00	4.13E-06	2.70E-07	2.82E+00	1.87E-08	4.35E-03	3.20E-06	4.97E-03	4.31E-04	7.33E-05	3.02E-04	8.23E-05	8.33E-05	4.29E-04	9.42E-06	0.00E+00	2.19E-04	9.38E-04
9	D43	60	Passenger Car	272	0.00E+00	4.03E-06	4.35E-07	1.35E+01	2.81E-05	1.01E-01	8.92E-06	5.55E-04	2.76E-03	4.24E-04	8.69E-04	5.62E-04	5.77E-04	5.69E-05	6.84E-05	1.88E-08	2.95E-04	8.69E-05
9	D43	60	Passenger Truck	456	0.00E+00	8.89E-06	9.38E-07	3.09E+01	5.56E-05	1.79E-01	1.84E-05	1.81E-03	5.06E-03	7.86E-04	1.73E-03	1.13E-03	1.16E-03	2.42E-04	1.54E-04	4.28E-08	5.79E-04	3.00E-04
9	D43	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.60E-08	8.02E-01	4.36E-09	1.08E-03	9.12E-07	1.34E-03	1.14E-04	2.27E-05	7.85E-05	2.56E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	D43	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.21E-08	7.53E-01	5.00E-09	1.16E-03	8.53E-07	1.32E-03	1.15E-04	1.96E-05	8.06E-05	2.19E-05	2.22E-05	1.14E-04	2.51E-06	0.00E+00	5.83E-05	2.50E-04
9	D44	60	Passenger Car	62	0.00E+00	9.13E-07	9.87E-08	3.07E+00	6.36E-06	2.28E-02	2.02E-06	1.26E-04	6.25E-04	9.61E-05	1.97E-04	1.27E-04	1.31E-04	1.29E-05	1.55E-05	4.27E-09	6.68E-05	1.97E-05
9	D44	60	Passenger Truck	103	0.00E+00	2.01E-06	2.13E-07	7.00E+00	1.26E-05	4.05E-02	4.16E-06	4.10E-04	1.15E-03	1.78E-04	3.93E-04	2.57E-04	2.63E-04	5.48E-05	3.50E-05	9.70E-09	1.31E-04	6.80E-05
9	D44	60	Single Unit Short Haul Truck	30	0.00E+00	8.74E-06	4.36E-07	5.55E+00	7.18E-06	1.07E-02	9.32E-06	4.16E-03	7.06E-04	1.28E-04	1.06E-03	2.61E-04	2.66E-04	5.56E-04	2.24E-05	9.24E-09	7.93E-04	7.80E-04
9	D44	60	Single Unit Long Haul Truck	1	0.00E+00	3.82E-07	1.90E-08	2.37E-01	3.12E-07	4.55E-04	4.07E-07	1.80E-04	3.17E-05	5.67E-06	4.66E-05	1.14E-05	1.16E-05	2.37E-05	9.57E-07	3.93E-10	3.48E-05	3.38E-05
9	D44	60	Combination Short Haul Truck	16	0.00E+00	9.24E-06	6.45E-07	6.02E+00	3.27E-08	8.06E-03	6.84E-06	1.00E-02	8.59E-04	1.70E-04	5.88E-04	1.92E-04	1.92E-04	9.07E-04	2.01E-05	0.00E+00	3.95E-04	1.89E-03
9	D44	60	Combination Long Haul Truck	14	0.00E+00	8.27E-06	5.41E-07	5.64E+00	3.75E-08	8.70E-03	6.40E-06	9.94E-03	8.62E-04	1.47E-04	6.04E-04	1.65E-04	1.67E-04	8.59E-04	1.88E-05	0.00E+00	4.37E-04	1.88E-03
9	D45	60	Passenger Car	482	0.00E+00	7.14E-06	7.71E-07	2.40E+01	4.97E-05	1.78E-01	1.58E-05	9.83E-04	4.89E-03	7.51E-04	1.54E-03	9.95E-04	1.02E-03	1.01E-04	1.21E-04	3.33E-08	5.22E-04	1.54E-04
9	D45	60	Passenger Truck	807	0.00E+00	1.57E-05	1.66E-06	5.47E+01	9.84E-05	3.16E-01	3.25E-05	3.21E-03	8.97E-03	1.39E-03	3.07E-03	2.01E-03	2.06E-03	4.28E-04	2.74E-04	7.58E-08	1.02E-03	5.31E-04
9	D45	60	Single Unit Short Haul Truck	80	0.00E+00	2.37E-05	1.18E-06	1.50E+01	1.95E-05	2.91E-02	2.53E-05	1.13E-02	1.91E-03	3.46E-04	2.86E-03	7.08E-04	7.20E-04	1.51E-03	6.08E-05	2.50E-08	2.15E-03	2.11E-03
9	D45	60	Single Unit Long Haul Truck	4	0.00E+00	1.03E-06	5.14E-08	6.43E-01	8.46E-07	1.23E-03	1.10E-06	4.88E-04	8.59E-05	1.54E-05	1.26E-04	3.09E-05	3.13E-05	6.42E-05	2.59E-06	1.06E-09	9.44E-05	9.15E-05
9	D45	60	Combination Short Haul Truck	54	0.00E+00	3.20E-05	2.24E-06	2.09E+01	1.13E-07	2.80E-02	2.37E-05	3.48E-02	2.98E-03	5.89E-04	2.04E-03	6.65E-04	6.65E-04	3.14E-03	6.97E-05	0.00E+00	1.37E-03	6.56E-03
9	D45	60	Combination Long Haul Truck	50	0.00E+00	2.87E-05	1.87E-06	1.96E+01	1.30E-07	3.02E-02	2.22E-05	3.44E-02	2.99E-03	5.08E-04	2.09E-03	5.70E-04	5.77E-04	2.98E-03	6.53E-05	0.00E+00	1.52E-03	6.50E-03
9	D46	60	Passenger Car	498	0.00E+00	7.38E-06	7.97E-07	2.48E+01	5.14E-05	1.84E-01	1.63E-05	1.02E-03	5.05E-03	7.77E-04	1.59E-03	1.03E-03	1.06E-03	1.04E-04	1.25E-04	3.45E-08	5.40E-04	1.59E-04
9	D46	60	Passenger Truck	835	0.00E+00	1.63E-05	1.72E-06	5.66E+01	1.02E-04	3.27E-01	3.36E-05	3.32E-03	9.27E-03	1.44E-03	3.18E-03	2.08E-03	2.13E-03	4.43E-04	2.83E-04	7.84E-08	1.06E-03	5.49E-04
9	D46	60	Single Unit Short Haul Truck	105	0.00E+00	3.10E-05	1.55E-06	1.97E+01	2.55E-05	3.80E-02	3.31E-05	1.48E-02	2.51E-03	4.54E-04	3.75E-03	9.28E-04	9.42E-04	1.97E-03	7.96E-05	3.28E-08	2.82E-03	2.77E-03
9	D46	60	Single Unit Long Haul Truck	5	0.00E+00	1.36E-06	6.72E-08	8.42E-01	1.11E-06	1.61E-03	1.45E-06	6.39E-04	1.13E-04	2.01E-05	1.65E-04	4.04E-05	4.10E-05	8.40E-05	3.39E-06	1.39E-09	1.24E-04	1.20E-04
9	D46	60	Combination Short Haul Truck	60	0.00E+00	3.54E-05	2.47E-06	2.31E+01	1.25E-07	3.09E-02	2.62E-05	3.84E-02	3.29E-03	6.52E-04	2.26E-03	7.35E-04	7.35E-04	3.48E-03	7.70E-05	0.00E+00	1.52E-03	7.25E-03
9	D46	60	Combination Long Haul Truck	55	0.00E+00	3.17E-05	2.07E-06	2.16E+01	1.44E-07	3.34E-02	2.45E-05	3.81E-02	3.31E-03	5.62E-04	2.32E-03	6.31E-04	6.38E-04	3.29E-03	7.22E-05	0.00E+00	1.68E-03	7.19E-03
9	D47	60	Passenger Car	572	0.00E+00	8.46E-06	9.15E-07	2.84E+01	5.89E-05	2.11E-01	1.87E-05	1.17E-03	5.80E-03	8.91E-04	1.83E-03	1.18E-03	1.21E-03	1.19E-04	1.44E-04	3.95E-08	6.19E-04	1.83E-04
9	D47	60	Passenger Truck	957	0.00E+00	1.87E-05	1.97E-06	6.49E+01	1.17E-04	3.75E-01	3.86E-05	3.80E-03	1.06E-02	1.65E-03	3.64E-03	2.38E-03	2.44E-03	5.08E-04	3.24E-04	8.99E-08	1.22E-03	6.30E-04
9	D47	60	Single Unit Short Haul Truck	85	0.00E+00	2.51E-05	1.25E-06	1.59E+01	2.06E-05	3.08E-02	2.68E-05	1.20E-02	2.03E-03	3.67E-04	3.03E-03	7.51E-04	7.62E-04	1.60E-03	6.44E-05	2.65E-08	2.28E-03	2.24E-03
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	1.10E-06	5.44E-08	6.81E-01	8.96E-07	1.31E-03	1.17E-06	5.17E-04	9.11E-05	1.63E-05	1.34E-04	3.27E-05	3.32E-05	6.80E-05	2.75E-06	1.13E-09	1.00E-04	9.69E-05
9	D47	60	Combination Short Haul Truck	56	0.00E+00	3.30E-05	2.30E-06	2.15E+01	1.17E-07	2.88E-02	2.44E-05	3.58E-02	3.06E-03	6.06E-04	2.10E-03	6.84E-04	6.84E-04	3.23E-03	7.17E-05	0.00E+00	1.41E-03	6.75E-03
9	D47	60	Combination Long Haul Truck	51	0.00E+00	2.95E-05	1.93E-06	2.01E+01	1.34E-07	3.10E-02	2.28E-05	3.54E-02	3.08E-03	5.23E-04	2.15E-03	5.87E-04	5.94E-04	3.06E-03	6.72E-05	0.00E+00	1.56E-03	6.69E-03
9	D48	60	Passenger Car	321	0.00E+00	4.75E-06	5.14E-07	1.60E+01	3.31E-05	1.19E-01	1.05E-05	6.55E-04	3.26E-03	5.00E-04	1.03E-03	6.63E-04	6.81E-04	6.71E-05	8.07E-05	2.22E-08	3.48E-04	1.03E-04
9	D48	60	Passenger Truck	538	0.00E+00	1.05E-05	1.11E-06	3.65E+01	6.56E-05	2.11E-01	2.17E-05	2.14E-03	5.98E-03	9.28E-04	2.05E-03	1.34E-03	1.37E-03	2.85E-04	1.82E-04	5.05E-08	6.83E-04	3.54E-04
9	D48	60	Single Unit Short Haul Truck	13	0.00E+00	3.95E-06	1.97E-07	2.51E+00	3.24E-06	4.84E-03	4.21E-06	1.88E-03	3.19E-04	5.77E-05	4.77E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	D48	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.05E-04	1.84E-07	8.13E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.32E-07	1.77E-10	1.57E-05	1.52E-05
9	D48	60	Combination Short Haul Truck	16	0.00E+00	9.24E-06	6.45E-07	6.02E+00	3.27E-08	8.06E-03	6.84E-06	1.00E-02	8.59E-04	1.70E-04	5.88E-04	1.92E-04	1.92E-04	9.07E-04	2.01E-05	0.00E+00	3.95E-04	1.89E-03
9	D48	60	Combination Long Haul Truck	14	0.00E+00	8.27E-06	5.41E-07	5.64E+00	3.75E-08	8.70E-03	6.40E-06	9.94E-03	8.62E-04	1.47E-04	6.04E-04	1.65E-04	1.67E-04	8.59E-04	1.88E-05	0.00E+00	4.37E-04	1.88E-03
9	D49	60	Passenger Car	572	0.00E+00	8.46E-06	9.15E-07	2.84E+01	5.89E-05	2.11E-01	1.87E-05	1.17E-03	5.80E-03	8.91E-04	1.83E-03	1.18E-03	1.21E-03	1.19E-04	1.44E-04	3.95E-08	6.19E-04	1.83E-04
9	D49	60	Passenger Truck	957	0.00E+00	1.87E-05	1.97E-06	6.49E+01	1.17E-04	3.75E-01	3.86E-05	3.80E-03	1.06E-02	1.65E-03	3.64E-03	2.38E-03	2.44E-03	5.08E-04	3.24E-04	8.99E-08	1.22E-03	6.30E-04
9	D49	60	Single Unit Short Haul Truck	85	0.00E+00	2.51E-05	1.25E-06	1.59E+01	2.06E-05	3.08E-02	2.68E-05	1.20E-02	2.03E-03	3.67E-04	3.03E-03	7.51E-04	7.62E-04	1.60E-03	6.44E-05	2.65E-08	2.28E-03	2.24E-03
9	D49	60	Single Unit Long Haul Truck	4	0.00E+00	1.10E-06	5.44E-08	6.81E-01	8.96E-07	1.31E-03	1.17E-06	5.17E-04	9.11E-05	1.63E-05	1.34E-04	3.27E-05	3.32E-05	6.80E-05	2.75E-06	1.13E-09	1.00E-04	9.69E-05
9	D49	60	Combination Short Haul Truck	56	0.00E+00	3.30E-05	2.30E-06	2.15E+01	1.17E-07	2.88E-02	2.44E-05	3.58E-02	3.06E-03	6.06E-04	2.10E-03	6.84E-04	6.84E-04	3.23E-03	7.17E-05	0.00E+00	1.41E-03	6.75E-03
9	D49	60	Combination Long Haul Truck	51	0.00E+00	2.95E-05	1.93E-06	2.01E+01	1.34E-07	3.10E-02	2.28E-05	3.54E-02	3.08E-03	5.23E-04	2.15E-03	5.87E-04	5.94E-04	3.06E-03	6.72E-05	0.00E+00	1.56E-03	6.69E-03
9	D50	60	Passenger Car	646	0.00E+00	9.57E-06	1.03E-06	3.21E+01	6.66E-05	2.39E-01	2.12E-05	1.32E-03	6.55E-03	1.01E-03	2.06E-03	1.33E-03	1.37E-03	1.35E-04	1.62E-04	4.47E-08	7.00E-04	2.06E-04
9	D50	60	Passenger Truck	1082	0.00E+00	2.11E-05	2.23E-06	7.33E+01	1.32E-04	4.24E-01	4.36E-05	4.30E-03	1.20E-02	1.87E-03	4.12E-03	2.69E-03	2.76E-03	5.74E-04	3.67E-04	1.02E-07	1.37E-03	7.12E-04
9	D50	60	Single Unit Short Haul Truck	109	0.00E+00	3.21E-05	1.60E-06	2.04E+01	2.64E-05	3.94E-02	3.43E-05	1.53E-02	2.60E-03	4.70E-04	3.88E-03	9.61E-04	9.77E-04	2.04E-03	8.25E-05	3.40E-08	2.92E-03	2.87E-03
9	D50	60	Single Unit Long Haul Truck	5	0.00E+00	1.40E-06	6.97E-08	8.72E-01	1.15E-06	1.67E-03	1.50E-06	6.62E-04	1.17E-04	2.09E-05	1.71E-04	4.19E-05	4.25E-05	8.71E-05	3.52E-06	1.44E-09	1.28E-04	1.24E-04
9	D50	60	Combination Short Haul Truck	64	0.00E+00	3.76E-05	2.62E-06	2.45E+01	1.33E-07	3.28E-02	2.78E-05	4.08E-02	3.49E-03	6.91E-04	2.39E-03	7.80E-04	7.80E-04	3.69E-03	8.17E-05	0.00E+00	1.61E-03	7.69E-03
9	D50	60	Combination Long Haul Truck	58	0.00E+00	3.36E-05	2.20E-06	2.30E+01	1.52E-07	3.54E-02	2.60E-05	4.04E-02	3.51E-03	5.96E-04	2.46E-03	6.69E-04	6.77E-04	3.49E-03	7.66E-05	0.00E+00	1.78E-03	7.63E-03
9	D51	60	Passenger Car	264	0.00E+00	3.90E-06	4.22E-07	1.31E+01	2.72E-05	9.74E-02	8.64E-06	5.37E-04	2.67E-03	4.11E-04	8.42E-04	5.44E-04	5.59E-04	5.51E-05	6.63E-05	1.82E-08	2.86E-04	8.42E-05
9	D51	60	Passenger Truck	441	0.00E+00	8.61E-06	9.09E-07	2.99E+01	5.38E-05	1.73E-01	1.78E-05	1.75E-03	4.90E-03	7.61E-04	1.68E-03	1.10E-03	1.13E-03	2.34E-04	1.50E-04	4.14E-08	5.60E-04	2.91E-04
9	D51	60	Single Unit Short Haul Truck	41	0.00E+00	1.21E-05	6.05E-07	7.70E+00	9.96E-06	1.49E-02	1.29E-05	5.78E-03	9.79E-04	1.77E-04	1.46E-03	3.63E-04	3.68E-04	7.71E-04	3.11E-05	1.28E-08	1.10E-03	1.08E-03
9	D51	60	Single Unit Long Haul Truck	2	0.00E+00	5.30E-07	2.63E-08	3.29E-01	4.33E-07	6.31E-04	5.65E-07	2.50E-04	4.40E-05	7.87E-06	6.46E-05	1.58E-05	1.60E-05	3.28E-05	1.33E-06	5.45E-10	4.83E-05	4.68E-05
9	D51	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.60E-07	8.02E+00	4.36E-08	1.08E-02	9.12E-06	1.34E-02	1.14E-03	2.27E-04	7.85E-04	2.56E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.52E-03
9	D51	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.21E-07	7.53E+00	5.00E-08	1.16E-02	8.53E-06	1.32E-02	1.15E-03	1.96E-04	8.06E-04	2.19E-04	2.22E-04	1.14E-03	2.51E-05	0.00E+00	5.83E-04	2.50E-03
9	D52	60	Passenger Car	252	0.00E+00	3.73E-06	4.03E-07	1.25E+01	2.60E-05	9.31E-02	8.26E-06	5.14E-04	2.55E-03	3.93E-04	8.05E-04	5.20E-04	5.34E-04	5.26E-05	6.33E-05	1.74E-08	2.73E-04	8.05E-05
9	D52	60	Passenger Truck	422	0.00E+00	8.23E-06	8.69E-07	2.86E+01	5.15E-05	1.65E-01	1.70E-05	1.68E-03	4.69E-03	7.28E-04	1.61E-03	1.05E-03	1.08E-03	2.24E-04	1.43E-04	3.96E-08	5.36E-04	2.78E-04
9	D52	60	Single Unit Short Haul Truck	22	0.00E+00	6.49E-06	3.24E-07	4.12E+00	5.33E-06	7.95E-03	6.91E-06	3.09E-03	5.24E-04	9.48E-05	7.83E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.85E-09	5.89E-04	5.79E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	2.83E-07	1.41E-08	1.76E-01	2.32E-07	3.37E-04	3.02E-07	1.34E-04	2.35E-05	4.21E-06	3.45E-05	8.45E-06	8.58E-06	1.76E-05	7.10E-07	2.91E-10	2.59E-05	2.50E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	4.93E-06	3.44E-07	3.21E+00	1.74E-08	4.30E-03	3.65E-06	5.35E-03	4.58E-04	9.07E-05	3.14E-04	1.02E-04	1.02E-04	4.84E-04	1.07E-05	0.00E+00	2.11E-04	1.01E-03
9	D52	60	Combination Long Haul Truck	8	0.00E+00	4.41E-06	2.88E-07	3.01E+00	2.00E-08	4.64E-03	3.41E-06	5.30E-03	4.60E-04	7.82E-05	3.22E-04	8.78E-05	8.88E-05	4.58E-04	1.00E-05	0.00E+00	2.33E-04	1.00E-03
9	D53	60	Passenger Car	304	0.00E+00	4.50E-06	4.86E-07	1.51E+01	3.13E-05	1.12E-01	9.96E-06	6.20E-04	3.08E-03	4.74E-04	9.71E-04	6.27E-04	6.44E-04	6.35E-05	7.64E-05	2.10E-08	3.29E-04	9.71E-05
9	D53	60	Passenger Truck	509	0.00E+00	9.93E-06	1.05E-06	3.45E+01	6.21E-05	1.99E-01	2.05E-05	2.02E-03	5.66E-03	8.78E-04	1.94E-03	1.27E-03	1.30E-03	2.70E-04	1.73E-04	4.78E-08	6.46E-04	3.35E-04
9	D53	60	Single Unit Short Haul Truck	42	0.00E+00	1.24E-05	6.19E-07	7.88E+00	1.02E-05	1.52E-02	1.32E-05	5.91E-03	1.00E-03	1.81E-04	1.50E-03	3.71E-04	3.77E-04	7.89E-04	3.18E-05	1.31E-08	1.13E-03	1.11E-03
9	D53	60	Single Unit Long Haul Truck	2	0.00E+00	5.42E-07	2.69E-08	3.37E-01	4.43E-07	6.45E-04	5.78E-07	2.56E-04	4.50E-05	8.05E-06	6.61E-05	1.62E-05	1.64E-05	3.36E-05	1.36E-06	5.58E-10	4.95E-05	4.79E-05
9	D53	60	Combination Short Haul Truck	23	0.00E+00	1.36E-05	9.46E-07	8.82E+00	4.79E-08	1.18E-02	1.00E-05	1.47E-02	1.26E-03	2.49E-04	8.63E-04	2.81E-04	2.81E-04	1.33E-03	2.95E-05	0.00E+00	5.80E-04	2.77E-03
9	D53	60	Combination Long Haul Truck	21	0.00E+00

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D57	80	Combination Short Haul Truck	60	0.00E+00	2.64E-05	1.89E-06	2.19E+01	8.34E-08	2.34E-02	1.94E-05	2.72E-02	1.60E-03	3.94E-04	1.57E-03	5.58E-04	5.55E-04	3.29E-03	7.32E-05	0.00E+00	1.02E-03	5.13E-03
11	D57	80	Combination Long Haul Truck	55	0.00E+00	2.36E-05	1.58E-06	2.03E+01	9.64E-08	2.42E-02	1.80E-05	2.64E-02	1.57E-03	3.15E-04	1.63E-03	4.80E-04	4.83E-04	3.09E-03	6.76E-05	0.00E+00	1.14E-03	4.97E-03
11	D58	80	Passenger Car	387	0.00E+00	4.64E-06	5.03E-07	1.78E+01	3.24E-05	1.19E-01	1.03E-05	7.95E-04	2.13E-03	3.70E-04	1.01E-03	6.48E-04	6.65E-04	6.06E-05	9.08E-05	2.55E-08	3.41E-04	1.25E-04
11	D58	80	Passenger Truck	648	0.00E+00	9.99E-06	1.06E-06	4.12E+01	6.39E-05	2.20E-01	2.09E-05	2.36E-03	3.82E-03	6.77E-04	2.00E-03	1.30E-03	1.33E-03	2.92E-04	2.09E-04	5.67E-08	6.70E-04	3.85E-04
11	D58	80	Single Unit Short Haul Truck	77	0.00E+00	1.44E-05	7.13E-07	1.41E+01	1.16E-05	2.83E-02	1.53E-05	7.36E-03	9.02E-04	2.04E-04	1.75E-03	4.26E-04	4.32E-04	1.41E-03	5.68E-05	2.26E-08	1.32E-03	1.38E-03
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	6.24E-07	3.08E-08	5.96E-01	4.94E-07	1.17E-03	6.65E-07	3.15E-04	4.12E-05	9.00E-06	7.62E-05	1.83E-05	1.86E-05	5.95E-05	2.40E-06	9.39E-10	5.76E-05	5.89E-05
11	D58	80	Combination Short Haul Truck	45	0.00E+00	1.97E-05	1.41E-06	1.64E+01	6.24E-08	1.75E-02	1.45E-05	2.04E-02	1.20E-03	2.95E-04	1.18E-03	4.17E-04	4.15E-04	2.46E-03	5.47E-05	0.00E+00	7.63E-04	3.84E-03
11	D58	80	Combination Long Haul Truck	41	0.00E+00	1.77E-05	1.18E-06	1.52E+01	7.21E-08	1.81E-02	1.34E-05	1.97E-02	1.17E-03	2.36E-04	1.22E-03	3.59E-04	3.61E-04	2.31E-03	5.06E-05	0.00E+00	8.55E-04	3.71E-03
11	D59	80	Passenger Car	513	0.00E+00	6.16E-06	6.67E-07	2.37E+01	4.29E-05	1.58E-01	1.37E-05	1.06E-03	2.82E-03	4.91E-04	1.33E-03	8.60E-04	8.83E-04	8.04E-05	1.20E-04	3.38E-08	4.52E-04	1.65E-04
11	D59	80	Passenger Truck	860	0.00E+00	1.33E-05	1.40E-06	5.47E+01	8.48E-05	2.91E-01	2.77E-05	3.13E-03	5.06E-03	8.98E-04	2.65E-03	1.72E-03	1.77E-03	3.87E-04	2.77E-04	7.52E-08	8.88E-04	5.11E-04
11	D59	80	Single Unit Short Haul Truck	111	0.00E+00	2.08E-05	1.03E-06	2.04E+01	1.68E-05	4.10E-02	2.22E-05	1.07E-02	1.31E-03	2.96E-04	2.53E-03	6.17E-04	6.26E-04	2.05E-03	8.24E-05	3.27E-08	1.91E-03	2.00E-03
11	D59	80	Single Unit Long Haul Truck	5	0.00E+00	9.05E-07	4.46E-08	8.64E-01	7.16E-07	1.70E-03	9.64E-07	4.57E-04	5.98E-05	1.31E-05	1.11E-04	2.65E-05	2.69E-05	8.63E-05	3.48E-06	1.36E-09	8.36E-05	8.55E-05
11	D59	80	Combination Short Haul Truck	60	0.00E+00	2.64E-05	1.89E-06	2.19E+01	8.34E-08	2.34E-02	1.94E-05	2.72E-02	1.60E-03	3.94E-04	1.57E-03	5.58E-04	5.55E-04	3.29E-03	7.32E-05	0.00E+00	1.02E-03	5.13E-03
11	D59	80	Combination Long Haul Truck	55	0.00E+00	2.36E-05	1.58E-06	2.03E+01	9.64E-08	2.42E-02	1.80E-05	2.64E-02	1.57E-03	3.15E-04	1.63E-03	4.80E-04	4.83E-04	3.09E-03	6.76E-05	0.00E+00	1.14E-03	4.97E-03
11	D60	80	Passenger Car	387	0.00E+00	4.64E-06	5.03E-07	1.78E+01	3.24E-05	1.19E-01	1.03E-05	7.95E-04	2.13E-03	3.70E-04	1.01E-03	6.48E-04	6.65E-04	6.06E-05	9.08E-05	2.55E-08	3.41E-04	1.25E-04
11	D60	80	Passenger Truck	648	0.00E+00	9.99E-06	1.06E-06	4.12E+01	6.39E-05	2.20E-01	2.09E-05	2.36E-03	3.82E-03	6.77E-04	2.00E-03	1.30E-03	1.33E-03	2.92E-04	2.09E-04	5.67E-08	6.70E-04	3.85E-04
11	D60	80	Single Unit Short Haul Truck	77	0.00E+00	1.44E-05	7.13E-07	1.41E+01	1.16E-05	2.83E-02	1.53E-05	7.36E-03	9.02E-04	2.04E-04	1.75E-03	4.26E-04	4.32E-04	1.41E-03	5.68E-05	2.26E-08	1.32E-03	1.38E-03
11	D60	80	Single Unit Long Haul Truck	3	0.00E+00	6.24E-07	3.08E-08	5.96E-01	4.94E-07	1.17E-03	6.65E-07	3.15E-04	4.12E-05	9.00E-06	7.62E-05	1.83E-05	1.86E-05	5.95E-05	2.40E-06	9.39E-10	5.76E-05	5.89E-05
11	D60	80	Combination Short Haul Truck	45	0.00E+00	1.97E-05	1.41E-06	1.64E+01	6.24E-08	1.75E-02	1.45E-05	2.04E-02	1.20E-03	2.95E-04	1.18E-03	4.17E-04	4.15E-04	2.46E-03	5.47E-05	0.00E+00	7.63E-04	3.84E-03
11	D60	80	Combination Long Haul Truck	41	0.00E+00	1.77E-05	1.18E-06	1.52E+01	7.21E-08	1.81E-02	1.34E-05	1.97E-02	1.17E-03	2.36E-04	1.22E-03	3.59E-04	3.61E-04	2.31E-03	5.06E-05	0.00E+00	8.55E-04	3.71E-03
11	D61	80	Passenger Car	60	0.00E+00	7.18E-07	7.78E-08	2.76E+00	5.00E-06	1.84E-02	1.60E-06	1.23E-04	3.29E-04	5.72E-05	1.56E-04	1.00E-04	1.03E-04	9.37E-06	1.40E-05	3.94E-09	5.27E-05	1.93E-05
11	D61	80	Passenger Truck	100	0.00E+00	1.54E-06	1.64E-07	6.37E+00	9.88E-06	3.39E-02	3.23E-06	3.65E-04	5.90E-04	1.05E-04	3.09E-04	2.01E-04	2.06E-04	4.51E-05	3.23E-05	8.77E-09	1.04E-04	5.96E-05
11	D61	80	Single Unit Short Haul Truck	10	0.00E+00	1.80E-06	8.91E-08	1.76E+00	1.44E-06	3.54E-03	1.91E-06	9.21E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	D61	80	Combination Short Haul Truck	5	0.00E+00	2.07E-06	1.48E-07	1.71E+00	6.53E-09	1.83E-03	1.52E-06	2.13E-03	1.25E-04	3.09E-05	1.23E-04	4.37E-05	4.34E-05	2.58E-04	5.73E-06	0.00E+00	7.99E-05	4.01E-04
11	D61	80	Combination Long Haul Truck	4	0.00E+00	1.85E-06	1.24E-07	1.59E+00	7.55E-09	1.90E-03	1.41E-06	2.06E-03	1.23E-04	2.47E-05	1.28E-04	3.76E-05	3.78E-05	2.42E-04	5.29E-06	0.00E+00	8.94E-05	3.89E-04
11	D62	80	Passenger Car	154	0.00E+00	1.85E-06	2.00E-07	7.10E+00	1.29E-05	4.75E-02	4.11E-06	3.17E-04	8.47E-04	1.47E-04	4.01E-04	2.58E-04	2.65E-04	2.41E-05	3.62E-05	1.01E-08	1.36E-04	4.96E-05
11	D62	80	Passenger Truck	258	0.00E+00	3.98E-06	4.21E-07	1.64E+01	2.54E-05	8.74E-02	8.31E-06	9.39E-04	1.52E-03	2.69E-04	7.95E-04	5.17E-04	5.30E-04	1.16E-04	8.31E-05	2.26E-08	2.67E-04	1.53E-04
11	D62	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.02E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.05E-05	9.18E-05	3.00E-04	1.21E-05	4.79E-09	2.80E-04	2.93E-04
11	D62	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.49E-04	1.41E-07	6.70E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.95E-06	1.26E-05	5.11E-07	1.99E-10	1.22E-05	1.25E-05
11	D62	80	Combination Short Haul Truck	7	0.00E+00	3.21E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.36E-06	3.32E-03	1.95E-04	4.80E-05	1.92E-04	6.79E-05	6.75E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.24E-04
11	D62	80	Combination Long Haul Truck	7	0.00E+00	2.87E-06	1.93E-07	2.47E+00	1.17E-08	2.95E-03	2.19E-06	3.21E-03	1.91E-04	3.84E-05	1.98E-04	5.84E-05	5.88E-05	3.77E-04	8.24E-06	0.00E+00	1.39E-04	6.05E-04
10	D63	70	Passenger Car	70	0.00E+00	8.96E-07	9.70E-08	3.30E+00	6.24E-06	2.24E-02	1.99E-06	1.39E-04	5.39E-04	8.65E-05	1.93E-04	1.25E-04	1.28E-04	1.25E-05	1.68E-05	4.58E-09	6.57E-05	2.18E-05
10	D63	70	Passenger Truck	116	0.00E+00	1.97E-06	2.08E-07	7.60E+00	1.24E-05	4.14E-02	4.08E-06	4.37E-04	9.80E-04	1.59E-04	3.88E-04	2.54E-04	2.60E-04	5.66E-05	3.82E-05	1.03E-08	1.30E-04	7.18E-05
10	D63	70	Single Unit Short Haul Truck	28	0.00E+00	6.53E-06	3.27E-07	5.12E+00	5.34E-06	1.03E-02	6.95E-06	3.22E-03	4.59E-04	9.18E-05	7.95E-04	1.95E-04	1.98E-04	5.12E-04	2.06E-05	8.33E-09	5.93E-04	6.03E-04
10	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.84E-07	1.42E-08	2.17E-01	2.30E-07	4.29E-04	3.03E-07	1.38E-04	2.10E-05	4.08E-06	3.47E-05	8.44E-06	8.57E-06	2.17E-05	8.75E-07	3.50E-10	2.60E-05	2.60E-05
10	D63	70	Combination Short Haul Truck	15	0.00E+00	7.61E-06	5.41E-07	5.53E+00	2.47E-08	6.55E-03	5.57E-06	8.01E-03	5.78E-04	1.27E-04	4.64E-04	1.60E-04	1.60E-04	8.34E-04	1.85E-05	0.00E+00	3.04E-04	1.51E-03
10	D63	70	Combination Long Haul Truck	13	0.00E+00	6.90E-06	4.60E-07	5.16E+00	2.85E-08	6.94E-03	5.23E-06	7.90E-03	5.75E-04	1.05E-04	4.79E-04	1.39E-04	1.41E-04	7.86E-04	1.72E-05	0.00E+00	3.39E-04	1.49E-03
10	D64	70	Passenger Car	72	0.00E+00	9.25E-07	1.00E-07	3.41E+00	6.44E-06	2.31E-02	2.05E-06	1.44E-04	5.56E-04	8.93E-05	1.99E-04	1.29E-04	1.33E-04	1.29E-05	1.73E-05	4.73E-09	6.78E-05	2.25E-05
10	D64	70	Passenger Truck	120	0.00E+00	2.03E-06	2.15E-07	7.85E+00	1.28E-05	4.27E-02	4.21E-06	4.51E-04	1.01E-03	1.65E-04	4.01E-04	2.62E-04	2.68E-04	5.84E-05	3.94E-05	1.06E-08	1.34E-04	7.41E-05
10	D64	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.83E-03	1.92E-06	8.90E-04	1.27E-04	2.53E-05	2.19E-04	5.38E-05	5.47E-05	1.41E-04	5.68E-06	2.30E-09	1.64E-04	1.66E-04
10	D64	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	D64	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.20E-04
11	D65	80	Passenger Car	169	0.00E+00	2.03E-06	2.20E-07	7.79E+00	1.41E-05	5.21E-02	4.51E-06	3.47E-04	9.29E-04	1.61E-04	4.39E-04	2.83E-04	2.91E-04	2.65E-05	3.97E-05	1.11E-08	1.49E-04	5.45E-05
11	D65	80	Passenger Truck	283	0.00E+00	4.36E-06	4.62E-07	1.80E+01	2.79E-05	9.59E-02	9.12E-06	1.03E-03	1.67E-03	2.96E-04	8.73E-04	5.68E-04	5.82E-04	1.27E-04	9.12E-05	2.48E-08	2.92E-04	1.68E-04
11	D65	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.61E-07	1.11E+01	9.10E-06	2.23E-02	1.20E-05	5.80E-03	7.11E-04	1.61E-04	1.38E-03	3.35E-04	3.40E-04	1.11E-03	4.48E-05	1.78E-08	1.04E-03	1.09E-03
11	D65	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.24E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.46E-05	4.69E-05	1.89E-06	7.39E-10	4.54E-05	4.64E-05
11	D65	80	Combination Short Haul Truck	29	0.00E+00	1.29E-05	9.19E-07	1.07E+01	4.06E-08	1.14E-02	9.44E-06	1.33E-02	7.79E-04	1.92E-04	7.66E-04	2.72E-04	2.70E-04	1.60E-03	3.56E-05	0.00E+00	4.97E-04	2.50E-03
11	D65	80	Combination Long Haul Truck	27	0.00E+00	1.15E-05	7.72E-07	9.87E+00	4.70E-08	1.18E-02	8.75E-06	1.28E-02	7.64E-04	1.54E-04	7.94E-04	2.34E-04	2.35E-04	1.51E-03	3.29E-05	0.00E+00	5.56E-04	2.42E-03
11	D66	80	Passenger Car	214	0.00E+00	2.57E-06	2.79E-07	9.88E+00	1.79E-05	6.61E-02	5.72E-06	4.40E-04	1.18E-03	2.05E-04	5.57E-04	3.59E-04	3.68E-04	3.36E-05	5.03E-05	1.41E-08	1.89E-04	6.90E-05
11	D66	80	Passenger Truck	359	0.00E+00	5.53E-06	5.86E-07	2.28E+01	3.54E-05	1.22E-01	1.16E-05	1.31E-03	2.11E-03	3.75E-04	1.11E-03	7.20E-04	7.37E-04	1.61E-04	1.16E-04	3.14E-08	3.71E-04	2.13E-04
11	D66	80	Single Unit Short Haul Truck	49	0.00E+00	9.16E-06	4.55E-07	8.98E+00	7.37E-06	1.80E-02	9.74E-06	4.69E-03	5.75E-04	1.30E-04	1.11E-03	2.71E-04	2.75E-04	9.01E-04	3.62E-05	1.44E-08	8.39E-04	8.79E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	3.98E-07	1.96E-08	3.80E-01	3.15E-07	7.48E-04	4.24E-07	2.01E-04	2.63E-05	5.74E-06	4.86E-05	1.17E-05	1.18E-05	3.79E-05	1.53E-06	5.98E-10	3.67E-05	3.76E-05
11	D66	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.70E-07	1.01E+01	3.84E-08	1.08E-02	8.93E-06	1.26E-02	7.38E-04	1.82E-04	7.25E-04	2.57E-04	2.56E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.36E-03
11	D66	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.30E-07	9.34E+00	4.44E-08	1.12E-02	8.29E-06	1.21E-02	7.23E-04	1.45E-04	7.51E-04	2.21E-04	2.23E-04	1.43E-03	3.12E-05	0.00E+00	5.27E-04	2.29E-03
11	D67	80	Passenger Car	169	0.00E+00	2.03E-06	2.20E-07	7.79E+00	1.41E-05	5.21E-02	4.51E-06	3.47E-04	9.29E-04	1.61E-04	4.39E-04	2.83E-04	2.91E-04	2.65E-05	3.97E-05	1.11E-08	1.49E-04	5.45E-05
11	D67	80	Passenger Truck	283	0.00E+00	4.36E-06	4.62E-07	1.80E+01	2.79E-05	9.59E-02	9.12E-06	1.03E-03	1.67E-03	2.96E-04	8.73E-04	5.68E-04	5.82E-04	1.27E-04	9.12E-05	2.48E-08	2.92E-04	1.68E-04
11	D67	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.61E-07	1.11E+01	9.10E-06	2.23E-02	1.20E-05	5.80E-03	7.11E-04	1.61E-04	1.38E-03	3.35E-04	3.40E-04	1.11E-03	4.48E-05	1.78E-08	1.04E-03	1.09E-03
11	D67	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.24E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.46E-05	4.69E-05	1.89E-06	7.39E-10	4.54E-05	4.64E-05
11	D67	80	Combination Short Haul Truck	29	0.00E+00	1.29E-05	9.19E-07	1.07E+01	4.06E-08	1.14E-02	9.44E-06	1.33E-02	7.79E-04	1.92E-04	7.66E-04	2.72E-04	2.70E-04	1.60E-03	3.56E-05	0.00E+00	4.97E-04	2.50E-03
11	D67	80	Combination Long Haul Truck	27	0.00E+00	1.15E-05	7.72E-07	9.87E+00	4.70E-08	1.18E-02	8.75E-06	1.28E-02	7.64E-04	1.54E-04	7.94E-04	2.34E-04	2.35E-04	1.51E-03	3.29E-05	0.00E+00	5.56E-04	2.42E-03
11	D68	80	Passenger Car	214	0.00E+00	2.57E-06	2.79E-07	9.88E+00	1.79E-05	6.61E-02	5.72E-06	4.40E-04	1.18E-03	2.05E-04	5.57E-04	3.59E-04	3.68E-04	3.36E-05	5.03E-05	1.41E-08	1.89E-04	6.90E-05
11	D68	80	Passenger Truck	359	0.00E+00	5.53E-06	5.86E-07	2.28E+01	3.54E-05	1.22E-01	1.16E-05	1.31E-03	2.11E-03	3.75E-04	1.11E-03	7.20E-04	7.37E-04	1.61E-04	1.16E-04	3.14E-08	3.71E-04	2.13E-04
11	D68	80	Single Unit Short Haul Truck	49	0.00E+00	9.16E-06	4.55E-07	8.98E+00	7.37E-06	1.80E-02	9.74E-06	4.69E-03	5.75E-04	1.30E-04	1.11E-03	2.71E-04	2.75E-04	9.01E-04	3.62E-05	1.44E-08	8.39E-04	8.79E-04
11	D68	80	Single Unit Long Haul Truck	2	0.00E+00	3.98E-07	1.96E-08	3.80E-01	3.15E-07	7.48E-04	4.24E-07	2.01E-04	2.63E-05	5.74E-06	4.86E-05	1.17E-05	1.18E-05	3.79E-05	1.53E-06	5.98E-10	3.67E-05	3.76E-05
11	D68	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.70E-07	1.01E+01	3.84E-08	1.08E-02	8.93E-06	1.26E-02	7.38E-04	1.82E-04	7.25E-04	2.57E-04	2.56E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.36E-03
11	D68	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.30E-07	9.34E+00	4.44E-08	1.12E-02	8.29E-06	1.21E-02	7.23E-04	1.45E-04	7.51E-04	2.21E-04	2.23E-04	1.43E-03	3.12E-05	0.00E+00	5.27E-04	2.29E-03
11	D69	80	Passenger Car	85	0.00E+00	1.02E-06	1.10E-07	3.91E+00	7.10E-06	2.62E-02	2.27E-06	1.74E-04	4.67E-04	8.11E-05	2.21E-04	1.42E-04	1.46E-04	1.33E-05	1.99E-05	5.59E-09	7.47E-05	2.73E-05
11	D69	80	Passenger Truck	142	0.00E+00	2.19E-06	2.32E-07	9.04E+00	1.40E-05	4.82E-02	4.58E-06	5.17E-04	8.37E-04	1.48E-04	4.38E-04	2.85E-04	2.92E-04	6.40E-05	4.58E-05	1.24E-08	1.47E-04	8.45E-05
11	D69	80	Single Unit Short Haul Truck	40	0.00E+00	7.54E-06	3.74E-07	7.40E+00	6.07E-06	1.49E-02	8.02E-06	3.87E-03	4.74E-04	1.07E-04	9.17E-04	2.23E-04	2.27E-04	7.42E-04	2.98E-05	1.18E-08	6.91E-04	7.24E-04
11	D69	80	Single Unit Long Haul Truck	2	0.00E+00	3.28E-07	1.62E-08	3.13E-01	2.59E-07	6.16E-04	3.49E-07	1.66E-04	2.16E-05	4.73E-06	4.00E-05	9.61E-06	9.76E-06	3.12E-05	1.26E-06	4.93E-10	3.03E-05	3.09E-05
11	D69	80	Combination Short Haul Truck	19	0.00E+00	8.26E-06	5.91E-07	6.85E+00	2.61E-08	7.32E-03	6.07E-06	8.53E-03	5.01E-04	1.23E-04	4.93E-04	1.75E-04	1.74E-04	1.03E-03	2.29E-05	0.00E+00	3.20E-04	1.61E-03
11	D69	80	Combination Long Haul Truck	17	0.00E+00	7.39E-06	4.96E-07	6.34E+00	3.02E-08	7.58E-03	5.63E-06	8.25E-03	4.91E-04	9.87E-05	5.10E-04	1.50E-04	1.51E-04	9.68E-04	2.12E-05	0.00E+00	3.58E-04	1.55E-03
11	D70	80	Passenger Car	113	0.00E+00	1.35E-06	1.47E-07	5.21E+00	9.44E-06	3.48E-02	3.01E-06	2.32E-04	6.21E-04	1.08E-04	2.94E-04	1.89E-04	1.94E-04	1.77E-05	2.65E-05	7.43E-09	9.94E-05	3.64E-05
11	D70	80	Passenger Truck	189	0.00E+00	2.92E-06	3.09E-07	1.20E+01	1.86E-05	6.41E-02	6.09E-06	6.88E-04	1.11E-03	1.97E-04	5.83E-04	3.79E-04	3.89E-04	8.51E-05	6.09E-05	1.65E-08	1.95E-04	1.12E-04
11	D70	80	Single Unit Short Haul Truck	31	0.00E+00	5.75E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.95E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.02E-09	5.26E-04	5.52E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.98E-07	4.69E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.43E-06	2.38E-05	9.61E-07	3.75E-10	2.31E-05	2.36E-05
11	D70	80	Combination Short Haul Truck	18	0.00E+00	8.03E-06	5.75E-07	6.66E+00	2.54E-08	7.12E-03	5.90E-06	8.29E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.56E-03
11	D70	80	Combination Long Haul Truck	17	0.00E+00	7.19E-06	4.82E-07	6.17E+00	2.94E-08	7.37E-03	5.47E-06	8.02E-03	4.78E-04	9.60E-05	4.96E-04	1.46E-04	1.47E-04	9.41E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	D71	70	Passenger Car	238	0.00E+00	3.06E-06	3.32E-07	1.13E+01	2.13E-05	7.66E-02	6.80E-06	4.76E-04	1.84E-03	2.96E-04	6.61E-04	4.28E-04	4.39E-04	4.26E-05	5.73E-05	1.57E-08	2.25E-04	7.46E-05
11	D71	70	Passenger Truck	398	0.00E+00	6.73E-06	7.11E-07	2.60E+01	4.25E-05	1.42E-01	1.39E-05	1.49E-03	3.35E-03	5.45E-04	1.33E-03	8.67E-04	8.88E-04	1.94E-04	1.31E-04	3.51E-08	4.45E-04	2.46E-04
11	D71	70	Single Unit Short Haul Truck	21	0.00E+00	4.95E-06	2.48E-07	3.88E+00	4.05E-06	7.78E-03	5.27E-06	2.45E-03	3.48E-04	6.97E-05	6.03E-04	1.48E-04	1.50E-04	3.89E-04	1.56E-05	6.32E-09	4.50E-04	4.58E-04
11	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.16E-07	1.07E-08	1.65E-01	1.75E-07	3.25E-04	2.30E-07	1.05E-04	1.59E-05	3.10E-06	2.63E-05	6.40E-06	6.51E-06	1.64E-05	6.63E-07	2.66E-10	1.97E-05	1.97E-05
11	D71	70	Combination Short Haul

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D75	80	Combination Short Haul Truck	9	0.00E+00	4.13E-06	2.96E-07	3.43E+00	1.31E-08	3.66E-03	3.03E-06	4.26E-03	2.51E-04	6.17E-05	2.46E-04	8.73E-05	8.68E-05	5.15E-04	1.15E-05	0.00E+00	1.60E-04	8.03E-04
11	D75	80	Combination Long Haul Truck	9	0.00E+00	3.70E-06	2.48E-07	3.17E+00	1.51E-08	3.79E-03	2.81E-06	4.13E-03	2.46E-04	4.94E-05	2.55E-04	7.51E-05	7.56E-05	4.84E-04	1.06E-05	0.00E+00	1.79E-04	7.77E-04
11	D76	80	Passenger Car	199	0.00E+00	2.39E-06	2.59E-07	9.19E+00	1.67E-05	6.14E-02	5.32E-06	4.10E-04	1.10E-03	1.90E-04	5.18E-04	3.34E-04	3.43E-04	3.12E-05	4.68E-05	1.31E-08	1.75E-04	6.42E-05
11	D76	80	Passenger Truck	334	0.00E+00	5.14E-06	5.45E-07	2.12E+01	3.29E-05	1.13E-01	1.08E-05	1.21E-03	1.97E-03	3.49E-04	1.03E-03	6.69E-04	6.86E-04	1.50E-04	1.08E-04	2.92E-08	3.45E-04	1.98E-04
11	D76	80	Single Unit Short Haul Truck	34	0.00E+00	6.29E-06	3.12E-07	6.16E+00	5.06E-06	1.24E-02	6.69E-06	3.22E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.49E-05	9.87E-09	5.75E-04	6.03E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.13E-04	2.91E-07	1.38E-04	1.80E-05	3.94E-06	3.33E-05	8.01E-06	8.13E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.58E-05
11	D76	80	Combination Short Haul Truck	18	0.00E+00	8.03E-06	5.75E-07	6.66E+00	2.54E-08	7.12E-03	5.90E-06	8.29E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.56E-03
11	D76	80	Combination Long Haul Truck	17	0.00E+00	7.19E-06	4.82E-07	6.17E+00	2.94E-08	7.37E-03	5.47E-06	8.02E-03	4.78E-04	9.60E-05	4.96E-04	1.46E-04	1.47E-04	9.41E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	D77	80	Passenger Car	71	0.00E+00	8.48E-07	9.19E-08	3.26E+00	5.91E-06	2.18E-02	1.89E-06	1.45E-04	3.89E-04	6.75E-05	1.84E-04	1.18E-04	1.22E-04	1.11E-05	1.66E-05	4.65E-09	6.22E-05	2.28E-05
11	D77	80	Passenger Truck	118	0.00E+00	1.82E-06	1.93E-07	7.53E+00	1.17E-05	4.01E-02	3.81E-06	4.31E-04	6.97E-04	1.24E-04	3.65E-04	2.37E-04	2.43E-04	5.33E-05	3.81E-05	1.04E-08	1.22E-04	7.03E-05
11	D77	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.37E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.58E-05	9.72E-05	3.18E-04	1.28E-05	5.08E-09	2.96E-04	3.10E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	6.93E-09	1.34E-01	1.11E-07	2.64E-04	1.50E-07	7.10E-05	9.27E-06	2.03E-06	1.71E-05	4.12E-06	4.18E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.33E-05
11	D77	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.79E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.14E-04
11	D77	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
11	D78	80	Passenger Car	154	0.00E+00	1.85E-06	2.01E-07	7.12E+00	1.29E-05	4.76E-02	4.12E-06	3.17E-04	8.49E-04	1.48E-04	4.01E-04	2.59E-04	2.66E-04	2.42E-05	3.62E-05	1.02E-08	1.36E-04	4.98E-05
11	D78	80	Passenger Truck	259	0.00E+00	3.99E-06	4.22E-07	1.64E+01	2.55E-05	8.76E-02	8.33E-06	9.41E-04	1.52E-03	2.70E-04	7.97E-04	5.19E-04	5.32E-04	1.16E-04	8.33E-05	2.26E-08	2.67E-04	1.54E-04
11	D78	80	Single Unit Short Haul Truck	34	0.00E+00	6.29E-06	3.12E-07	6.16E+00	5.06E-06	1.24E-02	6.69E-06	3.22E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.49E-05	9.87E-09	5.75E-04	6.03E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.13E-04	2.91E-07	1.38E-04	1.80E-05	3.94E-06	3.33E-05	8.01E-06	8.13E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.58E-05
11	D78	80	Combination Short Haul Truck	18	0.00E+00	8.03E-06	5.75E-07	6.66E+00	2.54E-08	7.12E-03	5.90E-06	8.29E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.56E-03
11	D78	80	Combination Long Haul Truck	17	0.00E+00	7.19E-06	4.82E-07	6.17E+00	2.94E-08	7.37E-03	5.47E-06	8.02E-03	4.78E-04	9.60E-05	4.96E-04	1.46E-04	1.47E-04	9.41E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
10	D79	70	Passenger Car	232	0.00E+00	2.99E-06	3.24E-07	1.10E+01	2.08E-05	7.48E-02	6.64E-06	4.65E-04	1.80E-03	2.89E-04	6.45E-04	4.18E-04	4.29E-04	4.16E-05	5.60E-05	1.53E-08	2.19E-04	7.29E-05
10	D79	70	Passenger Truck	389	0.00E+00	6.57E-06	6.94E-07	2.54E+01	4.15E-05	1.38E-01	1.36E-05	1.46E-03	3.27E-03	5.32E-04	1.30E-03	8.47E-04	8.67E-04	1.89E-04	1.27E-04	3.42E-08	4.34E-04	2.40E-04
10	D79	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.67E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	D79	70	Combination Short Haul Truck	7	0.00E+00	3.80E-06	2.71E-07	2.77E+00	1.24E-08	3.27E-03	2.79E-06	4.01E-03	2.89E-04	6.33E-05	2.32E-04	8.01E-05	7.99E-05	4.17E-04	9.23E-06	0.00E+00	1.52E-04	7.55E-04
10	D79	70	Combination Long Haul Truck	7	0.00E+00	3.45E-06	2.30E-07	2.58E+00	1.42E-08	3.47E-03	2.62E-06	3.95E-03	2.87E-04	5.25E-05	2.39E-04	6.96E-05	7.03E-05	3.93E-04	8.62E-06	0.00E+00	1.70E-04	7.46E-04
10	D80	70	Passenger Car	224	0.00E+00	2.88E-06	3.12E-07	1.06E+01	2.01E-05	7.20E-02	6.40E-06	4.48E-04	1.73E-03	2.78E-04	6.21E-04	4.02E-04	4.13E-04	4.01E-05	5.39E-05	1.47E-08	2.11E-04	7.02E-05
10	D80	70	Passenger Truck	374	0.00E+00	6.32E-06	6.69E-07	2.44E+01	3.99E-05	1.33E-01	1.31E-05	1.40E-03	3.15E-03	5.13E-04	1.25E-03	8.15E-04	8.35E-04	1.82E-04	1.23E-04	3.30E-08	4.18E-04	2.31E-04
10	D80	70	Single Unit Short Haul Truck	29	0.00E+00	6.75E-06	3.38E-07	5.29E+00	5.52E-06	1.06E-02	7.19E-06	3.34E-03	4.75E-04	9.50E-05	8.22E-04	2.02E-04	2.05E-04	5.30E-04	2.13E-05	8.62E-09	6.14E-04	6.24E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	2.94E-07	1.46E-08	2.25E-01	2.38E-07	4.44E-04	3.13E-07	1.43E-04	2.17E-05	4.22E-06	3.59E-05	8.73E-06	8.87E-06	2.24E-05	9.05E-07	3.63E-10	2.69E-05	2.69E-05
10	D80	70	Combination Short Haul Truck	18	0.00E+00	9.24E-06	6.57E-07	6.72E+00	3.00E-08	7.95E-03	6.77E-06	9.73E-03	7.01E-04	1.54E-04	5.63E-04	1.95E-04	1.94E-04	1.01E-03	2.24E-05	0.00E+00	3.69E-04	1.83E-03
10	D80	70	Combination Long Haul Truck	16	0.00E+00	8.38E-06	5.59E-07	6.26E+00	3.46E-08	8.42E-03	6.35E-06	9.59E-03	6.98E-04	1.27E-04	5.81E-04	1.69E-04	1.71E-04	9.55E-04	2.09E-05	0.00E+00	4.12E-04	1.81E-03
10	D81	70	Passenger Car	242	0.00E+00	3.12E-06	3.38E-07	1.15E+01	2.17E-05	7.81E-02	6.93E-06	4.85E-04	1.88E-03	3.01E-04	6.73E-04	4.36E-04	4.48E-04	4.34E-05	5.84E-05	1.59E-08	2.29E-04	7.60E-05
10	D81	70	Passenger Truck	406	0.00E+00	6.85E-06	7.25E-07	2.65E+01	4.33E-05	1.44E-01	1.42E-05	1.52E-03	3.41E-03	5.56E-04	1.35E-03	8.84E-04	9.05E-04	1.97E-04	1.33E-04	3.57E-08	4.53E-04	2.50E-04
10	D81	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.34E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.24E-05
10	D81	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.90E-01	3.53E-09	9.36E-04	7.96E-07	1.14E-03	8.25E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.16E-04
10	D81	70	Combination Long Haul Truck	2	0.00E+00	9.86E-07	6.57E-08	7.37E-01	4.07E-09	9.91E-04	7.47E-07	1.13E-03	8.21E-05	1.50E-05	6.84E-05	1.99E-05	2.01E-05	1.12E-04	2.46E-06	0.00E+00	4.84E-05	2.13E-04
10	D82	70	Passenger Car	139	0.00E+00	1.80E-06	1.94E-07	6.62E+00	1.25E-05	4.49E-02	3.99E-06	2.79E-04	1.08E-03	1.74E-04	3.87E-04	2.51E-04	2.58E-04	2.50E-05	3.36E-05	9.18E-09	1.32E-04	4.38E-05
10	D82	70	Passenger Truck	234	0.00E+00	3.94E-06	4.17E-07	1.52E+01	2.49E-05	8.30E-02	8.17E-06	8.76E-04	1.97E-03	3.20E-04	7.78E-04	5.09E-04	5.21E-04	1.14E-04	7.66E-05	2.06E-08	2.61E-04	1.44E-04
10	D82	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D82	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.07E-04
11	D83	80	Passenger Car	372	0.00E+00	4.47E-06	4.84E-07	1.72E+01	3.11E-05	1.15E-01	9.94E-06	7.65E-04	2.05E-03	3.56E-04	9.68E-04	6.24E-04	6.40E-04	5.83E-05	8.74E-05	2.45E-08	3.28E-04	1.20E-04
11	D83	80	Passenger Truck	624	0.00E+00	9.61E-06	1.02E-06	3.97E+01	6.15E-05	2.11E-01	2.01E-05	2.27E-03	3.67E-03	6.51E-04	1.92E-03	1.25E-03	1.28E-03	2.81E-04	2.01E-04	5.46E-08	6.44E-04	3.71E-04
11	D83	80	Single Unit Short Haul Truck	158	0.00E+00	2.96E-05	1.47E-06	2.91E+01	2.38E-05	5.84E-02	3.15E-05	1.52E-02	1.86E-03	4.21E-04	3.60E-03	8.78E-04	8.91E-04	2.91E-03	1.17E-04	4.65E-08	2.71E-03	2.84E-03
11	D83	80	Single Unit Long Haul Truck	7	0.00E+00	1.29E-06	6.35E-08	1.23E+00	1.02E-06	2.42E-03	1.37E-06	6.51E-04	8.50E-05	1.86E-05	1.57E-04	3.78E-05	3.83E-05	1.23E-04	4.96E-06	1.94E-09	1.19E-04	1.22E-04
11	D83	80	Combination Short Haul Truck	99	0.00E+00	4.34E-05	3.10E-06	3.60E+01	1.37E-07	3.84E-02	3.19E-05	4.48E-02	2.63E-03	6.48E-04	2.59E-03	9.17E-04	9.12E-04	5.41E-03	1.20E-04	0.00E+00	1.68E-03	8.43E-03
11	D83	80	Combination Long Haul Truck	90	0.00E+00	3.88E-05	2.60E-06	3.33E+01	1.59E-07	3.98E-02	2.95E-05	4.33E-02	2.58E-03	5.18E-04	2.68E-03	7.89E-04	7.94E-04	5.08E-03	1.11E-04	0.00E+00	1.88E-03	8.16E-03
11	D84	80	Passenger Car	704	0.00E+00	8.45E-06	9.15E-07	3.25E+01	5.89E-05	2.17E-01	1.88E-05	1.45E-03	3.87E-03	6.73E-04	1.83E-03	1.18E-03	1.21E-03	1.10E-04	1.65E-04	4.63E-08	6.20E-04	2.27E-04
11	D84	80	Passenger Truck	1179	0.00E+00	1.82E-05	1.93E-06	7.50E+01	1.16E-04	4.00E-01	3.80E-05	4.29E-03	6.94E-03	1.23E-03	3.64E-03	2.36E-03	2.42E-03	5.31E-04	3.80E-04	1.03E-07	1.22E-03	7.01E-04
11	D84	80	Single Unit Short Haul Truck	83	0.00E+00	1.56E-05	7.75E-07	1.53E+01	1.26E-05	3.08E-02	1.66E-05	8.01E-03	9.81E-04	2.22E-04	1.90E-03	4.63E-04	4.70E-04	1.54E-03	6.18E-05	2.45E-08	1.43E-03	1.50E-03
11	D84	80	Single Unit Long Haul Truck	4	0.00E+00	6.79E-07	3.35E-08	6.48E-01	5.37E-07	1.28E-03	7.23E-07	3.43E-04	4.48E-05	9.79E-06	8.29E-05	1.99E-05	2.02E-05	6.47E-05	2.61E-06	1.02E-09	6.27E-05	6.41E-05
11	D84	80	Combination Short Haul Truck	125	0.00E+00	5.49E-05	3.92E-06	4.55E+01	1.73E-07	4.86E-02	4.03E-05	5.66E-02	3.33E-03	8.19E-04	3.27E-03	1.16E-03	1.15E-03	6.84E-03	1.52E-04	0.00E+00	2.12E-03	1.07E-02
11	D84	80	Combination Long Haul Truck	114	0.00E+00	4.91E-05	3.29E-06	4.21E+01	2.00E-07	5.03E-02	3.74E-05	5.48E-02	3.26E-03	6.55E-04	3.39E-03	9.97E-04	1.00E-03	6.43E-03	1.41E-04	0.00E+00	2.37E-03	1.03E-02
11	D85	80	Passenger Car	299	0.00E+00	3.59E-06	3.89E-07	1.38E+01	2.50E-05	9.23E-02	7.99E-06	6.16E-04	1.65E-03	2.86E-04	7.79E-04	5.02E-04	5.15E-04	4.69E-05	7.03E-05	1.97E-08	2.64E-04	9.65E-05
11	D85	80	Passenger Truck	502	0.00E+00	7.73E-06	8.19E-07	3.19E+01	4.95E-05	1.70E-01	1.62E-05	1.82E-03	2.95E-03	5.24E-04	1.55E-03	1.01E-03	1.03E-03	2.26E-04	1.62E-04	4.39E-08	5.18E-04	2.98E-04
11	D85	80	Single Unit Short Haul Truck	129	0.00E+00	2.42E-05	1.20E-06	2.38E+01	1.95E-05	4.78E-02	2.58E-05	1.24E-02	1.52E-03	3.44E-04	2.95E-03	7.18E-04	7.29E-04	2.38E-03	9.59E-05	3.81E-08	2.22E-03	2.33E-03
11	D85	80	Single Unit Long Haul Truck	6	0.00E+00	1.05E-06	5.20E-08	1.01E+00	8.33E-07	1.98E-03	1.12E-06	5.32E-04	6.95E-05	1.52E-05	1.29E-04	3.09E-05	3.14E-05	1.00E-04	4.06E-06	1.58E-09	9.73E-05	9.95E-05
11	D85	80	Combination Short Haul Truck	83	0.00E+00	3.65E-05	2.61E-06	3.03E+01	1.15E-07	3.23E-02	2.68E-05	3.77E-02	2.21E-03	5.45E-04	2.18E-03	7.72E-04	7.67E-04	4.55E-03	1.01E-04	0.00E+00	1.41E-03	7.09E-03
11	D85	80	Combination Long Haul Truck	76	0.00E+00	3.27E-05	2.19E-06	2.80E+01	1.33E-07	3.35E-02	2.49E-05	3.64E-02	2.17E-03	4.36E-04	2.25E-03	6.64E-04	6.68E-04	4.28E-03	9.35E-05	0.00E+00	1.58E-03	6.87E-03
11	D86	80	Passenger Car	725	0.00E+00	8.70E-06	9.42E-07	3.34E+01	6.06E-05	2.24E-01	1.94E-05	1.49E-03	3.99E-03	6.93E-04	1.88E-03	1.21E-03	1.25E-03	1.14E-04	1.70E-04	4.77E-08	6.38E-04	2.34E-04
11	D86	80	Passenger Truck	1214	0.00E+00	1.87E-05	1.98E-06	7.72E+01	1.20E-04	4.11E-01	3.91E-05	4.42E-03	7.15E-03	1.27E-03	3.74E-03	2.43E-03	2.50E-03	5.46E-04	3.91E-04	1.06E-07	1.25E-03	7.22E-04
11	D86	80	Single Unit Short Haul Truck	72	0.00E+00	1.35E-05	6.68E-07	1.32E+01	1.08E-05	2.65E-02	1.43E-05	6.90E-03	8.46E-04	1.91E-04	1.64E-03	3.99E-04	4.05E-04	1.32E-03	5.33E-05	2.12E-08	1.23E-03	1.29E-03
11	D86	80	Single Unit Long Haul Truck	3	0.00E+00	5.85E-07	2.89E-08	5.59E-01	4.63E-07	1.10E-03	6.23E-07	2.96E-04	3.86E-05	8.44E-06	7.15E-05	1.72E-05	1.74E-05	5.58E-05	2.25E-06	8.80E-10	5.40E-05	5.53E-05
11	D86	80	Combination Short Haul Truck	121	0.00E+00	5.33E-05	3.81E-06	4.42E+01	1.68E-07	4.72E-02	3.91E-05	5.49E-02	3.23E-03	7.95E-04	3.18E-03	1.13E-03	1.12E-03	6.64E-03	1.48E-04	0.00E+00	2.06E-03	1.03E-02
11	D86	80	Combination Long Haul Truck	111	0.00E+00	4.76E-05	3.20E-06	4.09E+01	1.95E-07	4.89E-02	3.63E-05	5.32E-02	3.17E-03	6.36E-04	3.29E-03	9.68E-04	9.74E-04	6.24E-03	1.36E-04	0.00E+00	2.31E-03	1.00E-02
11	D87	80	Passenger Car	299	0.00E+00	3.59E-06	3.89E-07	1.38E+01	2.50E-05	9.23E-02	7.99E-06	6.16E-04	1.65E-03	2.86E-04	7.79E-04	5.02E-04	5.15E-04	4.69E-05	7.03E-05	1.97E-08	2.64E-04	9.65E-05
11	D87	80	Passenger Truck	502	0.00E+00	7.73E-06	8.19E-07	3.19E+01	4.95E-05	1.70E-01	1.62E-05	1.82E-03	2.95E-03	5.24E-04	1.55E-03	1.01E-03	1.03E-03	2.26E-04	1.62E-04	4.39E-08	5.18E-04	2.98E-04
11	D87	80	Single Unit Short Haul Truck	129	0.00E+00	2.42E-05	1.20E-06	2.38E+01	1.95E-05	4.78E-02	2.58E-05	1.24E-02	1.52E-03	3.44E-04	2.95E-03	7.18E-04	7.29E-04	2.38E-03	9.59E-05	3.81E-08	2.22E-03	2.33E-03
11	D87	80	Single Unit Long Haul Truck	6	0.00E+00	1.05E-06	5.20E-08	1.01E+00	8.33E-07	1.98E-03	1.12E-06	5.32E-04	6.95E-05	1.52E-05	1.29E-04	3.09E-05	3.14E-05	1.00E-04	4.06E-06	1.58E-09	9.73E-05	9.95E-05
11	D87	80	Combination Short Haul Truck	83	0.00E+00	3.65E-05	2.61E-06	3.03E+01	1.15E-07	3.23E-02	2.68E-05	3.77E-02	2.21E-03	5.45E-04	2.18E-03	7.72E-04	7.67E-04	4.55E-03	1.01E-04	0.00E+00	1.41E-03	7.09E-03
11	D87	80	Combination Long Haul Truck	76	0.00E+00	3.27E-05	2.19E-06	2.80E+01	1.33E-07	3.35E-02	2.49E-05	3.64E-02	2.17E-03	4.36E-04	2.25E-03	6.64E-04	6.68E-04	4.28E-03	9.35E-05	0.00E+00	1.58E-03	6.87E-03
11	D88	80	Passenger Car	725	0.00E+00	8.70E-06	9.42E-07	3.34E+01	6.06E-05	2.24E-01	1.94E-05	1.49E-03	3.99E-03	6.93E-04	1.88E-03	1.21E-03	1.25E-03	1.14E-04	1.70E-04	4.77E-08	6.38E-04	2.34E-04
11	D88	80	Passenger Truck	1214	0.00E+00	1.87E-05	1.98E-06	7.72E+01	1.20E-04	4.11E-01	3.91E-05	4.42E-03	7.15E-03	1.27E-03	3.74E-03	2.43E-03	2.50E-03	5.46E-04	3.91E-04	1.06E-07	1.25E-03	7.22E-04
11	D88	80	Single Unit Short Haul Truck	72	0.00E+00	1.35E-05	6.68E-07	1.32E+01	1.08E-05	2.65E-02	1.43E-05	6.90E-03	8.46E-04	1.91E-04	1.64E-03	3.99E-04	4.05E-04	1.32E-03	5.33E-05	2.12E-08	1.23E-03	1.29E-03
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	5.85E-07	2.89E-08	5.59E-01	4.63E-07	1.10E-03	6.23E-07	2.96E-04	3.86E-05	8.44E-06	7.15E-05	1.72E-05	1.74E-05	5.58E-05	2.25E-06	8.80E-10	5.40E-05	5.53E-05
11	D88	80	Combination Short Haul Truck	121	0.00E+00	5.33E-05	3.81E-06	4.42E+01	1.68E-07	4.72E-02	3.91E-05	5.49E-02	3.23E-03	7.95E-04	3.18E-03	1.13E-03	1.12E-03	6.64E-03	1.48E-04	0.00E+00	2.06E-03	1.03E-02
11	D88	80	Combination Long Haul Truck	111	0.00E+00	4.76E-05	3.20E-06	4.09E+01	1.95E-07	4.89E-02	3.63E-05	5.32E-02	3.17E-03	6.36E-04	3.29E-03	9.68E-04	9.74E-04	6.24E-03	1.36E-04	0.00E+00	2.31E-03	1.00E-02
9	D89	60	Passenger Car	44	0.00E+00	6.48E-07	7.00E-08	2.18E+00	4.51E-06	1.62E-02	1.43E-06	8.92E-05	4.44E-04	6.82E-05	1.40E-04	9.03E-05	9.27E-05	9.14E-06	1.10E-05	3.03E-09	4.74E-05	1.40E-05
9	D89	60	Passenger Truck	73	0.00E+00	1.43E-06	1.51E-07	4.97E+00	8.93E-06	2.87E-02	2.95E-06	2.91E-04	8.14E-04	1.26E-04	2.79E-04	1.82E-04	1.87E-04	3.89E-05	2.48E-05	6.88E-09	9.30E-05	4.82E-05
9	D89	60	Single Unit Short Haul Truck	4	0.00E+00	1.13E-06	5.63E-08	7.16E-01	9.27E-07	1.38E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.36E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	D89	60	Combination Short Haul Truck	4	0.00E+00	2.16E-06	1.51E-07	1.40E+00	7.63E-09	1.88E-03	1.60E-06	2.34E-03	2.00E-04	3.97E-05	1.37E-04	4.47E-05	4.47E-05	2.12E-04	4.69E-06	0.00E+00	9.22E-05	4.41E-04
9	D89	60	Combination Long Haul Truck	3	0.00E+00	1.93E-06	1.26E-07	1.32E+00	8.75E-09	2.03E-03	1.49E-06	2.32E-03	2.01E-04	3.42E-05	1.41E-04	3.84E-05	3.89E-05	2.00E-04	4.40E-06	0.00E+00	1.02E-04	4.38E-04
9	D90	60	Passenger Car	67

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D94	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.69E-05	1.01E-05	1.97E-06	1.68E-05	4.07E-06	4.14E-06	1.05E-05	4.22E-07	1.69E-10	1.26E-05	1.25E-05
10	D94	70	Combination Short Haul Truck	6	0.00E+00	3.26E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.87E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	D94	70	Combination Long Haul Truck	6	0.00E+00	2.96E-06	1.97E-07	2.21E+00	1.22E-08	2.97E-03	2.24E-06	3.39E-03	2.46E-04	4.50E-05	2.05E-04	5.96E-05	6.03E-05	3.37E-04	7.39E-06	0.00E+00	1.45E-04	6.39E-04
9	E01	60	Passenger Car	124	0.00E+00	1.83E-06	1.98E-07	6.15E+00	1.28E-05	4.57E-02	4.06E-06	2.52E-04	1.25E-03	1.93E-04	3.95E-04	2.55E-04	2.62E-04	2.59E-05	3.11E-05	8.56E-09	1.34E-04	3.95E-05
9	E01	60	Passenger Truck	207	0.00E+00	4.04E-06	4.27E-07	1.40E+01	2.53E-05	8.12E-02	8.35E-06	8.23E-04	2.30E-03	3.57E-04	7.89E-04	5.16E-04	5.28E-04	1.10E-04	7.02E-05	1.95E-08	2.63E-04	1.36E-04
9	E01	60	Single Unit Short Haul Truck	17	0.00E+00	5.08E-06	2.53E-07	3.22E+00	4.17E-06	6.23E-03	5.41E-06	2.42E-03	4.10E-04	7.42E-05	6.13E-04	1.52E-04	1.54E-04	3.23E-04	1.30E-05	5.36E-09	4.61E-04	4.53E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	2.22E-07	1.10E-08	1.38E-01	1.81E-07	2.64E-04	2.37E-07	1.05E-04	1.84E-05	3.29E-06	2.70E-05	6.61E-06	6.72E-06	1.37E-05	5.55E-07	2.28E-10	2.02E-05	1.96E-05
9	E01	60	Combination Short Haul Truck	8	0.00E+00	4.62E-06	3.23E-07	3.01E+00	1.63E-08	4.03E-03	3.42E-06	5.01E-03	4.29E-04	8.50E-05	2.94E-04	9.59E-05	9.59E-05	4.53E-04	1.00E-05	0.00E+00	1.98E-04	9.46E-04
9	E01	60	Combination Long Haul Truck	7	0.00E+00	4.13E-06	2.70E-07	2.82E+00	1.87E-08	4.35E-03	3.20E-06	4.97E-03	4.31E-04	7.33E-05	3.02E-04	8.23E-05	8.33E-05	4.29E-04	9.42E-06	0.00E+00	2.19E-04	9.38E-04
9	E02	60	Passenger Car	247	0.00E+00	3.66E-06	3.95E-07	1.23E+01	2.55E-05	9.13E-02	8.10E-06	5.04E-04	2.51E-03	3.85E-04	7.89E-04	5.10E-04	5.24E-04	5.16E-05	6.21E-05	1.71E-08	2.68E-04	7.89E-05
9	E02	60	Passenger Truck	414	0.00E+00	8.07E-06	8.52E-07	2.81E+01	5.05E-05	1.62E-01	1.67E-05	1.64E-03	4.60E-03	7.14E-04	1.57E-03	1.03E-03	1.06E-03	2.20E-04	1.40E-04	3.89E-08	5.25E-04	2.72E-04
9	E02	60	Single Unit Short Haul Truck	37	0.00E+00	1.10E-05	5.49E-07	6.98E+00	9.04E-06	1.35E-02	1.17E-05	5.24E-03	8.88E-04	1.61E-04	1.33E-03	3.29E-04	3.34E-04	6.99E-04	2.82E-05	1.16E-08	9.98E-04	9.82E-04
9	E02	60	Single Unit Long Haul Truck	2	0.00E+00	4.80E-07	2.38E-08	2.98E-01	3.93E-07	5.72E-04	5.13E-07	2.27E-04	3.99E-05	7.14E-06	5.86E-05	1.43E-05	1.46E-05	2.98E-05	1.20E-06	4.94E-10	4.38E-05	4.25E-05
9	E02	60	Combination Short Haul Truck	27	0.00E+00	1.57E-05	1.10E-06	1.02E+01	5.56E-08	1.37E-02	1.16E-05	1.70E-02	1.46E-03	2.89E-04	1.00E-03	3.26E-04	3.26E-04	1.54E-03	3.42E-05	0.00E+00	6.72E-04	3.22E-03
9	E02	60	Combination Long Haul Truck	24	0.00E+00	1.41E-05	9.19E-07	9.59E+00	6.37E-08	1.48E-02	1.09E-05	1.69E-02	1.47E-03	2.49E-04	1.03E-03	2.80E-04	2.83E-04	1.46E-03	3.20E-05	0.00E+00	7.43E-04	3.19E-03
11	E03	80	Passenger Car	236	0.00E+00	2.84E-06	3.07E-07	1.09E+01	1.98E-05	7.29E-02	6.31E-06	4.86E-04	1.30E-03	2.26E-04	6.14E-04	3.96E-04	4.06E-04	3.70E-05	5.55E-05	1.56E-08	2.08E-04	7.61E-05
11	E03	80	Passenger Truck	396	0.00E+00	6.10E-06	6.46E-07	2.52E+01	3.90E-05	1.34E-01	1.28E-05	1.44E-03	2.33E-03	4.13E-04	1.22E-03	7.94E-04	8.13E-04	1.78E-04	1.28E-04	3.46E-08	4.09E-04	2.35E-04
11	E03	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.55E-03	5.16E-06	2.49E-03	3.05E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.61E-09	4.44E-04	4.65E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.96E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.27E-06	2.01E-05	8.11E-07	3.17E-10	1.95E-05	1.99E-05
11	E03	80	Combination Short Haul Truck	14	0.00E+00	5.97E-06	4.27E-07	4.95E+00	1.89E-08	5.29E-03	4.38E-06	6.16E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.44E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	E03	80	Combination Long Haul Truck	12	0.00E+00	5.34E-06	3.58E-07	4.58E+00	2.18E-08	5.48E-03	4.06E-06	5.96E-03	3.55E-04	7.13E-05	3.69E-04	1.09E-04	1.09E-04	6.99E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E04	80	Passenger Car	243	0.00E+00	2.92E-06	3.16E-07	1.12E+01	2.04E-05	7.50E-02	6.50E-06	5.00E-04	1.34E-03	2.33E-04	6.33E-04	4.08E-04	4.19E-04	3.81E-05	5.71E-05	1.60E-08	2.14E-04	7.84E-05
11	E04	80	Passenger Truck	408	0.00E+00	6.28E-06	6.66E-07	2.59E+01	4.02E-05	1.38E-01	1.31E-05	1.48E-03	2.40E-03	4.26E-04	1.26E-03	8.17E-04	8.38E-04	1.83E-04	1.31E-04	3.57E-08	4.21E-04	2.42E-04
11	E04	80	Single Unit Short Haul Truck	27	0.00E+00	5.03E-06	2.50E-07	4.93E+00	4.04E-06	9.91E-03	5.35E-06	2.58E-03	3.16E-04	7.14E-05	6.12E-04	1.49E-04	1.51E-04	4.95E-04	1.99E-05	7.90E-09	4.60E-04	4.83E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	2.18E-07	1.08E-08	2.09E-01	1.73E-07	4.11E-04	2.33E-07	1.10E-04	1.44E-05	3.15E-06	2.67E-05	6.41E-06	6.51E-06	2.08E-05	8.41E-07	3.29E-10	2.02E-05	2.06E-05
11	E04	80	Combination Short Haul Truck	19	0.00E+00	8.26E-06	5.91E-07	6.85E+00	2.61E-08	7.32E-03	6.07E-06	8.53E-03	5.01E-04	1.23E-04	4.93E-04	1.75E-04	1.74E-04	1.03E-03	2.29E-05	0.00E+00	3.20E-04	1.61E-03
11	E04	80	Combination Long Haul Truck	17	0.00E+00	7.39E-06	4.96E-07	6.34E+00	3.02E-08	7.58E-03	5.63E-06	8.25E-03	4.91E-04	9.87E-05	5.10E-04	1.50E-04	1.51E-04	9.68E-04	2.12E-05	0.00E+00	3.58E-04	1.55E-03
11	E05	80	Passenger Car	78	0.00E+00	9.38E-07	1.02E-07	3.60E+00	6.53E-06	2.41E-02	2.09E-06	1.61E-04	4.30E-04	7.47E-05	2.03E-04	1.31E-04	1.34E-04	1.22E-05	1.83E-05	5.14E-09	6.88E-05	2.52E-05
11	E05	80	Passenger Truck	131	0.00E+00	2.02E-06	2.14E-07	8.32E+00	1.29E-05	4.43E-02	4.22E-06	4.76E-04	7.71E-04	1.37E-04	4.03E-04	2.62E-04	2.69E-04	5.89E-05	4.22E-05	1.15E-08	1.35E-04	7.78E-05
11	E05	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.55E-03	5.16E-06	2.49E-03	3.05E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.61E-09	4.44E-04	4.65E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.96E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.27E-06	2.01E-05	8.11E-07	3.17E-10	1.95E-05	1.99E-05
11	E05	80	Combination Short Haul Truck	12	0.00E+00	5.05E-06	3.61E-07	4.19E+00	1.60E-08	4.47E-03	3.71E-06	5.21E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.30E-04	1.40E-05	0.00E+00	1.95E-04	9.81E-04
11	E05	80	Combination Long Haul Truck	10	0.00E+00	4.52E-06	3.03E-07	3.88E+00	1.85E-08	4.63E-03	3.44E-06	5.04E-03	3.00E-04	6.03E-05	3.12E-04	9.18E-05	9.24E-05	5.92E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
11	E06	80	Passenger Car	198	0.00E+00	2.38E-06	2.58E-07	9.14E+00	1.66E-05	6.11E-02	5.29E-06	4.07E-04	1.09E-03	1.89E-04	5.15E-04	3.32E-04	3.41E-04	3.10E-05	4.65E-05	1.30E-08	1.74E-04	6.39E-05
11	E06	80	Passenger Truck	332	0.00E+00	5.12E-06	5.42E-07	2.11E+01	3.27E-05	1.12E-01	1.07E-05	1.21E-03	1.95E-03	3.47E-04	1.02E-03	6.66E-04	6.82E-04	1.49E-04	1.07E-04	2.90E-08	3.43E-04	1.97E-04
11	E06	80	Single Unit Short Haul Truck	20	0.00E+00	3.77E-06	1.87E-07	3.70E+00	3.03E-06	7.43E-03	4.01E-06	1.93E-03	2.37E-04	5.36E-05	4.59E-04	1.12E-04	1.13E-04	3.71E-04	1.49E-05	5.92E-09	3.45E-04	3.62E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.64E-07	8.08E-09	1.56E-01	1.30E-07	3.08E-04	1.74E-07	8.28E-05	1.08E-05	2.36E-06	2.00E-05	4.80E-06	4.88E-06	1.56E-05	6.31E-07	2.46E-10	1.51E-05	1.55E-05
11	E06	80	Combination Short Haul Truck	12	0.00E+00	5.28E-06	3.78E-07	4.38E+00	1.67E-08	4.68E-03	3.88E-06	5.45E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.58E-04	1.46E-05	0.00E+00	2.04E-04	1.03E-03
11	E06	80	Combination Long Haul Truck	11	0.00E+00	4.72E-06	3.17E-07	4.05E+00	1.93E-08	4.85E-03	3.60E-06	5.27E-03	3.14E-04	6.31E-05	3.26E-04	9.60E-05	9.66E-05	6.19E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
9	E07	60	Passenger Car	1168	0.00E+00	1.73E-05	1.87E-06	5.81E+01	1.20E-04	4.32E-01	3.83E-05	2.38E-03	1.18E-02	1.82E-03	3.73E-03	2.41E-03	2.48E-03	2.44E-04	2.94E-04	8.08E-08	1.27E-03	3.73E-04
9	E07	60	Passenger Truck	1957	0.00E+00	3.82E-05	4.03E-06	1.33E+02	2.39E-04	7.66E-01	7.88E-05	7.77E-03	2.17E-02	3.38E-03	7.45E-03	4.87E-03	4.99E-03	1.04E-03	6.63E-04	1.84E-07	2.48E-03	1.29E-03
9	E07	60	Single Unit Short Haul Truck	107	0.00E+00	3.16E-05	1.58E-06	2.01E+01	2.60E-05	3.87E-02	3.37E-05	1.50E-02	2.55E-03	4.62E-04	3.81E-03	9.45E-04	9.59E-04	2.01E-03	8.10E-05	3.34E-08	2.87E-03	2.82E-03
9	E07	60	Single Unit Long Haul Truck	5	0.00E+00	1.38E-06	6.85E-08	8.57E-01	1.13E-06	1.64E-03	1.47E-06	6.51E-04	1.15E-04	2.05E-05	1.68E-04	4.11E-05	4.18E-05	8.56E-05	3.46E-06	1.42E-09	1.26E-04	1.22E-04
9	E07	60	Combination Short Haul Truck	92	0.00E+00	5.39E-05	3.76E-06	3.51E+01	1.91E-07	4.70E-02	3.99E-05	5.85E-02	5.01E-03	9.92E-04	3.43E-03	1.12E-03	1.12E-03	5.29E-03	1.17E-04	0.00E+00	2.31E-03	1.10E-02
9	E07	60	Combination Long Haul Truck	83	0.00E+00	4.82E-05	3.15E-06	3.29E+01	2.19E-07	5.08E-02	3.73E-05	5.80E-02	5.03E-03	8.56E-04	3.52E-03	9.60E-04	9.71E-04	5.01E-03	1.10E-04	0.00E+00	2.55E-03	1.09E-02
9	E08	60	Passenger Car	654	0.00E+00	9.69E-06	1.05E-06	3.25E+01	6.74E-05	2.42E-01	2.14E-05	1.33E-03	6.63E-03	1.02E-03	2.09E-03	1.35E-03	1.39E-03	1.37E-04	1.64E-04	4.53E-08	7.09E-04	2.09E-04
9	E08	60	Passenger Truck	1096	0.00E+00	2.14E-05	2.26E-06	7.43E+01	1.34E-04	4.29E-01	4.41E-05	4.35E-03	1.22E-02	1.89E-03	4.17E-03	2.73E-03	2.79E-03	5.81E-04	3.71E-04	1.03E-07	1.39E-03	7.21E-04
9	E08	60	Single Unit Short Haul Truck	83	0.00E+00	2.45E-05	1.22E-06	1.56E+01	2.02E-05	3.01E-02	2.62E-05	1.17E-02	1.98E-03	3.59E-04	2.96E-03	7.34E-04	7.45E-04	1.56E-03	6.30E-05	2.59E-08	2.23E-03	2.19E-03
9	E08	60	Single Unit Long Haul Truck	4	0.00E+00	1.07E-06	5.32E-08	6.66E-01	8.76E-07	1.28E-03	1.14E-06	5.05E-04	8.90E-05	1.59E-05	1.31E-04	3.20E-05	3.25E-05	6.65E-05	2.68E-06	1.10E-09	9.78E-05	9.47E-05
9	E08	60	Combination Short Haul Truck	49	0.00E+00	2.90E-05	2.02E-06	1.88E+01	1.02E-07	2.53E-02	2.14E-05	3.14E-02	2.69E-03	5.33E-04	1.84E-03	6.01E-04	6.01E-04	2.84E-03	6.30E-05	0.00E+00	1.24E-03	5.93E-03
9	E08	60	Combination Long Haul Truck	45	0.00E+00	2.59E-05	1.69E-06	1.77E+01	1.17E-07	2.73E-02	2.01E-05	3.11E-02	2.70E-03	4.60E-04	1.89E-03	5.16E-04	5.22E-04	2.69E-03	5.90E-05	0.00E+00	1.37E-03	5.88E-03
9	E09	60	Passenger Car	1050	0.00E+00	1.55E-05	1.68E-06	5.22E+01	1.08E-04	3.88E-01	3.44E-05	2.14E-03	1.06E-02	1.64E-03	3.35E-03	2.17E-03	2.23E-03	2.19E-04	2.64E-04	7.26E-08	1.14E-03	3.35E-04
9	E09	60	Passenger Truck	1758	0.00E+00	3.43E-05	3.62E-06	1.19E+02	2.14E-04	6.89E-01	7.08E-05	6.98E-03	1.95E-02	3.03E-03	6.69E-03	4.38E-03	4.48E-03	9.33E-04	5.96E-04	1.65E-07	2.23E-03	1.16E-03
9	E09	60	Single Unit Short Haul Truck	72	0.00E+00	2.12E-05	1.06E-06	1.34E+01	1.74E-05	2.59E-02	2.25E-05	1.01E-02	1.71E-03	3.09E-04	2.55E-03	6.33E-04	6.42E-04	1.34E-03	5.43E-05	2.23E-08	1.92E-03	1.89E-03
9	E09	60	Single Unit Long Haul Truck	3	0.00E+00	9.24E-07	4.58E-08	5.74E-01	7.55E-07	1.10E-03	9.86E-07	4.36E-04	7.67E-05	1.37E-05	1.13E-04	2.75E-05	2.80E-05	5.73E-05	2.31E-06	9.50E-10	8.43E-05	8.17E-05
9	E09	60	Combination Short Haul Truck	71	0.00E+00	4.16E-05	2.90E-06	2.71E+01	1.47E-07	3.63E-02	3.08E-05	4.51E-02	3.86E-03	7.65E-04	2.65E-03	8.63E-04	8.63E-04	4.08E-03	9.04E-05	0.00E+00	1.78E-03	8.51E-03
9	E09	60	Combination Long Haul Truck	64	0.00E+00	3.72E-05	2.43E-06	2.54E+01	1.69E-07	3.92E-02	2.88E-05	4.47E-02	3.88E-03	6.60E-04	2.72E-03	7.40E-04	7.49E-04	3.86E-03	8.48E-05	0.00E+00	1.97E-03	8.44E-03
9	E10	60	Passenger Car	651	0.00E+00	9.64E-06	1.04E-06	3.24E+01	6.71E-05	2.41E-01	2.13E-05	1.33E-03	6.60E-03	1.01E-03	2.08E-03	1.34E-03	1.38E-03	1.36E-04	1.64E-04	4.50E-08	7.06E-04	2.08E-04
9	E10	60	Passenger Truck	1091	0.00E+00	2.13E-05	2.25E-06	7.39E+01	1.33E-04	4.27E-01	4.39E-05	4.33E-03	1.21E-02	1.88E-03	4.15E-03	2.71E-03	2.78E-03	5.79E-04	3.70E-04	1.02E-07	1.38E-03	7.18E-04
9	E10	60	Single Unit Short Haul Truck	67	0.00E+00	1.97E-05	9.85E-07	1.25E+01	1.62E-05	2.42E-02	2.10E-05	9.40E-03	1.59E-03	2.89E-04	2.38E-03	5.90E-04	6.00E-04	1.26E-03	5.07E-05	2.09E-08	1.79E-03	1.76E-03
9	E10	60	Single Unit Long Haul Truck	3	0.00E+00	8.62E-07	4.28E-08	5.36E-01	7.05E-07	1.03E-03	9.20E-07	4.07E-04	7.16E-05	1.28E-05	1.05E-04	2.57E-05	2.61E-05	5.35E-05	2.16E-06	8.87E-10	7.87E-05	7.62E-05
9	E10	60	Combination Short Haul Truck	42	0.00E+00	2.49E-05	1.74E-06	1.62E+01	8.83E-08	2.18E-02	1.85E-05	2.71E-02	2.32E-03	4.59E-04	1.59E-03	5.18E-04	5.18E-04	2.45E-03	5.43E-05	0.00E+00	1.07E-03	5.11E-03
9	E10	60	Combination Long Haul Truck	39	0.00E+00	2.23E-05	1.46E-06	1.52E+01	1.01E-07	2.35E-02	1.73E-05	2.68E-02	2.33E-03	3.96E-04	1.63E-03	4.44E-04	4.50E-04	2.32E-03	5.09E-05	0.00E+00	1.18E-03	5.07E-03
9	E11	60	Passenger Car	1227	0.00E+00	1.82E-05	1.96E-06	6.10E+01	1.26E-04	4.53E-01	4.02E-05	2.50E-03	1.24E-02	1.91E-03	3.92E-03	2.53E-03	2.60E-03	2.56E-04	3.08E-04	8.48E-08	1.33E-03	3.92E-04
9	E11	60	Passenger Truck	2054	0.00E+00	4.01E-05	4.23E-06	1.39E+02	2.51E-04	8.05E-01	8.27E-05	8.16E-03	2.28E-02	3.54E-03	7.82E-03	5.11E-03	5.24E-03	1.09E-03	6.96E-04	1.93E-07	2.61E-03	1.35E-03
9	E11	60	Single Unit Short Haul Truck	148	0.00E+00	4.37E-05	2.18E-06	2.78E+01	3.59E-05	5.36E-02	4.66E-05	2.08E-02	3.53E-03	6.39E-04	5.28E-03	1.31E-03	1.33E-03	2.78E-03	1.12E-04	4.62E-08	3.97E-03	3.90E-03
9	E11	60	Single Unit Long Haul Truck	7	0.00E+00	1.91E-06	9.48E-08	1.19E+00	1.56E-06	2.27E-03	2.04E-06	9.00E-04	1.59E-04	2.84E-05	2.33E-04	5.69E-05	5.78E-05	1.18E-04	4.78E-06	1.96E-09	1.74E-04	1.69E-04
9	E11	60	Combination Short Haul Truck	94	0.00E+00	5.51E-05	3.85E-06	3.59E+01	1.95E-07	4.81E-02	4.08E-05	5.98E-02	5.12E-03	1.01E-03	3.51E-03	1.14E-03	1.14E-03	5.41E-03	1.20E-04	0.00E+00	2.36E-03	1.13E-02
9	E11	60	Combination Long Haul Truck	85	0.00E+00	4.93E-05	3.23E-06	3.37E+01	2.24E-07	5.19E-02	3.82E-05	5.93E-02	5.15E-03	8.75E-04	3.60E-03	9.82E-04	9.94E-04	5.12E-03	1.12E-04	0.00E+00	2.61E-03	1.12E-02
9	E12	60	Passenger Car	897	0.00E+00	1.33E-05	1.44E-06	4.46E+01	9.24E-05	3.31E-01	2.94E-05	1.83E-03	9.09E-03	1.40E-03	2.87E-03	1.85E-03	1.90E-03	1.87E-04	2.25E-04	6.20E-08	9.72E-04	2.87E-04
9	E12	60	Passenger Truck	1502	0.00E+00	2.93E-05	3.09E-06	1.02E+02	1.83E-04	5.88E-01	6.05E-05	5.97E-03	1.67E-02	2.59E-03	5.72E-03	3.74E-03	3.83E-03	7.97E-04	5.09E-04	1.41E-07	1.91E-03	9.89E-04
9	E12	60	Single Unit Short Haul Truck	145	0.00E+00	4.26E-05	2.13E-06	2.70E+01	3.50E-05	5.22E-02	4.54E-05	2.03E-02	3.44E-03	6.23E-04	5.14E-03	1.27E-03	1.29E-03	2.71E-03	1.09E-04	4.50E-08	3.86E-03	3.80E-03
9	E12	60	Single Unit Long Haul Truck	6	0.00E+00	1.86E-06	9.23E-08	1.16E+00	1.52E-06	2.21E-03	1.98E-06	8.77E-04	1.54E-04	2.76E-05	2.27E-04	5.55E-05	5.63E-05	1.15E-04	4.66E-06	1.91E-09	1.70E-04	1.64E-04
9	E12	60	Combination Short Haul Truck	132	0.00E+00	7.76E-05	5.42E-06	5.05E+01	2.75E-07	6.77E-02	5.75E-05	8.42E-02	7.21E-03	1.43E-03	4.94E-03	1.61E-03	1.61E-03	7.62E-03	1.69E-04	0.00E+00	3.32E-03	1.59E-02
9	E12	60	Combination Long Haul Truck	120	0.00E+00	6.94E-05	4.54E-06	4.74E+01	3.15E-07	7.31E-02	5.38E-05	8.35E-02	7.24E-03	1.23E-03	5.07E-03	1.38E-03	1.40E-03	7.21E-03	1.58E-04	0.00E+00	3.67E-03	1.58E-02
9	E13	80	Passenger Car	239	0.00E+00	2.87E-06	3.11E-07	1.10E+01	2.00E-05	7.37E-02	6.38E-06	4.91E-04	1.31E-03	2.28E-04	6.21E-04	4.00E-04	4.11E-04	3.74E-05	5.61E-05	1.57E-08	2.10E-04	7.70E-05
11	E13	80	Passenger Truck	400	0.00E+00	6.17E-06	6.53E-07	2.55E+01	3.95E-05	1.36E-01	1.29E-05	1.46E-03	2.36E-03	4.18E-04	1.23E-03	8.02E-04	8.22E-04	1.80E-04	1.29E-04	3.50E-08	4.13E-04	2.38E-04
11	E13	80	Single Unit Short Haul Truck	27	0.00E+00	5.03E-06	2.50E-07	4.93E+00	4.04E-06	9.91E-03	5.35E-06	2.58E-03	3.16E-04	7.14E-05	6.12E-04	1.49E-04	1.51E-04	4.95E-04	1.99E-05	7.90E-09	4.60E-04	4.83E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	2.18E-07	1.08E-08	2.09E-01	1.73E-07	4.11E-04	2.33E-07	1.10E-04	1.44E-05	3.15E-06	2.67E-05	6.41E-06	6.51E-06	2.08E-05	8.41E-07	3.29E-10	2.02E-05	2.06E-05
11	E13	80	Combination Short Haul Truck	12	0.00E+00	5.05E-06	3.61E-07	4.19E+00	1.60E-08	4.47E-03	3.71E-06	5.21E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.30E-04	1.40E-05	0.00E+00	1.95E-04	9.81E-04
11	E13	80	Combination Long Haul Truck	10	0.00E+00	4.52E-06	3.03E-07	3.88E+00	1.85E-08	4.63E-03	3.44E-06	5.04E-03	3.00E-04	6.03E-05	3.12E-04	9.18E-05	9.24E-05	5.92E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
11	E14	80	Passenger Car	414	0.00E+00	4.96E-06	5.38E-07	1.91E+01	3.46E-05	1.27E-01	1.10E-05	8.50E-04	2.27E-03	3.95E-04	1.08E-03	6.93E-04	7.11E-04	6.48E-05	9.71E-05	2.72E-08	3.64E-04	1.33E-04
11	E

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E18	80	Passenger Car	237	0.00E+00	2.85E-06	3.09E-07	1.09E+01	1.99E-05	7.32E-02	6.34E-06	4.88E-04	1.31E-03	2.27E-04	6.17E-04	3.98E-04	4.08E-04	3.72E-05	5.57E-05	1.56E-08	2.09E-04	7.65E-05
11	E18	80	Passenger Truck	398	0.00E+00	6.13E-06	6.49E-07	2.53E+01	3.92E-05	1.35E-01	1.28E-05	1.45E-03	2.34E-03	4.15E-04	1.23E-03	7.97E-04	8.17E-04	1.79E-04	1.28E-04	3.48E-08	4.11E-04	2.36E-04
11	E18	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.60E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.92E-05	7.02E-05	2.30E-04	9.23E-06	3.67E-09	2.14E-04	2.24E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.13E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.02E-06	9.67E-06	3.90E-07	1.53E-10	9.37E-06	9.58E-06
11	E18	80	Combination Short Haul Truck	9	0.00E+00	4.13E-06	2.96E-07	3.43E+00	1.31E-08	3.66E-03	3.03E-06	4.26E-03	2.51E-04	6.17E-05	2.46E-04	8.73E-05	8.68E-05	5.15E-04	1.15E-05	0.00E+00	1.60E-04	8.03E-04
11	E18	80	Combination Long Haul Truck	9	0.00E+00	3.70E-06	2.48E-07	3.17E+00	1.51E-08	3.79E-03	2.81E-06	4.13E-03	2.46E-04	4.94E-05	2.55E-04	7.51E-05	7.56E-05	4.84E-04	1.06E-05	0.00E+00	1.79E-04	7.77E-04
9	E19	60	Passenger Car	590	0.00E+00	8.74E-06	9.44E-07	2.93E+01	6.08E-05	2.18E-01	1.93E-05	1.20E-03	5.98E-03	9.19E-04	1.88E-03	1.22E-03	1.25E-03	1.23E-04	1.48E-04	4.08E-08	6.39E-04	1.88E-04
9	E19	60	Passenger Truck	988	0.00E+00	1.93E-05	2.03E-06	6.70E+01	1.20E-04	3.87E-01	3.98E-05	3.92E-03	1.10E-02	1.70E-03	3.76E-03	2.46E-03	2.52E-03	5.24E-04	3.35E-04	9.28E-08	1.25E-03	6.50E-04
9	E19	60	Single Unit Short Haul Truck	50	0.00E+00	1.47E-05	7.32E-07	9.31E+00	1.20E-05	1.80E-02	1.56E-05	6.99E-03	1.18E-03	2.14E-04	1.77E-03	4.39E-04	4.45E-04	9.32E-04	3.76E-05	1.55E-08	1.33E-03	1.31E-03
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	6.41E-07	3.18E-08	3.98E-01	5.24E-07	7.63E-04	6.83E-07	3.02E-04	5.32E-05	9.52E-06	7.81E-05	1.91E-05	1.94E-05	3.97E-05	1.60E-06	6.59E-10	5.85E-05	5.66E-05
9	E19	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.82E+00	5.34E-08	1.32E-02	1.12E-05	1.64E-02	1.40E-03	2.78E-04	9.61E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.09E-03
9	E19	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.83E-07	9.22E+00	6.12E-08	1.42E-02	1.05E-05	1.62E-02	1.41E-03	2.40E-04	9.87E-04	2.69E-04	2.72E-04	1.40E-03	3.08E-05	0.00E+00	7.14E-04	3.06E-03
9	E20	60	Passenger Car	388	0.00E+00	5.74E-06	6.20E-07	1.93E+01	4.00E-05	1.43E-01	1.27E-05	7.91E-04	3.93E-03	6.04E-04	1.24E-03	8.00E-04	8.22E-04	8.10E-05	9.75E-05	2.68E-08	4.20E-04	1.24E-04
9	E20	60	Passenger Truck	649	0.00E+00	1.27E-05	1.34E-06	4.40E+01	7.92E-05	2.54E-01	2.62E-05	2.58E-03	7.21E-03	1.12E-03	2.47E-03	1.62E-03	1.66E-03	3.44E-04	2.20E-04	6.10E-08	8.24E-04	4.27E-04
9	E20	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.90E-07	8.77E+00	1.14E-05	1.69E-02	1.47E-05	6.58E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	E20	60	Single Unit Long Haul Truck	2	0.00E+00	6.04E-07	3.00E-08	3.75E-01	4.93E-07	7.19E-04	6.44E-07	2.85E-04	5.01E-05	8.97E-06	7.36E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.34E-05
9	E20	60	Combination Short Haul Truck	16	0.00E+00	9.55E-06	6.67E-07	6.22E+00	3.38E-08	8.33E-03	7.07E-06	1.04E-02	8.87E-04	1.76E-04	6.08E-04	1.98E-04	1.98E-04	9.37E-04	2.08E-05	0.00E+00	4.09E-04	1.95E-03
9	E20	60	Combination Long Haul Truck	15	0.00E+00	8.54E-06	5.59E-07	5.83E+00	3.87E-08	8.99E-03	6.61E-06	1.03E-02	8.91E-04	1.52E-04	6.24E-04	1.70E-04	1.72E-04	8.87E-04	1.95E-05	0.00E+00	4.52E-04	1.94E-03
11	E21	80	Passenger Car	9	0.00E+00	1.08E-07	1.17E-08	4.14E-01	7.50E-07	2.77E-03	2.40E-07	1.84E-05	4.94E-05	8.57E-06	2.33E-05	1.50E-05	1.54E-05	1.41E-06	2.11E-06	5.91E-10	7.90E-06	2.89E-06
11	E21	80	Passenger Truck	15	0.00E+00	2.32E-07	2.45E-08	9.56E-01	1.48E-06	5.09E-03	4.84E-07	5.47E-05	8.85E-05	1.57E-05	4.63E-05	3.01E-05	3.09E-05	6.76E-06	4.84E-06	1.31E-09	1.55E-05	8.93E-06
11	E21	80	Single Unit Short Haul Truck	1	0.00E+00	1.80E-07	8.91E-09	1.76E-01	1.44E-07	3.54E-04	1.91E-07	9.21E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E21	80	Combination Short Haul Truck	2	0.00E+00	6.89E-07	4.93E-08	5.71E-01	2.18E-09	6.10E-04	5.06E-07	7.10E-04	4.18E-05	1.03E-05	4.11E-05	1.46E-05	1.45E-05	8.59E-05	1.91E-06	0.00E+00	2.66E-05	1.34E-04
11	E21	80	Combination Long Haul Truck	1	0.00E+00	6.16E-07	4.13E-08	5.29E-01	2.52E-09	6.32E-04	4.69E-07	6.88E-04	4.09E-05	8.23E-06	4.25E-05	1.25E-05	1.26E-05	8.07E-05	1.76E-06	0.00E+00	2.98E-05	1.30E-04
11	E22	80	Passenger Car	133	0.00E+00	1.59E-06	1.73E-07	6.12E+00	1.11E-05	4.09E-02	3.54E-06	2.73E-04	7.30E-04	1.27E-04	3.45E-04	2.22E-04	2.28E-04	2.08E-05	3.12E-05	8.74E-09	1.17E-04	4.28E-05
11	E22	80	Passenger Truck	222	0.00E+00	3.43E-06	3.63E-07	1.41E+01	2.19E-05	7.53E-02	7.16E-06	8.09E-04	1.31E-03	2.32E-04	6.85E-04	4.46E-04	4.57E-04	1.00E-04	7.16E-05	1.94E-08	2.30E-04	1.32E-04
11	E22	80	Single Unit Short Haul Truck	13	0.00E+00	2.51E-06	1.25E-07	2.47E+00	2.02E-06	4.95E-03	2.67E-06	1.29E-03	1.58E-04	3.57E-05	3.06E-04	7.45E-05	7.56E-05	2.47E-04	9.94E-06	3.95E-09	2.30E-04	2.41E-04
11	E22	80	Single Unit Long Haul Truck	1	0.00E+00	1.09E-07	5.39E-09	1.04E-01	8.64E-08	2.05E-04	1.16E-07	5.52E-05	7.21E-06	1.58E-06	1.33E-05	3.20E-06	3.25E-06	1.04E-05	4.21E-07	1.64E-10	1.01E-05	1.03E-05
11	E22	80	Combination Short Haul Truck	12	0.00E+00	5.28E-06	3.78E-07	4.38E+00	1.67E-08	4.68E-03	3.88E-06	5.45E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.58E-04	1.46E-05	0.00E+00	2.04E-04	1.03E-03
11	E22	80	Combination Long Haul Truck	11	0.00E+00	4.72E-06	3.17E-07	4.05E+00	1.93E-08	4.85E-03	3.60E-06	5.27E-03	3.14E-04	6.31E-05	3.26E-04	9.60E-05	9.66E-05	6.19E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
11	E23	80	Passenger Car	9	0.00E+00	1.08E-07	1.17E-08	4.14E-01	7.50E-07	2.77E-03	2.40E-07	1.84E-05	4.94E-05	8.57E-06	2.33E-05	1.50E-05	1.54E-05	1.41E-06	2.11E-06	5.91E-10	7.90E-06	2.89E-06
11	E23	80	Passenger Truck	15	0.00E+00	2.32E-07	2.45E-08	9.56E-01	1.48E-06	5.09E-03	4.84E-07	5.47E-05	8.85E-05	1.57E-05	4.63E-05	3.01E-05	3.09E-05	6.76E-06	4.84E-06	1.31E-09	1.55E-05	8.93E-06
11	E23	80	Single Unit Short Haul Truck	1	0.00E+00	1.80E-07	8.91E-09	1.76E-01	1.44E-07	3.54E-04	1.91E-07	9.21E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E23	80	Combination Short Haul Truck	2	0.00E+00	6.89E-07	4.93E-08	5.71E-01	2.18E-09	6.10E-04	5.06E-07	7.10E-04	4.18E-05	1.03E-05	4.11E-05	1.46E-05	1.45E-05	8.59E-05	1.91E-06	0.00E+00	2.66E-05	1.34E-04
11	E23	80	Combination Long Haul Truck	1	0.00E+00	6.16E-07	4.13E-08	5.29E-01	2.52E-09	6.32E-04	4.69E-07	6.88E-04	4.09E-05	8.23E-06	4.25E-05	1.25E-05	1.26E-05	8.07E-05	1.76E-06	0.00E+00	2.98E-05	1.30E-04
11	E24	80	Passenger Car	133	0.00E+00	1.59E-06	1.73E-07	6.12E+00	1.11E-05	4.09E-02	3.54E-06	2.73E-04	7.30E-04	1.27E-04	3.45E-04	2.22E-04	2.28E-04	2.08E-05	3.12E-05	8.74E-09	1.17E-04	4.28E-05
11	E24	80	Passenger Truck	222	0.00E+00	3.43E-06	3.63E-07	1.41E+01	2.19E-05	7.53E-02	7.16E-06	8.09E-04	1.31E-03	2.32E-04	6.85E-04	4.46E-04	4.57E-04	1.00E-04	7.16E-05	1.94E-08	2.30E-04	1.32E-04
11	E24	80	Single Unit Short Haul Truck	13	0.00E+00	2.51E-06	1.25E-07	2.47E+00	2.02E-06	4.95E-03	2.67E-06	1.29E-03	1.58E-04	3.57E-05	3.06E-04	7.45E-05	7.56E-05	2.47E-04	9.94E-06	3.95E-09	2.30E-04	2.41E-04
11	E24	80	Single Unit Long Haul Truck	1	0.00E+00	1.09E-07	5.39E-09	1.04E-01	8.64E-08	2.05E-04	1.16E-07	5.52E-05	7.21E-06	1.58E-06	1.33E-05	3.20E-06	3.25E-06	1.04E-05	4.21E-07	1.64E-10	1.01E-05	1.03E-05
11	E24	80	Combination Short Haul Truck	12	0.00E+00	5.28E-06	3.78E-07	4.38E+00	1.67E-08	4.68E-03	3.88E-06	5.45E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.58E-04	1.46E-05	0.00E+00	2.04E-04	1.03E-03
11	E24	80	Combination Long Haul Truck	11	0.00E+00	4.72E-06	3.17E-07	4.05E+00	1.93E-08	4.85E-03	3.60E-06	5.27E-03	3.14E-04	6.31E-05	3.26E-04	9.60E-05	9.66E-05	6.19E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
10	E25	70	Passenger Car	300	0.00E+00	3.86E-06	4.18E-07	1.42E+01	2.69E-05	9.66E-02	8.58E-06	6.01E-04	2.32E-03	3.73E-04	8.33E-04	5.40E-04	5.54E-04	5.37E-05	7.23E-05	1.97E-08	2.83E-04	9.41E-05
10	E25	70	Passenger Truck	502	0.00E+00	8.48E-06	8.97E-07	3.28E+01	5.36E-05	1.79E-01	1.76E-05	1.88E-03	4.23E-03	6.88E-04	1.67E-03	1.09E-03	1.12E-03	2.44E-04	1.65E-04	4.42E-08	5.61E-04	3.10E-04
10	E25	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.10E-05	1.06E-04	4.26E-06	1.72E-09	1.23E-04	1.25E-04
10	E25	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.57E-03	2.19E-06	3.15E-03	2.27E-04	4.97E-05	1.82E-04	6.30E-05	6.28E-05	3.28E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	E25	70	Combination Long Haul Truck	5	0.00E+00	2.71E-06	1.81E-07	2.03E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.12E-05	1.88E-04	5.47E-05	5.52E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.86E-04
10	E26	70	Passenger Car	212	0.00E+00	2.73E-06	2.95E-07	1.01E+01	1.90E-05	6.82E-02	6.05E-06	4.24E-04	1.64E-03	2.63E-04	5.88E-04	3.81E-04	3.91E-04	3.79E-05	5.10E-05	1.39E-08	2.00E-04	6.64E-05
10	E26	70	Passenger Truck	354	0.00E+00	5.99E-06	6.33E-07	2.31E+01	3.78E-05	1.26E-01	1.24E-05	1.33E-03	2.98E-03	4.85E-04	1.18E-03	7.72E-04	7.90E-04	1.72E-04	1.16E-04	3.12E-08	3.96E-04	2.19E-04
10	E26	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.54E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.74E-04	6.73E-05	6.84E-05	1.77E-04	7.10E-06	2.87E-09	2.05E-04	2.08E-04
10	E26	70	Combination Short Haul Truck	9	0.00E+00	4.89E-06	3.48E-07	3.56E+00	1.59E-08	4.21E-03	3.58E-06	5.15E-03	3.71E-04	8.13E-05	2.98E-04	1.03E-04	1.03E-04	5.36E-04	1.19E-05	0.00E+00	1.95E-04	9.70E-04
10	E26	70	Combination Long Haul Truck	9	0.00E+00	4.44E-06	2.96E-07	3.31E+00	1.83E-08	4.46E-03	3.36E-06	5.08E-03	3.70E-04	6.75E-05	3.08E-04	8.94E-05	9.04E-05	5.06E-04	1.11E-05	0.00E+00	2.18E-04	9.59E-04
10	E27	70	Passenger Car	249	0.00E+00	3.21E-06	3.48E-07	1.18E+01	2.24E-05	8.04E-02	7.13E-06	4.99E-04	1.93E-03	3.10E-04	6.93E-04	4.49E-04	4.61E-04	4.47E-05	6.01E-05	1.64E-08	2.36E-04	7.83E-05
10	E27	70	Passenger Truck	418	0.00E+00	7.05E-06	7.46E-07	2.73E+01	4.45E-05	1.48E-01	1.46E-05	1.57E-03	3.51E-03	5.72E-04	1.39E-03	9.09E-04	9.32E-04	2.03E-04	1.37E-04	3.68E-08	4.66E-04	2.58E-04
10	E27	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.10E-05	1.06E-04	4.26E-06	1.72E-09	1.23E-04	1.25E-04
10	E27	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.78E+00	7.95E-09	2.11E-03	1.79E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	E27	70	Combination Long Haul Truck	4	0.00E+00	2.22E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.37E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.54E-06	0.00E+00	1.09E-04	4.79E-04
10	E28	70	Passenger Car	149	0.00E+00	1.92E-06	2.07E-07	7.07E+00	1.34E-05	4.79E-02	4.26E-06	2.98E-04	1.15E-03	1.85E-04	4.13E-04	2.68E-04	2.75E-04	2.67E-05	3.59E-05	9.80E-09	1.41E-04	4.67E-05
10	E28	70	Passenger Truck	249	0.00E+00	4.21E-06	4.45E-07	1.63E+01	2.66E-05	8.86E-02	8.72E-06	9.34E-04	2.10E-03	3.41E-04	8.31E-04	5.43E-04	5.56E-04	1.21E-04	8.17E-05	2.19E-08	2.78E-04	1.54E-04
10	E28	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.02E-07	1.59E+00	1.66E-06	3.18E-03	2.16E-06	1.00E-03	1.42E-04	2.85E-05	2.47E-04	6.06E-05	6.15E-05	1.59E-04	6.39E-06	2.59E-09	1.84E-04	1.87E-04
10	E28	70	Combination Short Haul Truck	7	0.00E+00	3.80E-06	2.71E-07	2.77E+00	1.24E-08	3.27E-03	2.79E-06	4.01E-03	2.89E-04	6.33E-05	2.32E-04	8.01E-05	7.99E-05	4.17E-04	9.23E-06	0.00E+00	1.52E-04	7.55E-04
10	E28	70	Combination Long Haul Truck	7	0.00E+00	3.45E-06	2.30E-07	2.58E+00	1.42E-08	3.47E-03	2.62E-06	3.95E-03	2.87E-04	5.25E-05	2.39E-04	6.96E-05	7.03E-05	3.93E-04	8.62E-06	0.00E+00	1.70E-04	7.46E-04
10	E29	70	Passenger Car	31	0.00E+00	3.95E-07	4.28E-08	1.46E+00	2.75E-06	9.88E-03	8.77E-07	6.14E-05	2.38E-04	3.82E-05	8.52E-05	5.52E-05	5.66E-05	5.49E-06	7.39E-06	2.02E-09	2.90E-05	9.62E-06
10	E29	70	Passenger Truck	51	0.00E+00	8.67E-07	9.17E-08	3.35E+00	5.48E-06	1.83E-02	1.80E-06	1.93E-04	4.32E-04	7.03E-05	1.71E-04	1.12E-04	1.15E-04	2.50E-05	1.68E-05	4.52E-09	5.73E-05	3.17E-05
10	E29	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E29	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	E30	70	Passenger Car	194	0.00E+00	2.51E-06	2.71E-07	9.23E+00	1.74E-05	6.26E-02	5.56E-06	3.89E-04	1.51E-03	2.42E-04	5.40E-04	3.50E-04	3.59E-04	3.48E-05	4.69E-05	1.28E-08	1.84E-04	6.10E-05
10	E30	70	Passenger Truck	326	0.00E+00	5.50E-06	5.82E-07	2.13E+01	3.47E-05	1.16E-01	1.14E-05	1.22E-03	2.74E-03	4.46E-04	1.09E-03	7.09E-04	7.26E-04	1.58E-04	1.07E-04	2.87E-08	3.64E-04	2.01E-04
10	E30	70	Single Unit Short Haul Truck	11	0.00E+00	2.48E-06	1.24E-07	1.94E+00	2.03E-06	3.89E-03	2.64E-06	1.22E-03	1.74E-04	3.48E-05	3.01E-04	7.40E-05	7.52E-05	1.94E-04	7.81E-06	3.16E-09	2.25E-04	2.29E-04
10	E30	70	Combination Short Haul Truck	7	0.00E+00	3.53E-06	2.51E-07	2.57E+00	1.15E-08	3.04E-03	2.59E-06	3.72E-03	2.68E-04	5.87E-05	2.15E-04	7.44E-05	7.42E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.01E-04
10	E30	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.22E-03	2.43E-06	3.67E-03	2.67E-04	4.87E-05	2.22E-04	6.46E-05	6.53E-05	3.65E-04	8.01E-06	0.00E+00	1.57E-04	6.92E-04
10	E31	70	Passenger Car	56	0.00E+00	7.28E-07	7.87E-08	2.68E+00	5.07E-06	1.82E-02	1.62E-06	1.13E-04	4.38E-04	7.03E-05	1.57E-04	1.02E-04	1.04E-04	1.01E-05	1.36E-05	3.72E-09	5.33E-05	1.77E-05
10	E31	70	Passenger Truck	95	0.00E+00	1.60E-06	1.69E-07	6.17E+00	1.01E-05	3.36E-02	3.31E-06	3.55E-04	7.96E-04	1.29E-04	3.15E-04	2.06E-04	2.11E-04	4.60E-05	3.10E-05	8.33E-09	1.06E-04	5.83E-05
10	E31	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.67E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	E31	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	E31	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.57E-03	2.19E-06	3.15E-03	2.27E-04	4.97E-05	1.82E-04	6.30E-05	6.28E-05	3.28E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	E31	70	Combination Long Haul Truck	5	0.00E+00	2.71E-06	1.81E-07	2.03E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.12E-05	1.88E-04	5.47E-05	5.52E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.86E-04
10	E32	70	Passenger Car	234	0.00E+00	3.02E-06	3.27E-07	1.11E+01	2.10E-05	7.55E-02	6.71E-06	4.69E-04	1.82E-03	2.92E-04	6.51E-04	4.22E-04	4.33E-04	4.20E-05	5.65E-05	1.54E-08	2.21E-04	7.36E-05
10	E32	70	Passenger Truck	393	0.00E+00	6.63E-06	7.01E-07	2.56E+01	4.19E-05	1.40E-01	1.37E-05	1.47E-03	3.30E-03	5.38E-04	1.31E-03	8.55E-04	8.76E-04	1.91E-04	1.29E-04	3.46E-08	4.38E-04	2.42E-04
10	E32	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.37E-03	4.31E-06	2.00E-03	2.85E-04	5.70E-05	4.93E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.74E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	8.79E-09	1.35E-01	1.43E-07	2.66E-04	1.88E-07	8.60E-05	1.30E-05	2.53E-06	2.15E-05	5.24E-06	5.32E-06	1.35E-05	5.43E-07	2.18E-10	1.62E-05	1.61E-05
10	E32	70	Combination Short Haul Truck	10	0.00E+00	5.43E-06	3.86E-07	3.95E+00	1.77E-08	4.68E-03	3.98E-06	5.72E-03	4.13E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.96E-04	1.32E-05	0.00E+00	2.17E-04	1.08E-03
10	E32	70	Combination Long Haul Truck	10	0.00E+00	4.93E-06	3.29E-07	3.68E+00	2.04E-08	4.96E-03	3.74E-06	5.64E-03	4.11E-04	7.50E-05	3.42E-04	9.94E-05	1.00E-04	5.62E-04	1.23E-05	0.00E+00	2.42E-04	1.07E-03
9	E33	60	Passenger Car	267	0.00E+00	3.95E-06	4.27E-07	1.33E+01	2.75E-05	9.86E-02	8.75E-06	5.44E-04	2.71E-03	4.16E-04	8.53E-04	5.51E-04	5.66E-04	5.58E-05	6.71E-05	1.85E-08	2.89E-04	8.53E-05
9	E33	60	Passenger Truck	447	0.00E+00	8.72E-06	9.

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E37	60	Passenger Car	186	0.00E+00	2.75E-06	2.97E-07	9.24E+00	1.91E-05	6.86E-02	6.09E-06	3.79E-04	1.88E-03	2.90E-04	5.94E-04	3.84E-04	3.94E-04	3.88E-05	4.67E-05	1.29E-08	2.01E-04	5.94E-05
9	E37	60	Passenger Truck	311	0.00E+00	6.07E-06	6.41E-07	2.11E+01	3.79E-05	1.22E-01	1.25E-05	1.24E-03	3.46E-03	5.37E-04	1.18E-03	7.74E-04	7.94E-04	1.65E-04	1.05E-04	2.92E-08	3.95E-04	2.05E-04
9	E37	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.04E-07	8.95E+00	1.16E-05	1.73E-02	1.50E-05	6.72E-03	1.14E-03	2.06E-04	1.70E-03	4.22E-04	4.28E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.26E-03
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	6.16E-07	3.06E-08	3.83E-01	5.03E-07	7.33E-04	6.57E-07	2.90E-04	5.12E-05	9.15E-06	7.51E-05	1.84E-05	1.87E-05	3.82E-05	1.54E-06	6.34E-10	5.62E-05	5.44E-05
9	E37	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.82E+00	5.34E-08	1.32E-02	1.12E-05	1.64E-02	1.40E-03	2.78E-04	9.61E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.09E-03
9	E37	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.83E-07	9.22E+00	6.12E-08	1.42E-02	1.05E-05	1.62E-02	1.41E-03	2.40E-04	9.87E-04	2.69E-04	2.72E-04	1.40E-03	3.08E-05	0.00E+00	7.14E-04	3.06E-03
9	E38	60	Passenger Car	498	0.00E+00	7.37E-06	7.97E-07	2.48E+01	5.13E-05	1.84E-01	1.63E-05	1.02E-03	5.05E-03	7.76E-04	1.59E-03	1.03E-03	1.06E-03	1.04E-04	1.25E-04	3.44E-08	5.40E-04	1.59E-04
9	E38	60	Passenger Truck	834	0.00E+00	1.63E-05	1.72E-06	5.65E+01	1.02E-04	3.27E-01	3.36E-05	3.31E-03	9.27E-03	1.44E-03	3.17E-03	2.08E-03	2.13E-03	4.42E-04	2.83E-04	7.83E-08	1.06E-03	5.49E-04
9	E38	60	Single Unit Short Haul Truck	45	0.00E+00	1.33E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.31E-03	1.07E-03	1.94E-04	1.60E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	E38	60	Single Unit Long Haul Truck	2	0.00E+00	5.79E-07	2.87E-08	3.60E-01	4.73E-07	6.89E-04	6.18E-07	2.73E-04	4.81E-05	8.60E-06	7.06E-05	1.73E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.12E-05
9	E38	60	Combination Short Haul Truck	32	0.00E+00	1.91E-05	1.33E-06	1.24E+01	6.76E-08	1.67E-02	1.41E-05	2.07E-02	1.77E-03	3.51E-04	1.22E-03	3.96E-04	3.96E-04	1.87E-03	4.15E-05	0.00E+00	8.17E-04	3.91E-03
9	E38	60	Combination Long Haul Truck	30	0.00E+00	1.71E-05	1.12E-06	1.17E+01	7.75E-08	1.80E-02	1.32E-05	2.05E-02	1.78E-03	3.03E-04	1.25E-03	3.40E-04	3.44E-04	1.77E-03	3.89E-05	0.00E+00	9.04E-04	3.88E-03
10	E39	70	Passenger Car	267	0.00E+00	3.44E-06	3.72E-07	1.27E+01	2.40E-05	8.60E-02	7.64E-06	5.35E-04	2.07E-03	3.32E-04	7.42E-04	4.81E-04	4.93E-04	4.78E-05	6.44E-05	1.76E-08	2.52E-04	8.38E-05
10	E39	70	Passenger Truck	447	0.00E+00	7.55E-06	7.98E-07	2.92E+01	4.77E-05	1.59E-01	1.56E-05	1.68E-03	3.76E-03	6.12E-04	1.49E-03	9.74E-04	9.97E-04	2.17E-04	1.47E-04	3.94E-08	4.99E-04	2.76E-04
10	E39	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.10E-05	1.06E-04	4.26E-06	1.72E-09	1.23E-04	1.25E-04
10	E39	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.78E+00	7.95E-09	2.11E-03	1.79E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	E39	70	Combination Long Haul Truck	4	0.00E+00	2.22E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.37E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.54E-06	0.00E+00	1.09E-04	4.79E-04
10	E40	70	Passenger Car	175	0.00E+00	2.26E-06	2.44E-07	8.31E+00	1.57E-05	5.64E-02	5.01E-06	3.50E-04	1.36E-03	2.18E-04	4.86E-04	3.15E-04	3.23E-04	3.13E-05	4.22E-05	1.15E-08	1.65E-04	5.49E-05
10	E40	70	Passenger Truck	293	0.00E+00	4.95E-06	5.23E-07	1.91E+01	3.13E-05	1.04E-01	1.03E-05	1.10E-03	2.47E-03	4.01E-04	9.77E-04	6.38E-04	6.54E-04	1.42E-04	9.60E-05	2.58E-08	3.27E-04	1.81E-04
10	E40	70	Single Unit Short Haul Truck	31	0.00E+00	7.20E-06	3.61E-07	5.64E+00	5.89E-06	1.13E-02	7.67E-06	3.56E-03	5.07E-04	1.01E-04	8.77E-04	2.15E-04	2.19E-04	5.65E-04	2.27E-05	9.19E-09	6.55E-04	6.66E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	3.14E-07	1.56E-08	2.40E-01	2.54E-07	4.73E-04	3.34E-07	1.53E-04	2.31E-05	4.51E-06	3.83E-05	9.31E-06	9.46E-06	2.39E-05	9.65E-07	3.87E-10	2.87E-05	2.86E-05
10	E40	70	Combination Short Haul Truck	21	0.00E+00	1.09E-05	7.73E-07	7.90E+00	3.53E-08	9.36E-03	7.96E-06	1.14E-02	8.25E-04	1.81E-04	6.63E-04	2.29E-04	2.28E-04	1.19E-03	2.64E-05	0.00E+00	4.34E-04	2.16E-03
10	E40	70	Combination Long Haul Truck	19	0.00E+00	9.86E-06	6.57E-07	7.37E+00	4.07E-08	9.91E-03	7.47E-06	1.13E-02	8.21E-04	1.50E-04	6.84E-04	1.99E-04	2.01E-04	1.12E-03	2.46E-05	0.00E+00	4.84E-04	2.13E-03
10	E41	70	Passenger Car	221	0.00E+00	2.85E-06	3.09E-07	1.05E+01	1.99E-05	7.13E-02	6.33E-06	4.43E-04	1.72E-03	2.75E-04	6.15E-04	3.98E-04	4.09E-04	3.97E-05	5.34E-05	1.46E-08	2.09E-04	6.95E-05
10	E41	70	Passenger Truck	371	0.00E+00	6.26E-06	6.62E-07	2.42E+01	3.95E-05	1.32E-01	1.30E-05	1.39E-03	3.12E-03	5.08E-04	1.24E-03	8.07E-04	8.27E-04	1.80E-04	1.21E-04	3.26E-08	4.14E-04	2.29E-04
10	E41	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.06E-01	7.36E-07	1.42E-03	9.59E-07	4.45E-04	6.33E-05	1.27E-05	1.10E-04	2.69E-05	2.73E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.32E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E41	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E42	70	Passenger Car	217	0.00E+00	2.79E-06	3.02E-07	1.03E+01	1.95E-05	6.99E-02	6.20E-06	4.34E-04	1.68E-03	2.70E-04	6.02E-04	3.90E-04	4.01E-04	3.89E-05	5.23E-05	1.43E-08	2.05E-04	6.81E-05
10	E42	70	Passenger Truck	363	0.00E+00	6.13E-06	6.49E-07	2.37E+01	3.87E-05	1.29E-01	1.27E-05	1.36E-03	3.06E-03	4.97E-04	1.21E-03	7.91E-04	8.10E-04	1.77E-04	1.19E-04	3.20E-08	4.06E-04	2.24E-04
10	E42	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.82E-01	9.21E-07	1.77E-03	1.20E-06	5.56E-04	7.91E-05	1.58E-05	1.37E-04	3.37E-05	3.42E-05	8.83E-05	3.55E-06	1.44E-09	1.02E-04	1.04E-04
10	E42	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.09E-04	6.78E-05	2.48E-04	8.59E-05	8.56E-05	4.47E-04	9.89E-06	0.00E+00	1.63E-04	8.09E-04
10	E42	70	Combination Long Haul Truck	7	0.00E+00	3.70E-06	2.46E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.62E-05	2.56E-04	7.45E-05	7.53E-05	4.21E-04	9.24E-06	0.00E+00	1.82E-04	7.99E-04
10	E43	70	Passenger Car	220	0.00E+00	2.83E-06	3.07E-07	1.04E+01	1.97E-05	7.08E-02	6.29E-06	4.40E-04	1.70E-03	2.74E-04	6.11E-04	3.96E-04	4.06E-04	3.94E-05	5.30E-05	1.45E-08	2.08E-04	6.90E-05
10	E43	70	Passenger Truck	368	0.00E+00	6.22E-06	6.58E-07	2.40E+01	3.93E-05	1.31E-01	1.29E-05	1.38E-03	3.10E-03	5.04E-04	1.23E-03	8.02E-04	8.21E-04	1.79E-04	1.21E-04	3.24E-08	4.11E-04	2.27E-04
10	E43	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.90E-08	1.23E+00	1.29E-06	2.48E-03	1.68E-06	7.78E-04	1.11E-04	2.22E-05	1.92E-04	4.71E-05	4.79E-05	1.24E-04	4.97E-06	2.01E-09	1.43E-04	1.46E-04
10	E43	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E43	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E44	70	Passenger Car	164	0.00E+00	2.12E-06	2.29E-07	7.80E+00	1.47E-05	5.29E-02	4.70E-06	3.29E-04	1.27E-03	2.04E-04	4.56E-04	2.95E-04	3.03E-04	2.94E-05	3.96E-05	1.08E-08	1.55E-04	5.15E-05
10	E44	70	Passenger Truck	275	0.00E+00	4.64E-06	4.91E-07	1.79E+01	2.93E-05	9.77E-02	9.62E-06	1.03E-03	2.31E-03	3.76E-04	9.16E-04	5.99E-04	6.13E-04	1.34E-04	9.01E-05	2.42E-08	3.07E-04	1.70E-04
10	E44	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E44	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.98E+00	8.83E-09	2.34E-03	1.99E-06	2.86E-03	2.06E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.98E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E44	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.05E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.33E-04
11	E45	80	Passenger Car	75	0.00E+00	9.02E-07	9.77E-08	3.47E+00	6.28E-06	2.32E-02	2.01E-06	1.54E-04	4.13E-04	7.18E-05	1.95E-04	1.26E-04	1.29E-04	1.18E-05	1.76E-05	4.95E-09	6.62E-05	2.42E-05
11	E45	80	Passenger Truck	126	0.00E+00	1.94E-06	2.06E-07	8.01E+00	1.24E-05	4.26E-02	4.06E-06	4.58E-04	7.41E-04	1.31E-04	3.88E-04	2.52E-04	2.59E-04	5.66E-05	4.06E-05	1.10E-08	1.30E-04	7.48E-05
11	E45	80	Single Unit Short Haul Truck	37	0.00E+00	7.00E-06	3.48E-07	6.87E+00	5.63E-06	1.38E-02	7.45E-06	3.59E-03	4.40E-04	9.95E-05	8.52E-04	2.08E-04	2.11E-04	6.89E-04	2.77E-05	1.10E-08	6.41E-04	6.72E-04
11	E45	80	Single Unit Long Haul Truck	2	0.00E+00	3.04E-07	1.50E-08	2.91E-01	2.41E-07	5.72E-04	3.24E-07	1.54E-04	2.01E-05	4.39E-06	3.72E-05	8.92E-06	9.06E-06	2.90E-05	1.17E-06	4.58E-10	2.81E-05	2.87E-05
11	E45	80	Combination Short Haul Truck	20	0.00E+00	8.95E-06	6.40E-07	7.42E+00	2.83E-08	7.93E-03	6.57E-06	9.24E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.74E-03
11	E45	80	Combination Long Haul Truck	19	0.00E+00	8.01E-06	5.37E-07	6.87E+00	3.27E-08	8.22E-03	6.10E-06	8.94E-03	5.32E-04	1.07E-04	5.53E-04	1.63E-04	1.64E-04	1.05E-03	2.29E-05	0.00E+00	3.88E-04	1.68E-03
11	E46	80	Passenger Car	233	0.00E+00	2.79E-06	3.02E-07	1.07E+01	1.94E-05	7.17E-02	6.21E-06	4.78E-04	1.28E-03	2.22E-04	6.05E-04	3.90E-04	4.00E-04	3.64E-05	5.46E-05	1.53E-08	2.05E-04	7.49E-05
11	E46	80	Passenger Truck	389	0.00E+00	6.00E-06	6.36E-07	2.48E+01	3.84E-05	1.32E-01	1.25E-05	1.42E-03	2.29E-03	4.07E-04	1.20E-03	7.81E-04	8.01E-04	1.75E-04	1.25E-04	3.41E-08	4.02E-04	2.32E-04
11	E46	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.14E-03	5.08E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.20E-05	1.27E-08	7.40E-04	7.76E-04
11	E46	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.60E-04	3.74E-07	1.77E-04	2.32E-05	5.06E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.32E-05
11	E46	80	Combination Short Haul Truck	22	0.00E+00	9.64E-06	6.90E-07	7.99E+00	3.05E-08	8.54E-03	7.08E-06	9.95E-03	5.85E-04	1.44E-04	5.75E-04	2.04E-04	2.03E-04	1.20E-03	2.67E-05	0.00E+00	3.73E-04	1.87E-03
11	E46	80	Combination Long Haul Truck	20	0.00E+00	8.62E-06	5.79E-07	7.40E+00	3.52E-08	8.85E-03	6.57E-06	9.63E-03	5.73E-04	1.15E-04	5.95E-04	1.75E-04	1.76E-04	1.13E-03	2.47E-05	0.00E+00	4.17E-04	1.81E-03
11	E47	80	Passenger Car	65	0.00E+00	7.76E-07	8.41E-08	2.98E+00	5.41E-06	1.99E-02	1.73E-06	1.33E-04	3.56E-04	6.18E-05	1.68E-04	1.08E-04	1.11E-04	1.01E-05	1.52E-05	4.26E-09	5.70E-05	2.08E-05
11	E47	80	Passenger Truck	108	0.00E+00	1.67E-06	1.77E-07	6.89E+00	1.07E-05	3.67E-02	3.49E-06	3.94E-04	6.38E-04	1.13E-04	3.34E-04	2.17E-04	2.23E-04	4.87E-05	3.49E-05	9.48E-09	1.12E-04	6.44E-05
11	E47	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.18E-03	1.72E-06	8.28E-04	1.02E-04	2.30E-05	1.97E-04	4.79E-05	4.86E-05	1.59E-04	6.39E-06	2.54E-09	1.48E-04	1.55E-04
11	E47	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.52E+00	5.80E-09	1.63E-03	1.35E-06	1.89E-03	1.11E-04	2.74E-05	1.09E-04	3.88E-05	3.86E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.57E-04
11	E47	80	Combination Long Haul Truck	4	0.00E+00	1.64E-06	1.10E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.46E-04
11	E48	80	Passenger Car	219	0.00E+00	2.63E-06	2.85E-07	1.01E+01	1.83E-05	6.77E-02	5.86E-06	4.51E-04	1.21E-03	2.10E-04	5.71E-04	3.68E-04	3.77E-04	3.44E-05	5.15E-05	1.44E-08	1.93E-04	7.07E-05
11	E48	80	Passenger Truck	368	0.00E+00	5.67E-06	6.00E-07	2.34E+01	3.62E-05	1.25E-01	1.18E-05	1.34E-03	2.16E-03	3.84E-04	1.13E-03	7.37E-04	7.55E-04	1.65E-04	1.18E-04	3.22E-08	3.80E-04	2.18E-04
11	E48	80	Single Unit Short Haul Truck	38	0.00E+00	7.18E-06	3.56E-07	7.04E+00	5.78E-06	1.42E-02	7.64E-06	3.68E-03	4.51E-04	1.02E-04	8.74E-04	2.13E-04	2.16E-04	7.07E-04	2.84E-05	1.13E-08	6.58E-04	6.90E-04
11	E48	80	Single Unit Long Haul Truck	2	0.00E+00	3.12E-07	1.54E-08	2.98E-01	2.47E-07	5.87E-04	3.32E-07	1.58E-04	2.06E-05	4.50E-06	3.81E-05	9.15E-06	9.29E-06	2.98E-05	1.20E-06	4.69E-10	2.88E-05	2.95E-05
11	E48	80	Combination Short Haul Truck	19	0.00E+00	8.49E-06	6.07E-07	7.04E+00	2.68E-08	7.53E-03	6.24E-06	8.76E-03	5.15E-04	1.27E-04	5.06E-04	1.80E-04	1.78E-04	1.06E-03	2.35E-05	0.00E+00	3.28E-04	1.65E-03
11	E48	80	Combination Long Haul Truck	18	0.00E+00	7.60E-06	5.10E-07	6.52E+00	3.10E-08	7.79E-03	5.78E-06	8.48E-03	5.05E-04	1.01E-04	5.25E-04	1.54E-04	1.55E-04	9.95E-04	2.18E-05	0.00E+00	3.68E-04	1.60E-03
11	E49	80	Passenger Car	56	0.00E+00	6.68E-07	7.24E-08	2.57E+00	4.66E-06	1.72E-02	1.49E-06	1.15E-04	3.06E-04	5.32E-05	1.45E-04	9.33E-05	9.58E-05	8.73E-06	1.31E-05	3.67E-09	4.91E-05	1.80E-05
11	E49	80	Passenger Truck	93	0.00E+00	1.44E-06	1.52E-07	5.93E+00	9.20E-06	3.16E-02	3.01E-06	3.39E-04	5.49E-04	9.74E-05	2.88E-04	1.87E-04	1.92E-04	4.20E-05	3.01E-05	8.16E-09	9.64E-05	5.55E-05
11	E49	80	Single Unit Short Haul Truck	3	0.00E+00	5.39E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.60E-05	1.62E-05	5.30E-05	2.13E-06	8.46E-10	4.93E-05	5.17E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.85E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.42E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.68E-04
11	E49	80	Combination Long Haul Truck	3	0.00E+00	1.23E-06	8.27E-08	1.06E+00	5.03E-09	1.26E-03	9.38E-07	1.38E-03	8.19E-05	1.65E-05	8.51E-05	2.50E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	E50	80	Passenger Car	204	0.00E+00	2.45E-06	2.65E-07	9.41E+00	1.71E-05	6.29E-02	5.45E-06	4.20E-04	1.12E-03	1.95E-04	5.31E-04	3.42E-04	3.51E-04	3.20E-05	4.79E-05	1.34E-08	1.80E-04	6.58E-05
11	E50	80	Passenger Truck	342	0.00E+00	5.27E-06	5.58E-07	2.17E+01	3.37E-05	1.16E-01	1.10E-05	1.24E-03	2.01E-03	3.57E-04	1.05E-03	6.86E-04	7.03E-04	1.54E-04	1.10E-04	2.99E-08	3.53E-04	2.03E-04
11	E50	80	Single Unit Short Haul Truck	45	0.00E+00	8.44E-06	4.19E-07	8.28E+00	6.79E-06	1.66E-02	8.98E-06	4.33E-03	5.30E-04	1.20E-04	1.03E-03	2.50E-04	2.54E-04	8.30E-04	3.34E-05	1.33E-08	7.73E-04	8.10E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	3.67E-07	1.81E-08	3.50E-01	2.90E-07	6.89E-04	3.90E-07	1.85E-04	2.42E-05	5.29E-06	4.48E-05	1.08E-05	1.09E-05	3.50E-05	1.41E-06	5.51E-10	3.39E-05	3.46E-05
11	E50	80	Combination Short Haul Truck	36	0.00E+00	1.58E-05	1.13E-06	1.31E+01	5.00E-08	1.40E-02	1.16E-05	1.63E-02	9.60E-04	2.37E-04	9.44E-04	3.35E-04	3.33E-04	1.97E-03	4.39E-05	0.00E+00	6.13E-04	3.08E-03
11	E50	80	Combination Long Haul Truck	33	0.00E+00	1.42E-05	9.51E-07	1.22E+01	5.79E-08	1.45E-02	1.08E-05	1.58E-02	9.42E-04	1.89E-04	9.78E-04	2.88E-04	2.90E-04	1.86E-03	4.06E-05	0.00E+00	6.86E-04	2.98E-03
11	E51	80	Passenger Car	15	0.00E+00	1.84E-07	1.99E-08	7.07E-01	1.28E-06	4.73E-03	4.09E-07	3.15E-05	8.43E-05	1.46E-05	3.99E-05	2.57E-05	2.64E-05	2.40E-06	3.60E-06	1.01E-09	1.35E-05	4.94E-06
11	E51	80	Passenger Truck	26	0.00E+00	3.96E-07	4.19E-08	1.63E+00	2.53E-06	8.70E-03	8.27E-07	9.34E-05	1.51E-04	2.68E-05	7.92E-05	5.15E-05	5.28E-05	1.16E-05	8.27E-06	2.25E-09	2.65E-05	1.53E-05
11	E51	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.03E-04	1.69E-07	2.37E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.86E-05	6.36E-07	0.00E+00	8.88E-06	4.46E-05
11	E52	80	Passenger Car	214	0.00E+00	2.57E-06	2.78E-07	9.86E+00	1.79E-05	6.59E-02	5.71E-06	4.40E-04	1.18E-03	2.04E-04	5.56E-04	3.58E-04	3.68E-04	3.35E-05	5.02E-05	1.41E-08	1.88E-04	6.89E-05
11	E52	80	Passenger Truck	358	0.00E+00	5.52E-06	5.85E-07	2.28E+01	3.53E-05	1.21E-01	1.15E-05	1.30E-03	2.11E-03	3.74E-04	1.10E-03	7.18E-04	7.36E-04	1.61E-04	1.15E-04	3.13E-08	3.70E-04	2.13E-04
11	E52	80	Single Unit Short Haul Truck	48	0.00E+00	8.98E-06

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E56	80	Passenger Truck	658	0.00E+00	1.01E-05	1.07E-06	4.19E+01	6.49E-05	2.23E-01	2.12E-05	2.39E-03	3.88E-03	6.87E-04	2.03E-03	1.32E-03	1.35E-03	2.96E-04	2.12E-04	5.76E-08	6.80E-04	3.91E-04
11	E56	80	Single Unit Short Haul Truck	50	0.00E+00	9.34E-06	4.63E-07	9.16E+00	7.51E-06	1.84E-02	9.93E-06	4.79E-03	5.87E-04	1.33E-04	1.14E-03	2.77E-04	2.81E-04	9.19E-04	3.69E-05	1.47E-08	8.55E-04	8.96E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	4.06E-07	2.00E-08	3.87E-01	3.21E-07	7.63E-04	4.32E-07	2.05E-04	2.68E-05	5.85E-06	4.95E-05	1.19E-05	1.21E-05	3.87E-05	1.56E-06	6.10E-10	3.75E-05	3.83E-05
11	E56	80	Combination Short Haul Truck	39	0.00E+00	1.70E-05	1.21E-06	1.41E+01	5.37E-08	1.51E-02	1.25E-05	1.75E-02	1.03E-03	2.54E-04	1.01E-03	3.59E-04	3.57E-04	2.12E-03	4.71E-05	0.00E+00	6.57E-04	3.30E-03
11	E56	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.30E+01	6.21E-08	1.56E-02	1.16E-05	1.70E-02	1.01E-03	2.03E-04	1.05E-03	3.09E-04	3.11E-04	1.99E-03	4.35E-05	0.00E+00	7.35E-04	3.20E-03
10	E57	70	Passenger Car	262	0.00E+00	3.38E-06	3.65E-07	1.24E+01	2.35E-05	8.45E-02	7.50E-06	5.25E-04	2.03E-03	3.26E-04	7.28E-04	4.72E-04	4.84E-04	4.70E-05	6.32E-05	1.73E-08	2.48E-04	8.23E-05
10	E57	70	Passenger Truck	439	0.00E+00	7.41E-06	7.84E-07	2.87E+01	4.68E-05	1.56E-01	1.54E-05	1.65E-03	3.69E-03	6.01E-04	1.46E-03	9.56E-04	9.79E-04	2.13E-04	1.44E-04	3.86E-08	4.90E-04	2.71E-04
10	E57	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.02E-07	1.59E+00	1.66E-06	3.18E-03	2.16E-06	1.00E-03	1.42E-04	2.85E-05	2.47E-04	6.06E-05	6.15E-05	1.59E-04	6.39E-06	2.59E-09	1.84E-04	1.87E-04
10	E57	70	Combination Short Haul Truck	6	0.00E+00	3.26E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.87E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	E57	70	Combination Long Haul Truck	6	0.00E+00	2.96E-06	1.97E-07	2.21E+00	1.22E-08	2.97E-03	2.24E-06	3.39E-03	2.46E-04	4.50E-05	2.05E-04	5.96E-05	6.03E-05	3.37E-04	7.39E-06	0.00E+00	1.45E-04	6.39E-04
10	E58	70	Passenger Car	196	0.00E+00	2.53E-06	2.74E-07	9.32E+00	1.76E-05	6.32E-02	5.62E-06	3.93E-04	1.52E-03	2.44E-04	5.45E-04	3.53E-04	3.63E-04	3.52E-05	4.73E-05	1.29E-08	1.85E-04	6.16E-05
10	E58	70	Passenger Truck	329	0.00E+00	5.55E-06	5.87E-07	2.15E+01	3.51E-05	1.17E-01	1.15E-05	1.23E-03	2.77E-03	4.50E-04	1.10E-03	7.16E-04	7.33E-04	1.60E-04	1.08E-04	2.89E-08	3.67E-04	2.03E-04
10	E58	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.72E-03	4.55E-06	2.11E-03	3.01E-04	6.02E-05	5.21E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.46E-09	3.89E-04	3.95E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.98E-07	9.07E-05	1.37E-05	2.68E-06	2.27E-05	5.53E-06	5.62E-06	1.42E-05	5.73E-07	2.30E-10	1.71E-05	1.70E-05
10	E58	70	Combination Short Haul Truck	12	0.00E+00	6.25E-06	4.44E-07	4.54E+00	2.03E-08	5.38E-03	4.58E-06	6.58E-03	4.75E-04	1.04E-04	3.81E-04	1.32E-04	1.31E-04	6.85E-04	1.52E-05	0.00E+00	2.50E-04	1.24E-03
10	E58	70	Combination Long Haul Truck	11	0.00E+00	5.67E-06	3.78E-07	4.24E+00	2.34E-08	5.70E-03	4.30E-06	6.49E-03	4.72E-04	8.62E-05	3.93E-04	1.14E-04	1.15E-04	6.46E-04	1.42E-05	0.00E+00	2.79E-04	1.22E-03
11	E59	80	Passenger Car	199	0.00E+00	2.38E-06	2.58E-07	9.15E+00	1.66E-05	6.12E-02	5.30E-06	4.08E-04	1.09E-03	1.90E-04	5.16E-04	3.33E-04	3.41E-04	3.11E-05	4.66E-05	1.31E-08	1.75E-04	6.40E-05
11	E59	80	Passenger Truck	332	0.00E+00	5.13E-06	5.43E-07	2.11E+01	3.28E-05	1.13E-01	1.07E-05	1.21E-03	1.96E-03	3.47E-04	1.03E-03	6.67E-04	6.83E-04	1.50E-04	1.07E-04	2.91E-08	3.44E-04	1.98E-04
11	E59	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.18E-03	1.72E-06	8.28E-04	1.02E-04	2.30E-05	1.97E-04	4.79E-05	4.86E-05	1.59E-04	6.39E-06	2.54E-09	1.48E-04	1.55E-04
11	E59	80	Single Unit Long Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.61E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.31E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.91E-04
11	E59	80	Combination Short Haul Truck	6	0.00E+00	2.26E-06	1.52E-07	1.94E+00	9.23E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.02E-05	1.56E-04	4.59E-05	4.62E-05	2.96E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	E59	80	Combination Long Haul Truck	5	0.00E+00	2.26E-06	1.52E-07	1.94E+00	9.23E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.02E-05	1.56E-04	4.59E-05	4.62E-05	2.96E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	E60	80	Passenger Car	147	0.00E+00	1.76E-06	1.91E-07	6.78E+00	1.23E-05	4.53E-02	3.92E-06	3.02E-04	8.08E-04	1.40E-04	3.82E-04	2.46E-04	2.53E-04	2.30E-05	3.45E-05	9.67E-09	1.29E-04	4.73E-05
11	E60	80	Passenger Truck	246	0.00E+00	3.79E-06	4.02E-07	1.57E+01	2.43E-05	8.34E-02	7.93E-06	8.95E-04	1.45E-03	2.57E-04	7.59E-04	4.93E-04	5.06E-04	1.11E-04	7.93E-05	2.15E-08	2.54E-04	1.46E-04
11	E60	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.60E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.92E-05	7.02E-05	2.30E-04	9.23E-06	3.67E-09	2.14E-04	2.24E-04
11	E60	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.13E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.02E-06	9.67E-06	3.90E-07	1.53E-10	9.37E-06	9.58E-06
11	E60	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.79E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.14E-04
11	E60	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
11	E61	80	Passenger Car	199	0.00E+00	2.38E-06	2.58E-07	9.15E+00	1.66E-05	6.12E-02	5.30E-06	4.08E-04	1.09E-03	1.90E-04	5.16E-04	3.33E-04	3.41E-04	3.11E-05	4.66E-05	1.31E-08	1.75E-04	6.40E-05
11	E61	80	Passenger Truck	332	0.00E+00	5.13E-06	5.43E-07	2.11E+01	3.28E-05	1.13E-01	1.07E-05	1.21E-03	1.96E-03	3.47E-04	1.03E-03	6.67E-04	6.83E-04	1.50E-04	1.07E-04	2.91E-08	3.44E-04	1.98E-04
11	E61	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.18E-03	1.72E-06	8.28E-04	1.02E-04	2.30E-05	1.97E-04	4.79E-05	4.86E-05	1.59E-04	6.39E-06	2.54E-09	1.48E-04	1.55E-04
11	E61	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.61E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.31E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.91E-04
11	E61	80	Combination Long Haul Truck	5	0.00E+00	2.26E-06	1.52E-07	1.94E+00	9.23E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.02E-05	1.56E-04	4.59E-05	4.62E-05	2.96E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	E62	80	Passenger Car	147	0.00E+00	1.76E-06	1.91E-07	6.78E+00	1.23E-05	4.53E-02	3.92E-06	3.02E-04	8.08E-04	1.40E-04	3.82E-04	2.46E-04	2.53E-04	2.30E-05	3.45E-05	9.67E-09	1.29E-04	4.73E-05
11	E62	80	Passenger Truck	246	0.00E+00	3.79E-06	4.02E-07	1.57E+01	2.43E-05	8.34E-02	7.93E-06	8.95E-04	1.45E-03	2.57E-04	7.59E-04	4.93E-04	5.06E-04	1.11E-04	7.93E-05	2.15E-08	2.54E-04	1.46E-04
11	E62	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.60E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.92E-05	7.02E-05	2.30E-04	9.23E-06	3.67E-09	2.14E-04	2.24E-04
11	E62	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.13E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.02E-06	9.67E-06	3.90E-07	1.53E-10	9.37E-06	9.58E-06
11	E62	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.79E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.14E-04
11	E62	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
10	E63	70	Passenger Car	837	0.00E+00	1.08E-05	1.17E-06	3.98E+01	7.51E-05	2.70E-01	2.40E-05	1.68E-03	6.49E-03	1.04E-03	2.33E-03	1.51E-03	1.55E-03	1.50E-04	2.02E-04	5.51E-08	7.91E-04	2.63E-04
10	E63	70	Passenger Truck	1403	0.00E+00	2.37E-05	2.51E-06	9.16E+01	1.50E-04	4.99E-01	4.91E-05	5.26E-03	1.18E-02	1.92E-03	4.68E-03	3.05E-03	3.13E-03	6.82E-04	4.60E-04	1.23E-07	1.57E-03	8.65E-04
10	E63	70	Single Unit Short Haul Truck	78	0.00E+00	1.82E-05	9.14E-07	1.43E+01	1.49E-05	2.87E-02	1.94E-05	9.01E-03	1.28E-03	2.56E-04	2.22E-03	5.45E-04	5.54E-04	1.43E-03	5.75E-05	2.33E-08	1.66E-03	1.69E-03
10	E63	70	Single Unit Long Haul Truck	3	0.00E+00	7.95E-07	3.95E-08	6.06E-01	6.43E-07	1.20E-03	8.46E-07	3.87E-04	5.85E-05	1.14E-05	9.69E-05	2.36E-05	2.40E-05	6.05E-05	2.44E-06	9.79E-10	7.27E-05	7.25E-05
10	E63	70	Combination Short Haul Truck	52	0.00E+00	2.72E-05	1.93E-06	1.98E+01	8.83E-08	2.34E-02	1.99E-05	2.86E-02	2.06E-03	4.52E-04	1.66E-03	5.72E-04	5.71E-04	2.98E-03	6.60E-05	0.00E+00	1.09E-03	5.39E-03
10	E63	70	Combination Long Haul Truck	48	0.00E+00	2.46E-05	1.64E-06	1.84E+01	1.02E-07	2.48E-02	1.87E-05	2.82E-02	2.05E-03	3.75E-04	1.71E-03	4.97E-04	5.02E-04	2.81E-03	6.16E-05	0.00E+00	1.21E-03	5.33E-03
10	E64	70	Passenger Car	456	0.00E+00	5.88E-06	6.36E-07	2.17E+01	4.09E-05	1.47E-01	1.31E-05	9.14E-04	3.54E-03	5.68E-04	1.27E-03	8.21E-04	8.43E-04	8.17E-05	1.10E-04	3.00E-08	4.31E-04	1.43E-04
10	E64	70	Passenger Truck	764	0.00E+00	1.29E-05	1.36E-06	4.99E+01	8.15E-05	2.72E-01	2.67E-05	2.86E-03	6.43E-03	1.05E-03	2.55E-03	1.66E-03	1.70E-03	3.71E-04	2.50E-04	6.73E-08	8.53E-04	4.71E-04
10	E64	70	Single Unit Short Haul Truck	53	0.00E+00	1.24E-05	6.20E-07	9.70E+00	1.01E-05	1.95E-02	1.32E-05	6.12E-03	8.71E-04	1.74E-04	1.51E-03	3.70E-04	3.76E-04	9.72E-04	3.91E-05	1.58E-08	1.13E-03	1.14E-03
10	E64	70	Single Unit Long Haul Truck	2	0.00E+00	5.40E-07	2.68E-08	4.12E-01	4.37E-07	8.13E-04	5.74E-07	2.63E-04	3.98E-05	7.74E-06	6.58E-05	1.60E-05	1.63E-05	4.11E-05	1.66E-06	6.65E-10	4.94E-05	4.92E-05
10	E64	70	Combination Short Haul Truck	34	0.00E+00	1.77E-05	1.26E-06	1.28E+01	5.74E-08	1.52E-02	1.29E-05	1.86E-02	1.34E-03	2.94E-04	1.08E-03	3.72E-04	3.71E-04	1.94E-03	4.29E-05	0.00E+00	7.05E-04	3.50E-03
10	E64	70	Combination Long Haul Truck	31	0.00E+00	1.60E-05	1.07E-06	1.20E+01	6.61E-08	1.61E-02	1.21E-05	1.83E-02	1.33E-03	2.44E-04	1.11E-03	3.23E-04	3.26E-04	1.83E-03	4.00E-05	0.00E+00	7.87E-04	3.46E-03
10	E65	70	Passenger Car	895	0.00E+00	1.15E-05	1.25E-06	4.25E+01	8.03E-05	2.88E-01	2.56E-05	1.79E-03	6.94E-03	1.11E-03	2.49E-03	1.61E-03	1.65E-03	1.60E-04	2.16E-04	5.89E-08	8.45E-04	2.81E-04
10	E65	70	Passenger Truck	1499	0.00E+00	2.53E-05	2.68E-06	9.78E+01	1.60E-04	5.33E-01	5.25E-05	5.62E-03	1.26E-02	2.05E-03	5.00E-03	3.26E-03	3.34E-03	7.29E-04	4.91E-04	1.32E-07	1.67E-03	9.24E-04
10	E65	70	Single Unit Short Haul Truck	77	0.00E+00	1.80E-05	9.02E-07	1.41E+01	1.47E-05	2.83E-02	1.92E-05	8.90E-03	1.27E-03	2.53E-04	2.19E-03	5.38E-04	5.47E-04	1.41E-03	5.68E-05	2.30E-08	1.64E-03	1.66E-03
10	E65	70	Single Unit Long Haul Truck	3	0.00E+00	7.85E-07	3.90E-08	5.99E-01	6.35E-07	1.18E-03	8.35E-07	3.82E-04	5.78E-05	1.13E-05	9.57E-05	2.33E-05	2.37E-05	5.98E-05	2.41E-06	9.67E-10	7.18E-05	7.16E-05
10	E65	70	Combination Short Haul Truck	51	0.00E+00	2.66E-05	1.89E-06	1.94E+01	8.66E-08	2.29E-02	1.95E-05	2.80E-02	2.02E-03	4.43E-04	1.62E-03	5.61E-04	5.60E-04	2.92E-03	6.46E-05	0.00E+00	1.06E-03	5.28E-03
10	E65	70	Combination Long Haul Truck	47	0.00E+00	2.41E-05	1.61E-06	1.80E+01	9.97E-08	2.43E-02	1.83E-05	2.77E-02	2.01E-03	3.67E-04	1.67E-03	4.87E-04	4.92E-04	2.75E-03	6.04E-05	0.00E+00	1.19E-03	5.22E-03
10	E66	70	Passenger Car	500	0.00E+00	6.45E-06	6.98E-07	2.38E+01	4.49E-05	1.61E-01	1.43E-05	1.00E-03	3.88E-03	6.23E-04	1.39E-03	9.00E-04	9.24E-04	8.96E-05	1.21E-04	3.29E-08	4.72E-04	1.57E-04
10	E66	70	Passenger Truck	838	0.00E+00	1.41E-05	1.50E-06	5.47E+01	8.94E-05	2.98E-01	2.93E-05	3.14E-03	7.05E-03	1.15E-03	2.79E-03	1.82E-03	1.87E-03	4.07E-04	2.75E-04	7.38E-08	9.35E-04	5.17E-04
10	E66	70	Single Unit Short Haul Truck	57	0.00E+00	1.33E-05	6.66E-07	1.04E+01	1.09E-05	2.09E-02	1.41E-05	6.56E-03	9.34E-04	1.87E-04	1.62E-03	3.97E-04	4.03E-04	1.04E-03	4.19E-05	1.70E-08	1.21E-03	1.23E-03
10	E66	70	Single Unit Long Haul Truck	2	0.00E+00	5.79E-07	2.88E-08	4.42E-01	4.69E-07	8.72E-04	6.16E-07	2.82E-04	4.26E-05	8.31E-06	7.06E-05	1.72E-05	1.74E-05	4.41E-05	1.78E-06	7.13E-10	5.30E-05	5.28E-05
10	E66	70	Combination Short Haul Truck	36	0.00E+00	1.87E-05	1.33E-06	1.36E+01	6.10E-08	1.61E-02	1.37E-05	1.97E-02	1.42E-03	3.12E-04	1.14E-03	3.95E-04	3.94E-04	2.06E-03	4.55E-05	0.00E+00	7.49E-04	3.72E-03
10	E66	70	Combination Long Haul Truck	33	0.00E+00	1.70E-05	1.13E-06	1.27E+01	7.02E-08	1.71E-02	1.29E-05	1.95E-02	1.42E-03	2.59E-04	1.18E-03	3.43E-04	3.46E-04	1.94E-03	4.25E-05	0.00E+00	8.36E-04	3.67E-03
11	E67	80	Passenger Car	319	0.00E+00	3.83E-06	4.15E-07	1.47E+01	2.67E-05	9.84E-02	8.52E-06	6.56E-04	1.76E-03	3.05E-04	8.30E-04	5.35E-04	5.49E-04	5.00E-05	7.49E-05	2.10E-08	2.81E-04	1.03E-04
11	E67	80	Passenger Truck	535	0.00E+00	8.24E-06	8.73E-07	3.40E+01	5.27E-05	1.81E-01	1.72E-05	1.95E-03	3.15E-03	5.58E-04	1.65E-03	1.07E-03	1.10E-03	2.41E-04	1.72E-04	4.68E-08	5.53E-04	3.18E-04
11	E67	80	Single Unit Short Haul Truck	31	0.00E+00	5.75E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.95E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.02E-09	5.26E-04	5.52E-04
11	E67	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.98E-07	4.69E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.43E-06	2.38E-05	9.61E-07	3.75E-10	2.31E-05	2.36E-05
11	E67	80	Combination Short Haul Truck	19	0.00E+00	8.26E-06	5.91E-07	6.85E+00	2.61E-08	7.32E-03	6.07E-06	8.53E-03	5.01E-04	1.23E-04	4.93E-04	1.75E-04	1.74E-04	1.03E-03	2.29E-05	0.00E+00	3.20E-04	1.61E-03
11	E67	80	Combination Long Haul Truck	17	0.00E+00	7.39E-06	4.96E-07	6.34E+00	3.02E-08	7.58E-03	5.63E-06	8.25E-03	4.91E-04	9.87E-05	5.10E-04	1.50E-04	1.51E-04	9.68E-04	2.12E-05	0.00E+00	3.58E-04	1.55E-03
11	E68	80	Passenger Car	352	0.00E+00	4.22E-06	4.57E-07	1.62E+01	2.94E-05	1.08E-01	9.39E-06	7.23E-04	1.94E-03	3.36E-04	9.15E-04	5.89E-04	6.05E-04	5.51E-05	8.26E-05	2.32E-08	3.10E-04	1.13E-04
11	E68	80	Passenger Truck	589	0.00E+00	9.08E-06	9.62E-07	3.75E+01	5.81E-05	2.00E-01	1.90E-05	2.14E-03	3.47E-03	6.15E-04	1.82E-03	1.18E-03	1.21E-03	2.65E-04	1.90E-04	5.16E-08	6.09E-04	3.50E-04
11	E68	80	Single Unit Short Haul Truck	38	0.00E+00	7.18E-06	3.56E-07	7.04E+00	5.78E-06	1.42E-02	7.64E-06	3.68E-03	4.51E-04	1.02E-04	8.74E-04	2.13E-04	2.16E-04	7.07E-04	2.84E-05	1.13E-08	6.58E-04	6.90E-04
11	E68	80	Single Unit Long Haul Truck	2	0.00E+00	3.12E-07	1.54E-08	2.98E-01	2.47E-07	5.87E-04	3.32E-07	1.58E-04	2.06E-05	4.50E-06	3.81E-05	9.15E-06	9.29E-06	2.98E-05	1.20E-06	4.69E-10	2.88E-05	2.95E-05
11	E68	80	Combination Short Haul Truck	19	0.00E+00	8.49E-06	6.07E-07	7.04E+00	2.68E-08	7.53E-03	6.24E-06	8.76E-03	5.15E-04	1.27E-04	5.06E-04	1.80E-04	1.78E-04	1.06E-03	2.35E-05	0.00E+00	3.28E-04	1.65E-03
11	E68	80	Combination Long Haul Truck	18	0.00E+00	7.60E-06	5.10E-07	6.52E+00	3.10E-08	7.79E-03	5.78E-06	8.48E-03	5.05E-04	1.01E-04	5.25E-04	1.54E-04	1.55E-04	9.95E-04	2.18E-05	0.00E+00	3.68E-04	1.60E-03
10	E69	70	Passenger Car	340	0.00E+00	4.38E-06	4.74E-07	1.61E+01	3.05E-05	1.10E-01	9.72E-06	6.81E-04	2.63E-03	4.23E-04	9.44E-04	6.12E-04	6.28E-04	6.09E-05	8.19E-05	2.24E-08	3.21E-04	1.07E-04
10	E69	70	Passenger Truck	569	0.00E+00	9.61E-06	1.02E-06	3.72E+01	6.07E-05	2.02E-01	1.99E-05	2.13E-03	4.79E-03	7.79E-04	1.90E-03	1.24E-03	1.27E-03	2.77E-04	1.87E-04	5.01E-08	6.36E-04	3.51E-04
10	E69	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.67E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	E69	70	Combination Short Haul Truck	7	0.00E+00	3.53E-06	2.51E-07	2.57E+00	1.15E-08	3.04E-03	2.59E-06	3.72E-03	2.68E-04	5.87E-05	2.15E-04	7.44E-05	7.42E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.01E-04
10	E69	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.22E-03	2.43E-06	3.67E-03	2.67E-04	4.87E-05	2.22E-04	6.46E-05	6.53E-05	3.65E-04	8.01E-06	0.00E+00	1.57E-04	6.92E-04
10	E70	70	Passenger Car	482	0.00E+00	6.22E-06	6.73E-07	2.29E+01	4.33E-05	1.55E-01	1.38E-05	9.66E-04	3.74E-03	6.00E-04	1.34E-03	8.68E-04	8.91E-04	8.64E-05	1.16E-04	3.18E-08	4.56E-04	1.51E-04
10	E70	70	Passenger Tru

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E74	60	Single Unit Short Haul Truck	22	0.00E+00	6.49E-06	3.24E-07	4.12E+00	5.33E-06	7.95E-03	6.91E-06	3.09E-03	5.24E-04	9.48E-05	7.83E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.85E-09	5.89E-04	5.79E-04
9	E74	60	Single Unit Long Haul Truck	1	0.00E+00	2.83E-07	1.41E-08	1.76E-01	2.32E-07	3.37E-04	3.02E-07	1.34E-04	2.35E-05	4.21E-06	3.45E-05	8.45E-06	8.58E-06	1.76E-05	7.10E-07	2.91E-10	2.59E-05	2.50E-05
9	E74	60	Combination Short Haul Truck	10	0.00E+00	5.85E-06	4.09E-07	3.81E+00	2.07E-08	5.11E-03	4.33E-06	6.35E-03	5.44E-04	1.08E-04	3.73E-04	1.21E-04	1.21E-04	5.74E-04	1.27E-05	0.00E+00	2.50E-04	1.20E-03
9	E74	60	Combination Long Haul Truck	9	0.00E+00	5.24E-06	3.42E-07	3.57E+00	2.37E-08	5.51E-03	4.05E-06	6.29E-03	5.46E-04	9.29E-05	3.83E-04	1.04E-04	1.05E-04	5.44E-04	1.19E-05	0.00E+00	2.77E-04	1.19E-03
53	E75	70	Passenger Car	737	0.00E+00	9.21E-06	9.96E-07	3.54E+01	6.40E-05	2.29E-01	2.05E-05	1.50E-03	5.63E-03	9.06E-04	1.99E-03	1.28E-03	1.32E-03	1.32E-04	1.80E-04	4.89E-08	6.75E-04	2.35E-04
53	E75	70	Passenger Truck	1233	0.00E+00	2.00E-05	2.12E-06	8.15E+01	1.27E-04	4.21E-01	4.18E-05	4.59E-03	1.01E-02	1.65E-03	3.97E-03	2.59E-03	2.65E-03	5.96E-04	4.11E-04	1.08E-07	1.33E-03	7.54E-04
53	E75	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.63E-02	1.10E-05	5.12E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.57E-04
53	E75	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.25E-08	3.44E-01	3.65E-07	6.80E-04	4.80E-07	2.20E-04	3.32E-05	6.48E-06	5.51E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.12E-05
53	E75	70	Combination Short Haul Truck	41	0.00E+00	2.12E-05	1.51E-06	1.54E+01	6.89E-08	1.82E-02	1.55E-05	2.23E-02	1.61E-03	3.52E-04	1.29E-03	4.47E-04	4.45E-04	2.32E-03	5.15E-05	0.00E+00	8.47E-04	4.20E-03
53	E75	70	Combination Long Haul Truck	37	0.00E+00	1.92E-05	1.28E-06	1.44E+01	7.94E-08	1.93E-02	1.46E-05	2.20E-02	1.60E-03	2.92E-04	1.33E-03	3.88E-04	3.92E-04	2.19E-03	4.81E-05	0.00E+00	9.45E-04	4.15E-03
53	E76	70	Passenger Car	1049	0.00E+00	1.31E-05	1.42E-06	5.04E+01	9.12E-05	3.26E-01	2.91E-05	2.14E-03	8.01E-03	1.29E-03	2.84E-03	1.83E-03	1.88E-03	1.88E-04	2.56E-04	6.96E-08	9.62E-04	3.35E-04
53	E76	70	Passenger Truck	1757	0.00E+00	2.85E-05	3.03E-06	1.16E+02	1.81E-04	6.00E-01	5.95E-05	6.54E-03	1.44E-02	2.35E-03	5.66E-03	3.68E-03	3.78E-03	8.49E-04	5.86E-04	1.53E-07	1.89E-03	1.07E-03
53	E76	70	Single Unit Short Haul Truck	55	0.00E+00	1.28E-05	6.43E-07	1.01E+01	1.05E-05	2.02E-02	1.37E-05	6.34E-03	9.02E-04	1.80E-04	1.56E-03	3.84E-04	3.90E-04	1.01E-03	4.05E-05	1.64E-08	1.17E-03	1.19E-03
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	5.59E-07	2.78E-08	4.27E-01	4.53E-07	8.43E-04	5.95E-07	2.72E-04	4.12E-05	8.03E-06	6.82E-05	1.66E-05	1.69E-05	4.26E-05	1.72E-06	6.89E-10	5.12E-05	5.10E-05
53	E76	70	Combination Short Haul Truck	72	0.00E+00	3.75E-05	2.67E-06	2.73E+01	1.22E-07	3.23E-02	2.75E-05	3.95E-02	2.85E-03	6.24E-04	2.29E-03	7.90E-04	7.88E-04	4.11E-03	9.10E-05	0.00E+00	1.50E-03	7.44E-03
53	E76	70	Combination Long Haul Truck	66	0.00E+00	3.40E-05	2.27E-06	2.54E+01	1.40E-07	3.42E-02	2.58E-05	3.89E-02	2.83E-03	5.17E-04	2.36E-03	6.86E-04	6.93E-04	3.88E-03	8.50E-05	0.00E+00	1.67E-03	7.35E-03
53	E77	70	Passenger Car	758	0.00E+00	9.48E-06	1.03E-06	3.64E+01	6.59E-05	2.36E-01	2.11E-05	1.55E-03	5.79E-03	9.33E-04	2.05E-03	1.32E-03	1.36E-03	1.36E-04	1.85E-04	5.03E-08	6.95E-04	2.42E-04
53	E77	70	Passenger Truck	1270	0.00E+00	2.06E-05	2.19E-06	8.39E+01	1.31E-04	4.34E-01	4.30E-05	4.73E-03	1.04E-02	1.70E-03	4.09E-03	2.66E-03	2.73E-03	6.14E-04	4.23E-04	1.11E-07	1.37E-03	7.76E-04
53	E77	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.63E-02	1.10E-05	5.12E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.57E-04
53	E77	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.25E-08	3.44E-01	3.65E-07	6.80E-04	4.80E-07	2.20E-04	3.32E-05	6.48E-06	5.51E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.12E-05
53	E77	70	Combination Short Haul Truck	48	0.00E+00	2.50E-05	1.78E-06	1.82E+01	8.13E-08	2.15E-02	1.83E-05	2.63E-02	1.90E-03	4.16E-04	1.52E-03	5.27E-04	5.25E-04	2.74E-03	6.07E-05	0.00E+00	9.98E-04	4.96E-03
53	E77	70	Combination Long Haul Truck	44	0.00E+00	2.27E-05	1.51E-06	1.69E+01	9.36E-08	2.28E-02	1.72E-05	2.60E-02	1.89E-03	3.45E-04	1.57E-03	4.57E-04	4.62E-04	2.58E-03	5.67E-05	0.00E+00	1.11E-03	4.90E-03
53	E78	70	Passenger Car	1060	0.00E+00	1.32E-05	1.43E-06	5.09E+01	9.22E-05	3.30E-01	2.94E-05	2.16E-03	8.10E-03	1.30E-03	2.87E-03	1.85E-03	1.90E-03	1.90E-04	2.59E-04	7.04E-08	9.72E-04	3.39E-04
53	E78	70	Passenger Truck	1775	0.00E+00	2.88E-05	3.06E-06	1.17E+02	1.83E-04	6.06E-01	6.02E-05	6.61E-03	1.45E-02	2.37E-03	5.72E-03	3.72E-03	3.82E-03	8.58E-04	5.92E-04	1.55E-07	1.91E-03	1.08E-03
53	E78	70	Single Unit Short Haul Truck	57	0.00E+00	1.33E-05	6.66E-07	1.04E+01	1.09E-05	2.09E-02	1.41E-05	6.56E-03	9.34E-04	1.87E-04	1.62E-03	3.97E-04	4.03E-04	1.04E-03	4.19E-05	1.70E-08	1.21E-03	1.23E-03
53	E78	70	Single Unit Long Haul Truck	2	0.00E+00	5.79E-07	2.88E-08	4.42E-01	4.69E-07	8.72E-04	6.16E-07	2.82E-04	4.26E-05	8.31E-06	7.06E-05	1.72E-05	1.74E-05	4.41E-05	1.78E-06	7.13E-10	5.30E-05	5.28E-05
53	E78	70	Combination Short Haul Truck	78	0.00E+00	4.05E-05	2.88E-06	2.94E+01	1.32E-07	3.49E-02	2.97E-05	4.26E-02	3.07E-03	6.73E-04	2.47E-03	8.53E-04	8.51E-04	4.44E-03	9.83E-05	0.00E+00	1.62E-03	8.03E-03
53	E78	70	Combination Long Haul Truck	71	0.00E+00	3.67E-05	2.45E-06	2.74E+01	1.52E-07	3.69E-02	2.78E-05	4.20E-02	3.06E-03	5.59E-04	2.55E-03	7.40E-04	7.48E-04	4.19E-03	9.18E-05	0.00E+00	1.80E-03	7.94E-03
53	E79	70	Passenger Car	710	0.00E+00	8.87E-06	9.60E-07	3.41E+01	6.17E-05	2.21E-01	1.97E-05	1.45E-03	5.42E-03	8.73E-04	1.92E-03	1.24E-03	1.27E-03	1.27E-04	1.73E-04	4.71E-08	6.50E-04	2.27E-04
53	E79	70	Passenger Truck	1188	0.00E+00	1.93E-05	2.05E-06	7.86E+01	1.22E-04	4.06E-01	4.03E-05	4.42E-03	9.74E-03	1.59E-03	3.83E-03	2.49E-03	2.56E-03	5.74E-04	3.96E-04	1.04E-07	1.28E-03	7.26E-04
53	E79	70	Single Unit Short Haul Truck	61	0.00E+00	1.44E-05	7.22E-07	1.13E+01	1.18E-05	2.26E-02	1.53E-05	7.12E-03	1.01E-03	2.03E-04	1.75E-03	4.31E-04	4.38E-04	1.13E-03	4.55E-05	1.84E-08	1.31E-03	1.33E-03
53	E79	70	Single Unit Long Haul Truck	3	0.00E+00	6.28E-07	3.12E-08	4.79E-01	5.08E-07	9.46E-04	6.68E-07	3.06E-04	4.63E-05	9.01E-06	7.66E-05	1.86E-05	1.89E-05	4.78E-05	1.93E-06	7.73E-10	5.74E-05	5.73E-05
53	E79	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.54E-07	7.71E+00	3.45E-08	9.12E-03	7.76E-06	1.12E-02	8.05E-04	1.76E-04	6.46E-04	2.23E-04	2.23E-04	1.16E-03	2.57E-05	0.00E+00	4.23E-04	2.10E-03
53	E79	70	Combination Long Haul Truck	19	0.00E+00	9.61E-06	6.41E-07	7.18E+00	3.97E-08	9.66E-03	7.29E-06	1.10E-02	8.01E-04	1.46E-04	6.67E-04	1.94E-04	1.96E-04	1.10E-03	2.40E-05	0.00E+00	4.72E-04	2.08E-03
53	E80	70	Passenger Car	983	0.00E+00	1.23E-05	1.33E-06	4.72E+01	8.55E-05	3.06E-01	2.73E-05	2.00E-03	7.51E-03	1.21E-03	2.66E-03	1.71E-03	1.76E-03	1.76E-04	2.40E-04	6.53E-08	9.01E-04	3.14E-04
53	E80	70	Passenger Truck	1646	0.00E+00	2.67E-05	2.83E-06	1.09E+02	1.70E-04	5.62E-01	5.58E-05	6.13E-03	1.35E-02	2.20E-03	5.30E-03	3.45E-03	3.54E-03	7.96E-04	5.49E-04	1.44E-07	1.77E-03	1.01E-03
53	E80	70	Single Unit Short Haul Truck	41	0.00E+00	9.68E-06	4.85E-07	7.58E+00	7.92E-06	1.52E-02	1.03E-05	4.78E-03	6.81E-04	1.36E-04	1.18E-03	2.89E-04	2.94E-04	7.60E-04	3.05E-05	1.24E-08	8.80E-04	8.95E-04
53	E80	70	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.10E-08	3.22E-01	3.42E-07	6.36E-04	4.49E-07	2.05E-04	3.11E-05	6.05E-06	5.15E-05	1.25E-05	1.27E-05	3.21E-05	1.30E-06	5.20E-10	3.86E-05	3.85E-05
53	E80	70	Combination Short Haul Truck	26	0.00E+00	1.36E-05	9.66E-07	9.88E+00	4.42E-08	1.17E-02	9.95E-06	1.43E-02	1.03E-03	2.26E-04	8.28E-04	2.86E-04	2.85E-04	1.49E-03	3.30E-05	0.00E+00	5.43E-04	2.70E-03
53	E80	70	Combination Long Haul Truck	24	0.00E+00	1.23E-05	8.21E-07	9.21E+00	5.09E-08	1.24E-02	9.34E-06	1.41E-02	1.03E-03	1.87E-04	8.55E-04	2.48E-04	2.51E-04	1.40E-03	3.08E-05	0.00E+00	6.05E-04	2.66E-03
10	E83	70	Passenger Car	264	0.00E+00	3.41E-06	3.69E-07	1.26E+01	2.37E-05	8.52E-02	7.56E-06	5.29E-04	2.05E-03	3.29E-04	7.34E-04	4.76E-04	4.88E-04	4.74E-05	6.37E-05	1.74E-08	2.50E-04	8.30E-05
10	E83	70	Passenger Truck	443	0.00E+00	7.48E-06	7.91E-07	2.89E+01	4.72E-05	1.57E-01	1.55E-05	1.66E-03	3.73E-03	6.06E-04	1.48E-03	9.64E-04	9.87E-04	2.15E-04	1.45E-04	3.90E-08	4.94E-04	2.73E-04
10	E83	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.37E-03	4.31E-06	2.00E-03	2.85E-04	5.70E-05	4.93E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.74E-04
10	E83	70	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	8.79E-09	1.35E-01	1.43E-07	2.66E-04	1.88E-07	8.60E-05	1.30E-05	2.53E-06	2.15E-05	5.24E-06	5.32E-06	1.35E-05	5.43E-07	2.18E-10	1.62E-05	1.61E-05
10	E83	70	Combination Short Haul Truck	18	0.00E+00	9.51E-06	6.76E-07	6.92E+00	3.09E-08	8.19E-03	6.97E-06	1.00E-02	7.22E-04	1.58E-04	5.80E-04	2.00E-04	2.00E-04	1.04E-03	2.31E-05	0.00E+00	3.80E-04	1.89E-03
10	E83	70	Combination Long Haul Truck	17	0.00E+00	8.62E-06	5.75E-07	6.45E+00	3.56E-08	8.67E-03	6.54E-06	9.88E-03	7.19E-04	1.31E-04	5.98E-04	1.74E-04	1.76E-04	9.83E-04	2.16E-05	0.00E+00	4.24E-04	1.86E-03
10	E84	70	Passenger Car	203	0.00E+00	2.62E-06	2.83E-07	9.64E+00	1.82E-05	6.54E-02	5.81E-06	4.07E-04	1.57E-03	2.53E-04	5.64E-04	3.65E-04	3.75E-04	3.64E-05	4.89E-05	1.34E-08	1.92E-04	6.37E-05
10	E84	70	Passenger Truck	340	0.00E+00	5.74E-06	6.07E-07	2.22E+01	3.63E-05	1.21E-01	1.19E-05	1.27E-03	2.86E-03	4.66E-04	1.13E-03	7.40E-04	7.58E-04	1.65E-04	1.11E-04	2.99E-08	3.80E-04	2.10E-04
10	E84	70	Single Unit Short Haul Truck	21	0.00E+00	4.95E-06	2.48E-07	3.88E+00	4.05E-06	7.78E-03	5.27E-06	2.45E-03	3.48E-04	6.97E-05	6.03E-04	1.48E-04	1.50E-04	3.89E-04	1.56E-05	6.32E-09	4.50E-04	4.58E-04
10	E84	70	Single Unit Long Haul Truck	1	0.00E+00	2.16E-07	1.07E-08	1.65E-01	1.75E-07	3.25E-04	2.30E-07	1.05E-04	1.59E-05	3.10E-06	2.63E-05	6.40E-06	6.51E-06	1.64E-05	6.63E-07	2.66E-10	1.97E-05	1.97E-05
10	E84	70	Combination Short Haul Truck	16	0.00E+00	8.42E-06	5.99E-07	6.13E+00	2.74E-08	7.25E-03	6.17E-06	8.87E-03	6.40E-04	1.40E-04	5.13E-04	1.77E-04	1.77E-04	9.23E-04	2.04E-05	0.00E+00	3.36E-04	1.67E-03
10	E84	70	Combination Long Haul Truck	15	0.00E+00	7.64E-06	5.09E-07	5.71E+00	3.15E-08	7.68E-03	5.79E-06	8.75E-03	6.37E-04	1.16E-04	5.30E-04	1.54E-04	1.56E-04	8.71E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
9	E85	60	Passenger Car	1330	0.00E+00	1.97E-05	2.13E-06	6.61E+01	1.37E-04	4.91E-01	4.36E-05	2.71E-03	1.35E-02	2.07E-03	4.25E-03	2.74E-03	2.82E-03	2.78E-04	3.34E-04	9.20E-08	1.44E-03	4.25E-04
9	E85	60	Passenger Truck	2226	0.00E+00	4.34E-05	4.58E-06	1.51E+02	2.72E-04	8.72E-01	8.97E-05	8.84E-03	2.47E-02	3.84E-03	8.47E-03	5.54E-03	5.68E-03	1.18E-03	7.55E-04	2.09E-07	2.83E-03	1.47E-03
9	E85	60	Single Unit Short Haul Truck	87	0.00E+00	2.57E-05	1.28E-06	1.63E+01	2.11E-05	3.15E-02	2.74E-05	1.22E-02	2.07E-03	3.75E-04	3.10E-03	7.67E-04	7.80E-04	1.63E-03	6.59E-05	2.71E-08	2.33E-03	2.29E-03
9	E85	60	Single Unit Long Haul Truck	4	0.00E+00	1.12E-06	5.56E-08	6.96E-01	9.16E-07	1.33E-03	1.20E-06	5.29E-04	9.31E-05	1.67E-05	1.37E-04	3.34E-05	3.40E-05	6.95E-05	2.81E-06	1.15E-09	1.02E-04	9.91E-05
9	E85	60	Combination Short Haul Truck	55	0.00E+00	3.26E-05	2.28E-06	2.13E+01	1.16E-07	2.85E-02	2.42E-05	3.54E-02	3.03E-03	6.01E-04	2.08E-03	6.78E-04	6.78E-04	3.20E-03	7.10E-05	0.00E+00	1.40E-03	6.68E-03
9	E85	60	Combination Long Haul Truck	51	0.00E+00	2.92E-05	1.91E-06	1.99E+01	1.32E-07	3.08E-02	2.26E-05	3.51E-02	3.05E-03	5.18E-04	2.13E-03	5.81E-04	5.88E-04	3.03E-03	6.66E-05	0.00E+00	1.54E-03	6.63E-03
9	E86	60	Passenger Car	1147	0.00E+00	1.70E-05	1.83E-06	5.70E+01	1.18E-04	4.24E-01	3.76E-05	2.34E-03	1.16E-02	1.79E-03	3.66E-03	2.37E-03	2.43E-03	2.40E-04	2.88E-04	7.93E-08	1.24E-03	3.66E-04
9	E86	60	Passenger Truck	1920	0.00E+00	3.74E-05	3.95E-06	1.30E+02	2.34E-04	7.52E-01	7.73E-05	7.63E-03	2.13E-02	3.31E-03	7.31E-03	4.78E-03	4.90E-03	1.02E-03	6.51E-04	1.80E-07	2.44E-03	1.26E-03
9	E86	60	Single Unit Short Haul Truck	95	0.00E+00	2.79E-05	1.39E-06	1.77E+01	2.29E-05	3.42E-02	2.98E-05	1.33E-02	2.25E-03	4.08E-04	3.37E-03	8.35E-04	8.48E-04	1.78E-03	7.16E-05	2.95E-08	2.53E-03	2.49E-03
9	E86	60	Single Unit Long Haul Truck	4	0.00E+00	1.22E-06	6.05E-08	7.57E-01	9.97E-07	1.45E-03	1.30E-06	5.75E-04	1.01E-04	1.81E-05	1.49E-04	3.64E-05	3.69E-05	7.56E-05	3.06E-06	1.25E-09	1.11E-04	1.08E-04
9	E86	60	Combination Short Haul Truck	62	0.00E+00	3.63E-05	2.54E-06	2.37E+01	1.29E-07	3.17E-02	2.69E-05	3.94E-02	3.38E-03	6.69E-04	2.31E-03	7.54E-04	7.54E-04	3.57E-03	7.90E-05	0.00E+00	1.55E-03	7.44E-03
9	E86	60	Combination Long Haul Truck	56	0.00E+00	3.25E-05	2.13E-06	2.22E+01	1.47E-07	3.42E-02	2.52E-05	3.91E-02	3.39E-03	5.77E-04	2.38E-03	6.47E-04	6.55E-04	3.38E-03	7.41E-05	0.00E+00	1.72E-03	7.38E-03
9	E87	60	Passenger Car	1164	0.00E+00	1.72E-05	1.86E-06	5.79E+01	1.20E-04	4.30E-01	3.82E-05	2.37E-03	1.18E-02	1.81E-03	3.72E-03	2.40E-03	2.47E-03	2.43E-04	2.93E-04	8.05E-08	1.26E-03	3.72E-04
9	E87	60	Passenger Truck	1950	0.00E+00	3.80E-05	4.01E-06	1.32E+02	2.38E-04	7.64E-01	7.85E-05	7.74E-03	2.17E-02	3.36E-03	7.42E-03	4.85E-03	4.97E-03	1.03E-03	6.61E-04	1.83E-07	2.48E-03	1.28E-03
9	E87	60	Single Unit Short Haul Truck	106	0.00E+00	3.13E-05	1.56E-06	1.99E+01	2.57E-05	3.84E-02	3.34E-05	1.49E-02	2.53E-03	4.58E-04	3.78E-03	9.36E-04	9.51E-04	1.99E-03	8.03E-05	3.31E-08	2.84E-03	2.79E-03
9	E87	60	Single Unit Long Haul Truck	5	0.00E+00	1.37E-06	6.79E-08	8.49E-01	1.12E-06	1.63E-03	1.46E-06	6.45E-04	1.14E-04	2.03E-05	1.67E-04	4.08E-05	4.14E-05	8.48E-05	3.43E-06	1.41E-09	1.25E-04	1.21E-04
9	E87	60	Combination Short Haul Truck	67	0.00E+00	3.94E-05	2.75E-06	2.57E+01	1.39E-07	3.44E-02	2.92E-05	4.28E-02	3.66E-03	7.25E-04	2.51E-03	8.18E-04	8.18E-04	3.87E-03	8.57E-05	0.00E+00	1.69E-03	8.07E-03
9	E87	60	Combination Long Haul Truck	61	0.00E+00	3.53E-05	2.31E-06	2.41E+01	1.60E-07	3.71E-02	2.73E-05	4.24E-02	3.68E-03	6.26E-04	2.58E-03	7.02E-04	7.11E-04	3.66E-03	8.04E-05	0.00E+00	1.87E-03	8.00E-03
9	E88	60	Passenger Car	942	0.00E+00	1.39E-05	1.51E-06	4.68E+01	9.71E-05	3.48E-01	3.09E-05	1.92E-03	9.55E-03	1.47E-03	3.01E-03	1.94E-03	2.00E-03	1.97E-04	2.37E-04	6.52E-08	1.02E-03	3.01E-04
9	E88	60	Passenger Truck	1578	0.00E+00	3.08E-05	3.25E-06	1.07E+02	1.92E-04	6.18E-01	6.36E-05	6.27E-03	1.75E-02	2.72E-03	6.00E-03	3.93E-03	4.02E-03	8.37E-04	5.35E-04	1.48E-07	2.00E-03	1.04E-03
9	E88	60	Single Unit Short Haul Truck	91	0.00E+00	2.68E-05	1.34E-06	1.70E+01	2.20E-05	3.29E-02	2.86E-05	1.28E-02	2.16E-03	3.92E-04	3.24E-03	8.01E-04	8.14E-04	1.70E-03	6.87E-05	2.83E-08	2.43E-03	2.39E-03
9	E88	60	Single Unit Long Haul Truck	4	0.00E+00	1.17E-06	5.81E-08	7.27E-01	9.56E-07	1.39E-03	1.25E-06	5.52E-04	9.72E-05	1.74E-05	1.43E-04	3.49E-05	3.54E-05	7.26E-05	2.93E-06	1.20E-09	1.07E-04	1.03E-04
9	E88	60	Combination Short Haul Truck	51	0.00E+00	3.02E-05	2.11E-06	1.96E+01	1.07E-07	2.63E-02	2.24E-05	3.27E-02	2.80E-03	5.55E-04	1.92E-03	6.26E-04	6.26E-04	2.96E-03	6.56E-05	0.00E+00	1.29E-03	6.18E-03
9	E88	60	Combination Long Haul Truck	47	0.00E+00	2.70E-05	1.77E-06	1.84E+01	1.22E-07	2.84E-02	2.09E-05	3.25E-02	2.82E-03	4.79E-04	1.97E-03	5.38E-04	5.44E-04	2.80E-03	6.15E-05	0.00E+00	1.43E-03	6.13E-03
9	E89	60	Passenger Car	100	0.00E+00	1.48E-06	1.60E-07	4.96E+00	1.03E-05	3.69E-02	3.27E-06	2.04E-04	1.01E-03	1.56E-04	3.19E-04	2.06E-04	2.12E-04	2.09E-05	2.51E-05	6.90E-09	1.08E-04	3.19E-05
9	E89	60	Passenger Truck	167	0.00E+00	3.26E-06	3.44E-07	1.13E+01	2.04E-05	6.55E-02	6.73E-06	6.64E-04	1.86E-03	2.88E-04	6.36E-04	4.16E-04	4.26E-04	8.87E-05	5.67E-05	1.57E-08	2.12E-04	1.10E-04
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E90	60	Passenger Car	127	0.00E+00	1.89E-06	2.04E-07	6.34E+00	1.31E-05	4.71E-02	4.18E-06	2.60E-04	1.29E-03	1.99E-04	4.07E-04	2.63E-04	2.70E-04	2.66E-05	3.21E-05	8.82E-09	1.38E-04	4.07E-05
9	E90	60	Passenger Truck	214	0.00E+00	4.16E-06	4.39E-07	1.45E+01	2.60E-05	8.36E-02	8.60E-06	8.48E-04	2.37E-03	3.68E-04	8.13E-04	5.31E-04	5.44E-04	1.13E-04	7.24E-05	2.00E-08	2.71E-04	1.41E-04
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
54	E96	80	Single Unit Short Haul Truck	70	0.00E+00	1.31E-05	6.51E-07	1.29E+01	1.05E-05	2.58E-02	1.39E-05	6.72E-03	8.23E-04	1.86E-04	1.59E-03	3.88E-04	3.94E-04	1.29E-03	5.19E-05	2.06E-08	1.20E-03	1.26E-03
54	E96	80	Single Unit Long Haul Truck	3	0.00E+00	5.70E-07	2.81E-08	5.44E-01	4.51E-07	1.07E-03	6.06E-07	2.88E-04	3.76E-05	8.21E-06	6.96E-05	1.67E-05	1.70E-05	5.43E-05	2.19E-06	8.57E-10	5.26E-05	5.38E-05
54	E96	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.30E+01	8.77E-08	2.46E-02	2.04E-05	2.87E-02	1.68E-03	4.15E-04	1.66E-03	5.87E-04	5.84E-04	3.46E-03	7.70E-05	0.00E+00	1.07E-03	5.40E-03
54	E96	80	Combination Long Haul Truck	58	0.00E+00	2.48E-05	1.67E-06	2.13E+01	1.01E-07	2.55E-02	1.89E-05	2.77E-02	1.65E-03	3.32E-04	1.72E-03	5.05E-04	5.08E-04	3.25E-03	7.12E-05	0.00E+00	1.20E-03	5.23E-03
9	F01	60	Passenger Car	292	0.00E+00	4.33E-06	4.68E-07	1.45E+01	3.01E-05	1.08E-01	9.58E-06	5.96E-04	2.96E-03	4.56E-04	9.34E-04	6.03E-04	6.20E-04	6.11E-05	7.35E-05	2.02E-08	3.17E-04	9.34E-05
9	F01	60	Passenger Truck	490	0.00E+00	9.55E-06	1.01E-06	3.32E+01	5.97E-05	1.92E-01	1.97E-05	1.94E-03	5.44E-03	8.45E-04	1.86E-03	1.22E-03	1.25E-03	2.60E-04	1.66E-04	4.60E-08	6.22E-04	3.22E-04
9	F01	60	Single Unit Short Haul Truck	11	0.00E+00	3.10E-06	1.55E-07	1.97E+00	2.55E-06	3.80E-03	3.31E-06	1.48E-03	2.51E-04	4.54E-05	3.75E-04	9.28E-05	9.42E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.77E-04
9	F01	60	Combination Short Haul Truck	9	0.00E+00	5.54E-06	3.87E-07	3.61E+00	1.96E-08	4.84E-03	4.11E-06	6.02E-03	5.15E-04	1.02E-04	3.53E-04	1.15E-04	1.15E-04	5.44E-04	1.21E-05	0.00E+00	2.37E-04	1.14E-03
9	F01	60	Combination Long Haul Truck	9	0.00E+00	4.96E-06	3.24E-07	3.39E+00	2.25E-08	5.22E-03	3.84E-06	5.96E-03	5.17E-04	8.80E-05	3.62E-04	9.87E-05	9.99E-05	5.15E-04	1.13E-05	0.00E+00	2.62E-04	1.13E-03
9	F02	60	Passenger Car	281	0.00E+00	4.16E-06	4.49E-07	1.40E+01	2.89E-05	1.04E-01	9.20E-06	5.72E-04	2.85E-03	4.38E-04	8.97E-04	5.80E-04	5.95E-04	5.87E-05	7.06E-05	1.94E-08	3.04E-04	8.97E-05
9	F02	60	Passenger Truck	470	0.00E+00	9.17E-06	9.68E-07	3.19E+01	5.73E-05	1.84E-01	1.89E-05	1.87E-03	5.22E-03	8.11E-04	1.79E-03	1.17E-03	1.20E-03	2.49E-04	1.59E-04	4.41E-08	5.97E-04	3.10E-04
9	F02	60	Single Unit Short Haul Truck	23	0.00E+00	6.77E-06	3.38E-07	4.30E+00	5.56E-06	8.30E-03	7.22E-06	3.22E-03	5.47E-04	9.90E-05	8.17E-04	2.02E-04	2.06E-04	4.30E-04	1.74E-05	7.15E-09	6.14E-04	6.04E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	2.96E-07	1.47E-08	1.84E-01	2.42E-07	3.52E-04	3.15E-07	1.39E-04	2.46E-05	4.39E-06	3.60E-05	8.81E-06	8.96E-06	1.83E-05	7.41E-07	3.04E-10	2.70E-05	2.61E-05
9	F02	60	Combination Short Haul Truck	14	0.00E+00	8.32E-06	5.81E-07	5.41E+00	2.94E-08	7.26E-03	6.16E-06	9.02E-03	7.73E-04	1.53E-04	5.30E-04	1.73E-04	1.73E-04	8.16E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F02	60	Combination Long Haul Truck	13	0.00E+00	7.44E-06	4.86E-07	5.08E+00	3.37E-08	7.83E-03	5.76E-06	8.94E-03	7.76E-04	1.32E-04	5.44E-04	1.48E-04	1.50E-04	7.73E-04	1.70E-05	0.00E+00	3.93E-04	1.69E-03
9	F33	60	Passenger Car	132	0.00E+00	1.95E-06	2.11E-07	6.54E+00	1.36E-05	4.86E-02	4.31E-06	2.68E-04	1.33E-03	2.05E-04	4.20E-04	2.72E-04	2.79E-04	2.75E-05	3.31E-05	9.10E-09	1.43E-04	4.20E-05
9	F33	60	Passenger Truck	220	0.00E+00	4.30E-06	4.54E-07	1.49E+01	2.69E-05	8.63E-02	8.88E-06	8.75E-04	2.45E-03	3.80E-04	8.39E-04	5.49E-04	5.62E-04	1.17E-04	7.47E-05	2.07E-08	2.80E-04	1.45E-04
9	F33	60	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.45E-08	6.02E-01	3.27E-09	8.06E-04	6.84E-07	1.00E-03	8.59E-05	1.70E-05	5.88E-05	1.92E-05	1.92E-05	9.07E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	F33	60	Combination Long Haul Truck	1	0.00E+00	8.27E-07	5.41E-08	5.64E-01	3.75E-09	8.70E-04	6.40E-07	9.94E-04	8.62E-05	1.47E-05	6.04E-05	1.65E-05	1.67E-05	8.59E-05	1.88E-06	0.00E+00	4.37E-05	1.88E-04
9	F34	60	Passenger Car	321	0.00E+00	4.75E-06	5.14E-07	1.60E+01	3.31E-05	1.19E-01	1.05E-05	6.55E-04	3.26E-03	5.00E-04	1.03E-03	6.63E-04	6.81E-04	6.71E-05	8.07E-05	2.22E-08	3.48E-04	1.03E-04
9	F34	60	Passenger Truck	538	0.00E+00	1.05E-05	1.11E-06	3.65E+01	6.56E-05	2.11E-01	2.17E-05	2.14E-03	5.98E-03	9.28E-04	2.05E-03	1.34E-03	1.37E-03	2.85E-04	1.82E-04	5.05E-08	6.83E-04	3.54E-04
9	F34	60	Single Unit Short Haul Truck	13	0.00E+00	3.95E-06	1.97E-07	2.51E+00	3.24E-06	4.84E-03	4.21E-06	1.88E-03	3.19E-04	5.77E-05	4.77E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	F34	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.05E-04	1.84E-07	8.13E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.32E-07	1.77E-10	1.57E-05	1.52E-05
9	F34	60	Combination Short Haul Truck	16	0.00E+00	9.24E-06	6.45E-07	6.02E+00	3.27E-08	8.06E-03	6.84E-06	1.00E-02	8.59E-04	1.70E-04	5.88E-04	1.92E-04	1.92E-04	9.07E-04	2.01E-05	0.00E+00	3.95E-04	1.89E-03
9	F34	60	Combination Long Haul Truck	14	0.00E+00	8.27E-06	5.41E-07	5.64E+00	3.75E-08	8.70E-03	6.40E-06	9.94E-03	8.62E-04	1.47E-04	6.04E-04	1.65E-04	1.67E-04	8.59E-04	1.88E-05	0.00E+00	4.37E-04	1.88E-03
11	F35	80	Passenger Car	82	0.00E+00	9.87E-07	1.07E-07	3.79E+00	6.88E-06	2.54E-02	2.20E-06	1.69E-04	4.52E-04	7.86E-05	2.14E-04	1.38E-04	1.41E-04	1.29E-05	1.93E-05	5.42E-09	7.24E-05	2.65E-05
11	F35	80	Passenger Truck	138	0.00E+00	2.12E-06	2.25E-07	8.76E+00	1.36E-05	4.67E-02	4.44E-06	5.01E-04	8.11E-04	1.44E-04	4.25E-04	2.76E-04	2.83E-04	6.20E-05	4.44E-05	1.21E-08	1.42E-04	8.19E-05
11	F35	80	Single Unit Short Haul Truck	20	0.00E+00	3.77E-06	1.87E-07	3.70E+00	3.03E-06	7.43E-03	4.01E-06	1.93E-03	2.37E-04	5.36E-05	4.59E-04	1.12E-04	1.13E-04	3.71E-04	1.49E-05	5.92E-09	3.45E-04	3.62E-04
11	F35	80	Single Unit Long Haul Truck	1	0.00E+00	1.64E-07	8.08E-09	1.56E-01	1.30E-07	3.08E-04	1.74E-07	8.28E-05	1.08E-05	2.36E-06	2.00E-05	4.80E-06	4.88E-06	1.56E-05	6.31E-07	2.46E-10	1.51E-05	1.55E-05
11	F35	80	Combination Short Haul Truck	9	0.00E+00	4.13E-06	2.96E-07	3.43E+00	1.31E-08	3.66E-03	3.03E-06	4.26E-03	2.51E-04	6.17E-05	2.46E-04	8.73E-05	8.68E-05	5.15E-04	1.15E-05	0.00E+00	1.60E-04	8.03E-04
11	F35	80	Combination Long Haul Truck	9	0.00E+00	3.70E-06	2.48E-07	3.17E+00	1.51E-08	3.79E-03	2.81E-06	4.13E-03	2.46E-04	4.94E-05	2.55E-04	7.51E-05	7.56E-05	4.84E-04	1.06E-05	0.00E+00	1.79E-04	7.77E-04
11	F36	80	Passenger Car	214	0.00E+00	2.57E-06	2.78E-07	9.86E+00	1.79E-05	6.59E-02	5.71E-06	4.40E-04	1.18E-03	2.04E-04	5.56E-04	3.58E-04	3.68E-04	3.35E-05	5.02E-05	1.41E-08	1.88E-04	6.89E-05
11	F36	80	Passenger Truck	358	0.00E+00	5.52E-06	5.85E-07	2.28E+01	3.53E-05	1.21E-01	1.15E-05	1.30E-03	2.11E-03	3.74E-04	1.10E-03	7.18E-04	7.36E-04	1.61E-04	1.15E-04	3.13E-08	3.70E-04	2.13E-04
11	F36	80	Single Unit Short Haul Truck	23	0.00E+00	4.31E-06	2.14E-07	4.23E+00	3.47E-06	8.49E-03	4.58E-06	2.21E-03	2.71E-04	6.12E-05	5.24E-04	1.28E-04	1.30E-04	4.24E-04	1.70E-05	6.77E-09	3.95E-04	4.14E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	9.24E-09	1.79E-01	1.48E-07	3.52E-04	1.99E-07	9.46E-05	1.24E-05	2.70E-06	2.29E-05	5.49E-06	5.58E-06	1.79E-05	7.21E-07	2.82E-10	1.73E-05	1.77E-05
11	F36	80	Combination Short Haul Truck	13	0.00E+00	5.51E-06	3.94E-07	4.57E+00	1.74E-08	4.88E-03	4.04E-06	5.68E-03	3.34E-04	8.23E-05	3.28E-04	1.16E-04	1.16E-04	6.87E-04	1.53E-05	0.00E+00	2.13E-04	1.07E-03
11	F36	80	Combination Long Haul Truck	11	0.00E+00	4.93E-06	3.31E-07	4.23E+00	2.01E-08	5.06E-03	3.75E-06	5.50E-03	3.28E-04	6.58E-05	3.40E-04	1.00E-04	1.01E-04	6.45E-04	1.41E-05	0.00E+00	2.38E-04	1.04E-03
9	F37	60	Passenger Car	913	0.00E+00	1.35E-05	1.46E-06	4.54E+01	9.41E-05	3.37E-01	2.99E-05	1.86E-03	9.26E-03	1.42E-03	2.92E-03	1.88E-03	1.94E-03	1.91E-04	2.30E-04	6.32E-08	9.89E-04	2.92E-04
9	F37	60	Passenger Truck	1529	0.00E+00	2.98E-05	3.15E-06	1.04E+02	1.86E-04	5.99E-01	6.16E-05	6.07E-03	1.70E-02	2.64E-03	5.82E-03	3.81E-03	3.90E-03	8.11E-04	5.18E-04	1.44E-07	1.94E-03	1.01E-03
9	F37	60	Single Unit Short Haul Truck	78	0.00E+00	2.28E-05	1.14E-06	1.45E+01	1.88E-05	2.80E-02	2.44E-05	1.09E-02	1.84E-03	3.34E-04	2.76E-03	6.83E-04	6.94E-04	1.45E-03	5.86E-05	2.41E-08	2.07E-03	2.04E-03
9	F37	60	Single Unit Long Haul Truck	3	0.00E+00	9.98E-07	4.95E-08	6.20E-01	8.15E-07	1.19E-03	1.06E-06	4.70E-04	8.29E-05	1.48E-05	1.22E-04	2.97E-05	3.02E-05	6.19E-05	2.50E-06	1.03E-09	9.11E-05	8.82E-05
9	F37	60	Combination Short Haul Truck	55	0.00E+00	3.26E-05	2.28E-06	2.13E+01	1.16E-07	2.85E-02	2.42E-05	3.54E-02	3.03E-03	6.01E-04	2.08E-03	6.78E-04	6.78E-04	3.20E-03	7.10E-05	0.00E+00	1.40E-03	6.68E-03
9	F37	60	Combination Long Haul Truck	51	0.00E+00	2.92E-05	1.91E-06	1.99E+01	1.32E-07	3.08E-02	2.26E-05	3.51E-02	3.05E-03	5.18E-04	2.13E-03	5.81E-04	5.88E-04	3.03E-03	6.66E-05	0.00E+00	1.54E-03	6.63E-03
9	F38	60	Passenger Car	578	0.00E+00	8.56E-06	9.25E-07	2.87E+01	5.96E-05	2.14E-01	1.89E-05	1.18E-03	5.86E-03	9.01E-04	1.85E-03	1.19E-03	1.23E-03	1.21E-04	1.45E-04	4.00E-08	6.26E-04	1.85E-04
9	F38	60	Passenger Truck	968	0.00E+00	1.89E-05	1.99E-06	6.56E+01	1.18E-04	3.79E-01	3.90E-05	3.85E-03	1.08E-02	1.67E-03	3.68E-03	2.41E-03	2.47E-03	5.14E-04	3.28E-04	9.09E-08	1.23E-03	6.37E-04
9	F38	60	Single Unit Short Haul Truck	122	0.00E+00	3.58E-05	1.79E-06	2.27E+01	2.94E-05	4.39E-02	3.82E-05	1.71E-02	2.89E-03	5.24E-04	4.32E-03	1.07E-03	1.09E-03	2.28E-03	9.19E-05	3.78E-08	3.25E-03	3.20E-03
9	F38	60	Single Unit Long Haul Truck	5	0.00E+00	1.56E-06	7.76E-08	9.72E-01	1.28E-06	1.86E-03	1.67E-06	7.38E-04	1.30E-04	2.32E-05	1.91E-04	4.66E-05	4.74E-05	9.70E-05	3.92E-06	1.61E-09	1.43E-04	1.38E-04
9	F38	60	Combination Short Haul Truck	93	0.00E+00	5.48E-05	3.83E-06	3.57E+01	1.94E-07	4.78E-02	4.06E-05	5.95E-02	5.09E-03	1.01E-03	3.49E-03	1.14E-03	1.14E-03	5.38E-03	1.19E-04	0.00E+00	2.35E-03	1.12E-02
9	F38	60	Combination Long Haul Truck	85	0.00E+00	4.91E-05	3.21E-06	3.35E+01	2.22E-07	5.16E-02	3.80E-05	5.90E-02	5.12E-03	8.70E-04	3.58E-03	9.76E-04	9.88E-04	5.09E-03	1.12E-04	0.00E+00	2.59E-03	1.11E-02
11	F39	80	Passenger Car	44	0.00E+00	5.29E-07	5.74E-08	2.03E+00	3.69E-06	1.36E-02	1.18E-06	9.07E-05	2.43E-04	4.22E-05	1.15E-04	7.39E-05	7.59E-05	6.91E-06	1.04E-05	2.90E-09	3.88E-05	1.42E-05
11	F39	80	Passenger Truck	74	0.00E+00	1.14E-06	1.21E-07	4.70E+00	7.29E-06	2.50E-02	2.38E-06	2.69E-04	4.35E-04	7.72E-05	2.28E-04	1.48E-04	1.52E-04	3.32E-05	2.38E-05	6.46E-09	7.63E-05	4.39E-05
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	F39	80	Combination Short Haul Truck	7	0.00E+00	2.98E-06	2.13E-07	2.47E+00	9.43E-09	2.64E-03	2.19E-06	3.08E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.27E-05	3.72E-04	8.27E-06	0.00E+00	1.15E-04	5.80E-04
11	F39	80	Combination Long Haul Truck	6	0.00E+00	2.67E-06	1.79E-07	2.29E+00	1.09E-08	2.74E-03	2.03E-06	2.98E-03	1.77E-04	3.57E-05	1.84E-04	5.43E-05	5.46E-05	3.50E-04	7.65E-06	0.00E+00	1.29E-04	5.61E-04
11	F40	80	Passenger Car	183	0.00E+00	2.19E-06	2.38E-07	8.43E+00	1.53E-05	5.64E-02	4.88E-06	3.76E-04	1.01E-03	1.75E-04	4.75E-04	3.06E-04	3.14E-04	2.86E-05	4.29E-05	1.20E-08	1.61E-04	5.89E-05
11	F40	80	Passenger Truck	306	0.00E+00	4.72E-06	5.00E-07	1.95E+01	3.02E-05	1.04E-01	9.87E-06	1.11E-03	1.80E-03	3.20E-04	9.44E-04	6.14E-04	6.29E-04	1.38E-04	9.87E-05	2.68E-08	3.16E-04	1.82E-04
11	F40	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.08E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.64E-09	3.29E-04	3.45E-04
11	F40	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.70E-09	1.49E-01	1.23E-07	2.93E-04	1.66E-07	7.89E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.01E-07	2.35E-10	1.44E-05	1.47E-05
11	F40	80	Combination Short Haul Truck	15	0.00E+00	6.66E-06	4.76E-07	5.52E+00	2.10E-08	5.90E-03	4.89E-06	6.87E-03	4.04E-04	9.94E-05	3.97E-04	1.41E-04	1.40E-04	8.30E-04	1.85E-05	0.00E+00	2.57E-04	1.29E-03
11	F40	80	Combination Long Haul Truck	14	0.00E+00	5.96E-06	4.00E-07	5.11E+00	2.43E-08	6.11E-03	4.53E-06	6.65E-03	3.96E-04	7.95E-05	4.11E-04	1.21E-04	1.22E-04	7.80E-04	1.71E-05	0.00E+00	2.88E-04	1.25E-03
10	F41	70	Passenger Car	297	0.00E+00	3.83E-06	4.14E-07	1.41E+01	2.66E-05	9.57E-02	8.49E-06	5.95E-04	2.30E-03	3.69E-04	8.25E-04	5.34E-04	5.48E-04	5.32E-05	7.16E-05	1.95E-08	2.80E-04	9.32E-05
10	F41	70	Passenger Truck	497	0.00E+00	8.40E-06	8.88E-07	3.25E+01	5.30E-05	1.77E-01	1.74E-05	1.86E-03	4.18E-03	6.81E-04	1.66E-03	1.08E-03	1.11E-03	2.42E-04	1.63E-04	4.38E-08	5.55E-04	3.07E-04
10	F42	70	Passenger Car	193	0.00E+00	2.49E-06	2.70E-07	9.18E+00	1.73E-05	6.23E-02	5.53E-06	3.87E-04	1.50E-03	2.41E-04	5.37E-04	3.48E-04	3.57E-04	3.46E-05	4.66E-05	1.27E-08	1.83E-04	6.07E-05
10	F42	70	Passenger Truck	324	0.00E+00	5.47E-06	5.78E-07	2.11E+01	3.45E-05	1.15E-01	1.13E-05	1.21E-03	2.72E-03	4.43E-04	1.08E-03	7.05E-04	7.22E-04	1.57E-04	1.06E-04	2.85E-08	3.61E-04	2.00E-04
10	F42	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.06E-01	7.36E-07	1.42E-03	9.59E-07	4.45E-04	6.33E-05	1.27E-05	1.10E-04	2.69E-05	2.73E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.32E-05
10	F42	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.57E-03	2.19E-06	3.15E-03	2.27E-04	4.97E-05	1.82E-04	6.30E-05	6.28E-05	3.28E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	F42	70	Combination Long Haul Truck	5	0.00E+00	2.71E-06	1.81E-07	2.03E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.12E-05	1.88E-04	5.47E-05	5.52E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.86E-04
9	F43	60	Passenger Car	12	0.00E+00	1.83E-07	1.97E-08	6.13E-01	1.27E-06	4.56E-03	4.04E-07	2.52E-05	1.25E-04	1.92E-05	3.94E-05	2.55E-05	2.61E-05	2.58E-06	3.10E-06	8.53E-10	1.34E-05	3.94E-06
9	F43	60	Passenger Truck	21	0.00E+00	4.03E-07	4.25E-08	1.40E+00	2.52E-06	8.09E-03	8.32E-07	8.21E-05	2.30E-04	3.56E-05	7.86E-05	5.14E-05	5.27E-05	1.10E-05	7.00E-06	1.94E-09	2.62E-05	1.36E-05
9	F44	60	Passenger Car	157	0.00E+00	2.32E-06	2.51E-07	7.81E+00	1.62E-05	5.80E-02	5.15E-06	3.20E-04	1.59E-03	2.45E-04	5.02E-04	3.24E-04	3.33E-04	3.28E-05	3.95E-05	1.09E-08	1.70E-04	5.02E-05
9	F44	60	Passenger Truck	263	0.00E+00	5.13E-06	5.41E-07	1.78E+01	3.21E-05	1.03E-01	1.06E-05	1.04E-03	2.92E-03	4.54E-04	1.00E-03	6.55E-04	6.71E-04	1.40E-04	8.91E-05	2.47E-08	3.34E-04	1.73E-04
9	F44	60	Single Unit Short Haul Truck	4	0.00E+00	1.13E-06	5.63E-08	7.16E-01	9.27E-07	1.38E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.36E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	F44	60	Single Unit Long Haul Truck	2	0.00E+00	1.23E-06	8.60E-08	8.02E-01	4.36E-09	1.08E-03	9.12E-07	1.34E-03	1.14E-04	2.27E-05	7.85E-05	2.56E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	F44	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.21E-08	7.53E-01	5.00E-09	1.16E-03	8.53E-07	1.32E-03	1.15E-04	1.96E-05	8.06E-05	2.19E-05	2.22E-05	1.14E-04	2.51E-06	0.00E+00	5.83E-05	2.50E-04
10	F45	70	Passenger Car	264	0.00E+00	3.41E-06	3.69E-07	1.26E+01	2.37E-05	8.52E-02	7.56E-06	5.29E-04	2.05E-03	3.29E-04	7.34E-04	4.76E-04	4.88E-04	4.74E-05	6.37E-05	1.74E-08	2.50E-04	8.30E-05
10	F45	70	Passenger Truck	443	0.00E+00	7.48E-06	7.91E-07	2.89E+01	4.72E-05	1.57E-01	1.55E-05	1.66E-03	3.73E-03	6.06E-04	1.48E-03	9.64E-04	9.87E-04	2.15E-04	1.45E-04	3.90E-08	4.94E-04	2.73E-04
10	F45	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.37E-03	4.31E-06	2.00E-03	2.85E-04	5.70E-05	4.93E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.74E-04
10	F45	70	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	8.79E-09	1.35E-01	1.43E-07	2.66E-04	1.88E-07	8.60E-05	1.30E-05	2.53E-06	2.15E-05	5.24E-06	5.32E-06	1.35E-05	5.43E-07	2.18E-10	1.62E-05	1.61E-05
10	F45	70	Combination Short Haul Truck	18	0.00E+00	9.51E-06	6.76E-07	6.92E+00	3.09E-08	8.19E-03	6.97E-06	1.00E-02	7.22E-04	1.58E-04	5.80E-04	2.00E-04	2.00E-04	1.04E-03	2.31E-05	0.00E+00	3.80E-04	1.89E-03
10	F45	70	Combination Long Haul Truck	17	0.00E+00	8.62E-06	5.75E-07	6.45E+00	3.56E-08	8.67E-03	6.54E-06	9.88E-03	7.19E-04	1.31E-04	5.98E-04	1.74E-04	1.76E-04	9.83E-04	2.16E-05	0.00E+00	4.24E-04	1.86E-03
10	F46	70	Passenger Car	203	0.00E+00	2.62E-06	2.83E-07	9.64E+00	1.82E-05	6.54E-02	5.81E-06	4.07E-04	1.57E-03	2.53E-04	5.64E-04	3.65E-04	3.75E-04	3.64E-05	4.89E-05	1.34E-08	1.92E-04	6.37E-05
10	F46	70	Passenger Truck	340	0.00E+00	5.74E-06	6.07E-07	2.22E+01	3.63E-05	1.21E-01	1.19E-05	1.27E-03	2.86E-03	4.66E-04	1.13E-03	7.40E-04	7.58E-04	1.65E-04	1.11E-04	2.99E-08	3.80E-04	2.10E-04
10	F46	70	Single Unit Short Haul Truck	21	0.00E+00	4.95

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	F80	70	Single Unit Short Haul Truck	33	0.00E+00	7.65E-06	3.84E-07	6.00E+00	6.26E-06	1.20E-02	8.15E-06	3.78E-03	5.38E-04	1.08E-04	9.32E-04	2.29E-04	2.32E-04	6.01E-04	2.42E-05	9.77E-09	6.96E-04	7.07E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	3.34E-07	1.66E-08	2.55E-01	2.70E-07	5.03E-04	3.55E-07	1.62E-04	2.46E-05	4.79E-06	4.07E-05	9.89E-06	1.01E-05	2.54E-05	1.03E-06	4.11E-10	3.05E-05	3.04E-05
53	F80	70	Combination Short Haul Truck	11	0.00E+00	5.71E-06	4.06E-07	4.15E+00	1.86E-08	4.91E-03	4.18E-06	6.01E-03	4.33E-04	9.49E-05	3.48E-04	1.20E-04	1.20E-04	6.25E-04	1.39E-05	0.00E+00	2.28E-04	1.13E-03
53	F80	70	Combination Long Haul Truck	10	0.00E+00	5.17E-06	3.45E-07	3.87E+00	2.14E-08	5.20E-03	3.92E-06	5.93E-03	4.31E-04	7.87E-05	3.59E-04	1.04E-04	1.05E-04	5.90E-04	1.29E-05	0.00E+00	2.54E-04	1.12E-03
50	F84	40	Passenger Car	201	0.00E+00	3.34E-06	3.61E-07	1.15E+01	2.32E-05	8.25E-02	7.42E-06	3.63E-04	3.47E-03	4.96E-04	7.19E-04	4.65E-04	4.77E-04	6.30E-05	5.80E-05	1.41E-08	2.44E-04	5.69E-05
50	F84	40	Passenger Truck	336	0.00E+00	7.62E-06	7.99E-07	2.57E+01	4.58E-05	1.42E-01	1.52E-05	1.37E-03	6.16E-03	8.77E-04	1.44E-03	9.43E-04	9.62E-04	2.22E-04	1.28E-04	2.74E-08	4.74E-04	2.33E-04
50	F84	40	Single Unit Short Haul Truck	6	0.00E+00	2.55E-06	1.34E-07	1.22E+00	2.22E-06	2.11E-03	2.71E-06	1.25E-03	2.33E-04	3.86E-05	3.02E-04	7.97E-05	8.09E-05	1.24E-04	4.95E-06	2.09E-09	2.20E-04	2.35E-04
50	F84	40	Combination Short Haul Truck	44	0.00E+00	3.89E-05	2.70E-06	1.98E+01	1.40E-07	3.39E-02	2.89E-05	4.34E-02	4.53E-03	8.16E-04	2.53E-03	8.05E-04	8.14E-04	2.98E-03	6.61E-05	0.00E+00	1.71E-03	8.20E-03
50	F84	40	Combination Long Haul Truck	40	0.00E+00	3.55E-05	2.31E-06	1.88E+01	1.59E-07	3.77E-02	2.73E-05	4.36E-02	4.55E-03	7.24E-04	2.59E-03	7.06E-04	7.19E-04	2.87E-03	6.29E-05	0.00E+00	1.88E-03	8.21E-03
52	F85	60	Passenger Car	390	0.00E+00	5.29E-06	5.72E-07	1.94E+01	3.69E-05	1.31E-01	1.18E-05	7.65E-04	3.84E-03	5.91E-04	1.15E-03	7.39E-04	7.59E-04	8.14E-05	9.79E-05	2.62E-08	3.87E-04	1.20E-04
52	F85	60	Passenger Truck	652	0.00E+00	1.16E-05	1.23E-06	4.40E+01	7.25E-05	2.34E-01	2.39E-05	2.46E-03	6.85E-03	1.06E-03	2.28E-03	1.48E-03	1.52E-03	3.39E-04	2.21E-04	5.55E-08	7.56E-04	4.08E-04
52	F85	60	Single Unit Short Haul Truck	16	0.00E+00	4.79E-06	2.39E-07	3.04E+00	3.94E-06	5.88E-03	5.11E-06	2.28E-03	3.87E-04	7.01E-05	5.79E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.28E-04
52	F85	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.49E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.55E-05	6.24E-06	6.34E-06	1.30E-05	5.25E-07	2.15E-10	1.91E-05	1.85E-05
52	F85	60	Combination Short Haul Truck	34	0.00E+00	2.00E-05	1.40E-06	1.30E+01	7.08E-08	1.75E-02	1.48E-05	2.17E-02	1.86E-03	3.68E-04	1.27E-03	4.16E-04	4.16E-04	1.96E-03	4.35E-05	0.00E+00	8.57E-04	4.10E-03
52	F85	60	Combination Long Haul Truck	31	0.00E+00	1.79E-05	1.17E-06	1.22E+01	8.12E-08	1.89E-02	1.39E-05	2.15E-02	1.87E-03	3.18E-04	1.31E-03	3.57E-04	3.61E-04	1.86E-03	4.08E-05	0.00E+00	9.47E-04	4.06E-03
53	F86	70	Passenger Car	206	0.00E+00	2.58E-06	2.79E-07	9.92E+00	1.79E-05	6.42E-02	5.73E-06	4.21E-04	1.58E-03	2.54E-04	5.58E-04	3.60E-04	3.69E-04	3.70E-05	5.03E-05	1.37E-08	1.89E-04	6.59E-05
53	F86	70	Passenger Truck	346	0.00E+00	5.62E-06	5.95E-07	2.28E+01	3.56E-05	1.18E-01	1.17E-05	1.29E-03	2.83E-03	4.62E-04	1.11E-03	7.25E-04	7.43E-04	1.67E-04	1.15E-04	3.01E-08	3.72E-04	2.11E-04
53	F86	70	Single Unit Short Haul Truck	33	0.00E+00	7.65E-06	3.84E-07	6.00E+00	6.26E-06	1.20E-02	8.15E-06	3.78E-03	5.38E-04	1.08E-04	9.32E-04	2.29E-04	2.32E-04	6.01E-04	2.42E-05	9.77E-09	6.96E-04	7.07E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	3.34E-07	1.66E-08	2.55E-01	2.70E-07	5.03E-04	3.55E-07	1.62E-04	2.46E-05	4.79E-06	4.07E-05	9.89E-06	1.01E-05	2.54E-05	1.03E-06	4.11E-10	3.05E-05	3.04E-05
53	F86	70	Combination Short Haul Truck	22	0.00E+00	1.17E-05	8.31E-07	8.50E+00	3.80E-08	1.01E-02	8.56E-06	1.23E-02	8.87E-04	1.94E-04	7.12E-04	2.46E-04	2.46E-04	1.28E-03	2.84E-05	0.00E+00	4.67E-04	2.32E-03
53	F86	70	Combination Long Haul Truck	21	0.00E+00	1.06E-05	7.06E-07	7.92E+00	4.38E-08	1.07E-02	8.03E-06	1.21E-02	8.83E-04	1.61E-04	7.35E-04	2.14E-04	2.16E-04	1.21E-03	2.65E-05	0.00E+00	5.21E-04	2.29E-03
52	F87	60	Passenger Car	135	0.00E+00	1.84E-06	1.99E-07	6.73E+00	1.28E-05	4.55E-02	4.10E-06	2.66E-04	1.33E-03	2.05E-04	3.99E-04	2.57E-04	2.64E-04	2.83E-05	3.40E-05	9.10E-09	1.35E-04	4.17E-05
52	F87	60	Passenger Truck	227	0.00E+00	4.04E-06	4.27E-07	1.53E+01	2.52E-05	8.12E-02	8.31E-06	8.56E-04	2.38E-03	3.68E-04	7.93E-04	5.15E-04	5.28E-04	1.18E-04	7.68E-05	1.93E-08	2.63E-04	1.42E-04
52	F87	60	Single Unit Short Haul Truck	79	0.00E+00	2.31E-05	1.15E-06	1.47E+01	1.90E-05	2.84E-02	2.47E-05	1.10E-02	1.87E-03	3.38E-04	2.79E-03	6.92E-04	7.02E-04	1.47E-03	5.93E-05	2.44E-08	2.10E-03	2.06E-03
52	F87	60	Single Unit Long Haul Truck	3	0.00E+00	1.01E-06	5.01E-08	6.27E-01	8.26E-07	1.20E-03	1.08E-06	4.76E-04	8.39E-05	1.50E-05	1.23E-04	3.01E-05	3.06E-05	6.26E-05	2.53E-06	1.04E-09	9.22E-05	8.93E-05
52	F87	60	Combination Short Haul Truck	50	0.00E+00	2.93E-05	2.04E-06	1.90E+01	1.04E-07	2.55E-02	2.17E-05	3.17E-02	2.72E-03	5.38E-04	1.86E-03	6.07E-04	6.07E-04	2.87E-03	6.36E-05	0.00E+00	1.25E-03	5.99E-03
52	F87	60	Combination Long Haul Truck	45	0.00E+00	2.62E-05	1.71E-06	1.79E+01	1.19E-07	2.76E-02	2.03E-05	3.15E-02	2.73E-03	4.64E-04	1.91E-03	5.21E-04	5.27E-04	2.72E-03	5.97E-05	0.00E+00	1.38E-03	5.94E-03
50	F88	40	Passenger Car	201	0.00E+00	3.34E-06	3.61E-07	1.15E+01	2.32E-05	8.25E-02	7.42E-06	3.63E-04	3.47E-03	4.96E-04	7.19E-04	4.65E-04	4.77E-04	6.30E-05	5.80E-05	1.41E-08	2.44E-04	5.69E-05
50	F88	40	Passenger Truck	336	0.00E+00	7.62E-06	7.99E-07	2.57E+01	4.58E-05	1.42E-01	1.52E-05	1.37E-03	6.16E-03	8.77E-04	1.44E-03	9.43E-04	9.62E-04	2.22E-04	1.28E-04	2.74E-08	4.74E-04	2.33E-04
50	F88	40	Single Unit Short Haul Truck	6	0.00E+00	2.55E-06	1.34E-07	1.22E+00	2.22E-06	2.11E-03	2.71E-06	1.25E-03	2.33E-04	3.86E-05	3.02E-04	7.97E-05	8.09E-05	1.24E-04	4.95E-06	2.09E-09	2.20E-04	2.35E-04
50	F88	40	Combination Short Haul Truck	44	0.00E+00	3.89E-05	2.70E-06	1.98E+01	1.40E-07	3.39E-02	2.89E-05	4.34E-02	4.53E-03	8.16E-04	2.53E-03	8.05E-04	8.14E-04	2.98E-03	6.61E-05	0.00E+00	1.71E-03	8.20E-03
50	F88	40	Combination Long Haul Truck	40	0.00E+00	3.55E-05	2.31E-06	1.88E+01	1.59E-07	3.77E-02	2.73E-05	4.36E-02	4.55E-03	7.24E-04	2.59E-03	7.06E-04	7.19E-04	2.87E-03	6.29E-05	0.00E+00	1.88E-03	8.21E-03
50	F89	40	Passenger Car	450	0.00E+00	7.48E-06	8.09E-07	2.59E+01	5.20E-05	1.85E-01	1.66E-05	8.14E-04	7.79E-03	1.11E-03	1.61E-03	1.04E-03	1.07E-03	1.41E-04	1.30E-04	3.15E-08	5.48E-04	1.28E-04
50	F89	40	Passenger Truck	754	0.00E+00	1.71E-05	1.79E-06	5.76E+01	1.03E-04	3.18E-01	3.41E-05	3.08E-03	1.38E-02	1.97E-03	3.22E-03	2.11E-03	2.16E-03	4.98E-04	2.87E-04	6.14E-08	1.06E-03	5.21E-04
50	F89	40	Single Unit Short Haul Truck	68	0.00E+00	3.02E-05	1.58E-06	1.45E+01	2.63E-05	2.49E-02	3.21E-05	1.48E-02	2.76E-03	4.57E-04	3.57E-03	9.43E-04	9.58E-04	1.46E-03	5.86E-05	2.47E-08	2.61E-03	2.78E-03
50	F89	40	Single Unit Long Haul Truck	3	0.00E+00	1.32E-06	6.90E-08	6.26E-01	1.15E-06	1.08E-03	1.41E-06	6.43E-04	1.23E-04	2.03E-05	1.57E-04	4.12E-05	4.18E-05	6.32E-05	2.52E-06	1.07E-09	1.15E-04	1.21E-04
50	F89	40	Combination Short Haul Truck	39	0.00E+00	3.43E-05	2.38E-06	1.74E+01	1.24E-07	2.99E-02	2.55E-05	3.83E-02	3.99E-03	7.19E-04	2.23E-03	7.10E-04	7.17E-04	2.62E-03	5.83E-05	0.00E+00	1.51E-03	7.23E-03
50	F89	40	Combination Long Haul Truck	35	0.00E+00	3.13E-05	2.04E-06	1.66E+01	1.40E-07	3.32E-02	2.40E-05	3.84E-02	4.01E-03	6.38E-04	2.28E-03	6.22E-04	6.33E-04	2.53E-03	5.54E-05	0.00E+00	1.66E-03	7.24E-03

Appendix F.3.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B09	0.00E+00	9.76E-05	7.20E-06	1.78E+02	1.55E-04	6.39E-01	1.08E-04	7.87E-02	8.41E-03	2.06E-03	1.03E-02	4.58E-03	4.65E-03	1.25E-02	7.70E-04	1.72E-07	5.62E-03	1.47E-02
B10	0.00E+00	2.02E-04	1.58E-05	3.85E+02	3.44E-04	1.44E+00	2.24E-04	1.74E-01	1.86E-02	4.47E-03	2.05E-02	1.00E-02	1.02E-02	2.56E-02	1.68E-03	3.35E-07	1.03E-02	3.24E-02
B13	0.00E+00	1.29E-04	9.94E-06	2.39E+02	2.07E-04	8.69E-01	1.40E-04	1.11E-01	1.14E-02	2.76E-03	1.29E-02	6.16E-03	6.25E-03	1.65E-02	1.03E-03	2.05E-07	6.60E-03	2.07E-02
B14	0.00E+00	7.19E-05	5.21E-06	1.26E+02	1.04E-04	4.32E-01	7.76E-05	5.88E-02	5.83E-03	1.45E-03	7.39E-03	3.19E-03	3.24E-03	9.38E-03	5.38E-04	1.19E-07	4.14E-03	1.10E-02
B15	0.00E+00	3.46E-05	3.18E-06	1.14E+02	1.57E-04	5.98E-01	5.97E-05	1.59E-02	6.51E-03	1.40E-03	5.78E-03	3.38E-03	3.46E-03	2.31E-03	5.59E-04	1.50E-07	2.31E-03	2.83E-03
B16	0.00E+00	6.03E-05	5.65E-06	2.02E+02	2.79E-04	1.07E+00	1.05E-04	2.82E-02	1.16E-02	2.49E-03	1.01E-02	6.00E-03	6.14E-03	3.94E-03	9.92E-04	2.63E-07	3.93E-03	5.02E-03
D27	0.00E+00	2.50E-05	1.97E-06	4.90E+01	5.98E-05	2.18E-01	3.19E-05	1.71E-02	4.52E-03	8.46E-04	3.06E-03	1.52E-03	1.55E-03	2.18E-03	2.26E-04	5.48E-08	1.51E-03	3.17E-03
D28	0.00E+00	7.42E-05	5.96E-06	1.53E+02	1.92E-04	6.98E-01	9.74E-05	4.95E-02	1.42E-02	2.64E-03	9.32E-03	4.76E-03	4.86E-03	6.27E-03	7.12E-04	1.73E-07	4.47E-03	9.16E-03
D29	0.00E+00	2.50E-05	1.97E-06	4.90E+01	5.98E-05	2.18E-01	3.19E-05	1.71E-02	4.52E-03	8.46E-04	3.06E-03	1.52E-03	1.55E-03	2.18E-03	2.26E-04	5.48E-08	1.51E-03	3.17E-03
D30	0.00E+00	7.42E-05	5.96E-06	1.53E+02	1.92E-04	6.98E-01	9.74E-05	4.95E-02	1.42E-02	2.64E-03	9.32E-03	4.76E-03	4.86E-03	6.27E-03	7.12E-04	1.73E-07	4.47E-03	9.16E-03
D31	0.00E+00	2.52E-05	1.93E-06	4.64E+01	5.46E-05	1.99E-01	3.12E-05	1.75E-02	4.22E-03	7.96E-04	3.01E-03	1.43E-03	1.46E-03	2.27E-03	2.12E-04	5.14E-08	1.55E-03	3.25E-03
D32	0.00E+00	5.07E-05	3.94E-06	9.41E+01	1.10E-04	4.06E-01	6.23E-05	3.61E-02	8.60E-03	1.62E-03	5.95E-03	2.89E-03	2.95E-03	4.59E-03	4.30E-04	1.02E-07	3.01E-03	6.71E-03
D33	0.00E+00	5.40E-05	3.94E-06	7.17E+01	9.46E-05	3.24E-01	6.23E-05	4.09E-02	1.17E-02	1.92E-03	6.07E-03	2.66E-03	2.71E-03	3.97E-03	3.20E-04	7.52E-08	3.36E-03	7.65E-03
D34	0.00E+00	1.77E-05	1.57E-06	4.20E+01	7.30E-05	2.43E-01	2.90E-05	7.92E-03	7.24E-03	1.14E-03	2.80E-03	1.60E-03	1.64E-03	8.33E-04	2.04E-04	5.49E-08	1.17E-03	1.44E-03
D35	0.00E+00	2.74E-05	2.46E-06	6.56E+01	1.14E-04	3.81E-01	4.49E-05	1.27E-02	1.13E-02	1.78E-03	4.32E-03	2.49E-03	2.55E-03	1.31E-03	3.19E-04	8.51E-08	1.78E-03	2.31E-03
D36	0.00E+00	3.13E-05	2.21E-06	3.54E+01	4.00E-05	1.41E-01	3.30E-05	2.62E-02	5.65E-03	9.45E-04	3.20E-03	1.29E-03	1.31E-03	2.49E-03	1.52E-04	3.25E-08	1.89E-03	4.91E-03
D37	0.00E+00	1.88E-05	1.58E-06	3.70E+01	5.88E-05	2.01E-01	2.68E-05	1.18E-02	6.31E-03	1.00E-03	2.55E-03	1.38E-03	1.41E-03	1.14E-03	1.75E-04	4.41E-08	1.15E-03	2.18E-03
D38	0.00E+00	5.28E-05	4.27E-06	9.22E+01	1.38E-04	4.78E-01	6.95E-05	3.69E-02	1.56E-02	2.50E-03	6.63E-03	3.41E-03	3.49E-03	3.52E-03	4.29E-04	1.04E-07	3.15E-03	6.87E-03
D39	0.00E+00	8.00E-06	7.83E-07	2.26E+01	4.04E-05	1.37E-01	1.45E-05	3.14E-03	3.96E-03	6.17E-04	1.38E-03	8.56E-04	8.77E-04	3.21E-04	1.12E-04	2.98E-08	5.06E-04	5.64E-04
D40	0.00E+00	3.69E-05	3.01E-06	6.67E+01	1.02E-04	3.51E-01	4.98E-05	2.47E-02	1.13E-02	1.81E-03	4.76E-03	2.48E-03	2.54E-03	2.38E-03	3.13E-04	7.71E-08	2.24E-03	4.59E-03
D41	0.00E+00	1.15E-05	1.18E-06	3.63E+01	6.69E-05	2.24E-01	2.27E-05	3.22E-03	6.37E-03	9.89E-04	2.16E-03	1.38E-03	1.41E-03	3.56E-04	1.81E-04	4.93E-08	7.54E-04	5.61E-04
D42	0.00E+00	1.30E-05	9.78E-07	1.71E+01	2.09E-05	7.61E-02	1.44E-05	1.11E-02	2.82E-03	4.63E-04	1.36E-03	6.16E-04	6.28E-04	1.03E-03	7.55E-05	1.59E-08	7.31E-04	2.08E-03
D43	0.00E+00	1.53E-05	1.53E-06	4.60E+01	8.36E-05	2.81E-01	2.90E-05	5.03E-03	8.05E-03	1.25E-03	2.76E-03	1.74E-03	1.79E-03	5.34E-04	2.28E-04	6.16E-08	9.85E-04	8.89E-04
D44	0.00E+00	2.96E-05	1.95E-06	2.75E+01	2.65E-05	9.12E-02	2.92E-05	2.48E-02	4.23E-03	7.25E-04	2.89E-03	1.01E-03	1.03E-03	2.41E-03	1.13E-04	2.36E-08	1.86E-03	4.67E-03
D45	0.00E+00	1.08E-04	7.78E-06	1.35E+02	1.69E-04	5.83E-01	1.21E-04	8.52E-02	2.18E-02	3.60E-03	1.17E-02	4.98E-03	5.07E-03	8.22E-03	5.93E-04	1.35E-07	6.68E-03	1.60E-02
D46	0.00E+00	1.23E-04	8.68E-06	1.47E+02	1.80E-04	6.15E-01	1.35E-04	9.63E-02	2.35E-02	3.90E-03	1.33E-02	5.44E-03	5.54E-03	9.37E-03	6.40E-04	1.47E-07	7.73E-03	1.80E-02
D47	0.00E+00	1.16E-04	8.42E-06	1.52E+02	1.97E-04	6.78E-01	1.32E-04	8.86E-02	2.47E-02	4.05E-03	1.29E-02	5.62E-03	5.73E-03	8.59E-03	6.74E-04	1.57E-07	7.18E-03	1.66E-02
D48	0.00E+00	3.69E-05	3.01E-06	6.67E+01	1.02E-04	3.51E-01	4.98E-05	2.47E-02	1.13E-02	1.81E-03	4.76E-03	2.48E-03	2.54E-03	2.38E-03	3.13E-04	7.71E-08	2.24E-03	4.59E-03
D49	0.00E+00	1.16E-04	8.42E-06	1.52E+02	1.97E-04	6.78E-01	1.32E-04	8.86E-02	2.47E-02	4.05E-03	1.29E-02	5.62E-03	5.73E-03	8.59E-03	6.74E-04	1.57E-07	7.18E-03	1.66E-02
D50	0.00E+00	1.35E-04	9.76E-06	1.74E+02	2.26E-04	7.72E-01	1.54E-04	1.03E-01	2.83E-02	4.65E-03	1.51E-02	6.48E-03	6.60E-03	1.00E-02	7.73E-04	1.82E-07	8.50E-03	1.92E-02
D51	0.00E+00	4.85E-05	3.54E-06	6.66E+01	9.15E-05	3.08E-01	5.76E-05	3.49E-02	1.09E-02	1.78E-03	5.64E-03	2.50E-03	2.55E-03	3.45E-03	3.00E-04	7.30E-08	3.10E-03	6.53E-03
D52	0.00E+00	2.81E-05	2.24E-06	5.16E+01	8.30E-05	2.76E-01	3.95E-05	1.61E-02	8.71E-03	1.39E-03	3.86E-03	1.96E-03	2.01E-03	1.65E-03	2.44E-04	6.42E-08	1.87E-03	2.97E-03
D53	0.00E+00	5.31E-05	3.92E-06	7.49E+01	1.04E-04	3.52E-01	6.37E-05	3.81E-02	1.23E-02	2.01E-03	6.22E-03	2.80E-03	2.86E-03	3.75E-03	3.39E-04	8.25E-08	3.37E-03	7.11E-03
D54	0.00E+00	4.24E-05	3.51E-06	8.55E+01	1.42E-04	4.72E-01	6.32E-05	2.23E-02	1.45E-02	2.30E-03	6.16E-03	3.26E-03	3.33E-03	2.31E-03	4.10E-04	1.09E-07	2.84E-03	4.10E-03
D55	0.00E+00	7.48E-05	5.58E-06	1.26E+02	1.39E-04	5.11E-01	8.74E-05	5.48E-02	1.13E-02	2.16E-03	8.41E-03	3.84E-03	3.91E-03	7.09E-03	5.66E-04	1.32E-07	4.51E-03	1.02E-02
D56	0.00E+00	5.96E-05	4.30E-06	9.09E+01	9.14E-05	3.40E-01	6.59E-05	4.54E-02	7.93E-03	1.54E-03	6.36E-03	2.73E-03	2.77E-03	5.93E-03	3.98E-04	9.07E-08	3.59E-03	8.48E-03
D57	0.00E+00	9.12E-05	6.62E-06	1.42E+02	1.45E-04	5.40E-01	1.02E-04	6.89E-02	1.24E-02	2.41E-03	9.83E-03	4.27E-03	4.34E-03	8.99E-03	6.24E-04	1.43E-07	5.49E-03	1.29E-02
D58	0.00E+00	6.70E-05	4.90E-06	1.05E+02	1.08E-04	4.04E-01	7.51E-05	5.09E-02	9.26E-03	1.79E-03	7.22E-03	3.17E-03	3.22E-03	6.60E-03	4.64E-04	1.06E-07	4.00E-03	9.50E-03
D59	0.00E+00	9.12E-05	6.62E-06	1.42E+02	1.45E-04	5.40E-01	1.02E-04	6.89E-02	1.24E-02	2.41E-03	9.83E-03	4.27E-03	4.34E-03	8.99E-03	6.24E-04	1.43E-07	5.49E-03	1.29E-02
D60	0.00E+00	6.70E-05	4.90E-06	1.05E+02	1.08E-04	4.04E-01	7.51E-05	5.09E-02	9.26E-03	1.79E-03	7.22E-03	3.17E-03	3.22E-03	6.60E-03	4.64E-04	1.06E-07	4.00E-03	9.50E-03
D61	0.00E+00	8.05E-06	6.06E-07	1.43E+01	1.64E-05	5.98E-02	9.74E-06	5.64E-03	1.28E-03	2.44E-04	9.43E-04	4.38E-04	4.46E-04	7.38E-04	6.47E-05	1.56E-08	4.97E-04	1.05E-03
D62	0.00E+00	1.51E-05	1.20E-06	3.18E+01	4.09E-05	1.47E-01	2.04E-05	9.41E-03	2.95E-03	5.48E-04	1.97E-03	9.96E-04	1.02E-03	1.23E-03	1.49E-04	3.77E-08	9.57E-04	1.74E-03
D63	0.00E+00	2.42E-05	1.65E-06	2.69E+01	2.43E-05	8.80E-02	2.41E-05	1.99E-02	3.15E-03	5.73E-04	2.35E-03	8.82E-04	8.96E-04	2.22E-03	1.12E-04	2.35E-08	1.46E-03	3.72E-03
D64	0.00E+00	7.94E-06	6.23E-07	1.50E+01	2.08E-05	7.17E-02	1.06E-05	4.93E-03	1.95E-03	3.30E-04	1.03E-03	5.11E-04	5.22E-04	5.66E-04	7.03E-05	1.77E-08	5.11E-04	9.13E-04
D65	0.00E+00	4.26E-05	2.96E-06	5.79E+01	5.16E-05	1.94E-01	4.44E-05	3.35E-02	4.88E-03	9.70E-04	4.31E-03	1.71E-03	1.73E-03	4.42E-03	2.46E-04	5.44E-08	2.58E-03	6.27E-03
D66	0.00E+00	4.07E-05	2.94E-06	6.15E+01	6.11E-05	2.28E-01	4.47E-05	3.13E-02	5.35E-03	1.04E-03	4.30E-03	1.84E-03	1.87E-03	4.08E-03	2.69E-04	6.05E-08	2.43E-03	5.85E-03
D67	0.00E+00	4.26E-05	2.96E-06	5.79E+01	5.16E-05	1.94E-01	4.44E-05	3.35E-02	4.88E-03	9.70E-04	4.31E-03	1.71E-03	1.73E-03	4.42E-03	2.46E-04	5.44E-08	2.58E-03	6.27E-03
D68	0.00E+00	4.07E-05	2.94E-06	6.15E+01	6.11E-05	2.28E-01	4.47E-05	3.13E-02	5.35E-03	1.04E-03	4.30E-03	1.84E-03	1.87E-03	4.08E-03	2.69E-04	6.05E-08	2.43E-03	5.85E-03
D69	0.00E+00	2.67E-05	1.82E-06	3.39E+01	2.75E-05	1.05E-01	2.69E-05	2.15E-02	2.79E-03	5.64E-04	2.62E-03	9.85E-04	1.00E-03	2.85E-03	1.41E-04	3.04E-08	1.62E-03	4.03E-03
D70	0.00E+00	2.55E-05	1.81E-06	3.59E+01	3.30E-05	1.25E-01	2.69E-05	2.03E-02	3.08E-03	6.07E-04	2.58E-03	1.06E-03	1.08E-03	2.63E-03	1.54E-04	3.34E-08	1.50E-03	3.80E-03
D71	0.00E+00	2.58E-05	2.05E-06	4.94E+01	6.81E-05	2.36E-01	3.43E-05	1.65E-02	6.42E-03	1.09E-03	3.32E-03	1.67E-03	1.71E-03	1.86E-03	2.31E-04	5.73E-08	1.62E-03	3.05E-03
D72	0.00E+00	3.90E-05	2.79E-06	5.06E+01	5.27E-05	1.91E-01	4.14E-05	3.13E-02	6.17E-03	1.09E-03	3.99E-03	1.67E-03	1.69E-03	3.45E-03	2.19E-04	4.73E-08	2.30E-03	5.85E-03
D73	0.00E+00	1.25E-05	1.12E-06	3.23E+01	4.99E-05	1.72E-01	2.01E-05	6.18E-03	4.36E-03	7.21E-04	1.93E-03	1.11E-03	1.13E-03	6.96E-04	1.57E-04	4.06E-08	8.00E-04	1.13E-03
D74	0.00E+00	2.49E-05	1.84E-06	3.51E+01	3.89E-05	1.41E-01	2.74E-05	1.98E-02	4.38E-03	7.67E-04	2.62E-03	1.16E-03	1.18E-03	2.16E-03	1.55E-04	3.37E-08	1.44E-03	3.70E-03
D75	0.00E+00	1.79E-05	1.40E-06	3.56E+01	4.43E-05	1.60E-01	2.32E-05	1.17E-02	3.28E-03	6.13E-04	2.25E-03	1.11E-03	1.13E-03	1.52E-03	1.65E-04	4.11E-08	1.12E-03	2.16E-03
D76	0.00E+00	2.93E-05	2.19E-06	4.97E+01	5.49E-05	2.02E-01	3.44E-05	2.13E-02	4.44E-03	8.48E-04	3.32E-03	1.51E-03	1.54E-03	2.77E-03	2.23E-04	5.26E-08	1.78E-03	3.96E-03
D77	0.00E+00	1.30E-05	9.36E-07	2.00E+01	2.03E-05	7.51E-02	1.45E-05	9.76E-03	1.74E-03	3.38E-04	1.40E-03	6.00E-04	6.11E-04	1.28E-03	8.76E-05	2.03E-08	7.94E-04	1.82E-03
D78	0.00E+00	2.76E-05	2.01E-06	4.28E+01	4.37E-05	1.63E-01	3.08E-05	2.09E-02	3.75E-03	7.27E-04	2.97E-03	1.29E-03	1.31E-03	2.73E-03	1.88E-04	4.31E-08	1.66E-03	3.91E-03
D79	0.00E+00	2.03E-05	1.70E-06	4.45E+01	6.52E-05	2.25E-01	2.94E-05	1.16E-02	5.90E-03	9.87E-04	2.84E-03	1.52E-03	1.55E-03	1.32E-03	2.12E-04	5.40E-08	1.30E-03	2.14E-03
D80	0.00E+00	3.39E-05	2.55E-06	5.36E+01	6.58E-05	2.33E-01	4.01E-05	2.47E-02	6.78E-03	1.17E-03	3.87E-03	1.79E-03	1.83E-03	2.74E-03	2.42E-04	5.67E-08	2.05E-03	4.60E-03
D81	0.00E+00	1.28E-05	1.24E-06	4.01E+01	6.56E-05	2.25E-01	2.34E-05	4.63E-03	5.51E-03	9.00E-04	2.25E-03	1.38E-03	1.42E-03	5.27E-04	1.99E-04	5.26E-08	8.38E-04	8.20E-04
D82	0.00E+00	6.78E-06	6.83E-07	2.26E+01	3.74E-05	1.29E-01	1.29E-05	2.29E-03	3.13E-03	5.10E-04	1.23E-03	7.81E-04	8.00E-04	2.54E-04	1.13E-04	2.97E-08	4.38E-04	4.02E-04
D83	0.00E+00	1.27E-04	8.74E-06	1.56E+02	1.18E-04	4.65E-01	1.24E-04	1.07E-01	1.29E-02	2.61E-03	1.19E-02	4.50E-03	4.56E-03	1.39E-02	6.42E-04	1.28E-07	7.36E-03	2.01E-02
D84	0.00E+00	1.47E-04	1.09E-05	2.11E+02	1.89E-04	7.48E-01	1.52E-04	1.25E-01	1.84E-02	3.61E-03	1.41E-02	6.18E-03	6.28E-03	1.55E-02	9.02E-04	1.75E-07	7.83E-03	2.35E-02
D85	0.00E+00	1.06E-04	7.26E-06	1.29E+02	9.51E-05	3.78E-01	1.03E-04	8.95E-02	1.06E-02	2.15E-03	9.83E-03	3.69E-03	3.74E-03	1.16E-02	5.27E-04	1.03E-07	6.09E-03	1.68E-02
D86	0.00E+00	1.42E-04	1.06E-05	2.09E+02	1.92E-04	7.59E-01	1.49E-04	1.21E-01	1.84E-02	3.59E-03	1.38E-02	6.16E-03	6.26E-03	1.49E-02	9.01E-04	1.76E-07	7.54E-03	2.27E-02
D87	0.00E+00	1.06E-04	7.26E-06	1.29E+02	9.51E-05	3.78E-01	1.03E-04	8.95E-02	1.06E-02	2.15E-03	9.83E-03	3.69E-03	3.74E-03	1.16E-02	5.27E-04	1.03E-07	6.09E-03	1.68E-02
D88	0.00E+00	1.42E-04	1.06E-05	2.09E+02	1.92E-04	7.59E-01	1.49E-04	1.21E-01	1.84E-02	3.59E-03	1.38E-02	6.16E-03	6.26E-03	1.49E-02	9.01E-04	1.76E-07	7.54E-03	2.27E-02
D89	0.00E+00	7.34E-06	5.56E-07	1.06E+01	1.44E-05	5.02E-02	8.73E-06	5.60E-03	1.75E-03	2.86E-04	8.39E-04	3.91E-04	3.99E-04	5.35E-04	4.79E-05	1.11E-08	4.42E-04	1.05E-03
D90	0.00E+00	1.05E-05	7.88E-07	1.58E+01	2.29E-05	7.67E-02	1.31E-05	7.17E-03	2.61E-03	4.22E-04	1.28E-03	5.94E-04	6.06E-04	7.13E-04	7.23E-05	1.80E-08	6.78E-04	1.34E-03
D91	0.00E+00	1.79E-05	1.64E-06	4.99E+01	7.96E-05	2.73E-01	3.04E-05	7.54E-03	6.78E-03	1.11E-03	2.94E-03	1.72E-03	1.76E-03	8.77E-04	2.45E-04	6.47E-08	1.19E-03	1.36E-03
D92	0.00E+00	1.31E-05	1.03E-06	2.44E+01	3.32E-05	1.16E-01	1.71E-05	8.49E-03	3.17E-03	5.37E-04	1.65E-03	8.26E-04	8.44E-04	9.54E-04	1.14E-04	2.80E-08	8.14E-04	1.57E-03
D93	0.00E+00	1.42E-05	1.41E-06	4.66E+01	7.73E-05	2.65E-01	2.70E-05	4.53E-03	6.42E-03	1.05E-03	2.60E-03	1.61E-03	1.65E-03	5.31E-04	2.32E-04	6.20E-08	9.57E-04	7.92E-04
D94	0.00E+00	1.41E-05	1.08E-06	2.45E+01	3.24E-05	1.12E-01	1.78E-05	9.36E-03	3.14E-03	5.37E-04	1.73E-03	8.29E-04	8.46E-04	1.06E-03	1.13E-04	2.78E-08	8.86E-04	1.74E-03
E01	0.00E+00	1.99E-05	1.48E-06	2.94E+01	4.24E-05	1.42E-01	2.47E-05	1.36E-02	4.85E-03	7.86E-04	2.42E-03	1.11E-03	1.13E-03	1.35E-03	1.34E-04	3.36E-08	1.29E-03	2.53E-03
E02	0.00E+00	5.30E-05	3.84E-06	6.74E+01	8.55E-05	2.96E-01	5.95E-05	4.15E-02	1.10E-02	1.81E-03	5.78E-03	2.49E-03	2.54E-03	4.00E-03	2.98E-04	6.81E-08	3.25E-03	7.78E-03
E03	0.00E+00	2.53E-05	1.99E-06	5.06E+01	6.29E-05	2.28E-01	3.29E-05	1.66E-02	4.67E-03	8.71E-04	3.17E-03	1.57E-03	1.61E-03	2.16E-03	2.35E-04	5.81E-08	1.57E-03	3.08E-03
E04	0.00E+00	3.01E-05	2.33E-06	5.55E+01	6.48E-05	2.38E-01	3.69E-05	2.14E-02	5.06E-03	9.55E-04	3.53E-03	1.71E-03	1.74E-03	2.74E-03	2.53E-04	5.99E-08	1.79E-03	3.98E-03
E05	0.00E+00	1.76E-05	1.23E-06	2.49E+01	2.35E-05	8.75E-02	1.88E-05	1.35E-02	2.13E-03	4.19E-04	1.84E-03	7.42E-04	7.54E-04	1.79E-03	1.07E-04	2.45E-08	1.08E-03	2.52E-03
E06	0.00E+00	2.14E-05	1.69E-06	4.25E+01	5.25E-05	1.91E-01	2.76E-05	1.43E-02	3.93E-03	7.34E-04	2.66E-03	1.32E-03	1.35E-03	1.84E-03	1.97E-04	4.83E-08	1.31E-03	2.66E-03
E07	0.00E+00	1.91E-04	1.45E-05	2.80E+02	3.86E-04	1.34E+00	2.29E-04	1.42E-01	4.63E-02	7.53E-03	2.21E-02	1.03E-02	1.06E-02	1.37E-02	1.27E-03	2.99E-07	1.16E-02	2.66E-02
E08	0.00E+00	1.12E-04	8.29E-06	1.60E+02	2.22E-04	7.55E-01	1.34E-04	8.04E-02	2.63E-02	4.28E-03	1.31E-02	5.96E-03	6.08E-03	7.88E-03	7.23E-04	1.75E-07	7.03E-03	1.50E-02
E09	0.00E+00	1.51E-04	1.17E-05	2.38E+02	3.41E-04	1.18E+00	1.88E-04	1.09E-01	3.97E-02	6.42E-03	1.81E-02	8.81E-03	8.99E-03	1.05E-02	1.09E-03	2.61E-07	9.12E-03	2.04E-02
E10	0.00E+00	9.88E-05	7.52E-06	1.51E+02	2.17E-04	7.38E-01	1.23E-04	6.94E-02	2.50E-02	4.05E-03	1.19E-02	5.64E-03	5.75E-03	6.79E-03	6.91E-04	1.69E-07	6.21E-03	1.29E-02
E11	0.00E+00	2.08E-04	1.55E-05	2.99E+02	4.15E-04	1.41E+00	2.51E-04	1.51E-01	4.92E-02	8.01E-03	2.44E-02	1.11E-02	1.14E-02	1.48E-02	1.35E-03	3.26E-07	1.30E-02	2.83E-02
E12	0.00E+00	2.34E-04	1.67E-05	2.73E+02	3.13E-04	1.11E+00	2.49E-04	1.97E-01	4.38E-02	7.30E-03	2.40E-02	9.91E-03	1.01E-02	1.86E-02	1.18E-03	2.50E-07	1.39E-02	3.69E-02
E13	0.00E+00	2.38E-05	1.89E-06	4.97E+01	6.37E-05	2.29E-01	3.20E-05	1.49E-02	4.61E-03	8.57E-04	3.11E-03	1.56E-03	1.59E-03	1.95E-03	2.33E-04	5.90E-08	1.52E-03	2.75E-03
E14	0.00E+00	6.22E-05	4.67E-06	1.04E+02	1.12E-04	4.19E-01	7.19E-05	4.67E-02	9.30E-03	1.78E-03	6.88E-03	3.15E-03	3.21E-03	5.98E-03	4.65E-04	1.06E-07	3.67E-03	8.70E-03
E15	0.00E+00	2.76E-05	2.06E-06	4.77E+01	5.39E-05	1.97E-01	3.30E-05	1.95E-02	4.27E-03	8.14E-04	3.20E-03	1.46E-03	1.49E-03	2.56E-03	2.15E-04	5.19E-08	1.71E-03	3.63E-03
E16	0.00E+00	4.50E-05	3.53E-06	7.69E+01	8.17E-05	3.14E-01	5.11E-05	3.65E-02	7.00E-03	1.33E-03	4.73E-03	2.31E-03	2.36E-03	4.42E-03	3.43E-04	7.18E-08	2.38E-03	6.80E-03
E17	0.00E+00	2.19E-05	1.53E-06	3.20E+01	3.16E-05	1.15E-01	2.41E-05	1.61E-02	2.73E-03	5.37E-04	2.37E-03	9.60E-04	9.76E-04	2.18E-03	1.39E-04	3.32E-08	1.39E-03	3.01E-03
E18	0.00E+00	1.92E-05	1.62E-06	4.52E+01	6.10E-05	2.20E-01	2.76E-05	1.16E-02	4.30E-03	7.88E-04	2.64E-03	1.43E-03	1.46E-03	1.45E-03	2.16E-04	5.42E-08	1.18E-03	2.13E-03
E19	0.00E+00	7.19E-05	5.68E-06	1.25E+02	1.94E-04	6.51E-01	9.71E-05	4.50E-02	2.10E-02	3.36E-03	9.44E-03	4.72E-03	4.82E-03	4.50E-03	5.86E-04	1.50E-07	4.64E-03	8.36E-03
E20	0.00E+00	5.09E-05	3.90E-06	8.45E+01	1.31E-04	4.33E-01	6.79E-05	3.09E-02	1.41E-02	2.26E-03	6.68E-03	3.22E-03	3.29E-03

Appendix F.3.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E36	0.00E+00	7.37E-05	5.65E-06	1.14E+02	1.65E-04	5.62E-01	9.20E-05	5.22E-02	1.90E-02	3.07E-03	8.90E-03	4.25E-03	4.34E-03	5.07E-03	5.24E-04	1.27E-07	4.57E-03	9.73E-03
E37	0.00E+00	5.21E-05	3.61E-06	5.87E+01	6.93E-05	2.36E-01	5.59E-05	4.12E-02	9.34E-03	1.56E-03	5.50E-03	2.18E-03	2.22E-03	4.02E-03	2.53E-04	5.76E-08	3.29E-03	7.73E-03
E38	0.00E+00	7.37E-05	5.65E-06	1.14E+02	1.65E-04	5.62E-01	9.20E-05	5.22E-02	1.90E-02	3.07E-03	8.90E-03	4.25E-03	4.34E-03	5.07E-03	5.24E-04	1.27E-07	4.57E-03	9.73E-03
E39	0.00E+00	1.71E-05	1.56E-06	4.64E+01	7.28E-05	2.52E-01	2.83E-05	8.02E-03	6.30E-03	1.04E-03	2.71E-03	1.59E-03	1.63E-03	8.96E-04	2.27E-04	5.87E-08	1.09E-03	1.45E-03
E40	0.00E+00	3.54E-05	2.57E-06	4.86E+01	5.32E-05	1.92E-01	3.87E-05	2.79E-02	6.00E-03	1.06E-03	3.72E-03	1.61E-03	1.63E-03	3.08E-03	2.13E-04	4.69E-08	2.09E-03	5.22E-03
E41	0.00E+00	1.26E-05	1.20E-06	3.74E+01	6.02E-05	2.07E-01	2.22E-05	5.14E-03	5.11E-03	8.38E-04	2.13E-03	1.29E-03	1.32E-03	5.83E-04	1.84E-04	4.84E-08	8.23E-04	9.21E-04
E42	0.00E+00	1.79E-05	1.55E-06	4.07E+01	5.92E-05	2.08E-01	2.60E-05	1.09E-02	5.44E-03	9.08E-04	2.46E-03	1.38E-03	1.41E-03	1.18E-03	1.94E-04	4.78E-08	1.06E-03	2.01E-03
E43	0.00E+00	1.33E-05	1.23E-06	3.77E+01	6.03E-05	2.07E-01	2.29E-05	5.47E-03	5.12E-03	8.42E-04	2.21E-03	1.30E-03	1.33E-03	6.37E-04	1.85E-04	4.90E-08	8.83E-04	9.84E-04
E44	0.00E+00	1.24E-05	1.10E-06	2.99E+01	4.44E-05	1.56E-01	1.87E-05	7.28E-03	4.03E-03	6.70E-04	1.77E-03	1.02E-03	1.04E-03	7.79E-04	1.44E-04	3.56E-08	7.34E-04	1.34E-03
E45	0.00E+00	2.71E-05	1.84E-06	3.29E+01	2.46E-05	9.63E-02	2.65E-05	2.25E-02	2.69E-03	5.48E-04	2.56E-03	9.47E-04	9.60E-04	2.95E-03	1.35E-04	2.74E-08	1.60E-03	4.22E-03
E46	0.00E+00	3.55E-05	2.63E-06	5.92E+01	6.47E-05	2.38E-01	4.14E-05	2.58E-02	5.26E-03	1.01E-03	4.00E-03	1.80E-03	1.83E-03	3.37E-03	2.65E-04	6.26E-08	2.17E-03	4.80E-03
E47	0.00E+00	7.61E-06	5.86E-07	1.45E+01	1.75E-05	6.33E-02	9.61E-06	5.12E-03	1.32E-03	2.48E-04	9.30E-04	4.48E-04	4.57E-04	6.69E-04	6.65E-05	1.64E-08	4.74E-04	9.49E-04
E48	0.00E+00	3.19E-05	2.37E-06	5.44E+01	6.07E-05	2.22E-01	3.77E-05	2.29E-02	4.86E-03	9.28E-04	3.65E-03	1.66E-03	1.69E-03	2.99E-03	2.45E-04	5.84E-08	1.96E-03	4.26E-03
E49	0.00E+00	5.28E-06	4.34E-07	1.13E+01	1.43E-05	5.24E-02	7.04E-06	3.54E-03	1.06E-03	1.96E-04	6.68E-04	3.51E-04	3.59E-04	4.39E-04	5.27E-05	1.27E-08	3.10E-04	6.54E-04
E50	0.00E+00	4.65E-05	3.34E-06	6.51E+01	5.80E-05	2.25E-01	4.82E-05	3.83E-02	5.59E-03	1.10E-03	4.58E-03	1.91E-03	1.94E-03	4.88E-03	2.77E-04	5.72E-08	2.64E-03	7.17E-03
E51	0.00E+00	1.01E-06	9.21E-08	2.71E+00	3.81E-06	1.38E-02	1.56E-06	5.91E-04	2.63E-04	4.76E-05	1.47E-04	8.62E-05	8.81E-05	6.95E-05	1.31E-05	3.26E-09	5.88E-05	1.08E-04
E52	0.00E+00	4.83E-05	3.47E-06	6.78E+01	6.08E-05	2.35E-01	5.03E-05	3.96E-02	5.83E-03	1.15E-03	4.78E-03	1.99E-03	2.03E-03	5.06E-03	2.90E-04	6.01E-08	2.75E-03	7.41E-03
E53	0.00E+00	2.00E-05	1.39E-06	2.74E+01	2.46E-05	9.26E-02	2.09E-05	1.57E-02	2.31E-03	4.59E-04	2.04E-03	8.08E-04	8.20E-04	2.07E-03	1.17E-04	2.60E-08	1.21E-03	2.93E-03
E54	0.00E+00	5.68E-05	4.30E-06	9.66E+01	1.06E-04	3.94E-01	6.61E-05	4.27E-02	8.69E-03	1.66E-03	6.30E-03	2.93E-03	2.99E-03	5.42E-03	4.33E-04	9.87E-08	3.31E-03	7.95E-03
E55	0.00E+00	2.00E-05	1.39E-06	2.74E+01	2.46E-05	9.26E-02	2.09E-05	1.57E-02	2.31E-03	4.59E-04	2.04E-03	8.08E-04	8.20E-04	2.07E-03	1.17E-04	2.60E-08	1.21E-03	2.93E-03
E56	0.00E+00	5.68E-05	4.30E-06	9.66E+01	1.06E-04	3.94E-01	6.61E-05	4.27E-02	8.69E-03	1.66E-03	6.30E-03	2.93E-03	2.99E-03	5.42E-03	4.33E-04	9.87E-08	3.31E-03	7.95E-03
E57	0.00E+00	1.91E-05	1.68E-06	4.73E+01	7.21E-05	2.50E-01	2.97E-05	1.00E-02	6.37E-03	1.06E-03	2.85E-03	1.62E-03	1.66E-03	1.12E-03	2.29E-04	5.86E-08	1.21E-03	1.83E-03
E58	0.00E+00	2.45E-05	1.91E-06	4.31E+01	5.64E-05	1.98E-01	3.07E-05	1.69E-02	5.55E-03	9.47E-04	2.96E-03	1.45E-03	1.48E-03	1.88E-03	1.98E-04	4.76E-08	1.49E-03	3.14E-03
E59	0.00E+00	1.40E-05	1.22E-06	3.60E+01	5.08E-05	1.82E-01	2.14E-05	7.61E-03	3.46E-03	6.29E-04	2.05E-03	1.15E-03	1.17E-03	9.57E-04	1.74E-04	4.48E-08	8.80E-04	1.39E-03
E60	0.00E+00	1.50E-05	1.20E-06	3.07E+01	3.85E-05	1.40E-01	1.96E-05	9.90E-03	2.85E-03	5.31E-04	1.88E-03	9.56E-04	9.76E-04	1.26E-03	1.43E-04	3.50E-08	9.08E-04	1.83E-03
E61	0.00E+00	1.40E-05	1.22E-06	3.60E+01	5.08E-05	1.82E-01	2.14E-05	7.61E-03	3.46E-03	6.29E-04	2.05E-03	1.15E-03	1.17E-03	9.57E-04	1.74E-04	4.48E-08	8.80E-04	1.39E-03
E62	0.00E+00	1.50E-05	1.20E-06	3.07E+01	3.85E-05	1.40E-01	1.96E-05	9.90E-03	2.85E-03	5.31E-04	1.88E-03	9.56E-04	9.76E-04	1.26E-03	1.43E-04	3.50E-08	9.08E-04	1.83E-03
E63	0.00E+00	1.05E-04	8.20E-06	1.84E+02	2.40E-04	8.47E-01	1.32E-04	7.32E-02	2.38E-02	4.06E-03	1.27E-02	6.20E-03	6.33E-03	8.11E-03	8.49E-04	2.03E-07	6.38E-03	1.36E-02
E64	0.00E+00	6.54E-05	4.97E-06	1.06E+02	1.33E-04	4.70E-01	7.86E-05	4.71E-02	1.36E-02	2.33E-03	7.57E-03	3.57E-03	3.64E-03	5.23E-03	4.84E-04	1.14E-07	3.95E-03	8.77E-03
E65	0.00E+00	1.06E-04	8.37E-06	1.92E+02	2.56E-04	8.98E-01	1.36E-04	7.24E-02	2.49E-02	4.24E-03	1.31E-02	6.49E-03	6.62E-03	8.03E-03	8.91E-04	2.15E-07	6.48E-03	1.34E-02
E66	0.00E+00	7.02E-05	5.36E-06	1.16E+02	1.46E-04	5.14E-01	8.50E-05	5.02E-02	1.47E-02	2.54E-03	8.19E-03	3.88E-03	3.95E-03	5.58E-03	5.27E-04	1.24E-07	4.25E-03	9.35E-03
E67	0.00E+00	3.37E-05	2.67E-06	6.78E+01	8.43E-05	3.06E-01	4.38E-05	2.25E-02	6.27E-03	1.17E-03	4.21E-03	2.11E-03	2.15E-03	2.88E-03	3.15E-04	7.72E-08	2.06E-03	4.16E-03
E68	0.00E+00	3.69E-05	2.91E-06	7.46E+01	9.36E-05	3.38E-01	4.84E-05	2.39E-02	6.90E-03	1.29E-03	4.67E-03	2.33E-03	2.38E-03	3.11E-03	3.47E-04	8.65E-08	2.30E-03	4.43E-03
E69	0.00E+00	2.43E-05	2.13E-06	6.10E+01	9.41E-05	3.24E-01	3.84E-05	1.19E-02	8.21E-03	1.36E-03	3.71E-03	2.10E-03	2.14E-03	1.37E-03	2.96E-04	7.70E-08	1.58E-03	2.18E-03
E70	0.00E+00	3.25E-05	2.87E-06	8.52E+01	1.34E-04	4.58E-01	5.33E-05	1.43E-02	1.15E-02	1.90E-03	5.18E-03	2.94E-03	3.01E-03	1.69E-03	4.16E-04	1.10E-07	2.19E-03	2.59E-03
E71	0.00E+00	2.59E-05	2.65E-06	9.03E+01	1.52E-04	5.19E-01	5.14E-05	7.28E-03	1.25E-02	2.03E-03	4.92E-03	3.13E-03	3.21E-03	8.46E-04	4.52E-04	1.21E-07	1.74E-03	1.25E-03
E72	0.00E+00	3.72E-05	3.28E-06	9.66E+01	1.52E-04	5.17E-01	6.07E-05	1.65E-02	1.30E-02	2.15E-03	5.91E-03	3.33E-03	3.41E-03	1.96E-03	4.71E-04	1.25E-07	2.52E-03	2.99E-03
E73	0.00E+00	3.20E-05	2.57E-06	5.64E+01	8.62E-05	2.94E-01	4.29E-05	2.12E-02	9.51E-03	1.52E-03	4.12E-03	2.11E-03	2.15E-03	2.06E-03	2.64E-04	6.56E-08	1.98E-03	3.94E-03
E74	0.00E+00	2.71E-05	2.07E-06	4.34E+01	6.53E-05	2.18E-01	3.51E-05	1.76E-02	7.23E-03	1.16E-03	3.43E-03	1.64E-03	1.67E-03	1.76E-03	2.01E-04	5.12E-08	1.77E-03	3.27E-03
E75	0.00E+00	8.05E-05	6.45E-06	1.55E+02	2.00E-04	7.05E-01	1.04E-04	5.58E-02	1.97E-02	3.35E-03	9.91E-03	5.03E-03	5.13E-03	6.09E-03	7.24E-04	1.70E-07	4.78E-03	1.03E-02
E76	0.00E+00	1.27E-04	1.00E-05	2.30E+02	2.83E-04	1.01E+00	1.56E-04	9.37E-02	2.90E-02	4.97E-03	1.48E-02	7.39E-03	7.54E-03	1.01E-02	1.06E-03	2.40E-07	7.24E-03	1.74E-02
E77	0.00E+00	8.86E-05	7.04E-06	1.64E+02	2.06E-04	7.31E-01	1.11E-04	6.39E-02	2.07E-02	3.54E-03	1.06E-02	5.29E-03	5.40E-03	6.92E-03	7.60E-04	1.75E-07	5.16E-03	1.19E-02
E78	0.00E+00	1.33E-04	1.05E-05	2.36E+02	2.87E-04	1.03E+00	1.62E-04	1.00E-01	2.98E-02	5.10E-03	1.53E-02	7.58E-03	7.73E-03	1.08E-02	1.08E-03	2.43E-07	7.57E-03	1.87E-02
E79	0.00E+00	6.34E-05	5.15E-06	1.39E+02	1.97E-04	6.69E-01	9.10E-05	3.55E-02	1.78E-02	3.00E-03	8.89E-03	4.60E-03	4.70E-03	4.14E-03	6.66E-04	1.70E-07	4.19E-03	6.52E-03
E80	0.00E+00	7.50E-05	6.46E-06	1.83E+02	2.63E-04	9.08E-01	1.13E-04	4.15E-02	2.38E-02	3.96E-03	1.09E-02	6.00E-03	6.14E-03	4.66E-03	8.84E-04	2.22E-07	4.74E-03	7.61E-03
E83	0.00E+00	3.32E-05	2.62E-06	5.81E+01	7.45E-05	2.66E-01	4.11E-05	2.42E-02	7.51E-03	1.28E-03	3.90E-03	1.94E-03	1.98E-03	2.62E-03	2.67E-04	6.18E-08	1.93E-03	4.50E-03
E84	0.00E+00	2.96E-05	2.26E-06	4.77E+01	5.88E-05	2.09E-01	3.52E-05	2.19E-02	6.08E-03	1.05E-03	3.37E-03	1.59E-03	1.62E-03	2.40E-03	2.16E-04	4.99E-08	1.75E-03	4.07E-03
E85	0.00E+00	1.52E-04	1.22E-05	2.75E+02	4.31E-04	1.46E+00	2.09E-04	9.48E-02	4.65E-02	7.42E-03	2.02E-02	1.03E-02	1.06E-02	9.40E-03	1.29E-03	3.29E-07	9.64E-03	1.76E-02
E86	0.00E+00	1.52E-04	1.19E-05	2.52E+02	3.77E-04	1.28E+00	1.98E-04	1.02E-01	4.21E-02	6.77E-03	1.92E-02	9.42E-03	9.62E-03	1.01E-02	1.17E-03	2.90E-07	9.60E-03	1.90E-02
E87	0.00E+00	1.63E-04	1.26E-05	2.61E+02	3.85E-04	1.31E+00	2.08E-04	1.11E-01	4.35E-02	7.01E-03	2.02E-02	9.75E-03	9.96E-03	1.09E-02	1.20E-03	2.98E-07	1.03E-02	2.06E-02
E88	0.00E+00	1.30E-04	1.00E-05	2.10E+02	3.13E-04	1.06E+00	1.68E-04	8.67E-02	3.50E-02	5.63E-03	1.63E-02	7.87E-03	8.04E-03	8.58E-03	9.70E-04	2.43E-07	8.28E-03	1.61E-02
E89	0.00E+00	5.03E-06	5.19E-07	1.65E+01	3.09E-05	1.03E-01	1.03E-05	1.01E-03	2.89E-03	4.48E-04	9.91E-04	6.31E-04	6.47E-04	1.28E-04	8.25E-05	2.29E-08	3.47E-04	1.68E-04
E90	0.00E+00	1.04E-05	9.25E-07	2.37E+01	3.99E-05	1.35E-01	1.64E-05	5.52E-03	4.08E-03	6.43E-04	1.56E-03	8.92E-04	9.13E-04	5.49E-04	1.14E-04	2.98E-08	6.56E-04	1.01E-03
E91	0.00E+00	1.77E-07	1.89E-08	6.10E-01	1.15E-06	3.83E-03	3.75E-07	3.25E-05	1.07E-04	1.66E-05	3.58E-05	2.33E-05	2.39E-05	4.10E-06	3.06E-06	8.46E-10	1.20E-05	5.32E-06
E92	0.00E+00	1.77E-07	1.89E-08	6.10E-01	1.15E-06	3.83E-03	3.75E-07	3.25E-05	1.07E-04	1.66E-05	3.58E-05	2.33E-05	2.39E-05	4.10E-06	3.06E-06	8.46E-10	1.20E-05	5.32E-06
E93	0.00E+00	9.51E-06	8.27E-07	2.05E+01	3.39E-05	1.15E-01	1.44E-05	5.35E-03	3.52E-03	5.57E-04	1.38E-03	7.71E-04	7.89E-04	5.28E-04	9.85E-05	2.54E-08	5.93E-04	9.86E-04
E94	0.00E+00	8.66E-06	8.65E-07	2.65E+01	4.90E-05	1.63E-01	1.69E-05	2.32E-03	4.64E-03	7.21E-04	1.62E-03	1.01E-03	1.04E-03	2.69E-04	1.32E-04	3.63E-08	5.88E-04	4.02E-04
E95	0.00E+00	5.68E-05	4.20E-06	9.32E+01	9.65E-05	3.57E-01	6.46E-05	4.30E-02	8.51E-03	1.61E-03	6.19E-03	2.77E-03	2.82E-03	5.54E-03	4.14E-04	9.28E-08	3.37E-03	8.01E-03
E96	0.00E+00	9.13E-05	7.01E-06	1.62E+02	1.76E-04	6.52E-01	1.08E-04	6.89E-02	1.51E-02	2.83E-03	1.02E-02	4.83E-03	4.93E-03	8.68E-03	7.29E-04	1.62E-07	5.26E-03	1.28E-02
F01	0.00E+00	2.76E-05	2.35E-06	5.68E+01	9.25E-05	3.14E-01	4.07E-05	1.61E-02	9.70E-03	1.54E-03	3.90E-03	2.13E-03	2.18E-03	1.59E-03	2.71E-04	6.96E-08	1.73E-03	2.97E-03
F02	0.00E+00	3.61E-05	2.84E-06	6.08E+01	9.21E-05	3.12E-01	4.76E-05	2.38E-02	1.02E-02	1.64E-03	4.61E-03	2.28E-03	2.33E-03	2.35E-03	2.83E-04	7.10E-08	2.29E-03	4.42E-03
F33	0.00E+00	8.00E-06	7.83E-07	2.26E+01	4.04E-05	1.37E-01	1.45E-05	3.14E-03	3.96E-03	6.17E-04	1.38E-03	8.56E-04	8.77E-04	3.21E-04	1.12E-04	2.98E-08	5.06E-04	5.64E-04
F34	0.00E+00	3.69E-05	3.01E-06	6.67E+01	1.02E-04	3.51E-01	4.98E-05	2.47E-02	1.13E-02	1.81E-03	4.76E-03	2.48E-03	2.54E-03	2.38E-03	3.13E-04	7.71E-08	2.24E-03	4.59E-03
F35	0.00E+00	1.49E-05	1.07E-06	2.30E+01	2.37E-05	8.72E-02	1.67E-05	1.11E-02	2.01E-03	3.89E-04	1.62E-03	6.93E-04	7.05E-04	1.46E-03	1.01E-04	2.36E-08	9.14E-04	2.07E-03
F36	0.00E+00	2.30E-05	1.81E-06	4.58E+01	5.69E-05	2.06E-01	2.98E-05	1.52E-02	4.23E-03	7.90E-04	2.88E-03	1.43E-03	1.46E-03	1.97E-03	2.13E-04	5.25E-08	1.42E-03	2.82E-03
F37	0.00E+00	1.29E-04	9.99E-06	2.05E+02	3.00E-04	1.02E+00	1.64E-04	8.98E-02	3.43E-02	5.53E-03	1.58E-02	7.66E-03	7.82E-03	8.75E-03	9.46E-04	2.32E-07	8.04E-03	1.67E-02
F38	0.00E+00	1.69E-04	1.18E-05	1.87E+02	2.09E-04	7.38E-01	1.76E-04	1.41E-01	2.99E-02	5.00E-03	1.71E-02	6.83E-03	6.95E-03	1.35E-02	8.00E-04	1.70E-07	1.02E-02	2.65E-02
F39	0.00E+00	8.45E-06	6.26E-07	1.26E+01	1.19E-05	4.62E-02	8.98E-06	6.99E-03	1.11E-03	2.16E-04	8.41E-04	3.73E-04	3.79E-04	8.72E-04	5.45E-05	1.11E-08	4.63E-04	1.31E-03
F40	0.00E+00	2.33E-05	1.80E-06	4.22E+01	4.85E-05	1.80E-01	2.82E-05	1.69E-02	3.84E-03	7.27E-04	2.68E-03	1.29E-03	1.32E-03	2.14E-03	1.92E-04	4.47E-08	1.37E-03	3.15E-03
F41	0.00E+00	1.22E-05	1.30E-06	4.66E+01	7.97E-05	2.72E-01	2.59E-05	2.46E-03	6.48E-03	1.05E-03	2.48E-03	1.62E-03	1.66E-03	2.95E-04	2.35E-04	6.33E-08	8.36E-04	4.00E-04
F42	0.00E+00	1.46E-05	1.29E-06	3.52E+01	5.27E-05	1.84E-01	2.21E-05	8.32E-03	4.74E-03	7.88E-04	2.10E-03	1.20E-03	1.23E-03	9.02E-04	1.70E-04	4.24E-08	8.82E-04	1.53E-03
F43	0.00E+00	5.86E-07	6.23E-08	2.01E+00	3.79E-06	1.27E-02	1.24E-06	1.07E-04	3.55E-04	5.49E-05	1.18E-04	7.69E-05	7.88E-05	1.35E-05	1.01E-05	2.79E-09	3.96E-05	1.75E-05
F44	0.00E+00	1.10E-05	1.01E-06	2.79E+01	4.92E-05	1.65E-01	1.88E-05	4.59E-03	4.84E-03	7.58E-04	1.80E-03	1.06E-03	1.09E-03	4.82E-04	1.37E-04	3.68E-08	7.22E-04	8.31E-04
F45	0.00E+00	3.32E-05	2.62E-06	5.81E+01	7.45E-05	2.66E-01	4.11E-05	2.42E-02	7.51E-03	1.28E-03	3.90E-03	1.94E-03	1.98E-03	2.62E-03	2.67E-04	6.18E-08	1.93E-03	4.50E-03
F46	0.00E+00	2.96E-05	2.26E-06	4.77E+01	5.88E-05	2.09E-01	3.52E-05	2.19E-02	6.08E-03	1.05E-03	3.37E-03	1.59E-03	1.62E-03	2.40E-03	2.16E-04	4.99E-08	1.75E-03	4.07E-03
F47	0.00E+00	9.74E-07	8.10E-08	1.73E+00	2.53E-06	8.99E-03	1.27E-06	7.37E-04	2.94E-04	4.71E-05	1.18E-04	6.31E-05	6.45E-05	6.79E-05	8.03E-06	1.86E-09	5.41E-05	1.37E-04
F48	0.00E+00	1.06E-07	1.13E-08	3.66E-01	6.89E-07	2.30E-03	2.25E-07	1.95E-05	6.45E-05	9.98E-06	2.15E-05	1.40E-05	1.43E-05	2.46E-06	1.84E-06	5.08E-10	7.20E-06	3.19E-06
F78	0.00E+00	5.12E-05	4.38E-06	1.05E+02	1.78E-04	5.80E-01	7.68E-05	2.69E-02	2.66E-02	3.86E-03	7.40E-03	4.07E-03	4.16E-03	2.35E-03	5.05E-04	1.09E-07	3.24E-03	4.97E-03
F79	0.00E+00	5.12E-05	4.54E-06	1.28E+02	2.04E-04	6.83E-01	8.22E-05	2.49E-02	2.13E-02	3.34E-03	7.96E-03	4.51E-03	4.61E-03	2.59E-03	6.26E-04	1.55E-07	3.33E-03	4.55E-03
F80	0.00E+00	4.55E-05	4.00E-06	1.21E+02	1.81E-04	6.16E-01	7.34E-05	2.14E-02	1.58E-02	2.62E-03	7.12E-03	3.99E-03	4.09E-03	2.51E-03	5.91E-04	1.53E-07	3.04E-03	3.89E-03
F84	0.00E+00	8.81E-05	6.31E-06	7.71E+01	7.16E-05	2.98E-01	8.17E-05	9.01E-02	1.90E-02	2.95E-03	7.59E-03	3.00E-03	3.06E-03	6.26E-03	3.20E-04	4.36E-08	4.54E-03	1.69E-02
F85	0.00E+00	5.99E-05	4.62E-06	9.18E+01	1.14E-04	4.07E-01	6.97E-05	4.89E-02	1.48E-02	2.41E-03	6.62E-03	3.14E-03	3.21E-03	4.56E-03	4.16E-04	8.69E-08	3.40E-03	9.14E-03
F86	0.00E+00	3.85E-05	2.81E-06	5.54E+01	6.02E-05	2.16E-01	4.25E-05	3.01E-02	6.74E-03	1.18E-03	4.09E-03	1.78E-03	1.82E-03	3.32E-03	2.46E-04	5.40E-08	2.28E-03	5.62E-03
F87	0.00E+00	8.55E-05	5.58E-06	7.43E+01	5.81E-05	2.09E-01	8.01E-05	7.58E-02	1.11E-02	1.93E-03	7.88E-03	2.62E-03	2.66E-03	7.27E-03	2.96E-04	5.38E-08	5.22E-03	1.43E-02
F88	0.00E+00	8.81E-05	6.31E-06	7.71E+01	7.16E-05	2.98E-01	8.17E-05	9.01E-02	1.90E-02	2.95E-03	7.59E-03	3.00E-03	3.06E-03	6.26E-03	3.20E-04	4.36E-08	4.54E-03	1.69E-02
F89	0.00E+00	1.22E-04	8.67E-06	1.33E+02	1.82E-04	5.92E-01	1.34E-04	9.60E-02	3.25E-02	4.91E-03	1.31E-02	5.47E-03	5.58E-03	7.32E-03	5.92E-04	1.19E-07	7.50E-03	1.80E-02

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B09	100	Passenger Car	1227	0.00E+00	1.33E-05	1.44E-06	5.46E+01	9.24E-05	3.51E-01	2.95E-05	2.62E-03	3.99E-03	8.01E-04	2.87E-03	1.85E-03	1.90E-03	1.54E-04	2.79E-04	7.67E-08	9.72E-04	4.09E-04
16	B09	100	Passenger Truck	2056	0.00E+00	2.86E-05	3.05E-06	1.29E+02	1.87E-04	7.02E-01	6.11E-05	7.48E-03	7.02E-03	1.50E-03	5.88E-03	3.80E-03	3.89E-03	8.28E-04	6.51E-04	1.79E-07	1.97E-03	1.20E-03
16	B09	100	Single Unit Short Haul Truck	59	0.00E+00	7.98E-06	3.94E-07	1.08E+01	6.96E-06	2.51E-02	8.63E-06	4.32E-03	4.09E-04	1.19E-04	9.86E-04	2.44E-04	2.49E-04	1.09E-03	4.35E-05	1.78E-08	7.37E-04	8.07E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	3.46E-07	1.68E-08	4.57E-01	2.88E-07	1.03E-03	3.73E-07	1.82E-04	1.85E-05	5.14E-06	4.30E-05	1.03E-05	1.05E-05	4.58E-05	1.84E-06	7.27E-10	3.25E-05	3.40E-05
16	B09	100	Combination Short Haul Truck	73	0.00E+00	2.52E-05	1.84E-06	2.64E+01	7.16E-08	2.46E-02	1.81E-05	2.68E-02	8.52E-04	3.03E-04	1.41E-03	5.39E-04	5.29E-04	3.99E-03	8.87E-05	0.00E+00	8.81E-04	5.06E-03
16	B09	100	Combination Long Haul Truck	67	0.00E+00	2.19E-05	1.50E-06	2.39E+01	8.29E-08	2.45E-02	1.64E-05	2.56E-02	7.90E-04	2.19E-04	1.44E-03	4.49E-04	4.49E-04	3.65E-03	8.03E-05	0.00E+00	9.87E-04	4.82E-03
16	B10	100	Passenger Car	929	0.00E+00	1.00E-05	1.09E-06	4.13E+01	6.99E-05	2.66E-01	2.23E-05	1.98E-03	3.02E-03	6.06E-04	2.17E-03	1.40E-03	1.44E-03	1.16E-04	2.11E-04	5.80E-08	7.35E-04	3.10E-04
16	B10	100	Passenger Truck	1555	0.00E+00	2.16E-05	2.31E-06	9.76E+01	1.42E-04	5.31E-01	4.62E-05	5.66E-03	5.31E-03	1.13E-03	4.45E-03	2.87E-03	2.94E-03	6.26E-04	4.93E-04	1.35E-07	1.49E-03	9.12E-04
16	B10	100	Single Unit Short Haul Truck	47	0.00E+00	6.31E-06	3.12E-07	8.56E+00	5.50E-06	1.98E-02	6.82E-06	3.42E-03	3.23E-04	9.41E-05	7.80E-04	1.93E-04	1.97E-04	8.64E-04	3.44E-05	1.41E-08	5.83E-04	6.37E-04
16	B10	100	Single Unit Long Haul Truck	2	0.00E+00	2.73E-07	1.33E-08	3.61E-01	2.28E-07	8.11E-04	2.95E-07	1.44E-04	1.46E-05	4.06E-06	3.40E-05	8.16E-06	8.28E-06	3.62E-05	1.45E-06	5.75E-10	2.57E-05	2.69E-05
16	B10	100	Combination Short Haul Truck	61	0.00E+00	2.09E-05	1.52E-06	2.19E+01	5.93E-08	2.04E-02	1.50E-05	2.22E-02	7.06E-04	2.51E-04	1.17E-03	4.47E-04	4.38E-04	3.30E-03	7.35E-05	0.00E+00	7.30E-04	4.20E-03
16	B10	100	Combination Long Haul Truck	55	0.00E+00	1.81E-05	1.24E-06	1.98E+01	6.87E-08	2.03E-02	1.36E-05	2.12E-02	6.55E-04	1.81E-04	1.19E-03	3.72E-04	3.72E-04	3.03E-03	6.65E-05	0.00E+00	8.18E-04	4.00E-03
16	B13	100	Passenger Car	502	0.00E+00	5.42E-06	5.87E-07	2.23E+01	3.78E-05	1.44E-01	1.20E-05	1.07E-03	1.63E-03	3.28E-04	1.17E-03	7.55E-04	7.76E-04	6.29E-05	1.14E-04	3.14E-08	3.97E-04	1.67E-04
16	B13	100	Passenger Truck	840	0.00E+00	1.17E-05	1.25E-06	5.27E+01	7.66E-05	2.87E-01	2.50E-05	3.06E-03	2.87E-03	6.12E-04	2.40E-03	1.55E-03	1.59E-03	3.38E-04	2.66E-04	7.31E-08	8.05E-04	4.92E-04
16	B13	100	Single Unit Short Haul Truck	29	0.00E+00	3.86E-06	1.91E-07	5.24E+00	3.37E-06	1.21E-02	4.17E-06	2.09E-03	1.98E-04	5.76E-05	4.77E-04	1.18E-04	1.21E-04	5.29E-04	2.11E-05	8.62E-09	3.57E-04	3.90E-04
16	B13	100	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.13E-09	2.21E-01	1.39E-07	4.96E-04	1.81E-07	8.80E-05	8.94E-06	2.49E-06	2.08E-05	5.00E-06	5.07E-06	2.21E-05	8.91E-07	3.52E-10	1.57E-05	1.64E-05
16	B13	100	Combination Short Haul Truck	35	0.00E+00	1.21E-05	8.79E-07	1.27E+01	3.43E-08	1.18E-02	8.68E-06	1.28E-02	4.08E-04	1.45E-04	6.75E-04	2.58E-04	2.53E-04	1.91E-03	4.24E-05	0.00E+00	4.22E-04	2.42E-03
16	B13	100	Combination Long Haul Truck	32	0.00E+00	1.05E-05	7.18E-07	1.15E+01	3.97E-08	1.17E-02	7.85E-06	1.22E-02	3.78E-04	1.05E-04	6.87E-04	2.15E-04	2.15E-04	1.75E-03	3.84E-05	0.00E+00	4.72E-04	2.31E-03
16	B14	100	Passenger Car	900	0.00E+00	9.72E-06	1.05E-06	4.00E+01	6.77E-05	2.57E-01	2.16E-05	1.92E-03	2.92E-03	5.87E-04	2.10E-03	1.35E-03	1.39E-03	1.13E-04	2.05E-04	5.62E-08	7.12E-04	3.00E-04
16	B14	100	Passenger Truck	1507	0.00E+00	2.10E-05	2.24E-06	9.46E+01	1.37E-04	5.15E-01	4.48E-05	5.48E-03	5.15E-03	1.10E-03	4.31E-03	2.78E-03	2.85E-03	6.07E-04	4.77E-04	1.31E-07	1.44E-03	8.83E-04
16	B14	100	Single Unit Short Haul Truck	48	0.00E+00	6.44E-06	3.18E-07	8.74E+00	5.61E-06	2.02E-02	6.96E-06	3.49E-03	3.30E-04	9.60E-05	7.95E-04	1.97E-04	2.01E-04	8.82E-04	3.51E-05	1.44E-08	5.95E-04	6.50E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.79E-07	1.36E-08	3.68E-01	2.32E-07	8.27E-04	3.01E-07	1.47E-04	1.49E-05	4.15E-06	3.47E-05	8.33E-06	8.45E-06	3.69E-05	1.48E-06	5.87E-10	2.62E-05	2.74E-05
16	B14	100	Combination Short Haul Truck	53	0.00E+00	1.82E-05	1.33E-06	1.91E+01	5.17E-08	1.78E-02	1.31E-05	1.94E-02	6.15E-04	2.19E-04	1.02E-03	3.89E-04	3.82E-04	2.88E-03	6.40E-05	0.00E+00	6.35E-04	3.65E-03
16	B14	100	Combination Long Haul Truck	48	0.00E+00	1.58E-05	1.08E-06	1.73E+01	5.98E-08	1.77E-02	1.18E-05	1.85E-02	5.70E-04	1.58E-04	1.04E-03	3.24E-04	3.24E-04	2.64E-03	5.79E-05	0.00E+00	7.12E-04	3.48E-03
16	B15	100	Passenger Car	1172	0.00E+00	1.27E-05	1.37E-06	5.21E+01	8.82E-05	3.35E-01	2.81E-05	2.50E-03	3.81E-03	7.65E-04	2.74E-03	1.76E-03	1.81E-03	1.47E-04	2.67E-04	7.32E-08	9.28E-04	3.91E-04
16	B15	100	Passenger Truck	1962	0.00E+00	2.73E-05	2.91E-06	1.23E+02	1.79E-04	6.70E-01	5.83E-05	7.14E-03	6.70E-03	1.43E-03	5.61E-03	3.62E-03	3.71E-03	7.90E-04	6.21E-04	1.71E-07	1.88E-03	1.15E-03
16	B15	100	Single Unit Short Haul Truck	25	0.00E+00	3.35E-06	1.65E-07	4.54E+00	2.92E-06	1.05E-02	3.62E-06	1.81E-03	1.72E-04	4.99E-05	4.14E-04	1.02E-04	1.04E-04	4.59E-04	1.83E-05	7.47E-09	3.09E-04	3.38E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.45E-07	7.05E-09	1.92E-01	1.21E-07	4.30E-04	1.57E-07	7.63E-05	7.75E-06	2.16E-06	1.80E-05	4.33E-06	4.39E-06	1.92E-05	7.72E-07	3.05E-10	1.36E-05	1.42E-05
16	B15	100	Combination Short Haul Truck	17	0.00E+00	5.95E-06	4.33E-07	6.23E+00	1.69E-08	5.80E-03	4.28E-06	6.33E-03	2.01E-04	7.14E-05	3.32E-04	1.27E-04	1.25E-04	9.40E-04	2.09E-05	0.00E+00	2.08E-04	1.19E-03
16	B15	100	Combination Long Haul Truck	16	0.00E+00	5.16E-06	3.54E-07	5.64E+00	1.95E-08	5.77E-03	3.86E-06	6.03E-03	1.86E-04	5.16E-05	3.38E-04	1.06E-04	1.06E-04	8.61E-04	1.89E-05	0.00E+00	2.33E-04	1.14E-03
16	B16	100	Passenger Car	832	0.00E+00	8.99E-06	9.73E-07	3.70E+01	6.26E-05	2.38E-01	2.00E-05	1.78E-03	2.70E-03	5.43E-04	1.94E-03	1.25E-03	1.29E-03	1.04E-04	1.89E-04	5.20E-08	6.59E-04	2.77E-04
16	B16	100	Passenger Truck	1393	0.00E+00	1.94E-05	2.07E-06	8.75E+01	1.27E-04	4.76E-01	4.14E-05	5.07E-03	4.76E-03	1.01E-03	3.99E-03	2.57E-03	2.64E-03	5.61E-04	4.41E-04	1.21E-07	1.34E-03	8.17E-04
16	B16	100	Single Unit Short Haul Truck	22	0.00E+00	2.96E-06	1.46E-07	4.02E+00	2.58E-06	9.30E-03	3.20E-06	1.60E-03	1.52E-04	4.42E-05	3.66E-04	9.06E-05	9.24E-05	4.06E-04	1.62E-05	6.61E-09	2.74E-04	2.99E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	1.28E-07	6.23E-09	1.69E-01	1.07E-07	3.81E-04	1.38E-07	6.75E-05	6.85E-06	1.91E-06	1.59E-05	3.83E-06	3.89E-06	1.70E-05	6.83E-07	2.70E-10	1.21E-05	1.26E-05
16	B16	100	Combination Short Haul Truck	12	0.00E+00	3.96E-06	2.89E-07	4.16E+00	1.13E-08	3.87E-03	2.85E-06	4.22E-03	1.34E-04	4.76E-05	2.22E-04	8.47E-05	8.31E-05	6.26E-04	1.39E-05	0.00E+00	1.38E-04	7.96E-04
16	B16	100	Combination Long Haul Truck	10	0.00E+00	3.44E-06	2.36E-07	3.76E+00	1.30E-08	3.85E-03	2.58E-06	4.02E-03	1.24E-04	3.44E-05	2.26E-04	7.05E-05	7.05E-05	5.74E-04	1.26E-05	0.00E+00	1.55E-04	7.58E-04
11	D27	80	Passenger Car	731	0.00E+00	8.78E-06	9.51E-07	3.37E+01	6.11E-05	2.25E-01	1.95E-05	1.50E-03	4.02E-03	6.99E-04	1.90E-03	1.22E-03	1.26E-03	1.15E-04	1.72E-04	4.81E-08	6.44E-04	2.36E-04
11	D27	80	Passenger Truck	1225	0.00E+00	1.89E-05	2.00E-06	7.79E+01	1.24E-04	4.15E-01	3.95E-05	4.46E-03	7.21E-03	1.28E-03	3.78E-03	2.46E-03	2.52E-03	5.51E-04	3.95E-04	1.07E-07	1.27E-03	7.28E-04
11	D27	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.55E-03	5.16E-06	2.49E-03	3.05E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.61E-09	4.44E-04	4.65E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.96E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.27E-06	2.01E-05	8.11E-07	3.17E-10	1.95E-05	1.99E-05
11	D27	80	Combination Short Haul Truck	20	0.00E+00	8.95E-06	6.40E-07	7.42E+00	2.83E-08	7.93E-03	6.57E-06	9.24E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.74E-03
11	D27	80	Combination Long Haul Truck	19	0.00E+00	8.01E-06	5.37E-07	6.87E+00	3.27E-08	8.22E-03	6.10E-06	8.94E-03	5.32E-04	1.07E-04	5.53E-04	1.63E-04	1.64E-04	1.05E-03	2.29E-05	0.00E+00	3.88E-04	1.68E-03
11	D28	80	Passenger Car	309	0.00E+00	3.71E-06	4.01E-07	1.42E+01	2.58E-05	9.52E-02	8.24E-06	6.35E-04	1.70E-03	2.95E-04	8.03E-04	5.17E-04	5.31E-04	4.84E-05	7.25E-05	2.03E-08	2.72E-04	9.95E-05
11	D28	80	Passenger Truck	517	0.00E+00	7.97E-06	8.45E-07	3.29E+01	5.10E-05	1.75E-01	1.67E-05	1.88E-03	3.05E-03	5.40E-04	1.59E-03	1.04E-03	1.06E-03	2.33E-04	1.67E-04	4.53E-08	5.34E-04	3.07E-04
11	D28	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.48E-03	1.34E-06	6.44E-04	7.90E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.21E-04
11	D28	80	Combination Short Haul Truck	8	0.00E+00	3.44E-06	2.46E-07	2.85E+00	1.09E-08	3.05E-03	2.53E-06	3.55E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.24E-05	4.29E-04	9.55E-06	0.00E+00	1.33E-04	6.69E-04
11	D28	80	Combination Long Haul Truck	7	0.00E+00	3.08E-06	2.07E-07	2.64E+00	1.26E-08	3.16E-03	2.35E-06	3.44E-03	2.05E-04	4.11E-05	2.13E-04	6.26E-05	6.30E-05	4.03E-04	8.82E-06	0.00E+00	1.49E-04	6.48E-04
11	D29	80	Passenger Car	731	0.00E+00	8.78E-06	9.51E-07	3.37E+01	6.11E-05	2.25E-01	1.95E-05	1.50E-03	4.02E-03	6.99E-04	1.90E-03	1.22E-03	1.26E-03	1.15E-04	1.72E-04	4.81E-08	6.44E-04	2.36E-04
11	D29	80	Passenger Truck	1225	0.00E+00	1.89E-05	2.00E-06	7.79E+01	1.21E-04	4.15E-01	3.95E-05	4.46E-03	7.21E-03	1.28E-03	3.78E-03	2.46E-03	2.52E-03	5.51E-04	3.95E-04	1.07E-07	1.27E-03	7.28E-04
11	D29	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.55E-03	5.16E-06	2.49E-03	3.05E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.61E-09	4.44E-04	4.65E-04
11	D29	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.96E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.27E-06	2.01E-05	8.11E-07	3.17E-10	1.95E-05	1.99E-05
11	D29	80	Combination Short Haul Truck	20	0.00E+00	8.95E-06	6.40E-07	7.42E+00	2.83E-08	7.93E-03	6.57E-06	9.24E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.74E-03
11	D29	80	Combination Long Haul Truck	19	0.00E+00	8.01E-06	5.37E-07	6.87E+00	3.27E-08	8.22E-03	6.10E-06	8.94E-03	5.32E-04	1.07E-04	5.53E-04	1.63E-04	1.64E-04	1.05E-03	2.29E-05	0.00E+00	3.88E-04	1.68E-03
11	D30	80	Passenger Car	309	0.00E+00	3.71E-06	4.01E-07	1.42E+01	2.58E-05	9.52E-02	8.24E-06	6.35E-04	1.70E-03	2.95E-04	8.03E-04	5.17E-04	5.31E-04	4.84E-05	7.25E-05	2.03E-08	2.72E-04	9.95E-05
11	D30	80	Passenger Truck	517	0.00E+00	7.97E-06	8.45E-07	3.29E+01	5.10E-05	1.75E-01	1.67E-05	1.88E-03	3.05E-03	5.40E-04	1.59E-03	1.04E-03	1.06E-03	2.33E-04	1.67E-04	4.53E-08	5.34E-04	3.07E-04
11	D30	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.48E-03	1.34E-06	6.44E-04	7.90E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.21E-04
11	D30	80	Combination Short Haul Truck	8	0.00E+00	3.44E-06	2.46E-07	2.85E+00	1.09E-08	3.05E-03	2.53E-06	3.55E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.24E-05	4.29E-04	9.55E-06	0.00E+00	1.33E-04	6.69E-04
11	D30	80	Combination Long Haul Truck	7	0.00E+00	3.08E-06	2.07E-07	2.64E+00	1.26E-08	3.16E-03	2.35E-06	3.44E-03	2.05E-04	4.11E-05	2.13E-04	6.26E-05	6.30E-05	4.03E-04	8.82E-06	0.00E+00	1.49E-04	6.48E-04
11	D31	80	Passenger Car	396	0.00E+00	4.76E-06	5.15E-07	1.83E+01	3.31E-05	1.22E-01	1.06E-05	8.15E-04	2.18E-03	3.79E-04	1.03E-03	6.64E-04	6.81E-04	6.21E-05	9.30E-05	2.61E-08	3.49E-04	1.28E-04
11	D31	80	Passenger Truck	664	0.00E+00	1.02E-05	1.08E-06	4.22E+01	6.54E-05	2.25E-01	2.14E-05	2.42E-03	3.91E-03	6.93E-04	2.05E-03	1.33E-03	1.36E-03	2.99E-04	2.14E-04	5.81E-08	6.86E-04	3.95E-04
11	D31	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.37E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.58E-05	9.72E-05	3.18E-04	1.28E-05	5.08E-09	2.96E-04	3.10E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	6.93E-09	1.34E-01	1.11E-07	2.64E-04	1.50E-07	7.10E-05	9.27E-06	2.03E-06	1.71E-05	4.12E-06	4.18E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.33E-05
11	D31	80	Combination Short Haul Truck	14	0.00E+00	6.20E-06	4.43E-07	5.14E+00	1.96E-08	5.49E-03	4.55E-06	6.39E-03	3.76E-04	9.26E-05	3.70E-04	1.31E-04	1.30E-04	7.73E-04	1.72E-05	0.00E+00	2.40E-04	1.20E-03
11	D31	80	Combination Long Haul Truck	13	0.00E+00	5.54E-06	3.72E-07	4.76E+00	2.26E-08	5.69E-03	4.22E-06	6.19E-03	3.68E-04	7.40E-05	3.83E-04	1.13E-04	1.13E-04	7.26E-04	1.59E-05	0.00E+00	2.68E-04	1.17E-03
11	D32	80	Passenger Car	220	0.00E+00	2.64E-06	2.86E-07	1.01E+01	1.84E-05	6.78E-02	5.87E-06	4.52E-04	1.21E-03	2.10E-04	5.72E-04	3.68E-04	3.78E-04	3.44E-05	5.16E-05	1.45E-08	1.94E-04	7.08E-05
11	D32	80	Passenger Truck	368	0.00E+00	5.68E-06	6.01E-07	2.34E+01	3.63E-05	1.25E-01	1.19E-05	1.34E-03	2.17E-03	3.85E-04	1.14E-03	7.38E-04	7.57E-04	1.66E-04	1.19E-04	3.22E-08	3.80E-04	2.19E-04
11	D32	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	D32	80	Single Unit Long Haul Truck	7	0.00E+00	2.98E-06	2.13E-07	2.47E+00	9.43E-09	2.64E-03	2.19E-06	3.08E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.27E-05	3.72E-04	8.27E-06	0.00E+00	1.15E-04	5.80E-04
11	D32	80	Combination Long Haul Truck	6	0.00E+00	2.67E-06	1.79E-07	2.29E+00	1.09E-08	2.74E-03	2.03E-06	2.98E-03	1.77E-04	3.57E-05	1.84E-04	5.43E-05	5.46E-05	3.50E-04	7.65E-06	0.00E+00	1.29E-04	5.61E-04
9	D33	60	Passenger Car	221	0.00E+00	3.27E-06	3.53E-07	1.10E+01	2.27E-05	8.15E-02	7.23E-06	4.50E-04	2.24E-03	3.44E-04	7.05E-04	4.55E-04	4.68E-04	4.61E-05	5.55E-05	1.53E-08	2.39E-04	7.05E-05
9	D33	60	Passenger Truck	369	0.00E+00	7.20E-06	7.60E-07	2.50E+01	4.50E-05	1.45E-01	1.49E-05	1.47E-03	4.10E-03	6.37E-04	1.41E-03	9.19E-04	9.42E-04	1.96E-04	1.25E-04	3.47E-08	4.69E-04	2.43E-04
9	D33	60	Single Unit Short Haul Truck	6	0.00E+00	1.69E-06	8.44E-08	1.07E+00	1.39E-06	2.08E-03	1.80E-06	8.06E-04	1.37E-04	2.47E-05	2.04E-04	5.06E-05	5.14E-05	1.08E-04	4.34E-06	1.79E-09	1.54E-04	1.51E-04
9	D33	60	Combination Short Haul Truck	6	0.00E+00	3.70E-06	2.58E-07	2.41E+00	1.31E-08	3.23E-03	2.74E-06	4.01E-03	3.43E-04	6.80E-05	2.35E-04	7.67E-05	7.67E-05	3.63E-04	8.04E-06	0.00E+00	1.58E-04	7.57E-04
9	D33	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.26E+00	1.50E-08	3.48E-03	2.56E-06	3.97E-03	3.45E-04	5.87E-05	2.42E-04	6.58E-05	6.66E-05	3.43E-04	7.54E-06	0.00E+00	1.75E-04	7.50E-04
9	D34	60	Passenger Car	338	0.00E+00	5.01E-06	5.41E-07	1.68E+01	3.49E-05	1.25E-01	1.11E-05	6.90E-04	3.43E-03	5.27E-04	1.08E-03	6.98E-04	7.17E-04	7.07E-05	8.51E-05	2.34E-08	3.67E-04	1.08E-04
9	D34	60	Passenger Truck	567	0.00E+00	1.10E-05	1.17E-06	3.84E+01	6.91E-05	2.22E-01	2.28E-05	2.25E-03	6.30E-03	9.77E-04	2.16E-03	1.41E-03	1.44E-03	3.01E-04	1.92E-04	5.32E-08	7.19E-04	3.73E-04
9	D34	60	Single Unit Short Haul Truck	11	0.00E+00	3.38E-06	1.69E-07	2.15E+00	2.78E-06	4.15E-03	3.61E-06	1.61E-03	2.73E-04	4.95E-05	4.09E-04	1.01E-04	1.03E-04	2.15E-04	8.68E-06	3.58E-09	3.07E-04	3.02E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.34E-09	9.18E-02	1.21E-07	1.76E-04	1.58E-07	6.97E-05	1.23E-05	2.20E-06	1.80E-05	4.41E-06	4.48E-06	9.17E-06	3.70E-07	1.52E-10	1.35E-05	1.31E-05
9	D34	60	Combination Short Haul Truck	10	0.00E+00	5.85E-06	4.09E-07	3.81E+00	2.07E-08	5.11E-03	4.33E-06	6.35E-03	5.44E-04	1.08E-04	3.73E-04	1.21E-04	1.21E-04	5.74E-04	1.27E-05	0.00E+00	2.50E-04	1.20E-03
9	D34	60	Combination Long Haul Truck	9	0.00E+00	5.24E-06	3.42E-07	3.57E+00	2.37E-08	5.51E-03	4.05E-06	6.29E-03	5.46E-04	9.29E-05	3.83E-04	1.04E-04	1.05E-04	5.44E-04	1.19E-05	0.00E+00	2.77E-04	1.19E-03
9	D35	60	Passenger Car	209	0.00E+00	3.10E-06	3.35E-07	1.04E+01	2.16E-05	7.74E-02	6.86E-06	4.27E-04	2.12E-03	3.26E-04	6.69E-04	4.32E-04	4.44E-04	4.37E-05	5.26E-05	1.45E-08	2.27E-04	6.69E-05
9	D35	60	Passenger Truck	351	0.00E+00	6.84E-06	7.22E-07	2.38E+01	4.28E-05	1.37E-01	1.41E-05	1.39E-03	3.90E-03	6.05E-04	1.33E-03	8.73E-04	8.94E-04	1.86E-04	1.19E-04	3.29E-08	4.45E-04	2.31E-04
9	D35	60	Single Unit Short Haul

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D40	60	Passenger Truck	270	0.00E+00	5.26E-06	5.55E-07	1.83E+01	3.29E-05	1.06E-01	1.09E-05	1.07E-03	3.00E-03	4.66E-04	1.03E-03	6.72E-04	6.88E-04	1.43E-04	9.15E-05	2.53E-08	3.43E-04	1.78E-04
9	D40	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D40	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	D41	60	Passenger Car	50	0.00E+00	7.36E-07	7.96E-08	2.47E+00	5.12E-06	1.84E-02	1.63E-06	1.01E-04	5.04E-04	7.75E-05	1.59E-04	1.03E-04	1.05E-04	1.04E-05	1.25E-05	3.44E-09	5.39E-05	1.59E-05
9	D41	60	Passenger Truck	83	0.00E+00	1.62E-06	1.71E-07	5.64E+00	1.02E-05	3.26E-02	3.35E-06	3.31E-04	9.25E-04	1.44E-04	3.17E-04	2.07E-04	2.12E-04	4.42E-05	2.82E-05	7.82E-09	1.06E-04	5.48E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	D41	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.08E-07	1.00E+00	5.45E-09	1.34E-03	1.14E-06	1.67E-03	1.43E-04	2.83E-05	9.81E-05	3.20E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	D41	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	9.01E-08	9.41E-01	6.25E-09	1.45E-03	1.07E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.29E-05	3.13E-04
9	D42	60	Passenger Car	187	0.00E+00	2.77E-06	3.00E-07	9.31E+00	1.93E-05	6.92E-02	6.14E-06	3.82E-04	1.90E-03	2.92E-04	5.98E-04	3.87E-04	3.97E-04	3.91E-05	4.71E-05	1.30E-08	2.03E-04	5.98E-05
9	D42	60	Passenger Truck	314	0.00E+00	6.12E-06	6.46E-07	2.13E+01	3.83E-05	1.23E-01	1.26E-05	1.25E-03	3.49E-03	5.41E-04	1.19E-03	7.81E-04	8.00E-04	1.66E-04	1.06E-04	2.95E-08	3.98E-04	2.07E-04
9	D42	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	D42	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D42	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	D43	60	Passenger Car	134	0.00E+00	1.98E-06	2.14E-07	6.66E+00	1.38E-05	4.94E-02	4.39E-06	2.73E-04	1.36E-03	2.09E-04	4.28E-04	2.76E-04	2.84E-04	2.80E-05	3.36E-05	9.26E-09	1.45E-04	4.28E-05
9	D43	60	Passenger Truck	224	0.00E+00	4.37E-06	4.61E-07	1.52E+01	2.73E-05	8.78E-02	9.03E-06	8.90E-04	2.49E-03	3.87E-04	8.53E-04	5.58E-04	5.72E-04	1.19E-04	7.60E-05	2.10E-08	2.85E-04	1.48E-04
9	D43	60	Single Unit Short Haul Truck	16	0.00E+00	4.79E-06	2.39E-07	3.04E+00	3.94E-06	5.88E-03	5.11E-06	2.28E-03	3.87E-04	7.01E-05	5.79E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.28E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.49E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.55E-05	6.24E-06	6.34E-06	1.30E-05	5.25E-07	2.15E-10	1.91E-05	1.85E-05
9	D43	60	Combination Short Haul Truck	8	0.00E+00	4.62E-06	3.23E-07	3.01E+00	1.63E-08	4.03E-03	3.42E-06	5.01E-03	4.29E-04	8.50E-05	2.94E-04	9.59E-05	9.59E-05	4.53E-04	1.00E-05	0.00E+00	1.98E-04	9.46E-04
9	D43	60	Combination Long Haul Truck	7	0.00E+00	4.13E-06	2.70E-07	2.82E+00	1.87E-08	4.35E-03	3.20E-06	4.97E-03	4.31E-04	7.33E-05	3.02E-04	8.23E-05	8.33E-05	4.29E-04	9.42E-06	0.00E+00	2.19E-04	9.38E-04
9	D44	60	Passenger Car	266	0.00E+00	3.94E-06	4.25E-07	1.32E+01	2.74E-05	9.82E-02	8.71E-06	5.42E-04	2.70E-03	4.14E-04	8.49E-04	5.49E-04	5.63E-04	5.55E-05	6.68E-05	1.84E-08	2.88E-04	8.49E-05
9	D44	60	Passenger Truck	445	0.00E+00	8.68E-06	9.16E-07	3.02E+01	5.43E-05	1.74E-01	1.79E-05	1.77E-03	4.95E-03	7.68E-04	1.69E-03	1.11E-03	1.14E-03	2.36E-04	1.51E-04	4.18E-08	5.65E-04	2.93E-04
9	D44	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	D44	60	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.45E-08	6.02E-01	3.27E-09	8.06E-04	6.84E-07	1.00E-03	8.59E-05	1.70E-05	5.88E-05	1.92E-05	1.92E-05	9.07E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	D44	60	Combination Long Haul Truck	1	0.00E+00	8.27E-07	5.41E-08	5.64E-01	3.75E-09	8.70E-04	6.40E-07	9.94E-04	8.62E-05	1.47E-05	6.04E-05	1.65E-05	1.67E-05	8.59E-05	1.88E-06	0.00E+00	4.37E-05	1.88E-04
9	D45	60	Passenger Car	521	0.00E+00	7.71E-06	8.33E-07	2.59E+01	5.37E-05	1.92E-01	1.71E-05	1.06E-03	5.28E-03	8.12E-04	1.66E-03	1.07E-03	1.10E-03	1.09E-04	1.31E-04	3.60E-08	5.64E-04	1.66E-04
9	D45	60	Passenger Truck	872	0.00E+00	1.70E-05	1.80E-06	5.91E+01	1.06E-04	3.42E-01	3.51E-05	3.46E-03	9.69E-03	1.50E-03	3.32E-03	2.17E-03	2.22E-03	4.63E-04	2.96E-04	8.19E-08	1.11E-03	5.74E-04
9	D45	60	Single Unit Short Haul Truck	46	0.00E+00	1.35E-05	6.76E-07	8.59E+00	1.11E-05	1.66E-02	1.44E-05	6.45E-03	1.09E-03	1.98E-04	1.63E-03	4.05E-04	4.11E-04	8.61E-04	3.47E-05	1.43E-08	1.23E-03	1.21E-03
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	5.91E-07	2.93E-08	3.67E-01	4.83E-07	7.04E-04	6.31E-07	2.79E-04	4.91E-05	8.79E-06	7.21E-05	1.76E-05	1.79E-05	3.67E-05	1.48E-06	6.08E-10	5.40E-05	5.23E-05
9	D45	60	Combination Short Haul Truck	31	0.00E+00	1.85E-05	1.29E-06	1.20E+01	6.54E-08	1.61E-02	1.37E-05	2.01E-02	1.72E-03	3.40E-04	1.18E-03	3.84E-04	3.84E-04	1.81E-03	4.02E-05	0.00E+00	7.91E-04	3.78E-03
9	D45	60	Combination Long Haul Truck	29	0.00E+00	1.65E-05	1.08E-06	1.13E+01	7.50E-08	1.74E-02	1.28E-05	1.99E-02	1.72E-03	2.93E-04	1.21E-03	3.29E-04	3.33E-04	1.72E-03	3.77E-05	0.00E+00	8.74E-04	3.75E-03
9	D46	60	Passenger Car	481	0.00E+00	7.12E-06	7.69E-07	2.39E+01	4.96E-05	1.78E-01	1.58E-05	9.80E-04	4.87E-03	7.49E-04	1.54E-03	9.92E-04	1.02E-03	1.00E-04	1.21E-04	3.33E-08	5.21E-04	1.54E-04
9	D46	60	Passenger Truck	805	0.00E+00	1.57E-05	1.66E-06	5.46E+01	9.82E-05	3.15E-01	3.24E-05	3.20E-03	8.95E-03	1.39E-03	3.06E-03	2.00E-03	2.05E-03	4.27E-04	2.73E-04	7.56E-08	1.02E-03	5.30E-04
9	D46	60	Single Unit Short Haul Truck	44	0.00E+00	1.30E-05	6.47E-07	8.24E+00	1.07E-05	1.59E-02	1.38E-05	6.18E-03	1.05E-03	1.90E-04	1.57E-03	3.88E-04	3.94E-04	8.25E-04	3.33E-05	1.37E-08	1.18E-03	1.16E-03
9	D46	60	Single Unit Long Haul Truck	2	0.00E+00	5.67E-07	2.81E-08	3.52E-01	4.63E-07	6.75E-04	6.05E-07	2.67E-04	4.71E-05	8.42E-06	6.91E-05	1.69E-05	1.72E-05	3.51E-05	1.42E-06	5.83E-10	5.17E-05	5.01E-05
9	D46	60	Combination Short Haul Truck	36	0.00E+00	2.13E-05	1.48E-06	1.38E+01	7.52E-08	1.85E-02	1.57E-05	2.31E-02	1.97E-03	3.91E-04	1.35E-03	4.41E-04	4.41E-04	2.09E-03	4.62E-05	0.00E+00	9.09E-04	4.35E-03
9	D46	60	Combination Long Haul Truck	33	0.00E+00	1.90E-05	1.24E-06	1.30E+01	8.62E-08	2.00E-02	1.47E-05	2.29E-02	1.98E-03	3.37E-04	1.39E-03	3.78E-04	3.83E-04	1.97E-03	4.33E-05	0.00E+00	1.01E-03	4.31E-03
9	D47	60	Passenger Car	741	0.00E+00	1.10E-05	1.19E-06	3.68E+01	7.63E-05	2.74E-01	2.43E-05	1.51E-03	7.51E-03	1.15E-03	2.37E-03	1.53E-03	1.57E-03	1.55E-04	1.86E-04	5.12E-08	8.02E-04	2.37E-04
9	D47	60	Passenger Truck	1240	0.00E+00	2.42E-05	2.55E-06	8.41E+01	1.51E-04	4.86E-01	5.00E-05	4.93E-03	1.38E-02	2.14E-03	4.72E-03	3.09E-03	3.16E-03	6.58E-04	4.20E-04	1.16E-07	1.57E-03	8.17E-04
9	D47	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.90E-07	8.77E+00	1.14E-05	1.69E-02	1.47E-05	6.58E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	D47	60	Single Unit Long Haul Truck	2	0.00E+00	6.04E-07	3.00E-08	3.75E-01	4.93E-07	7.19E-04	6.44E-07	2.85E-04	5.01E-05	8.97E-06	7.36E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.34E-05
9	D47	60	Combination Short Haul Truck	33	0.00E+00	1.97E-05	1.38E-06	1.28E+01	6.97E-08	1.72E-02	1.46E-05	2.14E-02	1.83E-03	3.63E-04	1.26E-03	4.09E-04	4.09E-04	1.93E-03	4.29E-05	0.00E+00	8.43E-04	4.04E-03
9	D47	60	Combination Long Haul Truck	31	0.00E+00	1.76E-05	1.15E-06	1.20E+01	8.00E-08	1.86E-02	1.37E-05	2.12E-02	1.84E-03	3.13E-04	1.29E-03	3.51E-04	3.55E-04	1.83E-03	4.02E-05	0.00E+00	9.33E-04	4.00E-03
9	D48	60	Passenger Car	161	0.00E+00	2.39E-06	2.58E-07	8.01E+00	1.66E-05	5.95E-02	5.28E-06	3.29E-04	1.63E-03	2.51E-04	5.15E-04	3.33E-04	3.42E-04	3.37E-05	4.05E-05	1.11E-08	1.75E-04	5.15E-05
9	D48	60	Passenger Truck	270	0.00E+00	5.26E-06	5.55E-07	1.83E+01	3.29E-05	1.06E-01	1.09E-05	1.07E-03	3.00E-03	4.66E-04	1.03E-03	6.72E-04	6.88E-04	1.43E-04	9.15E-05	2.53E-08	3.43E-04	1.78E-04
9	D48	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D48	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	D49	60	Passenger Car	741	0.00E+00	1.10E-05	1.19E-06	3.68E+01	7.63E-05	2.74E-01	2.43E-05	1.51E-03	7.51E-03	1.15E-03	2.37E-03	1.53E-03	1.57E-03	1.55E-04	1.86E-04	5.12E-08	8.02E-04	2.37E-04
9	D49	60	Passenger Truck	1240	0.00E+00	2.42E-05	2.55E-06	8.41E+01	1.51E-04	4.86E-01	5.00E-05	4.93E-03	1.38E-02	2.14E-03	4.72E-03	3.09E-03	3.16E-03	6.58E-04	4.20E-04	1.16E-07	1.57E-03	8.17E-04
9	D49	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.90E-07	8.77E+00	1.14E-05	1.69E-02	1.47E-05	6.58E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	D49	60	Single Unit Long Haul Truck	2	0.00E+00	6.04E-07	3.00E-08	3.75E-01	4.93E-07	7.19E-04	6.44E-07	2.85E-04	5.01E-05	8.97E-06	7.36E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.34E-05
9	D49	60	Combination Short Haul Truck	33	0.00E+00	1.97E-05	1.38E-06	1.28E+01	6.97E-08	1.72E-02	1.46E-05	2.14E-02	1.83E-03	3.63E-04	1.26E-03	4.09E-04	4.09E-04	1.93E-03	4.29E-05	0.00E+00	8.43E-04	4.04E-03
9	D49	60	Combination Long Haul Truck	31	0.00E+00	1.76E-05	1.15E-06	1.20E+01	8.00E-08	1.86E-02	1.37E-05	2.12E-02	1.84E-03	3.13E-04	1.29E-03	3.51E-04	3.55E-04	1.83E-03	4.02E-05	0.00E+00	9.33E-04	4.00E-03
9	D50	60	Passenger Car	601	0.00E+00	8.90E-06	9.62E-07	2.99E+01	6.20E-05	2.22E-01	1.97E-05	1.23E-03	6.10E-03	9.37E-04	1.92E-03	1.24E-03	1.27E-03	1.26E-04	1.51E-04	4.16E-08	6.51E-04	1.92E-04
9	D50	60	Passenger Truck	1007	0.00E+00	1.96E-05	2.07E-06	6.82E+01	1.23E-04	3.94E-01	4.06E-05	4.00E-03	1.12E-02	1.74E-03	3.83E-03	2.51E-03	2.57E-03	5.34E-04	3.41E-04	9.45E-08	1.28E-03	6.63E-04
9	D50	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.90E-07	8.77E+00	1.14E-05	1.69E-02	1.47E-05	6.58E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	D50	60	Single Unit Long Haul Truck	2	0.00E+00	6.04E-07	3.00E-08	3.75E-01	4.93E-07	7.19E-04	6.44E-07	2.85E-04	5.01E-05	8.97E-06	7.36E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.34E-05
9	D50	60	Combination Short Haul Truck	36	0.00E+00	2.13E-05	1.48E-06	1.38E+01	7.52E-08	1.85E-02	1.57E-05	2.31E-02	1.97E-03	3.91E-04	1.35E-03	4.41E-04	4.41E-04	2.09E-03	4.62E-05	0.00E+00	9.09E-04	4.35E-03
9	D50	60	Combination Long Haul Truck	33	0.00E+00	1.90E-05	1.24E-06	1.30E+01	8.62E-08	2.00E-02	1.47E-05	2.29E-02	1.98E-03	3.37E-04	1.39E-03	3.78E-04	3.83E-04	1.97E-03	4.33E-05	0.00E+00	1.01E-03	4.31E-03
9	D51	60	Passenger Car	248	0.00E+00	3.68E-06	3.97E-07	1.23E+01	2.56E-05	9.17E-02	8.14E-06	5.06E-04	2.52E-03	3.87E-04	7.93E-04	5.12E-04	5.26E-04	5.19E-05	6.24E-05	1.72E-08	2.69E-04	7.93E-05
9	D51	60	Passenger Truck	416	0.00E+00	8.11E-06	8.56E-07	2.82E+01	5.07E-05	1.63E-01	1.67E-05	1.65E-03	4.62E-03	7.17E-04	1.58E-03	1.03E-03	1.06E-03	2.21E-04	1.41E-04	3.90E-08	5.28E-04	2.74E-04
9	D51	60	Single Unit Short Haul Truck	16	0.00E+00	4.79E-06	2.39E-07	3.04E+00	3.94E-06	5.88E-03	5.11E-06	2.28E-03	3.87E-04	7.01E-05	5.79E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.28E-04
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.49E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.55E-05	6.24E-06	6.34E-06	1.30E-05	5.25E-07	2.15E-10	1.91E-05	1.85E-05
9	D51	60	Combination Short Haul Truck	7	0.00E+00	4.00E-06	2.80E-07	2.61E+00	1.42E-08	3.49E-03	2.97E-06	4.34E-03	3.72E-04	7.37E-05	2.55E-04	8.31E-05	8.31E-05	3.93E-04	8.71E-06	0.00E+00	1.71E-04	8.20E-04
9	D51	60	Combination Long Haul Truck	6	0.00E+00	3.58E-06	2.34E-07	2.45E+00	1.62E-08	3.77E-03	2.77E-06	4.31E-03	3.74E-04	6.36E-05	2.62E-04	7.13E-05	7.22E-05	3.72E-04	8.16E-06	0.00E+00	1.89E-04	8.13E-04
9	D52	60	Passenger Car	262	0.00E+00	3.88E-06	4.19E-07	1.30E+01	2.70E-05	9.68E-02	8.59E-06	5.34E-04	2.66E-03	4.08E-04	8.37E-04	5.41E-04	5.55E-04	5.47E-05	6.59E-05	1.81E-08	2.84E-04	8.37E-05
9	D52	60	Passenger Truck	439	0.00E+00	8.56E-06	9.03E-07	2.97E+01	5.35E-05	1.72E-01	1.77E-05	1.74E-03	4.88E-03	7.57E-04	1.67E-03	1.09E-03	1.12E-03	2.33E-04	1.49E-04	4.12E-08	5.57E-04	2.89E-04
9	D52	60	Single Unit Short Haul Truck	25	0.00E+00	7.33E-06	3.66E-07	4.66E+00	6.02E-06	8.99E-03	7.82E-06	3.49E-03	5.92E-04	1.07E-04	8.85E-04	2.19E-04	2.23E-04	4.66E-04	1.88E-05	7.75E-09	6.65E-04	6.54E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	3.20E-07	1.59E-08	1.99E-01	2.62E-07	3.81E-04	3.42E-07	1.51E-04	2.66E-05	4.76E-06	3.90E-05	9.55E-06	9.70E-06	1.99E-05	8.02E-07	3.29E-10	2.92E-05	2.83E-05
9	D52	60	Combination Short Haul Truck	14	0.00E+00	8.32E-06	5.81E-07	5.41E+00	2.94E-08	7.26E-03	6.16E-06	9.02E-03	7.73E-04	1.53E-04	5.30E-04	1.73E-04	1.73E-04	8.16E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	D52	60	Combination Long Haul Truck	13	0.00E+00	7.44E-06	4.86E-07	5.08E+00	3.37E-08	7.83E-03	5.76E-06	8.94E-03	7.76E-04	1.32E-04	5.44E-04	1.48E-04	1.50E-04	7.73E-04	1.70E-05	0.00E+00	3.93E-04	1.69E-03
9	D53	60	Passenger Car	388	0.00E+00	5.75E-06	6.21E-07	1.93E+01	4.00E-05	1.43E-01	1.27E-05	7.91E-04	3.93E-03	6.05E-04	1.24E-03	8.01E-04	8.23E-04	8.11E-05	9.76E-05	2.68E-08	4.20E-04	1.24E-04
9	D53	60	Passenger Truck	650	0.00E+00	1.27E-05	1.34E-06	4.40E+01	7.93E-05	2.55E-01	2.62E-05	2.58E-03	7.22E-03	1.12E-03	2.47E-03	1.62E-03	1.66E-03	3.45E-04	2.20E-04	6.10E-08	8.25E-04	4.28E-04
9	D53	60	Single Unit Short Haul Truck	17	0.00E+00	5.08E-06	2.53E-07	3.22E+00	4.17E-06	6.23E-03	5.41E-06	2.42E-03	4.10E-04	7.42E-05	6.13E-04	1.52E-04	1.54E-04	3.23E-04	1.30E-05	5.36E-09	4.61E-04	4.53E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	2.22E-07	1.10E-08	1.38E-01	1.81E-07	2.64E-04	2.37E-07	1.05E-04	1.84E-05	3.29E-06	2.70E-05	6.61E-06	6.72E-06	1.37E-05	5.55E-07	2.28E-10	2.02E-05	1.96E-05
9	D53	60	Combination Short Haul Truck	7	0.00E+00	4.31E-06	3.01E-07	2.81E+00	1.53E-08	3.76E-03	3.19E-06	4.68E-03	4.01E-04	7.93E-05	2.75E-04	8.95E-05	8.95E-05	4.23E-04	9.38E-06	0.00E+00	1.84E-04	8.83E-04
9	D53	60	Combination Long Haul Truck	7	0.00E+00	3.86E-06	2.52E-07	2.63E+00	1.75E-08	4.06E-03	2.99E-06	4.64E-03	4.02E-04	6.84E-05	2.82E-04	7.68E-05	7.77E-05	4.01E-04	8.79E-06	0.00E+00	2.04E-04	8.75E-04
9	D54	60	Passenger Car	278	0.00E+00	4.11E-06	4.44E-07	1.38E+01	2.86E-05	1.03E-01	9.11E-06	5.66E-04	2.82E-03	4.33E-04	8.87E-04	5.73E-04	5.89E-04	5.80E-05	6.98E-05	1.92E-08	3.01E-04	8.87E-05
9	D54	60	Passenger Truck	465	0.00E+00	9.07E-06	9.58E-07	3.15E+01	5.67E-05	1.82E-01	1.87E-05	1.85E-03	5.17E-03	8.02E-04	1.77E-03	1.16E-03	1.19E-03	2.47E-04	1.58E-04	4.37E-08	5.91E-04	3.06E-04
9	D54	60	Single Unit Short Haul Truck	25	0.00E+00	7.33E-06	3.66E-07	4.66E+00	6.02E-06	8.99E-03	7.82E-06	3.49E-03	5.92E-04	1.07E-04	8.85E-04	2.19E-04	2.23E-04	4.66E-04	1.88E-05	7.75E-09	6.65E-04	6.54E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	3.20E-07	1.59E-08	1.99E-01	2.62E-07	3.81E-04	3.42E-07	1.51E-04	2.66E-05	4.76E-06	3.90E-05	9.55E-06	9.70E-06	1.99E-05	8.02E-07	3.29E-10	2.92E-05	2.83E-05
9	D54	60	Combination Short Haul Truck	14	0.00E+00	8.32E-06	5.81E-07	5.41E+00	2.94E-08	7.26E-03	6.16E-06	9.02E-03	7.73E-04	1.53E-04	5.30E-04	1.73E-04	1.73E-04	8.16E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	D54	60	Combination Long Haul Truck	13	0.00E+00	7.44E-06	4.86E-07	5.08E+00	3.37E-08	7.83E-03	5.76E-06	8.94E-03	7.76E-04	1.32E-04	5.44E-04	1.48E-04	1.50E-04	7.73E-04	1.70E-05	0.00E+00	3.93E-04	1.69E-03
11	D55	80	Passenger Car	380	0.00

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D58	80	Combination Long Haul Truck	32	0.00E+00	1.38E-05	9.23E-07	1.18E+01	5.62E-08	1.41E-02	1.05E-05	1.54E-02	9.14E-04	1.84E-04	9.50E-04	2.80E-04	2.81E-04	1.80E-03	3.94E-05	0.00E+00	6.66E-04	2.89E-03
11	D59	80	Passenger Car	440	0.00E+00	5.28E-06	5.72E-07	2.03E+01	3.68E-05	1.36E-01	1.17E-05	9.05E-04	2.42E-03	4.20E-04	1.14E-03	7.37E-04	7.57E-04	6.89E-05	1.03E-04	2.90E-08	3.87E-04	1.42E-04
11	D59	80	Passenger Truck	737	0.00E+00	1.14E-05	1.20E-06	4.69E+01	7.27E-05	2.50E-01	2.37E-05	2.68E-03	4.34E-03	7.70E-04	2.27E-03	1.48E-03	1.51E-03	3.32E-04	2.37E-04	6.45E-08	7.62E-04	4.38E-04
11	D59	80	Single Unit Short Haul Truck	32	0.00E+00	5.93E-06	2.94E-07	5.81E+00	4.77E-06	1.17E-02	6.30E-06	3.04E-03	3.72E-04	8.42E-05	7.21E-04	1.76E-04	1.78E-04	5.83E-04	2.34E-05	9.31E-09	5.43E-04	5.69E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	2.57E-07	1.27E-08	2.46E-01	2.04E-07	4.84E-04	2.74E-07	1.30E-04	1.70E-05	3.71E-06	3.14E-05	7.55E-06	7.67E-06	2.45E-05	9.91E-07	3.87E-10	2.38E-05	2.43E-05
11	D59	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.21E-07	9.52E+00	3.63E-08	1.02E-02	8.43E-06	1.18E-02	6.96E-04	1.71E-04	6.84E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.23E-03
11	D59	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.89E-07	8.81E+00	4.19E-08	1.05E-02	7.82E-06	1.15E-02	6.82E-04	1.37E-04	7.09E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.16E-03
11	D60	80	Passenger Car	536	0.00E+00	6.43E-06	6.97E-07	2.47E+01	4.48E-05	1.65E-01	1.43E-05	1.10E-03	2.95E-03	5.12E-04	1.39E-03	8.98E-04	9.22E-04	8.40E-05	1.26E-04	3.53E-08	4.72E-04	1.73E-04
11	D60	80	Passenger Truck	898	0.00E+00	1.38E-05	1.47E-06	5.71E+01	8.85E-05	3.04E-01	2.89E-05	3.27E-03	5.29E-03	9.38E-04	2.77E-03	1.80E-03	1.85E-03	4.04E-04	2.89E-04	7.86E-08	9.28E-04	5.34E-04
11	D60	80	Single Unit Short Haul Truck	51	0.00E+00	9.52E-06	4.72E-07	9.33E+00	7.66E-06	1.88E-02	1.01E-05	4.88E-03	5.98E-04	1.35E-04	1.16E-03	2.82E-04	2.86E-04	9.36E-04	3.76E-05	1.49E-08	8.71E-04	9.14E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	4.14E-07	2.04E-08	3.95E-01	3.27E-07	7.77E-04	4.40E-07	2.09E-04	2.73E-05	5.96E-06	5.05E-05	1.21E-05	1.23E-05	3.94E-05	1.59E-06	6.22E-10	3.82E-05	3.91E-05
11	D60	80	Combination Short Haul Truck	35	0.00E+00	1.54E-05	1.10E-06	1.28E+01	4.86E-08	1.36E-02	1.13E-05	1.59E-02	9.33E-04	2.30E-04	9.17E-04	3.25E-04	3.23E-04	1.92E-03	4.26E-05	0.00E+00	5.95E-04	2.99E-03
11	D60	80	Combination Long Haul Truck	32	0.00E+00	1.38E-05	9.23E-07	1.18E+01	5.62E-08	1.41E-02	1.05E-05	1.54E-02	9.14E-04	1.84E-04	9.50E-04	2.80E-04	2.81E-04	1.80E-03	3.94E-05	0.00E+00	6.66E-04	2.89E-03
11	D61	80	Passenger Car	138	0.00E+00	1.66E-06	1.79E-07	6.36E+00	1.15E-05	4.25E-02	3.68E-06	2.84E-04	7.59E-04	1.32E-04	3.59E-04	2.31E-04	2.37E-04	2.16E-05	3.24E-05	9.08E-09	1.21E-04	4.45E-05
11	D61	80	Passenger Truck	231	0.00E+00	3.56E-06	3.77E-07	1.47E+01	2.28E-05	7.83E-02	7.44E-06	8.41E-04	1.36E-03	2.41E-04	7.12E-04	4.63E-04	4.75E-04	1.04E-04	7.44E-05	2.02E-08	2.39E-04	1.37E-04
11	D61	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.18E-03	1.72E-06	8.28E-04	1.02E-04	2.30E-05	1.97E-04	4.79E-05	4.86E-05	1.59E-04	6.39E-06	2.54E-09	1.48E-04	1.55E-04
11	D61	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.85E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.42E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.68E-04
11	D61	80	Combination Long Haul Truck	3	0.00E+00	1.23E-06	8.27E-08	1.06E+00	5.03E-09	1.26E-03	9.38E-07	1.38E-03	8.19E-05	1.65E-05	8.51E-05	2.50E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	D62	80	Passenger Car	70	0.00E+00	8.34E-07	9.04E-08	3.21E+00	5.81E-06	2.14E-02	1.86E-06	1.43E-04	3.82E-04	6.65E-05	1.81E-04	1.16E-04	1.20E-04	1.09E-05	1.63E-05	4.58E-09	6.12E-05	2.24E-05
11	D62	80	Passenger Truck	116	0.00E+00	1.80E-06	1.90E-07	7.41E+00	1.15E-05	3.95E-02	3.75E-06	4.24E-04	6.86E-04	1.22E-04	3.59E-04	2.34E-04	2.39E-04	5.24E-05	3.75E-05	1.02E-08	1.20E-04	6.92E-05
11	D62	80	Single Unit Short Haul Truck	5	0.00E+00	8.98E-07	4.46E-08	8.81E-01	7.22E-07	1.77E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.62E-05
11	D62	80	Combination Short Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.42E-03	1.18E-06	1.66E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.38E-05	2.00E-04	4.45E-06	0.00E+00	6.21E-05	3.12E-04
11	D62	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.65E-08	1.23E+00	5.87E-09	1.47E-03	1.09E-06	1.60E-03	9.55E-05	1.92E-05	9.92E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.02E-04
10	D63	70	Passenger Car	40	0.00E+00	5.11E-07	5.53E-08	1.88E+00	3.56E-06	1.28E-02	1.13E-06	7.94E-05	3.07E-04	4.93E-05	1.10E-04	7.13E-05	7.32E-05	7.10E-06	9.56E-06	2.61E-09	3.74E-05	1.24E-05
10	D63	70	Passenger Truck	66	0.00E+00	1.12E-06	1.19E-07	4.33E+00	7.08E-06	2.36E-02	2.32E-06	2.49E-04	5.59E-04	9.09E-05	2.21E-04	1.45E-04	1.48E-04	3.23E-05	2.18E-05	5.84E-09	7.41E-05	4.09E-05
10	D63	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.34E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.24E-05
10	D63	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D63	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.07E-04
10	D64	70	Passenger Car	78	0.00E+00	1.01E-06	1.09E-07	3.71E+00	7.01E-06	2.52E-02	2.24E-06	1.56E-04	6.06E-04	9.72E-05	2.17E-04	1.41E-04	1.44E-04	1.40E-05	1.88E-05	5.14E-09	7.38E-05	2.45E-05
10	D64	70	Passenger Truck	131	0.00E+00	2.21E-06	2.34E-07	8.54E+00	1.40E-05	4.65E-02	4.58E-06	4.91E-04	1.10E-03	1.79E-04	4.36E-04	2.85E-04	2.92E-04	6.36E-05	4.29E-05	1.15E-08	1.46E-04	8.07E-05
10	D64	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.95E-06	5.66E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.38E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.60E-09	3.27E-04	3.33E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.64E-05	1.16E-05	2.25E-06	1.91E-05	4.66E-06	4.73E-06	1.20E-05	4.82E-07	1.93E-10	1.44E-05	1.43E-05
10	D64	70	Combination Short Haul Truck	10	0.00E+00	5.43E-06	3.86E-07	3.95E+00	1.77E-08	4.68E-03	3.98E-06	5.72E-03	4.13E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.96E-04	1.32E-05	0.00E+00	2.17E-04	1.08E-03
10	D64	70	Combination Long Haul Truck	10	0.00E+00	4.93E-06	3.29E-07	3.68E+00	2.04E-08	4.96E-03	3.74E-06	5.64E-03	4.11E-04	7.50E-05	3.42E-04	9.94E-05	1.00E-04	5.62E-04	1.23E-05	0.00E+00	2.42E-04	1.07E-03
11	D65	80	Passenger Car	173	0.00E+00	2.08E-06	2.25E-07	7.98E+00	1.45E-05	5.34E-02	4.62E-06	3.56E-04	9.52E-04	1.65E-04	4.50E-04	2.90E-04	2.98E-04	2.71E-05	4.06E-05	1.14E-08	1.52E-04	5.58E-05
11	D65	80	Passenger Truck	290	0.00E+00	4.47E-06	4.73E-07	1.84E+01	2.86E-05	9.82E-02	9.34E-06	1.05E-03	1.71E-03	3.03E-04	8.94E-04	5.81E-04	5.96E-04	1.30E-04	9.34E-05	2.54E-08	3.00E-04	1.72E-04
11	D65	80	Single Unit Short Haul Truck	36	0.00E+00	6.82E-06	3.39E-07	6.69E+00	5.49E-06	1.34E-02	7.26E-06	3.50E-03	4.29E-04	9.70E-05	8.30E-04	2.02E-04	2.05E-04	6.71E-04	2.70E-05	1.07E-08	6.25E-04	6.55E-04
11	D65	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.46E-08	2.83E-01	2.35E-07	5.57E-04	3.16E-07	1.50E-04	1.96E-05	4.28E-06	3.62E-05	8.69E-06	8.83E-06	2.83E-05	1.14E-06	4.46E-10	2.74E-05	2.80E-05
11	D65	80	Combination Short Haul Truck	22	0.00E+00	9.87E-06	7.06E-07	8.18E+00	3.12E-08	8.75E-03	7.25E-06	1.02E-02	5.99E-04	1.47E-04	5.89E-04	2.09E-04	2.07E-04	1.23E-03	2.74E-05	0.00E+00	3.82E-04	1.92E-03
11	D65	80	Combination Long Haul Truck	21	0.00E+00	8.83E-06	5.92E-07	7.58E+00	3.61E-08	9.06E-03	6.72E-06	9.86E-03	5.87E-04	1.18E-04	6.10E-04	1.79E-04	1.81E-04	1.16E-03	2.53E-05	0.00E+00	4.27E-04	1.86E-03
11	D66	80	Passenger Car	188	0.00E+00	2.25E-06	2.44E-07	8.65E+00	1.57E-05	5.79E-02	5.01E-06	3.86E-04	1.03E-03	1.79E-04	4.88E-04	3.14E-04	3.23E-04	2.94E-05	4.41E-05	1.24E-08	1.65E-04	6.05E-05
11	D66	80	Passenger Truck	314	0.00E+00	4.85E-06	5.13E-07	2.00E+01	3.10E-05	1.07E-01	1.01E-05	1.14E-03	1.85E-03	3.28E-04	9.69E-04	6.30E-04	6.46E-04	1.41E-04	1.01E-04	2.75E-08	3.25E-04	1.87E-04
11	D66	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.18E-05	7.86E-04	1.92E-04	1.94E-04	6.36E-04	2.56E-05	1.02E-08	5.92E-04	6.21E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.39E-08	2.68E-01	2.22E-07	5.28E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.36E-06	2.68E-05	1.08E-06	4.22E-10	2.59E-05	2.65E-05
11	D66	80	Combination Short Haul Truck	30	0.00E+00	1.33E-05	9.52E-07	1.10E+01	4.21E-08	1.18E-02	9.78E-06	1.37E-02	8.07E-04	1.99E-04	7.94E-04	2.81E-04	2.80E-04	1.66E-03	3.69E-05	0.00E+00	5.15E-04	2.59E-03
11	D66	80	Combination Long Haul Truck	28	0.00E+00	1.19E-05	7.99E-07	1.02E+01	4.86E-08	1.22E-02	9.07E-06	1.33E-02	7.91E-04	1.59E-04	8.22E-04	2.42E-04	2.44E-04	1.56E-03	3.41E-05	0.00E+00	5.76E-04	2.51E-03
11	D67	80	Passenger Car	173	0.00E+00	2.08E-06	2.25E-07	7.98E+00	1.45E-05	5.34E-02	4.62E-06	3.56E-04	9.52E-04	1.65E-04	4.50E-04	2.90E-04	2.98E-04	2.71E-05	4.06E-05	1.14E-08	1.52E-04	5.58E-05
11	D67	80	Passenger Truck	290	0.00E+00	4.47E-06	4.73E-07	1.84E+01	2.86E-05	9.82E-02	9.34E-06	1.05E-03	1.71E-03	3.03E-04	8.94E-04	5.81E-04	5.96E-04	1.30E-04	9.34E-05	2.54E-08	3.00E-04	1.72E-04
11	D67	80	Single Unit Short Haul Truck	36	0.00E+00	6.82E-06	3.39E-07	6.69E+00	5.49E-06	1.34E-02	7.26E-06	3.50E-03	4.29E-04	9.70E-05	8.30E-04	2.02E-04	2.05E-04	6.71E-04	2.70E-05	1.07E-08	6.25E-04	6.55E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.46E-08	2.83E-01	2.35E-07	5.57E-04	3.16E-07	1.50E-04	1.96E-05	4.28E-06	3.62E-05	8.69E-06	8.83E-06	2.83E-05	1.14E-06	4.46E-10	2.74E-05	2.80E-05
11	D67	80	Combination Short Haul Truck	22	0.00E+00	9.87E-06	7.06E-07	8.18E+00	3.12E-08	8.75E-03	7.25E-06	1.02E-02	5.99E-04	1.47E-04	5.89E-04	2.09E-04	2.07E-04	1.23E-03	2.74E-05	0.00E+00	3.82E-04	1.92E-03
11	D67	80	Combination Long Haul Truck	21	0.00E+00	8.83E-06	5.92E-07	7.58E+00	3.61E-08	9.06E-03	6.72E-06	9.86E-03	5.87E-04	1.18E-04	6.10E-04	1.79E-04	1.81E-04	1.16E-03	2.53E-05	0.00E+00	4.27E-04	1.86E-03
11	D68	80	Passenger Car	188	0.00E+00	2.25E-06	2.44E-07	8.65E+00	1.57E-05	5.79E-02	5.01E-06	3.86E-04	1.03E-03	1.79E-04	4.88E-04	3.14E-04	3.23E-04	2.94E-05	4.41E-05	1.24E-08	1.65E-04	6.05E-05
11	D68	80	Passenger Truck	314	0.00E+00	4.85E-06	5.13E-07	2.00E+01	3.10E-05	1.07E-01	1.01E-05	1.14E-03	1.85E-03	3.28E-04	9.69E-04	6.30E-04	6.46E-04	1.41E-04	1.01E-04	2.75E-08	3.25E-04	1.87E-04
11	D68	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.18E-05	7.86E-04	1.92E-04	1.94E-04	6.36E-04	2.56E-05	1.02E-08	5.92E-04	6.21E-04
11	D68	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.39E-08	2.68E-01	2.22E-07	5.28E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.36E-06	2.68E-05	1.08E-06	4.22E-10	2.59E-05	2.65E-05
11	D68	80	Combination Short Haul Truck	30	0.00E+00	1.33E-05	9.52E-07	1.10E+01	4.21E-08	1.18E-02	9.78E-06	1.37E-02	8.07E-04	1.99E-04	7.94E-04	2.81E-04	2.80E-04	1.66E-03	3.69E-05	0.00E+00	5.15E-04	2.59E-03
11	D68	80	Combination Long Haul Truck	28	0.00E+00	1.19E-05	7.99E-07	1.02E+01	4.86E-08	1.22E-02	9.07E-06	1.33E-02	7.91E-04	1.59E-04	8.22E-04	2.42E-04	2.44E-04	1.56E-03	3.41E-05	0.00E+00	5.76E-04	2.51E-03
11	D69	80	Passenger Car	113	0.00E+00	1.35E-06	1.47E-07	5.21E+00	9.44E-06	3.48E-02	3.01E-06	2.32E-04	6.21E-04	1.08E-04	2.94E-04	1.89E-04	1.94E-04	1.77E-05	2.65E-05	7.43E-09	9.94E-05	3.64E-05
11	D69	80	Passenger Truck	189	0.00E+00	2.92E-06	3.09E-07	1.20E+01	1.86E-05	6.41E-02	6.09E-06	6.88E-04	1.11E-03	1.97E-04	5.83E-04	3.79E-04	3.89E-04	8.51E-05	6.09E-05	1.65E-08	1.95E-04	1.12E-04
11	D69	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.72E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.36E-09	3.12E-04	3.28E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.49E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.41E-06	1.41E-05	5.71E-07	2.23E-10	1.37E-05	1.40E-05
11	D69	80	Combination Short Haul Truck	13	0.00E+00	5.74E-06	4.10E-07	4.76E+00	1.81E-08	5.09E-03	4.21E-06	5.92E-03	3.48E-04	8.57E-05	3.42E-04	1.21E-04	1.21E-04	7.16E-04	1.59E-05	0.00E+00	2.22E-04	1.12E-03
11	D69	80	Combination Long Haul Truck	12	0.00E+00	5.13E-06	3.44E-07	4.41E+00	2.10E-08	5.27E-03	3.91E-06	5.73E-03	3.41E-04	6.86E-05	3.54E-04	1.04E-04	1.05E-04	6.72E-04	1.47E-05	0.00E+00	2.48E-04	1.08E-03
11	D70	80	Passenger Car	99	0.00E+00	1.19E-06	1.29E-07	4.59E+00	8.32E-06	3.07E-02	2.65E-06	2.04E-04	5.47E-04	9.50E-05	2.59E-04	1.67E-04	1.71E-04	1.56E-05	2.33E-05	6.55E-09	8.76E-05	3.20E-05
11	D70	80	Passenger Truck	167	0.00E+00	2.57E-06	2.72E-07	1.06E+01	1.64E-05	5.64E-02	5.37E-06	6.06E-04	9.81E-04	1.74E-04	5.14E-04	3.34E-04	3.42E-04	7.49E-05	5.37E-05	1.46E-08	1.72E-04	9.90E-05
11	D70	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.72E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.36E-09	3.12E-04	3.28E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.49E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.41E-06	1.41E-05	5.71E-07	2.23E-10	1.37E-05	1.40E-05
11	D70	80	Combination Short Haul Truck	14	0.00E+00	5.97E-06	4.27E-07	4.95E+00	1.89E-08	5.29E-03	4.38E-06	6.16E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.44E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	D70	80	Combination Long Haul Truck	12	0.00E+00	5.34E-06	3.58E-07	4.58E+00	2.18E-08	5.48E-03	4.06E-06	5.96E-03	3.55E-04	7.13E-05	3.69E-04	1.09E-04	1.09E-04	6.99E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
10	D71	70	Passenger Car	175	0.00E+00	2.26E-06	2.44E-07	8.31E+00	1.57E-05	5.64E-02	5.01E-06	3.50E-04	1.36E-03	2.18E-04	4.86E-04	3.15E-04	3.23E-04	3.13E-05	4.22E-05	1.15E-08	1.65E-04	5.49E-05
10	D71	70	Passenger Truck	293	0.00E+00	4.95E-06	5.23E-07	1.91E+01	3.13E-05	1.04E-01	1.03E-05	1.10E-03	2.47E-03	4.01E-04	9.77E-04	6.38E-04	6.54E-04	1.42E-04	9.60E-05	2.58E-08	3.27E-04	1.81E-04
10	D71	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	6.02E-03	4.07E-06	1.89E-03	2.69E-04	5.38E-05	4.66E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.54E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.30E-09	1.27E-01	1.35E-07	2.51E-04	1.78E-07	8.12E-05	1.23E-05	2.39E-06	2.03E-05	4.95E-06	5.03E-06	1.27E-05	5.13E-07	2.05E-10	1.53E-05	1.52E-05
10	D71	70	Combination Short Haul Truck	23	0.00E+00	1.20E-05	8.50E-07	8.69E+00	3.89E-08	1.03E-02	8.76E-06	1.26E-02	9.08E-04	1.99E-04	7.29E-04	2.52E-04	2.51E-04	1.31E-03	2.90E-05	0.00E+00	4.78E-04	2.37E-03
10	D71	70	Combination Long Haul Truck	21	0.00E+00	1.08E-05	7.23E-07	8.10E+00	4.48E-08	1.09E-02	8.22E-06	1.24E-02	9.04E-04	1.65E-04	7.52E-04	2.19E-04	2.21E-04	1.24E-03	2.71E-05	0.00E+00	5.33E-04	2.34E-03
10	D72	70	Passenger Car	210	0.00E+00	2.71E-06	2.93E-07	9.98E+00	1.89E-05	6.77E-02	6.01E-06	4.21E-04	1.63E-03	2.61E-04	5.84E-04	3.78E-04	3.88E-04	3.76E-05	5.07E-05	1.38E-08	1.98E-04	6.60E-05
10	D72	70	Passenger Truck	352	0.00E+00	5.94E-06	6.28E-07	2.30E+01	3.75E-05	1.25E-01	1.23E-05	1.32E-03	2.96E-03	4.82E-04	1.17E-03	7.66E-04	7.85E-04	1.71E-04	1.15E-04	3.10E-08	3.93E-04	2.17E-04
10	D72	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	6.02E-03	4.07E-06	1.89E-03	2.69E-04	5.38E-05	4.66E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.54E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.30E-09	1.27E-01	1.35E-07	2.51E-04	1.78E-07	8.12E-05	1.23E-05	2.39E-06	2.03E-05	4.95E-06	5.03E-06	1.27E-05	5.13E-07	2.05E-10	1.53E-05	1.52E-05
10	D72	70	Combination Short Haul Truck	10	0.00E+00	5.16E-06	3.67E-07	3.75E+00	1.68E-08	4.44E-03	3.78E-06	5.44E-03	3.92E-04	8.59E-05	3.15E-04	1.09E-04	1.08E-04	5.66E-04	1.25E-05	0.00E+00	2.06E-04	1.02E-03
10	D72	70	Combination Long Haul Truck	9	0.00E+00	4.68E-06	3.12E-07	3.50E+00	1.93E-08	4.71E-03	3.55E-06	5.36E-03	3.90E-04	7.12E-05	3.25E-04	9.44E-05	9.54E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
10	D73	70	Passenger Car	130

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D77	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.66E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.51E-05	8.64E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.76E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.16E-09	1.19E-01	9.88E-08	2.35E-04	1.33E-07	6.31E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	D77	80	Combination Short Haul Truck	7	0.00E+00	2.98E-06	2.13E-07	2.47E+00	9.43E-09	2.64E-03	2.19E-06	3.08E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.27E-05	3.72E-04	8.27E-06	0.00E+00	1.15E-04	5.80E-04
11	D77	80	Combination Long Haul Truck	6	0.00E+00	2.67E-06	1.79E-07	2.29E+00	1.09E-08	2.74E-03	2.03E-06	2.98E-03	1.77E-04	3.57E-05	1.84E-04	5.43E-05	5.46E-05	3.50E-04	7.65E-06	0.00E+00	1.29E-04	5.61E-04
11	D78	80	Passenger Car	71	0.00E+00	8.52E-07	9.23E-08	3.28E+00	5.94E-06	2.19E-02	1.90E-06	1.46E-04	3.91E-04	6.79E-05	1.85E-04	1.19E-04	1.22E-04	1.11E-05	1.67E-05	4.68E-09	6.26E-05	2.29E-05
11	D78	80	Passenger Truck	119	0.00E+00	1.83E-06	1.94E-07	7.57E+00	1.17E-05	4.03E-02	3.83E-06	4.33E-04	7.01E-04	1.24E-04	3.67E-04	2.39E-04	2.45E-04	5.35E-05	3.83E-05	1.04E-08	1.23E-04	7.07E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	D78	80	Combination Short Haul Truck	7	0.00E+00	3.21E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.36E-06	3.32E-03	1.95E-04	4.80E-05	1.92E-04	6.79E-05	6.75E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.24E-04
11	D78	80	Combination Long Haul Truck	7	0.00E+00	2.87E-06	1.93E-07	2.47E+00	1.17E-08	2.95E-03	2.19E-06	3.21E-03	1.91E-04	3.84E-05	1.98E-04	5.84E-05	5.88E-05	3.77E-04	8.24E-06	0.00E+00	1.39E-04	6.05E-04
10	D79	70	Passenger Car	178	0.00E+00	2.30E-06	2.49E-07	8.47E+00	1.60E-05	5.75E-02	5.10E-06	3.57E-04	1.38E-03	2.22E-04	4.95E-04	3.21E-04	3.29E-04	3.20E-05	4.30E-05	1.17E-08	1.68E-04	5.60E-05
10	D79	70	Passenger Truck	299	0.00E+00	5.04E-06	5.33E-07	1.95E+01	3.19E-05	1.06E-01	1.05E-05	1.12E-03	2.51E-03	4.09E-04	9.96E-04	6.50E-04	6.66E-04	1.45E-04	9.79E-05	2.63E-08	3.34E-04	1.84E-04
10	D79	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.95E-03	3.36E-06	1.56E-03	2.22E-04	4.43E-05	3.84E-04	9.42E-05	9.57E-05	2.47E-04	9.94E-06	4.02E-09	2.86E-04	2.91E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.69E-05	1.01E-05	1.97E-06	1.68E-05	4.07E-06	4.14E-06	1.05E-05	4.22E-07	1.69E-10	1.26E-05	1.25E-05
10	D79	70	Combination Short Haul Truck	14	0.00E+00	7.34E-06	5.22E-07	5.34E+00	2.39E-08	6.32E-03	5.37E-06	7.73E-03	5.57E-04	1.22E-04	4.47E-04	1.55E-04	1.54E-04	8.04E-04	1.78E-05	0.00E+00	2.93E-04	1.46E-03
10	D79	70	Combination Long Haul Truck	13	0.00E+00	6.65E-06	4.44E-07	4.97E+00	2.75E-08	6.69E-03	5.04E-06	7.62E-03	5.54E-04	1.01E-04	4.61E-04	1.34E-04	1.36E-04	7.58E-04	1.66E-05	0.00E+00	3.27E-04	1.44E-03
10	D80	70	Passenger Car	400	0.00E+00	5.15E-06	5.57E-07	1.90E+01	3.59E-05	1.29E-01	1.14E-05	8.00E-04	3.10E-03	4.97E-04	1.11E-03	7.19E-04	7.38E-04	7.16E-05	9.64E-05	2.63E-08	3.77E-04	1.25E-04
10	D80	70	Passenger Truck	669	0.00E+00	1.13E-05	1.20E-06	4.37E+01	7.14E-05	2.38E-01	2.34E-05	2.51E-03	5.63E-03	9.17E-04	2.23E-03	1.46E-03	1.49E-03	3.25E-04	2.19E-04	5.89E-08	7.47E-04	4.13E-04
10	D80	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.67E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	D80	70	Combination Short Haul Truck	16	0.00E+00	8.42E-06	5.99E-07	6.13E+00	2.74E-08	7.25E-03	6.17E-06	8.87E-03	6.40E-04	1.40E-04	5.13E-04	1.77E-04	1.77E-04	9.23E-04	2.04E-05	0.00E+00	3.36E-04	1.67E-03
10	D80	70	Combination Long Haul Truck	15	0.00E+00	7.64E-06	5.09E-07	5.71E+00	3.15E-08	7.68E-03	5.79E-06	8.75E-03	6.37E-04	1.16E-04	5.30E-04	1.54E-04	1.56E-04	8.71E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
10	D81	70	Passenger Car	140	0.00E+00	1.80E-06	1.95E-07	6.64E+00	1.25E-05	4.51E-02	4.00E-06	2.80E-04	1.08E-03	1.74E-04	3.88E-04	2.52E-04	2.58E-04	2.51E-05	3.37E-05	9.21E-09	1.32E-04	4.39E-05
10	D81	70	Passenger Truck	234	0.00E+00	3.95E-06	4.18E-07	1.53E+01	2.50E-05	8.33E-02	8.20E-06	8.78E-04	1.97E-03	3.21E-04	7.81E-04	5.10E-04	5.22E-04	1.14E-04	7.68E-05	2.06E-08	2.61E-04	1.44E-04
10	D81	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	D81	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D81	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.07E-04
10	D82	70	Passenger Car	200	0.00E+00	2.58E-06	2.79E-07	9.52E+00	1.80E-05	6.46E-02	5.73E-06	4.01E-04	1.55E-03	2.49E-04	5.57E-04	3.61E-04	3.70E-04	3.59E-05	4.83E-05	1.32E-08	1.89E-04	6.29E-05
10	D82	70	Passenger Truck	336	0.00E+00	5.67E-06	5.99E-07	2.19E+01	3.58E-05	1.19E-01	1.17E-05	1.26E-03	2.82E-03	4.60E-04	1.12E-03	7.31E-04	7.49E-04	1.63E-04	1.10E-04	2.96E-08	3.75E-04	2.07E-04
11	D83	80	Passenger Car	932	0.00E+00	1.12E-05	1.21E-06	4.30E+01	7.80E-05	2.88E-01	2.49E-05	1.92E-03	5.13E-03	8.91E-04	2.42E-03	1.56E-03	1.60E-03	1.46E-04	2.19E-04	6.14E-08	8.21E-04	3.00E-04
11	D83	80	Passenger Truck	1562	0.00E+00	2.41E-05	2.55E-06	9.93E+01	1.54E-04	5.29E-01	5.03E-05	5.68E-03	9.20E-03	1.63E-03	4.81E-03	3.13E-03	3.21E-03	7.03E-04	5.03E-04	1.37E-07	1.61E-03	9.28E-04
11	D83	80	Single Unit Short Haul Truck	59	0.00E+00	1.11E-05	5.53E-07	1.09E+01	8.96E-06	2.19E-02	1.18E-05	5.71E-03	6.99E-04	1.58E-04	1.35E-03	3.30E-04	3.35E-04	1.10E-03	4.40E-05	1.75E-08	1.02E-03	1.07E-03
11	D83	80	Single Unit Long Haul Truck	3	0.00E+00	4.84E-07	2.39E-08	4.62E-01	3.83E-07	9.09E-04	5.15E-07	2.44E-04	3.19E-05	6.98E-06	5.91E-05	1.42E-05	1.44E-05	4.61E-05	1.86E-06	7.27E-10	4.47E-05	4.57E-05
11	D83	80	Combination Short Haul Truck	66	0.00E+00	2.92E-05	2.09E-06	2.42E+01	9.21E-08	2.58E-02	2.14E-05	3.01E-02	1.77E-03	4.35E-04	1.74E-03	6.16E-04	6.13E-04	3.64E-03	8.08E-05	0.00E+00	1.13E-03	5.66E-03
11	D83	80	Combination Long Haul Truck	61	0.00E+00	2.61E-05	1.75E-06	2.24E+01	1.07E-07	2.68E-02	1.99E-05	2.91E-02	1.73E-03	3.48E-04	1.80E-03	5.30E-04	5.33E-04	3.42E-03	7.47E-05	0.00E+00	1.26E-03	5.49E-03
11	D84	80	Passenger Car	446	0.00E+00	5.35E-06	5.80E-07	2.06E+01	3.73E-05	1.38E-01	1.19E-05	9.17E-04	2.45E-03	4.26E-04	1.16E-03	7.47E-04	7.67E-04	6.99E-05	1.05E-04	2.94E-08	3.93E-04	1.44E-04
11	D84	80	Passenger Truck	747	0.00E+00	1.15E-05	1.22E-06	4.75E+01	7.37E-05	2.53E-01	2.41E-05	2.72E-03	4.40E-03	7.80E-04	2.30E-03	1.50E-03	1.54E-03	3.36E-04	2.41E-04	6.54E-08	7.72E-04	4.44E-04
11	D84	80	Single Unit Short Haul Truck	57	0.00E+00	1.08E-05	5.35E-07	1.06E+01	8.67E-06	2.12E-02	1.15E-05	5.52E-03	6.77E-04	1.53E-04	1.31E-03	3.19E-04	3.24E-04	1.06E-03	4.26E-05	1.69E-08	9.86E-04	1.03E-03
11	D84	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	2.31E-08	4.47E-01	3.70E-07	8.80E-04	4.98E-07	2.37E-04	3.09E-05	6.75E-06	5.72E-05	1.37E-05	1.39E-05	4.46E-05	1.80E-06	7.04E-10	4.32E-05	4.42E-05
11	D84	80	Combination Short Haul Truck	60	0.00E+00	2.62E-05	1.87E-06	2.17E+01	8.27E-08	2.32E-02	1.92E-05	2.70E-02	1.59E-03	3.91E-04	1.56E-03	5.53E-04	5.50E-04	3.26E-03	7.25E-05	0.00E+00	1.01E-03	5.08E-03
11	D84	80	Combination Long Haul Truck	54	0.00E+00	2.34E-05	1.57E-06	2.01E+01	9.56E-08	2.40E-02	1.78E-05	2.61E-02	1.56E-03	3.13E-04	1.62E-03	4.76E-04	4.79E-04	3.07E-03	6.71E-05	0.00E+00	1.13E-03	4.92E-03
11	D85	80	Passenger Car	729	0.00E+00	8.74E-06	9.47E-07	3.36E+01	6.09E-05	2.25E-01	1.95E-05	1.50E-03	4.01E-03	6.96E-04	1.89E-03	1.22E-03	1.25E-03	1.14E-04	1.71E-04	4.80E-08	6.42E-04	2.35E-04
11	D85	80	Passenger Truck	1220	0.00E+00	1.88E-05	1.99E-06	7.76E+01	1.20E-04	4.14E-01	3.93E-05	4.44E-03	7.19E-03	1.27E-03	3.76E-03	2.45E-03	2.51E-03	5.49E-04	3.93E-04	1.07E-07	1.26E-03	7.25E-04
11	D85	80	Single Unit Short Haul Truck	46	0.00E+00	8.62E-06	4.28E-07	8.45E+00	6.93E-06	1.70E-02	9.17E-06	4.42E-03	5.41E-04	1.22E-04	1.05E-03	2.55E-04	2.59E-04	8.48E-04	3.41E-05	1.35E-08	7.89E-04	8.28E-04
11	D85	80	Single Unit Long Haul Truck	2	0.00E+00	3.75E-07	1.85E-08	3.58E-01	2.96E-07	7.04E-04	3.99E-07	1.89E-04	2.47E-05	5.40E-06	4.57E-05	1.10E-05	1.12E-05	3.57E-05	1.44E-06	5.63E-10	3.46E-05	3.54E-05
11	D85	80	Combination Short Haul Truck	51	0.00E+00	2.23E-05	1.59E-06	1.85E+01	7.03E-08	1.97E-02	1.63E-05	2.30E-02	1.35E-03	3.33E-04	1.33E-03	4.71E-04	4.68E-04	2.78E-03	6.17E-05	0.00E+00	8.61E-04	4.33E-03
11	D85	80	Combination Long Haul Truck	46	0.00E+00	1.99E-05	1.34E-06	1.71E+01	8.13E-08	2.04E-02	1.52E-05	2.22E-02	1.32E-03	2.66E-04	1.38E-03	4.05E-04	4.07E-04	2.61E-03	5.71E-05	0.00E+00	9.64E-04	4.19E-03
11	D86	80	Passenger Car	405	0.00E+00	4.85E-06	5.26E-07	1.87E+01	3.38E-05	1.25E-01	1.08E-05	8.32E-04	2.22E-03	3.87E-04	1.05E-03	6.78E-04	6.96E-04	6.34E-05	9.50E-05	2.66E-08	3.56E-04	1.30E-04
11	D86	80	Passenger Truck	677	0.00E+00	1.04E-05	1.11E-06	4.31E+01	6.68E-05	2.30E-01	2.18E-05	2.47E-03	3.99E-03	7.08E-04	2.09E-03	1.36E-03	1.39E-03	3.05E-04	2.18E-04	5.93E-08	7.00E-04	4.03E-04
11	D86	80	Single Unit Short Haul Truck	44	0.00E+00	8.26E-06	4.10E-07	8.10E+00	6.65E-06	1.63E-02	8.79E-06	4.23E-03	5.19E-04	1.17E-04	1.00E-03	2.45E-04	2.48E-04	8.13E-04	3.27E-05	1.30E-08	7.56E-04	7.93E-04
11	D86	80	Single Unit Long Haul Truck	2	0.00E+00	3.59E-07	1.77E-08	3.43E-01	2.84E-07	6.75E-04	3.82E-07	1.81E-04	2.37E-05	5.18E-06	4.38E-05	1.05E-05	1.07E-05	3.42E-05	1.38E-06	5.40E-10	3.31E-05	3.39E-05
11	D86	80	Combination Short Haul Truck	47	0.00E+00	2.07E-05	1.48E-06	1.71E+01	6.53E-08	1.83E-02	1.52E-05	2.13E-02	1.25E-03	3.09E-04	1.23E-03	4.37E-04	4.34E-04	2.58E-03	5.73E-05	0.00E+00	7.99E-04	4.01E-03
11	D86	80	Combination Long Haul Truck	43	0.00E+00	1.85E-05	1.24E-06	1.59E+01	7.55E-08	1.90E-02	1.41E-05	2.06E-02	1.23E-03	2.47E-04	1.28E-03	3.76E-04	3.78E-04	2.42E-03	5.29E-05	0.00E+00	8.94E-04	3.89E-03
11	D87	80	Passenger Car	729	0.00E+00	8.74E-06	9.47E-07	3.36E+01	6.09E-05	2.25E-01	1.95E-05	1.50E-03	4.01E-03	6.96E-04	1.89E-03	1.22E-03	1.25E-03	1.14E-04	1.71E-04	4.80E-08	6.42E-04	2.35E-04
11	D87	80	Passenger Truck	1220	0.00E+00	1.88E-05	1.99E-06	7.76E+01	1.20E-04	4.14E-01	3.93E-05	4.44E-03	7.19E-03	1.27E-03	3.76E-03	2.45E-03	2.51E-03	5.49E-04	3.93E-04	1.07E-07	1.26E-03	7.25E-04
11	D87	80	Single Unit Short Haul Truck	46	0.00E+00	8.62E-06	4.28E-07	8.45E+00	6.93E-06	1.70E-02	9.17E-06	4.42E-03	5.41E-04	1.22E-04	1.05E-03	2.55E-04	2.59E-04	8.48E-04	3.41E-05	1.35E-08	7.89E-04	8.28E-04
11	D87	80	Single Unit Long Haul Truck	2	0.00E+00	3.75E-07	1.85E-08	3.58E-01	2.96E-07	7.04E-04	3.99E-07	1.89E-04	2.47E-05	5.40E-06	4.57E-05	1.10E-05	1.12E-05	3.57E-05	1.44E-06	5.63E-10	3.46E-05	3.54E-05
11	D87	80	Combination Short Haul Truck	51	0.00E+00	2.23E-05	1.59E-06	1.85E+01	7.03E-08	1.97E-02	1.63E-05	2.30E-02	1.35E-03	3.33E-04	1.33E-03	4.71E-04	4.68E-04	2.78E-03	6.17E-05	0.00E+00	8.61E-04	4.33E-03
11	D87	80	Combination Long Haul Truck	46	0.00E+00	1.99E-05	1.34E-06	1.71E+01	8.13E-08	2.04E-02	1.52E-05	2.22E-02	1.32E-03	2.66E-04	1.38E-03	4.05E-04	4.07E-04	2.61E-03	5.71E-05	0.00E+00	9.64E-04	4.19E-03
11	D88	80	Passenger Car	405	0.00E+00	4.85E-06	5.26E-07	1.87E+01	3.38E-05	1.25E-01	1.08E-05	8.32E-04	2.22E-03	3.87E-04	1.05E-03	6.78E-04	6.96E-04	6.34E-05	9.50E-05	2.66E-08	3.56E-04	1.30E-04
11	D88	80	Passenger Truck	677	0.00E+00	1.04E-05	1.11E-06	4.31E+01	6.68E-05	2.30E-01	2.18E-05	2.47E-03	3.99E-03	7.08E-04	2.09E-03	1.36E-03	1.39E-03	3.05E-04	2.18E-04	5.93E-08	7.00E-04	4.03E-04
11	D88	80	Single Unit Short Haul Truck	44	0.00E+00	8.26E-06	4.10E-07	8.10E+00	6.65E-06	1.63E-02	8.79E-06	4.23E-03	5.19E-04	1.17E-04	1.00E-03	2.45E-04	2.48E-04	8.13E-04	3.27E-05	1.30E-08	7.56E-04	7.93E-04
11	D88	80	Single Unit Long Haul Truck	2	0.00E+00	3.59E-07	1.77E-08	3.43E-01	2.84E-07	6.75E-04	3.82E-07	1.81E-04	2.37E-05	5.18E-06	4.38E-05	1.05E-05	1.07E-05	3.42E-05	1.38E-06	5.40E-10	3.31E-05	3.39E-05
11	D88	80	Combination Short Haul Truck	47	0.00E+00	2.07E-05	1.48E-06	1.71E+01	6.53E-08	1.83E-02	1.52E-05	2.13E-02	1.25E-03	3.09E-04	1.23E-03	4.37E-04	4.34E-04	2.58E-03	5.73E-05	0.00E+00	7.99E-04	4.01E-03
11	D88	80	Combination Long Haul Truck	43	0.00E+00	1.85E-05	1.24E-06	1.59E+01	7.55E-08	1.90E-02	1.41E-05	2.06E-02	1.23E-03	2.47E-04	1.28E-03	3.76E-04	3.78E-04	2.42E-03	5.29E-05	0.00E+00	8.94E-04	3.89E-03
9	D89	60	Passenger Car	49	0.00E+00	7.25E-07	7.84E-08	2.44E+00	5.05E-06	1.81E-02	1.61E-06	9.99E-05	4.97E-04	7.63E-05	1.56E-04	1.01E-04	1.04E-04	1.02E-05	1.23E-05	3.39E-09	5.31E-05	1.56E-05
9	D89	60	Passenger Truck	82	0.00E+00	1.60E-06	1.69E-07	5.56E+00	1.00E-05	3.21E-02	3.30E-06	3.26E-04	9.11E-04	1.41E-04	3.12E-04	2.04E-04	2.09E-04	4.35E-05	2.78E-05	7.70E-09	1.04E-04	5.40E-05
9	D89	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	D89	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.08E-07	1.00E+00	5.45E-09	1.34E-03	1.14E-06	1.67E-03	1.43E-04	2.83E-05	9.81E-05	3.20E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	D89	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	9.01E-08	9.41E-01	6.25E-09	1.45E-03	1.07E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.29E-05	3.13E-04
9	D90	60	Passenger Car	27	0.00E+00	3.93E-07	4.25E-08	1.32E+00	2.74E-06	9.81E-03	8.70E-07	5.41E-05	2.69E-04	4.14E-05	8.48E-05	5.48E-05	5.63E-05	5.55E-06	6.67E-06	1.84E-09	2.88E-05	8.48E-06
9	D90	60	Passenger Truck	44	0.00E+00	8.67E-07	9.15E-08	3.01E+00	5.42E-06	1.74E-02	1.79E-06	1.77E-04	4.94E-04	7.67E-05	1.69E-04	1.11E-04	1.13E-04	2.36E-05	1.51E-05	4.17E-09	5.64E-05	2.93E-05
9	D90	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	D90	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D90	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
10	D91	70	Passenger Car	107	0.00E+00	1.38E-06	1.49E-07	5.08E+00	9.59E-06	3.45E-02	3.06E-06	2.14E-04	8.29E-04	1.33E-04	2.97E-04	1.92E-04	1.98E-04	1.92E-05	2.58E-05	7.04E-09	1.01E-04	3.36E-05
10	D91	70	Passenger Truck	179	0.00E+00	3.02E-06	3.20E-07	1.17E+01	1.91E-05	6.37E-02	6.27E-06	6.72E-04	1.51E-03	2.45E-04	5.97E-04	3.90E-04	3.99E-04	8.70E-05	5.87E-05	1.58E-08	2.00E-04	1.10E-04
10	D91	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.83E-03	1.92E-06	8.90E-04	1.27E-04	2.53E-05	2.19E-04	5.38E-05	5.47E-05	1.41E-04	5.68E-06	2.30E-09	1.64E-04	1.66E-04
10	D91	70	Combination Short Haul Truck	7	0.00E+00	3.53E-06	2.51E-07	2.57E+00	1.15E-08	3.04E-03	2.59E-06	3.72E-03	2.68E-04	5.87E-05	2.15E-04	7.44E-05	7.42E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.01E-04
10	D91	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.22E-03	2.43E-06	3.67E-03	2.67E-04	4.87E-05	2.22E-04	6.46E-05	6.53E-05	3.65E-04	8.01E-06	0.00E+00	1.57E-04	6.92E-04
10	D92	70	Passenger Car	248	0.00E+00	3.19E-06	3.46E-07	1.18E+01	2.22E-05	7.99E-02	7.09E-06	4.96E-04	1.92E-03	3.08E-04	6.89E-04	4.46E-04	4.58E-04	4.44E-05	5.98E-05	1.63E-08	2.34E-04	7.78E-05
10	D92	70	Passenger Truck	415	0.00E+00	7.01E-06	7.41E-07	2.71E+01	4.43E-05	1.48E-01	1.45E-05	1.56E-03	3.49E-03	5.68E-04	1.38E-03	9.04E-04	9.26E-04	2.02E-04	1.36E-04	3.66E-08	4.64E-04	2.56E-04
10	D92	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.10E-05	1.06E-04	4.26E-06	1.72E-09	1.23E-04	1.25E-04
10	D92	70	Combination Short Haul Truck	2	0

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E03	80	Passenger Car	156	0.00E+00	1.87E-06	2.02E-07	7.17E+00	1.30E-05	4.80E-02	4.15E-06	3.20E-04	8.55E-04	1.49E-04	4.04E-04	2.61E-04	2.67E-04	2.44E-05	3.65E-05	1.02E-08	1.37E-04	5.01E-05
11	E03	80	Passenger Truck	260	0.00E+00	4.02E-06	4.25E-07	1.66E+01	2.57E-05	8.83E-02	8.39E-06	9.48E-04	1.53E-03	2.72E-04	8.03E-04	5.22E-04	5.35E-04	1.17E-04	8.39E-05	2.28E-08	2.69E-04	1.55E-04
11	E03	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.78E-03	4.20E-06	2.03E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.20E-09	3.62E-04	3.79E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.47E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.67E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.11E-06	1.64E-05	6.61E-07	2.58E-10	1.58E-05	1.62E-05
11	E03	80	Combination Short Haul Truck	14	0.00E+00	5.97E-06	4.27E-07	4.95E+00	1.89E-08	5.29E-03	4.38E-06	6.16E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.44E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	E03	80	Combination Long Haul Truck	12	0.00E+00	5.34E-06	3.58E-07	4.58E+00	2.18E-08	5.48E-03	4.06E-06	5.96E-03	3.55E-04	7.13E-05	3.69E-04	1.09E-04	1.09E-04	6.99E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E04	80	Passenger Car	250	0.00E+00	3.00E-06	3.25E-07	1.15E+01	2.09E-05	7.70E-02	6.67E-06	5.13E-04	1.37E-03	2.39E-04	6.49E-04	4.18E-04	4.29E-04	3.91E-05	5.86E-05	1.64E-08	2.20E-04	8.05E-05
11	E04	80	Passenger Truck	418	0.00E+00	6.45E-06	6.83E-07	2.66E+01	4.12E-05	1.42E-01	1.35E-05	1.52E-03	2.46E-03	4.37E-04	1.29E-03	8.39E-04	8.60E-04	1.88E-04	1.35E-04	3.66E-08	4.32E-04	2.49E-04
11	E04	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.02E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.05E-05	9.18E-05	3.00E-04	1.21E-05	4.79E-09	2.80E-04	2.93E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.49E-04	1.41E-07	6.70E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.95E-06	1.26E-05	5.11E-07	1.99E-10	1.22E-05	1.25E-05
11	E04	80	Combination Short Haul Truck	9	0.00E+00	4.13E-06	2.96E-07	3.43E+00	1.31E-08	3.66E-03	3.03E-06	4.26E-03	2.51E-04	6.17E-05	2.46E-04	8.73E-05	8.68E-05	5.15E-04	1.15E-05	0.00E+00	1.60E-04	8.03E-04
11	E04	80	Combination Long Haul Truck	9	0.00E+00	3.70E-06	2.48E-07	3.17E+00	1.51E-08	3.79E-03	2.81E-06	4.13E-03	2.46E-04	4.94E-05	2.55E-04	7.51E-05	7.56E-05	4.84E-04	1.06E-05	0.00E+00	1.79E-04	7.77E-04
11	E05	80	Passenger Car	160	0.00E+00	1.92E-06	2.08E-07	7.38E+00	1.34E-05	4.93E-02	4.27E-06	3.29E-04	8.80E-04	1.53E-04	4.16E-04	2.68E-04	2.75E-04	2.51E-05	3.76E-05	1.05E-08	1.41E-04	5.16E-05
11	E05	80	Passenger Truck	268	0.00E+00	4.13E-06	4.38E-07	1.70E+01	2.64E-05	9.08E-02	8.63E-06	9.75E-04	1.58E-03	2.80E-04	8.26E-04	5.37E-04	5.51E-04	1.21E-04	8.63E-05	2.34E-08	2.77E-04	1.59E-04
11	E05	80	Single Unit Short Haul Truck	20	0.00E+00	3.77E-06	1.87E-07	3.70E+00	3.03E-06	7.43E-03	4.01E-06	1.93E-03	2.37E-04	5.36E-05	4.59E-04	1.12E-04	1.13E-04	3.71E-04	1.49E-05	5.92E-09	3.45E-04	3.62E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	1.64E-07	8.08E-09	1.56E-01	1.30E-07	3.08E-04	1.74E-07	8.28E-05	1.08E-05	2.36E-06	2.00E-05	4.80E-06	4.88E-06	1.56E-05	6.31E-07	2.46E-10	1.51E-05	1.55E-05
11	E05	80	Combination Short Haul Truck	13	0.00E+00	5.51E-06	3.94E-07	4.57E+00	1.74E-08	4.88E-03	4.04E-06	5.68E-03	3.34E-04	8.23E-05	3.28E-04	1.16E-04	1.16E-04	6.87E-04	1.53E-05	0.00E+00	2.13E-04	1.07E-03
11	E05	80	Combination Long Haul Truck	11	0.00E+00	4.93E-06	3.31E-07	4.23E+00	2.01E-08	5.06E-03	3.75E-06	5.50E-03	3.28E-04	6.58E-05	3.40E-04	1.00E-04	1.01E-04	6.45E-04	1.41E-05	0.00E+00	2.38E-04	1.04E-03
11	E06	80	Passenger Car	95	0.00E+00	1.14E-06	1.23E-07	4.38E+00	7.94E-06	2.93E-02	2.54E-06	1.95E-04	5.22E-04	9.07E-05	2.47E-04	1.59E-04	1.63E-04	1.49E-05	2.23E-05	6.25E-09	8.36E-05	3.06E-05
11	E06	80	Passenger Truck	159	0.00E+00	2.45E-06	2.60E-07	1.01E+01	1.57E-05	5.39E-02	5.12E-06	5.79E-04	9.37E-04	1.66E-04	4.90E-04	3.19E-04	3.27E-04	7.16E-05	5.12E-05	1.39E-08	1.64E-04	9.45E-05
11	E06	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.66E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.51E-05	8.64E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.76E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.16E-09	1.19E-01	9.88E-08	2.35E-04	1.33E-07	6.31E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	E06	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.79E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.14E-04
11	E06	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
9	E07	60	Passenger Car	841	0.00E+00	1.25E-05	1.35E-06	4.18E+01	8.67E-05	3.11E-01	2.76E-05	1.72E-03	8.53E-03	1.31E-03	2.69E-03	1.74E-03	1.78E-03	1.76E-04	2.11E-04	5.82E-08	9.11E-04	2.69E-04
9	E07	60	Passenger Truck	1409	0.00E+00	2.75E-05	2.90E-06	9.55E+01	1.72E-04	5.52E-01	5.67E-05	5.60E-03	1.57E-02	2.43E-03	5.36E-03	3.51E-03	3.59E-03	7.47E-04	4.77E-04	1.32E-07	1.79E-03	9.27E-04
9	E07	60	Single Unit Short Haul Truck	45	0.00E+00	1.33E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.31E-03	1.07E-03	1.94E-04	1.60E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	E07	60	Single Unit Long Haul Truck	2	0.00E+00	5.79E-07	2.87E-08	3.60E-01	4.73E-07	6.89E-04	6.18E-07	2.73E-04	4.81E-05	8.60E-06	7.06E-05	1.73E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.12E-05
9	E07	60	Combination Short Haul Truck	47	0.00E+00	2.77E-05	1.94E-06	1.80E+01	9.81E-08	2.42E-02	2.05E-05	3.01E-02	2.58E-03	5.10E-04	1.77E-03	5.75E-04	5.75E-04	2.72E-03	6.03E-05	0.00E+00	1.19E-03	5.68E-03
9	E07	60	Combination Long Haul Truck	43	0.00E+00	2.48E-05	1.62E-06	1.69E+01	1.12E-07	2.61E-02	1.92E-05	2.98E-02	2.59E-03	4.40E-04	1.81E-03	4.94E-04	5.00E-04	2.58E-03	5.65E-05	0.00E+00	1.31E-03	5.63E-03
9	E08	60	Passenger Car	1055	0.00E+00	1.56E-05	1.69E-06	5.24E+01	1.09E-04	3.90E-01	3.46E-05	2.15E-03	1.07E-02	1.64E-03	3.37E-03	2.18E-03	2.24E-03	2.20E-04	2.65E-04	7.30E-08	1.14E-03	3.37E-04
9	E08	60	Passenger Truck	1766	0.00E+00	3.44E-05	3.64E-06	1.20E+02	2.15E-04	6.92E-01	7.11E-05	7.02E-03	1.96E-02	3.05E-03	6.72E-03	4.40E-03	4.50E-03	9.37E-04	5.99E-04	1.66E-07	2.24E-03	1.16E-03
9	E08	60	Single Unit Short Haul Truck	40	0.00E+00	1.18E-05	5.91E-07	7.52E+00	9.73E-06	1.45E-02	1.26E-05	5.64E-03	9.56E-04	1.73E-04	1.43E-03	3.54E-04	3.60E-04	7.53E-04	3.04E-05	1.25E-08	1.07E-03	1.06E-03
9	E08	60	Single Unit Long Haul Truck	2	0.00E+00	5.17E-07	2.57E-08	3.21E-01	4.23E-07	6.16E-04	5.52E-07	2.44E-04	4.30E-05	7.69E-06	6.31E-05	1.54E-05	1.57E-05	3.21E-05	1.30E-06	5.32E-10	4.72E-05	4.57E-05
9	E08	60	Combination Short Haul Truck	49	0.00E+00	2.90E-05	2.02E-06	1.88E+01	1.02E-07	2.53E-02	2.14E-05	3.14E-02	2.69E-03	5.33E-04	1.84E-03	6.01E-04	6.01E-04	2.84E-03	6.30E-05	0.00E+00	1.24E-03	5.93E-03
9	E08	60	Combination Long Haul Truck	45	0.00E+00	2.59E-05	1.69E-06	1.77E+01	1.17E-07	2.73E-02	2.01E-05	3.11E-02	2.70E-03	4.60E-04	1.89E-03	5.16E-04	5.22E-04	2.69E-03	5.90E-05	0.00E+00	1.37E-03	5.88E-03
9	E09	60	Passenger Car	757	0.00E+00	1.12E-05	1.21E-06	3.77E+01	7.81E-05	2.80E-01	2.48E-05	1.54E-03	7.68E-03	1.18E-03	2.42E-03	1.56E-03	1.61E-03	1.58E-04	1.90E-04	5.24E-08	8.21E-04	2.42E-04
9	E09	60	Passenger Truck	1269	0.00E+00	2.47E-05	2.61E-06	8.60E+01	1.55E-04	4.97E-01	5.11E-05	5.04E-03	1.41E-02	2.19E-03	4.83E-03	3.16E-03	3.23E-03	6.73E-04	4.30E-04	1.19E-07	1.61E-03	8.35E-04
9	E09	60	Single Unit Short Haul Truck	34	0.00E+00	9.87E-06	4.93E-07	6.27E+00	8.11E-06	1.21E-02	1.05E-05	4.70E-03	7.97E-04	1.44E-04	1.19E-03	2.95E-04	3.00E-04	6.28E-04	2.53E-05	1.04E-08	8.96E-04	8.81E-04
9	E09	60	Single Unit Long Haul Truck	1	0.00E+00	4.31E-07	2.14E-08	2.68E-01	3.52E-07	5.13E-04	4.60E-07	2.03E-04	3.58E-05	6.41E-06	5.26E-05	1.29E-05	1.31E-05	2.67E-05	1.08E-06	4.44E-10	3.93E-05	3.81E-05
9	E09	60	Combination Short Haul Truck	36	0.00E+00	2.13E-05	1.48E-06	1.38E+01	7.52E-08	1.85E-02	1.57E-05	2.31E-02	1.97E-03	3.91E-04	1.35E-03	4.41E-04	4.41E-04	2.09E-03	4.62E-05	0.00E+00	9.09E-04	4.35E-03
9	E09	60	Combination Long Haul Truck	33	0.00E+00	1.90E-05	1.24E-06	1.30E+01	8.62E-08	2.00E-02	1.47E-05	2.29E-02	1.98E-03	3.37E-04	1.39E-03	3.78E-04	3.83E-04	1.97E-03	4.33E-05	0.00E+00	1.01E-03	4.31E-03
9	E10	60	Passenger Car	896	0.00E+00	1.33E-05	1.43E-06	4.45E+01	9.23E-05	3.31E-01	2.94E-05	1.83E-03	9.08E-03	1.40E-03	2.86E-03	1.85E-03	1.90E-03	1.87E-04	2.25E-04	6.20E-08	9.70E-04	2.86E-04
9	E10	60	Passenger Truck	1500	0.00E+00	2.93E-05	3.09E-06	1.02E+02	1.83E-04	5.88E-01	6.04E-05	5.96E-03	1.67E-02	2.59E-03	5.71E-03	3.73E-03	3.83E-03	7.96E-04	5.08E-04	1.41E-07	1.90E-03	9.88E-04
9	E10	60	Single Unit Short Haul Truck	32	0.00E+00	9.31E-06	4.64E-07	5.91E+00	7.65E-06	1.14E-02	9.92E-06	4.43E-03	7.52E-04	1.36E-04	1.12E-03	2.78E-04	2.83E-04	5.92E-04	2.39E-05	9.83E-09	8.45E-04	8.31E-04
9	E10	60	Single Unit Long Haul Truck	1	0.00E+00	4.07E-07	2.02E-08	2.52E-01	3.32E-07	4.84E-04	4.34E-07	1.92E-04	3.38E-05	6.04E-06	4.96E-05	1.21E-05	1.23E-05	2.52E-05	1.02E-06	4.18E-10	3.71E-05	3.59E-05
9	E10	60	Combination Short Haul Truck	41	0.00E+00	2.40E-05	1.68E-06	1.56E+01	8.50E-08	2.10E-02	1.78E-05	2.61E-02	2.23E-03	4.42E-04	1.53E-03	4.99E-04	4.99E-04	2.36E-03	5.22E-05	0.00E+00	1.03E-03	4.92E-03
9	E10	60	Combination Long Haul Truck	37	0.00E+00	2.15E-05	1.41E-06	1.47E+01	9.74E-08	2.26E-02	1.66E-05	2.58E-02	2.24E-03	3.81E-04	1.57E-03	4.28E-04	4.33E-04	2.23E-03	4.90E-05	0.00E+00	1.14E-03	4.88E-03
9	E11	60	Passenger Car	923	0.00E+00	1.37E-05	1.48E-06	4.59E+01	9.51E-05	3.41E-01	3.02E-05	1.88E-03	9.36E-03	1.44E-03	2.95E-03	1.90E-03	1.96E-03	1.93E-04	2.32E-04	6.38E-08	1.00E-03	2.95E-04
9	E11	60	Passenger Truck	1545	0.00E+00	3.01E-05	3.18E-06	1.05E+02	1.88E-04	6.05E-01	6.22E-05	6.14E-03	1.72E-02	2.67E-03	5.88E-03	3.85E-03	3.94E-03	8.20E-04	5.24E-04	1.45E-07	1.96E-03	1.02E-03
9	E11	60	Single Unit Short Haul Truck	84	0.00E+00	2.48E-05	1.24E-06	1.58E+01	2.04E-05	3.04E-02	2.65E-05	1.18E-02	2.00E-03	3.63E-04	3.00E-03	7.42E-04	7.54E-04	1.58E-03	6.37E-05	2.62E-08	2.25E-03	2.21E-03
9	E11	60	Single Unit Long Haul Truck	4	0.00E+00	1.08E-06	5.38E-08	6.73E-01	8.86E-07	1.29E-03	1.16E-06	5.11E-04	9.00E-05	1.61E-05	1.32E-04	3.23E-05	3.28E-05	6.72E-05	2.72E-06	1.12E-09	9.89E-05	9.58E-05
9	E11	60	Combination Short Haul Truck	90	0.00E+00	5.30E-05	3.70E-06	3.45E+01	1.87E-07	4.62E-02	3.92E-05	5.75E-02	4.92E-03	9.75E-04	3.37E-03	1.10E-03	1.10E-03	5.20E-03	1.15E-04	0.00E+00	2.27E-03	1.08E-02
9	E11	60	Combination Long Haul Truck	82	0.00E+00	4.74E-05	3.10E-06	3.24E+01	2.15E-07	4.99E-02	3.67E-05	5.70E-02	4.94E-03	8.41E-04	3.46E-03	9.43E-04	9.55E-04	4.92E-03	1.08E-04	0.00E+00	2.51E-03	1.08E-02
9	E12	60	Passenger Car	1294	0.00E+00	1.92E-05	2.07E-06	6.43E+01	1.33E-04	4.78E-01	4.24E-05	2.64E-03	1.31E-02	2.02E-03	4.13E-03	2.67E-03	2.74E-03	2.70E-04	3.25E-04	8.95E-08	1.40E-03	4.13E-04
9	E12	60	Passenger Truck	2167	0.00E+00	4.23E-05	4.46E-06	1.47E+02	2.64E-04	8.49E-01	8.73E-05	8.61E-03	2.41E-02	3.74E-03	8.25E-03	5.39E-03	5.53E-03	1.15E-03	7.34E-04	2.03E-07	2.75E-03	1.43E-03
9	E12	60	Single Unit Short Haul Truck	85	0.00E+00	2.51E-05	1.25E-06	1.59E+01	2.06E-05	3.08E-02	2.68E-05	1.20E-02	2.03E-03	3.67E-04	3.03E-03	7.51E-04	7.62E-04	1.60E-03	6.44E-05	2.65E-08	2.28E-03	2.24E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	1.10E-06	5.44E-08	6.81E-01	8.96E-07	1.31E-03	1.17E-06	5.17E-04	9.11E-05	1.63E-05	1.34E-04	3.27E-05	3.32E-05	6.80E-05	2.75E-06	1.13E-09	1.00E-04	9.69E-05
9	E12	60	Combination Short Haul Truck	80	0.00E+00	4.68E-05	3.27E-06	3.05E+01	1.66E-07	4.09E-02	3.47E-05	5.08E-02	4.35E-03	8.61E-04	2.98E-03	9.72E-04	9.72E-04	4.59E-03	1.02E-04	0.00E+00	2.00E-03	9.58E-03
9	E12	60	Combination Long Haul Truck	72	0.00E+00	4.19E-05	2.74E-06	2.86E+01	1.90E-07	4.41E-02	3.24E-05	5.03E-02	4.37E-03	7.43E-04	3.06E-03	8.34E-04	8.44E-04	4.35E-03	9.55E-05	0.00E+00	2.22E-03	9.51E-03
11	E13	80	Passenger Car	330	0.00E+00	3.96E-06	4.29E-07	1.52E+01	2.76E-05	1.02E-01	8.81E-06	6.79E-04	1.82E-03	3.15E-04	8.58E-04	5.53E-04	5.68E-04	5.17E-05	7.75E-05	2.17E-08	2.91E-04	1.06E-04
11	E13	80	Passenger Truck	553	0.00E+00	8.52E-06	9.03E-07	3.52E+01	5.45E-05	1.87E-01	1.78E-05	2.01E-03	3.26E-03	5.77E-04	1.70E-03	1.11E-03	1.14E-03	2.49E-04	1.78E-04	4.84E-08	5.71E-04	3.29E-04
11	E13	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.85E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.78E-05	7.05E-09	4.11E-04	4.31E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.86E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.81E-06	1.86E-05	7.51E-07	2.93E-10	1.80E-05	1.84E-05
11	E13	80	Combination Short Haul Truck	15	0.00E+00	6.43E-06	4.60E-07	5.33E+00	2.03E-08	5.70E-03	4.72E-06	6.63E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.01E-04	1.78E-05	0.00E+00	2.49E-04	1.25E-03
11	E13	80	Combination Long Haul Truck	13	0.00E+00	5.75E-06	3.86E-07	4.93E+00	2.35E-08	5.90E-03	4.38E-06	6.42E-03	3.82E-04	7.68E-05	3.97E-04	1.17E-04	1.18E-04	7.53E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	E14	80	Passenger Car	204	0.00E+00	2.45E-06	2.65E-07	9.41E+00	1.71E-05	6.29E-02	5.45E-06	4.20E-04	1.12E-03	1.95E-04	5.31E-04	3.42E-04	3.51E-04	3.20E-05	4.79E-05	1.34E-08	1.80E-04	6.58E-05
11	E14	80	Passenger Truck	342	0.00E+00	5.27E-06	5.58E-07	2.17E+01	3.37E-05	1.16E-01	1.10E-05	1.24E-03	2.01E-03	3.57E-04	1.05E-03	6.86E-04	7.03E-04	1.54E-04	1.10E-04	2.99E-08	3.53E-04	2.03E-04
11	E14	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.25E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.39E-05	6.48E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.07E-04
11	E14	80	Single Unit Long Haul Truck	1	0.00E+00	9.36E-08	4.62E-09	8.94E-02	7.41E-08	1.76E-04	9.97E-08	4.73E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.60E-07	1.41E-10	8.65E-06	8.84E-06
11	E14	80	Combination Short Haul Truck	12	0.00E+00	5.05E-06	3.61E-07	4.19E+00	1.60E-08	4.47E-03	3.71E-06	5.21E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.30E-04	1.40E-05	0.00E+00	1.95E-04	9.81E-04
11	E14	80	Combination Long Haul Truck	10	0.00E+00	4.52E-06	3.03E-07	3.88E+00	1.85E-08	4.63E-03	3.44E-06	5.04E-03	3.00E-04	6.03E-05	3.12E-04	9.18E-05	9.24E-05	5.92E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
11	E15	80	Passenger Car	261	0.00E+00	3.13E-06	3.39E-07	1.20E+01	2.18E-05	8.05E-02	6.97E-06	5.36E-04	1.44E-03	2.49E-04	6.79E-04	4.37E-04	4.49E-04	4.09E-05	6.13E-05	1.72E-08	2.30E-04	8.41E-05
11	E15	80	Passenger Truck	437	0.00E+00	6.74E-06	7.14E-07	2.78E+01	4.31E-05	1.48E-01	1.41E-05	1.59E-03	2.57E-03	4.56E-04	1.35E-03	8.76E-04	8.98E-04	1.97E-04	1.41E-04	3.82E-08	4.52E-04	2.60E-04
11	E15	80	Single Unit Short Haul Truck	10	0.00E+00	1.80E-06	8.91E-08	1.76E+00	1.44E-06	3.54E-03	1.91E-06	9.21E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	E15	80	Combination Short Haul Truck	15	0.00E+00	6.66E-06	4.76E-07	5.52E+00	2.10E-08	5.90E-03	4.89E-06	6.87E-03	4.04E-04	9.94E-05	3.97E-04	1.41E-04	1.40E-04	8.30E-04	1.85E-05	0.00E+00	2.57E-04	1.29E-03
11	E15	80	Combination Long Haul Truck	14	0.00E+00	5.96E-06	4.00E-07	5.11E+00	2.43E-08	6.11E-03	4.53E-06	6.65E-03	3.96E-04	7.95E-05	4.11E-04	1.21E-04	1.22E-04	7.80E-04	1.71E-05	0.00E+00	2.88E-04	1.25E-03
11	E16	80	Passenger Car	267	0.00E+00	3.20E-06	3.47E-07	1.23E+01	2.23E-05	8.22E-02	7.12E-06	5.48E-04	1.47E-03	2.55E-04	6.93E-04	4.47E-04	4.58E-04	4.18E-05	6.26E-05	1.75E-08	2.35E-04	8.59E-05
11	E16	80	Passenger Truck	446	0.00E+00	6.88E-06	7.29E-07	2.84E+01	4.40E-05	1.51E-01	1.44E-05	1.62E-03	2.63E-03	4.66E-04	1.38E-03	8.95E-04	9.18E-04	2.01E-04	1.44E-04	3.91E-08	4.61E-04	2.65E-04
11	E16	80	Single Unit Short Haul Truck	10	0.00E+00	1.80E-06	8.91E-08	1.76E+00	1.44E-06	3.54E-03	1.91E-06	9.21E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	E16	80	Combination Short Haul Truck	15	0.00E+00	6.43E-06	4.60E-07	5.33E+00	2.03E-08	5.70E-03	4.72E-06	6.63E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.01E-04	1.78E-05	0.00E+00	2.49E-04	1.25E-03
11	E16	80	Combination Long Haul Truck	13	0.00E+00	5.75E-06	3.86E-07	4.93E+00	2.35E-08	5.90E-03	4.38E-06	6.42E-03	3.82E-04	7.68E-05	3.97E-04	1.17E-04	1.18E-04	7.53E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	E17	80

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E20	60	Combination Long Haul Truck	18	0.00E+00	1.05E-05	6.85E-07	7.15E+00	4.75E-08	1.10E-02	8.11E-06	1.26E-02	1.09E-03	1.86E-04	7.65E-04	2.08E-04	2.11E-04	1.09E-03	2.39E-05	0.00E+00	5.54E-04	2.38E-03
11	E21	80	Passenger Car	133	0.00E+00	1.59E-06	1.73E-07	6.12E+00	1.11E-05	4.09E-02	3.54E-06	2.73E-04	7.30E-04	1.27E-04	3.45E-04	2.22E-04	2.28E-04	2.08E-05	3.12E-05	8.74E-09	1.17E-04	4.28E-05
11	E21	80	Passenger Truck	222	0.00E+00	3.43E-06	3.63E-07	1.41E+01	2.19E-05	7.53E-02	7.16E-06	8.09E-04	1.31E-03	2.32E-04	6.85E-04	4.46E-04	4.57E-04	1.00E-04	7.16E-05	1.94E-08	2.30E-04	1.32E-04
11	E21	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.48E-03	1.34E-06	6.44E-04	7.90E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.21E-04
11	E21	80	Combination Short Haul Truck	6	0.00E+00	2.75E-06	1.97E-07	2.28E+00	8.70E-09	2.44E-03	2.02E-06	2.84E-03	1.67E-04	4.11E-05	1.64E-04	5.82E-05	5.79E-05	3.43E-04	7.64E-06	0.00E+00	1.07E-04	5.35E-04
11	E21	80	Combination Long Haul Truck	6	0.00E+00	2.46E-06	1.65E-07	2.11E+00	1.01E-08	2.53E-03	1.88E-06	2.75E-03	1.64E-04	3.29E-05	1.70E-04	5.01E-05	5.04E-05	3.23E-04	7.06E-06	0.00E+00	1.19E-04	5.18E-04
11	E22	80	Passenger Car	10	0.00E+00	1.17E-07	1.26E-08	4.48E-01	8.13E-07	3.00E-03	2.59E-07	2.00E-05	5.35E-05	9.29E-06	2.53E-05	1.63E-05	1.67E-05	1.52E-06	2.28E-06	6.40E-10	8.56E-06	3.13E-06
11	E22	80	Passenger Truck	16	0.00E+00	2.51E-07	2.66E-08	1.04E+00	1.61E-06	5.52E-03	5.25E-07	5.92E-05	9.59E-05	1.70E-05	5.02E-05	3.26E-05	3.35E-05	7.33E-06	5.25E-06	1.42E-09	1.68E-05	9.68E-06
11	E22	80	Single Unit Short Haul Truck	1	0.00E+00	1.80E-07	8.91E-09	1.76E-01	1.44E-07	3.54E-04	1.91E-07	9.21E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E22	80	Combination Short Haul Truck	1	0.00E+00	4.59E-07	3.28E-08	3.81E-01	1.45E-09	4.07E-04	3.37E-07	4.74E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.65E-06	5.72E-05	1.27E-06	0.00E+00	1.78E-05	8.92E-05
11	E22	80	Combination Long Haul Truck	1	0.00E+00	4.11E-07	2.76E-08	3.52E-01	1.68E-09	4.21E-04	3.13E-07	4.58E-04	2.73E-05	5.48E-06	2.84E-05	8.35E-06	8.40E-06	5.38E-05	1.18E-06	0.00E+00	1.99E-05	8.64E-05
11	E23	80	Passenger Car	133	0.00E+00	1.59E-06	1.73E-07	6.12E+00	1.11E-05	4.09E-02	3.54E-06	2.73E-04	7.30E-04	1.27E-04	3.45E-04	2.22E-04	2.28E-04	2.08E-05	3.12E-05	8.74E-09	1.17E-04	4.28E-05
11	E23	80	Passenger Truck	222	0.00E+00	3.43E-06	3.63E-07	1.41E+01	2.19E-05	7.53E-02	7.16E-06	8.09E-04	1.31E-03	2.32E-04	6.85E-04	4.46E-04	4.57E-04	1.00E-04	7.16E-05	1.94E-08	2.30E-04	1.32E-04
11	E23	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.48E-03	1.34E-06	6.44E-04	7.90E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.21E-04
11	E23	80	Combination Short Haul Truck	6	0.00E+00	2.75E-06	1.97E-07	2.28E+00	8.70E-09	2.44E-03	2.02E-06	2.84E-03	1.67E-04	4.11E-05	1.64E-04	5.82E-05	5.79E-05	3.43E-04	7.64E-06	0.00E+00	1.07E-04	5.35E-04
11	E23	80	Combination Long Haul Truck	6	0.00E+00	2.46E-06	1.65E-07	2.11E+00	1.01E-08	2.53E-03	1.88E-06	2.75E-03	1.64E-04	3.29E-05	1.70E-04	5.01E-05	5.04E-05	3.23E-04	7.06E-06	0.00E+00	1.19E-04	5.18E-04
11	E24	80	Passenger Car	10	0.00E+00	1.17E-07	1.26E-08	4.48E-01	8.13E-07	3.00E-03	2.59E-07	2.00E-05	5.35E-05	9.29E-06	2.53E-05	1.63E-05	1.67E-05	1.52E-06	2.28E-06	6.40E-10	8.56E-06	3.13E-06
11	E24	80	Passenger Truck	16	0.00E+00	2.51E-07	2.66E-08	1.04E+00	1.61E-06	5.52E-03	5.25E-07	5.92E-05	9.59E-05	1.70E-05	5.02E-05	3.26E-05	3.35E-05	7.33E-06	5.25E-06	1.42E-09	1.68E-05	9.68E-06
11	E24	80	Single Unit Short Haul Truck	1	0.00E+00	1.80E-07	8.91E-09	1.76E-01	1.44E-07	3.54E-04	1.91E-07	9.21E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E24	80	Combination Short Haul Truck	1	0.00E+00	4.59E-07	3.28E-08	3.81E-01	1.45E-09	4.07E-04	3.37E-07	4.74E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.65E-06	5.72E-05	1.27E-06	0.00E+00	1.78E-05	8.92E-05
11	E24	80	Combination Long Haul Truck	1	0.00E+00	4.11E-07	2.76E-08	3.52E-01	1.68E-09	4.21E-04	3.13E-07	4.58E-04	2.73E-05	5.48E-06	2.84E-05	8.35E-06	8.40E-06	5.38E-05	1.18E-06	0.00E+00	1.99E-05	8.64E-05
10	E25	70	Passenger Car	227	0.00E+00	2.93E-06	3.17E-07	1.08E+01	2.04E-05	7.32E-02	6.50E-06	4.55E-04	1.76E-03	2.83E-04	6.31E-04	4.09E-04	4.20E-04	4.07E-05	5.48E-05	1.50E-08	2.15E-04	7.14E-05
10	E25	70	Passenger Truck	381	0.00E+00	6.43E-06	6.80E-07	2.49E+01	4.06E-05	1.35E-01	1.33E-05	1.43E-03	3.20E-03	5.21E-04	1.27E-03	8.29E-04	8.49E-04	1.85E-04	1.25E-04	3.35E-08	4.25E-04	2.35E-04
10	E25	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E25	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	E25	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.20E-04
10	E26	70	Passenger Car	286	0.00E+00	3.69E-06	3.99E-07	1.36E+01	2.57E-05	9.23E-02	8.19E-06	5.74E-04	2.22E-03	3.56E-04	7.96E-04	5.16E-04	5.29E-04	5.13E-05	6.91E-05	1.89E-08	2.70E-04	8.99E-05
10	E26	70	Passenger Truck	480	0.00E+00	8.10E-06	8.57E-07	3.13E+01	5.12E-05	1.71E-01	1.68E-05	1.80E-03	4.04E-03	6.57E-04	1.60E-03	1.04E-03	1.07E-03	2.33E-04	1.57E-04	4.22E-08	5.36E-04	2.96E-04
10	E26	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.34E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.24E-05
10	E26	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E26	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E27	70	Passenger Car	287	0.00E+00	3.70E-06	4.00E-07	1.36E+01	2.58E-05	9.25E-02	8.22E-06	5.75E-04	2.23E-03	3.57E-04	7.98E-04	5.17E-04	5.30E-04	5.14E-05	6.92E-05	1.89E-08	2.71E-04	9.01E-05
10	E27	70	Passenger Truck	481	0.00E+00	8.12E-06	8.59E-07	3.14E+01	5.13E-05	1.71E-01	1.68E-05	1.80E-03	4.05E-03	6.59E-04	1.60E-03	1.05E-03	1.07E-03	2.34E-04	1.58E-04	4.23E-08	5.37E-04	2.97E-04
10	E27	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.82E-01	9.21E-07	1.77E-03	1.20E-06	5.56E-04	7.91E-05	1.58E-05	1.37E-04	3.37E-05	3.42E-05	8.83E-05	3.55E-06	1.44E-09	1.02E-04	1.04E-04
10	E27	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.09E-04	6.78E-05	2.48E-04	8.59E-05	8.56E-05	4.47E-04	9.89E-06	0.00E+00	1.63E-04	8.09E-04
10	E27	70	Combination Long Haul Truck	7	0.00E+00	3.70E-06	2.46E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.62E-05	2.56E-04	7.45E-05	7.53E-05	4.21E-04	9.24E-06	0.00E+00	1.82E-04	7.99E-04
10	E28	70	Passenger Car	250	0.00E+00	3.23E-06	3.49E-07	1.19E+01	2.25E-05	8.07E-02	7.17E-06	5.02E-04	1.94E-03	3.12E-04	6.96E-04	4.51E-04	4.63E-04	4.49E-05	6.04E-05	1.65E-08	2.37E-04	7.86E-05
10	E28	70	Passenger Truck	420	0.00E+00	7.08E-06	7.49E-07	2.74E+01	4.47E-05	1.49E-01	1.47E-05	1.57E-03	3.53E-03	5.74E-04	1.40E-03	9.14E-04	9.36E-04	2.04E-04	1.38E-04	3.69E-08	4.68E-04	2.59E-04
10	E28	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	E29	70	Passenger Car	130	0.00E+00	1.68E-06	1.82E-07	6.20E+00	1.17E-05	4.20E-02	3.73E-06	2.61E-04	1.01E-03	1.62E-04	3.62E-04	2.35E-04	2.41E-04	2.34E-05	3.15E-05	8.59E-09	1.23E-04	4.10E-05
10	E29	70	Passenger Truck	219	0.00E+00	3.69E-06	3.90E-07	1.43E+01	2.33E-05	7.77E-02	7.65E-06	8.19E-04	1.84E-03	2.99E-04	7.28E-04	4.76E-04	4.87E-04	1.06E-04	7.16E-05	1.92E-08	2.44E-04	1.35E-04
10	E29	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.82E-01	9.21E-07	1.77E-03	1.20E-06	5.56E-04	7.91E-05	1.58E-05	1.37E-04	3.37E-05	3.42E-05	8.83E-05	3.55E-06	1.44E-09	1.02E-04	1.04E-04
10	E29	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	E29	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.20E-04
10	E30	70	Passenger Car	63	0.00E+00	8.10E-07	8.76E-08	2.98E+00	5.64E-06	2.02E-02	1.80E-06	1.26E-04	4.87E-04	7.82E-05	1.74E-04	1.13E-04	1.16E-04	1.13E-05	1.51E-05	4.14E-09	5.93E-05	1.97E-05
10	E30	70	Passenger Truck	105	0.00E+00	1.78E-06	1.88E-07	6.87E+00	1.12E-05	3.74E-02	3.68E-06	3.94E-04	8.85E-04	1.44E-04	3.51E-04	2.29E-04	2.35E-04	5.11E-05	3.45E-05	9.26E-09	1.17E-04	6.49E-05
10	E30	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	E30	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E30	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.07E-04
10	E31	70	Passenger Car	186	0.00E+00	2.39E-06	2.59E-07	8.83E+00	1.67E-05	5.99E-02	5.32E-06	3.72E-04	1.44E-03	2.31E-04	5.16E-04	3.34E-04	3.43E-04	3.33E-05	4.48E-05	1.22E-08	1.75E-04	5.83E-05
10	E31	70	Passenger Truck	311	0.00E+00	5.26E-06	5.56E-07	2.03E+01	3.32E-05	1.11E-01	1.09E-05	1.17E-03	2.62E-03	4.26E-04	1.04E-03	6.78E-04	6.94E-04	1.51E-04	1.02E-04	2.74E-08	3.47E-04	1.92E-04
10	E31	70	Single Unit Short Haul Truck	11	0.00E+00	2.48E-06	1.24E-07	1.94E+00	2.03E-06	3.89E-03	2.64E-06	1.22E-03	1.74E-04	3.48E-05	3.01E-04	7.40E-05	7.52E-05	1.94E-04	7.81E-06	3.16E-09	2.25E-04	2.29E-04
10	E31	70	Combination Short Haul Truck	6	0.00E+00	3.26E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.87E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	E31	70	Combination Long Haul Truck	6	0.00E+00	2.96E-06	1.97E-07	2.21E+00	1.22E-08	2.97E-03	2.24E-06	3.39E-03	2.46E-04	4.50E-05	2.05E-04	5.96E-05	6.03E-05	3.37E-04	7.39E-06	0.00E+00	1.45E-04	6.39E-04
10	E32	70	Passenger Car	114	0.00E+00	1.46E-06	1.58E-07	5.40E+00	1.02E-05	3.66E-02	3.25E-06	2.28E-04	8.81E-04	1.41E-04	3.16E-04	2.05E-04	2.10E-04	2.04E-05	2.74E-05	7.48E-09	1.07E-04	3.57E-05
10	E32	70	Passenger Truck	190	0.00E+00	3.21E-06	3.40E-07	1.24E+01	2.03E-05	6.77E-02	6.66E-06	7.14E-04	1.60E-03	2.61E-04	6.34E-04	4.15E-04	4.25E-04	9.25E-05	6.24E-05	1.68E-08	2.13E-04	1.17E-04
10	E32	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.02E-07	1.59E+00	1.66E-06	3.18E-03	2.16E-06	1.00E-03	1.42E-04	2.85E-05	2.47E-04	6.06E-05	6.15E-05	1.59E-04	6.39E-06	2.59E-09	1.84E-04	1.87E-04
10	E32	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.98E+00	8.83E-09	2.34E-03	1.99E-06	2.86E-03	2.06E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.98E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E32	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.05E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.33E-04
9	E33	60	Passenger Car	624	0.00E+00	9.24E-06	9.99E-07	3.10E+01	6.43E-05	2.31E-01	2.05E-05	1.27E-03	6.33E-03	9.73E-04	1.99E-03	1.29E-03	1.32E-03	1.30E-04	1.57E-04	4.32E-08	6.76E-04	1.99E-04
9	E33	60	Passenger Truck	1046	0.00E+00	2.04E-05	2.15E-06	7.09E+01	1.28E-04	4.10E-01	4.21E-05	4.15E-03	1.16E-02	1.80E-03	3.98E-03	2.60E-03	2.67E-03	5.55E-04	3.54E-04	9.82E-08	1.33E-03	6.88E-04
9	E33	60	Single Unit Short Haul Truck	13	0.00E+00	3.95E-06	1.97E-07	2.51E+00	3.24E-06	4.84E-03	4.21E-06	1.88E-03	3.19E-04	5.77E-05	4.77E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.05E-04	1.84E-07	8.13E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.32E-07	1.77E-10	1.57E-05	1.52E-05
9	E33	60	Combination Short Haul Truck	15	0.00E+00	8.93E-06	6.24E-07	5.81E+00	3.16E-08	7.79E-03	6.62E-06	9.69E-03	8.30E-04	1.64E-04	5.69E-04	1.85E-04	1.85E-04	8.76E-04	1.94E-05	0.00E+00	3.82E-04	1.83E-03
9	E33	60	Combination Long Haul Truck	14	0.00E+00	7.99E-06	5.23E-07	5.46E+00	3.62E-08	8.41E-03	6.19E-06	9.61E-03	8.34E-04	1.42E-04	5.84E-04	1.59E-04	1.61E-04	8.30E-04	1.82E-05	0.00E+00	4.23E-04	1.81E-03
9	E34	60	Passenger Car	355	0.00E+00	5.26E-06	5.68E-07	1.77E+01	3.66E-05	1.31E-01	1.16E-05	7.24E-04	3.60E-03	5.53E-04	1.13E-03	7.33E-04	7.53E-04	7.42E-05	8.93E-05	2.46E-08	3.85E-04	1.13E-04
9	E34	60	Passenger Truck	595	0.00E+00	1.16E-05	1.22E-06	4.03E+01	7.25E-05	2.33E-01	2.40E-05	2.36E-03	6.61E-03	1.03E-03	2.26E-03	1.48E-03	1.52E-03	3.16E-04	2.02E-04	5.58E-08	7.55E-04	3.92E-04
9	E34	60	Single Unit Short Haul Truck	16	0.00E+00	4.79E-06	2.39E-07	3.04E+00	3.94E-06	5.88E-03	5.11E-06	2.28E-03	3.87E-04	7.01E-05	5.79E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.28E-04
9	E34	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.49E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.55E-05	6.24E-06	6.34E-06	1.30E-05	5.25E-07	2.15E-10	1.91E-05	1.85E-05
9	E34	60	Combination Short Haul Truck	18	0.00E+00	1.05E-05	7.31E-07	6.82E+00	3.70E-08	9.14E-03	7.76E-06	1.14E-02	9.73E-04	1.93E-04	6.67E-04	2.17E-04	2.17E-04	1.03E-03	2.28E-05	0.00E+00	4.48E-04	2.14E-03
9	E34	60	Combination Long Haul Truck	16	0.00E+00	9.37E-06	6.13E-07	6.40E+00	4.25E-08	9.86E-03	7.25E-06	1.13E-02	9.77E-04	1.66E-04	6.85E-04	1.86E-04	1.89E-04	9.73E-04	2.14E-05	0.00E+00	4.96E-04	2.13E-03
9	E35	60	Passenger Car	494	0.00E+00	7.31E-06	7.90E-07	2.45E+01	5.09E-05	1.82E-01	1.62E-05	1.01E-03	5.00E-03	7.69E-04	1.58E-03	1.02E-03	1.05E-03	1.03E-04	1.24E-04	3.41E-08	5.35E-04	1.58E-04
9	E35	60	Passenger Truck	826	0.00E+00	1.61E-05	1.70E-06	5.60E+01	1.01E-04	3.24E-01	3.33E-05	3.28E-03	9.18E-03	1.43E-03	3.15E-03	2.06E-03	2.11E-03	4.38E-04	2.80E-04	7.76E-08	1.05E-03	5.44E-04
9	E35	60	Single Unit Short Haul Truck	18	0.00E+00	5.36E-06	2.67E-07	3.40E+00	4.40E-06	6.57E-03	5.71E-06	2.55E-03	4.33E-04	7.83E-05	6.47E-04	1.60E-04	1.63E-04	3.41E-04	1.37E-05	5.66E-09	4.86E-04	4.78E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.16E-08	1.45E-01	1.91E-07	2.79E-04	2.50E-07	1.10E-04	1.94E-05	3.48E-06	2.85E-05	6.98E-06	7.09E-06	1.45E-05	5.86E-07	2.41E-10	2.14E-05	2.07E-05
9	E35	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.60E-07	8.02E+00	4.36E-08	1.08E-02	9.12E-06	1.34E-02	1.14E-03	2.27E-04	7.85E-04	2.56E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.52E-03
9	E35	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.21E-07	7.53E+00	5.00E-08	1.16E-02	8.53E-06	1.32E-02	1.15E-03	1.96E-04	8.06E-04	2.19E-04	2.22E-04	1.14E-03	2.51E-05	0.00E+00	5.83E-04	2.50E-03
9	E36	60	Passenger Car	187	0.00E+00	2.77E-06	2.99E-07	9.30E+00	1.93E-05	6.91E-02	6.13E-06	3.81E-04	1.90E-03	2.91E-04	5.97E-04	3.86E-04	3.96E-04	3.90E-05	4.70E-05	1.29E-08	2.03E-04	5.97E-05
9	E36	60	Passenger Truck	313	0.00E+00	6.10E-06	6.44E-07	2.12E+01	3.82E-05	1.23E-01	1.26E-05	1.24E-03	3.48E-03	5.40E-04	1.19E-03	7.79E-04	7.98E-04	1.66E-04	1.06E-04	2.94E-08	3.97E-04	2.06E-04
9	E36	60	Single Unit Short Haul Truck	16	0.00E+00	4.79E-06	2.39E-07	3.04E+00	3.94E-06	5.88E-03	5.11E-06	2.28E-03	3.87E-04	7.01E-05	5.79E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.28E-04
9	E36	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.49E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.55E-05	6.24E-06	6.34E-06	1.30E-05	5.25E-07	2.15E-10	1.91E-05	1.85E-05
9	E36	60	Combination Short Haul Truck	17	0.00E+00	9.86E-06	6.88E-07	6.42E+00	3.49E-08	8.60E-03	7.30E-06	1.07E-02	9.16E-04	1.81E-04	6.28E-04	2.05E-04	2.05E-04	9.67E-04	2.14E-05	0.00E+00	4.22E-04	2.02E-03
9	E36	60	Combination Long Haul Truck	15	0.00E+00	8.82E-06	5.77E

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E40	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E41	70	Passenger Car	211	0.00E+00	2.72E-06	2.95E-07	1.00E+01	1.90E-05	6.81E-02	6.04E-06	4.23E-04	1.64E-03	2.63E-04	5.87E-04	3.80E-04	3.90E-04	3.78E-05	5.09E-05	1.39E-08	2.00E-04	6.63E-05
10	E41	70	Passenger Truck	354	0.00E+00	5.97E-06	6.32E-07	2.31E+01	3.77E-05	1.26E-01	1.24E-05	1.33E-03	2.98E-03	4.84E-04	1.18E-03	7.70E-04	7.89E-04	1.72E-04	1.16E-04	3.12E-08	3.95E-04	2.18E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.20E-04
10	E42	70	Passenger Car	282	0.00E+00	3.63E-06	3.93E-07	1.34E+01	2.53E-05	9.07E-02	8.05E-06	5.64E-04	2.18E-03	3.50E-04	7.82E-04	5.07E-04	5.20E-04	5.04E-05	6.79E-05	1.85E-08	2.66E-04	8.84E-05
10	E42	70	Passenger Truck	471	0.00E+00	7.96E-06	8.42E-07	3.08E+01	5.03E-05	1.68E-01	1.65E-05	1.77E-03	3.97E-03	6.46E-04	1.57E-03	1.03E-03	1.05E-03	2.29E-04	1.55E-04	4.15E-08	5.26E-04	2.91E-04
10	E42	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	E42	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E42	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E43	70	Passenger Car	162	0.00E+00	2.08E-06	2.25E-07	7.67E+00	1.45E-05	5.20E-02	4.62E-06	3.23E-04	1.25E-03	2.01E-04	4.49E-04	2.91E-04	2.98E-04	2.89E-05	3.89E-05	1.06E-08	1.53E-04	5.07E-05
10	E43	70	Passenger Truck	270	0.00E+00	4.57E-06	4.83E-07	1.77E+01	2.89E-05	9.62E-02	9.47E-06	1.01E-03	2.28E-03	3.70E-04	9.02E-04	5.89E-04	6.03E-04	1.31E-04	8.87E-05	2.38E-08	3.02E-04	1.67E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E43	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.07E-04
10	E44	70	Passenger Car	285	0.00E+00	3.67E-06	3.97E-07	1.35E+01	2.55E-05	9.17E-02	8.14E-06	5.70E-04	2.21E-03	3.54E-04	7.90E-04	5.12E-04	5.26E-04	5.10E-05	6.86E-05	1.87E-08	2.69E-04	8.93E-05
10	E44	70	Passenger Truck	476	0.00E+00	8.05E-06	8.51E-07	3.11E+01	5.08E-05	1.69E-01	1.67E-05	1.79E-03	4.01E-03	6.53E-04	1.59E-03	1.04E-03	1.06E-03	2.32E-04	1.56E-04	4.20E-08	5.32E-04	2.94E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	E44	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E44	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.07E-04
11	E45	80	Passenger Car	194	0.00E+00	2.33E-06	2.53E-07	8.96E+00	1.63E-05	5.99E-02	5.19E-06	4.00E-04	1.07E-03	1.86E-04	5.05E-04	3.26E-04	3.34E-04	3.05E-05	4.56E-05	1.28E-08	1.71E-04	6.26E-05
11	E45	80	Passenger Truck	326	0.00E+00	5.02E-06	5.32E-07	2.07E+01	3.21E-05	1.10E-01	1.05E-05	1.18E-03	1.92E-03	3.40E-04	1.00E-03	6.53E-04	6.69E-04	1.47E-04	1.05E-04	2.85E-08	3.36E-04	1.94E-04
11	E45	80	Single Unit Short Haul Truck	33	0.00E+00	6.11E-06	3.03E-07	5.99E+00	4.91E-06	1.20E-02	6.49E-06	3.13E-03	3.84E-04	8.67E-05	7.43E-04	1.81E-04	1.84E-04	6.01E-04	2.42E-05	9.59E-09	5.59E-04	5.86E-04
11	E45	80	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.31E-08	2.53E-01	2.10E-07	4.99E-04	2.82E-07	1.34E-04	1.75E-05	3.83E-06	3.24E-05	7.78E-06	7.90E-06	2.53E-05	1.02E-06	3.99E-10	2.45E-05	2.51E-05
11	E45	80	Combination Short Haul Truck	20	0.00E+00	8.72E-06	6.24E-07	7.23E+00	2.76E-08	7.73E-03	6.40E-06	9.00E-03	5.29E-04	1.30E-04	5.20E-04	1.84E-04	1.83E-04	1.09E-03	2.42E-05	0.00E+00	3.37E-04	1.69E-03
11	E45	80	Combination Long Haul Truck	18	0.00E+00	7.80E-06	5.24E-07	6.70E+00	3.19E-08	8.00E-03	5.94E-06	8.71E-03	5.19E-04	1.04E-04	5.39E-04	1.59E-04	1.60E-04	1.02E-03	2.24E-05	0.00E+00	3.78E-04	1.64E-03
11	E46	80	Passenger Car	96	0.00E+00	1.15E-06	1.24E-07	4.41E+00	8.00E-06	2.95E-02	2.56E-06	1.97E-04	5.26E-04	9.15E-05	2.49E-04	1.60E-04	1.65E-04	1.50E-05	2.25E-05	6.30E-09	8.43E-05	3.08E-05
11	E46	80	Passenger Truck	160	0.00E+00	2.47E-06	2.62E-07	1.02E+01	1.58E-05	5.43E-02	5.16E-06	5.83E-04	9.44E-04	1.67E-04	4.94E-04	3.21E-04	3.29E-04	7.21E-05	5.16E-05	1.40E-08	1.66E-04	9.53E-05
11	E46	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.08E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.64E-09	3.29E-04	3.45E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.70E-09	1.49E-01	1.23E-07	2.93E-04	1.66E-07	7.89E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.01E-07	2.35E-10	1.44E-05	1.47E-05
11	E46	80	Combination Short Haul Truck	17	0.00E+00	7.58E-06	5.42E-07	6.28E+00	2.39E-08	6.71E-03	5.56E-06	7.82E-03	4.59E-04	1.13E-04	4.52E-04	1.60E-04	1.59E-04	9.45E-04	2.10E-05	0.00E+00	2.93E-04	1.47E-03
11	E46	80	Combination Long Haul Truck	16	0.00E+00	6.78E-06	4.55E-07	5.81E+00	2.77E-08	6.95E-03	5.16E-06	7.56E-03	4.50E-04	9.05E-05	4.68E-04	1.38E-04	1.39E-04	8.88E-04	1.94E-05	0.00E+00	3.28E-04	1.43E-03
11	E47	80	Passenger Car	180	0.00E+00	2.16E-06	2.34E-07	8.29E+00	1.50E-05	5.54E-02	4.80E-06	3.70E-04	9.89E-04	1.72E-04	4.68E-04	3.01E-04	3.09E-04	2.82E-05	4.22E-05	1.18E-08	1.58E-04	5.79E-05
11	E47	80	Passenger Truck	301	0.00E+00	4.64E-06	4.92E-07	1.92E+01	2.97E-05	1.02E-01	9.70E-06	1.10E-03	1.77E-03	3.15E-04	9.29E-04	6.04E-04	6.19E-04	1.36E-04	9.70E-05	2.64E-08	3.11E-04	1.79E-04
11	E47	80	Single Unit Short Haul Truck	31	0.00E+00	5.75E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.95E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.02E-09	5.26E-04	5.52E-04
11	E47	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.98E-07	4.69E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.43E-06	2.38E-05	9.61E-07	3.75E-10	2.31E-05	2.36E-05
11	E47	80	Combination Short Haul Truck	18	0.00E+00	8.03E-06	5.75E-07	6.66E+00	2.54E-08	7.12E-03	5.90E-06	8.29E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.56E-03
11	E47	80	Combination Long Haul Truck	17	0.00E+00	7.19E-06	4.82E-07	6.17E+00	2.94E-08	7.37E-03	5.47E-06	8.02E-03	4.78E-04	9.60E-05	4.96E-04	1.46E-04	1.47E-04	9.41E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	E48	80	Passenger Car	70	0.00E+00	8.43E-07	9.14E-08	3.24E+00	5.88E-06	2.17E-02	1.88E-06	1.44E-04	3.87E-04	6.72E-05	1.83E-04	1.18E-04	1.21E-04	1.10E-05	1.65E-05	4.63E-09	6.19E-05	2.26E-05
11	E48	80	Passenger Truck	118	0.00E+00	1.81E-06	1.92E-07	7.49E+00	1.16E-05	3.99E-02	3.79E-06	4.28E-04	6.93E-04	1.23E-04	3.63E-04	2.36E-04	2.42E-04	5.30E-05	3.79E-05	1.03E-08	1.22E-04	7.00E-05
11	E48	80	Single Unit Short Haul Truck	5	0.00E+00	8.98E-07	4.46E-08	8.81E-01	7.22E-07	1.77E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.62E-05
11	E48	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.52E+00	5.80E-09	1.63E-03	1.35E-06	1.89E-03	1.11E-04	2.74E-05	1.09E-04	3.88E-05	3.86E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.57E-04
11	E48	80	Combination Long Haul Truck	4	0.00E+00	1.64E-06	1.10E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.46E-04
11	E49	80	Passenger Car	188	0.00E+00	2.26E-06	2.45E-07	8.69E+00	1.58E-05	5.81E-02	5.03E-06	3.87E-04	1.04E-03	1.80E-04	4.90E-04	3.16E-04	3.24E-04	2.95E-05	4.42E-05	1.24E-08	1.66E-04	6.07E-05
11	E49	80	Passenger Truck	316	0.00E+00	4.86E-06	5.15E-07	2.01E+01	3.11E-05	1.07E-01	1.02E-05	1.15E-03	1.86E-03	3.30E-04	9.73E-04	6.33E-04	6.49E-04	1.42E-04	1.02E-04	2.76E-08	3.26E-04	1.88E-04
11	E49	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.18E-05	7.86E-04	1.92E-04	1.94E-04	6.36E-04	2.56E-05	1.02E-08	5.92E-04	6.21E-04
11	E49	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.39E-08	2.68E-01	2.22E-07	5.28E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.36E-06	2.68E-05	1.08E-06	4.22E-10	2.59E-05	2.65E-05
11	E49	80	Combination Short Haul Truck	22	0.00E+00	9.64E-06	6.90E-07	7.99E+00	3.05E-08	8.54E-03	7.08E-06	9.95E-03	5.85E-04	1.44E-04	5.75E-04	2.04E-04	2.03E-04	1.20E-03	2.67E-05	0.00E+00	3.73E-04	1.87E-03
11	E49	80	Combination Long Haul Truck	20	0.00E+00	8.62E-06	5.79E-07	7.40E+00	3.52E-08	8.85E-03	6.57E-06	9.63E-03	5.73E-04	1.15E-04	5.95E-04	1.75E-04	1.76E-04	1.13E-03	2.47E-05	0.00E+00	4.17E-04	1.81E-03
11	E50	80	Passenger Car	86	0.00E+00	1.04E-06	1.12E-07	3.98E+00	7.22E-06	2.66E-02	2.31E-06	1.78E-04	4.75E-04	8.25E-05	2.25E-04	1.45E-04	1.49E-04	1.35E-05	2.03E-05	5.69E-09	7.61E-05	2.78E-05
11	E50	80	Passenger Truck	145	0.00E+00	2.23E-06	2.36E-07	9.20E+00	1.43E-05	4.90E-02	4.66E-06	5.26E-04	8.52E-04	1.51E-04	4.46E-04	2.90E-04	2.97E-04	6.51E-05	4.66E-05	1.27E-08	1.49E-04	8.60E-05
11	E50	80	Single Unit Short Haul Truck	2	0.00E+00	3.59E-07	1.78E-08	3.52E-01	2.89E-07	7.08E-04	3.82E-07	1.84E-04	2.26E-05	5.10E-06	4.37E-05	1.06E-05	1.08E-05	3.53E-05	1.42E-06	5.64E-10	3.29E-05	3.45E-05
11	E50	80	Combination Short Haul Truck	2	0.00E+00	9.18E-07	6.57E-08	7.61E-01	2.90E-09	8.14E-04	6.74E-07	9.47E-04	5.57E-05	1.37E-05	5.47E-05	1.94E-05	1.93E-05	1.14E-04	2.55E-06	0.00E+00	3.55E-05	1.78E-04
11	E50	80	Combination Long Haul Truck	2	0.00E+00	8.21E-07	5.51E-08	7.05E-01	3.35E-09	8.43E-04	6.25E-07	9.17E-04	5.46E-05	1.10E-05	5.67E-05	1.67E-05	1.68E-05	1.08E-04	2.35E-06	0.00E+00	3.97E-05	1.73E-04
11	E51	80	Passenger Car	186	0.00E+00	2.23E-06	2.42E-07	8.57E+00	1.55E-05	5.73E-02	4.96E-06	3.82E-04	1.02E-03	1.78E-04	4.83E-04	3.11E-04	3.20E-04	2.91E-05	4.36E-05	1.22E-08	1.64E-04	5.99E-05
11	E51	80	Passenger Truck	311	0.00E+00	4.80E-06	5.08E-07	1.98E+01	3.07E-05	1.05E-01	1.00E-05	1.13E-03	1.83E-03	3.25E-04	9.59E-04	6.24E-04	6.40E-04	1.40E-04	1.00E-04	2.72E-08	3.22E-04	1.85E-04
11	E51	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.18E-05	7.86E-04	1.92E-04	1.94E-04	6.36E-04	2.56E-05	1.02E-08	5.92E-04	6.21E-04
11	E51	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.39E-08	2.68E-01	2.22E-07	5.28E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.36E-06	2.68E-05	1.08E-06	4.22E-10	2.59E-05	2.65E-05
11	E51	80	Combination Short Haul Truck	21	0.00E+00	9.41E-06	6.73E-07	7.80E+00	2.97E-08	8.34E-03	6.91E-06	9.71E-03	5.71E-04	1.41E-04	5.61E-04	1.99E-04	1.98E-04	1.17E-03	2.61E-05	0.00E+00	3.64E-04	1.83E-03
11	E51	80	Combination Long Haul Truck	20	0.00E+00	8.42E-06	5.65E-07	7.22E+00	3.44E-08	8.64E-03	6.41E-06	9.40E-03	5.59E-04	1.12E-04	5.81E-04	1.71E-04	1.72E-04	1.10E-03	2.41E-05	0.00E+00	4.07E-04	1.77E-03
11	E52	80	Passenger Car	32	0.00E+00	3.86E-07	4.18E-08	1.48E+00	2.69E-06	9.91E-03	8.58E-07	6.61E-05	1.77E-04	3.07E-05	8.36E-05	5.39E-05	5.53E-05	5.04E-06	7.55E-06	2.12E-09	2.83E-05	1.04E-05
11	E52	80	Passenger Truck	54	0.00E+00	8.30E-07	8.79E-08	3.43E+00	5.31E-06	1.82E-02	1.74E-06	1.96E-04	3.17E-04	5.62E-05	1.66E-04	1.08E-04	1.11E-04	2.42E-05	1.74E-05	4.71E-09	5.56E-05	3.20E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.03E-04	1.69E-07	2.37E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.86E-05	6.36E-07	0.00E+00	8.88E-06	4.46E-05
11	E53	80	Passenger Car	322	0.00E+00	3.86E-06	4.18E-07	1.48E+01	2.69E-05	9.91E-02	8.58E-06	6.61E-04	1.77E-03	3.07E-04	8.36E-04	5.39E-04	5.53E-04	5.04E-05	7.55E-05	2.12E-08	2.83E-04	1.04E-04
11	E53	80	Passenger Truck	538	0.00E+00	8.30E-06	8.79E-07	3.43E+01	5.31E-05	1.82E-01	1.74E-05	1.96E-03	3.17E-03	5.62E-04	1.66E-03	1.08E-03	1.11E-03	2.42E-04	1.74E-04	4.71E-08	5.56E-04	3.20E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.78E-03	4.20E-06	2.03E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.20E-09	3.62E-04	3.79E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.47E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.67E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.11E-06	1.64E-05	6.61E-07	2.58E-10	1.58E-05	1.62E-05
11	E53	80	Combination Short Haul Truck	17	0.00E+00	7.35E-06	5.25E-07	6.09E+00	2.32E-08	6.51E-03	5.39E-06	7.58E-03	4.45E-04	1.10E-04	4.38E-04	1.55E-04	1.54E-04	9.16E-04	2.04E-05	0.00E+00	2.84E-04	1.43E-03
11	E53	80	Combination Long Haul Truck	15	0.00E+00	6.57E-06	4.41E-07	5.64E+00	2.68E-08	6.74E-03	5.00E-06	7.33E-03	4.37E-04	8.78E-05	4.54E-04	1.34E-04	1.34E-04	8.61E-04	1.88E-05	0.00E+00	3.18E-04	1.38E-03
11	E54	80	Passenger Car	74	0.00E+00	8.88E-07	9.62E-08	3.41E+00	6.19E-06	2.28E-02	1.98E-06	1.52E-04	4.07E-04	7.07E-05	1.92E-04	1.24E-04	1.27E-04	1.16E-05	1.74E-05	4.87E-09	6.52E-05	2.39E-05
11	E54	80	Passenger Truck	124	0.00E+00	1.91E-06	2.02E-07	7.89E+00	1.22E-05	4.20E-02	3.99E-06	4.51E-04	7.30E-04	1.29E-04	3.82E-04	2.49E-04	2.55E-04	5.58E-05	3.99E-05	1.08E-08	1.28E-04	7.37E-05
11	E54	80	Single Unit Short Haul Truck	5	0.00E+00	8.98E-07	4.46E-08	8.81E-01	7.22E-07	1.77E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.62E-05
11	E54	80	Combination Short Haul Truck	8	0.00E+00	3.44E-06	2.46E-07	2.85E+00	1.09E-08	3.05E-03	2.53E-06	3.55E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.24E-05	4.29E-04	9.55E-06	0.00E+00	1.33E-04	6.69E-04
11	E54	80	Combination Long Haul Truck	7	0.00E+00	3.08E-06	2.07E-07	2.64E+00	1.26E-08	3.16E-03	2.35E-06	3.44E-03	2.05E-04	4.11E-05	2.13E-04	6.26E-05	6.30E-05	4.03E-04	8.82E-06	0.00E+00	1.49E-04	6.48E-04
11	E55	80	Passenger Car	322	0.00E+00	3.86E-06	4.18E-07	1.48E+01	2.69E-05	9.91E-02	8.58E-06	6.61E-04	1.77E-03	3.07E-04	8.36E-04	5.39E-04	5.53E-04	5.04E-05	7.55E-05	2.12E-08	2.83E-04	1.04E-04
11	E55	80	Passenger Truck	538	0.00E+00	8.30E-06	8.79E-07	3.43E+01	5.31E-05	1.82E-01	1.74E-05	1.96E-03	3.17E-03	5.62E-04	1.66E-03	1.08E-03	1.11E-03	2.42E-04	1.74E-04	4.71E-08	5.56E-04	3.20E-04
11	E55	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.78E-03	4.20E-06	2.03E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.20E-09	3.62E-04	3.79E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.47E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.67E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.11E-06	1.64E-05	6.61E-07	2.58E-10	1.58E-05	1.62E-05
11	E55	80	Combination Short Haul Truck	17	0.00E+00	7.35E-06	5.25E-07	6.09E+00	2.32E-08	6.51E-03	5.39E-06	7.58E-03	4.45E-04	1.10E-04	4.38E-04	1.55E-04	1.54E-04	9.16E-04	2.04E-05	0.00E+00	2.84E-04	1.43E-03
11	E55	80	Combination Long Haul Truck	15	0.00E+00	6.57E-06	4.41E-07	5.64E+00	2.68E-08	6.74E-03	5.00E-06	7.33E-03	4.37E-04	8.78E-05	4.54E-04	1.34E-04	1.34E-04	8.61E-04	1.88E-05	0.00E+00	3.18E-04	1.38E-03
11	E56	80	Passenger Car	74	0.00E+00	8.88E-07	9.62E-08	3.41E+00	6.19E-06	2.28E-02	1.98E-06	1.52E-04	4.07E-04	7.07E-05	1.92E-04	1.24E-04	1.27E-04	1.16E-05	1.74E-05	4.87E-09	6.52E-05	2.39E-05
11	E56	80	Passenger Truck	124	0.00E+00	1.91E-06	2

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E60	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E61	80	Passenger Car	238	0.00E+00	2.85E-06	3.09E-07	1.10E+01	1.99E-05	7.33E-02	6.35E-06	4.89E-04	1.31E-03	2.27E-04	6.18E-04	3.98E-04	4.09E-04	3.73E-05	5.58E-05	1.57E-08	2.09E-04	7.66E-05
11	E61	80	Passenger Truck	398	0.00E+00	6.14E-06	6.50E-07	2.53E+01	3.93E-05	1.35E-01	1.28E-05	1.45E-03	2.35E-03	4.16E-04	1.23E-03	7.99E-04	8.19E-04	1.79E-04	1.28E-04	3.48E-08	4.11E-04	2.37E-04
11	E61	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	E61	80	Combination Short Haul Truck	7	0.00E+00	3.21E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.36E-06	3.32E-03	1.95E-04	4.80E-05	1.92E-04	6.79E-05	6.75E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.24E-04
11	E61	80	Combination Long Haul Truck	7	0.00E+00	2.87E-06	1.93E-07	2.47E+00	1.17E-08	2.95E-03	2.19E-06	3.21E-03	1.91E-04	3.84E-05	1.98E-04	5.84E-05	5.88E-05	3.77E-04	8.24E-06	0.00E+00	1.39E-04	6.05E-04
11	E62	80	Passenger Car	209	0.00E+00	2.50E-06	2.71E-07	9.62E+00	1.74E-05	6.43E-02	5.57E-06	4.29E-04	1.15E-03	1.99E-04	5.42E-04	3.49E-04	3.59E-04	3.27E-05	4.90E-05	1.37E-08	1.84E-04	6.72E-05
11	E62	80	Passenger Truck	349	0.00E+00	5.39E-06	5.71E-07	2.22E+01	3.45E-05	1.18E-01	1.13E-05	1.27E-03	2.06E-03	3.65E-04	1.08E-03	7.01E-04	7.18E-04	1.57E-04	1.13E-04	3.06E-08	3.61E-04	2.08E-04
11	E62	80	Single Unit Short Haul Truck	3	0.00E+00	5.39E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.60E-05	1.62E-05	5.30E-05	2.13E-06	8.46E-10	4.93E-05	5.17E-05
11	E62	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.23E-04
11	E62	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
10	E63	70	Passenger Car	489	0.00E+00	6.30E-06	6.82E-07	2.32E+01	4.39E-05	1.58E-01	1.40E-05	9.79E-04	3.79E-03	6.09E-04	1.36E-03	8.80E-04	9.03E-04	8.76E-05	1.18E-04	3.22E-08	4.62E-04	1.54E-04
10	E63	70	Passenger Truck	819	0.00E+00	1.38E-05	1.46E-06	5.35E+01	8.74E-05	2.91E-01	2.87E-05	3.07E-03	6.89E-03	1.12E-03	2.73E-03	1.78E-03	1.83E-03	3.98E-04	2.68E-04	7.21E-08	9.15E-04	5.05E-04
10	E63	70	Single Unit Short Haul Truck	36	0.00E+00	8.55E-06	4.29E-07	6.70E+00	7.00E-06	1.34E-02	9.11E-06	4.23E-03	6.02E-04	1.20E-04	1.04E-03	2.56E-04	2.60E-04	6.71E-04	2.70E-05	1.09E-08	7.77E-04	7.91E-04
10	E63	70	Single Unit Long Haul Truck	2	0.00E+00	3.73E-07	1.85E-08	2.84E-01	3.02E-07	5.62E-04	3.97E-07	1.81E-04	2.75E-05	5.35E-06	4.55E-05	1.11E-05	1.12E-05	2.84E-05	1.15E-06	4.59E-10	3.41E-05	3.40E-05
10	E63	70	Combination Short Haul Truck	34	0.00E+00	1.77E-05	1.26E-06	1.28E+01	5.74E-08	1.52E-02	1.29E-05	1.86E-02	1.34E-03	2.94E-04	1.08E-03	3.72E-04	3.71E-04	1.94E-03	4.29E-05	0.00E+00	7.05E-04	3.50E-03
10	E63	70	Combination Long Haul Truck	31	0.00E+00	1.60E-05	1.07E-06	1.20E+01	6.61E-08	1.61E-02	1.21E-05	1.83E-02	1.33E-03	2.44E-04	1.11E-03	3.23E-04	3.26E-04	1.83E-03	4.00E-05	0.00E+00	7.87E-04	3.46E-03
10	E64	70	Passenger Car	740	0.00E+00	9.54E-06	1.03E-06	3.52E+01	6.64E-05	2.39E-01	2.12E-05	1.48E-03	5.74E-03	9.21E-04	2.06E-03	1.33E-03	1.37E-03	1.33E-04	1.78E-04	4.87E-08	6.99E-04	2.32E-04
10	E64	70	Passenger Truck	1240	0.00E+00	2.09E-05	2.21E-06	8.09E+01	1.32E-04	4.41E-01	4.34E-05	4.65E-03	1.04E-02	1.70E-03	4.13E-03	2.70E-03	2.77E-03	6.03E-04	4.06E-04	1.09E-07	1.38E-03	7.64E-04
10	E64	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.63E-02	1.10E-05	5.12E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.57E-04
10	E64	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.25E-08	3.44E-01	3.65E-07	6.80E-04	4.80E-07	2.20E-04	3.32E-05	6.48E-06	5.51E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.12E-05
10	E64	70	Combination Short Haul Truck	46	0.00E+00	2.39E-05	1.70E-06	1.74E+01	7.77E-08	2.06E-02	1.75E-05	2.52E-02	1.82E-03	3.98E-04	1.46E-03	5.04E-04	5.02E-04	2.62E-03	5.80E-05	0.00E+00	9.55E-04	4.74E-03
10	E64	70	Combination Long Haul Truck	42	0.00E+00	2.17E-05	1.45E-06	1.62E+01	8.95E-08	2.18E-02	1.64E-05	2.48E-02	1.81E-03	3.30E-04	1.50E-03	4.37E-04	4.42E-04	2.47E-03	5.42E-05	0.00E+00	1.07E-03	4.69E-03
10	E65	70	Passenger Car	530	0.00E+00	6.83E-06	7.39E-07	2.52E+01	4.75E-05	1.71E-01	1.52E-05	1.06E-03	4.11E-03	6.59E-04	1.47E-03	9.54E-04	9.79E-04	9.49E-05	1.28E-04	3.49E-08	5.00E-04	1.66E-04
10	E65	70	Passenger Truck	887	0.00E+00	1.50E-05	1.58E-06	5.79E+01	9.46E-05	3.15E-01	3.11E-05	3.33E-03	7.47E-03	1.21E-03	2.96E-03	1.93E-03	1.98E-03	4.31E-04	2.91E-04	7.81E-08	9.91E-04	5.47E-04
10	E65	70	Single Unit Short Haul Truck	38	0.00E+00	9.00E-06	4.51E-07	7.06E+00	7.36E-06	1.42E-02	9.59E-06	4.45E-03	6.33E-04	1.27E-04	1.10E-03	2.69E-04	2.73E-04	7.07E-04	2.84E-05	1.15E-08	8.18E-04	8.32E-04
10	E65	70	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.95E-08	2.99E-01	3.18E-07	5.91E-04	4.18E-07	1.91E-04	2.89E-05	5.63E-06	4.79E-05	1.16E-05	1.18E-05	2.99E-05	1.21E-06	4.83E-10	3.59E-05	3.58E-05
10	E65	70	Combination Short Haul Truck	35	0.00E+00	1.79E-05	1.28E-06	1.30E+01	5.83E-08	1.54E-02	1.31E-05	1.89E-02	1.36E-03	2.98E-04	1.09E-03	3.78E-04	3.77E-04	1.97E-03	4.35E-05	0.00E+00	7.16E-04	3.56E-03
10	E65	70	Combination Long Haul Truck	31	0.00E+00	1.63E-05	1.08E-06	1.22E+01	6.72E-08	1.64E-02	1.23E-05	1.86E-02	1.36E-03	2.47E-04	1.13E-03	3.28E-04	3.31E-04	1.85E-03	4.07E-05	0.00E+00	7.99E-04	3.52E-03
10	E66	70	Passenger Car	840	0.00E+00	1.08E-05	1.17E-06	3.99E+01	7.53E-05	2.71E-01	2.40E-05	1.68E-03	6.51E-03	1.05E-03	2.33E-03	1.51E-03	1.55E-03	1.50E-04	2.02E-04	5.53E-08	7.93E-04	2.64E-04
10	E66	70	Passenger Truck	1406	0.00E+00	2.38E-05	2.51E-06	9.18E+01	1.50E-04	5.00E-01	4.92E-05	5.27E-03	1.18E-02	1.93E-03	4.69E-03	3.06E-03	3.14E-03	6.84E-04	4.61E-04	1.24E-07	1.57E-03	8.67E-04
10	E66	70	Single Unit Short Haul Truck	47	0.00E+00	1.10E-05	5.53E-07	8.64E+00	9.02E-06	1.73E-02	1.17E-05	5.45E-03	7.76E-04	1.55E-04	1.34E-03	3.30E-04	3.35E-04	8.66E-04	3.48E-05	1.41E-08	1.00E-03	1.02E-03
10	E66	70	Single Unit Long Haul Truck	2	0.00E+00	4.81E-07	2.39E-08	3.67E-01	3.89E-07	7.24E-04	5.12E-07	2.34E-04	3.54E-05	6.90E-06	5.86E-05	1.43E-05	1.45E-05	3.66E-05	1.48E-06	5.92E-10	4.40E-05	4.39E-05
10	E66	70	Combination Short Haul Truck	48	0.00E+00	2.50E-05	1.78E-06	1.82E+01	8.13E-08	2.15E-02	1.83E-05	2.63E-02	1.90E-03	4.16E-04	1.52E-03	5.27E-04	5.25E-04	2.74E-03	6.07E-05	0.00E+00	9.98E-04	4.96E-03
10	E66	70	Combination Long Haul Truck	44	0.00E+00	2.27E-05	1.51E-06	1.69E+01	9.36E-08	2.28E-02	1.72E-05	2.60E-02	1.89E-03	3.45E-04	1.57E-03	4.57E-04	4.62E-04	2.58E-03	5.67E-05	0.00E+00	1.11E-03	4.90E-03
11	E67	80	Passenger Car	320	0.00E+00	3.84E-06	4.17E-07	1.48E+01	2.68E-05	9.88E-02	8.55E-06	6.59E-04	1.76E-03	3.06E-04	8.33E-04	5.37E-04	5.51E-04	5.02E-05	7.52E-05	2.11E-08	2.82E-04	1.03E-04
11	E67	80	Passenger Truck	537	0.00E+00	8.27E-06	8.76E-07	3.41E+01	5.29E-05	1.82E-01	1.73E-05	1.95E-03	3.16E-03	5.60E-04	1.65E-03	1.08E-03	1.10E-03	2.41E-04	1.73E-04	4.70E-08	5.54E-04	3.19E-04
11	E67	80	Single Unit Short Haul Truck	34	0.00E+00	6.29E-06	3.12E-07	6.16E+00	5.06E-06	1.24E-02	6.69E-06	3.22E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.49E-05	9.87E-09	5.75E-04	6.03E-04
11	E67	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.13E-04	2.91E-07	1.38E-04	1.80E-05	3.94E-06	3.33E-05	8.01E-06	8.13E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.58E-05
11	E67	80	Combination Short Haul Truck	21	0.00E+00	9.41E-06	6.73E-07	7.80E+00	2.97E-08	8.34E-03	6.91E-06	9.71E-03	5.71E-04	1.41E-04	5.61E-04	1.99E-04	1.98E-04	1.17E-03	2.61E-05	0.00E+00	3.64E-04	1.83E-03
11	E67	80	Combination Long Haul Truck	20	0.00E+00	8.42E-06	5.65E-07	7.22E+00	3.44E-08	8.64E-03	6.41E-06	9.40E-03	5.59E-04	1.12E-04	5.81E-04	1.71E-04	1.72E-04	1.10E-03	2.41E-05	0.00E+00	4.07E-04	1.77E-03
11	E68	80	Passenger Car	327	0.00E+00	3.93E-06	4.25E-07	1.51E+01	2.74E-05	1.01E-01	8.73E-06	6.72E-04	1.80E-03	3.13E-04	8.51E-04	5.48E-04	5.63E-04	5.13E-05	7.68E-05	2.15E-08	2.88E-04	1.05E-04
11	E68	80	Passenger Truck	548	0.00E+00	8.45E-06	8.95E-07	3.48E+01	5.40E-05	1.86E-01	1.77E-05	1.99E-03	3.23E-03	5.72E-04	1.69E-03	1.10E-03	1.13E-03	2.47E-04	1.77E-04	4.79E-08	5.66E-04	3.26E-04
11	E68	80	Single Unit Short Haul Truck	27	0.00E+00	5.03E-06	2.50E-07	4.93E+00	4.04E-06	9.91E-03	5.35E-06	2.58E-03	3.16E-04	7.14E-05	6.12E-04	1.49E-04	1.51E-04	4.95E-04	1.99E-05	7.90E-09	4.60E-04	4.83E-04
11	E68	80	Single Unit Long Haul Truck	1	0.00E+00	2.18E-07	1.08E-08	2.09E-01	1.73E-07	4.11E-04	2.33E-07	1.10E-04	1.44E-05	3.15E-06	2.67E-05	6.41E-06	6.51E-06	2.08E-05	8.41E-07	3.29E-10	2.02E-05	2.06E-05
11	E68	80	Combination Short Haul Truck	18	0.00E+00	8.03E-06	5.75E-07	6.66E+00	2.54E-08	7.12E-03	5.90E-06	8.29E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.56E-03
11	E68	80	Combination Long Haul Truck	17	0.00E+00	7.19E-06	4.82E-07	6.17E+00	2.94E-08	7.37E-03	5.47E-06	8.02E-03	4.78E-04	9.60E-05	4.96E-04	1.46E-04	1.47E-04	9.41E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
10	E69	70	Passenger Car	422	0.00E+00	5.44E-06	5.88E-07	2.00E+01	3.78E-05	1.36E-01	1.21E-05	8.45E-04	3.27E-03	5.25E-04	1.17E-03	7.59E-04	7.79E-04	7.56E-05	1.02E-04	2.78E-08	3.98E-04	1.32E-04
10	E69	70	Passenger Truck	706	0.00E+00	1.19E-05	1.26E-06	4.61E+01	7.53E-05	2.51E-01	2.47E-05	2.65E-03	5.94E-03	9.67E-04	2.35E-03	1.54E-03	1.58E-03	3.43E-04	2.31E-04	6.22E-08	7.89E-04	4.36E-04
10	E69	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.95E-06	5.66E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.38E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.60E-09	3.27E-04	3.33E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.64E-05	1.16E-05	2.25E-06	1.91E-05	4.66E-06	4.73E-06	1.20E-05	4.82E-07	1.93E-10	1.44E-05	1.43E-05
10	E69	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.98E+00	8.83E-09	2.34E-03	1.99E-06	2.86E-03	2.06E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.98E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E69	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.05E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.33E-04
10	E70	70	Passenger Car	354	0.00E+00	4.56E-06	4.94E-07	1.68E+01	3.18E-05	1.14E-01	1.01E-05	7.09E-04	2.74E-03	4.41E-04	9.84E-04	6.37E-04	6.54E-04	6.34E-05	8.54E-05	2.33E-08	3.34E-04	1.11E-04
10	E70	70	Passenger Truck	593	0.00E+00	1.00E-05	1.06E-06	3.87E+01	6.32E-05	2.11E-01	2.08E-05	2.22E-03	4.99E-03	8.12E-04	1.98E-03	1.29E-03	1.32E-03	2.88E-04	1.94E-04	5.22E-08	6.62E-04	3.66E-04
10	E70	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.54E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.74E-04	6.73E-05	6.84E-05	1.77E-04	7.10E-06	2.87E-09	2.05E-04	2.08E-04
10	E70	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.09E-04	6.78E-05	2.48E-04	8.59E-05	8.56E-05	4.47E-04	9.89E-06	0.00E+00	1.63E-04	8.09E-04
10	E70	70	Combination Long Haul Truck	7	0.00E+00	3.70E-06	2.46E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.62E-05	2.56E-04	7.45E-05	7.53E-05	4.21E-04	9.24E-06	0.00E+00	1.82E-04	7.99E-04
10	E71	70	Passenger Car	518	0.00E+00	6.67E-06	7.22E-07	2.46E+01	4.65E-05	1.67E-01	1.48E-05	1.04E-03	4.01E-03	6.44E-04	1.44E-03	9.32E-04	9.57E-04	9.28E-05	1.25E-04	3.41E-08	4.89E-04	1.63E-04
10	E71	70	Passenger Truck	867	0.00E+00	1.46E-05	1.55E-06	5.66E+01	9.25E-05	3.08E-01	3.04E-05	3.25E-03	7.30E-03	1.19E-03	2.89E-03	1.89E-03	1.93E-03	4.22E-04	2.84E-04	7.64E-08	9.68E-04	5.35E-04
10	E71	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	6.02E-03	4.07E-06	1.89E-03	2.69E-04	5.38E-05	4.66E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.54E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.30E-09	1.27E-01	1.35E-07	2.51E-04	1.78E-07	8.12E-05	1.23E-05	2.39E-06	2.03E-05	4.95E-06	5.03E-06	1.27E-05	5.13E-07	2.05E-10	1.53E-05	1.52E-05
10	E71	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.57E-03	2.19E-06	3.15E-03	2.27E-04	4.97E-05	1.82E-04	6.30E-05	6.28E-05	3.28E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	E71	70	Combination Long Haul Truck	5	0.00E+00	2.71E-06	1.81E-07	2.03E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.12E-05	1.88E-04	5.47E-05	5.52E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.86E-04
10	E72	70	Passenger Car	563	0.00E+00	7.26E-06	7.85E-07	2.67E+01	5.05E-05	1.81E-01	1.61E-05	1.13E-03	4.36E-03	7.01E-04	1.56E-03	1.01E-03	1.04E-03	1.01E-04	1.36E-04	3.71E-08	5.32E-04	1.77E-04
10	E72	70	Passenger Truck	943	0.00E+00	1.59E-05	1.68E-06	6.16E+01	1.01E-04	3.35E-01	3.30E-05	3.54E-03	7.94E-03	1.29E-03	3.14E-03	2.05E-03	2.10E-03	4.58E-04	3.09E-04	8.30E-08	1.05E-03	5.81E-04
10	E72	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.34E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.24E-05
10	E72	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
9	E73	60	Passenger Car	161	0.00E+00	2.39E-06	2.58E-07	8.01E+00	1.66E-05	5.95E-02	5.28E-06	3.29E-04	1.63E-03	2.51E-04	5.15E-04	3.33E-04	3.42E-04	3.37E-05	4.05E-05	1.11E-08	1.75E-04	5.15E-05
9	E73	60	Passenger Truck	270	0.00E+00	5.26E-06	5.55E-07	1.83E+01	3.29E-05	1.06E-01	1.09E-05	1.07E-03	3.00E-03	4.66E-04	1.03E-03	6.72E-04	6.88E-04	1.43E-04	9.15E-05	2.53E-08	3.43E-04	1.78E-04
9	E73	60	Single Unit Short Haul Truck	7	0.00E+00	1.97E-06	9.85E-08	1.25E+00	1.62E-06	2.42E-03	2.10E-06	9.40E-04	1.59E-04	2.89E-05	2.38E-04	5.90E-05	6.00E-05	1.26E-04	5.07E-06	2.09E-09	1.79E-04	1.76E-04
9	E73	60	Combination Short Haul Truck	5	0.00E+00	3.08E-06	2.15E-07	2.01E+00	1.09E-08	2.69E-03	2.28E-06	3.34E-03	2.86E-04	5.67E-05	1.96E-04	6.39E-05	6.39E-05	3.02E-04	6.70E-06	0.00E+00	1.32E-04	6.31E-04
9	E73	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.31E-03	2.87E-04	4.89E-05	2.01E-04	5.48E-05	5.55E-05	2.86E-04	6.28E-06	0.00E+00	1.46E-04	6.25E-04
9	E74	60	Passenger Car	231	0.00E+00	3.42E-06	3.69E-07	1.15E+01	2.38E-05	8.52E-02	7.56E-06	4.70E-04	2.34E-03	3.59E-04	7.37E-04	4.76E-04	4.89E-04	4.82E-05	5.80E-05	1.60E-08	2.50E-04	7.37E-05
9	E74	60	Passenger Truck	386	0.00E+00	7.53E-06	7.95E-07	2.62E+01	4.71E-05	1.51E-01	1.56E-05	1.53E-03	4.29E-03	6.66E-04	1.47E-03	9.61E-04	9.85E-04	2.05E-04	1.31E-04	3.63E-08	4.90E-04	2.54E-04
9	E74	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.69E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E74	60	Combination Short Haul Truck	5	0.00E+00	2.77E-06	1.94E-07	1.80E+00	9.81E-09	2.42E-03	2.05E-06	3.01E-03	2.58E-04	5.10E-05	1.77E-04	5.75E-05	5.75E-05	2.72E-04	6.03E-06	0.00E+00	1.19E-04	5.68E-04
9	E74	60	Combination Long Haul Truck	4	0.00E+00	2.48E-06	1.62E-07	1.69E+00	1.12E-08	2.61E-03	1.92E-06	2.98E-03	2.59E-04	4.40E-05	1.81E-04	4.94E-05	5.00E-05	2.58E-04	5.65E-06	0.00E+00	1.31E-04	5.63E-04
53	E75	70	Passenger Car	907	0.00E+00	1.13E-05	1.23E-06	4.36E+01	7.89E-05	2.82E-01	2.52E-05	1.85E-03	6.93E-03	1.12E-03	2.45E-03	1.58E-03	1.62E-03	1.63E-04	2.21E-04	6.02E-08	8.31E-04	2.90E-04
53	E75	70	Passenger Truck	1519	0.00E+00	2.47E-05	2.62E-06	1.00E+02	1.57E-04	5.19E-01	5.15E-05	5.65E-03	1.24E-02	2.03E-03	4.89E-03	3.19E-03	3.27E-03	7.34E-04	5.06E-04	1.32E-07	1.64E-03	9.28E-04
53	E75	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.47E+00	5.71E-06	1.10E-02	7.43E-06	3.45E-03	4.91E-04	9.81E-05	8.49E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.91E-09	6.34E-04	6.45E-04
53	E75	70	Single Unit Long Haul Truck	1	0

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	E79	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.47E+00	5.71E-06	1.10E-02	7.43E-06	3.45E-03	4.91E-04	9.81E-05	8.49E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.91E-09	6.34E-04	6.45E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.58E-04	3.24E-07	1.48E-04	2.24E-05	4.36E-06	3.71E-05	9.02E-06	9.17E-06	2.32E-05	9.35E-07	3.75E-10	2.78E-05	2.78E-05
53	E79	70	Combination Short Haul Truck	16	0.00E+00	8.42E-06	5.99E-07	6.13E+00	2.74E-08	7.25E-03	6.17E-06	8.87E-03	6.40E-04	1.40E-04	5.13E-04	1.77E-04	1.77E-04	9.23E-04	2.04E-05	0.00E+00	3.36E-04	1.67E-03
53	E79	70	Combination Long Haul Truck	15	0.00E+00	7.64E-06	5.09E-07	5.71E+00	3.15E-08	7.68E-03	5.79E-06	8.75E-03	6.37E-04	1.16E-04	5.30E-04	1.54E-04	1.56E-04	8.71E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
53	E80	70	Passenger Car	789	0.00E+00	9.86E-06	1.07E-06	3.79E+01	6.86E-05	2.45E-01	2.19E-05	1.61E-03	6.03E-03	9.71E-04	2.13E-03	1.38E-03	1.41E-03	1.41E-04	1.92E-04	5.24E-08	7.23E-04	2.52E-04
53	E80	70	Passenger Truck	1321	0.00E+00	2.15E-05	2.28E-06	8.73E+01	1.36E-04	4.51E-01	4.48E-05	4.92E-03	1.08E-02	1.77E-03	4.26E-03	2.77E-03	2.84E-03	6.39E-04	4.40E-04	1.15E-07	1.42E-03	8.07E-04
53	E80	70	Single Unit Short Haul Truck	28	0.00E+00	6.53E-06	3.27E-07	5.12E+00	5.34E-06	1.03E-02	6.95E-06	3.22E-03	4.59E-04	9.18E-05	7.95E-04	1.95E-04	1.98E-04	5.12E-04	2.06E-05	8.33E-09	5.93E-04	6.03E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	2.84E-07	1.42E-08	2.17E-01	2.30E-07	4.29E-04	3.03E-07	1.38E-04	2.10E-05	4.08E-06	3.47E-05	8.44E-06	8.57E-06	2.17E-05	8.75E-07	3.50E-10	2.60E-05	2.60E-05
53	E80	70	Combination Short Haul Truck	19	0.00E+00	9.78E-06	6.96E-07	7.11E+00	3.18E-08	8.42E-03	7.17E-06	1.03E-02	7.43E-04	1.63E-04	5.96E-04	2.06E-04	2.06E-04	1.07E-03	2.37E-05	0.00E+00	3.91E-04	1.94E-03
53	E80	70	Combination Long Haul Truck	17	0.00E+00	8.87E-06	5.91E-07	6.63E+00	3.66E-08	8.92E-03	6.73E-06	1.02E-02	7.39E-04	1.35E-04	6.15E-04	1.79E-04	1.81E-04	1.01E-03	2.22E-05	0.00E+00	4.36E-04	1.92E-03
10	E83	70	Passenger Car	209	0.00E+00	2.69E-06	2.91E-07	9.93E+00	1.88E-05	6.73E-02	5.98E-06	4.19E-04	1.62E-03	2.60E-04	5.81E-04	3.76E-04	3.86E-04	3.74E-05	5.04E-05	1.38E-08	1.97E-04	6.56E-05
10	E83	70	Passenger Truck	350	0.00E+00	5.91E-06	6.25E-07	2.28E+01	3.73E-05	1.24E-01	1.23E-05	1.31E-03	2.95E-03	4.79E-04	1.17E-03	7.62E-04	7.81E-04	1.70E-04	1.15E-04	3.08E-08	3.91E-04	2.16E-04
10	E83	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.90E-08	1.23E+00	1.29E-06	2.48E-03	1.68E-06	7.78E-04	1.11E-04	2.22E-05	1.92E-04	4.71E-05	4.79E-05	1.24E-04	4.97E-06	2.01E-09	1.43E-04	1.46E-04
10	E83	70	Combination Short Haul Truck	7	0.00E+00	3.53E-06	2.51E-07	2.57E+00	1.15E-08	3.04E-03	2.59E-06	3.72E-03	2.68E-04	5.87E-05	2.15E-04	7.44E-05	7.42E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.01E-04
10	E83	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.22E-03	2.43E-06	3.67E-03	2.67E-04	4.87E-05	2.22E-04	6.46E-05	6.53E-05	3.65E-04	8.01E-06	0.00E+00	1.57E-04	6.92E-04
10	E84	70	Passenger Car	209	0.00E+00	2.69E-06	2.91E-07	9.93E+00	1.88E-05	6.73E-02	5.98E-06	4.19E-04	1.62E-03	2.60E-04	5.81E-04	3.76E-04	3.86E-04	3.74E-05	5.04E-05	1.38E-08	1.97E-04	6.56E-05
10	E84	70	Passenger Truck	350	0.00E+00	5.91E-06	6.25E-07	2.28E+01	3.73E-05	1.24E-01	1.23E-05	1.31E-03	2.95E-03	4.79E-04	1.17E-03	7.62E-04	7.81E-04	1.70E-04	1.15E-04	3.08E-08	3.91E-04	2.16E-04
10	E84	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E84	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.78E+00	7.95E-09	2.11E-03	1.79E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	E84	70	Combination Long Haul Truck	4	0.00E+00	2.22E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.37E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.54E-06	0.00E+00	1.09E-04	4.79E-04
9	E85	60	Passenger Car	1225	0.00E+00	1.81E-05	1.96E-06	6.09E+01	1.26E-04	4.53E-01	4.02E-05	2.50E-03	1.24E-02	1.91E-03	3.91E-03	2.53E-03	2.60E-03	2.56E-04	3.08E-04	8.47E-08	1.33E-03	3.91E-04
9	E85	60	Passenger Truck	2052	0.00E+00	4.00E-05	4.22E-06	1.39E+02	2.50E-04	8.04E-01	8.26E-05	8.15E-03	2.28E-02	3.54E-03	7.81E-03	5.11E-03	5.23E-03	1.09E-03	6.95E-04	1.93E-07	2.60E-03	1.35E-03
9	E85	60	Single Unit Short Haul Truck	51	0.00E+00	1.49E-05	7.46E-07	9.49E+00	1.23E-05	1.83E-02	1.59E-05	7.12E-03	1.21E-03	2.19E-04	1.80E-03	4.47E-04	4.54E-04	9.50E-04	3.84E-05	1.58E-08	1.36E-03	1.33E-03
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	6.53E-07	3.24E-08	4.05E-01	5.34E-07	7.77E-04	6.97E-07	3.08E-04	5.42E-05	9.70E-06	7.96E-05	1.95E-05	1.98E-05	4.05E-05	1.64E-06	6.72E-10	5.96E-05	5.77E-05
9	E85	60	Combination Short Haul Truck	40	0.00E+00	2.34E-05	1.63E-06	1.52E+01	8.28E-08	2.04E-02	1.73E-05	2.54E-02	2.18E-03	4.31E-04	1.49E-03	4.86E-04	4.86E-04	2.30E-03	5.09E-05	0.00E+00	1.00E-03	4.79E-03
9	E85	60	Combination Long Haul Truck	36	0.00E+00	2.09E-05	1.37E-06	1.43E+01	9.50E-08	2.21E-02	1.62E-05	2.52E-02	2.18E-03	3.72E-04	1.53E-03	4.17E-04	4.22E-04	2.17E-03	4.77E-05	0.00E+00	1.11E-03	4.75E-03
9	E86	60	Passenger Car	1106	0.00E+00	1.64E-05	1.77E-06	5.50E+01	1.14E-04	4.09E-01	3.63E-05	2.25E-03	1.12E-02	1.72E-03	3.53E-03	2.28E-03	2.34E-03	2.31E-04	2.78E-04	7.65E-08	1.20E-03	3.53E-04
9	E86	60	Passenger Truck	1852	0.00E+00	3.61E-05	3.81E-06	1.26E+02	2.26E-04	7.25E-01	7.46E-05	7.36E-03	2.06E-02	3.19E-03	7.05E-03	4.61E-03	4.72E-03	9.83E-04	6.28E-04	1.74E-07	2.35E-03	1.22E-03
9	E86	60	Single Unit Short Haul Truck	74	0.00E+00	2.17E-05	1.08E-06	1.38E+01	1.78E-05	2.66E-02	2.31E-05	1.03E-02	1.75E-03	3.18E-04	2.62E-03	6.49E-04	6.60E-04	1.38E-03	5.57E-05	2.29E-08	1.97E-03	1.94E-03
9	E86	60	Single Unit Long Haul Truck	3	0.00E+00	9.49E-07	4.71E-08	5.89E-01	7.75E-07	1.13E-03	1.01E-06	4.47E-04	7.88E-05	1.41E-05	1.16E-04	2.83E-05	2.87E-05	5.88E-05	2.38E-06	9.76E-10	8.66E-05	8.38E-05
9	E86	60	Combination Short Haul Truck	63	0.00E+00	3.70E-05	2.58E-06	2.41E+01	1.31E-07	3.23E-02	2.74E-05	4.01E-02	3.43E-03	6.80E-04	2.35E-03	7.67E-04	7.67E-04	3.63E-03	8.04E-05	0.00E+00	1.58E-03	7.57E-03
9	E86	60	Combination Long Haul Truck	57	0.00E+00	3.31E-05	2.16E-06	2.26E+01	1.50E-07	3.48E-02	2.56E-05	3.97E-02	3.45E-03	5.87E-04	2.42E-03	6.58E-04	6.66E-04	3.43E-03	7.54E-05	0.00E+00	1.75E-03	7.50E-03
9	E87	60	Passenger Car	920	0.00E+00	1.36E-05	1.47E-06	4.58E+01	9.48E-05	3.40E-01	3.02E-05	1.88E-03	9.33E-03	1.43E-03	2.94E-03	1.90E-03	1.95E-03	1.92E-04	2.31E-04	6.36E-08	9.97E-04	2.94E-04
9	E87	60	Passenger Truck	1541	0.00E+00	3.00E-05	3.17E-06	1.04E+02	1.88E-04	6.04E-01	6.21E-05	6.12E-03	1.71E-02	2.66E-03	5.86E-03	3.84E-03	3.93E-03	8.18E-04	5.22E-04	1.45E-07	1.96E-03	1.01E-03
9	E87	60	Single Unit Short Haul Truck	73	0.00E+00	2.14E-05	1.07E-06	1.36E+01	1.76E-05	2.63E-02	2.28E-05	1.02E-02	1.73E-03	3.13E-04	2.59E-03	6.41E-04	6.51E-04	1.36E-03	5.50E-05	2.26E-08	1.95E-03	1.91E-03
9	E87	60	Single Unit Long Haul Truck	3	0.00E+00	9.36E-07	4.65E-08	5.81E-01	7.65E-07	1.11E-03	9.99E-07	4.41E-04	7.78E-05	1.39E-05	1.14E-04	2.79E-05	2.84E-05	5.81E-05	2.35E-06	9.63E-10	8.54E-05	8.28E-05
9	E87	60	Combination Short Haul Truck	60	0.00E+00	3.54E-05	2.47E-06	2.31E+01	1.25E-07	3.09E-02	2.62E-05	3.84E-02	3.29E-03	6.52E-04	2.26E-03	7.35E-04	7.35E-04	3.48E-03	7.70E-05	0.00E+00	1.52E-03	7.25E-03
9	E87	60	Combination Long Haul Truck	55	0.00E+00	3.17E-05	2.07E-06	2.16E+01	1.44E-07	3.34E-02	2.45E-05	3.81E-02	3.31E-03	5.62E-04	2.32E-03	6.31E-04	6.38E-04	3.29E-03	7.22E-05	0.00E+00	1.68E-03	7.19E-03
9	E88	60	Passenger Car	1290	0.00E+00	1.91E-05	2.06E-06	6.41E+01	1.33E-04	4.77E-01	4.23E-05	2.63E-03	1.31E-02	2.01E-03	4.12E-03	2.66E-03	2.73E-03	2.69E-04	3.24E-04	8.92E-08	1.40E-03	4.12E-04
9	E88	60	Passenger Truck	2160	0.00E+00	4.21E-05	4.45E-06	1.46E+02	2.63E-04	8.46E-01	8.70E-05	8.58E-03	2.40E-02	3.73E-03	8.22E-03	5.38E-03	5.51E-03	1.15E-03	7.32E-04	2.03E-07	2.74E-03	1.42E-03
9	E88	60	Single Unit Short Haul Truck	53	0.00E+00	1.55E-05	7.74E-07	9.85E+00	1.27E-05	1.90E-02	1.65E-05	7.39E-03	1.25E-03	2.27E-04	1.87E-03	4.64E-04	4.71E-04	9.86E-04	3.98E-05	1.64E-08	1.41E-03	1.38E-03
9	E88	60	Single Unit Long Haul Truck	2	0.00E+00	6.78E-07	3.36E-08	4.21E-01	5.54E-07	8.07E-04	7.23E-07	3.19E-04	5.63E-05	1.01E-05	8.26E-05	2.02E-05	2.05E-05	4.20E-05	1.70E-06	6.97E-10	6.18E-05	5.99E-05
9	E88	60	Combination Short Haul Truck	43	0.00E+00	2.53E-05	1.76E-06	1.64E+01	8.94E-08	2.20E-02	1.87E-05	2.74E-02	2.35E-03	4.65E-04	1.61E-03	5.24E-04	5.24E-04	2.48E-03	5.49E-05	0.00E+00	1.08E-03	5.17E-03
9	E88	60	Combination Long Haul Truck	39	0.00E+00	2.26E-05	1.48E-06	1.54E+01	1.02E-07	2.38E-02	1.75E-05	2.72E-02	2.36E-03	4.01E-04	1.65E-03	4.50E-04	4.55E-04	2.35E-03	5.15E-05	0.00E+00	1.20E-03	5.13E-03
9	E89	60	Passenger Car	92	0.00E+00	1.37E-06	1.48E-07	4.59E+00	9.52E-06	3.41E-02	3.03E-06	1.88E-04	9.36E-04	1.44E-04	2.95E-04	1.91E-04	1.96E-04	1.93E-05	2.32E-05	6.39E-09	1.00E-04	2.95E-05
9	E89	60	Passenger Truck	155	0.00E+00	3.02E-06	3.18E-07	1.05E+01	1.89E-05	6.06E-02	6.23E-06	6.14E-04	1.72E-03	2.67E-04	5.89E-04	3.85E-04	3.94E-04	8.21E-05	5.24E-05	1.45E-08	1.96E-04	1.02E-04
9	E89	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.69E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E89	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	E89	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	E90	60	Passenger Car	76	0.00E+00	1.12E-06	1.21E-07	3.76E+00	7.78E-06	2.79E-02	2.48E-06	1.54E-04	7.66E-04	1.18E-04	2.41E-04	1.56E-04	1.60E-04	1.58E-05	1.90E-05	5.22E-09	8.18E-05	2.41E-05
9	E90	60	Passenger Truck	126	0.00E+00	2.47E-06	2.60E-07	8.57E+00	1.54E-05	4.95E-02	5.09E-06	5.02E-04	1.41E-03	2.18E-04	4.81E-04	3.15E-04	3.23E-04	6.71E-05	4.29E-05	1.19E-08	1.61E-04	8.33E-05
9	E90	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.15E-08	2.01E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.39E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.31E-05
9	E91	60	Passenger Car	4	0.00E+00	5.54E-08	5.98E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.72E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.05E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.45E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.38E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.95E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.54E-08	5.98E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.72E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.05E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.45E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.38E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.95E-06	4.12E-06
9	E93	60	Passenger Car	122	0.00E+00	1.80E-06	1.95E-07	6.06E+00	1.26E-05	4.50E-02	4.00E-06	2.49E-04	1.24E-03	1.90E-04	3.89E-04	2.52E-04	2.58E-04	2.55E-05	3.06E-05	8.43E-09	1.32E-04	3.89E-05
9	E93	60	Passenger Truck	204	0.00E+00	3.98E-06	4.20E-07	1.38E+01	2.49E-05	7.99E-02	8.22E-06	8.11E-04	2.27E-03	3.52E-04	7.77E-04	5.08E-04	5.20E-04	1.08E-04	6.92E-05	1.92E-08	2.59E-04	1.34E-04
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.69E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	E93	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	E94	60	Passenger Car	82	0.00E+00	1.21E-06	1.31E-07	4.07E+00	8.44E-06	3.02E-02	2.68E-06	1.67E-04	8.30E-04	1.28E-04	2.62E-04	1.69E-04	1.74E-04	1.71E-05	2.06E-05	5.66E-09	8.87E-05	2.62E-05
9	E94	60	Passenger Truck	137	0.00E+00	2.67E-06	2.82E-07	9.29E+00	1.67E-05	5.37E-02	5.52E-06	5.45E-04	1.52E-03	2.37E-04	5.22E-04	3.41E-04	3.50E-04	7.27E-05	4.65E-05	1.29E-08	1.74E-04	9.03E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.69E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.15E-08	2.01E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.39E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.31E-05
54	E95	80	Passenger Car	685	0.00E+00	8.03E-06	8.68E-07	3.18E+01	5.59E-05	2.02E-01	1.78E-05	1.41E-03	3.96E-03	6.75E-04	1.74E-03	1.12E-03	1.15E-03	1.07E-04	1.62E-04	4.40E-08	5.88E-04	2.21E-04
54	E95	80	Passenger Truck	1147	0.00E+00	1.74E-05	1.85E-06	7.39E+01	1.12E-04	3.82E-01	3.66E-05	4.21E-03	7.14E-03	1.24E-03	3.50E-03	2.27E-03	2.33E-03	5.16E-04	3.73E-04	9.91E-08	1.17E-03	6.85E-04
54	E95	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.18E-05	7.86E-04	1.92E-04	1.94E-04	6.36E-04	2.56E-05	1.02E-08	5.92E-04	6.21E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.39E-08	2.68E-01	2.22E-07	5.28E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.36E-06	2.68E-05	1.08E-06	4.22E-10	2.59E-05	2.65E-05
54	E95	80	Combination Short Haul Truck	36	0.00E+00	1.56E-05	1.12E-06	1.29E+01	4.93E-08	1.38E-02	1.15E-05	1.61E-02	9.46E-04	2.33E-04	9.31E-04	3.30E-04	3.28E-04	1.95E-03	4.33E-05	0.00E+00	6.04E-04	3.03E-03
54	E95	80	Combination Long Haul Truck	32	0.00E+00	1.40E-05	9.37E-07	1.20E+01	5.70E-08	1.43E-02	1.06E-05	1.56E-02	9.28E-04	1.86E-04	9.64E-04	2.84E-04	2.86E-04	1.83E-03	4.00E-05	0.00E+00	6.76E-04	2.94E-03
54	E96	80	Passenger Car	465	0.00E+00	5.46E-06	5.90E-07	2.16E+01	3.80E-05	1.37E-01	1.21E-05	9.61E-04	2.69E-03	4.59E-04	1.18E-03	7.62E-04	7.81E-04	7.29E-05	1.10E-04	2.99E-08	4.00E-04	1.50E-04
54	E96	80	Passenger Truck	780	0.00E+00	1.18E-05	1.26E-06	5.02E+01	7.58E-05	2.60E-01	2.49E-05	2.86E-03	4.85E-03	8.44E-04	2.38E-03	1.54E-03	1.58E-03	3.51E-04	2.53E-04	6.73E-08	7.95E-04	4.66E-04
54	E96	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.85E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.78E-05	7.05E-09	4.11E-04	4.31E-04
54	E96	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.86E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.81E-06	1.86E-05	7.51E-07	2.93E-10	1.80E-05	1.84E-05
54	E96	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.21E-07	9.52E+00	3.63E-08	1.02E-02	8.43E-06	1.18E-02	6.96E-04	1.71E-04	6.84E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.23E-03
54	E96	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.89E-07	8.81E+00	4.19E-08	1.05E-02	7.82E-06	1.15E-02	6.82E-04	1.37E-04	7.09E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.16E-03
9	F01	60	Passenger Car	301	0.00E+00	4.45E-06	4.81E-07	1.49E+01	3.10E-05	1.11E-01	9.85E-06	6.13E-04	3.05E-03	4.68E-04	9.60E-04	6.20E-04	6.37E-04	6.28E-05	7.56E-05	2.08E-08	3.26E-04	9.60E-05
9	F01	60	Passenger Truck	503	0.00E+00	9.82E-06	1.04E-06	3.41E+01	6.14E-05	1.97E-01	2.03E-05	2.00E-03	5.59E-03	8.68E-04	1.92E-03	1.25E-03	1.28E-03	2.67E-04	1.71E-04	4.73E-08	6.39E-04	3.31E-04
9	F01	60	Single Unit Short Haul Truck	13	0.00E+00	3.95E-06	1.97E-07	2.51E+00	3.24E-06	4.84E-03	4.21E-06	1.88E-03	3.19E-04	5.77E-05	4.77E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.05E-04	1.84E-07	8.13E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.32E-07	1.77E-10	1.57E-05	1.52E-05
9	F01	60	Combination Short Haul Truck	12	0.00E

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F36	80	Single Unit Short Haul Truck	14	0.00E+00	2.69E-06	1.34E-07	2.64E+00	2.17E-06	5.31E-03	2.87E-06	1.38E-03	1.69E-04	3.83E-05	3.28E-04	7.98E-05	8.10E-05	2.65E-04	1.07E-05	4.23E-09	2.47E-04	2.59E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	5.77E-09	1.12E-01	9.26E-08	2.20E-04	1.25E-07	5.91E-05	7.73E-06	1.69E-06	1.43E-05	3.43E-06	3.48E-06	1.12E-05	4.51E-07	1.76E-10	1.08E-05	1.11E-05
11	F36	80	Combination Short Haul Truck	7	0.00E+00	3.21E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.36E-06	3.32E-03	1.95E-04	4.80E-05	1.92E-04	6.79E-05	6.75E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.24E-04
11	F36	80	Combination Long Haul Truck	7	0.00E+00	2.87E-06	1.93E-07	2.47E+00	1.17E-08	2.95E-03	2.19E-06	3.21E-03	1.91E-04	3.84E-05	1.98E-04	5.84E-05	5.88E-05	3.77E-04	8.24E-06	0.00E+00	1.39E-04	6.05E-04
9	F37	60	Passenger Car	692	0.00E+00	1.02E-05	1.11E-06	3.44E+01	7.13E-05	2.56E-01	2.27E-05	1.41E-03	7.01E-03	1.08E-03	2.21E-03	1.43E-03	1.47E-03	1.44E-04	1.74E-04	4.78E-08	7.49E-04	2.21E-04
9	F37	60	Passenger Truck	1158	0.00E+00	2.26E-05	2.38E-06	7.85E+01	1.41E-04	4.54E-01	4.67E-05	4.60E-03	1.29E-02	2.00E-03	4.41E-03	2.88E-03	2.95E-03	6.15E-04	3.93E-04	1.09E-07	1.47E-03	7.63E-04
9	F37	60	Single Unit Short Haul Truck	70	0.00E+00	2.06E-05	1.03E-06	1.31E+01	1.69E-05	2.52E-02	2.19E-05	9.81E-03	1.66E-03	3.01E-04	2.49E-03	6.16E-04	6.25E-04	1.31E-03	5.28E-05	2.18E-08	1.87E-03	1.84E-03
9	F37	60	Single Unit Long Haul Truck	3	0.00E+00	8.99E-07	4.46E-08	5.58E-01	7.35E-07	1.07E-03	9.59E-07	4.24E-04	7.47E-05	1.34E-05	1.10E-04	2.68E-05	2.72E-05	5.58E-05	2.25E-06	9.25E-10	8.21E-05	7.95E-05
9	F37	60	Combination Short Haul Truck	73	0.00E+00	4.31E-05	3.01E-06	2.81E+01	1.53E-07	3.76E-02	3.19E-05	4.68E-02	4.01E-03	7.93E-04	2.75E-03	8.95E-04	8.95E-04	4.23E-03	9.38E-05	0.00E+00	1.84E-03	8.83E-03
9	F37	60	Combination Long Haul Truck	67	0.00E+00	3.86E-05	2.52E-06	2.63E+01	1.75E-07	4.06E-02	2.99E-05	4.64E-02	4.02E-03	6.84E-04	2.82E-03	7.68E-04	7.77E-04	4.01E-03	8.79E-05	0.00E+00	2.04E-03	8.75E-03
9	F38	60	Passenger Car	888	0.00E+00	1.31E-05	1.42E-06	4.41E+01	9.15E-05	3.28E-01	2.91E-05	1.81E-03	9.00E-03	1.38E-03	2.84E-03	1.83E-03	1.88E-03	1.85E-04	2.23E-04	6.14E-08	9.62E-04	2.84E-04
9	F38	60	Passenger Truck	1486	0.00E+00	2.90E-05	3.06E-06	1.01E+02	1.81E-04	5.82E-01	5.99E-05	5.90E-03	1.65E-02	2.56E-03	5.66E-03	3.70E-03	3.79E-03	7.89E-04	5.04E-04	1.40E-07	1.89E-03	9.79E-04
9	F38	60	Single Unit Short Haul Truck	57	0.00E+00	1.69E-05	8.44E-07	1.07E+01	1.39E-05	2.08E-02	1.80E-05	8.06E-03	1.37E-03	2.47E-04	2.04E-03	5.06E-04	5.14E-04	1.08E-03	4.34E-05	1.79E-08	1.54E-03	1.51E-03
9	F38	60	Single Unit Long Haul Truck	3	0.00E+00	7.39E-07	3.67E-08	4.59E-01	6.04E-07	8.80E-04	7.89E-07	3.48E-04	6.14E-05	1.10E-05	9.01E-05	2.20E-05	2.24E-05	4.58E-05	1.85E-06	7.60E-10	6.74E-05	6.53E-05
9	F38	60	Combination Short Haul Truck	59	0.00E+00	3.45E-05	2.41E-06	2.25E+01	1.22E-07	3.01E-02	2.55E-05	3.74E-02	3.21E-03	6.35E-04	2.20E-03	7.16E-04	7.16E-04	3.38E-03	7.50E-05	0.00E+00	1.48E-03	7.06E-03
9	F38	60	Combination Long Haul Truck	53	0.00E+00	3.09E-05	2.02E-06	2.11E+01	1.40E-07	3.25E-02	2.39E-05	3.71E-02	3.22E-03	5.48E-04	2.26E-03	6.14E-04	6.22E-04	3.21E-03	7.03E-05	0.00E+00	1.63E-03	7.00E-03
11	F39	80	Passenger Car	199	0.00E+00	2.38E-06	2.58E-07	9.15E+00	1.66E-05	6.12E-02	5.30E-06	4.08E-04	1.09E-03	1.90E-04	5.16E-04	3.33E-04	3.41E-04	3.11E-05	4.66E-05	1.31E-08	1.75E-04	6.40E-05
11	F39	80	Passenger Truck	332	0.00E+00	5.13E-06	5.43E-07	2.11E+01	3.28E-05	1.13E-01	1.07E-05	1.21E-03	1.96E-03	3.47E-04	1.03E-03	6.67E-04	6.83E-04	1.50E-04	1.07E-04	2.91E-08	3.44E-04	1.98E-04
11	F39	80	Single Unit Short Haul Truck	8	0.00E+00	1.44E-06	7.13E-08	1.41E+00	1.16E-06	2.83E-03	1.53E-06	7.36E-04	9.02E-05	2.04E-05	1.75E-04	4.26E-05	4.32E-05	1.41E-04	5.68E-06	2.26E-09	1.32E-04	1.38E-04
11	F39	80	Single Unit Long Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.79E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.14E-04
11	F39	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
11	F40	80	Passenger Car	66	0.00E+00	7.90E-07	8.55E-08	3.03E+00	5.50E-06	2.03E-02	1.76E-06	1.35E-04	3.62E-04	6.29E-05	1.71E-04	1.10E-04	1.13E-04	1.03E-05	1.54E-05	4.33E-09	5.79E-05	2.12E-05
11	F40	80	Passenger Truck	110	0.00E+00	1.70E-06	1.80E-07	7.01E+00	1.09E-05	3.73E-02	3.55E-06	4.01E-04	6.49E-04	1.15E-04	3.40E-04	2.21E-04	2.27E-04	4.96E-05	3.55E-05	9.64E-09	1.14E-04	6.55E-05
11	F40	80	Single Unit Short Haul Truck	4	0.00E+00	7.18E-07	3.56E-08	7.04E-01	5.78E-07	1.42E-03	7.64E-07	3.68E-04	4.51E-05	1.02E-05	8.74E-05	2.13E-05	2.16E-05	7.07E-05	2.84E-06	1.13E-09	6.58E-05	6.90E-05
11	F40	80	Combination Short Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.42E-03	1.18E-06	1.66E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.38E-05	2.00E-04	4.45E-06	0.00E+00	6.21E-05	3.12E-04
11	F40	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.65E-08	1.23E+00	5.87E-09	1.47E-03	1.09E-06	1.60E-03	9.55E-05	1.92E-05	9.92E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.02E-04
10	F41	70	Passenger Car	199	0.00E+00	2.56E-06	2.77E-07	9.45E+00	1.78E-05	6.41E-02	5.69E-06	3.98E-04	1.54E-03	2.48E-04	5.53E-04	3.58E-04	3.67E-04	3.56E-05	4.80E-05	1.31E-08	1.88E-04	6.24E-05
10	F41	70	Passenger Truck	333	0.00E+00	5.63E-06	5.95E-07	2.17E+01	3.55E-05	1.18E-01	1.17E-05	1.25E-03	2.80E-03	4.56E-04	1.11E-03	7.25E-04	7.43E-04	1.62E-04	1.09E-04	2.93E-08	3.72E-04	2.05E-04
10	F41	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	F41	70	Single Unit Long Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	F41	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.60E-04
10	F42	70	Passenger Car	268	0.00E+00	3.46E-06	3.74E-07	1.28E+01	2.41E-05	8.65E-02	7.68E-06	5.38E-04	2.08E-03	3.34E-04	7.46E-04	4.83E-04	4.96E-04	4.81E-05	6.47E-05	1.77E-08	2.54E-04	8.43E-05
10	F42	70	Passenger Truck	450	0.00E+00	7.59E-06	8.03E-07	2.93E+01	4.80E-05	1.60E-01	1.57E-05	1.69E-03	3.78E-03	6.16E-04	1.50E-03	9.79E-04	1.00E-03	2.19E-04	1.47E-04	3.96E-08	5.02E-04	2.77E-04
10	F42	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
9	F43	60	Passenger Car	45	0.00E+00	6.70E-07	7.24E-08	2.25E+00	4.66E-06	1.67E-02	1.48E-06	9.22E-05	4.59E-04	7.05E-05	1.45E-04	9.34E-05	9.59E-05	9.45E-06	1.14E-05	3.13E-09	4.90E-05	1.45E-05
9	F43	60	Passenger Truck	76	0.00E+00	1.48E-06	1.56E-07	5.13E+00	9.24E-06	2.97E-02	3.05E-06	3.01E-04	8.42E-04	1.31E-04	2.88E-04	1.89E-04	1.93E-04	4.02E-05	2.57E-05	7.11E-09	9.62E-05	4.99E-05
9	F43	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	F43	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.15E-08	2.01E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.39E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.31E-05
9	F44	60	Passenger Car	14	0.00E+00	2.05E-07	2.21E-08	6.88E-01	1.43E-06	5.11E-03	4.53E-07	2.82E-05	1.40E-04	2.16E-05	4.42E-05	2.86E-05	2.93E-05	2.89E-06	3.48E-06	9.57E-10	1.50E-05	4.42E-06
9	F44	60	Passenger Truck	23	0.00E+00	4.52E-07	4.77E-08	1.57E+00	2.83E-06	9.07E-03	9.33E-07	9.20E-05	2.57E-04	4.00E-05	8.82E-05	5.77E-05	5.91E-05	1.23E-05	7.85E-06	2.18E-09	2.94E-05	1.53E-05
10	F45	70	Passenger Car	209	0.00E+00	2.69E-06	2.91E-07	9.93E+00	1.88E-05	6.73E-02	5.98E-06	4.19E-04	1.62E-03	2.60E-04	5.81E-04	3.76E-04	3.86E-04	3.74E-05	5.04E-05	1.38E-08	1.97E-04	6.56E-05
10	F45	70	Passenger Truck	350	0.00E+00	5.91E-06	6.25E-07	2.28E+01	3.73E-05	1.24E-01	1.23E-05	1.31E-03	2.95E-03	4.79E-04	1.17E-03	7.62E-04	7.81E-04	1.70E-04	1.15E-04	3.08E-08	3.91E-04	2.16E-04
10	F45	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.90E-08	1.23E+00	1.29E-06	2.48E-03	1.68E-06	7.78E-04	1.11E-04	2.22E-05	1.92E-04	4.71E-05	4.79E-05	1.24E-04	4.97E-06	2.01E-09	1.43E-04	1.46E-04
10	F45	70	Combination Short Haul Truck	7	0.00E+00	3.53E-06	2.51E-07	2.57E+00	1.15E-08	3.04E-03	2.59E-06	3.72E-03	2.68E-04	5.87E-05	2.15E-04	7.44E-05	7.42E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.01E-04
10	F45	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.22E-03	2.43E-06	3.67E-03	2.67E-04	4.87E-05	2.22E-04	6.46E-05	6.53E-05	3.65E-04	8.01E-06	0.00E+00	1.57E-04	6.92E-04
10	F46	70	Passenger Car	209	0.00E+00	2.69E-06	2.91E-07	9.93E+00	1.88E-05	6.73E-02	5.98E-06	4.19E-04	1.62E-03	2.60E-04	5.81E-04	3.76E-04	3.86E-04	3.74E-05	5.04E-05	1.38E-08	1.97E-04	6.56E-05
10	F46	70	Passenger Truck	350	0.00E+00	5.91E-06	6.25E-07	2.28E+01	3.73E-05	1.24E-01	1.23E-05	1.31E-03	2.95E-03	4.79E-04	1.17E-03	7.62E-04	7.81E-04	1.70E-04	1.15E-04	3.08E-08	3.91E-04	2.16E-04
10	F46	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	F46	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.78E+00	7.95E-09	2.11E-03	1.79E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	F46	70	Combination Long Haul Truck	4	0.00E+00	2.22E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.37E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.54E-06	0.00E+00	1.09E-04	4.79E-04
9	F47	60	Passenger Car	3	0.00E+00	3.87E-08	4.19E-09	1.30E-01	2.70E-07	9.67E-04	8.58E-08	5.34E-06	2.65E-05	4.08E-06	8.36E-06	5.40E-06	5.55E-06	5.47E-07	6.58E-07	1.81E-10	2.84E-06	8.36E-07
9	F47	60	Passenger Truck	4	0.00E+00	8.55E-08	9.02E-09	2.97E-01	5.34E-07	1.72E-03	1.77E-07	1.74E-05	4.87E-05	7.56E-06	1.67E-05	1.09E-05	1.12E-05	2.33E-06	1.49E-06	4.12E-10	5.56E-06	2.89E-06
9	F48	60	Passenger Car	26	0.00E+00	3.87E-07	4.19E-08	1.30E+00	2.70E-06	9.67E-03	8.58E-07	5.34E-05	2.65E-04	4.08E-05	8.36E-05	5.40E-05	5.55E-05	5.47E-06	6.58E-06	1.81E-09	2.84E-05	8.36E-06
9	F48	60	Passenger Truck	44	0.00E+00	8.55E-07	9.02E-08	2.97E+00	5.34E-06	1.72E-02	1.77E-06	1.74E-04	4.87E-04	7.56E-05	1.67E-04	1.09E-04	1.12E-04	2.33E-05	1.49E-05	4.12E-09	5.56E-05	2.89E-05
9	F48	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	F48	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	F48	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
50	F78	40	Passenger Car	276	0.00E+00	4.58E-06	4.96E-07	1.59E+01	3.19E-05	1.13E-01	1.02E-05	4.99E-04	4.78E-03	6.81E-04	9.89E-04	6.39E-04	6.56E-04	8.66E-05	7.97E-05	1.93E-08	3.36E-04	7.82E-05
50	F78	40	Passenger Truck	462	0.00E+00	1.05E-05	1.10E-06	3.53E+01	6.29E-05	1.95E-01	2.09E-05	1.89E-03	8.47E-03	1.21E-03	1.98E-03	1.30E-03	1.32E-03	3.05E-04	1.76E-04	3.76E-08	6.52E-04	3.20E-04
50	F78	40	Single Unit Short Haul Truck	11	0.00E+00	4.68E-06	2.45E-07	2.24E+00	4.07E-06	3.86E-03	4.98E-06	2.29E-03	4.27E-04	7.08E-05	5.53E-04	1.46E-04	1.48E-04	2.27E-04	9.07E-06	3.83E-09	4.04E-04	4.30E-04
50	F78	40	Combination Short Haul Truck	5	0.00E+00	4.63E-06	3.21E-07	2.35E+00	1.67E-08	4.04E-03	3.44E-06	5.17E-03	5.39E-04	9.72E-05	3.01E-04	9.59E-05	9.69E-05	3.55E-04	7.87E-06	0.00E+00	2.03E-04	9.76E-04
50	F78	40	Combination Long Haul Truck	5	0.00E+00	4.23E-06	2.76E-07	2.24E+00	1.89E-08	4.49E-03	3.25E-06	5.19E-03	5.42E-04	8.62E-05	3.09E-04	8.40E-05	8.56E-05	3.42E-04	7.49E-06	0.00E+00	2.24E-04	9.78E-04
52	F79	60	Passenger Car	556	0.00E+00	7.55E-06	8.16E-07	2.76E+01	5.26E-05	1.87E-01	1.68E-05	1.09E-03	5.48E-03	8.43E-04	1.64E-03	1.05E-03	1.08E-03	1.16E-04	1.40E-04	3.73E-08	5.52E-04	1.71E-04
52	F79	60	Passenger Truck	930	0.00E+00	1.66E-05	1.75E-06	6.28E+01	1.03E-04	3.33E-01	3.41E-05	3.51E-03	9.77E-03	1.51E-03	3.26E-03	2.11E-03	2.17E-03	4.83E-04	3.15E-04	7.91E-08	1.08E-03	5.82E-04
52	F79	60	Single Unit Short Haul Truck	11	0.00E+00	3.38E-06	1.69E-07	2.15E+00	2.78E-06	4.15E-03	3.61E-06	1.61E-03	2.73E-04	4.95E-05	4.09E-04	1.01E-04	1.03E-04	2.15E-04	8.68E-06	3.58E-09	3.07E-04	3.02E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.34E-09	9.18E-02	1.21E-07	1.76E-04	1.58E-07	6.97E-05	1.23E-05	2.20E-06	1.80E-05	4.41E-06	4.48E-06	9.17E-06	3.70E-07	1.52E-10	1.35E-05	1.31E-05
52	F79	60	Combination Short Haul Truck	6	0.00E+00	3.70E-06	2.58E-07	2.41E+00	1.31E-08	3.23E-03	2.74E-06	4.01E-03	3.43E-04	6.80E-05	2.35E-04	7.67E-05	7.67E-05	3.63E-04	8.04E-06	0.00E+00	1.58E-04	7.57E-04
52	F79	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.26E+00	1.50E-08	3.48E-03	2.56E-06	3.97E-03	3.45E-04	5.87E-05	2.42E-04	6.58E-05	6.66E-05	3.43E-04	7.54E-06	0.00E+00	1.75E-04	7.50E-04
53	F80	70	Passenger Car	1172	0.00E+00	1.46E-05	1.59E-06	5.63E+01	1.02E-04	3.65E-01	3.25E-05	2.39E-03	8.95E-03	1.44E-03	3.17E-03	2.04E-03	2.10E-03	2.10E-04	2.86E-04	7.78E-08	1.07E-03	3.74E-04
53	F80	70	Passenger Truck	1962	0.00E+00	3.19E-05	3.38E-06	1.30E+02	2.02E-04	6.70E-01	6.65E-05	7.30E-03	1.61E-02	2.62E-03	6.32E-03	4.12E-03	4.22E-03	9.48E-04	6.54E-04	1.71E-07	2.11E-03	1.20E-03
53	F80	70	Single Unit Short Haul Truck	25	0.00E+00	5.85E-06	2.93E-07	4.59E+00	4.79E-06	9.20E-03	6.23E-06	2.89E-03	4.12E-04	8.23E-05	7.12E-04	1.75E-04	1.78E-04	4.59E-04	1.85E-05	7.47E-09	5.32E-04	5.41E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	2.55E-07	1.27E-08	1.95E-01	2.07E-07	3.84E-04	2.72E-07	1.24E-04	1.88E-05	3.66E-06	3.11E-05	7.57E-06	7.69E-06	1.94E-05	7.84E-07	3.14E-10	2.33E-05	2.33E-05
53	F80	70	Combination Short Haul Truck	17	0.00E+00	8.97E-06	6.38E-07	6.52E+00	2.92E-08	7.72E-03	6.57E-06	9.45E-03	6.81E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.83E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
53	F80	70	Combination Long Haul Truck	16	0.00E+00	8.13E-06	5.42E-07	6.08E+00	3.36E-08	8.18E-03	6.16E-06	9.31E-03	6.78E-04	1.24E-04	5.64E-04	1.64E-04	1.66E-04	9.27E-04	2.03E-05	0.00E+00	4.00E-04	1.76E-03
50	F84	40	Passenger Car	211	0.00E+00	3.50E-06	3.79E-07	1.21E+01	2.44E-05	8.67E-02	7.79E-06	3.81E-04	3.65E-03	5.21E-04	7.56E-04	4.89E-04	5.01E-04	6.62E-05	6.09E-05	1.48E-08	2.57E-04	5.97E-05
50	F84	40	Passenger Truck	353	0.00E+00	8.00E-06	8.40E-07	2.70E+01	4.81E-05	1.49E-01	1.60E-05	1.44E-03	6.47E-03	9.21E-04	1.51E-03	9.91E-04	1.01E-03	2.33E-04	1.34E-04	2.87E-08	4.98E-04	2.44E-04
50	F84	40	Single Unit Short Haul Truck	9	0.00E+00	3.83E-06	2.01E-07	1.84E+00	3.33E-06	3.16E-03	4.07E-06	1.87E-03	3.50E-04	5.79E-05	4.53E-04	1.19E-04	1.21E-04	1.86E-04	7.42E-06	3.14E-09	3.30E-04	3.52E-04
50	F84	40	Combination Short Haul Truck	15	0.00E+00	1.30E-05	8.99E-07	6.59E+00	4.68E-08	1.13E-02	9.64E-06	1.45E-02	1.51E-03	2.72E-04	8.42E-04	2.68E-04	2.71E-04	9.93E-04	2.20E-05	0.00E+00	5.70E-04	2.73E-03
50	F84	40	Combination Long Haul Truck	13	0.00E+00	1.18E-05	7.72E-07	6.27E+00	5.30E-08	1.26E-02	9.09E-06	1.45E-02	1.52E-03	2.41E-04	8.64E-04	2.35E-04	2.40E-04	9.57E-04	2.10E-05	0.00E+00	6.27E-04	2.74E-03
52	F85	60	Passenger Car	216	0.00E+00	2.94E-06	3.18E-07	1.07E+01	2.05E-05	7.26E-02	6.54E-06	4.24E-04	2.13E-03	3.28E-04	6.36E-04	4.10E-04	4.21E-04	4.51E-05	5.43E-05	1.45E-08	2.15E-04	6.66E-05
52	F85	60	Passenger Truck	362	0.00E+00	6.45E-06	6.82E-07	2.44E+01	4.02E-05	1.30E-01	1.33E-05	1.37E-03	3.80E-03	5.88E-04	1.27E-03	8.22E-04	8.42E-04	1.88E-04	1.23E-04	3.08E-08	4.19E-04	2.26E-04
52	F85	60	Single Unit Short Haul Truck	10	0.00E+00	2.82E-06	1.41E-07	1.79E+00	2.32E-06	3.46E-03	3.01E-06	1.34E-03	2.28E-04	4.12E-05	3.41E-04	8.43E-05	8.57E-05	1.79E-04	7.24E-06	2.98E-09	2.56E-04	2.52E-04
52	F85	60	Combination Short Haul Truck	11	0.00E+00	6.47E-06	4.

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	F89	40	Combination Short Haul Truck	51	0.00E+00	4.50E-05	3.11E-06	2.28E+01	1.62E-07	3.92E-02	3.34E-05	5.02E-02	5.23E-03	9.43E-04	2.92E-03	9.30E-04	9.40E-04	3.44E-03	7.64E-05	0.00E+00	1.97E-03	9.47E-03
50	F89	40	Combination Long Haul Truck	46	0.00E+00	4.10E-05	2.67E-06	2.17E+01	1.84E-07	4.36E-02	3.15E-05	5.04E-02	5.26E-03	8.37E-04	2.99E-03	8.15E-04	8.30E-04	3.32E-03	7.26E-05	0.00E+00	2.17E-03	9.48E-03

Appendix F.3.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B09	0.00E+00	9.73E-05	8.23E-06	2.45E+02	2.87E-04	1.13E+00	1.34E-04	6.71E-02	1.31E-02	2.94E-03	1.26E-02	6.89E-03	7.02E-03	9.76E-03	1.14E-03	2.74E-07	5.58E-03	1.23E-02
B10	0.00E+00	7.73E-05	6.48E-06	1.90E+02	2.17E-04	8.58E-01	1.04E-04	5.47E-02	1.00E-02	2.27E-03	9.79E-03	5.29E-03	5.39E-03	7.97E-03	8.80E-04	2.08E-07	4.38E-03	1.01E-02
B13	0.00E+00	4.37E-05	3.63E-06	1.05E+02	1.18E-04	4.67E-01	5.79E-05	3.14E-02	5.49E-03	1.25E-03	5.44E-03	2.90E-03	2.96E-03	4.61E-03	4.83E-04	1.13E-07	2.47E-03	5.80E-03
B14	0.00E+00	7.14E-05	6.03E-06	1.80E+02	2.11E-04	8.29E-01	9.86E-05	4.89E-02	9.60E-03	2.16E-03	9.30E-03	5.06E-03	5.16E-03	7.15E-03	8.40E-04	2.02E-07	4.12E-03	8.99E-03
B15	0.00E+00	5.46E-05	5.24E-06	1.92E+02	2.70E-04	1.03E+00	9.84E-05	2.39E-02	1.11E-02	2.37E-03	9.45E-03	5.73E-03	5.86E-03	3.22E-03	9.47E-04	2.52E-07	3.57E-03	4.22E-03
B16	0.00E+00	3.89E-05	3.72E-06	1.37E+02	1.92E-04	7.31E-01	7.01E-05	1.68E-02	7.88E-03	1.69E-03	6.76E-03	4.08E-03	4.17E-03	2.29E-03	6.74E-04	1.80E-07	2.57E-03	2.96E-03
D27	0.00E+00	4.97E-05	4.38E-06	1.31E+02	1.86E-04	6.67E-01	7.70E-05	2.67E-02	1.26E-02	2.29E-03	7.38E-03	4.18E-03	4.28E-03	3.33E-03	6.34E-04	1.63E-07	3.11E-03	4.87E-03
D28	0.00E+00	1.95E-05	1.76E-06	5.39E+01	7.79E-05	2.79E-01	3.12E-05	1.02E-02	5.24E-03	9.46E-04	2.98E-03	1.73E-03	1.77E-03	1.24E-03	2.63E-04	6.76E-08	1.21E-03	1.85E-03
D29	0.00E+00	4.97E-05	4.38E-06	1.31E+02	1.86E-04	6.67E-01	7.70E-05	2.67E-02	1.26E-02	2.29E-03	7.38E-03	4.18E-03	4.28E-03	3.33E-03	6.34E-04	1.63E-07	3.11E-03	4.87E-03
D30	0.00E+00	1.95E-05	1.76E-06	5.39E+01	7.79E-05	2.79E-01	3.12E-05	1.02E-02	5.24E-03	9.46E-04	2.98E-03	1.73E-03	1.77E-03	1.24E-03	2.63E-04	6.76E-08	1.21E-03	1.85E-03
D31	0.00E+00	3.01E-05	2.58E-06	7.37E+01	1.01E-04	3.65E-01	4.43E-05	1.75E-02	7.04E-03	1.29E-03	4.24E-03	2.34E-03	2.39E-03	2.19E-03	3.53E-04	8.95E-08	1.85E-03	3.22E-03
D32	0.00E+00	1.51E-05	1.34E-06	3.94E+01	5.56E-05	2.00E-01	2.32E-05	8.43E-03	3.81E-03	6.91E-04	2.21E-03	1.26E-03	1.29E-03	1.03E-03	1.91E-04	4.84E-08	9.22E-04	1.54E-03
D33	0.00E+00	1.92E-05	1.68E-06	4.18E+01	6.93E-05	2.35E-01	2.93E-05	1.07E-02	7.17E-03	1.13E-03	2.80E-03	1.57E-03	1.61E-03	1.06E-03	2.01E-04	5.18E-08	1.20E-03	1.98E-03
D34	0.00E+00	3.07E-05	2.63E-06	6.49E+01	1.07E-04	3.62E-01	4.61E-05	1.73E-02	1.11E-02	1.76E-03	4.42E-03	2.44E-03	2.50E-03	1.71E-03	3.11E-04	8.03E-08	1.93E-03	3.18E-03
D35	0.00E+00	1.75E-05	1.54E-06	3.92E+01	6.58E-05	2.22E-01	2.73E-05	9.31E-03	6.74E-03	1.06E-03	2.61E-03	1.48E-03	1.51E-03	9.30E-04	1.89E-04	4.93E-08	1.11E-03	1.71E-03
D36	0.00E+00	2.57E-05	2.32E-06	6.15E+01	1.06E-04	3.56E-01	4.18E-05	1.26E-02	1.06E-02	1.67E-03	4.00E-03	2.32E-03	2.38E-03	1.27E-03	2.99E-04	7.87E-08	1.63E-03	2.30E-03
D37	0.00E+00	3.30E-05	3.03E-06	7.95E+01	1.35E-04	4.60E-01	5.33E-05	1.74E-02	1.38E-02	2.17E-03	5.05E-03	2.98E-03	3.05E-03	1.69E-03	3.86E-04	9.97E-08	2.01E-03	3.19E-03
D38	0.00E+00	1.61E-05	1.51E-06	4.24E+01	7.50E-05	2.52E-01	2.80E-05	6.65E-03	7.36E-03	1.15E-03	2.68E-03	1.61E-03	1.65E-03	6.92E-04	2.08E-04	5.58E-08	1.05E-03	1.20E-03
D39	0.00E+00	1.98E-05	1.81E-06	4.71E+01	7.92E-05	2.71E-01	3.16E-05	1.09E-02	8.15E-03	1.28E-03	2.98E-03	1.76E-03	1.80E-03	1.05E-03	2.28E-04	5.83E-08	1.19E-03	2.00E-03
D40	0.00E+00	8.82E-06	8.92E-07	2.71E+01	4.95E-05	1.66E-01	1.70E-05	2.73E-03	4.75E-03	7.38E-04	1.62E-03	1.03E-03	1.05E-03	2.95E-04	1.35E-04	3.65E-08	5.73E-04	4.80E-04
D41	0.00E+00	5.57E-06	4.63E-07	1.02E+01	1.55E-05	5.41E-02	7.50E-06	3.90E-03	1.74E-03	2.78E-04	7.10E-04	3.78E-04	3.86E-04	3.67E-04	4.80E-05	1.16E-08	3.25E-04	7.25E-04
D42	0.00E+00	1.04E-05	1.04E-06	3.15E+01	5.78E-05	1.94E-01	2.00E-05	3.10E-03	5.52E-03	8.58E-04	1.91E-03	1.20E-03	1.23E-03	3.42E-04	1.57E-04	4.27E-08	6.83E-04	5.44E-04
D43	0.00E+00	2.01E-05	1.52E-06	3.09E+01	4.53E-05	1.52E-01	2.54E-05	1.35E-02	5.11E-03	8.27E-04	2.48E-03	1.16E-03	1.19E-03	1.35E-03	1.42E-04	3.56E-08	1.30E-03	2.52E-03
D44	0.00E+00	1.47E-05	1.47E-06	4.47E+01	8.19E-05	2.75E-01	2.83E-05	4.45E-03	7.84E-03	1.22E-03	2.70E-03	1.70E-03	1.74E-03	4.87E-04	2.22E-04	6.05E-08	9.63E-04	7.81E-04
D45	0.00E+00	7.39E-05	5.70E-06	1.17E+02	1.72E-04	5.85E-01	9.37E-05	5.12E-02	1.96E-02	3.16E-03	9.07E-03	4.38E-03	4.47E-03	5.00E-03	5.41E-04	1.33E-07	4.62E-03	9.54E-03
D46	0.00E+00	7.66E-05	5.83E-06	1.14E+02	1.59E-04	5.48E-01	9.31E-05	5.65E-02	1.89E-02	3.06E-03	8.98E-03	4.22E-03	4.31E-03	5.45E-03	5.18E-04	1.23E-07	4.69E-03	1.06E-02
D47	0.00E+00	8.69E-05	6.99E-06	1.55E+02	2.40E-04	8.13E-01	1.18E-04	5.59E-02	2.61E-02	4.18E-03	1.14E-02	5.81E-03	5.94E-03	5.49E-03	7.27E-04	1.83E-07	5.46E-03	1.04E-02
D48	0.00E+00	8.82E-06	8.92E-07	2.71E+01	4.95E-05	1.66E-01	1.70E-05	2.73E-03	4.75E-03	7.38E-04	1.62E-03	1.03E-03	1.05E-03	2.95E-04	1.35E-04	3.65E-08	5.73E-04	4.80E-04
D49	0.00E+00	8.69E-05	6.99E-06	1.55E+02	2.40E-04	8.13E-01	1.18E-04	5.59E-02	2.61E-02	4.18E-03	1.14E-02	5.81E-03	5.94E-03	5.49E-03	7.27E-04	1.83E-07	5.46E-03	1.04E-02
D50	0.00E+00	8.32E-05	6.48E-06	1.34E+02	1.97E-04	6.73E-01	1.06E-04	5.80E-02	2.24E-02	3.61E-03	1.02E-02	5.00E-03	5.10E-03	5.64E-03	6.19E-04	1.51E-07	5.15E-03	1.08E-02
D51	0.00E+00	2.44E-05	2.02E-06	4.87E+01	8.04E-05	2.68E-01	3.60E-05	1.32E-02	8.29E-03	1.31E-03	3.50E-03	1.85E-03	1.89E-03	1.36E-03	2.33E-04	6.15E-08	1.61E-03	2.43E-03
D52	0.00E+00	3.58E-05	2.77E-06	5.81E+01	8.69E-05	2.93E-01	4.63E-05	2.39E-02	9.70E-03	1.56E-03	4.51E-03	2.18E-03	2.23E-03	2.36E-03	2.69E-04	6.74E-08	2.29E-03	4.45E-03
D53	0.00E+00	3.19E-05	2.78E-06	7.21E+01	1.24E-04	4.12E-01	5.07E-05	1.52E-02	1.24E-02	1.95E-03	4.91E-03	2.74E-03	2.81E-03	1.59E-03	3.50E-04	9.35E-08	2.11E-03	2.78E-03
D54	0.00E+00	3.66E-05	2.85E-06	6.07E+01	9.17E-05	3.09E-01	4.79E-05	2.40E-02	1.02E-02	1.63E-03	4.66E-03	2.28E-03	2.33E-03	2.38E-03	2.82E-04	7.10E-08	2.34E-03	4.47E-03
D55	0.00E+00	3.99E-05	3.19E-06	8.03E+01	9.94E-05	3.63E-01	5.16E-05	2.71E-02	7.45E-03	1.39E-03	4.93E-03	2.50E-03	2.55E-03	3.43E-03	3.73E-04	9.01E-08	2.39E-03	5.03E-03
D56	0.00E+00	4.76E-05	3.83E-06	9.79E+01	1.23E-04	4.47E-01	6.24E-05	3.20E-02	9.12E-03	1.70E-03	5.95E-03	3.05E-03	3.11E-03	4.03E-03	4.56E-04	1.11E-07	2.84E-03	5.92E-03
D57	0.00E+00	4.46E-05	3.59E-06	9.16E+01	1.15E-04	4.18E-01	5.83E-05	3.01E-02	8.53E-03	1.59E-03	5.56E-03	2.85E-03	2.91E-03	3.78E-03	4.26E-04	1.03E-07	2.66E-03	5.56E-03
D58	0.00E+00	5.93E-05	4.68E-06	1.16E+02	1.41E-04	5.17E-01	7.56E-05	4.07E-02	1.07E-02	2.00E-03	7.24E-03	3.60E-03	3.67E-03	5.18E-03	5.36E-04	1.29E-07	3.57E-03	7.54E-03
D59	0.00E+00	4.46E-05	3.59E-06	9.16E+01	1.15E-04	4.18E-01	5.83E-05	3.01E-02	8.53E-03	1.59E-03	5.56E-03	2.85E-03	2.91E-03	3.78E-03	4.26E-04	1.03E-07	2.66E-03	5.56E-03
D60	0.00E+00	5.93E-05	4.68E-06	1.16E+02	1.41E-04	5.17E-01	7.56E-05	4.07E-02	1.07E-02	2.00E-03	7.24E-03	3.60E-03	3.67E-03	5.18E-03	5.36E-04	1.29E-07	3.57E-03	7.54E-03
D61	0.00E+00	9.51E-06	8.22E-07	2.49E+01	3.57E-05	1.27E-01	1.49E-05	4.78E-03	2.39E-03	4.34E-04	1.44E-03	7.99E-04	8.17E-04	6.24E-04	1.21E-04	3.19E-08	6.28E-04	8.70E-04
D62	0.00E+00	6.61E-06	5.38E-07	1.41E+01	1.81E-05	6.56E-02	8.88E-06	4.31E-03	1.32E-03	2.45E-04	8.49E-04	4.41E-04	4.50E-04	5.44E-04	6.61E-05	1.62E-08	3.99E-04	7.96E-04
D63	0.00E+00	3.37E-06	2.81E-07	7.53E+00	1.12E-05	3.84E-02	4.98E-06	1.81E-03	9.98E-04	1.67E-04	4.84E-04	2.58E-04	2.64E-04	2.10E-04	3.61E-05	9.35E-09	2.22E-04	3.33E-04
D64	0.00E+00	1.73E-05	1.25E-06	2.28E+01	2.41E-05	8.72E-02	1.85E-05	1.39E-02	2.80E-03	4.95E-04	1.78E-03	7.52E-04	7.65E-04	1.53E-03	9.91E-05	2.15E-08	1.02E-03	2.60E-03
D65	0.00E+00	3.24E-05	2.35E-06	4.92E+01	4.89E-05	1.83E-01	3.55E-05	2.51E-02	4.29E-03	8.35E-04	3.41E-03	1.47E-03	1.50E-03	3.24E-03	2.15E-04	4.79E-08	1.91E-03	4.69E-03
D66	0.00E+00	3.91E-05	2.84E-06	5.65E+01	5.22E-05	2.02E-01	4.12E-05	3.20E-02	4.91E-03	9.61E-04	3.89E-03	1.67E-03	1.69E-03	4.05E-03	2.43E-04	5.04E-08	2.20E-03	5.99E-03
D67	0.00E+00	3.24E-05	2.35E-06	4.92E+01	4.89E-05	1.83E-01	3.55E-05	2.51E-02	4.29E-03	8.35E-04	3.41E-03	1.47E-03	1.50E-03	3.24E-03	2.15E-04	4.79E-08	1.91E-03	4.69E-03
D68	0.00E+00	3.91E-05	2.84E-06	5.65E+01	5.22E-05	2.02E-01	4.12E-05	3.20E-02	4.91E-03	9.61E-04	3.89E-03	1.67E-03	1.69E-03	4.05E-03	2.43E-04	5.04E-08	2.20E-03	5.99E-03
D69	0.00E+00	1.87E-05	1.39E-06	2.99E+01	3.10E-05	1.16E-01	2.10E-05	1.44E-02	2.65E-03	5.10E-04	2.01E-03	8.99E-04	9.15E-04	1.84E-03	1.32E-04	2.96E-08	1.09E-03	2.69E-03
D70	0.00E+00	1.86E-05	1.36E-06	2.82E+01	2.76E-05	1.05E-01	2.03E-05	1.48E-02	2.47E-03	4.80E-04	1.93E-03	8.41E-04	8.55E-04	1.88E-03	1.23E-04	2.67E-08	1.07E-03	2.76E-03
D71	0.00E+00	3.40E-05	2.54E-06	4.74E+01	5.03E-05	1.88E-01	3.65E-05	2.84E-02	5.92E-03	1.04E-03	3.43E-03	1.54E-03	1.57E-03	3.03E-03	2.07E-04	4.24E-08	1.87E-03	5.32E-03
D72	0.00E+00	2.25E-05	1.80E-06	4.33E+01	5.97E-05	2.08E-01	2.99E-05	1.45E-02	5.65E-03	9.57E-04	2.88E-03	1.47E-03	1.50E-03	1.62E-03	2.03E-04	4.99E-08	1.39E-03	2.69E-03
D73	0.00E+00	1.46E-05	1.19E-06	2.72E+01	3.56E-05	1.28E-01	1.85E-05	1.06E-02	3.56E-03	6.04E-04	1.74E-03	9.06E-04	9.25E-04	1.13E-03	1.26E-04	2.89E-08	8.18E-04	1.98E-03
D74	0.00E+00	1.05E-05	1.01E-06	3.21E+01	5.22E-05	1.80E-01	1.89E-05	4.10E-03	4.41E-03	7.22E-04	1.80E-03	1.11E-03	1.13E-03	4.60E-04	1.59E-04	4.17E-08	6.78E-04	7.32E-04
D75	0.00E+00	1.08E-05	8.51E-07	2.23E+01	2.84E-05	1.02E-01	1.44E-05	6.77E-03	2.06E-03	3.84E-04	1.40E-03	6.97E-04	7.12E-04	8.91E-04	1.04E-04	2.64E-08	6.88E-04	1.25E-03
D76	0.00E+00	1.32E-05	1.06E-06	2.75E+01	3.49E-05	1.27E-01	1.75E-05	8.67E-03	2.57E-03	4.77E-04	1.68E-03	8.59E-04	8.77E-04	1.10E-03	1.29E-04	3.16E-08	8.01E-04	1.60E-03
D77	0.00E+00	1.25E-05	9.49E-07	2.31E+01	2.75E-05	9.97E-02	1.56E-05	8.42E-03	2.10E-03	3.96E-04	1.51E-03	7.14E-04	7.29E-04	1.11E-03	1.06E-04	2.61E-08	7.83E-04	1.56E-03
D78	0.00E+00	1.08E-05	8.12E-07	1.80E+01	1.93E-05	7.21E-02	1.25E-05	8.16E-03	1.61E-03	3.08E-04	1.19E-03	5.45E-04	5.55E-04	1.04E-03	8.03E-05	1.83E-08	6.38E-04	1.52E-03
D79	0.00E+00	2.46E-05	1.91E-06	4.08E+01	5.06E-05	1.82E-01	2.95E-05	1.84E-02	5.24E-03	9.00E-04	2.80E-03	1.36E-03	1.39E-03	2.00E-03	1.86E-04	4.22E-08	1.42E-03	3.44E-03
D80	0.00E+00	3.60E-05	3.04E-06	7.73E+01	1.10E-04	3.87E-01	5.06E-05	2.27E-02	1.03E-02	1.72E-03	4.81E-03	2.61E-03	2.67E-03	2.47E-03	3.66E-04	8.97E-08	2.16E-03	4.19E-03
D81	0.00E+00	7.03E-06	6.97E-07	2.29E+01	3.77E-05	1.30E-01	1.32E-05	2.41E-03	3.15E-03	5.15E-04	1.26E-03	7.90E-04	8.09E-04	2.73E-04	1.14E-04	3.01E-08	4.61E-04	4.24E-04
D82	0.00E+00	8.25E-06	8.79E-07	3.14E+01	5.38E-05	1.84E-01	1.75E-05	1.66E-03	4.38E-03	7.09E-04	1.68E-03	1.09E-03	1.12E-03	1.99E-04	1.58E-04	4.27E-08	5.64E-04	2.70E-04
D83	0.00E+00	1.02E-04	8.17E-06	2.00E+02	2.41E-04	8.92E-01	1.29E-04	7.27E-02	1.86E-02	3.47E-03	1.22E-02	6.18E-03	6.31E-03	9.04E-03	9.23E-04	2.16E-07	5.89E-03	1.35E-02
D84	0.00E+00	7.77E-05	5.80E-06	1.21E+02	1.20E-04	4.60E-01	8.50E-05	6.25E-02	1.07E-02	2.07E-03	8.01E-03	3.61E-03	3.67E-03	7.84E-03	5.29E-04	1.12E-07	4.34E-03	1.17E-02
D85	0.00E+00	7.87E-05	6.32E-06	1.56E+02	1.89E-04	6.96E-01	9.99E-05	5.58E-02	1.44E-02	2.70E-03	9.45E-03	4.81E-03	4.91E-03	6.93E-03	7.19E-04	1.69E-07	4.55E-03	1.03E-02
D86	0.00E+00	6.31E-05	4.78E-06	1.03E+02	1.08E-04	4.09E-01	7.10E-05	4.97E-02	9.24E-03	1.77E-03	6.70E-03	3.10E-03	3.16E-03	6.21E-03	4.58E-04	9.94E-08	3.54E-03	9.26E-03
D87	0.00E+00	7.87E-05	6.32E-06	1.56E+02	1.89E-04	6.96E-01	9.99E-05	5.58E-02	1.44E-02	2.70E-03	9.45E-03	4.81E-03	4.91E-03	6.93E-03	7.19E-04	1.69E-07	4.55E-03	1.03E-02
D88	0.00E+00	6.31E-05	4.78E-06	1.03E+02	1.08E-04	4.09E-01	7.10E-05	4.97E-02	9.24E-03	1.77E-03	6.70E-03	3.10E-03	3.16E-03	6.21E-03	4.58E-04	9.94E-08	3.54E-03	9.26E-03
D89	0.00E+00	6.13E-06	4.89E-07	1.05E+01	1.58E-05	5.41E-02	8.06E-06	4.17E-03	1.77E-03	2.84E-04	7.74E-04	3.91E-04	4.00E-04	4.04E-04	4.89E-05	1.20E-08	3.76E-04	7.76E-04
D90	0.00E+00	3.31E-06	2.57E-07	5.67E+00	8.89E-06	2.94E-02	4.48E-06	1.98E-03	9.49E-04	1.52E-04	4.40E-04	2.16E-04	2.20E-04	2.03E-04	2.66E-05	6.94E-09	2.21E-04	3.68E-04
D91	0.00E+00	1.30E-05	1.03E-06	2.32E+01	3.03E-05	1.07E-01	1.63E-05	9.20E-03	3.00E-03	5.12E-04	1.56E-03	7.78E-04	7.94E-04	1.01E-03	1.07E-04	2.52E-08	7.70E-04	1.71E-03
D92	0.00E+00	1.37E-05	1.30E-06	4.15E+01	6.77E-05	2.32E-01	2.47E-05	5.02E-03	5.68E-03	9.30E-04	2.38E-03	1.44E-03	1.47E-03	5.88E-04	2.05E-04	5.47E-08	9.18E-04	8.93E-04
D93	0.00E+00	1.14E-05	9.07E-07	2.09E+01	2.78E-05	9.81E-02	1.46E-05	7.88E-03	2.72E-03	4.62E-04	1.39E-03	7.02E-04	7.17E-04	8.63E-04	9.69E-05	2.31E-08	6.79E-04	1.46E-03
D94	0.00E+00	1.25E-05	1.20E-06	3.92E+01	6.45E-05	2.20E-01	2.31E-05	4.25E-03	5.38E-03	8.79E-04	2.22E-03	1.36E-03	1.39E-03	5.01E-04	1.95E-04	5.20E-08	8.42E-04	7.49E-04
E01	0.00E+00	2.50E-05	1.99E-06	4.36E+01	6.66E-05	2.27E-01	3.34E-05	1.64E-02	7.33E-03	1.18E-03	3.22E-03	1.63E-03	1.67E-03	1.61E-03	2.04E-04	5.09E-08	1.56E-03	3.05E-03
E02	0.00E+00	2.30E-05	1.92E-06	4.50E+01	7.20E-05	2.44E-01	3.29E-05	1.40E-02	7.66E-03	1.22E-03	3.16E-03	1.69E-03	1.73E-03	1.38E-03	2.14E-04	5.43E-08	1.44E-03	2.59E-03
E03	0.00E+00	2.13E-05	1.62E-06	3.73E+01	4.20E-05	1.55E-01	2.54E-05	1.55E-02	3.37E-03	6.40E-04	2.43E-03	1.14E-03	1.16E-03	1.99E-03	1.69E-04	3.95E-08	1.27E-03	2.88E-03
E04	0.00E+00	2.05E-05	1.71E-06	4.78E+01	6.47E-05	2.32E-01	2.94E-05	1.21E-02	4.53E-03	8.32E-04	2.83E-03	1.51E-03	1.55E-03	1.54E-03	2.28E-04	5.80E-08	1.28E-03	2.22E-03
E05	0.00E+00	2.04E-05	1.57E-06	3.71E+01	4.30E-05	1.58E-01	2.49E-05	1.45E-02	3.37E-03	6.37E-04	2.39E-03	1.14E-03	1.16E-03	1.86E-03	1.69E-04	4.02E-08	1.23E-03	2.70E-03
E06	0.00E+00	1.35E-05	1.02E-06	2.33E+01	2.61E-05	9.57E-02	1.60E-05	9.77E-03	2.09E-03	3.98E-04	1.55E-03	7.11E-04	7.25E-04	1.27E-03	1.05E-04	2.49E-08	8.24E-04	1.82E-03
E07	0.00E+00	1.06E-04	8.49E-06	1.81E+02	2.70E-04	9.30E-01	1.39E-04	7.38E-02	3.05E-02	4.89E-03	1.33E-02	6.73E-03	6.87E-03	7.10E-03	8.41E-04	2.05E-07	6.45E-03	1.37E-02
E08	0.00E+00	1.17E-04	9.65E-06	2.17E+02	3.34E-04	1.15E+00	1.60E-04	7.76E-02	3.67E-02	5.86E-03	1.53E-02	8.06E-03	8.24E-03	7.47E-03	1.02E-03	2.52E-07	7.12E-03	1.44E-02
E09	0.00E+00	8.65E-05	7.06E-06	1.57E+02	2.41E-04	8.28E-01	1.17E-04	5.74E-02	2.66E-02	4.25E-03	1.12E-02	5.85E-03	5.98E-03	5.55E-03	7.36E-04	1.82E-07	5.28E-03	1.07E-02
E10	0.00E+00	9.77E-05	8.09E-06	1.83E+02	2.83E-04	9.74E-01	1.35E-04	6.43E-02	3.10E-02	4.95E-03	1.28E-02	6.80E-03	6.95E-03	6.19E-03	8.60E-04	2.13E-07	5.92E-03	1.19E-02
E11	0.00E+00	1.70E-04	1.27E-05	2.34E+02	3.05E-04	1.07E+00	1.96E-04	1.35E-01	3.85E-02	6.30E-03	1.88E-02	8.57E-03	8.74E-03	1.28E-02	1.05E-03	2.36E-07	1.01E-02	2.52E-02
E12	0.00E+00	1.76E-04	1.38E-05	2.87E+02	4.19E-04	1.44E+00	2.25E-04	1.25E-01	4.80E-02	7.74E-03	2.16E-02	1.07E-02	1.09E-02	1.20E-02	1.32E-03	3.21E-07	1.07E-02	2.33E-02
E13	0.00E+00	2.93E-05	2.41E-06	6.52E+01	8.59E-05	3.10E-01	4.07E-05	1.81E-02	6.14E-03	1.13E-03	3.91E-03	2.05E-03	2.10E-03	2.32E-03	3.08E-04	7.75E-08	1.82E-03	3.34E-03
E14	0.00E+00	1.95E-05	1.60E-06	4.14E+01	5.26E-05	1.92E-01	2.60E-05	1.31E-02	3.88E-03	7.20E-04	2.47E-03	1.29E-03	1.32E-03	1.63E-03	1.94E-04	4.69E-08	1.15E-03	2.42E-03
E15	0.00E+00	2.44E-05	2.02E-06	5.23E+01	6.65E-05	2.44E-01	3.25E-05	1.66E-02	4.93E-03	9.11E-04	3.06E-03	1.63E-03	1.67E-03	2.03E-03	2.45E-04	5.84E-08	1.40E-03	3.07E-03
E16	0.00E+00	2.41E-05	2.01E-06	5.28E+01	6.79E-05	2.49E-01	3.26E-05	1.62E-02	4.98E-03	9.20E-04	3.08E-03	1.65E-03	1.68E-03	1.98E-03	2.48E-04	5.95E-08	1.39E-03	2.99E-03
E17	0.00E+00	1.71E-05	1.42E-06	3.86E+01	5.10E-05	1.85E-01	2.39E-05	1.07E-02	3.65E-03	6.72E-04	2.28E-03	1.22E-03	1.24E-03	1.34E-03	1.83E-04	4.55E-08	1.04E-03	1.97E-03
E18	0.00E+00	1.89E-05	1.45E-06	3.43E+01	3.99E-05	1.46E-01	2.31E-05	1.34E-02	3.12E-03	5.89E-04	2.22E-03	1.05E-03	1.08E-03	1.72E-03	1.56E-04	3.73E-08	1.14E-03	2.49E-03
E19	0.00E+00	4.30E-05	3.50E-06	8.11E+01	1.30E-04	4.36E-01	6.09E-05	2.54E-02	1.37E-02	2.19E-03	5.90E-03	3.06E-03	3.13E-03	2.55E-03	3.84E-04	9.94E-08	2.78E-03	4.70E-03
E20	0.00E+00	5.59E-05	4.61E-06	1.07E+02	1.70E-04	5.77E-01	7.92E-05	3.40E-02	1.82E-02	2.89E-03	7.63E-03	4.02E-03	4.11E-03

Appendix F.3.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E36	0.00E+00	3.26E-05	2.46E-06	4.61E+01	6.16E-05	2.16E-01	3.82E-05	2.53E-02	7.61E-03	1.24E-03	3.67E-03	1.69E-03	1.73E-03	2.41E-03	2.07E-04	4.76E-08	1.94E-03	4.73E-03
E37	0.00E+00	5.24E-05	4.35E-06	9.96E+01	1.56E-04	5.35E-01	7.31E-05	3.36E-02	1.69E-02	2.70E-03	6.99E-03	3.72E-03	3.80E-03	3.25E-03	4.70E-04	1.18E-07	3.20E-03	6.22E-03
E38	0.00E+00	3.26E-05	2.46E-06	4.61E+01	6.16E-05	2.16E-01	3.82E-05	2.53E-02	7.61E-03	1.24E-03	3.67E-03	1.69E-03	1.73E-03	2.41E-03	2.07E-04	4.76E-08	1.94E-03	4.73E-03
E39	0.00E+00	2.63E-05	2.12E-06	4.90E+01	6.52E-05	2.31E-01	3.39E-05	1.83E-02	6.39E-03	1.09E-03	3.22E-03	1.65E-03	1.68E-03	1.99E-03	2.28E-04	5.39E-08	1.55E-03	3.40E-03
E40	0.00E+00	1.59E-05	1.58E-06	5.19E+01	8.55E-05	2.94E-01	2.99E-05	5.59E-03	7.16E-03	1.17E-03	2.85E-03	1.79E-03	1.83E-03	6.23E-04	2.58E-04	6.81E-08	1.03E-03	9.85E-04
E41	0.00E+00	1.23E-05	1.16E-06	3.58E+01	5.71E-05	1.97E-01	2.12E-05	5.39E-03	4.89E-03	8.04E-04	2.03E-03	1.23E-03	1.26E-03	5.94E-04	1.76E-04	4.57E-08	7.75E-04	9.71E-04
E42	0.00E+00	1.44E-05	1.43E-06	4.62E+01	7.58E-05	2.61E-01	2.67E-05	5.29E-03	6.37E-03	1.04E-03	2.55E-03	1.59E-03	1.63E-03	5.87E-04	2.30E-04	6.03E-08	9.29E-04	9.37E-04
E43	0.00E+00	7.92E-06	7.92E-07	2.63E+01	4.35E-05	1.50E-01	1.51E-05	2.59E-03	3.63E-03	5.91E-04	1.45E-03	9.08E-04	9.30E-04	2.95E-04	1.31E-04	3.48E-08	5.22E-04	4.54E-04
E44	0.00E+00	1.30E-05	1.33E-06	4.56E+01	7.65E-05	2.62E-01	2.58E-05	3.61E-03	6.31E-03	1.03E-03	2.47E-03	1.58E-03	1.62E-03	4.17E-04	2.28E-04	6.10E-08	8.68E-04	6.19E-04
E45	0.00E+00	3.03E-05	2.25E-06	4.98E+01	5.35E-05	1.99E-01	3.48E-05	2.26E-02	4.44E-03	8.51E-04	3.34E-03	1.51E-03	1.54E-03	2.91E-03	2.22E-04	5.13E-08	1.81E-03	4.20E-03
E46	0.00E+00	2.17E-05	1.57E-06	3.04E+01	2.69E-05	1.05E-01	2.24E-05	1.81E-02	2.62E-03	5.16E-04	2.12E-03	8.91E-04	9.04E-04	2.29E-03	1.29E-04	2.62E-08	1.21E-03	3.38E-03
E47	0.00E+00	2.80E-05	2.08E-06	4.62E+01	4.96E-05	1.84E-01	3.23E-05	2.08E-02	4.10E-03	7.88E-04	3.10E-03	1.40E-03	1.42E-03	2.70E-03	2.06E-04	4.76E-08	1.68E-03	3.89E-03
E48	0.00E+00	7.07E-06	5.72E-07	1.46E+01	1.83E-05	6.67E-02	9.26E-06	4.78E-03	1.36E-03	2.53E-04	8.83E-04	4.54E-04	4.63E-04	6.00E-04	6.79E-05	1.64E-08	4.20E-04	8.85E-04
E49	0.00E+00	3.21E-05	2.36E-06	5.08E+01	5.24E-05	1.96E-01	3.60E-05	2.46E-02	4.48E-03	8.65E-04	3.45E-03	1.53E-03	1.55E-03	3.17E-03	2.24E-04	5.06E-08	1.90E-03	4.58E-03
E50	0.00E+00	5.38E-06	4.88E-07	1.50E+01	2.18E-05	7.80E-02	8.66E-06	2.76E-03	1.46E-03	2.64E-04	8.28E-04	4.82E-04	4.93E-04	3.38E-04	7.33E-05	1.89E-08	3.35E-04	5.01E-04
E51	0.00E+00	3.16E-05	2.32E-06	5.00E+01	5.17E-05	1.93E-01	3.55E-05	2.41E-02	4.41E-03	8.51E-04	3.41E-03	1.51E-03	1.53E-03	3.11E-03	2.21E-04	5.00E-08	1.87E-03	4.49E-03
E52	0.00E+00	1.65E-06	1.60E-07	5.27E+00	8.00E-06	2.86E-02	2.92E-06	7.28E-04	5.22E-04	9.31E-05	2.77E-04	1.71E-04	1.75E-04	8.48E-05	2.61E-05	6.83E-09	1.03E-04	1.30E-04
E53	0.00E+00	3.02E-05	2.47E-06	6.48E+01	8.33E-05	3.03E-01	4.07E-05	1.96E-02	6.08E-03	1.13E-03	3.89E-03	2.03E-03	2.07E-03	2.47E-03	3.04E-04	7.47E-08	1.82E-03	3.63E-03
E54	0.00E+00	1.03E-05	7.98E-07	1.77E+01	1.92E-05	7.29E-02	1.18E-05	8.07E-03	1.61E-03	3.06E-04	1.11E-03	5.36E-04	5.46E-04	9.92E-04	7.94E-05	1.72E-08	5.61E-04	1.50E-03
E55	0.00E+00	3.02E-05	2.47E-06	6.48E+01	8.33E-05	3.03E-01	4.07E-05	1.96E-02	6.08E-03	1.13E-03	3.89E-03	2.03E-03	2.07E-03	2.47E-03	3.04E-04	7.47E-08	1.82E-03	3.63E-03
E56	0.00E+00	1.03E-05	7.98E-07	1.77E+01	1.92E-05	7.29E-02	1.18E-05	8.07E-03	1.61E-03	3.06E-04	1.11E-03	5.36E-04	5.46E-04	9.92E-04	7.94E-05	1.72E-08	5.61E-04	1.50E-03
E57	0.00E+00	1.62E-05	1.45E-06	4.08E+01	6.21E-05	2.16E-01	2.54E-05	8.72E-03	5.51E-03	9.13E-04	2.42E-03	1.39E-03	1.42E-03	9.55E-04	1.98E-04	5.01E-08	1.00E-03	1.59E-03
E58	0.00E+00	1.39E-05	1.34E-06	4.28E+01	6.96E-05	2.40E-01	2.51E-05	5.32E-03	5.87E-03	9.61E-04	2.40E-03	1.48E-03	1.51E-03	6.00E-04	2.12E-04	5.58E-08	9.03E-04	9.47E-04
E59	0.00E+00	1.62E-05	1.44E-06	4.25E+01	6.01E-05	2.16E-01	2.49E-05	9.04E-03	4.11E-03	7.46E-04	2.37E-03	1.36E-03	1.39E-03	1.10E-03	2.06E-04	5.23E-08	9.87E-04	1.65E-03
E60	0.00E+00	1.06E-05	1.02E-06	3.42E+01	5.24E-05	1.86E-01	1.90E-05	4.32E-03	3.38E-03	6.03E-04	1.83E-03	1.11E-03	1.14E-03	5.23E-04	1.70E-04	4.52E-08	6.90E-04	7.68E-04
E61	0.00E+00	1.62E-05	1.44E-06	4.25E+01	6.01E-05	2.16E-01	2.49E-05	9.04E-03	4.11E-03	7.46E-04	2.37E-03	1.36E-03	1.39E-03	1.10E-03	2.06E-04	5.23E-08	9.87E-04	1.65E-03
E62	0.00E+00	1.06E-05	1.02E-06	3.42E+01	5.24E-05	1.86E-01	1.90E-05	4.32E-03	3.38E-03	6.03E-04	1.83E-03	1.11E-03	1.14E-03	5.23E-04	1.70E-04	4.52E-08	6.90E-04	7.68E-04
E63	0.00E+00	6.27E-05	4.92E-06	1.08E+02	1.39E-04	4.94E-01	7.72E-05	4.54E-02	1.40E-02	2.39E-03	7.36E-03	3.63E-03	3.70E-03	4.95E-03	4.97E-04	1.16E-07	3.68E-03	8.45E-03
E64	0.00E+00	8.69E-05	6.93E-06	1.58E+02	2.08E-04	7.39E-01	1.10E-04	6.15E-02	2.06E-02	3.50E-03	1.05E-02	5.30E-03	5.41E-03	6.67E-03	7.31E-04	1.72E-07	5.09E-03	1.14E-02
E65	0.00E+00	6.54E-05	5.15E-06	1.16E+02	1.50E-04	5.33E-01	8.17E-05	4.65E-02	1.50E-02	2.55E-03	7.79E-03	3.87E-03	3.95E-03	5.08E-03	5.32E-04	1.25E-07	3.86E-03	8.65E-03
E66	0.00E+00	9.37E-05	7.55E-06	1.76E+02	2.35E-04	8.33E-01	1.21E-04	6.49E-02	2.29E-02	3.89E-03	1.15E-02	5.90E-03	6.02E-03	7.06E-03	8.17E-04	1.94E-07	5.52E-03	1.21E-02
E67	0.00E+00	3.65E-05	2.86E-06	7.04E+01	8.50E-05	3.11E-01	4.61E-05	2.51E-02	6.47E-03	1.21E-03	4.43E-03	2.18E-03	2.22E-03	3.21E-03	3.24E-04	7.83E-08	2.21E-03	4.65E-03
E68	0.00E+00	3.28E-05	2.64E-06	6.79E+01	8.57E-05	3.11E-01	4.33E-05	2.17E-02	6.32E-03	1.18E-03	4.15E-03	2.12E-03	2.16E-03	2.76E-03	3.17E-04	7.77E-08	1.99E-03	4.01E-03
E69	0.00E+00	2.63E-05	2.40E-06	7.29E+01	1.16E-04	3.98E-01	4.46E-05	1.10E-02	9.89E-03	1.63E-03	4.32E-03	2.52E-03	2.58E-03	1.29E-03	3.58E-04	9.47E-08	1.76E-03	1.99E-03
E70	0.00E+00	2.47E-05	2.21E-06	6.31E+01	9.70E-05	3.36E-01	3.92E-05	1.26E-02	8.52E-03	1.41E-03	3.75E-03	2.16E-03	2.21E-03	1.40E-03	3.06E-04	7.85E-08	1.55E-03	2.30E-03
E71	0.00E+00	3.10E-05	2.86E-06	8.85E+01	1.42E-04	4.87E-01	5.37E-05	1.25E-02	1.20E-02	1.98E-03	5.19E-03	3.06E-03	3.13E-03	1.46E-03	4.36E-04	1.16E-07	2.07E-03	2.24E-03
E72	0.00E+00	2.65E-05	2.68E-06	9.08E+01	1.52E-04	5.20E-01	5.18E-05	7.85E-03	1.26E-02	2.04E-03	4.96E-03	3.14E-03	3.22E-03	9.04E-04	4.53E-04	1.21E-07	1.76E-03	1.36E-03
E73	0.00E+00	1.55E-05	1.31E-06	3.15E+01	5.12E-05	1.73E-01	2.28E-05	9.04E-03	5.37E-03	8.52E-04	2.19E-03	1.18E-03	1.21E-03	8.96E-04	1.50E-04	3.87E-08	9.82E-04	1.67E-03
E74	0.00E+00	1.68E-05	1.55E-06	4.15E+01	7.14E-05	2.42E-01	2.77E-05	8.27E-03	7.20E-03	1.13E-03	2.64E-03	1.56E-03	1.60E-03	8.20E-04	2.02E-04	5.28E-08	1.04E-03	1.51E-03
E75	0.00E+00	7.13E-05	6.14E-06	1.70E+02	2.41E-04	8.39E-01	1.05E-04	4.18E-02	2.21E-02	3.69E-03	1.01E-02	5.56E-03	5.69E-03	4.59E-03	8.19E-04	2.02E-07	4.37E-03	7.68E-03
E76	0.00E+00	4.74E-05	4.35E-06	1.36E+02	2.06E-04	7.07E-01	7.96E-05	2.17E-02	1.79E-02	2.96E-03	7.64E-03	4.48E-03	4.59E-03	2.45E-03	6.69E-04	1.71E-07	3.06E-03	3.92E-03
E77	0.00E+00	7.20E-05	6.18E-06	1.70E+02	2.39E-04	8.32E-01	1.05E-04	4.29E-02	2.20E-02	3.68E-03	1.01E-02	5.54E-03	5.67E-03	4.70E-03	8.15E-04	2.00E-07	4.39E-03	7.88E-03
E78	0.00E+00	5.19E-05	4.76E-06	1.47E+02	2.22E-04	7.64E-01	8.63E-05	2.45E-02	1.94E-02	3.21E-03	8.27E-03	4.85E-03	4.96E-03	2.74E-03	7.24E-04	1.85E-07	3.32E-03	4.44E-03
E79	0.00E+00	5.86E-05	5.24E-06	1.59E+02	2.37E-04	8.11E-01	9.48E-05	2.86E-02	2.08E-02	3.44E-03	9.13E-03	5.22E-03	5.34E-03	3.24E-03	7.75E-04	1.98E-07	3.79E-03	5.19E-03
E80	0.00E+00	5.68E-05	4.97E-06	1.44E+02	2.10E-04	7.25E-01	8.78E-05	3.04E-02	1.88E-02	3.13E-03	8.43E-03	4.74E-03	4.84E-03	3.40E-03	7.00E-04	1.76E-07	3.59E-03	5.55E-03
E83	0.00E+00	1.70E-05	1.46E-06	3.90E+01	5.75E-05	2.01E-01	2.50E-05	9.93E-03	5.22E-03	8.70E-04	2.38E-03	1.33E-03	1.36E-03	1.09E-03	1.87E-04	4.67E-08	1.04E-03	1.83E-03
E84	0.00E+00	1.37E-05	1.26E-06	3.66E+01	5.65E-05	1.97E-01	2.22E-05	7.08E-03	4.97E-03	8.20E-04	2.11E-03	1.25E-03	1.28E-03	7.65E-04	1.78E-04	4.52E-08	8.38E-04	1.29E-03
E85	0.00E+00	1.18E-04	9.97E-06	2.39E+02	3.89E-04	1.32E+00	1.73E-04	6.86E-02	4.08E-02	6.48E-03	1.66E-02	9.00E-03	9.21E-03	6.81E-03	1.14E-03	2.94E-07	7.46E-03	1.27E-02
E86	0.00E+00	1.45E-04	1.15E-05	2.42E+02	3.59E-04	1.23E+00	1.88E-04	1.00E-01	4.05E-02	6.52E-03	1.81E-02	9.00E-03	9.19E-03	9.71E-03	1.12E-03	2.74E-07	8.94E-03	1.87E-02
E87	0.00E+00	1.33E-04	1.03E-05	2.09E+02	3.01E-04	1.04E+00	1.67E-04	9.52E-02	3.49E-02	5.63E-03	1.61E-02	7.77E-03	7.93E-03	9.20E-03	9.60E-04	2.32E-07	8.17E-03	1.77E-02
E88	0.00E+00	1.25E-04	1.06E-05	2.53E+02	4.10E-04	1.39E+00	1.83E-04	7.35E-02	4.31E-02	6.84E-03	1.76E-02	9.50E-03	9.71E-03	7.27E-03	1.20E-03	3.09E-07	7.88E-03	1.36E-02
E89	0.00E+00	6.14E-06	5.74E-07	1.62E+01	2.89E-05	9.65E-02	1.08E-05	2.41E-03	2.82E-03	4.40E-04	1.03E-03	6.17E-04	6.32E-04	2.56E-04	7.97E-05	2.15E-08	4.05E-04	4.35E-04
E90	0.00E+00	4.46E-06	4.35E-07	1.29E+01	2.35E-05	7.84E-02	8.32E-06	1.46E-03	2.25E-03	3.51E-04	7.98E-04	4.91E-04	5.03E-04	1.60E-04	6.39E-05	1.74E-08	2.97E-04	2.59E-04
E91	0.00E+00	1.77E-07	1.89E-08	6.10E-01	1.15E-06	3.83E-03	3.75E-07	3.25E-05	1.07E-04	1.66E-05	3.58E-05	2.33E-05	2.39E-05	4.10E-06	3.06E-06	8.46E-10	1.20E-05	5.32E-06
E92	0.00E+00	1.77E-07	1.89E-08	6.10E-01	1.15E-06	3.83E-03	3.75E-07	3.25E-05	1.07E-04	1.66E-05	3.58E-05	2.33E-05	2.39E-05	4.10E-06	3.06E-06	8.46E-10	1.20E-05	5.32E-06
E93	0.00E+00	7.54E-06	7.24E-07	2.10E+01	3.79E-05	1.27E-01	1.37E-05	2.67E-03	3.67E-03	5.72E-04	1.32E-03	8.01E-04	8.21E-04	2.89E-04	1.04E-04	2.82E-08	5.00E-04	4.77E-04
E94	0.00E+00	5.06E-06	4.82E-07	1.41E+01	2.56E-05	8.52E-02	9.28E-06	1.66E-03	2.46E-03	3.83E-04	8.94E-04	5.40E-04	5.53E-04	1.86E-04	6.99E-05	1.92E-08	3.44E-04	2.95E-04
E95	0.00E+00	6.17E-05	5.10E-06	1.37E+02	1.73E-04	6.25E-01	8.38E-05	4.08E-02	1.34E-02	2.43E-03	7.96E-03	4.20E-03	4.29E-03	5.06E-03	6.44E-04	1.54E-07	3.65E-03	7.52E-03
E96	0.00E+00	4.37E-05	3.59E-06	9.47E+01	1.18E-04	4.27E-01	5.83E-05	2.95E-02	9.21E-03	1.68E-03	5.53E-03	2.89E-03	2.95E-03	3.66E-03	4.43E-04	1.05E-07	2.56E-03	5.45E-03
F01	0.00E+00	3.12E-05	2.59E-06	6.02E+01	9.58E-05	3.26E-01	4.42E-05	1.92E-02	1.02E-02	1.63E-03	4.25E-03	2.26E-03	2.31E-03	1.89E-03	2.85E-04	7.24E-08	1.95E-03	3.56E-03
F02	0.00E+00	1.92E-05	1.77E-06	4.81E+01	8.36E-05	2.82E-01	3.22E-05	8.89E-03	8.34E-03	1.31E-03	3.07E-03	1.82E-03	1.86E-03	8.99E-04	2.35E-04	6.21E-08	1.22E-03	1.62E-03
F33	0.00E+00	1.98E-05	1.81E-06	4.71E+01	7.92E-05	2.71E-01	3.16E-05	1.09E-02	8.15E-03	1.28E-03	2.98E-03	1.76E-03	1.80E-03	1.05E-03	2.28E-04	5.83E-08	1.19E-03	2.00E-03
F34	0.00E+00	8.82E-06	8.92E-07	2.71E+01	4.95E-05	1.66E-01	1.70E-05	2.73E-03	4.75E-03	7.38E-04	1.62E-03	1.03E-03	1.05E-03	2.95E-04	1.35E-04	3.65E-08	5.73E-04	4.80E-04
F35	0.00E+00	1.98E-05	1.54E-06	3.78E+01	4.55E-05	1.66E-01	2.49E-05	1.36E-02	3.47E-03	6.51E-04	2.40E-03	1.17E-03	1.19E-03	1.75E-03	1.74E-04	4.22E-08	1.20E-03	2.52E-03
F36	0.00E+00	1.25E-05	9.51E-07	2.26E+01	2.63E-05	9.58E-02	1.53E-05	8.75E-03	2.04E-03	3.87E-04	1.48E-03	6.95E-04	7.09E-04	1.14E-03	1.03E-04	2.49E-08	7.73E-04	1.63E-03
F37	0.00E+00	1.36E-04	1.01E-05	1.81E+02	2.31E-04	8.14E-01	1.54E-04	1.09E-01	2.97E-02	4.87E-03	1.48E-02	6.62E-03	6.74E-03	1.04E-02	8.03E-04	1.79E-07	8.06E-03	2.05E-02
F38	0.00E+00	1.25E-04	9.79E-06	2.00E+02	2.87E-04	9.94E-01	1.57E-04	9.06E-02	3.34E-02	5.39E-03	1.51E-02	7.39E-03	7.55E-03	8.69E-03	9.17E-04	2.20E-07	7.56E-03	1.69E-02
F39	0.00E+00	1.60E-05	1.36E-06	3.76E+01	5.06E-05	1.83E-01	2.28E-05	9.84E-03	3.59E-03	6.57E-04	2.17E-03	1.19E-03	1.21E-03	1.22E-03	1.79E-04	4.45E-08	9.57E-04	1.81E-03
F40	0.00E+00	6.28E-06	5.14E-07	1.33E+01	1.70E-05	6.20E-02	8.38E-06	4.18E-03	1.25E-03	2.32E-04	7.97E-04	4.17E-04	4.25E-04	5.22E-04	6.25E-05	1.51E-08	3.72E-04	7.73E-04
F41	0.00E+00	1.02E-05	1.00E-06	3.27E+01	5.38E-05	1.85E-01	1.90E-05	3.58E-03	4.50E-03	7.35E-04	1.82E-03	1.13E-03	1.16E-03	4.08E-04	1.62E-04	4.30E-08	6.71E-04	6.33E-04
F42	0.00E+00	1.13E-05	1.19E-06	4.23E+01	7.22E-05	2.47E-01	2.37E-05	2.34E-03	5.88E-03	9.53E-04	2.27E-03	1.47E-03	1.51E-03	2.85E-04	2.13E-04	5.76E-08	7.77E-04	3.83E-04
F43	0.00E+00	3.03E-06	2.83E-07	7.96E+00	1.41E-05	4.73E-02	5.29E-06	1.20E-03	1.38E-03	2.16E-04	5.08E-04	3.03E-04	3.10E-04	1.27E-04	3.91E-05	1.06E-08	2.00E-04	2.16E-04
F44	0.00E+00	6.57E-07	6.98E-08	2.26E+00	4.25E-06	1.42E-02	1.39E-06	1.20E-04	3.98E-04	6.15E-05	1.32E-04	8.62E-05	8.84E-05	1.52E-05	1.13E-05	3.13E-09	4.44E-05	1.97E-05
F45	0.00E+00	1.70E-05	1.46E-06	3.90E+01	5.75E-05	2.01E-01	2.50E-05	9.93E-03	5.22E-03	8.70E-04	2.38E-03	1.33E-03	1.36E-03	1.09E-03	1.87E-04	4.67E-08	1.04E-03	1.83E-03
F46	0.00E+00	1.37E-05	1.26E-06	3.66E+01	5.65E-05	1.97E-01	2.22E-05	7.08E-03	4.97E-03	8.20E-04	2.11E-03	1.25E-03	1.28E-03	7.65E-04	1.78E-04	4.52E-08	8.38E-04	1.29E-03
F47	0.00E+00	1.24E-07	1.32E-08	4.27E-01	8.04E-07	2.68E-03	2.62E-07	2.27E-05	7.52E-05	1.16E-05	2.50E-05	1.63E-05	1.67E-05	2.87E-06	2.14E-06	5.93E-10	8.40E-06	3.72E-06
F48	0.00E+00	2.70E-06	2.26E-07	5.24E+00	8.29E-06	2.83E-02	3.82E-06	1.70E-03	8.91E-04	1.42E-04	3.65E-04	1.96E-04	2.00E-04	1.65E-04	2.48E-05	6.24E-09	1.66E-04	3.15E-04
F78	0.00E+00	2.88E-05	2.45E-06	5.81E+01	9.91E-05	3.21E-01	4.30E-05	1.51E-02	1.48E-02	2.14E-03	4.15E-03	2.27E-03	2.32E-03	1.33E-03	2.80E-04	6.09E-08	1.84E-03	2.80E-03
F79	0.00E+00	3.47E-05	3.22E-06	9.73E+01	1.59E-04	5.31E-01	6.00E-05	1.43E-02	1.62E-02	2.53E-03	5.80E-03	3.42E-03	3.50E-03	1.53E-03	4.80E-04	1.20E-07	2.28E-03	2.57E-03
F80	0.00E+00	6.97E-05	6.45E-06	2.03E+02	3.09E-04	1.06E+00	1.18E-04	3.15E-02	2.68E-02	4.42E-03	1.13E-02	6.69E-03	6.85E-03	3.55E-03	1.00E-03	2.57E-07	4.50E-03	5.67E-03
F84	0.00E+00	4.03E-05	3.10E-06	5.39E+01	7.60E-05	2.63E-01	4.68E-05	3.28E-02	1.35E-02	2.02E-03	4.45E-03	2.11E-03	2.15E-03	2.44E-03	2.46E-04	4.68E-08	2.30E-03	6.14E-03
F85	0.00E+00	2.46E-05	1.98E-06	4.52E+01	6.31E-05	2.18E-01	3.22E-05	1.72E-02	7.37E-03	1.18E-03	3.09E-03	1.57E-03	1.60E-03	1.66E-03	2.12E-04	4.84E-08	1.48E-03	3.19E-03
F86	0.00E+00	3.55E-05	2.89E-06	6.88E+01	8.75E-05	3.12E-01	4.54E-05	2.57E-02	8.77E-03	1.49E-03	4.28E-03	2.21E-03	2.26E-03	2.74E-03	3.20E-04	7.33E-08	2.02E-03	4.77E-03
F87	0.00E+00	6.33E-05	4.59E-06	8.72E+01	1.08E-04	3.69E-01	7.26E-05	4.80E-02	1.38E-02	2.27E-03	7.11E-03	3.07E-03	3.13E-03	4.69E-03	3.92E-04	8.74E-08	3.97E-03	8.98E-03
F88	0.00E+00	4.03E-05	3.10E-06	5.39E+01	7.60E-05	2.63E-01	4.68E-05	3.28E-02	1.35E-02	2.02E-03	4.45E-03	2.11E-03	2.15E-03	2.44E-03	2.46E-04	4.68E-08	2.30E-03	6.14E-03
F89	0.00E+00	1.22E-04	8.26E-06	9.45E+01	9.25E-05	3.34E-01	1.14E-04	1.14E-01	2.26E-02	3.56E-03	1.10E-02	3.95E-03	4.02E-03	8.23E-03	3.87E-04	6.26E-08	6.99E-03	2.15E-02

Appendix F.4.1: MOVES Emission Factors by Road Type, 2041 Build, Section 4

Highway 413

GTA West

RWDI Project#: 1301992

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.94E-05	4.26E-06	1.62E+02	2.74E-04	1.08E+00	8.77E-05	7.69E-03	1.17E-02	2.35E-03	8.53E-03	5.50E-03	5.64E-03	4.51E-04	8.19E-04	2.25E-07	2.89E-03	1.20E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	5.08E-05	5.41E-06	2.28E+02	3.33E-04	1.30E+00	1.08E-04	1.31E-02	1.23E-02	2.62E-03	1.04E-02	6.74E-03	6.91E-03	1.45E-03	1.14E-03	3.13E-07	3.49E-03	2.11E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	6.15E-05	6.42E-06	2.54E+02	3.73E-04	1.19E+00	1.24E-04	1.82E-02	1.37E-02	3.15E-03	1.11E-02	7.65E-03	7.76E-03	3.12E-03	1.26E-03	5.42E-07	3.30E-03	3.04E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.16E-03	5.08E-05	1.14E+03	1.77E-03	1.11E+01	6.17E-03	7.08E-01	3.80E-02	9.10E-03	9.32E-01	7.42E-02	7.67E-02	1.06E-01	4.78E-03	1.34E-06	8.55E-01	1.29E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.33E-03	5.03E-05	1.14E+03	1.70E-03	1.06E+01	6.37E-03	6.08E-01	2.86E-02	7.75E-03	9.65E-01	7.42E-02	7.68E-02	1.04E-01	4.73E-03	1.37E-06	8.88E-01	1.11E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	6.14E-04	2.47E-05	8.33E+02	3.47E-04	1.98E+00	6.54E-04	4.04E-01	3.51E-02	9.53E-03	8.12E-02	1.47E-02	1.50E-02	1.10E-01	3.03E-03	3.13E-07	6.61E-02	7.56E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	5.73E-03	3.85E-05	1.14E+03	1.04E-04	3.91E+00	6.52E-03	9.45E-01	3.50E-02	8.51E-03	1.02E+00	4.92E-02	5.25E-02	1.64E-01	4.03E-03	1.34E-09	9.72E-01	1.75E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.84E-04	2.39E-05	6.57E+02	4.22E-04	1.52E+00	5.23E-04	2.62E-01	2.48E-02	7.22E-03	5.98E-02	1.48E-02	1.51E-02	6.63E-02	2.64E-03	1.08E-06	4.47E-02	4.89E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.50E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.67E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.96E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	3.56E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.49E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.38E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.59E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.17E-05	4.51E-06	1.68E+02	2.90E-04	1.30E+00	9.26E-05	8.44E-03	8.94E-03	2.08E-03	9.02E-03	5.81E-03	5.96E-03	4.10E-04	8.52E-04	2.52E-07	3.05E-03	1.32E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.40E-05	5.76E-06	2.40E+02	3.57E-04	1.60E+00	1.16E-04	1.41E-02	9.26E-03	2.33E-03	1.12E-02	7.22E-03	7.40E-03	1.43E-03	1.20E-03	3.53E-07	3.76E-03	2.27E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.11E-05	6.39E-06	2.65E+02	3.76E-04	1.45E+00	1.24E-04	1.87E-02	1.05E-02	2.82E-03	1.13E-02	7.70E-03	7.83E-03	3.13E-03	1.31E-03	5.70E-07	3.45E-03	3.11E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.35E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.53E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.10E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.30E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.36E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.16E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.07E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.99E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.78E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.18E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.62E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.89E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.18E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.93E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.46E+00	3.86E-02	1.53E-02	7.18E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.74E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.55E+00	3.81E-02	1.16E-02	8.06E-02	2.86E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.91E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.69E-05	5.07E-06	1.77E+02	3.26E-04	1.71E+00	1.04E-04	9.41E-03	7.63E-03	2.07E-03	1.01E-02	6.54E-03	6.71E-03	3.76E-04	9.00E-04	3.03E-07	3.43E-03	1.47E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	6.05E-05	6.46E-06	2.54E+02	4.03E-04	2.12E+00	1.30E-04	1.55E-02	7.92E-03	2.31E-03	1.26E-02	8.14E-03	8.35E-03	1.41E-03	1.28E-03	4.07E-07	4.24E-03	2.49E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.61E-05	6.93E-06	2.75E+02	4.13E-04	1.86E+00	1.36E-04	1.99E-02	8.94E-03	2.77E-03	1.24E-02	8.43E-03	8.57E-03	3.14E-03	1.36E-03	6.29E-07	3.85E-03	3.30E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.56E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.76E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.09E-01	1.98E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.71E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.22E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.16E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.38E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.22E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.13E-05	7.71E-06	2.46E+02	4.96E-04	1.74E+00	1.58E-04	6.70E-03	8.50E-02	1.19E-02	1.54E-02	9.94E-03	1.02E-02	1.50E-03	1.21E-03	2.76E-07	5.22E-03	1.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	1.01E-04	1.05E-05	3.26E+02	5.91E-04	1.78E+00	1.99E-04	1.70E-02	9.19E-02	1.27E-02	1.86E-02	1.22E-02	1.25E-02	2.97E-03	1.60E-03	3.07E-07	6.12E-03	2.92E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	2.01E-04	2.08E-05	3.78E+02	1.12E-03	1.75E+00	3.83E-04	3.43E-02	9.51E-02	1.39E-02	3.13E-02	2.34E-02	2.36E-02	5.27E-03	1.83E-03	7.72E-07	7.71E-03	6.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.63E+00	4.80E-01	6.85E-02	3.89E+00	2.20E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.87E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.44E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.39E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.51E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.92E-03	1.32E-04	1.24E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.28E-02	3.44E-01	6.20E-02	6.38E-02	1.62E-01	4.53E-03	5.76E-07	2.80E-01	3.23E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.46E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.43E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.89E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.96E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.87E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.16E+03	4.76E-03	2.76E+00	9.87E-05	7.58E-01	2.64E-01	4.34E-02	1.31E-01	1.08E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-05	2.33E-02	1.41E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.34E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.18E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.78E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	9.01E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.05E-05	6.55E-06	2.09E+02	4.21E-04	1.56E+00	1.35E-04	6.51E-03	6.23E-02	8.89E-03	1.31E-02	8.45E-03	8.67E-03	1.13E-03	1.04E-03	2.52E-07	4.44E-03	1.02E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.27E-05	8.67E-06	2.78E+02	4.96E-04	1.60E+00	1.66E-04	1.47E-02	6.60E-02	9.39E-03	1.56E-02	1.02E-02	1.04E-02	2.38E-03	1.37E-03	2.93E-07	5.15E-03	2.49E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.53E-04	1.58E-05	3.21E+02	8.61E-04	1.55E+00	2.93E-04	2.78E-02	6.96E-02	1.05E-02	2.42E-02	1.79E-02	1.81E-02	4.37E-03	1.56E-03	6.77E-07	6.16E-03	4.86E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.71E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.44E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.31E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.46E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.44E+03	3.31E-04	5.95E+00	2.19E-02	2.80E+00	3.55E-01	5.20E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.58E-09	3.26E+00	5.31E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.82E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.71E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.90E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.71E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.91E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.37E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.51E-05	5.97E-06	1.89E+02	3.84E-04	1.42E+00	1.23E-04	6.70E-03	4.71E-02	6.95E-03	1.19E-02	7.69E-03	7.89E-03	9.03E-04	9.42E-04	2.46E-07	4.04E-03	1.05E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.31E-05	7.69E-06	2.54E+02	4.48E-04	1.46E+00	1.48E-04	1.38E-02	4.99E-02	7.34E-03	1.40E-02	9.18E-03	9.40E-03	2.05E-03	1.25E-03	2.95E-07	4.65E-03	2.31E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	8.27E-05	8.67E-06	2.92E+02	4.96E-04	1.72E+00	1.66E-04	1.41E-02	5.10E-02	7.56E-03	2.11E-02	1.52E-02	1.53E-02	3.90E-03	1.43E-03	6.34E-07	5.31E-03	4.97E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.19E-01
2	RuralR

Appendix F.4.1: MOVES Emission Factors by Road Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.50E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.67E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.96E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	3.56E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.49E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.38E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.59E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.08E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.17E-05	4.51E-06	1.68E+02	2.90E-04	1.30E+00	9.26E-05	8.44E-03	8.94E-03	2.08E-03	9.02E-03	5.81E-03	5.96E-03	4.10E-04	8.52E-04	2.52E-07	3.05E-03	1.32E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.40E-05	5.76E-06	2.40E+02	3.57E-04	1.60E+00	1.16E-04	1.41E-02	9.26E-03	2.33E-03	1.12E-02	7.22E-03	7.40E-03	1.43E-03	1.20E-03	3.53E-07	3.76E-03	2.27E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.11E-05	6.39E-06	2.65E+02	3.76E-04	1.45E+00	1.24E-04	1.87E-02	1.05E-02	2.82E-03	1.13E-02	7.70E-03	7.83E-03	3.13E-03	1.31E-03	5.70E-07	3.45E-03	3.11E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.35E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.53E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.10E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.30E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.36E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.16E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.07E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.99E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.78E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.18E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.62E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.89E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.18E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.93E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.46E+00	3.86E-02	1.53E-02	7.18E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.74E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.55E+00	3.81E-02	1.16E-02	8.06E-02	2.86E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.91E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.69E-05	5.07E-06	1.77E+02	3.26E-04	1.71E+00	1.04E-04	9.41E-03	7.63E-03	2.07E-03	1.01E-02	6.54E-03	6.71E-03	3.76E-04	9.00E-04	3.03E-07	3.43E-03	1.47E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	6.05E-05	6.46E-06	2.54E+02	4.03E-04	2.12E+00	1.30E-04	1.55E-02	7.92E-03	2.31E-03	1.26E-02	8.14E-03	8.35E-03	1.41E-03	1.28E-03	4.07E-07	4.24E-03	2.49E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.61E-05	6.93E-06	2.75E+02	4.13E-04	1.86E+00	1.36E-04	1.99E-02	8.94E-03	2.77E-03	1.24E-02	8.43E-03	8.57E-03	3.14E-03	1.36E-03	6.29E-07	3.85E-03	3.30E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.59E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.76E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.09E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.71E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.22E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.16E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.38E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.22E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.40E-05	8.00E-06	2.20E+02	5.15E-04	1.75E+00	1.65E-04	8.50E-03	6.58E-02	9.49E-03	1.60E-02	1.03E-02	1.06E-02	1.13E-03	1.10E-03	3.00E-07	5.42E-03	1.33E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.93E-05	1.04E-05	2.96E+02	6.06E-04	1.82E+00	2.01E-04	1.81E-02	7.26E-02	1.06E-02	1.90E-02	1.24E-02	1.27E-02	2.54E-03	1.46E-03	4.14E-07	6.30E-03	3.03E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.72E-04	1.78E-05	3.41E+02	9.78E-04	1.73E+00	3.32E-04	3.30E-02	7.50E-02	1.15E-02	2.77E-02	2.03E-02	2.05E-02	4.79E-03	1.66E-03	8.23E-07	7.22E-03	5.73E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.71E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	6.63E+00	1.83E-02	1.84E+00	1.91E-01	3.07E-02	2.86E+00	1.61E-01	1.70E-01	1.41E-01	5.82E-03	1.89E-06	2.69E+00	3.39E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.42E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.59E-02	1.33E-04	1.44E+03	3.31E-04	5.95E+00	2.19E-02	2.60E+00	3.50E-02	2.20E-02	3.48E+00	1.66E-01	1.77E-01	2.08E-01	4.97E-03	2.58E-05	3.12E-01	3.12E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.82E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.71E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.90E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.71E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.91E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.37E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.38E-05	6.90E-06	1.92E+02	4.44E-04	1.65E+00	1.42E-04	7.54E-03	4.89E-02	7.24E-03	1.38E-02	8.90E-03	9.13E-03	9.03E-04	9.58E-04	2.68E-07	4.67E-03	1.18E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.45E-05	8.90E-06	2.58E+02	5.22E-04	1.69E+00	1.73E-04	1.55E-02	5.39E-02	8.06E-03	1.64E-02	1.07E-02	1.09E-02	2.13E-03	1.28E-03	3.69E-07	5.43E-03	2.59E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.42E-04	1.47E-05	2.95E+02	8.19E-04	1.61E+00	2.77E-04	2.76E-02	5.61E-02	8.92E-03	2.32E-02	1.70E-02	1.71E-02	4.06E-03	1.44E-03	7.34E-07	6.11E-03	4.78E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.19E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.40E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.59E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.86E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.44E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.65E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.25E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.55E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.01E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.31E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.79E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.36E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.44E+02	2.75E-02	1.00E+01	8.72E-03	6.96E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.50E-05	5.95E-06	1.81E+02	3.83E-04	1.41E+00	1.22E-04	7.58E-03	3.60E-02	5.56E-03	1.19E-02	7.68E-03	7.88E-03	7.52E-04	9.10E-04	2.57E-07	4.03E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.18E-05	7.59E-06	2.47E+02	4.50E-04	1.48E+00	1.48E-04	1.45E-02	3.94E-02	6.19E-03	1.41E-02	9.19E-03	9.41E-03	1.90E-03	1.23E-03	3.58E-07	4.69E-03	2.40E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.12E-04	1.17E-05	2.83E+02	6.53E-04	1.41E+00	2.20E-04	2.42E-02	4.13E-02	6.95E-03	1.87E-02	1.35E-02	1.37E-02	3.78E-03	1.38E-03	6.78E-07	5.07E-03	4.15E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.39E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.12E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.05E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.83E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.75E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.26E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.04E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.45E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.27E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.75E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.95E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.33E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E

Appendix F.4.1: MOVES Emission Factors by Road Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.59E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.76E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.09E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.71E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.22E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.16E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.38E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.22E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.13E-05	7.71E-06	2.46E+02	4.96E-04	1.74E+00	1.58E-04	6.70E-03	8.50E-02	1.19E-02	1.54E-02	9.94E-03	1.02E-02	1.50E-03	1.21E-03	2.76E-07	5.22E-03	1.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	1.01E-04	1.05E-05	3.26E+02	5.91E-04	1.78E+00	1.99E-04	1.70E-02	9.19E-02	1.27E-02	1.86E-02	1.22E-02	1.25E-02	2.97E-03	1.60E-03	3.07E-07	6.12E-03	2.92E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	2.01E-04	2.08E-05	3.78E+02	1.12E-03	1.75E+00	3.83E-04	3.43E-02	9.51E-02	1.39E-02	3.13E-02	2.34E-02	2.36E-02	5.27E-03	1.83E-03	7.72E-07	7.71E-03	6.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.63E+00	4.80E-01	6.85E-02	3.89E+00	2.20E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.87E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.44E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.38E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.51E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.32E-03	1.32E-04	1.24E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.23E-02	3.44E-01	6.20E-02	6.28E-02	1.62E-01	4.53E-03	5.76E-07	1.80E-01	1.23E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.46E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.43E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.89E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.96E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.87E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.16E+03	4.76E-03	2.76E+00	1.87E-03	7.59E-01	2.64E-01	4.14E-02	1.31E-01	1.08E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-06	2.33E-02	1.41E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.34E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.18E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.78E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	9.01E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.05E-05	6.55E-06	2.09E+02	4.21E-04	1.56E+00	1.35E-04	6.51E-03	6.23E-02	8.89E-03	1.31E-02	8.45E-03	8.67E-03	1.13E-03	1.04E-03	2.52E-07	4.44E-03	1.02E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.27E-05	8.61E-06	2.75E+02	4.96E-04	1.60E+00	1.66E-04	1.47E-02	6.60E-02	9.39E-03	1.56E-02	1.02E-02	1.04E-02	2.38E-03	1.37E-03	2.56E-07	5.15E-03	2.43E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.53E-04	1.58E-05	3.21E+02	8.61E-04	1.55E+00	2.93E-04	2.78E-02	6.96E-02	1.05E-02	2.42E-02	1.79E-02	1.81E-02	4.37E-03	1.56E-03	6.77E-07	6.16E-03	4.86E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.71E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.44E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.31E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.46E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.80E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.21E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.82E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.71E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.90E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.42E-01	6.71E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.91E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.37E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.51E-05	5.97E-06	1.89E+02	3.84E-04	1.42E+00	1.23E-04	6.70E-03	4.71E-02	6.95E-03	1.19E-02	7.69E-03	7.89E-03	9.03E-04	9.42E-04	2.46E-07	4.04E-03	1.05E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.31E-05	7.69E-06	2.54E+02	4.48E-04	1.46E+00	1.48E-04	1.38E-02	4.99E-02	7.34E-03	1.40E-02	9.18E-03	9.40E-03	2.05E-03	1.25E-03	2.96E-07	4.65E-03	2.31E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.27E-04	1.31E-05	2.93E+02	7.25E-04	1.41E+00	2.46E-04	2.48E-02	5.34E-02	8.35E-03	2.05E-02	1.51E-02	1.52E-02	3.90E-03	1.43E-03	6.39E-07	5.36E-03	4.29E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.19E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.36E-02	9.69E-05	1.28E+03	1.61E-03	5.47E+00	1.57E-02	1.60E+00	1.99E-01	3.11E-02	2.44E+00	1.39E-01	1.47E-01	1.27E-01	5.24E-03	1.73E-06	2.30E+00	2.95E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.84E-03	8.42E-05	1.04E+03	5.64E-04	1.41E+00	1.78E-03	1.09E+00	2.12E-01	3.77E-02	2.14E-01	3.84E-02	3.96E-02	1.37E-01	3.79E-03	4.47E-07	1.74E-01	2.05E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.44E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.65E-01	1.15E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.18E-01	1.16E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.55E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.01E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.31E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.79E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.36E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.96E-05	5.36E-06	1.81E+02	3.45E-04	1.28E+00	1.10E-04	7.07E-03	3.55E-02	5.46E-03	1.07E-02	6.92E-03	7.10E-03	7.52E-04	9.05E-04	2.42E-07	3.63E-03	1.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	6.50E-05	6.87E-06	2.46E+02	4.06E-04	1.36E+00	1.34E-04	1.36E-02	3.78E-02	5.85E-03	1.27E-02	8.29E-03	8.49E-03	1.87E-03	1.22E-03	3.06E-07	4.23E-03	2.25E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.04E-04	1.08E-05	2.83E+02	6.00E-04	1.31E+00	2.03E-04	2.26E-02	4.04E-02	6.68E-03	1.72E-02	1.24E-02	1.26E-02	3.67E-03	1.38E-03	6.14E-07	4.63E-03	3.88E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.53E-06	1.85E+00	2.29E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.11E-02	7.41E-05	1.14E+03	1.42E-03	5.95E+00	1.30E-02	1.19E+00	1.39E-01	2.26E-02	2.02E+00	1.15E-01	1.21E-01	1.11E-01	4.69E-03	1.52E-06	1.90E+00	2.19E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.41E-03	6.01E-05	8.92E+02	4.77E-04	1.48E+00	1.40E-03	8.13E-01	1.48E-01	2.64E-02	1.73E-01	2.93E-02	3.02E-02	1.18E-01	3.26E-03	3.62E-07	1.43E-01	1.53E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.75E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.26E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.04E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.45E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.27E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.75E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.95E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.33E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.71E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.66E-03	4.01E-04	3.65E+02	2.62E-02	1.12E+01	8.32E-03	1.38E+00	3.38E-02	1.75E-02	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.41E-06	8.87E-02	2.70E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.56E-05	4.94E-06	1.75E+02	3.18E-04	1.18E+00	1.01E-04	7.34E-03	2.75E-02	4.43E-03	9.87E-03	6.36E-03	6.53E-03	6.45E-04	8.78E-04	2.39E-07	3.34E-03	1.15E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	5.93E-05	6.28E-06	2.41E+02	3.76E-04	1.29E+00	1.23E-04	1.34E-02	2.95E-02	4.81E-03	1.18E-02	7.65E-03	7.84E-03	1.74E-03	1.20E-03	3.14E-07	3.93E-03	2.20E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	8.73E-05	9.08E-06	2.75E+02	5.11E-04	1.23E+00	1.72E-04	2.11E-02	3.15E-02	5.52E-03	1.48E-02	1.06E-02	1.07E-02	3.51E-03	1.35E-03	5.96E-07	4.11E-03	3.58E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.05E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.93E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.16E-03	6.05E-05	1.11E+03	1.30E-03	6.40E+00	1.07E-02	9.51E-01	8.96E-02	1.61E-02	1.66E+00	9.65E-02	1.01E-01	1.07E-01	4.58E-03	1.50E-06	1.56E+00	1.75E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.12E-03	4.59E-05	8.51E+02	3.98E-04	1.52E+00	1.13E-03	6.54E-01	1.02E-01	1.93E-02	1.40E-01	2.32E-02	2.38E-02	1.12E-01	3.11E-03	3.31E-07	1.17E-01	1.23E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.49E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.76E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.40E-05	8.00E-06	2.20E+02	5.15E-04	1.75E+00	1.65E-04	8.50E-03	6.58E-02	9.49E-03	1.60E-02	1.03E-02	1.06E-02	1.13E-03	1.10E-03	3.00E-07	5.42E-03	1.33E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.93E-05	1.04E-05	2.96E+02	6.06E-04	1.82E+00	2.01E-04	1.81E-02	7.26E-02	1.06E-02	1.90E-02	1.24E-02	1.27E-02	2.54E-03	1.46E-03	4.14E-07	6.30E-03	3.03E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.72E-04	1.78E-05	3.41E+02	9.78E-04	1.73E+00	3.32E-04	3.30E-02	7.50E-02	1.15E-02	2.77E-02	2.03E-02	2.05E-02	4.79E-03	1.66E-03	8.23E-07	7.22E-03	5.73E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.00E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.71E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	6.63E+00	1.83E-02	1.84E+00	1.91E-01	3.07E-02	2.86E+00	1.61E-01	1.70E-01	1.41E-01	5.82E-03	1.89E-06	2.69E+00	3.39E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.42E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.80E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.21E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.82E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.71E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.90E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.71E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.91E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.37E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.38E-05	6.90E-06	1.92E+02	4.44E-04	1.65E+00	1.42E-04	7.54E-03	4.89E-02	7.24E-03	1.38E-02	8.89E-03	9.13E-03	9.03E-04	9.58E-04	2.68E-07	4.67E-03	1.18E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.45E-05	8.90E-06	2.58E+02	5.22E-04	1.69E+00	1.73E-04	1.55E-02	5.39E-02	8.06E-03	1.64E-02	1.07E-02	1.09E-02	2.13E-03	1.28E-03	3.69E-07	5.42E-03	2.59E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.42E-04	1.47E-05	2.95E+02	8.19E-04	1.61E+00	2.77E-04	2.76E-02	5.61E-02	8.92E-03	2.32E-02	1.70E-02	1.71E-02	4.09E-03	1.44E-03	7.34E-07	6.11E-03	4.78E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.72E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.19E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.40E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.59E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.86E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.44E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.65E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.25E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.55E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.01E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.31E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.79E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.36E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.40E-05	5.84E-06	1.81E+02	3.76E-04	1.40E+00	1.20E-04	7.34E-03	3.65E-02	5.61E-03	1.17E-02	7.53E-03	7.73E-03	7.52E-04	9.05E-04	2.49E-07	3.95E-03	1.15E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.11E-05	7.51E-06	2.46E+02	4.44E-04	1.49E+00	1.46E-04	1.43E-02	4.00E-02	6.21E-03	1.39E-02	9.08E-03	9.29E-03	1.91E-03	1.22E-03	3.38E-07	4.63E-03	2.37E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.12E-04	1.17E-05	2.82E+02	6.51E-04	1.41E+00	2.20E-04	2.40E-02	4.20E-02	6.96E-03	1.86E-02	1.35E-02	1.36E-02	3.77E-03	1.38E-03	6.55E-07	5.02E-03	4.12E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.39E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.12E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.05E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.83E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.75E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.26E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.04E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.45E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.27E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.75E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.95E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.33E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.71E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.71E-05	5.09E-06	1.73E+02	3.28E-04	1.23E+00	1.05E-04	7.21E-03	2.79E-02	4.48E-03	1.02E-02	6.57E-03	6.74E-03	6.45E-04	8.68E-04	2.37E-07	3.45E-03	1.13E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	6.16E-05	6.52E-06	2.38E+02	3.90E-04	1.35E+00	1.28E-04	1.35E-02	3.03E-02	4.93E-03	1.22E-02	7.94E-03	8.13E-03	1.75E-03	1.18E-03	3.17E-07	4.07E-03	2.22E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	9.09E-05	9.45E-06	2.72E+02	5.31E-04	1.27E+00	1.79E-04	2.14E-02	3.21E-02	5.60E-03	1.54E-02	1.10E-02	1.11E-02	3.53E-03	1.33E-03	6.00E-07	4.26E-03	3.65E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.05E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.93E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.33E-03	5.90E-05	1.17E+03	1.38E-03	7.54E+00	9.75E-03	9.10E-01	7.26E-02	1.41E-02	1.51E+00	9.17E-02	9.61E-02	1.12E-01	4.85E-03	1.57E-06	1.42E+00	1.67E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.05E-03	4.36E-05	9.10E+02	3.85E-04	1.63E+00	1.05E-03	6.38E-01	8.00E-02	1.72E-02	1.31E-01	2.20E-02	2.27E-02	1.20E-01	3.32E-03	3.53E-07	1.08E-01	1.20E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.49E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.76E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.46E-04	4.24E-05	6.63E+02	6.92E-04	1.33E+00	9.01E-04	4.17E-01	5.95E-02	1.19E-02	1.03E-01	2.53E-02	2.57E-02	6.64E-02	2.67E-03	1.08E-06	7.69E-02	7.81E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	8.36E-04	4.16E-05	6.38E+02	6.77E-04	1.26E+00	8.90E-04	4.07E-01	6.16E-02	1.20E-02	1.02E-01	2.48E-02	2.52E-02	6.37E-02	2.57E-03	1.03E-06	7.65E-02	7.62E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	4.85E-04	4.80E-05	8.21E+02	1.92E-03	3.81E+00	7.48E-04	3.08E-01	7.03E-02	1.40E-02	5.27E-02	4.36E-02	4.35E-02	3.96E-02	3.89E-03	2.22E-06	9.28E-03	5.69E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.87E-03	1.33E-04	1.36E+03	6.08E-06	1.61E+00	1.37E-03	1.97E+00	1.42E-01	3.11E-02	1.14E-01	3.94E-02	3.93E-02	2.05E-01	4.54E-03	0.00E+00	7.47E-02	3.71E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.86E-03	1.24E-04	1.39E+03	7.68E-06	1.87E+00	1.41E-03	2.13E+00	1.55E-01	2.83E-02	1.29E-01	3.75E-02	3.79E-02	2.12E-01	4.65E-03	0.00E+00	9.14E-02	4.01E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	4.38E-05	4.74E-06	1.68E+02	3.05E-04	1.17E+00	9.75E-05	7.40E-03	1.98E-02	3.44E-03	9.49E-03	6.12E-03	6.28E-03	5.64E-04	8.45E-04	2.37E-07	3.21E-03	1.16E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	5.62E-05	5.96E-06	2.32E+02	3.60E-04	1.28E+00	1.18E-04	1.31E-02	2.12E-02	3.76E-03	1.13E-02	7.32E-03	7.50E-03	1.62E-03	1.16E-03	3.15E-07	3.77E-03	2.14E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	7.71E-05	8.02E-06	2.63E+02	4.55E-04	1.20E+00	1.53E-04	1.98E-02	2.30E-02	4.40E-03	1.33E-02	9.39E-03	9.51E-03	3.33E-03	1.29E-03	5.76E-07	3.79E-03	3.35E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.18E-03	4.98E-05	1.11E+03	1.29E-03	7.43E+00	8.44E-03	8.61E-01	7.53E-02	1.43E-02	1.31E+00	8.06E-02	8.43E-02	1.05E-01	4.59E-03	1.48E-06	1.22E+00	1.58E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.08E-03	5.01E-05	1.13E+03	1.31E-03	7.69E+00	8.32E-03	7.55E-01	5.20E-02	1.12E-02	1.29E+00	8.01E-02	8.38E-02	1.07E-01	4.69E-03	1.52E-06	1.20E+00	1.38E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	8.51E-04	3.45E-05	8.69E+02	3.40E-04	1.63E+00	8.69E-04	5.29E-01	6.01E-02	1.37E-02	1.08E-01	1.82E-02	1.87E-02	1.15E-01	3.17E-03	3.29E-07	8.98E-02	9.93E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.35E-03	5.50E-05	1.14E+03	1.46E-04	4.06E+00	9.49E-03	1.20E+00	8.67E-02	1.55E-02	1.49E+00	7.14E-02	7.61E-02	1.65E-01	4.03E-03	1.29E-09	1.42E+00	2.23E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.75E-04	3.35E-05	6.62E+02	5.43E-04	1.33E+00	7.18E-04	3.46E-01	4.24E-02	9.59E-03	8.21E-02	2.00E-02	2.03E-02	6.64E-02	2.67E-03	1.06E-06	6.18E-02	6.47E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.65E-04	3.28E-05	6.35E+02	5.26E-04	1.25E+00	7.08E-04	3.35E-01	4.39E-02	9.59E-03	8.12E-02	1.95E-02	1.98E-02	6.34E-02	2.56E-03	1.00E-06	6.14E-02	6.28E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	3.97E-04	3.95E-05	8.13E+02	1.64E-03	4.12E+00	6.28E-04	2.55E-01	4.92E-02	1.13E-02	4.44E-02	3.68E-02	3.67E-02	3.91E-02	3.85E-03	2.22E-06	7.68E-03	4.69E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.58E-03	1.13E-04	1.31E+03	4.99E-06	1.40E+00	1.16E-03	1.62E+00	9.58E-02	2.36E-02	9.42E-02	3.34E-02	3.32E-02	1.97E-01	4.38E-03	0.00E+00	6.11E-02	3.06E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.04E-04	1.33E+03	6.33E-06	1.59E+00	1.18E-03	1.73E+00	1.03E-01	2.07E-02	1.07E-01	3.15E-02	3.17E-02	2.03E-01	4.44E-03	0.00E+00	7.50E-02	3.26E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	4.17E-05	4.51E-06	1.65E+02	2.90E-04	1.16E+00	9.27E-05	7.62E-03	1.47E-02	2.79E-03	9.02E-03	5.81E-03	5.97E-03	5.01E-04	8.33E-04	2.38E-07	3.05E-03	1.19E-03
5	UrbanUnrestrictedA

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A07	110	Passenger Car	1060	0.00E+00	1.23E-05	1.33E-06	4.95E+01	8.54E-05	3.83E-01	2.73E-05	2.48E-03	2.63E-03	6.12E-04	2.66E-03	1.71E-03	1.75E-03	1.21E-04	2.51E-04	7.42E-08	8.98E-04	3.89E-04
17	A07	110	Passenger Truck	1775	0.00E+00	2.66E-05	2.84E-06	1.18E+02	1.76E-04	7.89E-01	5.72E-05	6.95E-03	4.57E-03	1.15E-03	5.52E-03	3.56E-03	3.65E-03	7.05E-04	5.92E-04	1.74E-07	1.85E-03	1.12E-03
17	A07	110	Single Unit Short Haul Truck	371	0.00E+00	4.91E-05	2.60E-06	7.12E+01	5.03E-05	1.96E-01	5.40E-05	2.87E-02	2.22E-03	7.33E-04	5.94E-03	1.66E-03	1.68E-03	7.28E-03	2.85E-04	1.27E-07	4.26E-03	5.34E-03
17	A07	110	Single Unit Long Haul Truck	16	0.00E+00	2.10E-06	1.08E-07	2.98E+00	2.02E-06	7.73E-03	2.30E-06	1.19E-03	9.92E-05	3.14E-05	2.58E-04	6.82E-05	6.92E-05	3.04E-04	1.20E-05	5.19E-09	1.88E-04	2.22E-04
17	A07	110	Combination Short Haul Truck	203	0.00E+00	7.69E-05	5.76E-06	7.74E+01	1.83E-07	6.95E-02	5.44E-05	8.25E-02	2.18E-03	8.65E-04	4.06E-03	1.68E-03	1.66E-03	1.17E-02	2.60E-04	0.00E+00	2.40E-03	1.55E-02
17	A07	110	Combination Long Haul Truck	186	0.00E+00	6.96E-05	5.01E-06	7.01E+01	2.10E-07	6.85E-02	5.05E-05	7.99E-02	1.96E-03	5.98E-04	4.15E-03	1.47E-03	1.48E-03	1.07E-02	2.35E-04	0.00E+00	2.67E-03	1.50E-02
17	A08	110	Passenger Car	1247	0.00E+00	1.44E-05	1.56E-06	5.82E+01	1.00E-04	4.50E-01	3.21E-05	2.92E-03	3.10E-03	7.21E-04	3.13E-03	2.01E-03	2.07E-03	1.42E-04	2.95E-04	8.73E-08	1.06E-03	4.57E-04
17	A08	110	Passenger Truck	2089	0.00E+00	3.13E-05	3.34E-06	1.39E+02	2.07E-04	9.28E-01	6.73E-05	8.18E-03	5.37E-03	1.35E-03	6.50E-03	4.19E-03	4.29E-03	8.30E-04	6.96E-04	2.05E-07	2.18E-03	1.32E-03
17	A08	110	Single Unit Short Haul Truck	347	0.00E+00	4.59E-05	2.43E-06	6.66E+01	4.71E-05	1.83E-01	5.04E-05	2.68E-02	2.07E-03	6.86E-04	5.56E-03	1.55E-03	1.57E-03	6.81E-03	2.66E-04	1.19E-07	3.98E-03	5.00E-03
17	A08	110	Single Unit Long Haul Truck	15	0.00E+00	1.97E-06	1.01E-07	2.79E+00	1.89E-06	7.23E-03	2.15E-06	1.11E-03	9.27E-05	2.94E-05	2.41E-04	6.38E-05	6.47E-05	2.84E-04	1.12E-05	4.85E-09	1.76E-04	2.08E-04
17	A08	110	Combination Short Haul Truck	180	0.00E+00	6.80E-05	5.10E-06	6.85E+01	1.62E-07	6.15E-02	4.81E-05	7.30E-02	1.93E-03	7.65E-04	3.59E-03	1.48E-03	1.47E-03	1.03E-02	2.30E-04	0.00E+00	2.12E-03	1.37E-02
17	A08	110	Combination Long Haul Truck	164	0.00E+00	6.15E-05	4.43E-06	6.20E+01	1.86E-07	6.06E-02	4.47E-05	7.07E-02	1.74E-03	5.29E-04	3.67E-03	1.30E-03	1.31E-03	9.48E-03	2.08E-04	0.00E+00	2.37E-03	1.33E-02
17	A09	110	Passenger Car	1393	0.00E+00	1.61E-05	1.74E-06	6.50E+01	1.12E-04	5.03E-01	3.58E-05	3.27E-03	3.46E-03	8.05E-04	3.49E-03	2.25E-03	2.31E-03	1.59E-04	3.30E-04	9.75E-08	1.18E-03	5.11E-04
17	A09	110	Passenger Truck	2332	0.00E+00	3.50E-05	3.73E-06	1.55E+02	2.31E-04	1.04E+00	7.52E-05	9.14E-03	6.00E-03	1.51E-03	7.26E-03	4.68E-03	4.79E-03	9.26E-04	7.77E-04	2.29E-07	2.44E-03	1.47E-03
17	A09	110	Single Unit Short Haul Truck	460	0.00E+00	6.08E-05	3.22E-06	8.81E+01	6.23E-05	2.43E-01	6.68E-05	3.55E-02	2.75E-03	9.08E-04	7.36E-03	2.06E-03	2.08E-03	9.02E-03	3.53E-04	1.57E-07	5.28E-03	6.62E-03
17	A09	110	Single Unit Long Haul Truck	20	0.00E+00	2.60E-06	1.34E-07	3.70E+00	2.50E-06	9.58E-03	2.85E-06	1.48E-03	1.23E-04	3.89E-05	3.19E-04	8.45E-05	8.56E-05	3.76E-04	1.48E-05	6.42E-09	2.33E-04	2.76E-04
17	A09	110	Combination Short Haul Truck	254	0.00E+00	9.59E-05	7.19E-06	9.66E+01	2.28E-07	8.67E-02	6.78E-05	1.03E-01	2.72E-03	1.08E-03	5.06E-03	2.09E-03	2.07E-03	1.46E-02	3.24E-04	0.00E+00	3.00E-03	1.93E-02
17	A09	110	Combination Long Haul Truck	231	0.00E+00	8.68E-05	6.25E-06	8.74E+01	2.62E-07	8.55E-02	6.30E-05	9.96E-02	2.45E-03	7.46E-04	5.18E-03	1.84E-03	1.85E-03	1.34E-02	2.93E-04	0.00E+00	3.34E-03	1.87E-02
17	A10	110	Passenger Car	1284	0.00E+00	1.49E-05	1.61E-06	5.99E+01	1.03E-04	4.64E-01	3.30E-05	3.01E-03	3.19E-03	7.42E-04	3.22E-03	2.07E-03	2.13E-03	1.46E-04	3.04E-04	8.99E-08	1.09E-03	4.71E-04
17	A10	110	Passenger Truck	2150	0.00E+00	3.23E-05	3.44E-06	1.43E+02	2.13E-04	9.56E-01	6.93E-05	8.42E-03	5.53E-03	1.39E-03	6.69E-03	4.31E-03	4.42E-03	8.54E-04	7.17E-04	2.11E-07	2.25E-03	1.36E-03
17	A10	110	Single Unit Short Haul Truck	399	0.00E+00	5.27E-05	2.79E-06	7.64E+01	5.40E-05	2.10E-01	5.79E-05	3.08E-02	2.38E-03	7.87E-04	6.38E-03	1.78E-03	1.80E-03	7.82E-03	3.06E-04	1.36E-07	4.57E-03	5.73E-03
17	A10	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.16E-07	3.20E+00	2.17E-06	8.30E-03	2.47E-06	1.28E-03	1.06E-04	3.37E-05	2.76E-04	7.32E-05	7.42E-05	3.26E-04	1.28E-05	5.57E-09	2.02E-04	2.39E-04
17	A10	110	Combination Short Haul Truck	222	0.00E+00	8.37E-05	6.28E-06	8.43E+01	1.99E-07	7.57E-02	5.92E-05	8.98E-02	2.38E-03	9.42E-04	4.42E-03	1.83E-03	1.81E-03	1.27E-02	2.83E-04	0.00E+00	2.62E-03	1.69E-02
17	A10	110	Combination Long Haul Truck	202	0.00E+00	7.58E-05	5.45E-06	7.63E+01	2.28E-07	7.46E-02	5.50E-05	8.70E-02	2.14E-03	6.51E-04	4.52E-03	1.60E-03	1.62E-03	1.17E-02	2.56E-04	0.00E+00	2.91E-03	1.63E-02
17	A11	110	Passenger Car	1678	0.00E+00	1.94E-05	2.10E-06	7.83E+01	1.35E-04	6.06E-01	4.32E-05	3.93E-03	4.17E-03	9.70E-04	4.20E-03	2.71E-03	2.78E-03	1.91E-04	3.97E-04	1.17E-07	1.42E-03	6.15E-04
17	A11	110	Passenger Truck	2810	0.00E+00	4.22E-05	4.50E-06	1.87E+02	2.79E-04	1.25E+00	9.06E-05	1.10E-02	7.23E-03	1.82E-03	8.74E-03	5.64E-03	5.78E-03	1.12E-03	9.37E-04	2.76E-07	2.94E-03	1.77E-03
17	A11	110	Single Unit Short Haul Truck	524	0.00E+00	6.93E-05	3.67E-06	1.01E+02	7.11E-05	2.77E-01	7.62E-05	4.05E-02	3.13E-03	1.04E-03	8.39E-03	2.35E-03	2.37E-03	1.03E-02	4.02E-04	1.79E-07	6.02E-03	7.55E-03
17	A11	110	Single Unit Long Haul Truck	23	0.00E+00	2.97E-06	1.53E-07	4.21E+00	2.85E-06	1.09E-02	3.24E-06	1.68E-03	1.40E-04	4.43E-05	3.64E-04	9.64E-05	9.76E-05	4.29E-04	1.69E-05	7.32E-09	2.65E-04	3.14E-04
17	A11	110	Combination Short Haul Truck	325	0.00E+00	1.23E-04	9.19E-06	1.24E+02	2.92E-07	1.11E-01	8.67E-05	1.32E-01	3.48E-03	1.38E-03	6.47E-03	2.68E-03	2.65E-03	1.87E-02	4.15E-04	0.00E+00	3.83E-03	2.47E-02
17	A11	110	Combination Long Haul Truck	296	0.00E+00	1.11E-04	7.99E-06	1.12E+02	3.35E-07	1.09E-01	8.06E-05	1.27E-01	3.13E-03	9.54E-04	6.63E-03	2.35E-03	2.37E-03	1.71E-02	3.75E-04	0.00E+00	4.27E-03	2.39E-02
17	A12	110	Passenger Car	1302	0.00E+00	1.51E-05	1.63E-06	6.08E+01	1.05E-04	4.70E-01	3.35E-05	3.05E-03	3.23E-03	7.52E-04	3.26E-03	2.10E-03	2.16E-03	1.48E-04	3.08E-04	9.11E-08	1.10E-03	4.77E-04
17	A12	110	Passenger Truck	2180	0.00E+00	3.27E-05	3.49E-06	1.45E+02	2.16E-04	9.69E-01	7.03E-05	8.54E-03	5.61E-03	1.41E-03	6.78E-03	4.37E-03	4.48E-03	8.66E-04	7.27E-04	2.14E-07	2.28E-03	1.37E-03
17	A12	110	Single Unit Short Haul Truck	467	0.00E+00	6.18E-05	3.27E-06	8.96E+01	6.33E-05	2.47E-01	6.79E-05	3.61E-02	2.79E-03	9.23E-04	7.48E-03	2.09E-03	2.12E-03	9.16E-03	3.58E-04	1.60E-07	5.36E-03	6.72E-03
17	A12	110	Single Unit Long Haul Truck	21	0.00E+00	2.64E-06	1.36E-07	3.76E+00	2.54E-06	9.73E-03	2.89E-06	1.50E-03	1.25E-04	3.95E-05	3.24E-04	8.59E-05	8.70E-05	3.82E-04	1.51E-05	6.53E-09	2.36E-04	2.80E-04
17	A12	110	Combination Short Haul Truck	265	0.00E+00	1.00E-04	7.50E-06	1.01E+02	2.38E-07	9.04E-02	7.07E-05	1.07E-01	2.84E-03	1.13E-03	5.28E-03	2.18E-03	2.16E-03	1.52E-02	3.38E-04	0.00E+00	3.13E-03	2.01E-02
17	A12	110	Combination Long Haul Truck	241	0.00E+00	9.05E-05	6.52E-06	9.12E+01	2.73E-07	8.92E-02	6.57E-05	1.04E-01	2.55E-03	7.78E-04	5.40E-03	1.92E-03	1.93E-03	1.39E-02	3.06E-04	0.00E+00	3.48E-03	1.95E-02
17	A13	110	Passenger Car	1503	0.00E+00	1.74E-05	1.88E-06	7.01E+01	1.21E-04	5.43E-01	3.87E-05	3.52E-03	3.73E-03	8.68E-04	3.76E-03	2.43E-03	2.49E-03	1.71E-04	3.56E-04	1.05E-07	1.27E-03	5.51E-04
17	A13	110	Passenger Truck	2516	0.00E+00	3.77E-05	4.03E-06	1.68E+02	2.50E-04	1.12E+00	8.11E-05	9.86E-03	6.47E-03	1.63E-03	7.83E-03	5.05E-03	5.17E-03	1.00E-03	8.39E-04	2.47E-07	2.63E-03	1.59E-03
17	A13	110	Single Unit Short Haul Truck	538	0.00E+00	7.11E-05	3.77E-06	1.03E+02	7.29E-05	2.84E-01	7.81E-05	4.15E-02	3.21E-03	1.06E-03	8.61E-03	2.41E-03	2.44E-03	1.05E-02	4.12E-04	1.84E-07	6.17E-03	7.74E-03
17	A13	110	Single Unit Long Haul Truck	24	0.00E+00	3.04E-06	1.57E-07	4.32E+00	2.93E-06	1.12E-02	3.33E-06	1.73E-03	1.44E-04	4.55E-05	3.73E-04	9.88E-05	1.00E-04	4.40E-04	1.73E-05	7.51E-09	2.72E-04	3.22E-04
17	A13	110	Combination Short Haul Truck	292	0.00E+00	1.10E-04	8.28E-06	1.11E+02	2.63E-07	9.98E-02	7.81E-05	1.18E-01	3.13E-03	1.24E-03	5.83E-03	2.41E-03	2.39E-03	1.68E-02	3.73E-04	0.00E+00	3.45E-03	2.22E-02
17	A13	110	Combination Long Haul Truck	266	0.00E+00	9.99E-05	7.19E-06	1.01E+02	3.01E-07	9.84E-02	7.25E-05	1.15E-01	2.82E-03	8.58E-04	5.96E-03	2.12E-03	2.13E-03	1.54E-02	3.37E-04	0.00E+00	3.84E-03	2.15E-02
17	A14	110	Passenger Car	1492	0.00E+00	1.73E-05	1.87E-06	6.96E+01	1.20E-04	5.39E-01	3.84E-05	3.50E-03	3.71E-03	8.62E-04	3.74E-03	2.41E-03	2.47E-03	1.70E-04	3.53E-04	1.04E-07	1.26E-03	5.47E-04
17	A14	110	Passenger Truck	2499	0.00E+00	3.75E-05	4.00E-06	1.67E+02	2.48E-04	1.11E+00	8.05E-05	9.79E-03	6.43E-03	1.62E-03	7.78E-03	5.01E-03	5.14E-03	9.93E-04	8.33E-04	2.45E-07	2.61E-03	1.58E-03
17	A14	110	Single Unit Short Haul Truck	461	0.00E+00	6.09E-05	3.23E-06	8.83E+01	6.25E-05	2.43E-01	6.69E-05	3.56E-02	2.75E-03	9.10E-04	7.37E-03	2.06E-03	2.09E-03	9.04E-03	3.53E-04	1.57E-07	5.29E-03	6.63E-03
17	A14	110	Single Unit Long Haul Truck	20	0.00E+00	2.61E-06	1.34E-07	3.70E+00	2.51E-06	9.60E-03	2.85E-06	1.48E-03	1.23E-04	3.89E-05	3.19E-04	8.47E-05	8.58E-05	3.77E-04	1.48E-05	6.43E-09	2.33E-04	2.76E-04
17	A14	110	Combination Short Haul Truck	264	0.00E+00	9.97E-05	7.48E-06	1.00E+02	2.38E-07	9.02E-02	7.05E-05	1.07E-01	2.83E-03	1.12E-03	5.26E-03	2.18E-03	2.16E-03	1.52E-02	3.37E-04	0.00E+00	3.12E-03	2.01E-02
17	A14	110	Combination Long Haul Truck	241	0.00E+00	9.03E-05	6.50E-06	9.09E+01	2.72E-07	8.89E-02	6.55E-05	1.04E-01	2.55E-03	7.76E-04	5.39E-03	1.91E-03	1.93E-03	1.39E-02	3.05E-04	0.00E+00	3.47E-03	1.95E-02
17	A15	110	Passenger Car	1444	0.00E+00	1.67E-05	1.81E-06	6.74E+01	1.16E-04	5.21E-01	3.71E-05	3.38E-03	3.59E-03	8.34E-04	3.62E-03	2.33E-03	2.39E-03	1.64E-04	3.42E-04	1.01E-07	1.22E-03	5.29E-04
17	A15	110	Passenger Truck	2418	0.00E+00	3.63E-05	3.87E-06	1.61E+02	2.40E-04	1.07E+00	7.79E-05	9.47E-03	6.22E-03	1.56E-03	7.52E-03	4.85E-03	4.97E-03	9.60E-04	8.06E-04	2.37E-07	2.53E-03	1.52E-03
17	A15	110	Single Unit Short Haul Truck	543	0.00E+00	7.18E-05	3.80E-06	1.04E+02	7.36E-05	2.87E-01	7.89E-05	4.19E-02	3.24E-03	1.07E-03	8.69E-03	2.43E-03	2.46E-03	1.07E-02	4.16E-04	1.86E-07	6.23E-03	7.81E-03
17	A15	110	Single Unit Long Haul Truck	24	0.00E+00	3.07E-06	1.58E-07	4.36E+00	2.95E-06	1.13E-02	3.36E-06	1.74E-03	1.45E-04	4.59E-05	3.77E-04	9.98E-05	1.01E-04	4.44E-04	1.75E-05	7.58E-09	2.75E-04	3.25E-04
17	A15	110	Combination Short Haul Truck	305	0.00E+00	1.15E-04	8.66E-06	1.16E+02	2.75E-07	1.04E-01	8.16E-05	1.24E-01	3.28E-03	1.30E-03	6.09E-03	2.52E-03	2.49E-03	1.76E-02	3.90E-04	0.00E+00	3.61E-03	2.33E-02
17	A15	110	Combination Long Haul Truck	279	0.00E+00	1.04E-04	7.52E-06	1.05E+02	3.15E-07	1.03E-01	7.58E-05	1.20E-01	2.95E-03	8.98E-04	6.24E-03	2.21E-03	2.23E-03	1.61E-02	3.53E-04	0.00E+00	4.02E-03	2.25E-02
17	A16	110	Passenger Car	1267	0.00E+00	1.47E-05	1.59E-06	5.91E+01	1.02E-04	4.57E-01	3.26E-05	2.97E-03	3.15E-03	7.32E-04	3.17E-03	2.04E-03	2.10E-03	1.44E-04	3.00E-04	8.87E-08	1.07E-03	4.64E-04
17	A16	110	Passenger Truck	2121	0.00E+00	3.18E-05	3.39E-06	1.41E+02	2.10E-04	9.43E-01	6.84E-05	8.31E-03	5.46E-03	1.37E-03	6.60E-03	4.25E-03	4.36E-03	8.43E-04	7.07E-04	2.08E-07	2.22E-03	1.34E-03
17	A16	110	Single Unit Short Haul Truck	527	0.00E+00	6.96E-05	3.69E-06	1.01E+02	7.14E-05	2.78E-01	7.65E-05	4.07E-02	3.15E-03	1.04E-03	8.43E-03	2.36E-03	2.38E-03	1.03E-02	4.04E-04	1.80E-07	6.04E-03	7.58E-03
17	A16	110	Single Unit Long Haul Truck	23	0.00E+00	2.98E-06	1.54E-07	4.23E+00	2.86E-06	1.10E-02	3.26E-06	1.69E-03	1.41E-04	4.45E-05	3.65E-04	9.68E-05	9.81E-05	4.31E-04	1.70E-05	7.36E-09	2.66E-04	3.16E-04
17	A16	110	Combination Short Haul Truck	306	0.00E+00	1.16E-04	8.67E-06	1.16E+02	2.75E-07	1.05E-01	8.18E-05	1.24E-01	3.28E-03	1.30E-03	6.10E-03	2.52E-03	2.50E-03	1.76E-02	3.91E-04	0.00E+00	3.61E-03	2.33E-02
17	A16	110	Combination Long Haul Truck	279	0.00E+00	1.05E-04	7.53E-06	1.05E+02	3.15E-07	1.03E-01	7.60E-05	1.20E-01	2.95E-03	8.99E-04	6.25E-03	2.22E-03	2.23E-03	1.61E-02	3.53E-04	0.00E+00	4.02E-03	2.26E-02
17	A17	110	Passenger Car	1420	0.00E+00	1.64E-05	1.78E-06	6.63E+01	1.14E-04	5.13E-01	3.65E-05	3.33E-03	3.53E-03	8.20E-04	3.56E-03	2.29E-03	2.35E-03	1.62E-04	3.36E-04	9.94E-08	1.20E-03	5.21E-04
17	A17	110	Passenger Truck	2378	0.00E+00	3.57E-05	3.80E-06	1.59E+02	2.36E-04	1.06E+00	7.66E-05	9.31E-03	6.12E-03	1.54E-03	7.40E-03	4.77E-03	4.89E-03	9.44E-04	7.93E-04	2.33E-07	2.48E-03	1.50E-03
17	A17	110	Single Unit Short Haul Truck	539	0.00E+00	7.13E-05	3.78E-06	1.03E+02	7.31E-05	2.85E-01	7.84E-05	4.17E-02	3.22E-03	1.07E-03	8.63E-03	2.41E-03	2.44E-03	1.06E-02	4.14E-04	1.84E-07	6.19E-03	7.76E-03
17	A17	110	Single Unit Long Haul Truck	24	0.00E+00	3.05E-06	1.57E-07	4.34E+00	2.93E-06	1.12E-02	3.34E-06	1.73E-03	1.44E-04	4.56E-05	3.74E-04	9.91E-05	1.00E-04	4.41E-04	1.74E-05	7.53E-09	2.73E-04	3.23E-04
17	A17	110	Combination Short Haul Truck	307	0.00E+00	1.16E-04	8.71E-06	1.17E+02	2.77E-07	1.05E-01	8.21E-05	1.25E-01	3.30E-03	1.31E-03	6.13E-03	2.54E-03	2.51E-03	1.77E-02	3.93E-04	0.00E+00	3.63E-03	2.34E-02
17	A17	110	Combination Long Haul Truck	280	0.00E+00	1.05E-04	7.57E-06	1.06E+02	3.17E-07	1.04E-01	7.63E-05	1.21E-01	2.97E-03	9.03E-04	6.27E-03	2.23E-03	2.24E-03	1.62E-02	3.55E-04	0.00E+00	4.04E-03	2.27E-02
17	A18	110	Passenger Car	1193	0.00E+00	1.38E-05	1.49E-06	5.57E+01	9.61E-05	4.31E-01	3.07E-05	2.80E-03	2.96E-03	6.89E-04	2.99E-03	1.93E-03	1.98E-03	1.36E-04	2.82E-04	8.35E-08	1.01E-03	4.38E-04
17	A18	110	Passenger Truck	1998	0.00E+00	3.00E-05	3.20E-06	1.33E+02	1.98E-04	8.88E-01	6.44E-05	7.83E-03	5.14E-03	1.29E-03	6.22E-03	4.01E-03	4.11E-03	7.94E-04	6.66E-04	1.96E-07	2.09E-03	1.26E-03
17	A18	110	Single Unit Short Haul Truck	520	0.00E+00	6.87E-05	3.64E-06	9.97E+01	7.05E-05	2.74E-01	7.55E-05	4.02E-02	3.11E-03	1.03E-03	8.32E-03	2.33E-03	2.35E-03	1.02E-02	3.99E-04	1.78E-07	5.96E-03	7.48E-03
17	A18	110	Single Unit Long Haul Truck	23	0.00E+00	2.94E-06	1.52E-07	4.18E+00	2.83E-06	1.08E-02	3.22E-06	1.67E-03	1.39E-04	4.40E-05	3.61E-04	9.55E-05	9.68E-05	4.26E-04	1.68E-05	7.26E-09	2.63E-04	3.11E-04
17	A18	110	Combination Short Haul Truck	299	0.00E+00	1.13E-04	8.47E-06	1.14E+02	2.69E-07	1.02E-01	7.99E-05	1.21E-01	3.20E-03	1.27E-03	5.96E-03	2.47E-03	2.44E-03	1.72E-02	3.82E-04	0.00E+00	3.53E-03	2.27E-02
17	A18	110	Combination Long Haul Truck	273	0.00E+00	1.02E-04	7.36E-06	1.03E+02	3.08E-07	1.01E-01	7.42E-05	1.17E-01	2.88E-03	8.78E-04	6.10E-03	2.17E-03	2.18E-03	1.57E-02	3.45E-04	0.00E+00	3.93E-03	2.20E-02
17	A19	110	Passenger Car	1278	0.00E+00	1.48E-05	1.60E-06	5.96E+01	1.03E-04	4.62E-01	3.29E-05	3.00E-03	3.17E-03	7.38E-04	3.20E-03	2.06E-03	2.12E-03	1.46E-04	3.02E-04	8.95E-08	1.08E-03	4.69E-04
17	A19	110	Passenger Truck	2140	0.00E+00	3.21E-05	3.42E-06	1.43E+02	2.12E-04	9.51E-01	6.90E-05	8.38E-03	5.51E-03	1.39E-03	6.66E-03	4.29E-03	4.40E-03	8.50E-04	7.13E-04	2.10E-07	2.24E-03	1.35E-03
17	A19	110	Single Unit Short Haul Truck	513	0.00E+00	6.78E-05	3.59E-06	9.83E+01	6.95E-05	2.71E-01	7.45E-05	3.96E-02	3.06E-03	1.01E-03	8.20E-03	2.29E-03	2.32E-03	1.01E-02	3.93E-04	1.75E-07	5.88E-03	7.38E-03
17	A19	110	Single Unit Long Haul Truck	23	0.00E+00	2.90E-06	1.50E-07	4.12E+00	2.79E-06	1.07E-02	3.17E-06	1.65E-03	1.37E-04	4.33E-05	3.56E-04	9.42E-05	9.55E-05	4.20E-04	1.65E-05	7.16E-09	2.59E-04	3.07E-04
17	A19	110	Combination Short Haul Truck	296	0.00E+00	1.12E-04	8.37E-06	1.12E+02	2.66E-07	1.01E-01	7.90E-05	1.20E-01	3.17E-03	1.26E-03	5.89E-03	2.44E-03	2.41E-03	1.70E-02	3.78E-04	0.00E+00	3.49E-03	2.25E-02
17	A19	110	Combination Long Haul Truck	269	0.00E+00	1.01E-04	7.28E-06	1.02E+02	3.05E-07	9.96E-02	7.34E-05	1.16E-01	2.85E-03	8.68E-04	6.03E-03	2.14E-03	2.16E-03	1.56E-02	3.41E-04	0.00E+00	3.88E-03	2.18E-02
17	A20	110	Passenger Car	1065	0.00E+00	1.23E-05	1.33E-06	4.97E+01	8.58E-05	3.84E-01	2.74E-05	2.50E-03	2.64E-03	6.15E-04	2.67E-03	1.72E-03	1.76E-03	1.21E-04	2.52E-04	7.45E-08	9.02E-04	3.90E-04
17	A20	110	Passenger Truck	1783	0.00E+00	2.67E-05	2.85E-06	1.19E+02	1.77E-04	7.92E-01	5.74E-05	6.98E-03	4.59E-03	1.15E-03	5.55E-03	3.58E-03	3.66E-03	7.08E-04	5.94E-04	1.75E-07	1.86E-03	1.12E-03
17	A20	110	Single Unit Short Haul Truck	496	0.00E+00	6.56E-05	3.47E-06	9.51E+01	6.73E-05	2.62E-01	7.21E-05	3.83E-02	2.96E-03	9.80E-04	7.94E-03	2.22E-03	2.25E-03	9.73E-03	3.81E-04	1.70E-07	5.69E-03	7.14E-03
17	A20	110	Single Unit Long Haul Truck	22	0.00E+00	2.81E-06	1.45E-07	3.99E+00	2.70E-06	1.03E-02	3.07E-06	1.59E-03	1.33E-04	4.20E-05	3.44E-04	9.12E-05	9.24E-05	4.06E-04	1.60E-05	6.93E-09	2.51E-04

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A24	110	Single Unit Long Haul Truck	23	0.00E+00	2.93E-06	1.51E-07	4.16E+00	2.81E-06	1.08E-02	3.20E-06	1.66E-03	1.38E-04	4.37E-05	3.59E-04	9.50E-05	9.63E-05	4.23E-04	1.67E-05	7.22E-09	2.62E-04	3.10E-04
17	A24	110	Combination Short Haul Truck	260	0.00E+00	9.81E-05	7.36E-06	9.88E+01	2.34E-07	8.87E-02	6.94E-05	1.05E-01	2.78E-03	1.10E-03	5.18E-03	2.14E-03	2.12E-03	1.49E-02	3.32E-04	0.00E+00	3.06E-03	1.98E-02
17	A24	110	Combination Long Haul Truck	237	0.00E+00	8.88E-05	6.39E-06	8.94E+01	2.68E-07	8.75E-02	6.44E-05	1.02E-01	2.51E-03	7.63E-04	5.30E-03	1.88E-03	1.89E-03	1.37E-02	3.00E-04	0.00E+00	3.41E-03	1.91E-02
17	A25	110	Passenger Car	1144	0.00E+00	1.33E-05	1.43E-06	5.34E+01	9.22E-05	4.13E-01	2.94E-05	2.68E-03	2.84E-03	6.61E-04	2.87E-03	1.85E-03	1.89E-03	1.30E-04	2.71E-04	8.01E-08	9.69E-04	4.20E-04
17	A25	110	Passenger Truck	1916	0.00E+00	2.87E-05	3.07E-06	1.28E+02	1.90E-04	8.52E-01	6.17E-05	7.51E-03	4.93E-03	1.24E-03	5.96E-03	3.84E-03	3.94E-03	7.61E-04	6.39E-04	1.88E-07	2.00E-03	1.21E-03
17	A25	110	Single Unit Short Haul Truck	578	0.00E+00	7.65E-05	4.05E-06	1.11E+02	7.84E-05	3.05E-01	8.40E-05	4.46E-02	3.45E-03	1.14E-03	9.25E-03	2.59E-03	2.62E-03	1.13E-02	4.43E-04	1.98E-07	6.63E-03	8.32E-03
17	A25	110	Single Unit Long Haul Truck	26	0.00E+00	3.27E-06	1.69E-07	4.65E+00	3.15E-06	1.20E-02	3.58E-06	1.86E-03	1.54E-04	4.89E-05	4.01E-04	1.06E-04	1.08E-04	4.73E-04	1.86E-05	8.08E-09	2.93E-04	3.46E-04
17	A25	110	Combination Short Haul Truck	319	0.00E+00	1.21E-04	9.04E-06	1.21E+02	2.87E-07	1.09E-01	8.53E-05	1.29E-01	3.42E-03	1.36E-03	6.37E-03	2.63E-03	2.61E-03	1.84E-02	4.08E-04	0.00E+00	3.77E-03	2.43E-02
17	A25	110	Combination Long Haul Truck	291	0.00E+00	1.09E-04	7.86E-06	1.10E+02	3.29E-07	1.08E-01	7.92E-05	1.25E-01	3.08E-03	9.38E-04	6.52E-03	2.31E-03	2.33E-03	1.68E-02	3.69E-04	0.00E+00	4.20E-03	2.35E-02
17	A26	110	Passenger Car	1391	0.00E+00	1.61E-05	1.74E-06	6.49E+01	1.12E-04	5.02E-01	3.58E-05	3.26E-03	3.45E-03	8.03E-04	3.48E-03	2.24E-03	2.30E-03	1.58E-04	3.29E-04	9.73E-08	1.18E-03	5.10E-04
17	A26	110	Passenger Truck	2329	0.00E+00	3.49E-05	3.73E-06	1.55E+02	2.31E-04	1.04E+00	7.50E-05	9.12E-03	5.99E-03	1.51E-03	7.25E-03	4.67E-03	4.79E-03	9.25E-04	7.76E-04	2.28E-07	2.43E-03	1.47E-03
17	A26	110	Single Unit Short Haul Truck	447	0.00E+00	5.91E-05	3.13E-06	8.56E+01	6.06E-05	2.36E-01	6.49E-05	3.45E-02	2.67E-03	8.82E-04	7.15E-03	2.00E-03	2.02E-03	8.76E-03	3.42E-04	1.53E-07	5.12E-03	6.43E-03
17	A26	110	Single Unit Long Haul Truck	20	0.00E+00	2.53E-06	1.30E-07	3.59E+00	2.43E-06	9.30E-03	2.76E-06	1.43E-03	1.19E-04	3.78E-05	3.10E-04	8.21E-05	8.32E-05	3.66E-04	1.44E-05	6.24E-09	2.26E-04	2.68E-04
17	A26	110	Combination Short Haul Truck	227	0.00E+00	8.56E-05	6.42E-06	8.62E+01	2.04E-07	7.74E-02	6.05E-05	9.19E-02	2.43E-03	9.63E-04	4.52E-03	1.87E-03	1.85E-03	1.30E-02	2.89E-04	0.00E+00	2.67E-03	1.72E-02
17	A26	110	Combination Long Haul Truck	207	0.00E+00	7.75E-05	5.58E-06	7.80E+01	2.34E-07	7.63E-02	5.62E-05	8.89E-02	2.19E-03	6.66E-04	4.62E-03	1.64E-03	1.65E-03	1.19E-02	2.62E-04	0.00E+00	2.98E-03	1.67E-02
17	A27	110	Passenger Car	1144	0.00E+00	1.33E-05	1.43E-06	5.34E+01	9.22E-05	4.13E-01	2.94E-05	2.68E-03	2.84E-03	6.61E-04	2.87E-03	1.85E-03	1.89E-03	1.30E-04	2.71E-04	8.01E-08	9.69E-04	4.20E-04
17	A27	110	Passenger Truck	1916	0.00E+00	2.87E-05	3.07E-06	1.28E+02	1.90E-04	8.52E-01	6.17E-05	7.51E-03	4.93E-03	1.24E-03	5.96E-03	3.84E-03	3.94E-03	7.61E-04	6.39E-04	1.88E-07	2.00E-03	1.21E-03
17	A27	110	Single Unit Short Haul Truck	578	0.00E+00	7.65E-05	4.05E-06	1.11E+02	7.84E-05	3.05E-01	8.40E-05	4.46E-02	3.45E-03	1.14E-03	9.25E-03	2.59E-03	2.62E-03	1.13E-02	4.43E-04	1.98E-07	6.63E-03	8.32E-03
17	A27	110	Single Unit Long Haul Truck	26	0.00E+00	3.27E-06	1.69E-07	4.65E+00	3.15E-06	1.20E-02	3.58E-06	1.86E-03	1.54E-04	4.89E-05	4.01E-04	1.06E-04	1.08E-04	4.73E-04	1.86E-05	8.08E-09	2.93E-04	3.46E-04
17	A27	110	Combination Short Haul Truck	319	0.00E+00	1.21E-04	9.04E-06	1.21E+02	2.87E-07	1.09E-01	8.53E-05	1.29E-01	3.42E-03	1.36E-03	6.37E-03	2.63E-03	2.61E-03	1.84E-02	4.08E-04	0.00E+00	3.77E-03	2.43E-02
17	A27	110	Combination Long Haul Truck	291	0.00E+00	1.09E-04	7.86E-06	1.10E+02	3.29E-07	1.08E-01	7.92E-05	1.25E-01	3.08E-03	9.38E-04	6.52E-03	2.31E-03	2.33E-03	1.68E-02	3.69E-04	0.00E+00	4.20E-03	2.35E-02
17	A28	110	Passenger Car	1391	0.00E+00	1.61E-05	1.74E-06	6.49E+01	1.12E-04	5.02E-01	3.58E-05	3.26E-03	3.45E-03	8.03E-04	3.48E-03	2.24E-03	2.30E-03	1.58E-04	3.29E-04	9.73E-08	1.18E-03	5.10E-04
17	A28	110	Passenger Truck	2329	0.00E+00	3.49E-05	3.73E-06	1.55E+02	2.31E-04	1.04E+00	7.50E-05	9.12E-03	5.99E-03	1.51E-03	7.25E-03	4.67E-03	4.79E-03	9.25E-04	7.76E-04	2.28E-07	2.43E-03	1.47E-03
17	A28	110	Single Unit Short Haul Truck	447	0.00E+00	5.91E-05	3.13E-06	8.56E+01	6.06E-05	2.36E-01	6.49E-05	3.45E-02	2.67E-03	8.82E-04	7.15E-03	2.00E-03	2.02E-03	8.76E-03	3.42E-04	1.53E-07	5.12E-03	6.43E-03
17	A28	110	Single Unit Long Haul Truck	20	0.00E+00	2.53E-06	1.30E-07	3.59E+00	2.43E-06	9.30E-03	2.76E-06	1.43E-03	1.19E-04	3.78E-05	3.10E-04	8.21E-05	8.32E-05	3.66E-04	1.44E-05	6.24E-09	2.26E-04	2.68E-04
17	A28	110	Combination Short Haul Truck	227	0.00E+00	8.56E-05	6.42E-06	8.62E+01	2.04E-07	7.74E-02	6.05E-05	9.19E-02	2.43E-03	9.63E-04	4.52E-03	1.87E-03	1.85E-03	1.30E-02	2.89E-04	0.00E+00	2.67E-03	1.72E-02
17	A28	110	Combination Long Haul Truck	207	0.00E+00	7.75E-05	5.58E-06	7.80E+01	2.34E-07	7.63E-02	5.62E-05	8.89E-02	2.19E-03	6.66E-04	4.62E-03	1.64E-03	1.65E-03	1.19E-02	2.62E-04	0.00E+00	2.98E-03	1.67E-02
16	B09	100	Passenger Car	754	0.00E+00	8.26E-06	8.93E-07	3.39E+01	5.74E-05	2.26E-01	1.84E-05	1.61E-03	2.45E-03	4.92E-04	1.79E-03	1.15E-03	1.18E-03	9.45E-05	1.72E-04	4.71E-08	6.06E-04	2.51E-04
16	B09	100	Passenger Truck	1263	0.00E+00	1.78E-05	1.90E-06	8.00E+01	1.17E-04	4.56E-01	3.79E-05	4.60E-03	4.32E-03	9.19E-04	3.65E-03	2.37E-03	2.42E-03	5.09E-04	4.00E-04	1.10E-07	1.22E-03	7.40E-04
16	B09	100	Single Unit Short Haul Truck	146	0.00E+00	1.96E-05	9.67E-07	2.66E+01	1.71E-05	6.15E-02	2.12E-05	1.06E-02	1.00E-03	2.92E-04	2.42E-03	5.99E-04	6.11E-04	2.68E-03	1.07E-04	4.37E-08	1.81E-03	1.98E-03
16	B09	100	Single Unit Long Haul Truck	6	0.00E+00	8.48E-07	4.12E-08	1.12E+00	7.07E-07	2.52E-03	9.15E-07	4.46E-04	4.53E-05	1.26E-05	1.05E-04	2.53E-05	2.57E-05	1.12E-04	4.51E-06	1.78E-09	7.98E-05	8.33E-05
16	B09	100	Combination Short Haul Truck	77	0.00E+00	2.67E-05	1.94E-06	2.80E+01	7.57E-08	2.60E-02	1.92E-05	2.84E-02	9.01E-04	3.21E-04	1.49E-03	5.70E-04	5.59E-04	4.22E-03	9.38E-05	0.00E+00	9.32E-04	5.36E-03
16	B09	100	Combination Long Haul Truck	71	0.00E+00	2.31E-05	1.59E-06	2.53E+01	8.77E-08	2.59E-02	1.73E-05	2.71E-02	8.36E-04	2.31E-04	1.52E-03	4.75E-04	4.75E-04	3.86E-03	8.49E-05	0.00E+00	1.04E-03	5.08E-03
16	B10	100	Passenger Car	1540	0.00E+00	1.69E-05	1.82E-06	6.93E+01	1.17E-04	4.62E-01	3.75E-05	3.29E-03	5.01E-03	1.01E-03	3.65E-03	2.35E-03	2.41E-03	1.93E-04	3.50E-04	9.63E-08	1.24E-03	5.13E-04
16	B10	100	Passenger Truck	2580	0.00E+00	3.64E-05	3.88E-06	1.63E+02	2.39E-04	9.32E-01	7.74E-05	9.39E-03	8.81E-03	1.88E-03	7.45E-03	4.83E-03	4.95E-03	1.04E-03	8.17E-04	2.24E-07	2.50E-03	1.51E-03
16	B10	100	Single Unit Short Haul Truck	115	0.00E+00	1.54E-05	7.63E-07	2.10E+01	1.35E-05	4.85E-02	1.67E-05	8.36E-03	7.91E-04	2.30E-04	1.91E-03	4.72E-04	4.82E-04	2.12E-03	8.42E-05	3.45E-08	1.43E-03	1.56E-03
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	6.68E-07	3.25E-08	8.84E-01	5.57E-07	1.98E-03	7.22E-07	3.52E-04	3.57E-05	9.95E-06	8.32E-05	2.00E-05	2.03E-05	8.85E-05	3.56E-06	1.41E-09	6.29E-05	6.57E-05
16	B10	100	Combination Short Haul Truck	216	0.00E+00	7.43E-05	5.41E-06	7.79E+01	2.11E-07	7.25E-02	5.35E-05	7.91E-02	2.51E-03	8.93E-04	4.15E-03	1.59E-03	1.56E-03	1.17E-02	2.61E-04	0.00E+00	2.60E-03	1.49E-02
16	B10	100	Combination Long Haul Truck	197	0.00E+00	6.45E-05	4.42E-06	7.05E+01	2.44E-07	7.21E-02	4.83E-05	7.54E-02	2.33E-03	6.45E-04	4.23E-03	1.32E-03	1.32E-03	1.08E-02	2.37E-04	0.00E+00	2.91E-03	1.42E-02
16	B11	100	Passenger Car	284	0.00E+00	3.11E-06	3.36E-07	1.28E+01	2.16E-05	8.51E-02	6.91E-06	6.06E-04	9.22E-04	1.85E-04	6.72E-04	4.33E-04	4.44E-04	3.55E-05	6.45E-05	1.77E-08	2.28E-04	9.46E-05
16	B11	100	Passenger Truck	475	0.00E+00	6.70E-06	7.14E-07	3.01E+01	4.39E-05	1.72E-01	1.43E-05	1.73E-03	1.62E-03	3.46E-04	1.37E-03	8.90E-04	9.12E-04	1.91E-04	1.50E-04	4.13E-08	4.61E-04	2.78E-04
16	B11	100	Single Unit Short Haul Truck	83	0.00E+00	1.11E-05	5.50E-07	1.51E+01	9.71E-06	3.50E-02	1.20E-05	6.03E-03	5.71E-04	1.66E-04	1.38E-03	3.40E-04	3.47E-04	1.53E-03	6.07E-05	2.48E-08	1.03E-03	1.12E-03
16	B11	100	Single Unit Long Haul Truck	4	0.00E+00	4.82E-07	2.34E-08	6.37E-01	4.02E-07	1.43E-03	5.20E-07	2.54E-04	2.58E-05	7.17E-06	6.00E-05	1.44E-05	1.46E-05	6.38E-05	2.57E-06	1.01E-09	4.54E-05	4.74E-05
16	B11	100	Combination Short Haul Truck	38	0.00E+00	1.31E-05	9.56E-07	1.38E+01	3.73E-08	1.28E-02	9.44E-06	1.40E-02	4.44E-04	1.58E-04	7.34E-04	2.81E-04	2.75E-04	2.08E-03	4.62E-05	0.00E+00	4.58E-04	2.64E-03
16	B11	100	Combination Long Haul Truck	35	0.00E+00	1.14E-05	7.81E-07	1.25E+01	4.32E-08	1.27E-02	8.53E-06	1.33E-02	4.11E-04	1.14E-04	7.47E-04	2.34E-04	2.34E-04	1.90E-03	4.18E-05	0.00E+00	5.14E-04	2.50E-03
16	B12	100	Passenger Car	650	0.00E+00	7.11E-06	7.69E-07	2.92E+01	4.95E-05	1.95E-01	1.58E-05	1.39E-03	2.11E-03	4.24E-04	1.54E-03	9.93E-04	1.02E-03	8.14E-05	1.48E-04	4.06E-08	5.22E-04	2.17E-04
16	B12	100	Passenger Truck	1088	0.00E+00	1.54E-05	1.64E-06	6.89E+01	1.01E-04	3.93E-01	3.26E-05	3.96E-03	3.72E-03	7.92E-04	3.14E-03	2.04E-03	2.09E-03	4.38E-04	3.45E-04	9.46E-08	1.05E-03	6.38E-04
16	B12	100	Single Unit Short Haul Truck	63	0.00E+00	8.44E-06	4.17E-07	1.15E+01	7.35E-06	2.65E-02	9.12E-06	4.57E-03	4.32E-04	1.26E-04	1.04E-03	2.58E-04	2.63E-04	1.16E-03	4.60E-05	1.88E-08	7.79E-04	8.52E-04
16	B12	100	Single Unit Long Haul Truck	3	0.00E+00	3.65E-07	1.78E-08	4.83E-01	3.04E-07	1.08E-03	3.94E-07	1.92E-04	1.95E-05	5.43E-06	4.54E-05	1.09E-05	1.11E-05	4.83E-05	1.94E-06	7.69E-10	3.44E-05	3.59E-05
16	B12	100	Combination Short Haul Truck	70	0.00E+00	2.40E-05	1.75E-06	2.52E+01	6.82E-08	2.34E-02	1.73E-05	2.56E-02	8.12E-04	2.89E-04	1.34E-03	5.13E-04	5.04E-04	3.80E-03	8.45E-05	0.00E+00	8.39E-04	4.82E-03
16	B12	100	Combination Long Haul Truck	64	0.00E+00	2.08E-05	1.43E-06	2.28E+01	7.90E-08	2.33E-02	1.56E-05	2.44E-02	7.53E-04	2.08E-04	1.37E-03	4.28E-04	4.28E-04	3.48E-03	7.65E-05	0.00E+00	9.40E-04	4.58E-03
16	B13	100	Passenger Car	728	0.00E+00	7.97E-06	8.61E-07	3.28E+01	5.54E-05	2.18E-01	1.77E-05	1.56E-03	2.37E-03	4.75E-04	1.72E-03	1.11E-03	1.14E-03	9.12E-05	1.66E-04	4.55E-08	5.84E-04	2.43E-04
16	B13	100	Passenger Truck	1219	0.00E+00	1.72E-05	1.83E-06	7.72E+01	1.13E-04	4.40E-01	3.66E-05	4.44E-03	4.17E-03	8.87E-04	3.52E-03	2.28E-03	2.34E-03	4.91E-04	3.86E-04	1.06E-07	1.18E-03	7.15E-04
16	B13	100	Single Unit Short Haul Truck	70	0.00E+00	9.42E-06	4.65E-07	1.28E+01	8.21E-06	2.96E-02	1.02E-05	5.10E-03	4.83E-04	1.41E-04	1.16E-03	2.88E-04	2.94E-04	1.29E-03	5.14E-05	2.10E-08	8.70E-04	9.52E-04
16	B13	100	Single Unit Long Haul Truck	3	0.00E+00	4.08E-07	1.98E-08	5.39E-01	3.40E-07	1.21E-03	4.40E-07	2.15E-04	2.18E-05	6.07E-06	5.07E-05	1.22E-05	1.24E-05	5.40E-05	2.17E-06	8.58E-10	3.84E-05	4.01E-05
16	B13	100	Combination Short Haul Truck	97	0.00E+00	3.35E-05	2.44E-06	3.51E+01	9.51E-08	3.27E-02	2.41E-05	3.57E-02	1.13E-03	4.03E-04	1.87E-03	7.16E-04	7.02E-04	5.29E-03	1.18E-04	0.00E+00	1.17E-03	6.73E-03
16	B13	100	Combination Long Haul Truck	89	0.00E+00	2.91E-05	1.99E-06	3.18E+01	1.10E-07	3.25E-02	2.18E-05	3.40E-02	1.05E-03	2.91E-04	1.91E-03	5.96E-04	5.96E-04	4.85E-03	1.07E-04	0.00E+00	1.31E-03	6.38E-03
16	B14	100	Passenger Car	294	0.00E+00	3.21E-06	3.47E-07	1.32E+01	2.23E-05	8.81E-02	7.15E-06	6.27E-04	9.54E-04	1.92E-04	6.96E-04	4.49E-04	4.60E-04	3.68E-05	6.68E-05	1.83E-08	2.36E-04	9.79E-05
16	B14	100	Passenger Truck	492	0.00E+00	6.94E-06	7.39E-07	3.11E+01	4.55E-05	1.78E-01	1.47E-05	1.79E-03	1.68E-03	3.58E-04	1.42E-03	9.20E-04	9.44E-04	1.98E-04	1.56E-04	4.27E-08	4.77E-04	2.88E-04
16	B14	100	Single Unit Short Haul Truck	72	0.00E+00	9.70E-06	4.79E-07	1.32E+01	8.46E-06	3.05E-02	1.05E-05	5.25E-03	4.97E-04	1.45E-04	1.20E-03	2.97E-04	3.03E-04	1.33E-03	5.29E-05	2.16E-08	8.96E-04	9.80E-04
16	B14	100	Single Unit Long Haul Truck	3	0.00E+00	4.20E-07	2.04E-08	5.55E-01	3.50E-07	1.25E-03	4.53E-07	2.21E-04	2.24E-05	6.25E-06	5.22E-05	1.25E-05	1.27E-05	5.56E-05	2.24E-06	8.84E-10	3.95E-05	4.13E-05
16	B14	100	Combination Short Haul Truck	35	0.00E+00	1.22E-05	8.90E-07	1.28E+01	3.47E-08	1.19E-02	8.79E-06	1.30E-02	4.13E-04	1.47E-04	6.83E-04	2.61E-04	2.56E-04	1.93E-03	4.30E-05	0.00E+00	4.27E-04	2.45E-03
16	B14	100	Combination Long Haul Truck	32	0.00E+00	1.06E-05	7.27E-07	1.16E+01	4.02E-08	1.19E-02	7.94E-06	1.24E-02	3.83E-04	1.06E-04	6.96E-04	2.17E-04	2.17E-04	1.77E-03	3.89E-05	0.00E+00	4.78E-04	2.33E-03
16	B15	100	Passenger Car	796	0.00E+00	8.71E-06	9.42E-07	3.58E+01	6.06E-05	2.39E-01	1.94E-05	1.70E-03	2.59E-03	5.19E-04	1.89E-03	1.22E-03	1.25E-03	9.97E-05	1.81E-04	4.97E-08	6.39E-04	2.65E-04
16	B15	100	Passenger Truck	1332	0.00E+00	1.88E-05	2.00E-06	8.44E+01	1.23E-04	4.81E-01	4.00E-05	4.85E-03	4.55E-03	9.70E-04	3.85E-03	2.49E-03	2.56E-03	5.37E-04	4.22E-04	1.16E-07	1.29E-03	7.81E-04
16	B15	100	Single Unit Short Haul Truck	139	0.00E+00	1.87E-05	9.25E-07	2.54E+01	1.63E-05	5.88E-02	2.02E-05	1.01E-02	9.59E-04	2.79E-04	2.31E-03	5.73E-04	5.84E-04	2.56E-03	1.02E-04	4.18E-08	1.73E-03	1.89E-03
16	B15	100	Single Unit Long Haul Truck	6	0.00E+00	8.10E-07	3.94E-08	1.07E+00	6.76E-07	2.41E-03	8.75E-07	4.27E-04	4.33E-05	1.21E-05	1.01E-04	2.42E-05	2.46E-05	1.07E-04	4.32E-06	1.71E-09	7.63E-05	7.97E-05
16	B15	100	Combination Short Haul Truck	69	0.00E+00	2.36E-05	1.72E-06	2.48E+01	6.70E-08	2.30E-02	1.70E-05	2.51E-02	7.98E-04	2.84E-04	1.32E-03	5.05E-04	4.95E-04	3.73E-03	8.30E-05	0.00E+00	8.24E-04	4.74E-03
16	B15	100	Combination Long Haul Truck	63	0.00E+00	2.05E-05	1.40E-06	2.24E+01	7.76E-08	2.29E-02	1.53E-05	2.40E-02	7.40E-04	2.05E-04	1.34E-03	4.20E-04	4.20E-04	3.42E-03	7.52E-05	0.00E+00	9.24E-04	4.50E-03
16	B16	100	Passenger Car	1512	0.00E+00	1.65E-05	1.79E-06	6.80E+01	1.15E-04	4.53E-01	3.68E-05	3.23E-03	4.91E-03	9.87E-04	3.58E-03	2.31E-03	2.37E-03	1.89E-04	3.44E-04	9.45E-08	1.21E-03	5.04E-04
16	B16	100	Passenger Truck	2531	0.00E+00	3.57E-05	3.80E-06	1.60E+02	2.34E-04	9.14E-01	7.59E-05	9.21E-03	8.65E-03	1.84E-03	7.31E-03	4.74E-03	4.86E-03	1.02E-03	8.02E-04	2.20E-07	2.45E-03	1.48E-03
16	B16	100	Single Unit Short Haul Truck	145	0.00E+00	1.95E-05	9.63E-07	2.65E+01	1.70E-05	6.12E-02	2.11E-05	1.06E-02	9.99E-04	2.91E-04	2.41E-03	5.96E-04	6.08E-04	2.67E-03	1.06E-04	4.35E-08	1.80E-03	1.97E-03
16	B16	100	Single Unit Long Haul Truck	6	0.00E+00	8.44E-07	4.10E-08	1.12E+00	7.04E-07	2.51E-03	9.12E-07	4.44E-04	4.51E-05	1.26E-05	1.05E-04	2.52E-05	2.56E-05	1.12E-04	4.50E-06	1.78E-09	7.94E-05	8.30E-05
16	B16	100	Combination Short Haul Truck	57	0.00E+00	1.96E-05	1.42E-06	2.05E+01	5.55E-08	1.91E-02	1.41E-05	2.08E-02	6.61E-04	2.35E-04	1.09E-03	4.18E-04	4.10E-04	3.09E-03	6.88E-05	0.00E+00	6.83E-04	3.93E-03
16	B16	100	Combination Long Haul Truck	52	0.00E+00	1.70E-05	1.16E-06	1.86E+01	6.43E-08	1.90E-02	1.27E-05	1.99E-02	6.13E-04	1.70E-04	1.11E-03	3.48E-04	3.48E-04	2.83E-03	6.23E-05	0.00E+00	7.65E-04	3.73E-03
16	B17	100	Passenger Car	517	0.00E+00	5.66E-06	6.11E-07	2.33E+01	3.93E-05	1.55E-01	1.26E-05	1.10E-03	1.68E-03	3.37E-04	1.22E-03	7.89E-04	8.10E-04	6.47E-05	1.18E-04	3.23E-08	4.15E-04	1.72E-04
16	B17	100	Passenger Truck	865	0.00E+00	1.22E-05	1.30E-06	5.48E+01	8.00E-05	3.12E-01	2.60E-05	3.15E-03	2.96E-03	6.30E-04	2.50E-03	1.62E-03	1.66E-03	3.49E-04	2.74E-04	7.52E-08	8.39E-04	5.07E-04
16	B17	100	Single Unit Short Haul Truck	259	0.00E+00	3.49E-05	1.72E-06	4.73E+01	3.04E-05	1.10E-01	3.77E-05	1.89E-02	1.79E-03	5.20E-04	4.31E-03	1.07E-03	1.09E-03	4.78E-03	1.90E-04	7.78E-08	3.22E-03	3.52E-03
16	B17	100	Single Unit Long Haul Truck	11	0.00E+00	1.51E-06	7.34E-08	2.00E+00	1.26E-06	4.48E-03	1.63E-06	7.95E-04	8.07E-05	2.25E-05	1.88E-04	4.51E-05	4.58E-05	2.00E-04	8.04E-06	3.18E-09	1.42E-04	1.48E-04
16	B17	100	Combination Short Haul Truck	122	0.00E+00	4.21E-05	3.07E-06	4.42E+01	1.20E-07	4.11E-02	3.03E-05	4.48E-02	1.42E-03	5.06E-04	2.35E-03	9.00E-04	8.83E-04	6.66E-03	1.48E-04	0.00E+00	1.47E-03	8.46E-03
16	B17	100	Combination Long Haul Truck	111	0.00E+00	3.65E-05	2.51E-06	4.00E+01	1.38E-07	4.09E-02	2.74E-05	4.27E-02	1.32E-03	3.65E-04	2.40E-03	7.49E-04	7.49E-04	6.10E-03	1.34E-04	0.00E+00	1.65E-03	8.02E-03
16	B18	100	Passenger Car	1138	0.00E+00	1.25E-05	1.35E-06	5.12E+01	8.66E-05	3.41E-01	2.77E-05	2.43E-03	3.70E-03	7.43E-04	2.70E-03	1.74E-03	1.78E-03	1.43E-04	2.59E-04	7.11E-08	9.13E-04	3.79E-04

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B22	100	Passenger Car	2427	0.00E+00	2.66E-05	2.87E-06	1.09E+02	1.85E-04	7.28E-01	5.91E-05	5.18E-03	7.89E-03	1.58E-03	5.75E-03	3.71E-03	3.80E-03	3.04E-04	5.52E-04	1.52E-07	1.95E-03	8.09E-04
16	B22	100	Passenger Truck	4064	0.00E+00	5.73E-05	6.11E-06	2.57E+02	3.76E-04	1.47E+00	1.22E-04	1.48E-02	1.39E-02	2.96E-03	1.17E-02	7.61E-03	7.80E-03	1.64E-03	1.29E-03	3.53E-07	3.94E-03	2.38E-03
16	B22	100	Single Unit Short Haul Truck	157	0.00E+00	2.11E-05	1.04E-06	2.87E+01	1.84E-05	6.64E-02	2.28E-05	1.14E-02	1.08E-03	3.15E-04	2.61E-03	6.46E-04	6.59E-04	2.90E-03	1.15E-04	4.72E-08	1.95E-03	2.14E-03
16	B22	100	Single Unit Long Haul Truck	7	0.00E+00	9.15E-07	4.45E-08	1.21E+00	7.63E-07	2.72E-03	9.88E-07	4.82E-04	4.89E-05	1.36E-05	1.14E-04	2.74E-05	2.77E-05	1.21E-04	4.87E-06	1.93E-09	8.61E-05	9.00E-05
16	B22	100	Combination Short Haul Truck	155	0.00E+00	5.33E-05	3.88E-06	5.59E+01	1.51E-07	5.20E-02	3.83E-05	5.67E-02	1.80E-03	6.40E-04	2.98E-03	1.14E-03	1.12E-03	8.42E-03	1.87E-04	0.00E+00	1.86E-03	1.07E-02
16	B22	100	Combination Long Haul Truck	141	0.00E+00	4.62E-05	3.17E-06	5.06E+01	1.75E-07	5.17E-02	3.46E-05	5.41E-02	1.67E-03	4.62E-04	3.03E-03	9.48E-04	9.48E-04	7.72E-03	1.70E-04	0.00E+00	2.09E-03	1.02E-02
16	B23	100	Passenger Car	936	0.00E+00	1.02E-05	1.11E-06	4.21E+01	7.12E-05	2.81E-01	2.28E-05	2.00E-03	3.04E-03	6.11E-04	2.22E-03	1.43E-03	1.47E-03	1.17E-04	2.13E-04	5.85E-08	7.51E-04	3.12E-04
16	B23	100	Passenger Truck	1567	0.00E+00	2.21E-05	2.35E-06	9.92E+01	1.45E-04	5.66E-01	4.70E-05	5.70E-03	5.35E-03	1.14E-03	4.53E-03	2.93E-03	3.01E-03	6.31E-04	4.96E-04	1.36E-07	1.52E-03	9.18E-04
16	B23	100	Single Unit Short Haul Truck	196	0.00E+00	2.64E-05	1.30E-06	3.58E+01	2.30E-05	8.29E-02	2.85E-05	1.43E-02	1.35E-03	3.94E-04	3.26E-03	8.07E-04	8.24E-04	3.62E-03	1.44E-04	5.89E-08	2.44E-03	2.67E-03
16	B23	100	Single Unit Long Haul Truck	9	0.00E+00	1.14E-06	5.56E-08	1.51E+00	9.53E-07	3.39E-03	1.23E-06	6.01E-04	6.11E-05	1.70E-05	1.42E-04	3.42E-05	3.46E-05	1.51E-04	6.09E-06	2.41E-09	1.08E-04	1.12E-04
16	B23	100	Combination Short Haul Truck	169	0.00E+00	5.83E-05	4.24E-06	6.11E+01	1.65E-07	5.68E-02	4.19E-05	6.20E-02	1.97E-03	7.00E-04	3.26E-03	1.25E-03	1.22E-03	9.21E-03	2.05E-04	0.00E+00	2.03E-03	1.17E-02
16	B23	100	Combination Long Haul Truck	154	0.00E+00	5.06E-05	3.47E-06	5.53E+01	1.92E-07	5.66E-02	3.79E-05	5.91E-02	1.83E-03	5.06E-04	3.32E-03	1.04E-03	1.04E-03	8.44E-03	1.86E-04	0.00E+00	2.28E-03	1.11E-02
16	B24	100	Passenger Car	3524	0.00E+00	3.86E-05	4.17E-06	1.59E+02	2.68E-04	1.06E+00	8.58E-05	7.53E-03	1.15E-02	2.30E-03	8.35E-03	5.38E-03	5.52E-03	4.41E-04	8.02E-04	2.20E-07	2.83E-03	1.17E-03
16	B24	100	Passenger Truck	5901	0.00E+00	8.33E-05	8.87E-06	3.74E+02	5.46E-04	2.13E+00	1.77E-04	2.15E-02	2.02E-02	4.29E-03	1.70E-02	1.10E-02	1.13E-02	2.38E-03	1.87E-03	5.13E-07	5.72E-03	3.46E-03
16	B24	100	Single Unit Short Haul Truck	374	0.00E+00	5.03E-05	2.48E-06	6.82E+01	4.38E-05	1.58E-01	5.43E-05	2.72E-02	2.58E-03	7.50E-04	6.21E-03	1.54E-03	1.57E-03	6.89E-03	2.74E-04	1.12E-07	4.64E-03	5.08E-03
16	B24	100	Single Unit Long Haul Truck	16	0.00E+00	2.18E-06	1.06E-07	2.88E+00	1.81E-06	6.46E-03	2.35E-06	1.15E-03	1.16E-04	3.24E-05	2.71E-04	6.51E-05	6.60E-05	2.88E-04	1.16E-05	4.58E-09	2.05E-04	2.14E-04
16	B24	100	Combination Short Haul Truck	256	0.00E+00	8.82E-05	6.42E-06	9.25E+01	2.50E-07	8.61E-02	6.34E-05	9.39E-02	2.98E-03	1.06E-03	4.93E-03	1.88E-03	1.85E-03	1.39E-02	3.10E-04	0.00E+00	3.08E-03	1.77E-02
16	B24	100	Combination Long Haul Truck	233	0.00E+00	7.65E-05	5.25E-06	8.37E+01	2.90E-07	8.56E-02	5.73E-05	8.95E-02	2.76E-03	7.65E-04	5.02E-03	1.57E-03	1.57E-03	1.28E-02	2.81E-04	0.00E+00	3.45E-03	1.68E-02
53	C29	70	Passenger Car	31	0.00E+00	3.87E-07	4.20E-08	1.49E+00	2.70E-06	1.00E-02	8.58E-07	6.23E-05	2.34E-04	3.76E-05	8.38E-05	5.40E-05	5.55E-05	5.48E-06	7.46E-06	2.03E-09	2.84E-05	9.77E-06
53	C29	70	Passenger Truck	51	0.00E+00	8.43E-07	8.93E-08	3.43E+00	5.35E-06	1.83E-02	1.75E-06	1.91E-04	4.20E-04	6.84E-05	1.68E-04	1.09E-04	1.12E-04	2.47E-05	1.71E-05	4.47E-09	5.59E-05	3.13E-05
53	C29	70	Single Unit Short Haul Truck	1	0.00E+00	1.89E-07	9.46E-09	1.48E-01	1.54E-07	2.97E-04	2.01E-07	9.31E-05	1.33E-05	2.66E-06	2.30E-05	5.65E-06	5.74E-06	1.48E-05	5.96E-07	2.41E-10	1.72E-05	1.74E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	1.12E-06	7.98E-08	8.16E-01	3.65E-09	9.66E-04	8.22E-07	1.18E-03	8.52E-05	1.87E-05	6.84E-05	2.36E-05	2.36E-05	1.23E-04	2.72E-06	0.00E+00	4.48E-05	2.23E-04
53	C29	70	Combination Long Haul Truck	2	0.00E+00	1.02E-06	6.78E-08	7.61E-01	4.20E-09	1.02E-03	7.71E-07	1.17E-03	8.48E-05	1.55E-05	7.06E-05	2.05E-05	2.07E-05	1.16E-04	2.54E-06	0.00E+00	5.00E-05	2.19E-04
50	C30	40	Passenger Car	106	0.00E+00	1.79E-06	1.94E-07	6.18E+00	1.25E-05	4.61E-02	3.99E-06	1.93E-04	1.84E-03	2.63E-04	3.88E-04	2.50E-04	2.56E-04	3.34E-05	3.08E-05	7.45E-09	1.31E-04	3.02E-05
50	C30	40	Passenger Truck	178	0.00E+00	4.10E-06	4.29E-07	1.38E+01	2.46E-05	7.93E-02	8.22E-06	7.28E-04	3.27E-03	4.65E-04	7.73E-04	5.05E-04	5.15E-04	1.18E-04	6.79E-05	1.45E-08	2.55E-04	1.23E-04
50	C30	40	Single Unit Short Haul Truck	44	0.00E+00	1.97E-05	1.03E-06	9.43E+00	1.71E-05	1.62E-02	2.09E-05	9.61E-03	1.79E-03	2.97E-04	2.32E-03	6.13E-04	6.23E-04	9.52E-04	3.81E-05	1.61E-08	1.70E-03	1.81E-03
50	C30	40	Single Unit Long Haul Truck	2	0.00E+00	8.62E-07	4.49E-08	4.07E-01	7.48E-07	7.05E-04	9.16E-07	4.18E-04	8.02E-05	1.32E-05	1.02E-04	2.68E-05	2.72E-05	4.11E-05	1.64E-06	6.99E-10	7.48E-05	7.86E-05
50	C30	40	Combination Short Haul Truck	34	0.00E+00	3.01E-05	2.08E-06	1.53E+01	1.08E-07	2.62E-02	2.23E-05	3.35E-02	3.50E-03	6.30E-04	1.95E-03	6.22E-04	6.29E-04	2.30E-03	5.11E-05	0.00E+00	1.32E-03	6.32E-03
50	C30	40	Combination Long Haul Truck	31	0.00E+00	2.74E-05	1.79E-06	1.45E+01	1.23E-07	2.91E-02	2.11E-05	3.36E-02	3.51E-03	5.59E-04	2.00E-03	5.45E-04	5.55E-04	2.22E-03	4.85E-05	0.00E+00	1.45E-03	6.33E-03
52	C31	60	Passenger Car	257	0.00E+00	3.54E-06	3.83E-07	1.29E+01	2.46E-05	9.13E-02	7.85E-06	5.05E-04	2.53E-03	3.90E-04	7.64E-04	4.94E-04	5.07E-04	5.37E-05	6.46E-05	1.73E-08	2.59E-04	7.92E-05
52	C31	60	Passenger Truck	430	0.00E+00	7.77E-06	8.21E-07	2.94E+01	4.85E-05	1.63E-01	1.60E-05	1.63E-03	4.52E-03	6.99E-04	1.52E-03	9.91E-04	1.01E-03	2.23E-04	1.46E-04	3.66E-08	5.06E-04	2.69E-04
52	C31	60	Single Unit Short Haul Truck	45	0.00E+00	1.33E-05	6.62E-07	8.43E+00	1.09E-05	1.63E-02	1.42E-05	6.31E-03	1.07E-03	1.94E-04	1.60E-03	3.97E-04	4.03E-04	8.44E-04	3.41E-05	1.40E-08	1.20E-03	1.18E-03
52	C31	60	Single Unit Long Haul Truck	2	0.00E+00	5.80E-07	2.88E-08	3.60E-01	4.74E-07	6.90E-04	6.19E-07	2.73E-04	4.82E-05	8.62E-06	7.07E-05	1.73E-05	1.76E-05	3.60E-05	1.45E-06	5.96E-10	5.29E-05	5.12E-05
52	C31	60	Combination Short Haul Truck	19	0.00E+00	1.09E-05	7.63E-07	7.11E+00	3.86E-08	9.53E-03	8.09E-06	1.19E-02	1.02E-03	2.01E-04	6.96E-04	2.27E-04	2.27E-04	1.07E-03	2.38E-05	0.00E+00	4.67E-04	2.23E-03
52	C31	60	Combination Long Haul Truck	17	0.00E+00	9.77E-06	6.39E-07	6.67E+00	4.43E-08	1.03E-02	7.56E-06	1.17E-02	1.02E-03	1.73E-04	7.14E-04	1.95E-04	1.97E-04	1.01E-03	2.23E-05	0.00E+00	5.17E-04	2.21E-03
53	C32	70	Passenger Car	157	0.00E+00	1.99E-06	2.16E-07	7.64E+00	1.39E-05	5.15E-02	4.41E-06	3.20E-04	1.20E-03	1.93E-04	4.31E-04	2.78E-04	2.85E-04	2.81E-05	3.83E-05	1.04E-08	1.46E-04	5.02E-05
53	C32	70	Passenger Truck	263	0.00E+00	4.33E-06	4.59E-07	1.76E+01	2.75E-05	9.43E-02	8.99E-06	9.79E-04	2.16E-03	3.52E-04	8.62E-04	5.59E-04	5.73E-04	1.27E-04	8.77E-05	2.29E-08	2.87E-04	1.61E-04
53	C32	70	Single Unit Short Haul Truck	60	0.00E+00	1.41E-05	7.08E-07	1.11E+01	1.16E-05	2.22E-02	1.51E-05	6.97E-03	9.94E-04	1.99E-04	1.72E-03	4.23E-04	4.29E-04	1.11E-03	4.46E-05	1.80E-08	1.28E-03	1.30E-03
53	C32	70	Single Unit Long Haul Truck	3	0.00E+00	6.16E-07	3.06E-08	4.70E-01	4.99E-07	9.28E-04	6.56E-07	3.00E-04	4.54E-05	8.84E-06	7.51E-05	1.83E-05	1.86E-05	4.69E-05	1.89E-06	7.59E-10	5.64E-05	5.61E-05
53	C32	70	Combination Short Haul Truck	44	0.00E+00	2.29E-05	1.63E-06	1.67E+01	7.45E-08	1.97E-02	1.68E-05	2.41E-02	1.74E-03	3.81E-04	1.40E-03	4.83E-04	4.82E-04	2.51E-03	5.56E-05	0.00E+00	9.16E-04	4.55E-03
53	C32	70	Combination Long Haul Truck	40	0.00E+00	2.08E-05	1.39E-06	1.55E+01	8.58E-08	2.09E-02	1.58E-05	2.38E-02	1.73E-03	3.16E-04	1.44E-03	4.19E-04	4.24E-04	2.37E-03	5.20E-05	0.00E+00	1.02E-03	4.48E-03
52	C33	60	Passenger Car	51	0.00E+00	6.96E-07	7.52E-08	2.54E+00	4.84E-06	1.80E-02	1.54E-06	9.92E-05	4.98E-04	7.66E-05	1.50E-04	9.71E-05	9.96E-05	1.05E-05	1.27E-05	3.39E-09	5.09E-05	1.56E-05
52	C33	60	Passenger Truck	85	0.00E+00	1.53E-06	1.61E-07	5.78E+00	9.54E-06	3.19E-02	3.15E-06	3.19E-04	8.88E-04	1.37E-04	2.98E-04	1.95E-04	1.99E-04	4.39E-05	2.87E-05	7.19E-09	9.94E-05	5.29E-05
52	C33	60	Single Unit Short Haul Truck	2	0.00E+00	6.74E-07	3.36E-08	4.28E-01	5.54E-07	8.27E-04	7.19E-07	3.21E-04	5.44E-05	9.86E-06	8.14E-05	2.02E-05	2.05E-05	4.29E-05	1.73E-06	7.12E-10	6.12E-05	6.01E-05
50	C34	40	Passenger Car	70	0.00E+00	1.18E-06	1.27E-07	4.07E+00	8.19E-06	3.04E-02	2.63E-06	1.27E-04	1.21E-03	1.73E-04	2.55E-04	1.64E-04	1.69E-04	2.20E-05	2.02E-05	4.90E-09	8.64E-05	1.98E-05
50	C34	40	Passenger Truck	117	0.00E+00	2.69E-06	2.82E-07	9.06E+00	1.62E-05	5.21E-02	5.41E-06	4.79E-04	2.15E-03	3.06E-04	5.08E-04	3.32E-04	3.39E-04	7.75E-05	4.46E-05	9.55E-09	1.68E-04	8.11E-05
50	C34	40	Single Unit Short Haul Truck	7	0.00E+00	2.92E-06	1.53E-07	1.40E+00	2.54E-06	2.41E-03	3.10E-06	1.43E-03	2.66E-04	4.41E-05	3.45E-04	9.10E-05	9.25E-05	1.41E-04	5.65E-06	2.39E-09	2.52E-04	2.68E-04
50	C34	40	Combination Short Haul Truck	3	0.00E+00	2.25E-06	1.56E-07	1.14E+00	8.12E-09	1.96E-03	1.67E-06	2.51E-03	2.62E-04	4.72E-05	1.46E-04	4.66E-05	4.71E-05	1.72E-04	3.82E-06	0.00E+00	9.88E-05	4.73E-04
50	C34	40	Combination Long Haul Truck	2	0.00E+00	2.05E-06	1.34E-07	1.09E+00	9.20E-09	2.18E-03	1.58E-06	2.52E-03	2.63E-04	4.19E-05	1.50E-04	4.08E-05	4.16E-05	1.66E-04	3.64E-06	0.00E+00	1.09E-04	4.74E-04
53	C35	70	Passenger Car	110	0.00E+00	1.40E-06	1.52E-07	5.37E+00	9.76E-06	3.62E-02	3.10E-06	2.25E-04	8.44E-04	1.36E-04	3.03E-04	1.95E-04	2.00E-04	1.98E-05	2.69E-05	7.33E-09	1.02E-04	3.53E-05
53	C35	70	Passenger Truck	185	0.00E+00	3.05E-06	3.23E-07	1.24E+01	1.93E-05	6.63E-02	6.32E-06	6.89E-04	1.52E-03	2.47E-04	6.06E-04	3.93E-04	4.03E-04	8.94E-05	6.17E-05	1.61E-08	2.02E-04	1.13E-04
53	C35	70	Single Unit Short Haul Truck	16	0.00E+00	3.85E-06	1.93E-07	3.02E+00	3.15E-06	6.06E-03	4.11E-06	1.90E-03	2.71E-04	5.42E-05	4.69E-04	1.15E-04	1.17E-04	3.03E-04	1.22E-05	4.92E-09	3.50E-04	3.56E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.68E-07	8.36E-09	1.28E-01	1.36E-07	2.53E-04	1.79E-07	8.18E-05	1.24E-05	2.41E-06	2.05E-05	4.98E-06	5.06E-06	1.28E-05	5.16E-07	2.07E-10	1.54E-05	1.53E-05
53	C35	70	Combination Short Haul Truck	13	0.00E+00	6.57E-06	4.67E-07	4.78E+00	2.14E-08	5.66E-03	4.81E-06	6.92E-03	4.99E-04	1.09E-04	4.01E-04	1.38E-04	1.38E-04	7.20E-04	1.60E-05	0.00E+00	2.63E-04	1.30E-03
53	C35	70	Combination Long Haul Truck	12	0.00E+00	5.96E-06	3.97E-07	4.45E+00	2.46E-08	5.99E-03	4.52E-06	6.83E-03	4.97E-04	9.07E-05	4.13E-04	1.20E-04	1.21E-04	6.79E-04	1.49E-05	0.00E+00	2.93E-04	1.29E-03
50	C36	40	Passenger Car	305	0.00E+00	5.12E-06	5.54E-07	1.77E+01	3.56E-05	1.32E-01	1.14E-05	5.51E-04	5.27E-03	7.52E-04	1.11E-03	7.15E-04	7.34E-04	9.56E-05	8.80E-05	2.13E-08	3.76E-04	8.63E-05
50	C36	40	Passenger Truck	510	0.00E+00	1.17E-05	1.23E-06	3.94E+01	7.03E-05	2.27E-01	2.35E-05	2.08E-03	9.35E-03	1.33E-03	2.21E-03	1.45E-03	1.47E-03	3.37E-04	1.94E-04	4.15E-08	7.30E-04	3.53E-04
50	C36	40	Single Unit Short Haul Truck	45	0.00E+00	2.00E-05	1.05E-06	9.60E+00	1.74E-05	1.65E-02	2.13E-05	9.79E-03	1.83E-03	3.03E-04	2.37E-03	6.25E-04	6.35E-04	9.71E-04	3.88E-05	1.64E-08	1.73E-03	1.84E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	8.78E-07	4.57E-08	4.15E-01	7.62E-07	7.18E-04	9.33E-07	4.26E-04	8.17E-05	1.35E-05	1.04E-04	2.73E-05	2.77E-05	4.19E-05	1.67E-06	7.12E-10	7.62E-05	8.01E-05
50	C36	40	Combination Short Haul Truck	59	0.00E+00	5.19E-05	3.59E-06	2.63E+01	1.87E-07	4.52E-02	3.85E-05	5.79E-02	6.03E-03	1.09E-03	3.37E-03	1.07E-03	1.08E-03	3.97E-03	8.81E-05	0.00E+00	2.28E-03	1.09E-02
50	C36	40	Combination Long Haul Truck	53	0.00E+00	4.73E-05	3.08E-06	2.51E+01	2.12E-07	5.03E-02	3.63E-05	5.80E-02	6.06E-03	9.65E-04	3.45E-03	9.40E-04	9.58E-04	3.82E-03	8.38E-05	0.00E+00	2.51E-03	1.09E-02
52	C37	60	Passenger Car	91	0.00E+00	1.26E-06	1.36E-07	4.59E+00	8.76E-06	3.25E-02	2.79E-06	1.79E-04	9.01E-04	1.39E-04	2.72E-04	1.76E-04	1.80E-04	1.91E-05	2.30E-05	6.14E-09	9.21E-05	2.82E-05
52	C37	60	Passenger Truck	153	0.00E+00	2.76E-06	2.92E-07	1.05E+01	1.73E-05	5.78E-02	5.69E-06	5.78E-04	1.61E-03	2.49E-04	5.40E-04	3.52E-04	3.61E-04	7.95E-05	5.18E-05	1.30E-08	1.80E-04	9.56E-05
52	C37	60	Single Unit Short Haul Truck	36	0.00E+00	1.05E-05	5.26E-07	6.69E+00	8.66E-06	1.29E-02	1.12E-05	5.01E-03	8.51E-04	1.54E-04	1.27E-03	3.15E-04	3.20E-04	6.70E-04	2.71E-05	1.11E-08	9.57E-04	9.40E-04
52	C37	60	Single Unit Long Haul Truck	2	0.00E+00	4.61E-07	2.29E-08	2.86E-01	3.76E-07	5.48E-04	4.91E-07	2.17E-04	3.82E-05	6.84E-06	5.61E-05	1.37E-05	1.39E-05	2.86E-05	1.15E-06	4.74E-10	4.20E-05	4.07E-05
52	C37	60	Combination Short Haul Truck	25	0.00E+00	1.47E-05	1.02E-06	9.54E+00	5.19E-08	1.28E-02	1.09E-05	1.59E-02	1.36E-03	2.70E-04	9.34E-04	3.04E-04	3.04E-04	1.44E-03	3.19E-05	0.00E+00	6.27E-04	2.99E-03
52	C37	60	Combination Long Haul Truck	23	0.00E+00	1.31E-05	8.58E-07	8.96E+00	5.95E-08	1.38E-02	1.02E-05	1.58E-02	1.37E-03	2.33E-04	9.59E-04	2.61E-04	2.64E-04	1.36E-03	2.99E-05	0.00E+00	6.94E-04	2.97E-03
53	C38	70	Passenger Car	124	0.00E+00	1.57E-06	1.70E-07	6.02E+00	1.09E-05	4.06E-02	3.47E-06	2.52E-04	9.46E-04	1.52E-04	3.39E-04	2.19E-04	2.25E-04	2.22E-05	3.02E-05	8.22E-09	1.15E-04	3.96E-05
53	C38	70	Passenger Truck	207	0.00E+00	3.42E-06	3.62E-07	1.39E+01	2.17E-05	7.43E-02	7.08E-06	7.72E-04	1.70E-03	2.77E-04	6.80E-04	4.41E-04	4.52E-04	1.00E-04	6.91E-05	1.81E-08	2.26E-04	1.27E-04
53	C38	70	Single Unit Short Haul Truck	77	0.00E+00	1.81E-05	9.06E-07	1.42E+01	1.48E-05	2.84E-02	1.93E-05	8.92E-03	1.27E-03	2.54E-04	2.20E-03	5.41E-04	5.49E-04	1.42E-03	5.71E-05	2.31E-08	1.64E-03	1.67E-03
53	C38	70	Single Unit Long Haul Truck	3	0.00E+00	7.88E-07	3.92E-08	6.02E-01	6.38E-07	1.19E-03	8.39E-07	3.84E-04	5.81E-05	1.13E-05	9.62E-05	2.34E-05	2.38E-05	6.01E-05	2.42E-06	9.71E-10	7.21E-05	7.18E-05
53	C38	70	Combination Short Haul Truck	53	0.00E+00	2.74E-05	1.95E-06	1.99E+01	8.91E-08	2.36E-02	2.01E-05	2.89E-02	2.08E-03	4.56E-04	1.67E-03	5.78E-04	5.76E-04	3.01E-03	6.66E-05	0.00E+00	1.10E-03	5.44E-03
53	C38	70	Combination Long Haul Truck	48	0.00E+00	2.49E-05	1.66E-06	1.86E+01	1.03E-07	2.50E-02	1.88E-05	2.85E-02	2.07E-03	3.78E-04	1.72E-03	5.01E-04	5.07E-04	2.83E-03	6.22E-05	0.00E+00	1.22E-03	5.36E-03
52	C39	60	Passenger Car	106	0.00E+00	1.46E-06	1.57E-07	5.31E+00	1.01E-05	3.76E-02	3.23E-06	2.08E-04	1.04E-03	1.60E-04	3.14E-04	2.03E-04	2.08E-04	2.21E-05	2.66E-05	7.10E-09	1.07E-04	3.26E-05
52	C39	60	Passenger Truck	177	0.00E+00	3.20E-06	3.38E-07	1.21E+01	2.00E-05	6.69E-02	6.59E-06	6.69E-04	1.86E-03	2.88E-04	6.24E-04	4.08E-04	4.17E-04	9.19E-05	6.00E-05	1.50E-08	2.08E-04	1.11E-04
52	C39	60	Single Unit Short Haul Truck	8	0.00E+00	2.42E-06	1.21E-07	1.53E+00	1.98E-06	2.96E-03	2.57E-06	1.15E-03	1.95E-04	3.53E-05	2.92E-04	7.22E-05	7.34E-05	1.54E-04	6.20E-06	2.55E-09	2.19E-04	2.15E-04
52	C39	60	Combination Short Haul Truck	10	0.00E+00	5.65E-06	3.95E-07	3.68E+00	2.00E-08	4.93E-03	4.19E-06	6.13E-03	5.25E-04	1.04E-04	3.60E-04	1.17E-04	1.17E-04	5.55E-04	1.23E-05	0.00E+00	2.42E-04	1.15E-03
52	C39	60	Combination Long Haul Truck	9	0.00E+00	5.06E-06	3.31E-07	3.45E+00	2.29E-08	5.33E-03	3.91E-06	6.08E-03	5.28E-04	8.97E-05	3.70E-04	1.01E-04	1.02E-04	5.25E-04	1.15E-05	0.00E+00	2.67E-04	1.15E-03
50	C40	40	Passenger Car	106	0.00E+00	1.78E-06	1.92E-07	6.14E+00	1.24E-05	4.58E-02	3.96E-06	1.91E-04	1.83E-03	2.61E-04	3.85E-04	2.48E-04	2.55E-04	3.32E-05	3.05E-05	7.40E-09	1.30E-04	2.99E-05
50	C40	40	Passenger Truck	177	0.00E+00	4.07E-06	4.26E-07	1.37E+01	2.44E-05	7.87E-02	8.16E-06	7.23E-04	3.24E-03	4.62E-04	7.67E-04	5.01E-04	5.11E-04	1.17E-04	6.73E-05	1.44E-08	2.53E-04	1.22E-04
50	C40	40	Single Unit Short Haul Truck	8	0.00E+00	3.65E-06	1.91E-07	1.75E+00	3.17E-06	3.01E-03	3.87E-06	1.78E-03	3.33E-04	5.51E-05	4.31E-04	1.14E-04	1.16E-04	1.77E-04	7.06E-06	2.98E-09	3.14E-04	3.35E-04
50	C40	40	Combination Short Haul Truck	10	0.00E+00	8.51E-06	5.89E-07	4.32E+00	3.07E-08	7.41E-03	6.32E-06	9.49E-03	9.89E-04	1.78E-04	5.52E-04	1.76E-04	1.78E-04	6.51E-04	1.45E-05	0.00E+00	3.73E-04	1.79E-03
50	C40	40	Combination Long Haul Truck	9

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
55	C44	90	Combination Short Haul Truck	18	0.00E+00	6.32E-06	4.49E-07	6.22E+00	2.04E-08	6.12E-03	4.62E-06	6.52E-03	2.85E-04	8.41E-05	3.73E-04	1.33E-04	1.30E-04	9.41E-04	2.09E-05	0.00E+00	2.43E-04	1.22E-03
55	C44	90	Combination Long Haul Truck	16	0.00E+00	5.45E-06	3.60E-07	5.68E+00	2.37E-08	6.17E-03	4.18E-06	6.13E-03	2.73E-04	6.45E-05	3.82E-04	1.09E-04	1.09E-04	8.67E-04	1.91E-05	0.00E+00	2.73E-04	1.16E-03
53	C45	70	Passenger Car	170	0.00E+00	2.15E-06	2.33E-07	8.24E+00	1.50E-05	5.56E-02	4.76E-06	3.46E-04	1.29E-03	2.09E-04	4.65E-04	2.99E-04	3.07E-04	3.04E-05	4.13E-05	1.13E-08	1.57E-04	5.41E-05
53	C45	70	Passenger Truck	284	0.00E+00	4.68E-06	4.95E-07	1.90E+01	2.96E-05	1.02E-01	9.70E-06	1.06E-03	2.33E-03	3.79E-04	9.30E-04	6.03E-04	6.18E-04	1.37E-04	9.46E-05	2.48E-08	3.10E-04	1.73E-04
53	C45	70	Single Unit Short Haul Truck	49	0.00E+00	1.15E-05	5.74E-07	8.98E+00	9.37E-06	1.80E-02	1.22E-05	5.65E-03	8.06E-04	1.61E-04	1.39E-03	3.43E-04	3.48E-04	8.99E-04	3.62E-05	1.46E-08	1.04E-03	1.06E-03
53	C45	70	Single Unit Long Haul Truck	2	0.00E+00	4.99E-07	2.48E-08	3.81E-01	4.04E-07	7.53E-04	5.32E-07	2.43E-04	3.68E-05	7.17E-06	6.09E-05	1.48E-05	1.51E-05	3.80E-05	1.53E-06	6.15E-10	4.57E-05	4.55E-05
53	C45	70	Combination Short Haul Truck	20	0.00E+00	1.04E-05	7.38E-07	7.55E+00	3.37E-08	8.93E-03	7.60E-06	1.09E-02	7.88E-04	1.73E-04	6.33E-04	2.19E-04	2.18E-04	1.14E-03	2.52E-05	0.00E+00	4.15E-04	2.06E-03
53	C45	70	Combination Long Haul Truck	18	0.00E+00	9.41E-06	6.27E-07	7.03E+00	3.89E-08	9.46E-03	7.14E-06	1.08E-02	7.84E-04	1.43E-04	6.53E-04	1.90E-04	1.92E-04	1.07E-03	2.35E-05	0.00E+00	4.63E-04	2.03E-03
50	C46	40	Passenger Car	111	0.00E+00	1.86E-06	2.01E-07	6.43E+00	1.29E-05	4.80E-02	4.15E-06	2.00E-04	1.92E-03	2.73E-04	4.03E-04	2.60E-04	2.67E-04	3.48E-05	3.20E-05	7.75E-09	1.37E-04	3.14E-05
50	C46	40	Passenger Truck	185	0.00E+00	4.26E-06	4.47E-07	1.43E+01	2.55E-05	8.24E-02	8.55E-06	7.57E-04	3.40E-03	4.84E-04	8.04E-04	5.25E-04	5.36E-04	1.23E-04	7.06E-05	1.51E-08	2.65E-04	1.28E-04
50	C46	40	Single Unit Short Haul Truck	54	0.00E+00	2.40E-05	1.26E-06	1.15E+01	2.08E-05	1.98E-02	2.55E-05	1.17E-02	2.19E-03	3.63E-04	2.83E-03	7.48E-04	7.60E-04	1.16E-03	4.64E-05	1.96E-08	2.07E-03	2.20E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	1.05E-06	5.47E-08	4.96E-01	9.12E-07	8.59E-04	1.12E-06	5.09E-04	9.78E-05	1.61E-05	1.24E-04	3.27E-05	3.32E-05	5.01E-05	2.00E-06	8.52E-10	9.12E-05	9.58E-05
50	C46	40	Combination Short Haul Truck	33	0.00E+00	2.95E-05	2.05E-06	1.50E+01	1.06E-07	2.57E-02	2.19E-05	3.29E-02	3.43E-03	6.19E-04	1.92E-03	6.11E-04	6.17E-04	2.26E-03	5.02E-05	0.00E+00	1.30E-03	6.21E-03
50	C46	40	Combination Long Haul Truck	30	0.00E+00	2.69E-05	1.76E-06	1.43E+01	1.21E-07	2.86E-02	2.07E-05	3.30E-02	3.45E-03	5.49E-04	1.97E-03	5.35E-04	5.45E-04	2.18E-03	4.77E-05	0.00E+00	1.43E-03	6.22E-03
53	C48	70	Passenger Car	60	0.00E+00	7.63E-07	8.27E-08	2.93E+00	5.32E-06	1.98E-02	1.69E-06	1.23E-04	4.60E-04	7.42E-05	1.65E-04	1.06E-04	1.09E-04	1.08E-05	1.47E-05	4.00E-09	5.59E-05	1.93E-05
53	C48	70	Passenger Truck	101	0.00E+00	1.66E-06	1.76E-07	6.76E+00	1.05E-05	3.62E-02	3.45E-06	3.76E-04	8.27E-04	1.35E-04	3.31E-04	2.14E-04	2.20E-04	4.88E-05	3.36E-05	8.80E-09	1.10E-04	6.17E-05
53	C48	70	Single Unit Short Haul Truck	101	0.00E+00	2.38E-05	1.19E-06	1.87E+01	1.95E-05	3.75E-02	2.54E-05	1.17E-02	1.68E-03	3.35E-04	2.90E-03	7.12E-04	7.24E-04	1.87E-03	7.52E-05	3.04E-08	2.17E-03	2.20E-03
53	C48	70	Single Unit Long Haul Truck	4	0.00E+00	1.04E-06	5.17E-08	7.92E-01	8.41E-07	1.56E-03	1.11E-06	5.05E-04	7.65E-05	1.49E-05	1.27E-04	3.08E-05	3.13E-05	7.91E-05	3.19E-06	1.28E-09	9.50E-05	9.46E-05
53	C48	70	Combination Short Haul Truck	65	0.00E+00	3.36E-05	2.39E-06	2.45E+01	1.09E-07	2.90E-02	2.46E-05	3.54E-02	2.55E-03	5.59E-04	2.05E-03	7.09E-04	7.07E-04	3.69E-03	8.17E-05	0.00E+00	1.34E-03	6.67E-03
53	C48	70	Combination Long Haul Truck	59	0.00E+00	3.05E-05	2.03E-06	2.28E+01	1.26E-07	3.07E-02	2.31E-05	3.49E-02	2.54E-03	4.64E-04	2.12E-03	6.15E-04	6.22E-04	3.48E-03	7.63E-05	0.00E+00	1.50E-03	6.58E-03
52	C49	60	Passenger Car	280	0.00E+00	3.85E-06	4.16E-07	1.41E+01	2.68E-05	9.94E-02	8.54E-06	5.49E-04	2.76E-03	4.24E-04	8.31E-04	5.37E-04	5.51E-04	5.84E-05	7.03E-05	1.88E-08	2.82E-04	8.62E-05
52	C49	60	Passenger Truck	468	0.00E+00	8.45E-06	8.94E-07	3.20E+01	5.28E-05	1.77E-01	1.74E-05	1.77E-03	4.92E-03	7.61E-04	1.65E-03	1.08E-03	1.10E-03	2.43E-04	1.59E-04	3.98E-08	5.50E-04	2.93E-04
52	C49	60	Single Unit Short Haul Truck	35	0.00E+00	1.04E-05	5.19E-07	6.60E+00	8.54E-06	1.27E-02	1.11E-05	4.94E-03	8.40E-04	1.52E-04	1.26E-03	3.11E-04	3.16E-04	6.61E-04	2.67E-05	1.10E-08	9.43E-04	9.27E-04
52	C49	60	Single Unit Long Haul Truck	2	0.00E+00	4.54E-07	2.25E-08	2.82E-01	3.71E-07	5.41E-04	4.84E-07	2.14E-04	3.77E-05	6.75E-06	5.54E-05	1.35E-05	1.38E-05	2.82E-05	1.14E-06	4.67E-10	4.14E-05	4.01E-05
52	C49	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.82E-07	8.22E+00	4.47E-08	1.10E-02	9.35E-06	1.37E-02	1.17E-03	2.32E-04	8.04E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.58E-03
52	C49	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.39E-07	7.72E+00	5.12E-08	1.19E-02	8.75E-06	1.36E-02	1.18E-03	2.00E-04	8.26E-04	2.25E-04	2.28E-04	1.17E-03	2.58E-05	0.00E+00	5.98E-04	2.56E-03
50	C50	40	Passenger Car	6	0.00E+00	1.06E-07	1.15E-08	3.67E-01	7.40E-07	2.74E-03	2.37E-07	1.14E-05	1.10E-04	1.56E-05	2.30E-05	1.49E-05	1.52E-05	1.99E-06	1.83E-06	4.43E-10	7.80E-06	1.79E-06
50	C50	40	Passenger Truck	11	0.00E+00	2.43E-07	2.55E-08	8.18E-01	1.46E-06	4.71E-03	4.89E-07	4.33E-05	1.94E-04	2.76E-05	4.59E-05	3.00E-05	3.06E-05	7.01E-06	4.03E-06	8.62E-10	1.52E-05	7.33E-06
50	C50	40	Combination Short Haul Truck	1	0.00E+00	1.13E-06	7.81E-08	5.72E-01	4.06E-09	9.82E-04	8.37E-07	1.26E-03	1.31E-04	2.36E-05	7.31E-05	2.33E-05	2.36E-05	8.62E-05	1.91E-06	0.00E+00	4.95E-05	2.37E-04
50	C50	40	Combination Long Haul Truck	1	0.00E+00	1.03E-06	6.70E-08	5.44E-01	4.61E-09	1.09E-03	7.89E-07	1.26E-03	1.32E-04	2.10E-05	7.51E-05	2.04E-05	2.08E-05	8.31E-05	1.82E-06	0.00E+00	5.44E-05	2.37E-04
53	C51	70	Passenger Car	192	0.00E+00	2.44E-06	2.64E-07	9.35E+00	1.70E-05	6.31E-02	5.40E-06	3.92E-04	1.47E-03	2.37E-04	5.27E-04	3.40E-04	3.49E-04	3.45E-05	4.69E-05	1.28E-08	1.78E-04	6.15E-05
53	C51	70	Passenger Truck	322	0.00E+00	5.31E-06	5.62E-07	2.16E+01	3.36E-05	1.15E-01	1.10E-05	1.20E-03	2.64E-03	4.30E-04	1.06E-03	6.85E-04	7.02E-04	1.56E-04	1.07E-04	2.81E-08	3.52E-04	1.97E-04
53	C51	70	Single Unit Short Haul Truck	25	0.00E+00	5.83E-06	2.92E-07	4.57E+00	4.77E-06	9.17E-03	6.21E-06	2.87E-03	4.10E-04	8.20E-05	7.10E-04	1.74E-04	1.77E-04	4.58E-04	1.84E-05	7.45E-09	5.30E-04	5.38E-04
53	C51	70	Single Unit Long Haul Truck	1	0.00E+00	2.54E-07	1.26E-08	1.94E-01	2.06E-07	3.83E-04	2.71E-07	1.24E-04	1.87E-05	3.65E-06	3.10E-05	7.54E-06	7.66E-06	1.94E-05	7.81E-07	3.13E-10	2.33E-05	2.32E-05
53	C51	70	Combination Short Haul Truck	10	0.00E+00	5.08E-06	3.62E-07	3.70E+00	1.65E-08	4.38E-03	3.72E-06	5.36E-03	3.86E-04	8.46E-05	3.10E-04	1.07E-04	1.07E-04	5.57E-04	1.23E-05	0.00E+00	2.03E-04	1.01E-03
53	C51	70	Combination Long Haul Truck	9	0.00E+00	4.61E-06	3.07E-07	3.45E+00	1.90E-08	4.64E-03	3.50E-06	5.28E-03	3.84E-04	7.02E-05	3.20E-04	9.30E-05	9.40E-05	5.26E-04	1.15E-05	0.00E+00	2.27E-04	9.94E-04
50	C52	40	Passenger Car	74	0.00E+00	1.24E-06	1.34E-07	4.28E+00	8.62E-06	3.20E-02	2.77E-06	1.33E-04	1.28E-03	1.82E-04	2.68E-04	1.73E-04	1.78E-04	2.31E-05	2.13E-05	5.16E-09	9.09E-05	2.09E-05
50	C52	40	Passenger Truck	123	0.00E+00	2.84E-06	2.97E-07	9.54E+00	1.70E-05	5.49E-02	5.69E-06	5.04E-04	2.26E-03	3.22E-04	5.35E-04	3.50E-04	3.57E-04	8.16E-05	4.70E-05	1.01E-08	1.77E-04	8.54E-05
50	C52	40	Single Unit Short Haul Truck	10	0.00E+00	4.38E-06	2.30E-07	2.10E+00	3.81E-06	3.62E-03	4.66E-06	2.14E-03	4.00E-04	6.63E-05	5.18E-04	1.37E-04	1.39E-04	2.12E-04	8.49E-06	3.59E-09	3.78E-04	4.03E-04
50	C52	40	Combination Short Haul Truck	5	0.00E+00	4.35E-06	3.01E-07	2.21E+00	1.57E-08	3.79E-03	3.23E-06	4.85E-03	5.06E-04	9.12E-05	2.82E-04	9.00E-05	9.09E-05	3.33E-04	7.39E-06	0.00E+00	1.91E-04	9.15E-04
50	C52	40	Combination Long Haul Truck	4	0.00E+00	3.97E-06	2.59E-07	2.10E+00	1.78E-08	4.21E-03	3.05E-06	4.86E-03	5.08E-04	8.09E-05	2.90E-04	7.88E-05	8.03E-05	3.21E-04	7.02E-06	0.00E+00	2.10E-04	9.16E-04
52	C53	60	Passenger Car	95	0.00E+00	1.30E-06	1.41E-07	4.76E+00	9.07E-06	3.36E-02	2.89E-06	1.86E-04	9.33E-04	1.44E-04	2.81E-04	1.82E-04	1.87E-04	1.98E-05	2.38E-05	6.36E-09	9.54E-05	2.92E-05
52	C53	60	Passenger Truck	158	0.00E+00	2.86E-06	3.02E-07	1.08E+01	1.79E-05	5.99E-02	5.90E-06	5.99E-04	1.66E-03	2.57E-04	5.59E-04	3.65E-04	3.74E-04	8.23E-05	5.37E-05	1.35E-08	1.86E-04	9.90E-05
52	C53	60	Single Unit Short Haul Truck	11	0.00E+00	3.33E-06	1.66E-07	2.11E+00	2.74E-06	4.08E-03	3.55E-06	1.58E-03	2.69E-04	4.87E-05	4.02E-04	9.96E-05	1.01E-04	2.12E-04	8.54E-06	3.52E-09	3.02E-04	2.97E-04
52	C53	60	Combination Short Haul Truck	7	0.00E+00	3.95E-06	2.76E-07	2.57E+00	1.40E-08	3.45E-03	2.93E-06	4.29E-03	3.67E-04	7.27E-05	2.52E-04	8.20E-05	8.20E-05	3.88E-04	8.59E-06	0.00E+00	1.69E-04	8.07E-04
52	C53	60	Combination Long Haul Truck	6	0.00E+00	3.54E-06	2.31E-07	2.41E+00	1.60E-08	3.72E-03	2.74E-06	4.25E-03	3.69E-04	6.27E-05	2.58E-04	7.04E-05	7.12E-05	3.67E-04	8.06E-06	0.00E+00	1.87E-04	8.01E-04
53	C54	70	Passenger Car	114	0.00E+00	1.45E-06	1.57E-07	5.55E+00	1.01E-05	3.74E-02	3.20E-06	2.33E-04	8.72E-04	1.40E-04	3.13E-04	2.02E-04	2.07E-04	2.05E-05	2.78E-05	7.58E-09	1.06E-04	3.65E-05
53	C54	70	Passenger Truck	191	0.00E+00	3.15E-06	3.34E-07	1.28E+01	2.00E-05	6.85E-02	6.53E-06	7.12E-04	1.57E-03	2.55E-04	6.27E-04	4.06E-04	4.16E-04	9.24E-05	6.37E-05	1.67E-08	2.09E-04	1.17E-04
53	C54	70	Single Unit Short Haul Truck	25	0.00E+00	5.97E-06	2.99E-07	4.68E+00	4.88E-06	9.39E-03	6.36E-06	2.94E-03	4.20E-04	8.40E-05	7.27E-04	1.79E-04	1.81E-04	4.69E-04	1.88E-05	7.62E-09	5.43E-04	5.51E-04
53	C54	70	Single Unit Long Haul Truck	1	0.00E+00	2.60E-07	1.30E-08	1.99E-01	2.11E-07	3.92E-04	2.77E-07	1.27E-04	1.92E-05	3.74E-06	3.18E-05	7.72E-06	7.85E-06	1.98E-05	8.00E-07	3.21E-10	2.38E-05	2.37E-05
53	C54	70	Combination Short Haul Truck	12	0.00E+00	6.43E-06	4.57E-07	4.68E+00	2.09E-08	5.54E-03	4.71E-06	6.77E-03	4.88E-04	1.07E-04	3.92E-04	1.35E-04	1.35E-04	7.05E-04	1.56E-05	0.00E+00	2.57E-04	1.28E-03
53	C54	70	Combination Long Haul Truck	11	0.00E+00	5.83E-06	3.89E-07	4.36E+00	2.41E-08	5.86E-03	4.42E-06	6.68E-03	4.86E-04	8.87E-05	4.04E-04	1.18E-04	1.19E-04	6.65E-04	1.46E-05	0.00E+00	2.87E-04	1.26E-03
52	C55	60	Passenger Car	183	0.00E+00	2.52E-06	2.72E-07	9.20E+00	1.75E-05	6.50E-02	5.59E-06	3.59E-04	1.80E-03	2.77E-04	5.44E-04	3.52E-04	3.61E-04	3.82E-05	4.60E-05	1.23E-08	1.84E-04	5.64E-05
52	C55	60	Passenger Truck	306	0.00E+00	5.53E-06	5.85E-07	2.09E+01	3.45E-05	1.16E-01	1.14E-05	1.16E-03	3.22E-03	4.98E-04	1.08E-03	7.05E-04	7.22E-04	1.59E-04	1.04E-04	2.60E-08	3.60E-04	1.91E-04
52	C55	60	Single Unit Short Haul Truck	29	0.00E+00	8.66E-06	4.32E-07	5.50E+00	7.12E-06	1.06E-02	9.23E-06	4.12E-03	6.99E-04	1.27E-04	1.05E-03	2.59E-04	2.63E-04	5.51E-04	2.22E-05	9.15E-09	7.86E-04	7.72E-04
52	C55	60	Single Unit Long Haul Truck	1	0.00E+00	3.78E-07	1.88E-08	2.35E-01	3.09E-07	4.51E-04	4.04E-07	1.78E-04	3.14E-05	5.62E-06	4.61E-05	1.13E-05	1.15E-05	2.35E-05	9.48E-07	3.89E-10	3.45E-05	3.34E-05
52	C55	60	Combination Short Haul Truck	19	0.00E+00	1.10E-05	7.66E-07	7.15E+00	3.88E-08	9.58E-03	8.13E-06	1.19E-02	1.02E-03	2.02E-04	6.99E-04	2.28E-04	2.28E-04	1.08E-03	2.39E-05	0.00E+00	4.70E-04	2.24E-03
52	C55	60	Combination Long Haul Truck	17	0.00E+00	9.82E-06	6.42E-07	6.71E+00	4.45E-08	1.03E-02	7.60E-06	1.18E-02	1.02E-03	1.74E-04	7.18E-04	1.95E-04	1.98E-04	1.02E-03	2.24E-05	0.00E+00	5.19E-04	2.22E-03
50	C56	40	Passenger Car	5	0.00E+00	8.12E-08	8.80E-09	2.81E-01	5.65E-07	2.09E-03	1.81E-07	8.74E-06	8.37E-05	1.19E-05	1.76E-05	1.13E-05	1.16E-05	1.52E-06	1.40E-06	3.38E-10	5.96E-06	1.37E-06
50	C56	40	Passenger Truck	8	0.00E+00	1.86E-07	1.95E-08	6.25E-01	1.12E-06	3.60E-03	3.73E-07	3.31E-05	1.48E-04	2.11E-05	3.51E-05	2.29E-05	2.34E-05	5.35E-06	3.08E-06	6.59E-10	1.16E-05	5.60E-06
50	C56	40	Single Unit Short Haul Truck	3	0.00E+00	1.20E-06	6.28E-08	5.75E-01	1.04E-06	9.89E-04	1.27E-06	5.86E-04	1.09E-04	1.81E-05	1.42E-04	3.74E-05	3.80E-05	5.81E-05	2.32E-06	9.81E-10	1.03E-04	1.10E-04
50	C56	40	Combination Short Haul Truck	1	0.00E+00	7.46E-07	5.17E-08	3.79E-01	2.69E-09	6.50E-04	5.54E-07	8.33E-04	8.68E-05	1.56E-05	4.84E-05	1.54E-05	1.56E-05	5.71E-05	1.27E-06	0.00E+00	3.27E-05	1.57E-04
50	C56	40	Combination Long Haul Truck	1	0.00E+00	6.80E-07	4.44E-08	3.60E-01	3.05E-09	7.23E-04	5.22E-07	8.34E-04	8.72E-05	1.39E-05	4.97E-05	1.35E-05	1.38E-05	5.50E-05	1.20E-06	0.00E+00	3.60E-05	1.57E-04
53	C57	70	Passenger Car	195	0.00E+00	2.47E-06	2.67E-07	9.47E+00	1.72E-05	6.39E-02	5.47E-06	3.97E-04	1.49E-03	2.40E-04	5.34E-04	3.44E-04	3.53E-04	3.49E-05	4.75E-05	1.29E-08	1.81E-04	6.22E-05
53	C57	70	Passenger Truck	326	0.00E+00	5.37E-06	5.69E-07	2.18E+01	3.41E-05	1.17E-01	1.11E-05	1.21E-03	2.67E-03	4.36E-04	1.07E-03	6.93E-04	7.11E-04	1.58E-04	1.09E-04	2.85E-08	3.56E-04	1.99E-04
53	C57	70	Single Unit Short Haul Truck	28	0.00E+00	6.63E-06	3.32E-07	5.19E+00	5.42E-06	1.04E-02	7.06E-06	3.27E-03	4.66E-04	9.32E-05	8.07E-04	1.98E-04	2.01E-04	5.20E-04	2.09E-05	8.46E-09	6.02E-04	6.12E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.44E-08	2.20E-01	2.34E-07	4.35E-04	3.08E-07	1.41E-04	2.13E-05	4.15E-06	3.52E-05	8.57E-06	8.71E-06	2.20E-05	8.88E-07	3.56E-10	2.64E-05	2.63E-05
53	C57	70	Combination Short Haul Truck	13	0.00E+00	6.50E-06	4.62E-07	4.73E+00	2.11E-08	5.59E-03	4.76E-06	6.85E-03	4.93E-04	1.08E-04	3.96E-04	1.37E-04	1.37E-04	7.12E-04	1.58E-05	0.00E+00	2.60E-04	1.29E-03
53	C57	70	Combination Long Haul Truck	11	0.00E+00	5.89E-06	3.93E-07	4.40E+00	2.43E-08	5.93E-03	4.47E-06	6.75E-03	4.91E-04	8.97E-05	4.09E-04	1.19E-04	1.20E-04	6.72E-04	1.47E-05	0.00E+00	2.90E-04	1.27E-03
50	C58	40	Passenger Car	53	0.00E+00	8.92E-07	9.66E-08	3.08E+00	6.21E-06	2.30E-02	1.99E-06	9.60E-05	9.19E-04	1.31E-04	1.93E-04	1.25E-04	1.28E-04	1.67E-05	1.53E-05	3.72E-09	6.55E-05	1.50E-05
50	C58	40	Passenger Truck	89	0.00E+00	2.04E-06	2.14E-07	6.87E+00	1.23E-05	3.95E-02	4.10E-06	3.63E-04	1.63E-03	2.32E-04	3.85E-04	2.52E-04	2.57E-04	5.88E-05	3.38E-05	7.24E-09	1.27E-04	6.15E-05
50	C58	40	Single Unit Short Haul Truck	2	0.00E+00	7.06E-07	3.70E-08	3.38E-01	6.13E-07	5.82E-04	7.50E-07	3.45E-04	6.44E-05	1.07E-05	8.34E-05	2.20E-05	2.24E-05	3.42E-05	1.37E-06	5.78E-10	6.09E-05	6.49E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	6.24E-07	4.32E-08	3.17E-01	2.25E-09	5.44E-04	4.64E-07	6.96E-04	7.26E-05	1.31E-05	4.05E-05	1.29E-05	1.30E-05	4.77E-05	1.06E-06	0.00E+00	2.74E-05	1.31E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	5.69E-07	3.71E-08	3.01E-01	2.55E-09	6.05E-04	4.37E-07	6.98E-04	7.30E-05	1.16E-05	4.16E-05	1.13E-05	1.15E-05	4.60E-05	1.01E-06	0.00E+00	3.01E-05	1.31E-04
53	C59	70	Passenger Car	46	0.00E+00	5.80E-07	6.29E-08	2.23E+00	4.05E-06	1.50E-02	1.29E-06	9.34E-05	3.50E-04	5.64E-05	1.26E-04	8.09E-05	8.31E-05	8.21E-06	1.12E-05	3.04E-09	4.25E-05	1.46E-05
53	C59	70	Passenger Truck	77	0.00E+00	1.26E-06	1.34E-07	5.14E+00	8.01E-06	2.75E-02	2.62E-06	2.86E-04	6.29E-04	1.03E-04	2.51E-04	1.63E-04	1.67E-04	3.71E-05	2.56E-05	6.69E-09	8.38E-05	4.69E-05
53	C59	70	Single Unit Short Haul Truck	3	0.00E+00	7.21E-07	3.61E-08	5.65E-01	5.90E-07	1.13E-03	7.68E-07	3.56E-04	5.07E-05	1.01E-05	8.78E-05	2.16E-05	2.19E-05	5.66E-05	2.28E-06	9.21E-10	6.56E-05	6.66E-05
53	C59	70	Combination Short Haul Truck	1	0.00E+00	4.59E-07	3.27E-08	3.34E-01	1.49E-09	3.96E-04	3.37E-07	4.84E-04	3.49E-05	7.64E-06	2.80E-05	9.68E-06	9.66E-06	5.04E-05	1.12E-06	0.00E+00	1.84E-05	9.12E-05
53	C59	70	Combination Long Haul Truck	1	0.00E+00	4.17E-07	2.78E-08	3.11E-01	1.72E-09	4.19E-04	3.16E-07	4.77E-04	3.47E-05	6.34E-06	2.89E-05	8.40E-06	8.49E-06	4.75E-05	1.04E-06	0.00E+00	2.05E-05	8.98E-05
52	C60	60	Passenger Car	174	0.00E+00	2.40E-06	2.60E-07	8.77E+00	1.67E-05	6.20E-02	5.33E-06	3.42E-04	1.72E-03	2.65E-04	5.18E-04	3.35E-04	3.44E-04	3.64E-05	4.38E-05	1.17E-08	1.76E-04	5.38E-05
52	C60	60	Passenger Truck	292	0.00E+00	5.27E-06	5.57E-07	2.00E+01	3.29E-05	1.10E-01	1.09E-05	1.10E-03	3.07E-03	4.75E-04	1.03E-03	6.73E-04	6.89E-04	1.52E-04	9.90E-05	2.48E-08	3.43E-04	1.83E-04
52	C60	60	Single Unit Short Haul Truck	27	0.00E+00	7.84E-06	3.91E-07	4.98E+00	6.44E-06	9.61E-03	8.35E-06	3.73E-03	6.33E-04	1.15E-04	9.46E-04	2.34E-04	2.38E-04	4.98E-04	2.01E-05	8.28E-09	7.11E-04	6.99E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C64	70	Single Unit Short Haul Truck	90	0.00E+00	2.11E-05	1.06E-06	1.66E+01	1.73E-05	3.32E-02	2.25E-05	1.04E-02	1.49E-03	2.97E-04	2.57E-03	6.32E-04	6.42E-04	1.66E-03	6.67E-05	2.70E-08	1.92E-03	1.95E-03
53	C64	70	Single Unit Long Haul Truck	4	0.00E+00	9.21E-07	4.58E-08	7.03E-01	7.46E-07	1.39E-03	9.81E-07	4.49E-04	6.79E-05	1.32E-05	1.12E-04	2.73E-05	2.78E-05	7.02E-05	2.83E-06	1.14E-09	8.43E-05	8.40E-05
53	C64	70	Combination Short Haul Truck	37	0.00E+00	1.91E-05	1.36E-06	1.39E+01	6.21E-08	1.64E-02	1.40E-05	2.01E-02	1.45E-03	3.18E-04	1.16E-03	4.02E-04	4.01E-04	2.09E-03	4.64E-05	0.00E+00	7.63E-04	3.79E-03
53	C64	70	Combination Long Haul Truck	34	0.00E+00	1.73E-05	1.15E-06	1.29E+01	7.15E-08	1.74E-02	1.31E-05	1.98E-02	1.44E-03	2.64E-04	1.20E-03	3.49E-04	3.53E-04	1.97E-03	4.33E-05	0.00E+00	8.51E-04	3.73E-03
52	C65	60	Passenger Car	10	0.00E+00	1.34E-07	1.45E-08	4.90E-01	9.34E-07	3.46E-03	2.98E-07	1.91E-05	9.61E-05	1.48E-05	2.90E-05	1.87E-05	1.92E-05	2.03E-06	2.45E-06	6.55E-10	9.82E-06	3.00E-06
52	C65	60	Passenger Truck	16	0.00E+00	2.95E-07	3.11E-08	1.11E+00	1.84E-06	6.16E-03	6.07E-07	6.16E-05	1.71E-04	2.65E-05	5.76E-05	3.76E-05	3.85E-05	8.47E-06	5.53E-06	1.39E-09	1.92E-05	1.02E-05
50	C66	40	Passenger Car	60	0.00E+00	1.00E-06	1.09E-07	3.46E+00	6.98E-06	2.59E-02	2.24E-06	1.08E-04	1.03E-03	1.47E-04	2.17E-04	1.40E-04	1.44E-04	1.87E-05	1.72E-05	4.18E-09	7.36E-05	1.69E-05
50	C66	40	Passenger Truck	100	0.00E+00	2.30E-06	2.41E-07	7.72E+00	1.38E-05	4.44E-02	4.61E-06	4.08E-04	1.83E-03	2.61E-04	4.33E-04	2.83E-04	2.89E-04	6.61E-05	3.80E-05	8.13E-09	1.43E-04	6.91E-05
50	C66	40	Single Unit Short Haul Truck	18	0.00E+00	7.96E-06	4.17E-07	3.82E+00	6.92E-06	6.57E-03	8.46E-06	3.89E-03	7.27E-04	1.20E-04	9.41E-04	2.48E-04	2.52E-04	3.86E-04	1.54E-05	6.52E-09	6.87E-04	7.32E-04
50	C66	40	Single Unit Long Haul Truck	1	0.00E+00	3.49E-07	1.82E-08	1.65E-01	3.03E-07	2.85E-04	3.71E-07	1.69E-04	3.25E-05	5.36E-06	4.13E-05	1.09E-05	1.10E-05	1.67E-05	6.65E-07	2.83E-10	3.03E-05	3.18E-05
50	C66	40	Combination Short Haul Truck	11	0.00E+00	9.52E-06	6.59E-07	4.83E+00	3.43E-08	8.30E-03	7.07E-06	1.06E-02	1.11E-03	2.00E-04	6.18E-04	1.97E-04	1.99E-04	7.28E-04	1.62E-05	0.00E+00	4.18E-04	2.00E-03
50	C66	40	Combination Long Haul Truck	10	0.00E+00	8.68E-06	5.66E-07	4.60E+00	3.89E-08	9.22E-03	6.67E-06	1.06E-02	1.11E-03	1.77E-04	6.34E-04	1.73E-04	1.76E-04	7.02E-04	1.54E-05	0.00E+00	4.60E-04	2.01E-03
55	C67	90	Passenger Car	448	0.00E+00	5.05E-06	5.47E-07	2.03E+01	3.52E-05	1.34E-01	1.12E-05	9.24E-04	1.93E-03	3.52E-04	1.09E-03	7.05E-04	7.24E-04	6.23E-05	1.02E-04	2.74E-08	3.71E-04	1.44E-04
55	C67	90	Passenger Truck	750	0.00E+00	1.10E-05	1.16E-06	4.75E+01	7.08E-05	2.65E-01	2.31E-05	2.69E-03	3.46E-03	6.52E-04	2.21E-03	1.44E-03	1.48E-03	3.15E-04	2.38E-04	6.29E-08	7.44E-04	4.38E-04
55	C67	90	Single Unit Short Haul Truck	96	0.00E+00	1.45E-05	7.12E-07	1.77E+01	1.15E-05	3.56E-02	1.55E-05	7.74E-03	8.04E-04	2.12E-04	1.78E-03	4.26E-04	4.34E-04	1.78E-03	7.12E-05	2.79E-08	1.34E-03	1.45E-03
55	C67	90	Single Unit Long Haul Truck	4	0.00E+00	6.31E-07	3.06E-08	7.48E-01	4.86E-07	1.48E-03	6.70E-07	3.30E-04	3.65E-05	9.23E-06	7.75E-05	1.82E-05	1.85E-05	7.45E-05	3.01E-06	1.15E-09	5.89E-05	6.17E-05
55	C67	90	Combination Short Haul Truck	48	0.00E+00	1.69E-05	1.20E-06	1.66E+01	5.46E-08	1.64E-02	1.23E-05	1.74E-02	7.63E-04	2.25E-04	9.98E-04	3.55E-04	3.49E-04	2.52E-03	5.59E-05	0.00E+00	6.49E-04	3.27E-03
55	C67	90	Combination Long Haul Truck	44	0.00E+00	1.46E-05	9.62E-07	1.52E+01	6.32E-08	1.65E-02	1.12E-05	1.64E-02	7.29E-04	1.72E-04	1.02E-03	2.92E-04	2.91E-04	2.32E-03	5.10E-05	0.00E+00	7.29E-04	3.09E-03
55	C68	90	Passenger Car	690	0.00E+00	7.78E-06	8.43E-07	3.12E+01	5.42E-05	2.07E-01	1.73E-05	1.42E-03	2.97E-03	5.42E-04	1.68E-03	1.09E-03	1.12E-03	9.60E-05	1.58E-04	4.22E-08	5.71E-04	2.22E-04
55	C68	90	Passenger Truck	1155	0.00E+00	1.69E-05	1.79E-06	7.32E+01	1.09E-04	4.08E-01	3.56E-05	4.14E-03	5.33E-03	1.00E-03	3.40E-03	2.21E-03	2.27E-03	4.85E-04	3.66E-04	9.69E-08	1.15E-03	6.74E-04
55	C68	90	Single Unit Short Haul Truck	122	0.00E+00	1.84E-05	9.04E-07	2.25E+01	1.46E-05	4.52E-02	1.96E-05	9.82E-03	1.02E-03	2.68E-04	2.26E-03	5.40E-04	5.50E-04	2.25E-03	9.04E-05	3.53E-08	1.71E-03	1.84E-03
55	C68	90	Single Unit Long Haul Truck	5	0.00E+00	8.00E-07	3.88E-08	9.49E-01	6.16E-07	1.87E-03	8.50E-07	4.18E-04	4.63E-05	1.17E-05	9.83E-05	2.31E-05	2.35E-05	9.46E-05	3.82E-06	1.46E-09	7.48E-05	7.82E-05
55	C68	90	Combination Short Haul Truck	42	0.00E+00	1.48E-05	1.05E-06	1.45E+01	4.76E-08	1.43E-02	1.08E-05	1.52E-02	6.66E-04	1.96E-04	8.72E-04	3.10E-04	3.04E-04	2.20E-03	4.88E-05	0.00E+00	5.67E-04	2.86E-03
55	C68	90	Combination Long Haul Truck	38	0.00E+00	1.27E-05	8.40E-07	1.32E+01	5.52E-08	1.44E-02	9.75E-06	1.43E-02	6.37E-04	1.50E-04	8.92E-04	2.55E-04	2.54E-04	2.02E-03	4.45E-05	0.00E+00	6.37E-04	2.70E-03
54	C69	80	Passenger Car	161	0.00E+00	1.92E-06	2.07E-07	7.57E+00	1.34E-05	5.02E-02	4.26E-06	3.33E-04	9.32E-04	1.59E-04	4.15E-04	2.67E-04	2.74E-04	2.53E-05	3.81E-05	1.04E-08	1.40E-04	5.20E-05
54	C69	80	Passenger Truck	270	0.00E+00	4.16E-06	4.40E-07	1.76E+01	2.66E-05	9.53E-02	8.70E-06	9.90E-04	1.68E-03	2.93E-04	8.33E-04	5.42E-04	5.55E-04	1.22E-04	8.78E-05	2.33E-08	2.79E-04	1.61E-04
54	C69	80	Single Unit Short Haul Truck	86	0.00E+00	1.61E-05	7.99E-07	1.58E+01	1.29E-05	3.17E-02	1.71E-05	8.25E-03	1.01E-03	2.29E-04	1.96E-03	4.77E-04	4.84E-04	1.58E-03	6.36E-05	2.53E-08	1.47E-03	1.54E-03
54	C69	80	Single Unit Long Haul Truck	4	0.00E+00	6.99E-07	3.45E-08	6.68E-01	5.53E-07	1.31E-03	7.44E-07	3.52E-04	4.62E-05	1.01E-05	8.54E-05	2.05E-05	2.08E-05	6.67E-05	2.69E-06	1.05E-09	6.46E-05	6.60E-05
54	C69	80	Combination Short Haul Truck	31	0.00E+00	1.37E-05	9.77E-07	1.13E+01	4.31E-08	1.21E-02	1.00E-05	1.40E-02	8.28E-04	2.04E-04	8.14E-04	2.89E-04	2.87E-04	1.70E-03	3.79E-05	0.00E+00	5.28E-04	2.64E-03
54	C69	80	Combination Long Haul Truck	28	0.00E+00	1.22E-05	8.20E-07	1.05E+01	4.99E-08	1.25E-02	9.30E-06	1.36E-02	8.12E-04	1.63E-04	8.43E-04	2.48E-04	2.50E-04	1.60E-03	3.50E-05	0.00E+00	5.91E-04	2.57E-03
55	C70	90	Passenger Car	355	0.00E+00	4.01E-06	4.34E-07	1.61E+01	2.79E-05	1.07E-01	8.91E-06	7.34E-04	1.53E-03	2.79E-04	8.68E-04	5.60E-04	5.75E-04	4.95E-05	8.13E-05	2.17E-08	2.94E-04	1.15E-04
55	C70	90	Passenger Truck	595	0.00E+00	8.70E-06	9.24E-07	3.77E+01	5.62E-05	2.10E-01	1.84E-05	2.13E-03	2.74E-03	5.17E-04	1.75E-03	1.14E-03	1.17E-03	2.50E-04	1.88E-04	4.99E-08	5.90E-04	3.47E-04
55	C70	90	Single Unit Short Haul Truck	174	0.00E+00	2.61E-05	1.28E-06	3.19E+01	2.07E-05	6.41E-02	2.78E-05	1.39E-02	1.45E-03	3.81E-04	3.20E-03	7.67E-04	7.81E-04	3.20E-03	1.28E-04	5.01E-08	2.42E-03	2.61E-03
55	C70	90	Single Unit Long Haul Truck	8	0.00E+00	1.14E-06	5.51E-08	1.35E+00	8.74E-07	2.66E-03	1.21E-06	5.93E-04	6.57E-05	1.66E-05	1.40E-04	3.28E-05	3.34E-05	1.34E-04	5.42E-06	2.08E-09	1.06E-04	1.11E-04
55	C70	90	Combination Short Haul Truck	91	0.00E+00	3.22E-05	2.28E-06	3.16E+01	1.04E-07	3.11E-02	2.35E-05	3.32E-02	1.45E-03	4.28E-04	1.90E-03	6.76E-04	6.63E-04	4.79E-03	1.06E-04	0.00E+00	1.24E-03	6.23E-03
55	C70	90	Combination Long Haul Truck	83	0.00E+00	2.77E-05	1.83E-06	2.89E+01	1.20E-07	3.14E-02	2.12E-05	3.12E-02	1.39E-03	3.28E-04	1.94E-03	5.56E-04	5.54E-04	4.41E-03	9.70E-05	0.00E+00	1.39E-03	5.89E-03
53	C71	70	Passenger Car	245	0.00E+00	3.11E-06	3.37E-07	1.19E+01	2.17E-05	8.04E-02	6.88E-06	5.00E-04	1.87E-03	3.02E-04	6.72E-04	4.33E-04	4.45E-04	4.39E-05	5.98E-05	1.63E-08	2.28E-04	7.83E-05
53	C71	70	Passenger Truck	411	0.00E+00	6.76E-06	7.16E-07	2.75E+01	4.29E-05	1.47E-01	1.40E-05	1.53E-03	3.37E-03	5.49E-04	1.35E-03	8.73E-04	8.94E-04	1.98E-04	1.37E-04	3.58E-08	4.48E-04	2.51E-04
53	C71	70	Single Unit Short Haul Truck	51	0.00E+00	1.20E-05	6.00E-07	9.39E+00	9.80E-06	1.88E-02	1.28E-05	5.90E-03	8.42E-04	1.68E-04	1.46E-03	3.58E-04	3.64E-04	9.40E-04	3.78E-05	1.53E-08	1.09E-03	1.11E-03
53	C71	70	Single Unit Long Haul Truck	2	0.00E+00	5.22E-07	2.60E-08	3.98E-01	4.23E-07	7.87E-04	5.56E-07	2.54E-04	3.85E-05	7.49E-06	6.37E-05	1.55E-05	1.57E-05	3.98E-05	1.60E-06	6.43E-10	4.78E-05	4.76E-05
53	C71	70	Combination Short Haul Truck	25	0.00E+00	1.32E-05	9.41E-07	9.62E+00	4.30E-08	1.14E-02	9.69E-06	1.39E-02	1.00E-03	2.20E-04	8.06E-04	2.79E-04	2.78E-04	1.45E-03	3.21E-05	0.00E+00	5.28E-04	2.62E-03
53	C71	70	Combination Long Haul Truck	23	0.00E+00	1.20E-05	8.00E-07	8.97E+00	4.95E-08	1.21E-02	9.09E-06	1.37E-02	1.00E-03	1.83E-04	8.32E-04	2.42E-04	2.44E-04	1.37E-03	3.00E-05	0.00E+00	5.90E-04	2.59E-03
50	C72	40	Passenger Car	131	0.00E+00	2.19E-06	2.37E-07	7.58E+00	1.53E-05	5.66E-02	4.89E-06	2.36E-04	2.26E-03	3.22E-04	4.75E-04	3.06E-04	3.14E-04	4.10E-05	3.77E-05	9.14E-09	1.61E-04	3.70E-05
50	C72	40	Passenger Truck	219	0.00E+00	5.02E-06	5.26E-07	1.69E+01	3.01E-05	9.71E-02	1.01E-05	8.93E-04	4.01E-03	5.70E-04	9.47E-04	6.19E-04	6.31E-04	1.45E-04	8.32E-05	1.78E-08	3.13E-04	1.51E-04
50	C72	40	Single Unit Short Haul Truck	19	0.00E+00	8.33E-06	4.36E-07	3.99E+00	7.24E-06	6.87E-03	8.85E-06	4.07E-03	7.60E-04	1.26E-04	9.84E-04	2.60E-04	2.64E-04	4.03E-04	1.61E-05	6.82E-09	7.18E-04	7.65E-04
50	C72	40	Single Unit Long Haul Truck	1	0.00E+00	3.65E-07	1.90E-08	1.72E-01	3.17E-07	2.98E-04	3.88E-07	1.77E-04	3.40E-05	5.60E-06	4.32E-05	1.14E-05	1.15E-05	1.74E-05	6.96E-07	2.96E-10	3.17E-05	3.33E-05
50	C72	40	Combination Short Haul Truck	6	0.00E+00	5.31E-06	3.68E-07	2.70E+00	1.91E-08	4.63E-03	3.95E-06	5.93E-03	6.18E-04	1.11E-04	3.45E-04	1.10E-04	1.11E-04	4.06E-04	9.03E-06	0.00E+00	2.33E-04	1.12E-03
50	C72	40	Combination Long Haul Truck	5	0.00E+00	4.84E-06	3.16E-07	2.57E+00	2.17E-08	5.15E-03	3.72E-06	5.94E-03	6.21E-04	9.89E-05	3.54E-04	9.63E-05	9.81E-05	3.92E-04	8.58E-06	0.00E+00	2.57E-04	1.12E-03
51	C73	50	Passenger Car	69	0.00E+00	1.05E-06	1.14E-07	3.60E+00	7.32E-06	2.71E-02	2.35E-06	1.28E-04	8.98E-04	1.33E-04	2.27E-04	1.47E-04	1.50E-04	1.72E-05	1.80E-05	4.69E-09	7.70E-05	2.00E-05
51	C73	50	Passenger Truck	115	0.00E+00	2.33E-06	2.46E-07	8.11E+00	1.43E-05	4.66E-02	4.73E-06	4.41E-04	1.59E-03	2.34E-04	4.47E-04	2.93E-04	3.00E-04	6.55E-05	3.99E-05	9.45E-09	1.48E-04	7.38E-05
51	C73	50	Single Unit Short Haul Truck	22	0.00E+00	8.05E-06	4.38E-07	4.58E+00	6.90E-06	8.12E-03	8.48E-06	4.06E-03	7.26E-04	1.27E-04	9.28E-04	2.53E-04	2.56E-04	4.65E-04	1.84E-05	7.75E-09	6.71E-04	7.63E-04
51	C73	50	Single Unit Long Haul Truck	1	0.00E+00	3.50E-07	1.90E-08	1.97E-01	2.99E-07	3.47E-04	3.69E-07	1.76E-04	3.28E-05	5.68E-06	4.01E-05	1.10E-05	1.12E-05	2.00E-05	7.91E-07	3.34E-10	2.91E-05	3.31E-05
51	C73	50	Combination Short Haul Truck	7	0.00E+00	5.30E-06	3.79E-07	3.03E+00	1.68E-08	4.52E-03	3.89E-06	5.90E-03	5.13E-04	1.01E-04	3.26E-04	1.12E-04	1.13E-04	4.56E-04	1.01E-05	0.00E+00	2.13E-04	1.11E-03
51	C73	50	Combination Long Haul Truck	6	0.00E+00	4.85E-06	3.28E-07	2.85E+00	1.92E-08	4.98E-03	3.67E-06	5.90E-03	5.13E-04	8.66E-05	3.35E-04	9.90E-05	1.01E-04	4.37E-04	9.55E-06	0.00E+00	2.34E-04	1.11E-03
52	C74	60	Passenger Car	736	0.00E+00	1.01E-05	1.10E-06	3.70E+01	7.06E-05	2.62E-01	2.25E-05	1.45E-03	7.26E-03	1.12E-03	2.19E-03	1.42E-03	1.45E-03	1.54E-04	1.85E-04	4.95E-08	7.42E-04	2.27E-04
52	C74	60	Passenger Truck	1233	0.00E+00	2.23E-05	2.35E-06	8.43E+01	1.39E-04	4.66E-01	4.59E-05	4.66E-03	1.29E-02	2.00E-03	4.35E-03	2.84E-03	2.91E-03	6.40E-04	4.18E-04	1.05E-07	1.45E-03	7.71E-04
52	C74	60	Single Unit Short Haul Truck	166	0.00E+00	4.89E-05	2.44E-06	3.11E+01	4.02E-05	6.00E-02	5.22E-05	2.33E-02	3.95E-03	7.16E-04	5.91E-03	1.46E-03	1.49E-03	3.11E-03	1.26E-04	5.17E-08	4.44E-03	4.36E-03
52	C74	60	Single Unit Long Haul Truck	7	0.00E+00	2.14E-06	1.06E-07	1.33E+00	1.75E-06	2.55E-03	2.28E-06	1.01E-03	1.78E-04	3.18E-05	2.61E-04	6.37E-05	6.48E-05	1.33E-04	5.36E-06	2.20E-09	1.95E-04	1.89E-04
52	C74	60	Combination Short Haul Truck	74	0.00E+00	4.33E-05	3.02E-06	2.82E+01	1.53E-07	3.78E-02	3.21E-05	4.70E-02	4.03E-03	7.97E-04	2.76E-03	8.99E-04	8.99E-04	4.25E-03	9.42E-05	0.00E+00	1.85E-03	8.85E-03
52	C74	60	Combination Long Haul Truck	67	0.00E+00	3.88E-05	2.53E-06	2.65E+01	1.76E-07	4.08E-02	3.00E-05	4.66E-02	4.04E-03	6.88E-04	2.83E-03	7.72E-04	7.81E-04	4.03E-03	8.83E-05	0.00E+00	2.05E-03	8.78E-03
53	C81	70	Passenger Car	344	0.00E+00	4.36E-06	4.72E-07	1.67E+01	3.04E-05	1.13E-01	9.66E-06	7.02E-04	2.63E-03	4.24E-04	9.44E-04	6.08E-04	6.24E-04	6.17E-05	8.39E-05	2.28E-08	3.19E-04	1.10E-04
53	C81	70	Passenger Truck	576	0.00E+00	9.49E-06	1.01E-06	3.86E+01	6.02E-05	2.07E-01	1.97E-05	2.15E-03	4.72E-03	7.70E-04	1.89E-03	1.22E-03	1.26E-03	2.79E-04	1.92E-04	5.03E-08	6.29E-04	3.52E-04
53	C81	70	Single Unit Short Haul Truck	81	0.00E+00	1.89E-05	9.50E-07	1.49E+01	1.55E-05	2.98E-02	2.02E-05	9.34E-03	1.33E-03	2.67E-04	2.31E-03	5.67E-04	5.76E-04	1.49E-03	5.98E-05	2.42E-08	1.72E-03	1.75E-03
53	C81	70	Single Unit Long Haul Truck	4	0.00E+00	8.26E-07	4.11E-08	6.30E-01	6.69E-07	1.24E-03	8.79E-07	4.02E-04	6.09E-05	1.19E-05	1.01E-04	2.45E-05	2.49E-05	6.29E-05	2.54E-06	1.02E-09	7.56E-05	7.53E-05
53	C81	70	Combination Short Haul Truck	45	0.00E+00	2.33E-05	1.65E-06	1.69E+01	7.57E-08	2.00E-02	1.70E-05	2.45E-02	1.77E-03	3.87E-04	1.42E-03	4.90E-04	4.89E-04	2.55E-03	5.65E-05	0.00E+00	9.29E-04	4.62E-03
53	C81	70	Combination Long Haul Truck	41	0.00E+00	2.11E-05	1.41E-06	1.58E+01	8.71E-08	2.12E-02	1.60E-05	2.42E-02	1.76E-03	3.21E-04	1.46E-03	4.25E-04	4.30E-04	2.41E-03	5.28E-05	0.00E+00	1.04E-03	4.55E-03
52	C82	60	Passenger Car	404	0.00E+00	5.56E-06	6.01E-07	2.03E+01	3.87E-05	1.44E-01	1.23E-05	7.93E-04	3.98E-03	6.12E-04	1.20E-03	7.76E-04	7.96E-04	8.43E-05	1.01E-04	2.71E-08	4.07E-04	1.24E-04
52	C82	60	Passenger Truck	676	0.00E+00	1.22E-05	1.29E-06	4.62E+01	7.62E-05	2.55E-01	2.52E-05	2.55E-03	7.10E-03	1.10E-03	2.38E-03	1.56E-03	1.59E-03	3.51E-04	2.29E-04	5.75E-08	7.94E-04	4.22E-04
52	C82	60	Single Unit Short Haul Truck	112	0.00E+00	3.30E-05	1.65E-06	2.10E+01	2.71E-05	4.05E-02	3.52E-05	1.57E-02	2.67E-03	4.83E-04	3.99E-03	9.87E-04	1.00E-03	2.10E-03	8.47E-05	3.49E-08	3.00E-03	2.94E-03
52	C82	60	Single Unit Long Haul Truck	5	0.00E+00	1.44E-06	7.16E-08	8.96E-01	1.18E-06	1.72E-03	1.54E-06	6.80E-04	1.20E-04	2.14E-05	1.76E-04	4.30E-05	4.37E-05	8.94E-05	3.61E-06	1.48E-09	1.32E-04	1.27E-04
52	C82	60	Combination Short Haul Truck	57	0.00E+00	3.37E-05	2.35E-06	2.19E+01	1.19E-07	2.94E-02	2.50E-05	3.66E-02	3.13E-03	6.20E-04	2.15E-03	7.00E-04	7.00E-04	3.31E-03	7.33E-05	0.00E+00	1.44E-03	6.88E-03
52	C82	60	Combination Long Haul Truck	52	0.00E+00	3.02E-05	1.97E-06	2.06E+01	1.37E-07	3.18E-02	2.33E-05	3.62E-02	3.15E-03	5.35E-04	2.20E-03	6.00E-04	6.07E-04	3.13E-03	6.87E-05	0.00E+00	1.59E-03	6.83E-03
16	C83	100	Passenger Car	463	0.00E+00	5.06E-06	5.47E-07	2.08E+01	3.52E-05	1.39E-01	1.13E-05	9.88E-04	1.50E-03	3.02E-04	1.10E-03	7.07E-04	7.25E-04	5.80E-05	1.05E-04	2.89E-08	3.71E-04	1.54E-04
16	C83	100	Passenger Truck	775	0.00E+00	1.09E-05	1.16E-06	4.91E+01	7.17E-05	2.80E-01	2.32E-05	2.82E-03	2.65E-03	5.64E-04	2.24E-03	1.45E-03	1.49E-03	3.12E-04	2.45E-04	6.74E-08	7.51E-04	4.54E-04
16	C83	100	Single Unit Short Haul Truck	366	0.00E+00	4.92E-05	2.43E-06	6.68E+01	4.29E-05	1.55E-01	5.32E-05	2.66E-02	2.52E-03	7.34E-04	6.08E-03	1.51E-03	1.54E-03	6.74E-03	2.68E-04	1.10E-07	4.55E-03	4.97E-03
16	C83	100	Single Unit Long Haul Truck	16	0.00E+00	2.13E-06	1.04E-07	2.82E+00	1.78E-06	6.32E-03	2.30E-06	1.12E-03	1.14E-04	3.17E-05	2.65E-04	6.37E-05	6.46E-05	2.82E-04	1.13E-05	4.49E-09	2.00E-04	2.09E-04
16	C83	100	Combination Short Haul Truck	203	0.00E+00	7.00E-05	5.10E-06	7.34E+01	1.99E-07	6.83E-02	5.03E-05	7.45E-02	2.36E-03	8.41E-04	3.91E-03	1.50E-03	1.47E-03	1.11E-02	2.46E-04	0.00E+00	2.44E-03	1.41E-02
16	C83	100	Combination Long Haul Truck	185	0.00E+00	6.07E-05	4.16E-06	6.64E+01	2.30E-07	6.79E-02	4.55E-05	7.10E-02	2.19E-03	6.07E-04	3.98E-03	1.25E-03	1.25E-03	1.01E-02	2.23E-04	0.00E+00	2.74E-03	1.33E-02
55	C84	90	Passenger Car	337	0.00E+00	3.81E-06	4.12E-07	1.53E+01	2.65E-05	1.01E-01	8.47E-06	6.97E-04	1.45E-03	2.65E-04	8.24E-04	5.32E-04	5.46E-04	4.70E-05	7.72E-05	2.06E-08	2.79E-04	1.09E-04
55	C84	90	Passenger Truck	565	0.00E+00	8.26E-06	8.78E-07	3.58E+01	5.34E-05	1.99E-01	1.74E-05	2.03E-03	2.61E-03	4.91E-04	1.66E-03	1.08E-03	1.11E-03	2.37E-04	1.79E-04	4.74E-08	5.60E-04	3.30E-04
55	C84	90	Single Unit Short Haul Truck	131	0.00E+00	1.98E-05	9.71E-07	2.41E+01	1.57E-05	4.86E-02	2.11E-05	1.06E-02	1.10E-03	2.88E-04	2.42E-03	5.81E-04	5.92E-04	2.42E-03	9.71E-05	3.80E-08	1.83E-03	1.98E-03
55	C84	90	Single Unit Long Haul Truck	6	0.00E+00	8.60E-07	4.17E-08	1.02E+00	6.62E-07	2.01E-03	9.13E-07	4.49E-04	4.98E-05	1.26E-05	1.06E-04	2.48E-05	2.53E-05	1.02E-04	4.11E-06	1.57E-09	8.04E-05	8.41E-05
55	C84	90	Combination

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D64	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	D64	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
11	D65	80	Passenger Car	373	0.00E+00	4.54E-06	4.92E-07	1.74E+01	3.16E-05	1.21E-01	1.01E-05	7.67E-04	2.05E-03	3.57E-04	9.84E-04	6.35E-04	6.51E-04	5.85E-05	8.76E-05	2.46E-08	3.33E-04	1.20E-04
11	D65	80	Passenger Truck	625	0.00E+00	9.76E-06	1.04E-06	4.03E+01	6.25E-05	2.22E-01	2.05E-05	2.28E-03	3.68E-03	6.53E-04	1.96E-03	1.27E-03	1.30E-03	2.81E-04	2.01E-04	5.47E-08	6.55E-04	3.72E-04
11	D65	80	Single Unit Short Haul Truck	65	0.00E+00	1.22E-05	6.06E-07	1.20E+01	9.82E-06	2.41E-02	1.30E-05	6.26E-03	7.67E-04	1.73E-04	1.48E-03	3.62E-04	3.67E-04	1.20E-03	4.83E-05	1.92E-08	1.12E-03	1.17E-03
11	D65	80	Single Unit Long Haul Truck	3	0.00E+00	5.30E-07	2.62E-08	5.06E-01	4.20E-07	9.97E-04	5.65E-07	2.67E-04	3.50E-05	7.65E-06	6.48E-05	1.56E-05	1.58E-05	5.06E-05	2.04E-06	7.98E-10	4.90E-05	5.01E-05
11	D65	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.85E-08	1.08E-02	8.94E-06	1.25E-02	7.38E-04	1.82E-04	7.26E-04	2.57E-04	2.56E-04	1.52E-03	3.38E-05	0.00E+00	4.71E-04	2.36E-03
11	D65	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.31E-07	9.35E+00	4.45E-08	1.12E-02	8.29E-06	1.22E-02	7.24E-04	1.45E-04	7.52E-04	2.21E-04	2.23E-04	1.43E-03	3.12E-05	0.00E+00	5.27E-04	2.29E-03
11	D66	80	Passenger Car	236	0.00E+00	2.87E-06	3.11E-07	1.10E+01	2.00E-05	7.67E-02	6.40E-06	4.85E-04	1.30E-03	2.26E-04	6.22E-04	4.01E-04	4.12E-04	3.70E-05	5.54E-05	1.55E-08	2.11E-04	7.61E-05
11	D66	80	Passenger Truck	395	0.00E+00	6.17E-06	6.55E-07	2.55E+01	3.95E-05	1.41E-01	1.30E-05	1.44E-03	2.33E-03	4.13E-04	1.24E-03	8.04E-04	8.24E-04	1.78E-04	1.27E-04	3.46E-08	4.14E-04	2.35E-04
11	D66	80	Single Unit Short Haul Truck	48	0.00E+00	8.94E-06	4.44E-07	8.77E+00	7.19E-06	1.76E-02	9.51E-06	4.58E-03	5.62E-04	1.27E-04	1.09E-03	2.65E-04	2.69E-04	8.80E-04	3.54E-05	1.40E-08	8.19E-04	8.57E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	3.89E-07	1.92E-08	3.71E-01	3.07E-07	7.30E-04	4.14E-07	1.96E-04	2.56E-05	5.60E-06	4.74E-05	1.14E-05	1.16E-05	3.70E-05	1.50E-06	5.84E-10	3.59E-05	3.67E-05
11	D66	80	Combination Short Haul Truck	32	0.00E+00	1.39E-05	9.97E-07	1.16E+01	4.40E-08	1.23E-02	1.02E-05	1.43E-02	8.45E-04	2.08E-04	8.31E-04	2.95E-04	2.93E-04	1.74E-03	3.86E-05	0.00E+00	5.39E-04	2.70E-03
11	D66	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.37E-07	1.07E+01	5.09E-08	1.28E-02	9.49E-06	1.39E-02	8.28E-04	1.66E-04	8.61E-04	2.53E-04	2.55E-04	1.63E-03	3.57E-05	0.00E+00	6.03E-04	2.62E-03
11	D67	80	Passenger Car	126	0.00E+00	1.53E-06	1.66E-07	5.87E+00	1.07E-05	4.09E-02	3.40E-06	2.58E-04	6.91E-04	1.20E-04	3.31E-04	2.14E-04	2.19E-04	1.97E-05	2.95E-05	8.28E-09	1.12E-04	4.05E-05
11	D67	80	Passenger Truck	211	0.00E+00	3.29E-06	3.49E-07	1.36E+01	2.11E-05	7.49E-02	6.90E-06	7.66E-04	1.24E-03	2.20E-04	6.61E-04	4.28E-04	4.39E-04	9.47E-05	6.78E-05	1.84E-08	2.20E-04	1.25E-04
11	D67	80	Single Unit Short Haul Truck	55	0.00E+00	1.03E-05	5.11E-07	1.01E+01	8.28E-06	2.03E-02	1.10E-05	5.28E-03	6.47E-04	1.46E-04	1.25E-03	3.05E-04	3.10E-04	1.01E-03	4.07E-05	1.62E-08	9.43E-04	9.87E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	4.47E-07	2.21E-08	4.27E-01	3.54E-07	8.41E-04	4.76E-07	2.25E-04	2.95E-05	6.45E-06	5.46E-05	1.31E-05	1.33E-05	4.27E-05	1.72E-06	6.73E-10	4.13E-05	4.23E-05
11	D67	80	Combination Short Haul Truck	36	0.00E+00	1.57E-05	1.12E-06	1.30E+01	4.96E-08	1.39E-02	1.15E-05	1.61E-02	9.52E-04	2.34E-04	9.36E-04	3.32E-04	3.30E-04	1.96E-03	4.35E-05	0.00E+00	6.07E-04	3.04E-03
11	D67	80	Combination Long Haul Truck	33	0.00E+00	1.40E-05	9.42E-07	1.20E+01	5.73E-08	1.44E-02	1.07E-05	1.57E-02	9.33E-04	1.88E-04	9.69E-04	2.85E-04	2.87E-04	1.84E-03	4.02E-05	0.00E+00	6.79E-04	2.95E-03
11	D68	80	Passenger Car	285	0.00E+00	3.46E-06	3.75E-07	1.33E+01	2.41E-05	9.26E-02	7.71E-06	5.85E-04	1.57E-03	2.72E-04	7.51E-04	4.84E-04	4.97E-04	4.46E-05	6.68E-05	1.87E-08	2.54E-04	9.18E-05
11	D68	80	Passenger Truck	477	0.00E+00	7.45E-06	7.90E-07	3.07E+01	4.77E-05	1.70E-01	1.56E-05	1.74E-03	2.81E-03	4.98E-04	1.50E-03	9.70E-04	9.94E-04	2.15E-04	1.54E-04	4.17E-08	4.99E-04	2.84E-04
11	D68	80	Single Unit Short Haul Truck	75	0.00E+00	1.40E-05	6.95E-07	1.37E+01	1.13E-05	2.76E-02	1.49E-05	7.18E-03	8.80E-04	1.99E-04	1.70E-03	4.15E-04	4.21E-04	1.38E-03	5.54E-05	2.20E-08	1.28E-03	1.34E-03
11	D68	80	Single Unit Long Haul Truck	3	0.00E+00	6.09E-07	3.00E-08	5.81E-01	4.82E-07	1.14E-03	6.48E-07	3.07E-04	4.02E-05	8.78E-06	7.43E-05	1.79E-05	1.81E-05	5.80E-05	2.34E-06	9.16E-10	5.62E-05	5.75E-05
11	D68	80	Combination Short Haul Truck	48	0.00E+00	2.13E-05	1.52E-06	1.76E+01	6.72E-08	1.89E-02	1.56E-05	2.18E-02	1.29E-03	3.18E-04	1.27E-03	4.50E-04	4.47E-04	2.65E-03	5.90E-05	0.00E+00	8.23E-04	4.12E-03
11	D68	80	Combination Long Haul Truck	44	0.00E+00	1.90E-05	1.28E-06	1.63E+01	7.78E-08	1.95E-02	1.45E-05	2.13E-02	1.27E-03	2.54E-04	1.31E-03	3.87E-04	3.89E-04	2.49E-03	5.45E-05	0.00E+00	9.21E-04	4.00E-03
11	D69	80	Passenger Car	27	0.00E+00	3.25E-07	3.52E-08	1.25E+00	2.26E-06	8.68E-03	7.24E-07	5.49E-05	1.47E-04	2.55E-05	7.04E-05	4.54E-05	4.66E-05	4.19E-06	6.27E-06	1.76E-09	2.38E-05	8.61E-06
11	D69	80	Passenger Truck	45	0.00E+00	6.98E-07	7.41E-08	2.88E+00	4.47E-06	1.59E-02	1.47E-06	1.63E-04	2.63E-04	4.67E-05	1.40E-04	9.10E-05	9.32E-05	2.01E-05	1.44E-05	3.91E-09	4.69E-05	2.66E-05
11	D69	80	Single Unit Short Haul Truck	15	0.00E+00	2.91E-06	1.44E-07	2.85E+00	2.34E-06	5.73E-03	3.09E-06	1.49E-03	1.83E-04	4.13E-05	3.53E-04	8.61E-05	8.74E-05	2.86E-04	1.15E-05	4.56E-09	2.66E-04	2.79E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	6.23E-09	1.21E-01	9.99E-08	2.37E-04	1.34E-07	6.36E-05	8.34E-06	1.82E-06	1.54E-05	3.70E-06	3.76E-06	1.20E-05	4.86E-07	1.90E-10	1.17E-05	1.19E-05
11	D69	80	Combination Short Haul Truck	8	0.00E+00	3.30E-06	2.36E-07	2.74E+00	1.04E-08	2.93E-03	2.42E-06	3.39E-03	2.00E-04	4.93E-05	1.97E-04	6.98E-05	6.94E-05	4.12E-04	9.15E-06	0.00E+00	1.28E-04	6.40E-04
11	D69	80	Combination Long Haul Truck	7	0.00E+00	2.95E-06	1.98E-07	2.53E+00	1.21E-08	3.03E-03	2.25E-06	3.30E-03	1.96E-04	3.95E-05	2.04E-04	6.00E-05	6.04E-05	3.87E-04	8.46E-06	0.00E+00	1.43E-04	6.21E-04
11	D70	80	Passenger Car	126	0.00E+00	1.54E-06	1.66E-07	5.89E+00	1.07E-05	4.10E-02	3.42E-06	2.59E-04	6.94E-04	1.21E-04	3.33E-04	2.15E-04	2.20E-04	1.98E-05	2.96E-05	8.31E-09	1.13E-04	4.07E-05
11	D70	80	Passenger Truck	211	0.00E+00	3.30E-06	3.50E-07	1.36E+01	2.11E-05	7.51E-02	6.93E-06	7.69E-04	1.24E-03	2.21E-04	6.63E-04	4.30E-04	4.40E-04	9.51E-05	6.81E-05	1.85E-08	2.21E-04	1.26E-04
11	D70	80	Single Unit Short Haul Truck	37	0.00E+00	6.92E-06	3.43E-07	6.79E+00	5.57E-06	1.36E-02	7.36E-06	3.55E-03	4.35E-04	9.83E-05	8.42E-04	2.05E-04	2.08E-04	6.81E-04	2.74E-05	1.09E-08	6.34E-04	6.63E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	3.01E-07	1.48E-08	2.87E-01	2.38E-07	5.65E-04	3.20E-07	1.51E-04	1.98E-05	4.34E-06	3.67E-05	8.82E-06	8.95E-06	2.87E-05	1.16E-06	4.52E-10	2.78E-05	2.84E-05
11	D70	80	Combination Short Haul Truck	24	0.00E+00	1.04E-05	7.45E-07	8.63E+00	3.29E-08	9.23E-03	7.64E-06	1.07E-02	6.31E-04	1.56E-04	6.21E-04	2.20E-04	2.19E-04	1.30E-03	2.89E-05	0.00E+00	4.03E-04	2.02E-03
11	D70	80	Combination Long Haul Truck	22	0.00E+00	9.31E-06	6.25E-07	7.99E+00	3.80E-08	9.55E-03	7.09E-06	1.04E-02	6.19E-04	1.24E-04	6.43E-04	1.89E-04	1.90E-04	1.22E-03	2.67E-05	0.00E+00	4.51E-04	1.96E-03
10	D71	70	Passenger Car	187	0.00E+00	2.45E-06	2.65E-07	9.01E+00	1.71E-05	6.40E-02	5.47E-06	3.75E-04	1.45E-03	2.33E-04	5.31E-04	3.42E-04	3.51E-04	3.36E-05	4.52E-05	1.23E-08	1.80E-04	5.88E-05
10	D71	70	Passenger Truck	314	0.00E+00	5.37E-06	5.68E-07	2.08E+01	3.40E-05	1.18E-01	1.12E-05	1.18E-03	2.64E-03	4.30E-04	1.06E-03	6.92E-04	7.09E-04	1.53E-04	1.03E-04	2.76E-08	3.55E-04	1.94E-04
10	D71	70	Single Unit Short Haul Truck	37	0.00E+00	8.78E-06	4.40E-07	6.88E+00	7.18E-06	1.38E-02	9.35E-06	4.33E-03	6.17E-04	1.23E-04	1.07E-03	2.63E-04	2.67E-04	6.89E-04	2.77E-05	1.12E-08	7.98E-04	8.10E-04
10	D71	70	Single Unit Long Haul Truck	2	0.00E+00	3.83E-07	1.90E-08	2.92E-01	3.10E-07	5.77E-04	4.07E-07	1.86E-04	2.82E-05	5.49E-06	4.67E-05	1.14E-05	1.15E-05	2.92E-05	1.18E-06	4.71E-10	3.50E-05	3.49E-05
10	D71	70	Combination Short Haul Truck	34	0.00E+00	1.75E-05	1.25E-06	1.27E+01	5.70E-08	1.51E-02	1.28E-05	1.85E-02	1.33E-03	2.91E-04	1.07E-03	3.69E-04	3.68E-04	1.92E-03	4.25E-05	0.00E+00	7.00E-04	3.48E-03
10	D71	70	Combination Long Haul Truck	31	0.00E+00	1.59E-05	1.06E-06	1.19E+01	6.56E-08	1.60E-02	1.20E-05	1.82E-02	1.32E-03	2.42E-04	1.10E-03	3.20E-04	3.24E-04	1.81E-03	3.97E-05	0.00E+00	7.81E-04	3.43E-03
10	D72	70	Passenger Car	145	0.00E+00	1.90E-06	2.06E-07	6.99E+00	1.33E-05	4.97E-02	4.24E-06	2.91E-04	1.13E-03	1.81E-04	4.12E-04	2.65E-04	2.72E-04	2.61E-05	3.51E-05	9.58E-09	1.39E-04	4.57E-05
10	D72	70	Passenger Truck	244	0.00E+00	4.17E-06	4.41E-07	1.61E+01	2.64E-05	9.13E-02	8.66E-06	9.13E-04	2.05E-03	3.34E-04	8.25E-04	5.37E-04	5.50E-04	1.18E-04	7.98E-05	2.14E-08	2.75E-04	1.50E-04
10	D72	70	Single Unit Short Haul Truck	43	0.00E+00	1.01E-05	5.08E-07	7.94E+00	8.29E-06	1.59E-02	1.08E-05	4.99E-03	7.13E-04	1.43E-04	1.23E-03	3.03E-04	3.08E-04	7.95E-04	3.20E-05	1.29E-08	9.21E-04	9.35E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	4.42E-07	2.20E-08	3.37E-01	3.58E-07	6.66E-04	4.70E-07	2.15E-04	3.25E-05	6.34E-06	5.39E-05	1.31E-05	1.33E-05	3.36E-05	1.36E-06	5.44E-10	4.04E-05	4.03E-05
10	D72	70	Combination Short Haul Truck	32	0.00E+00	1.68E-05	1.19E-06	1.22E+01	5.45E-08	1.44E-02	1.23E-05	1.77E-02	1.27E-03	2.79E-04	1.02E-03	3.53E-04	3.53E-04	1.84E-03	4.07E-05	0.00E+00	6.70E-04	3.33E-03
10	D72	70	Combination Long Haul Truck	29	0.00E+00	1.52E-05	1.01E-06	1.14E+01	6.28E-08	1.53E-02	1.15E-05	1.74E-02	1.27E-03	2.31E-04	1.06E-03	3.07E-04	3.10E-04	1.73E-03	3.80E-05	0.00E+00	7.48E-04	3.28E-03
10	D73	70	Passenger Car	105	0.00E+00	1.37E-06	1.48E-07	5.03E+00	9.54E-06	3.58E-02	3.05E-06	2.10E-04	8.11E-04	1.30E-04	2.97E-04	1.91E-04	1.96E-04	1.88E-05	2.52E-05	6.89E-09	1.00E-04	3.29E-05
10	D73	70	Passenger Truck	175	0.00E+00	3.00E-06	3.18E-07	1.16E+01	1.90E-05	6.58E-02	6.23E-06	6.58E-04	1.48E-03	2.40E-04	5.94E-04	3.87E-04	3.96E-04	8.52E-05	5.75E-05	1.54E-08	1.98E-04	1.08E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	9.04E-07	4.53E-08	7.08E-01	7.39E-07	1.42E-03	9.62E-07	4.45E-04	6.36E-05	1.27E-05	1.10E-04	2.70E-05	2.75E-05	7.09E-05	2.85E-06	1.15E-09	8.21E-05	8.34E-05
10	D73	70	Combination Short Haul Truck	11	0.00E+00	5.87E-06	4.18E-07	4.27E+00	1.91E-08	5.06E-03	4.30E-06	6.19E-03	4.46E-04	9.77E-05	3.58E-04	1.24E-04	1.23E-04	6.44E-04	1.43E-05	0.00E+00	2.35E-04	1.17E-03
10	D73	70	Combination Long Haul Truck	10	0.00E+00	5.33E-06	3.55E-07	3.98E+00	2.20E-08	5.36E-03	4.04E-06	6.10E-03	4.44E-04	8.11E-05	3.70E-04	1.07E-04	1.09E-04	6.07E-04	1.33E-05	0.00E+00	2.62E-04	1.15E-03
10	D74	70	Passenger Car	122	0.00E+00	1.60E-06	1.73E-07	5.88E+00	1.11E-05	4.18E-02	3.57E-06	2.45E-04	9.48E-04	1.52E-04	3.47E-04	2.23E-04	2.29E-04	2.19E-05	2.95E-05	8.05E-09	1.17E-04	3.84E-05
10	D74	70	Passenger Truck	205	0.00E+00	3.51E-06	3.71E-07	1.35E+01	2.22E-05	7.68E-02	7.28E-06	7.68E-04	1.72E-03	2.81E-04	6.94E-04	4.52E-04	4.63E-04	9.96E-05	6.71E-05	1.80E-08	2.32E-04	1.26E-04
10	D74	70	Single Unit Short Haul Truck	8	0.00E+00	1.88E-06	9.44E-08	1.48E+00	1.54E-06	2.96E-03	2.01E-06	9.28E-04	1.32E-04	2.65E-05	2.29E-04	5.63E-05	5.72E-05	1.48E-04	5.94E-06	2.40E-09	1.71E-04	1.74E-04
10	D74	70	Combination Short Haul Truck	6	0.00E+00	3.33E-06	2.37E-07	2.42E+00	1.08E-08	2.87E-03	2.44E-06	3.51E-03	2.53E-04	5.54E-05	2.03E-04	7.01E-05	7.00E-05	3.65E-04	8.08E-06	0.00E+00	1.33E-04	6.60E-04
10	D74	70	Combination Long Haul Truck	6	0.00E+00	3.02E-06	2.01E-07	2.26E+00	1.25E-08	3.04E-03	2.29E-06	3.46E-03	2.52E-04	4.59E-05	2.09E-04	6.09E-05	6.15E-05	3.44E-04	7.55E-06	0.00E+00	1.48E-04	6.51E-04
11	D75	80	Passenger Car	104	0.00E+00	1.26E-06	1.37E-07	4.85E+00	8.81E-06	3.38E-02	2.82E-06	2.14E-04	5.72E-04	9.93E-05	2.74E-04	1.77E-04	1.81E-04	1.63E-05	2.44E-05	6.84E-09	9.27E-05	3.35E-05
11	D75	80	Passenger Truck	174	0.00E+00	2.72E-06	2.88E-07	1.12E+01	1.74E-05	6.19E-02	5.71E-06	6.33E-04	1.03E-03	1.82E-04	5.46E-04	3.54E-04	3.63E-04	7.83E-05	5.61E-05	1.52E-08	1.82E-04	1.03E-04
11	D75	80	Single Unit Short Haul Truck	10	0.00E+00	1.80E-06	8.91E-08	1.76E+00	1.44E-06	3.54E-03	1.91E-06	9.21E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	D75	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.59E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.31E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	D75	80	Combination Long Haul Truck	5	0.00E+00	2.26E-06	1.52E-07	1.94E+00	9.23E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.02E-05	1.56E-04	4.59E-05	4.62E-05	2.96E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	D76	80	Passenger Car	95	0.00E+00	1.16E-06	1.25E-07	4.43E+00	8.05E-06	3.09E-02	2.57E-06	1.95E-04	5.22E-04	9.07E-05	2.50E-04	1.61E-04	1.66E-04	1.49E-05	2.23E-05	6.25E-09	8.47E-05	3.06E-05
11	D76	80	Passenger Truck	159	0.00E+00	2.48E-06	2.63E-07	1.02E+01	1.59E-05	5.65E-02	5.21E-06	5.79E-04	9.37E-04	1.66E-04	4.99E-04	3.23E-04	3.31E-04	7.16E-05	5.12E-05	1.39E-08	1.67E-04	9.45E-05
11	D76	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.66E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.51E-05	8.64E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.75E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.16E-09	1.19E-01	9.88E-08	2.35E-04	1.33E-07	6.29E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	D76	80	Combination Short Haul Truck	8	0.00E+00	3.44E-06	2.46E-07	2.85E+00	1.09E-08	3.05E-03	2.53E-06	3.53E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.24E-05	4.29E-04	9.55E-06	0.00E+00	1.33E-04	6.67E-04
11	D76	80	Combination Long Haul Truck	7	0.00E+00	3.08E-06	2.07E-07	2.64E+00	1.26E-08	3.16E-03	2.35E-06	3.44E-03	2.05E-04	4.11E-05	2.13E-04	6.26E-05	6.30E-05	4.03E-04	8.82E-06	0.00E+00	1.49E-04	6.48E-04
11	D77	80	Passenger Car	79	0.00E+00	9.64E-07	1.04E-07	3.70E+00	6.72E-06	2.58E-02	2.15E-06	1.63E-04	4.36E-04	7.57E-05	2.09E-04	1.35E-04	1.38E-04	1.24E-05	1.86E-05	5.22E-09	7.07E-05	2.55E-05
11	D77	80	Passenger Truck	133	0.00E+00	2.07E-06	2.20E-07	8.55E+00	1.33E-05	4.72E-02	4.35E-06	4.83E-04	7.82E-04	1.39E-04	4.17E-04	2.70E-04	2.77E-04	5.97E-05	4.28E-05	1.16E-08	1.39E-04	7.89E-05
11	D77	80	Single Unit Short Haul Truck	28	0.00E+00	5.21E-06	2.58E-07	5.11E+00	4.19E-06	1.03E-02	5.54E-06	2.67E-03	3.27E-04	7.40E-05	6.33E-04	1.54E-04	1.57E-04	5.12E-04	2.06E-05	8.18E-09	4.77E-04	4.99E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	2.16E-01	1.79E-07	4.25E-04	2.41E-07	1.14E-04	1.49E-05	3.26E-06	2.76E-05	6.64E-06	6.74E-06	2.16E-05	8.71E-07	3.40E-10	2.09E-05	2.14E-05
11	D77	80	Combination Short Haul Truck	14	0.00E+00	5.97E-06	4.27E-07	4.95E+00	1.89E-08	5.29E-03	4.38E-06	6.12E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.44E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	D77	80	Combination Long Haul Truck	12	0.00E+00	5.34E-06	3.58E-07	4.58E+00	2.18E-08	5.48E-03	4.06E-06	5.96E-03	3.55E-04	7.13E-05	3.69E-04	1.09E-04	1.09E-04	6.99E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	D78	80	Passenger Car	162	0.00E+00	1.97E-06	2.13E-07	7.55E+00	1.37E-05	5.26E-02	4.38E-06	3.33E-04	8.90E-04	1.55E-04	4.27E-04	2.75E-04	2.82E-04	2.54E-05	3.80E-05	1.07E-08	1.44E-04	5.22E-05
11	D78	80	Passenger Truck	271	0.00E+00	4.23E-06	4.49E-07	1.75E+01	2.71E-05	9.64E-02	8.89E-06	9.87E-04	1.60E-03	2.83E-04	8.51E-04	5.51E-04	5.65E-04	1.22E-04	8.74E-05	2.37E-08	2.84E-04	1.61E-04
11	D78	80	Single Unit Short Haul Truck	37	0.00E+00	7.00E-06	3.48E-07	6.87E+00	5.63E-06	1.38E-02	7.45E-06	3.59E-03	4.40E-04	9.95E-05	8.52E-04	2.08E-04	2.11E-04	6.89E-04	2.77E-05	1.10E-08	6.41E-04	6.71E-04
11	D78	80	Single Unit Long Haul Truck	2	0.00E+00	3.04E-07	1.50E-08	2.91E-01	2.41E-07	5.72E-04	3.24E-07	1.53E-04	2.01E-05	4.39E-06	3.72E-05	8.92E-06	9.06E-06	2.90E-05	1.17E-06	4.58E-10	2.81E-05	2.87E-05
11	D78	80	Combination Short Haul Truck	21	0.00E+00	9.18E-06	6.57E-07	7.61E+00	2.90E-08	8.14E-03	6.74E-06	9.41E-03	5.57E-04	1.37E-04	5.47E-04	1.94E-04	1.93E-04	1.14E-03	2.55E-05	0.00E+00	3.55E-04	1.78E-03
11	D78	80	Combination Long Haul Truck

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D83	80	Passenger Car	302	0.00E+00	3.68E-06	3.98E-07	1.41E+01	2.56E-05	9.83E-02	8.19E-06	6.22E-04	1.66E-03	2.89E-04	7.97E-04	5.14E-04	5.28E-04	4.74E-05	7.10E-05	1.99E-08	2.70E-04	9.74E-05
11	D83	80	Passenger Truck	506	0.00E+00	7.91E-06	8.38E-07	3.26E+01	5.06E-05	1.80E-01	1.66E-05	1.84E-03	2.98E-03	5.29E-04	1.59E-03	1.03E-03	1.06E-03	2.28E-04	1.63E-04	4.43E-08	5.30E-04	3.01E-04
11	D83	80	Single Unit Short Haul Truck	75	0.00E+00	1.41E-05	7.01E-07	1.38E+01	1.14E-05	2.78E-02	1.50E-05	7.24E-03	8.87E-04	2.01E-04	1.72E-03	4.18E-04	4.25E-04	1.39E-03	5.58E-05	2.22E-08	1.29E-03	1.35E-03
11	D83	80	Single Unit Long Haul Truck	3	0.00E+00	6.13E-07	3.03E-08	5.86E-01	4.85E-07	1.15E-03	6.53E-07	3.09E-04	4.05E-05	8.85E-06	7.49E-05	1.80E-05	1.83E-05	5.85E-05	2.36E-06	9.23E-10	5.66E-05	5.79E-05
11	D83	80	Combination Short Haul Truck	44	0.00E+00	1.92E-05	1.37E-06	1.59E+01	6.05E-08	1.70E-02	1.41E-05	1.97E-02	1.16E-03	2.86E-04	1.14E-03	4.05E-04	4.03E-04	2.39E-03	5.31E-05	0.00E+00	7.41E-04	3.71E-03
11	D83	80	Combination Long Haul Truck	40	0.00E+00	1.71E-05	1.15E-06	1.47E+01	7.00E-08	1.76E-02	1.31E-05	1.91E-02	1.14E-03	2.29E-04	1.18E-03	3.49E-04	3.51E-04	2.25E-03	4.91E-05	0.00E+00	8.30E-04	3.61E-03
11	D84	80	Passenger Car	333	0.00E+00	4.06E-06	4.39E-07	1.56E+01	2.82E-05	1.08E-01	9.03E-06	6.85E-04	1.83E-03	3.19E-04	8.79E-04	5.67E-04	5.82E-04	5.22E-05	7.82E-05	2.19E-08	2.97E-04	1.07E-04
11	D84	80	Passenger Truck	558	0.00E+00	8.71E-06	9.24E-07	3.60E+01	5.58E-05	1.98E-01	1.83E-05	2.03E-03	3.29E-03	5.83E-04	1.75E-03	1.14E-03	1.16E-03	2.51E-04	1.80E-04	4.88E-08	5.85E-04	3.32E-04
11	D84	80	Single Unit Short Haul Truck	39	0.00E+00	7.28E-06	3.61E-07	7.14E+00	5.86E-06	1.43E-02	7.74E-06	3.73E-03	4.57E-04	1.03E-04	8.85E-04	2.16E-04	2.19E-04	7.16E-04	2.88E-05	1.14E-08	6.66E-04	6.98E-04
11	D84	80	Single Unit Long Haul Truck	2	0.00E+00	3.16E-07	1.56E-08	3.02E-01	2.50E-07	5.95E-04	3.37E-07	1.59E-04	2.09E-05	4.56E-06	3.86E-05	9.28E-06	9.42E-06	3.02E-05	1.22E-06	4.76E-10	2.92E-05	2.99E-05
11	D84	80	Combination Short Haul Truck	69	0.00E+00	3.03E-05	2.17E-06	2.51E+01	9.57E-08	2.69E-02	2.23E-05	3.11E-02	1.84E-03	4.53E-04	1.81E-03	6.41E-04	6.37E-04	3.78E-03	8.40E-05	0.00E+00	1.17E-03	5.87E-03
11	D84	80	Combination Long Haul Truck	63	0.00E+00	2.71E-05	1.82E-06	2.33E+01	1.11E-07	2.78E-02	2.06E-05	3.03E-02	1.80E-03	3.62E-04	1.87E-03	5.51E-04	5.55E-04	3.55E-03	7.77E-05	0.00E+00	1.31E-03	5.70E-03
11	D85	80	Passenger Car	251	0.00E+00	3.05E-06	3.30E-07	1.17E+01	2.13E-05	8.15E-02	6.79E-06	5.16E-04	1.38E-03	2.40E-04	6.61E-04	4.26E-04	4.38E-04	3.93E-05	5.89E-05	1.65E-08	2.24E-04	8.08E-05
11	D85	80	Passenger Truck	420	0.00E+00	6.56E-06	6.95E-07	2.71E+01	4.20E-05	1.49E-01	1.38E-05	1.53E-03	2.47E-03	4.39E-04	1.32E-03	8.54E-04	8.75E-04	1.89E-04	1.35E-04	3.68E-08	4.40E-04	2.50E-04
11	D85	80	Single Unit Short Haul Truck	69	0.00E+00	1.30E-05	6.45E-07	1.27E+01	1.04E-05	2.56E-02	1.38E-05	6.66E-03	8.16E-04	1.85E-04	1.58E-03	3.85E-04	3.91E-04	1.28E-03	5.14E-05	2.04E-08	1.19E-03	1.24E-03
11	D85	80	Single Unit Long Haul Truck	3	0.00E+00	5.64E-07	2.78E-08	5.39E-01	4.46E-07	1.06E-03	6.01E-07	2.84E-04	3.73E-05	8.14E-06	6.89E-05	1.65E-05	1.68E-05	5.38E-05	2.17E-06	8.49E-10	5.21E-05	5.33E-05
11	D85	80	Combination Short Haul Truck	48	0.00E+00	2.13E-05	1.52E-06	1.76E+01	6.72E-08	1.89E-02	1.56E-05	2.18E-02	1.29E-03	3.18E-04	1.27E-03	4.50E-04	4.47E-04	2.65E-03	5.90E-05	0.00E+00	8.23E-04	4.12E-03
11	D85	80	Combination Long Haul Truck	44	0.00E+00	1.90E-05	1.28E-06	1.63E+01	7.78E-08	1.95E-02	1.45E-05	2.12E-02	1.27E-03	2.54E-04	1.31E-03	3.87E-04	3.89E-04	2.49E-03	5.45E-05	0.00E+00	9.21E-04	4.00E-03
11	D86	80	Passenger Car	371	0.00E+00	4.51E-06	4.88E-07	1.73E+01	3.14E-05	1.20E-01	1.00E-05	7.62E-04	2.04E-03	3.54E-04	9.77E-04	6.30E-04	6.47E-04	5.81E-05	8.70E-05	2.44E-08	3.31E-04	1.19E-04
11	D86	80	Passenger Truck	621	0.00E+00	9.69E-06	1.03E-06	4.00E+01	6.21E-05	2.21E-01	2.04E-05	2.26E-03	3.66E-03	6.48E-04	1.95E-03	1.26E-03	1.29E-03	2.79E-04	2.00E-04	5.43E-08	6.50E-04	3.69E-04
11	D86	80	Single Unit Short Haul Truck	32	0.00E+00	5.93E-06	2.94E-07	5.82E+00	4.77E-06	1.17E-02	6.31E-06	3.04E-03	3.73E-04	8.43E-05	7.21E-04	1.76E-04	1.78E-04	5.83E-04	2.35E-05	9.31E-09	5.43E-04	5.69E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.27E-08	2.46E-01	2.04E-07	4.84E-04	2.74E-07	1.30E-04	1.70E-05	3.72E-06	3.15E-05	7.56E-06	7.67E-06	2.46E-05	9.92E-07	3.88E-10	2.38E-05	2.43E-05
11	D86	80	Combination Short Haul Truck	67	0.00E+00	2.93E-05	2.09E-06	2.43E+01	9.24E-08	2.59E-02	2.15E-05	3.00E-02	1.77E-03	4.37E-04	1.74E-03	6.18E-04	6.15E-04	3.65E-03	8.11E-05	0.00E+00	1.13E-03	5.67E-03
11	D86	80	Combination Long Haul Truck	61	0.00E+00	2.62E-05	1.76E-06	2.25E+01	1.07E-07	2.68E-02	1.99E-05	2.92E-02	1.74E-03	3.50E-04	1.81E-03	5.32E-04	5.35E-04	3.43E-03	7.50E-05	0.00E+00	1.27E-03	5.50E-03
11	D87	80	Passenger Car	337	0.00E+00	4.10E-06	4.43E-07	1.57E+01	2.85E-05	1.09E-01	9.12E-06	6.92E-04	1.85E-03	3.22E-04	8.88E-04	5.72E-04	5.87E-04	5.27E-05	7.90E-05	2.22E-08	3.00E-04	1.08E-04
11	D87	80	Passenger Truck	564	0.00E+00	8.80E-06	9.33E-07	3.63E+01	5.64E-05	2.00E-01	1.85E-05	2.05E-03	3.32E-03	5.89E-04	1.77E-03	1.15E-03	1.17E-03	2.54E-04	1.82E-04	4.93E-08	5.90E-04	3.35E-04
11	D87	80	Single Unit Short Haul Truck	124	0.00E+00	2.33E-05	1.16E-06	2.28E+01	1.87E-05	4.59E-02	2.48E-05	1.19E-02	1.46E-03	3.31E-04	2.83E-03	6.90E-04	7.01E-04	2.29E-03	9.22E-05	3.66E-08	2.13E-03	2.23E-03
11	D87	80	Single Unit Long Haul Truck	5	0.00E+00	1.01E-06	4.99E-08	9.67E-01	8.01E-07	1.90E-03	1.08E-06	5.10E-04	6.68E-05	1.46E-05	1.24E-04	2.97E-05	3.01E-05	9.65E-05	3.90E-06	1.52E-09	9.35E-05	9.56E-05
11	D87	80	Combination Short Haul Truck	85	0.00E+00	3.73E-05	2.66E-06	3.09E+01	1.18E-07	3.30E-02	2.74E-05	3.82E-02	2.26E-03	5.56E-04	2.22E-03	7.88E-04	7.83E-04	4.65E-03	1.03E-04	0.00E+00	1.44E-03	7.22E-03
11	D87	80	Combination Long Haul Truck	77	0.00E+00	3.33E-05	2.24E-06	2.86E+01	1.36E-07	3.42E-02	2.54E-05	3.72E-02	2.21E-03	4.45E-04	2.30E-03	6.77E-04	6.82E-04	4.36E-03	9.55E-05	0.00E+00	1.61E-03	7.01E-03
11	D88	80	Passenger Car	724	0.00E+00	8.81E-06	9.53E-07	3.38E+01	6.13E-05	2.35E-01	1.96E-05	1.49E-03	3.98E-03	6.92E-04	1.91E-03	1.23E-03	1.26E-03	1.13E-04	1.70E-04	4.77E-08	6.46E-04	2.33E-04
11	D88	80	Passenger Truck	1212	0.00E+00	1.89E-05	2.01E-06	7.81E+01	1.21E-04	4.31E-01	3.97E-05	4.41E-03	7.14E-03	1.27E-03	3.81E-03	2.47E-03	2.53E-03	5.46E-04	3.91E-04	1.06E-07	1.27E-03	7.21E-04
11	D88	80	Single Unit Short Haul Truck	82	0.00E+00	1.54E-05	7.66E-07	1.51E+01	1.24E-05	3.04E-02	1.64E-05	7.91E-03	9.70E-04	2.19E-04	1.88E-03	4.57E-04	4.64E-04	1.52E-03	6.11E-05	2.42E-08	1.41E-03	1.48E-03
11	D88	80	Single Unit Long Haul Truck	4	0.00E+00	6.71E-07	3.31E-08	6.41E-01	5.31E-07	1.26E-03	7.14E-07	3.38E-04	4.43E-05	9.67E-06	8.19E-05	1.97E-05	2.00E-05	6.40E-05	2.58E-06	1.01E-09	6.19E-05	6.34E-05
11	D88	80	Combination Short Haul Truck	131	0.00E+00	5.73E-05	4.10E-06	4.75E+01	1.81E-07	5.08E-02	4.21E-05	5.88E-02	3.48E-03	8.57E-04	3.42E-03	1.21E-03	1.20E-03	7.15E-03	1.59E-04	0.00E+00	2.22E-03	1.11E-02
11	D88	80	Combination Long Haul Truck	119	0.00E+00	5.13E-05	3.44E-06	4.40E+01	2.09E-07	5.26E-02	3.91E-05	5.73E-02	3.41E-03	6.85E-04	3.54E-03	1.04E-03	1.05E-03	6.72E-03	1.47E-04	0.00E+00	2.48E-03	1.08E-02
9	D89	60	Passenger Car	49	0.00E+00	7.29E-07	7.88E-08	2.44E+00	5.08E-06	1.89E-02	1.62E-06	9.91E-05	4.93E-04	7.57E-05	1.58E-04	1.02E-04	1.04E-04	1.02E-05	1.22E-05	3.36E-09	5.33E-05	1.55E-05
9	D89	60	Passenger Truck	81	0.00E+00	1.61E-06	1.70E-07	5.56E+00	1.00E-05	3.37E-02	3.30E-06	3.23E-04	9.04E-04	1.40E-04	3.14E-04	2.05E-04	2.10E-04	4.32E-05	2.76E-05	7.64E-09	1.05E-04	5.36E-05
9	D89	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.02E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	D89	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.01E-03	1.72E-04	3.40E-05	1.18E-04	3.84E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.77E-04
9	D89	60	Combination Long Haul Truck	3	0.00E+00	1.65E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.99E-03	1.72E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.74E-05	3.74E-04
9	D90	60	Passenger Car	76	0.00E+00	1.14E-06	1.23E-07	3.82E+00	7.93E-06	2.95E-02	2.53E-06	1.55E-04	7.70E-04	1.18E-04	2.47E-04	1.59E-04	1.63E-04	1.59E-05	1.91E-05	5.25E-09	8.33E-05	2.42E-05
9	D90	60	Passenger Truck	127	0.00E+00	2.51E-06	2.65E-07	8.69E+00	1.57E-05	5.26E-02	5.15E-06	5.05E-04	1.41E-03	2.19E-04	4.91E-04	3.21E-04	3.28E-04	6.74E-05	4.31E-05	1.19E-08	1.63E-04	8.37E-05
9	D90	60	Single Unit Short Haul Truck	11	0.00E+00	3.10E-06	1.55E-07	1.97E+00	2.55E-06	3.80E-03	3.31E-06	1.47E-03	2.51E-04	4.54E-05	3.75E-04	9.28E-05	9.42E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.77E-04
9	D90	60	Combination Short Haul Truck	6	0.00E+00	3.70E-06	2.58E-07	2.41E+00	1.31E-08	3.23E-03	2.74E-06	4.01E-03	3.43E-04	6.80E-05	2.35E-04	7.67E-05	7.67E-05	3.63E-04	8.04E-06	0.00E+00	1.58E-04	7.55E-04
9	D90	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.26E+00	1.50E-08	3.48E-03	2.56E-06	3.97E-03	3.45E-04	5.87E-05	2.42E-04	6.58E-05	6.66E-05	3.43E-04	7.54E-06	0.00E+00	1.75E-04	7.49E-04
10	D91	70	Passenger Car	243	0.00E+00	3.17E-06	3.43E-07	1.17E+01	2.21E-05	8.29E-02	7.08E-06	4.86E-04	1.88E-03	3.02E-04	6.88E-04	4.43E-04	4.54E-04	4.35E-05	5.85E-05	1.60E-08	2.33E-04	7.62E-05
10	D91	70	Passenger Truck	406	0.00E+00	6.95E-06	7.36E-07	2.69E+01	4.40E-05	1.52E-01	1.44E-05	1.52E-03	3.42E-03	5.56E-04	1.38E-03	8.96E-04	9.18E-04	1.98E-04	1.33E-04	3.58E-08	4.59E-04	2.51E-04
10	D91	70	Single Unit Short Haul Truck	12	0.00E+00	2.93E-06	1.47E-07	2.29E+00	2.39E-06	4.60E-03	3.12E-06	1.44E-03	2.06E-04	4.12E-05	3.56E-04	8.75E-05	8.89E-05	2.30E-04	9.23E-06	3.74E-09	2.66E-04	2.70E-04
10	D91	70	Single Unit Long Haul Truck	1	0.00E+00	1.28E-07	6.35E-09	9.73E-02	1.03E-07	1.92E-04	1.36E-07	6.21E-05	9.40E-06	1.83E-06	1.56E-05	3.78E-06	3.84E-06	9.72E-06	3.92E-07	1.57E-10	1.17E-05	1.16E-05
10	D91	70	Combination Short Haul Truck	8	0.00E+00	4.35E-06	3.09E-07	3.16E+00	1.41E-08	3.74E-03	3.18E-06	4.58E-03	3.30E-04	7.23E-05	2.65E-04	9.16E-05	9.14E-05	4.77E-04	1.06E-05	0.00E+00	1.74E-04	8.62E-04
10	D91	70	Combination Long Haul Truck	8	0.00E+00	3.94E-06	2.63E-07	2.95E+00	1.63E-08	3.96E-03	2.99E-06	4.52E-03	3.29E-04	6.00E-05	2.73E-04	7.95E-05	8.03E-05	4.49E-04	9.86E-06	0.00E+00	1.94E-04	8.50E-04
10	D92	70	Passenger Car	62	0.00E+00	8.17E-07	8.83E-08	3.00E+00	5.69E-06	2.13E-02	1.82E-06	1.25E-04	4.84E-04	7.77E-05	1.77E-04	1.14E-04	1.17E-04	1.12E-05	1.51E-05	4.11E-09	5.98E-05	1.96E-05
10	D92	70	Passenger Truck	105	0.00E+00	1.79E-06	1.89E-07	6.91E+00	1.13E-05	3.92E-02	3.72E-06	3.92E-04	8.80E-04	1.43E-04	3.54E-04	2.31E-04	2.36E-04	5.08E-05	3.43E-05	9.21E-09	1.18E-04	6.45E-05
10	D92	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.23E-05
10	D92	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	D92	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	D93	70	Passenger Car	219	0.00E+00	2.87E-06	3.10E-07	1.05E+01	2.00E-05	7.49E-02	6.39E-06	4.39E-04	1.70E-03	2.73E-04	6.21E-04	4.00E-04	4.10E-04	3.93E-05	5.28E-05	1.44E-08	2.10E-04	6.88E-05
10	D93	70	Passenger Truck	367	0.00E+00	6.28E-06	6.65E-07	2.43E+01	3.97E-05	1.38E-01	1.30E-05	1.38E-03	3.09E-03	5.02E-04	1.24E-03	8.09E-04	8.29E-04	1.78E-04	1.20E-04	3.23E-08	4.15E-04	2.26E-04
10	D93	70	Single Unit Short Haul Truck	12	0.00E+00	2.93E-06	1.47E-07	2.29E+00	2.39E-06	4.60E-03	3.12E-06	1.44E-03	2.06E-04	4.12E-05	3.56E-04	8.75E-05	8.89E-05	2.30E-04	9.23E-06	3.74E-09	2.66E-04	2.70E-04
10	D93	70	Single Unit Long Haul Truck	1	0.00E+00	1.28E-07	6.35E-09	9.73E-02	1.03E-07	1.92E-04	1.36E-07	6.21E-05	9.40E-06	1.83E-06	1.56E-05	3.78E-06	3.84E-06	9.72E-06	3.92E-07	1.57E-10	1.17E-05	1.16E-05
10	D93	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.09E-04	6.78E-05	2.48E-04	8.59E-05	8.56E-05	4.47E-04	9.89E-06	0.00E+00	1.63E-04	8.09E-04
10	D93	70	Combination Long Haul Truck	7	0.00E+00	3.70E-06	2.46E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.62E-05	2.56E-04	7.45E-05	7.53E-05	4.21E-04	9.24E-06	0.00E+00	1.82E-04	7.97E-04
10	D94	70	Passenger Car	49	0.00E+00	6.46E-07	6.98E-08	2.37E+00	4.50E-06	1.69E-02	1.44E-06	9.88E-05	3.82E-04	6.14E-05	1.40E-04	9.01E-05	9.24E-05	8.84E-06	1.19E-05	3.25E-09	4.73E-05	1.55E-05
10	D94	70	Passenger Truck	83	0.00E+00	1.41E-06	1.50E-07	5.46E+00	8.95E-06	3.10E-02	2.94E-06	3.10E-04	6.96E-04	1.13E-04	2.80E-04	1.82E-04	1.87E-04	4.02E-05	2.71E-05	7.28E-09	9.34E-05	5.10E-05
10	D94	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.23E-05
10	D94	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
9	E01	60	Passenger Car	112	0.00E+00	1.67E-06	1.81E-07	5.61E+00	1.17E-05	4.34E-02	3.72E-06	2.28E-04	1.13E-03	1.74E-04	3.63E-04	2.33E-04	2.40E-04	2.33E-05	2.81E-05	7.72E-09	1.22E-04	3.56E-05
9	E01	60	Passenger Truck	187	0.00E+00	3.69E-06	3.90E-07	1.28E+01	2.30E-05	7.73E-02	7.58E-06	7.42E-04	2.08E-03	3.22E-04	7.21E-04	4.71E-04	4.82E-04	9.91E-05	6.33E-05	1.75E-08	2.40E-04	1.23E-04
9	E01	60	Single Unit Short Haul Truck	15	0.00E+00	4.44E-06	2.22E-07	2.82E+00	3.65E-06	5.45E-03	4.73E-06	2.11E-03	3.59E-04	6.49E-05	5.36E-04	1.33E-04	1.35E-04	2.82E-04	1.14E-05	4.69E-09	4.03E-04	3.96E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.94E-07	9.63E-09	1.20E-01	1.59E-07	2.31E-04	2.07E-07	9.15E-05	1.61E-05	2.88E-06	2.36E-05	5.78E-06	5.88E-06	1.20E-05	4.86E-07	2.00E-10	1.77E-05	1.71E-05
9	E01	60	Combination Short Haul Truck	6	0.00E+00	3.75E-06	2.62E-07	2.44E+00	1.33E-08	3.27E-03	2.77E-06	4.06E-03	3.48E-04	6.89E-05	2.39E-04	7.78E-05	7.78E-05	3.68E-04	8.15E-06	0.00E+00	1.60E-04	7.65E-04
9	E01	60	Combination Long Haul Truck	6	0.00E+00	3.35E-06	2.19E-07	2.29E+00	1.52E-08	3.53E-03	2.59E-06	4.03E-03	3.50E-04	5.95E-05	2.45E-04	6.67E-05	6.75E-05	3.48E-04	7.64E-06	0.00E+00	1.77E-04	7.59E-04
9	E02	60	Passenger Car	199	0.00E+00	2.99E-06	3.23E-07	1.00E+01	2.08E-05	7.75E-02	6.64E-06	4.06E-04	2.02E-03	3.10E-04	6.47E-04	4.17E-04	4.28E-04	4.16E-05	5.01E-05	1.38E-08	2.19E-04	6.36E-05
9	E02	60	Passenger Truck	334	0.00E+00	6.59E-06	6.96E-07	2.28E+01	4.11E-05	1.38E-01	1.35E-05	1.33E-03	3.71E-03	5.75E-04	1.29E-03	8.41E-04	8.61E-04	1.77E-04	1.13E-04	3.13E-08	4.29E-04	2.20E-04
9	E02	60	Single Unit Short Haul Truck	32	0.00E+00	9.51E-06	4.75E-07	6.04E+00	7.82E-06	1.17E-02	1.01E-05	4.52E-03	7.68E-04	1.39E-04	1.15E-03	2.85E-04	2.89E-04	6.05E-04	2.44E-05	1.01E-08	8.63E-04	8.48E-04
9	E02	60	Single Unit Long Haul Truck	1	0.00E+00	4.16E-07	2.06E-08	2.58E-01	3.40E-07	4.95E-04	4.43E-07	1.96E-04	3.45E-05	6.18E-06	5.07E-05	1.24E-05	1.26E-05	2.58E-05	1.04E-06	4.28E-10	3.79E-05	3.67E-05
9	E02	60	Combination Short Haul Truck	23	0.00E+00	1.33E-05	9.25E-07	8.63E+00	4.69E-08	1.16E-02	9.81E-06	1.44E-02	1.23E-03	2.44E-04	8.44E-04	2.75E-04	2.75E-04	1.30E-03	2.88E-05	0.00E+00	5.67E-04	2.71E-03
9	E02	60	Combination Long Haul Truck	21	0.00E+00	1.19E-05	7.75E-07	8.09E+00	5.37E-08	1.25E-02	9.18E-06	1.42E-02	1.24E-03	2.10E-04	8.66E-04	2.36E-04	2.39E-04	1.23E-03	2.70E-05	0.00E+00	6.27E-04	2.68E-03
11	E03	80	Passenger Car	180	0.00E+00	2.19E-06	2.37E-07	8.38E+00	1.52E-05	5.84E-02	4.87E-06	3.69E-04	9.88E-04	1.72E-04	4.74E-04	3.05E-04	3.13E-04	2.81E-05	4.22E-05	1.18E-08	1.60E-04	5.79E-05
11	E03	80	Passenger Truck	301	0.00E+00	4.70E-06	4.98E-07	1.94E+01	3.01E-05	1.07E-01	9.86E-06	1.09E-03	1.77E-03	3.14E-04	9.44E-04	6.12E-04	6.27E-04	1.35E-04	9.69E-05	2.63E-08	3.15E-04	1.79E-04
11	E03	80	Single Unit Short Haul Truck	11	0.

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E07	60	Single Unit Long Haul Truck	5	0.00E+00	1.56E-06	7.75E-08	9.70E-01	1.28E-06	1.86E-03	1.67E-06	7.36E-04	1.30E-04	2.32E-05	1.90E-04	4.66E-05	4.73E-05	9.68E-05	3.91E-06	1.61E-09	1.42E-04	1.38E-04
9	E07	60	Combination Short Haul Truck	91	0.00E+00	5.35E-05	3.73E-06	3.48E+01	1.89E-07	4.67E-02	3.96E-05	5.80E-02	4.97E-03	9.83E-04	3.40E-03	1.11E-03	1.11E-03	5.25E-03	1.16E-04	0.00E+00	2.29E-03	1.09E-02
9	E07	60	Combination Long Haul Truck	83	0.00E+00	4.78E-05	3.13E-06	3.27E+01	2.17E-07	5.04E-02	3.70E-05	5.75E-02	4.99E-03	8.49E-04	3.50E-03	9.52E-04	9.64E-04	4.97E-03	1.09E-04	0.00E+00	2.53E-03	1.08E-02
9	E08	60	Passenger Car	668	0.00E+00	1.00E-05	1.08E-06	3.36E+01	6.98E-05	2.60E-01	2.23E-05	1.36E-03	6.78E-03	1.04E-03	2.17E-03	1.40E-03	1.44E-03	1.40E-04	1.68E-04	4.62E-08	7.33E-04	2.14E-04
9	E08	60	Passenger Truck	1119	0.00E+00	2.21E-05	2.34E-06	7.65E+01	1.38E-04	4.63E-01	4.54E-05	4.45E-03	1.24E-02	1.93E-03	4.32E-03	2.82E-03	2.89E-03	5.94E-04	3.79E-04	1.05E-07	1.44E-03	7.37E-04
9	E08	60	Single Unit Short Haul Truck	98	0.00E+00	2.88E-05	1.44E-06	1.83E+01	2.36E-05	3.53E-02	3.07E-05	1.37E-02	2.32E-03	4.21E-04	3.47E-03	8.60E-04	8.74E-04	1.83E-03	7.38E-05	3.04E-08	2.61E-03	2.57E-03
9	E08	60	Single Unit Long Haul Truck	4	0.00E+00	1.26E-06	6.24E-08	7.81E-01	1.03E-06	1.50E-03	1.34E-06	5.93E-04	1.04E-04	1.87E-05	1.53E-04	3.75E-05	3.81E-05	7.79E-05	3.15E-06	1.29E-09	1.15E-04	1.11E-04
9	E08	60	Combination Short Haul Truck	47	0.00E+00	2.78E-05	1.94E-06	1.81E+01	9.84E-08	2.43E-02	2.06E-05	3.02E-02	2.59E-03	5.12E-04	1.77E-03	5.78E-04	5.78E-04	2.73E-03	6.05E-05	0.00E+00	1.19E-03	5.68E-03
9	E08	60	Combination Long Haul Truck	43	0.00E+00	2.49E-05	1.63E-06	1.70E+01	1.13E-07	2.62E-02	1.93E-05	2.99E-02	2.60E-03	4.42E-04	1.82E-03	4.96E-04	5.02E-04	2.59E-03	5.67E-05	0.00E+00	1.32E-03	5.64E-03
9	E09	60	Passenger Car	1011	0.00E+00	1.52E-05	1.64E-06	5.08E+01	1.06E-04	3.93E-01	3.37E-05	2.06E-03	1.02E-02	1.57E-03	3.28E-03	2.11E-03	2.17E-03	2.11E-04	2.54E-04	6.99E-08	1.11E-03	3.23E-04
9	E09	60	Passenger Truck	1692	0.00E+00	3.34E-05	3.53E-06	1.16E+02	2.09E-04	7.00E-01	6.86E-05	6.72E-03	1.88E-02	2.92E-03	6.53E-03	4.27E-03	4.37E-03	8.98E-04	5.74E-04	1.59E-07	2.18E-03	1.11E-03
9	E09	60	Single Unit Short Haul Truck	99	0.00E+00	2.91E-05	1.45E-06	1.85E+01	2.39E-05	3.57E-02	3.10E-05	1.38E-02	2.35E-03	4.25E-04	3.51E-03	8.70E-04	8.84E-04	1.85E-03	7.46E-05	3.07E-08	2.64E-03	2.59E-03
9	E09	60	Single Unit Long Haul Truck	4	0.00E+00	1.27E-06	6.31E-08	7.89E-01	1.04E-06	1.51E-03	1.36E-06	5.99E-04	1.06E-04	1.89E-05	1.55E-04	3.79E-05	3.85E-05	7.88E-05	3.18E-06	1.31E-09	1.16E-04	1.12E-04
9	E09	60	Combination Short Haul Truck	78	0.00E+00	4.62E-05	3.22E-06	3.01E+01	1.63E-07	4.03E-02	3.42E-05	5.01E-02	4.29E-03	8.49E-04	2.94E-03	9.58E-04	9.58E-04	4.53E-03	1.00E-04	0.00E+00	1.98E-03	9.43E-03
9	E09	60	Combination Long Haul Truck	71	0.00E+00	4.13E-05	2.70E-06	2.82E+01	1.87E-07	4.35E-02	3.20E-05	4.96E-02	4.31E-03	7.33E-04	3.02E-03	8.22E-04	8.32E-04	4.29E-03	9.41E-05	0.00E+00	2.18E-03	9.35E-03
9	E10	60	Passenger Car	718	0.00E+00	1.08E-05	1.17E-06	3.61E+01	7.50E-05	2.79E-01	2.39E-05	1.46E-03	7.28E-03	1.12E-03	2.33E-03	1.50E-03	1.54E-03	1.50E-04	1.81E-04	4.97E-08	7.88E-04	2.29E-04
9	E10	60	Passenger Truck	1203	0.00E+00	2.38E-05	2.51E-06	8.22E+01	1.48E-04	4.98E-01	4.88E-05	4.78E-03	1.34E-02	2.07E-03	4.64E-03	3.03E-03	3.10E-03	6.38E-04	4.08E-04	1.13E-07	1.55E-03	7.92E-04
9	E10	60	Single Unit Short Haul Truck	89	0.00E+00	2.62E-05	1.31E-06	1.67E+01	2.16E-05	3.22E-02	2.80E-05	1.25E-02	2.12E-03	3.84E-04	3.17E-03	7.85E-04	7.97E-04	1.67E-03	6.74E-05	2.77E-08	2.38E-03	2.34E-03
9	E10	60	Single Unit Long Haul Truck	4	0.00E+00	1.15E-06	5.69E-08	7.12E-01	9.37E-07	1.37E-03	1.22E-06	5.41E-04	9.52E-05	1.70E-05	1.40E-04	3.42E-05	3.47E-05	7.11E-05	2.87E-06	1.18E-09	1.05E-04	1.01E-04
9	E10	60	Combination Short Haul Truck	46	0.00E+00	2.69E-05	1.88E-06	1.75E+01	9.51E-08	2.35E-02	1.99E-05	2.92E-02	2.50E-03	4.95E-04	1.71E-03	5.58E-04	5.58E-04	2.64E-03	5.85E-05	0.00E+00	1.15E-03	5.49E-03
9	E10	60	Combination Long Haul Truck	42	0.00E+00	2.41E-05	1.57E-06	1.64E+01	1.09E-07	2.53E-02	1.86E-05	2.89E-02	2.51E-03	4.27E-04	1.76E-03	4.79E-04	4.85E-04	2.50E-03	5.48E-05	0.00E+00	1.27E-03	5.45E-03
9	E11	60	Passenger Car	1030	0.00E+00	1.55E-05	1.67E-06	5.18E+01	1.08E-04	4.01E-01	3.43E-05	2.10E-03	1.04E-02	1.61E-03	3.35E-03	2.16E-03	2.21E-03	2.15E-04	2.59E-04	7.13E-08	1.13E-03	3.29E-04
9	E11	60	Passenger Truck	1726	0.00E+00	3.41E-05	3.60E-06	1.18E+02	2.13E-04	7.14E-01	7.00E-05	6.85E-03	1.92E-02	2.98E-03	6.66E-03	4.35E-03	4.45E-03	9.15E-04	5.85E-04	1.62E-07	2.22E-03	1.14E-03
9	E11	60	Single Unit Short Haul Truck	110	0.00E+00	3.23E-05	1.61E-06	2.05E+01	2.65E-05	3.96E-02	3.44E-05	1.53E-02	2.61E-03	4.72E-04	3.90E-03	9.65E-04	9.80E-04	2.05E-03	8.28E-05	3.41E-08	2.93E-03	2.88E-03
9	E11	60	Single Unit Long Haul Truck	5	0.00E+00	1.41E-06	7.00E-08	8.76E-01	1.15E-06	1.68E-03	1.50E-06	6.65E-04	1.17E-04	2.09E-05	1.72E-04	4.20E-05	4.27E-05	8.74E-05	3.53E-06	1.45E-09	1.29E-04	1.24E-04
9	E11	60	Combination Short Haul Truck	68	0.00E+00	3.98E-05	2.78E-06	2.59E+01	1.41E-07	3.47E-02	2.95E-05	4.32E-02	3.70E-03	7.32E-04	2.53E-03	8.26E-04	8.26E-04	3.90E-03	8.65E-05	0.00E+00	1.70E-03	8.12E-03
9	E11	60	Combination Long Haul Truck	62	0.00E+00	3.56E-05	2.33E-06	2.43E+01	1.61E-07	3.75E-02	2.75E-05	4.28E-02	3.71E-03	6.31E-04	2.60E-03	7.08E-04	7.17E-04	3.70E-03	8.11E-05	0.00E+00	1.88E-03	8.06E-03
9	E12	60	Passenger Car	724	0.00E+00	1.09E-05	1.17E-06	3.64E+01	7.56E-05	2.81E-01	2.41E-05	1.48E-03	7.34E-03	1.13E-03	2.35E-03	1.51E-03	1.55E-03	1.51E-04	1.82E-04	5.00E-08	7.94E-04	2.31E-04
9	E12	60	Passenger Truck	1212	0.00E+00	2.39E-05	2.53E-06	8.28E+01	1.49E-04	5.02E-01	4.91E-05	4.81E-03	1.35E-02	2.09E-03	4.68E-03	3.06E-03	3.13E-03	6.43E-04	4.11E-04	1.14E-07	1.56E-03	7.98E-04
9	E12	60	Single Unit Short Haul Truck	91	0.00E+00	2.69E-05	1.34E-06	1.71E+01	2.21E-05	3.30E-02	2.87E-05	1.28E-02	2.17E-03	3.93E-04	3.25E-03	8.04E-04	8.17E-04	1.71E-03	6.90E-05	2.84E-08	2.44E-03	2.40E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	1.17E-06	5.83E-08	7.29E-01	9.60E-07	1.40E-03	1.25E-06	5.54E-04	9.75E-05	1.74E-05	1.43E-04	3.50E-05	3.56E-05	7.28E-05	2.94E-06	1.21E-09	1.07E-04	1.04E-04
9	E12	60	Combination Short Haul Truck	80	0.00E+00	4.70E-05	3.28E-06	3.06E+01	1.66E-07	4.10E-02	3.48E-05	5.09E-02	4.36E-03	8.64E-04	2.99E-03	9.74E-04	9.74E-04	4.61E-03	1.02E-04	0.00E+00	2.01E-03	9.59E-03
9	E12	60	Combination Long Haul Truck	73	0.00E+00	4.20E-05	2.75E-06	2.87E+01	1.90E-07	4.42E-02	3.25E-05	5.05E-02	4.38E-03	7.45E-04	3.07E-03	8.36E-04	8.46E-04	4.36E-03	9.57E-05	0.00E+00	2.22E-03	9.51E-03
11	E13	80	Passenger Car	272	0.00E+00	3.31E-06	3.58E-07	1.27E+01	2.30E-05	8.83E-02	7.36E-06	5.58E-04	1.49E-03	2.60E-04	7.16E-04	4.62E-04	4.74E-04	4.26E-05	6.38E-05	1.79E-08	2.42E-04	8.75E-05
11	E13	80	Passenger Truck	455	0.00E+00	7.10E-06	7.53E-07	2.93E+01	4.55E-05	1.62E-01	1.49E-05	1.66E-03	2.68E-03	4.75E-04	1.43E-03	9.25E-04	9.48E-04	2.05E-04	1.47E-04	3.98E-08	4.76E-04	2.70E-04
11	E13	80	Single Unit Short Haul Truck	30	0.00E+00	5.56E-06	2.76E-07	5.45E+00	4.47E-06	1.10E-02	5.91E-06	2.85E-03	3.49E-04	7.90E-05	6.76E-04	1.65E-04	1.67E-04	5.47E-04	2.20E-05	8.73E-09	5.09E-04	5.33E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	1.19E-08	2.31E-01	1.91E-07	4.54E-04	2.57E-07	1.22E-04	1.59E-05	3.48E-06	2.95E-05	7.08E-06	7.19E-06	2.30E-05	9.30E-07	3.63E-10	2.23E-05	2.28E-05
11	E13	80	Combination Short Haul Truck	13	0.00E+00	5.66E-06	4.05E-07	4.70E+00	1.79E-08	5.02E-03	4.16E-06	5.81E-03	3.43E-04	8.46E-05	3.38E-04	1.20E-04	1.19E-04	7.06E-04	1.57E-05	0.00E+00	2.19E-04	1.10E-03
11	E13	80	Combination Long Haul Truck	12	0.00E+00	5.07E-06	3.40E-07	4.35E+00	2.07E-08	5.20E-03	3.86E-06	5.65E-03	3.37E-04	6.77E-05	3.50E-04	1.03E-04	1.04E-04	6.63E-04	1.45E-05	0.00E+00	2.45E-04	1.07E-03
11	E14	80	Passenger Car	464	0.00E+00	5.64E-06	6.10E-07	2.16E+01	3.93E-05	1.51E-01	1.26E-05	9.53E-04	2.55E-03	4.43E-04	1.22E-03	7.88E-04	8.09E-04	7.26E-05	1.09E-04	3.05E-08	4.13E-04	1.49E-04
11	E14	80	Passenger Truck	776	0.00E+00	1.21E-05	1.29E-06	5.00E+01	7.76E-05	2.76E-01	2.54E-05	2.82E-03	4.57E-03	8.11E-04	2.44E-03	1.58E-03	1.62E-03	3.49E-04	2.50E-04	6.79E-08	8.13E-04	4.61E-04
11	E14	80	Single Unit Short Haul Truck	55	0.00E+00	1.03E-05	5.11E-07	1.01E+01	8.27E-06	2.03E-02	1.09E-05	5.27E-03	6.46E-04	1.46E-04	1.25E-03	3.05E-04	3.09E-04	1.01E-03	4.07E-05	1.62E-08	9.42E-04	9.86E-04
11	E14	80	Single Unit Long Haul Truck	2	0.00E+00	4.47E-07	2.20E-08	4.27E-01	3.54E-07	8.40E-04	4.76E-07	2.25E-04	2.95E-05	6.45E-06	5.46E-05	1.31E-05	1.33E-05	4.26E-05	1.72E-06	6.72E-10	4.13E-05	4.22E-05
11	E14	80	Combination Short Haul Truck	32	0.00E+00	1.40E-05	1.00E-06	1.16E+01	4.44E-08	1.24E-02	1.03E-05	1.44E-02	8.52E-04	2.10E-04	8.37E-04	2.97E-04	2.95E-04	1.75E-03	3.89E-05	0.00E+00	5.43E-04	2.72E-03
11	E14	80	Combination Long Haul Truck	29	0.00E+00	1.26E-05	8.43E-07	1.08E+01	5.13E-08	1.29E-02	9.57E-06	1.40E-02	8.35E-04	1.68E-04	8.67E-04	2.55E-04	2.57E-04	1.65E-03	3.60E-05	0.00E+00	6.08E-04	2.64E-03
11	E15	80	Passenger Car	146	0.00E+00	1.77E-06	1.92E-07	6.81E+00	1.24E-05	4.74E-02	3.95E-06	3.00E-04	8.02E-04	1.39E-04	3.85E-04	2.48E-04	2.54E-04	2.29E-05	3.42E-05	9.60E-09	1.30E-04	4.70E-05
11	E15	80	Passenger Truck	244	0.00E+00	3.81E-06	4.04E-07	1.57E+01	2.44E-05	8.68E-02	8.01E-06	8.89E-04	1.44E-03	2.55E-04	7.67E-04	4.97E-04	5.09E-04	1.10E-04	7.87E-05	2.14E-08	2.56E-04	1.45E-04
11	E15	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.28E+00	1.87E-06	4.59E-03	2.48E-06	1.19E-03	1.46E-04	3.31E-05	2.83E-04	6.90E-05	7.00E-05	2.29E-04	9.21E-06	3.66E-09	2.13E-04	2.23E-04
11	E15	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	4.99E-09	9.66E-02	8.00E-08	1.90E-04	1.08E-07	5.10E-05	6.68E-06	1.46E-06	1.23E-05	2.97E-06	3.01E-06	9.64E-06	3.89E-07	1.52E-10	9.34E-06	9.55E-06
11	E15	80	Combination Short Haul Truck	7	0.00E+00	3.14E-06	2.24E-07	2.60E+00	9.91E-09	2.78E-03	2.30E-06	3.22E-03	1.90E-04	4.69E-05	1.87E-04	6.63E-05	6.59E-05	3.91E-04	8.70E-06	0.00E+00	1.21E-04	6.08E-04
11	E15	80	Combination Long Haul Truck	7	0.00E+00	2.81E-06	1.88E-07	2.41E+00	1.15E-08	2.88E-03	2.14E-06	3.13E-03	1.86E-04	3.75E-05	1.94E-04	5.70E-05	5.74E-05	3.68E-04	8.04E-06	0.00E+00	1.36E-04	5.90E-04
11	E16	80	Passenger Car	248	0.00E+00	3.01E-06	3.26E-07	1.16E+01	2.10E-05	8.04E-02	6.70E-06	5.09E-04	1.36E-03	2.37E-04	6.52E-04	4.21E-04	4.32E-04	3.88E-05	5.81E-05	1.63E-08	2.21E-04	7.98E-05
11	E16	80	Passenger Truck	414	0.00E+00	6.47E-06	6.86E-07	2.67E+01	4.14E-05	1.47E-01	1.36E-05	1.51E-03	2.44E-03	4.33E-04	1.30E-03	8.43E-04	8.64E-04	1.87E-04	1.34E-04	3.63E-08	4.34E-04	2.46E-04
11	E16	80	Single Unit Short Haul Truck	11	0.00E+00	2.00E-06	9.94E-08	1.96E+00	1.61E-06	3.94E-03	2.13E-06	1.03E-03	1.26E-04	2.84E-05	2.44E-04	5.93E-05	6.02E-05	1.97E-04	7.92E-06	3.14E-09	1.83E-04	1.92E-04
11	E16	80	Combination Short Haul Truck	31	0.00E+00	1.34E-05	9.61E-07	1.11E+01	4.24E-08	1.19E-02	9.86E-06	1.38E-02	8.14E-04	2.01E-04	8.01E-04	2.84E-04	2.82E-04	1.67E-03	3.72E-05	0.00E+00	5.19E-04	2.60E-03
11	E16	80	Combination Long Haul Truck	28	0.00E+00	1.20E-05	8.06E-07	1.03E+01	4.91E-08	1.23E-02	9.15E-06	1.34E-02	7.98E-04	1.60E-04	8.30E-04	2.44E-04	2.46E-04	1.57E-03	3.44E-05	0.00E+00	5.81E-04	2.53E-03
11	E17	80	Passenger Car	67	0.00E+00	8.14E-07	8.81E-08	3.12E+00	5.67E-06	2.18E-02	1.81E-06	1.38E-04	3.68E-04	6.40E-05	1.76E-04	1.14E-04	1.17E-04	1.05E-05	1.57E-05	4.41E-09	5.97E-05	2.16E-05
11	E17	80	Passenger Truck	112	0.00E+00	1.75E-06	1.86E-07	7.22E+00	1.12E-05	3.98E-02	3.67E-06	4.08E-04	6.60E-04	1.17E-04	3.52E-04	2.28E-04	2.33E-04	5.04E-05	3.61E-05	9.81E-09	1.17E-04	6.66E-05
11	E17	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.72E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.36E-09	3.12E-04	3.27E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.47E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.41E-06	1.41E-05	5.71E-07	2.23E-10	1.37E-05	1.40E-05
11	E17	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.59E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.31E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	E17	80	Combination Long Haul Truck	5	0.00E+00	2.26E-06	1.52E-07	1.94E+00	9.23E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.02E-05	1.56E-04	4.59E-05	4.62E-05	2.96E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	E18	80	Passenger Car	219	0.00E+00	2.67E-06	2.88E-07	1.02E+01	1.86E-05	7.12E-02	5.93E-06	4.50E-04	1.21E-03	2.09E-04	5.78E-04	3.72E-04	3.82E-04	3.43E-05	5.14E-05	1.44E-08	1.95E-04	7.06E-05
11	E18	80	Passenger Truck	367	0.00E+00	5.73E-06	6.07E-07	2.36E+01	3.67E-05	1.30E-01	1.20E-05	1.34E-03	2.16E-03	3.83E-04	1.15E-03	7.46E-04	7.64E-04	1.65E-04	1.18E-04	3.21E-08	3.84E-04	2.18E-04
11	E18	80	Single Unit Short Haul Truck	8	0.00E+00	1.44E-06	7.13E-08	1.41E+00	1.16E-06	2.83E-03	1.53E-06	7.36E-04	9.02E-05	2.04E-05	1.75E-04	4.26E-05	4.32E-05	1.41E-04	5.68E-06	2.26E-09	1.32E-04	1.38E-04
11	E18	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.03E-03	1.69E-06	2.35E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.86E-04	6.36E-06	0.00E+00	8.88E-05	4.45E-04
11	E18	80	Combination Long Haul Truck	5	0.00E+00	2.05E-06	1.38E-07	1.76E+00	8.39E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.42E-04	4.17E-05	4.20E-05	2.69E-04	5.88E-06	0.00E+00	9.94E-05	4.32E-04
9	E19	60	Passenger Car	425	0.00E+00	6.38E-06	6.90E-07	2.14E+01	4.44E-05	1.65E-01	1.42E-05	8.67E-04	4.31E-03	6.62E-04	1.38E-03	8.89E-04	9.13E-04	8.88E-05	1.07E-04	2.94E-08	4.66E-04	1.36E-04
9	E19	60	Passenger Truck	712	0.00E+00	1.41E-05	1.49E-06	4.86E+01	8.78E-05	2.95E-01	2.89E-05	2.83E-03	7.91E-03	1.23E-03	2.75E-03	1.80E-03	1.84E-03	3.78E-04	2.41E-04	6.68E-08	9.16E-04	4.69E-04
9	E19	60	Single Unit Short Haul Truck	65	0.00E+00	1.92E-05	9.57E-07	1.22E+01	1.58E-05	2.35E-02	2.04E-05	9.12E-03	1.55E-03	2.80E-04	2.32E-03	5.73E-04	5.83E-04	1.22E-03	4.92E-05	2.03E-08	1.74E-03	1.71E-03
9	E19	60	Single Unit Long Haul Truck	3	0.00E+00	8.38E-07	4.16E-08	5.20E-01	6.85E-07	9.97E-04	8.94E-07	3.95E-04	6.96E-05	1.24E-05	1.02E-04	2.50E-05	2.54E-05	5.19E-05	2.10E-06	8.62E-10	7.64E-05	7.40E-05
9	E19	60	Combination Short Haul Truck	30	0.00E+00	1.79E-05	1.25E-06	1.16E+01	6.32E-08	1.56E-02	1.32E-05	1.94E-02	1.66E-03	3.29E-04	1.14E-03	3.71E-04	3.71E-04	1.75E-03	3.88E-05	0.00E+00	7.64E-04	3.65E-03
9	E19	60	Combination Long Haul Truck	28	0.00E+00	1.60E-05	1.05E-06	1.09E+01	7.25E-08	1.68E-02	1.24E-05	1.92E-02	1.67E-03	2.84E-04	1.17E-03	3.18E-04	3.22E-04	1.66E-03	3.64E-05	0.00E+00	8.45E-04	3.62E-03
9	E20	60	Passenger Car	242	0.00E+00	3.62E-06	3.92E-07	1.21E+01	2.52E-05	9.39E-02	8.05E-06	4.92E-04	2.45E-03	3.76E-04	7.85E-04	5.05E-04	5.19E-04	5.05E-05	6.07E-05	1.67E-08	2.65E-04	7.72E-05
9	E20	60	Passenger Truck	404	0.00E+00	7.99E-06	8.44E-07	2.76E+01	4.99E-05	1.67E-01	1.64E-05	1.61E-03	4.49E-03	6.98E-04	1.56E-03	1.02E-03	1.04E-03	2.15E-04	1.37E-04	3.80E-08	5.20E-04	2.66E-04
9	E20	60	Single Unit Short Haul Truck	35	0.00E+00	1.04E-05	5.21E-07	6.62E+00	8.57E-06	1.28E-02	1.11E-05	4.96E-03	8.43E-04	1.53E-04	1.26E-03	3.12E-04	3.17E-04	6.63E-04	2.68E-05	1.10E-08	9.47E-04	9.30E-04
9	E20	60	Single Unit Long Haul Truck	2	0.00E+00	4.56E-07	2.26E-08	2.83E-01	3.72E-07	5.43E-04	4.86E-07	2.15E-04	3.79E-05	6.77E-06	5.56E-05	1.36E-05	1.38E-05	2.83E-05	1.14E-06	4.69E-10	4.16E-05	4.02E-05
9	E20	60	Combination Short Haul Truck	13	0.00E+00	7.39E-06	5.16E-07	4.81E+00	2.62E-08	6.45E-03	5.47E-06	8.02E-03	6.87E-04	1.36E-04	4.71E-04	1.53E-04	1.53E-04	7.25E-04	1.61E-05	0.00E+00	3.16E-04	1.51E-03
9	E20	60	Combination Long Haul Truck	11	0.00E+00	6.61E-06	4.32E-07	4.52E+00	3.00E-08	6.96E-03	5.12E-06	7.95E-03	6.90E-04	1.17E-04	4.83E-04	1.32E-04	1.33E-04	6.87E-04	1.51E-05	0.00E+00	3.50E-04	1.50E-03
11	E21	80	Passenger Car	8	0.00E+00	9.33E-08	1.01E-08	3.58E-01	6.49E-07	2.49E-03	2.08E-07	1.58E-05	4.22E-05	7.33E-06	2.02E-05	1.30E-05	1.34E-05	1.20E-06	1.80E-06	5.05E-10	6.84E-06	2.47E-06
11	E21	80	Passenger Truck	13	0.00E+00	2.00E-07	2.13E-08	8.27E-01	1.28E-06	4.56E-03	4.21E-07	4.67E-05	7.56E-05	1.34E-05	4.03E-05	2.61E-05	2.67E-05	5.78E-06	4.14E-06	1.12E-09	1.34E-05	7.63E-06
11	E21	80	Single Unit Short Haul Truck	1	0.00E+00	1.71E-07	8.49E-09	1.68E-01	1.38E-07	3.37E-04	1.82E-07	8.77E-05	1.07E-05	2.43E-06	2.08E-05	5.07E-06	5.14E-06	1.68E-05	6.77E-07	2.69E-10	1.57E-05	1.64E-05
11	E21	80	Combination

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E25	70	Combination Long Haul Truck	8	0.00E+00	3.92E-06	2.62E-07	2.93E+00	1.62E-08	3.94E-03	2.97E-06	4.49E-03	3.27E-04	5.97E-05	2.72E-04	7.91E-05	8.00E-05	4.47E-04	9.81E-06	0.00E+00	1.93E-04	8.46E-04
10	E26	70	Passenger Car	194	0.00E+00	2.54E-06	2.75E-07	9.34E+00	1.77E-05	6.64E-02	5.67E-06	3.89E-04	1.51E-03	2.42E-04	5.51E-04	3.55E-04	3.64E-04	3.48E-05	4.69E-05	1.28E-08	1.86E-04	6.10E-05
10	E26	70	Passenger Truck	325	0.00E+00	5.57E-06	5.89E-07	2.15E+01	3.53E-05	1.22E-01	1.16E-05	1.22E-03	2.74E-03	4.46E-04	1.10E-03	7.18E-04	7.35E-04	1.58E-04	1.07E-04	2.87E-08	3.68E-04	2.01E-04
10	E26	70	Single Unit Short Haul Truck	3	0.00E+00	8.04E-07	4.03E-08	6.30E-01	6.58E-07	1.26E-03	8.56E-07	3.96E-04	5.66E-05	1.13E-05	9.79E-05	2.40E-05	2.44E-05	6.31E-05	2.54E-06	1.03E-09	7.31E-05	7.42E-05
10	E26	70	Combination Short Haul Truck	5	0.00E+00	2.40E-06	1.71E-07	1.74E+00	7.80E-09	2.07E-03	1.76E-06	2.53E-03	1.82E-04	3.99E-05	1.46E-04	5.05E-05	5.04E-05	2.63E-04	5.82E-06	0.00E+00	9.58E-05	4.76E-04
10	E26	70	Combination Long Haul Truck	4	0.00E+00	2.18E-06	1.45E-07	1.63E+00	8.98E-09	2.19E-03	1.65E-06	2.49E-03	1.81E-04	3.31E-05	1.51E-04	4.39E-05	4.43E-05	2.48E-04	5.44E-06	0.00E+00	1.07E-04	4.69E-04
10	E27	70	Passenger Car	200	0.00E+00	2.62E-06	2.83E-07	9.61E+00	1.82E-05	6.83E-02	5.83E-06	4.01E-04	1.55E-03	2.49E-04	5.67E-04	3.65E-04	3.74E-04	3.58E-05	4.82E-05	1.32E-08	1.92E-04	6.28E-05
10	E27	70	Passenger Truck	335	0.00E+00	5.73E-06	6.07E-07	2.21E+01	3.63E-05	1.26E-01	1.19E-05	1.26E-03	2.82E-03	4.59E-04	1.14E-03	7.39E-04	7.56E-04	1.63E-04	1.10E-04	2.95E-08	3.79E-04	2.07E-04
10	E27	70	Single Unit Short Haul Truck	18	0.00E+00	4.27E-06	2.14E-07	3.35E+00	3.50E-06	6.72E-03	4.55E-06	2.11E-03	3.01E-04	6.01E-05	5.20E-04	1.28E-04	1.30E-04	3.35E-04	1.35E-05	5.46E-09	3.88E-04	3.94E-04
10	E27	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.98E-07	9.07E-05	1.37E-05	2.67E-06	2.27E-05	5.52E-06	5.61E-06	1.42E-05	5.73E-07	2.29E-10	1.70E-05	1.70E-05
10	E27	70	Combination Short Haul Truck	13	0.00E+00	6.51E-06	4.63E-07	4.73E+00	2.12E-08	5.60E-03	4.77E-06	6.86E-03	4.94E-04	1.08E-04	3.97E-04	1.37E-04	1.37E-04	7.14E-04	1.58E-05	0.00E+00	2.60E-04	1.29E-03
10	E27	70	Combination Long Haul Truck	11	0.00E+00	5.90E-06	3.94E-07	4.41E+00	2.44E-08	5.94E-03	4.48E-06	6.76E-03	4.92E-04	8.98E-05	4.09E-04	1.19E-04	1.20E-04	6.73E-04	1.48E-05	0.00E+00	2.90E-04	1.27E-03
10	E28	70	Passenger Car	69	0.00E+00	9.08E-07	9.81E-08	3.33E+00	6.32E-06	2.37E-02	2.02E-06	1.39E-04	5.38E-04	8.63E-05	1.97E-04	1.27E-04	1.30E-04	1.24E-05	1.67E-05	4.57E-09	6.65E-05	2.18E-05
10	E28	70	Passenger Truck	116	0.00E+00	1.99E-06	2.10E-07	7.68E+00	1.26E-05	4.36E-02	4.13E-06	4.36E-04	9.78E-04	1.59E-04	3.94E-04	2.56E-04	2.62E-04	5.65E-05	3.81E-05	1.02E-08	1.31E-04	7.17E-05
10	E28	70	Single Unit Short Haul Truck	3	0.00E+00	7.81E-07	3.91E-08	6.12E-01	6.39E-07	1.23E-03	8.32E-07	3.85E-04	5.49E-05	1.10E-05	9.51E-05	2.34E-05	2.37E-05	6.13E-05	2.46E-06	9.97E-10	7.10E-05	7.21E-05
10	E28	70	Combination Short Haul Truck	2	0.00E+00	1.02E-06	7.27E-08	7.44E-01	3.33E-09	8.81E-04	7.49E-07	1.08E-03	7.77E-05	1.70E-05	6.23E-05	2.15E-05	2.15E-05	1.12E-04	2.48E-06	0.00E+00	4.09E-05	2.03E-04
10	E28	70	Combination Long Haul Truck	2	0.00E+00	9.28E-07	6.18E-08	6.93E-01	3.83E-09	9.33E-04	7.03E-07	1.06E-03	7.73E-05	1.41E-05	6.43E-05	1.87E-05	1.89E-05	1.06E-04	2.32E-06	0.00E+00	4.56E-05	2.00E-04
10	E29	70	Passenger Car	33	0.00E+00	4.30E-07	4.65E-08	1.58E+00	3.00E-06	1.12E-02	9.60E-07	6.59E-05	2.55E-04	4.09E-05	9.32E-05	6.00E-05	6.16E-05	5.89E-06	7.93E-06	2.17E-09	3.15E-05	1.03E-05
10	E29	70	Passenger Truck	55	0.00E+00	9.43E-07	9.98E-08	3.64E+00	5.97E-06	2.07E-02	1.96E-06	2.07E-04	4.64E-04	7.55E-05	1.87E-04	1.22E-04	1.24E-04	2.68E-05	1.81E-05	4.85E-09	6.23E-05	3.40E-05
10	E29	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E29	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	E29	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	E30	70	Passenger Car	177	0.00E+00	2.31E-06	2.50E-07	8.50E+00	1.61E-05	6.04E-02	5.16E-06	3.54E-04	1.37E-03	2.20E-04	5.01E-04	3.23E-04	3.31E-04	3.17E-05	4.26E-05	1.16E-08	1.69E-04	5.55E-05
10	E30	70	Passenger Truck	296	0.00E+00	5.07E-06	5.36E-07	1.96E+01	3.21E-05	1.11E-01	1.05E-05	1.11E-03	2.49E-03	4.06E-04	1.00E-03	6.53E-04	6.69E-04	1.44E-04	9.71E-05	2.61E-08	3.35E-04	1.83E-04
10	E30	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.95E-03	3.36E-06	1.55E-03	2.22E-04	4.43E-05	3.84E-04	9.42E-05	9.57E-05	2.47E-04	9.94E-06	4.02E-09	2.86E-04	2.91E-04
10	E30	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.69E-05	1.01E-05	1.97E-06	1.68E-05	4.07E-06	4.14E-06	1.05E-05	4.22E-07	1.69E-10	1.26E-05	1.25E-05
10	E30	70	Combination Short Haul Truck	9	0.00E+00	4.62E-06	3.29E-07	3.36E+00	1.50E-08	3.98E-03	3.38E-06	4.87E-03	3.51E-04	7.68E-05	2.82E-04	9.73E-05	9.71E-05	5.06E-04	1.12E-05	0.00E+00	1.85E-04	9.16E-04
10	E30	70	Combination Long Haul Truck	8	0.00E+00	4.19E-06	2.79E-07	3.13E+00	1.73E-08	4.21E-03	3.18E-06	4.80E-03	3.49E-04	6.37E-05	2.91E-04	8.45E-05	8.54E-05	4.77E-04	1.05E-05	0.00E+00	2.06E-04	9.03E-04
10	E31	70	Passenger Car	77	0.00E+00	1.01E-06	1.09E-07	3.72E+00	7.05E-06	2.64E-02	2.26E-06	1.55E-04	6.00E-04	9.63E-05	2.19E-04	1.41E-04	1.45E-04	1.39E-05	1.87E-05	5.10E-09	7.42E-05	2.43E-05
10	E31	70	Passenger Truck	130	0.00E+00	2.22E-06	2.35E-07	8.57E+00	1.40E-05	4.86E-02	4.61E-06	4.86E-04	1.09E-03	1.77E-04	4.39E-04	2.86E-04	2.93E-04	6.30E-05	4.25E-05	1.14E-08	1.47E-04	7.99E-05
10	E31	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.54E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.74E-04	6.73E-05	6.84E-05	1.77E-04	7.10E-06	2.87E-09	2.05E-04	2.08E-04
10	E31	70	Single Unit Long Haul Truck	4	0.00E+00	2.17E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.59E-06	2.29E-03	1.65E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.68E-05	4.31E-04
10	E31	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.31E-07	1.47E+00	8.14E-09	1.98E-03	1.49E-06	2.26E-03	1.64E-04	3.00E-05	1.37E-04	3.97E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.25E-04
10	E32	70	Passenger Car	327	0.00E+00	4.28E-06	4.63E-07	1.57E+01	2.98E-05	1.12E-01	9.54E-06	6.55E-04	2.54E-03	4.07E-04	9.27E-04	5.97E-04	6.12E-04	5.86E-05	7.89E-05	2.15E-08	3.14E-04	1.03E-04
10	E32	70	Passenger Truck	548	0.00E+00	9.37E-06	9.92E-07	3.62E+01	5.94E-05	2.05E-01	1.95E-05	2.05E-03	4.61E-03	7.50E-04	1.86E-03	1.21E-03	1.24E-03	2.66E-04	1.80E-04	4.82E-08	6.19E-04	3.38E-04
10	E32	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.95E-06	5.66E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.38E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.60E-09	3.27E-04	3.32E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.64E-05	1.16E-05	2.25E-06	1.91E-05	4.66E-06	4.73E-06	1.20E-05	4.82E-07	1.93E-10	1.44E-05	1.43E-05
10	E32	70	Combination Short Haul Truck	10	0.00E+00	5.16E-06	3.67E-07	3.75E+00	1.68E-08	4.44E-03	3.78E-06	5.44E-03	3.92E-04	8.59E-05	3.15E-04	1.09E-04	1.08E-04	5.66E-04	1.25E-05	0.00E+00	2.06E-04	1.02E-03
10	E32	70	Combination Long Haul Truck	9	0.00E+00	4.68E-06	3.12E-07	3.50E+00	1.93E-08	4.71E-03	3.55E-06	5.36E-03	3.90E-04	7.12E-05	3.25E-04	9.44E-05	9.54E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
9	E33	60	Passenger Car	168	0.00E+00	2.52E-06	2.72E-07	8.44E+00	1.75E-05	6.53E-02	5.60E-06	3.42E-04	1.70E-03	2.62E-04	5.46E-04	3.51E-04	3.61E-04	3.51E-05	4.22E-05	1.16E-08	1.84E-04	5.36E-05
9	E33	60	Passenger Truck	281	0.00E+00	5.55E-06	5.87E-07	1.92E+01	3.47E-05	1.16E-01	1.14E-05	1.12E-03	3.12E-03	4.85E-04	1.09E-03	7.09E-04	7.26E-04	1.49E-04	9.53E-05	2.64E-08	3.62E-04	1.85E-04
9	E33	60	Single Unit Short Haul Truck	15	0.00E+00	4.35E-06	2.17E-07	2.76E+00	3.57E-06	5.33E-03	4.63E-06	2.07E-03	3.51E-04	6.35E-05	5.25E-04	1.30E-04	1.32E-04	2.76E-04	1.12E-05	4.59E-09	3.94E-04	3.87E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.90E-07	9.42E-09	1.18E-01	1.55E-07	2.26E-04	2.03E-07	8.95E-05	1.58E-05	2.82E-06	2.31E-05	5.66E-06	5.75E-06	1.18E-05	4.76E-07	1.95E-10	1.73E-05	1.68E-05
9	E33	60	Combination Short Haul Truck	8	0.00E+00	4.90E-06	3.42E-07	3.19E+00	1.73E-08	4.27E-03	3.63E-06	5.31E-03	4.55E-04	9.01E-05	3.12E-04	1.02E-04	1.02E-04	4.80E-04	1.06E-05	0.00E+00	2.09E-04	1.00E-03
9	E33	60	Combination Long Haul Truck	8	0.00E+00	4.38E-06	2.86E-07	2.99E+00	1.99E-08	4.61E-03	3.39E-06	5.27E-03	4.57E-04	7.77E-05	3.20E-04	8.72E-05	8.83E-05	4.55E-04	9.98E-06	0.00E+00	2.32E-04	9.92E-04
9	E34	60	Passenger Car	497	0.00E+00	7.46E-06	8.07E-07	2.50E+01	5.20E-05	1.93E-01	1.66E-05	1.01E-03	5.04E-03	7.75E-04	1.62E-03	1.04E-03	1.07E-03	1.04E-04	1.25E-04	3.44E-08	5.46E-04	1.59E-04
9	E34	60	Passenger Truck	833	0.00E+00	1.65E-05	1.74E-06	5.69E+01	1.03E-04	3.45E-01	3.38E-05	3.31E-03	9.26E-03	1.44E-03	3.22E-03	2.10E-03	2.15E-03	4.42E-04	2.82E-04	7.82E-08	1.07E-03	5.48E-04
9	E34	60	Single Unit Short Haul Truck	41	0.00E+00	1.20E-05	5.98E-07	7.61E+00	9.85E-06	1.47E-02	1.28E-05	5.70E-03	9.68E-04	1.75E-04	1.45E-03	3.58E-04	3.64E-04	7.62E-04	3.07E-05	1.27E-08	1.09E-03	1.07E-03
9	E34	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.60E-08	3.25E-01	4.28E-07	6.23E-04	5.58E-07	2.47E-04	4.35E-05	7.78E-06	6.38E-05	1.56E-05	1.59E-05	3.25E-05	1.31E-06	5.38E-10	4.78E-05	4.62E-05
9	E34	60	Combination Short Haul Truck	29	0.00E+00	1.68E-05	1.18E-06	1.10E+01	5.96E-08	1.47E-02	1.25E-05	1.83E-02	1.56E-03	3.10E-04	1.07E-03	3.49E-04	3.49E-04	1.65E-03	3.66E-05	0.00E+00	7.20E-04	3.44E-03
9	E34	60	Combination Long Haul Truck	26	0.00E+00	1.51E-05	9.85E-07	1.03E+01	6.83E-08	1.59E-02	1.17E-05	1.81E-02	1.57E-03	2.67E-04	1.10E-03	3.00E-04	3.03E-04	1.56E-03	3.43E-05	0.00E+00	7.97E-04	3.41E-03
9	E35	60	Passenger Car	247	0.00E+00	3.70E-06	4.00E-07	1.24E+01	2.58E-05	9.59E-02	8.22E-06	5.03E-04	2.50E-03	3.84E-04	8.02E-04	5.16E-04	5.30E-04	5.15E-05	6.20E-05	1.71E-08	2.71E-04	7.88E-05
9	E35	60	Passenger Truck	413	0.00E+00	8.16E-06	8.62E-07	2.82E+01	5.09E-05	1.71E-01	1.67E-05	1.64E-03	4.59E-03	7.12E-04	1.59E-03	1.04E-03	1.07E-03	2.19E-04	1.40E-04	3.88E-08	5.31E-04	2.72E-04
9	E35	60	Single Unit Short Haul Truck	27	0.00E+00	7.84E-06	3.91E-07	4.98E+00	6.44E-06	9.62E-03	8.36E-06	3.73E-03	6.33E-04	1.15E-04	9.47E-04	2.34E-04	2.38E-04	4.99E-04	2.01E-05	8.29E-09	7.12E-04	6.99E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	3.43E-07	1.70E-08	2.13E-01	2.80E-07	4.08E-04	3.65E-07	1.61E-04	2.84E-05	5.09E-06	4.18E-05	1.02E-05	1.04E-05	2.12E-05	8.58E-07	3.52E-10	3.13E-05	3.02E-05
9	E35	60	Combination Short Haul Truck	17	0.00E+00	9.76E-06	6.82E-07	6.36E+00	3.45E-08	8.52E-03	7.23E-06	1.06E-02	9.07E-04	1.80E-04	6.22E-04	2.03E-04	2.03E-04	9.58E-04	2.12E-05	0.00E+00	4.18E-04	1.99E-03
9	E35	60	Combination Long Haul Truck	15	0.00E+00	8.74E-06	5.71E-07	5.96E+00	3.96E-08	9.20E-03	6.76E-06	1.05E-02	9.11E-04	1.55E-04	6.38E-04	1.74E-04	1.76E-04	9.07E-04	1.99E-05	0.00E+00	4.62E-04	1.98E-03
9	E36	60	Passenger Car	446	0.00E+00	6.68E-06	7.23E-07	2.24E+01	4.65E-05	1.73E-01	1.49E-05	9.09E-04	4.52E-03	6.94E-04	1.45E-03	9.32E-04	9.57E-04	9.31E-05	1.12E-04	3.08E-08	4.89E-04	1.42E-04
9	E36	60	Passenger Truck	746	0.00E+00	1.47E-05	1.56E-06	5.10E+01	9.20E-05	3.09E-01	3.03E-05	2.96E-03	8.29E-03	1.29E-03	2.88E-03	1.88E-03	1.93E-03	3.96E-04	2.53E-04	7.01E-08	9.60E-04	4.91E-04
9	E36	60	Single Unit Short Haul Truck	38	0.00E+00	1.11E-05	5.54E-07	7.05E+00	9.12E-06	1.36E-02	1.18E-05	5.28E-03	8.97E-04	1.62E-04	1.34E-03	3.32E-04	3.37E-04	7.06E-04	2.85E-05	1.17E-08	1.01E-03	9.90E-04
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	4.85E-07	2.41E-08	3.01E-01	3.96E-07	5.77E-04	5.17E-07	2.29E-04	4.03E-05	7.21E-06	5.91E-05	1.45E-05	1.47E-05	3.01E-05	1.21E-06	4.99E-10	4.43E-05	4.28E-05
9	E36	60	Combination Short Haul Truck	26	0.00E+00	1.55E-05	1.08E-06	1.01E+01	5.48E-08	1.35E-02	1.15E-05	1.68E-02	1.44E-03	2.85E-04	9.86E-04	3.21E-04	3.21E-04	1.52E-03	3.37E-05	0.00E+00	6.62E-04	3.16E-03
9	E36	60	Combination Long Haul Truck	24	0.00E+00	1.39E-05	9.06E-07	9.46E+00	6.28E-08	1.46E-02	1.07E-05	1.66E-02	1.45E-03	2.46E-04	1.01E-03	2.76E-04	2.79E-04	1.44E-03	3.16E-05	0.00E+00	7.33E-04	3.14E-03
9	E37	60	Passenger Car	228	0.00E+00	3.43E-06	3.71E-07	1.15E+01	2.39E-05	8.88E-02	7.61E-06	4.66E-04	2.32E-03	3.56E-04	7.42E-04	4.78E-04	4.90E-04	4.77E-05	5.74E-05	1.58E-08	2.51E-04	7.30E-05
9	E37	60	Passenger Truck	383	0.00E+00	7.55E-06	7.98E-07	2.61E+01	4.72E-05	1.58E-01	1.55E-05	1.52E-03	4.25E-03	6.60E-04	1.48E-03	9.65E-04	9.87E-04	2.03E-04	1.30E-04	3.59E-08	4.92E-04	2.52E-04
9	E37	60	Single Unit Short Haul Truck	43	0.00E+00	1.27E-05	6.36E-07	8.09E+00	1.05E-05	1.56E-02	1.36E-05	6.06E-03	1.03E-03	1.86E-04	1.54E-03	3.81E-04	3.87E-04	8.10E-04	3.27E-05	1.35E-08	1.16E-03	1.14E-03
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	5.57E-07	2.76E-08	3.46E-01	4.55E-07	6.63E-04	5.94E-07	2.62E-04	4.62E-05	8.27E-06	6.78E-05	1.66E-05	1.69E-05	3.45E-05	1.39E-06	5.72E-10	5.08E-05	4.91E-05
9	E37	60	Combination Short Haul Truck	23	0.00E+00	1.34E-05	9.36E-07	8.73E+00	4.74E-08	1.17E-02	9.93E-06	1.45E-02	1.25E-03	2.47E-04	8.54E-04	2.78E-04	2.78E-04	1.32E-03	2.92E-05	0.00E+00	5.74E-04	2.74E-03
9	E37	60	Combination Long Haul Truck	21	0.00E+00	1.20E-05	7.84E-07	8.19E+00	5.44E-08	1.26E-02	9.28E-06	1.44E-02	1.25E-03	2.13E-04	8.76E-04	2.39E-04	2.42E-04	1.25E-03	2.73E-05	0.00E+00	6.34E-04	2.72E-03
9	E38	60	Passenger Car	477	0.00E+00	7.15E-06	7.74E-07	2.40E+01	4.98E-05	1.85E-01	1.59E-05	9.72E-04	4.84E-03	7.43E-04	1.55E-03	9.98E-04	1.02E-03	9.96E-05	1.20E-04	3.30E-08	5.23E-04	1.52E-04
9	E38	60	Passenger Truck	799	0.00E+00	1.58E-05	1.67E-06	5.46E+01	9.85E-05	3.31E-01	3.24E-05	3.17E-03	8.87E-03	1.38E-03	3.08E-03	2.01E-03	2.06E-03	4.24E-04	2.71E-04	7.50E-08	1.03E-03	5.26E-04
9	E38	60	Single Unit Short Haul Truck	57	0.00E+00	1.69E-05	8.43E-07	1.07E+01	1.39E-05	2.07E-02	1.80E-05	8.03E-03	1.36E-03	2.47E-04	2.04E-03	5.05E-04	5.13E-04	1.07E-03	4.34E-05	1.79E-08	1.53E-03	1.51E-03
9	E38	60	Single Unit Long Haul Truck	3	0.00E+00	7.38E-07	3.66E-08	4.58E-01	6.03E-07	8.79E-04	7.87E-07	3.48E-04	6.13E-05	1.10E-05	9.00E-05	2.20E-05	2.24E-05	4.58E-05	1.85E-06	7.59E-10	6.74E-05	6.52E-05
9	E38	60	Combination Short Haul Truck	41	0.00E+00	2.44E-05	1.70E-06	1.59E+01	8.63E-08	2.13E-02	1.81E-05	2.65E-02	2.27E-03	4.49E-04	1.55E-03	5.06E-04	5.06E-04	2.39E-03	5.30E-05	0.00E+00	1.04E-03	4.98E-03
9	E38	60	Combination Long Haul Truck	38	0.00E+00	2.18E-05	1.43E-06	1.49E+01	9.89E-08	2.30E-02	1.69E-05	2.62E-02	2.28E-03	3.87E-04	1.59E-03	4.34E-04	4.39E-04	2.27E-03	4.97E-05	0.00E+00	1.15E-03	4.94E-03
10	E39	70	Passenger Car	239	0.00E+00	3.12E-06	3.37E-07	1.15E+01	2.17E-05	8.15E-02	6.96E-06	4.78E-04	1.85E-03	2.97E-04	6.76E-04	4.35E-04	4.47E-04	4.27E-05	5.75E-05	1.57E-08	2.29E-04	7.49E-05
10	E39	70	Passenger Truck	399	0.00E+00	6.83E-06	7.23E-07	2.64E+01	4.33E-05	1.50E-01	1.42E-05	1.50E-03	3.36E-03	5.47E-04	1.35E-03	8.81E-04	9.02E-04	1.94E-04	1.31E-04	3.52E-08	4.52E-04	2.46E-04
10	E39	70	Single Unit Short Haul Truck	17	0.00E+00	3.90E-06	1.96E-07	3.06E+00	3.19E-06	6.13E-03	4.15E-06	1.92E-03	2.74E-04	5.49E-05	4.75E-04	1.17E-04	1.19E-04	3.06E-04	1.23E-05	4.98E-09	3.55E-04	3.60E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.70E-07	8.46E-09	1.30E-01	1.38E-07	2.56E-04	1.81E-07	8.28E-05	1.25E-05	2.44E-06	2.07E-05	5.04E-06	5.13E-06	1.30E-05	5.23E-07	2.09E-10	1.56E-05	1.55E-05
10	E39	70	Combination Short Haul Truck	8	0.00E+00	4.29E-06	3.05E-07	3.12E+00	1.40E-08	3.69E-03	3.14E-06	4.52E-03	3.26E-04	7.14E-05	2.62E-04	9.04E-05	9.02E-05	4.70E-04	1.04E-05	0.00E+00	1.71E-04	8.51E-04
10	E39	70	Combination Long Haul Truck	8	0.00E+00	3.89E-06	2.59E-07	2.91E+00	1.61E-08	3.91E-03	2.95E-06	4.46E-03	3.24E-04	5.92E-05	2.70E-04	7.85E-05	7.93E-05	4.44E-04	9.73E-06	0.00E+00	1.91E-04	8.39E-04
10	E40	70	Passenger Car	199	0.00E+00	2.60E-06	2.81E-07	9.56E+00	1.81E-05	6.80E-02	5.80E-06	3.98E-04	1.54E-03	2.48E-04	5.64E-04	3.63E-04	3.72E-04	3.56E-05	4.80E-05	1.31E-08	1.91E-04	6.24E-05
10	E40	70	Passenger Truck	333	0.00

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E45	80	Passenger Truck	71	0.00E+00	1.11E-06	1.18E-07	4.60E+00	7.14E-06	2.54E-02	2.34E-06	2.60E-04	4.20E-04	7.46E-05	2.24E-04	1.45E-04	1.49E-04	3.21E-05	2.30E-05	6.25E-09	7.47E-05	4.24E-05
11	E45	80	Single Unit Short Haul Truck	4	0.00E+00	7.18E-07	3.56E-08	7.04E-01	5.78E-07	1.42E-03	7.64E-07	3.68E-04	4.51E-05	1.02E-05	8.74E-05	2.13E-05	2.16E-05	7.07E-05	2.84E-06	1.13E-09	6.58E-05	6.89E-05
11	E45	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	E45	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E46	80	Passenger Car	216	0.00E+00	2.63E-06	2.85E-07	1.01E+01	1.83E-05	7.02E-02	5.85E-06	4.44E-04	1.19E-03	2.06E-04	5.70E-04	3.67E-04	3.77E-04	3.39E-05	5.07E-05	1.42E-08	1.93E-04	6.96E-05
11	E46	80	Passenger Truck	362	0.00E+00	5.65E-06	5.99E-07	2.33E+01	3.62E-05	1.29E-01	1.19E-05	1.32E-03	2.13E-03	3.78E-04	1.14E-03	7.36E-04	7.54E-04	1.63E-04	1.17E-04	3.17E-08	3.79E-04	2.15E-04
11	E46	80	Single Unit Short Haul Truck	25	0.00E+00	4.67E-06	2.32E-07	4.58E+00	3.76E-06	9.20E-03	4.97E-06	2.39E-03	2.93E-04	6.63E-05	5.68E-04	1.38E-04	1.40E-04	4.59E-04	1.85E-05	7.33E-09	4.27E-04	4.48E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	2.03E-07	1.00E-08	1.94E-01	1.60E-07	3.81E-04	2.16E-07	1.02E-04	1.34E-05	2.93E-06	2.48E-05	5.95E-06	6.04E-06	1.93E-05	7.81E-07	3.05E-10	1.87E-05	1.92E-05
11	E46	80	Combination Short Haul Truck	11	0.00E+00	4.82E-06	3.45E-07	4.00E+00	1.52E-08	4.27E-03	3.54E-06	4.94E-03	2.92E-04	7.20E-05	2.87E-04	1.02E-04	1.01E-04	6.01E-04	1.34E-05	0.00E+00	1.86E-04	9.34E-04
11	E46	80	Combination Long Haul Truck	10	0.00E+00	4.31E-06	2.89E-07	3.70E+00	1.76E-08	4.42E-03	3.28E-06	4.81E-03	2.87E-04	5.76E-05	2.98E-04	8.76E-05	8.82E-05	5.65E-04	1.24E-05	0.00E+00	2.09E-04	9.07E-04
11	E47	80	Passenger Car	36	0.00E+00	4.41E-07	4.78E-08	1.69E+00	3.07E-06	1.18E-02	9.82E-07	7.45E-05	1.99E-04	3.47E-05	9.56E-05	6.17E-05	6.33E-05	5.68E-06	8.51E-06	2.39E-09	3.23E-05	1.17E-05
11	E47	80	Passenger Truck	61	0.00E+00	9.48E-07	1.01E-07	3.91E+00	6.07E-06	2.16E-02	1.99E-06	2.21E-04	3.58E-04	6.34E-05	1.91E-04	1.23E-04	1.27E-04	2.73E-05	1.96E-05	5.31E-09	6.36E-05	3.61E-05
11	E47	80	Single Unit Short Haul Truck	5	0.00E+00	8.98E-07	4.46E-08	8.81E-01	7.22E-07	1.77E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.61E-05
11	E47	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	E47	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E48	80	Passenger Car	337	0.00E+00	4.10E-06	4.44E-07	1.57E+01	2.86E-05	1.10E-01	9.13E-06	6.93E-04	1.85E-03	3.22E-04	8.89E-04	5.73E-04	5.88E-04	5.28E-05	7.92E-05	2.22E-08	3.01E-04	1.09E-04
11	E48	80	Passenger Truck	565	0.00E+00	8.82E-06	9.35E-07	3.64E+01	5.65E-05	2.01E-01	1.85E-05	2.06E-03	3.33E-03	5.90E-04	1.77E-03	1.15E-03	1.18E-03	2.54E-04	1.82E-04	4.94E-08	5.91E-04	3.36E-04
11	E48	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.37E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.58E-05	9.72E-05	3.18E-04	1.28E-05	5.08E-09	2.96E-04	3.10E-04
11	E48	80	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	6.93E-09	1.34E-01	1.11E-07	2.64E-04	1.50E-07	7.08E-05	9.27E-06	2.03E-06	1.71E-05	4.12E-06	4.18E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.33E-05
11	E48	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.77E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	E48	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
11	E49	80	Passenger Car	43	0.00E+00	5.19E-07	5.62E-08	1.99E+00	3.62E-06	1.39E-02	1.16E-06	8.77E-05	2.35E-04	4.08E-05	1.12E-04	7.25E-05	7.44E-05	6.69E-06	1.00E-05	2.81E-09	3.81E-05	1.38E-05
11	E49	80	Passenger Truck	71	0.00E+00	1.12E-06	1.18E-07	4.61E+00	7.15E-06	2.54E-02	2.34E-06	2.60E-04	4.21E-04	7.46E-05	2.24E-04	1.45E-04	1.49E-04	3.22E-05	2.30E-05	6.25E-09	7.48E-05	4.25E-05
11	E49	80	Single Unit Short Haul Truck	1	0.00E+00	2.01E-07	1.00E-08	1.98E-01	1.62E-07	3.97E-04	2.14E-07	1.03E-04	1.27E-05	2.86E-06	2.45E-05	5.97E-06	6.06E-06	1.98E-05	7.97E-07	3.16E-10	1.84E-05	1.93E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	1.27E-06	9.09E-08	1.05E+00	4.02E-09	1.13E-03	9.34E-07	1.30E-03	7.71E-05	1.90E-05	7.58E-05	2.69E-05	2.67E-05	1.59E-04	3.52E-06	0.00E+00	4.92E-05	2.46E-04
11	E49	80	Combination Long Haul Truck	3	0.00E+00	1.14E-06	7.63E-08	9.76E-01	4.65E-09	1.17E-03	8.66E-07	1.27E-03	7.56E-05	1.52E-05	7.85E-05	2.31E-05	2.33E-05	1.49E-04	3.26E-06	0.00E+00	5.50E-05	2.39E-04
11	E50	80	Passenger Car	265	0.00E+00	3.23E-06	3.49E-07	1.24E+01	2.25E-05	8.62E-02	7.19E-06	5.45E-04	1.46E-03	2.54E-04	6.99E-04	4.51E-04	4.63E-04	4.16E-05	6.23E-05	1.75E-08	2.37E-04	8.55E-05
11	E50	80	Passenger Truck	444	0.00E+00	6.94E-06	7.36E-07	2.86E+01	4.44E-05	1.58E-01	1.46E-05	1.62E-03	2.62E-03	4.64E-04	1.39E-03	9.03E-04	9.26E-04	2.00E-04	1.43E-04	3.89E-08	4.65E-04	2.64E-04
11	E50	80	Single Unit Short Haul Truck	53	0.00E+00	9.96E-06	4.94E-07	9.77E+00	8.01E-06	1.96E-02	1.06E-05	5.11E-03	6.26E-04	1.41E-04	1.21E-03	2.95E-04	3.00E-04	9.80E-04	3.94E-05	1.56E-08	9.12E-04	9.55E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	2.13E-08	4.13E-01	3.42E-07	8.13E-04	4.61E-07	2.18E-04	2.86E-05	6.24E-06	5.28E-05	1.27E-05	1.29E-05	4.13E-05	1.67E-06	6.51E-10	4.00E-05	4.09E-05
11	E50	80	Combination Short Haul Truck	43	0.00E+00	1.88E-05	1.35E-06	1.56E+01	5.95E-08	1.67E-02	1.38E-05	1.93E-02	1.14E-03	2.82E-04	1.12E-03	3.98E-04	3.96E-04	2.35E-03	5.22E-05	0.00E+00	7.29E-04	3.65E-03
11	E50	80	Combination Long Haul Truck	39	0.00E+00	1.69E-05	1.13E-06	1.45E+01	6.89E-08	1.73E-02	1.28E-05	1.88E-02	1.12E-03	2.25E-04	1.16E-03	3.43E-04	3.45E-04	2.21E-03	4.83E-05	0.00E+00	8.16E-04	3.55E-03
11	E51	80	Passenger Car	13	0.00E+00	1.58E-07	1.71E-08	6.04E-01	1.10E-06	4.21E-03	3.51E-07	2.66E-05	7.12E-05	1.24E-05	3.41E-05	2.20E-05	2.26E-05	2.03E-06	3.04E-06	8.53E-10	1.15E-05	4.17E-06
11	E51	80	Passenger Truck	22	0.00E+00	3.39E-07	3.59E-08	1.40E+00	2.17E-06	7.71E-03	7.11E-07	7.89E-05	1.28E-04	2.27E-05	6.81E-05	4.41E-05	4.52E-05	9.76E-06	6.99E-06	1.90E-09	2.27E-05	1.29E-05
11	E51	80	Combination Short Haul Truck	1	0.00E+00	3.84E-07	2.74E-08	3.18E-01	1.21E-09	3.40E-04	2.82E-07	3.93E-04	2.33E-05	5.73E-06	2.29E-05	8.11E-06	8.06E-06	4.78E-05	1.06E-06	0.00E+00	1.48E-05	7.43E-05
11	E51	80	Combination Long Haul Truck	1	0.00E+00	3.43E-07	2.30E-08	2.94E-01	1.40E-09	3.52E-04	2.61E-07	3.83E-04	2.28E-05	4.58E-06	2.37E-05	6.97E-06	7.02E-06	4.49E-05	9.83E-07	0.00E+00	1.66E-05	7.22E-05
11	E52	80	Passenger Car	183	0.00E+00	2.22E-06	2.40E-07	8.52E+00	1.55E-05	5.93E-02	4.94E-06	3.75E-04	1.00E-03	1.74E-04	4.81E-04	3.10E-04	3.18E-04	2.86E-05	4.28E-05	1.20E-08	1.63E-04	5.88E-05
11	E52	80	Passenger Truck	306	0.00E+00	4.77E-06	5.06E-07	1.97E+01	3.06E-05	1.09E-01	1.00E-05	1.11E-03	1.80E-03	3.19E-04	9.60E-04	6.22E-04	6.37E-04	1.38E-04	9.85E-05	2.67E-08	3.20E-04	1.82E-04
11	E52	80	Single Unit Short Haul Truck	52	0.00E+00	9.72E-06	4.82E-07	9.53E+00	7.82E-06	1.92E-02	1.03E-05	4.98E-03	6.11E-04	1.38E-04	1.18E-03	2.88E-04	2.92E-04	9.56E-04	3.84E-05	1.53E-08	8.90E-04	9.32E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.08E-08	4.03E-01	3.34E-07	7.94E-04	4.50E-07	2.13E-04	2.79E-05	6.09E-06	5.16E-05	1.24E-05	1.26E-05	4.03E-05	1.63E-06	6.35E-10	3.90E-05	3.99E-05
11	E52	80	Combination Short Haul Truck	42	0.00E+00	1.82E-05	1.30E-06	1.51E+01	5.76E-08	1.62E-02	1.34E-05	1.87E-02	1.11E-03	2.72E-04	1.09E-03	3.86E-04	3.83E-04	2.27E-03	5.06E-05	0.00E+00	7.05E-04	3.53E-03
11	E52	80	Combination Long Haul Truck	38	0.00E+00	1.63E-05	1.09E-06	1.40E+01	6.66E-08	1.67E-02	1.24E-05	1.82E-02	1.08E-03	2.18E-04	1.13E-03	3.32E-04	3.34E-04	2.14E-03	4.67E-05	0.00E+00	7.90E-04	3.43E-03
11	E53	80	Passenger Car	131	0.00E+00	1.60E-06	1.73E-07	6.13E+00	1.11E-05	4.27E-02	3.56E-06	2.70E-04	7.23E-04	1.26E-04	3.46E-04	2.23E-04	2.29E-04	2.06E-05	3.08E-05	8.65E-09	1.17E-04	4.23E-05
11	E53	80	Passenger Truck	220	0.00E+00	3.44E-06	3.64E-07	1.42E+01	2.20E-05	7.83E-02	7.21E-06	8.01E-04	1.30E-03	2.30E-04	6.91E-04	4.47E-04	4.58E-04	9.90E-05	7.09E-05	1.93E-08	2.30E-04	1.31E-04
11	E53	80	Single Unit Short Haul Truck	32	0.00E+00	6.01E-06	2.98E-07	5.89E+00	4.83E-06	1.18E-02	6.39E-06	3.08E-03	3.77E-04	8.53E-05	7.31E-04	1.78E-04	1.81E-04	5.91E-04	2.38E-05	9.43E-09	5.50E-04	5.76E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.29E-08	2.49E-01	2.06E-07	4.91E-04	2.78E-07	1.31E-04	1.72E-05	3.76E-06	3.19E-05	7.65E-06	7.77E-06	2.49E-05	1.00E-06	3.92E-10	2.41E-05	2.46E-05
11	E53	80	Combination Short Haul Truck	23	0.00E+00	1.00E-05	7.17E-07	8.31E+00	3.17E-08	8.88E-03	7.36E-06	1.03E-02	6.08E-04	1.50E-04	5.98E-04	2.12E-04	2.11E-04	1.25E-03	2.78E-05	0.00E+00	3.88E-04	1.94E-03
11	E53	80	Combination Long Haul Truck	21	0.00E+00	8.97E-06	6.02E-07	7.70E+00	3.66E-08	9.20E-03	6.83E-06	1.00E-02	5.96E-04	1.20E-04	6.19E-04	1.82E-04	1.83E-04	1.17E-03	2.57E-05	0.00E+00	4.34E-04	1.89E-03
11	E54	80	Passenger Car	353	0.00E+00	4.30E-06	4.65E-07	1.65E+01	2.99E-05	1.15E-01	9.56E-06	7.26E-04	1.94E-03	3.37E-04	9.31E-04	6.00E-04	6.16E-04	5.53E-05	8.29E-05	2.32E-08	3.15E-04	1.14E-04
11	E54	80	Passenger Truck	591	0.00E+00	9.23E-06	9.79E-07	3.81E+01	5.91E-05	2.10E-01	1.94E-05	2.15E-03	3.48E-03	6.17E-04	1.86E-03	1.20E-03	1.23E-03	2.66E-04	1.90E-04	5.17E-08	6.19E-04	3.51E-04
11	E54	80	Single Unit Short Haul Truck	54	0.00E+00	1.01E-05	5.02E-07	9.92E+00	8.14E-06	1.99E-02	1.08E-05	5.18E-03	6.35E-04	1.44E-04	1.23E-03	3.00E-04	3.04E-04	9.95E-04	4.00E-05	1.59E-08	9.26E-04	9.69E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	4.39E-07	2.17E-08	4.20E-01	3.48E-07	8.26E-04	4.68E-07	2.21E-04	2.90E-05	6.34E-06	5.37E-05	1.29E-05	1.31E-05	4.19E-05	1.69E-06	6.61E-10	4.06E-05	4.15E-05
11	E54	80	Combination Short Haul Truck	39	0.00E+00	1.71E-05	1.22E-06	1.41E+01	5.39E-08	1.51E-02	1.25E-05	1.75E-02	1.03E-03	2.55E-04	1.02E-03	3.61E-04	3.59E-04	2.13E-03	4.73E-05	0.00E+00	6.60E-04	3.30E-03
11	E54	80	Combination Long Haul Truck	35	0.00E+00	1.53E-05	1.02E-06	1.31E+01	6.23E-08	1.57E-02	1.16E-05	1.70E-02	1.01E-03	2.04E-04	1.05E-03	3.10E-04	3.12E-04	2.00E-03	4.37E-05	0.00E+00	7.39E-04	3.21E-03
11	E55	80	Passenger Car	72	0.00E+00	8.76E-07	9.48E-08	3.36E+00	6.10E-06	2.34E-02	1.95E-06	1.48E-04	3.96E-04	6.88E-05	1.90E-04	1.22E-04	1.26E-04	1.13E-05	1.69E-05	4.74E-09	6.42E-05	2.32E-05
11	E55	80	Passenger Truck	121	0.00E+00	1.88E-06	2.00E-07	7.77E+00	1.21E-05	4.29E-02	3.95E-06	4.39E-04	7.10E-04	1.26E-04	3.78E-04	2.45E-04	2.51E-04	5.42E-05	3.88E-05	1.05E-08	1.26E-04	7.16E-05
11	E55	80	Single Unit Short Haul Truck	22	0.00E+00	4.11E-06	2.04E-07	4.03E+00	3.31E-06	8.10E-03	4.37E-06	2.11E-03	2.58E-04	5.84E-05	5.00E-04	1.22E-04	1.24E-04	4.04E-04	1.63E-05	6.46E-09	3.76E-04	3.94E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.81E-09	1.71E-01	1.41E-07	3.36E-04	1.90E-07	9.00E-05	1.18E-05	2.58E-06	2.18E-05	5.24E-06	5.32E-06	1.70E-05	6.88E-07	2.69E-10	1.65E-05	1.69E-05
11	E55	80	Combination Short Haul Truck	13	0.00E+00	5.81E-06	4.15E-07	4.82E+00	1.83E-08	5.15E-03	4.26E-06	5.96E-03	3.52E-04	8.68E-05	3.46E-04	1.23E-04	1.22E-04	7.24E-04	1.61E-05	0.00E+00	2.25E-04	1.12E-03
11	E55	80	Combination Long Haul Truck	12	0.00E+00	5.20E-06	3.49E-07	4.46E+00	2.12E-08	5.33E-03	3.96E-06	5.80E-03	3.45E-04	6.94E-05	3.59E-04	1.06E-04	1.06E-04	6.81E-04	1.49E-05	0.00E+00	2.51E-04	1.09E-03
11	E56	80	Passenger Car	280	0.00E+00	3.41E-06	3.69E-07	1.31E+01	2.38E-05	9.11E-02	7.59E-06	5.76E-04	1.54E-03	2.68E-04	7.39E-04	4.77E-04	4.89E-04	4.39E-05	6.58E-05	1.85E-08	2.50E-04	9.04E-05
11	E56	80	Passenger Truck	470	0.00E+00	7.33E-06	7.77E-07	3.03E+01	4.70E-05	1.67E-01	1.54E-05	1.71E-03	2.77E-03	4.90E-04	1.47E-03	9.55E-04	9.78E-04	2.11E-04	1.51E-04	4.11E-08	4.92E-04	2.79E-04
11	E56	80	Single Unit Short Haul Truck	41	0.00E+00	7.64E-06	3.79E-07	7.50E+00	6.15E-06	1.51E-02	8.13E-06	3.92E-03	4.80E-04	1.09E-04	9.30E-04	2.26E-04	2.30E-04	7.52E-04	3.02E-05	1.20E-08	7.00E-04	7.33E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	3.32E-07	1.64E-08	3.17E-01	2.63E-07	6.24E-04	3.54E-07	1.67E-04	2.19E-05	4.79E-06	4.06E-05	9.74E-06	9.89E-06	3.17E-05	1.28E-06	4.99E-10	3.07E-05	3.14E-05
11	E56	80	Combination Short Haul Truck	33	0.00E+00	1.47E-05	1.05E-06	1.22E+01	4.64E-08	1.30E-02	1.08E-05	1.51E-02	8.90E-04	2.19E-04	8.76E-04	3.10E-04	3.09E-04	1.83E-03	4.07E-05	0.00E+00	5.68E-04	2.84E-03
11	E56	80	Combination Long Haul Truck	31	0.00E+00	1.31E-05	8.81E-07	1.13E+01	5.36E-08	1.35E-02	1.00E-05	1.47E-02	8.73E-04	1.75E-04	9.07E-04	2.67E-04	2.69E-04	1.72E-03	3.76E-05	0.00E+00	6.36E-04	2.76E-03
10	E57	70	Passenger Car	212	0.00E+00	2.77E-06	2.99E-07	1.02E+01	1.93E-05	7.23E-02	6.17E-06	4.24E-04	1.64E-03	2.63E-04	6.00E-04	3.86E-04	3.96E-04	3.79E-05	5.10E-05	1.39E-08	2.03E-04	6.64E-05
10	E57	70	Passenger Truck	354	0.00E+00	6.06E-06	6.42E-07	2.34E+01	3.84E-05	1.33E-01	1.26E-05	1.33E-03	2.98E-03	4.85E-04	1.20E-03	7.82E-04	8.00E-04	1.72E-04	1.16E-04	3.12E-08	4.01E-04	2.19E-04
10	E57	70	Single Unit Short Haul Truck	11	0.00E+00	2.66E-06	1.33E-07	2.08E+00	2.17E-06	4.18E-03	2.83E-06	1.31E-03	1.87E-04	3.74E-05	3.23E-04	7.94E-05	8.07E-05	2.08E-04	8.38E-06	3.39E-09	2.41E-04	2.45E-04
10	E57	70	Combination Short Haul Truck	9	0.00E+00	4.78E-06	3.40E-07	3.48E+00	1.56E-08	4.12E-03	3.50E-06	5.04E-03	3.63E-04	7.96E-05	2.92E-04	1.01E-04	1.01E-04	5.24E-04	1.16E-05	0.00E+00	1.91E-04	9.49E-04
10	E57	70	Combination Long Haul Truck	8	0.00E+00	4.34E-06	2.89E-07	3.24E+00	1.79E-08	4.36E-03	3.29E-06	4.97E-03	3.62E-04	6.60E-05	3.01E-04	8.75E-05	8.84E-05	4.95E-04	1.08E-05	0.00E+00	2.13E-04	9.35E-04
10	E58	70	Passenger Car	172	0.00E+00	2.25E-06	2.43E-07	8.26E+00	1.57E-05	5.87E-02	5.01E-06	3.44E-04	1.33E-03	2.14E-04	4.87E-04	3.14E-04	3.22E-04	3.08E-05	4.14E-05	1.13E-08	1.65E-04	5.39E-05
10	E58	70	Passenger Truck	288	0.00E+00	4.92E-06	5.21E-07	1.90E+01	3.12E-05	1.08E-01	1.02E-05	1.08E-03	2.42E-03	3.94E-04	9.75E-04	6.35E-04	6.50E-04	1.40E-04	9.43E-05	2.53E-08	3.25E-04	1.77E-04
10	E58	70	Single Unit Short Haul Truck	13	0.00E+00	3.06E-06	1.54E-07	2.40E+00	2.51E-06	4.82E-03	3.26E-06	1.51E-03	2.16E-04	4.31E-05	3.73E-04	9.17E-05	9.31E-05	2.41E-04	9.67E-06	3.91E-09	2.79E-04	2.83E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	1.34E-07	6.65E-09	1.02E-01	1.08E-07	2.01E-04	1.42E-07	6.50E-05	9.84E-06	1.92E-06	1.63E-05	3.96E-06	4.03E-06	1.02E-05	4.11E-07	1.65E-10	1.22E-05	1.22E-05
10	E58	70	Combination Short Haul Truck	11	0.00E+00	5.52E-06	3.92E-07	4.01E+00	1.79E-08	4.75E-03	4.04E-06	5.81E-03	4.19E-04	9.18E-05	3.36E-04	1.16E-04	1.16E-04	6.05E-04	1.34E-05	0.00E+00	2.20E-04	1.09E-03
10	E58	70	Combination Long Haul Truck	10	0.00E+00	5.01E-06	3.34E-07	3.74E+00	2.07E-08	5.03E-03	3.79E-06	5.73E-03	4.17E-04	7.62E-05	3.47E-04	1.01E-04	1.02E-04	5.70E-04	1.25E-05	0.00E+00	2.46E-04	1.08E-03
11	E59	80	Passenger Car	442	0.00E+00	5.38E-06	5.82E-07	2.06E+01	3.75E-05	1.44E-01	1.20E-05	9.09E-04	2.43E-03	4.22E-04	1.17E-03	7.52E-04	7.71E-04	6.93E-05	1.04E-04	2.91E-08	3.94E-04	1.42E-04
11	E59	80	Passenger Truck	740	0.00E+00	1.16E-05	1.23E-06	4.77E+01	7.40E-05	2.63E-01	2.43E-05	2.69E-03	4.36E-03	7.73E-04	2.32E-03	1.51E-03	1.54E-03	3.33E-04	2.39E-04	6.48E-08	7.75E-04	4.40E-04
11	E59	80	Single Unit Short Haul Truck	126	0.00E+00	2.37E-05	1.18E-06	2.33E+01	1.91E-05	4.67E-02	2.52E-05	1.22E-02	1.49E-03	3.37E-04	2.88E-03	7.03E-04	7.13E-04	2.33E-03	9.38E-05	3.72E-08	2.17E-03	2.27E-03
11	E59	80	Single Unit Long Haul Truck	6	0.00E+00	1.03E-06	5.08E-08	9.84E-01	8.15E-07	1.94E-03	1.10E-06	5.19E-04	6.80E-05	1.49E-05	1.26E-04	3.02E-05	3.07E-05	9.82E-05	3.97E-06	1.55E-09	9.51E-05	9.73E-05
11	E59	80	Combination Short Haul Truck	70	0.00E+00	3.08E-05	2.20E-06	2.56E+01	9.73E-08	2.73E-02	2.26E-05	3.16E-02	1.87E-03	4.60E-04	1.84E-03	6.51E-04	6.48E-04	3.84E-03	8.54E-05	0.00E+00	1.19E-03	5.97E-03
11	E59	80	Combination Long Haul Truck	64

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E63	70	Combination Long Haul Truck	72	0.00E+00	3.70E-05	2.46E-06	2.76E+01	1.53E-07	3.72E-02	2.80E-05	4.23E-02	3.08E-03	5.62E-04	2.56E-03	7.45E-04	7.53E-04	4.21E-03	9.24E-05	0.00E+00	1.82E-03	7.97E-03
10	E64	70	Passenger Car	462	0.00E+00	6.05E-06	6.53E-07	2.22E+01	4.21E-05	1.58E-01	1.35E-05	9.25E-04	3.58E-03	5.75E-04	1.31E-03	8.43E-04	8.65E-04	8.28E-05	1.11E-04	3.04E-08	4.43E-04	1.45E-04
10	E64	70	Passenger Truck	774	0.00E+00	1.32E-05	1.40E-06	5.12E+01	8.38E-05	2.90E-01	2.75E-05	2.90E-03	6.51E-03	1.06E-03	2.62E-03	1.71E-03	1.75E-03	3.76E-04	2.54E-04	6.81E-08	8.75E-04	4.77E-04
10	E64	70	Single Unit Short Haul Truck	88	0.00E+00	2.07E-05	1.04E-06	1.62E+01	1.69E-05	3.25E-02	2.20E-05	1.02E-02	1.46E-03	2.91E-04	2.52E-03	6.19E-04	6.29E-04	1.62E-03	6.53E-05	2.64E-08	1.88E-03	1.91E-03
10	E64	70	Single Unit Long Haul Truck	4	0.00E+00	9.02E-07	4.49E-08	6.89E-01	7.31E-07	1.36E-03	9.60E-07	4.39E-04	6.65E-05	1.30E-05	1.10E-04	2.68E-05	2.72E-05	6.87E-05	2.77E-06	1.11E-09	8.26E-05	8.22E-05
10	E64	70	Combination Short Haul Truck	48	0.00E+00	2.51E-05	1.78E-06	1.82E+01	8.15E-08	2.16E-02	1.84E-05	2.64E-02	1.90E-03	4.17E-04	1.53E-03	5.28E-04	5.27E-04	2.75E-03	6.08E-05	0.00E+00	1.00E-03	4.97E-03
10	E64	70	Combination Long Haul Truck	44	0.00E+00	2.27E-05	1.52E-06	1.70E+01	9.38E-08	2.28E-02	1.72E-05	2.60E-02	1.89E-03	3.46E-04	1.58E-03	4.58E-04	4.63E-04	2.59E-03	5.68E-05	0.00E+00	1.12E-03	4.90E-03
10	E65	70	Passenger Car	730	0.00E+00	9.55E-06	1.03E-06	3.51E+01	6.65E-05	2.49E-01	2.13E-05	1.46E-03	5.65E-03	9.08E-04	2.07E-03	1.33E-03	1.37E-03	1.31E-04	1.76E-04	4.80E-08	6.99E-04	2.29E-04
10	E65	70	Passenger Truck	1222	0.00E+00	2.09E-05	2.21E-06	8.08E+01	1.32E-04	4.58E-01	4.34E-05	4.58E-03	1.03E-02	1.67E-03	4.14E-03	2.69E-03	2.76E-03	5.94E-04	4.00E-04	1.08E-07	1.38E-03	7.53E-04
10	E65	70	Single Unit Short Haul Truck	30	0.00E+00	7.11E-06	3.56E-07	5.57E+00	5.81E-06	1.12E-02	7.57E-06	3.50E-03	5.00E-04	1.00E-04	8.65E-04	2.13E-04	2.16E-04	5.58E-04	2.24E-05	9.07E-09	6.46E-04	6.56E-04
10	E65	70	Single Unit Long Haul Truck	1	0.00E+00	3.10E-07	1.54E-08	2.36E-01	2.51E-07	4.67E-04	3.30E-07	1.51E-04	2.28E-05	4.45E-06	3.78E-05	9.19E-06	9.34E-06	2.36E-05	9.52E-07	3.82E-10	2.83E-05	2.82E-05
10	E65	70	Combination Short Haul Truck	25	0.00E+00	1.29E-05	9.18E-07	9.38E+00	4.20E-08	1.11E-02	9.45E-06	1.36E-02	9.80E-04	2.15E-04	7.87E-04	2.72E-04	2.71E-04	1.41E-03	3.13E-05	0.00E+00	5.15E-04	2.56E-03
10	E65	70	Combination Long Haul Truck	23	0.00E+00	1.17E-05	7.80E-07	8.75E+00	4.83E-08	1.18E-02	8.87E-06	1.34E-02	9.75E-04	1.78E-04	8.12E-04	2.36E-04	2.38E-04	1.33E-03	2.93E-05	0.00E+00	5.75E-04	2.52E-03
10	E66	70	Passenger Car	359	0.00E+00	4.69E-06	5.07E-07	1.72E+01	3.27E-05	1.23E-01	1.05E-05	7.18E-04	2.78E-03	4.46E-04	1.02E-03	6.54E-04	6.71E-04	6.43E-05	8.65E-05	2.36E-08	3.44E-04	1.13E-04
10	E66	70	Passenger Truck	601	0.00E+00	1.03E-05	1.09E-06	3.97E+01	6.51E-05	2.25E-01	2.14E-05	2.25E-03	5.05E-03	8.22E-04	2.04E-03	1.32E-03	1.36E-03	2.92E-04	1.97E-04	5.29E-08	6.79E-04	3.70E-04
10	E66	70	Single Unit Short Haul Truck	24	0.00E+00	5.66E-06	2.83E-07	4.43E+00	4.63E-06	8.89E-03	6.02E-06	2.79E-03	3.98E-04	7.96E-05	6.89E-04	1.69E-04	1.72E-04	4.44E-04	1.78E-05	7.22E-09	5.14E-04	5.22E-04
10	E66	70	Single Unit Long Haul Truck	1	0.00E+00	2.46E-07	1.23E-08	1.88E-01	2.00E-07	3.71E-04	2.62E-07	1.20E-04	1.82E-05	3.54E-06	3.01E-05	7.31E-06	7.43E-06	1.88E-05	7.58E-07	3.04E-10	2.26E-05	2.25E-05
10	E66	70	Combination Short Haul Truck	22	0.00E+00	1.16E-05	8.23E-07	8.41E+00	3.76E-08	9.96E-03	8.47E-06	1.22E-02	8.78E-04	1.92E-04	7.05E-04	2.44E-04	2.43E-04	1.27E-03	2.81E-05	0.00E+00	4.62E-04	2.29E-03
10	E66	70	Combination Long Haul Truck	20	0.00E+00	1.05E-05	6.99E-07	7.84E+00	4.33E-08	1.05E-02	7.95E-06	1.20E-02	8.74E-04	1.60E-04	7.28E-04	2.12E-04	2.14E-04	1.20E-03	2.62E-05	0.00E+00	5.16E-04	2.26E-03
11	E67	80	Passenger Car	244	0.00E+00	2.97E-06	3.21E-07	1.14E+01	2.07E-05	7.92E-02	6.60E-06	5.01E-04	1.34E-03	2.33E-04	6.43E-04	4.14E-04	4.25E-04	3.82E-05	5.72E-05	1.60E-08	2.17E-04	7.85E-05
11	E67	80	Passenger Truck	408	0.00E+00	6.37E-06	6.76E-07	2.63E+01	4.08E-05	1.45E-01	1.34E-05	1.49E-03	2.40E-03	4.26E-04	1.28E-03	8.30E-04	8.50E-04	1.84E-04	1.32E-04	3.57E-08	4.28E-04	2.43E-04
11	E67	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	E67	80	Combination Short Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.42E-03	1.18E-06	1.65E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.38E-05	2.00E-04	4.45E-06	0.00E+00	6.21E-05	3.11E-04
11	E67	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.65E-08	1.23E+00	5.87E-09	1.47E-03	1.09E-06	1.60E-03	9.55E-05	1.92E-05	9.92E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.02E-04
11	E68	80	Passenger Car	264	0.00E+00	3.22E-06	3.48E-07	1.23E+01	2.24E-05	8.59E-02	7.16E-06	5.43E-04	1.45E-03	2.53E-04	6.97E-04	4.49E-04	4.61E-04	4.14E-05	6.20E-05	1.74E-08	2.36E-04	8.52E-05
11	E68	80	Passenger Truck	443	0.00E+00	6.91E-06	7.33E-07	2.85E+01	4.43E-05	1.57E-01	1.45E-05	1.61E-03	2.61E-03	4.62E-04	1.39E-03	9.00E-04	9.22E-04	1.99E-04	1.43E-04	3.87E-08	4.64E-04	2.63E-04
11	E68	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.78E-03	4.20E-06	2.03E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.20E-09	3.62E-04	3.79E-04
11	E68	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.47E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.65E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.11E-06	1.64E-05	6.61E-07	2.58E-10	1.58E-05	1.62E-05
11	E68	80	Combination Short Haul Truck	12	0.00E+00	5.28E-06	3.78E-07	4.38E+00	1.67E-08	4.68E-03	3.88E-06	5.41E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.58E-04	1.46E-05	0.00E+00	2.04E-04	1.02E-03
11	E68	80	Combination Long Haul Truck	11	0.00E+00	4.72E-06	3.17E-07	4.05E+00	1.93E-08	4.85E-03	3.60E-06	5.27E-03	3.14E-04	6.31E-05	3.26E-04	9.60E-05	9.66E-05	6.19E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
10	E69	70	Passenger Car	270	0.00E+00	3.54E-06	3.82E-07	1.30E+01	2.46E-05	9.24E-02	7.88E-06	5.41E-04	2.09E-03	3.36E-04	7.66E-04	4.93E-04	5.06E-04	4.84E-05	6.52E-05	1.78E-08	2.59E-04	8.48E-05
10	E69	70	Passenger Truck	453	0.00E+00	7.75E-06	8.20E-07	2.99E+01	4.90E-05	1.70E-01	1.61E-05	1.70E-03	3.81E-03	6.20E-04	1.53E-03	9.98E-04	1.02E-03	2.20E-04	1.48E-04	3.99E-08	5.12E-04	2.79E-04
10	E69	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E69	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	E70	70	Passenger Car	418	0.00E+00	5.47E-06	5.91E-07	2.01E+01	3.81E-05	1.43E-01	1.22E-05	8.37E-04	3.24E-03	5.20E-04	1.18E-03	7.63E-04	7.83E-04	7.49E-05	1.01E-04	2.75E-08	4.01E-04	1.31E-04
10	E70	70	Passenger Truck	700	0.00E+00	1.20E-05	1.27E-06	4.63E+01	7.58E-05	2.63E-01	2.49E-05	2.63E-03	5.89E-03	9.59E-04	2.37E-03	1.54E-03	1.58E-03	3.40E-04	2.29E-04	6.16E-08	7.91E-04	4.32E-04
10	E70	70	Single Unit Short Haul Truck	22	0.00E+00	5.18E-06	2.59E-07	4.06E+00	4.23E-06	8.14E-03	5.51E-06	2.55E-03	3.64E-04	7.28E-05	6.30E-04	1.55E-04	1.57E-04	4.06E-04	1.63E-05	6.61E-09	4.71E-04	4.78E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	1.72E-01	1.83E-07	3.40E-04	2.40E-07	1.10E-04	1.66E-05	3.24E-06	2.75E-05	6.69E-06	6.80E-06	1.72E-05	6.94E-07	2.78E-10	2.06E-05	2.06E-05
10	E70	70	Combination Short Haul Truck	6	0.00E+00	3.26E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.87E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	E70	70	Combination Long Haul Truck	6	0.00E+00	2.96E-06	1.97E-07	2.21E+00	1.22E-08	2.97E-03	2.24E-06	3.39E-03	2.46E-04	4.50E-05	2.05E-04	5.96E-05	6.03E-05	3.37E-04	7.39E-06	0.00E+00	1.45E-04	6.38E-04
10	E71	70	Passenger Car	560	0.00E+00	7.32E-06	7.91E-07	2.69E+01	5.10E-05	1.91E-01	1.63E-05	1.12E-03	4.34E-03	6.97E-04	1.59E-03	1.02E-03	1.05E-03	1.00E-04	1.35E-04	3.68E-08	5.36E-04	1.76E-04
10	E71	70	Passenger Truck	937	0.00E+00	1.60E-05	1.70E-06	6.20E+01	1.02E-04	3.51E-01	3.33E-05	3.51E-03	7.89E-03	1.28E-03	3.18E-03	2.07E-03	2.12E-03	4.56E-04	3.07E-04	8.25E-08	1.06E-03	5.78E-04
10	E71	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E71	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	E71	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	E72	70	Passenger Car	508	0.00E+00	6.64E-06	7.18E-07	2.44E+01	4.63E-05	1.73E-01	1.48E-05	1.02E-03	3.93E-03	6.32E-04	1.44E-03	9.27E-04	9.51E-04	9.10E-05	1.22E-04	3.34E-08	4.87E-04	1.59E-04
10	E72	70	Passenger Truck	850	0.00E+00	1.45E-05	1.54E-06	5.62E+01	9.21E-05	3.19E-01	3.02E-05	3.19E-03	7.16E-03	1.16E-03	2.88E-03	1.88E-03	1.92E-03	4.13E-04	2.79E-04	7.49E-08	9.61E-04	5.24E-04
10	E72	70	Single Unit Short Haul Truck	26	0.00E+00	6.08E-06	3.05E-07	4.76E+00	4.97E-06	9.55E-03	6.47E-06	3.00E-03	4.27E-04	8.55E-05	7.40E-04	1.82E-04	1.85E-04	4.77E-04	1.92E-05	7.76E-09	5.52E-04	5.61E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.32E-08	2.02E-01	2.14E-07	3.99E-04	2.82E-07	1.29E-04	1.95E-05	3.80E-06	3.23E-05	7.86E-06	7.98E-06	2.02E-05	8.14E-07	3.26E-10	2.42E-05	2.41E-05
10	E72	70	Combination Short Haul Truck	7	0.00E+00	3.80E-06	2.71E-07	2.77E+00	1.24E-08	3.27E-03	2.79E-06	4.01E-03	2.89E-04	6.33E-05	2.32E-04	8.01E-05	7.99E-05	4.17E-04	9.23E-06	0.00E+00	1.52E-04	7.55E-04
10	E72	70	Combination Long Haul Truck	7	0.00E+00	3.45E-06	2.30E-07	2.58E+00	1.42E-08	3.47E-03	2.62E-06	3.95E-03	2.87E-04	5.25E-05	2.39E-04	6.96E-05	7.03E-05	3.93E-04	8.62E-06	0.00E+00	1.70E-04	7.44E-04
9	E73	60	Passenger Car	103	0.00E+00	1.55E-06	1.67E-07	5.19E+00	1.08E-05	4.01E-02	3.44E-06	2.10E-04	1.05E-03	1.61E-04	3.35E-04	2.16E-04	2.21E-04	2.15E-05	2.59E-05	7.13E-09	1.13E-04	3.29E-05
9	E73	60	Passenger Truck	173	0.00E+00	3.41E-06	3.60E-07	1.18E+01	2.13E-05	7.15E-02	7.01E-06	6.86E-04	1.92E-03	2.98E-04	6.67E-04	4.36E-04	4.46E-04	9.16E-05	5.85E-05	1.62E-08	2.22E-04	1.14E-04
9	E73	60	Single Unit Short Haul Truck	7	0.00E+00	2.15E-06	1.07E-07	1.37E+00	1.77E-06	2.64E-03	2.29E-06	1.02E-03	1.74E-04	3.14E-05	2.60E-04	6.43E-05	6.53E-05	1.37E-04	5.52E-06	2.27E-09	1.95E-04	1.92E-04
9	E73	60	Combination Short Haul Truck	8	0.00E+00	4.59E-06	3.20E-07	2.99E+00	1.62E-08	4.01E-03	3.40E-06	4.98E-03	4.27E-04	8.44E-05	2.92E-04	9.53E-05	9.53E-05	4.50E-04	9.98E-06	0.00E+00	1.96E-04	9.37E-04
9	E73	60	Combination Long Haul Truck	7	0.00E+00	4.11E-06	2.68E-07	2.80E+00	1.86E-08	4.32E-03	3.18E-06	4.94E-03	4.28E-04	7.28E-05	3.00E-04	8.17E-05	8.27E-05	4.26E-04	9.36E-06	0.00E+00	2.17E-04	9.30E-04
9	E74	60	Passenger Car	52	0.00E+00	7.80E-07	8.44E-08	2.62E+00	5.43E-06	2.02E-02	1.73E-06	1.06E-04	5.27E-04	8.11E-05	1.69E-04	1.09E-04	1.12E-04	1.09E-05	1.31E-05	3.60E-09	5.71E-05	1.66E-05
9	E74	60	Passenger Truck	87	0.00E+00	1.72E-06	1.82E-07	5.95E+00	1.07E-05	3.61E-02	3.53E-06	3.46E-04	9.68E-04	1.50E-04	3.36E-04	2.20E-04	2.25E-04	4.62E-05	2.95E-05	8.18E-09	1.12E-04	5.73E-05
53	E75	70	Passenger Car	637	0.00E+00	8.07E-06	8.74E-07	3.10E+01	5.63E-05	2.09E-01	1.79E-05	1.30E-03	4.87E-03	7.84E-04	1.75E-03	1.13E-03	1.16E-03	1.14E-04	1.55E-04	4.23E-08	5.91E-04	2.04E-04
53	E75	70	Passenger Truck	1067	0.00E+00	1.76E-05	1.86E-06	7.14E+01	1.11E-04	3.82E-01	3.65E-05	3.97E-03	8.74E-03	1.43E-03	3.50E-03	2.27E-03	2.32E-03	5.16E-04	3.56E-04	9.31E-08	1.16E-03	6.52E-04
53	E75	70	Single Unit Short Haul Truck	31	0.00E+00	7.33E-06	3.67E-07	5.74E+00	5.99E-06	1.15E-02	7.80E-06	3.61E-03	5.15E-04	1.03E-04	8.92E-04	2.19E-04	2.23E-04	5.75E-04	2.31E-05	9.36E-09	6.66E-04	6.77E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	3.19E-07	1.59E-08	2.44E-01	2.59E-07	4.81E-04	3.40E-07	1.55E-04	2.35E-05	4.58E-06	3.90E-05	9.47E-06	9.63E-06	2.43E-05	9.82E-07	3.94E-10	2.92E-05	2.91E-05
53	E75	70	Combination Short Haul Truck	38	0.00E+00	1.96E-05	1.39E-06	1.42E+01	6.36E-08	1.68E-02	1.43E-05	2.06E-02	1.49E-03	3.25E-04	1.19E-03	4.12E-04	4.11E-04	2.14E-03	4.75E-05	0.00E+00	7.82E-04	3.88E-03
53	E75	70	Combination Long Haul Truck	34	0.00E+00	1.77E-05	1.18E-06	1.33E+01	7.33E-08	1.78E-02	1.35E-05	2.03E-02	1.48E-03	2.70E-04	1.23E-03	3.58E-04	3.62E-04	2.02E-03	4.44E-05	0.00E+00	8.72E-04	3.83E-03
53	E76	70	Passenger Car	888	0.00E+00	1.12E-05	1.22E-06	4.31E+01	7.84E-05	2.91E-01	2.49E-05	1.81E-03	6.78E-03	1.09E-03	2.43E-03	1.57E-03	1.61E-03	1.59E-04	2.16E-04	5.89E-08	8.23E-04	2.84E-04
53	E76	70	Passenger Truck	1486	0.00E+00	2.45E-05	2.59E-06	9.95E+01	1.55E-04	5.33E-01	5.08E-05	5.53E-03	1.22E-02	1.99E-03	4.87E-03	3.16E-03	3.24E-03	7.18E-04	4.95E-04	1.30E-07	1.62E-03	9.08E-04
53	E76	70	Single Unit Short Haul Truck	53	0.00E+00	1.25E-05	6.27E-07	9.80E+00	1.02E-05	1.97E-02	1.33E-05	6.16E-03	8.79E-04	1.76E-04	1.52E-03	3.74E-04	3.80E-04	9.81E-04	3.95E-05	1.60E-08	1.14E-03	1.15E-03
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	5.45E-07	2.71E-08	4.16E-01	4.41E-07	8.21E-04	5.80E-07	2.65E-04	4.01E-05	7.82E-06	6.65E-05	1.62E-05	1.64E-05	4.15E-05	1.68E-06	6.71E-10	4.99E-05	4.97E-05
53	E76	70	Combination Short Haul Truck	71	0.00E+00	3.69E-05	2.62E-06	2.68E+01	1.20E-07	3.18E-02	2.70E-05	3.89E-02	2.80E-03	6.14E-04	2.25E-03	7.77E-04	7.75E-04	4.05E-03	8.96E-05	0.00E+00	1.47E-03	7.32E-03
53	E76	70	Combination Long Haul Truck	65	0.00E+00	3.35E-05	2.23E-06	2.50E+01	1.38E-07	3.36E-02	2.54E-05	3.83E-02	2.79E-03	5.09E-04	2.32E-03	6.75E-04	6.82E-04	3.81E-03	8.37E-05	0.00E+00	1.64E-03	7.22E-03
53	E77	70	Passenger Car	782	0.00E+00	9.91E-06	1.07E-06	3.80E+01	6.91E-05	2.56E-01	2.19E-05	1.59E-03	5.97E-03	9.62E-04	2.14E-03	1.38E-03	1.42E-03	1.40E-04	1.91E-04	5.19E-08	7.26E-04	2.50E-04
53	E77	70	Passenger Truck	1310	0.00E+00	2.16E-05	2.28E-06	8.77E+01	1.37E-04	4.69E-01	4.48E-05	4.88E-03	1.07E-02	1.75E-03	4.29E-03	2.78E-03	2.85E-03	6.33E-04	4.37E-04	1.14E-07	1.43E-03	8.00E-04
53	E77	70	Single Unit Short Haul Truck	33	0.00E+00	7.75E-06	3.88E-07	6.07E+00	6.34E-06	1.22E-02	8.25E-06	3.82E-03	5.45E-04	1.09E-04	9.43E-04	2.32E-04	2.35E-04	6.08E-04	2.45E-05	9.89E-09	7.04E-04	7.15E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	3.38E-07	1.68E-08	2.58E-01	2.73E-07	5.09E-04	3.59E-07	1.64E-04	2.49E-05	4.85E-06	4.12E-05	1.00E-05	1.02E-05	2.57E-05	1.04E-06	4.16E-10	3.09E-05	3.08E-05
53	E77	70	Combination Short Haul Truck	45	0.00E+00	2.33E-05	1.65E-06	1.69E+01	7.57E-08	2.00E-02	1.70E-05	2.45E-02	1.77E-03	3.87E-04	1.42E-03	4.90E-04	4.89E-04	2.55E-03	5.65E-05	0.00E+00	9.29E-04	4.62E-03
53	E77	70	Combination Long Haul Truck	41	0.00E+00	2.11E-05	1.41E-06	1.58E+01	8.71E-08	2.12E-02	1.60E-05	2.42E-02	1.76E-03	3.21E-04	1.46E-03	4.25E-04	4.30E-04	2.41E-03	5.28E-05	0.00E+00	1.04E-03	4.55E-03
53	E78	70	Passenger Car	982	0.00E+00	1.24E-05	1.35E-06	4.77E+01	8.67E-05	3.22E-01	2.75E-05	2.00E-03	7.50E-03	1.21E-03	2.69E-03	1.73E-03	1.78E-03	1.76E-04	2.39E-04	6.52E-08	9.11E-04	3.14E-04
53	E78	70	Passenger Truck	1644	0.00E+00	2.71E-05	2.87E-06	1.10E+02	1.72E-04	5.89E-01	5.62E-05	6.12E-03	1.35E-02	2.20E-03	5.39E-03	3.49E-03	3.58E-03	7.94E-04	5.48E-04	1.43E-07	1.79E-03	1.00E-03
53	E78	70	Single Unit Short Haul Truck	61	0.00E+00	1.44E-05	7.23E-07	1.13E+01	1.18E-05	2.27E-02	1.54E-05	7.11E-03	1.01E-03	2.03E-04	1.76E-03	4.31E-04	4.38E-04	1.13E-03	4.55E-05	1.84E-08	1.31E-03	1.33E-03
53	E78	70	Single Unit Long Haul Truck	3	0.00E+00	6.29E-07	3.13E-08	4.80E-01	5.09E-07	9.48E-04	6.69E-07	3.06E-04	4.63E-05	9.02E-06	7.67E-05	1.87E-05	1.90E-05	4.79E-05	1.93E-06	7.75E-10	5.75E-05	5.73E-05
53	E78	70	Combination Short Haul Truck	79	0.00E+00	4.10E-05	2.92E-06	2.98E+01	1.33E-07	3.53E-02	3.01E-05	4.32E-02	3.12E-03	6.82E-04	2.50E-03	8.64E-04	8.62E-04	4.50E-03	9.96E-05	0.00E+00	1.64E-03	8.14E-03
53	E78	70	Combination Long Haul Truck	72	0.00E+00	3.72E-05	2.48E-06	2.78E+01	1.54E-07	3.74E-02	2.82E-05	4.26E-02	3.10E-03	5.66E-04	2.58E-03	7.50E-04	7.58E-04	4.24E-03	9.30E-05	0.00E+00	1.83E-03	8.02E-03
53	E79	70	Passenger Car	739	0.00E+00

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E83	70	Combination Short Haul Truck	15	0.00E+00	7.90E-06	5.62E-07	5.74E+00	2.57E-08	6.80E-03	5.79E-06	8.32E-03	6.00E-04	1.31E-04	4.82E-04	1.66E-04	1.66E-04	8.66E-04	1.92E-05	0.00E+00	3.16E-04	1.57E-03
10	E83	70	Combination Long Haul Truck	14	0.00E+00	7.16E-06	4.78E-07	5.35E+00	2.96E-08	7.20E-03	5.43E-06	8.20E-03	5.97E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.17E-04	1.79E-05	0.00E+00	3.52E-04	1.54E-03
10	E84	70	Passenger Car	186	0.00E+00	2.43E-06	2.63E-07	8.93E+00	1.69E-05	6.35E-02	5.42E-06	3.72E-04	1.44E-03	2.31E-04	5.26E-04	3.39E-04	3.48E-04	3.33E-05	4.48E-05	1.22E-08	1.78E-04	5.83E-05
10	E84	70	Passenger Truck	311	0.00E+00	5.32E-06	5.63E-07	2.06E+01	3.37E-05	1.17E-01	1.11E-05	1.17E-03	2.62E-03	4.26E-04	1.05E-03	6.86E-04	7.03E-04	1.51E-04	1.02E-04	2.74E-08	3.52E-04	1.92E-04
10	E84	70	Single Unit Short Haul Truck	2	0.00E+00	3.63E-07	1.82E-08	2.85E-01	2.97E-07	5.71E-04	3.87E-07	1.79E-04	2.55E-05	5.11E-06	4.42E-05	1.09E-05	1.10E-05	2.85E-05	1.15E-06	4.64E-10	3.30E-05	3.35E-05
10	E84	70	Combination Short Haul Truck	7	0.00E+00	3.65E-06	2.60E-07	2.66E+00	1.19E-08	3.14E-03	2.67E-06	3.85E-03	2.77E-04	6.07E-05	2.23E-04	7.69E-05	7.67E-05	4.00E-04	8.86E-06	0.00E+00	1.46E-04	7.24E-04
10	E84	70	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.21E-07	2.47E+00	1.37E-08	3.33E-03	2.51E-06	3.79E-03	2.76E-04	5.04E-05	2.30E-04	6.68E-05	6.75E-05	3.77E-04	8.28E-06	0.00E+00	1.63E-04	7.14E-04
9	E85	60	Passenger Car	1053	0.00E+00	1.58E-05	1.71E-06	5.30E+01	1.10E-04	4.10E-01	3.51E-05	2.15E-03	1.07E-02	1.64E-03	3.42E-03	2.20E-03	2.26E-03	2.20E-04	2.65E-04	7.29E-08	1.16E-03	3.37E-04
9	E85	60	Passenger Truck	1764	0.00E+00	3.48E-05	3.68E-06	1.21E+02	2.18E-04	7.30E-01	7.15E-05	7.01E-03	1.96E-02	3.04E-03	6.81E-03	4.45E-03	4.55E-03	9.36E-04	5.98E-04	1.66E-07	2.27E-03	1.16E-03
9	E85	60	Single Unit Short Haul Truck	55	0.00E+00	1.63E-05	8.14E-07	1.04E+01	1.34E-05	2.00E-02	1.74E-05	7.76E-03	1.32E-03	2.39E-04	1.97E-03	4.88E-04	4.96E-04	1.04E-03	4.19E-05	1.72E-08	1.48E-03	1.45E-03
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	7.13E-07	3.54E-08	4.43E-01	5.83E-07	8.49E-04	7.60E-07	3.36E-04	5.92E-05	1.06E-05	8.69E-05	2.13E-05	2.16E-05	4.42E-05	1.79E-06	7.33E-10	6.50E-05	6.29E-05
9	E85	60	Combination Short Haul Truck	34	0.00E+00	2.03E-05	1.41E-06	1.32E+01	7.17E-08	1.77E-02	1.50E-05	2.20E-02	1.88E-03	3.73E-04	1.29E-03	4.21E-04	4.21E-04	1.99E-03	4.41E-05	0.00E+00	8.67E-04	4.14E-03
9	E85	60	Combination Long Haul Truck	31	0.00E+00	1.81E-05	1.19E-06	1.24E+01	8.22E-08	1.91E-02	1.40E-05	2.18E-02	1.89E-03	3.22E-04	1.33E-03	3.61E-04	3.65E-04	1.88E-03	4.13E-05	0.00E+00	9.59E-04	4.11E-03
9	E86	60	Passenger Car	1132	0.00E+00	1.70E-05	1.84E-06	5.69E+01	1.18E-04	4.40E-01	3.77E-05	2.31E-03	1.15E-02	1.76E-03	3.68E-03	2.37E-03	2.43E-03	2.36E-04	2.85E-04	7.83E-08	1.24E-03	3.62E-04
9	E86	60	Passenger Truck	1895	0.00E+00	3.74E-05	3.95E-06	1.30E+02	2.34E-04	7.84E-01	7.69E-05	7.53E-03	2.11E-02	3.27E-03	7.32E-03	4.78E-03	4.89E-03	1.01E-03	6.42E-04	1.78E-07	2.44E-03	1.25E-03
9	E86	60	Single Unit Short Haul Truck	49	0.00E+00	1.43E-05	7.16E-07	9.11E+00	1.18E-05	1.76E-02	1.53E-05	6.82E-03	1.16E-03	2.10E-04	1.73E-03	4.29E-04	4.36E-04	9.12E-04	3.68E-05	1.52E-08	1.30E-03	1.28E-03
9	E86	60	Single Unit Long Haul Truck	2	0.00E+00	6.27E-07	3.11E-08	3.89E-01	5.12E-07	7.46E-04	6.69E-07	2.95E-04	5.21E-05	9.31E-06	7.64E-05	1.87E-05	1.90E-05	3.89E-05	1.57E-06	6.45E-10	5.72E-05	5.53E-05
9	E86	60	Combination Short Haul Truck	33	0.00E+00	1.92E-05	1.34E-06	1.25E+01	6.80E-08	1.68E-02	1.42E-05	2.09E-02	1.79E-03	3.54E-04	1.22E-03	3.99E-04	3.99E-04	1.89E-03	4.18E-05	0.00E+00	8.22E-04	3.93E-03
9	E86	60	Combination Long Haul Truck	30	0.00E+00	1.72E-05	1.12E-06	1.17E+01	7.80E-08	1.81E-02	1.33E-05	2.07E-02	1.79E-03	3.05E-04	1.26E-03	3.42E-04	3.46E-04	1.79E-03	3.92E-05	0.00E+00	9.09E-04	3.89E-03
9	E87	60	Passenger Car	890	0.00E+00	1.34E-05	1.44E-06	4.48E+01	9.30E-05	3.46E-01	2.97E-05	1.81E-03	9.02E-03	1.39E-03	2.89E-03	1.86E-03	1.91E-03	1.86E-04	2.24E-04	6.16E-08	9.77E-04	2.84E-04
9	E87	60	Passenger Truck	1491	0.00E+00	2.94E-05	3.11E-06	1.02E+02	1.84E-04	6.17E-01	6.05E-05	5.92E-03	1.66E-02	2.57E-03	5.76E-03	3.76E-03	3.85E-03	7.91E-04	5.05E-04	1.40E-07	1.92E-03	9.81E-04
9	E87	60	Single Unit Short Haul Truck	154	0.00E+00	4.52E-05	2.26E-06	2.87E+01	3.71E-05	5.54E-02	4.82E-05	2.15E-02	3.65E-03	6.61E-04	5.46E-03	1.35E-03	1.37E-03	2.87E-03	1.16E-04	4.78E-08	4.10E-03	4.03E-03
9	E87	60	Single Unit Long Haul Truck	7	0.00E+00	1.97E-06	9.80E-08	1.23E+00	1.61E-06	2.35E-03	2.11E-06	9.31E-04	1.64E-04	2.93E-05	2.41E-04	5.89E-05	5.98E-05	1.22E-04	4.95E-06	2.03E-09	1.80E-04	1.74E-04
9	E87	60	Combination Short Haul Truck	77	0.00E+00	4.53E-05	3.16E-06	2.95E+01	1.60E-07	3.95E-02	3.35E-05	4.91E-02	4.21E-03	8.33E-04	2.88E-03	9.40E-04	9.40E-04	4.44E-03	9.85E-05	0.00E+00	1.94E-03	9.25E-03
9	E87	60	Combination Long Haul Truck	70	0.00E+00	4.05E-05	2.65E-06	2.77E+01	1.84E-07	4.27E-02	3.14E-05	4.87E-02	4.23E-03	7.19E-04	2.96E-03	8.07E-04	8.16E-04	4.21E-03	9.23E-05	0.00E+00	2.14E-03	9.18E-03
9	E88	60	Passenger Car	881	0.00E+00	1.32E-05	1.43E-06	4.43E+01	9.20E-05	3.43E-01	2.94E-05	1.80E-03	8.93E-03	1.37E-03	2.86E-03	1.84E-03	1.89E-03	1.84E-04	2.21E-04	6.09E-08	9.67E-04	2.81E-04
9	E88	60	Passenger Truck	1475	0.00E+00	2.91E-05	3.08E-06	1.01E+02	1.82E-04	6.11E-01	5.98E-05	5.86E-03	1.64E-02	2.55E-03	5.70E-03	3.72E-03	3.81E-03	7.83E-04	5.00E-04	1.39E-07	1.90E-03	9.71E-04
9	E88	60	Single Unit Short Haul Truck	114	0.00E+00	3.36E-05	1.68E-06	2.13E+01	2.76E-05	4.12E-02	3.58E-05	1.60E-02	2.71E-03	4.91E-04	4.05E-03	1.00E-03	1.02E-03	2.13E-03	8.61E-05	3.55E-08	3.05E-03	2.99E-03
9	E88	60	Single Unit Long Haul Truck	5	0.00E+00	1.47E-06	7.28E-08	9.11E-01	1.20E-06	1.75E-03	1.56E-06	6.91E-04	1.22E-04	2.18E-05	1.79E-04	4.37E-05	4.44E-05	9.09E-05	3.67E-06	1.51E-09	1.34E-04	1.29E-04
9	E88	60	Combination Short Haul Truck	59	0.00E+00	3.46E-05	2.42E-06	2.25E+01	1.22E-07	3.02E-02	2.56E-05	3.75E-02	3.22E-03	6.37E-04	2.20E-03	7.18E-04	7.18E-04	3.40E-03	7.53E-05	0.00E+00	1.48E-03	7.07E-03
9	E88	60	Combination Long Haul Truck	54	0.00E+00	3.10E-05	2.02E-06	2.11E+01	1.40E-07	3.26E-02	2.40E-05	3.72E-02	3.23E-03	5.49E-04	2.26E-03	6.16E-04	6.24E-04	3.22E-03	7.06E-05	0.00E+00	1.64E-03	7.01E-03
9	E89	60	Passenger Car	53	0.00E+00	8.02E-07	8.67E-08	2.69E+00	5.58E-06	2.08E-02	1.78E-06	1.09E-04	5.42E-04	8.33E-05	1.74E-04	1.12E-04	1.15E-04	1.12E-05	1.34E-05	3.70E-09	5.87E-05	1.71E-05
9	E89	60	Passenger Truck	90	0.00E+00	1.77E-06	1.87E-07	6.12E+00	1.10E-05	3.71E-02	3.63E-06	3.56E-04	9.95E-04	1.54E-04	3.46E-04	2.26E-04	2.31E-04	4.75E-05	3.03E-05	8.41E-09	1.15E-04	5.89E-05
9	E89	60	Single Unit Short Haul Truck	4	0.00E+00	1.13E-06	5.63E-08	7.16E-01	9.27E-07	1.38E-03	1.20E-06	5.36E-04	9.11E-05	1.65E-05	1.36E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	E89	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.15E-08	2.01E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.39E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.29E-05
9	E90	60	Passenger Car	47	0.00E+00	7.12E-07	7.70E-08	2.39E+00	4.96E-06	1.85E-02	1.58E-06	9.68E-05	4.81E-04	7.40E-05	1.54E-04	9.93E-05	1.02E-04	9.92E-06	1.19E-05	3.28E-09	5.21E-05	1.52E-05
9	E90	60	Passenger Truck	80	0.00E+00	1.57E-06	1.66E-07	5.43E+00	9.81E-06	3.29E-02	3.22E-06	3.16E-04	8.84E-04	1.37E-04	3.07E-04	2.01E-04	2.05E-04	4.22E-05	2.69E-05	7.47E-09	1.02E-04	5.23E-05
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.02E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	E90	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.60E-08	8.02E-01	4.36E-09	1.08E-03	9.12E-07	1.34E-03	1.14E-04	2.27E-05	7.85E-05	2.56E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	E90	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.21E-08	7.53E-01	5.00E-09	1.16E-03	8.53E-07	1.32E-03	1.15E-04	1.96E-05	8.06E-05	2.19E-05	2.22E-05	1.14E-04	2.51E-06	0.00E+00	5.83E-05	2.50E-04
9	E91	60	Passenger Car	4	0.00E+00	5.61E-08	6.07E-09	1.88E-01	3.90E-07	1.45E-03	1.25E-07	7.62E-06	3.79E-05	5.83E-06	1.22E-05	7.82E-06	8.03E-06	7.81E-07	9.40E-07	2.59E-10	4.10E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.24E-07	1.31E-08	4.28E-01	7.72E-07	2.59E-03	2.54E-07	2.49E-05	6.96E-05	1.08E-05	2.42E-05	1.58E-05	1.62E-05	3.32E-06	2.12E-06	5.88E-10	8.05E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.61E-08	6.07E-09	1.88E-01	3.90E-07	1.45E-03	1.25E-07	7.62E-06	3.79E-05	5.83E-06	1.22E-05	7.82E-06	8.03E-06	7.81E-07	9.40E-07	2.59E-10	4.10E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.24E-07	1.31E-08	4.28E-01	7.72E-07	2.59E-03	2.54E-07	2.49E-05	6.96E-05	1.08E-05	2.42E-05	1.58E-05	1.62E-05	3.32E-06	2.12E-06	5.88E-10	8.05E-06	4.12E-06
9	E93	60	Passenger Car	56	0.00E+00	8.47E-07	9.16E-08	2.84E+00	5.90E-06	2.20E-02	1.88E-06	1.15E-04	5.72E-04	8.80E-05	1.83E-04	1.18E-04	1.21E-04	1.18E-05	1.42E-05	3.90E-09	6.19E-05	1.80E-05
9	E93	60	Passenger Truck	95	0.00E+00	1.87E-06	1.97E-07	6.46E+00	1.17E-05	3.91E-02	3.83E-06	3.76E-04	1.05E-03	1.63E-04	3.65E-04	2.38E-04	2.44E-04	5.02E-05	3.20E-05	8.88E-09	1.22E-04	6.22E-05
9	E93	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.02E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	E93	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.08E-07	1.00E+00	5.45E-09	1.34E-03	1.14E-06	1.67E-03	1.43E-04	2.83E-05	9.81E-05	3.20E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	9.01E-08	9.41E-01	6.25E-09	1.45E-03	1.07E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.29E-05	3.12E-04
9	E94	60	Passenger Car	108	0.00E+00	1.63E-06	1.76E-07	5.45E+00	1.13E-05	4.22E-02	3.61E-06	2.21E-04	1.10E-03	1.69E-04	3.52E-04	2.27E-04	2.33E-04	2.26E-05	2.73E-05	7.50E-09	1.19E-04	3.46E-05
9	E94	60	Passenger Truck	182	0.00E+00	3.59E-06	3.79E-07	1.24E+01	2.24E-05	7.52E-02	7.36E-06	7.21E-04	2.02E-03	3.13E-04	7.01E-04	4.58E-04	4.69E-04	9.63E-05	6.15E-05	1.70E-08	2.34E-04	1.20E-04
9	E94	60	Single Unit Short Haul Truck	5	0.00E+00	1.41E-06	7.04E-08	8.95E-01	1.16E-06	1.73E-03	1.50E-06	6.70E-04	1.14E-04	2.06E-05	1.70E-04	4.22E-05	4.28E-05	8.97E-05	3.62E-06	1.49E-09	1.28E-04	1.26E-04
9	E94	60	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.45E-08	6.02E-01	3.27E-09	8.06E-04	6.84E-07	1.00E-03	8.59E-05	1.70E-05	5.88E-05	1.92E-05	1.92E-05	9.07E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	E94	60	Combination Long Haul Truck	1	0.00E+00	8.27E-07	5.41E-08	5.64E-01	3.75E-09	8.70E-04	6.40E-07	9.94E-04	8.62E-05	1.47E-05	6.04E-05	1.65E-05	1.67E-05	8.59E-05	1.88E-06	0.00E+00	4.37E-05	1.87E-04
54	E95	80	Passenger Car	376	0.00E+00	4.47E-06	4.83E-07	1.76E+01	3.11E-05	1.17E-01	9.93E-06	7.76E-04	2.17E-03	3.71E-04	9.67E-04	6.23E-04	6.39E-04	5.89E-05	8.88E-05	2.41E-08	3.27E-04	1.21E-04
54	E95	80	Passenger Truck	630	0.00E+00	9.69E-06	1.03E-06	4.09E+01	6.21E-05	2.22E-01	2.03E-05	2.31E-03	3.92E-03	6.82E-04	1.94E-03	1.26E-03	1.29E-03	2.83E-04	2.05E-04	5.44E-08	6.51E-04	3.76E-04
54	E95	80	Single Unit Short Haul Truck	62	0.00E+00	1.16E-05	5.74E-07	1.13E+01	9.30E-06	2.28E-02	1.23E-05	5.93E-03	7.27E-04	1.64E-04	1.41E-03	3.43E-04	3.48E-04	1.14E-03	4.58E-05	1.82E-08	1.06E-03	1.11E-03
54	E95	80	Single Unit Long Haul Truck	3	0.00E+00	5.03E-07	2.48E-08	4.80E-01	3.98E-07	9.45E-04	5.35E-07	2.53E-04	3.32E-05	7.25E-06	6.14E-05	1.47E-05	1.50E-05	4.79E-05	1.93E-06	7.56E-10	4.64E-05	4.75E-05
54	E95	80	Combination Short Haul Truck	32	0.00E+00	1.42E-05	1.01E-06	1.17E+01	4.47E-08	1.25E-02	1.04E-05	1.45E-02	8.58E-04	2.11E-04	8.44E-04	2.99E-04	2.97E-04	1.76E-03	3.92E-05	0.00E+00	5.47E-04	2.74E-03
54	E95	80	Combination Long Haul Truck	29	0.00E+00	1.27E-05	8.50E-07	1.09E+01	5.17E-08	1.30E-02	9.64E-06	1.41E-02	8.41E-04	1.69E-04	8.74E-04	2.57E-04	2.59E-04	1.66E-03	3.63E-05	0.00E+00	6.13E-04	2.66E-03
54	E96	80	Passenger Car	630	0.00E+00	7.49E-06	8.10E-07	2.96E+01	5.22E-05	1.96E-01	1.66E-05	1.30E-03	3.64E-03	6.21E-04	1.62E-03	1.04E-03	1.07E-03	9.87E-05	1.49E-04	4.04E-08	5.48E-04	2.03E-04
54	E96	80	Passenger Truck	1055	0.00E+00	1.62E-05	1.72E-06	6.86E+01	1.04E-04	3.72E-01	3.40E-05	3.87E-03	6.57E-03	1.14E-03	3.25E-03	2.12E-03	2.17E-03	4.75E-04	3.43E-04	9.12E-08	1.09E-03	6.30E-04
54	E96	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.60E-07	1.11E+01	9.07E-06	2.22E-02	1.20E-05	5.78E-03	7.08E-04	1.60E-04	1.37E-03	3.34E-04	3.39E-04	1.11E-03	4.46E-05	1.77E-08	1.03E-03	1.08E-03
54	E96	80	Single Unit Long Haul Truck	3	0.00E+00	4.90E-07	2.42E-08	4.68E-01	3.88E-07	9.21E-04	5.22E-07	2.47E-04	3.23E-05	7.07E-06	5.98E-05	1.44E-05	1.46E-05	4.67E-05	1.89E-06	7.37E-10	4.52E-05	4.63E-05
54	E96	80	Combination Short Haul Truck	57	0.00E+00	2.52E-05	1.80E-06	2.09E+01	7.94E-08	2.23E-02	1.85E-05	2.58E-02	1.53E-03	3.76E-04	1.50E-03	5.32E-04	5.29E-04	3.14E-03	6.97E-05	0.00E+00	9.73E-04	4.87E-03
54	E96	80	Combination Long Haul Truck	52	0.00E+00	2.25E-05	1.51E-06	1.93E+01	9.19E-08	2.31E-02	1.71E-05	2.51E-02	1.50E-03	3.01E-04	1.55E-03	4.57E-04	4.60E-04	2.95E-03	6.45E-05	0.00E+00	1.09E-03	4.73E-03
54	E97	80	Passenger Car	256	0.00E+00	3.04E-06	3.29E-07	1.20E+01	2.12E-05	7.97E-02	6.76E-06	5.28E-04	1.48E-03	2.53E-04	6.59E-04	4.25E-04	4.35E-04	4.01E-05	6.05E-05	1.64E-08	2.23E-04	8.25E-05
54	E97	80	Passenger Truck	429	0.00E+00	6.60E-06	6.99E-07	2.79E+01	4.23E-05	1.51E-01	1.38E-05	1.57E-03	2.67E-03	4.65E-04	1.32E-03	8.60E-04	8.80E-04	1.93E-04	1.39E-04	3.70E-08	4.43E-04	2.56E-04
54	E97	80	Single Unit Short Haul Truck	64	0.00E+00	1.20E-05	5.97E-07	1.18E+01	9.67E-06	2.37E-02	1.28E-05	6.16E-03	7.55E-04	1.71E-04	1.46E-03	3.56E-04	3.62E-04	1.18E-03	4.76E-05	1.89E-08	1.10E-03	1.15E-03
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	5.22E-07	2.58E-08	4.99E-01	4.13E-07	9.82E-04	5.56E-07	2.63E-04	3.45E-05	7.53E-06	6.38E-05	1.53E-05	1.56E-05	4.98E-05	2.01E-06	7.85E-10	4.82E-05	4.93E-05
54	E97	80	Combination Short Haul Truck	33	0.00E+00	1.45E-05	1.04E-06	1.21E+01	4.59E-08	1.29E-02	1.07E-05	1.49E-02	8.82E-04	2.17E-04	8.67E-04	3.07E-04	3.06E-04	1.81E-03	4.03E-05	0.00E+00	5.63E-04	2.82E-03
54	E97	80	Combination Long Haul Truck	30	0.00E+00	1.30E-05	8.73E-07	1.12E+01	5.31E-08	1.33E-02	9.91E-06	1.45E-02	8.65E-04	1.74E-04	8.98E-04	2.64E-04	2.66E-04	1.70E-03	3.73E-05	0.00E+00	6.30E-04	2.74E-03
54	E98	80	Passenger Car	754	0.00E+00	8.96E-06	9.69E-07	3.54E+01	6.24E-05	2.35E-01	1.99E-05	1.56E-03	4.36E-03	7.43E-04	1.94E-03	1.25E-03	1.28E-03	1.18E-04	1.78E-04	4.84E-08	6.55E-04	2.43E-04
54	E98	80	Passenger Truck	1262	0.00E+00	1.94E-05	2.06E-06	8.21E+01	1.24E-04	4.45E-01	4.07E-05	4.63E-03	7.85E-03	1.37E-03	3.89E-03	2.53E-03	2.59E-03	5.68E-04	4.10E-04	1.09E-07	1.30E-03	7.54E-04
54	E98	80	Single Unit Short Haul Truck	101	0.00E+00	1.89E-05	9.38E-07	1.85E+01	1.52E-05	3.72E-02	2.01E-05	9.69E-03	1.19E-03	2.69E-04	2.30E-03	5.60E-04	5.68E-04	1.86E-03	7.48E-05	2.97E-08	1.73E-03	1.81E-03
54	E98	80	Single Unit Long Haul Truck	4	0.00E+00	8.21E-07	4.05E-08	7.84E-01	6.50E-07	1.54E-03	8.74E-07	4.14E-04	5.42E-05	1.18E-05	1.00E-04	2.41E-05	2.45E-05	7.83E-05	3.16E-06	1.24E-09	7.58E-05	7.76E-05
54	E98	80	Combination Short Haul Truck	72	0.00E+00	3.15E-05	2.25E-06	2.61E+01	9.95E-08	2.79E-02	2.31E-05	3.23E-02	1.91E-03	4.71E-04	1.88E-03	6.66E-04	6.62E-04	3.93E-03	8.74E-05	0.00E+00	1.22E-03	6.10E-03
54	E98	80	Combination Long Haul Truck	65	0.00E+00	2.82E-05	1.89E-06	2.42E+01	1.15E-07	2.89E-02	2.15E-05	3.15E-02	1.87E-03	3.77E-04	1.95E-03	5.73E-04	5.77E-04	3.69E-03	8.08E-05	0.00E+00	1.36E-03	5.93E-03
9	F01	60	Passenger Car	255	0.00E+00	3.83E-06	4.14E-07	1.28E+01	2.67E-05	9.92E-02	8.51E-06	5.20E-04	2.59E-03	3.98E-04	8.29E-04	5.34E-04	5.48E-04	5.33E-05	6.42E-05	1.77E-08	2.80E-04	8.15E-05
9	F01	60	Passenger Truck	427	0.00E+00	8.44E-06	8.92E-07	2.92E+01	5.27E-05	1.77E-01	1.73E-05	1.70E-03	4.75E-03	7.37E-04	1.65E-03	1.08E-03	1.10E-03	2.27E-04	1.45E-04	4.01E-08	5.50E-04	2.81E-04
9	F01	60	Single Unit Short Haul Truck	36	0.00E+00	1.06E-05	5.29E-07	6.73E+00	8.71E-06	1.30E-02	1.13E-05	5.04E-03	8.56E-04	1.55E-04	1.28E-03	3.17E-04	3.22E-04	6.74E-04	2.72E-05	1.12E-08	9.63E-04	9.46E-04
9	F01	60	Single Unit Long Haul Truck	2	0.00E+00	4.63E-07	2.30E-08	2.88E-01	3.79E-07	5.52E-04	4.94E-07	2.18E-04	3.85E-05	6.88E-06	5.65E-05	1.38E-05	1.40E-05	2.87E-05	1.16E-06	4.77E-10	4.23E-05	4.09E-05
9	F01	60	Combination Short Haul Truck	24	0.00E+00

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F06	60	Passenger Car	146	0.00E+00	2.20E-06	2.37E-07	7.36E+00	1.53E-05	5.69E-02	4.88E-06	2.98E-04	1.48E-03	2.28E-04	4.76E-04	3.06E-04	3.14E-04	3.06E-05	3.68E-05	1.01E-08	1.61E-04	4.68E-05
9	F06	60	Passenger Truck	245	0.00E+00	4.84E-06	5.11E-07	1.67E+01	3.02E-05	1.01E-01	9.94E-06	9.74E-04	2.72E-03	4.23E-04	9.46E-04	6.18E-04	6.32E-04	1.30E-04	8.31E-05	2.30E-08	3.15E-04	1.61E-04
9	F06	60	Single Unit Short Haul Truck	20	0.00E+00	6.01E-06	3.00E-07	3.82E+00	4.94E-06	7.37E-03	6.41E-06	2.86E-03	4.85E-04	8.79E-05	7.26E-04	1.80E-04	1.83E-04	3.82E-04	1.54E-05	6.35E-09	5.46E-04	5.36E-04
9	F06	60	Single Unit Long Haul Truck	1	0.00E+00	2.63E-07	1.30E-08	1.63E-01	2.15E-07	3.13E-04	2.80E-07	1.24E-04	2.18E-05	3.90E-06	3.20E-05	7.83E-06	7.95E-06	1.63E-05	6.58E-07	2.70E-10	2.40E-05	2.32E-05
9	F06	60	Combination Short Haul Truck	11	0.00E+00	6.21E-06	4.34E-07	4.05E+00	2.20E-08	5.42E-03	4.60E-06	6.74E-03	5.77E-04	1.14E-04	3.96E-04	1.29E-04	1.29E-04	6.10E-04	1.35E-05	0.00E+00	2.66E-04	1.27E-03
9	F06	60	Combination Long Haul Truck	10	0.00E+00	5.56E-06	3.64E-07	3.80E+00	2.52E-08	5.85E-03	4.30E-06	6.68E-03	5.80E-04	9.86E-05	4.06E-04	1.11E-04	1.12E-04	5.77E-04	1.27E-05	0.00E+00	2.94E-04	1.26E-03
9	F07	60	Passenger Car	314	0.00E+00	4.71E-06	5.09E-07	1.58E+01	3.28E-05	1.22E-01	1.05E-05	6.40E-04	3.18E-03	4.89E-04	1.02E-03	6.57E-04	6.74E-04	6.56E-05	7.90E-05	2.17E-08	3.45E-04	1.00E-04
9	F07	60	Passenger Truck	526	0.00E+00	1.04E-05	1.10E-06	3.59E+01	6.49E-05	2.18E-01	2.13E-05	2.09E-03	5.84E-03	9.07E-04	2.03E-03	1.33E-03	1.36E-03	2.79E-04	1.78E-04	4.94E-08	6.76E-04	3.46E-04
9	F07	60	Single Unit Short Haul Truck	29	0.00E+00	8.46E-06	4.22E-07	5.37E+00	6.95E-06	1.04E-02	9.02E-06	4.02E-03	6.83E-04	1.24E-04	1.02E-03	2.53E-04	2.57E-04	5.38E-04	2.17E-05	8.94E-09	7.68E-04	7.54E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	3.70E-07	1.83E-08	2.30E-01	3.02E-07	4.40E-04	3.94E-07	1.74E-04	3.07E-05	5.49E-06	4.51E-05	1.10E-05	1.12E-05	2.29E-05	9.26E-07	3.80E-10	3.37E-05	3.26E-05
9	F07	60	Combination Short Haul Truck	12	0.00E+00	6.78E-06	4.73E-07	4.41E+00	2.40E-08	5.91E-03	5.02E-06	7.35E-03	6.30E-04	1.25E-04	4.32E-04	1.41E-04	1.41E-04	6.65E-04	1.47E-05	0.00E+00	2.90E-04	1.38E-03
9	F07	60	Combination Long Haul Truck	10	0.00E+00	6.06E-06	3.96E-07	4.14E+00	2.75E-08	6.38E-03	4.69E-06	7.29E-03	6.32E-04	1.08E-04	4.43E-04	1.21E-04	1.22E-04	6.30E-04	1.38E-05	0.00E+00	3.21E-04	1.37E-03
9	F08	60	Passenger Car	271	0.00E+00	4.07E-06	4.40E-07	1.36E+01	2.83E-05	1.05E-01	9.04E-06	5.53E-04	2.75E-03	4.22E-04	8.81E-04	5.67E-04	5.82E-04	5.66E-05	6.81E-05	1.87E-08	2.97E-04	8.66E-05
9	F08	60	Passenger Truck	454	0.00E+00	8.97E-06	9.47E-07	3.10E+01	5.60E-05	1.88E-01	1.84E-05	1.80E-03	5.04E-03	7.83E-04	1.75E-03	1.14E-03	1.17E-03	2.41E-04	1.54E-04	4.26E-08	5.84E-04	2.99E-04
9	F08	60	Single Unit Short Haul Truck	26	0.00E+00	7.61E-06	3.80E-07	4.83E+00	6.26E-06	9.34E-03	8.12E-06	3.62E-03	6.15E-04	1.11E-04	9.19E-04	2.28E-04	2.31E-04	4.84E-04	1.95E-05	8.05E-09	6.91E-04	6.79E-04
9	F08	60	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.65E-08	2.07E-01	2.72E-07	3.96E-04	3.55E-07	1.57E-04	2.76E-05	4.94E-06	4.06E-05	9.92E-06	1.01E-05	2.06E-05	8.33E-07	3.42E-10	3.04E-05	2.94E-05
9	F08	60	Combination Short Haul Truck	14	0.00E+00	8.32E-06	5.81E-07	5.41E+00	2.94E-08	7.26E-03	6.16E-06	9.02E-03	7.73E-04	1.53E-04	5.30E-04	1.73E-04	1.73E-04	8.16E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F08	60	Combination Long Haul Truck	13	0.00E+00	7.44E-06	4.86E-07	5.08E+00	3.37E-08	7.83E-03	5.76E-06	8.94E-03	7.76E-04	1.32E-04	5.44E-04	1.48E-04	1.50E-04	7.73E-04	1.70E-05	0.00E+00	3.93E-04	1.68E-03
11	F09	80	Passenger Car	33	0.00E+00	3.98E-07	4.31E-08	1.53E+00	2.77E-06	1.06E-02	8.86E-07	6.72E-05	1.80E-04	3.12E-05	8.62E-05	5.56E-05	5.70E-05	5.12E-06	7.67E-06	2.15E-09	2.92E-05	1.05E-05
11	F09	80	Passenger Truck	55	0.00E+00	8.55E-07	9.07E-08	3.53E+00	5.48E-06	1.95E-02	1.79E-06	1.99E-04	3.22E-04	5.72E-05	1.72E-04	1.11E-04	1.14E-04	2.46E-05	1.76E-05	4.79E-09	5.73E-05	3.25E-05
11	F09	80	Single Unit Short Haul Truck	1	0.00E+00	1.85E-07	9.19E-09	1.82E-01	1.49E-07	3.65E-04	1.97E-07	9.50E-05	1.16E-05	2.63E-06	2.25E-05	5.49E-06	5.57E-06	1.82E-05	7.33E-07	2.91E-10	1.70E-05	1.78E-05
11	F09	80	Combination Short Haul Truck	2	0.00E+00	9.71E-07	6.95E-08	8.05E-01	3.07E-09	8.61E-04	7.13E-07	9.96E-04	5.89E-05	1.45E-05	5.79E-05	2.05E-05	2.04E-05	1.21E-04	2.69E-06	0.00E+00	3.76E-05	1.88E-04
11	F09	80	Combination Long Haul Truck	2	0.00E+00	8.69E-07	5.83E-08	7.45E-01	3.55E-09	8.91E-04	6.61E-07	9.70E-04	5.77E-05	1.16E-05	6.00E-05	1.77E-05	1.78E-05	1.14E-04	2.49E-06	0.00E+00	4.20E-05	1.83E-04
11	F10	80	Passenger Car	250	0.00E+00	3.04E-06	3.29E-07	1.17E+01	2.12E-05	8.13E-02	6.78E-06	5.14E-04	1.38E-03	2.39E-04	6.60E-04	4.25E-04	4.37E-04	3.92E-05	5.87E-05	1.65E-08	2.23E-04	8.06E-05
11	F10	80	Passenger Truck	419	0.00E+00	6.54E-06	6.94E-07	2.70E+01	4.19E-05	1.49E-01	1.37E-05	1.52E-03	2.47E-03	4.38E-04	1.32E-03	8.52E-04	8.73E-04	1.89E-04	1.35E-04	3.67E-08	4.39E-04	2.49E-04
11	F10	80	Single Unit Short Haul Truck	9	0.00E+00	1.70E-06	8.44E-08	1.67E+00	1.37E-06	3.35E-03	1.81E-06	8.71E-04	1.07E-04	2.42E-05	2.07E-04	5.04E-05	5.11E-05	1.67E-04	6.72E-06	2.67E-09	1.56E-04	1.63E-04
11	F10	80	Combination Short Haul Truck	12	0.00E+00	5.47E-06	3.91E-07	4.53E+00	1.73E-08	4.85E-03	4.01E-06	5.61E-03	3.32E-04	8.17E-05	3.26E-04	1.16E-04	1.15E-04	6.82E-04	1.52E-05	0.00E+00	2.11E-04	1.06E-03
11	F10	80	Combination Long Haul Truck	11	0.00E+00	4.89E-06	3.28E-07	4.20E+00	2.00E-08	5.02E-03	3.72E-06	5.46E-03	3.25E-04	6.53E-05	3.38E-04	9.94E-05	1.00E-04	6.41E-04	1.40E-05	0.00E+00	2.37E-04	1.03E-03
11	F13	80	Passenger Car	12	0.00E+00	1.52E-07	1.64E-08	5.82E-01	1.06E-06	4.05E-03	3.38E-07	2.56E-05	6.86E-05	1.19E-05	3.29E-05	2.12E-05	2.18E-05	1.95E-06	2.93E-06	8.21E-10	1.11E-05	4.02E-06
11	F13	80	Passenger Truck	21	0.00E+00	3.26E-07	3.46E-08	1.35E+00	2.09E-06	7.43E-03	6.85E-07	7.60E-05	1.23E-04	2.18E-05	6.56E-05	4.25E-05	4.35E-05	9.40E-06	6.73E-06	1.83E-09	2.19E-05	1.24E-05
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.23E-07	6.11E-09	1.21E-01	9.90E-08	2.43E-04	1.31E-07	6.31E-05	7.73E-06	1.75E-06	1.50E-05	3.65E-06	3.70E-06	1.21E-05	4.87E-07	1.93E-10	1.13E-05	1.18E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	5.63E-07	4.03E-08	4.67E-01	1.78E-09	4.99E-04	4.13E-07	5.77E-04	3.41E-05	8.41E-06	3.36E-05	1.19E-05	1.18E-05	7.02E-05	1.56E-06	0.00E+00	2.18E-05	1.09E-04
11	F13	80	Combination Long Haul Truck	1	0.00E+00	5.04E-07	3.38E-08	4.32E-01	2.06E-09	5.17E-04	3.83E-07	5.62E-04	3.35E-05	6.72E-06	3.48E-05	1.02E-05	1.03E-05	6.59E-05	1.44E-06	0.00E+00	2.44E-05	1.06E-04
11	F14	80	Passenger Car	10	0.00E+00	1.26E-07	1.36E-08	4.83E-01	8.76E-07	3.36E-03	2.80E-07	2.13E-05	5.69E-05	9.88E-06	2.73E-05	1.76E-05	1.80E-05	1.62E-06	2.43E-06	6.81E-10	9.22E-06	3.33E-06
11	F14	80	Passenger Truck	17	0.00E+00	2.70E-07	2.87E-08	1.12E+00	1.73E-06	6.16E-03	5.68E-07	6.30E-05	1.02E-04	1.81E-05	5.44E-05	3.52E-05	3.61E-05	7.79E-06	5.58E-06	1.52E-09	1.81E-05	1.03E-05
11	F14	80	Single Unit Short Haul Truck	1	0.00E+00	1.02E-07	5.06E-09	1.00E-01	8.21E-08	2.01E-04	1.09E-07	5.23E-05	6.41E-06	1.45E-06	1.24E-05	3.02E-06	3.07E-06	1.00E-05	4.04E-07	1.60E-10	9.34E-06	9.78E-06
11	F14	80	Combination Short Haul Truck	1	0.00E+00	4.67E-07	3.34E-08	3.87E-01	1.47E-09	4.13E-04	3.43E-07	4.78E-04	2.83E-05	6.97E-06	2.78E-05	9.86E-06	9.80E-06	5.82E-05	1.29E-06	0.00E+00	1.80E-05	9.04E-05
11	F14	80	Combination Long Haul Truck	1	0.00E+00	4.17E-07	2.80E-08	3.58E-01	1.70E-09	4.28E-04	3.18E-07	4.66E-04	2.77E-05	5.57E-06	2.88E-05	8.48E-06	8.54E-06	5.47E-05	1.20E-06	0.00E+00	2.02E-05	8.78E-05
10	F15	70	Passenger Car	370	0.00E+00	4.84E-06	5.23E-07	1.78E+01	3.37E-05	1.26E-01	1.08E-05	7.41E-04	2.87E-03	4.60E-04	1.05E-03	6.75E-04	6.92E-04	6.63E-05	8.92E-05	2.43E-08	3.54E-04	1.16E-04
10	F15	70	Passenger Truck	619	0.00E+00	1.06E-05	1.12E-06	4.09E+01	6.71E-05	2.32E-01	2.20E-05	2.32E-03	5.21E-03	8.48E-04	2.10E-03	1.37E-03	1.40E-03	3.01E-04	2.03E-04	5.45E-08	7.00E-04	3.82E-04
10	F15	70	Single Unit Short Haul Truck	9	0.00E+00	2.12E-06	1.06E-07	1.66E+00	1.74E-06	3.34E-03	2.26E-06	1.05E-03	1.49E-04	2.99E-05	2.59E-04	6.35E-05	6.45E-05	1.67E-04	6.70E-06	2.71E-09	1.93E-04	1.96E-04
10	F15	70	Combination Short Haul Truck	20	0.00E+00	1.02E-05	7.22E-07	7.38E+00	3.30E-08	8.74E-03	7.44E-06	1.07E-02	7.71E-04	1.69E-04	6.19E-04	2.14E-04	2.13E-04	1.11E-03	2.46E-05	0.00E+00	4.05E-04	2.01E-03
10	F15	70	Combination Long Haul Truck	18	0.00E+00	9.21E-06	6.14E-07	6.88E+00	3.80E-08	9.26E-03	6.98E-06	1.05E-02	7.67E-04	1.40E-04	6.39E-04	1.86E-04	1.88E-04	1.05E-03	2.30E-05	0.00E+00	4.52E-04	1.98E-03
10	F16	70	Passenger Car	202	0.00E+00	2.64E-06	2.85E-07	9.69E+00	1.84E-05	6.89E-02	5.88E-06	4.04E-04	1.56E-03	2.51E-04	5.71E-04	3.68E-04	3.78E-04	3.61E-05	4.86E-05	1.33E-08	1.93E-04	6.33E-05
10	F16	70	Passenger Truck	338	0.00E+00	5.78E-06	6.12E-07	2.23E+01	3.66E-05	1.27E-01	1.20E-05	1.27E-03	2.84E-03	4.62E-04	1.14E-03	7.45E-04	7.63E-04	1.64E-04	1.11E-04	2.97E-08	3.82E-04	2.08E-04
10	F16	70	Single Unit Short Haul Truck	3	0.00E+00	7.51E-07	3.76E-08	5.88E-01	6.14E-07	1.18E-03	8.00E-07	3.70E-04	5.28E-05	1.06E-05	9.14E-05	2.25E-05	2.28E-05	5.89E-05	2.37E-06	9.59E-10	6.82E-05	6.93E-05
10	F16	70	Combination Short Haul Truck	11	0.00E+00	5.81E-06	4.13E-07	4.22E+00	1.89E-08	5.00E-03	4.25E-06	6.12E-03	4.41E-04	9.66E-05	3.54E-04	1.22E-04	1.22E-04	6.37E-04	1.41E-05	0.00E+00	2.32E-04	1.15E-03
10	F16	70	Combination Long Haul Truck	10	0.00E+00	5.27E-06	3.51E-07	3.94E+00	2.17E-08	5.29E-03	3.99E-06	6.03E-03	4.39E-04	8.01E-05	3.65E-04	1.06E-04	1.07E-04	6.00E-04	1.32E-05	0.00E+00	2.59E-04	1.14E-03
10	F17	70	Passenger Car	141	0.00E+00	1.85E-06	1.99E-07	6.78E+00	1.28E-05	4.82E-02	4.11E-06	2.82E-04	1.09E-03	1.76E-04	4.00E-04	2.57E-04	2.64E-04	2.53E-05	3.40E-05	9.28E-09	1.35E-04	4.43E-05
10	F17	70	Passenger Truck	236	0.00E+00	4.04E-06	4.28E-07	1.56E+01	2.56E-05	8.86E-02	8.40E-06	8.86E-04	1.99E-03	3.23E-04	8.00E-04	5.21E-04	5.33E-04	1.15E-04	7.74E-05	2.08E-08	2.67E-04	1.46E-04
10	F17	70	Single Unit Short Haul Truck	1	0.00E+00	1.29E-07	6.49E-09	1.01E-01	1.06E-07	2.04E-04	1.38E-07	6.38E-05	9.10E-06	1.82E-06	1.58E-05	3.87E-06	3.93E-06	1.02E-05	4.09E-07	1.65E-10	1.18E-05	1.20E-05
10	F17	70	Combination Short Haul Truck	14	0.00E+00	7.35E-06	5.23E-07	5.34E+00	2.39E-08	6.33E-03	5.38E-06	7.74E-03	5.58E-04	1.22E-04	4.48E-04	1.55E-04	1.54E-04	8.06E-04	1.78E-05	0.00E+00	2.94E-04	1.46E-03
10	F17	70	Combination Long Haul Truck	13	0.00E+00	6.67E-06	4.44E-07	4.98E+00	2.75E-08	6.70E-03	5.05E-06	7.63E-03	5.55E-04	1.01E-04	4.62E-04	1.34E-04	1.36E-04	7.60E-04	1.67E-05	0.00E+00	3.28E-04	1.44E-03
10	F18	70	Passenger Car	193	0.00E+00	2.52E-06	2.72E-07	9.25E+00	1.75E-05	6.58E-02	5.62E-06	3.86E-04	1.49E-03	2.40E-04	5.46E-04	3.51E-04	3.61E-04	3.45E-05	4.64E-05	1.27E-08	1.85E-04	6.04E-05
10	F18	70	Passenger Truck	322	0.00E+00	5.52E-06	5.84E-07	2.13E+01	3.49E-05	1.21E-01	1.15E-05	1.21E-03	2.71E-03	4.42E-04	1.09E-03	7.11E-04	7.28E-04	1.57E-04	1.06E-04	2.84E-08	3.65E-04	1.99E-04
10	F18	70	Single Unit Short Haul Truck	3	0.00E+00	6.82E-07	3.42E-08	5.35E-01	5.58E-07	1.07E-03	7.26E-07	3.36E-04	4.80E-05	9.59E-06	8.30E-05	2.04E-05	2.07E-05	5.35E-05	2.15E-06	8.71E-10	6.20E-05	6.30E-05
10	F18	70	Combination Short Haul Truck	16	0.00E+00	8.44E-06	6.00E-07	6.14E+00	2.74E-08	7.27E-03	6.18E-06	8.89E-03	6.41E-04	1.40E-04	5.15E-04	1.78E-04	1.77E-04	9.25E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
10	F18	70	Combination Long Haul Truck	15	0.00E+00	7.66E-06	5.10E-07	5.72E+00	3.16E-08	7.70E-03	5.80E-06	8.77E-03	6.38E-04	1.17E-04	5.31E-04	1.54E-04	1.56E-04	8.73E-04	1.91E-05	0.00E+00	3.76E-04	1.65E-03
10	F19	70	Passenger Car	285	0.00E+00	3.72E-06	4.02E-07	1.37E+01	2.59E-05	9.72E-02	8.30E-06	5.70E-04	2.21E-03	3.54E-04	8.06E-04	5.19E-04	5.33E-04	5.10E-05	6.86E-05	1.87E-08	2.73E-04	8.93E-05
10	F19	70	Passenger Truck	477	0.00E+00	8.16E-06	8.63E-07	3.15E+01	5.16E-05	1.79E-01	1.69E-05	1.79E-03	4.01E-03	6.53E-04	1.62E-03	1.05E-03	1.08E-03	2.32E-04	1.56E-04	4.20E-08	5.39E-04	2.94E-04
10	F20	70	Passenger Car	393	0.00E+00	5.15E-06	5.56E-07	1.89E+01	3.58E-05	1.34E-01	1.15E-05	7.88E-04	3.05E-03	4.89E-04	1.11E-03	7.18E-04	7.36E-04	7.05E-05	9.48E-05	2.59E-08	3.77E-04	1.23E-04
10	F20	70	Passenger Truck	659	0.00E+00	1.13E-05	1.19E-06	4.35E+01	7.14E-05	2.47E-01	2.34E-05	2.47E-03	5.54E-03	9.02E-04	2.23E-03	1.45E-03	1.49E-03	3.20E-04	2.16E-04	5.80E-08	7.45E-04	4.06E-04
10	F21	70	Passenger Car	251	0.00E+00	3.29E-06	3.55E-07	1.21E+01	2.29E-05	8.59E-02	7.33E-06	5.03E-04	1.95E-03	3.13E-04	7.12E-04	4.59E-04	4.70E-04	4.50E-05	6.06E-05	1.65E-08	2.41E-04	7.89E-05
10	F21	70	Passenger Truck	421	0.00E+00	7.20E-06	7.62E-07	2.78E+01	4.56E-05	1.58E-01	1.50E-05	1.58E-03	3.54E-03	5.76E-04	1.43E-03	9.28E-04	9.50E-04	2.05E-04	1.38E-04	3.71E-08	4.76E-04	2.59E-04
10	F21	70	Single Unit Short Haul Truck	81	0.00E+00	1.89E-05	9.50E-07	1.49E+01	1.55E-05	2.98E-02	2.02E-05	9.34E-03	1.33E-03	2.67E-04	2.31E-03	5.67E-04	5.76E-04	1.49E-03	5.98E-05	2.42E-08	1.72E-03	1.75E-03
10	F21	70	Single Unit Long Haul Truck	4	0.00E+00	8.26E-07	4.11E-08	6.30E-01	6.69E-07	1.24E-03	8.79E-07	4.02E-04	6.09E-05	1.19E-05	1.01E-04	2.45E-05	2.49E-05	6.29E-05	2.54E-06	1.02E-09	7.56E-05	7.53E-05
10	F21	70	Combination Short Haul Truck	45	0.00E+00	2.33E-05	1.65E-06	1.69E+01	7.57E-08	2.00E-02	1.70E-05	2.45E-02	1.77E-03	3.87E-04	1.42E-03	4.90E-04	4.89E-04	2.55E-03	5.65E-05	0.00E+00	9.29E-04	4.62E-03
10	F21	70	Combination Long Haul Truck	41	0.00E+00	2.11E-05	1.41E-06	1.58E+01	8.71E-08	2.12E-02	1.60E-05	2.42E-02	1.76E-03	3.21E-04	1.46E-03	4.25E-04	4.30E-04	2.41E-03	5.28E-05	0.00E+00	1.04E-03	4.55E-03
10	F22	70	Passenger Car	403	0.00E+00	5.27E-06	5.70E-07	1.94E+01	3.67E-05	1.38E-01	1.18E-05	8.07E-04	3.12E-03	5.01E-04	1.14E-03	7.35E-04	7.54E-04	7.22E-05	9.71E-05	2.65E-08	3.86E-04	1.26E-04
10	F22	70	Passenger Truck	675	0.00E+00	1.15E-05	1.22E-06	4.46E+01	7.31E-05	2.53E-01	2.40E-05	2.53E-03	5.68E-03	9.24E-04	2.29E-03	1.49E-03	1.52E-03	3.28E-04	2.21E-04	5.94E-08	7.63E-04	4.16E-04
10	F22	70	Single Unit Short Haul Truck	112	0.00E+00	2.63E-05	1.32E-06	2.06E+01	2.16E-05	4.14E-02	2.81E-05	1.30E-02	1.85E-03	3.71E-04	3.21E-03	7.88E-04	8.00E-04	2.07E-03	8.32E-05	3.36E-08	2.40E-03	2.43E-03
10	F22	70	Single Unit Long Haul Truck	5	0.00E+00	1.15E-06	5.71E-08	8.76E-01	9.30E-07	1.73E-03	1.22E-06	5.59E-04	8.46E-05	1.65E-05	1.40E-04	3.41E-05	3.46E-05	8.75E-05	3.53E-06	1.41E-09	1.05E-04	1.05E-04
10	F22	70	Combination Short Haul Truck	57	0.00E+00	2.97E-05	2.11E-06	2.16E+01	9.67E-08	2.56E-02	2.18E-05	3.13E-02	2.26E-03	4.94E-04	1.81E-03	6.26E-04	6.25E-04	3.26E-03	7.22E-05	0.00E+00	1.19E-03	5.90E-03
10	F22	70	Combination Long Haul Truck	52	0.00E+00	2.70E-05	1.80E-06	2.02E+01	1.11E-07	2.71E-02	2.04E-05	3.09E-02	2.25E-03	4.10E-04	1.87E-03	5.44E-04	5.49E-04	3.07E-03	6.74E-05	0.00E+00	1.33E-03	5.81E-03
10	F23	70	Passenger Car	93	0.00E+00	1.21E-06	1.31E-07	4.45E+00	8.43E-06	3.16E-02	2.70E-06	1.85E-04	7.17E-04	1.15E-04	2.62E-04	1.69E-04	1.73E-04	1.66E-05	2.23E-05	6.09E-09	8.87E-05	2.91E-05
10	F23	70	Passenger Truck	155	0.00E+00	2.65E-06	2.81E-07	1.02E+01	1.68E-05	5.81E-02	5.51E-06	5.81E-04	1.30E-03	2.12E-04	5.25E-04	3.42E-04	3.50E-04	7.53E-05	5.08E-05	1.36E-08	1.75E-04	9.56E-05
10	F23	70	Single Unit Short Haul Truck	20	0.00E+00	4.80E-06	2.41E-07	3.76E+00	3.93E-06	7.55E-03	5.11E-06	2.37E-03	3.38E-04	6.76E-05	5.85E-04	1.44E-04	1.46E-04	3.77E-04	1.52E-05	6.13E-09	4.37E-04	4.43E-04
10	F23	70	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.60E-01	1.70E-07	3.15E-04	2.23E-07	1.02E-04	1.54E-05	3.00E-06	2.55E-05	6.21E-06	6.31E-06	1.59E-05	6.43E-07	2.58E-10	1.92E-05	1.91E-05
10	F23	70	Combination Short Haul Truck	12	0.00E+00	6.35E-06	4.52E-07	4.62E+00	2.07E-08	5.47E-03	4.65E-06	6.69E-03	4.82E-04	1.06E-04	3.87E-04	1.34E-04	1.33E-04	6.96E-04	1.54E-05	0.00E+00	2.54E-04	1.26E-03
10	F23	70	Combination Long Haul Truck	11	0.00E+00	5.76E-06	3.84E-07	4.31E+00	2.38E-08	5.79E-03	4.37E-06	6.60E-03	4.80E-04	8.76E-05	4.00E-04	1.16E-04	1.17E-04	6.57E-04	1.44E-05	0.00E+00	2.83E-04	1.24E-03
10	F24	70	Passenger Car	138	0.00E+00	1.81E-06	1.96E-07	6.65E+00	1.26E-05	4.73E-02	4.04E-06	2.77E-04	1.07E-03	1.72E-04	3.92E-04	2.53E-04	2.59E-04	2.48E-05	3.34E-05	9.11E-09	1.33E-04	4.35E-05
10	F24	70	Passenger Truck	232	0.00E+00	3.97E-06	4.20E-07	1.53E+01	2.51E-05	8.69E-02	8.24E-06	8.69E-04	1.95E-03	3.17E-04	7.86E-04	5.11E-04	5.24E-04	1.13E-04	7.60E-05	2.04E-08	2.62E-04	1.43E-04
10	F24	70	Single Unit Short Haul Truck	27	0.00E+00	6.29E-06	3.15E-07	4.

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F28	60	Passenger Truck	1471	0.00E+00	2.91E-05	3.07E-06	1.01E+02	1.81E-04	6.09E-01	5.97E-05	5.84E-03	1.63E-02	2.54E-03	5.68E-03	3.71E-03	3.80E-03	7.81E-04	4.99E-04	1.38E-07	1.89E-03	9.69E-04
9	F28	60	Single Unit Short Haul Truck	143	0.00E+00	4.20E-05	2.10E-06	2.67E+01	3.45E-05	5.15E-02	4.48E-05	2.00E-02	3.39E-03	6.14E-04	5.07E-03	1.26E-03	1.28E-03	2.67E-03	1.08E-04	4.44E-08	3.81E-03	3.75E-03
9	F28	60	Single Unit Long Haul Truck	6	0.00E+00	1.84E-06	9.11E-08	1.14E+00	1.50E-06	2.19E-03	1.96E-06	8.65E-04	1.52E-04	2.73E-05	2.24E-04	5.47E-05	5.56E-05	1.14E-04	4.60E-06	1.89E-09	1.67E-04	1.62E-04
9	F28	60	Combination Short Haul Truck	71	0.00E+00	4.19E-05	2.92E-06	2.73E+01	1.48E-07	3.66E-02	3.10E-05	4.54E-02	3.89E-03	7.71E-04	2.67E-03	8.69E-04	8.69E-04	4.11E-03	9.11E-05	0.00E+00	1.79E-03	8.56E-03
9	F28	60	Combination Long Haul Truck	65	0.00E+00	3.75E-05	2.45E-06	2.56E+01	1.70E-07	3.95E-02	2.90E-05	4.50E-02	3.91E-03	6.65E-04	2.74E-03	7.46E-04	7.55E-04	3.89E-03	8.54E-05	0.00E+00	1.98E-03	8.49E-03
9	F29	60	Passenger Car	394	0.00E+00	5.91E-06	6.39E-07	1.98E+01	4.11E-05	1.53E-01	1.31E-05	8.03E-04	3.99E-03	6.14E-04	1.28E-03	8.24E-04	8.45E-04	8.22E-05	9.90E-05	2.72E-08	4.32E-04	1.26E-04
9	F29	60	Passenger Truck	659	0.00E+00	1.30E-05	1.38E-06	4.51E+01	8.13E-05	2.73E-01	2.67E-05	2.62E-03	7.33E-03	1.14E-03	2.55E-03	1.66E-03	1.70E-03	3.50E-04	2.23E-04	6.19E-08	8.48E-04	4.34E-04
9	F29	60	Single Unit Short Haul Truck	27	0.00E+00	8.01E-06	4.00E-07	5.09E+00	6.58E-06	9.83E-03	8.54E-06	3.81E-03	6.47E-04	1.17E-04	9.68E-04	2.40E-04	2.43E-04	5.09E-04	2.06E-05	8.47E-09	7.27E-04	7.14E-04
9	F29	60	Single Unit Long Haul Truck	1	0.00E+00	3.50E-07	1.74E-08	2.17E-01	2.86E-07	4.17E-04	3.73E-07	1.65E-04	2.91E-05	5.20E-06	4.27E-05	1.04E-05	1.06E-05	2.17E-05	8.77E-07	3.60E-10	3.19E-05	3.09E-05
9	F29	60	Combination Short Haul Truck	18	0.00E+00	1.04E-05	7.24E-07	6.75E+00	3.67E-08	9.04E-03	7.68E-06	1.12E-02	9.63E-04	1.91E-04	6.60E-04	2.15E-04	2.15E-04	1.02E-03	2.25E-05	0.00E+00	4.43E-04	2.12E-03
9	F29	60	Combination Long Haul Truck	16	0.00E+00	9.27E-06	6.06E-07	6.33E+00	4.20E-08	9.76E-03	7.18E-06	1.11E-02	9.67E-04	1.64E-04	6.78E-04	1.85E-04	1.87E-04	9.63E-04	2.11E-05	0.00E+00	4.90E-04	2.10E-03
9	F30	60	Passenger Car	263	0.00E+00	3.95E-06	4.27E-07	1.32E+01	2.75E-05	1.02E-01	8.77E-06	5.36E-04	2.67E-03	4.10E-04	8.55E-04	5.50E-04	5.65E-04	5.50E-05	6.61E-05	1.82E-08	2.89E-04	8.40E-05
9	F30	60	Passenger Truck	441	0.00E+00	8.70E-06	9.19E-07	3.01E+01	5.43E-05	1.82E-01	1.79E-05	1.75E-03	4.90E-03	7.60E-04	1.70E-03	1.11E-03	1.14E-03	2.34E-04	1.49E-04	4.14E-08	5.67E-04	2.90E-04
9	F30	60	Single Unit Short Haul Truck	22	0.00E+00	6.51E-06	3.25E-07	4.14E+00	5.35E-06	7.99E-03	6.94E-06	3.10E-03	5.26E-04	9.53E-05	7.87E-04	1.95E-04	1.98E-04	4.14E-04	1.67E-05	6.88E-09	5.91E-04	5.81E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	2.85E-07	1.41E-08	1.77E-01	2.33E-07	3.39E-04	3.04E-07	1.34E-04	2.36E-05	4.23E-06	3.47E-05	8.48E-06	8.62E-06	1.76E-05	7.13E-07	2.93E-10	2.60E-05	2.51E-05
9	F30	60	Combination Short Haul Truck	14	0.00E+00	8.33E-06	5.81E-07	5.42E+00	2.95E-08	7.27E-03	6.17E-06	9.03E-03	7.74E-04	1.53E-04	5.30E-04	1.73E-04	1.73E-04	8.17E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F30	60	Combination Long Haul Truck	13	0.00E+00	7.45E-06	4.87E-07	5.09E+00	3.38E-08	7.84E-03	5.77E-06	8.95E-03	7.77E-04	1.32E-04	5.44E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.94E-04	1.69E-03
11	F35	80	Passenger Car	49	0.00E+00	6.00E-07	6.50E-08	2.30E+00	4.18E-06	1.60E-02	1.34E-06	1.01E-04	2.71E-04	4.72E-05	1.30E-04	8.39E-05	8.61E-05	7.73E-06	1.16E-05	3.25E-09	4.40E-05	1.59E-05
11	F35	80	Passenger Truck	83	0.00E+00	1.29E-06	1.37E-07	5.33E+00	8.26E-06	2.94E-02	2.71E-06	3.01E-04	4.87E-04	8.63E-05	2.59E-04	1.68E-04	1.72E-04	3.72E-05	2.66E-05	7.23E-09	8.66E-05	4.91E-05
11	F35	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.48E-03	1.34E-06	6.44E-04	7.90E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	F35	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	F35	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	F36	80	Passenger Car	166	0.00E+00	2.02E-06	2.19E-07	7.76E+00	1.41E-05	5.41E-02	4.51E-06	3.42E-04	9.15E-04	1.59E-04	4.39E-04	2.83E-04	2.90E-04	2.61E-05	3.91E-05	1.10E-08	1.48E-04	5.36E-05
11	F36	80	Passenger Truck	279	0.00E+00	4.35E-06	4.61E-07	1.80E+01	2.79E-05	9.91E-02	9.13E-06	1.01E-03	1.64E-03	2.91E-04	8.75E-04	5.67E-04	5.80E-04	1.25E-04	8.98E-05	2.44E-08	2.92E-04	1.66E-04
11	F36	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.60E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.92E-05	7.02E-05	2.30E-04	9.23E-06	3.67E-09	2.14E-04	2.24E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.11E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.02E-06	9.67E-06	3.90E-07	1.53E-10	9.37E-06	9.58E-06
11	F36	80	Combination Short Haul Truck	6	0.00E+00	2.75E-06	1.97E-07	2.28E+00	8.70E-09	2.44E-03	2.02E-06	2.82E-03	1.67E-04	4.11E-05	1.64E-04	5.82E-05	5.79E-05	3.43E-04	7.64E-06	0.00E+00	1.07E-04	5.34E-04
11	F36	80	Combination Long Haul Truck	6	0.00E+00	2.46E-06	1.65E-07	2.11E+00	1.01E-08	2.53E-03	1.88E-06	2.75E-03	1.64E-04	3.29E-05	1.70E-04	5.01E-05	5.04E-05	3.23E-04	7.06E-06	0.00E+00	1.19E-04	5.18E-04
9	F37	60	Passenger Car	760	0.00E+00	1.14E-05	1.23E-06	3.82E+01	7.94E-05	2.96E-01	2.53E-05	1.55E-03	7.71E-03	1.18E-03	2.47E-03	1.59E-03	1.63E-03	1.59E-04	1.91E-04	5.26E-08	8.34E-04	2.43E-04
9	F37	60	Passenger Truck	1273	0.00E+00	2.51E-05	2.66E-06	8.70E+01	1.57E-04	5.27E-01	5.16E-05	5.06E-03	1.41E-02	2.20E-03	4.92E-03	3.21E-03	3.29E-03	6.75E-04	4.31E-04	1.20E-07	1.64E-03	8.38E-04
9	F37	60	Single Unit Short Haul Truck	69	0.00E+00	2.03E-05	1.01E-06	1.29E+01	1.67E-05	2.49E-02	2.17E-05	9.66E-03	1.64E-03	2.97E-04	2.45E-03	6.07E-04	6.17E-04	1.29E-03	5.21E-05	2.15E-08	1.84E-03	1.81E-03
9	F37	60	Single Unit Long Haul Truck	3	0.00E+00	8.87E-07	4.40E-08	5.51E-01	7.25E-07	1.06E-03	9.46E-07	4.18E-04	7.37E-05	1.32E-05	1.08E-04	2.65E-05	2.69E-05	5.50E-05	2.22E-06	9.13E-10	8.10E-05	7.83E-05
9	F37	60	Combination Short Haul Truck	51	0.00E+00	3.00E-05	2.10E-06	1.95E+01	1.06E-07	2.62E-02	2.22E-05	3.26E-02	2.79E-03	5.52E-04	1.91E-03	6.23E-04	6.23E-04	2.95E-03	6.53E-05	0.00E+00	1.28E-03	6.13E-03
9	F37	60	Combination Long Haul Truck	46	0.00E+00	2.69E-05	1.76E-06	1.83E+01	1.22E-07	2.83E-02	2.08E-05	3.23E-02	2.80E-03	4.76E-04	1.96E-03	5.35E-04	5.41E-04	2.79E-03	6.12E-05	0.00E+00	1.42E-03	6.08E-03
9	F38	60	Passenger Car	530	0.00E+00	7.95E-06	8.60E-07	2.66E+01	5.54E-05	2.06E-01	1.77E-05	1.08E-03	5.37E-03	8.26E-04	1.72E-03	1.11E-03	1.14E-03	1.11E-04	1.33E-04	3.67E-08	5.81E-04	1.69E-04
9	F38	60	Passenger Truck	887	0.00E+00	1.75E-05	1.85E-06	6.06E+01	1.09E-04	3.67E-01	3.60E-05	3.53E-03	9.86E-03	1.53E-03	3.43E-03	2.24E-03	2.29E-03	4.71E-04	3.01E-04	8.33E-08	1.14E-03	5.84E-04
9	F38	60	Single Unit Short Haul Truck	70	0.00E+00	2.06E-05	1.03E-06	1.31E+01	1.69E-05	2.53E-02	2.20E-05	9.80E-03	1.66E-03	3.01E-04	2.49E-03	6.16E-04	6.26E-04	1.31E-03	5.29E-05	2.18E-08	1.87E-03	1.84E-03
9	F38	60	Single Unit Long Haul Truck	3	0.00E+00	9.01E-07	4.47E-08	5.59E-01	7.36E-07	1.07E-03	9.61E-07	4.25E-04	7.48E-05	1.34E-05	1.10E-04	2.68E-05	2.73E-05	5.58E-05	2.26E-06	9.26E-10	8.22E-05	7.95E-05
9	F38	60	Combination Short Haul Truck	48	0.00E+00	2.85E-05	1.99E-06	1.86E+01	1.01E-07	2.49E-02	2.11E-05	3.09E-02	2.65E-03	5.25E-04	1.82E-03	5.92E-04	5.92E-04	2.80E-03	6.20E-05	0.00E+00	1.22E-03	5.83E-03
9	F38	60	Combination Long Haul Truck	44	0.00E+00	2.55E-05	1.67E-06	1.74E+01	1.16E-07	2.69E-02	1.98E-05	3.07E-02	2.66E-03	4.53E-04	1.86E-03	5.08E-04	5.14E-04	2.65E-03	5.81E-05	0.00E+00	1.35E-03	5.78E-03
11	F39	80	Passenger Car	52	0.00E+00	6.32E-07	6.84E-08	2.42E+00	4.40E-06	1.69E-02	1.41E-06	1.07E-04	2.86E-04	4.96E-05	1.37E-04	8.83E-05	9.06E-05	8.13E-06	1.22E-05	3.42E-09	4.63E-05	1.67E-05
11	F39	80	Passenger Truck	87	0.00E+00	1.36E-06	1.44E-07	5.60E+00	8.70E-06	3.09E-02	2.85E-06	3.16E-04	5.12E-04	9.08E-05	2.73E-04	1.77E-04	1.81E-04	3.91E-05	2.80E-05	7.61E-09	9.11E-05	5.17E-05
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	1.11E-06	5.53E-08	1.09E+00	8.96E-07	2.19E-03	1.18E-06	5.71E-04	7.00E-05	1.58E-05	1.35E-04	3.30E-05	3.35E-05	1.10E-04	4.41E-06	1.75E-09	1.02E-04	1.07E-04
11	F39	80	Combination Short Haul Truck	5	0.00E+00	2.26E-06	1.62E-07	1.88E+00	7.15E-09	2.00E-03	1.66E-06	2.32E-03	1.37E-04	3.38E-05	1.35E-04	4.78E-05	4.75E-05	2.82E-04	6.27E-06	0.00E+00	8.75E-05	4.38E-04
11	F39	80	Combination Long Haul Truck	5	0.00E+00	2.02E-06	1.36E-07	1.74E+00	8.27E-09	2.08E-03	1.54E-06	2.26E-03	1.35E-04	2.70E-05	1.40E-04	4.11E-05	4.14E-05	2.65E-04	5.80E-06	0.00E+00	9.79E-05	4.26E-04
11	F40	80	Passenger Car	225	0.00E+00	2.73E-06	2.96E-07	1.05E+01	1.90E-05	7.30E-02	6.08E-06	4.62E-04	1.24E-03	2.15E-04	5.92E-04	3.82E-04	3.92E-04	3.52E-05	5.27E-05	1.48E-08	2.00E-04	7.24E-05
11	F40	80	Passenger Truck	376	0.00E+00	5.87E-06	6.23E-07	2.42E+01	3.76E-05	1.34E-01	1.23E-05	1.37E-03	2.22E-03	3.93E-04	1.18E-03	7.65E-04	7.84E-04	1.69E-04	1.21E-04	3.29E-08	3.94E-04	2.24E-04
11	F40	80	Single Unit Short Haul Truck	6	0.00E+00	1.10E-06	5.47E-08	1.08E+00	8.87E-07	2.17E-03	1.17E-06	5.65E-04	6.92E-05	1.57E-05	1.34E-04	3.27E-05	3.32E-05	1.08E-04	4.36E-06	1.73E-09	1.01E-04	1.06E-04
11	F40	80	Combination Short Haul Truck	8	0.00E+00	3.43E-06	2.46E-07	2.85E+00	1.08E-08	3.04E-03	2.52E-06	3.52E-03	2.08E-04	5.13E-05	2.05E-04	7.26E-05	7.22E-05	4.28E-04	9.52E-06	0.00E+00	1.33E-04	6.65E-04
11	F40	80	Combination Long Haul Truck	7	0.00E+00	3.07E-06	2.06E-07	2.64E+00	1.25E-08	3.15E-03	2.34E-06	3.43E-03	2.04E-04	4.10E-05	2.12E-04	6.24E-05	6.28E-05	4.02E-04	8.80E-06	0.00E+00	1.49E-04	6.46E-04
10	F41	70	Passenger Car	232	0.00E+00	3.03E-06	3.28E-07	1.11E+01	2.11E-05	7.92E-02	6.76E-06	4.64E-04	1.80E-03	2.89E-04	6.57E-04	4.23E-04	4.34E-04	4.15E-05	5.59E-05	1.53E-08	2.22E-04	7.28E-05
10	F41	70	Passenger Truck	388	0.00E+00	6.64E-06	7.03E-07	2.57E+01	4.21E-05	1.46E-01	1.38E-05	1.46E-03	3.27E-03	5.32E-04	1.32E-03	8.56E-04	8.77E-04	1.89E-04	1.27E-04	3.42E-08	4.39E-04	2.39E-04
10	F41	70	Single Unit Short Haul Truck	1	0.00E+00	1.29E-07	6.45E-09	1.01E-01	1.05E-07	2.02E-04	1.37E-07	6.35E-05	9.06E-06	1.81E-06	1.57E-05	3.85E-06	3.91E-06	1.01E-05	4.06E-07	1.64E-10	1.17E-05	1.19E-05
10	F41	70	Combination Short Haul Truck	2	0.00E+00	1.08E-06	7.65E-08	7.82E-01	3.50E-09	9.26E-04	7.88E-07	1.13E-03	8.17E-05	1.79E-05	6.56E-05	2.27E-05	2.26E-05	1.18E-04	2.61E-06	0.00E+00	4.30E-05	2.13E-04
10	F41	70	Combination Long Haul Truck	2	0.00E+00	9.76E-07	6.50E-08	7.29E-01	4.03E-09	9.81E-04	7.40E-07	1.12E-03	8.13E-05	1.48E-05	6.77E-05	1.97E-05	1.99E-05	1.11E-04	2.44E-06	0.00E+00	4.79E-05	2.10E-04
10	F42	70	Passenger Car	92	0.00E+00	1.20E-06	1.29E-07	4.40E+00	8.34E-06	3.13E-02	2.67E-06	1.83E-04	7.10E-04	1.14E-04	2.59E-04	1.67E-04	1.71E-04	1.64E-05	2.21E-05	6.03E-09	8.77E-05	2.87E-05
10	F42	70	Passenger Truck	153	0.00E+00	2.62E-06	2.78E-07	1.01E+01	1.66E-05	5.75E-02	5.45E-06	5.75E-04	1.29E-03	2.10E-04	5.20E-04	3.38E-04	3.46E-04	7.45E-05	5.03E-05	1.35E-08	1.73E-04	9.45E-05
10	F45	70	Passenger Car	186	0.00E+00	2.43E-06	2.63E-07	8.94E+00	1.69E-05	6.35E-02	5.42E-06	3.72E-04	1.44E-03	2.31E-04	5.27E-04	3.39E-04	3.48E-04	3.33E-05	4.48E-05	1.22E-08	1.78E-04	5.84E-05
10	F45	70	Passenger Truck	311	0.00E+00	5.33E-06	5.64E-07	2.06E+01	3.37E-05	1.17E-01	1.11E-05	1.17E-03	2.62E-03	4.26E-04	1.06E-03	6.87E-04	7.03E-04	1.51E-04	1.02E-04	2.74E-08	3.52E-04	1.92E-04
10	F45	70	Single Unit Short Haul Truck	15	0.00E+00	3.57E-06	1.79E-07	2.80E+00	2.92E-06	5.61E-03	3.80E-06	1.76E-03	2.51E-04	5.02E-05	4.35E-04	1.07E-04	1.08E-04	2.80E-04	1.13E-05	4.56E-09	3.25E-04	3.30E-04
10	F45	70	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.75E-09	1.19E-01	1.26E-07	2.35E-04	1.66E-07	7.58E-05	1.15E-05	2.23E-06	1.90E-05	4.62E-06	4.69E-06	1.19E-05	4.79E-07	1.92E-10	1.42E-05	1.42E-05
10	F45	70	Combination Short Haul Truck	15	0.00E+00	7.90E-06	5.62E-07	5.74E+00	2.57E-08	6.80E-03	5.79E-06	8.32E-03	6.00E-04	1.31E-04	4.82E-04	1.66E-04	1.66E-04	8.66E-04	1.92E-05	0.00E+00	3.16E-04	1.57E-03
10	F45	70	Combination Long Haul Truck	14	0.00E+00	7.16E-06	4.78E-07	5.35E+00	2.96E-08	7.20E-03	5.43E-06	8.20E-03	5.97E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.17E-04	1.79E-05	0.00E+00	3.52E-04	1.54E-03
10	F46	70	Passenger Car	186	0.00E+00	2.43E-06	2.63E-07	8.93E+00	1.69E-05	6.35E-02	5.42E-06	3.72E-04	1.44E-03	2.31E-04	5.26E-04	3.39E-04	3.48E-04	3.33E-05	4.48E-05	1.22E-08	1.78E-04	5.83E-05
10	F46	70	Passenger Truck	311	0.00E+00	5.32E-06	5.63E-07	2.06E+01	3.37E-05	1.17E-01	1.11E-05	1.17E-03	2.62E-03	4.26E-04	1.05E-03	6.86E-04	7.03E-04	1.51E-04	1.02E-04	2.74E-08	3.52E-04	1.92E-04
10	F46	70	Single Unit Short Haul Truck	2	0.00E+00	3.63E-07	1.82E-08	2.85E-01	2.97E-07	5.71E-04	3.87E-07	1.79E-04	2.55E-05	5.11E-06	4.42E-05	1.09E-05	1.10E-05	2.85E-05	1.15E-06	4.64E-10	3.30E-05	3.35E-05
10	F46	70	Combination Short Haul Truck	7	0.00E+00	3.65E-06	2.60E-07	2.66E+00	1.19E-08	3.14E-03	2.67E-06	3.85E-03	2.77E-04	6.07E-05	2.23E-04	7.69E-05	7.67E-05	4.00E-04	8.86E-06	0.00E+00	1.46E-04	7.24E-04
10	F46	70	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.21E-07	2.47E+00	1.37E-08	3.33E-03	2.51E-06	3.79E-03	2.76E-04	5.04E-05	2.30E-04	6.68E-05	6.75E-05	3.77E-04	8.28E-06	0.00E+00	1.63E-04	7.14E-04
9	F47	60	Passenger Car	9	0.00E+00	1.32E-07	1.43E-08	4.44E-01	9.22E-07	3.43E-03	2.94E-07	1.80E-05	8.95E-05	1.38E-05	2.87E-05	1.85E-05	1.90E-05	1.84E-06	2.22E-06	6.11E-10	9.69E-06	2.82E-06
9	F47	60	Passenger Truck	15	0.00E+00	2.92E-07	3.08E-08	1.01E+00	1.82E-06	6.12E-03	6.00E-07	5.87E-05	1.64E-04	2.55E-05	5.71E-05	3.73E-05	3.82E-05	7.84E-06	5.01E-06	1.39E-09	1.90E-05	9.73E-06
9	F47	60	Combination Short Haul Truck	1	0.00E+00	3.81E-07	2.66E-08	2.48E-01	1.35E-09	3.33E-04	2.82E-07	4.14E-04	3.54E-05	7.01E-06	2.43E-05	7.91E-06	7.91E-06	3.74E-05	8.29E-07	0.00E+00	1.63E-05	7.79E-05
9	F47	60	Combination Long Haul Truck	1	0.00E+00	3.41E-07	2.23E-08	2.33E-01	1.55E-09	3.59E-04	2.64E-07	4.10E-04	3.56E-05	6.05E-06	2.49E-05	6.79E-06	6.87E-06	3.54E-05	7.77E-07	0.00E+00	1.80E-05	7.72E-05
9	F48	60	Passenger Car	1	0.00E+00	2.13E-08	2.30E-09	7.13E-02	1.48E-07	5.52E-04	4.73E-08	2.89E-06	1.44E-05	2.21E-06	4.61E-06	2.97E-06	3.05E-06	2.96E-07	3.57E-07	9.82E-11	1.56E-06	4.53E-07
9	F48	60	Passenger Truck	2	0.00E+00	4.69E-08	4.96E-09	1.62E-01	2.93E-07	9.84E-04	9.64E-08	9.44E-06	2.64E-05	4.10E-06	9.18E-06	5.99E-06	6.13E-06	1.26E-06	8.05E-07	2.23E-10	3.06E-06	1.56E-06
9	F49	60	Passenger Car	729	0.00E+00	1.09E-05	1.18E-06	3.67E+01	7.61E-05	2.84E-01	2.43E-05	1.49E-03	7.39E-03	1.14E-03	2.37E-03	1.52E-03	1.57E-03	1.52E-04	1.83E-04	5.04E-08	8.00E-04	2.33E-04
9	F49	60	Passenger Truck	1221	0.00E+00	2.41E-05	2.55E-06	8.34E+01	1.51E-04	5.05E-01	4.95E-05	4.85E-03	1.36E-02	2.11E-03	4.71E-03	3.08E-03	3.15E-03	6.48E-04	4.14E-04	1.15E-07	1.57E-03	8.04E-04
9	F49	60	Single Unit Short Haul Truck	144	0.00E+00	4.23E-05	2.11E-06	2.69E+01	3.48E-05	5.19E-02	4.51E-05	2.01E-02	3.42E-03	6.19E-04	5.11E-03	1.27E-03	1.28E-03	2.69E-03	1.09E-04	4.47E-08	3.84E-03	3.77E-03
9	F49	60	Single Unit Long Haul Truck	6	0.00E+00	1.85E-06	9.17E-08	1.15E+00	1.51E-06	2.20E-03	1.97E-06	8.71E-04	1.53E-04	2.75E-05	2.25E-04	5.51E-05	5.60E-05	1.15E-04	4.63E-06	1.90E-09	1.69E-04	1.63E-04
9	F49	60	Combination Short Haul Truck	80	0.00E+00	4.68E-05	3.27E-06	3.05E+01	1.66E-07	4.09E-02	3.47E-05	5.08E-02	4.35E-03	8.61E-04	2.98E-03	9.72E-04	9.72E-04	4.59E-03	1.02E-04	0.00E+00	2.00E-03	9.56E-03
9	F49	60	Combination Long Haul Truck	72	0.00E+00	4.19E-05	2.74E-06	2.86E+01	1.90E-07	4.41E-02	3.24E-05	5.03E-02	4.37E-03	7.43E-04	3.06E-03	8.34E-04	8.44E-04	4.35E-03	9.55E-05	0.00E+00	2.22E-03	9.49E-03
9	F50	60	Passenger Car	804	0.00E+00	1.21E-05	1.30E-06	4.04E+01	8.40E-05	3.13E-01	2.68E-05	1.64E-03	8.15E-03	1.25E-03	2.61E-03	1.68E-03	1.73E-03	1.68E-04	2.02E-04	5.56E-08	8.82E-04	2.57E-04
9	F50	60	Passenger Truck	1347	0.00E+00	2.66E-05	2.81E-06	9.20E+01	1.66E-04	5.57E-01	5.46E-05	5.35E-03	1.50E-02	2.32E-03	5.20E-03	3.40E-03	3.48E-03	7.15E-04	4.56E-04	1.26E-07	1.73E-03	8.87E-04
9	F50	60	Single Unit Short Haul Truck	129	0.00E+00	3.81E-05

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F54	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.95E-06	5.66E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.38E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.60E-09	3.27E-04	3.32E-04
10	F54	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.64E-05	1.16E-05	2.25E-06	1.91E-05	4.66E-06	4.73E-06	1.20E-05	4.82E-07	1.93E-10	1.44E-05	1.43E-05
10	F54	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.09E-04	6.78E-05	2.48E-04	8.59E-05	8.56E-05	4.47E-04	9.89E-06	0.00E+00	1.63E-04	8.09E-04
10	F54	70	Combination Long Haul Truck	7	0.00E+00	3.70E-06	2.46E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.62E-05	2.56E-04	7.45E-05	7.53E-05	4.21E-04	9.24E-06	0.00E+00	1.82E-04	7.97E-04
53	F71	70	Passenger Car	317	0.00E+00	4.01E-06	4.35E-07	1.54E+01	2.80E-05	1.04E-01	8.89E-06	6.46E-04	2.42E-03	3.90E-04	8.69E-04	5.60E-04	5.75E-04	5.68E-05	7.73E-05	2.10E-08	2.94E-04	1.01E-04
53	F71	70	Passenger Truck	531	0.00E+00	8.74E-06	9.26E-07	3.55E+01	5.54E-05	1.90E-01	1.81E-05	1.98E-03	4.35E-03	7.09E-04	1.74E-03	1.13E-03	1.16E-03	2.57E-04	1.77E-04	4.63E-08	5.79E-04	3.24E-04
53	F71	70	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	5.36E-08	8.39E-01	8.76E-07	1.68E-03	1.14E-06	5.28E-04	7.53E-05	1.51E-05	1.30E-04	3.20E-05	3.25E-05	8.40E-05	3.38E-06	1.37E-09	9.73E-05	9.88E-05
53	F71	70	Combination Short Haul Truck	4	0.00E+00	2.32E-06	1.65E-07	1.69E+00	7.54E-09	2.00E-03	1.70E-06	2.44E-03	1.76E-04	3.86E-05	1.41E-04	4.89E-05	4.88E-05	2.54E-04	5.63E-06	0.00E+00	9.27E-05	4.60E-04
53	F71	70	Combination Long Haul Truck	4	0.00E+00	2.10E-06	1.40E-07	1.57E+00	8.69E-09	2.12E-03	1.60E-06	2.41E-03	1.75E-04	3.20E-05	1.46E-04	4.24E-05	4.29E-05	2.40E-04	5.26E-06	0.00E+00	1.03E-04	4.54E-04
50	F72	40	Passenger Car	281	0.00E+00	4.72E-06	5.11E-07	1.63E+01	3.28E-05	1.22E-01	1.05E-05	5.08E-04	4.86E-03	6.94E-04	1.02E-03	6.59E-04	6.76E-04	8.82E-05	8.11E-05	1.97E-08	3.46E-04	7.96E-05
50	F72	40	Passenger Truck	470	0.00E+00	1.08E-05	1.13E-06	3.63E+01	6.48E-05	2.09E-01	2.17E-05	1.92E-03	8.62E-03	1.23E-03	2.04E-03	1.33E-03	1.36E-03	3.11E-04	1.79E-04	3.83E-08	6.73E-04	3.25E-04
50	F72	40	Single Unit Short Haul Truck	44	0.00E+00	1.94E-05	1.02E-06	9.32E+00	1.69E-05	1.60E-02	2.06E-05	9.50E-03	1.77E-03	2.94E-04	2.30E-03	6.06E-04	6.16E-04	9.41E-04	3.76E-05	1.59E-08	1.68E-03	1.79E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	8.52E-07	4.44E-08	4.02E-01	7.39E-07	6.96E-04	9.05E-07	4.13E-04	7.93E-05	1.31E-05	1.01E-04	2.65E-05	2.69E-05	4.07E-05	1.62E-06	6.91E-10	7.39E-05	7.77E-05
50	F72	40	Combination Short Haul Truck	20	0.00E+00	1.76E-05	1.22E-06	8.94E+00	6.35E-08	1.53E-02	1.31E-05	1.96E-02	2.05E-03	3.69E-04	1.14E-03	3.64E-04	3.68E-04	1.35E-03	2.99E-05	0.00E+00	7.73E-04	3.70E-03
50	F72	40	Combination Long Haul Truck	18	0.00E+00	1.61E-05	1.05E-06	8.50E+00	7.20E-08	1.71E-02	1.23E-05	1.97E-02	2.06E-03	3.28E-04	1.17E-03	3.19E-04	3.25E-04	1.30E-03	2.84E-05	0.00E+00	8.50E-04	3.71E-03
52	F73	60	Passenger Car	23	0.00E+00	3.14E-07	3.40E-08	1.15E+00	2.19E-06	8.11E-03	6.97E-07	4.48E-05	2.25E-04	3.46E-05	6.78E-05	4.38E-05	4.50E-05	4.76E-06	5.73E-06	1.53E-09	2.30E-05	7.03E-06
52	F73	60	Passenger Truck	38	0.00E+00	6.90E-07	7.29E-08	2.61E+00	4.31E-06	1.44E-02	1.42E-06	1.44E-04	4.01E-04	6.21E-05	1.35E-04	8.80E-05	9.01E-05	1.98E-05	1.29E-05	3.25E-09	4.49E-05	2.39E-05
53	F74	70	Passenger Car	314	0.00E+00	3.98E-06	4.31E-07	1.53E+01	2.78E-05	1.03E-01	8.82E-06	6.41E-04	2.40E-03	3.87E-04	8.62E-04	5.56E-04	5.70E-04	5.63E-05	7.67E-05	2.09E-08	2.92E-04	1.00E-04
53	F74	70	Passenger Truck	527	0.00E+00	8.67E-06	9.19E-07	3.53E+01	5.50E-05	1.89E-01	1.80E-05	1.96E-03	4.32E-03	7.04E-04	1.73E-03	1.12E-03	1.15E-03	2.55E-04	1.76E-04	4.59E-08	5.75E-04	3.22E-04
53	F74	70	Single Unit Short Haul Truck	115	0.00E+00	2.71E-05	1.36E-06	2.13E+01	2.22E-05	4.27E-02	2.89E-05	1.34E-02	1.91E-03	3.82E-04	3.30E-03	8.11E-04	8.24E-04	2.13E-03	8.56E-05	3.46E-08	2.47E-03	2.50E-03
53	F74	70	Single Unit Long Haul Truck	5	0.00E+00	1.18E-06	5.88E-08	9.02E-01	9.58E-07	1.78E-03	1.26E-06	5.76E-04	8.71E-05	1.70E-05	1.44E-04	3.51E-05	3.56E-05	9.01E-05	3.64E-06	1.46E-09	1.08E-04	1.08E-04
53	F74	70	Combination Short Haul Truck	57	0.00E+00	2.97E-05	2.12E-06	2.16E+01	9.67E-08	2.56E-02	2.18E-05	3.13E-02	2.26E-03	4.95E-04	1.81E-03	6.27E-04	6.25E-04	3.26E-03	7.22E-05	0.00E+00	1.19E-03	5.90E-03
53	F74	70	Combination Long Haul Truck	52	0.00E+00	2.70E-05	1.80E-06	2.02E+01	1.11E-07	2.71E-02	2.04E-05	3.09E-02	2.25E-03	4.10E-04	1.87E-03	5.44E-04	5.50E-04	3.07E-03	6.74E-05	0.00E+00	1.33E-03	5.82E-03
52	F75	60	Passenger Car	19	0.00E+00	2.57E-07	2.78E-08	9.39E-01	1.79E-06	6.64E-03	5.70E-07	3.67E-05	1.84E-04	2.83E-05	5.55E-05	3.59E-05	3.68E-05	3.90E-06	4.69E-06	1.25E-09	1.88E-05	5.76E-06
52	F75	60	Passenger Truck	31	0.00E+00	5.64E-07	5.97E-08	2.14E+00	3.53E-06	1.18E-02	1.16E-06	1.18E-04	3.28E-04	5.08E-05	1.10E-04	7.20E-05	7.37E-05	1.62E-05	1.06E-05	2.66E-09	3.67E-05	1.95E-05
52	F75	60	Single Unit Short Haul Truck	3	0.00E+00	8.02E-07	4.00E-08	5.09E-01	6.59E-07	9.84E-04	8.55E-07	3.81E-04	6.48E-05	1.17E-05	9.69E-05	2.40E-05	2.44E-05	5.10E-05	2.06E-06	8.48E-10	7.28E-05	7.15E-05
52	F75	60	Combination Short Haul Truck	1	0.00E+00	5.32E-07	3.71E-08	3.46E-01	1.88E-09	4.64E-04	3.94E-07	5.77E-04	4.94E-05	9.78E-06	3.39E-05	1.10E-05	1.10E-05	5.22E-05	1.16E-06	0.00E+00	2.27E-05	1.09E-04
52	F75	60	Combination Long Haul Truck	1	0.00E+00	4.76E-07	3.11E-08	3.25E-01	2.16E-09	5.01E-04	3.68E-07	5.72E-04	4.96E-05	8.44E-06	3.48E-05	9.47E-06	9.58E-06	4.94E-05	1.08E-06	0.00E+00	2.52E-05	1.08E-04
50	F76	40	Passenger Car	14	0.00E+00	2.33E-07	2.52E-08	8.03E-01	1.62E-06	6.00E-03	5.19E-07	2.50E-05	2.39E-04	3.42E-05	5.04E-05	3.25E-05	3.33E-05	4.34E-06	4.00E-06	9.69E-10	1.71E-05	3.92E-06
50	F76	40	Passenger Truck	23	0.00E+00	5.32E-07	5.58E-08	1.79E+00	3.19E-06	1.03E-02	1.07E-06	9.46E-05	4.25E-04	6.04E-05	1.00E-04	6.57E-05	6.70E-05	1.53E-05	8.82E-06	1.89E-09	3.32E-05	1.60E-05
53	F77	70	Passenger Car	382	0.00E+00	4.84E-06	5.25E-07	1.86E+01	3.38E-05	1.25E-01	1.07E-05	7.80E-04	2.92E-03	4.71E-04	1.05E-03	6.76E-04	6.94E-04	6.85E-05	9.33E-05	2.54E-08	3.55E-04	1.22E-04
53	F77	70	Passenger Truck	640	0.00E+00	1.05E-05	1.12E-06	4.29E+01	6.69E-05	2.29E-01	2.19E-05	2.38E-03	5.25E-03	8.56E-04	2.10E-03	1.36E-03	1.39E-03	3.10E-04	2.13E-04	5.59E-08	6.99E-04	3.91E-04
53	F77	70	Single Unit Short Haul Truck	89	0.00E+00	2.09E-05	1.05E-06	1.64E+01	1.71E-05	3.29E-02	2.23E-05	1.03E-02	1.47E-03	2.95E-04	2.55E-03	6.26E-04	6.36E-04	1.64E-03	6.61E-05	2.67E-08	1.90E-03	1.93E-03
53	F77	70	Single Unit Long Haul Truck	4	0.00E+00	9.13E-07	4.54E-08	6.97E-01	7.39E-07	1.38E-03	9.72E-07	4.44E-04	6.73E-05	1.31E-05	1.11E-04	2.71E-05	2.75E-05	6.95E-05	2.81E-06	1.12E-09	8.35E-05	8.32E-05
53	F77	70	Combination Short Haul Truck	42	0.00E+00	2.16E-05	1.54E-06	1.57E+01	7.03E-08	1.86E-02	1.58E-05	2.28E-02	1.64E-03	3.60E-04	1.32E-03	4.55E-04	4.54E-04	2.37E-03	5.25E-05	0.00E+00	8.64E-04	4.29E-03
53	F77	70	Combination Long Haul Truck	38	0.00E+00	1.96E-05	1.31E-06	1.47E+01	8.10E-08	1.97E-02	1.49E-05	2.25E-02	1.63E-03	2.98E-04	1.36E-03	3.95E-04	4.00E-04	2.23E-03	4.90E-05	0.00E+00	9.63E-04	4.23E-03
50	F78	40	Passenger Car	301	0.00E+00	5.06E-06	5.48E-07	1.75E+01	3.52E-05	1.30E-01	1.13E-05	5.44E-04	5.21E-03	7.43E-04	1.10E-03	7.07E-04	7.25E-04	9.45E-05	8.70E-05	2.11E-08	3.71E-04	8.53E-05
50	F78	40	Passenger Truck	504	0.00E+00	1.16E-05	1.21E-06	3.89E+01	6.95E-05	2.24E-01	2.32E-05	2.06E-03	9.24E-03	1.32E-03	2.18E-03	1.43E-03	1.46E-03	3.33E-04	1.92E-04	4.10E-08	7.21E-04	3.49E-04
50	F78	40	Single Unit Short Haul Truck	2	0.00E+00	1.02E-06	5.33E-08	4.88E-01	8.85E-07	8.40E-04	1.08E-06	4.98E-04	9.29E-05	1.54E-05	1.20E-04	3.18E-05	3.23E-05	4.93E-05	1.97E-06	8.34E-10	8.79E-05	9.36E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	5.55E-07	3.85E-08	2.82E-01	2.00E-09	4.84E-04	4.12E-07	6.20E-04	6.46E-05	1.16E-05	3.60E-05	1.15E-05	1.16E-05	4.25E-05	9.43E-07	0.00E+00	2.44E-05	1.17E-04
50	F78	40	Combination Long Haul Truck	1	0.00E+00	5.06E-07	3.30E-08	2.68E-01	2.27E-09	5.38E-04	3.89E-07	6.20E-04	6.49E-05	1.03E-05	3.70E-05	1.01E-05	1.03E-05	4.09E-05	8.97E-07	0.00E+00	2.68E-05	1.17E-04
52	F79	60	Passenger Car	455	0.00E+00	6.27E-06	6.78E-07	2.29E+01	4.36E-05	1.62E-01	1.39E-05	8.94E-04	4.49E-03	6.90E-04	1.35E-03	8.75E-04	8.98E-04	9.51E-05	1.14E-04	3.06E-08	4.59E-04	1.40E-04
52	F79	60	Passenger Truck	762	0.00E+00	1.38E-05	1.45E-06	5.21E+01	8.60E-05	2.88E-01	2.84E-05	2.88E-03	8.00E-03	1.24E-03	2.69E-03	1.76E-03	1.80E-03	3.96E-04	2.58E-04	6.48E-08	8.96E-04	4.76E-04
52	F79	60	Single Unit Short Haul Truck	13	0.00E+00	3.86E-06	1.93E-07	2.45E+00	3.17E-06	4.73E-03	4.11E-06	1.83E-03	3.12E-04	5.64E-05	4.66E-04	1.15E-04	1.17E-04	2.45E-04	9.90E-06	4.08E-09	3.50E-04	3.44E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.69E-07	8.36E-09	1.05E-01	1.38E-07	2.01E-04	1.80E-07	7.95E-05	1.40E-05	2.50E-06	2.05E-05	5.02E-06	5.10E-06	1.05E-05	4.22E-07	1.73E-10	1.54E-05	1.49E-05
52	F79	60	Combination Short Haul Truck	8	0.00E+00	4.73E-06	3.30E-07	3.08E+00	1.67E-08	4.13E-03	3.50E-06	5.13E-03	4.40E-04	8.71E-05	3.01E-04	9.82E-05	9.82E-05	4.64E-04	1.03E-05	0.00E+00	2.02E-04	9.67E-04
52	F79	60	Combination Long Haul Truck	7	0.00E+00	4.23E-06	2.77E-07	2.89E+00	1.92E-08	4.46E-03	3.28E-06	5.09E-03	4.42E-04	7.51E-05	3.09E-04	8.43E-05	8.53E-05	4.40E-04	9.65E-06	0.00E+00	2.24E-04	9.59E-04
53	F80	70	Passenger Car	548	0.00E+00	6.94E-06	7.52E-07	2.66E+01	4.84E-05	1.80E-01	1.54E-05	1.12E-03	4.18E-03	6.74E-04	1.50E-03	9.68E-04	9.94E-04	9.81E-05	1.34E-04	3.64E-08	5.08E-04	1.75E-04
53	F80	70	Passenger Truck	917	0.00E+00	1.51E-05	1.60E-06	6.14E+01	9.58E-05	3.29E-01	3.13E-05	3.41E-03	7.52E-03	1.23E-03	3.01E-03	1.95E-03	2.00E-03	4.43E-04	3.06E-04	8.00E-08	1.00E-03	5.61E-04
53	F80	70	Single Unit Short Haul Truck	14	0.00E+00	3.30E-06	1.66E-07	2.59E+00	2.70E-06	5.19E-03	3.52E-06	1.63E-03	2.32E-04	4.65E-05	4.02E-04	9.88E-05	1.00E-04	2.59E-04	1.04E-05	4.22E-09	3.00E-04	3.05E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.44E-07	7.17E-09	1.10E-01	1.17E-07	2.17E-04	1.53E-07	7.01E-05	1.06E-05	2.07E-06	1.76E-05	4.27E-06	4.34E-06	1.10E-05	4.43E-07	1.77E-10	1.32E-05	1.31E-05
53	F80	70	Combination Short Haul Truck	6	0.00E+00	3.29E-06	2.34E-07	2.39E+00	1.07E-08	2.83E-03	2.41E-06	3.46E-03	2.50E-04	5.47E-05	2.00E-04	6.93E-05	6.91E-05	3.60E-04	7.98E-06	0.00E+00	1.31E-04	6.52E-04
53	F80	70	Combination Long Haul Truck	6	0.00E+00	2.98E-06	1.99E-07	2.23E+00	1.23E-08	3.00E-03	2.26E-06	3.41E-03	2.49E-04	4.54E-05	2.07E-04	6.01E-05	6.08E-05	3.40E-04	7.46E-06	0.00E+00	1.47E-04	6.43E-04
52	F81	60	Passenger Car	214	0.00E+00	2.95E-06	3.19E-07	1.08E+01	2.05E-05	7.62E-02	6.55E-06	4.21E-04	2.11E-03	3.25E-04	6.37E-04	4.12E-04	4.23E-04	4.48E-05	5.39E-05	1.44E-08	2.16E-04	6.61E-05
52	F81	60	Passenger Truck	359	0.00E+00	6.48E-06	6.85E-07	2.45E+01	4.05E-05	1.36E-01	1.34E-05	1.36E-03	3.77E-03	5.83E-04	1.27E-03	8.26E-04	8.46E-04	1.86E-04	1.22E-04	3.05E-08	4.22E-04	2.24E-04
52	F81	60	Single Unit Short Haul Truck	123	0.00E+00	3.61E-05	1.80E-06	2.29E+01	2.96E-05	4.43E-02	3.85E-05	1.72E-02	2.91E-03	5.28E-04	4.36E-03	1.08E-03	1.10E-03	2.29E-03	9.26E-05	3.81E-08	3.27E-03	3.22E-03
52	F81	60	Single Unit Long Haul Truck	5	0.00E+00	1.58E-06	7.82E-08	9.79E-01	1.29E-06	1.88E-03	1.68E-06	7.43E-04	1.31E-04	2.34E-05	1.92E-04	4.70E-05	4.77E-05	9.77E-05	3.95E-06	1.62E-09	1.44E-04	1.39E-04
52	F81	60	Combination Short Haul Truck	54	0.00E+00	3.20E-05	2.23E-06	2.08E+01	1.13E-07	2.79E-02	2.37E-05	3.47E-02	2.97E-03	5.88E-04	2.04E-03	6.64E-04	6.64E-04	3.14E-03	6.95E-05	0.00E+00	1.37E-03	6.53E-03
52	F81	60	Combination Long Haul Truck	50	0.00E+00	2.86E-05	1.87E-06	1.95E+01	1.30E-07	3.01E-02	2.21E-05	3.44E-02	2.98E-03	5.07E-04	2.09E-03	5.69E-04	5.76E-04	2.97E-03	6.52E-05	0.00E+00	1.51E-03	6.48E-03
50	F82	40	Passenger Car	55	0.00E+00	9.16E-07	9.92E-08	3.17E+00	6.38E-06	2.36E-02	2.04E-06	9.86E-05	9.43E-04	1.35E-04	1.98E-04	1.28E-04	1.31E-04	1.71E-05	1.58E-05	3.82E-09	6.72E-05	1.54E-05
50	F82	40	Passenger Truck	91	0.00E+00	2.10E-06	2.20E-07	7.05E+00	1.26E-05	4.06E-02	4.21E-06	3.73E-04	1.67E-03	2.38E-04	3.96E-04	2.59E-04	2.64E-04	6.04E-05	3.47E-05	7.43E-09	1.31E-04	6.32E-05
50	F82	40	Single Unit Short Haul Truck	12	0.00E+00	5.18E-06	2.71E-07	2.48E+00	4.50E-06	4.28E-03	5.51E-06	2.53E-03	4.73E-04	7.84E-05	6.12E-04	1.62E-04	1.64E-04	2.51E-04	1.00E-05	4.24E-09	4.47E-04	4.76E-04
50	F82	40	Single Unit Long Haul Truck	1	0.00E+00	2.27E-07	1.18E-08	1.07E-01	1.97E-07	1.86E-04	2.41E-07	1.10E-04	2.11E-05	3.49E-06	2.69E-05	7.07E-06	7.17E-06	1.08E-05	4.33E-07	1.84E-10	1.97E-05	2.07E-05
50	F82	40	Combination Short Haul Truck	6	0.00E+00	5.10E-06	3.53E-07	2.59E+00	1.84E-08	4.44E-03	3.79E-06	5.69E-03	5.93E-04	1.07E-04	3.31E-04	1.05E-04	1.07E-04	3.90E-04	8.66E-06	0.00E+00	2.24E-04	1.07E-03
50	F82	40	Combination Long Haul Truck	5	0.00E+00	4.65E-06	3.03E-07	2.46E+00	2.08E-08	4.94E-03	3.57E-06	5.70E-03	5.96E-04	9.49E-05	3.40E-04	9.24E-05	9.41E-05	3.76E-04	8.23E-06	0.00E+00	2.46E-04	1.07E-03
53	F83	70	Passenger Car	93	0.00E+00	1.18E-06	1.28E-07	4.53E+00	8.23E-06	3.05E-02	2.61E-06	1.90E-04	7.11E-04	1.15E-04	2.55E-04	1.65E-04	1.69E-04	1.67E-05	2.27E-05	6.18E-09	8.64E-05	2.97E-05
53	F83	70	Passenger Truck	156	0.00E+00	2.57E-06	2.72E-07	1.04E+01	1.63E-05	5.59E-02	5.33E-06	5.80E-04	1.28E-03	2.08E-04	5.11E-04	3.31E-04	3.40E-04	7.54E-05	5.20E-05	1.36E-08	1.70E-04	9.53E-05
53	F83	70	Single Unit Short Haul Truck	24	0.00E+00	5.59E-06	2.80E-07	4.38E+00	4.57E-06	8.78E-03	5.95E-06	2.75E-03	3.93E-04	7.86E-05	6.80E-04	1.67E-04	1.70E-04	4.39E-04	1.76E-05	7.13E-09	5.08E-04	5.16E-04
53	F83	70	Single Unit Long Haul Truck	1	0.00E+00	2.43E-07	1.21E-08	1.86E-01	1.97E-07	3.67E-04	2.59E-07	1.19E-04	1.79E-05	3.50E-06	2.97E-05	7.22E-06	7.34E-06	1.86E-05	7.49E-07	3.00E-10	2.23E-05	2.22E-05
53	F83	70	Combination Short Haul Truck	15	0.00E+00	7.86E-06	5.59E-07	5.71E+00	2.55E-08	6.76E-03	5.76E-06	8.28E-03	5.97E-04	1.31E-04	4.79E-04	1.66E-04	1.65E-04	8.61E-04	1.91E-05	0.00E+00	3.14E-04	1.56E-03
53	F83	70	Combination Long Haul Truck	14	0.00E+00	7.13E-06	4.75E-07	5.32E+00	2.94E-08	7.16E-03	5.40E-06	8.16E-03	5.94E-04	1.08E-04	4.94E-04	1.44E-04	1.45E-04	8.12E-04	1.78E-05	0.00E+00	3.50E-04	1.54E-03
50	F84	40	Passenger Car	62	0.00E+00	1.04E-06	1.13E-07	3.59E+00	7.23E-06	2.68E-02	2.32E-06	1.12E-04	1.07E-03	1.53E-04	2.25E-04	1.45E-04	1.49E-04	1.94E-05	1.79E-05	4.33E-09	7.63E-05	1.75E-05
50	F84	40	Passenger Truck	104	0.00E+00	2.38E-06	2.49E-07	8.00E+00	1.43E-05	4.60E-02	4.77E-06	4.23E-04	1.90E-03	2.70E-04	4.49E-04	2.93E-04	2.99E-04	6.85E-05	3.94E-05	8.43E-09	1.48E-04	7.16E-05
50	F84	40	Single Unit Short Haul Truck	1	0.00E+00	3.32E-07	1.74E-08	1.59E-01	2.88E-07	2.74E-04	3.53E-07	1.62E-04	3.03E-05	5.02E-06	3.92E-05	1.04E-05	1.05E-05	1.61E-05	6.43E-07	2.72E-10	2.86E-05	3.05E-05
50	F84	40	Combination Short Haul Truck	36	0.00E+00	3.20E-05	2.22E-06	1.62E+01	1.15E-07	2.79E-02	2.38E-05	3.57E-02	3.72E-03	6.71E-04	2.08E-03	6.62E-04	6.69E-04	2.45E-03	5.43E-05	0.00E+00	1.40E-03	6.73E-03
50	F84	40	Combination Long Haul Truck	33	0.00E+00	2.92E-05	1.90E-06	1.55E+01	1.31E-07	3.10E-02	2.24E-05	3.57E-02	3.74E-03	5.95E-04	2.13E-03	5.80E-04	5.91E-04	2.36E-03	5.17E-05	0.00E+00	1.55E-03	6.74E-03
52	F85	60	Passenger Car	194	0.00E+00	2.67E-06	2.89E-07	9.75E+00	1.86E-05	6.89E-02	5.92E-06	3.81E-04	1.91E-03	2.94E-04	5.76E-04	3.73E-04	3.82E-04	4.05E-05	4.87E-05	1.30E-08	1.96E-04	5.98E-05
52	F85	60	Passenger Truck	325	0.00E+00	5.86E-06	6.20E-07	2.22E+01	3.66E-05	1.23E-01	1.21E-05	1.23E-03	3.41E-03	5.28E-04	1.15E-03	7.48E-04	7.66E-04	1.69E-04	1.10E-04	2.76E-08	3.82E-04	2.03E-04
52	F85	60	Single Unit Short Haul Truck	5	0.00E+00	1.49E-06	7.45E-08	9.47E-01	1.23E-06	1.83E-03	1.59E-06	7.10E-04	1.21E-04	2.18E-05	1.80E-04	4.46E-05	4.53E-05	9.49E-05	3.83E-06	1.58E-09	1.35E-04	1.33E-04
52	F85	60	Combination Short Haul Truck	28	0.00E+00	1.64E-05	1.14E-06	1.07E+01	5.79E-08	1.43E-02	1.21E-05	1.78E-02	1.52E-03	3.01E-04	1.04E-03	3.40E-04	3.40E-04	1.61E-03	3.56E-05	0.00E+00	7.01E-04	3.34E-03
52	F85	60	Combination Long Haul Truck	25	0.00E+00	1.46E-05	9.58E-07	1.00E+01	6.64E-08	1.54E-02	1.13E-05	1.76E-02	1.53E-03	2.60E-04	1.07E-03	2.92E-04	2.95E-04	1.52E-03	3.34E-05	0.00E+00	7.75E-04	3.32E-03
53	F86	70	Passenger Car	270	0.00E+00	3.42E-06	3.71E-07	1.31E+01	2.39E-05	8.86E-02	7.58E-06	5.51E-04	2.06E-03	3.33E-04	7.41E-04	4.78E-04	4.90E-04	4.84E-05	6.59E-05	1.79E-08	2.51E-04	8.64E-05
53	F86	70	Passenger Truck	453	0.00E+00	7.46E-06

Appendix F.4.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A07	0.00E+00	2.37E-04	1.76E-05	3.89E+02	3.14E-04	1.51E+00	2.46E-04	2.02E-01	1.37E-02	3.99E-03	2.26E-02	1.02E-02	1.03E-02	3.08E-02	1.63E-03	3.80E-07	1.23E-02	3.76E-02
A08	0.00E+00	2.23E-04	1.70E-05	3.97E+02	3.57E-04	1.69E+00	2.45E-04	1.83E-01	1.43E-02	4.08E-03	2.27E-02	1.06E-02	1.08E-02	2.79E-02	1.71E-03	4.16E-07	1.19E-02	3.39E-02
A09	0.00E+00	2.97E-04	2.23E-05	4.96E+02	4.09E-04	1.96E+00	3.11E-04	2.52E-01	1.75E-02	5.09E-03	2.87E-02	1.30E-02	1.32E-02	3.84E-02	2.09E-03	4.90E-07	1.55E-02	4.69E-02
A10	0.00E+00	2.62E-04	1.97E-05	4.43E+02	3.73E-04	1.79E+00	2.77E-04	2.20E-01	1.57E-02	4.55E-03	2.55E-02	1.17E-02	1.18E-02	3.36E-02	1.88E-03	4.42E-07	1.36E-02	4.10E-02
A11	0.00E+00	3.67E-04	2.76E-05	6.06E+02	4.88E-04	2.36E+00	3.80E-04	3.16E-01	2.13E-02	6.20E-03	3.48E-02	1.58E-02	1.60E-02	4.78E-02	2.54E-03	5.80E-07	1.87E-02	5.89E-02
A12	0.00E+00	3.03E-04	2.25E-05	4.91E+02	3.88E-04	1.88E+00	3.11E-04	2.60E-01	1.72E-02	5.03E-03	2.85E-02	1.28E-02	1.29E-02	3.97E-02	2.05E-03	4.71E-07	1.56E-02	4.85E-02
A13	0.00E+00	3.40E-04	2.53E-05	5.57E+02	4.47E-04	2.15E+00	3.52E-04	2.90E-01	1.95E-02	5.70E-03	3.24E-02	1.45E-02	1.47E-02	4.43E-02	2.33E-03	5.43E-07	1.76E-02	5.40E-02
A14	0.00E+00	3.08E-04	2.32E-05	5.20E+02	4.34E-04	2.08E+00	3.25E-04	2.61E-01	1.84E-02	5.33E-03	2.99E-02	1.37E-02	1.39E-02	3.97E-02	2.20E-03	5.13E-07	1.60E-02	4.86E-02
A15	0.00E+00	3.48E-04	2.58E-05	5.59E+02	4.33E-04	2.10E+00	3.55E-04	3.00E-01	1.94E-02	5.71E-03	3.25E-02	1.44E-02	1.46E-02	4.59E-02	2.32E-03	5.31E-07	1.79E-02	5.60E-02
A16	0.00E+00	3.39E-04	2.50E-05	5.28E+02	3.87E-04	1.90E+00	3.38E-04	2.98E-01	1.81E-02	5.39E-03	3.09E-02	1.35E-02	1.37E-02	4.55E-02	2.17E-03	4.84E-07	1.72E-02	5.55E-02
A17	0.00E+00	3.48E-04	2.58E-05	5.55E+02	4.27E-04	2.07E+00	3.53E-04	3.01E-01	1.93E-02	5.68E-03	3.24E-02	1.43E-02	1.45E-02	4.60E-02	2.31E-03	5.24E-07	1.78E-02	5.61E-02
A18	0.00E+00	3.31E-04	2.43E-05	5.09E+02	3.68E-04	1.81E+00	3.28E-04	2.91E-01	1.74E-02	5.20E-03	2.99E-02	1.30E-02	1.32E-02	4.45E-02	2.09E-03	4.64E-07	1.68E-02	5.43E-02
A19	0.00E+00	3.30E-04	2.44E-05	5.19E+02	3.88E-04	1.89E+00	3.32E-04	2.88E-01	1.79E-02	5.30E-03	3.03E-02	1.33E-02	1.35E-02	4.40E-02	2.14E-03	4.82E-07	1.68E-02	5.38E-02
A20	0.00E+00	3.11E-04	2.28E-05	4.73E+02	3.33E-04	1.64E+00	3.06E-04	2.75E-01	1.61E-02	4.82E-03	2.79E-02	1.20E-02	1.21E-02	4.21E-02	1.93E-03	4.26E-07	1.58E-02	5.13E-02
A21	0.00E+00	3.98E-04	2.94E-05	6.26E+02	4.69E-04	2.29E+00	4.00E-04	3.47E-01	2.16E-02	6.40E-03	3.66E-02	1.61E-02	1.63E-02	5.31E-02	2.59E-03	5.83E-07	2.03E-02	6.48E-02
A22	0.00E+00	3.53E-04	2.61E-05	5.61E+02	4.30E-04	2.09E+00	3.58E-04	3.05E-01	1.94E-02	5.74E-03	3.29E-02	1.45E-02	1.47E-02	4.68E-02	2.33E-03	5.33E-07	1.82E-02	5.68E-02
A23	0.00E+00	3.74E-04	2.73E-05	5.67E+02	3.97E-04	1.96E+00	3.67E-04	3.31E-01	1.93E-02	5.78E-03	3.36E-02	1.43E-02	1.45E-02	5.08E-02	2.31E-03	5.12E-07	1.90E-02	6.17E-02
A24	0.00E+00	3.22E-04	2.44E-05	5.68E+02	5.05E-04	2.39E+00	3.52E-04	2.64E-01	2.04E-02	5.84E-03	3.26E-02	1.51E-02	1.54E-02	4.05E-02	2.43E-03	5.94E-07	1.72E-02	4.91E-02
A25	0.00E+00	3.51E-04	2.56E-05	5.28E+02	3.64E-04	1.80E+00	3.43E-04	3.11E-01	1.79E-02	5.39E-03	3.14E-02	1.33E-02	1.35E-02	4.79E-02	2.15E-03	4.74E-07	1.79E-02	5.81E-02
A26	0.00E+00	2.76E-04	2.07E-05	4.74E+02	4.06E-04	1.94E+00	2.95E-04	2.29E-01	1.68E-02	4.86E-03	2.73E-02	1.25E-02	1.27E-02	3.52E-02	2.01E-03	4.85E-07	1.46E-02	4.26E-02
A27	0.00E+00	3.51E-04	2.56E-05	5.28E+02	3.64E-04	1.80E+00	3.43E-04	3.11E-01	1.79E-02	5.39E-03	3.14E-02	1.33E-02	1.35E-02	4.79E-02	2.15E-03	4.74E-07	1.79E-02	5.81E-02
A28	0.00E+00	2.76E-04	2.07E-05	4.74E+02	4.06E-04	1.94E+00	2.95E-04	2.29E-01	1.68E-02	4.86E-03	2.73E-02	1.25E-02	1.27E-02	3.52E-02	2.01E-03	4.85E-07	1.46E-02	4.26E-02
B09	0.00E+00	9.63E-05	7.33E-06	1.95E+02	1.92E-04	7.98E-01	1.15E-04	7.27E-02	9.55E-03	2.27E-03	1.10E-02	5.19E-03	5.28E-03	1.15E-02	8.62E-04	2.02E-07	5.69E-03	1.35E-02
B10	0.00E+00	2.08E-04	1.63E-05	4.03E+02	3.70E-04	1.59E+00	2.34E-04	1.76E-01	1.95E-02	4.66E-03	2.15E-02	1.06E-02	1.07E-02	2.60E-02	1.75E-03	3.56E-07	1.07E-02	3.27E-02
B11	0.00E+00	4.59E-05	3.36E-06	8.48E+01	7.57E-05	3.19E-01	5.17E-05	3.59E-02	4.00E-03	9.76E-04	4.96E-03	2.19E-03	2.23E-03	5.79E-03	3.66E-04	8.49E-08	2.73E-03	6.68E-03
B12	0.00E+00	7.61E-05	6.02E-06	1.58E+02	1.58E-04	6.62E-01	9.09E-05	6.01E-02	7.85E-03	1.84E-03	8.48E-03	4.24E-03	4.31E-03	9.00E-03	7.01E-04	1.55E-07	4.17E-03	1.11E-02
B13	0.00E+00	9.76E-05	7.61E-06	1.90E+02	1.77E-04	7.55E-01	1.11E-04	8.10E-02	9.22E-03	2.20E-03	1.02E-02	5.01E-03	5.09E-03	1.21E-02	8.30E-04	1.73E-07	5.15E-03	1.51E-02
B14	0.00E+00	4.31E-05	3.20E-06	8.25E+01	7.67E-05	3.21E-01	4.96E-05	3.33E-02	3.95E-03	9.53E-04	4.75E-03	2.16E-03	2.19E-03	5.32E-03	3.60E-04	8.36E-08	2.55E-03	6.19E-03
B15	0.00E+00	9.11E-05	7.03E-06	1.94E+02	2.01E-04	8.27E-01	1.13E-04	6.62E-02	9.68E-03	2.27E-03	1.08E-02	5.23E-03	5.33E-03	1.05E-02	8.68E-04	2.09E-07	5.48E-03	1.23E-02
B16	0.00E+00	1.09E-04	9.18E-06	2.95E+02	3.67E-04	1.47E+00	1.62E-04	6.41E-02	1.59E-02	3.54E-03	1.56E-02	8.44E-03	8.62E-03	9.92E-03	1.39E-03	3.60E-07	7.00E-03	1.17E-02
B17	0.00E+00	1.33E-04	9.28E-06	2.11E+02	1.51E-04	6.63E-01	1.36E-04	1.11E-01	9.25E-03	2.38E-03	1.30E-02	5.17E-03	5.24E-03	1.81E-02	8.72E-04	1.89E-07	7.74E-03	2.08E-02
B18	0.00E+00	1.28E-04	9.81E-06	2.75E+02	2.90E-04	1.19E+00	1.60E-04	9.02E-02	1.38E-02	3.23E-03	1.55E-02	7.45E-03	7.59E-03	1.45E-02	1.24E-03	3.05E-07	7.89E-03	1.67E-02
B19	0.00E+00	3.03E-04	2.20E-05	5.06E+02	3.87E-04	1.70E+00	3.14E-04	2.59E-01	2.28E-02	5.74E-03	2.95E-02	1.26E-02	1.28E-02	4.06E-02	2.11E-03	4.36E-07	1.67E-02	4.83E-02
B20	0.00E+00	3.11E-04	2.49E-05	6.96E+02	7.50E-04	3.09E+00	3.95E-04	2.27E-01	3.54E-02	8.19E-03	3.74E-02	1.90E-02	1.94E-02	3.45E-02	3.15E-03	7.42E-07	1.80E-02	4.19E-02
B21	0.00E+00	1.68E-04	1.25E-05	2.93E+02	2.37E-04	1.03E+00	1.78E-04	1.43E-01	1.35E-02	3.34E-03	1.66E-02	7.42E-03	7.52E-03	2.21E-02	1.24E-03	2.53E-07	9.09E-03	2.68E-02
B22	0.00E+00	2.05E-04	1.71E-05	5.03E+02	5.80E-04	2.37E+00	2.78E-04	1.43E-01	2.64E-02	5.97E-03	2.62E-02	1.41E-02	1.44E-02	2.11E-02	2.32E-03	5.54E-07	1.19E-02	2.63E-02
B23	0.00E+00	1.69E-04	1.25E-05	2.95E+02	2.40E-04	1.05E+00	1.79E-04	1.44E-01	1.36E-02	3.37E-03	1.67E-02	7.49E-03	7.59E-03	2.22E-02	1.25E-03	2.56E-07	9.13E-03	2.68E-02
B24	0.00E+00	3.39E-04	2.73E-05	7.80E+02	8.60E-04	3.52E+00	4.40E-04	2.41E-01	4.01E-02	9.20E-03	4.18E-02	2.15E-02	2.19E-02	3.67E-02	3.55E-03	8.50E-07	1.99E-02	4.44E-02
C29	0.00E+00	3.57E-06	2.89E-07	6.64E+00	8.22E-06	3.07E-02	4.41E-06	2.70E-03	8.37E-04	1.43E-04	4.15E-04	2.13E-04	2.17E-04	2.85E-04	3.04E-05	6.75E-09	1.97E-04	5.01E-04
C30	0.00E+00	8.39E-05	5.57E-06	5.96E+01	5.51E-05	1.98E-01	7.74E-05	7.81E-02	1.40E-02	2.23E-03	7.54E-03	2.56E-03	2.61E-03	5.66E-03	2.38E-04	3.88E-08	4.93E-03	1.47E-02
C31	0.00E+00	4.59E-05	3.30E-06	6.49E+01	8.46E-05	2.91E-01	5.43E-05	3.23E-02	1.02E-02	1.67E-03	5.36E-03	2.32E-03	2.37E-03	3.24E-03	2.92E-04	6.85E-08	3.01E-03	6.03E-03
C32	0.00E+00	6.48E-05	4.43E-06	6.90E+01	5.36E-05	2.10E-01	6.17E-05	5.65E-02	7.87E-03	1.45E-03	5.93E-03	2.18E-03	2.21E-03	6.19E-03	2.80E-04	5.22E-08	3.71E-03	1.06E-02
C33	0.00E+00	2.93E-06	2.72E-07	8.76E+00	1.50E-05	5.08E-02	5.44E-06	7.53E-04	1.44E-03	2.24E-04	5.33E-04	3.13E-04	3.20E-04	9.92E-05	4.32E-05	1.13E-08	2.14E-04	1.31E-04
C34	0.00E+00	1.12E-05	8.59E-07	1.68E+01	2.70E-05	8.91E-02	1.45E-05	7.12E-03	4.17E-03	6.14E-04	1.42E-03	6.79E-04	6.93E-04	5.85E-04	7.82E-05	1.69E-08	7.25E-04	1.33E-03
C35	0.00E+00	2.10E-05	1.54E-06	3.01E+01	3.24E-05	1.20E-01	2.30E-05	1.66E-02	3.64E-03	6.40E-04	2.21E-03	9.67E-04	9.85E-04	1.82E-03	1.32E-04	2.86E-08	1.23E-03	3.11E-03
C36	0.00E+00	1.37E-04	9.55E-06	1.18E+02	1.24E-04	4.71E-01	1.32E-04	1.29E-01	2.86E-02	4.45E-03	1.26E-02	4.83E-03	4.91E-03	9.24E-03	4.94E-04	8.00E-08	7.69E-03	2.42E-02
C37	0.00E+00	4.28E-05	2.86E-06	4.05E+01	3.52E-05	1.30E-01	4.12E-05	3.77E-02	6.13E-03	1.05E-03	4.03E-03	1.42E-03	1.44E-03	3.60E-03	1.65E-04	3.08E-08	2.59E-03	7.07E-03
C38	0.00E+00	7.61E-05	5.08E-06	7.32E+01	4.82E-05	1.93E-01	6.96E-05	6.77E-02	8.13E-03	1.53E-03	6.71E-03	2.30E-03	2.33E-03	7.44E-03	2.88E-04	5.04E-08	4.37E-03	1.27E-02
C39	0.00E+00	1.79E-05	1.35E-06	2.61E+01	3.22E-05	1.18E-01	2.06E-05	1.43E-02	4.16E-03	6.78E-04	1.97E-03	9.04E-04	9.22E-04	1.35E-03	1.17E-04	2.48E-08	1.05E-03	2.67E-03
C40	0.00E+00	2.59E-05	1.91E-06	3.01E+01	4.01E-05	1.43E-01	2.84E-05	2.18E-02	7.40E-03	1.12E-03	2.72E-03	1.20E-03	1.22E-03	1.61E-03	1.33E-04	2.49E-08	1.50E-03	4.08E-03
C41	0.00E+00	5.23E-05	3.93E-06	9.26E+01	8.40E-05	3.48E-01	5.76E-05	4.29E-02	5.98E-03	1.27E-03	5.39E-03	2.48E-03	2.52E-03	6.29E-03	4.00E-04	7.85E-08	2.88E-03	8.00E-03
C42	0.00E+00	2.66E-05	2.18E-06	6.41E+01	7.79E-05	3.02E-01	3.70E-05	1.68E-02	4.55E-03	9.08E-04	3.55E-03	1.86E-03	1.90E-03	2.50E-03	2.97E-04	7.14E-08	1.66E-03	3.10E-03
C43	0.00E+00	2.68E-05	1.91E-06	4.71E+01	4.40E-05	1.75E-01	3.05E-05	1.97E-02	2.98E-03	6.39E-04	2.99E-03	1.27E-03	1.29E-03	3.13E-03	2.04E-04	4.72E-08	1.71E-03	3.68E-03
C44	0.00E+00	2.14E-05	1.54E-06	3.70E+01	3.36E-05	1.36E-01	2.38E-05	1.64E-02	2.34E-03	5.03E-04	2.30E-03	9.89E-04	1.00E-03	2.54E-03	1.60E-04	3.49E-08	1.30E-03	3.06E-03
C45	0.00E+00	3.86E-05	2.69E-06	5.12E+01	5.45E-05	1.94E-01	4.19E-05	2.90E-02	6.04E-03	1.07E-03	4.14E-03	1.67E-03	1.70E-03	3.32E-03	2.22E-04	5.13E-08	2.43E-03	5.42E-03
C46	0.00E+00	8.76E-05	5.76E-06	6.20E+01	6.05E-05	2.05E-01	8.19E-05	7.91E-02	1.45E-02	2.30E-03	8.04E-03	2.71E-03	2.76E-03	5.80E-03	2.49E-04	4.33E-08	5.28E-03	1.49E-02
C47	0.00E+00	3.18E-10	2.82E-11	7.95E-04	1.26E-09	4.40E-06	5.10E-10	1.56E-07	1.30E-07	2.05E-08	4.91E-08	2.79E-08	2.86E-08	1.61E-08	3.83E-09	9.46E-13	2.06E-08	2.85E-08
C48	0.00E+00	9.14E-05	5.93E-06	7.64E+01	3.64E-05	1.55E-01	7.94E-05	8.31E-02	8.14E-03	1.58E-03	7.69E-03	2.39E-03	2.41E-03	9.17E-03	2.85E-04	4.45E-08	5.27E-03	1.56E-02
C49	0.00E+00	4.71E-05	3.47E-06	6.89E+01	8.86E-05	3.13E-01	5.56E-05	3.48E-02	1.09E-02	1.78E-03	5.42E-03	2.43E-03	2.48E-03	3.40E-03	3.10E-04	7.01E-08	2.96E-03	6.48E-03
C50	0.00E+00	2.57E-06	1.86E-07	2.33E+00	2.27E-06	9.58E-03	2.42E-06	2.60E-03	5.73E-04	8.89E-05	2.25E-04	9.07E-05	9.23E-05	1.82E-04	9.72E-06	1.36E-09	1.33E-04	4.90E-04
C51	0.00E+00	2.35E-05	1.80E-06	4.28E+01	5.57E-05	1.97E-01	3.01E-05	1.52E-02	5.31E-03	9.08E-04	2.95E-03	1.41E-03	1.44E-03	1.75E-03	1.97E-04	4.86E-08	1.51E-03	2.82E-03
C52	0.00E+00	1.70E-05	1.23E-06	2.03E+01	2.96E-05	9.86E-02	1.96E-05	1.26E-02	4.97E-03	7.46E-04	1.92E-03	8.34E-04	8.51E-04	9.80E-04	9.16E-05	1.90E-08	1.06E-03	2.36E-03
C53	0.00E+00	1.51E-05	1.12E-06	2.28E+01	2.98E-05	1.05E-01	1.82E-05	1.10E-02	3.61E-03	5.87E-04	1.77E-03	8.03E-04	8.19E-04	1.08E-03	1.03E-04	2.35E-08	9.53E-04	2.05E-03
C54	0.00E+00	2.31E-05	1.65E-06	3.23E+01	3.52E-05	1.27E-01	2.55E-05	1.75E-02	3.85E-03	6.79E-04	2.50E-03	1.05E-03	1.07E-03	1.97E-03	1.41E-04	3.22E-08	1.42E-03	3.26E-03
C55	0.00E+00	3.79E-05	2.72E-06	4.97E+01	5.96E-05	2.12E-01	4.24E-05	2.95E-02	7.80E-03	1.28E-03	4.13E-03	1.75E-03	1.78E-03	2.87E-03	2.19E-04	4.79E-08	2.35E-03	5.52E-03
C56	0.00E+00	2.94E-06	1.90E-07	2.24E+00	2.77E-06	8.10E-03	2.96E-06	2.32E-03	5.20E-04	8.15E-05	2.99E-04	1.02E-04	1.04E-04	1.80E-04	9.37E-06	2.02E-09	1.94E-04	4.36E-04
C57	0.00E+00	2.72E-05	2.04E-06	4.59E+01	5.70E-05	2.03E-01	3.32E-05	1.86E-02	5.63E-03	9.71E-04	3.25E-03	1.50E-03	1.53E-03	2.12E-03	2.09E-04	5.02E-08	1.72E-03	3.46E-03
C58	0.00E+00	4.87E-06	4.30E-07	1.09E+01	1.91E-05	6.43E-02	7.78E-06	2.21E-03	2.76E-03	3.99E-04	7.48E-04	4.24E-04	4.33E-04	2.05E-04	5.27E-05	1.16E-08	3.14E-04	4.07E-04
C59	0.00E+00	3.47E-06	2.95E-07	8.60E+00	1.27E-05	4.45E-02	5.36E-06	1.71E-03	1.10E-03	1.83E-04	5.26E-04	2.85E-04	2.91E-04	2.02E-04	4.13E-05	1.07E-08	2.34E-04	3.12E-04
C60	0.00E+00	3.47E-05	2.50E-06	4.65E+01	5.64E-05	2.00E-01	3.92E-05	2.68E-02	7.30E-03	1.20E-03	3.82E-03	1.64E-03	1.67E-03	2.61E-03	2.06E-04	4.52E-08	2.16E-03	5.01E-03
C61	0.00E+00	1.66E-05	1.43E-06	4.27E+01	6.36E-05	2.24E-01	2.62E-05	7.89E-03	5.49E-03	9.12E-04	2.57E-03	1.41E-03	1.45E-03	9.31E-04	2.06E-04	5.34E-08	1.11E-03	1.44E-03
C62	0.00E+00	2.71E-05	2.14E-06	4.46E+01	7.35E-05	2.43E-01	3.67E-05	1.61E-02	1.11E-02	1.63E-03	3.58E-03	1.78E-03	1.82E-03	1.36E-03	2.09E-04	4.56E-08	1.75E-03	3.01E-03
C63	0.00E+00	1.11E-04	7.47E-06	1.14E+02	1.14E-04	4.04E-01	1.13E-04	9.23E-02	1.74E-02	2.95E-03	1.11E-02	4.07E-03	4.13E-03	8.97E-03	4.79E-04	9.86E-08	6.98E-03	1.73E-02
C64	0.00E+00	7.54E-05	5.42E-06	1.11E+02	1.29E-04	4.57E-01	8.64E-05	5.43E-02	1.34E-02	2.35E-03	8.50E-03	3.64E-03	3.71E-03	6.21E-03	4.95E-04	1.17E-07	4.78E-03	1.01E-02
C65	0.00E+00	4.29E-07	4.56E-08	1.60E+00	2.77E-06	9.63E-03	9.05E-07	8.08E-05	2.67E-04	4.13E-05	8.65E-05	5.63E-05	5.77E-05	1.05E-05	7.98E-06	2.04E-09	2.90E-05	1.32E-05
C66	0.00E+00	2.98E-05	2.01E-06	2.46E+01	2.80E-05	9.46E-02	2.94E-05	2.58E-02	5.84E-03	9.11E-04	2.88E-03	1.05E-03	1.07E-03	1.92E-03	1.03E-04	1.91E-08	1.81E-03	4.86E-03
C67	0.00E+00	6.26E-05	4.62E-06	1.18E+02	1.18E-04	4.69E-01	7.40E-05	4.55E-02	7.72E-03	1.62E-03	7.18E-03	3.23E-03	3.29E-03	7.06E-03	5.21E-04	1.19E-07	3.90E-03	8.46E-03
C68	0.00E+00	7.14E-05	5.47E-06	1.56E+02	1.79E-04	6.90E-01	9.39E-05	4.53E-02	1.07E-02	2.17E-03	9.20E-03	4.43E-03	4.52E-03	7.15E-03	7.11E-04	1.76E-07	4.70E-03	8.37E-03
C69	0.00E+00	4.87E-05	3.28E-06	6.34E+01	5.36E-05	2.03E-01	5.02E-05	3.76E-02	5.31E-03	1.06E-03	4.95E-03	1.84E-03	1.87E-03	5.10E-03	2.65E-04	6.00E-08	3.08E-03	7.04E-03
C70	0.00E+00	9.98E-05	6.81E-06	1.48E+02	1.06E-04	4.46E-01	1.01E-04	8.17E-02	8.63E-03	1.95E-03	9.80E-03	3.73E-03	3.78E-03	1.28E-02	6.07E-04	1.24E-07	6.03E-03	1.53E-02
C71	0.00E+00	4.76E-05	3.42E-06	6.78E+01	7.49E-05	2.71E-01	5.30E-05	3.59E-02	8.12E-03	1.43E-03	5.18E-03	2.20E-03	2.24E-03	4.04E-03	2.98E-04	6.80E-08	2.93E-03	6.69E-03
C72	0.00E+00	2.61E-05	1.90E-06	3.39E+01	5.30E-05	1.71E-01	3.19E-05	1.72E-02	8.30E-03	1.23E-03	3.15E-03	1.40E-03	1.43E-03	1.40E-03	1.55E-04	3.40E-08	1.71E-03	3.22E-03
C73	0.00E+00	2.19E-05	1.52E-06	2.24E+01	2.89E-05	9.17E-02	2.35E-05	1.66E-02	4.28E-03	6.87E-04	2.30E-03	9.14E-04	9.32E-04	1.46E-03	9.68E-05	2.22E-08	1.37E-03	3.11E-03
C74	0.00E+00	1.66E-04	1.16E-05	2.08E+02	2.52E-04	8.69E-01	1.85E-04	1.24E-01	3.24E-02	5.35E-03	1.83E-02	7.45E-03	7.59E-03	1.23E-02	9.16E-04	2.08E-07	1.07E-02	2.32E-02
C81	0.00E+00	7.80E-05	5.53E-06	1.03E+02	1.07E-04	3.92E-01	8.35E-05	6.13E-02	1.23E-02	2.18E-03	8.12E-03	3.34E-03	3.40E-03	6.85E-03	4.48E-04	9.83E-08	4.71E-03	1.15E-02
C82	0.00E+00	1.16E-04	7.93E-06	1.31E+02	1.43E-04	5.02E-01	1.23E-04	9.25E-02	2.01E-02	3.37E-03	1.21E-02	4.66E-03	4.74E-03	9.06E-03	5.61E-04	1.21E-07	7.37E-03	1.73E-02
C83	0.00E+00	1.98E-04	1.35E-05	2.79E+02	1.52E-04	7.16E-01	1.86E-04	1.77E-01	1.13E-02	3.08E-03	1.76E-02	6.47E-03	6.52E-03	2.86E-02	1.10E-03	2.11E-07	1.11E-02	3.32E-02
C84	0.00E+00	7.95E-05	5.51E-06	1.23E+02	9.64E-05	4.00E-01	8.28E-05	6.40E-02	7.42E-03	1.65E-03	8.02E-03	3.18E-03	3.22E-03	9.99E-03	5.16E-04	1.08E-07	4.80E-03	1.20E-02
C85	0.00E+00	7.42E-05	5.00E-06	1.03E+02	6.43E-05	2.81E-01	7.19E-05	6.30E-02	5.81E-03	1.34E-03	6.93E-03	2.53E-03	2.56E-03	9.83E-03	4.13E-04	7.85E-08	4.38E-03	1.18E-02
C86	0.00E+00	1.25E-04	8.99E-06	2.23E+02	2.11E-04	8.43E-01	1.43E-04	9.24E-02	1.43E-02	3.04E-03	1.39E-02	6.02E-03	6.12E-03	1.45E-02	9.72E-04	2.21E-07	7.82E-03	1.72E-02
D63	0.00E+00	1.83E-05	1.23E-06	2.02E+01	1.85E-05	6.74E-02	1.84E-05	1.47E-02	2.33E-03	4.25E-04	1.81E-03	6.66E-04	6.76E-04	1.67E-03	8.36E-05	1.82E-08	1.14E-03	2.75E-03
D64	0.00E+00	3.74E-06	2.74E-07	5.92E+00	7.59E-06	2.69E-02	4.56E-06	2.49E-03	7.37E-04	1.27E-04	4.51E-04	2.01E-04	2.05E-04	2.90E-04	2.67E-05	6.68E-09	2.45E-04	4.62E-04
D65	0.00E+00	5.01E-05	3.76E-06	8.96E+01	1.04E-04	3.91E-01	6.14E-05	3.42E-02	8.00E-03	1.52E-03	5.97E-03	2.76E-03	2.82E-03	4.54E-03	4.04E-04	9.93E-08	3.15E-03	6.36E-03
D66	0.00E+00	4.48E-05	3.26E-06	6.79E+01	6.71E-05	2.61E-01	4.90E-05	3.49E-02	5.89E-03	1.15E-03	4.69E-03	2.03E-03	2.06E-03

Appendix F.4.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D82	0.00E+00	6.74E-06	6.20E-07	1.85E+01	2.91E-05	1.05E-01	1.13E-05	3.12E-03	2.48E-03	4.09E-04	1.08E-03	6.34E-04	6.49E-04	3.49E-04	8.93E-05	2.31E-08	4.30E-04	5.64E-04
D83	0.00E+00	6.26E-05	4.49E-06	9.18E+01	8.82E-05	3.42E-01	6.76E-05	4.88E-02	7.88E-03	1.54E-03	6.51E-03	2.73E-03	2.78E-03	6.36E-03	3.95E-04	8.73E-08	3.72E-03	9.13E-03
D84	0.00E+00	7.78E-05	5.73E-06	1.07E+02	9.04E-05	3.76E-01	7.83E-05	6.79E-02	9.24E-03	1.82E-03	7.23E-03	3.12E-03	3.16E-03	8.38E-03	4.50E-04	8.27E-08	4.06E-03	1.27E-02
D85	0.00E+00	6.35E-05	4.50E-06	8.60E+01	7.43E-05	2.96E-01	6.51E-05	5.21E-02	7.26E-03	1.44E-03	6.21E-03	2.52E-03	2.56E-03	6.71E-03	3.61E-04	7.45E-08	3.65E-03	9.75E-03
D86	0.00E+00	7.58E-05	5.67E-06	1.10E+02	9.87E-05	4.06E-01	7.84E-05	6.54E-02	9.60E-03	1.88E-03	7.23E-03	3.23E-03	3.28E-03	8.02E-03	4.68E-04	8.84E-08	3.95E-03	1.23E-02
D87	0.00E+00	1.08E-04	7.48E-06	1.35E+02	1.05E-04	4.25E-01	1.06E-04	9.06E-02	1.12E-02	2.26E-03	1.01E-02	3.90E-03	3.96E-03	1.17E-02	5.56E-04	1.10E-07	6.17E-03	1.70E-02
D88	0.00E+00	1.52E-04	1.13E-05	2.19E+02	1.96E-04	8.01E-01	1.58E-04	1.30E-01	1.90E-02	3.73E-03	1.46E-02	6.43E-03	6.53E-03	1.61E-02	9.30E-04	1.79E-07	8.09E-03	2.44E-02
D89	0.00E+00	6.72E-06	5.30E-07	1.09E+01	1.59E-05	5.70E-02	8.51E-06	4.83E-03	1.81E-03	2.92E-04	8.17E-04	4.05E-04	4.13E-04	4.62E-04	4.99E-05	1.19E-08	4.05E-04	9.00E-04
D90	0.00E+00	1.39E-05	1.02E-06	1.92E+01	2.63E-05	9.28E-02	1.64E-05	1.02E-02	3.13E-03	5.12E-04	1.61E-03	7.19E-04	7.33E-04	9.95E-04	8.60E-05	2.06E-08	8.74E-04	1.90E-03
D91	0.00E+00	2.15E-05	1.80E-06	4.70E+01	6.87E-05	2.48E-01	3.10E-05	1.26E-02	6.17E-03	1.03E-03	2.97E-03	1.60E-03	1.64E-03	1.41E-03	2.22E-04	5.56E-08	1.34E-03	2.32E-03
D92	0.00E+00	5.90E-06	4.92E-07	1.24E+01	1.76E-05	6.41E-02	8.22E-06	3.71E-03	1.62E-03	2.72E-04	7.85E-04	4.19E-04	4.28E-04	4.07E-04	5.79E-05	1.42E-08	3.57E-04	6.84E-04
D93	0.00E+00	2.00E-05	1.66E-06	4.29E+01	6.22E-05	2.24E-01	2.85E-05	1.18E-02	5.62E-03	9.42E-04	2.74E-03	1.46E-03	1.49E-03	1.33E-03	2.02E-04	5.06E-08	1.25E-03	2.18E-03
D94	0.00E+00	4.32E-06	3.62E-07	9.53E+00	1.40E-05	5.04E-02	6.29E-06	2.46E-03	1.25E-03	2.09E-04	6.07E-04	3.25E-04	3.33E-04	2.78E-04	4.50E-05	1.14E-08	2.74E-04	4.53E-04
E01	0.00E+00	1.71E-05	1.28E-06	2.60E+01	3.85E-05	1.33E-01	2.16E-05	1.13E-02	4.28E-03	6.92E-04	2.13E-03	9.88E-04	1.01E-03	1.13E-03	1.19E-04	3.02E-08	1.12E-03	2.10E-03
E02	0.00E+00	4.46E-05	3.21E-06	5.58E+01	7.02E-05	2.52E-01	4.97E-05	3.51E-02	9.00E-03	1.49E-03	4.85E-03	2.07E-03	2.10E-03	3.38E-03	2.44E-04	5.56E-08	2.74E-03	6.56E-03
E03	0.00E+00	1.45E-05	1.22E-06	3.44E+01	4.70E-05	1.75E-01	2.11E-05	8.39E-03	3.24E-03	5.93E-04	2.02E-03	1.09E-03	1.12E-03	1.07E-03	1.63E-04	4.15E-08	9.05E-04	1.54E-03
E04	0.00E+00	1.82E-05	1.42E-06	3.35E+01	3.89E-05	1.48E-01	2.22E-05	1.32E-02	3.03E-03	5.72E-04	2.11E-03	1.03E-03	1.05E-03	1.67E-03	1.51E-04	3.51E-08	1.06E-03	2.45E-03
E05	0.00E+00	8.89E-06	6.69E-07	1.57E+01	1.80E-05	6.77E-02	1.07E-05	6.23E-03	1.40E-03	2.66E-04	1.04E-03	4.82E-04	4.91E-04	8.17E-04	7.05E-05	1.70E-08	5.48E-04	1.16E-03
E06	0.00E+00	1.72E-05	1.37E-06	3.59E+01	4.59E-05	1.71E-01	2.30E-05	1.09E-02	3.31E-03	6.14E-04	2.22E-03	1.12E-03	1.15E-03	1.41E-03	1.66E-04	4.14E-08	1.07E-03	2.02E-03
E07	0.00E+00	1.91E-04	1.43E-05	2.69E+02	3.68E-04	1.31E+00	2.26E-04	1.43E-01	4.41E-02	7.19E-03	2.19E-02	1.00E-02	1.02E-02	1.38E-02	1.21E-03	2.85E-07	1.17E-02	2.66E-02
E08	0.00E+00	1.15E-04	8.49E-06	1.64E+02	2.33E-04	8.11E-01	1.40E-04	8.02E-02	2.68E-02	4.37E-03	1.37E-02	6.19E-03	6.32E-03	7.96E-03	7.42E-04	1.83E-07	7.41E-03	1.49E-02
E09	0.00E+00	1.66E-04	1.26E-05	2.44E+02	3.40E-04	1.21E+00	2.01E-04	1.23E-01	4.01E-02	6.52E-03	1.94E-02	9.07E-03	9.25E-03	1.19E-02	1.10E-03	2.61E-07	1.02E-02	2.29E-02
E10	0.00E+00	1.13E-04	8.49E-06	1.70E+02	2.46E-04	8.59E-01	1.40E-04	7.74E-02	2.79E-02	4.52E-03	1.38E-02	6.39E-03	6.52E-03	7.67E-03	7.72E-04	1.92E-07	7.24E-03	1.44E-02
E11	0.00E+00	1.59E-04	1.21E-05	2.41E+02	3.48E-04	1.23E+00	1.97E-04	1.11E-01	3.98E-02	6.44E-03	1.92E-02	9.05E-03	9.23E-03	1.09E-02	1.10E-03	2.69E-07	9.99E-03	2.06E-02
E12	0.00E+00	1.52E-04	1.11E-05	1.96E+02	2.48E-04	9.02E-01	1.70E-04	1.21E-01	3.18E-02	5.24E-03	1.65E-02	7.22E-03	7.35E-03	1.15E-02	8.62E-04	1.93E-07	9.13E-03	2.26E-02
E13	0.00E+00	2.69E-05	2.14E-06	5.67E+01	7.32E-05	2.72E-01	3.65E-05	1.66E-02	5.22E-03	9.69E-04	3.54E-03	1.78E-03	1.82E-03	2.19E-03	2.63E-04	6.68E-08	1.71E-03	3.08E-03
E14	0.00E+00	5.51E-05	4.28E-06	1.05E+02	1.26E-04	4.73E-01	6.93E-05	3.77E-02	9.48E-03	1.78E-03	6.67E-03	3.24E-03	3.30E-03	4.87E-03	4.76E-04	1.15E-07	3.36E-03	7.00E-03
E15	0.00E+00	1.40E-05	1.13E-06	2.99E+01	3.88E-05	1.45E-01	1.90E-05	8.78E-03	2.77E-03	5.13E-04	1.83E-03	9.40E-04	9.60E-04	1.13E-03	1.39E-04	3.48E-08	8.65E-04	1.62E-03
E16	0.00E+00	3.70E-05	2.88E-06	6.18E+01	6.42E-05	2.56E-01	4.15E-05	3.03E-02	5.55E-03	1.06E-03	3.84E-03	1.85E-03	1.89E-03	3.68E-03	2.72E-04	5.58E-08	1.95E-03	5.66E-03
E17	0.00E+00	1.09E-05	7.82E-07	1.79E+01	1.98E-05	7.32E-02	1.28E-05	7.48E-03	1.56E-03	3.00E-04	1.27E-03	5.46E-04	5.57E-04	1.02E-03	7.94E-05	1.98E-08	7.10E-04	1.39E-03
E18	0.00E+00	1.42E-05	1.27E-06	3.90E+01	5.65E-05	2.09E-01	2.28E-05	7.20E-03	3.74E-03	6.76E-04	2.19E-03	1.25E-03	1.28E-03	9.02E-04	1.88E-04	4.89E-08	9.05E-04	1.31E-03
E19	0.00E+00	7.43E-05	5.47E-06	1.05E+02	1.49E-04	5.17E-01	9.00E-05	5.18E-02	1.72E-02	2.80E-03	8.85E-03	3.97E-03	4.05E-03	5.15E-03	4.75E-04	1.17E-07	4.81E-03	9.66E-03
E20	0.00E+00	3.65E-05	2.73E-06	5.60E+01	8.41E-05	2.88E-01	4.67E-05	2.32E-02	9.20E-03	1.49E-03	4.62E-03	2.14E-03	2.18E-03	2.37E-03	2.57E-04	6.62E-08	2.44E-03	4.32E-03
E21	0.00E+00	1.85E-06	1.36E-07	2.52E+00	2.08E-06	8.72E-03	1.85E-06	1.63E-03	2.17E-04	4.29E-05	1.71E-04	7.31E-05	7.41E-05	2.01E-04	1.05E-05	1.91E-09	9.64E-05	3.06E-04
E22	0.00E+00	8.60E-06	6.58E-07	1.48E+01	1.63E-05	6.29E-02	1.01E-05	6.49E-03	1.33E-03	2.53E-04	9.55E-04	4.51E-04	4.59E-04	8.20E-04	6.60E-05	1.49E-08	4.95E-04	1.21E-03
E23	0.00E+00	1.04E-04	6.90E-06	1.13E+02	6.81E-05	2.85E-01	9.61E-05	8.93E-02	8.87E-03	1.86E-03	9.27E-03	3.18E-03	3.21E-03	1.17E-02	4.44E-04	8.25E-08	6.05E-03	1.68E-02
E24	0.00E+00	8.13E-05	5.86E-06	1.20E+02	1.15E-04	4.47E-01	8.76E-05	6.39E-02	1.03E-02	2.01E-03	8.39E-03	3.56E-03	3.62E-03	8.27E-03	5.14E-04	1.12E-07	4.77E-03	1.20E-02
E25	0.00E+00	1.96E-05	1.64E-06	4.20E+01	6.05E-05	2.20E-01	2.77E-05	1.20E-02	5.52E-03	9.25E-04	2.65E-03	1.43E-03	1.46E-03	1.32E-03	1.98E-04	4.89E-08	1.20E-03	2.21E-03
E26	0.00E+00	1.35E-05	1.22E-06	3.49E+01	5.37E-05	1.94E-01	2.15E-05	7.04E-03	4.67E-03	7.72E-04	2.05E-03	1.19E-03	1.22E-03	7.70E-04	1.67E-04	4.25E-08	8.33E-04	1.28E-03
E27	0.00E+00	2.52E-05	1.97E-06	4.44E+01	5.82E-05	2.12E-01	3.17E-05	1.75E-02	5.67E-03	9.68E-04	3.05E-03	1.49E-03	1.52E-03	1.93E-03	2.03E-04	4.83E-08	1.53E-03	3.25E-03
E28	0.00E+00	5.66E-06	4.84E-07	1.31E+01	1.96E-05	7.04E-02	8.48E-06	3.12E-03	1.73E-03	2.88E-04	8.16E-04	4.48E-04	4.57E-04	3.51E-04	6.22E-05	1.58E-08	3.58E-04	5.72E-04
E29	0.00E+00	3.40E-06	2.77E-07	6.74E+00	9.36E-06	3.41E-02	4.58E-06	2.21E-03	8.75E-04	1.48E-04	4.38E-04	2.28E-04	2.32E-04	2.43E-04	3.13E-05	7.62E-09	2.05E-04	4.09E-04
E30	0.00E+00	1.95E-05	1.56E-06	3.71E+01	5.09E-05	1.85E-01	2.57E-05	1.27E-02	4.79E-03	8.12E-04	2.48E-03	1.26E-03	1.28E-03	1.42E-03	1.72E-04	4.19E-08	1.19E-03	2.36E-03
E31	0.00E+00	9.72E-06	7.48E-07	1.72E+01	2.30E-05	8.26E-02	1.25E-05	6.35E-03	2.19E-03	3.73E-04	1.21E-03	5.83E-04	5.95E-04	7.24E-04	7.88E-05	1.95E-08	6.18E-04	1.18E-03
E32	0.00E+00	2.73E-05	2.32E-06	6.21E+01	9.23E-05	3.32E-01	4.04E-05	1.54E-02	8.19E-03	1.37E-03	3.88E-03	2.12E-03	2.17E-03	1.72E-03	2.95E-04	7.46E-08	1.71E-03	2.82E-03
E33	0.00E+00	2.19E-05	1.71E-06	3.67E+01	5.60E-05	1.96E-01	2.89E-05	1.42E-02	6.11E-03	9.81E-04	2.81E-03	1.38E-03	1.41E-03	1.41E-03	1.70E-04	4.28E-08	1.40E-03	2.64E-03
E34	0.00E+00	6.83E-05	5.33E-06	1.11E+02	1.65E-04	5.84E-01	8.78E-05	4.66E-02	1.84E-02	2.97E-03	8.52E-03	4.17E-03	4.25E-03	4.56E-03	5.10E-04	1.26E-07	4.27E-03	8.67E-03
E35	0.00E+00	3.85E-05	2.92E-06	5.81E+01	8.35E-05	2.95E-01	4.77E-05	2.71E-02	9.57E-03	1.55E-03	4.64E-03	2.18E-03	2.22E-03	2.66E-03	2.64E-04	6.45E-08	2.42E-03	5.05E-03
E36	0.00E+00	6.23E-05	4.84E-06	1.00E+02	1.48E-04	5.24E-01	7.97E-05	4.28E-02	1.66E-02	2.68E-03	7.73E-03	3.76E-03	3.83E-03	4.18E-03	4.60E-04	1.13E-07	3.90E-03	7.96E-03
E37	0.00E+00	4.97E-05	3.55E-06	6.30E+01	8.21E-05	2.88E-01	5.65E-05	3.73E-02	1.01E-02	1.67E-03	5.56E-03	2.36E-03	2.40E-03	3.66E-03	2.78E-04	6.57E-08	3.16E-03	6.96E-03
E38	0.00E+00	8.68E-05	6.45E-06	1.21E+02	1.63E-04	5.82E-01	1.02E-04	6.52E-02	1.97E-02	3.21E-03	9.91E-03	4.48E-03	4.57E-03	6.30E-03	5.39E-04	1.27E-07	5.35E-03	1.22E-02
E39	0.00E+00	2.22E-05	1.83E-06	4.71E+01	6.84E-05	2.45E-01	3.16E-05	1.30E-02	6.15E-03	1.03E-03	3.06E-03	1.61E-03	1.64E-03	1.47E-03	2.21E-04	5.61E-08	1.41E-03	2.39E-03
E40	0.00E+00	1.40E-05	1.25E-06	3.59E+01	5.55E-05	1.99E-01	2.24E-05	7.01E-03	4.79E-03	7.92E-04	2.15E-03	1.23E-03	1.26E-03	7.86E-04	1.72E-04	4.44E-08	8.91E-04	1.28E-03
E41	0.00E+00	1.08E-05	1.08E-06	3.52E+01	5.80E-05	2.08E-01	2.04E-05	3.79E-03	4.79E-03	7.82E-04	1.94E-03	1.21E-03	1.24E-03	4.23E-04	1.73E-04	4.55E-08	7.01E-04	6.67E-04
E42	0.00E+00	1.15E-05	9.86E-07	2.57E+01	3.73E-05	1.36E-01	1.66E-05	7.02E-03	3.39E-03	5.67E-04	1.58E-03	8.70E-04	8.89E-04	7.61E-04	1.21E-04	2.98E-08	6.86E-04	1.29E-03
E43	0.00E+00	8.85E-06	9.17E-07	3.18E+01	5.40E-05	1.92E-01	1.80E-05	2.20E-03	4.36E-03	7.08E-04	1.73E-03	1.10E-03	1.13E-03	2.58E-04	1.58E-04	4.23E-08	5.97E-04	3.72E-04
E44	0.00E+00	1.12E-05	1.02E-06	3.03E+01	4.78E-05	1.71E-01	1.86E-05	5.22E-03	4.07E-03	6.71E-04	1.78E-03	1.04E-03	1.07E-03	5.85E-04	1.47E-04	3.80E-08	7.13E-04	9.46E-04
E45	0.00E+00	4.56E-06	3.62E-07	9.16E+00	1.14E-05	4.28E-02	5.92E-06	3.05E-03	8.40E-04	1.57E-04	5.67E-04	2.85E-04	2.91E-04	3.90E-04	4.21E-05	1.02E-08	2.75E-04	5.66E-04
E46	0.00E+00	2.23E-05	1.76E-06	4.59E+01	5.84E-05	2.17E-01	2.97E-05	1.40E-02	4.21E-03	7.83E-04	2.88E-03	1.44E-03	1.47E-03	1.84E-03	2.12E-04	5.35E-08	1.41E-03	2.59E-03
E47	0.00E+00	4.50E-06	3.46E-07	8.36E+00	9.91E-06	3.73E-02	5.59E-06	3.10E-03	7.54E-04	1.42E-04	5.40E-04	2.58E-04	2.63E-04	4.03E-04	3.79E-05	9.17E-09	2.76E-04	5.76E-04
E48	0.00E+00	2.33E-05	2.03E-06	6.13E+01	8.78E-05	3.24E-01	3.64E-05	1.19E-02	5.83E-03	1.06E-03	3.52E-03	1.97E-03	2.01E-03	1.53E-03	2.94E-04	7.69E-08	1.50E-03	2.17E-03
E49	0.00E+00	4.25E-06	3.52E-07	8.83E+00	1.09E-05	4.20E-02	5.52E-06	3.03E-03	8.21E-04	1.53E-04	5.17E-04	2.74E-04	2.80E-04	3.67E-04	4.07E-05	9.39E-09	2.36E-04	5.62E-04
E50	0.00E+00	5.63E-05	4.08E-06	8.13E+01	7.54E-05	2.99E-01	5.95E-05	4.56E-02	6.99E-03	1.37E-03	5.65E-03	2.40E-03	2.44E-03	5.82E-03	3.47E-04	7.26E-08	3.20E-03	8.54E-03
E51	0.00E+00	1.24E-06	1.05E-07	2.64E+00	3.29E-06	1.27E-02	1.63E-06	8.93E-04	2.46E-04	4.57E-05	1.51E-04	8.18E-05	8.35E-05	1.07E-04	1.22E-05	2.78E-09	6.77E-05	1.66E-04
E52	0.00E+00	5.17E-05	3.65E-06	6.73E+01	5.43E-05	2.21E-01	5.16E-05	4.36E-02	5.63E-03	1.13E-03	4.89E-03	1.95E-03	1.98E-03	5.57E-03	2.79E-04	5.47E-08	2.91E-03	8.18E-03
E53	0.00E+00	3.03E-05	2.17E-06	4.25E+01	3.82E-05	1.51E-01	3.16E-05	2.46E-02	3.62E-03	7.14E-04	3.02E-03	1.25E-03	1.27E-03	3.16E-03	1.80E-04	3.77E-08	1.74E-03	4.60E-03
E54	0.00E+00	5.64E-05	4.21E-06	9.22E+01	9.76E-05	3.76E-01	6.43E-05	4.28E-02	8.14E-03	1.56E-03	6.14E-03	2.79E-03	2.84E-03	5.48E-03	4.06E-04	9.15E-08	3.30E-03	7.99E-03
E55	0.00E+00	1.81E-05	1.27E-06	2.46E+01	2.16E-05	8.52E-02	1.87E-05	1.45E-02	2.07E-03	4.12E-04	1.79E-03	7.23E-04	7.34E-04	1.89E-03	1.04E-04	2.20E-08	1.06E-03	2.72E-03
E56	0.00E+00	4.65E-05	3.47E-06	7.46E+01	7.72E-05	3.00E-01	5.23E-05	3.61E-02	6.57E-03	1.27E-03	4.97E-03	2.25E-03	2.28E-03	4.59E-03	3.27E-04	7.21E-08	2.68E-03	6.74E-03
E57	0.00E+00	2.07E-05	1.71E-06	4.25E+01	6.00E-05	2.18E-01	2.85E-05	1.31E-02	5.54E-03	9.33E-04	2.73E-03	1.44E-03	1.47E-03	1.45E-03	1.98E-04	4.87E-08	1.26E-03	2.43E-03
E58	0.00E+00	2.09E-05	1.65E-06	3.75E+01	4.95E-05	1.81E-01	2.65E-05	1.45E-02	4.82E-03	8.21E-04	2.54E-03	1.26E-03	1.29E-03	1.60E-03	1.72E-04	4.07E-08	1.25E-03	2.70E-03
E59	0.00E+00	1.00E-04	7.09E-06	1.42E+02	1.32E-04	5.11E-01	1.06E-04	7.86E-02	1.21E-02	2.38E-03	1.02E-02	4.20E-03	4.27E-03	1.03E-02	6.05E-04	1.33E-07	5.96E-03	1.47E-02
E60	0.00E+00	7.55E-05	5.58E-06	1.28E+02	1.44E-04	5.40E-01	8.96E-05	5.32E-02	1.13E-02	2.17E-03	8.71E-03	3.92E-03	4.00E-03	7.04E-03	5.72E-04	1.38E-07	4.71E-03	9.90E-03
E61	0.00E+00	1.48E-05	1.37E-06	4.52E+01	6.85E-05	2.51E-01	2.58E-05	6.14E-03	4.38E-03	7.85E-04	2.50E-03	1.47E-03	1.50E-03	7.82E-04	2.21E-04	5.92E-08	9.88E-04	1.10E-03
E62	0.00E+00	2.23E-05	1.83E-06	4.97E+01	6.55E-05	2.44E-01	3.10E-05	1.37E-02	4.63E-03	8.54E-04	2.98E-03	1.57E-03	1.60E-03	1.76E-03	2.32E-04	5.83E-08	1.38E-03	2.53E-03
E63	0.00E+00	1.38E-04	1.01E-05	1.97E+02	2.23E-04	8.26E-01	1.55E-04	1.06E-01	2.42E-02	4.24E-03	1.49E-02	6.53E-03	6.64E-03	1.18E-02	8.62E-04	1.94E-07	8.26E-03	1.98E-02
E64	0.00E+00	8.87E-05	6.43E-06	1.25E+02	1.44E-04	5.26E-01	9.96E-05	6.69E-02	1.54E-02	2.70E-03	9.67E-03	4.18E-03	4.26E-03	7.49E-03	5.51E-04	1.26E-07	5.40E-03	1.25E-02
E65	0.00E+00	6.25E-05	5.31E-06	1.40E+02	2.05E-04	7.42E-01	9.09E-05	3.67E-02	1.84E-02	3.08E-03	8.71E-03	4.76E-03	4.86E-03	4.05E-03	6.60E-04	1.65E-07	3.85E-03	6.75E-03
E66	0.00E+00	4.29E-05	3.41E-06	7.78E+01	1.03E-04	3.78E-01	5.45E-05	3.01E-02	1.00E-02	1.70E-03	5.20E-03	2.61E-03	2.66E-03	3.28E-03	3.56E-04	8.40E-08	2.54E-03	5.58E-03
E67	0.00E+00	1.44E-05	1.31E-06	4.23E+01	6.31E-05	2.31E-01	2.44E-05	6.29E-03	4.07E-03	7.32E-04	2.37E-03	1.37E-03	1.40E-03	8.13E-04	2.05E-04	5.50E-08	9.65E-04	1.13E-03
E68	0.00E+00	2.43E-05	1.98E-06	5.33E+01	7.00E-05	2.61E-01	3.35E-05	1.50E-02	4.95E-03	9.15E-04	3.23E-03	1.68E-03	1.71E-03	1.92E-03	2.49E-04	6.26E-08	1.51E-03	2.76E-03
E69	0.00E+00	1.23E-05	1.26E-06	4.37E+01	7.41E-05	2.63E-01	2.49E-05	3.04E-03	5.98E-03	9.71E-04	2.39E-03	1.52E-03	1.55E-03	3.63E-04	2.16E-04	5.83E-08	8.37E-04	5.14E-04
E70	0.00E+00	2.91E-05	2.56E-06	7.52E+01	1.18E-04	4.20E-01	4.75E-05	1.29E-02	1.00E-02	1.65E-03	4.62E-03	2.60E-03	2.66E-03	1.53E-03	3.63E-04	9.60E-08	1.96E-03	2.35E-03
E71	0.00E+00	2.54E-05	2.62E-06	9.04E+01	1.53E-04	5.45E-01	5.13E-05	6.57E-03	1.24E-02	2.01E-03	4.92E-03	3.13E-03	3.21E-03	7.66E-04	4.47E-04	1.20E-07	1.71E-03	1.12E-03
E72	0.00E+00	3.48E-05	3.08E-06	9.09E+01	1.44E-04	5.09E-01	5.72E-05	1.53E-02	1.21E-02	2.00E-03	5.56E-03	3.14E-03	3.21E-03	1.81E-03	4.39E-04	1.16E-07	2.35E-03	2.77E-03
E73	0.00E+00	1.59E-05	1.23E-06	2.42E+01	3.40E-05	1.23E-01	1.94E-05	1.19E-02	4.00E-03	6.49E-04	1.87E-03	8.96E-04	9.13E-04	1.13E-03	1.10E-04	2.57E-08	9.53E-04	2.21E-03
E74	0.00E+00	3.00E-06	3.00E-07	8.90E+00	1.62E-05	5.68E-02	5.65E-06	1.02E-03	1.54E-03	2.40E-04	5.41E-04	3.39E-04	3.47E-04	1.07E-04	4.37E-05	1.18E-08	1.94E-04	1.80E-04
E75	0.00E+00	7.06E-05	5.69E-06	1.36E+02	1.74E-04	6.38E-01	9.03E-05	5.00E-02	1.71E-02	2.91E-03	8.60E-03	4.39E-03	4.48E-03	5.40E-03	6.27E-04	1.45E-07	4.11E-03	9.27E-03
E76	0.00E+00	1.19E-04	9.32E-06	2.05E+02	2.45E-04	9.09E-01	1.42E-04	9.10E-02	2.55E-02	4.38E-03	1.35E-02	6.57E-03	6.70E-03	9.76E-03	9.26E-04	2.05E-07	6.75E-03	1.69E-02
E77	0.00E+00	8.39E-05	6.83E-06	1.65E+02	2.13E-04	7.80E-01	1.08E-04	5.91E-02	2.08E-02	3.53E-03	1.03E-02	5.32E-03	5.44E-03	6.36E-03	7.62E-04	1.76E-07	4.86E-03	1.10E-02
E78	0.00E+00	1.33E-04	1.04E-05	2.27E+02	2.71E-04	1.01E+00	1.58E-04	1.01E-01	2.82E-02	4.86E-03	1.50E-02	7.29E-03	7.44E-03	1.09E-02	1.03E-03	2.28E-07	7.54E-03	1.89E-02
E79	0.00E+00	5.84E-05	4.93E-06	1.40E+02	2.04E-04	7.20E-01	8.80E-05	3.05E-02	1.80E-02	3.00E-03	8.60E-03	4.63E-03	4.74E-03	3.54E-03	6.71E-04	1.72E-07	3.84E-03	5.59E-03
E80	0.00E+00	4.44E-05	3.14E-06	5.72E+01	5.71E-05	2.11E-01	4.66E-05	3.57E-02	6.77E-03	1.21E-03	4.51E-03	1.84E-03	1.87E-03	3.96E-03	2.46E-04	5.25E-08	2.64E-03	6.68E-03
E81	0.00E+00	3.77E-07	4.02E-08	1.29E+00	2.44E-06	8.50E-03	7.95E-07	6.82E-05	2.26E-04	3.49E-05	7.63E-05	4.96E-05	5.08E-05

Appendix F.4.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E97	0.00E+00	4.97E-05	3.56E-06	7.54E+01	7.37E-05	2.82E-01	5.45E-05	3.80E-02	6.68E-03	1.29E-03	5.27E-03	2.23E-03	2.26E-03	4.98E-03	3.27E-04	7.31E-08	3.01E-03	7.09E-03
E98	0.00E+00	1.08E-04	8.15E-06	1.87E+02	2.03E-04	7.75E-01	1.26E-04	8.01E-02	1.72E-02	3.24E-03	1.21E-02	5.61E-03	5.70E-03	1.02E-02	8.34E-04	1.88E-07	6.35E-03	1.49E-02
F01	0.00E+00	4.96E-05	3.64E-06	6.66E+01	8.86E-05	3.15E-01	5.75E-05	3.75E-02	1.08E-02	1.77E-03	5.61E-03	2.48E-03	2.53E-03	3.64E-03	2.96E-04	6.95E-08	3.09E-03	7.00E-03
F02	0.00E+00	3.04E-05	2.58E-06	6.33E+01	1.05E-04	3.68E-01	4.57E-05	1.65E-02	1.07E-02	1.70E-03	4.43E-03	2.40E-03	2.46E-03	1.67E-03	3.01E-04	7.89E-08	1.97E-03	3.03E-03
F03	0.00E+00	1.54E-06	1.22E-07	2.88E+00	3.36E-06	1.29E-02	1.89E-06	1.13E-03	2.62E-04	4.94E-05	1.79E-04	8.85E-05	9.02E-05	1.41E-04	1.30E-05	2.99E-09	8.84E-05	2.10E-04
F04	0.00E+00	1.33E-06	1.09E-07	2.58E+00	3.02E-06	1.18E-02	1.63E-06	1.03E-03	2.39E-04	4.47E-05	1.50E-04	7.91E-05	8.07E-05	1.22E-04	1.17E-05	2.54E-09	6.93E-05	1.91E-04
F05	0.00E+00	3.74E-05	2.85E-06	5.61E+01	7.91E-05	2.83E-01	4.57E-05	2.73E-02	9.25E-03	1.50E-03	4.42E-03	2.09E-03	2.13E-03	2.64E-03	2.54E-04	6.06E-08	2.29E-03	5.09E-03
F06	0.00E+00	2.51E-05	1.86E-06	3.59E+01	5.07E-05	1.77E-01	3.04E-05	1.77E-02	5.87E-03	9.56E-04	2.98E-03	1.35E-03	1.38E-03	1.75E-03	1.62E-04	3.98E-08	1.61E-03	3.30E-03
F07	0.00E+00	3.68E-05	2.92E-06	6.59E+01	1.05E-04	3.63E-01	5.09E-05	2.16E-02	1.10E-02	1.76E-03	4.99E-03	2.51E-03	2.56E-03	2.20E-03	3.08E-04	8.04E-08	2.43E-03	3.99E-03
F08	0.00E+00	3.67E-05	2.85E-06	6.02E+01	9.09E-05	3.18E-01	4.78E-05	2.41E-02	9.98E-03	1.61E-03	4.67E-03	2.27E-03	2.32E-03	2.39E-03	2.77E-04	6.98E-08	2.35E-03	4.48E-03
F09	0.00E+00	3.29E-06	2.71E-07	6.79E+00	8.41E-06	3.22E-02	4.26E-06	2.33E-03	6.31E-04	1.17E-04	3.99E-04	2.11E-04	2.15E-04	2.84E-04	3.13E-05	7.25E-09	1.84E-04	4.32E-04
F10	0.00E+00	2.17E-05	1.83E-06	4.92E+01	6.46E-05	2.44E-01	3.01E-05	1.40E-02	4.61E-03	8.49E-04	2.85E-03	1.55E-03	1.58E-03	1.72E-03	2.30E-04	5.59E-08	1.27E-03	2.59E-03
F13	0.00E+00	1.67E-06	1.31E-07	2.95E+00	3.25E-06	1.27E-02	1.96E-06	1.31E-03	2.67E-04	5.07E-05	1.82E-04	8.96E-05	9.13E-05	1.60E-04	1.32E-05	2.85E-09	9.09E-05	2.44E-04
F14	0.00E+00	1.39E-06	1.09E-07	2.45E+00	2.70E-06	1.06E-02	1.62E-06	1.08E-03	2.22E-04	4.20E-05	1.51E-04	7.43E-05	7.57E-05	1.33E-04	1.09E-05	2.36E-09	7.53E-05	2.02E-04
F15	0.00E+00	3.70E-05	3.09E-06	7.47E+01	1.03E-04	3.80E-01	4.96E-05	2.54E-02	9.77E-03	1.65E-03	4.67E-03	2.51E-03	2.56E-03	2.70E-03	3.47E-04	8.17E-08	2.11E-03	4.70E-03
F16	0.00E+00	2.03E-05	1.70E-06	4.08E+01	5.56E-05	2.07E-01	2.70E-05	1.42E-02	5.34E-03	9.01E-04	2.53E-03	1.36E-03	1.39E-03	1.50E-03	1.89E-04	4.40E-08	1.14E-03	2.63E-03
F17	0.00E+00	2.00E-05	1.60E-06	3.28E+01	3.86E-05	1.50E-01	2.31E-05	1.66E-02	4.20E-03	7.24E-04	2.13E-03	1.07E-03	1.09E-03	1.72E-03	1.46E-04	3.03E-08	1.04E-03	3.10E-03
F18	0.00E+00	2.48E-05	2.00E-06	4.30E+01	5.31E-05	2.03E-01	2.98E-05	1.96E-02	5.54E-03	9.48E-04	2.77E-03	1.42E-03	1.44E-03	2.05E-03	1.94E-04	4.20E-08	1.33E-03	3.65E-03
F19	0.00E+00	1.19E-05	1.27E-06	4.52E+01	7.76E-05	2.76E-01	2.52E-05	2.36E-03	6.22E-03	1.01E-03	2.42E-03	1.57E-03	1.61E-03	2.83E-04	2.25E-04	6.07E-08	8.12E-04	3.84E-04
F20	0.00E+00	1.65E-05	1.76E-06	6.25E+01	1.07E-04	3.82E-01	3.50E-05	3.34E-03	8.60E-03	1.39E-03	3.36E-03	2.17E-03	2.23E-03	4.02E-04	3.11E-04	8.40E-08	1.13E-03	5.46E-04
F21	0.00E+00	7.46E-05	5.17E-06	8.81E+01	8.48E-05	3.16E-01	7.64E-05	6.05E-02	1.04E-02	1.88E-03	7.43E-03	2.89E-03	2.94E-03	6.76E-03	3.70E-04	7.88E-08	4.48E-03	1.13E-02
F22	0.00E+00	1.01E-04	7.08E-06	1.27E+02	1.32E-04	4.87E-01	1.07E-04	7.91E-02	1.52E-02	2.72E-03	1.05E-02	4.22E-03	4.29E-03	8.89E-03	5.45E-04	1.21E-07	6.16E-03	1.48E-02
F23	0.00E+00	2.10E-05	1.50E-06	2.75E+01	2.94E-05	1.09E-01	2.26E-05	1.65E-02	3.34E-03	5.91E-04	2.18E-03	9.11E-04	9.26E-04	1.84E-03	1.19E-04	2.61E-08	1.26E-03	3.09E-03
F24	0.00E+00	2.69E-05	1.95E-06	3.78E+01	4.32E-05	1.58E-01	3.01E-05	2.03E-02	4.64E-03	8.14E-04	2.92E-03	1.26E-03	1.28E-03	2.28E-03	1.66E-04	3.79E-08	1.64E-03	3.80E-03
F25	0.00E+00	7.30E-05	5.29E-06	9.65E+01	1.29E-04	4.53E-01	8.47E-05	5.40E-02	1.56E-02	2.56E-03	8.30E-03	3.61E-03	3.68E-03	5.30E-03	4.29E-04	1.02E-07	4.63E-03	1.01E-02
F26	0.00E+00	9.34E-05	6.45E-06	1.04E+02	1.21E-04	4.26E-01	9.94E-05	7.43E-02	1.64E-02	2.73E-03	9.80E-03	3.85E-03	3.91E-03	7.24E-03	4.43E-04	9.97E-08	5.89E-03	1.39E-02
F27	0.00E+00	2.04E-04	1.41E-05	2.29E+02	2.71E-04	9.53E-01	2.19E-04	1.60E-01	3.62E-02	6.05E-03	2.16E-02	8.53E-03	8.68E-03	1.57E-02	9.83E-04	2.24E-07	1.29E-02	3.00E-02
F28	0.00E+00	1.65E-04	1.21E-05	2.25E+02	3.10E-04	1.08E+00	1.96E-04	1.19E-01	3.66E-02	5.98E-03	1.92E-02	8.48E-03	8.64E-03	1.18E-02	1.01E-03	2.45E-07	1.06E-02	2.22E-02
F29	0.00E+00	4.69E-05	3.76E-06	8.32E+01	1.29E-04	4.55E-01	6.36E-05	2.98E-02	1.39E-02	2.23E-03	6.17E-03	3.14E-03	3.20E-03	2.94E-03	3.88E-04	9.80E-08	2.97E-03	5.52E-03
F30	0.00E+00	3.52E-05	2.75E-06	5.82E+01	8.75E-05	3.08E-01	4.58E-05	2.35E-02	9.66E-03	1.55E-03	4.45E-03	2.19E-03	2.23E-03	2.31E-03	2.68E-04	6.67E-08	2.22E-03	4.37E-03
F35	0.00E+00	5.38E-06	4.18E-07	1.07E+01	1.35E-05	5.01E-02	7.07E-06	3.40E-03	9.79E-04	1.83E-04	6.88E-04	3.36E-04	3.43E-04	4.51E-04	4.95E-05	1.25E-08	3.45E-04	6.29E-04
F36	0.00E+00	1.40E-05	1.16E-06	3.25E+01	4.39E-05	1.63E-01	2.01E-05	8.18E-03	3.04E-03	5.59E-04	1.94E-03	1.03E-03	1.05E-03	1.06E-03	1.53E-04	3.92E-08	8.89E-04	1.50E-03
F37	0.00E+00	1.15E-04	8.80E-06	1.77E+02	2.54E-04	9.03E-01	1.43E-04	8.15E-02	2.92E-02	4.72E-03	1.38E-02	6.59E-03	6.73E-03	7.92E-03	8.03E-04	1.94E-07	7.10E-03	1.52E-02
F38	0.00E+00	1.01E-04	7.44E-06	1.37E+02	1.83E-04	6.52E-01	1.17E-04	7.64E-02	2.23E-02	3.65E-03	1.14E-02	5.09E-03	5.19E-03	7.40E-03	6.09E-04	1.43E-07	6.25E-03	1.43E-02
F39	0.00E+00	7.44E-06	5.68E-07	1.28E+01	1.40E-05	5.42E-02	8.69E-06	5.60E-03	1.14E-03	2.18E-04	8.26E-04	3.88E-04	3.96E-04	7.09E-04	5.69E-05	1.28E-08	4.29E-04	1.04E-03
F40	0.00E+00	1.63E-05	1.43E-06	4.13E+01	5.76E-05	2.15E-01	2.45E-05	9.37E-03	3.94E-03	7.16E-04	2.33E-03	1.32E-03	1.34E-03	1.15E-03	1.97E-04	4.95E-08	9.81E-04	1.72E-03
F41	0.00E+00	1.19E-05	1.18E-06	3.84E+01	6.33E-05	2.27E-01	2.22E-05	4.24E-03	5.24E-03	8.55E-04	2.12E-03	1.33E-03	1.36E-03	4.70E-04	1.89E-04	4.96E-08	7.64E-04	7.48E-04
F42	0.00E+00	3.86E-06	4.10E-07	1.46E+01	2.50E-05	8.88E-02	8.15E-06	7.96E-04	2.00E-03	3.24E-04	7.82E-04	5.06E-04	5.18E-04	9.49E-05	7.24E-05	1.95E-08	2.63E-04	1.30E-04
F45	0.00E+00	2.66E-05	2.05E-06	4.35E+01	5.38E-05	2.00E-01	3.17E-05	1.99E-02	5.52E-03	9.51E-04	3.01E-03	1.45E-03	1.48E-03	2.16E-03	1.96E-04	4.44E-08	1.54E-03	3.71E-03
F46	0.00E+00	1.51E-05	1.33E-06	3.49E+01	5.10E-05	1.87E-01	2.21E-05	9.36E-03	4.64E-03	7.74E-04	2.08E-03	1.18E-03	1.21E-03	9.92E-04	1.65E-04	4.01E-08	8.73E-04	1.72E-03
F47	0.00E+00	1.25E-06	9.92E-08	2.00E+00	2.83E-06	1.04E-02	1.55E-06	9.49E-04	3.33E-04	5.38E-05	1.47E-04	7.35E-05	7.50E-05	8.90E-05	9.10E-06	2.11E-09	7.23E-05	1.77E-04
F48	0.00E+00	3.69E-07	2.70E-08	4.33E-01	4.73E-07	1.83E-03	3.83E-07	3.31E-04	6.98E-05	1.16E-05	3.63E-05	1.54E-05	1.57E-05	3.05E-05	1.84E-06	3.61E-10	2.05E-05	6.20E-05
F49	0.00E+00	1.68E-04	1.19E-05	2.07E+02	2.63E-04	9.28E-01	1.88E-04	1.28E-01	3.32E-02	5.49E-03	1.85E-02	7.73E-03	7.87E-03	1.25E-02	9.07E-04	2.12E-07	1.06E-02	2.40E-02
F50	0.00E+00	1.48E-04	1.08E-05	2.04E+02	2.83E-04	9.86E-01	1.77E-04	1.06E-01	3.32E-02	5.42E-03	1.74E-02	7.69E-03	7.84E-03	1.05E-02	9.16E-04	2.24E-07	9.55E-03	1.97E-02
F51	0.00E+00	6.69E-05	4.63E-06	8.22E+01	8.47E-05	3.08E-01	7.07E-05	5.18E-02	9.76E-03	1.75E-03	6.94E-03	2.73E-03	2.78E-03	5.88E-03	3.50E-04	7.90E-08	4.16E-03	9.69E-03
F52	0.00E+00	7.35E-05	5.99E-06	1.51E+02	2.16E-04	7.76E-01	1.02E-04	4.42E-02	1.96E-02	3.30E-03	9.90E-03	5.14E-03	5.25E-03	5.00E-03	7.06E-04	1.77E-07	4.64E-03	8.15E-03
F53	0.00E+00	1.66E-05	1.46E-06	4.17E+01	6.45E-05	2.31E-01	2.63E-05	8.17E-03	5.55E-03	9.20E-04	2.54E-03	1.43E-03	1.47E-03	9.33E-04	2.00E-04	5.20E-08	1.07E-03	1.49E-03
F54	0.00E+00	3.84E-05	3.59E-06	1.11E+02	1.79E-04	6.38E-01	6.69E-05	1.57E-02	1.50E-02	2.46E-03	6.44E-03	3.83E-03	3.92E-03	1.80E-03	5.40E-04	1.42E-07	2.52E-03	2.82E-03
F71	0.00E+00	1.83E-05	1.72E-06	5.51E+01	8.44E-05	3.00E-01	3.15E-05	8.03E-03	7.20E-03	1.19E-03	3.03E-03	1.81E-03	1.86E-03	8.95E-04	2.69E-04	6.88E-08	1.17E-03	1.44E-03
F72	0.00E+00	6.95E-05	4.97E-06	7.98E+01	1.15E-04	3.80E-01	7.92E-05	5.17E-02	1.94E-02	2.92E-03	7.77E-03	3.31E-03	3.37E-03	4.03E-03	3.58E-04	7.45E-08	4.39E-03	9.68E-03
F73	0.00E+00	1.12E-06	1.13E-07	3.83E+00	6.59E-06	2.27E-02	2.24E-06	2.45E-04	6.36E-04	9.84E-05	2.17E-04	1.35E-04	1.39E-04	3.21E-05	1.90E-05	4.90E-09	7.85E-05	4.14E-05
F74	0.00E+00	9.77E-05	6.68E-06	1.14E+02	1.06E-04	3.89E-01	9.92E-05	7.88E-02	1.32E-02	2.39E-03	9.72E-03	3.69E-03	3.75E-03	8.87E-03	4.81E-04	1.03E-07	5.95E-03	1.48E-02
F75	0.00E+00	2.67E-06	1.97E-07	4.28E+00	6.01E-06	2.04E-02	3.39E-06	1.70E-03	6.79E-04	1.10E-04	3.36E-04	1.53E-04	1.57E-04	1.75E-04	1.97E-05	4.80E-09	1.79E-04	3.16E-04
F76	0.00E+00	1.12E-06	1.05E-07	2.78E+00	4.81E-06	1.66E-02	1.85E-06	5.32E-04	7.07E-04	1.02E-04	1.75E-04	1.05E-04	1.08E-04	4.74E-05	1.34E-05	2.85E-09	6.72E-05	9.77E-05
F77	0.00E+00	7.85E-05	5.58E-06	1.09E+02	1.19E-04	4.27E-01	8.66E-05	5.92E-02	1.30E-02	2.29E-03	8.49E-03	3.54E-03	3.61E-03	6.70E-03	4.77E-04	1.09E-07	4.87E-03	1.10E-02
F78	0.00E+00	1.88E-05	1.89E-06	5.75E+01	1.06E-04	3.56E-01	3.65E-05	4.36E-03	1.47E-02	2.10E-03	3.48E-03	2.19E-03	2.24E-03	5.63E-04	2.83E-04	6.30E-08	1.24E-03	7.65E-04
F79	0.00E+00	3.30E-05	2.94E-06	8.35E+01	1.33E-04	4.63E-01	5.33E-05	1.59E-02	1.37E-02	2.15E-03	5.14E-03	2.93E-03	3.00E-03	1.65E-03	4.03E-04	9.96E-08	2.15E-03	2.90E-03
F80	0.00E+00	3.18E-05	2.96E-06	9.54E+01	1.47E-04	5.19E-01	5.51E-05	1.31E-02	1.24E-02	2.05E-03	5.34E-03	3.15E-03	3.23E-03	1.51E-03	4.66E-04	1.21E-07	2.10E-03	2.35E-03
F81	0.00E+00	1.08E-04	6.99E-06	9.95E+01	9.22E-05	3.16E-01	1.06E-04	8.87E-02	1.49E-02	2.55E-03	1.06E-02	3.60E-03	3.65E-03	8.73E-03	4.07E-04	8.47E-08	6.94E-03	1.67E-02
F82	0.00E+00	1.82E-05	1.26E-06	1.79E+01	2.37E-05	7.80E-02	1.94E-05	1.45E-02	4.30E-03	6.56E-04	1.90E-03	7.53E-04	7.67E-04	1.11E-03	7.79E-05	1.57E-08	1.13E-03	2.72E-03
F83	0.00E+00	2.46E-05	1.73E-06	3.06E+01	2.93E-05	1.09E-01	2.53E-05	2.01E-02	3.59E-03	6.44E-04	2.45E-03	9.79E-04	9.96E-04	2.22E-03	1.30E-04	2.72E-08	1.45E-03	3.76E-03
F84	0.00E+00	6.49E-05	4.50E-06	4.34E+01	2.20E-05	1.32E-01	5.36E-05	7.21E-02	1.05E-02	1.69E-03	4.92E-03	1.69E-03	1.72E-03	4.91E-03	1.64E-04	1.30E-08	3.20E-03	1.36E-02
F85	0.00E+00	4.11E-05	3.09E-06	5.36E+01	5.66E-05	2.23E-01	4.31E-05	3.77E-02	8.50E-03	1.41E-03	4.02E-03	1.80E-03	1.83E-03	3.44E-03	2.32E-04	4.23E-08	2.19E-03	7.06E-03
F86	0.00E+00	3.59E-05	2.79E-06	6.21E+01	7.56E-05	2.78E-01	4.34E-05	2.65E-02	7.72E-03	1.33E-03	4.15E-03	2.01E-03	2.05E-03	2.89E-03	2.82E-04	6.42E-08	2.10E-03	4.93E-03
F87	0.00E+00	9.54E-06	6.42E-07	1.06E+01	1.20E-05	4.08E-02	1.02E-05	7.30E-03	1.63E-03	2.73E-04	1.02E-03	3.84E-04	3.91E-04	7.28E-04	4.58E-05	1.03E-08	6.26E-04	1.37E-03
F88	0.00E+00	3.27E-05	2.19E-06	2.62E+01	2.93E-05	9.84E-02	3.20E-05	2.84E-02	6.20E-03	9.70E-04	3.14E-03	1.13E-03	1.15E-03	2.11E-03	1.09E-04	2.02E-08	1.99E-03	5.34E-03

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A07	110	Passenger Car	1158	0.00E+00	1.34E-05	1.45E-06	5.41E+01	9.33E-05	4.18E-01	2.98E-05	2.72E-03	2.88E-03	6.69E-04	2.90E-03	1.87E-03	1.92E-03	1.32E-04	2.74E-04	8.11E-08	9.81E-04	4.25E-04
17	A07	110	Passenger Truck	1940	0.00E+00	2.91E-05	3.10E-06	1.29E+02	1.92E-04	8.62E-01	6.25E-05	7.60E-03	4.99E-03	1.26E-03	6.04E-03	3.89E-03	3.99E-03	7.71E-04	6.47E-04	1.90E-07	2.03E-03	1.22E-03
17	A07	110	Single Unit Short Haul Truck	256	0.00E+00	3.39E-05	1.79E-06	4.91E+01	3.47E-05	1.35E-01	3.72E-05	1.98E-02	1.53E-03	5.06E-04	4.10E-03	1.15E-03	1.16E-03	5.02E-03	1.96E-04	8.75E-08	2.94E-03	3.69E-03
17	A07	110	Single Unit Long Haul Truck	11	0.00E+00	1.45E-06	7.47E-08	2.06E+00	1.39E-06	5.34E-03	1.59E-06	8.22E-04	6.84E-05	2.17E-05	1.78E-04	4.71E-05	4.77E-05	2.10E-04	8.26E-06	3.58E-09	1.30E-04	1.54E-04
17	A07	110	Combination Short Haul Truck	199	0.00E+00	7.51E-05	5.63E-06	7.56E+01	1.79E-07	6.79E-02	5.31E-05	8.06E-02	2.13E-03	8.45E-04	3.96E-03	1.64E-03	1.62E-03	1.14E-02	2.54E-04	0.00E+00	2.35E-03	1.51E-02
17	A07	110	Combination Long Haul Truck	181	0.00E+00	6.80E-05	4.89E-06	6.85E+01	2.05E-07	6.70E-02	4.93E-05	7.80E-02	1.92E-03	5.84E-04	4.06E-03	1.44E-03	1.45E-03	1.05E-02	2.30E-04	0.00E+00	2.61E-03	1.46E-02
17	A08	110	Passenger Car	997	0.00E+00	1.15E-05	1.25E-06	4.65E+01	8.03E-05	3.60E-01	2.56E-05	2.34E-03	2.48E-03	5.76E-04	2.50E-03	1.61E-03	1.65E-03	1.14E-04	2.36E-04	6.98E-08	8.45E-04	3.66E-04
17	A08	110	Passenger Truck	1669	0.00E+00	2.50E-05	2.67E-06	1.11E+02	1.66E-04	7.42E-01	5.38E-05	6.54E-03	4.29E-03	1.08E-03	5.19E-03	3.35E-03	3.43E-03	6.63E-04	5.56E-04	1.64E-07	1.74E-03	1.05E-03
17	A08	110	Single Unit Short Haul Truck	313	0.00E+00	4.14E-05	2.19E-06	6.00E+01	4.24E-05	1.65E-01	4.55E-05	2.42E-02	1.87E-03	6.18E-04	5.01E-03	1.40E-03	1.42E-03	6.14E-03	2.40E-04	1.07E-07	3.59E-03	4.50E-03
17	A08	110	Single Unit Long Haul Truck	14	0.00E+00	1.77E-06	9.13E-08	2.52E+00	1.70E-06	6.52E-03	1.94E-06	1.00E-03	8.36E-05	2.65E-05	2.17E-04	5.75E-05	5.83E-05	2.56E-04	1.01E-05	4.37E-09	1.58E-04	1.88E-04
17	A08	110	Combination Short Haul Truck	219	0.00E+00	8.29E-05	6.21E-06	8.35E+01	1.97E-07	7.49E-02	5.86E-05	8.90E-02	2.35E-03	9.32E-04	4.37E-03	1.81E-03	1.79E-03	1.26E-02	2.80E-04	0.00E+00	2.59E-03	1.67E-02
17	A08	110	Combination Long Haul Truck	200	0.00E+00	7.50E-05	5.40E-06	7.56E+01	2.26E-07	7.39E-02	5.44E-05	8.61E-02	2.12E-03	6.45E-04	4.48E-03	1.59E-03	1.60E-03	1.16E-02	2.53E-04	0.00E+00	2.88E-03	1.62E-02
17	A09	110	Passenger Car	1227	0.00E+00	1.42E-05	1.54E-06	5.73E+01	9.88E-05	4.43E-01	3.16E-05	2.88E-03	3.05E-03	7.09E-04	3.07E-03	1.98E-03	2.03E-03	1.40E-04	2.90E-04	8.59E-08	1.04E-03	4.50E-04
17	A09	110	Passenger Truck	2055	0.00E+00	3.08E-05	3.29E-06	1.37E+02	2.04E-04	9.13E-01	6.62E-05	8.05E-03	5.28E-03	1.33E-03	6.39E-03	4.12E-03	4.22E-03	8.16E-04	6.85E-04	2.01E-07	2.15E-03	1.30E-03
17	A09	110	Single Unit Short Haul Truck	292	0.00E+00	3.86E-05	2.04E-06	5.60E+01	3.96E-05	1.54E-01	4.24E-05	2.26E-02	1.74E-03	5.77E-04	4.67E-03	1.31E-03	1.32E-03	5.73E-03	2.24E-04	9.98E-08	3.35E-03	4.20E-03
17	A09	110	Single Unit Long Haul Truck	13	0.00E+00	1.65E-06	8.51E-08	2.35E+00	1.59E-06	6.08E-03	1.81E-06	9.37E-04	7.80E-05	2.47E-05	2.02E-04	5.37E-05	5.44E-05	2.39E-04	9.41E-06	4.08E-09	1.48E-04	1.75E-04
17	A09	110	Combination Short Haul Truck	232	0.00E+00	8.78E-05	6.58E-06	8.84E+01	2.09E-07	7.94E-02	6.21E-05	9.42E-02	2.49E-03	9.88E-04	4.63E-03	1.92E-03	1.90E-03	1.34E-02	2.97E-04	0.00E+00	2.74E-03	1.77E-02
17	A09	110	Combination Long Haul Truck	212	0.00E+00	7.95E-05	5.72E-06	8.00E+01	2.40E-07	7.83E-02	5.77E-05	9.12E-02	2.24E-03	6.83E-04	4.74E-03	1.68E-03	1.70E-03	1.22E-02	2.68E-04	0.00E+00	3.05E-03	1.71E-02
17	A10	110	Passenger Car	1209	0.00E+00	1.40E-05	1.51E-06	5.64E+01	9.74E-05	4.36E-01	3.11E-05	2.83E-03	3.00E-03	6.98E-04	3.03E-03	1.95E-03	2.00E-03	1.38E-04	2.86E-04	8.46E-08	1.02E-03	4.43E-04
17	A10	110	Passenger Truck	2024	0.00E+00	3.04E-05	3.24E-06	1.35E+02	2.01E-04	9.00E-01	6.52E-05	7.93E-03	5.21E-03	1.31E-03	6.30E-03	4.06E-03	4.16E-03	8.04E-04	6.75E-04	1.98E-07	2.11E-03	1.28E-03
17	A10	110	Single Unit Short Haul Truck	369	0.00E+00	4.87E-05	2.58E-06	7.06E+01	5.00E-05	1.95E-01	5.35E-05	2.85E-02	2.20E-03	7.28E-04	5.90E-03	1.65E-03	1.67E-03	7.23E-03	2.83E-04	1.26E-07	4.23E-03	5.30E-03
17	A10	110	Single Unit Long Haul Truck	16	0.00E+00	2.09E-06	1.07E-07	2.96E+00	2.00E-06	7.68E-03	2.28E-06	1.18E-03	9.84E-05	3.12E-05	2.56E-04	6.77E-05	6.86E-05	3.02E-04	1.19E-05	5.15E-09	1.86E-04	2.21E-04
17	A10	110	Combination Short Haul Truck	263	0.00E+00	9.92E-05	7.44E-06	9.99E+01	2.36E-07	8.97E-02	7.01E-05	1.06E-01	2.81E-03	1.12E-03	5.24E-03	2.17E-03	2.14E-03	1.51E-02	3.35E-04	0.00E+00	3.10E-03	2.00E-02
17	A10	110	Combination Long Haul Truck	239	0.00E+00	8.98E-05	6.46E-06	9.04E+01	2.71E-07	8.84E-02	6.52E-05	1.03E-01	2.53E-03	7.71E-04	5.36E-03	1.90E-03	1.92E-03	1.38E-02	3.03E-04	0.00E+00	3.45E-03	1.93E-02
17	A11	110	Passenger Car	1255	0.00E+00	1.45E-05	1.57E-06	5.86E+01	1.01E-04	4.53E-01	3.23E-05	2.94E-03	3.12E-03	7.25E-04	3.14E-03	2.03E-03	2.08E-03	1.43E-04	2.97E-04	8.78E-08	1.06E-03	4.60E-04
17	A11	110	Passenger Truck	2101	0.00E+00	3.15E-05	3.36E-06	1.40E+02	2.08E-04	9.34E-01	6.77E-05	8.23E-03	5.41E-03	1.36E-03	6.54E-03	4.21E-03	4.32E-03	8.35E-04	7.00E-04	2.06E-07	2.19E-03	1.33E-03
17	A11	110	Single Unit Short Haul Truck	338	0.00E+00	4.47E-05	2.37E-06	6.48E+01	4.58E-05	1.78E-01	4.91E-05	2.61E-02	2.02E-03	6.67E-04	5.41E-03	1.51E-03	1.53E-03	6.63E-03	2.59E-04	1.15E-07	3.88E-03	4.86E-03
17	A11	110	Single Unit Long Haul Truck	15	0.00E+00	1.91E-06	9.85E-08	2.72E+00	1.84E-06	7.04E-03	2.09E-06	1.08E-03	9.03E-05	2.86E-05	2.34E-04	6.21E-05	6.29E-05	2.77E-04	1.09E-05	4.72E-09	1.71E-04	2.02E-04
17	A11	110	Combination Short Haul Truck	282	0.00E+00	1.06E-04	7.99E-06	1.07E+02	2.54E-07	9.63E-02	7.53E-05	1.14E-01	3.02E-03	1.20E-03	5.62E-03	2.33E-03	2.30E-03	1.62E-02	3.60E-04	0.00E+00	3.33E-03	2.15E-02
17	A11	110	Combination Long Haul Truck	257	0.00E+00	9.64E-05	6.94E-06	9.71E+01	2.91E-07	9.50E-02	7.00E-05	1.11E-01	2.72E-03	8.28E-04	5.75E-03	2.04E-03	2.06E-03	1.48E-02	3.26E-04	0.00E+00	3.71E-03	2.08E-02
17	A12	110	Passenger Car	1596	0.00E+00	1.85E-05	2.00E-06	7.45E+01	1.29E-04	5.76E-01	4.11E-05	3.74E-03	3.96E-03	9.22E-04	4.00E-03	2.58E-03	2.64E-03	1.82E-04	3.78E-04	1.12E-07	1.35E-03	5.85E-04
17	A12	110	Passenger Truck	2673	0.00E+00	4.01E-05	4.28E-06	1.78E+02	2.65E-04	1.19E+00	8.61E-05	1.05E-02	6.88E-03	1.73E-03	8.32E-03	5.36E-03	5.50E-03	1.06E-03	8.91E-04	2.62E-07	2.79E-03	1.69E-03
17	A12	110	Single Unit Short Haul Truck	405	0.00E+00	5.35E-05	2.83E-06	7.76E+01	5.49E-05	2.14E-01	5.88E-05	3.13E-02	2.42E-03	8.00E-04	6.48E-03	1.81E-03	1.83E-03	7.94E-03	3.10E-04	1.38E-07	4.64E-03	5.83E-03
17	A12	110	Single Unit Long Haul Truck	18	0.00E+00	2.29E-06	1.18E-07	3.25E+00	2.20E-06	8.43E-03	2.50E-06	1.30E-03	1.08E-04	3.42E-05	2.81E-04	7.44E-05	7.54E-05	3.31E-04	1.30E-05	5.65E-09	2.05E-04	2.43E-04
17	A12	110	Combination Short Haul Truck	309	0.00E+00	1.17E-04	8.76E-06	1.18E+02	2.78E-07	1.06E-01	8.27E-05	1.25E-01	3.32E-03	1.31E-03	6.17E-03	2.55E-03	2.53E-03	1.78E-02	3.95E-04	0.00E+00	3.65E-03	2.35E-02
17	A12	110	Combination Long Haul Truck	282	0.00E+00	1.06E-04	7.62E-06	1.07E+02	3.19E-07	1.04E-01	7.68E-05	1.21E-01	2.99E-03	9.09E-04	6.32E-03	2.24E-03	2.26E-03	1.63E-02	3.57E-04	0.00E+00	4.07E-03	2.28E-02
17	A13	110	Passenger Car	1395	0.00E+00	1.62E-05	1.75E-06	6.51E+01	1.12E-04	5.04E-01	3.59E-05	3.27E-03	3.46E-03	8.06E-04	3.50E-03	2.25E-03	2.31E-03	1.59E-04	3.30E-04	9.77E-08	1.18E-03	5.12E-04
17	A13	110	Passenger Truck	2336	0.00E+00	3.50E-05	3.74E-06	1.56E+02	2.32E-04	1.04E+00	7.53E-05	9.15E-03	6.01E-03	1.51E-03	7.27E-03	4.69E-03	4.80E-03	9.28E-04	7.79E-04	2.29E-07	2.44E-03	1.47E-03
17	A13	110	Single Unit Short Haul Truck	347	0.00E+00	4.59E-05	2.43E-06	6.65E+01	4.70E-05	1.83E-01	5.04E-05	2.68E-02	2.07E-03	6.85E-04	5.55E-03	1.55E-03	1.57E-03	6.80E-03	2.66E-04	1.18E-07	3.98E-03	4.99E-03
17	A13	110	Single Unit Long Haul Truck	15	0.00E+00	1.96E-06	1.01E-07	2.79E+00	1.89E-06	7.22E-03	2.15E-06	1.11E-03	9.26E-05	2.93E-05	2.40E-04	6.37E-05	6.46E-05	2.84E-04	1.12E-05	4.84E-09	1.75E-04	2.08E-04
17	A13	110	Combination Short Haul Truck	285	0.00E+00	1.08E-04	8.08E-06	1.08E+02	2.57E-07	9.74E-02	7.62E-05	1.16E-01	3.06E-03	1.21E-03	5.69E-03	2.35E-03	2.33E-03	1.64E-02	3.64E-04	0.00E+00	3.37E-03	2.17E-02
17	A13	110	Combination Long Haul Truck	260	0.00E+00	9.75E-05	7.02E-06	9.82E+01	2.94E-07	9.60E-02	7.08E-05	1.12E-01	2.75E-03	8.38E-04	5.82E-03	2.07E-03	2.08E-03	1.50E-02	3.29E-04	0.00E+00	3.75E-03	2.10E-02
17	A14	110	Passenger Car	1402	0.00E+00	1.62E-05	1.76E-06	6.54E+01	1.13E-04	5.06E-01	3.61E-05	3.29E-03	3.48E-03	8.10E-04	3.51E-03	2.26E-03	2.32E-03	1.60E-04	3.32E-04	9.81E-08	1.19E-03	5.14E-04
17	A14	110	Passenger Truck	2348	0.00E+00	3.52E-05	3.76E-06	1.57E+02	2.33E-04	1.04E+00	7.56E-05	9.19E-03	6.04E-03	1.52E-03	7.30E-03	4.71E-03	4.83E-03	9.33E-04	7.83E-04	2.30E-07	2.45E-03	1.48E-03
17	A14	110	Single Unit Short Haul Truck	431	0.00E+00	5.70E-05	3.02E-06	8.26E+01	5.84E-05	2.28E-01	6.26E-05	3.33E-02	2.57E-03	8.51E-04	6.90E-03	1.93E-03	1.95E-03	8.45E-03	3.31E-04	1.47E-07	4.95E-03	6.20E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	2.44E-06	1.26E-07	3.46E+00	2.35E-06	8.98E-03	2.67E-06	1.38E-03	1.15E-04	3.64E-05	2.99E-04	7.92E-05	8.03E-05	3.53E-04	1.39E-05	6.02E-09	2.18E-04	2.58E-04
17	A14	110	Combination Short Haul Truck	313	0.00E+00	1.18E-04	8.86E-06	1.19E+02	2.81E-07	1.07E-01	8.35E-05	1.27E-01	3.35E-03	1.33E-03	6.24E-03	2.58E-03	2.55E-03	1.80E-02	3.99E-04	0.00E+00	3.69E-03	2.38E-02
17	A14	110	Combination Long Haul Truck	285	0.00E+00	1.07E-04	7.70E-06	1.08E+02	3.22E-07	1.05E-01	7.76E-05	1.23E-01	3.02E-03	9.19E-04	6.38E-03	2.26E-03	2.28E-03	1.65E-02	3.61E-04	0.00E+00	4.11E-03	2.30E-02
17	A15	110	Passenger Car	1275	0.00E+00	1.48E-05	1.60E-06	5.95E+01	1.03E-04	4.60E-01	3.28E-05	2.99E-03	3.17E-03	7.37E-04	3.19E-03	2.06E-03	2.11E-03	1.45E-04	3.02E-04	8.92E-08	1.08E-03	4.67E-04
17	A15	110	Passenger Truck	2135	0.00E+00	3.20E-05	3.42E-06	1.42E+02	2.12E-04	9.49E-01	6.88E-05	8.36E-03	5.49E-03	1.38E-03	6.64E-03	4.28E-03	4.39E-03	8.48E-04	7.12E-04	2.09E-07	2.23E-03	1.35E-03
17	A15	110	Single Unit Short Haul Truck	376	0.00E+00	4.97E-05	2.63E-06	7.20E+01	5.09E-05	1.98E-01	5.46E-05	2.90E-02	2.24E-03	7.42E-04	6.01E-03	1.68E-03	1.70E-03	7.37E-03	2.88E-04	1.28E-07	4.31E-03	5.41E-03
17	A15	110	Single Unit Long Haul Truck	17	0.00E+00	2.13E-06	1.10E-07	3.02E+00	2.04E-06	7.82E-03	2.32E-06	1.21E-03	1.00E-04	3.18E-05	2.61E-04	6.90E-05	7.00E-05	3.07E-04	1.21E-05	5.25E-09	1.90E-04	2.25E-04
17	A15	110	Combination Short Haul Truck	314	0.00E+00	1.19E-04	8.90E-06	1.20E+02	2.83E-07	1.07E-01	8.39E-05	1.27E-01	3.37E-03	1.33E-03	6.26E-03	2.59E-03	2.56E-03	1.81E-02	4.01E-04	0.00E+00	3.71E-03	2.39E-02
17	A15	110	Combination Long Haul Truck	286	0.00E+00	1.07E-04	7.73E-06	1.08E+02	3.24E-07	1.06E-01	7.80E-05	1.23E-01	3.03E-03	9.23E-04	6.41E-03	2.28E-03	2.29E-03	1.65E-02	3.63E-04	0.00E+00	4.13E-03	2.31E-02
17	A16	110	Passenger Car	1302	0.00E+00	1.51E-05	1.63E-06	6.08E+01	1.05E-04	4.70E-01	3.35E-05	3.05E-03	3.23E-03	7.52E-04	3.26E-03	2.10E-03	2.16E-03	1.48E-04	3.08E-04	9.11E-08	1.10E-03	4.77E-04
17	A16	110	Passenger Truck	2181	0.00E+00	3.27E-05	3.49E-06	1.45E+02	2.16E-04	9.69E-01	7.03E-05	8.54E-03	5.61E-03	1.41E-03	6.78E-03	4.37E-03	4.48E-03	8.66E-04	7.27E-04	2.14E-07	2.28E-03	1.37E-03
17	A16	110	Single Unit Short Haul Truck	450	0.00E+00	5.95E-05	3.15E-06	8.63E+01	6.11E-05	2.38E-01	6.54E-05	3.48E-02	2.69E-03	8.89E-04	7.21E-03	2.01E-03	2.04E-03	8.83E-03	3.45E-04	1.54E-07	5.17E-03	6.48E-03
17	A16	110	Single Unit Long Haul Truck	20	0.00E+00	2.55E-06	1.31E-07	3.62E+00	2.45E-06	9.38E-03	2.79E-06	1.45E-03	1.20E-04	3.81E-05	3.12E-04	8.28E-05	8.39E-05	3.69E-04	1.45E-05	6.29E-09	2.28E-04	2.70E-04
17	A16	110	Combination Short Haul Truck	335	0.00E+00	1.26E-04	9.48E-06	1.27E+02	3.01E-07	1.14E-01	8.94E-05	1.36E-01	3.59E-03	1.42E-03	6.67E-03	2.76E-03	2.73E-03	1.92E-02	4.27E-04	0.00E+00	3.95E-03	2.55E-02
17	A16	110	Combination Long Haul Truck	305	0.00E+00	1.14E-04	8.24E-06	1.15E+02	3.45E-07	1.13E-01	8.30E-05	1.31E-01	3.23E-03	9.83E-04	6.83E-03	2.42E-03	2.44E-03	1.76E-02	3.86E-04	0.00E+00	4.40E-03	2.47E-02
17	A17	110	Passenger Car	1147	0.00E+00	1.33E-05	1.44E-06	5.35E+01	9.24E-05	4.14E-01	2.95E-05	2.69E-03	2.85E-03	6.63E-04	2.87E-03	1.85E-03	1.90E-03	1.31E-04	2.71E-04	8.03E-08	9.72E-04	4.20E-04
17	A17	110	Passenger Truck	1920	0.00E+00	2.88E-05	3.07E-06	1.28E+02	1.90E-04	8.54E-01	6.19E-05	7.52E-03	4.94E-03	1.24E-03	5.97E-03	3.85E-03	3.95E-03	7.63E-04	6.40E-04	1.88E-07	2.01E-03	1.21E-03
17	A17	110	Single Unit Short Haul Truck	356	0.00E+00	4.70E-05	2.49E-06	6.82E+01	4.82E-05	1.88E-01	5.17E-05	2.75E-02	2.12E-03	7.02E-04	5.69E-03	1.59E-03	1.61E-03	6.98E-03	2.73E-04	1.22E-07	4.08E-03	5.12E-03
17	A17	110	Single Unit Long Haul Truck	16	0.00E+00	2.01E-06	1.04E-07	2.86E+00	1.93E-06	7.41E-03	2.20E-06	1.14E-03	9.50E-05	3.01E-05	2.47E-04	6.54E-05	6.62E-05	2.91E-04	1.15E-05	4.97E-09	1.80E-04	2.13E-04
17	A17	110	Combination Short Haul Truck	301	0.00E+00	1.14E-04	8.53E-06	1.15E+02	2.71E-07	1.03E-01	8.04E-05	1.22E-01	3.23E-03	1.28E-03	6.00E-03	2.48E-03	2.46E-03	1.73E-02	3.85E-04	0.00E+00	3.55E-03	2.29E-02
17	A17	110	Combination Long Haul Truck	274	0.00E+00	1.03E-04	7.41E-06	1.04E+02	3.10E-07	1.01E-01	7.47E-05	1.18E-01	2.90E-03	8.84E-04	6.14E-03	2.18E-03	2.20E-03	1.59E-02	3.48E-04	0.00E+00	3.96E-03	2.22E-02
17	A18	110	Passenger Car	1320	0.00E+00	1.53E-05	1.65E-06	6.16E+01	1.06E-04	4.77E-01	3.39E-05	3.09E-03	3.28E-03	7.63E-04	3.31E-03	2.13E-03	2.18E-03	1.50E-04	3.12E-04	9.24E-08	1.12E-03	4.84E-04
17	A18	110	Passenger Truck	2210	0.00E+00	3.32E-05	3.54E-06	1.47E+02	2.19E-04	9.82E-01	7.12E-05	8.66E-03	5.69E-03	1.43E-03	6.88E-03	4.43E-03	4.54E-03	8.78E-04	7.37E-04	2.17E-07	2.31E-03	1.39E-03
17	A18	110	Single Unit Short Haul Truck	444	0.00E+00	5.87E-05	3.11E-06	8.51E+01	6.02E-05	2.34E-01	6.45E-05	3.43E-02	2.65E-03	8.77E-04	7.10E-03	1.99E-03	2.01E-03	8.71E-03	3.40E-04	1.52E-07	5.09E-03	6.39E-03
17	A18	110	Single Unit Long Haul Truck	20	0.00E+00	2.51E-06	1.29E-07	3.57E+00	2.41E-06	9.25E-03	2.75E-06	1.43E-03	1.19E-04	3.75E-05	3.08E-04	8.16E-05	8.27E-05	3.63E-04	1.43E-05	6.20E-09	2.25E-04	2.66E-04
17	A18	110	Combination Short Haul Truck	332	0.00E+00	1.25E-04	9.41E-06	1.26E+02	2.99E-07	1.13E-01	8.87E-05	1.35E-01	3.56E-03	1.41E-03	6.62E-03	2.74E-03	2.71E-03	1.91E-02	4.24E-04	0.00E+00	3.92E-03	2.53E-02
17	A18	110	Combination Long Haul Truck	303	0.00E+00	1.14E-04	8.17E-06	1.14E+02	3.42E-07	1.12E-01	8.24E-05	1.30E-01	3.20E-03	9.76E-04	6.78E-03	2.41E-03	2.42E-03	1.75E-02	3.84E-04	0.00E+00	4.36E-03	2.45E-02
17	A19	110	Passenger Car	1026	0.00E+00	1.19E-05	1.29E-06	4.79E+01	8.26E-05	3.70E-01	2.64E-05	2.41E-03	2.55E-03	5.93E-04	2.57E-03	1.66E-03	1.70E-03	1.17E-04	2.43E-04	7.18E-08	8.69E-04	3.76E-04
17	A19	110	Passenger Truck	1718	0.00E+00	2.58E-05	2.75E-06	1.15E+02	1.70E-04	7.64E-01	5.54E-05	6.73E-03	4.42E-03	1.11E-03	5.35E-03	3.45E-03	3.53E-03	6.82E-04	5.73E-04	1.68E-07	1.79E-03	1.08E-03
17	A19	110	Single Unit Short Haul Truck	337	0.00E+00	4.46E-05	2.36E-06	6.47E+01	4.57E-05	1.78E-01	4.90E-05	2.61E-02	2.02E-03	6.67E-04	5.40E-03	1.51E-03	1.53E-03	6.62E-03	2.59E-04	1.15E-07	3.87E-03	4.86E-03
17	A19	110	Single Unit Long Haul Truck	15	0.00E+00	1.91E-06	9.84E-08	2.71E+00	1.84E-06	7.03E-03	2.09E-06	1.08E-03	9.01E-05	2.85E-05	2.34E-04	6.20E-05	6.28E-05	2.76E-04	1.09E-05	4.71E-09	1.71E-04	2.02E-04
17	A19	110	Combination Short Haul Truck	285	0.00E+00	1.08E-04	8.07E-06	1.08E+02	2.56E-07	9.73E-02	7.61E-05	1.15E-01	3.05E-03	1.21E-03	5.68E-03	2.35E-03	2.33E-03	1.64E-02	3.64E-04	0.00E+00	3.36E-03	2.17E-02
17	A19	110	Combination Long Haul Truck	260	0.00E+00	9.74E-05	7.01E-06	9.81E+01	2.94E-07	9.59E-02	7.07E-05	1.12E-01	2.75E-03	8.37E-04	5.81E-03	2.06E-03	2.08E-03	1.50E-02	3.29E-04	0.00E+00	3.74E-03	2.10E-02
17	A20	110	Passenger Car	1197	0.00E+00	1.39E-05	1.50E-06	5.58E+01	9.64E-05	4.32E-01	3.08E-05	2.81E-03	2.97E-03	6.91E-04	3.00E-03	1.93E-03	1.98E-03	1.36E-04	2.83E-04	8.38E-08	1.01E-03	4.39E-04
17	A20	110	Passenger Truck	2004	0.00E+00	3.01E-05	3.21E-06	1.34E+02	1.99E-04	8.91E-01	6.46E-05	7.85E-03	5.16E-03	1.30E-03	6.24E-03	4.02E-03	4.12E-03	7.96E-04	6.68E-04	1.97E-07	2.09E-03	1.26E-03
17	A20	110	Single Unit Short Haul Truck	435	0.00E+00	5.76E-05	3.05E-06	8.35E+01	5.90E-05	2.30E-01	6.33E-05	3.36E-02	2.60E-03	8.60E-04	6.97E-03	1.95E-03	1.97E-03	8.54E-03	3.34E-04	1.49E-07	5.00E-03	6.27E-03
17	A20	110	Single Unit Long Haul Truck	19	0.00E+00	2.46E-06	1.27E-07	3.50E+00	2.37E-06	9.07E-03	2.69E-06	1.40E-03	1.16E-04	3.68E-05	3.02E-04	8.00E-05	8.11E-05	3.56E-04	1.40E-05	6.08E-09	2.20E-04

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A24	110	Single Unit Long Haul Truck	19	0.00E+00	2.38E-06	1.23E-07	3.38E+00	2.29E-06	8.75E-03	2.60E-06	1.35E-03	1.12E-04	3.55E-05	2.91E-04	7.72E-05	7.82E-05	3.44E-04	1.35E-05	5.87E-09	2.13E-04	2.52E-04
17	A24	110	Combination Short Haul Truck	325	0.00E+00	1.23E-04	9.21E-06	1.24E+02	2.92E-07	1.11E-01	8.68E-05	1.32E-01	3.48E-03	1.38E-03	6.48E-03	2.68E-03	2.65E-03	1.87E-02	4.15E-04	0.00E+00	3.84E-03	2.47E-02
17	A24	110	Combination Long Haul Truck	296	0.00E+00	1.11E-04	8.00E-06	1.12E+02	3.35E-07	1.09E-01	8.07E-05	1.28E-01	3.14E-03	9.55E-04	6.63E-03	2.35E-03	2.37E-03	1.71E-02	3.75E-04	0.00E+00	4.27E-03	2.40E-02
17	A25	110	Passenger Car	1306	0.00E+00	1.51E-05	1.64E-06	6.09E+01	1.05E-04	4.71E-01	3.36E-05	3.06E-03	3.24E-03	7.54E-04	3.27E-03	2.11E-03	2.16E-03	1.49E-04	3.09E-04	9.14E-08	1.11E-03	4.79E-04
17	A25	110	Passenger Truck	2187	0.00E+00	3.28E-05	3.50E-06	1.46E+02	2.17E-04	9.72E-01	7.05E-05	8.56E-03	5.62E-03	1.42E-03	6.80E-03	4.39E-03	4.49E-03	8.69E-04	7.29E-04	2.14E-07	2.28E-03	1.38E-03
17	A25	110	Single Unit Short Haul Truck	329	0.00E+00	4.36E-05	2.31E-06	6.31E+01	4.47E-05	1.74E-01	4.79E-05	2.54E-02	1.97E-03	6.51E-04	5.27E-03	1.47E-03	1.49E-03	6.46E-03	2.53E-04	1.13E-07	3.78E-03	4.74E-03
17	A25	110	Single Unit Long Haul Truck	15	0.00E+00	1.86E-06	9.60E-08	2.65E+00	1.79E-06	6.86E-03	2.04E-06	1.06E-03	8.80E-05	2.78E-05	2.28E-04	6.05E-05	6.13E-05	2.70E-04	1.06E-05	4.60E-09	1.67E-04	1.97E-04
17	A25	110	Combination Short Haul Truck	298	0.00E+00	1.12E-04	8.43E-06	1.13E+02	2.68E-07	1.02E-01	7.95E-05	1.21E-01	3.19E-03	1.27E-03	5.94E-03	2.46E-03	2.43E-03	1.71E-02	3.80E-04	0.00E+00	3.51E-03	2.27E-02
17	A25	110	Combination Long Haul Truck	271	0.00E+00	1.02E-04	7.33E-06	1.03E+02	3.07E-07	1.00E-01	7.39E-05	1.17E-01	2.87E-03	8.75E-04	6.08E-03	2.16E-03	2.17E-03	1.57E-02	3.44E-04	0.00E+00	3.91E-03	2.19E-02
17	A26	110	Passenger Car	1221	0.00E+00	1.41E-05	1.53E-06	5.70E+01	9.84E-05	4.41E-01	3.14E-05	2.86E-03	3.03E-03	7.06E-04	3.06E-03	1.97E-03	2.02E-03	1.39E-04	2.89E-04	8.55E-08	1.03E-03	4.48E-04
17	A26	110	Passenger Truck	2045	0.00E+00	3.07E-05	3.27E-06	1.36E+02	2.03E-04	9.09E-01	6.59E-05	8.01E-03	5.26E-03	1.32E-03	6.36E-03	4.10E-03	4.20E-03	8.12E-04	6.82E-04	2.01E-07	2.14E-03	1.29E-03
17	A26	110	Single Unit Short Haul Truck	400	0.00E+00	5.29E-05	2.80E-06	7.66E+01	5.42E-05	2.11E-01	5.81E-05	3.09E-02	2.39E-03	7.89E-04	6.40E-03	1.79E-03	1.81E-03	7.84E-03	3.06E-04	1.37E-07	4.59E-03	5.75E-03
17	A26	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.17E-07	3.21E+00	2.17E-06	8.33E-03	2.47E-06	1.28E-03	1.07E-04	3.38E-05	2.77E-04	7.35E-05	7.44E-05	3.27E-04	1.29E-05	5.58E-09	2.02E-04	2.39E-04
17	A26	110	Combination Short Haul Truck	303	0.00E+00	1.15E-04	8.59E-06	1.15E+02	2.73E-07	1.04E-01	8.10E-05	1.23E-01	3.25E-03	1.29E-03	6.05E-03	2.50E-03	2.48E-03	1.74E-02	3.87E-04	0.00E+00	3.58E-03	2.31E-02
17	A26	110	Combination Long Haul Truck	276	0.00E+00	1.04E-04	7.46E-06	1.04E+02	3.13E-07	1.02E-01	7.52E-05	1.19E-01	2.93E-03	8.91E-04	6.19E-03	2.20E-03	2.21E-03	1.60E-02	3.50E-04	0.00E+00	3.99E-03	2.23E-02
17	A27	110	Passenger Car	1306	0.00E+00	1.51E-05	1.64E-06	6.09E+01	1.05E-04	4.71E-01	3.36E-05	3.06E-03	3.24E-03	7.54E-04	3.27E-03	2.11E-03	2.16E-03	1.49E-04	3.09E-04	9.14E-08	1.11E-03	4.79E-04
17	A27	110	Passenger Truck	2187	0.00E+00	3.28E-05	3.50E-06	1.46E+02	2.17E-04	9.72E-01	7.05E-05	8.56E-03	5.62E-03	1.42E-03	6.80E-03	4.39E-03	4.49E-03	8.69E-04	7.29E-04	2.14E-07	2.28E-03	1.38E-03
17	A27	110	Single Unit Short Haul Truck	329	0.00E+00	4.36E-05	2.31E-06	6.31E+01	4.47E-05	1.74E-01	4.79E-05	2.54E-02	1.97E-03	6.51E-04	5.27E-03	1.47E-03	1.49E-03	6.46E-03	2.53E-04	1.13E-07	3.78E-03	4.74E-03
17	A27	110	Single Unit Long Haul Truck	15	0.00E+00	1.86E-06	9.60E-08	2.65E+00	1.79E-06	6.86E-03	2.04E-06	1.06E-03	8.80E-05	2.78E-05	2.28E-04	6.05E-05	6.13E-05	2.70E-04	1.06E-05	4.60E-09	1.67E-04	1.97E-04
17	A27	110	Combination Short Haul Truck	298	0.00E+00	1.12E-04	8.43E-06	1.13E+02	2.68E-07	1.02E-01	7.95E-05	1.21E-01	3.19E-03	1.27E-03	5.94E-03	2.46E-03	2.43E-03	1.71E-02	3.80E-04	0.00E+00	3.51E-03	2.27E-02
17	A27	110	Combination Long Haul Truck	271	0.00E+00	1.02E-04	7.33E-06	1.03E+02	3.07E-07	1.00E-01	7.39E-05	1.17E-01	2.87E-03	8.75E-04	6.08E-03	2.16E-03	2.17E-03	1.57E-02	3.44E-04	0.00E+00	3.91E-03	2.19E-02
17	A28	110	Passenger Car	1221	0.00E+00	1.41E-05	1.53E-06	5.70E+01	9.84E-05	4.41E-01	3.14E-05	2.86E-03	3.03E-03	7.06E-04	3.06E-03	1.97E-03	2.02E-03	1.39E-04	2.89E-04	8.55E-08	1.03E-03	4.48E-04
17	A28	110	Passenger Truck	2045	0.00E+00	3.07E-05	3.27E-06	1.36E+02	2.03E-04	9.09E-01	6.59E-05	8.01E-03	5.26E-03	1.32E-03	6.36E-03	4.10E-03	4.20E-03	8.12E-04	6.82E-04	2.01E-07	2.14E-03	1.29E-03
17	A28	110	Single Unit Short Haul Truck	400	0.00E+00	5.29E-05	2.80E-06	7.66E+01	5.42E-05	2.11E-01	5.81E-05	3.09E-02	2.39E-03	7.89E-04	6.40E-03	1.79E-03	1.81E-03	7.84E-03	3.06E-04	1.37E-07	4.59E-03	5.75E-03
17	A28	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.17E-07	3.21E+00	2.17E-06	8.33E-03	2.47E-06	1.28E-03	1.07E-04	3.38E-05	2.77E-04	7.35E-05	7.44E-05	3.27E-04	1.29E-05	5.58E-09	2.02E-04	2.39E-04
17	A28	110	Combination Short Haul Truck	303	0.00E+00	1.15E-04	8.59E-06	1.15E+02	2.73E-07	1.04E-01	8.10E-05	1.23E-01	3.25E-03	1.29E-03	6.05E-03	2.50E-03	2.48E-03	1.74E-02	3.87E-04	0.00E+00	3.58E-03	2.31E-02
17	A28	110	Combination Long Haul Truck	276	0.00E+00	1.04E-04	7.46E-06	1.04E+02	3.13E-07	1.02E-01	7.52E-05	1.19E-01	2.93E-03	8.91E-04	6.19E-03	2.20E-03	2.21E-03	1.60E-02	3.50E-04	0.00E+00	3.99E-03	2.23E-02
16	B09	100	Passenger Car	1308	0.00E+00	1.43E-05	1.55E-06	5.89E+01	9.96E-05	3.92E-01	3.19E-05	2.79E-03	4.25E-03	8.54E-04	3.10E-03	2.00E-03	2.05E-03	1.64E-04	2.98E-04	8.17E-08	1.05E-03	4.36E-04
16	B09	100	Passenger Truck	2190	0.00E+00	3.09E-05	3.29E-06	1.39E+02	2.03E-04	7.91E-01	6.57E-05	7.97E-03	7.48E-03	1.59E-03	6.33E-03	4.10E-03	4.20E-03	8.82E-04	6.94E-04	1.90E-07	2.12E-03	1.28E-03
16	B09	100	Single Unit Short Haul Truck	62	0.00E+00	8.38E-06	4.14E-07	1.14E+01	7.30E-06	2.63E-02	9.05E-06	4.53E-03	4.29E-04	1.25E-04	1.03E-03	2.56E-04	2.61E-04	1.15E-03	4.57E-05	1.87E-08	7.74E-04	8.46E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	3.63E-07	1.76E-08	4.79E-01	3.02E-07	1.08E-03	3.92E-07	1.91E-04	1.94E-05	5.40E-06	4.51E-05	1.08E-05	1.10E-05	4.80E-05	1.93E-06	7.63E-10	3.41E-05	3.56E-05
16	B09	100	Combination Short Haul Truck	72	0.00E+00	2.47E-05	1.80E-06	2.59E+01	7.02E-08	2.41E-02	1.78E-05	2.63E-02	8.36E-04	2.97E-04	1.38E-03	5.29E-04	5.19E-04	3.91E-03	8.70E-05	0.00E+00	8.64E-04	4.97E-03
16	B09	100	Combination Long Haul Truck	65	0.00E+00	2.15E-05	1.47E-06	2.35E+01	8.13E-08	2.40E-02	1.61E-05	2.51E-02	7.75E-04	2.15E-04	1.41E-03	4.40E-04	4.40E-04	3.58E-03	7.88E-05	0.00E+00	9.68E-04	4.71E-03
16	B10	100	Passenger Car	1058	0.00E+00	1.16E-05	1.25E-06	4.76E+01	8.05E-05	3.17E-01	2.58E-05	2.26E-03	3.44E-03	6.91E-04	2.51E-03	1.62E-03	1.66E-03	1.33E-04	2.41E-04	6.61E-08	8.49E-04	3.53E-04
16	B10	100	Passenger Truck	1772	0.00E+00	2.50E-05	2.66E-06	1.12E+02	1.64E-04	6.40E-01	5.31E-05	6.45E-03	6.05E-03	1.29E-03	5.12E-03	3.32E-03	3.40E-03	7.14E-04	5.61E-04	1.54E-07	1.72E-03	1.04E-03
16	B10	100	Single Unit Short Haul Truck	76	0.00E+00	1.02E-05	5.03E-07	1.38E+01	8.88E-06	3.20E-02	1.10E-05	5.51E-03	5.22E-04	1.52E-04	1.26E-03	3.11E-04	3.18E-04	1.40E-03	5.56E-05	2.27E-08	9.41E-04	1.03E-03
16	B10	100	Single Unit Long Haul Truck	3	0.00E+00	4.41E-07	2.14E-08	5.83E-01	3.68E-07	1.31E-03	4.76E-07	2.32E-04	2.36E-05	6.56E-06	5.49E-05	1.32E-05	1.34E-05	5.84E-05	2.35E-06	9.28E-10	4.15E-05	4.33E-05
16	B10	100	Combination Short Haul Truck	77	0.00E+00	2.66E-05	1.94E-06	2.79E+01	7.55E-08	2.59E-02	1.91E-05	2.83E-02	8.98E-04	3.19E-04	1.49E-03	5.68E-04	5.57E-04	4.20E-03	9.35E-05	0.00E+00	9.28E-04	5.34E-03
16	B10	100	Combination Long Haul Truck	70	0.00E+00	2.31E-05	1.58E-06	2.52E+01	8.74E-08	2.58E-02	1.73E-05	2.70E-02	8.33E-04	2.31E-04	1.51E-03	4.73E-04	4.73E-04	3.85E-03	8.46E-05	0.00E+00	1.04E-03	5.06E-03
16	B11	100	Passenger Car	615	0.00E+00	6.73E-06	7.28E-07	2.77E+01	4.68E-05	1.84E-01	1.50E-05	1.31E-03	2.00E-03	4.01E-04	1.46E-03	9.39E-04	9.63E-04	7.70E-05	1.40E-04	3.84E-08	4.94E-04	2.05E-04
16	B11	100	Passenger Truck	1030	0.00E+00	1.45E-05	1.55E-06	6.52E+01	9.52E-05	3.72E-01	3.09E-05	3.75E-03	3.52E-03	7.49E-04	2.97E-03	1.93E-03	1.98E-03	4.15E-04	3.26E-04	8.95E-08	9.98E-04	6.03E-04
16	B11	100	Single Unit Short Haul Truck	24	0.00E+00	3.22E-06	1.59E-07	4.36E+00	2.80E-06	1.01E-02	3.47E-06	1.74E-03	1.65E-04	4.80E-05	3.97E-04	9.83E-05	1.00E-04	4.40E-04	1.75E-05	7.17E-09	2.97E-04	3.25E-04
16	B11	100	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	6.77E-09	1.84E-01	1.16E-07	4.13E-04	1.50E-07	7.32E-05	7.44E-06	2.07E-06	1.73E-05	4.16E-06	4.22E-06	1.84E-05	7.41E-07	2.93E-10	1.31E-05	1.37E-05
16	B11	100	Combination Short Haul Truck	29	0.00E+00	9.91E-06	7.22E-07	1.04E+01	2.81E-08	9.67E-03	7.13E-06	1.05E-02	3.35E-04	1.19E-04	5.54E-04	2.12E-04	2.08E-04	1.57E-03	3.48E-05	0.00E+00	3.46E-04	1.99E-03
16	B11	100	Combination Long Haul Truck	26	0.00E+00	8.60E-06	5.90E-07	9.40E+00	3.26E-08	9.62E-03	6.44E-06	1.01E-02	3.10E-04	8.60E-05	5.64E-04	1.76E-04	1.76E-04	1.44E-03	3.16E-05	0.00E+00	3.88E-04	1.89E-03
16	B12	100	Passenger Car	280	0.00E+00	3.06E-06	3.31E-07	1.26E+01	2.13E-05	8.40E-02	6.82E-06	5.98E-04	9.10E-04	1.83E-04	6.63E-04	4.28E-04	4.39E-04	3.51E-05	6.37E-05	1.75E-08	2.25E-04	9.33E-05
16	B12	100	Passenger Truck	469	0.00E+00	6.62E-06	7.05E-07	2.97E+01	4.34E-05	1.69E-01	1.41E-05	1.71E-03	1.60E-03	3.41E-04	1.35E-03	8.78E-04	9.00E-04	1.89E-04	1.48E-04	4.08E-08	4.55E-04	2.75E-04
16	B12	100	Single Unit Short Haul Truck	41	0.00E+00	5.55E-06	2.74E-07	7.53E+00	4.84E-06	1.74E-02	6.00E-06	3.00E-03	2.84E-04	8.28E-05	6.86E-04	1.70E-04	1.73E-04	7.60E-04	3.03E-05	1.24E-08	5.13E-04	5.61E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	2.40E-07	1.17E-08	3.18E-01	2.00E-07	7.13E-04	2.59E-07	1.26E-04	1.28E-05	3.58E-06	2.99E-05	7.18E-06	7.28E-06	3.18E-05	1.28E-06	5.06E-10	2.26E-05	2.36E-05
16	B12	100	Combination Short Haul Truck	29	0.00E+00	9.93E-06	7.23E-07	1.04E+01	2.82E-08	9.69E-03	7.14E-06	1.06E-02	3.35E-04	1.19E-04	5.55E-04	2.12E-04	2.08E-04	1.57E-03	3.49E-05	0.00E+00	3.47E-04	1.99E-03
16	B12	100	Combination Long Haul Truck	26	0.00E+00	8.62E-06	5.91E-07	9.42E+00	3.26E-08	9.64E-03	6.45E-06	1.01E-02	3.11E-04	8.62E-05	5.65E-04	1.77E-04	1.77E-04	1.44E-03	3.16E-05	0.00E+00	3.88E-04	1.89E-03
16	B13	100	Passenger Car	438	0.00E+00	4.80E-06	5.19E-07	1.97E+01	3.34E-05	1.32E-01	1.07E-05	9.37E-04	1.42E-03	2.86E-04	1.04E-03	6.70E-04	6.87E-04	5.49E-05	9.97E-05	2.74E-08	3.52E-04	1.46E-04
16	B13	100	Passenger Truck	734	0.00E+00	1.04E-05	1.10E-06	4.65E+01	6.79E-05	2.65E-01	2.20E-05	2.67E-03	2.51E-03	5.34E-04	2.12E-03	1.37E-03	1.41E-03	2.96E-04	2.33E-04	6.38E-08	7.12E-04	4.30E-04
16	B13	100	Single Unit Short Haul Truck	30	0.00E+00	4.00E-06	1.97E-07	5.42E+00	3.48E-06	1.26E-02	4.32E-06	2.16E-03	2.05E-04	5.96E-05	4.94E-04	1.22E-04	1.25E-04	5.47E-04	2.18E-05	8.92E-09	3.69E-04	4.04E-04
16	B13	100	Single Unit Long Haul Truck	1	0.00E+00	1.73E-07	8.41E-09	2.29E-01	1.44E-07	5.13E-04	1.87E-07	9.10E-05	9.25E-06	2.57E-06	2.15E-05	5.17E-06	5.24E-06	2.29E-05	9.21E-07	3.64E-10	1.63E-05	1.70E-05
16	B13	100	Combination Short Haul Truck	34	0.00E+00	1.16E-05	8.46E-07	1.22E+01	3.30E-08	1.13E-02	8.35E-06	1.24E-02	3.92E-04	1.40E-04	6.49E-04	2.48E-04	2.43E-04	1.84E-03	4.08E-05	0.00E+00	4.05E-04	2.33E-03
16	B13	100	Combination Long Haul Truck	31	0.00E+00	1.01E-05	6.91E-07	1.10E+01	3.82E-08	1.13E-02	7.55E-06	1.18E-02	3.64E-04	1.01E-04	6.61E-04	2.07E-04	2.07E-04	1.68E-03	3.70E-05	0.00E+00	4.54E-04	2.21E-03
16	B14	100	Passenger Car	593	0.00E+00	6.49E-06	7.02E-07	2.67E+01	4.52E-05	1.78E-01	1.45E-05	1.27E-03	1.93E-03	3.87E-04	1.41E-03	9.06E-04	9.29E-04	7.43E-05	1.35E-04	3.71E-08	4.76E-04	1.98E-04
16	B14	100	Passenger Truck	994	0.00E+00	1.40E-05	1.49E-06	6.29E+01	9.19E-05	3.59E-01	2.98E-05	3.62E-03	3.39E-03	7.23E-04	2.87E-03	1.86E-03	1.91E-03	4.00E-04	3.15E-04	8.64E-08	9.63E-04	5.82E-04
16	B14	100	Single Unit Short Haul Truck	36	0.00E+00	4.81E-06	2.38E-07	6.53E+00	4.20E-06	1.51E-02	5.20E-06	2.61E-03	2.47E-04	7.18E-05	5.95E-04	1.47E-04	1.50E-04	6.59E-04	2.63E-05	1.07E-08	4.44E-04	4.86E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.08E-07	1.01E-08	2.75E-01	1.74E-07	6.18E-04	2.25E-07	1.10E-04	1.11E-05	3.10E-06	2.59E-05	6.23E-06	6.32E-06	2.76E-05	1.11E-06	4.39E-10	1.96E-05	2.05E-05
16	B14	100	Combination Short Haul Truck	33	0.00E+00	1.13E-05	8.24E-07	1.19E+01	3.21E-08	1.10E-02	8.14E-06	1.20E-02	3.82E-04	1.36E-04	6.33E-04	2.42E-04	2.37E-04	1.79E-03	3.98E-05	0.00E+00	3.95E-04	2.27E-03
16	B14	100	Combination Long Haul Truck	30	0.00E+00	9.82E-06	6.73E-07	1.07E+01	3.72E-08	1.10E-02	7.36E-06	1.15E-02	3.55E-04	9.82E-05	6.44E-04	2.01E-04	2.01E-04	1.64E-03	3.60E-05	0.00E+00	4.43E-04	2.16E-03
16	B15	100	Passenger Car	1642	0.00E+00	1.80E-05	1.94E-06	7.39E+01	1.25E-04	4.93E-01	4.00E-05	3.51E-03	5.34E-03	1.07E-03	3.89E-03	2.51E-03	2.57E-03	2.06E-04	3.74E-04	1.03E-07	1.32E-03	5.47E-04
16	B15	100	Passenger Truck	2750	0.00E+00	3.88E-05	4.13E-06	1.74E+02	2.54E-04	9.93E-01	8.25E-05	1.00E-02	9.39E-03	2.00E-03	7.94E-03	5.15E-03	5.28E-03	1.11E-03	8.71E-04	2.39E-07	2.67E-03	1.61E-03
16	B15	100	Single Unit Short Haul Truck	110	0.00E+00	1.47E-05	7.28E-07	2.00E+01	1.28E-05	4.63E-02	1.59E-05	7.98E-03	7.55E-04	2.20E-04	1.82E-03	4.51E-04	4.60E-04	2.02E-03	8.04E-05	3.29E-08	1.36E-03	1.49E-03
16	B15	100	Single Unit Long Haul Truck	5	0.00E+00	6.38E-07	3.10E-08	8.43E-01	5.32E-07	1.89E-03	6.89E-07	3.36E-04	3.41E-05	9.49E-06	7.93E-05	1.91E-05	1.93E-05	8.44E-05	3.40E-06	1.34E-09	6.00E-05	6.27E-05
16	B15	100	Combination Short Haul Truck	87	0.00E+00	3.00E-05	2.19E-06	3.15E+01	8.52E-08	2.93E-02	2.16E-05	3.20E-02	1.01E-03	3.61E-04	1.68E-03	6.41E-04	6.29E-04	4.74E-03	1.06E-04	0.00E+00	1.05E-03	6.03E-03
16	B15	100	Combination Long Haul Truck	79	0.00E+00	2.60E-05	1.79E-06	2.85E+01	9.87E-08	2.91E-02	1.95E-05	3.05E-02	9.40E-04	2.60E-04	1.71E-03	5.34E-04	5.34E-04	4.35E-03	9.56E-05	0.00E+00	1.17E-03	5.72E-03
16	B16	100	Passenger Car	994	0.00E+00	1.09E-05	1.18E-06	4.48E+01	7.57E-05	2.98E-01	2.42E-05	2.12E-03	3.23E-03	6.49E-04	2.36E-03	1.52E-03	1.56E-03	1.25E-04	2.26E-04	6.22E-08	7.98E-04	3.31E-04
16	B16	100	Passenger Truck	1665	0.00E+00	2.35E-05	2.50E-06	1.05E+02	1.54E-04	6.01E-01	5.00E-05	6.06E-03	5.69E-03	1.21E-03	4.81E-03	3.12E-03	3.20E-03	6.71E-04	5.27E-04	1.45E-07	1.61E-03	9.76E-04
16	B16	100	Single Unit Short Haul Truck	72	0.00E+00	9.72E-06	4.80E-07	1.32E+01	8.47E-06	3.05E-02	1.05E-05	5.26E-03	4.98E-04	1.45E-04	1.20E-03	2.97E-04	3.03E-04	1.33E-03	5.30E-05	2.17E-08	8.97E-04	9.82E-04
16	B16	100	Single Unit Long Haul Truck	3	0.00E+00	4.21E-07	2.05E-08	5.56E-01	3.51E-07	1.25E-03	4.54E-07	2.21E-04	2.25E-05	6.26E-06	5.23E-05	1.26E-05	1.28E-05	5.57E-05	2.24E-06	8.85E-10	3.96E-05	4.14E-05
16	B16	100	Combination Short Haul Truck	55	0.00E+00	1.89E-05	1.38E-06	1.98E+01	5.37E-08	1.85E-02	1.36E-05	2.01E-02	6.39E-04	2.27E-04	1.06E-03	4.04E-04	3.97E-04	2.99E-03	6.65E-05	0.00E+00	6.60E-04	3.80E-03
16	B16	100	Combination Long Haul Truck	50	0.00E+00	1.64E-05	1.13E-06	1.79E+01	6.22E-08	1.84E-02	1.23E-05	1.92E-02	5.92E-04	1.64E-04	1.08E-03	3.37E-04	3.37E-04	2.74E-03	6.02E-05	0.00E+00	7.40E-04	3.60E-03
16	B17	100	Passenger Car	1163	0.00E+00	1.27E-05	1.38E-06	5.23E+01	8.85E-05	3.49E-01	2.83E-05	2.48E-03	3.78E-03	7.59E-04	2.75E-03	1.78E-03	1.82E-03	1.46E-04	2.65E-04	7.27E-08	9.33E-04	3.88E-04
16	B17	100	Passenger Truck	1947	0.00E+00	2.75E-05	2.93E-06	1.23E+02	1.80E-04	7.03E-01	5.84E-05	7.09E-03	6.65E-03	1.42E-03	5.63E-03	3.65E-03	3.74E-03	7.84E-04	6.17E-04	1.69E-07	1.89E-03	1.14E-03
16	B17	100	Single Unit Short Haul Truck	164	0.00E+00	2.20E-05	1.09E-06	2.98E+01	1.92E-05	6.91E-02	2.38E-05	1.19E-02	1.13E-03	3.28E-04	2.72E-03	6.72E-04	6.86E-04	3.01E-03	1.20E-04	4.91E-08	2.03E-03	2.22E-03
16	B17	100	Single Unit Long Haul Truck	7	0.00E+00	9.52E-07	4.63E-08	1.26E+00	7.93E-07	2.83E-03	1.03E-06	5.01E-04	5.09E-05	1.42E-05	1.18E-04	2.85E-05	2.89E-05	1.26E-04	5.07E-06	2.00E-09	8.96E-05	9.36E-05
16	B17	100	Combination Short Haul Truck	125	0.00E+00	4.31E-05	3.14E-06	4.52E+01	1.22E-07	4.21E-02	3.10E-05	4.59E-02	1.46E-03	5.18E-04	2.41E-03	9.22E-04	9.04E-04	6.82E-03	1.52E-04	0.00E+00	1.51E-03	8.66E-03
16	B17	100	Combination Long Haul Truck	114	0.00E+00	3.74E-05	2.57E-06	4.09E+01	1.42E-07	4.19E-02	2.80E-05	4.38E-02	1.35E-03	3.74E-04	2.45E-03	7.68E-04	7.68E-04	6.25E-03	1.37E-04	0.00E+00	1.69E-03	8.21E-03
16	B18	100	Passenger Car	772	0.00E+00	8.44E-06	9.13E-07	3.47E+01	5.87E-05	2.31E-01	1.88E-05	1.65E-03	2.51E-03	5.04E-04	1.83E-03	1.18E-03	1.21E-03	9.67E-05	1.76E-04	4.82E-08	6.19E-04	2.57E-04

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B22	100	Passenger Car	991	0.00E+00	1.08E-05	1.17E-06	4.46E+01	7.55E-05	2.97E-01	2.41E-05	2.12E-03	3.22E-03	6.47E-04	2.35E-03	1.51E-03	1.55E-03	1.24E-04	2.26E-04	6.20E-08	7.96E-04	3.30E-04
16	B22	100	Passenger Truck	1660	0.00E+00	2.34E-05	2.49E-06	1.05E+02	1.54E-04	5.99E-01	4.98E-05	6.04E-03	5.67E-03	1.21E-03	4.80E-03	3.11E-03	3.19E-03	6.69E-04	5.26E-04	1.44E-07	1.61E-03	9.73E-04
16	B22	100	Single Unit Short Haul Truck	38	0.00E+00	5.14E-06	2.54E-07	6.97E+00	4.48E-06	1.61E-02	5.55E-06	2.78E-03	2.63E-04	7.66E-05	6.35E-04	1.57E-04	1.60E-04	7.04E-04	2.80E-05	1.15E-08	4.75E-04	5.19E-04
16	B22	100	Single Unit Long Haul Truck	2	0.00E+00	2.22E-07	1.08E-08	2.94E-01	1.85E-07	6.60E-04	2.40E-07	1.17E-04	1.19E-05	3.31E-06	2.77E-05	6.65E-06	6.74E-06	2.94E-05	1.18E-06	4.68E-10	2.09E-05	2.19E-05
16	B22	100	Combination Short Haul Truck	84	0.00E+00	2.91E-05	2.12E-06	3.05E+01	8.26E-08	2.84E-02	2.09E-05	3.10E-02	9.83E-04	3.50E-04	1.63E-03	6.22E-04	6.10E-04	4.60E-03	1.02E-04	0.00E+00	1.02E-03	5.84E-03
16	B22	100	Combination Long Haul Truck	77	0.00E+00	2.52E-05	1.73E-06	2.76E+01	9.56E-08	2.82E-02	1.89E-05	2.95E-02	9.11E-04	2.52E-04	1.66E-03	5.18E-04	5.18E-04	4.21E-03	9.26E-05	0.00E+00	1.14E-03	5.54E-03
16	B23	100	Passenger Car	2653	0.00E+00	2.90E-05	3.14E-06	1.19E+02	2.02E-04	7.96E-01	6.46E-05	5.67E-03	8.62E-03	1.73E-03	6.29E-03	4.05E-03	4.16E-03	3.32E-04	6.04E-04	1.66E-07	2.13E-03	8.84E-04
16	B23	100	Passenger Truck	4443	0.00E+00	6.27E-05	6.68E-06	2.81E+02	4.11E-04	1.60E+00	1.33E-04	1.62E-02	1.52E-02	3.23E-03	1.28E-02	8.32E-03	8.53E-03	1.79E-03	1.41E-03	3.86E-07	4.31E-03	2.60E-03
16	B23	100	Single Unit Short Haul Truck	42	0.00E+00	5.60E-06	2.76E-07	7.60E+00	4.88E-06	1.76E-02	6.05E-06	3.03E-03	2.87E-04	8.35E-05	6.92E-04	1.71E-04	1.75E-04	7.67E-04	3.05E-05	1.25E-08	5.17E-04	5.66E-04
16	B23	100	Single Unit Long Haul Truck	2	0.00E+00	2.42E-07	1.18E-08	3.20E-01	2.02E-07	7.19E-04	2.62E-07	1.28E-04	1.30E-05	3.61E-06	3.02E-05	7.25E-06	7.35E-06	3.21E-05	1.29E-06	5.10E-10	2.28E-05	2.38E-05
16	B23	100	Combination Short Haul Truck	44	0.00E+00	1.51E-05	1.10E-06	1.58E+01	4.28E-08	1.47E-02	1.09E-05	1.61E-02	5.10E-04	1.81E-04	8.43E-04	3.22E-04	3.16E-04	2.38E-03	5.31E-05	0.00E+00	5.27E-04	3.03E-03
16	B23	100	Combination Long Haul Truck	40	0.00E+00	1.31E-05	8.98E-07	1.43E+01	4.96E-08	1.46E-02	9.81E-06	1.53E-02	4.73E-04	1.31E-04	8.59E-04	2.69E-04	2.69E-04	2.19E-03	4.80E-05	0.00E+00	5.90E-04	2.87E-03
16	B24	100	Passenger Car	1567	0.00E+00	1.71E-05	1.85E-06	7.05E+01	1.19E-04	4.70E-01	3.82E-05	3.35E-03	5.09E-03	1.02E-03	3.71E-03	2.39E-03	2.45E-03	1.96E-04	3.56E-04	9.79E-08	1.26E-03	5.22E-04
16	B24	100	Passenger Truck	2623	0.00E+00	3.70E-05	3.94E-06	1.66E+02	2.43E-04	9.47E-01	7.87E-05	9.55E-03	8.96E-03	1.91E-03	7.58E-03	4.91E-03	5.04E-03	1.06E-03	8.31E-04	2.28E-07	2.54E-03	1.54E-03
16	B24	100	Single Unit Short Haul Truck	259	0.00E+00	3.49E-05	1.72E-06	4.73E+01	3.04E-05	1.09E-01	3.77E-05	1.89E-02	1.79E-03	5.20E-04	4.31E-03	1.07E-03	1.09E-03	4.77E-03	1.90E-04	7.78E-08	3.22E-03	3.52E-03
16	B24	100	Single Unit Long Haul Truck	11	0.00E+00	1.51E-06	7.34E-08	1.99E+00	1.26E-06	4.48E-03	1.63E-06	7.94E-04	8.07E-05	2.25E-05	1.88E-04	4.51E-05	4.57E-05	2.00E-04	8.04E-06	3.18E-09	1.42E-04	1.48E-04
16	B24	100	Combination Short Haul Truck	250	0.00E+00	8.62E-05	6.27E-06	9.03E+01	2.45E-07	8.41E-02	6.20E-05	9.17E-02	2.91E-03	1.04E-03	4.82E-03	1.84E-03	1.81E-03	1.36E-02	3.03E-04	0.00E+00	3.01E-03	1.73E-02
16	B24	100	Combination Long Haul Truck	228	0.00E+00	7.48E-05	5.13E-06	8.17E+01	2.83E-07	8.36E-02	5.60E-05	8.74E-02	2.70E-03	7.48E-04	4.90E-03	1.53E-03	1.53E-03	1.25E-02	2.74E-04	0.00E+00	3.37E-03	1.64E-02
53	C29	70	Passenger Car	55	0.00E+00	6.92E-07	7.50E-08	2.66E+00	4.82E-06	1.79E-02	1.53E-06	1.11E-04	4.17E-04	6.72E-05	1.50E-04	9.65E-05	9.91E-05	9.79E-06	1.33E-05	3.63E-09	5.07E-05	1.74E-05
53	C29	70	Passenger Truck	91	0.00E+00	1.51E-06	1.60E-07	6.12E+00	9.55E-06	3.28E-02	3.13E-06	3.40E-04	7.50E-04	1.22E-04	3.00E-04	1.94E-04	1.99E-04	4.42E-05	3.05E-05	7.98E-09	9.99E-05	5.59E-05
53	C29	70	Single Unit Short Haul Truck	2	0.00E+00	5.01E-07	2.51E-08	3.93E-01	4.10E-07	7.88E-04	5.34E-07	2.47E-04	3.53E-05	7.05E-06	6.10E-05	1.50E-05	1.52E-05	3.93E-05	1.58E-06	6.40E-10	4.56E-05	4.63E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	9.08E-07	6.46E-08	6.60E-01	2.95E-09	7.81E-04	6.65E-07	9.56E-04	6.89E-05	1.51E-05	5.53E-05	1.91E-05	1.91E-05	9.95E-05	2.20E-06	0.00E+00	3.63E-05	1.80E-04
53	C29	70	Combination Long Haul Truck	2	0.00E+00	8.23E-07	5.49E-08	6.15E-01	3.40E-09	8.28E-04	6.24E-07	9.43E-04	6.86E-05	1.25E-05	5.71E-05	1.66E-05	1.68E-05	9.38E-05	2.06E-06	0.00E+00	4.05E-05	1.77E-04
50	C30	40	Passenger Car	50	0.00E+00	8.34E-07	9.03E-08	2.88E+00	5.80E-06	2.15E-02	1.86E-06	8.97E-05	8.58E-04	1.23E-04	1.81E-04	1.16E-04	1.19E-04	1.56E-05	1.43E-05	3.47E-09	6.12E-05	1.41E-05
50	C30	40	Passenger Truck	83	0.00E+00	1.91E-06	2.00E-07	6.42E+00	1.14E-05	3.69E-02	3.83E-06	3.39E-04	1.52E-03	2.17E-04	3.60E-04	2.35E-04	2.40E-04	5.49E-05	3.16E-05	6.76E-09	1.19E-04	5.75E-05
50	C30	40	Single Unit Short Haul Truck	21	0.00E+00	9.42E-06	4.93E-07	4.51E+00	8.18E-06	7.77E-03	1.00E-05	4.60E-03	8.59E-04	1.42E-04	1.11E-03	2.94E-04	2.98E-04	4.56E-04	1.82E-05	7.71E-09	8.12E-04	8.65E-04
50	C30	40	Single Unit Long Haul Truck	1	0.00E+00	4.13E-07	2.15E-08	1.95E-01	3.58E-07	3.37E-04	4.39E-07	2.00E-04	3.84E-05	6.33E-06	4.88E-05	1.28E-05	1.30E-05	1.97E-05	7.86E-07	3.35E-10	3.58E-05	3.76E-05
50	C30	40	Combination Short Haul Truck	22	0.00E+00	1.91E-05	1.32E-06	9.69E+00	6.88E-08	1.66E-02	1.42E-05	2.13E-02	2.22E-03	4.00E-04	1.24E-03	3.95E-04	3.99E-04	1.46E-03	3.24E-05	0.00E+00	8.37E-04	4.01E-03
50	C30	40	Combination Long Haul Truck	20	0.00E+00	1.74E-05	1.13E-06	9.22E+00	7.80E-08	1.85E-02	1.34E-05	2.13E-02	2.23E-03	3.55E-04	1.27E-03	3.46E-04	3.52E-04	1.41E-03	3.08E-05	0.00E+00	9.22E-04	4.02E-03
52	C31	60	Passenger Car	73	0.00E+00	1.01E-06	1.09E-07	3.69E+00	7.03E-06	2.61E-02	2.24E-06	1.44E-04	7.24E-04	1.11E-04	2.18E-04	1.41E-04	1.45E-04	1.53E-05	1.85E-05	4.93E-09	7.40E-05	2.26E-05
52	C31	60	Passenger Truck	123	0.00E+00	2.22E-06	2.35E-07	8.40E+00	1.39E-05	4.64E-02	4.58E-06	4.64E-04	1.29E-03	2.00E-04	4.34E-04	2.83E-04	2.90E-04	6.39E-05	4.17E-05	1.04E-08	1.44E-04	7.68E-05
52	C31	60	Single Unit Short Haul Truck	17	0.00E+00	4.93E-06	2.46E-07	3.13E+00	4.05E-06	6.05E-03	5.26E-06	2.34E-03	3.98E-04	7.21E-05	5.96E-04	1.47E-04	1.50E-04	3.14E-04	1.27E-05	5.21E-09	4.48E-04	4.40E-04
52	C31	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	1.07E-08	1.34E-01	1.76E-07	2.57E-04	2.30E-07	1.02E-04	1.79E-05	3.20E-06	2.63E-05	6.42E-06	6.53E-06	1.34E-05	5.40E-07	2.22E-10	1.97E-05	1.90E-05
52	C31	60	Combination Short Haul Truck	14	0.00E+00	8.15E-06	5.69E-07	5.30E+00	2.88E-08	7.11E-03	6.03E-06	8.84E-03	7.57E-04	1.50E-04	5.19E-04	1.69E-04	1.69E-04	8.00E-04	1.77E-05	0.00E+00	3.49E-04	1.66E-03
52	C31	60	Combination Long Haul Truck	13	0.00E+00	7.29E-06	4.77E-07	4.98E+00	3.31E-08	7.68E-03	5.64E-06	8.76E-03	7.61E-04	1.29E-04	5.33E-04	1.45E-04	1.47E-04	7.57E-04	1.66E-05	0.00E+00	3.86E-04	1.65E-03
53	C32	70	Passenger Car	269	0.00E+00	3.41E-06	3.70E-07	1.31E+01	2.38E-05	8.83E-02	7.56E-06	5.49E-04	2.06E-03	3.31E-04	7.38E-04	4.76E-04	4.88E-04	4.83E-05	6.57E-05	1.79E-08	2.50E-04	8.60E-05
53	C32	70	Passenger Truck	451	0.00E+00	7.43E-06	7.87E-07	3.02E+01	4.71E-05	1.62E-01	1.54E-05	1.68E-03	3.70E-03	6.03E-04	1.48E-03	9.58E-04	9.82E-04	2.18E-04	1.50E-04	3.93E-08	4.92E-04	2.76E-04
53	C32	70	Single Unit Short Haul Truck	61	0.00E+00	1.43E-05	7.16E-07	1.12E+01	1.17E-05	2.24E-02	1.52E-05	7.04E-03	1.00E-03	2.01E-04	1.74E-03	4.27E-04	4.34E-04	1.12E-03	4.51E-05	1.82E-08	1.30E-03	1.32E-03
53	C32	70	Single Unit Long Haul Truck	3	0.00E+00	6.22E-07	3.10E-08	4.75E-01	5.04E-07	9.38E-04	6.62E-07	3.03E-04	4.59E-05	8.93E-06	7.59E-05	1.85E-05	1.88E-05	4.74E-05	1.91E-06	7.67E-10	5.69E-05	5.67E-05
53	C32	70	Combination Short Haul Truck	44	0.00E+00	2.31E-05	1.64E-06	1.68E+01	7.51E-08	1.99E-02	1.69E-05	2.43E-02	1.75E-03	3.84E-04	1.41E-03	4.86E-04	4.85E-04	2.53E-03	5.60E-05	0.00E+00	9.22E-04	4.58E-03
53	C32	70	Combination Long Haul Truck	41	0.00E+00	2.09E-05	1.40E-06	1.56E+01	8.65E-08	2.11E-02	1.59E-05	2.40E-02	1.74E-03	3.19E-04	1.45E-03	4.22E-04	4.27E-04	2.39E-03	5.23E-05	0.00E+00	1.03E-03	4.51E-03
52	C33	60	Passenger Car	34	0.00E+00	4.75E-07	5.14E-08	1.73E+00	3.31E-06	1.23E-02	1.05E-06	6.77E-05	3.40E-04	5.23E-05	1.03E-04	6.63E-05	6.80E-05	7.21E-06	8.67E-06	2.32E-09	3.48E-05	1.06E-05
52	C33	60	Passenger Truck	58	0.00E+00	1.04E-06	1.10E-07	3.95E+00	6.52E-06	2.18E-02	2.15E-06	2.18E-04	6.07E-04	9.39E-05	2.04E-04	1.33E-04	1.36E-04	3.00E-05	1.96E-05	4.91E-09	6.79E-05	3.61E-05
52	C33	60	Single Unit Short Haul Truck	1	0.00E+00	3.14E-07	1.57E-08	2.00E-01	2.58E-07	3.85E-04	3.35E-07	1.49E-04	2.54E-05	4.59E-06	3.79E-05	9.40E-06	9.55E-06	2.00E-05	8.06E-07	3.32E-10	2.85E-05	2.80E-05
50	C34	40	Passenger Car	23	0.00E+00	3.88E-07	4.20E-08	1.34E+00	2.70E-06	1.00E-02	8.65E-07	4.17E-05	3.99E-04	5.70E-05	8.40E-05	5.42E-05	5.56E-05	7.24E-06	6.66E-06	1.61E-09	2.85E-05	6.54E-06
50	C34	40	Passenger Truck	39	0.00E+00	8.88E-07	9.30E-08	2.98E+00	5.32E-06	1.72E-02	1.78E-06	1.58E-04	7.08E-04	1.01E-04	1.67E-04	1.09E-04	1.12E-04	2.55E-05	1.47E-05	3.14E-09	5.53E-05	2.67E-05
50	C34	40	Single Unit Short Haul Truck	4	0.00E+00	1.86E-06	9.76E-08	8.94E-01	1.62E-06	1.54E-03	1.98E-06	9.11E-04	1.70E-04	2.82E-05	2.20E-04	5.81E-05	5.91E-05	9.03E-05	3.61E-06	1.53E-09	1.61E-04	1.71E-04
50	C34	40	Combination Short Haul Truck	1	0.00E+00	1.00E-06	6.94E-08	5.09E-01	3.61E-09	8.73E-04	7.45E-07	1.12E-03	1.17E-04	2.10E-05	6.50E-05	2.07E-05	2.10E-05	7.67E-05	1.70E-06	0.00E+00	4.40E-05	2.11E-04
50	C34	40	Combination Long Haul Truck	1	0.00E+00	9.14E-07	5.96E-08	4.84E-01	4.10E-09	9.71E-04	7.02E-07	1.12E-03	1.17E-04	1.87E-05	6.68E-05	1.82E-05	1.85E-05	7.39E-05	1.62E-06	0.00E+00	4.84E-05	2.11E-04
53	C35	70	Passenger Car	133	0.00E+00	1.68E-06	1.82E-07	6.46E+00	1.17E-05	4.36E-02	3.73E-06	2.71E-04	1.02E-03	1.64E-04	3.64E-04	2.35E-04	2.41E-04	2.38E-05	3.24E-05	8.83E-09	1.23E-04	4.25E-05
53	C35	70	Passenger Truck	223	0.00E+00	3.67E-06	3.88E-07	1.49E+01	2.33E-05	7.98E-02	7.61E-06	8.29E-04	1.82E-03	2.97E-04	7.30E-04	4.73E-04	4.85E-04	1.08E-04	7.42E-05	1.94E-08	2.43E-04	1.36E-04
53	C35	70	Single Unit Short Haul Truck	12	0.00E+00	2.85E-06	1.43E-07	2.24E+00	2.33E-06	4.48E-03	3.04E-06	1.41E-03	2.01E-04	4.01E-05	3.47E-04	8.53E-05	8.67E-05	2.24E-04	9.00E-06	3.64E-09	2.59E-04	2.63E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.24E-07	6.19E-09	9.49E-02	1.01E-07	1.87E-04	1.32E-07	6.05E-05	9.16E-06	1.78E-06	1.52E-05	3.69E-06	3.75E-06	9.47E-06	3.82E-07	1.53E-10	1.14E-05	1.13E-05
53	C35	70	Combination Short Haul Truck	5	0.00E+00	2.42E-06	1.72E-07	1.76E+00	7.88E-09	2.09E-03	1.78E-06	2.55E-03	1.84E-04	4.03E-05	1.48E-04	5.11E-05	5.10E-05	2.66E-04	5.89E-06	0.00E+00	9.69E-05	4.81E-04
53	C35	70	Combination Long Haul Truck	4	0.00E+00	2.20E-06	1.47E-07	1.64E+00	9.08E-09	2.21E-03	1.67E-06	2.52E-03	1.83E-04	3.35E-05	1.53E-04	4.43E-05	4.48E-05	2.51E-04	5.50E-06	0.00E+00	1.08E-04	4.74E-04
50	C36	40	Passenger Car	110	0.00E+00	1.85E-06	2.00E-07	6.39E+00	1.29E-05	4.77E-02	4.13E-06	1.99E-04	1.90E-03	2.72E-04	4.00E-04	2.58E-04	2.65E-04	3.45E-05	3.18E-05	7.70E-09	1.36E-04	3.12E-05
50	C36	40	Passenger Truck	184	0.00E+00	4.23E-06	4.44E-07	1.42E+01	2.54E-05	8.19E-02	8.50E-06	7.52E-04	3.38E-03	4.81E-04	7.99E-04	5.22E-04	5.32E-04	1.22E-04	7.01E-05	1.50E-08	2.64E-04	1.27E-04
50	C36	40	Single Unit Short Haul Truck	43	0.00E+00	1.89E-05	9.90E-07	9.06E+00	1.64E-05	1.56E-02	2.01E-05	9.24E-03	1.72E-03	2.86E-04	2.23E-03	5.90E-04	5.99E-04	9.16E-04	3.66E-05	1.55E-08	1.63E-03	1.74E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	8.29E-07	4.31E-08	3.91E-01	7.19E-07	6.77E-04	8.81E-07	4.02E-04	7.71E-05	1.27E-05	9.80E-05	2.58E-05	2.62E-05	3.96E-05	1.58E-06	6.72E-10	7.19E-05	7.56E-05
50	C36	40	Combination Short Haul Truck	40	0.00E+00	3.53E-05	2.44E-06	1.79E+01	1.27E-07	3.07E-02	2.62E-05	3.94E-02	4.10E-03	7.40E-04	2.29E-03	7.30E-04	7.38E-04	2.70E-03	5.99E-05	0.00E+00	1.55E-03	7.42E-03
50	C36	40	Combination Long Haul Truck	36	0.00E+00	3.22E-05	2.10E-06	1.70E+01	1.44E-07	3.42E-02	2.47E-05	3.94E-02	4.12E-03	6.57E-04	2.35E-03	6.39E-04	6.52E-04	2.60E-03	5.70E-05	0.00E+00	1.70E-03	7.43E-03
52	C37	60	Passenger Car	51	0.00E+00	7.01E-07	7.58E-08	2.56E+00	4.88E-06	1.81E-02	1.55E-06	9.99E-05	5.02E-04	7.72E-05	1.51E-04	9.78E-05	1.00E-04	1.06E-05	1.28E-05	3.42E-09	5.13E-05	1.57E-05
52	C37	60	Passenger Truck	85	0.00E+00	1.54E-06	1.63E-07	5.82E+00	9.61E-06	3.22E-02	3.17E-06	3.22E-04	8.95E-04	1.38E-04	3.01E-04	1.96E-04	2.01E-04	4.43E-05	2.89E-05	7.24E-09	1.00E-04	5.33E-05
52	C37	60	Single Unit Short Haul Truck	16	0.00E+00	4.57E-06	2.28E-07	2.90E+00	3.75E-06	5.60E-03	4.87E-06	2.17E-03	3.69E-04	6.68E-05	5.52E-04	1.37E-04	1.39E-04	2.90E-04	1.17E-05	4.83E-09	4.15E-04	4.07E-04
52	C37	60	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	9.90E-09	1.24E-01	1.63E-07	2.38E-04	2.13E-07	9.41E-05	1.66E-05	2.97E-06	2.43E-05	5.95E-06	6.04E-06	1.24E-05	5.00E-07	2.05E-10	1.82E-05	1.76E-05
52	C37	60	Combination Short Haul Truck	14	0.00E+00	8.45E-06	5.90E-07	5.50E+00	2.99E-08	7.37E-03	6.26E-06	9.16E-03	7.85E-04	1.55E-04	5.38E-04	1.75E-04	1.75E-04	8.29E-04	1.84E-05	0.00E+00	3.61E-04	1.73E-03
52	C37	60	Combination Long Haul Truck	13	0.00E+00	7.56E-06	4.94E-07	5.16E+00	3.43E-08	7.96E-03	5.85E-06	9.08E-03	7.88E-04	1.34E-04	5.52E-04	1.50E-04	1.52E-04	7.85E-04	1.72E-05	0.00E+00	4.00E-04	1.71E-03
53	C38	70	Passenger Car	466	0.00E+00	5.90E-06	6.39E-07	2.27E+01	4.12E-05	1.53E-01	1.31E-05	9.50E-04	3.56E-03	5.73E-04	1.28E-03	8.23E-04	8.45E-04	8.35E-05	1.14E-04	3.09E-08	4.32E-04	1.49E-04
53	C38	70	Passenger Truck	780	0.00E+00	1.29E-05	1.36E-06	5.22E+01	8.15E-05	2.80E-01	2.67E-05	2.90E-03	6.40E-03	1.04E-03	2.56E-03	1.66E-03	1.70E-03	3.77E-04	2.60E-04	6.81E-08	8.52E-04	4.77E-04
53	C38	70	Single Unit Short Haul Truck	54	0.00E+00	1.26E-05	6.32E-07	9.88E+00	1.03E-05	1.98E-02	1.34E-05	6.21E-03	8.87E-04	1.77E-04	1.53E-03	3.77E-04	3.83E-04	9.89E-04	3.98E-05	1.61E-08	1.15E-03	1.16E-03
53	C38	70	Single Unit Long Haul Truck	2	0.00E+00	5.49E-07	2.73E-08	4.19E-01	4.45E-07	8.28E-04	5.85E-07	2.67E-04	4.05E-05	7.89E-06	6.70E-05	1.63E-05	1.66E-05	4.19E-05	1.69E-06	6.77E-10	5.03E-05	5.01E-05
53	C38	70	Combination Short Haul Truck	54	0.00E+00	2.80E-05	1.99E-06	2.04E+01	9.12E-08	2.41E-02	2.05E-05	2.95E-02	2.13E-03	4.66E-04	1.71E-03	5.91E-04	5.89E-04	3.07E-03	6.81E-05	0.00E+00	1.12E-03	5.56E-03
53	C38	70	Combination Long Haul Truck	49	0.00E+00	2.54E-05	1.70E-06	1.90E+01	1.05E-07	2.56E-02	1.93E-05	2.91E-02	2.12E-03	3.87E-04	1.76E-03	5.13E-04	5.18E-04	2.90E-03	6.36E-05	0.00E+00	1.25E-03	5.48E-03
52	C39	60	Passenger Car	78	0.00E+00	1.08E-06	1.17E-07	3.94E+00	7.51E-06	2.78E-02	2.39E-06	1.54E-04	7.72E-04	1.19E-04	2.33E-04	1.51E-04	1.54E-04	1.64E-05	1.97E-05	5.26E-09	7.90E-05	2.41E-05
52	C39	60	Passenger Truck	131	0.00E+00	2.37E-06	2.50E-07	8.96E+00	1.48E-05	4.95E-02	4.88E-06	4.95E-04	1.38E-03	2.13E-04	4.63E-04	3.02E-04	3.09E-04	6.81E-05	4.44E-05	1.11E-08	1.54E-04	8.20E-05
52	C39	60	Single Unit Short Haul Truck	17	0.00E+00	5.10E-06	2.55E-07	3.24E+00	4.19E-06	6.26E-03	5.44E-06	2.43E-03	4.12E-04	7.46E-05	6.16E-04	1.53E-04	1.55E-04	3.24E-04	1.31E-05	5.39E-09	4.63E-04	4.55E-04
52	C39	60	Single Unit Long Haul Truck	1	0.00E+00	2.23E-07	1.11E-08	1.38E-01	1.82E-07	2.65E-04	2.38E-07	1.05E-04	1.85E-05	3.31E-06	2.72E-05	6.65E-06	6.75E-06	1.38E-05	5.58E-07	2.29E-10	2.03E-05	1.97E-05
52	C39	60	Combination Short Haul Truck	7	0.00E+00	4.20E-06	2.93E-07	2.73E+00	1.49E-08	3.67E-03	3.11E-06	4.56E-03	3.90E-04	7.73E-05	2.68E-04	8.72E-05	8.72E-05	4.12E-04	9.14E-06	0.00E+00	1.80E-04	8.58E-04
52	C39	60	Combination Long Haul Truck	7	0.00E+00	3.76E-06	2.46E-07	2.57E+00	1.70E-08	3.96E-03	2.91E-06	4.52E-03	3.92E-04	6.67E-05	2.75E-04	7.48E-05	7.57E-05	3.90E-04	8.57E-06	0.00E+00	1.99E-04	8.51E-04
50	C40	40	Passenger Car	78	0.00E+00	1.32E-06	1.42E-07	4.55E+00	9.16E-06	3.39E-02	2.94E-06	1.42E-04	1.36E-03	1.93E-04	2.85E-04	1.84E-04	1.89E-04	2.46E-05	2.26E-05	5.48E-09	9.66E-05	2.22E-05
50	C40	40	Passenger Truck	131	0.00E+00	3.01E-06	3.16E-07	1.01E+01	1.81E-05	5.83E-02	6.05E-06	5.36E-04	2.40E-03	3.42E-04	5.68E-04	3.72E-04	3.79E-04	8.67E-05	4.99E-05	1.07E-08	1.88E-04	9.07E-05
50	C40	40	Single Unit Short Haul Truck	17	0.00E+00	7.70E-06	4.03E-07	3.69E+00	6.69E-06	6.36E-03	8.18E-06	3.76E-03	7.03E-04	1.17E-04	9.10E-04	2.40E-04	2.44E-04	3.73E-04	1.49E-05	6.31E-09	6.64E-04	7.08E-04
50	C40	40	Single Unit Long Haul Truck

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
55	C44	90	Combination Short Haul Truck	23	0.00E+00	7.95E-06	5.64E-07	7.82E+00	2.57E-08	7.70E-03	5.81E-06	8.20E-03	3.59E-04	1.06E-04	4.69E-04	1.67E-04	1.64E-04	1.18E-03	2.63E-05	0.00E+00	3.05E-04	1.54E-03
55	C44	90	Combination Long Haul Truck	21	0.00E+00	6.85E-06	4.53E-07	7.13E+00	2.97E-08	7.76E-03	5.25E-06	7.70E-03	3.43E-04	8.10E-05	4.81E-04	1.38E-04	1.37E-04	1.09E-03	2.40E-05	0.00E+00	3.43E-04	1.46E-03
53	C45	70	Passenger Car	203	0.00E+00	2.57E-06	2.79E-07	9.87E+00	1.79E-05	6.66E-02	5.70E-06	4.14E-04	1.55E-03	2.50E-04	5.57E-04	3.59E-04	3.68E-04	3.64E-05	4.95E-05	1.35E-08	1.88E-04	6.49E-05
53	C45	70	Passenger Truck	340	0.00E+00	5.60E-06	5.93E-07	2.28E+01	3.55E-05	1.22E-01	1.16E-05	1.27E-03	2.79E-03	4.54E-04	1.11E-03	7.23E-04	7.41E-04	1.64E-04	1.13E-04	2.97E-08	3.71E-04	2.08E-04
53	C45	70	Single Unit Short Haul Truck	17	0.00E+00	4.10E-06	2.05E-07	3.21E+00	3.35E-06	6.44E-03	4.37E-06	2.02E-03	2.88E-04	5.77E-05	4.99E-04	1.23E-04	1.25E-04	3.22E-04	1.29E-05	5.23E-09	3.73E-04	3.78E-04
53	C45	70	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.89E-09	1.36E-01	1.45E-07	2.69E-04	1.90E-07	8.70E-05	1.32E-05	2.56E-06	2.18E-05	5.30E-06	5.38E-06	1.36E-05	5.49E-07	2.20E-10	1.63E-05	1.63E-05
53	C45	70	Combination Short Haul Truck	12	0.00E+00	6.14E-06	4.37E-07	4.47E+00	2.00E-08	5.29E-03	4.50E-06	6.47E-03	4.66E-04	1.02E-04	3.74E-04	1.29E-04	1.29E-04	6.73E-04	1.49E-05	0.00E+00	2.45E-04	1.22E-03
53	C45	70	Combination Long Haul Truck	11	0.00E+00	5.57E-06	3.71E-07	4.16E+00	2.30E-08	5.60E-03	4.22E-06	6.38E-03	4.64E-04	8.47E-05	3.86E-04	1.12E-04	1.13E-04	6.35E-04	1.39E-05	0.00E+00	2.74E-04	1.20E-03
50	C46	40	Passenger Car	61	0.00E+00	1.02E-06	1.10E-07	3.52E+00	7.09E-06	2.63E-02	2.27E-06	1.10E-04	1.05E-03	1.50E-04	2.21E-04	1.42E-04	1.46E-04	1.90E-05	1.75E-05	4.24E-09	7.48E-05	1.72E-05
50	C46	40	Passenger Truck	102	0.00E+00	2.33E-06	2.45E-07	7.84E+00	1.40E-05	4.51E-02	4.68E-06	4.15E-04	1.86E-03	2.65E-04	4.40E-04	2.88E-04	2.93E-04	6.71E-05	3.86E-05	8.26E-09	1.45E-04	7.02E-05
50	C46	40	Single Unit Short Haul Truck	46	0.00E+00	2.03E-05	1.06E-06	9.75E+00	1.77E-05	1.68E-02	2.16E-05	9.94E-03	1.86E-03	3.08E-04	2.40E-03	6.34E-04	6.44E-04	9.85E-04	3.94E-05	1.66E-08	1.75E-03	1.87E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	8.91E-07	4.64E-08	4.21E-01	7.73E-07	7.29E-04	9.47E-07	4.32E-04	8.30E-05	1.37E-05	1.05E-04	2.77E-05	2.81E-05	4.25E-05	1.70E-06	7.23E-10	7.73E-05	8.13E-05
50	C46	40	Combination Short Haul Truck	40	0.00E+00	3.57E-05	2.48E-06	1.82E+01	1.29E-07	3.11E-02	2.66E-05	3.99E-02	4.16E-03	7.50E-04	2.32E-03	7.40E-04	7.47E-04	2.73E-03	6.07E-05	0.00E+00	1.57E-03	7.52E-03
50	C46	40	Combination Long Haul Truck	37	0.00E+00	3.26E-05	2.13E-06	1.73E+01	1.46E-07	3.46E-02	2.50E-05	3.99E-02	4.18E-03	6.65E-04	2.38E-03	6.48E-04	6.60E-04	2.64E-03	5.77E-05	0.00E+00	1.73E-03	7.53E-03
52	C47	60	Passenger Car	22	0.00E+00	3.04E-07	3.29E-08	1.11E+00	2.12E-06	7.85E-03	6.75E-07	4.34E-05	2.18E-04	3.35E-05	6.56E-05	4.24E-05	4.35E-05	4.61E-06	5.55E-06	1.48E-09	2.23E-05	6.81E-06
52	C47	60	Passenger Truck	37	0.00E+00	6.68E-07	7.06E-08	2.53E+00	4.17E-06	1.40E-02	1.38E-06	1.40E-04	3.88E-04	6.01E-05	1.30E-04	8.51E-05	8.72E-05	1.92E-05	1.25E-05	3.14E-09	4.34E-05	2.31E-05
52	C47	60	Single Unit Short Haul Truck	1	0.00E+00	1.73E-07	8.64E-09	1.10E-01	1.42E-07	2.12E-04	1.84E-07	8.23E-05	1.40E-05	2.53E-06	2.09E-05	5.17E-06	5.26E-06	1.10E-05	4.44E-07	1.83E-10	1.57E-05	1.54E-05
53	C48	70	Passenger Car	126	0.00E+00	1.60E-06	1.73E-07	6.13E+00	1.11E-05	4.14E-02	3.54E-06	2.57E-04	9.64E-04	1.55E-04	3.46E-04	2.23E-04	2.29E-04	2.26E-05	3.08E-05	8.38E-09	1.17E-04	4.03E-05
53	C48	70	Passenger Truck	211	0.00E+00	3.48E-06	3.69E-07	1.41E+01	2.21E-05	7.57E-02	7.22E-06	7.87E-04	1.73E-03	2.82E-04	6.93E-04	4.49E-04	4.60E-04	1.02E-04	7.04E-05	1.84E-08	2.31E-04	1.29E-04
53	C48	70	Single Unit Short Haul Truck	59	0.00E+00	1.38E-05	6.90E-07	1.08E+01	1.13E-05	2.16E-02	1.47E-05	6.78E-03	9.68E-04	1.94E-04	1.68E-03	4.11E-04	4.18E-04	1.08E-03	4.34E-05	1.76E-08	1.25E-03	1.27E-03
53	C48	70	Single Unit Long Haul Truck	3	0.00E+00	6.00E-07	2.98E-08	4.58E-01	4.86E-07	9.04E-04	6.38E-07	2.92E-04	4.42E-05	8.61E-06	7.32E-05	1.78E-05	1.81E-05	4.57E-05	1.84E-06	7.39E-10	5.49E-05	5.47E-05
53	C48	70	Combination Short Haul Truck	42	0.00E+00	2.17E-05	1.54E-06	1.58E+01	7.04E-08	1.87E-02	1.59E-05	2.28E-02	1.64E-03	3.60E-04	1.32E-03	4.56E-04	4.55E-04	2.37E-03	5.26E-05	0.00E+00	8.65E-04	4.30E-03
53	C48	70	Combination Long Haul Truck	38	0.00E+00	1.96E-05	1.31E-06	1.47E+01	8.11E-08	1.98E-02	1.49E-05	2.25E-02	1.64E-03	2.99E-04	1.36E-03	3.96E-04	4.00E-04	2.24E-03	4.91E-05	0.00E+00	9.65E-04	4.24E-03
52	C49	60	Passenger Car	198	0.00E+00	2.73E-06	2.95E-07	9.97E+00	1.90E-05	7.05E-02	6.06E-06	3.89E-04	1.96E-03	3.01E-04	5.89E-04	3.81E-04	3.91E-04	4.14E-05	4.99E-05	1.33E-08	2.00E-04	6.11E-05
52	C49	60	Passenger Truck	332	0.00E+00	6.00E-06	6.34E-07	2.27E+01	3.75E-05	1.25E-01	1.24E-05	1.25E-03	3.49E-03	5.40E-04	1.17E-03	7.65E-04	7.83E-04	1.73E-04	1.13E-04	2.82E-08	3.90E-04	2.08E-04
52	C49	60	Single Unit Short Haul Truck	39	0.00E+00	1.15E-05	5.73E-07	7.30E+00	9.44E-06	1.41E-02	1.22E-05	5.46E-03	9.28E-04	1.68E-04	1.39E-03	3.44E-04	3.49E-04	7.31E-04	2.95E-05	1.21E-08	1.04E-03	1.02E-03
52	C49	60	Single Unit Long Haul Truck	2	0.00E+00	5.02E-07	2.49E-08	3.12E-01	4.10E-07	5.98E-04	5.35E-07	2.37E-04	4.17E-05	7.46E-06	6.12E-05	1.50E-05	1.52E-05	3.11E-05	1.26E-06	5.16E-10	4.58E-05	4.43E-05
52	C49	60	Combination Short Haul Truck	19	0.00E+00	1.14E-05	7.94E-07	7.41E+00	4.03E-08	9.93E-03	8.43E-06	1.23E-02	1.06E-03	2.09E-04	7.25E-04	2.36E-04	2.36E-04	1.12E-03	2.47E-05	0.00E+00	4.87E-04	2.32E-03
52	C49	60	Combination Long Haul Truck	18	0.00E+00	1.02E-05	6.66E-07	6.95E+00	4.62E-08	1.07E-02	7.88E-06	1.22E-02	1.06E-03	1.81E-04	7.44E-04	2.03E-04	2.05E-04	1.06E-03	2.32E-05	0.00E+00	5.38E-04	2.31E-03
50	C50	40	Passenger Car	28	0.00E+00	4.64E-07	5.03E-08	1.60E+00	3.23E-06	1.20E-02	1.04E-06	5.00E-05	4.78E-04	6.82E-05	1.01E-04	6.48E-05	6.65E-05	8.67E-06	7.98E-06	1.93E-09	3.41E-05	7.83E-06
50	C50	40	Passenger Truck	46	0.00E+00	1.06E-06	1.11E-07	3.57E+00	6.37E-06	2.06E-02	2.13E-06	1.89E-04	8.48E-04	1.21E-04	2.00E-04	1.31E-04	1.34E-04	3.06E-05	1.76E-05	3.77E-09	6.62E-05	3.20E-05
53	C51	70	Passenger Car	222	0.00E+00	2.81E-06	3.04E-07	1.08E+01	1.96E-05	7.27E-02	6.22E-06	4.52E-04	1.69E-03	2.73E-04	6.08E-04	3.92E-04	4.02E-04	3.97E-05	5.41E-05	1.47E-08	2.06E-04	7.08E-05
53	C51	70	Passenger Truck	371	0.00E+00	6.12E-06	6.48E-07	2.49E+01	3.88E-05	1.33E-01	1.27E-05	1.38E-03	3.04E-03	4.96E-04	1.22E-03	7.89E-04	8.09E-04	1.79E-04	1.24E-04	3.24E-08	4.05E-04	2.27E-04
53	C51	70	Single Unit Short Haul Truck	28	0.00E+00	6.47E-06	3.24E-07	5.07E+00	5.29E-06	1.02E-02	6.89E-06	3.19E-03	4.55E-04	9.10E-05	7.87E-04	1.93E-04	1.96E-04	5.08E-04	2.04E-05	8.26E-09	5.88E-04	5.97E-04
53	C51	70	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.40E-08	2.15E-01	2.28E-07	4.25E-04	3.00E-07	1.37E-04	2.08E-05	4.05E-06	3.44E-05	8.36E-06	8.50E-06	2.15E-05	8.67E-07	3.47E-10	2.58E-05	2.57E-05
53	C51	70	Combination Short Haul Truck	20	0.00E+00	1.02E-05	7.23E-07	7.40E+00	3.31E-08	8.76E-03	7.45E-06	1.07E-02	7.72E-04	1.69E-04	6.20E-04	2.14E-04	2.14E-04	1.11E-03	2.47E-05	0.00E+00	4.06E-04	2.02E-03
53	C51	70	Combination Long Haul Truck	18	0.00E+00	9.22E-06	6.15E-07	6.89E+00	3.81E-08	9.27E-03	6.99E-06	1.06E-02	7.69E-04	1.40E-04	6.40E-04	1.86E-04	1.88E-04	1.05E-03	2.31E-05	0.00E+00	4.53E-04	1.99E-03
50	C52	40	Passenger Car	48	0.00E+00	8.11E-07	8.78E-08	2.80E+00	5.64E-06	2.09E-02	1.81E-06	8.73E-05	8.35E-04	1.19E-04	1.76E-04	1.13E-04	1.16E-04	1.51E-05	1.39E-05	3.38E-09	5.95E-05	1.37E-05
50	C52	40	Passenger Truck	81	0.00E+00	1.86E-06	1.95E-07	6.24E+00	1.11E-05	3.59E-02	3.73E-06	3.30E-04	1.48E-03	2.11E-04	3.50E-04	2.29E-04	2.33E-04	5.34E-05	3.08E-05	6.58E-09	1.16E-04	5.59E-05
50	C52	40	Single Unit Short Haul Truck	7	0.00E+00	3.12E-06	1.63E-07	1.50E+00	2.71E-06	2.57E-03	3.32E-06	1.53E-03	2.85E-04	4.72E-05	3.69E-04	9.73E-05	9.89E-05	1.51E-04	6.05E-06	2.56E-09	2.69E-04	2.87E-04
50	C52	40	Combination Short Haul Truck	6	0.00E+00	5.36E-06	3.71E-07	2.72E+00	1.93E-08	4.67E-03	3.98E-06	5.98E-03	6.23E-04	1.12E-04	3.48E-04	1.11E-04	1.12E-04	4.10E-04	9.10E-06	0.00E+00	2.35E-04	1.13E-03
50	C52	40	Combination Long Haul Truck	6	0.00E+00	4.89E-06	3.19E-07	2.59E+00	2.19E-08	5.19E-03	3.75E-06	5.99E-03	6.26E-04	9.97E-05	3.57E-04	9.71E-05	9.89E-05	3.95E-04	8.65E-06	0.00E+00	2.59E-04	1.13E-03
52	C53	60	Passenger Car	45	0.00E+00	6.25E-07	6.76E-08	2.28E+00	4.35E-06	1.61E-02	1.39E-06	8.91E-05	4.48E-04	6.88E-05	1.35E-04	8.72E-05	8.95E-05	9.48E-06	1.14E-05	3.05E-09	4.58E-05	1.40E-05
52	C53	60	Passenger Truck	76	0.00E+00	1.37E-06	1.45E-07	5.19E+00	8.57E-06	2.87E-02	2.83E-06	2.87E-04	7.98E-04	1.24E-04	2.68E-04	1.75E-04	1.79E-04	3.95E-05	2.58E-05	6.46E-09	8.93E-05	4.75E-05
53	C54	70	Passenger Car	64	0.00E+00	8.09E-07	8.76E-08	3.10E+00	5.64E-06	2.09E-02	1.79E-06	1.30E-04	4.88E-04	7.86E-05	1.75E-04	1.13E-04	1.16E-04	1.14E-05	1.56E-05	4.24E-09	5.93E-05	2.04E-05
53	C54	70	Passenger Truck	107	0.00E+00	1.76E-06	1.87E-07	7.16E+00	1.12E-05	3.83E-02	3.65E-06	3.98E-04	8.77E-04	1.43E-04	3.51E-04	2.27E-04	2.33E-04	5.17E-05	3.57E-05	9.33E-09	1.17E-04	6.54E-05
53	C54	70	Single Unit Short Haul Truck	8	0.00E+00	1.91E-06	9.57E-08	1.50E+00	1.56E-06	3.00E-03	2.03E-06	9.41E-04	1.34E-04	2.69E-05	2.32E-04	5.71E-05	5.80E-05	1.50E-04	6.03E-06	2.44E-09	1.74E-04	1.76E-04
53	C54	70	Combination Short Haul Truck	5	0.00E+00	2.38E-06	1.70E-07	1.73E+00	7.75E-09	2.05E-03	1.75E-06	2.51E-03	1.81E-04	3.96E-05	1.45E-04	5.02E-05	5.01E-05	2.61E-04	5.79E-06	0.00E+00	9.52E-05	4.73E-04
53	C54	70	Combination Long Haul Truck	4	0.00E+00	2.16E-06	1.44E-07	1.62E+00	8.93E-09	2.17E-03	1.64E-06	2.48E-03	1.80E-04	3.29E-05	1.50E-04	4.36E-05	4.41E-05	2.46E-04	5.41E-06	0.00E+00	1.06E-04	4.66E-04
52	C55	60	Passenger Car	16	0.00E+00	2.24E-07	2.43E-08	8.19E-01	1.56E-06	5.79E-03	4.98E-07	3.20E-05	1.61E-04	2.47E-05	4.84E-05	3.13E-05	3.21E-05	3.40E-06	4.10E-06	1.10E-09	1.64E-05	5.02E-06
52	C55	60	Passenger Truck	27	0.00E+00	4.93E-07	5.21E-08	1.86E+00	3.08E-06	1.03E-02	1.02E-06	1.03E-04	2.86E-04	4.43E-05	9.62E-05	6.28E-05	6.43E-05	1.42E-05	9.25E-06	2.32E-09	3.21E-05	1.71E-05
52	C55	60	Single Unit Short Haul Truck	4	0.00E+00	1.15E-06	5.74E-08	7.31E-01	9.45E-07	1.41E-03	1.23E-06	5.47E-04	9.29E-05	1.68E-05	1.39E-04	3.44E-05	3.50E-05	7.32E-05	2.95E-06	1.22E-09	1.04E-04	1.03E-04
52	C55	60	Combination Short Haul Truck	2	0.00E+00	1.14E-06	7.95E-08	7.42E-01	4.03E-09	9.94E-04	8.44E-07	1.24E-03	1.06E-04	2.10E-05	7.25E-05	2.36E-05	2.36E-05	1.12E-04	2.48E-06	0.00E+00	4.87E-05	2.33E-04
52	C55	60	Combination Long Haul Truck	2	0.00E+00	1.02E-06	6.66E-08	6.96E-01	4.62E-09	1.07E-03	7.89E-07	1.23E-03	1.06E-04	1.81E-05	7.45E-05	2.03E-05	2.05E-05	1.06E-04	2.32E-06	0.00E+00	5.39E-05	2.31E-04
50	C56	40	Passenger Car	30	0.00E+00	5.02E-07	5.44E-08	1.74E+00	3.50E-06	1.30E-02	1.12E-06	5.41E-05	5.17E-04	7.38E-05	1.09E-04	7.02E-05	7.20E-05	9.39E-06	8.64E-06	2.09E-09	3.69E-05	8.47E-06
50	C56	40	Passenger Truck	50	0.00E+00	1.15E-06	1.21E-07	3.87E+00	6.90E-06	2.23E-02	2.31E-06	2.04E-04	9.18E-04	1.31E-04	2.17E-04	1.42E-04	1.45E-04	3.31E-05	1.91E-05	4.08E-09	7.16E-05	3.46E-05
50	C56	40	Single Unit Short Haul Truck	11	0.00E+00	4.72E-06	2.47E-07	2.26E+00	4.10E-06	3.90E-03	5.02E-06	2.31E-03	4.31E-04	7.14E-05	5.58E-04	1.47E-04	1.50E-04	2.29E-04	9.15E-06	3.87E-09	4.07E-04	4.34E-04
50	C56	40	Combination Short Haul Truck	5	0.00E+00	4.59E-06	3.18E-07	2.33E+00	1.66E-08	4.00E-03	3.41E-06	5.12E-03	5.34E-04	9.63E-05	2.98E-04	9.50E-05	9.60E-05	3.51E-04	7.80E-06	0.00E+00	2.02E-04	9.66E-04
50	C56	40	Combination Long Haul Truck	5	0.00E+00	4.19E-06	2.73E-07	2.22E+00	1.88E-08	4.45E-03	3.22E-06	5.13E-03	5.37E-04	8.54E-05	3.06E-04	8.32E-05	8.48E-05	3.39E-04	7.42E-06	0.00E+00	2.22E-04	9.67E-04
53	C57	70	Passenger Car	153	0.00E+00	1.94E-06	2.10E-07	7.44E+00	1.35E-05	5.02E-02	4.29E-06	3.12E-04	1.17E-03	1.88E-04	4.19E-04	2.70E-04	2.78E-04	2.74E-05	3.73E-05	1.02E-08	1.42E-04	4.89E-05
53	C57	70	Passenger Truck	256	0.00E+00	4.22E-06	4.47E-07	1.72E+01	2.68E-05	9.18E-02	8.75E-06	9.54E-04	2.10E-03	3.42E-04	8.40E-04	5.44E-04	5.58E-04	1.24E-04	8.54E-05	2.23E-08	2.80E-04	1.57E-04
53	C57	70	Single Unit Short Haul Truck	19	0.00E+00	4.54E-06	2.28E-07	3.56E+00	3.72E-06	7.14E-03	4.84E-06	2.24E-03	3.20E-04	6.39E-05	5.53E-04	1.36E-04	1.38E-04	3.57E-04	1.43E-05	5.80E-09	4.13E-04	4.20E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	9.86E-09	1.51E-01	1.60E-07	2.99E-04	2.11E-07	9.64E-05	1.46E-05	2.84E-06	2.42E-05	5.88E-06	5.97E-06	1.51E-05	6.09E-07	2.44E-10	1.81E-05	1.81E-05
53	C57	70	Combination Short Haul Truck	18	0.00E+00	9.16E-06	6.51E-07	6.66E+00	2.98E-08	7.88E-03	6.71E-06	9.65E-03	6.95E-04	1.52E-04	5.58E-04	1.93E-04	1.92E-04	1.00E-03	2.22E-05	0.00E+00	3.66E-04	1.82E-03
53	C57	70	Combination Long Haul Truck	16	0.00E+00	8.30E-06	5.54E-07	6.21E+00	3.43E-08	8.35E-03	6.30E-06	9.51E-03	6.92E-04	1.26E-04	5.76E-04	1.67E-04	1.69E-04	9.47E-04	2.08E-05	0.00E+00	4.08E-04	1.79E-03
50	C58	40	Passenger Car	32	0.00E+00	5.41E-07	5.86E-08	1.87E+00	3.77E-06	1.40E-02	1.21E-06	5.82E-05	5.57E-04	7.95E-05	1.17E-04	7.56E-05	7.76E-05	1.01E-05	9.30E-06	2.25E-09	3.97E-05	9.12E-06
50	C58	40	Passenger Truck	54	0.00E+00	1.24E-06	1.30E-07	4.16E+00	7.43E-06	2.40E-02	2.49E-06	2.20E-04	9.89E-04	1.41E-04	2.34E-04	1.53E-04	1.56E-04	3.57E-05	2.05E-05	4.39E-09	7.71E-05	3.73E-05
50	C58	40	Single Unit Short Haul Truck	1	0.00E+00	5.06E-07	2.65E-08	2.43E-01	4.40E-07	4.18E-04	5.38E-07	2.48E-04	4.62E-05	7.66E-06	5.98E-05	1.58E-05	1.60E-05	2.45E-05	9.81E-07	4.15E-10	4.37E-05	4.65E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	1.30E-06	9.02E-08	6.62E-01	4.70E-09	1.14E-03	9.68E-07	1.45E-03	1.52E-04	2.73E-05	8.45E-05	2.70E-05	2.72E-05	9.96E-05	2.21E-06	0.00E+00	5.72E-05	2.74E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	1.19E-06	7.75E-08	6.29E-01	5.32E-09	1.26E-03	9.12E-07	1.46E-03	1.52E-04	2.42E-05	8.68E-05	2.36E-05	2.41E-05	9.61E-05	2.10E-06	0.00E+00	6.29E-05	2.74E-04
53	C59	70	Passenger Car	106	0.00E+00	1.34E-06	1.45E-07	5.14E+00	9.35E-06	3.47E-02	2.97E-06	2.16E-04	8.08E-04	1.30E-04	2.90E-04	1.87E-04	1.92E-04	1.90E-05	2.58E-05	7.02E-09	9.82E-05	3.38E-05
53	C59	70	Passenger Truck	177	0.00E+00	2.92E-06	3.09E-07	1.19E+01	1.85E-05	6.35E-02	6.05E-06	6.60E-04	1.45E-03	2.37E-04	5.81E-04	3.77E-04	3.86E-04	8.56E-05	5.91E-05	1.55E-08	1.93E-04	1.08E-04
53	C59	70	Single Unit Short Haul Truck	8	0.00E+00	1.83E-06	9.15E-08	1.43E+00	1.49E-06	2.87E-03	1.94E-06	9.00E-04	1.28E-04	2.57E-05	2.22E-04	5.46E-05	5.55E-05	1.43E-04	5.76E-06	2.33E-09	1.66E-04	1.69E-04
53	C59	70	Combination Short Haul Truck	5	0.00E+00	2.76E-06	1.96E-07	2.01E+00	8.97E-09	2.38E-03	2.02E-06	2.91E-03	2.10E-04	4.59E-05	1.68E-04	5.82E-05	5.80E-05	3.03E-04	6.70E-06	0.00E+00	1.10E-04	5.48E-04
53	C59	70	Combination Long Haul Truck	5	0.00E+00	2.50E-06	1.67E-07	1.87E+00	1.03E-08	2.52E-03	1.90E-06	2.87E-03	2.09E-04	3.81E-05	1.74E-04	5.05E-05	5.10E-05	2.85E-04	6.26E-06	0.00E+00	1.23E-04	5.40E-04
52	C60	60	Passenger Car	229	0.00E+00	3.15E-06	3.41E-07	1.15E+01	2.19E-05	8.14E-02	6.99E-06	4.49E-04	2.26E-03	3.47E-04	6.80E-04	4.40E-04	4.51E-04	4.78E-05	5.75E-05	1.54E-08	2.31E-04	7.06E-05
52	C60	60	Passenger Truck	383	0.00E+00	6.92E-06	7.31E-07	2.62E+01	4.32E-05	1.45E-01	1.43E-05	1.45E-03	4.02E-03	6.23E-04	1.35E-03	8.82E-04	9.04E-04	1.99E-04	1.30E-04	3.26E-08	4.50E-04	2.39E-04
52	C60	60	Single Unit Short Haul Truck	16	0.00E+00	4.80E-06	2.40E-07	3.05E+00	3.94E-06	5.89E-03	5.12E-06	2.28E-03	3.88E-04	7.02E-05	5.80E-04	1.44E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.36E-04	4.28E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	2.10E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.24E-07	9.88E-05	1.74E-05	3.12E-06	2.56E-05	6.25E-06	6.35E-06	1.30E-05	5.25E-07	2.16E-10	1.91E-05	1.85E-05
52	C60	60	Combination Short Haul Truck	10	0.00E+00	5.88E-06	4.10E-07	3.83E+00	2.08E-08	5.13E-03	4.35E-06	6.38E-03	5.46E-04	1.08E-04	3.74E-04	1.22E-04	1.22E-04	5.77E-04	1.28E-05	0.00E+00	2.52E-04	1.20E-03
52	C60	60	Combination Long Haul Truck	9	0.00E+00	5.26E-06	3.44E-07	3.59E+00	2.38E-08	5.54E-03	4.07E-06	6.32E-03	5.49E-04	9.33E-05	3.84E-04	1.05E-04	1.06E-04	5.46E-04	1.20E-05	0.00E+00	2.78E-04	1.19E-03
53	C61	70	Passenger Car	108	0.00E+00	1.37E-06	1.48E-07	5.26E+00	9.55E-06	3.54E-02	3.03E-06	2.20E-04	8.26E-04	1.33E-04	2.96E-04	1.91E-04	1.96E-04	1.94E-05	2.64E-05	7.18E-09	1.00E-04	3.45E-05
53	C61	70	Passenger Truck	181	0.00E+00	2.98E-06	3.16E-07	1.

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES L nkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C65	60	Passenger Truck	11	0.00E+00	1.91E-07	2.02E-08	7.22E-01	1.19E-06	3.99E-03	3.93E-07	3.99E-05	1.11E-04	1.72E-05	3.73E-05	2.43E-05	2.49E-05	5.49E-06	3.58E-06	8.98E-10	1.24E-05	6.60E-06
50	C66	40	Passenger Car	124	0.00E+00	2.09E-06	2.26E-07	7.21E+00	1.45E-05	5.38E-02	4.66E-06	2.25E-04	2.15E-03	3.07E-04	4.52E-04	2.92E-04	2.99E-04	3.90E-05	3.59E-05	8.69E-09	1.53E-04	3.52E-05
50	C66	40	Passenger Truck	208	0.00E+00	4.78E-06	5.01E-07	1.61E+01	2.87E-05	9.24E-02	9.59E-06	8.49E-04	3.81E-03	5.42E-04	9.01E-04	5.89E-04	6.01E-04	1.37E-04	7.91E-05	1.69E-08	2.98E-04	1.44E-04
50	C66	40	Single Unit Short Haul Truck	6	0.00E+00	2.73E-06	1.43E-07	1.31E+00	2.37E-06	2.25E-03	2.90E-06	1.33E-03	2.49E-04	4.12E-05	3.22E-04	8.51E-05	8.64E-05	1.32E-04	5.28E-06	2.23E-09	2.35E-04	2.51E-04
50	C66	40	Combination Short Haul Truck	4	0.00E+00	3.59E-06	2.48E-07	1.82E+00	1.29E-08	3.13E-03	2.66E-06	4.00E-03	4.17E-04	7.52E-05	2.33E-04	7.42E-05	7.50E-05	2.74E-04	6.09E-06	0.00E+00	1.57E-04	7.54E-04
50	C66	40	Combination Long Haul Truck	4	0.00E+00	3.27E-06	2.13E-07	1.73E+00	1.47E-08	3.48E-03	2.51E-06	4.01E-03	4.19E-04	6.67E-05	2.39E-04	6.50E-05	6.62E-05	2.65E-04	5.79E-06	0.00E+00	1.73E-04	7.56E-04
55	C67	90	Passenger Car	413	0.00E+00	4.66E-06	5.05E-07	1.87E+01	3.25E-05	1.24E-01	1.04E-05	8.52E-04	1.78E-03	3.25E-04	1.01E-03	6.50E-04	6.67E-04	5.75E-05	9.44E-05	2.52E-08	3.42E-04	1.33E-04
55	C67	90	Passenger Truck	691	0.00E+00	1.01E-05	1.07E-06	4.38E+01	6.53E-05	2.44E-01	2.13E-05	2.48E-03	3.19E-03	6.01E-04	2.04E-03	1.33E-03	1.36E-03	2.90E-04	2.19E-04	5.80E-08	6.86E-04	4.03E-04
55	C67	90	Single Unit Short Haul Truck	67	0.00E+00	1.01E-05	4.96E-07	1.23E+01	8.01E-06	2.48E-02	1.08E-05	5.39E-03	5.59E-04	1.47E-04	1.24E-03	2.96E-04	3.02E-04	1.24E-03	4.96E-05	1.94E-08	9.36E-04	1.01E-03
55	C67	90	Single Unit Long Haul Truck	3	0.00E+00	4.39E-07	2.13E-08	5.20E-01	3.38E-07	1.03E-03	4.66E-07	2.29E-04	2.54E-05	6.42E-06	5.39E-05	1.27E-05	1.29E-05	5.19E-05	2.10E-06	8.03E-10	4.10E-05	4.29E-05
55	C67	90	Combination Short Haul Truck	55	0.00E+00	1.96E-05	1.39E-06	1.92E+01	6.31E-08	1.89E-02	1.43E-05	2.02E-02	8.82E-04	2.60E-04	1.15E-03	4.11E-04	4.03E-04	2.91E-03	6.47E-05	0.00E+00	7.51E-04	3.79E-03
55	C67	90	Combination Long Haul Truck	51	0.00E+00	1.68E-05	1.11E-06	1.76E+01	7.32E-08	1.91E-02	1.29E-05	1.90E-02	8.44E-04	1.99E-04	1.18E-03	3.38E-04	3.37E-04	2.68E-03	5.90E-05	0.00E+00	8.44E-04	3.58E-03
55	C68	90	Passenger Car	359	0.00E+00	4.05E-06	4.38E-07	1.62E+01	2.82E-05	1.08E-01	9.00E-06	7.40E-04	1.54E-03	2.82E-04	8.76E-04	5.65E-04	5.80E-04	4.99E-05	8.20E-05	2.19E-08	2.97E-04	1.16E-04
55	C68	90	Passenger Truck	601	0.00E+00	8.78E-06	9.33E-07	3.80E+01	5.67E-05	2.12E-01	1.85E-05	2.15E-03	2.77E-03	5.22E-04	1.77E-03	1.15E-03	1.18E-03	2.52E-04	1.90E-04	5.04E-08	5.96E-04	3.50E-04
55	C68	90	Single Unit Short Haul Truck	57	0.00E+00	8.65E-06	4.25E-07	1.06E+01	6.86E-06	2.12E-02	9.21E-06	4.61E-03	4.79E-04	1.26E-04	1.06E-03	2.54E-04	2.59E-04	1.06E-03	4.25E-05	1.66E-08	8.01E-04	8.63E-04
55	C68	90	Single Unit Long Haul Truck	3	0.00E+00	3.76E-07	1.82E-08	4.46E-01	2.89E-07	8.80E-04	3.99E-07	1.96E-04	2.18E-05	5.50E-06	4.62E-05	1.08E-05	1.11E-05	4.44E-05	1.80E-06	6.88E-10	3.51E-05	3.67E-05
55	C68	90	Combination Short Haul Truck	42	0.00E+00	1.48E-05	1.05E-06	1.45E+01	4.77E-08	1.43E-02	1.08E-05	1.52E-02	6.66E-04	1.96E-04	8.72E-04	3.10E-04	3.05E-04	2.20E-03	4.88E-05	0.00E+00	5.67E-04	2.86E-03
55	C68	90	Combination Long Haul Truck	38	0.00E+00	1.27E-05	8.41E-07	1.33E+01	5.52E-08	1.44E-02	9.75E-06	1.43E-02	6.37E-04	1.51E-04	8.93E-04	2.56E-04	2.54E-04	2.02E-03	4.45E-05	0.00E+00	6.37E-04	2.70E-03
54	C69	80	Passenger Car	545	0.00E+00	6.48E-06	7.01E-07	2.56E+01	4.51E-05	1.70E-01	1.44E-05	1.13E-03	3.15E-03	5.38E-04	1.40E-03	9.04E-04	9.27E-04	8.54E-05	1.29E-04	3.50E-08	4.74E-04	1.76E-04
54	C69	80	Passenger Truck	913	0.00E+00	1.41E-05	1.49E-06	5.94E+01	9.01E-05	3.22E-01	2.94E-05	3.35E-03	5.68E-03	9.89E-04	2.82E-03	1.83E-03	1.87E-03	4.11E-04	2.97E-04	7.89E-08	9.44E-04	5.45E-04
54	C69	80	Single Unit Short Haul Truck	53	0.00E+00	9.87E-06	4.90E-07	9.68E+00	7.94E-06	1.95E-02	1.05E-05	5.06E-03	6.20E-04	1.40E-04	1.20E-03	2.93E-04	2.97E-04	9.71E-04	3.91E-05	1.55E-08	9.04E-04	9.47E-04
54	C69	80	Single Unit Long Haul Truck	2	0.00E+00	4.29E-07	2.12E-08	4.10E-01	3.39E-07	8.07E-04	4.57E-07	2.16E-04	2.83E-05	6.19E-06	5.24E-05	1.26E-05	1.28E-05	4.09E-05	1.65E-06	6.45E-10	3.96E-05	4.05E-05
54	C69	80	Combination Short Haul Truck	55	0.00E+00	2.43E-05	1.74E-06	2.02E+01	7.68E-08	2.15E-02	1.79E-05	2.49E-02	1.47E-03	3.63E-04	1.45E-03	5.14E-04	5.11E-04	3.03E-03	6.74E-05	0.00E+00	9.40E-04	4.71E-03
54	C69	80	Combination Long Haul Truck	51	0.00E+00	2.18E-05	1.46E-06	1.87E+01	8.88E-08	2.23E-02	1.66E-05	2.43E-02	1.45E-03	2.91E-04	1.50E-03	4.42E-04	4.45E-04	2.85E-03	6.23E-05	0.00E+00	1.05E-03	4.58E-03
55	C70	90	Passenger Car	617	0.00E+00	6.96E-06	7.55E-07	2.80E+01	4.85E-05	1.85E-01	1.55E-05	1.27E-03	2.66E-03	4.85E-04	1.51E-03	9.72E-04	9.98E-04	8.59E-05	1.41E-04	3.77E-08	5.11E-04	1.99E-04
55	C70	90	Passenger Truck	1034	0.00E+00	1.51E-05	1.61E-06	6.55E+01	9.76E-05	3.65E-01	3.19E-05	3.70E-03	4.77E-03	8.99E-04	3.04E-03	1.98E-03	2.03E-03	4.34E-04	3.27E-04	8.67E-08	1.03E-03	6.03E-04
55	C70	90	Single Unit Short Haul Truck	111	0.00E+00	1.67E-05	8.19E-07	2.04E+01	1.32E-05	4.10E-02	1.78E-05	8.90E-03	9.24E-04	2.43E-04	2.05E-03	4.90E-04	4.99E-04	2.04E-03	8.19E-05	3.20E-08	1.55E-03	1.67E-03
55	C70	90	Single Unit Long Haul Truck	5	0.00E+00	7.25E-07	3.52E-08	8.60E-01	5.58E-07	1.70E-03	7.70E-07	3.79E-04	4.20E-05	1.06E-05	8.91E-05	2.09E-05	2.13E-05	8.57E-05	3.46E-06	1.33E-09	6.78E-05	7.09E-05
55	C70	90	Combination Short Haul Truck	70	0.00E+00	2.46E-05	1.75E-06	2.42E+01	7.95E-08	2.39E-02	1.80E-05	2.54E-02	1.11E-03	3.28E-04	1.45E-03	5.18E-04	5.08E-04	3.66E-03	8.14E-05	0.00E+00	9.46E-04	4.77E-03
55	C70	90	Combination Long Haul Truck	64	0.00E+00	2.12E-05	1.40E-06	2.21E+01	9.21E-08	2.40E-02	1.63E-05	2.39E-02	1.06E-03	2.51E-04	1.49E-03	4.26E-04	4.24E-04	3.38E-03	7.43E-05	0.00E+00	1.06E-03	4.51E-03
53	C71	70	Passenger Car	344	0.00E+00	4.36E-06	4.73E-07	1.67E+01	3.04E-05	1.13E-01	9.66E-06	7.02E-04	2.63E-03	4.24E-04	9.44E-04	6.08E-04	6.25E-04	6.17E-05	8.40E-05	2.29E-08	3.20E-04	1.10E-04
53	C71	70	Passenger Truck	577	0.00E+00	9.50E-06	1.01E-06	3.86E+01	6.02E-05	2.07E-01	1.97E-05	2.15E-03	4.73E-03	7.71E-04	1.89E-03	1.23E-03	1.26E-03	2.79E-04	1.92E-04	5.03E-08	6.30E-04	3.52E-04
53	C71	70	Single Unit Short Haul Truck	58	0.00E+00	1.36E-05	6.81E-07	1.07E+01	1.11E-05	2.14E-02	1.45E-05	6.70E-03	9.56E-04	1.91E-04	1.66E-03	4.07E-04	4.13E-04	1.07E-03	4.29E-05	1.74E-08	1.24E-03	1.26E-03
53	C71	70	Single Unit Long Haul Truck	3	0.00E+00	5.93E-07	2.95E-08	4.52E-01	4.80E-07	8.93E-04	6.31E-07	2.89E-04	4.37E-05	8.51E-06	7.23E-05	1.76E-05	1.79E-05	4.52E-05	1.82E-06	7.30E-10	5.42E-05	5.40E-05
53	C71	70	Combination Short Haul Truck	40	0.00E+00	2.05E-05	1.46E-06	1.49E+01	6.67E-08	1.77E-02	1.50E-05	2.16E-02	1.56E-03	3.41E-04	1.25E-03	4.32E-04	4.31E-04	2.25E-03	4.98E-05	0.00E+00	8.20E-04	4.07E-03
53	C71	70	Combination Long Haul Truck	36	0.00E+00	1.86E-05	1.24E-06	1.39E+01	7.69E-08	1.87E-02	1.41E-05	2.13E-02	1.55E-03	2.83E-04	1.29E-03	3.75E-04	3.79E-04	2.12E-03	4.65E-05	0.00E+00	9.15E-04	4.01E-03
50	C72	40	Passenger Car	29	0.00E+00	4.88E-07	5.28E-08	1.68E+00	3.39E-06	1.26E-02	1.09E-06	5.25E-05	5.02E-04	7.16E-05	1.06E-04	6.81E-05	6.99E-05	9.11E-06	8.38E-06	2.03E-09	3.58E-05	8.22E-06
50	C72	40	Passenger Truck	49	0.00E+00	1.12E-06	1.17E-07	3.75E+00	6.69E-06	2.16E-02	2.24E-06	1.98E-04	8.91E-04	1.27E-04	2.11E-04	1.38E-04	1.40E-04	3.21E-05	1.85E-05	3.95E-09	6.95E-05	3.36E-05
50	C72	40	Single Unit Short Haul Truck	2	0.00E+00	8.66E-07	4.54E-08	4.15E-01	7.52E-07	7.14E-04	9.20E-07	4.23E-04	7.90E-05	1.31E-05	1.02E-04	2.70E-05	2.74E-05	4.19E-05	1.68E-06	7.09E-10	7.47E-05	7.96E-05
50	C72	40	Combination Short Haul Truck	1	0.00E+00	8.46E-07	5.86E-08	4.29E-01	3.05E-09	7.37E-04	6.28E-07	9.44E-04	9.83E-05	1.77E-05	5.49E-05	1.75E-05	1.77E-05	6.47E-05	1.44E-06	0.00E+00	3.71E-05	1.78E-04
50	C72	40	Combination Long Haul Truck	1	0.00E+00	7.71E-07	5.03E-08	4.09E-01	3.46E-09	8.19E-04	5.92E-07	9.45E-04	9.89E-05	1.57E-05	5.63E-05	1.53E-05	1.56E-05	6.24E-05	1.37E-06	0.00E+00	4.09E-05	1.78E-04
51	C73	50	Passenger Car	160	0.00E+00	2.45E-06	2.65E-07	8.40E+00	1.71E-05	6.31E-02	5.46E-06	2.98E-04	2.09E-03	3.09E-04	5.29E-04	3.42E-04	3.51E-04	4.01E-05	4.19E-05	1.09E-08	1.79E-04	4.66E-05
51	C73	50	Passenger Truck	268	0.00E+00	5.44E-06	5.72E-07	1.89E+01	3.33E-05	1.09E-01	1.10E-05	1.03E-03	3.71E-03	5.46E-04	1.04E-03	6.83E-04	6.99E-04	1.53E-04	9.30E-05	2.20E-08	3.46E-04	1.72E-04
51	C73	50	Single Unit Short Haul Truck	15	0.00E+00	5.42E-06	2.95E-07	3.08E+00	4.64E-06	5.46E-03	5.70E-06	2.73E-03	4.88E-04	8.53E-05	6.24E-04	1.70E-04	1.72E-04	3.13E-04	1.24E-05	5.21E-09	4.51E-04	5.13E-04
51	C73	50	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	1.28E-08	1.32E-01	2.01E-07	2.33E-04	2.48E-07	1.19E-04	2.21E-05	3.82E-06	2.70E-05	7.38E-06	7.51E-06	1.34E-05	5.32E-07	2.24E-10	1.95E-05	2.23E-05
51	C73	50	Combination Short Haul Truck	7	0.00E+00	5.59E-06	4.00E-07	3.19E+00	1.77E-08	4.77E-03	4.10E-06	6.22E-03	5.41E-04	1.07E-04	3.43E-04	1.18E-04	1.19E-04	4.81E-04	1.07E-05	0.00E+00	2.24E-04	1.17E-03
51	C73	50	Combination Long Haul Truck	7	0.00E+00	5.12E-06	3.46E-07	3.00E+00	2.03E-08	5.25E-03	3.87E-06	6.22E-03	5.41E-04	9.13E-05	3.54E-04	1.04E-04	1.06E-04	4.60E-04	1.01E-05	0.00E+00	2.47E-04	1.17E-03
52	C74	60	Passenger Car	399	0.00E+00	5.49E-06	5.93E-07	2.00E+01	3.82E-05	1.42E-01	1.22E-05	7.83E-04	3.93E-03	6.05E-04	1.18E-03	7.66E-04	7.86E-04	8.33E-05	1.00E-04	2.68E-08	4.02E-04	1.23E-04
52	C74	60	Passenger Truck	668	0.00E+00	1.21E-05	1.27E-06	4.56E+01	7.53E-05	2.52E-01	2.48E-05	2.52E-03	7.01E-03	1.08E-03	2.35E-03	1.54E-03	1.57E-03	3.47E-04	2.26E-04	5.67E-08	7.84E-04	4.17E-04
52	C74	60	Single Unit Short Haul Truck	60	0.00E+00	1.75E-05	8.75E-07	1.11E+01	1.44E-05	2.15E-02	1.87E-05	8.34E-03	1.42E-03	2.56E-04	2.12E-03	5.24E-04	5.33E-04	1.12E-03	4.50E-05	1.85E-08	1.59E-03	1.56E-03
52	C74	60	Single Unit Long Haul Truck	3	0.00E+00	7.66E-07	3.80E-08	4.76E-01	6.26E-07	9.12E-04	8.17E-07	3.61E-04	6.36E-05	1.14E-05	9.34E-05	2.28E-05	2.32E-05	4.75E-05	1.92E-06	7.88E-10	6.99E-05	6.76E-05
52	C74	60	Combination Short Haul Truck	50	0.00E+00	2.93E-05	2.04E-06	1.91E+01	1.04E-07	2.56E-02	2.17E-05	3.18E-02	2.72E-03	5.39E-04	1.87E-03	6.08E-04	6.08E-04	2.87E-03	6.37E-05	0.00E+00	1.25E-03	5.98E-03
52	C74	60	Combination Long Haul Truck	45	0.00E+00	2.62E-05	1.71E-06	1.79E+01	1.19E-07	2.76E-02	2.03E-05	3.15E-02	2.73E-03	4.65E-04	1.91E-03	5.22E-04	5.28E-04	2.72E-03	5.97E-05	0.00E+00	1.39E-03	5.93E-03
53	C81	70	Passenger Car	316	0.00E+00	4.01E-06	4.34E-07	1.54E+01	2.79E-05	1.04E-01	8.87E-06	6.45E-04	2.42E-03	3.89E-04	8.67E-04	5.59E-04	5.74E-04	5.67E-05	7.71E-05	2.10E-08	2.93E-04	1.01E-04
53	C81	70	Passenger Truck	530	0.00E+00	8.72E-06	9.24E-07	3.55E+01	5.53E-05	1.90E-01	1.81E-05	1.97E-03	4.34E-03	7.08E-04	1.74E-03	1.13E-03	1.15E-03	2.56E-04	1.77E-04	4.62E-08	5.78E-04	3.24E-04
53	C81	70	Single Unit Short Haul Truck	72	0.00E+00	1.69E-05	8.48E-07	1.33E+01	1.38E-05	2.66E-02	1.80E-05	8.34E-03	1.19E-03	2.38E-04	2.06E-03	5.06E-04	5.14E-04	1.33E-03	5.34E-05	2.16E-08	1.54E-03	1.56E-03
53	C81	70	Single Unit Long Haul Truck	3	0.00E+00	7.37E-07	3.67E-08	5.63E-01	5.97E-07	1.11E-03	7.85E-07	3.59E-04	5.43E-05	1.06E-05	8.99E-05	2.19E-05	2.22E-05	5.62E-05	2.27E-06	9.08E-10	6.74E-05	6.72E-05
53	C81	70	Combination Short Haul Truck	68	0.00E+00	3.52E-05	2.50E-06	2.56E+01	1.14E-07	3.03E-02	2.58E-05	3.71E-02	2.67E-03	5.85E-04	2.15E-03	7.42E-04	7.40E-04	3.86E-03	8.54E-05	0.00E+00	1.41E-03	6.98E-03
53	C81	70	Combination Long Haul Truck	62	0.00E+00	3.19E-05	2.13E-06	2.39E+01	1.32E-07	3.21E-02	2.42E-05	3.66E-02	2.66E-03	4.86E-04	2.21E-03	6.44E-04	6.50E-04	3.64E-03	7.98E-05	0.00E+00	1.57E-03	6.88E-03
52	C82	60	Passenger Car	292	0.00E+00	4.02E-06	4.34E-07	1.47E+01	2.80E-05	1.04E-01	8.91E-06	5.73E-04	2.88E-03	4.42E-04	8.67E-04	5.61E-04	5.75E-04	6.09E-05	7.33E-05	1.96E-08	2.94E-04	8.99E-05
52	C82	60	Passenger Truck	488	0.00E+00	8.82E-06	9.32E-07	3.34E+01	5.51E-05	1.85E-01	1.82E-05	1.85E-03	5.13E-03	7.94E-04	1.72E-03	1.12E-03	1.15E-03	2.54E-04	1.66E-04	4.15E-08	5.74E-04	3.05E-04
52	C82	60	Single Unit Short Haul Truck	71	0.00E+00	2.09E-05	1.04E-06	1.33E+01	1.72E-05	2.56E-02	2.23E-05	9.93E-03	1.69E-03	3.05E-04	2.52E-03	6.24E-04	6.34E-04	1.33E-03	5.36E-05	2.21E-08	1.89E-03	1.86E-03
52	C82	60	Single Unit Long Haul Truck	3	0.00E+00	9.12E-07	4.53E-08	5.66E-01	7.45E-07	1.09E-03	9.73E-07	4.30E-04	7.57E-05	1.36E-05	1.11E-04	2.72E-05	2.76E-05	5.65E-05	2.28E-06	9.38E-10	8.32E-05	8.05E-05
52	C82	60	Combination Short Haul Truck	64	0.00E+00	3.75E-05	2.62E-06	2.44E+01	1.33E-07	3.27E-02	2.78E-05	4.07E-02	3.48E-03	6.90E-04	2.39E-03	7.78E-04	7.78E-04	3.68E-03	8.15E-05	0.00E+00	1.60E-03	7.66E-03
52	C82	60	Combination Long Haul Truck	58	0.00E+00	3.35E-05	2.19E-06	2.29E+01	1.52E-07	3.53E-02	2.60E-05	4.03E-02	3.50E-03	5.95E-04	2.45E-03	6.68E-04	6.76E-04	3.48E-03	7.64E-05	0.00E+00	1.77E-03	7.60E-03
16	C83	100	Passenger Car	783	0.00E+00	8.57E-06	9.26E-07	3.52E+01	5.96E-05	2.35E-01	1.91E-05	1.67E-03	2.54E-03	5.11E-04	1.85E-03	1.20E-03	1.23E-03	9.81E-05	1.78E-04	4.89E-08	6.28E-04	2.61E-04
16	C83	100	Passenger Truck	1311	0.00E+00	1.85E-05	1.97E-06	8.30E+01	1.21E-04	4.73E-01	3.93E-05	4.77E-03	4.48E-03	9.54E-04	3.79E-03	2.45E-03	2.52E-03	5.28E-04	4.15E-04	1.14E-07	1.27E-03	7.68E-04
16	C83	100	Single Unit Short Haul Truck	172	0.00E+00	2.31E-05	1.14E-06	3.14E+01	2.02E-05	7.27E-02	2.50E-05	1.25E-02	1.19E-03	3.45E-04	2.86E-03	7.08E-04	7.22E-04	3.17E-03	1.26E-04	5.16E-08	2.14E-03	2.34E-03
16	C83	100	Single Unit Long Haul Truck	8	0.00E+00	1.00E-06	4.87E-08	1.32E+00	8.35E-07	2.97E-03	1.08E-06	5.27E-04	5.36E-05	1.49E-05	1.25E-04	2.99E-05	3.04E-05	1.33E-04	5.34E-06	2.11E-09	9.43E-05	9.85E-05
16	C83	100	Combination Short Haul Truck	160	0.00E+00	5.52E-05	4.02E-06	5.78E+01	1.57E-07	5.38E-02	3.97E-05	5.87E-02	1.86E-03	6.63E-04	3.08E-03	1.18E-03	1.16E-03	8.72E-03	1.94E-04	0.00E+00	1.93E-03	1.11E-02
16	C83	100	Combination Long Haul Truck	146	0.00E+00	4.79E-05	3.28E-06	5.23E+01	1.81E-07	5.36E-02	3.59E-05	5.60E-02	1.73E-03	4.79E-04	3.14E-03	9.82E-04	9.82E-04	7.99E-03	1.76E-04	0.00E+00	2.16E-03	1.05E-02
55	C84	90	Passenger Car	207	0.00E+00	2.33E-06	2.53E-07	9.36E+00	1.62E-05	6.20E-02	5.18E-06	4.27E-04	8.90E-04	1.62E-04	5.05E-04	3.25E-04	3.34E-04	2.88E-05	4.72E-05	1.26E-08	1.71E-04	6.66E-05
55	C84	90	Passenger Truck	346	0.00E+00	5.06E-06	5.37E-07	2.19E+01	3.27E-05	1.22E-01	1.07E-05	1.24E-03	1.60E-03	3.01E-04	1.02E-03	6.63E-04	6.81E-04	1.45E-04	1.10E-04	2.90E-08	3.43E-04	2.02E-04
55	C84	90	Single Unit Short Haul Truck	85	0.00E+00	1.28E-05	6.30E-07	1.57E+01	1.02E-05	3.15E-02	1.37E-05	6.85E-03	7.11E-04	1.87E-04	1.57E-03	3.77E-04	3.84E-04	1.57E-03	6.30E-05	2.46E-08	1.19E-03	1.28E-03
55	C84	90	Single Unit Long Haul Truck	4	0.00E+00	5.58E-07	2.71E-08	6.62E-01	4.30E-07	1.31E-03	5.93E-07	2.92E-04	3.23E-05	8.16E-06	6.86E-05	1.61E-05	1.64E-05	6.59E-05	2.66E-06	1.02E-09	5.21E-05	5.46E-05
55	C84	90	Combination Short Haul Truck	70	0.00E+00	2.46E-05	1.74E-06	2.42E+01	7.94E-08	2.38E-02	1.80E-05	2.54E-02	1.11E-03	3.27E-04	1.45E-03	5.17E-04	5.07E-04	3.66E-03	8.13E-05	0.00E+00	9.45E-04	4.76E-03
55	C84	90	Combination Long Haul Truck	64	0.00E+00	2.12E-05	1.40E-06	2.21E+01	9.20E-08	2.40E-02	1.62E-05	2.38E-02	1.06E-03	2.51E-04	1.49E-03	4.26E-04	4.24E-04	3.37E-03	7.42E-05	0.00E+00	1.06E-03	4.50E-03
55	C85	90	Passenger Car	462	0.00E+00	5.21E-06	5.65E-07	2.09E+01	3.63E-05	1.39E-01	1.16E-05	9.53E-04	1.99E-03	3.63E-04	1.13E-03	7.28E-04	7.47E-04	6.43E-05	1.06E-04	2.82E-08	3.82E-04	1.49E-04
55	C85	90	Passenger Truck	774	0.00E+00	1.13E-05	1.20E-06	4.90E+01	7.31E-05	2.73E-01	2.39E-05	2.77E-03	3.57E-03	6.73E-04	2.28E-03	1.48E-03	1.52E-03	3.24E-04	2.45E-04	6.49E-08	7.67E-04	4.51E-04
55	C85	90	Single Unit Short Haul Truck	119	0.00E+00	1.79E-05	8.79E-07	2.19E+01	1.42E-05	4.40E-02	1.91E-05	9.55E-03	9.92E-04	2.61E-04	2.20E-03	5.26E-04	5.36E-04	2.19E-03	8.79E-05	3.44E-08	1.66E-03	1.79E-03
55	C85	90	Single Unit Long Haul Truck	5	0.00E+00	7.79E-07	3.78E-08	9.23E-01	5.99E-07	1.82E-03	8.27E-07	4.07E-04	4.51E-05	1.14E-05	9.56E-05	2.25E-05	2.29E-05	9.20E-05	3.72E-06	1.42E-09	7.28E-05	7.61E-05
55	C85	90	Combination Short Haul Truck	82	0.00E+00	2.91E-05	2.06E-06	2.86E+01	9.39E-08	2.82E-02	2.12E-05	3.00E-02	1.31E-03	3.87E-04	1.72E-03	6.11E-04	6.00E-04	4.33E-03	9.62E-05	0.00E+00	1.12E-03	5.63E-03
55	C85	90	Combination Long Haul Truck	75	0.00E+00	2.51E-05	1.66E-06	2.61E+01	1.09E-07	2.84E-02	1.92E-05	2.82E-02	1.25E-03	2.96E-04	1.76E-03	5.03E-04	5.01E-04	3.99E-03	8.77E-05	0.00E+00	1.25E-03	5.32E-03
55	C86	90	Passenger Car	468	0.00E+00	5.27E-06	5.71E-07	2.12E+01	3.68E-05	1.40E-01	1.17E-05	9.65E-04	2.01E-03	3.68E-04	1.14E-03	7.36E-04	7.56E-04	6.51E-05	1.07E-04	2.86E-08	3.87E-04	1.51E-04
55	C86	90	Passenger Truck	783	0.00E+00	1.14E-05	1.22E-06	4.96E+01	7.39E-05	2.76E-01	2.41E-05	2.81E-03	3.61E-03	6.81E-04	2.31E-03	1.50E-03	1.54E-03	3.28E-04	2.48E-04	6.57E-08	7.76E-04	4.57E-04
55	C86	90	Single Unit Short Haul Truck	210	0.00E+00	3.16E-05	1.55E-06	3.85E+01	2.51E-05	7.75E-02	3.36E-05	1.68E-02	1.75E-03	4.60E-04	3.87E-03	9.27E-04	9.44E-04	3.86E-03	1.55E-04	6.06E-08	2.93E-03	3.15E-03
55	C86	90	Single Unit Long Haul Truck	9	0.00E+00	1.37E-06	6.66E-08	1.63E+00	1.06E-06	3.21E-03	1.46E-06	7.17E-04	7.94E-05	2.01E-05	1.69E-04	3.96E-05	4.04E-05	1.62E-04	6.55E-06	2.51E-09	1.28E-04	1.34E-04
55	C86	90	Combination Short Haul Truck	157	0.00E+00	5.54E-05	3.93E-06	5.45E+01	1.79E-07	5.37E-02	4.05E-05	5.71E-02	2.50E-03	7.37E-04	3.27E-03	1.16E-03	1.14E-03	8.24E-03	1.83E-04	0.00E+00	2.13E-03	1.07E-02
55	C86	90	Combination Long Haul Truck	143	0.00E+00	4.77E-05	3.15E-06	4.97E+01	2.07E-07	5.41E-02	3.66E-05	5.37E-02	2.39E-03	5.65E-04	3.35E-03	9.59E-04	9.55E-04	7.60E-03	1.67E-04	0.00E+00	2.39E-03	1.01E-02
10	D63	70	Passenger Car	4	0.00E+00	4.89E-08	5.29E-09	1.80E-01	3.41E-07	1.28E-03	1.09E-07	7.49E-06	2.90E-05	4.65E-06	1.06E-05	6.82E-06	7.00E-06	6.70E-07	9.01E-07	2.46E-10	3.58E-06	1.17E-06
10	D63	70	Passenger Truck	6	0.00E+00	1.07E-07	1.13E-08	4.14E-01	6.78E-07	2.35E-03	2.23E-07	2.35E-05	5.27E-05	8.57E-06	2.12E-05	1.38E-05	1.41E-05	3.04E-06	2.05E-06	5.51E-10	7.08E-06	3.86E-06
10	D64	70	Passenger Car	43	0.00E+00	5.67E-07	6.13E-08	2.08E+00	3.95E-06	1.48E-02	1.26E-06	8.69E-05	3.36E-04	5.40E-05	1.23E-04	7.92E-05	8.12E-05	7.77E-06	1.05E-05	2.86E-09	4.16E-05	1.36E-05
10	D64	70	Passenger Truck	73	0.00E+00	1.24E-06	1.32E-07	4.80E+00	7.87E-06	2.72E-02	2.58E-06	2.72E-04	6.11E-04	9.95E-05	2.46E-04	1.60E-04	1.64E-04	3.53E-05	2.38E-05	6.40E-09	8.21E-05	4.48E-05
10	D64	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.83E-03	1.92E-06	8.88E-04	1.27E-04	2.53E-05	2.19E-04	5.38E-05	5.47E-05	1.41E-04	5.68E-06	2.30E-09	1.64E-04	1.66E-04
10	D64	70	Combination Short Haul Truck	6	0.00E+00	3.26E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.87E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	D64	70	Combination Long Haul Truck	6	0.00E+00	2.96E-06	1.97E-07	2.21E+00	1.22E-08	2.97E-03	2.24E-06	3.39E-03	2.46E-04	4.50E-05	2.05E-04	5.96E-05	6.03E-05	3.37E-04	7.39E-06	0.00E+00	1.45E-04	6.38E-04
11	D65	80	Passenger Car	186	0.00E+00	2.26E-06	2.44E-07	8.66E+00	1.57E-05	6.03E-02	5.02E-06	3.81E-04	1.02E-03	1.77E-04	4.89E-04	3.15E-04	3.24E-04	2.91E-05	4.35E-05	1.22E-08	1.65E-04	5.98E-05
11	D65	80	Passenger Truck	311	0.00E+00	4.85E-06	5.14E-07	2.00E+01	3.11E-05	1.10E-01	1.02E-05	1.13E-03	1.83E-03	3.24E-04	9.75E-04	6.32E-04	6.47E-04	1.40E-04	1.00E-04	2.72E-08	3.25E-04	1.85E-04
11	D65	80	Single Unit Short Haul Truck	29	0.00E+00	5.53E-06	2.74E-07	5.42E+00	4.45E-06	1.09E-02	5.88E-06	2.83E-03	3.47E-04	7.85E-05	6.72E-04	1.64E-04	1.66E-04	5.44E-04	2.19E-05	8.68E-09	5.06E-04	5.30E-04
11	D65	80	Single Unit Long Haul Truck	1	0.00E+00	2.40E-07	1.18E-08	2.29E-01	1.90E-07	4.51E-04	2.56E-07	1.21E-04	1.59E-05	3.46E-06	2.93E-05	7.04E-06	7.15E-06	2.29E-05	9.25E-07	3.61E-10	2.22E-05	2.27E-05
11	D65	80	Combination Short Haul Truck	22	0.00E+00	9.85E-06	7.05E-07	8.17E+00	3.11E-08	8.73E-03	7.23E-06	1.01E-02	5.97E-04	1.47E-04	5.87E-04	2.08E-04	2.07E-04	1.23E-03	2.73E-05	0.00E+00	3.81E-04	1.91E-03
11	D65	80	Combination Long Haul Truck	20	0.00E+00	8.81E-06	5.91E-07	7.56E+00	3.60E-08	9.04E-03	6.71E-06	9.84E-03	5.86E-04	1.18E-04	6.08E-04	1.79E-04	1.80E-04	1.15E-03	2.52E-05	0.00E+00	4.27E-04	1.85E-03
11	D66	80	Passenger Car	285	0.00E+00	3.47E-06	3.75E-07	1.33E+01	2.41E-05	9.26E-02	7.72E-06	5.86E-04	1.57E-03	2.72E-04	7.51E-04	4.84E-04	4.97E-04	4.46E-05	6.69E-05	1.88E-08	2.54E-04	9.18E-05
11	D66	80	Passenger Truck	477	0.00E+00	7.45E-06	7.90E-07	3.08E+01	4.77E-05	1.70E-01	1.56E-05	1.74E-03	2.81E-03	4.98E-04	1.50E-03	9.70E-04	9.94E-04	2.15E-04	1.54E-04	4.18E-08	5.00E-04	2.84E-04
11	D66	80	Single Unit Short Haul Truck	33	0.00E+00	6.17E-06	3.06E-07	6.05E+00	4.96E-06	1.22E-02	6.56E-06	3.16E-03	3.88E-04	8.76E-05	7.50E-04	1.83E-04	1.86E-04	6.07E-04	2.44E-05	9.69E-09	5.65E-04	5.91E-04

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D66	80	Single Unit Long Haul Truck	1	0.00E+00	2.68E-07	1.32E-08	2.56E-01	2.12E-07	5.04E-04	2.85E-07	1.35E-04	1.77E-05	3.87E-06	3.27E-05	7.86E-06	7.98E-06	2.56E-05	1.03E-06	4.03E-10	2.47E-05	2.53E-05
11	D66	80	Combination Short Haul Truck	26	0.00E+00	1.13E-05	8.10E-07	9.39E+00	3.58E-08	1.00E-02	8.32E-06	1.16E-02	6.87E-04	1.69E-04	6.75E-04	2.39E-04	2.38E-04	1.41E-03	3.14E-05	0.00E+00	4.38E-04	2.19E-03
11	D66	80	Combination Long Haul Truck	24	0.00E+00	1.01E-05	6.80E-07	8.69E+00	4.14E-08	1.04E-02	7.71E-06	1.13E-02	6.73E-04	1.35E-04	6.99E-04	2.06E-04	2.07E-04	1.33E-03	2.90E-05	0.00E+00	4.90E-04	2.13E-03
11	D67	80	Passenger Car	202	0.00E+00	2.45E-06	2.65E-07	9.41E+00	1.71E-05	6.55E-02	5.46E-06	4.14E-04	1.11E-03	1.93E-04	5.32E-04	3.43E-04	3.52E-04	3.16E-05	4.73E-05	1.33E-08	1.80E-04	6.50E-05
11	D67	80	Passenger Truck	338	0.00E+00	5.27E-06	5.59E-07	2.18E+01	3.38E-05	1.20E-01	1.11E-05	1.23E-03	1.99E-03	3.53E-04	1.06E-03	6.87E-04	7.03E-04	1.52E-04	1.09E-04	2.95E-08	3.54E-04	2.01E-04
11	D67	80	Single Unit Short Haul Truck	49	0.00E+00	9.22E-06	4.57E-07	9.04E+00	7.41E-06	1.82E-02	9.80E-06	4.72E-03	5.79E-04	1.31E-04	1.12E-03	2.73E-04	2.77E-04	9.07E-04	3.65E-05	1.45E-08	8.44E-04	8.83E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	4.00E-07	1.98E-08	3.82E-01	3.17E-07	7.53E-04	4.26E-07	2.02E-04	2.64E-05	5.77E-06	4.89E-05	1.17E-05	1.19E-05	3.82E-05	1.54E-06	6.02E-10	3.70E-05	3.78E-05
11	D67	80	Combination Short Haul Truck	38	0.00E+00	1.67E-05	1.19E-06	1.38E+01	5.26E-08	1.48E-02	1.22E-05	1.71E-02	1.01E-03	2.49E-04	9.94E-04	3.52E-04	3.50E-04	2.08E-03	4.62E-05	0.00E+00	6.44E-04	3.23E-03
11	D67	80	Combination Long Haul Truck	35	0.00E+00	1.49E-05	1.00E-06	1.28E+01	6.09E-08	1.53E-02	1.13E-05	1.66E-02	9.91E-04	1.99E-04	1.03E-03	3.03E-04	3.05E-04	1.95E-03	4.27E-05	0.00E+00	7.21E-04	3.14E-03
11	D68	80	Passenger Car	158	0.00E+00	1.92E-06	2.08E-07	7.36E+00	1.34E-05	5.13E-02	4.27E-06	3.24E-04	8.68E-04	1.51E-04	4.16E-04	2.68E-04	2.75E-04	2.47E-05	3.70E-05	1.04E-08	1.41E-04	5.08E-05
11	D68	80	Passenger Truck	264	0.00E+00	4.12E-06	4.37E-07	1.70E+01	2.64E-05	9.39E-02	8.66E-06	9.61E-04	1.56E-03	2.76E-04	8.29E-04	5.37E-04	5.50E-04	1.19E-04	8.51E-05	2.31E-08	2.77E-04	1.57E-04
11	D68	80	Single Unit Short Haul Truck	33	0.00E+00	6.16E-06	3.06E-07	6.05E+00	4.96E-06	1.21E-02	6.56E-06	3.16E-03	3.87E-04	8.76E-05	7.50E-04	1.83E-04	1.85E-04	6.06E-04	2.44E-05	9.68E-09	5.64E-04	5.91E-04
11	D68	80	Single Unit Long Haul Truck	1	0.00E+00	2.68E-07	1.32E-08	2.56E-01	2.12E-07	5.03E-04	2.85E-07	1.35E-04	1.77E-05	3.86E-06	3.27E-05	7.85E-06	7.97E-06	2.55E-05	1.03E-06	4.03E-10	2.47E-05	2.53E-05
11	D68	80	Combination Short Haul Truck	32	0.00E+00	1.39E-05	9.98E-07	1.16E+01	4.41E-08	1.24E-02	1.02E-05	1.43E-02	8.46E-04	2.08E-04	8.32E-04	2.95E-04	2.93E-04	1.74E-03	3.87E-05	0.00E+00	5.39E-04	2.70E-03
11	D68	80	Combination Long Haul Truck	29	0.00E+00	1.25E-05	8.37E-07	1.07E+01	5.10E-08	1.28E-02	9.50E-06	1.39E-02	8.29E-04	1.67E-04	8.61E-04	2.54E-04	2.55E-04	1.63E-03	3.57E-05	0.00E+00	6.04E-04	2.62E-03
11	D69	80	Passenger Car	128	0.00E+00	1.55E-06	1.68E-07	5.96E+00	1.08E-05	4.15E-02	3.46E-06	2.63E-04	7.02E-04	1.22E-04	3.37E-04	2.17E-04	2.23E-04	2.00E-05	3.00E-05	8.41E-09	1.14E-04	4.12E-05
11	D69	80	Passenger Truck	214	0.00E+00	3.34E-06	3.54E-07	1.38E+01	2.14E-05	7.61E-02	7.01E-06	7.78E-04	1.26E-03	2.23E-04	6.71E-04	4.35E-04	4.46E-04	9.63E-05	6.89E-05	1.87E-08	2.24E-04	1.27E-04
11	D69	80	Single Unit Short Haul Truck	12	0.00E+00	2.24E-06	1.11E-07	2.19E+00	1.80E-06	4.41E-03	2.38E-06	1.15E-03	1.40E-04	3.18E-05	2.72E-04	6.63E-05	6.73E-05	2.20E-04	8.85E-06	3.51E-09	2.05E-04	2.14E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	9.72E-08	4.79E-09	9.28E-02	7.69E-08	1.83E-04	1.03E-07	4.90E-05	6.42E-06	1.40E-06	1.19E-05	2.85E-06	2.89E-06	9.27E-06	3.74E-07	1.46E-10	8.97E-06	9.18E-06
11	D69	80	Combination Short Haul Truck	11	0.00E+00	4.90E-06	3.50E-07	4.06E+00	1.55E-08	4.34E-03	3.60E-06	5.02E-03	2.97E-04	7.32E-05	2.92E-04	1.04E-04	1.03E-04	6.11E-04	1.36E-05	0.00E+00	1.89E-04	9.49E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	4.38E-06	2.94E-07	3.76E+00	1.79E-08	4.49E-03	3.34E-06	4.89E-03	2.91E-04	5.85E-05	3.02E-04	8.90E-05	8.96E-05	5.74E-04	1.26E-05	0.00E+00	2.12E-04	9.21E-04
11	D70	80	Passenger Car	64	0.00E+00	7.84E-07	8.49E-08	3.01E+00	5.46E-06	2.09E-02	1.75E-06	1.33E-04	3.55E-04	6.16E-05	1.70E-04	1.10E-04	1.12E-04	1.01E-05	1.51E-05	4.24E-09	5.75E-05	2.08E-05
11	D70	80	Passenger Truck	108	0.00E+00	1.69E-06	1.79E-07	6.96E+00	1.08E-05	3.84E-02	3.54E-06	3.93E-04	6.36E-04	1.13E-04	3.39E-04	2.19E-04	2.25E-04	4.86E-05	3.48E-05	9.45E-09	1.13E-04	6.42E-05
11	D70	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.28E+00	1.87E-06	4.59E-03	2.48E-06	1.19E-03	1.46E-04	3.31E-05	2.83E-04	6.90E-05	7.00E-05	2.29E-04	9.21E-06	3.65E-09	2.13E-04	2.23E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	4.99E-09	9.66E-02	8.00E-08	1.90E-04	1.08E-07	5.09E-05	6.68E-06	1.46E-06	1.23E-05	2.97E-06	3.01E-06	9.64E-06	3.89E-07	1.52E-10	9.34E-06	9.55E-06
11	D70	80	Combination Short Haul Truck	10	0.00E+00	4.44E-06	3.18E-07	3.68E+00	1.40E-08	3.94E-03	3.26E-06	4.55E-03	2.69E-04	6.64E-05	2.65E-04	9.39E-05	9.33E-05	5.54E-04	1.23E-05	0.00E+00	1.72E-04	8.60E-04
11	D70	80	Combination Long Haul Truck	9	0.00E+00	3.97E-06	2.67E-07	3.41E+00	1.62E-08	4.08E-03	3.03E-06	4.44E-03	2.64E-04	5.31E-05	2.74E-04	8.08E-05	8.13E-05	5.20E-04	1.14E-05	0.00E+00	1.92E-04	8.36E-04
10	D71	70	Passenger Car	145	0.00E+00	1.89E-06	2.05E-07	6.95E+00	1.32E-05	4.94E-02	4.22E-06	2.90E-04	1.12E-03	1.80E-04	4.10E-04	2.64E-04	2.71E-04	2.59E-05	3.49E-05	9.52E-09	1.39E-04	4.54E-05
10	D71	70	Passenger Truck	242	0.00E+00	4.14E-06	4.39E-07	1.60E+01	2.62E-05	9.08E-02	8.61E-06	9.08E-04	2.04E-03	3.32E-04	8.21E-04	5.34E-04	5.47E-04	1.18E-04	7.94E-05	2.13E-08	2.74E-04	1.49E-04
10	D71	70	Single Unit Short Haul Truck	24	0.00E+00	5.70E-06	2.85E-07	4.46E+00	4.66E-06	8.95E-03	6.07E-06	2.81E-03	4.01E-04	8.01E-05	6.93E-04	1.70E-04	1.73E-04	4.47E-04	1.80E-05	7.27E-09	5.18E-04	5.26E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.48E-07	1.24E-08	1.89E-01	2.01E-07	3.74E-04	2.64E-07	1.21E-04	1.83E-05	3.56E-06	3.03E-05	7.36E-06	7.48E-06	1.89E-05	7.63E-07	3.06E-10	2.27E-05	2.26E-05
10	D71	70	Combination Short Haul Truck	29	0.00E+00	1.49E-05	1.06E-06	1.08E+01	4.83E-08	1.28E-02	1.09E-05	1.56E-02	1.13E-03	2.47E-04	9.06E-04	3.13E-04	3.12E-04	1.63E-03	3.61E-05	0.00E+00	5.93E-04	2.95E-03
10	D71	70	Combination Long Haul Truck	26	0.00E+00	1.35E-05	8.98E-07	1.01E+01	5.56E-08	1.35E-02	1.02E-05	1.54E-02	1.12E-03	2.05E-04	9.34E-04	2.72E-04	2.75E-04	1.54E-03	3.37E-05	0.00E+00	6.62E-04	2.90E-03
10	D72	70	Passenger Car	176	0.00E+00	2.30E-06	2.48E-07	8.44E+00	1.60E-05	6.00E-02	5.12E-06	3.52E-04	1.36E-03	2.18E-04	4.97E-04	3.20E-04	3.29E-04	3.15E-05	4.23E-05	1.16E-08	1.68E-04	5.51E-05
10	D72	70	Passenger Truck	294	0.00E+00	5.03E-06	5.32E-07	1.94E+01	3.18E-05	1.10E-01	1.05E-05	1.10E-03	2.47E-03	4.03E-04	9.96E-04	6.48E-04	6.64E-04	1.43E-04	9.64E-05	2.59E-08	3.32E-04	1.81E-04
10	D72	70	Single Unit Short Haul Truck	42	0.00E+00	9.79E-06	4.91E-07	7.67E+00	8.01E-06	1.54E-02	1.04E-05	4.82E-03	6.88E-04	1.38E-04	1.19E-03	2.93E-04	2.97E-04	7.68E-04	3.09E-05	1.25E-08	8.90E-04	9.04E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	4.27E-07	2.12E-08	3.26E-01	3.45E-07	6.43E-04	4.54E-07	2.08E-04	3.14E-05	6.12E-06	5.20E-05	1.27E-05	1.29E-05	3.25E-05	1.31E-06	5.26E-10	3.90E-05	3.89E-05
10	D72	70	Combination Short Haul Truck	31	0.00E+00	1.62E-05	1.15E-06	1.18E+01	5.27E-08	1.40E-02	1.19E-05	1.71E-02	1.23E-03	2.70E-04	9.88E-04	3.42E-04	3.41E-04	1.78E-03	3.94E-05	0.00E+00	6.48E-04	3.22E-03
10	D72	70	Combination Long Haul Truck	28	0.00E+00	1.47E-05	9.80E-07	1.10E+01	6.07E-08	1.48E-02	1.11E-05	1.68E-02	1.23E-03	2.24E-04	1.02E-03	2.96E-04	3.00E-04	1.68E-03	3.68E-05	0.00E+00	7.23E-04	3.17E-03
10	D73	70	Passenger Car	79	0.00E+00	1.04E-06	1.12E-07	3.81E+00	7.22E-06	2.71E-02	2.31E-06	1.59E-04	6.15E-04	9.87E-05	2.25E-04	1.45E-04	1.48E-04	1.42E-05	1.91E-05	5.22E-09	7.60E-05	2.49E-05
10	D73	70	Passenger Truck	133	0.00E+00	2.27E-06	2.40E-07	8.78E+00	1.44E-05	4.98E-02	4.72E-06	4.98E-04	1.12E-03	1.82E-04	4.50E-04	2.93E-04	3.00E-04	6.45E-05	4.35E-05	1.17E-08	1.50E-04	8.19E-05
10	D73	70	Single Unit Short Haul Truck	3	0.00E+00	6.78E-07	3.40E-08	5.32E-01	5.55E-07	1.07E-03	7.22E-07	3.34E-04	4.77E-05	9.54E-06	8.26E-05	2.03E-05	2.06E-05	5.32E-05	2.14E-06	8.66E-10	6.17E-05	6.26E-05
10	D73	70	Combination Short Haul Truck	6	0.00E+00	3.35E-06	2.38E-07	2.44E+00	1.09E-08	2.88E-03	2.45E-06	3.53E-03	2.54E-04	5.57E-05	2.04E-04	7.06E-05	7.04E-05	3.67E-04	8.13E-06	0.00E+00	1.34E-04	6.64E-04
10	D73	70	Combination Long Haul Truck	6	0.00E+00	3.04E-06	2.03E-07	2.27E+00	1.25E-08	3.05E-03	2.30E-06	3.48E-03	2.53E-04	4.62E-05	2.11E-04	6.12E-05	6.19E-05	3.46E-04	7.59E-06	0.00E+00	1.49E-04	6.55E-04
10	D74	70	Passenger Car	130	0.00E+00	1.70E-06	1.83E-07	6.23E+00	1.18E-05	4.43E-02	3.78E-06	2.60E-04	1.00E-03	1.61E-04	3.67E-04	2.36E-04	2.43E-04	2.32E-05	3.12E-05	8.53E-09	1.24E-04	4.07E-05
10	D74	70	Passenger Truck	217	0.00E+00	3.71E-06	3.93E-07	1.43E+01	2.35E-05	8.14E-02	7.72E-06	8.14E-04	1.83E-03	2.97E-04	7.35E-04	4.79E-04	4.90E-04	1.05E-04	7.11E-05	1.91E-08	2.45E-04	1.34E-04
10	D74	70	Single Unit Short Haul Truck	4	0.00E+00	8.32E-07	4.17E-08	6.52E-01	6.81E-07	1.31E-03	8.87E-07	4.10E-04	5.86E-05	1.17E-05	1.01E-04	2.49E-05	2.53E-05	6.53E-05	2.63E-06	1.06E-09	7.57E-05	7.69E-05
10	D74	70	Combination Short Haul Truck	4	0.00E+00	2.03E-06	1.44E-07	1.48E+00	6.60E-09	1.75E-03	1.49E-06	2.14E-03	1.54E-04	3.38E-05	1.24E-04	4.28E-05	4.27E-05	2.23E-04	4.93E-06	0.00E+00	8.11E-05	4.03E-04
10	D74	70	Combination Long Haul Truck	4	0.00E+00	1.84E-06	1.23E-07	1.38E+00	7.61E-09	1.85E-03	1.40E-06	2.11E-03	1.53E-04	2.80E-05	1.28E-04	3.71E-05	3.75E-05	2.10E-04	4.60E-06	0.00E+00	9.05E-05	3.97E-04
11	D75	80	Passenger Car	84	0.00E+00	1.02E-06	1.10E-07	3.91E+00	7.10E-06	2.72E-02	2.27E-06	1.72E-04	4.61E-04	8.00E-05	2.21E-04	1.42E-04	1.46E-04	1.31E-05	1.97E-05	5.51E-09	7.47E-05	2.70E-05
11	D75	80	Passenger Truck	140	0.00E+00	2.19E-06	2.32E-07	9.04E+00	1.40E-05	4.99E-02	4.60E-06	5.10E-04	8.26E-04	1.46E-04	4.40E-04	2.85E-04	2.92E-04	6.31E-05	4.52E-05	1.23E-08	1.47E-04	8.34E-05
11	D75	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.18E-03	1.72E-06	8.28E-04	1.02E-04	2.30E-05	1.97E-04	4.79E-05	4.86E-05	1.59E-04	6.39E-06	2.54E-09	1.48E-04	1.55E-04
11	D75	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	D75	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	D76	80	Passenger Car	86	0.00E+00	1.04E-06	1.13E-07	4.00E+00	7.25E-06	2.78E-02	2.32E-06	1.76E-04	4.71E-04	8.18E-05	2.26E-04	1.46E-04	1.49E-04	1.34E-05	2.01E-05	5.64E-09	7.63E-05	2.76E-05
11	D76	80	Passenger Truck	143	0.00E+00	2.24E-06	2.37E-07	9.24E+00	1.43E-05	5.10E-02	4.70E-06	5.22E-04	8.44E-04	1.50E-04	4.50E-04	2.92E-04	2.99E-04	6.45E-05	4.62E-05	1.25E-08	1.50E-04	8.52E-05
11	D76	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.48E-03	1.34E-06	6.44E-04	7.90E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.20E-04
11	D76	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.52E+00	5.80E-09	1.63E-03	1.35E-06	1.88E-03	1.11E-04	2.74E-05	1.09E-04	3.88E-05	3.86E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.56E-04
11	D76	80	Combination Long Haul Truck	4	0.00E+00	1.64E-06	1.10E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.46E-04
11	D77	80	Passenger Car	139	0.00E+00	1.69E-06	1.83E-07	6.49E+00	1.18E-05	4.52E-02	3.77E-06	2.86E-04	7.65E-04	1.33E-04	3.67E-04	2.36E-04	2.43E-04	2.18E-05	3.26E-05	9.16E-09	1.24E-04	4.48E-05
11	D77	80	Passenger Truck	233	0.00E+00	3.64E-06	3.86E-07	1.50E+01	2.33E-05	8.28E-02	7.63E-06	8.48E-04	1.37E-03	2.43E-04	7.31E-04	4.74E-04	4.85E-04	1.05E-04	7.51E-05	2.04E-08	2.44E-04	1.38E-04
11	D77	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.08E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.64E-09	3.29E-04	3.44E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.70E-09	1.49E-01	1.23E-07	2.93E-04	1.66E-07	7.86E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.01E-07	2.35E-10	1.44E-05	1.47E-05
11	D77	80	Combination Short Haul Truck	10	0.00E+00	4.36E-06	3.12E-07	3.62E+00	1.38E-08	3.86E-03	3.20E-06	4.47E-03	2.64E-04	6.51E-05	2.60E-04	9.22E-05	9.16E-05	5.44E-04	1.21E-05	0.00E+00	1.69E-04	8.45E-04
11	D77	80	Combination Long Haul Truck	9	0.00E+00	3.90E-06	2.62E-07	3.35E+00	1.59E-08	4.00E-03	2.97E-06	4.35E-03	2.59E-04	5.21E-05	2.69E-04	7.93E-05	7.98E-05	5.11E-04	1.12E-05	0.00E+00	1.89E-04	8.21E-04
11	D78	80	Passenger Car	73	0.00E+00	8.92E-07	9.65E-08	3.42E+00	6.21E-06	2.38E-02	1.98E-06	1.51E-04	4.03E-04	7.00E-05	1.93E-04	1.25E-04	1.28E-04	1.15E-05	1.72E-05	4.82E-09	6.53E-05	2.36E-05
11	D78	80	Passenger Truck	123	0.00E+00	1.92E-06	2.03E-07	7.91E+00	1.23E-05	4.36E-02	4.02E-06	4.47E-04	7.23E-04	1.28E-04	3.85E-04	2.50E-04	2.56E-04	5.52E-05	3.95E-05	1.07E-08	1.29E-04	7.29E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.25E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.39E-05	6.48E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.07E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	9.36E-08	4.62E-09	8.94E-02	7.41E-08	1.76E-04	9.97E-08	4.72E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.60E-07	1.41E-10	8.65E-06	8.84E-06
11	D78	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.77E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	D78	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
11	D79	70	Passenger Car	122	0.00E+00	1.60E-06	1.73E-07	5.87E+00	1.11E-05	4.17E-02	3.56E-06	2.44E-04	9.46E-04	1.52E-04	3.46E-04	2.23E-04	2.29E-04	2.19E-05	2.94E-05	8.04E-09	1.17E-04	3.83E-05
11	D79	70	Passenger Truck	204	0.00E+00	3.50E-06	3.70E-07	1.35E+01	2.21E-05	7.67E-02	7.27E-06	7.67E-04	1.72E-03	2.80E-04	6.93E-04	4.51E-04	4.62E-04	9.94E-05	6.70E-05	1.80E-08	2.31E-04	1.26E-04
11	D79	70	Single Unit Short Haul Truck	22	0.00E+00	5.28E-06	2.64E-07	4.13E+00	4.32E-06	8.29E-03	5.62E-06	2.60E-03	3.71E-04	7.42E-05	6.42E-04	1.58E-04	1.60E-04	4.14E-04	1.66E-05	6.73E-09	4.80E-04	4.87E-04
11	D79	70	Single Unit Long Haul Truck	1	0.00E+00	2.30E-07	1.14E-08	1.75E-01	1.86E-07	3.47E-04	2.45E-07	1.12E-04	1.69E-05	3.30E-06	2.81E-05	6.82E-06	6.93E-06	1.75E-05	7.07E-07	2.83E-10	2.10E-05	2.10E-05
11	D79	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.55E-07	7.72E+00	3.45E-08	9.14E-03	7.78E-06	1.12E-02	8.06E-04	1.77E-04	6.47E-04	2.24E-04	2.23E-04	1.16E-03	2.58E-05	0.00E+00	4.24E-04	2.11E-03
11	D79	70	Combination Long Haul Truck	19	0.00E+00	9.63E-06	6.42E-07	7.19E+00	3.98E-08	9.68E-03	7.30E-06	1.10E-02	8.02E-04	1.46E-04	6.68E-04	1.94E-04	1.96E-04	1.10E-03	2.41E-05	0.00E+00	4.73E-04	2.08E-03
11	D80	70	Passenger Car	340	0.00E+00	4.45E-06	4.81E-07	1.64E+01	3.10E-05	1.16E-01	9.93E-06	6.82E-04	2.64E-03	4.23E-04	9.64E-04	6.21E-04	6.37E-04	6.10E-05	8.20E-05	2.24E-08	3.26E-04	1.07E-04
11	D80	70	Passenger Truck	570	0.00E+00	9.75E-06	1.03E-06	3.77E+01	6.17E-05	2.14E-01	2.03E-05	2.14E-03	4.80E-03	7.80E-04	1.93E-03	1.26E-03	1.29E-03	2.77E-04	1.87E-04	5.02E-08	6.44E-04	3.51E-04
11	D80	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.81E-07	2.82E+00	2.95E-06	5.66E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.39E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.60E-09	3.28E-04	3.33E-04
11	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.65E-05	1.16E-05	2.25E-06	1.92E-05	4.66E-06	4.73E-06	1.20E-05	4.83E-07	1.93E-10	1.44E-05	1.43E-05
11	D80	70	Combination Short Haul Truck	18	0.00E+00	9.47E-06	6.73E-07	6.89E+00	3.08E-08	8.15E-03	6.94E-06	9.98E-03	7.19E-04	1.57E-04	5.77E-04	2.00E-04	1.99E-04	1.04E-03	2.30E-05	0.00E+00	3.78E-04	1.88E-03
11	D80	70	Combination Long Haul Truck

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D85	80	Single Unit Short Haul Truck	27	0.00E+00	5.07E-06	2.52E-07	4.97E+00	4.08E-06	9.99E-03	5.39E-06	2.60E-03	3.18E-04	7.20E-05	6.17E-04	1.50E-04	1.52E-04	4.99E-04	2.01E-05	7.96E-09	4.64E-04	4.86E-04
11	D85	80	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	1.09E-08	2.10E-01	1.74E-07	4.14E-04	2.34E-07	1.11E-04	1.45E-05	3.18E-06	2.69E-05	6.46E-06	6.56E-06	2.10E-05	8.48E-07	3.31E-10	2.03E-05	2.08E-05
11	D85	80	Combination Short Haul Truck	31	0.00E+00	1.38E-05	9.84E-07	1.14E+01	4.35E-08	1.22E-02	1.01E-05	1.41E-02	8.34E-04	2.06E-04	8.20E-04	2.91E-04	2.89E-04	1.72E-03	3.81E-05	0.00E+00	5.32E-04	2.67E-03
11	D85	80	Combination Long Haul Truck	29	0.00E+00	1.23E-05	8.26E-07	1.06E+01	5.03E-08	1.26E-02	9.37E-06	1.37E-02	8.18E-04	1.64E-04	8.50E-04	2.50E-04	2.52E-04	1.61E-03	3.53E-05	0.00E+00	5.96E-04	2.59E-03
11	D86	80	Passenger Car	337	0.00E+00	4.10E-06	4.43E-07	1.57E+01	2.85E-05	1.09E-01	9.12E-06	6.92E-04	1.85E-03	3.22E-04	8.88E-04	5.72E-04	5.87E-04	5.28E-05	7.90E-05	2.22E-08	3.00E-04	1.09E-04
11	D86	80	Passenger Truck	564	0.00E+00	8.80E-06	9.34E-07	3.63E+01	5.64E-05	2.01E-01	1.85E-05	2.05E-03	3.32E-03	5.89E-04	1.77E-03	1.15E-03	1.17E-03	2.54E-04	1.82E-04	4.93E-08	5.91E-04	3.35E-04
11	D86	80	Single Unit Short Haul Truck	17	0.00E+00	3.10E-06	1.54E-07	3.04E+00	2.49E-06	6.10E-03	3.29E-06	1.59E-03	1.95E-04	4.40E-05	3.77E-04	9.18E-05	9.31E-05	3.05E-04	1.22E-05	4.86E-09	2.84E-04	2.97E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	1.35E-07	6.64E-09	1.28E-01	1.06E-07	2.53E-04	1.43E-07	6.78E-05	8.88E-06	1.94E-06	1.64E-05	3.95E-06	4.01E-06	1.28E-05	5.18E-07	2.02E-10	1.24E-05	1.27E-05
11	D86	80	Combination Short Haul Truck	24	0.00E+00	1.07E-05	7.62E-07	8.83E+00	3.36E-08	9.44E-03	7.82E-06	1.09E-02	6.46E-04	1.59E-04	6.35E-04	2.25E-04	2.24E-04	1.33E-03	2.95E-05	0.00E+00	4.12E-04	2.06E-03
11	D86	80	Combination Long Haul Truck	22	0.00E+00	9.53E-06	6.40E-07	8.18E+00	3.89E-08	9.78E-03	7.26E-06	1.06E-02	6.33E-04	1.27E-04	6.58E-04	1.94E-04	1.95E-04	1.25E-03	2.73E-05	0.00E+00	4.61E-04	2.00E-03
11	D87	80	Passenger Car	760	0.00E+00	9.25E-06	1.00E-06	3.55E+01	6.44E-05	2.47E-01	2.06E-05	1.56E-03	4.18E-03	7.26E-04	2.00E-03	1.29E-03	1.33E-03	1.19E-04	1.78E-04	5.00E-08	6.78E-04	2.45E-04
11	D87	80	Passenger Truck	1273	0.00E+00	1.99E-05	2.11E-06	8.20E+01	1.27E-04	4.53E-01	4.17E-05	4.63E-03	7.50E-03	1.33E-03	4.00E-03	2.59E-03	2.65E-03	5.73E-04	4.10E-04	1.11E-07	1.33E-03	7.57E-04
11	D87	80	Single Unit Short Haul Truck	75	0.00E+00	1.40E-05	6.97E-07	1.38E+01	1.13E-05	2.77E-02	1.49E-05	7.20E-03	8.82E-04	1.99E-04	1.71E-03	4.16E-04	4.22E-04	1.38E-03	5.55E-05	2.20E-08	1.29E-03	1.35E-03
11	D87	80	Single Unit Long Haul Truck	3	0.00E+00	6.10E-07	3.01E-08	5.82E-01	4.82E-07	1.15E-03	6.49E-07	3.07E-04	4.03E-05	8.80E-06	7.45E-05	1.79E-05	1.82E-05	5.82E-05	2.35E-06	9.17E-10	5.63E-05	5.76E-05
11	D87	80	Combination Short Haul Truck	72	0.00E+00	3.16E-05	2.26E-06	2.62E+01	9.98E-08	2.80E-02	2.32E-05	3.24E-02	1.92E-03	4.72E-04	1.88E-03	6.68E-04	6.64E-04	3.94E-03	8.76E-05	0.00E+00	1.22E-03	6.12E-03
11	D87	80	Combination Long Haul Truck	66	0.00E+00	2.83E-05	1.90E-06	2.43E+01	1.15E-07	2.90E-02	2.15E-05	3.15E-02	1.88E-03	3.77E-04	1.95E-03	5.74E-04	5.78E-04	3.70E-03	8.10E-05	0.00E+00	1.37E-03	5.94E-03
11	D88	80	Passenger Car	445	0.00E+00	5.42E-06	5.86E-07	2.08E+01	3.77E-05	1.45E-01	1.21E-05	9.15E-04	2.45E-03	4.25E-04	1.17E-03	7.57E-04	7.77E-04	6.97E-05	1.04E-04	2.93E-08	3.97E-04	1.43E-04
11	D88	80	Passenger Truck	745	0.00E+00	1.16E-05	1.23E-06	4.80E+01	7.45E-05	2.65E-01	2.44E-05	2.71E-03	4.39E-03	7.79E-04	2.34E-03	1.52E-03	1.55E-03	3.35E-04	2.40E-04	6.52E-08	7.81E-04	4.43E-04
11	D88	80	Single Unit Short Haul Truck	74	0.00E+00	1.39E-05	6.88E-07	1.36E+01	1.12E-05	2.73E-02	1.47E-05	7.11E-03	8.71E-04	1.97E-04	1.69E-03	4.11E-04	4.17E-04	1.36E-03	5.48E-05	2.18E-08	1.27E-03	1.33E-03
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	6.02E-07	2.97E-08	5.75E-01	4.76E-07	1.13E-03	6.41E-07	3.03E-04	3.98E-05	8.69E-06	7.36E-05	1.77E-05	1.79E-05	5.74E-05	2.32E-06	9.06E-10	5.56E-05	5.69E-05
11	D88	80	Combination Short Haul Truck	68	0.00E+00	2.97E-05	2.12E-06	2.46E+01	9.36E-08	2.63E-02	2.18E-05	3.04E-02	1.80E-03	4.43E-04	1.77E-03	6.27E-04	6.23E-04	3.70E-03	8.22E-05	0.00E+00	1.15E-03	5.74E-03
11	D88	80	Combination Long Haul Truck	62	0.00E+00	2.65E-05	1.78E-06	2.28E+01	1.08E-07	2.72E-02	2.02E-05	2.96E-02	1.76E-03	3.54E-04	1.83E-03	5.39E-04	5.42E-04	3.47E-03	7.60E-05	0.00E+00	1.28E-03	5.58E-03
9	D89	60	Passenger Car	39	0.00E+00	5.89E-07	6.37E-08	1.97E+00	4.10E-06	1.53E-02	1.31E-06	8.00E-05	3.98E-04	6.12E-05	1.28E-04	8.21E-05	8.43E-05	8.20E-06	9.87E-06	2.72E-09	4.31E-05	1.25E-05
9	D89	60	Passenger Truck	66	0.00E+00	1.30E-06	1.37E-07	4.49E+00	8.11E-06	2.72E-02	2.67E-06	2.61E-04	7.30E-04	1.13E-04	2.54E-04	1.66E-04	1.70E-04	3.49E-05	2.23E-05	6.17E-09	8.46E-05	4.33E-05
9	D89	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.02E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	D89	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.60E-08	8.02E-01	4.36E-09	1.08E-03	9.12E-07	1.34E-03	1.14E-04	2.27E-05	7.85E-05	2.56E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	D89	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.21E-08	7.53E-01	5.00E-09	1.16E-03	8.53E-07	1.32E-03	1.15E-04	1.96E-05	8.06E-05	2.19E-05	2.22E-05	1.14E-04	2.51E-06	0.00E+00	5.83E-05	2.50E-04
9	D90	60	Passenger Car	24	0.00E+00	3.59E-07	3.88E-08	1.20E+00	2.50E-06	9.31E-03	7.98E-07	4.88E-05	2.43E-04	3.73E-05	7.78E-05	5.01E-05	5.14E-05	5.00E-06	6.02E-06	1.66E-09	2.63E-05	7.64E-06
9	D90	60	Passenger Truck	40	0.00E+00	7.91E-07	8.36E-08	2.74E+00	4.94E-06	1.66E-02	1.63E-06	1.59E-04	4.45E-04	6.91E-05	1.55E-04	1.01E-04	1.03E-04	2.13E-05	1.36E-05	3.76E-09	5.15E-05	2.64E-05
9	D90	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.02E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	D90	60	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.45E-08	6.02E-01	3.27E-09	8.06E-04	6.84E-07	1.00E-03	8.59E-05	1.70E-05	5.88E-05	1.92E-05	1.92E-05	9.07E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	D90	60	Combination Long Haul Truck	1	0.00E+00	8.27E-07	5.41E-08	5.64E-01	3.75E-09	8.70E-04	6.40E-07	9.94E-04	8.62E-05	1.47E-05	6.04E-05	1.65E-05	1.67E-05	8.59E-05	1.88E-06	0.00E+00	4.37E-05	1.87E-04
10	D91	70	Passenger Car	55	0.00E+00	7.14E-07	7.72E-08	2.62E+00	4.97E-06	1.87E-02	1.59E-06	1.09E-04	4.23E-04	6.79E-05	1.55E-04	9.96E-05	1.02E-04	9.78E-06	1.32E-05	3.59E-09	5.23E-05	1.71E-05
10	D91	70	Passenger Truck	91	0.00E+00	1.56E-06	1.66E-07	6.04E+00	9.90E-06	3.43E-02	3.25E-06	3.43E-04	7.69E-04	1.25E-04	3.10E-04	2.02E-04	2.06E-04	4.44E-05	3.00E-05	8.05E-09	1.03E-04	5.64E-05
10	D91	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	D91	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	D91	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	D92	70	Passenger Car	191	0.00E+00	2.50E-06	2.71E-07	9.20E+00	1.74E-05	6.54E-02	5.58E-06	3.83E-04	1.48E-03	2.38E-04	5.42E-04	3.49E-04	3.58E-04	3.43E-05	4.62E-05	1.26E-08	1.83E-04	6.01E-05
10	D92	70	Passenger Truck	321	0.00E+00	5.49E-06	5.81E-07	2.12E+01	3.47E-05	1.20E-01	1.14E-05	1.20E-03	2.70E-03	4.39E-04	1.09E-03	7.07E-04	7.24E-04	1.56E-04	1.05E-04	2.82E-08	3.62E-04	1.98E-04
10	D92	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.82E-01	9.21E-07	1.77E-03	1.20E-06	5.55E-04	7.91E-05	1.58E-05	1.37E-04	3.37E-05	3.42E-05	8.83E-05	3.55E-06	1.44E-09	1.02E-04	1.04E-04
10	D92	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	D92	70	Passenger Car	46	0.00E+00	6.02E-07	6.50E-08	2.21E+00	4.19E-06	1.57E-02	1.34E-06	9.21E-05	3.56E-04	5.72E-05	1.30E-04	8.39E-05	8.61E-05	8.24E-06	1.11E-05	3.03E-09	4.41E-05	1.44E-05
10	D93	70	Passenger Truck	77	0.00E+00	1.32E-06	1.39E-07	5.09E+00	8.34E-06	2.89E-02	2.74E-06	2.89E-04	6.48E-04	1.05E-04	2.61E-04	1.70E-04	1.74E-04	3.74E-05	2.52E-05	6.78E-09	8.71E-05	4.75E-05
10	D93	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	D93	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	D94	70	Passenger Car	165	0.00E+00	2.15E-06	2.33E-07	7.91E+00	1.50E-05	5.62E-02	4.80E-06	3.29E-04	1.27E-03	2.05E-04	4.66E-04	3.00E-04	3.08E-04	2.95E-05	3.97E-05	1.08E-08	1.58E-04	5.16E-05
10	D94	70	Passenger Truck	275	0.00E+00	4.71E-06	4.99E-07	1.82E+01	2.98E-05	1.03E-01	9.80E-06	1.03E-03	2.32E-03	3.77E-04	9.34E-04	6.08E-04	6.22E-04	1.34E-04	9.03E-05	2.43E-08	3.11E-04	1.70E-04
10	D94	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.50E-06	8.22E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.62E-10	6.14E-05	6.23E-05
10	D94	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
9	E01	60	Passenger Car	194	0.00E+00	2.90E-06	3.14E-07	9.73E+00	2.02E-05	7.53E-02	6.45E-06	3.95E-04	1.96E-03	3.02E-04	6.29E-04	4.05E-04	4.16E-04	4.04E-05	4.87E-05	1.34E-08	2.12E-04	6.18E-05
9	E01	60	Passenger Truck	324	0.00E+00	6.40E-06	6.76E-07	2.22E+01	4.00E-05	1.34E-01	1.31E-05	1.29E-03	3.60E-03	5.59E-04	1.25E-03	8.18E-04	8.37E-04	1.72E-04	1.10E-04	3.04E-08	4.17E-04	2.13E-04
9	E01	60	Single Unit Short Haul Truck	12	0.00E+00	3.43E-06	1.71E-07	2.18E+00	2.82E-06	4.20E-03	3.65E-06	1.63E-03	2.77E-04	5.01E-05	4.14E-04	1.03E-04	1.04E-04	2.18E-04	8.80E-06	3.62E-09	3.11E-04	3.06E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.50E-07	7.43E-09	9.30E-02	1.22E-07	1.78E-04	1.60E-07	7.06E-05	1.24E-05	2.23E-06	1.83E-05	4.46E-06	4.54E-06	9.29E-06	3.75E-07	1.54E-10	1.37E-05	1.32E-05
9	E01	60	Combination Short Haul Truck	8	0.00E+00	4.97E-06	3.47E-07	3.23E+00	1.76E-08	4.33E-03	3.68E-06	5.39E-03	4.62E-04	9.14E-05	3.16E-04	1.03E-04	1.03E-04	4.87E-04	1.08E-05	0.00E+00	2.12E-04	1.01E-03
9	E01	60	Combination Long Haul Truck	8	0.00E+00	4.44E-06	2.91E-07	3.03E+00	2.01E-08	4.68E-03	3.44E-06	5.34E-03	4.64E-04	7.88E-05	3.25E-04	8.84E-05	8.95E-05	4.61E-04	1.01E-05	0.00E+00	2.35E-04	1.01E-03
9	E02	60	Passenger Car	138	0.00E+00	2.07E-06	2.24E-07	6.93E+00	1.44E-05	5.36E-02	4.60E-06	2.81E-04	1.40E-03	2.15E-04	4.48E-04	2.88E-04	2.96E-04	2.88E-05	3.47E-05	9.54E-09	1.51E-04	4.41E-05
9	E02	60	Passenger Truck	231	0.00E+00	4.56E-06	4.82E-07	1.58E+01	2.85E-05	9.56E-02	9.37E-06	9.17E-04	2.57E-03	3.98E-04	8.92E-04	5.83E-04	5.96E-04	1.23E-04	7.83E-05	2.17E-08	2.97E-04	1.52E-04
9	E02	60	Single Unit Short Haul Truck	8	0.00E+00	2.23E-06	1.11E-07	1.42E+00	1.83E-06	2.74E-03	2.38E-06	1.06E-03	1.80E-04	3.26E-05	2.70E-04	6.68E-05	6.78E-05	1.42E-04	5.73E-06	2.36E-09	2.03E-04	1.99E-04
9	E02	60	Combination Short Haul Truck	7	0.00E+00	3.89E-06	2.72E-07	2.53E+00	1.38E-08	3.39E-03	2.88E-06	4.22E-03	3.61E-04	7.15E-05	2.48E-04	8.07E-05	8.07E-05	3.82E-04	8.46E-06	0.00E+00	1.66E-04	7.94E-04
9	E02	60	Combination Long Haul Truck	6	0.00E+00	3.48E-06	2.28E-07	2.38E+00	1.58E-08	3.66E-03	2.69E-06	4.18E-03	3.63E-04	6.17E-05	2.54E-04	6.93E-05	7.01E-05	3.61E-04	7.93E-06	0.00E+00	1.84E-04	7.88E-04
11	E03	80	Passenger Car	103	0.00E+00	1.25E-06	1.35E-07	4.78E+00	8.69E-06	3.33E-02	2.78E-06	2.11E-04	5.64E-04	9.80E-05	2.70E-04	1.74E-04	1.79E-04	1.61E-05	2.41E-05	6.75E-09	9.14E-05	3.30E-05
11	E03	80	Passenger Truck	172	0.00E+00	2.68E-06	2.84E-07	1.11E+01	1.72E-05	6.10E-02	5.63E-06	6.25E-04	1.01E-03	1.79E-04	5.39E-04	3.49E-04	3.58E-04	7.73E-05	5.53E-05	1.50E-08	1.80E-04	1.02E-04
11	E03	80	Single Unit Short Haul Truck	11	0.00E+00	2.14E-06	1.06E-07	2.10E+00	1.72E-06	4.21E-03	2.27E-06	1.10E-03	1.34E-04	3.04E-05	2.60E-04	6.33E-05	6.43E-05	2.10E-04	8.45E-06	3.36E-09	1.96E-04	2.05E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	9.28E-08	4.58E-09	8.87E-02	7.34E-08	1.75E-04	9.88E-08	4.68E-05	6.13E-06	1.34E-06	1.13E-05	2.72E-06	2.76E-06	8.85E-06	3.57E-07	1.40E-10	8.57E-06	8.77E-06
11	E03	80	Combination Short Haul Truck	6	0.00E+00	2.82E-06	2.01E-07	2.33E+00	8.89E-09	2.49E-03	2.07E-06	2.89E-03	1.71E-04	4.21E-05	1.68E-04	5.95E-05	5.92E-05	3.51E-04	7.81E-06	0.00E+00	1.09E-04	5.45E-04
11	E03	80	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.69E-07	2.16E+00	1.03E-08	2.58E-03	1.92E-06	2.81E-03	1.67E-04	3.36E-05	1.74E-04	5.12E-05	5.15E-05	3.30E-04	7.22E-06	0.00E+00	1.22E-04	5.30E-04
11	E04	80	Passenger Truck	156	0.00E+00	1.90E-06	2.05E-07	7.27E+00	1.32E-05	5.06E-02	4.22E-06	3.20E-04	8.57E-04	1.49E-04	4.11E-04	2.65E-04	2.72E-04	2.44E-05	3.66E-05	1.03E-08	1.39E-04	5.02E-05
11	E04	80	Passenger Truck	261	0.00E+00	4.07E-06	4.32E-07	1.68E+01	2.61E-05	9.28E-02	8.55E-06	9.50E-04	1.54E-03	2.73E-04	8.19E-04	5.31E-04	5.44E-04	1.17E-04	8.41E-05	2.28E-08	2.73E-04	1.55E-04
11	E04	80	Single Unit Short Haul Truck	4	0.00E+00	6.84E-07	3.39E-08	6.70E-01	5.50E-07	1.35E-03	7.27E-07	3.50E-04	4.29E-05	9.71E-06	8.31E-05	2.03E-05	2.06E-05	6.72E-05	2.70E-06	1.07E-09	6.26E-05	6.55E-05
11	E04	80	Single Unit Long Haul Truck	3	0.00E+00	1.15E-06	8.20E-08	9.51E-01	3.62E-09	1.02E-03	8.42E-07	1.18E-03	6.95E-05	1.71E-05	6.84E-05	2.42E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.43E-05	2.22E-04
11	E04	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.88E-08	8.80E-01	4.19E-09	1.05E-03	7.81E-07	1.14E-03	6.82E-05	1.37E-05	7.08E-05	2.08E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.96E-05	2.16E-04
11	E05	80	Passenger Car	123	0.00E+00	1.49E-06	1.61E-07	5.72E+00	1.04E-05	3.99E-02	3.32E-06	2.52E-04	6.74E-04	1.17E-04	3.23E-04	2.08E-04	2.14E-04	1.92E-05	2.88E-05	8.07E-09	1.09E-04	3.95E-05
11	E05	80	Passenger Truck	205	0.00E+00	3.21E-06	3.40E-07	1.32E+01	2.05E-05	7.30E-02	6.73E-06	7.47E-04	1.21E-03	2.14E-04	6.45E-04	4.18E-04	4.28E-04	9.24E-05	6.62E-05	1.80E-08	2.15E-04	1.22E-04
11	E05	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	E05	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.59E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.31E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	E05	80	Combination Long Haul Truck	5	0.00E+00	2.26E-06	1.52E-07	1.94E+00	9.23E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.02E-05	1.56E-04	4.59E-05	4.62E-05	2.96E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	E06	80	Passenger Car	46	0.00E+00	5.60E-07	6.05E-08	2.15E+00	3.90E-06	1.49E-02	1.25E-06	9.45E-05	2.53E-04	4.39E-05	1.21E-04	7.82E-05	8.02E-05	7.20E-06	1.08E-05	3.03E-09	4.10E-05	1.48E-05
11	E06	80	Passenger Truck	77	0.00E+00	1.20E-06	1.27E-07	4.96E+00	7.70E-06	2.74E-02	2.52E-06	2.80E-04	4.54E-04	8.04E-05	2.42E-04	1.57E-04	1.60E-04	3.47E-05	2.48E-05	6.74E-09	8.06E-05	4.58E-05
11	E06	80	Single Unit Short Haul Truck	4	0.00E+00	7.18E-07	3.56E-08	7.04E-01	5.78E-07	1.42E-03	7.64E-07	3.68E-04	4.51E-05	1.02E-05	8.74E-05	2.13E-05	2.16E-05	7.07E-05	2.84E-06	1.13E-09	6.58E-05	6.89E-05
11	E06	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.03E-04	1.69E-07	2.35E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.86E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
9	E07	60	Passenger Car	840	0.00E+00	1.26E-05	1.36E-06	4.22E+01	8.78E-05	3.27E-01	2.80E-05	1.71E-03	8.52E-03	1.31E-03	2.73E-03	1.76E-03	1.80E-03	1.76E-04	2.11E-04	5.81E-08	9.22E-04	2.68E-04
9	E07	60	Passenger Truck	1407	0.00E+00	2.78E

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E11	60	Passenger Car	761	0.00E+00	1.14E-05	1.24E-06	3.83E+01	7.95E-05	2.96E-01	2.54E-05	1.55E-03	7.72E-03	1.19E-03	2.47E-03	1.59E-03	1.63E-03	1.59E-04	1.91E-04	5.27E-08	8.35E-04	2.43E-04
9	E11	60	Passenger Truck	1275	0.00E+00	2.52E-05	2.66E-06	8.71E+01	1.57E-04	5.28E-01	5.17E-05	5.06E-03	1.42E-02	2.20E-03	4.92E-03	3.22E-03	3.29E-03	6.76E-04	4.32E-04	1.20E-07	1.64E-03	8.39E-04
9	E11	60	Single Unit Short Haul Truck	38	0.00E+00	1.11E-05	5.56E-07	7.07E+00	9.15E-06	1.37E-02	1.19E-05	5.30E-03	8.99E-04	1.63E-04	1.34E-03	3.33E-04	3.38E-04	7.08E-04	2.86E-05	1.18E-08	1.01E-03	9.93E-04
9	E11	60	Single Unit Long Haul Truck	2	0.00E+00	4.87E-07	2.41E-08	3.02E-01	3.98E-07	5.79E-04	5.19E-07	2.29E-04	4.04E-05	7.23E-06	5.93E-05	1.45E-05	1.47E-05	3.02E-05	1.22E-06	5.00E-10	4.44E-05	4.30E-05
9	E11	60	Combination Short Haul Truck	39	0.00E+00	2.32E-05	1.62E-06	1.51E+01	8.21E-08	2.02E-02	1.72E-05	2.52E-02	2.16E-03	4.27E-04	1.48E-03	4.82E-04	4.82E-04	2.28E-03	5.05E-05	0.00E+00	9.93E-04	4.74E-03
9	E11	60	Combination Long Haul Truck	36	0.00E+00	2.08E-05	1.36E-06	1.42E+01	9.41E-08	2.19E-02	1.61E-05	2.50E-02	2.17E-03	3.68E-04	1.52E-03	4.13E-04	4.18E-04	2.16E-03	4.73E-05	0.00E+00	1.10E-03	4.70E-03
9	E12	60	Passenger Car	1112	0.00E+00	1.67E-05	1.80E-06	5.59E+01	1.16E-04	4.33E-01	3.71E-05	2.27E-03	1.13E-02	1.73E-03	3.62E-03	2.33E-03	2.39E-03	2.32E-04	2.80E-04	7.69E-08	1.22E-03	3.55E-04
9	E12	60	Passenger Truck	1863	0.00E+00	3.68E-05	3.89E-06	1.27E+02	2.30E-04	7.71E-01	7.56E-05	7.40E-03	2.07E-02	3.21E-03	7.19E-03	4.70E-03	4.81E-03	9.88E-04	6.31E-04	1.75E-07	2.40E-03	1.23E-03
9	E12	60	Single Unit Short Haul Truck	29	0.00E+00	8.64E-06	4.31E-07	5.48E+00	7.10E-06	1.06E-02	9.21E-06	4.11E-03	6.97E-04	1.26E-04	1.04E-03	2.58E-04	2.62E-04	5.49E-04	2.22E-05	9.13E-09	7.84E-04	7.70E-04
9	E12	60	Single Unit Long Haul Truck	1	0.00E+00	3.77E-07	1.87E-08	2.34E-01	3.08E-07	4.49E-04	4.02E-07	1.78E-04	3.13E-05	5.61E-06	4.60E-05	1.12E-05	1.14E-05	2.34E-05	9.45E-07	3.88E-10	3.44E-05	3.33E-05
9	E12	60	Combination Short Haul Truck	32	0.00E+00	1.86E-05	1.30E-06	1.21E+01	6.58E-08	1.62E-02	1.38E-05	2.02E-02	1.73E-03	3.42E-04	1.19E-03	3.86E-04	3.86E-04	1.83E-03	4.05E-05	0.00E+00	7.96E-04	3.80E-03
9	E12	60	Combination Long Haul Truck	29	0.00E+00	1.66E-05	1.09E-06	1.14E+01	7.55E-08	1.75E-02	1.29E-05	2.00E-02	1.74E-03	2.95E-04	1.22E-03	3.31E-04	3.35E-04	1.73E-03	3.79E-05	0.00E+00	8.81E-04	3.77E-03
11	E13	80	Passenger Car	362	0.00E+00	4.40E-06	4.76E-07	1.69E+01	3.07E-05	1.18E-01	9.80E-06	7.44E-04	1.99E-03	3.46E-04	9.54E-04	6.15E-04	6.31E-04	5.67E-05	8.49E-05	2.38E-08	3.23E-04	1.17E-04
11	E13	80	Passenger Truck	606	0.00E+00	9.46E-06	1.00E-06	3.91E+01	6.06E-05	2.15E-01	1.99E-05	2.21E-03	3.57E-03	6.33E-04	1.90E-03	1.23E-03	1.26E-03	2.73E-04	1.95E-04	5.30E-08	6.35E-04	3.60E-04
11	E13	80	Single Unit Short Haul Truck	20	0.00E+00	3.78E-06	1.87E-07	3.70E+00	3.04E-06	7.44E-03	4.02E-06	1.94E-03	2.37E-04	5.37E-05	4.59E-04	1.12E-04	1.14E-04	3.72E-04	1.49E-05	5.93E-09	3.46E-04	3.62E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.64E-07	8.09E-09	1.57E-01	1.30E-07	3.08E-04	1.75E-07	8.27E-05	1.08E-05	2.37E-06	2.00E-05	4.81E-06	4.89E-06	1.56E-05	6.32E-07	2.47E-10	1.52E-05	1.55E-05
11	E13	80	Combination Short Haul Truck	14	0.00E+00	6.17E-06	4.41E-07	5.11E+00	1.95E-08	5.47E-03	4.53E-06	6.33E-03	3.74E-04	9.21E-05	3.68E-04	1.30E-04	1.30E-04	7.69E-04	1.71E-05	0.00E+00	2.39E-04	1.19E-03
11	E13	80	Combination Long Haul Truck	13	0.00E+00	5.52E-06	3.70E-07	4.74E+00	2.25E-08	5.66E-03	4.20E-06	6.16E-03	3.67E-04	7.37E-05	3.81E-04	1.12E-04	1.13E-04	7.23E-04	1.58E-05	0.00E+00	2.67E-04	1.16E-03
11	E14	80	Passenger Car	305	0.00E+00	3.71E-06	4.02E-07	1.42E+01	2.59E-05	9.92E-02	8.27E-06	6.27E-04	1.68E-03	2.92E-04	8.05E-04	5.19E-04	5.33E-04	4.78E-05	7.17E-05	2.01E-08	2.72E-04	9.84E-05
11	E14	80	Passenger Truck	511	0.00E+00	7.98E-06	8.46E-07	3.29E+01	5.11E-05	1.82E-01	1.68E-05	1.86E-03	3.01E-03	5.34E-04	1.60E-03	1.04E-03	1.07E-03	2.30E-04	1.65E-04	4.47E-08	5.35E-04	3.04E-04
11	E14	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.06E-08	1.59E+00	1.31E-06	3.20E-03	1.73E-06	8.32E-04	1.02E-04	2.31E-05	1.97E-04	4.81E-05	4.88E-05	1.60E-04	6.42E-06	2.55E-09	1.49E-04	1.56E-04
11	E14	80	Combination Short Haul Truck	9	0.00E+00	3.73E-06	2.67E-07	3.09E+00	1.18E-08	3.31E-03	2.74E-06	3.83E-03	2.26E-04	5.57E-05	2.22E-04	7.89E-05	7.84E-05	4.65E-04	1.03E-05	0.00E+00	1.44E-04	7.23E-04
11	E14	80	Combination Long Haul Truck	8	0.00E+00	3.34E-06	2.24E-07	2.86E+00	1.36E-08	3.42E-03	2.54E-06	3.73E-03	2.22E-04	4.46E-05	2.30E-04	6.78E-05	6.83E-05	4.37E-04	9.56E-06	0.00E+00	1.62E-04	7.02E-04
11	E15	80	Passenger Car	204	0.00E+00	2.48E-06	2.69E-07	9.52E+00	1.73E-05	6.63E-02	5.53E-06	4.19E-04	1.12E-03	1.95E-04	5.38E-04	3.47E-04	3.56E-04	3.20E-05	4.79E-05	1.34E-08	1.82E-04	6.57E-05
11	E15	80	Passenger Truck	342	0.00E+00	5.33E-06	5.66E-07	2.20E+01	3.42E-05	1.21E-01	1.12E-05	1.24E-03	2.01E-03	3.57E-04	1.07E-03	6.95E-04	7.12E-04	1.54E-04	1.10E-04	2.99E-08	3.58E-04	2.03E-04
11	E15	80	Single Unit Short Haul Truck	4	0.00E+00	8.40E-07	4.17E-08	8.23E-01	6.75E-07	1.65E-03	8.93E-07	4.30E-04	5.27E-05	1.19E-05	1.02E-04	2.49E-05	2.53E-05	8.26E-05	3.32E-06	1.32E-09	7.69E-05	8.05E-05
11	E15	80	Combination Short Haul Truck	9	0.00E+00	4.16E-06	2.98E-07	3.45E+00	1.31E-08	3.69E-03	3.06E-06	4.27E-03	2.52E-04	6.22E-05	2.48E-04	8.80E-05	8.75E-05	5.19E-04	1.15E-05	0.00E+00	1.61E-04	8.06E-04
11	E15	80	Combination Long Haul Truck	9	0.00E+00	3.72E-06	2.50E-07	3.20E+00	1.52E-08	3.82E-03	2.83E-06	4.16E-03	2.47E-04	4.97E-05	2.57E-04	7.57E-05	7.62E-05	4.88E-04	1.07E-05	0.00E+00	1.80E-04	7.83E-04
11	E16	80	Passenger Car	210	0.00E+00	2.55E-06	2.76E-07	9.78E+00	1.78E-05	6.81E-02	5.68E-06	4.31E-04	1.15E-03	2.00E-04	5.53E-04	3.56E-04	3.66E-04	3.28E-05	4.92E-05	1.38E-08	1.87E-04	6.75E-05
11	E16	80	Passenger Truck	351	0.00E+00	5.48E-06	5.81E-07	2.26E+01	3.51E-05	1.25E-01	1.15E-05	1.28E-03	2.07E-03	3.67E-04	1.10E-03	7.14E-04	7.31E-04	1.58E-04	1.13E-04	3.07E-08	3.68E-04	2.09E-04
11	E16	80	Single Unit Short Haul Truck	5	0.00E+00	8.93E-07	4.43E-08	8.75E-01	7.18E-07	1.76E-03	9.50E-07	4.58E-04	5.61E-05	1.27E-05	1.09E-04	2.65E-05	2.68E-05	8.78E-05	3.53E-06	1.40E-09	8.17E-05	8.56E-05
11	E16	80	Combination Short Haul Truck	7	0.00E+00	3.29E-06	2.35E-07	2.73E+00	1.04E-08	2.91E-03	2.41E-06	3.37E-03	1.99E-04	4.91E-05	1.96E-04	6.95E-05	6.91E-05	4.10E-04	9.11E-06	0.00E+00	1.27E-04	6.37E-04
11	E16	80	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.97E-07	2.52E+00	1.20E-08	3.02E-03	2.24E-06	3.28E-03	1.95E-04	3.93E-05	2.03E-04	5.98E-05	6.02E-05	3.85E-04	8.42E-06	0.00E+00	1.42E-04	6.19E-04
11	E17	80	Passenger Car	172	0.00E+00	2.09E-06	2.26E-07	8.03E+00	1.46E-05	5.59E-02	4.66E-06	3.54E-04	9.46E-04	1.64E-04	4.53E-04	2.92E-04	3.00E-04	2.69E-05	4.04E-05	1.13E-08	1.53E-04	5.54E-05
11	E17	80	Passenger Truck	288	0.00E+00	4.50E-06	4.77E-07	1.86E+01	2.88E-05	1.02E-01	9.44E-06	1.05E-03	1.70E-03	3.01E-04	9.04E-04	5.86E-04	6.00E-04	1.30E-04	9.28E-05	2.52E-08	3.02E-04	1.71E-04
11	E17	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.18E-03	1.72E-06	8.28E-04	1.02E-04	2.30E-05	1.97E-04	4.79E-05	4.86E-05	1.59E-04	6.39E-06	2.54E-09	1.48E-04	1.55E-04
11	E17	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.03E-03	1.69E-06	2.35E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.86E-04	6.36E-06	0.00E+00	8.88E-05	4.45E-04
11	E17	80	Combination Long Haul Truck	5	0.00E+00	2.05E-06	1.38E-07	1.76E+00	8.39E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.42E-04	4.17E-05	4.20E-05	2.69E-04	5.88E-06	0.00E+00	9.94E-05	4.32E-04
11	E18	80	Passenger Car	102	0.00E+00	1.24E-06	1.34E-07	4.75E+00	8.62E-06	3.31E-02	2.75E-06	2.09E-04	5.59E-04	9.72E-05	2.68E-04	1.73E-04	1.77E-04	1.59E-05	2.39E-05	6.69E-09	9.07E-05	3.28E-05
11	E18	80	Passenger Truck	170	0.00E+00	2.66E-06	2.82E-07	1.10E+01	1.70E-05	6.06E-02	5.58E-06	6.20E-04	1.00E-03	1.78E-04	5.35E-04	3.46E-04	3.55E-04	7.66E-05	5.49E-05	1.49E-08	1.78E-04	1.01E-04
11	E18	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.25E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.39E-05	6.48E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.07E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	9.36E-08	4.62E-09	8.94E-02	7.41E-08	1.76E-04	9.97E-08	4.72E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.60E-07	1.41E-10	8.65E-06	8.84E-06
11	E18	80	Combination Short Haul Truck	7	0.00E+00	2.98E-06	2.13E-07	2.47E+00	9.43E-09	2.64E-03	2.19E-06	3.06E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.27E-05	3.72E-04	8.27E-06	0.00E+00	1.15E-04	5.78E-04
11	E18	80	Combination Long Haul Truck	6	0.00E+00	2.67E-06	1.79E-07	2.29E+00	1.09E-08	2.74E-03	2.03E-06	2.98E-03	1.77E-04	3.57E-05	1.84E-04	5.43E-05	5.46E-05	3.50E-04	7.65E-06	0.00E+00	1.29E-04	5.61E-04
9	E19	60	Passenger Car	246	0.00E+00	3.69E-06	3.99E-07	1.24E+01	2.57E-05	9.57E-02	8.20E-06	5.02E-04	2.49E-03	3.83E-04	8.00E-04	5.15E-04	5.28E-04	5.14E-05	6.18E-05	1.70E-08	2.70E-04	7.86E-05
9	E19	60	Passenger Truck	412	0.00E+00	8.14E-06	8.59E-07	2.82E+01	5.08E-05	1.71E-01	1.67E-05	1.64E-03	4.58E-03	7.11E-04	1.59E-03	1.04E-03	1.06E-03	2.19E-04	1.40E-04	3.87E-08	5.30E-04	2.71E-04
9	E19	60	Single Unit Short Haul Truck	24	0.00E+00	7.05E-06	3.52E-07	4.48E+00	5.79E-06	8.65E-03	7.52E-06	3.35E-03	5.69E-04	1.03E-04	8.51E-04	2.11E-04	2.14E-04	4.48E-04	1.81E-05	7.45E-09	6.40E-04	6.29E-04
9	E19	60	Single Unit Long Haul Truck	1	0.00E+00	3.08E-07	1.53E-08	1.91E-01	2.52E-07	3.67E-04	3.29E-07	1.45E-04	2.56E-05	4.58E-06	3.75E-05	9.18E-06	9.33E-06	1.91E-05	7.71E-07	3.17E-10	2.81E-05	2.72E-05
9	E19	60	Combination Short Haul Truck	17	0.00E+00	1.02E-05	7.10E-07	6.62E+00	3.60E-08	8.87E-03	7.53E-06	1.10E-02	9.45E-04	1.87E-04	6.47E-04	2.11E-04	2.11E-04	9.97E-04	2.21E-05	0.00E+00	4.35E-04	2.08E-03
9	E19	60	Combination Long Haul Truck	16	0.00E+00	9.09E-06	5.95E-07	6.21E+00	4.12E-08	9.57E-03	7.04E-06	1.09E-02	9.49E-04	1.61E-04	6.65E-04	1.81E-04	1.83E-04	9.44E-04	2.07E-05	0.00E+00	4.81E-04	2.06E-03
9	E20	60	Passenger Car	412	0.00E+00	6.18E-06	6.68E-07	2.07E+01	4.30E-05	1.60E-01	1.37E-05	8.40E-04	4.18E-03	6.42E-04	1.34E-03	8.62E-04	8.85E-04	8.61E-05	1.04E-04	2.85E-08	4.52E-04	1.32E-04
9	E20	60	Passenger Truck	690	0.00E+00	1.36E-05	1.44E-06	4.71E+01	8.51E-05	2.86E-01	2.80E-05	2.74E-03	7.67E-03	1.19E-03	2.66E-03	1.74E-03	1.78E-03	3.66E-04	2.34E-04	6.48E-08	8.87E-04	4.54E-04
9	E20	60	Single Unit Short Haul Truck	20	0.00E+00	5.92E-06	2.96E-07	3.76E+00	4.87E-06	7.26E-03	6.31E-06	2.82E-03	4.78E-04	8.66E-05	7.15E-04	1.77E-04	1.80E-04	3.77E-04	1.52E-05	6.26E-09	5.37E-04	5.28E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	2.59E-07	1.28E-08	1.61E-01	2.11E-07	3.08E-04	2.76E-07	1.22E-04	2.15E-05	3.84E-06	3.15E-05	7.71E-06	7.84E-06	1.60E-05	6.48E-07	2.66E-10	2.36E-05	2.28E-05
9	E20	60	Combination Short Haul Truck	11	0.00E+00	6.47E-06	4.52E-07	4.21E+00	2.29E-08	5.64E-03	4.79E-06	7.02E-03	6.01E-04	1.19E-04	4.12E-04	1.34E-04	1.34E-04	6.35E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
9	E20	60	Combination Long Haul Truck	10	0.00E+00	5.79E-06	3.78E-07	3.95E+00	2.62E-08	6.09E-03	4.48E-06	6.96E-03	6.04E-04	1.03E-04	4.23E-04	1.15E-04	1.17E-04	6.01E-04	1.32E-05	0.00E+00	3.06E-04	1.31E-03
11	E21	80	Passenger Car	82	0.00E+00	1.00E-06	1.08E-07	3.84E+00	6.97E-06	2.67E-02	2.23E-06	1.69E-04	4.52E-04	7.86E-05	2.17E-04	1.40E-04	1.43E-04	1.29E-05	1.93E-05	5.41E-09	7.33E-05	2.65E-05
11	E21	80	Passenger Truck	138	0.00E+00	2.15E-06	2.28E-07	8.87E+00	1.38E-05	4.90E-02	4.51E-06	5.01E-04	8.11E-04	1.44E-04	4.32E-04	2.80E-04	2.87E-04	6.20E-05	4.44E-05	1.21E-08	1.44E-04	8.19E-05
11	E21	80	Single Unit Short Haul Truck	3	0.00E+00	5.72E-07	2.84E-08	5.61E-01	4.60E-07	1.13E-03	6.09E-07	2.93E-04	3.60E-05	8.13E-06	6.96E-05	1.70E-05	1.72E-05	5.63E-05	2.26E-06	8.99E-10	5.24E-05	5.49E-05
11	E21	80	Combination Short Haul Truck	4	0.00E+00	1.79E-06	1.28E-07	1.48E+00	5.64E-09	1.58E-03	1.31E-06	1.83E-03	1.08E-04	2.67E-05	1.06E-04	3.77E-05	3.75E-05	2.23E-04	4.95E-06	0.00E+00	6.90E-05	3.46E-04
11	E21	80	Combination Long Haul Truck	4	0.00E+00	1.60E-06	1.07E-07	1.37E+00	6.52E-09	1.64E-03	1.22E-06	1.78E-03	1.06E-04	2.13E-05	1.10E-04	3.25E-05	3.27E-05	2.09E-04	4.58E-06	0.00E+00	7.73E-05	3.36E-04
11	E22	80	Passenger Car	13	0.00E+00	1.60E-07	1.73E-08	6.15E-01	1.12E-06	4.28E-03	3.57E-07	2.71E-05	7.25E-05	1.26E-05	3.47E-05	2.24E-05	2.30E-05	2.06E-06	3.09E-06	8.67E-10	1.17E-05	4.25E-06
11	E22	80	Passenger Truck	22	0.00E+00	3.44E-07	3.65E-08	1.42E+00	2.21E-06	7.85E-03	7.23E-07	8.03E-05	1.30E-04	2.30E-05	6.93E-05	4.49E-05	4.60E-05	9.93E-06	7.11E-06	1.93E-09	2.31E-05	1.31E-05
11	E22	80	Combination Short Haul Truck	1	0.00E+00	5.22E-07	3.73E-08	4.33E-01	1.65E-09	4.63E-04	3.83E-07	5.35E-04	3.17E-05	7.80E-06	3.11E-05	1.10E-05	1.10E-05	6.51E-05	1.45E-06	0.00E+00	2.02E-05	1.01E-04
11	E22	80	Combination Long Haul Truck	1	0.00E+00	4.67E-07	3.13E-08	4.01E-01	1.91E-09	4.79E-04	3.56E-07	5.21E-04	3.10E-05	6.24E-06	3.22E-05	9.49E-06	9.55E-06	6.12E-05	1.34E-06	0.00E+00	2.26E-05	9.82E-05
11	E23	80	Passenger Car	355	0.00E+00	4.32E-06	4.68E-07	1.66E+01	3.01E-05	1.15E-01	9.62E-06	7.30E-04	1.95E-03	3.39E-04	9.36E-04	6.04E-04	6.20E-04	5.57E-05	8.34E-05	2.34E-08	3.17E-04	1.14E-04
11	E23	80	Passenger Truck	595	0.00E+00	9.29E-06	9.85E-07	3.83E+01	5.95E-05	2.12E-01	1.95E-05	2.16E-03	3.50E-03	6.21E-04	1.87E-03	1.21E-03	1.24E-03	2.68E-04	1.92E-04	5.21E-08	6.23E-04	3.54E-04
11	E23	80	Single Unit Short Haul Truck	78	0.00E+00	1.47E-05	7.28E-07	1.44E+01	1.18E-05	2.89E-02	1.56E-05	7.52E-03	9.21E-04	2.08E-04	1.78E-03	4.34E-04	4.41E-04	1.44E-03	5.80E-05	2.30E-08	1.34E-03	1.41E-03
11	E23	80	Single Unit Long Haul Truck	3	0.00E+00	6.37E-07	3.14E-08	6.08E-01	5.04E-07	1.20E-03	6.78E-07	3.21E-04	4.21E-05	9.19E-06	7.78E-05	1.87E-05	1.90E-05	6.07E-05	2.45E-06	9.58E-10	5.88E-05	6.02E-05
11	E23	80	Combination Short Haul Truck	57	0.00E+00	2.48E-05	1.77E-06	2.06E+01	7.84E-08	2.20E-02	1.82E-05	2.54E-02	1.50E-03	3.71E-04	1.48E-03	5.24E-04	5.21E-04	3.09E-03	6.88E-05	0.00E+00	9.59E-04	4.80E-03
11	E23	80	Combination Long Haul Truck	52	0.00E+00	2.22E-05	1.49E-06	1.90E+01	9.06E-08	2.28E-02	1.69E-05	2.48E-02	1.47E-03	2.96E-04	1.53E-03	4.51E-04	4.54E-04	2.91E-03	6.36E-05	0.00E+00	1.07E-03	4.67E-03
11	E24	80	Passenger Car	266	0.00E+00	3.23E-06	3.50E-07	1.24E+01	2.25E-05	8.63E-02	7.19E-06	5.46E-04	1.46E-03	2.54E-04	7.00E-04	4.51E-04	4.63E-04	4.16E-05	6.23E-05	1.75E-08	2.37E-04	8.56E-05
11	E24	80	Passenger Truck	445	0.00E+00	6.94E-06	7.36E-07	2.87E+01	4.45E-05	1.58E-01	1.46E-05	1.62E-03	2.62E-03	4.64E-04	1.40E-03	9.04E-04	9.27E-04	2.00E-04	1.43E-04	3.89E-08	4.66E-04	2.64E-04
11	E24	80	Single Unit Short Haul Truck	85	0.00E+00	1.60E-05	7.92E-07	1.57E+01	1.28E-05	3.14E-02	1.70E-05	8.18E-03	1.00E-03	2.27E-04	1.94E-03	4.73E-04	4.80E-04	1.57E-03	6.31E-05	2.51E-08	1.46E-03	1.53E-03
11	E24	80	Single Unit Long Haul Truck	4	0.00E+00	6.93E-07	3.42E-08	6.62E-01	5.49E-07	1.30E-03	7.38E-07	3.49E-04	4.58E-05	1.00E-05	8.47E-05	2.03E-05	2.06E-05	6.61E-05	2.67E-06	1.04E-09	6.40E-05	6.55E-05
11	E24	80	Combination Short Haul Truck	61	0.00E+00	2.66E-05	1.91E-06	2.21E+01	8.41E-08	2.36E-02	1.96E-05	2.73E-02	1.62E-03	3.98E-04	1.59E-03	5.63E-04	5.60E-04	3.32E-03	7.39E-05	0.00E+00	1.03E-03	5.16E-03
11	E24	80	Combination Long Haul Truck	55	0.00E+00	2.38E-05	1.60E-06	2.05E+01	9.73E-08	2.44E-02	1.81E-05	2.66E-02	1.58E-03	3.18E-04	1.65E-03	4.84E-04	4.87E-04	3.12E-03	6.83E-05	0.00E+00	1.15E-03	5.01E-03
10	E25	70	Passenger Car	159	0.00E+00	2.08E-06	2.25E-07	7.66E+00	1.45E-05	5.44E-02	4.65E-06	3.19E-04	1.23E-03	1.98E-04	4.51E-04	2.91E-04	2.98E-04	2.85E-05	3.84E-05	1.05E-08	1.53E-04	5.00E-05
10	E25	70	Passenger Truck	267	0.00E+00	4.57E-06	4.83E-07	1.76E+01	2.89E-05	1.00E-01	9.49E-06	1.00E-03	2.25E-03	3.65E-04	9.04E-04	5.88E-04	6.03E-04	1.30E-04	8.75E-05	2.35E-08	3.02E-04	1.65E-04
10	E25	70	Single Unit Short Haul Truck	1	0.00E+00	1.95E-07	9.77E-09	1.53E-01	1.59E-07	3.06E-04	2.08E-07	9.61E-05	1.37E-05	2.74E-06	2.37E-05	5.83E-06	5.92E-06	1.53E-05	6.15E-07	2.49E-10	1.77E-05	1.80E-05
10	E25	70	Combination Short Haul Truck	2	0.00E+00	1.02E-06	7.27E-08	7.44E-01	3.33E-09	8.81E-04	7.49E-07	1.08E-03	7.77E-05	1.70E-05	6.23E-05	2.15E-05	2.15E-05	1.12E-04	2.48E-06	0.00E+00	4.09E-05	2.03E-04
10	E25	70	Combination Long Haul Truck	2	0.00E+00	9.28E-07	6.18E-08	6.93E-01	3.83E-09	9.33E-04	7.03E-07	1.06E-03	7.73E-05	1.41E-05	6.43E-05	1.87E-05	1.89E-05	1.06E-04	2.32E-06	0.00E+00	4.56E-05	2.00E-04
10	E26	70	Passenger Car	212	0.00E+00	2.

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E30	70	Combination Short Haul Truck	1	0.00E+00	5.43E-07	3.86E-08	3.95E-01	1.77E-09	4.68E-04	3.98E-07	5.72E-04	4.13E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.96E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E30	70	Combination Long Haul Truck	1	0.00E+00	4.93E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.42E-05	9.94E-06	1.00E-05	5.62E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	E31	70	Passenger Car	238	0.00E+00	3.12E-06	3.37E-07	1.14E+01	2.17E-05	8.14E-02	6.95E-06	4.77E-04	1.85E-03	2.96E-04	6.75E-04	4.35E-04	4.46E-04	4.27E-05	5.74E-05	1.57E-08	2.28E-04	7.48E-05
10	E31	70	Passenger Truck	399	0.00E+00	6.82E-06	7.22E-07	2.64E+01	4.32E-05	1.50E-01	1.42E-05	1.50E-03	3.36E-03	5.46E-04	1.35E-03	8.80E-04	9.01E-04	1.94E-04	1.31E-04	3.51E-08	4.51E-04	2.46E-04
10	E31	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.66E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.10E-05	1.06E-04	4.26E-06	1.72E-09	1.23E-04	1.25E-04
10	E31	70	Combination Short Haul Truck	4	0.00E+00	2.17E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.59E-06	2.29E-03	1.65E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.68E-05	4.31E-04
10	E31	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.31E-07	1.47E+00	8.14E-09	1.98E-03	1.49E-06	2.26E-03	1.64E-04	3.00E-05	1.37E-04	3.97E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.25E-04
10	E32	70	Passenger Car	121	0.00E+00	1.58E-06	1.71E-07	5.82E+00	1.10E-05	4.14E-02	3.53E-06	2.43E-04	9.39E-04	1.51E-04	3.43E-04	2.21E-04	2.27E-04	2.17E-05	2.92E-05	7.97E-09	1.16E-04	3.80E-05
10	E32	70	Passenger Truck	203	0.00E+00	3.47E-06	3.67E-07	1.34E+01	2.20E-05	7.61E-02	7.21E-06	7.61E-04	1.71E-03	2.78E-04	6.87E-04	4.47E-04	4.58E-04	9.86E-05	6.65E-05	1.79E-08	2.29E-04	1.25E-04
10	E32	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.82E-01	9.21E-07	1.77E-03	1.20E-06	5.55E-04	7.91E-05	1.58E-05	1.37E-04	3.37E-05	3.42E-05	8.83E-05	3.55E-06	1.44E-09	1.02E-04	1.04E-04
10	E32	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	E32	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.19E-04
9	E33	60	Passenger Car	473	0.00E+00	7.10E-06	7.67E-07	2.38E+01	4.94E-05	1.84E-01	1.58E-05	9.65E-04	4.80E-03	7.37E-04	1.54E-03	9.89E-04	1.02E-03	9.88E-05	1.19E-04	3.27E-08	5.19E-04	1.51E-04
9	E33	60	Passenger Truck	792	0.00E+00	1.56E-05	1.65E-06	5.41E+01	9.77E-05	3.28E-01	3.21E-05	3.15E-03	8.80E-03	1.37E-03	3.06E-03	2.00E-03	2.04E-03	4.20E-04	2.68E-04	7.44E-08	1.02E-03	5.22E-04
9	E33	60	Single Unit Short Haul Truck	16	0.00E+00	4.57E-06	2.28E-07	2.90E+00	3.76E-06	5.61E-03	4.88E-06	2.18E-03	3.69E-04	6.69E-05	5.52E-04	1.37E-04	1.39E-04	2.91E-04	1.17E-05	4.83E-09	4.15E-04	4.08E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	9.92E-09	1.24E-01	1.63E-07	2.38E-04	2.13E-07	9.42E-05	1.66E-05	2.97E-06	2.44E-05	5.96E-06	6.05E-06	1.24E-05	5.01E-07	2.06E-10	1.82E-05	1.76E-05
9	E33	60	Combination Short Haul Truck	16	0.00E+00	9.14E-06	6.38E-07	5.95E+00	3.23E-08	7.98E-03	6.77E-06	9.92E-03	8.49E-04	1.68E-04	5.82E-04	1.90E-04	1.90E-04	8.97E-04	1.99E-05	0.00E+00	3.91E-04	1.87E-03
9	E33	60	Combination Long Haul Truck	14	0.00E+00	8.18E-06	5.35E-07	5.58E+00	3.71E-08	8.61E-03	6.33E-06	9.83E-03	8.53E-04	1.45E-04	5.98E-04	1.63E-04	1.65E-04	8.49E-04	1.86E-05	0.00E+00	4.33E-04	1.85E-03
9	E34	60	Passenger Car	301	0.00E+00	4.51E-06	4.88E-07	1.51E+01	3.14E-05	1.17E-01	1.00E-05	6.14E-04	3.05E-03	4.69E-04	9.78E-04	6.29E-04	6.46E-04	6.29E-05	7.56E-05	2.08E-08	3.30E-04	9.61E-05
9	E34	60	Passenger Truck	504	0.00E+00	9.95E-06	1.05E-06	3.44E+01	6.21E-05	2.09E-01	2.04E-05	2.00E-03	5.60E-03	8.69E-04	1.95E-03	1.27E-03	1.30E-03	2.67E-04	1.71E-04	4.73E-08	6.48E-04	3.32E-04
9	E34	60	Single Unit Short Haul Truck	11	0.00E+00	3.12E-06	1.56E-07	1.98E+00	2.57E-06	3.83E-03	3.33E-06	1.49E-03	2.52E-04	4.57E-05	3.77E-04	9.34E-05	9.49E-05	1.99E-04	8.02E-06	3.30E-09	2.83E-04	2.78E-04
9	E34	60	Combination Short Haul Truck	10	0.00E+00	6.14E-06	4.29E-07	4.00E+00	2.17E-08	5.36E-03	4.55E-06	6.66E-03	5.71E-04	1.13E-04	3.91E-04	1.27E-04	1.27E-04	6.03E-04	1.34E-05	0.00E+00	2.63E-04	1.25E-03
9	E34	60	Combination Long Haul Truck	10	0.00E+00	5.50E-06	3.59E-07	3.75E+00	2.49E-08	5.79E-03	4.25E-06	6.61E-03	5.73E-04	9.75E-05	4.02E-04	1.09E-04	1.11E-04	5.71E-04	1.25E-05	0.00E+00	2.91E-04	1.24E-03
9	E35	60	Passenger Car	373	0.00E+00	5.60E-06	6.06E-07	1.88E+01	3.90E-05	1.45E-01	1.24E-05	7.61E-04	3.79E-03	5.82E-04	1.21E-03	7.81E-04	8.02E-04	7.80E-05	9.39E-05	2.58E-08	4.10E-04	1.19E-04
9	E35	60	Passenger Truck	625	0.00E+00	1.24E-05	1.30E-06	4.27E+01	7.71E-05	2.59E-01	2.54E-05	2.48E-03	6.95E-03	1.08E-03	2.41E-03	1.58E-03	1.61E-03	3.32E-04	2.12E-04	5.87E-08	8.04E-04	4.12E-04
9	E35	60	Single Unit Short Haul Truck	17	0.00E+00	4.97E-06	2.48E-07	3.16E+00	4.09E-06	6.10E-03	5.30E-06	2.36E-03	4.02E-04	7.27E-05	6.01E-04	1.49E-04	1.51E-04	3.16E-04	1.28E-05	5.25E-09	4.51E-04	4.43E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.17E-07	1.08E-08	1.35E-01	1.78E-07	2.59E-04	2.32E-07	1.02E-04	1.80E-05	3.23E-06	2.65E-05	6.48E-06	6.58E-06	1.35E-05	5.44E-07	2.23E-10	1.98E-05	1.92E-05
9	E35	60	Combination Short Haul Truck	19	0.00E+00	1.10E-05	7.67E-07	7.15E+00	3.89E-08	9.59E-03	8.14E-06	1.19E-02	1.02E-03	2.02E-04	7.00E-04	2.28E-04	2.28E-04	1.08E-03	2.39E-05	0.00E+00	4.70E-04	2.24E-03
9	E35	60	Combination Long Haul Truck	17	0.00E+00	9.83E-06	6.43E-07	6.71E+00	4.46E-08	1.03E-02	7.61E-06	1.18E-02	1.03E-03	1.74E-04	7.18E-04	1.96E-04	1.98E-04	1.02E-03	2.24E-05	0.00E+00	5.20E-04	2.23E-03
9	E36	60	Passenger Car	213	0.00E+00	3.19E-06	3.45E-07	1.07E+01	2.22E-05	8.27E-02	7.09E-06	4.34E-04	2.16E-03	3.32E-04	6.91E-04	4.45E-04	4.57E-04	4.44E-05	5.35E-05	1.47E-08	2.33E-04	6.80E-05
9	E36	60	Passenger Truck	356	0.00E+00	7.04E-06	7.43E-07	2.43E+01	4.39E-05	1.47E-01	1.44E-05	1.42E-03	3.96E-03	6.15E-04	1.38E-03	8.99E-04	9.19E-04	1.89E-04	1.21E-04	3.34E-08	4.58E-04	2.35E-04
9	E36	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.54E-07	1.96E+00	2.54E-06	3.79E-03	3.30E-06	1.47E-03	2.50E-04	4.52E-05	3.74E-04	9.25E-05	9.40E-05	1.97E-04	7.94E-06	3.27E-09	2.81E-04	2.76E-04
9	E36	60	Combination Short Haul Truck	10	0.00E+00	5.98E-06	4.17E-07	3.89E+00	2.11E-08	5.21E-03	4.43E-06	6.48E-03	5.55E-04	1.10E-04	3.81E-04	1.24E-04	1.24E-04	5.86E-04	1.30E-05	0.00E+00	2.56E-04	1.22E-03
9	E36	60	Combination Long Haul Truck	9	0.00E+00	5.35E-06	3.50E-07	3.65E+00	2.42E-08	5.63E-03	4.14E-06	6.43E-03	5.58E-04	9.48E-05	3.91E-04	1.06E-04	1.08E-04	5.55E-04	1.22E-05	0.00E+00	2.83E-04	1.21E-03
9	E37	60	Passenger Car	520	0.00E+00	7.80E-06	8.44E-07	2.62E+01	5.43E-05	2.02E-01	1.73E-05	1.06E-03	5.27E-03	8.11E-04	1.69E-03	1.09E-03	1.12E-03	1.09E-04	1.31E-04	3.60E-08	5.71E-04	1.66E-04
9	E37	60	Passenger Truck	871	0.00E+00	1.72E-05	1.82E-06	5.95E+01	1.07E-04	3.61E-01	3.53E-05	3.46E-03	9.68E-03	1.50E-03	3.36E-03	2.20E-03	2.25E-03	4.62E-04	2.95E-04	8.18E-08	1.12E-03	5.74E-04
9	E37	60	Single Unit Short Haul Truck	34	0.00E+00	1.01E-05	5.05E-07	6.42E+00	8.31E-06	1.24E-02	1.08E-05	4.81E-03	8.17E-04	1.48E-04	1.22E-03	3.02E-04	3.07E-04	6.43E-04	2.59E-05	1.07E-08	9.18E-04	9.02E-04
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	4.42E-07	2.19E-08	2.74E-01	3.61E-07	5.26E-04	4.71E-07	2.08E-04	3.67E-05	6.56E-06	5.39E-05	1.32E-05	1.34E-05	2.74E-05	1.11E-06	4.54E-10	4.03E-05	3.90E-05
9	E37	60	Combination Short Haul Truck	33	0.00E+00	1.95E-05	1.36E-06	1.27E+01	6.89E-08	1.70E-02	1.44E-05	2.11E-02	1.81E-03	3.58E-04	1.24E-03	4.04E-04	4.04E-04	1.91E-03	4.24E-05	0.00E+00	8.34E-04	3.98E-03
9	E37	60	Combination Long Haul Truck	30	0.00E+00	1.74E-05	1.14E-06	1.19E+01	7.90E-08	1.84E-02	1.35E-05	2.10E-02	1.82E-03	3.09E-04	1.27E-03	3.47E-04	3.51E-04	1.81E-03	3.97E-05	0.00E+00	9.22E-04	3.95E-03
9	E38	60	Passenger Car	214	0.00E+00	3.21E-06	3.47E-07	1.07E+01	2.23E-05	8.31E-02	7.12E-06	4.36E-04	2.17E-03	3.33E-04	6.95E-04	4.47E-04	4.59E-04	4.46E-05	5.37E-05	1.48E-08	2.34E-04	6.83E-05
9	E38	60	Passenger Truck	358	0.00E+00	7.07E-06	7.47E-07	2.45E+01	4.41E-05	1.48E-01	1.45E-05	1.42E-03	3.98E-03	6.17E-04	1.38E-03	9.03E-04	9.24E-04	1.90E-04	1.21E-04	3.36E-08	4.60E-04	2.36E-04
9	E38	60	Single Unit Short Haul Truck	14	0.00E+00	4.23E-06	2.11E-07	2.68E+00	3.47E-06	5.18E-03	4.50E-06	2.01E-03	3.41E-04	6.18E-05	5.10E-04	1.26E-04	1.28E-04	2.69E-04	1.08E-05	4.46E-09	3.83E-04	3.77E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	1.85E-07	9.16E-09	1.15E-01	1.51E-07	2.20E-04	1.97E-07	8.70E-05	1.53E-05	2.74E-06	2.25E-05	5.50E-06	5.59E-06	1.14E-05	4.62E-07	1.90E-10	1.68E-05	1.63E-05
9	E38	60	Combination Short Haul Truck	14	0.00E+00	8.23E-06	5.74E-07	5.35E+00	2.91E-08	7.18E-03	6.09E-06	8.92E-03	7.64E-04	1.51E-04	5.24E-04	1.71E-04	1.71E-04	8.07E-04	1.79E-05	0.00E+00	3.52E-04	1.68E-03
9	E38	60	Combination Long Haul Truck	13	0.00E+00	7.36E-06	4.81E-07	5.02E+00	3.34E-08	7.75E-03	5.70E-06	8.85E-03	7.68E-04	1.31E-04	5.38E-04	1.46E-04	1.48E-04	7.64E-04	1.68E-05	0.00E+00	3.89E-04	1.67E-03
10	E39	70	Passenger Car	215	0.00E+00	2.81E-06	3.04E-07	1.03E+01	1.96E-05	7.34E-02	6.26E-06	4.30E-04	1.66E-03	2.67E-04	6.08E-04	3.92E-04	4.02E-04	3.85E-05	5.18E-05	1.41E-08	2.06E-04	6.74E-05
10	E39	70	Passenger Truck	360	0.00E+00	6.15E-06	6.51E-07	2.38E+01	3.90E-05	1.35E-01	1.28E-05	1.35E-03	3.03E-03	4.93E-04	1.22E-03	7.93E-04	8.12E-04	1.75E-04	1.18E-04	3.17E-08	4.07E-04	2.22E-04
10	E39	70	Single Unit Short Haul Truck	7	0.00E+00	1.55E-06	7.75E-08	1.21E+00	1.26E-06	2.43E-03	1.65E-06	7.62E-04	1.09E-04	2.17E-05	1.88E-04	4.62E-05	4.70E-05	1.21E-04	4.88E-06	1.97E-09	1.40E-04	1.43E-04
10	E39	70	Combination Short Haul Truck	5	0.00E+00	2.47E-06	1.76E-07	1.80E+00	8.04E-09	2.13E-03	1.81E-06	2.60E-03	1.88E-04	4.11E-05	1.51E-04	5.21E-05	5.20E-05	2.71E-04	6.00E-06	0.00E+00	9.88E-05	4.91E-04
10	E39	70	Combination Long Haul Truck	4	0.00E+00	2.24E-06	1.50E-07	1.68E+00	9.26E-09	2.25E-03	1.70E-06	2.57E-03	1.87E-04	3.41E-05	1.56E-04	4.52E-05	4.57E-05	2.56E-04	5.61E-06	0.00E+00	1.10E-04	4.83E-04
10	E40	70	Passenger Car	241	0.00E+00	3.15E-06	3.41E-07	1.16E+01	2.20E-05	8.24E-02	7.03E-06	4.83E-04	1.87E-03	3.00E-04	6.83E-04	4.40E-04	4.51E-04	4.32E-05	5.81E-05	1.59E-08	2.31E-04	7.57E-05
10	E40	70	Passenger Truck	404	0.00E+00	6.91E-06	7.31E-07	2.67E+01	4.37E-05	1.51E-01	1.44E-05	1.51E-03	3.40E-03	5.53E-04	1.37E-03	8.90E-04	9.12E-04	1.96E-04	1.32E-04	3.55E-08	4.56E-04	2.49E-04
10	E40	70	Single Unit Short Haul Truck	10	0.00E+00	2.44E-06	1.23E-07	1.92E+00	2.00E-06	3.84E-03	2.60E-06	1.20E-03	1.72E-04	3.44E-05	2.98E-04	7.31E-05	7.43E-05	1.92E-04	7.72E-06	3.12E-09	2.22E-04	2.26E-04
10	E40	70	Combination Short Haul Truck	6	0.00E+00	3.36E-06	2.39E-07	2.45E+00	1.09E-08	2.90E-03	2.46E-06	3.54E-03	2.55E-04	5.59E-05	2.05E-04	7.09E-05	7.07E-05	3.69E-04	8.17E-06	0.00E+00	1.34E-04	6.67E-04
10	E40	70	Combination Long Haul Truck	6	0.00E+00	3.05E-06	2.03E-07	2.28E+00	1.26E-08	3.07E-03	2.31E-06	3.49E-03	2.54E-04	4.64E-05	2.12E-04	6.15E-05	6.22E-05	3.48E-04	7.63E-06	0.00E+00	1.50E-04	6.58E-04
10	E41	70	Passenger Car	166	0.00E+00	2.18E-06	2.35E-07	7.99E+00	1.52E-05	5.68E-02	4.85E-06	3.33E-04	1.29E-03	2.07E-04	4.71E-04	3.04E-04	3.11E-04	2.98E-05	4.01E-05	1.10E-08	1.59E-04	5.22E-05
10	E41	70	Passenger Truck	279	0.00E+00	4.77E-06	5.05E-07	1.84E+01	3.02E-05	1.04E-01	9.90E-06	1.04E-03	2.34E-03	3.81E-04	9.44E-04	6.14E-04	6.29E-04	1.35E-04	9.13E-05	2.45E-08	3.15E-04	1.72E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	3.91E-07	1.96E-08	3.07E-01	3.20E-07	6.15E-04	4.17E-07	1.93E-04	2.75E-05	5.50E-06	4.76E-05	1.17E-05	1.19E-05	3.07E-05	1.23E-06	4.99E-10	3.56E-05	3.61E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.09E-07	1.12E+00	5.00E-09	1.32E-03	1.13E-06	1.62E-03	1.17E-04	2.56E-05	9.38E-05	3.24E-05	3.23E-05	1.69E-04	3.73E-06	0.00E+00	6.14E-05	3.05E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.40E-06	9.30E-08	1.04E+00	5.76E-09	1.40E-03	1.06E-06	1.60E-03	1.16E-04	2.12E-05	9.68E-05	2.81E-05	2.84E-05	1.59E-04	3.49E-06	0.00E+00	6.86E-05	3.01E-04
10	E42	70	Passenger Car	226	0.00E+00	2.95E-06	3.19E-07	1.08E+01	2.05E-05	7.71E-02	6.58E-06	4.52E-04	1.75E-03	2.81E-04	6.39E-04	4.12E-04	4.22E-04	4.04E-05	5.44E-05	1.48E-08	2.16E-04	7.08E-05
10	E42	70	Passenger Truck	378	0.00E+00	6.46E-06	6.84E-07	2.50E+01	4.09E-05	1.42E-01	1.34E-05	1.42E-03	3.18E-03	5.17E-04	1.28E-03	8.33E-04	8.53E-04	1.84E-04	1.24E-04	3.33E-08	4.27E-04	2.33E-04
10	E42	70	Single Unit Short Haul Truck	5	0.00E+00	1.23E-06	6.18E-08	9.67E-01	1.01E-06	1.94E-03	1.31E-06	6.08E-04	8.68E-05	1.74E-05	1.50E-04	3.69E-05	3.75E-05	9.68E-05	3.89E-06	1.57E-09	1.12E-04	1.14E-04
10	E42	70	Combination Short Haul Truck	4	0.00E+00	2.16E-06	1.54E-07	1.57E+00	7.04E-09	1.86E-03	1.59E-06	2.28E-03	1.64E-04	3.60E-05	1.32E-04	4.56E-05	4.55E-05	2.37E-04	5.25E-06	0.00E+00	8.65E-05	4.29E-04
10	E42	70	Combination Long Haul Truck	4	0.00E+00	1.96E-06	1.31E-07	1.47E+00	8.11E-09	1.97E-03	1.49E-06	2.25E-03	1.64E-04	2.99E-05	1.36E-04	3.96E-05	4.00E-05	2.24E-04	4.91E-06	0.00E+00	9.65E-05	4.23E-04
10	E43	70	Passenger Car	150	0.00E+00	1.96E-06	2.12E-07	7.19E+00	1.36E-05	5.11E-02	4.37E-06	3.00E-04	1.16E-03	1.86E-04	4.24E-04	2.73E-04	2.80E-04	2.68E-05	3.61E-05	9.85E-09	1.43E-04	4.70E-05
10	E43	70	Passenger Truck	251	0.00E+00	4.29E-06	4.54E-07	1.66E+01	2.72E-05	9.40E-02	8.91E-06	9.40E-04	2.11E-03	3.43E-04	8.49E-04	5.53E-04	5.66E-04	1.22E-04	8.22E-05	2.21E-08	2.83E-04	1.55E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	1.72E-07	8.60E-09	1.34E-01	1.40E-07	2.70E-04	1.83E-07	8.46E-05	1.21E-05	2.41E-06	2.09E-05	5.13E-06	5.21E-06	1.35E-05	5.41E-07	2.19E-10	1.56E-05	1.58E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	7.59E-07	5.40E-08	5.52E-01	2.47E-09	6.54E-04	5.56E-07	8.00E-04	5.77E-05	1.26E-05	4.63E-05	1.60E-05	1.60E-05	8.33E-05	1.84E-06	0.00E+00	3.03E-05	1.51E-04
10	E43	70	Combination Long Haul Truck	1	0.00E+00	6.89E-07	4.59E-08	5.15E-01	2.84E-09	6.92E-04	5.22E-07	7.89E-04	5.74E-05	1.05E-05	4.78E-05	1.39E-05	1.40E-05	7.85E-05	1.72E-06	0.00E+00	3.38E-05	1.48E-04
10	E44	70	Passenger Car	203	0.00E+00	2.65E-06	2.87E-07	9.75E+00	1.85E-05	6.93E-02	5.92E-06	4.06E-04	1.57E-03	2.52E-04	5.75E-04	3.70E-04	3.80E-04	3.63E-05	4.89E-05	1.34E-08	1.94E-04	6.37E-05
10	E44	70	Passenger Truck	340	0.00E+00	5.81E-06	6.15E-07	2.25E+01	3.68E-05	1.27E-01	1.21E-05	1.27E-03	2.86E-03	4.65E-04	1.15E-03	7.49E-04	7.67E-04	1.65E-04	1.11E-04	2.99E-08	3.84E-04	2.09E-04
10	E44	70	Single Unit Short Haul Truck	2	0.00E+00	5.13E-07	2.57E-08	4.02E-01	4.19E-07	8.06E-04	5.46E-07	2.53E-04	3.61E-05	7.21E-06	6.24E-05	1.53E-05	1.56E-05	4.02E-05	1.62E-06	6.55E-10	4.66E-05	4.73E-05
10	E44	70	Combination Short Haul Truck	3	0.00E+00	1.37E-06	9.77E-08	9.99E-01	4.46E-09	1.18E-03	1.01E-06	1.45E-03	1.04E-04	2.28E-05	8.37E-05	2.89E-05	2.89E-05	1.51E-04	3.33E-06	0.00E+00	5.48E-05	2.72E-04
10	E44	70	Combination Long Haul Truck	2	0.00E+00	1.25E-06	8.30E-08	9.31E-01	5.14E-09	1.25E-03	9.44E-07	1.43E-03	1.04E-04	1.89E-05	8.64E-05	2.51E-05	2.54E-05	1.42E-04	3.11E-06	0.00E+00	6.12E-05	2.68E-04
11	E45	80	Passenger Car	175	0.00E+00	2.12E-06	2.30E-07	8.15E+00	1.48E-05	5.67E-02	4.73E-06	3.59E-04	9.60E-04	1.67E-04	4.60E-04	2.97E-04	3.05E-04	2.74E-05	4.10E-05	1.15E-08	1.56E-04	5.63E-05
11	E45	80	Passenger Truck	292	0.00E+00	4.56E-06	4.84E-07	1.88E+01	2.92E-05	1.04E-01	9.58E-06	1.06E-03	1.72E-03	3.05E-04	9.18E-04	5.95E-04	6.09E-04	1.32E-04	9.42E-05	2.56E-08	3.06E-04	1.74E-04
11	E45	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.08E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.64E-09	3.29E-04	3.44E-04
11	E45	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.70E-09	1.49E-01	1.23E-07	2.93E-04	1.66E-07	7.86E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.01E-07	2.35E-10	1.44E-05	1.47E-05
11	E45	80	Combination Short Haul Truck	10	0.00E+00	4.59E-06	3.28E-07	3.81E+00	1.45E-08	4.07E-03	3.37E-06	4.71E-03	2.78E-04	6.86E-05	2.74E-04	9.71E-05	9.65E-05	5.72E-04	1.27E-05	0.00E+00	1.78E-04	8.89E-04
11	E45	80	Combination Long Haul Truck	10	0.00E+00	4.11E-06	2.76E-07	3.52E+00	1.68E-08	4.21E-03	3.13E-06	4.58E-03	2.73E-04	5.48E-05	2.84E-04	8.35E-05	8.40E-05	5.38E-04	1.18E-05	0.00E+00	1.99E-04	8.64E-04
11	E46	80	Passenger Car	64	0.00E+00	7.82E-07

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E50	80	Passenger Truck	113	0.00E+00	1.76E-06	1.86E-07	7.26E+00	1.13E-05	4.00E-02	3.69E-06	4.10E-04	6.63E-04	1.18E-04	3.53E-04	2.29E-04	2.35E-04	5.07E-05	3.63E-05	9.85E-09	1.18E-04	6.69E-05
11	E50	80	Single Unit Short Haul Truck	1	0.00E+00	2.23E-07	1.10E-08	2.18E-01	1.79E-07	4.39E-04	2.37E-07	1.14E-04	1.40E-05	3.16E-06	2.71E-05	6.60E-06	6.69E-06	2.19E-05	8.80E-07	3.50E-10	2.04E-05	2.13E-05
11	E50	80	Combination Short Haul Truck	1	0.00E+00	6.34E-07	4.54E-08	5.26E-01	2.00E-09	5.62E-04	4.66E-07	6.51E-04	3.85E-05	9.48E-06	3.78E-05	1.34E-05	1.33E-05	7.91E-05	1.76E-06	0.00E+00	2.45E-05	1.23E-04
11	E50	80	Combination Long Haul Truck	1	0.00E+00	5.68E-07	3.81E-08	4.87E-01	2.32E-09	5.82E-04	4.32E-07	6.33E-04	3.77E-05	7.58E-06	3.92E-05	1.15E-05	1.16E-05	7.43E-05	1.63E-06	0.00E+00	2.75E-05	1.19E-04
11	E51	80	Passenger Car	198	0.00E+00	2.41E-06	2.60E-07	9.23E+00	1.68E-05	6.43E-02	5.36E-06	4.07E-04	1.09E-03	1.89E-04	5.21E-04	3.36E-04	3.45E-04	3.10E-05	4.64E-05	1.30E-08	1.76E-04	6.37E-05
11	E51	80	Passenger Truck	331	0.00E+00	5.17E-06	5.48E-07	2.13E+01	3.31E-05	1.18E-01	1.09E-05	1.21E-03	1.95E-03	3.46E-04	1.04E-03	6.73E-04	6.90E-04	1.49E-04	1.07E-04	2.90E-08	3.47E-04	1.97E-04
11	E51	80	Single Unit Short Haul Truck	19	0.00E+00	3.48E-06	1.73E-07	3.42E+00	2.80E-06	6.87E-03	3.71E-06	1.79E-03	2.19E-04	4.95E-05	4.24E-04	1.03E-04	1.05E-04	3.43E-04	1.38E-05	5.47E-09	3.19E-04	3.34E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.51E-07	7.47E-09	1.45E-01	1.20E-07	2.85E-04	1.61E-07	7.63E-05	1.00E-05	2.18E-06	1.85E-05	4.44E-06	4.51E-06	1.44E-05	5.83E-07	2.28E-10	1.40E-05	1.43E-05
11	E51	80	Combination Short Haul Truck	11	0.00E+00	4.82E-06	3.45E-07	3.99E+00	1.52E-08	4.27E-03	3.54E-06	4.94E-03	2.92E-04	7.19E-05	2.87E-04	1.02E-04	1.01E-04	6.01E-04	1.34E-05	0.00E+00	1.86E-04	9.33E-04
11	E51	80	Combination Long Haul Truck	10	0.00E+00	4.31E-06	2.89E-07	3.70E+00	1.76E-08	4.42E-03	3.28E-06	4.81E-03	2.86E-04	5.75E-05	2.97E-04	8.76E-05	8.81E-05	5.64E-04	1.23E-05	0.00E+00	2.09E-04	9.06E-04
11	E52	80	Passenger Car	35	0.00E+00	4.23E-07	4.58E-08	1.62E+00	2.95E-06	1.13E-02	9.42E-07	7.15E-05	1.91E-04	3.33E-05	9.17E-05	5.92E-05	6.07E-05	5.45E-06	8.17E-06	2.29E-09	3.10E-05	1.12E-05
11	E52	80	Passenger Truck	58	0.00E+00	9.10E-07	9.65E-08	3.76E+00	5.83E-06	2.07E-02	1.91E-06	2.12E-04	3.43E-04	6.09E-05	1.83E-04	1.18E-04	1.21E-04	2.62E-05	1.88E-05	5.10E-09	6.10E-05	3.46E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	2.55E-07	1.82E-08	2.11E-01	8.04E-10	2.26E-04	1.87E-07	2.61E-04	1.54E-05	3.80E-06	1.52E-05	5.38E-06	5.35E-06	3.17E-05	7.06E-07	0.00E+00	9.84E-06	4.93E-05
11	E52	80	Combination Long Haul Truck	1	0.00E+00	2.28E-07	1.53E-08	1.95E-01	9.30E-10	2.34E-04	1.73E-07	2.54E-04	1.51E-05	3.04E-06	1.57E-05	4.63E-06	4.66E-06	2.98E-05	6.52E-07	0.00E+00	1.10E-05	4.79E-05
11	E53	80	Passenger Car	287	0.00E+00	3.49E-06	3.78E-07	1.34E+01	2.43E-05	9.33E-02	7.77E-06	5.90E-04	1.58E-03	2.74E-04	7.57E-04	4.88E-04	5.01E-04	4.50E-05	6.74E-05	1.89E-08	2.56E-04	9.25E-05
11	E53	80	Passenger Truck	481	0.00E+00	7.50E-06	7.96E-07	3.10E+01	4.81E-05	1.71E-01	1.58E-05	1.75E-03	2.83E-03	5.02E-04	1.51E-03	9.77E-04	1.00E-03	2.16E-04	1.55E-04	4.21E-08	5.03E-04	2.86E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	3.94E-06	1.96E-07	3.86E+00	3.17E-06	7.76E-03	4.19E-06	2.02E-03	2.47E-04	5.60E-05	4.79E-04	1.17E-04	1.18E-04	3.88E-04	1.56E-05	6.19E-09	3.61E-04	3.78E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	8.44E-09	1.63E-01	1.35E-07	3.22E-04	1.82E-07	8.62E-05	1.13E-05	2.47E-06	2.09E-05	5.02E-06	5.10E-06	1.63E-05	6.59E-07	2.57E-10	1.58E-05	1.62E-05
11	E53	80	Combination Short Haul Truck	16	0.00E+00	7.14E-06	5.11E-07	5.92E+00	2.26E-08	6.33E-03	5.24E-06	7.32E-03	4.33E-04	1.07E-04	4.26E-04	1.51E-04	1.50E-04	8.90E-04	1.98E-05	0.00E+00	2.76E-04	1.38E-03
11	E53	80	Combination Long Haul Truck	15	0.00E+00	6.39E-06	4.29E-07	5.48E+00	2.61E-08	6.55E-03	4.86E-06	7.13E-03	4.25E-04	8.53E-05	4.41E-04	1.30E-04	1.31E-04	8.37E-04	1.83E-05	0.00E+00	3.09E-04	1.34E-03
11	E54	80	Passenger Car	173	0.00E+00	2.10E-06	2.28E-07	8.07E+00	1.46E-05	5.62E-02	4.68E-06	3.55E-04	9.51E-04	1.65E-04	4.56E-04	2.94E-04	3.01E-04	2.71E-05	4.06E-05	1.14E-08	1.54E-04	5.57E-05
11	E54	80	Passenger Truck	289	0.00E+00	4.52E-06	4.79E-07	1.87E+01	2.89E-05	1.03E-01	9.49E-06	1.05E-03	1.70E-03	3.02E-04	9.08E-04	5.88E-04	6.03E-04	1.30E-04	9.33E-05	2.53E-08	3.03E-04	1.72E-04
11	E54	80	Single Unit Short Haul Truck	22	0.00E+00	4.12E-06	2.04E-07	4.04E+00	3.31E-06	8.11E-03	4.38E-06	2.11E-03	2.59E-04	5.85E-05	5.01E-04	1.22E-04	1.24E-04	4.05E-04	1.63E-05	6.46E-09	3.77E-04	3.95E-04
11	E54	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.82E-09	1.71E-01	1.41E-07	3.36E-04	1.90E-07	9.01E-05	1.18E-05	2.58E-06	2.18E-05	5.25E-06	5.33E-06	1.71E-05	6.89E-07	2.69E-10	1.65E-05	1.69E-05
11	E54	80	Combination Short Haul Truck	22	0.00E+00	9.79E-06	7.00E-07	8.12E+00	3.09E-08	8.67E-03	7.19E-06	1.00E-02	5.94E-04	1.46E-04	5.84E-04	2.07E-04	2.06E-04	1.22E-03	2.71E-05	0.00E+00	3.79E-04	1.90E-03
11	E54	80	Combination Long Haul Truck	20	0.00E+00	8.76E-06	5.88E-07	7.51E+00	3.58E-08	8.98E-03	6.67E-06	9.77E-03	5.82E-04	1.17E-04	6.04E-04	1.78E-04	1.79E-04	1.15E-03	2.51E-05	0.00E+00	4.24E-04	1.84E-03
11	E55	80	Passenger Car	325	0.00E+00	3.95E-06	4.28E-07	1.52E+01	2.75E-05	1.06E-01	8.80E-06	6.68E-04	1.79E-03	3.11E-04	8.57E-04	5.53E-04	5.67E-04	5.09E-05	7.63E-05	2.14E-08	2.90E-04	1.05E-04
11	E55	80	Passenger Truck	544	0.00E+00	8.50E-06	9.01E-07	3.51E+01	5.44E-05	1.94E-01	1.78E-05	1.98E-03	3.21E-03	5.68E-04	1.71E-03	1.11E-03	1.13E-03	2.45E-04	1.75E-04	4.76E-08	5.70E-04	3.24E-04
11	E55	80	Single Unit Short Haul Truck	18	0.00E+00	3.36E-06	1.67E-07	3.29E+00	2.70E-06	6.61E-03	3.57E-06	1.72E-03	2.11E-04	4.77E-05	4.08E-04	9.95E-05	1.01E-04	3.30E-04	1.33E-05	5.27E-09	3.07E-04	3.22E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.46E-07	7.19E-09	1.39E-01	1.15E-07	2.74E-04	1.55E-07	7.35E-05	9.63E-06	2.10E-06	1.78E-05	4.28E-06	4.34E-06	1.39E-05	5.61E-07	2.19E-10	1.35E-05	1.38E-05
11	E55	80	Combination Short Haul Truck	15	0.00E+00	6.37E-06	4.56E-07	5.29E+00	2.01E-08	5.65E-03	4.68E-06	6.54E-03	3.87E-04	9.52E-05	3.80E-04	1.35E-04	1.34E-04	7.95E-04	1.77E-05	0.00E+00	2.47E-04	1.23E-03
11	E55	80	Combination Long Haul Truck	13	0.00E+00	5.70E-06	3.83E-07	4.89E+00	2.33E-08	5.85E-03	4.34E-06	6.36E-03	3.79E-04	7.62E-05	3.94E-04	1.16E-04	1.17E-04	7.47E-04	1.63E-05	0.00E+00	2.76E-04	1.20E-03
11	E56	80	Passenger Car	213	0.00E+00	2.59E-06	2.80E-07	9.94E+00	1.80E-05	6.92E-02	5.77E-06	4.38E-04	1.17E-03	2.04E-04	5.61E-04	3.62E-04	3.72E-04	3.34E-05	5.00E-05	1.40E-08	1.90E-04	6.86E-05
11	E56	80	Passenger Truck	357	0.00E+00	5.57E-06	5.91E-07	2.30E+01	3.57E-05	1.27E-01	1.17E-05	1.30E-03	2.10E-03	3.73E-04	1.12E-03	7.25E-04	7.43E-04	1.61E-04	1.15E-04	3.12E-08	3.74E-04	2.12E-04
11	E56	80	Single Unit Short Haul Truck	9	0.00E+00	1.72E-06	8.54E-08	1.69E+00	1.38E-06	3.39E-03	1.83E-06	8.82E-04	1.08E-04	2.45E-05	2.09E-04	5.10E-05	5.18E-05	1.69E-04	6.81E-06	2.70E-09	1.58E-04	1.65E-04
11	E56	80	Combination Short Haul Truck	9	0.00E+00	3.98E-06	2.85E-07	3.30E+00	1.26E-08	3.53E-03	2.92E-06	4.08E-03	2.41E-04	5.95E-05	2.37E-04	8.42E-05	8.37E-05	4.96E-04	1.10E-05	0.00E+00	1.54E-04	7.71E-04
11	E56	80	Combination Long Haul Truck	8	0.00E+00	3.56E-06	2.39E-07	3.06E+00	1.45E-08	3.65E-03	2.71E-06	3.97E-03	2.37E-04	4.76E-05	2.46E-04	7.24E-05	7.28E-05	4.66E-04	1.02E-05	0.00E+00	1.72E-04	7.49E-04
10	E57	70	Passenger Car	155	0.00E+00	2.03E-06	2.20E-07	7.47E+00	1.42E-05	5.31E-02	4.53E-06	3.11E-04	1.20E-03	1.93E-04	4.40E-04	2.84E-04	2.91E-04	2.78E-05	3.75E-05	1.02E-08	1.49E-04	4.88E-05
10	E57	70	Passenger Truck	260	0.00E+00	4.45E-06	4.71E-07	1.72E+01	2.82E-05	9.76E-02	9.25E-06	9.76E-04	2.19E-03	3.56E-04	8.82E-04	5.74E-04	5.88E-04	1.26E-04	8.53E-05	2.29E-08	2.94E-04	1.60E-04
10	E57	70	Single Unit Short Haul Truck	4	0.00E+00	8.30E-07	4.16E-08	6.51E-01	6.79E-07	1.31E-03	8.84E-07	4.09E-04	5.84E-05	1.17E-05	1.01E-04	2.48E-05	2.52E-05	6.52E-05	2.62E-06	1.06E-09	7.55E-05	7.67E-05
10	E57	70	Combination Short Haul Truck	5	0.00E+00	2.83E-06	2.02E-07	2.06E+00	9.21E-09	2.44E-03	2.08E-06	2.98E-03	2.15E-04	4.71E-05	1.73E-04	5.97E-05	5.95E-05	3.11E-04	6.88E-06	0.00E+00	1.13E-04	5.62E-04
10	E57	70	Combination Long Haul Truck	5	0.00E+00	2.57E-06	1.71E-07	1.92E+00	1.06E-08	2.58E-03	1.95E-06	2.94E-03	2.14E-04	3.91E-05	1.78E-04	5.18E-05	5.24E-05	2.93E-04	6.42E-06	0.00E+00	1.26E-04	5.54E-04
10	E58	70	Passenger Car	173	0.00E+00	2.26E-06	2.45E-07	8.31E+00	1.58E-05	5.91E-02	5.04E-06	3.46E-04	1.34E-03	2.15E-04	4.90E-04	3.16E-04	3.24E-04	3.10E-05	4.17E-05	1.14E-08	1.66E-04	5.43E-05
10	E58	70	Passenger Truck	290	0.00E+00	4.96E-06	5.25E-07	1.91E+01	3.14E-05	1.09E-01	1.03E-05	1.09E-03	2.44E-03	3.97E-04	9.81E-04	6.39E-04	6.54E-04	1.41E-04	9.49E-05	2.55E-08	3.27E-04	1.79E-04
10	E58	70	Single Unit Short Haul Truck	7	0.00E+00	1.72E-06	8.60E-08	1.34E+00	1.40E-06	2.70E-03	1.83E-06	8.45E-04	1.21E-04	2.41E-05	2.09E-04	5.13E-05	5.21E-05	1.35E-04	5.41E-06	2.19E-09	1.56E-04	1.58E-04
10	E58	70	Combination Short Haul Truck	7	0.00E+00	3.73E-06	2.65E-07	2.71E+00	1.21E-08	3.21E-03	2.73E-06	3.93E-03	2.83E-04	6.20E-05	2.27E-04	7.86E-05	7.84E-05	4.09E-04	9.06E-06	0.00E+00	1.49E-04	7.40E-04
10	E58	70	Combination Long Haul Truck	7	0.00E+00	3.38E-06	2.26E-07	2.53E+00	1.40E-08	3.40E-03	2.56E-06	3.87E-03	2.82E-04	5.15E-05	2.35E-04	6.82E-05	6.89E-05	3.86E-04	8.46E-06	0.00E+00	1.66E-04	7.29E-04
11	E59	80	Passenger Car	500	0.00E+00	6.08E-06	6.58E-07	2.33E+01	4.23E-05	1.62E-01	1.35E-05	1.03E-03	2.75E-03	4.77E-04	1.32E-03	8.49E-04	8.71E-04	7.83E-05	1.17E-04	3.29E-08	4.45E-04	1.61E-04
11	E59	80	Passenger Truck	837	0.00E+00	1.31E-05	1.38E-06	5.39E+01	8.37E-05	2.97E-01	2.74E-05	3.04E-03	4.93E-03	8.74E-04	2.63E-03	1.70E-03	1.74E-03	3.76E-04	2.70E-04	7.32E-08	8.76E-04	4.97E-04
11	E59	80	Single Unit Short Haul Truck	76	0.00E+00	1.42E-05	7.04E-07	1.39E+01	1.14E-05	2.79E-02	1.51E-05	7.27E-03	8.91E-04	2.01E-04	1.72E-03	4.20E-04	4.26E-04	1.39E-03	5.61E-05	2.23E-08	1.30E-03	1.36E-03
11	E59	80	Single Unit Long Haul Truck	3	0.00E+00	6.16E-07	3.04E-08	5.88E-01	4.87E-07	1.16E-03	6.56E-07	3.10E-04	4.07E-05	8.89E-06	7.52E-05	1.81E-05	1.83E-05	5.87E-05	2.37E-06	9.26E-10	5.69E-05	5.82E-05
11	E59	80	Combination Short Haul Truck	65	0.00E+00	2.87E-05	2.06E-06	2.38E+01	9.07E-08	2.55E-02	2.11E-05	2.95E-02	1.74E-03	4.29E-04	1.71E-03	6.07E-04	6.04E-04	3.58E-03	7.97E-05	0.00E+00	1.11E-03	5.56E-03
11	E59	80	Combination Long Haul Truck	60	0.00E+00	2.57E-05	1.72E-06	2.21E+01	1.05E-07	2.64E-02	1.96E-05	2.87E-02	1.71E-03	3.43E-04	1.77E-03	5.22E-04	5.26E-04	3.37E-03	7.36E-05	0.00E+00	1.24E-03	5.41E-03
11	E60	80	Passenger Car	386	0.00E+00	4.70E-06	5.09E-07	1.80E+01	3.27E-05	1.26E-01	1.05E-05	7.94E-04	2.12E-03	3.69E-04	1.02E-03	6.57E-04	6.74E-04	6.05E-05	9.07E-05	2.54E-08	3.44E-04	1.24E-04
11	E60	80	Passenger Truck	647	0.00E+00	1.01E-05	1.07E-06	4.17E+01	6.47E-05	2.30E-01	2.12E-05	2.35E-03	3.81E-03	6.76E-04	2.03E-03	1.32E-03	1.35E-03	2.91E-04	2.08E-04	5.66E-08	6.77E-04	3.84E-04
11	E60	80	Single Unit Short Haul Truck	43	0.00E+00	8.05E-06	3.99E-07	7.89E+00	6.47E-06	1.59E-02	8.56E-06	4.12E-03	5.05E-04	1.14E-04	9.79E-04	2.38E-04	2.42E-04	7.92E-04	3.18E-05	1.26E-08	7.37E-04	7.71E-04
11	E60	80	Single Unit Long Haul Truck	2	0.00E+00	3.50E-07	1.72E-08	3.34E-01	2.77E-07	6.57E-04	3.72E-07	1.76E-04	2.31E-05	5.04E-06	4.27E-05	1.03E-05	1.04E-05	3.33E-05	1.35E-06	5.26E-10	3.23E-05	3.30E-05
11	E60	80	Combination Short Haul Truck	33	0.00E+00	1.45E-05	1.04E-06	1.20E+01	4.58E-08	1.29E-02	1.07E-05	1.49E-02	8.80E-04	2.17E-04	8.65E-04	3.07E-04	3.05E-04	1.81E-03	4.02E-05	0.00E+00	5.61E-04	2.81E-03
11	E60	80	Combination Long Haul Truck	30	0.00E+00	1.30E-05	8.71E-07	1.11E+01	5.30E-08	1.33E-02	9.88E-06	1.45E-02	8.63E-04	1.73E-04	8.96E-04	2.64E-04	2.65E-04	1.70E-03	3.72E-05	0.00E+00	6.28E-04	2.73E-03
11	E61	80	Passenger Car	342	0.00E+00	4.16E-06	4.50E-07	1.59E+01	2.89E-05	1.11E-01	9.25E-06	7.02E-04	1.88E-03	3.26E-04	9.01E-04	5.81E-04	5.96E-04	5.35E-05	8.02E-05	2.25E-08	3.05E-04	1.10E-04
11	E61	80	Passenger Truck	572	0.00E+00	8.93E-06	9.47E-07	3.69E+01	5.72E-05	2.03E-01	1.88E-05	2.08E-03	3.37E-03	5.98E-04	1.80E-03	1.16E-03	1.19E-03	2.57E-04	1.84E-04	5.01E-08	5.99E-04	3.40E-04
11	E61	80	Single Unit Short Haul Truck	12	0.00E+00	2.31E-06	1.15E-07	2.27E+00	1.86E-06	4.55E-03	2.46E-06	1.18E-03	1.45E-04	3.28E-05	2.81E-04	6.85E-05	6.95E-05	2.27E-04	9.14E-06	3.63E-09	2.12E-04	2.21E-04
11	E61	80	Single Unit Long Haul Truck	1	0.00E+00	1.00E-07	4.95E-09	9.59E-02	7.94E-08	1.89E-04	1.07E-07	5.06E-05	6.63E-06	1.45E-06	1.23E-05	2.94E-06	2.99E-06	9.57E-06	3.86E-07	1.51E-10	9.27E-06	9.48E-06
11	E61	80	Combination Short Haul Truck	10	0.00E+00	4.33E-06	3.10E-07	3.59E+00	1.37E-08	3.84E-03	3.18E-06	4.44E-03	2.62E-04	6.47E-05	2.58E-04	9.15E-05	9.10E-05	5.40E-04	1.20E-05	0.00E+00	1.67E-04	8.38E-04
11	E61	80	Combination Long Haul Truck	9	0.00E+00	3.87E-06	2.60E-07	3.32E+00	1.58E-08	3.97E-03	2.95E-06	4.32E-03	2.57E-04	5.17E-05	2.67E-04	7.87E-05	7.92E-05	5.07E-04	1.11E-05	0.00E+00	1.87E-04	8.14E-04
11	E62	80	Passenger Car	327	0.00E+00	3.98E-06	4.31E-07	1.53E+01	2.77E-05	1.06E-01	8.86E-06	6.72E-04	1.80E-03	3.13E-04	8.62E-04	5.56E-04	5.71E-04	5.12E-05	7.68E-05	2.15E-08	2.92E-04	1.05E-04
11	E62	80	Passenger Truck	548	0.00E+00	8.55E-06	9.07E-07	3.53E+01	5.48E-05	1.95E-01	1.80E-05	1.99E-03	3.23E-03	5.72E-04	1.72E-03	1.11E-03	1.14E-03	2.46E-04	1.77E-04	4.79E-08	5.74E-04	3.26E-04
11	E62	80	Single Unit Short Haul Truck	4	0.00E+00	6.96E-07	3.46E-08	6.83E-01	5.60E-07	1.37E-03	7.41E-07	3.57E-04	4.37E-05	9.89E-06	8.47E-05	2.06E-05	2.09E-05	6.85E-05	2.75E-06	1.09E-09	6.37E-05	6.67E-05
11	E62	80	Combination Short Haul Truck	3	0.00E+00	1.47E-06	1.05E-07	1.22E+00	4.63E-09	1.30E-03	1.08E-06	1.50E-03	8.89E-05	2.19E-05	8.74E-05	3.10E-05	3.08E-05	1.83E-04	4.07E-06	0.00E+00	5.67E-05	2.84E-04
11	E62	80	Combination Long Haul Truck	3	0.00E+00	1.31E-06	8.80E-08	1.13E+00	5.36E-09	1.35E-03	9.99E-07	1.46E-03	8.72E-05	1.75E-05	9.06E-05	2.67E-05	2.68E-05	1.72E-04	3.76E-06	0.00E+00	6.35E-05	2.76E-04
10	E63	70	Passenger Car	518	0.00E+00	6.78E-06	7.33E-07	2.49E+01	4.72E-05	1.77E-01	1.51E-05	1.04E-03	4.02E-03	6.45E-04	1.47E-03	9.46E-04	9.70E-04	9.29E-05	1.25E-04	3.41E-08	4.97E-04	1.63E-04
10	E63	70	Passenger Truck	868	0.00E+00	1.49E-05	1.57E-06	5.74E+01	9.40E-05	3.26E-01	3.09E-05	3.26E-03	7.31E-03	1.19E-03	2.94E-03	1.91E-03	1.96E-03	4.22E-04	2.85E-04	7.64E-08	9.81E-04	5.35E-04
10	E63	70	Single Unit Short Haul Truck	68	0.00E+00	1.60E-05	8.02E-07	1.25E+01	1.31E-05	2.51E-02	1.70E-05	7.89E-03	1.13E-03	2.25E-04	1.95E-03	4.78E-04	4.86E-04	1.26E-03	5.05E-05	2.04E-08	1.45E-03	1.48E-03
10	E63	70	Single Unit Long Haul Truck	3	0.00E+00	6.97E-07	3.47E-08	5.32E-01	5.65E-07	1.05E-03	7.42E-07	3.39E-04	5.14E-05	1.00E-05	8.51E-05	2.07E-05	2.10E-05	5.31E-05	2.14E-06	8.59E-10	6.38E-05	6.35E-05
10	E63	70	Combination Short Haul Truck	58	0.00E+00	3.02E-05	2.15E-06	2.20E+01	9.83E-08	2.60E-02	2.21E-05	3.18E-02	2.29E-03	5.03E-04	1.84E-03	6.37E-04	6.35E-04	3.31E-03	7.34E-05	0.00E+00	1.21E-03	6.00E-03
10	E63	70	Combination Long Haul Truck	53	0.00E+00	2.74E-05	1.83E-06	2.05E+01	1.13E-07	2.76E-02	2.08E-05	3.14E-02	2.28E-03	4.17E-04	1.90E-03	5.53E-04	5.59E-04	3.12E-03	6.85E-05	0.00E+00	1.35E-03	5.91E-03
10	E64	70	Passenger Car	694	0.00E+00	9.08E-06	9.81E-07	3.33E+01	6.32E-05	2.37E-01	2.02E-05	1.39E-03	5.38E-03	8.63E-04	1.97E-03	1.27E-03	1.30E-03	1.24E-04	1.67E-04	4.57E-08	6.65E-04	2.18E-04
10	E64	70	Passenger Truck	1162	0.00E+00	1.99E-05	2.10E-06	7.68E+01	1.26E-04	4.36E-01	4.13E-05	4.36E-03	9.78E-03	1.59E-03	3.94E-03	2.56E-03	2.62E-03	5.65E-04	3.81E-04	1.02E-07	1.31E-03	7.16E-04
10	E64	70	Single Unit Short Haul Truck	32	0.00E+00	7.59E-06	3.80E-07	5.94E+00	6.20E-06	1.19E-02	8.08E-06	3.74E-03	5.34E-04	1.07E-04	9.24E-04	2.27E-04	2.30E-04	5.95E-04	2.39E-05	9.68E-09	6.90E-04	7.00E-04
10	E64	70	Single Unit Long Haul Truck	1	0.00E+00	3.31E-07	1.65E-08	2.52E-01	2.68E-07	4.98E-04	3.52E-07	1.61E-04	2.44E-05	4.75E-06	4.03E-05	9.81E-06	9.97E-06	2.52E-05	1.02E-06	4.07E-10	3.03E-05	3.01E-05
10	E64	70	Combination Short Haul Truck	34	0.00E+00	1.78E-05	1.27E-06	1.30E+01	5.80E-08	1.53E-02	1.31E-05	1.88E-02	1.35E-03	2.96E-04	1.09E-03	3.76E-04	3.75E-04	1.95E-03	4.33E-05	0.00E+00	7.12E-04	3.54E-03
10	E64	70	Combination Long Haul Truck	31	0.00E+00	1.62E-05	1.08E-06	1.21E+01	6.68E-08	1.63E-02	1.23E-05	1.85E-02	1.35E-03	2.46E-04	1.12E-03	3.26E-04	3.29E-04	1.84E-03	4.04E-05	0.00E+00	7.95E-04	3.49E-03
10	E65	70	Passenger Car	418	0.00E+00

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.18E-07	5.86E-09	8.98E-02	9.53E-08	1.77E-04	1.25E-07	5.73E-05	8.67E-06	1.69E-06	1.44E-05	3.49E-06	3.55E-06	8.97E-06	3.62E-07	1.45E-10	1.08E-05	1.07E-05
10	E69	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	E69	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.19E-04
10	E70	70	Passenger Car	309	0.00E+00	4.04E-06	4.37E-07	1.48E+01	2.81E-05	1.06E-01	9.01E-06	6.19E-04	2.39E-03	3.84E-04	8.75E-04	5.64E-04	5.78E-04	5.53E-05	7.45E-05	2.03E-08	2.96E-04	9.69E-05
10	E70	70	Passenger Truck	517	0.00E+00	8.85E-06	9.37E-07	3.42E+01	5.60E-05	1.94E-01	1.84E-05	1.94E-03	4.35E-03	7.08E-04	1.75E-03	1.14E-03	1.17E-03	2.51E-04	1.70E-04	4.55E-08	5.85E-04	3.19E-04
10	E70	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E70	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	E70	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	E71	70	Passenger Car	460	0.00E+00	6.02E-06	6.50E-07	2.21E+01	4.19E-05	1.57E-01	1.34E-05	9.21E-04	3.56E-03	5.72E-04	1.30E-03	8.39E-04	8.61E-04	8.24E-05	1.11E-04	3.03E-08	4.41E-04	1.44E-04
10	E71	70	Passenger Truck	770	0.00E+00	1.32E-05	1.39E-06	5.09E+01	8.34E-05	2.89E-01	2.74E-05	2.89E-03	6.48E-03	1.05E-03	2.61E-03	1.70E-03	1.74E-03	3.74E-04	2.52E-04	6.78E-08	8.71E-04	4.75E-04
10	E71	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.66E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	E71	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.98E+00	8.83E-09	2.34E-03	1.99E-06	2.86E-03	2.06E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.98E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E71	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.05E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.31E-04
10	E72	70	Passenger Car	541	0.00E+00	7.08E-06	7.65E-07	2.60E+01	4.93E-05	1.85E-01	1.58E-05	1.08E-03	4.19E-03	6.73E-04	1.53E-03	9.87E-04	1.01E-03	9.69E-05	1.30E-04	3.56E-08	5.18E-04	1.70E-04
10	E72	70	Passenger Truck	906	0.00E+00	1.55E-05	1.64E-06	5.99E+01	9.81E-05	3.40E-01	3.22E-05	3.40E-03	7.63E-03	1.24E-03	3.07E-03	2.00E-03	2.05E-03	4.40E-04	2.97E-04	7.98E-08	1.02E-03	5.59E-04
10	E72	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	E72	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.90E-01	3.53E-09	9.36E-04	7.96E-07	1.14E-03	8.25E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.16E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	9.86E-07	6.57E-08	7.37E-01	4.07E-09	9.91E-04	7.47E-07	1.13E-03	8.21E-05	1.50E-05	6.84E-05	1.99E-05	2.01E-05	1.12E-04	2.46E-06	0.00E+00	4.84E-05	2.13E-04
9	E73	60	Passenger Car	51	0.00E+00	7.67E-07	8.29E-08	2.57E+00	5.34E-06	1.99E-02	1.70E-06	1.04E-04	5.18E-04	7.96E-05	1.66E-04	1.07E-04	1.10E-04	1.07E-05	1.28E-05	3.53E-09	5.61E-05	1.63E-05
9	E73	60	Passenger Truck	86	0.00E+00	1.69E-06	1.79E-07	5.85E+00	1.06E-05	3.54E-02	3.47E-06	3.40E-04	9.51E-04	1.48E-04	3.30E-04	2.16E-04	2.21E-04	4.54E-05	2.90E-05	8.04E-09	1.10E-04	5.63E-05
9	E74	60	Passenger Car	117	0.00E+00	1.75E-06	1.90E-07	5.88E+00	1.22E-05	4.55E-02	3.90E-06	2.38E-04	1.18E-03	1.82E-04	3.80E-04	2.44E-04	2.51E-04	2.44E-05	2.94E-05	8.08E-09	1.28E-04	3.73E-05
9	E74	60	Passenger Truck	196	0.00E+00	3.87E-06	4.08E-07	1.34E+01	2.41E-05	8.10E-02	7.94E-06	7.77E-04	2.17E-03	3.38E-04	7.56E-04	4.94E-04	5.05E-04	1.04E-04	6.63E-05	1.84E-08	2.52E-04	1.29E-04
53	E75	70	Passenger Car	789	0.00E+00	9.99E-06	1.08E-06	3.84E+01	6.97E-05	2.59E-01	2.21E-05	1.61E-03	6.03E-03	9.71E-04	2.16E-03	1.39E-03	1.43E-03	1.41E-04	1.92E-04	5.24E-08	7.32E-04	2.52E-04
53	E75	70	Passenger Truck	1321	0.00E+00	2.18E-05	2.31E-06	8.85E+01	1.38E-04	4.74E-01	4.51E-05	4.92E-03	1.08E-02	1.77E-03	4.33E-03	2.81E-03	2.88E-03	6.39E-04	4.40E-04	1.15E-07	1.44E-03	8.08E-04
53	E75	70	Single Unit Short Haul Truck	23	0.00E+00	5.30E-06	2.65E-07	4.15E+00	4.33E-06	8.33E-03	5.64E-06	2.61E-03	3.73E-04	7.45E-05	6.45E-04	1.58E-04	1.61E-04	4.16E-04	1.67E-05	6.76E-09	4.81E-04	4.89E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	2.31E-07	1.15E-08	1.76E-01	1.87E-07	3.48E-04	2.46E-07	1.12E-04	1.70E-05	3.31E-06	2.82E-05	6.85E-06	6.96E-06	1.76E-05	7.10E-07	2.84E-10	2.11E-05	2.10E-05
53	E75	70	Combination Short Haul Truck	26	0.00E+00	1.33E-05	9.48E-07	9.69E+00	4.33E-08	1.15E-02	9.77E-06	1.40E-02	1.01E-03	2.22E-04	8.13E-04	2.81E-04	2.80E-04	1.46E-03	3.24E-05	0.00E+00	5.32E-04	2.64E-03
53	E75	70	Combination Long Haul Truck	23	0.00E+00	1.21E-05	8.06E-07	9.03E+00	4.99E-08	1.22E-02	9.16E-06	1.38E-02	1.01E-03	1.84E-04	8.38E-04	2.44E-04	2.46E-04	1.38E-03	3.02E-05	0.00E+00	5.94E-04	2.61E-03
53	E76	70	Passenger Car	652	0.00E+00	8.25E-06	8.94E-07	3.17E+01	5.76E-05	2.14E-01	1.83E-05	1.33E-03	4.98E-03	8.02E-04	1.79E-03	1.15E-03	1.18E-03	1.17E-04	1.59E-04	4.33E-08	6.04E-04	2.08E-04
53	E76	70	Passenger Truck	1091	0.00E+00	1.80E-05	1.90E-06	7.30E+01	1.14E-04	3.91E-01	3.73E-05	4.06E-03	8.94E-03	1.46E-03	3.58E-03	2.32E-03	2.38E-03	5.27E-04	3.64E-04	9.52E-08	1.19E-03	6.67E-04
53	E76	70	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.50E-07	2.35E+00	2.45E-06	4.71E-03	3.19E-06	1.48E-03	2.10E-04	4.21E-05	3.64E-04	8.95E-05	9.09E-05	2.35E-04	9.45E-06	3.82E-09	2.72E-04	2.76E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.30E-07	6.49E-09	9.95E-02	1.06E-07	1.97E-04	1.39E-07	6.35E-05	9.61E-06	1.87E-06	1.59E-05	3.87E-06	3.93E-06	9.94E-06	4.01E-07	1.61E-10	1.19E-05	1.19E-05
53	E76	70	Combination Short Haul Truck	10	0.00E+00	5.17E-06	3.68E-07	3.76E+00	1.68E-08	4.45E-03	3.79E-06	5.45E-03	3.93E-04	8.60E-05	3.15E-04	1.09E-04	1.09E-04	5.67E-04	1.25E-05	0.00E+00	2.06E-04	1.03E-03
53	E76	70	Combination Long Haul Truck	9	0.00E+00	4.69E-06	3.13E-07	3.50E+00	1.94E-08	4.71E-03	3.55E-06	5.37E-03	3.91E-04	7.13E-05	3.25E-04	9.45E-05	9.55E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
53	E77	70	Passenger Car	867	0.00E+00	1.10E-05	1.19E-06	4.22E+01	7.66E-05	2.84E-01	2.43E-05	1.77E-03	6.63E-03	1.07E-03	2.38E-03	1.53E-03	1.57E-03	1.55E-04	2.12E-04	5.76E-08	8.05E-04	2.77E-04
53	E77	70	Passenger Truck	1452	0.00E+00	2.39E-05	2.53E-06	9.72E+01	1.52E-04	5.20E-01	4.96E-05	5.41E-03	1.19E-02	1.94E-03	4.76E-03	3.09E-03	3.16E-03	7.02E-04	4.84E-04	1.27E-07	1.59E-03	8.88E-04
53	E77	70	Single Unit Short Haul Truck	24	0.00E+00	5.74E-06	2.88E-07	4.50E+00	4.69E-06	9.02E-03	6.11E-06	2.83E-03	4.03E-04	8.07E-05	6.98E-04	1.72E-04	1.74E-04	4.50E-04	1.81E-05	7.32E-09	5.21E-04	5.30E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.24E-08	1.91E-01	2.02E-07	3.77E-04	2.66E-07	1.22E-04	1.84E-05	3.59E-06	3.05E-05	7.42E-06	7.54E-06	1.91E-05	7.69E-07	3.08E-10	2.29E-05	2.28E-05
53	E77	70	Combination Short Haul Truck	27	0.00E+00	1.38E-05	9.83E-07	1.01E+01	4.50E-08	1.19E-02	1.01E-05	1.46E-02	1.05E-03	2.30E-04	8.43E-04	2.91E-04	2.91E-04	1.52E-03	3.36E-05	0.00E+00	5.52E-04	2.74E-03
53	E77	70	Combination Long Haul Truck	24	0.00E+00	1.25E-05	8.36E-07	9.37E+00	5.18E-08	1.26E-02	9.51E-06	1.44E-02	1.05E-03	1.91E-04	8.70E-04	2.53E-04	2.56E-04	1.43E-03	3.14E-05	0.00E+00	6.16E-04	2.70E-03
53	E78	70	Passenger Car	804	0.00E+00	1.02E-05	1.10E-06	3.91E+01	7.10E-05	2.64E-01	2.26E-05	1.64E-03	6.14E-03	9.90E-04	2.20E-03	1.42E-03	1.46E-03	1.44E-04	1.96E-04	5.34E-08	7.46E-04	2.57E-04
53	E78	70	Passenger Truck	1347	0.00E+00	2.22E-05	2.35E-06	9.02E+01	1.41E-04	4.83E-01	4.60E-05	5.01E-03	1.10E-02	1.80E-03	4.41E-03	2.86E-03	2.93E-03	6.51E-04	4.49E-04	1.17E-07	1.47E-03	8.23E-04
53	E78	70	Single Unit Short Haul Truck	14	0.00E+00	3.33E-06	1.67E-07	2.61E+00	2.73E-06	5.24E-03	3.55E-06	1.64E-03	2.34E-04	4.69E-05	4.06E-04	9.97E-05	1.01E-04	2.62E-04	1.05E-05	4.26E-09	3.03E-04	3.08E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.45E-07	7.23E-09	1.11E-01	1.18E-07	2.19E-04	1.55E-07	7.07E-05	1.07E-05	2.09E-06	1.77E-05	4.31E-06	4.38E-06	1.11E-05	4.47E-07	1.79E-10	1.33E-05	1.32E-05
53	E78	70	Combination Short Haul Truck	13	0.00E+00	6.66E-06	4.74E-07	4.85E+00	2.17E-08	5.74E-03	4.88E-06	7.02E-03	5.06E-04	1.11E-04	4.06E-04	1.40E-04	1.40E-04	7.31E-04	1.62E-05	0.00E+00	2.66E-04	1.32E-03
53	E78	70	Combination Long Haul Truck	12	0.00E+00	6.05E-06	4.03E-07	4.52E+00	2.50E-08	6.08E-03	4.58E-06	6.92E-03	5.04E-04	9.20E-05	4.19E-04	1.22E-04	1.23E-04	6.89E-04	1.51E-05	0.00E+00	2.97E-04	1.30E-03
53	E79	70	Passenger Car	877	0.00E+00	1.11E-05	1.20E-06	4.26E+01	7.74E-05	2.87E-01	2.46E-05	1.79E-03	6.70E-03	1.08E-03	2.40E-03	1.55E-03	1.59E-03	1.57E-04	2.14E-04	5.82E-08	8.13E-04	2.80E-04
53	E79	70	Passenger Truck	1468	0.00E+00	2.42E-05	2.56E-06	9.83E+01	1.53E-04	5.26E-01	5.02E-05	5.47E-03	1.20E-02	1.96E-03	4.81E-03	3.12E-03	3.20E-03	7.10E-04	4.89E-04	1.28E-07	1.60E-03	8.97E-04
53	E79	70	Single Unit Short Haul Truck	24	0.00E+00	5.63E-06	2.82E-07	4.41E+00	4.60E-06	8.85E-03	5.99E-06	2.77E-03	3.96E-04	7.91E-05	6.85E-04	1.68E-04	1.71E-04	4.42E-04	1.78E-05	7.18E-09	5.11E-04	5.19E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.87E-01	1.99E-07	3.70E-04	2.61E-07	1.19E-04	1.81E-05	3.52E-06	2.99E-05	7.27E-06	7.39E-06	1.87E-05	7.54E-07	3.02E-10	2.24E-05	2.24E-05
53	E79	70	Combination Short Haul Truck	14	0.00E+00	7.34E-06	5.22E-07	5.34E+00	2.39E-08	6.32E-03	5.37E-06	7.73E-03	5.57E-04	1.22E-04	4.47E-04	1.55E-04	1.54E-04	8.04E-04	1.78E-05	0.00E+00	2.93E-04	1.46E-03
53	E79	70	Combination Long Haul Truck	13	0.00E+00	6.65E-06	4.44E-07	4.97E+00	2.75E-08	6.69E-03	5.04E-06	7.62E-03	5.54E-04	1.01E-04	4.61E-04	1.34E-04	1.36E-04	7.58E-04	1.66E-05	0.00E+00	3.27E-04	1.43E-03
53	E80	70	Passenger Car	751	0.00E+00	9.51E-06	1.03E-06	3.65E+01	6.63E-05	2.46E-01	2.11E-05	1.53E-03	5.74E-03	9.24E-04	2.06E-03	1.33E-03	1.36E-03	1.35E-04	1.83E-04	4.99E-08	6.97E-04	2.40E-04
53	E80	70	Passenger Truck	1258	0.00E+00	2.07E-05	2.19E-06	8.42E+01	1.31E-04	4.51E-01	4.30E-05	4.68E-03	1.03E-02	1.68E-03	4.12E-03	2.67E-03	2.74E-03	6.08E-04	4.19E-04	1.10E-07	1.37E-03	7.69E-04
53	E80	70	Single Unit Short Haul Truck	23	0.00E+00	5.40E-06	2.71E-07	4.23E+00	4.42E-06	8.49E-03	5.75E-06	2.66E-03	3.80E-04	7.60E-05	6.58E-04	1.62E-04	1.64E-04	4.24E-04	1.70E-05	6.90E-09	4.91E-04	4.99E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	1.17E-08	1.80E-01	1.91E-07	3.55E-04	2.51E-07	1.15E-04	1.73E-05	3.38E-06	2.87E-05	6.98E-06	7.10E-06	1.79E-05	7.24E-07	2.90E-10	2.15E-05	2.15E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	8.97E-06	6.38E-07	6.52E+00	2.92E-08	7.72E-03	6.57E-06	9.45E-03	6.81E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.83E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00	8.13E-06	5.42E-07	6.08E+00	3.36E-08	8.18E-03	6.16E-06	9.31E-03	6.78E-04	1.24E-04	5.64E-04	1.64E-04	1.66E-04	9.27E-04	2.03E-05	0.00E+00	4.00E-04	1.75E-03
9	E81	60	Passenger Car	22	0.00E+00	3.36E-07	3.64E-08	1.13E+00	2.34E-06	8.72E-03	7.48E-07	4.57E-05	2.27E-04	3.50E-05	7.29E-05	4.69E-05	4.82E-05	4.69E-06	5.64E-06	1.55E-09	2.46E-05	7.17E-06
9	E81	60	Passenger Truck	38	0.00E+00	7.42E-07	7.84E-08	2.57E+00	4.63E-06	1.55E-02	1.52E-06	1.49E-04	4.17E-04	6.48E-05	1.45E-04	9.48E-05	9.69E-05	1.99E-05	1.27E-05	3.53E-09	4.83E-05	2.47E-05
9	E81	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	E82	60	Passenger Car	9	0.00E+00	1.40E-07	1.52E-08	4.70E-01	9.76E-07	3.63E-03	3.12E-07	1.91E-05	9.48E-05	1.46E-05	3.04E-05	1.96E-05	2.01E-05	1.95E-06	2.35E-06	6.47E-10	1.03E-05	2.99E-06
9	E82	60	Passenger Truck	16	0.00E+00	3.09E-07	3.27E-08	1.07E+00	1.93E-06	6.48E-03	6.35E-07	6.22E-05	1.74E-04	2.70E-05	6.04E-05	3.95E-05	4.04E-05	8.30E-06	5.30E-06	1.47E-09	2.01E-05	1.03E-05
10	E83	70	Passenger Car	197	0.00E+00	2.57E-06	2.78E-07	9.45E+00	1.79E-05	6.72E-02	5.73E-06	3.94E-04	1.52E-03	2.45E-04	5.57E-04	3.59E-04	3.68E-04	3.52E-05	4.74E-05	1.29E-08	1.88E-04	6.17E-05
10	E83	70	Passenger Truck	329	0.00E+00	5.63E-06	5.96E-07	2.18E+01	3.57E-05	1.23E-01	1.17E-05	1.23E-03	2.77E-03	4.51E-04	1.12E-03	7.26E-04	7.43E-04	1.60E-04	1.08E-04	2.90E-08	3.72E-04	2.03E-04
10	E83	70	Single Unit Short Haul Truck	1	0.00E+00	3.31E-07	1.66E-08	2.59E-01	2.71E-07	5.20E-04	3.52E-07	1.63E-04	2.33E-05	4.65E-06	4.03E-05	9.89E-06	1.00E-05	2.60E-05	1.04E-06	4.22E-10	3.01E-05	3.05E-05
10	E83	70	Combination Short Haul Truck	3	0.00E+00	1.42E-06	1.01E-07	1.03E+00	4.62E-09	1.22E-03	1.04E-06	1.50E-03	1.08E-04	2.36E-05	8.65E-05	2.99E-05	2.98E-05	1.56E-04	3.45E-06	0.00E+00	5.67E-05	2.82E-04
10	E83	70	Combination Long Haul Truck	2	0.00E+00	1.29E-06	8.58E-08	9.62E-01	5.32E-09	1.29E-03	9.76E-07	1.47E-03	1.07E-04	1.96E-05	8.93E-05	2.60E-05	2.62E-05	1.47E-04	3.22E-06	0.00E+00	6.33E-05	2.78E-04
10	E84	70	Passenger Car	188	0.00E+00	2.46E-06	2.66E-07	9.03E+00	1.71E-05	6.42E-02	5.48E-06	3.76E-04	1.46E-03	2.34E-04	5.32E-04	3.43E-04	3.52E-04	3.37E-05	4.53E-05	1.24E-08	1.80E-04	5.90E-05
10	E84	70	Passenger Truck	315	0.00E+00	5.38E-06	5.70E-07	2.08E+01	3.41E-05	1.18E-01	1.12E-05	1.18E-03	2.65E-03	4.31E-04	1.07E-03	6.94E-04	7.10E-04	1.53E-04	1.03E-04	2.77E-08	3.56E-04	1.94E-04
10	E84	70	Single Unit Short Haul Truck	2	0.00E+00	4.40E-07	2.21E-08	3.45E-01	3.60E-07	6.92E-04	4.69E-07	2.17E-04	3.10E-05	6.19E-06	5.36E-05	1.32E-05	1.34E-05	3.46E-05	1.39E-06	5.62E-10	4.00E-05	4.07E-05
10	E84	70	Combination Short Haul Truck	1	0.00E+00	5.12E-07	3.64E-08	3.72E-01	1.66E-09	4.41E-04	3.75E-07	5.39E-04	3.89E-05	8.51E-06	3.12E-05	1.08E-05	1.08E-05	5.61E-05	1.24E-06	0.00E+00	2.04E-05	1.02E-04
10	E84	70	Combination Long Haul Truck	1	0.00E+00	4.64E-07	3.10E-08	3.47E-01	1.92E-09	4.67E-04	3.52E-07	5.32E-04	3.87E-05	7.06E-06	3.22E-05	9.36E-06	9.46E-06	5.29E-05	1.16E-06	0.00E+00	2.28E-05	1.00E-04
9	E85	60	Passenger Car	1102	0.00E+00	1.65E-05	1.79E-06	5.54E+01	1.15E-04	4.29E-01	3.67E-05	2.25E-03	1.12E-02	1.72E-03	3.58E-03	2.31E-03	2.37E-03	2.30E-04	2.77E-04	7.62E-08	1.21E-03	3.52E-04
9	E85	60	Passenger Truck	1846	0.00E+00	3.65E-05	3.85E-06	1.26E+02	2.28E-04	7.64E-01	7.49E-05	7.33E-03	2.05E-02	3.18E-03	7.13E-03	4.66E-03	4.76E-03	9.79E-04	6.26E-04	1.73E-07	2.37E-03	1.22E-03
9	E85	60	Single Unit Short Haul Truck	26	0.00E+00	7.72E-06	3.85E-07	4.90E+00	6.34E-06	9.47E-03	8.23E-06	3.67E-03	6.24E-04	1.13E-04	9.32E-04	2.31E-04	2.35E-04	4.91E-04	1.98E-05	8.16E-09	7.01E-04	6.88E-04
9	E85	60	Single Unit Long Haul Truck	1	0.00E+00	3.37E-07	1.67E-08	2.09E-01	2.76E-07	4.02E-04	3.60E-07	1.59E-04	2.80E-05	5.01E-06	4.11E-05	1.01E-05	1.02E-05	2.09E-05	8.45E-07	3.47E-10	3.08E-05	2.98E-05
9	E85	60	Combination Short Haul Truck	16	0.00E+00	9.64E-06	6.73E-07	6.28E+00	3.41E-08	8.41E-03	7.14E-06	1.05E-02	8.96E-04	1.77E-04	6.14E-04	2.00E-04	2.00E-04	9.46E-04	2.10E-05	0.00E+00	4.12E-04	1.97E-03
9	E85	60	Combination Long Haul Truck	15	0.00E+00	8.63E-06	5.64E-07	5.89E+00	3.91E-08	9.08E-03	6.68E-06	1.04E-02	9.00E-04	1.53E-04	6.30E-04	1.72E-04	1.74E-04	8.96E-04	1.97E-05	0.00E+00	4.56E-04	1.95E-03
9	E86	60	Passenger Car	991	0.00E+00	1.49E-05	1.61E-06	4.98E+01	1.03E-04	3.85E-01	3.30E-05	2.02E-03	1.00E-02	1.54E-03	3.22E-03	2.07E-03	2.13E-03	2.07E-04	2.49E-04	6.85E-08	1.09E-03	3.16E-04
9	E86	60	Passenger Truck	1659	0.00E+00	3.28E-05	3.46E-06	1.13E+02	2.05E-04	6.87E-01	6.73E-05	6.59E-03	1.84E-02	2.86E-03	6.41E-03	4.18E-03	4.28E-03	8.80E-04	5.62E-04	1.56E-07	2.13E-03	1.09E-03
9	E86	60	Single Unit Short Haul Truck	38	0.00E+00	1.13E-05

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E91	60	Passenger Car	4	0.00E+00	5.61E-08	6.07E-09	1.88E-01	3.90E-07	1.45E-03	1.25E-07	7.62E-06	3.79E-05	5.83E-06	1.22E-05	7.82E-06	8.03E-06	7.81E-07	9.40E-07	2.59E-10	4.10E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.24E-07	1.31E-08	4.28E-01	7.72E-07	2.59E-03	2.54E-07	2.49E-05	6.96E-05	1.08E-05	2.42E-05	1.58E-05	1.62E-05	3.32E-06	2.12E-06	5.88E-10	8.05E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.61E-08	6.07E-09	1.88E-01	3.90E-07	1.45E-03	1.25E-07	7.62E-06	3.79E-05	5.83E-06	1.22E-05	7.82E-06	8.03E-06	7.81E-07	9.40E-07	2.59E-10	4.10E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.24E-07	1.31E-08	4.28E-01	7.72E-07	2.59E-03	2.54E-07	2.49E-05	6.96E-05	1.08E-05	2.42E-05	1.58E-05	1.62E-05	3.32E-06	2.12E-06	5.88E-10	8.05E-06	4.12E-06
9	E93	60	Passenger Car	83	0.00E+00	1.25E-06	1.35E-07	4.19E+00	8.71E-06	3.24E-02	2.78E-06	1.70E-04	8.45E-04	1.30E-04	2.71E-04	1.74E-04	1.79E-04	1.74E-05	2.10E-05	5.77E-09	9.15E-05	2.66E-05
9	E93	60	Passenger Truck	140	0.00E+00	2.76E-06	2.91E-07	9.54E+00	1.72E-05	5.78E-02	5.66E-06	5.55E-04	1.55E-03	2.41E-04	5.39E-04	3.52E-04	3.60E-04	7.41E-05	4.73E-05	1.31E-08	1.80E-04	9.19E-05
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.68E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	E93	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	E94	60	Passenger Car	27	0.00E+00	4.04E-07	4.37E-08	1.35E+00	2.81E-06	1.05E-02	8.97E-07	5.49E-05	2.73E-04	4.19E-05	8.75E-05	5.63E-05	5.78E-05	5.62E-06	6.77E-06	1.86E-09	2.95E-05	8.60E-06
9	E94	60	Passenger Truck	45	0.00E+00	8.90E-07	9.40E-08	3.08E+00	5.56E-06	1.87E-02	1.83E-06	1.79E-04	5.01E-04	7.78E-05	1.74E-04	1.14E-04	1.16E-04	2.39E-05	1.53E-05	4.23E-09	5.80E-05	2.97E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.68E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
54	E95	80	Passenger Car	578	0.00E+00	6.88E-06	7.44E-07	2.72E+01	4.79E-05	1.80E-01	1.53E-05	1.19E-03	3.34E-03	5.70E-04	1.49E-03	9.59E-04	9.83E-04	9.06E-05	1.37E-04	3.71E-08	5.03E-04	1.86E-04
54	E95	80	Passenger Truck	969	0.00E+00	1.49E-05	1.58E-06	6.30E+01	9.55E-05	3.42E-01	3.12E-05	3.55E-03	6.03E-03	1.05E-03	2.99E-03	1.94E-03	1.99E-03	4.36E-04	3.15E-04	8.37E-08	1.00E-03	5.78E-04
54	E95	80	Single Unit Short Haul Truck	31	0.00E+00	5.87E-06	2.91E-07	5.76E+00	4.72E-06	1.16E-02	6.24E-06	3.01E-03	3.69E-04	8.34E-05	7.14E-04	1.74E-04	1.76E-04	5.77E-04	2.32E-05	9.22E-09	5.37E-04	5.62E-04
54	E95	80	Single Unit Long Haul Truck	1	0.00E+00	2.55E-07	1.26E-08	2.43E-01	2.02E-07	4.79E-04	2.71E-07	1.28E-04	1.68E-05	3.68E-06	3.11E-05	7.48E-06	7.59E-06	2.43E-05	9.82E-07	3.83E-10	2.35E-05	2.41E-05
54	E95	80	Combination Short Haul Truck	32	0.00E+00	1.42E-05	1.02E-06	1.18E+01	4.49E-08	1.26E-02	1.04E-05	1.46E-02	8.62E-04	2.12E-04	8.48E-04	3.01E-04	2.99E-04	1.77E-03	3.94E-05	0.00E+00	5.50E-04	2.75E-03
54	E95	80	Combination Long Haul Truck	30	0.00E+00	1.27E-05	8.54E-07	1.09E+01	5.20E-08	1.31E-02	9.69E-06	1.42E-02	8.45E-04	1.70E-04	8.78E-04	2.59E-04	2.60E-04	1.67E-03	3.64E-05	0.00E+00	6.16E-04	2.68E-03
54	E96	80	Passenger Car	434	0.00E+00	5.16E-06	5.58E-07	2.04E+01	3.59E-05	1.35E-01	1.15E-05	8.96E-04	2.51E-03	4.28E-04	1.12E-03	7.20E-04	7.38E-04	6.80E-05	1.02E-04	2.79E-08	3.77E-04	1.40E-04
54	E96	80	Passenger Truck	727	0.00E+00	1.12E-05	1.19E-06	4.73E+01	7.17E-05	2.56E-01	2.34E-05	2.67E-03	4.52E-03	7.88E-04	2.24E-03	1.46E-03	1.49E-03	3.27E-04	2.36E-04	6.28E-08	7.51E-04	4.34E-04
54	E96	80	Single Unit Short Haul Truck	39	0.00E+00	7.33E-06	3.64E-07	7.19E+00	5.90E-06	1.44E-02	7.80E-06	3.76E-03	4.61E-04	1.04E-04	8.92E-04	2.17E-04	2.21E-04	7.21E-04	2.90E-05	1.15E-08	6.71E-04	7.03E-04
54	E96	80	Single Unit Long Haul Truck	2	0.00E+00	3.19E-07	1.57E-08	3.04E-01	2.52E-07	5.99E-04	3.39E-07	1.61E-04	2.10E-05	4.60E-06	3.89E-05	9.34E-06	9.49E-06	3.04E-05	1.23E-06	4.79E-10	2.94E-05	3.01E-05
54	E96	80	Combination Short Haul Truck	38	0.00E+00	1.66E-05	1.19E-06	1.37E+01	5.24E-08	1.47E-02	1.22E-05	1.70E-02	1.01E-03	2.48E-04	9.88E-04	3.50E-04	3.48E-04	2.07E-03	4.60E-05	0.00E+00	6.41E-04	3.21E-03
54	E96	80	Combination Long Haul Truck	34	0.00E+00	1.48E-05	9.95E-07	1.27E+01	6.06E-08	1.52E-02	1.13E-05	1.66E-02	9.85E-04	1.98E-04	1.02E-03	3.01E-04	3.03E-04	1.94E-03	4.25E-05	0.00E+00	7.18E-04	3.12E-03
54	E97	80	Passenger Car	782	0.00E+00	9.29E-06	1.01E-06	3.67E+01	6.47E-05	2.43E-01	2.07E-05	1.61E-03	4.52E-03	7.71E-04	2.01E-03	1.30E-03	1.33E-03	1.22E-04	1.85E-04	5.02E-08	6.80E-04	2.52E-04
54	E97	80	Passenger Truck	1309	0.00E+00	2.01E-05	2.13E-06	8.51E+01	1.29E-04	4.62E-01	4.22E-05	4.80E-03	8.15E-03	1.42E-03	4.04E-03	2.63E-03	2.69E-03	5.89E-04	4.26E-04	1.13E-07	1.35E-03	7.82E-04
54	E97	80	Single Unit Short Haul Truck	59	0.00E+00	1.10E-05	5.46E-07	1.08E+01	8.86E-06	2.17E-02	1.17E-05	5.64E-03	6.92E-04	1.56E-04	1.34E-03	3.26E-04	3.31E-04	1.08E-03	4.36E-05	1.73E-08	1.01E-03	1.06E-03
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	4.78E-07	2.36E-08	4.57E-01	3.78E-07	8.99E-04	5.09E-07	2.41E-04	3.16E-05	6.90E-06	5.84E-05	1.40E-05	1.42E-05	4.56E-05	1.84E-06	7.19E-10	4.42E-05	4.52E-05
54	E97	80	Combination Short Haul Truck	45	0.00E+00	1.99E-05	1.42E-06	1.65E+01	6.29E-08	1.76E-02	1.46E-05	2.04E-02	1.21E-03	2.97E-04	1.19E-03	4.21E-04	4.18E-04	2.48E-03	5.52E-05	0.00E+00	7.70E-04	3.86E-03
54	E97	80	Combination Long Haul Truck	41	0.00E+00	1.78E-05	1.20E-06	1.53E+01	7.27E-08	1.83E-02	1.36E-05	1.99E-02	1.18E-03	2.38E-04	1.23E-03	3.62E-04	3.64E-04	2.33E-03	5.10E-05	0.00E+00	8.62E-04	3.75E-03
54	E98	80	Passenger Car	403	0.00E+00	4.79E-06	5.18E-07	1.89E+01	3.34E-05	1.25E-01	1.06E-05	8.32E-04	2.33E-03	3.97E-04	1.04E-03	6.68E-04	6.85E-04	6.31E-05	9.52E-05	2.59E-08	3.50E-04	1.30E-04
54	E98	80	Passenger Truck	675	0.00E+00	1.04E-05	1.10E-06	4.39E+01	6.66E-05	2.38E-01	2.17E-05	2.47E-03	4.20E-03	7.31E-04	2.08E-03	1.35E-03	1.39E-03	3.04E-04	2.19E-04	5.83E-08	6.97E-04	4.03E-04
54	E98	80	Single Unit Short Haul Truck	31	0.00E+00	5.82E-06	2.89E-07	5.71E+00	4.68E-06	1.15E-02	6.19E-06	2.98E-03	3.66E-04	8.27E-05	7.08E-04	1.72E-04	1.75E-04	5.73E-04	2.30E-05	9.14E-09	5.33E-04	5.58E-04
54	E98	80	Single Unit Long Haul Truck	1	0.00E+00	2.53E-07	1.25E-08	2.42E-01	2.00E-07	4.75E-04	2.69E-07	1.27E-04	1.67E-05	3.65E-06	3.09E-05	7.42E-06	7.53E-06	2.41E-05	9.74E-07	3.80E-10	2.34E-05	2.39E-05
54	E98	80	Combination Short Haul Truck	34	0.00E+00	1.49E-05	1.07E-06	1.24E+01	4.72E-08	1.32E-02	1.10E-05	1.53E-02	9.06E-04	2.23E-04	8.91E-04	3.16E-04	3.14E-04	1.86E-03	4.14E-05	0.00E+00	5.78E-04	2.89E-03
54	E98	80	Combination Long Haul Truck	31	0.00E+00	1.34E-05	8.97E-07	1.15E+01	5.46E-08	1.37E-02	1.02E-05	1.49E-02	8.88E-04	1.78E-04	9.23E-04	2.72E-04	2.73E-04	1.75E-03	3.83E-05	0.00E+00	6.47E-04	2.81E-03
9	F01	60	Passenger Car	322	0.00E+00	4.84E-06	5.23E-07	1.62E+01	3.37E-05	1.25E-01	1.07E-05	6.57E-04	3.27E-03	5.02E-04	1.05E-03	6.74E-04	6.92E-04	6.73E-05	8.10E-05	2.23E-08	3.54E-04	1.03E-04
9	F01	60	Passenger Truck	540	0.00E+00	1.07E-05	1.13E-06	3.69E+01	6.66E-05	2.23E-01	2.19E-05	2.14E-03	6.00E-03	9.31E-04	2.08E-03	1.36E-03	1.39E-03	2.86E-04	1.83E-04	5.07E-08	6.94E-04	3.55E-04
9	F01	60	Single Unit Short Haul Truck	31	0.00E+00	8.98E-06	4.48E-07	5.70E+00	7.38E-06	1.10E-02	9.57E-06	4.27E-03	7.25E-04	1.31E-04	1.08E-03	2.69E-04	2.73E-04	5.71E-04	2.30E-05	9.49E-09	8.15E-04	8.01E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	3.92E-07	1.95E-08	2.44E-01	3.21E-07	4.67E-04	4.19E-07	1.85E-04	3.26E-05	5.83E-06	4.78E-05	1.17E-05	1.19E-05	2.43E-05	9.83E-07	4.04E-10	3.58E-05	3.46E-05
9	F01	60	Combination Short Haul Truck	24	0.00E+00	1.43E-05	1.00E-06	9.34E+00	5.08E-08	1.25E-02	1.06E-05	1.56E-02	1.33E-03	2.64E-04	9.14E-04	2.98E-04	2.98E-04	1.41E-03	3.12E-05	0.00E+00	6.14E-04	2.93E-03
9	F01	60	Combination Long Haul Truck	22	0.00E+00	1.28E-05	8.39E-07	8.76E+00	5.82E-08	1.35E-02	9.94E-06	1.54E-02	1.34E-03	2.28E-04	9.38E-04	2.56E-04	2.59E-04	1.33E-03	2.93E-05	0.00E+00	6.79E-04	2.91E-03
9	F02	60	Passenger Car	213	0.00E+00	3.19E-06	3.45E-07	1.07E+01	2.22E-05	8.28E-02	7.09E-06	4.34E-04	2.16E-03	3.32E-04	6.92E-04	4.45E-04	4.57E-04	4.45E-05	5.35E-05	1.47E-08	2.34E-04	6.80E-05
9	F02	60	Passenger Truck	356	0.00E+00	7.04E-06	7.44E-07	2.44E+01	4.40E-05	1.48E-01	1.45E-05	1.42E-03	3.96E-03	6.15E-04	1.38E-03	8.99E-04	9.20E-04	1.89E-04	1.21E-04	3.35E-08	4.58E-04	2.35E-04
9	F02	60	Single Unit Short Haul Truck	11	0.00E+00	3.35E-06	1.67E-07	2.13E+00	2.75E-06	4.11E-03	3.57E-06	1.59E-03	2.70E-04	4.90E-05	4.04E-04	1.00E-04	1.02E-04	2.13E-04	8.59E-06	3.54E-09	3.04E-04	2.98E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	1.46E-07	7.26E-09	9.08E-02	1.20E-07	1.74E-04	1.56E-07	6.90E-05	1.21E-05	2.17E-06	1.78E-05	4.36E-06	4.43E-06	9.07E-06	3.66E-07	1.50E-10	1.33E-05	1.29E-05
9	F02	60	Combination Short Haul Truck	10	0.00E+00	5.73E-06	4.00E-07	3.73E+00	2.03E-08	5.00E-03	4.24E-06	6.21E-03	5.32E-04	1.05E-04	3.65E-04	1.19E-04	1.19E-04	5.62E-04	1.25E-05	0.00E+00	2.45E-04	1.17E-03
9	F02	60	Combination Long Haul Truck	9	0.00E+00	5.13E-06	3.35E-07	3.50E+00	2.32E-08	5.40E-03	3.97E-06	6.16E-03	5.35E-04	9.09E-05	3.75E-04	1.02E-04	1.03E-04	5.32E-04	1.17E-05	0.00E+00	2.71E-04	1.16E-03
11	F03	80	Passenger Car	10	0.00E+00	1.27E-07	1.38E-08	4.89E-01	8.87E-07	3.40E-03	2.84E-07	2.15E-05	5.76E-05	1.00E-05	2.76E-05	1.78E-05	1.83E-05	1.64E-06	2.46E-06	6.89E-10	9.33E-06	3.37E-06
11	F03	80	Passenger Truck	18	0.00E+00	2.74E-07	2.90E-08	1.13E+00	1.75E-06	6.23E-03	5.75E-07	6.38E-05	1.03E-04	1.83E-05	5.50E-05	3.56E-05	3.65E-05	7.89E-06	5.65E-06	1.53E-09	1.84E-05	1.04E-05
11	F03	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.03E-04	1.69E-07	2.35E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.86E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
11	F04	80	Passenger Car	4	0.00E+00	5.00E-08	5.42E-09	1.92E-01	3.48E-07	1.34E-03	1.11E-07	8.45E-06	2.26E-05	3.93E-06	1.08E-05	6.99E-06	7.17E-06	6.44E-07	9.65E-07	2.71E-10	3.67E-06	1.33E-06
11	F04	80	Passenger Truck	7	0.00E+00	1.08E-07	1.14E-08	4.44E-01	6.89E-07	2.45E-03	2.26E-07	2.51E-05	4.06E-05	7.19E-06	2.16E-05	1.40E-05	1.43E-05	3.10E-06	2.22E-06	6.03E-10	7.21E-06	4.09E-06
9	F05	60	Passenger Car	159	0.00E+00	2.38E-06	2.57E-07	7.97E+00	1.66E-05	6.17E-02	5.28E-06	3.23E-04	1.61E-03	2.47E-04	5.15E-04	3.32E-04	3.40E-04	3.31E-05	3.99E-05	1.10E-08	1.74E-04	5.06E-05
9	F05	60	Passenger Truck	265	0.00E+00	5.24E-06	5.54E-07	1.81E+01	3.27E-05	1.10E-01	1.08E-05	1.05E-03	2.95E-03	4.58E-04	1.03E-03	6.70E-04	6.85E-04	1.41E-04	9.00E-05	2.49E-08	3.41E-04	1.75E-04
9	F05	60	Single Unit Short Haul Truck	6	0.00E+00	1.71E-06	8.54E-08	1.09E+00	1.41E-06	2.10E-03	1.82E-06	8.14E-04	1.38E-04	2.50E-05	2.07E-04	5.12E-05	5.20E-05	1.09E-04	4.39E-06	1.81E-09	1.55E-04	1.53E-04
9	F05	60	Combination Short Haul Truck	6	0.00E+00	3.29E-06	2.30E-07	2.14E+00	1.16E-08	2.87E-03	2.44E-06	3.57E-03	3.06E-04	6.05E-05	2.10E-04	6.83E-05	6.83E-05	3.23E-04	7.16E-06	0.00E+00	1.41E-04	6.72E-04
9	F05	60	Combination Long Haul Truck	5	0.00E+00	2.94E-06	1.93E-07	2.01E+00	1.34E-08	3.10E-03	2.28E-06	3.54E-03	3.07E-04	5.22E-05	2.15E-04	5.86E-05	5.93E-05	3.06E-04	6.71E-06	0.00E+00	1.56E-04	6.67E-04
9	F06	60	Passenger Car	160	0.00E+00	2.40E-06	2.59E-07	8.03E+00	1.67E-05	6.21E-02	5.33E-06	3.26E-04	1.62E-03	2.49E-04	5.19E-04	3.34E-04	3.43E-04	3.34E-05	4.02E-05	1.11E-08	1.75E-04	5.10E-05
9	F06	60	Passenger Truck	268	0.00E+00	5.28E-06	5.58E-07	1.83E+01	3.30E-05	1.11E-01	1.09E-05	1.06E-03	2.97E-03	4.62E-04	1.03E-03	6.75E-04	6.90E-04	1.42E-04	9.07E-05	2.51E-08	3.44E-04	1.76E-04
9	F06	60	Single Unit Short Haul Truck	17	0.00E+00	5.06E-06	2.52E-07	3.21E+00	4.16E-06	6.20E-03	5.39E-06	2.41E-03	4.09E-04	7.40E-05	6.11E-04	1.51E-04	1.54E-04	3.22E-04	1.30E-05	5.35E-09	4.59E-04	4.51E-04
9	F06	60	Single Unit Long Haul Truck	1	0.00E+00	2.21E-07	1.10E-08	1.37E-01	1.81E-07	2.63E-04	2.36E-07	1.04E-04	1.84E-05	3.28E-06	2.69E-05	6.59E-06	6.69E-06	1.37E-05	5.54E-07	2.27E-10	2.02E-05	1.95E-05
9	F06	60	Combination Short Haul Truck	19	0.00E+00	1.09E-05	7.62E-07	7.10E+00	3.86E-08	9.52E-03	8.08E-06	1.18E-02	1.01E-03	2.01E-04	6.95E-04	2.26E-04	2.26E-04	1.07E-03	2.37E-05	0.00E+00	4.67E-04	2.23E-03
9	F06	60	Combination Long Haul Truck	17	0.00E+00	9.76E-06	6.38E-07	6.66E+00	4.42E-08	1.03E-02	7.55E-06	1.17E-02	1.02E-03	1.73E-04	7.13E-04	1.94E-04	1.97E-04	1.01E-03	2.22E-05	0.00E+00	5.16E-04	2.21E-03
9	F07	60	Passenger Car	287	0.00E+00	4.30E-06	4.65E-07	1.44E+01	3.00E-05	1.12E-01	9.56E-06	5.85E-04	2.91E-03	4.47E-04	9.32E-04	6.00E-04	6.16E-04	5.99E-05	7.21E-05	1.98E-08	3.15E-04	9.16E-05
9	F07	60	Passenger Truck	480	0.00E+00	9.48E-06	1.00E-06	3.28E+01	5.92E-05	1.99E-01	1.95E-05	1.91E-03	5.34E-03	8.28E-04	1.85E-03	1.21E-03	1.24E-03	2.55E-04	1.63E-04	4.51E-08	6.18E-04	3.16E-04
9	F07	60	Single Unit Short Haul Truck	13	0.00E+00	3.95E-06	1.97E-07	2.51E+00	3.24E-06	4.84E-03	4.21E-06	1.88E-03	3.19E-04	5.77E-05	4.77E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.05E-04	1.84E-07	8.13E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.32E-07	1.77E-10	1.57E-05	1.52E-05
9	F07	60	Combination Short Haul Truck	10	0.00E+00	6.16E-06	4.30E-07	4.01E+00	2.18E-08	5.38E-03	4.56E-06	6.68E-03	5.72E-04	1.13E-04	3.92E-04	1.28E-04	1.28E-04	6.04E-04	1.34E-05	0.00E+00	2.64E-04	1.26E-03
9	F07	60	Combination Long Haul Truck	10	0.00E+00	5.51E-06	3.60E-07	3.76E+00	2.50E-08	5.80E-03	4.27E-06	6.62E-03	5.75E-04	9.78E-05	4.03E-04	1.10E-04	1.11E-04	5.72E-04	1.26E-05	0.00E+00	2.91E-04	1.25E-03
9	F08	60	Passenger Car	230	0.00E+00	3.45E-06	3.73E-07	1.16E+01	2.40E-05	8.94E-02	7.66E-06	4.69E-04	2.33E-03	3.58E-04	7.47E-04	4.81E-04	4.94E-04	4.80E-05	5.78E-05	1.59E-08	2.52E-04	7.35E-05
9	F08	60	Passenger Truck	385	0.00E+00	7.61E-06	8.03E-07	2.63E+01	4.75E-05	1.59E-01	1.56E-05	1.53E-03	4.28E-03	6.64E-04	1.49E-03	9.71E-04	9.94E-04	2.04E-04	1.30E-04	3.62E-08	4.95E-04	2.54E-04
9	F08	60	Single Unit Short Haul Truck	26	0.00E+00	7.61E-06	3.80E-07	4.83E+00	6.26E-06	9.34E-03	8.12E-06	3.62E-03	6.15E-04	1.11E-04	9.19E-04	2.28E-04	2.31E-04	4.84E-04	1.95E-05	8.05E-09	6.91E-04	6.79E-04
9	F08	60	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.65E-08	2.07E-01	2.72E-07	3.96E-04	3.55E-07	1.57E-04	2.76E-05	4.94E-06	4.06E-05	9.92E-06	1.01E-05	2.06E-05	8.33E-07	3.42E-10	3.04E-05	2.94E-05
9	F08	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.82E-07	8.22E+00	4.47E-08	1.10E-02	9.35E-06	1.37E-02	1.17E-03	2.32E-04	8.04E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.58E-03
9	F08	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.39E-07	7.71E+00	5.12E-08	1.19E-02	8.75E-06	1.36E-02	1.18E-03	2.00E-04	8.26E-04	2.25E-04	2.28E-04	1.17E-03	2.57E-05	0.00E+00	5.98E-04	2.56E-03
11	F09	80	Passenger Car	126	0.00E+00	1.53E-06	1.66E-07	5.88E+00	1.07E-05	4.10E-02	3.41E-06	2.59E-04	6.93E-04	1.20E-04	3.32E-04	2.14E-04	2.20E-04	1.97E-05	2.96E-05	8.30E-09	1.12E-04	4.06E-05
11	F09	80	Passenger Truck	211	0.00E+00	3.30E-06	3.49E-07	1.36E+01	2.11E-05	7.51E-02	6.92E-06	7.68E-04	1.24E-03	2.20E-04	6.63E-04	4.29E-04	4.40E-04	9.50E-05	6.80E-05	1.85E-08	2.21E-04	1.25E-04
11	F09	80	Single Unit Short Haul Truck	3	0.00E+00	5.65E-07	2.80E-08	5.54E-01	4.54E-07	1.11E-03	6.01E-07	2.90E-04	3.55E-05	8.03E-06	6.87E-05	1.67E-05	1.70E-05	5.56E-05	2.23E-06	8.87E-10	5.17E-05	5.41E-05
11	F09	80	Single Unit Long Haul Truck	2	0.00E+00	1.07E-06	7.68E-08	8.90E-01	3.39E-09	9.51E-04	7.88E-07	1.10E-03	6.51E-05	1.60E-05	6.40E-05	2.27E-05	2.26E-05	1.34E-04	2.98E-06	0.00E+00	4.15E-05	2.08E-04
11	F09	80	Combination Long Haul Truck	2	0.00E+00	9.60E-07	6.44E-08	8.24E-01	3.92E-09	9.85E-04	7.31E-07	1.07E-03	6.38E-05	1.28E-05	6.63E-05	1.95E-05	1.96E-05	1.26E-04	2.75E-06	0.00E+00	4.65E-05	2.02E-04
11	F10	80	Passenger Car	45	0.00E+00	5.43E-07	5.88E-08	2.08E+00	3.78E-06	1.45E-02	1.21E-06	9.18E-05	2.46E-04	4.27E-05	1.18E-04	7.59E-05	7.79E-05	7.00E-06	1.05E-05	2.94E-09	3.98E-05	1.44E-05
11	F10	80	Passenger Truck	75	0.00E+00	1.17E-06	1.24E-07	4.82E+00

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F17	70	Single Unit Short Haul Truck	2	0.00E+00	5.39E-07	2.70E-08	4.22E-01	4.41E-07	8.47E-04	5.74E-07	2.66E-04	3.79E-05	7.58E-06	6.56E-05	1.61E-05	1.64E-05	4.23E-05	1.70E-06	6.88E-10	4.90E-05	4.97E-05
10	F17	70	Combination Short Haul Truck	4	0.00E+00	2.17E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.59E-06	2.29E-03	1.65E-04	3.62E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.69E-05	4.31E-04
10	F17	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.31E-07	1.47E+00	8.14E-09	1.98E-03	1.50E-06	2.26E-03	1.64E-04	3.00E-05	1.37E-04	3.98E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.25E-04
10	F18	70	Passenger Car	152	0.00E+00	1.99E-06	2.15E-07	7.31E+00	1.39E-05	5.20E-02	4.44E-06	3.05E-04	1.18E-03	1.89E-04	4.31E-04	2.78E-04	2.85E-04	2.73E-05	3.67E-05	1.00E-08	1.46E-04	4.77E-05
10	F18	70	Passenger Truck	255	0.00E+00	4.36E-06	4.61E-07	1.68E+01	2.76E-05	9.55E-02	9.06E-06	9.55E-04	2.14E-03	3.49E-04	8.63E-04	5.62E-04	5.75E-04	1.24E-04	8.35E-05	2.24E-08	2.88E-04	1.57E-04
10	F18	70	Single Unit Short Haul Truck	1	0.00E+00	2.26E-07	1.13E-08	1.77E-01	1.85E-07	3.56E-04	2.41E-07	1.12E-04	1.59E-05	3.18E-06	2.76E-05	6.77E-06	6.88E-06	1.78E-05	7.14E-07	2.89E-10	2.06E-05	2.09E-05
10	F18	70	Combination Short Haul Truck	5	0.00E+00	2.58E-06	1.84E-07	1.88E+00	8.39E-09	2.22E-03	1.89E-06	2.72E-03	1.96E-04	4.29E-05	1.57E-04	5.44E-05	5.42E-05	2.83E-04	6.27E-06	0.00E+00	1.03E-04	5.12E-04
10	F18	70	Combination Long Haul Truck	5	0.00E+00	2.34E-06	1.56E-07	1.75E+00	9.67E-09	2.35E-03	1.77E-06	2.68E-03	1.95E-04	3.56E-05	1.62E-04	4.72E-05	4.77E-05	2.67E-04	5.85E-06	0.00E+00	1.15E-04	5.05E-04
10	F19	70	Passenger Car	354	0.00E+00	4.64E-06	5.01E-07	1.70E+01	3.23E-05	1.21E-01	1.03E-05	7.10E-04	2.75E-03	4.41E-04	1.00E-03	6.47E-04	6.63E-04	6.35E-05	8.54E-05	2.33E-08	3.40E-04	1.11E-04
10	F19	70	Passenger Truck	593	0.00E+00	1.02E-05	1.07E-06	3.92E+01	6.43E-05	2.22E-01	2.11E-05	2.22E-03	4.99E-03	8.12E-04	2.01E-03	1.31E-03	1.34E-03	2.88E-04	1.94E-04	5.22E-08	6.71E-04	3.66E-04
10	F20	70	Passenger Car	279	0.00E+00	3.65E-06	3.94E-07	1.34E+01	2.54E-05	9.52E-02	8.13E-06	5.58E-04	2.16E-03	3.47E-04	7.90E-04	5.09E-04	5.22E-04	4.99E-05	6.72E-05	1.83E-08	2.67E-04	8.75E-05
10	F20	70	Passenger Truck	467	0.00E+00	7.99E-06	8.45E-07	3.09E+01	5.06E-05	1.75E-01	1.66E-05	1.75E-03	3.93E-03	6.39E-04	1.58E-03	1.03E-03	1.05E-03	2.27E-04	1.53E-04	4.11E-08	5.28E-04	2.88E-04
10	F21	70	Passenger Car	319	0.00E+00	4.18E-06	4.51E-07	1.53E+01	2.91E-05	1.09E-01	9.31E-06	6.39E-04	2.47E-03	3.97E-04	9.05E-04	5.83E-04	5.98E-04	5.72E-05	7.70E-05	2.10E-08	3.06E-04	1.00E-04
10	F21	70	Passenger Truck	535	0.00E+00	9.15E-06	9.68E-07	3.53E+01	5.79E-05	2.00E-01	1.90E-05	2.00E-03	4.50E-03	7.32E-04	1.81E-03	1.18E-03	1.21E-03	2.60E-04	1.75E-04	4.71E-08	6.04E-04	3.30E-04
10	F21	70	Single Unit Short Haul Truck	72	0.00E+00	1.69E-05	8.48E-07	1.33E+01	1.38E-05	2.66E-02	1.80E-05	8.34E-03	1.19E-03	2.38E-04	2.06E-03	5.06E-04	5.14E-04	1.33E-03	5.34E-05	2.16E-08	1.54E-03	1.56E-03
10	F21	70	Single Unit Long Haul Truck	3	0.00E+00	7.37E-07	3.67E-08	5.63E-01	5.97E-07	1.11E-03	7.85E-07	3.59E-04	5.43E-05	1.06E-05	8.99E-05	2.19E-05	2.22E-05	5.62E-05	2.27E-06	9.08E-10	6.74E-05	6.72E-05
10	F21	70	Combination Short Haul Truck	68	0.00E+00	3.52E-05	2.50E-06	2.56E+01	1.14E-07	3.03E-02	2.58E-05	3.71E-02	2.67E-03	5.85E-04	2.15E-03	7.42E-04	7.40E-04	3.86E-03	8.54E-05	0.00E+00	1.41E-03	6.98E-03
10	F21	70	Combination Long Haul Truck	62	0.00E+00	3.19E-05	2.13E-06	2.39E+01	1.32E-07	3.21E-02	2.42E-05	3.66E-02	2.66E-03	4.86E-04	2.21E-03	6.44E-04	6.50E-04	3.64E-03	7.98E-05	0.00E+00	1.57E-03	6.88E-03
10	F22	70	Passenger Car	247	0.00E+00	3.24E-06	3.50E-07	1.19E+01	2.25E-05	8.45E-02	7.21E-06	4.95E-04	1.92E-03	3.08E-04	7.01E-04	4.51E-04	4.63E-04	4.43E-05	5.96E-05	1.63E-08	2.37E-04	7.76E-05
10	F22	70	Passenger Truck	414	0.00E+00	7.09E-06	7.50E-07	2.74E+01	4.49E-05	1.55E-01	1.47E-05	1.55E-03	3.49E-03	5.67E-04	1.40E-03	9.13E-04	9.35E-04	2.01E-04	1.36E-04	3.65E-08	4.68E-04	2.55E-04
10	F22	70	Single Unit Short Haul Truck	71	0.00E+00	1.67E-05	8.35E-07	1.31E+01	1.36E-05	2.62E-02	1.77E-05	8.21E-03	1.17E-03	2.34E-04	2.03E-03	4.98E-04	5.06E-04	1.31E-03	5.26E-05	2.13E-08	1.51E-03	1.54E-03
10	F22	70	Single Unit Long Haul Truck	3	0.00E+00	7.26E-07	3.61E-08	5.54E-01	5.88E-07	1.09E-03	7.73E-07	3.54E-04	5.35E-05	1.04E-05	8.86E-05	2.15E-05	2.19E-05	5.53E-05	2.23E-06	8.95E-10	6.64E-05	6.62E-05
10	F22	70	Combination Short Haul Truck	64	0.00E+00	3.31E-05	2.35E-06	2.41E+01	1.08E-07	2.85E-02	2.42E-05	3.48E-02	2.51E-03	5.50E-04	2.02E-03	6.97E-04	6.95E-04	3.63E-03	8.03E-05	0.00E+00	1.32E-03	6.56E-03
10	F22	70	Combination Long Haul Truck	58	0.00E+00	3.00E-05	2.00E-06	2.24E+01	1.24E-07	3.02E-02	2.27E-05	3.43E-02	2.50E-03	4.56E-04	2.08E-03	6.05E-04	6.11E-04	3.42E-03	7.50E-05	0.00E+00	1.47E-03	6.47E-03
10	F23	70	Passenger Car	133	0.00E+00	1.74E-06	1.88E-07	6.40E+00	1.21E-05	4.55E-02	3.89E-06	2.67E-04	1.03E-03	1.66E-04	3.77E-04	2.43E-04	2.49E-04	2.39E-05	3.21E-05	8.77E-09	1.28E-04	4.18E-05
10	F23	70	Passenger Truck	223	0.00E+00	3.82E-06	4.04E-07	1.47E+01	2.42E-05	8.37E-02	7.93E-06	8.37E-04	1.88E-03	3.06E-04	7.56E-04	4.92E-04	5.04E-04	1.08E-04	7.31E-05	1.96E-08	2.52E-04	1.38E-04
10	F23	70	Single Unit Short Haul Truck	18	0.00E+00	4.19E-06	2.10E-07	3.29E+00	3.43E-06	6.59E-03	4.47E-06	2.07E-03	2.95E-04	5.90E-05	5.11E-04	1.25E-04	1.27E-04	3.29E-04	1.32E-05	5.35E-09	3.81E-04	3.87E-04
10	F23	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	9.09E-09	1.39E-01	1.48E-07	2.75E-04	1.95E-07	8.90E-05	1.35E-05	2.62E-06	2.23E-05	5.42E-06	5.51E-06	1.39E-05	5.62E-07	2.25E-10	1.67E-05	1.67E-05
10	F23	70	Combination Short Haul Truck	18	0.00E+00	9.47E-06	6.74E-07	6.89E+00	3.08E-08	8.15E-03	6.94E-06	9.98E-03	7.19E-04	1.58E-04	5.77E-04	2.00E-04	1.99E-04	1.04E-03	2.30E-05	0.00E+00	3.78E-04	1.88E-03
10	F23	70	Combination Long Haul Truck	17	0.00E+00	8.59E-06	5.73E-07	6.42E+00	3.55E-08	8.64E-03	6.51E-06	9.84E-03	7.16E-04	1.31E-04	5.96E-04	1.73E-04	1.75E-04	9.79E-04	2.15E-05	0.00E+00	4.22E-04	1.85E-03
10	F24	70	Passenger Car	113	0.00E+00	1.48E-06	1.60E-07	5.44E+00	1.03E-05	3.87E-02	3.30E-06	2.27E-04	8.77E-04	1.41E-04	3.21E-04	2.07E-04	2.12E-04	2.03E-05	2.73E-05	7.45E-09	1.08E-04	3.55E-05
10	F24	70	Passenger Truck	190	0.00E+00	3.24E-06	3.43E-07	1.25E+01	2.05E-05	7.11E-02	6.74E-06	7.11E-04	1.60E-03	2.60E-04	6.42E-04	4.18E-04	4.28E-04	9.21E-05	6.21E-05	1.67E-08	2.14E-04	1.17E-04
10	F24	70	Single Unit Short Haul Truck	14	0.00E+00	3.26E-06	1.63E-07	2.55E+00	2.67E-06	5.12E-03	3.47E-06	1.61E-03	2.29E-04	4.58E-05	3.97E-04	9.75E-05	9.90E-05	2.56E-04	1.03E-05	4.16E-09	2.96E-04	3.01E-04
10	F24	70	Single Unit Long Haul Truck	1	0.00E+00	1.42E-07	7.07E-09	1.08E-01	1.15E-07	2.14E-04	1.51E-07	6.92E-05	1.05E-05	2.04E-06	1.73E-05	4.21E-06	4.28E-06	1.08E-05	4.37E-07	1.75E-10	1.30E-05	1.29E-05
10	F24	70	Combination Short Haul Truck	13	0.00E+00	6.66E-06	4.74E-07	4.84E+00	2.17E-08	5.73E-03	4.88E-06	7.02E-03	5.06E-04	1.11E-04	4.06E-04	1.40E-04	1.40E-04	7.30E-04	1.62E-05	0.00E+00	2.66E-04	1.32E-03
10	F24	70	Combination Long Haul Truck	12	0.00E+00	6.04E-06	4.03E-07	4.51E+00	2.49E-08	6.07E-03	4.58E-06	6.92E-03	5.03E-04	9.19E-05	4.19E-04	1.22E-04	1.23E-04	6.89E-04	1.51E-05	0.00E+00	2.97E-04	1.30E-03
9	F25	60	Passenger Car	324	0.00E+00	4.86E-06	5.26E-07	1.63E+01	3.38E-05	1.26E-01	1.08E-05	6.61E-04	3.28E-03	5.05E-04	1.05E-03	6.78E-04	6.96E-04	6.77E-05	8.14E-05	2.24E-08	3.55E-04	1.03E-04
9	F25	60	Passenger Truck	543	0.00E+00	1.07E-05	1.13E-06	3.71E+01	6.69E-05	2.25E-01	2.20E-05	2.16E-03	6.03E-03	9.36E-04	2.09E-03	1.37E-03	1.40E-03	2.88E-04	1.84E-04	5.09E-08	6.98E-04	3.57E-04
9	F25	60	Single Unit Short Haul Truck	55	0.00E+00	1.61E-05	8.05E-07	1.02E+01	1.33E-05	1.98E-02	1.72E-05	7.67E-03	1.30E-03	2.36E-04	1.95E-03	4.82E-04	4.90E-04	1.03E-03	4.14E-05	1.70E-08	1.46E-03	1.44E-03
9	F25	60	Single Unit Long Haul Truck	2	0.00E+00	7.05E-07	3.50E-08	4.38E-01	5.76E-07	8.39E-04	7.52E-07	3.32E-04	5.85E-05	1.05E-05	8.59E-05	2.10E-05	2.13E-05	4.37E-05	1.77E-06	7.25E-10	6.43E-05	6.22E-05
9	F25	60	Combination Short Haul Truck	51	0.00E+00	2.98E-05	2.08E-06	1.94E+01	1.06E-07	2.60E-02	2.21E-05	3.24E-02	2.77E-03	5.49E-04	1.90E-03	6.19E-04	6.19E-04	2.93E-03	6.49E-05	0.00E+00	1.28E-03	6.09E-03
9	F25	60	Combination Long Haul Truck	46	0.00E+00	2.67E-05	1.75E-06	1.82E+01	1.21E-07	2.81E-02	2.07E-05	3.21E-02	2.78E-03	4.74E-04	1.95E-03	5.31E-04	5.38E-04	2.77E-03	6.08E-05	0.00E+00	1.41E-03	6.04E-03
9	F26	60	Passenger Car	310	0.00E+00	4.66E-06	5.03E-07	1.56E+01	3.24E-05	1.21E-01	1.03E-05	6.33E-04	3.15E-03	4.84E-04	1.01E-03	6.49E-04	6.66E-04	6.48E-05	7.80E-05	2.15E-08	3.41E-04	9.91E-05
9	F26	60	Passenger Truck	520	0.00E+00	1.03E-05	1.08E-06	3.55E+01	6.41E-05	2.15E-01	2.11E-05	2.06E-03	5.77E-03	8.97E-04	2.01E-03	1.31E-03	1.34E-03	2.76E-04	1.76E-04	4.88E-08	6.68E-04	3.42E-04
9	F26	60	Single Unit Short Haul Truck	59	0.00E+00	1.74E-05	8.67E-07	1.10E+01	1.43E-05	2.13E-02	1.85E-05	8.26E-03	1.40E-03	2.54E-04	2.10E-03	5.20E-04	5.28E-04	1.11E-03	4.46E-05	1.84E-08	1.58E-03	1.55E-03
9	F26	60	Single Unit Long Haul Truck	3	0.00E+00	7.59E-07	3.77E-08	4.71E-01	6.20E-07	9.04E-04	8.10E-07	3.58E-04	6.31E-05	1.13E-05	9.26E-05	2.26E-05	2.30E-05	4.71E-05	1.90E-06	7.81E-10	6.93E-05	6.70E-05
9	F26	60	Combination Short Haul Truck	53	0.00E+00	3.10E-05	2.16E-06	2.02E+01	1.10E-07	2.70E-02	2.30E-05	3.36E-02	2.88E-03	5.70E-04	1.97E-03	6.43E-04	6.43E-04	3.04E-03	6.74E-05	0.00E+00	1.33E-03	6.33E-03
9	F26	60	Combination Long Haul Truck	48	0.00E+00	2.77E-05	1.81E-06	1.89E+01	1.26E-07	2.92E-02	2.15E-05	3.33E-02	2.89E-03	4.92E-04	2.03E-03	5.52E-04	5.59E-04	2.88E-03	6.32E-05	0.00E+00	1.47E-03	6.28E-03
9	F27	60	Passenger Car	853	0.00E+00	1.28E-05	1.38E-06	4.29E+01	8.91E-05	3.32E-01	2.84E-05	1.74E-03	8.65E-03	1.33E-03	2.77E-03	1.78E-03	1.83E-03	1.78E-04	2.14E-04	5.90E-08	9.36E-04	2.72E-04
9	F27	60	Passenger Truck	1428	0.00E+00	2.82E-05	2.98E-06	9.76E+01	1.76E-04	5.91E-01	5.79E-05	5.67E-03	1.59E-02	2.46E-03	5.51E-03	3.60E-03	3.69E-03	7.58E-04	4.84E-04	1.34E-07	1.84E-03	9.40E-04
9	F27	60	Single Unit Short Haul Truck	137	0.00E+00	4.03E-05	2.01E-06	2.56E+01	3.31E-05	4.95E-02	4.30E-05	1.92E-02	3.26E-03	5.90E-04	4.87E-03	1.21E-03	1.23E-03	2.56E-03	1.03E-04	4.26E-08	3.66E-03	3.60E-03
9	F27	60	Single Unit Long Haul Truck	6	0.00E+00	1.76E-06	8.74E-08	1.09E+00	1.44E-06	2.10E-03	1.88E-06	8.31E-04	1.46E-04	2.62E-05	2.15E-04	5.25E-05	5.34E-05	1.09E-04	4.41E-06	1.81E-09	1.61E-04	1.56E-04
9	F27	60	Combination Short Haul Truck	94	0.00E+00	5.54E-05	3.87E-06	3.61E+01	1.96E-07	4.84E-02	4.11E-05	6.02E-02	5.15E-03	1.02E-03	3.53E-03	1.15E-03	1.15E-03	5.44E-03	1.21E-04	0.00E+00	2.37E-03	1.13E-02
9	F27	60	Combination Long Haul Truck	86	0.00E+00	4.96E-05	3.24E-06	3.39E+01	2.25E-07	5.22E-02	3.84E-05	5.96E-02	5.17E-03	8.80E-04	3.62E-03	9.87E-04	9.99E-04	5.15E-03	1.13E-04	0.00E+00	2.62E-03	1.12E-02
9	F28	60	Passenger Car	625	0.00E+00	9.38E-06	1.01E-06	3.14E+01	6.53E-05	2.43E-01	2.08E-05	1.27E-03	6.34E-03	9.74E-04	2.03E-03	1.31E-03	1.34E-03	1.31E-04	1.57E-04	4.32E-08	6.86E-04	2.00E-04
9	F28	60	Passenger Truck	1047	0.00E+00	2.07E-05	2.18E-06	7.15E+01	1.29E-04	4.33E-01	4.25E-05	4.16E-03	1.16E-02	1.81E-03	4.04E-03	2.64E-03	2.70E-03	5.55E-04	3.55E-04	9.83E-08	1.35E-03	6.89E-04
9	F28	60	Single Unit Short Haul Truck	124	0.00E+00	3.64E-05	1.82E-06	2.31E+01	2.99E-05	4.46E-02	3.88E-05	1.73E-02	2.94E-03	5.32E-04	4.39E-03	1.09E-03	1.11E-03	2.31E-03	9.33E-05	3.84E-08	3.30E-03	3.24E-03
9	F28	60	Single Unit Long Haul Truck	5	0.00E+00	1.59E-06	7.89E-08	9.87E-01	1.30E-06	1.89E-03	1.70E-06	7.49E-04	1.32E-04	2.36E-05	1.94E-04	4.74E-05	4.81E-05	9.85E-05	3.98E-06	1.63E-09	1.45E-04	1.40E-04
9	F28	60	Combination Short Haul Truck	90	0.00E+00	5.33E-05	3.72E-06	3.47E+01	1.89E-07	4.65E-02	3.95E-05	5.78E-02	4.95E-03	9.80E-04	3.39E-03	1.11E-03	1.11E-03	5.23E-03	1.16E-04	0.00E+00	2.28E-03	1.09E-02
9	F28	60	Combination Long Haul Truck	83	0.00E+00	4.77E-05	3.12E-06	3.25E+01	2.16E-07	5.02E-02	3.69E-05	5.73E-02	4.97E-03	8.46E-04	3.48E-03	9.49E-04	9.60E-04	4.95E-03	1.09E-04	0.00E+00	2.52E-03	1.08E-02
9	F29	60	Passenger Car	267	0.00E+00	4.00E-06	4.33E-07	1.34E+01	2.79E-05	1.04E-01	8.89E-06	5.44E-04	2.70E-03	4.16E-04	8.67E-04	5.58E-04	5.73E-04	5.57E-05	6.71E-05	1.85E-08	2.93E-04	8.52E-05
9	F29	60	Passenger Truck	447	0.00E+00	8.82E-06	9.32E-07	3.05E+01	5.51E-05	1.85E-01	1.81E-05	1.77E-03	4.96E-03	7.71E-04	1.72E-03	1.13E-03	1.15E-03	2.37E-04	1.51E-04	4.19E-08	5.75E-04	2.94E-04
9	F29	60	Single Unit Short Haul Truck	26	0.00E+00	7.59E-06	3.79E-07	4.82E+00	6.24E-06	9.31E-03	8.09E-06	3.61E-03	6.13E-04	1.11E-04	9.17E-04	2.27E-04	2.31E-04	4.83E-04	1.95E-05	8.02E-09	6.89E-04	6.77E-04
9	F29	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.06E-01	2.71E-07	3.95E-04	3.54E-07	1.56E-04	2.75E-05	4.93E-06	4.04E-05	9.89E-06	1.00E-05	2.06E-05	8.31E-07	3.41E-10	3.03E-05	2.93E-05
9	F29	60	Combination Short Haul Truck	20	0.00E+00	1.19E-05	8.32E-07	7.76E+00	4.22E-08	1.04E-02	8.83E-06	1.29E-02	1.11E-03	2.19E-04	7.59E-04	2.47E-04	2.47E-04	1.17E-03	2.59E-05	0.00E+00	5.10E-04	2.43E-03
9	F29	60	Combination Long Haul Truck	18	0.00E+00	1.07E-05	6.97E-07	7.28E+00	4.83E-08	1.12E-02	8.25E-06	1.28E-02	1.11E-03	1.89E-04	7.79E-04	2.12E-04	2.15E-04	1.11E-03	2.43E-05	0.00E+00	5.64E-04	2.41E-03
9	F30	60	Passenger Car	354	0.00E+00	5.31E-06	5.74E-07	1.78E+01	3.70E-05	1.38E-01	1.18E-05	7.22E-04	3.59E-03	5.51E-04	1.15E-03	7.40E-04	7.60E-04	7.39E-05	8.90E-05	2.45E-08	3.88E-04	1.13E-04
9	F30	60	Passenger Truck	593	0.00E+00	1.17E-05	1.24E-06	4.05E+01	7.31E-05	2.45E-01	2.40E-05	2.35E-03	6.58E-03	1.02E-03	2.29E-03	1.49E-03	1.53E-03	3.14E-04	2.01E-04	5.56E-08	7.62E-04	3.90E-04
9	F30	60	Single Unit Short Haul Truck	8	0.00E+00	2.33E-06	1.16E-07	1.48E+00	1.91E-06	2.85E-03	2.48E-06	1.11E-03	1.88E-04	3.40E-05	2.81E-04	6.95E-05	7.06E-05	1.48E-04	5.97E-06	2.46E-09	2.11E-04	2.07E-04
9	F30	60	Combination Short Haul Truck	5	0.00E+00	3.05E-06	2.13E-07	1.99E+00	1.08E-08	2.66E-03	2.26E-06	3.31E-03	2.84E-04	5.61E-05	1.94E-04	6.33E-05	6.33E-05	2.99E-04	6.64E-06	0.00E+00	1.31E-04	6.23E-04
9	F30	60	Combination Long Haul Truck	5	0.00E+00	2.73E-06	1.79E-07	1.86E+00	1.24E-08	2.87E-03	2.11E-06	3.28E-03	2.85E-04	4.84E-05	2.00E-04	5.43E-05	5.50E-05	2.84E-04	6.22E-06	0.00E+00	1.44E-04	6.18E-04
11	F35	80	Passenger Car	132	0.00E+00	1.60E-06	1.73E-07	6.14E+00	1.11E-05	4.28E-02	3.56E-06	2.71E-04	7.24E-04	1.26E-04	3.47E-04	2.24E-04	2.30E-04	2.06E-05	3.09E-05	8.66E-09	1.17E-04	4.24E-05
11	F35	80	Passenger Truck	220	0.00E+00	3.44E-06	3.65E-07	1.42E+01	2.20E-05	7.84E-02	7.22E-06	8.02E-04	1.30E-03	2.30E-04	6.92E-04	4.48E-04	4.59E-04	9.92E-05	7.10E-05	1.93E-08	2.31E-04	1.31E-04
11	F35	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	F35	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.03E-03	1.69E-06	2.35E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.86E-04	6.36E-06	0.00E+00	8.88E-05	4.45E-04
11	F35	80	Combination Long Haul Truck	5	0.00E+00	2.05E-06	1.38E-07	1.76E+00	8.39E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.42E-04	4.17E-05	4.20E-05	2.69E-04	5.88E-06	0.00E+00	9.94E-05	4.32E-04
11	F36	80	Passenger Car	37	0.00E+00	4.46E-07	4.82E-08	1.71E+00	3.10E-06	1.19E-02	9.92E-07	7.53E-05	2.02E-04	3.50E-05	9.66E-05	6.23E-05	6.39E-05	5.74E-06	8.60E-06	2.41E-09	3.27E-05	1.18E-05
11	F36	80	Passenger Truck	61	0.00E+00	9.58E-07	1.02E-07	3.95E+00	6.14E-06	2.18E-02	2.01E-06	2.23E-04	3.61E-04	6.41E-05	1.93E-04	1.25E-04	1.28E-04	2.76E-05	1.98E-05	5.37E-09	6.43E-05	3.65E-05
11	F36	80	Single Unit Short Haul Truck	3	0.00E+00	5.39E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.60E-05	1.62E-05	5.30E-05	2.13E-06	8.46E-10	4.93E-05	5.16E-05
11	F36	80	Combination Short Haul Truck	1	0.00E+00	4.59E-07	3.28E-08	3.81E-01	1.45E-09	4.07E-04	3.37E-07	4.71E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.65E-06	5.72E-05	1.27E-06	0.00E+00	1.78E-05	8.89E-05
11	F36	80	Combination Long Haul Truck	1	0.00E+00	4.11E-07	2.76E-08	3.52E-01	1.68E-09	4.21E-04	3.13E-07	4.58E-04	2.73E-05	5.48E-06	2.84E-05	8.35E-06	8.40E-06	5.38E-05	1.18E-06	0.00E+00	1.99E-05	8.64E-05
9	F37	60	Passenger Car	601	0.00E+00	9.02E-06	9.76E-07	3.02E+01	6.28E-05	2.34E-01	2.00E-05	1.23E-03	6.10E-03	9.37E-04	1.95E-03	1.26E-03	1.29E-03	1.26E-04	1.51E-04	4.16E-08	6.60E-04	1.92E-04
9	F37	60	Passenger Truck	1007	0.00E+00	1.99E

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F41	70	Single Unit Short Haul Truck	1	0.00E+00	1.45E-07	7.25E-09	1.13E-01	1.18E-07	2.27E-04	1.54E-07	7.13E-05	1.02E-05	2.03E-06	1.76E-05	4.32E-06	4.39E-06	1.13E-05	4.56E-07	1.85E-10	1.31E-05	1.33E-05
10	F42	70	Passenger Car	201	0.00E+00	2.63E-06	2.85E-07	9.67E+00	1.83E-05	6.88E-02	5.87E-06	4.03E-04	1.56E-03	2.51E-04	5.70E-04	3.67E-04	3.77E-04	3.61E-05	4.85E-05	1.33E-08	1.93E-04	6.32E-05
10	F42	70	Passenger Truck	337	0.00E+00	5.77E-06	6.11E-07	2.23E+01	3.65E-05	1.26E-01	1.20E-05	1.26E-03	2.84E-03	4.62E-04	1.14E-03	7.44E-04	7.61E-04	1.64E-04	1.11E-04	2.97E-08	3.81E-04	2.08E-04
10	F45	70	Passenger Car	197	0.00E+00	2.57E-06	2.78E-07	9.45E+00	1.79E-05	6.72E-02	5.73E-06	3.94E-04	1.52E-03	2.45E-04	5.57E-04	3.59E-04	3.68E-04	3.52E-05	4.74E-05	1.29E-08	1.88E-04	6.17E-05
10	F45	70	Passenger Truck	329	0.00E+00	5.63E-06	5.96E-07	2.18E+01	3.57E-05	1.23E-01	1.17E-05	1.23E-03	2.77E-03	4.51E-04	1.12E-03	7.26E-04	7.43E-04	1.60E-04	1.08E-04	2.90E-08	3.72E-04	2.03E-04
10	F45	70	Single Unit Short Haul Truck	1	0.00E+00	3.31E-07	1.66E-08	2.59E-01	2.71E-07	5.20E-04	3.52E-07	1.63E-04	2.33E-05	4.65E-06	4.03E-05	9.89E-06	1.00E-05	2.60E-05	1.04E-06	4.22E-10	3.01E-05	3.05E-05
10	F45	70	Combination Short Haul Truck	3	0.00E+00	1.42E-06	1.01E-07	1.03E+00	4.62E-09	1.22E-03	1.04E-06	1.50E-03	1.08E-04	2.36E-05	8.65E-05	2.99E-05	2.98E-05	1.56E-04	3.45E-06	0.00E+00	5.67E-05	2.82E-04
10	F45	70	Combination Long Haul Truck	2	0.00E+00	1.29E-06	8.58E-08	9.62E-01	5.32E-09	1.29E-03	9.76E-07	1.47E-03	1.07E-04	1.96E-05	8.93E-05	2.60E-05	2.62E-05	1.47E-04	3.22E-06	0.00E+00	6.33E-05	2.78E-04
10	F46	70	Passenger Car	188	0.00E+00	2.46E-06	2.66E-07	9.03E+00	1.71E-05	6.42E-02	5.48E-06	3.76E-04	1.46E-03	2.34E-04	5.32E-04	3.43E-04	3.52E-04	3.37E-05	4.53E-05	1.24E-08	1.80E-04	5.90E-05
10	F46	70	Passenger Truck	315	0.00E+00	5.38E-06	5.70E-07	2.08E+01	3.41E-05	1.18E-01	1.12E-05	1.18E-03	2.65E-03	4.31E-04	1.07E-03	6.94E-04	7.10E-04	1.53E-04	1.03E-04	2.77E-08	3.56E-04	1.94E-04
10	F46	70	Single Unit Short Haul Truck	2	0.00E+00	4.40E-07	2.21E-08	3.45E-01	3.60E-07	6.92E-04	4.69E-07	2.17E-04	3.10E-05	6.19E-06	5.36E-05	1.32E-05	1.34E-05	3.46E-05	1.39E-06	5.62E-10	4.00E-05	4.07E-05
10	F46	70	Combination Short Haul Truck	1	0.00E+00	5.12E-07	3.64E-08	3.72E-01	1.66E-09	4.41E-04	3.75E-07	5.39E-04	3.89E-05	8.51E-06	3.12E-05	1.08E-05	1.08E-05	5.61E-05	1.24E-06	0.00E+00	2.04E-05	1.02E-04
10	F46	70	Combination Long Haul Truck	1	0.00E+00	4.64E-07	3.10E-08	3.47E-01	1.92E-09	4.67E-04	3.52E-07	5.32E-04	3.87E-05	7.06E-06	3.22E-05	9.36E-06	9.46E-06	5.29E-05	1.16E-06	0.00E+00	2.28E-05	1.00E-04
9	F47	60	Passenger Car	2	0.00E+00	3.60E-08	3.89E-09	1.21E-01	2.50E-07	9.33E-04	7.99E-08	4.89E-06	2.43E-05	3.74E-06	7.79E-06	5.02E-06	5.15E-06	5.01E-07	6.03E-07	1.66E-10	2.63E-06	7.66E-07
9	F47	60	Passenger Truck	4	0.00E+00	7.93E-08	8.38E-09	2.74E-01	4.95E-07	1.66E-03	1.63E-07	1.60E-05	4.46E-05	6.93E-06	1.55E-05	1.01E-05	1.04E-05	2.13E-06	1.36E-06	3.77E-10	5.17E-06	2.64E-06
9	F48	60	Passenger Car	25	0.00E+00	3.74E-07	4.05E-08	1.25E+00	2.61E-06	9.70E-03	8.32E-07	5.09E-05	2.53E-04	3.89E-05	8.11E-05	5.22E-05	5.36E-05	5.21E-06	6.27E-06	1.73E-09	2.74E-05	7.97E-06
9	F48	60	Passenger Truck	42	0.00E+00	8.25E-07	8.71E-08	2.85E+00	5.15E-06	1.73E-02	1.69E-06	1.66E-04	4.64E-04	7.21E-05	1.61E-04	1.05E-04	1.08E-04	2.22E-05	1.42E-05	3.92E-09	5.37E-05	2.75E-05
9	F48	60	Single Unit Short Haul Truck	1	0.00E+00	2.98E-07	1.49E-08	1.89E-01	2.45E-07	3.66E-04	3.18E-07	1.42E-04	2.41E-05	4.36E-06	3.60E-05	8.92E-06	9.06E-06	1.90E-05	7.65E-07	3.15E-10	2.71E-05	2.66E-05
9	F48	60	Combination Short Haul Truck	1	0.00E+00	7.53E-07	5.26E-08	4.90E-01	2.66E-09	6.57E-04	5.58E-07	8.17E-04	7.00E-05	1.39E-05	4.80E-05	1.56E-05	1.56E-05	7.39E-05	1.64E-06	0.00E+00	3.22E-05	1.54E-04
9	F48	60	Combination Long Haul Truck	1	0.00E+00	6.74E-07	4.41E-08	4.60E-01	3.06E-09	7.10E-04	5.22E-07	8.10E-04	7.03E-05	1.20E-05	4.92E-05	1.34E-05	1.36E-05	7.00E-05	1.54E-06	0.00E+00	3.56E-05	1.53E-04
9	F49	60	Passenger Car	738	0.00E+00	1.11E-05	1.20E-06	3.71E+01	7.70E-05	2.87E-01	2.46E-05	1.50E-03	7.48E-03	1.15E-03	2.40E-03	1.54E-03	1.58E-03	1.54E-04	1.85E-04	5.10E-08	8.09E-04	2.36E-04
9	F49	60	Passenger Truck	1235	0.00E+00	2.44E-05	2.58E-06	8.44E+01	1.52E-04	5.11E-01	5.01E-05	4.91E-03	1.37E-02	2.13E-03	4.77E-03	3.12E-03	3.19E-03	6.55E-04	4.19E-04	1.16E-07	1.59E-03	8.13E-04
9	F49	60	Single Unit Short Haul Truck	109	0.00E+00	3.21E-05	1.60E-06	2.04E+01	2.64E-05	3.94E-02	3.43E-05	1.53E-02	2.60E-03	4.70E-04	3.88E-03	9.61E-04	9.77E-04	2.04E-03	8.25E-05	3.40E-08	2.92E-03	2.87E-03
9	F49	60	Single Unit Long Haul Truck	5	0.00E+00	1.40E-06	6.97E-08	8.72E-01	1.15E-06	1.67E-03	1.50E-06	6.62E-04	1.17E-04	2.09E-05	1.71E-04	4.19E-05	4.25E-05	8.71E-05	3.52E-06	1.44E-09	1.28E-04	1.24E-04
9	F49	60	Combination Short Haul Truck	81	0.00E+00	4.74E-05	3.31E-06	3.09E+01	1.68E-07	4.14E-02	3.51E-05	5.15E-02	4.41E-03	8.73E-04	3.02E-03	9.84E-04	9.84E-04	4.65E-03	1.03E-04	0.00E+00	2.03E-03	9.69E-03
9	F49	60	Combination Long Haul Truck	73	0.00E+00	4.24E-05	2.77E-06	2.90E+01	1.92E-07	4.47E-02	3.28E-05	5.10E-02	4.43E-03	7.53E-04	3.10E-03	8.45E-04	8.55E-04	4.41E-03	9.67E-05	0.00E+00	2.24E-03	9.61E-03
9	F50	60	Passenger Car	644	0.00E+00	9.66E-06	1.04E-06	3.24E+01	6.72E-05	2.50E-01	2.15E-05	1.31E-03	6.53E-03	1.00E-03	2.09E-03	1.35E-03	1.38E-03	1.34E-04	1.62E-04	4.45E-08	7.06E-04	2.06E-04
9	F50	60	Passenger Truck	1078	0.00E+00	2.13E-05	2.25E-06	7.37E+01	1.33E-04	4.46E-01	4.37E-05	4.28E-03	1.20E-02	1.86E-03	4.16E-03	2.72E-03	2.78E-03	5.72E-04	3.65E-04	1.01E-07	1.39E-03	7.10E-04
9	F50	60	Single Unit Short Haul Truck	120	0.00E+00	3.53E-05	1.76E-06	2.24E+01	2.90E-05	4.32E-02	3.76E-05	1.68E-02	2.85E-03	5.15E-04	4.26E-03	1.05E-03	1.07E-03	2.24E-03	9.05E-05	3.72E-08	3.20E-03	3.14E-03
9	F50	60	Single Unit Long Haul Truck	5	0.00E+00	1.54E-06	7.64E-08	9.56E-01	1.26E-06	1.83E-03	1.64E-06	7.26E-04	1.28E-04	2.29E-05	1.88E-04	4.59E-05	4.66E-05	9.55E-05	3.86E-06	1.58E-09	1.41E-04	1.36E-04
9	F50	60	Combination Short Haul Truck	88	0.00E+00	5.21E-05	3.63E-06	3.39E+01	1.84E-07	4.54E-02	3.85E-05	5.65E-02	4.84E-03	9.58E-04	3.31E-03	1.08E-03	1.08E-03	5.11E-03	1.13E-04	0.00E+00	2.23E-03	1.06E-02
9	F50	60	Combination Long Haul Truck	81	0.00E+00	4.66E-05	3.05E-06	3.18E+01	2.11E-07	4.90E-02	3.60E-05	5.60E-02	4.86E-03	8.26E-04	3.40E-03	9.27E-04	9.38E-04	4.84E-03	1.06E-04	0.00E+00	2.46E-03	1.05E-02
10	F51	70	Passenger Car	522	0.00E+00	6.83E-06	7.38E-07	2.51E+01	4.76E-05	1.78E-01	1.52E-05	1.05E-03	4.05E-03	6.50E-04	1.48E-03	9.53E-04	9.77E-04	9.35E-05	1.26E-04	3.44E-08	5.00E-04	1.64E-04
10	F51	70	Passenger Truck	874	0.00E+00	1.50E-05	1.58E-06	5.78E+01	9.47E-05	3.28E-01	3.11E-05	3.28E-03	7.36E-03	1.20E-03	2.96E-03	1.93E-03	1.97E-03	4.25E-04	2.86E-04	7.70E-08	9.88E-04	5.39E-04
10	F51	70	Single Unit Short Haul Truck	41	0.00E+00	9.68E-06	4.85E-07	7.58E+00	7.92E-06	1.52E-02	1.03E-05	4.77E-03	6.81E-04	1.36E-04	1.18E-03	2.89E-04	2.94E-04	7.60E-04	3.05E-05	1.24E-08	8.80E-04	8.93E-04
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.10E-08	3.22E-01	3.42E-07	6.36E-04	4.49E-07	2.05E-04	3.11E-05	6.05E-06	5.15E-05	1.25E-05	1.27E-05	3.21E-05	1.30E-06	5.20E-10	3.86E-05	3.84E-05
10	F51	70	Combination Short Haul Truck	19	0.00E+00	1.01E-05	7.15E-07	7.31E+00	3.27E-08	8.65E-03	7.36E-06	1.06E-02	7.63E-04	1.67E-04	6.13E-04	2.12E-04	2.11E-04	1.10E-03	2.44E-05	0.00E+00	4.02E-04	1.99E-03
10	F51	70	Combination Long Haul Truck	18	0.00E+00	9.12E-06	6.08E-07	6.81E+00	3.76E-08	9.17E-03	6.91E-06	1.04E-02	7.60E-04	1.39E-04	6.32E-04	1.84E-04	1.86E-04	1.04E-03	2.28E-05	0.00E+00	4.48E-04	1.97E-03
10	F52	70	Passenger Car	214	0.00E+00	2.80E-06	3.02E-07	1.03E+01	1.95E-05	7.31E-02	6.24E-06	4.28E-04	1.66E-03	2.66E-04	6.06E-04	3.90E-04	4.00E-04	3.83E-05	5.16E-05	1.41E-08	2.05E-04	6.71E-05
10	F52	70	Passenger Truck	358	0.00E+00	6.13E-06	6.49E-07	2.37E+01	3.88E-05	1.34E-01	1.27E-05	1.34E-03	3.01E-03	4.90E-04	1.21E-03	7.90E-04	8.09E-04	1.74E-04	1.17E-04	3.15E-08	4.05E-04	2.21E-04
10	F52	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.66E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	F52	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	F52	70	Combination Short Haul Truck	7	0.00E+00	3.80E-06	2.71E-07	2.77E+00	1.24E-08	3.27E-03	2.79E-06	4.01E-03	2.89E-04	6.33E-05	2.32E-04	8.01E-05	7.99E-05	4.17E-04	9.23E-06	0.00E+00	1.52E-04	7.55E-04
10	F52	70	Combination Long Haul Truck	7	0.00E+00	3.45E-06	2.30E-07	2.58E+00	1.42E-08	3.47E-03	2.62E-06	3.95E-03	2.87E-04	5.25E-05	2.39E-04	6.96E-05	7.03E-05	3.93E-04	8.62E-06	0.00E+00	1.70E-04	7.44E-04
10	F53	70	Passenger Car	504	0.00E+00	6.59E-06	7.12E-07	2.42E+01	4.59E-05	1.72E-01	1.47E-05	1.01E-03	3.90E-03	6.27E-04	1.43E-03	9.19E-04	9.43E-04	9.02E-05	1.21E-04	3.32E-08	4.83E-04	1.58E-04
10	F53	70	Passenger Truck	843	0.00E+00	1.44E-05	1.53E-06	5.58E+01	9.14E-05	3.16E-01	3.00E-05	3.16E-03	7.10E-03	1.15E-03	2.86E-03	1.86E-03	1.90E-03	4.10E-04	2.76E-04	7.43E-08	9.53E-04	5.20E-04
10	F53	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.83E-03	1.92E-06	8.88E-04	1.27E-04	2.53E-05	2.19E-04	5.38E-05	5.47E-05	1.41E-04	5.68E-06	2.30E-09	1.64E-04	1.66E-04
10	F53	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	F53	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.19E-04
10	F54	70	Passenger Car	329	0.00E+00	4.31E-06	4.66E-07	1.58E+01	3.00E-05	1.13E-01	9.61E-06	6.60E-04	2.55E-03	4.10E-04	9.33E-04	6.01E-04	6.17E-04	5.90E-05	7.94E-05	2.17E-08	3.16E-04	1.03E-04
10	F54	70	Passenger Truck	552	0.00E+00	9.44E-06	9.99E-07	3.65E+01	5.98E-05	2.07E-01	1.96E-05	2.07E-03	4.64E-03	7.55E-04	1.87E-03	1.22E-03	1.25E-03	2.68E-04	1.81E-04	4.86E-08	6.24E-04	3.40E-04
10	F54	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.66E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.10E-05	1.06E-04	4.26E-06	1.72E-09	1.23E-04	1.25E-04
10	F54	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	F54	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
53	F71	70	Passenger Car	108	0.00E+00	1.36E-06	1.48E-07	5.24E+00	9.52E-06	3.53E-02	3.02E-06	2.20E-04	8.23E-04	1.33E-04	2.95E-04	1.90E-04	1.95E-04	1.93E-05	2.63E-05	7.15E-09	1.00E-04	3.44E-05
53	F71	70	Passenger Truck	180	0.00E+00	2.97E-06	3.15E-07	1.21E+01	1.88E-05	6.47E-02	6.16E-06	6.72E-04	1.48E-03	2.41E-04	5.91E-04	3.83E-04	3.93E-04	8.72E-05	6.01E-05	1.57E-08	1.97E-04	1.10E-04
53	F71	70	Single Unit Short Haul Truck	11	0.00E+00	2.64E-06	1.32E-07	2.07E+00	2.16E-06	4.15E-03	2.81E-06	1.30E-03	1.86E-04	3.72E-05	3.22E-04	7.90E-05	8.02E-05	2.07E-04	8.34E-06	3.37E-09	2.40E-04	2.44E-04
53	F71	70	Combination Short Haul Truck	9	0.00E+00	4.49E-06	3.19E-07	3.26E+00	1.46E-08	3.87E-03	3.29E-06	4.73E-03	3.41E-04	7.47E-05	2.74E-04	9.46E-05	9.43E-05	4.92E-04	1.09E-05	0.00E+00	1.79E-04	8.91E-04
53	F71	70	Combination Long Haul Truck	8	0.00E+00	4.07E-06	2.71E-07	3.04E+00	1.68E-08	4.09E-03	3.09E-06	4.66E-03	3.39E-04	6.20E-05	2.82E-04	8.21E-05	8.30E-05	4.64E-04	1.02E-05	0.00E+00	2.00E-04	8.78E-04
50	F72	40	Passenger Car	244	0.00E+00	4.09E-06	4.43E-07	1.41E+01	2.85E-05	1.06E-01	9.14E-06	4.41E-04	4.22E-03	6.02E-04	8.87E-04	5.72E-04	5.87E-04	7.65E-05	7.04E-05	1.71E-08	3.00E-04	6.90E-05
50	F72	40	Passenger Truck	408	0.00E+00	9.37E-06	9.83E-07	3.15E+01	5.62E-05	1.81E-01	1.88E-05	1.67E-03	7.48E-03	1.06E-03	1.77E-03	1.16E-03	1.18E-03	2.70E-04	1.55E-04	3.32E-08	5.84E-04	2.82E-04
50	F72	40	Single Unit Short Haul Truck	38	0.00E+00	1.69E-05	8.84E-07	8.09E+00	1.47E-05	1.39E-02	1.79E-05	8.25E-03	1.54E-03	2.55E-04	1.99E-03	5.27E-04	5.35E-04	8.18E-04	3.27E-05	1.38E-08	1.46E-03	1.55E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	7.40E-07	3.85E-08	3.50E-01	6.42E-07	6.05E-04	7.87E-07	3.59E-04	6.89E-05	1.14E-05	8.75E-05	2.30E-05	2.34E-05	3.53E-05	1.41E-06	6.00E-10	6.42E-05	6.75E-05
50	F72	40	Combination Short Haul Truck	21	0.00E+00	1.82E-05	1.26E-06	9.23E+00	6.55E-08	1.58E-02	1.35E-05	2.03E-02	2.11E-03	3.81E-04	1.18E-03	3.76E-04	3.80E-04	1.39E-03	3.09E-05	0.00E+00	7.98E-04	3.82E-03
50	F72	40	Combination Long Haul Truck	19	0.00E+00	1.66E-05	1.08E-06	8.78E+00	7.43E-08	1.76E-02	1.27E-05	2.03E-02	2.13E-03	3.38E-04	1.21E-03	3.30E-04	3.36E-04	1.34E-03	2.94E-05	0.00E+00	8.78E-04	3.83E-03
52	F73	60	Passenger Car	152	0.00E+00	2.09E-06	2.26E-07	7.65E+00	1.46E-05	5.41E-02	4.65E-06	2.99E-04	1.50E-03	2.31E-04	4.52E-04	2.92E-04	3.00E-04	3.18E-05	3.82E-05	1.02E-08	1.53E-04	4.69E-05
52	F73	60	Passenger Truck	255	0.00E+00	4.60E-06	4.86E-07	1.74E+01	2.87E-05	9.62E-02	9.48E-06	9.62E-04	2.67E-03	4.14E-04	8.98E-04	5.86E-04	6.01E-04	1.32E-04	8.63E-05	2.16E-08	2.99E-04	1.59E-04
52	F73	60	Single Unit Short Haul Truck	3	0.00E+00	8.96E-07	4.47E-08	5.69E-01	7.36E-07	1.10E-03	9.55E-07	4.26E-04	7.24E-05	1.31E-05	1.08E-04	2.68E-05	2.72E-05	5.70E-05	2.30E-06	9.47E-10	8.13E-05	7.99E-05
52	F73	60	Combination Short Haul Truck	2	0.00E+00	1.24E-06	8.64E-08	8.05E-01	4.38E-09	1.08E-03	9.16E-07	1.34E-03	1.15E-04	2.28E-05	7.88E-05	2.57E-05	2.57E-05	1.21E-04	2.69E-06	0.00E+00	5.29E-05	2.53E-04
52	F73	60	Combination Long Haul Truck	2	0.00E+00	1.11E-06	7.24E-08	7.56E-01	5.02E-09	1.17E-03	8.57E-07	1.33E-03	1.15E-04	1.96E-05	8.09E-05	2.20E-05	2.23E-05	1.15E-04	2.52E-06	0.00E+00	5.85E-05	2.51E-04
53	F74	70	Passenger Car	316	0.00E+00	4.00E-06	4.34E-07	1.54E+01	2.79E-05	1.04E-01	8.87E-06	6.45E-04	2.41E-03	3.89E-04	8.67E-04	5.58E-04	5.73E-04	5.66E-05	7.71E-05	2.10E-08	2.93E-04	1.01E-04
53	F74	70	Passenger Truck	529	0.00E+00	8.72E-06	9.23E-07	3.54E+01	5.53E-05	1.90E-01	1.81E-05	1.97E-03	4.34E-03	7.07E-04	1.74E-03	1.12E-03	1.15E-03	2.56E-04	1.76E-04	4.62E-08	5.78E-04	3.24E-04
53	F74	70	Single Unit Short Haul Truck	65	0.00E+00	1.52E-05	7.63E-07	1.19E+01	1.25E-05	2.39E-02	1.62E-05	7.51E-03	1.07E-03	2.14E-04	1.85E-03	4.55E-04	4.63E-04	1.20E-03	4.81E-05	1.94E-08	1.38E-03	1.41E-03
53	F74	70	Single Unit Long Haul Truck	3	0.00E+00	6.64E-07	3.30E-08	5.07E-01	5.37E-07	1.00E-03	7.07E-07	3.23E-04	4.89E-05	9.53E-06	8.10E-05	1.97E-05	2.00E-05	5.06E-05	2.04E-06	8.18E-10	6.07E-05	6.05E-05
53	F74	70	Combination Short Haul Truck	30	0.00E+00	1.57E-05	1.12E-06	1.14E+01	5.11E-08	1.35E-02	1.15E-05	1.66E-02	1.19E-03	2.62E-04	9.59E-04	3.31E-04	3.31E-04	1.72E-03	3.82E-05	0.00E+00	6.28E-04	3.12E-03
53	F74	70	Combination Long Haul Truck	28	0.00E+00	1.43E-05	9.51E-07	1.07E+01	5.89E-08	1.43E-02	1.08E-05	1.63E-02	1.19E-03	2.17E-04	9.90E-04	2.88E-04	2.91E-04	1.63E-03	3.57E-05	0.00E+00	7.01E-04	3.08E-03
52	F75	60	Passenger Car	204	0.00E+00	2.81E-06	3.04E-07	1.03E+01	1.95E-05	7.25E-02	6.23E-06	4.01E-04	2.01E-03	3.09E-04	6.06E-04	3.92E-04	4.02E-04	4.26E-05	5.13E-05	1.37E-08	2.06E-04	6.29E-05
52	F75	60	Passenger Truck	342	0.00E+00	6.17E-06	6.52E-07	2.33E+01	3.85E-05	1.29E-01	1.27E-05	1.29E-03	3.59E-03	5.55E-04	1.20E-03	7.86E-04	8.05E-04	1.77E-04	1.16E-04	2.90E-08	4.01E-04	2.13E-04
52	F75	60	Single Unit Short Haul Truck	16	0.00E+00	4.62E-06	2.31E-07	2.93E+00	3.80E-06	5.67E-03	4.93E-06	2.20E-03	3.73E-04	6.76E-05	5.58E-04	1.38E-04	1.40E-04	2.94E-04	1.19E-05	4.88E-09	4.19E-04	4.12E-04
52	F75	60	Single Unit Long Haul Truck	1	0.00E+00	2.02E-07	1.00E-08	1.25E-01	1.65E-07	2.40E-04	2.15E-07	9.52E-05	1.68E-05	3.00E-06	2.46E-05	6.02E-06	6.11E-06	1.25E-05	5.06E-07	2.08E-10	1.84E-05	1.78E-05
52	F75	60	Combination Short Haul Truck	9	0.00E+00	5.17E-06	3.61E-07	3.37E+00	1.83E-08	4.52E-03	3.83E-06	5.61E-03	4.81E-04	9.52E-05	3.30E-04	1.07E-04	1.07E-04	5.08E-04	1.13E-05	0.00E+00	2.21E-04	1.06E-03
52	F75	60	Combination Long Haul Truck	8	0.00E+00	4.63E-06	3.03E-07	3.16E+00	2.10E-08	4.87E-03	3.58E-06	5.56E-03	4.83E-04	8.21E-05	3.38E-04	9.22E-05	9.33E-05	4.81E-04	1.06E-05	0.00E+00	2.45E-04	1.05E-03
50	F76	40	Passenger Car	79	0.00E+00	1.33E-06	1.44

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	F80	70	Combination Long Haul Truck	7	0.00E+00	3.84E-06	2.56E-07	2.87E+00	1.58E-08	3.86E-03	2.91E-06	4.39E-03	3.20E-04	5.84E-05	2.66E-04	7.73E-05	7.82E-05	4.37E-04	9.59E-06	0.00E+00	1.89E-04	8.27E-04
52	F81	60	Passenger Car	222	0.00E+00	3.07E-06	3.31E-07	1.12E+01	2.13E-05	7.91E-02	6.80E-06	4.37E-04	2.19E-03	3.37E-04	6.61E-04	4.28E-04	4.39E-04	4.65E-05	5.59E-05	1.50E-08	2.24E-04	6.86E-05
52	F81	60	Passenger Truck	373	0.00E+00	6.73E-06	7.11E-07	2.55E+01	4.20E-05	1.41E-01	1.39E-05	1.41E-03	3.91E-03	6.05E-04	1.31E-03	8.58E-04	8.79E-04	1.94E-04	1.26E-04	3.17E-08	4.38E-04	2.33E-04
52	F81	60	Single Unit Short Haul Truck	68	0.00E+00	2.01E-05	1.01E-06	1.28E+01	1.66E-05	2.47E-02	2.15E-05	9.58E-03	1.63E-03	2.95E-04	2.43E-03	6.02E-04	6.12E-04	1.28E-03	5.17E-05	2.13E-08	1.83E-03	1.80E-03
52	F81	60	Single Unit Long Haul Truck	3	0.00E+00	8.80E-07	4.37E-08	5.46E-01	7.19E-07	1.05E-03	9.39E-07	4.15E-04	7.31E-05	1.31E-05	1.07E-04	2.62E-05	2.67E-05	5.46E-05	2.20E-06	9.05E-10	8.03E-05	7.77E-05
52	F81	60	Combination Short Haul Truck	45	0.00E+00	2.66E-05	1.86E-06	1.73E+01	9.41E-08	2.32E-02	1.97E-05	2.89E-02	2.47E-03	4.89E-04	1.69E-03	5.52E-04	5.52E-04	2.61E-03	5.78E-05	0.00E+00	1.14E-03	5.43E-03
52	F81	60	Combination Long Haul Truck	41	0.00E+00	2.38E-05	1.56E-06	1.62E+01	1.08E-07	2.51E-02	1.84E-05	2.86E-02	2.48E-03	4.22E-04	1.74E-03	4.74E-04	4.79E-04	2.47E-03	5.42E-05	0.00E+00	1.26E-03	5.39E-03
50	F82	40	Passenger Car	129	0.00E+00	2.17E-06	2.35E-07	7.50E+00	1.51E-05	5.60E-02	4.84E-06	2.34E-04	2.24E-03	3.19E-04	4.70E-04	3.03E-04	3.11E-04	4.05E-05	3.73E-05	9.04E-09	1.59E-04	3.66E-05
50	F82	40	Passenger Truck	216	0.00E+00	4.97E-06	5.21E-07	1.67E+01	2.98E-05	9.62E-02	9.98E-06	8.83E-04	3.97E-03	5.64E-04	9.37E-04	6.13E-04	6.25E-04	1.43E-04	8.23E-05	1.76E-08	3.09E-04	1.50E-04
50	F82	40	Single Unit Short Haul Truck	2	0.00E+00	7.72E-07	4.04E-08	3.70E-01	6.71E-07	6.37E-04	8.20E-07	3.77E-04	7.04E-05	1.17E-05	9.12E-05	2.41E-05	2.45E-05	3.74E-05	1.50E-06	6.32E-10	6.66E-05	7.09E-05
50	F82	40	Combination Short Haul Truck	1	0.00E+00	9.37E-07	6.49E-08	4.76E-01	3.38E-09	8.16E-04	6.96E-07	1.05E-03	1.09E-04	1.96E-05	6.08E-05	1.94E-05	1.96E-05	7.16E-05	1.59E-06	0.00E+00	4.11E-05	1.97E-04
50	F82	40	Combination Long Haul Truck	1	0.00E+00	8.54E-07	5.57E-08	4.53E-01	3.83E-09	9.08E-04	6.56E-07	1.05E-03	1.10E-04	1.74E-05	6.24E-05	1.70E-05	1.73E-05	6.91E-05	1.51E-06	0.00E+00	4.53E-05	1.97E-04
53	F83	70	Passenger Car	9	0.00E+00	1.20E-07	1.30E-08	4.60E-01	8.35E-07	3.10E-03	2.65E-07	1.93E-05	7.22E-05	1.16E-05	2.59E-05	1.67E-05	1.72E-05	1.69E-06	2.31E-06	6.28E-10	8.77E-06	3.02E-06
53	F83	70	Passenger Truck	16	0.00E+00	2.61E-07	2.76E-08	1.06E+00	1.65E-06	5.68E-03	5.41E-07	5.90E-05	1.30E-04	2.12E-05	5.19E-05	3.37E-05	3.45E-05	7.66E-06	5.28E-06	1.38E-09	1.73E-05	9.68E-06
53	F83	70	Single Unit Short Haul Truck	1	0.00E+00	1.98E-07	9.95E-09	1.56E-01	1.62E-07	3.12E-04	2.11E-07	9.78E-05	1.40E-05	2.79E-06	2.42E-05	5.93E-06	6.03E-06	1.56E-05	6.26E-07	2.53E-10	1.80E-05	1.83E-05
50	F84	40	Passenger Car	183	0.00E+00	3.08E-06	3.33E-07	1.06E+01	2.14E-05	7.93E-02	6.86E-06	3.31E-04	3.17E-03	4.52E-04	6.66E-04	4.30E-04	4.41E-04	5.75E-05	5.29E-05	1.28E-08	2.26E-04	5.19E-05
50	F84	40	Passenger Truck	307	0.00E+00	7.04E-06	7.38E-07	2.37E+01	4.22E-05	1.36E-01	1.41E-05	1.25E-03	5.62E-03	8.00E-04	1.33E-03	8.68E-04	8.86E-04	2.03E-04	1.17E-04	2.49E-08	4.38E-04	2.12E-04
50	F84	40	Single Unit Short Haul Truck	2	0.00E+00	1.08E-06	5.66E-08	5.18E-01	9.38E-07	8.91E-04	1.15E-06	5.28E-04	9.85E-05	1.63E-05	1.28E-04	3.37E-05	3.42E-05	5.23E-05	2.09E-06	8.84E-10	9.31E-05	9.92E-05
50	F84	40	Combination Short Haul Truck	7	0.00E+00	6.64E-06	4.60E-07	3.37E+00	2.39E-08	5.78E-03	4.93E-06	7.40E-03	7.72E-04	1.39E-04	4.31E-04	1.37E-04	1.39E-04	5.08E-04	1.13E-05	0.00E+00	2.91E-04	1.40E-03
50	F84	40	Combination Long Haul Truck	7	0.00E+00	6.05E-06	3.95E-07	3.21E+00	2.71E-08	6.43E-03	4.65E-06	7.42E-03	7.76E-04	1.23E-04	4.42E-04	1.20E-04	1.23E-04	4.89E-04	1.07E-05	0.00E+00	3.21E-04	1.40E-03
52	F85	60	Passenger Car	166	0.00E+00	2.29E-06	2.47E-07	8.34E+00	1.59E-05	5.90E-02	5.07E-06	3.26E-04	1.64E-03	2.52E-04	4.93E-04	3.19E-04	3.27E-04	3.46E-05	4.17E-05	1.12E-08	1.67E-04	5.11E-05
52	F85	60	Passenger Truck	278	0.00E+00	5.02E-06	5.30E-07	1.90E+01	3.13E-05	1.05E-01	1.03E-05	1.05E-03	2.92E-03	4.51E-04	9.80E-04	6.40E-04	6.55E-04	1.44E-04	9.41E-05	2.36E-08	3.26E-04	1.74E-04
52	F85	60	Single Unit Short Haul Truck	3	0.00E+00	9.35E-07	4.67E-08	5.94E-01	7.69E-07	1.15E-03	9.97E-07	4.45E-04	7.55E-05	1.37E-05	1.13E-04	2.80E-05	2.84E-05	5.95E-05	2.40E-06	9.88E-10	8.49E-05	8.34E-05
52	F85	60	Combination Short Haul Truck	8	0.00E+00	4.47E-06	3.12E-07	2.91E+00	1.58E-08	3.90E-03	3.31E-06	4.85E-03	4.16E-04	8.23E-05	2.85E-04	9.29E-05	9.29E-05	4.39E-04	9.73E-06	0.00E+00	1.91E-04	9.14E-04
52	F85	60	Combination Long Haul Truck	7	0.00E+00	4.00E-06	2.62E-07	2.73E+00	1.81E-08	4.21E-03	3.10E-06	4.81E-03	4.18E-04	7.10E-05	2.93E-04	7.97E-05	8.06E-05	4.16E-04	9.12E-06	0.00E+00	2.12E-04	9.06E-04
53	F86	70	Passenger Car	132	0.00E+00	1.67E-06	1.81E-07	6.42E+00	1.17E-05	4.33E-02	3.70E-06	2.69E-04	1.01E-03	1.62E-04	3.62E-04	2.33E-04	2.39E-04	2.37E-05	3.22E-05	8.77E-09	1.22E-04	4.22E-05
53	F86	70	Passenger Truck	221	0.00E+00	3.64E-06	3.86E-07	1.48E+01	2.31E-05	7.92E-02	7.55E-06	8.23E-04	1.81E-03	2.95E-04	7.25E-04	4.70E-04	4.82E-04	1.07E-04	7.37E-05	1.93E-08	2.41E-04	1.35E-04
53	F86	70	Single Unit Short Haul Truck	5	0.00E+00	1.11E-06	5.59E-08	8.73E-01	9.12E-07	1.75E-03	1.19E-06	5.49E-04	7.84E-05	1.57E-05	1.36E-04	3.33E-05	3.39E-05	8.75E-05	3.52E-06	1.42E-09	1.01E-04	1.03E-04
53	F86	70	Combination Short Haul Truck	12	0.00E+00	6.44E-06	4.58E-07	4.69E+00	2.09E-08	5.55E-03	4.72E-06	6.79E-03	4.89E-04	1.07E-04	3.93E-04	1.36E-04	1.35E-04	7.06E-04	1.56E-05	0.00E+00	2.57E-04	1.28E-03
53	F86	70	Combination Long Haul Truck	11	0.00E+00	5.84E-06	3.90E-07	4.37E+00	2.41E-08	5.87E-03	4.43E-06	6.69E-03	4.87E-04	8.89E-05	4.05E-04	1.18E-04	1.19E-04	6.66E-04	1.46E-05	0.00E+00	2.87E-04	1.26E-03
52	F87	60	Passenger Car	26	0.00E+00	3.63E-07	3.92E-08	1.32E+00	2.52E-06	9.36E-03	8.05E-07	5.17E-05	2.60E-04	3.99E-05	7.83E-05	5.06E-05	5.19E-05	5.50E-06	6.62E-06	1.77E-09	2.66E-05	8.12E-06
52	F87	60	Passenger Truck	44	0.00E+00	7.96E-07	8.42E-08	3.01E+00	4.97E-06	1.67E-02	1.64E-06	1.67E-04	4.63E-04	7.17E-05	1.56E-04	1.02E-04	1.04E-04	2.29E-05	1.49E-05	3.75E-09	5.18E-05	2.76E-05
52	F87	60	Single Unit Short Haul Truck	2	0.00E+00	5.90E-07	2.95E-08	3.75E-01	4.85E-07	7.24E-04	6.29E-07	2.81E-04	4.77E-05	8.63E-06	7.13E-05	1.77E-05	1.79E-05	3.75E-05	1.51E-06	6.24E-10	5.36E-05	5.26E-05
52	F87	60	Combination Short Haul Truck	2	0.00E+00	1.12E-06	7.83E-08	7.30E-01	3.97E-09	9.79E-04	8.31E-07	1.22E-03	1.04E-04	2.06E-05	7.14E-05	2.33E-05	2.33E-05	1.10E-04	2.44E-06	0.00E+00	4.80E-05	2.29E-04
52	F87	60	Combination Long Haul Truck	2	0.00E+00	1.00E-06	6.56E-08	6.85E-01	4.55E-09	1.06E-03	7.77E-07	1.21E-03	1.05E-04	1.78E-05	7.33E-05	2.00E-05	2.02E-05	1.04E-04	2.29E-06	0.00E+00	5.31E-05	2.27E-04
50	F88	40	Passenger Car	6	0.00E+00	9.77E-08	1.06E-08	3.37E-01	6.80E-07	2.52E-03	2.18E-07	1.05E-05	1.01E-04	1.43E-05	2.11E-05	1.36E-05	1.40E-05	1.82E-06	1.68E-06	4.07E-10	7.17E-06	1.65E-06
50	F88	40	Passenger Truck	10	0.00E+00	2.24E-07	2.34E-08	7.51E-01	1.34E-06	4.32E-03	4.49E-07	3.97E-05	1.78E-04	2.54E-05	4.22E-05	2.76E-05	2.81E-05	6.43E-06	3.70E-06	7.92E-10	1.39E-05	6.73E-06

Appendix F.4.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A07	0.00E+00	2.21E-04	1.69E-05	3.79E+02	3.22E-04	1.56E+00	2.34E-04	1.90E-01	1.35E-02	3.88E-03	2.12E-02	1.00E-02	1.02E-02	2.80E-02	1.61E-03	3.62E-07	1.10E-02	3.53E-02
A08	0.00E+00	2.38E-04	1.78E-05	3.79E+02	2.90E-04	1.42E+00	2.40E-04	2.09E-01	1.32E-02	3.88E-03	2.18E-02	9.81E-03	9.95E-03	3.13E-02	1.58E-03	3.45E-07	1.18E-02	3.90E-02
A09	0.00E+00	2.53E-04	1.93E-05	4.21E+02	3.44E-04	1.67E+00	2.62E-04	2.20E-01	1.49E-02	4.31E-03	2.37E-02	1.11E-02	1.12E-02	3.25E-02	1.77E-03	3.91E-07	1.25E-02	4.09E-02
A10	0.00E+00	2.84E-04	2.13E-05	4.55E+02	3.51E-04	1.72E+00	2.87E-04	2.50E-01	1.59E-02	4.65E-03	2.61E-02	1.18E-02	1.20E-02	3.74E-02	1.89E-03	4.14E-07	1.41E-02	4.66E-02
A11	0.00E+00	2.96E-04	2.23E-05	4.70E+02	3.58E-04	1.76E+00	2.96E-04	2.63E-01	1.64E-02	4.81E-03	2.67E-02	1.22E-02	1.23E-02	3.89E-02	1.95E-03	4.14E-07	1.43E-02	4.91E-02
A12	0.00E+00	3.37E-04	2.56E-05	5.58E+02	4.51E-04	2.20E+00	3.48E-04	2.94E-01	1.97E-02	5.71E-03	3.16E-02	1.46E-02	1.48E-02	4.36E-02	2.34E-03	5.18E-07	1.67E-02	5.47E-02
A13	0.00E+00	3.04E-04	2.31E-05	4.97E+02	3.94E-04	1.93E+00	3.11E-04	2.68E-01	1.74E-02	5.08E-03	2.81E-02	1.30E-02	1.32E-02	3.96E-02	2.08E-03	4.50E-07	1.49E-02	4.99E-02
A14	0.00E+00	3.36E-04	2.52E-05	5.35E+02	4.07E-04	2.00E+00	3.38E-04	2.97E-01	1.86E-02	5.46E-03	3.06E-02	1.38E-02	1.40E-02	4.43E-02	2.22E-03	4.82E-07	1.66E-02	5.53E-02
A15	0.00E+00	3.25E-04	2.44E-05	5.05E+02	3.68E-04	1.83E+00	3.20E-04	2.92E-01	1.74E-02	5.15E-03	2.88E-02	1.30E-02	1.31E-02	4.33E-02	2.08E-03	4.32E-07	1.56E-02	5.45E-02
A16	0.00E+00	3.51E-04	2.61E-05	5.39E+02	3.85E-04	1.91E+00	3.44E-04	3.15E-01	1.85E-02	5.50E-03	3.11E-02	1.38E-02	1.39E-02	4.71E-02	2.21E-03	4.65E-07	1.71E-02	5.87E-02
A17	0.00E+00	3.08E-04	2.30E-05	4.71E+02	3.34E-04	1.67E+00	3.00E-04	2.79E-01	1.61E-02	4.80E-03	2.69E-02	1.20E-02	1.22E-02	4.13E-02	1.93E-03	3.95E-07	1.47E-02	5.20E-02
A18	0.00E+00	3.49E-04	2.60E-05	5.38E+02	3.89E-04	1.93E+00	3.44E-04	3.12E-01	1.85E-02	5.49E-03	3.10E-02	1.38E-02	1.40E-02	4.67E-02	2.21E-03	4.67E-07	1.70E-02	5.83E-02
A19	0.00E+00	2.89E-04	2.16E-05	4.36E+02	3.01E-04	1.51E+00	2.80E-04	2.64E-01	1.49E-02	4.45E-03	2.50E-02	1.11E-02	1.12E-02	3.91E-02	1.78E-03	3.60E-07	1.38E-02	4.92E-02
A20	0.00E+00	3.40E-04	2.52E-05	5.14E+02	3.57E-04	1.78E+00	3.30E-04	3.07E-01	1.75E-02	5.24E-03	2.97E-02	1.31E-02	1.32E-02	4.59E-02	2.10E-03	4.35E-07	1.65E-02	5.73E-02
A21	0.00E+00	3.52E-04	2.66E-05	5.59E+02	4.24E-04	2.09E+00	3.52E-04	3.14E-01	1.95E-02	5.71E-03	3.17E-02	1.45E-02	1.47E-02	4.64E-02	2.32E-03	4.91E-07	1.70E-02	5.85E-02
A22	0.00E+00	3.77E-04	2.83E-05	5.98E+02	4.52E-04	2.22E+00	3.78E-04	3.34E-01	2.07E-02	6.11E-03	3.42E-02	1.54E-02	1.56E-02	4.98E-02	2.48E-03	5.34E-07	1.85E-02	6.22E-02
A23	0.00E+00	3.55E-04	2.70E-05	5.77E+02	4.55E-04	2.23E+00	3.61E-04	3.14E-01	2.03E-02	5.90E-03	3.25E-02	1.51E-02	1.53E-02	4.62E-02	2.41E-03	5.17E-07	1.72E-02	5.85E-02
A24	0.00E+00	3.40E-04	2.54E-05	5.26E+02	3.81E-04	1.89E+00	3.35E-04	3.05E-01	1.81E-02	5.37E-03	3.02E-02	1.35E-02	1.36E-02	4.54E-02	2.16E-03	4.54E-07	1.65E-02	5.68E-02
A25	0.00E+00	3.08E-04	2.33E-05	4.88E+02	3.69E-04	1.83E+00	3.07E-04	2.76E-01	1.70E-02	4.99E-03	2.76E-02	1.26E-02	1.28E-02	4.05E-02	2.03E-03	4.23E-07	1.48E-02	5.14E-02
A26	0.00E+00	3.18E-04	2.38E-05	4.93E+02	3.58E-04	1.77E+00	3.14E-04	2.85E-01	1.70E-02	5.03E-03	2.83E-02	1.26E-02	1.28E-02	4.25E-02	2.03E-03	4.28E-07	1.55E-02	5.31E-02
A27	0.00E+00	3.08E-04	2.33E-05	4.88E+02	3.69E-04	1.83E+00	3.07E-04	2.76E-01	1.70E-02	4.99E-03	2.76E-02	1.26E-02	1.28E-02	4.05E-02	2.03E-03	4.23E-07	1.48E-02	5.14E-02
A28	0.00E+00	3.18E-04	2.38E-05	4.93E+02	3.58E-04	1.77E+00	3.14E-04	2.85E-01	1.70E-02	5.03E-03	2.83E-02	1.26E-02	1.28E-02	4.25E-02	2.03E-03	4.28E-07	1.55E-02	5.31E-02
B09	0.00E+00	1.00E-04	8.54E-06	2.59E+02	3.10E-04	1.26E+00	1.41E-04	6.69E-02	1.38E-02	3.09E-03	1.33E-02	7.34E-03	7.48E-03	9.74E-03	1.20E-03	2.92E-07	5.81E-03	1.23E-02
B10	0.00E+00	9.69E-05	7.96E-06	2.27E+02	2.54E-04	1.04E+00	1.27E-04	6.97E-02	1.18E-02	2.69E-03	1.19E-02	6.30E-03	6.42E-03	1.04E-02	1.04E-03	2.44E-07	5.52E-03	1.29E-02
B11	0.00E+00	4.31E-05	3.75E-06	1.17E+02	1.45E-04	5.86E-01	6.31E-05	2.75E-02	6.33E-03	1.41E-03	5.96E-03	3.36E-03	3.43E-03	3.95E-03	5.51E-04	1.35E-07	2.54E-03	5.02E-03
B12	0.00E+00	3.40E-05	2.64E-06	7.00E+01	6.98E-05	2.91E-01	4.07E-05	2.61E-02	3.46E-03	8.16E-04	3.85E-03	1.87E-03	1.90E-03	4.02E-03	3.10E-04	7.12E-08	1.95E-03	4.84E-03
B13	0.00E+00	4.10E-05	3.36E-06	9.51E+01	1.05E-04	4.32E-01	5.31E-05	3.00E-02	4.90E-03	1.12E-03	4.99E-03	2.63E-03	2.68E-03	4.44E-03	4.33E-04	1.01E-07	2.31E-03	5.54E-03
B14	0.00E+00	4.67E-05	3.94E-06	1.19E+02	1.41E-04	5.75E-01	6.52E-05	3.11E-02	6.32E-03	1.42E-03	6.17E-03	3.36E-03	3.43E-03	4.59E-03	5.53E-04	1.35E-07	2.74E-03	5.72E-03
B15	0.00E+00	1.28E-04	1.08E-05	3.29E+02	3.93E-04	1.59E+00	1.80E-04	8.42E-02	1.75E-02	3.92E-03	1.71E-02	9.30E-03	9.49E-03	1.25E-02	1.53E-03	3.76E-07	7.63E-03	1.55E-02
B16	0.00E+00	7.98E-05	6.68E-06	2.02E+02	2.39E-04	9.68E-01	1.11E-04	5.30E-02	1.07E-02	2.40E-03	1.06E-02	5.69E-03	5.80E-03	7.91E-03	9.36E-04	2.30E-07	4.75E-03	9.73E-03
B17	0.00E+00	1.44E-04	1.11E-05	2.93E+02	2.89E-04	1.21E+00	1.71E-04	1.12E-01	1.44E-02	3.41E-03	1.61E-02	7.81E-03	7.95E-03	1.71E-02	1.30E-03	2.93E-07	8.13E-03	2.07E-02
B18	0.00E+00	1.07E-04	8.15E-06	2.07E+02	1.94E-04	8.18E-01	1.22E-04	8.55E-02	1.00E-02	2.40E-03	1.15E-02	5.44E-03	5.53E-03	1.32E-02	9.04E-04	1.99E-07	5.97E-03	1.59E-02
B19	0.00E+00	2.48E-04	2.11E-05	6.57E+02	8.02E-04	3.24E+00	3.58E-04	1.57E-01	3.52E-02	7.86E-03	3.42E-02	1.87E-02	1.91E-02	2.33E-02	3.07E-03	7.68E-07	1.50E-02	2.87E-02
B20	0.00E+00	1.92E-04	1.51E-05	3.94E+02	3.89E-04	1.63E+00	2.27E-04	1.52E-01	1.94E-02	4.59E-03	2.12E-02	1.05E-02	1.07E-02	2.29E-02	1.74E-03	3.83E-07	1.05E-02	2.82E-02
B21	0.00E+00	1.23E-04	1.18E-05	4.27E+02	6.00E-04	2.38E+00	2.19E-04	5.57E-02	2.44E-02	5.22E-03	2.10E-02	1.28E-02	1.31E-02	7.43E-03	2.08E-03	5.49E-07	7.90E-03	9.88E-03
B22	0.00E+00	9.40E-05	7.78E-06	2.15E+02	2.34E-04	9.70E-01	1.20E-04	7.15E-02	1.11E-02	2.54E-03	1.11E-02	5.93E-03	6.03E-03	1.03E-02	9.75E-04	2.18E-07	5.05E-03	1.32E-02
B23	0.00E+00	1.26E-04	1.21E-05	4.39E+02	6.18E-04	2.45E+00	2.25E-04	5.64E-02	2.51E-02	5.37E-03	2.15E-02	1.31E-02	1.35E-02	7.49E-03	2.14E-03	5.65E-07	8.09E-03	9.98E-03
B24	0.00E+00	2.51E-04	1.90E-05	4.58E+02	3.94E-04	1.70E+00	2.74E-04	2.12E-01	2.15E-02	5.26E-03	2.55E-02	1.18E-02	1.20E-02	3.23E-02	1.96E-03	4.07E-07	1.35E-02	3.94E-02
C29	0.00E+00	4.45E-06	3.80E-07	1.05E+01	1.48E-05	5.31E-02	6.50E-06	2.61E-03	1.34E-03	2.24E-04	6.26E-04	3.42E-04	3.50E-04	2.88E-04	4.97E-05	1.23E-08	2.75E-04	4.79E-04
C30	0.00E+00	4.90E-05	3.26E-06	3.29E+01	2.59E-05	1.02E-01	4.37E-05	4.78E-02	7.73E-03	1.24E-03	4.21E-03	1.40E-03	1.42E-03	3.41E-03	1.28E-04	1.83E-08	2.79E-03	9.01E-03
C31	0.00E+00	2.38E-05	1.65E-06	2.56E+01	2.52E-05	9.36E-02	2.40E-05	2.07E-02	3.95E-03	6.66E-04	2.33E-03	8.92E-04	9.07E-04	1.96E-03	1.08E-04	2.08E-08	1.42E-03	3.87E-03
C32	0.00E+00	6.98E-05	4.94E-06	8.74E+01	8.32E-05	3.14E-01	7.16E-05	5.79E-02	1.03E-02	1.85E-03	6.89E-03	2.79E-03	2.83E-03	6.35E-03	3.71E-04	7.62E-08	4.05E-03	1.08E-02
C33	0.00E+00	2.01E-06	1.89E-07	6.00E+00	1.01E-05	3.46E-02	3.68E-06	6.27E-04	9.89E-04	1.54E-04	3.57E-04	2.12E-04	2.18E-04	7.44E-05	2.95E-05	7.58E-09	1.40E-04	1.11E-04
C34	0.00E+00	5.14E-06	3.66E-07	6.25E+00	9.72E-06	3.06E-02	6.16E-06	3.39E-03	1.52E-03	2.27E-04	6.13E-04	2.63E-04	2.68E-04	2.78E-04	2.85E-05	6.35E-09	3.44E-04	6.34E-04
C35	0.00E+00	1.30E-05	1.04E-06	2.71E+01	3.74E-05	1.32E-01	1.80E-05	7.64E-03	3.42E-03	5.77E-04	1.76E-03	8.92E-04	9.12E-04	8.81E-04	1.27E-04	3.20E-08	8.42E-04	1.41E-03
C36	0.00E+00	9.33E-05	6.22E-06	6.50E+01	5.57E-05	2.11E-01	8.45E-05	8.94E-02	1.53E-02	2.45E-03	8.17E-03	2.77E-03	2.81E-03	6.41E-03	2.57E-04	3.89E-08	5.35E-03	1.68E-02
C37	0.00E+00	2.30E-05	1.56E-06	2.21E+01	1.85E-05	7.14E-02	2.19E-05	2.09E-02	3.36E-03	5.75E-04	2.12E-03	7.62E-04	7.74E-04	1.97E-03	8.95E-05	1.57E-08	1.35E-03	3.93E-03
C38	0.00E+00	8.54E-05	6.35E-06	1.25E+02	1.34E-04	5.03E-01	9.36E-05	6.90E-02	1.51E-02	2.65E-03	8.91E-03	3.98E-03	4.05E-03	7.46E-03	5.47E-04	1.16E-07	4.85E-03	1.29E-02
C39	0.00E+00	1.67E-05	1.17E-06	2.16E+01	2.67E-05	9.15E-02	1.90E-05	1.23E-02	3.36E-03	5.54E-04	1.88E-03	7.74E-04	7.88E-04	1.23E-03	9.55E-05	2.20E-08	1.10E-03	2.29E-03
C40	0.00E+00	2.45E-05	1.69E-06	2.48E+01	3.43E-05	1.10E-01	2.67E-05	1.87E-02	5.97E-03	9.07E-04	2.63E-03	1.05E-03	1.07E-03	1.45E-03	1.09E-04	2.27E-08	1.56E-03	3.51E-03
C41	0.00E+00	5.10E-06	4.51E-07	1.43E+01	1.88E-05	7.27E-02	7.83E-06	2.93E-03	1.05E-03	2.05E-04	7.44E-04	4.25E-04	4.35E-04	4.09E-04	6.78E-05	1.64E-08	3.11E-04	5.35E-04
C42	0.00E+00	3.03E-05	2.24E-06	5.52E+01	5.27E-05	2.12E-01	3.47E-05	2.31E-02	3.57E-03	7.56E-04	3.33E-03	1.49E-03	1.52E-03	3.53E-03	2.41E-04	5.25E-08	1.82E-03	4.31E-03
C43	0.00E+00	1.36E-05	1.20E-06	3.93E+01	5.32E-05	2.03E-01	2.17E-05	7.08E-03	2.92E-03	5.67E-04	2.08E-03	1.18E-03	1.21E-03	1.02E-03	1.88E-04	4.74E-08	8.82E-04	1.28E-03
C44	0.00E+00	3.10E-05	2.63E-06	7.74E+01	9.55E-05	3.73E-01	4.36E-05	2.02E-02	5.58E-03	1.10E-03	4.12E-03	2.26E-03	2.31E-03	2.86E-03	3.61E-04	8.38E-08	1.82E-03	3.71E-03
C45	0.00E+00	2.42E-05	1.89E-06	4.46E+01	5.70E-05	2.06E-01	3.06E-05	1.66E-02	5.57E-03	9.51E-04	2.95E-03	1.45E-03	1.48E-03	1.84E-03	2.05E-04	4.86E-08	1.47E-03	3.09E-03
C46	0.00E+00	9.29E-05	6.07E-06	5.69E+01	3.98E-05	1.55E-01	8.11E-05	9.07E-02	1.32E-02	2.15E-03	7.87E-03	2.48E-03	2.52E-03	6.48E-03	2.16E-04	2.99E-08	5.35E-03	1.71E-02
C47	0.00E+00	1.69E-06	1.49E-07	4.11E+00	6.44E-06	2.26E-02	2.65E-06	8.81E-04	6.73E-04	1.06E-04	2.54E-04	1.44E-04	1.47E-04	8.94E-05	1.97E-05	4.82E-09	1.08E-04	1.61E-04
C48	0.00E+00	6.07E-05	4.11E-06	6.20E+01	4.51E-05	1.78E-01	5.68E-05	5.34E-02	6.99E-03	1.30E-03	5.47E-03	1.95E-03	1.98E-03	5.86E-03	2.48E-04	4.51E-08	3.48E-03	1.00E-02
C49	0.00E+00	4.23E-05	2.99E-06	5.46E+01	6.64E-05	2.31E-01	4.75E-05	3.19E-02	8.53E-03	1.41E-03	4.68E-03	1.94E-03	1.98E-03	3.15E-03	2.41E-04	5.42E-08	2.70E-03	5.97E-03
C50	0.00E+00	2.39E-06	2.18E-07	5.62E+00	9.71E-06	3.33E-02	3.86E-06	1.16E-03	1.43E-03	2.06E-04	3.66E-04	2.15E-04	2.19E-04	1.03E-04	2.71E-05	5.80E-09	1.47E-04	2.14E-04
C51	0.00E+00	3.51E-05	2.63E-06	5.52E+01	6.40E-05	2.34E-01	4.05E-05	2.64E-02	6.75E-03	1.17E-03	3.91E-03	1.78E-03	1.82E-03	2.91E-03	2.47E-04	5.57E-08	2.08E-03	4.93E-03
C52	0.00E+00	1.62E-05	1.14E-06	1.59E+01	1.96E-05	6.94E-02	1.67E-05	1.40E-02	3.86E-03	5.91E-04	1.62E-03	6.52E-04	6.64E-04	1.03E-03	6.88E-05	1.26E-08	9.50E-04	2.62E-03
C53	0.00E+00	2.58E-06	2.50E-07	7.86E+00	1.30E-05	4.54E-02	4.70E-06	9.45E-04	1.30E-03	2.02E-04	4.51E-04	2.76E-04	2.82E-04	1.02E-04	3.85E-05	9.67E-09	1.69E-04	1.69E-04
C54	0.00E+00	9.11E-06	6.88E-07	1.52E+01	1.85E-05	6.66E-02	1.10E-05	6.50E-03	1.87E-03	3.22E-04	1.06E-03	4.94E-04	5.03E-04	7.27E-04	6.87E-05	1.61E-08	5.59E-04	1.21E-03
C55	0.00E+00	4.08E-06	2.82E-07	4.88E+00	5.63E-06	1.96E-02	4.43E-06	3.17E-03	7.56E-04	1.26E-04	4.37E-04	1.74E-04	1.77E-04	3.11E-04	2.12E-05	4.68E-09	2.60E-04	5.93E-04
C56	0.00E+00	1.54E-05	1.02E-06	1.25E+01	1.47E-05	4.77E-02	1.53E-05	1.29E-02	2.96E-03	4.61E-04	1.51E-03	5.44E-04	5.54E-04	9.71E-04	5.25E-05	1.02E-08	9.57E-04	2.43E-03
C57	0.00E+00	2.84E-05	2.10E-06	4.12E+01	4.42E-05	1.66E-01	3.11E-05	2.28E-02	4.99E-03	8.76E-04	2.97E-03	1.32E-03	1.34E-03	2.47E-03	1.81E-04	3.86E-08	1.63E-03	4.25E-03
C58	0.00E+00	4.80E-06	3.84E-07	7.58E+00	1.17E-05	4.08E-02	6.14E-06	3.45E-03	1.90E-03	2.80E-04	5.85E-04	2.95E-04	3.01E-04	2.67E-04	3.52E-05	7.08E-09	2.83E-04	6.43E-04
C59	0.00E+00	1.14E-05	9.13E-07	2.24E+01	2.94E-05	1.06E-01	1.50E-05	7.59E-03	2.81E-03	4.78E-04	1.44E-03	7.29E-04	7.45E-04	8.42E-04	1.04E-04	2.49E-08	6.98E-04	1.41E-03
C60	0.00E+00	2.62E-05	2.08E-06	4.83E+01	6.93E-05	2.43E-01	3.50E-05	1.70E-02	7.78E-03	1.24E-03	3.40E-03	1.70E-03	1.74E-03	1.69E-03	2.25E-04	5.32E-08	1.67E-03	3.15E-03
C61	0.00E+00	1.57E-05	1.19E-06	2.59E+01	3.08E-05	1.13E-01	1.86E-05	1.16E-02	3.18E-03	5.51E-04	1.78E-03	8.35E-04	8.52E-04	1.28E-03	1.17E-04	2.65E-08	9.30E-04	2.17E-03
C62	0.00E+00	2.50E-05	2.32E-06	6.30E+01	1.12E-04	3.79E-01	4.27E-05	9.79E-03	1.60E-02	2.30E-03	4.08E-03	2.42E-03	2.47E-03	9.62E-04	3.06E-04	6.72E-08	1.60E-03	1.79E-03
C63	0.00E+00	9.59E-05	6.56E-06	9.77E+01	9.00E-05	3.38E-01	9.42E-05	8.48E-02	1.50E-02	2.54E-03	9.14E-03	3.40E-03	3.45E-03	8.03E-03	4.04E-04	7.55E-08	5.69E-03	1.59E-02
C64	0.00E+00	6.02E-05	4.70E-06	1.10E+02	1.39E-04	5.03E-01	7.56E-05	4.17E-02	1.37E-02	2.34E-03	7.30E-03	3.56E-03	3.64E-03	4.63E-03	5.03E-04	1.19E-07	3.65E-03	7.74E-03
C65	0.00E+00	3.72E-07	3.55E-08	1.10E+00	1.81E-06	6.33E-03	6.64E-07	1.45E-04	1.82E-04	2.84E-05	6.36E-05	3.86E-05	3.95E-05	1.55E-05	5.38E-06	1.35E-09	2.42E-05	2.60E-05
C66	0.00E+00	1.66E-05	1.34E-06	2.82E+01	4.57E-05	1.55E-01	2.24E-05	1.05E-02	7.06E-03	1.03E-03	2.16E-03	1.11E-03	1.13E-03	8.53E-04	1.32E-04	2.80E-08	1.03E-03	1.95E-03
C67	0.00E+00	6.17E-05	4.60E-06	1.12E+02	1.06E-04	4.32E-01	7.01E-05	4.81E-02	7.28E-03	1.54E-03	6.67E-03	3.03E-03	3.08E-03	7.23E-03	4.89E-04	1.03E-07	3.60E-03	8.96E-03
C68	0.00E+00	4.93E-05	3.70E-06	9.31E+01	9.22E-05	3.70E-01	5.77E-05	3.72E-02	6.12E-03	1.28E-03	5.52E-03	2.55E-03	2.59E-03	5.63E-03	4.10E-04	8.96E-08	2.93E-03	6.93E-03
C69	0.00E+00	7.69E-05	5.90E-06	1.34E+02	1.44E-04	5.56E-01	8.92E-05	5.90E-02	1.24E-02	2.33E-03	8.42E-03	4.00E-03	4.07E-03	7.39E-03	5.96E-04	1.30E-07	4.35E-03	1.10E-02
C70	0.00E+00	8.53E-05	6.36E-06	1.61E+02	1.60E-04	6.40E-01	1.00E-04	6.35E-02	1.06E-02	2.22E-03	9.63E-03	4.41E-03	4.48E-03	9.69E-03	7.10E-04	1.58E-07	5.16E-03	1.18E-02
C71	0.00E+00	6.72E-05	4.89E-06	9.53E+01	1.02E-04	3.78E-01	7.36E-05	5.28E-02	1.15E-02	2.02E-03	7.10E-03	3.07E-03	3.12E-03	5.82E-03	4.17E-04	9.13E-08	3.97E-03	9.86E-03
C72	0.00E+00	4.12E-06	3.26E-07	6.71E+00	1.09E-05	3.65E-02	5.51E-06	2.58E-03	1.67E-03	2.45E-04	5.34E-04	2.67E-04	2.72E-04	2.12E-04	3.14E-05	6.72E-09	2.61E-04	4.81E-04
C73	0.00E+00	2.43E-05	1.89E-06	3.67E+01	5.53E-05	1.87E-01	3.04E-05	1.66E-02	7.40E-03	1.14E-03	2.92E-03	1.42E-03	1.46E-03	1.46E-03	1.69E-04	3.84E-08	1.47E-03	3.09E-03
C74	0.00E+00	9.13E-05	6.54E-06	1.14E+02	1.29E-04	4.69E-01	9.85E-05	7.53E-02	1.79E-02	2.96E-03	9.53E-03	3.98E-03	4.05E-03	7.19E-03	4.97E-04	1.03E-07	5.49E-03	1.41E-02
C81	0.00E+00	9.75E-05	6.87E-06	1.14E+02	9.79E-05	3.83E-01	9.57E-05	8.49E-02	1.33E-02	2.42E-03	9.11E-03	3.60E-03	3.65E-03	9.19E-03	4.75E-04	8.97E-08	5.45E-03	1.59E-02
C82	0.00E+00	1.06E-04	7.26E-06	1.09E+02	1.01E-04	3.83E-01	1.04E-04	9.38E-02	1.67E-02	2.84E-03	1.01E-02	3.78E-03	3.84E-03	8.86E-03	4.53E-04	8.41E-08	6.22E-03	1.76E-02
C83	0.00E+00	1.54E-04	1.14E-05	2.61E+02	2.02E-04	8.91E-01	1.60E-04	1.34E-01	1.19E-02	2.97E-03	1.49E-02	6.55E-03	6.63E-03	2.06E-02	1.09E-03	2.17E-07	8.22E-03	2.51E-02
C84	0.00E+00	6.66E-05	4.59E-06	9.39E+01	5.97E-05	2.65E-01	6.43E-05	5.80E-02	5.40E-03	1.24E-03	6.10E-03	2.32E-03	2.35E-03	8.84E-03	3.78E-04	6.73E-08	3.76E-03	1.09E-02
C85	0.00E+00	8.93E-05	6.40E-06	1.47E+02	1.24E-04	5.14E-01	9.58E-05	7.19E-02	9.16E-03	1.99E-03	9.17E-03	3.87E-03	3.93E-03	1.10E-02	6.26E-04	1.29E-07	5.25E-03	1.34E-02
C86	0.00E+00	1.53E-04	1.05E-05	2.15E+02	1.37E-04	6.05E-01	1.48E-04	1.32E-01	1.23E-02	2.83E-03	1.41E-02	5.33E-03	5.38E-03	2.03E-02	8.67E-04	1.57E-07	8.74E-03	2.48E-02
D63	0.00E+00	3.35E-07	2.85E-08	7.27E-01	1.04E-06	3.81E-03	4.72E-07	2.13E-04	9.57E-05	1.60E-05	4.48E-05	2.45E-05	2.51E-05	2.29E-05	3.41E-06	8.27E-10	1.97E-05	3.93E-05
D64	0.00E+00	9.91E-06	7.16E-07	1.29E+01	1.34E-05	5.08E-02	1.05E-05	8.11E-03	1.57E-03	2.79E-04	1.00E-03	4.24E-04	4.31E-04	8.85E-04	5.55E-05	1.16E-08	5.70E-04	1.52E-03
D65	0.00E+00	3.15E-05	2.34E-06	5.01E+01	5.15E-05	2.00E-01	3.53E-05	2.44E-02	4.40E-03	8.49E-04	3.36E-03	1.51E-03	1.53E-03	3.12E-03	2.19E-04	4.84E-08	1.83E-03	4.56E-03
D66	0.00E+00	3.88E-05	2.97E-06	6.84E+01	7.71E-05	2.95E-01	4.62E-05	2.85E-02	6.14E-03	1.17E-03	4.41E-03	2.09E-03	2.13E-03

Appendix F.4.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D82	0.00E+00	6.05E-06	6.31E-07	2.21E+01	3.78E-05	1.34E-01	1.25E-05	1.37E-03	3.04E-03	4.93E-04	1.20E-03	7.69E-04	7.88E-04	1.64E-04	1.10E-04	2.96E-08	4.13E-04	2.29E-04
D83	0.00E+00	5.20E-05	4.20E-06	1.04E+02	1.27E-04	4.84E-01	6.64E-05	3.67E-02	9.57E-03	1.79E-03	6.28E-03	3.22E-03	3.28E-03	4.55E-03	4.76E-04	1.11E-07	2.99E-03	6.80E-03
D84	0.00E+00	4.03E-05	3.21E-06	7.73E+01	9.17E-05	3.51E-01	5.02E-05	2.91E-02	7.06E-03	1.33E-03	4.74E-03	2.38E-03	2.43E-03	3.62E-03	3.51E-04	8.12E-08	2.31E-03	5.41E-03
D85	0.00E+00	4.25E-05	3.27E-06	7.23E+01	7.79E-05	3.04E-01	4.90E-05	3.29E-02	6.47E-03	1.23E-03	4.62E-03	2.19E-03	2.23E-03	4.11E-03	3.20E-04	7.03E-08	2.38E-03	6.15E-03
D86	0.00E+00	3.63E-05	2.94E-06	7.22E+01	8.76E-05	3.36E-01	4.61E-05	2.60E-02	6.66E-03	1.24E-03	4.34E-03	2.23E-03	2.28E-03	3.20E-03	3.30E-04	7.66E-08	2.06E-03	4.82E-03
D87	0.00E+00	1.04E-04	7.99E-06	1.82E+02	2.04E-04	7.85E-01	1.23E-04	7.76E-02	1.64E-02	3.11E-03	1.16E-02	5.56E-03	5.66E-03	9.77E-03	8.15E-04	1.84E-07	5.94E-03	1.45E-02
D88	0.00E+00	8.77E-05	6.44E-06	1.30E+02	1.24E-04	4.92E-01	9.38E-05	7.10E-02	1.13E-02	2.21E-03	8.87E-03	3.87E-03	3.93E-03	9.00E-03	5.60E-04	1.17E-07	4.93E-03	1.33E-02
D89	0.00E+00	5.10E-06	4.03E-07	8.58E+00	1.29E-05	4.58E-02	6.68E-06	3.42E-03	1.43E-03	2.30E-04	6.47E-04	3.22E-04	3.29E-04	3.35E-04	3.96E-05	9.82E-09	3.19E-04	6.36E-04
D90	0.00E+00	3.78E-06	2.85E-07	5.67E+00	8.17E-06	2.86E-02	4.69E-06	2.62E-03	9.31E-04	1.51E-04	4.58E-04	2.13E-04	2.17E-04	2.59E-04	2.58E-05	6.35E-09	2.41E-04	4.89E-04
D91	0.00E+00	4.07E-06	3.62E-07	1.00E+01	1.51E-05	5.47E-02	6.25E-06	2.27E-03	1.33E-03	2.21E-04	5.94E-04	3.40E-04	3.48E-04	2.46E-04	4.77E-05	1.19E-08	2.46E-04	4.16E-04
D92	0.00E+00	9.68E-06	9.46E-07	3.17E+01	5.31E-05	1.88E-01	1.86E-05	2.73E-03	4.31E-03	7.02E-04	1.81E-03	1.10E-03	1.13E-03	3.40E-04	1.56E-04	4.23E-08	6.76E-04	4.73E-04
D93	0.00E+00	2.67E-06	2.52E-07	7.87E+00	1.27E-05	4.54E-02	4.72E-06	1.07E-03	1.06E-03	1.74E-04	4.54E-04	2.71E-04	2.78E-04	1.22E-04	3.83E-05	1.01E-08	1.75E-04	1.91E-04
D94	0.00E+00	8.61E-06	8.38E-07	2.74E+01	4.54E-05	1.62E-01	1.61E-05	2.85E-03	3.73E-03	6.08E-04	1.55E-03	9.50E-04	9.73E-04	3.34E-04	1.35E-04	3.60E-08	5.79E-04	5.01E-04
E01	0.00E+00	2.23E-05	1.81E-06	4.04E+01	6.32E-05	2.23E-01	3.05E-05	1.41E-02	6.78E-03	1.08E-03	2.95E-03	1.52E-03	1.55E-03	1.39E-03	1.89E-04	4.76E-08	1.40E-03	2.61E-03
E02	0.00E+00	1.63E-05	1.32E-06	2.91E+01	4.48E-05	1.59E-01	2.20E-05	1.07E-02	4.88E-03	7.81E-04	2.12E-03	1.09E-03	1.11E-03	1.04E-03	1.35E-04	3.37E-08	1.01E-03	1.99E-03
E03	0.00E+00	1.15E-05	9.00E-07	2.25E+01	2.77E-05	1.04E-01	1.48E-05	7.68E-03	2.05E-03	3.85E-04	1.42E-03	7.00E-04	7.14E-04	9.93E-04	1.03E-04	2.53E-08	7.06E-04	1.42E-03
E04	0.00E+00	8.86E-06	8.23E-07	2.66E+01	3.99E-05	1.47E-01	1.52E-05	3.96E-03	2.58E-03	4.62E-04	1.46E-03	8.62E-04	8.82E-04	4.89E-04	1.30E-04	3.42E-08	5.72E-04	7.11E-04
E05	0.00E+00	1.15E-05	9.36E-07	2.50E+01	3.26E-05	1.21E-01	1.58E-05	7.17E-03	2.32E-03	4.29E-04	1.53E-03	7.86E-04	8.03E-04	9.25E-04	1.17E-04	2.93E-08	7.20E-04	1.32E-03
E06	0.00E+00	2.95E-06	2.55E-07	8.21E+00	1.22E-05	4.42E-02	4.89E-06	1.22E-03	7.81E-04	1.41E-04	4.82E-04	2.66E-04	2.72E-04	1.71E-04	3.98E-05	1.09E-08	2.09E-04	2.20E-04
E07	0.00E+00	1.02E-04	8.20E-06	1.79E+02	2.72E-04	9.71E-01	1.35E-04	6.82E-02	2.99E-02	4.80E-03	1.30E-02	6.68E-03	6.82E-03	6.59E-03	8.29E-04	2.04E-07	6.21E-03	1.27E-02
E08	0.00E+00	9.19E-05	8.04E-06	2.02E+02	3.37E-04	1.19E+00	1.41E-04	4.99E-02	3.44E-02	5.43E-03	1.36E-02	7.61E-03	7.79E-03	4.95E-03	9.62E-04	2.49E-07	5.77E-03	9.17E-03
E09	0.00E+00	9.23E-05	7.58E-06	1.70E+02	2.66E-04	9.44E-01	1.27E-04	5.96E-02	2.86E-02	4.57E-03	1.22E-02	6.38E-03	6.52E-03	5.79E-03	7.95E-04	1.99E-07	5.68E-03	1.10E-02
E10	0.00E+00	8.07E-05	7.06E-06	1.78E+02	2.98E-04	1.05E+00	1.24E-04	4.34E-02	3.02E-02	4.78E-03	1.20E-02	6.71E-03	6.86E-03	4.32E-03	8.48E-04	2.20E-07	5.10E-03	7.97E-03
E11	0.00E+00	9.22E-05	7.45E-06	1.62E+02	2.47E-04	8.80E-01	1.23E-04	6.23E-02	2.71E-02	4.35E-03	1.18E-02	6.05E-03	6.18E-03	6.01E-03	7.51E-04	1.85E-07	5.62E-03	1.16E-02
E12	0.00E+00	9.78E-05	8.53E-06	2.12E+02	3.53E-04	1.25E+00	1.49E-04	5.42E-02	3.62E-02	5.72E-03	1.43E-02	8.01E-03	8.19E-03	5.35E-03	1.01E-03	2.61E-07	6.11E-03	9.96E-03
E13	0.00E+00	2.95E-05	2.49E-06	6.97E+01	9.45E-05	3.52E-01	4.26E-05	1.75E-02	6.55E-03	1.20E-03	4.08E-03	2.21E-03	2.25E-03	2.21E-03	3.29E-04	8.30E-08	1.82E-03	3.21E-03
E14	0.00E+00	2.05E-05	1.82E-06	5.48E+01	7.84E-05	2.91E-01	3.21E-05	1.09E-02	5.24E-03	9.50E-04	3.07E-03	1.76E-03	1.80E-03	1.35E-03	2.63E-04	6.75E-08	1.27E-03	1.99E-03
E15	0.00E+00	1.66E-05	1.43E-06	3.90E+01	5.22E-05	1.97E-01	2.35E-05	1.05E-02	3.69E-03	6.76E-04	2.22E-03	1.23E-03	1.26E-03	1.28E-03	1.84E-04	4.47E-08	9.61E-04	1.94E-03
E16	0.00E+00	1.52E-05	1.34E-06	3.86E+01	5.36E-05	2.01E-01	2.28E-05	8.84E-03	3.67E-03	6.69E-04	2.17E-03	1.23E-03	1.25E-03	1.08E-03	1.84E-04	4.60E-08	9.09E-04	1.62E-03
E17	0.00E+00	1.26E-05	1.09E-06	3.19E+01	4.47E-05	1.66E-01	1.91E-05	6.91E-03	3.02E-03	5.51E-04	1.84E-03	1.02E-03	1.04E-03	8.77E-04	1.52E-04	3.92E-08	7.98E-04	1.26E-03
E18	0.00E+00	1.18E-05	9.20E-07	2.27E+01	2.75E-05	1.03E-01	1.50E-05	8.02E-03	2.06E-03	3.87E-04	1.44E-03	7.03E-04	7.17E-04	1.04E-03	1.04E-04	2.51E-08	7.20E-04	1.49E-03
E19	0.00E+00	3.84E-05	2.93E-06	5.80E+01	8.26E-05	2.94E-01	4.73E-05	2.76E-02	9.56E-03	1.55E-03	4.59E-03	2.17E-03	2.21E-03	2.68E-03	2.63E-04	6.35E-08	2.38E-03	5.14E-03
E20	0.00E+00	3.82E-05	3.25E-06	7.99E+01	1.33E-04	4.65E-01	5.76E-05	2.05E-02	1.35E-02	2.14E-03	5.58E-03	3.04E-03	3.10E-03	2.08E-03	3.81E-04	9.98E-08	2.48E-03	3.77E-03
E21	0.00E+00	7.13E-06	6.01E-07	1.61E+01	2.12E-05	8.01E-02	9.90E-06	4.59E-03	1.52E-03	2.79E-04	9.38E-04	5.08E-04	5.18E-04	5.65E-04	7.56E-05	1.84E-08	4.19E-04	8.47E-04
E22	0.00E+00	1.56E-06	1.26E-07	2.94E+00	3.38E-06	1.32E-02	1.89E-06	1.20E-03	2.69E-04	5.06E-05	1.76E-04	8.98E-05	9.15E-05	1.45E-04	1.33E-05	2.90E-09	8.39E-05	2.23E-04
E23	0.00E+00	7.59E-05	5.48E-06	1.10E+02	1.02E-04	4.02E-01	8.05E-05	6.09E-02	9.40E-03	1.85E-03	7.68E-03	3.24E-03	3.29E-03	7.83E-03	4.68E-04	9.94E-08	4.37E-03	1.14E-02
E24	0.00E+00	7.73E-05	5.42E-06	9.99E+01	8.05E-05	3.25E-01	7.72E-05	6.46E-02	8.33E-03	1.67E-03	7.36E-03	2.90E-03	2.94E-03	8.32E-03	4.14E-04	8.25E-08	4.41E-03	1.21E-02
E25	0.00E+00	8.80E-06	8.53E-07	2.69E+01	4.36E-05	1.57E-01	1.58E-05	3.56E-03	3.65E-03	5.98E-04	1.51E-03	9.26E-04	9.47E-04	3.92E-04	1.31E-04	3.42E-08	5.59E-04	6.36E-04
E26	0.00E+00	1.25E-05	1.19E-06	3.64E+01	5.81E-05	2.09E-01	2.17E-05	5.58E-03	4.92E-03	8.08E-04	2.06E-03	1.25E-03	1.28E-03	6.11E-04	1.77E-04	4.57E-08	7.86E-04	1.01E-03
E27	0.00E+00	1.28E-05	1.16E-06	3.28E+01	5.01E-05	1.82E-01	2.02E-05	6.89E-03	4.38E-03	7.26E-04	1.92E-03	1.12E-03	1.14E-03	7.46E-04	1.57E-04	3.96E-08	7.79E-04	1.26E-03
E28	0.00E+00	9.57E-06	9.58E-07	3.18E+01	5.29E-05	1.89E-01	1.83E-05	3.09E-03	4.34E-03	7.07E-04	1.76E-03	1.10E-03	1.13E-03	3.51E-04	1.57E-04	4.15E-08	6.29E-04	5.41E-04
E29	0.00E+00	8.60E-06	7.66E-07	2.19E+01	3.39E-05	1.22E-01	1.37E-05	4.31E-03	2.93E-03	4.84E-04	1.32E-03	7.52E-04	7.69E-04	4.84E-04	1.05E-04	2.71E-08	5.47E-04	7.85E-04
E30	0.00E+00	4.05E-06	3.53E-07	1.01E+01	1.57E-05	5.57E-02	6.43E-06	1.94E-03	1.34E-03	2.22E-04	6.24E-04	3.48E-04	3.56E-04	2.26E-04	4.85E-05	1.27E-08	2.68E-04	3.54E-04
E31	0.00E+00	1.55E-05	1.42E-06	4.20E+01	6.61E-05	2.37E-01	2.57E-05	7.21E-03	5.63E-03	9.29E-04	2.47E-03	1.44E-03	1.48E-03	8.10E-04	2.03E-04	5.26E-08	9.91E-04	1.31E-03
E32	0.00E+00	9.34E-06	8.12E-07	2.24E+01	3.40E-05	1.22E-01	1.43E-05	4.99E-03	2.98E-03	4.95E-04	1.38E-03	7.68E-04	7.85E-04	5.60E-04	1.07E-04	2.73E-08	5.90E-04	9.14E-04
E33	0.00E+00	4.48E-05	3.83E-06	9.25E+01	1.51E-04	5.34E-01	6.61E-05	2.61E-02	1.57E-02	2.49E-03	6.35E-03	3.48E-03	3.56E-03	2.57E-03	4.38E-04	1.12E-07	2.79E-03	4.82E-03
E34	0.00E+00	2.94E-05	2.49E-06	5.94E+01	9.63E-05	3.41E-01	4.27E-05	1.74E-02	1.01E-02	1.60E-03	4.11E-03	2.23E-03	2.28E-03	1.71E-03	2.81E-04	7.16E-08	1.83E-03	3.22E-03
E35	0.00E+00	4.40E-05	3.58E-06	7.87E+01	1.20E-04	4.30E-01	5.91E-05	2.94E-02	1.32E-02	2.11E-03	5.67E-03	2.94E-03	3.00E-03	2.84E-03	3.65E-04	9.00E-08	2.68E-03	5.46E-03
E36	0.00E+00	2.48E-05	2.02E-06	4.46E+01	6.89E-05	2.45E-01	3.35E-05	1.63E-02	7.49E-03	1.20E-03	3.23E-03	1.67E-03	1.71E-03	1.58E-03	2.08E-04	5.16E-08	1.52E-03	3.02E-03
E37	0.00E+00	7.25E-05	5.69E-06	1.17E+02	1.71E-04	6.11E-01	9.18E-05	5.16E-02	1.94E-02	3.14E-03	8.84E-03	4.35E-03	4.44E-03	4.96E-03	5.35E-04	1.29E-07	4.40E-03	9.61E-03
E38	0.00E+00	3.03E-05	2.37E-06	4.84E+01	7.01E-05	2.52E-01	3.81E-05	2.17E-02	8.03E-03	1.30E-03	3.67E-03	1.80E-03	1.84E-03	2.09E-03	2.21E-04	5.30E-08	1.84E-03	4.04E-03
E39	0.00E+00	1.53E-05	1.36E-06	3.88E+01	5.99E-05	2.15E-01	2.43E-05	7.75E-03	5.18E-03	8.58E-04	2.33E-03	1.33E-03	1.36E-03	8.66E-04	1.86E-04	4.79E-08	9.68E-04	1.41E-03
E40	0.00E+00	1.90E-05	1.64E-06	4.50E+01	6.78E-05	2.44E-01	2.89E-05	1.03E-02	5.96E-03	9.91E-04	2.78E-03	1.54E-03	1.57E-03	1.16E-03	2.14E-04	5.47E-08	1.20E-03	1.89E-03
E41	0.00E+00	1.03E-05	9.63E-07	2.89E+01	4.57E-05	1.65E-01	1.74E-05	4.80E-03	3.90E-03	6.41E-04	1.66E-03	9.91E-04	1.01E-03	5.25E-04	1.40E-04	3.60E-08	6.41E-04	8.68E-04
E42	0.00E+00	1.48E-05	1.35E-06	3.99E+01	6.25E-05	2.25E-01	2.45E-05	7.03E-03	5.35E-03	8.82E-04	2.34E-03	1.37E-03	1.40E-03	7.86E-04	1.92E-04	4.97E-08	9.43E-04	1.28E-03
E43	0.00E+00	7.87E-06	7.75E-07	2.50E+01	4.09E-05	1.47E-01	1.45E-05	2.92E-03	3.40E-03	5.55E-04	1.39E-03	8.61E-04	8.82E-04	3.24E-04	1.22E-04	3.22E-08	5.07E-04	5.17E-04
E44	0.00E+00	1.16E-05	1.11E-06	3.45E+01	5.57E-05	2.00E-01	2.05E-05	4.82E-03	4.68E-03	7.67E-04	1.96E-03	1.19E-03	1.22E-03	5.36E-04	1.68E-04	4.39E-08	7.43E-04	8.63E-04
E45	0.00E+00	1.91E-05	1.50E-06	3.80E+01	4.71E-05	1.76E-01	2.48E-05	1.26E-02	3.47E-03	6.49E-04	2.39E-03	1.18E-03	1.21E-03	1.64E-03	1.74E-04	4.30E-08	1.18E-03	2.34E-03
E46	0.00E+00	6.63E-06	5.30E-07	1.36E+01	1.71E-05	6.43E-02	8.74E-06	4.35E-03	1.25E-03	2.33E-04	8.39E-04	4.25E-04	4.34E-04	5.58E-04	6.28E-05	1.54E-08	4.05E-04	8.06E-04
E47	0.00E+00	1.92E-05	1.58E-06	4.28E+01	5.65E-05	2.11E-01	2.68E-05	1.17E-02	3.98E-03	7.35E-04	2.58E-03	1.35E-03	1.38E-03	1.51E-03	2.00E-04	5.04E-08	1.20E-03	2.16E-03
E48	0.00E+00	4.61E-06	3.69E-07	9.39E+00	1.17E-05	4.42E-02	6.04E-06	3.07E-03	8.63E-04	1.61E-04	5.79E-04	2.93E-04	2.99E-04	3.91E-04	4.32E-05	1.05E-08	2.79E-04	5.68E-04
E49	0.00E+00	2.32E-05	1.86E-06	4.90E+01	6.31E-05	2.35E-01	3.13E-05	1.47E-02	4.52E-03	8.40E-04	3.02E-03	1.54E-03	1.57E-03	1.89E-03	2.28E-04	5.69E-08	1.44E-03	2.71E-03
E50	0.00E+00	4.01E-06	3.70E-07	1.16E+01	1.71E-05	6.35E-02	6.66E-06	1.95E-03	1.12E-03	2.02E-04	6.36E-04	3.75E-04	3.84E-04	2.37E-04	5.64E-05	1.46E-08	2.51E-04	3.53E-04
E51	0.00E+00	2.03E-05	1.62E-06	4.18E+01	5.28E-05	1.98E-01	2.69E-05	1.32E-02	3.85E-03	7.16E-04	2.59E-03	1.31E-03	1.33E-03	1.70E-03	1.93E-04	4.77E-08	1.25E-03	2.45E-03
E52	0.00E+00	1.82E-06	1.76E-07	5.79E+00	8.78E-06	3.25E-02	3.22E-06	8.02E-04	5.66E-04	1.01E-04	3.06E-04	1.88E-04	1.92E-04	9.39E-05	2.83E-05	7.40E-09	1.14E-04	1.44E-04
E53	0.00E+00	2.86E-05	2.32E-06	5.98E+01	7.57E-05	2.85E-01	3.80E-05	1.89E-02	5.53E-03	1.03E-03	3.63E-03	1.87E-03	1.91E-03	2.39E-03	2.77E-04	6.74E-08	1.72E-03	3.50E-03
E54	0.00E+00	2.95E-05	2.21E-06	4.66E+01	4.71E-05	1.85E-01	3.26E-05	2.34E-02	4.10E-03	7.92E-04	3.07E-03	1.39E-03	1.42E-03	2.95E-03	2.03E-04	4.34E-08	1.65E-03	4.38E-03
E55	0.00E+00	2.80E-05	2.34E-06	6.39E+01	8.48E-05	3.18E-01	3.94E-05	1.73E-02	5.98E-03	1.10E-03	3.76E-03	2.01E-03	2.06E-03	2.18E-03	3.00E-04	7.45E-08	1.70E-03	3.20E-03
E56	0.00E+00	1.75E-05	1.48E-06	4.10E+01	5.52E-05	2.07E-01	2.50E-05	1.07E-02	3.86E-03	7.09E-04	2.38E-03	1.30E-03	1.33E-03	1.33E-03	1.93E-04	4.80E-08	1.05E-03	1.97E-03
E57	0.00E+00	1.28E-05	1.11E-06	2.93E+01	4.31E-05	1.57E-01	1.87E-05	7.64E-03	3.88E-03	6.48E-04	1.78E-03	9.95E-04	1.02E-03	8.26E-04	1.39E-04	3.42E-08	7.61E-04	1.41E-03
E58	0.00E+00	1.61E-05	1.35E-06	3.41E+01	4.86E-05	1.77E-01	2.25E-05	1.01E-02	4.47E-03	7.51E-04	2.15E-03	1.15E-03	1.18E-03	1.11E-03	1.60E-04	3.92E-08	9.71E-04	1.87E-03
E59	0.00E+00	8.84E-05	6.56E-06	1.38E+02	1.38E-04	5.41E-01	9.74E-05	6.98E-02	1.21E-02	2.33E-03	9.23E-03	4.12E-03	4.19E-03	8.86E-03	5.99E-04	1.29E-07	5.03E-03	1.30E-02
E60	0.00E+00	5.07E-05	3.90E-06	9.11E+01	1.04E-04	3.98E-01	6.11E-05	3.68E-02	8.20E-03	1.55E-03	5.83E-03	2.79E-03	2.84E-03	4.69E-03	4.10E-04	9.52E-08	2.98E-03	6.85E-03
E61	0.00E+00	2.37E-05	2.09E-06	6.21E+01	8.81E-05	3.27E-01	3.67E-05	1.28E-02	5.92E-03	1.07E-03	3.52E-03	1.99E-03	2.03E-03	1.59E-03	2.97E-04	7.63E-08	1.48E-03	2.33E-03
E62	0.00E+00	1.60E-05	1.57E-06	5.36E+01	8.31E-05	3.05E-01	2.97E-05	6.01E-03	5.25E-03	9.34E-04	2.85E-03	1.75E-03	1.79E-03	7.24E-04	2.64E-04	7.06E-08	1.05E-03	1.06E-03
E63	0.00E+00	9.60E-05	7.12E-06	1.38E+02	1.55E-04	5.82E-01	1.07E-04	7.57E-02	1.71E-02	2.99E-03	1.02E-02	4.55E-03	4.63E-03	8.26E-03	6.04E-04	1.32E-07	5.55E-03	1.41E-02
E64	0.00E+00	7.09E-05	5.83E-06	1.41E+02	1.96E-04	7.17E-01	9.53E-05	4.69E-02	1.84E-02	3.11E-03	9.08E-03	4.77E-03	4.87E-03	5.11E-03	6.57E-04	1.58E-07	4.20E-03	8.69E-03
E65	0.00E+00	2.40E-05	2.28E-06	7.12E+01	1.15E-04	4.12E-01	4.24E-05	9.80E-03	9.63E-03	1.58E-03	4.06E-03	2.45E-03	2.51E-03	1.10E-03	3.47E-04	9.08E-08	1.54E-03	1.76E-03
E66	0.00E+00	4.71E-05	4.36E-06	1.27E+02	1.99E-04	7.19E-01	7.73E-05	2.36E-02	1.71E-02	2.83E-03	7.34E-03	4.36E-03	4.46E-03	2.55E-03	6.15E-04	1.56E-07	2.88E-03	4.29E-03
E67	0.00E+00	1.47E-05	1.34E-06	4.35E+01	6.51E-05	2.39E-01	2.51E-05	6.36E-03	4.19E-03	7.53E-04	2.43E-03	1.41E-03	1.44E-03	8.20E-04	2.12E-04	5.67E-08	9.86E-04	1.14E-03
E68	0.00E+00	1.57E-05	1.46E-06	4.76E+01	7.17E-05	2.64E-01	2.71E-05	6.76E-03	4.61E-03	8.27E-04	2.61E-03	1.54E-03	1.58E-03	8.46E-04	2.32E-04	6.17E-08	1.03E-03	1.21E-03
E69	0.00E+00	2.13E-05	1.99E-06	6.28E+01	1.02E-04	3.64E-01	3.79E-05	7.84E-03	8.47E-03	1.39E-03	3.67E-03	2.18E-03	2.23E-03	9.33E-04	3.07E-04	8.20E-08	1.44E-03	1.40E-03
E70	0.00E+00	1.49E-05	1.50E-06	5.05E+01	8.46E-05	3.02E-01	2.91E-05	4.49E-03	6.90E-03	1.12E-03	2.79E-03	1.75E-03	1.79E-03	5.17E-04	2.49E-04	6.65E-08	9.92E-04	7.80E-04
E71	0.00E+00	2.79E-05	2.58E-06	7.96E+01	1.28E-04	4.56E-01	4.84E-05	1.12E-02	1.07E-02	1.76E-03	4.68E-03	2.75E-03	2.81E-03	1.31E-03	3.87E-04	1.03E-07	1.86E-03	2.01E-03
E72	0.00E+00	2.49E-05	2.56E-06	8.76E+01	1.48E-04	5.27E-01	4.98E-05	6.87E-03	1.20E-02	1.95E-03	4.77E-03	3.04E-03	3.11E-03	7.87E-04	4.33E-04	1.16E-07	1.66E-03	1.18E-03
E73	0.00E+00	2.62E-06	2.72E-07	8.53E+00	1.59E-05	5.55E-02	5.31E-06	6.14E-04	1.48E-03	2.30E-04	5.09E-04	3.26E-04	3.34E-04	7.18E-05	4.22E-05	1.16E-08	1.75E-04	1.05E-04
E74	0.00E+00	6.00E-06	6.23E-07	1.95E+01	3.64E-05	1.27E-01	1.21E-05	1.42E-03	3.40E-03	5.26E-04	1.16E-03	7.46E-04	7.64E-04	1.65E-04	9.66E-05	2.65E-08	4.00E-04	2.42E-04
E75	0.00E+00	6.27E-05	5.42E-06	1.50E+02	2.12E-04	7.64E-01	9.21E-05	3.71E-02	1.93E-02	3.22E-03	8.82E-03	4.89E-03	5.00E-03	4.05E-03	7.13E-04	1.75E-07	3.80E-03	6.82E-03
E76	0.00E+00	3.92E-05	3.63E-06	1.14E+02	1.74E-04	6.19E-01	6.62E-05	1.77E-02	1.49E-02	2.46E-03	6.38E-03	3.77E-03	3.86E-03	1.99E-03	5.57E-04	1.42E-07	2.52E-03	3.20E-03
E77	0.00E+00	6.73E-05	5.84E-06	1.64E+02	2.33E-04	8.39E-01	1.00E-04	3.90E-02	2.10E-02	3.51E-03	9.58E-03	5.34E-03	5.46E-03	4.27E-03	7.79E-04	1.92E-07	4.10E-03	7.16E-03
E78	0.00E+00	4.86E-05	4.50E-06	1.41E+02	2.15E-04	7.63E-01	8.17E-05	2.23E-02	1.84E-02	3.04E-03	7.87E-03	4.65E-03	4.76E-03	2.49E-03	6.87E-04	1.75E-07	3.10E-03	4.03E-03
E79	0.00E+00	5.52E-05	5.02E-06	1.56E+02	2.36E-04	8.36E-01	9.14E-05	2.55E-02	2.03E-02	3.35E-03	8.84E-03	5.13E-03	5.26E-03	2.89E-03	7.56E-04	1.94E-07	3.57E-03	4.61E-03
E80	0.00E+00	5.30E-05	4.69E-06	1.38E+02	2.02E-04	7.22E-01	8.28E-05	2.77E-02	1.78E-02	2.96E-03	7.98E-03	4.52E-03	4.63E-03	3.09E-03	6.62E-04	1.67E-07	3.34E-03	5.06E-03
E81	0.00E+00	1.37E-06	1.29E-07	3.88E+00	7.22E-06	2.46E-02	2.59E-06	3.35E-04	6.69E-04	1.04E-04	2.54E-04	1.50E-04	1.54E-04

Appendix F.4.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E97	0.00E+00	7.87E-05	6.33E-06	1.65E+02	2.03E-04	7.64E-01	1.03E-04	5.26E-02	1.58E-02	2.89E-03	9.86E-03	5.05E-03	5.14E-03	6.66E-03	7.62E-04	1.81E-07	4.72E-03	9.74E-03
E98	0.00E+00	4.96E-05	3.89E-06	9.26E+01	1.05E-04	4.02E-01	6.00E-05	3.66E-02	8.70E-03	1.62E-03	5.67E-03	2.79E-03	2.84E-03	4.58E-03	4.18E-04	9.37E-08	2.83E-03	6.82E-03
F01	0.00E+00	5.21E-05	3.96E-06	7.71E+01	1.08E-04	3.86E-01	6.32E-05	3.83E-02	1.27E-02	2.06E-03	6.12E-03	2.87E-03	2.93E-03	3.69E-03	3.48E-04	8.29E-08	3.19E-03	7.13E-03
F02	0.00E+00	2.46E-05	2.00E-06	4.45E+01	6.91E-05	2.45E-01	3.35E-05	1.59E-02	7.47E-03	1.19E-03	3.23E-03	1.67E-03	1.71E-03	1.55E-03	2.07E-04	5.19E-08	1.53E-03	2.94E-03
F03	0.00E+00	8.92E-07	7.58E-08	2.04E+00	2.69E-06	1.02E-02	1.24E-06	5.79E-04	1.92E-04	3.53E-05	1.17E-04	6.41E-05	6.55E-05	7.06E-05	9.55E-06	2.31E-09	5.17E-05	1.07E-04
F04	0.00E+00	1.58E-07	1.68E-08	6.36E-01	1.04E-06	3.79E-03	3.37E-07	3.36E-05	6.32E-05	1.11E-05	3.25E-05	2.10E-05	2.15E-05	3.75E-06	3.18E-06	8.73E-10	1.09E-05	5.43E-06
F05	0.00E+00	1.56E-05	1.32E-06	3.14E+01	5.08E-05	1.80E-01	2.27E-05	9.34E-03	5.31E-03	8.44E-04	2.18E-03	1.18E-03	1.21E-03	9.16E-04	1.48E-04	3.78E-08	9.74E-04	1.72E-03
F06	0.00E+00	3.36E-05	2.48E-06	4.34E+01	5.41E-05	1.99E-01	3.74E-05	2.75E-02	7.05E-03	1.16E-03	3.60E-03	1.59E-03	1.62E-03	2.59E-03	1.90E-04	4.17E-08	1.98E-03	5.14E-03
F07	0.00E+00	2.96E-05	2.46E-06	5.76E+01	9.26E-05	3.27E-01	4.23E-05	1.78E-02	9.72E-03	1.55E-03	4.08E-03	2.17E-03	2.22E-03	1.75E-03	2.71E-04	6.93E-08	1.86E-03	3.28E-03
F08	0.00E+00	4.29E-05	3.19E-06	5.88E+01	7.81E-05	2.81E-01	4.99E-05	3.31E-02	9.60E-03	1.57E-03	4.82E-03	2.18E-03	2.22E-03	3.17E-03	2.62E-04	6.04E-08	2.61E-03	6.17E-03
F09	0.00E+00	7.45E-06	6.86E-07	2.18E+01	3.23E-05	1.19E-01	1.25E-05	3.50E-03	2.10E-03	3.78E-04	1.20E-03	7.03E-04	7.20E-04	4.32E-04	1.06E-04	2.77E-08	4.75E-04	6.32E-04
F10	0.00E+00	2.52E-06	2.35E-07	7.61E+00	1.14E-05	4.21E-02	4.33E-06	1.11E-03	7.37E-04	1.32E-04	4.16E-04	2.47E-04	2.52E-04	1.38E-04	3.71E-05	9.80E-09	1.63E-04	2.00E-04
F13	0.00E+00	1.75E-06	1.47E-07	3.92E+00	5.12E-06	1.93E-02	2.41E-06	1.14E-03	3.67E-04	6.77E-05	2.29E-04	1.23E-04	1.26E-04	1.40E-04	1.83E-05	4.45E-09	1.03E-04	2.10E-04
F14	0.00E+00	5.74E-07	4.81E-08	1.28E+00	1.68E-06	6.33E-03	7.91E-07	3.72E-04	1.20E-04	2.22E-05	7.50E-05	4.03E-05	4.12E-05	4.60E-05	6.00E-06	1.46E-09	3.37E-05	6.87E-05
F15	0.00E+00	1.52E-05	1.40E-06	4.14E+01	6.49E-05	2.34E-01	2.51E-05	7.33E-03	5.57E-03	9.18E-04	2.40E-03	1.42E-03	1.45E-03	8.03E-04	2.00E-04	5.13E-08	9.44E-04	1.33E-03
F16	0.00E+00	1.79E-05	1.63E-06	4.63E+01	7.11E-05	2.58E-01	2.85E-05	9.51E-03	6.21E-03	1.03E-03	2.71E-03	1.58E-03	1.62E-03	1.03E-03	2.22E-04	5.61E-08	1.09E-03	1.74E-03
F17	0.00E+00	1.30E-05	1.19E-06	3.49E+01	5.43E-05	1.96E-01	2.12E-05	6.46E-03	4.69E-03	7.73E-04	2.02E-03	1.19E-03	1.22E-03	7.04E-04	1.68E-04	4.29E-08	7.98E-04	1.17E-03
F18	0.00E+00	1.15E-05	1.03E-06	2.80E+01	4.17E-05	1.52E-01	1.74E-05	6.78E-03	3.73E-03	6.20E-04	1.64E-03	9.48E-04	9.69E-04	7.19E-04	1.33E-04	3.27E-08	6.73E-04	1.24E-03
F19	0.00E+00	1.50E-05	1.59E-06	5.64E+01	9.66E-05	3.44E-01	3.16E-05	3.13E-03	7.76E-03	1.26E-03	3.03E-03	1.96E-03	2.01E-03	3.74E-04	2.80E-04	7.57E-08	1.02E-03	5.14E-04
F20	0.00E+00	1.17E-05	1.24E-06	4.43E+01	7.60E-05	2.70E-01	2.48E-05	2.35E-03	6.09E-03	9.87E-04	2.38E-03	1.54E-03	1.58E-03	2.83E-04	2.20E-04	5.95E-08	8.01E-04	3.83E-04
F21	0.00E+00	9.81E-05	6.94E-06	1.14E+02	1.02E-04	4.00E-01	9.71E-05	8.50E-02	1.36E-02	2.45E-03	9.23E-03	3.67E-03	3.73E-03	9.20E-03	4.73E-04	9.06E-08	5.49E-03	1.59E-02
F22	0.00E+00	9.08E-05	6.32E-06	9.93E+01	8.18E-05	3.26E-01	8.74E-05	7.98E-02	1.16E-02	2.13E-03	8.32E-03	3.19E-03	3.23E-03	8.65E-03	4.05E-04	7.49E-08	5.08E-03	1.50E-02
F23	0.00E+00	2.80E-05	2.06E-06	3.79E+01	3.99E-05	1.53E-01	2.99E-05	2.31E-02	4.65E-03	8.21E-04	2.84E-03	1.24E-03	1.26E-03	2.49E-03	1.64E-04	3.40E-08	1.58E-03	4.31E-03
F24	0.00E+00	2.08E-05	1.55E-06	3.00E+01	3.37E-05	1.27E-01	2.31E-05	1.65E-02	3.72E-03	6.51E-04	2.20E-03	9.88E-04	1.01E-03	1.80E-03	1.31E-04	2.85E-08	1.19E-03	3.09E-03
F25	0.00E+00	8.89E-05	6.33E-06	1.02E+02	1.15E-04	4.25E-01	9.35E-05	7.53E-02	1.62E-02	2.71E-03	9.03E-03	3.70E-03	3.76E-03	7.12E-03	4.34E-04	9.11E-08	5.27E-03	1.41E-02
F26	0.00E+00	9.18E-05	6.47E-06	1.02E+02	1.12E-04	4.14E-01	9.52E-05	7.83E-02	1.62E-02	2.71E-03	9.21E-03	3.70E-03	3.76E-03	7.41E-03	4.31E-04	8.94E-08	5.45E-03	1.47E-02
F27	0.00E+00	1.88E-04	1.36E-05	2.37E+02	3.00E-04	1.07E+00	2.11E-04	1.47E-01	3.82E-02	6.31E-03	2.05E-02	8.78E-03	8.94E-03	1.42E-02	1.04E-03	2.37E-07	1.16E-02	2.75E-02
F28	0.00E+00	1.69E-04	1.19E-05	1.94E+02	2.26E-04	8.20E-01	1.80E-04	1.39E-01	3.10E-02	5.16E-03	1.75E-02	7.14E-03	7.26E-03	1.33E-02	8.34E-04	1.82E-07	1.03E-02	2.60E-02
F29	0.00E+00	4.33E-05	3.29E-06	6.40E+01	8.96E-05	3.20E-01	5.25E-05	3.18E-02	1.05E-02	1.71E-03	5.09E-03	2.38E-03	2.43E-03	3.07E-03	2.89E-04	6.88E-08	2.66E-03	5.93E-03
F30	0.00E+00	2.52E-05	2.32E-06	6.37E+01	1.12E-04	3.91E-01	4.28E-05	1.08E-02	1.09E-02	1.71E-03	4.13E-03	2.43E-03	2.48E-03	1.13E-03	3.09E-04	8.27E-08	1.65E-03	1.96E-03
F35	0.00E+00	1.15E-05	9.42E-07	2.60E+01	3.49E-05	1.29E-01	1.62E-05	6.77E-03	2.43E-03	4.47E-04	1.57E-03	8.23E-04	8.41E-04	8.77E-04	1.22E-04	3.12E-08	7.25E-04	1.25E-03
F36	0.00E+00	2.84E-06	2.38E-07	6.95E+00	9.70E-06	3.57E-02	4.25E-06	1.52E-03	6.53E-04	1.19E-04	4.13E-04	2.22E-04	2.27E-04	2.00E-04	3.30E-05	8.66E-09	1.86E-04	2.77E-04
F37	0.00E+00	8.42E-05	6.60E-06	1.35E+02	1.97E-04	7.07E-01	1.07E-04	5.99E-02	2.25E-02	3.63E-03	1.03E-02	5.04E-03	5.15E-03	5.76E-03	6.20E-04	1.49E-07	5.12E-03	1.11E-02
F38	0.00E+00	7.25E-05	6.27E-06	1.53E+02	2.52E-04	8.92E-01	1.08E-04	4.20E-02	2.61E-02	4.13E-03	1.04E-02	5.77E-03	5.89E-03	4.11E-03	7.28E-04	1.86E-07	4.48E-03	7.74E-03
F39	0.00E+00	1.09E-05	9.62E-07	2.80E+01	3.93E-05	1.47E-01	1.65E-05	6.21E-03	2.67E-03	4.86E-04	1.57E-03	8.94E-04	9.13E-04	7.59E-04	1.34E-04	3.37E-08	6.57E-04	1.14E-03
F40	0.00E+00	6.20E-06	5.14E-07	1.31E+01	1.63E-05	6.25E-02	8.14E-06	4.34E-03	1.22E-03	2.25E-04	7.64E-04	4.06E-04	4.14E-04	5.27E-04	6.03E-05	1.41E-08	3.48E-04	8.04E-04
F41	0.00E+00	5.95E-06	6.09E-07	2.08E+01	3.50E-05	1.25E-01	1.19E-05	1.63E-03	2.85E-03	4.63E-04	1.14E-03	7.21E-04	7.38E-04	1.90E-04	1.03E-04	2.75E-08	3.99E-04	2.80E-04
F42	0.00E+00	8.56E-06	9.04E-07	3.21E+01	5.50E-05	1.95E-01	1.80E-05	1.77E-03	4.41E-03	7.15E-04	1.73E-03	1.12E-03	1.14E-03	2.14E-04	1.60E-04	4.31E-08	5.86E-04	2.91E-04
F45	0.00E+00	1.13E-05	1.08E-06	3.35E+01	5.39E-05	1.94E-01	1.98E-05	4.77E-03	4.53E-03	7.43E-04	1.89E-03	1.15E-03	1.18E-03	5.25E-04	1.63E-04	4.24E-08	7.12E-04	8.56E-04
F46	0.00E+00	9.28E-06	9.26E-07	3.09E+01	5.16E-05	1.84E-01	1.79E-05	2.85E-03	4.21E-03	6.87E-04	1.72E-03	1.07E-03	1.10E-03	3.32E-04	1.52E-04	4.07E-08	6.21E-04	4.97E-04
F47	0.00E+00	3.08E-07	2.44E-08	5.22E-01	7.89E-07	2.79E-03	4.05E-07	2.06E-04	8.70E-05	1.40E-05	3.92E-05	1.96E-05	2.00E-05	2.02E-05	2.41E-06	5.98E-10	1.92E-05	3.83E-05
F48	0.00E+00	2.94E-06	2.40E-07	5.26E+00	8.02E-06	2.87E-02	3.94E-06	1.99E-03	8.83E-04	1.41E-04	3.77E-04	1.96E-04	2.00E-04	1.91E-04	2.44E-05	5.98E-09	1.77E-04	3.70E-04
F49	0.00E+00	1.59E-04	1.15E-05	2.03E+02	2.57E-04	9.25E-01	1.78E-04	1.25E-01	3.28E-02	5.40E-03	1.73E-02	7.49E-03	7.63E-03	1.20E-02	8.90E-04	2.02E-07	9.72E-03	2.33E-02
F50	0.00E+00	1.66E-04	1.18E-05	1.95E+02	2.31E-04	8.36E-01	1.79E-04	1.36E-01	3.12E-02	5.19E-03	1.74E-02	7.17E-03	7.30E-03	1.30E-02	8.41E-04	1.85E-07	1.01E-02	2.54E-02
F51	0.00E+00	5.11E-05	4.15E-06	1.05E+02	1.51E-04	5.40E-01	7.13E-05	3.03E-02	1.36E-02	2.29E-03	6.92E-03	3.58E-03	3.65E-03	3.45E-03	4.91E-04	1.24E-07	3.26E-03	5.59E-03
F52	0.00E+00	1.97E-05	1.63E-06	4.21E+01	6.12E-05	2.20E-01	2.81E-05	1.15E-02	5.50E-03	9.22E-04	2.72E-03	1.44E-03	1.47E-03	1.30E-03	1.98E-04	5.01E-08	1.25E-03	2.11E-03
F53	0.00E+00	2.60E-05	2.55E-06	8.37E+01	1.39E-04	4.94E-01	4.90E-05	8.51E-03	1.14E-02	1.86E-03	4.72E-03	2.90E-03	2.97E-03	9.95E-04	4.11E-04	1.10E-07	1.74E-03	1.49E-03
F54	0.00E+00	1.77E-05	1.71E-06	5.53E+01	9.09E-05	3.24E-01	3.27E-05	6.26E-03	7.50E-03	1.23E-03	3.14E-03	1.91E-03	1.96E-03	7.27E-04	2.71E-04	7.21E-08	1.18E-03	1.11E-03
F71	0.00E+00	1.57E-05	1.19E-06	2.58E+01	3.06E-05	1.12E-01	1.85E-05	1.16E-02	3.18E-03	5.49E-04	1.78E-03	8.33E-04	8.49E-04	1.28E-03	1.16E-04	2.64E-08	9.27E-04	2.17E-03
F72	0.00E+00	6.59E-05	4.69E-06	7.21E+01	1.00E-04	3.35E-01	7.29E-05	5.13E-02	1.75E-02	2.65E-03	7.13E-03	2.98E-03	3.04E-03	3.93E-03	3.20E-04	6.47E-08	4.08E-03	9.63E-03
F73	0.00E+00	9.97E-06	9.18E-07	2.72E+01	4.41E-05	1.54E-01	1.69E-05	4.38E-03	4.48E-03	7.00E-04	1.62E-03	9.54E-04	9.77E-04	4.60E-04	1.32E-04	3.29E-08	6.49E-04	7.93E-04
F74	0.00E+00	5.86E-05	4.22E-06	8.53E+01	9.63E-05	3.46E-01	6.62E-05	4.34E-02	1.03E-02	1.80E-03	6.49E-03	2.78E-03	2.83E-03	4.91E-03	3.78E-04	8.74E-08	3.65E-03	8.09E-03
F75	0.00E+00	2.36E-05	1.86E-06	4.32E+01	6.21E-05	2.17E-01	3.15E-05	1.52E-02	6.95E-03	1.11E-03	3.06E-03	1.52E-03	1.55E-03	1.51E-03	2.01E-04	4.78E-08	1.51E-03	2.81E-03
F76	0.00E+00	4.37E-06	4.63E-07	1.48E+01	2.75E-05	9.31E-02	9.07E-06	6.84E-04	3.80E-03	5.41E-04	8.62E-04	5.61E-04	5.73E-04	1.12E-04	7.32E-05	1.63E-08	2.87E-04	1.14E-04
F77	0.00E+00	7.20E-05	5.05E-06	8.53E+01	7.59E-05	2.91E-01	7.17E-05	6.13E-02	9.97E-03	1.80E-03	6.87E-03	2.71E-03	2.75E-03	6.70E-03	3.57E-04	7.02E-08	4.12E-03	1.15E-02
F78	0.00E+00	7.41E-06	6.76E-07	1.77E+01	3.09E-05	1.05E-01	1.21E-05	3.36E-03	4.48E-03	6.46E-04	1.16E-03	6.78E-04	6.92E-04	3.09E-04	8.54E-05	1.85E-08	4.65E-04	6.17E-04
F79	0.00E+00	2.35E-05	2.20E-06	6.67E+01	1.09E-04	3.80E-01	4.09E-05	9.62E-03	1.10E-02	1.72E-03	3.93E-03	2.34E-03	2.40E-03	1.03E-03	3.25E-04	8.13E-08	1.55E-03	1.73E-03
F80	0.00E+00	4.55E-05	4.32E-06	1.43E+02	2.22E-04	7.85E-01	8.11E-05	1.77E-02	1.87E-02	3.07E-03	7.85E-03	4.71E-03	4.82E-03	2.03E-03	6.99E-04	1.82E-07	3.01E-03	3.15E-03
F81	0.00E+00	8.12E-05	5.50E-06	8.35E+01	8.08E-05	2.94E-01	8.12E-05	6.93E-02	1.28E-02	2.16E-03	7.95E-03	2.94E-03	2.99E-03	6.66E-03	3.48E-04	6.88E-08	4.97E-03	1.30E-02
F82	0.00E+00	9.74E-06	9.19E-07	2.55E+01	4.56E-05	1.55E-01	1.70E-05	3.60E-03	6.49E-03	9.33E-04	1.63E-03	9.78E-04	9.99E-04	3.63E-04	1.24E-04	2.73E-08	6.25E-04	6.55E-04
F83	0.00E+00	1.03E-06	8.14E-08	2.01E+00	2.66E-06	9.51E-03	1.36E-06	6.65E-04	2.52E-04	4.28E-05	1.32E-04	6.57E-05	6.71E-05	7.49E-05	9.33E-06	2.27E-09	6.45E-05	1.23E-04
F84	0.00E+00	2.39E-05	1.98E-06	4.14E+01	6.47E-05	2.29E-01	3.18E-05	1.70E-02	1.04E-02	1.53E-03	3.00E-03	1.59E-03	1.62E-03	1.31E-03	1.94E-04	3.87E-08	1.37E-03	3.16E-03
F85	0.00E+00	1.68E-05	1.40E-06	3.36E+01	4.81E-05	1.73E-01	2.29E-05	1.15E-02	5.46E-03	8.71E-04	2.17E-03	1.16E-03	1.19E-03	1.10E-03	1.57E-04	3.58E-08	9.85E-04	2.13E-03
F86	0.00E+00	1.88E-05	1.47E-06	3.12E+01	3.58E-05	1.36E-01	2.16E-05	1.51E-02	3.88E-03	6.70E-04	2.03E-03	9.91E-04	1.01E-03	1.59E-03	1.40E-04	2.95E-08	1.01E-03	2.82E-03
F87	0.00E+00	3.90E-06	2.98E-07	6.14E+00	8.01E-06	2.88E-02	4.71E-06	2.93E-03	9.82E-04	1.59E-04	4.53E-04	2.14E-04	2.18E-04	2.82E-04	2.79E-05	6.17E-09	2.35E-04	5.47E-04
F88	0.00E+00	9.09E-07	7.26E-08	1.39E+00	2.08E-06	7.40E-03	1.13E-06	6.91E-04	3.49E-04	5.15E-05	1.07E-04	5.39E-05	5.50E-05	5.24E-05	6.41E-06	1.25E-09	5.20E-05	1.29E-04

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B09	100	Passenger Car	598	0.00E+00	6.55E-06	7.09E-07	2.69E+01	4.56E-05	1.80E-01	1.46E-05	1.28E-03	1.94E-03	3.91E-04	1.42E-03	9.14E-04	9.38E-04	7.50E-05	1.36E-04	3.75E-08	4.80E-04	2.00E-04
16	B09	100	Passenger Truck	1002	0.00E+00	1.41E-05	1.51E-06	6.35E+01	9.26E-05	3.62E-01	3.01E-05	3.64E-03	3.43E-03	7.29E-04	2.89E-03	1.87E-03	1.92E-03	4.04E-04	3.18E-04	8.72E-08	9.72E-04	5.88E-04
16	B09	100	Single Unit Short Haul Truck	152	0.00E+00	2.05E-05	1.01E-06	2.78E+01	1.78E-05	6.44E-02	2.21E-05	1.11E-02	1.05E-03	3.05E-04	2.53E-03	6.27E-04	6.37E-04	2.80E-03	1.12E-04	4.57E-08	1.89E-03	2.07E-03
16	B09	100	Single Unit Long Haul Truck	7	0.00E+00	8.87E-07	4.31E-08	1.17E+00	7.39E-07	2.63E-03	9.56E-07	4.66E-04	4.75E-05	1.32E-05	1.10E-04	2.65E-05	2.69E-05	1.17E-04	4.71E-06	1.87E-09	8.33E-05	8.71E-05
16	B09	100	Combination Short Haul Truck	87	0.00E+00	2.98E-05	2.18E-06	3.14E+01	8.49E-08	2.91E-02	2.15E-05	3.19E-02	1.01E-03	3.60E-04	1.67E-03	6.38E-04	6.27E-04	4.73E-03	1.05E-04	0.00E+00	1.04E-03	6.00E-03
16	B09	100	Combination Long Haul Truck	79	0.00E+00	2.60E-05	1.78E-06	2.84E+01	9.83E-08	2.91E-02	1.94E-05	3.03E-02	9.36E-04	2.60E-04	1.70E-03	5.33E-04	5.32E-04	4.34E-03	9.52E-05	0.00E+00	1.17E-03	5.70E-03
16	B10	100	Passenger Car	1454	0.00E+00	1.59E-05	1.72E-06	6.54E+01	1.11E-04	4.37E-01	3.54E-05	3.11E-03	4.72E-03	9.51E-04	3.45E-03	2.22E-03	2.28E-03	1.82E-04	3.31E-04	9.11E-08	1.17E-03	4.86E-04
16	B10	100	Passenger Truck	2435	0.00E+00	3.44E-05	3.66E-06	1.54E+02	2.25E-04	8.79E-01	7.31E-05	8.84E-03	8.34E-03	1.77E-03	7.03E-03	4.56E-03	4.67E-03	9.82E-04	7.74E-04	2.12E-07	2.36E-03	1.43E-03
16	B10	100	Single Unit Short Haul Truck	103	0.00E+00	1.39E-05	6.88E-07	1.89E+01	1.21E-05	4.37E-02	1.50E-05	7.52E-03	7.13E-04	2.07E-04	1.72E-03	4.26E-04	4.33E-04	1.90E-03	7.59E-05	3.10E-08	1.29E-03	1.40E-03
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	6.02E-07	2.93E-08	7.95E-01	5.02E-07	1.79E-03	6.50E-07	3.17E-04	3.22E-05	8.96E-06	7.49E-05	1.80E-05	1.83E-05	7.97E-05	3.20E-06	1.27E-09	5.66E-05	5.91E-05
16	B10	100	Combination Short Haul Truck	215	0.00E+00	7.39E-05	5.39E-06	7.77E+01	2.10E-07	7.20E-02	5.33E-05	7.89E-02	2.50E-03	8.91E-04	4.14E-03	1.58E-03	1.55E-03	1.17E-02	2.60E-04	0.00E+00	2.59E-03	1.49E-02
16	B10	100	Combination Long Haul Truck	196	0.00E+00	6.43E-05	4.41E-06	7.04E+01	2.43E-07	7.20E-02	4.82E-05	7.49E-02	2.32E-03	6.44E-04	4.21E-03	1.32E-03	1.32E-03	1.07E-02	2.36E-04	0.00E+00	2.90E-03	1.41E-02
16	B13	100	Passenger Car	864	0.00E+00	9.47E-06	1.02E-06	3.89E+01	6.59E-05	2.60E-01	2.10E-05	1.85E-03	2.80E-03	5.65E-04	2.05E-03	1.32E-03	1.36E-03	1.08E-04	1.97E-04	5.41E-08	6.93E-04	2.89E-04
16	B13	100	Passenger Truck	1448	0.00E+00	2.04E-05	2.18E-06	9.17E+01	1.34E-04	5.23E-01	4.35E-05	5.25E-03	4.96E-03	1.05E-03	4.18E-03	2.71E-03	2.78E-03	5.84E-04	4.60E-04	1.26E-07	1.41E-03	8.50E-04
16	B13	100	Single Unit Short Haul Truck	80	0.00E+00	1.08E-05	5.35E-07	1.47E+01	9.43E-06	3.40E-02	1.17E-05	5.85E-03	5.55E-04	1.61E-04	1.34E-03	3.31E-04	3.37E-04	1.48E-03	5.90E-05	2.41E-08	1.00E-03	1.09E-03
16	B13	100	Single Unit Long Haul Truck	4	0.00E+00	4.68E-07	2.28E-08	6.19E-01	3.90E-07	1.39E-03	5.05E-07	2.46E-04	2.51E-05	6.97E-06	5.82E-05	1.40E-05	1.42E-05	6.20E-05	2.49E-06	9.87E-10	4.40E-05	4.60E-05
16	B13	100	Combination Short Haul Truck	137	0.00E+00	4.69E-05	3.42E-06	4.94E+01	1.33E-07	4.58E-02	3.38E-05	5.01E-02	1.59E-03	5.66E-04	2.63E-03	1.00E-03	9.86E-04	7.44E-03	1.65E-04	0.00E+00	1.64E-03	9.44E-03
16	B13	100	Combination Long Haul Truck	124	0.00E+00	4.08E-05	2.80E-06	4.47E+01	1.55E-07	4.57E-02	3.06E-05	4.76E-02	1.47E-03	4.09E-04	2.68E-03	8.38E-04	8.36E-04	6.83E-03	1.50E-04	0.00E+00	1.84E-03	8.97E-03
16	B14	100	Passenger Car	391	0.00E+00	4.29E-06	4.64E-07	1.76E+01	2.98E-05	1.18E-01	9.53E-06	8.36E-04	1.27E-03	2.56E-04	9.28E-04	5.98E-04	6.14E-04	4.91E-05	8.90E-05	2.45E-08	3.14E-04	1.31E-04
16	B14	100	Passenger Truck	656	0.00E+00	9.25E-06	9.85E-07	4.15E+01	6.06E-05	2.37E-01	1.97E-05	2.38E-03	2.25E-03	4.77E-04	1.89E-03	1.23E-03	1.26E-03	2.64E-04	2.08E-04	5.71E-08	6.36E-04	3.85E-04
16	B14	100	Single Unit Short Haul Truck	120	0.00E+00	1.61E-05	7.96E-07	2.19E+01	1.40E-05	5.06E-02	1.74E-05	8.70E-03	8.25E-04	2.40E-04	1.99E-03	4.93E-04	5.01E-04	2.20E-03	8.78E-05	3.59E-08	1.49E-03	1.63E-03
16	B14	100	Single Unit Long Haul Truck	5	0.00E+00	6.97E-07	3.39E-08	9.21E-01	5.81E-07	2.07E-03	7.52E-07	3.67E-04	3.73E-05	1.04E-05	8.67E-05	2.08E-05	2.12E-05	9.23E-05	3.71E-06	1.47E-09	6.55E-05	6.85E-05
16	B14	100	Combination Short Haul Truck	65	0.00E+00	2.23E-05	1.63E-06	2.35E+01	6.34E-08	2.17E-02	1.61E-05	2.38E-02	7.55E-04	2.69E-04	1.25E-03	4.77E-04	4.69E-04	3.54E-03	7.85E-05	0.00E+00	7.80E-04	4.48E-03
16	B14	100	Combination Long Haul Truck	59	0.00E+00	1.94E-05	1.33E-06	2.12E+01	7.34E-08	2.17E-02	1.45E-05	2.26E-02	6.99E-04	1.94E-04	1.27E-03	3.98E-04	3.97E-04	3.24E-03	7.11E-05	0.00E+00	8.74E-04	4.26E-03
16	B15	100	Passenger Car	672	0.00E+00	7.36E-06	7.96E-07	3.02E+01	5.12E-05	2.02E-01	1.64E-05	1.44E-03	2.18E-03	4.39E-04	1.59E-03	1.03E-03	1.05E-03	8.42E-05	1.53E-04	4.21E-08	5.39E-04	2.24E-04
16	B15	100	Passenger Truck	1125	0.00E+00	1.59E-05	1.69E-06	7.13E+01	1.04E-04	4.06E-01	3.38E-05	4.08E-03	3.85E-03	8.18E-04	3.25E-03	2.11E-03	2.16E-03	4.54E-04	3.57E-04	9.80E-08	1.09E-03	6.60E-04
16	B15	100	Single Unit Short Haul Truck	33	0.00E+00	4.37E-06	2.16E-07	5.94E+00	3.82E-06	1.38E-02	4.73E-06	2.37E-03	2.24E-04	6.53E-05	5.41E-04	1.34E-04	1.36E-04	5.99E-04	2.39E-05	9.76E-09	4.05E-04	4.42E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.90E-07	9.21E-09	2.50E-01	1.58E-07	5.62E-04	2.05E-07	9.97E-05	1.02E-05	2.82E-06	2.36E-05	5.66E-06	5.75E-06	2.51E-05	1.01E-06	4.00E-10	1.78E-05	1.86E-05
16	B15	100	Combination Short Haul Truck	11	0.00E+00	3.77E-06	2.75E-07	3.97E+00	1.07E-08	3.68E-03	2.72E-06	4.03E-03	1.28E-04	4.55E-05	2.11E-04	8.07E-05	7.94E-05	5.99E-04	1.33E-05	0.00E+00	1.32E-04	7.59E-04
16	B15	100	Combination Long Haul Truck	10	0.00E+00	3.28E-06	2.25E-07	3.60E+00	1.24E-08	3.68E-03	2.46E-06	3.83E-03	1.18E-04	3.29E-05	2.15E-04	6.74E-05	6.73E-05	5.49E-04	1.20E-05	0.00E+00	1.48E-04	7.21E-04
16	B16	100	Passenger Car	1205	0.00E+00	1.32E-05	1.43E-06	5.42E+01	9.19E-05	3.62E-01	2.93E-05	2.58E-03	3.91E-03	7.88E-04	2.86E-03	1.84E-03	1.89E-03	1.51E-04	2.74E-04	7.55E-08	9.67E-04	4.02E-04
16	B16	100	Passenger Truck	2019	0.00E+00	2.85E-05	3.03E-06	1.28E+02	1.87E-04	7.29E-01	6.06E-05	7.33E-03	6.91E-03	1.47E-03	5.83E-03	3.78E-03	3.87E-03	8.14E-04	6.41E-04	1.76E-07	1.96E-03	1.18E-03
16	B16	100	Single Unit Short Haul Truck	38	0.00E+00	5.15E-06	2.55E-07	6.99E+00	4.49E-06	1.62E-02	5.57E-06	2.79E-03	2.64E-04	7.68E-05	6.36E-04	1.58E-04	1.60E-04	7.05E-04	2.81E-05	1.15E-08	4.76E-04	5.20E-04
16	B16	100	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	1.08E-08	2.95E-01	1.86E-07	6.61E-04	2.41E-07	1.17E-04	1.19E-05	3.32E-06	2.77E-05	6.66E-06	6.77E-06	2.95E-05	1.19E-06	4.70E-10	2.10E-05	2.19E-05
16	B16	100	Combination Short Haul Truck	21	0.00E+00	7.37E-06	5.38E-07	7.75E+00	2.10E-08	7.19E-03	5.32E-06	7.87E-03	2.50E-04	8.89E-05	4.13E-04	1.58E-04	1.55E-04	1.17E-03	2.60E-05	0.00E+00	2.58E-04	1.48E-03
16	B16	100	Combination Long Haul Truck	20	0.00E+00	6.41E-06	4.39E-07	7.02E+00	2.43E-08	7.18E-03	4.80E-06	7.48E-03	2.31E-04	6.43E-05	4.20E-04	1.32E-04	1.31E-04	1.07E-03	2.35E-05	0.00E+00	2.89E-04	1.41E-03
16	B19	100	Passenger Car	1620	0.00E+00	1.77E-05	1.92E-06	7.28E+01	1.23E-04	4.87E-01	3.94E-05	3.46E-03	5.25E-03	1.06E-03	3.84E-03	2.47E-03	2.54E-03	2.03E-04	3.68E-04	1.01E-07	1.30E-03	5.41E-04
16	B19	100	Passenger Truck	2712	0.00E+00	3.83E-05	4.08E-06	1.72E+02	2.51E-04	9.79E-01	8.15E-05	9.84E-03	9.29E-03	1.97E-03	7.84E-03	5.08E-03	5.20E-03	1.09E-03	8.62E-04	2.36E-07	2.63E-03	1.59E-03
16	B19	100	Single Unit Short Haul Truck	461	0.00E+00	6.19E-05	3.06E-06	8.41E+01	5.40E-05	1.95E-01	6.70E-05	3.35E-02	3.18E-03	9.24E-04	7.65E-03	1.90E-03	1.93E-03	8.48E-03	3.38E-04	1.38E-07	5.72E-03	6.25E-03
16	B19	100	Single Unit Long Haul Truck	20	0.00E+00	2.68E-06	1.30E-07	3.54E+00	2.24E-06	7.95E-03	2.89E-06	1.41E-03	1.44E-04	3.99E-05	3.34E-04	8.01E-05	8.14E-05	3.55E-04	1.43E-05	5.65E-09	2.52E-04	2.63E-04
16	B19	100	Combination Short Haul Truck	317	0.00E+00	1.09E-04	7.95E-06	1.15E+02	3.10E-07	1.06E-01	7.86E-05	1.16E-01	3.69E-03	1.31E-03	6.10E-03	2.33E-03	2.29E-03	1.73E-02	3.84E-04	0.00E+00	3.81E-03	2.19E-02
16	B19	100	Combination Long Haul Truck	289	0.00E+00	9.48E-05	6.50E-06	1.04E+02	3.59E-07	1.06E-01	7.10E-05	1.10E-01	3.42E-03	9.50E-04	6.21E-03	1.95E-03	1.94E-03	1.58E-02	3.48E-04	0.00E+00	4.27E-03	2.08E-02
16	B20	100	Passenger Car	3140	0.00E+00	3.44E-05	3.72E-06	1.41E+02	2.39E-04	9.43E-01	7.65E-05	6.71E-03	1.02E-02	2.05E-03	7.44E-03	4.80E-03	4.92E-03	3.94E-04	7.14E-04	1.97E-07	2.52E-03	1.05E-03
16	B20	100	Passenger Truck	5259	0.00E+00	7.42E-05	7.90E-06	3.33E+02	4.86E-04	1.90E+00	1.58E-04	1.91E-02	1.80E-02	3.82E-03	1.52E-02	9.84E-03	1.01E-02	2.12E-03	1.67E-03	4.58E-07	5.10E-03	3.09E-03
16	B20	100	Single Unit Short Haul Truck	299	0.00E+00	4.01E-05	1.99E-06	5.46E+01	3.50E-05	1.26E-01	4.34E-05	2.17E-02	2.06E-03	5.99E-04	4.96E-03	1.23E-03	1.25E-03	5.50E-03	2.19E-04	8.96E-08	3.71E-03	4.06E-03
16	B20	100	Single Unit Long Haul Truck	13	0.00E+00	1.74E-06	8.45E-08	2.30E+00	1.45E-06	5.16E-03	1.88E-06	9.15E-04	9.32E-05	2.59E-05	2.16E-04	5.20E-05	5.28E-05	2.30E-04	9.25E-06	3.67E-09	1.64E-04	1.71E-04
16	B20	100	Combination Short Haul Truck	229	0.00E+00	7.87E-05	5.74E-06	8.28E+01	2.24E-07	7.68E-02	5.68E-05	8.41E-02	2.67E-03	9.50E-04	4.41E-03	1.68E-03	1.66E-03	1.25E-02	2.77E-04	0.00E+00	2.76E-03	1.58E-02
16	B20	100	Combination Long Haul Truck	209	0.00E+00	6.85E-05	4.69E-06	7.50E+01	2.59E-07	7.67E-02	5.13E-05	7.99E-02	2.47E-03	6.87E-04	4.49E-03	1.41E-03	1.40E-03	1.15E-02	2.51E-04	0.00E+00	3.09E-03	1.50E-02
16	B21	100	Passenger Car	1186	0.00E+00	1.30E-05	1.41E-06	5.33E+01	9.04E-05	3.56E-01	2.89E-05	2.53E-03	3.85E-03	7.76E-04	2.81E-03	1.81E-03	1.86E-03	1.49E-04	2.70E-04	7.43E-08	9.52E-04	3.96E-04
16	B21	100	Passenger Truck	1987	0.00E+00	2.80E-05	2.99E-06	1.26E+02	1.84E-04	7.17E-01	5.97E-05	7.21E-03	6.80E-03	1.44E-03	5.74E-03	3.72E-03	3.81E-03	8.01E-04	6.31E-04	1.73E-07	1.93E-03	1.17E-03
16	B21	100	Single Unit Short Haul Truck	370	0.00E+00	4.97E-05	2.46E-06	6.75E+01	4.33E-05	1.56E-01	5.38E-05	2.69E-02	2.55E-03	7.42E-04	6.14E-03	1.52E-03	1.55E-03	6.81E-03	2.71E-04	1.11E-07	4.59E-03	5.02E-03
16	B21	100	Single Unit Long Haul Truck	16	0.00E+00	2.15E-06	1.05E-07	2.84E+00	1.79E-06	6.38E-03	2.32E-06	1.13E-03	1.15E-04	3.20E-05	2.68E-04	6.43E-05	6.53E-05	2.85E-04	1.14E-05	4.54E-09	2.02E-04	2.11E-04
16	B21	100	Combination Short Haul Truck	275	0.00E+00	9.43E-05	6.88E-06	9.93E+01	2.68E-07	9.20E-02	6.81E-05	1.01E-01	3.20E-03	1.14E-03	5.29E-03	2.02E-03	1.98E-03	1.50E-02	3.32E-04	0.00E+00	3.30E-03	1.90E-02
16	B21	100	Combination Long Haul Truck	250	0.00E+00	8.21E-05	5.63E-06	8.99E+01	3.11E-07	9.19E-02	6.15E-05	9.57E-02	2.96E-03	8.23E-04	5.38E-03	1.69E-03	1.68E-03	1.37E-02	3.01E-04	0.00E+00	3.70E-03	1.80E-02
16	B22	100	Passenger Car	2857	0.00E+00	3.13E-05	3.38E-06	1.28E+02	2.18E-04	8.58E-01	6.96E-05	6.10E-03	9.27E-03	1.87E-03	6.77E-03	4.36E-03	4.48E-03	3.58E-04	6.50E-04	1.79E-07	2.29E-03	9.54E-04
16	B22	100	Passenger Truck	4785	0.00E+00	6.75E-05	7.19E-06	3.03E+02	4.42E-04	1.73E+00	1.44E-04	1.74E-02	1.64E-02	3.48E-03	1.38E-02	8.95E-03	9.18E-03	1.93E-03	1.52E-03	4.17E-07	4.64E-03	2.81E-03
16	B22	100	Single Unit Short Haul Truck	259	0.00E+00	3.47E-05	1.72E-06	4.72E+01	3.03E-05	1.09E-01	3.76E-05	1.88E-02	1.78E-03	5.19E-04	4.29E-03	1.07E-03	1.08E-03	4.76E-03	1.90E-04	7.75E-08	3.21E-03	3.51E-03
16	B22	100	Single Unit Long Haul Truck	11	0.00E+00	1.51E-06	7.32E-08	1.99E+00	1.26E-06	4.46E-03	1.62E-06	7.92E-04	8.06E-05	2.24E-05	1.87E-04	4.50E-05	4.57E-05	1.99E-04	8.01E-06	3.17E-09	1.42E-04	1.48E-04
16	B22	100	Combination Short Haul Truck	215	0.00E+00	7.39E-05	5.39E-06	7.77E+01	2.10E-07	7.20E-02	5.33E-05	7.89E-02	2.50E-03	8.91E-04	4.14E-03	1.58E-03	1.55E-03	1.17E-02	2.60E-04	0.00E+00	2.59E-03	1.49E-02
16	B22	100	Combination Long Haul Truck	196	0.00E+00	6.43E-05	4.41E-06	7.04E+01	2.43E-07	7.20E-02	4.82E-05	7.49E-02	2.32E-03	6.44E-04	4.21E-03	1.32E-03	1.32E-03	1.07E-02	2.36E-04	0.00E+00	2.90E-03	1.41E-02
16	B23	100	Passenger Car	1202	0.00E+00	1.32E-05	1.42E-06	5.40E+01	9.16E-05	3.61E-01	2.93E-05	2.57E-03	3.90E-03	7.86E-04	2.85E-03	1.84E-03	1.88E-03	1.51E-04	2.73E-04	7.53E-08	9.64E-04	4.01E-04
16	B23	100	Passenger Truck	2013	0.00E+00	2.84E-05	3.03E-06	1.28E+02	1.86E-04	7.27E-01	6.05E-05	7.31E-03	6.89E-03	1.46E-03	5.81E-03	3.77E-03	3.86E-03	8.12E-04	6.39E-04	1.75E-07	1.95E-03	1.18E-03
16	B23	100	Single Unit Short Haul Truck	370	0.00E+00	4.97E-05	2.46E-06	6.75E+01	4.33E-05	1.56E-01	5.38E-05	2.69E-02	2.55E-03	7.42E-04	6.14E-03	1.52E-03	1.55E-03	6.81E-03	2.71E-04	1.11E-07	4.59E-03	5.02E-03
16	B23	100	Single Unit Long Haul Truck	16	0.00E+00	2.15E-06	1.05E-07	2.84E+00	1.79E-06	6.38E-03	2.32E-06	1.13E-03	1.15E-04	3.20E-05	2.68E-04	6.43E-05	6.53E-05	2.85E-04	1.14E-05	4.54E-09	2.02E-04	2.11E-04
16	B23	100	Combination Short Haul Truck	275	0.00E+00	9.45E-05	6.90E-06	9.95E+01	2.69E-07	9.22E-02	6.82E-05	1.01E-01	3.20E-03	1.14E-03	5.30E-03	2.02E-03	1.99E-03	1.50E-02	3.33E-04	0.00E+00	3.31E-03	1.90E-02
16	B23	100	Combination Long Haul Truck	251	0.00E+00	8.23E-05	5.64E-06	9.01E+01	3.11E-07	9.21E-02	6.16E-05	9.59E-02	2.97E-03	8.25E-04	5.39E-03	1.69E-03	1.69E-03	1.38E-02	3.02E-04	0.00E+00	3.71E-03	1.81E-02
16	B24	100	Passenger Car	3296	0.00E+00	3.61E-05	3.90E-06	1.48E+02	2.51E-04	9.90E-01	8.02E-05	7.04E-03	1.07E-02	2.16E-03	7.81E-03	5.03E-03	5.17E-03	4.13E-04	7.49E-04	2.06E-07	2.64E-03	1.10E-03
16	B24	100	Passenger Truck	5519	0.00E+00	7.79E-05	8.30E-06	3.50E+02	5.10E-04	1.99E+00	1.66E-04	2.00E-02	1.89E-02	4.01E-03	1.59E-02	1.03E-02	1.06E-02	2.23E-03	1.75E-03	4.81E-07	5.36E-03	3.24E-03
16	B24	100	Single Unit Short Haul Truck	277	0.00E+00	3.72E-05	1.84E-06	5.05E+01	3.24E-05	1.17E-01	4.02E-05	2.01E-02	1.91E-03	5.55E-04	4.60E-03	1.14E-03	1.16E-03	5.10E-03	2.03E-04	8.30E-08	3.44E-03	3.76E-03
16	B24	100	Single Unit Long Haul Truck	12	0.00E+00	1.61E-06	7.83E-08	2.13E+00	1.34E-06	4.78E-03	1.74E-06	8.47E-04	8.63E-05	2.40E-05	2.00E-04	4.81E-05	4.89E-05	2.13E-04	8.57E-06	3.40E-09	1.51E-04	1.58E-04
16	B24	100	Combination Short Haul Truck	230	0.00E+00	7.91E-05	5.77E-06	8.32E+01	2.25E-07	7.71E-02	5.70E-05	8.45E-02	2.68E-03	9.54E-04	4.43E-03	1.69E-03	1.66E-03	1.25E-02	2.79E-04	0.00E+00	2.77E-03	1.59E-02
16	B24	100	Combination Long Haul Truck	210	0.00E+00	6.88E-05	4.72E-06	7.54E+01	2.61E-07	7.71E-02	5.15E-05	8.02E-02	2.48E-03	6.90E-04	4.51E-03	1.41E-03	1.41E-03	1.15E-02	2.52E-04	0.00E+00	3.10E-03	1.51E-02
10	D63	70	Passenger Car	70	0.00E+00	9.09E-07	9.84E-08	3.34E+00	6.33E-06	2.37E-02	2.02E-06	1.39E-04	5.39E-04	8.65E-05	1.97E-04	1.27E-04	1.30E-04	1.25E-05	1.68E-05	4.57E-09	6.66E-05	2.18E-05
10	D63	70	Passenger Truck	116	0.00E+00	1.99E-06	2.11E-07	7.69E+00	1.26E-05	4.36E-02	4.14E-06	4.36E-04	9.81E-04	1.59E-04	3.95E-04	2.57E-04	2.63E-04	5.65E-05	3.83E-05	1.02E-08	1.32E-04	7.17E-05
10	D63	70	Single Unit Short Haul Truck	28	0.00E+00	6.53E-06	3.27E-07	5.11E+00	5.34E-06	1.02E-02	6.95E-06	3.22E-03	4.59E-04	9.20E-05	7.92E-04	1.95E-04	1.98E-04	5.13E-04	2.06E-05	8.32E-09	5.93E-04	6.03E-04
10	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.84E-07	1.41E-08	2.17E-01	2.30E-07	4.30E-04	3.03E-07	1.38E-04	2.10E-05	4.09E-06	3.46E-05	8.45E-06	8.59E-06	2.17E-05	8.76E-07	3.51E-10	2.60E-05	2.59E-05
10	D63	70	Combination Short Haul Truck	15	0.00E+00	7.62E-06	5.41E-07	5.52E+00	2.48E-08	6.56E-03	5.59E-06	8.01E-03	5.80E-04	1.27E-04	4.64E-04	1.60E-04	1.60E-04	8.33E-04	1.85E-05	0.00E+00	3.04E-04	1.51E-03
10	D63	70	Combination Long Haul Truck	13	0.00E+00	6.89E-06	4.60E-07	5.15E+00	2.85E-08	6.95E-03	5.23E-06	7.89E-03	5.76E-04	1.05E-04	4.80E-04	1.39E-04	1.41E-04	7.88E-04	1.73E-05	0.00E+00	3.39E-04	1.49E-03
10	D64	70	Passenger Car	72	0.00E+00	9.39E-07	1.02E-07	3.45E+00	6.53E-06	2.44E-02	2.09E-06	1.44E-04	5.57E-04	8.93E-05	2.03E-04	1.31E-04	1.34E-04	1.29E-05	1.73E-05	4.72E-09	6.88E-05	2.25E-05
10	D64	70	Passenger Truck	120	0.00E+00	2.06E-06	2.18E-07	7.94E+00	1.30E-05	4.50E-02	4.27E-06	4.50E-04	1.01E-03	1.65E-04	4.08E-04	2.65E-04	2.72E-04	5.83E-05	3.95E-05	1.06E-08	1.36E-04	7.40E-05
10	D64	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.82E-03	1.92E-06	8.88E-04	1.27E-04	2.54E-05	2.18E-04	5.39E-05	5.47E-05	1.41E-04	5.69E-06	2.30E-09	1.64E-04	1.66E-04
10	D64	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.18E+00	5.30E-09	1.41E-03	1.20E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.78E-04	3.96E-06	0.00E+00	6.52E-05	3.23E-04

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D68	80	Combination Short Haul Truck	28	0.00E+00	1.22E-05	8.71E-07	1.01E+01	3.84E-08	1.08E-02	8.90E-06	1.25E-02	7.37E-04	1.82E-04	7.26E-04	2.57E-04	2.55E-04	1.52E-03	3.37E-05	0.00E+00	4.70E-04	2.36E-03
11	D68	80	Combination Long Haul Truck	25	0.00E+00	1.09E-05	7.34E-07	9.31E+00	4.44E-08	1.12E-02	8.27E-06	1.21E-02	7.21E-04	1.45E-04	7.49E-04	2.21E-04	2.23E-04	1.42E-03	3.12E-05	0.00E+00	5.27E-04	2.29E-03
11	D69	80	Passenger Car	85	0.00E+00	1.03E-06	1.12E-07	3.95E+00	7.19E-06	2.76E-02	2.30E-06	1.74E-04	4.67E-04	8.11E-05	2.24E-04	1.44E-04	1.48E-04	1.33E-05	1.99E-05	5.58E-09	7.57E-05	2.72E-05
11	D69	80	Passenger Truck	142	0.00E+00	2.22E-06	2.35E-07	9.14E+00	1.42E-05	5.07E-02	4.65E-06	5.18E-04	8.37E-04	1.49E-04	4.45E-04	2.89E-04	2.96E-04	6.38E-05	4.57E-05	1.24E-08	1.49E-04	8.46E-05
11	D69	80	Single Unit Short Haul Truck	40	0.00E+00	7.54E-06	3.74E-07	7.40E+00	6.07E-06	1.48E-02	8.02E-06	3.87E-03	4.74E-04	1.07E-04	9.17E-04	2.23E-04	2.27E-04	7.42E-04	2.98E-05	1.18E-08	6.90E-04	7.23E-04
11	D69	80	Single Unit Long Haul Truck	2	0.00E+00	3.28E-07	1.62E-08	3.13E-01	2.59E-07	6.17E-04	3.49E-07	1.65E-04	2.16E-05	4.73E-06	4.00E-05	9.61E-06	9.77E-06	3.12E-05	1.26E-06	4.93E-10	3.03E-05	3.09E-05
11	D69	80	Combination Short Haul Truck	19	0.00E+00	8.28E-06	5.92E-07	6.84E+00	2.61E-08	7.33E-03	6.05E-06	8.50E-03	5.01E-04	1.23E-04	4.93E-04	1.75E-04	1.73E-04	1.03E-03	2.29E-05	0.00E+00	3.20E-04	1.60E-03
11	D69	80	Combination Long Haul Truck	17	0.00E+00	7.41E-06	4.98E-07	6.33E+00	3.02E-08	7.60E-03	5.62E-06	8.25E-03	4.90E-04	9.86E-05	5.09E-04	1.50E-04	1.51E-04	9.67E-04	2.12E-05	0.00E+00	3.58E-04	1.55E-03
11	D70	80	Passenger Car	113	0.00E+00	1.37E-06	1.49E-07	5.26E+00	9.57E-06	3.67E-02	3.06E-06	2.32E-04	6.21E-04	1.08E-04	2.98E-04	1.92E-04	1.97E-04	1.77E-05	2.65E-05	7.43E-09	1.01E-04	3.62E-05
11	D70	80	Passenger Truck	189	0.00E+00	2.95E-06	3.13E-07	1.22E+01	1.89E-05	6.75E-02	6.19E-06	6.89E-04	1.11E-03	1.98E-04	5.92E-04	3.85E-04	3.94E-04	8.49E-05	6.07E-05	1.65E-08	1.98E-04	1.13E-04
11	D70	80	Single Unit Short Haul Truck	31	0.00E+00	5.74E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.94E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.01E-09	5.26E-04	5.51E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.97E-07	4.70E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.45E-06	2.38E-05	9.63E-07	3.76E-10	2.31E-05	2.36E-05
11	D70	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.26E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.56E-03
11	D70	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	8.02E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	D71	70	Passenger Car	238	0.00E+00	3.11E-06	3.36E-07	1.14E+01	2.16E-05	8.10E-02	6.91E-06	4.76E-04	1.84E-03	2.96E-04	6.73E-04	4.34E-04	4.45E-04	4.26E-05	5.73E-05	1.56E-08	2.28E-04	7.45E-05
10	D71	70	Passenger Truck	398	0.00E+00	6.81E-06	7.21E-07	2.63E+01	4.31E-05	1.49E-01	1.42E-05	1.49E-03	3.35E-03	5.45E-04	1.35E-03	8.78E-04	9.00E-04	1.93E-04	1.31E-04	3.50E-08	4.50E-04	2.45E-04
10	D71	70	Single Unit Short Haul Truck	21	0.00E+00	4.95E-06	2.48E-07	3.88E+00	4.05E-06	7.76E-03	5.28E-06	2.44E-03	3.48E-04	6.98E-05	6.01E-04	1.48E-04	1.51E-04	3.89E-04	1.56E-05	6.31E-09	4.50E-04	4.57E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.16E-07	1.07E-08	1.65E-01	1.75E-07	3.26E-04	2.30E-07	1.05E-04	1.59E-05	3.10E-06	2.63E-05	6.41E-06	6.52E-06	1.64E-05	6.65E-07	2.66E-10	1.97E-05	1.97E-05
10	D71	70	Combination Short Haul Truck	11	0.00E+00	5.71E-06	4.06E-07	4.14E+00	1.86E-08	4.92E-03	4.19E-06	6.00E-03	4.35E-04	9.49E-05	3.48E-04	1.20E-04	1.20E-04	6.24E-04	1.39E-05	0.00E+00	2.28E-04	1.13E-03
10	D71	70	Combination Long Haul Truck	10	0.00E+00	5.16E-06	3.45E-07	3.87E+00	2.14E-08	5.21E-03	3.92E-06	5.92E-03	4.32E-04	7.88E-05	3.60E-04	1.04E-04	1.06E-04	5.91E-04	1.29E-05	0.00E+00	2.54E-04	1.12E-03
10	D72	70	Passenger Car	170	0.00E+00	2.22E-06	2.40E-07	8.15E+00	1.54E-05	5.78E-02	4.93E-06	3.40E-04	1.32E-03	2.11E-04	4.80E-04	3.10E-04	3.18E-04	3.04E-05	4.09E-05	1.12E-08	1.63E-04	5.31E-05
10	D72	70	Passenger Truck	284	0.00E+00	4.86E-06	5.15E-07	1.88E+01	3.08E-05	1.06E-01	1.01E-05	1.06E-03	2.39E-03	3.89E-04	9.64E-04	6.27E-04	6.42E-04	1.38E-04	9.35E-05	2.50E-08	3.22E-04	1.75E-04
10	D72	70	Single Unit Short Haul Truck	35	0.00E+00	8.33E-06	4.17E-07	6.52E+00	6.81E-06	1.30E-02	8.87E-06	4.11E-03	5.86E-04	1.17E-04	1.01E-03	2.49E-04	2.53E-04	6.54E-04	2.63E-05	1.06E-08	7.57E-04	7.69E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.63E-07	1.80E-08	2.77E-01	2.94E-07	5.48E-04	3.87E-07	1.77E-04	2.68E-05	5.22E-06	4.42E-05	1.08E-05	1.10E-05	2.76E-05	1.12E-06	4.48E-10	3.32E-05	3.31E-05
10	D72	70	Combination Short Haul Truck	24	0.00E+00	1.22E-05	8.70E-07	8.87E+00	3.98E-08	1.05E-02	8.98E-06	1.29E-02	9.32E-04	2.03E-04	7.46E-04	2.57E-04	2.57E-04	1.34E-03	2.97E-05	0.00E+00	4.89E-04	2.42E-03
10	D72	70	Combination Long Haul Truck	21	0.00E+00	1.11E-05	7.40E-07	8.28E+00	4.58E-08	1.12E-02	8.41E-06	1.27E-02	9.25E-04	1.69E-04	7.71E-04	2.24E-04	2.26E-04	1.27E-03	2.77E-05	0.00E+00	5.45E-04	2.39E-03
10	D73	70	Passenger Car	182	0.00E+00	2.38E-06	2.57E-07	8.72E+00	1.65E-05	6.19E-02	5.28E-06	3.64E-04	1.41E-03	2.26E-04	5.14E-04	3.31E-04	3.40E-04	3.25E-05	4.38E-05	1.19E-08	1.74E-04	5.69E-05
10	D73	70	Passenger Truck	304	0.00E+00	5.21E-06	5.51E-07	2.01E+01	3.29E-05	1.14E-01	1.08E-05	1.14E-03	2.56E-03	4.17E-04	1.03E-03	6.71E-04	6.87E-04	1.48E-04	1.00E-04	2.68E-08	3.44E-04	1.87E-04
10	D73	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.66E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	D73	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.77E-04
10	D73	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.72E-04
10	D74	70	Passenger Car	131	0.00E+00	1.72E-06	1.86E-07	6.30E+00	1.19E-05	4.47E-02	3.81E-06	2.63E-04	1.02E-03	1.63E-04	3.71E-04	2.39E-04	2.46E-04	2.35E-05	3.16E-05	8.62E-09	1.26E-04	4.11E-05
10	D74	70	Passenger Truck	220	0.00E+00	3.76E-06	3.98E-07	1.45E+01	2.38E-05	8.22E-02	7.81E-06	8.22E-04	1.85E-03	3.01E-04	7.45E-04	4.85E-04	4.97E-04	1.07E-04	7.23E-05	1.93E-08	2.49E-04	1.35E-04
10	D74	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.07E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
10	D74	70	Combination Short Haul Truck	15	0.00E+00	7.89E-06	5.61E-07	5.72E+00	2.56E-08	6.79E-03	5.79E-06	8.29E-03	6.00E-04	1.31E-04	4.81E-04	1.66E-04	1.66E-04	8.62E-04	1.91E-05	0.00E+00	3.15E-04	1.56E-03
10	D74	70	Combination Long Haul Truck	14	0.00E+00	7.13E-06	4.77E-07	5.34E+00	2.95E-08	7.20E-03	5.42E-06	8.17E-03	5.96E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.16E-04	1.79E-05	0.00E+00	3.51E-04	1.54E-03
11	D75	80	Passenger Car	166	0.00E+00	2.02E-06	2.19E-07	7.74E+00	1.41E-05	5.39E-02	4.49E-06	3.41E-04	9.13E-04	1.59E-04	4.37E-04	2.82E-04	2.89E-04	2.60E-05	3.90E-05	1.09E-08	1.48E-04	5.33E-05
11	D75	80	Passenger Truck	278	0.00E+00	4.34E-06	4.60E-07	1.79E+01	2.78E-05	9.92E-02	9.10E-06	1.01E-03	1.64E-03	2.91E-04	8.71E-04	5.65E-04	5.79E-04	1.25E-04	8.93E-05	2.43E-08	2.91E-04	1.66E-04
11	D75	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	D75	80	Combination Short Haul Truck	9	0.00E+00	4.14E-06	2.96E-07	3.42E+00	1.31E-08	3.67E-03	3.02E-06	4.25E-03	2.50E-04	6.17E-05	2.46E-04	8.74E-05	8.67E-05	5.16E-04	1.15E-05	0.00E+00	1.60E-04	8.00E-04
11	D75	80	Combination Long Haul Truck	9	0.00E+00	3.71E-06	2.49E-07	3.16E+00	1.51E-08	3.80E-03	2.81E-06	4.12E-03	2.45E-04	4.93E-05	2.55E-04	7.52E-05	7.56E-05	4.83E-04	1.06E-05	0.00E+00	1.79E-04	7.77E-04
11	D76	80	Passenger Car	199	0.00E+00	2.43E-06	2.62E-07	9.29E+00	1.69E-05	6.47E-02	5.39E-06	4.09E-04	1.10E-03	1.91E-04	5.25E-04	3.39E-04	3.47E-04	3.12E-05	4.68E-05	1.31E-08	1.78E-04	6.40E-05
11	D76	80	Passenger Truck	334	0.00E+00	5.21E-06	5.53E-07	2.15E+01	3.34E-05	1.19E-01	1.09E-05	1.22E-03	1.97E-03	3.49E-04	1.05E-03	6.79E-04	6.95E-04	1.50E-04	1.07E-04	2.92E-08	3.50E-04	1.99E-04
11	D76	80	Single Unit Short Haul Truck	34	0.00E+00	6.28E-06	3.12E-07	6.16E+00	5.06E-06	1.23E-02	6.69E-06	3.22E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.48E-05	9.86E-09	5.75E-04	6.03E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.14E-04	2.91E-07	1.38E-04	1.80E-05	3.94E-06	3.34E-05	8.01E-06	8.14E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.58E-05
11	D76	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.26E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.56E-03
11	D76	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	8.02E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
11	D77	80	Passenger Car	71	0.00E+00	8.60E-07	9.31E-08	3.29E+00	5.99E-06	2.29E-02	1.91E-06	1.45E-04	3.89E-04	6.76E-05	1.86E-04	1.20E-04	1.23E-04	1.11E-05	1.66E-05	4.65E-09	6.30E-05	2.27E-05
11	D77	80	Passenger Truck	118	0.00E+00	1.85E-06	1.96E-07	7.61E+00	1.18E-05	4.22E-02	3.87E-06	4.31E-04	6.97E-04	1.24E-04	3.71E-04	2.41E-04	2.47E-04	5.32E-05	3.80E-05	1.04E-08	1.24E-04	7.05E-05
11	D77	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.35E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.57E-05	9.73E-05	3.18E-04	1.28E-05	5.07E-09	2.96E-04	3.10E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.41E-07	6.92E-09	1.34E-01	1.11E-07	2.64E-04	1.49E-07	7.09E-05	9.27E-06	2.03E-06	1.72E-05	4.12E-06	4.19E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.33E-05
11	D77	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.78E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	D77	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.67E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.91E-04
11	D78	80	Passenger Car	154	0.00E+00	1.88E-06	2.03E-07	7.20E+00	1.31E-05	5.01E-02	4.18E-06	3.17E-04	8.49E-04	1.48E-04	4.07E-04	2.62E-04	2.69E-04	2.42E-05	3.62E-05	1.02E-08	1.38E-04	4.96E-05
11	D78	80	Passenger Truck	259	0.00E+00	4.04E-06	4.28E-07	1.66E+01	2.59E-05	9.22E-02	8.46E-06	9.42E-04	1.52E-03	2.70E-04	8.10E-04	5.26E-04	5.39E-04	1.16E-04	8.31E-05	2.26E-08	2.71E-04	1.54E-04
11	D78	80	Single Unit Short Haul Truck	34	0.00E+00	6.28E-06	3.12E-07	6.16E+00	5.06E-06	1.23E-02	6.69E-06	3.22E-03	3.95E-04	8.93E-05	7.64E-04	1.86E-04	1.89E-04	6.18E-04	2.48E-05	9.86E-09	5.75E-04	6.03E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	2.73E-07	1.35E-08	2.61E-01	2.16E-07	5.14E-04	2.91E-07	1.38E-04	1.80E-05	3.94E-06	3.34E-05	8.01E-06	8.14E-06	2.60E-05	1.05E-06	4.11E-10	2.52E-05	2.58E-05
11	D78	80	Combination Short Haul Truck	18	0.00E+00	8.05E-06	5.75E-07	6.65E+00	2.54E-08	7.13E-03	5.88E-06	8.26E-03	4.87E-04	1.20E-04	4.79E-04	1.70E-04	1.69E-04	1.00E-03	2.23E-05	0.00E+00	3.11E-04	1.56E-03
11	D78	80	Combination Long Haul Truck	17	0.00E+00	7.21E-06	4.84E-07	6.15E+00	2.93E-08	7.39E-03	5.46E-06	8.02E-03	4.76E-04	9.59E-05	4.95E-04	1.46E-04	1.47E-04	9.40E-04	2.06E-05	0.00E+00	3.48E-04	1.51E-03
10	D79	70	Passenger Car	232	0.00E+00	3.04E-06	3.28E-07	1.11E+01	2.11E-05	7.91E-02	6.75E-06	4.65E-04	1.80E-03	2.89E-04	6.57E-04	4.23E-04	4.35E-04	4.16E-05	5.60E-05	1.53E-08	2.22E-04	7.27E-05
10	D79	70	Passenger Truck	389	0.00E+00	6.65E-06	7.04E-07	2.57E+01	4.21E-05	1.45E-01	1.38E-05	1.46E-03	3.27E-03	5.32E-04	1.32E-03	8.58E-04	8.78E-04	1.88E-04	1.28E-04	3.42E-08	4.40E-04	2.39E-04
10	D79	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.67E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.12E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	D79	70	Combination Short Haul Truck	7	0.00E+00	3.81E-06	2.71E-07	2.76E+00	1.24E-08	3.28E-03	2.79E-06	4.00E-03	2.90E-04	6.33E-05	2.32E-04	8.01E-05	8.00E-05	4.16E-04	9.24E-06	0.00E+00	1.52E-04	7.54E-04
10	D79	70	Combination Long Haul Truck	7	0.00E+00	3.44E-06	2.30E-07	2.58E+00	1.43E-08	3.47E-03	2.61E-06	3.95E-03	2.88E-04	5.25E-05	2.40E-04	6.96E-05	7.03E-05	3.94E-04	8.63E-06	0.00E+00	1.70E-04	7.43E-04
10	D80	70	Passenger Car	224	0.00E+00	2.92E-06	3.16E-07	1.07E+01	2.03E-05	7.61E-02	6.50E-06	4.48E-04	1.73E-03	2.78E-04	6.33E-04	4.08E-04	4.18E-04	4.00E-05	5.39E-05	1.47E-08	2.14E-04	7.00E-05
10	D80	70	Passenger Truck	374	0.00E+00	6.41E-06	6.78E-07	2.47E+01	4.05E-05	1.40E-01	1.33E-05	1.40E-03	3.15E-03	5.13E-04	1.27E-03	8.26E-04	8.46E-04	1.82E-04	1.23E-04	3.29E-08	4.24E-04	2.31E-04
10	D80	70	Single Unit Short Haul Truck	29	0.00E+00	6.75E-06	3.38E-07	5.29E+00	5.52E-06	1.06E-02	7.19E-06	3.33E-03	4.75E-04	9.51E-05	8.19E-04	2.02E-04	2.05E-04	5.30E-04	2.13E-05	8.61E-09	6.14E-04	6.24E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	2.94E-07	1.46E-08	2.24E-01	2.38E-07	4.44E-04	3.13E-07	1.43E-04	2.17E-05	4.23E-06	3.58E-05	8.74E-06	8.89E-06	2.24E-05	9.06E-07	3.63E-10	2.69E-05	2.68E-05
10	D80	70	Combination Short Haul Truck	18	0.00E+00	9.25E-06	6.57E-07	6.71E+00	3.01E-08	7.96E-03	6.78E-06	9.72E-03	7.04E-04	1.54E-04	5.63E-04	1.95E-04	1.94E-04	1.01E-03	2.24E-05	0.00E+00	3.69E-04	1.83E-03
10	D80	70	Combination Long Haul Truck	16	0.00E+00	8.36E-06	5.59E-07	6.26E+00	3.46E-08	8.44E-03	6.35E-06	9.58E-03	6.99E-04	1.28E-04	5.83E-04	1.69E-04	1.71E-04	9.56E-04	2.10E-05	0.00E+00	4.12E-04	1.81E-03
10	D81	70	Passenger Car	242	0.00E+00	3.17E-06	3.43E-07	1.16E+01	2.20E-05	8.25E-02	7.04E-06	4.85E-04	1.88E-03	3.01E-04	6.86E-04	4.42E-04	4.53E-04	4.34E-05	5.84E-05	1.59E-08	2.32E-04	7.59E-05
10	D81	70	Passenger Truck	406	0.00E+00	6.94E-06	7.35E-07	2.68E+01	4.39E-05	1.52E-01	1.44E-05	1.52E-03	3.42E-03	5.55E-04	1.38E-03	8.95E-04	9.17E-04	1.97E-04	1.33E-04	3.57E-08	4.59E-04	2.50E-04
10	D81	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	D81	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	D81	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
10	D82	70	Passenger Car	139	0.00E+00	1.82E-06	1.97E-07	6.69E+00	1.27E-05	4.75E-02	4.05E-06	2.79E-04	1.08E-03	1.73E-04	3.95E-04	2.54E-04	2.61E-04	2.50E-05	3.36E-05	9.16E-09	1.34E-04	4.37E-05
10	D82	70	Passenger Truck	234	0.00E+00	4.00E-06	4.23E-07	1.54E+01	2.53E-05	8.73E-02	8.30E-06	8.74E-04	1.97E-03	3.20E-04	7.92E-04	5.15E-04	5.28E-04	1.13E-04	7.68E-05	2.05E-08	2.64E-04	1.44E-04
10	D82	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.72E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D82	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
11	D83	80	Passenger Car	372

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D86	80	Combination Long Haul Truck	111	0.00E+00	4.78E-05	3.21E-06	4.08E+01	1.94E-07	4.90E-02	3.62E-05	5.32E-02	3.16E-03	6.35E-04	3.28E-03	9.69E-04	9.74E-04	6.23E-03	1.37E-04	0.00E+00	2.31E-03	1.00E-02
11	D87	80	Passenger Car	299	0.00E+00	3.65E-06	3.94E-07	1.40E+01	2.54E-05	9.72E-02	8.11E-06	6.15E-04	1.65E-03	2.86E-04	7.89E-04	5.09E-04	5.22E-04	4.69E-05	7.03E-05	1.97E-08	2.67E-04	9.61E-05
11	D87	80	Passenger Truck	502	0.00E+00	7.83E-06	8.30E-07	3.23E+01	5.02E-05	1.79E-01	1.64E-05	1.83E-03	2.95E-03	5.24E-04	1.57E-03	1.02E-03	1.04E-03	2.25E-04	1.61E-04	4.39E-08	5.26E-04	2.99E-04
11	D87	80	Single Unit Short Haul Truck	129	0.00E+00	2.42E-05	1.20E-06	2.38E+01	1.95E-05	4.76E-02	2.58E-05	1.24E-02	1.52E-03	3.44E-04	2.95E-03	7.18E-04	7.30E-04	2.39E-03	9.58E-05	3.80E-08	2.22E-03	2.32E-03
11	D87	80	Single Unit Long Haul Truck	6	0.00E+00	1.05E-06	5.19E-08	1.01E+00	8.33E-07	1.98E-03	1.12E-06	5.31E-04	6.96E-05	1.52E-05	1.29E-04	3.09E-05	3.14E-05	1.00E-04	4.06E-06	1.58E-09	9.72E-05	9.94E-05
11	D87	80	Combination Short Haul Truck	83	0.00E+00	3.66E-05	2.61E-06	3.02E+01	1.15E-07	3.24E-02	2.67E-05	3.75E-02	2.21E-03	5.45E-04	2.18E-03	7.72E-04	7.66E-04	4.56E-03	1.01E-04	0.00E+00	1.41E-03	7.07E-03
11	D87	80	Combination Long Haul Truck	76	0.00E+00	3.27E-05	2.20E-06	2.79E+01	1.33E-07	3.36E-02	2.48E-05	3.64E-02	2.16E-03	4.35E-04	2.25E-03	6.64E-04	6.68E-04	4.27E-03	9.36E-05	0.00E+00	1.58E-03	6.86E-03
11	D88	80	Passenger Car	725	0.00E+00	8.83E-06	9.55E-07	3.38E+01	6.14E-05	2.35E-01	1.96E-05	1.49E-03	3.99E-03	6.93E-04	1.91E-03	1.23E-03	1.26E-03	1.14E-04	1.70E-04	4.77E-08	6.47E-04	2.33E-04
11	D88	80	Passenger Truck	1214	0.00E+00	1.90E-05	2.01E-06	7.81E+01	1.21E-04	4.33E-01	3.97E-05	4.42E-03	7.15E-03	1.27E-03	3.80E-03	2.47E-03	2.53E-03	5.45E-04	3.90E-04	1.06E-07	1.27E-03	7.23E-04
11	D88	80	Single Unit Short Haul Truck	72	0.00E+00	1.35E-05	6.69E-07	1.32E+01	1.08E-05	2.65E-02	1.43E-05	6.90E-03	8.46E-04	1.91E-04	1.64E-03	3.99E-04	4.05E-04	1.33E-03	5.32E-05	2.11E-08	1.23E-03	1.29E-03
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	5.85E-07	2.88E-08	5.59E-01	4.63E-07	1.10E-03	6.23E-07	2.95E-04	3.86E-05	8.44E-06	7.15E-05	1.72E-05	1.75E-05	5.58E-05	2.26E-06	8.80E-10	5.40E-05	5.52E-05
11	D88	80	Combination Short Haul Truck	121	0.00E+00	5.33E-05	3.81E-06	4.41E+01	1.68E-07	4.72E-02	3.90E-05	5.48E-02	3.23E-03	7.96E-04	3.18E-03	1.13E-03	1.12E-03	6.65E-03	1.48E-04	0.00E+00	2.06E-03	1.03E-02
11	D88	80	Combination Long Haul Truck	111	0.00E+00	4.78E-05	3.21E-06	4.08E+01	1.94E-07	4.90E-02	3.62E-05	5.32E-02	3.16E-03	6.35E-04	3.28E-03	9.69E-04	9.74E-04	6.23E-03	1.37E-04	0.00E+00	2.31E-03	1.00E-02
9	D89	60	Passenger Car	44	0.00E+00	6.56E-07	7.09E-08	2.20E+00	4.56E-06	1.70E-02	1.46E-06	8.92E-05	4.44E-04	6.82E-05	1.42E-04	9.15E-05	9.39E-05	9.14E-06	1.10E-05	3.03E-09	4.80E-05	1.39E-05
9	D89	60	Passenger Truck	73	0.00E+00	1.45E-06	1.53E-07	5.01E+00	9.04E-06	3.03E-02	2.98E-06	2.91E-04	8.15E-04	1.26E-04	2.83E-04	1.85E-04	1.89E-04	3.88E-05	2.49E-05	6.88E-09	9.43E-05	4.82E-05
9	D89	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	D89	60	Combination Short Haul Truck	4	0.00E+00	2.15E-06	1.50E-07	1.40E+00	7.63E-09	1.88E-03	1.60E-06	2.34E-03	2.01E-04	3.97E-05	1.37E-04	4.47E-05	4.48E-05	2.11E-04	4.69E-06	0.00E+00	9.23E-05	4.40E-04
9	D89	60	Combination Long Haul Truck	3	0.00E+00	1.93E-06	1.26E-07	1.31E+00	8.75E-09	2.03E-03	1.49E-06	2.32E-03	2.02E-04	3.42E-05	1.41E-04	3.84E-05	3.89E-05	2.01E-04	4.40E-06	0.00E+00	1.02E-04	4.37E-04
9	D90	60	Passenger Car	67	0.00E+00	1.01E-06	1.09E-07	3.38E+00	7.02E-06	2.62E-02	2.24E-06	1.37E-04	6.83E-04	1.05E-04	2.18E-04	1.41E-04	1.44E-04	1.41E-05	1.69E-05	4.66E-09	7.39E-05	2.15E-05
9	D90	60	Passenger Truck	113	0.00E+00	2.23E-06	2.35E-07	7.71E+00	1.39E-05	4.66E-02	4.59E-06	4.48E-04	1.25E-03	1.95E-04	4.36E-04	2.84E-04	2.91E-04	5.97E-05	3.83E-05	1.06E-08	1.45E-04	7.42E-05
9	D90	60	Single Unit Short Haul Truck	9	0.00E+00	2.53E-06	1.27E-07	1.61E+00	2.09E-06	3.12E-03	2.70E-06	1.21E-03	2.05E-04	3.72E-05	3.08E-04	7.59E-05	7.72E-05	1.61E-04	6.51E-06	2.68E-09	2.30E-04	2.26E-04
9	D90	60	Combination Short Haul Truck	4	0.00E+00	2.46E-06	1.72E-07	1.60E+00	8.72E-09	2.15E-03	1.83E-06	2.67E-03	2.29E-04	4.54E-05	1.57E-04	5.11E-05	5.12E-05	2.41E-04	5.36E-06	0.00E+00	1.05E-04	5.03E-04
9	D90	60	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.44E-07	1.50E+00	1.00E-08	2.32E-03	1.70E-06	2.65E-03	2.30E-04	3.91E-05	1.61E-04	4.39E-05	4.45E-05	2.29E-04	5.03E-06	0.00E+00	1.17E-04	4.99E-04
10	D91	70	Passenger Car	289	0.00E+00	3.78E-06	4.09E-07	1.39E+01	2.63E-05	9.85E-02	8.41E-06	5.80E-04	2.24E-03	3.60E-04	8.19E-04	5.28E-04	5.42E-04	5.18E-05	6.98E-05	1.90E-08	2.77E-04	9.06E-05
10	D91	70	Passenger Truck	485	0.00E+00	8.29E-06	8.77E-07	3.20E+01	5.24E-05	1.81E-01	1.72E-05	1.81E-03	4.08E-03	6.63E-04	1.64E-03	1.07E-03	1.09E-03	2.35E-04	1.59E-04	4.26E-08	5.48E-04	2.98E-04
10	D91	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	D91	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.77E-04
10	D91	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.72E-04
10	D92	70	Passenger Car	116	0.00E+00	1.52E-06	1.64E-07	5.56E+00	1.05E-05	3.95E-02	3.37E-06	2.32E-04	8.99E-04	1.44E-04	3.28E-04	2.11E-04	2.17E-04	2.08E-05	2.80E-05	7.62E-09	1.11E-04	3.63E-05
10	D92	70	Passenger Truck	194	0.00E+00	3.32E-06	3.51E-07	1.28E+01	2.10E-05	7.26E-02	6.90E-06	7.26E-04	1.63E-03	2.66E-04	6.58E-04	4.28E-04	4.39E-04	9.41E-05	6.38E-05	1.71E-08	2.20E-04	1.19E-04
10	D92	70	Single Unit Short Haul Truck	11	0.00E+00	2.48E-06	1.24E-07	1.94E+00	2.02E-06	3.88E-03	2.64E-06	1.22E-03	1.74E-04	3.49E-05	3.00E-04	7.40E-05	7.53E-05	1.94E-04	7.82E-06	3.16E-09	2.25E-04	2.29E-04
10	D92	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.15E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	D92	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.84E-04
10	D93	70	Passenger Car	285	0.00E+00	3.73E-06	4.03E-07	1.37E+01	2.60E-05	9.71E-02	8.29E-06	5.72E-04	2.21E-03	3.55E-04	8.07E-04	5.20E-04	5.34E-04	5.11E-05	6.88E-05	1.87E-08	2.73E-04	8.93E-05
10	D93	70	Passenger Truck	478	0.00E+00	8.17E-06	8.65E-07	3.15E+01	5.17E-05	1.79E-01	1.70E-05	1.79E-03	4.02E-03	6.54E-04	1.62E-03	1.05E-03	1.08E-03	2.32E-04	1.57E-04	4.20E-08	5.40E-04	2.94E-04
10	D93	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	D93	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.58E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	D93	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.46E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	D94	70	Passenger Car	111	0.00E+00	1.45E-06	1.57E-07	5.31E+00	1.01E-05	3.77E-02	3.22E-06	2.22E-04	8.58E-04	1.38E-04	3.13E-04	2.02E-04	2.07E-04	1.98E-05	2.67E-05	7.27E-09	1.06E-04	3.47E-05
10	D94	70	Passenger Truck	185	0.00E+00	3.17E-06	3.36E-07	1.22E+01	2.01E-05	6.93E-02	6.59E-06	6.94E-04	1.56E-03	2.54E-04	6.28E-04	4.09E-04	4.19E-04	8.98E-05	6.10E-05	1.63E-08	2.10E-04	1.14E-04
10	D94	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.91E-04
10	D94	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.68E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	D94	70	Combination Short Haul Truck	6	0.00E+00	3.27E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.86E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.46E-04
10	D94	70	Combination Long Haul Truck	6	0.00E+00	2.95E-06	1.97E-07	2.21E+00	1.22E-08	2.98E-03	2.24E-06	3.38E-03	2.47E-04	4.50E-05	2.06E-04	5.96E-05	6.03E-05	3.38E-04	7.40E-06	0.00E+00	1.45E-04	6.37E-04
9	E01	60	Passenger Car	124	0.00E+00	1.86E-06	2.01E-07	6.21E+00	1.29E-05	4.81E-02	4.13E-06	2.52E-04	1.26E-03	1.93E-04	4.02E-04	2.59E-04	2.66E-04	2.59E-05	3.11E-05	8.57E-09	1.36E-04	3.94E-05
9	E01	60	Passenger Truck	207	0.00E+00	4.09E-06	4.32E-07	1.42E+01	2.56E-05	8.57E-02	8.43E-06	8.23E-04	2.30E-03	3.58E-04	8.02E-04	5.22E-04	5.35E-04	1.10E-04	7.04E-05	1.95E-08	2.67E-04	1.36E-04
9	E01	60	Single Unit Short Haul Truck	17	0.00E+00	5.06E-06	2.53E-07	3.22E+00	4.17E-06	6.24E-03	5.40E-06	2.41E-03	4.10E-04	7.43E-05	6.15E-04	1.52E-04	1.54E-04	3.23E-04	1.30E-05	5.37E-09	4.61E-04	4.52E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	2.21E-07	1.10E-08	1.38E-01	1.81E-07	2.65E-04	2.36E-07	1.04E-04	1.84E-05	3.29E-06	2.69E-05	6.60E-06	6.71E-06	1.37E-05	5.56E-07	2.28E-10	2.02E-05	1.96E-05
9	E01	60	Combination Short Haul Truck	8	0.00E+00	4.61E-06	3.22E-07	3.00E+00	1.63E-08	4.04E-03	3.42E-06	5.01E-03	4.30E-04	8.51E-05	2.94E-04	9.58E-05	9.59E-05	4.53E-04	1.01E-05	0.00E+00	1.98E-04	9.44E-04
9	E01	60	Combination Long Haul Truck	7	0.00E+00	4.14E-06	2.70E-07	2.81E+00	1.87E-08	4.35E-03	3.19E-06	4.97E-03	4.32E-04	7.33E-05	3.03E-04	8.23E-05	8.34E-05	4.30E-04	9.43E-06	0.00E+00	2.19E-04	9.36E-04
9	E02	60	Passenger Car	247	0.00E+00	3.71E-06	4.01E-07	1.24E+01	2.58E-05	9.60E-02	8.24E-06	5.04E-04	2.51E-03	3.85E-04	8.02E-04	5.17E-04	5.30E-04	5.16E-05	6.22E-05	1.71E-08	2.71E-04	7.88E-05
9	E02	60	Passenger Truck	414	0.00E+00	8.17E-06	8.63E-07	2.83E+01	5.11E-05	1.71E-01	1.68E-05	1.64E-03	4.60E-03	7.14E-04	1.60E-03	1.04E-03	1.07E-03	2.19E-04	1.41E-04	3.89E-08	5.33E-04	2.72E-04
9	E02	60	Single Unit Short Haul Truck	37	0.00E+00	1.10E-05	5.49E-07	6.99E+00	9.04E-06	1.35E-02	1.17E-05	5.23E-03	8.88E-04	1.61E-04	1.33E-03	3.29E-04	3.34E-04	6.99E-04	2.82E-05	1.16E-08	9.98E-04	9.80E-04
9	E02	60	Single Unit Long Haul Truck	2	0.00E+00	4.79E-07	2.38E-08	2.98E-01	3.93E-07	5.74E-04	5.11E-07	2.26E-04	3.99E-05	7.13E-06	5.84E-05	1.43E-05	1.45E-05	2.98E-05	1.21E-06	4.95E-10	4.38E-05	4.24E-05
9	E02	60	Combination Short Haul Truck	27	0.00E+00	1.57E-05	1.09E-06	1.02E+01	5.56E-08	1.37E-02	1.16E-05	1.70E-02	1.46E-03	2.89E-04	9.98E-04	3.26E-04	3.26E-04	1.54E-03	3.42E-05	0.00E+00	6.72E-04	3.21E-03
9	E02	60	Combination Long Haul Truck	24	0.00E+00	1.41E-05	9.17E-07	9.57E+00	6.37E-08	1.48E-02	1.09E-05	1.69E-02	1.47E-03	2.49E-04	1.03E-03	2.80E-04	2.83E-04	1.46E-03	3.21E-05	0.00E+00	7.46E-04	3.18E-03
11	E03	80	Passenger Car	236	0.00E+00	2.88E-06	3.11E-07	1.10E+01	2.00E-05	7.67E-02	6.40E-06	4.85E-04	1.30E-03	2.26E-04	6.23E-04	4.01E-04	4.12E-04	3.70E-05	5.55E-05	1.55E-08	2.11E-04	7.59E-05
11	E03	80	Passenger Truck	396	0.00E+00	6.18E-06	6.55E-07	2.55E+01	3.96E-05	1.41E-01	1.29E-05	1.44E-03	2.33E-03	4.14E-04	1.24E-03	8.05E-04	8.25E-04	1.78E-04	1.27E-04	3.46E-08	4.15E-04	2.36E-04
11	E03	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.52E-03	5.16E-06	2.48E-03	3.04E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.60E-09	4.44E-04	4.65E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.97E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.28E-06	2.01E-05	8.12E-07	3.17E-10	1.94E-05	1.99E-05
11	E03	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.14E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	E03	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.96E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E04	80	Passenger Car	243	0.00E+00	2.96E-06	3.21E-07	1.13E+01	2.06E-05	7.90E-02	6.59E-06	5.00E-04	1.34E-03	2.33E-04	6.41E-04	4.13E-04	4.24E-04	3.81E-05	5.71E-05	1.60E-08	2.17E-04	7.81E-05
11	E04	80	Passenger Truck	408	0.00E+00	6.36E-06	6.75E-07	2.62E+01	4.08E-05	1.45E-01	1.33E-05	1.49E-03	2.40E-03	4.26E-04	1.28E-03	8.29E-04	8.49E-04	1.83E-04	1.31E-04	3.57E-08	4.27E-04	2.43E-04
11	E04	80	Single Unit Short Haul Truck	27	0.00E+00	5.02E-06	2.50E-07	4.93E+00	4.04E-06	9.88E-03	5.35E-06	2.58E-03	3.16E-04	7.14E-05	6.12E-04	1.49E-04	1.51E-04	4.95E-04	1.99E-05	7.88E-09	4.60E-04	4.82E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	2.19E-07	1.08E-08	2.09E-01	1.73E-07	4.11E-04	2.32E-07	1.10E-04	1.44E-05	3.15E-06	2.67E-05	6.41E-06	6.52E-06	2.08E-05	8.42E-07	3.29E-10	2.02E-05	2.06E-05
11	E04	80	Combination Short Haul Truck	19	0.00E+00	8.28E-06	5.92E-07	6.84E+00	2.61E-08	7.33E-03	6.05E-06	8.50E-03	5.01E-04	1.23E-04	4.93E-04	1.75E-04	1.73E-04	1.03E-03	2.29E-05	0.00E+00	3.20E-04	1.60E-03
11	E04	80	Combination Long Haul Truck	17	0.00E+00	7.41E-06	4.98E-07	6.33E+00	3.02E-08	7.60E-03	5.62E-06	8.25E-03	4.90E-04	9.86E-05	5.09E-04	1.50E-04	1.51E-04	9.67E-04	2.12E-05	0.00E+00	3.58E-04	1.55E-03
11	E05	80	Passenger Car	78	0.00E+00	9.52E-07	1.03E-07	3.64E+00	6.62E-06	2.54E-02	2.12E-06	1.61E-04	4.30E-04	7.47E-05	2.06E-04	1.33E-04	1.36E-04	1.22E-05	1.83E-05	5.14E-09	6.97E-05	2.51E-05
11	E05	80	Passenger Truck	131	0.00E+00	2.04E-06	2.17E-07	8.42E+00	1.31E-05	4.67E-02	4.28E-06	4.77E-04	7.71E-04	1.37E-04	4.10E-04	2.66E-04	2.73E-04	5.88E-05	4.20E-05	1.14E-08	1.37E-04	7.79E-05
11	E05	80	Single Unit Short Haul Truck	26	0.00E+00	4.85E-06	2.41E-07	4.76E+00	3.90E-06	9.52E-03	5.16E-06	2.48E-03	3.04E-04	6.89E-05	5.90E-04	1.44E-04	1.46E-04	4.77E-04	1.92E-05	7.60E-09	4.44E-04	4.65E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	2.11E-07	1.04E-08	2.01E-01	1.67E-07	3.97E-04	2.24E-07	1.06E-04	1.39E-05	3.04E-06	2.57E-05	6.18E-06	6.28E-06	2.01E-05	8.12E-07	3.17E-10	1.94E-05	1.99E-05
11	E05	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.78E-04
11	E05	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.04E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
11	E06	80	Passenger Car	198	0.00E+00	2.41E-06	2.61E-07	9.23E+00	1.68E-05	6.43E-02	5.36E-06	4.07E-04	1.09E-03	1.89E-04	5.22E-04	3.37E-04	3.45E-04	3.11E-05	4.65E-05	1.30E-08	1.77E-04	6.36E-05
11	E06	80	Passenger Truck	332	0.00E+00	5.18E-06	5.50E-07	2.13E+01	3.32E-05	1.18E-01	1.09E-05	1.21E-03	1.95E-03	3.47E-04	1.04E-03	6.75E-04	6.91E-04	1.49E-04	1.07E-04	2.90E-08	3.48E-04	1.98E-04
11	E06	80	Single Unit Short Haul Truck	20	0.00E+00	3.77E-06	1.87E-07	3.70E+00	3.03E-06	7.41E-03	4.01E-06	1.93E-03	2.37E-04	5.36E-05	4.59E-04	1.12E-04	1.14E-04	3.71E-04	1.49E-05	5.91E-09	3.45E-04	3.62E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.64E-07	8.08E-09	1.56E-01	1.30E-07	3.09E-04	1.74E-07	8.27E-05	1.08E-05	2.36E-06	2.00E-05	4.80E-06	4.89E-06	1.56E-05	6.32E-07	2.47E-10	1.51E-05	1.55E-05
11	E06	80	Combination Short Haul Truck	12	0.00E+00	5.29E-06	3.78E-07	4.37E+00	1.67E-08	4.68E-03	3.86E-06	5.43E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.59E-04	1.46E-05	0.00E+00	2.04E-04	1.02E-03
11	E06	80	Combination Long Haul Truck	11	0.00E+00	4.74E-06	3.18E-07	4.04E+00	1.93E-08	4.85E-03	3.59E-06	5.27E-03	3.13E-04	6.30E-05	3.25E-04	9.60E-05	9.66E-05	6.17E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
9	E07	60	Passenger Car	1168	0.00E+00	1.75E-05	1.89E-06	5.86E+01	1.22E-04	4.54E-01	3.89E-05	2.38E-03	1.19E-02	1.82E-03	3.79E-03	2.44E-03	2.51E-03	2.44E-04	2.94E-04	8.10E-08	1.28E-03	3.72E-04
9	E07	60	Passenger Truck	1957	0.00E+00	3.86E-05	4.08E-06	1.34E+02	2.41E-04	8.09E-01	7.96E-05	7.77E-03	2.18E-02	3.38E-03	7.57E-03	4.93E-03	5.05E-03	1.04E-03	6.65E-04	1.84E-07	2.52E-03	1.29E-03
9	E07	60	Single Unit Short Haul Truck	107	0

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E11	60	Passenger Truck	2054	0.00E+00	4.06E-05	4.28E-06	1.40E+02	2.54E-04	8.50E-01	8.36E-05	8.16E-03	2.28E-02	3.55E-03	7.95E-03	5.18E-03	5.30E-03	1.09E-03	6.98E-04	1.93E-07	2.64E-03	1.35E-03
9	E11	60	Single Unit Short Haul Truck	148	0.00E+00	4.36E-05	2.18E-06	2.78E+01	3.59E-05	5.38E-02	4.65E-05	2.08E-02	3.53E-03	6.40E-04	5.30E-03	1.31E-03	1.33E-03	2.78E-03	1.12E-04	4.62E-08	3.97E-03	3.90E-03
9	E11	60	Single Unit Long Haul Truck	7	0.00E+00	1.90E-06	9.47E-08	1.19E+00	1.56E-06	2.28E-03	2.03E-06	8.99E-04	1.59E-04	2.83E-05	2.32E-04	5.69E-05	5.78E-05	1.18E-04	4.79E-06	1.97E-09	1.74E-04	1.69E-04
9	E11	60	Combination Short Haul Truck	94	0.00E+00	5.51E-05	3.84E-06	3.58E+01	1.95E-07	4.82E-02	4.09E-05	5.98E-02	5.13E-03	1.01E-03	3.50E-03	1.14E-03	1.14E-03	5.40E-03	1.20E-04	0.00E+00	2.36E-03	1.13E-02
9	E11	60	Combination Long Haul Truck	85	0.00E+00	4.94E-05	3.22E-06	3.36E+01	2.24E-07	5.19E-02	3.81E-05	5.93E-02	5.16E-03	8.74E-04	3.61E-03	9.82E-04	9.95E-04	5.13E-03	1.12E-04	0.00E+00	2.62E-03	1.12E-02
9	E12	60	Passenger Car	897	0.00E+00	1.34E-05	1.45E-06	4.50E+01	9.36E-05	3.49E-01	2.99E-05	1.83E-03	9.10E-03	1.40E-03	2.91E-03	1.88E-03	1.93E-03	1.87E-04	2.26E-04	6.21E-08	9.85E-04	2.86E-04
9	E12	60	Passenger Truck	1502	0.00E+00	2.97E-05	3.13E-06	1.03E+02	1.85E-04	6.21E-01	6.11E-05	5.96E-03	1.67E-02	2.59E-03	5.81E-03	3.79E-03	3.88E-03	7.95E-04	5.10E-04	1.41E-07	1.93E-03	9.89E-04
9	E12	60	Single Unit Short Haul Truck	145	0.00E+00	4.25E-05	2.12E-06	2.71E+01	3.50E-05	5.24E-02	4.53E-05	2.03E-02	3.44E-03	6.24E-04	5.16E-03	1.27E-03	1.29E-03	2.71E-03	1.09E-04	4.50E-08	3.87E-03	3.80E-03
9	E12	60	Single Unit Long Haul Truck	6	0.00E+00	1.85E-06	9.23E-08	1.15E+00	1.52E-06	2.22E-03	1.98E-06	8.76E-04	1.54E-04	2.76E-05	2.26E-04	5.54E-05	5.63E-05	1.15E-04	4.67E-06	1.91E-09	1.70E-04	1.64E-04
9	E12	60	Combination Short Haul Truck	132	0.00E+00	7.75E-05	5.40E-06	5.04E+01	2.75E-07	6.78E-02	5.75E-05	8.42E-02	7.22E-03	1.43E-03	4.93E-03	1.61E-03	1.61E-03	7.60E-03	1.69E-04	0.00E+00	3.32E-03	1.59E-02
9	E12	60	Combination Long Haul Truck	120	0.00E+00	6.96E-05	4.53E-06	4.73E+01	3.15E-07	7.30E-02	5.37E-05	8.34E-02	7.26E-03	1.23E-03	5.08E-03	1.38E-03	1.40E-03	7.23E-03	1.58E-04	0.00E+00	3.68E-03	1.57E-02
11	E13	80	Passenger Car	239	0.00E+00	2.91E-06	3.15E-07	1.11E+01	2.02E-05	7.76E-02	6.47E-06	4.91E-04	1.31E-03	2.28E-04	6.30E-04	4.06E-04	4.16E-04	3.74E-05	5.61E-05	1.57E-08	2.13E-04	7.67E-05
11	E13	80	Passenger Truck	400	0.00E+00	6.25E-06	6.63E-07	2.57E+01	4.00E-05	1.43E-01	1.31E-05	1.46E-03	2.36E-03	4.18E-04	1.25E-03	8.14E-04	8.34E-04	1.80E-04	1.29E-04	3.50E-08	4.19E-04	2.38E-04
11	E13	80	Single Unit Short Haul Truck	27	0.00E+00	5.02E-06	2.50E-07	4.93E+00	4.04E-06	9.88E-03	5.35E-06	2.58E-03	3.16E-04	7.14E-05	6.12E-04	1.49E-04	1.51E-04	4.95E-04	1.99E-05	7.88E-09	4.60E-04	4.82E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	2.19E-07	1.08E-08	2.09E-01	1.73E-07	4.11E-04	2.32E-07	1.10E-04	1.44E-05	3.15E-06	2.67E-05	6.41E-06	6.52E-06	2.08E-05	8.42E-07	3.29E-10	2.02E-05	2.06E-05
11	E13	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.78E-04
11	E13	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.04E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
11	E14	80	Passenger Car	414	0.00E+00	5.04E-06	5.45E-07	1.93E+01	3.50E-05	1.34E-01	1.12E-05	8.49E-04	2.27E-03	3.95E-04	1.09E-03	7.02E-04	7.21E-04	6.48E-05	9.71E-05	2.72E-08	3.69E-04	1.33E-04
11	E14	80	Passenger Truck	692	0.00E+00	1.08E-05	1.15E-06	4.45E+01	6.93E-05	2.47E-01	2.27E-05	2.52E-03	4.08E-03	7.24E-04	2.17E-03	1.41E-03	1.44E-03	3.11E-04	2.22E-04	6.06E-08	7.26E-04	4.12E-04
11	E14	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.62E-07	1.11E+01	9.10E-06	2.22E-02	1.20E-05	5.80E-03	7.10E-04	1.61E-04	1.38E-03	3.35E-04	3.41E-04	1.11E-03	4.47E-05	1.77E-08	1.04E-03	1.08E-03
11	E14	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.26E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.47E-05	4.69E-05	1.90E-06	7.40E-10	4.54E-05	4.64E-05
11	E14	80	Combination Short Haul Truck	42	0.00E+00	1.84E-05	1.32E-06	1.52E+01	5.80E-08	1.63E-02	1.34E-05	1.89E-02	1.11E-03	2.74E-04	1.10E-03	3.88E-04	3.85E-04	2.29E-03	5.09E-05	0.00E+00	7.10E-04	3.56E-03
11	E14	80	Combination Long Haul Truck	38	0.00E+00	1.65E-05	1.11E-06	1.41E+01	6.71E-08	1.69E-02	1.25E-05	1.83E-02	1.09E-03	2.19E-04	1.13E-03	3.34E-04	3.36E-04	2.15E-03	4.71E-05	0.00E+00	7.95E-04	3.45E-03
11	E15	80	Passenger Car	195	0.00E+00	2.37E-06	2.57E-07	9.08E+00	1.65E-05	6.32E-02	5.27E-06	4.00E-04	1.07E-03	1.86E-04	5.13E-04	3.31E-04	3.40E-04	3.05E-05	4.57E-05	1.28E-08	1.74E-04	6.25E-05
11	E15	80	Passenger Truck	326	0.00E+00	5.09E-06	5.40E-07	2.10E+01	3.26E-05	1.16E-01	1.07E-05	1.19E-03	1.92E-03	3.41E-04	1.02E-03	6.63E-04	6.80E-04	1.47E-04	1.05E-04	2.85E-08	3.42E-04	1.94E-04
11	E15	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.20E-04
11	E15	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	E15	80	Combination Short Haul Truck	16	0.00E+00	7.13E-06	5.10E-07	5.89E+00	2.25E-08	6.31E-03	5.21E-06	7.32E-03	4.31E-04	1.06E-04	4.24E-04	1.50E-04	1.49E-04	8.89E-04	1.97E-05	0.00E+00	2.75E-04	1.38E-03
11	E15	80	Combination Long Haul Truck	15	0.00E+00	6.38E-06	4.29E-07	5.45E+00	2.60E-08	6.54E-03	4.84E-06	7.10E-03	4.22E-04	8.49E-05	4.38E-04	1.29E-04	1.30E-04	8.32E-04	1.82E-05	0.00E+00	3.08E-04	1.34E-03
11	E16	80	Passenger Car	320	0.00E+00	3.90E-06	4.22E-07	1.49E+01	2.71E-05	1.04E-01	8.66E-06	6.57E-04	1.76E-03	3.06E-04	8.43E-04	5.44E-04	5.58E-04	5.01E-05	7.51E-05	2.11E-08	2.85E-04	1.03E-04
11	E16	80	Passenger Truck	536	0.00E+00	8.37E-06	8.88E-07	3.45E+01	5.36E-05	1.91E-01	1.75E-05	1.95E-03	3.16E-03	5.60E-04	1.68E-03	1.09E-03	1.12E-03	2.41E-04	1.72E-04	4.69E-08	5.62E-04	3.19E-04
11	E16	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	E16	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	E16	80	Combination Short Haul Truck	37	0.00E+00	1.61E-05	1.15E-06	1.33E+01	5.08E-08	1.43E-02	1.18E-05	1.65E-02	9.74E-04	2.40E-04	9.58E-04	3.40E-04	3.37E-04	2.01E-03	4.45E-05	0.00E+00	6.21E-04	3.11E-03
11	E16	80	Combination Long Haul Truck	33	0.00E+00	1.44E-05	9.69E-07	1.23E+01	5.87E-08	1.48E-02	1.09E-05	1.60E-02	9.53E-04	1.92E-04	9.90E-04	2.92E-04	2.94E-04	1.88E-03	4.12E-05	0.00E+00	6.96E-04	3.02E-03
11	E17	80	Passenger Car	104	0.00E+00	1.27E-06	1.37E-07	4.84E+00	8.81E-06	3.37E-02	2.81E-06	2.14E-04	5.72E-04	9.94E-05	2.74E-04	1.77E-04	1.81E-04	1.63E-05	2.44E-05	6.84E-09	9.27E-05	3.34E-05
11	E17	80	Passenger Truck	174	0.00E+00	2.72E-06	2.88E-07	1.12E+01	1.74E-05	6.21E-02	5.70E-06	6.34E-04	1.03E-03	1.82E-04	5.45E-04	3.54E-04	3.63E-04	7.82E-05	5.59E-05	1.52E-08	1.82E-04	1.04E-04
11	E17	80	Single Unit Short Haul Truck	36	0.00E+00	6.82E-06	3.39E-07	6.69E+00	5.49E-06	1.34E-02	7.26E-06	3.50E-03	4.29E-04	9.70E-05	8.30E-04	2.02E-04	2.05E-04	6.71E-04	2.70E-05	1.07E-08	6.25E-04	6.54E-04
11	E17	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.46E-08	2.83E-01	2.34E-07	5.58E-04	3.15E-07	1.50E-04	1.96E-05	4.28E-06	3.62E-05	8.69E-06	8.84E-06	2.83E-05	1.14E-06	4.46E-10	2.74E-05	2.80E-05
11	E17	80	Combination Short Haul Truck	13	0.00E+00	5.75E-06	4.11E-07	4.75E+00	1.81E-08	5.09E-03	4.20E-06	5.90E-03	3.48E-04	8.57E-05	3.42E-04	1.21E-04	1.20E-04	7.17E-04	1.59E-05	0.00E+00	2.22E-04	1.11E-03
11	E17	80	Combination Long Haul Truck	12	0.00E+00	5.15E-06	3.46E-07	4.39E+00	2.10E-08	5.28E-03	3.90E-06	5.73E-03	3.40E-04	6.85E-05	3.54E-04	1.04E-04	1.05E-04	6.71E-04	1.47E-05	0.00E+00	2.49E-04	1.08E-03
11	E18	80	Passenger Car	237	0.00E+00	2.89E-06	3.13E-07	1.11E+01	2.01E-05	7.71E-02	6.43E-06	4.88E-04	1.31E-03	2.27E-04	6.26E-04	4.03E-04	4.14E-04	3.72E-05	5.57E-05	1.56E-08	2.12E-04	7.62E-05
11	E18	80	Passenger Truck	398	0.00E+00	6.21E-06	6.58E-07	2.56E+01	3.98E-05	1.42E-01	1.30E-05	1.45E-03	2.34E-03	4.16E-04	1.25E-03	8.09E-04	8.28E-04	1.79E-04	1.28E-04	3.48E-08	4.17E-04	2.37E-04
11	E18	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	E18	80	Combination Short Haul Truck	9	0.00E+00	4.14E-06	2.96E-07	3.42E+00	1.31E-08	3.67E-03	3.02E-06	4.25E-03	2.50E-04	6.17E-05	2.46E-04	8.74E-05	8.67E-05	5.16E-04	1.15E-05	0.00E+00	1.60E-04	8.00E-04
11	E18	80	Combination Long Haul Truck	9	0.00E+00	3.71E-06	2.49E-07	3.16E+00	1.51E-08	3.80E-03	2.81E-06	4.12E-03	2.45E-04	4.93E-05	2.55E-04	7.52E-05	7.56E-05	4.83E-04	1.06E-05	0.00E+00	1.79E-04	7.77E-04
9	E19	60	Passenger Car	590	0.00E+00	8.85E-06	9.57E-07	2.96E+01	6.16E-05	2.29E-01	1.97E-05	1.20E-03	5.99E-03	9.19E-04	1.91E-03	1.23E-03	1.27E-03	1.23E-04	1.48E-04	4.09E-08	6.48E-04	1.88E-04
9	E19	60	Passenger Truck	988	0.00E+00	1.95E-05	2.06E-06	6.76E+01	1.22E-04	4.09E-01	4.02E-05	3.92E-03	1.10E-02	1.71E-03	3.82E-03	2.49E-03	2.55E-03	5.23E-04	3.36E-04	9.27E-08	1.27E-03	6.50E-04
9	E19	60	Single Unit Short Haul Truck	50	0.00E+00	1.46E-05	7.31E-07	9.32E+00	1.21E-05	1.80E-02	1.56E-05	6.98E-03	1.18E-03	2.15E-04	1.78E-03	4.39E-04	4.46E-04	9.32E-04	3.76E-05	1.55E-08	1.33E-03	1.31E-03
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	6.39E-07	3.18E-08	3.98E-01	5.24E-07	7.66E-04	6.82E-07	3.02E-04	5.32E-05	9.50E-06	7.78E-05	1.91E-05	1.94E-05	3.97E-05	1.61E-06	6.59E-10	5.84E-05	5.65E-05
9	E19	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.64E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.08E-03
9	E19	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.06E-03
9	E20	60	Passenger Car	388	0.00E+00	5.81E-06	6.29E-07	1.95E+01	4.05E-05	1.51E-01	1.29E-05	7.91E-04	3.94E-03	6.04E-04	1.26E-03	8.11E-04	8.32E-04	8.10E-05	9.75E-05	2.69E-08	4.26E-04	1.24E-04
9	E20	60	Passenger Truck	649	0.00E+00	1.28E-05	1.35E-06	4.44E+01	8.01E-05	2.69E-01	2.64E-05	2.58E-03	7.22E-03	1.12E-03	2.51E-03	1.64E-03	1.68E-03	3.44E-04	2.21E-04	6.09E-08	8.36E-04	4.27E-04
9	E20	60	Single Unit Short Haul Truck	47	0.00E+00	1.38E-05	6.89E-07	8.78E+00	1.14E-05	1.70E-02	1.47E-05	6.57E-03	1.12E-03	2.02E-04	1.67E-03	4.13E-04	4.20E-04	8.79E-04	3.55E-05	1.46E-08	1.25E-03	1.23E-03
9	E20	60	Single Unit Long Haul Truck	2	0.00E+00	6.02E-07	2.99E-08	3.75E-01	4.93E-07	7.21E-04	6.43E-07	2.84E-04	5.01E-05	8.96E-06	7.34E-05	1.80E-05	1.83E-05	3.74E-05	1.51E-06	6.21E-10	5.51E-05	5.33E-05
9	E20	60	Combination Short Haul Truck	16	0.00E+00	9.54E-06	6.65E-07	6.20E+00	3.38E-08	8.34E-03	7.08E-06	1.04E-02	8.88E-04	1.76E-04	6.07E-04	1.98E-04	1.98E-04	9.35E-04	2.08E-05	0.00E+00	4.09E-04	1.95E-03
9	E20	60	Combination Long Haul Truck	15	0.00E+00	8.56E-06	5.57E-07	5.82E+00	3.87E-08	8.99E-03	6.60E-06	1.03E-02	8.93E-04	1.51E-04	6.26E-04	1.70E-04	1.72E-04	8.89E-04	1.95E-05	0.00E+00	4.53E-04	1.93E-03
11	E21	80	Passenger Car	9	0.00E+00	1.09E-07	1.18E-08	4.18E-01	7.60E-07	2.91E-03	2.43E-07	1.84E-05	4.94E-05	8.58E-06	2.36E-05	1.52E-05	1.56E-05	1.41E-06	2.11E-06	5.90E-10	8.00E-06	2.88E-06
11	E21	80	Passenger Truck	15	0.00E+00	2.35E-07	2.49E-08	9.66E-01	1.50E-06	5.36E-03	4.92E-07	5.48E-05	8.85E-05	1.57E-05	4.71E-05	3.06E-05	3.13E-05	6.75E-06	4.83E-06	1.31E-09	1.57E-05	8.95E-06
11	E21	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.20E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E21	80	Single Unit Long Haul Truck	2	0.00E+00	6.90E-07	4.93E-08	5.70E-01	2.18E-09	6.11E-04	5.04E-07	7.08E-04	4.17E-05	1.03E-05	4.11E-05	1.46E-05	1.44E-05	8.60E-05	1.91E-06	0.00E+00	2.66E-05	1.33E-04
11	E21	80	Combination Short Haul Truck	1	0.00E+00	6.18E-07	4.15E-08	5.27E-01	2.51E-09	6.33E-04	4.68E-07	6.87E-04	4.08E-05	8.22E-06	4.24E-05	1.25E-05	1.26E-05	8.05E-05	1.77E-06	0.00E+00	2.98E-05	1.30E-04
11	E22	80	Passenger Car	133	0.00E+00	1.62E-06	1.75E-07	6.18E+00	1.12E-05	4.31E-02	3.59E-06	2.73E-04	7.30E-04	1.27E-04	3.50E-04	2.25E-04	2.31E-04	2.08E-05	3.12E-05	8.73E-09	1.18E-04	4.26E-05
11	E22	80	Passenger Truck	222	0.00E+00	3.47E-06	3.68E-07	1.43E+01	2.22E-05	7.93E-02	7.27E-06	8.10E-04	1.31E-03	2.32E-04	6.96E-04	4.52E-04	4.63E-04	9.98E-05	7.14E-05	1.94E-08	2.33E-04	1.32E-04
11	E22	80	Single Unit Short Haul Truck	13	0.00E+00	2.51E-06	1.25E-07	2.47E+00	2.02E-06	4.94E-03	2.67E-06	1.29E-03	1.58E-04	3.57E-05	3.06E-04	7.44E-05	7.57E-05	2.47E-04	9.93E-06	3.94E-09	2.30E-04	2.41E-04
11	E22	80	Single Unit Long Haul Truck	1	0.00E+00	1.09E-07	5.38E-09	1.04E-01	8.64E-08	2.06E-04	1.16E-07	5.51E-05	7.21E-06	1.58E-06	1.33E-05	3.20E-06	3.26E-06	1.04E-05	4.21E-07	1.64E-10	1.01E-05	1.03E-05
11	E22	80	Combination Short Haul Truck	12	0.00E+00	5.29E-06	3.78E-07	4.37E+00	1.67E-08	4.68E-03	3.86E-06	5.43E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.59E-04	1.46E-05	0.00E+00	2.04E-04	1.02E-03
11	E22	80	Combination Long Haul Truck	11	0.00E+00	4.74E-06	3.18E-07	4.04E+00	1.93E-08	4.85E-03	3.59E-06	5.27E-03	3.13E-04	6.30E-05	3.25E-04	9.60E-05	9.66E-05	6.17E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
11	E23	80	Passenger Car	9	0.00E+00	1.09E-07	1.18E-08	4.18E-01	7.60E-07	2.91E-03	2.43E-07	1.84E-05	4.94E-05	8.58E-06	2.36E-05	1.52E-05	1.56E-05	1.41E-06	2.11E-06	5.90E-10	8.00E-06	2.88E-06
11	E23	80	Passenger Truck	15	0.00E+00	2.35E-07	2.49E-08	9.66E-01	1.50E-06	5.36E-03	4.92E-07	5.48E-05	8.85E-05	1.57E-05	4.71E-05	3.06E-05	3.13E-05	6.75E-06	4.83E-06	1.31E-09	1.57E-05	8.95E-06
11	E23	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.20E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E23	80	Combination Short Haul Truck	2	0.00E+00	6.90E-07	4.93E-08	5.70E-01	2.18E-09	6.11E-04	5.04E-07	7.08E-04	4.17E-05	1.03E-05	4.11E-05	1.46E-05	1.44E-05	8.60E-05	1.91E-06	0.00E+00	2.66E-05	1.33E-04
11	E23	80	Combination Long Haul Truck	1	0.00E+00	6.18E-07	4.15E-08	5.27E-01	2.51E-09	6.33E-04	4.68E-07	6.87E-04	4.08E-05	8.22E-06	4.24E-05	1.25E-05	1.26E-05	8.05E-05	1.77E-06	0.00E+00	2.98E-05	1.30E-04
11	E24	80	Passenger Car	133	0.00E+00	1.62E-06	1.75E-07	6.18E+00	1.12E-05	4.31E-02	3.59E-06	2.73E-04	7.30E-04	1.27E-04	3.50E-04	2.25E-04	2.31E-04	2.08E-05	3.12E-05	8.73E-09	1.18E-04	4.26E-05
11	E24	80	Passenger Truck	222	0.00E+00	3.47E-06	3.68E-07	1.43E+01	2.22E-05	7.93E-02	7.27E-06	8.10E-04	1.31E-03	2.32E-04	6.96E-04	4.52E-04	4.63E-04	9.98E-05	7.14E-05	1.94E-08	2.33E-04	1.32E-04
11	E24	80	Single Unit Short Haul Truck	13	0.00E+00	2.51E-06	1.25E-07	2.47E+00	2.02E-06	4.94E-03	2.67E-06	1.29E-03	1.58E-04	3.57E-05	3.06E-04	7.44E-05	7.57E-05	2.47E-04	9.93E-06	3.94E-09	2.30E-04	2.41E-04
11	E24	80	Single Unit Long Haul Truck	1	0.00E+00	1.09E-07	5.38E-09	1.04E-01	8.64E-08	2.06E-04	1.16E-07	5.51E-05	7.21E-06	1.58E-06	1.33E-05	3.20E-06	3.26E-06	1.04E-05	4.21E-07	1.64E-10	1.01E-05	1.03E-05
11	E24	80	Combination Short Haul Truck	12	0.00E+00	5.29E-06	3.78E-07	4.37E+00	1.67E-08	4.68E-03	3.86E-06	5.43E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.59E-04	1.46E-05	0.00E+00	2.04E-04	1.02E-03
11	E24	80	Combination Long Haul Truck	11	0.00E+00	4.74E-06	3.18E-07	4.04E+00	1.93E-08	4.85E-03	3.59E-06	5.27E-03	3.13E-04	6.30E-05	3.25E-04	9.60E-05	9.66E-05	6.17E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
10	E25	70	Passenger Car	300	0.00E+00	3.92E-06	4.24E-07	1.44E+01	2.73E-05	1.02E-01	8.72E-06	6.01E-04	2.32E-03	3.73E-04	8.48E-04	5.47E-04	5.61E-04	5.37E-05	7.23E-05	1.97E-08	2.87E-04	9.39E-05
10	E25	70	Passenger

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E30	70	Passenger Car	194	0.00E+00	2.54E-06	2.75E-07	9.33E+00	1.77E-05	6.62E-02	5.65E-06	3.90E-04	1.51E-03	2.42E-04	5.50E-04	3.55E-04	3.64E-04	3.48E-05	4.69E-05	1.28E-08	1.86E-04	6.09E-05
10	E30	70	Passenger Truck	326	0.00E+00	5.57E-06	5.90E-07	2.15E+01	3.52E-05	1.22E-01	1.16E-05	1.22E-03	2.74E-03	4.46E-04	1.10E-03	7.18E-04	7.36E-04	1.58E-04	1.07E-04	2.86E-08	3.68E-04	2.00E-04
10	E30	70	Single Unit Short Haul Truck	11	0.00E+00	2.48E-06	1.24E-07	1.94E+00	2.02E-06	3.88E-03	2.64E-06	1.22E-03	1.74E-04	3.49E-05	3.00E-04	7.40E-05	7.53E-05	1.94E-04	7.82E-06	3.16E-09	2.25E-04	2.29E-04
10	E30	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.00E-04
10	E30	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.66E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.90E-04
10	E31	70	Passenger Car	56	0.00E+00	7.38E-07	7.98E-08	2.71E+00	5.14E-06	1.92E-02	1.64E-06	1.13E-04	4.38E-04	7.02E-05	1.60E-04	1.03E-04	1.06E-04	1.01E-05	1.36E-05	3.71E-09	5.41E-05	1.77E-05
10	E31	70	Passenger Truck	95	0.00E+00	1.62E-06	1.71E-07	6.24E+00	1.02E-05	3.54E-02	3.36E-06	3.54E-04	7.96E-04	1.29E-04	3.21E-04	2.09E-04	2.14E-04	4.58E-05	3.11E-05	8.32E-09	1.07E-04	5.82E-05
10	E31	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.67E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.12E-04
10	E31	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	E31	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.15E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	E31	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.84E-04
10	E32	70	Passenger Car	234	0.00E+00	3.07E-06	3.32E-07	1.13E+01	2.13E-05	7.98E-02	6.81E-06	4.70E-04	1.82E-03	2.92E-04	6.63E-04	4.28E-04	4.39E-04	4.20E-05	5.65E-05	1.54E-08	2.25E-04	7.34E-05
10	E32	70	Passenger Truck	393	0.00E+00	6.72E-06	7.11E-07	2.59E+01	4.25E-05	1.47E-01	1.40E-05	1.47E-03	3.31E-03	5.37E-04	1.33E-03	8.66E-04	8.87E-04	1.90E-04	1.29E-04	3.45E-08	4.44E-04	2.42E-04
10	E32	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.35E-03	4.32E-06	2.00E-03	2.85E-04	5.71E-05	4.91E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.74E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	8.78E-09	1.35E-01	1.43E-07	2.67E-04	1.88E-07	8.59E-05	1.30E-05	2.54E-06	2.15E-05	5.24E-06	5.33E-06	1.35E-05	5.44E-07	2.18E-10	1.61E-05	1.61E-05
10	E32	70	Combination Short Haul Truck	10	0.00E+00	5.44E-06	3.87E-07	3.94E+00	1.77E-08	4.68E-03	3.99E-06	5.72E-03	4.14E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.95E-04	1.32E-05	0.00E+00	2.17E-04	1.08E-03
10	E32	70	Combination Long Haul Truck	10	0.00E+00	4.92E-06	3.29E-07	3.68E+00	2.04E-08	4.96E-03	3.74E-06	5.64E-03	4.11E-04	7.50E-05	3.43E-04	9.94E-05	1.00E-04	5.63E-04	1.23E-05	0.00E+00	2.42E-04	1.06E-03
9	E33	60	Passenger Car	267	0.00E+00	4.00E-06	4.33E-07	1.34E+01	2.79E-05	1.04E-01	8.90E-06	5.44E-04	2.71E-03	4.16E-04	8.66E-04	5.58E-04	5.73E-04	5.58E-05	6.71E-05	1.85E-08	2.93E-04	8.51E-05
9	E33	60	Passenger Truck	447	0.00E+00	8.83E-06	9.32E-07	3.06E+01	5.52E-05	1.85E-01	1.82E-05	1.78E-03	4.97E-03	7.72E-04	1.73E-03	1.13E-03	1.15E-03	2.37E-04	1.52E-04	4.20E-08	5.75E-04	2.94E-04
9	E33	60	Single Unit Short Haul Truck	49	0.00E+00	1.43E-05	7.17E-07	9.14E+00	1.18E-05	1.77E-02	1.53E-05	6.84E-03	1.16E-03	2.11E-04	1.74E-03	4.30E-04	4.37E-04	9.14E-04	3.69E-05	1.52E-08	1.31E-03	1.28E-03
9	E33	60	Single Unit Long Haul Truck	2	0.00E+00	6.26E-07	3.12E-08	3.90E-01	5.13E-07	7.51E-04	6.69E-07	2.96E-04	5.22E-05	9.32E-06	7.63E-05	1.87E-05	1.90E-05	3.89E-05	1.58E-06	6.47E-10	5.73E-05	5.55E-05
9	E33	60	Combination Short Haul Truck	28	0.00E+00	1.66E-05	1.16E-06	1.08E+01	5.89E-08	1.45E-02	1.23E-05	1.80E-02	1.55E-03	3.06E-04	1.06E-03	3.45E-04	3.45E-04	1.63E-03	3.62E-05	0.00E+00	7.12E-04	3.40E-03
9	E33	60	Combination Long Haul Truck	26	0.00E+00	1.49E-05	9.71E-07	1.01E+01	6.75E-08	1.57E-02	1.15E-05	1.79E-02	1.56E-03	2.64E-04	1.09E-03	2.96E-04	3.00E-04	1.55E-03	3.39E-05	0.00E+00	7.90E-04	3.37E-03
9	E34	60	Passenger Car	680	0.00E+00	1.02E-05	1.10E-06	3.41E+01	7.10E-05	2.64E-01	2.27E-05	1.39E-03	6.90E-03	1.06E-03	2.21E-03	1.42E-03	1.46E-03	1.42E-04	1.71E-04	4.71E-08	7.47E-04	2.17E-04
9	E34	60	Passenger Truck	1139	0.00E+00	2.25E-05	2.37E-06	7.79E+01	1.41E-04	4.71E-01	4.63E-05	4.52E-03	1.27E-02	1.97E-03	4.41E-03	2.87E-03	2.94E-03	6.03E-04	3.87E-04	1.07E-07	1.47E-03	7.50E-04
9	E34	60	Single Unit Short Haul Truck	42	0.00E+00	1.24E-05	6.19E-07	7.88E+00	1.02E-05	1.53E-02	1.32E-05	5.90E-03	1.00E-03	1.82E-04	1.50E-03	3.71E-04	3.77E-04	7.89E-04	3.18E-05	1.31E-08	1.13E-03	1.11E-03
9	E34	60	Single Unit Long Haul Truck	2	0.00E+00	5.40E-07	2.69E-08	3.36E-01	4.43E-07	6.48E-04	5.77E-07	2.55E-04	4.50E-05	8.04E-06	6.59E-05	1.61E-05	1.64E-05	3.36E-05	1.36E-06	5.58E-10	4.95E-05	4.78E-05
9	E34	60	Combination Short Haul Truck	32	0.00E+00	1.88E-05	1.31E-06	1.22E+01	6.65E-08	1.64E-02	1.39E-05	2.04E-02	1.75E-03	3.46E-04	1.19E-03	3.90E-04	3.90E-04	1.84E-03	4.09E-05	0.00E+00	8.04E-04	3.84E-03
9	E34	60	Combination Long Haul Truck	29	0.00E+00	1.68E-05	1.10E-06	1.14E+01	7.62E-08	1.77E-02	1.30E-05	2.02E-02	1.76E-03	2.98E-04	1.23E-03	3.35E-04	3.39E-04	1.75E-03	3.83E-05	0.00E+00	8.92E-04	3.81E-03
9	E35	60	Passenger Car	186	0.00E+00	2.79E-06	3.01E-07	9.32E+00	1.94E-05	7.22E-02	6.19E-06	3.79E-04	1.89E-03	2.90E-04	6.03E-04	3.89E-04	3.99E-04	3.88E-05	4.67E-05	1.29E-08	2.04E-04	5.92E-05
9	E35	60	Passenger Truck	311	0.00E+00	6.14E-06	6.49E-07	2.13E+01	3.84E-05	1.29E-01	1.27E-05	1.24E-03	3.46E-03	5.37E-04	1.20E-03	7.84E-04	8.03E-04	1.65E-04	1.06E-04	2.92E-08	4.00E-04	2.05E-04
9	E35	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.03E-07	8.96E+00	1.16E-05	1.73E-02	1.50E-05	6.71E-03	1.14E-03	2.07E-04	1.71E-03	4.22E-04	4.29E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.26E-03
9	E35	60	Single Unit Long Haul Truck	2	0.00E+00	6.14E-07	3.06E-08	3.82E-01	5.03E-07	7.36E-04	6.56E-07	2.90E-04	5.11E-05	9.14E-06	7.48E-05	1.83E-05	1.86E-05	3.82E-05	1.55E-06	6.34E-10	5.62E-05	5.44E-05
9	E35	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.64E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.08E-03
9	E35	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.06E-03
9	E36	60	Passenger Car	498	0.00E+00	7.47E-06	8.08E-07	2.50E+01	5.20E-05	1.94E-01	1.66E-05	1.02E-03	5.05E-03	7.76E-04	1.62E-03	1.04E-03	1.07E-03	1.04E-04	1.25E-04	3.45E-08	5.47E-04	1.59E-04
9	E36	60	Passenger Truck	834	0.00E+00	1.65E-05	1.74E-06	5.70E+01	1.03E-04	3.45E-01	3.39E-05	3.31E-03	9.27E-03	1.44E-03	3.23E-03	2.10E-03	2.15E-03	4.42E-04	2.83E-04	7.83E-08	1.07E-03	5.49E-04
9	E36	60	Single Unit Short Haul Truck	45	0.00E+00	1.32E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.31E-03	1.07E-03	1.94E-04	1.61E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	5.77E-07	2.87E-08	3.59E-01	4.73E-07	6.92E-04	6.16E-07	2.73E-04	4.81E-05	8.59E-06	7.04E-05	1.72E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.11E-05
9	E36	60	Combination Short Haul Truck	32	0.00E+00	1.91E-05	1.33E-06	1.24E+01	6.76E-08	1.67E-02	1.42E-05	2.07E-02	1.78E-03	3.52E-04	1.21E-03	3.96E-04	3.97E-04	1.87E-03	4.15E-05	0.00E+00	8.17E-04	3.90E-03
9	E36	60	Combination Long Haul Truck	30	0.00E+00	1.71E-05	1.11E-06	1.16E+01	7.75E-08	1.80E-02	1.32E-05	2.05E-02	1.79E-03	3.03E-04	1.25E-03	3.40E-04	3.45E-04	1.78E-03	3.90E-05	0.00E+00	9.07E-04	3.87E-03
9	E37	60	Passenger Car	186	0.00E+00	2.79E-06	3.01E-07	9.32E+00	1.94E-05	7.22E-02	6.19E-06	3.79E-04	1.89E-03	2.90E-04	6.03E-04	3.89E-04	3.99E-04	3.88E-05	4.67E-05	1.29E-08	2.04E-04	5.92E-05
9	E37	60	Passenger Truck	311	0.00E+00	6.14E-06	6.49E-07	2.13E+01	3.84E-05	1.29E-01	1.27E-05	1.24E-03	3.46E-03	5.37E-04	1.20E-03	7.84E-04	8.03E-04	1.65E-04	1.06E-04	2.92E-08	4.00E-04	2.05E-04
9	E37	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.03E-07	8.96E+00	1.16E-05	1.73E-02	1.50E-05	6.71E-03	1.14E-03	2.07E-04	1.71E-03	4.22E-04	4.29E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.26E-03
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	6.14E-07	3.06E-08	3.82E-01	5.03E-07	7.36E-04	6.56E-07	2.90E-04	5.11E-05	9.14E-06	7.48E-05	1.83E-05	1.86E-05	3.82E-05	1.55E-06	6.34E-10	5.62E-05	5.44E-05
9	E37	60	Combination Short Haul Truck	26	0.00E+00	1.51E-05	1.05E-06	9.81E+00	5.34E-08	1.32E-02	1.12E-05	1.64E-02	1.40E-03	2.78E-04	9.59E-04	3.13E-04	3.13E-04	1.48E-03	3.28E-05	0.00E+00	6.46E-04	3.08E-03
9	E37	60	Combination Long Haul Truck	23	0.00E+00	1.35E-05	8.81E-07	9.19E+00	6.12E-08	1.42E-02	1.04E-05	1.62E-02	1.41E-03	2.39E-04	9.89E-04	2.69E-04	2.72E-04	1.41E-03	3.08E-05	0.00E+00	7.16E-04	3.06E-03
9	E38	60	Passenger Car	498	0.00E+00	7.47E-06	8.08E-07	2.50E+01	5.20E-05	1.94E-01	1.66E-05	1.02E-03	5.05E-03	7.76E-04	1.62E-03	1.04E-03	1.07E-03	1.04E-04	1.25E-04	3.45E-08	5.47E-04	1.59E-04
9	E38	60	Passenger Truck	834	0.00E+00	1.65E-05	1.74E-06	5.70E+01	1.03E-04	3.45E-01	3.39E-05	3.31E-03	9.27E-03	1.44E-03	3.23E-03	2.10E-03	2.15E-03	4.42E-04	2.83E-04	7.83E-08	1.07E-03	5.49E-04
9	E38	60	Single Unit Short Haul Truck	45	0.00E+00	1.32E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.31E-03	1.07E-03	1.94E-04	1.61E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	E38	60	Single Unit Long Haul Truck	2	0.00E+00	5.77E-07	2.87E-08	3.59E-01	4.73E-07	6.92E-04	6.16E-07	2.73E-04	4.81E-05	8.59E-06	7.04E-05	1.72E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.11E-05
9	E38	60	Combination Short Haul Truck	32	0.00E+00	1.91E-05	1.33E-06	1.24E+01	6.76E-08	1.67E-02	1.42E-05	2.07E-02	1.78E-03	3.52E-04	1.21E-03	3.96E-04	3.97E-04	1.87E-03	4.15E-05	0.00E+00	8.17E-04	3.90E-03
9	E38	60	Combination Long Haul Truck	30	0.00E+00	1.71E-05	1.11E-06	1.16E+01	7.75E-08	1.80E-02	1.32E-05	2.05E-02	1.79E-03	3.03E-04	1.25E-03	3.40E-04	3.45E-04	1.78E-03	3.90E-05	0.00E+00	9.07E-04	3.87E-03
10	E39	70	Passenger Car	267	0.00E+00	3.49E-06	3.78E-07	1.28E+01	2.43E-05	9.09E-02	7.76E-06	5.35E-04	2.07E-03	3.32E-04	7.55E-04	4.87E-04	5.00E-04	4.78E-05	6.44E-05	1.75E-08	2.56E-04	8.36E-05
10	E39	70	Passenger Truck	447	0.00E+00	7.65E-06	8.09E-07	2.95E+01	4.84E-05	1.67E-01	1.59E-05	1.67E-03	3.77E-03	6.12E-04	1.52E-03	9.86E-04	1.01E-03	2.17E-04	1.47E-04	3.93E-08	5.06E-04	2.75E-04
10	E39	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.66E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	E39	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.57E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	E39	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.78E-04
10	E40	70	Passenger Car	175	0.00E+00	2.29E-06	2.47E-07	8.40E+00	1.59E-05	5.96E-02	5.09E-06	3.51E-04	1.36E-03	2.18E-04	4.95E-04	3.19E-04	3.28E-04	3.13E-05	4.22E-05	1.15E-08	1.68E-04	5.48E-05
10	E40	70	Passenger Truck	293	0.00E+00	5.01E-06	5.31E-07	1.93E+01	3.17E-05	1.10E-01	1.04E-05	1.10E-03	2.47E-03	4.01E-04	9.93E-04	6.46E-04	6.62E-04	1.42E-04	9.64E-05	2.58E-08	3.31E-04	1.80E-04
10	E40	70	Single Unit Short Haul Truck	31	0.00E+00	7.20E-06	3.61E-07	5.64E+00	5.89E-06	1.13E-02	7.67E-06	3.55E-03	5.07E-04	1.01E-04	8.74E-04	2.15E-04	2.19E-04	5.66E-04	2.27E-05	9.18E-09	6.55E-04	6.65E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	3.14E-07	1.56E-08	2.39E-01	2.54E-07	4.74E-04	3.34E-07	1.53E-04	2.31E-05	4.51E-06	3.82E-05	9.32E-06	9.48E-06	2.39E-05	9.67E-07	3.87E-10	2.87E-05	2.86E-05
10	E40	70	Combination Short Haul Truck	21	0.00E+00	1.09E-05	7.73E-07	7.89E+00	3.54E-08	9.37E-03	7.98E-06	1.14E-02	8.28E-04	1.81E-04	6.63E-04	2.29E-04	2.28E-04	1.19E-03	2.64E-05	0.00E+00	4.34E-04	2.15E-03
10	E40	70	Combination Long Haul Truck	19	0.00E+00	9.84E-06	6.58E-07	7.36E+00	4.07E-08	9.92E-03	7.47E-06	1.13E-02	8.23E-04	1.50E-04	6.85E-04	1.99E-04	2.01E-04	1.13E-03	2.47E-05	0.00E+00	4.84E-04	2.12E-03
10	E41	70	Passenger Car	221	0.00E+00	2.89E-06	3.13E-07	1.06E+01	2.01E-05	7.54E-02	6.43E-06	4.43E-04	1.72E-03	2.75E-04	6.26E-04	4.04E-04	4.14E-04	3.96E-05	5.34E-05	1.45E-08	2.12E-04	6.93E-05
10	E41	70	Passenger Truck	371	0.00E+00	6.34E-06	6.71E-07	2.45E+01	4.01E-05	1.39E-01	1.32E-05	1.39E-03	3.12E-03	5.07E-04	1.26E-03	8.17E-04	8.37E-04	1.80E-04	1.22E-04	3.26E-08	4.19E-04	2.28E-04
10	E41	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E41	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E42	70	Passenger Car	217	0.00E+00	2.84E-06	3.07E-07	1.04E+01	1.97E-05	7.38E-02	6.30E-06	4.34E-04	1.68E-03	2.70E-04	6.14E-04	3.96E-04	4.06E-04	3.88E-05	5.23E-05	1.42E-08	2.08E-04	6.79E-05
10	E42	70	Passenger Truck	363	0.00E+00	6.21E-06	6.58E-07	2.40E+01	3.93E-05	1.36E-01	1.29E-05	1.36E-03	3.06E-03	4.97E-04	1.23E-03	8.01E-04	8.20E-04	1.76E-04	1.19E-04	3.19E-08	4.11E-04	2.24E-04
10	E42	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.55E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	E42	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.11E-04	6.78E-05	2.49E-04	8.58E-05	8.57E-05	4.46E-04	9.90E-06	0.00E+00	1.63E-04	8.08E-04
10	E42	70	Combination Long Haul Truck	7	0.00E+00	3.69E-06	2.47E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.63E-05	2.57E-04	7.46E-05	7.54E-05	4.22E-04	9.25E-06	0.00E+00	1.82E-04	7.97E-04
10	E43	70	Passenger Car	220	0.00E+00	2.87E-06	3.11E-07	1.06E+01	2.00E-05	7.49E-02	6.39E-06	4.40E-04	1.70E-03	2.73E-04	6.22E-04	4.01E-04	4.11E-04	3.94E-05	5.30E-05	1.44E-08	2.11E-04	6.88E-05
10	E43	70	Passenger Truck	368	0.00E+00	6.30E-06	6.67E-07	2.43E+01	3.98E-05	1.38E-01	1.31E-05	1.38E-03	3.10E-03	5.04E-04	1.25E-03	8.12E-04	8.32E-04	1.78E-04	1.21E-04	3.24E-08	4.16E-04	2.27E-04
10	E43	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.89E-08	1.23E+00	1.29E-06	2.47E-03	1.68E-06	7.77E-04	1.11E-04	2.22E-05	1.91E-04	4.71E-05	4.79E-05	1.24E-04	4.98E-06	2.01E-09	1.43E-04	1.46E-04
10	E43	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E43	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E44	70	Passenger Car	164	0.00E+00	2.15E-06	2.32E-07	7.88E+00	1.49E-05	5.59E-02	4.77E-06	3.29E-04	1.27E-03	2.04E-04	4.64E-04	2.99E-04	3.07E-04	2.94E-05	3.96E-05	1.08E-08	1.57E-04	5.14E-05
10	E44	70	Passenger Truck	275	0.00E+00	4.70E-06	4.98E-07	1.82E+01	2.97E-05	1.03E-01	9.77E-06	1.03E-03	2.31E-03	3.76E-04	9.32E-04	6.06E-04	6.21E-04	1.33E-04	9.04E-05	2.42E-08	3.11E-04	1.69E-04
10	E44	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	E44	70	Combination Short Haul Truck	5	0.00

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E48	80	Combination Short Haul Truck	19	0.00E+00	8.51E-06	6.08E-07	7.03E+00	2.68E-08	7.53E-03	6.22E-06	8.73E-03	5.15E-04	1.27E-04	5.07E-04	1.80E-04	1.78E-04	1.06E-03	2.35E-05	0.00E+00	3.28E-04	1.65E-03
11	E48	80	Combination Long Haul Truck	18	0.00E+00	7.62E-06	5.12E-07	6.50E+00	3.10E-08	7.81E-03	5.77E-06	8.48E-03	5.03E-04	1.01E-04	5.23E-04	1.54E-04	1.55E-04	9.93E-04	2.18E-05	0.00E+00	3.68E-04	1.60E-03
11	E49	80	Passenger Car	56	0.00E+00	6.78E-07	7.34E-08	2.60E+00	4.72E-06	1.81E-02	1.51E-06	1.14E-04	3.06E-04	5.33E-05	1.47E-04	9.46E-05	9.71E-05	8.73E-06	1.31E-05	3.66E-09	4.97E-05	1.79E-05
11	E49	80	Passenger Truck	93	0.00E+00	1.46E-06	1.54E-07	6.00E+00	9.33E-06	3.33E-02	3.05E-06	3.40E-04	5.49E-04	9.75E-05	2.92E-04	1.90E-04	1.94E-04	4.19E-05	3.00E-05	8.16E-09	9.78E-05	5.55E-05
11	E49	80	Single Unit Short Haul Truck	3	0.00E+00	5.38E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.59E-05	1.62E-05	5.30E-05	2.13E-06	8.45E-10	4.93E-05	5.17E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.42E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.67E-04
11	E49	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.37E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	E50	80	Passenger Car	204	0.00E+00	2.49E-06	2.69E-07	9.51E+00	1.73E-05	6.63E-02	5.53E-06	4.19E-04	1.12E-03	1.95E-04	5.38E-04	3.47E-04	3.56E-04	3.20E-05	4.79E-05	1.34E-08	1.82E-04	6.55E-05
11	E50	80	Passenger Truck	342	0.00E+00	5.34E-06	5.66E-07	2.20E+01	3.42E-05	1.22E-01	1.12E-05	1.25E-03	2.01E-03	3.57E-04	1.07E-03	6.95E-04	7.12E-04	1.54E-04	1.10E-04	2.99E-08	3.58E-04	2.04E-04
11	E50	80	Single Unit Short Haul Truck	45	0.00E+00	8.43E-06	4.19E-07	8.28E+00	6.79E-06	1.66E-02	8.98E-06	4.33E-03	5.30E-04	1.20E-04	1.03E-03	2.50E-04	2.54E-04	8.30E-04	3.34E-05	1.32E-08	7.73E-04	8.09E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	3.67E-07	1.81E-08	3.50E-01	2.90E-07	6.91E-04	3.90E-07	1.85E-04	2.42E-05	5.29E-06	4.48E-05	1.08E-05	1.09E-05	3.50E-05	1.41E-06	5.52E-10	3.39E-05	3.46E-05
11	E50	80	Combination Short Haul Truck	36	0.00E+00	1.59E-05	1.13E-06	1.31E+01	5.01E-08	1.40E-02	1.16E-05	1.63E-02	9.60E-04	2.37E-04	9.45E-04	3.35E-04	3.32E-04	1.98E-03	4.39E-05	0.00E+00	6.12E-04	3.07E-03
11	E50	80	Combination Long Haul Truck	33	0.00E+00	1.42E-05	9.55E-07	1.21E+01	5.78E-08	1.46E-02	1.08E-05	1.58E-02	9.39E-04	1.89E-04	9.76E-04	2.88E-04	2.90E-04	1.85E-03	4.06E-05	0.00E+00	6.86E-04	2.98E-03
11	E51	80	Passenger Car	15	0.00E+00	1.87E-07	2.02E-08	7.14E-01	1.30E-06	4.98E-03	4.15E-07	3.15E-05	8.43E-05	1.47E-05	4.04E-05	2.60E-05	2.67E-05	2.40E-06	3.60E-06	1.01E-09	1.37E-05	4.92E-06
11	E51	80	Passenger Truck	26	0.00E+00	4.01E-07	4.25E-08	1.65E+00	2.57E-06	9.16E-03	8.40E-07	9.36E-05	1.51E-04	2.68E-05	8.04E-05	5.22E-05	5.35E-05	1.15E-05	8.25E-06	2.25E-09	2.69E-05	1.53E-05
11	E51	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
11	E52	80	Passenger Car	214	0.00E+00	2.60E-06	2.82E-07	9.97E+00	1.81E-05	6.94E-02	5.79E-06	4.39E-04	1.18E-03	2.04E-04	5.64E-04	3.63E-04	3.73E-04	3.35E-05	5.02E-05	1.41E-08	1.91E-04	6.87E-05
11	E52	80	Passenger Truck	358	0.00E+00	5.59E-06	5.93E-07	2.30E+01	3.58E-05	1.28E-01	1.17E-05	1.31E-03	2.11E-03	3.74E-04	1.12E-03	7.28E-04	7.46E-04	1.61E-04	1.15E-04	3.13E-08	3.75E-04	2.13E-04
11	E52	80	Single Unit Short Haul Truck	48	0.00E+00	8.97E-06	4.46E-07	8.81E+00	7.22E-06	1.76E-02	9.55E-06	4.60E-03	5.64E-04	1.28E-04	1.09E-03	2.66E-04	2.70E-04	8.83E-04	3.55E-05	1.41E-08	8.22E-04	8.61E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	3.90E-07	1.92E-08	3.73E-01	3.08E-07	7.35E-04	4.15E-07	1.97E-04	2.58E-05	5.63E-06	4.77E-05	1.14E-05	1.16E-05	3.72E-05	1.50E-06	5.87E-10	3.60E-05	3.68E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	1.63E-05	1.17E-06	1.35E+01	5.15E-08	1.45E-02	1.19E-05	1.68E-02	9.88E-04	2.43E-04	9.72E-04	3.45E-04	3.42E-04	2.04E-03	4.52E-05	0.00E+00	6.30E-04	3.16E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.46E-05	9.83E-07	1.25E+01	5.95E-08	1.50E-02	1.11E-05	1.63E-02	9.66E-04	1.94E-04	1.00E-03	2.96E-04	2.98E-04	1.91E-03	4.18E-05	0.00E+00	7.06E-04	3.06E-03
11	E53	80	Passenger Car	81	0.00E+00	9.83E-07	1.06E-07	3.76E+00	6.84E-06	2.62E-02	2.19E-06	1.66E-04	4.44E-04	7.72E-05	2.13E-04	1.37E-04	1.41E-04	1.27E-05	1.90E-05	5.31E-09	7.20E-05	2.59E-05
11	E53	80	Passenger Truck	135	0.00E+00	2.11E-06	2.24E-07	8.70E+00	1.35E-05	4.82E-02	4.43E-06	4.93E-04	7.96E-04	1.41E-04	4.24E-04	2.75E-04	2.82E-04	6.07E-05	4.34E-05	1.18E-08	1.42E-04	8.05E-05
11	E53	80	Single Unit Short Haul Truck	29	0.00E+00	5.38E-06	2.67E-07	5.28E+00	4.33E-06	1.06E-02	5.73E-06	2.76E-03	3.38E-04	7.65E-05	6.55E-04	1.59E-04	1.62E-04	5.30E-04	2.13E-05	8.45E-09	4.93E-04	5.17E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.15E-08	2.24E-01	1.85E-07	4.41E-04	2.49E-07	1.18E-04	1.55E-05	3.38E-06	2.86E-05	6.86E-06	6.98E-06	2.23E-05	9.02E-07	3.52E-10	2.16E-05	2.21E-05
11	E53	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.14E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	E53	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.96E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E54	80	Passenger Car	393	0.00E+00	4.78E-06	5.18E-07	1.83E+01	3.33E-05	1.28E-01	1.06E-05	8.07E-04	2.16E-03	3.76E-04	1.04E-03	6.67E-04	6.85E-04	6.16E-05	9.22E-05	2.58E-08	3.50E-04	1.26E-04
11	E54	80	Passenger Truck	658	0.00E+00	1.03E-05	1.09E-06	4.23E+01	6.58E-05	2.35E-01	2.15E-05	2.40E-03	3.88E-03	6.88E-04	2.06E-03	1.34E-03	1.37E-03	2.96E-04	2.11E-04	5.76E-08	6.90E-04	3.92E-04
11	E54	80	Single Unit Short Haul Truck	50	0.00E+00	9.33E-06	4.64E-07	9.16E+00	7.51E-06	1.83E-02	9.93E-06	4.79E-03	5.86E-04	1.33E-04	1.14E-03	2.76E-04	2.81E-04	9.19E-04	3.69E-05	1.46E-08	8.55E-04	8.95E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	4.06E-07	2.00E-08	3.88E-01	3.21E-07	7.64E-04	4.32E-07	2.05E-04	2.68E-05	5.85E-06	4.96E-05	1.19E-05	1.21E-05	3.87E-05	1.56E-06	6.10E-10	3.75E-05	3.83E-05
11	E54	80	Combination Short Haul Truck	39	0.00E+00	1.70E-05	1.22E-06	1.41E+01	5.37E-08	1.51E-02	1.24E-05	1.75E-02	1.03E-03	2.54E-04	1.01E-03	3.59E-04	3.56E-04	2.12E-03	4.71E-05	0.00E+00	6.57E-04	3.29E-03
11	E54	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.30E+01	6.20E-08	1.56E-02	1.15E-05	1.70E-02	1.01E-03	2.03E-04	1.05E-03	3.09E-04	3.11E-04	1.99E-03	4.35E-05	0.00E+00	7.36E-04	3.19E-03
11	E55	80	Passenger Car	81	0.00E+00	9.83E-07	1.06E-07	3.76E+00	6.84E-06	2.62E-02	2.19E-06	1.66E-04	4.44E-04	7.72E-05	2.13E-04	1.37E-04	1.41E-04	1.27E-05	1.90E-05	5.31E-09	7.20E-05	2.59E-05
11	E55	80	Passenger Truck	135	0.00E+00	2.11E-06	2.24E-07	8.70E+00	1.35E-05	4.82E-02	4.43E-06	4.93E-04	7.96E-04	1.41E-04	4.24E-04	2.75E-04	2.82E-04	6.07E-05	4.34E-05	1.18E-08	1.42E-04	8.05E-05
11	E55	80	Single Unit Short Haul Truck	29	0.00E+00	5.38E-06	2.67E-07	5.28E+00	4.33E-06	1.06E-02	5.73E-06	2.76E-03	3.38E-04	7.65E-05	6.55E-04	1.59E-04	1.62E-04	5.30E-04	2.13E-05	8.45E-09	4.93E-04	5.17E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.15E-08	2.24E-01	1.85E-07	4.41E-04	2.49E-07	1.18E-04	1.55E-05	3.38E-06	2.86E-05	6.86E-06	6.98E-06	2.23E-05	9.02E-07	3.52E-10	2.16E-05	2.21E-05
11	E55	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.14E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	E55	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.96E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E56	80	Passenger Car	393	0.00E+00	4.78E-06	5.18E-07	1.83E+01	3.33E-05	1.28E-01	1.06E-05	8.07E-04	2.16E-03	3.76E-04	1.04E-03	6.67E-04	6.85E-04	6.16E-05	9.22E-05	2.58E-08	3.50E-04	1.26E-04
11	E56	80	Passenger Truck	658	0.00E+00	1.03E-05	1.09E-06	4.23E+01	6.58E-05	2.35E-01	2.15E-05	2.40E-03	3.88E-03	6.88E-04	2.06E-03	1.34E-03	1.37E-03	2.96E-04	2.11E-04	5.76E-08	6.90E-04	3.92E-04
11	E56	80	Single Unit Short Haul Truck	50	0.00E+00	9.33E-06	4.64E-07	9.16E+00	7.51E-06	1.83E-02	9.93E-06	4.79E-03	5.86E-04	1.33E-04	1.14E-03	2.76E-04	2.81E-04	9.19E-04	3.69E-05	1.46E-08	8.55E-04	8.95E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	4.06E-07	2.00E-08	3.88E-01	3.21E-07	7.64E-04	4.32E-07	2.05E-04	2.68E-05	5.85E-06	4.96E-05	1.19E-05	1.21E-05	3.87E-05	1.56E-06	6.10E-10	3.75E-05	3.83E-05
11	E56	80	Combination Short Haul Truck	39	0.00E+00	1.70E-05	1.22E-06	1.41E+01	5.37E-08	1.51E-02	1.24E-05	1.75E-02	1.03E-03	2.54E-04	1.01E-03	3.59E-04	3.56E-04	2.12E-03	4.71E-05	0.00E+00	6.57E-04	3.29E-03
11	E56	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.30E+01	6.20E-08	1.56E-02	1.15E-05	1.70E-02	1.01E-03	2.03E-04	1.05E-03	3.09E-04	3.11E-04	1.99E-03	4.35E-05	0.00E+00	7.36E-04	3.19E-03
10	E57	70	Passenger Car	262	0.00E+00	3.43E-06	3.71E-07	1.26E+01	2.38E-05	8.92E-02	7.62E-06	5.25E-04	2.03E-03	3.26E-04	7.42E-04	4.78E-04	4.91E-04	4.69E-05	6.32E-05	1.72E-08	2.51E-04	8.21E-05
10	E57	70	Passenger Truck	439	0.00E+00	7.51E-06	7.95E-07	2.90E+01	4.75E-05	1.64E-01	1.56E-05	1.64E-03	3.70E-03	6.01E-04	1.49E-03	9.68E-04	9.92E-04	2.13E-04	1.44E-04	3.86E-08	4.96E-04	2.70E-04
10	E57	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.01E-07	1.59E+00	1.66E-06	3.17E-03	2.16E-06	9.99E-04	1.43E-04	2.85E-05	2.46E-04	6.06E-05	6.16E-05	1.59E-04	6.40E-06	2.58E-09	1.84E-04	1.87E-04
10	E57	70	Combination Short Haul Truck	6	0.00E+00	3.27E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.86E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.46E-04
10	E57	70	Combination Long Haul Truck	6	0.00E+00	2.95E-06	1.97E-07	2.21E+00	1.22E-08	2.98E-03	2.24E-06	3.38E-03	2.47E-04	4.50E-05	2.06E-04	5.96E-05	6.03E-05	3.38E-04	7.40E-06	0.00E+00	1.45E-04	6.37E-04
10	E58	70	Passenger Car	196	0.00E+00	2.57E-06	2.78E-07	9.42E+00	1.79E-05	6.68E-02	5.71E-06	3.93E-04	1.52E-03	2.44E-04	5.55E-04	3.58E-04	3.67E-04	3.52E-05	4.73E-05	1.29E-08	1.88E-04	6.15E-05
10	E58	70	Passenger Truck	329	0.00E+00	5.62E-06	5.95E-07	2.17E+01	3.56E-05	1.23E-01	1.17E-05	1.23E-03	2.77E-03	4.50E-04	1.11E-03	7.25E-04	7.43E-04	1.59E-04	1.08E-04	2.89E-08	3.72E-04	2.02E-04
10	E58	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.07E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
10	E58	70	Combination Short Haul Truck	12	0.00E+00	6.26E-06	4.45E-07	4.54E+00	2.03E-08	5.39E-03	4.59E-06	6.58E-03	4.76E-04	1.04E-04	3.81E-04	1.32E-04	1.31E-04	6.84E-04	1.52E-05	0.00E+00	2.50E-04	1.24E-03
10	E58	70	Combination Long Haul Truck	11	0.00E+00	5.66E-06	3.78E-07	4.23E+00	2.34E-08	5.71E-03	4.30E-06	6.48E-03	4.73E-04	8.63E-05	3.94E-04	1.14E-04	1.16E-04	6.47E-04	1.42E-05	0.00E+00	2.79E-04	1.22E-03
11	E59	80	Passenger Car	199	0.00E+00	2.42E-06	2.62E-07	9.25E+00	1.68E-05	6.45E-02	5.37E-06	4.08E-04	1.09E-03	1.90E-04	5.23E-04	3.37E-04	3.46E-04	3.11E-05	4.66E-05	1.31E-08	1.77E-04	6.37E-05
11	E59	80	Passenger Truck	332	0.00E+00	5.19E-06	5.51E-07	2.14E+01	3.33E-05	1.19E-01	1.09E-05	1.21E-03	1.96E-03	3.48E-04	1.04E-03	6.76E-04	6.93E-04	1.49E-04	1.07E-04	2.91E-08	3.48E-04	1.98E-04
11	E59	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.28E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	E59	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.60E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	E59	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	E60	80	Passenger Car	147	0.00E+00	1.79E-06	1.94E-07	6.85E+00	1.25E-05	4.77E-02	3.98E-06	3.02E-04	8.08E-04	1.40E-04	3.87E-04	2.50E-04	2.56E-04	2.30E-05	3.45E-05	9.67E-09	1.31E-04	4.72E-05
11	E60	80	Passenger Truck	246	0.00E+00	3.84E-06	4.07E-07	1.58E+01	2.46E-05	8.78E-02	8.05E-06	8.97E-04	1.45E-03	2.57E-04	7.71E-04	5.00E-04	5.13E-04	1.11E-04	7.90E-05	2.15E-08	2.58E-04	1.47E-04
11	E60	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	E60	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	E60	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.78E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	E60	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.67E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.91E-04
11	E61	80	Passenger Car	199	0.00E+00	2.42E-06	2.62E-07	9.25E+00	1.68E-05	6.45E-02	5.37E-06	4.08E-04	1.09E-03	1.90E-04	5.23E-04	3.37E-04	3.46E-04	3.11E-05	4.66E-05	1.31E-08	1.77E-04	6.37E-05
11	E61	80	Passenger Truck	332	0.00E+00	5.19E-06	5.51E-07	2.14E+01	3.33E-05	1.19E-01	1.09E-05	1.21E-03	1.96E-03	3.48E-04	1.04E-03	6.76E-04	6.93E-04	1.49E-04	1.07E-04	2.91E-08	3.48E-04	1.98E-04
11	E61	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.28E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	E61	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.60E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	E61	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
11	E62	80	Passenger Car	147	0.00E+00	1.79E-06	1.94E-07	6.85E+00	1.25E-05	4.77E-02	3.98E-06	3.02E-04	8.08E-04	1.40E-04	3.87E-04	2.50E-04	2.56E-04	2.30E-05	3.45E-05	9.67E-09	1.31E-04	4.72E-05
11	E62	80	Passenger Truck	246	0.00E+00	3.84E-06	4.07E-07	1.58E+01	2.46E-05	8.78E-02	8.05E-06	8.97E-04	1.45E-03	2.57E-04	7.71E-04	5.00E-04	5.13E-04	1.11E-04	7.90E-05	2.15E-08	2.58E-04	1.47E-04
11	E62	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	E62	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	E62	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.78E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	E62	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.67E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.91E-04
10	E63	70	Passenger Car	837	0.00E+00	1.10E-05	1.18E-06	4.02E+01	7.62E-05	2.85E-01	2.43E-05	1.68E-03	6.49E-03	1.04E-03	2.37E-03	1.53E-03	1.57E-03	1.50E-04	2.02E-04	5.50E-08	8.02E-04	2.62E-04
10	E63	70	Passenger Truck	1403	0.00E+00	2.40E-05	2.54E-06	9.26E+01	1.52E-04	5.25E-01	4.98E-05	5.25E-03	1.18E-02	1.92E-03	4.76E-03	3.09E-03	3.17E-03	6.80E-04	4.61E-04	1.23E-07	1.59E-03	8.63E-04
10	E63	70	Single Unit Short Haul Truck	78	0.00E+00	1.82E-05	9.13E-07	1.43E+01	1.49E-05	2.86E-02	1.94E-05	8.99E-03	1.28E-03	2.57E-04	2.21E-03	5.45E-04	5.54E-04	1.43E-03	5.76E-05	2.32E-08	1.66E-03	1.68E-03
10	E63	70	Single Unit Long Haul Truck	3	0.00

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E67	80	Single Unit Short Haul Truck	31	0.00E+00	5.74E-06	2.85E-07	5.64E+00	4.62E-06	1.13E-02	6.11E-06	2.94E-03	3.61E-04	8.16E-05	6.99E-04	1.70E-04	1.73E-04	5.65E-04	2.27E-05	9.01E-09	5.26E-04	5.51E-04
11	E67	80	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.23E-08	2.38E-01	1.97E-07	4.70E-04	2.66E-07	1.26E-04	1.65E-05	3.60E-06	3.05E-05	7.32E-06	7.45E-06	2.38E-05	9.63E-07	3.76E-10	2.31E-05	2.36E-05
11	E67	80	Combination Short Haul Truck	19	0.00E+00	8.28E-06	5.92E-07	6.84E+00	2.61E-08	7.33E-03	6.05E-06	8.50E-03	5.01E-04	1.23E-04	4.93E-04	1.75E-04	1.73E-04	1.03E-03	2.29E-05	0.00E+00	3.20E-04	1.60E-03
11	E67	80	Combination Long Haul Truck	17	0.00E+00	7.41E-06	4.98E-07	6.33E+00	3.02E-08	7.60E-03	5.62E-06	8.25E-03	4.90E-04	9.86E-05	5.09E-04	1.50E-04	1.51E-04	9.67E-04	2.12E-05	0.00E+00	3.58E-04	1.55E-03
11	E68	80	Passenger Car	352	0.00E+00	4.28E-06	4.63E-07	1.64E+01	2.98E-05	1.14E-01	9.52E-06	7.23E-04	1.94E-03	3.36E-04	9.27E-04	5.98E-04	6.13E-04	5.51E-05	8.26E-05	2.31E-08	3.14E-04	1.13E-04
11	E68	80	Passenger Truck	589	0.00E+00	9.20E-06	9.76E-07	3.79E+01	5.89E-05	2.10E-01	1.93E-05	2.15E-03	3.47E-03	6.16E-04	1.85E-03	1.20E-03	1.23E-03	2.65E-04	1.89E-04	5.15E-08	6.17E-04	3.51E-04
11	E68	80	Single Unit Short Haul Truck	38	0.00E+00	7.18E-06	3.57E-07	7.04E+00	5.78E-06	1.41E-02	7.64E-06	3.68E-03	4.51E-04	1.02E-04	8.74E-04	2.13E-04	2.16E-04	7.07E-04	2.84E-05	1.13E-08	6.58E-04	6.89E-04
11	E68	80	Single Unit Long Haul Truck	2	0.00E+00	3.12E-07	1.54E-08	2.98E-01	2.47E-07	5.88E-04	3.32E-07	1.57E-04	2.06E-05	4.50E-06	3.81E-05	9.15E-06	9.31E-06	2.98E-05	1.20E-06	4.70E-10	2.88E-05	2.95E-05
11	E68	80	Combination Short Haul Truck	19	0.00E+00	8.51E-06	6.08E-07	7.03E+00	2.68E-08	7.53E-03	6.22E-06	8.73E-03	5.15E-04	1.27E-04	5.07E-04	1.80E-04	1.78E-04	1.06E-03	2.35E-05	0.00E+00	3.28E-04	1.65E-03
11	E68	80	Combination Long Haul Truck	18	0.00E+00	7.62E-06	5.12E-07	6.50E+00	3.10E-08	7.81E-03	5.77E-06	8.48E-03	5.03E-04	1.01E-04	5.23E-04	1.54E-04	1.55E-04	9.93E-04	2.18E-05	0.00E+00	3.68E-04	1.60E-03
10	E69	70	Passenger Car	340	0.00E+00	4.44E-06	4.81E-07	1.63E+01	3.09E-05	1.16E-01	9.88E-06	6.81E-04	2.63E-03	4.23E-04	9.62E-04	6.20E-04	6.36E-04	6.09E-05	8.20E-05	2.23E-08	3.25E-04	1.06E-04
10	E69	70	Passenger Truck	569	0.00E+00	9.74E-06	1.03E-06	3.76E+01	6.16E-05	2.13E-01	2.02E-05	2.13E-03	4.79E-03	7.79E-04	1.93E-03	1.26E-03	1.29E-03	2.76E-04	1.87E-04	5.01E-08	6.44E-04	3.50E-04
10	E69	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.67E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.12E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	E69	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.00E-04
10	E69	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.66E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.90E-04
10	E70	70	Passenger Car	482	0.00E+00	6.31E-06	6.82E-07	2.32E+01	4.39E-05	1.64E-01	1.40E-05	9.66E-04	3.74E-03	6.00E-04	1.36E-03	8.80E-04	9.03E-04	8.64E-05	1.16E-04	3.17E-08	4.62E-04	1.51E-04
10	E70	70	Passenger Truck	808	0.00E+00	1.38E-05	1.46E-06	5.33E+01	8.74E-05	3.02E-01	2.87E-05	3.02E-03	6.80E-03	1.11E-03	2.74E-03	1.78E-03	1.82E-03	3.92E-04	2.66E-04	7.11E-08	9.14E-04	4.97E-04
10	E70	70	Single Unit Short Haul Truck	24	0.00E+00	5.63E-06	2.82E-07	4.41E+00	4.60E-06	8.82E-03	5.99E-06	2.78E-03	3.96E-04	7.93E-05	6.83E-04	1.68E-04	1.71E-04	4.42E-04	1.78E-05	7.17E-09	5.12E-04	5.20E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.87E-01	1.99E-07	3.70E-04	2.61E-07	1.19E-04	1.81E-05	3.53E-06	2.98E-05	7.28E-06	7.41E-06	1.87E-05	7.55E-07	3.02E-10	2.24E-05	2.23E-05
10	E70	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.00E-04
10	E70	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.66E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.90E-04
10	E71	70	Passenger Car	563	0.00E+00	7.36E-06	7.96E-07	2.70E+01	5.12E-05	1.92E-01	1.64E-05	1.13E-03	4.36E-03	7.00E-04	1.59E-03	1.03E-03	1.05E-03	1.01E-04	1.36E-04	3.70E-08	5.39E-04	1.76E-04
10	E71	70	Passenger Truck	942	0.00E+00	1.61E-05	1.71E-06	6.22E+01	1.02E-04	3.52E-01	3.35E-05	3.53E-03	7.94E-03	1.29E-03	3.19E-03	2.08E-03	2.13E-03	4.57E-04	3.10E-04	8.29E-08	1.07E-03	5.80E-04
10	E71	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	E71	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	E71	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
10	E72	70	Passenger Car	544	0.00E+00	7.11E-06	7.69E-07	2.61E+01	4.95E-05	1.85E-01	1.58E-05	1.09E-03	4.22E-03	6.77E-04	1.54E-03	9.92E-04	1.02E-03	9.74E-05	1.31E-04	3.57E-08	5.21E-04	1.70E-04
10	E72	70	Passenger Truck	911	0.00E+00	1.56E-05	1.65E-06	6.02E+01	9.86E-05	3.41E-01	3.24E-05	3.41E-03	7.67E-03	1.25E-03	3.09E-03	2.01E-03	2.06E-03	4.42E-04	3.00E-04	8.01E-08	1.03E-03	5.61E-04
10	E72	70	Single Unit Short Haul Truck	29	0.00E+00	6.75E-06	3.38E-07	5.29E+00	5.52E-06	1.06E-02	7.19E-06	3.33E-03	4.75E-04	9.51E-05	8.19E-04	2.02E-04	2.05E-04	5.30E-04	2.13E-05	8.61E-09	6.14E-04	6.24E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	2.94E-07	1.46E-08	2.24E-01	2.38E-07	4.44E-04	3.13E-07	1.43E-04	2.17E-05	4.23E-06	3.58E-05	8.74E-06	8.89E-06	2.24E-05	9.06E-07	3.63E-10	2.69E-05	2.68E-05
10	E72	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.11E-04	6.78E-05	2.49E-04	8.58E-05	8.57E-05	4.46E-04	9.90E-06	0.00E+00	1.63E-04	8.08E-04
10	E72	70	Combination Long Haul Truck	7	0.00E+00	3.69E-06	2.47E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.63E-05	2.57E-04	7.46E-05	7.54E-05	4.22E-04	9.25E-06	0.00E+00	1.82E-04	7.97E-04
9	E73	60	Passenger Car	268	0.00E+00	4.01E-06	4.34E-07	1.34E+01	2.79E-05	1.04E-01	8.92E-06	5.46E-04	2.72E-03	4.17E-04	8.69E-04	5.60E-04	5.75E-04	5.59E-05	6.73E-05	1.85E-08	2.94E-04	8.53E-05
9	E73	60	Passenger Truck	448	0.00E+00	8.85E-06	9.35E-07	3.07E+01	5.53E-05	1.85E-01	1.82E-05	1.78E-03	4.98E-03	7.74E-04	1.73E-03	1.13E-03	1.16E-03	2.37E-04	1.52E-04	4.21E-08	5.77E-04	2.95E-04
9	E73	60	Single Unit Short Haul Truck	15	0.00E+00	4.50E-06	2.25E-07	2.87E+00	3.71E-06	5.55E-03	4.80E-06	2.15E-03	3.64E-04	6.61E-05	5.47E-04	1.35E-04	1.37E-04	2.87E-04	1.16E-05	4.77E-09	4.10E-04	4.02E-04
9	E73	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.78E-09	1.22E-01	1.61E-07	2.36E-04	2.10E-07	9.28E-05	1.64E-05	2.92E-06	2.40E-05	5.87E-06	5.97E-06	1.22E-05	4.95E-07	2.03E-10	1.80E-05	1.74E-05
9	E73	60	Combination Short Haul Truck	13	0.00E+00	7.69E-06	5.36E-07	5.00E+00	2.72E-08	6.73E-03	5.71E-06	8.35E-03	7.16E-04	1.42E-04	4.89E-04	1.60E-04	1.60E-04	7.54E-04	1.68E-05	0.00E+00	3.29E-04	1.57E-03
9	E73	60	Combination Long Haul Truck	12	0.00E+00	6.90E-06	4.49E-07	4.69E+00	3.12E-08	7.25E-03	5.32E-06	8.28E-03	7.20E-04	1.22E-04	5.04E-04	1.37E-04	1.39E-04	7.17E-04	1.57E-05	0.00E+00	3.66E-04	1.56E-03
9	E74	60	Passenger Car	194	0.00E+00	2.91E-06	3.15E-07	9.76E+00	2.03E-05	7.55E-02	6.48E-06	3.97E-04	1.97E-03	3.03E-04	6.31E-04	4.07E-04	4.17E-04	4.06E-05	4.89E-05	1.35E-08	2.14E-04	6.20E-05
9	E74	60	Passenger Truck	326	0.00E+00	6.43E-06	6.79E-07	2.23E+01	4.02E-05	1.35E-01	1.32E-05	1.29E-03	3.62E-03	5.62E-04	1.26E-03	8.21E-04	8.41E-04	1.72E-04	1.11E-04	3.06E-08	4.19E-04	2.14E-04
9	E74	60	Single Unit Short Haul Truck	22	0.00E+00	6.47E-06	3.23E-07	4.12E+00	5.33E-06	7.98E-03	6.90E-06	3.09E-03	5.24E-04	9.50E-05	7.86E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.86E-09	5.89E-04	5.78E-04
9	E74	60	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.76E-01	2.32E-07	3.39E-04	3.02E-07	1.33E-04	2.35E-05	4.20E-06	3.44E-05	8.44E-06	8.58E-06	1.76E-05	7.11E-07	2.92E-10	2.59E-05	2.50E-05
9	E74	60	Combination Short Haul Truck	10	0.00E+00	5.85E-06	4.07E-07	3.80E+00	2.07E-08	5.11E-03	4.34E-06	6.34E-03	5.44E-04	1.08E-04	3.72E-04	1.21E-04	1.22E-04	5.73E-04	1.27E-05	0.00E+00	2.50E-04	1.20E-03
9	E74	60	Combination Long Haul Truck	9	0.00E+00	5.25E-06	3.41E-07	3.57E+00	2.37E-08	5.51E-03	4.05E-06	6.29E-03	5.47E-04	9.28E-05	3.83E-04	1.04E-04	1.06E-04	5.45E-04	1.19E-05	0.00E+00	2.78E-04	1.19E-03
53	E75	70	Passenger Car	737	0.00E+00	9.33E-06	1.01E-06	3.57E+01	6.50E-05	2.41E-01	2.08E-05	1.50E-03	5.62E-03	9.07E-04	2.02E-03	1.30E-03	1.34E-03	1.32E-04	1.80E-04	4.89E-08	6.84E-04	2.35E-04
53	E75	70	Passenger Truck	1233	0.00E+00	2.03E-05	2.15E-06	8.24E+01	1.29E-04	4.43E-01	4.23E-05	4.59E-03	1.01E-02	1.65E-03	4.03E-03	2.62E-03	2.69E-03	5.94E-04	4.11E-04	1.08E-07	1.35E-03	7.54E-04
53	E75	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.62E-02	1.10E-05	5.11E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.56E-04
53	E75	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.24E-08	3.44E-01	3.65E-07	6.81E-04	4.81E-07	2.20E-04	3.33E-05	6.49E-06	5.49E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.11E-05
53	E75	70	Combination Short Haul Truck	41	0.00E+00	2.12E-05	1.51E-06	1.54E+01	6.90E-08	1.83E-02	1.56E-05	2.23E-02	1.61E-03	3.52E-04	1.29E-03	4.46E-04	4.46E-04	2.32E-03	5.15E-05	0.00E+00	8.47E-04	4.20E-03
53	E75	70	Combination Long Haul Truck	37	0.00E+00	1.92E-05	1.28E-06	1.44E+01	7.94E-08	1.94E-02	1.46E-05	2.20E-02	1.60E-03	2.93E-04	1.34E-03	3.88E-04	3.92E-04	2.19E-03	4.81E-05	0.00E+00	9.45E-04	4.14E-03
53	E76	70	Passenger Car	1049	0.00E+00	1.33E-05	1.44E-06	5.09E+01	9.25E-05	3.43E-01	2.96E-05	2.14E-03	8.01E-03	1.29E-03	2.88E-03	1.85E-03	1.90E-03	1.88E-04	2.56E-04	6.97E-08	9.74E-04	3.34E-04
53	E76	70	Passenger Truck	1757	0.00E+00	2.89E-05	3.06E-06	1.17E+02	1.83E-04	6.30E-01	6.02E-05	6.54E-03	1.44E-02	2.35E-03	5.74E-03	3.73E-03	3.83E-03	8.47E-04	5.85E-04	1.53E-07	1.92E-03	1.07E-03
53	E76	70	Single Unit Short Haul Truck	55	0.00E+00	1.28E-05	6.43E-07	1.00E+01	1.05E-05	2.01E-02	1.37E-05	6.33E-03	9.03E-04	1.81E-04	1.56E-03	3.84E-04	3.90E-04	1.01E-03	4.05E-05	1.64E-08	1.17E-03	1.18E-03
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	5.59E-07	2.78E-08	4.26E-01	4.53E-07	8.44E-04	5.96E-07	2.72E-04	4.12E-05	8.04E-06	6.80E-05	1.66E-05	1.69E-05	4.26E-05	1.72E-06	6.89E-10	5.11E-05	5.10E-05
53	E76	70	Combination Short Haul Truck	72	0.00E+00	3.75E-05	2.67E-06	2.72E+01	1.22E-07	3.23E-02	2.75E-05	3.95E-02	2.86E-03	6.23E-04	2.29E-03	7.89E-04	7.88E-04	4.10E-03	9.11E-05	0.00E+00	1.50E-03	7.43E-03
53	E76	70	Combination Long Haul Truck	66	0.00E+00	3.39E-05	2.27E-06	2.54E+01	1.41E-07	3.42E-02	2.58E-05	3.89E-02	2.84E-03	5.18E-04	2.36E-03	6.86E-04	6.93E-04	3.88E-03	8.51E-05	0.00E+00	1.67E-03	7.33E-03
53	E77	70	Passenger Car	758	0.00E+00	9.61E-06	1.04E-06	3.68E+01	6.69E-05	2.48E-01	2.14E-05	1.55E-03	5.79E-03	9.34E-04	2.08E-03	1.34E-03	1.38E-03	1.36E-04	1.85E-04	5.04E-08	7.04E-04	2.42E-04
53	E77	70	Passenger Truck	1270	0.00E+00	2.09E-05	2.21E-06	8.48E+01	1.32E-04	4.56E-01	4.35E-05	4.73E-03	1.04E-02	1.70E-03	4.15E-03	2.70E-03	2.77E-03	6.12E-04	4.23E-04	1.11E-07	1.38E-03	7.76E-04
53	E77	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.62E-02	1.10E-05	5.11E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.56E-04
53	E77	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.24E-08	3.44E-01	3.65E-07	6.81E-04	4.81E-07	2.20E-04	3.33E-05	6.49E-06	5.49E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.11E-05
53	E77	70	Combination Short Haul Truck	48	0.00E+00	2.50E-05	1.78E-06	1.81E+01	8.13E-08	2.15E-02	1.84E-05	2.63E-02	1.90E-03	4.16E-04	1.52E-03	5.26E-04	5.25E-04	2.74E-03	6.07E-05	0.00E+00	9.99E-04	4.96E-03
53	E77	70	Combination Long Haul Truck	44	0.00E+00	2.26E-05	1.51E-06	1.69E+01	9.37E-08	2.28E-02	1.72E-05	2.59E-02	1.89E-03	3.45E-04	1.58E-03	4.57E-04	4.62E-04	2.59E-03	5.67E-05	0.00E+00	1.11E-03	4.89E-03
53	E78	70	Passenger Car	1060	0.00E+00	1.34E-05	1.45E-06	5.14E+01	9.35E-05	3.47E-01	2.99E-05	2.16E-03	8.09E-03	1.31E-03	2.91E-03	1.87E-03	1.92E-03	1.90E-04	2.59E-04	7.04E-08	9.84E-04	3.38E-04
53	E78	70	Passenger Truck	1775	0.00E+00	2.92E-05	3.10E-06	1.19E+02	1.85E-04	6.37E-01	6.08E-05	6.61E-03	1.45E-02	2.37E-03	5.80E-03	3.77E-03	3.87E-03	8.56E-04	5.91E-04	1.55E-07	1.94E-03	1.09E-03
53	E78	70	Single Unit Short Haul Truck	57	0.00E+00	1.33E-05	6.65E-07	1.04E+01	1.09E-05	2.08E-02	1.41E-05	6.55E-03	9.34E-04	1.87E-04	1.61E-03	3.97E-04	4.04E-04	1.04E-03	4.19E-05	1.69E-08	1.21E-03	1.23E-03
53	E78	70	Single Unit Long Haul Truck	2	0.00E+00	5.79E-07	2.88E-08	4.41E-01	4.69E-07	8.74E-04	6.16E-07	2.82E-04	4.27E-05	8.32E-06	7.04E-05	1.72E-05	1.75E-05	4.41E-05	1.78E-06	7.14E-10	5.29E-05	5.27E-05
53	E78	70	Combination Short Haul Truck	78	0.00E+00	4.05E-05	2.88E-06	2.94E+01	1.32E-07	3.49E-02	2.97E-05	4.26E-02	3.08E-03	6.73E-04	2.47E-03	8.52E-04	8.51E-04	4.43E-03	9.84E-05	0.00E+00	1.62E-03	8.03E-03
53	E78	70	Combination Long Haul Truck	71	0.00E+00	3.66E-05	2.45E-06	2.74E+01	1.52E-07	3.70E-02	2.78E-05	4.20E-02	3.06E-03	5.59E-04	2.55E-03	7.41E-04	7.49E-04	4.19E-03	9.18E-05	0.00E+00	1.80E-03	7.91E-03
53	E79	70	Passenger Car	710	0.00E+00	8.99E-06	9.73E-07	3.44E+01	6.26E-05	2.32E-01	2.00E-05	1.45E-03	5.42E-03	8.74E-04	1.95E-03	1.25E-03	1.29E-03	1.27E-04	1.73E-04	4.72E-08	6.59E-04	2.26E-04
53	E79	70	Passenger Truck	1188	0.00E+00	1.96E-05	2.07E-06	7.94E+01	1.24E-04	4.26E-01	4.07E-05	4.43E-03	9.72E-03	1.59E-03	3.88E-03	2.53E-03	2.59E-03	5.73E-04	3.96E-04	1.04E-07	1.30E-03	7.27E-04
53	E79	70	Single Unit Short Haul Truck	61	0.00E+00	1.44E-05	7.22E-07	1.13E+01	1.18E-05	2.26E-02	1.53E-05	7.10E-03	1.01E-03	2.03E-04	1.75E-03	4.31E-04	4.38E-04	1.13E-03	4.55E-05	1.84E-08	1.31E-03	1.33E-03
53	E79	70	Single Unit Long Haul Truck	3	0.00E+00	6.28E-07	3.12E-08	4.79E-01	5.08E-07	9.48E-04	6.69E-07	3.06E-04	4.63E-05	9.03E-06	7.64E-05	1.86E-05	1.90E-05	4.78E-05	1.93E-06	7.74E-10	5.74E-05	5.72E-05
53	E79	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.54E-07	7.69E+00	3.45E-08	9.14E-03	7.78E-06	1.12E-02	8.07E-04	1.76E-04	6.46E-04	2.23E-04	2.23E-04	1.16E-03	2.57E-05	0.00E+00	4.23E-04	2.10E-03
53	E79	70	Combination Long Haul Truck	19	0.00E+00	9.59E-06	6.41E-07	7.18E+00	3.97E-08	9.68E-03	7.28E-06	1.10E-02	8.02E-04	1.46E-04	6.68E-04	1.94E-04	1.96E-04	1.10E-03	2.40E-05	0.00E+00	4.72E-04	2.07E-03
53	E80	70	Passenger Car	983	0.00E+00	1.25E-05	1.35E-06	4.77E+01	8.67E-05	3.22E-01	2.77E-05	2.00E-03	7.50E-03	1.21E-03	2.70E-03	1.74E-03	1.78E-03	1.76E-04	2.40E-04	6.53E-08	9.12E-04	3.13E-04
53	E80	70	Passenger Truck	1646	0.00E+00	2.71E-05	2.87E-06	1.10E+02	1.72E-04	5.91E-01	5.64E-05	6.13E-03	1.35E-02	2.20E-03	5.38E-03	3.50E-03	3.58E-03	7.93E-04	5.48E-04	1.43E-07	1.80E-03	1.01E-03
53	E80	70	Single Unit Short Haul Truck	41	0.00E+00	9.68E-06	4.85E-07	7.58E+00	7.91E-06	1.52E-02	1.03E-05	4.77E-03	6.81E-04	1.36E-04	1.17E-03	2.89E-04	2.94E-04	7.60E-04	3.06E-05	1.23E-08	8.80E-04	8.94E-04
53	E80	70	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.10E-08	3.22E-01	3.42E-07	6.37E-04	4.49E-07	2.05E-04	3.11E-05	6.06E-06	5.13E-05	1.25E-05	1.27E-05	3.21E-05	1.30E-06	5.20E-10	3.86E-05	3.84E-05
53	E80	70	Combination Short Haul Truck	26	0.00E+00	1.36E-05	9.67E-07	9.86E+00	4.42E-08	1.17E-02	9.98E-06	1.43E-02	1.04E-03	2.26E-04	8.29E-04	2.86E-04	2.86E-04	1.49E-03	3.30E-05	0.00E+00	5.43E-04	2.69E-03
53	E80	70	Combination Long Haul Truck	24	0.00E+00	1.23E-05	8.22E-07	9.20E+00	5.09E-08	1.24E-02	9.34E-06	1.41E-02	1.03E-03	1.88E-04	8.57E-04	2.49E-04	2.51E-04	1.41E-03	3.08E-05	0.00E+00	6.05E-04	2.66E-03
10	E83	70	Passenger Car	264	0.00E+00	3.46E-06	3.74E-07	1.27E+01	2.41E-05	9.00E-02	7.68E-06	5.30E-04	2.05E-03	3.29E-04	7.48E-04	4.82E-04	4.95E-04	4.73E-05	6.37E-05	1.74E-08	2.53E-04	8.28E-05
10	E83

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E87	60	Passenger Car	1164	0.00E+00	1.75E-05	1.89E-06	5.84E+01	1.21E-04	4.52E-01	3.88E-05	2.37E-03	1.18E-02	1.81E-03	3.78E-03	2.44E-03	2.50E-03	2.43E-04	2.93E-04	8.07E-08	1.28E-03	3.71E-04
9	E87	60	Passenger Truck	1950	0.00E+00	3.85E-05	4.07E-06	1.33E+02	2.41E-04	8.07E-01	7.93E-05	7.74E-03	2.17E-02	3.36E-03	7.54E-03	4.92E-03	5.03E-03	1.03E-03	6.62E-04	1.83E-07	2.51E-03	1.28E-03
9	E87	60	Single Unit Short Haul Truck	106	0.00E+00	3.12E-05	1.56E-06	1.99E+01	2.57E-05	3.85E-02	3.33E-05	1.49E-02	2.53E-03	4.58E-04	3.79E-03	9.36E-04	9.52E-04	1.99E-03	8.03E-05	3.31E-08	2.84E-03	2.79E-03
9	E87	60	Single Unit Long Haul Truck	5	0.00E+00	1.36E-06	6.78E-08	8.49E-01	1.12E-06	1.63E-03	1.46E-06	6.44E-04	1.14E-04	2.03E-05	1.66E-04	4.07E-05	4.14E-05	8.48E-05	3.43E-06	1.41E-09	1.25E-04	1.21E-04
9	E87	60	Combination Short Haul Truck	67	0.00E+00	3.94E-05	2.74E-06	2.56E+01	1.39E-07	3.44E-02	2.92E-05	4.27E-02	3.67E-03	7.26E-04	2.51E-03	8.17E-04	8.19E-04	3.86E-03	8.58E-05	0.00E+00	1.69E-03	8.05E-03
9	E87	60	Combination Long Haul Truck	61	0.00E+00	3.54E-05	2.30E-06	2.40E+01	1.60E-07	3.71E-02	2.73E-05	4.24E-02	3.69E-03	6.25E-04	2.58E-03	7.02E-04	7.11E-04	3.67E-03	8.04E-05	0.00E+00	1.87E-03	7.98E-03
9	E88	60	Passenger Car	942	0.00E+00	1.41E-05	1.53E-06	4.73E+01	9.83E-05	3.66E-01	3.14E-05	1.92E-03	9.56E-03	1.47E-03	3.06E-03	1.97E-03	2.02E-03	1.97E-04	2.37E-04	6.53E-08	1.03E-03	3.00E-04
9	E88	60	Passenger Truck	1578	0.00E+00	3.12E-05	3.29E-06	1.08E+02	1.95E-04	6.53E-01	6.42E-05	6.27E-03	1.75E-02	2.72E-03	6.10E-03	3.98E-03	4.07E-03	8.35E-04	5.36E-04	1.48E-07	2.03E-03	1.04E-03
9	E88	60	Single Unit Short Haul Truck	91	0.00E+00	2.67E-05	1.34E-06	1.70E+01	2.20E-05	3.29E-02	2.85E-05	1.27E-02	2.16E-03	3.92E-04	3.25E-03	8.01E-04	8.15E-04	1.70E-03	6.87E-05	2.83E-08	2.43E-03	2.39E-03
9	E88	60	Single Unit Long Haul Truck	4	0.00E+00	1.17E-06	5.81E-08	7.26E-01	9.56E-07	1.40E-03	1.25E-06	5.51E-04	9.72E-05	1.74E-05	1.42E-04	3.49E-05	3.54E-05	7.25E-05	2.94E-06	1.20E-09	1.07E-04	1.03E-04
9	E88	60	Combination Short Haul Truck	51	0.00E+00	3.02E-05	2.10E-06	1.96E+01	1.07E-07	2.64E-02	2.24E-05	3.27E-02	2.81E-03	5.56E-04	1.92E-03	6.26E-04	6.27E-04	2.96E-03	6.57E-05	0.00E+00	1.29E-03	6.17E-03
9	E88	60	Combination Long Haul Truck	47	0.00E+00	2.71E-05	1.76E-06	1.84E+01	1.22E-07	2.84E-02	2.09E-05	3.24E-02	2.82E-03	4.79E-04	1.98E-03	5.38E-04	5.45E-04	2.81E-03	6.16E-05	0.00E+00	1.43E-03	6.11E-03
9	E89	60	Passenger Car	100	0.00E+00	1.50E-06	1.62E-07	5.01E+00	1.04E-05	3.88E-02	3.33E-06	2.04E-04	1.01E-03	1.56E-04	3.24E-04	2.09E-04	2.14E-04	2.09E-05	2.51E-05	6.92E-09	1.10E-04	3.18E-05
9	E89	60	Passenger Truck	167	0.00E+00	3.30E-06	3.49E-07	1.14E+01	2.06E-05	6.92E-02	6.80E-06	6.64E-04	1.86E-03	2.89E-04	6.47E-04	4.21E-04	4.32E-04	8.85E-05	5.68E-05	1.57E-08	2.15E-04	1.10E-04
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	E90	60	Passenger Car	127	0.00E+00	1.91E-06	2.07E-07	6.40E+00	1.33E-05	4.95E-02	4.25E-06	2.60E-04	1.29E-03	1.99E-04	4.14E-04	2.67E-04	2.74E-04	2.66E-05	3.21E-05	8.83E-09	1.40E-04	4.06E-05
9	E90	60	Passenger Truck	214	0.00E+00	4.22E-06	4.45E-07	1.46E+01	2.64E-05	8.83E-02	8.69E-06	8.48E-04	2.37E-03	3.68E-04	8.26E-04	5.38E-04	5.51E-04	1.13E-04	7.25E-05	2.00E-08	2.75E-04	1.41E-04
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.02E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	E90	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.00E-03	1.72E-04	3.40E-05	1.17E-04	3.83E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.78E-04
9	E90	60	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.99E-03	1.73E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.77E-05	3.74E-04
9	E91	60	Passenger Car	4	0.00E+00	5.61E-08	6.06E-09	1.88E-01	3.90E-07	1.45E-03	1.25E-07	7.63E-06	3.79E-05	5.83E-06	1.21E-05	7.82E-06	8.02E-06	7.81E-07	9.40E-07	2.59E-10	4.11E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.24E-07	1.31E-08	4.28E-01	7.73E-07	2.59E-03	2.55E-07	2.49E-05	6.96E-05	1.08E-05	2.42E-05	1.58E-05	1.62E-05	3.31E-06	2.13E-06	5.88E-10	8.06E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.61E-08	6.06E-09	1.88E-01	3.90E-07	1.45E-03	1.25E-07	7.63E-06	3.79E-05	5.83E-06	1.21E-05	7.82E-06	8.02E-06	7.81E-07	9.40E-07	2.59E-10	4.11E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.24E-07	1.31E-08	4.28E-01	7.73E-07	2.59E-03	2.55E-07	2.49E-05	6.96E-05	1.08E-05	2.42E-05	1.58E-05	1.62E-05	3.31E-06	2.13E-06	5.88E-10	8.06E-06	4.12E-06
9	E93	60	Passenger Car	108	0.00E+00	1.62E-06	1.75E-07	5.42E+00	1.13E-05	4.20E-02	3.60E-06	2.20E-04	1.10E-03	1.68E-04	3.51E-04	2.26E-04	2.32E-04	2.26E-05	2.72E-05	7.49E-09	1.19E-04	3.44E-05
9	E93	60	Passenger Truck	181	0.00E+00	3.57E-06	3.77E-07	1.24E+01	2.23E-05	7.49E-02	7.36E-06	7.19E-04	2.01E-03	3.12E-04	7.00E-04	4.56E-04	4.67E-04	9.58E-05	6.15E-05	1.70E-08	2.33E-04	1.19E-04
9	E93	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.02E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	E93	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.00E-03	1.72E-04	3.40E-05	1.17E-04	3.83E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.78E-04
9	E93	60	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.99E-03	1.73E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.77E-05	3.74E-04
9	E94	60	Passenger Car	158	0.00E+00	2.37E-06	2.56E-07	7.92E+00	1.65E-05	6.13E-02	5.26E-06	3.22E-04	1.60E-03	2.46E-04	5.12E-04	3.30E-04	3.39E-04	3.30E-05	3.97E-05	1.09E-08	1.73E-04	5.03E-05
9	E94	60	Passenger Truck	264	0.00E+00	5.22E-06	5.51E-07	1.81E+01	3.26E-05	1.09E-01	1.07E-05	1.05E-03	2.94E-03	4.56E-04	1.02E-03	6.66E-04	6.82E-04	1.40E-04	8.97E-05	2.48E-08	3.40E-04	1.74E-04
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.68E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.29E-05
54	E95	80	Passenger Car	356	0.00E+00	4.22E-06	4.57E-07	1.67E+01	2.94E-05	1.10E-01	9.39E-06	7.34E-04	2.06E-03	3.51E-04	9.14E-04	5.89E-04	6.05E-04	5.57E-05	8.40E-05	2.28E-08	3.09E-04	1.15E-04
54	E95	80	Passenger Truck	595	0.00E+00	9.16E-06	9.72E-07	3.87E+01	5.87E-05	2.10E-01	1.92E-05	2.18E-03	3.70E-03	6.44E-04	1.84E-03	1.19E-03	1.22E-03	2.67E-04	1.94E-04	5.14E-08	6.15E-04	3.56E-04
54	E95	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.62E-07	1.11E+01	9.10E-06	2.22E-02	1.20E-05	5.80E-03	7.10E-04	1.61E-04	1.38E-03	3.35E-04	3.41E-04	1.11E-03	4.47E-05	1.77E-08	1.04E-03	1.08E-03
54	E95	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.26E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.47E-05	4.69E-05	1.90E-06	7.40E-10	4.54E-05	4.64E-05
54	E95	80	Combination Short Haul Truck	38	0.00E+00	1.68E-05	1.20E-06	1.39E+01	5.30E-08	1.49E-02	1.23E-05	1.72E-02	1.02E-03	2.50E-04	9.99E-04	3.54E-04	3.52E-04	2.09E-03	4.65E-05	0.00E+00	6.48E-04	3.25E-03
54	E95	80	Combination Long Haul Truck	35	0.00E+00	1.50E-05	1.01E-06	1.28E+01	6.12E-08	1.54E-02	1.14E-05	1.67E-02	9.93E-04	2.00E-04	1.03E-03	3.05E-04	3.07E-04	1.96E-03	4.30E-05	0.00E+00	7.26E-04	3.15E-03
54	E96	80	Passenger Car	674	0.00E+00	8.01E-06	8.67E-07	3.16E+01	5.58E-05	2.10E-01	1.78E-05	1.39E-03	3.90E-03	6.65E-04	1.73E-03	1.12E-03	1.15E-03	1.06E-04	1.59E-04	4.33E-08	5.87E-04	2.18E-04
54	E96	80	Passenger Truck	1130	0.00E+00	1.74E-05	1.84E-06	7.35E+01	1.11E-04	3.98E-01	3.64E-05	4.13E-03	7.01E-03	1.22E-03	3.49E-03	2.26E-03	2.32E-03	5.07E-04	3.67E-04	9.74E-08	1.17E-03	6.75E-04
54	E96	80	Single Unit Short Haul Truck	70	0.00E+00	1.31E-05	6.51E-07	1.29E+01	1.05E-05	2.57E-02	1.39E-05	6.72E-03	8.23E-04	1.86E-04	1.59E-03	3.88E-04	3.95E-04	1.29E-03	5.18E-05	2.06E-08	1.20E-03	1.26E-03
54	E96	80	Single Unit Long Haul Truck	3	0.00E+00	5.70E-07	2.81E-08	5.44E-01	4.50E-07	1.07E-03	6.06E-07	2.87E-04	3.76E-05	8.22E-06	6.96E-05	1.67E-05	1.70E-05	5.43E-05	2.20E-06	8.57E-10	5.26E-05	5.38E-05
54	E96	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.30E+01	8.78E-08	2.46E-02	2.03E-05	2.86E-02	1.68E-03	4.15E-04	1.66E-03	5.87E-04	5.83E-04	3.47E-03	7.70E-05	0.00E+00	1.07E-03	5.38E-03
54	E96	80	Combination Long Haul Truck	58	0.00E+00	2.49E-05	1.67E-06	2.13E+01	1.01E-07	2.55E-02	1.89E-05	2.77E-02	1.65E-03	3.31E-04	1.71E-03	5.05E-04	5.08E-04	3.25E-03	7.12E-05	0.00E+00	1.20E-03	5.22E-03
54	E97	80	Passenger Car	356	0.00E+00	4.22E-06	4.57E-07	1.67E+01	2.94E-05	1.10E-01	9.39E-06	7.34E-04	2.06E-03	3.51E-04	9.14E-04	5.89E-04	6.05E-04	5.57E-05	8.40E-05	2.28E-08	3.09E-04	1.15E-04
54	E97	80	Passenger Truck	595	0.00E+00	9.16E-06	9.72E-07	3.87E+01	5.87E-05	2.10E-01	1.92E-05	2.18E-03	3.70E-03	6.44E-04	1.84E-03	1.19E-03	1.22E-03	2.67E-04	1.94E-04	5.14E-08	6.15E-04	3.56E-04
54	E97	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.62E-07	1.11E+01	9.10E-06	2.22E-02	1.20E-05	5.80E-03	7.10E-04	1.61E-04	1.38E-03	3.35E-04	3.41E-04	1.11E-03	4.47E-05	1.77E-08	1.04E-03	1.08E-03
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.26E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.47E-05	4.69E-05	1.90E-06	7.40E-10	4.54E-05	4.64E-05
54	E97	80	Combination Short Haul Truck	38	0.00E+00	1.68E-05	1.20E-06	1.39E+01	5.30E-08	1.49E-02	1.23E-05	1.72E-02	1.02E-03	2.50E-04	9.99E-04	3.54E-04	3.52E-04	2.09E-03	4.65E-05	0.00E+00	6.48E-04	3.25E-03
54	E97	80	Combination Long Haul Truck	35	0.00E+00	1.50E-05	1.01E-06	1.28E+01	6.12E-08	1.54E-02	1.14E-05	1.67E-02	9.93E-04	2.00E-04	1.03E-03	3.05E-04	3.07E-04	1.96E-03	4.30E-05	0.00E+00	7.26E-04	3.15E-03
54	E98	80	Passenger Car	674	0.00E+00	8.01E-06	8.67E-07	3.16E+01	5.58E-05	2.10E-01	1.78E-05	1.39E-03	3.90E-03	6.65E-04	1.73E-03	1.12E-03	1.15E-03	1.06E-04	1.59E-04	4.33E-08	5.87E-04	2.18E-04
54	E98	80	Passenger Truck	1130	0.00E+00	1.74E-05	1.84E-06	7.35E+01	1.11E-04	3.98E-01	3.64E-05	4.13E-03	7.01E-03	1.22E-03	3.49E-03	2.26E-03	2.32E-03	5.07E-04	3.67E-04	9.74E-08	1.17E-03	6.75E-04
54	E98	80	Single Unit Short Haul Truck	70	0.00E+00	1.31E-05	6.51E-07	1.29E+01	1.05E-05	2.57E-02	1.39E-05	6.72E-03	8.23E-04	1.86E-04	1.59E-03	3.88E-04	3.95E-04	1.29E-03	5.18E-05	2.06E-08	1.20E-03	1.26E-03
54	E98	80	Single Unit Long Haul Truck	3	0.00E+00	5.70E-07	2.81E-08	5.44E-01	4.50E-07	1.07E-03	6.06E-07	2.87E-04	3.76E-05	8.22E-06	6.96E-05	1.67E-05	1.70E-05	5.43E-05	2.20E-06	8.57E-10	5.26E-05	5.38E-05
54	E98	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.30E+01	8.78E-08	2.46E-02	2.03E-05	2.86E-02	1.68E-03	4.15E-04	1.66E-03	5.87E-04	5.83E-04	3.47E-03	7.70E-05	0.00E+00	1.07E-03	5.38E-03
54	E98	80	Combination Long Haul Truck	58	0.00E+00	2.49E-05	1.67E-06	2.13E+01	1.01E-07	2.55E-02	1.89E-05	2.77E-02	1.65E-03	3.31E-04	1.71E-03	5.05E-04	5.08E-04	3.25E-03	7.12E-05	0.00E+00	1.20E-03	5.22E-03
9	F01	60	Passenger Car	292	0.00E+00	4.38E-06	4.74E-07	1.47E+01	3.05E-05	1.14E-01	9.75E-06	5.96E-04	2.97E-03	4.56E-04	9.49E-04	6.11E-04	6.28E-04	6.11E-05	7.35E-05	2.03E-08	3.21E-04	9.32E-05
9	F01	60	Passenger Truck	490	0.00E+00	9.67E-06	1.02E-06	3.35E+01	6.04E-05	2.03E-01	1.99E-05	1.94E-03	5.44E-03	8.45E-04	1.89E-03	1.23E-03	1.26E-03	2.59E-04	1.66E-04	4.60E-08	6.30E-04	3.22E-04
9	F01	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.55E-07	1.97E+00	2.55E-06	3.81E-03	3.30E-06	1.48E-03	2.51E-04	4.54E-05	3.76E-04	9.28E-05	9.43E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.77E-04
9	F01	60	Combination Short Haul Truck	9	0.00E+00	5.54E-06	3.86E-07	3.60E+00	1.96E-08	4.84E-03	4.11E-06	6.01E-03	5.16E-04	1.02E-04	3.52E-04	1.15E-04	1.15E-04	5.43E-04	1.21E-05	0.00E+00	2.37E-04	1.13E-03
9	F01	60	Combination Long Haul Truck	9	0.00E+00	4.97E-06	3.24E-07	3.38E+00	2.25E-08	5.22E-03	3.83E-06	5.96E-03	5.18E-04	8.79E-05	3.63E-04	9.88E-05	1.00E-04	5.16E-04	1.13E-05	0.00E+00	2.63E-04	1.12E-03
9	F02	60	Passenger Car	281	0.00E+00	4.21E-06	4.55E-07	1.41E+01	2.93E-05	1.09E-01	9.36E-06	5.73E-04	2.85E-03	4.38E-04	9.11E-04	5.87E-04	6.03E-04	5.87E-05	7.06E-05	1.95E-08	3.08E-04	8.95E-05
9	F02	60	Passenger Truck	470	0.00E+00	9.28E-06	9.80E-07	3.22E+01	5.80E-05	1.95E-01	1.91E-05	1.87E-03	5.23E-03	8.12E-04	1.82E-03	1.19E-03	1.21E-03	2.49E-04	1.60E-04	4.41E-08	6.05E-04	3.09E-04
9	F02	60	Single Unit Short Haul Truck	23	0.00E+00	6.75E-06	3.38E-07	4.30E+00	5.56E-06	8.32E-03	7.20E-06	3.22E-03	5.47E-04	9.91E-05	8.20E-04	2.02E-04	2.06E-04	4.30E-04	1.74E-05	7.16E-09	6.14E-04	6.03E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	2.95E-07	1.47E-08	1.84E-01	2.42E-07	3.53E-04	3.15E-07	1.39E-04	2.45E-05	4.39E-06	3.59E-05	8.81E-06	8.95E-06	1.83E-05	7.42E-07	3.04E-10	2.70E-05	2.61E-05
9	F02	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	9.02E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F02	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.94E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.68E-03
11	F03	80	Passenger Car	9	0.00E+00	1.05E-07	1.13E-08	4.01E-01	7.29E-07	2.79E-03	2.33E-07	1.77E-05	4.73E-05	8.22E-06	2.27E-05	1.46E-05	1.50E-05	1.35E-06	2.02E-06	5.66E-10	7.67E-06	2.76E-06
11	F03	80	Passenger Truck	14	0.00E+00	2.25E-07	2.38E-08	9.26E-01	1.44E-06	5.14E-03	4.71E-07	5.25E-05	8.48E-05	1.51E-05	4.51E-05	2.93E-05	3.00E-05	6.47E-06	4.63E-06	1.26E-09	1.51E-05	8.57E-06
11	F03	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.20E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	F03	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
11	F04	80	Passenger Car	111	0.00E+00	1.36E-06	1.47E-07	5.19E+00	9.44E-06	3.62E-02	3.02E-06	2.29E-04	6.13E-04	1.07E-04	2.94E-04	1.89E-04	1.94E-04	1.75E-05	2.62E-05	7.33E-09	9.94E-05	3.58E-05
11	F04	80	Passenger Truck	187	0.00E+00	2.91E-06	3.09E-07	1.20E+01	1.87E-05	6.66E-02	6.11E-06	6.80E-04	1.10E-03	1.95E-04	5.84E-04	3.79E-04	3.89E-04	8.38E-05	5.99E-05	1.63E-08	1.96E-04	1.11E-04
11	F04	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	F04	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	F04	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.60E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.89E-04
11	F04	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.75E-04
9	F05	60	Passenger Car	293	0.00E+00	4.39E-06	4.75E-07	1.47E+01	3.06E-05	1.14E-01	9.77E-06	5.98E-04	2.98E-03	4.57E-04	9.51E-04	6.13E-04	6.29E-04	6.12E-05	7.37E-05	2.03E-08	3.22E-04	9.34E-05
9	F05	60	Passenger Truck	491	0.00E+00	9.69E-06	1.02E-06	3.36E+01	6.06E-05	2.03E-01	2.00E-05	1.95E-03	5.46E-03	8.47E-04	1.90E-03	1.24E-03	1.27E-03	2.60E-04	1.67E-04	4.61E-08	6.32E-04	3.23E-04
9	F05	60	Single Unit Short Haul Truck	32	0.00E+00	9.28E-06	4.64E-07	5.91E+00	7.65E-06	1.14E-02	9.90E-06	4.43E-03	7.52E-04	1.36E-04	1.13E-03	2.78E-04	2.83E-04	5.92E-04	2.39E-05	9.84E-09	8.45E-04	8.30E-04
9	F05	60	Single Unit Long Haul Truck	1	0.00E+00	4.05E-07	2.02E-08	2.52E-01	3.32E-07	4.86E-04	4.33E-07	1.91E-04	3.37E-05	6.03E-06	4.94E-05	1.21E-05	1.23E-05	2.52E-05	1.02E-06	4.18E-10	3.71E-05	3.59E-05
9	F05	60	Combination Short Haul Truck	27	0.00E+00	1.57E-05

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F09	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.04E-03	1.68E-06	2.36E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.87E-04	6.36E-06	0.00E+00	8.88E-05	4.45E-04
11	F09	80	Combination Long Haul Truck	5	0.00E+00	2.06E-06	1.38E-07	1.76E+00	8.38E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.41E-04	4.18E-05	4.20E-05	2.68E-04	5.88E-06	0.00E+00	9.94E-05	4.32E-04
11	F10	80	Passenger Car	245	0.00E+00	2.98E-06	3.23E-07	1.14E+01	2.08E-05	7.95E-02	6.63E-06	5.03E-04	1.35E-03	2.34E-04	6.45E-04	4.16E-04	4.27E-04	3.84E-05	5.75E-05	1.61E-08	2.18E-04	7.86E-05
11	F10	80	Passenger Truck	410	0.00E+00	6.40E-06	6.79E-07	2.64E+01	4.10E-05	1.46E-01	1.34E-05	1.49E-03	2.42E-03	4.29E-04	1.28E-03	8.34E-04	8.55E-04	1.84E-04	1.32E-04	3.59E-08	4.30E-04	2.44E-04
11	F10	80	Single Unit Short Haul Truck	14	0.00E+00	2.69E-06	1.34E-07	2.64E+00	2.17E-06	5.29E-03	2.87E-06	1.38E-03	1.69E-04	3.83E-05	3.28E-04	7.97E-05	8.11E-05	2.65E-04	1.06E-05	4.22E-09	2.47E-04	2.58E-04
11	F10	80	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	5.77E-09	1.12E-01	9.25E-08	2.20E-04	1.25E-07	5.90E-05	7.73E-06	1.69E-06	1.43E-05	3.43E-06	3.49E-06	1.12E-05	4.51E-07	1.76E-10	1.08E-05	1.10E-05
11	F10	80	Combination Short Haul Truck	16	0.00E+00	6.90E-06	4.93E-07	5.70E+00	2.18E-08	6.11E-03	5.04E-06	7.08E-03	4.17E-04	1.03E-04	4.11E-04	1.46E-04	1.44E-04	8.60E-04	1.91E-05	0.00E+00	2.66E-04	1.33E-03
11	F10	80	Combination Long Haul Truck	14	0.00E+00	6.18E-06	4.15E-07	5.27E+00	2.51E-08	6.33E-03	4.68E-06	6.87E-03	4.08E-04	8.22E-05	4.24E-04	1.25E-04	1.26E-04	8.05E-04	1.77E-05	0.00E+00	2.98E-04	1.30E-03
11	F13	80	Passenger Car	12	0.00E+00	1.50E-07	1.63E-08	5.75E-01	1.05E-06	4.01E-03	3.34E-07	2.53E-05	6.79E-05	1.18E-05	3.25E-05	2.10E-05	2.15E-05	1.93E-06	2.90E-06	8.12E-10	1.10E-05	3.96E-06
11	F13	80	Passenger Truck	21	0.00E+00	3.23E-07	3.42E-08	1.33E+00	2.07E-06	7.37E-03	6.76E-07	7.53E-05	1.22E-04	2.16E-05	6.47E-05	4.20E-05	4.31E-05	9.28E-06	6.64E-06	1.81E-09	2.17E-05	1.23E-05
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.20E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.72E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.89E-05
11	F13	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.58E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.63E-05
11	F14	80	Passenger Car	10	0.00E+00	1.23E-07	1.33E-08	4.70E-01	8.55E-07	3.28E-03	2.73E-07	2.07E-05	5.55E-05	9.65E-06	2.66E-05	1.71E-05	1.76E-05	1.58E-06	2.37E-06	6.64E-10	9.00E-06	3.24E-06
11	F14	80	Passenger Truck	17	0.00E+00	2.64E-07	2.80E-08	1.09E+00	1.69E-06	6.03E-03	5.53E-07	6.16E-05	9.96E-05	1.77E-05	5.29E-05	3.44E-05	3.52E-05	7.59E-06	5.43E-06	1.48E-09	1.77E-05	1.01E-05
11	F14	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.20E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	F14	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.72E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.89E-05
11	F14	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.58E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.63E-05
10	F15	70	Passenger Car	436	0.00E+00	5.70E-06	6.16E-07	2.09E+01	3.96E-05	1.48E-01	1.27E-05	8.73E-04	3.38E-03	5.42E-04	1.23E-03	7.94E-04	8.15E-04	7.80E-05	1.05E-04	2.86E-08	4.17E-04	1.36E-04
10	F15	70	Passenger Truck	729	0.00E+00	1.25E-05	1.32E-06	4.82E+01	7.89E-05	2.73E-01	2.59E-05	2.73E-03	6.14E-03	9.99E-04	2.47E-03	1.61E-03	1.65E-03	3.54E-04	2.40E-04	6.42E-08	8.25E-04	4.49E-04
10	F15	70	Single Unit Short Haul Truck	28	0.00E+00	6.53E-06	3.27E-07	5.11E+00	5.34E-06	1.02E-02	6.95E-06	3.22E-03	4.59E-04	9.20E-05	7.92E-04	1.95E-04	1.98E-04	5.13E-04	2.06E-05	8.32E-09	5.93E-04	6.03E-04
10	F15	70	Single Unit Long Haul Truck	1	0.00E+00	2.84E-07	1.41E-08	2.17E-01	2.30E-07	4.30E-04	3.03E-07	1.38E-04	2.10E-05	4.09E-06	3.46E-05	8.45E-06	8.59E-06	2.17E-05	8.76E-07	3.51E-10	2.60E-05	2.59E-05
10	F15	70	Combination Short Haul Truck	31	0.00E+00	1.61E-05	1.14E-06	1.16E+01	5.22E-08	1.38E-02	1.18E-05	1.69E-02	1.22E-03	2.67E-04	9.78E-04	3.38E-04	3.37E-04	1.75E-03	3.89E-05	0.00E+00	6.41E-04	3.18E-03
10	F15	70	Combination Long Haul Truck	28	0.00E+00	1.45E-05	9.70E-07	1.09E+01	6.01E-08	1.46E-02	1.10E-05	1.66E-02	1.21E-03	2.21E-04	1.01E-03	2.93E-04	2.96E-04	1.66E-03	3.64E-05	0.00E+00	7.14E-04	3.13E-03
10	F16	70	Passenger Car	293	0.00E+00	3.83E-06	4.15E-07	1.41E+01	2.67E-05	9.98E-02	8.52E-06	5.87E-04	2.27E-03	3.65E-04	8.29E-04	5.35E-04	5.49E-04	5.25E-05	7.07E-05	1.93E-08	2.81E-04	9.18E-05
10	F16	70	Passenger Truck	491	0.00E+00	8.40E-06	8.89E-07	3.24E+01	5.31E-05	1.84E-01	1.74E-05	1.84E-03	4.13E-03	6.72E-04	1.66E-03	1.08E-03	1.11E-03	2.38E-04	1.61E-04	4.32E-08	5.55E-04	3.02E-04
10	F16	70	Single Unit Short Haul Truck	23	0.00E+00	5.40E-06	2.71E-07	4.23E+00	4.42E-06	8.46E-03	5.76E-06	2.66E-03	3.80E-04	7.61E-05	6.55E-04	1.62E-04	1.64E-04	4.24E-04	1.71E-05	6.89E-09	4.91E-04	4.99E-04
10	F16	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	1.17E-08	1.80E-01	1.91E-07	3.56E-04	2.51E-07	1.15E-04	1.74E-05	3.38E-06	2.86E-05	6.99E-06	7.11E-06	1.79E-05	7.25E-07	2.90E-10	2.15E-05	2.15E-05
10	F16	70	Combination Short Haul Truck	20	0.00E+00	1.03E-05	7.35E-07	7.49E+00	3.36E-08	8.90E-03	7.58E-06	1.09E-02	7.87E-04	1.72E-04	6.30E-04	2.17E-04	2.17E-04	1.13E-03	2.51E-05	0.00E+00	4.13E-04	2.05E-03
10	F16	70	Combination Long Haul Truck	18	0.00E+00	9.34E-06	6.25E-07	6.99E+00	3.87E-08	9.43E-03	7.10E-06	1.07E-02	7.81E-04	1.43E-04	6.51E-04	1.89E-04	1.91E-04	1.07E-03	2.34E-05	0.00E+00	4.60E-04	2.02E-03
10	F17	70	Passenger Car	301	0.00E+00	3.94E-06	4.26E-07	1.45E+01	2.74E-05	1.03E-01	8.76E-06	6.04E-04	2.34E-03	3.75E-04	8.53E-04	5.50E-04	5.64E-04	5.40E-05	7.27E-05	1.98E-08	2.89E-04	9.44E-05
10	F17	70	Passenger Truck	505	0.00E+00	8.63E-06	9.14E-07	3.33E+01	5.46E-05	1.89E-01	1.79E-05	1.89E-03	4.25E-03	6.91E-04	1.71E-03	1.11E-03	1.14E-03	2.45E-04	1.66E-04	4.44E-08	5.71E-04	3.11E-04
10	F17	70	Single Unit Short Haul Truck	27	0.00E+00	6.30E-06	3.16E-07	4.94E+00	5.15E-06	9.87E-03	6.71E-06	3.11E-03	4.43E-04	8.88E-05	7.65E-04	1.88E-04	1.92E-04	4.95E-04	1.99E-05	8.04E-09	5.73E-04	5.82E-04
10	F17	70	Single Unit Long Haul Truck	1	0.00E+00	2.75E-07	1.37E-08	2.09E-01	2.22E-07	4.15E-04	2.93E-07	1.34E-04	2.02E-05	3.95E-06	3.34E-05	8.16E-06	8.30E-06	2.09E-05	8.46E-07	3.39E-10	2.51E-05	2.50E-05
10	F17	70	Combination Short Haul Truck	29	0.00E+00	1.52E-05	1.08E-06	1.10E+01	4.95E-08	1.31E-02	1.12E-05	1.60E-02	1.16E-03	2.53E-04	9.28E-04	3.20E-04	3.20E-04	1.67E-03	3.70E-05	0.00E+00	6.08E-04	3.02E-03
10	F17	70	Combination Long Haul Truck	27	0.00E+00	1.38E-05	9.21E-07	1.03E+01	5.70E-08	1.39E-02	1.05E-05	1.58E-02	1.15E-03	2.10E-04	9.59E-04	2.78E-04	2.81E-04	1.58E-03	3.45E-05	0.00E+00	6.78E-04	2.97E-03
10	F18	70	Passenger Car	292	0.00E+00	3.82E-06	4.13E-07	1.40E+01	2.66E-05	9.94E-02	8.49E-06	5.85E-04	2.26E-03	3.63E-04	8.26E-04	5.33E-04	5.47E-04	5.23E-05	7.04E-05	1.92E-08	2.80E-04	9.14E-05
10	F18	70	Passenger Truck	489	0.00E+00	8.37E-06	8.85E-07	3.23E+01	5.29E-05	1.83E-01	1.74E-05	1.83E-03	4.12E-03	6.69E-04	1.66E-03	1.08E-03	1.10E-03	2.37E-04	1.61E-04	4.30E-08	5.53E-04	3.01E-04
10	F18	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.46E+00	5.71E-06	1.09E-02	7.43E-06	3.44E-03	4.91E-04	9.83E-05	8.46E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.90E-09	6.34E-04	6.44E-04
10	F18	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.59E-04	3.24E-07	1.48E-04	2.24E-05	4.37E-06	3.70E-05	9.03E-06	9.18E-06	2.32E-05	9.37E-07	3.75E-10	2.78E-05	2.77E-05
10	F18	70	Combination Short Haul Truck	29	0.00E+00	1.52E-05	1.08E-06	1.10E+01	4.95E-08	1.31E-02	1.12E-05	1.60E-02	1.16E-03	2.53E-04	9.28E-04	3.20E-04	3.20E-04	1.67E-03	3.70E-05	0.00E+00	6.08E-04	3.02E-03
10	F18	70	Combination Long Haul Truck	27	0.00E+00	1.38E-05	9.21E-07	1.03E+01	5.70E-08	1.39E-02	1.05E-05	1.58E-02	1.15E-03	2.10E-04	9.59E-04	2.78E-04	2.81E-04	1.58E-03	3.45E-05	0.00E+00	6.78E-04	2.97E-03
10	F19	70	Passenger Car	342	0.00E+00	4.48E-06	4.84E-07	1.64E+01	3.12E-05	1.17E-01	9.96E-06	6.86E-04	2.66E-03	4.26E-04	9.69E-04	6.25E-04	6.41E-04	6.13E-05	8.26E-05	2.25E-08	3.28E-04	1.07E-04
10	F19	70	Passenger Truck	574	0.00E+00	9.81E-06	1.04E-06	3.79E+01	6.21E-05	2.14E-01	2.04E-05	2.15E-03	4.83E-03	7.85E-04	1.94E-03	1.26E-03	1.30E-03	2.78E-04	1.89E-04	5.05E-08	6.49E-04	3.53E-04
10	F20	70	Passenger Car	252	0.00E+00	3.29E-06	3.56E-07	1.21E+01	2.29E-05	8.57E-02	7.31E-06	5.04E-04	1.95E-03	3.13E-04	7.12E-04	4.59E-04	4.71E-04	4.51E-05	6.07E-05	1.65E-08	2.41E-04	7.88E-05
10	F20	70	Passenger Truck	421	0.00E+00	7.21E-06	7.63E-07	2.78E+01	4.56E-05	1.58E-01	1.50E-05	1.58E-03	3.55E-03	5.77E-04	1.43E-03	9.29E-04	9.52E-04	2.04E-04	1.39E-04	3.71E-08	4.77E-04	2.59E-04
10	F20	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	F20	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.57E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	F20	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.78E-04
10	F21	70	Passenger Car	195	0.00E+00	2.55E-06	2.76E-07	9.35E+00	1.77E-05	6.63E-02	5.66E-06	3.90E-04	1.51E-03	2.42E-04	5.51E-04	3.55E-04	3.65E-04	3.49E-05	4.70E-05	1.28E-08	1.87E-04	6.10E-05
10	F21	70	Passenger Truck	326	0.00E+00	5.58E-06	5.91E-07	2.15E+01	3.53E-05	1.22E-01	1.16E-05	1.22E-03	2.75E-03	4.47E-04	1.11E-03	7.19E-04	7.37E-04	1.58E-04	1.07E-04	2.87E-08	3.69E-04	2.01E-04
10	F22	70	Passenger Car	89	0.00E+00	1.17E-06	1.26E-07	4.29E+00	8.13E-06	3.04E-02	2.60E-06	1.79E-04	6.93E-04	1.11E-04	2.53E-04	1.63E-04	1.67E-04	1.60E-05	2.15E-05	5.87E-09	8.56E-05	2.80E-05
10	F22	70	Passenger Truck	150	0.00E+00	2.56E-06	2.71E-07	9.88E+00	1.62E-05	5.60E-02	5.32E-06	5.60E-04	1.26E-03	2.05E-04	5.07E-04	3.30E-04	3.38E-04	7.25E-05	4.92E-05	1.32E-08	1.69E-04	9.21E-05
10	F22	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.97E-01	8.84E-10	2.34E-04	2.00E-07	2.86E-04	2.07E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.97E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	F23	70	Passenger Car	79	0.00E+00	1.04E-06	1.12E-07	3.80E+00	7.21E-06	2.70E-02	2.30E-06	1.59E-04	6.14E-04	9.86E-05	2.24E-04	1.45E-04	1.48E-04	1.42E-05	1.91E-05	5.21E-09	7.59E-05	2.48E-05
10	F23	70	Passenger Truck	133	0.00E+00	2.27E-06	2.40E-07	8.77E+00	1.44E-05	4.96E-02	4.72E-06	4.97E-04	1.12E-03	1.82E-04	4.50E-04	2.93E-04	3.00E-04	6.43E-05	4.37E-05	1.17E-08	1.50E-04	8.17E-05
10	F23	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.66E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	F23	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.77E-04
10	F23	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.97E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.72E-04
10	F24	70	Passenger Car	67	0.00E+00	8.80E-07	9.52E-08	3.23E+00	6.12E-06	2.29E-02	1.96E-06	1.35E-04	5.22E-04	8.37E-05	1.90E-04	1.23E-04	1.26E-04	1.21E-05	1.62E-05	4.42E-09	6.45E-05	2.11E-05
10	F24	70	Passenger Truck	113	0.00E+00	1.93E-06	2.04E-07	7.44E+00	1.22E-05	4.22E-02	4.01E-06	4.22E-04	9.49E-04	1.54E-04	3.82E-04	2.49E-04	2.55E-04	5.46E-05	3.71E-05	9.91E-09	1.27E-04	6.94E-05
10	F24	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.66E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	F24	70	Combination Short Haul Truck	4	0.00E+00	2.18E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.60E-06	2.29E-03	1.66E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.69E-05	4.31E-04
10	F24	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.32E-07	1.47E+00	8.15E-09	1.98E-03	1.49E-06	2.25E-03	1.65E-04	3.00E-05	1.37E-04	3.98E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.25E-04
9	F25	60	Passenger Car	271	0.00E+00	4.06E-06	4.39E-07	1.36E+01	2.82E-05	1.05E-01	9.02E-06	5.52E-04	2.75E-03	4.22E-04	8.78E-04	5.66E-04	5.81E-04	5.66E-05	6.81E-05	1.88E-08	2.97E-04	8.63E-05
9	F25	60	Passenger Truck	453	0.00E+00	8.95E-06	9.45E-07	3.10E+01	5.59E-05	1.88E-01	1.84E-05	1.80E-03	5.04E-03	7.82E-04	1.75E-03	1.14E-03	1.17E-03	2.40E-04	1.54E-04	4.26E-08	5.83E-04	2.98E-04
9	F25	60	Single Unit Short Haul Truck	14	0.00E+00	4.22E-06	2.11E-07	2.69E+00	3.48E-06	5.20E-03	4.50E-06	2.01E-03	3.42E-04	6.20E-05	5.13E-04	1.27E-04	1.29E-04	2.69E-04	1.09E-05	4.47E-09	3.84E-04	3.77E-04
9	F25	60	Single Unit Long Haul Truck	1	0.00E+00	1.84E-07	9.17E-09	1.15E-01	1.51E-07	2.21E-04	1.97E-07	8.70E-05	1.53E-05	2.74E-06	2.25E-05	5.50E-06	5.59E-06	1.15E-05	4.64E-07	1.90E-10	1.69E-05	1.63E-05
9	F25	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.40E+00	2.40E-08	5.92E-03	5.02E-06	7.35E-03	6.30E-04	1.25E-04	4.31E-04	1.40E-04	1.41E-04	6.64E-04	1.47E-05	0.00E+00	2.90E-04	1.38E-03
9	F25	60	Combination Long Haul Truck	10	0.00E+00	6.08E-06	3.95E-07	4.13E+00	2.75E-08	6.38E-03	4.68E-06	7.28E-03	6.34E-04	1.07E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
9	F26	60	Passenger Car	165	0.00E+00	2.48E-06	2.68E-07	8.29E+00	1.72E-05	6.42E-02	5.51E-06	3.37E-04	1.68E-03	2.58E-04	5.36E-04	3.46E-04	3.55E-04	3.45E-05	4.16E-05	1.14E-08	1.81E-04	5.27E-05
9	F26	60	Passenger Truck	277	0.00E+00	5.46E-06	5.77E-07	1.89E+01	3.42E-05	1.14E-01	1.13E-05	1.10E-03	3.08E-03	4.78E-04	1.07E-03	6.98E-04	7.15E-04	1.47E-04	9.40E-05	2.60E-08	3.56E-04	1.82E-04
9	F26	60	Single Unit Short Haul Truck	18	0.00E+00	5.34E-06	2.67E-07	3.40E+00	4.40E-06	6.59E-03	5.70E-06	2.55E-03	4.33E-04	7.85E-05	6.49E-04	1.60E-04	1.63E-04	3.41E-04	1.37E-05	5.66E-09	4.86E-04	4.78E-04
9	F26	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	1.16E-08	1.45E-01	1.91E-07	2.80E-04	2.49E-07	1.10E-04	1.94E-05	3.47E-06	2.84E-05	6.97E-06	7.09E-06	1.45E-05	5.87E-07	2.41E-10	2.14E-05	2.07E-05
9	F26	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	9.02E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F26	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.94E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.68E-03
9	F27	60	Passenger Car	717	0.00E+00	1.08E-05	1.16E-06	3.60E+01	7.48E-05	2.79E-01	2.39E-05	1.46E-03	7.28E-03	1.12E-03	2.33E-03	1.50E-03	1.54E-03	1.50E-04	1.80E-04	4.97E-08	7.88E-04	2.29E-04
9	F27	60	Passenger Truck	1201	0.00E+00	2.37E-05	2.50E-06	8.21E+01	1.48E-04	4.97E-01	4.89E-05	4.77E-03	1.34E-02	2.07E-03	4.65E-03	3.03E-03	3.10E-03	6.36E-04	4.08E-04	1.13E-07	1.55E-03	7.90E-04
9	F27	60	Single Unit Short Haul Truck	145	0.00E+00	4.25E-05	2.12E-06	2.71E+01	3.50E-05	5.24E-02	4.53E-05	2.03E-02	3.44E-03	6.24E-04	5.16E-03	1.27E-03	1.29E-03	2.71E-03	1.09E-04	4.50E-08	3.87E-03	3.80E-03
9	F27	60	Single Unit Long Haul Truck	6	0.00E+00	1.85E-06	9.23E-08	1.15E+00	1.52E-06	2.22E-03	1.98E-06	8.76E-04	1.54E-04	2.76E-05	2.26E-04	5.54E-05	5.63E-05	1.15E-04	4.67E-06	1.91E-09	1.70E-04	1.64E-04
9	F27	60	Combination Short Haul Truck	78	0.00E+00	4.61E-05	3.22E-06	3.00E+01	1.63E-07	4.04E-02	3.42E-05	5.01E-02	4.30E-03	8.51E-04	2.94E-03	9.58E-04	9.59E-04	4.53E-03	1.01E-04	0.00E+00	1.98E-03	9.44E-03
9	F27	60	Combination Long Haul Truck	72	0.00E+00	4.14E-05	2.70E-06	2.81E+01	1.87E-07	4.35E-02	3.19E-05	4.97E-02	4.32E-03	7.33E-04	3.03E-03	8.23E-04	8.34E-04	4.30E-03	9.43E-05	0.00E+00	2.19E-03	9.36E-03
9	F28	60	Passenger Car	796	0.00E+00	1.19E-05	1.29E-

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F36	80	Passenger Car	214	0.00E+00	2.60E-06	2.82E-07	9.97E+00	1.81E-05	6.94E-02	5.79E-06	4.39E-04	1.18E-03	2.04E-04	5.64E-04	3.63E-04	3.73E-04	3.35E-05	5.02E-05	1.41E-08	1.91E-04	6.87E-05
11	F36	80	Passenger Truck	358	0.00E+00	5.59E-06	5.93E-07	2.30E+01	3.58E-05	1.28E-01	1.17E-05	1.31E-03	2.11E-03	3.74E-04	1.12E-03	7.28E-04	7.46E-04	1.61E-04	1.15E-04	3.13E-08	3.75E-04	2.13E-04
11	F36	80	Single Unit Short Haul Truck	23	0.00E+00	4.31E-06	2.14E-07	4.23E+00	3.47E-06	8.47E-03	4.59E-06	2.21E-03	2.71E-04	6.12E-05	5.24E-04	1.28E-04	1.30E-04	4.24E-04	1.70E-05	6.76E-09	3.95E-04	4.13E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	9.23E-09	1.79E-01	1.48E-07	3.53E-04	1.99E-07	9.45E-05	1.24E-05	2.70E-06	2.29E-05	5.49E-06	5.58E-06	1.79E-05	7.22E-07	2.82E-10	1.73E-05	1.77E-05
11	F36	80	Combination Short Haul Truck	13	0.00E+00	5.52E-06	3.95E-07	4.56E+00	1.74E-08	4.89E-03	4.03E-06	5.66E-03	3.34E-04	8.23E-05	3.29E-04	1.17E-04	1.16E-04	6.88E-04	1.53E-05	0.00E+00	2.13E-04	1.07E-03
11	F36	80	Combination Long Haul Truck	11	0.00E+00	4.94E-06	3.32E-07	4.22E+00	2.01E-08	5.06E-03	3.74E-06	5.50E-03	3.27E-04	6.57E-05	3.39E-04	1.00E-04	1.01E-04	6.44E-04	1.41E-05	0.00E+00	2.39E-04	1.04E-03
9	F37	60	Passenger Car	913	0.00E+00	1.37E-05	1.48E-06	4.58E+01	9.53E-05	3.55E-01	3.04E-05	1.86E-03	9.27E-03	1.42E-03	2.96E-03	1.91E-03	1.96E-03	1.91E-04	2.30E-04	6.33E-08	1.00E-03	2.91E-04
9	F37	60	Passenger Truck	1529	0.00E+00	3.02E-05	3.19E-06	1.05E+02	1.89E-04	6.33E-01	6.22E-05	6.07E-03	1.70E-02	2.64E-03	5.92E-03	3.85E-03	3.95E-03	8.09E-04	5.19E-04	1.44E-07	1.97E-03	1.01E-03
9	F37	60	Single Unit Short Haul Truck	78	0.00E+00	2.28E-05	1.14E-06	1.45E+01	1.88E-05	2.81E-02	2.43E-05	1.09E-02	1.85E-03	3.35E-04	2.77E-03	6.83E-04	6.94E-04	1.45E-03	5.86E-05	2.42E-08	2.07E-03	2.04E-03
9	F37	60	Single Unit Long Haul Truck	3	0.00E+00	9.95E-07	4.95E-08	6.19E-01	8.16E-07	1.19E-03	1.06E-06	4.70E-04	8.28E-05	1.48E-05	1.21E-04	2.97E-05	3.02E-05	6.19E-05	2.50E-06	1.03E-09	9.10E-05	8.81E-05
9	F37	60	Combination Short Haul Truck	55	0.00E+00	3.26E-05	2.27E-06	2.12E+01	1.16E-07	2.85E-02	2.42E-05	3.54E-02	3.04E-03	6.01E-04	2.08E-03	6.77E-04	6.78E-04	3.20E-03	7.10E-05	0.00E+00	1.40E-03	6.67E-03
9	F37	60	Combination Long Haul Truck	51	0.00E+00	2.93E-05	1.91E-06	1.99E+01	1.32E-07	3.07E-02	2.26E-05	3.51E-02	3.05E-03	5.18E-04	2.14E-03	5.82E-04	5.89E-04	3.04E-03	6.66E-05	0.00E+00	1.55E-03	6.61E-03
9	F38	60	Passenger Car	578	0.00E+00	8.67E-06	9.37E-07	2.90E+01	6.03E-05	2.25E-01	1.93E-05	1.18E-03	5.87E-03	9.01E-04	1.88E-03	1.21E-03	1.24E-03	1.21E-04	1.45E-04	4.00E-08	6.35E-04	1.84E-04
9	F38	60	Passenger Truck	968	0.00E+00	1.91E-05	2.02E-06	6.62E+01	1.19E-04	4.00E-01	3.94E-05	3.84E-03	1.08E-02	1.67E-03	3.74E-03	2.44E-03	2.50E-03	5.12E-04	3.29E-04	9.09E-08	1.25E-03	6.37E-04
9	F38	60	Single Unit Short Haul Truck	122	0.00E+00	3.57E-05	1.79E-06	2.28E+01	2.94E-05	4.40E-02	3.81E-05	1.70E-02	2.89E-03	5.25E-04	4.34E-03	1.07E-03	1.09E-03	2.28E-03	9.19E-05	3.79E-08	3.25E-03	3.19E-03
9	F38	60	Single Unit Long Haul Truck	5	0.00E+00	1.56E-06	7.76E-08	9.71E-01	1.28E-06	1.87E-03	1.67E-06	7.37E-04	1.30E-04	2.32E-05	1.90E-04	4.66E-05	4.74E-05	9.70E-05	3.93E-06	1.61E-09	1.43E-04	1.38E-04
9	F38	60	Combination Short Haul Truck	93	0.00E+00	5.48E-05	3.82E-06	3.56E+01	1.94E-07	4.79E-02	4.06E-05	5.94E-02	5.10E-03	1.01E-03	3.48E-03	1.14E-03	1.14E-03	5.37E-03	1.19E-04	0.00E+00	2.35E-03	1.12E-02
9	F38	60	Combination Long Haul Truck	85	0.00E+00	4.92E-05	3.20E-06	3.34E+01	2.22E-07	5.16E-02	3.79E-05	5.89E-02	5.13E-03	8.70E-04	3.59E-03	9.77E-04	9.89E-04	5.10E-03	1.12E-04	0.00E+00	2.60E-03	1.11E-02
11	F39	80	Passenger Car	44	0.00E+00	5.37E-07	5.81E-08	2.06E+00	3.74E-06	1.43E-02	1.19E-06	9.06E-05	2.43E-04	4.22E-05	1.16E-04	7.49E-05	7.69E-05	6.91E-06	1.04E-05	2.90E-09	3.94E-05	1.42E-05
11	F39	80	Passenger Truck	74	0.00E+00	1.15E-06	1.22E-07	4.75E+00	7.39E-06	2.64E-02	2.42E-06	2.69E-04	4.35E-04	7.72E-05	2.31E-04	1.50E-04	1.54E-04	3.32E-05	2.37E-05	6.46E-09	7.74E-05	4.40E-05
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	F39	80	Combination Short Haul Truck	7	0.00E+00	2.99E-06	2.14E-07	2.47E+00	9.43E-09	2.65E-03	2.18E-06	3.07E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.26E-05	3.73E-04	8.27E-06	0.00E+00	1.15E-04	5.78E-04
11	F39	80	Combination Long Haul Truck	6	0.00E+00	2.68E-06	1.80E-07	2.28E+00	1.09E-08	2.74E-03	2.03E-06	2.98E-03	1.77E-04	3.56E-05	1.84E-04	5.43E-05	5.46E-05	3.49E-04	7.65E-06	0.00E+00	1.29E-04	5.61E-04
11	F40	80	Passenger Car	183	0.00E+00	2.23E-06	2.41E-07	8.52E+00	1.55E-05	5.94E-02	4.95E-06	3.76E-04	1.01E-03	1.75E-04	4.82E-04	3.11E-04	3.19E-04	2.86E-05	4.29E-05	1.20E-08	1.63E-04	5.87E-05
11	F40	80	Passenger Truck	306	0.00E+00	4.78E-06	5.07E-07	1.97E+01	3.06E-05	1.09E-01	1.00E-05	1.12E-03	1.80E-03	3.20E-04	9.59E-04	6.23E-04	6.38E-04	1.38E-04	9.83E-05	2.68E-08	3.21E-04	1.82E-04
11	F40	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	F40	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	F40	80	Combination Short Haul Truck	15	0.00E+00	6.67E-06	4.77E-07	5.51E+00	2.10E-08	5.90E-03	4.87E-06	6.84E-03	4.03E-04	9.94E-05	3.97E-04	1.41E-04	1.40E-04	8.31E-04	1.85E-05	0.00E+00	2.57E-04	1.29E-03
11	F40	80	Combination Long Haul Truck	14	0.00E+00	5.97E-06	4.01E-07	5.10E+00	2.43E-08	6.12E-03	4.52E-06	6.65E-03	3.95E-04	7.94E-05	4.10E-04	1.21E-04	1.22E-04	7.79E-04	1.71E-05	0.00E+00	2.88E-04	1.25E-03
10	F41	70	Passenger Car	297	0.00E+00	3.88E-06	4.20E-07	1.42E+01	2.70E-05	1.01E-01	8.63E-06	5.95E-04	2.30E-03	3.69E-04	8.40E-04	5.41E-04	5.56E-04	5.32E-05	7.16E-05	1.95E-08	2.84E-04	9.29E-05
10	F41	70	Passenger Truck	497	0.00E+00	8.51E-06	9.00E-07	3.28E+01	5.38E-05	1.86E-01	1.77E-05	1.86E-03	4.19E-03	6.81E-04	1.69E-03	1.10E-03	1.12E-03	2.41E-04	1.64E-04	4.37E-08	5.62E-04	3.06E-04
10	F42	70	Passenger Car	193	0.00E+00	2.53E-06	2.73E-07	9.28E+00	1.76E-05	6.58E-02	5.62E-06	3.87E-04	1.50E-03	2.40E-04	5.47E-04	3.53E-04	3.62E-04	3.46E-05	4.66E-05	1.27E-08	1.85E-04	6.05E-05
10	F42	70	Passenger Truck	324	0.00E+00	5.54E-06	5.86E-07	2.14E+01	3.50E-05	1.21E-01	1.15E-05	1.21E-03	2.73E-03	4.43E-04	1.10E-03	7.14E-04	7.31E-04	1.57E-04	1.06E-04	2.85E-08	3.66E-04	1.99E-04
10	F42	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	F42	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.15E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	F42	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.84E-04
9	F43	60	Passenger Car	12	0.00E+00	1.85E-07	2.00E-08	6.19E-01	1.29E-06	4.79E-03	4.11E-07	2.52E-05	1.25E-04	1.92E-05	4.00E-05	2.58E-05	2.65E-05	2.58E-06	3.10E-06	8.55E-10	1.35E-05	3.93E-06
9	F43	60	Passenger Truck	21	0.00E+00	4.08E-07	4.31E-08	1.41E+00	2.55E-06	8.55E-03	8.41E-07	8.20E-05	2.30E-04	3.57E-05	7.99E-05	5.21E-05	5.33E-05	1.09E-05	7.02E-06	1.94E-09	2.66E-05	1.36E-05
9	F44	60	Passenger Car	157	0.00E+00	2.35E-06	2.55E-07	7.88E+00	1.64E-05	6.10E-02	5.23E-06	3.20E-04	1.59E-03	2.45E-04	5.09E-04	3.28E-04	3.37E-04	3.28E-05	3.95E-05	1.09E-08	1.72E-04	5.01E-05
9	F44	60	Passenger Truck	263	0.00E+00	5.19E-06	5.48E-07	1.80E+01	3.25E-05	1.09E-01	1.07E-05	1.04E-03	2.92E-03	4.54E-04	1.02E-03	6.63E-04	6.79E-04	1.39E-04	8.93E-05	2.47E-08	3.38E-04	1.73E-04
9	F44	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	F44	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.58E-08	8.01E-01	4.36E-09	1.08E-03	9.13E-07	1.34E-03	1.15E-04	2.27E-05	7.83E-05	2.55E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	F44	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.19E-08	7.51E-01	5.00E-09	1.16E-03	8.52E-07	1.32E-03	1.15E-04	1.95E-05	8.07E-05	2.19E-05	2.22E-05	1.15E-04	2.51E-06	0.00E+00	5.85E-05	2.50E-04
10	F45	70	Passenger Car	264	0.00E+00	3.46E-06	3.74E-07	1.27E+01	2.41E-05	9.00E-02	7.68E-06	5.30E-04	2.05E-03	3.29E-04	7.48E-04	4.82E-04	4.95E-04	4.73E-05	6.37E-05	1.74E-08	2.53E-04	8.28E-05
10	F45	70	Passenger Truck	443	0.00E+00	7.57E-06	8.02E-07	2.92E+01	4.79E-05	1.66E-01	1.57E-05	1.66E-03	3.73E-03	6.06E-04	1.50E-03	9.76E-04	1.00E-03	2.15E-04	1.46E-04	3.89E-08	5.01E-04	2.73E-04
10	F45	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.35E-03	4.32E-06	2.00E-03	2.85E-04	5.71E-05	4.91E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.74E-04
10	F45	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	8.78E-09	1.35E-01	1.43E-07	2.67E-04	1.88E-07	8.59E-05	1.30E-05	2.54E-06	2.15E-05	5.24E-06	5.33E-06	1.35E-05	5.44E-07	2.18E-10	1.61E-05	1.61E-05
10	F45	70	Combination Short Haul Truck	18	0.00E+00	9.52E-06	6.77E-07	6.90E+00	3.09E-08	8.20E-03	6.98E-06	1.00E-02	7.25E-04	1.58E-04	5.80E-04	2.00E-04	2.00E-04	1.04E-03	2.31E-05	0.00E+00	3.80E-04	1.89E-03
10	F45	70	Combination Long Haul Truck	17	0.00E+00	8.61E-06	5.76E-07	6.44E+00	3.56E-08	8.68E-03	6.54E-06	9.87E-03	7.20E-04	1.31E-04	6.00E-04	1.74E-04	1.76E-04	9.84E-04	2.16E-05	0.00E+00	4.24E-04	1.86E-03
10	F46	70	Passenger Car	203	0.00E+00	2.65E-06	2.87E-07	9.74E+00	1.85E-05	6.91E-02	5.90E-06	4.07E-04	1.57E-03	2.52E-04	5.74E-04	3.70E-04	3.80E-04	3.64E-05	4.90E-05	1.33E-08	1.94E-04	6.36E-05
10	F46	70	Passenger Truck	340	0.00E+00	5.82E-06	6.16E-07	2.25E+01	3.68E-05	1.27E-01	1.21E-05	1.27E-03	2.86E-03	4.65E-04	1.15E-03	7.50E-04	7.68E-04	1.65E-04	1.12E-04	2.99E-08	3.85E-04	2.09E-04
10	F46	70	Single Unit Short Haul Truck	21	0.00E+00	4.95E-06	2.48E-07	3.88E+00	4.05E-06	7.76E-03	5.28E-06	2.44E-03	3.48E-04	6.98E-05	6.01E-04	1.48E-04	1.51E-04	3.89E-04	1.56E-05	6.31E-09	4.50E-04	4.57E-04
10	F46	70	Single Unit Long Haul Truck	1	0.00E+00	2.16E-07	1.07E-08	1.65E-01	1.75E-07	3.26E-04	2.30E-07	1.05E-04	1.59E-05	3.10E-06	2.63E-05	6.41E-06	6.52E-06	1.64E-05	6.65E-07	2.66E-10	1.97E-05	1.97E-05
10	F46	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.86E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
10	F46	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.74E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
9	F47	60	Passenger Car	8	0.00E+00	1.23E-07	1.33E-08	4.13E-01	8.58E-07	3.20E-03	2.74E-07	1.68E-05	8.35E-05	1.28E-05	2.67E-05	1.72E-05	1.77E-05	1.72E-06	2.07E-06	5.70E-10	9.03E-06	2.62E-06
9	F47	60	Passenger Truck	14	0.00E+00	2.72E-07	2.87E-08	9.42E-01	1.70E-06	5.70E-03	5.60E-07	5.47E-05	1.53E-04	2.38E-05	5.33E-05	3.47E-05	3.56E-05	7.29E-06	4.68E-06	1.29E-09	1.77E-05	9.07E-06
9	F47	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.29E-05
9	F48	60	Passenger Car	2	0.00E+00	3.36E-08	3.64E-09	1.13E-01	2.34E-07	8.72E-04	7.48E-08	4.58E-06	2.28E-05	3.50E-06	7.28E-06	4.69E-06	4.81E-06	4.69E-07	5.64E-07	1.55E-10	2.46E-06	7.15E-07
9	F48	60	Passenger Truck	4	0.00E+00	7.42E-08	7.83E-09	2.57E-01	4.64E-07	1.55E-03	1.53E-07	1.49E-05	4.18E-05	6.48E-06	1.45E-05	9.47E-06	9.70E-06	1.99E-06	1.28E-06	3.53E-10	4.83E-06	2.47E-06
9	F49	60	Passenger Car	747	0.00E+00	1.12E-05	1.21E-06	3.75E+01	7.79E-05	2.90E-01	2.49E-05	1.52E-03	7.58E-03	1.16E-03	2.42E-03	1.56E-03	1.60E-03	1.56E-04	1.88E-04	5.18E-08	8.20E-04	2.38E-04
9	F49	60	Passenger Truck	1251	0.00E+00	2.47E-05	2.61E-06	8.55E+01	1.54E-04	5.18E-01	5.09E-05	4.97E-03	1.39E-02	2.16E-03	4.84E-03	3.15E-03	3.23E-03	6.62E-04	4.25E-04	1.17E-07	1.61E-03	8.23E-04
9	F49	60	Single Unit Short Haul Truck	132	0.00E+00	3.88E-05	1.94E-06	2.47E+01	3.20E-05	4.79E-02	4.14E-05	1.85E-02	3.14E-03	5.70E-04	4.72E-03	1.16E-03	1.18E-03	2.47E-03	9.99E-05	4.11E-08	3.53E-03	3.47E-03
9	F49	60	Single Unit Long Haul Truck	6	0.00E+00	1.69E-06	8.43E-08	1.06E+00	1.39E-06	2.03E-03	1.81E-06	8.01E-04	1.41E-04	2.52E-05	2.07E-04	5.06E-05	5.15E-05	1.05E-04	4.27E-06	1.75E-09	1.55E-04	1.50E-04
9	F49	60	Combination Short Haul Truck	72	0.00E+00	4.25E-05	2.96E-06	2.76E+01	1.50E-07	3.71E-02	3.15E-05	4.61E-02	3.95E-03	7.82E-04	2.70E-03	8.81E-04	8.83E-04	4.16E-03	9.25E-05	0.00E+00	1.82E-03	8.68E-03
9	F49	60	Combination Long Haul Truck	66	0.00E+00	3.81E-05	2.48E-06	2.59E+01	1.72E-07	4.00E-02	2.94E-05	4.57E-02	3.97E-03	6.74E-04	2.78E-03	7.57E-04	7.67E-04	3.96E-03	8.67E-05	0.00E+00	2.02E-03	8.61E-03
9	F50	60	Passenger Car	782	0.00E+00	1.17E-05	1.27E-06	3.92E+01	8.16E-05	3.04E-01	2.61E-05	1.59E-03	7.94E-03	1.22E-03	2.54E-03	1.64E-03	1.68E-03	1.63E-04	1.97E-04	5.42E-08	8.59E-04	2.49E-04
9	F50	60	Passenger Truck	1309	0.00E+00	2.58E-05	2.73E-06	8.95E+01	1.62E-04	5.42E-01	5.33E-05	5.20E-03	1.46E-02	2.26E-03	5.06E-03	3.30E-03	3.38E-03	6.93E-04	4.45E-04	1.23E-07	1.68E-03	8.62E-04
9	F50	60	Single Unit Short Haul Truck	143	0.00E+00	4.19E-05	2.10E-06	2.67E+01	3.45E-05	5.17E-02	4.47E-05	2.00E-02	3.39E-03	6.15E-04	5.09E-03	1.26E-03	1.28E-03	2.67E-03	1.08E-04	4.44E-08	3.81E-03	3.75E-03
9	F50	60	Single Unit Long Haul Truck	6	0.00E+00	1.83E-06	9.11E-08	1.14E+00	1.50E-06	2.19E-03	1.95E-06	8.65E-04	1.52E-04	2.72E-05	2.23E-04	5.47E-05	5.56E-05	1.14E-04	4.61E-06	1.89E-09	1.67E-04	1.62E-04
9	F50	60	Combination Short Haul Truck	56	0.00E+00	3.32E-05	2.32E-06	2.16E+01	1.18E-07	2.91E-02	2.47E-05	3.61E-02	3.09E-03	6.12E-04	2.11E-03	6.90E-04	6.91E-04	3.26E-03	7.24E-05	0.00E+00	1.42E-03	6.80E-03
9	F50	60	Combination Long Haul Truck	52	0.00E+00	2.98E-05	1.94E-06	2.03E+01	1.35E-07	3.13E-02	2.30E-05	3.58E-02	3.11E-03	5.28E-04	2.18E-03	5.93E-04	6.00E-04	3.10E-03	6.79E-05	0.00E+00	1.58E-03	6.74E-03
10	F51	70	Passenger Car	173	0.00E+00	2.26E-06	2.44E-07	8.29E+00	1.57E-05	5.88E-02	5.02E-06	3.46E-04	1.34E-03	2.15E-04	4.89E-04	3.15E-04	3.23E-04	3.09E-05	4.17E-05	1.13E-08	1.65E-04	5.41E-05
10	F51	70	Passenger Truck	289	0.00E+00	4.95E-06	5.24E-07	1.91E+01	3.13E-05	1.08E-01	1.03E-05	1.08E-03	2.44E-03	3.96E-04	9.81E-04	6.38E-04	6.54E-04	1.40E-04	9.51E-05	2.54E-08	3.27E-04	1.78E-04
10	F51	70	Single Unit Short Haul Truck	49	0.00E+00	1.15E-05	5.75E-07	8.99E+00	9.39E-06	1.80E-02	1.22E-05	5.66E-03	8.08E-04	1.62E-04	1.39E-03	3.43E-04	3.49E-04	9.01E-04	3.63E-05	1.46E-08	1.04E-03	1.06E-03
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	5.00E-07	2.49E-08	3.81E-01	4.05E-07	7.56E-04	5.33E-07	2.43E-04	3.69E-05	7.19E-06	6.09E-05	1.49E-05	1.51E-05	3.81E-05	1.54E-06	6.17E-10	4.58E-05	4.56E-05
10	F51	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.54E-07	7.69E+00	3.45E-08	9.14E-03	7.78E-06	1.12E-02	8.07E-04	1.76E-04	6.46E-04	2.23E-04	2.23E-04	1.16E-03	2.57E-05	0.00E+00	4.23E-04	2.10E-03
10	F51	70	Combination Long Haul Truck	19	0.00E+00	9.59E-06	6.41E-07	7.18E+00	3.97E-08	9.68E-03	7.28E-06	1.10E-02	8.02E-04	1.46E-04	6.68E-04	1.94E-04	1.96E-04	1.10E-03	2.40E-05	0.00E+00	4.72E-04	2.07E-03
10	F52	70	Passenger Car	738	0.00E+00	9.65E-06	1.04E-06	3.54E+01	6.71E-05	2.51E-01	2.14E-05	1.48E-03	5.72E-03	9.17E-04	2.09E-03	1.35E-03	1.38E-03	1.32E-04	1.78E-04	4.85E-08	7.06E-04	2.31E-04
10	F52	70	Passenger Truck	1235	0.00E+00	2.11E-05	2.24E-06	8.16E+01	1.34E-04	4.62E-01	4.39E-05	4.62E-03	1.04E-02	1.69E-03	4.19E-03	2.72E-03	2.79E-03	5.99E-04	4.06E-04	1.09E-07	1.40E-03	7.61E-04
10	F52	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.62E-02	1.10E-05	5.11E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.56E-04
10	F52	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.24E-08	3.44E-01	3.65E-07	6.81E-04	4.81E-07	2.20E-04	3.33E-05	6.49E-06	5.49E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.11E-05
10	F52	70	Combination Short Haul Truck	21	0.00E+00	1.09E-05	7.

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	9.31E-07	4.86E-08	4.41E-01	8.11E-07	7.65E-04	9.91E-07	4.53E-04	8.69E-05	1.43E-05	1.11E-04	2.90E-05	2.95E-05	4.45E-05	1.78E-06	7.57E-10	8.11E-05	8.49E-05
50	F72	40	Combination Short Haul Truck	18	0.00E+00	1.58E-05	1.09E-06	8.00E+00	5.66E-08	1.37E-02	1.17E-05	1.76E-02	1.83E-03	3.30E-04	1.02E-03	3.26E-04	3.29E-04	1.21E-03	2.68E-05	0.00E+00	6.92E-04	3.31E-03
50	F72	40	Combination Long Haul Truck	16	0.00E+00	1.43E-05	9.37E-07	7.60E+00	6.43E-08	1.53E-02	1.10E-05	1.76E-02	1.84E-03	2.93E-04	1.05E-03	2.86E-04	2.91E-04	1.16E-03	2.54E-05	0.00E+00	7.60E-04	3.32E-03
52	F73	60	Passenger Car	7	0.00E+00	1.03E-07	1.11E-08	3.75E-01	7.17E-07	2.65E-03	2.29E-07	1.47E-05	7.38E-05	1.13E-05	2.23E-05	1.44E-05	1.47E-05	1.56E-06	1.88E-06	5.02E-10	7.55E-06	2.30E-06
52	F73	60	Passenger Truck	13	0.00E+00	2.26E-07	2.39E-08	8.56E-01	1.41E-06	4.74E-03	4.65E-07	4.72E-05	1.31E-04	2.03E-05	4.42E-05	2.88E-05	2.95E-05	6.50E-06	4.25E-06	1.07E-09	1.47E-05	7.82E-06
53	F74	70	Passenger Car	183	0.00E+00	2.32E-06	2.51E-07	8.87E+00	1.61E-05	5.98E-02	5.15E-06	3.73E-04	1.40E-03	2.25E-04	5.01E-04	3.23E-04	3.32E-04	3.27E-05	4.46E-05	1.21E-08	1.70E-04	5.82E-05
53	F74	70	Passenger Truck	306	0.00E+00	5.04E-06	5.34E-07	2.05E+01	3.19E-05	1.10E-01	1.05E-05	1.14E-03	2.51E-03	4.09E-04	1.00E-03	6.51E-04	6.67E-04	1.48E-04	1.02E-04	2.67E-08	3.34E-04	1.87E-04
53	F74	70	Single Unit Short Haul Truck	99	0.00E+00	2.32E-05	1.16E-06	1.82E+01	1.90E-05	3.63E-02	2.47E-05	1.14E-02	1.63E-03	3.27E-04	2.81E-03	6.93E-04	7.05E-04	1.82E-03	7.32E-05	2.96E-08	2.11E-03	2.14E-03
53	F74	70	Single Unit Long Haul Truck	4	0.00E+00	1.01E-06	5.02E-08	7.70E-01	8.18E-07	1.53E-03	1.08E-06	4.92E-04	7.45E-05	1.45E-05	1.23E-04	3.00E-05	3.05E-05	7.70E-05	3.11E-06	1.25E-09	9.24E-05	9.21E-05
53	F74	70	Combination Short Haul Truck	48	0.00E+00	2.50E-05	1.78E-06	1.81E+01	8.13E-08	2.15E-02	1.84E-05	2.63E-02	1.90E-03	4.16E-04	1.52E-03	5.26E-04	5.25E-04	2.74E-03	6.07E-05	0.00E+00	9.99E-04	4.96E-03
53	F74	70	Combination Long Haul Truck	44	0.00E+00	2.26E-05	1.51E-06	1.69E+01	9.37E-08	2.28E-02	1.72E-05	2.59E-02	1.89E-03	3.45E-04	1.58E-03	4.57E-04	4.62E-04	2.59E-03	5.67E-05	0.00E+00	1.11E-03	4.89E-03
52	F75	60	Passenger Car	50	0.00E+00	6.85E-07	7.41E-08	2.50E+00	4.77E-06	1.76E-02	1.52E-06	9.77E-05	4.91E-04	7.54E-05	1.48E-04	9.56E-05	9.81E-05	1.04E-05	1.25E-05	3.34E-09	5.02E-05	1.53E-05
52	F75	60	Passenger Truck	83	0.00E+00	1.50E-06	1.59E-07	5.69E+00	9.38E-06	3.15E-02	3.10E-06	3.14E-04	8.74E-04	1.35E-04	2.94E-04	1.92E-04	1.96E-04	4.32E-05	2.83E-05	7.09E-09	9.78E-05	5.20E-05
52	F75	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.03E-07	8.96E+00	1.16E-05	1.73E-02	1.50E-05	6.71E-03	1.14E-03	2.07E-04	1.71E-03	4.22E-04	4.29E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.26E-03
52	F75	60	Single Unit Long Haul Truck	2	0.00E+00	6.14E-07	3.06E-08	3.82E-01	5.03E-07	7.36E-04	6.56E-07	2.90E-04	5.11E-05	9.14E-06	7.48E-05	1.83E-05	1.86E-05	3.82E-05	1.55E-06	6.34E-10	5.62E-05	5.44E-05
52	F75	60	Combination Short Haul Truck	16	0.00E+00	9.54E-06	6.65E-07	6.20E+00	3.38E-08	8.34E-03	7.08E-06	1.04E-02	8.88E-04	1.76E-04	6.07E-04	1.98E-04	1.98E-04	9.35E-04	2.08E-05	0.00E+00	4.09E-04	1.95E-03
52	F75	60	Combination Long Haul Truck	15	0.00E+00	8.56E-06	5.57E-07	5.82E+00	3.87E-08	8.99E-03	6.60E-06	1.03E-02	8.93E-04	1.51E-04	6.26E-04	1.70E-04	1.72E-04	8.89E-04	1.95E-05	0.00E+00	4.53E-04	1.93E-03
50	F76	40	Passenger Car	16	0.00E+00	2.70E-07	2.93E-08	9.34E-01	1.88E-06	6.96E-03	6.01E-07	2.91E-05	2.78E-04	3.97E-05	5.85E-05	3.77E-05	3.87E-05	5.04E-06	4.64E-06	1.13E-09	1.98E-05	4.54E-06
50	F76	40	Passenger Truck	27	0.00E+00	6.18E-07	6.48E-08	2.08E+00	3.71E-06	1.20E-02	1.24E-06	1.10E-04	4.94E-04	7.02E-05	1.17E-04	7.63E-05	7.81E-05	1.78E-05	1.03E-05	2.19E-09	3.85E-05	1.86E-05
50	F78	40	Passenger Car	499	0.00E+00	8.39E-06	9.07E-07	2.90E+01	5.84E-05	2.16E-01	1.86E-05	9.01E-04	8.63E-03	1.23E-03	1.82E-03	1.17E-03	1.20E-03	1.56E-04	1.44E-04	3.50E-08	6.14E-04	1.41E-04
50	F78	40	Passenger Truck	835	0.00E+00	1.92E-05	2.01E-06	6.46E+01	1.15E-04	3.72E-01	3.84E-05	3.42E-03	1.53E-02	2.18E-03	3.62E-03	2.37E-03	2.42E-03	5.53E-04	3.18E-04	6.80E-08	1.19E-03	5.78E-04
50	F78	40	Single Unit Short Haul Truck	17	0.00E+00	7.65E-06	4.01E-07	3.67E+00	6.67E-06	6.33E-03	8.13E-06	3.74E-03	6.99E-04	1.16E-04	9.05E-04	2.39E-04	2.43E-04	3.71E-04	1.48E-05	6.28E-09	6.62E-04	7.02E-04
50	F78	40	Single Unit Long Haul Truck	1	0.00E+00	3.35E-07	1.75E-08	1.59E-01	2.92E-07	2.75E-04	3.57E-07	1.63E-04	3.13E-05	5.16E-06	3.98E-05	1.04E-05	1.06E-05	1.60E-05	6.40E-07	2.72E-10	2.92E-05	3.06E-05
50	F78	40	Combination Short Haul Truck	9	0.00E+00	8.34E-06	5.79E-07	4.23E+00	3.00E-08	7.28E-03	6.20E-06	9.31E-03	9.70E-04	1.75E-04	5.40E-04	1.73E-04	1.74E-04	6.38E-04	1.42E-05	0.00E+00	3.66E-04	1.75E-03
50	F78	40	Combination Long Haul Truck	9	0.00E+00	7.60E-06	4.96E-07	4.02E+00	3.41E-08	8.07E-03	5.85E-06	9.33E-03	9.74E-04	1.55E-04	5.56E-04	1.51E-04	1.54E-04	6.15E-04	1.35E-05	0.00E+00	4.02E-04	1.76E-03
52	F79	60	Passenger Car	706	0.00E+00	9.73E-06	1.05E-06	3.54E+01	6.77E-05	2.50E-01	2.16E-05	1.39E-03	6.97E-03	1.07E-03	2.11E-03	1.36E-03	1.39E-03	1.48E-04	1.78E-04	4.75E-08	7.13E-04	2.17E-04
52	F79	60	Passenger Truck	1183	0.00E+00	2.14E-05	2.26E-06	8.08E+01	1.33E-04	4.48E-01	4.40E-05	4.46E-03	1.24E-02	1.92E-03	4.18E-03	2.72E-03	2.79E-03	6.13E-04	4.02E-04	1.01E-07	1.39E-03	7.38E-04
52	F79	60	Single Unit Short Haul Truck	21	0.00E+00	6.19E-06	3.09E-07	3.94E+00	5.10E-06	7.63E-03	6.60E-06	2.95E-03	5.01E-04	9.09E-05	7.52E-04	1.86E-04	1.89E-04	3.94E-04	1.59E-05	6.56E-09	5.63E-04	5.53E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	2.70E-07	1.34E-08	1.68E-01	2.22E-07	3.24E-04	2.88E-07	1.28E-04	2.25E-05	4.02E-06	3.29E-05	8.07E-06	8.21E-06	1.68E-05	6.80E-07	2.79E-10	2.47E-05	2.39E-05
52	F79	60	Combination Short Haul Truck	13	0.00E+00	7.38E-06	5.15E-07	4.80E+00	2.62E-08	6.46E-03	5.48E-06	8.01E-03	6.88E-04	1.36E-04	4.70E-04	1.53E-04	1.54E-04	7.24E-04	1.61E-05	0.00E+00	3.16E-04	1.51E-03
52	F79	60	Combination Long Haul Truck	11	0.00E+00	6.63E-06	4.31E-07	4.50E+00	3.00E-08	6.96E-03	5.11E-06	7.95E-03	6.91E-04	1.17E-04	4.84E-04	1.32E-04	1.33E-04	6.88E-04	1.51E-05	0.00E+00	3.51E-04	1.50E-03
53	F80	70	Passenger Car	672	0.00E+00	8.51E-06	9.21E-07	3.26E+01	5.93E-05	2.20E-01	1.89E-05	1.37E-03	5.13E-03	8.27E-04	1.84E-03	1.19E-03	1.22E-03	1.20E-04	1.64E-04	4.46E-08	6.24E-04	2.14E-04
53	F80	70	Passenger Truck	1125	0.00E+00	1.85E-05	1.96E-06	7.52E+01	1.17E-04	4.04E-01	3.85E-05	4.19E-03	9.21E-03	1.50E-03	3.68E-03	2.39E-03	2.45E-03	5.42E-04	3.75E-04	9.81E-08	1.23E-03	6.88E-04
53	F80	70	Single Unit Short Haul Truck	33	0.00E+00	7.65E-06	3.83E-07	5.99E+00	6.26E-06	1.20E-02	8.15E-06	3.77E-03	5.38E-04	1.08E-04	9.28E-04	2.29E-04	2.33E-04	6.01E-04	2.42E-05	9.76E-09	6.96E-04	7.07E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.66E-08	2.54E-01	2.70E-07	5.04E-04	3.55E-07	1.62E-04	2.46E-05	4.80E-06	4.06E-05	9.91E-06	1.01E-05	2.54E-05	1.03E-06	4.11E-10	3.05E-05	3.04E-05
53	F80	70	Combination Short Haul Truck	11	0.00E+00	5.71E-06	4.06E-07	4.14E+00	1.86E-08	4.92E-03	4.19E-06	6.00E-03	4.35E-04	9.49E-05	3.48E-04	1.20E-04	1.20E-04	6.24E-04	1.39E-05	0.00E+00	2.28E-04	1.13E-03
53	F80	70	Combination Long Haul Truck	10	0.00E+00	5.16E-06	3.45E-07	3.87E+00	2.14E-08	5.21E-03	3.92E-06	5.92E-03	4.32E-04	7.88E-05	3.60E-04	1.04E-04	1.06E-04	5.91E-04	1.29E-05	0.00E+00	2.54E-04	1.12E-03
50	F84	40	Passenger Car	201	0.00E+00	3.38E-06	3.65E-07	1.17E+01	2.35E-05	8.69E-02	7.51E-06	3.63E-04	3.47E-03	4.96E-04	7.31E-04	4.71E-04	4.83E-04	6.29E-05	5.79E-05	1.41E-08	2.47E-04	5.67E-05
50	F84	40	Passenger Truck	336	0.00E+00	7.72E-06	8.09E-07	2.60E+01	4.63E-05	1.50E-01	1.55E-05	1.37E-03	6.17E-03	8.77E-04	1.46E-03	9.53E-04	9.76E-04	2.23E-04	1.28E-04	2.74E-08	4.81E-04	2.33E-04
50	F84	40	Single Unit Short Haul Truck	6	0.00E+00	2.55E-06	1.34E-07	1.22E+00	2.22E-06	2.11E-03	2.71E-06	1.25E-03	2.33E-04	3.87E-05	3.02E-04	7.96E-05	8.09E-05	1.24E-04	4.94E-06	2.09E-09	2.21E-04	2.34E-04
50	F84	40	Combination Short Haul Truck	44	0.00E+00	3.89E-05	2.70E-06	1.98E+01	1.40E-07	3.40E-02	2.89E-05	4.34E-02	4.52E-03	8.16E-04	2.52E-03	8.06E-04	8.14E-04	2.98E-03	6.61E-05	0.00E+00	1.71E-03	8.18E-03
50	F84	40	Combination Long Haul Truck	40	0.00E+00	3.55E-05	2.31E-06	1.88E+01	1.59E-07	3.77E-02	2.73E-05	4.35E-02	4.55E-03	7.25E-04	2.60E-03	7.06E-04	7.19E-04	2.87E-03	6.29E-05	0.00E+00	1.88E-03	8.20E-03
52	F85	60	Passenger Car	390	0.00E+00	5.37E-06	5.81E-07	1.95E+01	3.73E-05	1.38E-01	1.19E-05	7.65E-04	3.84E-03	5.91E-04	1.16E-03	7.49E-04	7.68E-04	8.14E-05	9.79E-05	2.62E-08	3.93E-04	1.20E-04
52	F85	60	Passenger Truck	652	0.00E+00	1.18E-05	1.24E-06	4.46E+01	7.35E-05	2.47E-01	2.42E-05	2.46E-03	6.85E-03	1.06E-03	2.30E-03	1.50E-03	1.54E-03	3.38E-04	2.21E-04	5.55E-08	7.66E-04	4.07E-04
52	F85	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
52	F85	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
52	F85	60	Combination Short Haul Truck	34	0.00E+00	2.00E-05	1.39E-06	1.30E+01	7.08E-08	1.75E-02	1.48E-05	2.17E-02	1.86E-03	3.69E-04	1.27E-03	4.15E-04	4.16E-04	1.96E-03	4.36E-05	0.00E+00	8.57E-04	4.09E-03
52	F85	60	Combination Long Haul Truck	31	0.00E+00	1.80E-05	1.17E-06	1.22E+01	8.12E-08	1.88E-02	1.38E-05	2.15E-02	1.87E-03	3.18E-04	1.31E-03	3.57E-04	3.61E-04	1.86E-03	4.09E-05	0.00E+00	9.50E-04	4.05E-03
53	F86	70	Passenger Car	206	0.00E+00	2.62E-06	2.83E-07	1.00E+01	1.82E-05	6.75E-02	5.81E-06	4.21E-04	1.58E-03	2.54E-04	5.66E-04	3.65E-04	3.74E-04	3.70E-05	5.03E-05	1.37E-08	1.92E-04	6.58E-05
53	F86	70	Passenger Truck	346	0.00E+00	5.69E-06	6.03E-07	2.31E+01	3.61E-05	1.24E-01	1.18E-05	1.29E-03	2.83E-03	4.62E-04	1.13E-03	7.35E-04	7.53E-04	1.67E-04	1.15E-04	3.01E-08	3.77E-04	2.11E-04
53	F86	70	Single Unit Short Haul Truck	33	0.00E+00	7.65E-06	3.83E-07	5.99E+00	6.26E-06	1.20E-02	8.15E-06	3.77E-03	5.38E-04	1.08E-04	9.28E-04	2.29E-04	2.33E-04	6.01E-04	2.42E-05	9.76E-09	6.96E-04	7.07E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.66E-08	2.54E-01	2.70E-07	5.04E-04	3.55E-07	1.62E-04	2.46E-05	4.80E-06	4.06E-05	9.91E-06	1.01E-05	2.54E-05	1.03E-06	4.11E-10	3.05E-05	3.04E-05
53	F86	70	Combination Short Haul Truck	22	0.00E+00	1.17E-05	8.31E-07	8.48E+00	3.80E-08	1.01E-02	8.58E-06	1.23E-02	8.90E-04	1.94E-04	7.13E-04	2.46E-04	2.46E-04	1.28E-03	2.84E-05	0.00E+00	4.67E-04	2.32E-03
53	F86	70	Combination Long Haul Truck	21	0.00E+00	1.06E-05	7.07E-07	7.91E+00	4.38E-08	1.07E-02	8.03E-06	1.21E-02	8.84E-04	1.61E-04	7.37E-04	2.14E-04	2.16E-04	1.21E-03	2.65E-05	0.00E+00	5.21E-04	2.28E-03
52	F87	60	Passenger Car	135	0.00E+00	1.86E-06	2.02E-07	6.79E+00	1.30E-05	4.80E-02	4.14E-06	2.66E-04	1.34E-03	2.05E-04	4.03E-04	2.60E-04	2.67E-04	2.83E-05	3.40E-05	9.09E-09	1.37E-04	4.16E-05
52	F87	60	Passenger Truck	227	0.00E+00	4.09E-06	4.32E-07	1.55E+01	2.55E-05	8.58E-02	8.42E-06	8.55E-04	2.38E-03	3.68E-04	8.01E-04	5.22E-04	5.34E-04	1.18E-04	7.69E-05	1.93E-08	2.66E-04	1.41E-04
52	F87	60	Single Unit Short Haul Truck	79	0.00E+00	2.31E-05	1.15E-06	1.47E+01	1.90E-05	2.84E-02	2.46E-05	1.10E-02	1.87E-03	3.39E-04	2.80E-03	6.92E-04	7.03E-04	1.47E-03	5.93E-05	2.44E-08	2.10E-03	2.06E-03
52	F87	60	Single Unit Long Haul Truck	3	0.00E+00	1.01E-06	5.01E-08	6.27E-01	8.26E-07	1.21E-03	1.08E-06	4.76E-04	8.39E-05	1.50E-05	1.23E-04	3.01E-05	3.06E-05	6.26E-05	2.54E-06	1.04E-09	9.22E-05	8.92E-05
52	F87	60	Combination Short Haul Truck	50	0.00E+00	2.92E-05	2.04E-06	1.90E+01	1.04E-07	2.56E-02	2.17E-05	3.17E-02	2.72E-03	5.39E-04	1.86E-03	6.07E-04	6.08E-04	2.87E-03	6.37E-05	0.00E+00	1.25E-03	5.98E-03
52	F87	60	Combination Long Haul Truck	45	0.00E+00	2.62E-05	1.71E-06	1.78E+01	1.19E-07	2.75E-02	2.02E-05	3.15E-02	2.74E-03	4.64E-04	1.92E-03	5.21E-04	5.28E-04	2.72E-03	5.97E-05	0.00E+00	1.39E-03	5.93E-03
50	F88	40	Passenger Car	201	0.00E+00	3.38E-06	3.65E-07	1.17E+01	2.35E-05	8.69E-02	7.51E-06	3.63E-04	3.47E-03	4.96E-04	7.31E-04	4.71E-04	4.83E-04	6.29E-05	5.79E-05	1.41E-08	2.47E-04	5.67E-05
50	F88	40	Passenger Truck	336	0.00E+00	7.72E-06	8.09E-07	2.60E+01	4.63E-05	1.50E-01	1.55E-05	1.37E-03	6.17E-03	8.77E-04	1.46E-03	9.53E-04	9.76E-04	2.23E-04	1.28E-04	2.74E-08	4.81E-04	2.33E-04
50	F88	40	Single Unit Short Haul Truck	6	0.00E+00	2.55E-06	1.34E-07	1.22E+00	2.22E-06	2.11E-03	2.71E-06	1.25E-03	2.33E-04	3.87E-05	3.02E-04	7.96E-05	8.09E-05	1.24E-04	4.94E-06	2.09E-09	2.21E-04	2.34E-04
50	F88	40	Combination Short Haul Truck	44	0.00E+00	3.89E-05	2.70E-06	1.98E+01	1.40E-07	3.40E-02	2.89E-05	4.34E-02	4.52E-03	8.16E-04	2.52E-03	8.06E-04	8.14E-04	2.98E-03	6.61E-05	0.00E+00	1.71E-03	8.18E-03
50	F88	40	Combination Long Haul Truck	40	0.00E+00	3.55E-05	2.31E-06	1.88E+01	1.59E-07	3.77E-02	2.73E-05	4.35E-02	4.55E-03	7.25E-04	2.60E-03	7.06E-04	7.19E-04	2.87E-03	6.29E-05	0.00E+00	1.88E-03	8.20E-03
50	F89	40	Passenger Car	450	0.00E+00	7.57E-06	8.19E-07	2.62E+01	5.27E-05	1.95E-01	1.68E-05	8.14E-04	7.79E-03	1.11E-03	1.64E-03	1.06E-03	1.08E-03	1.41E-04	1.30E-04	3.16E-08	5.55E-04	1.27E-04
50	F89	40	Passenger Truck	754	0.00E+00	1.73E-05	1.81E-06	5.83E+01	1.04E-04	3.35E-01	3.47E-05	3.08E-03	1.38E-02	1.97E-03	3.27E-03	2.14E-03	2.19E-03	4.99E-04	2.87E-04	6.14E-08	1.08E-03	5.21E-04
50	F89	40	Single Unit Short Haul Truck	68	0.00E+00	3.02E-05	1.58E-06	1.45E+01	2.63E-05	2.50E-02	3.21E-05	1.48E-02	2.76E-03	4.58E-04	3.57E-03	9.42E-04	9.57E-04	1.46E-03	5.85E-05	2.48E-08	2.61E-03	2.77E-03
50	F89	40	Single Unit Long Haul Truck	3	0.00E+00	1.32E-06	6.90E-08	6.26E-01	1.15E-06	1.09E-03	1.41E-06	6.43E-04	1.23E-04	2.03E-05	1.57E-04	4.12E-05	4.19E-05	6.32E-05	2.53E-06	1.07E-09	1.15E-04	1.21E-04
50	F89	40	Combination Short Haul Truck	39	0.00E+00	3.43E-05	2.38E-06	1.74E+01	1.23E-07	2.99E-02	2.55E-05	3.83E-02	3.99E-03	7.19E-04	2.22E-03	7.10E-04	7.17E-04	2.62E-03	5.83E-05	0.00E+00	1.51E-03	7.21E-03
50	F89	40	Combination Long Haul Truck	35	0.00E+00	3.12E-05	2.04E-06	1.65E+01	1.40E-07	3.32E-02	2.40E-05	3.84E-02	4.01E-03	6.38E-04	2.29E-03	6.22E-04	6.33E-04	2.53E-03	5.54E-05	0.00E+00	1.65E-03	7.23E-03

Appendix F.4.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B09	0.00E+00	9.78E-05	7.23E-06	1.79E+02	1.57E-04	6.67E-01	1.09E-04	7.86E-02	8.42E-03	2.06E-03	1.03E-02	4.61E-03	4.68E-03	1.25E-02	7.71E-04	1.72E-07	5.64E-03	1.46E-02
B10	0.00E+00	2.03E-04	1.59E-05	3.87E+02	3.49E-04	1.51E+00	2.26E-04	1.74E-01	1.86E-02	4.47E-03	2.06E-02	1.01E-02	1.03E-02	2.56E-02	1.68E-03	3.35E-07	1.04E-02	3.24E-02
B13	0.00E+00	1.29E-04	9.98E-06	2.40E+02	2.10E-04	9.09E-01	1.41E-04	1.11E-01	1.14E-02	2.76E-03	1.29E-02	6.22E-03	6.31E-03	1.65E-02	1.03E-03	2.05E-07	6.62E-03	2.07E-02
B14	0.00E+00	7.20E-05	5.23E-06	1.27E+02	1.05E-04	4.50E-01	7.80E-05	5.87E-02	5.83E-03	1.45E-03	7.42E-03	3.21E-03	3.26E-03	9.39E-03	5.38E-04	1.19E-07	4.16E-03	1.10E-02
B15	0.00E+00	3.49E-05	3.21E-06	1.15E+02	1.59E-04	6.30E-01	6.03E-05	1.58E-02	6.51E-03	1.40E-03	5.83E-03	3.42E-03	3.50E-03	2.31E-03	5.60E-04	1.50E-07	2.33E-03	2.83E-03
B16	0.00E+00	6.08E-05	5.70E-06	2.04E+02	2.83E-04	1.12E+00	1.06E-04	2.81E-02	1.16E-02	2.49E-03	1.02E-02	6.07E-03	6.22E-03	3.94E-03	9.94E-04	2.63E-07	3.97E-03	5.02E-03
B19	0.00E+00	3.24E-04	2.36E-05	5.51E+02	4.31E-04	1.88E+00	3.40E-04	2.75E-01	2.50E-02	6.26E-03	3.20E-02	1.38E-02	1.40E-02	4.33E-02	2.31E-03	4.81E-07	1.80E-02	5.14E-02
B20	0.00E+00	2.98E-04	2.41E-05	6.89E+02	7.62E-04	3.13E+00	3.88E-04	2.12E-01	3.55E-02	8.14E-03	3.67E-02	1.90E-02	1.94E-02	3.22E-02	3.14E-03	7.48E-07	1.73E-02	3.92E-02
B21	0.00E+00	2.69E-04	1.95E-05	4.39E+02	3.20E-04	1.42E+00	2.74E-04	2.34E-01	1.95E-02	4.96E-03	2.56E-02	1.08E-02	1.09E-02	3.67E-02	1.82E-03	3.63E-07	1.47E-02	4.38E-02
B22	0.00E+00	2.73E-04	2.22E-05	6.29E+02	6.92E-04	2.84E+00	3.54E-04	1.97E-01	3.23E-02	7.43E-03	3.34E-02	1.73E-02	1.77E-02	2.97E-02	2.86E-03	6.76E-07	1.58E-02	3.64E-02
B23	0.00E+00	2.70E-04	1.95E-05	4.41E+02	3.23E-04	1.43E+00	2.76E-04	2.35E-01	1.96E-02	4.99E-03	2.58E-02	1.09E-02	1.10E-02	3.68E-02	1.83E-03	3.66E-07	1.47E-02	4.39E-02
B24	0.00E+00	3.01E-04	2.46E-05	7.09E+02	7.96E-04	3.26E+00	3.97E-04	2.13E-01	3.67E-02	8.39E-03	3.75E-02	1.97E-02	2.00E-02	3.20E-02	3.25E-03	7.73E-07	1.75E-02	3.93E-02
D63	0.00E+00	2.42E-05	1.65E-06	2.70E+01	2.46E-05	9.14E-02	2.42E-05	1.98E-02	3.16E-03	5.74E-04	2.36E-03	8.87E-04	9.01E-04	2.22E-03	1.12E-04	2.35E-08	1.46E-03	3.72E-03
D64	0.00E+00	7.98E-06	6.28E-07	1.51E+01	2.11E-05	7.52E-02	1.07E-05	4.93E-03	1.95E-03	3.30E-04	1.04E-03	5.16E-04	5.27E-04	5.66E-04	7.04E-05	1.77E-08	5.13E-04	9.12E-04
D65	0.00E+00	4.27E-05	2.97E-06	5.81E+01	5.22E-05	2.02E-01	4.45E-05	3.35E-02	4.88E-03	9.71E-04	4.33E-03	1.72E-03	1.74E-03	4.42E-03	2.46E-04	5.43E-08	2.58E-03	6.26E-03
D66	0.00E+00	4.09E-05	2.96E-06	6.18E+01	6.18E-05	2.38E-01	4.49E-05	3.13E-02	5.35E-03	1.04E-03	4.33E-03	1.85E-03	1.89E-03	4.08E-03	2.68E-04	6.04E-08	2.44E-03	5.84E-03
D67	0.00E+00	4.27E-05	2.97E-06	5.81E+01	5.22E-05	2.02E-01	4.45E-05	3.35E-02	4.88E-03	9.71E-04	4.33E-03	1.72E-03	1.74E-03	4.42E-03	2.46E-04	5.43E-08	2.58E-03	6.26E-03
D68	0.00E+00	4.09E-05	2.96E-06	6.18E+01	6.18E-05	2.38E-01	4.49E-05	3.13E-02	5.35E-03	1.04E-03	4.33E-03	1.85E-03	1.89E-03	4.08E-03	2.68E-04	6.04E-08	2.44E-03	5.84E-03
D69	0.00E+00	2.68E-05	1.83E-06	3.40E+01	2.78E-05	1.09E-01	2.70E-05	2.15E-02	2.79E-03	5.64E-04	2.63E-03	9.91E-04	1.01E-03	2.85E-03	1.41E-04	3.03E-08	1.62E-03	4.02E-03
D70	0.00E+00	2.56E-05	1.82E-06	3.61E+01	3.34E-05	1.30E-01	2.70E-05	2.03E-02	3.08E-03	6.07E-04	2.59E-03	1.07E-03	1.09E-03	2.63E-03	1.54E-04	3.34E-08	1.51E-03	3.79E-03
D71	0.00E+00	2.60E-05	2.07E-06	4.98E+01	6.90E-05	2.48E-01	3.47E-05	1.64E-02	6.43E-03	1.09E-03	3.36E-03	1.69E-03	1.73E-03	1.86E-03	2.31E-04	5.72E-08	1.63E-03	3.04E-03
D72	0.00E+00	3.91E-05	2.80E-06	5.09E+01	5.34E-05	1.99E-01	4.17E-05	3.12E-02	6.18E-03	1.09E-03	4.02E-03	1.68E-03	1.71E-03	3.45E-03	2.19E-04	4.72E-08	2.31E-03	5.84E-03
D73	0.00E+00	1.26E-05	1.13E-06	3.26E+01	5.06E-05	1.81E-01	2.03E-05	6.17E-03	4.36E-03	7.20E-04	1.95E-03	1.12E-03	1.15E-03	6.96E-04	1.57E-04	4.05E-08	8.07E-04	1.12E-03
D74	0.00E+00	2.50E-05	1.84E-06	3.54E+01	3.94E-05	1.48E-01	2.76E-05	1.98E-02	4.38E-03	7.67E-04	2.64E-03	1.17E-03	1.19E-03	2.16E-03	1.55E-04	3.36E-08	1.45E-03	3.69E-03
D75	0.00E+00	1.80E-05	1.41E-06	3.59E+01	4.49E-05	1.68E-01	2.34E-05	1.16E-02	3.28E-03	6.14E-04	2.26E-03	1.12E-03	1.14E-03	1.52E-03	1.65E-04	4.11E-08	1.12E-03	2.16E-03
D76	0.00E+00	2.94E-05	2.20E-06	5.00E+01	5.56E-05	2.11E-01	3.46E-05	2.13E-02	4.44E-03	8.49E-04	3.34E-03	1.53E-03	1.56E-03	2.77E-03	2.23E-04	5.26E-08	1.79E-03	3.96E-03
D77	0.00E+00	1.31E-05	9.41E-07	2.01E+01	2.06E-05	7.84E-02	1.46E-05	9.75E-03	1.74E-03	3.38E-04	1.41E-03	6.05E-04	6.15E-04	1.28E-03	8.75E-05	2.03E-08	7.97E-04	1.82E-03
D78	0.00E+00	2.77E-05	2.02E-06	4.31E+01	4.43E-05	1.70E-01	3.10E-05	2.09E-02	3.75E-03	7.27E-04	2.99E-03	1.30E-03	1.32E-03	2.73E-03	1.88E-04	4.30E-08	1.67E-03	3.90E-03
D79	0.00E+00	2.05E-05	1.71E-06	4.49E+01	6.61E-05	2.37E-01	2.97E-05	1.16E-02	5.90E-03	9.87E-04	2.87E-03	1.54E-03	1.57E-03	1.32E-03	2.13E-04	5.39E-08	1.30E-03	2.13E-03
D80	0.00E+00	3.40E-05	2.56E-06	5.39E+01	6.67E-05	2.44E-01	4.04E-05	2.46E-02	6.79E-03	1.17E-03	3.90E-03	1.81E-03	1.84E-03	2.74E-03	2.43E-04	5.66E-08	2.06E-03	4.59E-03
D81	0.00E+00	1.29E-05	1.26E-06	4.05E+01	6.65E-05	2.37E-01	2.38E-05	4.62E-03	5.51E-03	9.00E-04	2.28E-03	1.40E-03	1.43E-03	5.27E-04	1.99E-04	5.25E-08	8.47E-04	8.19E-04
D82	0.00E+00	6.86E-06	6.92E-07	2.29E+01	3.80E-05	1.36E-01	1.31E-05	2.29E-03	3.13E-03	5.10E-04	1.25E-03	7.91E-04	8.10E-04	2.54E-04	1.13E-04	2.97E-08	4.44E-04	4.01E-04
D83	0.00E+00	1.28E-04	8.78E-06	1.57E+02	1.19E-04	4.82E-01	1.25E-04	1.07E-01	1.29E-02	2.61E-03	1.20E-02	4.52E-03	4.58E-03	1.39E-02	6.41E-04	1.27E-07	7.37E-03	2.00E-02
D84	0.00E+00	1.47E-04	1.09E-05	2.12E+02	1.91E-04	7.80E-01	1.52E-04	1.25E-01	1.84E-02	3.61E-03	1.42E-02	6.23E-03	6.33E-03	1.55E-02	9.01E-04	1.75E-07	7.85E-03	2.34E-02
D85	0.00E+00	1.06E-04	7.30E-06	1.29E+02	9.61E-05	3.92E-01	1.03E-04	8.94E-02	1.06E-02	2.15E-03	9.86E-03	3.71E-03	3.76E-03	1.16E-02	5.26E-04	1.03E-07	6.10E-03	1.68E-02
D86	0.00E+00	1.43E-04	1.07E-05	2.10E+02	1.95E-04	7.92E-01	1.49E-04	1.21E-01	1.84E-02	3.59E-03	1.39E-02	6.21E-03	6.31E-03	1.49E-02	9.00E-04	1.76E-07	7.57E-03	2.26E-02
D87	0.00E+00	1.06E-04	7.30E-06	1.29E+02	9.61E-05	3.92E-01	1.03E-04	8.94E-02	1.06E-02	2.15E-03	9.86E-03	3.71E-03	3.76E-03	1.16E-02	5.26E-04	1.03E-07	6.10E-03	1.68E-02
D88	0.00E+00	1.43E-04	1.07E-05	2.10E+02	1.95E-04	7.92E-01	1.49E-04	1.21E-01	1.84E-02	3.59E-03	1.39E-02	6.21E-03	6.31E-03	1.49E-02	9.00E-04	1.76E-07	7.57E-03	2.26E-02
D89	0.00E+00	7.36E-06	5.58E-07	1.07E+01	1.46E-05	5.27E-02	8.78E-06	5.60E-03	1.76E-03	2.86E-04	8.46E-04	3.94E-04	4.02E-04	5.35E-04	4.80E-05	1.12E-08	4.44E-04	1.04E-03
D90	0.00E+00	1.05E-05	7.92E-07	1.59E+01	2.31E-05	8.05E-02	1.32E-05	7.16E-03	2.61E-03	4.23E-04	1.29E-03	5.99E-04	6.12E-04	7.13E-04	7.24E-05	1.80E-08	6.82E-04	1.33E-03
D91	0.00E+00	1.81E-05	1.65E-06	5.04E+01	8.07E-05	2.87E-01	3.08E-05	7.53E-03	6.78E-03	1.11E-03	2.98E-03	1.74E-03	1.78E-03	8.76E-04	2.46E-04	6.46E-08	1.20E-03	1.35E-03
D92	0.00E+00	1.31E-05	1.04E-06	2.46E+01	3.37E-05	1.21E-01	1.73E-05	8.48E-03	3.17E-03	5.37E-04	1.67E-03	8.34E-04	8.52E-04	9.54E-04	1.14E-04	2.80E-08	8.18E-04	1.57E-03
D93	0.00E+00	1.44E-05	1.42E-06	4.71E+01	7.84E-05	2.79E-01	2.74E-05	4.53E-03	6.43E-03	1.05E-03	2.64E-03	1.63E-03	1.67E-03	5.30E-04	2.33E-04	6.20E-08	9.68E-04	7.91E-04
D94	0.00E+00	1.41E-05	1.09E-06	2.47E+01	3.28E-05	1.18E-01	1.79E-05	9.35E-03	3.15E-03	5.37E-04	1.74E-03	8.37E-04	8.55E-04	1.06E-03	1.13E-04	2.78E-08	8.90E-04	1.74E-03
E01	0.00E+00	2.00E-05	1.49E-06	2.96E+01	4.29E-05	1.49E-01	2.48E-05	1.36E-02	4.85E-03	7.86E-04	2.44E-03	1.12E-03	1.14E-03	1.35E-03	1.35E-04	3.36E-08	1.30E-03	2.53E-03
E02	0.00E+00	5.31E-05	3.85E-06	6.78E+01	8.64E-05	3.10E-01	5.98E-05	4.15E-02	1.10E-02	1.81E-03	5.82E-03	2.51E-03	2.56E-03	4.00E-03	2.98E-04	6.81E-08	3.26E-03	7.76E-03
E03	0.00E+00	2.54E-05	2.00E-06	5.09E+01	6.37E-05	2.39E-01	3.32E-05	1.66E-02	4.66E-03	8.72E-04	3.20E-03	1.59E-03	1.62E-03	2.16E-03	2.34E-04	5.81E-08	1.58E-03	3.07E-03
E04	0.00E+00	3.03E-05	2.35E-06	5.59E+01	6.57E-05	2.50E-01	3.72E-05	2.14E-02	5.06E-03	9.55E-04	3.56E-03	1.72E-03	1.76E-03	2.74E-03	2.53E-04	5.99E-08	1.80E-03	3.98E-03
E05	0.00E+00	1.76E-05	1.24E-06	2.51E+01	2.38E-05	9.11E-02	1.89E-05	1.35E-02	2.12E-03	4.19E-04	1.84E-03	7.47E-04	7.59E-04	1.79E-03	1.07E-04	2.45E-08	1.08E-03	2.52E-03
E06	0.00E+00	2.16E-05	1.70E-06	4.28E+01	5.32E-05	2.00E-01	2.79E-05	1.43E-02	3.92E-03	7.34E-04	2.68E-03	1.34E-03	1.36E-03	1.84E-03	1.97E-04	4.82E-08	1.32E-03	2.65E-03
E07	0.00E+00	1.91E-04	1.45E-05	2.81E+02	3.91E-04	1.40E+00	2.31E-04	1.42E-01	4.63E-02	7.53E-03	2.23E-02	1.04E-02	1.07E-02	1.37E-02	1.27E-03	2.99E-07	1.17E-02	2.65E-02
E08	0.00E+00	1.12E-04	8.33E-06	1.60E+02	2.25E-04	7.92E-01	1.35E-04	8.04E-02	2.63E-02	4.28E-03	1.32E-02	6.01E-03	6.14E-03	7.87E-03	7.24E-04	1.75E-07	7.07E-03	1.50E-02
E09	0.00E+00	1.51E-04	1.18E-05	2.39E+02	3.45E-04	1.24E+00	1.90E-04	1.09E-01	3.97E-02	6.42E-03	1.83E-02	8.89E-03	9.08E-03	1.05E-02	1.09E-03	2.61E-07	9.17E-03	2.04E-02
E10	0.00E+00	9.91E-05	7.55E-06	1.52E+02	2.20E-04	7.75E-01	1.24E-04	6.93E-02	2.51E-02	4.05E-03	1.20E-02	5.69E-03	5.81E-03	6.79E-03	6.92E-04	1.69E-07	6.24E-03	1.29E-02
E11	0.00E+00	2.09E-04	1.56E-05	3.00E+02	4.19E-04	1.48E+00	2.52E-04	1.51E-01	4.93E-02	8.01E-03	2.46E-02	1.12E-02	1.15E-02	1.48E-02	1.36E-03	3.26E-07	1.31E-02	2.82E-02
E12	0.00E+00	2.35E-04	1.67E-05	2.74E+02	3.16E-04	1.17E+00	2.49E-04	1.97E-01	4.39E-02	7.30E-03	2.41E-02	9.98E-03	1.02E-02	1.86E-02	1.18E-03	2.50E-07	1.40E-02	3.68E-02
E13	0.00E+00	2.40E-05	1.90E-06	5.01E+01	6.45E-05	2.40E-01	3.23E-05	1.49E-02	4.61E-03	8.57E-04	3.13E-03	1.57E-03	1.61E-03	1.95E-03	2.32E-04	5.89E-08	1.53E-03	2.75E-03
E14	0.00E+00	6.25E-05	4.70E-06	1.05E+02	1.14E-04	4.38E-01	7.23E-05	4.66E-02	9.30E-03	1.78E-03	6.92E-03	3.18E-03	3.24E-03	5.98E-03	4.64E-04	1.06E-07	3.68E-03	8.69E-03
E15	0.00E+00	2.77E-05	2.07E-06	4.80E+01	5.46E-05	2.06E-01	3.32E-05	1.95E-02	4.27E-03	8.14E-04	3.22E-03	1.47E-03	1.50E-03	2.56E-03	2.15E-04	5.19E-08	1.72E-03	3.62E-03
E16	0.00E+00	4.52E-05	3.55E-06	7.74E+01	8.28E-05	3.29E-01	5.15E-05	3.64E-02	7.00E-03	1.33E-03	4.77E-03	2.34E-03	2.38E-03	4.42E-03	3.43E-04	7.17E-08	2.39E-03	6.79E-03
E17	0.00E+00	2.20E-05	1.54E-06	3.22E+01	3.20E-05	1.20E-01	2.42E-05	1.61E-02	2.73E-03	5.37E-04	2.38E-03	9.67E-04	9.84E-04	2.18E-03	1.39E-04	3.32E-08	1.40E-03	3.01E-03
E18	0.00E+00	1.94E-05	1.64E-06	4.56E+01	6.19E-05	2.31E-01	2.79E-05	1.16E-02	4.30E-03	7.88E-04	2.67E-03	1.45E-03	1.48E-03	1.45E-03	2.15E-04	5.42E-08	1.19E-03	2.12E-03
E19	0.00E+00	7.22E-05	5.71E-06	1.26E+02	1.96E-04	6.84E-01	9.78E-05	4.50E-02	2.10E-02	3.37E-03	9.54E-03	4.76E-03	4.87E-03	4.50E-03	5.87E-04	1.50E-07	4.67E-03	8.34E-03
E20	0.00E+00	5.11E-05	3.92E-06	8.50E+01	1.33E-04	4.54E-01	6.84E-05	3.08E-02	1.41E-02	2.26E-03	6.75E-03	3.25E-03	3.32E-03	3.16E-03	3.95E-04	1.03E-07	3.43E-03	5.72E-03
E21	0.00E+00	1.84E-06	1.37E-07	2.67E+00	2.42E-06	9.89E-03	1.91E-06	1.56E-03	2.32E-04	4.55E-05	1.77E-04	7.84E-05	7.96E-05	1.93E-04	1.13E-05	2.20E-09	9.74E-05	2.93E-04
E22	0.00E+00	1.77E-05	1.37E-06	3.15E+01	3.56E-05	1.37E-01	2.11E-05	1.31E-02	2.84E-03	5.38E-04	2.01E-03	9.63E-04	9.81E-04	1.66E-03	1.41E-04	3.23E-08	1.02E-03	2.44E-03
E23	0.00E+00	1.84E-06	1.37E-07	2.67E+00	2.42E-06	9.89E-03	1.91E-06	1.56E-03	2.32E-04	4.55E-05	1.77E-04	7.84E-05	7.96E-05	1.93E-04	1.13E-05	2.20E-09	9.74E-05	2.93E-04
E24	0.00E+00	1.77E-05	1.37E-06	3.15E+01	3.56E-05	1.37E-01	2.11E-05	1.31E-02	2.84E-03	5.38E-04	2.01E-03	9.63E-04	9.81E-04	1.66E-03	1.41E-04	3.23E-08	1.02E-03	2.44E-03
E25	0.00E+00	1.96E-05	1.80E-06	5.28E+01	8.28E-05	2.97E-01	3.23E-05	9.42E-03	7.11E-03	1.17E-03	3.09E-03	1.81E-03	1.86E-03	1.04E-03	2.56E-04	6.57E-08	1.24E-03	1.71E-03
E26	0.00E+00	2.05E-05	1.70E-06	4.23E+01	5.96E-05	2.17E-01	2.82E-05	1.31E-02	5.53E-03	9.30E-04	2.69E-03	1.43E-03	1.46E-03	1.44E-03	1.98E-04	4.81E-08	1.23E-03	2.43E-03
E27	0.00E+00	1.65E-05	1.50E-06	4.41E+01	6.91E-05	2.48E-01	2.71E-05	7.87E-03	5.92E-03	9.76E-04	2.60E-03	1.51E-03	1.55E-03	8.78E-04	2.13E-04	5.49E-08	1.05E-03	1.43E-03
E28	0.00E+00	1.56E-05	1.27E-06	3.06E+01	4.23E-05	1.54E-01	2.08E-05	1.02E-02	3.98E-03	6.72E-04	1.99E-03	1.03E-03	1.06E-03	1.12E-03	1.42E-04	3.44E-08	9.38E-04	1.89E-03
E29	0.00E+00	2.27E-06	1.96E-07	5.61E+00	8.73E-06	3.09E-02	3.60E-06	1.05E-03	7.44E-04	1.23E-04	3.52E-04	1.94E-04	1.98E-04	1.25E-04	2.70E-05	7.13E-09	1.53E-04	1.92E-04
E30	0.00E+00	1.74E-05	1.46E-06	3.78E+01	5.51E-05	1.98E-01	2.50E-05	1.03E-02	4.97E-03	8.31E-04	2.41E-03	1.29E-03	1.32E-03	1.15E-03	1.79E-04	4.47E-08	1.09E-03	1.89E-03
E31	0.00E+00	1.16E-05	8.21E-07	1.59E+01	1.83E-05	6.54E-02	1.30E-05	8.45E-03	1.94E-03	3.40E-04	1.28E-03	5.34E-04	5.44E-04	9.69E-04	6.99E-05	1.65E-08	7.34E-04	1.58E-03
E32	0.00E+00	2.44E-05	1.97E-06	4.81E+01	6.73E-05	2.43E-01	3.30E-05	1.54E-02	6.25E-03	1.05E-03	3.18E-03	1.63E-03	1.67E-03	1.72E-03	2.25E-04	5.53E-08	1.51E-03	2.84E-03
E33	0.00E+00	5.93E-05	4.24E-06	7.44E+01	9.55E-05	3.37E-01	6.69E-05	4.54E-02	1.20E-02	1.98E-03	6.56E-03	2.78E-03	2.83E-03	4.42E-03	3.28E-04	7.63E-08	3.73E-03	8.48E-03
E34	0.00E+00	8.12E-05	6.53E-06	1.44E+02	2.22E-04	7.85E-01	1.10E-04	5.26E-02	2.41E-02	3.86E-03	1.06E-02	5.41E-03	5.52E-03	5.16E-03	6.70E-04	1.68E-07	5.08E-03	9.76E-03
E35	0.00E+00	5.22E-05	3.62E-06	5.89E+01	7.00E-05	2.46E-01	5.61E-05	4.12E-02	9.35E-03	1.56E-03	5.54E-03	2.19E-03	2.24E-03	4.02E-03	2.54E-04	5.76E-08	3.30E-03	7.71E-03
E36	0.00E+00	7.39E-05	5.68E-06	1.15E+02	1.66E-04	5.90E-01	9.26E-05	5.21E-02	1.90E-02	3.07E-03	8.98E-03	4.29E-03	4.38E-03	5.07E-03	5.25E-04	1.27E-07	4.60E-03	9.71E-03
E37	0.00E+00	5.22E-05	3.62E-06	5.89E+01	7.00E-05	2.46E-01	5.61E-05	4.12E-02	9.35E-03	1.56E-03	5.54E-03	2.19E-03	2.24E-03	4.02E-03	2.54E-04	5.76E-08	3.30E-03	7.71E-03
E38	0.00E+00	7.39E-05	5.68E-06	1.15E+02	1.66E-04	5.90E-01	9.26E-05	5.21E-02	1.90E-02	3.07E-03	8.98E-03	4.29E-03	4.38E-03	5.07E-03	5.25E-04	1.27E-07	4.60E-03	9.71E-03
E39	0.00E+00	1.72E-05	1.58E-06	4.69E+01	7.38E-05	2.65E-01	2.86E-05	8.01E-03	6.31E-03	1.04E-03	2.75E-03	1.61E-03	1.65E-03	8.96E-04	2.27E-04	5.87E-08	1.10E-03	1.45E-03
E40	0.00E+00	3.55E-05	2.59E-06	4.89E+01	5.39E-05	2.00E-01	3.90E-05	2.79E-02	6.00E-03	1.06E-03	3.75E-03	1.62E-03	1.65E-03	3.08E-03	2.13E-04	4.68E-08	2.10E-03	5.21E-03
E41	0.00E+00	1.28E-05	1.21E-06	3.77E+01	6.10E-05	2.18E-01	2.25E-05	5.13E-03	5.11E-03	8.37E-04	2.17E-03	1.30E-03	1.33E-03	5.82E-04	1.85E-04	4.83E-08	8.32E-04	9.19E-04
E42	0.00E+00	1.80E-05	1.56E-06	4.10E+01	6.00E-05	2.19E-01	2.63E-05	1.09E-02	5.44E-03	9.07E-04	2.49E-03	1.39E-03	1.42E-03	1.17E-03	1.95E-04	4.77E-08	1.07E-03	2.00E-03
E43	0.00E+00	1.34E-05	1.24E-06	3.81E+01	6.12E-05	2.18E-01	2.32E-05	5.47E-03	5.13E-03	8.42E-04	2.24E-03	1.32E-03	1.35E-03	6.36E-04	1.86E-04	4.89E-08	8.91E-04	9.82E-04
E44	0.00E+00	1.25E-05	1.11E-06	3.02E+01	4.51E-05	1.64E-01	1.89E-05	7.27E-03	4.03E-03	6.70E-04	1.79E-03	1.03E-03	1.05E-03	7.78E-04	1.44E-04	3.56E-08	7.41E-04	1.33E-03
E45	0.00E+00	2.72E-05	1.85E-06	3.30E+01	2.49E-05	9.98E-02	2.66E-05	2.25E-02	2.69E-03	5.48E-04	2.57E-03	9.52E-04	9.65E-04	2.95E-03	1.35E-04	2.74E-08	1.60E-03	4.22E-03
E46	0.00E+00	3.56E-05	2.64E-06	5.95E+01	6.55E-05	2.48E-01	4.16E-05	2.58E-02	5.26E-03	1.01E-03	4.03E-03	1.82E-03	1.85E-03	3.37E-03	2.64E-04	6.26E-08	2.18E-03	4.80E-03
E47	0.00E+00	7.65E-06	5.91E-07	1.46E+01	1.77E-05	6.63E-02	9.68E-06	5.11E-03	1.32E-03	2.48E-04	9.37E-04	4.52E-04	4.61E-04	6.69E-04	6.64E-05	1.64E-08	4.76E-04	9.48E-04
E48	0.00E+00	3.20E-05	2.39E-06	5.47E+01	6.14E-05	2.32E-01	3.79E-05	2.28E-02	4.86E-03	9.29E-04	3.67E-03	1.68E-03	1.71E-03	2.99E-03	2.44E-04	5.83E-08	1.96E-03	4.25E-03
E49	0.00E+00	5.31E-06	4.37E-07	1.13E+01	1.45E-05	5.50E-02	7.10E-06	3.53E-03	1.06E-03	1.96E-04	6.74E-04	3.55E-04	3.63E-04	4.39E-04	5.26E-05	1.27E-08	3.12E-04	6.53E-04
E50	0.00E+00	4.67E-05	3.36E-06	6.54E+01	5.87E-05	2.34E-01	4.84E-05	3.83E-02	5.59E-03	1.10E-03	4.60E-03	1.93E-03	1.96E-03

Appendix F.4.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E66	0.00E+00	7.05E-05	5.39E-06	1.16E+02	1.48E-04	5.39E-01	8.57E-05	5.01E-02	1.48E-02	2.54E-03	8.26E-03	3.91E-03	3.99E-03	5.57E-03	5.28E-04	1.24E-07	4.27E-03	9.33E-03
E67	0.00E+00	3.39E-05	2.69E-06	6.83E+01	8.54E-05	3.21E-01	4.42E-05	2.24E-02	6.27E-03	1.17E-03	4.25E-03	2.13E-03	2.18E-03	2.88E-03	3.14E-04	7.72E-08	2.07E-03	4.15E-03
E68	0.00E+00	3.71E-05	2.93E-06	7.52E+01	9.48E-05	3.54E-01	4.88E-05	2.39E-02	6.89E-03	1.29E-03	4.71E-03	2.35E-03	2.40E-03	3.11E-03	3.47E-04	8.64E-08	2.31E-03	4.42E-03
E69	0.00E+00	2.44E-05	2.15E-06	6.16E+01	9.54E-05	3.40E-01	3.89E-05	1.19E-02	8.21E-03	1.36E-03	3.76E-03	2.12E-03	2.17E-03	1.37E-03	2.97E-04	7.69E-08	1.59E-03	2.17E-03
E70	0.00E+00	3.27E-05	2.90E-06	8.60E+01	1.36E-04	4.82E-01	5.40E-05	1.43E-02	1.15E-02	1.90E-03	5.25E-03	2.98E-03	3.05E-03	1.69E-03	4.17E-04	1.10E-07	2.21E-03	2.58E-03
E71	0.00E+00	2.63E-05	2.68E-06	9.13E+01	1.54E-04	5.47E-01	5.21E-05	7.27E-03	1.25E-02	2.03E-03	5.01E-03	3.17E-03	3.25E-03	8.44E-04	4.53E-04	1.21E-07	1.76E-03	1.25E-03
E72	0.00E+00	3.75E-05	3.31E-06	9.75E+01	1.54E-04	5.44E-01	6.15E-05	1.65E-02	1.30E-02	2.15E-03	5.99E-03	3.37E-03	3.45E-03	1.96E-03	4.72E-04	1.25E-07	2.54E-03	2.99E-03
E73	0.00E+00	3.22E-05	2.59E-06	5.68E+01	8.72E-05	3.09E-01	4.32E-05	2.12E-02	9.52E-03	1.52E-03	4.17E-03	2.13E-03	2.17E-03	2.06E-03	2.64E-04	6.56E-08	1.99E-03	3.93E-03
E74	0.00E+00	2.72E-05	2.08E-06	4.37E+01	6.61E-05	2.29E-01	3.53E-05	1.75E-02	7.23E-03	1.16E-03	3.47E-03	1.66E-03	1.69E-03	1.76E-03	2.02E-04	5.12E-08	1.78E-03	3.26E-03
E75	0.00E+00	8.09E-05	6.49E-06	1.56E+02	2.03E-04	7.38E-01	1.05E-04	5.57E-02	1.97E-02	3.35E-03	9.99E-03	5.08E-03	5.19E-03	6.09E-03	7.24E-04	1.70E-07	4.80E-03	1.03E-02
E76	0.00E+00	1.27E-04	1.01E-05	2.31E+02	2.87E-04	1.06E+00	1.57E-04	9.36E-02	2.90E-02	4.97E-03	1.49E-02	7.47E-03	7.62E-03	1.01E-02	1.06E-03	2.40E-07	7.28E-03	1.74E-02
E77	0.00E+00	8.90E-05	7.09E-06	1.65E+02	2.08E-04	7.65E-01	1.12E-04	6.38E-02	2.07E-02	3.54E-03	1.06E-02	5.35E-03	5.46E-03	6.92E-03	7.59E-04	1.75E-07	5.18E-03	1.19E-02
E78	0.00E+00	1.34E-04	1.06E-05	2.38E+02	2.90E-04	1.08E+00	1.63E-04	1.00E-01	2.97E-02	5.11E-03	1.54E-02	7.65E-03	7.81E-03	1.08E-02	1.08E-03	2.43E-07	7.60E-03	1.86E-02
E79	0.00E+00	6.38E-05	5.19E-06	1.40E+02	1.99E-04	7.01E-01	9.18E-05	3.54E-02	1.78E-02	3.00E-03	8.97E-03	4.65E-03	4.75E-03	4.14E-03	6.66E-04	1.70E-07	4.22E-03	6.51E-03
E80	0.00E+00	7.56E-05	6.51E-06	1.85E+02	2.67E-04	9.52E-01	1.14E-04	4.15E-02	2.37E-02	3.97E-03	1.10E-02	6.07E-03	6.21E-03	4.65E-03	8.84E-04	2.22E-07	4.77E-03	7.60E-03
E83	0.00E+00	3.34E-05	2.64E-06	5.86E+01	7.55E-05	2.79E-01	4.14E-05	2.41E-02	7.52E-03	1.28E-03	3.94E-03	1.96E-03	2.00E-03	2.62E-03	2.67E-04	6.17E-08	1.94E-03	4.49E-03
E84	0.00E+00	2.97E-05	2.27E-06	4.81E+01	5.95E-05	2.19E-01	3.55E-05	2.18E-02	6.08E-03	1.05E-03	3.40E-03	1.61E-03	1.64E-03	2.40E-03	2.17E-04	4.98E-08	1.76E-03	4.07E-03
E85	0.00E+00	1.52E-04	1.23E-05	2.77E+02	4.36E-04	1.53E+00	2.10E-04	9.48E-02	4.65E-02	7.43E-03	2.04E-02	1.05E-02	1.07E-02	9.40E-03	1.30E-03	3.29E-07	9.70E-03	1.76E-02
E86	0.00E+00	1.53E-04	1.20E-05	2.53E+02	3.81E-04	1.34E+00	1.99E-04	1.02E-01	4.21E-02	6.77E-03	1.94E-02	9.51E-03	9.72E-03	1.01E-02	1.17E-03	2.90E-07	9.66E-03	1.90E-02
E87	0.00E+00	1.63E-04	1.26E-05	2.62E+02	3.89E-04	1.37E+00	2.09E-04	1.11E-01	4.35E-02	7.01E-03	2.04E-02	9.85E-03	1.01E-02	1.09E-02	1.21E-03	2.98E-07	1.03E-02	2.06E-02
E88	0.00E+00	1.30E-04	1.01E-05	2.11E+02	3.16E-04	1.11E+00	1.69E-04	8.67E-02	3.50E-02	5.64E-03	1.64E-02	7.95E-03	8.12E-03	8.58E-03	9.72E-04	2.43E-07	8.33E-03	1.61E-02
E89	0.00E+00	5.09E-06	5.25E-07	1.66E+01	3.13E-05	1.08E-01	1.04E-05	1.01E-03	2.90E-03	4.48E-04	1.01E-03	6.39E-04	6.55E-04	1.28E-04	8.26E-05	2.29E-08	3.51E-04	1.68E-04
E90	0.00E+00	1.05E-05	9.32E-07	2.39E+01	4.04E-05	1.42E-01	1.65E-05	5.52E-03	4.08E-03	6.43E-04	1.59E-03	9.03E-04	9.23E-04	5.49E-04	1.15E-04	2.98E-08	6.62E-04	1.01E-03
E91	0.00E+00	1.80E-07	1.91E-08	6.16E-01	1.16E-06	4.04E-03	3.79E-07	3.25E-05	1.08E-04	1.66E-05	3.64E-05	2.36E-05	2.42E-05	4.10E-06	3.07E-06	8.47E-10	1.22E-05	5.31E-06
E92	0.00E+00	1.80E-07	1.91E-08	6.16E-01	1.16E-06	4.04E-03	3.79E-07	3.25E-05	1.08E-04	1.66E-05	3.64E-05	2.36E-05	2.42E-05	4.10E-06	3.07E-06	8.47E-10	1.22E-05	5.31E-06
E93	0.00E+00	9.58E-06	8.33E-07	2.07E+01	3.43E-05	1.21E-01	1.46E-05	5.35E-03	3.52E-03	5.57E-04	1.40E-03	7.80E-04	7.98E-04	5.28E-04	9.87E-05	2.54E-08	5.98E-04	9.84E-04
E94	0.00E+00	8.75E-06	8.76E-07	2.67E+01	4.96E-05	1.72E-01	1.71E-05	2.32E-03	4.64E-03	7.21E-04	1.65E-03	1.03E-03	1.05E-03	2.69E-04	1.32E-04	3.64E-08	5.95E-04	4.02E-04
E95	0.00E+00	5.70E-05	4.23E-06	9.37E+01	9.77E-05	3.73E-01	6.48E-05	4.29E-02	8.51E-03	1.61E-03	6.22E-03	2.79E-03	2.84E-03	5.54E-03	4.14E-04	9.26E-08	3.38E-03	8.00E-03
E96	0.00E+00	9.18E-05	7.05E-06	1.63E+02	1.78E-04	6.84E-01	1.08E-04	6.88E-02	1.51E-02	2.83E-03	1.03E-02	4.88E-03	4.97E-03	8.67E-03	7.29E-04	1.62E-07	5.28E-03	1.28E-02
E97	0.00E+00	5.70E-05	4.23E-06	9.37E+01	9.77E-05	3.73E-01	6.48E-05	4.29E-02	8.51E-03	1.61E-03	6.22E-03	2.79E-03	2.84E-03	5.54E-03	4.14E-04	9.26E-08	3.38E-03	8.00E-03
E98	0.00E+00	9.18E-05	7.05E-06	1.63E+02	1.78E-04	6.84E-01	1.08E-04	6.88E-02	1.51E-02	2.83E-03	1.03E-02	4.88E-03	4.97E-03	8.67E-03	7.29E-04	1.62E-07	5.28E-03	1.28E-02
F01	0.00E+00	2.78E-05	2.37E-06	5.72E+01	9.36E-05	3.30E-01	4.11E-05	1.61E-02	9.71E-03	1.54E-03	3.95E-03	2.16E-03	2.21E-03	1.59E-03	2.72E-04	6.96E-08	1.75E-03	2.96E-03
F02	0.00E+00	3.63E-05	2.85E-06	6.12E+01	9.32E-05	3.27E-01	4.79E-05	2.38E-02	1.02E-02	1.64E-03	4.66E-03	2.30E-03	2.35E-03	2.35E-03	2.84E-04	7.11E-08	2.31E-03	4.41E-03
F03	0.00E+00	9.53E-07	7.48E-08	1.88E+00	2.32E-06	8.71E-03	1.23E-06	6.31E-04	1.71E-04	3.21E-05	1.18E-04	5.85E-05	5.97E-05	8.17E-05	8.61E-06	2.12E-09	5.87E-05	1.17E-04
F04	0.00E+00	1.15E-05	9.10E-07	2.36E+01	3.01E-05	1.12E-01	1.53E-05	7.27E-03	2.17E-03	4.04E-04	1.48E-03	7.40E-04	7.55E-04	9.51E-04	1.09E-04	2.75E-08	7.25E-04	1.34E-03
F05	0.00E+00	5.35E-05	3.99E-06	7.42E+01	9.93E-05	3.57E-01	6.26E-05	4.11E-02	1.21E-02	1.98E-03	6.05E-03	2.75E-03	2.80E-03	3.94E-03	3.32E-04	7.66E-08	3.25E-03	7.67E-03
F06	0.00E+00	2.28E-05	1.69E-06	3.21E+01	4.40E-05	1.56E-01	2.72E-05	1.68E-02	5.24E-03	8.55E-04	2.65E-03	1.20E-03	1.22E-03	1.64E-03	1.44E-04	3.43E-08	1.43E-03	3.13E-03
F07	0.00E+00	5.33E-05	4.08E-06	8.37E+01	1.24E-04	4.34E-01	6.78E-05	3.60E-02	1.38E-02	2.24E-03	6.62E-03	3.15E-03	3.22E-03	3.56E-03	3.84E-04	9.54E-08	3.40E-03	6.71E-03
F08	0.00E+00	4.81E-05	3.69E-06	7.72E+01	1.16E-04	4.04E-01	6.22E-05	3.16E-02	1.28E-02	2.06E-03	6.08E-03	2.92E-03	2.98E-03	3.15E-03	3.56E-04	8.95E-08	3.11E-03	5.87E-03
F09	0.00E+00	1.00E-05	8.34E-07	2.25E+01	2.98E-05	1.12E-01	1.40E-05	6.25E-03	2.11E-03	3.89E-04	1.34E-03	7.11E-04	7.26E-04	7.88E-04	1.06E-04	2.63E-08	6.10E-04	1.15E-03
F10	0.00E+00	2.53E-05	2.05E-06	5.15E+01	6.41E-05	2.44E-01	3.28E-05	1.74E-02	4.76E-03	8.88E-04	3.11E-03	1.60E-03	1.64E-03	2.16E-03	2.37E-04	5.64E-08	1.47E-03	3.22E-03
F13	0.00E+00	1.53E-06	1.20E-07	2.82E+00	3.27E-06	1.26E-02	1.86E-06	1.13E-03	2.56E-04	4.84E-05	1.76E-04	8.66E-05	8.82E-05	1.41E-04	1.27E-05	2.91E-09	8.74E-05	2.09E-04
F14	0.00E+00	1.45E-06	1.11E-07	2.47E+00	2.70E-06	1.05E-02	1.67E-06	1.11E-03	2.22E-04	4.23E-05	1.58E-04	7.51E-05	7.65E-05	1.39E-04	1.10E-05	2.44E-09	8.15E-05	2.07E-04
F15	0.00E+00	5.55E-05	4.39E-06	9.69E+01	1.24E-04	4.60E-01	6.86E-05	4.05E-02	1.24E-02	2.12E-03	6.52E-03	3.24E-03	3.30E-03	4.38E-03	4.42E-04	1.01E-07	3.22E-03	7.53E-03
F16	0.00E+00	3.76E-05	2.95E-06	6.54E+01	8.45E-05	3.11E-01	4.67E-05	2.68E-02	8.37E-03	1.43E-03	4.46E-03	2.19E-03	2.24E-03	2.93E-03	2.98E-04	6.96E-08	2.22E-03	4.98E-03
F17	0.00E+00	4.82E-05	3.67E-06	7.43E+01	8.75E-05	3.29E-01	5.53E-05	3.75E-02	9.36E-03	1.62E-03	5.25E-03	2.46E-03	2.51E-03	4.05E-03	3.31E-04	7.26E-08	2.74E-03	7.00E-03
F18	0.00E+00	4.85E-05	3.67E-06	7.34E+01	8.55E-05	3.21E-01	5.53E-05	3.78E-02	9.21E-03	1.60E-03	5.25E-03	2.43E-03	2.47E-03	4.10E-03	3.26E-04	7.15E-08	2.78E-03	7.06E-03
F19	0.00E+00	1.43E-05	1.52E-06	5.43E+01	9.32E-05	3.31E-01	3.03E-05	2.83E-03	7.49E-03	1.21E-03	2.91E-03	1.89E-03	1.94E-03	3.39E-04	2.71E-04	7.30E-08	9.77E-04	4.60E-04
F20	0.00E+00	1.75E-05	1.56E-06	4.52E+01	7.04E-05	2.51E-01	2.83E-05	8.35E-03	6.04E-03	9.97E-04	2.73E-03	1.55E-03	1.59E-03	9.54E-04	2.18E-04	5.66E-08	1.14E-03	1.52E-03
F21	0.00E+00	8.13E-06	8.66E-07	3.09E+01	5.30E-05	1.88E-01	1.73E-05	1.61E-03	4.26E-03	6.89E-04	1.66E-03	1.07E-03	1.10E-03	1.93E-04	1.54E-04	4.15E-08	5.56E-04	2.62E-04
F22	0.00E+00	4.25E-06	4.33E-07	1.46E+01	2.43E-05	8.69E-02	8.30E-06	1.31E-03	1.99E-03	3.24E-04	7.94E-04	5.04E-04	5.16E-04	1.46E-04	7.20E-05	1.90E-08	2.78E-04	2.27E-04
F23	0.00E+00	8.34E-06	6.74E-07	1.63E+01	2.27E-05	8.22E-02	1.12E-05	5.32E-03	2.12E-03	3.58E-04	1.08E-03	5.54E-04	5.66E-04	5.94E-04	7.62E-05	1.87E-08	5.15E-04	9.85E-04
F24	0.00E+00	8.36E-06	6.56E-07	1.48E+01	1.95E-05	7.11E-02	1.06E-05	5.79E-03	1.90E-03	3.24E-04	1.01E-03	4.99E-04	5.09E-04	6.40E-04	6.80E-05	1.61E-08	5.04E-04	1.08E-03
F25	0.00E+00	3.03E-05	2.47E-06	5.59E+01	8.79E-05	3.10E-01	4.19E-05	1.91E-02	9.41E-03	1.50E-03	4.04E-03	2.10E-03	2.15E-03	1.87E-03	2.62E-04	6.60E-08	1.89E-03	3.53E-03
F26	0.00E+00	2.93E-05	2.19E-06	4.12E+01	5.61E-05	2.01E-01	3.46E-05	2.21E-02	6.76E-03	1.10E-03	3.36E-03	1.53E-03	1.56E-03	2.13E-03	1.85E-04	4.33E-08	1.80E-03	4.12E-03
F27	0.00E+00	1.66E-04	1.18E-05	2.04E+02	2.60E-04	9.14E-01	1.86E-04	1.27E-01	3.28E-02	5.42E-03	1.83E-02	7.64E-03	7.78E-03	1.24E-02	8.97E-04	2.09E-07	1.05E-02	2.38E-02
F28	0.00E+00	1.46E-04	1.06E-05	2.02E+02	2.84E-04	9.76E-01	1.76E-04	1.01E-01	3.28E-02	5.34E-03	1.74E-02	7.64E-03	7.80E-03	1.01E-02	9.08E-04	2.27E-07	9.63E-03	1.88E-02
F29	0.00E+00	2.42E-05	2.16E-06	5.62E+01	9.58E-05	3.37E-01	3.86E-05	1.23E-02	9.62E-03	1.51E-03	3.71E-03	2.13E-03	2.18E-03	1.23E-03	2.70E-04	7.07E-08	1.53E-03	2.24E-03
F30	0.00E+00	2.36E-05	1.85E-06	3.88E+01	5.79E-05	2.05E-01	3.05E-05	1.61E-02	6.46E-03	1.04E-03	2.96E-03	1.45E-03	1.48E-03	1.57E-03	1.79E-04	4.40E-08	1.47E-03	3.00E-03
F35	0.00E+00	1.49E-05	1.08E-06	2.31E+01	2.39E-05	9.10E-02	1.68E-05	1.11E-02	2.01E-03	3.90E-04	1.63E-03	6.99E-04	7.11E-04	1.46E-03	1.01E-04	2.36E-08	9.17E-04	2.06E-03
F36	0.00E+00	2.32E-05	1.82E-06	4.62E+01	5.76E-05	2.16E-01	3.01E-05	1.52E-02	4.23E-03	7.91E-04	2.90E-03	1.44E-03	1.47E-03	1.97E-03	2.12E-04	5.24E-08	1.43E-03	2.82E-03
F37	0.00E+00	1.30E-04	1.00E-05	2.07E+02	3.04E-04	1.08E+00	1.65E-04	8.98E-02	3.43E-02	5.53E-03	1.60E-02	7.74E-03	7.90E-03	8.75E-03	9.48E-04	2.32E-07	8.08E-03	1.67E-02
F38	0.00E+00	1.69E-04	1.18E-05	1.88E+02	2.11E-04	7.70E-01	1.77E-04	1.41E-01	2.99E-02	5.00E-03	1.72E-02	6.88E-03	7.00E-03	1.35E-02	8.01E-04	1.70E-07	1.02E-02	2.65E-02
F39	0.00E+00	8.48E-06	6.30E-07	1.27E+01	1.21E-05	4.83E-02	9.02E-06	6.98E-03	1.11E-03	2.16E-04	8.46E-04	3.76E-04	3.82E-04	8.72E-04	5.44E-05	1.11E-08	4.64E-04	1.31E-03
F40	0.00E+00	2.34E-05	1.81E-06	4.25E+01	4.92E-05	1.88E-01	2.84E-05	1.69E-02	3.84E-03	7.27E-04	2.70E-03	1.31E-03	1.33E-03	2.14E-03	1.92E-04	4.47E-08	1.37E-03	3.14E-03
F41	0.00E+00	1.24E-05	1.32E-06	4.71E+01	8.08E-05	2.87E-01	2.63E-05	2.46E-03	6.49E-03	1.05E-03	2.53E-03	1.64E-03	1.68E-03	2.94E-04	2.35E-04	6.32E-08	8.47E-04	3.99E-04
F42	0.00E+00	1.47E-05	1.30E-06	3.56E+01	5.34E-05	1.94E-01	2.24E-05	8.31E-03	4.74E-03	7.88E-04	2.13E-03	1.21E-03	1.24E-03	9.02E-04	1.70E-04	4.24E-08	8.89E-04	1.52E-03
F43	0.00E+00	5.93E-07	6.31E-08	2.03E+00	3.84E-06	1.33E-02	1.25E-06	1.07E-04	3.55E-04	5.49E-05	1.20E-04	7.79E-05	7.98E-05	1.35E-05	1.01E-05	2.79E-09	4.01E-05	1.75E-05
F44	0.00E+00	1.11E-05	1.02E-06	2.82E+01	4.98E-05	1.73E-01	1.90E-05	4.58E-03	4.84E-03	7.58E-04	1.83E-03	1.07E-03	1.10E-03	4.82E-04	1.37E-04	3.68E-08	7.29E-04	8.29E-04
F45	0.00E+00	3.34E-05	2.64E-06	5.86E+01	7.55E-05	2.79E-01	4.14E-05	2.41E-02	7.52E-03	1.28E-03	3.94E-03	1.96E-03	2.00E-03	2.62E-03	2.67E-04	6.17E-08	1.94E-03	4.49E-03
F46	0.00E+00	2.97E-05	2.27E-06	4.81E+01	5.95E-05	2.19E-01	3.55E-05	2.18E-02	6.08E-03	1.05E-03	3.40E-03	1.61E-03	1.64E-03	2.40E-03	2.17E-04	4.98E-08	1.76E-03	4.07E-03
F47	0.00E+00	9.79E-07	8.15E-08	1.74E+00	2.56E-06	9.45E-03	1.28E-06	7.37E-04	2.94E-04	4.71E-05	1.20E-04	6.38E-05	6.52E-05	6.79E-05	8.05E-06	1.86E-09	5.46E-05	1.37E-04
F48	0.00E+00	1.08E-07	1.15E-08	3.69E-01	6.98E-07	2.43E-03	2.28E-07	1.95E-05	6.45E-05	9.98E-06	2.18E-05	1.42E-05	1.45E-05	2.46E-06	1.84E-06	5.08E-10	7.30E-06	3.19E-06
F49	0.00E+00	1.57E-04	1.13E-05	2.02E+02	2.66E-04	9.35E-01	1.80E-04	1.18E-01	3.27E-02	5.37E-03	1.77E-02	7.57E-03	7.72E-03	1.15E-02	8.96E-04	2.12E-07	9.95E-03	2.20E-02
F50	0.00E+00	1.44E-04	1.04E-05	1.98E+02	2.79E-04	9.60E-01	1.74E-04	9.95E-02	3.22E-02	5.26E-03	1.72E-02	7.53E-03	7.68E-03	1.00E-02	8.94E-04	2.23E-07	9.53E-03	1.86E-02
F51	0.00E+00	3.94E-05	2.76E-06	5.16E+01	5.69E-05	2.05E-01	4.31E-05	2.95E-02	6.23E-03	1.10E-03	4.24E-03	1.73E-03	1.76E-03	3.37E-03	2.24E-04	5.20E-08	2.48E-03	5.51E-03
F52	0.00E+00	6.23E-05	5.25E-06	1.41E+02	2.10E-04	7.49E-01	9.23E-05	3.41E-02	1.85E-02	3.09E-03	8.93E-03	4.82E-03	4.93E-03	3.89E-03	6.69E-04	1.71E-07	4.00E-03	6.27E-03
F53	0.00E+00	1.51E-05	1.26E-06	3.37E+01	5.05E-05	1.79E-01	2.23E-05	8.07E-03	4.44E-03	7.40E-04	2.17E-03	1.16E-03	1.19E-03	9.35E-04	1.61E-04	4.14E-08	9.87E-04	1.48E-03
F54	0.00E+00	4.41E-05	4.05E-06	1.22E+02	1.93E-04	6.90E-01	7.44E-05	1.94E-02	1.64E-02	2.69E-03	7.17E-03	4.20E-03	4.30E-03	2.22E-03	5.92E-04	1.54E-07	2.87E-03	3.51E-03
F71	0.00E+00	3.74E-05	3.15E-06	8.51E+01	1.19E-04	4.28E-01	5.37E-05	2.24E-02	1.09E-02	1.83E-03	5.15E-03	2.79E-03	2.85E-03	2.48E-03	4.03E-04	9.91E-08	2.30E-03	4.12E-03
F72	0.00E+00	6.49E-05	4.53E-06	6.89E+01	9.86E-05	3.15E-01	7.24E-05	4.80E-02	1.66E-02	2.52E-03	7.18E-03	2.92E-03	2.98E-03	3.77E-03	3.06E-04	6.52E-08	4.20E-03	9.00E-03
F73	0.00E+00	3.29E-07	3.50E-08	1.23E+00	2.13E-06	7.39E-03	6.94E-07	6.19E-05	2.05E-04	3.17E-05	6.65E-05	4.32E-05	4.43E-05	8.06E-06	6.13E-06	1.57E-09	2.23E-05	1.01E-05
F74	0.00E+00	7.92E-05	5.29E-06	8.33E+01	6.80E-05	2.52E-01	7.70E-05	6.57E-02	9.40E-03	1.74E-03	7.54E-03	2.68E-03	2.72E-03	7.40E-03	3.40E-04	6.96E-08	4.82E-03	1.23E-02
F75	0.00E+00	3.50E-05	2.19E-06	2.95E+01	2.63E-05	8.45E-02	3.40E-05	2.80E-02	4.34E-03	7.53E-04	3.46E-03	1.10E-03	1.11E-03	2.81E-03	1.19E-04	2.60E-08	2.35E-03	5.26E-03
F76	0.00E+00	8.89E-07	9.41E-08	3.02E+00	5.59E-06	1.89E-02	1.84E-06	1.39E-04	7.72E-04	1.10E-04	1.75E-04	1.14E-04	1.17E-04	2.29E-05	1.49E-05	3.32E-09	5.83E-05	2.32E-05
F78	0.00E+00	5.15E-05	4.41E-06	1.06E+02	1.80E-04	6.09E-01	7.76E-05	2.69E-02	2.66E-02	3.86E-03	7.48E-03	4.11E-03	4.21E-03	2.35E-03	5.05E-04	1.10E-07	3.27E-03	4.96E-03
F79	0.00E+00	5.16E-05	4.58E-06	1.30E+02	2.06E-04	7.19E-01	8.31E-05	2.49E-02	2.13E-02	3.34E-03	8.02E-03	4.56E-03	4.67E-03	2.58E-03	6.27E-04	1.55E-07	3.36E-03	4.54E-03
F80	0.00E+00	4.59E-05	4.03E-06	1.22E+02	1.83E-04	6.46E-01	7.41E-05	2.14E-02	1.58E-02	2.62E-03	7.20E-03	4.04E-03	4.14E-03	2.50E-03	5.91E-04	1.53E-07	3.06E-03	3.89E-03
F84	0.00E+00	8.81E-05	6.33E-06	7.75E+01	7.24E-05	3.10E-01	8.20E-05	9.00E-02	1.90E-02	2.95E-03	7.62E-03	3.02E-03	3.08E-03	6.26E-03	3.20E-04	4.36E-08	4.54E-03	1.69E-02
F85	0.00E+00	6.01E-05	4.64E-06	9.25E+01	1.15E-04	4.28E-01	7.02E-05	4.88E-02	1.48E-02	2.41E-03	6.66E-03	3.17E-03	3.24E-03	4.56E-03	4.17E-04	8.70E-08	3.42E-03	9.12E-03
F86	0.00E+00	3.86E-05	2.82E-06	5.58E+01	6.09E-05	2.25E-01	4.28E-05	3.01E-02	6.74E-03	1.18E-03	4.11E-03	1.80E-03	1.83E-03	3.32E-03	2.46E-04	5.40E-08	2.28E-03	5.61E-03
F87	0.00E+00	8.55E-05	5.58E-06	7.44E+01	5.86E-05	2.17E-01	8.02E-05	7.58E-02	1.11E-02	1.93E-03	7.91E-03	2.63E-03	2.67E-03	7.27E-03	2.96E-04	5.39E-08	5.24E-03	1.42E-02
F88	0.00E+00	8.81E-05	6.33E-06	7.75E+01	7.24E-05	3.10E-01	8.20E-05	9.00E-02	1.90E-02	2.95E-03	7.62E-03	3.02E-03	3.08E-03	6.26E-03	3.20E-04	4.36E-08	4.54E-03	1.69E-02
F89	0.00E+00	1.22E-04	8.71E-06	1.33E+02	1.84E-04	6.19E-01	1.35E-04	9.59E-02	3.25E-02	4.91E-03	1.31E-02	5.51E-03	5.62E-03

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B09	100	Passenger Car	1227	0.00E+00	1.34E-05	1.45E-06	5.52E+01	9.36E-05	3.69E-01	2.99E-05	2.62E-03	3.98E-03	8.03E-04	2.91E-03	1.88E-03	1.92E-03	1.54E-04	2.79E-04	7.69E-08	9.85E-04	4.10E-04
16	B09	100	Passenger Truck	2056	0.00E+00	2.90E-05	3.09E-06	1.30E+02	1.90E-04	7.42E-01	6.17E-05	7.46E-03	7.04E-03	1.49E-03	5.94E-03	3.85E-03	3.94E-03	8.29E-04	6.53E-04	1.79E-07	2.00E-03	1.21E-03
16	B09	100	Single Unit Short Haul Truck	59	0.00E+00	7.98E-06	3.95E-07	1.08E+01	6.96E-06	2.51E-02	8.63E-06	4.32E-03	4.09E-04	1.19E-04	9.86E-04	2.45E-04	2.48E-04	1.09E-03	4.36E-05	1.78E-08	7.38E-04	8.06E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	3.46E-07	1.68E-08	4.57E-01	2.88E-07	1.03E-03	3.73E-07	1.82E-04	1.85E-05	5.15E-06	4.30E-05	1.03E-05	1.05E-05	4.58E-05	1.84E-06	7.29E-10	3.25E-05	3.40E-05
16	B09	100	Combination Short Haul Truck	73	0.00E+00	2.52E-05	1.84E-06	2.65E+01	7.16E-08	2.45E-02	1.82E-05	2.69E-02	8.53E-04	3.04E-04	1.41E-03	5.38E-04	5.29E-04	3.99E-03	8.86E-05	0.00E+00	8.81E-04	5.06E-03
16	B09	100	Combination Long Haul Truck	67	0.00E+00	2.19E-05	1.50E-06	2.40E+01	8.29E-08	2.45E-02	1.64E-05	2.55E-02	7.89E-04	2.20E-04	1.44E-03	4.50E-04	4.49E-04	3.66E-03	8.03E-05	0.00E+00	9.86E-04	4.81E-03
16	B10	100	Passenger Car	929	0.00E+00	1.02E-05	1.10E-06	4.18E+01	7.08E-05	2.79E-01	2.26E-05	1.98E-03	3.01E-03	6.07E-04	2.20E-03	1.42E-03	1.46E-03	1.16E-04	2.11E-04	5.82E-08	7.45E-04	3.10E-04
16	B10	100	Passenger Truck	1555	0.00E+00	2.20E-05	2.34E-06	9.85E+01	1.44E-04	5.61E-01	4.67E-05	5.65E-03	5.33E-03	1.13E-03	4.49E-03	2.91E-03	2.98E-03	6.27E-04	4.94E-04	1.35E-07	1.51E-03	9.13E-04
16	B10	100	Single Unit Short Haul Truck	47	0.00E+00	6.30E-06	3.12E-07	8.57E+00	5.50E-06	1.98E-02	6.82E-06	3.41E-03	3.23E-04	9.41E-05	7.79E-04	1.93E-04	1.96E-04	8.64E-04	3.44E-05	1.41E-08	5.83E-04	6.37E-04
16	B10	100	Single Unit Long Haul Truck	2	0.00E+00	2.73E-07	1.33E-08	3.61E-01	2.28E-07	8.10E-04	2.95E-07	1.44E-04	1.46E-05	4.07E-06	3.40E-05	8.16E-06	8.29E-06	3.62E-05	1.45E-06	5.76E-10	2.57E-05	2.68E-05
16	B10	100	Combination Short Haul Truck	61	0.00E+00	2.08E-05	1.52E-06	2.19E+01	5.93E-08	2.03E-02	1.50E-05	2.23E-02	7.06E-04	2.52E-04	1.17E-03	4.46E-04	4.38E-04	3.31E-03	7.34E-05	0.00E+00	7.30E-04	4.19E-03
16	B10	100	Combination Long Haul Truck	55	0.00E+00	1.81E-05	1.24E-06	1.99E+01	6.87E-08	2.03E-02	1.36E-05	2.12E-02	6.54E-04	1.82E-04	1.19E-03	3.73E-04	3.72E-04	3.03E-03	6.65E-05	0.00E+00	8.17E-04	3.98E-03
16	B13	100	Passenger Car	502	0.00E+00	5.49E-06	5.94E-07	2.26E+01	3.82E-05	1.51E-01	1.22E-05	1.07E-03	1.63E-03	3.28E-04	1.19E-03	7.67E-04	7.87E-04	6.29E-05	1.14E-04	3.14E-08	4.02E-04	1.68E-04
16	B13	100	Passenger Truck	840	0.00E+00	1.19E-05	1.26E-06	5.32E+01	7.76E-05	3.03E-01	2.52E-05	3.05E-03	2.88E-03	6.11E-04	2.43E-03	1.57E-03	1.61E-03	3.39E-04	2.67E-04	7.32E-08	8.16E-04	4.93E-04
16	B13	100	Single Unit Short Haul Truck	29	0.00E+00	3.86E-06	1.91E-07	5.25E+00	3.37E-06	1.21E-02	4.18E-06	2.09E-03	1.98E-04	5.76E-05	4.77E-04	1.18E-04	1.20E-04	5.29E-04	2.11E-05	8.62E-09	3.57E-04	3.90E-04
16	B13	100	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.13E-09	2.21E-01	1.39E-07	4.96E-04	1.80E-07	8.80E-05	8.96E-06	2.49E-06	2.08E-05	5.00E-06	5.08E-06	2.21E-05	8.90E-07	3.53E-10	1.57E-05	1.64E-05
16	B13	100	Combination Short Haul Truck	35	0.00E+00	1.20E-05	8.79E-07	1.27E+01	3.42E-08	1.17E-02	8.69E-06	1.29E-02	4.08E-04	1.45E-04	6.75E-04	2.58E-04	2.53E-04	1.91E-03	4.24E-05	0.00E+00	4.21E-04	2.42E-03
16	B13	100	Combination Long Haul Truck	32	0.00E+00	1.05E-05	7.18E-07	1.15E+01	3.97E-08	1.17E-02	7.85E-06	1.22E-02	3.78E-04	1.05E-04	6.87E-04	2.15E-04	2.15E-04	1.75E-03	3.84E-05	0.00E+00	4.72E-04	2.30E-03
16	B14	100	Passenger Car	900	0.00E+00	9.86E-06	1.07E-06	4.05E+01	6.86E-05	2.70E-01	2.19E-05	1.92E-03	2.92E-03	5.89E-04	2.13E-03	1.37E-03	1.41E-03	1.13E-04	2.05E-04	5.64E-08	7.22E-04	3.00E-04
16	B14	100	Passenger Truck	1507	0.00E+00	2.13E-05	2.27E-06	9.55E+01	1.39E-04	5.44E-01	4.53E-05	5.47E-03	5.16E-03	1.10E-03	4.35E-03	2.82E-03	2.89E-03	6.08E-04	4.79E-04	1.31E-07	1.46E-03	8.85E-04
16	B14	100	Single Unit Short Haul Truck	48	0.00E+00	6.43E-06	3.18E-07	8.74E+00	5.61E-06	2.02E-02	6.96E-06	3.48E-03	3.30E-04	9.61E-05	7.95E-04	1.97E-04	2.00E-04	8.82E-04	3.51E-05	1.44E-08	5.95E-04	6.50E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.79E-07	1.35E-08	3.68E-01	2.32E-07	8.27E-04	3.01E-07	1.47E-04	1.49E-05	4.15E-06	3.47E-05	8.33E-06	8.46E-06	3.69E-05	1.48E-06	5.88E-10	2.62E-05	2.74E-05
16	B14	100	Combination Short Haul Truck	53	0.00E+00	1.82E-05	1.32E-06	1.91E+01	5.16E-08	1.77E-02	1.31E-05	1.94E-02	6.15E-04	2.19E-04	1.02E-03	3.88E-04	3.82E-04	2.88E-03	6.39E-05	0.00E+00	6.35E-04	3.65E-03
16	B14	100	Combination Long Haul Truck	48	0.00E+00	1.58E-05	1.08E-06	1.73E+01	5.98E-08	1.77E-02	1.18E-05	1.84E-02	5.70E-04	1.58E-04	1.04E-03	3.24E-04	3.24E-04	2.64E-03	5.79E-05	0.00E+00	7.12E-04	3.47E-03
16	B15	100	Passenger Car	1172	0.00E+00	1.28E-05	1.39E-06	5.27E+01	8.93E-05	3.52E-01	2.85E-05	2.50E-03	3.80E-03	7.66E-04	2.78E-03	1.79E-03	1.84E-03	1.47E-04	2.66E-04	7.34E-08	9.40E-04	3.91E-04
16	B15	100	Passenger Truck	1962	0.00E+00	2.77E-05	2.95E-06	1.24E+02	1.81E-04	7.08E-01	5.89E-05	7.12E-03	6.72E-03	1.43E-03	5.67E-03	3.67E-03	3.76E-03	7.91E-04	6.23E-04	1.71E-07	1.90E-03	1.15E-03
16	B15	100	Single Unit Short Haul Truck	25	0.00E+00	3.34E-06	1.66E-07	4.55E+00	2.92E-06	1.05E-02	3.62E-06	1.81E-03	1.72E-04	4.99E-05	4.14E-04	1.03E-04	1.04E-04	4.58E-04	1.83E-05	7.47E-09	3.09E-04	3.38E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.45E-07	7.04E-09	1.91E-01	1.21E-07	4.30E-04	1.56E-07	7.62E-05	7.76E-06	2.16E-06	1.80E-05	4.33E-06	4.40E-06	1.92E-05	7.71E-07	3.06E-10	1.36E-05	1.42E-05
16	B15	100	Combination Short Haul Truck	17	0.00E+00	5.93E-06	4.33E-07	6.24E+00	1.69E-08	5.78E-03	4.28E-06	6.33E-03	2.01E-04	7.16E-05	3.32E-04	1.27E-04	1.25E-04	9.41E-04	2.09E-05	0.00E+00	2.08E-04	1.19E-03
16	B15	100	Combination Long Haul Truck	16	0.00E+00	5.16E-06	3.54E-07	5.65E+00	1.95E-08	5.78E-03	3.87E-06	6.02E-03	1.86E-04	5.17E-05	3.38E-04	1.06E-04	1.06E-04	8.63E-04	1.89E-05	0.00E+00	2.33E-04	1.13E-03
16	B16	100	Passenger Car	832	0.00E+00	9.11E-06	9.86E-07	3.74E+01	6.34E-05	2.50E-01	2.03E-05	1.78E-03	2.70E-03	5.44E-04	1.97E-03	1.27E-03	1.30E-03	1.04E-04	1.89E-04	5.21E-08	6.67E-04	2.78E-04
16	B16	100	Passenger Truck	1393	0.00E+00	1.97E-05	2.09E-06	8.83E+01	1.29E-04	5.03E-01	4.18E-05	5.06E-03	4.77E-03	1.01E-03	4.02E-03	2.61E-03	2.67E-03	5.62E-04	4.43E-04	1.21E-07	1.35E-03	8.18E-04
16	B16	100	Single Unit Short Haul Truck	22	0.00E+00	2.96E-06	1.46E-07	4.02E+00	2.58E-06	9.31E-03	3.20E-06	1.60E-03	1.52E-04	4.42E-05	3.66E-04	9.07E-05	9.22E-05	4.06E-04	1.62E-05	6.60E-09	2.74E-04	2.99E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	1.28E-07	6.23E-09	1.69E-01	1.07E-07	3.80E-04	1.38E-07	6.74E-05	6.87E-06	1.91E-06	1.59E-05	3.83E-06	3.89E-06	1.70E-05	6.82E-07	2.70E-10	1.21E-05	1.26E-05
16	B16	100	Combination Short Haul Truck	12	0.00E+00	3.95E-06	2.88E-07	4.16E+00	1.12E-08	3.86E-03	2.85E-06	4.22E-03	1.34E-04	4.77E-05	2.22E-04	8.46E-05	8.31E-05	6.27E-04	1.39E-05	0.00E+00	1.38E-04	7.96E-04
16	B16	100	Combination Long Haul Truck	10	0.00E+00	3.44E-06	2.36E-07	3.77E+00	1.30E-08	3.85E-03	2.58E-06	4.01E-03	1.24E-04	3.45E-05	2.26E-04	7.07E-05	7.05E-05	5.75E-04	1.26E-05	0.00E+00	1.55E-04	7.56E-04
16	B19	100	Passenger Car	3501	0.00E+00	3.83E-05	4.15E-06	1.57E+02	2.67E-04	1.05E+00	8.52E-05	7.48E-03	1.14E-02	2.29E-03	8.30E-03	5.35E-03	5.49E-03	4.39E-04	7.96E-04	2.19E-07	2.81E-03	1.17E-03
16	B19	100	Passenger Truck	5863	0.00E+00	8.28E-05	8.81E-06	3.71E+02	5.42E-04	2.12E+00	1.76E-04	2.13E-02	2.01E-02	4.26E-03	1.69E-02	1.10E-02	1.12E-02	2.36E-03	1.86E-03	5.10E-07	5.69E-03	3.44E-03
16	B19	100	Single Unit Short Haul Truck	174	0.00E+00	2.34E-05	1.16E-06	3.18E+01	2.04E-05	7.37E-02	2.53E-05	1.27E-02	1.20E-03	3.50E-04	2.89E-03	7.18E-04	7.29E-04	3.21E-03	1.28E-04	5.23E-08	2.17E-03	2.37E-03
16	B19	100	Single Unit Long Haul Truck	8	0.00E+00	1.01E-06	4.93E-08	1.34E+00	8.46E-07	3.01E-03	1.09E-06	5.34E-04	5.43E-05	1.51E-05	1.26E-04	3.03E-05	3.08E-05	1.34E-04	5.40E-06	2.14E-09	9.54E-05	9.97E-05
16	B19	100	Combination Short Haul Truck	139	0.00E+00	4.78E-05	3.49E-06	5.03E+01	1.36E-07	4.66E-02	3.45E-05	5.11E-02	1.62E-03	5.77E-04	2.68E-03	1.02E-03	1.01E-03	7.59E-03	1.68E-04	0.00E+00	1.67E-03	9.62E-03
16	B19	100	Combination Long Haul Truck	127	0.00E+00	4.16E-05	2.85E-06	4.56E+01	1.57E-07	4.66E-02	3.12E-05	4.85E-02	1.50E-03	4.17E-04	2.73E-03	8.54E-04	8.52E-04	6.96E-03	1.53E-04	0.00E+00	1.87E-03	9.14E-03
16	B20	100	Passenger Car	1708	0.00E+00	1.87E-05	2.02E-06	7.68E+01	1.30E-04	5.13E-01	4.16E-05	3.65E-03	5.54E-03	1.12E-03	4.05E-03	2.61E-03	2.68E-03	2.14E-04	3.88E-04	1.07E-07	1.37E-03	5.70E-04
16	B20	100	Passenger Truck	2860	0.00E+00	4.04E-05	4.30E-06	1.81E+02	2.64E-04	1.03E+00	8.59E-05	1.04E-02	9.80E-03	2.08E-03	8.26E-03	5.35E-03	5.49E-03	1.15E-03	9.09E-04	2.49E-07	2.78E-03	1.68E-03
16	B20	100	Single Unit Short Haul Truck	157	0.00E+00	2.11E-05	1.04E-06	2.87E+01	1.84E-05	6.64E-02	2.28E-05	1.14E-02	1.08E-03	3.15E-04	2.61E-03	6.47E-04	6.57E-04	2.89E-03	1.15E-04	4.71E-08	1.95E-03	2.13E-03
16	B20	100	Single Unit Long Haul Truck	7	0.00E+00	9.15E-07	4.44E-08	1.21E+00	7.62E-07	2.71E-03	9.86E-07	4.81E-04	4.90E-05	1.36E-05	1.14E-04	2.73E-05	2.78E-05	1.21E-04	4.86E-06	1.93E-09	8.60E-05	8.98E-05
16	B20	100	Combination Short Haul Truck	183	0.00E+00	6.27E-05	4.58E-06	6.60E+01	1.78E-07	6.12E-02	4.53E-05	6.70E-02	2.13E-03	7.57E-04	3.51E-03	1.34E-03	1.32E-03	9.95E-03	2.21E-04	0.00E+00	2.20E-03	1.26E-02
16	B20	100	Combination Long Haul Truck	166	0.00E+00	5.46E-05	3.74E-06	5.98E+01	2.07E-07	6.11E-02	4.09E-05	6.36E-02	1.97E-03	5.47E-04	3.58E-03	1.12E-03	1.12E-03	9.13E-03	2.00E-04	0.00E+00	2.46E-03	1.20E-02
16	B21	100	Passenger Car	3221	0.00E+00	3.53E-05	3.82E-06	1.45E+02	2.46E-04	9.68E-01	7.84E-05	6.88E-03	1.04E-02	2.11E-03	7.63E-03	4.92E-03	5.05E-03	4.04E-04	7.32E-04	2.02E-07	2.58E-03	1.08E-03
16	B21	100	Passenger Truck	5395	0.00E+00	7.61E-05	8.11E-06	3.42E+02	4.99E-04	1.95E+00	1.62E-04	1.96E-02	1.85E-02	3.92E-03	1.56E-02	1.01E-02	1.03E-02	2.17E-03	1.71E-03	4.70E-07	5.24E-03	3.17E-03
16	B21	100	Single Unit Short Haul Truck	116	0.00E+00	1.56E-05	7.70E-07	2.12E+01	1.36E-05	4.90E-02	1.69E-05	8.43E-03	7.99E-04	2.32E-04	1.92E-03	4.77E-04	4.85E-04	2.13E-03	8.50E-05	3.47E-08	1.44E-03	1.57E-03
16	B21	100	Single Unit Long Haul Truck	5	0.00E+00	6.75E-07	3.28E-08	8.91E-01	5.62E-07	2.00E-03	7.28E-07	3.55E-04	3.61E-05	1.00E-05	8.39E-05	2.02E-05	2.05E-05	8.93E-05	3.59E-06	1.42E-09	6.34E-05	6.63E-05
16	B21	100	Combination Short Haul Truck	108	0.00E+00	3.72E-05	2.71E-06	3.92E+01	1.06E-07	3.63E-02	2.68E-05	3.97E-02	1.26E-03	4.49E-04	2.08E-03	7.96E-04	7.82E-04	5.90E-03	1.31E-04	0.00E+00	1.30E-03	7.49E-03
16	B21	100	Combination Long Haul Truck	99	0.00E+00	3.24E-05	2.22E-06	3.55E+01	1.23E-07	3.63E-02	2.43E-05	3.77E-02	1.17E-03	3.25E-04	2.12E-03	6.65E-04	6.63E-04	5.41E-03	1.19E-04	0.00E+00	1.46E-03	7.11E-03
16	B22	100	Passenger Car	1340	0.00E+00	1.47E-05	1.59E-06	6.02E+01	1.02E-04	4.03E-01	3.26E-05	2.86E-03	4.35E-03	8.76E-04	3.18E-03	2.05E-03	2.10E-03	1.68E-04	3.05E-04	8.39E-08	1.07E-03	4.47E-04
16	B22	100	Passenger Truck	2244	0.00E+00	3.17E-05	3.37E-06	1.42E+02	2.07E-04	8.10E-01	6.74E-05	8.14E-03	7.69E-03	1.63E-03	6.48E-03	4.20E-03	4.30E-03	9.05E-04	7.13E-04	1.95E-07	2.18E-03	1.32E-03
16	B22	100	Single Unit Short Haul Truck	123	0.00E+00	1.65E-05	8.15E-07	2.24E+01	1.44E-05	5.18E-02	1.78E-05	8.91E-03	8.45E-04	2.46E-04	2.04E-03	5.05E-04	5.13E-04	2.26E-03	8.99E-05	3.68E-08	1.52E-03	1.66E-03
16	B22	100	Single Unit Long Haul Truck	5	0.00E+00	7.14E-07	3.47E-08	9.43E-01	5.95E-07	2.12E-03	7.70E-07	3.75E-04	3.82E-05	1.06E-05	8.88E-05	2.13E-05	2.17E-05	9.45E-05	3.80E-06	1.50E-09	6.71E-05	7.01E-05
16	B22	100	Combination Short Haul Truck	159	0.00E+00	5.46E-05	3.99E-06	5.75E+01	1.55E-07	5.33E-02	3.94E-05	5.83E-02	1.85E-03	6.59E-04	3.06E-03	1.17E-03	1.15E-03	8.67E-03	1.92E-04	0.00E+00	1.91E-03	1.10E-02
16	B22	100	Combination Long Haul Truck	145	0.00E+00	4.75E-05	3.26E-06	5.21E+01	1.80E-07	5.32E-02	3.56E-05	5.54E-02	1.71E-03	4.77E-04	3.12E-03	9.76E-04	9.74E-04	7.95E-03	1.74E-04	0.00E+00	2.14E-03	1.04E-02
16	B23	100	Passenger Car	3301	0.00E+00	3.62E-05	3.91E-06	1.48E+02	2.52E-04	9.92E-01	8.04E-05	7.05E-03	1.07E-02	2.16E-03	7.82E-03	5.04E-03	5.18E-03	4.14E-04	7.51E-04	2.07E-07	2.65E-03	1.10E-03
16	B23	100	Passenger Truck	5528	0.00E+00	7.80E-05	8.31E-06	3.50E+02	5.11E-04	2.00E+00	1.66E-04	2.01E-02	1.89E-02	4.02E-03	1.60E-02	1.03E-02	1.06E-02	2.23E-03	1.76E-03	4.81E-07	5.37E-03	3.24E-03
16	B23	100	Single Unit Short Haul Truck	116	0.00E+00	1.56E-05	7.70E-07	2.12E+01	1.36E-05	4.90E-02	1.69E-05	8.43E-03	7.99E-04	2.32E-04	1.92E-03	4.77E-04	4.85E-04	2.13E-03	8.50E-05	3.47E-08	1.44E-03	1.57E-03
16	B23	100	Single Unit Long Haul Truck	5	0.00E+00	6.75E-07	3.28E-08	8.91E-01	5.62E-07	2.00E-03	7.28E-07	3.55E-04	3.61E-05	1.00E-05	8.39E-05	2.02E-05	2.05E-05	8.93E-05	3.59E-06	1.42E-09	6.34E-05	6.63E-05
16	B23	100	Combination Short Haul Truck	108	0.00E+00	3.72E-05	2.71E-06	3.92E+01	1.06E-07	3.63E-02	2.68E-05	3.97E-02	1.26E-03	4.49E-04	2.08E-03	7.96E-04	7.82E-04	5.90E-03	1.31E-04	0.00E+00	1.30E-03	7.49E-03
16	B23	100	Combination Long Haul Truck	99	0.00E+00	3.24E-05	2.22E-06	3.55E+01	1.23E-07	3.63E-02	2.43E-05	3.77E-02	1.17E-03	3.25E-04	2.12E-03	6.65E-04	6.63E-04	5.41E-03	1.19E-04	0.00E+00	1.46E-03	7.11E-03
16	B24	100	Passenger Car	1472	0.00E+00	1.61E-05	1.74E-06	6.62E+01	1.12E-04	4.42E-01	3.58E-05	3.15E-03	4.78E-03	9.63E-04	3.49E-03	2.25E-03	2.31E-03	1.85E-04	3.35E-04	9.22E-08	1.18E-03	4.92E-04
16	B24	100	Passenger Truck	2466	0.00E+00	3.48E-05	3.71E-06	1.56E+02	2.28E-04	8.90E-01	7.41E-05	8.95E-03	8.44E-03	1.79E-03	7.12E-03	4.61E-03	4.73E-03	9.94E-04	7.83E-04	2.15E-07	2.39E-03	1.45E-03
16	B24	100	Single Unit Short Haul Truck	141	0.00E+00	1.89E-05	9.36E-07	2.57E+01	1.65E-05	5.95E-02	2.05E-05	1.02E-02	9.70E-04	2.82E-04	2.34E-03	5.80E-04	5.89E-04	2.59E-03	1.03E-04	4.22E-08	1.75E-03	1.91E-03
16	B24	100	Single Unit Long Haul Truck	6	0.00E+00	8.20E-07	3.98E-08	1.08E+00	6.83E-07	2.43E-03	8.84E-07	4.31E-04	4.39E-05	1.22E-05	1.02E-04	2.45E-05	2.49E-05	1.08E-04	4.36E-06	1.73E-09	7.71E-05	8.05E-05
16	B24	100	Combination Short Haul Truck	175	0.00E+00	6.02E-05	4.39E-06	6.34E+01	1.71E-07	5.87E-02	4.34E-05	6.43E-02	2.04E-03	7.26E-04	3.37E-03	1.29E-03	1.27E-03	9.55E-03	2.12E-04	0.00E+00	2.11E-03	1.21E-02
16	B24	100	Combination Long Haul Truck	160	0.00E+00	5.24E-05	3.59E-06	5.74E+01	1.98E-07	5.87E-02	3.92E-05	6.11E-02	1.89E-03	5.25E-04	3.43E-03	1.08E-03	1.07E-03	8.76E-03	1.92E-04	0.00E+00	2.36E-03	1.15E-02
10	D63	70	Passenger Car	40	0.00E+00	5.18E-07	5.61E-08	1.90E+00	3.61E-06	1.35E-02	1.15E-06	7.94E-05	3.07E-04	4.93E-05	1.12E-04	7.23E-05	7.42E-05	7.10E-06	9.56E-06	2.60E-09	3.80E-05	1.24E-05
10	D63	70	Passenger Truck	66	0.00E+00	1.14E-06	1.20E-07	4.38E+00	7.18E-06	2.48E-02	2.36E-06	2.48E-04	5.59E-04	9.09E-05	2.25E-04	1.46E-04	1.50E-04	3.22E-05	2.18E-05	5.84E-09	7.51E-05	4.09E-05
10	D63	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	D63	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.72E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D63	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	D64	70	Passenger Car	78	0.00E+00	1.02E-06	1.11E-07	3.75E+00	7.11E-06	2.66E-02	2.27E-06	1.57E-04	6.06E-04	9.72E-05	2.21E-04	1.43E-04	1.46E-04	1.40E-05	1.88E-05	5.13E-09	7.48E-05	2.45E-05
10	D64	70	Passenger Truck	131	0.00E+00	2.24E-06	2.37E-07	8.64E+00	1.42E-05	4.89E-02	4.65E-06	4.90E-04	1.10E-03	1.79E-04	4.44E-04	2.89E-04	2.96E-04	6.34E-05	4.30E-05	1.15E-08	1.48E-04	8.06E-05
10	D64	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.94E-06	5.64E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.37E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.59E-09	3.27E-04	3.33E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.80E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.64E-05	1.16E-05	2.26E-06	1.91E-05	4.66E-06	4.74E-06	1.20E-05	4.83E-07	1.94E-10	1.44E-05	1.43E-05
10	D64	70	Combination Short Haul Truck	10	0.00E+00	5.44E-06	3.87E-07	3.94E+00	1.77E-08	4.68E-03	3.99E-06	5.72E-03	4.14E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.95E-04	1.32E-05	0.00E+00	2.17E-04	1.08E-03

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D68	80	Combination Short Haul Truck	30	0.00E+00	1.33E-05	9.54E-07	1.10E+01	4.21E-08	1.18E-02	9.74E-06	1.37E-02	8.07E-04	1.99E-04	7.94E-04	2.82E-04	2.79E-04	1.66E-03	3.69E-05	0.00E+00	5.15E-04	2.58E-03
11	D68	80	Combination Long Haul Truck	28	0.00E+00	1.19E-05	8.03E-07	1.02E+01	4.86E-08	1.22E-02	9.05E-06	1.33E-02	7.89E-04	1.59E-04	8.20E-04	2.42E-04	2.44E-04	1.56E-03	3.41E-05	0.00E+00	5.77E-04	2.50E-03
11	D69	80	Passenger Car	113	0.00E+00	1.37E-06	1.49E-07	5.26E+00	9.57E-06	3.67E-02	3.06E-06	2.32E-04	6.21E-04	1.08E-04	2.98E-04	1.92E-04	1.97E-04	1.77E-05	2.65E-05	7.43E-09	1.01E-04	3.62E-05
11	D69	80	Passenger Truck	189	0.00E+00	2.95E-06	3.13E-07	1.22E+01	1.89E-05	6.75E-02	6.19E-06	6.89E-04	1.11E-03	1.98E-04	5.92E-04	3.85E-04	3.94E-04	8.49E-05	6.07E-05	1.65E-08	1.98E-04	1.13E-04
11	D69	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.70E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.35E-09	3.12E-04	3.27E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.48E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.42E-06	1.41E-05	5.72E-07	2.23E-10	1.37E-05	1.40E-05
11	D69	80	Combination Short Haul Truck	13	0.00E+00	5.75E-06	4.11E-07	4.75E+00	1.81E-08	5.09E-03	4.20E-06	5.90E-03	3.48E-04	8.57E-05	3.42E-04	1.21E-04	1.20E-04	7.17E-04	1.59E-05	0.00E+00	2.22E-04	1.11E-03
11	D69	80	Combination Long Haul Truck	12	0.00E+00	5.15E-06	3.46E-07	4.39E+00	2.10E-08	5.28E-03	3.90E-06	5.73E-03	3.40E-04	6.85E-05	3.54E-04	1.04E-04	1.05E-04	6.71E-04	1.47E-05	0.00E+00	2.49E-04	1.08E-03
11	D70	80	Passenger Car	99	0.00E+00	1.21E-06	1.31E-07	4.63E+00	8.43E-06	3.23E-02	2.69E-06	2.04E-04	5.47E-04	9.51E-05	2.62E-04	1.69E-04	1.73E-04	1.56E-05	2.33E-05	6.54E-09	8.87E-05	3.19E-05
11	D70	80	Passenger Truck	167	0.00E+00	2.60E-06	2.76E-07	1.07E+01	1.67E-05	5.94E-02	5.45E-06	6.07E-04	9.81E-04	1.74E-04	5.22E-04	3.39E-04	3.47E-04	7.48E-05	5.35E-05	1.46E-08	1.75E-04	9.92E-05
11	D70	80	Single Unit Short Haul Truck	18	0.00E+00	3.41E-06	1.69E-07	3.35E+00	2.74E-06	6.70E-03	3.63E-06	1.75E-03	2.14E-04	4.85E-05	4.15E-04	1.01E-04	1.03E-04	3.36E-04	1.35E-05	5.35E-09	3.12E-04	3.27E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	7.31E-09	1.42E-01	1.17E-07	2.79E-04	1.58E-07	7.48E-05	9.79E-06	2.14E-06	1.81E-05	4.35E-06	4.42E-06	1.41E-05	5.72E-07	2.23E-10	1.37E-05	1.40E-05
11	D70	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.14E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	D70	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.96E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
10	D71	70	Passenger Car	175	0.00E+00	2.29E-06	2.47E-07	8.40E+00	1.59E-05	5.96E-02	5.09E-06	3.51E-04	1.36E-03	2.18E-04	4.95E-04	3.19E-04	3.28E-04	3.13E-05	4.22E-05	1.15E-08	1.68E-04	5.48E-05
10	D71	70	Passenger Truck	293	0.00E+00	5.01E-06	5.31E-07	1.93E+01	3.17E-05	1.10E-01	1.04E-05	1.10E-03	2.47E-03	4.01E-04	9.93E-04	6.46E-04	6.62E-04	1.42E-04	9.64E-05	2.58E-08	3.31E-04	1.80E-04
10	D71	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.89E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.53E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.12E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	D71	70	Combination Short Haul Truck	23	0.00E+00	1.20E-05	8.51E-07	8.68E+00	3.89E-08	1.03E-02	8.78E-06	1.26E-02	9.11E-04	1.99E-04	7.29E-04	2.52E-04	2.51E-04	1.31E-03	2.90E-05	0.00E+00	4.78E-04	2.37E-03
10	D71	70	Combination Long Haul Truck	21	0.00E+00	1.08E-05	7.24E-07	8.10E+00	4.48E-08	1.09E-02	8.22E-06	1.24E-02	9.05E-04	1.65E-04	7.54E-04	2.19E-04	2.21E-04	1.24E-03	2.71E-05	0.00E+00	5.33E-04	2.34E-03
10	D72	70	Passenger Car	210	0.00E+00	2.75E-06	2.97E-07	1.01E+01	1.91E-05	7.15E-02	6.11E-06	4.21E-04	1.63E-03	2.61E-04	5.95E-04	3.83E-04	3.93E-04	3.76E-05	5.07E-05	1.38E-08	2.01E-04	6.58E-05
10	D72	70	Passenger Truck	352	0.00E+00	6.02E-06	6.37E-07	2.32E+01	3.81E-05	1.32E-01	1.25E-05	1.32E-03	2.96E-03	4.82E-04	1.19E-03	7.76E-04	7.95E-04	1.71E-04	1.16E-04	3.10E-08	3.98E-04	2.17E-04
10	D72	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.89E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.53E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.12E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	D72	70	Combination Short Haul Truck	10	0.00E+00	5.17E-06	3.67E-07	3.75E+00	1.68E-08	4.45E-03	3.79E-06	5.43E-03	3.93E-04	8.58E-05	3.15E-04	1.09E-04	1.09E-04	5.65E-04	1.25E-05	0.00E+00	2.06E-04	1.02E-03
10	D72	70	Combination Long Haul Truck	9	0.00E+00	4.67E-06	3.12E-07	3.50E+00	1.93E-08	4.71E-03	3.55E-06	5.36E-03	3.91E-04	7.13E-05	3.26E-04	9.44E-05	9.55E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
10	D73	70	Passenger Car	130	0.00E+00	1.70E-06	1.83E-07	6.23E+00	1.18E-05	4.42E-02	3.77E-06	2.60E-04	1.01E-03	1.61E-04	3.67E-04	2.37E-04	2.43E-04	2.32E-05	3.13E-05	8.52E-09	1.24E-04	4.06E-05
10	D73	70	Passenger Truck	217	0.00E+00	3.72E-06	3.93E-07	1.43E+01	2.35E-05	8.13E-02	7.72E-06	8.13E-04	1.83E-03	2.97E-04	7.37E-04	4.79E-04	4.91E-04	1.05E-04	7.15E-05	1.91E-08	2.46E-04	1.34E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	D73	70	Combination Short Haul Truck	8	0.00E+00	4.35E-06	3.09E-07	3.16E+00	1.41E-08	3.75E-03	3.19E-06	4.57E-03	3.31E-04	7.23E-05	2.65E-04	9.15E-05	9.14E-05	4.76E-04	1.06E-05	0.00E+00	1.74E-04	8.62E-04
10	D73	70	Combination Long Haul Truck	8	0.00E+00	3.93E-06	2.63E-07	2.94E+00	1.63E-08	3.97E-03	2.99E-06	4.51E-03	3.29E-04	6.00E-05	2.74E-04	7.95E-05	8.04E-05	4.50E-04	9.86E-06	0.00E+00	1.94E-04	8.50E-04
10	D74	70	Passenger Car	193	0.00E+00	2.52E-06	2.73E-07	9.26E+00	1.76E-05	6.57E-02	5.61E-06	3.87E-04	1.50E-03	2.40E-04	5.46E-04	3.52E-04	3.61E-04	3.45E-05	4.65E-05	1.27E-08	1.85E-04	6.04E-05
10	D74	70	Passenger Truck	323	0.00E+00	5.53E-06	5.85E-07	2.13E+01	3.50E-05	1.21E-01	1.15E-05	1.21E-03	2.72E-03	4.42E-04	1.10E-03	7.13E-04	7.30E-04	1.57E-04	1.06E-04	2.84E-08	3.65E-04	1.99E-04
10	D74	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	D74	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	D74	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
11	D75	80	Passenger Car	106	0.00E+00	1.29E-06	1.40E-07	4.95E+00	9.00E-06	3.45E-02	2.87E-06	2.18E-04	5.84E-04	1.02E-04	2.80E-04	1.80E-04	1.85E-04	1.66E-05	2.49E-05	6.99E-09	9.47E-05	3.41E-05
11	D75	80	Passenger Truck	178	0.00E+00	2.78E-06	2.94E-07	1.14E+01	1.78E-05	6.34E-02	5.82E-06	6.48E-04	1.05E-03	1.86E-04	5.57E-04	3.62E-04	3.71E-04	7.99E-05	5.71E-05	1.56E-08	1.86E-04	1.06E-04
11	D75	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.57E-06
11	D75	80	Combination Short Haul Truck	5	0.00E+00	2.30E-06	1.64E-07	1.90E+00	7.25E-09	2.04E-03	1.68E-06	2.36E-03	1.39E-04	3.43E-05	1.37E-04	4.85E-05	4.82E-05	2.87E-04	6.36E-06	0.00E+00	8.88E-05	4.45E-04
11	D75	80	Combination Long Haul Truck	5	0.00E+00	2.06E-06	1.38E-07	1.76E+00	8.38E-09	2.11E-03	1.56E-06	2.29E-03	1.36E-04	2.74E-05	1.41E-04	4.18E-05	4.20E-05	2.68E-04	5.88E-06	0.00E+00	9.94E-05	4.32E-04
11	D76	80	Passenger Car	133	0.00E+00	1.63E-06	1.76E-07	6.22E+00	1.13E-05	4.33E-02	3.61E-06	2.74E-04	7.34E-04	1.28E-04	3.52E-04	2.27E-04	2.33E-04	2.09E-05	3.13E-05	8.78E-09	1.19E-04	4.28E-05
11	D76	80	Passenger Truck	224	0.00E+00	3.49E-06	3.70E-07	1.44E+01	2.24E-05	7.97E-02	7.31E-06	8.15E-04	1.32E-03	2.34E-04	7.00E-04	4.55E-04	4.66E-04	1.00E-04	7.18E-05	1.96E-08	2.34E-04	1.33E-04
11	D76	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D76	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.30E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.23E-04
11	D76	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.21E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.04E-04
11	D77	80	Passenger Car	101	0.00E+00	1.23E-06	1.33E-07	4.70E+00	8.55E-06	3.28E-02	2.73E-06	2.07E-04	5.55E-04	9.65E-05	2.66E-04	1.71E-04	1.76E-04	1.58E-05	2.37E-05	6.64E-09	9.00E-05	3.24E-05
11	D77	80	Passenger Truck	169	0.00E+00	2.64E-06	2.80E-07	1.09E+01	1.69E-05	6.03E-02	5.53E-06	6.16E-04	9.96E-04	1.77E-04	5.29E-04	3.44E-04	3.52E-04	7.59E-05	5.43E-05	1.48E-08	1.77E-04	1.01E-04
11	D77	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.64E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.50E-05	8.65E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.76E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.15E-09	1.19E-01	9.87E-08	2.35E-04	1.33E-07	6.30E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	D77	80	Combination Short Haul Truck	7	0.00E+00	2.99E-06	2.14E-07	2.47E+00	9.43E-09	2.65E-03	2.18E-06	3.07E-03	1.81E-04	4.46E-05	1.78E-04	6.31E-05	6.26E-05	3.73E-04	8.27E-06	0.00E+00	1.15E-04	5.78E-04
11	D77	80	Combination Long Haul Truck	6	0.00E+00	2.68E-06	1.80E-07	2.28E+00	1.09E-08	2.74E-03	2.03E-06	2.98E-03	1.77E-04	3.56E-05	1.84E-04	5.43E-05	5.46E-05	3.49E-04	7.65E-06	0.00E+00	1.29E-04	5.61E-04
11	D78	80	Passenger Car	71	0.00E+00	8.65E-07	9.36E-08	3.31E+00	6.02E-06	2.31E-02	1.92E-06	1.46E-04	3.91E-04	6.79E-05	1.87E-04	1.21E-04	1.24E-04	1.11E-05	1.67E-05	4.67E-09	6.34E-05	2.28E-05
11	D78	80	Passenger Truck	119	0.00E+00	1.86E-06	1.97E-07	7.65E+00	1.19E-05	4.24E-02	3.89E-06	4.34E-04	7.01E-04	1.24E-04	3.73E-04	2.42E-04	2.48E-04	5.34E-05	3.82E-05	1.04E-08	1.25E-04	7.08E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	1.97E-06	9.81E-08	1.94E+00	1.59E-06	3.88E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.95E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.89E-04
11	D78	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.30E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.23E-04
11	D78	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.21E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.04E-04
11	D79	70	Passenger Car	178	0.00E+00	2.33E-06	2.52E-07	8.56E+00	1.62E-05	6.07E-02	5.18E-06	3.57E-04	1.38E-03	2.22E-04	5.05E-04	3.25E-04	3.34E-04	3.19E-05	4.30E-05	1.17E-08	1.71E-04	5.58E-05
11	D79	70	Passenger Truck	299	0.00E+00	5.11E-06	5.41E-07	1.97E+01	3.23E-05	1.12E-01	1.06E-05	1.12E-03	2.52E-03	4.09E-04	1.01E-03	6.59E-04	6.75E-04	1.45E-04	9.82E-05	2.63E-08	3.38E-04	1.84E-04
11	D79	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.91E-04
11	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.68E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
11	D79	70	Combination Short Haul Truck	14	0.00E+00	7.35E-06	5.22E-07	5.32E+00	2.39E-08	6.32E-03	5.39E-06	7.72E-03	5.59E-04	1.22E-04	4.47E-04	1.54E-04	1.54E-04	8.03E-04	1.78E-05	0.00E+00	2.93E-04	1.45E-03
11	D79	70	Combination Long Haul Truck	13	0.00E+00	6.64E-06	4.44E-07	4.97E+00	2.75E-08	6.70E-03	5.04E-06	7.61E-03	5.55E-04	1.01E-04	4.63E-04	1.34E-04	1.36E-04	7.59E-04	1.66E-05	0.00E+00	3.27E-04	1.43E-03
10	D80	70	Passenger Car	400	0.00E+00	5.23E-06	5.65E-07	1.92E+01	3.64E-05	1.36E-01	1.16E-05	8.01E-04	3.10E-03	4.97E-04	1.13E-03	7.29E-04	7.48E-04	7.16E-05	9.64E-05	2.63E-08	3.83E-04	1.25E-04
10	D80	70	Passenger Truck	669	0.00E+00	1.15E-05	1.21E-06	4.42E+01	7.24E-05	2.50E-01	2.38E-05	2.50E-03	5.64E-03	9.16E-04	2.27E-03	1.48E-03	1.51E-03	3.24E-04	2.20E-04	5.89E-08	7.57E-04	4.12E-04
10	D80	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.67E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.12E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	D80	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.86E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
10	D80	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.74E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
10	D81	70	Passenger Car	140	0.00E+00	1.83E-06	1.98E-07	6.71E+00	1.27E-05	4.76E-02	4.06E-06	2.80E-04	1.08E-03	1.74E-04	3.96E-04	2.55E-04	2.62E-04	2.50E-05	3.37E-05	9.19E-09	1.34E-04	4.38E-05
10	D81	70	Passenger Truck	234	0.00E+00	4.01E-06	4.24E-07	1.55E+01	2.53E-05	8.76E-02	8.32E-06	8.76E-04	1.97E-03	3.21E-04	7.94E-04	5.16E-04	5.29E-04	1.14E-04	7.70E-05	2.06E-08	2.65E-04	1.44E-04
10	D81	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	D81	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.72E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	D81	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
11	D82	70	Passenger Car	200	0.00E+00	2.62E-06	2.83E-07	9.62E+00	1.82E-05	6.82E-02	5.83E-06	4.02E-04	1.55E-03	2.49E-04	5.67E-04	3.66E-04	3.75E-04	3.59E-05	4.83E-05	1.32E-08	1.92E-04	6.27E-05
11	D82	70	Passenger Truck	336	0.00E+00	5.74E-06	6.08E-07	2.22E+01	3.63E-05	1.26E-01	1.19E-05	1.26E-03	2.83E-03	4.59E-04	1.14E-03	7.40E-04	7.58E-04	1.63E-04	1.10E-04	2.95E-08	3.80E-04	2.07E-04
11	D83	80	Passenger Car	932	0.00E+00	1.14E-05	1.23E-06	4.34E+01	7.90E-05	3.03E-01	2.52E-05	1.92E-03	5.13E-03	8.92E-04	2.46E-03	1.58E-03	1.63E-03	1.46E-04	2.19E-04	6.13E-08	8.32E-04	2.99E-04
11	D83	80	Passenger Truck	1562	0.00E+00	2.44E-05	2.59E-06	1.00E+02	1.56E-04	5.57E-01	5.11E-05	5.69E-03	9.20E-03	1.63E-03	4.89E-03	3.18E-03	3.25E-03	7.01E-04	5.02E-04	1.37E-07	1.64E-03	9.30E-04
11	D83	80	Single Unit Short Haul Truck	59	0.00E+00	1.11E-05	5.53E-07	1.09E+01	8.95E-06	2.19E-02	1.18E-05	5.71E-03	6.99E-04	1.58E-04	1.35E-03	3.30E-04	3.35E-04	1.10E-03	4.40E-05	1.75E-08	1.02E-03	1.07E-03
11	D83	80	Single Unit Long Haul Truck	3	0.00E+00	4.84E-07	2.38E-08	4.62E-01	3.83E-07	9.11E-04	5.15E-07	2.44E-04	3.19E-05	6.98E-06	5.91E-05	1.42E-05	1.44E-05	4.61E-05	1.86E-06	7.28E-10	4.47E-05	4.57E-05
11	D83	80	Combination Short Haul Truck	66	0.00E+00	2.92E-05	2.09E-06	2.41E+01	9.21E-08	2.59E-02	2.13E-05	3.00E-02	1.77E-03	4.35E-04	1.74E-03	6.16E-04	6.12E-04	3.64E-03	8.08E-05	0.00E+00	1.13E-03	5.65E-03
11	D83	80	Combination Long Haul Truck	61	0.00E+

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D87	80	Combination Short Haul Truck	51	0.00E+00	2.23E-05	1.59E-06	1.84E+01	7.04E-08	1.98E-02	1.63E-05	2.29E-02	1.35E-03	3.33E-04	1.33E-03	4.71E-04	4.67E-04	2.78E-03	6.17E-05	0.00E+00	8.61E-04	4.31E-03
11	D87	80	Combination Long Haul Truck	46	0.00E+00	2.00E-05	1.34E-06	1.70E+01	8.13E-08	2.05E-02	1.51E-05	2.22E-02	1.32E-03	2.66E-04	1.37E-03	4.05E-04	4.07E-04	2.60E-03	5.71E-05	0.00E+00	9.64E-04	4.19E-03
11	D88	80	Passenger Car	405	0.00E+00	4.93E-06	5.33E-07	1.89E+01	3.43E-05	1.31E-01	1.10E-05	8.31E-04	2.22E-03	3.87E-04	1.07E-03	6.87E-04	7.05E-04	6.34E-05	9.50E-05	2.66E-08	3.61E-04	1.30E-04
11	D88	80	Passenger Truck	677	0.00E+00	1.06E-05	1.12E-06	4.36E+01	6.78E-05	2.42E-01	2.22E-05	2.47E-03	3.99E-03	7.08E-04	2.12E-03	1.38E-03	1.41E-03	3.04E-04	2.18E-04	5.93E-08	7.10E-04	4.03E-04
11	D88	80	Single Unit Short Haul Truck	44	0.00E+00	8.26E-06	4.10E-07	8.10E+00	6.64E-06	1.62E-02	8.79E-06	4.23E-03	5.19E-04	1.17E-04	1.00E-03	2.45E-04	2.49E-04	8.13E-04	3.26E-05	1.30E-08	7.56E-04	7.92E-04
11	D88	80	Single Unit Long Haul Truck	2	0.00E+00	3.59E-07	1.77E-08	3.43E-01	2.84E-07	6.76E-04	3.82E-07	1.81E-04	2.37E-05	5.18E-06	4.38E-05	1.05E-05	1.07E-05	3.42E-05	1.38E-06	5.40E-10	3.31E-05	3.39E-05
11	D88	80	Combination Short Haul Truck	47	0.00E+00	2.07E-05	1.48E-06	1.71E+01	6.53E-08	1.83E-02	1.51E-05	2.12E-02	1.25E-03	3.09E-04	1.23E-03	4.37E-04	4.33E-04	2.58E-03	5.73E-05	0.00E+00	7.99E-04	4.00E-03
11	D88	80	Combination Long Haul Truck	43	0.00E+00	1.85E-05	1.25E-06	1.58E+01	7.54E-08	1.90E-02	1.40E-05	2.06E-02	1.22E-03	2.46E-04	1.27E-03	3.76E-04	3.78E-04	2.42E-03	5.30E-05	0.00E+00	8.95E-04	3.89E-03
9	D89	60	Passenger Car	49	0.00E+00	7.34E-07	7.94E-08	2.46E+00	5.11E-06	1.90E-02	1.63E-06	9.99E-05	4.97E-04	7.63E-05	1.59E-04	1.02E-04	1.05E-04	1.02E-05	1.23E-05	3.39E-09	5.38E-05	1.56E-05
9	D89	60	Passenger Truck	82	0.00E+00	1.62E-06	1.71E-07	5.61E+00	1.01E-05	3.39E-02	3.34E-06	3.26E-04	9.12E-04	1.42E-04	3.17E-04	2.07E-04	2.12E-04	4.34E-05	2.79E-05	7.70E-09	1.06E-04	5.40E-05
9	D89	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.02E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	D89	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.07E-07	1.00E+00	5.45E-09	1.35E-03	1.14E-06	1.67E-03	1.43E-04	2.84E-05	9.79E-05	3.19E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	D89	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	8.99E-08	9.38E-01	6.25E-09	1.45E-03	1.06E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.31E-05	3.12E-04
9	D90	60	Passenger Car	27	0.00E+00	3.98E-07	4.31E-08	1.33E+00	2.77E-06	1.03E-02	8.85E-07	5.41E-05	2.69E-04	4.14E-05	8.61E-05	5.55E-05	5.70E-05	5.55E-06	6.68E-06	1.84E-09	2.92E-05	8.46E-06
9	D90	60	Passenger Truck	44	0.00E+00	8.78E-07	9.27E-08	3.04E+00	5.49E-06	1.84E-02	1.81E-06	1.77E-04	4.94E-04	7.67E-05	1.72E-04	1.12E-04	1.15E-04	2.35E-05	1.51E-05	4.17E-09	5.72E-05	2.93E-05
9	D90	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.02E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.54E-05
9	D90	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.68E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	D90	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.62E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
10	D91	70	Passenger Car	107	0.00E+00	1.40E-06	1.51E-07	5.13E+00	9.73E-06	3.64E-02	3.11E-06	2.14E-04	8.29E-04	1.33E-04	3.03E-04	1.95E-04	2.00E-04	1.91E-05	2.58E-05	7.03E-09	1.02E-04	3.35E-05
10	D91	70	Passenger Truck	179	0.00E+00	3.06E-06	3.24E-07	1.18E+01	1.94E-05	6.70E-02	6.36E-06	6.70E-04	1.51E-03	2.45E-04	6.07E-04	3.95E-04	4.05E-04	8.68E-05	5.89E-05	1.58E-08	2.03E-04	1.10E-04
10	D91	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.82E-03	1.92E-06	8.88E-04	1.27E-04	2.54E-05	2.18E-04	5.39E-05	5.47E-05	1.41E-04	5.69E-06	2.30E-09	1.64E-04	1.66E-04
10	D91	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.00E-04
10	D91	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.66E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.90E-04
10	D92	70	Passenger Car	248	0.00E+00	3.24E-06	3.51E-07	1.19E+01	2.26E-05	8.44E-02	7.21E-06	4.97E-04	1.92E-03	3.08E-04	7.01E-04	4.52E-04	4.64E-04	4.44E-05	5.98E-05	1.63E-08	2.37E-04	7.76E-05
10	D92	70	Passenger Truck	415	0.00E+00	7.10E-06	7.52E-07	2.74E+01	4.49E-05	1.55E-01	1.48E-05	1.55E-03	3.50E-03	5.68E-04	1.41E-03	9.16E-04	9.38E-04	2.01E-04	1.37E-04	3.65E-08	4.70E-04	2.56E-04
10	D92	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.66E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	D92	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	D92	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
10	D93	70	Passenger Car	98	0.00E+00	1.29E-06	1.39E-07	4.72E+00	8.95E-06	3.35E-02	2.86E-06	1.97E-04	7.62E-04	1.22E-04	2.78E-04	1.79E-04	1.84E-04	1.76E-05	2.37E-05	6.46E-09	9.42E-05	3.08E-05
10	D93	70	Passenger Truck	165	0.00E+00	2.82E-06	2.98E-07	1.09E+01	1.78E-05	6.16E-02	5.85E-06	6.16E-04	1.39E-03	2.25E-04	5.58E-04	3.63E-04	3.72E-04	7.98E-05	5.42E-05	1.45E-08	1.86E-04	1.01E-04
10	D93	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.89E-08	1.23E+00	1.29E-06	2.47E-03	1.68E-06	7.77E-04	1.11E-04	2.22E-05	1.91E-04	4.71E-05	4.79E-05	1.24E-04	4.98E-06	2.01E-09	1.43E-04	1.46E-04
10	D93	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.15E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	D93	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.84E-04
10	D94	70	Passenger Car	237	0.00E+00	3.09E-06	3.35E-07	1.14E+01	2.15E-05	8.06E-02	6.88E-06	4.74E-04	1.83E-03	2.94E-04	6.70E-04	4.32E-04	4.43E-04	4.24E-05	5.71E-05	1.55E-08	2.27E-04	7.41E-05
10	D94	70	Passenger Truck	396	0.00E+00	6.78E-06	7.18E-07	2.62E+01	4.29E-05	1.48E-01	1.41E-05	1.48E-03	3.34E-03	5.43E-04	1.34E-03	8.74E-04	8.95E-04	1.92E-04	1.30E-04	3.49E-08	4.48E-04	2.44E-04
10	D94	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.55E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	D94	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.58E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.46E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
9	E01	60	Passenger Car	206	0.00E+00	3.08E-06	3.34E-07	1.03E+01	2.15E-05	7.99E-02	6.85E-06	4.19E-04	2.09E-03	3.20E-04	6.67E-04	4.30E-04	4.41E-04	4.30E-05	5.17E-05	1.42E-08	2.26E-04	6.55E-05
9	E01	60	Passenger Truck	344	0.00E+00	6.80E-06	7.18E-07	2.35E+01	4.25E-05	1.42E-01	1.40E-05	1.37E-03	3.83E-03	5.94E-04	1.33E-03	8.68E-04	8.89E-04	1.82E-04	1.17E-04	3.23E-08	4.43E-04	2.27E-04
9	E01	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.88E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.12E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	E01	60	Combination Short Haul Truck	10	0.00E+00	5.85E-06	4.07E-07	3.80E+00	2.07E-08	5.11E-03	4.34E-06	6.34E-03	5.44E-04	1.08E-04	3.72E-04	1.21E-04	1.22E-04	5.73E-04	1.27E-05	0.00E+00	2.50E-04	1.20E-03
9	E01	60	Combination Long Haul Truck	9	0.00E+00	5.25E-06	3.41E-07	3.57E+00	2.37E-08	5.51E-03	4.05E-06	6.29E-03	5.47E-04	9.28E-05	3.83E-04	1.04E-04	1.06E-04	5.45E-04	1.19E-05	0.00E+00	2.78E-04	1.19E-03
9	E02	60	Passenger Car	226	0.00E+00	3.39E-06	3.67E-07	1.14E+01	2.36E-05	8.79E-02	7.54E-06	4.61E-04	2.30E-03	3.52E-04	7.34E-04	4.73E-04	4.85E-04	4.73E-05	5.69E-05	1.57E-08	2.48E-04	7.21E-05
9	E02	60	Passenger Truck	379	0.00E+00	7.48E-06	7.90E-07	2.59E+01	4.68E-05	1.57E-01	1.54E-05	1.50E-03	4.21E-03	6.54E-04	1.47E-03	9.55E-04	9.78E-04	2.01E-04	1.29E-04	3.56E-08	4.87E-04	2.49E-04
9	E02	60	Single Unit Short Haul Truck	10	0.00E+00	2.81E-06	1.41E-07	1.79E+00	2.32E-06	3.47E-03	3.00E-06	1.34E-03	2.28E-04	4.13E-05	3.42E-04	8.43E-05	8.57E-05	1.79E-04	7.24E-06	2.98E-09	2.56E-04	2.51E-04
9	E02	60	Combination Short Haul Truck	8	0.00E+00	4.92E-06	3.43E-07	3.20E+00	1.74E-08	4.31E-03	3.65E-06	5.34E-03	4.58E-04	9.07E-05	3.13E-04	1.02E-04	1.02E-04	4.83E-04	1.07E-05	0.00E+00	2.11E-04	1.01E-03
9	E02	60	Combination Long Haul Truck	8	0.00E+00	4.42E-06	2.88E-07	3.00E+00	2.00E-08	4.64E-03	3.41E-06	5.30E-03	4.61E-04	7.82E-05	3.23E-04	8.78E-05	8.89E-05	4.59E-04	1.01E-05	0.00E+00	2.34E-04	9.98E-04
11	E03	80	Passenger Car	156	0.00E+00	1.89E-06	2.05E-07	7.25E+00	1.32E-05	5.05E-02	4.21E-06	3.19E-04	8.55E-04	1.49E-04	4.10E-04	2.64E-04	2.71E-04	2.44E-05	3.65E-05	1.02E-08	1.39E-04	4.99E-05
11	E03	80	Passenger Truck	260	0.00E+00	4.07E-06	4.31E-07	1.68E+01	2.61E-05	9.29E-02	8.52E-06	9.49E-04	1.53E-03	2.72E-04	8.16E-04	5.30E-04	5.43E-04	1.17E-04	8.37E-05	2.28E-08	2.73E-04	1.55E-04
11	E03	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.76E-03	4.20E-06	2.02E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.19E-09	3.62E-04	3.79E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.46E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.66E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.12E-06	1.64E-05	6.62E-07	2.58E-10	1.58E-05	1.62E-05
11	E03	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.14E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	E03	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.96E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E04	80	Passenger Car	250	0.00E+00	3.04E-06	3.29E-07	1.16E+01	2.12E-05	8.11E-02	6.76E-06	5.13E-04	1.37E-03	2.39E-04	6.58E-04	4.24E-04	4.35E-04	3.91E-05	5.86E-05	1.64E-08	2.23E-04	8.02E-05
11	E04	80	Passenger Truck	418	0.00E+00	6.53E-06	6.93E-07	2.69E+01	4.18E-05	1.49E-01	1.37E-05	1.52E-03	2.46E-03	4.37E-04	1.31E-03	8.51E-04	8.71E-04	1.88E-04	1.34E-04	3.66E-08	4.38E-04	2.49E-04
11	E04	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.00E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.04E-05	9.19E-05	3.00E-04	1.21E-05	4.79E-09	2.79E-04	2.93E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.50E-04	1.41E-07	6.69E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.96E-06	1.26E-05	5.11E-07	2.00E-10	1.22E-05	1.25E-05
11	E04	80	Combination Short Haul Truck	9	0.00E+00	4.14E-06	2.96E-07	3.42E+00	1.31E-08	3.67E-03	3.02E-06	4.25E-03	2.50E-04	6.17E-05	2.46E-04	8.74E-05	8.67E-05	5.16E-04	1.15E-05	0.00E+00	1.60E-04	8.00E-04
11	E04	80	Combination Long Haul Truck	9	0.00E+00	3.71E-06	2.49E-07	3.16E+00	1.51E-08	3.80E-03	2.81E-06	4.12E-03	2.45E-04	4.93E-05	2.55E-04	7.52E-05	7.56E-05	4.83E-04	1.06E-05	0.00E+00	1.79E-04	7.77E-04
11	E05	80	Passenger Car	160	0.00E+00	1.95E-06	2.11E-07	7.46E+00	1.36E-05	5.19E-02	4.33E-06	3.29E-04	8.80E-04	1.53E-04	4.22E-04	2.72E-04	2.79E-04	2.51E-05	3.76E-05	1.05E-08	1.43E-04	5.14E-05
11	E05	80	Passenger Truck	268	0.00E+00	4.18E-06	4.44E-07	1.72E+01	2.68E-05	9.56E-02	8.77E-06	9.77E-04	1.58E-03	2.80E-04	8.39E-04	5.45E-04	5.58E-04	1.20E-04	8.61E-05	2.34E-08	2.81E-04	1.60E-04
11	E05	80	Single Unit Short Haul Truck	20	0.00E+00	3.77E-06	1.87E-07	3.70E+00	3.03E-06	7.41E-03	4.01E-06	1.93E-03	2.37E-04	5.36E-05	4.59E-04	1.12E-04	1.14E-04	3.71E-04	1.49E-05	5.91E-09	3.45E-04	3.62E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	1.64E-07	8.08E-09	1.56E-01	1.30E-07	3.09E-04	1.74E-07	8.27E-05	1.08E-05	2.36E-06	2.00E-05	4.80E-06	4.89E-06	1.56E-05	6.32E-07	2.47E-10	1.51E-05	1.55E-05
11	E05	80	Combination Short Haul Truck	13	0.00E+00	5.52E-06	3.95E-07	4.56E+00	1.74E-08	4.89E-03	4.03E-06	5.66E-03	3.34E-04	8.23E-05	3.29E-04	1.17E-04	1.16E-04	6.88E-04	1.53E-05	0.00E+00	2.13E-04	1.07E-03
11	E05	80	Combination Long Haul Truck	11	0.00E+00	4.94E-06	3.32E-07	4.22E+00	2.01E-08	5.06E-03	3.74E-06	5.50E-03	3.27E-04	6.57E-05	3.39E-04	1.00E-04	1.01E-04	6.44E-04	1.41E-05	0.00E+00	2.39E-04	1.04E-03
11	E06	80	Passenger Car	95	0.00E+00	1.16E-06	1.25E-07	4.43E+00	8.05E-06	3.08E-02	2.57E-06	1.95E-04	5.22E-04	9.08E-05	2.50E-04	1.61E-04	1.66E-04	1.49E-05	2.23E-05	6.25E-09	8.47E-05	3.05E-05
11	E06	80	Passenger Truck	159	0.00E+00	2.48E-06	2.63E-07	1.02E+01	1.59E-05	5.67E-02	5.20E-06	5.80E-04	9.37E-04	1.66E-04	4.98E-04	3.23E-04	3.31E-04	7.14E-05	5.11E-05	1.39E-08	1.67E-04	9.47E-05
11	E06	80	Single Unit Short Haul Truck	15	0.00E+00	2.87E-06	1.43E-07	2.82E+00	2.31E-06	5.64E-03	3.06E-06	1.47E-03	1.80E-04	4.08E-05	3.49E-04	8.50E-05	8.65E-05	2.83E-04	1.14E-05	4.51E-09	2.63E-04	2.76E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	6.15E-09	1.19E-01	9.87E-08	2.35E-04	1.33E-07	6.30E-05	8.24E-06	1.80E-06	1.52E-05	3.66E-06	3.72E-06	1.19E-05	4.81E-07	1.88E-10	1.15E-05	1.18E-05
11	E06	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.78E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	E06	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.67E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.91E-04
9	E07	60	Passenger Car	841	0.00E+00	1.26E-05	1.36E-06	4.22E+01	8.78E-05	3.27E-01	2.80E-05	1.72E-03	8.54E-03	1.31E-03	2.73E-03	1.76E-03	1.81E-03	1.76E-04	2.12E-04	5.83E-08	9.24E-04	2.68E-04
9	E07	60	Passenger Truck	1409	0.00E+00	2.78E-05	2.94E-06	9.63E+01	1.74E-04	5.83E-01	5.73E-05	5.59E-03	1.57E-02	2.43E-03	5.45E-03	3.55E-03	3.64E-03	7.46E-04	4.79E-04	1.32E-07	1.81E-03	9.27E-04
9	E07	60	Single Unit Short Haul Truck	45	0.00E+00	1.32E-05	6.61E-07	8.42E+00	1.09E-05	1.63E-02	1.41E-05	6.31E-03	1.07E-03	1.94E-04	1.61E-03	3.96E-04	4.03E-04	8.43E-04	3.40E-05	1.40E-08	1.20E-03	1.18E-03
9	E07	60	Single Unit Long Haul Truck	2	0.00E+00	5.77E-07	2.87E-08	3.59E-01	4.73E-07	6.92E-04	6.16E-07	2.73E-04	4.81E-05	8.59E-06	7.04E-05	1.72E-05	1.75E-05	3.59E-05	1.45E-06	5.96E-10	5.28E-05	5.11E-05
9	E07	60	Combination Short Haul Truck	47	0.00E+00	2.77E-05	1.93E-06	1.80E+01	9.81E-08	2.42E-02	2.05E-05	3.01E-02	2.58E-03	5.10E-04	1.76E-03	5.75E-04	5.76E-04	2.72E-03	6.03E-05	0.00E+00	1.19E-03	5.66E-03
9	E07	60	Combination Long Haul Truck	43	0.00E+00	2.49E-05	1.62E-06	1.69E+01	1.12E-07	2.61E-02	1.92E-05	2.98E-02	2.59E-03	4.40E-04	1.82E-03	4.94E-04	5.00E-04	2.58E-03	5.66E-05	0.00E+00	1.32E-03	5.61E-03
9	E08	60	Passenger Car	1055	0.00E+00	1.58E-05	1.71E-06	5.29E+01	1.10E-04	4.10E-01	3.52E-05	2.15E-03	1.07E-02	1.64E-03	3.42E-03	2.21E-03	2.26E-03	2.20E-04	2.65E-04	7.31E-08	1.16E-03	3.36E-04
9	E08	60	Passenger Truck	1766	0.00E+00	3.49E-05	3.68E-06	1.21E+02	2.18E-04	7.31E-01	7.19E-05	7.01E-03	1.96E-02	3.05E-03	6.83E-03	4.45E-03	4.56E-03	9.35E-04	6.00E-04	1.66E-07	2.27E-03	1.16E-03
9	E08	60	Single Unit Short Haul Truck	40	0.00E+00	1.18E-05	5.91E-07	7.52E+00	9.74E-06	1.46E-02	1.26E-05	5.63E-03	9.57E-04	1.73E-04	1.44E-03	3.54E-04	3.60E-04	7.53E-04	3.04E-05	1.25E-08	1.08E-03	1.06E-03
9	E08	60	Single Unit Long Haul Truck	2	0.00

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E12	60	Single Unit Short Haul Truck	85	0.00E+00	2.50E-05	1.25E-06	1.59E+01	2.06E-05	3.09E-02	2.67E-05	1.19E-02	2.03E-03	3.68E-04	3.04E-03	7.51E-04	7.63E-04	1.60E-03	6.44E-05	2.65E-08	2.28E-03	2.24E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	1.09E-06	5.44E-08	6.81E-01	8.96E-07	1.31E-03	1.17E-06	5.16E-04	9.10E-05	1.63E-05	1.33E-04	3.27E-05	3.32E-05	6.80E-05	2.75E-06	1.13E-09	1.00E-04	9.68E-05
9	E12	60	Combination Short Haul Truck	80	0.00E+00	4.68E-05	3.26E-06	3.04E+01	1.66E-07	4.09E-02	3.47E-05	5.08E-02	4.35E-03	8.62E-04	2.98E-03	9.71E-04	9.72E-04	4.59E-03	1.02E-04	0.00E+00	2.00E-03	9.56E-03
9	E12	60	Combination Long Haul Truck	72	0.00E+00	4.20E-05	2.73E-06	2.85E+01	1.90E-07	4.41E-02	3.24E-05	5.03E-02	4.38E-03	7.43E-04	3.07E-03	8.34E-04	8.45E-04	4.36E-03	9.55E-05	0.00E+00	2.22E-03	9.48E-03
11	E13	80	Passenger Car	330	0.00E+00	4.02E-06	4.35E-07	1.54E+01	2.80E-05	1.07E-01	8.94E-06	6.78E-04	1.82E-03	3.16E-04	8.70E-04	5.61E-04	5.75E-04	5.17E-05	7.75E-05	2.17E-08	2.94E-04	1.06E-04
11	E13	80	Passenger Truck	553	0.00E+00	8.63E-06	9.16E-07	3.56E+01	5.53E-05	1.97E-01	1.81E-05	2.01E-03	3.26E-03	5.78E-04	1.73E-03	1.12E-03	1.15E-03	2.48E-04	1.78E-04	4.84E-08	5.79E-04	3.29E-04
11	E13	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.82E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.77E-05	7.04E-09	4.11E-04	4.30E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.84E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.82E-06	1.86E-05	7.52E-07	2.93E-10	1.80E-05	1.84E-05
11	E13	80	Combination Short Haul Truck	15	0.00E+00	6.44E-06	4.60E-07	5.32E+00	2.03E-08	5.70E-03	4.70E-06	6.61E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.03E-04	1.78E-05	0.00E+00	2.49E-04	1.25E-03
11	E13	80	Combination Long Haul Truck	13	0.00E+00	5.77E-06	3.88E-07	4.92E+00	2.35E-08	5.91E-03	4.37E-06	6.42E-03	3.81E-04	7.67E-05	3.96E-04	1.17E-04	1.18E-04	7.52E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	E14	80	Passenger Car	204	0.00E+00	2.49E-06	2.69E-07	9.51E+00	1.73E-05	6.63E-02	5.53E-06	4.19E-04	1.12E-03	1.95E-04	5.38E-04	3.47E-04	3.56E-04	3.20E-05	4.79E-05	1.34E-08	1.82E-04	6.55E-05
11	E14	80	Passenger Truck	342	0.00E+00	5.34E-06	5.66E-07	2.20E+01	3.42E-05	1.22E-01	1.12E-05	1.25E-03	2.01E-03	3.57E-04	1.07E-03	6.95E-04	7.12E-04	1.54E-04	1.10E-04	2.99E-08	3.58E-04	2.04E-04
11	E14	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.23E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.38E-05	6.49E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.07E-04
11	E14	80	Single Unit Long Haul Truck	1	0.00E+00	9.37E-08	4.62E-09	8.94E-02	7.40E-08	1.76E-04	9.96E-08	4.72E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.61E-07	1.41E-10	8.64E-06	8.84E-06
11	E14	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.78E-04
11	E14	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.04E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
11	E15	80	Passenger Car	261	0.00E+00	3.18E-06	3.44E-07	1.22E+01	2.21E-05	8.47E-02	7.06E-06	5.36E-04	1.44E-03	2.50E-04	6.88E-04	4.43E-04	4.55E-04	4.09E-05	6.13E-05	1.72E-08	2.33E-04	8.38E-05
11	E15	80	Passenger Truck	437	0.00E+00	6.82E-06	7.24E-07	2.81E+01	4.37E-05	1.56E-01	1.43E-05	1.59E-03	2.57E-03	4.57E-04	1.37E-03	8.89E-04	9.11E-04	1.96E-04	1.40E-04	3.82E-08	4.58E-04	2.60E-04
11	E15	80	Single Unit Short Haul Truck	10	0.00E+00	1.79E-06	8.91E-08	1.76E+00	1.44E-06	3.53E-03	1.91E-06	9.20E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	E15	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E+00	1.44E-06	3.53E-03	1.91E-06	9.20E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	E15	80	Combination Short Haul Truck	15	0.00E+00	6.67E-06	4.77E-07	5.51E+00	2.10E-08	5.90E-03	4.87E-06	6.84E-03	4.03E-04	9.94E-05	3.97E-04	1.41E-04	1.40E-04	8.31E-04	1.85E-05	0.00E+00	2.57E-04	1.29E-03
11	E15	80	Combination Long Haul Truck	14	0.00E+00	5.97E-06	4.01E-07	5.10E+00	2.43E-08	6.12E-03	4.52E-06	6.65E-03	3.95E-04	7.94E-05	4.10E-04	1.21E-04	1.22E-04	7.79E-04	1.71E-05	0.00E+00	2.88E-04	1.25E-03
11	E16	80	Passenger Car	267	0.00E+00	3.25E-06	3.51E-07	1.24E+01	2.26E-05	8.65E-02	7.22E-06	5.48E-04	1.47E-03	2.55E-04	7.02E-04	4.53E-04	4.65E-04	4.18E-05	6.26E-05	1.75E-08	2.38E-04	8.56E-05
11	E16	80	Passenger Truck	446	0.00E+00	6.97E-06	7.39E-07	2.87E+01	4.47E-05	1.59E-01	1.46E-05	1.63E-03	2.63E-03	4.67E-04	1.40E-03	9.08E-04	9.30E-04	2.01E-04	1.43E-04	3.90E-08	4.68E-04	2.66E-04
11	E16	80	Single Unit Short Haul Truck	10	0.00E+00	1.79E-06	8.91E-08	1.76E+00	1.44E-06	3.53E-03	1.91E-06	9.20E-04	1.13E-04	2.55E-05	2.18E-04	5.32E-05	5.40E-05	1.77E-04	7.10E-06	2.82E-09	1.64E-04	1.72E-04
11	E16	80	Combination Short Haul Truck	15	0.00E+00	6.44E-06	4.60E-07	5.32E+00	2.03E-08	5.70E-03	4.70E-06	6.61E-03	3.90E-04	9.60E-05	3.83E-04	1.36E-04	1.35E-04	8.03E-04	1.78E-05	0.00E+00	2.49E-04	1.25E-03
11	E16	80	Combination Long Haul Truck	13	0.00E+00	5.77E-06	3.88E-07	4.92E+00	2.35E-08	5.91E-03	4.37E-06	6.42E-03	3.81E-04	7.67E-05	3.96E-04	1.17E-04	1.18E-04	7.52E-04	1.65E-05	0.00E+00	2.78E-04	1.21E-03
11	E17	80	Passenger Car	198	0.00E+00	2.41E-06	2.61E-07	9.22E+00	1.68E-05	6.42E-02	5.35E-06	4.06E-04	1.09E-03	1.89E-04	5.21E-04	3.36E-04	3.45E-04	3.10E-05	4.64E-05	1.30E-08	1.76E-04	6.35E-05
11	E17	80	Passenger Truck	331	0.00E+00	5.17E-06	5.48E-07	2.13E+01	3.31E-05	1.18E-01	1.08E-05	1.21E-03	1.95E-03	3.46E-04	1.04E-03	6.74E-04	6.90E-04	1.49E-04	1.06E-04	2.90E-08	3.47E-04	1.97E-04
11	E17	80	Single Unit Short Haul Truck	11	0.00E+00	2.15E-06	1.07E-07	2.11E+00	1.73E-06	4.23E-03	2.29E-06	1.10E-03	1.35E-04	3.06E-05	2.62E-04	6.38E-05	6.49E-05	2.12E-04	8.52E-06	3.38E-09	1.97E-04	2.07E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	9.37E-08	4.62E-09	8.94E-02	7.40E-08	1.76E-04	9.96E-08	4.72E-05	6.18E-06	1.35E-06	1.14E-05	2.75E-06	2.79E-06	8.93E-06	3.61E-07	1.41E-10	8.64E-06	8.84E-06
11	E17	80	Combination Short Haul Truck	9	0.00E+00	3.91E-06	2.80E-07	3.23E+00	1.23E-08	3.46E-03	2.86E-06	4.01E-03	2.36E-04	5.83E-05	2.33E-04	8.25E-05	8.19E-05	4.87E-04	1.08E-05	0.00E+00	1.51E-04	7.56E-04
11	E17	80	Combination Long Haul Truck	8	0.00E+00	3.50E-06	2.35E-07	2.99E+00	1.42E-08	3.59E-03	2.65E-06	3.90E-03	2.31E-04	4.66E-05	2.40E-04	7.10E-05	7.14E-05	4.56E-04	1.00E-05	0.00E+00	1.69E-04	7.34E-04
11	E18	80	Passenger Car	148	0.00E+00	1.80E-06	1.95E-07	6.90E+00	1.25E-05	4.81E-02	4.01E-06	3.04E-04	8.14E-04	1.42E-04	3.90E-04	2.51E-04	2.58E-04	2.32E-05	3.48E-05	9.74E-09	1.32E-04	4.75E-05
11	E18	80	Passenger Truck	248	0.00E+00	3.87E-06	4.11E-07	1.59E+01	2.48E-05	8.85E-02	8.11E-06	9.04E-04	1.46E-03	2.59E-04	7.76E-04	5.04E-04	5.17E-04	1.11E-04	7.96E-05	2.17E-08	2.60E-04	1.48E-04
11	E18	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	E18	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.78E-04
11	E18	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.04E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
9	E19	60	Passenger Car	401	0.00E+00	6.01E-06	6.50E-07	2.01E+01	4.18E-05	1.56E-01	1.34E-05	8.17E-04	4.07E-03	6.25E-04	1.30E-03	8.38E-04	8.60E-04	8.37E-05	1.01E-04	2.78E-08	4.40E-04	1.28E-04
9	E19	60	Passenger Truck	671	0.00E+00	1.33E-05	1.40E-06	4.59E+01	8.28E-05	2.78E-01	2.73E-05	2.67E-03	7.46E-03	1.16E-03	2.60E-03	1.69E-03	1.73E-03	3.55E-04	2.28E-04	6.30E-08	8.64E-04	4.42E-04
9	E19	60	Single Unit Short Haul Truck	27	0.00E+00	7.87E-06	3.94E-07	5.02E+00	6.49E-06	9.71E-03	8.40E-06	3.76E-03	6.38E-04	1.16E-04	9.57E-04	2.36E-04	2.40E-04	5.02E-04	2.03E-05	8.35E-09	7.17E-04	7.04E-04
9	E19	60	Single Unit Long Haul Truck	1	0.00E+00	3.44E-07	1.71E-08	2.14E-01	2.82E-07	4.12E-04	3.67E-07	1.62E-04	2.86E-05	5.12E-06	4.19E-05	1.03E-05	1.04E-05	2.14E-05	8.66E-07	3.55E-10	3.15E-05	3.04E-05
9	E19	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	9.02E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	E19	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.94E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.68E-03
9	E20	60	Passenger Car	532	0.00E+00	7.97E-06	8.62E-07	2.67E+01	5.55E-05	2.07E-01	1.77E-05	1.08E-03	5.40E-03	8.28E-04	1.72E-03	1.11E-03	1.14E-03	1.11E-04	1.34E-04	3.68E-08	5.84E-04	1.69E-04
9	E20	60	Passenger Truck	890	0.00E+00	1.76E-05	1.86E-06	6.09E+01	1.10E-04	3.68E-01	3.62E-05	3.54E-03	9.90E-03	1.54E-03	3.44E-03	2.24E-03	2.30E-03	4.71E-04	3.02E-04	8.36E-08	1.15E-03	5.86E-04
9	E20	60	Single Unit Short Haul Truck	28	0.00E+00	8.15E-06	4.08E-07	5.20E+00	6.72E-06	1.01E-02	8.70E-06	3.89E-03	6.61E-04	1.20E-04	9.91E-04	2.45E-04	2.49E-04	5.20E-04	2.10E-05	8.65E-09	7.42E-04	7.29E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	3.56E-07	1.77E-08	2.22E-01	2.92E-07	4.27E-04	3.80E-07	1.68E-04	2.97E-05	5.30E-06	4.34E-05	1.06E-05	1.08E-05	2.21E-05	8.97E-07	3.68E-10	3.26E-05	3.15E-05
9	E20	60	Combination Short Haul Truck	20	0.00E+00	1.17E-05	8.15E-07	7.61E+00	4.14E-08	1.02E-02	8.67E-06	1.27E-02	1.09E-03	2.15E-04	7.44E-04	2.43E-04	2.43E-04	1.15E-03	2.55E-05	0.00E+00	5.01E-04	2.39E-03
9	E20	60	Combination Long Haul Truck	18	0.00E+00	1.05E-05	6.83E-07	7.13E+00	4.75E-08	1.10E-02	8.09E-06	1.26E-02	1.09E-03	1.86E-04	7.67E-04	2.08E-04	2.11E-04	1.09E-03	2.39E-05	0.00E+00	5.56E-04	2.37E-03
11	E21	80	Passenger Car	133	0.00E+00	1.62E-06	1.75E-07	6.18E+00	1.12E-05	4.31E-02	3.59E-06	2.73E-04	7.30E-04	1.27E-04	3.50E-04	2.25E-04	2.31E-04	2.08E-05	3.12E-05	8.73E-09	1.18E-04	4.26E-05
11	E21	80	Passenger Truck	222	0.00E+00	3.47E-06	3.68E-07	1.43E+01	2.22E-05	7.93E-02	7.27E-06	8.10E-04	1.31E-03	2.32E-04	6.96E-04	4.52E-04	4.63E-04	9.98E-05	7.14E-05	1.94E-08	2.33E-04	1.32E-04
11	E21	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.44E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.21E-04
11	E21	80	Combination Short Haul Truck	6	0.00E+00	2.76E-06	1.97E-07	2.28E+00	8.70E-09	2.44E-03	2.02E-06	2.83E-03	1.67E-04	4.11E-05	1.64E-04	5.83E-05	5.78E-05	3.44E-04	7.64E-06	0.00E+00	1.07E-04	5.34E-04
11	E21	80	Combination Long Haul Truck	6	0.00E+00	2.47E-06	1.66E-07	2.11E+00	1.01E-08	2.53E-03	1.87E-06	2.75E-03	1.63E-04	3.29E-05	1.70E-04	5.01E-05	5.04E-05	3.22E-04	7.06E-06	0.00E+00	1.19E-04	5.18E-04
11	E22	80	Passenger Car	10	0.00E+00	1.18E-07	1.28E-08	4.53E-01	8.24E-07	3.16E-03	2.63E-07	2.00E-05	5.35E-05	9.29E-06	2.56E-05	1.65E-05	1.69E-05	1.52E-06	2.28E-06	6.39E-10	8.67E-06	3.12E-06
11	E22	80	Passenger Truck	16	0.00E+00	2.54E-07	2.70E-08	1.05E+00	1.63E-06	5.81E-03	5.33E-07	5.93E-05	9.59E-05	1.70E-05	5.10E-05	3.31E-05	3.39E-05	7.31E-06	5.23E-06	1.42E-09	1.71E-05	9.69E-06
11	E22	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.20E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E22	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.72E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.89E-05
11	E22	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.58E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.63E-05
11	E23	80	Passenger Car	133	0.00E+00	1.62E-06	1.75E-07	6.18E+00	1.12E-05	4.31E-02	3.59E-06	2.73E-04	7.30E-04	1.27E-04	3.50E-04	2.25E-04	2.31E-04	2.08E-05	3.12E-05	8.73E-09	1.18E-04	4.26E-05
11	E23	80	Passenger Truck	222	0.00E+00	3.47E-06	3.68E-07	1.43E+01	2.22E-05	7.93E-02	7.27E-06	8.10E-04	1.31E-03	2.32E-04	6.96E-04	4.52E-04	4.63E-04	9.98E-05	7.14E-05	1.94E-08	2.33E-04	1.32E-04
11	E23	80	Single Unit Short Haul Truck	7	0.00E+00	1.26E-06	6.24E-08	1.23E+00	1.01E-06	2.47E-03	1.34E-06	6.44E-04	7.89E-05	1.79E-05	1.53E-04	3.72E-05	3.78E-05	1.24E-04	4.97E-06	1.97E-09	1.15E-04	1.21E-04
11	E23	80	Combination Short Haul Truck	6	0.00E+00	2.76E-06	1.97E-07	2.28E+00	8.70E-09	2.44E-03	2.02E-06	2.83E-03	1.67E-04	4.11E-05	1.64E-04	5.83E-05	5.78E-05	3.44E-04	7.64E-06	0.00E+00	1.07E-04	5.34E-04
11	E23	80	Combination Long Haul Truck	6	0.00E+00	2.47E-06	1.66E-07	2.11E+00	1.01E-08	2.53E-03	1.87E-06	2.75E-03	1.63E-04	3.29E-05	1.70E-04	5.01E-05	5.04E-05	3.22E-04	7.06E-06	0.00E+00	1.19E-04	5.18E-04
11	E24	80	Passenger Car	10	0.00E+00	1.18E-07	1.28E-08	4.53E-01	8.24E-07	3.16E-03	2.63E-07	2.00E-05	5.35E-05	9.29E-06	2.56E-05	1.65E-05	1.69E-05	1.52E-06	2.28E-06	6.39E-10	8.67E-06	3.12E-06
11	E24	80	Passenger Truck	16	0.00E+00	2.54E-07	2.70E-08	1.05E+00	1.63E-06	5.81E-03	5.33E-07	5.93E-05	9.59E-05	1.70E-05	5.10E-05	3.31E-05	3.39E-05	7.31E-06	5.23E-06	1.42E-09	1.71E-05	9.69E-06
11	E24	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.20E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	E24	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.72E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.89E-05
11	E24	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.58E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.63E-05
10	E25	70	Passenger Car	227	0.00E+00	2.97E-06	3.22E-07	1.09E+01	2.07E-05	7.74E-02	6.61E-06	4.55E-04	1.76E-03	2.83E-04	6.43E-04	4.15E-04	4.25E-04	4.07E-05	5.48E-05	1.49E-08	2.18E-04	7.12E-05
10	E25	70	Passenger Truck	381	0.00E+00	6.51E-06	6.89E-07	2.51E+01	4.12E-05	1.42E-01	1.35E-05	1.42E-03	3.21E-03	5.21E-04	1.29E-03	8.40E-04	8.60E-04	1.85E-04	1.25E-04	3.35E-08	4.31E-04	2.34E-04
10	E25	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	E25	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.18E+00	5.30E-09	1.41E-03	1.20E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.78E-04	3.96E-06	0.00E+00	6.52E-05	3.23E-04
10	E25	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.87E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.19E-04
10	E26	70	Passenger Car	286	0.00E+00	3.74E-06	4.05E-07	1.37E+01	2.61E-05	9.75E-02	8.33E-06	5.74E-04	2.22E-03	3.56E-04	8.10E-04	5.22E-04	5.36E-04	5.13E-05	6.91E-05	1.88E-08	2.74E-04	8.97E-05
10	E26	70	Passenger Truck	480	0.00E+00	8.21E-06	8.68E-07	3.17E+01	5.19E-05	1.79E-01	1.70E-05	1.79E-03	4.04E-03	6.57E-04	1.63E-03	1.06E-03	1.08E-03	2.33E-04	1.58E-04	4.22E-08	5.42E-04	2.95E-04
10	E26	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	E26	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E26	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E27	70	Passenger Car	287	0.00E+00	3.75E-06	4.06E-07	1.38E+01	2.61E-05	9.78E-02	8.35E-06	5.75E-04	2.23E-03	3.57E-04	8.12E-04	5.24E-04	5.37E-04	5.14E-05	6.92E-05	1.89E-08	2.75E-04	8.99E-05
10	E27	70	Passenger Truck	481	0.00E+00

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E32	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.01E-07	1.59E+00	1.66E-06	3.17E-03	2.16E-06	9.99E-04	1.43E-04	2.85E-05	2.46E-04	6.06E-05	6.16E-05	1.59E-04	6.40E-06	2.58E-09	1.84E-04	1.87E-04
10	E32	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.97E+00	8.84E-09	2.34E-03	2.00E-06	2.86E-03	2.07E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.97E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E32	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.06E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.31E-04
9	E33	60	Passenger Car	624	0.00E+00	9.36E-06	1.01E-06	3.13E+01	6.51E-05	2.43E-01	2.08E-05	1.27E-03	6.34E-03	9.73E-04	2.03E-03	1.31E-03	1.34E-03	1.30E-04	1.57E-04	4.33E-08	6.86E-04	1.99E-04
9	E33	60	Passenger Truck	1046	0.00E+00	2.06E-05	2.18E-06	7.15E+01	1.29E-04	4.33E-01	4.25E-05	4.15E-03	1.16E-02	1.80E-03	4.05E-03	2.64E-03	2.70E-03	5.54E-04	3.55E-04	9.82E-08	1.35E-03	6.88E-04
9	E33	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.88E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.12E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	E33	60	Combination Short Haul Truck	15	0.00E+00	8.92E-06	6.22E-07	5.80E+00	3.16E-08	7.80E-03	6.62E-06	9.68E-03	8.31E-04	1.64E-04	5.68E-04	1.85E-04	1.86E-04	8.75E-04	1.94E-05	0.00E+00	3.82E-04	1.82E-03
9	E33	60	Combination Long Haul Truck	14	0.00E+00	8.01E-06	5.21E-07	5.44E+00	3.62E-08	8.41E-03	6.17E-06	9.60E-03	8.35E-04	1.42E-04	5.85E-04	1.59E-04	1.61E-04	8.32E-04	1.82E-05	0.00E+00	4.24E-04	1.81E-03
9	E34	60	Passenger Car	355	0.00E+00	5.33E-06	5.76E-07	1.78E+01	3.71E-05	1.38E-01	1.18E-05	7.24E-04	3.61E-03	5.53E-04	1.15E-03	7.43E-04	7.62E-04	7.42E-05	8.93E-05	2.46E-08	3.90E-04	1.13E-04
9	E34	60	Passenger Truck	595	0.00E+00	1.17E-05	1.24E-06	4.07E+01	7.34E-05	2.46E-01	2.42E-05	2.36E-03	6.61E-03	1.03E-03	2.30E-03	1.50E-03	1.54E-03	3.15E-04	2.02E-04	5.58E-08	7.65E-04	3.91E-04
9	E34	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	E34	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	E34	60	Combination Short Haul Truck	18	0.00E+00	1.05E-05	7.29E-07	6.80E+00	3.71E-08	9.15E-03	7.76E-06	1.14E-02	9.74E-04	1.93E-04	6.66E-04	2.17E-04	2.17E-04	1.03E-03	2.28E-05	0.00E+00	4.48E-04	2.14E-03
9	E34	60	Combination Long Haul Truck	16	0.00E+00	9.39E-06	6.11E-07	6.38E+00	4.25E-08	9.86E-03	7.24E-06	1.13E-02	9.79E-04	1.66E-04	6.86E-04	1.87E-04	1.89E-04	9.75E-04	2.14E-05	0.00E+00	4.97E-04	2.12E-03
9	E35	60	Passenger Car	494	0.00E+00	7.40E-06	8.00E-07	2.48E+01	5.15E-05	1.92E-01	1.65E-05	1.01E-03	5.01E-03	7.69E-04	1.60E-03	1.03E-03	1.06E-03	1.03E-04	1.24E-04	3.42E-08	5.42E-04	1.57E-04
9	E35	60	Passenger Truck	826	0.00E+00	1.63E-05	1.72E-06	5.65E+01	1.02E-04	3.42E-01	3.36E-05	3.28E-03	9.19E-03	1.43E-03	3.20E-03	2.08E-03	2.13E-03	4.38E-04	2.81E-04	7.76E-08	1.06E-03	5.44E-04
9	E35	60	Single Unit Short Haul Truck	18	0.00E+00	5.34E-06	2.67E-07	3.40E+00	4.40E-06	6.59E-03	5.70E-06	2.55E-03	4.33E-04	7.85E-05	6.49E-04	1.60E-04	1.63E-04	3.41E-04	1.37E-05	5.66E-09	4.86E-04	4.78E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	1.16E-08	1.45E-01	1.91E-07	2.80E-04	2.49E-07	1.10E-04	1.94E-05	3.47E-06	2.84E-05	6.97E-06	7.09E-06	1.45E-05	5.87E-07	2.41E-10	2.14E-05	2.07E-05
9	E35	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.34E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.52E-03
9	E35	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.32E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.50E-03
9	E36	60	Passenger Car	187	0.00E+00	2.80E-06	3.03E-07	9.38E+00	1.95E-05	7.26E-02	6.23E-06	3.81E-04	1.90E-03	2.91E-04	6.07E-04	3.91E-04	4.01E-04	3.91E-05	4.70E-05	1.30E-08	2.05E-04	5.96E-05
9	E36	60	Passenger Truck	313	0.00E+00	6.18E-06	6.53E-07	2.14E+01	3.86E-05	1.30E-01	1.27E-05	1.24E-03	3.48E-03	5.40E-04	1.21E-03	7.89E-04	8.08E-04	1.66E-04	1.06E-04	2.94E-08	4.03E-04	2.06E-04
9	E36	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	E36	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	E36	60	Combination Short Haul Truck	17	0.00E+00	9.84E-06	6.86E-07	6.40E+00	3.49E-08	8.61E-03	7.30E-06	1.07E-02	9.17E-04	1.81E-04	6.26E-04	2.04E-04	2.05E-04	9.65E-04	2.14E-05	0.00E+00	4.22E-04	2.01E-03
9	E36	60	Combination Long Haul Truck	15	0.00E+00	8.84E-06	5.75E-07	6.00E+00	4.00E-08	9.28E-03	6.81E-06	1.06E-02	9.22E-04	1.56E-04	6.46E-04	1.76E-04	1.78E-04	9.18E-04	2.01E-05	0.00E+00	4.68E-04	2.00E-03
9	E37	60	Passenger Car	494	0.00E+00	7.40E-06	8.00E-07	2.48E+01	5.15E-05	1.92E-01	1.65E-05	1.01E-03	5.01E-03	7.69E-04	1.60E-03	1.03E-03	1.06E-03	1.03E-04	1.24E-04	3.42E-08	5.42E-04	1.57E-04
9	E37	60	Passenger Truck	826	0.00E+00	1.63E-05	1.72E-06	5.65E+01	1.02E-04	3.42E-01	3.36E-05	3.28E-03	9.19E-03	1.43E-03	3.20E-03	2.08E-03	2.13E-03	4.38E-04	2.81E-04	7.76E-08	1.06E-03	5.44E-04
9	E37	60	Single Unit Short Haul Truck	18	0.00E+00	5.34E-06	2.67E-07	3.40E+00	4.40E-06	6.59E-03	5.70E-06	2.55E-03	4.33E-04	7.85E-05	6.49E-04	1.60E-04	1.63E-04	3.41E-04	1.37E-05	5.66E-09	4.86E-04	4.78E-04
9	E37	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	1.16E-08	1.45E-01	1.91E-07	2.80E-04	2.49E-07	1.10E-04	1.94E-05	3.47E-06	2.84E-05	6.97E-06	7.09E-06	1.45E-05	5.87E-07	2.41E-10	2.14E-05	2.07E-05
9	E37	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.34E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.52E-03
9	E37	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.32E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.50E-03
9	E38	60	Passenger Car	187	0.00E+00	2.80E-06	3.03E-07	9.38E+00	1.95E-05	7.26E-02	6.23E-06	3.81E-04	1.90E-03	2.91E-04	6.07E-04	3.91E-04	4.01E-04	3.91E-05	4.70E-05	1.30E-08	2.05E-04	5.96E-05
9	E38	60	Passenger Truck	313	0.00E+00	6.18E-06	6.53E-07	2.14E+01	3.86E-05	1.30E-01	1.27E-05	1.24E-03	3.48E-03	5.40E-04	1.21E-03	7.89E-04	8.08E-04	1.66E-04	1.06E-04	2.94E-08	4.03E-04	2.06E-04
9	E38	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.27E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.23E-07	9.87E-05	1.74E-05	3.11E-06	2.54E-05	6.24E-06	6.34E-06	1.30E-05	5.26E-07	2.16E-10	1.91E-05	1.85E-05
9	E38	60	Combination Short Haul Truck	17	0.00E+00	9.84E-06	6.86E-07	6.40E+00	3.49E-08	8.61E-03	7.30E-06	1.07E-02	9.17E-04	1.81E-04	6.26E-04	2.04E-04	2.05E-04	9.65E-04	2.14E-05	0.00E+00	4.22E-04	2.01E-03
9	E38	60	Combination Long Haul Truck	15	0.00E+00	8.84E-06	5.75E-07	6.00E+00	4.00E-08	9.28E-03	6.81E-06	1.06E-02	9.22E-04	1.56E-04	6.46E-04	1.76E-04	1.78E-04	9.18E-04	2.01E-05	0.00E+00	4.68E-04	2.00E-03
10	E39	70	Passenger Car	233	0.00E+00	3.05E-06	3.29E-07	1.12E+01	2.12E-05	7.93E-02	6.77E-06	4.67E-04	1.81E-03	2.90E-04	6.59E-04	4.25E-04	4.36E-04	4.17E-05	5.62E-05	1.53E-08	2.23E-04	7.29E-05
10	E39	70	Passenger Truck	390	0.00E+00	6.67E-06	7.06E-07	2.58E+01	4.22E-05	1.46E-01	1.39E-05	1.46E-03	3.29E-03	5.34E-04	1.32E-03	8.60E-04	8.81E-04	1.89E-04	1.28E-04	3.43E-08	4.41E-04	2.40E-04
10	E39	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.55E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.91E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.68E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	E39	70	Combination Short Haul Truck	14	0.00E+00	7.07E-06	5.03E-07	5.13E+00	2.30E-08	6.09E-03	5.19E-06	7.43E-03	5.38E-04	1.17E-04	4.31E-04	1.49E-04	1.49E-04	7.73E-04	1.72E-05	0.00E+00	2.82E-04	1.40E-03
10	E39	70	Combination Long Haul Truck	12	0.00E+00	6.39E-06	4.28E-07	4.79E+00	2.65E-08	6.45E-03	4.86E-06	7.33E-03	5.35E-04	9.75E-05	4.45E-04	1.29E-04	1.31E-04	7.31E-04	1.60E-05	0.00E+00	3.15E-04	1.38E-03
10	E40	70	Passenger Car	318	0.00E+00	4.16E-06	4.49E-07	1.53E+01	2.89E-05	1.08E-01	9.24E-06	6.37E-04	2.46E-03	3.95E-04	8.99E-04	5.80E-04	5.95E-04	5.69E-05	7.66E-05	2.09E-08	3.04E-04	9.95E-05
10	E40	70	Passenger Truck	532	0.00E+00	9.11E-06	9.64E-07	3.51E+01	5.76E-05	1.99E-01	1.89E-05	1.99E-03	4.48E-03	7.29E-04	1.80E-03	1.17E-03	1.20E-03	2.58E-04	1.75E-04	4.68E-08	6.02E-04	3.28E-04
10	E40	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E40	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E40	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E41	70	Passenger Car	211	0.00E+00	2.76E-06	2.99E-07	1.01E+01	1.92E-05	7.19E-02	6.14E-06	4.23E-04	1.64E-03	2.63E-04	5.98E-04	3.85E-04	3.95E-04	3.78E-05	5.09E-05	1.39E-08	2.02E-04	6.61E-05
10	E41	70	Passenger Truck	354	0.00E+00	6.05E-06	6.41E-07	2.34E+01	3.83E-05	1.32E-01	1.26E-05	1.32E-03	2.98E-03	4.84E-04	1.20E-03	7.80E-04	7.99E-04	1.71E-04	1.16E-04	3.11E-08	4.00E-04	2.18E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.18E+00	5.30E-09	1.41E-03	1.20E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.78E-04	3.96E-06	0.00E+00	6.52E-05	3.23E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.87E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.19E-04
10	E42	70	Passenger Car	282	0.00E+00	3.68E-06	3.98E-07	1.35E+01	2.56E-05	9.59E-02	8.18E-06	5.64E-04	2.18E-03	3.50E-04	7.97E-04	5.13E-04	5.27E-04	5.04E-05	6.79E-05	1.85E-08	2.70E-04	8.81E-05
10	E42	70	Passenger Truck	471	0.00E+00	8.07E-06	8.54E-07	3.11E+01	5.10E-05	1.76E-01	1.68E-05	1.76E-03	3.97E-03	6.45E-04	1.60E-03	1.04E-03	1.07E-03	2.29E-04	1.55E-04	4.15E-08	5.33E-04	2.90E-04
10	E42	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E42	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E42	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E43	70	Passenger Car	162	0.00E+00	2.11E-06	2.28E-07	7.75E+00	1.47E-05	5.50E-02	4.70E-06	3.24E-04	1.25E-03	2.01E-04	4.57E-04	2.95E-04	3.02E-04	2.89E-05	3.90E-05	1.06E-08	1.55E-04	5.06E-05
10	E43	70	Passenger Truck	270	0.00E+00	4.63E-06	4.90E-07	1.79E+01	2.93E-05	1.01E-01	9.61E-06	1.01E-03	2.28E-03	3.70E-04	9.17E-04	5.97E-04	6.11E-04	1.31E-04	8.90E-05	2.38E-08	3.06E-04	1.67E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.72E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E43	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	E44	70	Passenger Car	285	0.00E+00	3.72E-06	4.02E-07	1.37E+01	2.59E-05	9.69E-02	8.27E-06	5.70E-04	2.21E-03	3.54E-04	8.05E-04	5.19E-04	5.33E-04	5.10E-05	6.86E-05	1.87E-08	2.72E-04	8.91E-05
10	E44	70	Passenger Truck	476	0.00E+00	8.15E-06	8.63E-07	3.15E+01	5.16E-05	1.78E-01	1.69E-05	1.78E-03	4.01E-03	6.52E-04	1.62E-03	1.05E-03	1.08E-03	2.31E-04	1.57E-04	4.19E-08	5.39E-04	2.93E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E44	70	Combination Short Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.72E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E44	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.64E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
11	E45	80	Passenger Car	194	0.00E+00	2.37E-06	2.56E-07	9.06E+00	1.65E-05	6.31E-02	5.26E-06	3.99E-04	1.07E-03	1.86E-04	5.12E-04	3.30E-04	3.39E-04	3.05E-05	4.56E-05	1.28E-08	1.73E-04	6.24E-05
11	E45	80	Passenger Truck	326	0.00E+00	5.08E-06	5.39E-07	2.09E+01	3.26E-05	1.16E-01	1.07E-05	1.19E-03	1.92E-03	3.40E-04	1.02E-03	6.62E-04	6.78E-04	1.46E-04	1.05E-04	2.85E-08	3.41E-04	1.94E-04
11	E45	80	Single Unit Short Haul Truck	33	0.00E+00	6.10E-06	3.03E-07	5.99E+00	4.91E-06	1.20E-02	6.50E-06	3.13E-03	3.83E-04	8.67E-05	7.43E-04	1.81E-04	1.84E-04	6.01E-04	2.41E-05	9.57E-09	5.59E-04	5.85E-04
11	E45	80	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.31E-08	2.53E-01	2.10E-07	5.00E-04	2.82E-07	1.34E-04	1.75E-05	3.83E-06	3.24E-05	7.78E-06	7.91E-06	2.53E-05	1.02E-06	3.99E-10	2.45E-05	2.50E-05
11	E45	80	Combination Short Haul Truck	20	0.00E+00	8.74E-06	6.25E-07	7.22E+00	2.76E-08	7.74E-03	6.38E-06	8.97E-03	5.29E-04	1.30E-04	5.20E-04	1.84E-04	1.83E-04	1.09E-03	2.42E-05	0.00E+00	3.37E-04	1.69E-03
11	E45	80	Combination Long Haul Truck	18	0.00E+00	7.83E-06	5.26E-07	6.68E+00	3.19E-08	8.02E-03	5.93E-06	8.71E-03	5.17E-04	1.04E-04	5.37E-04	1.59E-04	1.60E-04	1.02E-03	2.24E-05	0.00E+00	3.78E-04	1.64E-03
11	E46	80	Passenger Car	96	0.00E+00	1.17E-06	1.26E-07	4.46E+00	8.11E-06	3.11E-02	2.59E-06	1.97E-04	5.26E-04	9.15E-05	2.52E-04	1.63E-04	1.67E-04	1.50E-05	2.25E-05	6.30E-09	8.54E-05	3.07E-05
11	E46	80	Passenger Truck	160	0.00E+00	2.50E-06	2.65E-07	1.03E+01	1.60E-05	5.72E-02	5.24E-06	5.84E-04	9.44E-04	1.68E-04	5.02E-04	3.26E-04	3.34E-04	7.20E-05	5.15E-05	1.40E-08	1.68E-04	9.54E-05
11	E46	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	E46	80	Combination Short Haul Truck	17	0.00E+00	7.59E-06	5.43E-07	6.27E+00	2.39E-08	6.72E-03	5.54E-06	7.79E-03	4.59E-04	1.13E-04	4.52E-04	1.60E-04	1.59E-04	9.46E-04	2.10E-05	0.00E+00	2.93E-04	1.47E-03
11	E46	80	Combination Long Haul Truck	16	0.00E+00	6.80E-06	4.57E-07	5.80E+00	2.77E-08	6.96E-03	5.15E-06	7.56E-03	4.49E-04	9.04E-05	4.67E-04	1.38E-04	1.39E-04	8.86E-04	1.94E-05	0.00E+00	3.28E-04	1.42E-03
11	E47	80	Passenger Car	180

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E51	80	Passenger Truck	311	0.00E+00	4.86E-06	5.15E-07	2.00E+01	3.11E-05	1.11E-01	1.02E-05	1.13E-03	1.83E-03	3.25E-04	9.74E-04	6.33E-04	6.48E-04	1.40E-04	9.99E-05	2.72E-08	3.26E-04	1.85E-04
11	E51	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.20E-04
11	E51	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	E51	80	Combination Short Haul Truck	21	0.00E+00	9.43E-06	6.74E-07	7.79E+00	2.97E-08	8.35E-03	6.89E-06	9.68E-03	5.70E-04	1.41E-04	5.61E-04	1.99E-04	1.97E-04	1.18E-03	2.61E-05	0.00E+00	3.64E-04	1.82E-03
11	E51	80	Combination Long Haul Truck	20	0.00E+00	8.44E-06	5.67E-07	7.20E+00	3.44E-08	8.65E-03	6.40E-06	9.39E-03	5.58E-04	1.12E-04	5.80E-04	1.71E-04	1.72E-04	1.10E-03	2.41E-05	0.00E+00	4.08E-04	1.77E-03
11	E52	80	Passenger Car	32	0.00E+00	3.92E-07	4.24E-08	1.50E+00	2.72E-06	1.04E-02	8.70E-07	6.60E-05	1.77E-04	3.07E-05	8.47E-05	5.46E-05	5.61E-05	5.04E-06	7.55E-06	2.12E-09	2.87E-05	1.03E-05
11	E52	80	Passenger Truck	54	0.00E+00	8.41E-07	8.92E-08	3.46E+00	5.39E-06	1.92E-02	1.76E-06	1.96E-04	3.17E-04	5.63E-05	1.69E-04	1.09E-04	1.12E-04	2.42E-05	1.73E-05	4.71E-09	5.64E-05	3.21E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
11	E53	80	Passenger Car	322	0.00E+00	3.92E-06	4.24E-07	1.50E+01	2.72E-05	1.04E-01	8.70E-06	6.60E-04	1.77E-03	3.07E-04	8.47E-04	5.46E-04	5.61E-04	5.04E-05	7.55E-05	2.12E-08	2.87E-04	1.03E-04
11	E53	80	Passenger Truck	538	0.00E+00	8.41E-06	8.92E-07	3.46E+01	5.39E-05	1.92E-01	1.76E-05	1.96E-03	3.17E-03	5.63E-04	1.69E-03	1.09E-03	1.12E-03	2.42E-04	1.73E-04	4.71E-08	5.64E-04	3.21E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.76E-03	4.20E-06	2.02E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.19E-09	3.62E-04	3.79E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.46E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.66E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.12E-06	1.64E-05	6.62E-07	2.58E-10	1.58E-05	1.62E-05
11	E53	80	Combination Short Haul Truck	17	0.00E+00	7.36E-06	5.26E-07	6.08E+00	2.32E-08	6.52E-03	5.38E-06	7.55E-03	4.45E-04	1.10E-04	4.38E-04	1.55E-04	1.54E-04	9.17E-04	2.04E-05	0.00E+00	2.84E-04	1.42E-03
11	E53	80	Combination Long Haul Truck	15	0.00E+00	6.59E-06	4.43E-07	5.62E+00	2.68E-08	6.75E-03	4.99E-06	7.33E-03	4.35E-04	8.76E-05	4.53E-04	1.34E-04	1.34E-04	8.59E-04	1.88E-05	0.00E+00	3.18E-04	1.38E-03
11	E54	80	Passenger Car	74	0.00E+00	9.01E-07	9.75E-08	3.45E+00	6.27E-06	2.40E-02	2.00E-06	1.52E-04	4.07E-04	7.08E-05	1.95E-04	1.26E-04	1.29E-04	1.16E-05	1.74E-05	4.87E-09	6.60E-05	2.38E-05
11	E54	80	Passenger Truck	124	0.00E+00	1.94E-06	2.05E-07	7.97E+00	1.24E-05	4.42E-02	4.06E-06	4.52E-04	7.30E-04	1.30E-04	3.88E-04	2.52E-04	2.58E-04	5.57E-05	3.98E-05	1.08E-08	1.30E-04	7.38E-05
11	E54	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.61E-05
11	E54	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.54E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.67E-04
11	E54	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.44E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.48E-04
11	E55	80	Passenger Car	322	0.00E+00	3.92E-06	4.24E-07	1.50E+01	2.72E-05	1.04E-01	8.70E-06	6.60E-04	1.77E-03	3.07E-04	8.47E-04	5.46E-04	5.61E-04	5.04E-05	7.55E-05	2.12E-08	2.87E-04	1.03E-04
11	E55	80	Passenger Truck	538	0.00E+00	8.41E-06	8.92E-07	3.46E+01	5.39E-05	1.92E-01	1.76E-05	1.96E-03	3.17E-03	5.63E-04	1.69E-03	1.09E-03	1.12E-03	2.42E-04	1.73E-04	4.71E-08	5.64E-04	3.21E-04
11	E55	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.76E-03	4.20E-06	2.02E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.19E-09	3.62E-04	3.79E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.46E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.66E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.12E-06	1.64E-05	6.62E-07	2.58E-10	1.58E-05	1.62E-05
11	E55	80	Combination Short Haul Truck	17	0.00E+00	7.36E-06	5.26E-07	6.08E+00	2.32E-08	6.52E-03	5.38E-06	7.55E-03	4.45E-04	1.10E-04	4.38E-04	1.55E-04	1.54E-04	9.17E-04	2.04E-05	0.00E+00	2.84E-04	1.42E-03
11	E55	80	Combination Long Haul Truck	15	0.00E+00	6.59E-06	4.43E-07	5.62E+00	2.68E-08	6.75E-03	4.99E-06	7.33E-03	4.35E-04	8.76E-05	4.53E-04	1.34E-04	1.34E-04	8.59E-04	1.88E-05	0.00E+00	3.18E-04	1.38E-03
11	E56	80	Passenger Car	74	0.00E+00	9.01E-07	9.75E-08	3.45E+00	6.27E-06	2.40E-02	2.00E-06	1.52E-04	4.07E-04	7.08E-05	1.95E-04	1.26E-04	1.29E-04	1.16E-05	1.74E-05	4.87E-09	6.60E-05	2.38E-05
11	E56	80	Passenger Truck	124	0.00E+00	1.94E-06	2.05E-07	7.97E+00	1.24E-05	4.42E-02	4.06E-06	4.52E-04	7.30E-04	1.30E-04	3.88E-04	2.52E-04	2.58E-04	5.57E-05	3.98E-05	1.08E-08	1.30E-04	7.38E-05
11	E56	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.61E-05
11	E56	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.54E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.67E-04
11	E56	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.44E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.48E-04
10	E57	70	Passenger Car	228	0.00E+00	2.98E-06	3.22E-07	1.09E+01	2.07E-05	7.75E-02	6.62E-06	4.56E-04	1.77E-03	2.83E-04	6.44E-04	4.15E-04	4.26E-04	4.08E-05	5.49E-05	1.50E-08	2.18E-04	7.13E-05
10	E57	70	Passenger Truck	381	0.00E+00	6.52E-06	6.90E-07	2.52E+01	4.13E-05	1.43E-01	1.36E-05	1.43E-03	3.21E-03	5.22E-04	1.29E-03	8.41E-04	8.61E-04	1.85E-04	1.25E-04	3.35E-08	4.31E-04	2.35E-04
10	E57	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.55E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	E57	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.15E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	E57	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.84E-04
10	E58	70	Passenger Car	257	0.00E+00	3.36E-06	3.64E-07	1.23E+01	2.34E-05	8.76E-02	7.48E-06	5.15E-04	1.99E-03	3.20E-04	7.28E-04	4.69E-04	4.81E-04	4.61E-05	6.20E-05	1.69E-08	2.46E-04	8.05E-05
10	E58	70	Passenger Truck	431	0.00E+00	7.37E-06	7.80E-07	2.84E+01	4.66E-05	1.61E-01	1.53E-05	1.61E-03	3.63E-03	5.90E-04	1.46E-03	9.50E-04	9.73E-04	2.09E-04	1.42E-04	3.79E-08	4.87E-04	2.65E-04
10	E58	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	E58	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E58	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
11	E59	80	Passenger Car	238	0.00E+00	2.90E-06	3.13E-07	1.11E+01	2.02E-05	7.72E-02	6.44E-06	4.88E-04	1.31E-03	2.27E-04	6.27E-04	4.04E-04	4.15E-04	3.73E-05	5.58E-05	1.56E-08	2.12E-04	7.63E-05
11	E59	80	Passenger Truck	398	0.00E+00	6.22E-06	6.59E-07	2.56E+01	3.98E-05	1.42E-01	1.30E-05	1.45E-03	2.35E-03	4.16E-04	1.25E-03	8.10E-04	8.30E-04	1.79E-04	1.28E-04	3.48E-08	4.17E-04	2.37E-04
11	E59	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	E59	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.30E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.23E-04
11	E59	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.21E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.04E-04
11	E60	80	Passenger Car	209	0.00E+00	2.54E-06	2.75E-07	9.72E+00	1.77E-05	6.77E-02	5.65E-06	4.29E-04	1.15E-03	1.99E-04	5.50E-04	3.54E-04	3.64E-04	3.27E-05	4.90E-05	1.37E-08	1.86E-04	6.70E-05
11	E60	80	Passenger Truck	349	0.00E+00	5.45E-06	5.79E-07	2.25E+01	3.49E-05	1.25E-01	1.14E-05	1.27E-03	2.06E-03	3.65E-04	1.09E-03	7.10E-04	7.28E-04	1.57E-04	1.12E-04	3.06E-08	3.66E-04	2.08E-04
11	E60	80	Single Unit Short Haul Truck	3	0.00E+00	5.38E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.59E-05	1.62E-05	5.30E-05	2.13E-06	8.45E-10	4.93E-05	5.17E-05
11	E60	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	E60	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.15E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E61	80	Passenger Car	238	0.00E+00	2.90E-06	3.13E-07	1.11E+01	2.02E-05	7.72E-02	6.44E-06	4.88E-04	1.31E-03	2.27E-04	6.27E-04	4.04E-04	4.15E-04	3.73E-05	5.58E-05	1.56E-08	2.12E-04	7.63E-05
11	E61	80	Passenger Truck	398	0.00E+00	6.22E-06	6.59E-07	2.56E+01	3.98E-05	1.42E-01	1.30E-05	1.45E-03	2.35E-03	4.16E-04	1.25E-03	8.10E-04	8.30E-04	1.79E-04	1.28E-04	3.48E-08	4.17E-04	2.37E-04
11	E61	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.52E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	E61	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.30E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.23E-04
11	E61	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.21E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.04E-04
11	E62	80	Passenger Car	209	0.00E+00	2.54E-06	2.75E-07	9.72E+00	1.77E-05	6.77E-02	5.65E-06	4.29E-04	1.15E-03	1.99E-04	5.50E-04	3.54E-04	3.64E-04	3.27E-05	4.90E-05	1.37E-08	1.86E-04	6.70E-05
11	E62	80	Passenger Truck	349	0.00E+00	5.45E-06	5.79E-07	2.25E+01	3.49E-05	1.25E-01	1.14E-05	1.27E-03	2.06E-03	3.65E-04	1.09E-03	7.10E-04	7.28E-04	1.57E-04	1.12E-04	3.06E-08	3.66E-04	2.08E-04
11	E62	80	Single Unit Short Haul Truck	3	0.00E+00	5.38E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.59E-05	1.62E-05	5.30E-05	2.13E-06	8.45E-10	4.93E-05	5.17E-05
11	E62	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	E62	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.15E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
10	E63	70	Passenger Car	489	0.00E+00	6.39E-06	6.92E-07	2.35E+01	4.45E-05	1.67E-01	1.42E-05	9.80E-04	3.79E-03	6.08E-04	1.38E-03	8.92E-04	9.15E-04	8.76E-05	1.18E-04	3.21E-08	4.68E-04	1.53E-04
10	E63	70	Passenger Truck	819	0.00E+00	1.40E-05	1.48E-06	5.41E+01	8.86E-05	3.06E-01	2.91E-05	3.06E-03	6.90E-03	1.12E-03	2.78E-03	1.81E-03	1.85E-03	3.97E-04	2.69E-04	7.20E-08	9.26E-04	5.04E-04
10	E63	70	Single Unit Short Haul Truck	36	0.00E+00	8.55E-06	4.28E-07	6.70E+00	6.99E-06	1.34E-02	9.11E-06	4.22E-03	6.02E-04	1.21E-04	1.04E-03	2.56E-04	2.60E-04	6.72E-04	2.70E-05	1.09E-08	7.77E-04	7.90E-04
10	E63	70	Single Unit Long Haul Truck	2	0.00E+00	3.73E-07	1.85E-08	2.84E-01	3.02E-07	5.63E-04	3.97E-07	1.81E-04	2.75E-05	5.36E-06	4.54E-05	1.11E-05	1.13E-05	2.84E-05	1.15E-06	4.60E-10	3.41E-05	3.40E-05
10	E63	70	Combination Short Haul Truck	34	0.00E+00	1.77E-05	1.26E-06	1.28E+01	5.75E-08	1.52E-02	1.30E-05	1.86E-02	1.35E-03	2.94E-04	1.08E-03	3.72E-04	3.71E-04	1.93E-03	4.29E-05	0.00E+00	7.06E-04	3.50E-03
10	E63	70	Combination Long Haul Truck	31	0.00E+00	1.60E-05	1.07E-06	1.20E+01	6.62E-08	1.61E-02	1.21E-05	1.83E-02	1.34E-03	2.44E-04	1.11E-03	3.23E-04	3.27E-04	1.83E-03	4.01E-05	0.00E+00	7.87E-04	3.45E-03
10	E64	70	Passenger Car	740	0.00E+00	9.68E-06	1.05E-06	3.55E+01	6.74E-05	2.52E-01	2.15E-05	1.48E-03	5.74E-03	9.21E-04	2.09E-03	1.35E-03	1.39E-03	1.33E-04	1.79E-04	4.86E-08	7.09E-04	2.32E-04
10	E64	70	Passenger Truck	1240	0.00E+00	2.12E-05	2.24E-06	8.19E+01	1.34E-04	4.64E-01	4.41E-05	4.64E-03	1.04E-02	1.70E-03	4.20E-03	2.73E-03	2.80E-03	6.01E-04	4.08E-04	1.09E-07	1.40E-03	7.63E-04
10	E64	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.62E-02	1.10E-05	5.11E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.56E-04
10	E64	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.24E-08	3.44E-01	3.65E-07	6.81E-04	4.81E-07	2.20E-04	3.33E-05	6.49E-06	5.49E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.11E-05
10	E64	70	Combination Short Haul Truck	46	0.00E+00	2.39E-05	1.70E-06	1.74E+01	7.78E-08	2.06E-02	1.76E-05	2.52E-02	1.82E-03	3.98E-04	1.46E-03	5.03E-04	5.03E-04	2.62E-03	5.81E-05	0.00E+00	9.56E-04	4.74E-03
10	E64	70	Combination Long Haul Truck	42	0.00E+00	2.16E-05	1.45E-06	1.62E+01	8.96E-08	2.18E-02	1.64E-05	2.48E-02	1.81E-03	3.30E-04	1.51E-03	4.37E-04	4.42E-04	2.48E-03	5.42E-05	0.00E+00	1.07E-03	4.67E-03
10	E65	70	Passenger Car	530	0.00E+00	6.93E-06	7.49E-07	2.54E+01	4.82E-05	1.80E-01	1.54E-05	1.06E-03	4.11E-03	6.59E-04	1.50E-03	9.66E-04	9.92E-04	9.49E-05	1.28E-04	3.48E-08	5.07E-04	1.66E-04
10	E65	70	Passenger Truck	887	0.00E+00	1.52E-05	1.61E-06	5.86E+01	9.60E-05	3.32E-01	3.15E-05	3.32E-03	7.47E-03	1.21E-03	3.01E-03	1.96E-03	2.00E-03	4.30E-04	2.92E-04	7.80E-08	1.00E-03	5.46E-04
10	E65	70	Single Unit Short Haul Truck	38	0.00E+00	9.00E-06	4.51E-07	7.05E+00	7.36E-06	1.41E-02	9.59E-06	4.44E-03	6.33E-04	1.27E-04	1.09E-03	2.69E-04	2.74E-04	7.07E-04	2.84E-05	1.15E-08	8.18E-04	8.31E-04
10	E65	70	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.95E-08	2.99E-01	3.18E-07	5.93E-04	4.18E-07	1.91E-04	2.89E-05	5.64E-06	4.77E-05	1.17E-05	1.19E-05	2.99E-05	1.21E-06	4.84E-10	3.59E-05	3.58E-05
10	E65	70	Combination Short Haul Truck	35	0.00E+00	1.80E-05	1.28E-06	1.30E+01	5.83E-08	1.55E-02	1.32E-05	1.89E-02	1.37E-03	2.98E-04	1.09E-03	3.78E-04	3.77E-04	1.96E-03	4.36E-05	0.00E+00	7.17E-04	3.56E-03
10	E65	70	Combination Long Haul Truck	31	0.00E+00	1.62E-05	1.09E-06	1.21E+01	6.72E-08	1.64E-02	1.23E-05	1.86E-02	1.36E-03	2.48E-04	1.13E-03	3.28E-04	3.32E-04	1.86E-03	4.07E-05	0.00E+00	7.99E-04	3.50E-03
10	E66	70	Passenger Car	840	0.00E+00	1.10E-05	1.19E-06	4.03E+01	7.64E-05	2.86E-01	2.44E-05	1.68E-03	6.51E-03	1.04E-03	2.38E-03	1.53E-03	1.57E-03	1.50E-04	2.03E-04	5.52E-08	8.04E-04	2.63E-04
10	E66	70	Passenger Truck	1406	0.00E+00	2.41E-05	2.55E-06	9.29E+01	1.52E-04	5.26E-01	5.00E-05	5.26E-03	1.18E-02	1.93E-03	4.77E-03	3.10E-03	3.18E-03	6.82E-04	4.63E-04	1.24E-07	1.59E-03	8.66E-04
10	E66	70	Single Unit Short Haul Truck	47	0.00E+00	1.10E-05	5.52E-07	8.64E+00	9.02E-06	1.73E-02	1.18E-05	5.44E-03	7.76E-04	1.55E-04	1.34E-03	3.30E-04	3.35E-04	8.66E-04	3.48E-05	1.41E-08	1.00E-03	1.02E-03
10	E66	70	Single Unit Long Haul Truck	2	0.00E+00	4.80E-07	2.39E-08	3.67E-01	3.89E-07	7.26E-04	5.12E-07	2.34E-04	3.54E-05	6.91E-06	5.85E-05	1.43E-05	1.45E-05	3.66E-05	1.48E-06	5.93E-10	4.40E-05	4.38E-05
10	E66	70	Combination Short Haul Truck	48	0.00E+00	2

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E70	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.11E-04	6.78E-05	2.49E-04	8.58E-05	8.57E-05	4.46E-04	9.90E-06	0.00E+00	1.63E-04	8.08E-04
10	E70	70	Combination Long Haul Truck	7	0.00E+00	3.69E-06	2.47E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.63E-05	2.57E-04	7.46E-05	7.54E-05	4.22E-04	9.25E-06	0.00E+00	1.82E-04	7.97E-04
10	E71	70	Passenger Car	518	0.00E+00	6.77E-06	7.32E-07	2.49E+01	4.71E-05	1.76E-01	1.51E-05	1.04E-03	4.01E-03	6.44E-04	1.47E-03	9.44E-04	9.69E-04	9.27E-05	1.25E-04	3.40E-08	4.96E-04	1.62E-04
10	E71	70	Passenger Truck	867	0.00E+00	1.48E-05	1.57E-06	5.73E+01	9.38E-05	3.24E-01	3.08E-05	3.25E-03	7.30E-03	1.19E-03	2.94E-03	1.91E-03	1.96E-03	4.20E-04	2.85E-04	7.63E-08	9.81E-04	5.34E-04
10	E71	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.89E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.53E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.12E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	E71	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.15E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	E71	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.10E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.84E-04
10	E72	70	Passenger Car	563	0.00E+00	7.36E-06	7.96E-07	2.70E+01	5.12E-05	1.92E-01	1.64E-05	1.13E-03	4.37E-03	7.00E-04	1.59E-03	1.03E-03	1.05E-03	1.01E-04	1.36E-04	3.70E-08	5.39E-04	1.76E-04
10	E72	70	Passenger Truck	943	0.00E+00	1.61E-05	1.71E-06	6.23E+01	1.02E-04	3.53E-01	3.35E-05	3.53E-03	7.94E-03	1.29E-03	3.20E-03	2.08E-03	2.13E-03	4.57E-04	3.10E-04	8.29E-08	1.07E-03	5.80E-04
10	E72	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	E72	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.69E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
9	E73	60	Passenger Car	161	0.00E+00	2.42E-06	2.61E-07	8.09E+00	1.68E-05	6.26E-02	5.37E-06	3.29E-04	1.64E-03	2.51E-04	5.23E-04	3.37E-04	3.46E-04	3.37E-05	4.05E-05	1.12E-08	1.77E-04	5.14E-05
9	E73	60	Passenger Truck	270	0.00E+00	5.33E-06	5.63E-07	1.85E+01	3.33E-05	1.12E-01	1.10E-05	1.07E-03	3.00E-03	4.66E-04	1.04E-03	6.80E-04	6.97E-04	1.43E-04	9.17E-05	2.53E-08	3.47E-04	1.78E-04
9	E73	60	Single Unit Short Haul Truck	7	0.00E+00	1.97E-06	9.85E-08	1.25E+00	1.62E-06	2.43E-03	2.10E-06	9.39E-04	1.59E-04	2.89E-05	2.39E-04	5.90E-05	6.00E-05	1.26E-04	5.07E-06	2.09E-09	1.79E-04	1.76E-04
9	E73	60	Combination Short Haul Truck	5	0.00E+00	3.08E-06	2.14E-07	2.00E+00	1.09E-08	2.69E-03	2.28E-06	3.34E-03	2.86E-04	5.67E-05	1.96E-04	6.39E-05	6.40E-05	3.02E-04	6.70E-06	0.00E+00	1.32E-04	6.29E-04
9	E73	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.31E-03	2.88E-04	4.89E-05	2.02E-04	5.49E-05	5.56E-05	2.87E-04	6.28E-06	0.00E+00	1.46E-04	6.24E-04
9	E74	60	Passenger Car	231	0.00E+00	3.46E-06	3.74E-07	1.16E+01	2.41E-05	8.96E-02	7.69E-06	4.71E-04	2.34E-03	3.59E-04	7.48E-04	4.82E-04	4.95E-04	4.82E-05	5.80E-05	1.60E-08	2.53E-04	7.35E-05
9	E74	60	Passenger Truck	386	0.00E+00	7.63E-06	8.05E-07	2.64E+01	4.77E-05	1.60E-01	1.57E-05	1.53E-03	4.30E-03	6.67E-04	1.49E-03	9.74E-04	9.97E-04	2.05E-04	1.31E-04	3.63E-08	4.97E-04	2.54E-04
9	E74	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.68E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E74	60	Combination Short Haul Truck	5	0.00E+00	2.77E-06	1.93E-07	1.80E+00	9.81E-09	2.42E-03	2.05E-06	3.01E-03	2.58E-04	5.10E-05	1.76E-04	5.75E-05	5.76E-05	2.72E-04	6.03E-06	0.00E+00	1.19E-04	5.66E-04
9	E74	60	Combination Long Haul Truck	4	0.00E+00	2.49E-06	1.62E-07	1.69E+00	1.12E-08	2.61E-03	1.92E-06	2.98E-03	2.59E-04	4.40E-05	1.82E-04	4.94E-05	5.00E-05	2.58E-04	5.66E-06	0.00E+00	1.32E-04	5.61E-04
53	E75	70	Passenger Car	907	0.00E+00	1.15E-05	1.24E-06	4.40E+01	8.00E-05	2.97E-01	2.56E-05	1.85E-03	6.93E-03	1.12E-03	2.49E-03	1.60E-03	1.65E-03	1.62E-04	2.21E-04	6.03E-08	8.42E-04	2.89E-04
53	E75	70	Passenger Truck	1519	0.00E+00	2.50E-05	2.65E-06	1.01E+02	1.58E-04	5.45E-01	5.20E-05	5.66E-03	1.24E-02	2.03E-03	4.96E-03	3.23E-03	3.31E-03	7.32E-04	5.06E-04	1.32E-07	1.66E-03	9.29E-04
53	E75	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.46E+00	5.71E-06	1.09E-02	7.43E-06	3.44E-03	4.91E-04	9.83E-05	8.46E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.90E-09	6.34E-04	6.44E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.59E-04	3.24E-07	1.48E-04	2.24E-05	4.37E-06	3.70E-05	9.03E-06	9.18E-06	2.32E-05	9.37E-07	3.75E-10	2.78E-05	2.77E-05
53	E75	70	Combination Short Haul Truck	28	0.00E+00	1.47E-05	1.04E-06	1.06E+01	4.77E-08	1.26E-02	1.08E-05	1.54E-02	1.12E-03	2.44E-04	8.95E-04	3.09E-04	3.08E-04	1.61E-03	3.56E-05	0.00E+00	5.86E-04	2.91E-03
53	E75	70	Combination Long Haul Truck	26	0.00E+00	1.33E-05	8.88E-07	9.94E+00	5.50E-08	1.34E-02	1.01E-05	1.52E-02	1.11E-03	2.03E-04	9.25E-04	2.68E-04	2.71E-04	1.52E-03	3.33E-05	0.00E+00	6.54E-04	2.87E-03
53	E76	70	Passenger Car	780	0.00E+00	9.88E-06	1.07E-06	3.79E+01	6.88E-05	2.55E-01	2.20E-05	1.59E-03	5.95E-03	9.60E-04	2.14E-03	1.38E-03	1.41E-03	1.40E-04	1.90E-04	5.18E-08	7.24E-04	2.48E-04
53	E76	70	Passenger Truck	1306	0.00E+00	2.15E-05	2.28E-06	8.73E+01	1.36E-04	4.69E-01	4.47E-05	4.87E-03	1.07E-02	1.75E-03	4.27E-03	2.78E-03	2.84E-03	6.30E-04	4.35E-04	1.14E-07	1.42E-03	7.99E-04
53	E76	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.07E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
53	E76	70	Combination Short Haul Truck	12	0.00E+00	6.26E-06	4.45E-07	4.54E+00	2.03E-08	5.39E-03	4.59E-06	6.58E-03	4.76E-04	1.04E-04	3.81E-04	1.32E-04	1.31E-04	6.84E-04	1.52E-05	0.00E+00	2.50E-04	1.24E-03
53	E76	70	Combination Long Haul Truck	11	0.00E+00	5.66E-06	3.78E-07	4.23E+00	2.34E-08	5.71E-03	4.30E-06	6.48E-03	4.73E-04	8.63E-05	3.94E-04	1.14E-04	1.16E-04	6.47E-04	1.42E-05	0.00E+00	2.79E-04	1.22E-03
53	E77	70	Passenger Car	899	0.00E+00	1.14E-05	1.23E-06	4.36E+01	7.93E-05	2.94E-01	2.53E-05	1.83E-03	6.86E-03	1.11E-03	2.47E-03	1.59E-03	1.63E-03	1.61E-04	2.19E-04	5.97E-08	8.34E-04	2.86E-04
53	E77	70	Passenger Truck	1505	0.00E+00	2.48E-05	2.62E-06	1.01E+02	1.57E-04	5.40E-01	5.16E-05	5.61E-03	1.23E-02	2.01E-03	4.92E-03	3.20E-03	3.28E-03	7.25E-04	5.01E-04	1.31E-07	1.64E-03	9.20E-04
53	E77	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.46E+00	5.71E-06	1.09E-02	7.43E-06	3.44E-03	4.91E-04	9.83E-05	8.46E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.90E-09	6.34E-04	6.44E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.59E-04	3.24E-07	1.48E-04	2.24E-05	4.37E-06	3.70E-05	9.03E-06	9.18E-06	2.32E-05	9.37E-07	3.75E-10	2.78E-05	2.77E-05
53	E77	70	Combination Short Haul Truck	29	0.00E+00	1.52E-05	1.08E-06	1.10E+01	4.95E-08	1.31E-02	1.12E-05	1.60E-02	1.16E-03	2.53E-04	9.28E-04	3.20E-04	3.20E-04	1.67E-03	3.70E-05	0.00E+00	6.08E-04	3.02E-03
53	E77	70	Combination Long Haul Truck	27	0.00E+00	1.38E-05	9.21E-07	1.03E+01	5.70E-08	1.39E-02	1.05E-05	1.58E-02	1.15E-03	2.10E-04	9.59E-04	2.78E-04	2.81E-04	1.58E-03	3.45E-05	0.00E+00	6.78E-04	2.97E-03
53	E78	70	Passenger Car	842	0.00E+00	1.07E-05	1.15E-06	4.09E+01	7.43E-05	2.75E-01	2.37E-05	1.72E-03	6.43E-03	1.04E-03	2.31E-03	1.49E-03	1.53E-03	1.51E-04	2.05E-04	5.59E-08	7.82E-04	2.68E-04
53	E78	70	Passenger Truck	1410	0.00E+00	2.32E-05	2.46E-06	9.42E+01	1.47E-04	5.06E-01	4.83E-05	5.25E-03	1.15E-02	1.89E-03	4.61E-03	3.00E-03	3.07E-03	6.80E-04	4.70E-04	1.23E-07	1.54E-03	8.62E-04
53	E78	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.07E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
53	E78	70	Combination Short Haul Truck	14	0.00E+00	7.35E-06	5.22E-07	5.32E+00	2.39E-08	6.32E-03	5.39E-06	7.72E-03	5.59E-04	1.22E-04	4.47E-04	1.54E-04	1.54E-04	8.03E-04	1.78E-05	0.00E+00	2.93E-04	1.45E-03
53	E78	70	Combination Long Haul Truck	13	0.00E+00	6.64E-06	4.44E-07	4.97E+00	2.75E-08	6.70E-03	5.04E-06	7.61E-03	5.55E-04	1.01E-04	4.63E-04	1.34E-04	1.36E-04	7.59E-04	1.66E-05	0.00E+00	3.27E-04	1.43E-03
53	E79	70	Passenger Car	889	0.00E+00	1.13E-05	1.22E-06	4.31E+01	7.84E-05	2.91E-01	2.50E-05	1.81E-03	6.79E-03	1.09E-03	2.44E-03	1.57E-03	1.61E-03	1.59E-04	2.17E-04	5.91E-08	8.25E-04	2.83E-04
53	E79	70	Passenger Truck	1488	0.00E+00	2.45E-05	2.60E-06	9.94E+01	1.55E-04	5.34E-01	5.10E-05	5.54E-03	1.22E-02	1.99E-03	4.86E-03	3.16E-03	3.24E-03	7.17E-04	4.96E-04	1.30E-07	1.62E-03	9.10E-04
53	E79	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.46E+00	5.71E-06	1.09E-02	7.43E-06	3.44E-03	4.91E-04	9.83E-05	8.46E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.90E-09	6.34E-04	6.44E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.59E-04	3.24E-07	1.48E-04	2.24E-05	4.37E-06	3.70E-05	9.03E-06	9.18E-06	2.32E-05	9.37E-07	3.75E-10	2.78E-05	2.77E-05
53	E79	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.86E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
53	E79	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.74E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
53	E80	70	Passenger Car	789	0.00E+00	1.00E-05	1.08E-06	3.83E+01	6.96E-05	2.58E-01	2.22E-05	1.61E-03	6.02E-03	9.71E-04	2.16E-03	1.39E-03	1.43E-03	1.41E-04	1.92E-04	5.24E-08	7.32E-04	2.51E-04
53	E80	70	Passenger Truck	1321	0.00E+00	2.18E-05	2.30E-06	8.83E+01	1.38E-04	4.74E-01	4.53E-05	4.92E-03	1.08E-02	1.77E-03	4.32E-03	2.81E-03	2.88E-03	6.37E-04	4.40E-04	1.15E-07	1.44E-03	8.08E-04
53	E80	70	Single Unit Short Haul Truck	28	0.00E+00	6.53E-06	3.27E-07	5.11E+00	5.34E-06	1.02E-02	6.95E-06	3.22E-03	4.59E-04	9.20E-05	7.92E-04	1.95E-04	1.98E-04	5.13E-04	2.06E-05	8.32E-09	5.93E-04	6.03E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	2.84E-07	1.41E-08	2.17E-01	2.30E-07	4.30E-04	3.03E-07	1.38E-04	2.10E-05	4.09E-06	3.46E-05	8.45E-06	8.59E-06	2.17E-05	8.76E-07	3.51E-10	2.60E-05	2.59E-05
53	E80	70	Combination Short Haul Truck	19	0.00E+00	9.80E-06	6.96E-07	7.10E+00	3.18E-08	8.43E-03	7.18E-06	1.03E-02	7.45E-04	1.63E-04	5.97E-04	2.06E-04	2.06E-04	1.07E-03	2.38E-05	0.00E+00	3.91E-04	1.94E-03
53	E80	70	Combination Long Haul Truck	17	0.00E+00	8.85E-06	5.92E-07	6.63E+00	3.67E-08	8.93E-03	6.72E-06	1.01E-02	7.40E-04	1.35E-04	6.17E-04	1.79E-04	1.81E-04	1.01E-03	2.22E-05	0.00E+00	4.36E-04	1.91E-03
10	E83	70	Passenger Car	209	0.00E+00	2.73E-06	2.96E-07	1.00E+01	1.90E-05	7.12E-02	6.08E-06	4.19E-04	1.62E-03	2.60E-04	5.91E-04	3.81E-04	3.91E-04	3.74E-05	5.04E-05	1.37E-08	2.00E-04	6.54E-05
10	E83	70	Passenger Truck	350	0.00E+00	5.99E-06	6.34E-07	2.31E+01	3.79E-05	1.31E-01	1.24E-05	1.31E-03	2.95E-03	4.79E-04	1.19E-03	7.72E-04	7.91E-04	1.70E-04	1.15E-04	3.08E-08	3.96E-04	2.15E-04
10	E83	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.89E-08	1.23E+00	1.29E-06	2.47E-03	1.68E-06	7.77E-04	1.11E-04	2.22E-05	1.91E-04	4.71E-05	4.79E-05	1.24E-04	4.98E-06	2.01E-09	1.43E-04	1.46E-04
10	E83	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.00E-04
10	E83	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.66E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.90E-04
10	E84	70	Passenger Car	209	0.00E+00	2.73E-06	2.96E-07	1.00E+01	1.90E-05	7.12E-02	6.08E-06	4.19E-04	1.62E-03	2.60E-04	5.91E-04	3.81E-04	3.91E-04	3.74E-05	5.04E-05	1.37E-08	2.00E-04	6.54E-05
10	E84	70	Passenger Truck	350	0.00E+00	5.99E-06	6.34E-07	2.31E+01	3.79E-05	1.31E-01	1.24E-05	1.31E-03	2.95E-03	4.79E-04	1.19E-03	7.72E-04	7.91E-04	1.70E-04	1.15E-04	3.08E-08	3.96E-04	2.15E-04
10	E84	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	E84	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.57E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	E84	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.78E-04
9	E85	60	Passenger Car	1225	0.00E+00	1.84E-05	1.99E-06	6.15E+01	1.28E-04	4.76E-01	4.08E-05	2.50E-03	1.24E-02	1.91E-03	3.98E-03	2.56E-03	2.63E-03	2.56E-04	3.08E-04	8.49E-08	1.35E-03	3.91E-04
9	E85	60	Passenger Truck	2052	0.00E+00	4.05E-05	4.28E-06	1.40E+02	2.53E-04	8.49E-01	8.35E-05	8.15E-03	2.28E-02	3.54E-03	7.94E-03	5.17E-03	5.30E-03	1.09E-03	6.97E-04	1.93E-07	2.64E-03	1.35E-03
9	E85	60	Single Unit Short Haul Truck	51	0.00E+00	1.49E-05	7.45E-07	9.50E+00	1.23E-05	1.84E-02	1.59E-05	7.11E-03	1.21E-03	2.19E-04	1.81E-03	4.47E-04	4.54E-04	9.50E-04	3.84E-05	1.58E-08	1.36E-03	1.33E-03
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	6.51E-07	3.24E-08	4.05E-01	5.34E-07	7.80E-04	6.95E-07	3.08E-04	5.42E-05	9.69E-06	7.93E-05	1.94E-05	1.98E-05	4.05E-05	1.64E-06	6.72E-10	5.96E-05	5.76E-05
9	E85	60	Combination Short Haul Truck	40	0.00E+00	2.34E-05	1.63E-06	1.52E+01	8.28E-08	2.05E-02	1.73E-05	2.54E-02	2.18E-03	4.31E-04	1.49E-03	4.85E-04	4.86E-04	2.29E-03	5.09E-05	0.00E+00	1.00E-03	4.78E-03
9	E85	60	Combination Long Haul Truck	36	0.00E+00	2.10E-05	1.37E-06	1.43E+01	9.50E-08	2.20E-02	1.62E-05	2.52E-02	2.19E-03	3.71E-04	1.53E-03	4.17E-04	4.22E-04	2.18E-03	4.78E-05	0.00E+00	1.11E-03	4.74E-03
9	E86	60	Passenger Car	1106	0.00E+00	1.66E-05	1.79E-06	5.55E+01	1.15E-04	4.30E-01	3.69E-05	2.26E-03	1.12E-02	1.72E-03	3.59E-03	2.31E-03	2.37E-03	2.31E-04	2.78E-04	7.66E-08	1.21E-03	3.53E-04
9	E86	60	Passenger Truck	1852	0.00E+00	3.66E-05	3.86E-06	1.27E+02	2.29E-04	7.66E-01	7.54E-05	7.35E-03	2.06E-02	3.20E-03	7.17E-03	4.67E-03	4.78E-03	9.81E-04	6.29E-04	1.74E-07	2.38E-03	1.22E-03
9	E86	60	Single Unit Short Haul Truck	74	0.00E+00	2.16E-05	1.08E-06	1.38E+01	1.78E-05	2.67E-02	2.31E-05	1.03E-02	1.75E-03	3.18E-04	2.63E-03	6.49E-04	6.60E-04	1.38E-03	5.57E-05	2.30E-08	1.97E-03	1.94E-03
9	E86	60	Single Unit Long Haul Truck	3	0.00E+00	9.46E-07	4.71E-08	5.89E-01	7.75E-07	1.13E-03	1.01E-06	4.47E-04	7.87E-05	1.41E-05	1.15E-04	2.83E-05	2.87E-05	5.88E-05	2.38E-06	9.76E-10	8.65E-05	8.37E-05
9	E86	60	Combination Short Haul Truck	63	0.00E+00	3.69E-05	2.57E-06	2.40E+01	1.31E-07	3.23E-02	2.74E-05	4.01E-02	3.44E-03	6.80E-04	2.35E-03	7.66E-04	7.68E-04	3.62E-03	8.04E-05	0.00E+00	1.58E-03	7.55E-03
9	E86	60	Combination Long Haul Truck	57	0.00E+00	3.31E-05	2.16E-06	2.25E+01	1.50E-07	3.48E-02	2.56E-05	3.97E-02	3.46E-03	5.86E-04	2.42E-03	6.58E-04	6.67E-04	3.44E-03	7.54E-05	0.00E+00	1.75E-03	7.49E-03
9	E87	60	Passenger Car	920	0.00E+00	1.38E-05	1.49E-06	4.62E+01	9.60E-05	3.58E-01	3.07E-05	1.88E-03	9.34E-03	1.43E-03	2.99E-03	1.92E-03	1.97E-03	1.92E-04	2.31E-04	6.38E-08	1.01E-03	2.93E-04
9	E87	60	Passenger Truck

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E92	60	Passenger Truck	6	0.00E+00	1.24E-07	1.31E-08	4.28E-01	7.73E-07	2.59E-03	2.55E-07	2.49E-05	6.96E-05	1.08E-05	2.42E-05	1.58E-05	1.62E-05	3.31E-06	2.13E-06	5.88E-10	8.06E-06	4.12E-06
9	E93	60	Passenger Car	122	0.00E+00	1.83E-06	1.98E-07	6.12E+00	1.27E-05	4.74E-02	4.06E-06	2.49E-04	1.24E-03	1.90E-04	3.95E-04	2.55E-04	2.62E-04	2.55E-05	3.07E-05	8.44E-09	1.34E-04	3.89E-05
9	E93	60	Passenger Truck	204	0.00E+00	4.03E-06	4.26E-07	1.40E+01	2.52E-05	8.44E-02	8.30E-06	8.11E-04	2.27E-03	3.52E-04	7.90E-04	5.15E-04	5.27E-04	1.08E-04	6.93E-05	1.92E-08	2.63E-04	1.34E-04
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.68E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.68E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	E93	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.62E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
9	E94	60	Passenger Car	82	0.00E+00	1.23E-06	1.33E-07	4.11E+00	8.54E-06	3.18E-02	2.73E-06	1.67E-04	8.31E-04	1.28E-04	2.66E-04	1.71E-04	1.76E-04	1.71E-05	2.06E-05	5.67E-09	8.99E-05	2.61E-05
9	E94	60	Passenger Truck	137	0.00E+00	2.71E-06	2.86E-07	9.38E+00	1.69E-05	5.67E-02	5.58E-06	5.44E-04	1.52E-03	2.37E-04	5.30E-04	3.46E-04	3.54E-04	7.26E-05	4.66E-05	1.29E-08	1.76E-04	9.02E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.68E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.29E-05
54	E95	80	Passenger Car	685	0.00E+00	8.14E-06	8.80E-07	3.21E+01	5.66E-05	2.13E-01	1.81E-05	1.41E-03	3.96E-03	6.76E-04	1.76E-03	1.14E-03	1.16E-03	1.07E-04	1.62E-04	4.39E-08	5.96E-04	2.21E-04
54	E95	80	Passenger Truck	1147	0.00E+00	1.76E-05	1.87E-06	7.46E+01	1.13E-04	4.04E-01	3.70E-05	4.20E-03	7.12E-03	1.24E-03	3.54E-03	2.30E-03	2.36E-03	5.15E-04	3.73E-04	9.89E-08	1.18E-03	6.85E-04
54	E95	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.20E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
54	E95	80	Combination Short Haul Truck	36	0.00E+00	1.56E-05	1.12E-06	1.29E+01	4.93E-08	1.38E-02	1.14E-05	1.60E-02	9.46E-04	2.33E-04	9.31E-04	3.30E-04	3.28E-04	1.95E-03	4.33E-05	0.00E+00	6.04E-04	3.02E-03
54	E95	80	Combination Long Haul Truck	32	0.00E+00	1.40E-05	9.41E-07	1.19E+01	5.70E-08	1.43E-02	1.06E-05	1.56E-02	9.25E-04	1.86E-04	9.62E-04	2.84E-04	2.86E-04	1.83E-03	4.00E-05	0.00E+00	6.76E-04	2.94E-03
54	E96	80	Passenger Car	465	0.00E+00	5.53E-06	5.98E-07	2.18E+01	3.85E-05	1.45E-01	1.23E-05	9.61E-04	2.69E-03	4.59E-04	1.20E-03	7.71E-04	7.92E-04	7.29E-05	1.10E-04	2.98E-08	4.05E-04	1.50E-04
54	E96	80	Passenger Truck	780	0.00E+00	1.20E-05	1.27E-06	5.07E+01	7.69E-05	2.74E-01	2.51E-05	2.85E-03	4.84E-03	8.44E-04	2.41E-03	1.56E-03	1.60E-03	3.50E-04	2.53E-04	6.72E-08	8.05E-04	4.66E-04
54	E96	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.82E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.77E-05	7.04E-09	4.11E-04	4.30E-04
54	E96	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.84E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.82E-06	1.86E-05	7.52E-07	2.93E-10	1.80E-05	1.84E-05
54	E96	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.22E-07	9.50E+00	3.63E-08	1.02E-02	8.40E-06	1.18E-02	6.96E-04	1.71E-04	6.85E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.22E-03
54	E96	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.92E-07	8.79E+00	4.19E-08	1.06E-02	7.80E-06	1.15E-02	6.80E-04	1.37E-04	7.07E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.16E-03
54	E97	80	Passenger Car	685	0.00E+00	8.14E-06	8.80E-07	3.21E+01	5.66E-05	2.13E-01	1.81E-05	1.41E-03	3.96E-03	6.76E-04	1.76E-03	1.14E-03	1.16E-03	1.07E-04	1.62E-04	4.39E-08	5.96E-04	2.21E-04
54	E97	80	Passenger Truck	1147	0.00E+00	1.76E-05	1.87E-06	7.46E+01	1.13E-04	4.04E-01	3.70E-05	4.20E-03	7.12E-03	1.24E-03	3.54E-03	2.30E-03	2.36E-03	5.15E-04	3.73E-04	9.89E-08	1.18E-03	6.85E-04
54	E97	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.31E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.20E-04
54	E97	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
54	E97	80	Combination Short Haul Truck	36	0.00E+00	1.56E-05	1.12E-06	1.29E+01	4.93E-08	1.38E-02	1.14E-05	1.60E-02	9.46E-04	2.33E-04	9.31E-04	3.30E-04	3.28E-04	1.95E-03	4.33E-05	0.00E+00	6.04E-04	3.02E-03
54	E97	80	Combination Long Haul Truck	32	0.00E+00	1.40E-05	9.41E-07	1.19E+01	5.70E-08	1.43E-02	1.06E-05	1.56E-02	9.25E-04	1.86E-04	9.62E-04	2.84E-04	2.86E-04	1.83E-03	4.00E-05	0.00E+00	6.76E-04	2.94E-03
54	E98	80	Passenger Car	465	0.00E+00	5.53E-06	5.98E-07	2.18E+01	3.85E-05	1.45E-01	1.23E-05	9.61E-04	2.69E-03	4.59E-04	1.20E-03	7.71E-04	7.92E-04	7.29E-05	1.10E-04	2.98E-08	4.05E-04	1.50E-04
54	E98	80	Passenger Truck	780	0.00E+00	1.20E-05	1.27E-06	5.07E+01	7.69E-05	2.74E-01	2.51E-05	2.85E-03	4.84E-03	8.44E-04	2.41E-03	1.56E-03	1.60E-03	3.50E-04	2.53E-04	6.72E-08	8.05E-04	4.66E-04
54	E98	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.82E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.77E-05	7.04E-09	4.11E-04	4.30E-04
54	E98	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.84E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.82E-06	1.86E-05	7.52E-07	2.93E-10	1.80E-05	1.84E-05
54	E98	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.22E-07	9.50E+00	3.63E-08	1.02E-02	8.40E-06	1.18E-02	6.96E-04	1.71E-04	6.85E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.22E-03
54	E98	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.92E-07	8.79E+00	4.19E-08	1.06E-02	7.80E-06	1.15E-02	6.80E-04	1.37E-04	7.07E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.16E-03
9	F01	60	Passenger Car	301	0.00E+00	4.51E-06	4.88E-07	1.51E+01	3.14E-05	1.17E-01	1.00E-05	6.13E-04	3.05E-03	4.68E-04	9.75E-04	6.29E-04	6.45E-04	6.28E-05	7.56E-05	2.08E-08	3.30E-04	9.58E-05
9	F01	60	Passenger Truck	503	0.00E+00	9.94E-06	1.05E-06	3.44E+01	6.21E-05	2.08E-01	2.05E-05	2.00E-03	5.60E-03	8.69E-04	1.95E-03	1.27E-03	1.30E-03	2.67E-04	1.71E-04	4.73E-08	6.48E-04	3.31E-04
9	F01	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.88E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.12E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	F01	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.40E+00	2.40E-08	5.92E-03	5.02E-06	7.35E-03	6.30E-04	1.25E-04	4.31E-04	1.40E-04	1.41E-04	6.64E-04	1.47E-05	0.00E+00	2.90E-04	1.38E-03
9	F01	60	Combination Long Haul Truck	10	0.00E+00	6.08E-06	3.95E-07	4.13E+00	2.75E-08	6.38E-03	4.68E-06	7.28E-03	6.34E-04	1.07E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
9	F02	60	Passenger Car	269	0.00E+00	4.03E-06	4.36E-07	1.35E+01	2.80E-05	1.04E-01	8.96E-06	5.48E-04	2.73E-03	4.19E-04	8.72E-04	5.62E-04	5.77E-04	5.62E-05	6.76E-05	1.86E-08	2.95E-04	8.57E-05
9	F02	60	Passenger Truck	450	0.00E+00	8.89E-06	9.39E-07	3.08E+01	5.56E-05	1.86E-01	1.83E-05	1.79E-03	5.01E-03	7.77E-04	1.74E-03	1.13E-03	1.16E-03	2.38E-04	1.53E-04	4.23E-08	5.79E-04	2.96E-04
9	F02	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	F02	60	Combination Short Haul Truck	5	0.00E+00	2.77E-06	1.93E-07	1.80E+00	9.81E-09	2.42E-03	2.05E-06	3.01E-03	2.58E-04	5.10E-05	1.76E-04	5.75E-05	5.76E-05	2.72E-04	6.03E-06	0.00E+00	1.19E-04	5.66E-04
9	F02	60	Combination Long Haul Truck	4	0.00E+00	2.49E-06	1.62E-07	1.69E+00	1.12E-08	2.61E-03	1.92E-06	2.98E-03	2.59E-04	4.40E-05	1.82E-04	4.94E-05	5.00E-05	2.58E-04	5.66E-06	0.00E+00	1.32E-04	5.61E-04
11	F03	80	Passenger Car	55	0.00E+00	6.74E-07	7.29E-08	2.58E+00	4.69E-06	1.80E-02	1.50E-06	1.14E-04	3.04E-04	5.29E-05	1.46E-04	9.40E-05	9.65E-05	8.67E-06	1.30E-05	3.64E-09	4.94E-05	1.78E-05
11	F03	80	Passenger Truck	93	0.00E+00	1.45E-06	1.53E-07	5.96E+00	9.27E-06	3.31E-02	3.03E-06	3.38E-04	5.46E-04	9.69E-05	2.90E-04	1.88E-04	1.93E-04	4.16E-05	2.98E-05	8.11E-09	9.71E-05	5.52E-05
11	F03	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.61E-05
11	F03	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.42E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.67E-04
11	F03	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.37E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	F04	80	Passenger Car	3	0.00E+00	3.64E-08	3.94E-09	1.39E-01	2.53E-07	9.71E-04	8.10E-08	6.14E-06	1.65E-05	2.86E-06	7.88E-06	5.08E-06	5.21E-06	4.69E-07	7.02E-07	1.97E-10	2.67E-06	9.60E-07
11	F04	80	Passenger Truck	5	0.00E+00	7.82E-08	8.29E-09	3.22E-01	5.01E-07	1.79E-03	1.64E-07	1.83E-05	2.95E-05	5.24E-06	1.57E-05	1.02E-05	1.04E-05	2.25E-06	1.61E-06	4.38E-10	5.25E-06	2.98E-06
9	F05	60	Passenger Car	171	0.00E+00	2.57E-06	2.78E-07	8.59E+00	1.79E-05	6.65E-02	5.71E-06	3.49E-04	1.74E-03	2.67E-04	5.56E-04	3.58E-04	3.68E-04	3.58E-05	4.31E-05	1.19E-08	1.88E-04	5.46E-05
9	F05	60	Passenger Truck	287	0.00E+00	5.66E-06	5.98E-07	1.96E+01	3.54E-05	1.19E-01	1.17E-05	1.14E-03	3.19E-03	4.95E-04	1.11E-03	7.23E-04	7.40E-04	1.52E-04	9.74E-05	2.69E-08	3.69E-04	1.89E-04
9	F05	60	Single Unit Short Haul Truck	11	0.00E+00	3.37E-06	1.69E-07	2.15E+00	2.78E-06	4.16E-03	3.60E-06	1.61E-03	2.73E-04	4.96E-05	4.10E-04	1.01E-04	1.03E-04	2.15E-04	8.68E-06	3.58E-09	3.07E-04	3.02E-04
9	F05	60	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.33E-09	9.18E-02	1.21E-07	1.77E-04	1.57E-07	6.96E-05	1.23E-05	2.19E-06	1.80E-05	4.40E-06	4.48E-06	9.16E-06	3.71E-07	1.52E-10	1.35E-05	1.30E-05
9	F05	60	Combination Short Haul Truck	12	0.00E+00	7.08E-06	4.93E-07	4.60E+00	2.51E-08	6.19E-03	5.25E-06	7.68E-03	6.59E-04	1.30E-04	4.50E-04	1.47E-04	1.47E-04	6.94E-04	1.54E-05	0.00E+00	3.03E-04	1.45E-03
9	F05	60	Combination Long Haul Truck	11	0.00E+00	6.35E-06	4.13E-07	4.32E+00	2.87E-08	6.67E-03	4.90E-06	7.62E-03	6.62E-04	1.12E-04	4.64E-04	1.26E-04	1.28E-04	6.60E-04	1.45E-05	0.00E+00	3.36E-04	1.43E-03
9	F06	60	Passenger Car	245	0.00E+00	3.67E-06	3.97E-07	1.23E+01	2.56E-05	9.52E-02	8.16E-06	4.99E-04	2.49E-03	3.82E-04	7.95E-04	5.12E-04	5.26E-04	5.12E-05	6.16E-05	1.70E-08	2.69E-04	7.81E-05
9	F06	60	Passenger Truck	410	0.00E+00	8.10E-06	8.55E-07	2.80E+01	5.06E-05	1.70E-01	1.67E-05	1.63E-03	4.56E-03	7.08E-04	1.59E-03	1.03E-03	1.06E-03	2.17E-04	1.39E-04	3.85E-08	5.28E-04	2.70E-04
9	F06	60	Single Unit Short Haul Truck	20	0.00E+00	5.90E-06	2.95E-07	3.76E+00	4.87E-06	7.28E-03	6.30E-06	2.82E-03	4.78E-04	8.67E-05	7.18E-04	1.77E-04	1.80E-04	3.77E-04	1.52E-05	6.26E-09	5.38E-04	5.28E-04
9	F06	60	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.28E-08	1.61E-01	2.11E-07	3.09E-04	2.75E-07	1.22E-04	2.15E-05	3.84E-06	3.14E-05	7.70E-06	7.83E-06	1.60E-05	6.49E-07	2.66E-10	2.36E-05	2.28E-05
9	F06	60	Combination Short Haul Truck	18	0.00E+00	1.05E-05	7.29E-07	6.80E+00	3.71E-08	9.15E-03	7.76E-06	1.14E-02	9.74E-04	1.93E-04	6.66E-04	2.17E-04	2.17E-04	1.03E-03	2.28E-05	0.00E+00	4.48E-04	2.14E-03
9	F06	60	Combination Long Haul Truck	16	0.00E+00	9.39E-06	6.11E-07	6.38E+00	4.25E-08	9.86E-03	7.24E-06	1.13E-02	9.79E-04	1.66E-04	6.86E-04	1.87E-04	1.89E-04	9.75E-04	2.14E-05	0.00E+00	4.97E-04	2.12E-03
9	F07	60	Passenger Car	342	0.00E+00	5.13E-06	5.55E-07	1.72E+01	3.57E-05	1.33E-01	1.14E-05	6.98E-04	3.47E-03	5.33E-04	1.11E-03	7.15E-04	7.34E-04	7.15E-05	8.60E-05	2.37E-08	3.76E-04	1.09E-04
9	F07	60	Passenger Truck	573	0.00E+00	1.13E-05	1.19E-06	3.92E+01	7.07E-05	2.37E-01	2.33E-05	2.27E-03	6.37E-03	9.89E-04	2.22E-03	1.44E-03	1.48E-03	3.03E-04	1.95E-04	5.38E-08	7.37E-04	3.77E-04
9	F07	60	Single Unit Short Haul Truck	26	0.00E+00	7.59E-06	3.80E-07	4.84E+00	6.26E-06	9.36E-03	8.10E-06	3.62E-03	6.15E-04	1.12E-04	9.23E-04	2.28E-04	2.31E-04	4.84E-04	1.95E-05	8.05E-09	6.91E-04	6.79E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.06E-01	2.72E-07	3.97E-04	3.54E-07	1.57E-04	2.76E-05	4.93E-06	4.04E-05	9.91E-06	1.01E-05	2.06E-05	8.35E-07	3.42E-10	3.03E-05	2.94E-05
9	F07	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.79E-07	8.21E+00	4.47E-08	1.10E-02	9.36E-06	1.37E-02	1.17E-03	2.32E-04	8.03E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.58E-03
9	F07	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.37E-07	7.69E+00	5.12E-08	1.19E-02	8.73E-06	1.36E-02	1.18E-03	2.00E-04	8.27E-04	2.25E-04	2.28E-04	1.18E-03	2.58E-05	0.00E+00	5.99E-04	2.56E-03
9	F08	60	Passenger Car	323	0.00E+00	4.84E-06	5.24E-07	1.62E+01	3.37E-05	1.26E-01	1.08E-05	6.59E-04	3.28E-03	5.03E-04	1.05E-03	6.76E-04	6.93E-04	6.75E-05	8.12E-05	2.24E-08	3.55E-04	1.03E-04
9	F08	60	Passenger Truck	541	0.00E+00	1.07E-05	1.13E-06	3.70E+01	6.68E-05	2.24E-01	2.20E-05	2.15E-03	6.01E-03	9.34E-04	2.09E-03	1.36E-03	1.40E-03	2.86E-04	1.84E-04	5.08E-08	6.96E-04	3.56E-04
9	F08	60	Single Unit Short Haul Truck	33	0.00E+00	9.56E-06	4.78E-07	6.09E+00	7.88E-06	1.18E-02	1.02E-05	4.56E-03	7.75E-04	1.40E-04	1.16E-03	2.87E-04	2.92E-04	6.10E-04	2.46E-05	1.01E-08	8.70E-04	8.55E-04
9	F08	60	Single Unit Long Haul Truck	1	0.00E+00	4.18E-07	2.08E-08	2.60E-01	3.42E-07	5.01E-04	4.46E-07	1.97E-04	3.48E-05	6.21E-06	5.09E-05	1.25E-05	1.27E-05	2.60E-05	1.05E-06	4.31E-10	3.82E-05	3.70E-05
9	F08	60	Combination Short Haul Truck	25	0.00E+00	1.48E-05	1.03E-06	9.61E+00	5.23E-08	1.29E-02	1.10E-05	1.60E-02	1.38E-03	2.72E-04	9.40E-04	3.07E-04	3.07E-04	1.45E-03	3.22E-05	0.00E+00	6.33E-04	3.02E-03
9	F08	60	Combination Long Haul Truck	23	0.00E+00	1.33E-05	8.63E-07	9.01E+00	6.00E-08	1.39E-02	1.02E-05	1.59E-02	1.38E-03	2.34E-04	9.69E-04	2.63E-04	2.67E-04	1.38E-03	3.02E-05	0.00E+00	7.02E-04	2.99E-03
11	F09	80	Passenger Car	111	0.00E+00	1.35E-06	1.46E-07	5.16E+00	9.38E-06	3.59E-02	3.00E-06	2.27E-04	6.09E-04	1.06E-04	2.92E-04	1.88E-04	1.93E-04	1.73E-05	2.60E-05	7.28E-09	9.87E-05	3.55E-05
11	F09	80	Passenger Truck	185	0.00E+00	2.89E-06	3.07E-07	1.19E+01	1.85E-05	6.61E-02	6.06E-06	6.75E-04	1.09E-03	1.94E-04	5.80E-04	3.77E-04	3.86E-04	8.32E-05	5.95E-05	1.62E-08	1.94E-04	1.10E-04
11	F09	80	Single Unit Short Haul Truck	2	0.00E+00	3.59E-07	1.78E-08	3.52E-01	2.89E-07	7.05E-04	3.82E-07	1.84E-04	2.26E-05	5.10E-06	4.37E-05	1.06E-05	1.08E-05	3.53E-05	1.42E-06	5.63E-10	3.29E-05	3.44E-05
11	F09	80	Single Unit Long Haul Truck	2	0.00E+00	9.20E-07	6.58E-08	7.60E-01	2.90E-09	8.14E-04	6.72E-07	9.44E-04	5.56E-05	1.37E-05	5.48E-05	1.94E-05	1.93E-05	1.15E-04	2.55E-06	0.00E+00	3.55E-05	1.78E-04
11	F09	80	Combination Long Haul Truck	2	0.00E+00	8.24E-07	5.54E-08	7.03E-01	3.35E-09	8.44E-04	6.24E-07	9.17E-04	5.44E-05	1.10E-05	5.66E-05	1.67E-05	1.68E-05	1.07E-04	2.35E-06	0.00E+00	3.98E-05	1.73E-04
11	F10	80	Passenger Car	74	0.00E+00	8.97E-07	9.70E-08	3.43E+00	6.24E-06	2.39E-02	1.99E-06	1.51E-04	4.05E-04	7.04E-05	1.94E-04	1.25E-04	1.28E-04	1.15E-05	1.73E-05	4.85E-09	6.57E-05	2.36E-05
11	F10	80	Passenger Truck	123	0.00E+00	1.93E-06

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F17	70	Passenger Truck	434	0.00E+00	7.42E-06	7.86E-07	2.87E+01	4.70E-05	1.62E-01	1.54E-05	1.62E-03	3.65E-03	5.94E-04	1.47E-03	9.57E-04	9.80E-04	2.10E-04	1.43E-04	3.82E-08	4.91E-04	2.67E-04
10	F17	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.89E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.53E-04
10	F17	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.12E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	F17	70	Combination Short Haul Truck	17	0.00E+00	8.98E-06	6.38E-07	6.51E+00	2.92E-08	7.73E-03	6.59E-06	9.44E-03	6.83E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.81E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
10	F17	70	Combination Long Haul Truck	16	0.00E+00	8.11E-06	5.43E-07	6.07E+00	3.36E-08	8.19E-03	6.16E-06	9.30E-03	6.79E-04	1.24E-04	5.65E-04	1.64E-04	1.66E-04	9.28E-04	2.03E-05	0.00E+00	4.00E-04	1.75E-03
10	F18	70	Passenger Car	274	0.00E+00	3.58E-06	3.88E-07	1.32E+01	2.49E-05	9.33E-02	7.97E-06	5.49E-04	2.12E-03	3.41E-04	7.75E-04	5.00E-04	5.13E-04	4.91E-05	6.61E-05	1.80E-08	2.62E-04	8.58E-05
10	F18	70	Passenger Truck	459	0.00E+00	7.85E-06	8.31E-07	3.03E+01	4.97E-05	1.72E-01	1.63E-05	1.72E-03	3.87E-03	6.28E-04	1.56E-03	1.01E-03	1.04E-03	2.22E-04	1.51E-04	4.04E-08	5.19E-04	2.83E-04
10	F18	70	Single Unit Short Haul Truck	19	0.00E+00	4.50E-06	2.26E-07	3.53E+00	3.68E-06	7.05E-03	4.80E-06	2.22E-03	3.17E-04	6.34E-05	5.46E-04	1.35E-04	1.37E-04	3.53E-04	1.42E-05	5.74E-09	4.09E-04	4.16E-04
10	F18	70	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.76E-09	1.50E-01	1.59E-07	2.96E-04	2.09E-07	9.55E-05	1.45E-05	2.82E-06	2.39E-05	5.83E-06	5.93E-06	1.49E-05	6.04E-07	2.42E-10	1.79E-05	1.79E-05
10	F18	70	Combination Short Haul Truck	19	0.00E+00	9.80E-06	6.96E-07	7.10E+00	3.18E-08	8.43E-03	7.18E-06	1.03E-02	7.45E-04	1.63E-04	5.97E-04	2.06E-04	2.06E-04	1.07E-03	2.38E-05	0.00E+00	3.91E-04	1.94E-03
10	F18	70	Combination Long Haul Truck	17	0.00E+00	8.85E-06	5.92E-07	6.63E+00	3.67E-08	8.93E-03	6.72E-06	1.01E-02	7.40E-04	1.35E-04	6.17E-04	1.79E-04	1.81E-04	1.01E-03	2.22E-05	0.00E+00	4.36E-04	1.91E-03
10	F19	70	Passenger Car	197	0.00E+00	2.58E-06	2.79E-07	9.48E+00	1.80E-05	6.72E-02	5.74E-06	3.96E-04	1.53E-03	2.46E-04	5.59E-04	3.60E-04	3.70E-04	3.54E-05	4.76E-05	1.30E-08	1.89E-04	6.18E-05
10	F19	70	Passenger Truck	331	0.00E+00	5.66E-06	5.99E-07	2.18E+01	3.58E-05	1.24E-01	1.18E-05	1.24E-03	2.78E-03	4.53E-04	1.12E-03	7.29E-04	7.47E-04	1.60E-04	1.09E-04	2.91E-08	3.74E-04	2.04E-04
10	F19	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	F19	70	Combination Short Haul Truck	6	0.00E+00	3.27E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.86E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.46E-04
10	F19	70	Combination Long Haul Truck	6	0.00E+00	2.95E-06	1.97E-07	2.21E+00	1.22E-08	2.98E-03	2.24E-06	3.38E-03	2.47E-04	4.50E-05	2.06E-04	5.96E-05	6.03E-05	3.38E-04	7.40E-06	0.00E+00	1.45E-04	6.37E-04
10	F20	70	Passenger Car	305	0.00E+00	3.99E-06	4.32E-07	1.47E+01	2.78E-05	1.04E-01	8.88E-06	6.12E-04	2.37E-03	3.80E-04	8.64E-04	5.57E-04	5.72E-04	5.47E-05	7.37E-05	2.01E-08	2.93E-04	9.56E-05
10	F20	70	Passenger Truck	512	0.00E+00	8.75E-06	9.26E-07	3.38E+01	5.54E-05	1.91E-01	1.82E-05	1.91E-03	4.31E-03	7.00E-04	1.73E-03	1.13E-03	1.16E-03	2.48E-04	1.68E-04	4.50E-08	5.79E-04	3.15E-04
10	F20	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	F21	70	Passenger Car	67	0.00E+00	8.80E-07	9.52E-08	3.23E+00	6.12E-06	2.29E-02	1.96E-06	1.35E-04	5.22E-04	8.37E-05	1.90E-04	1.23E-04	1.26E-04	1.21E-05	1.62E-05	4.42E-09	6.45E-05	2.11E-05
10	F21	70	Passenger Truck	113	0.00E+00	1.93E-06	2.04E-07	7.44E+00	1.22E-05	4.22E-02	4.01E-06	4.22E-04	9.49E-04	1.54E-04	3.82E-04	2.49E-04	2.55E-04	5.46E-05	3.71E-05	9.91E-09	1.27E-04	6.94E-05
10	F22	70	Passenger Car	146	0.00E+00	1.91E-06	2.06E-07	7.00E+00	1.33E-05	4.96E-02	4.24E-06	2.92E-04	1.13E-03	1.81E-04	4.13E-04	2.66E-04	2.73E-04	2.61E-05	3.52E-05	9.58E-09	1.40E-04	4.57E-05
10	F22	70	Passenger Truck	244	0.00E+00	4.18E-06	4.42E-07	1.61E+01	2.64E-05	9.13E-02	8.68E-06	9.14E-04	2.06E-03	3.34E-04	8.28E-04	5.39E-04	5.52E-04	1.18E-04	8.03E-05	2.15E-08	2.76E-04	1.50E-04
10	F23	70	Passenger Car	55	0.00E+00	7.14E-07	7.72E-08	2.62E+00	4.97E-06	1.86E-02	1.59E-06	1.09E-04	4.23E-04	6.79E-05	1.54E-04	9.96E-05	1.02E-04	9.78E-06	1.32E-05	3.59E-09	5.23E-05	1.71E-05
10	F23	70	Passenger Truck	91	0.00E+00	1.56E-06	1.66E-07	6.04E+00	9.89E-06	3.42E-02	3.25E-06	3.42E-04	7.70E-04	1.25E-04	3.10E-04	2.02E-04	2.07E-04	4.43E-05	3.01E-05	8.04E-09	1.03E-04	5.63E-05
10	F23	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	F23	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	F23	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
10	F24	70	Passenger Car	74	0.00E+00	9.63E-07	1.04E-07	3.54E+00	6.70E-06	2.51E-02	2.14E-06	1.48E-04	5.71E-04	9.16E-05	2.08E-04	1.34E-04	1.38E-04	1.32E-05	1.78E-05	4.84E-09	7.05E-05	2.31E-05
10	F24	70	Passenger Truck	123	0.00E+00	2.11E-06	2.23E-07	8.15E+00	1.33E-05	4.61E-02	4.38E-06	4.62E-04	1.04E-03	1.69E-04	4.18E-04	2.72E-04	2.79E-04	5.98E-05	4.06E-05	1.09E-08	1.40E-04	7.59E-05
10	F24	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	F24	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.14E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.15E-04
10	F24	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.12E-04
9	F25	60	Passenger Car	205	0.00E+00	3.08E-06	3.33E-07	1.03E+01	2.14E-05	7.98E-02	6.84E-06	4.19E-04	2.08E-03	3.20E-04	6.66E-04	4.29E-04	4.41E-04	4.29E-05	5.16E-05	1.42E-08	2.25E-04	6.54E-05
9	F25	60	Passenger Truck	344	0.00E+00	6.79E-06	7.17E-07	2.35E+01	4.24E-05	1.42E-01	1.40E-05	1.36E-03	3.82E-03	5.93E-04	1.33E-03	8.67E-04	8.87E-04	1.82E-04	1.17E-04	3.23E-08	4.42E-04	2.26E-04
9	F25	60	Single Unit Short Haul Truck	11	0.00E+00	3.37E-06	1.69E-07	2.15E+00	2.78E-06	4.16E-03	3.60E-06	1.61E-03	2.73E-04	4.96E-05	4.10E-04	1.01E-04	1.03E-04	2.15E-04	8.68E-06	3.58E-09	3.07E-04	3.02E-04
9	F25	60	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.33E-09	9.18E-02	1.21E-07	1.77E-04	1.57E-07	6.96E-05	1.23E-05	2.19E-06	1.80E-05	4.40E-06	4.48E-06	9.16E-06	3.71E-07	1.52E-10	1.35E-05	1.30E-05
9	F25	60	Combination Short Haul Truck	12	0.00E+00	7.08E-06	4.93E-07	4.60E+00	2.51E-08	6.19E-03	5.25E-06	7.68E-03	6.59E-04	1.30E-04	4.50E-04	1.47E-04	1.47E-04	6.94E-04	1.54E-05	0.00E+00	3.03E-04	1.45E-03
9	F25	60	Combination Long Haul Truck	11	0.00E+00	6.35E-06	4.13E-07	4.32E+00	2.87E-08	6.67E-03	4.90E-06	7.62E-03	6.62E-04	1.12E-04	4.64E-04	1.26E-04	1.28E-04	6.60E-04	1.45E-05	0.00E+00	3.36E-04	1.43E-03
9	F26	60	Passenger Car	244	0.00E+00	3.66E-06	3.96E-07	1.23E+01	2.55E-05	9.49E-02	8.14E-06	4.98E-04	2.48E-03	3.80E-04	7.92E-04	5.11E-04	5.24E-04	5.10E-05	6.14E-05	1.69E-08	2.68E-04	7.78E-05
9	F26	60	Passenger Truck	409	0.00E+00	8.07E-06	8.52E-07	2.80E+01	5.05E-05	1.69E-01	1.66E-05	1.62E-03	4.55E-03	7.06E-04	1.58E-03	1.03E-03	1.06E-03	2.16E-04	1.39E-04	3.84E-08	5.26E-04	2.69E-04
9	F26	60	Single Unit Short Haul Truck	12	0.00E+00	3.65E-06	1.83E-07	2.33E+00	3.01E-06	4.51E-03	3.90E-06	1.74E-03	2.96E-04	5.37E-05	4.44E-04	1.10E-04	1.11E-04	2.33E-04	9.41E-06	3.88E-09	3.33E-04	3.27E-04
9	F26	60	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	7.95E-09	9.94E-02	1.31E-07	1.91E-04	1.70E-07	7.54E-05	1.33E-05	2.38E-06	1.95E-05	4.77E-06	4.85E-06	9.93E-06	4.02E-07	1.65E-10	1.46E-05	1.41E-05
9	F26	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.40E+00	2.40E-08	5.92E-03	5.02E-06	7.35E-03	6.30E-04	1.25E-04	4.31E-04	1.40E-04	1.41E-04	6.64E-04	1.47E-05	0.00E+00	2.90E-04	1.38E-03
9	F26	60	Combination Long Haul Truck	10	0.00E+00	6.08E-06	3.95E-07	4.13E+00	2.75E-08	6.38E-03	4.68E-06	7.28E-03	6.34E-04	1.07E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
9	F27	60	Passenger Car	761	0.00E+00	1.14E-05	1.23E-06	3.82E+01	7.94E-05	2.96E-01	2.54E-05	1.55E-03	7.73E-03	1.19E-03	2.47E-03	1.59E-03	1.63E-03	1.59E-04	1.91E-04	5.27E-08	8.36E-04	2.43E-04
9	F27	60	Passenger Truck	1275	0.00E+00	2.52E-05	2.66E-06	8.72E+01	1.57E-04	5.27E-01	5.19E-05	5.06E-03	1.42E-02	2.20E-03	4.93E-03	3.21E-03	3.29E-03	6.75E-04	4.33E-04	1.20E-07	1.64E-03	8.39E-04
9	F27	60	Single Unit Short Haul Truck	112	0.00E+00	3.29E-05	1.65E-06	2.10E+01	2.71E-05	4.06E-02	3.51E-05	1.57E-02	2.67E-03	4.83E-04	4.00E-03	9.87E-04	1.00E-03	2.10E-03	8.47E-05	3.49E-08	3.00E-03	2.94E-03
9	F27	60	Single Unit Long Haul Truck	5	0.00E+00	1.44E-06	7.15E-08	8.95E-01	1.18E-06	1.72E-03	1.53E-06	6.79E-04	1.20E-04	2.14E-05	1.75E-04	4.29E-05	4.36E-05	8.93E-05	3.62E-06	1.48E-09	1.32E-04	1.27E-04
9	F27	60	Combination Short Haul Truck	74	0.00E+00	4.34E-05	3.02E-06	2.82E+01	1.54E-07	3.79E-02	3.22E-05	4.71E-02	4.04E-03	7.99E-04	2.76E-03	9.00E-04	9.02E-04	4.25E-03	9.45E-05	0.00E+00	1.86E-03	8.87E-03
9	F27	60	Combination Long Haul Truck	67	0.00E+00	3.89E-05	2.53E-06	2.65E+01	1.76E-07	4.09E-02	3.00E-05	4.67E-02	4.06E-03	6.89E-04	2.85E-03	7.74E-04	7.84E-04	4.04E-03	8.86E-05	0.00E+00	2.06E-03	8.80E-03
9	F28	60	Passenger Car	636	0.00E+00	9.54E-06	1.03E-06	3.19E+01	6.64E-05	2.47E-01	2.12E-05	1.30E-03	6.46E-03	9.92E-04	2.06E-03	1.33E-03	1.37E-03	1.33E-04	1.60E-04	4.41E-08	6.99E-04	2.03E-04
9	F28	60	Passenger Truck	1066	0.00E+00	2.10E-05	2.22E-06	7.29E+01	1.32E-04	4.41E-01	4.34E-05	4.23E-03	1.18E-02	1.84E-03	4.12E-03	2.69E-03	2.75E-03	5.64E-04	3.62E-04	1.00E-07	1.37E-03	7.01E-04
9	F28	60	Single Unit Short Haul Truck	135	0.00E+00	3.96E-05	1.98E-06	2.53E+01	3.27E-05	4.89E-02	4.23E-05	1.89E-02	3.21E-03	5.82E-04	4.82E-03	1.19E-03	1.21E-03	2.53E-03	1.02E-04	4.20E-08	3.61E-03	3.54E-03
9	F28	60	Single Unit Long Haul Truck	6	0.00E+00	1.73E-06	8.62E-08	1.08E+00	1.42E-06	2.08E-03	1.85E-06	8.18E-04	1.44E-04	2.58E-05	2.11E-04	5.17E-05	5.26E-05	1.08E-04	4.36E-06	1.79E-09	1.58E-04	1.53E-04
9	F28	60	Combination Short Haul Truck	82	0.00E+00	4.80E-05	3.34E-06	3.12E+01	1.70E-07	4.20E-02	3.56E-05	5.21E-02	4.47E-03	8.85E-04	3.05E-03	9.96E-04	9.98E-04	4.71E-03	1.05E-04	0.00E+00	2.06E-03	9.82E-03
9	F28	60	Combination Long Haul Truck	74	0.00E+00	4.31E-05	2.80E-06	2.93E+01	1.95E-07	4.52E-02	3.32E-05	5.17E-02	4.49E-03	7.62E-04	3.15E-03	8.56E-04	8.67E-04	4.47E-03	9.80E-05	0.00E+00	2.28E-03	9.73E-03
9	F29	60	Passenger Car	190	0.00E+00	2.85E-06	3.08E-07	9.53E+00	1.98E-05	7.38E-02	6.33E-06	3.87E-04	1.93E-03	2.96E-04	6.16E-04	3.97E-04	4.08E-04	3.97E-05	4.78E-05	1.32E-08	2.09E-04	6.05E-05
9	F29	60	Passenger Truck	318	0.00E+00	6.28E-06	6.63E-07	2.17E+01	3.93E-05	1.32E-01	1.29E-05	1.26E-03	3.54E-03	5.49E-04	1.23E-03	8.02E-04	8.21E-04	1.68E-04	1.08E-04	2.99E-08	4.09E-04	2.09E-04
9	F29	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	F29	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.07E-07	1.00E+00	5.45E-09	1.35E-03	1.14E-06	1.67E-03	1.43E-04	2.84E-05	9.79E-05	3.19E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	F29	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	8.99E-08	9.38E-01	6.25E-09	1.45E-03	1.06E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.31E-05	3.12E-04
9	F30	60	Passenger Car	242	0.00E+00	3.62E-06	3.92E-07	1.21E+01	2.52E-05	9.39E-02	8.05E-06	4.93E-04	2.45E-03	3.76E-04	7.84E-04	5.05E-04	5.18E-04	5.05E-05	6.07E-05	1.67E-08	2.65E-04	7.70E-05
9	F30	60	Passenger Truck	404	0.00E+00	7.99E-06	8.43E-07	2.77E+01	4.99E-05	1.67E-01	1.65E-05	1.61E-03	4.50E-03	6.98E-04	1.56E-03	1.02E-03	1.04E-03	2.14E-04	1.37E-04	3.80E-08	5.20E-04	2.66E-04
9	F30	60	Single Unit Short Haul Truck	19	0.00E+00	5.62E-06	2.81E-07	3.58E+00	4.64E-06	6.94E-03	6.00E-06	2.68E-03	4.56E-04	8.26E-05	6.83E-04	1.69E-04	1.71E-04	3.59E-04	1.45E-05	5.96E-09	5.12E-04	5.03E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	2.46E-07	1.22E-08	1.53E-01	2.01E-07	2.94E-04	2.62E-07	1.16E-04	2.05E-05	3.66E-06	2.99E-05	7.34E-06	7.46E-06	1.53E-05	6.18E-07	2.54E-10	2.25E-05	2.17E-05
9	F30	60	Combination Short Haul Truck	13	0.00E+00	7.38E-06	5.15E-07	4.80E+00	2.62E-08	6.46E-03	5.48E-06	8.01E-03	6.88E-04	1.36E-04	4.70E-04	1.53E-04	1.54E-04	7.24E-04	1.61E-05	0.00E+00	3.16E-04	1.51E-03
9	F30	60	Combination Long Haul Truck	11	0.00E+00	6.63E-06	4.31E-07	4.50E+00	3.00E-08	6.96E-03	5.11E-06	7.95E-03	6.91E-04	1.17E-04	4.84E-04	1.32E-04	1.33E-04	6.88E-04	1.51E-05	0.00E+00	3.51E-04	1.50E-03
11	F35	80	Passenger Car	171	0.00E+00	2.08E-06	2.25E-07	7.96E+00	1.45E-05	5.55E-02	4.63E-06	3.51E-04	9.40E-04	1.63E-04	4.50E-04	2.90E-04	2.98E-04	2.68E-05	4.01E-05	1.12E-08	1.52E-04	5.48E-05
11	F35	80	Passenger Truck	286	0.00E+00	4.47E-06	4.74E-07	1.84E+01	2.86E-05	1.02E-01	9.36E-06	1.04E-03	1.69E-03	2.99E-04	8.96E-04	5.82E-04	5.96E-04	1.29E-04	9.19E-05	2.50E-08	3.00E-04	1.70E-04
11	F35	80	Single Unit Short Haul Truck	19	0.00E+00	3.59E-06	1.78E-07	3.52E+00	2.89E-06	7.05E-03	3.82E-06	1.84E-03	2.26E-04	5.10E-05	4.37E-04	1.06E-04	1.08E-04	3.53E-04	1.42E-05	5.63E-09	3.29E-04	3.44E-04
11	F35	80	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.69E-09	1.49E-01	1.23E-07	2.94E-04	1.66E-07	7.87E-05	1.03E-05	2.25E-06	1.91E-05	4.58E-06	4.65E-06	1.49E-05	6.02E-07	2.35E-10	1.44E-05	1.47E-05
11	F35	80	Combination Short Haul Truck	12	0.00E+00	5.06E-06	3.62E-07	4.18E+00	1.60E-08	4.48E-03	3.70E-06	5.19E-03	3.06E-04	7.54E-05	3.01E-04	1.07E-04	1.06E-04	6.31E-04	1.40E-05	0.00E+00	1.95E-04	9.78E-04
11	F35	80	Combination Long Haul Truck	10	0.00E+00	4.53E-06	3.04E-07	3.87E+00	1.84E-08	4.64E-03	3.43E-06	5.04E-03	2.99E-04	6.03E-05	3.11E-04	9.19E-05	9.24E-05	5.91E-04	1.29E-05	0.00E+00	2.19E-04	9.50E-04
11	F36	80	Passenger Car	96	0.00E+00	1.17E-06	1.27E-07	4.49E+00	8.17E-06	3.13E-02	2.61E-06	1.98E-04	5.31E-04	9.22E-05	2.54E-04	1.64E-04	1.68E-04	1.51E-05	2.26E-05	6.35E-09	8.60E-05	3.10E-05
11	F36	80	Passenger Truck	162	0.00E+00	2.52E-06	2.67E-07	1.04E+01	1.62E-05	5.76E-02	5.29E-06	5.89E-04	9.51E-04	1.69E-04	5.06E-04	3.28E-04	3.37E-04	7.26E-05	5.19E-05	1.41E-08	1.69E-04	9.62E-05
11	F36	80	Single Unit Short Haul Truck	14	0.00E+00	2.69E-06	1.34E-07	2.64E+00	2.17E-06	5.29E-03	2.87E-06	1.38E-03	1.69E-04	3.83E-05	3.28E-04	7.97E-05	8.11E-05	2.65E-04	1.06E-05	4.22E-09	2.47E-04	2.58E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	5.77E-09	1.12E-01	9.25E-08	2.20E-04	1.25E-07	5.90E-05	7.73E-06	1.69E-06	1.43E-05	3.43E-06	3.49E-06	1.12E-05	4.51E-07	1.76E-10	1.08E-05	1.10E-05
11	F36	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.30E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.23E-04
11	F36	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.21E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.04E-04
9	F37	60	Passenger Car	692	0.00E+00	1.04E-05	1.12E-06	3.47E+01	7.22E-05	2.69E-01	2.31E-05	1.41E-03	7.02E-03	1.08E-03	2.24E-03	1.45E-03	1.48E-03	1.45E-04	1.74E-04	4.79E-08	7.60E-04	2.20E-04
9	F37	60	Passenger Truck	1158	0.00E+00	2.29E-05	2.42E-06	7.92E+01	1.43E-04	4.79E-01	4.71E-05	4.60E-03	1.29E-02	2.00E-03	4.48E-03	2.92E-03	2.99E-03	6.13E-04	3.93E-04	1.09E-07	1.49E-03	7.62E-04
9	F37	60	Single Unit Short Haul Truck	70	0.00E+00	2.05E-

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F41	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.58E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	F41	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.46E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	F42	70	Passenger Car	268	0.00E+00	3.51E-06	3.80E-07	1.29E+01	2.44E-05	9.14E-02	7.80E-06	5.38E-04	2.08E-03	3.34E-04	7.60E-04	4.90E-04	5.02E-04	4.81E-05	6.47E-05	1.76E-08	2.57E-04	8.41E-05
10	F42	70	Passenger Truck	450	0.00E+00	7.69E-06	8.14E-07	2.97E+01	4.86E-05	1.68E-01	1.60E-05	1.68E-03	3.79E-03	6.15E-04	1.52E-03	9.91E-04	1.02E-03	2.18E-04	1.48E-04	3.95E-08	5.09E-04	2.77E-04
10	F42	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
9	F43	60	Passenger Car	45	0.00E+00	6.78E-07	7.34E-08	2.27E+00	4.72E-06	1.76E-02	1.51E-06	9.23E-05	4.59E-04	7.05E-05	1.47E-04	9.46E-05	9.71E-05	9.45E-06	1.14E-05	3.13E-09	4.97E-05	1.44E-05
9	F43	60	Passenger Truck	76	0.00E+00	1.50E-06	1.58E-07	5.18E+00	9.35E-06	3.13E-02	3.08E-06	3.01E-04	8.42E-04	1.31E-04	2.93E-04	1.91E-04	1.96E-04	4.01E-05	2.57E-05	7.11E-09	9.75E-05	4.99E-05
9	F43	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	F43	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.29E-05
9	F44	60	Passenger Car	14	0.00E+00	2.07E-07	2.24E-08	6.94E-01	1.44E-06	5.38E-03	4.61E-07	2.82E-05	1.40E-04	2.16E-05	4.49E-05	2.89E-05	2.97E-05	2.89E-06	3.48E-06	9.58E-10	1.52E-05	4.41E-06
9	F44	60	Passenger Truck	23	0.00E+00	4.57E-07	4.83E-08	1.58E+00	2.86E-06	9.58E-03	9.43E-07	9.20E-05	2.58E-04	4.00E-05	8.96E-05	5.84E-05	5.98E-05	1.23E-05	7.87E-06	2.17E-09	2.98E-05	1.52E-05
10	F45	70	Passenger Car	209	0.00E+00	2.73E-06	2.96E-07	1.00E+01	1.90E-05	7.12E-02	6.08E-06	4.19E-04	1.62E-03	2.60E-04	5.91E-04	3.81E-04	3.91E-04	3.74E-05	5.04E-05	1.37E-08	2.00E-04	6.54E-05
10	F45	70	Passenger Truck	350	0.00E+00	5.99E-06	6.34E-07	2.31E+01	3.79E-05	1.31E-01	1.24E-05	1.31E-03	2.95E-03	4.79E-04	1.19E-03	7.72E-04	7.91E-04	1.70E-04	1.15E-04	3.08E-08	3.96E-04	2.15E-04
10	F45	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.89E-08	1.23E+00	1.29E-06	2.47E-03	1.68E-06	7.77E-04	1.11E-04	2.22E-05	1.91E-04	4.71E-05	4.79E-05	1.24E-04	4.98E-06	2.01E-09	1.43E-04	1.46E-04
10	F45	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.00E-04
10	F45	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.66E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.90E-04
10	F46	70	Passenger Car	209	0.00E+00	2.73E-06	2.96E-07	1.00E+01	1.90E-05	7.12E-02	6.08E-06	4.19E-04	1.62E-03	2.60E-04	5.91E-04	3.81E-04	3.91E-04	3.74E-05	5.04E-05	1.37E-08	2.00E-04	6.54E-05
10	F46	70	Passenger Truck	350	0.00E+00	5.99E-06	6.34E-07	2.31E+01	3.79E-05	1.31E-01	1.24E-05	1.31E-03	2.95E-03	4.79E-04	1.19E-03	7.72E-04	7.91E-04	1.70E-04	1.15E-04	3.08E-08	3.96E-04	2.15E-04
10	F46	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	F46	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.57E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	F46	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.78E-04
9	F47	60	Passenger Car	3	0.00E+00	3.92E-08	4.24E-09	1.31E-01	2.73E-07	1.02E-03	8.72E-08	5.34E-06	2.66E-05	4.08E-06	8.49E-06	5.47E-06	5.62E-06	5.47E-07	6.58E-07	1.81E-10	2.87E-06	8.34E-07
9	F47	60	Passenger Truck	4	0.00E+00	8.65E-08	9.14E-09	3.00E-01	5.41E-07	1.81E-03	1.78E-07	1.74E-05	4.87E-05	7.56E-06	1.70E-05	1.10E-05	1.13E-05	2.32E-06	1.49E-06	4.11E-10	5.64E-06	2.88E-06
9	F48	60	Passenger Car	26	0.00E+00	3.92E-07	4.24E-08	1.31E+00	2.73E-06	1.02E-02	8.72E-07	5.34E-05	2.66E-04	4.08E-05	8.49E-05	5.47E-05	5.62E-05	5.47E-06	6.58E-06	1.81E-09	2.87E-05	8.34E-06
9	F48	60	Passenger Truck	44	0.00E+00	8.65E-07	9.14E-08	3.00E+00	5.41E-06	1.81E-02	1.78E-06	1.74E-04	4.87E-04	7.56E-05	1.70E-04	1.10E-04	1.13E-04	2.32E-05	1.49E-05	4.11E-09	5.64E-05	2.88E-05
9	F48	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
9	F48	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.68E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	F48	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.62E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
9	F49	60	Passenger Car	763	0.00E+00	1.14E-05	1.24E-06	3.83E+01	7.96E-05	2.96E-01	2.54E-05	1.56E-03	7.74E-03	1.19E-03	2.47E-03	1.60E-03	1.64E-03	1.59E-04	1.92E-04	5.28E-08	8.38E-04	2.43E-04
9	F49	60	Passenger Truck	1277	0.00E+00	2.52E-05	2.66E-06	8.73E+01	1.58E-04	5.28E-01	5.20E-05	5.07E-03	1.42E-02	2.20E-03	4.94E-03	3.22E-03	3.30E-03	6.76E-04	4.34E-04	1.20E-07	1.64E-03	8.41E-04
9	F49	60	Single Unit Short Haul Truck	97	0.00E+00	2.84E-05	1.42E-06	1.81E+01	2.34E-05	3.50E-02	3.03E-05	1.36E-02	2.30E-03	4.17E-04	3.45E-03	8.52E-04	8.66E-04	1.81E-03	7.31E-05	3.01E-08	2.59E-03	2.54E-03
9	F49	60	Single Unit Long Haul Truck	4	0.00E+00	1.24E-06	6.17E-08	7.72E-01	1.02E-06	1.49E-03	1.32E-06	5.86E-04	1.03E-04	1.85E-05	1.51E-04	3.71E-05	3.77E-05	7.71E-05	3.12E-06	1.28E-09	1.14E-04	1.10E-04
9	F49	60	Combination Short Haul Truck	64	0.00E+00	3.75E-05	2.62E-06	2.44E+01	1.33E-07	3.28E-02	2.78E-05	4.07E-02	3.49E-03	6.92E-04	2.39E-03	7.79E-04	7.80E-04	3.68E-03	8.17E-05	0.00E+00	1.61E-03	7.68E-03
9	F49	60	Combination Long Haul Truck	58	0.00E+00	3.37E-05	2.19E-06	2.29E+01	1.52E-07	3.54E-02	2.60E-05	4.04E-02	3.51E-03	5.96E-04	2.46E-03	6.69E-04	6.78E-04	3.50E-03	7.67E-05	0.00E+00	1.78E-03	7.61E-03
9	F50	60	Passenger Car	636	0.00E+00	9.54E-06	1.03E-06	3.19E+01	6.64E-05	2.47E-01	2.12E-05	1.30E-03	6.46E-03	9.91E-04	2.06E-03	1.33E-03	1.37E-03	1.33E-04	1.60E-04	4.41E-08	6.98E-04	2.03E-04
9	F50	60	Passenger Truck	1065	0.00E+00	2.10E-05	2.22E-06	7.28E+01	1.31E-04	4.41E-01	4.33E-05	4.23E-03	1.18E-02	1.84E-03	4.12E-03	2.68E-03	2.75E-03	5.64E-04	3.62E-04	1.00E-07	1.37E-03	7.01E-04
9	F50	60	Single Unit Short Haul Truck	130	0.00E+00	3.82E-05	1.91E-06	2.44E+01	3.15E-05	4.72E-02	4.08E-05	1.82E-02	3.10E-03	5.62E-04	4.65E-03	1.15E-03	1.17E-03	2.44E-03	9.84E-05	4.05E-08	3.48E-03	3.42E-03
9	F50	60	Single Unit Long Haul Truck	6	0.00E+00	1.67E-06	8.31E-08	1.04E+00	1.37E-06	2.00E-03	1.78E-06	7.89E-04	1.39E-04	2.49E-05	2.04E-04	4.99E-05	5.07E-05	1.04E-04	4.20E-06	1.72E-09	1.53E-04	1.48E-04
9	F50	60	Combination Short Haul Truck	78	0.00E+00	4.61E-05	3.22E-06	3.00E+01	1.63E-07	4.04E-02	3.42E-05	5.01E-02	4.30E-03	8.51E-04	2.94E-03	9.58E-04	9.59E-04	4.53E-03	1.01E-04	0.00E+00	1.98E-03	9.44E-03
9	F50	60	Combination Long Haul Truck	72	0.00E+00	4.14E-05	2.70E-06	2.81E+01	1.87E-07	4.35E-02	3.19E-05	4.97E-02	4.32E-03	7.33E-04	3.03E-03	8.23E-04	8.34E-04	4.30E-03	9.43E-05	0.00E+00	2.19E-03	9.36E-03
10	F51	70	Passenger Car	515	0.00E+00	6.74E-06	7.29E-07	2.47E+01	4.69E-05	1.75E-01	1.50E-05	1.03E-03	3.99E-03	6.41E-04	1.46E-03	9.40E-04	9.64E-04	9.23E-05	1.24E-04	3.39E-08	4.93E-04	1.61E-04
10	F51	70	Passenger Truck	863	0.00E+00	1.48E-05	1.56E-06	5.70E+01	9.34E-05	3.23E-01	3.07E-05	3.23E-03	7.27E-03	1.18E-03	2.93E-03	1.90E-03	1.95E-03	4.18E-04	2.84E-04	7.59E-08	9.76E-04	5.31E-04
10	F51	70	Single Unit Short Haul Truck	36	0.00E+00	8.55E-06	4.28E-07	6.70E+00	6.99E-06	1.34E-02	9.11E-06	4.22E-03	6.02E-04	1.21E-04	1.04E-03	2.56E-04	2.60E-04	6.72E-04	2.70E-05	1.09E-08	7.77E-04	7.90E-04
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	3.73E-07	1.85E-08	2.84E-01	3.02E-07	5.63E-04	3.97E-07	1.81E-04	2.75E-05	5.36E-06	4.54E-05	1.11E-05	1.13E-05	2.84E-05	1.15E-06	4.60E-10	3.41E-05	3.40E-05
10	F51	70	Combination Short Haul Truck	22	0.00E+00	1.17E-05	8.31E-07	8.48E+00	3.80E-08	1.01E-02	8.58E-06	1.23E-02	8.90E-04	1.94E-04	7.13E-04	2.46E-04	2.46E-04	1.28E-03	2.84E-05	0.00E+00	4.67E-04	2.32E-03
10	F51	70	Combination Long Haul Truck	21	0.00E+00	1.06E-05	7.07E-07	7.91E+00	4.38E-08	1.07E-02	8.03E-06	1.21E-02	8.84E-04	1.61E-04	7.37E-04	2.14E-04	2.16E-04	1.21E-03	2.65E-05	0.00E+00	5.21E-04	2.28E-03
10	F52	70	Passenger Car	174	0.00E+00	2.28E-06	2.46E-07	8.36E+00	1.59E-05	5.93E-02	5.06E-06	3.49E-04	1.35E-03	2.17E-04	4.93E-04	3.18E-04	3.26E-04	3.12E-05	4.20E-05	1.14E-08	1.67E-04	5.46E-05
10	F52	70	Passenger Truck	292	0.00E+00	4.99E-06	5.28E-07	1.93E+01	3.16E-05	1.09E-01	1.04E-05	1.09E-03	2.46E-03	3.99E-04	9.89E-04	6.43E-04	6.59E-04	1.41E-04	9.60E-05	2.57E-08	3.30E-04	1.80E-04
10	F52	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.82E-03	1.92E-06	8.88E-04	1.27E-04	2.54E-05	2.18E-04	5.39E-05	5.47E-05	1.41E-04	5.69E-06	2.30E-09	1.64E-04	1.66E-04
10	F52	70	Combination Short Haul Truck	4	0.00E+00	2.18E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.60E-06	2.29E-03	1.66E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.69E-05	4.31E-04
10	F52	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.32E-07	1.47E+00	8.15E-09	1.98E-03	1.49E-06	2.25E-03	1.65E-04	3.00E-05	1.37E-04	3.98E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.25E-04
10	F53	70	Passenger Car	567	0.00E+00	7.41E-06	8.02E-07	2.72E+01	5.16E-05	1.93E-01	1.65E-05	1.14E-03	4.39E-03	7.05E-04	1.60E-03	1.03E-03	1.06E-03	1.02E-04	1.37E-04	3.72E-08	5.43E-04	1.77E-04
10	F53	70	Passenger Truck	949	0.00E+00	1.62E-05	1.72E-06	6.27E+01	1.03E-04	3.55E-01	3.37E-05	3.55E-03	7.99E-03	1.30E-03	3.22E-03	2.09E-03	2.14E-03	4.60E-04	3.12E-04	8.35E-08	1.07E-03	5.84E-04
10	F53	70	Single Unit Short Haul Truck	22	0.00E+00	5.18E-06	2.59E-07	4.05E+00	4.23E-06	8.11E-03	5.52E-06	2.55E-03	3.64E-04	7.29E-05	6.28E-04	1.55E-04	1.57E-04	4.06E-04	1.63E-05	6.60E-09	4.71E-04	4.78E-04
10	F53	70	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	1.72E-01	1.83E-07	3.41E-04	2.40E-07	1.10E-04	1.66E-05	3.24E-06	2.74E-05	6.70E-06	6.81E-06	1.72E-05	6.95E-07	2.78E-10	2.06E-05	2.06E-05
10	F53	70	Combination Short Haul Truck	13	0.00E+00	6.80E-06	4.83E-07	4.93E+00	2.21E-08	5.86E-03	4.99E-06	7.15E-03	5.18E-04	1.13E-04	4.14E-04	1.43E-04	1.43E-04	7.43E-04	1.65E-05	0.00E+00	2.71E-04	1.35E-03
10	F53	70	Combination Long Haul Truck	12	0.00E+00	6.15E-06	4.11E-07	4.60E+00	2.55E-08	6.20E-03	4.67E-06	7.05E-03	5.14E-04	9.38E-05	4.28E-04	1.24E-04	1.26E-04	7.03E-04	1.54E-05	0.00E+00	3.03E-04	1.33E-03
10	F54	70	Passenger Car	224	0.00E+00	2.93E-06	3.17E-07	1.07E+01	2.04E-05	7.63E-02	6.51E-06	4.49E-04	1.74E-03	2.79E-04	6.34E-04	4.08E-04	4.19E-04	4.01E-05	5.40E-05	1.47E-08	2.14E-04	7.01E-05
10	F54	70	Passenger Truck	375	0.00E+00	6.42E-06	6.79E-07	2.48E+01	4.06E-05	1.40E-01	1.33E-05	1.40E-03	3.16E-03	5.13E-04	1.27E-03	8.27E-04	8.47E-04	1.82E-04	1.23E-04	3.30E-08	4.24E-04	2.31E-04
10	F54	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.31E-05
10	F54	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.58E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	F54	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.46E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
53	F71	70	Passenger Car	132	0.00E+00	1.67E-06	1.81E-07	6.41E+00	1.16E-05	4.32E-02	3.72E-06	2.69E-04	1.01E-03	1.63E-04	3.62E-04	2.33E-04	2.39E-04	2.36E-05	3.22E-05	8.77E-09	1.23E-04	4.20E-05
53	F71	70	Passenger Truck	221	0.00E+00	3.64E-06	3.85E-07	1.48E+01	2.31E-05	7.93E-02	7.57E-06	8.23E-04	1.81E-03	2.96E-04	7.22E-04	4.70E-04	4.81E-04	1.07E-04	7.36E-05	1.93E-08	2.41E-04	1.35E-04
53	F71	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
53	F71	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.07E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
53	F71	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.86E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
53	F71	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.74E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
50	F72	40	Passenger Car	132	0.00E+00	2.23E-06	2.41E-07	7.69E+00	1.55E-05	5.73E-02	4.95E-06	2.39E-04	2.29E-03	3.27E-04	4.82E-04	3.11E-04	3.19E-04	4.15E-05	3.82E-05	9.28E-09	1.63E-04	3.74E-05
50	F72	40	Passenger Truck	222	0.00E+00	5.09E-06	5.34E-07	1.71E+01	3.05E-05	9.86E-02	1.02E-05	9.06E-04	4.07E-03	5.78E-04	9.60E-04	6.28E-04	6.43E-04	1.47E-04	8.44E-05	1.81E-08	3.17E-04	1.53E-04
50	F72	40	Single Unit Short Haul Truck	51	0.00E+00	2.25E-05	1.18E-06	1.08E+01	1.96E-05	1.86E-02	2.40E-05	1.10E-02	2.06E-03	3.42E-04	2.66E-03	7.03E-04	7.14E-04	1.09E-03	4.37E-05	1.85E-08	1.95E-03	2.07E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	9.87E-07	5.15E-08	4.67E-01	8.59E-07	8.11E-04	1.05E-06	4.80E-04	9.21E-05	1.52E-05	1.17E-04	3.08E-05	3.12E-05	4.72E-05	1.89E-06	8.02E-10	8.59E-05	9.00E-05
50	F72	40	Combination Short Haul Truck	36	0.00E+00	3.15E-05	2.19E-06	1.60E+01	1.13E-07	2.75E-02	2.34E-05	3.52E-02	3.66E-03	6.61E-04	2.04E-03	6.53E-04	6.59E-04	2.41E-03	5.35E-05	0.00E+00	1.38E-03	6.62E-03
50	F72	40	Combination Long Haul Truck	32	0.00E+00	2.87E-05	1.87E-06	1.52E+01	1.29E-07	3.05E-02	2.21E-05	3.53E-02	3.68E-03	5.87E-04	2.10E-03	5.71E-04	5.82E-04	2.32E-03	5.09E-05	0.00E+00	1.52E-03	6.64E-03
52	F73	60	Passenger Car	27	0.00E+00	3.66E-07	3.96E-08	1.33E+00	2.54E-06	9.41E-03	8.13E-07	5.22E-05	2.62E-04	4.03E-05	7.91E-05	5.10E-05	5.23E-05	5.55E-06	6.67E-06	1.78E-09	2.68E-05	8.15E-06
52	F73	60	Passenger Truck	44	0.00E+00	8.03E-07	8.48E-08	3.04E+00	5.01E-06	1.68E-02	1.65E-06	1.68E-04	4.67E-04	7.22E-05	1.57E-04	1.02E-04	1.05E-04	2.31E-05	1.51E-05	3.78E-09	5.22E-05	2.77E-05
52	F73	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.51E-05
52	F73	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.29E-05
53	F74	70	Passenger Car	212	0.00E+00	2.69E-06	2.91E-07	1.03E+01	1.87E-05	6.95E-02	5.98E-06	4.33E-04	1.62E-03	2.61E-04	5.82E-04	3.75E-04	3.85E-04	3.80E-05	5.18E-05	1.41E-08	1.97E-04	6.77E-05
53	F74	70	Passenger Truck	356	0.00E+00	5.86E-06	6.20E-07	2.38E+01	3.71E-05	1.28E-01	1.22E-05	1.32E-03	2.91E-03	4.76E-04	1.16E-03	7.56E-04	7.75E-04	1.71E-04	1.18E-04	3.10E-08	3.88E-04	2.17E-04
53	F74	70	Single Unit Short Haul Truck	58	0.00E+00	1.37E-05	6.88E-07	1.08E+01	1.12E-05	2.15E-02	1.46E-05	6.77E-03	9.66E-04	1.93E-04	1.67E-03	4.11E-04	4.17E-04	1.08E-03	4.34E-05	1.75E-08	1.25E-03	1.27E-03
53	F74	70	Single Unit Long Haul Truck	3	0.00E+00	5.98E-07	2.98E-08	4.56E-01	4.85E-07	9.04E-04	6.37E-07	2.91E-04	4.41E-05	8.60E-06	7.28E-05	1.78E-05	1.81E-05	4.56E-05	1.84E-06	7.38E-10	5.47E-05	5.45E-05
53	F74	70	Combination Short Haul Truck	30	0.00E+00	1.58E-05	1.12E-06

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	F80	70	Single Unit Short Haul Truck	25	0.00E+00	5.85E-06	2.93E-07	4.58E+00	4.79E-06	9.17E-03	6.23E-06	2.89E-03	4.12E-04	8.24E-05	7.10E-04	1.75E-04	1.78E-04	4.59E-04	1.85E-05	7.46E-09	5.32E-04	5.40E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	2.55E-07	1.27E-08	1.94E-01	2.07E-07	3.85E-04	2.72E-07	1.24E-04	1.88E-05	3.67E-06	3.10E-05	7.58E-06	7.70E-06	1.94E-05	7.85E-07	3.15E-10	2.33E-05	2.32E-05
53	F80	70	Combination Short Haul Truck	17	0.00E+00	8.98E-06	6.38E-07	6.51E+00	2.92E-08	7.73E-03	6.59E-06	9.44E-03	6.83E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.81E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
53	F80	70	Combination Long Haul Truck	16	0.00E+00	8.11E-06	5.43E-07	6.07E+00	3.36E-08	8.19E-03	6.16E-06	9.30E-03	6.79E-04	1.24E-04	5.65E-04	1.64E-04	1.66E-04	9.28E-04	2.03E-05	0.00E+00	4.00E-04	1.75E-03
50	F84	40	Passenger Car	211	0.00E+00	3.55E-06	3.84E-07	1.23E+01	2.47E-05	9.12E-02	7.89E-06	3.81E-04	3.65E-03	5.21E-04	7.68E-04	4.95E-04	5.08E-04	6.61E-05	6.08E-05	1.48E-08	2.60E-04	5.96E-05
50	F84	40	Passenger Truck	353	0.00E+00	8.11E-06	8.50E-07	2.73E+01	4.86E-05	1.57E-01	1.62E-05	1.44E-03	6.48E-03	9.21E-04	1.53E-03	1.00E-03	1.02E-03	2.34E-04	1.34E-04	2.88E-08	5.05E-04	2.44E-04
50	F84	40	Single Unit Short Haul Truck	9	0.00E+00	3.82E-06	2.01E-07	1.84E+00	3.33E-06	3.16E-03	4.07E-06	1.87E-03	3.49E-04	5.80E-05	4.52E-04	1.19E-04	1.21E-04	1.86E-04	7.41E-06	3.14E-09	3.31E-04	3.51E-04
50	F84	40	Combination Short Haul Truck	15	0.00E+00	1.30E-05	9.01E-07	6.58E+00	4.66E-08	1.13E-02	9.65E-06	1.45E-02	1.51E-03	2.72E-04	8.41E-04	2.69E-04	2.71E-04	9.92E-04	2.20E-05	0.00E+00	5.69E-04	2.73E-03
50	F84	40	Combination Long Haul Truck	13	0.00E+00	1.18E-05	7.71E-07	6.26E+00	5.30E-08	1.26E-02	9.10E-06	1.45E-02	1.52E-03	2.42E-04	8.66E-04	2.35E-04	2.40E-04	9.57E-04	2.10E-05	0.00E+00	6.26E-04	2.73E-03
52	F85	60	Passenger Car	216	0.00E+00	2.98E-06	3.22E-07	1.08E+01	2.07E-05	7.66E-02	6.62E-06	4.25E-04	2.13E-03	3.28E-04	6.44E-04	4.15E-04	4.26E-04	4.52E-05	5.43E-05	1.45E-08	2.18E-04	6.63E-05
52	F85	60	Passenger Truck	362	0.00E+00	6.54E-06	6.90E-07	2.47E+01	4.08E-05	1.37E-01	1.35E-05	1.37E-03	3.80E-03	5.88E-04	1.28E-03	8.33E-04	8.53E-04	1.88E-04	1.23E-04	3.08E-08	4.25E-04	2.26E-04
52	F85	60	Single Unit Short Haul Truck	10	0.00E+00	2.81E-06	1.41E-07	1.79E+00	2.32E-06	3.47E-03	3.00E-06	1.34E-03	2.28E-04	4.13E-05	3.42E-04	8.43E-05	8.57E-05	1.79E-04	7.24E-06	2.98E-09	2.56E-04	2.51E-04
52	F85	60	Combination Short Haul Truck	11	0.00E+00	6.46E-06	4.50E-07	4.20E+00	2.29E-08	5.65E-03	4.79E-06	7.01E-03	6.02E-04	1.19E-04	4.11E-04	1.34E-04	1.34E-04	6.34E-04	1.41E-05	0.00E+00	2.77E-04	1.32E-03
52	F85	60	Combination Long Haul Truck	10	0.00E+00	5.80E-06	3.77E-07	3.94E+00	2.62E-08	6.09E-03	4.47E-06	6.95E-03	6.05E-04	1.03E-04	4.24E-04	1.15E-04	1.17E-04	6.02E-04	1.32E-05	0.00E+00	3.07E-04	1.31E-03
53	F86	70	Passenger Car	328	0.00E+00	4.16E-06	4.50E-07	1.59E+01	2.89E-05	1.07E-01	9.24E-06	6.68E-04	2.50E-03	4.04E-04	8.99E-04	5.80E-04	5.95E-04	5.87E-05	8.00E-05	2.18E-08	3.04E-04	1.04E-04
53	F86	70	Passenger Truck	549	0.00E+00	9.05E-06	9.58E-07	3.67E+01	5.73E-05	1.97E-01	1.88E-05	2.05E-03	4.49E-03	7.34E-04	1.79E-03	1.17E-03	1.20E-03	2.65E-04	1.83E-04	4.79E-08	5.99E-04	3.36E-04
53	F86	70	Single Unit Short Haul Truck	11	0.00E+00	2.70E-06	1.35E-07	2.12E+00	2.21E-06	4.23E-03	2.88E-06	1.33E-03	1.90E-04	3.81E-05	3.28E-04	8.08E-05	8.21E-05	2.12E-04	8.53E-06	3.44E-09	2.46E-04	2.49E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	1.18E-07	5.85E-09	8.98E-02	9.53E-08	1.78E-04	1.25E-07	5.73E-05	8.68E-06	1.69E-06	1.43E-05	3.50E-06	3.56E-06	8.97E-06	3.63E-07	1.45E-10	1.08E-05	1.07E-05
53	F86	70	Combination Short Haul Truck	20	0.00E+00	1.03E-05	7.35E-07	7.49E+00	3.36E-08	8.90E-03	7.58E-06	1.09E-02	7.87E-04	1.72E-04	6.30E-04	2.17E-04	2.17E-04	1.13E-03	2.51E-05	0.00E+00	4.13E-04	2.05E-03
53	F86	70	Combination Long Haul Truck	18	0.00E+00	9.34E-06	6.25E-07	6.99E+00	3.87E-08	9.43E-03	7.10E-06	1.07E-02	7.81E-04	1.43E-04	6.51E-04	1.89E-04	1.91E-04	1.07E-03	2.34E-05	0.00E+00	4.60E-04	2.02E-03
52	F87	60	Passenger Car	340	0.00E+00	4.68E-06	5.06E-07	1.71E+01	3.26E-05	1.21E-01	1.04E-05	6.68E-04	3.35E-03	5.15E-04	1.01E-03	6.53E-04	6.70E-04	7.10E-05	8.54E-05	2.28E-08	3.43E-04	1.04E-04
52	F87	60	Passenger Truck	569	0.00E+00	1.03E-05	1.09E-06	3.89E+01	6.41E-05	2.15E-01	2.12E-05	2.15E-03	5.98E-03	9.24E-04	2.01E-03	1.31E-03	1.34E-03	2.95E-04	1.93E-04	4.84E-08	6.69E-04	3.55E-04
52	F87	60	Single Unit Short Haul Truck	50	0.00E+00	1.46E-05	7.31E-07	9.32E+00	1.21E-05	1.80E-02	1.56E-05	6.98E-03	1.18E-03	2.15E-04	1.78E-03	4.39E-04	4.46E-04	9.32E-04	3.76E-05	1.55E-08	1.33E-03	1.31E-03
52	F87	60	Single Unit Long Haul Truck	2	0.00E+00	6.39E-07	3.18E-08	3.98E-01	5.24E-07	7.66E-04	6.82E-07	3.02E-04	5.32E-05	9.50E-06	7.78E-05	1.91E-05	1.94E-05	3.97E-05	1.61E-06	6.59E-10	5.84E-05	5.65E-05
52	F87	60	Combination Short Haul Truck	30	0.00E+00	1.75E-05	1.22E-06	1.14E+01	6.21E-08	1.53E-02	1.30E-05	1.90E-02	1.63E-03	3.23E-04	1.12E-03	3.64E-04	3.65E-04	1.72E-03	3.82E-05	0.00E+00	7.51E-04	3.59E-03
52	F87	60	Combination Long Haul Truck	27	0.00E+00	1.57E-05	1.02E-06	1.07E+01	7.12E-08	1.65E-02	1.21E-05	1.89E-02	1.64E-03	2.78E-04	1.15E-03	3.13E-04	3.17E-04	1.63E-03	3.58E-05	0.00E+00	8.33E-04	3.56E-03
50	F88	40	Passenger Car	211	0.00E+00	3.55E-06	3.84E-07	1.23E+01	2.47E-05	9.12E-02	7.89E-06	3.81E-04	3.65E-03	5.21E-04	7.68E-04	4.95E-04	5.08E-04	6.61E-05	6.08E-05	1.48E-08	2.60E-04	5.96E-05
50	F88	40	Passenger Truck	353	0.00E+00	8.11E-06	8.50E-07	2.73E+01	4.86E-05	1.57E-01	1.62E-05	1.44E-03	6.48E-03	9.21E-04	1.53E-03	1.00E-03	1.02E-03	2.34E-04	1.34E-04	2.88E-08	5.05E-04	2.44E-04
50	F88	40	Single Unit Short Haul Truck	9	0.00E+00	3.82E-06	2.01E-07	1.84E+00	3.33E-06	3.16E-03	4.07E-06	1.87E-03	3.49E-04	5.80E-05	4.52E-04	1.19E-04	1.21E-04	1.86E-04	7.41E-06	3.14E-09	3.31E-04	3.51E-04
50	F88	40	Combination Short Haul Truck	15	0.00E+00	1.30E-05	9.01E-07	6.58E+00	4.66E-08	1.13E-02	9.65E-06	1.45E-02	1.51E-03	2.72E-04	8.41E-04	2.69E-04	2.71E-04	9.92E-04	2.20E-05	0.00E+00	5.69E-04	2.73E-03
50	F88	40	Combination Long Haul Truck	13	0.00E+00	1.18E-05	7.71E-07	6.26E+00	5.30E-08	1.26E-02	9.10E-06	1.45E-02	1.52E-03	2.42E-04	8.66E-04	2.35E-04	2.40E-04	9.57E-04	2.10E-05	0.00E+00	6.26E-04	2.73E-03
50	F89	40	Passenger Car	206	0.00E+00	3.47E-06	3.75E-07	1.20E+01	2.42E-05	8.93E-02	7.72E-06	3.73E-04	3.57E-03	5.10E-04	7.51E-04	4.84E-04	4.97E-04	6.47E-05	5.95E-05	1.45E-08	2.54E-04	5.83E-05
50	F89	40	Passenger Truck	346	0.00E+00	7.94E-06	8.32E-07	2.67E+01	4.76E-05	1.54E-01	1.59E-05	1.41E-03	6.34E-03	9.01E-04	1.50E-03	9.80E-04	1.00E-03	2.29E-04	1.32E-04	2.82E-08	4.94E-04	2.39E-04
50	F89	40	Single Unit Short Haul Truck	53	0.00E+00	2.34E-05	1.23E-06	1.12E+01	2.04E-05	1.93E-02	2.49E-05	1.14E-02	2.14E-03	3.55E-04	2.76E-03	7.30E-04	7.41E-04	1.13E-03	4.53E-05	1.92E-08	2.02E-03	2.15E-03
50	F89	40	Single Unit Long Haul Truck	2	0.00E+00	1.02E-06	5.35E-08	4.85E-01	8.92E-07	8.42E-04	1.09E-06	4.98E-04	9.56E-05	1.58E-05	1.22E-04	3.19E-05	3.24E-05	4.90E-05	1.96E-06	8.32E-10	8.92E-05	9.34E-05
50	F89	40	Combination Short Haul Truck	51	0.00E+00	4.49E-05	3.12E-06	2.28E+01	1.62E-07	3.92E-02	3.34E-05	5.02E-02	5.23E-03	9.43E-04	2.91E-03	9.31E-04	9.39E-04	3.44E-03	7.64E-05	0.00E+00	1.97E-03	9.45E-03
50	F89	40	Combination Long Haul Truck	46	0.00E+00	4.09E-05	2.67E-06	2.17E+01	1.84E-07	4.35E-02	3.15E-05	5.03E-02	5.25E-03	8.37E-04	3.00E-03	8.15E-04	8.30E-04	3.31E-03	7.26E-05	0.00E+00	2.17E-03	9.47E-03

Appendix F.4.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B09	0.00E+00	9.78E-05	8.29E-06	2.47E+02	2.91E-04	1.19E+00	1.35E-04	6.70E-02	1.31E-02	2.95E-03	1.27E-02	6.96E-03	7.10E-03	9.78E-03	1.15E-03	2.74E-07	5.62E-03	1.23E-02
B10	0.00E+00	7.77E-05	6.53E-06	1.91E+02	2.20E-04	9.02E-01	1.05E-04	5.46E-02	1.00E-02	2.27E-03	9.86E-03	5.35E-03	5.45E-03	7.99E-03	8.81E-04	2.08E-07	4.41E-03	1.01E-02
B13	0.00E+00	4.39E-05	3.65E-06	1.05E+02	1.19E-04	4.90E-01	5.83E-05	3.14E-02	5.50E-03	1.25E-03	5.48E-03	2.94E-03	2.99E-03	4.62E-03	4.84E-04	1.14E-07	2.48E-03	5.79E-03
B14	0.00E+00	7.18E-05	6.07E-06	1.81E+02	2.14E-04	8.71E-01	9.94E-05	4.88E-02	9.61E-03	2.16E-03	9.37E-03	5.11E-03	5.22E-03	7.16E-03	8.42E-04	2.03E-07	4.15E-03	8.98E-03
B15	0.00E+00	5.51E-05	5.30E-06	1.94E+02	2.74E-04	1.08E+00	9.94E-05	2.39E-02	1.11E-02	2.37E-03	9.55E-03	5.80E-03	5.94E-03	3.22E-03	9.49E-04	2.52E-07	3.61E-03	4.22E-03
B16	0.00E+00	3.93E-05	3.76E-06	1.38E+02	1.95E-04	7.70E-01	7.09E-05	1.67E-02	7.89E-03	1.69E-03	6.82E-03	4.13E-03	4.23E-03	2.29E-03	6.75E-04	1.80E-07	2.60E-03	2.96E-03
B19	0.00E+00	2.35E-04	2.05E-05	6.58E+02	8.30E-04	3.34E+00	3.53E-04	1.42E-01	3.58E-02	7.91E-03	3.37E-02	1.89E-02	1.94E-02	2.07E-02	3.11E-03	7.84E-07	1.43E-02	2.58E-02
B20	0.00E+00	1.98E-04	1.57E-05	4.14E+02	4.14E-04	1.74E+00	2.37E-04	1.57E-01	2.06E-02	4.83E-03	2.21E-02	1.11E-02	1.13E-02	2.35E-02	1.84E-03	4.05E-07	1.08E-02	2.91E-02
B21	0.00E+00	1.97E-04	1.77E-05	5.83E+02	7.58E-04	3.04E+00	3.09E-04	1.13E-01	3.22E-02	7.05E-03	2.94E-02	1.70E-02	1.73E-02	1.61E-02	2.78E-03	7.08E-07	1.21E-02	2.05E-02
B22	0.00E+00	1.66E-04	1.31E-05	3.35E+02	3.25E-04	1.37E+00	1.94E-04	1.34E-01	1.65E-02	3.90E-03	1.80E-02	8.92E-03	9.06E-03	2.00E-02	1.48E-03	3.18E-07	8.90E-03	2.49E-02
B23	0.00E+00	2.00E-04	1.80E-05	5.95E+02	7.77E-04	3.11E+00	3.15E-04	1.13E-01	3.29E-02	7.20E-03	3.00E-02	1.73E-02	1.77E-02	1.62E-02	2.85E-03	7.24E-07	1.23E-02	2.06E-02
B24	0.00E+00	1.83E-04	1.44E-05	3.70E+02	3.58E-04	1.51E+00	2.14E-04	1.48E-01	1.82E-02	4.30E-03	1.99E-02	9.83E-03	9.99E-03	2.22E-02	1.63E-03	3.51E-07	9.87E-03	2.76E-02
D63	0.00E+00	3.39E-06	2.83E-07	7.60E+00	1.14E-05	4.04E-02	5.03E-06	1.81E-03	9.98E-04	1.67E-04	4.90E-04	2.61E-04	2.67E-04	2.10E-04	3.62E-05	9.34E-09	2.23E-04	3.32E-04
D64	0.00E+00	1.74E-05	1.25E-06	2.30E+01	2.44E-05	9.11E-02	1.87E-05	1.39E-02	2.80E-03	4.95E-04	1.79E-03	7.57E-04	7.71E-04	1.53E-03	9.93E-05	2.14E-08	1.02E-03	2.59E-03
D65	0.00E+00	3.25E-05	2.36E-06	4.94E+01	4.95E-05	1.91E-01	3.57E-05	2.51E-02	4.29E-03	8.35E-04	3.43E-03	1.48E-03	1.51E-03	3.24E-03	2.15E-04	4.79E-08	1.92E-03	4.68E-03
D66	0.00E+00	3.92E-05	2.86E-06	5.68E+01	5.29E-05	2.10E-01	4.13E-05	3.20E-02	4.90E-03	9.62E-04	3.91E-03	1.68E-03	1.71E-03	4.05E-03	2.43E-04	5.04E-08	2.21E-03	5.98E-03
D67	0.00E+00	3.25E-05	2.36E-06	4.94E+01	4.95E-05	1.91E-01	3.57E-05	2.51E-02	4.29E-03	8.35E-04	3.43E-03	1.48E-03	1.51E-03	3.24E-03	2.15E-04	4.79E-08	1.92E-03	4.68E-03
D68	0.00E+00	3.92E-05	2.86E-06	5.68E+01	5.29E-05	2.10E-01	4.13E-05	3.20E-02	4.90E-03	9.62E-04	3.91E-03	1.68E-03	1.71E-03	4.05E-03	2.43E-04	5.04E-08	2.21E-03	5.98E-03
D69	0.00E+00	1.88E-05	1.40E-06	3.01E+01	3.14E-05	1.21E-01	2.11E-05	1.44E-02	2.65E-03	5.10E-04	2.02E-03	9.07E-04	9.23E-04	1.84E-03	1.32E-04	2.95E-08	1.10E-03	2.68E-03
D70	0.00E+00	1.87E-05	1.37E-06	2.83E+01	2.80E-05	1.09E-01	2.04E-05	1.47E-02	2.47E-03	4.80E-04	1.94E-03	8.48E-04	8.62E-04	1.88E-03	1.23E-04	2.67E-08	1.08E-03	2.75E-03
D71	0.00E+00	3.41E-05	2.55E-06	4.76E+01	5.10E-05	1.97E-01	3.68E-05	2.84E-02	5.92E-03	1.04E-03	3.46E-03	1.56E-03	1.58E-03	3.03E-03	2.07E-04	4.24E-08	1.87E-03	5.31E-03
D72	0.00E+00	2.26E-05	1.81E-06	4.37E+01	6.05E-05	2.19E-01	3.02E-05	1.45E-02	5.66E-03	9.56E-04	2.91E-03	1.48E-03	1.51E-03	1.62E-03	2.03E-04	4.98E-08	1.40E-03	2.68E-03
D73	0.00E+00	1.46E-05	1.20E-06	2.74E+01	3.61E-05	1.35E-01	1.87E-05	1.06E-02	3.56E-03	6.04E-04	1.76E-03	9.15E-04	9.34E-04	1.13E-03	1.26E-04	2.88E-08	8.23E-04	1.97E-03
D74	0.00E+00	1.06E-05	1.02E-06	3.25E+01	5.29E-05	1.89E-01	1.91E-05	4.10E-03	4.41E-03	7.22E-04	1.83E-03	1.12E-03	1.15E-03	4.59E-04	1.59E-04	4.17E-08	6.85E-04	7.31E-04
D75	0.00E+00	1.09E-05	8.58E-07	2.24E+01	2.88E-05	1.07E-01	1.45E-05	6.77E-03	2.06E-03	3.84E-04	1.41E-03	7.04E-04	7.19E-04	8.91E-04	1.04E-04	2.64E-08	6.92E-04	1.25E-03
D76	0.00E+00	1.33E-05	1.07E-06	2.77E+01	3.53E-05	1.33E-01	1.77E-05	8.66E-03	2.57E-03	4.77E-04	1.69E-03	8.69E-04	8.87E-04	1.10E-03	1.28E-04	3.16E-08	8.05E-04	1.60E-03
D77	0.00E+00	1.25E-05	9.55E-07	2.33E+01	2.79E-05	1.04E-01	1.57E-05	8.41E-03	2.10E-03	3.96E-04	1.52E-03	7.21E-04	7.36E-04	1.11E-03	1.06E-04	2.61E-08	7.86E-04	1.56E-03
D78	0.00E+00	1.09E-05	8.17E-07	1.81E+01	1.96E-05	7.53E-02	1.25E-05	8.15E-03	1.61E-03	3.08E-04	1.20E-03	5.50E-04	5.60E-04	1.04E-03	8.02E-05	1.83E-08	6.40E-04	1.52E-03
D79	0.00E+00	2.47E-05	1.92E-06	4.11E+01	5.13E-05	1.91E-01	2.97E-05	1.84E-02	5.24E-03	9.00E-04	2.83E-03	1.37E-03	1.40E-03	2.00E-03	1.86E-04	4.22E-08	1.43E-03	3.43E-03
D80	0.00E+00	3.63E-05	3.06E-06	7.80E+01	1.12E-04	4.07E-01	5.11E-05	2.26E-02	1.03E-02	1.72E-03	4.87E-03	2.64E-03	2.70E-03	2.47E-03	3.67E-04	8.96E-08	2.17E-03	4.18E-03
D81	0.00E+00	7.11E-06	7.05E-07	2.31E+01	3.83E-05	1.37E-01	1.34E-05	2.41E-03	3.16E-03	5.14E-04	1.29E-03	8.00E-04	8.19E-04	2.73E-04	1.14E-04	3.01E-08	4.66E-04	4.24E-04
D82	0.00E+00	8.36E-06	8.91E-07	3.18E+01	5.46E-05	1.94E-01	1.78E-05	1.66E-03	4.38E-03	7.09E-04	1.70E-03	1.11E-03	1.13E-03	1.99E-04	1.59E-04	4.27E-08	5.72E-04	2.69E-04
D83	0.00E+00	1.03E-04	8.24E-06	2.02E+02	2.45E-04	9.35E-01	1.30E-04	7.26E-02	1.86E-02	3.47E-03	1.23E-02	6.25E-03	6.37E-03	9.04E-03	9.22E-04	2.16E-07	5.92E-03	1.35E-02
D84	0.00E+00	7.80E-05	5.83E-06	1.22E+02	1.22E-04	4.81E-01	8.54E-05	6.24E-02	1.07E-02	2.07E-03	8.06E-03	3.64E-03	3.70E-03	7.84E-03	5.29E-04	1.12E-07	4.36E-03	1.17E-02
D85	0.00E+00	7.92E-05	6.36E-06	1.57E+02	1.91E-04	7.30E-01	1.01E-04	5.57E-02	1.44E-02	2.70E-03	9.54E-03	4.86E-03	4.96E-03	6.93E-03	7.17E-04	1.69E-07	4.58E-03	1.03E-02
D86	0.00E+00	6.33E-05	4.81E-06	1.04E+02	1.09E-04	4.27E-01	7.14E-05	4.96E-02	9.23E-03	1.77E-03	6.74E-03	3.13E-03	3.19E-03	6.21E-03	4.57E-04	9.94E-08	3.55E-03	9.25E-03
D87	0.00E+00	7.92E-05	6.36E-06	1.57E+02	1.91E-04	7.30E-01	1.01E-04	5.57E-02	1.44E-02	2.70E-03	9.54E-03	4.86E-03	4.96E-03	6.93E-03	7.17E-04	1.69E-07	4.58E-03	1.03E-02
D88	0.00E+00	6.33E-05	4.81E-06	1.04E+02	1.09E-04	4.27E-01	7.14E-05	4.96E-02	9.23E-03	1.77E-03	6.74E-03	3.13E-03	3.19E-03	6.21E-03	4.57E-04	9.94E-08	3.55E-03	9.25E-03
D89	0.00E+00	6.15E-06	4.92E-07	1.06E+01	1.60E-05	5.68E-02	8.12E-06	4.17E-03	1.77E-03	2.84E-04	7.82E-04	3.95E-04	4.04E-04	4.04E-04	4.89E-05	1.20E-08	3.79E-04	7.75E-04
D90	0.00E+00	3.32E-06	2.59E-07	5.71E+00	8.99E-06	3.09E-02	4.52E-06	1.98E-03	9.50E-04	1.52E-04	4.45E-04	2.18E-04	2.22E-04	2.03E-04	2.66E-05	6.94E-09	2.22E-04	3.67E-04
D91	0.00E+00	1.31E-05	1.03E-06	2.34E+01	3.07E-05	1.13E-01	1.65E-05	9.19E-03	3.01E-03	5.12E-04	1.58E-03	7.85E-04	8.01E-04	1.01E-03	1.07E-04	2.52E-08	7.74E-04	1.71E-03
D92	0.00E+00	1.38E-05	1.32E-06	4.19E+01	6.86E-05	2.44E-01	2.50E-05	5.02E-03	5.68E-03	9.30E-04	2.41E-03	1.45E-03	1.49E-03	5.88E-04	2.06E-04	5.46E-08	9.27E-04	8.91E-04
D93	0.00E+00	1.14E-05	9.13E-07	2.11E+01	2.81E-05	1.03E-01	1.47E-05	7.87E-03	2.72E-03	4.62E-04	1.41E-03	7.09E-04	7.24E-04	8.63E-04	9.71E-05	2.30E-08	6.83E-04	1.46E-03
D94	0.00E+00	1.26E-05	1.22E-06	3.96E+01	6.54E-05	2.32E-01	2.34E-05	4.24E-03	5.38E-03	8.78E-04	2.26E-03	1.37E-03	1.41E-03	5.00E-04	1.95E-04	5.19E-08	8.51E-04	7.47E-04
E01	0.00E+00	2.51E-05	2.01E-06	4.39E+01	6.74E-05	2.38E-01	3.36E-05	1.64E-02	7.34E-03	1.18E-03	3.25E-03	1.65E-03	1.68E-03	1.61E-03	2.04E-04	5.09E-08	1.57E-03	3.04E-03
E02	0.00E+00	2.31E-05	1.93E-06	4.53E+01	7.28E-05	2.57E-01	3.31E-05	1.40E-02	7.66E-03	1.22E-03	3.19E-03	1.71E-03	1.74E-03	1.38E-03	2.14E-04	5.43E-08	1.45E-03	2.59E-03
E03	0.00E+00	2.14E-05	1.63E-06	3.75E+01	4.26E-05	1.62E-01	2.55E-05	1.55E-02	3.36E-03	6.40E-04	2.45E-03	1.15E-03	1.17E-03	1.99E-03	1.68E-04	3.95E-08	1.28E-03	2.88E-03
E04	0.00E+00	2.06E-05	1.72E-06	4.82E+01	6.56E-05	2.44E-01	2.97E-05	1.20E-02	4.53E-03	8.32E-04	2.86E-03	1.53E-03	1.56E-03	1.54E-03	2.28E-04	5.80E-08	1.29E-03	2.21E-03
E05	0.00E+00	2.05E-05	1.58E-06	3.73E+01	4.36E-05	1.65E-01	2.51E-05	1.45E-02	3.37E-03	6.37E-04	2.41E-03	1.15E-03	1.17E-03	1.86E-03	1.69E-04	4.01E-08	1.24E-03	2.69E-03
E06	0.00E+00	1.36E-05	1.02E-06	2.34E+01	2.64E-05	1.00E-01	1.61E-05	9.75E-03	2.09E-03	3.98E-04	1.56E-03	7.18E-04	7.31E-04	1.27E-03	1.05E-04	2.49E-08	8.27E-04	1.81E-03
E07	0.00E+00	1.07E-04	8.54E-06	1.82E+02	2.73E-04	9.77E-01	1.40E-04	7.37E-02	3.05E-02	4.89E-03	1.34E-02	6.79E-03	6.94E-03	7.10E-03	8.42E-04	2.05E-07	6.49E-03	1.37E-02
E08	0.00E+00	1.18E-04	9.71E-06	2.18E+02	3.38E-04	1.21E+00	1.62E-04	7.76E-02	3.67E-02	5.87E-03	1.55E-02	8.14E-03	8.32E-03	7.47E-03	1.02E-03	2.52E-07	7.17E-03	1.44E-02
E09	0.00E+00	8.70E-05	7.11E-06	1.58E+02	2.44E-04	8.70E-01	1.18E-04	5.74E-02	2.66E-02	4.25E-03	1.14E-02	5.91E-03	6.04E-03	5.54E-03	7.37E-04	1.82E-07	5.32E-03	1.06E-02
E10	0.00E+00	9.83E-05	8.14E-06	1.84E+02	2.87E-04	1.02E+00	1.36E-04	6.43E-02	3.10E-02	4.95E-03	1.30E-02	6.87E-03	7.02E-03	6.19E-03	8.61E-04	2.13E-07	5.96E-03	1.19E-02
E11	0.00E+00	1.71E-04	1.28E-05	2.35E+02	3.09E-04	1.13E+00	1.97E-04	1.35E-01	3.85E-02	6.30E-03	1.89E-02	8.64E-03	8.81E-03	1.28E-02	1.05E-03	2.36E-07	1.01E-02	2.52E-02
E12	0.00E+00	1.77E-04	1.39E-05	2.89E+02	4.24E-04	1.52E+00	2.26E-04	1.25E-01	4.81E-02	7.74E-03	2.18E-02	1.08E-02	1.10E-02	1.20E-02	1.33E-03	3.21E-07	1.08E-02	2.32E-02
E13	0.00E+00	2.95E-05	2.43E-06	6.58E+01	8.71E-05	3.25E-01	4.11E-05	1.81E-02	6.14E-03	1.13E-03	3.95E-03	2.08E-03	2.12E-03	2.31E-03	3.08E-04	7.74E-08	1.83E-03	3.34E-03
E14	0.00E+00	1.97E-05	1.61E-06	4.17E+01	5.33E-05	2.02E-01	2.62E-05	1.31E-02	3.88E-03	7.20E-04	2.49E-03	1.31E-03	1.33E-03	1.63E-03	1.94E-04	4.69E-08	1.16E-03	2.41E-03
E15	0.00E+00	2.45E-05	2.04E-06	5.27E+01	6.74E-05	2.56E-01	3.28E-05	1.66E-02	4.92E-03	9.12E-04	3.09E-03	1.65E-03	1.68E-03	2.03E-03	2.45E-04	5.83E-08	1.41E-03	3.06E-03
E16	0.00E+00	2.43E-05	2.03E-06	5.32E+01	6.88E-05	2.61E-01	3.29E-05	1.62E-02	4.98E-03	9.21E-04	3.11E-03	1.67E-03	1.70E-03	1.98E-03	2.48E-04	5.95E-08	1.40E-03	2.98E-03
E17	0.00E+00	1.72E-05	1.44E-06	3.89E+01	5.17E-05	1.94E-01	2.41E-05	1.07E-02	3.65E-03	6.72E-04	2.31E-03	1.23E-03	1.26E-03	1.34E-03	1.83E-04	4.55E-08	1.05E-03	1.97E-03
E18	0.00E+00	1.90E-05	1.46E-06	3.46E+01	4.04E-05	1.53E-01	2.32E-05	1.34E-02	3.12E-03	5.90E-04	2.23E-03	1.07E-03	1.09E-03	1.72E-03	1.56E-04	3.73E-08	1.15E-03	2.48E-03
E19	0.00E+00	4.32E-05	3.52E-06	8.17E+01	1.31E-04	4.59E-01	6.13E-05	2.54E-02	1.37E-02	2.19E-03	5.97E-03	3.10E-03	3.17E-03	2.55E-03	3.85E-04	9.95E-08	2.80E-03	4.69E-03
E20	0.00E+00	5.62E-05	4.64E-06	1.08E+02	1.72E-04	6.07E-01	7.98E-05	3.40E-02	1.82E-02	2.89E-03	7.71E-03	4.06E-03	4.15E-03	3.36E-03	5.07E-04	1.29E-07	3.56E-03	6.28E-03
E21	0.00E+00	1.16E-05	9.71E-07	2.62E+01	3.46E-05	1.30E-01	1.61E-05	7.34E-03	2.45E-03	4.52E-04	1.54E-03	8.25E-04	8.42E-04	9.16E-04	1.22E-04	3.02E-08	6.97E-04	1.35E-03
E22	0.00E+00	1.43E-06	1.10E-07	2.42E+00	2.61E-06	1.02E-02	1.64E-06	1.11E-03	2.16E-04	4.13E-05	1.55E-04	7.32E-05	7.45E-05	1.38E-04	1.07E-05	2.36E-09	8.05E-05	2.06E-04
E23	0.00E+00	1.16E-05	9.71E-07	2.62E+01	3.46E-05	1.30E-01	1.61E-05	7.34E-03	2.45E-03	4.52E-04	1.54E-03	8.25E-04	8.42E-04	9.16E-04	1.22E-04	3.02E-08	6.97E-04	1.35E-03
E24	0.00E+00	1.43E-06	1.10E-07	2.42E+00	2.61E-06	1.02E-02	1.64E-06	1.11E-03	2.16E-04	4.13E-05	1.55E-04	7.32E-05	7.45E-05	1.38E-04	1.07E-05	2.36E-09	8.05E-05	2.06E-04
E25	0.00E+00	1.31E-05	1.25E-06	3.87E+01	6.23E-05	2.23E-01	2.30E-05	5.52E-03	5.25E-03	8.60E-04	2.19E-03	1.33E-03	1.36E-03	6.09E-04	1.89E-04	4.90E-08	8.29E-04	9.91E-04
E26	0.00E+00	1.52E-05	1.49E-06	4.79E+01	7.85E-05	2.80E-01	2.81E-05	5.55E-03	6.52E-03	1.06E-03	2.69E-03	1.65E-03	1.69E-03	6.28E-04	2.35E-04	6.19E-08	9.96E-04	9.85E-04
E27	0.00E+00	2.09E-05	1.87E-06	5.22E+01	7.92E-05	2.87E-01	3.25E-05	1.15E-02	6.98E-03	1.16E-03	3.09E-03	1.78E-03	1.82E-03	1.24E-03	2.50E-04	6.27E-08	1.27E-03	2.10E-03
E28	0.00E+00	1.10E-05	1.15E-06	4.01E+01	6.82E-05	2.43E-01	2.26E-05	2.64E-03	5.52E-03	8.94E-04	2.16E-03	1.39E-03	1.43E-03	3.06E-04	2.00E-04	5.34E-08	7.37E-04	4.44E-04
E29	0.00E+00	9.73E-06	8.54E-07	2.39E+01	3.65E-05	1.31E-01	1.51E-05	5.06E-03	3.18E-03	5.28E-04	1.45E-03	8.19E-04	8.38E-04	5.69E-04	1.15E-04	2.93E-08	6.17E-04	9.26E-04
E30	0.00E+00	3.89E-06	3.63E-07	1.09E+01	1.73E-05	6.21E-02	6.59E-06	1.77E-03	1.47E-03	2.42E-04	6.30E-04	3.75E-04	3.84E-04	1.96E-04	5.30E-05	1.37E-08	2.46E-04	3.20E-04
E31	0.00E+00	1.66E-05	1.39E-06	3.61E+01	5.27E-05	1.89E-01	2.39E-05	9.62E-03	4.74E-03	7.93E-04	2.30E-03	1.23E-03	1.26E-03	1.08E-03	1.71E-04	4.29E-08	1.04E-03	1.77E-03
E32	0.00E+00	1.20E-05	9.69E-07	2.35E+01	3.27E-05	1.18E-01	1.62E-05	7.66E-03	3.05E-03	5.14E-04	1.56E-03	7.97E-04	8.14E-04	8.57E-04	1.09E-04	2.69E-08	7.46E-04	1.42E-03
E33	0.00E+00	5.10E-05	4.54E-06	1.17E+02	1.98E-04	6.96E-01	8.05E-05	2.67E-02	2.00E-02	3.14E-03	7.72E-03	4.41E-03	4.51E-03	2.65E-03	5.60E-04	1.46E-07	3.21E-03	4.89E-03
E34	0.00E+00	4.19E-05	3.41E-06	7.49E+01	1.15E-04	4.09E-01	5.64E-05	2.81E-02	1.26E-02	2.01E-03	5.41E-03	2.80E-03	2.86E-03	2.71E-03	3.48E-04	8.57E-08	2.55E-03	5.21E-03
E35	0.00E+00	5.26E-05	4.38E-06	1.00E+02	1.58E-04	5.63E-01	7.37E-05	3.35E-02	1.69E-02	2.70E-03	7.07E-03	3.76E-03	3.84E-03	3.25E-03	4.71E-04	1.18E-07	3.23E-03	6.21E-03
E36	0.00E+00	3.27E-05	2.47E-06	4.64E+01	6.23E-05	2.26E-01	3.84E-05	2.53E-02	7.62E-03	1.24E-03	3.70E-03	1.71E-03	1.74E-03	2.41E-03	2.08E-04	4.76E-08	1.95E-03	4.72E-03
E37	0.00E+00	5.26E-05	4.38E-06	1.00E+02	1.58E-04	5.63E-01	7.37E-05	3.35E-02	1.69E-02	2.70E-03	7.07E-03	3.76E-03	3.84E-03	3.25E-03	4.71E-04	1.18E-07	3.23E-03	6.21E-03
E38	0.00E+00	3.27E-05	2.47E-06	4.64E+01	6.23E-05	2.26E-01	3.84E-05	2.53E-02	7.62E-03	1.24E-03	3.70E-03	1.71E-03	1.74E-03	2.41E-03	2.08E-04	4.76E-08	1.95E-03	4.72E-03
E39	0.00E+00	2.65E-05	2.13E-06	4.94E+01	6.61E-05	2.43E-01	3.42E-05	1.83E-02	6.40E-03	1.09E-03	3.26E-03	1.66E-03	1.70E-03	1.99E-03	2.28E-04	5.38E-08	1.56E-03	3.40E-03
E40	0.00E+00	1.61E-05	1.60E-06	5.25E+01	8.67E-05	3.10E-01	3.03E-05	5.58E-03	7.17E-03	1.17E-03	2.90E-03	1.81E-03	1.86E-03	6.23E-04	2.59E-04	6.80E-08	1.04E-03	9.84E-04
E41	0.00E+00	1.24E-05	1.18E-06	3.62E+01	5.79E-05	2.08E-01	2.15E-05	5.39E-03	4.90E-03	8.03E-04	2.06E-03	1.24E-03	1.27E-03	5.93E-04	1.76E-04	4.56E-08	7.83E-04	9.69E-04
E42	0.00E+00	1.46E-05	1.44E-06	4.67E+01	7.68E-05	2.75E-01	2.71E-05	5.28E-03	6.38E-03	1.04E-03	2.59E-03	1.61E-03	1.65E-03	5.87E-04	2.30E-04	6.03E-08	9.39E-04	9.35E-04
E43	0.00E+00	8.01E-06	8.02E-07	2.66E+01	4.42E-05	1.57E-01	1.53E-05	2.59E-03	3.63E-03	5.91E-04	1.47E-03	9.20E-04	9.42E-04	2.94E-04	1.31E-04	3.47E-08	5.28E-04	4.53E-04
E44	0.00E+00	1.31E-05	1.35E-06	4.61E+01	7.76E-05	2.76E-01	2.62E-05	3.60E-03	6.32E-03	1.03E-03	2.52E-03	1.60E-03	1.64E-03	4.16E-04	2.29E-04	6.09E-08	8.79E-04	6.18E-04
E45	0.00E+00	3.04E-05	2.26E-06	5.01E+01	5.42E-05	2.08E-01	3.50E-05	2.25E-02	4.43E-03	8.51E-04	3.36E-03	1.52E-03	1.55E-03	2.91E-03	2.22E-04	5.12E-08	1.81E-03	4.20E-03
E46	0.00E+00	2.18E-05	1.58E-06	3.05E+01	2.72E-05	1.09E-01	2.25E-05	1.81E-02	2.61E-03	5.16E-04	2.13E-03	8.97E-04	9.11E-04	2.29E-03	1.29E-04	2.62E-08	1.22E-03	3.38E-03
E47	0.00E+00	2.81E-05	2.09E-06	4.64E+01	5.02E-05	1.92E-01	3.24E-05	2.08E-02	4.10E-03	7.88E-04	3.12E-03	1.41E-03	1.44E-03	2.70E-03	2.05E-04	4.76E-08	1.68E-03	3.88E-03
E48	0.00E+00	7.12E-06	5.76E-07	1.47E+01	1.85E-05	7.00E-02	9.34E-06	4.77E-03	1.36E-03	2.53E-04	8.90E-04	4.59E-04	4.68E-04	6.00E-04	6.78E-05	1.64E-08	4.22E-04	8.84E-04
E49	0.00E+00	3.23E-05	2.38E-06	5.10E+01	5.30E-05	2.04E-01	3.62E-05	2.45E-02	4.48E-03	8.65E-04	3.47E-03	1.54E-03	1.57E-03	3.17E-03	2.24E-04	5.06E-08	1.91E-03	4.58E-03
E50	0.00E+00	5.43E-06	4.93E-07	1.52E+01	2.21E-05	8.20E-02	8.77E-06	2.76E-03	1.46E-03	2.64E-04	8.37E-04	4.88E-04	4.99E-04

Appendix F.4.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E66	0.00E+00	9.42E-05	7.60E-06	1.77E+02	2.38E-04	8.74E-01	1.22E-04	6.49E-02	2.30E-02	3.89E-03	1.16E-02	5.96E-03	6.09E-03	7.06E-03	8.19E-04	1.94E-07	5.55E-03	1.20E-02
E67	0.00E+00	3.67E-05	2.88E-06	7.09E+01	8.62E-05	3.25E-01	4.65E-05	2.50E-02	6.46E-03	1.21E-03	4.46E-03	2.20E-03	2.24E-03	3.21E-03	3.24E-04	7.83E-08	2.22E-03	4.64E-03
E68	0.00E+00	3.30E-05	2.66E-06	6.84E+01	8.68E-05	3.26E-01	4.37E-05	2.16E-02	6.32E-03	1.18E-03	4.19E-03	2.14E-03	2.19E-03	2.76E-03	3.16E-04	7.77E-08	2.00E-03	4.00E-03
E69	0.00E+00	2.65E-05	2.42E-06	7.36E+01	1.18E-04	4.18E-01	4.52E-05	1.10E-02	9.90E-03	1.63E-03	4.38E-03	2.55E-03	2.61E-03	1.29E-03	3.59E-04	9.46E-08	1.77E-03	1.98E-03
E70	0.00E+00	2.49E-05	2.23E-06	6.37E+01	9.83E-05	3.53E-01	3.97E-05	1.26E-02	8.52E-03	1.41E-03	3.80E-03	2.18E-03	2.23E-03	1.40E-03	3.07E-04	7.84E-08	1.57E-03	2.30E-03
E71	0.00E+00	3.13E-05	2.90E-06	8.94E+01	1.44E-04	5.12E-01	5.44E-05	1.25E-02	1.21E-02	1.98E-03	5.26E-03	3.09E-03	3.17E-03	1.46E-03	4.37E-04	1.15E-07	2.09E-03	2.24E-03
E72	0.00E+00	2.68E-05	2.72E-06	9.18E+01	1.54E-04	5.48E-01	5.26E-05	7.84E-03	1.26E-02	2.04E-03	5.04E-03	3.18E-03	3.26E-03	9.03E-04	4.55E-04	1.21E-07	1.78E-03	1.36E-03
E73	0.00E+00	1.56E-05	1.32E-06	3.17E+01	5.18E-05	1.82E-01	2.30E-05	9.03E-03	5.38E-03	8.53E-04	2.21E-03	1.20E-03	1.22E-03	8.96E-04	1.50E-04	3.87E-08	9.89E-04	1.67E-03
E74	0.00E+00	1.69E-05	1.56E-06	4.19E+01	7.23E-05	2.55E-01	2.80E-05	8.27E-03	7.20E-03	1.13E-03	2.67E-03	1.58E-03	1.62E-03	8.20E-04	2.02E-04	5.29E-08	1.05E-03	1.51E-03
E75	0.00E+00	7.18E-05	6.19E-06	1.72E+02	2.45E-04	8.79E-01	1.06E-04	4.18E-02	2.21E-02	3.70E-03	1.02E-02	5.63E-03	5.75E-03	4.59E-03	8.19E-04	2.02E-07	4.40E-03	7.67E-03
E76	0.00E+00	4.78E-05	4.39E-06	1.37E+02	2.09E-04	7.42E-01	8.04E-05	2.17E-02	1.79E-02	2.96E-03	7.72E-03	4.53E-03	4.64E-03	2.45E-03	6.69E-04	1.71E-07	3.08E-03	3.92E-03
E77	0.00E+00	7.25E-05	6.23E-06	1.71E+02	2.42E-04	8.72E-01	1.06E-04	4.28E-02	2.20E-02	3.69E-03	1.02E-02	5.61E-03	5.73E-03	4.70E-03	8.15E-04	2.00E-07	4.42E-03	7.87E-03
E78	0.00E+00	5.23E-05	4.80E-06	1.49E+02	2.25E-04	8.01E-01	8.72E-05	2.45E-02	1.94E-02	3.21E-03	8.37E-03	4.91E-03	5.02E-03	2.74E-03	7.24E-04	1.85E-07	3.35E-03	4.43E-03
E79	0.00E+00	5.91E-05	5.29E-06	1.60E+02	2.40E-04	8.51E-01	9.58E-05	2.85E-02	2.08E-02	3.44E-03	9.23E-03	5.28E-03	5.41E-03	3.24E-03	7.75E-04	1.98E-07	3.82E-03	5.18E-03
E80	0.00E+00	5.72E-05	5.01E-06	1.46E+02	2.13E-04	7.60E-01	8.86E-05	3.03E-02	1.88E-02	3.13E-03	8.52E-03	4.79E-03	4.90E-03	3.40E-03	7.00E-04	1.76E-07	3.62E-03	5.54E-03
E83	0.00E+00	1.71E-05	1.48E-06	3.94E+01	5.83E-05	2.11E-01	2.53E-05	9.92E-03	5.22E-03	8.70E-04	2.42E-03	1.34E-03	1.37E-03	1.09E-03	1.87E-04	4.66E-08	1.04E-03	1.82E-03
E84	0.00E+00	1.39E-05	1.27E-06	3.69E+01	5.73E-05	2.07E-01	2.25E-05	7.07E-03	4.97E-03	8.20E-04	2.14E-03	1.26E-03	1.29E-03	7.65E-04	1.78E-04	4.51E-08	8.45E-04	1.29E-03
E85	0.00E+00	1.19E-04	1.00E-05	2.41E+02	3.94E-04	1.39E+00	1.74E-04	6.86E-02	4.09E-02	6.48E-03	1.68E-02	9.10E-03	9.31E-03	6.81E-03	1.14E-03	2.94E-07	7.51E-03	1.27E-02
E86	0.00E+00	1.46E-04	1.15E-05	2.43E+02	3.63E-04	1.29E+00	1.89E-04	1.00E-01	4.05E-02	6.52E-03	1.83E-02	9.08E-03	9.28E-03	9.71E-03	1.12E-03	2.74E-07	8.99E-03	1.86E-02
E87	0.00E+00	1.34E-04	1.04E-05	2.10E+02	3.05E-04	1.09E+00	1.68E-04	9.51E-02	3.49E-02	5.63E-03	1.62E-02	7.84E-03	8.01E-03	9.20E-03	9.61E-04	2.32E-07	8.22E-03	1.77E-02
E88	0.00E+00	1.26E-04	1.06E-05	2.55E+02	4.15E-04	1.46E+00	1.84E-04	7.34E-02	4.31E-02	6.84E-03	1.78E-02	9.60E-03	9.82E-03	7.27E-03	1.21E-03	3.09E-07	7.95E-03	1.35E-02
E89	0.00E+00	6.19E-06	5.80E-07	1.64E+01	2.92E-05	1.02E-01	1.09E-05	2.41E-03	2.82E-03	4.41E-04	1.05E-03	6.24E-04	6.39E-04	2.56E-04	7.99E-05	2.15E-08	4.09E-04	4.34E-04
E90	0.00E+00	4.51E-06	4.40E-07	1.30E+01	2.37E-05	8.26E-02	8.42E-06	1.46E-03	2.25E-03	3.51E-04	8.10E-04	4.97E-04	5.10E-04	1.60E-04	6.40E-05	1.74E-08	3.00E-04	2.59E-04
E91	0.00E+00	1.80E-07	1.91E-08	6.16E-01	1.16E-06	4.04E-03	3.79E-07	3.25E-05	1.08E-04	1.66E-05	3.64E-05	2.36E-05	2.42E-05	4.10E-06	3.07E-06	8.47E-10	1.22E-05	5.31E-06
E92	0.00E+00	1.80E-07	1.91E-08	6.16E-01	1.16E-06	4.04E-03	3.79E-07	3.25E-05	1.08E-04	1.66E-05	3.64E-05	2.36E-05	2.42E-05	4.10E-06	3.07E-06	8.47E-10	1.22E-05	5.31E-06
E93	0.00E+00	7.61E-06	7.31E-07	2.12E+01	3.84E-05	1.34E-01	1.39E-05	2.67E-03	3.67E-03	5.72E-04	1.34E-03	8.11E-04	8.30E-04	2.89E-04	1.04E-04	2.82E-08	5.06E-04	4.76E-04
E94	0.00E+00	5.11E-06	4.87E-07	1.42E+01	2.60E-05	8.98E-02	9.38E-06	1.66E-03	2.46E-03	3.83E-04	9.07E-04	5.46E-04	5.60E-04	1.86E-04	7.00E-05	1.92E-08	3.48E-04	2.94E-04
E95	0.00E+00	6.22E-05	5.15E-06	1.38E+02	1.75E-04	6.58E-01	8.43E-05	4.07E-02	1.34E-02	2.43E-03	8.02E-03	4.25E-03	4.34E-03	5.06E-03	6.45E-04	1.53E-07	3.68E-03	7.51E-03
E96	0.00E+00	4.40E-05	3.62E-06	9.54E+01	1.19E-04	4.49E-01	5.86E-05	2.95E-02	9.20E-03	1.68E-03	5.56E-03	2.92E-03	2.98E-03	3.66E-03	4.43E-04	1.04E-07	2.58E-03	5.45E-03
E97	0.00E+00	6.22E-05	5.15E-06	1.38E+02	1.75E-04	6.58E-01	8.43E-05	4.07E-02	1.34E-02	2.43E-03	8.02E-03	4.25E-03	4.34E-03	5.06E-03	6.45E-04	1.53E-07	3.68E-03	7.51E-03
E98	0.00E+00	4.40E-05	3.62E-06	9.54E+01	1.19E-04	4.49E-01	5.86E-05	2.95E-02	9.20E-03	1.68E-03	5.56E-03	2.92E-03	2.98E-03	3.66E-03	4.43E-04	1.04E-07	2.58E-03	5.45E-03
F01	0.00E+00	3.14E-05	2.61E-06	6.07E+01	9.69E-05	3.42E-01	4.46E-05	1.92E-02	1.02E-02	1.63E-03	4.30E-03	2.28E-03	2.33E-03	1.89E-03	2.86E-04	7.24E-08	1.96E-03	3.55E-03
F02	0.00E+00	1.93E-05	1.79E-06	4.85E+01	8.46E-05	2.97E-01	3.25E-05	8.88E-03	8.35E-03	1.31E-03	3.11E-03	1.84E-03	1.88E-03	8.99E-04	2.35E-04	6.21E-08	1.23E-03	1.61E-03
F03	0.00E+00	5.67E-06	4.55E-07	1.17E+01	1.47E-05	5.53E-02	7.47E-06	3.72E-03	1.07E-03	2.00E-04	7.17E-04	3.64E-04	3.72E-04	4.75E-04	5.38E-05	1.32E-08	3.45E-04	6.89E-04
F04	0.00E+00	1.15E-07	1.22E-08	4.62E-01	7.54E-07	2.76E-03	2.45E-07	2.44E-05	4.59E-05	8.10E-06	2.36E-05	1.53E-05	1.57E-05	2.72E-06	2.31E-06	6.35E-10	7.92E-06	3.94E-06
F05	0.00E+00	2.52E-05	1.96E-06	3.94E+01	5.62E-05	2.02E-01	3.13E-05	1.85E-02	6.53E-03	1.06E-03	3.01E-03	1.46E-03	1.49E-03	1.77E-03	1.79E-04	4.25E-08	1.52E-03	3.44E-03
F06	0.00E+00	3.78E-05	2.90E-06	5.74E+01	8.13E-05	2.91E-01	4.64E-05	2.77E-02	9.50E-03	1.54E-03	4.48E-03	2.13E-03	2.18E-03	2.66E-03	2.61E-04	6.20E-08	2.30E-03	5.16E-03
F07	0.00E+00	4.83E-05	3.76E-06	7.73E+01	1.13E-04	4.03E-01	6.13E-05	3.40E-02	1.28E-02	2.07E-03	5.92E-03	2.88E-03	2.95E-03	3.29E-03	3.54E-04	8.59E-08	2.97E-03	6.33E-03
F08	0.00E+00	5.35E-05	4.04E-06	7.82E+01	1.09E-04	3.88E-01	6.46E-05	3.95E-02	1.29E-02	2.09E-03	6.26E-03	2.91E-03	2.97E-03	3.81E-03	3.53E-04	8.37E-08	3.29E-03	7.37E-03
F09	0.00E+00	6.36E-06	5.92E-07	1.89E+01	2.82E-05	1.04E-01	1.08E-05	2.96E-03	1.83E-03	3.30E-04	1.03E-03	6.12E-04	6.26E-04	3.59E-04	9.19E-05	2.41E-08	4.03E-04	5.32E-04
F10	0.00E+00	3.26E-06	3.32E-07	1.17E+01	1.86E-05	6.83E-02	6.35E-06	1.07E-03	1.16E-03	2.06E-04	6.08E-04	3.85E-04	3.94E-04	1.22E-04	5.81E-05	1.56E-08	2.14E-04	1.85E-04
F13	0.00E+00	1.82E-06	1.51E-07	3.97E+00	5.15E-06	1.95E-02	2.47E-06	1.19E-03	3.71E-04	6.86E-05	2.35E-04	1.25E-04	1.27E-04	1.47E-04	1.85E-05	4.50E-09	1.07E-04	2.19E-04
F14	0.00E+00	6.79E-07	5.63E-08	1.35E+00	1.60E-06	6.28E-03	8.44E-07	5.17E-04	1.25E-04	2.34E-05	7.79E-05	4.15E-05	4.23E-05	6.13E-05	6.14E-06	1.35E-09	3.56E-05	9.60E-05
F15	0.00E+00	3.47E-05	2.83E-06	6.75E+01	9.22E-05	3.38E-01	4.59E-05	2.34E-02	8.78E-03	1.48E-03	4.37E-03	2.27E-03	2.32E-03	2.55E-03	3.13E-04	7.46E-08	2.05E-03	4.34E-03
F16	0.00E+00	4.06E-05	3.28E-06	7.67E+01	1.04E-04	3.79E-01	5.29E-05	2.77E-02	9.94E-03	1.68E-03	5.04E-03	2.58E-03	2.64E-03	3.02E-03	3.55E-04	8.42E-08	2.41E-03	5.14E-03
F17	0.00E+00	3.19E-05	2.53E-06	5.68E+01	7.39E-05	2.73E-01	4.00E-05	2.28E-02	7.31E-03	1.25E-03	3.80E-03	1.90E-03	1.94E-03	2.48E-03	2.60E-04	6.03E-08	1.86E-03	4.25E-03
F18	0.00E+00	3.48E-05	2.74E-06	6.09E+01	7.85E-05	2.90E-01	4.32E-05	2.50E-02	7.81E-03	1.33E-03	4.11E-03	2.04E-03	2.08E-03	2.72E-03	2.78E-04	6.44E-08	2.04E-03	4.65E-03
F19	0.00E+00	1.68E-05	1.42E-06	3.77E+01	5.57E-05	2.00E-01	2.46E-05	9.60E-03	4.98E-03	8.30E-04	2.37E-03	1.29E-03	1.32E-03	1.07E-03	1.79E-04	4.50E-08	1.05E-03	1.77E-03
F20	0.00E+00	1.30E-05	1.37E-06	4.86E+01	8.33E-05	2.96E-01	2.73E-05	2.64E-03	6.69E-03	1.08E-03	2.63E-03	1.69E-03	1.73E-03	3.21E-04	2.43E-04	6.54E-08	8.93E-04	4.32E-04
F21	0.00E+00	2.81E-06	2.99E-07	1.07E+01	1.83E-05	6.51E-02	5.96E-06	5.57E-04	1.47E-03	2.38E-04	5.73E-04	3.71E-04	3.81E-04	6.67E-05	5.33E-05	1.43E-08	1.92E-04	9.05E-05
F22	0.00E+00	6.08E-06	6.48E-07	2.31E+01	3.97E-05	1.41E-01	1.29E-05	1.21E-03	3.19E-03	5.16E-04	1.24E-03	8.04E-04	8.25E-04	1.44E-04	1.15E-04	3.11E-08	4.16E-04	1.96E-04
F23	0.00E+00	4.82E-06	4.09E-07	1.05E+01	1.53E-05	5.54E-02	6.88E-06	2.95E-03	1.39E-03	2.33E-04	6.56E-04	3.58E-04	3.66E-04	3.22E-04	4.98E-05	1.22E-08	2.90E-04	5.45E-04
F24	0.00E+00	5.85E-06	5.06E-07	1.38E+01	2.06E-05	7.42E-02	8.82E-06	3.23E-03	1.82E-03	3.03E-04	8.47E-04	4.70E-04	4.81E-04	3.60E-04	6.57E-05	1.66E-08	3.66E-04	5.92E-04
F25	0.00E+00	2.68E-05	2.13E-06	4.50E+01	6.68E-05	2.39E-01	3.47E-05	1.88E-02	7.51E-03	1.21E-03	3.34E-03	1.67E-03	1.71E-03	1.80E-03	2.07E-04	5.02E-08	1.63E-03	3.49E-03
F26	0.00E+00	2.84E-05	2.31E-06	5.12E+01	7.91E-05	2.81E-01	3.85E-05	1.86E-02	8.60E-03	1.37E-03	3.71E-03	1.92E-03	1.96E-03	1.81E-03	2.39E-04	5.93E-08	1.75E-03	3.44E-03
F27	0.00E+00	1.53E-04	1.12E-05	2.02E+02	2.65E-04	9.44E-01	1.76E-04	1.17E-01	3.28E-02	5.38E-03	1.72E-02	7.51E-03	7.66E-03	1.13E-02	8.96E-04	2.09E-07	9.52E-03	2.18E-02
F28	0.00E+00	1.63E-04	1.15E-05	1.92E+02	2.32E-04	8.26E-01	1.78E-04	1.29E-01	3.06E-02	5.09E-03	1.74E-02	7.11E-03	7.24E-03	1.25E-02	8.31E-04	1.88E-07	1.02E-02	2.41E-02
F29	0.00E+00	1.32E-05	1.23E-06	3.40E+01	6.01E-05	2.10E-01	2.27E-05	5.54E-03	5.85E-03	9.15E-04	2.19E-03	1.29E-03	1.32E-03	5.77E-04	1.65E-04	4.43E-08	8.64E-04	1.00E-03
F30	0.00E+00	3.15E-05	2.47E-06	5.28E+01	8.00E-05	2.82E-01	4.14E-05	2.09E-02	8.80E-03	1.41E-03	4.02E-03	1.99E-03	2.03E-03	2.05E-03	2.44E-04	6.09E-08	1.99E-03	3.87E-03
F35	0.00E+00	1.99E-05	1.55E-06	3.81E+01	4.61E-05	1.74E-01	2.51E-05	1.35E-02	3.47E-03	6.51E-04	2.41E-03	1.18E-03	1.21E-03	1.74E-03	1.74E-04	4.21E-08	1.21E-03	2.51E-03
F36	0.00E+00	1.26E-05	9.58E-07	2.28E+01	2.66E-05	1.00E-01	1.54E-05	8.74E-03	2.04E-03	3.87E-04	1.49E-03	7.02E-04	7.16E-04	1.14E-03	1.03E-04	2.49E-08	7.76E-04	1.62E-03
F37	0.00E+00	1.36E-04	1.01E-05	1.82E+02	2.33E-04	8.53E-01	1.55E-04	1.09E-01	2.97E-02	4.87E-03	1.49E-02	6.67E-03	6.80E-03	1.04E-02	8.04E-04	1.79E-07	8.09E-03	2.04E-02
F38	0.00E+00	1.26E-04	9.83E-06	2.01E+02	2.91E-04	1.04E+00	1.58E-04	9.06E-02	3.34E-02	5.39E-03	1.52E-02	7.46E-03	7.62E-03	8.68E-03	9.19E-04	2.20E-07	7.60E-03	1.69E-02
F39	0.00E+00	1.61E-05	1.37E-06	3.80E+01	5.13E-05	1.93E-01	2.30E-05	9.83E-03	3.58E-03	6.57E-04	2.19E-03	1.20E-03	1.23E-03	1.22E-03	1.79E-04	4.45E-08	9.64E-04	1.81E-03
F40	0.00E+00	6.32E-06	5.18E-07	1.34E+01	1.72E-05	6.50E-02	8.45E-06	4.18E-03	1.25E-03	2.32E-04	8.05E-04	4.21E-04	4.30E-04	5.22E-04	6.24E-05	1.51E-08	3.75E-04	7.72E-04
F41	0.00E+00	1.03E-05	1.02E-06	3.31E+01	5.45E-05	1.94E-01	1.93E-05	3.58E-03	4.50E-03	7.35E-04	1.85E-03	1.14E-03	1.17E-03	4.08E-04	1.63E-04	4.30E-08	6.79E-04	6.32E-04
F42	0.00E+00	1.14E-05	1.21E-06	4.28E+01	7.33E-05	2.60E-01	2.40E-05	2.34E-03	5.88E-03	9.53E-04	2.31E-03	1.49E-03	1.53E-03	2.84E-04	2.13E-04	5.75E-08	7.87E-04	3.82E-04
F43	0.00E+00	3.05E-06	2.85E-07	8.03E+00	1.43E-05	4.98E-02	5.34E-06	1.20E-03	1.38E-03	2.16E-04	5.15E-04	3.06E-04	3.14E-04	1.27E-04	3.92E-05	1.06E-08	2.02E-04	2.16E-04
F44	0.00E+00	6.65E-07	7.07E-08	2.28E+00	4.30E-06	1.50E-02	1.40E-06	1.20E-04	3.98E-04	6.15E-05	1.35E-04	8.73E-05	8.95E-05	1.52E-05	1.13E-05	3.13E-09	4.50E-05	1.97E-05
F45	0.00E+00	1.71E-05	1.48E-06	3.94E+01	5.83E-05	2.11E-01	2.53E-05	9.92E-03	5.22E-03	8.70E-04	2.42E-03	1.34E-03	1.37E-03	1.09E-03	1.87E-04	4.66E-08	1.04E-03	1.82E-03
F46	0.00E+00	1.39E-05	1.27E-06	3.69E+01	5.73E-05	2.07E-01	2.25E-05	7.07E-03	4.97E-03	8.20E-04	2.14E-03	1.26E-03	1.29E-03	7.65E-04	1.78E-04	4.51E-08	8.45E-04	1.29E-03
F47	0.00E+00	1.26E-07	1.34E-08	4.31E-01	8.14E-07	2.83E-03	2.66E-07	2.27E-05	7.53E-05	1.16E-05	2.54E-05	1.65E-05	1.69E-05	2.87E-06	2.15E-06	5.93E-10	8.51E-06	3.72E-06
F48	0.00E+00	2.72E-06	2.27E-07	5.27E+00	8.39E-06	2.98E-02	3.85E-06	1.70E-03	8.92E-04	1.42E-04	3.70E-04	1.98E-04	2.02E-04	1.65E-04	2.48E-05	6.24E-09	1.67E-04	3.14E-04
F49	0.00E+00	1.38E-04	1.02E-05	1.92E+02	2.62E-04	9.29E-01	1.63E-04	1.02E-01	3.14E-02	5.12E-03	1.59E-02	7.15E-03	7.30E-03	9.90E-03	8.60E-04	2.04E-07	8.57E-03	1.90E-02
F50	0.00E+00	1.58E-04	1.12E-05	1.88E+02	2.31E-04	8.21E-01	1.73E-04	1.24E-01	3.02E-02	5.00E-03	1.70E-02	6.99E-03	7.12E-03	1.21E-02	8.19E-04	1.86E-07	9.87E-03	2.33E-02
F51	0.00E+00	5.27E-05	4.28E-06	1.05E+02	1.48E-04	5.33E-01	7.18E-05	3.31E-02	1.37E-02	2.30E-03	6.92E-03	3.57E-03	3.65E-03	3.70E-03	4.91E-04	1.21E-07	3.27E-03	6.12E-03
F52	0.00E+00	1.33E-05	1.16E-06	3.22E+01	4.90E-05	1.75E-01	2.05E-05	6.91E-03	4.27E-03	7.09E-04	1.98E-03	1.10E-03	1.13E-03	7.83E-04	1.54E-04	3.95E-08	8.52E-04	1.26E-03
F53	0.00E+00	4.20E-05	3.69E-06	1.04E+02	1.59E-04	5.69E-01	6.56E-05	2.15E-02	1.38E-02	2.29E-03	6.32E-03	3.56E-03	3.64E-03	2.43E-03	4.98E-04	1.28E-07	2.68E-03	3.93E-03
F54	0.00E+00	1.18E-05	1.15E-06	3.74E+01	6.17E-05	2.19E-01	2.20E-05	4.02E-03	5.08E-03	8.30E-04	2.12E-03	1.30E-03	1.33E-03	4.69E-04	1.84E-04	4.89E-08	7.93E-04	7.09E-04
F71	0.00E+00	2.58E-05	1.90E-06	3.65E+01	3.84E-05	1.44E-01	2.80E-05	2.09E-02	4.41E-03	7.77E-04	2.67E-03	1.17E-03	1.19E-03	2.27E-03	1.59E-04	3.37E-08	1.48E-03	3.91E-03
F72	0.00E+00	9.10E-05	6.07E-06	6.73E+01	6.68E-05	2.33E-01	8.57E-05	8.31E-02	1.58E-02	2.51E-03	8.37E-03	2.90E-03	2.95E-03	6.06E-03	2.73E-04	4.66E-08	5.42E-03	1.56E-02
F73	0.00E+00	2.05E-06	1.78E-07	4.94E+00	7.80E-06	2.72E-02	3.22E-06	1.02E-03	8.10E-04	1.27E-04	3.12E-04	1.74E-04	1.78E-04	1.06E-04	2.38E-05	5.88E-09	1.34E-04	1.87E-04
F74	0.00E+00	5.29E-05	3.70E-06	6.74E+01	6.77E-05	2.47E-01	5.58E-05	4.18E-02	7.93E-03	1.42E-03	5.44E-03	2.18E-03	2.22E-03	4.69E-03	2.89E-04	6.34E-08	3.22E-03	7.81E-03
F75	0.00E+00	4.76E-05	3.30E-06	5.90E+01	7.11E-05	2.44E-01	5.30E-05	3.56E-02	9.17E-03	1.52E-03	5.27E-03	2.12E-03	2.16E-03	3.55E-03	2.59E-04	5.92E-08	3.11E-03	6.65E-03
F76	0.00E+00	4.42E-06	4.68E-07	1.50E+01	2.78E-05	9.42E-02	9.15E-06	6.92E-04	3.84E-03	5.47E-04	8.72E-04	5.68E-04	5.82E-04	1.14E-04	7.41E-05	1.65E-08	2.90E-04	1.15E-04
F78	0.00E+00	2.90E-05	2.47E-06	5.87E+01	1.00E-04	3.37E-01	4.35E-05	1.51E-02	1.48E-02	2.14E-03	4.19E-03	2.29E-03	2.34E-03	1.32E-03	2.80E-04	6.10E-08	1.85E-03	2.80E-03
F79	0.00E+00	3.50E-05	3.25E-06	9.83E+01	1.61E-04	5.60E-01	6.06E-05	1.43E-02	1.62E-02	2.53E-03	5.85E-03	3.46E-03	3.54E-03	1.53E-03	4.80E-04	1.20E-07	2.31E-03	2.57E-03
F80	0.00E+00	7.04E-05	6.51E-06	2.05E+02	3.13E-04	1.11E+00	1.19E-04	3.14E-02	2.68E-02	4.43E-03	1.15E-02	6.78E-03	6.94E-03	3.54E-03	1.00E-03	2.57E-07	4.54E-03	5.67E-03
F84	0.00E+00	4.04E-05	3.12E-06	5.43E+01	7.69E-05	2.75E-01	4.71E-05	3.28E-02	1.35E-02	2.02E-03	4.48E-03	2.12E-03	2.17E-03	2.44E-03	2.46E-04	4.68E-08	2.31E-03	6.13E-03
F85	0.00E+00	2.47E-05	1.99E-06	4.56E+01	6.40E-05	2.29E-01	3.25E-05	1.72E-02	7.38E-03	1.18E-03	3.11E-03	1.59E-03	1.62E-03	1.66E-03	2.12E-04	4.84E-08	1.49E-03	3.19E-03
F86	0.00E+00	3.57E-05	2.91E-06	6.93E+01	8.86E-05	3.27E-01	4.57E-05	2.57E-02	8.76E-03	1.49E-03	4.32E-03	2.24E-03	2.28E-03	2.74E-03	3.20E-04	7.32E-08	2.03E-03	4.77E-03
F87	0.00E+00	6.35E-05	4.60E-06	8.78E+01	1.09E-04	3.87E-01	7.30E-05	4.80E-02	1.38E-02	2.27E-03	7.14E-03	3.10E-03	3.16E-03	4.69E-03	3.92E-04	8.74E-08	3.99E-03	8.97E-03
F88	0.00E+00	4.04E-05	3.12E-06	5.43E+01	7.69E-05	2.75E-01	4.71E-05	3.28E-02	1.35E-02	2.02E-03	4.48E-03	2.12E-03	2.17E-03	2.44E-03	2.46E-04	4.68E-08	2.31E-03	6.13E-03
F89	0.00E+00	1.22E-04	8.28E-06	9.49E+01	9.34E-05	3.46E-01	1.14E-04	1.14E-01	2.26E-02	3.56E-03	1.10E-02	3.97E-03	4.04E-03

Appendix F.5.1: MOVES Emission Factors by Road Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.89E-05	4.21E-06	1.60E+02	2.71E-04	1.03E+00	8.65E-05	7.69E-03	1.17E-02	2.35E-03	8.42E-03	5.43E-03	5.57E-03	4.51E-04	8.19E-04	2.25E-07	2.85E-03	1.20E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	5.02E-05	5.34E-06	2.26E+02	3.29E-04	1.24E+00	1.07E-04	1.31E-02	1.23E-02	2.62E-03	1.03E-02	6.65E-03	6.82E-03	1.45E-03	1.14E-03	3.13E-07	3.45E-03	2.11E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	6.08E-05	6.34E-06	2.54E+02	3.68E-04	1.14E+00	1.22E-04	1.82E-02	1.37E-02	3.15E-03	1.09E-02	7.55E-03	7.67E-03	3.12E-03	1.26E-03	5.42E-07	3.26E-03	3.04E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.16E-03	5.08E-05	1.14E+03	1.77E-03	1.11E+01	6.17E-03	7.09E-01	3.80E-02	9.10E-03	9.32E-01	7.42E-02	7.67E-02	1.06E-01	4.78E-03	1.34E-06	8.55E-01	1.30E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.33E-03	5.03E-05	1.14E+03	1.70E-03	1.06E+01	6.37E-03	6.08E-01	2.86E-02	7.75E-03	9.65E-01	7.42E-02	7.68E-02	1.04E-01	4.73E-03	1.37E-06	8.88E-01	1.11E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	6.14E-04	2.47E-05	8.33E+02	3.47E-04	1.98E+00	6.54E-04	4.04E-01	3.51E-02	9.53E-03	8.12E-02	1.47E-02	1.50E-02	1.10E-01	3.03E-03	3.13E-07	6.61E-02	7.57E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	5.73E-03	3.85E-05	1.14E+03	1.04E-04	3.91E+00	6.52E-03	9.46E-01	3.50E-02	8.51E-03	1.02E+00	4.92E-02	5.25E-02	1.64E-01	4.03E-03	1.34E-09	9.72E-01	1.76E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.84E-04	2.39E-05	6.57E+02	4.22E-04	1.52E+00	5.23E-04	2.62E-01	2.48E-02	7.22E-03	5.98E-02	1.48E-02	1.51E-02	6.63E-02	2.64E-03	1.08E-06	4.47E-02	4.89E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.50E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.67E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.96E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	3.56E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.49E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.38E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.60E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.00E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.11E-05	4.45E-06	1.67E+02	2.86E-04	1.24E+00	9.14E-05	8.44E-03	8.94E-03	2.08E-03	8.90E-03	5.74E-03	5.89E-03	4.10E-04	8.52E-04	2.52E-07	3.01E-03	1.32E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.33E-05	5.69E-06	2.38E+02	3.53E-04	1.53E+00	1.14E-04	1.41E-02	9.26E-03	2.33E-03	1.10E-02	7.13E-03	7.31E-03	1.43E-03	1.20E-03	3.53E-07	3.71E-03	2.27E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.04E-05	6.31E-06	2.63E+02	3.72E-04	1.38E+00	1.23E-04	1.87E-02	1.05E-02	2.82E-03	1.11E-02	7.61E-03	7.73E-03	3.13E-03	1.31E-03	5.70E-07	3.41E-03	3.11E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.37E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.54E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.10E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.30E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.37E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.17E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.07E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.99E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.78E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.19E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.62E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.89E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.18E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.94E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.46E+00	3.86E-02	1.53E-02	7.18E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.75E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.55E+00	3.81E-02	1.16E-02	8.06E-02	2.86E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.92E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.63E-05	5.01E-06	1.76E+02	3.22E-04	1.63E+00	1.03E-04	9.41E-03	7.63E-03	2.07E-03	1.00E-02	6.46E-03	6.62E-03	3.76E-04	9.00E-04	3.03E-07	3.39E-03	1.47E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	5.97E-05	6.38E-06	2.52E+02	3.98E-04	2.02E+00	1.29E-04	1.55E-02	7.92E-03	2.31E-03	1.24E-02	8.04E-03	8.24E-03	1.41E-03	1.28E-03	4.07E-07	4.19E-03	2.49E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.53E-05	6.84E-06	2.73E+02	4.08E-04	1.78E+00	1.34E-04	1.99E-02	8.94E-03	2.77E-03	1.23E-02	8.32E-03	8.47E-03	3.14E-03	1.36E-03	6.29E-07	3.80E-03	3.30E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.60E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.77E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.10E-01	1.96E-02	5.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.72E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.23E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.17E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.39E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.23E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.05E-05	7.62E-06	2.43E+02	4.90E-04	1.66E+00	1.57E-04	6.70E-03	8.50E-02	1.19E-02	1.52E-02	9.83E-03	1.01E-02	1.50E-03	1.21E-03	2.76E-07	5.16E-03	1.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	9.97E-05	1.04E-05	3.22E+02	5.85E-04	1.70E+00	1.97E-04	1.70E-02	9.19E-02	1.27E-02	1.84E-02	1.21E-02	1.24E-02	2.97E-03	1.60E-03	3.07E-07	6.05E-03	2.92E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.99E-04	2.06E-05	3.73E+02	1.11E-03	1.67E+00	3.79E-04	3.43E-02	9.51E-02	1.39E-02	3.09E-02	2.32E-02	2.33E-02	5.27E-03	1.83E-03	7.72E-07	7.62E-03	6.05E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.63E+00	4.80E-01	6.85E-02	3.89E+00	2.20E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.87E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.44E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.39E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.51E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.92E-03	1.32E-04	1.24E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.28E-02	3.44E-01	6.20E-02	6.38E-02	1.62E-01	4.53E-03	5.76E-07	2.80E-01	3.24E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.47E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.44E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.89E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.97E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.87E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.11E+03	4.76E-03	2.76E+00	9.87E-03	7.63E-01	2.64E-01	4.34E-02	1.31E-01	5.89E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-05	2.33E-02	1.42E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.35E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.19E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.79E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	9.02E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.98E-05	6.47E-06	2.07E+02	4.16E-04	1.48E+00	1.33E-04	6.51E-03	6.23E-02	8.89E-03	1.29E-02	8.35E-03	8.57E-03	1.13E-03	1.04E-03	2.52E-07	4.38E-03	1.02E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.17E-05	8.57E-06	2.75E+02	4.90E-04	1.53E+00	1.64E-04	1.47E-02	6.60E-02	9.39E-03	1.54E-02	1.01E-02	1.03E-02	2.38E-03	1.37E-03	2.93E-07	5.09E-03	2.49E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.51E-04	1.56E-05	3.17E+02	8.51E-04	1.48E+00	2.90E-04	2.78E-02	6.96E-02	1.05E-02	2.40E-02	1.77E-02	1.79E-02	4.37E-03	1.56E-03	6.77E-07	6.09E-03	4.86E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.01E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.72E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.44E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.31E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.46E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.44E+03	3.31E-04	5.95E+00	2.19E-02	2.81E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.58E-09	3.26E+00	5.01E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.83E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.72E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.91E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.71E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.92E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.38E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.45E-05	5.89E-06	1.87E+02	3.79E-04	1.35E+00	1.21E-04	6.70E-03	4.71E-02	6.95E-03	1.18E-02	7.60E-03	7.80E-03	9.03E-04	9.42E-04	2.46E-07	3.99E-03	1.05E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.22E-05	7.60E-06	2.51E+02	4.42E-04	1.39E+00	1.47E-04	1.38E-02	4.99E-02	7.34E-03	1.39E-02	9.07E-03	9.29E-03	2.05E-03	1.25E-03	2.95E-07	4.60E-03	2.31E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.25E-04	1.30E-05	2.85E+02	7.17E-04	1.35E+00	2.50E-04	2.81E-02	5.34E-02	8.00E-03	2.08E-02	1.49E-02	1.50E-02	3.90E-03	1.43E-03	6.31E-07	5.13E-03	4.09E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.73E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.20E-01
2	RuralR

Appendix F.5.1: MOVES Emission Factors by Road Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.75E-04	2.31E-05	6.28E+02	3.96E-04	1.41E+00	5.13E-04	2.50E-01	2.54E-02	7.07E-03	5.91E-02	1.42E-02	1.44E-02	6.29E-02	2.53E-03	1.00E-06	4.47E-02	4.67E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	3.30E-04	3.34E-05	8.06E+02	1.56E-03	5.55E+00	5.66E-04	1.96E-01	2.78E-02	8.61E-03	4.03E-02	3.38E-02	3.36E-02	3.86E-02	3.81E-03	2.33E-06	6.68E-03	3.56E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.24E-03	9.03E-05	1.30E+03	3.52E-06	1.21E+00	8.92E-04	1.32E+00	4.19E-02	1.49E-02	6.93E-02	2.65E-02	2.60E-02	1.96E-01	4.36E-03	0.00E+00	4.33E-02	2.49E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.18E-03	8.09E-05	1.29E+03	4.47E-06	1.32E+00	8.84E-04	1.38E+00	4.26E-02	1.18E-02	7.74E-02	2.42E-02	2.42E-02	1.97E-01	4.33E-03	0.00E+00	5.32E-02	2.60E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	4.11E-05	4.45E-06	1.67E+02	2.86E-04	1.24E+00	9.14E-05	8.44E-03	8.94E-03	2.08E-03	8.90E-03	5.74E-03	5.89E-03	4.10E-04	8.52E-04	2.52E-07	3.01E-03	1.32E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	5.33E-05	5.69E-06	2.38E+02	3.53E-04	1.53E+00	1.14E-04	1.41E-02	9.26E-03	2.33E-03	1.10E-02	7.13E-03	7.31E-03	1.43E-03	1.20E-03	3.53E-07	3.71E-03	2.27E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	6.04E-05	6.31E-06	2.63E+02	3.72E-04	1.38E+00	1.23E-04	1.87E-02	1.05E-02	2.82E-03	1.11E-02	7.61E-03	7.73E-03	3.13E-03	1.31E-03	5.70E-07	3.41E-03	3.11E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.87E-03	7.13E-05	1.25E+03	2.74E-03	1.72E+01	5.95E-03	8.37E-01	3.14E-02	7.99E-03	8.65E-01	9.17E-02	9.39E-02	1.14E-01	5.24E-03	1.12E-06	7.71E-01	1.54E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.98E-03	7.11E-05	1.25E+03	2.71E-03	1.66E+01	6.07E-03	7.10E-01	2.35E-02	6.79E-03	8.84E-01	9.20E-02	9.42E-02	1.12E-01	5.21E-03	1.14E-06	7.90E-01	1.30E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	6.11E-04	2.80E-05	8.85E+02	4.77E-04	2.73E+00	6.61E-04	4.37E-01	2.96E-02	9.31E-03	7.77E-02	1.74E-02	1.77E-02	1.17E-01	3.22E-03	3.26E-07	6.00E-02	8.17E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.38E-03	4.94E-05	1.22E+03	9.83E-05	3.84E+00	6.03E-03	1.07E+00	3.08E-02	8.31E-03	9.38E-01	4.88E-02	5.19E-02	1.75E-01	4.28E-03	1.47E-09	8.86E-01	1.99E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.76E-04	2.52E-05	6.90E+02	4.88E-04	1.90E+00	5.23E-04	2.78E-01	2.15E-02	7.11E-03	5.76E-02	1.61E-02	1.63E-02	7.06E-02	2.76E-03	1.23E-06	4.13E-02	5.19E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.62E-04	2.38E-05	6.56E+02	4.44E-04	1.70E+00	5.05E-04	2.62E-01	2.18E-02	6.90E-03	5.66E-02	1.50E-02	1.52E-02	6.68E-02	2.63E-03	1.14E-06	4.13E-02	4.89E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	4.08E-04	4.18E-05	8.61E+02	2.06E-03	8.19E+00	7.31E-04	2.18E-01	2.42E-02	8.47E-03	5.23E-02	4.40E-02	4.38E-02	4.10E-02	4.07E-03	2.56E-06	8.49E-03	3.94E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.36E-03	1.02E-04	1.37E+03	3.24E-06	1.23E+00	9.62E-04	1.46E+00	3.86E-02	1.53E-02	7.18E-02	2.97E-02	2.94E-02	2.07E-01	4.60E-03	0.00E+00	4.25E-02	2.75E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.35E-03	9.72E-05	1.36E+03	4.07E-06	1.33E+00	9.80E-04	1.55E+00	3.81E-02	1.16E-02	8.06E-02	2.88E-02	2.88E-02	2.08E-01	4.56E-03	0.00E+00	5.19E-02	2.92E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.63E-05	5.01E-06	1.76E+02	3.22E-04	1.63E+00	1.03E-04	9.41E-03	7.63E-03	2.07E-03	1.00E-02	6.46E-03	6.62E-03	3.76E-04	9.00E-04	3.03E-07	3.39E-03	1.47E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	5.97E-05	6.38E-06	2.52E+02	3.98E-04	2.02E+00	1.29E-04	1.55E-02	7.92E-03	2.31E-03	1.24E-02	8.04E-03	8.24E-03	1.41E-03	1.28E-03	4.07E-07	4.19E-03	2.49E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	6.53E-05	6.84E-06	2.73E+02	4.08E-04	1.78E+00	1.34E-04	1.99E-02	8.94E-03	2.77E-03	1.23E-02	8.32E-03	8.47E-03	3.14E-03	1.36E-03	6.29E-07	3.80E-03	3.30E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.60E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.77E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.10E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.72E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.23E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.17E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.39E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.23E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.32E-05	7.92E-06	2.17E+02	5.09E-04	1.67E+00	1.63E-04	8.50E-03	6.58E-02	9.49E-03	1.58E-02	1.02E-02	1.05E-02	1.13E-03	1.10E-03	3.00E-07	5.36E-03	1.33E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.82E-05	1.03E-05	2.93E+02	6.00E-04	1.74E+00	1.99E-04	1.81E-02	7.26E-02	1.06E-02	1.88E-02	1.23E-02	1.26E-02	2.54E-03	1.46E-03	4.14E-07	6.24E-03	3.03E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.70E-04	1.76E-05	3.37E+02	9.67E-04	1.65E+00	3.28E-04	3.30E-02	7.50E-02	1.15E-02	2.74E-02	2.01E-02	2.03E-02	4.79E-03	1.66E-03	8.23E-07	7.14E-03	5.73E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.01E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.72E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	6.63E+00	1.83E-02	1.84E+00	1.91E-01	3.07E-02	2.86E+00	1.61E-01	1.70E-01	1.41E-01	5.82E-03	1.89E-06	2.69E+00	3.39E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.43E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.32E-02	1.33E-04	1.44E+03	3.31E-04	5.18E+00	2.40E-03	2.61E+00	3.20E-02	9.48E+00	1.66E-01	1.77E-01	2.08E-01	4.97E-03	2.29E-05	1.70E-01	3.20E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.83E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.72E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.91E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.71E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.92E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.38E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.30E-05	6.82E-06	1.90E+02	4.39E-04	1.57E+00	1.40E-04	7.54E-03	4.89E-02	7.24E-03	1.36E-02	8.79E-03	9.02E-03	9.03E-04	9.58E-04	2.68E-07	4.62E-03	1.18E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.35E-05	8.80E-06	2.55E+02	5.16E-04	1.62E+00	1.71E-04	1.55E-02	5.39E-02	8.06E-03	1.62E-02	1.06E-02	1.08E-02	2.13E-03	1.28E-03	3.69E-07	5.36E-03	2.59E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.40E-04	1.46E-05	2.93E+02	8.10E-04	1.54E+00	2.74E-04	2.76E-02	5.61E-02	8.92E-03	2.30E-02	1.68E-02	1.69E-02	4.09E-03	1.44E-03	7.34E-07	6.94E-03	4.78E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.73E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.20E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.41E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.59E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.87E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.45E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.66E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.25E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.55E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.02E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.32E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.80E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.37E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.44E+02	2.75E-02	1.00E+01	8.72E-03	6.99E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.44E-05	5.88E-06	1.80E+02	3.78E-04	1.34E+00	1.21E-04	7.58E-03	3.60E-02	5.56E-03	1.18E-02	7.59E-03	7.79E-03	7.52E-04	9.10E-04	2.57E-07	3.98E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.10E-05	7.50E-06	2.45E+02	4.45E-04	1.42E+00	1.47E-04	1.45E-02	3.94E-02	6.19E-03	1.39E-02	9.08E-03	9.30E-03	1.90E-03	1.23E-03	3.58E-07	4.64E-03	2.41E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.11E-04	1.15E-05	2.80E+02	6.45E-04	1.34E+00	2.18E-04	2.43E-02	4.13E-02	6.95E-03	1.85E-02	1.34E-02	1.35E-02	3.78E-03	1.38E-03	6.78E-07	5.01E-03	4.16E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.39E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.12E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.05E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.84E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.76E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.27E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.05E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.46E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.28E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.76E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.96E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.34E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E

Appendix F.5.1: MOVES Emission Factors by Road Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.78E-03	8.95E-05	1.34E+03	3.41E-03	2.14E+01	5.90E-03	9.60E-01	2.64E-02	7.15E-03	8.31E-01	1.05E-01	1.07E-01	1.22E-01	5.60E-03	9.53E-07	7.23E-01	1.77E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.84E-03	8.93E-05	1.33E+03	3.43E-03	2.10E+01	5.97E-03	8.10E-01	1.96E-02	6.09E-03	8.42E-01	1.06E-01	1.08E-01	1.20E-01	5.57E-03	9.66E-07	7.34E-01	1.48E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	6.19E-04	3.20E-05	9.30E+02	6.27E-04	3.60E+00	6.83E-04	4.66E-01	2.54E-02	9.22E-03	7.57E-02	2.06E-02	2.09E-02	1.22E-01	3.40E-03	3.23E-07	5.48E-02	8.72E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.23E-03	6.34E-05	1.29E+03	9.52E-05	3.77E+00	5.77E-03	1.19E+00	2.76E-02	8.25E-03	8.85E-01	5.05E-02	5.36E-02	1.85E-01	4.53E-03	1.59E-09	8.31E-01	2.23E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.82E-04	2.75E-05	7.27E+02	5.82E-04	2.40E+00	5.39E-04	2.98E-01	1.89E-02	7.03E-03	5.69E-02	1.81E-02	1.83E-02	7.47E-02	2.90E-03	1.35E-06	3.86E-02	5.56E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.59E-04	2.52E-05	6.84E+02	5.11E-04	2.07E+00	5.09E-04	2.77E-01	1.90E-02	6.78E-03	5.49E-02	1.63E-02	1.65E-02	7.03E-02	2.73E-03	1.25E-06	3.84E-02	5.17E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	5.11E-04	5.27E-05	9.26E+02	2.71E-03	1.15E+01	9.43E-04	2.45E-01	2.10E-02	8.09E-03	6.77E-02	5.72E-02	5.69E-02	4.31E-02	4.39E-03	2.58E-06	1.08E-02	4.39E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.50E-03	1.15E-04	1.44E+03	3.03E-06	1.26E+00	1.05E-03	1.59E+00	3.60E-02	1.59E-02	7.56E-02	3.33E-02	3.31E-02	2.18E-01	4.83E-03	0.00E+00	4.25E-02	2.99E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.16E-04	1.43E+03	3.81E-06	1.36E+00	1.10E-03	1.71E+00	3.44E-02	1.16E-02	8.63E-02	3.38E-02	3.41E-02	2.18E-01	4.78E-03	0.00E+00	5.22E-02	3.23E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	7.05E-05	7.62E-06	2.43E+02	4.90E-04	1.66E+00	1.57E-04	6.70E-03	8.50E-02	1.19E-02	1.52E-02	9.83E-03	1.01E-02	1.50E-03	1.21E-03	2.76E-07	5.16E-03	1.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	9.97E-05	1.04E-05	3.22E+02	5.85E-04	1.70E+00	1.97E-04	1.70E-02	9.19E-02	1.27E-02	1.84E-02	1.21E-02	1.24E-02	2.97E-03	1.60E-03	3.07E-07	6.05E-03	2.92E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.99E-04	2.06E-05	3.73E+02	1.11E-03	1.67E+00	3.79E-04	3.43E-02	9.51E-02	1.39E-02	3.09E-02	2.32E-02	2.33E-02	5.27E-03	1.83E-03	7.72E-07	7.62E-03	6.05E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.15E-02	1.42E-04	1.47E+03	2.63E-03	7.11E+00	2.50E-02	2.63E+00	4.80E-01	6.85E-02	3.89E+00	2.20E-01	2.31E-01	1.50E-01	6.03E-03	1.92E-06	3.66E+00	4.87E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.21E-02	1.47E-04	1.49E+03	2.73E-03	7.16E+00	2.57E-02	2.44E+00	3.86E-01	5.63E-02	4.01E+00	2.27E-01	2.38E-01	1.50E-01	6.11E-03	1.93E-06	3.77E+00	4.51E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	2.32E-03	1.32E-04	1.14E+03	9.77E-04	1.74E+00	2.85E-03	1.72E+00	3.88E-01	6.23E-02	3.44E-01	6.20E-02	6.28E-02	1.62E-01	4.53E-03	5.76E-06	1.80E-01	3.24E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.51E-02	1.62E-04	1.55E+03	4.33E-04	7.45E+00	2.85E-02	3.47E+00	4.40E-01	6.44E-02	4.49E+00	2.14E-01	2.28E-01	2.24E-01	5.49E-03	2.53E-09	4.26E+00	6.44E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	2.09E-03	1.12E-04	8.94E+02	1.93E-03	1.69E+00	2.23E-03	1.01E+00	2.16E-01	3.44E-02	2.46E-01	6.73E-02	6.83E-02	8.84E-02	3.64E-03	1.57E-06	1.78E-01	1.89E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.10E-04	8.78E+02	1.91E-03	1.67E+00	2.22E-03	9.97E-01	2.20E-01	3.48E-02	2.46E-01	6.67E-02	6.77E-02	8.68E-02	3.57E-03	1.55E-06	1.78E-01	1.87E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	1.22E-03	1.21E-04	1.16E+03	4.76E-03	2.76E+00	1.87E-03	7.60E-01	2.64E-01	4.14E-02	1.31E-01	1.08E-01	1.08E-01	5.68E-02	5.50E-03	3.27E-06	2.33E-02	1.42E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.96E-03	2.70E-04	1.79E+03	1.54E-05	3.42E+00	2.98E-03	4.35E+00	4.53E-01	7.99E-02	2.66E-01	8.11E-02	8.18E-02	2.69E-01	5.98E-03	0.00E+00	1.84E-01	8.19E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.98E-03	2.54E-04	1.87E+03	1.91E-05	4.17E+00	3.10E-03	4.79E+00	5.04E-01	7.88E-02	3.02E-01	7.81E-02	7.96E-02	2.86E-01	6.26E-03	0.00E+00	2.22E-01	9.02E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.98E-05	6.47E-06	2.07E+02	4.16E-04	1.48E+00	1.33E-04	6.51E-03	6.23E-02	8.89E-03	1.29E-02	9.35E-03	8.57E-03	1.13E-03	1.04E-03	2.52E-07	4.38E-03	1.02E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.17E-05	8.53E-06	2.75E+02	4.90E-04	1.53E+00	1.64E-04	1.47E-02	6.60E-02	9.39E-03	1.54E-02	1.01E-02	1.02E-02	2.38E-03	1.37E-03	2.56E-07	5.09E-03	2.43E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.51E-04	1.56E-05	3.17E+02	8.51E-04	1.48E+00	2.90E-04	2.78E-02	6.96E-02	1.05E-02	2.40E-02	1.77E-02	1.79E-02	4.37E-03	1.56E-03	6.77E-07	6.09E-03	4.86E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.01E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.72E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.66E-02	1.09E-04	1.31E+03	1.94E-03	5.48E+00	1.93E-02	1.86E+00	2.49E-01	3.78E-02	3.01E+00	1.68E-01	1.77E-01	1.31E-01	5.34E-03	1.73E-06	2.83E+00	3.44E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.21E-03	9.84E-05	1.07E+03	6.78E-04	1.34E+00	2.15E-03	1.31E+00	2.58E-01	4.31E-02	2.62E-01	4.56E-02	4.70E-02	1.41E-01	3.89E-03	4.67E-07	2.15E-01	2.46E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.81E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.22E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.83E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.72E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.91E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.42E-01	6.71E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.92E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.38E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.45E-05	5.89E-06	1.87E+02	3.79E-04	1.35E+00	1.21E-04	6.70E-03	4.71E-02	6.95E-03	1.18E-02	7.60E-03	7.80E-03	9.03E-04	9.42E-04	2.46E-07	3.99E-03	1.05E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	7.22E-05	7.60E-06	2.51E+02	4.42E-04	1.39E+00	1.47E-04	1.38E-02	4.99E-02	7.34E-03	1.39E-02	9.07E-03	9.29E-03	2.05E-03	1.25E-03	2.96E-07	4.60E-03	2.31E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.25E-04	1.30E-05	2.89E+02	7.17E-04	1.35E+00	2.43E-04	2.48E-02	5.34E-02	8.35E-03	2.03E-02	1.49E-02	1.50E-02	3.90E-03	1.43E-03	6.39E-07	5.29E-03	4.29E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.73E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.20E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.36E-02	9.69E-05	1.28E+03	1.61E-03	5.47E+00	1.57E-02	1.60E+00	1.99E-01	3.11E-02	2.44E+00	1.39E-01	1.47E-01	1.27E-01	5.24E-03	1.73E-06	2.30E+00	2.96E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.84E-03	8.42E-05	1.04E+03	5.64E-04	1.41E+00	1.78E-03	1.09E+00	2.12E-01	3.77E-02	2.14E-01	3.84E-02	3.96E-02	1.37E-01	3.79E-03	4.47E-07	1.74E-01	2.05E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.45E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.66E-01	1.15E-01	2.06E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.33E-06	1.39E-01	1.21E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.55E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.02E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.32E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.80E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.37E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.90E-05	5.30E-06	1.79E+02	3.41E-04	1.22E+00	1.09E-04	7.07E-03	3.55E-02	5.46E-03	1.06E-02	6.83E-03	7.01E-03	7.52E-04	9.05E-04	2.42E-07	3.59E-03	1.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	6.43E-05	6.79E-06	2.44E+02	4.01E-04	1.30E+00	1.32E-04	1.36E-02	3.78E-02	5.85E-03	1.26E-02	8.19E-03	8.39E-03	1.87E-03	1.22E-03	3.06E-07	4.18E-03	2.25E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.03E-04	1.06E-05	2.80E+02	5.93E-04	1.25E+00	2.00E-04	2.26E-02	4.04E-02	6.68E-03	1.70E-02	1.23E-02	1.24E-02	3.67E-03	1.38E-03	6.14E-07	4.57E-03	3.88E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.91E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.53E-06	1.83E+00	2.29E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.11E-02	7.41E-05	1.14E+03	1.42E-03	5.95E+00	1.30E-02	1.19E+00	1.39E-01	2.26E-02	2.02E+00	1.15E-01	1.21E-01	1.11E-01	4.69E-03	1.52E-06	1.90E+00	2.19E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.41E-03	6.01E-05	8.92E+02	4.77E-04	1.48E+00	1.40E-03	8.13E-01	1.48E-01	2.64E-02	1.73E-01	2.93E-02	3.02E-02	1.18E-01	3.26E-03	3.62E-07	1.43E-01	1.53E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.76E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.27E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.05E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.46E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.28E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.76E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.96E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.34E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.72E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.66E-03	4.01E-04	3.65E+02	2.62E-02	1.12E+01	8.31E-03	7.09E-01	3.38E-02	1.78E-02	6.08E-01	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.41E-06	8.87E-02	3.15E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.51E-05	4.87E-06	1.73E+02	3.14E-04	1.12E+00	1.00E-04	7.34E-03	2.75E-02	4.43E-03	9.75E-03	6.29E-03	6.45E-03	6.45E-04	8.78E-04	2.39E-07	3.30E-03	1.15E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	5.86E-05	6.20E-06	2.38E+02	3.71E-04	1.23E+00	1.22E-04	1.34E-02	2.95E-02	4.81E-03	1.16E-02	7.56E-03	7.75E-03	1.74E-03	1.20E-03	3.14E-07	3.88E-03	2.20E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	8.63E-05	8.98E-06	2.73E+02	5.05E-04	1.18E+00	1.70E-04	2.11E-02	3.15E-02	5.52E-03	1.46E-02	1.04E-02	1.06E-02	3.51E-03	1.35E-03	5.96E-07	4.06E-03	3.58E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.05E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.93E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.16E-03	6.05E-05	1.11E+03	1.30E-03	6.40E+00	1.07E-02	9.52E-01	8.96E-02	1.61E-02	1.66E+00	9.65E-02	1.01E-01	1.07E-01	4.58E-03	1.50E-06	1.56E+00	1.75E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.12E-03	4.59E-05	8.51E+02	3.98E-04	1.52E+00	1.13E-03	6.55E-01	1.02E-01	1.93E-02	1.40E-01	2.32E-02	2.38E-02	1.12E-01	3.11E-03	3.31E-07	1.17E-01	1.23E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.49E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.77E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/m

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	7.32E-05	7.92E-06	2.17E+02	5.09E-04	1.67E+00	1.63E-04	8.50E-03	6.58E-02	9.49E-03	1.58E-02	1.02E-02	1.05E-02	1.13E-03	1.10E-03	3.00E-07	5.36E-03	1.33E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	9.82E-05	1.03E-05	2.93E+02	6.00E-04	1.74E+00	1.99E-04	1.81E-02	7.26E-02	1.06E-02	1.88E-02	1.23E-02	1.26E-02	2.54E-03	1.46E-03	4.14E-07	6.24E-03	3.03E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.70E-04	1.76E-05	3.37E+02	9.67E-04	1.65E+00	3.28E-04	3.30E-02	7.50E-02	1.15E-02	2.74E-02	2.01E-02	2.03E-02	4.79E-03	1.66E-03	8.23E-07	7.14E-03	5.73E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.61E-02	1.05E-04	1.29E+03	1.87E-03	5.45E+00	1.87E-02	2.01E+00	3.12E-01	4.61E-02	2.91E+00	1.62E-01	1.71E-01	1.31E-01	5.29E-03	1.74E-06	2.74E+00	3.72E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.59E-02	1.12E-04	1.42E+03	1.79E-03	6.63E+00	1.83E-02	1.84E+00	1.91E-01	3.07E-02	2.86E+00	1.61E-01	1.70E-01	1.41E-01	5.82E-03	1.89E-06	2.69E+00	3.39E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	2.23E-03	9.82E-05	1.16E+03	6.52E-04	1.66E+00	2.17E-03	1.29E+00	1.95E-01	3.77E-02	2.65E-01	4.53E-02	4.67E-02	1.53E-01	4.24E-03	4.93E-07	2.19E-01	2.43E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	1.93E-02	1.33E-04	1.40E+03	3.31E-04	5.95E+00	2.19E-02	2.81E+00	3.55E-01	5.25E-02	3.44E+00	1.66E-01	1.77E-01	2.03E-01	4.97E-03	2.08E-09	3.26E+00	5.22E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	8.38E-05	7.67E+02	1.39E-03	1.32E+00	1.70E-03	7.83E-01	1.46E-01	2.42E-02	1.89E-01	4.99E-02	5.07E-02	7.75E-02	3.10E-03	1.31E-06	1.38E-01	1.47E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.59E-03	8.28E-05	7.51E+02	1.38E-03	1.30E+00	1.69E-03	7.72E-01	1.48E-01	2.44E-02	1.88E-01	4.95E-02	5.02E-02	7.59E-02	3.03E-03	1.29E-06	1.38E-01	1.45E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	9.03E-04	8.87E-05	9.88E+02	3.36E-03	2.27E+00	1.34E-03	5.91E-01	1.76E-01	2.89E-02	9.42E-02	7.74E-02	7.73E-02	4.94E-02	4.67E-03	2.75E-06	1.69E-02	1.10E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	3.19E-03	2.21E-04	1.62E+03	1.15E-05	2.78E+00	2.37E-03	3.56E+00	3.71E-01	6.69E-02	2.07E-01	6.60E-02	6.67E-02	2.44E-01	5.42E-03	0.00E+00	1.40E-01	6.71E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.19E-03	2.08E-04	1.69E+03	1.43E-05	3.39E+00	2.45E-03	3.92E+00	4.09E-01	6.51E-02	2.33E-01	6.34E-02	6.46E-02	2.58E-01	5.65E-03	0.00E+00	1.69E-01	7.38E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	6.30E-05	6.82E-06	1.90E+02	4.39E-04	1.57E+00	1.40E-04	7.54E-03	4.89E-02	7.24E-03	1.36E-02	8.79E-03	9.02E-03	9.03E-04	9.58E-04	2.68E-07	4.62E-03	1.18E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	8.35E-05	8.80E-06	2.55E+02	5.16E-04	1.62E+00	1.71E-04	1.55E-02	5.39E-02	8.06E-03	1.62E-02	1.06E-02	1.08E-02	2.13E-03	1.28E-03	3.69E-07	5.36E-03	2.59E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.40E-04	1.46E-05	2.92E+02	8.10E-04	1.54E+00	2.74E-04	2.76E-02	5.61E-02	8.92E-03	2.30E-02	1.68E-02	1.69E-02	4.09E-03	1.44E-03	7.34E-07	6.04E-03	4.78E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.31E-02	9.34E-05	1.27E+03	1.56E-03	5.47E+00	1.52E-02	1.73E+00	2.49E-01	3.78E-02	2.36E+00	1.35E-01	1.42E-01	1.26E-01	5.21E-03	1.73E-06	2.22E+00	3.20E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.23E-02	8.74E-05	1.31E+03	1.59E-03	7.05E+00	1.43E-02	1.41E+00	1.36E-01	2.30E-02	2.23E+00	1.29E-01	1.35E-01	1.27E-01	5.37E-03	1.74E-06	2.09E+00	2.59E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.68E-03	7.27E-05	1.04E+03	5.27E-04	1.65E+00	1.65E-03	9.87E-01	1.41E-01	2.81E-02	2.03E-01	3.45E-02	3.55E-02	1.38E-01	3.81E-03	4.27E-07	1.67E-01	1.85E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.47E-02	1.18E-04	1.36E+03	2.50E-04	5.07E+00	1.66E-02	2.39E+00	2.54E-01	3.92E-02	2.60E+00	1.30E-01	1.39E-01	1.97E-01	4.80E-03	1.81E-09	2.46E+00	4.45E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.32E-03	7.18E-05	7.51E+02	1.13E-03	1.33E+00	1.39E-03	6.66E-01	1.19E-01	2.08E-02	1.52E-01	4.14E-02	4.20E-02	7.62E-02	3.02E-03	1.27E-06	1.10E-01	1.25E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.30E-03	7.07E-05	7.31E+02	1.11E-03	1.29E+00	1.37E-03	6.55E-01	1.22E-01	2.11E-02	1.49E-01	4.08E-02	4.15E-02	7.42E-02	2.94E-03	1.24E-06	1.08E-01	1.23E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	7.87E-04	7.69E-05	9.59E+02	2.83E-03	3.02E+00	1.15E-03	5.02E-01	1.43E-01	2.45E-02	8.03E-02	6.58E-02	6.57E-02	4.78E-02	4.53E-03	2.67E-06	1.46E-02	9.32E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.77E-03	1.98E-04	1.58E+03	8.78E-06	2.36E+00	2.03E-03	3.08E+00	2.68E-01	5.28E-02	1.70E-01	5.85E-02	5.90E-02	2.38E-01	5.28E-03	0.00E+00	1.11E-01	5.80E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.78E-03	1.88E-04	1.63E+03	1.10E-05	2.85E+00	2.10E-03	3.38E+00	2.94E-01	4.96E-02	1.92E-01	5.67E-02	5.77E-02	2.50E-01	5.47E-03	0.00E+00	1.34E-01	6.37E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	5.33E-05	5.77E-06	1.79E+02	3.71E-04	1.33E+00	1.19E-04	7.34E-03	3.65E-02	5.61E-03	1.15E-02	7.44E-03	7.63E-03	7.52E-04	9.05E-04	2.49E-07	3.91E-03	1.15E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	7.02E-05	7.42E-06	2.44E+02	4.39E-04	1.42E+00	1.45E-04	1.43E-02	4.00E-02	6.21E-03	1.38E-02	8.97E-03	9.19E-03	1.91E-03	1.22E-03	3.38E-07	4.58E-03	2.37E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	1.11E-04	1.15E-05	2.79E+02	6.43E-04	1.35E+00	2.17E-04	2.40E-02	4.20E-02	6.96E-03	1.84E-02	1.33E-02	1.35E-02	3.77E-03	1.38E-03	6.55E-07	4.97E-03	4.12E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.07E-02	7.19E-05	1.13E+03	1.41E-03	6.04E+00	1.25E-02	1.29E+00	1.76E-01	2.75E-02	1.95E+00	1.11E-01	1.17E-01	1.11E-01	4.68E-03	1.52E-06	1.83E+00	2.39E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.00E-02	7.08E-05	1.23E+03	1.47E-03	7.33E+00	1.17E-02	1.12E+00	9.87E-02	1.77E-02	1.81E+00	1.07E-01	1.12E-01	1.18E-01	5.07E-03	1.64E-06	1.70E+00	2.05E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	1.31E-03	5.58E-05	9.66E+02	4.44E-04	1.64E+00	1.30E-03	7.84E-01	1.05E-01	2.17E-02	1.61E-01	2.72E-02	2.80E-02	1.28E-01	3.52E-03	3.84E-07	1.33E-01	1.47E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.24E-02	7.95E-05	1.20E+03	2.16E-04	4.56E+00	1.42E-02	1.76E+00	1.86E-01	2.89E-02	2.23E+00	1.06E-01	1.13E-01	1.73E-01	4.23E-03	1.48E-09	2.11E+00	3.27E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.06E-03	5.29E-05	6.73E+02	8.71E-04	1.30E+00	1.13E-03	5.05E-01	8.56E-02	1.55E-02	1.28E-01	3.17E-02	3.22E-02	6.74E-02	2.72E-03	1.12E-06	9.62E-02	9.46E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.05E-03	5.21E-05	6.52E+02	8.58E-04	1.25E+00	1.12E-03	4.95E-01	8.72E-02	1.56E-02	1.28E-01	3.13E-02	3.18E-02	6.51E-02	2.63E-03	1.08E-06	9.58E-02	9.28E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	5.98E-04	5.90E-05	8.48E+02	2.31E-03	3.41E+00	9.08E-04	3.76E-01	1.02E-01	1.83E-02	6.39E-02	5.27E-02	5.26E-02	4.11E-02	4.02E-03	2.32E-06	1.13E-02	6.96E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.12E-03	1.48E-04	1.38E+03	7.50E-06	1.85E+00	1.57E-03	2.30E+00	1.97E-01	3.90E-02	1.35E-01	4.40E-02	4.40E-02	2.08E-01	4.61E-03	0.00E+00	9.07E-02	4.34E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.08E-03	1.36E-04	1.42E+03	9.43E-06	2.19E+00	1.61E-03	2.50E+00	2.17E-01	3.69E-02	1.52E-01	4.14E-02	4.19E-02	2.16E-01	4.74E-03	0.00E+00	1.10E-01	4.72E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.65E-05	5.03E-06	1.71E+02	3.24E-04	1.17E+00	1.03E-04	7.21E-03	2.79E-02	4.48E-03	1.01E-02	6.48E-03	6.65E-03	6.45E-04	8.68E-04	2.37E-07	3.41E-03	1.13E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	6.09E-05	6.44E-06	2.36E+02	3.85E-04	1.28E+00	1.26E-04	1.35E-02	3.03E-02	4.93E-03	1.21E-02	7.84E-03	8.04E-03	1.75E-03	1.18E-03	3.17E-07	4.02E-03	2.22E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	8.98E-05	9.34E-06	2.69E+02	5.25E-04	1.22E+00	1.77E-04	2.14E-02	3.21E-02	5.60E-03	1.52E-02	1.09E-02	1.10E-02	3.53E-03	1.33E-03	6.00E-07	4.21E-03	3.65E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.83E-03	5.90E-05	1.11E+03	1.30E-03	6.55E+00	1.03E-02	1.05E+00	1.14E-01	1.94E-02	1.60E+00	9.39E-02	9.86E-02	1.07E-01	4.58E-03	1.50E-06	1.51E+00	1.93E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.33E-03	5.90E-05	1.17E+03	1.38E-03	7.54E+00	9.75E-03	9.11E-01	7.26E-02	1.41E-02	1.51E+00	9.17E-02	9.61E-02	1.12E-01	4.85E-03	1.57E-06	1.42E+00	1.67E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	1.05E-03	4.36E-05	9.10E+02	3.85E-04	1.63E+00	1.05E-03	6.39E-01	8.00E-02	1.72E-02	1.31E-01	2.20E-02	2.27E-02	1.20E-01	3.32E-03	3.53E-07	1.08E-01	1.20E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.02E-02	6.94E-05	1.18E+03	1.77E-04	4.25E+00	1.16E-02	1.49E+00	1.32E-01	2.18E-02	1.82E+00	8.76E-02	9.34E-02	1.71E-01	4.18E-03	1.37E-09	1.73E+00	2.77E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.46E-04	4.24E-05	6.63E+02	6.92E-04	1.33E+00	9.01E-04	4.18E-01	5.95E-02	1.19E-02	1.03E-01	2.53E-02	2.57E-02	6.64E-02	2.67E-03	1.08E-06	7.69E-02	7.82E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	8.36E-04	4.16E-05	6.38E+02	6.77E-04	1.26E+00	8.90E-04	4.07E-01	6.16E-02	1.20E-02	1.02E-01	2.48E-02	2.52E-02	6.37E-02	2.57E-03	1.03E-06	7.65E-02	7.63E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	4.85E-04	4.80E-05	8.21E+02	1.92E-03	3.81E+00	7.48E-04	3.08E-01	7.03E-02	1.40E-02	5.27E-02	4.36E-02	4.35E-02	3.96E-02	3.89E-03	2.22E-06	9.28E-03	5.69E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.87E-03	1.33E-04	1.36E+03	6.08E-06	1.61E+00	1.37E-03	1.97E+00	1.42E-01	3.11E-02	1.14E-01	3.94E-02	3.93E-02	2.05E-01	4.54E-03	0.00E+00	7.47E-02	3.71E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.86E-03	1.24E-04	1.39E+03	7.68E-06	1.87E+00	1.41E-03	2.13E+00	1.55E-01	2.83E-02	1.29E-01	3.75E-02	3.79E-02	2.12E-01	4.65E-03	0.00E+00	9.14E-02	4.01E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	4.33E-05	4.68E-06	1.66E+02	3.01E-04	1.11E+00	9.62E-05	7.40E-03	1.98E-02	3.44E-03	9.37E-03	6.04E-03	6.20E-03	5.64E-04	8.45E-04	2.37E-07	3.17E-03	1.16E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	5.55E-05	5.89E-06	2.29E+02	3.56E-04	1.23E+00	1.16E-04	1.31E-02	2.12E-02	3.76E-03	1.11E-02	7.23E-03	7.41E-03	1.62E-03	1.16E-03	3.15E-07	3.73E-03	2.14E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	7.61E-05	7.92E-06	2.61E+02	4.50E-04	1.15E+00	1.51E-04	1.98E-02	2.30E-02	4.40E-03	1.31E-02	9.28E-03	9.40E-03	3.33E-03	1.29E-03	5.76E-07	3.75E-03	3.35E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.18E-03	4.98E-05	1.11E+03	1.29E-03	7.43E+00	8.44E-03	8.62E-01	7.53E-02	1.43E-02	1.31E+00	8.06E-02	8.43E-02	1.05E-01	4.59E-03	1.48E-06	1.22E+00	1.59E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.08E-03	5.01E-05	1.13E+03	1.31E-03	7.69E+00	8.32E-03	7.56E-01	5.20E-02	1.12E-02	1.29E+00	8.01E-02	8.38E-02	1.07E-01	4.69E-03	1.52E-06	1.20E+00	1.38E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	8.51E-04	3.45E-05	8.69E+02	3.40E-04	1.63E+00	8.69E-04	5.30E-01	6.01E-02	1.37E-02	1.08E-01	1.82E-02	1.87E-02	1.15E-01	3.17E-03	3.29E-07	8.98E-02	9.94E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.35E-03	5.50E-05	1.14E+03	1.46E-04	4.06E+00	9.49E-03	1.20E+00	8.67E-02	1.55E-02	1.49E+00	7.14E-02	7.61E-02	1.65E-01	4.03E-03	1.29E-09	1.42E+00	2.23E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.75E-04	3.35E-05	6.62E+02	5.43E-04	1.33E+00	7.18E-04	3.46E-01	4.24E-02	9.59E-03	8.21E-02	2.00E-02	2.03E-02	6.64E-02	2.67E-03	1.06E-06	6.18E-02	6.48E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.65E-04	3.28E-05	6.35E+02	5.26E-04	1.25E+00	7.08E-04	3.36E-01	4.39E-02	9.59E-03	8.12E-02	1.95E-02	1.98E-02	6.34E-02	2.56E-03	1.00E-06	6.14E-02	6.28E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	3.97E-04	3.95E-05	8.13E+02	1.64E-03	4.12E+00	6.28E-04	2.56E-01	4.92E-02	1.13E-02	4.44E-02	3.68E-02	3.67E-02	3.91E-02	3.85E-03	2.22E-06	7.68E-03	4.70E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.58E-03	1.13E-04	1.31E+03	4.99E-06	1.40E+00	1.16E-03	1.63E+00	9.58E-02	2.36E-02	9.42E-02	3.34E-02	3.32E-02	1.97E-01	4.38E-03	0.00E+00	6.11E-02	3.06E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.55E-03	1.04E-04	1.33E+03	6.33E-06	1.59E+00	1.18E-03	1.73E+00	1.03E-01	2.07E-02	1.07E-01	3.15E-02	3.17E-02	2.03E-01	4.44E-03	0.00E+00	7.50E-02	3.26E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	4.12E-05	4.45E-06	1.64E+02	2.86E-04	1.10E+00	9.15E-05	7.62E-03	1.47E-02	2.79E-03	8.91E-03	5.74E-03	5.89E-03	5.01E-04	8.33E-04	2.38E-07	3.01E-03	1.19E-03
5	UrbanUnrestrictedA

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A17	110	Passenger Car	1420	0.00E+00	1.62E-05	1.76E-06	6.59E+01	1.13E-04	4.89E-01	3.60E-05	3.33E-03	3.53E-03	8.20E-04	3.51E-03	2.26E-03	2.32E-03	1.62E-04	3.36E-04	9.94E-08	1.19E-03	5.21E-04
17	A17	110	Passenger Truck	2378	0.00E+00	3.52E-05	3.76E-06	1.57E+02	2.33E-04	1.01E+00	7.53E-05	9.31E-03	6.12E-03	1.54E-03	7.27E-03	4.71E-03	4.83E-03	9.44E-04	7.93E-04	2.33E-07	2.45E-03	1.50E-03
17	A17	110	Single Unit Short Haul Truck	539	0.00E+00	7.13E-05	3.78E-06	1.03E+02	7.31E-05	2.85E-01	7.84E-05	4.17E-02	3.22E-03	1.07E-03	8.63E-03	2.41E-03	2.44E-03	1.06E-02	4.14E-04	1.84E-07	6.19E-03	7.78E-03
17	A17	110	Single Unit Long Haul Truck	24	0.00E+00	3.05E-06	1.57E-07	4.34E+00	2.93E-06	1.12E-02	3.34E-06	1.73E-03	1.44E-04	4.56E-05	3.74E-04	9.91E-05	1.00E-04	4.41E-04	1.74E-05	7.53E-09	2.73E-04	3.23E-04
17	A17	110	Combination Short Haul Truck	307	0.00E+00	1.16E-04	8.71E-06	1.17E+02	2.77E-07	1.05E-01	8.21E-05	1.25E-01	3.30E-03	1.31E-03	6.13E-03	2.54E-03	2.51E-03	1.77E-02	3.93E-04	0.00E+00	3.63E-03	2.35E-02
17	A17	110	Combination Long Haul Truck	280	0.00E+00	1.05E-04	7.57E-06	1.06E+02	3.17E-07	1.04E-01	7.63E-05	1.21E-01	2.97E-03	9.03E-04	6.27E-03	2.23E-03	2.24E-03	1.62E-02	3.55E-04	0.00E+00	4.04E-03	2.27E-02
17	A18	110	Passenger Car	1193	0.00E+00	1.36E-05	1.47E-06	5.54E+01	9.48E-05	4.11E-01	3.03E-05	2.80E-03	2.96E-03	6.89E-04	2.95E-03	1.90E-03	1.95E-03	1.36E-04	2.82E-04	8.35E-08	9.98E-04	4.38E-04
17	A18	110	Passenger Truck	1998	0.00E+00	2.96E-05	3.16E-06	1.32E+02	1.96E-04	8.49E-01	6.33E-05	7.83E-03	5.14E-03	1.29E-03	6.11E-03	3.96E-03	4.06E-03	7.94E-04	6.66E-04	1.96E-07	2.06E-03	1.26E-03
17	A18	110	Single Unit Short Haul Truck	520	0.00E+00	6.87E-05	3.64E-06	9.97E+01	7.05E-05	2.74E-01	7.55E-05	4.02E-02	3.11E-03	1.03E-03	8.32E-03	2.33E-03	2.35E-03	1.02E-02	3.99E-04	1.78E-07	5.96E-03	7.50E-03
17	A18	110	Single Unit Long Haul Truck	23	0.00E+00	2.94E-06	1.52E-07	4.18E+00	2.83E-06	1.08E-02	3.22E-06	1.67E-03	1.39E-04	4.40E-05	3.61E-04	9.55E-05	9.68E-05	4.26E-04	1.68E-05	7.26E-09	2.63E-04	3.11E-04
17	A18	110	Combination Short Haul Truck	299	0.00E+00	1.13E-04	8.47E-06	1.14E+02	2.69E-07	1.02E-01	7.99E-05	1.21E-01	3.20E-03	1.27E-03	5.96E-03	2.47E-03	2.44E-03	1.72E-02	3.82E-04	0.00E+00	3.53E-03	2.28E-02
17	A18	110	Combination Long Haul Truck	273	0.00E+00	1.02E-04	7.36E-06	1.03E+02	3.08E-07	1.01E-01	7.42E-05	1.17E-01	2.88E-03	8.78E-04	6.10E-03	2.17E-03	2.18E-03	1.57E-02	3.45E-04	0.00E+00	3.93E-03	2.21E-02
17	A19	110	Passenger Car	1278	0.00E+00	1.46E-05	1.58E-06	5.93E+01	1.02E-04	4.40E-01	3.24E-05	3.00E-03	3.17E-03	7.38E-04	3.16E-03	2.04E-03	2.09E-03	1.46E-04	3.02E-04	8.95E-08	1.07E-03	4.69E-04
17	A19	110	Passenger Truck	2140	0.00E+00	3.17E-05	3.38E-06	1.42E+02	2.10E-04	9.10E-01	6.78E-05	8.38E-03	5.51E-03	1.39E-03	6.54E-03	4.24E-03	4.35E-03	8.50E-04	7.13E-04	2.10E-07	2.21E-03	1.35E-03
17	A19	110	Single Unit Short Haul Truck	513	0.00E+00	6.78E-05	3.59E-06	9.83E+01	6.95E-05	2.71E-01	7.45E-05	3.96E-02	3.06E-03	1.01E-03	8.20E-03	2.29E-03	2.32E-03	1.01E-02	3.93E-04	1.75E-07	5.88E-03	7.39E-03
17	A19	110	Single Unit Long Haul Truck	23	0.00E+00	2.90E-06	1.50E-07	4.12E+00	2.79E-06	1.07E-02	3.17E-06	1.65E-03	1.37E-04	4.33E-05	3.56E-04	9.42E-05	9.55E-05	4.20E-04	1.65E-05	7.16E-09	2.59E-04	3.07E-04
17	A19	110	Combination Short Haul Truck	296	0.00E+00	1.12E-04	8.37E-06	1.12E+02	2.66E-07	1.01E-01	7.90E-05	1.20E-01	3.17E-03	1.26E-03	5.89E-03	2.44E-03	2.41E-03	1.70E-02	3.78E-04	0.00E+00	3.49E-03	2.26E-02
17	A19	110	Combination Long Haul Truck	269	0.00E+00	1.01E-04	7.28E-06	1.02E+02	3.05E-07	9.96E-02	7.34E-05	1.16E-01	2.85E-03	8.68E-04	6.03E-03	2.14E-03	2.16E-03	1.56E-02	3.41E-04	0.00E+00	3.88E-03	2.19E-02
17	A20	110	Passenger Car	1065	0.00E+00	1.22E-05	1.32E-06	4.94E+01	8.46E-05	3.67E-01	2.70E-05	2.50E-03	2.64E-03	6.15E-04	2.63E-03	1.70E-03	1.74E-03	1.21E-04	2.52E-04	7.45E-08	8.90E-04	3.90E-04
17	A20	110	Passenger Truck	1783	0.00E+00	2.64E-05	2.82E-06	1.18E+02	1.75E-04	7.58E-01	5.65E-05	6.98E-03	4.59E-03	1.15E-03	5.45E-03	3.53E-03	3.62E-03	7.08E-04	5.94E-04	1.75E-07	1.84E-03	1.12E-03
17	A20	110	Single Unit Short Haul Truck	496	0.00E+00	6.56E-05	3.47E-06	9.51E+01	6.73E-05	2.62E-01	7.21E-05	3.83E-02	2.96E-03	9.80E-04	7.94E-03	2.22E-03	2.25E-03	9.73E-03	3.81E-04	1.70E-07	5.69E-03	7.16E-03
17	A20	110	Single Unit Long Haul Truck	22	0.00E+00	2.81E-06	1.45E-07	3.99E+00	2.70E-06	1.03E-02	3.07E-06	1.59E-03	1.33E-04	4.20E-05	3.44E-04	9.12E-05	9.24E-05	4.06E-04	1.60E-05	6.93E-09	2.51E-04	2.97E-04
17	A20	110	Combination Short Haul Truck	283	0.00E+00	1.07E-04	8.02E-06	1.08E+02	2.55E-07	9.67E-02	7.56E-05	1.15E-01	3.03E-03	1.20E-03	5.64E-03	2.33E-03	2.31E-03	1.63E-02	3.61E-04	0.00E+00	3.34E-03	2.16E-02
17	A20	110	Combination Long Haul Truck	258	0.00E+00	9.67E-05	6.97E-06	9.75E+01	2.92E-07	9.53E-02	7.02E-05	1.11E-01	2.73E-03	8.31E-04	5.78E-03	2.05E-03	2.06E-03	1.49E-02	3.27E-04	0.00E+00	3.72E-03	2.09E-02
17	A21	110	Passenger Car	1546	0.00E+00	1.76E-05	1.91E-06	7.17E+01	1.23E-04	5.32E-01	3.92E-05	3.62E-03	3.84E-03	8.93E-04	3.82E-03	2.46E-03	2.53E-03	1.76E-04	3.66E-04	1.08E-07	1.29E-03	5.67E-04
17	A21	110	Passenger Truck	2588	0.00E+00	3.83E-05	4.09E-06	1.71E+02	2.54E-04	1.10E+00	8.20E-05	1.01E-02	6.66E-03	1.68E-03	7.91E-03	5.13E-03	5.26E-03	1.03E-03	8.63E-04	2.54E-07	2.67E-03	1.63E-03
17	A21	110	Single Unit Short Haul Truck	621	0.00E+00	8.21E-05	4.35E-06	1.19E+02	8.42E-05	3.28E-01	9.02E-05	4.80E-02	3.71E-03	1.23E-03	9.94E-03	2.78E-03	2.81E-03	1.22E-02	4.76E-04	2.12E-07	7.12E-03	8.95E-03
17	A21	110	Single Unit Long Haul Truck	27	0.00E+00	3.52E-06	1.81E-07	4.99E+00	3.38E-06	1.29E-02	3.84E-06	1.99E-03	1.66E-04	5.25E-05	4.31E-04	1.14E-04	1.16E-04	5.08E-04	2.00E-05	8.67E-09	3.14E-04	3.72E-04
17	A21	110	Combination Short Haul Truck	355	0.00E+00	1.34E-04	1.01E-05	1.35E+02	3.20E-07	1.21E-01	9.50E-05	1.44E-01	3.81E-03	1.51E-03	7.09E-03	2.93E-03	2.90E-03	2.04E-02	4.54E-04	0.00E+00	4.20E-03	2.71E-02
17	A21	110	Combination Long Haul Truck	324	0.00E+00	1.22E-04	8.75E-06	1.22E+02	3.66E-07	1.20E-01	8.82E-05	1.40E-01	3.43E-03	1.04E-03	7.26E-03	2.57E-03	2.59E-03	1.87E-02	4.11E-04	0.00E+00	4.67E-03	2.63E-02
17	A22	110	Passenger Car	1414	0.00E+00	1.61E-05	1.75E-06	6.56E+01	1.12E-04	4.87E-01	3.59E-05	3.32E-03	3.51E-03	8.17E-04	3.50E-03	2.26E-03	2.31E-03	1.61E-04	3.35E-04	9.90E-08	1.18E-03	5.19E-04
17	A22	110	Passenger Truck	2369	0.00E+00	3.51E-05	3.74E-06	1.57E+02	2.32E-04	1.01E+00	7.50E-05	9.28E-03	6.09E-03	1.53E-03	7.24E-03	4.69E-03	4.81E-03	9.41E-04	7.90E-04	2.32E-07	2.44E-03	1.49E-03
17	A22	110	Single Unit Short Haul Truck	568	0.00E+00	7.52E-05	3.98E-06	1.09E+02	7.71E-05	3.00E-01	8.26E-05	4.39E-02	3.39E-03	1.12E-03	9.10E-03	2.54E-03	2.57E-03	1.11E-02	4.36E-04	1.94E-07	6.52E-03	8.20E-03
17	A22	110	Single Unit Long Haul Truck	25	0.00E+00	3.22E-06	1.66E-07	4.57E+00	3.09E-06	1.18E-02	3.52E-06	1.82E-03	1.52E-04	4.81E-05	3.94E-04	1.04E-04	1.06E-04	4.65E-04	1.83E-05	7.94E-09	2.88E-04	3.41E-04
17	A22	110	Combination Short Haul Truck	309	0.00E+00	1.17E-04	8.75E-06	1.18E+02	2.78E-07	1.06E-01	8.26E-05	1.25E-01	3.31E-03	1.31E-03	6.16E-03	2.55E-03	2.52E-03	1.78E-02	3.95E-04	0.00E+00	3.65E-03	2.36E-02
17	A22	110	Combination Long Haul Truck	282	0.00E+00	1.06E-04	7.61E-06	1.06E+02	3.18E-07	1.04E-01	7.67E-05	1.21E-01	2.98E-03	9.08E-04	6.31E-03	2.24E-03	2.25E-03	1.63E-02	3.57E-04	0.00E+00	4.06E-03	2.28E-02
17	A23	110	Passenger Car	1259	0.00E+00	1.44E-05	1.56E-06	5.84E+01	1.00E-04	4.34E-01	3.20E-05	2.95E-03	3.13E-03	7.27E-04	3.11E-03	2.01E-03	2.06E-03	1.43E-04	2.98E-04	8.81E-08	1.05E-03	4.62E-04
17	A23	110	Passenger Truck	2108	0.00E+00	3.12E-05	3.33E-06	1.39E+02	2.07E-04	8.96E-01	6.68E-05	8.26E-03	5.42E-03	1.36E-03	6.44E-03	4.18E-03	4.28E-03	8.37E-04	7.03E-04	2.07E-07	2.17E-03	1.33E-03
17	A23	110	Single Unit Short Haul Truck	610	0.00E+00	8.07E-05	4.27E-06	1.17E+02	8.27E-05	3.22E-01	8.87E-05	4.71E-02	3.65E-03	1.21E-03	9.77E-03	2.73E-03	2.76E-03	1.20E-02	4.68E-04	2.09E-07	7.00E-03	8.80E-03
17	A23	110	Single Unit Long Haul Truck	27	0.00E+00	3.46E-06	1.78E-07	4.91E+00	3.32E-06	1.27E-02	3.78E-06	1.96E-03	1.63E-04	5.16E-05	4.23E-04	1.12E-04	1.14E-04	5.00E-04	1.97E-05	8.53E-09	3.09E-04	3.66E-04
17	A23	110	Combination Short Haul Truck	339	0.00E+00	1.28E-04	9.59E-06	1.29E+02	3.05E-07	1.16E-01	9.05E-05	1.37E-01	3.63E-03	1.44E-03	6.75E-03	2.79E-03	2.77E-03	1.95E-02	4.33E-04	0.00E+00	4.00E-03	2.59E-02
17	A23	110	Combination Long Haul Truck	309	0.00E+00	1.16E-04	8.34E-06	1.17E+02	3.49E-07	1.14E-01	8.41E-05	1.33E-01	3.27E-03	9.95E-04	6.91E-03	2.45E-03	2.47E-03	1.78E-02	3.91E-04	0.00E+00	4.45E-03	2.50E-02
17	A24	110	Passenger Car	1749	0.00E+00	2.00E-05	2.16E-06	8.11E+01	1.39E-04	6.02E-01	4.44E-05	4.10E-03	4.34E-03	1.01E-03	4.32E-03	2.79E-03	2.86E-03	1.99E-04	4.14E-04	1.22E-07	1.46E-03	6.41E-04
17	A24	110	Passenger Truck	2929	0.00E+00	4.34E-05	4.63E-06	1.94E+02	2.87E-04	1.24E+00	9.27E-05	1.15E-02	7.53E-03	1.90E-03	8.95E-03	5.80E-03	5.95E-03	1.16E-03	9.76E-04	2.87E-07	3.02E-03	1.85E-03
17	A24	110	Single Unit Short Haul Truck	517	0.00E+00	6.84E-05	3.62E-06	9.91E+01	7.01E-05	2.73E-01	7.51E-05	3.99E-02	3.09E-03	1.02E-03	8.27E-03	2.31E-03	2.34E-03	1.01E-02	3.97E-04	1.77E-07	5.93E-03	7.46E-03
17	A24	110	Single Unit Long Haul Truck	23	0.00E+00	2.93E-06	1.51E-07	4.16E+00	2.81E-06	1.08E-02	3.20E-06	1.66E-03	1.38E-04	4.37E-05	3.59E-04	9.50E-05	9.63E-05	4.23E-04	1.67E-05	7.22E-09	2.62E-04	3.10E-04
17	A24	110	Combination Short Haul Truck	260	0.00E+00	9.81E-05	7.36E-06	9.88E+01	2.34E-07	8.87E-02	6.94E-05	1.05E-01	2.78E-03	1.10E-03	5.18E-03	2.14E-03	2.12E-03	1.49E-02	3.32E-04	0.00E+00	3.06E-03	1.98E-02
17	A24	110	Combination Long Haul Truck	237	0.00E+00	8.88E-05	6.39E-06	8.94E+01	2.68E-07	8.75E-02	6.44E-05	1.02E-01	2.51E-03	7.63E-04	5.30E-03	1.88E-03	1.89E-03	1.37E-02	3.00E-04	0.00E+00	3.41E-03	1.92E-02
17	A25	110	Passenger Car	1144	0.00E+00	1.31E-05	1.41E-06	5.31E+01	9.09E-05	3.94E-01	2.91E-05	2.68E-03	2.84E-03	6.61E-04	2.83E-03	1.82E-03	1.87E-03	1.30E-04	2.71E-04	8.01E-08	9.57E-04	4.20E-04
17	A25	110	Passenger Truck	1916	0.00E+00	2.84E-05	3.03E-06	1.27E+02	1.88E-04	8.14E-01	6.07E-05	7.51E-03	4.93E-03	1.24E-03	5.86E-03	3.80E-03	3.89E-03	7.61E-04	6.39E-04	1.88E-07	1.97E-03	1.21E-03
17	A25	110	Single Unit Short Haul Truck	578	0.00E+00	7.65E-05	4.05E-06	1.11E+02	7.84E-05	3.05E-01	8.40E-05	4.46E-02	3.45E-03	1.14E-03	9.25E-03	2.59E-03	2.62E-03	1.13E-02	4.43E-04	1.98E-07	6.63E-03	8.34E-03
17	A25	110	Single Unit Long Haul Truck	26	0.00E+00	3.27E-06	1.69E-07	4.65E+00	3.15E-06	1.20E-02	3.58E-06	1.86E-03	1.54E-04	4.89E-05	4.01E-04	1.06E-04	1.08E-04	4.73E-04	1.86E-05	8.08E-09	2.93E-04	3.46E-04
17	A25	110	Combination Short Haul Truck	319	0.00E+00	1.21E-04	9.04E-06	1.21E+02	2.87E-07	1.09E-01	8.53E-05	1.29E-01	3.42E-03	1.36E-03	6.37E-03	2.63E-03	2.61E-03	1.84E-02	4.08E-04	0.00E+00	3.77E-03	2.44E-02
17	A25	110	Combination Long Haul Truck	291	0.00E+00	1.09E-04	7.86E-06	1.10E+02	3.29E-07	1.08E-01	7.92E-05	1.25E-01	3.08E-03	9.38E-04	6.52E-03	2.31E-03	2.33E-03	1.68E-02	3.69E-04	0.00E+00	4.20E-03	2.36E-02
17	A26	110	Passenger Car	1391	0.00E+00	1.59E-05	1.72E-06	6.45E+01	1.10E-04	4.79E-01	3.53E-05	3.26E-03	3.45E-03	8.03E-04	3.44E-03	2.22E-03	2.28E-03	1.58E-04	3.29E-04	9.73E-08	1.16E-03	5.10E-04
17	A26	110	Passenger Truck	2329	0.00E+00	3.45E-05	3.68E-06	1.54E+02	2.28E-04	9.90E-01	7.37E-05	9.12E-03	5.99E-03	1.51E-03	7.12E-03	4.61E-03	4.73E-03	9.25E-04	7.76E-04	2.28E-07	2.40E-03	1.47E-03
17	A26	110	Single Unit Short Haul Truck	447	0.00E+00	5.91E-05	3.13E-06	8.56E+01	6.06E-05	2.36E-01	6.49E-05	3.45E-02	2.67E-03	8.82E-04	7.15E-03	2.00E-03	2.02E-03	8.76E-03	3.42E-04	1.53E-07	5.12E-03	6.44E-03
17	A26	110	Single Unit Long Haul Truck	20	0.00E+00	2.53E-06	1.30E-07	3.59E+00	2.43E-06	9.30E-03	2.76E-06	1.43E-03	1.19E-04	3.78E-05	3.10E-04	8.21E-05	8.32E-05	3.66E-04	1.44E-05	6.24E-09	2.26E-04	2.68E-04
17	A26	110	Combination Short Haul Truck	227	0.00E+00	8.56E-05	6.42E-06	8.62E+01	2.04E-07	7.74E-02	6.05E-05	9.19E-02	2.43E-03	9.63E-04	4.52E-03	1.87E-03	1.85E-03	1.30E-02	2.89E-04	0.00E+00	2.67E-03	1.73E-02
17	A26	110	Combination Long Haul Truck	207	0.00E+00	7.75E-05	5.58E-06	7.80E+01	2.34E-07	7.63E-02	5.62E-05	8.89E-02	2.19E-03	6.66E-04	4.62E-03	1.64E-03	1.65E-03	1.19E-02	2.62E-04	0.00E+00	2.98E-03	1.68E-02
17	A27	110	Passenger Car	1144	0.00E+00	1.31E-05	1.41E-06	5.31E+01	9.09E-05	3.94E-01	2.91E-05	2.68E-03	2.84E-03	6.61E-04	2.83E-03	1.82E-03	1.87E-03	1.30E-04	2.71E-04	8.01E-08	9.57E-04	4.20E-04
17	A27	110	Passenger Truck	1916	0.00E+00	2.84E-05	3.03E-06	1.27E+02	1.88E-04	8.14E-01	6.07E-05	7.51E-03	4.93E-03	1.24E-03	5.86E-03	3.80E-03	3.89E-03	7.61E-04	6.39E-04	1.88E-07	1.97E-03	1.21E-03
17	A27	110	Single Unit Short Haul Truck	578	0.00E+00	7.65E-05	4.05E-06	1.11E+02	7.84E-05	3.05E-01	8.40E-05	4.46E-02	3.45E-03	1.14E-03	9.25E-03	2.59E-03	2.62E-03	1.13E-02	4.43E-04	1.98E-07	6.63E-03	8.34E-03
17	A27	110	Single Unit Long Haul Truck	26	0.00E+00	3.27E-06	1.69E-07	4.65E+00	3.15E-06	1.20E-02	3.58E-06	1.86E-03	1.54E-04	4.89E-05	4.01E-04	1.06E-04	1.08E-04	4.73E-04	1.86E-05	8.08E-09	2.93E-04	3.46E-04
17	A27	110	Combination Short Haul Truck	319	0.00E+00	1.21E-04	9.04E-06	1.21E+02	2.87E-07	1.09E-01	8.53E-05	1.29E-01	3.42E-03	1.36E-03	6.37E-03	2.63E-03	2.61E-03	1.84E-02	4.08E-04	0.00E+00	3.77E-03	2.44E-02
17	A27	110	Combination Long Haul Truck	291	0.00E+00	1.09E-04	7.86E-06	1.10E+02	3.29E-07	1.08E-01	7.92E-05	1.25E-01	3.08E-03	9.38E-04	6.52E-03	2.31E-03	2.33E-03	1.68E-02	3.69E-04	0.00E+00	4.20E-03	2.36E-02
17	A28	110	Passenger Car	1391	0.00E+00	1.59E-05	1.72E-06	6.45E+01	1.10E-04	4.79E-01	3.53E-05	3.26E-03	3.45E-03	8.03E-04	3.44E-03	2.22E-03	2.28E-03	1.58E-04	3.29E-04	9.73E-08	1.16E-03	5.10E-04
17	A28	110	Passenger Truck	2329	0.00E+00	3.45E-05	3.68E-06	1.54E+02	2.28E-04	9.90E-01	7.37E-05	9.12E-03	5.99E-03	1.51E-03	7.12E-03	4.61E-03	4.73E-03	9.25E-04	7.76E-04	2.28E-07	2.40E-03	1.47E-03
17	A28	110	Single Unit Short Haul Truck	447	0.00E+00	5.91E-05	3.13E-06	8.56E+01	6.06E-05	2.36E-01	6.49E-05	3.45E-02	2.67E-03	8.82E-04	7.15E-03	2.00E-03	2.02E-03	8.76E-03	3.42E-04	1.53E-07	5.12E-03	6.44E-03
17	A28	110	Single Unit Long Haul Truck	20	0.00E+00	2.53E-06	1.30E-07	3.59E+00	2.43E-06	9.30E-03	2.76E-06	1.43E-03	1.19E-04	3.78E-05	3.10E-04	8.21E-05	8.32E-05	3.66E-04	1.44E-05	6.24E-09	2.26E-04	2.68E-04
17	A28	110	Combination Short Haul Truck	227	0.00E+00	8.56E-05	6.42E-06	8.62E+01	2.04E-07	7.74E-02	6.05E-05	9.19E-02	2.43E-03	9.63E-04	4.52E-03	1.87E-03	1.85E-03	1.30E-02	2.89E-04	0.00E+00	2.67E-03	1.73E-02
17	A28	110	Combination Long Haul Truck	207	0.00E+00	7.75E-05	5.58E-06	7.80E+01	2.34E-07	7.63E-02	5.62E-05	8.89E-02	2.19E-03	6.66E-04	4.62E-03	1.64E-03	1.65E-03	1.19E-02	2.62E-04	0.00E+00	2.98E-03	1.68E-02
16	B15	100	Passenger Car	796	0.00E+00	8.60E-06	9.30E-07	3.54E+01	5.99E-05	2.28E-01	1.91E-05	1.70E-03	2.59E-03	5.19E-04	1.86E-03	1.20E-03	1.23E-03	9.97E-05	1.81E-04	4.97E-08	6.30E-04	2.65E-04
16	B15	100	Passenger Truck	1332	0.00E+00	1.86E-05	1.98E-06	8.36E+01	1.22E-04	4.59E-01	3.96E-05	4.85E-03	4.55E-03	9.70E-04	3.81E-03	2.46E-03	2.52E-03	5.37E-04	4.22E-04	1.16E-07	1.28E-03	7.81E-04
16	B15	100	Single Unit Short Haul Truck	139	0.00E+00	1.87E-05	9.25E-07	2.54E+01	1.63E-05	5.88E-02	2.02E-05	1.01E-02	9.59E-04	2.79E-04	2.31E-03	5.73E-04	5.84E-04	2.56E-03	1.02E-04	4.18E-08	1.73E-03	1.89E-03
16	B15	100	Single Unit Long Haul Truck	6	0.00E+00	8.10E-07	3.94E-08	1.07E+00	6.76E-07	2.41E-03	8.75E-07	4.27E-04	4.33E-05	1.21E-05	1.01E-04	2.42E-05	2.46E-05	1.07E-04	4.32E-06	1.71E-09	7.63E-05	7.97E-05
16	B15	100	Combination Short Haul Truck	69	0.00E+00	2.36E-05	1.72E-06	2.48E+01	6.70E-08	2.30E-02	1.70E-05	2.51E-02	7.98E-04	2.84E-04	1.32E-03	5.05E-04	4.95E-04	3.73E-03	8.30E-05	0.00E+00	8.24E-04	4.74E-03
16	B15	100	Combination Long Haul Truck	63	0.00E+00	2.05E-05	1.40E-06	2.24E+01	7.76E-08	2.29E-02	1.53E-05	2.40E-02	7.40E-04	2.05E-04	1.34E-03	4.20E-04	4.20E-04	3.42E-03	7.52E-05	0.00E+00	9.24E-04	4.51E-03
16	B16	100	Passenger Car	1512	0.00E+00	1.63E-05	1.77E-06	6.72E+01	1.14E-04	4.32E-01	3.63E-05	3.23E-03	4.91E-03	9.87E-04	3.54E-03	2.28E-03	2.34E-03	1.89E-04	3.44E-04	9.45E-08	1.20E-03	5.04E-04
16	B16	100	Passenger Truck	2531	0.00E+00	3.53E-05	3.75E-06	1.59E+02	2.31E-04	8.72E-01	7.52E-05	9.21E-03	8.65E-03	1.84E-03	7.24E-03	4.68E-03	4.80E-03	1.02E-03	8.02E-04	2.20E-07	2.43E-03	1.48E-03
16	B16	100	Single Unit Short Haul Truck	145	0.00E+00	1.95E-05	9.63E-07	2.65E+01	1.70E-05	6.12E-02	2.11E-05	1.06E-02	9.99E-04	2.91E-04	2.41E-03	5.96E-04	6.08E-04	2.67E-03	1.06E-04	4.35E-08	1.80E-03	1.97E-03
16	B16	100	Single Unit Long Haul Truck	6	0.00E+00	8.44E-07	4.10E-08	1.12E+00	7.04E-07	2.51E-03	9.12E-07	4.44E-04	4.51E-05	1.26E-05	1.05E-04	2.52E-05	2.56E-05	1.12E-04	4.50E-06	1.78E-09	7.94E-05

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B20	100	Single Unit Long Haul Truck	15	0.00E+00	1.94E-06	9.42E-08	2.56E+00	1.61E-06	5.75E-03	2.09E-06	1.02E-03	1.04E-04	2.88E-05	2.41E-04	5.79E-05	5.87E-05	2.56E-04	1.03E-05	4.08E-09	1.82E-04	1.90E-04
16	B20	100	Combination Long Haul Truck	224	0.00E+00	7.35E-05	5.04E-06	8.03E+01	2.78E-07	8.22E-02	5.50E-05	8.59E-02	2.65E-03	7.35E-04	4.82E-03	1.51E-03	1.51E-03	1.23E-02	2.70E-04	0.00E+00	3.31E-03	1.62E-02
16	B21	100	Passenger Car	922	0.00E+00	9.96E-06	1.08E-06	4.10E+01	6.94E-05	2.64E-01	2.22E-05	1.97E-03	3.00E-03	6.02E-04	2.16E-03	1.39E-03	1.43E-03	1.15E-04	2.10E-04	5.76E-08	7.30E-04	3.07E-04
16	B21	100	Passenger Truck	1544	0.00E+00	2.15E-05	2.29E-06	9.69E+01	1.41E-04	5.32E-01	4.59E-05	5.62E-03	5.27E-03	1.12E-03	4.42E-03	2.85E-03	2.92E-03	6.22E-04	4.89E-04	1.34E-07	1.48E-03	9.05E-04
16	B21	100	Single Unit Short Haul Truck	196	0.00E+00	2.64E-05	1.30E-06	3.58E+01	2.30E-05	8.29E-02	2.85E-05	1.43E-02	1.35E-03	3.94E-04	3.26E-03	8.07E-04	8.24E-04	3.62E-03	1.44E-04	5.89E-08	2.44E-03	2.67E-03
16	B21	100	Single Unit Long Haul Truck	9	0.00E+00	1.14E-06	5.56E-08	1.51E+00	9.53E-07	3.39E-03	1.23E-06	6.01E-04	6.11E-05	1.70E-05	1.42E-04	3.42E-05	3.46E-05	1.51E-04	6.09E-06	2.41E-09	1.08E-04	1.12E-04
16	B21	100	Combination Short Haul Truck	169	0.00E+00	5.82E-05	4.24E-06	6.10E+01	1.65E-07	5.68E-02	4.19E-05	6.19E-02	1.97E-03	6.99E-04	3.25E-03	1.24E-03	1.22E-03	9.20E-03	2.05E-04	0.00E+00	2.03E-03	1.17E-02
16	B21	100	Combination Long Haul Truck	154	0.00E+00	5.05E-05	3.46E-06	5.52E+01	1.91E-07	5.65E-02	3.78E-05	5.90E-02	1.82E-03	5.05E-04	3.31E-03	1.04E-03	1.04E-03	8.43E-03	1.85E-04	0.00E+00	2.28E-03	1.11E-02
16	B22	100	Passenger Car	2427	0.00E+00	2.62E-05	2.84E-06	1.08E+02	1.83E-04	6.94E-01	5.83E-05	5.18E-03	7.89E-03	1.58E-03	5.68E-03	3.66E-03	3.75E-03	3.04E-04	5.52E-04	1.52E-07	1.92E-03	8.09E-04
16	B22	100	Passenger Truck	4064	0.00E+00	5.67E-05	6.03E-06	2.55E+02	3.71E-04	1.40E+00	1.21E-04	1.48E-02	1.39E-02	2.96E-03	1.16E-02	7.51E-03	7.70E-03	1.64E-03	1.29E-03	3.53E-07	3.89E-03	2.38E-03
16	B22	100	Single Unit Short Haul Truck	157	0.00E+00	2.11E-05	1.04E-06	2.87E+01	1.84E-05	6.64E-02	2.28E-05	1.14E-02	1.08E-03	3.15E-04	2.61E-03	6.46E-04	6.59E-04	2.90E-03	1.15E-04	4.72E-08	1.95E-03	2.14E-03
16	B22	100	Single Unit Long Haul Truck	7	0.00E+00	9.15E-07	4.45E-08	1.21E+00	7.63E-07	2.72E-03	9.88E-07	4.82E-04	4.89E-05	1.36E-05	1.14E-04	2.74E-05	2.77E-05	1.21E-04	4.87E-06	1.93E-09	8.61E-05	9.00E-05
16	B22	100	Combination Short Haul Truck	155	0.00E+00	5.33E-05	3.88E-06	5.59E+01	1.51E-07	5.20E-02	3.83E-05	5.67E-02	1.80E-03	6.40E-04	2.98E-03	1.14E-03	1.12E-03	8.42E-03	1.87E-04	0.00E+00	1.86E-03	1.07E-02
16	B22	100	Combination Long Haul Truck	141	0.00E+00	4.62E-05	3.17E-06	5.06E+01	1.75E-07	5.17E-02	3.46E-05	5.41E-02	1.67E-03	4.62E-04	3.03E-03	9.48E-04	9.48E-04	7.72E-03	1.70E-04	0.00E+00	2.09E-03	1.02E-02
16	B23	100	Passenger Car	936	0.00E+00	1.01E-05	1.09E-06	4.16E+01	7.04E-05	2.68E-01	2.25E-05	2.00E-03	3.04E-03	6.11E-04	2.19E-03	1.41E-03	1.45E-03	1.17E-04	2.13E-04	5.85E-08	7.41E-04	3.12E-04
16	B23	100	Passenger Truck	1567	0.00E+00	2.19E-05	2.32E-06	9.84E+01	1.43E-04	5.40E-01	4.66E-05	5.70E-03	5.35E-03	1.14E-03	4.48E-03	2.89E-03	2.97E-03	6.31E-04	4.96E-04	1.36E-07	1.50E-03	9.18E-04
16	B23	100	Single Unit Short Haul Truck	196	0.00E+00	2.64E-05	1.30E-06	3.58E+01	2.30E-05	8.29E-02	2.85E-05	1.43E-02	1.35E-03	3.94E-04	3.26E-03	8.07E-04	8.24E-04	3.62E-03	1.44E-04	5.89E-08	2.44E-03	2.67E-03
16	B23	100	Single Unit Long Haul Truck	9	0.00E+00	1.14E-06	5.56E-08	1.51E+00	9.53E-07	3.39E-03	1.23E-06	6.01E-04	6.11E-05	1.70E-05	1.42E-04	3.42E-05	3.46E-05	1.51E-04	6.09E-06	2.41E-09	1.08E-04	1.12E-04
16	B23	100	Combination Short Haul Truck	169	0.00E+00	5.83E-05	4.24E-06	6.11E+01	1.65E-07	5.68E-02	4.19E-05	6.20E-02	1.97E-03	7.00E-04	3.26E-03	1.25E-03	1.22E-03	9.21E-03	2.05E-04	0.00E+00	2.03E-03	1.17E-02
16	B23	100	Combination Long Haul Truck	154	0.00E+00	5.06E-05	3.47E-06	5.53E+01	1.92E-07	5.66E-02	3.79E-05	5.91E-02	1.83E-03	5.06E-04	3.32E-03	1.04E-03	1.04E-03	8.44E-03	1.86E-04	0.00E+00	2.28E-03	1.11E-02
16	B24	100	Passenger Car	3524	0.00E+00	3.81E-05	4.12E-06	1.57E+02	2.65E-04	1.01E+00	8.47E-05	7.53E-03	1.15E-02	2.30E-03	8.24E-03	5.32E-03	5.45E-03	4.41E-04	8.02E-04	2.20E-07	2.79E-03	1.17E-03
16	B24	100	Passenger Truck	5901	0.00E+00	8.23E-05	8.75E-06	3.70E+02	5.39E-04	2.03E+00	1.75E-04	2.15E-02	2.02E-02	4.29E-03	1.69E-02	1.09E-02	1.12E-02	2.38E-03	1.87E-03	5.13E-07	5.66E-03	3.46E-03
16	B24	100	Single Unit Short Haul Truck	374	0.00E+00	5.03E-05	2.48E-06	6.82E+01	4.38E-05	1.58E-01	5.43E-05	2.72E-02	2.58E-03	7.50E-04	6.21E-03	1.54E-03	1.57E-03	6.89E-03	2.74E-04	1.12E-07	4.64E-03	5.08E-03
16	B24	100	Single Unit Long Haul Truck	16	0.00E+00	2.18E-06	1.06E-07	2.88E+00	1.81E-06	6.46E-03	2.35E-06	1.15E-03	1.16E-04	3.24E-05	2.71E-04	6.51E-05	6.60E-05	2.88E-04	1.16E-05	4.58E-09	2.05E-04	2.14E-04
16	B24	100	Combination Short Haul Truck	256	0.00E+00	8.82E-05	6.42E-06	9.25E+01	2.50E-07	8.61E-02	6.34E-05	9.39E-02	2.98E-03	1.06E-03	4.93E-03	1.88E-03	1.85E-03	1.39E-02	3.10E-04	0.00E+00	3.08E-03	1.77E-02
16	B24	100	Combination Long Haul Truck	233	0.00E+00	7.65E-05	5.25E-06	8.37E+01	2.90E-07	8.56E-02	5.73E-05	8.95E-02	2.76E-03	7.65E-04	5.02E-03	1.57E-03	1.57E-03	1.28E-02	2.81E-04	0.00E+00	3.45E-03	1.69E-02
52	C53	60	Passenger Car	95	0.00E+00	1.29E-06	1.39E-07	4.70E+00	8.96E-06	3.21E-02	2.86E-06	1.86E-04	9.33E-04	1.44E-04	2.79E-04	1.80E-04	1.84E-04	1.98E-05	2.38E-05	6.36E-09	9.44E-05	2.92E-05
52	C53	60	Passenger Truck	158	0.00E+00	2.83E-06	2.99E-07	1.07E+01	1.76E-05	5.72E-02	5.81E-06	5.99E-04	1.66E-03	2.57E-04	5.55E-04	3.60E-04	3.69E-04	8.23E-05	5.37E-05	1.35E-08	1.84E-04	9.90E-05
52	C53	60	Single Unit Short Haul Truck	11	0.00E+00	3.33E-06	1.66E-07	2.11E+00	2.74E-06	4.08E-03	3.55E-06	1.59E-03	2.69E-04	4.87E-05	4.02E-04	9.96E-05	1.01E-04	2.12E-04	8.54E-06	3.52E-09	3.02E-04	2.97E-04
52	C53	60	Combination Short Haul Truck	7	0.00E+00	3.95E-06	2.76E-07	2.57E+00	1.40E-08	3.45E-03	2.93E-06	4.29E-03	3.67E-04	7.27E-05	2.52E-04	8.20E-05	8.20E-05	3.88E-04	8.59E-06	0.00E+00	1.69E-04	8.09E-04
52	C53	60	Combination Long Haul Truck	6	0.00E+00	3.54E-06	2.31E-07	2.41E+00	1.60E-08	3.72E-03	2.74E-06	4.25E-03	3.69E-04	6.27E-05	2.58E-04	7.04E-05	7.12E-05	3.67E-04	8.06E-06	0.00E+00	1.87E-04	8.02E-04
53	C54	70	Passenger Car	114	0.00E+00	1.43E-06	1.54E-07	5.49E+00	9.96E-06	3.55E-02	3.17E-06	2.33E-04	8.72E-04	1.40E-04	3.09E-04	1.99E-04	2.05E-04	2.05E-05	2.78E-05	7.58E-09	1.05E-04	3.65E-05
53	C54	70	Passenger Truck	191	0.00E+00	3.11E-06	3.29E-07	1.26E+01	1.97E-05	6.53E-02	6.48E-06	7.12E-04	1.57E-03	2.55E-04	6.16E-04	4.01E-04	4.12E-04	9.24E-05	6.37E-05	1.67E-08	2.06E-04	1.17E-04
53	C54	70	Single Unit Short Haul Truck	25	0.00E+00	5.97E-06	2.99E-07	4.68E+00	4.88E-06	9.39E-03	6.36E-06	2.95E-03	4.20E-04	8.40E-05	7.27E-04	1.79E-04	1.81E-04	4.69E-04	1.88E-05	7.62E-09	5.43E-04	5.52E-04
53	C54	70	Single Unit Long Haul Truck	1	0.00E+00	2.60E-07	1.30E-08	1.99E-01	2.11E-07	3.92E-04	2.77E-07	1.27E-04	1.92E-05	3.74E-06	3.18E-05	7.72E-06	7.85E-06	1.98E-05	8.00E-07	3.21E-10	2.38E-05	2.38E-05
53	C54	70	Combination Short Haul Truck	12	0.00E+00	6.43E-06	4.57E-07	4.68E+00	2.09E-08	5.54E-03	4.71E-06	6.77E-03	4.88E-04	1.07E-04	3.92E-04	1.35E-04	1.35E-04	7.05E-04	1.56E-05	0.00E+00	2.57E-04	1.28E-03
53	C54	70	Combination Long Haul Truck	11	0.00E+00	5.83E-06	3.89E-07	4.36E+00	2.41E-08	5.86E-03	4.42E-06	6.68E-03	4.86E-04	8.87E-05	4.04E-04	1.18E-04	1.19E-04	6.65E-04	1.46E-05	0.00E+00	2.87E-04	1.26E-03
53	C57	70	Passenger Car	195	0.00E+00	2.44E-06	2.64E-07	9.36E+00	1.70E-05	6.06E-02	5.41E-06	3.97E-04	1.49E-03	2.40E-04	5.28E-04	3.40E-04	3.49E-04	3.49E-05	4.75E-05	1.29E-08	1.79E-04	6.22E-05
53	C57	70	Passenger Truck	326	0.00E+00	5.31E-06	5.62E-07	2.16E+01	3.36E-05	1.11E-01	1.11E-05	1.21E-03	2.67E-03	4.36E-04	1.05E-03	6.85E-04	7.02E-04	1.58E-04	1.09E-04	2.85E-08	3.52E-04	1.99E-04
53	C57	70	Single Unit Short Haul Truck	28	0.00E+00	6.63E-06	3.32E-07	5.19E+00	5.42E-06	1.04E-02	7.06E-06	3.27E-03	4.66E-04	9.32E-05	8.07E-04	1.98E-04	2.01E-04	5.20E-04	2.09E-05	8.46E-09	6.02E-04	6.13E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.44E-08	2.20E-01	2.34E-07	4.35E-04	3.08E-07	1.41E-04	2.13E-05	4.15E-06	3.52E-05	8.57E-06	8.71E-06	2.20E-05	8.88E-07	3.56E-10	2.64E-05	2.64E-05
53	C57	70	Combination Short Haul Truck	13	0.00E+00	6.50E-06	4.62E-07	4.73E+00	2.11E-08	5.59E-03	4.76E-06	6.85E-03	4.93E-04	1.08E-04	3.96E-04	1.37E-04	1.37E-04	7.12E-04	1.58E-05	0.00E+00	2.60E-04	1.29E-03
53	C57	70	Combination Long Haul Truck	11	0.00E+00	5.89E-06	3.93E-07	4.40E+00	2.43E-08	5.93E-03	4.47E-06	6.75E-03	4.91E-04	8.97E-05	4.09E-04	1.19E-04	1.20E-04	6.72E-04	1.47E-05	0.00E+00	2.90E-04	1.27E-03
50	C58	40	Passenger Car	53	0.00E+00	8.82E-07	9.54E-08	3.05E+00	6.14E-06	2.18E-02	1.96E-06	9.60E-05	9.19E-04	1.31E-04	1.90E-04	1.23E-04	1.26E-04	1.67E-05	1.53E-05	3.72E-09	6.46E-05	1.50E-05
50	C58	40	Passenger Truck	89	0.00E+00	2.02E-06	2.12E-07	6.79E+00	1.21E-05	3.78E-02	4.05E-06	3.63E-04	1.63E-03	2.32E-04	3.80E-04	2.49E-04	2.54E-04	5.88E-05	3.38E-05	7.24E-09	1.26E-04	6.15E-05
50	C58	40	Single Unit Short Haul Truck	2	0.00E+00	7.06E-07	3.70E-08	3.38E-01	6.13E-07	5.82E-04	7.50E-07	3.45E-04	6.44E-05	1.07E-05	8.34E-05	2.20E-05	2.24E-05	3.42E-05	1.37E-06	5.78E-10	6.09E-05	6.49E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	6.24E-07	4.32E-08	3.17E-01	2.25E-09	5.44E-04	4.64E-07	6.96E-04	7.26E-05	1.31E-05	4.05E-05	1.29E-05	1.30E-05	4.77E-05	1.06E-06	0.00E+00	2.74E-05	1.31E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	5.69E-07	3.71E-08	3.01E-01	2.55E-09	6.05E-04	4.37E-07	6.99E-04	7.30E-05	1.16E-05	4.16E-05	1.13E-05	1.15E-05	4.60E-05	1.01E-06	0.00E+00	3.01E-05	1.32E-04
53	C59	70	Passenger Car	46	0.00E+00	5.74E-07	6.20E-08	2.20E+00	4.00E-06	1.43E-02	1.27E-06	9.34E-05	3.50E-04	5.64E-05	1.24E-04	8.01E-05	8.21E-05	8.21E-06	1.12E-05	3.04E-09	4.20E-05	1.46E-05
53	C59	70	Passenger Truck	77	0.00E+00	1.25E-06	1.32E-07	5.07E+00	7.91E-06	2.62E-02	2.60E-06	2.86E-04	6.29E-04	1.03E-04	2.47E-04	1.61E-04	1.65E-04	3.71E-05	2.56E-05	6.69E-09	8.27E-05	4.69E-05
53	C59	70	Single Unit Short Haul Truck	3	0.00E+00	7.21E-07	3.61E-08	5.65E-01	5.90E-07	1.13E-03	7.68E-07	3.56E-04	5.07E-05	1.01E-05	8.78E-05	2.16E-05	2.19E-05	5.66E-05	2.28E-06	9.21E-10	6.56E-05	6.67E-05
53	C59	70	Combination Short Haul Truck	1	0.00E+00	4.59E-07	3.27E-08	3.34E-01	1.49E-09	3.96E-04	3.37E-07	4.84E-04	3.49E-05	7.64E-06	2.80E-05	9.68E-06	9.66E-06	5.04E-05	1.12E-06	0.00E+00	1.84E-05	9.12E-05
53	C59	70	Combination Long Haul Truck	1	0.00E+00	4.17E-07	2.78E-08	3.11E-01	1.72E-09	4.19E-04	3.16E-07	4.77E-04	3.47E-05	6.34E-06	2.89E-05	8.40E-06	8.49E-06	4.75E-05	1.04E-06	0.00E+00	2.05E-05	8.98E-05
52	C60	60	Passenger Car	174	0.00E+00	2.37E-06	2.57E-07	8.67E+00	1.65E-05	5.91E-02	5.28E-06	3.42E-04	1.72E-03	2.65E-04	5.14E-04	3.31E-04	3.40E-04	3.64E-05	4.38E-05	1.17E-08	1.74E-04	5.38E-05
52	C60	60	Passenger Truck	292	0.00E+00	5.22E-06	5.51E-07	1.98E+01	3.25E-05	1.05E-01	1.07E-05	1.10E-03	3.07E-03	4.75E-04	1.02E-03	6.64E-04	6.81E-04	1.52E-04	9.90E-05	2.48E-08	3.39E-04	1.83E-04
52	C60	60	Single Unit Short Haul Truck	27	0.00E+00	7.84E-06	3.91E-07	4.98E+00	6.44E-06	9.61E-03	8.35E-06	3.73E-03	6.33E-04	1.15E-04	9.46E-04	2.34E-04	2.38E-04	4.98E-04	2.01E-05	8.28E-09	7.11E-04	6.99E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	3.42E-07	1.70E-08	2.13E-01	2.80E-07	4.08E-04	3.65E-07	1.61E-04	2.84E-05	5.09E-06	4.17E-05	1.02E-05	1.04E-05	2.12E-05	8.58E-07	3.52E-10	3.12E-05	3.03E-05
52	C60	60	Combination Short Haul Truck	17	0.00E+00	9.94E-06	6.94E-07	6.47E+00	3.52E-08	8.67E-03	7.36E-06	1.08E-02	9.24E-04	1.83E-04	6.33E-04	2.06E-04	2.06E-04	9.75E-04	2.16E-05	0.00E+00	4.25E-04	2.03E-03
52	C60	60	Combination Long Haul Truck	15	0.00E+00	8.89E-06	5.81E-07	6.07E+00	4.03E-08	9.36E-03	6.88E-06	1.07E-02	9.28E-04	1.58E-04	6.50E-04	1.77E-04	1.79E-04	9.23E-04	2.03E-05	0.00E+00	4.70E-04	2.02E-03
53	C61	70	Passenger Car	231	0.00E+00	2.90E-06	3.13E-07	1.11E+01	2.02E-05	7.20E-02	6.43E-06	4.72E-04	1.77E-03	2.85E-04	6.27E-04	4.04E-04	4.15E-04	4.15E-05	5.64E-05	1.54E-08	2.12E-04	7.39E-05
53	C61	70	Passenger Truck	388	0.00E+00	6.31E-06	6.67E-07	2.56E+01	3.99E-05	1.32E-01	1.31E-05	1.44E-03	3.18E-03	5.18E-04	1.25E-03	8.14E-04	8.34E-04	1.87E-04	1.29E-04	3.38E-08	4.18E-04	2.37E-04
53	C61	70	Single Unit Short Haul Truck	13	0.00E+00	3.17E-06	1.59E-07	2.48E+00	2.59E-06	4.98E-03	3.38E-06	1.57E-03	2.23E-04	4.46E-05	3.86E-04	9.48E-05	9.63E-05	2.49E-04	1.00E-05	4.05E-09	2.88E-04	2.93E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	1.38E-07	6.88E-09	1.05E-01	1.12E-07	2.08E-04	1.47E-07	6.73E-05	1.02E-05	1.98E-06	1.69E-05	4.10E-06	4.17E-06	1.05E-05	4.25E-07	1.70E-10	1.26E-05	1.26E-05
53	C61	70	Combination Short Haul Truck	4	0.00E+00	2.08E-06	1.48E-07	1.51E+00	6.76E-09	1.79E-03	1.52E-06	2.19E-03	1.58E-04	3.46E-05	1.27E-04	4.38E-05	4.37E-05	2.28E-04	5.05E-06	0.00E+00	8.31E-05	4.13E-04
53	C61	70	Combination Long Haul Truck	4	0.00E+00	1.89E-06	1.26E-07	1.41E+00	7.79E-09	1.90E-03	1.43E-06	2.16E-03	1.57E-04	2.87E-05	1.31E-04	3.80E-05	3.84E-05	2.15E-04	4.71E-06	0.00E+00	9.27E-05	4.07E-04
50	C62	40	Passenger Car	194	0.00E+00	3.22E-06	3.49E-07	1.12E+01	2.24E-05	7.98E-02	7.17E-06	3.51E-04	3.36E-03	4.79E-04	6.95E-04	4.50E-04	4.62E-04	6.09E-05	5.61E-05	1.36E-08	2.36E-04	5.50E-05
50	C62	40	Passenger Truck	325	0.00E+00	7.37E-06	7.74E-07	2.48E+01	4.42E-05	1.38E-01	1.48E-05	1.33E-03	5.96E-03	8.48E-04	1.39E-03	9.12E-04	9.30E-04	2.15E-04	1.24E-04	2.64E-08	4.59E-04	2.25E-04
50	C62	40	Single Unit Short Haul Truck	15	0.00E+00	6.56E-06	3.44E-07	3.15E+00	5.70E-06	5.42E-03	6.97E-06	3.21E-03	5.99E-04	9.93E-05	7.75E-04	2.05E-04	2.08E-04	3.18E-04	1.27E-05	5.37E-09	5.66E-04	6.03E-04
50	C62	40	Single Unit Long Haul Truck	1	0.00E+00	2.88E-07	1.50E-08	1.36E-01	2.50E-07	2.35E-04	3.06E-07	1.40E-04	2.68E-05	4.42E-06	3.40E-05	8.96E-06	9.08E-06	1.37E-05	5.48E-07	2.33E-10	2.50E-05	2.62E-05
50	C62	40	Combination Short Haul Truck	6	0.00E+00	4.98E-06	3.45E-07	2.53E+00	1.79E-08	4.34E-03	3.70E-06	5.56E-03	5.79E-04	1.04E-04	3.23E-04	1.03E-04	1.04E-04	3.81E-04	8.46E-06	0.00E+00	2.18E-04	1.05E-03
50	C62	40	Combination Long Haul Truck	5	0.00E+00	4.54E-06	2.96E-07	2.41E+00	2.04E-08	4.82E-03	3.49E-06	5.58E-03	5.82E-04	9.26E-05	3.32E-04	9.02E-05	9.19E-05	3.67E-04	8.04E-06	0.00E+00	2.41E-04	1.05E-03
52	C63	60	Passenger Car	305	0.00E+00	4.15E-06	4.49E-07	1.52E+01	2.89E-05	1.03E-01	9.23E-06	5.99E-04	3.01E-03	4.62E-04	8.98E-04	5.78E-04	5.94E-04	6.37E-05	7.66E-05	2.05E-08	3.04E-04	9.40E-05
52	C63	60	Passenger Truck	511	0.00E+00	9.12E-06	9.63E-07	3.46E+01	5.69E-05	1.84E-01	1.87E-05	1.93E-03	5.36E-03	8.30E-04	1.79E-03	1.16E-03	1.19E-03	2.65E-04	1.73E-04	4.34E-08	5.93E-04	3.19E-04
52	C63	60	Single Unit Short Haul Truck	107	0.00E+00	3.15E-05	1.57E-06	2.00E+01	2.59E-05	3.86E-02	3.36E-05	1.50E-02	2.54E-03	4.61E-04	3.80E-03	9.42E-04	9.57E-04	2.00E-03	8.08E-05	3.33E-08	2.86E-03	2.81E-03
52	C63	60	Single Unit Long Haul Truck	5	0.00E+00	1.38E-06	6.83E-08	8.54E-01	1.12E-06	1.64E-03	1.47E-06	6.49E-04	1.14E-04	2.04E-05	1.68E-04	4.10E-05	4.17E-05	8.53E-05	3.45E-06	1.42E-09	1.26E-04	1.22E-04
52	C63	60	Combination Short Haul Truck	58	0.00E+00	3.43E-05	2.40E-06	2.23E+01	1.21E-07	3.00E-02	2.54E-05	3.72E-02	3.19E-03	6.32E-04	2.19E-03	7.13E-04	7.13E-04	3.37E-03	7.47E-05	0.00E+00	1.47E-03	7.03E-03
52	C63	60	Combination Long Haul Truck	53	0.00E+00	3.07E-05	2.01E-06	2.10E+01	1.39E-07	3.23E-02	2.38E-05	3.69E-02	3.20E-03	5.45E-04	2.24E-03	6.11E-04	6.19E-04	3.19E-03	7.00E-05	0.00E+00	1.62E-03	6.97E-03
53	C64	70	Passenger Car	419	0.00E+00	5.25E-06	5.67E-07	2.01E+01	3.66E-05	1.30E-01	1.16E-05	8.55E-04	3.20E-03	5.16E-04	1.14E-03	7.32E-04	7.51E-04	7.51E-05	1.02E-04	2.78E-08	3.84E-04	1.34E-04
53	C64	70	Passenger Truck	702	0.00E+00	1.14E-05	1.21E-06	4.64E+01	7.24E-05	2.40E-01	2.38E-05	2.61E-03	5.75E-03	9.38E-04	2.26E-03	1.47E-03	1.51E-03	3.39E-04	2.34E-04	6.12E-08	7.57E-04	4.29E-04
53	C64	70	Single Unit Short Haul Truck	90	0.00E+00	2.11E-05	1.06E-06	1.66E+01	1.73E-05	3.32E-02	2.25E-05	1.04E-02	1.49E-03	2.97E-04	2.57E-03	6.32E-04	6.42E-04	1.66E-03	6.67E-05	2.70E-08	1.92E-03	1.95E-03
53	C64	70	Single Unit Long Haul Truck	4	0.00E+00	9.21E-07	4.58E-08	7.03E-01	7.46E-07	1.39E-03	9.81E-07	4.49E-04	6.79E-05	1.32E-05	1.12E-04	2.73E-05	2.78E-05	7.02E-05	2.83E-06	1.14E-09	8.43E-05	8.41E-05
53	C64	70	Combination Short Haul Truck	37	0.00E+00	1.91E-05	1.36E-06	1.39E+01	6.21E-08	1.64E-02	1.40E-05	2.01E-02	1.45E-03	3.18E-04	1.16E-03	4.02E-04	4.01E-04	2.09E-03	4.64E-05	0.00E+00	7.63E-04	3.79E-03
53	C64	70	Combination

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
54	C69	80	Passenger Truck	270	0.00E+00	4.10E-06	4.35E-07	1.74E+01	2.63E-05	9.08E-02	8.63E-06	9.90E-04	1.68E-03	2.93E-04	8.25E-04	5.35E-04	5.49E-04	1.22E-04	8.78E-05	2.33E-08	2.75E-04	1.61E-04
54	C69	80	Single Unit Short Haul Truck	86	0.00E+00	1.61E-05	7.99E-07	1.58E+01	1.29E-05	3.17E-02	1.71E-05	8.25E-03	1.01E-03	2.29E-04	1.96E-03	4.77E-04	4.84E-04	1.58E-03	6.36E-05	2.53E-08	1.47E-03	1.54E-03
54	C69	80	Single Unit Long Haul Truck	4	0.00E+00	6.99E-07	3.45E-08	6.68E-01	5.53E-07	1.31E-03	7.44E-07	3.53E-04	4.62E-05	1.01E-05	8.54E-05	2.05E-05	2.08E-05	6.67E-05	2.69E-06	1.05E-09	6.46E-05	6.60E-05
54	C69	80	Combination Short Haul Truck	31	0.00E+00	1.37E-05	9.77E-07	1.13E+01	4.31E-08	1.21E-02	1.00E-05	1.41E-02	8.28E-04	2.04E-04	8.14E-04	2.89E-04	2.87E-04	1.70E-03	3.79E-05	0.00E+00	5.28E-04	2.64E-03
54	C69	80	Combination Long Haul Truck	28	0.00E+00	1.22E-05	8.20E-07	1.05E+01	4.99E-08	1.25E-02	9.30E-06	1.36E-02	8.12E-04	1.63E-04	8.43E-04	2.48E-04	2.50E-04	1.60E-03	3.50E-05	0.00E+00	5.91E-04	2.57E-03
55	C70	90	Passenger Car	355	0.00E+00	3.96E-06	4.28E-07	1.60E+01	2.75E-05	1.02E-01	8.81E-06	7.34E-04	1.53E-03	2.79E-04	8.57E-04	5.53E-04	5.67E-04	4.95E-05	8.13E-05	2.17E-08	2.90E-04	1.15E-04
55	C70	90	Passenger Truck	595	0.00E+00	8.58E-06	9.13E-07	3.74E+01	5.56E-05	2.00E-01	1.82E-05	2.13E-03	2.74E-03	5.17E-04	1.74E-03	1.13E-03	1.16E-03	2.50E-04	1.88E-04	4.99E-08	5.82E-04	3.47E-04
55	C70	90	Single Unit Short Haul Truck	174	0.00E+00	2.61E-05	1.28E-06	3.19E+01	2.07E-05	6.41E-02	2.78E-05	1.40E-02	1.45E-03	3.81E-04	3.20E-03	7.67E-04	7.81E-04	3.20E-03	1.28E-04	5.01E-08	2.42E-03	2.61E-03
55	C70	90	Single Unit Long Haul Truck	8	0.00E+00	1.14E-06	5.51E-08	1.35E+00	8.74E-07	2.66E-03	1.21E-06	5.93E-04	6.57E-05	1.66E-05	1.40E-04	3.28E-05	3.34E-05	1.34E-04	5.42E-06	2.08E-09	1.06E-04	1.11E-04
55	C70	90	Combination Short Haul Truck	91	0.00E+00	3.22E-05	2.28E-06	3.16E+01	1.04E-07	3.11E-02	2.35E-05	3.32E-02	1.45E-03	4.28E-04	1.90E-03	6.76E-04	6.63E-04	4.79E-03	1.06E-04	0.00E+00	1.24E-03	6.25E-03
55	C70	90	Combination Long Haul Truck	83	0.00E+00	2.77E-05	1.83E-06	2.89E+01	1.20E-07	3.14E-02	2.12E-05	3.14E-02	1.39E-03	3.28E-04	1.94E-03	5.56E-04	5.54E-04	4.41E-03	9.70E-05	0.00E+00	1.39E-03	5.91E-03
53	C71	70	Passenger Car	245	0.00E+00	3.07E-06	3.32E-07	1.18E+01	2.14E-05	7.63E-02	6.81E-06	5.00E-04	1.87E-03	3.02E-04	6.64E-04	4.28E-04	4.39E-04	4.39E-05	5.98E-05	1.63E-08	2.25E-04	7.83E-05
53	C71	70	Passenger Truck	411	0.00E+00	6.68E-06	7.07E-07	2.71E+01	4.23E-05	1.40E-01	1.39E-05	1.53E-03	3.37E-03	5.49E-04	1.32E-03	8.62E-04	8.84E-04	1.98E-04	1.37E-04	3.58E-08	4.43E-04	2.51E-04
53	C71	70	Single Unit Short Haul Truck	51	0.00E+00	1.20E-05	6.00E-07	9.39E+00	9.80E-06	1.88E-02	1.28E-05	5.92E-03	8.42E-04	1.68E-04	1.46E-03	3.58E-04	3.64E-04	9.40E-04	3.78E-05	1.53E-08	1.09E-03	1.11E-03
53	C71	70	Single Unit Long Haul Truck	2	0.00E+00	5.22E-07	2.60E-08	3.98E-01	4.23E-07	7.87E-04	5.56E-07	2.54E-04	3.85E-05	7.49E-06	6.37E-05	1.55E-05	1.57E-05	3.98E-05	1.60E-06	6.43E-10	4.78E-05	4.76E-05
53	C71	70	Combination Short Haul Truck	25	0.00E+00	1.32E-05	9.41E-07	9.62E+00	4.30E-08	1.14E-02	9.69E-06	1.39E-02	1.00E-03	2.20E-04	8.06E-04	2.79E-04	2.78E-04	1.45E-03	3.21E-05	0.00E+00	5.28E-04	2.62E-03
53	C71	70	Combination Long Haul Truck	23	0.00E+00	1.20E-05	8.00E-07	8.97E+00	4.95E-08	1.21E-02	9.09E-06	1.37E-02	1.00E-03	1.83E-04	8.32E-04	2.42E-04	2.44E-04	1.37E-03	3.00E-05	0.00E+00	5.90E-04	2.59E-03
50	C72	40	Passenger Car	131	0.00E+00	2.17E-06	2.35E-07	7.50E+00	1.51E-05	5.37E-02	4.82E-06	2.36E-04	2.26E-03	3.22E-04	4.68E-04	3.03E-04	3.11E-04	4.10E-05	3.77E-05	9.14E-09	1.59E-04	3.70E-05
50	C72	40	Passenger Truck	219	0.00E+00	4.96E-06	5.20E-07	1.67E+01	2.98E-05	9.29E-02	9.96E-06	8.93E-04	4.01E-03	5.70E-04	9.35E-04	6.13E-04	6.25E-04	1.45E-04	8.32E-05	1.78E-08	3.09E-04	1.51E-04
50	C72	40	Single Unit Short Haul Truck	19	0.00E+00	8.33E-06	4.36E-07	3.99E+00	7.24E-06	6.87E-03	8.85E-06	4.08E-03	7.60E-04	1.26E-04	9.84E-04	2.60E-04	2.64E-04	4.03E-04	1.61E-05	6.82E-09	7.18E-04	7.65E-04
50	C72	40	Single Unit Long Haul Truck	1	0.00E+00	3.65E-07	1.90E-08	1.72E-01	3.17E-07	2.98E-04	3.88E-07	1.77E-04	3.40E-05	5.60E-06	4.32E-05	1.14E-05	1.15E-05	1.74E-05	6.96E-07	2.96E-10	3.17E-05	3.33E-05
50	C72	40	Combination Short Haul Truck	6	0.00E+00	5.31E-06	3.68E-07	2.70E+00	1.91E-08	4.63E-03	3.95E-06	5.93E-03	6.18E-04	1.11E-04	3.45E-04	1.10E-04	1.11E-04	4.06E-04	9.03E-06	0.00E+00	2.33E-04	1.12E-03
50	C72	40	Combination Long Haul Truck	5	0.00E+00	4.84E-06	3.16E-07	2.57E+00	2.17E-08	5.15E-03	3.72E-06	5.95E-03	6.21E-04	9.89E-05	3.54E-04	9.63E-05	9.81E-05	3.92E-04	8.58E-06	0.00E+00	2.57E-04	1.12E-03
51	C73	50	Passenger Car	69	0.00E+00	1.04E-06	1.12E-07	3.57E+00	7.23E-06	2.57E-02	2.31E-06	1.28E-04	8.98E-04	1.33E-04	2.25E-04	1.45E-04	1.49E-04	1.72E-05	1.80E-05	4.69E-09	7.61E-05	2.00E-05
51	C73	50	Passenger Truck	115	0.00E+00	2.31E-06	2.43E-07	8.02E+00	1.41E-05	4.44E-02	4.69E-06	4.41E-04	1.59E-03	2.34E-04	4.44E-04	2.90E-04	2.97E-04	6.55E-05	3.99E-05	9.45E-09	1.47E-04	7.38E-05
51	C73	50	Single Unit Short Haul Truck	22	0.00E+00	8.05E-06	4.38E-07	4.58E+00	6.90E-06	8.12E-03	8.48E-06	4.06E-03	7.26E-04	1.27E-04	9.28E-04	2.53E-04	2.56E-04	4.65E-04	1.84E-05	7.75E-09	6.71E-04	7.63E-04
51	C73	50	Single Unit Long Haul Truck	1	0.00E+00	3.50E-07	1.90E-08	1.97E-01	2.99E-07	3.47E-04	3.69E-07	1.76E-04	3.28E-05	5.68E-06	4.01E-05	1.10E-05	1.12E-05	2.00E-05	7.91E-07	3.34E-10	2.91E-05	3.31E-05
51	C73	50	Combination Short Haul Truck	7	0.00E+00	5.30E-06	3.79E-07	3.03E+00	1.68E-08	4.52E-03	3.89E-06	5.90E-03	5.13E-04	1.01E-04	3.26E-04	1.12E-04	1.13E-04	4.56E-04	1.01E-05	0.00E+00	2.13E-04	1.11E-03
51	C73	50	Combination Long Haul Truck	6	0.00E+00	4.85E-06	3.28E-07	2.85E+00	1.92E-08	4.98E-03	3.67E-06	5.90E-03	5.13E-04	8.66E-05	3.35E-04	9.90E-05	1.01E-04	4.37E-04	9.55E-06	0.00E+00	2.34E-04	1.11E-03
52	C74	60	Passenger Car	736	0.00E+00	1.00E-05	1.08E-06	3.66E+01	6.97E-05	2.50E-01	2.23E-05	1.45E-03	7.26E-03	1.12E-03	2.17E-03	1.40E-03	1.43E-03	1.54E-04	1.85E-04	4.95E-08	7.34E-04	2.27E-04
52	C74	60	Passenger Truck	1233	0.00E+00	2.20E-05	2.33E-06	8.36E+01	1.37E-04	4.45E-01	4.52E-05	4.66E-03	1.29E-02	2.00E-03	4.32E-03	2.81E-03	2.87E-03	6.40E-04	4.18E-04	1.05E-07	1.43E-03	7.71E-04
52	C74	60	Single Unit Short Haul Truck	166	0.00E+00	4.89E-05	2.44E-06	3.11E+01	4.02E-05	6.00E-02	5.22E-05	2.33E-02	3.95E-03	7.16E-04	5.91E-03	1.46E-03	1.49E-03	3.11E-03	1.26E-04	5.17E-08	4.44E-03	4.37E-03
52	C74	60	Single Unit Long Haul Truck	7	0.00E+00	2.14E-06	1.06E-07	1.33E+00	1.75E-06	2.55E-03	2.28E-06	1.01E-03	1.78E-04	3.18E-05	2.61E-04	6.37E-05	6.48E-05	1.33E-04	5.36E-06	2.20E-09	1.95E-04	1.89E-04
52	C74	60	Combination Short Haul Truck	74	0.00E+00	4.33E-05	3.02E-06	2.82E+01	1.53E-07	3.78E-02	3.21E-05	4.70E-02	4.03E-03	7.97E-04	2.76E-03	8.99E-04	8.99E-04	4.25E-03	9.42E-05	0.00E+00	1.85E-03	8.87E-03
52	C74	60	Combination Long Haul Truck	67	0.00E+00	3.88E-05	2.53E-06	2.65E+01	1.76E-07	4.08E-02	3.00E-05	4.66E-02	4.04E-03	6.88E-04	2.83E-03	7.72E-04	7.81E-04	4.03E-03	8.83E-05	0.00E+00	2.05E-03	8.80E-03
53	C81	70	Passenger Car	344	0.00E+00	4.31E-06	4.66E-07	1.65E+01	3.00E-05	1.07E-01	9.56E-06	7.02E-04	2.63E-03	4.24E-04	9.32E-04	6.01E-04	6.17E-04	6.17E-05	8.39E-05	2.28E-08	3.15E-04	1.10E-04
53	C81	70	Passenger Truck	576	0.00E+00	9.38E-06	9.93E-07	3.81E+01	5.94E-05	1.97E-01	1.95E-05	2.15E-03	4.72E-03	7.70E-04	1.86E-03	1.21E-03	1.24E-03	2.79E-04	1.92E-04	5.03E-08	6.21E-04	3.52E-04
53	C81	70	Single Unit Short Haul Truck	81	0.00E+00	1.89E-05	9.50E-07	1.49E+01	1.55E-05	2.98E-02	2.02E-05	9.36E-03	1.33E-03	2.67E-04	2.31E-03	5.67E-04	5.76E-04	1.49E-03	5.98E-05	2.42E-08	1.72E-03	1.75E-03
53	C81	70	Single Unit Long Haul Truck	4	0.00E+00	8.26E-07	4.11E-08	6.30E-01	6.69E-07	1.24E-03	8.79E-07	4.02E-04	6.09E-05	1.19E-05	1.01E-04	2.45E-05	2.49E-05	6.29E-05	2.54E-06	1.02E-09	7.56E-05	7.54E-05
53	C81	70	Combination Short Haul Truck	45	0.00E+00	2.33E-05	1.65E-06	1.69E+01	7.57E-08	2.00E-02	1.70E-05	2.45E-02	1.77E-03	3.87E-04	1.42E-03	4.90E-04	4.89E-04	2.55E-03	5.65E-05	0.00E+00	9.29E-04	4.62E-03
53	C81	70	Combination Long Haul Truck	41	0.00E+00	2.11E-05	1.41E-06	1.58E+01	8.71E-08	2.12E-02	1.60E-05	2.42E-02	1.76E-03	3.21E-04	1.46E-03	4.25E-04	4.30E-04	2.41E-03	5.28E-05	0.00E+00	1.04E-03	4.55E-03
52	C82	60	Passenger Car	404	0.00E+00	5.49E-06	5.94E-07	2.01E+01	3.82E-05	1.37E-01	1.22E-05	7.93E-04	3.98E-03	6.12E-04	1.19E-03	7.66E-04	7.86E-04	8.43E-05	1.01E-04	2.71E-08	4.03E-04	1.24E-04
52	C82	60	Passenger Truck	676	0.00E+00	1.21E-05	1.27E-06	4.58E+01	7.53E-05	2.44E-01	2.48E-05	2.55E-03	7.10E-03	1.10E-03	2.37E-03	1.54E-03	1.58E-03	3.51E-04	2.29E-04	5.75E-08	7.85E-04	4.22E-04
52	C82	60	Single Unit Short Haul Truck	112	0.00E+00	3.30E-05	1.65E-06	2.10E+01	2.71E-05	4.05E-02	3.52E-05	1.57E-02	2.67E-03	4.83E-04	3.99E-03	9.87E-04	1.00E-03	2.10E-03	8.47E-05	3.49E-08	3.00E-03	2.95E-03
52	C82	60	Single Unit Long Haul Truck	5	0.00E+00	1.44E-06	7.16E-08	8.96E-01	1.18E-06	1.72E-03	1.54E-06	6.80E-04	1.20E-04	2.14E-05	1.76E-04	4.30E-05	4.37E-05	8.94E-05	3.61E-06	1.48E-09	1.32E-04	1.27E-04
52	C82	60	Combination Short Haul Truck	57	0.00E+00	3.37E-05	2.35E-06	2.19E+01	1.19E-07	2.94E-02	2.50E-05	3.66E-02	3.13E-03	6.20E-04	2.15E-03	7.00E-04	7.00E-04	3.31E-03	7.33E-05	0.00E+00	1.44E-03	6.90E-03
52	C82	60	Combination Long Haul Truck	52	0.00E+00	3.02E-05	1.97E-06	2.06E+01	1.37E-07	3.18E-02	2.33E-05	3.62E-02	3.15E-03	5.35E-04	2.20E-03	6.00E-04	6.07E-04	3.13E-03	6.87E-05	0.00E+00	1.59E-03	6.84E-03
16	C83	100	Passenger Car	463	0.00E+00	5.00E-06	5.41E-07	2.06E+01	3.48E-05	1.32E-01	1.11E-05	9.88E-04	1.50E-03	3.02E-04	1.08E-03	6.98E-04	7.16E-04	5.80E-05	1.05E-04	2.89E-08	3.66E-04	1.54E-04
16	C83	100	Passenger Truck	775	0.00E+00	1.08E-05	1.15E-06	4.86E+01	7.08E-05	2.67E-01	2.30E-05	2.82E-03	2.65E-03	5.64E-04	2.22E-03	1.43E-03	1.47E-03	3.12E-04	2.45E-04	6.74E-08	7.42E-04	4.54E-04
16	C83	100	Single Unit Short Haul Truck	366	0.00E+00	4.92E-05	2.43E-06	6.68E+01	4.29E-05	1.55E-01	5.32E-05	2.66E-02	2.52E-03	7.34E-04	6.08E-03	1.51E-03	1.54E-03	6.74E-03	2.68E-04	1.10E-07	4.55E-03	4.97E-03
16	C83	100	Single Unit Long Haul Truck	16	0.00E+00	2.13E-06	1.04E-07	2.82E+00	1.78E-06	6.32E-03	2.30E-06	1.12E-03	1.14E-04	3.17E-05	2.65E-04	6.37E-05	6.46E-05	2.82E-04	1.13E-05	4.49E-09	2.00E-04	2.09E-04
16	C83	100	Combination Short Haul Truck	203	0.00E+00	7.00E-05	5.10E-06	7.34E+01	1.99E-07	6.83E-02	5.03E-05	7.45E-02	2.36E-03	8.41E-04	3.91E-03	1.50E-03	1.47E-03	1.11E-02	2.46E-04	0.00E+00	2.44E-03	1.41E-02
16	C83	100	Combination Long Haul Truck	185	0.00E+00	6.07E-05	4.16E-06	6.64E+01	2.30E-07	6.79E-02	4.55E-05	7.10E-02	2.19E-03	6.07E-04	3.98E-03	1.25E-03	1.25E-03	1.01E-02	2.23E-04	0.00E+00	2.74E-03	1.34E-02
55	C84	90	Passenger Car	337	0.00E+00	3.76E-06	4.07E-07	1.52E+01	2.62E-05	9.66E-02	8.36E-06	6.97E-04	1.45E-03	2.65E-04	8.14E-04	5.25E-04	5.38E-04	4.70E-05	7.72E-05	2.06E-08	2.76E-04	1.09E-04
55	C84	90	Passenger Truck	565	0.00E+00	8.15E-06	8.67E-07	3.55E+01	5.27E-05	1.90E-01	1.73E-05	2.03E-03	2.61E-03	4.91E-04	1.65E-03	1.07E-03	1.10E-03	2.37E-04	1.79E-04	4.74E-08	5.53E-04	3.30E-04
55	C84	90	Single Unit Short Haul Truck	131	0.00E+00	1.98E-05	9.71E-07	2.41E+01	1.57E-05	4.86E-02	2.11E-05	1.06E-02	1.10E-03	2.88E-04	2.42E-03	5.81E-04	5.92E-04	2.42E-03	9.71E-05	3.80E-08	1.83E-03	1.98E-03
55	C84	90	Single Unit Long Haul Truck	6	0.00E+00	8.60E-07	4.17E-08	1.02E+00	6.62E-07	2.01E-03	9.13E-07	4.49E-04	4.98E-05	1.26E-05	1.06E-04	2.48E-05	2.53E-05	1.02E-04	4.11E-06	1.57E-09	8.04E-05	8.41E-05
55	C84	90	Combination Short Haul Truck	71	0.00E+00	2.51E-05	1.78E-06	2.47E+01	8.11E-08	2.43E-02	1.84E-05	2.59E-02	1.13E-03	3.34E-04	1.48E-03	5.28E-04	5.18E-04	3.74E-03	8.31E-05	0.00E+00	9.65E-04	4.88E-03
55	C84	90	Combination Long Haul Truck	65	0.00E+00	2.16E-05	1.43E-06	2.25E+01	9.39E-08	2.45E-02	1.66E-05	2.45E-02	1.08E-03	2.56E-04	1.52E-03	4.35E-04	4.33E-04	3.44E-03	7.57E-05	0.00E+00	1.08E-03	4.62E-03
55	C85	90	Passenger Car	207	0.00E+00	2.30E-06	2.49E-07	9.30E+00	1.60E-05	5.91E-02	5.12E-06	4.26E-04	8.90E-04	1.62E-04	4.98E-04	3.21E-04	3.29E-04	2.88E-05	4.72E-05	1.26E-08	1.69E-04	6.66E-05
55	C85	90	Passenger Truck	346	0.00E+00	4.99E-06	5.31E-07	2.17E+01	3.23E-05	1.16E-01	1.06E-05	1.24E-03	1.60E-03	3.01E-04	1.01E-03	6.56E-04	6.72E-04	1.45E-04	1.10E-04	2.90E-08	3.38E-04	2.02E-04
55	C85	90	Single Unit Short Haul Truck	122	0.00E+00	1.84E-05	9.04E-07	2.25E+01	1.46E-05	4.52E-02	1.96E-05	9.86E-03	1.02E-03	2.69E-04	2.26E-03	5.41E-04	5.51E-04	2.25E-03	9.04E-05	3.54E-08	1.71E-03	1.84E-03
55	C85	90	Single Unit Long Haul Truck	5	0.00E+00	8.01E-07	3.88E-08	9.49E-01	6.16E-07	1.87E-03	8.50E-07	4.18E-04	4.63E-05	1.17E-05	9.84E-05	2.31E-05	2.35E-05	9.46E-05	3.82E-06	1.46E-09	7.48E-05	7.83E-05
55	C85	90	Combination Short Haul Truck	72	0.00E+00	2.55E-05	1.81E-06	2.51E+01	8.25E-08	2.47E-02	1.87E-05	2.64E-02	1.15E-03	3.40E-04	1.51E-03	5.37E-04	5.27E-04	3.80E-03	8.45E-05	0.00E+00	9.82E-04	4.97E-03
55	C85	90	Combination Long Haul Truck	66	0.00E+00	2.20E-05	1.45E-06	2.29E+01	9.56E-08	2.49E-02	1.69E-05	2.49E-02	1.10E-03	2.60E-04	1.54E-03	4.42E-04	4.40E-04	3.50E-03	7.70E-05	0.00E+00	1.10E-03	4.70E-03
55	C86	90	Passenger Car	780	0.00E+00	8.69E-06	9.41E-07	3.51E+01	6.05E-05	2.23E-01	1.93E-05	1.61E-03	3.36E-03	6.13E-04	1.88E-03	1.21E-03	1.24E-03	1.09E-04	1.78E-04	4.77E-08	6.37E-04	2.51E-04
55	C86	90	Passenger Truck	1307	0.00E+00	1.88E-05	2.00E-06	8.20E+01	1.22E-04	4.39E-01	3.99E-05	4.68E-03	6.03E-03	1.14E-03	3.81E-03	2.48E-03	2.54E-03	5.48E-04	4.14E-04	1.10E-07	1.28E-03	7.62E-04
55	C86	90	Single Unit Short Haul Truck	212	0.00E+00	3.19E-05	1.57E-06	3.90E+01	2.53E-05	7.84E-02	3.40E-05	1.71E-02	1.77E-03	4.66E-04	3.91E-03	9.37E-04	9.55E-04	3.91E-03	1.57E-04	6.13E-08	2.96E-03	3.19E-03
55	C86	90	Single Unit Long Haul Truck	9	0.00E+00	1.39E-06	6.73E-08	1.65E+00	1.07E-06	3.25E-03	1.47E-06	7.25E-04	8.03E-05	2.03E-05	1.71E-04	4.00E-05	4.08E-05	1.64E-04	6.63E-06	2.54E-09	1.30E-04	1.36E-04
55	C86	90	Combination Short Haul Truck	97	0.00E+00	3.42E-05	2.42E-06	3.36E+01	1.10E-07	3.31E-02	2.50E-05	3.53E-02	1.54E-03	4.55E-04	2.02E-03	7.18E-04	7.05E-04	5.09E-03	1.13E-04	0.00E+00	1.31E-03	6.65E-03
55	C86	90	Combination Long Haul Truck	88	0.00E+00	2.94E-05	1.95E-06	3.07E+01	1.28E-07	3.34E-02	2.26E-05	3.34E-02	1.47E-03	3.48E-04	2.07E-03	5.91E-04	5.89E-04	4.69E-03	1.03E-04	0.00E+00	1.47E-03	6.28E-03
10	E39	70	Passenger Car	239	0.00E+00	3.08E-06	3.33E-07	1.13E+01	2.15E-05	7.75E-02	6.82E-06	4.78E-04	1.85E-03	2.97E-04	6.69E-04	4.29E-04	4.41E-04	4.27E-05	5.75E-05	1.57E-08	2.26E-04	7.49E-05
10	E39	70	Passenger Truck	399	0.00E+00	6.76E-06	7.15E-07	2.62E+01	4.27E-05	1.42E-01	1.40E-05	1.50E-03	3.36E-03	5.47E-04	1.34E-03	8.70E-04	8.92E-04	1.94E-04	1.31E-04	3.52E-08	4.46E-04	2.46E-04
10	E39	70	Single Unit Short Haul Truck	17	0.00E+00	3.90E-06	1.96E-07	3.06E+00	3.19E-06	6.13E-03	4.15E-06	1.93E-03	2.74E-04	5.49E-05	4.75E-04	1.17E-04	1.19E-04	3.06E-04	1.23E-05	4.98E-09	3.55E-04	3.61E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.70E-07	8.46E-09	1.30E-01	1.38E-07	2.56E-04	1.81E-07	8.28E-05	1.25E-05	2.44E-06	2.07E-05	5.04E-06	5.13E-06	1.30E-05	5.23E-07	2.09E-10	1.56E-05	1.55E-05
10	E39	70	Combination Short Haul Truck	8	0.00E+00	4.29E-06	3.05E-07	3.12E+00	1.40E-08	3.69E-03	3.14E-06	4.52E-03	3.26E-04	7.14E-05	2.62E-04	9.04E-05	9.02E-05	4.70E-04	1.04E-05	0.00E+00	1.71E-04	8.51E-04
10	E39	70	Combination Long Haul Truck	8	0.00E+00	3.89E-06	2.59E-07	2.91E+00	1.61E-08	3.91E-03	2.95E-06	4.46E-03	3.24E-04	5.92E-05	2.70E-04	7.85E-05	7.93E-05	4.44E-04	9.73E-06	0.00E+00	1.91E-04	8.39E-04
10	E40	70	Passenger Car	199	0.00E+00	2.57E-06	2.78E-07	9.45E+00	1.79E-05	6.47E-02	5.69E-06	3.98E-04	1.54E-03	2.48E-04	5.58E-04	3.58E-04	3.67E-04	3.56E-05	4.80E-05	1.31E-08	1.88E-04	6.24E-05
10	E40	70	Passenger Truck	333	0.00E+00	5.64E-06	5.96E-07	2.18E+01	3.56E-05	1.18E-01	1.17E-05	1.25E-03	2.80E-03	4.56E-04	1.12E-03	7.26E-04	7.44E-04	1.62E-04	1.09E-04	2.93E-08	3.72E-04	2.05E-04
10	E40	70	Single Unit Short Haul Truck	6	0.00E+00	1.44E-06	7.24E-08	1.13E+00	1.18E-06	2.27E-03	1.54E-06	7.14E-04	1.02E-04	2.03E-05	1.76E-04	4.32E-05	4.39E-05	1.13E-04	4.56E-06	1.84E-09	1.31E-04	1.34E-04
10	E40	70	Combination Short Haul Truck	4	0.00E+00	2.21E-06	1.57E-07	1.61E+00	7.18E-09	1.90E-03	1.62E-06	2.33E-03	1.68E-04	3.67E-05	1.35E-04	4.65E-05	4.64E-05	2.42E-04	5.36E-06	0.00E+00	8.82E-05	4.38E-04
10	E40	70	Combination Long Haul Truck	4	0.00E+00	2.00E-06	1.34E-07	1.50E+00	8.27E-09	2.01E-03	1.52E-06	2.29E-03	1.67E-04	3.05E-05	1.39E-04	4.04E-05	4.08E-05	2.28E-04	5.01E-06	0.00E+00	9.84E-05	4.32E-04
10	E41	70

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E46	80	Passenger Car	216	0.00E+00	2.60E-06	2.81E-07	9.96E+00	1.81E-05	6.66E-02	5.77E-06	4.44E-04	1.19E-03	2.06E-04	5.62E-04	3.63E-04	3.72E-04	3.39E-05	5.07E-05	1.42E-08	1.90E-04	6.96E-05
11	E46	80	Passenger Truck	362	0.00E+00	5.58E-06	5.92E-07	2.30E+01	3.58E-05	1.24E-01	1.17E-05	1.32E-03	2.13E-03	3.78E-04	1.12E-03	7.27E-04	7.45E-04	1.63E-04	1.17E-04	3.17E-08	3.75E-04	2.15E-04
11	E46	80	Single Unit Short Haul Truck	25	0.00E+00	4.67E-06	2.32E-07	4.58E+00	3.76E-06	9.20E-03	4.97E-06	2.39E-03	2.93E-04	6.63E-05	5.68E-04	1.38E-04	1.40E-04	4.59E-04	1.85E-05	7.33E-09	4.27E-04	4.48E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	2.03E-07	1.00E-08	1.94E-01	1.60E-07	3.81E-04	2.16E-07	1.03E-04	1.34E-05	2.93E-06	2.48E-05	5.95E-06	6.04E-06	1.93E-05	7.81E-07	3.05E-10	1.87E-05	1.92E-05
11	E46	80	Combination Short Haul Truck	11	0.00E+00	4.82E-06	3.45E-07	4.00E+00	1.52E-08	4.27E-03	3.54E-06	4.97E-03	2.92E-04	7.20E-05	2.87E-04	1.02E-04	1.01E-04	6.01E-04	1.34E-05	0.00E+00	1.86E-04	9.34E-04
11	E46	80	Combination Long Haul Truck	10	0.00E+00	4.31E-06	2.89E-07	3.70E+00	1.76E-08	4.42E-03	3.28E-06	4.81E-03	2.87E-04	5.76E-05	2.98E-04	8.76E-05	8.82E-05	5.65E-04	1.24E-05	0.00E+00	2.09E-04	9.07E-04
11	E47	80	Passenger Car	36	0.00E+00	4.36E-07	4.71E-08	1.67E+00	3.03E-06	1.12E-02	9.69E-07	7.45E-05	1.99E-04	3.47E-05	9.44E-05	6.08E-05	6.25E-05	5.68E-06	8.51E-06	2.39E-09	3.19E-05	1.17E-05
11	E47	80	Passenger Truck	61	0.00E+00	9.36E-07	9.94E-08	3.86E+00	6.01E-06	2.08E-02	1.96E-06	2.21E-04	3.58E-04	6.34E-05	1.87E-04	1.22E-04	1.25E-04	2.73E-05	1.96E-05	5.31E-09	6.29E-05	3.61E-05
11	E47	80	Single Unit Short Haul Truck	5	0.00E+00	8.98E-07	4.46E-08	8.81E-01	7.22E-07	1.77E-03	9.55E-07	4.60E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.62E-05
11	E47	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	E47	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E48	80	Passenger Car	337	0.00E+00	4.06E-06	4.38E-07	1.56E+01	2.82E-05	1.04E-01	9.01E-06	6.93E-04	1.85E-03	3.22E-04	8.78E-04	5.66E-04	5.81E-04	5.28E-05	7.92E-05	2.22E-08	2.97E-04	1.09E-04
11	E48	80	Passenger Truck	565	0.00E+00	8.71E-06	9.24E-07	3.59E+01	5.58E-05	1.93E-01	1.82E-05	2.06E-03	3.33E-03	5.90E-04	1.74E-03	1.13E-03	1.16E-03	2.54E-04	1.82E-04	4.94E-08	5.85E-04	3.36E-04
11	E48	80	Single Unit Short Haul Truck	17	0.00E+00	3.23E-06	1.60E-07	3.17E+00	2.60E-06	6.37E-03	3.44E-06	1.66E-03	2.03E-04	4.59E-05	3.93E-04	9.58E-05	9.72E-05	3.18E-04	1.28E-05	5.08E-09	2.96E-04	3.10E-04
11	E48	80	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	6.93E-09	1.34E-01	1.11E-07	2.64E-04	1.50E-07	7.10E-05	9.27E-06	2.03E-06	1.71E-05	4.12E-06	4.18E-06	1.34E-05	5.41E-07	2.11E-10	1.30E-05	1.33E-05
11	E48	80	Combination Short Haul Truck	8	0.00E+00	3.67E-06	2.63E-07	3.05E+00	1.16E-08	3.25E-03	2.70E-06	3.79E-03	2.23E-04	5.49E-05	2.19E-04	7.76E-05	7.72E-05	4.58E-04	1.02E-05	0.00E+00	1.42E-04	7.11E-04
11	E48	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.20E-07	2.82E+00	1.34E-08	3.37E-03	2.50E-06	3.67E-03	2.18E-04	4.39E-05	2.27E-04	6.68E-05	6.72E-05	4.30E-04	9.41E-06	0.00E+00	1.59E-04	6.91E-04
11	E49	80	Passenger Car	43	0.00E+00	5.13E-07	5.55E-08	1.97E+00	3.57E-06	1.32E-02	1.14E-06	8.77E-05	2.35E-04	4.08E-05	1.11E-04	7.16E-05	7.35E-05	6.69E-06	1.00E-05	2.81E-09	3.76E-05	1.38E-05
11	E49	80	Passenger Truck	71	0.00E+00	1.10E-06	1.17E-07	4.55E+00	7.07E-06	2.44E-02	2.30E-06	2.60E-04	4.21E-04	7.46E-05	2.20E-04	1.44E-04	1.47E-04	3.22E-05	2.30E-05	6.25E-09	7.40E-05	4.25E-05
11	E49	80	Single Unit Short Haul Truck	1	0.00E+00	2.01E-07	1.00E-08	1.98E-01	1.62E-07	3.97E-04	2.14E-07	1.03E-04	1.27E-05	2.86E-06	2.45E-05	5.97E-06	6.06E-06	1.98E-05	7.97E-07	3.16E-10	1.84E-05	1.93E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	1.27E-06	9.09E-08	1.05E+00	4.02E-09	1.13E-03	9.34E-07	1.31E-03	7.71E-05	1.90E-05	7.58E-05	2.69E-05	2.67E-05	1.59E-04	3.52E-06	0.00E+00	4.92E-05	2.46E-04
11	E49	80	Combination Long Haul Truck	3	0.00E+00	1.14E-06	7.63E-08	9.76E-01	4.65E-09	1.17E-03	8.66E-07	1.27E-03	7.56E-05	1.52E-05	7.85E-05	2.31E-05	2.33E-05	1.49E-04	3.26E-06	0.00E+00	5.50E-05	2.39E-04
11	E50	80	Passenger Car	265	0.00E+00	3.19E-06	3.45E-07	1.22E+01	2.22E-05	8.18E-02	7.09E-06	5.45E-04	1.46E-03	2.54E-04	6.91E-04	4.45E-04	4.57E-04	4.16E-05	6.23E-05	1.75E-08	2.34E-04	8.55E-05
11	E50	80	Passenger Truck	444	0.00E+00	6.85E-06	7.27E-07	2.83E+01	4.39E-05	1.52E-01	1.43E-05	1.62E-03	2.62E-03	4.64E-04	1.37E-03	8.92E-04	9.15E-04	2.00E-04	1.43E-04	3.89E-08	4.60E-04	2.64E-04
11	E50	80	Single Unit Short Haul Truck	53	0.00E+00	9.96E-06	4.94E-07	9.77E+00	8.01E-06	1.96E-02	1.06E-05	5.11E-03	6.26E-04	1.41E-04	1.21E-03	2.95E-04	3.00E-04	9.80E-04	3.94E-05	1.56E-08	9.12E-04	9.56E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	2.13E-08	4.13E-01	3.42E-07	8.13E-04	4.61E-07	2.19E-04	2.86E-05	6.24E-06	5.28E-05	1.27E-05	1.29E-05	4.13E-05	1.67E-06	6.51E-10	4.00E-05	4.09E-05
11	E50	80	Combination Short Haul Truck	43	0.00E+00	1.88E-05	1.35E-06	1.56E+01	5.95E-08	1.67E-02	1.38E-05	1.94E-02	1.14E-03	2.82E-04	1.12E-03	3.98E-04	3.96E-04	2.35E-03	5.22E-05	0.00E+00	7.29E-04	3.65E-03
11	E50	80	Combination Long Haul Truck	39	0.00E+00	1.69E-05	1.13E-06	1.45E+01	6.89E-08	1.73E-02	1.28E-05	1.88E-02	1.12E-03	2.25E-04	1.16E-03	3.43E-04	3.45E-04	2.21E-03	4.83E-05	0.00E+00	8.16E-04	3.55E-03
11	E51	80	Passenger Car	13	0.00E+00	1.56E-07	1.68E-08	5.97E-01	1.08E-06	3.99E-03	3.46E-07	2.66E-05	7.12E-05	1.24E-05	3.37E-05	2.17E-05	2.23E-05	2.03E-06	3.04E-06	8.53E-10	1.14E-05	4.17E-06
11	E51	80	Passenger Truck	22	0.00E+00	3.34E-07	3.55E-08	1.38E+00	2.14E-06	7.41E-03	6.99E-07	7.89E-05	1.28E-04	2.27E-05	6.69E-05	4.36E-05	4.46E-05	9.76E-06	6.99E-06	1.90E-09	2.25E-05	1.29E-05
11	E51	80	Combination Short Haul Truck	1	0.00E+00	3.84E-07	2.74E-08	3.18E-01	1.21E-09	3.40E-04	2.82E-07	3.96E-04	2.33E-05	5.73E-06	2.29E-05	8.11E-06	8.06E-06	4.78E-05	1.06E-06	0.00E+00	1.48E-05	7.43E-05
11	E51	80	Combination Long Haul Truck	1	0.00E+00	3.43E-07	2.30E-08	2.94E-01	1.40E-09	3.52E-04	2.61E-07	3.83E-04	2.28E-05	4.58E-06	2.37E-05	6.97E-06	7.02E-06	4.49E-05	9.83E-07	0.00E+00	1.66E-05	7.22E-05
11	E52	80	Passenger Car	183	0.00E+00	2.20E-06	2.37E-07	8.42E+00	1.53E-05	5.63E-02	4.88E-06	3.75E-04	1.00E-03	1.74E-04	4.75E-04	3.06E-04	3.14E-04	2.86E-05	4.28E-05	1.20E-08	1.61E-04	5.88E-05
11	E52	80	Passenger Truck	306	0.00E+00	4.71E-06	5.00E-07	1.94E+01	3.02E-05	1.04E-01	9.85E-06	1.11E-03	1.80E-03	3.19E-04	9.43E-04	6.14E-04	6.29E-04	1.38E-04	9.85E-05	2.67E-08	3.17E-04	1.82E-04
11	E52	80	Single Unit Short Haul Truck	52	0.00E+00	9.72E-06	4.82E-07	9.53E+00	7.82E-06	1.92E-02	1.03E-05	4.98E-03	6.11E-04	1.38E-04	1.18E-03	2.88E-04	2.92E-04	9.56E-04	3.84E-05	1.53E-08	8.90E-04	9.33E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.08E-08	4.03E-01	3.34E-07	7.94E-04	4.50E-07	2.13E-04	2.79E-05	6.09E-06	5.16E-05	1.24E-05	1.26E-05	4.03E-05	1.63E-06	6.35E-10	3.90E-05	3.99E-05
11	E52	80	Combination Short Haul Truck	42	0.00E+00	1.82E-05	1.30E-06	1.51E+01	5.76E-08	1.62E-02	1.34E-05	1.88E-02	1.11E-03	2.72E-04	1.09E-03	3.86E-04	3.83E-04	2.27E-03	5.06E-05	0.00E+00	7.05E-04	3.53E-03
11	E52	80	Combination Long Haul Truck	38	0.00E+00	1.63E-05	1.09E-06	1.40E+01	6.66E-08	1.67E-02	1.24E-05	1.82E-02	1.08E-03	2.18E-04	1.13E-03	3.32E-04	3.34E-04	2.14E-03	4.67E-05	0.00E+00	7.90E-04	3.43E-03
11	E53	80	Passenger Car	131	0.00E+00	1.58E-06	1.71E-07	6.06E+00	1.10E-05	4.05E-02	3.51E-06	2.70E-04	7.23E-04	1.26E-04	3.42E-04	2.20E-04	2.26E-04	2.06E-05	3.08E-05	8.65E-09	1.16E-04	4.23E-05
11	E53	80	Passenger Truck	220	0.00E+00	3.39E-06	3.60E-07	1.40E+01	2.18E-05	7.52E-02	7.09E-06	8.01E-04	1.30E-03	2.30E-04	6.79E-04	4.42E-04	4.53E-04	9.90E-05	7.09E-05	1.93E-08	2.28E-04	1.31E-04
11	E53	80	Single Unit Short Haul Truck	32	0.00E+00	6.01E-06	2.98E-07	5.89E+00	4.83E-06	1.18E-02	6.39E-06	3.08E-03	3.77E-04	8.53E-05	7.31E-04	1.78E-04	1.81E-04	5.91E-04	2.38E-05	9.43E-09	5.50E-04	5.77E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.29E-08	2.49E-01	2.06E-07	4.91E-04	2.78E-07	1.32E-04	1.72E-05	3.76E-06	3.19E-05	7.65E-06	7.77E-06	2.49E-05	1.00E-06	3.92E-10	2.41E-05	2.46E-05
11	E53	80	Combination Short Haul Truck	23	0.00E+00	1.00E-05	7.17E-07	8.31E+00	3.17E-08	8.88E-03	7.36E-06	1.03E-02	6.08E-04	1.50E-04	5.98E-04	2.12E-04	2.11E-04	1.25E-03	2.78E-05	0.00E+00	3.88E-04	1.94E-03
11	E53	80	Combination Long Haul Truck	21	0.00E+00	8.97E-06	6.02E-07	7.70E+00	3.66E-08	9.20E-03	6.83E-06	1.00E-02	5.96E-04	1.20E-04	6.19E-04	1.82E-04	1.83E-04	1.17E-03	2.57E-05	0.00E+00	4.34E-04	1.89E-03
11	E54	80	Passenger Car	353	0.00E+00	4.25E-06	4.59E-07	1.63E+01	2.95E-05	1.09E-01	9.43E-06	7.26E-04	1.94E-03	3.37E-04	9.19E-04	5.92E-04	6.08E-04	5.53E-05	8.29E-05	2.32E-08	3.11E-04	1.14E-04
11	E54	80	Passenger Truck	591	0.00E+00	9.11E-06	9.67E-07	3.76E+01	5.85E-05	2.02E-01	1.90E-05	2.15E-03	3.48E-03	6.17E-04	1.82E-03	1.19E-03	1.22E-03	2.66E-04	1.90E-04	5.17E-08	6.13E-04	3.51E-04
11	E54	80	Single Unit Short Haul Truck	54	0.00E+00	1.01E-05	5.02E-07	9.92E+00	8.14E-06	1.99E-02	1.08E-05	5.18E-03	6.35E-04	1.44E-04	1.23E-03	3.00E-04	3.04E-04	9.95E-04	4.00E-05	1.59E-08	9.26E-04	9.71E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	4.39E-07	2.17E-08	4.20E-01	3.48E-07	8.26E-04	4.68E-07	2.22E-04	2.90E-05	6.34E-06	5.37E-05	1.29E-05	1.31E-05	4.19E-05	1.69E-06	6.61E-10	4.06E-05	4.15E-05
11	E54	80	Combination Short Haul Truck	39	0.00E+00	1.71E-05	1.22E-06	1.41E+01	5.39E-08	1.51E-02	1.25E-05	1.76E-02	1.03E-03	2.55E-04	1.02E-03	3.61E-04	3.59E-04	2.13E-03	4.73E-05	0.00E+00	6.60E-04	3.30E-03
11	E54	80	Combination Long Haul Truck	35	0.00E+00	1.53E-05	1.02E-06	1.31E+01	6.23E-08	1.57E-02	1.16E-05	1.70E-02	1.01E-03	2.04E-04	1.05E-03	3.10E-04	3.12E-04	2.00E-03	4.37E-05	0.00E+00	7.39E-04	3.21E-03
11	E55	80	Passenger Car	72	0.00E+00	8.66E-07	9.36E-08	3.32E+00	6.02E-06	2.22E-02	1.92E-06	1.48E-04	3.96E-04	6.88E-05	1.87E-04	1.21E-04	1.24E-04	1.13E-05	1.69E-05	4.74E-09	6.34E-05	2.32E-05
11	E55	80	Passenger Truck	121	0.00E+00	1.86E-06	1.97E-07	7.67E+00	1.19E-05	4.12E-02	3.88E-06	4.39E-04	7.10E-04	1.26E-04	3.72E-04	2.42E-04	2.48E-04	5.42E-05	3.88E-05	1.05E-08	1.25E-04	7.16E-05
11	E55	80	Single Unit Short Haul Truck	22	0.00E+00	4.11E-06	2.04E-07	4.03E+00	3.31E-06	8.10E-03	4.37E-06	2.11E-03	2.58E-04	5.84E-05	5.00E-04	1.22E-04	1.24E-04	4.04E-04	1.63E-05	6.46E-09	3.76E-04	3.95E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.81E-09	1.71E-01	1.41E-07	3.36E-04	1.90E-07	9.03E-05	1.18E-05	2.58E-06	2.18E-05	5.24E-06	5.32E-06	1.70E-05	6.88E-07	2.69E-10	1.65E-05	1.69E-05
11	E55	80	Combination Short Haul Truck	13	0.00E+00	5.81E-06	4.15E-07	4.82E+00	1.83E-08	5.15E-03	4.26E-06	5.99E-03	3.52E-04	8.68E-05	3.46E-04	1.23E-04	1.22E-04	7.24E-04	1.61E-05	0.00E+00	2.25E-04	1.12E-03
11	E55	80	Combination Long Haul Truck	12	0.00E+00	5.20E-06	3.49E-07	4.46E+00	2.12E-08	5.33E-03	3.96E-06	5.80E-03	3.45E-04	6.94E-05	3.59E-04	1.06E-04	1.06E-04	6.81E-04	1.49E-05	0.00E+00	2.51E-04	1.09E-03
11	E56	80	Passenger Car	280	0.00E+00	3.37E-06	3.65E-07	1.29E+01	2.34E-05	8.65E-02	7.49E-06	5.76E-04	1.54E-03	2.68E-04	7.30E-04	4.70E-04	4.83E-04	4.39E-05	6.58E-05	1.85E-08	2.47E-04	9.04E-05
11	E56	80	Passenger Truck	470	0.00E+00	7.24E-06	7.68E-07	2.99E+01	4.64E-05	1.60E-01	1.51E-05	1.71E-03	2.77E-03	4.90E-04	1.45E-03	9.43E-04	9.67E-04	2.11E-04	1.51E-04	4.11E-08	4.87E-04	2.79E-04
11	E56	80	Single Unit Short Haul Truck	41	0.00E+00	7.64E-06	3.79E-07	7.50E+00	6.15E-06	1.51E-02	8.13E-06	3.92E-03	4.80E-04	1.09E-04	9.30E-04	2.26E-04	2.30E-04	7.52E-04	3.02E-05	1.20E-08	7.00E-04	7.34E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	3.32E-07	1.64E-08	3.17E-01	2.63E-07	6.24E-04	3.54E-07	1.68E-04	2.19E-05	4.79E-06	4.06E-05	9.74E-06	9.89E-06	3.17E-05	1.28E-06	4.99E-10	3.07E-05	3.14E-05
11	E56	80	Combination Short Haul Truck	33	0.00E+00	1.47E-05	1.05E-06	1.22E+01	4.64E-08	1.30E-02	1.08E-05	1.52E-02	8.90E-04	2.19E-04	8.76E-04	3.10E-04	3.09E-04	1.83E-03	4.07E-05	0.00E+00	5.68E-04	2.84E-03
11	E56	80	Combination Long Haul Truck	31	0.00E+00	1.31E-05	8.81E-07	1.13E+01	5.36E-08	1.35E-02	1.00E-05	1.47E-02	8.73E-04	1.75E-04	9.07E-04	2.67E-04	2.69E-04	1.72E-03	3.76E-05	0.00E+00	6.36E-04	2.76E-03
10	E57	70	Passenger Car	212	0.00E+00	2.73E-06	2.96E-07	1.01E+01	1.90E-05	6.88E-02	6.05E-06	4.24E-04	1.64E-03	2.63E-04	5.94E-04	3.81E-04	3.91E-04	3.79E-05	5.10E-05	1.39E-08	2.00E-04	6.64E-05
10	E57	70	Passenger Truck	354	0.00E+00	5.99E-06	6.34E-07	2.32E+01	3.79E-05	1.26E-01	1.24E-05	1.33E-03	2.98E-03	4.85E-04	1.19E-03	7.72E-04	7.91E-04	1.72E-04	1.16E-04	3.12E-08	3.96E-04	2.19E-04
10	E57	70	Single Unit Short Haul Truck	11	0.00E+00	2.66E-06	1.33E-07	2.08E+00	2.17E-06	4.18E-03	2.83E-06	1.31E-03	1.87E-04	3.74E-05	3.23E-04	7.94E-05	8.07E-05	2.08E-04	8.38E-06	3.39E-09	2.41E-04	2.46E-04
10	E57	70	Single Unit Long Haul Truck	1	0.00E+00	4.78E-06	3.40E-07	3.48E+00	1.56E-08	4.12E-03	3.50E-06	5.04E-03	3.63E-04	7.96E-05	2.92E-04	1.01E-04	1.01E-04	5.24E-04	1.16E-05	0.00E+00	1.91E-04	9.49E-04
10	E57	70	Combination Long Haul Truck	8	0.00E+00	4.34E-06	2.89E-07	3.24E+00	1.79E-08	4.36E-03	3.29E-06	4.97E-03	3.62E-04	6.60E-05	3.01E-04	8.75E-05	8.84E-05	4.95E-04	1.08E-05	0.00E+00	2.13E-04	9.35E-04
10	E58	70	Passenger Car	172	0.00E+00	2.22E-06	2.40E-07	8.16E+00	1.55E-05	5.59E-02	4.92E-06	3.44E-04	1.33E-03	2.14E-04	4.82E-04	3.09E-04	3.17E-04	3.08E-05	4.14E-05	1.13E-08	1.63E-04	5.39E-05
10	E58	70	Passenger Truck	288	0.00E+00	4.87E-06	5.15E-07	1.89E+01	3.08E-05	1.02E-01	1.01E-05	1.08E-03	2.42E-03	3.94E-04	9.67E-04	6.27E-04	6.43E-04	1.40E-04	9.43E-05	2.53E-08	3.21E-04	1.77E-04
10	E58	70	Single Unit Short Haul Truck	13	0.00E+00	3.06E-06	1.54E-07	2.40E+00	2.51E-06	4.82E-03	3.26E-06	1.51E-03	2.16E-04	4.31E-05	3.73E-04	9.17E-05	9.31E-05	2.41E-04	9.67E-06	3.91E-09	2.79E-04	2.83E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	1.34E-07	6.65E-09	1.02E-01	1.08E-07	2.01E-04	1.42E-07	6.50E-05	9.84E-06	1.92E-06	1.63E-05	3.96E-06	4.03E-06	1.02E-05	4.11E-07	1.65E-10	1.22E-05	1.22E-05
10	E58	70	Combination Short Haul Truck	11	0.00E+00	5.52E-06	3.92E-07	4.01E+00	1.79E-08	4.75E-03	4.04E-06	5.81E-03	4.19E-04	9.18E-05	3.36E-04	1.16E-04	1.16E-04	6.05E-04	1.34E-05	0.00E+00	2.20E-04	1.09E-03
10	E58	70	Combination Long Haul Truck	10	0.00E+00	5.01E-06	3.34E-07	3.74E+00	2.07E-08	5.03E-03	3.79E-06	5.73E-03	4.17E-04	7.62E-05	3.47E-04	1.01E-04	1.02E-04	5.70E-04	1.25E-05	0.00E+00	2.46E-04	1.08E-03
11	E59	80	Passenger Car	442	0.00E+00	5.32E-06	5.75E-07	2.04E+01	3.70E-05	1.36E-01	1.18E-05	9.09E-04	2.43E-03	4.22E-04	1.15E-03	7.42E-04	7.61E-04	6.93E-05	1.04E-04	2.91E-08	3.89E-04	1.42E-04
11	E59	80	Passenger Truck	740	0.00E+00	1.14E-05	1.21E-06	4.71E+01	7.32E-05	2.53E-01	2.39E-05	2.69E-03	4.36E-03	7.73E-04	2.28E-03	1.49E-03	1.52E-03	3.33E-04	2.39E-04	6.48E-08	7.67E-04	4.40E-04
11	E59	80	Single Unit Short Haul Truck	126	0.00E+00	2.37E-05	1.18E-06	2.33E+01	1.91E-05	4.67E-02	2.52E-05	1.22E-02	1.49E-03	3.37E-04	2.88E-03	7.03E-04	7.13E-04	2.33E-03	9.38E-05	3.72E-08	2.17E-03	2.28E-03
11	E59	80	Single Unit Long Haul Truck	6	0.00E+00	1.03E-06	5.08E-08	9.84E-01	8.15E-07	1.94E-03	1.10E-06	5.21E-04	6.80E-05	1.49E-05	1.26E-04	3.02E-05	3.07E-05	9.82E-05	3.97E-06	1.55E-09	9.51E-05	9.73E-05
11	E59	80	Combination Short Haul Truck	70	0.00E+00	3.08E-05	2.20E-06	2.56E+01	9.73E-08	2.73E-02	2.26E-05	3.18E-02	1.87E-03	4.60E-04	1.84E-03	6.51E-04	6.48E-04	3.84E-03	8.54E-05	0.00E+00	1.19E-03	5.97E-03
11	E59	80	Combination Long Haul Truck	64	0.00E+00	2.76E-05	1.85E-06	2.37E+01	1.13E-07	2.83E-02	2.10E-05	3.08E-02	1.83E-03	3.68E-04	1.90E-03	5.60E-04	5.64E-04	3.61E-03	7.90E-05	0.00E+00	1.33E-03	5.80E-03
11	E60	80	Passenger Car	507	0.00E+00	6.10E-06	6.59E-07	2.34E+01	4.24E-05	1.56E-01	1.35E-05	1.04E-03	2.79E-03	4.84E-04	1.32E-03	8.51E-04	8.73E-04	7.94E-05	1.19E-04	3.34E-08	4.46E-04	1.63E-04
11	E60	80	Passenger Truck	849	0.00E+00	1.31E-05	1.39E-06	5.40E+01	8.40E-05	2.90E-01	2.74E-05	3.09E-03	5.00E-03	8.87E-04	2.62E-03	1.71E-03	1.75E-03	3.82E-04	2.74E-04	7.43E-08	8.80E-04	5.05E-04
11	E60	80	Single Unit Short Haul Truck	99	0.00E+00	1.87E-05	9.26E-07	1.83E+01	1.50E-05	3.67E-02	1.98E-05	9.56E-03	1.17E-03	2.65E-04	2.27E-03	5.53E-04	5.61E-04	1.83E-03	7.38E-05	2.93E-08	1.71E-03	1.79E-03
11	E60	80	Single Unit Long Haul Truck	4	0

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E64	70	Single Unit Long Haul Truck	4	0.00E+00	9.02E-07	4.49E-08	6.89E-01	7.31E-07	1.36E-03	9.60E-07	4.39E-04	6.65E-05	1.30E-05	1.10E-04	2.68E-05	2.72E-05	6.87E-05	2.77E-06	1.11E-09	8.26E-05	8.23E-05
10	E64	70	Combination Short Haul Truck	48	0.00E+00	2.51E-05	1.78E-06	1.82E+01	8.15E-08	2.16E-02	1.84E-05	2.64E-02	1.90E-03	4.17E-04	1.53E-03	5.28E-04	5.27E-04	2.75E-03	6.08E-05	0.00E+00	1.00E-03	4.97E-03
10	E64	70	Combination Long Haul Truck	44	0.00E+00	2.27E-05	1.52E-06	1.70E+01	9.38E-08	2.28E-02	1.72E-05	2.60E-02	1.89E-03	3.46E-04	1.58E-03	4.58E-04	4.63E-04	2.59E-03	5.68E-05	0.00E+00	1.12E-03	4.90E-03
10	E65	70	Passenger Car	730	0.00E+00	9.42E-06	1.02E-06	3.47E+01	6.57E-05	2.37E-01	2.09E-05	1.46E-03	5.65E-03	9.08E-04	2.05E-03	1.31E-03	1.35E-03	1.31E-04	1.76E-04	4.80E-08	6.91E-04	2.29E-04
10	E65	70	Passenger Truck	1222	0.00E+00	2.07E-05	2.19E-06	8.01E+01	1.31E-04	4.34E-01	4.28E-05	4.58E-03	1.03E-02	1.67E-03	4.11E-03	2.66E-03	2.73E-03	5.94E-04	4.00E-04	1.08E-07	1.36E-03	7.53E-04
10	E65	70	Single Unit Short Haul Truck	30	0.00E+00	7.11E-06	3.56E-07	5.57E+00	5.81E-06	1.12E-02	7.57E-06	3.51E-03	5.00E-04	1.00E-04	8.65E-04	2.13E-04	2.16E-04	5.58E-04	2.24E-05	9.07E-09	6.46E-04	6.57E-04
10	E65	70	Single Unit Long Haul Truck	1	0.00E+00	3.10E-07	1.54E-08	2.36E-01	2.51E-07	4.67E-04	3.30E-07	1.51E-04	2.28E-05	4.45E-06	3.78E-05	9.19E-06	9.34E-06	2.36E-05	9.52E-07	3.82E-10	2.83E-05	2.83E-05
10	E65	70	Combination Short Haul Truck	25	0.00E+00	1.29E-05	9.18E-07	9.38E+00	4.20E-08	1.11E-02	9.45E-06	1.36E-02	9.80E-04	2.15E-04	7.87E-04	2.72E-04	2.71E-04	1.41E-03	3.13E-05	0.00E+00	5.15E-04	2.56E-03
10	E65	70	Combination Long Haul Truck	23	0.00E+00	1.17E-05	7.80E-07	8.75E+00	4.83E-08	1.18E-02	8.87E-06	1.34E-02	9.75E-04	1.78E-04	8.12E-04	2.36E-04	2.38E-04	1.33E-03	2.93E-05	0.00E+00	5.75E-04	2.52E-03
10	E66	70	Passenger Car	359	0.00E+00	4.63E-06	5.01E-07	1.70E+01	3.23E-05	1.17E-01	1.03E-05	7.18E-04	2.78E-03	4.46E-04	1.01E-03	6.46E-04	6.62E-04	6.43E-05	8.65E-05	2.36E-08	3.40E-04	1.13E-04
10	E66	70	Passenger Truck	601	0.00E+00	1.02E-05	1.07E-06	3.94E+01	6.42E-05	2.14E-01	2.10E-05	2.25E-03	5.05E-03	8.22E-04	2.02E-03	1.31E-03	1.34E-03	2.92E-04	1.97E-04	5.29E-08	6.71E-04	3.70E-04
10	E66	70	Single Unit Short Haul Truck	24	0.00E+00	5.66E-06	2.83E-07	4.43E+00	4.63E-06	8.89E-03	6.02E-06	2.79E-03	3.98E-04	7.96E-05	6.89E-04	1.69E-04	1.72E-04	4.44E-04	1.78E-05	7.22E-09	5.14E-04	5.23E-04
10	E66	70	Single Unit Long Haul Truck	1	0.00E+00	2.46E-07	1.23E-08	1.88E-01	2.00E-07	3.71E-04	2.62E-07	1.20E-04	1.82E-05	3.54E-06	3.01E-05	7.31E-06	7.43E-06	1.88E-05	7.58E-07	3.04E-10	2.26E-05	2.25E-05
10	E66	70	Combination Short Haul Truck	22	0.00E+00	1.16E-05	8.23E-07	8.41E+00	3.76E-08	9.96E-03	8.47E-06	1.22E-02	8.78E-04	1.92E-04	7.05E-04	2.44E-04	2.43E-04	1.27E-03	2.81E-05	0.00E+00	4.62E-04	2.29E-03
10	E66	70	Combination Long Haul Truck	20	0.00E+00	1.05E-05	6.99E-07	7.84E+00	4.33E-08	1.05E-02	7.95E-06	1.20E-02	8.74E-04	1.60E-04	7.28E-04	2.12E-04	2.14E-04	1.20E-03	2.62E-05	0.00E+00	5.16E-04	2.26E-03
11	E67	80	Passenger Car	244	0.00E+00	2.93E-06	3.17E-07	1.12E+01	2.04E-05	7.52E-02	6.51E-06	5.01E-04	1.34E-03	2.33E-04	6.34E-04	4.09E-04	4.20E-04	3.82E-05	5.72E-05	1.60E-08	2.15E-04	7.85E-05
11	E67	80	Passenger Truck	408	0.00E+00	6.29E-06	6.68E-07	2.60E+01	4.04E-05	1.39E-01	1.32E-05	1.49E-03	2.40E-03	4.26E-04	1.26E-03	8.20E-04	8.40E-04	1.84E-04	1.32E-04	3.57E-08	4.23E-04	2.43E-04
11	E67	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	E67	80	Combination Short Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.42E-03	1.18E-06	1.66E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.38E-05	2.00E-04	4.45E-06	0.00E+00	6.21E-05	3.11E-04
11	E67	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.65E-08	1.23E+00	5.87E-09	1.47E-03	1.09E-06	1.60E-03	9.55E-05	1.92E-05	9.92E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.02E-04
11	E68	80	Passenger Car	264	0.00E+00	3.18E-06	3.44E-07	1.22E+01	2.21E-05	8.15E-02	7.06E-06	5.43E-04	1.45E-03	2.53E-04	6.88E-04	4.43E-04	4.55E-04	4.14E-05	6.20E-05	1.74E-08	2.33E-04	8.52E-05
11	E68	80	Passenger Truck	443	0.00E+00	6.82E-06	7.24E-07	2.82E+01	4.38E-05	1.51E-01	1.43E-05	1.61E-03	2.61E-03	4.62E-04	1.36E-03	8.89E-04	9.11E-04	1.99E-04	1.43E-04	3.87E-08	4.59E-04	2.63E-04
11	E68	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.78E-03	4.20E-06	2.03E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.20E-09	3.62E-04	3.79E-04
11	E68	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.47E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.67E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.11E-06	1.64E-05	6.61E-07	2.58E-10	1.58E-05	1.62E-05
11	E68	80	Combination Short Haul Truck	12	0.00E+00	5.28E-06	3.78E-07	4.38E+00	1.67E-08	4.68E-03	3.88E-06	5.45E-03	3.20E-04	7.89E-05	3.15E-04	1.12E-04	1.11E-04	6.58E-04	1.46E-05	0.00E+00	2.04E-04	1.02E-03
11	E68	80	Combination Long Haul Truck	11	0.00E+00	4.72E-06	3.17E-07	4.05E+00	1.93E-08	4.85E-03	3.60E-06	5.27E-03	3.14E-04	6.31E-05	3.26E-04	9.60E-05	9.66E-05	6.19E-04	1.35E-05	0.00E+00	2.29E-04	9.93E-04
10	E69	70	Passenger Car	270	0.00E+00	3.49E-06	3.78E-07	1.28E+01	2.43E-05	8.79E-02	7.73E-06	5.41E-04	2.09E-03	3.36E-04	7.58E-04	4.87E-04	4.99E-04	4.84E-05	6.52E-05	1.78E-08	2.56E-04	8.48E-05
10	E69	70	Passenger Truck	453	0.00E+00	7.66E-06	8.10E-07	2.97E+01	4.84E-05	1.61E-01	1.58E-05	1.70E-03	3.81E-03	6.20E-04	1.52E-03	9.86E-04	1.01E-03	2.20E-04	1.48E-04	3.99E-08	5.05E-04	2.79E-04
10	E69	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E69	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.98E-01	8.83E-10	2.34E-04	1.99E-07	2.86E-04	2.06E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.98E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	E70	70	Passenger Car	418	0.00E+00	5.40E-06	5.84E-07	1.99E+01	3.76E-05	1.36E-01	1.20E-05	8.37E-04	3.24E-03	5.20E-04	1.17E-03	7.52E-04	7.72E-04	7.49E-05	1.01E-04	2.75E-08	3.96E-04	1.31E-04
10	E70	70	Passenger Truck	700	0.00E+00	1.18E-05	1.25E-06	4.59E+01	7.49E-05	2.49E-01	2.45E-05	2.63E-03	5.89E-03	9.59E-04	2.35E-03	1.52E-03	1.56E-03	3.40E-04	2.29E-04	6.16E-08	7.82E-04	4.32E-04
10	E70	70	Single Unit Short Haul Truck	22	0.00E+00	5.18E-06	2.59E-07	4.06E+00	4.23E-06	8.14E-03	5.51E-06	2.56E-03	3.64E-04	7.28E-05	6.30E-04	1.55E-04	1.57E-04	4.06E-04	1.63E-05	6.61E-09	4.71E-04	4.79E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	1.72E-01	1.83E-07	3.40E-04	2.40E-07	1.10E-04	1.66E-05	3.24E-06	2.75E-05	6.69E-06	6.80E-06	1.72E-05	6.94E-07	2.78E-10	2.06E-05	2.06E-05
10	E70	70	Combination Short Haul Truck	6	0.00E+00	3.26E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.43E-03	2.48E-04	5.42E-05	1.99E-04	6.87E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	E70	70	Combination Long Haul Truck	6	0.00E+00	2.96E-06	1.97E-07	2.21E+00	1.22E-08	2.97E-03	2.24E-06	3.39E-03	2.46E-04	4.50E-05	2.05E-04	5.96E-05	6.03E-05	3.37E-04	7.39E-06	0.00E+00	1.45E-04	6.38E-04
10	E71	70	Passenger Car	560	0.00E+00	7.23E-06	7.82E-07	2.66E+01	5.04E-05	1.82E-01	1.60E-05	1.12E-03	4.34E-03	6.97E-04	1.57E-03	1.01E-03	1.03E-03	1.00E-04	1.35E-04	3.68E-08	5.30E-04	1.76E-04
10	E71	70	Passenger Truck	937	0.00E+00	1.59E-05	1.68E-06	6.14E+01	1.00E-04	3.33E-01	3.28E-05	3.51E-03	7.89E-03	1.28E-03	3.15E-03	2.04E-03	2.09E-03	4.56E-04	3.07E-04	8.25E-08	1.05E-03	5.78E-04
10	E71	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E71	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	E71	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	E72	70	Passenger Car	508	0.00E+00	6.56E-06	7.09E-07	2.41E+01	4.57E-05	1.65E-01	1.45E-05	1.02E-03	3.93E-03	6.32E-04	1.42E-03	9.14E-04	9.38E-04	9.10E-05	1.22E-04	3.34E-08	4.81E-04	1.59E-04
10	E72	70	Passenger Truck	850	0.00E+00	1.44E-05	1.52E-06	5.57E+01	9.09E-05	3.02E-01	2.98E-05	3.19E-03	7.16E-03	1.16E-03	2.86E-03	1.85E-03	1.90E-03	4.13E-04	2.79E-04	7.49E-08	9.49E-04	5.24E-04
10	E72	70	Single Unit Short Haul Truck	26	0.00E+00	6.08E-06	3.05E-07	4.76E+00	4.97E-06	9.55E-03	6.47E-06	3.00E-03	4.27E-04	8.55E-05	7.40E-04	1.82E-04	1.85E-04	4.77E-04	1.92E-05	7.76E-09	5.52E-04	5.62E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	2.65E-07	1.32E-08	2.02E-01	2.14E-07	3.99E-04	2.82E-07	1.29E-04	1.95E-05	3.80E-06	3.23E-05	7.86E-06	7.98E-06	2.02E-05	8.14E-07	3.26E-10	2.42E-05	2.42E-05
10	E72	70	Combination Short Haul Truck	7	0.00E+00	3.80E-06	2.71E-07	2.77E+00	1.24E-08	3.27E-03	2.79E-06	4.01E-03	2.89E-04	6.33E-05	2.32E-04	8.01E-05	7.99E-05	4.17E-04	9.23E-06	0.00E+00	1.52E-04	7.55E-04
10	E72	70	Combination Long Haul Truck	7	0.00E+00	3.45E-06	2.30E-07	2.58E+00	1.42E-08	3.47E-03	2.62E-06	3.95E-03	2.87E-04	5.25E-05	2.39E-04	6.96E-05	7.03E-05	3.93E-04	8.62E-06	0.00E+00	1.70E-04	7.44E-04
9	E73	60	Passenger Car	103	0.00E+00	1.53E-06	1.65E-07	5.13E+00	1.06E-05	3.81E-02	3.41E-06	2.10E-04	1.05E-03	1.61E-04	3.29E-04	2.13E-04	2.19E-04	2.15E-05	2.59E-05	7.13E-09	1.12E-04	3.29E-05
9	E73	60	Passenger Truck	173	0.00E+00	3.37E-06	3.56E-07	1.17E+01	2.11E-05	6.81E-02	6.96E-06	6.86E-04	1.92E-03	2.98E-04	6.62E-04	4.30E-04	4.41E-04	9.16E-05	5.85E-05	1.62E-08	2.20E-04	1.14E-04
9	E73	60	Single Unit Short Haul Truck	7	0.00E+00	2.15E-06	1.07E-07	1.37E+00	1.77E-06	2.64E-03	2.29E-06	1.02E-03	1.74E-04	3.14E-05	2.60E-04	6.43E-05	6.53E-05	1.37E-04	5.52E-06	2.27E-09	1.95E-04	1.92E-04
9	E73	60	Combination Short Haul Truck	8	0.00E+00	4.59E-06	3.20E-07	2.99E+00	1.62E-08	4.01E-03	3.40E-06	4.98E-03	4.27E-04	8.44E-05	2.92E-04	9.53E-05	9.53E-05	4.50E-04	9.98E-06	0.00E+00	1.96E-04	9.40E-04
9	E73	60	Combination Long Haul Truck	7	0.00E+00	4.11E-06	2.68E-07	2.80E+00	1.86E-08	4.32E-03	3.18E-06	4.94E-03	4.28E-04	7.28E-05	3.00E-04	8.17E-05	8.27E-05	4.26E-04	9.36E-06	0.00E+00	2.17E-04	9.32E-04
9	E74	60	Passenger Car	52	0.00E+00	7.70E-07	8.34E-08	2.59E+00	5.36E-06	1.92E-02	1.72E-06	1.06E-04	5.27E-04	8.11E-05	1.66E-04	1.07E-04	1.10E-04	1.09E-05	1.31E-05	3.60E-09	5.65E-05	1.66E-05
9	E74	60	Passenger Truck	87	0.00E+00	1.70E-06	1.80E-07	5.90E+00	1.06E-05	3.44E-02	3.51E-06	3.46E-04	9.68E-04	1.50E-04	3.34E-04	2.17E-04	2.22E-04	4.62E-05	2.95E-05	8.18E-09	1.11E-04	5.73E-05
53	E75	70	Passenger Car	637	0.00E+00	7.98E-06	8.62E-07	3.06E+01	5.56E-05	1.98E-01	1.77E-05	1.30E-03	4.87E-03	7.84E-04	1.73E-03	1.11E-03	1.14E-03	1.14E-04	1.55E-04	4.23E-08	5.84E-04	2.04E-04
53	E75	70	Passenger Truck	1067	0.00E+00	1.74E-05	1.84E-06	7.05E+01	1.10E-04	3.65E-01	3.62E-05	3.97E-03	8.74E-03	1.43E-03	3.44E-03	2.24E-03	2.30E-03	5.16E-04	3.56E-04	9.31E-08	1.15E-03	6.52E-04
53	E75	70	Single Unit Short Haul Truck	31	0.00E+00	7.33E-06	3.67E-07	5.74E+00	5.99E-06	1.15E-02	7.80E-06	3.62E-03	5.15E-04	1.03E-04	8.92E-04	2.19E-04	2.23E-04	5.75E-04	2.31E-05	9.36E-09	6.66E-04	6.77E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	3.19E-07	1.59E-08	2.44E-01	2.59E-07	4.81E-04	3.40E-07	1.55E-04	2.35E-05	4.58E-06	3.90E-05	9.47E-06	9.63E-06	2.43E-05	9.82E-07	3.94E-10	2.92E-05	2.92E-05
53	E75	70	Combination Short Haul Truck	38	0.00E+00	1.96E-05	1.39E-06	1.42E+01	6.36E-08	1.68E-02	1.43E-05	2.06E-02	1.49E-03	3.25E-04	1.19E-03	4.12E-04	4.11E-04	2.14E-03	4.75E-05	0.00E+00	7.82E-04	3.88E-03
53	E75	70	Combination Long Haul Truck	34	0.00E+00	1.77E-05	1.18E-06	1.33E+01	7.33E-08	1.78E-02	1.35E-05	2.03E-02	1.48E-03	2.70E-04	1.23E-03	3.58E-04	3.62E-04	2.02E-03	4.44E-05	0.00E+00	8.72E-04	3.83E-03
53	E76	70	Passenger Car	888	0.00E+00	1.11E-05	1.20E-06	4.27E+01	7.74E-05	2.76E-01	2.47E-05	1.81E-03	6.78E-03	1.09E-03	2.40E-03	1.55E-03	1.59E-03	1.59E-04	2.16E-04	5.89E-08	8.14E-04	2.84E-04
53	E76	70	Passenger Truck	1486	0.00E+00	2.42E-05	2.56E-06	9.83E+01	1.53E-04	5.08E-01	5.04E-05	5.53E-03	1.22E-02	1.99E-03	4.79E-03	3.12E-03	3.20E-03	7.18E-04	4.95E-04	1.30E-07	1.60E-03	9.08E-04
53	E76	70	Single Unit Short Haul Truck	53	0.00E+00	1.25E-05	6.27E-07	9.80E+00	1.02E-05	1.97E-02	1.33E-05	6.18E-03	8.79E-04	1.76E-04	1.52E-03	3.74E-04	3.80E-04	9.81E-04	3.95E-05	1.60E-08	1.14E-03	1.16E-03
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	5.45E-07	2.71E-08	4.16E-01	4.41E-07	8.21E-04	5.80E-07	2.65E-04	4.01E-05	7.82E-06	6.65E-05	1.62E-05	1.64E-05	4.15E-05	1.68E-06	6.71E-10	4.99E-05	4.97E-05
53	E76	70	Combination Short Haul Truck	71	0.00E+00	3.69E-05	2.62E-06	2.68E+01	1.20E-07	3.18E-02	2.70E-05	3.89E-02	2.80E-03	6.14E-04	2.25E-03	7.77E-04	7.75E-04	4.05E-03	8.96E-05	0.00E+00	1.47E-03	7.32E-03
53	E76	70	Combination Long Haul Truck	65	0.00E+00	3.35E-05	2.23E-06	2.50E+01	1.38E-07	3.36E-02	2.54E-05	3.83E-02	2.79E-03	5.09E-04	2.32E-03	6.75E-04	6.82E-04	3.81E-03	8.37E-05	0.00E+00	1.64E-03	7.22E-03
53	E77	70	Passenger Car	782	0.00E+00	9.80E-06	1.06E-06	3.76E+01	6.82E-05	2.43E-01	2.17E-05	1.59E-03	5.97E-03	9.62E-04	2.12E-03	1.37E-03	1.40E-03	1.40E-04	1.91E-04	5.19E-08	7.17E-04	2.50E-04
53	E77	70	Passenger Truck	1310	0.00E+00	2.13E-05	2.26E-06	8.66E+01	1.35E-04	4.48E-01	4.44E-05	4.88E-03	1.07E-02	1.75E-03	4.22E-03	2.75E-03	2.82E-03	6.33E-04	4.37E-04	1.14E-07	1.41E-03	8.00E-04
53	E77	70	Single Unit Short Haul Truck	33	0.00E+00	7.75E-06	3.88E-07	6.07E+00	6.34E-06	1.22E-02	8.25E-06	3.83E-03	5.45E-04	1.09E-04	9.43E-04	2.32E-04	2.35E-04	6.08E-04	2.45E-05	9.89E-09	7.04E-04	7.16E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	3.38E-07	1.68E-08	2.58E-01	2.73E-07	5.09E-04	3.59E-07	1.64E-04	2.49E-05	4.85E-06	4.12E-05	1.00E-05	1.02E-05	2.57E-05	1.04E-06	4.16E-10	3.09E-05	3.08E-05
53	E77	70	Combination Short Haul Truck	45	0.00E+00	2.33E-05	1.65E-06	1.69E+01	7.57E-08	2.00E-02	1.70E-05	2.45E-02	1.77E-03	3.87E-04	1.42E-03	4.90E-04	4.89E-04	2.55E-03	5.65E-05	0.00E+00	9.29E-04	4.62E-03
53	E77	70	Combination Long Haul Truck	41	0.00E+00	2.11E-05	1.41E-06	1.58E+01	8.71E-08	2.12E-02	1.60E-05	2.42E-02	1.76E-03	3.21E-04	1.46E-03	4.25E-04	4.30E-04	2.41E-03	5.28E-05	0.00E+00	1.04E-03	4.55E-03
53	E78	70	Passenger Car	982	0.00E+00	1.23E-05	1.33E-06	4.72E+01	8.56E-05	3.05E-01	2.73E-05	2.00E-03	7.50E-03	1.21E-03	2.66E-03	1.71E-03	1.76E-03	1.76E-04	2.39E-04	6.52E-08	9.00E-04	3.14E-04
53	E78	70	Passenger Truck	1644	0.00E+00	2.68E-05	2.83E-06	1.09E+02	1.69E-04	5.62E-01	5.57E-05	6.12E-03	1.35E-02	2.20E-03	5.30E-03	3.45E-03	3.54E-03	7.94E-04	5.48E-04	1.43E-07	1.77E-03	1.00E-03
53	E78	70	Single Unit Short Haul Truck	61	0.00E+00	1.44E-05	7.23E-07	1.13E+01	1.18E-05	2.27E-02	1.54E-05	7.13E-03	1.01E-03	2.03E-04	1.76E-03	4.31E-04	4.38E-04	1.13E-03	4.55E-05	1.84E-08	1.31E-03	1.33E-03
53	E78	70	Single Unit Long Haul Truck	3	0.00E+00	6.29E-07	3.13E-08	4.80E-01	5.09E-07	9.48E-04	6.69E-07	3.06E-04	4.63E-05	9.02E-06	7.67E-05	1.87E-05	1.90E-05	4.79E-05	1.93E-06	7.75E-10	5.75E-05	5.74E-05
53	E78	70	Combination Short Haul Truck	79	0.00E+00	4.10E-05	2.92E-06	2.98E+01	1.33E-07	3.53E-02	3.01E-05	4.32E-02	3.12E-03	6.82E-04	2.50E-03	8.64E-04	8.62E-04	4.50E-03	9.96E-05	0.00E+00	1.64E-03	8.14E-03
53	E78	70	Combination Long Haul Truck	72	0.00E+00	3.72E-05	2.48E-06	2.78E+01	1.54E-07	3.74E-02	2.82E-05	4.26E-02	3.10E-03	5.66E-04	2.58E-03	7.50E-04	7.58E-04	4.24E-03	9.30E-05	0.00E+00	1.83E-03	8.02E-03
53	E79	70	Passenger Car	739	0.00E+00	9.26E-06	1.00E-06	3.55E+01	6.45E-05	2.30E-01	2.05E-05	1.51E-03	5.65E-03	9.10E-04	2.00E-03	1.29E-03	1.32E-03	1.32E-04	1.80E-04	4.91E-08	6.78E-04	2.36E-04
53	E79	70	Passenger Truck	1238	0.00E+00	2.01E-05	2.13E-06	8.18E+01	1.28E-04	4.23E-01	4.19E-05	4.61E-03	1.01E-02	1.65E-03	3.99E-03	2.60E-03	2.66E-03	5.98E-04	4.13E-04	1.08E-07	1.33E-03	7.56E-04
53	E79	70	Single Unit Short Haul Truck	47	0.00E+00	1.10E-05	5.53E-07	8.64E+00	9.02E-06	1.73E-02	1.17E-05	5.45E-03	7.76E-04	1.55E-04	1.34E-03	3.30E-04	3.35E-04	8.66E-04	3.48E-05	1.41E-08	1.00E-03	1.02E-03
53	E79	70	Single Unit Long Haul Truck	2	0.00E+00	4.81E-07	2.39E-08	3.67E-01	3.89E-07	7.24E-04	5.12E-07	2.34E-04	3.54E-05	6.90E-06	5.86E-05	1.43E-05	1.45E-05	3.66E-05	1.48E-06	5.92E-10	4.40E-05	4.39E-05
53	E79	70	Combination Short Haul Truck	17

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E84	70	Single Unit Short Haul Truck	2	0.00E+00	3.63E-07	1.82E-08	2.85E-01	2.97E-07	5.71E-04	3.87E-07	1.79E-04	2.55E-05	5.11E-06	4.42E-05	1.09E-05	1.10E-05	2.85E-05	1.15E-06	4.64E-10	3.30E-05	3.36E-05
10	E84	70	Combination Short Haul Truck	7	0.00E+00	3.65E-06	2.60E-07	2.66E+00	1.19E-08	3.14E-03	2.67E-06	3.85E-03	2.77E-04	6.07E-05	2.23E-04	7.69E-05	7.67E-05	4.00E-04	8.86E-06	0.00E+00	1.46E-04	7.24E-04
10	E84	70	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.21E-07	2.47E+00	1.37E-08	3.33E-03	2.51E-06	3.79E-03	2.76E-04	5.04E-05	2.30E-04	6.68E-05	6.75E-05	3.77E-04	8.28E-06	0.00E+00	1.63E-04	7.14E-04
9	E85	60	Passenger Car	1053	0.00E+00	1.56E-05	1.69E-06	5.24E+01	1.09E-04	3.89E-01	3.48E-05	2.15E-03	1.07E-02	1.64E-03	3.37E-03	2.18E-03	2.23E-03	2.20E-04	2.65E-04	7.29E-08	1.14E-03	3.37E-04
9	E85	60	Passenger Truck	1764	0.00E+00	3.44E-05	3.64E-06	1.20E+02	2.15E-04	6.96E-01	7.11E-05	7.01E-03	1.96E-02	3.04E-03	6.76E-03	4.40E-03	4.50E-03	9.36E-04	5.98E-04	1.66E-07	2.24E-03	1.16E-03
9	E85	60	Single Unit Short Haul Truck	55	0.00E+00	1.63E-05	8.14E-07	1.04E+01	1.34E-05	2.00E-02	1.74E-05	7.77E-03	1.32E-03	2.39E-04	1.97E-03	4.88E-04	4.96E-04	1.04E-03	4.19E-05	1.72E-08	1.48E-03	1.46E-03
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	7.13E-07	3.54E-08	4.43E-01	5.83E-07	8.49E-04	7.60E-07	3.36E-04	5.92E-05	1.06E-05	8.69E-05	2.13E-05	2.16E-05	4.42E-05	1.79E-06	7.33E-10	6.50E-05	6.30E-05
9	E85	60	Combination Short Haul Truck	34	0.00E+00	2.03E-05	1.41E-06	1.32E+01	7.17E-08	1.77E-02	1.50E-05	2.20E-02	1.88E-03	3.73E-04	1.29E-03	4.21E-04	4.21E-04	1.99E-03	4.41E-05	0.00E+00	8.67E-04	4.15E-03
9	E85	60	Combination Long Haul Truck	31	0.00E+00	1.81E-05	1.19E-06	1.24E+01	8.22E-08	1.91E-02	1.40E-05	2.18E-02	1.89E-03	3.22E-04	1.33E-03	3.61E-04	3.65E-04	1.88E-03	4.13E-05	0.00E+00	9.59E-04	4.11E-03
9	E86	60	Passenger Car	1132	0.00E+00	1.68E-05	1.81E-06	5.63E+01	1.17E-04	4.18E-01	3.74E-05	2.31E-03	1.15E-02	1.76E-03	3.62E-03	2.34E-03	2.40E-03	2.36E-04	2.85E-04	7.83E-08	1.23E-03	3.62E-04
9	E86	60	Passenger Truck	1895	0.00E+00	3.70E-05	3.91E-06	1.28E+02	2.31E-04	7.48E-01	7.63E-05	7.53E-03	2.11E-02	3.27E-03	7.27E-03	4.72E-03	4.84E-03	1.01E-03	6.42E-04	1.78E-07	2.41E-03	1.25E-03
9	E86	60	Single Unit Short Haul Truck	49	0.00E+00	1.43E-05	7.16E-07	9.11E+00	1.18E-05	1.76E-02	1.53E-05	6.83E-03	1.16E-03	2.10E-04	1.73E-03	4.29E-04	4.36E-04	9.12E-04	3.68E-05	1.52E-08	1.30E-03	1.28E-03
9	E86	60	Single Unit Long Haul Truck	2	0.00E+00	6.27E-07	3.11E-08	3.89E-01	5.12E-07	7.46E-04	6.69E-07	2.95E-04	5.21E-05	9.31E-06	7.64E-05	1.87E-05	1.90E-05	3.89E-05	1.57E-06	6.45E-10	5.72E-05	5.54E-05
9	E86	60	Combination Short Haul Truck	33	0.00E+00	1.92E-05	1.34E-06	1.25E+01	6.80E-08	1.68E-02	1.42E-05	2.09E-02	1.79E-03	3.54E-04	1.22E-03	3.99E-04	3.99E-04	1.89E-03	4.18E-05	0.00E+00	8.22E-04	3.93E-03
9	E86	60	Combination Long Haul Truck	30	0.00E+00	1.72E-05	1.12E-06	1.17E+01	7.80E-08	1.81E-02	1.33E-05	2.07E-02	1.79E-03	3.05E-04	1.26E-03	3.42E-04	3.46E-04	1.79E-03	3.92E-05	0.00E+00	9.09E-04	3.90E-03
9	E87	60	Passenger Car	890	0.00E+00	1.32E-05	1.43E-06	4.43E+01	9.17E-05	3.29E-01	2.94E-05	1.81E-03	9.02E-03	1.39E-03	2.84E-03	1.84E-03	1.89E-03	1.86E-04	2.24E-04	6.16E-08	9.67E-04	2.84E-04
9	E87	60	Passenger Truck	1491	0.00E+00	2.91E-05	3.07E-06	1.01E+02	1.82E-04	5.88E-01	6.00E-05	5.92E-03	1.66E-02	2.57E-03	5.71E-03	3.71E-03	3.81E-03	7.91E-04	5.05E-04	1.40E-07	1.90E-03	9.81E-04
9	E87	60	Single Unit Short Haul Truck	154	0.00E+00	4.52E-05	2.26E-06	2.87E+01	3.71E-05	5.54E-02	4.82E-05	2.15E-02	3.65E-03	6.61E-04	5.46E-03	1.35E-03	1.37E-03	2.87E-03	1.16E-04	4.78E-08	4.10E-03	4.03E-03
9	E87	60	Single Unit Long Haul Truck	7	0.00E+00	1.97E-06	9.80E-08	1.23E+00	1.61E-06	2.35E-03	2.11E-06	9.31E-04	1.64E-04	2.93E-05	2.41E-04	5.89E-05	5.98E-05	1.22E-04	4.95E-06	2.03E-09	1.80E-04	1.75E-04
9	E87	60	Combination Short Haul Truck	77	0.00E+00	4.53E-05	3.16E-06	2.95E+01	1.60E-07	3.95E-02	3.35E-05	4.91E-02	4.21E-03	8.33E-04	2.88E-03	9.40E-04	9.40E-04	4.44E-03	9.85E-05	0.00E+00	1.94E-03	9.27E-03
9	E87	60	Combination Long Haul Truck	70	0.00E+00	4.05E-05	2.65E-06	2.77E+01	1.84E-07	4.27E-02	3.14E-05	4.87E-02	4.23E-03	7.19E-04	2.96E-03	8.07E-04	8.16E-04	4.21E-03	9.23E-05	0.00E+00	2.14E-03	9.20E-03
9	E88	60	Passenger Car	881	0.00E+00	1.30E-05	1.41E-06	4.38E+01	9.08E-05	3.25E-01	2.91E-05	1.80E-03	8.93E-03	1.37E-03	2.81E-03	1.82E-03	1.87E-03	1.84E-04	2.21E-04	6.09E-08	9.57E-04	2.81E-04
9	E88	60	Passenger Truck	1475	0.00E+00	2.88E-05	3.04E-06	1.00E+02	1.80E-04	5.82E-01	5.94E-05	5.86E-03	1.64E-02	2.55E-03	5.66E-03	3.68E-03	3.77E-03	7.83E-04	5.00E-04	1.39E-07	1.88E-03	9.71E-04
9	E88	60	Single Unit Short Haul Truck	114	0.00E+00	3.36E-05	1.68E-06	2.13E+01	2.76E-05	4.12E-02	3.58E-05	1.60E-02	2.71E-03	4.91E-04	4.05E-03	1.00E-03	1.02E-03	2.13E-03	8.61E-05	3.55E-08	3.05E-03	3.00E-03
9	E88	60	Single Unit Long Haul Truck	5	0.00E+00	1.47E-06	7.28E-08	9.11E-01	1.20E-06	1.75E-03	1.56E-06	6.91E-04	1.22E-04	2.18E-05	1.79E-04	4.37E-05	4.44E-05	9.09E-05	3.67E-06	1.51E-09	1.34E-04	1.30E-04
9	E88	60	Combination Short Haul Truck	59	0.00E+00	3.46E-05	2.42E-06	2.25E+01	1.22E-07	3.02E-02	2.56E-05	3.75E-02	3.22E-03	6.37E-04	2.20E-03	7.18E-04	7.18E-04	3.40E-03	7.53E-05	0.00E+00	1.48E-03	7.08E-03
9	E88	60	Combination Long Haul Truck	54	0.00E+00	3.10E-05	2.02E-06	2.11E+01	1.40E-07	3.26E-02	2.40E-05	3.72E-02	3.23E-03	5.49E-04	2.26E-03	6.16E-04	6.24E-04	3.22E-03	7.06E-05	0.00E+00	1.64E-03	7.03E-03
9	E89	60	Passenger Car	53	0.00E+00	7.92E-07	8.57E-08	2.66E+00	5.51E-06	1.98E-02	1.77E-06	1.09E-04	5.42E-04	8.33E-05	1.71E-04	1.10E-04	1.13E-04	1.12E-05	1.34E-05	3.70E-09	5.81E-05	1.71E-05
9	E89	60	Passenger Truck	90	0.00E+00	1.75E-06	1.85E-07	6.07E+00	1.09E-05	3.53E-02	3.61E-06	3.56E-04	9.95E-04	1.54E-04	3.43E-04	2.23E-04	2.29E-04	4.75E-05	3.03E-05	8.41E-09	1.14E-04	5.89E-05
9	E89	60	Single Unit Short Haul Truck	4	0.00E+00	1.13E-06	5.63E-08	7.16E-01	9.27E-07	1.38E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.36E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	E89	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.15E-08	2.01E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.39E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.31E-05
9	E90	60	Passenger Car	47	0.00E+00	7.03E-07	7.61E-08	2.36E+00	4.89E-06	1.75E-02	1.57E-06	9.68E-05	4.81E-04	7.40E-05	1.52E-04	9.81E-05	1.01E-04	9.92E-06	1.19E-05	3.28E-09	5.16E-05	1.52E-05
9	E90	60	Passenger Truck	80	0.00E+00	1.55E-06	1.64E-07	5.39E+00	9.70E-06	3.14E-02	3.20E-06	3.16E-04	8.84E-04	1.37E-04	3.05E-04	1.98E-04	2.03E-04	4.22E-05	2.69E-05	7.47E-09	1.01E-04	5.23E-05
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	E90	60	Combination Short Haul Truck	2	0.00E+00	1.23E-06	8.60E-08	8.02E-01	4.36E-09	1.08E-03	9.12E-07	1.34E-03	1.14E-04	2.27E-05	7.85E-05	2.56E-05	2.56E-05	1.21E-04	2.68E-06	0.00E+00	5.27E-05	2.52E-04
9	E90	60	Combination Long Haul Truck	2	0.00E+00	1.10E-06	7.21E-08	7.53E-01	5.00E-09	1.16E-03	8.53E-07	1.32E-03	1.15E-04	1.96E-05	8.06E-05	2.19E-05	2.22E-05	1.14E-04	2.51E-06	0.00E+00	5.83E-05	2.50E-04
9	E91	60	Passenger Car	4	0.00E+00	5.54E-08	5.99E-09	1.86E-01	3.85E-07	1.38E-03	1.24E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.73E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.06E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.47E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.40E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.97E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.54E-08	5.99E-09	1.86E-01	3.85E-07	1.38E-03	1.24E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.73E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.06E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.47E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.40E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.97E-06	4.12E-06
9	E93	60	Passenger Car	56	0.00E+00	8.36E-07	9.05E-08	2.81E+00	5.82E-06	2.09E-02	1.87E-06	1.15E-04	5.72E-04	8.80E-05	1.80E-04	1.17E-04	1.20E-04	1.18E-05	1.42E-05	3.90E-09	6.13E-05	1.80E-05
9	E93	60	Passenger Truck	95	0.00E+00	1.84E-06	1.95E-07	6.41E+00	1.15E-05	3.73E-02	3.81E-06	3.76E-04	1.05E-03	1.63E-04	3.62E-04	2.36E-04	2.41E-04	5.02E-05	3.20E-05	8.88E-09	1.20E-04	6.22E-05
9	E93	60	Single Unit Short Haul Truck	3	0.00E+00	8.46E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.02E-07	4.03E-04	6.83E-05	1.24E-05	1.02E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	E93	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.08E-07	1.00E+00	5.45E-09	1.34E-03	1.14E-06	1.67E-03	1.43E-04	2.83E-05	9.81E-05	3.20E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	9.01E-08	9.41E-01	6.25E-09	1.45E-03	1.07E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.29E-05	3.13E-04
9	E94	60	Passenger Car	108	0.00E+00	1.61E-06	1.74E-07	5.39E+00	1.12E-05	4.01E-02	3.58E-06	2.21E-04	1.10E-03	1.69E-04	3.46E-04	2.24E-04	2.30E-04	2.26E-05	2.73E-05	7.50E-09	1.18E-04	3.46E-05
9	E94	60	Passenger Truck	182	0.00E+00	3.54E-06	3.74E-07	1.23E+01	2.21E-05	7.16E-02	7.31E-06	7.21E-04	2.02E-03	3.13E-04	6.96E-04	4.52E-04	4.64E-04	9.63E-05	6.15E-05	1.70E-08	2.31E-04	1.20E-04
9	E94	60	Single Unit Short Haul Truck	5	0.00E+00	1.41E-06	7.04E-08	8.95E-01	1.16E-06	1.73E-03	1.50E-06	6.72E-04	1.14E-04	2.06E-05	1.70E-04	4.22E-05	4.28E-05	8.97E-05	3.62E-06	1.49E-09	1.28E-04	1.26E-04
9	E94	60	Combination Short Haul Truck	2	0.00E+00	9.24E-07	6.45E-08	6.02E-01	3.27E-09	8.06E-04	6.84E-07	1.00E-03	8.59E-05	1.70E-05	5.88E-05	1.92E-05	1.92E-05	9.07E-05	2.01E-06	0.00E+00	3.95E-05	1.89E-04
9	E94	60	Combination Long Haul Truck	1	0.00E+00	8.27E-07	5.41E-08	5.64E-01	3.75E-09	8.70E-04	6.40E-07	9.94E-04	8.62E-05	1.47E-05	6.04E-05	1.65E-05	1.67E-05	8.59E-05	1.88E-06	0.00E+00	4.37E-05	1.88E-04
54	E95	80	Passenger Car	376	0.00E+00	4.41E-06	4.77E-07	1.74E+01	3.07E-05	1.12E-01	9.81E-06	7.76E-04	2.17E-03	3.71E-04	9.54E-04	6.15E-04	6.32E-04	5.89E-05	8.88E-05	2.41E-08	3.23E-04	1.21E-04
54	E95	80	Passenger Truck	630	0.00E+00	9.57E-06	1.01E-06	4.06E+01	6.14E-05	2.12E-01	2.01E-05	2.31E-03	3.92E-03	6.82E-04	1.92E-03	1.25E-03	1.28E-03	2.83E-04	2.05E-04	5.44E-08	6.42E-04	3.76E-04
54	E95	80	Single Unit Short Haul Truck	62	0.00E+00	1.16E-05	5.74E-07	1.13E+01	9.30E-06	2.28E-02	1.23E-05	5.93E-03	7.27E-04	1.64E-04	1.41E-03	3.43E-04	3.48E-04	1.14E-03	4.58E-05	1.82E-08	1.06E-03	1.11E-03
54	E95	80	Single Unit Long Haul Truck	3	0.00E+00	5.03E-07	2.48E-08	4.80E-01	3.98E-07	9.45E-04	5.35E-07	2.54E-04	3.32E-05	7.25E-06	6.14E-05	1.47E-05	1.50E-05	4.79E-05	1.93E-06	7.56E-10	4.64E-05	4.75E-05
54	E95	80	Combination Short Haul Truck	32	0.00E+00	1.42E-05	1.01E-06	1.17E+01	4.47E-08	1.25E-02	1.04E-05	1.46E-02	8.58E-04	2.11E-04	8.44E-04	2.99E-04	2.97E-04	1.76E-03	3.92E-05	0.00E+00	5.47E-04	2.74E-03
54	E95	80	Combination Long Haul Truck	29	0.00E+00	1.27E-05	8.50E-07	1.09E+01	5.17E-08	1.30E-02	9.64E-06	1.41E-02	8.41E-04	1.69E-04	8.74E-04	2.57E-04	2.59E-04	1.66E-03	3.63E-05	0.00E+00	6.13E-04	2.66E-03
54	E96	80	Passenger Car	630	0.00E+00	7.39E-06	8.00E-07	2.92E+01	5.15E-05	1.87E-01	1.64E-05	1.30E-03	3.64E-03	6.21E-04	1.60E-03	1.03E-03	1.06E-03	9.87E-05	1.49E-04	4.04E-08	5.41E-04	2.03E-04
54	E96	80	Passenger Truck	1055	0.00E+00	1.60E-05	1.70E-06	6.80E+01	1.03E-04	3.55E-01	3.37E-05	3.87E-03	6.57E-03	1.14E-03	3.22E-03	2.09E-03	2.14E-03	4.75E-04	3.43E-04	9.12E-08	1.08E-03	6.30E-04
54	E96	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.60E-07	1.11E+01	9.07E-06	2.22E-02	1.20E-05	5.78E-03	7.08E-04	1.60E-04	1.37E-03	3.34E-04	3.39E-04	1.11E-03	4.46E-05	1.77E-08	1.03E-03	1.08E-03
54	E96	80	Single Unit Long Haul Truck	3	0.00E+00	4.90E-07	2.42E-08	4.68E-01	3.88E-07	9.21E-04	5.22E-07	2.48E-04	3.23E-05	7.07E-06	5.98E-05	1.44E-05	1.46E-05	4.67E-05	1.89E-06	7.37E-10	4.52E-05	4.63E-05
54	E96	80	Combination Short Haul Truck	57	0.00E+00	2.52E-05	1.80E-06	2.09E+01	7.94E-08	2.23E-02	1.85E-05	2.60E-02	1.53E-03	3.76E-04	1.50E-03	5.32E-04	5.29E-04	3.14E-03	6.97E-05	0.00E+00	9.73E-04	4.87E-03
54	E96	80	Combination Long Haul Truck	52	0.00E+00	2.25E-05	1.51E-06	1.93E+01	9.19E-08	2.31E-02	1.71E-05	2.51E-02	1.50E-03	3.01E-04	1.55E-03	4.57E-04	4.60E-04	2.95E-03	6.45E-05	0.00E+00	1.09E-03	4.73E-03
54	E97	80	Passenger Car	256	0.00E+00	3.00E-06	3.25E-07	1.19E+01	2.09E-05	7.61E-02	6.68E-06	5.28E-04	1.48E-03	2.53E-04	6.50E-04	4.19E-04	4.30E-04	4.01E-05	6.05E-05	1.64E-08	2.20E-04	8.25E-05
54	E97	80	Passenger Truck	429	0.00E+00	6.52E-06	6.91E-07	2.76E+01	4.18E-05	1.44E-01	1.37E-05	1.57E-03	2.67E-03	4.65E-04	1.31E-03	8.49E-04	8.71E-04	1.93E-04	1.39E-04	3.70E-08	4.37E-04	2.56E-04
54	E97	80	Single Unit Short Haul Truck	64	0.00E+00	1.20E-05	5.97E-07	1.18E+01	9.67E-06	2.37E-02	1.28E-05	6.16E-03	7.55E-04	1.71E-04	1.46E-03	3.56E-04	3.62E-04	1.18E-03	4.76E-05	1.89E-08	1.10E-03	1.15E-03
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	5.22E-07	2.58E-08	4.99E-01	4.13E-07	9.82E-04	5.56E-07	2.64E-04	3.45E-05	7.53E-06	6.38E-05	1.53E-05	1.56E-05	4.98E-05	2.01E-06	7.85E-10	4.82E-05	4.93E-05
54	E97	80	Combination Short Haul Truck	33	0.00E+00	1.45E-05	1.04E-06	1.21E+01	4.59E-08	1.29E-02	1.07E-05	1.50E-02	8.82E-04	2.17E-04	8.67E-04	3.07E-04	3.06E-04	1.81E-03	4.03E-05	0.00E+00	5.63E-04	2.82E-03
54	E97	80	Combination Long Haul Truck	30	0.00E+00	1.30E-05	8.73E-07	1.12E+01	5.31E-08	1.33E-02	9.91E-06	1.45E-02	8.65E-04	1.74E-04	8.98E-04	2.64E-04	2.66E-04	1.70E-03	3.73E-05	0.00E+00	6.30E-04	2.74E-03
54	E98	80	Passenger Car	754	0.00E+00	8.84E-06	9.57E-07	3.50E+01	6.16E-05	2.24E-01	1.97E-05	1.56E-03	4.36E-03	7.43E-04	1.91E-03	1.23E-03	1.27E-03	1.18E-04	1.78E-04	4.84E-08	6.47E-04	2.43E-04
54	E98	80	Passenger Truck	1262	0.00E+00	1.92E-05	2.03E-06	8.14E+01	1.23E-04	4.24E-01	4.03E-05	4.63E-03	7.85E-03	1.37E-03	3.86E-03	2.50E-03	2.56E-03	5.68E-04	4.10E-04	1.09E-07	1.29E-03	7.54E-04
54	E98	80	Single Unit Short Haul Truck	101	0.00E+00	1.89E-05	9.38E-07	1.85E+01	1.52E-05	3.72E-02	2.01E-05	9.69E-03	1.19E-03	2.69E-04	2.30E-03	5.60E-04	5.68E-04	1.86E-03	7.48E-05	2.97E-08	1.73E-03	1.81E-03
54	E98	80	Single Unit Long Haul Truck	4	0.00E+00	8.21E-07	4.05E-08	7.84E-01	6.50E-07	1.54E-03	8.74E-07	4.15E-04	5.42E-05	1.18E-05	1.00E-04	2.41E-05	2.45E-05	7.83E-05	3.16E-06	1.24E-09	7.58E-05	7.76E-05
54	E98	80	Combination Short Haul Truck	72	0.00E+00	3.15E-05	2.25E-06	2.61E+01	9.95E-08	2.79E-02	2.31E-05	3.25E-02	1.91E-03	4.71E-04	1.88E-03	6.66E-04	6.62E-04	3.93E-03	8.74E-05	0.00E+00	1.22E-03	6.10E-03
54	E98	80	Combination Long Haul Truck	65	0.00E+00	2.82E-05	1.89E-06	2.42E+01	1.15E-07	2.89E-02	2.15E-05	3.15E-02	1.87E-03	3.77E-04	1.95E-03	5.73E-04	5.77E-04	3.69E-03	8.08E-05	0.00E+00	1.36E-03	5.93E-03
9	F01	60	Passenger Car	255	0.00E+00	3.78E-06	4.09E-07	1.27E+01	2.63E-05	9.43E-02	8.44E-06	5.20E-04	2.59E-03	3.98E-04	8.15E-04	5.27E-04	5.41E-04	5.33E-05	6.42E-05	1.77E-08	2.77E-04	8.15E-05
9	F01	60	Passenger Truck	427	0.00E+00	8.33E-06	8.81E-07	2.90E+01	5.21E-05	1.69E-01	1.72E-05	1.70E-03	4.75E-03	7.37E-04	1.64E-03	1.06E-03	1.09E-03	2.27E-04	1.45E-04	4.01E-08	5.44E-04	2.81E-04
9	F01	60	Single Unit Short Haul Truck	36	0.00E+00	1.06E-05	5.29E-07	6.73E+00	8.71E-06	1.30E-02	1.13E-05	5.05E-03	8.56E-04	1.55E-04	1.28E-03	3.17E-04	3.22E-04	6.74E-04	2.72E-05	1.12E-08	9.63E-04	9.47E-04
9	F01	60	Single Unit Long Haul Truck	2	0.00E+00	4.63E-07	2.30E-08	2.88E-01	3.79E-07	5.52E-04	4.94E-07	2.18E-04	3.85E-05	6.88E-06	5.65E-05	1.38E-05	1.40E-05	2.87E-05	1.16E-06	4.77E-10	4.23E-05	4.10E-05
9	F01	60	Combination Short Haul Truck	24	0.00E+00	1.39E-05	9.69E-07	9.04E+00	4.91E-08	1.21E-02	1.03E-05	1.51E-02	1.29E-03	2.55E-04	8.84E-04	2.88E-04	2.88E-04	1.36E-03	3.02E-05	0.00E+00	5.94E-04	2.84E-03
9	F01	60	Combination Long Haul Truck	22	0.00E+00	1.24E-05	8.12E-07	8.48E+00	5.63E-08	1.31E-02	9.62E-06	1.49E-02	1.30E-03	2.20E-04	9.08E-04	2.47E-04	2.50E-04	1.29E-03	2.83E-05	0.00E+00	6.57E-04	2.82E-03
9	F02	60	Passenger Car	326	0.00E+00	4.82E-06	5.22E-07	1.62E+01	3.36E-05	1.20E-01	1.08E-05	6.64E-04	3.30E-03	5.08E-04	1.04E-03	6.73E-04	6.90E-04	6.80E-05	8.19E-05	2.25E-08	3.54E-04	1.04E-04
9	F02	60	Passenger Truck	546	0.00E+00	1.06E-05	1.12E-06	3.70E+01	6.65E-05	2.15E-01	2.20E-05	2.17E-03	6.06E-03	9.41E-04	2.09E-03	1.36E-03	1.39E-03	2.89E-04	1.85E-04	5.12E-08	6.94E-04	3.59E-04
9	F02	60	Single Unit Short Haul Truck	16	0.00E+00

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F06	60	Combination Short Haul Truck	11	0.00E+00	6.21E-06	4.34E-07	4.05E+00	2.20E-08	5.42E-03	4.60E-06	6.74E-03	5.77E-04	1.14E-04	3.96E-04	1.29E-04	1.29E-04	6.10E-04	1.35E-05	0.00E+00	2.66E-04	1.27E-03
9	F06	60	Combination Long Haul Truck	10	0.00E+00	5.56E-06	3.64E-07	3.80E+00	2.52E-08	5.85E-03	4.30E-06	6.68E-03	5.80E-04	9.86E-05	4.06E-04	1.11E-04	1.12E-04	5.77E-04	1.27E-05	0.00E+00	2.94E-04	1.26E-03
9	F07	60	Passenger Car	314	0.00E+00	4.65E-06	5.03E-07	1.56E+01	3.24E-05	1.16E-01	1.04E-05	6.40E-04	3.18E-03	4.89E-04	1.00E-03	6.49E-04	6.66E-04	6.56E-05	7.90E-05	2.17E-08	3.41E-04	1.00E-04
9	F07	60	Passenger Truck	526	0.00E+00	1.03E-05	1.08E-06	3.56E+01	6.41E-05	2.07E-01	2.12E-05	2.09E-03	5.84E-03	9.07E-04	2.02E-03	1.31E-03	1.34E-03	2.79E-04	1.78E-04	4.94E-08	6.69E-04	3.46E-04
9	F07	60	Single Unit Short Haul Truck	29	0.00E+00	8.46E-06	4.22E-07	5.37E+00	6.95E-06	1.04E-02	9.02E-06	4.03E-03	6.83E-04	1.24E-04	1.02E-03	2.53E-04	2.57E-04	5.38E-04	2.17E-05	8.94E-09	7.68E-04	7.55E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	3.70E-07	1.83E-08	2.30E-01	3.02E-07	4.40E-04	3.94E-07	1.74E-04	3.07E-05	5.49E-06	4.51E-05	1.10E-05	1.12E-05	2.29E-05	9.26E-07	3.80E-10	3.37E-05	3.27E-05
9	F07	60	Combination Short Haul Truck	12	0.00E+00	6.78E-06	4.73E-07	4.41E+00	2.40E-08	5.91E-03	5.02E-06	7.35E-03	6.30E-04	1.25E-04	4.32E-04	1.41E-04	1.41E-04	6.65E-04	1.47E-05	0.00E+00	2.90E-04	1.39E-03
9	F07	60	Combination Long Haul Truck	10	0.00E+00	6.06E-06	3.96E-07	4.14E+00	2.75E-08	6.38E-03	4.69E-06	7.29E-03	6.32E-04	1.08E-04	4.43E-04	1.21E-04	1.22E-04	6.30E-04	1.38E-05	0.00E+00	3.21E-04	1.38E-03
9	F08	60	Passenger Car	271	0.00E+00	4.01E-06	4.34E-07	1.35E+01	2.79E-05	1.00E-01	8.96E-06	5.53E-04	2.75E-03	4.22E-04	8.66E-04	5.60E-04	5.75E-04	5.66E-05	6.81E-05	1.87E-08	2.94E-04	8.66E-05
9	F08	60	Passenger Truck	454	0.00E+00	8.85E-06	9.36E-07	3.08E+01	5.54E-05	1.79E-01	1.83E-05	1.80E-03	5.04E-03	7.83E-04	1.74E-03	1.13E-03	1.16E-03	2.41E-04	1.54E-04	4.26E-08	5.78E-04	2.99E-04
9	F08	60	Single Unit Short Haul Truck	26	0.00E+00	7.61E-06	3.80E-07	4.83E+00	6.26E-06	9.34E-03	8.12E-06	3.63E-03	6.15E-04	1.11E-04	9.19E-04	2.28E-04	2.31E-04	4.84E-04	1.95E-05	8.05E-09	6.91E-04	6.80E-04
9	F08	60	Single Unit Long Haul Truck	1	0.00E+00	3.33E-07	1.65E-08	2.07E-01	2.72E-07	3.96E-04	3.55E-07	1.57E-04	2.76E-05	4.94E-06	4.06E-05	9.92E-06	1.01E-05	2.06E-05	8.33E-07	3.42E-10	3.04E-05	2.94E-05
9	F08	60	Combination Short Haul Truck	14	0.00E+00	8.32E-06	5.81E-07	5.41E+00	2.94E-08	7.26E-03	6.16E-06	9.02E-03	7.73E-04	1.53E-04	5.30E-04	1.73E-04	1.73E-04	8.16E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F08	60	Combination Long Haul Truck	13	0.00E+00	7.44E-06	4.86E-07	5.08E+00	3.37E-08	7.83E-03	5.76E-06	8.94E-03	7.76E-04	1.32E-04	5.44E-04	1.48E-04	1.50E-04	7.73E-04	1.70E-05	0.00E+00	3.93E-04	1.69E-03
11	F09	80	Passenger Car	33	0.00E+00	3.93E-07	4.25E-08	1.51E+00	2.73E-06	1.01E-02	8.74E-07	6.72E-05	1.80E-04	3.12E-05	8.51E-05	5.49E-05	5.63E-05	5.12E-06	7.67E-06	2.15E-09	2.88E-05	1.05E-05
11	F09	80	Passenger Truck	55	0.00E+00	8.44E-07	8.96E-08	3.48E+00	5.41E-06	1.87E-02	1.76E-06	1.99E-04	3.22E-04	5.72E-05	1.69E-04	1.10E-04	1.13E-04	2.46E-05	1.76E-05	4.79E-09	5.67E-05	3.25E-05
11	F09	80	Single Unit Short Haul Truck	1	0.00E+00	1.85E-07	9.19E-09	1.82E-01	1.49E-07	3.65E-04	1.97E-07	9.50E-05	1.16E-05	2.63E-06	2.25E-05	5.49E-06	5.57E-06	1.82E-05	7.33E-07	2.91E-10	1.70E-05	1.78E-05
11	F09	80	Combination Short Haul Truck	2	0.00E+00	9.71E-07	6.95E-08	8.05E-01	3.07E-09	8.61E-04	7.13E-07	1.00E-03	5.89E-05	1.45E-05	5.79E-05	2.05E-05	2.04E-05	1.21E-04	2.69E-06	0.00E+00	3.76E-05	1.88E-04
11	F09	80	Combination Long Haul Truck	2	0.00E+00	8.69E-07	5.83E-08	7.45E-01	3.55E-09	8.91E-04	6.61E-07	9.70E-04	5.77E-05	1.16E-05	6.00E-05	1.77E-05	1.78E-05	1.14E-04	2.49E-06	0.00E+00	4.20E-05	1.83E-04
11	F10	80	Passenger Car	250	0.00E+00	3.01E-06	3.25E-07	1.15E+01	2.09E-05	7.72E-02	6.69E-06	5.14E-04	1.38E-03	2.39E-04	6.51E-04	4.20E-04	4.31E-04	3.92E-05	5.87E-05	1.65E-08	2.20E-04	8.06E-05
11	F10	80	Passenger Truck	419	0.00E+00	6.46E-06	6.86E-07	2.67E+01	4.14E-05	1.43E-01	1.35E-05	1.52E-03	2.47E-03	4.38E-04	1.29E-03	8.42E-04	8.63E-04	1.89E-04	1.35E-04	3.67E-08	4.34E-04	2.49E-04
11	F10	80	Single Unit Short Haul Truck	9	0.00E+00	1.70E-06	8.44E-08	1.67E+00	1.37E-06	3.35E-03	1.81E-06	8.71E-04	1.07E-04	2.42E-05	2.07E-04	5.04E-05	5.11E-05	1.67E-04	6.72E-06	2.67E-09	1.56E-04	1.63E-04
11	F10	80	Combination Short Haul Truck	12	0.00E+00	5.47E-06	3.91E-07	4.53E+00	1.73E-08	4.85E-03	4.01E-06	5.64E-03	3.32E-04	8.17E-05	3.26E-04	1.16E-04	1.15E-04	6.82E-04	1.52E-05	0.00E+00	2.11E-04	1.06E-03
11	F10	80	Combination Long Haul Truck	11	0.00E+00	4.89E-06	3.28E-07	4.20E+00	2.00E-08	5.02E-03	3.72E-06	5.46E-03	3.25E-04	6.53E-05	3.38E-04	9.94E-05	1.00E-04	6.41E-04	1.40E-05	0.00E+00	2.37E-04	1.03E-03
11	F13	80	Passenger Car	12	0.00E+00	1.50E-07	1.62E-08	5.75E-01	1.04E-06	3.85E-03	3.33E-07	2.56E-05	6.86E-05	1.19E-05	3.25E-05	2.09E-05	2.15E-05	1.95E-06	2.93E-06	8.21E-10	1.10E-05	4.02E-06
11	F13	80	Passenger Truck	21	0.00E+00	3.22E-07	3.42E-08	1.33E+00	2.07E-06	7.14E-03	6.73E-07	7.60E-05	1.23E-04	2.18E-05	6.44E-05	4.20E-05	4.30E-05	9.40E-06	6.73E-06	1.83E-09	2.16E-05	1.24E-05
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.23E-07	6.11E-09	1.21E-01	9.90E-08	2.43E-04	1.31E-07	6.31E-05	7.73E-06	1.75E-06	1.50E-05	3.65E-06	3.70E-06	1.21E-05	4.87E-07	1.93E-10	1.13E-05	1.18E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	5.63E-07	4.03E-08	4.67E-01	1.78E-09	4.99E-04	4.13E-07	5.81E-04	3.41E-05	8.41E-06	3.36E-05	1.19E-05	1.18E-05	7.02E-05	1.56E-06	0.00E+00	2.18E-05	1.09E-04
11	F13	80	Combination Long Haul Truck	1	0.00E+00	5.04E-07	3.38E-08	4.32E-01	2.06E-09	5.17E-04	3.83E-07	5.62E-04	3.35E-05	6.72E-06	3.48E-05	1.02E-05	1.03E-05	6.59E-05	1.44E-06	0.00E+00	2.44E-05	1.06E-04
11	F14	80	Passenger Car	10	0.00E+00	1.24E-07	1.34E-08	4.77E-01	8.65E-07	3.19E-03	2.76E-07	2.13E-05	5.69E-05	9.88E-06	2.69E-05	1.73E-05	1.78E-05	1.62E-06	2.43E-06	6.81E-10	9.10E-06	3.33E-06
11	F14	80	Passenger Truck	17	0.00E+00	2.67E-07	2.83E-08	1.10E+00	1.71E-06	5.92E-03	5.58E-07	6.30E-05	1.02E-04	1.81E-05	5.34E-05	3.48E-05	3.56E-05	7.79E-06	5.58E-06	1.52E-09	1.79E-05	1.03E-05
11	F14	80	Single Unit Short Haul Truck	1	0.00E+00	1.02E-07	5.06E-09	1.00E-01	8.21E-08	2.01E-04	1.09E-07	5.23E-05	6.41E-06	1.45E-06	1.24E-05	3.02E-06	3.07E-06	1.00E-05	4.04E-07	1.60E-10	9.34E-06	9.79E-06
11	F14	80	Combination Short Haul Truck	1	0.00E+00	4.67E-07	3.34E-08	3.87E-01	1.47E-09	4.13E-04	3.43E-07	4.81E-04	2.83E-05	6.97E-06	2.78E-05	9.86E-06	9.80E-06	5.82E-05	1.29E-06	0.00E+00	1.80E-05	9.04E-05
11	F14	80	Combination Long Haul Truck	1	0.00E+00	4.17E-07	2.80E-08	3.58E-01	1.70E-09	4.28E-04	3.18E-07	4.66E-04	2.77E-05	5.57E-06	2.88E-05	8.48E-06	8.54E-06	5.47E-05	1.20E-06	0.00E+00	2.02E-05	8.78E-05
10	F15	70	Passenger Car	370	0.00E+00	4.78E-06	5.17E-07	1.76E+01	3.33E-05	1.20E-01	1.06E-05	7.41E-04	2.87E-03	4.60E-04	1.04E-03	6.66E-04	6.83E-04	6.63E-05	8.92E-05	2.43E-08	3.50E-04	1.16E-04
10	F15	70	Passenger Truck	619	0.00E+00	1.05E-05	1.11E-06	4.06E+01	6.62E-05	2.20E-01	2.17E-05	2.32E-03	5.21E-03	8.48E-04	2.08E-03	1.35E-03	1.38E-03	3.01E-04	2.03E-04	5.45E-08	6.91E-04	3.82E-04
10	F15	70	Single Unit Short Haul Truck	9	0.00E+00	2.12E-06	1.06E-07	1.66E+00	1.74E-06	3.34E-03	2.26E-06	1.05E-03	1.49E-04	2.99E-05	2.59E-04	6.35E-05	6.45E-05	1.67E-04	6.70E-06	2.71E-09	1.93E-04	1.96E-04
10	F15	70	Combination Short Haul Truck	20	0.00E+00	1.02E-05	7.22E-07	7.38E+00	3.30E-08	8.74E-03	7.44E-06	1.07E-02	7.71E-04	1.69E-04	6.19E-04	2.14E-04	2.13E-04	1.11E-03	2.46E-05	0.00E+00	4.05E-04	2.01E-03
10	F15	70	Combination Long Haul Truck	18	0.00E+00	9.21E-06	6.14E-07	6.88E+00	3.80E-08	9.26E-03	6.98E-06	1.05E-02	7.67E-04	1.40E-04	6.39E-04	1.86E-04	1.88E-04	1.05E-03	2.30E-05	0.00E+00	4.52E-04	1.98E-03
10	F16	70	Passenger Car	202	0.00E+00	2.60E-06	2.82E-07	9.58E+00	1.81E-05	6.55E-02	5.77E-06	4.04E-04	1.56E-03	2.51E-04	5.66E-04	3.63E-04	3.72E-04	3.61E-05	4.86E-05	1.33E-08	1.91E-04	6.33E-05
10	F16	70	Passenger Truck	338	0.00E+00	5.71E-06	6.04E-07	2.21E+01	3.61E-05	1.20E-01	1.18E-05	1.27E-03	2.84E-03	4.62E-04	1.13E-03	7.35E-04	7.54E-04	1.64E-04	1.11E-04	2.97E-08	3.77E-04	2.08E-04
10	F16	70	Single Unit Short Haul Truck	3	0.00E+00	7.51E-07	3.76E-08	5.88E-01	6.14E-07	1.18E-03	8.00E-07	3.71E-04	5.28E-05	1.06E-05	9.14E-05	2.25E-05	2.28E-05	5.89E-05	2.37E-06	9.59E-10	6.82E-05	6.94E-05
10	F16	70	Combination Short Haul Truck	11	0.00E+00	5.81E-06	4.13E-07	4.22E+00	1.89E-08	5.00E-03	4.25E-06	6.12E-03	4.41E-04	9.66E-05	3.54E-04	1.22E-04	1.22E-04	6.37E-04	1.41E-05	0.00E+00	2.32E-04	1.15E-03
10	F16	70	Combination Long Haul Truck	10	0.00E+00	5.27E-06	3.51E-07	3.94E+00	2.17E-08	5.29E-03	3.99E-06	6.03E-03	4.39E-04	8.01E-05	3.65E-04	1.06E-04	1.07E-04	6.00E-04	1.32E-05	0.00E+00	2.59E-04	1.14E-03
10	F17	70	Passenger Car	141	0.00E+00	1.82E-06	1.97E-07	6.70E+00	1.27E-05	4.58E-02	4.03E-06	2.82E-04	1.09E-03	1.76E-04	3.96E-04	2.54E-04	2.61E-04	2.53E-05	3.40E-05	9.28E-09	1.34E-04	4.43E-05
10	F17	70	Passenger Truck	236	0.00E+00	4.00E-06	4.22E-07	1.55E+01	2.53E-05	8.40E-02	8.27E-06	8.86E-04	1.99E-03	3.23E-04	7.94E-04	5.14E-04	5.27E-04	1.15E-04	7.74E-05	2.08E-08	2.64E-04	1.46E-04
10	F17	70	Single Unit Short Haul Truck	1	0.00E+00	1.29E-07	6.49E-09	1.01E-01	1.06E-07	2.04E-04	1.38E-07	6.40E-05	9.10E-06	1.82E-06	1.58E-05	3.87E-06	3.93E-06	1.02E-05	4.09E-07	1.65E-10	1.18E-05	1.20E-05
10	F17	70	Combination Short Haul Truck	14	0.00E+00	7.35E-06	5.23E-07	5.34E+00	2.39E-08	6.33E-03	5.38E-06	7.74E-03	5.58E-04	1.22E-04	4.48E-04	1.55E-04	1.54E-04	8.06E-04	1.78E-05	0.00E+00	2.94E-04	1.46E-03
10	F17	70	Combination Long Haul Truck	13	0.00E+00	6.67E-06	4.44E-07	4.98E+00	2.75E-08	6.70E-03	5.05E-06	7.63E-03	5.55E-04	1.01E-04	4.62E-04	1.34E-04	1.36E-04	7.60E-04	1.67E-05	0.00E+00	3.28E-04	1.44E-03
10	F18	70	Passenger Car	193	0.00E+00	2.49E-06	2.69E-07	9.15E+00	1.73E-05	6.26E-02	5.51E-06	3.86E-04	1.49E-03	2.40E-04	5.40E-04	3.47E-04	3.56E-04	3.45E-05	4.64E-05	1.27E-08	1.82E-04	6.04E-05
10	F18	70	Passenger Truck	322	0.00E+00	5.46E-06	5.77E-07	2.11E+01	3.45E-05	1.15E-01	1.13E-05	1.21E-03	2.71E-03	4.42E-04	1.08E-03	7.02E-04	7.20E-04	1.57E-04	1.06E-04	2.84E-08	3.60E-04	1.99E-04
10	F18	70	Single Unit Short Haul Truck	3	0.00E+00	6.82E-07	3.42E-08	5.35E-01	5.58E-07	1.07E-03	7.26E-07	3.37E-04	4.80E-05	9.59E-06	8.30E-05	2.04E-05	2.07E-05	5.35E-05	2.15E-06	8.71E-10	6.20E-05	6.30E-05
10	F18	70	Combination Short Haul Truck	16	0.00E+00	8.44E-06	6.00E-07	6.14E+00	2.74E-08	7.27E-03	6.18E-06	8.89E-03	6.41E-04	1.40E-04	5.15E-04	1.78E-04	1.77E-04	9.25E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
10	F18	70	Combination Long Haul Truck	15	0.00E+00	7.66E-06	5.10E-07	5.72E+00	3.16E-08	7.70E-03	5.80E-06	8.77E-03	6.38E-04	1.17E-04	5.31E-04	1.54E-04	1.56E-04	8.73E-04	1.91E-05	0.00E+00	3.76E-04	1.65E-03
10	F19	70	Passenger Car	285	0.00E+00	3.68E-06	3.98E-07	1.35E+01	2.56E-05	9.25E-02	8.14E-06	5.70E-04	2.21E-03	3.54E-04	7.98E-04	5.12E-04	5.26E-04	5.10E-05	6.86E-05	1.87E-08	2.70E-04	8.93E-05
10	F19	70	Passenger Truck	477	0.00E+00	8.06E-06	8.53E-07	3.12E+01	5.10E-05	1.69E-01	1.67E-05	1.79E-03	4.01E-03	6.53E-04	1.60E-03	1.04E-03	1.06E-03	2.32E-04	1.56E-04	4.20E-08	5.32E-04	2.94E-04
10	F20	70	Passenger Car	393	0.00E+00	5.08E-06	5.50E-07	1.87E+01	3.54E-05	1.28E-01	1.13E-05	7.88E-04	3.05E-03	4.89E-04	1.10E-03	7.08E-04	7.27E-04	7.05E-05	9.48E-05	2.59E-08	3.73E-04	1.23E-04
10	F20	70	Passenger Truck	659	0.00E+00	1.11E-05	1.18E-06	4.32E+01	7.04E-05	2.34E-01	2.31E-05	2.47E-03	5.54E-03	9.02E-04	2.21E-03	1.43E-03	1.47E-03	3.20E-04	2.16E-04	5.80E-08	7.36E-04	4.06E-04
10	F21	70	Passenger Car	251	0.00E+00	3.25E-06	3.51E-07	1.19E+01	2.26E-05	8.17E-02	7.19E-06	5.03E-04	1.95E-03	3.13E-04	7.05E-04	4.52E-04	4.64E-04	4.50E-05	6.06E-05	1.65E-08	2.38E-04	7.89E-05
10	F21	70	Passenger Truck	421	0.00E+00	7.12E-06	7.53E-07	2.76E+01	4.50E-05	1.50E-01	1.47E-05	1.58E-03	3.54E-03	5.76E-04	1.41E-03	9.16E-04	9.40E-04	2.05E-04	1.38E-04	3.71E-08	4.70E-04	2.59E-04
10	F21	70	Single Unit Short Haul Truck	81	0.00E+00	1.89E-05	9.50E-07	1.49E+01	1.55E-05	2.98E-02	2.02E-05	9.36E-03	1.33E-03	2.67E-04	2.31E-03	5.67E-04	5.76E-04	1.49E-03	5.98E-05	2.42E-08	1.72E-03	1.75E-03
10	F21	70	Single Unit Long Haul Truck	4	0.00E+00	8.26E-07	4.11E-08	6.30E-01	6.69E-07	1.24E-03	8.79E-07	4.02E-04	6.09E-05	1.19E-05	1.01E-04	2.45E-05	2.49E-05	6.29E-05	2.54E-06	1.02E-09	7.56E-05	7.54E-05
10	F21	70	Combination Short Haul Truck	45	0.00E+00	2.33E-05	1.65E-06	1.69E+01	7.57E-08	2.00E-02	1.70E-05	2.45E-02	1.77E-03	3.87E-04	1.42E-03	4.90E-04	4.89E-04	2.55E-03	5.65E-05	0.00E+00	9.29E-04	4.62E-03
10	F21	70	Combination Long Haul Truck	41	0.00E+00	2.11E-05	1.41E-06	1.58E+01	8.71E-08	2.12E-02	1.60E-05	2.42E-02	1.76E-03	3.21E-04	1.46E-03	4.25E-04	4.30E-04	2.41E-03	5.28E-05	0.00E+00	1.04E-03	4.55E-03
10	F22	70	Passenger Car	403	0.00E+00	5.20E-06	5.63E-07	1.91E+01	3.63E-05	1.31E-01	1.15E-05	8.07E-04	3.12E-03	5.01E-04	1.13E-03	7.25E-04	7.44E-04	7.22E-05	9.71E-05	2.65E-08	3.82E-04	1.26E-04
10	F22	70	Passenger Truck	675	0.00E+00	1.14E-05	1.21E-06	4.42E+01	7.22E-05	2.40E-01	2.36E-05	2.53E-03	5.68E-03	9.24E-04	2.27E-03	1.47E-03	1.51E-03	3.28E-04	2.21E-04	5.94E-08	7.53E-04	4.16E-04
10	F22	70	Single Unit Short Haul Truck	112	0.00E+00	2.63E-05	1.32E-06	2.06E+01	2.16E-05	4.14E-02	2.81E-05	1.30E-02	1.85E-03	3.71E-04	3.21E-03	7.88E-04	8.00E-04	2.07E-03	8.32E-05	3.36E-08	2.40E-03	2.44E-03
10	F22	70	Single Unit Long Haul Truck	5	0.00E+00	1.15E-06	5.71E-08	8.76E-01	9.30E-07	1.73E-03	1.22E-06	5.59E-04	8.46E-05	1.65E-05	1.40E-04	3.41E-05	3.46E-05	8.75E-05	3.53E-06	1.41E-09	1.05E-04	1.05E-04
10	F22	70	Combination Short Haul Truck	57	0.00E+00	2.97E-05	2.11E-06	2.16E+01	9.67E-08	2.56E-02	2.18E-05	3.13E-02	2.26E-03	4.94E-04	1.81E-03	6.26E-04	6.25E-04	3.26E-03	7.22E-05	0.00E+00	1.19E-03	5.90E-03
10	F22	70	Combination Long Haul Truck	52	0.00E+00	2.70E-05	1.80E-06	2.02E+01	1.11E-07	2.71E-02	2.04E-05	3.09E-02	2.25E-03	4.10E-04	1.87E-03	5.44E-04	5.49E-04	3.07E-03	6.74E-05	0.00E+00	1.33E-03	5.81E-03
10	F23	70	Passenger Car	93	0.00E+00	1.20E-06	1.29E-07	4.40E+00	8.33E-06	3.01E-02	2.65E-06	1.85E-04	7.17E-04	1.15E-04	2.60E-04	1.67E-04	1.71E-04	1.66E-05	2.23E-05	6.09E-09	8.77E-05	2.91E-05
10	F23	70	Passenger Truck	155	0.00E+00	2.62E-06	2.77E-07	1.02E+01	1.66E-05	5.51E-02	5.42E-06	5.81E-04	1.30E-03	2.12E-04	5.21E-04	3.38E-04	3.46E-04	7.53E-05	5.08E-05	1.36E-08	1.73E-04	9.56E-05
10	F23	70	Single Unit Short Haul Truck	20	0.00E+00	4.80E-06	2.41E-07	3.76E+00	3.93E-06	7.55E-03	5.11E-06	2.37E-03	3.38E-04	6.76E-05	5.85E-04	1.44E-04	1.46E-04	3.77E-04	1.52E-05	6.13E-09	4.37E-04	4.44E-04
10	F23	70	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07	1.04E-08	1.60E-01	1.70E-07	3.15E-04	2.23E-07	1.02E-04	1.54E-05	3.00E-06	2.55E-05	6.21E-06	6.31E-06	1.59E-05	6.43E-07	2.58E-10	1.92E-05	1.91E-05
10	F23	70	Combination Short Haul Truck	12	0.00E+00	6.35E-06	4.52E-07	4.62E+00	2.07E-08	5.47E-03	4.65E-06	6.69E-03	4.82E-04	1.06E-04	3.87E-04	1.34E-04	1.33E-04	6.96E-04	1.54E-05	0.00E+00	2.54E-04	1.26E-03
10	F23	70	Combination Long Haul Truck	11	0.00E+00	5.76E-06	3.84E-07	4.31E+00	2.38E-08	5.79E-03	4.37E-06	6.60E-03	4.80E-04	8.76E-05	4.00E-04	1.16E-04	1.17E-04	6.57E-04	1.44E-05	0.00E+00	2.83E-04	1.24E-03
10	F24	70	Passenger Car	138	0.00E+00	1.79E-06	1.93E-07	6.58E+00	1.25E-05	4.50E-02	3.96E-06	2.77E-04	1.07E-03	1.72E-04	3.88E-04	2.49E-04	2.56E-04	2.48E-05	3.34E-05	9.11E-09	1.31E-04	4.35E-05
10	F24	70	Passenger Truck	232	0.00E+00	3.92E-06	4.15E-07	1.52E+01	2.48E-05	8.24E-02	8.11E-06	8.69E-04	1.95E-03	3.17E-04	7.79E-04	5.05E-04	5.18E-04	1.13E-04	7.60E-05	2.04E-08	2.59E-04	1.43E-04
10	F24	70	Single Unit Short Haul Truck	27	0.00E+00	6.29E-06	3.15E-07	4.93E+00	5.15E-06	9.89E-03	6.70E-06	3.11E-03	4.43E-04	8.85E-05	7.66E-04	1.88E-04	1.91E-04	4.94E-04	1.99E-05	8.03E-09	5.72E-04	5.82E-04
10	F24	70	Single Unit Long Haul Truck	1	0.00E+00	2.74E-07	1.36E-08	2.09E-01	2.22E-07	4.13E-04	2.92E-07	1.34E-04	2.02E-05	3.94E-06	3.35E-05	8.14E-06	8.27E-06	2.09E-05	8.43E-07	3.38E-10	2.51E-05	2.50E-05
10	F24	70	Combination Short Haul Truck	15	0.00E+00	7.63E-06	5.43E-07	5.55E+00	2.48E-08	6.57E-03	5.59E-06	8.04E-03	5.79E-04	1.27E-04	4.65E-04	1.61E-04	1.60E-04	8.36E-04	1.85E-05	0.00E+00	3.05E-04	1.51E-03
10	F24	70	Combination Long Haul Truck	13	0.00E+00	6.92E-06	4.61E-07	5.17E+00	2.86E-08	6.96E-03	5.25E-06	7.93E-03	5.77E-04	1.05E-04	4.80E-04	1.40E-04	1.41E-04	7.89E-04	1.73E-05	0.00E+00	3.40E-04	1.49E-03
9	F25	60	Passenger Car	365	0.00E+00	5.41E-06	5.85E-07

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F28	60	Combination Long Haul Truck	65	0.00E+00	3.75E-05	2.45E-06	2.56E+01	1.70E-07	3.95E-02	2.90E-05	4.50E-02	3.91E-03	6.65E-04	2.74E-03	7.46E-04	7.55E-04	3.89E-03	8.54E-05	0.00E+00	1.98E-03	8.50E-03
9	F29	60	Passenger Car	394	0.00E+00	5.83E-06	6.31E-07	1.96E+01	4.06E-05	1.45E-01	1.30E-05	8.03E-04	3.99E-03	6.14E-04	1.26E-03	8.14E-04	8.35E-04	8.22E-05	9.90E-05	2.72E-08	4.28E-04	1.26E-04
9	F29	60	Passenger Truck	659	0.00E+00	1.29E-05	1.36E-06	4.47E+01	8.04E-05	2.60E-01	2.66E-05	2.62E-03	7.33E-03	1.14E-03	2.53E-03	1.64E-03	1.68E-03	3.50E-04	2.23E-04	6.19E-08	8.39E-04	4.34E-04
9	F29	60	Single Unit Short Haul Truck	27	0.00E+00	8.01E-06	4.00E-07	5.09E+00	6.58E-06	9.83E-03	8.54E-06	3.82E-03	6.47E-04	1.17E-04	9.68E-04	2.40E-04	2.43E-04	5.09E-04	2.06E-05	8.47E-09	7.27E-04	7.15E-04
9	F29	60	Single Unit Long Haul Truck	1	0.00E+00	3.50E-07	1.74E-08	2.17E-01	2.86E-07	4.17E-04	3.73E-07	1.65E-04	2.91E-05	5.20E-06	4.27E-05	1.04E-05	1.06E-05	2.17E-05	8.77E-07	3.60E-10	3.19E-05	3.09E-05
9	F29	60	Combination Short Haul Truck	18	0.00E+00	1.04E-05	7.24E-07	6.75E+00	3.67E-08	9.04E-03	7.68E-06	1.12E-02	9.63E-04	1.91E-04	6.60E-04	2.15E-04	2.15E-04	1.02E-03	2.25E-05	0.00E+00	4.43E-04	2.12E-03
9	F29	60	Combination Long Haul Truck	16	0.00E+00	9.27E-06	6.06E-07	6.33E+00	4.20E-08	9.76E-03	7.18E-06	1.11E-02	9.67E-04	1.64E-04	6.78E-04	1.85E-04	1.87E-04	9.63E-04	2.11E-05	0.00E+00	4.90E-04	2.10E-03
9	F30	60	Passenger Car	263	0.00E+00	3.90E-06	4.22E-07	1.31E+01	2.71E-05	9.72E-02	8.70E-06	5.36E-04	2.67E-03	4.10E-04	8.40E-04	5.44E-04	5.58E-04	5.50E-05	6.61E-05	1.82E-08	2.86E-04	8.40E-05
9	F30	60	Passenger Truck	441	0.00E+00	8.59E-06	9.08E-07	2.99E+01	5.37E-05	1.74E-01	1.77E-05	1.75E-03	4.90E-03	7.60E-04	1.69E-03	1.10E-03	1.12E-03	2.34E-04	1.49E-04	4.14E-08	5.61E-04	2.90E-04
9	F30	60	Single Unit Short Haul Truck	22	0.00E+00	6.51E-06	3.25E-07	4.14E+00	5.35E-06	7.99E-03	6.94E-06	3.10E-03	5.26E-04	9.53E-05	7.87E-04	1.95E-04	1.98E-04	4.14E-04	1.67E-05	6.88E-09	5.91E-04	5.81E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	2.85E-07	1.41E-08	1.77E-01	2.33E-07	3.39E-04	3.04E-07	1.34E-04	2.36E-05	4.23E-06	3.47E-05	8.48E-06	8.62E-06	1.76E-05	7.13E-07	2.93E-10	2.60E-05	2.52E-05
9	F30	60	Combination Short Haul Truck	14	0.00E+00	8.33E-06	5.81E-07	5.42E+00	2.95E-08	7.27E-03	6.17E-06	9.03E-03	7.74E-04	1.53E-04	5.30E-04	1.73E-04	1.73E-04	8.17E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F30	60	Combination Long Haul Truck	13	0.00E+00	7.45E-06	4.87E-07	5.09E+00	3.38E-08	7.84E-03	5.77E-06	8.95E-03	7.77E-04	1.32E-04	5.44E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.94E-04	1.69E-03
10	F45	70	Passenger Car	186	0.00E+00	2.40E-06	2.60E-07	8.83E+00	1.67E-05	6.04E-02	5.32E-06	3.72E-04	1.44E-03	2.31E-04	5.22E-04	3.35E-04	3.43E-04	3.33E-05	4.48E-05	1.22E-08	1.76E-04	5.84E-05
10	F45	70	Passenger Truck	311	0.00E+00	5.27E-06	5.57E-07	2.04E+01	3.33E-05	1.11E-01	1.09E-05	1.17E-03	2.62E-03	4.26E-04	1.05E-03	6.78E-04	6.95E-04	1.51E-04	1.02E-04	2.74E-08	3.48E-04	1.92E-04
10	F45	70	Single Unit Short Haul Truck	15	0.00E+00	3.57E-06	1.79E-07	2.80E+00	2.92E-06	5.61E-03	3.80E-06	1.76E-03	2.51E-04	5.02E-05	4.35E-04	1.07E-04	1.08E-04	2.80E-04	1.13E-05	4.56E-09	3.25E-04	3.30E-04
10	F45	70	Single Unit Long Haul Truck	1	0.00E+00	1.56E-07	7.75E-09	1.19E-01	1.26E-07	2.35E-04	1.66E-07	7.58E-05	1.15E-05	2.23E-06	1.90E-05	4.62E-06	4.69E-06	1.19E-05	4.79E-07	1.92E-10	1.42E-05	1.42E-05
10	F45	70	Combination Short Haul Truck	15	0.00E+00	7.90E-06	5.62E-07	5.74E+00	2.57E-08	6.80E-03	5.79E-06	8.32E-03	6.00E-04	1.31E-04	4.82E-04	1.66E-04	1.66E-04	8.66E-04	1.92E-05	0.00E+00	3.16E-04	1.57E-03
10	F45	70	Combination Long Haul Truck	14	0.00E+00	7.16E-06	4.78E-07	5.35E+00	2.96E-08	7.20E-03	5.43E-06	8.20E-03	5.97E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.17E-04	1.79E-05	0.00E+00	3.52E-04	1.54E-03
10	F46	70	Passenger Car	186	0.00E+00	2.40E-06	2.60E-07	8.82E+00	1.67E-05	6.04E-02	5.32E-06	3.72E-04	1.44E-03	2.31E-04	5.21E-04	3.34E-04	3.43E-04	3.33E-05	4.48E-05	1.22E-08	1.76E-04	5.83E-05
10	F46	70	Passenger Truck	311	0.00E+00	5.26E-06	5.57E-07	2.04E+01	3.33E-05	1.11E-01	1.09E-05	1.17E-03	2.62E-03	4.26E-04	1.05E-03	6.78E-04	6.95E-04	1.51E-04	1.02E-04	2.74E-08	3.47E-04	1.92E-04
10	F46	70	Single Unit Short Haul Truck	2	0.00E+00	3.63E-07	1.82E-08	2.85E-01	2.97E-07	5.71E-04	3.87E-07	1.79E-04	2.55E-05	5.11E-06	4.42E-05	1.09E-05	1.10E-05	2.85E-05	1.15E-06	4.64E-10	3.30E-05	3.36E-05
10	F46	70	Combination Short Haul Truck	7	0.00E+00	3.65E-06	2.60E-07	2.66E+00	1.19E-08	3.14E-03	2.67E-06	3.85E-03	2.77E-04	6.07E-05	2.23E-04	7.69E-05	7.67E-05	4.00E-04	8.86E-06	0.00E+00	1.46E-04	7.24E-04
10	F46	70	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.21E-07	2.47E+00	1.37E-08	3.33E-03	2.51E-06	3.79E-03	2.76E-04	5.04E-05	2.30E-04	6.68E-05	6.75E-05	3.77E-04	8.28E-06	0.00E+00	1.63E-04	7.14E-04
9	F47	60	Passenger Car	9	0.00E+00	1.31E-07	1.42E-08	4.39E-01	9.10E-07	3.26E-03	2.92E-07	1.80E-05	8.95E-05	1.38E-05	2.82E-05	1.82E-05	1.87E-05	1.84E-06	2.22E-06	6.11E-10	9.59E-06	2.82E-06
9	F47	60	Passenger Truck	15	0.00E+00	2.88E-07	3.05E-08	1.00E+00	1.80E-06	5.83E-03	5.95E-07	5.87E-05	1.64E-04	2.55E-05	5.67E-05	3.68E-05	3.77E-05	7.84E-06	5.01E-06	1.39E-09	1.88E-05	9.73E-06
9	F47	60	Combination Short Haul Truck	1	0.00E+00	3.81E-07	2.66E-08	2.48E-01	1.35E-09	3.33E-04	2.82E-07	4.14E-04	3.54E-05	7.01E-06	2.43E-05	7.91E-06	7.91E-06	3.74E-05	8.29E-07	0.00E+00	1.63E-05	7.81E-05
9	F47	60	Combination Long Haul Truck	1	0.00E+00	3.41E-07	2.23E-08	2.33E-01	1.55E-09	3.59E-04	2.64E-07	4.10E-04	3.56E-05	6.05E-06	2.49E-05	6.79E-06	6.87E-06	3.54E-05	7.77E-07	0.00E+00	1.80E-05	7.74E-05
9	F48	60	Passenger Car	1	0.00E+00	2.10E-08	2.27E-09	7.06E-02	1.46E-07	5.24E-04	4.69E-08	2.89E-06	1.44E-05	2.21E-06	4.53E-06	2.93E-06	3.01E-06	2.96E-07	3.57E-07	9.82E-11	1.54E-06	4.53E-07
9	F48	60	Passenger Truck	2	0.00E+00	4.63E-08	4.90E-09	1.61E-01	2.90E-07	9.37E-04	9.57E-08	9.44E-06	2.64E-05	4.10E-06	9.11E-06	5.92E-06	6.07E-06	1.26E-06	8.05E-07	2.23E-10	3.02E-06	1.56E-06
9	F49	60	Passenger Car	729	0.00E+00	1.08E-05	1.17E-06	3.63E+01	7.51E-05	2.69E-01	2.41E-05	1.49E-03	7.39E-03	1.14E-03	2.33E-03	1.51E-03	1.55E-03	1.52E-04	1.83E-04	5.04E-08	7.92E-04	2.33E-04
9	F49	60	Passenger Truck	1221	0.00E+00	2.38E-05	2.52E-06	8.28E+01	1.49E-04	4.82E-01	4.92E-05	4.85E-03	1.36E-02	2.11E-03	4.68E-03	3.04E-03	3.12E-03	6.48E-04	4.14E-04	1.15E-07	1.55E-03	8.04E-04
9	F49	60	Single Unit Short Haul Truck	144	0.00E+00	4.23E-05	2.11E-06	2.69E+01	3.48E-05	5.19E-02	4.51E-05	2.02E-02	3.42E-03	6.19E-04	5.11E-03	1.27E-03	1.28E-03	2.69E-03	1.09E-04	4.47E-08	3.84E-03	3.78E-03
9	F49	60	Single Unit Long Haul Truck	6	0.00E+00	1.85E-06	9.17E-08	1.15E+00	1.51E-06	2.20E-03	1.97E-06	8.71E-04	1.53E-04	2.75E-05	2.25E-04	5.51E-05	5.60E-05	1.15E-04	4.63E-06	1.90E-09	1.69E-04	1.63E-04
9	F49	60	Combination Short Haul Truck	80	0.00E+00	4.68E-05	3.27E-06	3.05E+01	1.66E-07	4.09E-02	3.47E-05	5.08E-02	4.35E-03	8.61E-04	2.98E-03	9.72E-04	9.72E-04	4.59E-03	1.02E-04	0.00E+00	2.00E-03	9.58E-03
9	F49	60	Combination Long Haul Truck	72	0.00E+00	4.19E-05	2.74E-06	2.86E+01	1.90E-07	4.41E-02	3.24E-05	5.03E-02	4.37E-03	7.43E-04	3.06E-03	8.34E-04	8.44E-04	4.35E-03	9.55E-05	0.00E+00	2.22E-03	9.51E-03
9	F50	60	Passenger Car	804	0.00E+00	1.19E-05	1.29E-06	4.00E+01	8.29E-05	2.97E-01	2.66E-05	1.64E-03	8.15E-03	1.25E-03	2.57E-03	1.66E-03	1.70E-03	1.68E-04	2.02E-04	5.56E-08	8.73E-04	2.57E-04
9	F50	60	Passenger Truck	1347	0.00E+00	2.63E-05	2.78E-06	9.13E+01	1.64E-04	5.31E-01	5.42E-05	5.35E-03	1.50E-02	2.32E-03	5.16E-03	3.36E-03	3.44E-03	7.15E-04	4.56E-04	1.26E-07	1.71E-03	8.87E-04
9	F50	60	Single Unit Short Haul Truck	129	0.00E+00	3.81E-05	1.90E-06	2.42E+01	3.13E-05	4.67E-02	4.06E-05	1.81E-02	3.07E-03	5.57E-04	4.60E-03	1.14E-03	1.16E-03	2.42E-03	9.77E-05	4.02E-08	3.46E-03	3.40E-03
9	F50	60	Single Unit Long Haul Truck	6	0.00E+00	1.66E-06	8.25E-08	1.03E+00	1.36E-06	1.98E-03	1.77E-06	7.84E-04	1.38E-04	2.47E-05	2.03E-04	4.96E-05	5.04E-05	1.03E-04	4.17E-06	1.71E-09	1.52E-04	1.47E-04
9	F50	60	Combination Short Haul Truck	63	0.00E+00	3.70E-05	2.58E-06	2.41E+01	1.31E-07	3.23E-02	2.74E-05	4.01E-02	3.43E-03	6.80E-04	2.35E-03	7.67E-04	7.67E-04	3.63E-03	8.04E-05	0.00E+00	1.58E-03	7.57E-03
9	F50	60	Combination Long Haul Truck	57	0.00E+00	3.31E-05	2.16E-06	2.26E+01	1.50E-07	3.48E-02	2.56E-05	3.97E-02	3.45E-03	5.87E-04	2.42E-03	6.58E-04	6.66E-04	3.43E-03	7.54E-05	0.00E+00	1.75E-03	7.50E-03
10	F51	70	Passenger Car	250	0.00E+00	3.23E-06	3.49E-07	1.19E+01	2.25E-05	8.12E-02	7.15E-06	5.00E-04	1.94E-03	3.11E-04	7.01E-04	4.50E-04	4.61E-04	4.47E-05	6.02E-05	1.64E-08	2.37E-04	7.84E-05
10	F51	70	Passenger Truck	418	0.00E+00	7.08E-06	7.48E-07	2.74E+01	4.47E-05	1.49E-01	1.46E-05	1.57E-03	3.52E-03	5.73E-04	1.41E-03	9.11E-04	9.34E-04	2.03E-04	1.37E-04	3.68E-08	4.67E-04	2.58E-04
10	F51	70	Single Unit Short Haul Truck	82	0.00E+00	1.94E-05	9.70E-07	1.52E+01	1.58E-05	3.04E-02	2.06E-05	9.56E-03	1.36E-03	2.72E-04	2.36E-03	5.79E-04	5.88E-04	1.52E-03	6.11E-05	2.47E-08	1.76E-03	1.79E-03
10	F51	70	Single Unit Long Haul Truck	4	0.00E+00	8.44E-07	4.20E-08	6.44E-01	6.83E-07	1.27E-03	8.98E-07	4.11E-04	6.22E-05	1.21E-05	1.03E-04	2.50E-05	2.54E-05	6.43E-05	2.59E-06	1.04E-09	7.72E-05	7.70E-05
10	F51	70	Combination Short Haul Truck	37	0.00E+00	1.90E-05	1.35E-06	1.38E+01	6.18E-08	1.64E-02	1.39E-05	2.00E-02	1.44E-03	3.16E-04	1.16E-03	4.01E-04	4.00E-04	2.08E-03	4.62E-05	0.00E+00	7.60E-04	3.77E-03
10	F51	70	Combination Long Haul Truck	33	0.00E+00	1.72E-05	1.15E-06	1.29E+01	7.12E-08	1.73E-02	1.31E-05	1.98E-02	1.44E-03	2.62E-04	1.20E-03	3.48E-04	3.51E-04	1.97E-03	4.31E-05	0.00E+00	8.48E-04	3.72E-03
10	F52	70	Passenger Car	751	0.00E+00	9.70E-06	1.05E-06	3.57E+01	6.76E-05	2.44E-01	2.15E-05	1.50E-03	5.82E-03	9.34E-04	2.11E-03	1.35E-03	1.39E-03	1.35E-04	1.81E-04	4.94E-08	7.11E-04	2.36E-04
10	F52	70	Passenger Truck	1257	0.00E+00	2.13E-05	2.25E-06	8.24E+01	1.34E-04	4.47E-01	4.40E-05	4.71E-03	1.06E-02	1.72E-03	4.23E-03	2.74E-03	2.81E-03	6.11E-04	4.12E-04	1.11E-07	1.40E-03	7.75E-04
10	F52	70	Single Unit Short Haul Truck	56	0.00E+00	1.31E-05	6.54E-07	1.02E+01	1.07E-05	2.05E-02	1.39E-05	6.45E-03	9.18E-04	1.84E-04	1.59E-03	3.90E-04	3.97E-04	1.02E-03	4.12E-05	1.67E-08	1.19E-03	1.21E-03
10	F52	70	Single Unit Long Haul Truck	2	0.00E+00	5.69E-07	2.83E-08	4.34E-01	4.61E-07	8.57E-04	6.06E-07	2.77E-04	4.19E-05	8.17E-06	6.94E-05	1.69E-05	1.71E-05	4.34E-05	1.75E-06	7.01E-10	5.21E-05	5.19E-05
10	F52	70	Combination Short Haul Truck	29	0.00E+00	1.49E-05	1.06E-06	1.09E+01	4.86E-08	1.29E-02	1.09E-05	1.57E-02	1.13E-03	2.49E-04	9.11E-04	3.15E-04	3.14E-04	1.64E-03	3.63E-05	0.00E+00	5.97E-04	2.96E-03
10	F52	70	Combination Long Haul Truck	26	0.00E+00	1.36E-05	9.04E-07	1.01E+01	5.60E-08	1.36E-02	1.03E-05	1.55E-02	1.13E-03	2.06E-04	9.40E-04	2.73E-04	2.76E-04	1.54E-03	3.39E-05	0.00E+00	6.66E-04	2.92E-03
10	F53	70	Passenger Car	230	0.00E+00	2.97E-06	3.21E-07	1.09E+01	2.07E-05	7.46E-02	6.57E-06	4.60E-04	1.78E-03	2.86E-04	6.44E-04	4.13E-04	4.24E-04	4.11E-05	5.54E-05	1.51E-08	2.17E-04	7.21E-05
10	F53	70	Passenger Truck	384	0.00E+00	6.50E-06	6.88E-07	2.52E+01	4.11E-05	1.37E-01	1.35E-05	1.44E-03	3.24E-03	5.26E-04	1.29E-03	8.37E-04	8.59E-04	1.87E-04	1.26E-04	3.39E-08	4.29E-04	2.37E-04
10	F53	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.54E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.74E-04	6.73E-05	6.84E-05	1.77E-04	7.10E-06	2.87E-09	2.05E-04	2.08E-04
10	F53	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.78E+00	7.95E-09	2.11E-03	1.79E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.85E-04
10	F53	70	Combination Long Haul Truck	4	0.00E+00	2.22E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.37E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.54E-06	0.00E+00	1.09E-04	4.78E-04
10	F54	70	Passenger Car	644	0.00E+00	8.32E-06	9.00E-07	3.06E+01	5.80E-05	2.09E-01	1.84E-05	1.29E-03	4.99E-03	8.02E-04	1.81E-03	1.16E-03	1.19E-03	1.15E-04	1.55E-04	4.24E-08	6.10E-04	2.02E-04
10	F54	70	Passenger Truck	1079	0.00E+00	1.82E-05	1.93E-06	7.07E+01	1.15E-04	3.84E-01	3.78E-05	4.05E-03	9.08E-03	1.48E-03	3.63E-03	2.35E-03	2.41E-03	5.24E-04	3.54E-04	9.50E-08	1.20E-03	6.65E-04
10	F54	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.95E-06	5.66E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.38E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.60E-09	3.27E-04	3.33E-04
10	F54	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.81E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.64E-05	1.16E-05	2.25E-06	1.91E-05	4.66E-06	4.73E-06	1.20E-05	4.82E-07	1.93E-10	1.44E-05	1.43E-05
10	F54	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.09E-04	6.78E-05	2.48E-04	8.59E-05	8.56E-05	4.47E-04	9.89E-06	0.00E+00	1.63E-04	8.09E-04
10	F54	70	Combination Long Haul Truck	7	0.00E+00	3.70E-06	2.46E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.62E-05	2.56E-04	7.45E-05	7.53E-05	4.21E-04	9.24E-06	0.00E+00	1.82E-04	7.97E-04
53	F71	70	Passenger Car	317	0.00E+00	3.97E-06	4.29E-07	1.52E+01	2.76E-05	9.86E-02	8.80E-06	6.46E-04	2.42E-03	3.90E-04	8.58E-04	5.54E-04	5.68E-04	5.68E-05	7.73E-05	2.10E-08	2.91E-04	1.01E-04
53	F71	70	Passenger Truck	531	0.00E+00	8.64E-06	9.14E-07	3.51E+01	5.47E-05	1.81E-01	1.80E-05	1.98E-03	4.35E-03	7.09E-04	1.71E-03	1.11E-03	1.14E-03	2.57E-04	1.77E-04	4.63E-08	5.72E-04	3.24E-04
53	F71	70	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	5.36E-08	8.39E-01	8.76E-07	1.68E-03	1.14E-06	5.29E-04	7.53E-05	1.51E-05	1.30E-04	3.20E-05	3.25E-05	8.40E-05	3.38E-06	1.37E-09	9.73E-05	9.89E-05
53	F71	70	Combination Short Haul Truck	4	0.00E+00	2.32E-06	1.65E-07	1.69E+00	7.54E-09	2.00E-03	1.70E-06	2.44E-03	1.76E-04	3.86E-05	1.41E-04	4.89E-05	4.88E-05	2.54E-04	5.63E-06	0.00E+00	9.27E-05	4.60E-04
53	F71	70	Combination Long Haul Truck	4	0.00E+00	2.10E-06	1.40E-07	1.57E+00	8.69E-09	2.12E-03	1.60E-06	2.41E-03	1.75E-04	3.20E-05	1.46E-04	4.24E-05	4.29E-05	2.40E-04	5.26E-06	0.00E+00	1.03E-04	4.54E-04
50	F72	40	Passenger Car	281	0.00E+00	4.67E-06	5.05E-07	1.62E+01	3.25E-05	1.15E-01	1.04E-05	5.08E-04	4.86E-03	6.94E-04	1.01E-03	6.51E-04	6.69E-04	8.82E-05	8.11E-05	1.97E-08	3.42E-04	7.96E-05
50	F72	40	Passenger Truck	470	0.00E+00	1.07E-05	1.12E-06	3.59E+01	6.40E-05	2.00E-01	2.14E-05	1.92E-03	8.62E-03	1.23E-03	2.01E-03	1.32E-03	1.35E-03	3.11E-04	1.79E-04	3.83E-08	6.65E-04	3.25E-04
50	F72	40	Single Unit Short Haul Truck	44	0.00E+00	1.94E-05	1.02E-06	9.32E+00	1.69E-05	1.60E-02	2.06E-05	9.51E-03	1.77E-03	2.94E-04	2.30E-03	6.06E-04	6.16E-04	9.41E-04	3.76E-05	1.59E-08	1.68E-03	1.79E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	8.52E-07	4.44E-08	4.02E-01	7.39E-07	6.96E-04	9.05E-07	4.14E-04	7.93E-05	1.31E-05	1.01E-04	2.65E-05	2.69E-05	4.07E-05	1.62E-06	6.91E-10	7.39E-05	7.77E-05
50	F72	40	Combination Short Haul Truck	20	0.00E+00	1.76E-05	1.22E-06	8.94E+00	6.35E-08	1.53E-02	1.31E-05	1.96E-02	2.05E-03	3.69E-04	1.14E-03	3.64E-04	3.68E-04	1.35E-03	2.99E-05	0.00E+00	7.73E-04	3.70E-03
50	F72	40	Combination Long Haul Truck	18	0.00E+00	1.61E-05	1.05E-06	8.50E+00	7.20E-08	1.71E-02	1.23E-05	1.97E-02	2.06E-03	3.28E-04	1.17E-03	3.19E-04	3.25E-04	1.30E-03	2.84E-05	0.00E+00	8.50E-04	3.71E-03
52	F73	60	Passenger Car	23	0.00E+00	3.10E-07	3.36E-08	1.13E+00	2.16E-06	7.73E-03	6.91E-07	4.48E-05	2.25E-04	3.46E-05	6.72E-05	4.33E-05	4.44E-05	4.76E-06	5.73E-06	1.53E-09	2.27E-05	7.03E-06
52	F73	60	Passenger Truck	38	0.00E+00	6.82E-07	7.20E-08	2.59E+00	4.26E-06	1.38E-02	1.40E-06	1.44E-04	4.01E-04	6.21E-05	1.34E-04	8.69E-05	8.90E-05	1.98E-05	1.29E-05	3.25E-09	4.44E-05	2.39E-05
53	F74	70	Passenger Car	314	0.00E+00	3.94E-06	4.25E-07	1.51E+01	2.74E-05	9.78E-02	8.73E-06	6.41E-04	2.40E-03	3.87E-04	8.52E-04	5.49E-04	5.63E-04	5.63E-05	7.67E-05	2.09E-08	2.88E-04	1.00E-04
53	F74	70	Passenger Truck	527	0.00E+00	8.57E-06	9.07E-07	3.48E+01	5.43E-05	1.80E-01	1.78E-05	1.96E-03	4.32E-03	7.04E-04	1.70E-03	1.11E-03	1.13E-03	2.55E-04	1.76E-04	4.59E-08	5.68E-04	3.22E-04
53	F74	70	Single Unit Short Haul Truck	115	0.00E+00	2.71E-05	1.36E-06	2.13E+01	2.22E-05	4.27E-02	2.89E-05	1.34E-02	1.91E-03	3.82E-04	3.30E-03	8.11E-04	8.24E-04	2.13E-03	8.56E-05	3.46E-08	2.47E-03	2.51E-03
53	F74	70	Single Unit Long Haul Truck	5	0.00E+00	1.18E-06	5.88E-08	9.02E-01	9.58E-07	1.78E-03	1.26E-06	5.76E-04	8.71E-05	1.70E-05	1.44E-04	3.51E-05	3.56E-05	9.01E-05	3.64E-06	1.46E-09	1.08E-04	1.08E-04
53	F74	70	Combination Short Haul Truck	57	0.00E+00	2.97

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.69E-07	8.36E-09	1.05E-01	1.38E-07	2.01E-04	1.80E-07	7.95E-05	1.40E-05	2.50E-06	2.05E-05	5.02E-06	5.10E-06	1.05E-05	4.22E-07	1.73E-10	1.54E-05	1.49E-05
52	F79	60	Combination Short Haul Truck	8	0.00E+00	4.73E-06	3.30E-07	3.08E+00	1.67E-08	4.13E-03	3.50E-06	5.13E-03	4.40E-04	8.71E-05	3.01E-04	9.82E-05	9.82E-05	4.64E-04	1.03E-05	0.00E+00	2.02E-04	9.69E-04
52	F79	60	Combination Long Haul Truck	7	0.00E+00	4.23E-06	2.77E-07	2.89E+00	1.92E-08	4.46E-03	3.28E-06	5.09E-03	4.42E-04	7.51E-05	3.09E-04	8.43E-05	8.53E-05	4.40E-04	9.65E-06	0.00E+00	2.24E-04	9.61E-04
53	F80	70	Passenger Car	548	0.00E+00	6.86E-06	7.41E-07	2.63E+01	4.78E-05	1.70E-01	1.52E-05	1.12E-03	4.18E-03	6.74E-04	1.48E-03	9.57E-04	9.81E-04	9.81E-05	1.34E-04	3.64E-08	5.02E-04	1.75E-04
53	F80	70	Passenger Truck	917	0.00E+00	1.49E-05	1.58E-06	6.06E+01	9.45E-05	3.13E-01	3.11E-05	3.41E-03	7.52E-03	1.23E-03	2.96E-03	1.93E-03	1.97E-03	4.43E-04	3.06E-04	8.00E-08	9.89E-04	5.61E-04
53	F80	70	Single Unit Short Haul Truck	14	0.00E+00	3.30E-06	1.66E-07	2.59E+00	2.70E-06	5.19E-03	3.52E-06	1.63E-03	2.32E-04	4.65E-05	4.02E-04	9.88E-05	1.00E-04	2.59E-04	1.04E-05	4.22E-09	3.00E-04	3.05E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.44E-07	7.17E-09	1.10E-01	1.17E-07	2.17E-04	1.53E-07	7.01E-05	1.06E-05	2.07E-06	1.76E-05	4.27E-06	4.34E-06	1.10E-05	4.43E-07	1.77E-10	1.32E-05	1.31E-05
53	F80	70	Combination Short Haul Truck	6	0.00E+00	3.29E-06	2.34E-07	2.39E+00	1.07E-08	2.83E-03	2.41E-06	3.46E-03	2.50E-04	5.47E-05	2.00E-04	6.93E-05	6.91E-05	3.60E-04	7.98E-06	0.00E+00	1.31E-04	6.52E-04
53	F80	70	Combination Long Haul Truck	6	0.00E+00	2.98E-06	1.99E-07	2.23E+00	1.23E-08	3.00E-03	2.26E-06	3.41E-03	2.49E-04	4.54E-05	2.07E-04	6.01E-05	6.08E-05	3.40E-04	7.46E-06	0.00E+00	1.47E-04	6.43E-04
52	F81	60	Passenger Car	214	0.00E+00	2.92E-06	3.15E-07	1.07E+01	2.03E-05	7.26E-02	6.49E-06	4.21E-04	2.11E-03	3.25E-04	6.31E-04	4.07E-04	4.17E-04	4.48E-05	5.39E-05	1.44E-08	2.14E-04	6.61E-05
52	F81	60	Passenger Truck	359	0.00E+00	6.41E-06	6.77E-07	2.43E+01	4.00E-05	1.30E-01	1.32E-05	1.36E-03	3.77E-03	5.83E-04	1.26E-03	8.16E-04	8.36E-04	1.86E-04	1.22E-04	3.05E-08	4.17E-04	2.24E-04
52	F81	60	Single Unit Short Haul Truck	123	0.00E+00	3.61E-05	1.80E-06	2.29E+01	2.96E-05	4.43E-02	3.85E-05	1.72E-02	2.91E-03	5.28E-04	4.36E-03	1.08E-03	1.10E-03	2.29E-03	9.26E-05	3.81E-08	3.27E-03	3.22E-03
52	F81	60	Single Unit Long Haul Truck	5	0.00E+00	1.58E-06	7.82E-08	9.79E-01	1.29E-06	1.88E-03	1.68E-06	7.43E-04	1.31E-04	2.34E-05	1.92E-04	4.70E-05	4.77E-05	9.77E-05	3.95E-06	1.62E-09	1.44E-04	1.39E-04
52	F81	60	Combination Short Haul Truck	54	0.00E+00	3.20E-05	2.23E-06	2.08E+01	1.13E-07	2.79E-02	2.37E-05	3.47E-02	2.97E-03	5.88E-04	2.04E-03	6.64E-04	6.64E-04	3.14E-03	6.95E-05	0.00E+00	1.37E-03	6.55E-03
52	F81	60	Combination Long Haul Truck	50	0.00E+00	2.86E-05	1.87E-06	1.95E+01	1.30E-07	3.01E-02	2.21E-05	3.44E-02	2.98E-03	5.07E-04	2.09E-03	5.69E-04	5.76E-04	2.97E-03	6.52E-05	0.00E+00	1.51E-03	6.49E-03
50	F82	40	Passenger Car	55	0.00E+00	9.06E-07	9.80E-08	3.13E+00	6.30E-06	2.24E-02	2.01E-06	9.86E-05	9.43E-04	1.35E-04	1.95E-04	1.26E-04	1.30E-04	1.71E-05	1.58E-05	3.82E-09	6.63E-05	1.54E-05
50	F82	40	Passenger Truck	91	0.00E+00	2.07E-06	2.17E-07	6.97E+00	1.24E-05	3.88E-02	4.16E-06	3.73E-04	1.67E-03	2.38E-04	3.91E-04	2.56E-04	2.61E-04	6.04E-05	3.47E-05	7.43E-09	1.29E-04	6.32E-05
50	F82	40	Single Unit Short Haul Truck	12	0.00E+00	5.18E-06	2.71E-07	2.48E+00	4.50E-06	4.28E-03	5.51E-06	2.54E-03	4.73E-04	7.84E-05	6.12E-04	1.62E-04	1.64E-04	2.51E-04	1.00E-05	4.24E-09	4.47E-04	4.76E-04
50	F82	40	Single Unit Long Haul Truck	1	0.00E+00	2.27E-07	1.18E-08	1.07E-01	1.97E-07	1.86E-04	2.41E-07	1.10E-04	2.11E-05	3.49E-06	2.69E-05	7.07E-06	7.17E-06	1.08E-05	4.33E-07	1.84E-10	1.97E-05	2.07E-05
50	F82	40	Combination Short Haul Truck	6	0.00E+00	5.10E-06	3.53E-07	2.59E+00	1.84E-08	4.44E-03	3.79E-06	5.69E-03	5.93E-04	1.07E-04	3.31E-04	1.05E-04	1.07E-04	3.90E-04	8.66E-06	0.00E+00	2.24E-04	1.07E-03
50	F82	40	Combination Long Haul Truck	5	0.00E+00	4.65E-06	3.03E-07	2.46E+00	2.08E-08	4.94E-03	3.57E-06	5.71E-03	5.96E-04	9.49E-05	3.40E-04	9.24E-05	9.41E-05	3.76E-04	8.23E-06	0.00E+00	2.46E-04	1.08E-03

Appendix F.5.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A17	0.00E+00	3.47E-04	2.57E-05	5.54E+02	4.23E-04	2.00E+00	3.51E-04	3.01E-01	1.93E-02	5.68E-03	3.22E-02	1.42E-02	1.44E-02	4.60E-02	2.31E-03	5.24E-07	1.78E-02	5.63E-02
A18	0.00E+00	3.30E-04	2.43E-05	5.08E+02	3.65E-04	1.75E+00	3.26E-04	2.91E-01	1.74E-02	5.20E-03	2.98E-02	1.29E-02	1.31E-02	4.45E-02	2.09E-03	4.64E-07	1.67E-02	5.44E-02
A19	0.00E+00	3.30E-04	2.43E-05	5.17E+02	3.84E-04	1.83E+00	3.30E-04	2.88E-01	1.79E-02	5.30E-03	3.02E-02	1.32E-02	1.34E-02	4.40E-02	2.14E-03	4.82E-07	1.68E-02	5.39E-02
A20	0.00E+00	3.11E-04	2.27E-05	4.72E+02	3.30E-04	1.59E+00	3.04E-04	2.75E-01	1.61E-02	4.82E-03	2.78E-02	1.19E-02	1.21E-02	4.21E-02	1.93E-03	4.26E-07	1.57E-02	5.15E-02
A21	0.00E+00	3.97E-04	2.94E-05	6.25E+02	4.65E-04	2.21E+00	3.98E-04	3.47E-01	2.16E-02	6.40E-03	3.64E-02	1.60E-02	1.62E-02	5.31E-02	2.59E-03	5.83E-07	2.03E-02	6.50E-02
A22	0.00E+00	3.52E-04	2.60E-05	5.60E+02	4.25E-04	2.02E+00	3.56E-04	3.05E-01	1.94E-02	5.74E-03	3.27E-02	1.44E-02	1.46E-02	4.68E-02	2.33E-03	5.33E-07	1.81E-02	5.70E-02
A23	0.00E+00	3.73E-04	2.73E-05	5.65E+02	3.93E-04	1.89E+00	3.66E-04	3.31E-01	1.93E-02	5.78E-03	3.34E-02	1.43E-02	1.45E-02	5.08E-02	2.31E-03	5.12E-07	1.90E-02	6.19E-02
A24	0.00E+00	3.21E-04	2.43E-05	5.66E+02	5.00E-04	2.31E+00	3.49E-04	2.64E-01	2.04E-02	5.84E-03	3.24E-02	1.50E-02	1.53E-02	4.05E-02	2.43E-03	5.94E-07	1.72E-02	4.93E-02
A25	0.00E+00	3.51E-04	2.56E-05	5.27E+02	3.61E-04	1.74E+00	3.42E-04	3.11E-01	1.79E-02	5.39E-03	3.12E-02	1.33E-02	1.34E-02	4.79E-02	2.15E-03	4.74E-07	1.78E-02	5.83E-02
A26	0.00E+00	2.75E-04	2.07E-05	4.72E+02	4.02E-04	1.87E+00	2.93E-04	2.29E-01	1.68E-02	4.86E-03	2.72E-02	1.24E-02	1.26E-02	3.52E-02	2.01E-03	4.85E-07	1.46E-02	4.27E-02
A27	0.00E+00	3.51E-04	2.56E-05	5.27E+02	3.61E-04	1.74E+00	3.42E-04	3.11E-01	1.79E-02	5.39E-03	3.12E-02	1.33E-02	1.34E-02	4.79E-02	2.15E-03	4.74E-07	1.78E-02	5.83E-02
A28	0.00E+00	2.75E-04	2.07E-05	4.72E+02	4.02E-04	1.87E+00	2.93E-04	2.29E-01	1.68E-02	4.86E-03	2.72E-02	1.24E-02	1.26E-02	3.52E-02	2.01E-03	4.85E-07	1.46E-02	4.27E-02
B15	0.00E+00	9.08E-05	7.00E-06	1.93E+02	1.99E-04	7.94E-01	1.12E-04	6.62E-02	9.68E-03	2.27E-03	1.08E-02	5.18E-03	5.28E-03	1.05E-02	8.68E-04	2.09E-07	5.46E-03	1.23E-02
B16	0.00E+00	1.09E-04	9.11E-06	2.93E+02	3.63E-04	1.41E+00	1.60E-04	6.41E-02	1.59E-02	3.54E-03	1.55E-02	8.34E-03	8.53E-03	9.92E-03	1.39E-03	3.60E-07	6.95E-03	1.17E-02
B17	0.00E+00	1.33E-04	9.26E-06	2.11E+02	1.50E-04	6.42E-01	1.35E-04	1.11E-01	9.25E-03	2.38E-03	1.29E-02	5.14E-03	5.21E-03	1.81E-02	8.72E-04	1.89E-07	7.72E-03	2.09E-02
B18	0.00E+00	1.27E-04	9.76E-06	2.74E+02	2.87E-04	1.14E+00	1.59E-04	9.02E-02	1.38E-02	3.23E-03	1.54E-02	7.38E-03	7.52E-03	1.45E-02	1.24E-03	3.05E-07	7.85E-03	1.67E-02
B19	0.00E+00	3.02E-04	2.19E-05	5.04E+02	3.83E-04	1.64E+00	3.13E-04	2.59E-01	2.28E-02	5.74E-03	2.94E-02	1.25E-02	1.27E-02	4.06E-02	2.11E-03	4.36E-07	1.67E-02	4.84E-02
B20	0.00E+00	3.10E-04	2.47E-05	6.91E+02	7.42E-04	2.96E+00	3.93E-04	2.27E-01	3.54E-02	8.19E-03	3.72E-02	1.89E-02	1.92E-02	3.45E-02	3.15E-03	7.42E-07	1.79E-02	4.19E-02
B21	0.00E+00	1.68E-04	1.24E-05	2.91E+02	2.35E-04	9.95E-01	1.77E-04	1.43E-01	1.35E-02	3.34E-03	1.65E-02	7.36E-03	7.46E-03	2.21E-02	1.24E-03	2.53E-07	9.06E-03	2.68E-02
B22	0.00E+00	2.04E-04	1.70E-05	4.99E+02	5.74E-04	2.27E+00	2.76E-04	1.43E-01	2.64E-02	5.97E-03	2.60E-02	1.39E-02	1.42E-02	2.11E-02	2.32E-03	5.54E-07	1.18E-02	2.63E-02
B23	0.00E+00	1.68E-04	1.25E-05	2.94E+02	2.38E-04	1.01E+00	1.79E-04	1.44E-01	1.36E-02	3.37E-03	1.66E-02	7.43E-03	7.53E-03	2.22E-02	1.25E-03	2.56E-07	9.10E-03	2.68E-02
B24	0.00E+00	3.38E-04	2.71E-05	7.74E+02	8.51E-04	3.38E+00	4.38E-04	2.41E-01	4.01E-02	9.20E-03	4.16E-02	2.13E-02	2.17E-02	3.67E-02	3.55E-03	8.50E-07	1.98E-02	4.45E-02
C53	0.00E+00	1.51E-05	1.12E-06	2.26E+01	2.95E-05	1.01E-01	1.80E-05	1.10E-02	3.61E-03	5.87E-04	1.76E-03	7.96E-04	8.12E-04	1.08E-03	1.03E-04	2.35E-08	9.50E-04	2.05E-03
C54	0.00E+00	2.30E-05	1.64E-06	3.20E+01	3.48E-05	1.22E-01	2.54E-05	1.75E-02	3.85E-03	6.79E-04	2.48E-03	1.04E-03	1.06E-03	1.97E-03	1.41E-04	3.22E-08	1.42E-03	3.26E-03
C57	0.00E+00	2.71E-05	2.03E-06	4.55E+01	5.63E-05	1.94E-01	3.31E-05	1.86E-02	5.63E-03	9.71E-04	3.23E-03	1.49E-03	1.52E-03	2.12E-03	2.09E-04	5.02E-08	1.71E-03	3.46E-03
C58	0.00E+00	4.83E-06	4.26E-07	1.08E+01	1.89E-05	6.14E-02	7.70E-06	2.22E-03	2.76E-03	3.99E-04	7.40E-04	4.20E-04	4.29E-04	2.05E-04	5.27E-05	1.16E-08	3.11E-04	4.07E-04
C59	0.00E+00	3.45E-06	2.92E-07	8.51E+00	1.25E-05	4.25E-02	5.33E-06	1.71E-03	1.10E-03	1.83E-04	5.20E-04	2.82E-04	2.88E-04	2.02E-04	4.13E-05	1.07E-08	2.32E-04	3.12E-04
C60	0.00E+00	3.46E-05	2.49E-06	4.62E+01	5.58E-05	1.93E-01	3.90E-05	2.68E-02	7.30E-03	1.20E-03	3.81E-03	1.62E-03	1.65E-03	2.61E-03	2.06E-04	4.52E-08	2.15E-03	5.02E-03
C61	0.00E+00	1.65E-05	1.42E-06	4.23E+01	6.28E-05	2.13E-01	2.60E-05	7.90E-03	5.49E-03	9.12E-04	2.54E-03	1.40E-03	1.43E-03	9.31E-04	2.06E-04	5.34E-08	1.11E-03	1.44E-03
C62	0.00E+00	2.70E-05	2.12E-06	4.42E+01	7.26E-05	2.33E-01	3.64E-05	1.62E-02	1.11E-02	1.63E-03	3.55E-03	1.77E-03	1.80E-03	1.36E-03	2.09E-04	4.56E-08	1.75E-03	3.01E-03
C63	0.00E+00	1.11E-04	7.46E-06	1.14E+02	1.13E-04	3.90E-01	1.12E-04	9.23E-02	1.74E-02	2.95E-03	1.11E-02	4.05E-03	4.11E-03	8.97E-03	4.79E-04	9.86E-08	6.97E-03	1.73E-02
C64	0.00E+00	7.52E-05	5.39E-06	1.11E+02	1.27E-04	4.39E-01	8.61E-05	5.43E-02	1.34E-02	2.35E-03	8.45E-03	3.62E-03	3.69E-03	6.21E-03	4.95E-04	1.17E-07	4.76E-03	1.01E-02
C65	0.00E+00	4.24E-07	4.51E-08	1.59E+00	2.74E-06	9.19E-03	8.93E-07	8.08E-05	2.67E-04	4.13E-05	8.58E-05	5.56E-05	5.70E-05	1.05E-05	7.98E-06	2.04E-09	2.87E-05	1.32E-05
C66	0.00E+00	2.98E-05	2.01E-06	2.45E+01	2.78E-05	9.14E-02	2.93E-05	2.59E-02	5.84E-03	9.11E-04	2.87E-03	1.05E-03	1.07E-03	1.92E-03	1.03E-04	1.91E-08	1.81E-03	4.86E-03
C67	0.00E+00	6.24E-05	4.59E-06	1.17E+02	1.17E-04	4.50E-01	7.37E-05	4.56E-02	7.72E-03	1.62E-03	7.14E-03	3.21E-03	3.26E-03	7.06E-03	5.21E-04	1.19E-07	3.88E-03	8.49E-03
C68	0.00E+00	7.10E-05	5.43E-06	1.55E+02	1.77E-04	6.61E-01	9.34E-05	4.55E-02	1.07E-02	2.17E-03	9.15E-03	4.39E-03	4.48E-03	7.15E-03	7.11E-04	1.76E-07	4.68E-03	8.40E-03
C69	0.00E+00	4.87E-05	3.27E-06	6.31E+01	5.31E-05	1.96E-01	5.00E-05	3.76E-02	5.31E-03	1.06E-03	4.93E-03	1.83E-03	1.86E-03	5.10E-03	2.65E-04	6.00E-08	3.07E-03	7.04E-03
C70	0.00E+00	9.97E-05	6.79E-06	1.47E+02	1.05E-04	4.31E-01	1.01E-04	8.20E-02	8.63E-03	1.95E-03	9.78E-03	3.71E-03	3.75E-03	1.28E-02	6.07E-04	1.24E-07	6.02E-03	1.54E-02
C71	0.00E+00	4.75E-05	3.41E-06	6.73E+01	7.40E-05	2.60E-01	5.28E-05	3.59E-02	8.12E-03	1.43E-03	5.15E-03	2.19E-03	2.23E-03	4.04E-03	2.98E-04	6.80E-08	2.92E-03	6.69E-03
C72	0.00E+00	2.60E-05	1.89E-06	3.36E+01	5.24E-05	1.64E-01	3.17E-05	1.73E-02	8.30E-03	1.23E-03	3.13E-03	1.39E-03	1.42E-03	1.40E-03	1.55E-04	3.40E-08	1.71E-03	3.22E-03
C73	0.00E+00	2.19E-05	1.52E-06	2.22E+01	2.86E-05	8.81E-02	2.34E-05	1.66E-02	4.28E-03	6.87E-04	2.30E-03	9.09E-04	9.27E-04	1.46E-03	9.68E-05	2.22E-08	1.37E-03	3.11E-03
C74	0.00E+00	1.65E-04	1.15E-05	2.07E+02	2.49E-04	8.36E-01	1.84E-04	1.24E-01	3.24E-02	5.35E-03	1.82E-02	7.40E-03	7.54E-03	1.23E-02	9.16E-04	2.08E-07	1.07E-02	2.32E-02
C81	0.00E+00	7.78E-05	5.51E-06	1.03E+02	1.06E-04	3.76E-01	8.32E-05	6.13E-02	1.23E-02	2.18E-03	8.08E-03	3.32E-03	3.38E-03	6.85E-03	4.48E-04	9.83E-08	4.70E-03	1.15E-02
C82	0.00E+00	1.16E-04	7.91E-06	1.30E+02	1.42E-04	4.84E-01	1.22E-04	9.26E-02	2.01E-02	3.37E-03	1.21E-02	4.63E-03	4.71E-03	9.06E-03	5.61E-04	1.21E-07	7.35E-03	1.74E-02
C83	0.00E+00	1.98E-04	1.35E-05	2.79E+02	1.51E-04	6.96E-01	1.85E-04	1.77E-01	1.13E-02	3.08E-03	1.75E-02	6.44E-03	6.50E-03	2.86E-02	1.10E-03	2.11E-07	1.10E-02	3.32E-02
C84	0.00E+00	7.93E-05	5.50E-06	1.23E+02	9.54E-05	3.86E-01	8.26E-05	6.42E-02	7.42E-03	1.65E-03	7.99E-03	3.16E-03	3.20E-03	9.99E-03	5.16E-04	1.08E-07	4.79E-03	1.20E-02
C85	0.00E+00	7.41E-05	4.99E-06	1.03E+02	6.37E-05	2.72E-01	7.17E-05	6.32E-02	5.81E-03	1.34E-03	6.92E-03	2.52E-03	2.54E-03	9.83E-03	4.13E-04	7.85E-08	4.37E-03	1.19E-02
C86	0.00E+00	1.24E-04	8.95E-06	2.22E+02	2.09E-04	8.11E-01	1.42E-04	9.27E-02	1.43E-02	3.04E-03	1.39E-02	5.98E-03	6.07E-03	1.45E-02	9.72E-04	2.21E-07	7.79E-03	1.73E-02
E39	0.00E+00	2.21E-05	1.82E-06	4.67E+01	6.75E-05	2.34E-01	3.12E-05	1.30E-02	6.15E-03	1.03E-03	3.04E-03	1.59E-03	1.63E-03	1.47E-03	2.21E-04	5.61E-08	1.40E-03	2.39E-03
E40	0.00E+00	1.39E-05	1.24E-06	3.56E+01	5.48E-05	1.89E-01	2.21E-05	7.01E-03	4.79E-03	7.92E-04	2.13E-03	1.22E-03	1.24E-03	7.86E-04	1.72E-04	4.44E-08	8.84E-04	1.28E-03
E41	0.00E+00	1.07E-05	1.06E-06	3.48E+01	5.73E-05	1.97E-01	2.00E-05	3.79E-03	4.79E-03	7.82E-04	1.93E-03	1.20E-03	1.23E-03	4.23E-04	1.73E-04	4.55E-08	6.94E-04	6.67E-04
E42	0.00E+00	1.14E-05	9.78E-07	2.55E+01	3.69E-05	1.29E-01	1.64E-05	7.02E-03	3.39E-03	5.67E-04	1.57E-03	8.61E-04	8.80E-04	7.61E-04	1.21E-04	2.98E-08	6.82E-04	1.29E-03
E43	0.00E+00	8.75E-06	9.06E-07	3.15E+01	5.33E-05	1.82E-01	1.77E-05	2.20E-03	4.36E-03	7.08E-04	1.71E-03	1.09E-03	1.12E-03	2.58E-04	1.58E-04	4.23E-08	5.91E-04	3.72E-04
E44	0.00E+00	1.11E-05	1.01E-06	3.01E+01	4.72E-05	1.63E-01	1.83E-05	5.22E-03	4.07E-03	6.71E-04	1.77E-03	1.03E-03	1.05E-03	5.85E-04	1.47E-04	3.80E-08	7.08E-04	9.46E-04
E45	0.00E+00	4.54E-06	3.60E-07	9.07E+00	1.12E-05	4.11E-02	5.86E-06	3.06E-03	8.40E-04	1.57E-04	5.62E-04	2.82E-04	2.88E-04	3.90E-04	4.21E-05	1.02E-08	2.74E-04	5.66E-04
E46	0.00E+00	2.22E-05	1.75E-06	4.55E+01	5.78E-05	2.09E-01	2.94E-05	1.40E-02	4.21E-03	7.83E-04	2.86E-03	1.42E-03	1.45E-03	1.84E-03	2.12E-04	5.35E-08	1.41E-03	2.59E-03
E47	0.00E+00	4.48E-06	3.44E-07	8.29E+00	9.80E-06	3.58E-02	5.55E-06	3.11E-03	7.54E-04	1.42E-04	5.35E-04	2.56E-04	2.61E-04	4.03E-04	3.79E-05	9.17E-09	2.75E-04	5.76E-04
E48	0.00E+00	2.31E-05	2.01E-06	6.06E+01	8.68E-05	3.10E-01	3.60E-05	1.19E-02	5.83E-03	1.06E-03	3.48E-03	1.94E-03	1.99E-03	1.53E-03	2.94E-04	7.69E-08	1.49E-03	2.17E-03
E49	0.00E+00	4.23E-06	3.50E-07	8.75E+00	1.08E-05	4.03E-02	5.47E-06	3.04E-03	8.21E-04	1.53E-04	5.11E-04	2.71E-04	2.77E-04	3.67E-04	4.07E-05	9.39E-09	2.35E-04	5.62E-04
E50	0.00E+00	5.61E-05	4.07E-06	8.08E+01	7.46E-05	2.88E-01	5.91E-05	4.57E-02	6.99E-03	1.37E-03	5.61E-03	2.39E-03	2.42E-03	5.82E-03	3.47E-04	7.26E-08	3.19E-03	8.54E-03
E51	0.00E+00	1.24E-06	1.04E-07	2.61E+00	3.25E-06	1.21E-02	1.61E-06	8.95E-04	2.46E-04	4.57E-05	1.50E-04	8.10E-05	8.27E-05	1.07E-04	1.22E-05	2.78E-09	6.73E-05	1.66E-04
E52	0.00E+00	5.16E-05	3.64E-06	6.69E+01	5.38E-05	2.14E-01	5.13E-05	4.37E-02	5.63E-03	1.13E-03	4.87E-03	1.94E-03	1.97E-03	5.57E-03	2.79E-04	5.47E-08	2.90E-03	8.18E-03
E53	0.00E+00	3.02E-05	2.16E-06	4.22E+01	3.79E-05	1.46E-01	3.15E-05	2.46E-02	3.62E-03	7.14E-04	3.00E-03	1.24E-03	1.26E-03	3.16E-03	1.80E-04	3.77E-08	1.74E-03	4.60E-03
E54	0.00E+00	5.62E-05	4.19E-06	9.15E+01	9.66E-05	3.62E-01	6.39E-05	4.29E-02	8.14E-03	1.56E-03	6.10E-03	2.76E-03	2.81E-03	5.48E-03	4.06E-04	9.15E-08	3.29E-03	7.99E-03
E55	0.00E+00	1.80E-05	1.27E-06	2.45E+01	2.14E-05	8.23E-02	1.86E-05	1.46E-02	2.07E-03	4.12E-04	1.79E-03	7.18E-04	7.29E-04	1.89E-03	1.04E-04	2.20E-08	1.06E-03	2.72E-03
E56	0.00E+00	4.64E-05	3.46E-06	7.41E+01	7.64E-05	2.89E-01	5.19E-05	3.62E-02	6.57E-03	1.27E-03	4.93E-03	2.23E-03	2.27E-03	4.59E-03	3.27E-04	7.21E-08	2.67E-03	6.74E-03
E57	0.00E+00	2.06E-05	1.70E-06	4.22E+01	5.92E-05	2.08E-01	2.82E-05	1.31E-02	5.54E-03	9.33E-04	2.71E-03	1.42E-03	1.46E-03	1.45E-03	1.98E-04	4.87E-08	1.25E-03	2.43E-03
E58	0.00E+00	2.08E-05	1.64E-06	3.73E+01	4.89E-05	1.73E-01	2.62E-05	1.45E-02	4.82E-03	8.21E-04	2.52E-03	1.25E-03	1.28E-03	1.60E-03	1.72E-04	4.07E-08	1.24E-03	2.70E-03
E59	0.00E+00	9.99E-05	7.07E-06	1.41E+02	1.30E-04	4.94E-01	1.06E-04	7.88E-02	1.21E-02	2.38E-03	1.02E-02	4.17E-03	4.24E-03	1.03E-02	6.05E-04	1.33E-07	5.95E-03	1.47E-02
E60	0.00E+00	7.52E-05	5.55E-06	1.27E+02	1.42E-04	5.20E-01	8.89E-05	5.33E-02	1.13E-02	2.17E-03	8.65E-03	3.89E-03	3.96E-03	7.04E-03	5.72E-04	1.38E-07	4.69E-03	9.91E-03
E61	0.00E+00	1.47E-05	1.36E-06	4.47E+01	6.77E-05	2.40E-01	2.55E-05	6.15E-03	4.38E-03	7.85E-04	2.46E-03	1.45E-03	1.49E-03	7.82E-04	2.21E-04	5.92E-08	9.80E-04	1.10E-03
E62	0.00E+00	2.22E-05	1.82E-06	4.92E+01	6.48E-05	2.34E-01	3.07E-05	1.38E-02	4.63E-03	8.54E-04	2.95E-03	1.55E-03	1.58E-03	1.76E-03	2.32E-04	5.83E-08	1.37E-03	2.53E-03
E63	0.00E+00	1.38E-04	1.01E-05	1.95E+02	2.21E-04	7.90E-01	1.54E-04	1.06E-01	2.42E-02	4.24E-03	1.49E-02	6.47E-03	6.60E-03	1.18E-02	8.62E-04	1.94E-07	8.24E-03	1.98E-02
E64	0.00E+00	8.84E-05	6.41E-06	1.25E+02	1.42E-04	5.04E-01	9.89E-05	6.69E-02	1.54E-02	2.70E-03	9.63E-03	4.15E-03	4.23E-03	7.49E-03	5.51E-04	1.26E-07	5.38E-03	1.25E-02
E65	0.00E+00	6.21E-05	5.27E-06	1.39E+02	2.02E-04	7.06E-01	8.99E-05	3.67E-02	1.84E-02	3.08E-03	8.65E-03	4.70E-03	4.81E-03	4.05E-03	6.60E-04	1.65E-07	3.82E-03	6.75E-03
E66	0.00E+00	4.28E-05	3.39E-06	7.73E+01	1.01E-04	3.60E-01	5.40E-05	3.01E-02	1.00E-02	1.70E-03	5.18E-03	2.59E-03	2.64E-03	3.28E-03	3.56E-04	8.40E-08	2.52E-03	5.59E-03
E67	0.00E+00	1.43E-05	1.30E-06	4.18E+01	6.24E-05	2.22E-01	2.41E-05	6.30E-03	4.07E-03	7.32E-04	2.34E-03	1.35E-03	1.39E-03	8.13E-04	2.05E-04	5.50E-08	9.58E-04	1.13E-03
E68	0.00E+00	2.41E-05	1.97E-06	5.28E+01	6.92E-05	2.50E-01	3.32E-05	1.50E-02	4.95E-03	9.15E-04	3.20E-03	1.66E-03	1.70E-03	1.92E-03	2.49E-04	6.26E-08	1.50E-03	2.76E-03
E69	0.00E+00	1.21E-05	1.25E-06	4.33E+01	7.31E-05	2.50E-01	2.45E-05	3.04E-03	5.98E-03	9.71E-04	2.37E-03	1.50E-03	1.54E-03	3.63E-04	2.16E-04	5.83E-08	8.27E-04	5.14E-04
E70	0.00E+00	2.89E-05	2.54E-06	7.46E+01	1.17E-04	3.99E-01	4.68E-05	1.30E-02	1.00E-02	1.65E-03	4.59E-03	2.57E-03	2.63E-03	1.53E-03	3.63E-04	9.60E-08	1.94E-03	2.35E-03
E71	0.00E+00	2.51E-05	2.59E-06	8.95E+01	1.51E-04	5.17E-01	5.05E-05	6.57E-03	1.24E-02	2.01E-03	4.88E-03	3.09E-03	3.17E-03	7.66E-04	4.47E-04	1.20E-07	1.69E-03	1.12E-03
E72	0.00E+00	3.45E-05	3.05E-06	9.02E+01	1.42E-04	4.84E-01	5.64E-05	1.53E-02	1.21E-02	2.00E-03	5.53E-03	3.10E-03	3.18E-03	1.81E-03	4.39E-04	1.16E-07	2.33E-03	2.77E-03
E73	0.00E+00	1.58E-05	1.22E-06	2.41E+01	3.36E-05	1.17E-01	1.93E-05	1.19E-02	4.00E-03	6.49E-04	1.86E-03	8.88E-04	9.06E-04	1.13E-03	1.10E-04	2.57E-08	9.49E-04	2.22E-03
E74	0.00E+00	2.97E-06	2.97E-07	8.82E+00	1.60E-05	5.41E-02	5.61E-06	1.02E-03	1.54E-03	2.40E-04	5.35E-04	3.35E-04	3.43E-04	1.07E-04	4.37E-05	1.18E-08	1.92E-04	1.80E-04
E75	0.00E+00	7.03E-05	5.66E-06	1.35E+02	1.72E-04	6.10E-01	8.98E-05	5.00E-02	1.71E-02	2.91E-03	8.52E-03	4.35E-03	4.44E-03	5.40E-03	6.27E-04	1.45E-07	4.08E-03	9.27E-03
E76	0.00E+00	1.19E-04	9.27E-06	2.03E+02	2.42E-04	8.70E-01	1.41E-04	9.10E-02	2.55E-02	4.38E-03	1.34E-02	6.51E-03	6.64E-03	9.76E-03	9.26E-04	2.05E-07	6.72E-03	1.69E-02
E77	0.00E+00	8.36E-05	6.78E-06	1.63E+02	2.10E-04	7.45E-01	1.08E-04	5.91E-02	2.08E-02	3.53E-03	1.02E-02	5.27E-03	5.39E-03	6.36E-03	7.62E-04	1.76E-07	4.83E-03	1.10E-02
E78	0.00E+00	1.32E-04	1.03E-05	2.25E+02	2.68E-04	9.63E-01	1.57E-04	1.01E-01	2.82E-02	4.86E-03	1.49E-02	7.23E-03	7.37E-03	1.09E-02	1.03E-03	2.28E-07	7.51E-03	1.89E-02
E79	0.00E+00	5.80E-05	4.89E-06	1.39E+02	2.02E-04	6.87E-01	8.75E-05	3.06E-02	1.80E-02	3.00E-03	8.50E-03	4.59E-03	4.69E-03	3.54E-03	6.71E-04	1.72E-07	3.82E-03	5.59E-03
E80	0.00E+00	4.43E-05	3.13E-06	5.69E+01	5.64E-05	2.03E-01	4.65E-05	3.57E-02	6.77E-03	1.21E-03	4.49E-03	1.83E-03	1.86E-03	3.96E-03	2.46E-04	5.25E-08	2.63E-03	6.68E-03
E81	0.00E+00	3.73E-07	3.97E-08	1.28E+00	2.41E-06	8.09E-03	7.89E-07	6.82E-05	2.26E-04	3.49E-05	7.55E-05	4.90E-05	5.02E-05	8.62E-06	6.43E-06	1.78E-09	2.53E-05	1.12E-05
E82	0.00E+00	9.46E-06	8.50E-07	2.27E+01	3.95E-05	1.33E-01	1.56E-05	4.31E-03	3.93E-03	6.16E-04	1.51E-03	8.64E-04	8.84E-04	4.48E-04	1.11E-04	2.96E-08	6.21E-04	7.85E-04
E83	0.00E+00	2.65E-05	2.04E-06	4.33E+01	5.31E-05	1.91E-01	3.14E-05	1.99E-02	5.52E-03	9.51E-04	3.00E-03	1.44E-03	1.46E-03	2.16E-03	1.96E-04	4.44E-08	1.53E-03	3.71E-03
E84	0.00E+00	1.50E-05	1.32E-06	3.46E+01	5.03E-05	1.78E-01	2.18E-05	9.36E-03	4.64E-03	7.74E-04	2.07E-03	1.17E-03	1.19E-03

Appendix F.5.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F02	0.00E+00	3.02E-05	2.56E-06	6.29E+01	1.04E-04	3.51E-01	4.54E-05	1.65E-02	1.07E-02	1.70E-03	4.39E-03	2.38E-03	2.43E-03	1.67E-03	3.01E-04	7.89E-08	1.96E-03	3.03E-03
F03	0.00E+00	1.54E-06	1.21E-07	2.86E+00	3.32E-06	1.24E-02	1.87E-06	1.13E-03	2.62E-04	4.94E-05	1.77E-04	8.77E-05	8.94E-05	1.41E-04	1.30E-05	2.99E-09	8.80E-05	2.10E-04
F04	0.00E+00	1.32E-06	1.09E-07	2.56E+00	2.98E-06	1.14E-02	1.62E-06	1.03E-03	2.39E-04	4.47E-05	1.49E-04	7.84E-05	7.99E-05	1.22E-04	1.17E-05	2.54E-09	6.89E-05	1.91E-04
F05	0.00E+00	3.72E-05	2.84E-06	5.57E+01	7.82E-05	2.71E-01	4.55E-05	2.73E-02	9.25E-03	1.50E-03	4.39E-03	2.07E-03	2.11E-03	2.64E-03	2.54E-04	6.06E-08	2.28E-03	5.10E-03
F06	0.00E+00	2.50E-05	1.85E-06	3.57E+01	5.02E-05	1.70E-01	3.03E-05	1.77E-02	5.87E-03	9.56E-04	2.97E-03	1.34E-03	1.37E-03	1.75E-03	1.62E-04	3.98E-08	1.60E-03	3.30E-03
F07	0.00E+00	3.66E-05	2.90E-06	6.54E+01	1.04E-04	3.47E-01	5.07E-05	2.16E-02	1.10E-02	1.76E-03	4.96E-03	2.48E-03	2.54E-03	2.20E-03	3.08E-04	8.04E-08	2.42E-03	4.00E-03
F08	0.00E+00	3.66E-05	2.83E-06	5.98E+01	8.99E-05	3.04E-01	4.76E-05	2.41E-02	9.98E-03	1.61E-03	4.64E-03	2.25E-03	2.30E-03	2.39E-03	2.77E-04	6.98E-08	2.34E-03	4.49E-03
F09	0.00E+00	3.27E-06	2.69E-07	6.73E+00	8.31E-06	3.09E-02	4.22E-06	2.34E-03	6.31E-04	1.17E-04	3.95E-04	2.09E-04	2.13E-04	2.84E-04	3.13E-05	7.25E-09	1.83E-04	4.32E-04
F10	0.00E+00	2.16E-05	1.82E-06	4.87E+01	6.38E-05	2.34E-01	2.98E-05	1.40E-02	4.61E-03	8.49E-04	2.82E-03	1.53E-03	1.56E-03	1.72E-03	2.30E-04	5.59E-08	1.27E-03	2.59E-03
F13	0.00E+00	1.67E-06	1.31E-07	2.93E+00	3.22E-06	1.23E-02	1.94E-06	1.31E-03	2.67E-04	5.07E-05	1.81E-04	8.88E-05	9.05E-05	1.60E-04	1.32E-05	2.85E-09	9.05E-05	2.44E-04
F14	0.00E+00	1.38E-06	1.08E-07	2.43E+00	2.67E-06	1.02E-02	1.61E-06	1.09E-03	2.22E-04	4.20E-05	1.50E-04	7.36E-05	7.50E-05	1.33E-04	1.09E-05	2.36E-09	7.50E-05	2.02E-04
F15	0.00E+00	3.68E-05	3.07E-06	7.42E+01	1.01E-04	3.62E-01	4.90E-05	2.54E-02	9.77E-03	1.65E-03	4.65E-03	2.48E-03	2.53E-03	2.70E-03	3.47E-04	8.17E-08	2.10E-03	4.70E-03
F16	0.00E+00	2.02E-05	1.69E-06	4.05E+01	5.49E-05	1.97E-01	2.67E-05	1.42E-02	5.34E-03	9.01E-04	2.52E-03	1.35E-03	1.38E-03	1.50E-03	1.89E-04	4.40E-08	1.13E-03	2.63E-03
F17	0.00E+00	2.00E-05	1.59E-06	3.26E+01	3.81E-05	1.43E-01	2.29E-05	1.66E-02	4.20E-03	7.24E-04	2.12E-03	1.06E-03	1.08E-03	1.72E-03	1.46E-04	3.03E-08	1.03E-03	3.10E-03
F18	0.00E+00	2.48E-05	1.99E-06	4.27E+01	5.25E-05	1.93E-01	2.95E-05	1.96E-02	5.54E-03	9.48E-04	2.76E-03	1.40E-03	1.43E-03	2.05E-03	1.94E-04	4.20E-08	1.32E-03	3.65E-03
F19	0.00E+00	1.17E-05	1.25E-06	4.48E+01	7.66E-05	2.62E-01	2.48E-05	2.36E-03	6.22E-03	1.01E-03	2.40E-03	1.55E-03	1.59E-03	2.83E-04	2.25E-04	6.07E-08	8.02E-04	3.84E-04
F20	0.00E+00	1.63E-05	1.73E-06	6.20E+01	1.06E-04	3.62E-01	3.44E-05	3.34E-03	8.60E-03	1.39E-03	3.33E-03	2.15E-03	2.20E-03	4.02E-04	3.11E-04	8.40E-08	1.12E-03	5.46E-04
F21	0.00E+00	7.45E-05	5.16E-06	8.77E+01	8.39E-05	3.04E-01	7.60E-05	6.05E-02	1.04E-02	1.88E-03	7.41E-03	2.88E-03	2.92E-03	6.76E-03	3.70E-04	7.88E-08	4.47E-03	1.13E-02
F22	0.00E+00	1.01E-04	7.06E-06	1.27E+02	1.31E-04	4.67E-01	1.07E-04	7.91E-02	1.52E-02	2.72E-03	1.04E-02	4.19E-03	4.26E-03	8.89E-03	5.45E-04	1.21E-07	6.15E-03	1.48E-02
F23	0.00E+00	2.09E-05	1.49E-06	2.74E+01	2.90E-05	1.04E-01	2.24E-05	1.65E-02	3.34E-03	5.91E-04	2.18E-03	9.04E-04	9.20E-04	1.84E-03	1.19E-04	2.61E-08	1.25E-03	3.09E-03
F24	0.00E+00	2.68E-05	1.94E-06	3.76E+01	4.27E-05	1.51E-01	2.99E-05	2.04E-02	4.64E-03	8.14E-04	2.91E-03	1.25E-03	1.27E-03	2.28E-03	1.66E-04	3.79E-08	1.63E-03	3.80E-03
F25	0.00E+00	7.28E-05	5.27E-06	9.59E+01	1.28E-04	4.34E-01	8.44E-05	5.40E-02	1.56E-02	2.56E-03	8.27E-03	3.58E-03	3.65E-03	5.30E-03	4.29E-04	1.02E-07	4.61E-03	1.01E-02
F26	0.00E+00	9.32E-05	6.43E-06	1.03E+02	1.19E-04	4.09E-01	9.92E-05	7.43E-02	1.64E-02	2.73E-03	9.77E-03	3.82E-03	3.89E-03	7.24E-03	4.43E-04	9.97E-08	5.88E-03	1.39E-02
F27	0.00E+00	2.03E-04	1.40E-05	2.28E+02	2.69E-04	9.16E-01	2.18E-04	1.60E-01	3.62E-02	6.05E-03	2.15E-02	8.47E-03	8.62E-03	1.57E-02	9.83E-04	2.24E-07	1.29E-02	3.01E-02
F28	0.00E+00	1.65E-04	1.20E-05	2.24E+02	3.06E-04	1.03E+00	1.95E-04	1.19E-01	3.66E-02	5.98E-03	1.92E-02	8.41E-03	8.57E-03	1.18E-02	1.01E-03	2.45E-07	1.06E-02	2.22E-02
F29	0.00E+00	4.67E-05	3.74E-06	8.27E+01	1.28E-04	4.35E-01	6.33E-05	2.98E-02	1.39E-02	2.23E-03	6.13E-03	3.11E-03	3.17E-03	2.94E-03	3.88E-04	9.80E-08	2.96E-03	5.53E-03
F30	0.00E+00	3.51E-05	2.74E-06	5.78E+01	8.65E-05	2.94E-01	4.56E-05	2.35E-02	9.66E-03	1.55E-03	4.43E-03	2.17E-03	2.21E-03	2.31E-03	2.68E-04	6.67E-08	2.21E-03	4.38E-03
F45	0.00E+00	2.65E-05	2.04E-06	4.33E+01	5.31E-05	1.91E-01	3.14E-05	1.99E-02	5.52E-03	9.51E-04	3.00E-03	1.44E-03	1.46E-03	2.16E-03	1.96E-04	4.44E-08	1.53E-03	3.71E-03
F46	0.00E+00	1.50E-05	1.32E-06	3.46E+01	5.03E-05	1.78E-01	2.18E-05	9.36E-03	4.64E-03	7.74E-04	2.07E-03	1.17E-03	1.19E-03	9.92E-04	1.65E-04	4.01E-08	8.66E-04	1.72E-03
F47	0.00E+00	1.24E-06	9.86E-08	1.99E+00	2.80E-06	9.91E-03	1.54E-06	9.49E-04	3.33E-04	5.38E-05	1.46E-04	7.28E-05	7.43E-05	8.90E-05	9.10E-06	2.11E-09	7.20E-05	1.77E-04
F48	0.00E+00	3.69E-07	2.69E-08	4.31E-01	4.68E-07	1.76E-03	3.82E-07	3.31E-04	6.98E-05	1.16E-05	3.61E-05	1.53E-05	1.56E-05	3.05E-05	1.84E-06	3.61E-10	2.05E-05	6.22E-05
F49	0.00E+00	1.67E-04	1.19E-05	2.06E+02	2.61E-04	8.90E-01	1.87E-04	1.28E-01	3.32E-02	5.49E-03	1.84E-02	7.67E-03	7.82E-03	1.25E-02	9.07E-04	2.12E-07	1.06E-02	2.41E-02
F50	0.00E+00	1.48E-04	1.08E-05	2.03E+02	2.80E-04	9.44E-01	1.76E-04	1.06E-01	3.32E-02	5.42E-03	1.73E-02	7.63E-03	7.78E-03	1.05E-02	9.16E-04	2.24E-07	9.52E-03	1.98E-02
F51	0.00E+00	6.68E-05	4.61E-06	8.18E+01	8.39E-05	2.95E-01	7.03E-05	5.18E-02	9.76E-03	1.75E-03	6.92E-03	2.71E-03	2.76E-03	5.88E-03	3.50E-04	7.90E-08	4.15E-03	9.69E-03
F52	0.00E+00	7.31E-05	5.95E-06	1.50E+02	2.13E-04	7.39E-01	1.01E-04	4.42E-02	1.96E-02	3.30E-03	9.84E-03	5.08E-03	5.20E-03	5.00E-03	7.06E-04	1.77E-07	4.62E-03	8.16E-03
F53	0.00E+00	1.65E-05	1.45E-06	4.14E+01	6.37E-05	2.19E-01	2.60E-05	8.18E-03	5.55E-03	9.20E-04	2.53E-03	1.42E-03	1.45E-03	9.33E-04	2.00E-04	5.20E-08	1.07E-03	1.49E-03
F54	0.00E+00	3.81E-05	3.55E-06	1.10E+02	1.76E-04	6.06E-01	6.60E-05	1.57E-02	1.50E-02	2.46E-03	6.40E-03	3.78E-03	3.87E-03	1.80E-03	5.40E-04	1.42E-07	2.50E-03	2.82E-03
F71	0.00E+00	1.82E-05	1.70E-06	5.45E+01	8.33E-05	2.86E-01	3.13E-05	8.03E-03	7.20E-03	1.19E-03	2.99E-03	1.79E-03	1.84E-03	8.95E-04	2.69E-04	6.88E-08	1.16E-03	1.44E-03
F72	0.00E+00	6.93E-05	4.95E-06	7.92E+01	1.14E-04	3.65E-01	7.88E-05	5.17E-02	1.94E-02	2.92E-03	7.73E-03	3.29E-03	3.35E-03	4.03E-03	3.58E-04	7.45E-08	4.38E-03	9.68E-03
F73	0.00E+00	1.11E-06	1.11E-07	3.80E+00	6.51E-06	2.17E-02	2.22E-06	2.45E-04	6.36E-04	9.84E-05	2.15E-04	1.34E-04	1.37E-04	3.21E-05	1.90E-05	4.90E-09	7.77E-05	4.14E-05
F74	0.00E+00	9.75E-05	6.66E-06	1.14E+02	1.05E-04	3.75E-01	9.90E-05	7.88E-02	1.32E-02	2.39E-03	9.68E-03	3.67E-03	3.73E-03	8.87E-03	4.81E-04	1.03E-07	5.94E-03	1.48E-02
F75	0.00E+00	2.66E-06	1.96E-07	4.25E+00	5.94E-06	1.96E-02	3.37E-06	1.70E-03	6.79E-04	1.10E-04	3.34E-04	1.52E-04	1.55E-04	1.75E-04	1.97E-05	4.80E-09	1.79E-04	3.17E-04
F76	0.00E+00	1.11E-06	1.04E-07	2.75E+00	4.76E-06	1.59E-02	1.83E-06	5.33E-04	7.07E-04	1.02E-04	1.73E-04	1.04E-04	1.07E-04	4.74E-05	1.34E-05	2.85E-09	6.66E-05	9.77E-05
F77	0.00E+00	7.83E-05	5.56E-06	1.08E+02	1.17E-04	4.10E-01	8.63E-05	5.92E-02	1.30E-02	2.29E-03	8.44E-03	3.52E-03	3.58E-03	6.70E-03	4.77E-04	1.09E-07	4.85E-03	1.10E-02
F78	0.00E+00	1.86E-05	1.87E-06	5.69E+01	1.04E-04	3.40E-01	3.60E-05	4.36E-03	1.47E-02	2.10E-03	3.43E-03	2.17E-03	2.21E-03	5.63E-04	2.83E-04	6.30E-08	1.22E-03	7.66E-04
F79	0.00E+00	3.28E-05	2.92E-06	8.28E+01	1.31E-04	4.43E-01	5.28E-05	1.59E-02	1.37E-02	2.15E-03	5.10E-03	2.90E-03	2.97E-03	1.65E-03	4.03E-04	9.96E-08	2.13E-03	2.91E-03
F80	0.00E+00	3.15E-05	2.93E-06	9.43E+01	1.45E-04	4.95E-01	5.46E-05	1.31E-02	1.24E-02	2.05E-03	5.27E-03	3.12E-03	3.19E-03	1.51E-03	4.66E-04	1.21E-07	2.08E-03	2.35E-03
F81	0.00E+00	1.08E-04	6.97E-06	9.92E+01	9.15E-05	3.06E-01	1.06E-04	8.88E-02	1.49E-02	2.55E-03	1.06E-02	3.58E-03	3.64E-03	8.73E-03	4.07E-04	8.47E-08	6.93E-03	1.67E-02
F82	0.00E+00	1.81E-05	1.25E-06	1.78E+01	2.35E-05	7.51E-02	1.93E-05	1.45E-02	4.30E-03	6.56E-04	1.90E-03	7.49E-04	7.63E-04	1.11E-03	7.79E-05	1.57E-08	1.13E-03	2.72E-03

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A17	110	Passenger Car	1147	0.00E+00	1.31E-05	1.42E-06	5.32E+01	9.11E-05	3.95E-01	2.91E-05	2.69E-03	2.85E-03	6.63E-04	2.84E-03	1.83E-03	1.88E-03	1.31E-04	2.71E-04	8.03E-08	9.59E-04	4.20E-04
17	A17	110	Passenger Truck	1920	0.00E+00	2.84E-05	3.04E-06	1.27E+02	1.88E-04	8.16E-01	6.08E-05	7.52E-03	4.94E-03	1.24E-03	5.87E-03	3.80E-03	3.90E-03	7.63E-04	6.40E-04	1.88E-07	1.98E-03	1.21E-03
17	A17	110	Single Unit Short Haul Truck	356	0.00E+00	4.70E-05	2.49E-06	6.82E+01	4.82E-05	1.88E-01	5.17E-05	2.75E-02	2.12E-03	7.02E-04	5.69E-03	1.59E-03	1.61E-03	6.98E-03	2.73E-04	1.22E-07	4.08E-03	5.13E-03
17	A17	110	Single Unit Long Haul Truck	16	0.00E+00	2.01E-06	1.04E-07	2.86E+00	1.93E-06	7.41E-03	2.20E-06	1.14E-03	9.50E-05	3.01E-05	2.47E-04	6.54E-05	6.62E-05	2.91E-04	1.15E-05	4.97E-09	1.80E-04	2.13E-04
17	A17	110	Combination Short Haul Truck	301	0.00E+00	1.14E-04	8.53E-06	1.15E+02	2.71E-07	1.03E-01	8.04E-05	1.22E-01	3.23E-03	1.28E-03	6.00E-03	2.48E-03	2.46E-03	1.73E-02	3.85E-04	0.00E+00	3.55E-03	2.30E-02
17	A17	110	Combination Long Haul Truck	274	0.00E+00	1.03E-04	7.41E-06	1.04E+02	3.10E-07	1.01E-01	7.47E-05	1.18E-01	2.90E-03	8.84E-04	6.14E-03	2.18E-03	2.20E-03	1.59E-02	3.48E-04	0.00E+00	3.96E-03	2.23E-02
17	A18	110	Passenger Car	1320	0.00E+00	1.51E-05	1.63E-06	6.12E+01	1.05E-04	4.55E-01	3.35E-05	3.09E-03	3.28E-03	7.63E-04	3.26E-03	2.10E-03	2.16E-03	1.50E-04	3.12E-04	9.24E-08	1.10E-03	4.84E-04
17	A18	110	Passenger Truck	2210	0.00E+00	3.27E-05	3.49E-06	1.46E+02	2.17E-04	9.39E-01	7.00E-05	8.66E-03	5.69E-03	1.43E-03	6.75E-03	4.38E-03	4.49E-03	8.78E-04	7.37E-04	2.17E-07	2.28E-03	1.39E-03
17	A18	110	Single Unit Short Haul Truck	444	0.00E+00	5.87E-05	3.11E-06	8.51E+01	6.02E-05	2.34E-01	6.45E-05	3.43E-02	2.65E-03	8.77E-04	7.10E-03	1.99E-03	2.01E-03	8.71E-03	3.40E-04	1.52E-07	5.09E-03	6.40E-03
17	A18	110	Single Unit Long Haul Truck	20	0.00E+00	2.51E-06	1.29E-07	3.57E+00	2.41E-06	9.25E-03	2.75E-06	1.43E-03	1.19E-04	3.75E-05	3.08E-04	8.16E-05	8.27E-05	3.63E-04	1.43E-05	6.20E-09	2.25E-04	2.66E-04
17	A18	110	Combination Short Haul Truck	332	0.00E+00	1.25E-04	9.41E-06	1.26E+02	2.99E-07	1.13E-01	8.87E-05	1.35E-01	3.56E-03	1.41E-03	6.62E-03	2.74E-03	2.71E-03	1.91E-02	4.24E-04	0.00E+00	3.92E-03	2.54E-02
17	A18	110	Combination Long Haul Truck	303	0.00E+00	1.14E-04	8.17E-06	1.14E+02	3.42E-07	1.12E-01	8.24E-05	1.30E-01	3.20E-03	9.76E-04	6.78E-03	2.41E-03	2.42E-03	1.75E-02	3.84E-04	0.00E+00	4.36E-03	2.46E-02
17	A19	110	Passenger Car	1026	0.00E+00	1.17E-05	1.27E-06	4.76E+01	8.15E-05	3.53E-01	2.60E-05	2.41E-03	2.55E-03	5.93E-04	2.54E-03	1.64E-03	1.68E-03	1.17E-04	2.43E-04	7.18E-08	8.58E-04	3.76E-04
17	A19	110	Passenger Truck	1718	0.00E+00	2.54E-05	2.72E-06	1.14E+02	1.68E-04	7.30E-01	5.44E-05	6.73E-03	4.42E-03	1.11E-03	5.25E-03	3.40E-03	3.49E-03	6.82E-04	5.73E-04	1.68E-07	1.77E-03	1.08E-03
17	A19	110	Single Unit Short Haul Truck	337	0.00E+00	4.46E-05	2.36E-06	6.47E+01	4.57E-05	1.78E-01	4.90E-05	2.61E-02	2.02E-03	6.67E-04	5.40E-03	1.51E-03	1.53E-03	6.62E-03	2.59E-04	1.15E-07	3.87E-03	4.87E-03
17	A19	110	Single Unit Long Haul Truck	15	0.00E+00	1.91E-06	9.84E-08	2.71E+00	1.84E-06	7.03E-03	2.09E-06	1.08E-03	9.01E-05	2.85E-05	2.34E-04	6.20E-05	6.28E-05	2.76E-04	1.09E-05	4.71E-09	1.71E-04	2.02E-04
17	A19	110	Combination Short Haul Truck	285	0.00E+00	1.08E-04	8.07E-06	1.08E+02	2.56E-07	9.73E-02	7.61E-05	1.15E-01	3.05E-03	1.21E-03	5.68E-03	2.35E-03	2.33E-03	1.64E-02	3.64E-04	0.00E+00	3.36E-03	2.18E-02
17	A19	110	Combination Long Haul Truck	260	0.00E+00	9.74E-05	7.01E-06	9.81E+01	2.94E-07	9.59E-02	7.07E-05	1.12E-01	2.75E-03	8.37E-04	5.81E-03	2.06E-03	2.08E-03	1.50E-02	3.29E-04	0.00E+00	3.74E-03	2.11E-02
17	A20	110	Passenger Car	1197	0.00E+00	1.37E-05	1.48E-06	5.55E+01	9.51E-05	4.12E-01	3.04E-05	2.81E-03	2.97E-03	6.91E-04	2.96E-03	1.91E-03	1.96E-03	1.36E-04	2.83E-04	8.38E-08	1.00E-03	4.39E-04
17	A20	110	Passenger Truck	2004	0.00E+00	2.97E-05	3.17E-06	1.32E+02	1.97E-04	8.52E-01	6.35E-05	7.85E-03	5.16E-03	1.30E-03	6.12E-03	3.97E-03	4.07E-03	7.96E-04	6.68E-04	1.97E-07	2.07E-03	1.26E-03
17	A20	110	Single Unit Short Haul Truck	435	0.00E+00	5.76E-05	3.05E-06	8.35E+01	5.90E-05	2.30E-01	6.33E-05	3.36E-02	2.60E-03	8.60E-04	6.97E-03	1.95E-03	1.97E-03	8.54E-03	3.34E-04	1.49E-07	5.00E-03	6.28E-03
17	A20	110	Single Unit Long Haul Truck	19	0.00E+00	2.46E-06	1.27E-07	3.50E+00	2.37E-06	9.07E-03	2.69E-06	1.40E-03	1.16E-04	3.68E-05	3.02E-04	8.00E-05	8.11E-05	3.56E-04	1.40E-05	6.08E-09	2.20E-04	2.61E-04
17	A20	110	Combination Short Haul Truck	327	0.00E+00	1.24E-04	9.28E-06	1.25E+02	2.95E-07	1.12E-01	8.75E-05	1.33E-01	3.51E-03	1.39E-03	6.53E-03	2.70E-03	2.67E-03	1.88E-02	4.18E-04	0.00E+00	3.86E-03	2.50E-02
17	A20	110	Combination Long Haul Truck	299	0.00E+00	1.12E-04	8.06E-06	1.13E+02	3.37E-07	1.10E-01	8.13E-05	1.29E-01	3.16E-03	9.62E-04	6.68E-03	2.37E-03	2.39E-03	1.72E-02	3.78E-04	0.00E+00	4.30E-03	2.42E-02
17	A21	110	Passenger Car	1489	0.00E+00	1.70E-05	1.84E-06	6.91E+01	1.18E-04	5.13E-01	3.78E-05	3.49E-03	3.70E-03	8.60E-04	3.68E-03	2.37E-03	2.44E-03	1.70E-04	3.52E-04	1.04E-07	1.24E-03	5.46E-04
17	A21	110	Passenger Truck	2493	0.00E+00	3.69E-05	3.94E-06	1.65E+02	2.44E-04	1.06E+00	7.89E-05	9.76E-03	6.41E-03	1.61E-03	7.62E-03	4.94E-03	5.06E-03	9.90E-04	8.31E-04	2.44E-07	2.57E-03	1.57E-03
17	A21	110	Single Unit Short Haul Truck	400	0.00E+00	5.29E-05	2.80E-06	7.66E+01	5.42E-05	2.11E-01	5.81E-05	3.09E-02	2.39E-03	7.89E-04	6.40E-03	1.79E-03	1.81E-03	7.84E-03	3.06E-04	1.37E-07	4.59E-03	5.76E-03
17	A21	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.17E-07	3.21E+00	2.17E-06	8.33E-03	2.47E-06	1.28E-03	1.07E-04	3.38E-05	2.77E-04	7.35E-05	7.44E-05	3.27E-04	1.29E-05	5.58E-09	2.02E-04	2.39E-04
17	A21	110	Combination Short Haul Truck	336	0.00E+00	1.27E-04	9.53E-06	1.28E+02	3.03E-07	1.15E-01	8.99E-05	1.36E-01	3.61E-03	1.43E-03	6.71E-03	2.77E-03	2.75E-03	1.93E-02	4.30E-04	0.00E+00	3.97E-03	2.57E-02
17	A21	110	Combination Long Haul Truck	307	0.00E+00	1.15E-04	8.28E-06	1.16E+02	3.47E-07	1.13E-01	8.35E-05	1.32E-01	3.24E-03	9.88E-04	6.86E-03	2.44E-03	2.45E-03	1.77E-02	3.88E-04	0.00E+00	4.42E-03	2.49E-02
17	A22	110	Passenger Car	1561	0.00E+00	1.78E-05	1.93E-06	7.24E+01	1.24E-04	5.38E-01	3.96E-05	3.66E-03	3.88E-03	9.02E-04	3.86E-03	2.49E-03	2.55E-03	1.78E-04	3.69E-04	1.09E-07	1.30E-03	5.72E-04
17	A22	110	Passenger Truck	2614	0.00E+00	3.87E-05	4.13E-06	1.73E+02	2.56E-04	1.11E+00	8.28E-05	1.02E-02	6.72E-03	1.69E-03	7.99E-03	5.18E-03	5.31E-03	1.04E-03	8.71E-04	2.56E-07	2.69E-03	1.65E-03
17	A22	110	Single Unit Short Haul Truck	474	0.00E+00	6.26E-05	3.32E-06	9.08E+01	6.42E-05	2.50E-01	6.88E-05	3.66E-02	2.83E-03	9.35E-04	7.58E-03	2.12E-03	2.14E-03	9.29E-03	3.63E-04	1.62E-07	5.43E-03	6.83E-03
17	A22	110	Single Unit Long Haul Truck	21	0.00E+00	2.68E-06	1.38E-07	3.81E+00	2.58E-06	9.86E-03	2.93E-06	1.52E-03	1.26E-04	4.00E-05	3.28E-04	8.70E-05	8.82E-05	3.88E-04	1.53E-05	6.61E-09	2.40E-04	2.84E-04
17	A22	110	Combination Short Haul Truck	353	0.00E+00	1.33E-04	1.00E-05	1.34E+02	3.18E-07	1.21E-01	9.43E-05	1.43E-01	3.78E-03	1.50E-03	7.04E-03	2.91E-03	2.88E-03	2.03E-02	4.51E-04	0.00E+00	4.17E-03	2.70E-02
17	A22	110	Combination Long Haul Truck	322	0.00E+00	1.21E-04	8.69E-06	1.22E+02	3.64E-07	1.19E-01	8.76E-05	1.39E-01	3.41E-03	1.04E-03	7.21E-03	2.56E-03	2.57E-03	1.86E-02	4.08E-04	0.00E+00	4.64E-03	2.61E-02
17	A23	110	Passenger Car	1621	0.00E+00	1.85E-05	2.00E-06	7.52E+01	1.29E-04	5.58E-01	4.12E-05	3.80E-03	4.03E-03	9.37E-04	4.01E-03	2.58E-03	2.65E-03	1.85E-04	3.84E-04	1.13E-07	1.36E-03	5.94E-04
17	A23	110	Passenger Truck	2715	0.00E+00	4.02E-05	4.29E-06	1.79E+02	2.66E-04	1.15E+00	8.60E-05	1.06E-02	6.98E-03	1.76E-03	8.30E-03	5.38E-03	5.51E-03	1.08E-03	9.05E-04	2.66E-07	2.80E-03	1.71E-03
17	A23	110	Single Unit Short Haul Truck	385	0.00E+00	5.09E-05	2.70E-06	7.39E+01	5.22E-05	2.03E-01	5.60E-05	2.98E-02	2.30E-03	7.61E-04	6.16E-03	1.72E-03	1.74E-03	7.56E-03	2.95E-04	1.32E-07	4.42E-03	5.55E-03
17	A23	110	Single Unit Long Haul Truck	17	0.00E+00	2.18E-06	1.12E-07	3.10E+00	2.10E-06	8.02E-03	2.38E-06	1.24E-03	1.03E-04	3.26E-05	2.67E-04	7.08E-05	7.18E-05	3.15E-04	1.24E-05	5.38E-09	1.95E-04	2.31E-04
17	A23	110	Combination Short Haul Truck	336	0.00E+00	1.27E-04	9.53E-06	1.28E+02	3.03E-07	1.15E-01	8.98E-05	1.36E-01	3.60E-03	1.43E-03	6.71E-03	2.77E-03	2.75E-03	1.93E-02	4.30E-04	0.00E+00	3.97E-03	2.57E-02
17	A23	110	Combination Long Haul Truck	307	0.00E+00	1.15E-04	8.28E-06	1.16E+02	3.47E-07	1.13E-01	8.35E-05	1.32E-01	3.24E-03	9.88E-04	6.86E-03	2.44E-03	2.45E-03	1.77E-02	3.88E-04	0.00E+00	4.42E-03	2.49E-02
17	A24	110	Passenger Car	1302	0.00E+00	1.49E-05	1.61E-06	6.04E+01	1.03E-04	4.48E-01	3.31E-05	3.05E-03	3.23E-03	7.52E-04	3.22E-03	2.08E-03	2.13E-03	1.48E-04	3.08E-04	9.11E-08	1.09E-03	4.77E-04
17	A24	110	Passenger Truck	2180	0.00E+00	3.23E-05	3.45E-06	1.44E+02	2.14E-04	9.27E-01	6.90E-05	8.54E-03	5.61E-03	1.41E-03	6.66E-03	4.32E-03	4.43E-03	8.66E-04	7.27E-04	2.14E-07	2.25E-03	1.37E-03
17	A24	110	Single Unit Short Haul Truck	420	0.00E+00	5.56E-05	2.94E-06	8.05E+01	5.70E-05	2.22E-01	6.10E-05	3.24E-02	2.51E-03	8.30E-04	6.72E-03	1.88E-03	1.90E-03	8.24E-03	3.22E-04	1.44E-07	4.82E-03	6.06E-03
17	A24	110	Single Unit Long Haul Truck	19	0.00E+00	2.38E-06	1.23E-07	3.38E+00	2.29E-06	8.75E-03	2.60E-06	1.35E-03	1.12E-04	3.55E-05	2.91E-04	7.72E-05	7.82E-05	3.44E-04	1.35E-05	5.87E-09	2.13E-04	2.52E-04
17	A24	110	Combination Short Haul Truck	325	0.00E+00	1.23E-04	9.21E-06	1.24E+02	2.92E-07	1.11E-01	8.68E-05	1.32E-01	3.48E-03	1.38E-03	6.48E-03	2.68E-03	2.65E-03	1.87E-02	4.15E-04	0.00E+00	3.84E-03	2.48E-02
17	A24	110	Combination Long Haul Truck	296	0.00E+00	1.11E-04	8.00E-06	1.12E+02	3.35E-07	1.09E-01	8.07E-05	1.28E-01	3.14E-03	9.55E-04	6.63E-03	2.35E-03	2.37E-03	1.71E-02	3.75E-04	0.00E+00	4.27E-03	2.40E-02
17	A25	110	Passenger Car	1306	0.00E+00	1.49E-05	1.61E-06	6.06E+01	1.04E-04	4.50E-01	3.31E-05	3.06E-03	3.24E-03	7.54E-04	3.23E-03	2.08E-03	2.14E-03	1.49E-04	3.09E-04	9.14E-08	1.09E-03	4.79E-04
17	A25	110	Passenger Truck	2187	0.00E+00	3.24E-05	3.46E-06	1.45E+02	2.14E-04	9.29E-01	6.92E-05	8.56E-03	5.62E-03	1.42E-03	6.68E-03	4.33E-03	4.44E-03	8.69E-04	7.29E-04	2.14E-07	2.25E-03	1.38E-03
17	A25	110	Single Unit Short Haul Truck	329	0.00E+00	4.36E-05	2.31E-06	6.31E+01	4.47E-05	1.74E-01	4.79E-05	2.54E-02	1.97E-03	6.51E-04	5.27E-03	1.47E-03	1.49E-03	6.46E-03	2.53E-04	1.13E-07	3.78E-03	4.75E-03
17	A25	110	Single Unit Long Haul Truck	15	0.00E+00	1.86E-06	9.60E-08	2.65E+00	1.79E-06	6.86E-03	2.04E-06	1.06E-03	8.80E-05	2.78E-05	2.28E-04	6.05E-05	6.13E-05	2.70E-04	1.06E-05	4.60E-09	1.67E-04	1.97E-04
17	A25	110	Combination Short Haul Truck	298	0.00E+00	1.12E-04	8.43E-06	1.13E+02	2.68E-07	1.02E-01	7.95E-05	1.21E-01	3.19E-03	1.27E-03	5.94E-03	2.46E-03	2.43E-03	1.71E-02	3.80E-04	0.00E+00	3.51E-03	2.27E-02
17	A25	110	Combination Long Haul Truck	271	0.00E+00	1.02E-04	7.33E-06	1.03E+02	3.07E-07	1.00E-01	7.39E-05	1.17E-01	2.87E-03	8.75E-04	6.08E-03	2.16E-03	2.17E-03	1.57E-02	3.44E-04	0.00E+00	3.91E-03	2.20E-02
17	A26	110	Passenger Car	1221	0.00E+00	1.39E-05	1.51E-06	5.66E+01	9.70E-05	4.21E-01	3.10E-05	2.86E-03	3.03E-03	7.06E-04	3.02E-03	1.95E-03	2.00E-03	1.39E-04	2.89E-04	8.55E-08	1.02E-03	4.48E-04
17	A26	110	Passenger Truck	2045	0.00E+00	3.03E-05	3.23E-06	1.35E+02	2.01E-04	8.69E-01	6.48E-05	8.01E-03	5.26E-03	1.32E-03	6.25E-03	4.05E-03	4.15E-03	8.12E-04	6.82E-04	2.01E-07	2.11E-03	1.29E-03
17	A26	110	Single Unit Short Haul Truck	400	0.00E+00	5.29E-05	2.80E-06	7.66E+01	5.42E-05	2.11E-01	5.81E-05	3.09E-02	2.39E-03	7.89E-04	6.40E-03	1.79E-03	1.81E-03	7.84E-03	3.06E-04	1.37E-07	4.59E-03	5.76E-03
17	A26	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.17E-07	3.21E+00	2.17E-06	8.33E-03	2.47E-06	1.28E-03	1.07E-04	3.38E-05	2.77E-04	7.35E-05	7.44E-05	3.27E-04	1.29E-05	5.58E-09	2.02E-04	2.39E-04
17	A26	110	Combination Short Haul Truck	303	0.00E+00	1.15E-04	8.59E-06	1.15E+02	2.73E-07	1.04E-01	8.10E-05	1.23E-01	3.25E-03	1.29E-03	6.05E-03	2.50E-03	2.48E-03	1.74E-02	3.87E-04	0.00E+00	3.58E-03	2.32E-02
17	A26	110	Combination Long Haul Truck	276	0.00E+00	1.04E-04	7.46E-06	1.04E+02	3.13E-07	1.02E-01	7.52E-05	1.19E-01	2.93E-03	8.91E-04	6.19E-03	2.20E-03	2.21E-03	1.60E-02	3.50E-04	0.00E+00	3.99E-03	2.24E-02
17	A27	110	Passenger Car	1306	0.00E+00	1.49E-05	1.61E-06	6.06E+01	1.04E-04	4.50E-01	3.31E-05	3.06E-03	3.24E-03	7.54E-04	3.23E-03	2.08E-03	2.14E-03	1.49E-04	3.09E-04	9.14E-08	1.09E-03	4.79E-04
17	A27	110	Passenger Truck	2187	0.00E+00	3.24E-05	3.46E-06	1.45E+02	2.14E-04	9.29E-01	6.92E-05	8.56E-03	5.62E-03	1.42E-03	6.68E-03	4.33E-03	4.44E-03	8.69E-04	7.29E-04	2.14E-07	2.25E-03	1.38E-03
17	A27	110	Single Unit Short Haul Truck	329	0.00E+00	4.36E-05	2.31E-06	6.31E+01	4.47E-05	1.74E-01	4.79E-05	2.54E-02	1.97E-03	6.51E-04	5.27E-03	1.47E-03	1.49E-03	6.46E-03	2.53E-04	1.13E-07	3.78E-03	4.75E-03
17	A27	110	Single Unit Long Haul Truck	15	0.00E+00	1.86E-06	9.60E-08	2.65E+00	1.79E-06	6.86E-03	2.04E-06	1.06E-03	8.80E-05	2.78E-05	2.28E-04	6.05E-05	6.13E-05	2.70E-04	1.06E-05	4.60E-09	1.67E-04	1.97E-04
17	A27	110	Combination Short Haul Truck	298	0.00E+00	1.12E-04	8.43E-06	1.13E+02	2.68E-07	1.02E-01	7.95E-05	1.21E-01	3.19E-03	1.27E-03	5.94E-03	2.46E-03	2.43E-03	1.71E-02	3.80E-04	0.00E+00	3.51E-03	2.27E-02
17	A27	110	Combination Long Haul Truck	271	0.00E+00	1.02E-04	7.33E-06	1.03E+02	3.07E-07	1.00E-01	7.39E-05	1.17E-01	2.87E-03	8.75E-04	6.08E-03	2.16E-03	2.17E-03	1.57E-02	3.44E-04	0.00E+00	3.91E-03	2.20E-02
17	A28	110	Passenger Car	1221	0.00E+00	1.39E-05	1.51E-06	5.66E+01	9.70E-05	4.21E-01	3.10E-05	2.86E-03	3.03E-03	7.06E-04	3.02E-03	1.95E-03	2.00E-03	1.39E-04	2.89E-04	8.55E-08	1.02E-03	4.48E-04
17	A28	110	Passenger Truck	2045	0.00E+00	3.03E-05	3.23E-06	1.35E+02	2.01E-04	8.69E-01	6.48E-05	8.01E-03	5.26E-03	1.32E-03	6.25E-03	4.05E-03	4.15E-03	8.12E-04	6.82E-04	2.01E-07	2.11E-03	1.29E-03
17	A28	110	Single Unit Short Haul Truck	400	0.00E+00	5.29E-05	2.80E-06	7.66E+01	5.42E-05	2.11E-01	5.81E-05	3.09E-02	2.39E-03	7.89E-04	6.40E-03	1.79E-03	1.81E-03	7.84E-03	3.06E-04	1.37E-07	4.59E-03	5.76E-03
17	A28	110	Single Unit Long Haul Truck	18	0.00E+00	2.26E-06	1.17E-07	3.21E+00	2.17E-06	8.33E-03	2.47E-06	1.28E-03	1.07E-04	3.38E-05	2.77E-04	7.35E-05	7.44E-05	3.27E-04	1.29E-05	5.58E-09	2.02E-04	2.39E-04
17	A28	110	Combination Short Haul Truck	303	0.00E+00	1.15E-04	8.59E-06	1.15E+02	2.73E-07	1.04E-01	8.10E-05	1.23E-01	3.25E-03	1.29E-03	6.05E-03	2.50E-03	2.48E-03	1.74E-02	3.87E-04	0.00E+00	3.58E-03	2.32E-02
17	A28	110	Combination Long Haul Truck	276	0.00E+00	1.04E-04	7.46E-06	1.04E+02	3.13E-07	1.02E-01	7.52E-05	1.19E-01	2.93E-03	8.91E-04	6.19E-03	2.20E-03	2.21E-03	1.60E-02	3.50E-04	0.00E+00	3.99E-03	2.24E-02
16	B15	100	Passenger Car	1642	0.00E+00	1.77E-05	1.92E-06	7.30E+01	1.24E-04	4.70E-01	3.94E-05	3.51E-03	5.34E-03	1.07E-03	3.84E-03	2.48E-03	2.54E-03	2.06E-04	3.74E-04	1.03E-07	1.30E-03	5.47E-04
16	B15	100	Passenger Truck	2750	0.00E+00	3.83E-05	4.08E-06	1.73E+02	2.51E-04	9.47E-01	8.17E-05	1.00E-02	9.39E-03	2.00E-03	7.87E-03	5.08E-03	5.21E-03	1.11E-03	8.71E-04	2.39E-07	2.63E-03	1.61E-03
16	B15	100	Single Unit Short Haul Truck	110	0.00E+00	1.47E-05	7.28E-07	2.00E+01	1.28E-05	4.63E-02	1.59E-05	7.98E-03	7.55E-04	2.20E-04	1.82E-03	4.51E-04	4.60E-04	2.02E-03	8.04E-05	3.29E-08	1.36E-03	1.49E-03
16	B15	100	Single Unit Long Haul Truck	5	0.00E+00	6.38E-07	3.10E-08	8.43E-01	5.32E-07	1.89E-03	6.89E-07	3.36E-04	3.41E-05	9.49E-06	7.93E-05	1.91E-05	1.93E-05	8.44E-05	3.40E-06	1.34E-09	6.00E-05	6.27E-05
16	B15	100	Combination Short Haul Truck	87	0.00E+00	3.00E-05	2.19E-06	3.15E+01	8.52E-08	2.93E-02	2.16E-05	3.20E-02	1.01E-03	3.61E-04	1.68E-03	6.41E-04	6.29E-04	4.74E-03	1.06E-04	0.00E+00	1.05E-03	6.03E-03
16	B15	100	Combination Long Haul Truck	79	0.00E+00	2.60E-05	1.79E-06	2.85E+01	9.87E-08	2.91E-02	1.95E-05	3.05E-02	9.40E-04	2.60E-04	1.71E-03	5.34E-04	5.34E-04	4.35E-03	9.56E-05	0.00E+00	1.17E-03	5.74E-03
16	B16	100	Passenger Car	994	0.00E+00	1.07E-05	1.16E-06	4.42E+01	7.49E-05	2.85E-01	2.39E-05	2.12E-03	3.23E-03	6.49E-04	2.33E-03	1.50E-03	1.54E-03	1.25E-04	2.26E-04	6.22E-08	7.87E-04	3.31E-04
16	B16	100	Passenger Truck	1665	0.00E+00	2.32E-05	2.47E-06	1.05E+02	1.52E-04	5.74E-01	4.95E-05	6.06E-03	5.69E-03	1.21E-03	4.76E-03	3.08E-03	3.15E-03	6.71E-04	5.27E-04	1.45E-07	1.60E-03	9.76E-04
16	B16	100	Single Unit Short Haul Truck	72	0.00E+00	9.72E-06	4.80E-07	1.32E+01	8.47E-06	3.05E-02	1.05E-05	5.26E-03	4.98E-04	1.45E-04	1.20E-03	2.97E-04	3.03E-04	1.33E-03	5.30E-05	2.17E-08	8.97E-04	9.82E-04
16	B16	100	Single Unit Long Haul Truck	3	0.00E+00	4.21E-07	2.05E-08	5.56E-01	3.51E-07	1.25E-03	4.54E-07	2.21E-04	2.25E-05	6.26E-06	5.23E-05	1.26E-05	1.28E-05	5.57E-05	2.24E-06	8.85E-10	3.96E-05

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B20	100	Single Unit Long Haul Truck	7	0.00E+00	9.58E-07	4.66E-08	1.27E+00	7.98E-07	2.84E-03	1.03E-06	5.04E-04	5.12E-05	1.43E-05	1.19E-04	2.86E-05	2.90E-05	1.27E-04	5.10E-06	2.02E-09	9.01E-05	9.41E-05
16	B20	100	Combination Short Haul Truck	177	0.00E+00	6.09E-05	4.43E-06	6.38E+01	1.73E-07	5.94E-02	4.38E-05	6.48E-02	2.06E-03	7.32E-04	3.40E-03	1.30E-03	1.28E-03	9.62E-03	2.14E-04	0.00E+00	2.13E-03	1.22E-02
16	B20	100	Combination Long Haul Truck	161	0.00E+00	5.28E-05	3.62E-06	5.78E+01	2.00E-07	5.91E-02	3.96E-05	6.18E-02	1.91E-03	5.28E-04	3.47E-03	1.08E-03	1.08E-03	8.82E-03	1.94E-04	0.00E+00	2.38E-03	1.16E-02
16	B21	100	Passenger Car	2574	0.00E+00	2.78E-05	3.01E-06	1.14E+02	1.94E-04	7.36E-01	6.19E-05	5.50E-03	8.37E-03	1.68E-03	6.02E-03	3.88E-03	3.98E-03	3.22E-04	5.86E-04	1.61E-07	2.04E-03	8.58E-04
16	B21	100	Passenger Truck	4311	0.00E+00	6.01E-05	6.39E-06	2.71E+02	3.94E-04	1.48E+00	1.28E-04	1.57E-02	1.47E-02	3.14E-03	1.23E-02	7.96E-03	8.17E-03	1.74E-03	1.37E-03	3.75E-07	4.13E-03	2.53E-03
16	B21	100	Single Unit Short Haul Truck	42	0.00E+00	5.60E-06	2.76E-07	7.60E+00	4.88E-06	1.76E-02	6.05E-06	3.03E-03	2.87E-04	8.35E-05	6.92E-04	1.71E-04	1.75E-04	7.67E-04	3.05E-05	1.25E-08	5.17E-04	5.66E-04
16	B21	100	Single Unit Long Haul Truck	2	0.00E+00	2.42E-07	1.18E-08	3.20E-01	2.02E-07	7.19E-04	2.62E-07	1.28E-04	1.30E-05	3.61E-06	3.02E-05	7.25E-06	7.35E-06	3.21E-05	1.29E-06	5.10E-10	2.28E-05	2.38E-05
16	B21	100	Combination Short Haul Truck	44	0.00E+00	1.51E-05	1.10E-06	1.58E+01	4.28E-08	1.47E-02	1.09E-05	1.61E-02	5.10E-04	1.81E-04	8.43E-04	3.22E-04	3.16E-04	2.38E-03	5.31E-05	0.00E+00	5.27E-04	3.03E-03
16	B21	100	Combination Long Haul Truck	40	0.00E+00	1.31E-05	8.98E-07	1.43E+01	4.96E-08	1.46E-02	9.81E-06	1.53E-02	4.73E-04	1.31E-04	8.59E-04	2.69E-04	2.69E-04	2.19E-03	4.80E-05	0.00E+00	5.90E-04	2.88E-03
16	B22	100	Passenger Car	991	0.00E+00	1.07E-05	1.16E-06	4.41E+01	7.46E-05	2.84E-01	2.38E-05	2.12E-03	3.22E-03	6.47E-04	2.32E-03	1.50E-03	1.53E-03	1.24E-04	2.26E-04	6.20E-08	7.85E-04	3.30E-04
16	B22	100	Passenger Truck	1660	0.00E+00	2.31E-05	2.46E-06	1.04E+02	1.52E-04	5.72E-01	4.93E-05	6.04E-03	5.67E-03	1.21E-03	4.75E-03	3.07E-03	3.15E-03	6.69E-04	5.26E-04	1.44E-07	1.59E-03	9.73E-04
16	B22	100	Single Unit Short Haul Truck	38	0.00E+00	5.14E-06	2.54E-07	6.97E+00	4.48E-06	1.61E-02	5.55E-06	2.78E-03	2.63E-04	7.66E-05	6.35E-04	1.57E-04	1.60E-04	7.04E-04	2.80E-05	1.15E-08	4.75E-04	5.19E-04
16	B22	100	Single Unit Long Haul Truck	2	0.00E+00	2.22E-07	1.08E-08	2.94E-01	1.85E-07	6.60E-04	2.40E-07	1.17E-04	1.19E-05	3.31E-06	2.77E-05	6.65E-06	6.74E-06	2.94E-05	1.18E-06	4.68E-10	2.09E-05	2.19E-05
16	B22	100	Combination Short Haul Truck	84	0.00E+00	2.91E-05	2.12E-06	3.05E+01	8.26E-08	2.84E-02	2.09E-05	3.10E-02	9.83E-04	3.50E-04	1.63E-03	6.22E-04	6.10E-04	4.60E-03	1.02E-04	0.00E+00	1.02E-03	5.84E-03
16	B22	100	Combination Long Haul Truck	77	0.00E+00	2.52E-05	1.73E-06	2.76E+01	9.56E-08	2.82E-02	1.89E-05	2.95E-02	9.11E-04	2.52E-04	1.66E-03	5.18E-04	5.18E-04	4.21E-03	9.26E-05	0.00E+00	1.14E-03	5.56E-03
16	B23	100	Passenger Car	2653	0.00E+00	2.87E-05	3.10E-06	1.18E+02	2.00E-04	7.59E-01	6.38E-05	5.67E-03	8.62E-03	1.73E-03	6.21E-03	4.00E-03	4.11E-03	3.32E-04	6.04E-04	1.66E-07	2.10E-03	8.84E-04
16	B23	100	Passenger Truck	4443	0.00E+00	6.20E-05	6.59E-06	2.79E+02	4.06E-04	1.53E+00	1.32E-04	1.62E-02	1.52E-02	3.23E-03	1.27E-02	8.21E-03	8.42E-03	1.79E-03	1.41E-03	3.86E-07	4.26E-03	2.60E-03
16	B23	100	Single Unit Short Haul Truck	42	0.00E+00	5.60E-06	2.76E-07	7.60E+00	4.88E-06	1.76E-02	6.05E-06	3.03E-03	2.87E-04	8.35E-05	6.92E-04	1.71E-04	1.75E-04	7.67E-04	3.05E-05	1.25E-08	5.17E-04	5.66E-04
16	B23	100	Single Unit Long Haul Truck	2	0.00E+00	2.42E-07	1.18E-08	3.20E-01	2.02E-07	7.19E-04	2.62E-07	1.28E-04	1.30E-05	3.61E-06	3.02E-05	7.25E-06	7.35E-06	3.21E-05	1.29E-06	5.10E-10	2.28E-05	2.38E-05
16	B23	100	Combination Short Haul Truck	44	0.00E+00	1.51E-05	1.10E-06	1.58E+01	4.28E-08	1.47E-02	1.09E-05	1.61E-02	5.10E-04	1.81E-04	8.43E-04	3.22E-04	3.16E-04	2.38E-03	5.31E-05	0.00E+00	5.27E-04	3.03E-03
16	B23	100	Combination Long Haul Truck	40	0.00E+00	1.31E-05	8.98E-07	1.43E+01	4.96E-08	1.46E-02	9.81E-06	1.53E-02	4.73E-04	1.31E-04	8.59E-04	2.69E-04	2.69E-04	2.19E-03	4.80E-05	0.00E+00	5.90E-04	2.88E-03
16	B24	100	Passenger Car	1567	0.00E+00	1.69E-05	1.83E-06	6.96E+01	1.18E-04	4.48E-01	3.76E-05	3.35E-03	5.09E-03	1.02E-03	3.66E-03	2.36E-03	2.42E-03	1.96E-04	3.56E-04	9.79E-08	1.24E-03	5.22E-04
16	B24	100	Passenger Truck	2623	0.00E+00	3.66E-05	3.89E-06	1.65E+02	2.40E-04	9.04E-01	7.80E-05	9.55E-03	8.96E-03	1.91E-03	7.51E-03	4.85E-03	4.97E-03	1.06E-03	8.31E-04	2.28E-07	2.51E-03	1.54E-03
16	B24	100	Single Unit Short Haul Truck	259	0.00E+00	3.49E-05	1.72E-06	4.73E+01	3.04E-05	1.09E-01	3.77E-05	1.89E-02	1.79E-03	5.20E-04	4.31E-03	1.07E-03	1.09E-03	4.77E-03	1.90E-04	7.78E-08	3.22E-03	3.52E-03
16	B24	100	Single Unit Long Haul Truck	11	0.00E+00	1.51E-06	7.34E-08	1.99E+00	1.26E-06	4.48E-03	1.63E-06	7.94E-04	8.07E-05	2.25E-05	1.88E-04	4.51E-05	4.57E-05	2.00E-04	8.04E-06	3.18E-09	1.42E-04	1.48E-04
16	B24	100	Combination Short Haul Truck	250	0.00E+00	8.62E-05	6.27E-06	9.03E+01	2.45E-07	8.41E-02	6.20E-05	9.17E-02	2.91E-03	1.04E-03	4.82E-03	1.84E-03	1.81E-03	1.36E-02	3.03E-04	0.00E+00	3.01E-03	1.73E-02
16	B24	100	Combination Long Haul Truck	228	0.00E+00	7.48E-05	5.13E-06	8.17E+01	2.83E-07	8.36E-02	5.60E-05	8.74E-02	2.70E-03	7.48E-04	4.90E-03	1.53E-03	1.53E-03	1.25E-02	2.74E-04	0.00E+00	3.37E-03	1.65E-02
52	C53	60	Passenger Car	45	0.00E+00	6.18E-07	6.68E-08	2.26E+00	4.30E-06	1.54E-02	1.37E-06	8.91E-05	4.48E-04	6.88E-05	1.34E-04	8.61E-05	8.84E-05	9.48E-06	1.14E-05	3.05E-09	4.53E-05	1.40E-05
52	C53	60	Passenger Truck	76	0.00E+00	1.36E-06	1.43E-07	5.15E+00	8.47E-06	2.74E-02	2.79E-06	2.87E-04	7.98E-04	1.24E-04	2.66E-04	1.73E-04	1.77E-04	3.95E-05	2.58E-05	6.46E-09	8.82E-05	4.75E-05
53	C54	70	Passenger Car	64	0.00E+00	8.00E-07	8.64E-08	3.07E+00	5.57E-06	1.99E-02	1.77E-06	1.30E-04	4.88E-04	7.86E-05	1.73E-04	1.12E-04	1.14E-04	1.14E-05	1.56E-05	4.24E-09	5.86E-05	2.04E-05
53	C54	70	Passenger Truck	107	0.00E+00	1.74E-06	1.84E-07	7.07E+00	1.10E-05	3.65E-02	3.62E-06	3.98E-04	8.77E-04	1.43E-04	3.45E-04	2.25E-04	2.30E-04	5.17E-05	3.57E-05	9.33E-09	1.15E-04	6.54E-05
53	C54	70	Single Unit Short Haul Truck	8	0.00E+00	1.91E-06	9.57E-08	1.50E+00	1.56E-06	3.00E-03	2.03E-06	9.43E-04	1.34E-04	2.69E-05	2.32E-04	5.71E-05	5.80E-05	1.50E-04	6.03E-06	2.44E-09	1.74E-04	1.77E-04
53	C54	70	Combination Short Haul Truck	5	0.00E+00	2.38E-06	1.70E-07	1.73E+00	7.75E-09	2.05E-03	1.75E-06	2.51E-03	1.81E-04	3.96E-05	1.45E-04	5.02E-05	5.01E-05	2.61E-04	5.79E-06	0.00E+00	9.52E-05	4.73E-04
53	C54	70	Combination Long Haul Truck	4	0.00E+00	2.16E-06	1.44E-07	1.62E+00	8.93E-09	2.17E-03	1.64E-06	2.48E-03	1.80E-04	3.29E-05	1.50E-04	4.36E-05	4.41E-05	2.46E-04	5.41E-06	0.00E+00	1.06E-04	4.66E-04
53	C57	70	Passenger Car	153	0.00E+00	1.92E-06	2.07E-07	7.35E+00	1.33E-05	4.76E-02	4.25E-06	3.12E-04	1.17E-03	1.88E-04	4.14E-04	2.67E-04	2.74E-04	2.74E-05	3.73E-05	1.02E-08	1.40E-04	4.89E-05
53	C57	70	Passenger Truck	256	0.00E+00	4.17E-06	4.41E-07	1.69E+01	2.64E-05	8.75E-02	8.68E-06	9.54E-04	2.10E-03	3.42E-04	8.26E-04	5.38E-04	5.52E-04	1.24E-04	8.54E-05	2.23E-08	2.76E-04	1.57E-04
53	C57	70	Single Unit Short Haul Truck	19	0.00E+00	4.54E-06	2.28E-07	3.56E+00	3.72E-06	7.14E-03	4.84E-06	2.25E-03	3.20E-04	6.39E-05	5.53E-04	1.36E-04	1.38E-04	3.57E-04	1.43E-05	5.80E-09	4.13E-04	4.20E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	9.86E-09	1.51E-01	1.60E-07	2.99E-04	2.11E-07	9.64E-05	1.46E-05	2.84E-06	2.42E-05	5.88E-06	5.97E-06	1.51E-05	6.09E-07	2.44E-10	1.81E-05	1.81E-05
53	C57	70	Combination Short Haul Truck	18	0.00E+00	9.16E-06	6.51E-07	6.66E+00	2.98E-08	7.88E-03	6.71E-06	9.65E-03	6.95E-04	1.52E-04	5.58E-04	1.93E-04	1.92E-04	1.00E-03	2.22E-05	0.00E+00	3.66E-04	1.82E-03
53	C57	70	Combination Long Haul Truck	16	0.00E+00	8.30E-06	5.54E-07	6.21E+00	3.43E-08	8.35E-03	6.30E-06	9.51E-03	6.92E-04	1.26E-04	5.76E-04	1.67E-04	1.69E-04	9.47E-04	2.08E-05	0.00E+00	4.08E-04	1.79E-03
50	C58	40	Passenger Car	32	0.00E+00	5.35E-07	5.79E-08	1.85E+00	3.72E-06	1.32E-02	1.19E-06	5.82E-05	5.57E-04	7.95E-05	1.15E-04	7.47E-05	7.67E-05	1.01E-05	9.30E-06	2.25E-09	3.92E-05	9.12E-06
50	C58	40	Passenger Truck	54	0.00E+00	1.22E-06	1.28E-07	4.12E+00	7.34E-06	2.29E-02	2.46E-06	2.20E-04	9.89E-04	1.41E-04	2.31E-04	1.51E-04	1.54E-04	3.57E-05	2.05E-05	4.39E-09	7.62E-05	3.73E-05
50	C58	40	Single Unit Short Haul Truck	1	0.00E+00	5.06E-07	2.65E-08	2.43E-01	4.40E-07	4.18E-04	5.38E-07	2.48E-04	4.62E-05	7.66E-06	5.98E-05	1.58E-05	1.60E-05	2.45E-05	9.81E-07	4.15E-10	4.37E-05	4.65E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	1.30E-06	9.02E-08	6.62E-01	4.70E-09	1.14E-03	9.68E-07	1.45E-03	1.52E-04	2.73E-05	8.45E-05	2.70E-05	2.72E-05	9.96E-05	2.21E-06	0.00E+00	5.72E-05	2.74E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	1.19E-06	7.75E-08	6.29E-01	5.32E-09	1.26E-03	9.12E-07	1.46E-03	1.52E-04	2.42E-05	8.68E-05	2.36E-05	2.41E-05	9.61E-05	2.10E-06	0.00E+00	6.29E-05	2.75E-04
53	C59	70	Passenger Car	106	0.00E+00	1.33E-06	1.43E-07	5.08E+00	9.23E-06	3.29E-02	2.94E-06	2.16E-04	8.08E-04	1.30E-04	2.87E-04	1.85E-04	1.90E-04	1.90E-05	2.58E-05	7.02E-09	9.70E-05	3.38E-05
53	C59	70	Passenger Truck	177	0.00E+00	2.88E-06	3.05E-07	1.17E+01	1.83E-05	6.05E-02	6.00E-06	6.60E-04	1.45E-03	2.37E-04	5.71E-04	3.72E-04	3.81E-04	8.56E-05	5.91E-05	1.55E-08	1.91E-04	1.08E-04
53	C59	70	Single Unit Short Haul Truck	8	0.00E+00	1.83E-06	9.15E-08	1.43E+00	1.49E-06	2.87E-03	1.94E-06	9.02E-04	1.28E-04	2.57E-05	2.22E-04	5.46E-05	5.55E-05	1.43E-04	5.76E-06	2.33E-09	1.66E-04	1.69E-04
53	C59	70	Combination Short Haul Truck	5	0.00E+00	2.76E-06	1.96E-07	2.01E+00	8.97E-09	2.38E-03	2.02E-06	2.91E-03	2.10E-04	4.59E-05	1.68E-04	5.82E-05	5.80E-05	3.03E-04	6.70E-06	0.00E+00	1.10E-04	5.48E-04
53	C59	70	Combination Long Haul Truck	5	0.00E+00	2.50E-06	1.67E-07	1.87E+00	1.03E-08	2.52E-03	1.90E-06	2.87E-03	2.09E-04	3.81E-05	1.74E-04	5.05E-05	5.10E-05	2.85E-04	6.26E-06	0.00E+00	1.23E-04	5.40E-04
52	C60	60	Passenger Car	229	0.00E+00	3.11E-06	3.37E-07	1.14E+01	2.17E-05	7.75E-02	6.93E-06	4.49E-04	2.26E-03	3.47E-04	6.74E-04	4.34E-04	4.46E-04	4.78E-05	5.75E-05	1.54E-08	2.28E-04	7.06E-05
52	C60	60	Passenger Truck	383	0.00E+00	6.84E-06	7.23E-07	2.60E+01	4.27E-05	1.38E-01	1.41E-05	1.45E-03	4.02E-03	6.23E-04	1.34E-03	8.72E-04	8.93E-04	1.99E-04	1.30E-04	3.26E-08	4.45E-04	2.39E-04
52	C60	60	Single Unit Short Haul Truck	16	0.00E+00	4.80E-06	2.40E-07	3.05E+00	3.94E-06	5.89E-03	5.12E-06	2.29E-03	3.88E-04	7.02E-05	5.80E-04	1.44E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.36E-04	4.28E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	2.10E-07	1.04E-08	1.30E-01	1.71E-07	2.50E-04	2.24E-07	9.88E-05	1.74E-05	3.12E-06	2.56E-05	6.25E-06	6.35E-06	1.30E-05	5.25E-07	2.16E-10	1.91E-05	1.85E-05
52	C60	60	Combination Short Haul Truck	10	0.00E+00	5.88E-06	4.10E-07	3.83E+00	2.08E-08	5.13E-03	4.35E-06	6.38E-03	5.46E-04	1.08E-04	3.74E-04	1.22E-04	1.22E-04	5.77E-04	1.28E-05	0.00E+00	2.52E-04	1.20E-03
52	C60	60	Combination Long Haul Truck	9	0.00E+00	5.26E-06	3.44E-07	3.59E+00	2.38E-08	5.54E-03	4.07E-06	6.32E-03	5.49E-04	9.33E-05	3.84E-04	1.05E-04	1.06E-04	5.46E-04	1.20E-05	0.00E+00	2.78E-04	1.19E-03
53	C61	70	Passenger Car	108	0.00E+00	1.35E-06	1.46E-07	5.20E+00	9.43E-06	3.36E-02	3.00E-06	2.20E-04	8.26E-04	1.33E-04	2.93E-04	1.89E-04	1.94E-04	1.94E-05	2.64E-05	7.18E-09	9.91E-05	3.45E-05
53	C61	70	Passenger Truck	181	0.00E+00	2.95E-06	3.12E-07	1.20E+01	1.87E-05	6.19E-02	6.14E-06	6.74E-04	1.48E-03	2.42E-04	5.83E-04	3.80E-04	3.90E-04	8.75E-05	6.04E-05	1.58E-08	1.95E-04	1.11E-04
53	C61	70	Single Unit Short Haul Truck	11	0.00E+00	2.68E-06	1.34E-07	2.10E+00	2.19E-06	4.21E-03	2.85E-06	1.32E-03	1.88E-04	3.76E-05	3.26E-04	8.00E-05	8.13E-05	2.10E-04	8.45E-06	3.42E-09	2.43E-04	2.47E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	5.80E-09	8.90E-02	9.44E-08	1.76E-04	1.24E-07	5.68E-05	8.59E-06	1.67E-06	1.42E-05	3.46E-06	3.52E-06	8.89E-06	3.59E-07	1.44E-10	1.07E-05	1.06E-05
53	C61	70	Combination Short Haul Truck	9	0.00E+00	4.48E-06	3.18E-07	3.26E+00	1.46E-08	3.85E-03	3.28E-06	4.72E-03	3.40E-04	7.45E-05	2.73E-04	9.43E-05	9.41E-05	4.91E-04	1.09E-05	0.00E+00	1.79E-04	8.88E-04
53	C61	70	Combination Long Haul Truck	8	0.00E+00	4.06E-06	2.71E-07	3.03E+00	1.68E-08	4.08E-03	3.08E-06	4.65E-03	3.38E-04	6.18E-05	2.82E-04	8.19E-05	8.27E-05	4.63E-04	1.02E-05	0.00E+00	2.00E-04	8.75E-04
50	C62	40	Passenger Car	316	0.00E+00	5.25E-06	5.68E-07	1.82E+01	3.65E-05	1.30E-01	1.17E-05	5.72E-04	5.47E-03	7.80E-04	1.13E-03	7.33E-04	7.52E-04	9.92E-05	9.13E-05	2.21E-08	3.85E-04	8.96E-05
50	C62	40	Passenger Truck	529	0.00E+00	1.20E-05	1.26E-06	4.04E+01	7.20E-05	2.25E-01	2.41E-05	2.16E-03	9.70E-03	1.38E-03	2.26E-03	1.48E-03	1.51E-03	3.50E-04	2.01E-04	4.31E-08	7.48E-04	3.66E-04
50	C62	40	Single Unit Short Haul Truck	5	0.00E+00	2.36E-06	1.24E-07	1.13E+00	2.05E-06	1.95E-03	2.51E-06	1.16E-03	2.16E-04	3.58E-05	2.79E-04	7.37E-05	7.49E-05	1.14E-04	4.58E-06	1.94E-09	2.04E-04	2.17E-04
50	C62	40	Combination Short Haul Truck	3	0.00E+00	2.62E-06	1.82E-07	1.33E+00	9.45E-09	2.28E-03	1.95E-06	2.93E-03	3.05E-04	5.50E-05	1.70E-04	5.42E-05	5.48E-05	2.01E-04	4.45E-06	0.00E+00	1.15E-04	5.51E-04
50	C62	40	Combination Long Haul Truck	3	0.00E+00	2.39E-06	1.56E-07	1.27E+00	1.07E-08	2.54E-03	1.84E-06	2.94E-03	3.06E-04	4.88E-05	1.75E-04	4.75E-05	4.84E-05	1.93E-04	4.23E-06	0.00E+00	1.27E-04	5.53E-04
52	C63	60	Passenger Car	255	0.00E+00	3.47E-06	3.75E-07	1.27E+01	2.41E-05	8.63E-02	7.71E-06	5.00E-04	2.51E-03	3.86E-04	7.50E-04	4.83E-04	4.96E-04	5.32E-05	6.40E-05	1.71E-08	2.54E-04	7.85E-05
52	C63	60	Passenger Truck	426	0.00E+00	7.62E-06	8.04E-07	2.89E+01	4.75E-05	1.54E-01	1.56E-05	1.61E-03	4.48E-03	6.93E-04	1.49E-03	9.70E-04	9.94E-04	2.22E-04	1.45E-04	3.63E-08	4.95E-04	2.67E-04
52	C63	60	Single Unit Short Haul Truck	68	0.00E+00	2.01E-05	1.00E-06	1.28E+01	1.65E-05	2.47E-02	2.14E-05	9.58E-03	1.62E-03	2.94E-04	2.43E-03	6.01E-04	6.11E-04	1.28E-03	5.16E-05	2.13E-08	1.83E-03	1.79E-03
52	C63	60	Single Unit Long Haul Truck	3	0.00E+00	8.79E-07	4.36E-08	5.46E-01	7.18E-07	1.05E-03	9.37E-07	4.14E-04	7.30E-05	1.31E-05	1.07E-04	2.62E-05	2.66E-05	5.45E-05	2.20E-06	9.04E-10	8.02E-05	7.77E-05
52	C63	60	Combination Short Haul Truck	57	0.00E+00	3.36E-05	2.35E-06	2.19E+01	1.19E-07	2.94E-02	2.49E-05	3.65E-02	3.13E-03	6.19E-04	2.14E-03	6.98E-04	6.98E-04	3.30E-03	7.32E-05	0.00E+00	1.44E-03	6.89E-03
52	C63	60	Combination Long Haul Truck	52	0.00E+00	3.01E-05	1.97E-06	2.05E+01	1.36E-07	3.17E-02	2.33E-05	3.62E-02	3.14E-03	5.34E-04	2.20E-03	5.99E-04	6.06E-04	3.13E-03	6.86E-05	0.00E+00	1.59E-03	6.83E-03
53	C64	70	Passenger Car	494	0.00E+00	6.19E-06	6.69E-07	2.38E+01	4.31E-05	1.54E-01	1.37E-05	1.01E-03	3.78E-03	6.08E-04	1.34E-03	8.64E-04	8.86E-04	8.86E-05	1.21E-04	3.28E-08	4.53E-04	1.58E-04
53	C64	70	Passenger Truck	828	0.00E+00	1.35E-05	1.43E-06	5.47E+01	8.53E-05	2.83E-01	2.81E-05	3.08E-03	6.78E-03	1.11E-03	2.67E-03	1.74E-03	1.78E-03	4.00E-04	2.76E-04	7.22E-08	8.92E-04	5.06E-04
53	C64	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.22E-07	8.17E+00	8.52E-06	1.64E-02	1.11E-05	5.15E-03	7.33E-04	1.47E-04	1.27E-03	3.12E-04	3.17E-04	8.18E-04	3.29E-05	1.33E-08	9.47E-04	9.63E-04
53	C64	70	Single Unit Long Haul Truck	2	0.00E+00	4.54E-07	2.26E-08	3.47E-01	3.68E-07	6.85E-04	4.84E-07	2.21E-04	3.35E-05	6.52E-06	5.54E-05	1.35E-05	1.37E-05	3.46E-05	1.40E-06	5.60E-10	4.16E-05	4.15E-05
53	C64	70	Combination Short Haul Truck	30	0.00E+00	1.54E-05	1.10E-06	1.12E+01	5.02E-08	1.33E-02	1.13E-05	1.62E-02	1.17E-03	2.57E-04	9.40E-04	3.25E-04	3.24E-04	1.69E-03	3.74E-05	0.00E+00	6.16E-04	3.06E-03
53	C64	70	Combination Long Haul Truck	27	0.00E+00	1.40E-05	9.33E-07	1.05E+01	5.78E-08	1.41E-02	1.06E-05	1.60E-02	1.17E-03	2.13E-04	9.70E-04	2.82E-04	2.85E-04	1.59E-03	3.50E-05	0.00E+00	6.87E-04	3.02E-03
52	C65	60	Passenger Car	6	0.00E+00	8.59E-08	9.29E-09	3.14E-01	5.98E-07	2.14E-03	1.91E-07	1.24E-05	6.22E-05	9.57E-06	1.86E-05	1.20E-05	1.23E-05	1.32E-06	1.59E-06	4.24E-10	6.29E-06	1.95E-06
52	C65	60	Passenger Truck	11	0.00E+00	1.89E-07	1.99E-08	7.16E-01	1.18E-06	3.82E-03	3.87E-07	3.99E-05	1.11E-04	1.72E-05	3.70E-05	2.40E-05	2.46E-05	5.49E-06	3.58E-06	8.98E-10	1.23E-05	6.60E-06
50	C66	40	Passenger Car	124	0.00E+00	2.06E-06	2.23E-07	7.14E+00	1.44E-05	5.11E-02	4.59E-06	2.25E-04	2.15E-03	3.07E-04	4.45E-04	2.88E-04	2.96E-04	3.90E-05	3.59E-05	8.69E-09	1.51E-04	3.52E-05
50	C66	40	Passenger Truck	208	0.00E+00

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
55	C70	90	Passenger Truck	1034	0.00E+00	1.49E-05	1.59E-06	6.49E+01	9.65E-05	3.47E-01	3.16E-05	3.70E-03	4.77E-03	8.99E-04	3.02E-03	1.96E-03	2.01E-03	4.34E-04	3.27E-04	8.67E-08	1.01E-03	6.03E-04
55	C70	90	Single Unit Short Haul Truck	111	0.00E+00	1.67E-05	8.19E-07	2.04E+01	1.32E-05	4.10E-02	1.78E-05	8.93E-03	9.24E-04	2.43E-04	2.05E-03	4.90E-04	4.99E-04	2.04E-03	8.19E-05	3.20E-08	1.55E-03	1.67E-03
55	C70	90	Single Unit Long Haul Truck	5	0.00E+00	7.25E-07	3.52E-08	8.60E-01	5.58E-07	1.70E-03	7.70E-07	3.79E-04	4.20E-05	1.06E-05	8.91E-05	2.09E-05	2.13E-05	8.57E-05	3.46E-06	1.33E-09	6.78E-05	7.09E-05
55	C70	90	Combination Short Haul Truck	70	0.00E+00	2.46E-05	1.75E-06	2.42E+01	7.95E-08	2.39E-02	1.80E-05	2.54E-02	1.11E-03	3.28E-04	1.45E-03	5.18E-04	5.08E-04	3.66E-03	8.14E-05	0.00E+00	9.46E-04	4.79E-03
55	C70	90	Combination Long Haul Truck	64	0.00E+00	2.12E-05	1.40E-06	2.21E+01	9.21E-08	2.40E-02	1.63E-05	2.40E-02	1.06E-03	2.51E-04	1.49E-03	4.26E-04	4.24E-04	3.38E-03	7.43E-05	0.00E+00	1.06E-03	4.53E-03
53	C71	70	Passenger Car	344	0.00E+00	4.31E-06	4.66E-07	1.66E+01	3.00E-05	1.07E-01	9.57E-06	7.02E-04	2.63E-03	4.24E-04	9.33E-04	6.02E-04	6.17E-04	6.17E-05	8.40E-05	2.29E-08	3.16E-04	1.10E-04
53	C71	70	Passenger Truck	577	0.00E+00	9.39E-06	9.93E-07	3.81E+01	5.94E-05	1.97E-01	1.95E-05	2.15E-03	4.73E-03	7.71E-04	1.86E-03	1.21E-03	1.24E-03	2.79E-04	1.92E-04	5.03E-08	6.22E-04	3.52E-04
53	C71	70	Single Unit Short Haul Truck	58	0.00E+00	1.36E-05	6.81E-07	1.07E+01	1.11E-05	2.14E-02	1.45E-05	6.72E-03	9.56E-04	1.91E-04	1.66E-03	4.07E-04	4.13E-04	1.07E-03	4.29E-05	1.74E-08	1.24E-03	1.26E-03
53	C71	70	Single Unit Long Haul Truck	3	0.00E+00	5.93E-07	2.95E-08	4.52E-01	4.80E-07	8.93E-04	6.31E-07	2.89E-04	4.37E-05	8.51E-06	7.23E-05	1.76E-05	1.79E-05	4.52E-05	1.82E-06	7.30E-10	5.42E-05	5.41E-05
53	C71	70	Combination Short Haul Truck	40	0.00E+00	2.05E-05	1.46E-06	1.49E+01	6.67E-08	1.77E-02	1.50E-05	2.16E-02	1.56E-03	3.41E-04	1.25E-03	4.32E-04	4.31E-04	2.25E-03	4.98E-05	0.00E+00	8.20E-04	4.07E-03
53	C71	70	Combination Long Haul Truck	36	0.00E+00	1.86E-05	1.24E-06	1.39E+01	7.69E-08	1.87E-02	1.41E-05	2.13E-02	1.55E-03	2.83E-04	1.29E-03	3.75E-04	3.79E-04	2.12E-03	4.65E-05	0.00E+00	9.15E-04	4.01E-03
50	C72	40	Passenger Car	29	0.00E+00	4.82E-07	5.21E-08	1.67E+00	3.35E-06	1.19E-02	1.07E-06	5.25E-05	5.02E-04	7.16E-05	1.04E-04	6.73E-05	6.91E-05	9.11E-06	8.38E-06	2.03E-09	3.53E-05	8.22E-06
50	C72	40	Passenger Truck	49	0.00E+00	1.10E-06	1.16E-07	3.71E+00	6.61E-06	2.06E-02	2.21E-06	1.98E-04	8.91E-04	1.27E-04	2.08E-04	1.36E-04	1.39E-04	3.21E-05	1.85E-05	3.95E-09	6.87E-05	3.36E-05
50	C72	40	Single Unit Short Haul Truck	2	0.00E+00	8.66E-07	4.54E-08	4.15E-01	7.52E-07	7.14E-04	9.20E-07	4.24E-04	7.90E-05	1.31E-05	1.02E-04	2.70E-05	2.74E-05	4.19E-05	1.68E-06	7.09E-10	7.47E-05	7.96E-05
50	C72	40	Single Unit Long Haul Truck	1	0.00E+00	8.46E-07	5.86E-08	4.29E-01	3.05E-09	7.37E-04	6.28E-07	9.44E-04	9.83E-05	1.77E-05	5.49E-05	1.75E-05	1.77E-05	6.47E-05	1.44E-06	0.00E+00	3.71E-05	1.78E-04
50	C72	40	Combination Long Haul Truck	1	0.00E+00	7.71E-07	5.03E-08	4.09E-01	3.46E-09	8.19E-04	5.92E-07	9.48E-04	9.89E-05	1.57E-05	5.63E-05	1.53E-05	1.56E-05	6.24E-05	1.37E-06	0.00E+00	4.09E-05	1.78E-04
51	C73	50	Passenger Car	160	0.00E+00	2.42E-06	2.62E-07	8.31E+00	1.68E-05	6.00E-02	5.38E-06	2.98E-04	2.09E-03	3.09E-04	5.24E-04	3.38E-04	3.47E-04	4.01E-05	4.19E-05	1.09E-08	1.77E-04	4.66E-05
51	C73	50	Passenger Truck	268	0.00E+00	5.37E-06	5.65E-07	1.87E+01	3.29E-05	1.03E-01	1.09E-05	1.03E-03	3.71E-03	5.46E-04	1.03E-03	6.75E-04	6.91E-04	1.53E-04	9.30E-05	2.20E-08	3.42E-04	1.72E-04
51	C73	50	Single Unit Short Haul Truck	15	0.00E+00	5.42E-06	2.95E-07	3.08E+00	4.64E-06	5.46E-03	5.70E-06	2.73E-03	4.88E-04	8.53E-05	6.24E-04	1.70E-04	1.72E-04	3.13E-04	1.24E-05	5.21E-09	4.51E-04	5.13E-04
51	C73	50	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	1.28E-08	1.32E-01	2.01E-07	2.33E-04	2.48E-07	1.19E-04	2.21E-05	3.82E-06	2.70E-05	7.38E-06	7.51E-06	1.34E-05	5.32E-07	2.24E-10	1.95E-05	2.23E-05
51	C73	50	Combination Short Haul Truck	7	0.00E+00	5.59E-06	4.00E-07	3.19E+00	1.77E-08	4.77E-03	4.10E-06	6.22E-03	5.41E-04	1.07E-04	3.43E-04	1.18E-04	1.19E-04	4.81E-04	1.07E-05	0.00E+00	2.24E-04	1.17E-03
51	C73	50	Combination Long Haul Truck	7	0.00E+00	5.12E-06	3.46E-07	3.00E+00	2.03E-08	5.25E-03	3.87E-06	6.22E-03	5.41E-04	9.13E-05	3.54E-04	1.04E-04	1.06E-04	4.60E-04	1.01E-05	0.00E+00	2.47E-04	1.17E-03
52	C74	60	Passenger Car	399	0.00E+00	5.43E-06	5.87E-07	1.98E+01	3.78E-05	1.35E-01	1.21E-05	7.83E-04	3.93E-03	6.05E-04	1.17E-03	7.56E-04	7.76E-04	8.33E-05	1.00E-04	2.68E-08	3.97E-04	1.23E-04
52	C74	60	Passenger Truck	668	0.00E+00	1.19E-05	1.26E-06	4.52E+01	7.44E-05	2.41E-01	2.45E-05	2.52E-03	7.01E-03	1.08E-03	2.34E-03	1.52E-03	1.56E-03	3.47E-04	2.26E-04	5.67E-08	7.75E-04	4.17E-04
52	C74	60	Single Unit Short Haul Truck	60	0.00E+00	1.75E-05	8.75E-07	1.11E+01	1.44E-05	2.15E-02	1.87E-05	8.35E-03	1.42E-03	2.56E-04	2.12E-03	5.24E-04	5.33E-04	1.12E-03	4.50E-05	1.85E-08	1.59E-03	1.56E-03
52	C74	60	Single Unit Long Haul Truck	3	0.00E+00	7.66E-07	3.80E-08	4.76E-01	6.26E-07	9.12E-04	8.17E-07	3.61E-04	6.36E-05	1.14E-05	9.34E-05	2.28E-05	2.32E-05	4.75E-05	1.92E-06	7.88E-10	6.99E-05	6.77E-05
52	C74	60	Combination Short Haul Truck	50	0.00E+00	2.93E-05	2.04E-06	1.91E+01	1.04E-07	2.56E-02	2.17E-05	3.18E-02	2.72E-03	5.39E-04	1.87E-03	6.08E-04	6.08E-04	2.87E-03	6.37E-05	0.00E+00	1.25E-03	6.00E-03
52	C74	60	Combination Long Haul Truck	45	0.00E+00	2.62E-05	1.71E-06	1.79E+01	1.19E-07	2.76E-02	2.03E-05	3.15E-02	2.73E-03	4.65E-04	1.91E-03	5.22E-04	5.28E-04	2.72E-03	5.97E-05	0.00E+00	1.39E-03	5.95E-03
53	C81	70	Passenger Car	316	0.00E+00	3.96E-06	4.28E-07	1.52E+01	2.76E-05	9.84E-02	8.78E-06	6.45E-04	2.42E-03	3.89E-04	8.56E-04	5.52E-04	5.67E-04	5.67E-05	7.71E-05	2.10E-08	2.90E-04	1.01E-04
53	C81	70	Passenger Truck	530	0.00E+00	8.62E-06	9.12E-07	3.50E+01	5.46E-05	1.81E-01	1.79E-05	1.97E-03	4.34E-03	7.08E-04	1.71E-03	1.11E-03	1.14E-03	2.56E-04	1.77E-04	4.62E-08	5.71E-04	3.24E-04
53	C81	70	Single Unit Short Haul Truck	72	0.00E+00	1.69E-05	8.48E-07	1.33E+01	1.38E-05	2.66E-02	1.80E-05	8.36E-03	1.19E-03	2.38E-04	2.06E-03	5.06E-04	5.14E-04	1.33E-03	5.34E-05	2.16E-08	1.54E-03	1.56E-03
53	C81	70	Single Unit Long Haul Truck	3	0.00E+00	7.37E-07	3.67E-08	5.63E-01	5.97E-07	1.11E-03	7.85E-07	3.59E-04	5.43E-05	1.06E-05	8.99E-05	2.19E-05	2.22E-05	5.62E-05	2.27E-06	9.08E-10	6.74E-05	6.73E-05
53	C81	70	Combination Short Haul Truck	68	0.00E+00	3.52E-05	2.50E-06	2.56E+01	1.14E-07	3.03E-02	2.58E-05	3.71E-02	2.67E-03	5.85E-04	2.15E-03	7.42E-04	7.40E-04	3.86E-03	8.54E-05	0.00E+00	1.41E-03	6.98E-03
53	C81	70	Combination Long Haul Truck	62	0.00E+00	3.19E-05	2.13E-06	2.39E+01	1.32E-07	3.21E-02	2.42E-05	3.66E-02	2.66E-03	4.86E-04	2.21E-03	6.44E-04	6.50E-04	3.64E-03	7.98E-05	0.00E+00	1.57E-03	6.88E-03
52	C82	60	Passenger Car	292	0.00E+00	3.97E-06	4.29E-07	1.45E+01	2.76E-05	9.88E-02	8.83E-06	5.73E-04	2.88E-03	4.42E-04	8.59E-04	5.53E-04	5.68E-04	6.09E-05	7.33E-05	1.96E-08	2.91E-04	8.99E-05
52	C82	60	Passenger Truck	488	0.00E+00	8.72E-06	9.21E-07	3.31E+01	5.44E-05	1.76E-01	1.79E-05	1.85E-03	5.13E-03	7.94E-04	1.71E-03	1.11E-03	1.14E-03	2.54E-04	1.66E-04	4.15E-08	5.67E-04	3.05E-04
52	C82	60	Single Unit Short Haul Truck	71	0.00E+00	2.09E-05	1.04E-06	1.33E+01	1.72E-05	2.56E-02	2.23E-05	9.95E-03	1.69E-03	3.05E-04	2.52E-03	6.24E-04	6.34E-04	1.33E-03	5.36E-05	2.21E-08	1.89E-03	1.86E-03
52	C82	60	Single Unit Long Haul Truck	3	0.00E+00	9.12E-07	4.53E-08	5.66E-01	7.45E-07	1.09E-03	9.73E-07	4.30E-04	7.57E-05	1.36E-05	1.11E-04	2.72E-05	2.76E-05	5.65E-05	2.28E-06	9.38E-10	8.32E-05	8.06E-05
52	C82	60	Combination Short Haul Truck	64	0.00E+00	3.75E-05	2.62E-06	2.44E+01	1.33E-07	3.27E-02	2.78E-05	4.07E-02	3.48E-03	6.90E-04	2.39E-03	7.78E-04	7.78E-04	3.68E-03	8.15E-05	0.00E+00	1.60E-03	7.68E-03
52	C82	60	Combination Long Haul Truck	58	0.00E+00	3.35E-05	2.19E-06	2.29E+01	1.52E-07	3.53E-02	2.60E-05	4.03E-02	3.50E-03	5.95E-04	2.45E-03	6.68E-04	6.76E-04	3.48E-03	7.64E-05	0.00E+00	1.77E-03	7.61E-03
16	C83	100	Passenger Car	783	0.00E+00	8.46E-06	9.15E-07	3.48E+01	5.89E-05	2.24E-01	1.88E-05	1.67E-03	2.54E-03	5.11E-04	1.83E-03	1.18E-03	1.21E-03	9.81E-05	1.78E-04	4.89E-08	6.20E-04	2.61E-04
16	C83	100	Passenger Truck	1311	0.00E+00	1.83E-05	1.94E-06	8.23E+01	1.20E-04	4.52E-01	3.90E-05	4.77E-03	4.48E-03	9.54E-04	3.75E-03	2.42E-03	2.48E-03	5.28E-04	4.15E-04	1.14E-07	1.26E-03	7.68E-04
16	C83	100	Single Unit Short Haul Truck	172	0.00E+00	2.31E-05	1.14E-06	3.14E+01	2.02E-05	7.27E-02	2.50E-05	1.25E-02	1.19E-03	3.45E-04	2.86E-03	7.08E-04	7.22E-04	3.17E-03	1.26E-04	5.16E-08	2.14E-03	2.34E-03
16	C83	100	Single Unit Long Haul Truck	8	0.00E+00	1.00E-06	4.87E-08	1.32E+00	8.35E-07	2.97E-03	1.08E-06	5.27E-04	5.36E-05	1.49E-05	1.25E-04	2.99E-05	3.04E-05	1.33E-04	5.34E-06	2.11E-09	9.43E-05	9.85E-05
16	C83	100	Combination Short Haul Truck	160	0.00E+00	5.52E-05	4.02E-06	5.78E+01	1.57E-07	5.38E-02	3.97E-05	5.87E-02	1.86E-03	6.63E-04	3.08E-03	1.18E-03	1.16E-03	8.72E-03	1.94E-04	0.00E+00	1.93E-03	1.11E-02
16	C83	100	Combination Long Haul Truck	146	0.00E+00	4.79E-05	3.28E-06	5.23E+01	1.81E-07	5.36E-02	3.59E-05	5.60E-02	1.73E-03	4.79E-04	3.14E-03	9.82E-04	9.82E-04	7.99E-03	1.76E-04	0.00E+00	2.16E-03	1.05E-02
55	C84	90	Passenger Car	207	0.00E+00	2.30E-06	2.49E-07	9.30E+00	1.60E-05	5.91E-02	5.12E-06	4.27E-04	8.90E-04	1.62E-04	4.98E-04	3.21E-04	3.29E-04	2.88E-05	4.72E-05	1.26E-08	1.69E-04	6.66E-05
55	C84	90	Passenger Truck	346	0.00E+00	4.99E-06	5.31E-07	2.17E+01	3.23E-05	1.16E-01	1.06E-05	1.24E-03	1.60E-03	3.01E-04	1.01E-03	6.56E-04	6.72E-04	1.45E-04	1.10E-04	2.90E-08	3.38E-04	2.02E-04
55	C84	90	Single Unit Short Haul Truck	85	0.00E+00	1.28E-05	6.30E-07	1.57E+01	1.02E-05	3.15E-02	1.37E-05	6.87E-03	7.11E-04	1.87E-04	1.57E-03	3.77E-04	3.84E-04	1.57E-03	6.30E-05	2.46E-08	1.19E-03	1.28E-03
55	C84	90	Single Unit Long Haul Truck	4	0.00E+00	5.58E-07	2.71E-08	6.62E-01	4.30E-07	1.31E-03	5.93E-07	2.92E-04	3.23E-05	8.16E-06	6.86E-05	1.61E-05	1.64E-05	6.59E-05	2.66E-06	1.02E-09	5.21E-05	5.46E-05
55	C84	90	Combination Short Haul Truck	70	0.00E+00	2.46E-05	1.74E-06	2.42E+01	7.94E-08	2.38E-02	1.80E-05	2.54E-02	1.11E-03	3.27E-04	1.45E-03	5.17E-04	5.07E-04	3.66E-03	8.13E-05	0.00E+00	9.45E-04	4.78E-03
55	C84	90	Combination Long Haul Truck	64	0.00E+00	2.12E-05	1.40E-06	2.21E+01	9.20E-08	2.40E-02	1.62E-05	2.40E-02	1.06E-03	2.51E-04	1.49E-03	4.26E-04	4.24E-04	3.37E-03	7.42E-05	0.00E+00	1.06E-03	4.52E-03
55	C85	90	Passenger Car	462	0.00E+00	5.15E-06	5.57E-07	2.08E+01	3.58E-05	1.32E-01	1.14E-05	9.53E-04	1.99E-03	3.63E-04	1.11E-03	7.19E-04	7.37E-04	6.43E-05	1.06E-04	2.82E-08	3.77E-04	1.49E-04
55	C85	90	Passenger Truck	774	0.00E+00	1.12E-05	1.19E-06	4.86E+01	7.22E-05	2.60E-01	2.36E-05	2.77E-03	3.57E-03	6.73E-04	2.26E-03	1.47E-03	1.50E-03	3.24E-04	2.45E-04	6.49E-08	7.56E-04	4.51E-04
55	C85	90	Single Unit Short Haul Truck	119	0.00E+00	1.79E-05	8.79E-07	2.19E+01	1.42E-05	4.40E-02	1.91E-05	9.59E-03	9.92E-04	2.61E-04	2.20E-03	5.26E-04	5.36E-04	2.19E-03	8.79E-05	3.44E-08	1.66E-03	1.79E-03
55	C85	90	Single Unit Long Haul Truck	5	0.00E+00	7.79E-07	3.78E-08	9.23E-01	5.99E-07	1.82E-03	8.27E-07	4.07E-04	4.51E-05	1.14E-05	9.56E-05	2.25E-05	2.29E-05	9.20E-05	3.72E-06	1.42E-09	7.28E-05	7.61E-05
55	C85	90	Combination Short Haul Truck	82	0.00E+00	2.91E-05	2.06E-06	2.86E+01	9.39E-08	2.82E-02	2.12E-05	3.00E-02	1.31E-03	3.87E-04	1.72E-03	6.11E-04	6.00E-04	4.33E-03	9.62E-05	0.00E+00	1.12E-03	5.66E-03
55	C85	90	Combination Long Haul Truck	75	0.00E+00	2.51E-05	1.66E-06	2.61E+01	1.09E-07	2.84E-02	1.92E-05	2.84E-02	1.25E-03	2.96E-04	1.76E-03	5.03E-04	5.01E-04	3.99E-03	8.77E-05	0.00E+00	1.25E-03	5.34E-03
55	C86	90	Passenger Car	468	0.00E+00	5.21E-06	5.64E-07	2.10E+01	3.62E-05	1.34E-01	1.16E-05	9.65E-04	2.01E-03	3.68E-04	1.13E-03	7.27E-04	7.45E-04	6.51E-05	1.07E-04	2.86E-08	3.82E-04	1.51E-04
55	C86	90	Passenger Truck	783	0.00E+00	1.13E-05	1.20E-06	4.91E+01	7.31E-05	2.63E-01	2.39E-05	2.81E-03	3.61E-03	6.81E-04	2.28E-03	1.48E-03	1.52E-03	3.28E-04	2.48E-04	6.57E-08	7.66E-04	4.57E-04
55	C86	90	Single Unit Short Haul Truck	210	0.00E+00	3.16E-05	1.55E-06	3.85E+01	2.51E-05	7.75E-02	3.36E-05	1.69E-02	1.75E-03	4.60E-04	3.87E-03	9.27E-04	9.44E-04	3.86E-03	1.55E-04	6.06E-08	2.93E-03	3.16E-03
55	C86	90	Single Unit Long Haul Truck	9	0.00E+00	1.37E-06	6.66E-08	1.63E+00	1.06E-06	3.21E-03	1.46E-06	7.17E-04	7.94E-05	2.01E-05	1.69E-04	3.96E-05	4.04E-05	1.62E-04	6.55E-06	2.51E-09	1.28E-04	1.34E-04
55	C86	90	Combination Short Haul Truck	157	0.00E+00	5.54E-05	3.93E-06	5.45E+01	1.79E-07	5.37E-02	4.05E-05	5.71E-02	2.50E-03	7.37E-04	3.27E-03	1.16E-03	1.14E-03	8.24E-03	1.83E-04	0.00E+00	2.13E-03	1.08E-02
55	C86	90	Combination Long Haul Truck	143	0.00E+00	4.77E-05	3.15E-06	4.97E+01	2.07E-07	5.41E-02	3.66E-05	5.41E-02	2.39E-03	5.65E-04	3.35E-03	9.59E-04	9.55E-04	7.60E-03	1.67E-04	0.00E+00	2.39E-03	1.02E-02
10	E39	70	Passenger Car	215	0.00E+00	2.77E-06	3.00E-07	1.02E+01	1.93E-05	6.98E-02	6.14E-06	4.30E-04	1.66E-03	2.67E-04	6.03E-04	3.87E-04	3.97E-04	3.85E-05	5.18E-05	1.41E-08	2.03E-04	6.74E-05
10	E39	70	Passenger Truck	360	0.00E+00	6.08E-06	6.43E-07	2.36E+01	3.85E-05	1.28E-01	1.26E-05	1.35E-03	3.03E-03	4.93E-04	1.21E-03	7.83E-04	8.03E-04	1.75E-04	1.18E-04	3.17E-08	4.02E-04	2.22E-04
10	E39	70	Single Unit Short Haul Truck	7	0.00E+00	1.55E-06	7.75E-08	1.21E+00	1.26E-06	2.43E-03	1.65E-06	7.64E-04	1.09E-04	2.17E-05	1.88E-04	4.62E-05	4.70E-05	1.21E-04	4.88E-06	1.97E-09	1.40E-04	1.43E-04
10	E39	70	Single Unit Long Haul Truck	5	0.00E+00	2.47E-06	1.76E-07	1.80E+00	8.04E-09	2.13E-03	1.81E-06	2.60E-03	1.88E-04	4.11E-05	1.51E-04	5.21E-05	5.20E-05	2.71E-04	6.00E-06	0.00E+00	9.88E-05	4.91E-04
10	E39	70	Combination Long Haul Truck	4	0.00E+00	2.24E-06	1.50E-07	1.68E+00	9.26E-09	2.25E-03	1.70E-06	2.57E-03	1.87E-04	3.41E-05	1.56E-04	4.52E-05	4.57E-05	2.56E-04	5.61E-06	0.00E+00	1.10E-04	4.83E-04
10	E40	70	Passenger Car	241	0.00E+00	3.11E-06	3.37E-07	1.14E+01	2.17E-05	7.83E-02	6.90E-06	4.83E-04	1.87E-03	3.00E-04	6.76E-04	4.34E-04	4.45E-04	4.32E-05	5.81E-05	1.59E-08	2.28E-04	7.57E-05
10	E40	70	Passenger Truck	404	0.00E+00	6.83E-06	7.22E-07	2.65E+01	4.32E-05	1.44E-01	1.41E-05	1.51E-03	3.40E-03	5.53E-04	1.36E-03	8.79E-04	9.02E-04	1.96E-04	1.32E-04	3.55E-08	4.51E-04	2.49E-04
10	E40	70	Single Unit Short Haul Truck	10	0.00E+00	2.44E-06	1.23E-07	1.92E+00	2.00E-06	3.84E-03	2.60E-06	1.21E-03	1.72E-04	3.44E-05	2.98E-04	7.31E-05	7.43E-05	1.92E-04	7.72E-06	3.12E-09	2.22E-04	2.26E-04
10	E40	70	Combination Short Haul Truck	6	0.00E+00	3.36E-06	2.39E-07	2.45E+00	1.09E-08	2.90E-03	2.46E-06	3.54E-03	2.55E-04	5.59E-05	2.05E-04	7.09E-05	7.07E-05	3.69E-04	8.17E-06	0.00E+00	1.34E-04	6.67E-04
10	E40	70	Combination Long Haul Truck	6	0.00E+00	3.05E-06	2.03E-07	2.28E+00	1.26E-08	3.07E-03	2.31E-06	3.49E-03	2.54E-04	4.64E-05	2.12E-04	6.15E-05	6.22E-05	3.48E-04	7.63E-06	0.00E+00	1.50E-04	6.58E-04
10	E41	70	Passenger Car	166	0.00E+00	2.15E-06	2.32E-07	7.90E+00	1.50E-05	5.41E-02	4.76E-06	3.33E-04	1.29E-03	2.07E-04	4.67E-04	2.99E-04	3.07E-04	2.98E-05	4.01E-05	1.10E-08	1.58E-04	5.22E-05
10	E41	70	Passenger Truck	279	0.00E+00	4.71E-06	4.98E-07	1.83E+01	2.98E-05	9.90E-02	9.75E-06	1.04E-03	2.34E-03	3.81E-04	9.36E-04	6.07E-04	6.22E-04	1.35E-04	9.13E-05	2.45E-08	3.11E-04	1.72E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	3.91E-07	1.96E-08	3.07E-01	3.20E-07	6.15E-04	4.17E-07	1.93E-04	2.75E-05	5.50E-06	4.76E-05	1.17E-05	1.19E-05	3.07E-05	1.23E-06	4.99E-10	3.56E-05	3.62E-05
10	E41	70	Single Unit Long Haul Truck	3	0.00E+00	1.54E-06	1.09E-07	1.12E+00	5.00E-09	1.32E-03	1.13E-06	1.62E-03	1.17E-04	2.56E-05	9.38E-05	3.24E-05	3.23E-05	1.69E-04	3.73E-06	0.00E+00	6.14E-05	3.05E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.40E-06	9.30E-08	1.04E+00	5.76E-09	1.40E-03	1.06E-06	1.60E-03	1.16E-04	2.12E-05	9.68E-05	2.81E-05	2.84E-05	1.59E-04	3.49E-06	0.00E+00	6.86E-05	3.01E-04
10	E42	70	Passenger Car	226	0.00E+00	2.91E-06	3.15E-07	1.07E+01	2.03E-05	7.33E-02	6.45E-06	4.52E-04	1.75E-03	2.81E-04	6.33E-04	4.06E-04	4.17E-04	4.04E-05	5.44E-05	1.48E-08	2.14E-04	7.08E-05
10	E42	70	Passenger Truck	378	0.00E+00	6.39E-06	6.76E-07	2.48E+01	4.04E-05	1.34E-01	1.32E-05	1.42E-03	3.18E-03	5.17E-04	1.27E-03	8.22E-04	8.43E-04	1.84E-04	1.24E-04	3.33E-08	4.22E-04	2.33E-04
10	E42	70	Single Unit Short Haul Truck	5	0.00E+00	1.23E-06	6.18E-08	9.67E-01	1.01E-06	1.94E-03	1.31E-06	6.10E-04	8.68E-05	1.74E-05	1.50E-04	3.69E-05	3.75E-05	9.68E-05	3.89E-06	1.57E-09	1.12E-04	1.14E-04
10	E42	70	Single Unit Long

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E47	80	Passenger Car	214	0.00E+00	2.57E-06	2.78E-07	9.86E+00	1.79E-05	6.59E-02	5.71E-06	4.40E-04	1.18E-03	2.04E-04	5.57E-04	3.59E-04	3.68E-04	3.35E-05	5.02E-05	1.41E-08	1.88E-04	6.89E-05
11	E47	80	Passenger Truck	358	0.00E+00	5.52E-06	5.86E-07	2.28E+01	3.54E-05	1.22E-01	1.15E-05	1.30E-03	2.11E-03	3.74E-04	1.10E-03	7.19E-04	7.37E-04	1.61E-04	1.15E-04	3.13E-08	3.71E-04	2.13E-04
11	E47	80	Single Unit Short Haul Truck	16	0.00E+00	3.05E-06	1.52E-07	2.99E+00	2.46E-06	6.02E-03	3.25E-06	1.56E-03	1.92E-04	4.34E-05	3.71E-04	9.05E-05	9.18E-05	3.00E-04	1.21E-05	4.79E-09	2.80E-04	2.93E-04
11	E47	80	Single Unit Long Haul Truck	1	0.00E+00	1.33E-07	6.54E-09	1.27E-01	1.05E-07	2.49E-04	1.41E-07	6.70E-05	8.76E-06	1.91E-06	1.62E-05	3.89E-06	3.95E-06	1.26E-05	5.11E-07	1.99E-10	1.22E-05	1.25E-05
11	E47	80	Combination Short Haul Truck	9	0.00E+00	4.13E-06	2.96E-07	3.43E+00	1.31E-08	3.66E-03	3.03E-06	4.26E-03	2.51E-04	6.17E-05	2.46E-04	8.73E-05	8.68E-05	5.15E-04	1.15E-05	0.00E+00	1.60E-04	8.00E-04
11	E47	80	Combination Long Haul Truck	9	0.00E+00	3.70E-06	2.48E-07	3.17E+00	1.51E-08	3.79E-03	2.81E-06	4.13E-03	2.46E-04	4.94E-05	2.55E-04	7.51E-05	7.56E-05	4.84E-04	1.06E-05	0.00E+00	1.79E-04	7.77E-04
11	E48	80	Passenger Car	44	0.00E+00	5.31E-07	5.74E-08	2.03E+00	3.69E-06	1.36E-02	1.18E-06	9.07E-05	2.43E-04	4.22E-05	1.15E-04	7.40E-05	7.60E-05	6.91E-06	1.04E-05	2.90E-09	3.88E-05	1.42E-05
11	E48	80	Passenger Truck	74	0.00E+00	1.14E-06	1.21E-07	4.70E+00	7.31E-06	2.52E-02	2.38E-06	2.69E-04	4.35E-04	7.72E-05	2.28E-04	1.48E-04	1.52E-04	3.32E-05	2.38E-05	6.46E-09	7.66E-05	4.39E-05
11	E48	80	Single Unit Short Haul Truck	4	0.00E+00	7.18E-07	3.56E-08	7.04E-01	5.78E-07	1.42E-03	7.64E-07	3.68E-04	4.51E-05	1.02E-05	8.74E-05	2.13E-05	2.16E-05	7.07E-05	2.84E-06	1.13E-09	6.58E-05	6.90E-05
11	E48	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.21E-08	9.52E-01	3.63E-09	1.02E-03	8.43E-07	1.18E-03	6.96E-05	1.71E-05	6.84E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.22E-04
11	E48	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.89E-08	8.81E-01	4.19E-09	1.05E-03	7.82E-07	1.15E-03	6.82E-05	1.37E-05	7.09E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E49	80	Passenger Car	236	0.00E+00	2.84E-06	3.07E-07	1.09E+01	1.98E-05	7.28E-02	6.31E-06	4.86E-04	1.30E-03	2.26E-04	6.15E-04	3.96E-04	4.07E-04	3.70E-05	5.55E-05	1.56E-08	2.08E-04	7.61E-05
11	E49	80	Passenger Truck	396	0.00E+00	6.10E-06	6.47E-07	2.52E+01	3.91E-05	1.35E-01	1.27E-05	1.44E-03	2.33E-03	4.13E-04	1.22E-03	7.95E-04	8.14E-04	1.78E-04	1.27E-04	3.46E-08	4.10E-04	2.35E-04
11	E49	80	Single Unit Short Haul Truck	22	0.00E+00	4.10E-06	2.04E-07	4.02E+00	3.30E-06	8.08E-03	4.36E-06	2.10E-03	2.58E-04	5.83E-05	4.99E-04	1.21E-04	1.23E-04	4.03E-04	1.62E-05	6.44E-09	3.75E-04	3.94E-04
11	E49	80	Single Unit Long Haul Truck	1	0.00E+00	1.78E-07	8.79E-09	1.70E-01	1.41E-07	3.35E-04	1.90E-07	9.00E-05	1.18E-05	2.57E-06	2.18E-05	5.22E-06	5.30E-06	1.70E-05	6.86E-07	2.68E-10	1.65E-05	1.68E-05
11	E49	80	Combination Short Haul Truck	12	0.00E+00	5.21E-06	3.72E-07	4.32E+00	1.64E-08	4.61E-03	3.82E-06	5.37E-03	3.16E-04	7.78E-05	3.10E-04	1.10E-04	1.09E-04	6.49E-04	1.44E-05	0.00E+00	2.01E-04	1.01E-03
11	E49	80	Combination Long Haul Truck	11	0.00E+00	4.66E-06	3.13E-07	4.00E+00	1.90E-08	4.78E-03	3.55E-06	5.20E-03	3.10E-04	6.22E-05	3.22E-04	9.47E-05	9.53E-05	6.10E-04	1.33E-05	0.00E+00	2.25E-04	9.80E-04
11	E50	80	Passenger Car	67	0.00E+00	8.09E-07	8.74E-08	3.10E+00	5.62E-06	2.07E-02	1.80E-06	1.38E-04	3.70E-04	6.42E-05	1.75E-04	1.13E-04	1.16E-04	1.05E-05	1.58E-05	4.43E-09	5.92E-05	2.17E-05
11	E50	80	Passenger Truck	113	0.00E+00	1.74E-06	1.84E-07	7.16E+00	1.11E-05	3.85E-02	3.63E-06	4.10E-04	6.63E-04	1.18E-04	3.47E-04	2.26E-04	2.32E-04	5.07E-05	3.63E-05	9.85E-09	1.17E-04	6.69E-05
11	E50	80	Single Unit Short Haul Truck	1	0.00E+00	2.23E-07	1.10E-08	2.18E-01	1.79E-07	4.39E-04	2.37E-07	1.14E-04	1.40E-05	3.16E-06	2.71E-05	6.60E-06	6.69E-06	2.19E-05	8.80E-07	3.50E-10	2.04E-05	2.14E-05
11	E50	80	Combination Short Haul Truck	1	0.00E+00	6.34E-07	4.54E-08	5.26E-01	2.00E-09	5.62E-04	4.66E-07	6.55E-04	3.85E-05	9.48E-06	3.78E-05	1.34E-05	1.33E-05	7.91E-05	1.76E-06	0.00E+00	2.45E-05	1.23E-04
11	E50	80	Combination Long Haul Truck	1	0.00E+00	5.68E-07	3.81E-08	4.87E-01	2.32E-09	5.82E-04	4.32E-07	6.33E-04	3.77E-05	7.58E-06	3.92E-05	1.15E-05	1.16E-05	7.43E-05	1.63E-06	0.00E+00	2.75E-05	1.19E-04
11	E51	80	Passenger Car	198	0.00E+00	2.38E-06	2.57E-07	9.12E+00	1.65E-05	6.10E-02	5.29E-06	4.07E-04	1.09E-03	1.89E-04	5.15E-04	3.32E-04	3.41E-04	3.10E-05	4.64E-05	1.30E-08	1.74E-04	6.37E-05
11	E51	80	Passenger Truck	331	0.00E+00	5.11E-06	5.42E-07	2.11E+01	3.28E-05	1.13E-01	1.07E-05	1.21E-03	1.95E-03	3.46E-04	1.02E-03	6.65E-04	6.82E-04	1.49E-04	1.07E-04	2.90E-08	3.43E-04	1.97E-04
11	E51	80	Single Unit Short Haul Truck	19	0.00E+00	3.48E-06	1.73E-07	3.42E+00	2.80E-06	6.87E-03	3.71E-06	1.79E-03	2.19E-04	4.95E-05	4.24E-04	1.03E-04	1.05E-04	3.43E-04	1.38E-05	5.47E-09	3.19E-04	3.35E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.51E-07	7.47E-09	1.45E-01	1.20E-07	2.85E-04	1.61E-07	7.65E-05	1.00E-05	2.18E-06	1.85E-05	4.44E-06	4.51E-06	1.44E-05	5.83E-07	2.28E-10	1.40E-05	1.43E-05
11	E51	80	Combination Short Haul Truck	11	0.00E+00	4.82E-06	3.45E-07	3.99E+00	1.52E-08	4.27E-03	3.54E-06	4.97E-03	2.92E-04	7.19E-05	2.87E-04	1.02E-04	1.01E-04	6.01E-04	1.34E-05	0.00E+00	1.86E-04	9.33E-04
11	E51	80	Combination Long Haul Truck	10	0.00E+00	4.31E-06	2.89E-07	3.70E+00	1.76E-08	4.42E-03	3.28E-06	4.81E-03	2.86E-04	5.75E-05	2.97E-04	8.76E-05	8.81E-05	5.64E-04	1.23E-05	0.00E+00	2.09E-04	9.06E-04
11	E52	80	Passenger Car	35	0.00E+00	4.19E-07	4.52E-08	1.60E+00	2.91E-06	1.07E-02	9.30E-07	7.15E-05	1.91E-04	3.33E-05	9.06E-05	5.84E-05	5.99E-05	5.45E-06	8.17E-06	2.29E-09	3.06E-05	1.12E-05
11	E52	80	Passenger Truck	58	0.00E+00	8.98E-07	9.53E-08	3.71E+00	5.76E-06	1.99E-02	1.88E-06	2.12E-04	3.43E-04	6.09E-05	1.80E-04	1.17E-04	1.20E-04	2.62E-05	1.88E-05	5.10E-09	6.04E-05	3.46E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	2.55E-07	1.82E-08	2.11E-01	8.04E-10	2.26E-04	1.87E-07	2.63E-04	1.54E-05	3.80E-06	1.52E-05	5.38E-06	5.35E-06	3.17E-05	7.06E-07	0.00E+00	9.84E-06	4.93E-05
11	E52	80	Combination Long Haul Truck	1	0.00E+00	2.28E-07	1.53E-08	1.95E-01	9.30E-10	2.34E-04	1.73E-07	2.54E-04	1.51E-05	3.04E-06	1.57E-05	4.63E-06	4.66E-06	2.98E-05	6.52E-07	0.00E+00	1.10E-05	4.79E-05
11	E53	80	Passenger Car	287	0.00E+00	3.45E-06	3.73E-07	1.32E+01	2.40E-05	8.85E-02	7.67E-06	5.90E-04	1.58E-03	2.74E-04	7.47E-04	4.82E-04	4.94E-04	4.50E-05	6.74E-05	1.89E-08	2.53E-04	9.25E-05
11	E53	80	Passenger Truck	481	0.00E+00	7.41E-06	7.86E-07	3.06E+01	4.75E-05	1.64E-01	1.55E-05	1.75E-03	2.83E-03	5.02E-04	1.48E-03	9.65E-04	9.89E-04	2.16E-04	1.55E-04	4.21E-08	4.98E-04	2.86E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	3.94E-06	1.96E-07	3.86E+00	3.17E-06	7.76E-03	4.19E-06	2.02E-03	2.47E-04	5.60E-05	4.79E-04	1.17E-04	1.18E-04	3.88E-04	1.56E-05	6.19E-09	3.61E-04	3.78E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	8.44E-09	1.63E-01	1.35E-07	3.22E-04	1.82E-07	8.65E-05	1.13E-05	2.47E-06	2.09E-05	5.02E-06	5.10E-06	1.63E-05	6.59E-07	2.57E-10	1.58E-05	1.62E-05
11	E53	80	Combination Short Haul Truck	16	0.00E+00	7.14E-06	5.11E-07	5.92E+00	2.26E-08	6.33E-03	5.24E-06	7.37E-03	4.33E-04	1.07E-04	4.26E-04	1.51E-04	1.50E-04	8.90E-04	1.98E-05	0.00E+00	2.76E-04	1.38E-03
11	E53	80	Combination Long Haul Truck	15	0.00E+00	6.39E-06	4.29E-07	5.48E+00	2.61E-08	6.55E-03	4.86E-06	7.13E-03	4.25E-04	8.53E-05	4.41E-04	1.30E-04	1.31E-04	8.37E-04	1.83E-05	0.00E+00	3.09E-04	1.34E-03
11	E54	80	Passenger Car	173	0.00E+00	2.08E-06	2.25E-07	7.97E+00	1.44E-05	5.33E-02	4.62E-06	3.55E-04	9.51E-04	1.65E-04	4.50E-04	2.90E-04	2.98E-04	2.71E-05	4.06E-05	1.14E-08	1.52E-04	5.57E-05
11	E54	80	Passenger Truck	289	0.00E+00	4.46E-06	4.74E-07	1.84E+01	2.86E-05	9.89E-02	9.33E-06	1.05E-03	1.70E-03	3.02E-04	8.92E-04	5.81E-04	5.96E-04	1.30E-04	9.33E-05	2.53E-08	3.00E-04	1.72E-04
11	E54	80	Single Unit Short Haul Truck	22	0.00E+00	4.12E-06	2.04E-07	4.04E+00	3.31E-06	8.11E-03	4.38E-06	2.11E-03	2.59E-04	5.85E-05	5.01E-04	1.22E-04	1.24E-04	4.05E-04	1.63E-05	6.46E-09	3.77E-04	3.95E-04
11	E54	80	Single Unit Long Haul Truck	1	0.00E+00	1.79E-07	8.82E-09	1.71E-01	1.41E-07	3.36E-04	1.90E-07	9.04E-05	1.18E-05	2.58E-06	2.18E-05	5.25E-06	5.33E-06	1.71E-05	6.89E-07	2.69E-10	1.65E-05	1.69E-05
11	E54	80	Combination Short Haul Truck	22	0.00E+00	9.79E-06	7.00E-07	8.12E+00	3.09E-08	8.67E-03	7.19E-06	1.01E-02	5.94E-04	1.46E-04	5.84E-04	2.07E-04	2.06E-04	1.22E-03	2.71E-05	0.00E+00	3.79E-04	1.90E-03
11	E54	80	Combination Long Haul Truck	20	0.00E+00	8.76E-06	5.88E-07	7.51E+00	3.58E-08	8.98E-03	6.67E-06	9.77E-03	5.82E-04	1.17E-04	6.04E-04	1.78E-04	1.79E-04	1.15E-03	2.51E-05	0.00E+00	4.24E-04	1.84E-03
11	E55	80	Passenger Car	325	0.00E+00	3.91E-06	4.23E-07	1.50E+01	2.72E-05	1.00E-01	8.68E-06	6.68E-04	1.79E-03	3.11E-04	8.46E-04	5.45E-04	5.60E-04	5.09E-05	7.63E-05	2.14E-08	2.86E-04	1.05E-04
11	E55	80	Passenger Truck	544	0.00E+00	8.39E-06	8.90E-07	3.46E+01	5.38E-05	1.86E-01	1.75E-05	1.98E-03	3.21E-03	5.68E-04	1.68E-03	1.09E-03	1.12E-03	2.45E-04	1.75E-04	4.76E-08	5.64E-04	3.24E-04
11	E55	80	Single Unit Short Haul Truck	18	0.00E+00	3.36E-06	1.67E-07	3.29E+00	2.70E-06	6.61E-03	3.57E-06	1.72E-03	2.11E-04	4.77E-05	4.08E-04	9.95E-05	1.01E-04	3.30E-04	1.33E-05	5.27E-09	3.07E-04	3.22E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.46E-07	7.19E-09	1.39E-01	1.15E-07	2.74E-04	1.55E-07	7.37E-05	9.63E-06	2.10E-06	1.78E-05	4.28E-06	4.34E-06	1.39E-05	5.61E-07	2.19E-10	1.35E-05	1.38E-05
11	E55	80	Combination Short Haul Truck	15	0.00E+00	6.37E-06	4.56E-07	5.29E+00	2.01E-08	5.65E-03	4.68E-06	6.58E-03	3.87E-04	9.52E-05	3.80E-04	1.35E-04	1.34E-04	7.95E-04	1.77E-05	0.00E+00	2.47E-04	1.23E-03
11	E55	80	Combination Long Haul Truck	13	0.00E+00	5.70E-06	3.83E-07	4.89E+00	2.33E-08	5.85E-03	4.34E-06	6.36E-03	3.79E-04	7.62E-05	3.94E-04	1.16E-04	1.17E-04	7.47E-04	1.63E-05	0.00E+00	2.76E-04	1.20E-03
11	E56	80	Passenger Car	213	0.00E+00	2.56E-06	2.77E-07	9.82E+00	1.78E-05	6.57E-02	5.69E-06	4.38E-04	1.17E-03	2.04E-04	5.54E-04	3.57E-04	3.67E-04	3.34E-05	5.00E-05	1.40E-08	1.88E-04	6.86E-05
11	E56	80	Passenger Truck	357	0.00E+00	5.50E-06	5.84E-07	2.27E+01	3.53E-05	1.22E-01	1.15E-05	1.30E-03	2.10E-03	3.73E-04	1.10E-03	7.16E-04	7.34E-04	1.61E-04	1.15E-04	3.12E-08	3.70E-04	2.12E-04
11	E56	80	Single Unit Short Haul Truck	9	0.00E+00	1.72E-06	8.54E-08	1.69E+00	1.38E-06	3.39E-03	1.83E-06	8.82E-04	1.08E-04	2.45E-05	2.09E-04	5.10E-05	5.18E-05	1.69E-04	6.81E-06	2.70E-09	1.58E-04	1.65E-04
11	E56	80	Combination Short Haul Truck	9	0.00E+00	3.98E-06	2.85E-07	3.30E+00	1.26E-08	3.53E-03	2.92E-06	4.11E-03	2.41E-04	5.95E-05	2.37E-04	8.42E-05	8.37E-05	4.96E-04	1.10E-05	0.00E+00	1.54E-04	7.71E-04
11	E56	80	Combination Long Haul Truck	8	0.00E+00	3.56E-06	2.39E-07	3.06E+00	1.45E-08	3.65E-03	2.71E-06	3.97E-03	2.37E-04	4.76E-05	2.46E-04	7.24E-05	7.28E-05	4.66E-04	1.02E-05	0.00E+00	1.72E-04	7.49E-04
10	E57	70	Passenger Car	155	0.00E+00	2.01E-06	2.17E-07	7.38E+00	1.40E-05	5.05E-02	4.45E-06	3.11E-04	1.20E-03	1.93E-04	4.36E-04	2.80E-04	2.87E-04	2.78E-05	3.75E-05	1.02E-08	1.47E-04	4.88E-05
10	E57	70	Passenger Truck	260	0.00E+00	4.40E-06	4.65E-07	1.71E+01	2.78E-05	9.25E-02	9.11E-06	9.76E-04	2.19E-03	3.56E-04	8.75E-04	5.67E-04	5.81E-04	1.26E-04	8.53E-05	2.29E-08	2.91E-04	1.60E-04
10	E57	70	Single Unit Short Haul Truck	4	0.00E+00	8.30E-07	4.16E-08	6.51E-01	6.79E-07	1.31E-03	8.84E-07	4.10E-04	5.84E-05	1.17E-05	1.01E-04	2.48E-05	2.52E-05	6.52E-05	2.62E-06	1.06E-09	7.55E-05	7.67E-05
10	E57	70	Combination Short Haul Truck	5	0.00E+00	2.83E-06	2.02E-07	2.06E+00	9.21E-09	2.44E-03	2.08E-06	2.98E-03	2.15E-04	4.71E-05	1.73E-04	5.97E-05	5.95E-05	3.11E-04	6.88E-06	0.00E+00	1.13E-04	5.62E-04
10	E57	70	Combination Long Haul Truck	5	0.00E+00	2.57E-06	1.71E-07	1.92E+00	1.06E-08	2.58E-03	1.95E-06	2.94E-03	2.14E-04	3.91E-05	1.78E-04	5.18E-05	5.24E-05	2.93E-04	6.42E-06	0.00E+00	1.26E-04	5.54E-04
10	E58	70	Passenger Car	173	0.00E+00	2.23E-06	2.42E-07	8.21E+00	1.56E-05	5.62E-02	4.95E-06	3.46E-04	1.34E-03	2.15E-04	4.85E-04	3.11E-04	3.19E-04	3.10E-05	4.17E-05	1.14E-08	1.64E-04	5.43E-05
10	E58	70	Passenger Truck	290	0.00E+00	4.90E-06	5.18E-07	1.90E+01	3.10E-05	1.03E-01	1.01E-05	1.09E-03	2.44E-03	3.97E-04	9.73E-04	6.31E-04	6.47E-04	1.41E-04	9.49E-05	2.55E-08	3.23E-04	1.79E-04
10	E58	70	Single Unit Short Haul Truck	7	0.00E+00	1.72E-06	8.60E-08	1.34E+00	1.40E-06	2.70E-03	1.83E-06	8.47E-04	1.21E-04	2.41E-05	2.09E-04	5.13E-05	5.21E-05	1.35E-04	5.41E-06	2.19E-09	1.56E-04	1.59E-04
10	E58	70	Single Unit Long Haul Truck	7	0.00E+00	3.73E-06	2.65E-07	2.71E+00	1.21E-08	3.21E-03	2.73E-06	3.93E-03	2.83E-04	6.20E-05	2.27E-04	7.86E-05	7.84E-05	4.09E-04	9.06E-06	0.00E+00	1.49E-04	7.40E-04
10	E58	70	Combination Long Haul Truck	7	0.00E+00	3.38E-06	2.26E-07	2.53E+00	1.40E-08	3.40E-03	2.56E-06	3.87E-03	2.82E-04	5.15E-05	2.35E-04	6.82E-05	6.89E-05	3.86E-04	8.46E-06	0.00E+00	1.66E-04	7.29E-04
11	E59	80	Passenger Car	500	0.00E+00	6.01E-06	6.49E-07	2.30E+01	4.18E-05	1.54E-01	1.33E-05	1.03E-03	2.75E-03	4.77E-04	1.30E-03	8.38E-04	8.60E-04	7.83E-05	1.17E-04	3.29E-08	4.40E-04	1.61E-04
11	E59	80	Passenger Truck	837	0.00E+00	1.29E-05	1.37E-06	5.32E+01	8.27E-05	2.86E-01	2.70E-05	3.04E-03	4.93E-03	8.74E-04	2.58E-03	1.68E-03	1.72E-03	3.76E-04	2.70E-04	7.32E-08	8.67E-04	4.97E-04
11	E59	80	Single Unit Short Haul Truck	76	0.00E+00	1.42E-05	7.04E-07	1.39E+01	1.14E-05	2.79E-02	1.51E-05	7.27E-03	8.91E-04	2.01E-04	1.72E-03	4.20E-04	4.26E-04	1.39E-03	5.61E-05	2.23E-08	1.30E-03	1.36E-03
11	E59	80	Single Unit Long Haul Truck	3	0.00E+00	6.16E-07	3.04E-08	5.88E-01	4.87E-07	1.16E-03	6.56E-07	3.11E-04	4.07E-05	8.89E-06	7.52E-05	1.81E-05	1.83E-05	5.87E-05	2.37E-06	9.26E-10	5.69E-05	5.82E-05
11	E59	80	Combination Short Haul Truck	65	0.00E+00	2.87E-05	2.06E-06	2.38E+01	9.07E-08	2.55E-02	2.11E-05	2.96E-02	1.74E-03	4.29E-04	1.71E-03	6.07E-04	6.04E-04	3.58E-03	7.97E-05	0.00E+00	1.11E-03	5.56E-03
11	E59	80	Combination Long Haul Truck	60	0.00E+00	2.57E-05	1.72E-06	2.21E+01	1.05E-07	2.64E-02	1.96E-05	2.87E-02	1.71E-03	3.43E-04	1.77E-03	5.22E-04	5.26E-04	3.37E-03	7.36E-05	0.00E+00	1.24E-03	5.41E-03
11	E60	80	Passenger Car	386	0.00E+00	4.65E-06	5.02E-07	1.78E+01	3.23E-05	1.19E-01	1.03E-05	7.94E-04	2.12E-03	3.69E-04	1.01E-03	6.48E-04	6.65E-04	6.05E-05	9.07E-05	2.54E-08	3.40E-04	1.24E-04
11	E60	80	Passenger Truck	647	0.00E+00	9.97E-06	1.06E-06	4.11E+01	6.40E-05	2.21E-01	2.08E-05	2.35E-03	3.81E-03	6.76E-04	1.99E-03	1.30E-03	1.33E-03	2.91E-04	2.08E-04	5.66E-08	6.70E-04	3.84E-04
11	E60	80	Single Unit Short Haul Truck	43	0.00E+00	8.05E-06	3.99E-07	7.89E+00	6.47E-06	1.59E-02	8.56E-06	4.12E-03	5.05E-04	1.14E-04	9.79E-04	2.38E-04	2.42E-04	7.92E-04	3.18E-05	1.26E-08	7.37E-04	7.72E-04
11	E60	80	Single Unit Long Haul Truck	2	0.00E+00	3.50E-07	1.72E-08	3.34E-01	2.77E-07	6.57E-04	3.72E-07	1.77E-04	2.31E-05	5.04E-06	4.27E-05	1.03E-05	1.04E-05	3.33E-05	1.35E-06	5.26E-10	3.23E-05	3.30E-05
11	E60	80	Combination Short Haul Truck	33	0.00E+00	1.45E-05	1.04E-06	1.20E+01	4.58E-08	1.29E-02	1.07E-05	1.50E-02	8.80E-04	2.17E-04	8.65E-04	3.07E-04	3.05E-04	1.81E-03	4.02E-05	0.00E+00	5.61E-04	2.81E-03
11	E60	80	Combination Long Haul Truck	30	0.00E+00	1.30E-05	8.71E-07	1.11E+01	5.30E-08	1.33E-02	9.88E-06	1.45E-02	8.63E-04	1.73E-04	8.96E-04	2.64E-04	2.65E-04	1.70E-03	3.72E-05	0.00E+00	6.28E-04	2.73E-03
11	E61	80	Passenger Car	342	0.00E+00	4.11E-06	4.44E-07	1.58E+01	2.86E-05	1.05E-01	9.13E-06	7.02E-04	1.88E-03	3.26E-04	8.89E-04	5.73E-04	5.88E-04	5.35E-05	8.02E-05	2.25E-08	3.01E-04	1.10E-04
11	E61	80	Passenger Truck	572	0.00E+00	8.82E-06	9.36E-07	3.64E+01	5.66E-05	1.95E-01	1.84E-05	2.08E-03	3.37E-03	5.98E-04	1.76E-03	1.15E-03	1.18E-03	2.57E-04	1.84E-04	5.01E-08	5.93E-04	3.40E-04
11	E61	80	Single Unit Short Haul Truck	12	0.00E+00	2.31E-06	1.15E-07	2.27E+00	1.86E-06	4.55E-03	2.46E-06	1.18E-03	1.45E-04	3.28E-05	2.81E-04	6.85E-05	6.95E-05	2.27E-04	9.14E-06	3.63E-09	2.12E-04	2.22E-04
11	E61	80	Single Unit Long Haul Truck	1	0.00E+00	1.00E-07	4.95E-09	9.59E-02	7.94E-08	1.89E-04	1.07E-07	5.07E-05	6.63E-06	1.45E-06	1.23E-05	2.94E-06	2.99E-06	9.57E-06	3.86E-07	1.51E-10	9.27E-06	9.48E-06
11	E61	80	Combination Short Haul Truck	10	0.00E+00	4.33E-06	3.10E-07	3.59E+00	1.37E-08	3.84E-03	3.18E-06	4.47E-03	2.62E-04	6.47E-05	2.58E-04	9.15E-05	9.10E-05	5.40E-04	1.20E-05	0.00E+00	1.67E-04	8.38E-04
11	E61	80	Combination Long Haul Truck	9	0.00E+

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E66	70	Passenger Car	724	0.00E+00	9.35E-06	1.01E-06	3.44E+01	6.52E-05	2.35E-01	2.07E-05	1.45E-03	5.61E-03	9.01E-04	2.03E-03	1.30E-03	1.34E-03	1.30E-04	1.75E-04	4.77E-08	6.86E-04	2.27E-04
10	E66	70	Passenger Truck	1213	0.00E+00	2.05E-05	2.17E-06	7.95E+01	1.30E-04	4.31E-01	4.24E-05	4.55E-03	1.02E-02	1.66E-03	4.08E-03	2.64E-03	2.71E-03	5.89E-04	3.97E-04	1.07E-07	1.35E-03	7.48E-04
10	E66	70	Single Unit Short Haul Truck	6	0.00E+00	1.47E-06	7.38E-08	1.15E+00	1.20E-06	2.31E-03	1.57E-06	7.28E-04	1.04E-04	2.07E-05	1.79E-04	4.40E-05	4.47E-05	1.16E-04	4.65E-06	1.88E-09	1.34E-04	1.36E-04
10	E66	70	Combination Short Haul Truck	15	0.00E+00	8.05E-06	5.72E-07	5.85E+00	2.62E-08	6.93E-03	5.89E-06	8.48E-03	6.11E-04	1.34E-04	4.90E-04	1.70E-04	1.69E-04	8.82E-04	1.95E-05	0.00E+00	3.21E-04	1.60E-03
10	E66	70	Combination Long Haul Truck	14	0.00E+00	7.30E-06	4.86E-07	5.45E+00	3.01E-08	7.34E-03	5.53E-06	8.36E-03	6.08E-04	1.11E-04	5.06E-04	1.47E-04	1.49E-04	8.32E-04	1.82E-05	0.00E+00	3.59E-04	1.57E-03
11	E67	80	Passenger Car	252	0.00E+00	3.03E-06	3.27E-07	1.16E+01	2.10E-05	7.76E-02	6.72E-06	5.17E-04	1.38E-03	2.40E-04	6.55E-04	4.22E-04	4.33E-04	3.94E-05	5.91E-05	1.66E-08	2.22E-04	8.11E-05
11	E67	80	Passenger Truck	421	0.00E+00	6.50E-06	6.89E-07	2.68E+01	4.17E-05	1.44E-01	1.36E-05	1.53E-03	2.48E-03	4.40E-04	1.30E-03	8.46E-04	8.67E-04	1.90E-04	1.36E-04	3.69E-08	4.37E-04	2.50E-04
11	E67	80	Single Unit Short Haul Truck	11	0.00E+00	1.98E-06	9.80E-08	1.94E+00	1.59E-06	3.89E-03	2.10E-06	1.01E-03	1.24E-04	2.81E-05	2.40E-04	5.85E-05	5.94E-05	1.94E-04	7.81E-06	3.10E-09	1.81E-04	1.90E-04
11	E67	80	Combination Short Haul Truck	4	0.00E+00	1.61E-06	1.15E-07	1.33E+00	5.08E-09	1.42E-03	1.18E-06	1.66E-03	9.74E-05	2.40E-05	9.58E-05	3.40E-05	3.38E-05	2.00E-04	4.45E-06	0.00E+00	6.21E-05	3.11E-04
11	E67	80	Combination Long Haul Truck	3	0.00E+00	1.44E-06	9.65E-08	1.23E+00	5.87E-09	1.47E-03	1.09E-06	1.60E-03	9.55E-05	1.92E-05	9.92E-05	2.92E-05	2.94E-05	1.88E-04	4.12E-06	0.00E+00	6.96E-05	3.02E-04
11	E68	80	Passenger Car	280	0.00E+00	3.36E-06	3.64E-07	1.29E+01	2.34E-05	8.62E-02	7.47E-06	5.75E-04	1.54E-03	2.67E-04	7.28E-04	4.69E-04	4.82E-04	4.38E-05	6.56E-05	1.84E-08	2.46E-04	9.01E-05
11	E68	80	Passenger Truck	468	0.00E+00	7.22E-06	7.66E-07	2.98E+01	4.63E-05	1.60E-01	1.51E-05	1.70E-03	2.76E-03	4.89E-04	1.44E-03	9.41E-04	9.64E-04	2.11E-04	1.51E-04	4.10E-08	4.85E-04	2.78E-04
11	E68	80	Single Unit Short Haul Truck	8	0.00E+00	1.44E-06	7.13E-08	1.41E+00	1.16E-06	2.83E-03	1.53E-06	7.36E-04	9.02E-05	2.04E-05	1.75E-04	4.26E-05	4.32E-05	1.41E-04	5.68E-06	2.26E-09	1.32E-04	1.38E-04
11	E68	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.31E-07	1.52E+00	5.80E-09	1.63E-03	1.35E-06	1.89E-03	1.11E-04	2.74E-05	1.09E-04	3.88E-05	3.86E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.56E-04
11	E68	80	Combination Long Haul Truck	4	0.00E+00	1.64E-06	1.10E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.83E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.46E-04
10	E69	70	Passenger Car	368	0.00E+00	4.75E-06	5.14E-07	1.75E+01	3.31E-05	1.19E-01	1.05E-05	7.36E-04	2.85E-03	4.57E-04	1.03E-03	6.62E-04	6.79E-04	6.58E-05	8.86E-05	2.42E-08	3.48E-04	1.15E-04
10	E69	70	Passenger Truck	615	0.00E+00	1.04E-05	1.10E-06	4.03E+01	6.58E-05	2.19E-01	2.15E-05	2.31E-03	5.18E-03	8.43E-04	2.07E-03	1.34E-03	1.37E-03	2.99E-04	2.02E-04	5.42E-08	6.87E-04	3.80E-04
10	E69	70	Single Unit Short Haul Truck	11	0.00E+00	2.70E-06	1.35E-07	2.12E+00	2.21E-06	4.25E-03	2.88E-06	1.33E-03	1.90E-04	3.80E-05	3.29E-04	8.08E-05	8.20E-05	2.12E-04	8.52E-06	3.45E-09	2.46E-04	2.50E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.18E-07	5.86E-09	8.98E-02	9.53E-08	1.77E-04	1.25E-07	5.73E-05	8.67E-06	1.69E-06	1.44E-05	3.49E-06	3.55E-06	8.97E-06	3.62E-07	1.45E-10	1.08E-05	1.07E-05
10	E69	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	E69	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.19E-04
10	E70	70	Passenger Car	309	0.00E+00	3.99E-06	4.31E-07	1.47E+01	2.78E-05	1.00E-01	8.84E-06	6.19E-04	2.39E-03	3.84E-04	8.66E-04	5.56E-04	5.70E-04	5.53E-05	7.45E-05	2.03E-08	2.93E-04	9.69E-05
10	E70	70	Passenger Truck	517	0.00E+00	8.75E-06	9.25E-07	3.39E+01	5.53E-05	1.84E-01	1.81E-05	1.94E-03	4.35E-03	7.08E-04	1.74E-03	1.13E-03	1.16E-03	2.51E-04	1.70E-04	4.55E-08	5.78E-04	3.19E-04
10	E70	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.08E-04	4.79E-07	2.22E-04	3.17E-05	6.33E-06	5.48E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.75E-10	4.09E-05	4.16E-05
10	E70	70	Combination Short Haul Truck	2	0.00E+00	8.15E-07	5.80E-08	5.93E-01	2.65E-09	7.02E-04	5.97E-07	8.59E-04	6.19E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.94E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	E70	70	Combination Long Haul Truck	1	0.00E+00	7.39E-07	4.93E-08	5.52E-01	3.05E-09	7.43E-04	5.60E-07	8.47E-04	6.16E-05	1.12E-05	5.13E-05	1.49E-05	1.51E-05	8.43E-05	1.85E-06	0.00E+00	3.63E-05	1.59E-04
10	E71	70	Passenger Car	460	0.00E+00	5.94E-06	6.43E-07	2.18E+01	4.14E-05	1.49E-01	1.32E-05	9.21E-04	3.56E-03	5.72E-04	1.29E-03	8.28E-04	8.49E-04	8.24E-05	1.11E-04	3.03E-08	4.36E-04	1.44E-04
10	E71	70	Passenger Truck	770	0.00E+00	1.30E-05	1.38E-06	5.05E+01	8.24E-05	2.74E-01	2.70E-05	2.89E-03	6.48E-03	1.05E-03	2.59E-03	1.68E-03	1.72E-03	3.74E-04	2.52E-04	6.78E-08	8.60E-04	4.75E-04
10	E71	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.67E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	E71	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.98E+00	8.83E-09	2.34E-03	1.99E-06	2.86E-03	2.06E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.98E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E71	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.05E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.31E-04
10	E72	70	Passenger Car	541	0.00E+00	6.99E-06	7.56E-07	2.57E+01	4.87E-05	1.76E-01	1.55E-05	1.08E-03	4.19E-03	6.73E-04	1.52E-03	9.74E-04	9.99E-04	9.69E-05	1.30E-04	3.56E-08	5.12E-04	1.70E-04
10	E72	70	Passenger Truck	906	0.00E+00	1.53E-05	1.62E-06	5.94E+01	9.69E-05	3.22E-01	3.17E-05	3.40E-03	7.63E-03	1.24E-03	3.05E-03	1.97E-03	2.02E-03	4.40E-04	2.97E-04	7.98E-08	1.01E-03	5.59E-04
10	E72	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.54E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.74E-05	6.73E-06	6.84E-06	1.77E-05	7.10E-07	2.87E-10	2.05E-05	2.08E-05
10	E72	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.90E-01	3.53E-09	9.36E-04	7.96E-07	1.14E-03	8.25E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.16E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	9.86E-07	6.57E-08	7.37E-01	4.07E-09	9.91E-04	7.47E-07	1.13E-03	8.21E-05	1.50E-05	6.84E-05	1.99E-05	2.01E-05	1.12E-04	2.46E-06	0.00E+00	4.84E-05	2.13E-04
9	E73	60	Passenger Car	51	0.00E+00	7.57E-07	8.19E-08	2.54E+00	5.27E-06	1.89E-02	1.69E-06	1.04E-04	5.18E-04	7.96E-05	1.63E-04	1.06E-04	1.08E-04	1.07E-05	1.28E-05	3.53E-09	5.55E-05	1.63E-05
9	E73	60	Passenger Truck	86	0.00E+00	1.67E-06	1.76E-07	5.80E+00	1.04E-05	3.38E-02	3.45E-06	3.40E-04	9.51E-04	1.48E-04	3.28E-04	2.13E-04	2.18E-04	4.54E-05	2.90E-05	8.04E-09	1.09E-04	5.63E-05
9	E74	60	Passenger Car	117	0.00E+00	1.73E-06	1.87E-07	5.81E+00	1.20E-05	4.32E-02	3.86E-06	2.38E-04	1.18E-03	1.82E-04	3.73E-04	2.42E-04	2.48E-04	2.44E-05	2.94E-05	8.08E-09	1.27E-04	3.73E-05
9	E74	60	Passenger Truck	196	0.00E+00	3.82E-06	4.03E-07	1.33E+01	2.39E-05	7.72E-02	7.88E-06	7.77E-04	2.17E-03	3.38E-04	7.50E-04	4.88E-04	5.00E-04	1.04E-04	6.63E-05	1.84E-08	2.49E-04	1.29E-04
53	E75	70	Passenger Car	789	0.00E+00	9.89E-06	1.07E-06	3.79E+01	6.88E-05	2.45E-01	2.19E-05	1.61E-03	6.03E-03	9.71E-04	2.14E-03	1.38E-03	1.41E-03	1.41E-04	1.92E-04	5.24E-08	7.23E-04	2.52E-04
53	E75	70	Passenger Truck	1321	0.00E+00	2.15E-05	2.28E-06	8.74E+01	1.36E-04	4.51E-01	4.48E-05	4.92E-03	1.08E-02	1.77E-03	4.26E-03	2.77E-03	2.84E-03	6.39E-04	4.40E-04	1.15E-07	1.42E-03	8.08E-04
53	E75	70	Single Unit Short Haul Truck	23	0.00E+00	5.30E-06	2.65E-07	4.15E+00	4.33E-06	8.33E-03	5.64E-06	2.62E-03	3.73E-04	7.45E-05	6.45E-04	1.58E-04	1.61E-04	4.16E-04	1.67E-05	6.76E-09	4.81E-04	4.90E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	2.31E-07	1.15E-08	1.76E-01	1.87E-07	3.48E-04	2.46E-07	1.12E-04	1.70E-05	3.31E-06	2.82E-05	6.85E-06	6.96E-06	1.76E-05	7.10E-07	2.84E-10	2.11E-05	2.11E-05
53	E75	70	Combination Short Haul Truck	26	0.00E+00	1.33E-05	9.48E-07	9.69E+00	4.33E-08	1.15E-02	9.77E-06	1.40E-02	1.01E-03	2.22E-04	8.13E-04	2.81E-04	2.80E-04	1.46E-03	3.24E-05	0.00E+00	5.32E-04	2.64E-03
53	E75	70	Combination Long Haul Truck	23	0.00E+00	1.21E-05	8.06E-07	9.03E+00	4.99E-08	1.22E-02	9.16E-06	1.38E-02	1.01E-03	1.84E-04	8.38E-04	2.44E-04	2.46E-04	1.38E-03	3.02E-05	0.00E+00	5.94E-04	2.61E-03
53	E76	70	Passenger Car	652	0.00E+00	8.16E-06	8.81E-07	3.13E+01	5.68E-05	2.03E-01	1.81E-05	1.33E-03	4.98E-03	8.02E-04	1.76E-03	1.14E-03	1.17E-03	1.17E-04	1.59E-04	4.33E-08	5.97E-04	2.08E-04
53	E76	70	Passenger Truck	1091	0.00E+00	1.78E-05	1.88E-06	7.21E+01	1.12E-04	3.73E-01	3.70E-05	4.06E-03	8.94E-03	1.46E-03	3.52E-03	2.29E-03	2.35E-03	5.27E-04	3.64E-04	9.52E-08	1.18E-03	6.67E-04
53	E76	70	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.50E-07	2.35E+00	2.45E-06	4.71E-03	3.19E-06	1.48E-03	2.10E-04	4.21E-05	3.64E-04	8.95E-05	9.09E-05	2.35E-04	9.45E-06	3.82E-09	2.72E-04	2.77E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.30E-07	6.49E-09	9.95E-02	1.06E-07	1.97E-04	1.39E-07	6.35E-05	9.61E-06	1.87E-06	1.59E-05	3.87E-06	3.93E-06	9.94E-06	4.01E-07	1.61E-10	1.19E-05	1.19E-05
53	E76	70	Combination Short Haul Truck	10	0.00E+00	5.17E-06	3.68E-07	3.76E+00	1.68E-08	4.45E-03	3.79E-06	5.45E-03	3.93E-04	8.60E-05	3.15E-04	1.09E-04	1.09E-04	5.67E-04	1.25E-05	0.00E+00	2.06E-04	1.03E-03
53	E76	70	Combination Long Haul Truck	9	0.00E+00	4.69E-06	3.13E-07	3.50E+00	1.94E-08	4.71E-03	3.55E-06	5.37E-03	3.91E-04	7.13E-05	3.25E-04	9.45E-05	9.55E-05	5.34E-04	1.17E-05	0.00E+00	2.30E-04	1.01E-03
53	E77	70	Passenger Car	867	0.00E+00	1.09E-05	1.17E-06	4.17E+01	7.56E-05	2.70E-01	2.41E-05	1.77E-03	6.63E-03	1.07E-03	2.35E-03	1.52E-03	1.55E-03	1.55E-04	2.12E-04	5.76E-08	7.95E-04	2.77E-04
53	E77	70	Passenger Truck	1452	0.00E+00	2.36E-05	2.50E-06	9.60E+01	1.50E-04	4.96E-01	4.92E-05	5.41E-03	1.19E-02	1.94E-03	4.68E-03	3.05E-03	3.13E-03	7.02E-04	4.84E-04	1.27E-07	1.57E-03	8.88E-04
53	E77	70	Single Unit Short Haul Truck	24	0.00E+00	5.74E-06	2.88E-07	4.50E+00	4.69E-06	9.02E-03	6.11E-06	2.83E-03	4.03E-04	8.07E-05	6.98E-04	1.72E-04	1.74E-04	4.50E-04	1.81E-05	7.32E-09	5.21E-04	5.30E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	2.50E-07	1.24E-08	1.91E-01	2.02E-07	3.77E-04	2.66E-07	1.22E-04	1.84E-05	3.59E-06	3.05E-05	7.42E-06	7.54E-06	1.91E-05	7.69E-07	3.08E-10	2.29E-05	2.28E-05
53	E77	70	Combination Short Haul Truck	27	0.00E+00	1.38E-05	9.83E-07	1.01E+01	4.50E-08	1.19E-02	1.01E-05	1.46E-02	1.05E-03	2.30E-04	8.43E-04	2.91E-04	2.91E-04	1.52E-03	3.36E-05	0.00E+00	5.52E-04	2.74E-03
53	E77	70	Combination Long Haul Truck	24	0.00E+00	1.25E-05	8.36E-07	9.37E+00	5.18E-08	1.26E-02	9.51E-06	1.44E-02	1.05E-03	1.91E-04	8.70E-04	2.53E-04	2.56E-04	1.43E-03	3.14E-05	0.00E+00	6.16E-04	2.70E-03
53	E78	70	Passenger Car	804	0.00E+00	1.01E-05	1.09E-06	3.86E+01	7.01E-05	2.50E-01	2.23E-05	1.64E-03	6.14E-03	9.90E-04	2.18E-03	1.41E-03	1.44E-03	1.44E-04	1.96E-04	5.34E-08	7.37E-04	2.57E-04
53	E78	70	Passenger Truck	1347	0.00E+00	2.19E-05	2.32E-06	8.90E+01	1.39E-04	4.60E-01	4.56E-05	5.01E-03	1.10E-02	1.80E-03	4.34E-03	2.83E-03	2.90E-03	6.51E-04	4.49E-04	1.17E-07	1.45E-03	8.23E-04
53	E78	70	Single Unit Short Haul Truck	14	0.00E+00	3.33E-06	1.67E-07	2.61E+00	2.73E-06	5.24E-03	3.55E-06	1.65E-03	2.34E-04	4.69E-05	4.06E-04	9.97E-05	1.01E-04	2.62E-04	1.05E-05	4.26E-09	3.03E-04	3.08E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.45E-07	7.23E-09	1.11E-01	1.18E-07	2.19E-04	1.55E-07	7.07E-05	1.07E-05	2.09E-06	1.77E-05	4.31E-06	4.38E-06	1.11E-05	4.47E-07	1.79E-10	1.33E-05	1.33E-05
53	E78	70	Combination Short Haul Truck	13	0.00E+00	6.66E-06	4.74E-07	4.85E+00	2.17E-08	5.74E-03	4.88E-06	7.02E-03	5.06E-04	1.11E-04	4.06E-04	1.40E-04	1.40E-04	7.31E-04	1.62E-05	0.00E+00	2.66E-04	1.32E-03
53	E78	70	Combination Long Haul Truck	12	0.00E+00	6.05E-06	4.03E-07	4.52E+00	2.50E-08	6.08E-03	4.58E-06	6.92E-03	5.04E-04	9.20E-05	4.19E-04	1.22E-04	1.23E-04	6.89E-04	1.51E-05	0.00E+00	2.97E-04	1.30E-03
53	E79	70	Passenger Car	877	0.00E+00	1.10E-05	1.19E-06	4.21E+01	7.65E-05	2.73E-01	2.44E-05	1.79E-03	6.70E-03	1.08E-03	2.37E-03	1.53E-03	1.57E-03	1.57E-04	2.14E-04	5.82E-08	8.04E-04	2.80E-04
53	E79	70	Passenger Truck	1468	0.00E+00	2.39E-05	2.53E-06	9.71E+01	1.51E-04	5.02E-01	4.98E-05	5.47E-03	1.20E-02	1.96E-03	4.73E-03	3.08E-03	3.16E-03	7.10E-04	4.89E-04	1.28E-07	1.58E-03	8.97E-04
53	E79	70	Single Unit Short Haul Truck	24	0.00E+00	5.63E-06	2.82E-07	4.41E+00	4.60E-06	8.85E-03	5.99E-06	2.78E-03	3.96E-04	7.91E-05	6.85E-04	1.68E-04	1.71E-04	4.42E-04	1.78E-05	7.18E-09	5.11E-04	5.20E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.87E-01	1.99E-07	3.70E-04	2.61E-07	1.19E-04	1.81E-05	3.52E-06	2.99E-05	7.27E-06	7.39E-06	1.87E-05	7.54E-07	3.02E-10	2.24E-05	2.24E-05
53	E79	70	Combination Short Haul Truck	14	0.00E+00	7.34E-06	5.22E-07	5.34E+00	2.39E-08	6.32E-03	5.37E-06	7.73E-03	5.57E-04	1.22E-04	4.47E-04	1.55E-04	1.54E-04	8.04E-04	1.78E-05	0.00E+00	2.93E-04	1.46E-03
53	E79	70	Combination Long Haul Truck	13	0.00E+00	6.65E-06	4.44E-07	4.97E+00	2.75E-08	6.69E-03	5.04E-06	7.62E-03	5.54E-04	1.01E-04	4.61E-04	1.34E-04	1.36E-04	7.58E-04	1.66E-05	0.00E+00	3.27E-04	1.43E-03
53	E80	70	Passenger Car	751	0.00E+00	9.41E-06	1.02E-06	3.61E+01	6.55E-05	2.34E-01	2.09E-05	1.53E-03	5.74E-03	9.24E-04	2.03E-03	1.31E-03	1.35E-03	1.35E-04	1.83E-04	4.99E-08	6.89E-04	2.40E-04
53	E80	70	Passenger Truck	1258	0.00E+00	2.05E-05	2.17E-06	8.32E+01	1.30E-04	4.30E-01	4.26E-05	4.68E-03	1.03E-02	1.68E-03	4.05E-03	2.64E-03	2.71E-03	6.08E-04	4.19E-04	1.10E-07	1.36E-03	7.69E-04
53	E80	70	Single Unit Short Haul Truck	23	0.00E+00	5.40E-06	2.71E-07	4.23E+00	4.42E-06	8.49E-03	5.75E-06	2.67E-03	3.80E-04	7.60E-05	6.58E-04	1.62E-04	1.64E-04	4.24E-04	1.70E-05	6.90E-09	4.91E-04	4.99E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	1.17E-08	1.80E-01	1.91E-07	3.55E-04	2.51E-07	1.15E-04	1.73E-05	3.38E-06	2.87E-05	6.98E-06	7.10E-06	1.79E-05	7.24E-07	2.90E-10	2.15E-05	2.15E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	8.97E-06	6.38E-07	6.52E+00	2.92E-08	7.72E-03	6.57E-06	9.45E-03	6.81E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.83E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00	8.13E-06	5.42E-07	6.08E+00	3.36E-08	8.18E-03	6.16E-06	9.31E-03	6.78E-04	1.24E-04	5.64E-04	1.64E-04	1.66E-04	9.27E-04	2.03E-05	0.00E+00	4.00E-04	1.75E-03
9	E81	60	Passenger Car	22	0.00E+00	3.32E-07	3.60E-08	1.12E+00	2.31E-06	8.29E-03	7.42E-07	4.57E-05	2.27E-04	3.50E-05	7.17E-05	4.64E-05	4.75E-05	4.69E-06	5.64E-06	1.55E-09	2.44E-05	7.17E-06
9	E81	60	Passenger Truck	38	0.00E+00	7.33E-07	7.74E-08	2.55E+00	4.58E-06	1.48E-02	1.51E-06	1.49E-04	4.17E-04	6.48E-05	1.44E-04	9.36E-05	9.59E-05	1.99E-05	1.27E-05	3.53E-09	4.78E-05	2.47E-05
9	E81	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E82	60	Passenger Car	9	0.00E+00	1.38E-07	1.50E-08	4.65E-01	9.63E-07	3.45E-03	3.09E-07	1.91E-05	9.48E-05	1.46E-05	2.99E-05	1.93E-05	1.98E-05	1.95E-06	2.35E-06	6.47E-10	1.02E-05	2.99E-06
9	E82	60	Passenger Truck	16	0.00E+00	3.05E-07	3.23E-08	1.06E+00	1.91E-06	6.17E-03	6.30E-07	6.22E-05	1.74E-04	2.70E-05	6.00E-05	3.90E-05	4.00E-05	8.30E-06	5.30E-06	1.47E-09	1.99E-05	1.03E-05
10	E83	70	Passenger Car	197	0.00E+00	2.54E-06	2.75E-07

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E87	60	Passenger Truck	1225	0.00E+00	2.39E-05	2.53E-06	8.31E+01	1.49E-04	4.83E-01	4.94E-05	4.87E-03	1.36E-02	2.11E-03	4.70E-03	3.05E-03	3.13E-03	6.50E-04	4.15E-04	1.15E-07	1.56E-03	8.07E-04
9	E87	60	Single Unit Short Haul Truck	85	0.00E+00	2.50E-05	1.25E-06	1.59E+01	2.05E-05	3.07E-02	2.67E-05	1.19E-02	2.02E-03	3.66E-04	3.02E-03	7.48E-04	7.60E-04	1.59E-03	6.42E-05	2.64E-08	2.27E-03	2.23E-03
9	E87	60	Single Unit Long Haul Truck	4	0.00E+00	1.09E-06	5.42E-08	6.78E-01	8.93E-07	1.30E-03	1.17E-06	5.15E-04	9.07E-05	1.62E-05	1.33E-04	3.26E-05	3.31E-05	6.77E-05	2.74E-06	1.12E-09	9.97E-05	9.65E-05
9	E87	60	Combination Short Haul Truck	57	0.00E+00	3.33E-05	2.33E-06	2.17E+01	1.18E-07	2.91E-02	2.47E-05	3.62E-02	3.10E-03	6.13E-04	2.12E-03	6.92E-04	6.92E-04	3.27E-03	7.25E-05	0.00E+00	1.43E-03	6.83E-03
9	E87	60	Combination Long Haul Truck	52	0.00E+00	2.98E-05	1.95E-06	2.04E+01	1.35E-07	3.14E-02	2.31E-05	3.59E-02	3.11E-03	5.29E-04	2.18E-03	5.94E-04	6.01E-04	3.10E-03	6.80E-05	0.00E+00	1.58E-03	6.77E-03
9	E88	60	Passenger Car	1046	0.00E+00	1.55E-05	1.68E-06	5.20E+01	1.08E-04	3.86E-01	3.46E-05	2.13E-03	1.06E-02	1.63E-03	3.34E-03	2.16E-03	2.22E-03	2.18E-04	2.63E-04	7.23E-08	1.14E-03	3.34E-04
9	E88	60	Passenger Truck	1751	0.00E+00	3.41E-05	3.61E-06	1.19E+02	2.14E-04	6.91E-01	7.05E-05	6.96E-03	1.95E-02	3.02E-03	6.71E-03	4.36E-03	4.47E-03	9.29E-04	5.93E-04	1.64E-07	2.23E-03	1.15E-03
9	E88	60	Single Unit Short Haul Truck	73	0.00E+00	2.14E-05	1.07E-06	1.36E+01	1.76E-05	2.62E-02	2.28E-05	1.02E-02	1.73E-03	3.12E-04	2.58E-03	6.39E-04	6.49E-04	1.36E-03	5.48E-05	2.26E-08	1.94E-03	1.91E-03
9	E88	60	Single Unit Long Haul Truck	3	0.00E+00	9.34E-07	4.63E-08	5.80E-01	7.63E-07	1.11E-03	9.96E-07	4.40E-04	7.75E-05	1.39E-05	1.14E-04	2.78E-05	2.83E-05	5.79E-05	2.34E-06	9.60E-10	8.52E-05	8.25E-05
9	E88	60	Combination Short Haul Truck	57	0.00E+00	3.34E-05	2.33E-06	2.18E+01	1.18E-07	2.92E-02	2.48E-05	3.63E-02	3.11E-03	6.15E-04	2.13E-03	6.94E-04	6.94E-04	3.28E-03	7.27E-05	0.00E+00	1.43E-03	6.85E-03
9	E88	60	Combination Long Haul Truck	52	0.00E+00	2.99E-05	1.96E-06	2.04E+01	1.36E-07	3.15E-02	2.32E-05	3.60E-02	3.12E-03	5.31E-04	2.19E-03	5.95E-04	6.03E-04	3.11E-03	6.82E-05	0.00E+00	1.58E-03	6.79E-03
9	E89	60	Passenger Car	10	0.00E+00	1.55E-07	1.68E-08	5.21E-01	1.08E-06	3.87E-03	3.46E-07	2.13E-05	1.06E-04	1.63E-05	3.34E-05	2.16E-05	2.22E-05	2.19E-06	2.63E-06	7.24E-10	1.14E-05	3.34E-06
9	E89	60	Passenger Truck	18	0.00E+00	3.42E-07	3.61E-08	1.19E+00	2.14E-06	6.92E-03	7.06E-07	6.96E-05	1.95E-04	3.02E-05	6.72E-05	4.37E-05	4.48E-05	9.30E-06	5.94E-06	1.65E-09	2.23E-05	1.15E-05
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E90	60	Passenger Car	37	0.00E+00	5.54E-07	5.99E-08	1.86E+00	3.85E-06	1.38E-02	1.24E-06	7.62E-05	3.79E-04	5.83E-05	1.19E-04	7.73E-05	7.92E-05	7.81E-06	9.40E-06	2.59E-09	4.06E-05	1.19E-05
9	E90	60	Passenger Truck	63	0.00E+00	1.22E-06	1.29E-07	4.24E+00	7.64E-06	2.47E-02	2.52E-06	2.49E-04	6.96E-04	1.08E-04	2.40E-04	1.56E-04	1.60E-04	3.32E-05	2.12E-05	5.88E-09	7.97E-05	4.12E-05
9	E90	60	Single Unit Short Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.79E-01	2.32E-07	3.46E-04	3.01E-07	1.34E-04	2.28E-05	4.12E-06	3.41E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.15E-08	2.01E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.39E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.31E-05
9	E91	60	Passenger Car	4	0.00E+00	5.54E-08	5.99E-09	1.86E-01	3.85E-07	1.38E-03	1.24E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.73E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.06E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.47E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.40E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.97E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.54E-08	5.99E-09	1.86E-01	3.85E-07	1.38E-03	1.24E-07	7.62E-06	3.79E-05	5.83E-06	1.19E-05	7.73E-06	7.92E-06	7.81E-07	9.40E-07	2.59E-10	4.06E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.47E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.40E-05	1.56E-05	1.60E-05	3.32E-06	2.12E-06	5.88E-10	7.97E-06	4.12E-06
9	E93	60	Passenger Car	83	0.00E+00	1.23E-06	1.34E-07	4.15E+00	8.59E-06	3.08E-02	2.76E-06	1.70E-04	8.45E-04	1.30E-04	2.66E-04	1.72E-04	1.77E-04	1.74E-05	2.10E-05	5.77E-09	9.06E-05	2.66E-05
9	E93	60	Passenger Truck	140	0.00E+00	2.72E-06	2.88E-07	9.46E+00	1.70E-05	5.51E-02	5.62E-06	5.55E-04	1.55E-03	2.41E-04	5.35E-04	3.48E-04	3.56E-04	7.41E-05	4.73E-05	1.31E-08	1.78E-04	9.19E-05
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.69E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	6.16E-07	4.30E-08	4.01E-01	2.18E-09	5.38E-04	4.56E-07	6.68E-04	5.72E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.04E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	E93	60	Combination Long Haul Truck	1	0.00E+00	5.51E-07	3.60E-08	3.76E-01	2.50E-09	5.80E-04	4.27E-07	6.62E-04	5.75E-05	9.78E-06	4.03E-05	1.10E-05	1.11E-05	5.72E-05	1.26E-06	0.00E+00	2.91E-05	1.25E-04
9	E94	60	Passenger Car	27	0.00E+00	3.99E-07	4.31E-08	1.34E+00	2.77E-06	9.95E-03	8.90E-07	5.49E-05	2.73E-04	4.19E-05	8.60E-05	5.56E-05	5.71E-05	5.62E-06	6.77E-06	1.86E-09	2.92E-05	8.60E-06
9	E94	60	Passenger Truck	45	0.00E+00	8.79E-07	9.29E-08	3.06E+00	5.50E-06	1.78E-02	1.82E-06	1.79E-04	5.01E-04	7.78E-05	1.73E-04	1.12E-04	1.15E-04	2.39E-05	1.53E-05	4.23E-09	5.74E-05	2.97E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	5.64E-07	2.81E-08	3.58E-01	4.63E-07	6.92E-04	6.01E-07	2.69E-04	4.55E-05	8.25E-06	6.81E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
54	E95	80	Passenger Car	578	0.00E+00	6.78E-06	7.34E-07	2.68E+01	4.72E-05	1.72E-01	1.51E-05	1.19E-03	3.34E-03	5.70E-04	1.47E-03	9.46E-04	9.72E-04	9.06E-05	1.37E-04	3.71E-08	4.96E-04	1.86E-04
54	E95	80	Passenger Truck	969	0.00E+00	1.47E-05	1.56E-06	6.24E+01	9.44E-05	3.26E-01	3.09E-05	3.55E-03	6.03E-03	1.05E-03	2.96E-03	1.92E-03	1.97E-03	4.36E-04	3.15E-04	8.37E-08	9.87E-04	5.78E-04
54	E95	80	Single Unit Short Haul Truck	31	0.00E+00	5.87E-06	2.91E-07	5.76E+00	4.72E-06	1.16E-02	6.24E-06	3.01E-03	3.69E-04	8.34E-05	7.14E-04	1.74E-04	1.76E-04	5.77E-04	2.32E-05	9.22E-09	5.37E-04	5.63E-04
54	E95	80	Single Unit Long Haul Truck	1	0.00E+00	2.55E-07	1.26E-08	2.43E-01	2.02E-07	4.79E-04	2.71E-07	1.29E-04	1.68E-05	3.68E-06	3.11E-05	7.48E-06	7.59E-06	2.43E-05	9.82E-07	3.83E-10	2.35E-05	2.41E-05
54	E95	80	Combination Short Haul Truck	32	0.00E+00	1.42E-05	1.02E-06	1.18E+01	4.49E-08	1.26E-02	1.04E-05	1.47E-02	8.62E-04	2.12E-04	8.48E-04	3.01E-04	2.99E-04	1.77E-03	3.94E-05	0.00E+00	5.50E-04	2.75E-03
54	E95	80	Combination Long Haul Truck	30	0.00E+00	1.27E-05	8.54E-07	1.09E+01	5.20E-08	1.31E-02	9.69E-06	1.42E-02	8.45E-04	1.70E-04	8.78E-04	2.59E-04	2.60E-04	1.67E-03	3.64E-05	0.00E+00	6.16E-04	2.68E-03
54	E96	80	Passenger Car	434	0.00E+00	5.09E-06	5.51E-07	2.01E+01	3.55E-05	1.29E-01	1.13E-05	8.96E-04	2.51E-03	4.28E-04	1.10E-03	7.10E-04	7.30E-04	6.80E-05	1.02E-04	2.79E-08	3.73E-04	1.40E-04
54	E96	80	Passenger Truck	727	0.00E+00	1.10E-05	1.17E-06	4.68E+01	7.09E-05	2.44E-01	2.32E-05	2.67E-03	4.52E-03	7.88E-04	2.22E-03	1.44E-03	1.48E-03	3.27E-04	2.36E-04	6.28E-08	7.41E-04	4.34E-04
54	E96	80	Single Unit Short Haul Truck	39	0.00E+00	7.33E-06	3.64E-07	7.19E+00	5.90E-06	1.44E-02	7.80E-06	3.76E-03	4.61E-04	1.04E-04	8.92E-04	2.17E-04	2.21E-04	7.21E-04	2.90E-05	1.15E-08	6.71E-04	7.04E-04
54	E96	80	Single Unit Long Haul Truck	2	0.00E+00	3.19E-07	1.57E-08	3.04E-01	2.52E-07	5.99E-04	3.39E-07	1.61E-04	2.10E-05	4.60E-06	3.89E-05	9.34E-06	9.49E-06	3.04E-05	1.23E-06	4.79E-10	2.94E-05	3.01E-05
54	E96	80	Combination Short Haul Truck	38	0.00E+00	1.66E-05	1.19E-06	1.37E+01	5.24E-08	1.47E-02	1.22E-05	1.71E-02	1.01E-03	2.48E-04	9.88E-04	3.50E-04	3.48E-04	2.07E-03	4.60E-05	0.00E+00	6.41E-04	3.21E-03
54	E96	80	Combination Long Haul Truck	34	0.00E+00	1.48E-05	9.95E-07	1.27E+01	6.06E-08	1.52E-02	1.13E-05	1.66E-02	9.85E-04	1.98E-04	1.02E-03	3.01E-04	3.03E-04	1.94E-03	4.25E-05	0.00E+00	7.18E-04	3.12E-03
54	E97	80	Passenger Car	782	0.00E+00	9.16E-06	9.92E-07	3.63E+01	6.38E-05	2.32E-01	2.04E-05	1.61E-03	4.52E-03	7.71E-04	1.98E-03	1.28E-03	1.31E-03	1.22E-04	1.85E-04	5.02E-08	6.71E-04	2.52E-04
54	E97	80	Passenger Truck	1309	0.00E+00	1.99E-05	2.11E-06	8.44E+01	1.28E-04	4.40E-01	4.18E-05	4.80E-03	8.15E-03	1.42E-03	4.00E-03	2.59E-03	2.66E-03	5.89E-04	4.26E-04	1.13E-07	1.33E-03	7.82E-04
54	E97	80	Single Unit Short Haul Truck	59	0.00E+00	1.10E-05	5.46E-07	1.08E+01	8.86E-06	2.17E-02	1.17E-05	5.64E-03	6.92E-04	1.56E-04	1.34E-03	3.26E-04	3.31E-04	1.08E-03	4.36E-05	1.73E-08	1.01E-03	1.06E-03
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	4.78E-07	2.36E-08	4.57E-01	3.78E-07	8.99E-04	5.09E-07	2.42E-04	3.16E-05	6.90E-06	5.84E-05	1.40E-05	1.42E-05	4.56E-05	1.84E-06	7.19E-10	4.42E-05	4.52E-05
54	E97	80	Combination Short Haul Truck	45	0.00E+00	1.99E-05	1.42E-06	1.65E+01	6.29E-08	1.76E-02	1.46E-05	2.05E-02	1.21E-03	2.97E-04	1.19E-03	4.21E-04	4.18E-04	2.48E-03	5.52E-05	0.00E+00	7.70E-04	3.86E-03
54	E97	80	Combination Long Haul Truck	41	0.00E+00	1.78E-05	1.20E-06	1.53E+01	7.27E-08	1.83E-02	1.36E-05	1.99E-02	1.18E-03	2.38E-04	1.23E-03	3.62E-04	3.64E-04	2.33E-03	5.10E-05	0.00E+00	8.62E-04	3.75E-03
54	E98	80	Passenger Car	403	0.00E+00	4.72E-06	5.12E-07	1.87E+01	3.29E-05	1.20E-01	1.05E-05	8.32E-04	2.33E-03	3.97E-04	1.02E-03	6.59E-04	6.77E-04	6.31E-05	9.52E-05	2.59E-08	3.46E-04	1.30E-04
54	E98	80	Passenger Truck	675	0.00E+00	1.03E-05	1.09E-06	4.35E+01	6.58E-05	2.27E-01	2.16E-05	2.47E-03	4.20E-03	7.31E-04	2.06E-03	1.34E-03	1.37E-03	3.04E-04	2.19E-04	5.83E-08	6.88E-04	4.03E-04
54	E98	80	Single Unit Short Haul Truck	31	0.00E+00	5.82E-06	2.89E-07	5.71E+00	4.68E-06	1.15E-02	6.19E-06	2.98E-03	3.66E-04	8.27E-05	7.08E-04	1.72E-04	1.75E-04	5.73E-04	2.30E-05	9.14E-09	5.33E-04	5.59E-04
54	E98	80	Single Unit Long Haul Truck	1	0.00E+00	2.53E-07	1.25E-08	2.42E-01	2.00E-07	4.75E-04	2.69E-07	1.28E-04	1.67E-05	3.65E-06	3.09E-05	7.42E-06	7.53E-06	2.41E-05	9.74E-07	3.80E-10	2.34E-05	2.39E-05
54	E98	80	Combination Short Haul Truck	34	0.00E+00	1.49E-05	1.07E-06	1.24E+01	4.72E-08	1.32E-02	1.10E-05	1.54E-02	9.06E-04	2.23E-04	8.91E-04	3.16E-04	3.14E-04	1.86E-03	4.14E-05	0.00E+00	5.78E-04	2.89E-03
54	E98	80	Combination Long Haul Truck	31	0.00E+00	1.34E-05	8.97E-07	1.15E+01	5.46E-08	1.37E-02	1.02E-05	1.49E-02	8.88E-04	1.78E-04	9.23E-04	2.72E-04	2.73E-04	1.75E-03	3.83E-05	0.00E+00	6.47E-04	2.81E-03
9	F01	60	Passenger Car	322	0.00E+00	4.77E-06	5.17E-07	1.60E+01	3.32E-05	1.19E-01	1.07E-05	6.57E-04	3.27E-03	5.02E-04	1.03E-03	6.66E-04	6.83E-04	6.73E-05	8.10E-05	2.23E-08	3.50E-04	1.03E-04
9	F01	60	Passenger Truck	540	0.00E+00	1.05E-05	1.11E-06	3.66E+01	6.58E-05	2.13E-01	2.17E-05	2.14E-03	6.00E-03	9.31E-04	2.07E-03	1.35E-03	1.38E-03	2.86E-04	1.83E-04	5.07E-08	6.87E-04	3.55E-04
9	F01	60	Single Unit Short Haul Truck	31	0.00E+00	8.98E-06	4.48E-07	5.70E+00	7.38E-06	1.10E-02	9.57E-06	4.28E-03	7.25E-04	1.31E-04	1.08E-03	2.69E-04	2.73E-04	5.71E-04	2.30E-05	9.49E-09	8.15E-04	8.01E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	3.92E-07	1.95E-08	2.44E-01	3.21E-07	4.67E-04	4.19E-07	1.85E-04	3.26E-05	5.83E-06	4.78E-05	1.17E-05	1.19E-05	2.43E-05	9.83E-07	4.04E-10	3.58E-05	3.47E-05
9	F01	60	Combination Short Haul Truck	24	0.00E+00	1.43E-05	1.00E-06	9.34E+00	5.08E-08	1.25E-02	1.06E-05	1.56E-02	1.33E-03	2.64E-04	9.14E-04	2.98E-04	2.98E-04	1.41E-03	3.12E-05	0.00E+00	6.14E-04	2.94E-03
9	F01	60	Combination Long Haul Truck	22	0.00E+00	1.28E-05	8.39E-07	8.76E+00	5.82E-08	1.35E-02	9.94E-06	1.54E-02	1.34E-03	2.28E-04	9.38E-04	2.56E-04	2.59E-04	1.33E-03	2.93E-05	0.00E+00	6.79E-04	2.91E-03
9	F02	60	Passenger Car	213	0.00E+00	3.15E-06	3.41E-07	1.06E+01	2.19E-05	7.86E-02	7.04E-06	4.34E-04	2.16E-03	3.32E-04	6.80E-04	4.40E-04	4.51E-04	4.45E-05	5.35E-05	1.47E-08	2.31E-04	6.80E-05
9	F02	60	Passenger Truck	356	0.00E+00	6.95E-06	7.35E-07	2.42E+01	4.35E-05	1.41E-01	1.44E-05	1.42E-03	3.96E-03	6.15E-04	1.37E-03	8.88E-04	9.10E-04	1.89E-04	1.21E-04	3.35E-08	4.53E-04	2.35E-04
9	F02	60	Single Unit Short Haul Truck	11	0.00E+00	3.35E-06	1.67E-07	2.13E+00	2.75E-06	4.11E-03	3.57E-06	1.60E-03	2.70E-04	4.90E-05	4.04E-04	1.00E-04	1.02E-04	2.13E-04	8.59E-06	3.54E-09	3.04E-04	2.99E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	1.46E-07	7.26E-09	9.08E-02	1.20E-07	1.74E-04	1.56E-07	6.90E-05	1.21E-05	2.17E-06	1.78E-05	4.36E-06	4.43E-06	9.07E-06	3.66E-07	1.50E-10	1.33E-05	1.29E-05
9	F02	60	Combination Short Haul Truck	10	0.00E+00	5.73E-06	4.00E-07	3.73E+00	2.03E-08	5.00E-03	4.24E-06	6.21E-03	5.32E-04	1.05E-04	3.65E-04	1.19E-04	1.19E-04	5.62E-04	1.25E-05	0.00E+00	2.45E-04	1.17E-03
9	F02	60	Combination Long Haul Truck	9	0.00E+00	5.13E-06	3.35E-07	3.50E+00	2.32E-08	5.40E-03	3.97E-06	6.16E-03	5.35E-04	9.09E-05	3.75E-04	1.02E-04	1.03E-04	5.32E-04	1.17E-05	0.00E+00	2.71E-04	1.16E-03
11	F03	80	Passenger Car	10	0.00E+00	1.26E-07	1.36E-08	4.83E-01	8.75E-07	3.23E-03	2.80E-07	2.15E-05	5.76E-05	1.00E-05	2.72E-05	1.76E-05	1.80E-05	1.64E-06	2.46E-06	6.89E-10	9.22E-06	3.37E-06
11	F03	80	Passenger Truck	18	0.00E+00	2.70E-07	2.87E-08	1.12E+00	1.73E-06	5.99E-03	5.65E-07	6.38E-05	1.03E-04	1.83E-05	5.41E-05	3.52E-05	3.61E-05	7.89E-06	5.65E-06	1.53E-09	1.82E-05	1.04E-05
11	F03	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.03E-04	1.69E-07	2.37E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.86E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
11	F04	80	Passenger Car	4	0.00E+00	4.95E-08	5.35E-09	1.90E-01	3.44E-07	1.27E-03	1.10E-07	8.45E-06	2.26E-05	3.93E-06	1.07E-05	6.90E-06	7.08E-06	6.44E-07	9.65E-07	2.71E-10	3.62E-06	1.33E-06
11	F04	80	Passenger Truck	7	0.00E+00	1.06E-07	1.13E-08	4.38E-01	6.81E-07	2.35E-03	2.22E-07	2.51E-05	4.06E-05	7.19E-06	2.12E-05	1.38E-05	1.42E-05	3.10E-06	2.22E-06	6.03E-10	7.14E-06	4.09E-06
9	F05	60	Passenger Car	159	0.00E+00	2.35E-06	2.54E-07	7.88E+00	1.63E-05	5.86E-02	5.24E-06	3.23E-04	1.61E-03	2.47E-04	5.06E-04	3.28E-04	3.36E-04	3.31E-05	3.99E-05	1.10E-08	1.72E-04	5.06E-05
9	F05	60	Passenger Truck	265	0.00E+00	5.18E-06	5.47E-07	1.80E+01	3.24E-05	1.05E-01	1.07E-05	1.05E-03	2.95E-03	4.58E-04	1.02E-03	6.62E-04	6.78E-04	1.41E-04	9.00E-05	2.49E-08	3.38E-04	1.75E-04
9	F05	60	Single Unit Short Haul Truck	6	0.00E+00	1.71E-06	8.54E-08	1.09E+00	1.41E-06	2.10E-03	1.82E-06	8.16E-04	1.38E-04	2.50E-05	2.07E-04	5.12E-05	5.20E-05	1.09E-04	4.39E-06	1.81E-09	1.55E-04	1.53E-04
9	F05	60	Combination Short Haul Truck	6	0.00E+00	3.29E-06	2.30E-07	2.14E+00	1.16E-08	2.87E-03	2.44E-06	3.57E-03	3.06E-04	6.05E-05	2.10E-04	6.83E-05	6.83E-05	3.23E-04	7.16E-06	0.00E+00	1.41E-04	6.74E-04
9	F05	60	Combination Long Haul Truck	5	0.00E+00	2.94E-06	1.93E-07	2.01E+00	1.34E-08	3.10E-03	2.28E-06	3.54E-03	3.07E-04	5.22E-05	2.15E-04	5.86E-05	5.93E-05	3.06E-04	6.71E-06	0.00E+00	1.56E-04	6.68E-04
9	F06	60	Passenger Car	160	0.00E+00	2.37E-06	2.56E-07	7.94E+00	1.65E-05	5.90E-02	5.28E-06	3.26E-04	1.62E-03	2.49E-04	5.10E-04	3.30E-04	3.39E-04	3.34E-05	4.02E-05	1.11E-08	1.74E-04	5.10E-05
9	F06	60	Passenger Truck	268	0.00E+00	5.22E-06	5.51E-07	1.81E+01	3.26E-05	1.06E-01	1.08E-05	1.06E-03	2.97E-03	4.62E-04	1.03E-03	6.67E-04	6.83E-04	1.42E-04	9.07E-05	2.51E-08	3.40E-04	1.76E-04
9	F06	60	Single Unit Short Haul Truck	17	0.00E+00	5.06E-06	2.52E-07	3.21E+00	4.16E-06	6.20E-03	5.39E-06	2.41E-03	4.09E-04	7.40E-05	6.11E-04	1.51E-04	1.54E-04	3.22E-04	1.30E-05	5.35E-09	4.59E-04	4.52E-04
9	F06	60	Single Unit Long Haul Truck	1	0.00E+00	2.21E-07	1.10E-08	1.37E-01	1.81E-07	2.63E-04	2.36E-07	1.04E-04	1.84E-05	3.28E-06	2.69E-05	6.59E-06	6.69E-06	1.37E-05	5.54E-07	2.27E-10	2.02E-05	1.95E-05
9	F06	60	Combination Short Haul Truck	19	0.00E+00	1.09E-05	7.62E-07	7.10E+00	3.86E-08	9.52E-03	8.08E-06	1.18E-02	1.01E-03	2.01E-04	6.95E-04	2.26E-04	2.26E-04	1.07E-03	2.37E-05	0.00E+00	4.67E-04	2.23E-03
9	F06	60	Combination Long Haul Truck	17	0.00E+00	9.76E-06	6.38E-07	6.66E+00	4.42E-08	1.03E-02	7.55E-06	1.17E-02	1.02E-03	1.73E-04	7.13E-04	1.94E-04	1.97E-04	1.01E-03	2.22E-05	0.00E+00	5.16E-04	2.21E-03
9	F07	60	Passenger Car	287	0.00E+00	4.25E-06	4.60E-07	1.43

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F13	80	Passenger Truck	33	0.00E+00	5.11E-07	5.42E-08	2.11E+00	3.28E-06	1.13E-02	1.07E-06	1.21E-04	1.95E-04	3.46E-05	1.02E-04	6.66E-05	6.82E-05	1.49E-05	1.07E-05	2.90E-09	3.44E-05	1.97E-05
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.50E-07	7.42E-09	1.47E-01	1.20E-07	2.95E-04	1.59E-07	7.66E-05	9.39E-06	2.12E-06	1.82E-05	4.43E-06	4.50E-06	1.47E-05	5.91E-07	2.35E-10	1.37E-05	1.44E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	4.42E-07	3.16E-08	3.67E-01	1.40E-09	3.92E-04	3.25E-07	4.56E-04	2.68E-05	6.60E-06	2.64E-05	9.35E-06	9.29E-06	5.51E-05	1.23E-06	0.00E+00	1.71E-05	8.56E-05
11	F13	80	Combination Long Haul Truck	1	0.00E+00	3.96E-07	2.65E-08	3.39E-01	1.62E-09	4.06E-04	3.01E-07	4.41E-04	2.63E-05	5.28E-06	2.73E-05	8.04E-06	8.09E-06	5.18E-05	1.13E-06	0.00E+00	1.91E-05	8.32E-05
11	F14	80	Passenger Car	6	0.00E+00	7.80E-08	8.43E-09	2.99E-01	5.42E-07	2.00E-03	1.73E-07	1.33E-05	3.57E-05	6.20E-06	1.69E-05	1.09E-05	1.12E-05	1.02E-06	1.52E-06	4.27E-10	5.71E-06	2.09E-06
11	F14	80	Passenger Truck	11	0.00E+00	1.67E-07	1.78E-08	6.91E-01	1.07E-06	3.71E-03	3.50E-07	3.95E-05	6.40E-05	1.13E-05	3.35E-05	2.18E-05	2.24E-05	4.89E-06	3.50E-06	9.50E-10	1.13E-05	6.46E-06
10	F15	70	Passenger Car	236	0.00E+00	3.05E-06	3.30E-07	1.12E+01	2.12E-05	7.67E-02	6.75E-06	4.72E-04	1.83E-03	2.94E-04	6.62E-04	4.25E-04	4.36E-04	4.23E-05	5.69E-05	1.55E-08	2.23E-04	7.40E-05
10	F15	70	Passenger Truck	395	0.00E+00	6.68E-06	7.07E-07	2.59E+01	4.22E-05	1.40E-01	1.38E-05	1.48E-03	3.32E-03	5.41E-04	1.33E-03	8.60E-04	8.82E-04	1.92E-04	1.29E-04	3.48E-08	4.41E-04	2.44E-04
10	F15	70	Single Unit Short Haul Truck	3	0.00E+00	7.26E-07	3.64E-08	5.69E-01	5.94E-07	1.14E-03	7.73E-07	3.59E-04	5.11E-05	1.02E-05	8.84E-05	2.17E-05	2.21E-05	5.70E-05	2.29E-06	9.27E-10	6.60E-05	6.71E-05
10	F15	70	Combination Short Haul Truck	5	0.00E+00	2.39E-06	1.70E-07	1.74E+00	7.77E-09	2.06E-03	1.75E-06	2.52E-03	1.82E-04	3.98E-05	1.46E-04	5.04E-05	5.02E-05	2.62E-04	5.80E-06	0.00E+00	9.55E-05	4.74E-04
10	F15	70	Combination Long Haul Truck	4	0.00E+00	2.17E-06	1.45E-07	1.62E+00	8.95E-09	2.18E-03	1.64E-06	2.48E-03	1.81E-04	3.30E-05	1.50E-04	4.37E-05	4.42E-05	2.47E-04	5.42E-06	0.00E+00	1.07E-04	4.67E-04
10	F16	70	Passenger Car	258	0.00E+00	3.34E-06	3.61E-07	1.23E+01	2.33E-05	8.40E-02	7.39E-06	5.18E-04	2.00E-03	3.22E-04	7.25E-04	4.65E-04	4.77E-04	4.63E-05	6.23E-05	1.70E-08	2.45E-04	8.11E-05
10	F16	70	Passenger Truck	433	0.00E+00	7.32E-06	7.74E-07	2.84E+01	4.63E-05	1.54E-01	1.51E-05	1.62E-03	3.64E-03	5.93E-04	1.45E-03	9.43E-04	9.67E-04	2.10E-04	1.42E-04	3.81E-08	4.83E-04	2.67E-04
10	F16	70	Single Unit Short Haul Truck	3	0.00E+00	7.51E-07	3.76E-08	5.89E-01	6.14E-07	1.18E-03	8.00E-07	3.71E-04	5.28E-05	1.06E-05	9.14E-05	2.25E-05	2.28E-05	5.89E-05	2.37E-06	9.59E-10	6.83E-05	6.94E-05
10	F16	70	Combination Short Haul Truck	6	0.00E+00	3.34E-06	2.38E-07	2.43E+00	1.09E-08	2.88E-03	2.45E-06	3.52E-03	2.54E-04	5.55E-05	2.04E-04	7.04E-05	7.02E-05	3.66E-04	8.11E-06	0.00E+00	1.33E-04	6.63E-04
10	F16	70	Combination Long Haul Truck	6	0.00E+00	3.03E-06	2.02E-07	2.26E+00	1.25E-08	3.05E-03	2.30E-06	3.47E-03	2.52E-04	4.61E-05	2.10E-04	6.11E-05	6.17E-05	3.45E-04	7.57E-06	0.00E+00	1.49E-04	6.53E-04
10	F17	70	Passenger Car	198	0.00E+00	2.55E-06	2.76E-07	9.39E+00	1.78E-05	6.42E-02	5.65E-06	3.96E-04	1.53E-03	2.46E-04	5.54E-04	3.56E-04	3.65E-04	3.54E-05	4.77E-05	1.30E-08	1.87E-04	6.20E-05
10	F17	70	Passenger Truck	331	0.00E+00	5.60E-06	5.92E-07	2.17E+01	3.54E-05	1.18E-01	1.16E-05	1.24E-03	2.79E-03	4.53E-04	1.11E-03	7.21E-04	7.39E-04	1.61E-04	1.08E-04	2.91E-08	3.70E-04	2.04E-04
10	F17	70	Single Unit Short Haul Truck	2	0.00E+00	5.39E-07	2.70E-08	4.22E-01	4.41E-07	8.47E-04	5.74E-07	2.66E-04	3.79E-05	7.58E-06	6.56E-05	1.61E-05	1.64E-05	4.23E-05	1.70E-06	6.88E-10	4.90E-05	4.98E-05
10	F17	70	Combination Short Haul Truck	4	0.00E+00	2.17E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.59E-06	2.29E-03	1.65E-04	3.62E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.69E-05	4.31E-04
10	F17	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.31E-07	1.47E+00	8.14E-09	1.98E-03	1.50E-06	2.26E-03	1.64E-04	3.00E-05	1.37E-04	3.98E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.25E-04
10	F18	70	Passenger Car	152	0.00E+00	1.96E-06	2.13E-07	7.23E+00	1.37E-05	4.94E-02	4.35E-06	3.05E-04	1.18E-03	1.89E-04	4.27E-04	2.74E-04	2.81E-04	2.73E-05	3.67E-05	1.00E-08	1.44E-04	4.77E-05
10	F18	70	Passenger Truck	255	0.00E+00	4.31E-06	4.56E-07	1.67E+01	2.72E-05	9.06E-02	8.92E-06	9.55E-04	2.14E-03	3.49E-04	8.56E-04	5.55E-04	5.69E-04	1.24E-04	8.35E-05	2.24E-08	2.84E-04	1.57E-04
10	F18	70	Single Unit Short Haul Truck	1	0.00E+00	2.26E-07	1.13E-08	1.77E-01	1.85E-07	3.56E-04	2.41E-07	1.12E-04	1.59E-05	3.18E-06	2.76E-05	6.77E-06	6.88E-06	1.78E-05	7.14E-07	2.89E-10	2.06E-05	2.09E-05
10	F18	70	Combination Short Haul Truck	5	0.00E+00	2.58E-06	1.84E-07	1.88E+00	8.39E-09	2.22E-03	1.89E-06	2.72E-03	1.96E-04	4.29E-05	1.57E-04	5.44E-05	5.42E-05	2.83E-04	6.27E-06	0.00E+00	1.03E-04	5.12E-04
10	F18	70	Combination Long Haul Truck	5	0.00E+00	2.34E-06	1.56E-07	1.75E+00	9.67E-09	2.35E-03	1.77E-06	2.68E-03	1.95E-04	3.56E-05	1.62E-04	4.72E-05	4.77E-05	2.67E-04	5.85E-06	0.00E+00	1.15E-04	5.05E-04
10	F19	70	Passenger Car	354	0.00E+00	4.58E-06	4.95E-07	1.68E+01	3.19E-05	1.15E-01	1.01E-05	7.10E-04	2.75E-03	4.41E-04	9.94E-04	6.38E-04	6.54E-04	6.35E-05	8.54E-05	2.33E-08	3.36E-04	1.11E-04
10	F19	70	Passenger Truck	593	0.00E+00	1.00E-05	1.06E-06	3.89E+01	6.34E-05	2.11E-01	2.08E-05	2.22E-03	4.99E-03	8.12E-04	1.99E-03	1.29E-03	1.33E-03	2.88E-04	1.94E-04	5.22E-08	6.63E-04	3.66E-04
10	F20	70	Passenger Car	279	0.00E+00	3.60E-06	3.89E-07	1.32E+01	2.51E-05	9.06E-02	7.97E-06	5.58E-04	2.16E-03	3.47E-04	7.82E-04	5.02E-04	5.15E-04	4.99E-05	6.72E-05	1.83E-08	2.64E-04	8.75E-05
10	F20	70	Passenger Truck	467	0.00E+00	7.90E-06	8.35E-07	3.06E+01	4.99E-05	1.66E-01	1.63E-05	1.75E-03	3.93E-03	6.39E-04	1.57E-03	1.02E-03	1.04E-03	2.27E-04	1.53E-04	4.11E-08	5.21E-04	2.88E-04
10	F21	70	Passenger Car	319	0.00E+00	4.12E-06	4.46E-07	1.52E+01	2.87E-05	1.04E-01	9.13E-06	6.39E-04	2.47E-03	3.97E-04	8.96E-04	5.75E-04	5.90E-04	5.72E-05	7.70E-05	2.10E-08	3.02E-04	1.00E-04
10	F21	70	Passenger Truck	535	0.00E+00	9.04E-06	9.56E-07	3.51E+01	5.72E-05	1.90E-01	1.87E-05	2.00E-03	4.50E-03	7.32E-04	1.80E-03	1.16E-03	1.19E-03	2.60E-04	1.75E-04	4.71E-08	5.97E-04	3.30E-04
10	F21	70	Single Unit Short Haul Truck	72	0.00E+00	1.69E-05	8.48E-07	1.33E+01	1.38E-05	2.66E-02	1.80E-05	8.36E-03	1.19E-03	2.38E-04	2.06E-03	5.06E-04	5.14E-04	1.33E-03	5.34E-05	2.16E-08	1.54E-03	1.56E-03
10	F21	70	Single Unit Long Haul Truck	3	0.00E+00	7.37E-07	3.67E-08	5.63E-01	5.97E-07	1.11E-03	7.85E-07	3.59E-04	5.43E-05	1.06E-05	8.99E-05	2.19E-05	2.22E-05	5.62E-05	2.27E-06	9.08E-10	6.74E-05	6.73E-05
10	F21	70	Combination Short Haul Truck	68	0.00E+00	3.52E-05	2.50E-06	2.56E+01	1.14E-07	3.03E-02	2.58E-05	3.71E-02	2.67E-03	5.85E-04	2.15E-03	7.42E-04	7.40E-04	3.86E-03	8.54E-05	0.00E+00	1.41E-03	6.98E-03
10	F21	70	Combination Long Haul Truck	62	0.00E+00	3.19E-05	2.13E-06	2.39E+01	1.32E-07	3.21E-02	2.42E-05	3.66E-02	2.66E-03	4.86E-04	2.21E-03	6.44E-04	6.50E-04	3.64E-03	7.98E-05	0.00E+00	1.57E-03	6.88E-03
10	F22	70	Passenger Car	247	0.00E+00	3.19E-06	3.45E-07	1.17E+01	2.23E-05	8.04E-02	7.07E-06	4.95E-04	1.92E-03	3.08E-04	6.94E-04	4.45E-04	4.57E-04	4.43E-05	5.96E-05	1.63E-08	2.34E-04	7.76E-05
10	F22	70	Passenger Truck	414	0.00E+00	7.01E-06	7.41E-07	2.71E+01	4.43E-05	1.47E-01	1.45E-05	1.55E-03	3.49E-03	5.67E-04	1.39E-03	9.02E-04	9.25E-04	2.01E-04	1.36E-04	3.65E-08	4.62E-04	2.55E-04
10	F22	70	Single Unit Short Haul Truck	71	0.00E+00	1.67E-05	8.35E-07	1.31E+01	1.36E-05	2.62E-02	1.77E-05	8.23E-03	1.17E-03	2.34E-04	2.03E-03	4.98E-04	5.06E-04	1.31E-03	5.26E-05	2.13E-08	1.51E-03	1.54E-03
10	F22	70	Single Unit Long Haul Truck	3	0.00E+00	7.26E-07	3.61E-08	5.54E-01	5.88E-07	1.09E-03	7.73E-07	3.54E-04	5.35E-05	1.04E-05	8.86E-05	2.15E-05	2.19E-05	5.53E-05	2.23E-06	8.95E-10	6.64E-05	6.63E-05
10	F22	70	Combination Short Haul Truck	64	0.00E+00	3.31E-05	2.35E-06	2.41E+01	1.08E-07	2.85E-02	2.42E-05	3.48E-02	2.51E-03	5.50E-04	2.02E-03	6.97E-04	6.95E-04	3.63E-03	8.03E-05	0.00E+00	1.32E-03	6.56E-03
10	F22	70	Combination Long Haul Truck	58	0.00E+00	3.00E-05	2.00E-06	2.24E+01	1.24E-07	3.02E-02	2.27E-05	3.43E-02	2.50E-03	4.56E-04	2.08E-03	6.05E-04	6.11E-04	3.42E-03	7.50E-05	0.00E+00	1.47E-03	6.47E-03
10	F23	70	Passenger Car	133	0.00E+00	1.72E-06	1.86E-07	6.33E+00	1.20E-05	4.33E-02	3.81E-06	2.67E-04	1.03E-03	1.66E-04	3.74E-04	2.40E-04	2.46E-04	2.39E-05	3.21E-05	8.77E-09	1.26E-04	4.18E-05
10	F23	70	Passenger Truck	223	0.00E+00	3.77E-06	3.99E-07	1.46E+01	2.39E-05	7.93E-02	7.81E-06	8.37E-04	1.88E-03	3.06E-04	7.50E-04	4.86E-04	4.98E-04	1.08E-04	7.31E-05	1.96E-08	2.49E-04	1.38E-04
10	F23	70	Single Unit Short Haul Truck	18	0.00E+00	4.19E-06	2.10E-07	3.29E+00	3.43E-06	6.59E-03	4.47E-06	2.07E-03	2.95E-04	5.90E-05	5.11E-04	1.25E-04	1.27E-04	3.29E-04	1.32E-05	5.35E-09	3.81E-04	3.88E-04
10	F23	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	9.09E-09	1.39E-01	1.48E-07	2.75E-04	1.95E-07	8.90E-05	1.35E-05	2.62E-06	2.23E-05	5.42E-06	5.51E-06	1.39E-05	5.62E-07	2.25E-10	1.67E-05	1.67E-05
10	F23	70	Combination Short Haul Truck	18	0.00E+00	9.47E-06	6.74E-07	6.89E+00	3.08E-08	8.15E-03	6.94E-06	9.98E-03	7.19E-04	1.58E-04	5.77E-04	2.00E-04	1.99E-04	1.04E-03	2.30E-05	0.00E+00	3.78E-04	1.88E-03
10	F23	70	Combination Long Haul Truck	17	0.00E+00	8.59E-06	5.73E-07	6.42E+00	3.55E-08	8.64E-03	6.51E-06	9.84E-03	7.16E-04	1.31E-04	5.96E-04	1.73E-04	1.75E-04	9.79E-04	2.15E-05	0.00E+00	4.22E-04	1.85E-03
10	F24	70	Passenger Car	113	0.00E+00	1.46E-06	1.58E-07	5.38E+00	1.02E-05	3.68E-02	3.24E-06	2.27E-04	8.77E-04	1.41E-04	3.18E-04	2.04E-04	2.09E-04	2.03E-05	2.73E-05	7.45E-09	1.07E-04	3.55E-05
10	F24	70	Passenger Truck	190	0.00E+00	3.21E-06	3.39E-07	1.24E+01	2.03E-05	6.74E-02	6.63E-06	7.11E-04	1.60E-03	2.60E-04	6.37E-04	4.13E-04	4.23E-04	9.21E-05	6.21E-05	1.67E-08	2.12E-04	1.17E-04
10	F24	70	Single Unit Short Haul Truck	14	0.00E+00	3.26E-06	1.63E-07	2.55E+00	2.67E-06	5.12E-03	3.47E-06	1.61E-03	2.29E-04	4.58E-05	3.97E-04	9.75E-05	9.90E-05	2.56E-04	1.03E-05	4.16E-09	2.96E-04	3.01E-04
10	F24	70	Single Unit Long Haul Truck	1	0.00E+00	1.42E-07	7.07E-09	1.08E-01	1.15E-07	2.14E-04	1.51E-07	6.92E-05	1.05E-05	2.04E-06	1.73E-05	4.21E-06	4.28E-06	1.08E-05	4.37E-07	1.75E-10	1.30E-05	1.30E-05
10	F24	70	Combination Short Haul Truck	13	0.00E+00	6.66E-06	4.74E-07	4.84E+00	2.17E-08	5.73E-03	4.88E-06	7.02E-03	5.06E-04	1.11E-04	4.06E-04	1.40E-04	1.40E-04	7.30E-04	1.62E-05	0.00E+00	2.66E-04	1.32E-03
10	F24	70	Combination Long Haul Truck	12	0.00E+00	6.04E-06	4.03E-07	4.51E+00	2.49E-08	6.07E-03	4.58E-06	6.92E-03	5.03E-04	9.19E-05	4.19E-04	1.22E-04	1.23E-04	6.89E-04	1.51E-05	0.00E+00	2.97E-04	1.30E-03
9	F25	60	Passenger Car	324	0.00E+00	4.80E-06	5.19E-07	1.61E+01	3.34E-05	1.20E-01	1.07E-05	6.61E-04	3.28E-03	5.05E-04	1.03E-03	6.70E-04	6.87E-04	6.77E-05	8.14E-05	2.24E-08	3.52E-04	1.03E-04
9	F25	60	Passenger Truck	543	0.00E+00	1.06E-05	1.12E-06	3.68E+01	6.62E-05	2.14E-01	2.19E-05	2.16E-03	6.03E-03	9.36E-04	2.08E-03	1.35E-03	1.39E-03	2.88E-04	1.84E-04	5.09E-08	6.90E-04	3.57E-04
9	F25	60	Single Unit Short Haul Truck	55	0.00E+00	1.61E-05	8.05E-07	1.02E+01	1.33E-05	1.98E-02	1.72E-05	7.69E-03	1.30E-03	2.36E-04	1.95E-03	4.82E-04	4.90E-04	1.03E-03	4.14E-05	1.70E-08	1.46E-03	1.44E-03
9	F25	60	Single Unit Long Haul Truck	2	0.00E+00	7.05E-07	3.50E-08	4.38E-01	5.76E-07	8.39E-04	7.52E-07	3.32E-04	5.85E-05	1.05E-05	8.59E-05	2.10E-05	2.13E-05	4.37E-05	1.77E-06	7.25E-10	6.43E-05	6.23E-05
9	F25	60	Combination Short Haul Truck	51	0.00E+00	2.98E-05	2.08E-06	1.94E+01	1.06E-07	2.60E-02	2.21E-05	3.24E-02	2.77E-03	5.49E-04	1.90E-03	6.19E-04	6.19E-04	2.93E-03	6.49E-05	0.00E+00	1.28E-03	6.11E-03
9	F25	60	Combination Long Haul Truck	46	0.00E+00	2.67E-05	1.75E-06	1.82E+01	1.21E-07	2.81E-02	2.07E-05	3.21E-02	2.78E-03	4.74E-04	1.95E-03	5.31E-04	5.38E-04	2.77E-03	6.08E-05	0.00E+00	1.41E-03	6.06E-03
9	F26	60	Passenger Car	310	0.00E+00	4.60E-06	4.97E-07	1.54E+01	3.20E-05	1.15E-01	1.03E-05	6.33E-04	3.15E-03	4.84E-04	9.91E-04	6.41E-04	6.58E-04	6.48E-05	7.80E-05	2.15E-08	3.37E-04	9.91E-05
9	F26	60	Passenger Truck	520	0.00E+00	1.01E-05	1.07E-06	3.52E+01	6.34E-05	2.05E-01	2.09E-05	2.06E-03	5.77E-03	8.97E-04	1.99E-03	1.30E-03	1.33E-03	2.76E-04	1.76E-04	4.88E-08	6.61E-04	3.42E-04
9	F26	60	Single Unit Short Haul Truck	59	0.00E+00	1.74E-05	8.67E-07	1.10E+01	1.43E-05	2.13E-02	1.85E-05	8.28E-03	1.40E-03	2.54E-04	2.10E-03	5.20E-04	5.28E-04	1.11E-03	4.46E-05	1.84E-08	1.58E-03	1.55E-03
9	F26	60	Single Unit Long Haul Truck	3	0.00E+00	7.59E-07	3.77E-08	4.71E-01	6.20E-07	9.04E-04	8.10E-07	3.58E-04	6.31E-05	1.13E-05	9.26E-05	2.26E-05	2.30E-05	4.71E-05	1.90E-06	7.81E-10	6.93E-05	6.71E-05
9	F26	60	Combination Short Haul Truck	53	0.00E+00	3.10E-05	2.16E-06	2.02E+01	1.10E-07	2.70E-02	2.30E-05	3.36E-02	2.88E-03	5.70E-04	1.97E-03	6.43E-04	6.43E-04	3.04E-03	6.74E-05	0.00E+00	1.33E-03	6.34E-03
9	F26	60	Combination Long Haul Truck	48	0.00E+00	2.77E-05	1.81E-06	1.89E+01	1.26E-07	2.92E-02	2.15E-05	3.33E-02	2.89E-03	4.92E-04	2.03E-03	5.52E-04	5.59E-04	2.88E-03	6.32E-05	0.00E+00	1.47E-03	6.29E-03
9	F27	60	Passenger Car	853	0.00E+00	1.26E-05	1.37E-06	4.24E+01	8.79E-05	3.15E-01	2.82E-05	1.74E-03	8.65E-03	1.33E-03	2.72E-03	1.76E-03	1.81E-03	1.78E-04	2.14E-04	5.90E-08	9.26E-04	2.72E-04
9	F27	60	Passenger Truck	1428	0.00E+00	2.78E-05	2.94E-06	9.68E+01	1.74E-04	5.63E-01	5.75E-05	5.67E-03	1.59E-02	2.46E-03	5.47E-03	3.56E-03	3.65E-03	7.58E-04	4.84E-04	1.34E-07	1.82E-03	9.40E-04
9	F27	60	Single Unit Short Haul Truck	137	0.00E+00	4.03E-05	2.01E-06	2.56E+01	3.31E-05	4.95E-02	4.30E-05	1.92E-02	3.26E-03	5.90E-04	4.87E-03	1.21E-03	1.23E-03	2.56E-03	1.03E-04	4.26E-08	3.66E-03	3.60E-03
9	F27	60	Single Unit Long Haul Truck	6	0.00E+00	1.76E-06	8.74E-08	1.09E+00	1.44E-06	2.10E-03	1.88E-06	8.31E-04	1.46E-04	2.62E-05	2.15E-04	5.25E-05	5.34E-05	1.09E-04	4.41E-06	1.81E-09	1.61E-04	1.56E-04
9	F27	60	Combination Short Haul Truck	94	0.00E+00	5.54E-05	3.87E-06	3.61E+01	1.96E-07	4.84E-02	4.11E-05	6.02E-02	5.15E-03	1.02E-03	3.53E-03	1.15E-03	1.15E-03	5.44E-03	1.21E-04	0.00E+00	2.37E-03	1.14E-02
9	F27	60	Combination Long Haul Truck	86	0.00E+00	4.96E-05	3.24E-06	3.39E+01	2.25E-07	5.22E-02	3.84E-05	5.96E-02	5.17E-03	8.80E-04	3.62E-03	9.87E-04	9.99E-04	5.15E-03	1.13E-04	0.00E+00	2.62E-03	1.13E-02
9	F28	60	Passenger Car	625	0.00E+00	9.26E-06	1.00E-06	3.11E+01	6.44E-05	2.31E-01	2.07E-05	1.27E-03	6.34E-03	9.74E-04	2.00E-03	1.29E-03	1.32E-03	1.31E-04	1.57E-04	4.32E-08	6.79E-04	2.00E-04
9	F28	60	Passenger Truck	1047	0.00E+00	2.04E-05	2.16E-06	7.10E+01	1.28E-04	4.13E-01	4.22E-05	4.16E-03	1.16E-02	1.81E-03	4.01E-03	2.61E-03	2.67E-03	5.55E-04	3.55E-04	9.83E-08	1.33E-03	6.89E-04
9	F28	60	Single Unit Short Haul Truck	124	0.00E+00	3.64E-05	1.82E-06	2.31E+01	2.99E-05	4.46E-02	3.88E-05	1.73E-02	2.94E-03	5.32E-04	4.39E-03	1.09E-03	1.11E-03	2.31E-03	9.33E-05	3.84E-08	3.30E-03	3.25E-03
9	F28	60	Single Unit Long Haul Truck	5	0.00E+00	1.59E-06	7.89E-08	9.87E-01	1.30E-06	1.89E-03	1.70E-06	7.49E-04	1.32E-04	2.36E-05	1.94E-04	4.74E-05	4.81E-05	9.85E-05	3.98E-06	1.63E-09	1.45E-04	1.40E-04
9	F28	60	Combination Short Haul Truck	90	0.00E+00	5.33E-05	3.72E-06	3.47E+01	1.89E-07	4.65E-02	3.95E-05	5.78E-02	4.95E-03	9.80E-04	3.39E-03	1.11E-03	1.11E-03	5.23E-03	1.16E-04	0.00E+00	2.28E-03	1.09E-02
9	F28	60	Combination Long Haul Truck	83	0.00E+00	4.77E-05	3.12E-06	3.25E+01	2.16E-07	5.02E-02	3.69E-05	5.73E-02	4.97E-03	8.46E-04	3.48E-03	9.49E-04	9.60E-04	4.95E-03	1.09E-04	0.00E+00	2.52E-03	1.08E-02
9	F29	60	Passenger Car	267	0.00E+00	3.95E-06	4.28E-07	1.33E+01	2.75E-05	9.86E-02	8.82E-06	5.44E-04	2.70E-03	4.16E-04	8.52E-04	5.51E-04	5.65E-04	5.57E-05	6.71E-05	1.85E-08	2.90E-04	8.52E-05
9	F29	60	Passenger Truck	447	0.00E+00	8.71E-06	9.21E-07	3.03E+01	5.45E-05	1.76E-01	1.80E-05	1.77E-03	4.96E-03	7.71E-04	1.71E-03	1.11E-03	1.14E-03	2.37E-04	1.51E-04	4.19E-08	5.68E-04	2.94E-04
9	F29	60	Single Unit Short Haul Truck	26	0.00E+00	7.59E-06	3.79E-07	4.82E+00	6.24E-06	9.31E-03	8.09E-06	3.62E-03	6.13E-04	1.11E-04	9.17E-04	2.27E-04	2.31E-04	4.83E-04	1.95E-05	8.02E-09	6.89E-04	6.78E-04
9	F29	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.06E-01	2.71E-07	3.95E-04	3.54E-07	1.56E-04	2.75E-05	4.93E-06	4.04E-05	9.89E-06	1.00E-05	2.06E-05	8.31E-07	3.41E-10	3.03E-05	2.93E-05
9	F29	60	Combination Short Haul Truck	20	0.00E+00	1.19E-05

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F48	60	Combination Long Haul Truck	1	0.00E+00	6.74E-07	4.41E-08	4.60E-01	3.06E-09	7.10E-04	5.22E-07	8.10E-04	7.03E-05	1.20E-05	4.92E-05	1.34E-05	1.36E-05	7.00E-05	1.54E-06	0.00E+00	3.56E-05	1.53E-04
9	F49	60	Passenger Car	738	0.00E+00	1.09E-05	1.18E-06	3.67E+01	7.60E-05	2.73E-01	2.44E-05	1.50E-03	7.48E-03	1.15E-03	2.36E-03	1.52E-03	1.56E-03	1.54E-04	1.85E-04	5.10E-08	8.01E-04	2.36E-04
9	F49	60	Passenger Truck	1235	0.00E+00	2.41E-05	2.55E-06	8.37E+01	1.51E-04	4.87E-01	4.98E-05	4.91E-03	1.37E-02	2.13E-03	4.74E-03	3.08E-03	3.15E-03	6.55E-04	4.19E-04	1.16E-07	1.57E-03	8.13E-04
9	F49	60	Single Unit Short Haul Truck	109	0.00E+00	3.21E-05	1.60E-06	2.04E+01	2.64E-05	3.94E-02	3.43E-05	1.53E-02	2.60E-03	4.70E-04	3.88E-03	9.61E-04	9.77E-04	2.04E-03	8.25E-05	3.40E-08	2.92E-03	2.87E-03
9	F49	60	Single Unit Long Haul Truck	5	0.00E+00	1.40E-06	6.97E-08	8.72E-01	1.15E-06	1.67E-03	1.50E-06	6.62E-04	1.17E-04	2.09E-05	1.71E-04	4.19E-05	4.25E-05	8.71E-05	3.52E-06	1.44E-09	1.28E-04	1.24E-04
9	F49	60	Combination Short Haul Truck	81	0.00E+00	4.74E-05	3.31E-06	3.09E+01	1.68E-07	4.14E-02	3.51E-05	5.15E-02	4.41E-03	8.73E-04	3.02E-03	9.84E-04	9.84E-04	4.65E-03	1.03E-04	0.00E+00	2.03E-03	9.71E-03
9	F49	60	Combination Long Haul Truck	73	0.00E+00	4.24E-05	2.77E-06	2.90E+01	1.92E-07	4.47E-02	3.28E-05	5.10E-02	4.43E-03	7.53E-04	3.10E-03	8.45E-04	8.55E-04	4.41E-03	9.67E-05	0.00E+00	2.24E-03	9.63E-03
9	F50	60	Passenger Car	644	0.00E+00	9.53E-06	1.03E-06	3.20E+01	6.63E-05	2.38E-01	2.13E-05	1.31E-03	6.53E-03	1.00E-03	2.06E-03	1.33E-03	1.36E-03	1.34E-04	1.62E-04	4.45E-08	6.99E-04	2.06E-04
9	F50	60	Passenger Truck	1078	0.00E+00	2.10E-05	2.22E-06	7.31E+01	1.31E-04	4.25E-01	4.34E-05	4.28E-03	1.20E-02	1.86E-03	4.13E-03	2.69E-03	2.75E-03	5.72E-04	3.65E-04	1.01E-07	1.37E-03	7.10E-04
9	F50	60	Single Unit Short Haul Truck	120	0.00E+00	3.53E-05	1.76E-06	2.24E+01	2.90E-05	4.32E-02	3.76E-05	1.68E-02	2.85E-03	5.15E-04	4.26E-03	1.05E-03	1.07E-03	2.24E-03	9.05E-05	3.72E-08	3.20E-03	3.15E-03
9	F50	60	Single Unit Long Haul Truck	5	0.00E+00	1.54E-06	7.64E-08	9.56E-01	1.26E-06	1.83E-03	1.64E-06	7.26E-04	1.28E-04	2.29E-05	1.88E-04	4.59E-05	4.66E-05	9.55E-05	3.86E-06	1.58E-09	1.41E-04	1.36E-04
9	F50	60	Combination Short Haul Truck	88	0.00E+00	5.21E-05	3.63E-06	3.39E+01	1.84E-07	4.54E-02	3.85E-05	5.65E-02	4.84E-03	9.58E-04	3.31E-03	1.08E-03	1.08E-03	5.11E-03	1.13E-04	0.00E+00	2.23E-03	1.07E-02
9	F50	60	Combination Long Haul Truck	81	0.00E+00	4.66E-05	3.05E-06	3.18E+01	2.11E-07	4.90E-02	3.60E-05	5.60E-02	4.86E-03	8.26E-04	3.40E-03	9.27E-04	9.38E-04	4.84E-03	1.06E-04	0.00E+00	2.46E-03	1.06E-02
10	F51	70	Passenger Car	522	0.00E+00	6.74E-06	7.29E-07	2.48E+01	4.70E-05	1.70E-01	1.49E-05	1.05E-03	4.05E-03	6.50E-04	1.46E-03	9.39E-04	9.64E-04	9.35E-05	1.26E-04	3.44E-08	4.94E-04	1.64E-04
10	F51	70	Passenger Truck	874	0.00E+00	1.48E-05	1.56E-06	5.73E+01	9.35E-05	3.11E-01	3.06E-05	3.28E-03	7.36E-03	1.20E-03	2.94E-03	1.90E-03	1.95E-03	4.25E-04	2.86E-04	7.70E-08	9.76E-04	5.39E-04
10	F51	70	Single Unit Short Haul Truck	41	0.00E+00	9.68E-06	4.85E-07	7.58E+00	7.92E-06	1.52E-02	1.03E-05	4.78E-03	6.81E-04	1.36E-04	1.18E-03	2.89E-04	2.94E-04	7.60E-04	3.05E-05	1.24E-08	8.80E-04	8.95E-04
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.10E-08	3.22E-01	3.42E-07	6.36E-04	4.49E-07	2.05E-04	3.11E-05	6.05E-06	5.15E-05	1.25E-05	1.27E-05	3.21E-05	1.30E-06	5.20E-10	3.86E-05	3.85E-05
10	F51	70	Combination Short Haul Truck	19	0.00E+00	1.01E-05	7.15E-07	7.31E+00	3.27E-08	8.65E-03	7.36E-06	1.06E-02	7.63E-04	1.67E-04	6.13E-04	2.12E-04	2.11E-04	1.10E-03	2.44E-05	0.00E+00	4.02E-04	1.99E-03
10	F51	70	Combination Long Haul Truck	18	0.00E+00	9.12E-06	6.08E-07	6.81E+00	3.76E-08	9.17E-03	6.91E-06	1.04E-02	7.60E-04	1.39E-04	6.32E-04	1.84E-04	1.86E-04	1.04E-03	2.28E-05	0.00E+00	4.48E-04	1.97E-03
10	F52	70	Passenger Car	214	0.00E+00	2.76E-06	2.99E-07	1.02E+01	1.92E-05	6.95E-02	6.12E-06	4.28E-04	1.66E-03	2.66E-04	6.00E-04	3.85E-04	3.95E-04	3.83E-05	5.16E-05	1.41E-08	2.03E-04	6.71E-05
10	F52	70	Passenger Truck	358	0.00E+00	6.06E-06	6.41E-07	2.35E+01	3.83E-05	1.27E-01	1.25E-05	1.34E-03	3.01E-03	4.90E-04	1.20E-03	7.80E-04	8.00E-04	1.74E-04	1.17E-04	3.15E-08	4.00E-04	2.21E-04
10	F52	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.65E+00	2.76E-06	5.31E-03	3.60E-06	1.67E-03	2.37E-04	4.75E-05	4.11E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.31E-09	3.07E-04	3.12E-04
10	F52	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.16E-05	1.08E-05	2.11E-06	1.80E-05	4.36E-06	4.44E-06	1.12E-05	4.52E-07	1.81E-10	1.35E-05	1.34E-05
10	F52	70	Combination Short Haul Truck	7	0.00E+00	3.80E-06	2.71E-07	2.77E+00	1.24E-08	3.27E-03	2.79E-06	4.01E-03	2.89E-04	6.33E-05	2.32E-04	8.01E-05	7.99E-05	4.17E-04	9.23E-06	0.00E+00	1.52E-04	7.55E-04
10	F52	70	Combination Long Haul Truck	7	0.00E+00	3.45E-06	2.30E-07	2.58E+00	1.42E-08	3.47E-03	2.62E-06	3.95E-03	2.87E-04	5.25E-05	2.39E-04	6.96E-05	7.03E-05	3.93E-04	8.62E-06	0.00E+00	1.70E-04	7.44E-04
10	F53	70	Passenger Car	504	0.00E+00	6.51E-06	7.04E-07	2.39E+01	4.53E-05	1.64E-01	1.44E-05	1.01E-03	3.90E-03	6.27E-04	1.41E-03	9.07E-04	9.30E-04	9.02E-05	1.21E-04	3.32E-08	4.77E-04	1.58E-04
10	F53	70	Passenger Truck	843	0.00E+00	1.43E-05	1.51E-06	5.53E+01	9.02E-05	3.00E-01	2.95E-05	3.16E-03	7.10E-03	1.15E-03	2.83E-03	1.84E-03	1.88E-03	4.10E-04	2.76E-04	7.43E-08	9.42E-04	5.20E-04
10	F53	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.83E-03	1.92E-06	8.90E-04	1.27E-04	2.53E-05	2.19E-04	5.38E-05	5.47E-05	1.41E-04	5.68E-06	2.30E-09	1.64E-04	1.66E-04
10	F53	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.19E+00	5.30E-09	1.40E-03	1.19E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.79E-04	3.96E-06	0.00E+00	6.51E-05	3.23E-04
10	F53	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.86E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.19E-04
10	F54	70	Passenger Car	329	0.00E+00	4.25E-06	4.60E-07	1.56E+01	2.96E-05	1.07E-01	9.42E-06	6.60E-04	2.55E-03	4.10E-04	9.24E-04	5.93E-04	6.08E-04	5.90E-05	7.94E-05	2.17E-08	3.12E-04	1.03E-04
10	F54	70	Passenger Truck	552	0.00E+00	9.33E-06	9.87E-07	3.62E+01	5.90E-05	1.96E-01	1.93E-05	2.07E-03	4.64E-03	7.55E-04	1.85E-03	1.20E-03	1.23E-03	2.68E-04	1.81E-04	4.86E-08	6.16E-04	3.40E-04
10	F54	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.10E-05	1.06E-04	4.26E-06	1.72E-09	1.23E-04	1.25E-04
10	F54	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.66E-08	9.88E-01	4.42E-09	1.17E-03	9.95E-07	1.43E-03	1.03E-04	2.26E-05	8.28E-05	2.86E-05	2.85E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	F54	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.21E-08	9.21E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.87E-05	8.55E-05	2.48E-05	2.51E-05	1.40E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
53	F71	70	Passenger Car	108	0.00E+00	1.35E-06	1.46E-07	5.18E+00	9.40E-06	3.35E-02	2.99E-06	2.20E-04	8.23E-04	1.33E-04	2.92E-04	1.88E-04	1.93E-04	1.93E-05	2.63E-05	7.15E-09	9.88E-05	3.44E-05
53	F71	70	Passenger Truck	180	0.00E+00	2.94E-06	3.11E-07	1.19E+01	1.86E-05	6.16E-02	6.11E-06	6.72E-04	1.48E-03	2.41E-04	5.81E-04	3.79E-04	3.88E-04	8.72E-05	6.01E-05	1.57E-08	1.94E-04	1.10E-04
53	F71	70	Single Unit Short Haul Truck	11	0.00E+00	2.64E-06	1.32E-07	2.07E+00	2.16E-06	4.15E-03	2.81E-06	1.31E-03	1.86E-04	3.72E-05	3.22E-04	7.90E-05	8.02E-05	2.07E-04	8.34E-06	3.37E-09	2.40E-04	2.44E-04
53	F71	70	Combination Short Haul Truck	9	0.00E+00	4.49E-06	3.19E-07	3.26E+00	1.46E-08	3.87E-03	3.29E-06	4.73E-03	3.41E-04	7.47E-05	2.74E-04	9.46E-05	9.43E-05	4.92E-04	1.09E-05	0.00E+00	1.79E-04	8.91E-04
53	F71	70	Combination Long Haul Truck	8	0.00E+00	4.07E-06	2.71E-07	3.04E+00	1.68E-08	4.09E-03	3.09E-06	4.66E-03	3.39E-04	6.20E-05	2.82E-04	8.21E-05	8.30E-05	4.64E-04	1.02E-05	0.00E+00	2.00E-04	8.78E-04
50	F72	40	Passenger Car	244	0.00E+00	4.05E-06	4.38E-07	1.40E+01	2.82E-05	1.00E-01	9.00E-06	4.41E-04	4.22E-03	6.02E-04	8.73E-04	5.65E-04	5.80E-04	7.65E-05	7.04E-05	1.71E-08	2.96E-04	6.90E-05
50	F72	40	Passenger Truck	408	0.00E+00	9.26E-06	9.71E-07	3.12E+01	5.55E-05	1.73E-01	1.86E-05	1.67E-03	7.48E-03	1.06E-03	1.75E-03	1.14E-03	1.17E-03	2.70E-04	1.55E-04	3.32E-08	5.77E-04	2.82E-04
50	F72	40	Single Unit Short Haul Truck	38	0.00E+00	1.69E-05	8.84E-07	8.09E+00	1.47E-05	1.39E-02	1.79E-05	8.26E-03	1.54E-03	2.55E-04	1.99E-03	5.27E-04	5.35E-04	8.18E-04	3.27E-05	1.38E-08	1.46E-03	1.55E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	7.40E-07	3.85E-08	3.50E-01	6.42E-07	6.05E-04	7.87E-07	3.59E-04	6.89E-05	1.14E-05	8.75E-05	2.30E-05	2.34E-05	3.53E-05	1.41E-06	6.00E-10	6.42E-05	6.75E-05
50	F72	40	Combination Short Haul Truck	21	0.00E+00	1.82E-05	1.26E-06	9.23E+00	6.55E-08	1.58E-02	1.35E-05	2.03E-02	2.11E-03	3.81E-04	1.18E-03	3.76E-04	3.80E-04	1.39E-03	3.09E-05	0.00E+00	7.98E-04	3.82E-03
50	F72	40	Combination Long Haul Truck	19	0.00E+00	1.66E-05	1.08E-06	8.78E+00	7.43E-08	1.76E-02	1.27E-05	2.04E-02	2.13E-03	3.38E-04	1.21E-03	3.30E-04	3.36E-04	1.34E-03	2.94E-05	0.00E+00	8.78E-04	3.84E-03
52	F73	60	Passenger Car	152	0.00E+00	2.07E-06	2.24E-07	7.56E+00	1.44E-05	5.15E-02	4.60E-06	2.99E-04	1.50E-03	2.31E-04	4.48E-04	2.88E-04	2.96E-04	3.18E-05	3.82E-05	1.02E-08	1.52E-04	4.69E-05
52	F73	60	Passenger Truck	255	0.00E+00	4.55E-06	4.80E-07	1.73E+01	2.84E-05	9.20E-02	9.34E-06	9.62E-04	2.67E-03	4.14E-04	8.91E-04	5.79E-04	5.93E-04	1.32E-04	8.63E-05	2.16E-08	2.96E-04	1.59E-04
52	F73	60	Single Unit Short Haul Truck	3	0.00E+00	8.96E-07	4.47E-08	5.69E-01	7.36E-07	1.10E-03	9.55E-07	4.27E-04	7.24E-05	1.31E-05	1.08E-04	2.68E-05	2.72E-05	5.70E-05	2.30E-06	9.47E-10	8.13E-05	8.00E-05
52	F73	60	Combination Short Haul Truck	2	0.00E+00	1.24E-06	8.64E-08	8.05E-01	4.38E-09	1.08E-03	9.16E-07	1.34E-03	1.15E-04	2.28E-05	7.88E-05	2.57E-05	2.57E-05	1.21E-04	2.69E-06	0.00E+00	5.29E-05	2.53E-04
52	F73	60	Combination Long Haul Truck	2	0.00E+00	1.11E-06	7.24E-08	7.56E-01	5.02E-09	1.17E-03	8.57E-07	1.33E-03	1.15E-04	1.96E-05	8.09E-05	2.20E-05	2.23E-05	1.15E-04	2.52E-06	0.00E+00	5.85E-05	2.51E-04
53	F74	70	Passenger Car	316	0.00E+00	3.96E-06	4.28E-07	1.52E+01	2.76E-05	9.83E-02	8.78E-06	6.45E-04	2.41E-03	3.89E-04	8.56E-04	5.52E-04	5.66E-04	5.66E-05	7.71E-05	2.10E-08	2.90E-04	1.01E-04
53	F74	70	Passenger Truck	529	0.00E+00	8.62E-06	9.12E-07	3.50E+01	5.46E-05	1.81E-01	1.79E-05	1.97E-03	4.34E-03	7.07E-04	1.71E-03	1.11E-03	1.14E-03	2.56E-04	1.76E-04	4.62E-08	5.71E-04	3.24E-04
53	F74	70	Single Unit Short Haul Truck	65	0.00E+00	1.52E-05	7.63E-07	1.19E+01	1.25E-05	2.39E-02	1.62E-05	7.52E-03	1.07E-03	2.14E-04	1.85E-03	4.55E-04	4.63E-04	1.20E-03	4.81E-05	1.94E-08	1.38E-03	1.41E-03
53	F74	70	Single Unit Long Haul Truck	3	0.00E+00	6.64E-07	3.30E-08	5.07E-01	5.37E-07	1.00E-03	7.07E-07	3.23E-04	4.89E-05	9.53E-06	8.10E-05	1.97E-05	2.00E-05	5.06E-05	2.04E-06	8.18E-10	6.07E-05	6.06E-05
53	F74	70	Combination Short Haul Truck	30	0.00E+00	1.57E-05	1.12E-06	1.14E+01	5.11E-08	1.35E-02	1.15E-05	1.66E-02	1.19E-03	2.62E-04	9.59E-04	3.31E-04	3.31E-04	1.72E-03	3.82E-05	0.00E+00	6.28E-04	3.12E-03
53	F74	70	Combination Long Haul Truck	28	0.00E+00	1.43E-05	9.51E-07	1.07E+01	5.89E-08	1.43E-02	1.08E-05	1.63E-02	1.19E-03	2.17E-04	9.90E-04	2.88E-04	2.91E-04	1.63E-03	3.57E-05	0.00E+00	7.01E-04	3.08E-03
52	F75	60	Passenger Car	204	0.00E+00	2.78E-06	3.00E-07	1.01E+01	1.93E-05	6.91E-02	6.17E-06	4.01E-04	2.01E-03	3.09E-04	6.00E-04	3.87E-04	3.97E-04	4.26E-05	5.13E-05	1.37E-08	2.03E-04	6.29E-05
52	F75	60	Passenger Truck	342	0.00E+00	6.10E-06	6.44E-07	2.31E+01	3.80E-05	1.23E-01	1.25E-05	1.29E-03	3.59E-03	5.55E-04	1.20E-03	7.77E-04	7.96E-04	1.77E-04	1.16E-04	2.90E-08	3.97E-04	2.13E-04
52	F75	60	Single Unit Short Haul Truck	16	0.00E+00	4.62E-06	2.31E-07	2.93E+00	3.80E-06	5.67E-03	4.93E-06	2.20E-03	3.73E-04	6.76E-05	5.58E-04	1.38E-04	1.40E-04	2.94E-04	1.19E-05	4.88E-09	4.19E-04	4.12E-04
52	F75	60	Single Unit Long Haul Truck	1	0.00E+00	2.02E-07	1.00E-08	1.25E-01	1.65E-07	2.40E-04	2.15E-07	9.52E-05	1.68E-05	3.00E-06	2.46E-05	6.02E-06	6.11E-06	1.25E-05	5.06E-07	2.08E-10	1.84E-05	1.78E-05
52	F75	60	Combination Short Haul Truck	9	0.00E+00	5.17E-06	3.61E-07	3.37E+00	1.83E-08	4.52E-03	3.83E-06	5.61E-03	4.81E-04	9.52E-05	3.30E-04	1.07E-04	1.07E-04	5.08E-04	1.13E-05	0.00E+00	2.21E-04	1.06E-03
52	F75	60	Combination Long Haul Truck	8	0.00E+00	4.63E-06	3.03E-07	3.16E+00	2.10E-08	4.87E-03	3.58E-06	5.56E-03	4.83E-04	8.21E-05	3.38E-04	9.22E-05	9.33E-05	4.81E-04	1.06E-05	0.00E+00	2.45E-04	1.05E-03
50	F76	40	Passenger Car	79	0.00E+00	1.31E-06	1.42E-07	4.55E+00	9.14E-06	3.25E-02	2.92E-06	1.43E-04	1.37E-03	1.95E-04	2.83E-04	1.83E-04	1.88E-04	2.48E-05	2.28E-05	5.54E-09	9.62E-05	2.24E-05
50	F76	40	Passenger Truck	132	0.00E+00	3.01E-06	3.15E-07	1.01E+01	1.80E-05	5.63E-02	6.03E-06	5.41E-04	2.43E-03	3.45E-04	5.66E-04	3.72E-04	3.79E-04	8.75E-05	5.04E-05	1.08E-08	1.87E-04	9.16E-05
53	F77	70	Passenger Car	241	0.00E+00	3.02E-06	3.26E-07	1.16E+01	2.10E-05	7.51E-02	6.70E-06	4.92E-04	1.84E-03	2.97E-04	6.54E-04	4.22E-04	4.32E-04	4.32E-05	5.89E-05	1.60E-08	2.21E-04	7.71E-05
53	F77	70	Passenger Truck	404	0.00E+00	6.58E-06	6.96E-07	2.67E+01	4.16E-05	1.38E-01	1.37E-05	1.50E-03	3.31E-03	5.40E-04	1.30E-03	8.49E-04	8.70E-04	1.95E-04	1.35E-04	3.53E-08	4.36E-04	2.47E-04
53	F77	70	Single Unit Short Haul Truck	61	0.00E+00	1.42E-05	7.14E-07	1.12E+01	1.16E-05	2.24E-02	1.52E-05	7.04E-03	1.00E-03	2.00E-04	1.73E-03	4.26E-04	4.33E-04	1.12E-03	4.49E-05	1.82E-08	1.29E-03	1.32E-03
53	F77	70	Single Unit Long Haul Truck	3	0.00E+00	6.21E-07	3.09E-08	4.74E-01	5.03E-07	9.35E-04	6.61E-07	3.02E-04	4.57E-05	8.91E-06	7.57E-05	1.84E-05	1.87E-05	4.73E-05	1.91E-06	7.65E-10	5.68E-05	5.66E-05
53	F77	70	Combination Short Haul Truck	48	0.00E+00	2.49E-05	1.77E-06	1.81E+01	8.08E-08	2.14E-02	1.82E-05	2.62E-02	1.89E-03	4.13E-04	1.52E-03	5.24E-04	5.22E-04	2.72E-03	6.03E-05	0.00E+00	9.93E-04	4.93E-03
53	F77	70	Combination Long Haul Truck	44	0.00E+00	2.25E-05	1.50E-06	1.68E+01	9.31E-08	2.27E-02	1.71E-05	2.58E-02	1.88E-03	3.43E-04	1.56E-03	4.55E-04	4.59E-04	2.57E-03	5.64E-05	0.00E+00	1.11E-03	4.86E-03
50	F78	40	Passenger Car	87	0.00E+00	1.45E-06	1.57E-07	5.01E+00	1.01E-05	3.58E-02	3.22E-06	1.58E-04	1.51E-03	2.15E-04	3.12E-04	2.02E-04	2.08E-04	2.74E-05	2.52E-05	6.10E-09	1.06E-04	2.47E-05
50	F78	40	Passenger Truck	146	0.00E+00	3.31E-06	3.48E-07	1.12E+01	1.99E-05	6.21E-02	6.65E-06	5.96E-04	2.68E-03	3.81E-04	6.25E-04	4.10E-04	4.18E-04	9.65E-05	5.56E-05	1.19E-08	2.06E-04	1.01E-04
50	F78	40	Single Unit Short Haul Truck	1	0.00E+00	5.93E-07	3.10E-08	2.84E-01	5.15E-07	4.89E-04	6.30E-07	2.90E-04	5.41E-05	8.96E-06	7.00E-05	1.85E-05	1.88E-05	2.87E-05	1.15E-06	4.85E-10	5.11E-05	5.44E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	1.03E-06	7.15E-08	5.24E-01	3.72E-09	9.00E-04	7.67E-07	1.15E-03	1.20E-04	2.16E-05	6.70E-05	2.14E-05	2.16E-05	7.90E-05	1.75E-06	0.00E+00	4.53E-05	2.17E-04
50	F78	40	Combination Long Haul Truck	1	0.00E+00	9.41E-07	6.14E-08	4.99E-01	4.22E-09	1.00E-03	7.23E-07	1.16E-03	1.21E-04	1.92E-05	6.88E-05	1.87E-05	1.91E-05	7.61E-05	1.67E-06	0.00E+00	4.99E-05	2.18E-04
52	F79	60	Passenger Car	377	0.00E+00	5.13E-06	5.55E-07	1.87E+01	3.57E-05	1.28E-01	1.14E-05	7.40E-04	3.72E-03	5.72E-04	1.11E-03	7.15E-04	7.34E-04	7.88E-05	9.48E-05	2.53E-08	3.76E-04	1.16E-04
52	F79	60	Passenger Truck	631	0.00E+00	1.13E-05	1.19E-06	4.28E+01	7.03E-05	2.28E-01	2.32E-05	2.39E-03	6.63E-03	1.03E-03	2.21E-03	1.44E-03	1.47E-03	3.28E-04	2.14E-04	5.37E-08	7.33E-04	3.95E-04
52	F79	60	Single Unit Short Haul Truck	7	0.00E+00	2.06E-06	1.03E-07	1.31E+00	1.69E-06	2.52E-03	2.19E-06	9.80E-04	1.66E-04	3.01E-05	2.48E-04	6.15E-05	6.25E-05	1.31E-04	5.28E-06	2.17E-09	1.87E-04	1.84E-04
52	F79	60	Combination Short Haul Truck	4	0.00E+00	2.53E-06	1.77E-07	1.65E+00	8.96E-09	2.21E-03	1.88E-06	2.75E-03	2.35E-04	4.66E-05	1.61E-04	5.26E-05	5.26E-05	2.49E-04	5.51E-06	0.00E+00	1.08E-04	5.19E-04
52	F79	60	Combination Long Haul Truck	4	0.00E+00	2.27E-06	1.48E-07	1.55E+00	1.03E-08	2.39E-03	1.75E-06	2.72E-03	2.36E-04	4.02E-05	1.66E-04	4.51E-05	4.56E-05	2.35E-04	5.16E-06	0.00E+00	1.20E-04	5.14E-04
53	F80	70	Passenger Car	831	0.00E+00	1.04E-05	1.12E-06	3.99E+01	7.25E-05	2.58E-01	2.31E-05	1.69E-03	6.35E-03	1.02E-03	2.25E-03	1.45E-03	1.49E-03	1.49E-04	2.03E-04	5.52E-08	7.62E-04	2.65E-04
53	F80	70	Passenger Truck	1391	0.00E+00	2.26E-05

Appendix F.5.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A17	0.00E+00	3.07E-04	2.30E-05	4.69E+02	3.30E-04	1.61E+00	2.99E-04	2.79E-01	1.61E-02	4.80E-03	2.68E-02	1.20E-02	1.21E-02	4.13E-02	1.93E-03	3.95E-07	1.47E-02	5.22E-02
A18	0.00E+00	3.48E-04	2.59E-05	5.37E+02	3.85E-04	1.86E+00	3.42E-04	3.12E-01	1.85E-02	5.49E-03	3.08E-02	1.37E-02	1.39E-02	4.67E-02	2.21E-03	4.67E-07	1.70E-02	5.85E-02
A19	0.00E+00	2.89E-04	2.15E-05	4.35E+02	2.98E-04	1.46E+00	2.78E-04	2.64E-01	1.49E-02	4.45E-03	2.49E-02	1.10E-02	1.12E-02	3.91E-02	1.78E-03	3.60E-07	1.38E-02	4.93E-02
A20	0.00E+00	3.39E-04	2.52E-05	5.12E+02	3.54E-04	1.73E+00	3.29E-04	3.07E-01	1.75E-02	5.24E-03	2.96E-02	1.30E-02	1.31E-02	4.59E-02	2.10E-03	4.35E-07	1.65E-02	5.75E-02
A21	0.00E+00	3.51E-04	2.65E-05	5.57E+02	4.20E-04	2.02E+00	3.51E-04	3.14E-01	1.95E-02	5.71E-03	3.15E-02	1.44E-02	1.46E-02	4.64E-02	2.32E-03	4.91E-07	1.70E-02	5.87E-02
A22	0.00E+00	3.76E-04	2.82E-05	5.96E+02	4.48E-04	2.15E+00	3.76E-04	3.34E-01	2.07E-02	6.11E-03	3.40E-02	1.53E-02	1.55E-02	4.98E-02	2.48E-03	5.34E-07	1.85E-02	6.24E-02
A23	0.00E+00	3.54E-04	2.69E-05	5.75E+02	4.50E-04	2.15E+00	3.59E-04	3.14E-01	2.03E-02	5.90E-03	3.23E-02	1.50E-02	1.52E-02	4.62E-02	2.41E-03	5.17E-07	1.72E-02	5.86E-02
A24	0.00E+00	3.39E-04	2.53E-05	5.24E+02	3.77E-04	1.83E+00	3.33E-04	3.05E-01	1.81E-02	5.37E-03	3.00E-02	1.34E-02	1.36E-02	4.54E-02	2.16E-03	4.54E-07	1.65E-02	5.70E-02
A25	0.00E+00	3.07E-04	2.32E-05	4.87E+02	3.65E-04	1.76E+00	3.06E-04	2.76E-01	1.70E-02	4.99E-03	2.74E-02	1.26E-02	1.27E-02	4.05E-02	2.03E-03	4.23E-07	1.47E-02	5.16E-02
A26	0.00E+00	3.18E-04	2.37E-05	4.91E+02	3.54E-04	1.71E+00	3.13E-04	2.85E-01	1.70E-02	5.03E-03	2.82E-02	1.26E-02	1.27E-02	4.25E-02	2.03E-03	4.28E-07	1.55E-02	5.33E-02
A27	0.00E+00	3.07E-04	2.32E-05	4.87E+02	3.65E-04	1.76E+00	3.06E-04	2.76E-01	1.70E-02	4.99E-03	2.74E-02	1.26E-02	1.27E-02	4.05E-02	2.03E-03	4.23E-07	1.47E-02	5.16E-02
A28	0.00E+00	3.18E-04	2.37E-05	4.91E+02	3.54E-04	1.71E+00	3.13E-04	2.85E-01	1.70E-02	5.03E-03	2.82E-02	1.26E-02	1.27E-02	4.25E-02	2.03E-03	4.28E-07	1.55E-02	5.33E-02
B15	0.00E+00	1.28E-04	1.07E-05	3.26E+02	3.88E-04	1.52E+00	1.79E-04	8.42E-02	1.75E-02	3.92E-03	1.70E-02	9.20E-03	9.39E-03	1.25E-02	1.53E-03	3.76E-07	7.58E-03	1.55E-02
B16	0.00E+00	7.94E-05	6.64E-06	2.00E+02	2.36E-04	9.27E-01	1.10E-04	5.30E-02	1.07E-02	2.40E-03	1.05E-02	5.63E-03	5.74E-03	7.91E-03	9.36E-04	2.30E-07	4.72E-03	9.74E-03
B17	0.00E+00	1.43E-04	1.11E-05	2.91E+02	2.86E-04	1.16E+00	1.70E-04	1.12E-01	1.44E-02	3.41E-03	1.60E-02	7.74E-03	7.87E-03	1.71E-02	1.30E-03	2.93E-07	8.10E-03	2.08E-02
B18	0.00E+00	1.06E-04	8.12E-06	2.06E+02	1.92E-04	7.86E-01	1.22E-04	8.55E-02	1.00E-02	2.40E-03	1.14E-02	5.40E-03	5.48E-03	1.32E-02	9.04E-04	1.99E-07	5.95E-03	1.59E-02
B19	0.00E+00	2.47E-04	2.09E-05	6.52E+02	7.93E-04	3.10E+00	3.55E-04	1.57E-01	3.52E-02	7.86E-03	3.39E-02	1.85E-02	1.89E-02	2.33E-02	3.07E-03	7.68E-07	1.49E-02	2.87E-02
B20	0.00E+00	1.91E-04	1.50E-05	3.91E+02	3.84E-04	1.57E+00	2.26E-04	1.52E-01	1.94E-02	4.59E-03	2.11E-02	1.04E-02	1.06E-02	2.29E-02	1.74E-03	3.83E-07	1.05E-02	2.83E-02
B21	0.00E+00	1.22E-04	1.17E-05	4.23E+02	5.93E-04	2.27E+00	2.17E-04	5.57E-02	2.44E-02	5.22E-03	2.08E-02	1.26E-02	1.29E-02	7.43E-03	2.08E-03	5.49E-07	7.83E-03	9.89E-03
B22	0.00E+00	9.35E-05	7.74E-06	2.14E+02	2.31E-04	9.29E-01	1.19E-04	7.15E-02	1.11E-02	2.54E-03	1.10E-02	5.86E-03	5.97E-03	1.03E-02	9.75E-04	2.18E-07	5.02E-03	1.32E-02
B23	0.00E+00	1.25E-04	1.20E-05	4.35E+02	6.11E-04	2.34E+00	2.23E-04	5.64E-02	2.51E-02	5.37E-03	2.13E-02	1.30E-02	1.33E-02	7.49E-03	2.14E-03	5.65E-07	8.02E-03	9.99E-03
B24	0.00E+00	2.51E-04	1.89E-05	4.56E+02	3.90E-04	1.63E+00	2.73E-04	2.12E-01	2.15E-02	5.26E-03	2.54E-02	1.17E-02	1.19E-02	3.23E-02	1.96E-03	4.07E-07	1.35E-02	3.95E-02
C53	0.00E+00	2.56E-06	2.47E-07	7.79E+00	1.29E-05	4.34E-02	4.65E-06	9.45E-04	1.30E-03	2.02E-04	4.47E-04	2.72E-04	2.79E-04	1.02E-04	3.85E-05	9.67E-09	1.68E-04	1.69E-04
C54	0.00E+00	9.08E-06	6.84E-07	1.51E+01	1.82E-05	6.38E-02	1.09E-05	6.50E-03	1.87E-03	3.22E-04	1.06E-03	4.90E-04	4.99E-04	7.27E-04	6.87E-05	1.61E-08	5.57E-04	1.21E-03
C57	0.00E+00	2.83E-05	2.09E-06	4.09E+01	4.37E-05	1.59E-01	3.10E-05	2.28E-02	4.99E-03	8.76E-04	2.95E-03	1.31E-03	1.33E-03	2.47E-03	1.81E-04	3.86E-08	1.62E-03	4.25E-03
C58	0.00E+00	4.78E-06	3.82E-07	7.52E+00	1.15E-05	3.90E-02	6.09E-06	3.45E-03	1.90E-03	2.80E-04	5.80E-04	2.93E-04	2.99E-04	2.67E-04	3.52E-05	7.08E-09	2.81E-04	6.44E-04
C59	0.00E+00	1.14E-05	9.07E-07	2.22E+01	2.91E-05	1.01E-01	1.49E-05	7.59E-03	2.81E-03	4.78E-04	1.43E-03	7.23E-04	7.38E-04	8.42E-04	1.04E-04	2.49E-08	6.95E-04	1.41E-03
C60	0.00E+00	2.61E-05	2.06E-06	4.79E+01	6.85E-05	2.33E-01	3.47E-05	1.70E-02	7.78E-03	1.24E-03	3.38E-03	1.68E-03	1.72E-03	1.69E-03	2.25E-04	5.32E-08	1.66E-03	3.15E-03
C61	0.00E+00	1.56E-05	1.19E-06	2.56E+01	3.04E-05	1.08E-01	1.85E-05	1.16E-02	3.18E-03	5.51E-04	1.77E-03	8.29E-04	8.45E-04	1.28E-03	1.17E-04	2.65E-08	9.27E-04	2.17E-03
C62	0.00E+00	2.47E-05	2.29E-06	6.24E+01	1.11E-04	3.62E-01	4.22E-05	9.80E-03	1.60E-02	2.30E-03	4.03E-03	2.40E-03	2.45E-03	9.62E-04	3.06E-04	6.72E-08	1.59E-03	1.79E-03
C63	0.00E+00	9.58E-05	6.54E-06	9.73E+01	8.91E-05	3.27E-01	9.39E-05	8.48E-02	1.50E-02	2.54E-03	9.12E-03	3.38E-03	3.43E-03	8.03E-03	4.04E-04	7.55E-08	5.69E-03	1.59E-02
C64	0.00E+00	6.00E-05	4.67E-06	1.09E+02	1.37E-04	4.81E-01	7.53E-05	4.17E-02	1.37E-02	2.34E-03	7.24E-03	3.53E-03	3.61E-03	4.63E-03	5.03E-04	1.19E-07	3.64E-03	7.74E-03
C65	0.00E+00	3.69E-07	3.52E-08	1.09E+00	1.79E-06	6.05E-03	6.56E-07	1.45E-04	1.82E-04	2.84E-05	6.31E-05	3.81E-05	3.91E-05	1.55E-05	5.38E-06	1.35E-09	2.40E-05	2.60E-05
C66	0.00E+00	1.65E-05	1.33E-06	2.79E+01	4.52E-05	1.48E-01	2.23E-05	1.05E-02	7.06E-03	1.03E-03	2.14E-03	1.10E-03	1.12E-03	8.53E-04	1.32E-04	2.80E-08	1.02E-03	1.95E-03
C67	0.00E+00	6.15E-05	4.58E-06	1.12E+02	1.05E-04	4.14E-01	6.98E-05	4.82E-02	7.28E-03	1.54E-03	6.64E-03	3.01E-03	3.06E-03	7.23E-03	4.89E-04	1.03E-07	3.58E-03	8.99E-03
C68	0.00E+00	4.92E-05	3.68E-06	9.26E+01	9.11E-05	3.55E-01	5.74E-05	3.74E-02	6.12E-03	1.28E-03	5.49E-03	2.53E-03	2.57E-03	5.63E-03	4.10E-04	8.96E-08	2.92E-03	6.95E-03
C69	0.00E+00	7.66E-05	5.87E-06	1.33E+02	1.42E-04	5.33E-01	8.88E-05	5.91E-02	1.24E-02	2.33E-03	8.38E-03	3.96E-03	4.04E-03	7.39E-03	5.96E-04	1.30E-07	4.34E-03	1.10E-02
C70	0.00E+00	8.50E-05	6.33E-06	1.60E+02	1.58E-04	6.15E-01	9.97E-05	6.37E-02	1.06E-02	2.22E-03	9.58E-03	4.37E-03	4.44E-03	9.69E-03	7.10E-04	1.58E-07	5.14E-03	1.19E-02
C71	0.00E+00	6.70E-05	4.87E-06	9.46E+01	1.01E-04	3.63E-01	7.34E-05	5.28E-02	1.15E-02	2.02E-03	7.06E-03	3.04E-03	3.10E-03	5.82E-03	4.17E-04	9.13E-08	3.96E-03	9.86E-03
C72	0.00E+00	4.10E-06	3.24E-07	6.65E+00	1.08E-05	3.49E-02	5.47E-06	2.58E-03	1.67E-03	2.45E-04	5.30E-04	2.65E-04	2.70E-04	2.12E-04	3.14E-05	6.72E-09	2.60E-04	4.81E-04
C73	0.00E+00	2.42E-05	1.88E-06	3.64E+01	5.46E-05	1.79E-01	3.02E-05	1.66E-02	7.40E-03	1.14E-03	2.91E-03	1.41E-03	1.44E-03	1.46E-03	1.69E-04	3.84E-08	1.46E-03	3.10E-03
C74	0.00E+00	9.11E-05	6.52E-06	1.14E+02	1.27E-04	4.52E-01	9.80E-05	7.53E-02	1.79E-02	2.96E-03	9.50E-03	3.95E-03	4.02E-03	7.19E-03	4.97E-04	1.03E-07	5.47E-03	1.41E-02
C81	0.00E+00	9.73E-05	6.86E-06	1.13E+02	9.68E-05	3.69E-01	9.55E-05	8.50E-02	1.33E-02	2.42E-03	9.07E-03	3.58E-03	3.63E-03	9.19E-03	4.75E-04	8.97E-08	5.44E-03	1.59E-02
C82	0.00E+00	1.06E-04	7.25E-06	1.09E+02	1.00E-04	3.70E-01	1.04E-04	9.38E-02	1.67E-02	2.84E-03	1.00E-02	3.76E-03	3.82E-03	8.86E-03	4.53E-04	8.41E-08	6.21E-03	1.76E-02
C83	0.00E+00	1.54E-04	1.14E-05	2.60E+02	2.00E-04	8.59E-01	1.59E-04	1.34E-01	1.19E-02	2.97E-03	1.48E-02	6.50E-03	6.59E-03	2.06E-02	1.09E-03	2.17E-07	8.19E-03	2.51E-02
C84	0.00E+00	6.65E-05	4.58E-06	9.36E+01	5.91E-05	2.56E-01	6.42E-05	5.82E-02	5.40E-03	1.24E-03	6.09E-03	2.31E-03	2.33E-03	8.84E-03	3.78E-04	6.73E-08	3.76E-03	1.09E-02
C85	0.00E+00	8.91E-05	6.38E-06	1.47E+02	1.23E-04	4.95E-01	9.54E-05	7.21E-02	9.16E-03	1.99E-03	9.14E-03	3.85E-03	3.90E-03	1.10E-02	6.26E-04	1.29E-07	5.24E-03	1.35E-02
C86	0.00E+00	1.53E-04	1.05E-05	2.15E+02	1.36E-04	5.85E-01	1.48E-04	1.33E-01	1.23E-02	2.83E-03	1.41E-02	5.30E-03	5.35E-03	2.03E-02	8.67E-04	1.57E-07	8.72E-03	2.49E-02
E39	0.00E+00	1.52E-05	1.35E-06	3.85E+01	5.91E-05	2.05E-01	2.40E-05	7.75E-03	5.18E-03	8.58E-04	2.31E-03	1.32E-03	1.35E-03	8.66E-04	1.86E-04	4.79E-08	9.61E-04	1.41E-03
E40	0.00E+00	1.89E-05	1.63E-06	4.46E+01	6.70E-05	2.32E-01	2.85E-05	1.03E-02	5.96E-03	9.91E-04	2.76E-03	1.52E-03	1.56E-03	1.16E-03	2.14E-04	5.47E-08	1.20E-03	1.89E-03
E41	0.00E+00	1.02E-05	9.54E-07	2.86E+01	4.51E-05	1.56E-01	1.71E-05	4.80E-03	3.90E-03	6.41E-04	1.64E-03	9.79E-04	1.00E-03	5.25E-04	1.40E-04	3.60E-08	6.36E-04	8.68E-04
E42	0.00E+00	1.47E-05	1.34E-06	3.95E+01	6.18E-05	2.13E-01	2.41E-05	7.03E-03	5.35E-03	8.82E-04	2.33E-03	1.35E-03	1.38E-03	7.86E-04	1.92E-04	4.97E-08	9.35E-04	1.28E-03
E43	0.00E+00	7.80E-06	7.66E-07	2.48E+01	4.04E-05	1.39E-01	1.43E-05	2.92E-03	3.40E-03	5.55E-04	1.38E-03	8.51E-04	8.72E-04	3.24E-04	1.22E-04	3.22E-08	5.02E-04	5.17E-04
E44	0.00E+00	1.15E-05	1.10E-06	3.42E+01	5.50E-05	1.90E-01	2.02E-05	4.82E-03	4.68E-03	7.67E-04	1.95E-03	1.17E-03	1.20E-03	5.36E-04	1.68E-04	4.39E-08	7.36E-04	8.63E-04
E45	0.00E+00	1.91E-05	1.50E-06	3.77E+01	4.66E-05	1.69E-01	2.46E-05	1.27E-02	3.47E-03	6.49E-04	2.37E-03	1.17E-03	1.20E-03	1.64E-03	1.74E-04	4.30E-08	1.18E-03	2.34E-03
E46	0.00E+00	6.60E-06	5.27E-07	1.35E+01	1.69E-05	6.17E-02	8.66E-06	4.36E-03	1.25E-03	2.33E-04	8.31E-04	4.21E-04	4.29E-04	5.58E-04	6.28E-05	1.54E-08	4.03E-04	8.06E-04
E47	0.00E+00	1.91E-05	1.57E-06	4.24E+01	5.59E-05	2.02E-01	2.65E-05	1.18E-02	3.98E-03	7.35E-04	2.55E-03	1.33E-03	1.36E-03	1.51E-03	2.00E-04	5.04E-08	1.19E-03	2.17E-03
E48	0.00E+00	4.59E-06	3.66E-07	9.30E+00	1.16E-05	4.24E-02	5.98E-06	3.07E-03	8.63E-04	1.61E-04	5.73E-04	2.90E-04	2.96E-04	3.91E-04	4.32E-05	1.05E-08	2.78E-04	5.68E-04
E49	0.00E+00	2.31E-05	1.85E-06	4.86E+01	6.24E-05	2.26E-01	3.10E-05	1.47E-02	4.52E-03	8.40E-04	2.99E-03	1.52E-03	1.55E-03	1.89E-03	2.28E-04	5.69E-08	1.44E-03	2.71E-03
E50	0.00E+00	3.98E-06	3.67E-07	1.15E+01	1.69E-05	6.08E-02	6.57E-06	1.95E-03	1.12E-03	2.02E-04	6.27E-04	3.71E-04	3.79E-04	2.37E-04	5.64E-05	1.46E-08	2.49E-04	3.53E-04
E51	0.00E+00	2.02E-05	1.61E-06	4.14E+01	5.22E-05	1.90E-01	2.66E-05	1.33E-02	3.85E-03	7.16E-04	2.56E-03	1.29E-03	1.32E-03	1.70E-03	1.93E-04	4.77E-08	1.25E-03	2.45E-03
E52	0.00E+00	1.81E-06	1.74E-07	5.72E+00	8.68E-06	3.11E-02	3.18E-06	8.04E-04	5.66E-04	1.01E-04	3.02E-04	1.86E-04	1.90E-04	9.39E-05	2.83E-05	7.40E-09	1.13E-04	1.44E-04
E53	0.00E+00	2.85E-05	2.30E-06	5.92E+01	7.49E-05	2.74E-01	3.76E-05	1.89E-02	5.53E-03	1.03E-03	3.60E-03	1.85E-03	1.89E-03	2.39E-03	2.77E-04	6.74E-08	1.71E-03	3.50E-03
E54	0.00E+00	2.94E-05	2.20E-06	4.62E+01	4.66E-05	1.78E-01	3.24E-05	2.35E-02	4.10E-03	7.92E-04	3.05E-03	1.38E-03	1.41E-03	2.95E-03	2.03E-04	4.34E-08	1.65E-03	4.38E-03
E55	0.00E+00	2.79E-05	2.33E-06	6.32E+01	8.39E-05	3.05E-01	3.90E-05	1.74E-02	5.98E-03	1.10E-03	3.72E-03	1.99E-03	2.04E-03	2.18E-03	3.00E-04	7.45E-08	1.69E-03	3.20E-03
E56	0.00E+00	1.74E-05	1.47E-06	4.06E+01	5.46E-05	1.98E-01	2.47E-05	1.07E-02	3.86E-03	7.09E-04	2.36E-03	1.28E-03	1.31E-03	1.33E-03	1.93E-04	4.80E-08	1.05E-03	1.97E-03
E57	0.00E+00	1.27E-05	1.10E-06	2.91E+01	4.25E-05	1.49E-01	1.85E-05	7.64E-03	3.88E-03	6.48E-04	1.77E-03	9.84E-04	1.01E-03	8.26E-04	1.39E-04	3.42E-08	7.56E-04	1.41E-03
E58	0.00E+00	1.60E-05	1.34E-06	3.38E+01	4.80E-05	1.69E-01	2.23E-05	1.01E-02	4.47E-03	7.51E-04	2.14E-03	1.14E-03	1.17E-03	1.11E-03	1.60E-04	3.92E-08	9.65E-04	1.87E-03
E59	0.00E+00	8.81E-05	6.53E-06	1.37E+02	1.37E-04	5.21E-01	9.67E-05	7.00E-02	1.21E-02	2.33E-03	9.17E-03	4.09E-03	4.16E-03	8.86E-03	5.99E-04	1.29E-07	5.02E-03	1.30E-02
E60	0.00E+00	5.05E-05	3.89E-06	9.03E+01	1.03E-04	3.83E-01	6.06E-05	3.69E-02	8.20E-03	1.55E-03	5.78E-03	2.77E-03	2.82E-03	4.69E-03	4.10E-04	9.52E-08	2.97E-03	6.86E-03
E61	0.00E+00	2.35E-05	2.07E-06	6.14E+01	8.71E-05	3.13E-01	3.63E-05	1.28E-02	5.92E-03	1.07E-03	3.47E-03	1.96E-03	2.01E-03	1.59E-03	2.97E-04	7.63E-08	1.47E-03	2.33E-03
E62	0.00E+00	1.59E-05	1.55E-06	5.30E+01	8.21E-05	2.92E-01	2.92E-05	6.01E-03	5.25E-03	9.34E-04	2.81E-03	1.73E-03	1.77E-03	7.24E-04	2.64E-04	7.06E-08	1.04E-03	1.06E-03
E63	0.00E+00	9.57E-05	7.09E-06	1.37E+02	1.53E-04	5.57E-01	1.06E-04	7.58E-02	1.71E-02	2.99E-03	1.01E-02	4.51E-03	4.60E-03	8.26E-03	6.04E-04	1.32E-07	5.53E-03	1.41E-02
E64	0.00E+00	7.05E-05	5.79E-06	1.40E+02	1.93E-04	6.83E-01	9.43E-05	4.70E-02	1.84E-02	3.11E-03	9.02E-03	4.72E-03	4.82E-03	5.11E-03	6.57E-04	1.58E-07	4.18E-03	8.69E-03
E65	0.00E+00	2.38E-05	2.26E-06	7.06E+01	1.14E-04	3.91E-01	4.17E-05	9.81E-03	9.63E-03	1.58E-03	4.03E-03	2.42E-03	2.48E-03	1.10E-03	3.47E-04	9.08E-08	1.53E-03	1.76E-03
E66	0.00E+00	4.67E-05	4.32E-06	1.26E+02	1.96E-04	6.83E-01	7.62E-05	2.36E-02	1.71E-02	2.83E-03	7.29E-03	4.31E-03	4.41E-03	2.55E-03	6.15E-04	1.56E-07	2.86E-03	4.29E-03
E67	0.00E+00	1.46E-05	1.33E-06	4.30E+01	6.44E-05	2.29E-01	2.48E-05	6.37E-03	4.19E-03	7.53E-04	2.40E-03	1.39E-03	1.43E-03	8.20E-04	2.12E-04	5.67E-08	9.79E-04	1.14E-03
E68	0.00E+00	1.56E-05	1.45E-06	4.71E+01	7.09E-05	2.53E-01	2.68E-05	6.78E-03	4.61E-03	8.27E-04	2.58E-03	1.53E-03	1.56E-03	8.46E-04	2.32E-04	6.17E-08	1.02E-03	1.21E-03
E69	0.00E+00	2.11E-05	1.97E-06	6.23E+01	1.01E-04	3.46E-01	3.74E-05	7.85E-03	8.47E-03	1.39E-03	3.64E-03	2.15E-03	2.20E-03	9.33E-04	3.07E-04	8.20E-08	1.43E-03	1.40E-03
E70	0.00E+00	1.48E-05	1.49E-06	5.01E+01	8.35E-05	2.86E-01	2.86E-05	4.50E-03	6.90E-03	1.12E-03	2.76E-03	1.73E-03	1.77E-03	5.17E-04	2.49E-04	6.65E-08	9.82E-04	7.80E-04
E71	0.00E+00	2.77E-05	2.55E-06	7.89E+01	1.27E-04	4.34E-01	4.77E-05	1.12E-02	1.07E-02	1.76E-03	4.64E-03	2.72E-03	2.78E-03	1.31E-03	3.87E-04	1.03E-07	1.85E-03	2.02E-03
E72	0.00E+00	2.46E-05	2.53E-06	8.68E+01	1.46E-04	5.00E-01	4.90E-05	6.87E-03	1.20E-02	1.95E-03	4.73E-03	3.00E-03	3.07E-03	7.87E-04	4.33E-04	1.16E-07	1.64E-03	1.18E-03
E73	0.00E+00	2.59E-06	2.69E-07	8.45E+00	1.57E-05	5.28E-02	5.27E-06	6.14E-04	1.48E-03	2.30E-04	5.04E-04	3.23E-04	3.31E-04	7.18E-05	4.22E-05	1.16E-08	1.74E-04	1.05E-04
E74	0.00E+00	5.92E-06	6.15E-07	1.93E+01	3.59E-05	1.21E-01	1.20E-05	1.42E-03	3.40E-03	5.26E-04	1.15E-03	7.37E-04	7.55E-04	1.65E-04	9.66E-05	2.65E-08	3.96E-04	2.42E-04
E75	0.00E+00	6.23E-05	5.37E-06	1.48E+02	2.10E-04	7.29E-01	9.15E-05	3.71E-02	1.93E-02	3.22E-03	8.72E-03	4.84E-03	4.95E-03	4.05E-03	7.13E-04	1.75E-07	3.78E-03	6.82E-03
E76	0.00E+00	3.89E-05	3.60E-06	1.13E+02	1.72E-04	5.90E-01	6.57E-05	1.77E-02	1.49E-02	2.46E-03	6.30E-03	3.73E-03	3.82E-03	1.99E-03	5.57E-04	1.42E-07	2.49E-03	3.20E-03
E77	0.00E+00	6.69E-05	5.79E-06	1.62E+02	2.30E-04	8.00E-01	9.93E-05	3.91E-02	2.10E-02	3.51E-03	9.47E-03	5.29E-03	5.41E-03	4.27E-03	7.79E-04	1.92E-07	4.07E-03	7.16E-03
E78	0.00E+00	4.82E-05	4.46E-06	1.40E+02	2.12E-04	7.28E-01	8.12E-05	2.23E-02	1.84E-02	3.04E-03	7.77E-03	4.60E-03	4.71E-03	2.49E-03	6.87E-04	1.75E-07	3.07E-03	4.03E-03
E79	0.00E+00	5.47E-05	4.97E-06	1.54E+02	2.33E-04	7.97E-01	9.08E-05	2.55E-02	2.03E-02	3.35E-03	8.73E-03	5.08E-03	5.20E-03	2.89E-03	7.56E-04	1.94E-07	3.54E-03	4.61E-03
E80	0.00E+00	5.26E-05	4.64E-06	1.36E+02	2.00E-04	6.88E-01	8.22E-05	2.78E-02	1.78E-02	2.96E-03	7.88E-03	4.48E-03	4.58E-03	3.09E-03	6.62E-04	1.67E-07	3.31E-03	5.06E-03
E81	0.00E+00	1.36E-06	1.28E-07	3.85E+00	7.13E-06	2.35E-02	2.57E-06	3.35E-04	6.69E-04	1.04E-04	2.51E-04	1.49E-04	1.52E-04	4.33E-05	1.91E-05	5.39E-09	9.89E-05	5.82E-05
E82	0.00E+00	4.44E-07	4.72E-08	1.53E+00	2.87E-06	9.63E-03	9.39E-07	8.12E-05	2.69E-04	4.16E-05	8.99E-05	5.83E-05	5.98E-05	1.03E-05	7.65E-06	2.12E-09	3.01E-05	1.33E-05
E83	0.00E+00	1.12E-05	1.07E-06	3.32E+01	5.32E-05	1.84E-01	1.95E-05	4.77E-03	4.53E-03	7.43E-04	1.88E-03	1.14E-03	1.16E-03	5.25E-04	1.63E-04	4.24E-08	7.05E-04	8.56E-04
E84	0.00E+00	9.18E-06	9.16E-07	3.06E+01	5.09E-05	1.75E-01	1.76E-05	2.85E-03	4.21E-03	6.87E-04	1.70E-03	1.06E-03	1.08E-03

Appendix F.5.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F02	0.00E+00	2.44E-05	1.99E-06	4.42E+01	6.83E-05	2.34E-01	3.33E-05	1.59E-02	7.47E-03	1.19E-03	3.21E-03	1.65E-03	1.69E-03	1.55E-03	2.07E-04	5.19E-08	1.52E-03	2.95E-03
F03	0.00E+00	8.87E-07	7.53E-08	2.02E+00	2.66E-06	9.74E-03	1.23E-06	5.80E-04	1.92E-04	3.53E-05	1.16E-04	6.35E-05	6.48E-05	7.06E-05	9.55E-06	2.31E-09	5.13E-05	1.07E-04
F04	0.00E+00	1.56E-07	1.66E-08	6.28E-01	1.02E-06	3.62E-03	3.32E-07	3.36E-05	6.32E-05	1.11E-05	3.19E-05	2.07E-05	2.13E-05	3.75E-06	3.18E-06	8.73E-10	1.08E-05	5.43E-06
F05	0.00E+00	1.55E-05	1.31E-06	3.12E+01	5.02E-05	1.71E-01	2.26E-05	9.34E-03	5.31E-03	8.44E-04	2.16E-03	1.17E-03	1.20E-03	9.16E-04	1.48E-04	3.78E-08	9.69E-04	1.73E-03
F06	0.00E+00	3.35E-05	2.47E-06	4.32E+01	5.35E-05	1.91E-01	3.73E-05	2.75E-02	7.05E-03	1.16E-03	3.58E-03	1.58E-03	1.60E-03	2.59E-03	1.90E-04	4.17E-08	1.98E-03	5.15E-03
F07	0.00E+00	2.94E-05	2.45E-06	5.72E+01	9.15E-05	3.12E-01	4.20E-05	1.78E-02	9.72E-03	1.55E-03	4.05E-03	2.15E-03	2.20E-03	1.75E-03	2.71E-04	6.93E-08	1.85E-03	3.29E-03
F08	0.00E+00	4.28E-05	3.18E-06	5.85E+01	7.73E-05	2.69E-01	4.97E-05	3.31E-02	9.60E-03	1.57E-03	4.80E-03	2.16E-03	2.20E-03	3.17E-03	2.62E-04	6.04E-08	2.60E-03	6.19E-03
F09	0.00E+00	7.39E-06	6.80E-07	2.15E+01	3.19E-05	1.14E-01	1.23E-05	3.51E-03	2.10E-03	3.78E-04	1.18E-03	6.95E-04	7.11E-04	4.32E-04	1.06E-04	2.77E-08	4.72E-04	6.32E-04
F10	0.00E+00	2.50E-06	2.32E-07	7.52E+00	1.13E-05	4.03E-02	4.27E-06	1.11E-03	7.37E-04	1.32E-04	4.10E-04	2.44E-04	2.49E-04	1.38E-04	3.71E-05	9.80E-09	1.62E-04	2.00E-04
F13	0.00E+00	1.74E-06	1.46E-07	3.88E+00	5.06E-06	1.85E-02	2.39E-06	1.14E-03	3.67E-04	6.77E-05	2.26E-04	1.22E-04	1.24E-04	1.40E-04	1.83E-05	4.45E-09	1.02E-04	2.10E-04
F14	0.00E+00	5.71E-07	4.78E-08	1.27E+00	1.66E-06	6.07E-03	7.83E-07	3.73E-04	1.20E-04	2.22E-05	7.42E-05	3.99E-05	4.08E-05	4.60E-05	6.00E-06	1.46E-09	3.35E-05	6.87E-05
F15	0.00E+00	1.50E-05	1.39E-06	4.11E+01	6.41E-05	2.23E-01	2.48E-05	7.33E-03	5.57E-03	9.18E-04	2.38E-03	1.40E-03	1.44E-03	8.03E-04	2.00E-04	5.13E-08	9.36E-04	1.33E-03
F16	0.00E+00	1.78E-05	1.61E-06	4.60E+01	7.02E-05	2.45E-01	2.81E-05	9.51E-03	6.21E-03	1.03E-03	2.69E-03	1.56E-03	1.60E-03	1.03E-03	2.22E-04	5.61E-08	1.08E-03	1.74E-03
F17	0.00E+00	1.29E-05	1.18E-06	3.46E+01	5.37E-05	1.87E-01	2.09E-05	6.46E-03	4.69E-03	7.73E-04	2.00E-03	1.18E-03	1.21E-03	7.04E-04	1.68E-04	4.29E-08	7.92E-04	1.17E-03
F18	0.00E+00	1.14E-05	1.02E-06	2.77E+01	4.11E-05	1.45E-01	1.72E-05	6.78E-03	3.73E-03	6.20E-04	1.63E-03	9.37E-04	9.59E-04	7.19E-04	1.33E-04	3.27E-08	6.68E-04	1.24E-03
F19	0.00E+00	1.48E-05	1.57E-06	5.59E+01	9.54E-05	3.26E-01	3.11E-05	3.13E-03	7.76E-03	1.26E-03	3.01E-03	1.93E-03	1.98E-03	3.74E-04	2.80E-04	7.57E-08	1.01E-03	5.14E-04
F20	0.00E+00	1.16E-05	1.23E-06	4.39E+01	7.51E-05	2.57E-01	2.44E-05	2.35E-03	6.09E-03	9.87E-04	2.36E-03	1.52E-03	1.56E-03	2.83E-04	2.20E-04	5.95E-08	7.92E-04	3.83E-04
F21	0.00E+00	9.79E-05	6.92E-06	1.13E+02	1.01E-04	3.84E-01	9.66E-05	8.50E-02	1.36E-02	2.45E-03	9.20E-03	3.65E-03	3.71E-03	9.20E-03	4.73E-04	9.06E-08	5.48E-03	1.59E-02
F22	0.00E+00	9.07E-05	6.31E-06	9.90E+01	8.10E-05	3.14E-01	8.71E-05	7.98E-02	1.16E-02	2.13E-03	8.30E-03	3.17E-03	3.22E-03	8.65E-03	4.05E-04	7.49E-08	5.07E-03	1.50E-02
F23	0.00E+00	2.79E-05	2.05E-06	3.77E+01	3.95E-05	1.46E-01	2.97E-05	2.31E-02	4.65E-03	8.21E-04	2.83E-03	1.23E-03	1.25E-03	2.49E-03	1.64E-04	3.40E-08	1.57E-03	4.31E-03
F24	0.00E+00	2.08E-05	1.54E-06	2.98E+01	3.33E-05	1.21E-01	2.30E-05	1.66E-02	3.72E-03	6.51E-04	2.19E-03	9.80E-04	9.99E-04	1.80E-03	1.31E-04	2.85E-08	1.19E-03	3.09E-03
F25	0.00E+00	8.87E-05	6.31E-06	1.01E+02	1.14E-04	4.08E-01	9.33E-05	7.53E-02	1.62E-02	2.71E-03	9.00E-03	3.68E-03	3.74E-03	7.12E-03	4.34E-04	9.11E-08	5.26E-03	1.41E-02
F26	0.00E+00	9.16E-05	6.45E-06	1.01E+02	1.11E-04	3.98E-01	9.49E-05	7.83E-02	1.62E-02	2.71E-03	9.17E-03	3.67E-03	3.74E-03	7.41E-03	4.31E-04	8.94E-08	5.44E-03	1.47E-02
F27	0.00E+00	1.88E-04	1.35E-05	2.36E+02	2.97E-04	1.03E+00	2.10E-04	1.47E-01	3.82E-02	6.31E-03	2.04E-02	8.72E-03	8.88E-03	1.42E-02	1.04E-03	2.37E-07	1.16E-02	2.76E-02
F28	0.00E+00	1.69E-04	1.19E-05	1.93E+02	2.24E-04	7.87E-01	1.80E-04	1.39E-01	3.10E-02	5.16E-03	1.75E-02	7.09E-03	7.22E-03	1.33E-02	8.34E-04	1.82E-07	1.03E-02	2.60E-02
F29	0.00E+00	4.32E-05	3.27E-06	6.36E+01	8.86E-05	3.06E-01	5.23E-05	3.18E-02	1.05E-02	1.71E-03	5.06E-03	2.36E-03	2.41E-03	3.07E-03	2.89E-04	6.88E-08	2.65E-03	5.95E-03
F30	0.00E+00	2.50E-05	2.30E-06	6.32E+01	1.11E-04	3.73E-01	4.25E-05	1.08E-02	1.09E-02	1.71E-03	4.09E-03	2.40E-03	2.45E-03	1.13E-03	3.09E-04	8.27E-08	1.63E-03	1.96E-03
F45	0.00E+00	1.12E-05	1.07E-06	3.32E+01	5.32E-05	1.84E-01	1.95E-05	4.77E-03	4.53E-03	7.43E-04	1.88E-03	1.14E-03	1.16E-03	5.25E-04	1.63E-04	4.24E-08	7.05E-04	8.56E-04
F46	0.00E+00	9.18E-06	9.16E-07	3.06E+01	5.09E-05	1.75E-01	1.76E-05	2.85E-03	4.21E-03	6.87E-04	1.70E-03	1.06E-03	1.08E-03	3.32E-04	1.52E-04	4.07E-08	6.14E-04	4.97E-04
F47	0.00E+00	3.07E-07	2.43E-08	5.18E-01	7.80E-07	2.67E-03	4.03E-07	2.06E-04	8.70E-05	1.40E-05	3.90E-05	1.94E-05	1.98E-05	2.02E-05	2.41E-06	5.98E-10	1.91E-05	3.84E-05
F48	0.00E+00	2.92E-06	2.38E-07	5.22E+00	7.93E-06	2.74E-02	3.92E-06	1.99E-03	8.83E-04	1.41E-04	3.75E-04	1.94E-04	1.98E-04	1.91E-04	2.44E-05	5.98E-09	1.76E-04	3.70E-04
F49	0.00E+00	1.58E-04	1.15E-05	2.02E+02	2.55E-04	8.87E-01	1.78E-04	1.25E-01	3.28E-02	5.40E-03	1.73E-02	7.44E-03	7.58E-03	1.20E-02	8.90E-04	2.02E-07	9.69E-03	2.34E-02
F50	0.00E+00	1.66E-04	1.18E-05	1.94E+02	2.28E-04	8.03E-01	1.79E-04	1.36E-01	3.12E-02	5.19E-03	1.74E-02	7.12E-03	7.25E-03	1.30E-02	8.41E-04	1.85E-07	1.01E-02	2.54E-02
F51	0.00E+00	5.08E-05	4.12E-06	1.04E+02	1.49E-04	5.14E-01	7.06E-05	3.03E-02	1.36E-02	2.29E-03	6.88E-03	3.54E-03	3.62E-03	3.45E-03	4.91E-04	1.24E-07	3.24E-03	5.60E-03
F52	0.00E+00	1.96E-05	1.62E-06	4.17E+01	6.05E-05	2.09E-01	2.78E-05	1.15E-02	5.50E-03	9.22E-04	2.70E-03	1.42E-03	1.45E-03	1.30E-03	1.98E-04	5.01E-08	1.24E-03	2.11E-03
F53	0.00E+00	2.58E-05	2.52E-06	8.30E+01	1.37E-04	4.69E-01	4.82E-05	8.51E-03	1.14E-02	1.86E-03	4.68E-03	2.86E-03	2.94E-03	9.95E-04	4.11E-04	1.10E-07	1.73E-03	1.49E-03
F54	0.00E+00	1.76E-05	1.70E-06	5.48E+01	8.98E-05	3.08E-01	3.22E-05	6.27E-03	7.50E-03	1.23E-03	3.12E-03	1.89E-03	1.94E-03	7.27E-04	2.71E-04	7.21E-08	1.17E-03	1.11E-03
F71	0.00E+00	1.56E-05	1.19E-06	2.56E+01	3.03E-05	1.07E-01	1.84E-05	1.16E-02	3.18E-03	5.49E-04	1.76E-03	8.26E-04	8.42E-04	1.28E-03	1.16E-04	2.64E-08	9.23E-04	2.17E-03
F72	0.00E+00	6.57E-05	4.67E-06	7.16E+01	9.91E-05	3.22E-01	7.26E-05	5.14E-02	1.75E-02	2.65E-03	7.09E-03	2.97E-03	3.02E-03	3.93E-03	3.20E-04	6.47E-08	4.07E-03	9.63E-03
F73	0.00E+00	9.90E-06	9.10E-07	2.70E+01	4.35E-05	1.47E-01	1.67E-05	4.38E-03	4.48E-03	7.00E-04	1.61E-03	9.43E-04	9.66E-04	4.60E-04	1.32E-04	3.29E-08	6.44E-04	7.94E-04
F74	0.00E+00	5.85E-05	4.21E-06	8.47E+01	9.52E-05	3.32E-01	6.60E-05	4.34E-02	1.03E-02	1.80E-03	6.45E-03	2.76E-03	2.81E-03	4.91E-03	3.78E-04	8.74E-08	3.63E-03	8.09E-03
F75	0.00E+00	2.35E-05	1.85E-06	4.29E+01	6.14E-05	2.08E-01	3.13E-05	1.52E-02	6.95E-03	1.11E-03	3.05E-03	1.51E-03	1.54E-03	1.51E-03	2.01E-04	4.78E-08	1.50E-03	2.82E-03
F76	0.00E+00	4.32E-06	4.57E-07	1.47E+01	2.72E-05	8.88E-02	8.95E-06	6.84E-04	3.80E-03	5.41E-04	8.50E-04	5.55E-04	5.67E-04	1.12E-04	7.32E-05	1.63E-08	2.83E-04	1.14E-04
F77	0.00E+00	7.19E-05	5.04E-06	8.49E+01	7.50E-05	2.81E-01	7.15E-05	6.13E-02	9.97E-03	1.80E-03	6.84E-03	2.69E-03	2.74E-03	6.70E-03	3.57E-04	7.02E-08	4.11E-03	1.15E-02
F78	0.00E+00	7.35E-06	6.70E-07	1.75E+01	3.05E-05	1.00E-01	1.20E-05	3.37E-03	4.48E-03	6.46E-04	1.15E-03	6.71E-04	6.86E-04	3.09E-04	8.54E-05	1.85E-08	4.61E-04	6.17E-04
F79	0.00E+00	2.34E-05	2.18E-06	6.61E+01	1.08E-04	3.63E-01	4.05E-05	9.62E-03	1.10E-02	1.72E-03	3.91E-03	2.31E-03	2.37E-03	1.03E-03	3.25E-04	8.13E-08	1.53E-03	1.74E-03
F80	0.00E+00	4.51E-05	4.28E-06	1.41E+02	2.19E-04	7.48E-01	8.05E-05	1.77E-02	1.87E-02	3.07E-03	7.74E-03	4.66E-03	4.77E-03	2.03E-03	6.99E-04	1.82E-07	2.98E-03	3.15E-03
F81	0.00E+00	8.11E-05	5.49E-06	8.32E+01	8.00E-05	2.84E-01	8.09E-05	6.93E-02	1.28E-02	2.16E-03	7.93E-03	2.92E-03	2.97E-03	6.66E-03	3.48E-04	6.88E-08	4.96E-03	1.30E-02
F82	0.00E+00	9.65E-06	9.10E-07	2.53E+01	4.51E-05	1.47E-01	1.68E-05	3.61E-03	6.49E-03	9.33E-04	1.61E-03	9.68E-04	9.89E-04	3.63E-04	1.24E-04	2.73E-08	6.19E-04	6.55E-04

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES L nkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B15	100	Passenger Car	672	0.00E+00	7.26E-06	7.86E-07	2.99E+01	5.06E-05	1.92E-01	1.62E-05	1.44E-03	2.18E-03	4.39E-04	1.57E-03	1.01E-03	1.04E-03	8.42E-05	1.53E-04	4.21E-08	5.32E-04	2.24E-04
16	B15	100	Passenger Truck	1125	0.00E+00	1.57E-05	1.67E-06	7.07E+01	1.03E-04	3.87E-01	3.34E-05	4.08E-03	3.85E-03	8.18E-04	3.21E-03	2.08E-03	2.13E-03	4.54E-04	3.57E-04	9.80E-08	1.08E-03	6.61E-04
16	B15	100	Single Unit Short Haul Truck	33	0.00E+00	4.37E-06	2.16E-07	5.94E+00	3.82E-06	1.38E-02	4.73E-06	2.37E-03	2.24E-04	6.53E-05	5.41E-04	1.34E-04	1.36E-04	5.99E-04	2.39E-05	9.76E-09	4.05E-04	4.43E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.90E-07	9.21E-09	2.50E-01	1.58E-07	5.62E-04	2.05E-07	9.98E-05	1.02E-05	2.82E-06	2.36E-05	5.66E-06	5.75E-06	2.51E-05	1.01E-06	4.00E-10	1.78E-05	1.86E-05
16	B15	100	Combination Short Haul Truck	11	0.00E+00	3.77E-06	2.75E-07	3.97E+00	1.07E-08	3.68E-03	2.72E-06	4.04E-03	1.28E-04	4.55E-05	2.11E-04	8.07E-05	7.94E-05	5.99E-04	1.33E-05	0.00E+00	1.32E-04	7.61E-04
16	B15	100	Combination Long Haul Truck	10	0.00E+00	3.28E-06	2.25E-07	3.60E+00	1.24E-08	3.68E-03	2.46E-06	3.84E-03	1.18E-04	3.29E-05	2.15E-04	6.74E-05	6.73E-05	5.49E-04	1.20E-05	0.00E+00	1.48E-04	7.23E-04
16	B16	100	Passenger Car	1205	0.00E+00	1.30E-05	1.41E-06	5.37E+01	9.07E-05	3.45E-01	2.90E-05	2.58E-03	3.91E-03	7.88E-04	2.82E-03	1.82E-03	1.87E-03	1.51E-04	2.74E-04	7.55E-08	9.55E-04	4.02E-04
16	B16	100	Passenger Truck	2019	0.00E+00	2.81E-05	3.00E-06	1.27E+02	1.84E-04	6.95E-01	5.99E-05	7.33E-03	6.91E-03	1.47E-03	5.76E-03	3.73E-03	3.82E-03	8.14E-04	6.41E-04	1.76E-07	1.94E-03	1.19E-03
16	B16	100	Single Unit Short Haul Truck	38	0.00E+00	5.15E-06	2.55E-07	6.99E+00	4.49E-06	1.62E-02	5.57E-06	2.79E-03	2.64E-04	7.68E-05	6.36E-04	1.58E-04	1.60E-04	7.05E-04	2.81E-05	1.15E-08	4.76E-04	5.21E-04
16	B16	100	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	1.08E-08	2.95E-01	1.86E-07	6.61E-04	2.41E-07	1.17E-04	1.19E-05	3.32E-06	2.77E-05	6.66E-06	6.77E-06	2.95E-05	1.19E-06	4.70E-10	2.10E-05	2.19E-05
16	B16	100	Combination Short Haul Truck	21	0.00E+00	7.37E-06	5.38E-07	7.75E+00	2.10E-08	7.19E-03	5.32E-06	7.88E-03	2.50E-04	8.89E-05	4.13E-04	1.58E-04	1.55E-04	1.17E-03	2.60E-05	0.00E+00	2.58E-04	1.48E-03
16	B16	100	Combination Long Haul Truck	20	0.00E+00	6.41E-06	4.39E-07	7.02E+00	2.43E-08	7.18E-03	4.80E-06	7.49E-03	2.31E-04	6.43E-05	4.20E-04	1.32E-04	1.31E-04	1.07E-03	2.35E-05	0.00E+00	2.89E-04	1.41E-03
16	B19	100	Passenger Car	1620	0.00E+00	1.75E-05	1.89E-06	7.22E+01	1.22E-04	4.64E-01	3.89E-05	3.46E-03	5.25E-03	1.06E-03	3.79E-03	2.44E-03	2.51E-03	2.03E-04	3.68E-04	1.01E-07	1.28E-03	5.41E-04
16	B19	100	Passenger Truck	2712	0.00E+00	3.78E-05	4.03E-06	1.70E+02	2.48E-04	9.34E-01	8.05E-05	9.85E-03	9.29E-03	1.97E-03	7.74E-03	5.01E-03	5.14E-03	1.09E-03	8.62E-04	2.36E-07	2.60E-03	1.59E-03
16	B19	100	Single Unit Short Haul Truck	461	0.00E+00	6.19E-05	3.06E-06	8.41E+01	5.40E-05	1.95E-01	6.70E-05	3.35E-02	3.18E-03	9.24E-04	7.65E-03	1.90E-03	1.93E-03	8.48E-03	3.38E-04	1.38E-07	5.72E-03	6.26E-03
16	B19	100	Single Unit Long Haul Truck	20	0.00E+00	2.68E-06	1.30E-07	3.54E+00	2.24E-06	7.95E-03	2.89E-06	1.41E-03	1.44E-04	3.99E-05	3.34E-04	8.01E-05	8.14E-05	3.55E-04	1.43E-05	5.65E-09	2.52E-04	2.64E-04
16	B19	100	Combination Short Haul Truck	317	0.00E+00	1.09E-04	7.95E-06	1.15E+02	3.10E-07	1.06E-01	7.86E-05	1.16E-01	3.69E-03	1.31E-03	6.10E-03	2.33E-03	2.29E-03	1.73E-02	3.84E-04	0.00E+00	3.81E-03	2.19E-02
16	B19	100	Combination Long Haul Truck	289	0.00E+00	9.48E-05	6.50E-06	1.04E+02	3.59E-07	1.06E-01	7.10E-05	1.11E-01	3.42E-03	9.50E-04	6.21E-03	1.95E-03	1.94E-03	1.58E-02	3.48E-04	0.00E+00	4.27E-03	2.09E-02
16	B20	100	Passenger Car	3140	0.00E+00	3.40E-05	3.67E-06	1.40E+02	2.36E-04	8.99E-01	7.55E-05	6.71E-03	1.02E-02	2.05E-03	7.35E-03	4.74E-03	4.86E-03	3.94E-04	7.14E-04	1.97E-07	2.49E-03	1.05E-03
16	B20	100	Passenger Truck	5259	0.00E+00	7.33E-05	7.81E-06	3.30E+02	4.80E-04	1.81E+00	1.56E-04	1.91E-02	1.80E-02	3.82E-03	1.50E-02	9.72E-03	9.96E-03	2.12E-03	1.67E-03	4.58E-07	5.04E-03	3.09E-03
16	B20	100	Single Unit Short Haul Truck	299	0.00E+00	4.01E-05	1.99E-06	5.46E+01	3.50E-05	1.26E-01	4.34E-05	2.17E-02	2.06E-03	5.99E-04	4.96E-03	1.23E-03	1.25E-03	5.50E-03	2.19E-04	8.96E-08	3.71E-03	4.06E-03
16	B20	100	Single Unit Long Haul Truck	13	0.00E+00	1.74E-06	8.45E-08	2.30E+00	1.45E-06	5.16E-03	1.88E-06	9.16E-04	9.32E-05	2.59E-05	2.16E-04	5.20E-05	5.28E-05	2.30E-04	9.25E-06	3.67E-09	1.64E-04	1.71E-04
16	B20	100	Combination Short Haul Truck	229	0.00E+00	7.87E-05	5.74E-06	8.28E+01	2.24E-07	7.68E-02	5.68E-05	8.42E-02	2.67E-03	9.50E-04	4.41E-03	1.68E-03	1.66E-03	1.25E-02	2.77E-04	0.00E+00	2.76E-03	1.59E-02
16	B20	100	Combination Long Haul Truck	209	0.00E+00	6.85E-05	4.69E-06	7.50E+01	2.59E-07	7.67E-02	5.13E-05	8.00E-02	2.47E-03	6.87E-04	4.49E-03	1.41E-03	1.40E-03	1.15E-02	2.51E-04	0.00E+00	3.09E-03	1.51E-02
16	B21	100	Passenger Car	1186	0.00E+00	1.28E-05	1.39E-06	5.29E+01	8.93E-05	3.40E-01	2.85E-05	2.53E-03	3.85E-03	7.76E-04	2.78E-03	1.79E-03	1.84E-03	1.49E-04	2.70E-04	7.43E-08	9.40E-04	3.96E-04
16	B21	100	Passenger Truck	1987	0.00E+00	2.77E-05	2.95E-06	1.25E+02	1.81E-04	6.84E-01	5.89E-05	7.21E-03	6.80E-03	1.44E-03	5.67E-03	3.67E-03	3.76E-03	8.01E-04	6.31E-04	1.73E-07	1.90E-03	1.17E-03
16	B21	100	Single Unit Short Haul Truck	370	0.00E+00	4.97E-05	2.46E-06	6.75E+01	4.33E-05	1.56E-01	5.38E-05	2.69E-02	2.55E-03	7.42E-04	6.14E-03	1.52E-03	1.55E-03	6.81E-03	2.71E-04	1.11E-07	4.59E-03	5.02E-03
16	B21	100	Single Unit Long Haul Truck	16	0.00E+00	2.15E-06	1.05E-07	2.84E+00	1.79E-06	6.38E-03	2.32E-06	1.13E-03	1.15E-04	3.20E-05	2.68E-04	6.43E-05	6.53E-05	2.85E-04	1.14E-05	4.54E-09	2.02E-04	2.12E-04
16	B21	100	Combination Short Haul Truck	275	0.00E+00	9.43E-05	6.88E-06	9.93E+01	2.68E-07	9.20E-02	6.81E-05	1.01E-01	3.20E-03	1.14E-03	5.29E-03	2.02E-03	1.98E-03	1.50E-02	3.32E-04	0.00E+00	3.30E-03	1.90E-02
16	B21	100	Combination Long Haul Truck	250	0.00E+00	8.21E-05	5.63E-06	8.99E+01	3.11E-07	9.19E-02	6.15E-05	9.59E-02	2.96E-03	8.23E-04	5.38E-03	1.69E-03	1.68E-03	1.37E-02	3.01E-04	0.00E+00	3.70E-03	1.81E-02
16	B22	100	Passenger Car	2857	0.00E+00	3.09E-05	3.34E-06	1.27E+02	2.15E-04	8.18E-01	6.87E-05	6.10E-03	9.27E-03	1.87E-03	6.69E-03	4.31E-03	4.42E-03	3.58E-04	6.50E-04	1.79E-07	2.26E-03	9.54E-04
16	B22	100	Passenger Truck	4785	0.00E+00	6.67E-05	7.10E-06	3.01E+02	4.37E-04	1.65E+00	1.42E-04	1.74E-02	1.64E-02	3.48E-03	1.37E-02	8.84E-03	9.06E-03	1.93E-03	1.52E-03	4.17E-07	4.59E-03	2.81E-03
16	B22	100	Single Unit Short Haul Truck	259	0.00E+00	3.47E-05	1.72E-06	4.72E+01	3.03E-05	1.09E-01	3.76E-05	1.88E-02	1.78E-03	5.19E-04	4.29E-03	1.07E-03	1.08E-03	4.76E-03	1.90E-04	7.75E-08	3.21E-03	3.51E-03
16	B22	100	Single Unit Long Haul Truck	11	0.00E+00	1.51E-06	7.32E-08	1.99E+00	1.26E-06	4.46E-03	1.62E-06	7.92E-04	8.06E-05	2.24E-05	1.87E-04	4.50E-05	4.57E-05	1.99E-04	8.01E-06	3.17E-09	1.42E-04	1.48E-04
16	B22	100	Combination Short Haul Truck	215	0.00E+00	7.39E-05	5.39E-06	7.77E+01	2.10E-07	7.20E-02	5.33E-05	7.90E-02	2.50E-03	8.91E-04	4.14E-03	1.58E-03	1.55E-03	1.17E-02	2.60E-04	0.00E+00	2.59E-03	1.49E-02
16	B22	100	Combination Long Haul Truck	196	0.00E+00	6.43E-05	4.41E-06	7.04E+01	2.43E-07	7.20E-02	4.82E-05	7.51E-02	2.32E-03	6.44E-04	4.21E-03	1.32E-03	1.32E-03	1.07E-02	2.36E-04	0.00E+00	2.90E-03	1.41E-02
16	B23	100	Passenger Car	1202	0.00E+00	1.30E-05	1.41E-06	5.36E+01	9.05E-05	3.44E-01	2.89E-05	2.57E-03	3.90E-03	7.86E-04	2.81E-03	1.81E-03	1.86E-03	1.51E-04	2.73E-04	7.53E-08	9.52E-04	4.01E-04
16	B23	100	Passenger Truck	2013	0.00E+00	2.81E-05	2.99E-06	1.26E+02	1.84E-04	6.93E-01	5.97E-05	7.31E-03	6.89E-03	1.46E-03	5.74E-03	3.72E-03	3.81E-03	8.12E-04	6.39E-04	1.75E-07	1.93E-03	1.18E-03
16	B23	100	Single Unit Short Haul Truck	370	0.00E+00	4.97E-05	2.46E-06	6.75E+01	4.33E-05	1.56E-01	5.38E-05	2.69E-02	2.55E-03	7.42E-04	6.14E-03	1.52E-03	1.55E-03	6.81E-03	2.71E-04	1.11E-07	4.59E-03	5.02E-03
16	B23	100	Single Unit Long Haul Truck	16	0.00E+00	2.15E-06	1.05E-07	2.84E+00	1.79E-06	6.38E-03	2.32E-06	1.13E-03	1.15E-04	3.20E-05	2.68E-04	6.43E-05	6.53E-05	2.85E-04	1.14E-05	4.54E-09	2.02E-04	2.12E-04
16	B23	100	Combination Short Haul Truck	275	0.00E+00	9.45E-05	6.90E-06	9.95E+01	2.69E-07	9.22E-02	6.82E-05	1.01E-01	3.20E-03	1.14E-03	5.30E-03	2.02E-03	1.99E-03	1.50E-02	3.33E-04	0.00E+00	3.31E-03	1.90E-02
16	B23	100	Combination Long Haul Truck	251	0.00E+00	8.23E-05	5.64E-06	9.01E+01	3.11E-07	9.21E-02	6.16E-05	9.61E-02	2.97E-03	8.25E-04	5.39E-03	1.69E-03	1.69E-03	1.38E-02	3.02E-04	0.00E+00	3.71E-03	1.81E-02
16	B24	100	Passenger Car	3296	0.00E+00	3.56E-05	3.85E-06	1.47E+02	2.48E-04	9.43E-01	7.92E-05	7.04E-03	1.07E-02	2.16E-03	7.71E-03	4.97E-03	5.10E-03	4.13E-04	7.49E-04	2.06E-07	2.61E-03	1.10E-03
16	B24	100	Passenger Truck	5519	0.00E+00	7.69E-05	8.19E-06	3.47E+02	5.04E-04	1.90E+00	1.64E-04	2.00E-02	1.89E-02	4.01E-03	1.57E-02	1.02E-02	1.05E-02	2.23E-03	1.75E-03	4.81E-07	5.29E-03	3.24E-03
16	B24	100	Single Unit Short Haul Truck	277	0.00E+00	3.72E-05	1.84E-06	5.05E+01	3.24E-05	1.17E-01	4.02E-05	2.01E-02	1.91E-03	5.55E-04	4.60E-03	1.14E-03	1.16E-03	5.10E-03	2.03E-04	8.30E-08	3.44E-03	3.76E-03
16	B24	100	Single Unit Long Haul Truck	12	0.00E+00	1.61E-06	7.83E-08	2.13E+00	1.34E-06	4.78E-03	1.74E-06	8.48E-04	8.63E-05	2.40E-05	2.00E-04	4.81E-05	4.89E-05	2.13E-04	8.57E-06	3.40E-09	1.51E-04	1.58E-04
16	B24	100	Combination Short Haul Truck	230	0.00E+00	7.91E-05	5.77E-06	8.32E+01	2.25E-07	7.71E-02	5.70E-05	8.46E-02	2.68E-03	9.54E-04	4.43E-03	1.69E-03	1.66E-03	1.25E-02	2.79E-04	0.00E+00	2.77E-03	1.59E-02
16	B24	100	Combination Long Haul Truck	210	0.00E+00	6.88E-05	4.72E-06	7.54E+01	2.61E-07	7.71E-02	5.15E-05	8.04E-02	2.48E-03	6.90E-04	4.51E-03	1.41E-03	1.41E-03	1.15E-02	2.52E-04	0.00E+00	3.10E-03	1.51E-02
10	E39	70	Passenger Car	267	0.00E+00	3.45E-06	3.73E-07	1.27E+01	2.40E-05	8.66E-02	7.66E-06	5.35E-04	2.07E-03	3.32E-04	7.46E-04	4.81E-04	4.93E-04	4.78E-05	6.44E-05	1.75E-08	2.52E-04	8.36E-05
10	E39	70	Passenger Truck	447	0.00E+00	7.56E-06	8.00E-07	2.92E+01	4.78E-05	1.60E-01	1.57E-05	1.67E-03	3.77E-03	6.12E-04	1.50E-03	9.74E-04	9.98E-04	2.17E-04	1.47E-04	3.93E-08	5.00E-04	2.75E-04
10	E39	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	E39	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.86E-04
10	E39	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.79E-04
10	E40	70	Passenger Car	175	0.00E+00	2.26E-06	2.44E-07	8.32E+00	1.57E-05	5.68E-02	5.02E-06	3.51E-04	1.36E-03	2.18E-04	4.89E-04	3.15E-04	3.23E-04	3.13E-05	4.22E-05	1.15E-08	1.66E-04	5.48E-05
10	E40	70	Passenger Truck	293	0.00E+00	4.95E-06	5.24E-07	1.92E+01	3.13E-05	1.05E-01	1.03E-05	1.10E-03	2.47E-03	4.01E-04	9.82E-04	6.38E-04	6.54E-04	1.42E-04	9.64E-05	2.58E-08	3.27E-04	1.80E-04
10	E40	70	Single Unit Short Haul Truck	31	0.00E+00	7.20E-06	3.61E-07	5.64E+00	5.89E-06	1.13E-02	7.67E-06	3.56E-03	5.07E-04	1.01E-04	8.74E-04	2.15E-04	2.19E-04	5.66E-04	2.27E-05	9.18E-09	6.55E-04	6.66E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	3.14E-07	1.56E-08	2.39E-01	2.54E-07	4.74E-04	3.34E-07	1.53E-04	2.31E-05	4.51E-06	3.82E-05	9.32E-06	9.48E-06	2.39E-05	9.67E-07	3.87E-10	2.87E-05	2.86E-05
10	E40	70	Combination Short Haul Truck	21	0.00E+00	1.09E-05	7.73E-07	7.89E+00	3.54E-08	9.37E-03	7.98E-06	1.15E-02	8.28E-04	1.81E-04	6.63E-04	2.29E-04	2.28E-04	1.19E-03	2.64E-05	0.00E+00	4.34E-04	2.16E-03
10	E40	70	Combination Long Haul Truck	19	0.00E+00	9.84E-06	6.58E-07	7.36E+00	4.07E-08	9.92E-03	7.47E-06	1.13E-02	8.23E-04	1.50E-04	6.85E-04	1.99E-04	2.01E-04	1.13E-03	2.47E-05	0.00E+00	4.84E-04	2.13E-03
10	E41	70	Passenger Car	221	0.00E+00	2.86E-06	3.09E-07	1.05E+01	1.99E-05	7.18E-02	6.35E-06	4.43E-04	1.72E-03	2.75E-04	6.19E-04	3.99E-04	4.09E-04	3.96E-05	5.34E-05	1.45E-08	2.09E-04	6.93E-05
10	E41	70	Passenger Truck	371	0.00E+00	6.27E-06	6.63E-07	2.43E+01	3.96E-05	1.32E-01	1.30E-05	1.39E-03	3.12E-03	5.07E-04	1.24E-03	8.08E-04	8.27E-04	1.80E-04	1.22E-04	3.26E-08	4.14E-04	2.28E-04
10	E41	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.32E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E41	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E42	70	Passenger Car	217	0.00E+00	2.80E-06	3.03E-07	1.03E+01	1.95E-05	7.04E-02	6.23E-06	4.34E-04	1.68E-03	2.70E-04	6.06E-04	3.91E-04	4.01E-04	3.88E-05	5.23E-05	1.42E-08	2.05E-04	6.79E-05
10	E42	70	Passenger Truck	363	0.00E+00	6.14E-06	6.50E-07	2.38E+01	3.88E-05	1.30E-01	1.28E-05	1.36E-03	3.06E-03	4.97E-04	1.22E-03	7.91E-04	8.11E-04	1.76E-04	1.19E-04	3.19E-08	4.06E-04	2.24E-04
10	E42	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.56E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	E42	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.11E-04	6.78E-05	2.49E-04	8.58E-05	8.57E-05	4.46E-04	9.90E-06	0.00E+00	1.63E-04	8.09E-04
10	E42	70	Combination Long Haul Truck	7	0.00E+00	3.69E-06	2.47E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.63E-05	2.57E-04	7.46E-05	7.54E-05	4.22E-04	9.25E-06	0.00E+00	1.82E-04	7.98E-04
10	E43	70	Passenger Car	220	0.00E+00	2.84E-06	3.07E-07	1.05E+01	1.98E-05	7.13E-02	6.31E-06	4.40E-04	1.70E-03	2.73E-04	6.14E-04	3.96E-04	4.06E-04	3.94E-05	5.30E-05	1.44E-08	2.08E-04	6.88E-05
10	E43	70	Passenger Truck	368	0.00E+00	6.22E-06	6.59E-07	2.41E+01	3.94E-05	1.31E-01	1.29E-05	1.38E-03	3.10E-03	5.04E-04	1.23E-03	8.02E-04	8.22E-04	1.78E-04	1.21E-04	3.24E-08	4.11E-04	2.27E-04
10	E43	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.89E-08	1.23E+00	1.29E-06	2.47E-03	1.68E-06	7.78E-04	1.11E-04	2.22E-05	1.91E-04	4.71E-05	4.79E-05	1.24E-04	4.98E-06	2.01E-09	1.43E-04	1.46E-04
10	E43	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E43	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E44	70	Passenger Car	164	0.00E+00	2.12E-06	2.29E-07	7.80E+00	1.48E-05	5.33E-02	4.71E-06	3.29E-04	1.27E-03	2.04E-04	4.59E-04	2.96E-04	3.03E-04	2.94E-05	3.96E-05	1.08E-08	1.55E-04	5.14E-05
10	E44	70	Passenger Truck	275	0.00E+00	4.65E-06	4.92E-07	1.80E+01	2.94E-05	9.81E-02	9.65E-06	1.03E-03	2.31E-03	3.76E-04	9.21E-04	5.99E-04	6.14E-04	1.33E-04	9.04E-05	2.42E-08	3.07E-04	1.69E-04
10	E44	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	E44	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.97E+00	8.84E-09	2.34E-03	2.00E-06	2.86E-03	2.07E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.97E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E44	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.06E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.32E-04
11	E45	80	Passenger Car	75	0.00E+00	9.04E-07	9.78E-08	3.47E+00	6.29E-06	2.32E-02	2.01E-06	1.54E-04	4.13E-04	7.19E-05	1.96E-04	1.26E-04	1.29E-04	1.18E-05	1.76E-05	4.94E-09	6.62E-05	2.41E-05
11	E45	80	Passenger Truck	126	0.00E+00	1.94E-06	2.06E-07	8.02E+00	1.24E-05	4.28E-02	4.07E-06	4.59E-04	7.41E-04	1.32E-04	3.89E-04	2.53E-04	2.59E-04	5.65E-05	4.04E-05	1.10E-08	1.30E-04	7.49E-05
11	E45	80	Single Unit Short Haul Truck	37	0.00E+00	7.00E-06	3.48E-07	6.87E+00	5.63E-06	1.38E-02	7.45E-06	3.59E-03	4.40E-04	9.95E-05	8.52E-04	2.07E-04	2.11E-04	6.89E-04	2.77E-05	1.10E-08	6.41E-04	6.72E-04
11	E45	80	Single Unit Long Haul Truck	2	0.00E+00	3.04E-07	1.50E-08	2.91E-01	2.41E-07	5.73E-04	3.24E-07	1.54E-04	2.01E-05	4.39E-06	3.72E-05	8.92E-06	9.08E-06	2.90E-05	1.17E-06	4.58E-10	2.81E-05	2.88E-05
11	E45	80	Combination Short Haul Truck	20	0.00E+00	8.97E-06	6.41E-07	7.41E+00	2.83E-08	7.94E-03	6.55E-06	9.22E-03	5.43E-04	1.34E-04	5.34E-04	1.89E-04	1.88E-04	1.12E-03	2.48E-05	0.00E+00	3.46E-04	1.74E-03
11	E45	80	Combination Long Haul Truck	19	0.00E+00	8.03E-06	5.40E-07	6.85E+00	3.27E-08	8.23E-03	6.08E-06	8.95E-03	5.31E-04	1.07E-04	5.51E-04	1.63E-04	1.64E-04	1.05E-03	2.30E-05	0.00E+00	3.88E-04	1.69E-03
11	E46	80	Passenger Car	233	0.00E+00	2.80E-06	3.02E-07	1.07E+01	1.95E-05	7.19E-02	6.22E-06	4.78E-04	1.28E-03	2.22E-04	6.05E-04	3.90E-04	4.00E-04	3.64E-05	5.46E-05	1.53E-08	2.05E-04	7.47E-05
11	E46	80	Passenger Truck	389	0.00E+00	6.01E-06	6.37E-07	2.48E+01	3.85E-05	1.33E-01	1.26E-05	1.42E-03	2.29E-03	4.07E-04	1.20E-03	7.82E-04	8.02E-04	1.75E-04	1.25E-04	3.41E-08	4.03E-04	2.32E-04
11	E46	80	Single Unit Short Haul Truck	43	0.00E+00	8.08E-06	4.01E-07	7.93E+00	6.50E-06	1.59E-02	8.60E-06	4.15E-03	5.07E-04	1.15E-04	9.83E-04	2.39E-04	2.43E-04	7.95E-04	3.19E-05	1.27E-08	7.40E-04	7.76E-04
11	E46	80	Single Unit Long Haul Truck	2	0.00E+00	3.51E-07	1.73E-08	3.35E-01	2.78E-07	6.61E-04	3.74E-07	1.77E-04	2.32E-05	5.07E-06	4.29E-05	1.03E-05	1.05E-05	3.35E-05	1.35E-06	5.28E-10	3.24E-05	3.32E-05
11	E46	80	Combination Short Haul Truck	22	0.00E+00	9.66E-06	6.91E-07	7.98E+00	3.05E-08	8.55E-03	7.06E-06	9.93E-03	5.84E-04	1.44E-04	5.75E-04	2.04E-04	2.02E-04	1.20E-03	2.67E-05	0.00E+00	3.73E-04	1.87E-03
11	E46	80	Combination Long Haul Truck	20	0.00E+00	8.65E-06	5.81E-07	7.38E+00	3.52E-08	8.86E-03	6.55E-06	9.64E-03	5.72E-04	1.15E-04	5.94E-04	1.75E-04	1.76E-04	1.13E-03	2.47E-05	0.00E+00	4.18E-04	1.82E-03
11	E47	80	Passenger Car	65	0.00E+00	7.78E-07	8.41E-08	2.99E+00	5.41E-06	2.00E-02	1.73E-06	1.33E-04	3.56E-04	6.18E-05	1.68E-04	1.08E-04	1.11E-04	1.01E-05	1.52E-05	4.26E-09	5.70E-05	2.08E-05
11	E47	80	Passenger Truck	108	0.00E+00	1.67E-06	1.77E-07	6.91E+00	1.07E-05	3.69E-02	3.50E-06	3.95E-04	6.38E-04	1.13E-04	3.35E-04	2.18E-04	2.23E-04	4.87E-05	3.48E-05	9.47E-09	1.12E-04	6.45E-05
11	E47	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.29E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	E47	80	Combination Short Haul Truck	4	0.00E+00	1.84E-06	1.32E-07	1.52E+00	5.80E-09	1.63E-03	1.34E-06	1.89E-03	1.11E-04	2.74E-05	1.10E-04	3.88E-05	3.85E-05	2.29E-04	5.09E-06	0.00E+00	7.10E-05	3.56E-04
11	E47	80	Combination Long Haul Truck	4	0.00E+00	1.65E-06	1.11E-07	1.41E+00	6.71E-09	1.69E-03	1.25E-06	1.84E-03	1.09E-04	2.19E-05	1.13E-04	3.34E-05	3.36E-05	2.15E-04	4.71E-06	0.00E+00	7.95E-05	3.46E-04
11	E48	80	Passenger Car	219	0.00E+00	2.64E-06	2.85E-07	1.01E+01	1.84E-05	6.79E-02	5.87E-06	4.51E-04	1.21E-03	2.10E-04	5.71E-04	3.68E-04	3.78E-04	3.44E-05	5.15E-05	1.44E-08	1.93E-04	7.05E-05
11	E48	80	Passenger Truck	368	0.00E+00	5.67E-06	6.01E-07	2.34E+01	3.63E-05	1.25E-01	1.19E-05	1.34E-03	2.16E-03	3.84E-04	1.14E-03	7.38E-04	7.57E-04	1.65E-04	1.18E-04	3.21E-08	3.80E-04	2.19E-04
11	E48	80	Single Unit Short Haul Truck	38	0.00E+00	7.18E-06	3.57E-07	7.04E+00	5.78E-06	1.41E-02	7.64E-06	3.68E-03	4.51E-04	1.02E-04	8.74E-04	2.13E-04	2.16E-04	7.07E-04	2.84E-05	1.13E-08	6.58E-04	6.89E-04
11	E48	80	Single Unit Long Haul Truck	2	0.00E+00	3.12E-07	1.54E-08	2.98E-01	2.47E-07	5.88E-04	3.32E-07	1.58E-04	2.06E-05	4.50E-06	3.81E-05	9.15E-06	9.31E-06	2.98E-05	1.20E-06	4.70E-10	2.88E-05	2.95E-05
11	E48	80	Combination Short Haul Truck	19	0.00E+00	8.51E-06	6.08E-07	7.03E+00	2.68E-08	7.53E-03	6.22E-06	8.74E-03	5.15E-04	1.27E-04	5.07E-04	1.80E-04	1.78E-04	1.06E-03	2.35E-05	0.00E+00	3.28E-04	1.65E-03
11	E48	80	Combination Long Haul Truck	18	0.00E+00	7.62E-06	5.12E-07	6.50E+00	3.10E-08	7.81E-03	5.77E-06	8.49E-03	5.03E-04	1.01E-04	5.23E-04	1.54E-04	1.55E-04	9.93E-04	2.18E-05	0.00E+00	3.68E-04	1.60E-03
11	E49	80	Passenger Car	56	0.00E+00	6.70E-07	7.25E-08	2.57E+00	4.66E-06	1.72E-02	1.49E-06	1.14E-04	3.06E-04	5.33E-05	1.45E-04	9.34E-05	9.59E-05	8.73E-06	1.31E-05	3.66E-09	4.91E-05	1.79E-05
11	E49	80	Passenger Truck	93	0.00E+00	1.44E-06	1.53E-07	5.95E+00	9.22E-06	3.18E-02	3.02E-06	3.40E-04	5.49E-04	9.75E-05	2.89E-04	1.87E-04	1.92E-04	4.19E-05	3.00E-05	8.16E-09	9.66E-05	5.56E-05
11	E49	80	Single Unit Short Haul Truck	3	0.00E+00	5.38E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.59E-05	1.62E-05	5.30E-05	2.13E-06	8.45E-10	4.93E-05	5.17E-05

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E49	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.42E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.67E-04
11	E49	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.38E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	E50	80	Passenger Car	204	0.00E+00	2.45E-06	2.66E-07	9.42E+00	1.71E-05	6.32E-02	5.46E-06	4.19E-04	1.12E-03	1.95E-04	5.31E-04	3.42E-04	3.51E-04	3.20E-05	4.79E-05	1.34E-08	1.80E-04	6.55E-05
11	E50	80	Passenger Truck	342	0.00E+00	5.27E-06	5.59E-07	2.18E+01	3.38E-05	1.16E-01	1.11E-05	1.25E-03	2.01E-03	3.57E-04	1.06E-03	6.87E-04	7.04E-04	1.54E-04	1.10E-04	2.99E-08	3.54E-04	2.04E-04
11	E50	80	Single Unit Short Haul Truck	45	0.00E+00	8.43E-06	4.19E-07	8.28E+00	6.79E-06	1.66E-02	8.98E-06	4.33E-03	5.30E-04	1.20E-04	1.03E-03	2.50E-04	2.54E-04	8.30E-04	3.34E-05	1.32E-08	7.73E-04	8.10E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	3.67E-07	1.81E-08	3.50E-01	2.90E-07	6.91E-04	3.90E-07	1.85E-04	2.42E-05	5.29E-06	4.48E-05	1.08E-05	1.09E-05	3.50E-05	1.41E-06	5.52E-10	3.39E-05	3.46E-05
11	E50	80	Combination Short Haul Truck	36	0.00E+00	1.59E-05	1.13E-06	1.31E+01	5.01E-08	1.40E-02	1.16E-05	1.63E-02	9.60E-04	2.37E-04	9.45E-04	3.35E-04	3.32E-04	1.98E-03	4.39E-05	0.00E+00	6.12E-04	3.07E-03
11	E50	80	Combination Long Haul Truck	33	0.00E+00	1.42E-05	9.55E-07	1.21E+01	5.78E-08	1.46E-02	1.08E-05	1.58E-02	9.39E-04	1.89E-04	9.76E-04	2.88E-04	2.90E-04	1.85E-03	4.06E-05	0.00E+00	6.86E-04	2.98E-03
11	E51	80	Passenger Car	15	0.00E+00	1.84E-07	1.99E-08	7.08E-01	1.28E-06	4.74E-03	4.10E-07	3.15E-05	8.43E-05	1.47E-05	3.99E-05	2.57E-05	2.64E-05	2.40E-06	3.60E-06	1.01E-09	1.35E-05	4.92E-06
11	E51	80	Passenger Truck	26	0.00E+00	3.96E-07	4.20E-08	1.64E+00	2.54E-06	8.74E-03	8.30E-07	9.36E-05	1.51E-04	2.68E-05	7.94E-05	5.16E-05	5.28E-05	1.15E-05	8.25E-06	2.25E-09	2.66E-05	1.53E-05
11	E51	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
11	E52	80	Passenger Car	214	0.00E+00	2.57E-06	2.78E-07	9.87E+00	1.79E-05	6.62E-02	5.72E-06	4.39E-04	1.18E-03	2.04E-04	5.57E-04	3.59E-04	3.68E-04	3.35E-05	5.02E-05	1.41E-08	1.88E-04	6.87E-05
11	E52	80	Passenger Truck	358	0.00E+00	5.52E-06	5.86E-07	2.28E+01	3.54E-05	1.22E-01	1.16E-05	1.31E-03	2.11E-03	3.74E-04	1.11E-03	7.19E-04	7.37E-04	1.61E-04	1.15E-04	3.13E-08	3.71E-04	2.13E-04
11	E52	80	Single Unit Short Haul Truck	48	0.00E+00	8.97E-06	4.46E-07	8.81E+00	7.22E-06	1.76E-02	9.55E-06	4.61E-03	5.64E-04	1.28E-04	1.09E-03	2.66E-04	2.70E-04	8.83E-04	3.55E-05	1.41E-08	8.22E-04	8.62E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	3.90E-07	1.92E-08	3.73E-01	3.08E-07	7.35E-04	4.15E-07	1.97E-04	2.58E-05	5.63E-06	4.77E-05	1.14E-05	1.16E-05	3.72E-05	1.50E-06	5.87E-10	3.60E-05	3.69E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	1.63E-05	1.17E-06	1.35E+01	5.15E-08	1.45E-02	1.19E-05	1.68E-02	9.88E-04	2.43E-04	9.72E-04	3.45E-04	3.42E-04	2.04E-03	4.52E-05	0.00E+00	6.30E-04	3.16E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.46E-05	9.83E-07	1.25E+01	5.95E-08	1.50E-02	1.11E-05	1.63E-02	9.66E-04	1.94E-04	1.00E-03	2.96E-04	2.98E-04	1.91E-03	4.18E-05	0.00E+00	7.06E-04	3.07E-03
11	E53	80	Passenger Car	81	0.00E+00	9.71E-07	1.05E-07	3.73E+00	6.76E-06	2.50E-02	2.16E-06	1.66E-04	4.44E-04	7.72E-05	2.10E-04	1.35E-04	1.39E-04	1.27E-05	1.90E-05	5.31E-09	7.11E-05	2.59E-05
11	E53	80	Passenger Truck	135	0.00E+00	2.09E-06	2.21E-07	8.62E+00	1.34E-05	4.60E-02	4.37E-06	4.93E-04	7.96E-04	1.41E-04	4.18E-04	2.72E-04	2.78E-04	6.07E-05	4.34E-05	1.18E-08	1.40E-04	8.05E-05
11	E53	80	Single Unit Short Haul Truck	29	0.00E+00	5.38E-06	2.67E-07	5.28E+00	4.33E-06	1.06E-02	5.73E-06	2.76E-03	3.38E-04	7.65E-05	6.55E-04	1.59E-04	1.62E-04	5.30E-04	2.13E-05	8.45E-09	4.93E-04	5.17E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.15E-08	2.24E-01	1.85E-07	4.41E-04	2.49E-07	1.18E-04	1.55E-05	3.38E-06	2.86E-05	6.86E-06	6.98E-06	2.23E-05	9.02E-07	3.52E-10	2.16E-05	2.21E-05
11	E53	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.15E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	E53	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.97E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E54	80	Passenger Car	393	0.00E+00	4.73E-06	5.11E-07	1.81E+01	3.29E-05	1.22E-01	1.05E-05	8.07E-04	2.16E-03	3.76E-04	1.02E-03	6.59E-04	6.76E-04	6.16E-05	9.22E-05	2.58E-08	3.46E-04	1.26E-04
11	E54	80	Passenger Truck	658	0.00E+00	1.01E-05	1.08E-06	4.19E+01	6.50E-05	2.24E-01	2.13E-05	2.40E-03	3.88E-03	6.88E-04	2.04E-03	1.32E-03	1.35E-03	2.96E-04	2.11E-04	5.76E-08	6.81E-04	3.92E-04
11	E54	80	Single Unit Short Haul Truck	50	0.00E+00	9.33E-06	4.64E-07	9.16E+00	7.51E-06	1.83E-02	9.93E-06	4.79E-03	5.86E-04	1.33E-04	1.14E-03	2.76E-04	2.81E-04	9.19E-04	3.69E-05	1.46E-08	8.55E-04	8.96E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	4.06E-07	2.00E-08	3.88E-01	3.21E-07	7.64E-04	4.32E-07	2.05E-04	2.68E-05	5.85E-06	4.96E-05	1.19E-05	1.21E-05	3.87E-05	1.56E-06	6.10E-10	3.75E-05	3.83E-05
11	E54	80	Combination Short Haul Truck	39	0.00E+00	1.70E-05	1.22E-06	1.41E+01	5.37E-08	1.51E-02	1.24E-05	1.75E-02	1.03E-03	2.54E-04	1.01E-03	3.59E-04	3.56E-04	2.12E-03	4.71E-05	0.00E+00	6.57E-04	3.30E-03
11	E54	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.30E+01	6.20E-08	1.56E-02	1.15E-05	1.70E-02	1.01E-03	2.03E-04	1.05E-03	3.09E-04	3.11E-04	1.99E-03	4.35E-05	0.00E+00	7.36E-04	3.20E-03
11	E55	80	Passenger Car	81	0.00E+00	9.71E-07	1.05E-07	3.73E+00	6.76E-06	2.50E-02	2.16E-06	1.66E-04	4.44E-04	7.72E-05	2.10E-04	1.35E-04	1.39E-04	1.27E-05	1.90E-05	5.31E-09	7.11E-05	2.59E-05
11	E55	80	Passenger Truck	135	0.00E+00	2.09E-06	2.21E-07	8.62E+00	1.34E-05	4.60E-02	4.37E-06	4.93E-04	7.96E-04	1.41E-04	4.18E-04	2.72E-04	2.78E-04	6.07E-05	4.34E-05	1.18E-08	1.40E-04	8.05E-05
11	E55	80	Single Unit Short Haul Truck	29	0.00E+00	5.38E-06	2.67E-07	5.28E+00	4.33E-06	1.06E-02	5.73E-06	2.76E-03	3.38E-04	7.65E-05	6.55E-04	1.59E-04	1.62E-04	5.30E-04	2.13E-05	8.45E-09	4.93E-04	5.17E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	2.34E-07	1.15E-08	2.24E-01	1.85E-07	4.41E-04	2.49E-07	1.18E-04	1.55E-05	3.38E-06	2.86E-05	6.86E-06	6.98E-06	2.23E-05	9.02E-07	3.52E-10	2.16E-05	2.21E-05
11	E55	80	Combination Short Haul Truck	14	0.00E+00	5.98E-06	4.28E-07	4.94E+00	1.89E-08	5.29E-03	4.37E-06	6.15E-03	3.62E-04	8.92E-05	3.56E-04	1.26E-04	1.25E-04	7.45E-04	1.65E-05	0.00E+00	2.31E-04	1.16E-03
11	E55	80	Combination Long Haul Truck	12	0.00E+00	5.35E-06	3.60E-07	4.57E+00	2.18E-08	5.49E-03	4.06E-06	5.97E-03	3.54E-04	7.12E-05	3.68E-04	1.09E-04	1.09E-04	6.98E-04	1.53E-05	0.00E+00	2.58E-04	1.12E-03
11	E56	80	Passenger Car	393	0.00E+00	4.73E-06	5.11E-07	1.81E+01	3.29E-05	1.22E-01	1.05E-05	8.07E-04	2.16E-03	3.76E-04	1.02E-03	6.59E-04	6.76E-04	6.16E-05	9.22E-05	2.58E-08	3.46E-04	1.26E-04
11	E56	80	Passenger Truck	658	0.00E+00	1.01E-05	1.08E-06	4.19E+01	6.50E-05	2.24E-01	2.13E-05	2.40E-03	3.88E-03	6.88E-04	2.04E-03	1.32E-03	1.35E-03	2.96E-04	2.11E-04	5.76E-08	6.81E-04	3.92E-04
11	E56	80	Single Unit Short Haul Truck	50	0.00E+00	9.33E-06	4.64E-07	9.16E+00	7.51E-06	1.83E-02	9.93E-06	4.79E-03	5.86E-04	1.33E-04	1.14E-03	2.76E-04	2.81E-04	9.19E-04	3.69E-05	1.46E-08	8.55E-04	8.96E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	4.06E-07	2.00E-08	3.88E-01	3.21E-07	7.64E-04	4.32E-07	2.05E-04	2.68E-05	5.85E-06	4.96E-05	1.19E-05	1.21E-05	3.87E-05	1.56E-06	6.10E-10	3.75E-05	3.83E-05
11	E56	80	Combination Short Haul Truck	39	0.00E+00	1.70E-05	1.22E-06	1.41E+01	5.37E-08	1.51E-02	1.24E-05	1.75E-02	1.03E-03	2.54E-04	1.01E-03	3.59E-04	3.56E-04	2.12E-03	4.71E-05	0.00E+00	6.57E-04	3.30E-03
11	E56	80	Combination Long Haul Truck	35	0.00E+00	1.52E-05	1.02E-06	1.30E+01	6.20E-08	1.56E-02	1.15E-05	1.70E-02	1.01E-03	2.03E-04	1.05E-03	3.09E-04	3.11E-04	1.99E-03	4.35E-05	0.00E+00	7.36E-04	3.20E-03
10	E57	70	Passenger Car	262	0.00E+00	3.38E-06	3.66E-07	1.25E+01	2.36E-05	8.50E-02	7.52E-06	5.25E-04	2.03E-03	3.26E-04	7.32E-04	4.72E-04	4.85E-04	4.69E-05	6.32E-05	1.72E-08	2.48E-04	8.21E-05
10	E57	70	Passenger Truck	439	0.00E+00	7.42E-06	7.85E-07	2.87E+01	4.69E-05	1.57E-01	1.54E-05	1.64E-03	3.70E-03	6.01E-04	1.47E-03	9.56E-04	9.80E-04	2.13E-04	1.44E-04	3.86E-08	4.90E-04	2.70E-04
10	E57	70	Single Unit Short Haul Truck	9	0.00E+00	2.03E-06	1.01E-07	1.59E+00	1.66E-06	3.17E-03	2.16E-06	1.00E-03	1.43E-04	2.85E-05	2.46E-04	6.06E-05	6.16E-05	1.59E-04	6.40E-06	2.58E-09	1.84E-04	1.87E-04
10	E57	70	Combination Short Haul Truck	6	0.00E+00	3.27E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.44E-03	2.48E-04	5.42E-05	1.99E-04	6.86E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	E57	70	Combination Long Haul Truck	6	0.00E+00	2.95E-06	1.97E-07	2.21E+00	1.22E-08	2.98E-03	2.24E-06	3.39E-03	2.47E-04	4.50E-05	2.06E-04	5.96E-05	6.03E-05	3.38E-04	7.40E-06	0.00E+00	1.45E-04	6.38E-04
10	E58	70	Passenger Car	196	0.00E+00	2.53E-06	2.74E-07	9.33E+00	1.76E-05	6.37E-02	5.64E-06	3.93E-04	1.52E-03	2.44E-04	5.49E-04	3.54E-04	3.63E-04	3.52E-05	4.73E-05	1.29E-08	1.86E-04	6.15E-05
10	E58	70	Passenger Truck	329	0.00E+00	5.56E-06	5.88E-07	2.15E+01	3.51E-05	1.17E-01	1.15E-05	1.23E-03	2.77E-03	4.50E-04	1.10E-03	7.16E-04	7.34E-04	1.59E-04	1.08E-04	2.89E-08	3.67E-04	2.02E-04
10	E58	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.08E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
10	E58	70	Combination Short Haul Truck	12	0.00E+00	6.26E-06	4.45E-07	4.54E+00	2.03E-08	5.39E-03	4.59E-06	6.59E-03	4.76E-04	1.04E-04	3.81E-04	1.32E-04	1.31E-04	6.84E-04	1.52E-05	0.00E+00	2.50E-04	1.24E-03
10	E58	70	Combination Long Haul Truck	11	0.00E+00	5.66E-06	3.78E-07	4.23E+00	2.34E-08	5.71E-03	4.30E-06	6.49E-03	4.73E-04	8.63E-05	3.94E-04	1.14E-04	1.16E-04	6.47E-04	1.42E-05	0.00E+00	2.79E-04	1.22E-03
11	E59	80	Passenger Car	199	0.00E+00	2.39E-06	2.58E-07	9.17E+00	1.66E-05	6.14E-02	5.31E-06	4.08E-04	1.09E-03	1.90E-04	5.17E-04	3.33E-04	3.42E-04	3.11E-05	4.66E-05	1.31E-08	1.75E-04	6.37E-05
11	E59	80	Passenger Truck	332	0.00E+00	5.13E-06	5.44E-07	2.12E+01	3.29E-05	1.13E-01	1.07E-05	1.21E-03	1.96E-03	3.48E-04	1.03E-03	6.68E-04	6.84E-04	1.49E-04	1.07E-04	2.91E-08	3.44E-04	1.98E-04
11	E59	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.29E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	E59	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.60E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.90E-04
11	E59	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.76E-04
11	E60	80	Passenger Car	147	0.00E+00	1.77E-06	1.91E-07	6.78E+00	1.23E-05	4.55E-02	3.93E-06	3.02E-04	8.08E-04	1.40E-04	3.82E-04	2.46E-04	2.53E-04	2.30E-05	3.45E-05	9.67E-09	1.29E-04	4.72E-05
11	E60	80	Passenger Truck	246	0.00E+00	3.79E-06	4.03E-07	1.57E+01	2.43E-05	8.37E-02	7.95E-06	8.97E-04	1.45E-03	2.57E-04	7.61E-04	4.94E-04	5.06E-04	1.11E-04	7.90E-05	2.15E-08	2.55E-04	1.47E-04
11	E60	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	E60	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.58E-06
11	E60	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.78E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.13E-04
11	E60	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.67E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.92E-04
11	E61	80	Passenger Car	199	0.00E+00	2.39E-06	2.58E-07	9.17E+00	1.66E-05	6.14E-02	5.31E-06	4.08E-04	1.09E-03	1.90E-04	5.17E-04	3.33E-04	3.42E-04	3.11E-05	4.66E-05	1.31E-08	1.75E-04	6.37E-05
11	E61	80	Passenger Truck	332	0.00E+00	5.13E-06	5.44E-07	2.12E+01	3.29E-05	1.13E-01	1.07E-05	1.21E-03	1.96E-03	3.48E-04	1.03E-03	6.68E-04	6.84E-04	1.49E-04	1.07E-04	2.91E-08	3.44E-04	1.98E-04
11	E61	80	Single Unit Short Haul Truck	9	0.00E+00	1.62E-06	8.02E-08	1.59E+00	1.30E-06	3.17E-03	1.72E-06	8.29E-04	1.01E-04	2.30E-05	1.97E-04	4.78E-05	4.86E-05	1.59E-04	6.39E-06	2.53E-09	1.48E-04	1.55E-04
11	E61	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.60E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.90E-04
11	E61	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.76E-04
11	E62	80	Passenger Car	147	0.00E+00	1.77E-06	1.91E-07	6.78E+00	1.23E-05	4.55E-02	3.93E-06	3.02E-04	8.08E-04	1.40E-04	3.82E-04	2.46E-04	2.53E-04	2.30E-05	3.45E-05	9.67E-09	1.29E-04	4.72E-05
11	E62	80	Passenger Truck	246	0.00E+00	3.79E-06	4.03E-07	1.57E+01	2.43E-05	8.37E-02	7.95E-06	8.97E-04	1.45E-03	2.57E-04	7.61E-04	4.94E-04	5.06E-04	1.11E-04	7.90E-05	2.15E-08	2.55E-04	1.47E-04
11	E62	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	E62	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.58E-06
11	E62	80	Combination Short Haul Truck	8	0.00E+00	3.68E-06	2.63E-07	3.04E+00	1.16E-08	3.26E-03	2.69E-06	3.78E-03	2.23E-04	5.49E-05	2.19E-04	7.77E-05	7.71E-05	4.59E-04	1.02E-05	0.00E+00	1.42E-04	7.13E-04
11	E62	80	Combination Long Haul Truck	8	0.00E+00	3.29E-06	2.21E-07	2.81E+00	1.34E-08	3.38E-03	2.50E-06	3.67E-03	2.18E-04	4.38E-05	2.26E-04	6.68E-05	6.72E-05	4.30E-04	9.42E-06	0.00E+00	1.59E-04	6.92E-04
10	E63	70	Passenger Car	837	0.00E+00	1.08E-05	1.17E-06	3.98E+01	7.53E-05	2.72E-01	2.40E-05	1.68E-03	6.49E-03	1.04E-03	2.34E-03	1.51E-03	1.55E-03	1.50E-04	2.02E-04	5.50E-08	7.92E-04	2.62E-04
10	E63	70	Passenger Truck	1403	0.00E+00	2.37E-05	2.51E-06	9.18E+01	1.50E-04	5.00E-01	4.92E-05	5.25E-03	1.18E-02	1.92E-03	4.70E-03	3.06E-03	3.13E-03	6.80E-04	4.61E-04	1.23E-07	1.57E-03	8.64E-04
10	E63	70	Single Unit Short Haul Truck	78	0.00E+00	1.82E-05	9.13E-07	1.43E+01	1.49E-05	2.86E-02	1.94E-05	9.00E-03	1.28E-03	2.57E-04	2.21E-03	5.45E-04	5.54E-04	1.43E-03	5.76E-05	2.32E-08	1.66E-03	1.69E-03
10	E63	70	Single Unit Long Haul Truck	3	0.00E+00	7.94E-07	3.95E-08	6.06E-01	6.43E-07	1.20E-03	8.46E-07	3.87E-04	5.86E-05	1.14E-05	9.67E-05	2.36E-05	2.40E-05	6.05E-05	2.45E-06	9.80E-10	7.27E-05	7.25E-05
10	E63	70	Combination Short Haul Truck	52	0.00E+00	2.72E-05	1.93E-06	1.97E+01	8.84E-08	2.34E-02	2.00E-05	2.86E-02	2.07E-03	4.52E-04	1.66E-03	5.72E-04	5.71E-04	2.97E-03	6.60E-05	0.00E+00	1.09E-03	5.39E-03
10	E63	70	Combination Long Haul Truck	48	0.00E+00	2.46E-05	1.64E-06	1.84E+01	1.02E-07	2.48E-02	1.87E-05	2.82E-02	2.06E-03	3.75E-04	1.71E-03	4.97E-04	5.02E-04	2.81E-03	6.16E-05	0.00E+00	1.21E-03	5.32E-03
10	E64	70	Passenger Car	456	0.00E+00	5.89E-06	6.37E-07	2.17E+01	4.10E-05	1.48E-01	1.31E-05	9.14E-04	3.54E-03	5.67E-04	1.27E-03	8.22E-04	8.43E-04	8.17E-05	1.10E-04	3.00E-08	4.31E-04	1.43E-04
10	E64	70	Passenger Truck	764	0.00E+00	1.29E-05	1.37E-06	5.00E+01	8.17E-05	2.73E-01	2.68E-05	2.86E-03	6.43E-03	1.05E-03	2.56E-03	1.66E-03	1.71E-03	3.70E-04	2.51E-04	6.72E-08	8.54E-04	4.70E-04
10	E64	70	Single Unit Short Haul Truck	53	0.00

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E68	80	Passenger Truck	589	0.00E+00	9.09E-06	9.64E-07	3.76E+01	5.82E-05	2.01E-01	1.90E-05	2.15E-03	3.47E-03	6.16E-04	1.82E-03	1.18E-03	1.21E-03	2.65E-04	1.89E-04	5.15E-08	6.10E-04	3.51E-04
11	E68	80	Single Unit Short Haul Truck	38	0.00E+00	7.18E-06	3.57E-07	7.04E+00	5.78E-06	1.41E-02	7.64E-06	3.68E-03	4.51E-04	1.02E-04	8.74E-04	2.13E-04	2.16E-04	7.07E-04	2.84E-05	1.13E-08	6.58E-04	6.89E-04
11	E68	80	Single Unit Long Haul Truck	2	0.00E+00	3.12E-07	1.54E-08	2.98E-01	2.47E-07	5.88E-04	3.32E-07	1.58E-04	2.06E-05	4.50E-06	3.81E-05	9.15E-06	9.31E-06	2.98E-05	1.20E-06	4.70E-10	2.88E-05	2.95E-05
11	E68	80	Combination Short Haul Truck	19	0.00E+00	8.51E-06	6.08E-07	7.03E+00	2.68E-08	7.53E-03	6.22E-06	8.74E-03	5.15E-04	1.27E-04	5.07E-04	1.80E-04	1.78E-04	1.06E-03	2.35E-05	0.00E+00	3.28E-04	1.65E-03
11	E68	80	Combination Long Haul Truck	18	0.00E+00	7.62E-06	5.12E-07	6.50E+00	3.10E-08	7.81E-03	5.77E-06	8.49E-03	5.03E-04	1.01E-04	5.23E-04	1.54E-04	1.55E-04	9.93E-04	2.18E-05	0.00E+00	3.68E-04	1.60E-03
10	E69	70	Passenger Car	340	0.00E+00	4.39E-06	4.75E-07	1.62E+01	3.05E-05	1.10E-01	9.76E-06	6.81E-04	2.63E-03	4.23E-04	9.50E-04	6.12E-04	6.28E-04	6.09E-05	8.20E-05	2.23E-08	3.21E-04	1.06E-04
10	E69	70	Passenger Truck	569	0.00E+00	9.62E-06	1.02E-06	3.72E+01	6.08E-05	2.03E-01	2.00E-05	2.13E-03	4.79E-03	7.79E-04	1.91E-03	1.24E-03	1.27E-03	2.76E-04	1.87E-04	5.01E-08	6.36E-04	3.50E-04
10	E69	70	Single Unit Short Haul Truck	14	0.00E+00	3.38E-06	1.69E-07	2.64E+00	2.76E-06	5.29E-03	3.60E-06	1.67E-03	2.38E-04	4.76E-05	4.10E-04	1.01E-04	1.03E-04	2.65E-04	1.07E-05	4.30E-09	3.07E-04	3.12E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.32E-09	1.12E-01	1.19E-07	2.22E-04	1.57E-07	7.17E-05	1.08E-05	2.12E-06	1.79E-05	4.37E-06	4.44E-06	1.12E-05	4.53E-07	1.81E-10	1.35E-05	1.34E-05
10	E69	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.01E-04
10	E69	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.67E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.91E-04
10	E70	70	Passenger Car	482	0.00E+00	6.23E-06	6.74E-07	2.29E+01	4.33E-05	1.57E-01	1.38E-05	9.66E-04	3.74E-03	6.00E-04	1.35E-03	8.69E-04	8.92E-04	8.64E-05	1.16E-04	3.17E-08	4.56E-04	1.51E-04
10	E70	70	Passenger Truck	808	0.00E+00	1.37E-05	1.44E-06	5.28E+01	8.64E-05	2.88E-01	2.84E-05	3.02E-03	6.80E-03	1.11E-03	2.71E-03	1.76E-03	1.80E-03	3.92E-04	2.66E-04	7.11E-08	9.03E-04	4.97E-04
10	E70	70	Single Unit Short Haul Truck	24	0.00E+00	5.63E-06	2.82E-07	4.41E+00	4.60E-06	8.82E-03	5.99E-06	2.78E-03	3.96E-04	7.93E-05	6.83E-04	1.68E-04	1.71E-04	4.42E-04	1.78E-05	7.17E-09	5.12E-04	5.20E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	2.45E-07	1.22E-08	1.87E-01	1.99E-07	3.70E-04	2.61E-07	1.19E-04	1.81E-05	3.53E-06	2.98E-05	7.28E-06	7.41E-06	1.87E-05	7.55E-07	3.02E-10	2.24E-05	2.24E-05
10	E70	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.01E-04
10	E70	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.67E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.91E-04
10	E71	70	Passenger Car	563	0.00E+00	7.27E-06	7.86E-07	2.67E+01	5.06E-05	1.83E-01	1.62E-05	1.13E-03	4.36E-03	7.00E-04	1.57E-03	1.01E-03	1.04E-03	1.01E-04	1.36E-04	3.70E-08	5.32E-04	1.76E-04
10	E71	70	Passenger Truck	942	0.00E+00	1.59E-05	1.69E-06	6.17E+01	1.01E-04	3.36E-01	3.31E-05	3.53E-03	7.94E-03	1.29E-03	3.16E-03	2.05E-03	2.10E-03	4.57E-04	3.10E-04	8.29E-08	1.05E-03	5.80E-04
10	E71	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	E71	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.15E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.16E-04
10	E71	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.13E-04
10	E72	70	Passenger Car	544	0.00E+00	7.02E-06	7.60E-07	2.59E+01	4.89E-05	1.77E-01	1.56E-05	1.09E-03	4.22E-03	6.77E-04	1.52E-03	9.80E-04	1.01E-03	9.74E-05	1.31E-04	3.57E-08	5.15E-04	1.70E-04
10	E72	70	Passenger Truck	911	0.00E+00	1.54E-05	1.63E-06	5.96E+01	9.74E-05	3.25E-01	3.20E-05	3.41E-03	7.67E-03	1.25E-03	3.05E-03	1.99E-03	2.03E-03	4.42E-04	3.00E-04	8.01E-08	1.02E-03	5.61E-04
10	E72	70	Single Unit Short Haul Truck	29	0.00E+00	6.75E-06	3.38E-07	5.29E+00	5.52E-06	1.06E-02	7.19E-06	3.33E-03	4.75E-04	9.51E-05	8.19E-04	2.02E-04	2.05E-04	5.30E-04	2.13E-05	8.61E-09	6.14E-04	6.24E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	2.94E-07	1.46E-08	2.24E-01	2.38E-07	4.44E-04	3.13E-07	1.43E-04	2.17E-05	4.23E-06	3.58E-05	8.74E-06	8.89E-06	2.24E-05	9.06E-07	3.63E-10	2.69E-05	2.68E-05
10	E72	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.11E-04	6.78E-05	2.49E-04	8.58E-05	8.57E-05	4.46E-04	9.90E-06	0.00E+00	1.63E-04	8.09E-04
10	E72	70	Combination Long Haul Truck	7	0.00E+00	3.69E-06	2.47E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.63E-05	2.57E-04	7.46E-05	7.54E-05	4.22E-04	9.25E-06	0.00E+00	1.82E-04	7.98E-04
9	E73	60	Passenger Car	268	0.00E+00	3.97E-06	4.29E-07	1.33E+01	2.76E-05	9.92E-02	8.82E-06	5.46E-04	2.72E-03	4.17E-04	8.58E-04	5.53E-04	5.68E-04	5.59E-05	6.73E-05	1.85E-08	2.90E-04	8.53E-05
9	E73	60	Passenger Truck	448	0.00E+00	8.75E-06	9.24E-07	3.04E+01	5.47E-05	1.77E-01	1.80E-05	1.78E-03	4.98E-03	7.74E-04	1.71E-03	1.12E-03	1.14E-03	2.37E-04	1.52E-04	4.21E-08	5.70E-04	2.95E-04
9	E73	60	Single Unit Short Haul Truck	15	0.00E+00	4.50E-06	2.25E-07	2.87E+00	3.71E-06	5.55E-03	4.80E-06	2.15E-03	3.64E-04	6.61E-05	5.47E-04	1.35E-04	1.37E-04	2.87E-04	1.16E-05	4.77E-09	4.10E-04	4.03E-04
9	E73	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.78E-09	1.22E-01	1.61E-07	2.36E-04	2.10E-07	9.29E-05	1.64E-05	2.92E-06	2.40E-05	5.87E-06	5.97E-06	1.22E-05	4.95E-07	2.03E-10	1.80E-05	1.74E-05
9	E73	60	Combination Short Haul Truck	13	0.00E+00	7.69E-06	5.36E-07	5.00E+00	2.72E-08	6.73E-03	5.71E-06	8.36E-03	7.16E-04	1.42E-04	4.89E-04	1.60E-04	1.60E-04	7.54E-04	1.68E-05	0.00E+00	3.29E-04	1.58E-03
9	E73	60	Combination Long Haul Truck	12	0.00E+00	6.90E-06	4.49E-07	4.69E+00	3.12E-08	7.25E-03	5.32E-06	8.29E-03	7.20E-04	1.22E-04	5.04E-04	1.37E-04	1.39E-04	7.17E-04	1.57E-05	0.00E+00	3.66E-04	1.56E-03
9	E74	60	Passenger Car	194	0.00E+00	2.88E-06	3.12E-07	9.66E+00	2.00E-05	7.20E-02	6.40E-06	3.97E-04	1.97E-03	3.03E-04	6.23E-04	4.02E-04	4.12E-04	4.06E-05	4.89E-05	1.35E-08	2.11E-04	6.20E-05
9	E74	60	Passenger Truck	326	0.00E+00	6.35E-06	6.71E-07	2.20E+01	3.97E-05	1.29E-01	1.31E-05	1.29E-03	3.62E-03	5.62E-04	1.24E-03	8.11E-04	8.31E-04	1.72E-04	1.11E-04	3.06E-08	4.14E-04	2.14E-04
9	E74	60	Single Unit Short Haul Truck	22	0.00E+00	6.47E-06	3.23E-07	4.12E+00	5.33E-06	7.98E-03	6.90E-06	3.09E-03	5.24E-04	9.50E-05	7.86E-04	1.94E-04	1.97E-04	4.12E-04	1.66E-05	6.86E-09	5.89E-04	5.79E-04
9	E74	60	Single Unit Long Haul Truck	1	0.00E+00	2.82E-07	1.41E-08	1.76E-01	2.32E-07	3.39E-04	3.02E-07	1.34E-04	2.35E-05	4.20E-06	3.44E-05	8.44E-06	8.58E-06	1.76E-05	7.11E-07	2.92E-10	2.59E-05	2.50E-05
9	E74	60	Combination Short Haul Truck	10	0.00E+00	5.85E-06	4.07E-07	3.80E+00	2.07E-08	5.11E-03	4.34E-06	6.35E-03	5.44E-04	1.08E-04	3.72E-04	1.21E-04	1.22E-04	5.73E-04	1.27E-05	0.00E+00	2.50E-04	1.20E-03
9	E74	60	Combination Long Haul Truck	9	0.00E+00	5.25E-06	3.41E-07	3.57E+00	2.37E-08	5.51E-03	4.05E-06	6.30E-03	5.47E-04	9.28E-05	3.83E-04	1.04E-04	1.06E-04	5.45E-04	1.19E-05	0.00E+00	2.78E-04	1.19E-03
53	E75	70	Passenger Car	737	0.00E+00	9.22E-06	9.97E-07	3.54E+01	6.42E-05	2.30E-01	2.05E-05	1.50E-03	5.62E-03	9.07E-04	2.00E-03	1.29E-03	1.32E-03	1.32E-04	1.80E-04	4.89E-08	6.75E-04	2.35E-04
53	E75	70	Passenger Truck	1233	0.00E+00	2.01E-05	2.13E-06	8.17E+01	1.27E-04	4.22E-01	4.18E-05	4.60E-03	1.01E-02	1.65E-03	3.98E-03	2.59E-03	2.65E-03	5.94E-04	4.11E-04	1.08E-07	1.33E-03	7.54E-04
53	E75	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.62E-02	1.10E-05	5.11E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.57E-04
53	E75	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.24E-08	3.44E-01	3.65E-07	6.81E-04	4.81E-07	2.20E-04	3.33E-05	6.49E-06	5.49E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.12E-05
53	E75	70	Combination Short Haul Truck	41	0.00E+00	2.12E-05	1.51E-06	1.54E+01	6.90E-08	1.83E-02	1.56E-05	2.23E-02	1.61E-03	3.52E-04	1.29E-03	4.46E-04	4.46E-04	2.32E-03	5.15E-05	0.00E+00	8.47E-04	4.21E-03
53	E75	70	Combination Long Haul Truck	37	0.00E+00	1.92E-05	1.28E-06	1.44E+01	7.94E-08	1.94E-02	1.46E-05	2.20E-02	1.60E-03	2.93E-04	1.34E-03	3.88E-04	3.92E-04	2.19E-03	4.81E-05	0.00E+00	9.45E-04	4.15E-03
53	E76	70	Passenger Car	1049	0.00E+00	1.31E-05	1.42E-06	5.04E+01	9.14E-05	3.27E-01	2.92E-05	2.14E-03	8.01E-03	1.29E-03	2.84E-03	1.83E-03	1.88E-03	1.88E-04	2.56E-04	6.97E-08	9.62E-04	3.34E-04
53	E76	70	Passenger Truck	1757	0.00E+00	2.86E-05	3.03E-06	1.16E+02	1.81E-04	6.01E-01	5.95E-05	6.55E-03	1.44E-02	2.35E-03	5.67E-03	3.69E-03	3.78E-03	8.47E-04	5.85E-04	1.53E-07	1.89E-03	1.07E-03
53	E76	70	Single Unit Short Haul Truck	55	0.00E+00	1.28E-05	6.43E-07	1.00E+01	1.05E-05	2.01E-02	1.37E-05	6.33E-03	9.03E-04	1.81E-04	1.56E-03	3.84E-04	3.90E-04	1.01E-03	4.05E-05	1.64E-08	1.17E-03	1.19E-03
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	5.59E-07	2.78E-08	4.26E-01	4.53E-07	8.44E-04	5.96E-07	2.72E-04	4.12E-05	8.04E-06	6.80E-05	1.66E-05	1.69E-05	4.26E-05	1.72E-06	6.89E-10	5.11E-05	5.10E-05
53	E76	70	Combination Short Haul Truck	72	0.00E+00	3.75E-05	2.67E-06	2.72E+01	1.22E-07	3.23E-02	2.75E-05	3.95E-02	2.86E-03	6.23E-04	2.29E-03	7.89E-04	7.88E-04	4.10E-03	9.11E-05	0.00E+00	1.50E-03	7.44E-03
53	E76	70	Combination Long Haul Truck	66	0.00E+00	3.39E-05	2.27E-06	2.54E+01	1.41E-07	3.42E-02	2.58E-05	3.90E-02	2.84E-03	5.18E-04	2.36E-03	6.86E-04	6.93E-04	3.88E-03	8.51E-05	0.00E+00	1.67E-03	7.34E-03
53	E77	70	Passenger Car	758	0.00E+00	9.49E-06	1.03E-06	3.64E+01	6.61E-05	2.36E-01	2.11E-05	1.55E-03	5.79E-03	9.34E-04	2.05E-03	1.32E-03	1.36E-03	1.36E-04	1.85E-04	5.04E-08	6.95E-04	2.42E-04
53	E77	70	Passenger Truck	1270	0.00E+00	2.07E-05	2.19E-06	8.41E+01	1.31E-04	4.35E-01	4.30E-05	4.73E-03	1.04E-02	1.70E-03	4.10E-03	2.67E-03	2.73E-03	6.12E-04	4.23E-04	1.11E-07	1.37E-03	7.76E-04
53	E77	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.62E-02	1.10E-05	5.11E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.57E-04
53	E77	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.24E-08	3.44E-01	3.65E-07	6.81E-04	4.81E-07	2.20E-04	3.33E-05	6.49E-06	5.49E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.12E-05
53	E77	70	Combination Short Haul Truck	48	0.00E+00	2.50E-05	1.78E-06	1.81E+01	8.13E-08	2.15E-02	1.84E-05	2.63E-02	1.90E-03	4.16E-04	1.52E-03	5.26E-04	5.25E-04	2.74E-03	6.07E-05	0.00E+00	9.99E-04	4.96E-03
53	E77	70	Combination Long Haul Truck	44	0.00E+00	2.26E-05	1.51E-06	1.69E+01	9.37E-08	2.28E-02	1.72E-05	2.60E-02	1.89E-03	3.45E-04	1.58E-03	4.57E-04	4.62E-04	2.59E-03	5.67E-05	0.00E+00	1.11E-03	4.89E-03
53	E78	70	Passenger Car	1060	0.00E+00	1.33E-05	1.44E-06	5.10E+01	9.23E-05	3.30E-01	2.95E-05	2.16E-03	8.09E-03	1.31E-03	2.87E-03	1.85E-03	1.90E-03	1.90E-04	2.59E-04	7.04E-08	9.72E-04	3.38E-04
53	E78	70	Passenger Truck	1775	0.00E+00	2.89E-05	3.06E-06	1.18E+02	1.83E-04	6.08E-01	6.01E-05	6.61E-03	1.45E-02	2.37E-03	5.73E-03	3.73E-03	3.82E-03	8.56E-04	5.91E-04	1.55E-07	1.91E-03	1.09E-03
53	E78	70	Single Unit Short Haul Truck	57	0.00E+00	1.33E-05	6.65E-07	1.04E+01	1.09E-05	2.08E-02	1.41E-05	6.56E-03	9.34E-04	1.87E-04	1.61E-03	3.97E-04	4.04E-04	1.04E-03	4.19E-05	1.69E-08	1.21E-03	1.23E-03
53	E78	70	Single Unit Long Haul Truck	2	0.00E+00	5.79E-07	2.88E-08	4.41E-01	4.69E-07	8.74E-04	6.16E-07	2.82E-04	4.27E-05	8.32E-06	7.04E-05	1.72E-05	1.75E-05	4.41E-05	1.78E-06	7.14E-10	5.29E-05	5.28E-05
53	E78	70	Combination Short Haul Truck	78	0.00E+00	4.05E-05	2.88E-06	2.94E+01	1.32E-07	3.49E-02	2.97E-05	4.27E-02	3.08E-03	6.73E-04	2.47E-03	8.52E-04	8.51E-04	4.43E-03	9.84E-05	0.00E+00	1.62E-03	8.04E-03
53	E78	70	Combination Long Haul Truck	71	0.00E+00	3.66E-05	2.45E-06	2.74E+01	1.52E-07	3.70E-02	2.78E-05	4.21E-02	3.06E-03	5.59E-04	2.55E-03	7.41E-04	7.49E-04	4.19E-03	9.18E-05	0.00E+00	1.80E-03	7.92E-03
53	E79	70	Passenger Car	710	0.00E+00	8.88E-06	9.61E-07	3.41E+01	6.18E-05	2.21E-01	1.97E-05	1.45E-03	5.42E-03	8.74E-04	1.92E-03	1.24E-03	1.27E-03	1.27E-04	1.73E-04	4.72E-08	6.51E-04	2.26E-04
53	E79	70	Passenger Truck	1188	0.00E+00	1.93E-05	2.05E-06	7.87E+01	1.23E-04	4.07E-01	4.02E-05	4.43E-03	9.72E-03	1.59E-03	3.84E-03	2.50E-03	2.56E-03	5.73E-04	3.96E-04	1.04E-07	1.28E-03	7.27E-04
53	E79	70	Single Unit Short Haul Truck	61	0.00E+00	1.44E-05	7.22E-07	1.13E+01	1.18E-05	2.26E-02	1.53E-05	7.11E-03	1.01E-03	2.03E-04	1.75E-03	4.31E-04	4.38E-04	1.13E-03	4.55E-05	1.84E-08	1.31E-03	1.33E-03
53	E79	70	Single Unit Long Haul Truck	3	0.00E+00	6.28E-07	3.12E-08	4.79E-01	5.08E-07	9.48E-04	6.69E-07	3.06E-04	4.63E-05	9.03E-06	7.64E-05	1.86E-05	1.90E-05	4.78E-05	1.93E-06	7.74E-10	5.74E-05	5.73E-05
53	E79	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.54E-07	7.69E+00	3.45E-08	9.14E-03	7.78E-06	1.12E-02	8.07E-04	1.76E-04	6.46E-04	2.23E-04	2.23E-04	1.16E-03	2.57E-05	0.00E+00	4.23E-04	2.10E-03
53	E79	70	Combination Long Haul Truck	19	0.00E+00	9.59E-06	6.41E-07	7.18E+00	3.97E-08	9.68E-03	7.28E-06	1.10E-02	8.02E-04	1.46E-04	6.68E-04	1.94E-04	1.96E-04	1.10E-03	2.40E-05	0.00E+00	4.72E-04	2.07E-03
53	E80	70	Passenger Car	983	0.00E+00	1.23E-05	1.33E-06	4.73E+01	8.56E-05	3.06E-01	2.74E-05	2.00E-03	7.50E-03	1.21E-03	2.66E-03	1.72E-03	1.76E-03	1.76E-04	2.40E-04	6.53E-08	9.01E-04	3.13E-04
53	E80	70	Passenger Truck	1646	0.00E+00	2.68E-05	2.84E-06	1.09E+02	1.70E-04	5.64E-01	5.57E-05	6.13E-03	1.35E-02	2.20E-03	5.32E-03	3.46E-03	3.54E-03	7.93E-04	5.48E-04	1.43E-07	1.77E-03	1.01E-03
53	E80	70	Single Unit Short Haul Truck	41	0.00E+00	9.68E-06	4.85E-07	7.58E+00	7.91E-06	1.52E-02	1.03E-05	4.78E-03	6.81E-04	1.36E-04	1.17E-03	2.89E-04	2.94E-04	7.60E-04	3.06E-05	1.23E-08	8.80E-04	8.95E-04
53	E80	70	Single Unit Long Haul Truck	2	0.00E+00	4.22E-07	2.10E-08	3.22E-01	3.42E-07	6.37E-04	4.49E-07	2.05E-04	3.11E-05	6.06E-06	5.13E-05	1.25E-05	1.27E-05	3.21E-05	1.30E-06	5.20E-10	3.86E-05	3.85E-05
53	E80	70	Combination Short Haul Truck	26	0.00E+00	1.36E-05	9.67E-07	9.86E+00	4.42E-08	1.17E-02	9.98E-06	1.43E-02	1.04E-03	2.26E-04	8.29E-04	2.86E-04	2.86E-04	1.49E-03	3.30E-05	0.00E+00	5.43E-04	2.70E-03
53	E80	70	Combination Long Haul Truck	24	0.00E+00	1.23E-05	8.22E-07	9.20E+00	5.09E-08	1.24E-02	9.34E-06	1.41E-02	1.03E-03	1.88E-04	8.57E-04	2.49E-04	2.51E-04	1.41E-03	3.08E-05	0.00E+00	6.05E-04	2.66E-03
10	E83	70	Passenger Car	264	0.00E+00	3.41E-06	3.69E-07	1.26E+01	2.38E-05	8.58E-02	7.59E-06	5.30E-04	2.05E-03	3.29E-04	7.39E-04	4.76E-04	4.89E-04	4.73E-05	6.37E-05	1.74E-08	2.50E-04	8.28E-05
10	E83	70	Passenger Truck	443	0.00E+00	7.48E-06	7.92E-07	2.90E+01	4.73E-05	1.58E-01	1.55E-05	1.66E-03	3.73E-03	6.06E-04	1.48E-03	9.65E-04	9.88E-04	2.15E-04	1.46E-04	3.89E-08	4.95E-04	2.73E-04
10	E83	70	Single Unit Short Haul Truck	17	0.00E+00	4.05E-06	2.03E-07	3.17E+00	3.31E-06	6.35E-03	4.32E-06	2.00E-03	2.85E-04	5.71E-05	4.91E-04	1.21E-04	1.23E-04	3.18E-04	1.28E-05	5.17E-09	3.68E-04	3.75E-04
10	E83	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	8.78E-09	1.35E-01	1.43E-07	2.67E-04	1.88E-07	8.60E-05	1.30E-05	2.54E-06	2.15E-05	5.24E-06	5.33E-06	1.35E-05	5.44E-07	2.18E-10	1.61E-05	1.61E-05
10	E83	70	Combination Short Haul Truck	18	0.00E+00	9.52E-06	6.77E-07	6.90E+00	3.09E-08	8.20E-03	6.98E-06	1.00E-02	7.25E-04	1.58E-04	5.80E-04	2.00E-04	2.00E-04	1.04E-03	2.31E-05	0.00E+00	3.80E-04	1.89E-03
10	E83	70	Combination Long Haul Truck	17	0.00E+00	8.61E-06	5.76E-07	6.44E+00	3.56E-08	8.68E-03	6.54E-06	9.88E-03	7.20E-04	1.31E-04	6.00E-04	1.74E-04	1.76E-04	9.84E-04	2.16E-05	0.00E+00	4.24E-04	1.86E-03
10	E

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E87	60	Combination Long Haul Truck	61	0.00E+00	3.54E-05	2.30E-06	2.40E+01	1.60E-07	3.71E-02	2.73E-05	4.24E-02	3.69E-03	6.25E-04	2.58E-03	7.02E-04	7.11E-04	3.67E-03	8.04E-05	0.00E+00	1.87E-03	8.00E-03
9	E88	60	Passenger Car	942	0.00E+00	1.40E-05	1.51E-06	4.68E+01	9.71E-05	3.49E-01	3.10E-05	1.92E-03	9.56E-03	1.47E-03	3.02E-03	1.95E-03	2.00E-03	1.97E-04	2.37E-04	6.53E-08	1.02E-03	3.00E-04
9	E88	60	Passenger Truck	1578	0.00E+00	3.08E-05	3.25E-06	1.07E+02	1.92E-04	6.23E-01	6.34E-05	6.27E-03	1.75E-02	2.72E-03	6.03E-03	3.93E-03	4.03E-03	8.35E-04	5.36E-04	1.48E-07	2.01E-03	1.04E-03
9	E88	60	Single Unit Short Haul Truck	91	0.00E+00	2.67E-05	1.34E-06	1.70E+01	2.20E-05	3.29E-02	2.85E-05	1.28E-02	2.16E-03	3.92E-04	3.25E-03	8.01E-04	8.15E-04	1.70E-03	6.87E-05	2.83E-08	2.43E-03	2.39E-03
9	E88	60	Single Unit Long Haul Truck	4	0.00E+00	1.17E-06	5.81E-08	7.26E-01	9.56E-07	1.40E-03	1.25E-06	5.52E-04	9.72E-05	1.74E-05	1.42E-04	3.49E-05	3.54E-05	7.25E-05	2.94E-06	1.20E-09	1.07E-04	1.03E-04
9	E88	60	Combination Short Haul Truck	51	0.00E+00	3.02E-05	2.10E-06	1.96E+01	1.07E-07	2.64E-02	2.24E-05	3.28E-02	2.81E-03	5.56E-04	1.92E-03	6.26E-04	6.27E-04	2.96E-03	6.57E-05	0.00E+00	1.29E-03	6.17E-03
9	E88	60	Combination Long Haul Truck	47	0.00E+00	2.71E-05	1.76E-06	1.84E+01	1.22E-07	2.84E-02	2.09E-05	3.25E-02	2.82E-03	4.79E-04	1.98E-03	5.38E-04	5.45E-04	2.81E-03	6.16E-05	0.00E+00	1.43E-03	6.12E-03
9	E89	60	Passenger Car	100	0.00E+00	1.48E-06	1.60E-07	4.96E+00	1.03E-05	3.70E-02	3.29E-06	2.04E-04	1.01E-03	1.56E-04	3.20E-04	2.06E-04	2.12E-04	2.09E-05	2.51E-05	6.92E-09	1.08E-04	3.18E-05
9	E89	60	Passenger Truck	167	0.00E+00	3.26E-06	3.45E-07	1.13E+01	2.04E-05	6.60E-02	6.72E-06	6.64E-04	1.86E-03	2.89E-04	6.39E-04	4.17E-04	4.27E-04	8.85E-05	5.68E-05	1.57E-08	2.13E-04	1.10E-04
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E90	60	Passenger Car	127	0.00E+00	1.89E-06	2.04E-07	6.33E+00	1.31E-05	4.72E-02	4.20E-06	2.60E-04	1.29E-03	1.99E-04	4.09E-04	2.63E-04	2.70E-04	2.66E-05	3.21E-05	8.83E-09	1.38E-04	4.06E-05
9	E90	60	Passenger Truck	214	0.00E+00	4.17E-06	4.40E-07	1.45E+01	2.60E-05	8.43E-02	8.59E-06	8.48E-04	2.37E-03	3.68E-04	8.16E-04	5.32E-04	5.45E-04	1.13E-04	7.25E-05	2.00E-08	2.72E-04	1.41E-04
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.03E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	E90	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.01E-03	1.72E-04	3.40E-05	1.17E-04	3.83E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.78E-04
9	E90	60	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.99E-03	1.73E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.77E-05	3.75E-04
9	E91	60	Passenger Car	4	0.00E+00	5.54E-08	5.99E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.63E-06	3.79E-05	5.83E-06	1.20E-05	7.73E-06	7.93E-06	7.81E-07	9.40E-07	2.59E-10	4.06E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.47E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.39E-05	1.56E-05	1.60E-05	3.31E-06	2.13E-06	5.88E-10	7.96E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.54E-08	5.99E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.63E-06	3.79E-05	5.83E-06	1.20E-05	7.73E-06	7.93E-06	7.81E-07	9.40E-07	2.59E-10	4.06E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.47E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.39E-05	1.56E-05	1.60E-05	3.31E-06	2.13E-06	5.88E-10	7.96E-06	4.12E-06
9	E93	60	Passenger Car	108	0.00E+00	1.60E-06	1.73E-07	5.37E+00	1.11E-05	4.00E-02	3.56E-06	2.20E-04	1.10E-03	1.68E-04	3.46E-04	2.23E-04	2.29E-04	2.26E-05	2.72E-05	7.49E-09	1.17E-04	3.44E-05
9	E93	60	Passenger Truck	181	0.00E+00	3.53E-06	3.73E-07	1.23E+01	2.21E-05	7.14E-02	7.28E-06	7.19E-04	2.01E-03	3.12E-04	6.92E-04	4.51E-04	4.62E-04	9.58E-05	6.15E-05	1.70E-08	2.30E-04	1.19E-04
9	E93	60	Single Unit Short Haul Truck	3	0.00E+00	8.43E-07	4.22E-08	5.37E-01	6.95E-07	1.04E-03	9.00E-07	4.03E-04	6.83E-05	1.24E-05	1.03E-04	2.53E-05	2.57E-05	5.38E-05	2.17E-06	8.94E-10	7.68E-05	7.55E-05
9	E93	60	Combination Short Haul Truck	3	0.00E+00	1.85E-06	1.29E-07	1.20E+00	6.54E-09	1.61E-03	1.37E-06	2.01E-03	1.72E-04	3.40E-05	1.17E-04	3.83E-05	3.84E-05	1.81E-04	4.02E-06	0.00E+00	7.91E-05	3.78E-04
9	E93	60	Combination Long Haul Truck	3	0.00E+00	1.66E-06	1.08E-07	1.13E+00	7.50E-09	1.74E-03	1.28E-06	1.99E-03	1.73E-04	2.93E-05	1.21E-04	3.29E-05	3.33E-05	1.72E-04	3.77E-06	0.00E+00	8.77E-05	3.75E-04
9	E94	60	Passenger Car	158	0.00E+00	2.34E-06	2.53E-07	7.84E+00	1.63E-05	5.84E-02	5.20E-06	3.22E-04	1.60E-03	2.46E-04	5.06E-04	3.26E-04	3.35E-04	3.30E-05	3.97E-05	1.09E-08	1.71E-04	5.03E-05
9	E94	60	Passenger Truck	264	0.00E+00	5.16E-06	5.45E-07	1.79E+01	3.22E-05	1.04E-01	1.06E-05	1.05E-03	2.94E-03	4.56E-04	1.01E-03	6.58E-04	6.74E-04	1.40E-04	8.97E-05	2.48E-08	3.36E-04	1.74E-04
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.69E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.30E-05
54	E95	80	Passenger Car	356	0.00E+00	4.17E-06	4.51E-07	1.65E+01	2.90E-05	1.05E-01	9.27E-06	7.34E-04	2.06E-03	3.51E-04	9.03E-04	5.82E-04	5.97E-04	5.57E-05	8.40E-05	2.28E-08	3.06E-04	1.15E-04
54	E95	80	Passenger Truck	595	0.00E+00	9.05E-06	9.60E-07	3.84E+01	5.80E-05	2.00E-01	1.90E-05	2.18E-03	3.70E-03	6.44E-04	1.82E-03	1.18E-03	1.21E-03	2.67E-04	1.94E-04	5.14E-08	6.08E-04	3.56E-04
54	E95	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.62E-07	1.11E+01	9.10E-06	2.22E-02	1.20E-05	5.80E-03	7.10E-04	1.61E-04	1.38E-03	3.35E-04	3.41E-04	1.11E-03	4.47E-05	1.77E-08	1.04E-03	1.09E-03
54	E95	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.26E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.47E-05	4.69E-05	1.90E-06	7.40E-10	4.54E-05	4.64E-05
54	E95	80	Combination Short Haul Truck	38	0.00E+00	1.68E-05	1.20E-06	1.39E+01	5.30E-08	1.49E-02	1.23E-05	1.73E-02	1.02E-03	2.50E-04	9.99E-04	3.54E-04	3.52E-04	2.09E-03	4.65E-05	0.00E+00	6.48E-04	3.25E-03
54	E95	80	Combination Long Haul Truck	35	0.00E+00	1.50E-05	1.01E-06	1.28E+01	6.12E-08	1.54E-02	1.14E-05	1.68E-02	9.93E-04	2.00E-04	1.03E-03	3.05E-04	3.07E-04	1.96E-03	4.30E-05	0.00E+00	7.26E-04	3.16E-03
54	E96	80	Passenger Car	674	0.00E+00	7.91E-06	8.56E-07	3.13E+01	5.51E-05	2.00E-01	1.76E-05	1.39E-03	3.90E-03	6.65E-04	1.71E-03	1.10E-03	1.13E-03	1.06E-04	1.59E-04	4.33E-08	5.80E-04	2.18E-04
54	E96	80	Passenger Truck	1130	0.00E+00	1.72E-05	1.82E-06	7.28E+01	1.10E-04	3.79E-01	3.60E-05	4.13E-03	7.01E-03	1.22E-03	3.44E-03	2.24E-03	2.29E-03	5.07E-04	3.67E-04	9.74E-08	1.15E-03	6.75E-04
54	E96	80	Single Unit Short Haul Truck	70	0.00E+00	1.31E-05	6.51E-07	1.29E+01	1.05E-05	2.57E-02	1.39E-05	6.72E-03	8.23E-04	1.86E-04	1.59E-03	3.88E-04	3.95E-04	1.29E-03	5.18E-05	2.06E-08	1.20E-03	1.26E-03
54	E96	80	Single Unit Long Haul Truck	3	0.00E+00	5.70E-07	2.81E-08	5.44E-01	4.50E-07	1.07E-03	6.06E-07	2.88E-04	3.76E-05	8.22E-06	6.96E-05	1.67E-05	1.70E-05	5.43E-05	2.20E-06	8.57E-10	5.26E-05	5.38E-05
54	E96	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.30E+01	8.78E-08	2.46E-02	2.03E-05	2.86E-02	1.68E-03	4.15E-04	1.66E-03	5.87E-04	5.83E-04	3.47E-03	7.70E-05	0.00E+00	1.07E-03	5.39E-03
54	E96	80	Combination Long Haul Truck	58	0.00E+00	2.49E-05	1.67E-06	2.13E+01	1.01E-07	2.55E-02	1.89E-05	2.78E-02	1.65E-03	3.31E-04	1.71E-03	5.05E-04	5.08E-04	3.25E-03	7.12E-05	0.00E+00	1.20E-03	5.23E-03
54	E97	80	Passenger Car	356	0.00E+00	4.17E-06	4.51E-07	1.65E+01	2.90E-05	1.05E-01	9.27E-06	7.34E-04	2.06E-03	3.51E-04	9.03E-04	5.82E-04	5.97E-04	5.57E-05	8.40E-05	2.28E-08	3.06E-04	1.15E-04
54	E97	80	Passenger Truck	595	0.00E+00	9.05E-06	9.60E-07	3.84E+01	5.80E-05	2.00E-01	1.90E-05	2.18E-03	3.70E-03	6.44E-04	1.82E-03	1.18E-03	1.21E-03	2.67E-04	1.94E-04	5.14E-08	6.08E-04	3.56E-04
54	E97	80	Single Unit Short Haul Truck	60	0.00E+00	1.13E-05	5.62E-07	1.11E+01	9.10E-06	2.22E-02	1.20E-05	5.80E-03	7.10E-04	1.61E-04	1.38E-03	3.35E-04	3.41E-04	1.11E-03	4.47E-05	1.77E-08	1.04E-03	1.09E-03
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	4.92E-07	2.42E-08	4.69E-01	3.89E-07	9.26E-04	5.23E-07	2.48E-04	3.25E-05	7.09E-06	6.00E-05	1.44E-05	1.47E-05	4.69E-05	1.90E-06	7.40E-10	4.54E-05	4.64E-05
54	E97	80	Combination Short Haul Truck	38	0.00E+00	1.68E-05	1.20E-06	1.39E+01	5.30E-08	1.49E-02	1.23E-05	1.73E-02	1.02E-03	2.50E-04	9.99E-04	3.54E-04	3.52E-04	2.09E-03	4.65E-05	0.00E+00	6.48E-04	3.25E-03
54	E97	80	Combination Long Haul Truck	35	0.00E+00	1.50E-05	1.01E-06	1.28E+01	6.12E-08	1.54E-02	1.14E-05	1.68E-02	9.93E-04	2.00E-04	1.03E-03	3.05E-04	3.07E-04	1.96E-03	4.30E-05	0.00E+00	7.26E-04	3.16E-03
54	E98	80	Passenger Car	674	0.00E+00	7.91E-06	8.56E-07	3.13E+01	5.51E-05	2.00E-01	1.76E-05	1.39E-03	3.90E-03	6.65E-04	1.71E-03	1.10E-03	1.13E-03	1.06E-04	1.59E-04	4.33E-08	5.80E-04	2.18E-04
54	E98	80	Passenger Truck	1130	0.00E+00	1.72E-05	1.82E-06	7.28E+01	1.10E-04	3.79E-01	3.60E-05	4.13E-03	7.01E-03	1.22E-03	3.44E-03	2.24E-03	2.29E-03	5.07E-04	3.67E-04	9.74E-08	1.15E-03	6.75E-04
54	E98	80	Single Unit Short Haul Truck	70	0.00E+00	1.31E-05	6.51E-07	1.29E+01	1.05E-05	2.57E-02	1.39E-05	6.72E-03	8.23E-04	1.86E-04	1.59E-03	3.88E-04	3.95E-04	1.29E-03	5.18E-05	2.06E-08	1.20E-03	1.26E-03
54	E98	80	Single Unit Long Haul Truck	3	0.00E+00	5.70E-07	2.81E-08	5.44E-01	4.50E-07	1.07E-03	6.06E-07	2.88E-04	3.76E-05	8.22E-06	6.96E-05	1.67E-05	1.70E-05	5.43E-05	2.20E-06	8.57E-10	5.26E-05	5.38E-05
54	E98	80	Combination Short Haul Truck	63	0.00E+00	2.78E-05	1.99E-06	2.30E+01	8.78E-08	2.46E-02	2.03E-05	2.86E-02	1.68E-03	4.15E-04	1.66E-03	5.87E-04	5.83E-04	3.47E-03	7.70E-05	0.00E+00	1.07E-03	5.39E-03
54	E98	80	Combination Long Haul Truck	58	0.00E+00	2.49E-05	1.67E-06	2.13E+01	1.01E-07	2.55E-02	1.89E-05	2.78E-02	1.65E-03	3.31E-04	1.71E-03	5.05E-04	5.08E-04	3.25E-03	7.12E-05	0.00E+00	1.20E-03	5.23E-03
9	F01	60	Passenger Car	292	0.00E+00	4.33E-06	4.69E-07	1.45E+01	3.01E-05	1.08E-01	9.63E-06	5.96E-04	2.97E-03	4.56E-04	9.37E-04	6.04E-04	6.20E-04	6.11E-05	7.35E-05	2.03E-08	3.17E-04	9.32E-05
9	F01	60	Passenger Truck	490	0.00E+00	9.55E-06	1.01E-06	3.32E+01	5.97E-05	1.93E-01	1.97E-05	1.94E-03	5.44E-03	8.45E-04	1.87E-03	1.22E-03	1.25E-03	2.59E-04	1.66E-04	4.60E-08	6.23E-04	3.22E-04
9	F01	60	Single Unit Short Haul Truck	11	0.00E+00	3.09E-06	1.55E-07	1.97E+00	2.55E-06	3.81E-03	3.30E-06	1.48E-03	2.51E-04	4.54E-05	3.76E-04	9.28E-05	9.43E-05	1.97E-04	7.96E-06	3.28E-09	2.82E-04	2.77E-04
9	F01	60	Single Unit Long Haul Truck	9	0.00E+00	5.54E-06	3.86E-07	3.60E+00	1.96E-08	4.84E-03	4.11E-06	6.02E-03	5.16E-04	1.02E-04	3.52E-04	1.15E-04	1.15E-04	5.43E-04	1.21E-05	0.00E+00	2.37E-04	1.13E-03
9	F01	60	Combination Long Haul Truck	9	0.00E+00	4.97E-06	3.24E-07	3.38E+00	2.25E-08	5.22E-03	3.83E-06	5.97E-03	5.18E-04	8.79E-05	3.63E-04	9.88E-05	1.00E-04	5.16E-04	1.13E-05	0.00E+00	2.63E-04	1.12E-03
9	F02	60	Passenger Car	281	0.00E+00	4.16E-06	4.50E-07	1.39E+01	2.89E-05	1.04E-01	9.25E-06	5.73E-04	2.85E-03	4.38E-04	9.00E-04	5.80E-04	5.95E-04	5.87E-05	7.06E-05	1.95E-08	3.05E-04	8.95E-05
9	F02	60	Passenger Truck	470	0.00E+00	9.18E-06	9.69E-07	3.18E+01	5.74E-05	1.86E-01	1.89E-05	1.87E-03	5.23E-03	8.12E-04	1.80E-03	1.17E-03	1.20E-03	2.49E-04	1.60E-04	4.41E-08	5.98E-04	3.10E-04
9	F02	60	Single Unit Short Haul Truck	23	0.00E+00	6.75E-06	3.38E-07	4.30E+00	5.56E-06	8.32E-03	7.20E-06	3.22E-03	5.47E-04	9.91E-05	8.20E-04	2.02E-04	2.06E-04	4.30E-04	1.74E-05	7.16E-09	6.14E-04	6.04E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	2.95E-07	1.47E-08	1.84E-01	2.42E-07	3.53E-04	3.15E-07	1.39E-04	2.45E-05	4.39E-06	3.59E-05	8.81E-06	8.95E-06	1.83E-05	7.42E-07	3.04E-10	2.70E-05	2.61E-05
9	F02	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	9.03E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F02	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.95E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.69E-03
11	F03	80	Passenger Car	9	0.00E+00	1.03E-07	1.12E-08	3.97E-01	7.20E-07	2.66E-03	2.30E-07	1.77E-05	4.73E-05	8.22E-06	2.24E-05	1.44E-05	1.48E-05	1.35E-06	2.02E-06	5.66E-10	7.57E-06	2.76E-06
11	F03	80	Passenger Truck	14	0.00E+00	2.22E-07	2.36E-08	9.18E-01	1.42E-06	4.90E-03	4.66E-07	5.25E-05	8.48E-05	1.51E-05	4.45E-05	2.89E-05	2.96E-05	6.47E-06	4.63E-06	1.26E-09	1.49E-05	8.58E-06
11	F03	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.21E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	F03	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
11	F04	80	Passenger Car	111	0.00E+00	1.34E-06	1.45E-07	5.14E+00	9.32E-06	3.45E-02	2.98E-06	2.29E-04	6.13E-04	1.07E-04	2.90E-04	1.87E-04	1.92E-04	1.75E-05	2.62E-05	7.33E-09	9.81E-05	3.58E-05
11	F04	80	Passenger Truck	187	0.00E+00	2.88E-06	3.05E-07	1.19E+01	1.84E-05	6.35E-02	6.03E-06	6.80E-04	1.10E-03	1.95E-04	5.77E-04	3.75E-04	3.84E-04	8.38E-05	5.99E-05	1.63E-08	1.93E-04	1.11E-04
11	F04	80	Single Unit Short Haul Truck	12	0.00E+00	2.33E-06	1.16E-07	2.29E+00	1.88E-06	4.59E-03	2.48E-06	1.20E-03	1.47E-04	3.32E-05	2.84E-04	6.91E-05	7.03E-05	2.30E-04	9.22E-06	3.66E-09	2.14E-04	2.24E-04
11	F04	80	Single Unit Long Haul Truck	1	0.00E+00	1.01E-07	5.00E-09	9.69E-02	8.02E-08	1.91E-04	1.08E-07	5.12E-05	6.70E-06	1.46E-06	1.24E-05	2.97E-06	3.03E-06	9.67E-06	3.91E-07	1.53E-10	9.36E-06	9.58E-06
11	F04	80	Combination Short Haul Truck	6	0.00E+00	2.53E-06	1.81E-07	2.09E+00	7.98E-09	2.24E-03	1.85E-06	2.60E-03	1.53E-04	3.77E-05	1.51E-04	5.34E-05	5.30E-05	3.15E-04	7.00E-06	0.00E+00	9.76E-05	4.90E-04
11	F04	80	Combination Long Haul Truck	5	0.00E+00	2.27E-06	1.52E-07	1.93E+00	9.22E-09	2.32E-03	1.72E-06	2.52E-03	1.50E-04	3.01E-05	1.56E-04	4.59E-05	4.62E-05	2.95E-04	6.47E-06	0.00E+00	1.09E-04	4.76E-04
9	F05	60	Passenger Car	293	0.00E+00	4.34E-06	4.70E-07	1.46E+01	3.02E-05	1.09E-01	9.65E-06	5.98E-04	2.98E-03	4.57E-04	9.40E-04	6.06E-04	6.22E-04	6.12E-05	7.37E-05	2.03E-08	3.18E-04	9.34E-05
9	F05	60	Passenger Truck	491	0.00E+00	9.58E-06	1.01E-06	3.32E+01	5.99E-05	1.94E-01	1.97E-05	1.95E-03	5.46E-03	8.47E-04	1.88E-03	1.22E-03	1.25E-03	2.60E-04	1.67E-04	4.61E-08	6.24E-04	3.23E-04
9	F05	60	Single Unit Short Haul Truck	32	0.00E+00	9.28E-06	4.64E-07	5.91E+00	7.65E-06	1.14E-02	9.90E-06	4.43E-03	7.52E-04	1.36E-04	1.13E-03	2.78E-04	2.83E-04	5.92E-04	2.39E-05	9.84E-09	8.45E-04	8.30E-04
9	F05	60	Single Unit Long Haul Truck	1	0.00E+00	4.05E-07	2.02E-08	2.52E-01	3.32E-07	4.86E-04	4.33E-07	1.92E-04	3.37E-05	6.03E-06	4.94E-05	1.21E-05	1.23E-05	2.52E-05	1.02E-06	4.18E-10	3.71E-05	3.59E-05
9	F05	60	Combination Short Haul Truck	27	0.00E+00	1.57E-05	1.09E-06	1.02E+01	5.56E-08	1.37E-02	1.16E-05	1.71E-02	1.46E-03	2.89E-04	9.98E-04	3.26E-04	3.26E-04	1.54E-03	3.42E-05	0.00E+00	6.72E-04	3.21E-03
9	F05	60	Combination Long Haul Truck	24	0.00E+00	1.41E-05	9.17E-07	9.57E+00	6.37E-08	1.48E-02	1.09E-05	1.69E-02	1.47E-03	2.49E-04	1.03E-03	2.80E-04	2.83E-04	1.46E-03	3.21E-05	0.00E+00	7.46E-04	3.19E-03
9	F06	60	Passenger Car	128	0.00E+00	1.90E-06	2.05E-07	6.37E+00	1.32E-05	4.75E-02	4.22E-06	2.62E-04	1.30E-03	2.00E-04	4.11E-04	2.65E-04	2.72E-04	2.68E-05	3.23E-05	8.89E-09	1.39E-04	4.09E-05
9	F06	60	Passenger Truck	215	0.00E+00	4.19E-06	4.43E-07	1.45E+01	2.62E-05	8.48E-02	8.64E-06	8.53E-04	2.39E-03	3.71E-04	8.21E-04	5.35E-04	5.48E-04	1.14E-04	7.29E-05	2.02E-08	2.73E-04	1.41E-04
9	F06	60	Single Unit Short Haul Truck	16	0.00E+00	4.78E-06	2.39E-07	3.05E+00	3.94E-06	5.90E-03	5.10E-06	2.28E-03	3.87E-04	7.02E-05	5.81E-04	1.43E-04	1.46E-04	3.05E-04	1.23E-05	5.07E-09	4.35E-04	4.28E-04
9	F06	60	Single Unit Long Haul Truck	1	0.00E+00	2.09E-07

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F10	80	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	5.77E-09	1.12E-01	9.25E-08	2.20E-04	1.25E-07	5.91E-05	7.73E-06	1.69E-06	1.43E-05	3.43E-06	3.49E-06	1.12E-05	4.51E-07	1.76E-10	1.08E-05	1.11E-05
11	F10	80	Combination Short Haul Truck	16	0.00E+00	6.90E-06	4.93E-07	5.70E+00	2.18E-08	6.11E-03	5.04E-06	7.09E-03	4.17E-04	1.03E-04	4.11E-04	1.46E-04	1.44E-04	8.60E-04	1.91E-05	0.00E+00	2.66E-04	1.34E-03
11	F10	80	Combination Long Haul Truck	14	0.00E+00	6.18E-06	4.15E-07	5.27E+00	2.51E-08	6.33E-03	4.68E-06	6.89E-03	4.08E-04	8.22E-05	4.24E-04	1.25E-04	1.26E-04	8.05E-04	1.77E-05	0.00E+00	2.98E-04	1.30E-03
11	F13	80	Passenger Car	12	0.00E+00	1.48E-07	1.60E-08	5.70E-01	1.03E-06	3.82E-03	3.30E-07	2.53E-05	6.79E-05	1.18E-05	3.21E-05	2.07E-05	2.12E-05	1.93E-06	2.90E-06	8.12E-10	1.09E-05	3.96E-06
11	F13	80	Passenger Truck	21	0.00E+00	3.19E-07	3.38E-08	1.32E+00	2.04E-06	7.03E-03	6.68E-07	7.53E-05	1.22E-04	2.16E-05	6.39E-05	4.15E-05	4.25E-05	9.28E-06	6.64E-06	1.81E-09	2.14E-05	1.23E-05
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.21E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.73E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.91E-05
11	F13	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.59E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.65E-05
11	F14	80	Passenger Car	10	0.00E+00	1.21E-07	1.31E-08	4.66E-01	8.45E-07	3.12E-03	2.70E-07	2.07E-05	5.55E-05	9.65E-06	2.63E-05	1.69E-05	1.74E-05	1.58E-06	2.37E-06	6.64E-10	8.89E-06	3.24E-06
11	F14	80	Passenger Truck	17	0.00E+00	2.61E-07	2.77E-08	1.08E+00	1.67E-06	5.75E-03	5.46E-07	6.16E-05	9.96E-05	1.77E-05	5.23E-05	3.40E-05	3.48E-05	7.59E-06	5.43E-06	1.48E-09	1.75E-05	1.01E-05
11	F14	80	Single Unit Short Haul Truck	1	0.00E+00	1.79E-07	8.91E-09	1.76E-01	1.44E-07	3.53E-04	1.91E-07	9.21E-05	1.13E-05	2.55E-06	2.18E-05	5.32E-06	5.40E-06	1.77E-05	7.10E-07	2.82E-10	1.64E-05	1.72E-05
11	F14	80	Combination Short Haul Truck	1	0.00E+00	4.60E-07	3.29E-08	3.80E-01	1.45E-09	4.07E-04	3.36E-07	4.73E-04	2.78E-05	6.86E-06	2.74E-05	9.71E-06	9.63E-06	5.73E-05	1.27E-06	0.00E+00	1.78E-05	8.91E-05
11	F14	80	Combination Long Haul Truck	1	0.00E+00	4.12E-07	2.77E-08	3.51E-01	1.68E-09	4.22E-04	3.12E-07	4.59E-04	2.72E-05	5.48E-06	2.83E-05	8.35E-06	8.40E-06	5.37E-05	1.18E-06	0.00E+00	1.99E-05	8.65E-05
10	F15	70	Passenger Car	436	0.00E+00	5.62E-06	6.08E-07	2.07E+01	3.91E-05	1.41E-01	1.25E-05	8.73E-04	3.38E-03	5.42E-04	1.22E-03	7.85E-04	8.05E-04	7.80E-05	1.05E-04	2.86E-08	4.12E-04	1.36E-04
10	F15	70	Passenger Truck	729	0.00E+00	1.23E-05	1.30E-06	4.77E+01	7.80E-05	2.60E-01	2.56E-05	2.73E-03	6.14E-03	9.99E-04	2.44E-03	1.59E-03	1.63E-03	3.54E-04	2.40E-04	6.42E-08	8.15E-04	4.49E-04
10	F15	70	Single Unit Short Haul Truck	28	0.00E+00	6.53E-06	3.27E-07	5.11E+00	5.34E-06	1.02E-02	6.95E-06	3.22E-03	4.59E-04	9.20E-05	7.92E-04	1.95E-04	1.98E-04	5.13E-04	2.06E-05	8.32E-09	5.93E-04	6.03E-04
10	F15	70	Single Unit Long Haul Truck	1	0.00E+00	2.84E-07	1.41E-08	2.17E-01	2.30E-07	4.30E-04	3.03E-07	1.39E-04	2.10E-05	4.09E-06	3.46E-05	8.45E-06	8.59E-06	2.17E-05	8.76E-07	3.51E-10	2.60E-05	2.60E-05
10	F15	70	Combination Short Haul Truck	31	0.00E+00	1.61E-05	1.14E-06	1.16E+01	5.22E-08	1.38E-02	1.18E-05	1.69E-02	1.22E-03	2.67E-04	9.78E-04	3.38E-04	3.37E-04	1.75E-03	3.89E-05	0.00E+00	6.41E-04	3.18E-03
10	F15	70	Combination Long Haul Truck	28	0.00E+00	1.45E-05	9.70E-07	1.09E+01	6.01E-08	1.46E-02	1.10E-05	1.67E-02	1.21E-03	2.21E-04	1.01E-03	2.93E-04	2.96E-04	1.66E-03	3.64E-05	0.00E+00	7.14E-04	3.14E-03
10	F16	70	Passenger Car	293	0.00E+00	3.79E-06	4.09E-07	1.39E+01	2.63E-05	9.51E-02	8.42E-06	5.87E-04	2.27E-03	3.65E-04	8.19E-04	5.28E-04	5.42E-04	5.25E-05	7.07E-05	1.93E-08	2.77E-04	9.18E-05
10	F16	70	Passenger Truck	491	0.00E+00	8.30E-06	8.78E-07	3.21E+01	5.25E-05	1.75E-01	1.72E-05	1.84E-03	4.13E-03	6.72E-04	1.64E-03	1.07E-03	1.10E-03	2.38E-04	1.61E-04	4.32E-08	5.49E-04	3.02E-04
10	F16	70	Single Unit Short Haul Truck	23	0.00E+00	5.40E-06	2.71E-07	4.23E+00	4.42E-06	8.46E-03	5.76E-06	2.67E-03	3.80E-04	7.61E-05	6.55E-04	1.62E-04	1.64E-04	4.24E-04	1.71E-05	6.89E-09	4.91E-04	4.99E-04
10	F16	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	1.17E-08	1.80E-01	1.91E-07	3.56E-04	2.51E-07	1.15E-04	1.74E-05	3.38E-06	2.86E-05	6.99E-06	7.11E-06	1.79E-05	7.25E-07	2.90E-10	2.15E-05	2.15E-05
10	F16	70	Combination Short Haul Truck	20	0.00E+00	1.03E-05	7.35E-07	7.49E+00	3.36E-08	8.90E-03	7.58E-06	1.09E-02	7.87E-04	1.72E-04	6.30E-04	2.17E-04	2.17E-04	1.13E-03	2.51E-05	0.00E+00	4.13E-04	2.05E-03
10	F16	70	Combination Long Haul Truck	18	0.00E+00	9.34E-06	6.25E-07	6.99E+00	3.87E-08	9.43E-03	7.10E-06	1.07E-02	7.81E-04	1.43E-04	6.51E-04	1.89E-04	1.91E-04	1.07E-03	2.34E-05	0.00E+00	4.60E-04	2.02E-03
10	F17	70	Passenger Car	301	0.00E+00	3.89E-06	4.21E-07	1.43E+01	2.71E-05	9.78E-02	8.65E-06	6.04E-04	2.34E-03	3.75E-04	8.42E-04	5.43E-04	5.57E-04	5.40E-05	7.27E-05	1.98E-08	2.85E-04	9.44E-05
10	F17	70	Passenger Truck	505	0.00E+00	8.53E-06	9.03E-07	3.30E+01	5.40E-05	1.80E-01	1.77E-05	1.89E-03	4.25E-03	6.91E-04	1.69E-03	1.10E-03	1.13E-03	2.45E-04	1.66E-04	4.44E-08	5.64E-04	3.11E-04
10	F17	70	Single Unit Short Haul Truck	27	0.00E+00	6.30E-06	3.16E-07	4.94E+00	5.15E-06	9.87E-03	6.71E-06	3.11E-03	4.43E-04	8.88E-05	7.65E-04	1.88E-04	1.92E-04	4.95E-04	1.99E-05	8.04E-09	5.73E-04	5.83E-04
10	F17	70	Single Unit Long Haul Truck	1	0.00E+00	2.75E-07	1.37E-08	2.09E-01	2.22E-07	4.15E-04	2.93E-07	1.34E-04	2.02E-05	3.95E-06	3.34E-05	8.16E-06	8.30E-06	2.09E-05	8.46E-07	3.39E-10	2.51E-05	2.51E-05
10	F17	70	Combination Short Haul Truck	29	0.00E+00	1.52E-05	1.08E-06	1.10E+01	4.95E-08	1.31E-02	1.12E-05	1.60E-02	1.16E-03	2.53E-04	9.28E-04	3.20E-04	3.20E-04	1.67E-03	3.70E-05	0.00E+00	6.08E-04	3.02E-03
10	F17	70	Combination Long Haul Truck	27	0.00E+00	1.38E-05	9.21E-07	1.03E+01	5.70E-08	1.39E-02	1.05E-05	1.58E-02	1.15E-03	2.10E-04	9.59E-04	2.78E-04	2.81E-04	1.58E-03	3.45E-05	0.00E+00	6.78E-04	2.98E-03
10	F18	70	Passenger Car	292	0.00E+00	3.77E-06	4.08E-07	1.39E+01	2.62E-05	9.48E-02	8.38E-06	5.85E-04	2.26E-03	3.63E-04	8.16E-04	5.26E-04	5.40E-04	5.23E-05	7.04E-05	1.92E-08	2.76E-04	9.14E-05
10	F18	70	Passenger Truck	489	0.00E+00	8.27E-06	8.75E-07	3.20E+01	5.23E-05	1.74E-01	1.72E-05	1.83E-03	4.12E-03	6.69E-04	1.64E-03	1.07E-03	1.09E-03	2.37E-04	1.61E-04	4.30E-08	5.46E-04	3.01E-04
10	F18	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.46E+00	5.71E-06	1.09E-02	7.43E-06	3.44E-03	4.91E-04	9.83E-05	8.46E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.90E-09	6.34E-04	6.45E-04
10	F18	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.59E-04	3.24E-07	1.48E-04	2.24E-05	4.37E-06	3.70E-05	9.03E-06	9.18E-06	2.32E-05	9.37E-07	3.75E-10	2.78E-05	2.77E-05
10	F18	70	Combination Short Haul Truck	29	0.00E+00	1.52E-05	1.08E-06	1.10E+01	4.95E-08	1.31E-02	1.12E-05	1.60E-02	1.16E-03	2.53E-04	9.28E-04	3.20E-04	3.20E-04	1.67E-03	3.70E-05	0.00E+00	6.08E-04	3.02E-03
10	F18	70	Combination Long Haul Truck	27	0.00E+00	1.38E-05	9.21E-07	1.03E+01	5.70E-08	1.39E-02	1.05E-05	1.58E-02	1.15E-03	2.10E-04	9.59E-04	2.78E-04	2.81E-04	1.58E-03	3.45E-05	0.00E+00	6.78E-04	2.98E-03
10	F19	70	Passenger Car	342	0.00E+00	4.42E-06	4.78E-07	1.63E+01	3.08E-05	1.11E-01	9.83E-06	6.86E-04	2.66E-03	4.26E-04	9.57E-04	6.17E-04	6.33E-04	6.13E-05	8.26E-05	2.25E-08	3.24E-04	1.07E-04
10	F19	70	Passenger Truck	574	0.00E+00	9.69E-06	1.03E-06	3.75E+01	6.13E-05	2.05E-01	2.01E-05	2.15E-03	4.83E-03	7.85E-04	1.92E-03	1.25E-03	1.28E-03	2.78E-04	1.89E-04	5.05E-08	6.41E-04	3.53E-04
10	F20	70	Passenger Car	252	0.00E+00	3.25E-06	3.51E-07	1.20E+01	2.26E-05	8.16E-02	7.22E-06	5.04E-04	1.95E-03	3.13E-04	7.03E-04	4.53E-04	4.65E-04	4.51E-05	6.07E-05	1.65E-08	2.38E-04	7.88E-05
10	F20	70	Passenger Truck	421	0.00E+00	7.12E-06	7.54E-07	2.76E+01	4.51E-05	1.50E-01	1.48E-05	1.58E-03	3.55E-03	5.77E-04	1.41E-03	9.18E-04	9.41E-04	2.04E-04	1.39E-04	3.71E-08	4.71E-04	2.59E-04
10	F20	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	F20	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.86E-04
10	F20	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.79E-04
10	F21	70	Passenger Car	195	0.00E+00	2.52E-06	2.72E-07	9.26E+00	1.75E-05	6.32E-02	5.59E-06	3.90E-04	1.51E-03	2.42E-04	5.44E-04	3.51E-04	3.60E-04	3.49E-05	4.70E-05	1.28E-08	1.84E-04	6.10E-05
10	F21	70	Passenger Truck	326	0.00E+00	5.51E-06	5.84E-07	2.13E+01	3.49E-05	1.16E-01	1.15E-05	1.22E-03	2.75E-03	4.47E-04	1.09E-03	7.11E-04	7.28E-04	1.58E-04	1.07E-04	2.87E-08	3.65E-04	2.01E-04
10	F22	70	Passenger Car	89	0.00E+00	1.15E-06	1.25E-07	4.25E+00	8.03E-06	2.90E-02	2.57E-06	1.79E-04	6.93E-04	1.11E-04	2.50E-04	1.61E-04	1.65E-04	1.60E-05	2.15E-05	5.87E-09	8.45E-05	2.80E-05
10	F22	70	Passenger Truck	150	0.00E+00	2.53E-06	2.68E-07	9.79E+00	1.60E-05	5.34E-02	5.25E-06	5.60E-04	1.26E-03	2.05E-04	5.01E-04	3.26E-04	3.34E-04	7.25E-05	4.92E-05	1.32E-08	1.67E-04	9.21E-05
10	F22	70	Combination Short Haul Truck	1	0.00E+00	2.72E-07	1.93E-08	1.97E-01	8.84E-10	2.34E-04	2.00E-07	2.86E-04	2.07E-05	4.52E-06	1.66E-05	5.72E-06	5.71E-06	2.97E-05	6.60E-07	0.00E+00	1.09E-05	5.39E-05
10	F23	70	Passenger Car	79	0.00E+00	1.02E-06	1.11E-07	3.77E+00	7.12E-06	2.57E-02	2.28E-06	1.59E-04	6.14E-04	9.86E-05	2.21E-04	1.43E-04	1.47E-04	1.42E-05	1.91E-05	5.21E-09	7.50E-05	2.48E-05
10	F23	70	Passenger Truck	133	0.00E+00	2.24E-06	2.37E-07	8.68E+00	1.42E-05	4.74E-02	4.66E-06	4.97E-04	1.12E-03	1.82E-04	4.45E-04	2.89E-04	2.96E-04	6.43E-05	4.37E-05	1.17E-08	1.48E-04	8.17E-05
10	F23	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	F23	70	Combination Short Haul Truck	4	0.00E+00	1.90E-06	1.35E-07	1.38E+00	6.19E-09	1.64E-03	1.40E-06	2.00E-03	1.45E-04	3.16E-05	1.16E-04	4.00E-05	4.00E-05	2.08E-04	4.62E-06	0.00E+00	7.60E-05	3.78E-04
10	F23	70	Combination Long Haul Truck	3	0.00E+00	1.72E-06	1.15E-07	1.29E+00	7.13E-09	1.74E-03	1.31E-06	1.98E-03	1.44E-04	2.63E-05	1.20E-04	3.48E-05	3.52E-05	1.97E-04	4.31E-06	0.00E+00	8.48E-05	3.72E-04
10	F24	70	Passenger Car	67	0.00E+00	8.69E-07	9.40E-08	3.20E+00	6.05E-06	2.18E-02	1.93E-06	1.35E-04	5.22E-04	8.37E-05	1.88E-04	1.21E-04	1.24E-04	1.21E-05	1.62E-05	4.42E-09	6.37E-05	2.11E-05
10	F24	70	Passenger Truck	113	0.00E+00	1.91E-06	2.02E-07	7.37E+00	1.20E-05	4.02E-02	3.96E-06	4.22E-04	9.49E-04	1.54E-04	3.78E-04	2.46E-04	2.52E-04	5.46E-05	3.71E-05	9.91E-09	1.26E-04	6.94E-05
10	F24	70	Single Unit Short Haul Truck	6	0.00E+00	1.35E-06	6.77E-08	1.06E+00	1.10E-06	2.12E-03	1.44E-06	6.67E-04	9.50E-05	1.90E-05	1.64E-04	4.04E-05	4.11E-05	1.06E-04	4.27E-06	1.72E-09	1.23E-04	1.25E-04
10	F24	70	Combination Short Haul Truck	4	0.00E+00	2.18E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.60E-06	2.29E-03	1.66E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.69E-05	4.32E-04
10	F24	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.32E-07	1.47E+00	8.15E-09	1.98E-03	1.49E-06	2.26E-03	1.65E-04	3.00E-05	1.37E-04	3.98E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.25E-04
9	F25	60	Passenger Car	271	0.00E+00	4.01E-06	4.34E-07	1.34E+01	2.79E-05	1.00E-01	8.91E-06	5.52E-04	2.75E-03	4.22E-04	8.68E-04	5.59E-04	5.74E-04	5.66E-05	6.81E-05	1.88E-08	2.94E-04	8.63E-05
9	F25	60	Passenger Truck	453	0.00E+00	8.85E-06	9.34E-07	3.07E+01	5.53E-05	1.79E-01	1.82E-05	1.80E-03	5.04E-03	7.82E-04	1.73E-03	1.13E-03	1.16E-03	2.40E-04	1.54E-04	4.26E-08	5.77E-04	2.98E-04
9	F25	60	Single Unit Short Haul Truck	14	0.00E+00	4.22E-06	2.11E-07	2.69E+00	3.48E-06	5.20E-03	4.50E-06	2.01E-03	3.42E-04	6.20E-05	5.13E-04	1.27E-04	1.29E-04	2.69E-04	1.09E-05	4.47E-09	3.84E-04	3.77E-04
9	F25	60	Single Unit Long Haul Truck	1	0.00E+00	1.84E-07	9.17E-09	1.15E-01	1.51E-07	2.21E-04	1.97E-07	8.71E-05	1.53E-05	2.74E-06	2.25E-05	5.50E-06	5.59E-06	1.15E-05	4.64E-07	1.90E-10	1.69E-05	1.63E-05
9	F25	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.40E+00	2.40E-08	5.92E-03	5.02E-06	7.36E-03	6.30E-04	1.25E-04	4.31E-04	1.40E-04	1.41E-04	6.64E-04	1.47E-05	0.00E+00	2.90E-04	1.39E-03
9	F25	60	Combination Long Haul Truck	10	0.00E+00	6.08E-06	3.95E-07	4.13E+00	2.75E-08	6.38E-03	4.68E-06	7.30E-03	6.34E-04	1.07E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
9	F26	60	Passenger Car	165	0.00E+00	2.45E-06	2.65E-07	8.21E+00	1.70E-05	6.12E-02	5.44E-06	3.37E-04	1.68E-03	2.58E-04	5.30E-04	3.41E-04	3.50E-04	3.45E-05	4.16E-05	1.14E-08	1.79E-04	5.27E-05
9	F26	60	Passenger Truck	277	0.00E+00	5.40E-06	5.70E-07	1.87E+01	3.38E-05	1.09E-01	1.11E-05	1.10E-03	3.08E-03	4.78E-04	1.06E-03	6.90E-04	7.06E-04	1.47E-04	9.40E-05	2.60E-08	3.52E-04	1.82E-04
9	F26	60	Single Unit Short Haul Truck	18	0.00E+00	5.34E-06	2.67E-07	3.40E+00	4.40E-06	6.59E-03	5.70E-06	2.55E-03	4.33E-04	7.85E-05	6.49E-04	1.60E-04	1.63E-04	3.41E-04	1.37E-05	5.66E-09	4.86E-04	4.78E-04
9	F26	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	1.16E-08	1.45E-01	1.91E-07	2.80E-04	2.49E-07	1.10E-04	1.94E-05	3.47E-06	2.84E-05	6.97E-06	7.09E-06	1.45E-05	5.87E-07	2.41E-10	2.14E-05	2.07E-05
9	F26	60	Combination Short Haul Truck	14	0.00E+00	8.31E-06	5.79E-07	5.40E+00	2.94E-08	7.27E-03	6.16E-06	9.03E-03	7.73E-04	1.53E-04	5.29E-04	1.72E-04	1.73E-04	8.15E-04	1.81E-05	0.00E+00	3.56E-04	1.70E-03
9	F26	60	Combination Long Haul Truck	13	0.00E+00	7.46E-06	4.85E-07	5.07E+00	3.37E-08	7.83E-03	5.75E-06	8.95E-03	7.78E-04	1.32E-04	5.45E-04	1.48E-04	1.50E-04	7.74E-04	1.70E-05	0.00E+00	3.95E-04	1.69E-03
9	F27	60	Passenger Car	717	0.00E+00	1.06E-05	1.15E-06	3.56E+01	7.39E-05	2.66E-01	2.36E-05	1.46E-03	7.28E-03	1.12E-03	2.30E-03	1.48E-03	1.52E-03	1.50E-04	1.80E-04	4.97E-08	7.78E-04	2.29E-04
9	F27	60	Passenger Truck	1201	0.00E+00	2.34E-05	2.47E-06	8.13E+01	1.46E-04	4.74E-01	4.83E-05	4.77E-03	1.34E-02	2.07E-03	4.59E-03	2.99E-03	3.06E-03	6.36E-04	4.08E-04	1.13E-07	1.53E-03	7.91E-04
9	F27	60	Single Unit Short Haul Truck	145	0.00E+00	4.25E-05	2.12E-06	2.71E+01	3.50E-05	5.24E-02	4.53E-05	2.03E-02	3.44E-03	6.24E-04	5.16E-03	1.27E-03	1.29E-03	2.71E-03	1.09E-04	4.50E-08	3.87E-03	3.80E-03
9	F27	60	Single Unit Long Haul Truck	6	0.00E+00	1.85E-06	9.23E-08	1.15E+00	1.52E-06	2.22E-03	1.98E-06	8.77E-04	1.54E-04	2.76E-05	2.26E-04	5.54E-05	5.63E-05	1.15E-04	4.67E-06	1.91E-09	1.70E-04	1.64E-04
9	F27	60	Combination Short Haul Truck	78	0.00E+00	4.61E-05	3.22E-06	3.00E+01	1.63E-07	4.04E-02	3.42E-05	5.02E-02	4.30E-03	8.51E-04	2.94E-03	9.58E-04	9.59E-04	4.53E-03	1.01E-04	0.00E+00	1.98E-03	9.45E-03
9	F27	60	Combination Long Haul Truck	72	0.00E+00	4.14E-05	2.70E-06	2.81E+01	1.87E-07	4.35E-02	3.19E-05	4.97E-02	4.32E-03	7.33E-04	3.03E-03	8.23E-04	8.34E-04	4.30E-03	9.43E-05	0.00E+00	2.19E-03	9.37E-03
9	F28	60	Passenger Car	796	0.00E+00	1.18E-05	1.28E-06	3.95E+01	8.21E-05	2.95E-01	2.62E-05	1.62E-03	8.08E-03	1.24E-03	2.55E-03	1.64E-03	1.69E-03	1.66E-04	2.00E-04	5.52E-08	8.64E-04	2.54E-04
9	F28	60	Passenger Truck	1333	0.00E+00	2.60E-05	2.75E-06	9.03E+01	1.63E-04	5.26E-01	5.36E-05	5.29E-03	1.48E-02	2.30E-03	5.10E-03	3.32E-03	3.40E-03	7.06E-04	4.53E-04	1.25E-07	1.70E-03	8.77E-04
9	F28	60	Single Unit Short Haul Truck	143	0.00E+00	4.19E-05	2.10E-06	2.67E+01	3.45E-05	5.17E-02	4.47E-05	2.00E-02	3.39E-03	6.15E-04	5.09E-03	1.26E-03	1.28E-03	2.67E-03	1.08E-04	4.44E-08	3.81E-03	3.75E-03
9	F28	60	Single Unit Long Haul Truck	6	0.00E+00	1.83E-06	9.11E-08	1.14E+00	1.50E-06	2.19E-03	1.95E-06	8.65E-04	1.52E-04	2.72E-05	2.23E-04	5.47E-05	5.56E-05	1.14E-04	4.61E-06	1.89E-09	1.67E-04	1.62E-04
9	F28	60	Combination Short Haul Truck	58	0.00E+00	3.38E-05	2.36E-06	2.20E+01	1.20E-07	2.96E-02	2.51E-05	3.68E-02	3.15E-03	6.24E-04	2.15E-03	7.02E-04	7.04E-04	3.32E-03	7.37E-05	0.00E+00	1.45E-03	6.93E-03
9	F28	60	Combination Long Haul Truck	52	0.00E+00	3.04E-05

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F45	70	Combination Short Haul Truck	18	0.00E+00	9.52E-06	6.77E-07	6.90E+00	3.09E-08	8.20E-03	6.98E-06	1.00E-02	7.25E-04	1.58E-04	5.80E-04	2.00E-04	2.00E-04	1.04E-03	2.31E-05	0.00E+00	3.80E-04	1.89E-03
10	F45	70	Combination Long Haul Truck	17	0.00E+00	8.61E-06	5.76E-07	6.44E+00	3.56E-08	8.68E-03	6.54E-06	9.88E-03	7.20E-04	1.31E-04	6.00E-04	1.74E-04	1.76E-04	9.84E-04	2.16E-05	0.00E+00	4.24E-04	1.86E-03
10	F46	70	Passenger Car	203	0.00E+00	2.62E-06	2.84E-07	9.65E+00	1.82E-05	6.59E-02	5.83E-06	4.07E-04	1.57E-03	2.52E-04	5.67E-04	3.66E-04	3.75E-04	3.64E-05	4.90E-05	1.33E-08	1.92E-04	6.36E-05
10	F46	70	Passenger Truck	340	0.00E+00	5.75E-06	6.08E-07	2.22E+01	3.63E-05	1.21E-01	1.19E-05	1.27E-03	2.86E-03	4.65E-04	1.14E-03	7.41E-04	7.59E-04	1.65E-04	1.12E-04	2.99E-08	3.80E-04	2.09E-04
10	F46	70	Single Unit Short Haul Truck	21	0.00E+00	4.95E-06	2.48E-07	3.88E+00	4.05E-06	7.76E-03	5.28E-06	2.44E-03	3.48E-04	6.98E-05	6.01E-04	1.48E-04	1.51E-04	3.89E-04	1.56E-05	6.31E-09	4.50E-04	4.58E-04
10	F46	70	Single Unit Long Haul Truck	1	0.00E+00	2.16E-07	1.07E-08	1.65E-01	1.75E-07	3.26E-04	2.30E-07	1.05E-04	1.59E-05	3.10E-06	2.63E-05	6.41E-06	6.52E-06	1.64E-05	6.65E-07	2.66E-10	1.97E-05	1.97E-05
10	F46	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.88E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
10	F46	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.75E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
9	F47	60	Passenger Car	8	0.00E+00	1.22E-07	1.32E-08	4.09E-01	8.48E-07	3.05E-03	2.71E-07	1.68E-05	8.35E-05	1.28E-05	2.64E-05	1.70E-05	1.74E-05	1.72E-06	2.07E-06	5.70E-10	8.93E-06	2.62E-06
9	F47	60	Passenger Truck	14	0.00E+00	2.69E-07	2.84E-08	9.33E-01	1.68E-06	5.44E-03	5.54E-07	5.47E-05	1.53E-04	2.38E-05	5.27E-05	3.43E-05	3.52E-05	7.29E-06	4.68E-06	1.29E-09	1.75E-05	9.07E-06
9	F47	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.30E-05
9	F48	60	Passenger Car	2	0.00E+00	3.32E-08	3.59E-09	1.11E-01	2.31E-07	8.31E-04	7.39E-08	4.58E-06	2.28E-05	3.50E-06	7.19E-06	4.64E-06	4.76E-06	4.69E-07	5.64E-07	1.55E-10	2.43E-06	7.15E-07
9	F48	60	Passenger Truck	4	0.00E+00	7.33E-08	7.74E-09	2.54E-01	4.58E-07	1.48E-03	1.51E-07	1.49E-05	4.18E-05	6.48E-06	1.44E-05	9.36E-06	9.59E-06	1.99E-06	1.28E-06	3.53E-10	4.78E-06	2.47E-06
9	F49	60	Passenger Car	747	0.00E+00	1.11E-05	1.20E-06	3.71E+01	7.70E-05	2.77E-01	2.46E-05	1.52E-03	7.58E-03	1.16E-03	2.39E-03	1.54E-03	1.58E-03	1.56E-04	1.88E-04	5.18E-08	8.11E-04	2.38E-04
9	F49	60	Passenger Truck	1251	0.00E+00	2.44E-05	2.58E-06	8.47E+01	1.53E-04	4.94E-01	5.03E-05	4.97E-03	1.39E-02	2.16E-03	4.78E-03	3.12E-03	3.19E-03	6.62E-04	4.25E-04	1.17E-07	1.59E-03	8.24E-04
9	F49	60	Single Unit Short Haul Truck	132	0.00E+00	3.88E-05	1.94E-06	2.47E+01	3.20E-05	4.79E-02	4.14E-05	1.85E-02	3.14E-03	5.70E-04	4.72E-03	1.16E-03	1.18E-03	2.47E-03	9.99E-05	4.11E-08	3.53E-03	3.47E-03
9	F49	60	Single Unit Long Haul Truck	6	0.00E+00	1.69E-06	8.43E-08	1.06E+00	1.39E-06	2.03E-03	1.81E-06	8.02E-04	1.41E-04	2.52E-05	2.07E-04	5.06E-05	5.15E-05	1.05E-04	4.27E-06	1.75E-09	1.55E-04	1.50E-04
9	F49	60	Combination Short Haul Truck	72	0.00E+00	4.25E-05	2.96E-06	2.76E+01	1.50E-07	3.71E-02	3.15E-05	4.61E-02	3.95E-03	7.82E-04	2.70E-03	8.81E-04	8.83E-04	4.16E-03	9.25E-05	0.00E+00	1.82E-03	8.69E-03
9	F49	60	Combination Long Haul Truck	66	0.00E+00	3.81E-05	2.48E-06	2.59E+01	1.72E-07	4.00E-02	2.94E-05	4.58E-02	3.97E-03	6.74E-04	2.78E-03	7.57E-04	7.67E-04	3.96E-03	8.67E-05	0.00E+00	2.02E-03	8.62E-03
9	F50	60	Passenger Car	782	0.00E+00	1.16E-05	1.25E-06	3.88E+01	8.06E-05	2.90E-01	2.57E-05	1.59E-03	7.94E-03	1.22E-03	2.51E-03	1.62E-03	1.66E-03	1.63E-04	1.97E-04	5.42E-08	8.48E-04	2.49E-04
9	F50	60	Passenger Truck	1309	0.00E+00	2.55E-05	2.70E-06	8.87E+01	1.60E-04	5.17E-01	5.26E-05	5.20E-03	1.46E-02	2.26E-03	5.01E-03	3.26E-03	3.34E-03	6.93E-04	4.45E-04	1.23E-07	1.67E-03	8.62E-04
9	F50	60	Single Unit Short Haul Truck	143	0.00E+00	4.19E-05	2.10E-06	2.67E+01	3.45E-05	5.17E-02	4.47E-05	2.00E-02	3.39E-03	6.15E-04	5.09E-03	1.26E-03	1.28E-03	2.67E-03	1.08E-04	4.44E-08	3.81E-03	3.75E-03
9	F50	60	Single Unit Long Haul Truck	6	0.00E+00	1.83E-06	9.11E-08	1.14E+00	1.50E-06	2.19E-03	1.95E-06	8.65E-04	1.52E-04	2.72E-05	2.23E-04	5.47E-05	5.56E-05	1.14E-04	4.61E-06	1.89E-09	1.67E-04	1.62E-04
9	F50	60	Combination Short Haul Truck	56	0.00E+00	3.32E-05	2.32E-06	2.16E+01	1.18E-07	2.91E-02	2.47E-05	3.61E-02	3.09E-03	6.12E-04	2.11E-03	6.90E-04	6.91E-04	3.26E-03	7.24E-05	0.00E+00	1.42E-03	6.80E-03
9	F50	60	Combination Long Haul Truck	52	0.00E+00	2.98E-05	1.94E-06	2.03E+01	1.35E-07	3.13E-02	2.30E-05	3.58E-02	3.11E-03	5.28E-04	2.18E-03	5.93E-04	6.00E-04	3.10E-03	6.79E-05	0.00E+00	1.58E-03	6.75E-03
10	F51	70	Passenger Car	173	0.00E+00	2.23E-06	2.41E-07	8.21E+00	1.55E-05	5.61E-02	4.96E-06	3.46E-04	1.34E-03	2.15E-04	4.83E-04	3.11E-04	3.19E-04	3.09E-05	4.17E-05	1.13E-08	1.63E-04	5.41E-05
10	F51	70	Passenger Truck	289	0.00E+00	4.89E-06	5.17E-07	1.89E+01	3.09E-05	1.03E-01	1.02E-05	1.08E-03	2.44E-03	3.96E-04	9.69E-04	6.30E-04	6.46E-04	1.40E-04	9.51E-05	2.54E-08	3.23E-04	1.78E-04
10	F51	70	Single Unit Short Haul Truck	49	0.00E+00	1.15E-05	5.75E-07	8.99E+00	9.39E-06	1.80E-02	1.22E-05	5.67E-03	8.08E-04	1.62E-04	1.39E-03	3.43E-04	3.49E-04	9.01E-04	3.63E-05	1.46E-08	1.04E-03	1.06E-03
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	5.00E-07	2.49E-08	3.81E-01	4.05E-07	7.56E-04	5.33E-07	2.44E-04	3.69E-05	7.19E-06	6.09E-05	1.49E-05	1.51E-05	3.81E-05	1.54E-06	6.17E-10	4.58E-05	4.56E-05
10	F51	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.54E-07	7.69E+00	3.45E-08	9.14E-03	7.78E-06	1.12E-02	8.07E-04	1.76E-04	6.46E-04	2.23E-04	2.23E-04	1.16E-03	2.57E-05	0.00E+00	4.23E-04	2.10E-03
10	F51	70	Combination Long Haul Truck	19	0.00E+00	9.59E-06	6.41E-07	7.18E+00	3.97E-08	9.68E-03	7.28E-06	1.10E-02	8.02E-04	1.46E-04	6.68E-04	1.94E-04	1.96E-04	1.10E-03	2.40E-05	0.00E+00	4.72E-04	2.07E-03
10	F52	70	Passenger Car	738	0.00E+00	9.53E-06	1.03E-06	3.51E+01	6.63E-05	2.39E-01	2.12E-05	1.48E-03	5.72E-03	9.17E-04	2.06E-03	1.33E-03	1.36E-03	1.32E-04	1.78E-04	4.85E-08	6.98E-04	2.31E-04
10	F52	70	Passenger Truck	1235	0.00E+00	2.09E-05	2.21E-06	8.08E+01	1.32E-04	4.41E-01	4.34E-05	4.62E-03	1.04E-02	1.69E-03	4.14E-03	2.69E-03	2.76E-03	5.99E-04	4.06E-04	1.09E-07	1.38E-03	7.61E-04
10	F52	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.62E-02	1.10E-05	5.11E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.57E-04
10	F52	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.24E-08	3.44E-01	3.65E-07	6.81E-04	4.81E-07	2.20E-04	3.33E-05	6.49E-06	5.49E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.12E-05
10	F52	70	Combination Short Haul Truck	21	0.00E+00	1.09E-05	7.73E-07	7.89E+00	3.54E-08	9.37E-03	7.98E-06	1.15E-02	8.28E-04	1.81E-04	6.63E-04	2.29E-04	2.28E-04	1.19E-03	2.64E-05	0.00E+00	4.34E-04	2.16E-03
10	F52	70	Combination Long Haul Truck	19	0.00E+00	9.84E-06	6.58E-07	7.36E+00	4.07E-08	9.92E-03	7.47E-06	1.13E-02	8.23E-04	1.50E-04	6.85E-04	1.99E-04	2.01E-04	1.13E-03	2.47E-05	0.00E+00	4.84E-04	2.13E-03
10	F53	70	Passenger Car	176	0.00E+00	2.27E-06	2.46E-07	8.37E+00	1.58E-05	5.71E-02	5.06E-06	3.53E-04	1.37E-03	2.19E-04	4.92E-04	3.17E-04	3.26E-04	3.15E-05	4.25E-05	1.16E-08	1.67E-04	5.51E-05
10	F53	70	Passenger Truck	295	0.00E+00	4.99E-06	5.28E-07	1.93E+01	3.15E-05	1.05E-01	1.04E-05	1.10E-03	2.48E-03	4.04E-04	9.88E-04	6.43E-04	6.58E-04	1.43E-04	9.70E-05	2.59E-08	3.30E-04	1.82E-04
10	F53	70	Single Unit Short Haul Truck	12	0.00E+00	2.93E-06	1.47E-07	2.29E+00	2.39E-06	4.58E-03	3.12E-06	1.44E-03	2.06E-04	4.12E-05	3.55E-04	8.75E-05	8.90E-05	2.30E-04	9.24E-06	3.73E-09	2.66E-04	2.70E-04
10	F53	70	Single Unit Long Haul Truck	1	0.00E+00	1.27E-07	6.34E-09	9.72E-02	1.03E-07	1.93E-04	1.36E-07	6.21E-05	9.40E-06	1.83E-06	1.55E-05	3.79E-06	3.85E-06	9.71E-06	3.93E-07	1.57E-10	1.17E-05	1.16E-05
10	F53	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.86E-04
10	F53	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.79E-04
10	F54	70	Passenger Car	697	0.00E+00	8.99E-06	9.73E-07	3.31E+01	6.26E-05	2.26E-01	2.00E-05	1.40E-03	5.40E-03	8.66E-04	1.95E-03	1.25E-03	1.29E-03	1.25E-04	1.68E-04	4.58E-08	6.59E-04	2.18E-04
10	F54	70	Passenger Truck	1166	0.00E+00	1.97E-05	2.09E-06	7.63E+01	1.25E-04	4.16E-01	4.10E-05	4.37E-03	9.82E-03	1.60E-03	3.91E-03	2.54E-03	2.60E-03	5.65E-04	3.84E-04	1.03E-07	1.30E-03	7.18E-04
10	F54	70	Single Unit Short Haul Truck	19	0.00E+00	4.50E-06	2.26E-07	3.53E+00	3.68E-06	7.05E-03	4.80E-06	2.22E-03	3.17E-04	6.34E-05	5.46E-04	1.35E-04	1.37E-04	3.53E-04	1.42E-05	5.74E-09	4.09E-04	4.16E-04
10	F54	70	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.76E-09	1.50E-01	1.59E-07	2.96E-04	2.09E-07	9.56E-05	1.45E-05	2.82E-06	2.39E-05	5.83E-06	5.93E-06	1.49E-05	6.04E-07	2.42E-10	1.79E-05	1.79E-05
10	F54	70	Combination Short Haul Truck	10	0.00E+00	5.44E-06	3.87E-07	3.94E+00	1.77E-08	4.68E-03	3.99E-06	5.73E-03	4.14E-04	9.04E-05	3.31E-04	1.14E-04	1.14E-04	5.95E-04	1.32E-05	0.00E+00	2.17E-04	1.08E-03
10	F54	70	Combination Long Haul Truck	10	0.00E+00	4.92E-06	3.29E-07	3.68E+00	2.04E-08	4.96E-03	3.74E-06	5.65E-03	4.11E-04	7.50E-05	3.43E-04	9.94E-05	1.00E-04	5.63E-04	1.23E-05	0.00E+00	2.42E-04	1.06E-03
53	F71	70	Passenger Car	439	0.00E+00	5.49E-06	5.94E-07	2.11E+01	3.82E-05	1.37E-01	1.22E-05	8.94E-04	3.35E-03	5.40E-04	1.19E-03	7.66E-04	7.86E-04	7.85E-05	1.07E-04	2.91E-08	4.02E-04	1.40E-04
53	F71	70	Passenger Truck	734	0.00E+00	1.20E-05	1.27E-06	4.86E+01	7.57E-05	2.51E-01	2.49E-05	2.74E-03	6.01E-03	9.82E-04	2.37E-03	1.54E-03	1.58E-03	3.54E-04	2.45E-04	6.40E-08	7.92E-04	4.49E-04
53	F71	70	Single Unit Short Haul Truck	19	0.00E+00	4.50E-06	2.26E-07	3.53E+00	3.68E-06	7.05E-03	4.80E-06	2.22E-03	3.17E-04	6.34E-05	5.46E-04	1.35E-04	1.37E-04	3.53E-04	1.42E-05	5.74E-09	4.09E-04	4.16E-04
53	F71	70	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.76E-09	1.50E-01	1.59E-07	2.96E-04	2.09E-07	9.56E-05	1.45E-05	2.82E-06	2.39E-05	5.83E-06	5.93E-06	1.49E-05	6.04E-07	2.42E-10	1.79E-05	1.79E-05
53	F71	70	Combination Short Haul Truck	15	0.00E+00	7.89E-06	5.61E-07	5.72E+00	2.56E-08	6.79E-03	5.79E-06	8.30E-03	6.00E-04	1.31E-04	4.81E-04	1.66E-04	1.66E-04	8.62E-04	1.91E-05	0.00E+00	3.15E-04	1.56E-03
53	F71	70	Combination Long Haul Truck	14	0.00E+00	7.13E-06	4.77E-07	5.34E+00	2.95E-08	7.20E-03	5.42E-06	8.19E-03	5.96E-04	1.09E-04	4.97E-04	1.44E-04	1.46E-04	8.16E-04	1.79E-05	0.00E+00	3.51E-04	1.54E-03
50	F72	40	Passenger Car	228	0.00E+00	3.78E-06	4.09E-07	1.31E+01	2.63E-05	9.39E-02	8.41E-06	4.12E-04	3.94E-03	5.63E-04	8.19E-04	5.28E-04	5.42E-04	7.14E-05	6.57E-05	1.60E-08	2.77E-04	6.43E-05
50	F72	40	Passenger Truck	381	0.00E+00	8.66E-06	9.07E-07	2.92E+01	5.19E-05	1.62E-01	1.73E-05	1.56E-03	7.00E-03	9.94E-04	1.63E-03	1.07E-03	1.09E-03	2.52E-04	1.45E-04	3.11E-08	5.39E-04	2.64E-04
50	F72	40	Single Unit Short Haul Truck	48	0.00E+00	2.12E-05	1.11E-06	1.02E+01	1.85E-05	1.76E-02	2.26E-05	1.04E-02	1.94E-03	3.22E-04	2.51E-03	6.64E-04	6.74E-04	1.03E-03	4.12E-05	1.74E-08	1.84E-03	1.95E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	9.31E-07	4.86E-08	4.41E-01	8.11E-07	7.65E-04	9.91E-07	4.53E-04	8.69E-05	1.43E-05	1.11E-04	2.90E-05	2.95E-05	4.45E-05	1.78E-06	7.57E-10	8.11E-05	8.50E-05
50	F72	40	Combination Short Haul Truck	18	0.00E+00	1.58E-05	1.09E-06	8.00E+00	5.66E-08	1.37E-02	1.17E-05	1.76E-02	1.83E-03	3.30E-04	1.02E-03	3.26E-04	3.29E-04	1.21E-03	2.68E-05	0.00E+00	6.92E-04	3.32E-03
50	F72	40	Combination Long Haul Truck	16	0.00E+00	1.43E-05	9.37E-07	7.60E+00	6.43E-08	1.53E-02	1.10E-05	1.77E-02	1.84E-03	2.93E-04	1.05E-03	2.86E-04	2.91E-04	1.16E-03	2.54E-05	0.00E+00	7.60E-04	3.33E-03
52	F73	60	Passenger Car	7	0.00E+00	1.02E-07	1.10E-08	3.71E-01	7.08E-07	2.53E-03	2.26E-07	1.47E-05	7.38E-05	1.13E-05	2.20E-05	1.42E-05	1.46E-05	1.56E-06	1.88E-06	5.02E-10	7.45E-06	2.30E-06
52	F73	60	Passenger Truck	13	0.00E+00	2.24E-07	2.36E-08	8.47E-01	1.39E-06	4.52E-03	4.60E-07	4.72E-05	1.31E-04	2.03E-05	4.37E-05	2.85E-05	2.92E-05	6.50E-06	4.25E-06	1.07E-09	1.45E-05	7.82E-06
53	F74	70	Passenger Car	183	0.00E+00	2.29E-06	2.48E-07	8.79E+00	1.59E-05	5.70E-02	5.09E-06	3.73E-04	1.40E-03	2.25E-04	4.95E-04	3.19E-04	3.28E-04	3.27E-05	4.46E-05	1.21E-08	1.68E-04	5.82E-05
53	F74	70	Passenger Truck	306	0.00E+00	4.98E-06	5.28E-07	2.03E+01	3.16E-05	1.05E-01	1.04E-05	1.14E-03	2.51E-03	4.09E-04	9.89E-04	6.43E-04	6.59E-04	1.48E-04	1.02E-04	2.67E-08	3.30E-04	1.87E-04
53	F74	70	Single Unit Short Haul Truck	99	0.00E+00	2.32E-05	1.16E-06	1.82E+01	1.90E-05	3.63E-02	2.47E-05	1.14E-02	1.63E-03	3.27E-04	2.81E-03	6.93E-04	7.05E-04	1.82E-03	7.32E-05	2.96E-08	2.11E-03	2.14E-03
53	F74	70	Single Unit Long Haul Truck	4	0.00E+00	1.01E-06	5.02E-08	7.70E-01	8.18E-07	1.53E-03	1.08E-06	4.92E-04	7.45E-05	1.45E-05	1.23E-04	3.00E-05	3.05E-05	7.70E-05	3.11E-06	1.25E-09	9.24E-05	9.22E-05
53	F74	70	Combination Short Haul Truck	48	0.00E+00	2.50E-05	1.78E-06	1.81E+01	8.13E-08	2.15E-02	1.84E-05	2.63E-02	1.90E-03	4.16E-04	1.52E-03	5.26E-04	5.25E-04	2.74E-03	6.07E-05	0.00E+00	9.99E-04	4.96E-03
53	F74	70	Combination Long Haul Truck	44	0.00E+00	2.26E-05	1.51E-06	1.69E+01	9.37E-08	2.28E-02	1.72E-05	2.60E-02	1.89E-03	3.45E-04	1.58E-03	4.57E-04	4.62E-04	2.59E-03	5.67E-05	0.00E+00	1.11E-03	4.89E-03
52	F75	60	Passenger Car	50	0.00E+00	6.77E-07	7.32E-08	2.47E+00	4.71E-06	1.68E-02	1.50E-06	9.77E-05	4.91E-04	7.54E-05	1.46E-04	9.44E-05	9.69E-05	1.04E-05	1.25E-05	3.34E-09	4.96E-05	1.53E-05
52	F75	60	Passenger Truck	83	0.00E+00	1.49E-06	1.57E-07	5.64E+00	9.27E-06	3.01E-02	3.06E-06	3.14E-04	8.74E-04	1.35E-04	2.91E-04	1.89E-04	1.94E-04	4.32E-05	2.83E-05	7.09E-09	9.67E-05	5.20E-05
52	F75	60	Single Unit Short Haul Truck	48	0.00E+00	1.41E-05	7.03E-07	8.96E+00	1.16E-05	1.73E-02	1.50E-05	6.71E-03	1.14E-03	2.07E-04	1.71E-03	4.22E-04	4.29E-04	8.97E-04	3.62E-05	1.49E-08	1.28E-03	1.26E-03
52	F75	60	Single Unit Long Haul Truck	2	0.00E+00	6.14E-07	3.06E-08	3.82E-01	5.03E-07	7.36E-04	6.56E-07	2.90E-04	5.11E-05	9.14E-06	7.48E-05	1.83E-05	1.86E-05	3.82E-05	1.55E-06	6.34E-10	5.62E-05	5.44E-05
52	F75	60	Combination Short Haul Truck	16	0.00E+00	9.54E-06	6.65E-07	6.20E+00	3.38E-08	8.34E-03	7.08E-06	1.04E-02	8.88E-04	1.76E-04	6.07E-04	1.98E-04	1.98E-04	9.35E-04	2.08E-05	0.00E+00	4.09E-04	1.95E-03
52	F75	60	Combination Long Haul Truck	15	0.00E+00	8.56E-06	5.57E-07	5.82E+00	3.87E-08	8.99E-03	6.60E-06	1.03E-02	8.93E-04	1.51E-04	6.26E-04	1.70E-04	1.72E-04	8.89E-04	1.95E-05	0.00E+00	4.53E-04	1.94E-03
50	F76	40	Passenger Car	16	0.00E+00	2.67E-07	2.89E-08	9.23E-01	1.86E-06	6.63E-03	5.94E-07	2.91E-05	2.78E-04	3.97E-05	5.78E-05	3.73E-05	3.83E-05	5.04E-06	4.64E-06	1.13E-09	1.96E-05	4.54E-06
50	F76	40	Passenger Truck	27	0.00E+00	6.11E-07	6.41E-08	2.06E+00	3.67E-06	1.14E-02	1.22E-06	1.10E-04	4.94E-04	7.02E-05	1.15E-04	7.55E-05	7.72E-05	1.78E-05	1.03E-05	2.19E-09	3.81E-05	1.86E-05
50	F78	40	Passenger Car	499	0.00E+00	8.29E-06	8.97E-07	2.86E+01	5.77E-05	2.06E-01	1.84E-05	9.01E-04	8.63E-03	1.23E-03	1.79E-03	1.16E-03	1.19E-03	1.56E-04	1.44E-04	3.50E-08	6.07E-04	1.41E-04
50	F78	40	Passenger Truck	835	0.00E+00	1.90E-05	1.99E-06	6.39E+01	1.14E-04	3.55E-01	3.80E-05	3.42E-03	1.53E-02	2.18E-03	3.58E-03	2.34E-03	2.40E-03	5.53E-04	3.18E-04	6.80E-08	1.18E-03	5.78E-04
50	F78	40	Single Unit Short Haul Truck	17	0.00E+00	7.65E-06	4.01E-07	3.67E+00	6.67E-06	6.33E-03	8.13E-06	3.75E-03	6.99E-04	1.16E-04	9.05E-04	2.39E-04	2.43E-04	3.71E-04	1.48E-05	6.28E-09	6.62E-04	7.03E-04
50	F78	40	Single Unit Long Haul Truck	1	0.00E+00	3.35E-07	1.75E-08	1.59E-01	2.92E-07	2.75E-04	3.57E-07	1.63E-04	3.13E-05	5.16E-06	3.98E-05	1.04E-05	1.06E-05	1.60E-05	6.40E-07	2.72E-10	2.92E-05	3.06E-05
50	F78	40	Combination Short Haul Truck	9	0.00E+00	8.34E-06	5.79E-07	4.23E+00	3.00E-08	7.28E-03	6.20E-06	9.32E-03	9.70E-04	1.75E-04	5.40E-04	1.73E-04	1.74E-04	6.38E-04	1.42E-05	0.00E+00	3.66E-04	1.76E-03
50	F78	40	Combination Long Haul Truck	9	0.00E+00

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B15	0.00E+00	3.46E-05	3.18E-06	1.14E+02	1.57E-04	6.01E-01	5.96E-05	1.59E-02	6.51E-03	1.40E-03	5.77E-03	3.38E-03	3.46E-03	2.31E-03	5.60E-04	1.50E-07	2.31E-03	2.83E-03
B16	0.00E+00	6.03E-05	5.65E-06	2.03E+02	2.80E-04	1.07E+00	1.05E-04	2.82E-02	1.16E-02	2.49E-03	1.01E-02	6.00E-03	6.14E-03	3.94E-03	9.94E-04	2.63E-07	3.93E-03	5.03E-03
B19	0.00E+00	3.24E-04	2.36E-05	5.49E+02	4.26E-04	1.81E+00	3.39E-04	2.75E-01	2.50E-02	6.26E-03	3.18E-02	1.37E-02	1.39E-02	4.33E-02	2.31E-03	4.81E-07	1.79E-02	5.15E-02
B20	0.00E+00	2.96E-04	2.40E-05	6.85E+02	7.53E-04	2.99E+00	3.85E-04	2.13E-01	3.55E-02	8.14E-03	3.64E-02	1.88E-02	1.92E-02	3.22E-02	3.14E-03	7.48E-07	1.72E-02	3.93E-02
B21	0.00E+00	2.69E-04	1.94E-05	4.37E+02	3.16E-04	1.37E+00	2.73E-04	2.35E-01	1.95E-02	4.96E-03	2.55E-02	1.08E-02	1.09E-02	3.67E-02	1.82E-03	3.63E-07	1.46E-02	4.39E-02
B22	0.00E+00	2.72E-04	2.20E-05	6.25E+02	6.84E-04	2.72E+00	3.51E-04	1.97E-01	3.23E-02	7.43E-03	3.32E-02	1.72E-02	1.75E-02	2.97E-02	2.86E-03	6.76E-07	1.57E-02	3.65E-02
B23	0.00E+00	2.70E-04	1.95E-05	4.40E+02	3.20E-04	1.38E+00	2.75E-04	2.35E-01	1.96E-02	4.99E-03	2.57E-02	1.08E-02	1.10E-02	3.68E-02	1.83E-03	3.66E-07	1.47E-02	4.40E-02
B24	0.00E+00	2.99E-04	2.45E-05	7.05E+02	7.86E-04	3.12E+00	3.94E-04	2.13E-01	3.67E-02	8.39E-03	3.72E-02	1.95E-02	1.98E-02	3.20E-02	3.25E-03	7.73E-07	1.74E-02	3.93E-02
E39	0.00E+00	1.71E-05	1.57E-06	4.65E+01	7.30E-05	2.53E-01	2.83E-05	8.02E-03	6.31E-03	1.04E-03	2.72E-03	1.59E-03	1.63E-03	8.96E-04	2.27E-04	5.87E-08	1.09E-03	1.45E-03
E40	0.00E+00	3.54E-05	2.58E-06	4.86E+01	5.33E-05	1.92E-01	3.88E-05	2.79E-02	6.00E-03	1.06E-03	3.73E-03	1.61E-03	1.64E-03	3.08E-03	2.13E-04	4.68E-08	2.10E-03	5.21E-03
E41	0.00E+00	1.27E-05	1.20E-06	3.74E+01	6.03E-05	2.08E-01	2.23E-05	5.14E-03	5.11E-03	8.37E-04	2.14E-03	1.29E-03	1.32E-03	5.82E-04	1.85E-04	4.83E-08	8.24E-04	9.20E-04
E42	0.00E+00	1.79E-05	1.55E-06	4.07E+01	5.93E-05	2.09E-01	2.60E-05	1.09E-02	5.44E-03	9.07E-04	2.47E-03	1.38E-03	1.41E-03	1.17E-03	1.95E-04	4.77E-08	1.06E-03	2.01E-03
E43	0.00E+00	1.33E-05	1.23E-06	3.77E+01	6.05E-05	2.08E-01	2.29E-05	5.47E-03	5.13E-03	8.42E-04	2.22E-03	1.30E-03	1.33E-03	6.36E-04	1.86E-04	4.89E-08	8.84E-04	9.83E-04
E44	0.00E+00	1.24E-05	1.10E-06	3.00E+01	4.45E-05	1.57E-01	1.87E-05	7.28E-03	4.03E-03	6.70E-04	1.77E-03	1.02E-03	1.04E-03	7.78E-04	1.44E-04	3.56E-08	7.35E-04	1.34E-03
E45	0.00E+00	2.71E-05	1.85E-06	3.29E+01	2.47E-05	9.66E-02	2.65E-05	2.25E-02	2.69E-03	5.48E-04	2.56E-03	9.47E-04	9.60E-04	2.95E-03	1.35E-04	2.74E-08	1.60E-03	4.22E-03
E46	0.00E+00	3.55E-05	2.63E-06	5.92E+01	6.48E-05	2.38E-01	4.14E-05	2.58E-02	5.26E-03	1.01E-03	4.00E-03	1.80E-03	1.83E-03	3.37E-03	2.64E-04	6.26E-08	2.17E-03	4.80E-03
E47	0.00E+00	7.62E-06	5.87E-07	1.45E+01	1.75E-05	6.35E-02	9.62E-06	5.12E-03	1.32E-03	2.48E-04	9.31E-04	4.48E-04	4.57E-04	6.69E-04	6.64E-05	1.64E-08	4.74E-04	9.49E-04
E48	0.00E+00	3.19E-05	2.38E-06	5.44E+01	6.08E-05	2.23E-01	3.77E-05	2.29E-02	4.86E-03	9.29E-04	3.65E-03	1.66E-03	1.69E-03	2.99E-03	2.44E-04	5.83E-08	1.96E-03	4.26E-03
E49	0.00E+00	5.29E-06	4.35E-07	1.13E+01	1.43E-05	5.26E-02	7.05E-06	3.54E-03	1.06E-03	1.96E-04	6.69E-04	3.52E-04	3.59E-04	4.39E-04	5.26E-05	1.27E-08	3.10E-04	6.54E-04
E50	0.00E+00	4.66E-05	3.35E-06	6.51E+01	5.80E-05	2.25E-01	4.82E-05	3.83E-02	5.59E-03	1.10E-03	4.58E-03	1.91E-03	1.94E-03	4.88E-03	2.77E-04	5.71E-08	2.64E-03	7.17E-03
E51	0.00E+00	1.02E-06	9.22E-08	2.71E+00	3.82E-06	1.39E-02	1.56E-06	5.91E-04	2.63E-04	4.77E-05	1.47E-04	8.63E-05	8.82E-05	6.94E-05	1.31E-05	3.25E-09	5.89E-05	1.08E-04
E52	0.00E+00	4.84E-05	3.48E-06	6.79E+01	6.09E-05	2.36E-01	5.03E-05	3.96E-02	5.83E-03	1.15E-03	4.78E-03	2.00E-03	2.03E-03	5.06E-03	2.89E-04	6.01E-08	2.75E-03	7.41E-03
E53	0.00E+00	2.00E-05	1.39E-06	2.74E+01	2.47E-05	9.28E-02	2.09E-05	1.57E-02	2.31E-03	4.59E-04	2.04E-03	8.08E-04	8.21E-04	2.07E-03	1.16E-04	2.59E-08	1.22E-03	2.93E-03
E54	0.00E+00	5.69E-05	4.31E-06	9.67E+01	1.06E-04	3.95E-01	6.61E-05	4.27E-02	8.69E-03	1.66E-03	6.30E-03	2.94E-03	2.99E-03	5.42E-03	4.33E-04	9.87E-08	3.31E-03	7.95E-03
E55	0.00E+00	2.00E-05	1.39E-06	2.74E+01	2.47E-05	9.28E-02	2.09E-05	1.57E-02	2.31E-03	4.59E-04	2.04E-03	8.08E-04	8.21E-04	2.07E-03	1.16E-04	2.59E-08	1.22E-03	2.93E-03
E56	0.00E+00	5.69E-05	4.31E-06	9.67E+01	1.06E-04	3.95E-01	6.61E-05	4.27E-02	8.69E-03	1.66E-03	6.30E-03	2.94E-03	2.99E-03	5.42E-03	4.33E-04	9.87E-08	3.31E-03	7.95E-03
E57	0.00E+00	1.91E-05	1.69E-06	4.74E+01	7.22E-05	2.51E-01	2.98E-05	1.00E-02	6.37E-03	1.06E-03	2.86E-03	1.62E-03	1.66E-03	1.12E-03	2.30E-04	5.85E-08	1.21E-03	1.83E-03
E58	0.00E+00	2.45E-05	1.91E-06	4.31E+01	5.65E-05	1.99E-01	3.08E-05	1.69E-02	5.55E-03	9.47E-04	2.97E-03	1.45E-03	1.48E-03	1.88E-03	1.99E-04	4.75E-08	1.49E-03	3.14E-03
E59	0.00E+00	1.40E-05	1.22E-06	3.60E+01	5.08E-05	1.82E-01	2.14E-05	7.61E-03	3.46E-03	6.29E-04	2.06E-03	1.15E-03	1.18E-03	9.57E-04	1.74E-04	4.48E-08	8.80E-04	1.39E-03
E60	0.00E+00	1.50E-05	1.20E-06	3.07E+01	3.86E-05	1.41E-01	1.97E-05	9.90E-03	2.85E-03	5.31E-04	1.89E-03	9.57E-04	9.77E-04	1.26E-03	1.43E-04	3.50E-08	9.08E-04	1.83E-03
E61	0.00E+00	1.40E-05	1.22E-06	3.60E+01	5.08E-05	1.82E-01	2.14E-05	7.61E-03	3.46E-03	6.29E-04	2.06E-03	1.15E-03	1.18E-03	9.57E-04	1.74E-04	4.48E-08	8.80E-04	1.39E-03
E62	0.00E+00	1.50E-05	1.20E-06	3.07E+01	3.86E-05	1.41E-01	1.97E-05	9.90E-03	2.85E-03	5.31E-04	1.89E-03	9.57E-04	9.77E-04	1.26E-03	1.43E-04	3.50E-08	9.08E-04	1.83E-03
E63	0.00E+00	1.05E-04	8.21E-06	1.85E+02	2.41E-04	8.50E-01	1.32E-04	7.32E-02	2.38E-02	4.06E-03	1.27E-02	6.20E-03	6.33E-03	8.11E-03	8.51E-04	2.03E-07	6.39E-03	1.36E-02
E64	0.00E+00	6.54E-05	4.98E-06	1.07E+02	1.33E-04	4.72E-01	7.88E-05	4.71E-02	1.36E-02	2.33E-03	7.59E-03	3.57E-03	3.64E-03	5.23E-03	4.85E-04	1.14E-07	3.95E-03	8.77E-03
E65	0.00E+00	1.06E-04	8.38E-06	1.93E+02	2.56E-04	9.02E-01	1.36E-04	7.24E-02	2.49E-02	4.24E-03	1.31E-02	6.49E-03	6.62E-03	8.03E-03	8.93E-04	2.15E-07	6.48E-03	1.34E-02
E66	0.00E+00	7.02E-05	5.36E-06	1.16E+02	1.46E-04	5.16E-01	8.52E-05	5.02E-02	1.48E-02	2.54E-03	8.21E-03	3.88E-03	3.96E-03	5.57E-03	5.28E-04	1.24E-07	4.25E-03	9.34E-03
E67	0.00E+00	3.38E-05	2.68E-06	6.79E+01	8.44E-05	3.07E-01	4.39E-05	2.24E-02	6.27E-03	1.17E-03	4.22E-03	2.11E-03	2.16E-03	2.88E-03	3.14E-04	7.72E-08	2.06E-03	4.16E-03
E68	0.00E+00	3.69E-05	2.91E-06	7.47E+01	9.37E-05	3.39E-01	4.84E-05	2.39E-02	6.89E-03	1.29E-03	4.68E-03	2.33E-03	2.38E-03	3.11E-03	3.47E-04	8.64E-08	2.30E-03	4.43E-03
E69	0.00E+00	2.43E-05	2.13E-06	6.11E+01	9.43E-05	3.25E-01	3.85E-05	1.19E-02	8.21E-03	1.36E-03	3.72E-03	2.10E-03	2.15E-03	1.37E-03	2.97E-04	7.69E-08	1.58E-03	2.18E-03
E70	0.00E+00	3.25E-05	2.88E-06	8.53E+01	1.35E-04	4.60E-01	5.35E-05	1.43E-02	1.15E-02	1.90E-03	5.20E-03	2.94E-03	3.01E-03	1.69E-03	4.17E-04	1.10E-07	2.19E-03	2.58E-03
E71	0.00E+00	2.60E-05	2.65E-06	9.05E+01	1.52E-04	5.22E-01	5.15E-05	7.28E-03	1.25E-02	2.03E-03	4.95E-03	3.13E-03	3.21E-03	8.44E-04	4.53E-04	1.21E-07	1.74E-03	1.25E-03
E72	0.00E+00	3.72E-05	3.28E-06	9.67E+01	1.52E-04	5.20E-01	6.09E-05	1.65E-02	1.30E-02	2.15E-03	5.93E-03	3.34E-03	3.41E-03	1.96E-03	4.72E-04	1.25E-07	2.52E-03	2.99E-03
E73	0.00E+00	3.20E-05	2.57E-06	5.63E+01	8.62E-05	2.96E-01	4.29E-05	2.12E-02	9.52E-03	1.52E-03	4.14E-03	2.11E-03	2.15E-03	2.06E-03	2.64E-04	6.56E-08	1.98E-03	3.94E-03
E74	0.00E+00	2.71E-05	2.07E-06	4.34E+01	6.54E-05	2.19E-01	3.51E-05	1.76E-02	7.23E-03	1.16E-03	3.44E-03	1.64E-03	1.68E-03	1.76E-03	2.02E-04	5.12E-08	1.77E-03	3.26E-03
E75	0.00E+00	8.05E-05	6.46E-06	1.55E+02	2.00E-04	7.06E-01	1.04E-04	5.58E-02	1.97E-02	3.35E-03	9.92E-03	5.03E-03	5.14E-03	6.09E-03	7.24E-04	1.70E-07	4.78E-03	1.03E-02
E76	0.00E+00	1.27E-04	1.01E-05	2.30E+02	2.84E-04	1.02E+00	1.56E-04	9.38E-02	2.90E-02	4.97E-03	1.48E-02	7.40E-03	7.55E-03	1.01E-02	1.06E-03	2.40E-07	7.24E-03	1.74E-02
E77	0.00E+00	8.86E-05	7.05E-06	1.64E+02	2.06E-04	7.32E-01	1.11E-04	6.39E-02	2.07E-02	3.54E-03	1.06E-02	5.30E-03	5.41E-03	6.92E-03	7.59E-04	1.75E-07	5.16E-03	1.19E-02
E78	0.00E+00	1.33E-04	1.05E-05	2.36E+02	2.87E-04	1.03E+00	1.62E-04	1.00E-01	2.97E-02	5.11E-03	1.53E-02	7.59E-03	7.74E-03	1.08E-02	1.08E-03	2.43E-07	7.57E-03	1.87E-02
E79	0.00E+00	6.35E-05	5.16E-06	1.39E+02	1.97E-04	6.70E-01	9.11E-05	3.55E-02	1.78E-02	3.00E-03	8.90E-03	4.60E-03	4.70E-03	4.14E-03	6.66E-04	1.70E-07	4.19E-03	6.52E-03
E80	0.00E+00	7.51E-05	6.46E-06	1.83E+02	2.64E-04	9.10E-01	1.13E-04	4.16E-02	2.37E-02	3.97E-03	1.09E-02	6.01E-03	6.15E-03	4.65E-03	8.84E-04	2.22E-07	4.74E-03	7.61E-03
E83	0.00E+00	3.33E-05	2.63E-06	5.82E+01	7.46E-05	2.67E-01	4.12E-05	2.42E-02	7.52E-03	1.28E-03	3.91E-03	1.94E-03	1.98E-03	2.62E-03	2.67E-04	6.17E-08	1.93E-03	4.50E-03
E84	0.00E+00	2.96E-05	2.26E-06	4.78E+01	5.89E-05	2.10E-01	3.52E-05	2.19E-02	6.08E-03	1.05E-03	3.38E-03	1.59E-03	1.62E-03	2.40E-03	2.17E-04	4.98E-08	1.75E-03	4.07E-03
E85	0.00E+00	1.52E-04	1.22E-05	2.75E+02	4.31E-04	1.46E+00	2.09E-04	9.49E-02	4.65E-02	7.43E-03	2.02E-02	1.04E-02	1.06E-02	9.40E-03	1.30E-03	3.29E-07	9.65E-03	1.76E-02
E86	0.00E+00	1.52E-04	1.19E-05	2.51E+02	3.77E-04	1.28E+00	1.98E-04	1.02E-01	4.21E-02	6.77E-03	1.92E-02	9.43E-03	9.63E-03	1.01E-02	1.17E-03	2.90E-07	9.61E-03	1.90E-02
E87	0.00E+00	1.63E-04	1.26E-05	2.60E+02	3.85E-04	1.31E+00	2.08E-04	1.11E-01	4.35E-02	7.01E-03	2.02E-02	9.76E-03	9.97E-03	1.09E-02	1.21E-03	2.98E-07	1.03E-02	2.06E-02
E88	0.00E+00	1.30E-04	1.00E-05	2.09E+02	3.13E-04	1.06E+00	1.67E-04	8.68E-02	3.50E-02	5.64E-03	1.63E-02	7.88E-03	8.05E-03	8.58E-03	9.72E-04	2.43E-07	8.29E-03	1.61E-02
E89	0.00E+00	5.03E-06	5.19E-07	1.65E+01	3.09E-05	1.03E-01	1.03E-05	1.01E-03	2.90E-03	4.48E-04	9.95E-04	6.32E-04	6.47E-04	1.28E-04	8.26E-05	2.29E-08	3.48E-04	1.68E-04
E90	0.00E+00	1.04E-05	9.25E-07	2.37E+01	3.99E-05	1.36E-01	1.64E-05	5.52E-03	4.08E-03	6.43E-04	1.57E-03	8.93E-04	9.14E-04	5.49E-04	1.15E-04	2.98E-08	6.57E-04	1.01E-03
E91	0.00E+00	1.78E-07	1.89E-08	6.10E-01	1.15E-06	3.86E-03	3.75E-07	3.25E-05	1.08E-04	1.66E-05	3.59E-05	2.33E-05	2.39E-05	4.10E-06	3.07E-06	8.47E-10	1.20E-05	5.31E-06
E92	0.00E+00	1.78E-07	1.89E-08	6.10E-01	1.15E-06	3.86E-03	3.75E-07	3.25E-05	1.08E-04	1.66E-05	3.59E-05	2.33E-05	2.39E-05	4.10E-06	3.07E-06	8.47E-10	1.20E-05	5.31E-06
E93	0.00E+00	9.52E-06	8.27E-07	2.05E+01	3.40E-05	1.16E-01	1.44E-05	5.36E-03	3.52E-03	5.57E-04	1.38E-03	7.72E-04	7.89E-04	5.28E-04	9.87E-05	2.54E-08	5.94E-04	9.85E-04
E94	0.00E+00	8.66E-06	8.66E-07	2.65E+01	4.90E-05	1.64E-01	1.69E-05	2.32E-03	4.64E-03	7.21E-04	1.63E-03	1.01E-03	1.04E-03	2.69E-04	1.32E-04	3.64E-08	5.88E-04	4.02E-04
E95	0.00E+00	5.68E-05	4.21E-06	9.32E+01	9.66E-05	3.59E-01	6.45E-05	4.30E-02	8.51E-03	1.61E-03	6.19E-03	2.77E-03	2.82E-03	5.54E-03	4.14E-04	9.26E-08	3.37E-03	8.01E-03
E96	0.00E+00	9.15E-05	7.02E-06	1.62E+02	1.76E-04	6.56E-01	1.07E-04	6.89E-02	1.51E-02	2.83E-03	1.02E-02	4.84E-03	4.93E-03	8.67E-03	7.29E-04	1.62E-07	5.26E-03	1.28E-02
E97	0.00E+00	5.68E-05	4.21E-06	9.32E+01	9.66E-05	3.59E-01	6.45E-05	4.30E-02	8.51E-03	1.61E-03	6.19E-03	2.77E-03	2.82E-03	5.54E-03	4.14E-04	9.26E-08	3.37E-03	8.01E-03
E98	0.00E+00	9.15E-05	7.02E-06	1.62E+02	1.76E-04	6.56E-01	1.07E-04	6.89E-02	1.51E-02	2.83E-03	1.02E-02	4.84E-03	4.93E-03	8.67E-03	7.29E-04	1.62E-07	5.26E-03	1.28E-02
F01	0.00E+00	2.76E-05	2.35E-06	5.67E+01	9.26E-05	3.16E-01	4.07E-05	1.61E-02	9.71E-03	1.54E-03	3.92E-03	2.13E-03	2.18E-03	1.59E-03	2.72E-04	6.96E-08	1.73E-03	2.96E-03
F02	0.00E+00	3.61E-05	2.84E-06	6.07E+01	9.22E-05	3.13E-01	4.76E-05	2.38E-02	1.02E-02	1.64E-03	4.63E-03	2.28E-03	2.33E-03	2.35E-03	2.84E-04	7.11E-08	2.29E-03	4.42E-03
F03	0.00E+00	9.49E-07	7.43E-08	1.86E+00	2.29E-06	8.34E-03	1.22E-06	6.32E-04	1.71E-04	3.21E-05	1.18E-04	5.79E-05	5.91E-05	8.17E-05	8.61E-06	2.12E-09	5.85E-05	1.17E-04
F04	0.00E+00	1.14E-05	9.04E-07	2.34E+01	2.97E-05	1.07E-01	1.52E-05	7.28E-03	2.17E-03	4.04E-04	1.47E-03	7.33E-04	7.48E-04	9.51E-04	1.09E-04	2.75E-08	7.21E-04	1.35E-03
F05	0.00E+00	5.34E-05	3.98E-06	7.37E+01	9.82E-05	3.43E-01	6.22E-05	4.11E-02	1.21E-02	1.98E-03	6.02E-03	2.72E-03	2.78E-03	3.94E-03	3.32E-04	7.66E-08	3.24E-03	7.68E-03
F06	0.00E+00	2.28E-05	1.69E-06	3.18E+01	4.36E-05	1.50E-01	2.70E-05	1.68E-02	5.24E-03	8.55E-04	2.63E-03	1.19E-03	1.21E-03	1.64E-03	1.44E-04	3.43E-08	1.42E-03	3.14E-03
F07	0.00E+00	5.31E-05	4.05E-06	8.31E+01	1.22E-04	4.15E-01	6.74E-05	3.61E-02	1.38E-02	2.24E-03	6.58E-03	3.12E-03	3.19E-03	3.56E-03	3.84E-04	9.54E-08	3.39E-03	6.72E-03
F08	0.00E+00	4.79E-05	3.67E-06	7.66E+01	1.15E-04	3.87E-01	6.18E-05	3.16E-02	1.28E-02	2.06E-03	6.04E-03	2.89E-03	2.95E-03	3.15E-03	3.56E-04	8.95E-08	3.09E-03	5.88E-03
F09	0.00E+00	9.99E-06	8.29E-07	2.24E+01	2.95E-05	1.07E-01	1.39E-05	6.26E-03	2.11E-03	3.89E-04	1.33E-03	7.04E-04	7.19E-04	7.88E-04	1.06E-04	2.63E-08	6.06E-04	1.15E-03
F10	0.00E+00	2.52E-05	2.04E-06	5.12E+01	6.33E-05	2.33E-01	3.25E-05	1.74E-02	4.76E-03	8.88E-04	3.08E-03	1.59E-03	1.62E-03	2.16E-03	2.37E-04	5.64E-08	1.46E-03	3.23E-03
F13	0.00E+00	1.53E-06	1.20E-07	2.80E+00	3.23E-06	1.20E-02	1.85E-06	1.13E-03	2.56E-04	4.84E-05	1.74E-04	8.58E-05	8.74E-05	1.41E-04	1.27E-05	2.91E-09	8.70E-05	2.10E-04
F14	0.00E+00	1.44E-06	1.11E-07	2.46E+00	2.67E-06	1.01E-02	1.66E-06	1.11E-03	2.22E-04	4.23E-05	1.57E-04	7.45E-05	7.58E-05	1.39E-04	1.10E-05	2.44E-09	8.12E-05	2.07E-04
F15	0.00E+00	5.53E-05	4.37E-06	9.63E+01	1.23E-04	4.41E-01	6.82E-05	4.05E-02	1.24E-02	2.12E-03	6.48E-03	3.21E-03	3.27E-03	4.38E-03	4.42E-04	1.01E-07	3.20E-03	7.54E-03
F16	0.00E+00	3.74E-05	2.93E-06	6.49E+01	8.35E-05	2.97E-01	4.63E-05	2.68E-02	8.37E-03	1.43E-03	4.43E-03	2.17E-03	2.22E-03	2.93E-03	2.98E-04	6.96E-08	2.21E-03	4.99E-03
F17	0.00E+00	4.80E-05	3.66E-06	7.38E+01	8.65E-05	3.15E-01	5.50E-05	3.76E-02	9.36E-03	1.62E-03	5.22E-03	2.44E-03	2.48E-03	4.05E-03	3.31E-04	7.26E-08	2.73E-03	7.01E-03
F18	0.00E+00	4.83E-05	3.65E-06	7.29E+01	8.46E-05	3.08E-01	5.49E-05	3.79E-02	9.21E-03	1.60E-03	5.22E-03	2.41E-03	2.45E-03	4.10E-03	3.26E-04	7.15E-08	2.77E-03	7.06E-03
F19	0.00E+00	1.41E-05	1.50E-06	5.38E+01	9.21E-05	3.16E-01	3.00E-05	2.83E-03	7.49E-03	1.21E-03	2.88E-03	1.87E-03	1.91E-03	3.39E-04	2.71E-04	7.30E-08	9.65E-04	4.60E-04
F20	0.00E+00	1.74E-05	1.54E-06	4.48E+01	6.96E-05	2.40E-01	2.80E-05	8.36E-03	6.04E-03	9.97E-04	2.70E-03	1.54E-03	1.57E-03	9.54E-04	2.18E-04	5.66E-08	1.13E-03	1.52E-03
F21	0.00E+00	8.03E-06	8.56E-07	3.06E+01	5.24E-05	1.80E-01	1.70E-05	1.61E-03	4.26E-03	6.89E-04	1.64E-03	1.06E-03	1.09E-03	1.93E-04	1.54E-04	4.15E-08	5.49E-04	2.62E-04
F22	0.00E+00	4.20E-06	4.28E-07	1.44E+01	2.40E-05	8.29E-02	8.21E-06	1.31E-03	1.99E-03	3.24E-04	7.85E-04	4.98E-04	5.10E-04	1.46E-04	7.20E-05	1.90E-08	2.75E-04	2.27E-04
F23	0.00E+00	8.30E-06	6.69E-07	1.62E+01	2.25E-05	7.87E-02	1.11E-05	5.33E-03	2.12E-03	3.58E-04	1.07E-03	5.49E-04	5.61E-04	5.94E-04	7.62E-05	1.87E-08	5.12E-04	9.87E-04
F24	0.00E+00	8.33E-06	6.52E-07	1.47E+01	1.93E-05	6.81E-02	1.05E-05	5.80E-03	1.90E-03	3.24E-04	1.01E-03	4.94E-04	5.05E-04	6.40E-04	6.80E-05	1.61E-08	5.01E-04	1.08E-03
F25	0.00E+00	3.01E-05	2.46E-06	5.55E+01	8.69E-05	2.97E-01	4.15E-05	1.91E-02	9.41E-03	1.50E-03	4.01E-03	2.08E-03	2.13E-03	1.87E-03	2.62E-04	6.60E-08	1.88E-03	3.54E-03
F26	0.00E+00	2.92E-05	2.18E-06	4.10E+01	5.55E-05	1.92E-01	3.44E-05	2.21E-02	6.76E-03	1.10E-03	3.34E-03	1.52E-03	1.55E-03	2.13E-03	1.85E-04	4.33E-08	1.79E-03	4.12E-03
F27	0.00E+00	1.66E-04	1.18E-05	2.03E+02	2.57E-04	8.78E-01	1.85E-04	1.27E-01	3.28E-02	5.42E-03	1.82E-02	7.58E-03	7.73E-03	1.24E-02	8.97E-04	2.09E-07	1.05E-02	2.38E-02
F28	0.00E+00	1.46E-04	1.05E-05	2.00E+02	2.81E-04	9.36E-01	1.75E-04	1.01E-01	3.28E-02	5.34E-03	1.73E-02	7.58E-03	7.74E-03	1.01E-02	9.08E-04	2.27E-07	9.60E-03	1.88E-02
F29	0.00E+00	2.40E-05	2.14E-06	5.57E+01	9.47E-05	3.22E-01	3.83E-05	1.23E-02	9.62E-03	1.51E-03	3.67E-03	2.10E-03	2.15E-03	1.23E-03	2.70E-04	7.07E-08	1.52E-03	2.24E-03
F30	0.00E+00	2.35E-05	1.84E-06	3.85E+01	5.72E-05	1.96E-01	3.03E-05	1.61E-02	6.46E-03	1.04E-03	2.94E

Appendix F.5.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F74	0.00E+00	7.91E-05	5.28E-06	8.31E+01	6.74E-05	2.44E-01	7.68E-05	6.58E-02	9.40E-03	1.74E-03	7.52E-03	2.67E-03	2.71E-03	7.40E-03	3.40E-04	6.96E-08	4.81E-03	1.23E-02
F75	0.00E+00	3.49E-05	2.19E-06	2.95E+01	2.61E-05	8.23E-02	3.39E-05	2.81E-02	4.34E-03	7.53E-04	3.45E-03	1.09E-03	1.11E-03	2.81E-03	1.19E-04	2.60E-08	2.34E-03	5.27E-03
F76	0.00E+00	8.78E-07	9.30E-08	2.98E+00	5.53E-06	1.81E-02	1.82E-06	1.39E-04	7.72E-04	1.10E-04	1.73E-04	1.13E-04	1.15E-04	2.29E-05	1.49E-05	3.32E-09	5.76E-05	2.32E-05
F78	0.00E+00	5.12E-05	4.38E-06	1.05E+02	1.78E-04	5.82E-01	7.69E-05	2.69E-02	2.66E-02	3.86E-03	7.41E-03	4.07E-03	4.16E-03	2.35E-03	5.05E-04	1.10E-07	3.25E-03	4.97E-03
F79	0.00E+00	5.12E-05	4.54E-06	1.29E+02	2.04E-04	6.87E-01	8.23E-05	2.49E-02	2.13E-02	3.34E-03	7.95E-03	4.51E-03	4.62E-03	2.58E-03	6.27E-04	1.55E-07	3.33E-03	4.54E-03
F80	0.00E+00	4.56E-05	4.00E-06	1.21E+02	1.81E-04	6.17E-01	7.34E-05	2.14E-02	1.58E-02	2.62E-03	7.13E-03	4.00E-03	4.09E-03	2.50E-03	5.91E-04	1.53E-07	3.04E-03	3.89E-03

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B15	100	Passenger Car	1172	0.00E+00	1.27E-05	1.37E-06	5.22E+01	8.82E-05	3.35E-01	2.82E-05	2.50E-03	3.80E-03	7.66E-04	2.74E-03	1.77E-03	1.81E-03	1.47E-04	2.66E-04	7.34E-08	9.28E-04	3.91E-04
16	B15	100	Passenger Truck	1962	0.00E+00	2.74E-05	2.91E-06	1.23E+02	1.79E-04	6.76E-01	5.82E-05	7.12E-03	6.72E-03	1.43E-03	5.60E-03	3.63E-03	3.72E-03	7.91E-04	6.23E-04	1.71E-07	1.88E-03	1.15E-03
16	B15	100	Single Unit Short Haul Truck	25	0.00E+00	3.34E-06	1.66E-07	4.55E+00	2.92E-06	1.05E-02	3.62E-06	1.81E-03	1.72E-04	4.99E-05	4.14E-04	1.03E-04	1.04E-04	4.58E-04	1.83E-05	7.47E-09	3.09E-04	3.38E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.45E-07	7.04E-09	1.91E-01	1.21E-07	4.30E-04	1.56E-07	7.63E-05	7.76E-06	2.16E-06	1.80E-05	4.33E-06	4.40E-06	1.92E-05	7.71E-07	3.06E-10	1.36E-05	1.43E-05
16	B15	100	Combination Short Haul Truck	17	0.00E+00	5.93E-06	4.33E-07	6.24E+00	1.69E-08	5.78E-03	4.28E-06	6.34E-03	2.01E-04	7.16E-05	3.32E-04	1.27E-04	1.25E-04	9.41E-04	2.09E-05	0.00E+00	2.08E-04	1.20E-03
16	B15	100	Combination Long Haul Truck	16	0.00E+00	5.16E-06	3.54E-07	5.65E+00	1.95E-08	5.78E-03	3.87E-06	6.03E-03	1.86E-04	5.17E-05	3.38E-04	1.06E-04	1.06E-04	8.63E-04	1.89E-05	0.00E+00	2.33E-04	1.14E-03
16	B16	100	Passenger Car	832	0.00E+00	8.99E-06	9.73E-07	3.71E+01	6.26E-05	2.38E-01	2.00E-05	1.78E-03	2.70E-03	5.44E-04	1.95E-03	1.25E-03	1.29E-03	1.04E-04	1.89E-04	5.21E-08	6.59E-04	2.78E-04
16	B16	100	Passenger Truck	1393	0.00E+00	1.94E-05	2.07E-06	8.75E+01	1.27E-04	4.80E-01	4.13E-05	5.06E-03	4.77E-03	1.01E-03	3.97E-03	2.57E-03	2.64E-03	5.62E-04	4.43E-04	1.21E-07	1.34E-03	8.18E-04
16	B16	100	Single Unit Short Haul Truck	22	0.00E+00	2.96E-06	1.46E-07	4.02E+00	2.58E-06	9.31E-03	3.20E-06	1.60E-03	1.52E-04	4.42E-05	3.66E-04	9.07E-05	9.22E-05	4.06E-04	1.62E-05	6.60E-09	2.74E-04	2.99E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	1.28E-07	6.23E-09	1.69E-01	1.07E-07	3.80E-04	1.38E-07	6.75E-05	6.87E-06	1.91E-06	1.59E-05	3.83E-06	3.89E-06	1.70E-05	6.82E-07	2.70E-10	1.21E-05	1.26E-05
16	B16	100	Combination Short Haul Truck	12	0.00E+00	3.95E-06	2.88E-07	4.16E+00	1.12E-08	3.86E-03	2.85E-06	4.23E-03	1.34E-04	4.77E-05	2.22E-04	8.46E-05	8.31E-05	6.27E-04	1.39E-05	0.00E+00	1.38E-04	7.97E-04
16	B16	100	Combination Long Haul Truck	10	0.00E+00	3.44E-06	2.36E-07	3.77E+00	1.30E-08	3.85E-03	2.58E-06	4.02E-03	1.24E-04	3.45E-05	2.26E-04	7.07E-05	7.05E-05	5.75E-04	1.26E-05	0.00E+00	1.55E-04	7.57E-04
16	B19	100	Passenger Car	3501	0.00E+00	3.79E-05	4.09E-06	1.56E+02	2.63E-04	1.00E+00	8.42E-05	7.48E-03	1.14E-02	2.29E-03	8.19E-03	5.28E-03	5.42E-03	4.39E-04	7.96E-04	2.19E-07	2.77E-03	1.17E-03
16	B19	100	Passenger Truck	5863	0.00E+00	8.17E-05	8.70E-06	3.68E+02	5.35E-04	2.02E+00	1.74E-04	2.13E-02	2.01E-02	4.26E-03	1.67E-02	1.08E-02	1.11E-02	2.36E-03	1.86E-03	5.10E-07	5.62E-03	3.44E-03
16	B19	100	Single Unit Short Haul Truck	174	0.00E+00	2.34E-05	1.16E-06	3.18E+01	2.04E-05	7.37E-02	2.53E-05	1.27E-02	1.20E-03	3.50E-04	2.89E-03	7.18E-04	7.29E-04	3.21E-03	1.28E-04	5.23E-08	2.17E-03	2.37E-03
16	B19	100	Single Unit Long Haul Truck	8	0.00E+00	1.01E-06	4.93E-08	1.34E+00	8.46E-07	3.01E-03	1.09E-06	5.34E-04	5.43E-05	1.51E-05	1.26E-04	3.03E-05	3.08E-05	1.34E-04	5.40E-06	2.14E-09	9.54E-05	9.98E-05
16	B19	100	Combination Short Haul Truck	139	0.00E+00	4.78E-05	3.49E-06	5.03E+01	1.36E-07	4.66E-02	3.45E-05	5.11E-02	1.62E-03	5.77E-04	2.68E-03	1.02E-03	1.01E-03	7.59E-03	1.68E-04	0.00E+00	1.67E-03	9.63E-03
16	B19	100	Combination Long Haul Truck	127	0.00E+00	4.16E-05	2.85E-06	4.56E+01	1.57E-07	4.66E-02	3.12E-05	4.86E-02	1.50E-03	4.17E-04	2.73E-03	8.54E-04	8.52E-04	6.96E-03	1.53E-04	0.00E+00	1.87E-03	9.15E-03
16	B20	100	Passenger Car	1708	0.00E+00	1.85E-05	2.00E-06	7.61E+01	1.29E-04	4.89E-01	4.11E-05	3.65E-03	5.54E-03	1.12E-03	4.00E-03	2.58E-03	2.64E-03	2.14E-04	3.88E-04	1.07E-07	1.35E-03	5.70E-04
16	B20	100	Passenger Truck	2860	0.00E+00	3.99E-05	4.25E-06	1.80E+02	2.61E-04	9.85E-01	8.48E-05	1.04E-02	9.80E-03	2.08E-03	8.16E-03	5.29E-03	5.42E-03	1.15E-03	9.09E-04	2.49E-07	2.74E-03	1.68E-03
16	B20	100	Single Unit Short Haul Truck	157	0.00E+00	2.11E-05	1.04E-06	2.87E+01	1.84E-05	6.64E-02	2.28E-05	1.14E-02	1.08E-03	3.15E-04	2.61E-03	6.47E-04	6.57E-04	2.89E-03	1.15E-04	4.71E-08	1.95E-03	2.13E-03
16	B20	100	Single Unit Long Haul Truck	7	0.00E+00	9.15E-07	4.44E-08	1.21E+00	7.62E-07	2.71E-03	9.86E-07	4.81E-04	4.90E-05	1.36E-05	1.14E-04	2.73E-05	2.78E-05	1.21E-04	4.86E-06	1.93E-09	8.60E-05	8.99E-05
16	B20	100	Combination Short Haul Truck	183	0.00E+00	6.27E-05	4.58E-06	6.60E+01	1.78E-07	6.12E-02	4.53E-05	6.71E-02	2.13E-03	7.57E-04	3.51E-03	1.34E-03	1.32E-03	9.95E-03	2.21E-04	0.00E+00	2.20E-03	1.26E-02
16	B20	100	Combination Long Haul Truck	166	0.00E+00	5.46E-05	3.74E-06	5.98E+01	2.07E-07	6.11E-02	4.09E-05	6.37E-02	1.97E-03	5.47E-04	3.58E-03	1.12E-03	1.12E-03	9.13E-03	2.00E-04	0.00E+00	2.46E-03	1.20E-02
16	B21	100	Passenger Car	3221	0.00E+00	3.48E-05	3.77E-06	1.44E+02	2.42E-04	9.22E-01	7.74E-05	6.88E-03	1.04E-02	2.11E-03	7.54E-03	4.86E-03	4.99E-03	4.04E-04	7.32E-04	2.02E-07	2.55E-03	1.08E-03
16	B21	100	Passenger Truck	5395	0.00E+00	7.52E-05	8.01E-06	3.39E+02	4.92E-04	1.86E+00	1.60E-04	1.96E-02	1.85E-02	3.92E-03	1.54E-02	9.97E-03	1.02E-02	2.17E-03	1.71E-03	4.70E-07	5.17E-03	3.17E-03
16	B21	100	Single Unit Short Haul Truck	116	0.00E+00	1.56E-05	7.70E-07	2.12E+01	1.36E-05	4.90E-02	1.69E-05	8.43E-03	7.99E-04	2.32E-04	1.92E-03	4.77E-04	4.85E-04	2.13E-03	8.50E-05	3.47E-08	1.44E-03	1.57E-03
16	B21	100	Single Unit Long Haul Truck	5	0.00E+00	6.75E-07	3.28E-08	8.91E-01	5.62E-07	2.00E-03	7.28E-07	3.55E-04	3.61E-05	1.00E-05	8.39E-05	2.02E-05	2.05E-05	8.93E-05	3.59E-06	1.42E-09	6.34E-05	6.63E-05
16	B21	100	Combination Short Haul Truck	108	0.00E+00	3.72E-05	2.71E-06	3.92E+01	1.06E-07	3.63E-02	2.68E-05	3.98E-02	1.26E-03	4.49E-04	2.08E-03	7.96E-04	7.82E-04	5.90E-03	1.31E-04	0.00E+00	1.30E-03	7.50E-03
16	B21	100	Combination Long Haul Truck	99	0.00E+00	3.24E-05	2.22E-06	3.55E+01	1.23E-07	3.63E-02	2.43E-05	3.78E-02	1.17E-03	3.25E-04	2.12E-03	6.65E-04	6.63E-04	5.41E-03	1.19E-04	0.00E+00	1.46E-03	7.12E-03
16	B22	100	Passenger Car	1340	0.00E+00	1.45E-05	1.57E-06	5.97E+01	1.01E-04	3.84E-01	3.22E-05	2.86E-03	4.35E-03	8.76E-04	3.14E-03	2.02E-03	2.07E-03	1.68E-04	3.05E-04	8.39E-08	1.06E-03	4.47E-04
16	B22	100	Passenger Truck	2244	0.00E+00	3.13E-05	3.33E-06	1.41E+02	2.05E-04	7.73E-01	6.66E-05	8.15E-03	7.69E-03	1.63E-03	6.40E-03	4.15E-03	4.25E-03	9.05E-04	7.13E-04	1.95E-07	2.15E-03	1.32E-03
16	B22	100	Single Unit Short Haul Truck	123	0.00E+00	1.65E-05	8.15E-07	2.24E+01	1.44E-05	5.18E-02	1.78E-05	8.92E-03	8.45E-04	2.46E-04	2.04E-03	5.05E-04	5.13E-04	2.26E-03	8.99E-05	3.68E-08	1.52E-03	1.67E-03
16	B22	100	Single Unit Long Haul Truck	5	0.00E+00	7.14E-07	3.47E-08	9.43E-01	5.95E-07	2.12E-03	7.70E-07	3.76E-04	3.82E-05	1.06E-05	8.88E-05	2.13E-05	2.17E-05	9.45E-05	3.80E-06	1.50E-09	6.71E-05	7.02E-05
16	B22	100	Combination Short Haul Truck	159	0.00E+00	5.46E-05	3.99E-06	5.75E+01	1.55E-07	5.33E-02	3.94E-05	5.84E-02	1.85E-03	6.59E-04	3.06E-03	1.17E-03	1.15E-03	8.67E-03	1.92E-04	0.00E+00	1.91E-03	1.10E-02
16	B22	100	Combination Long Haul Truck	145	0.00E+00	4.75E-05	3.26E-06	5.21E+01	1.80E-07	5.32E-02	3.56E-05	5.55E-02	1.71E-03	4.77E-04	3.12E-03	9.76E-04	9.74E-04	7.95E-03	1.74E-04	0.00E+00	2.14E-03	1.05E-02
16	B23	100	Passenger Car	3301	0.00E+00	3.57E-05	3.86E-06	1.47E+02	2.48E-04	9.45E-01	7.94E-05	7.05E-03	1.07E-02	2.16E-03	7.72E-03	4.98E-03	5.11E-03	4.14E-04	7.51E-04	2.07E-07	2.61E-03	1.10E-03
16	B23	100	Passenger Truck	5528	0.00E+00	7.71E-05	8.21E-06	3.47E+02	5.05E-04	1.90E+00	1.64E-04	2.01E-02	1.89E-02	4.02E-03	1.58E-02	1.02E-02	1.05E-02	2.23E-03	1.76E-03	4.81E-07	5.30E-03	3.25E-03
16	B23	100	Single Unit Short Haul Truck	116	0.00E+00	1.56E-05	7.70E-07	2.12E+01	1.36E-05	4.90E-02	1.69E-05	8.43E-03	7.99E-04	2.32E-04	1.92E-03	4.77E-04	4.85E-04	2.13E-03	8.50E-05	3.47E-08	1.44E-03	1.57E-03
16	B23	100	Single Unit Long Haul Truck	5	0.00E+00	6.75E-07	3.28E-08	8.91E-01	5.62E-07	2.00E-03	7.28E-07	3.55E-04	3.61E-05	1.00E-05	8.39E-05	2.02E-05	2.05E-05	8.93E-05	3.59E-06	1.42E-09	6.34E-05	6.63E-05
16	B23	100	Combination Short Haul Truck	108	0.00E+00	3.72E-05	2.71E-06	3.92E+01	1.06E-07	3.63E-02	2.68E-05	3.98E-02	1.26E-03	4.49E-04	2.08E-03	7.96E-04	7.82E-04	5.90E-03	1.31E-04	0.00E+00	1.30E-03	7.50E-03
16	B23	100	Combination Long Haul Truck	99	0.00E+00	3.24E-05	2.22E-06	3.55E+01	1.23E-07	3.63E-02	2.43E-05	3.78E-02	1.17E-03	3.25E-04	2.12E-03	6.65E-04	6.63E-04	5.41E-03	1.19E-04	0.00E+00	1.46E-03	7.12E-03
16	B24	100	Passenger Car	1472	0.00E+00	1.59E-05	1.72E-06	6.56E+01	1.11E-04	4.21E-01	3.54E-05	3.15E-03	4.78E-03	9.63E-04	3.45E-03	2.22E-03	2.28E-03	1.85E-04	3.35E-04	9.22E-08	1.17E-03	4.92E-04
16	B24	100	Passenger Truck	2466	0.00E+00	3.44E-05	3.66E-06	1.55E+02	2.25E-04	8.49E-01	7.31E-05	8.95E-03	8.44E-03	1.79E-03	7.03E-03	4.56E-03	4.67E-03	9.94E-04	7.83E-04	2.15E-07	2.36E-03	1.45E-03
16	B24	100	Single Unit Short Haul Truck	141	0.00E+00	1.89E-05	9.36E-07	2.57E+01	1.65E-05	5.95E-02	2.05E-05	1.02E-02	9.70E-04	2.82E-04	2.34E-03	5.80E-04	5.89E-04	2.59E-03	1.03E-04	4.22E-08	1.75E-03	1.91E-03
16	B24	100	Single Unit Long Haul Truck	6	0.00E+00	8.20E-07	3.98E-08	1.08E+00	6.83E-07	2.43E-03	8.84E-07	4.31E-04	4.39E-05	1.22E-05	1.02E-04	2.45E-05	2.49E-05	1.08E-04	4.36E-06	1.73E-09	7.71E-05	8.06E-05
16	B24	100	Combination Short Haul Truck	175	0.00E+00	6.02E-05	4.39E-06	6.34E+01	1.71E-07	5.87E-02	4.34E-05	6.44E-02	2.04E-03	7.26E-04	3.37E-03	1.29E-03	1.27E-03	9.55E-03	2.12E-04	0.00E+00	2.11E-03	1.21E-02
16	B24	100	Combination Long Haul Truck	160	0.00E+00	5.24E-05	3.59E-06	5.74E+01	1.98E-07	5.87E-02	3.92E-05	6.12E-02	1.89E-03	5.25E-04	3.43E-03	1.08E-03	1.07E-03	8.76E-03	1.92E-04	0.00E+00	2.36E-03	1.15E-02
10	E39	70	Passenger Car	233	0.00E+00	3.01E-06	3.25E-07	1.11E+01	2.09E-05	7.56E-02	6.69E-06	4.67E-04	1.81E-03	2.90E-04	6.51E-04	4.20E-04	4.31E-04	4.17E-05	5.62E-05	1.53E-08	2.20E-04	7.29E-05
10	E39	70	Passenger Truck	390	0.00E+00	6.59E-06	6.98E-07	2.55E+01	4.17E-05	1.39E-01	1.37E-05	1.46E-03	3.29E-03	5.34E-04	1.31E-03	8.50E-04	8.71E-04	1.89E-04	1.28E-04	3.43E-08	4.36E-04	2.40E-04
10	E39	70	Single Unit Short Haul Truck	13	0.00E+00	3.15E-06	1.58E-07	2.47E+00	2.58E-06	4.94E-03	3.36E-06	1.56E-03	2.22E-04	4.44E-05	3.82E-04	9.42E-05	9.58E-05	2.47E-04	9.95E-06	4.02E-09	2.86E-04	2.91E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	6.83E-09	1.05E-01	1.11E-07	2.07E-04	1.46E-07	6.69E-05	1.01E-05	1.97E-06	1.67E-05	4.08E-06	4.15E-06	1.05E-05	4.23E-07	1.69E-10	1.26E-05	1.25E-05
10	E39	70	Combination Short Haul Truck	14	0.00E+00	7.07E-06	5.03E-07	5.13E+00	2.30E-08	6.09E-03	5.19E-06	7.44E-03	5.38E-04	1.17E-04	4.31E-04	1.49E-04	1.49E-04	7.73E-04	1.72E-05	0.00E+00	2.82E-04	1.40E-03
10	E39	70	Combination Long Haul Truck	12	0.00E+00	6.39E-06	4.28E-07	4.79E+00	2.65E-08	6.45E-03	4.86E-06	7.34E-03	5.35E-04	9.75E-05	4.45E-04	1.29E-04	1.31E-04	7.31E-04	1.60E-05	0.00E+00	3.15E-04	1.38E-03
10	E40	70	Passenger Car	318	0.00E+00	4.10E-06	4.44E-07	1.51E+01	2.86E-05	1.03E-01	9.12E-06	6.37E-04	2.46E-03	3.95E-04	8.88E-04	5.72E-04	5.87E-04	5.69E-05	7.66E-05	2.09E-08	3.01E-04	9.95E-05
10	E40	70	Passenger Truck	532	0.00E+00	9.00E-06	9.52E-07	3.48E+01	5.69E-05	1.90E-01	1.87E-05	1.99E-03	4.48E-03	7.29E-04	1.78E-03	1.16E-03	1.19E-03	2.58E-04	1.75E-04	4.68E-08	5.95E-04	3.28E-04
10	E40	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E40	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E40	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E41	70	Passenger Car	211	0.00E+00	2.73E-06	2.95E-07	1.00E+01	1.90E-05	6.85E-02	6.06E-06	4.23E-04	1.64E-03	2.63E-04	5.90E-04	3.81E-04	3.91E-04	3.78E-05	5.09E-05	1.39E-08	2.00E-04	6.61E-05
10	E41	70	Passenger Truck	354	0.00E+00	5.98E-06	6.33E-07	2.31E+01	3.78E-05	1.26E-01	1.24E-05	1.32E-03	2.98E-03	4.84E-04	1.18E-03	7.71E-04	7.90E-04	1.71E-04	1.16E-04	3.11E-08	3.95E-04	2.18E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	1.63E-06	1.16E-07	1.18E+00	5.30E-09	1.41E-03	1.20E-06	1.72E-03	1.24E-04	2.71E-05	9.94E-05	3.43E-05	3.43E-05	1.78E-04	3.96E-06	0.00E+00	6.52E-05	3.24E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.48E-06	9.87E-08	1.10E+00	6.11E-09	1.49E-03	1.12E-06	1.69E-03	1.23E-04	2.25E-05	1.03E-04	2.98E-05	3.01E-05	1.69E-04	3.70E-06	0.00E+00	7.27E-05	3.19E-04
10	E42	70	Passenger Car	282	0.00E+00	3.64E-06	3.93E-07	1.34E+01	2.53E-05	9.14E-02	8.08E-06	5.64E-04	2.18E-03	3.50E-04	7.87E-04	5.07E-04	5.20E-04	5.04E-05	6.79E-05	1.85E-08	2.66E-04	8.81E-05
10	E42	70	Passenger Truck	471	0.00E+00	7.97E-06	8.43E-07	3.08E+01	5.04E-05	1.68E-01	1.66E-05	1.76E-03	3.97E-03	6.45E-04	1.58E-03	1.03E-03	1.05E-03	2.29E-04	1.55E-04	4.15E-08	5.27E-04	2.90E-04
10	E42	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E42	70	Single Unit Long Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E42	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
10	E43	70	Passenger Car	162	0.00E+00	2.09E-06	2.26E-07	7.68E+00	1.45E-05	5.24E-02	4.64E-06	3.24E-04	1.25E-03	2.01E-04	4.51E-04	2.91E-04	2.99E-04	2.89E-05	3.90E-05	1.06E-08	1.53E-04	5.06E-05
10	E43	70	Passenger Truck	270	0.00E+00	4.57E-06	4.84E-07	1.77E+01	2.89E-05	9.65E-02	9.50E-06	1.01E-03	2.28E-03	3.70E-04	9.06E-04	5.89E-04	6.04E-04	1.31E-04	8.90E-05	2.38E-08	3.02E-04	1.67E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E43	70	Single Unit Long Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.73E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E43	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.65E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
10	E44	70	Passenger Car	285	0.00E+00	3.67E-06	3.97E-07	1.35E+01	2.56E-05	9.23E-02	8.17E-06	5.70E-04	2.21E-03	3.54E-04	7.95E-04	5.13E-04	5.26E-04	5.10E-05	6.86E-05	1.87E-08	2.69E-04	8.91E-05
10	E44	70	Passenger Truck	476	0.00E+00	8.05E-06	8.52E-07	3.12E+01	5.09E-05	1.70E-01	1.67E-05	1.78E-03	4.01E-03	6.52E-04	1.60E-03	1.04E-03	1.06E-03	2.31E-04	1.57E-04	4.19E-08	5.32E-04	2.93E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	E44	70	Single Unit Long Haul Truck	1	0.00E+00	5.44E-07	3.87E-08	3.94E-01	1.77E-09	4.68E-04	3.99E-07	5.73E-04	4.14E-05	9.04E-06	3.31E-05	1.14E-05	1.14E-05	5.95E-05	1.32E-06	0.00E+00	2.17E-05	1.08E-04
10	E44	70	Combination Long Haul Truck	1	0.00E+00	4.92E-07	3.29E-08	3.68E-01	2.04E-09	4.96E-04	3.74E-07	5.65E-04	4.11E-05	7.50E-06	3.43E-05	9.94E-06	1.00E-05	5.63E-05	1.23E-06	0.00E+00	2.42E-05	1.06E-04
11	E45	80	Passenger Car	194	0.00E+00	2.34E-06	2.53E-07	8.98E+00	1.63E-05	6.01E-02	5.20E-06	3.99E-04	1.07E-03	1.86E-04	5.06E-04	3.26E-04	3.35E-04	3.05E-05	4.56E-05	1.28E-08	1.71E-04	6.24E-05
11	E45	80	Passenger Truck	326	0.00E+00	5.02E-06	5.33E-07	2.08E+01	3.22E-05	1.11E-01	1.05E-05	1.19E-03	1.92E-03	3.40E-04	1.01E-03	6.54E-04	6.70E-04	1.46E-04	1.05E-04	2.85E-08	3.37E-04	1.94E-04
11	E45	80	Single Unit Short Haul Truck	33	0.00E+00	6.10E-06	3.03E-07	5.99E+00	4.91E-06	1.20E-02	6.50E-06	3.13E-03	3.83E-04	8.67E-05	7.43E-04	1.81E-04	1.84E-04	6.01E-04	2.41E-05	9.57E-09	5.59E-04	5.86E-04
11	E45	80

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E49	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	E49	80	Combination Short Haul Truck	22	0.00E+00	9.66E-06	6.91E-07	7.98E+00	3.05E-08	8.55E-03	7.06E-06	9.93E-03	5.84E-04	1.44E-04	5.75E-04	2.04E-04	2.02E-04	1.20E-03	2.67E-05	0.00E+00	3.73E-04	1.87E-03
11	E49	80	Combination Long Haul Truck	20	0.00E+00	8.65E-06	5.81E-07	7.38E+00	3.52E-08	8.86E-03	6.55E-06	9.64E-03	5.72E-04	1.15E-04	5.94E-04	1.75E-04	1.76E-04	1.13E-03	2.47E-05	0.00E+00	4.18E-04	1.82E-03
11	E50	80	Passenger Car	86	0.00E+00	1.04E-06	1.12E-07	3.99E+00	7.23E-06	2.67E-02	2.31E-06	1.77E-04	4.75E-04	8.26E-05	2.25E-04	1.45E-04	1.49E-04	1.35E-05	2.03E-05	5.68E-09	7.61E-05	2.77E-05
11	E50	80	Passenger Truck	145	0.00E+00	2.23E-06	2.37E-07	9.22E+00	1.43E-05	4.92E-02	4.68E-06	5.27E-04	8.52E-04	1.51E-04	4.47E-04	2.91E-04	2.98E-04	6.50E-05	4.65E-05	1.27E-08	1.50E-04	8.61E-05
11	E50	80	Single Unit Short Haul Truck	2	0.00E+00	3.59E-07	1.78E-08	3.52E-01	2.89E-07	7.05E-04	3.82E-07	1.84E-04	2.26E-05	5.10E-06	4.37E-05	1.06E-05	1.08E-05	3.53E-05	1.42E-06	5.63E-10	3.29E-05	3.45E-05
11	E50	80	Combination Short Haul Truck	2	0.00E+00	9.20E-07	6.58E-08	7.60E-01	2.90E-09	8.14E-04	6.72E-07	9.45E-04	5.56E-05	1.37E-05	5.48E-05	1.94E-05	1.93E-05	1.15E-04	2.55E-06	0.00E+00	3.55E-05	1.78E-04
11	E50	80	Combination Long Haul Truck	2	0.00E+00	8.24E-07	5.54E-08	7.03E-01	3.35E-09	8.44E-04	6.24E-07	9.18E-04	5.44E-05	1.10E-05	5.66E-05	1.67E-05	1.68E-05	1.07E-04	2.35E-06	0.00E+00	3.98E-05	1.73E-04
11	E51	80	Passenger Car	186	0.00E+00	2.23E-06	2.42E-07	8.58E+00	1.56E-05	5.75E-02	4.97E-06	3.82E-04	1.02E-03	1.78E-04	4.84E-04	3.12E-04	3.20E-04	2.91E-05	4.36E-05	1.22E-08	1.64E-04	5.97E-05
11	E51	80	Passenger Truck	311	0.00E+00	4.80E-06	5.09E-07	1.98E+01	3.07E-05	1.06E-01	1.01E-05	1.13E-03	1.83E-03	3.25E-04	9.63E-04	6.25E-04	6.41E-04	1.40E-04	9.99E-05	2.72E-08	3.22E-04	1.85E-04
11	E51	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.32E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.20E-04
11	E51	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
11	E51	80	Combination Short Haul Truck	21	0.00E+00	9.43E-06	6.74E-07	7.79E+00	2.97E-08	8.35E-03	6.89E-06	9.69E-03	5.70E-04	1.41E-04	5.61E-04	1.99E-04	1.97E-04	1.18E-03	2.61E-05	0.00E+00	3.64E-04	1.83E-03
11	E51	80	Combination Long Haul Truck	20	0.00E+00	8.44E-06	5.67E-07	7.20E+00	3.44E-08	8.65E-03	6.40E-06	9.41E-03	5.58E-04	1.12E-04	5.80E-04	1.71E-04	1.72E-04	1.10E-03	2.41E-05	0.00E+00	4.08E-04	1.77E-03
11	E52	80	Passenger Car	32	0.00E+00	3.87E-07	4.18E-08	1.48E+00	2.69E-06	9.95E-03	8.60E-07	6.60E-05	1.77E-04	3.07E-05	8.37E-05	5.39E-05	5.54E-05	5.04E-06	7.55E-06	2.12E-09	2.83E-05	1.03E-05
11	E52	80	Passenger Truck	54	0.00E+00	8.30E-07	8.81E-08	3.43E+00	5.32E-06	1.83E-02	1.74E-06	1.96E-04	3.17E-04	5.63E-05	1.67E-04	1.08E-04	1.11E-04	2.42E-05	1.73E-05	4.71E-09	5.57E-05	3.21E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	2.30E-07	1.64E-08	1.90E-01	7.25E-10	2.04E-04	1.68E-07	2.36E-04	1.39E-05	3.43E-06	1.37E-05	4.85E-06	4.82E-06	2.87E-05	6.36E-07	0.00E+00	8.88E-06	4.45E-05
11	E52	80	Combination Long Haul Truck	322	0.00E+00	3.87E-06	4.18E-07	1.48E+01	2.69E-05	9.95E-02	8.60E-06	6.60E-04	1.77E-03	3.07E-04	8.37E-04	5.39E-04	5.54E-04	5.04E-05	7.55E-05	2.12E-08	2.83E-04	1.03E-04
11	E53	80	Passenger Truck	538	0.00E+00	8.30E-06	8.81E-07	3.43E+01	5.32E-05	1.83E-01	1.74E-05	1.96E-03	3.17E-03	5.63E-04	1.67E-03	1.08E-03	1.11E-03	2.42E-04	1.73E-04	4.71E-08	5.57E-04	3.21E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.76E-03	4.20E-06	2.03E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.19E-09	3.62E-04	3.79E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.46E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.67E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.12E-06	1.64E-05	6.62E-07	2.58E-10	1.58E-05	1.62E-05
11	E53	80	Combination Short Haul Truck	17	0.00E+00	7.36E-06	5.26E-07	6.08E+00	2.32E-08	6.52E-03	5.38E-06	7.56E-03	4.45E-04	1.10E-04	4.38E-04	1.55E-04	1.54E-04	9.17E-04	2.04E-05	0.00E+00	2.84E-04	1.43E-03
11	E53	80	Combination Long Haul Truck	15	0.00E+00	6.59E-06	4.43E-07	5.62E+00	2.68E-08	6.75E-03	4.99E-06	7.34E-03	4.35E-04	8.76E-05	4.53E-04	1.34E-04	1.34E-04	8.59E-04	1.88E-05	0.00E+00	3.18E-04	1.38E-03
11	E54	80	Passenger Car	74	0.00E+00	8.90E-07	9.63E-08	3.42E+00	6.20E-06	2.29E-02	1.98E-06	1.52E-04	4.07E-04	7.08E-05	1.93E-04	1.24E-04	1.27E-04	1.16E-05	1.74E-05	4.87E-09	6.52E-05	2.38E-05
11	E54	80	Passenger Truck	124	0.00E+00	1.91E-06	2.03E-07	7.90E+00	1.22E-05	4.22E-02	4.01E-06	4.52E-04	7.30E-04	1.30E-04	3.84E-04	2.49E-04	2.55E-04	5.57E-05	3.98E-05	1.08E-08	1.28E-04	7.38E-05
11	E54	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.61E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.62E-05
11	E54	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.55E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.68E-04
11	E54	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.44E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.49E-04
11	E55	80	Passenger Car	322	0.00E+00	3.87E-06	4.18E-07	1.48E+01	2.69E-05	9.95E-02	8.60E-06	6.60E-04	1.77E-03	3.07E-04	8.37E-04	5.39E-04	5.54E-04	5.04E-05	7.55E-05	2.12E-08	2.83E-04	1.03E-04
11	E55	80	Passenger Truck	538	0.00E+00	8.30E-06	8.81E-07	3.43E+01	5.32E-05	1.83E-01	1.74E-05	1.96E-03	3.17E-03	5.63E-04	1.67E-03	1.08E-03	1.11E-03	2.42E-04	1.73E-04	4.71E-08	5.57E-04	3.21E-04
11	E55	80	Single Unit Short Haul Truck	21	0.00E+00	3.95E-06	1.96E-07	3.87E+00	3.18E-06	7.76E-03	4.20E-06	2.03E-03	2.48E-04	5.61E-05	4.81E-04	1.17E-04	1.19E-04	3.89E-04	1.56E-05	6.19E-09	3.62E-04	3.79E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.46E-09	1.64E-01	1.36E-07	3.23E-04	1.83E-07	8.67E-05	1.13E-05	2.48E-06	2.10E-05	5.03E-06	5.12E-06	1.64E-05	6.62E-07	2.58E-10	1.58E-05	1.62E-05
11	E55	80	Combination Short Haul Truck	17	0.00E+00	7.36E-06	5.26E-07	6.08E+00	2.32E-08	6.52E-03	5.38E-06	7.56E-03	4.45E-04	1.10E-04	4.38E-04	1.55E-04	1.54E-04	9.17E-04	2.04E-05	0.00E+00	2.84E-04	1.43E-03
11	E55	80	Combination Long Haul Truck	15	0.00E+00	6.59E-06	4.43E-07	5.62E+00	2.68E-08	6.75E-03	4.99E-06	7.34E-03	4.35E-04	8.76E-05	4.53E-04	1.34E-04	1.34E-04	8.59E-04	1.88E-05	0.00E+00	3.18E-04	1.38E-03
11	E56	80	Passenger Car	74	0.00E+00	8.90E-07	9.63E-08	3.42E+00	6.20E-06	2.29E-02	1.98E-06	1.52E-04	4.07E-04	7.08E-05	1.93E-04	1.24E-04	1.27E-04	1.16E-05	1.74E-05	4.87E-09	6.52E-05	2.38E-05
11	E56	80	Passenger Truck	124	0.00E+00	1.91E-06	2.03E-07	7.90E+00	1.22E-05	4.22E-02	4.01E-06	4.52E-04	7.30E-04	1.30E-04	3.84E-04	2.49E-04	2.55E-04	5.57E-05	3.98E-05	1.08E-08	1.28E-04	7.38E-05
11	E56	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.61E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.62E-05
11	E56	80	Combination Short Haul Truck	8	0.00E+00	3.45E-06	2.47E-07	2.85E+00	1.09E-08	3.05E-03	2.52E-06	3.55E-03	2.09E-04	5.14E-05	2.05E-04	7.28E-05	7.22E-05	4.30E-04	9.54E-06	0.00E+00	1.33E-04	6.68E-04
11	E56	80	Combination Long Haul Truck	7	0.00E+00	3.09E-06	2.08E-07	2.64E+00	1.26E-08	3.17E-03	2.34E-06	3.44E-03	2.04E-04	4.11E-05	2.12E-04	6.26E-05	6.30E-05	4.03E-04	8.83E-06	0.00E+00	1.49E-04	6.49E-04
10	E57	70	Passenger Car	228	0.00E+00	2.94E-06	3.18E-07	1.08E+01	2.05E-05	7.39E-02	6.54E-06	4.56E-04	1.77E-03	2.83E-04	6.36E-04	4.10E-04	4.21E-04	4.08E-05	5.49E-05	1.50E-08	2.15E-04	7.13E-05
10	E57	70	Passenger Truck	381	0.00E+00	6.45E-06	6.82E-07	2.49E+01	4.08E-05	1.36E-01	1.34E-05	1.43E-03	3.21E-03	5.22E-04	1.28E-03	8.31E-04	8.51E-04	1.85E-04	1.25E-04	3.35E-08	4.26E-04	2.35E-04
10	E57	70	Single Unit Short Haul Truck	5	0.00E+00	1.13E-06	5.64E-08	8.81E-01	9.20E-07	1.76E-03	1.20E-06	5.56E-04	7.92E-05	1.59E-05	1.37E-04	3.37E-05	3.42E-05	8.84E-05	3.55E-06	1.43E-09	1.02E-04	1.04E-04
10	E57	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.15E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	E57	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.11E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.85E-04
10	E58	70	Passenger Car	257	0.00E+00	3.32E-06	3.59E-07	1.22E+01	2.31E-05	8.35E-02	7.38E-06	5.15E-04	1.99E-03	3.20E-04	7.19E-04	4.63E-04	4.76E-04	4.61E-05	6.20E-05	1.69E-08	2.43E-04	8.05E-05
10	E58	70	Passenger Truck	431	0.00E+00	7.28E-06	7.71E-07	2.82E+01	4.61E-05	1.54E-01	1.51E-05	1.61E-03	3.63E-03	5.90E-04	1.44E-03	9.39E-04	9.62E-04	2.09E-04	1.42E-04	3.79E-08	4.81E-04	2.65E-04
10	E58	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	E58	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E58	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
11	E59	80	Passenger Car	238	0.00E+00	2.86E-06	3.09E-07	1.10E+01	1.99E-05	7.36E-02	6.36E-06	4.88E-04	1.31E-03	2.27E-04	6.19E-04	3.99E-04	4.09E-04	3.73E-05	5.58E-05	1.56E-08	2.09E-04	7.63E-05
11	E59	80	Passenger Truck	398	0.00E+00	6.14E-06	6.51E-07	2.54E+01	3.93E-05	1.36E-01	1.29E-05	1.45E-03	2.35E-03	4.16E-04	1.23E-03	8.00E-04	8.20E-04	1.79E-04	1.28E-04	3.48E-08	4.12E-04	2.37E-04
11	E59	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.53E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	E59	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.31E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.23E-04
11	E59	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.21E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.05E-04
11	E60	80	Passenger Car	209	0.00E+00	2.51E-06	2.71E-07	9.63E+00	1.75E-05	6.45E-02	5.58E-06	4.29E-04	1.15E-03	1.99E-04	5.43E-04	3.50E-04	3.59E-04	3.27E-05	4.90E-05	1.37E-08	1.84E-04	6.70E-05
11	E60	80	Passenger Truck	349	0.00E+00	5.39E-06	5.72E-07	2.23E+01	3.45E-05	1.19E-01	1.13E-05	1.27E-03	2.06E-03	3.65E-04	1.08E-03	7.02E-04	7.19E-04	1.57E-04	1.12E-04	3.06E-08	3.62E-04	2.08E-04
11	E60	80	Single Unit Short Haul Truck	3	0.00E+00	5.38E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.59E-05	1.62E-05	5.30E-05	2.13E-06	8.45E-10	4.93E-05	5.17E-05
11	E60	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.23E-04
11	E60	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.15E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
11	E61	80	Passenger Car	238	0.00E+00	2.86E-06	3.09E-07	1.10E+01	1.99E-05	7.36E-02	6.36E-06	4.88E-04	1.31E-03	2.27E-04	6.19E-04	3.99E-04	4.09E-04	3.73E-05	5.58E-05	1.56E-08	2.09E-04	7.63E-05
11	E61	80	Passenger Truck	398	0.00E+00	6.14E-06	6.51E-07	2.54E+01	3.93E-05	1.36E-01	1.29E-05	1.45E-03	2.35E-03	4.16E-04	1.23E-03	8.00E-04	8.20E-04	1.79E-04	1.28E-04	3.48E-08	4.12E-04	2.37E-04
11	E61	80	Single Unit Short Haul Truck	6	0.00E+00	1.08E-06	5.35E-08	1.06E+00	8.67E-07	2.12E-03	1.15E-06	5.53E-04	6.77E-05	1.53E-05	1.31E-04	3.19E-05	3.24E-05	1.06E-04	4.26E-06	1.69E-09	9.86E-05	1.03E-04
11	E61	80	Combination Short Haul Truck	7	0.00E+00	3.22E-06	2.30E-07	2.66E+00	1.02E-08	2.85E-03	2.35E-06	3.31E-03	1.95E-04	4.80E-05	1.92E-04	6.80E-05	6.74E-05	4.01E-04	8.91E-06	0.00E+00	1.24E-04	6.23E-04
11	E61	80	Combination Long Haul Truck	7	0.00E+00	2.88E-06	1.94E-07	2.46E+00	1.17E-08	2.95E-03	2.18E-06	3.21E-03	1.91E-04	3.83E-05	1.98E-04	5.85E-05	5.88E-05	3.76E-04	8.24E-06	0.00E+00	1.39E-04	6.05E-04
11	E62	80	Passenger Car	209	0.00E+00	2.51E-06	2.71E-07	9.63E+00	1.75E-05	6.45E-02	5.58E-06	4.29E-04	1.15E-03	1.99E-04	5.43E-04	3.50E-04	3.59E-04	3.27E-05	4.90E-05	1.37E-08	1.84E-04	6.70E-05
11	E62	80	Passenger Truck	349	0.00E+00	5.39E-06	5.72E-07	2.23E+01	3.45E-05	1.19E-01	1.13E-05	1.27E-03	2.06E-03	3.65E-04	1.08E-03	7.02E-04	7.19E-04	1.57E-04	1.12E-04	3.06E-08	3.62E-04	2.08E-04
11	E62	80	Single Unit Short Haul Truck	3	0.00E+00	5.38E-07	2.67E-08	5.28E-01	4.33E-07	1.06E-03	5.73E-07	2.76E-04	3.38E-05	7.65E-06	6.55E-05	1.59E-05	1.62E-05	5.30E-05	2.13E-06	8.45E-10	4.93E-05	5.17E-05
11	E62	80	Combination Short Haul Truck	3	0.00E+00	1.15E-06	8.22E-08	9.50E-01	3.63E-09	1.02E-03	8.40E-07	1.18E-03	6.96E-05	1.71E-05	6.85E-05	2.43E-05	2.41E-05	1.43E-04	3.18E-06	0.00E+00	4.44E-05	2.23E-04
11	E62	80	Combination Long Haul Truck	2	0.00E+00	1.03E-06	6.92E-08	8.79E-01	4.19E-09	1.06E-03	7.80E-07	1.15E-03	6.80E-05	1.37E-05	7.07E-05	2.09E-05	2.10E-05	1.34E-04	2.94E-06	0.00E+00	4.97E-05	2.16E-04
10	E63	70	Passenger Car	489	0.00E+00	6.31E-06	6.83E-07	2.32E+01	4.39E-05	1.59E-01	1.40E-05	9.80E-04	3.79E-03	6.08E-04	1.37E-03	8.81E-04	9.04E-04	8.76E-05	1.18E-04	3.21E-08	4.63E-04	1.53E-04
10	E63	70	Passenger Truck	819	0.00E+00	1.38E-05	1.47E-06	5.36E+01	8.76E-05	2.92E-01	2.88E-05	3.07E-03	6.90E-03	1.12E-03	2.74E-03	1.78E-03	1.83E-03	3.97E-04	2.69E-04	7.20E-08	9.15E-04	5.04E-04
10	E63	70	Single Unit Short Haul Truck	36	0.00E+00	8.55E-06	4.28E-07	6.70E+00	6.99E-06	1.34E-02	9.11E-06	4.22E-03	6.02E-04	1.21E-04	1.04E-03	2.56E-04	2.60E-04	6.72E-04	2.70E-05	1.09E-08	7.77E-04	7.91E-04
10	E63	70	Single Unit Long Haul Truck	2	0.00E+00	3.73E-07	1.85E-08	2.84E-01	3.02E-07	5.63E-04	3.97E-07	1.82E-04	2.75E-05	5.36E-06	4.54E-05	1.11E-05	1.13E-05	2.84E-05	1.15E-06	4.60E-10	3.41E-05	3.40E-05
10	E63	70	Combination Short Haul Truck	34	0.00E+00	1.77E-05	1.26E-06	1.28E+01	5.75E-08	1.52E-02	1.30E-05	1.86E-02	1.35E-03	2.94E-04	1.08E-03	3.72E-04	3.71E-04	1.93E-03	4.29E-05	0.00E+00	7.06E-04	3.51E-03
10	E63	70	Combination Long Haul Truck	31	0.00E+00	1.60E-05	1.07E-06	1.20E+01	6.62E-08	1.61E-02	1.21E-05	1.84E-02	1.34E-03	2.44E-04	1.11E-03	3.23E-04	3.27E-04	1.83E-03	4.01E-05	0.00E+00	7.87E-04	3.46E-03
10	E64	70	Passenger Car	740	0.00E+00	9.56E-06	1.03E-06	3.52E+01	6.65E-05	2.40E-01	2.13E-05	1.48E-03	5.74E-03	9.21E-04	2.07E-03	1.33E-03	1.37E-03	1.33E-04	1.79E-04	4.86E-08	7.00E-04	2.32E-04
10	E64	70	Passenger Truck	1240	0.00E+00	2.10E-05	2.22E-06	8.11E+01	1.33E-04	4.42E-01	4.35E-05	4.64E-03	1.04E-02	1.70E-03	4.15E-03	2.70E-03	2.77E-03	6.01E-04	4.08E-04	1.09E-07	1.39E-03	7.63E-04
10	E64	70	Single Unit Short Haul Truck	44	0.00E+00	1.04E-05	5.19E-07	8.11E+00	8.47E-06	1.62E-02	1.10E-05	5.11E-03	7.28E-04	1.46E-04	1.26E-03	3.10E-04	3.15E-04	8.13E-04	3.27E-05	1.32E-08	9.41E-04	9.57E-04
10	E64	70	Single Unit Long Haul Truck	2	0.00E+00	4.51E-07	2.24E-08	3.44E-01	3.65E-07	6.81E-04	4.81E-07	2.20E-04	3.33E-05	6.49E-06	5.49E-05	1.34E-05	1.36E-05	3.44E-05	1.39E-06	5.56E-10	4.13E-05	4.12E-05
10	E64	70	Combination Short Haul Truck	46	0.00E+00	2.39E-05	1.70E-06	1.74E+01	7.78E-08	2.06E-02	1.76E-05	2.52E-02	1.82E-03	3.98E-04	1.46E-03	5.03E-04	5.03E-04	2.62E-03	5.81E-05	0.00E+00	9.56E-04	4.75E-03
10	E64	70	Combination Long Haul Truck	42	0.00E+00	2.16E-05	1.45E-06	1.62E+01	8.96E-08	2.18E-02	1.64E-05	2.48E-02	1.81E-03	3.30E-04	1.51E-03	4.37E-04	4.42E-04	2.48E-03	5.42E-05	0.00E+00	1.07E-03	4.68E-03
10	E65	70	Passenger Car	530	0.00E+00	6.84E-06	7.40E-07	2.52E+01	4.76E-05	1.72E-01	1.52E-05	1.06E-03	4.11E-03	6.59E-04	1.48E-03	9.54E-04	9.79E-04	9.49E-05	1.28E-04	3.48E-08	5.01E-04	1.66E-04
10	E65	70	Passenger Truck	887	0.00E+00	1.50E-05

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E69	70	Passenger Car	422	0.00E+00	5.45E-06	5.89E-07	2.00E+01	3.79E-05	1.37E-01	1.21E-05	8.45E-04	3.27E-03	5.24E-04	1.18E-03	7.60E-04	7.80E-04	7.55E-05	1.02E-04	2.77E-08	3.99E-04	1.32E-04
10	E69	70	Passenger Truck	706	0.00E+00	1.19E-05	1.26E-06	4.62E+01	7.55E-05	2.52E-01	2.48E-05	2.64E-03	5.95E-03	9.67E-04	2.37E-03	1.54E-03	1.58E-03	3.42E-04	2.32E-04	6.21E-08	7.89E-04	4.35E-04
10	E69	70	Single Unit Short Haul Truck	15	0.00E+00	3.60E-06	1.80E-07	2.82E+00	2.94E-06	5.64E-03	3.84E-06	1.78E-03	2.53E-04	5.07E-05	4.37E-04	1.08E-04	1.09E-04	2.83E-04	1.14E-05	4.59E-09	3.27E-04	3.33E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.57E-07	7.80E-09	1.20E-01	1.27E-07	2.37E-04	1.67E-07	7.65E-05	1.16E-05	2.26E-06	1.91E-05	4.66E-06	4.74E-06	1.20E-05	4.83E-07	1.94E-10	1.44E-05	1.43E-05
10	E69	70	Combination Short Haul Truck	5	0.00E+00	2.72E-06	1.93E-07	1.97E+00	8.84E-09	2.34E-03	2.00E-06	2.86E-03	2.07E-04	4.52E-05	1.66E-04	5.72E-05	5.71E-05	2.97E-04	6.60E-06	0.00E+00	1.09E-04	5.39E-04
10	E69	70	Combination Long Haul Truck	5	0.00E+00	2.46E-06	1.64E-07	1.84E+00	1.02E-08	2.48E-03	1.87E-06	2.82E-03	2.06E-04	3.75E-05	1.71E-04	4.97E-05	5.02E-05	2.81E-04	6.16E-06	0.00E+00	1.21E-04	5.32E-04
10	E70	70	Passenger Car	354	0.00E+00	4.57E-06	4.95E-07	1.68E+01	3.18E-05	1.15E-01	1.02E-05	7.09E-04	2.74E-03	4.40E-04	9.89E-04	6.38E-04	6.55E-04	6.34E-05	8.54E-05	2.33E-08	3.35E-04	1.11E-04
10	E70	70	Passenger Truck	593	0.00E+00	1.00E-05	1.06E-06	3.88E+01	6.34E-05	2.12E-01	2.08E-05	2.22E-03	4.99E-03	8.12E-04	1.99E-03	1.29E-03	1.32E-03	2.87E-04	1.95E-04	5.22E-08	6.63E-04	3.65E-04
10	E70	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	E70	70	Combination Short Haul Truck	8	0.00E+00	4.08E-06	2.90E-07	2.96E+00	1.33E-08	3.51E-03	2.99E-06	4.29E-03	3.11E-04	6.78E-05	2.49E-04	8.58E-05	8.57E-05	4.46E-04	9.90E-06	0.00E+00	1.63E-04	8.09E-04
10	E70	70	Combination Long Haul Truck	7	0.00E+00	3.69E-06	2.47E-07	2.76E+00	1.53E-08	3.72E-03	2.80E-06	4.23E-03	3.08E-04	5.63E-05	2.57E-04	7.46E-05	7.54E-05	4.22E-04	9.25E-06	0.00E+00	1.82E-04	7.98E-04
10	E71	70	Passenger Car	518	0.00E+00	6.69E-06	7.23E-07	2.46E+01	4.65E-05	1.68E-01	1.49E-05	1.04E-03	4.01E-03	6.44E-04	1.45E-03	9.33E-04	9.57E-04	9.27E-05	1.25E-04	3.40E-08	4.90E-04	1.62E-04
10	E71	70	Passenger Truck	867	0.00E+00	1.47E-05	1.55E-06	5.67E+01	9.27E-05	3.09E-01	3.05E-05	3.25E-03	7.30E-03	1.19E-03	2.90E-03	1.89E-03	1.94E-03	4.20E-04	2.85E-04	7.63E-08	9.69E-04	5.34E-04
10	E71	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.89E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.54E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.12E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	E71	70	Combination Short Haul Truck	6	0.00E+00	2.99E-06	2.13E-07	2.17E+00	9.72E-09	2.58E-03	2.20E-06	3.15E-03	2.28E-04	4.97E-05	1.82E-04	6.29E-05	6.28E-05	3.27E-04	7.26E-06	0.00E+00	1.19E-04	5.93E-04
10	E71	70	Combination Long Haul Truck	5	0.00E+00	2.70E-06	1.81E-07	2.02E+00	1.12E-08	2.73E-03	2.05E-06	3.11E-03	2.26E-04	4.13E-05	1.88E-04	5.47E-05	5.53E-05	3.09E-04	6.78E-06	0.00E+00	1.33E-04	5.85E-04
10	E72	70	Passenger Car	563	0.00E+00	7.27E-06	7.87E-07	2.68E+01	5.06E-05	1.83E-01	1.62E-05	1.13E-03	4.37E-03	7.00E-04	1.57E-03	1.01E-03	1.04E-03	1.01E-04	1.36E-04	3.70E-08	5.33E-04	1.76E-04
10	E72	70	Passenger Truck	943	0.00E+00	1.59E-05	1.69E-06	6.17E+01	1.01E-04	3.36E-01	3.31E-05	3.53E-03	7.94E-03	1.29E-03	3.16E-03	2.05E-03	2.10E-03	4.57E-04	3.10E-04	8.29E-08	1.05E-03	5.81E-04
10	E72	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	E72	70	Combination Short Haul Truck	3	0.00E+00	1.36E-06	9.67E-08	9.86E-01	4.42E-09	1.17E-03	9.98E-07	1.43E-03	1.04E-04	2.26E-05	8.29E-05	2.86E-05	2.86E-05	1.49E-04	3.30E-06	0.00E+00	5.43E-05	2.70E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	1.23E-06	8.22E-08	9.20E-01	5.09E-09	1.24E-03	9.34E-07	1.41E-03	1.03E-04	1.88E-05	8.57E-05	2.49E-05	2.51E-05	1.41E-04	3.08E-06	0.00E+00	6.05E-05	2.66E-04
9	E73	60	Passenger Car	161	0.00E+00	2.39E-06	2.58E-07	8.01E+00	1.66E-05	5.97E-02	5.31E-06	3.29E-04	1.64E-03	2.51E-04	5.17E-04	3.33E-04	3.42E-04	3.37E-05	4.05E-05	1.12E-08	1.75E-04	5.14E-05
9	E73	60	Passenger Truck	270	0.00E+00	5.27E-06	5.56E-07	1.83E+01	3.29E-05	1.07E-01	1.09E-05	1.07E-03	3.00E-03	4.66E-04	1.03E-03	6.72E-04	6.89E-04	1.43E-04	9.17E-05	2.53E-08	3.43E-04	1.78E-04
9	E73	60	Single Unit Short Haul Truck	7	0.00E+00	1.97E-06	9.85E-08	1.25E+00	1.62E-06	2.43E-03	2.10E-06	9.40E-04	1.59E-04	2.89E-05	2.39E-04	5.90E-05	6.00E-05	1.26E-04	5.07E-06	2.09E-09	1.79E-04	1.76E-04
9	E73	60	Combination Short Haul Truck	5	0.00E+00	3.08E-06	2.14E-07	2.00E+00	1.09E-08	2.69E-03	2.28E-06	3.34E-03	2.86E-04	5.67E-05	1.96E-04	6.39E-05	6.40E-05	3.02E-04	6.70E-06	0.00E+00	1.32E-04	6.30E-04
9	E73	60	Combination Long Haul Truck	5	0.00E+00	2.76E-06	1.80E-07	1.88E+00	1.25E-08	2.90E-03	2.13E-06	3.32E-03	2.88E-04	4.89E-05	2.02E-04	5.49E-05	5.56E-05	2.87E-04	6.28E-06	0.00E+00	1.46E-04	6.25E-04
9	E74	60	Passenger Car	231	0.00E+00	3.42E-06	3.70E-07	1.15E+01	2.38E-05	8.54E-02	7.60E-06	4.71E-04	2.34E-03	3.59E-04	7.40E-04	4.77E-04	4.89E-04	4.82E-05	5.80E-05	1.60E-08	2.50E-04	7.35E-05
9	E74	60	Passenger Truck	386	0.00E+00	7.54E-06	7.96E-07	2.62E+01	4.71E-05	1.53E-01	1.55E-05	1.53E-03	4.30E-03	6.67E-04	1.48E-03	9.63E-04	9.86E-04	2.05E-04	1.31E-04	3.63E-08	4.91E-04	2.54E-04
9	E74	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.69E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E74	60	Combination Short Haul Truck	5	0.00E+00	2.77E-06	1.93E-07	1.80E+00	9.81E-09	2.42E-03	2.05E-06	3.01E-03	2.58E-04	5.10E-05	1.76E-04	5.75E-05	5.76E-05	2.72E-04	6.03E-06	0.00E+00	1.19E-04	5.67E-04
9	E74	60	Combination Long Haul Truck	4	0.00E+00	2.49E-06	1.62E-07	1.69E+00	1.12E-08	2.61E-03	1.92E-06	2.98E-03	2.59E-04	4.40E-05	1.82E-04	4.94E-05	5.00E-05	2.58E-04	5.66E-06	0.00E+00	1.32E-04	5.62E-04
53	E75	70	Passenger Car	907	0.00E+00	1.14E-05	1.23E-06	4.36E+01	7.90E-05	2.83E-01	2.52E-05	1.85E-03	6.93E-03	1.12E-03	2.46E-03	1.58E-03	1.63E-03	1.62E-04	2.21E-04	6.03E-08	8.32E-04	2.89E-04
53	E75	70	Passenger Truck	1519	0.00E+00	2.47E-05	2.62E-06	1.01E+02	1.57E-04	5.20E-01	5.14E-05	5.66E-03	1.24E-02	2.03E-03	4.91E-03	3.19E-03	3.27E-03	7.32E-04	5.06E-04	1.32E-07	1.64E-03	9.29E-04
53	E75	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.46E+00	5.71E-06	1.09E-02	7.43E-06	3.44E-03	4.91E-04	9.83E-05	8.46E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.90E-09	6.34E-04	6.45E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.59E-04	3.24E-07	1.48E-04	2.24E-05	4.37E-06	3.70E-05	9.03E-06	9.18E-06	2.32E-05	9.37E-07	3.75E-10	2.78E-05	2.77E-05
53	E75	70	Combination Short Haul Truck	28	0.00E+00	1.47E-05	1.04E-06	1.06E+01	4.77E-08	1.26E-02	1.08E-05	1.55E-02	1.12E-03	2.44E-04	8.95E-04	3.09E-04	3.08E-04	1.61E-03	3.56E-05	0.00E+00	5.86E-04	2.91E-03
53	E75	70	Combination Long Haul Truck	26	0.00E+00	1.33E-05	8.88E-07	9.94E+00	5.50E-08	1.34E-02	1.01E-05	1.52E-02	1.11E-03	2.03E-04	9.25E-04	2.68E-04	2.71E-04	1.52E-03	3.33E-05	0.00E+00	6.54E-04	2.87E-03
53	E76	70	Passenger Car	780	0.00E+00	9.76E-06	1.06E-06	3.75E+01	6.79E-05	2.43E-01	2.17E-05	1.59E-03	5.95E-03	9.60E-04	2.11E-03	1.36E-03	1.40E-03	1.40E-04	1.90E-04	5.18E-08	7.15E-04	2.48E-04
53	E76	70	Passenger Truck	1306	0.00E+00	2.13E-05	2.25E-06	8.65E+01	1.35E-04	4.47E-01	4.42E-05	4.87E-03	1.07E-02	1.75E-03	4.22E-03	2.74E-03	2.81E-03	6.30E-04	4.35E-04	1.14E-07	1.41E-03	7.99E-04
53	E76	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.08E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
53	E76	70	Combination Short Haul Truck	12	0.00E+00	6.26E-06	4.45E-07	4.54E+00	2.03E-08	5.39E-03	4.59E-06	6.59E-03	4.76E-04	1.04E-04	3.81E-04	1.32E-04	1.31E-04	6.84E-04	1.52E-05	0.00E+00	2.50E-04	1.24E-03
53	E76	70	Combination Long Haul Truck	11	0.00E+00	5.66E-06	3.78E-07	4.23E+00	2.34E-08	5.71E-03	4.30E-06	6.49E-03	4.73E-04	8.63E-05	3.94E-04	1.14E-04	1.16E-04	6.47E-04	1.42E-05	0.00E+00	2.79E-04	1.22E-03
53	E77	70	Passenger Car	899	0.00E+00	1.13E-05	1.22E-06	4.32E+01	7.83E-05	2.80E-01	2.50E-05	1.83E-03	6.86E-03	1.11E-03	2.43E-03	1.57E-03	1.61E-03	1.61E-04	2.19E-04	5.97E-08	8.24E-04	2.86E-04
53	E77	70	Passenger Truck	1505	0.00E+00	2.45E-05	2.59E-06	9.97E+01	1.55E-04	5.15E-01	5.09E-05	5.61E-03	1.23E-02	2.01E-03	4.86E-03	3.16E-03	3.24E-03	7.25E-04	5.01E-04	1.31E-07	1.62E-03	9.20E-04
53	E77	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.46E+00	5.71E-06	1.09E-02	7.43E-06	3.44E-03	4.91E-04	9.83E-05	8.46E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.90E-09	6.34E-04	6.45E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.59E-04	3.24E-07	1.48E-04	2.24E-05	4.37E-06	3.70E-05	9.03E-06	9.18E-06	2.32E-05	9.37E-07	3.75E-10	2.78E-05	2.77E-05
53	E77	70	Combination Short Haul Truck	29	0.00E+00	1.52E-05	1.08E-06	1.10E+01	4.95E-08	1.31E-02	1.12E-05	1.60E-02	1.16E-03	2.53E-04	9.28E-04	3.20E-04	3.20E-04	1.67E-03	3.70E-05	0.00E+00	6.08E-04	3.02E-03
53	E77	70	Combination Long Haul Truck	27	0.00E+00	1.38E-05	9.21E-07	1.03E+01	5.70E-08	1.39E-02	1.05E-05	1.58E-02	1.15E-03	2.10E-04	9.59E-04	2.78E-04	2.81E-04	1.58E-03	3.45E-05	0.00E+00	6.78E-04	2.98E-03
53	E78	70	Passenger Car	842	0.00E+00	1.05E-05	1.14E-06	4.05E+01	7.34E-05	2.63E-01	2.34E-05	1.72E-03	6.43E-03	1.04E-03	2.28E-03	1.47E-03	1.51E-03	1.51E-04	2.05E-04	5.59E-08	7.72E-04	2.68E-04
53	E78	70	Passenger Truck	1410	0.00E+00	2.30E-05	2.43E-06	9.34E+01	1.45E-04	4.83E-01	4.77E-05	5.25E-03	1.15E-02	1.89E-03	4.55E-03	2.96E-03	3.03E-03	6.80E-04	4.70E-04	1.23E-07	1.52E-03	8.62E-04
53	E78	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.08E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
53	E78	70	Combination Short Haul Truck	14	0.00E+00	7.35E-06	5.22E-07	5.32E+00	2.39E-08	6.32E-03	5.39E-06	7.73E-03	5.59E-04	1.22E-04	4.47E-04	1.54E-04	1.54E-04	8.03E-04	1.78E-05	0.00E+00	2.93E-04	1.46E-03
53	E78	70	Combination Long Haul Truck	13	0.00E+00	6.64E-06	4.44E-07	4.97E+00	2.75E-08	6.70E-03	5.04E-06	7.62E-03	5.55E-04	1.01E-04	4.63E-04	1.34E-04	1.36E-04	7.59E-04	1.66E-05	0.00E+00	3.27E-04	1.44E-03
53	E79	70	Passenger Car	889	0.00E+00	1.11E-05	1.20E-06	4.27E+01	7.74E-05	2.77E-01	2.47E-05	1.81E-03	6.79E-03	1.09E-03	2.41E-03	1.55E-03	1.59E-03	1.59E-04	2.17E-04	5.91E-08	8.15E-04	2.83E-04
53	E79	70	Passenger Truck	1488	0.00E+00	2.42E-05	2.56E-06	9.85E+01	1.53E-04	5.10E-01	5.04E-05	5.54E-03	1.22E-02	1.99E-03	4.81E-03	3.13E-03	3.20E-03	7.17E-04	4.96E-04	1.30E-07	1.60E-03	9.10E-04
53	E79	70	Single Unit Short Haul Truck	30	0.00E+00	6.98E-06	3.50E-07	5.46E+00	5.71E-06	1.09E-02	7.43E-06	3.44E-03	4.91E-04	9.83E-05	8.46E-04	2.09E-04	2.12E-04	5.48E-04	2.20E-05	8.90E-09	6.34E-04	6.45E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	3.04E-07	1.51E-08	2.32E-01	2.46E-07	4.59E-04	3.24E-07	1.48E-04	2.24E-05	4.37E-06	3.70E-05	9.03E-06	9.18E-06	2.32E-05	9.37E-07	3.75E-10	2.78E-05	2.77E-05
53	E79	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.88E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
53	E79	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.75E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
53	E80	70	Passenger Car	789	0.00E+00	9.88E-06	1.07E-06	3.79E+01	6.87E-05	2.46E-01	2.20E-05	1.61E-03	6.02E-03	9.71E-04	2.14E-03	1.38E-03	1.41E-03	1.41E-04	1.92E-04	5.24E-08	7.23E-04	2.51E-04
53	E80	70	Passenger Truck	1321	0.00E+00	2.15E-05	2.28E-06	8.75E+01	1.36E-04	4.52E-01	4.47E-05	4.92E-03	1.08E-02	1.77E-03	4.27E-03	2.78E-03	2.84E-03	6.37E-04	4.40E-04	1.15E-07	1.42E-03	8.08E-04
53	E80	70	Single Unit Short Haul Truck	28	0.00E+00	6.53E-06	3.27E-07	5.11E+00	5.34E-06	1.02E-02	6.95E-06	3.22E-03	4.59E-04	9.20E-05	7.92E-04	1.95E-04	1.98E-04	5.13E-04	2.06E-05	8.32E-09	5.93E-04	6.03E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	2.84E-07	1.41E-08	2.17E-01	2.30E-07	4.30E-04	3.03E-07	1.39E-04	2.10E-05	4.09E-06	3.46E-05	8.45E-06	8.59E-06	2.17E-05	8.76E-07	3.51E-10	2.60E-05	2.60E-05
53	E80	70	Combination Short Haul Truck	19	0.00E+00	9.80E-06	6.96E-07	7.10E+00	3.18E-08	8.43E-03	7.18E-06	1.03E-02	7.45E-04	1.63E-04	5.97E-04	2.06E-04	2.06E-04	1.07E-03	2.38E-05	0.00E+00	3.91E-04	1.94E-03
53	E80	70	Combination Long Haul Truck	17	0.00E+00	8.85E-06	5.92E-07	6.63E+00	3.67E-08	8.93E-03	6.72E-06	1.02E-02	7.40E-04	1.35E-04	6.17E-04	1.79E-04	1.81E-04	1.01E-03	2.22E-05	0.00E+00	4.36E-04	1.91E-03
10	E83	70	Passenger Car	209	0.00E+00	2.70E-06	2.92E-07	9.94E+00	1.88E-05	6.78E-02	6.00E-06	4.19E-04	1.62E-03	2.60E-04	5.84E-04	3.76E-04	3.86E-04	3.74E-05	5.04E-05	1.37E-08	1.98E-04	6.54E-05
10	E83	70	Passenger Truck	350	0.00E+00	5.92E-06	6.26E-07	2.29E+01	3.74E-05	1.25E-01	1.23E-05	1.31E-03	2.95E-03	4.79E-04	1.17E-03	7.63E-04	7.81E-04	1.70E-04	1.15E-04	3.08E-08	3.91E-04	2.16E-04
10	E83	70	Single Unit Short Haul Truck	7	0.00E+00	1.58E-06	7.89E-08	1.23E+00	1.29E-06	2.47E-03	1.68E-06	7.78E-04	1.11E-04	2.22E-05	1.91E-04	4.71E-05	4.79E-05	1.24E-04	4.98E-06	2.01E-09	1.43E-04	1.46E-04
10	E83	70	Combination Short Haul Truck	7	0.00E+00	3.54E-06	2.51E-07	2.56E+00	1.15E-08	3.05E-03	2.59E-06	3.72E-03	2.69E-04	5.87E-05	2.15E-04	7.44E-05	7.43E-05	3.87E-04	8.58E-06	0.00E+00	1.41E-04	7.01E-04
10	E83	70	Combination Long Haul Truck	6	0.00E+00	3.20E-06	2.14E-07	2.39E+00	1.32E-08	3.23E-03	2.43E-06	3.67E-03	2.67E-04	4.88E-05	2.23E-04	6.46E-05	6.53E-05	3.66E-04	8.01E-06	0.00E+00	1.57E-04	6.91E-04
10	E84	70	Passenger Car	209	0.00E+00	2.70E-06	2.92E-07	9.94E+00	1.88E-05	6.78E-02	6.00E-06	4.19E-04	1.62E-03	2.60E-04	5.84E-04	3.76E-04	3.86E-04	3.74E-05	5.04E-05	1.37E-08	1.98E-04	6.54E-05
10	E84	70	Passenger Truck	350	0.00E+00	5.92E-06	6.26E-07	2.29E+01	3.74E-05	1.25E-01	1.23E-05	1.31E-03	2.95E-03	4.79E-04	1.17E-03	7.63E-04	7.81E-04	1.70E-04	1.15E-04	3.08E-08	3.91E-04	2.16E-04
10	E84	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	E84	70	Combination Short Haul Truck	5	0.00E+00	2.45E-06	1.74E-07	1.77E+00	7.96E-09	2.11E-03	1.80E-06	2.58E-03	1.86E-04	4.07E-05	1.49E-04	5.15E-05	5.14E-05	2.68E-04	5.94E-06	0.00E+00	9.77E-05	4.86E-04
10	E84	70	Combination Long Haul Truck	4	0.00E+00	2.21E-06	1.48E-07	1.66E+00	9.16E-09	2.23E-03	1.68E-06	2.54E-03	1.85E-04	3.38E-05	1.54E-04	4.47E-05	4.52E-05	2.53E-04	5.55E-06	0.00E+00	1.09E-04	4.79E-04
9	E85	60	Passenger Car	1225	0.00E+00	1.81E-05	1.96E-06	6.09E+01	1.26E-04	4.54E-01	4.04E-05	2.50E-03	1.24E-02	1.91E-03	3.93E-03	2.53E-03	2.60E-03	2.56E-04	3.08E-04	8.49E-08	1.33E-03	3.91E-04
9	E85	60	Passenger Truck	2052	0.00E+00	4.00E-05	4.23E-06	1.39E+02	2.50E-04	8.10E-01	8.25E-05	8.15E-03	2.28E-02	3.54E-03	7.85E-03	5.11E-03	5.24E-03	1.09E-03	6.97E-04	1.93E-07	2.61E-03	1.35E-03
9	E85	60	Single Unit Short Haul Truck	51	0.00E+00	1.49E-05	7.45E-07	9.50E+00	1.23E-05	1.84E-02	1.59E-05	7.12E-03	1.21E-03	2.19E-04	1.81E-03	4.47E-04	4.54E-04	9.50E-04	3.84E-05	1.58E-08	1.36E-03	1.33E-03
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	6.51E-07	3.24E-08	4.05E-01	5.34E-07	7.80E-04	6.95E-07	3.08E-04	5.42E-05	9.69E-06	7.93E-05	1.94E-05	1.98E-05	4.05E-05	1.64E-06	6.72E-10	5.96E-05	5.77E-05
9	E85	60	Combination Short Haul Truck

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E89	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.69E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	E89	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.63E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
9	E90	60	Passenger Car	76	0.00E+00	1.12E-06	1.21E-07	3.75E+00	7.79E-06	2.80E-02	2.49E-06	1.54E-04	7.67E-04	1.18E-04	2.42E-04	1.56E-04	1.60E-04	1.58E-05	1.90E-05	5.23E-09	8.19E-05	2.41E-05
9	E90	60	Passenger Truck	126	0.00E+00	2.47E-06	2.61E-07	8.57E+00	1.54E-05	4.99E-02	5.09E-06	5.02E-04	1.41E-03	2.18E-04	4.84E-04	3.15E-04	3.23E-04	6.70E-05	4.30E-05	1.19E-08	1.61E-04	8.33E-05
9	E90	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.30E-05
9	E91	60	Passenger Car	4	0.00E+00	5.54E-08	5.99E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.63E-06	3.79E-05	5.83E-06	1.20E-05	7.73E-06	7.93E-06	7.81E-07	9.40E-07	2.59E-10	4.06E-06	1.19E-06
9	E91	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.47E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.39E-05	1.56E-05	1.60E-05	3.31E-06	2.13E-06	5.88E-10	7.96E-06	4.12E-06
9	E92	60	Passenger Car	4	0.00E+00	5.54E-08	5.99E-09	1.86E-01	3.85E-07	1.38E-03	1.23E-07	7.63E-06	3.79E-05	5.83E-06	1.20E-05	7.73E-06	7.93E-06	7.81E-07	9.40E-07	2.59E-10	4.06E-06	1.19E-06
9	E92	60	Passenger Truck	6	0.00E+00	1.22E-07	1.29E-08	4.24E-01	7.64E-07	2.47E-03	2.52E-07	2.49E-05	6.96E-05	1.08E-05	2.39E-05	1.56E-05	1.60E-05	3.31E-06	2.13E-06	5.88E-10	7.96E-06	4.12E-06
9	E93	60	Passenger Car	122	0.00E+00	1.81E-06	1.95E-07	6.06E+00	1.26E-05	4.51E-02	4.01E-06	2.49E-04	1.24E-03	1.90E-04	3.91E-04	2.52E-04	2.58E-04	2.55E-05	3.07E-05	8.44E-09	1.32E-04	3.89E-05
9	E93	60	Passenger Truck	204	0.00E+00	3.98E-06	4.21E-07	1.38E+01	2.49E-05	8.06E-02	8.21E-06	8.11E-04	2.27E-03	3.52E-04	7.80E-04	5.09E-04	5.21E-04	1.08E-04	6.93E-05	1.92E-08	2.60E-04	1.34E-04
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.69E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	6.15E-07	4.29E-08	4.00E-01	2.18E-09	5.38E-04	4.57E-07	6.69E-04	5.73E-05	1.13E-05	3.92E-05	1.28E-05	1.28E-05	6.03E-05	1.34E-06	0.00E+00	2.64E-05	1.26E-04
9	E93	60	Combination Long Haul Truck	1	0.00E+00	5.52E-07	3.59E-08	3.75E-01	2.50E-09	5.80E-04	4.26E-07	6.63E-04	5.76E-05	9.77E-06	4.04E-05	1.10E-05	1.11E-05	5.74E-05	1.26E-06	0.00E+00	2.92E-05	1.25E-04
9	E94	60	Passenger Car	82	0.00E+00	1.21E-06	1.31E-07	4.07E+00	8.44E-06	3.03E-02	2.70E-06	1.67E-04	8.31E-04	1.28E-04	2.62E-04	1.69E-04	1.74E-04	1.71E-05	2.06E-05	5.67E-09	8.88E-05	2.61E-05
9	E94	60	Passenger Truck	137	0.00E+00	2.68E-06	2.83E-07	9.29E+00	1.67E-05	5.41E-02	5.51E-06	5.45E-04	1.52E-03	2.37E-04	5.24E-04	3.42E-04	3.50E-04	7.26E-05	4.66E-05	1.29E-08	1.74E-04	9.03E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	5.62E-07	2.81E-08	3.58E-01	4.64E-07	6.94E-04	6.00E-07	2.69E-04	4.56E-05	8.26E-06	6.83E-05	1.69E-05	1.71E-05	3.59E-05	1.45E-06	5.96E-10	5.12E-05	5.03E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.30E-05
54	E95	80	Passenger Car	685	0.00E+00	8.04E-06	8.69E-07	3.18E+01	5.59E-05	2.03E-01	1.79E-05	1.41E-03	3.96E-03	6.76E-04	1.74E-03	1.12E-03	1.15E-03	1.07E-04	1.62E-04	4.39E-08	5.89E-04	2.21E-04
54	E95	80	Passenger Truck	1147	0.00E+00	1.74E-05	1.85E-06	7.40E+01	1.12E-04	3.85E-01	3.66E-05	4.20E-03	7.12E-03	1.24E-03	3.50E-03	2.27E-03	2.33E-03	5.15E-04	3.73E-04	9.89E-08	1.17E-03	6.85E-04
54	E95	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.32E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.20E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
54	E95	80	Combination Short Haul Truck	36	0.00E+00	1.56E-05	1.12E-06	1.29E+01	4.93E-08	1.38E-02	1.14E-05	1.61E-02	9.46E-04	2.33E-04	9.31E-04	3.30E-04	3.28E-04	1.95E-03	4.33E-05	0.00E+00	6.04E-04	3.03E-03
54	E95	80	Combination Long Haul Truck	32	0.00E+00	1.40E-05	9.41E-07	1.19E+01	5.70E-08	1.43E-02	1.06E-05	1.56E-02	9.25E-04	1.86E-04	9.62E-04	2.84E-04	2.86E-04	1.83E-03	4.00E-05	0.00E+00	6.76E-04	2.94E-03
54	E96	80	Passenger Car	465	0.00E+00	5.46E-06	5.91E-07	2.16E+01	3.80E-05	1.38E-01	1.21E-05	9.61E-04	2.69E-03	4.59E-04	1.18E-03	7.62E-04	7.82E-04	7.29E-05	1.10E-04	2.98E-08	4.00E-04	1.50E-04
54	E96	80	Passenger Truck	780	0.00E+00	1.18E-05	1.26E-06	5.03E+01	7.59E-05	2.62E-01	2.48E-05	2.85E-03	4.84E-03	8.44E-04	2.38E-03	1.54E-03	1.58E-03	3.50E-04	2.53E-04	6.72E-08	7.95E-04	4.66E-04
54	E96	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.82E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.77E-05	7.04E-09	4.11E-04	4.31E-04
54	E96	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.85E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.82E-06	1.86E-05	7.52E-07	2.93E-10	1.80E-05	1.84E-05
54	E96	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.22E-07	9.50E+00	3.63E-08	1.02E-02	8.40E-06	1.18E-02	6.96E-04	1.71E-04	6.85E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.23E-03
54	E96	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.92E-07	8.79E+00	4.19E-08	1.06E-02	7.80E-06	1.15E-02	6.80E-04	1.37E-04	7.07E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.16E-03
54	E97	80	Passenger Car	685	0.00E+00	8.04E-06	8.69E-07	3.18E+01	5.59E-05	2.03E-01	1.79E-05	1.41E-03	3.96E-03	6.76E-04	1.74E-03	1.12E-03	1.15E-03	1.07E-04	1.62E-04	4.39E-08	5.89E-04	2.21E-04
54	E97	80	Passenger Truck	1147	0.00E+00	1.74E-05	1.85E-06	7.40E+01	1.12E-04	3.85E-01	3.66E-05	4.20E-03	7.12E-03	1.24E-03	3.50E-03	2.27E-03	2.33E-03	5.15E-04	3.73E-04	9.89E-08	1.17E-03	6.85E-04
54	E97	80	Single Unit Short Haul Truck	34	0.00E+00	6.46E-06	3.21E-07	6.34E+00	5.20E-06	1.27E-02	6.88E-06	3.32E-03	4.06E-04	9.19E-05	7.86E-04	1.91E-04	1.95E-04	6.36E-04	2.55E-05	1.01E-08	5.92E-04	6.20E-04
54	E97	80	Single Unit Long Haul Truck	2	0.00E+00	2.81E-07	1.38E-08	2.68E-01	2.22E-07	5.29E-04	2.99E-07	1.42E-04	1.85E-05	4.05E-06	3.43E-05	8.24E-06	8.38E-06	2.68E-05	1.08E-06	4.23E-10	2.59E-05	2.65E-05
54	E97	80	Combination Short Haul Truck	36	0.00E+00	1.56E-05	1.12E-06	1.29E+01	4.93E-08	1.38E-02	1.14E-05	1.61E-02	9.46E-04	2.33E-04	9.31E-04	3.30E-04	3.28E-04	1.95E-03	4.33E-05	0.00E+00	6.04E-04	3.03E-03
54	E97	80	Combination Long Haul Truck	32	0.00E+00	1.40E-05	9.41E-07	1.19E+01	5.70E-08	1.43E-02	1.06E-05	1.56E-02	9.25E-04	1.86E-04	9.62E-04	2.84E-04	2.86E-04	1.83E-03	4.00E-05	0.00E+00	6.76E-04	2.94E-03
54	E98	80	Passenger Car	465	0.00E+00	5.46E-06	5.91E-07	2.16E+01	3.80E-05	1.38E-01	1.21E-05	9.61E-04	2.69E-03	4.59E-04	1.18E-03	7.62E-04	7.82E-04	7.29E-05	1.10E-04	2.98E-08	4.00E-04	1.50E-04
54	E98	80	Passenger Truck	780	0.00E+00	1.18E-05	1.26E-06	5.03E+01	7.59E-05	2.62E-01	2.48E-05	2.85E-03	4.84E-03	8.44E-04	2.38E-03	1.54E-03	1.58E-03	3.50E-04	2.53E-04	6.72E-08	7.95E-04	4.66E-04
54	E98	80	Single Unit Short Haul Truck	24	0.00E+00	4.49E-06	2.23E-07	4.40E+00	3.61E-06	8.82E-03	4.78E-06	2.30E-03	2.82E-04	6.38E-05	5.46E-04	1.33E-04	1.35E-04	4.42E-04	1.77E-05	7.04E-09	4.11E-04	4.31E-04
54	E98	80	Single Unit Long Haul Truck	1	0.00E+00	1.95E-07	9.62E-09	1.86E-01	1.54E-07	3.67E-04	2.08E-07	9.85E-05	1.29E-05	2.81E-06	2.38E-05	5.72E-06	5.82E-06	1.86E-05	7.52E-07	2.93E-10	1.80E-05	1.84E-05
54	E98	80	Combination Short Haul Truck	26	0.00E+00	1.15E-05	8.22E-07	9.50E+00	3.63E-08	1.02E-02	8.40E-06	1.18E-02	6.96E-04	1.71E-04	6.85E-04	2.43E-04	2.41E-04	1.43E-03	3.18E-05	0.00E+00	4.44E-04	2.23E-03
54	E98	80	Combination Long Haul Truck	24	0.00E+00	1.03E-05	6.92E-07	8.79E+00	4.19E-08	1.06E-02	7.80E-06	1.15E-02	6.80E-04	1.37E-04	7.07E-04	2.09E-04	2.10E-04	1.34E-03	2.94E-05	0.00E+00	4.97E-04	2.16E-03
9	F01	60	Passenger Car	301	0.00E+00	4.45E-06	4.82E-07	1.49E+01	3.10E-05	1.11E-01	9.90E-06	6.13E-04	3.05E-03	4.68E-04	9.64E-04	6.21E-04	6.37E-04	6.28E-05	7.56E-05	2.08E-08	3.26E-04	9.58E-05
9	F01	60	Passenger Truck	503	0.00E+00	9.82E-06	1.04E-06	3.41E+01	6.14E-05	1.99E-01	2.02E-05	2.00E-03	5.60E-03	8.69E-04	1.92E-03	1.25E-03	1.28E-03	2.67E-04	1.71E-04	4.73E-08	6.40E-04	3.31E-04
9	F01	60	Single Unit Short Haul Truck	13	0.00E+00	3.94E-06	1.97E-07	2.51E+00	3.25E-06	4.85E-03	4.20E-06	1.88E-03	3.19E-04	5.78E-05	4.78E-04	1.18E-04	1.20E-04	2.51E-04	1.01E-05	4.17E-09	3.58E-04	3.52E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.72E-07	8.56E-09	1.07E-01	1.41E-07	2.06E-04	1.84E-07	8.13E-05	1.43E-05	2.56E-06	2.10E-05	5.14E-06	5.22E-06	1.07E-05	4.33E-07	1.78E-10	1.57E-05	1.52E-05
9	F01	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.40E+00	2.40E-08	5.92E-03	5.02E-06	7.36E-03	6.30E-04	1.25E-04	4.31E-04	1.40E-04	1.41E-04	6.64E-04	1.47E-05	0.00E+00	2.90E-04	1.39E-03
9	F01	60	Combination Long Haul Truck	10	0.00E+00	6.08E-06	3.95E-07	4.13E+00	2.75E-08	6.38E-03	4.68E-06	7.30E-03	6.34E-04	1.07E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
9	F02	60	Passenger Car	269	0.00E+00	3.98E-06	4.31E-07	1.34E+01	2.77E-05	9.96E-02	8.85E-06	5.48E-04	2.73E-03	4.19E-04	8.62E-04	5.56E-04	5.70E-04	5.62E-05	6.76E-05	1.86E-08	2.92E-04	8.57E-05
9	F02	60	Passenger Truck	450	0.00E+00	8.78E-06	9.28E-07	3.05E+01	5.49E-05	1.78E-01	1.81E-05	1.79E-03	5.01E-03	7.77E-04	1.72E-03	1.12E-03	1.15E-03	2.38E-04	1.53E-04	4.23E-08	5.73E-04	2.96E-04
9	F02	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	F02	60	Combination Short Haul Truck	5	0.00E+00	2.77E-06	1.93E-07	1.80E+00	9.81E-09	2.42E-03	2.05E-06	3.01E-03	2.58E-04	5.10E-05	1.76E-04	5.75E-05	5.76E-05	2.72E-04	6.03E-06	0.00E+00	1.19E-04	5.67E-04
9	F02	60	Combination Long Haul Truck	4	0.00E+00	2.49E-06	1.62E-07	1.69E+00	1.12E-08	2.61E-03	1.92E-06	2.98E-03	2.59E-04	4.40E-05	1.82E-04	4.94E-05	5.00E-05	2.58E-04	5.66E-06	0.00E+00	1.32E-04	5.62E-04
11	F03	80	Passenger Car	55	0.00E+00	6.65E-07	7.20E-08	2.55E+00	4.63E-06	1.71E-02	1.48E-06	1.14E-04	3.04E-04	5.29E-05	1.44E-04	9.28E-05	9.53E-05	8.67E-06	1.30E-05	3.64E-09	4.87E-05	1.78E-05
11	F03	80	Passenger Truck	93	0.00E+00	1.43E-06	1.52E-07	5.91E+00	9.16E-06	3.15E-02	3.00E-06	3.38E-04	5.46E-04	9.69E-05	2.87E-04	1.86E-04	1.91E-04	4.16E-05	2.98E-05	8.11E-09	9.59E-05	5.52E-05
11	F03	80	Single Unit Short Haul Truck	5	0.00E+00	8.97E-07	4.46E-08	8.81E-01	7.22E-07	1.76E-03	9.55E-07	4.61E-04	5.64E-05	1.28E-05	1.09E-04	2.66E-05	2.70E-05	8.83E-05	3.55E-06	1.41E-09	8.22E-05	8.62E-05
11	F03	80	Combination Short Haul Truck	3	0.00E+00	1.38E-06	9.87E-08	1.14E+00	4.35E-09	1.22E-03	1.01E-06	1.42E-03	8.35E-05	2.06E-05	8.21E-05	2.91E-05	2.89E-05	1.72E-04	3.82E-06	0.00E+00	5.33E-05	2.67E-04
11	F03	80	Combination Long Haul Truck	3	0.00E+00	1.24E-06	8.30E-08	1.05E+00	5.03E-09	1.27E-03	9.36E-07	1.38E-03	8.16E-05	1.64E-05	8.48E-05	2.51E-05	2.52E-05	1.61E-04	3.53E-06	0.00E+00	5.96E-05	2.59E-04
11	F04	80	Passenger Car	3	0.00E+00	3.60E-08	3.89E-09	1.38E-01	2.50E-07	9.25E-04	8.00E-08	6.14E-06	1.65E-05	2.86E-06	7.78E-06	5.02E-06	5.15E-06	4.69E-07	7.02E-07	1.97E-10	2.63E-06	9.60E-07
11	F04	80	Passenger Truck	5	0.00E+00	7.72E-08	8.19E-09	3.19E-01	4.95E-07	1.70E-03	1.62E-07	1.83E-05	2.95E-05	5.24E-06	1.55E-05	1.01E-05	1.03E-05	2.25E-06	1.61E-06	4.38E-10	5.19E-06	2.98E-06
9	F05	60	Passenger Car	171	0.00E+00	2.54E-06	2.74E-07	8.51E+00	1.77E-05	6.34E-02	5.64E-06	3.49E-04	1.74E-03	2.67E-04	5.49E-04	3.54E-04	3.63E-04	3.58E-05	4.31E-05	1.19E-08	1.86E-04	5.46E-05
9	F05	60	Passenger Truck	287	0.00E+00	5.60E-06	5.91E-07	1.94E+01	3.50E-05	1.13E-01	1.15E-05	1.14E-03	3.19E-03	4.95E-04	1.10E-03	7.15E-04	7.32E-04	1.52E-04	9.74E-05	2.69E-08	3.65E-04	1.89E-04
9	F05	60	Single Unit Short Haul Truck	11	0.00E+00	3.37E-06	1.69E-07	2.15E+00	2.78E-06	4.16E-03	3.60E-06	1.61E-03	2.73E-04	4.96E-05	4.10E-04	1.01E-04	1.03E-04	2.15E-04	8.68E-06	3.58E-09	3.07E-04	3.02E-04
9	F05	60	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.33E-09	9.18E-02	1.21E-07	1.77E-04	1.57E-07	6.97E-05	1.23E-05	2.19E-06	1.80E-05	4.40E-06	4.48E-06	9.16E-06	3.71E-07	1.52E-10	1.35E-05	1.31E-05
9	F05	60	Combination Short Haul Truck	12	0.00E+00	7.08E-06	4.93E-07	4.60E+00	2.51E-08	6.19E-03	5.25E-06	7.69E-03	6.59E-04	1.30E-04	4.50E-04	1.47E-04	1.47E-04	6.94E-04	1.54E-05	0.00E+00	3.03E-04	1.45E-03
9	F05	60	Combination Long Haul Truck	11	0.00E+00	6.35E-06	4.13E-07	4.32E+00	2.87E-08	6.67E-03	4.90E-06	7.63E-03	6.62E-04	1.12E-04	4.64E-04	1.26E-04	1.28E-04	6.60E-04	1.45E-05	0.00E+00	3.36E-04	1.44E-03
9	F06	60	Passenger Car	245	0.00E+00	3.63E-06	3.92E-07	1.22E+01	2.52E-05	9.07E-02	8.07E-06	4.99E-04	2.49E-03	3.82E-04	7.85E-04	5.06E-04	5.19E-04	5.12E-05	6.16E-05	1.70E-08	2.66E-04	7.81E-05
9	F06	60	Passenger Truck	410	0.00E+00	8.00E-06	8.45E-07	2.78E+01	5.00E-05	1.62E-01	1.65E-05	1.63E-03	4.56E-03	7.08E-04	1.57E-03	1.02E-03	1.05E-03	2.17E-04	1.39E-04	3.85E-08	5.22E-04	2.70E-04
9	F06	60	Single Unit Short Haul Truck	20	0.00E+00	5.90E-06	2.95E-07	3.76E+00	4.87E-06	7.28E-03	6.30E-06	2.82E-03	4.78E-04	8.67E-05	7.18E-04	1.77E-04	1.80E-04	3.77E-04	1.52E-05	6.26E-09	5.38E-04	5.28E-04
9	F06	60	Single Unit Long Haul Truck	1	0.00E+00	2.58E-07	1.28E-08	1.61E-01	2.11E-07	3.09E-04	2.75E-07	1.22E-04	2.15E-05	3.84E-06	3.14E-05	7.70E-06	7.83E-06	1.60E-05	6.49E-07	2.66E-10	2.36E-05	2.29E-05
9	F06	60	Combination Short Haul Truck	18	0.00E+00	1.05E-05	7.29E-07	6.80E+00	3.71E-08	9.15E-03	7.76E-06	1.14E-02	9.74E-04	1.93E-04	6.66E-04	2.17E-04	2.17E-04	1.03E-03	2.28E-05	0.00E+00	4.48E-04	2.14E-03
9	F06	60	Combination Long Haul Truck	16	0.00E+00	9.39E-06	6.11E-07	6.38E+00	4.25E-08	9.86E-03	7.24E-06	1.13E-02	9.79E-04	1.66E-04	6.86E-04	1.87E-04	1.89E-04	9.75E-04	2.14E-05	0.00E+00	4.97E-04	2.12E-03
9	F07	60	Passenger Car	342	0.00E+00	5.07E-06	5.48E-07	1.70E+01	3.53E-05	1.27E-01	1.13E-05	6.98E-04	3.47E-03	5.33E-04	1.10E-03	7.07E-04	7.25E-04	7.15E-05	8.60E-05	2.37E-08	3.71E-04	1.09E-04
9	F07	60	Passenger Truck	573	0.00E+00	1.12E-05	1.18E-06	3.88E+01	6.99E-05	2.26E-01	2.30E-05	2.28E-03	6.37E-03	9.89E-04	2.19E-03	1.43E-03	1.46E-03	3.03E-04	1.95E-04	5.38E-08	7.29E-04	3.77E-04
9	F07	60	Single Unit Short Haul Truck	26	0.00E+00	7.59E-06	3.80E-07	4.84E+00	6.26E-06	9.36E-03	8.10E-06	3.63E-03	6.15E-04	1.12E-04	9.23E-04	2.28E-04	2.31E-04	4.84E-04	1.95E-05	8.05E-09	6.91E-04	6.79E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	3.32E-07	1.65E-08	2.06E-01	2.72E-07	3.97E-04	3.54E-07	1.57E-04	2.76E-05	4.93E-06	4.04E-05	9.91E-06	1.01E-05	2.06E-05	8.35E-07	3.42E-10	3.03E-05	2.94E-05
9	F07	60	Combination Short Haul Truck	21	0.00E+00	1.26E-05	8.79E-07	8.21E+00	4.47E-08	1.10E-02	9.36E-06	1.37E-02	1.17E-03	2.32E-04	8.03E-04	2.62E-04	2.62E-04	1.24E-03	2.75E-05	0.00E+00	5.40E-04	2.58E-03
9	F07	60	Combination Long Haul Truck	20	0.00E+00	1.13E-05	7.37E-07	7.69E+00	5.12E-08	1.19E-02	8.73E-06	1.36E-02	1.18E-03	2.00E-04	8.27E-04	2.25E-04	2.28E-04	1.18E-03	2.58E-05	0.00E+00	5.99E-04	2.56E-03
9	F08	60	Passenger Car	323	0.00E+00	4.79E-06	5.18E-07	1.60E+01	3.33E-05	1.20E-01	1.06E-05	6.59E-04	3.28E-03	5.03E-04	1.04E-03	6.68E-04	6.85E-04	6.75E-05	8.12E-05	2.24E-08	3.51E-04	1.03E-04
9	F08	60	Passenger Truck	541	0.00E+00	1.06E-05	1.11E-06	3.66E+01	6.60E-05	2.14E-01	2.18E-05	2.15E-03	6.01E-03	9.34E-04	2.07E-03	1.35E-03	1.38E-03	2.86E-04	1.84E-04	5.08E-08	6.88E-04	3.56E-04
9	F08	60	Single Unit Short Haul Truck	33	0.00E+00	9.56E-06	4.78E-07	6.09E+00	7.88E-06	1.18E-02	1.02E-05	4.57E-03	7.75E-04	1.40E-04	1.16E-03	2.87E-04	2.92E-04	6.10E-04	2.46E-05	1.01E-08	8.70E-04	8.56E-04
9	F08	60	Single Unit Long Haul Truck	1	0.00E+00	4.18E-07	2.08E

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F15	70	Combination Short Haul Truck	17	0.00E+00	8.98E-06	6.38E-07	6.51E+00	2.92E-08	7.73E-03	6.59E-06	9.45E-03	6.83E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.81E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
10	F15	70	Combination Long Haul Truck	16	0.00E+00	8.11E-06	5.43E-07	6.07E+00	3.36E-08	8.19E-03	6.16E-06	9.32E-03	6.79E-04	1.24E-04	5.65E-04	1.64E-04	1.66E-04	9.28E-04	2.03E-05	0.00E+00	4.00E-04	1.76E-03
10	F16	70	Passenger Car	365	0.00E+00	4.71E-06	5.09E-07	1.73E+01	3.28E-05	1.18E-01	1.05E-05	7.30E-04	2.83E-03	4.53E-04	1.02E-03	6.57E-04	6.74E-04	6.53E-05	8.79E-05	2.40E-08	3.45E-04	1.14E-04
10	F16	70	Passenger Truck	610	0.00E+00	1.03E-05	1.09E-06	3.99E+01	6.53E-05	2.18E-01	2.14E-05	2.28E-03	5.14E-03	8.36E-04	2.04E-03	1.33E-03	1.36E-03	2.96E-04	2.01E-04	5.37E-08	6.82E-04	3.76E-04
10	F16	70	Single Unit Short Haul Truck	21	0.00E+00	4.95E-06	2.48E-07	3.88E+00	4.05E-06	7.76E-03	5.28E-06	2.44E-03	3.48E-04	6.98E-05	6.01E-04	1.48E-04	1.51E-04	3.89E-04	1.56E-05	6.31E-09	4.50E-04	4.58E-04
10	F16	70	Single Unit Long Haul Truck	1	0.00E+00	2.16E-07	1.07E-08	1.65E-01	1.75E-07	3.26E-04	2.30E-07	1.05E-04	1.59E-05	3.10E-06	2.63E-05	6.41E-06	6.52E-06	1.64E-05	6.65E-07	2.66E-10	1.97E-05	1.97E-05
10	F16	70	Combination Short Haul Truck	20	0.00E+00	1.06E-05	7.54E-07	7.69E+00	3.45E-08	9.14E-03	7.78E-06	1.12E-02	8.07E-04	1.76E-04	6.46E-04	2.23E-04	2.23E-04	1.16E-03	2.57E-05	0.00E+00	4.23E-04	2.10E-03
10	F16	70	Combination Long Haul Truck	19	0.00E+00	9.59E-06	6.41E-07	7.18E+00	3.97E-08	9.68E-03	7.28E-06	1.10E-02	8.02E-04	1.46E-04	6.68E-04	1.94E-04	1.96E-04	1.10E-03	2.40E-05	0.00E+00	4.72E-04	2.07E-03
10	F17	70	Passenger Car	259	0.00E+00	3.35E-06	3.62E-07	1.23E+01	2.33E-05	8.41E-02	7.44E-06	5.19E-04	2.01E-03	3.22E-04	7.24E-04	4.67E-04	4.79E-04	4.64E-05	6.25E-05	1.70E-08	2.45E-04	8.11E-05
10	F17	70	Passenger Truck	434	0.00E+00	7.33E-06	7.76E-07	2.84E+01	4.64E-05	1.55E-01	1.52E-05	1.62E-03	3.65E-03	5.94E-04	1.45E-03	9.45E-04	9.69E-04	2.10E-04	1.43E-04	3.82E-08	4.85E-04	2.67E-04
10	F17	70	Single Unit Short Haul Truck	16	0.00E+00	3.83E-06	1.92E-07	3.00E+00	3.13E-06	5.99E-03	4.08E-06	1.89E-03	2.69E-04	5.39E-05	4.64E-04	1.14E-04	1.16E-04	3.00E-04	1.21E-05	4.88E-09	3.48E-04	3.54E-04
10	F17	70	Single Unit Long Haul Truck	1	0.00E+00	1.67E-07	8.29E-09	1.27E-01	1.35E-07	2.52E-04	1.78E-07	8.12E-05	1.23E-05	2.40E-06	2.03E-05	4.95E-06	5.04E-06	1.27E-05	5.14E-07	2.06E-10	1.53E-05	1.52E-05
10	F17	70	Combination Short Haul Truck	17	0.00E+00	8.98E-06	6.38E-07	6.51E+00	2.92E-08	7.73E-03	6.59E-06	9.45E-03	6.83E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.81E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
10	F17	70	Combination Long Haul Truck	16	0.00E+00	8.11E-06	5.43E-07	6.07E+00	3.36E-08	8.19E-03	6.16E-06	9.32E-03	6.79E-04	1.24E-04	5.65E-04	1.64E-04	1.66E-04	9.28E-04	2.03E-05	0.00E+00	4.00E-04	1.76E-03
10	F18	70	Passenger Car	274	0.00E+00	3.54E-06	3.83E-07	1.30E+01	2.46E-05	8.89E-02	7.87E-06	5.49E-04	2.12E-03	3.41E-04	7.66E-04	4.94E-04	5.07E-04	4.91E-05	6.61E-05	1.80E-08	2.59E-04	8.58E-05
10	F18	70	Passenger Truck	459	0.00E+00	7.76E-06	8.21E-07	3.00E+01	4.91E-05	1.64E-01	1.61E-05	1.72E-03	3.87E-03	6.28E-04	1.54E-03	1.00E-03	1.02E-03	2.22E-04	1.51E-04	4.04E-08	5.13E-04	2.83E-04
10	F18	70	Single Unit Short Haul Truck	19	0.00E+00	4.50E-06	2.26E-07	3.53E+00	3.68E-06	7.05E-03	4.80E-06	2.22E-03	3.17E-04	6.34E-05	5.46E-04	1.35E-04	1.37E-04	3.53E-04	1.42E-05	5.74E-09	4.09E-04	4.16E-04
10	F18	70	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	9.76E-09	1.50E-01	1.59E-07	2.96E-04	2.09E-07	9.56E-05	1.45E-05	2.82E-06	2.39E-05	5.83E-06	5.93E-06	1.49E-05	6.04E-07	2.42E-10	1.79E-05	1.79E-05
10	F18	70	Combination Short Haul Truck	19	0.00E+00	9.80E-06	6.96E-07	7.10E+00	3.18E-08	8.43E-03	7.18E-06	1.03E-02	7.45E-04	1.63E-04	5.97E-04	2.06E-04	2.06E-04	1.07E-03	2.38E-05	0.00E+00	3.91E-04	1.94E-03
10	F18	70	Combination Long Haul Truck	17	0.00E+00	8.85E-06	5.92E-07	6.63E+00	3.67E-08	8.93E-03	6.72E-06	1.02E-02	7.40E-04	1.35E-04	6.17E-04	1.79E-04	1.81E-04	1.01E-03	2.22E-05	0.00E+00	4.36E-04	1.91E-03
10	F19	70	Passenger Car	197	0.00E+00	2.55E-06	2.76E-07	9.38E+00	1.77E-05	6.41E-02	5.67E-06	3.96E-04	1.53E-03	2.46E-04	5.52E-04	3.56E-04	3.65E-04	3.54E-05	4.76E-05	1.30E-08	1.87E-04	6.18E-05
10	F19	70	Passenger Truck	331	0.00E+00	5.59E-06	5.91E-07	2.16E+01	3.53E-05	1.18E-01	1.16E-05	1.24E-03	2.78E-03	4.53E-04	1.11E-03	7.20E-04	7.38E-04	1.60E-04	1.09E-04	2.91E-08	3.69E-04	2.04E-04
10	F19	70	Single Unit Short Haul Truck	10	0.00E+00	2.25E-06	1.13E-07	1.76E+00	1.84E-06	3.53E-03	2.40E-06	1.11E-03	1.58E-04	3.17E-05	2.73E-04	6.73E-05	6.84E-05	1.77E-04	7.11E-06	2.87E-09	2.05E-04	2.08E-04
10	F19	70	Combination Short Haul Truck	6	0.00E+00	3.27E-06	2.32E-07	2.37E+00	1.06E-08	2.81E-03	2.39E-06	3.44E-03	2.48E-04	5.42E-05	1.99E-04	6.86E-05	6.85E-05	3.57E-04	7.92E-06	0.00E+00	1.30E-04	6.47E-04
10	F19	70	Combination Long Haul Truck	6	0.00E+00	2.95E-06	1.97E-07	2.21E+00	1.22E-08	2.98E-03	2.24E-06	3.39E-03	2.47E-04	4.50E-05	2.06E-04	5.96E-05	6.03E-05	3.38E-04	7.40E-06	0.00E+00	1.45E-04	6.38E-04
10	F20	70	Passenger Car	305	0.00E+00	3.94E-06	4.27E-07	1.45E+01	2.75E-05	9.91E-02	8.77E-06	6.12E-04	2.37E-03	3.80E-04	8.54E-04	5.50E-04	5.65E-04	5.47E-05	7.37E-05	2.01E-08	2.89E-04	9.56E-05
10	F20	70	Passenger Truck	512	0.00E+00	8.65E-06	9.15E-07	3.35E+01	5.47E-05	1.83E-01	1.80E-05	1.91E-03	4.31E-03	7.00E-04	1.71E-03	1.11E-03	1.14E-03	2.48E-04	1.68E-04	4.50E-08	5.72E-04	3.15E-04
10	F20	70	Single Unit Short Haul Truck	1	0.00E+00	2.25E-07	1.13E-08	1.76E-01	1.84E-07	3.53E-04	2.40E-07	1.11E-04	1.58E-05	3.17E-06	2.73E-05	6.73E-06	6.84E-06	1.77E-05	7.11E-07	2.87E-10	2.05E-05	2.08E-05
10	F21	70	Passenger Car	67	0.00E+00	8.69E-07	9.40E-08	3.20E+00	6.05E-06	2.18E-02	1.93E-06	1.35E-04	5.22E-04	8.37E-05	1.88E-04	1.21E-04	1.24E-04	1.21E-05	1.62E-05	4.42E-09	6.37E-05	2.11E-05
10	F21	70	Passenger Truck	113	0.00E+00	1.91E-06	2.02E-07	7.37E+00	1.20E-05	4.02E-02	3.96E-06	4.22E-04	9.49E-04	1.54E-04	3.78E-04	2.46E-04	2.52E-04	5.46E-05	3.71E-05	9.91E-09	1.26E-04	6.94E-05
10	F22	70	Passenger Car	146	0.00E+00	1.88E-06	2.04E-07	6.93E+00	1.31E-05	4.73E-02	4.19E-06	2.92E-04	1.13E-03	1.81E-04	4.07E-04	2.63E-04	2.70E-04	2.61E-05	3.52E-05	9.58E-09	1.38E-04	4.57E-05
10	F22	70	Passenger Truck	244	0.00E+00	4.13E-06	4.37E-07	1.60E+01	2.61E-05	8.71E-02	8.57E-06	9.14E-04	2.06E-03	3.34E-04	8.18E-04	5.32E-04	5.45E-04	1.18E-04	8.03E-05	2.15E-08	2.73E-04	1.50E-04
10	F23	70	Passenger Car	55	0.00E+00	7.05E-07	7.62E-08	2.59E+00	4.91E-06	1.77E-02	1.57E-06	1.09E-04	4.23E-04	6.79E-05	1.53E-04	9.83E-05	1.01E-04	9.78E-06	1.32E-05	3.59E-09	5.16E-05	1.71E-05
10	F23	70	Passenger Truck	91	0.00E+00	1.55E-06	1.64E-07	5.98E+00	9.77E-06	3.26E-02	3.21E-06	3.42E-04	7.70E-04	1.25E-04	3.06E-04	1.99E-04	2.04E-04	4.43E-05	3.01E-05	8.04E-09	1.02E-04	5.63E-05
10	F23	70	Single Unit Short Haul Truck	2	0.00E+00	4.50E-07	2.26E-08	3.53E-01	3.68E-07	7.05E-04	4.80E-07	2.22E-04	3.17E-05	6.34E-06	5.46E-05	1.35E-05	1.37E-05	3.53E-05	1.42E-06	5.74E-10	4.09E-05	4.16E-05
10	F23	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.15E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.16E-04
10	F23	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.13E-04
10	F24	70	Passenger Car	74	0.00E+00	9.51E-07	1.03E-07	3.50E+00	6.62E-06	2.39E-02	2.11E-06	1.48E-04	5.71E-04	9.16E-05	2.06E-04	1.33E-04	1.36E-04	1.32E-05	1.78E-05	4.84E-09	6.97E-05	2.31E-05
10	F24	70	Passenger Truck	123	0.00E+00	2.09E-06	2.21E-07	8.07E+00	1.32E-05	4.40E-02	4.33E-06	4.62E-04	1.04E-03	1.69E-04	4.13E-04	2.69E-04	2.75E-04	5.98E-05	4.06E-05	1.09E-08	1.38E-04	7.59E-05
10	F24	70	Single Unit Short Haul Truck	3	0.00E+00	6.75E-07	3.38E-08	5.29E-01	5.52E-07	1.06E-03	7.19E-07	3.33E-04	4.75E-05	9.51E-06	8.19E-05	2.02E-05	2.05E-05	5.30E-05	2.13E-06	8.61E-10	6.14E-05	6.24E-05
10	F24	70	Combination Short Haul Truck	2	0.00E+00	1.09E-06	7.73E-08	7.89E-01	3.54E-09	9.37E-04	7.98E-07	1.15E-03	8.28E-05	1.81E-05	6.63E-05	2.29E-05	2.28E-05	1.19E-04	2.64E-06	0.00E+00	4.34E-05	2.16E-04
10	F24	70	Combination Long Haul Truck	2	0.00E+00	9.84E-07	6.58E-08	7.36E-01	4.07E-09	9.92E-04	7.47E-07	1.13E-03	8.23E-05	1.50E-05	6.85E-05	1.99E-05	2.01E-05	1.13E-04	2.47E-06	0.00E+00	4.84E-05	2.13E-04
9	F25	60	Passenger Car	205	0.00E+00	3.04E-06	3.29E-07	1.02E+01	2.12E-05	7.60E-02	6.76E-06	4.19E-04	2.08E-03	3.20E-04	6.58E-04	4.24E-04	4.35E-04	4.29E-05	5.16E-05	1.42E-08	2.23E-04	6.54E-05
9	F25	60	Passenger Truck	344	0.00E+00	6.71E-06	7.08E-07	2.33E+01	4.19E-05	1.36E-01	1.38E-05	1.37E-03	3.82E-03	5.93E-04	1.31E-03	8.56E-04	8.77E-04	1.82E-04	1.17E-04	3.23E-08	4.37E-04	2.26E-04
9	F25	60	Single Unit Short Haul Truck	11	0.00E+00	3.37E-06	1.69E-07	2.15E+00	2.78E-06	4.16E-03	3.60E-06	1.61E-03	2.73E-04	4.96E-05	4.10E-04	1.01E-04	1.03E-04	2.15E-04	8.68E-06	3.58E-09	3.07E-04	3.02E-04
9	F25	60	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.33E-09	9.18E-02	1.21E-07	1.77E-04	1.57E-07	6.97E-05	1.23E-05	2.19E-06	1.80E-05	4.40E-06	4.48E-06	9.16E-06	3.71E-07	1.52E-10	1.35E-05	1.31E-05
9	F25	60	Combination Short Haul Truck	12	0.00E+00	7.08E-06	4.93E-07	4.60E+00	2.51E-08	6.19E-03	5.25E-06	7.69E-03	6.59E-04	1.30E-04	4.50E-04	1.47E-04	1.47E-04	6.94E-04	1.54E-05	0.00E+00	3.03E-04	1.45E-03
9	F25	60	Combination Long Haul Truck	11	0.00E+00	6.35E-06	4.13E-07	4.32E+00	2.87E-08	6.67E-03	4.90E-06	7.63E-03	6.62E-04	1.12E-04	4.64E-04	1.26E-04	1.28E-04	6.60E-04	1.45E-05	0.00E+00	3.36E-04	1.44E-03
9	F26	60	Passenger Car	244	0.00E+00	3.62E-06	3.91E-07	1.21E+01	2.52E-05	9.04E-02	8.04E-06	4.98E-04	2.48E-03	3.80E-04	7.83E-04	5.05E-04	5.18E-04	5.10E-05	6.14E-05	1.69E-08	2.65E-04	7.78E-05
9	F26	60	Passenger Truck	409	0.00E+00	7.98E-06	8.43E-07	2.77E+01	4.99E-05	1.61E-01	1.64E-05	1.62E-03	4.55E-03	7.06E-04	1.56E-03	1.02E-03	1.04E-03	2.16E-04	1.39E-04	3.84E-08	5.20E-04	2.69E-04
9	F26	60	Single Unit Short Haul Truck	12	0.00E+00	3.65E-06	1.83E-07	2.33E+00	3.01E-06	4.51E-03	3.90E-06	1.75E-03	2.96E-04	5.37E-05	4.44E-04	1.10E-04	1.11E-04	2.33E-04	9.41E-06	3.88E-09	3.33E-04	3.27E-04
9	F26	60	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	7.95E-09	9.94E-02	1.31E-07	1.91E-04	1.70E-07	7.55E-05	1.33E-05	2.38E-06	1.95E-05	4.77E-06	4.85E-06	9.93E-06	4.02E-07	1.65E-10	1.46E-05	1.41E-05
9	F26	60	Combination Short Haul Truck	12	0.00E+00	6.77E-06	4.72E-07	4.40E+00	2.40E-08	5.92E-03	5.02E-06	7.36E-03	6.30E-04	1.25E-04	4.31E-04	1.40E-04	1.41E-04	6.64E-04	1.47E-05	0.00E+00	2.90E-04	1.39E-03
9	F26	60	Combination Long Haul Truck	10	0.00E+00	6.08E-06	3.95E-07	4.13E+00	2.75E-08	6.38E-03	4.68E-06	7.30E-03	6.34E-04	1.07E-04	4.44E-04	1.21E-04	1.22E-04	6.31E-04	1.38E-05	0.00E+00	3.22E-04	1.37E-03
9	F27	60	Passenger Car	761	0.00E+00	1.13E-05	1.22E-06	3.78E+01	7.85E-05	2.82E-01	2.51E-05	1.55E-03	7.73E-03	1.19E-03	2.44E-03	1.57E-03	1.61E-03	1.59E-04	1.91E-04	5.27E-08	8.26E-04	2.43E-04
9	F27	60	Passenger Truck	1275	0.00E+00	2.49E-05	2.63E-06	8.63E+01	1.56E-04	5.03E-01	5.13E-05	5.06E-03	1.42E-02	2.20E-03	4.87E-03	3.18E-03	3.25E-03	6.75E-04	4.33E-04	1.20E-07	1.62E-03	8.39E-04
9	F27	60	Single Unit Short Haul Truck	112	0.00E+00	3.29E-05	1.65E-06	2.10E+01	2.71E-05	4.06E-02	3.51E-05	1.57E-02	2.67E-03	4.83E-04	4.00E-03	9.87E-04	1.00E-03	2.10E-03	8.47E-05	3.49E-08	3.00E-03	2.94E-03
9	F27	60	Single Unit Long Haul Truck	5	0.00E+00	1.44E-06	7.15E-08	8.95E-01	1.18E-06	1.72E-03	1.53E-06	6.80E-04	1.20E-04	2.14E-05	1.75E-04	4.29E-05	4.36E-05	8.93E-05	3.62E-06	1.48E-09	1.32E-04	1.27E-04
9	F27	60	Combination Short Haul Truck	74	0.00E+00	4.34E-05	3.02E-06	2.82E+01	1.54E-07	3.79E-02	3.22E-05	4.72E-02	4.04E-03	7.99E-04	2.76E-03	9.00E-04	9.02E-04	4.25E-03	9.45E-05	0.00E+00	1.86E-03	8.88E-03
9	F27	60	Combination Long Haul Truck	67	0.00E+00	3.89E-05	2.53E-06	2.65E+01	1.76E-07	4.09E-02	3.00E-05	4.68E-02	4.06E-03	6.89E-04	2.85E-03	7.74E-04	7.84E-04	4.04E-03	8.86E-05	0.00E+00	2.06E-03	8.81E-03
9	F28	60	Passenger Car	636	0.00E+00	9.43E-06	1.02E-06	3.16E+01	6.56E-05	2.36E-01	2.10E-05	1.30E-03	6.46E-03	9.92E-04	2.04E-03	1.31E-03	1.35E-03	1.33E-04	1.60E-04	4.41E-08	6.90E-04	2.03E-04
9	F28	60	Passenger Truck	1066	0.00E+00	2.08E-05	2.20E-06	7.22E+01	1.30E-04	4.21E-01	4.29E-05	4.23E-03	1.18E-02	1.84E-03	4.07E-03	2.66E-03	2.72E-03	5.64E-04	3.62E-04	1.00E-07	1.36E-03	7.02E-04
9	F28	60	Single Unit Short Haul Truck	135	0.00E+00	3.96E-05	1.98E-06	2.53E+01	3.27E-05	4.89E-02	4.23E-05	1.89E-02	3.21E-03	5.82E-04	4.82E-03	1.19E-03	1.21E-03	2.53E-03	1.02E-04	4.20E-08	3.61E-03	3.55E-03
9	F28	60	Single Unit Long Haul Truck	6	0.00E+00	1.73E-06	8.62E-08	1.08E+00	1.42E-06	2.08E-03	1.85E-06	8.19E-04	1.44E-04	2.58E-05	2.11E-04	5.17E-05	5.26E-05	1.08E-04	4.36E-06	1.79E-09	1.58E-04	1.53E-04
9	F28	60	Combination Short Haul Truck	82	0.00E+00	4.80E-05	3.34E-06	3.12E+01	1.70E-07	4.20E-02	3.56E-05	5.22E-02	4.47E-03	8.85E-04	3.05E-03	9.96E-04	9.98E-04	4.71E-03	1.05E-04	0.00E+00	2.06E-03	9.83E-03
9	F28	60	Combination Long Haul Truck	74	0.00E+00	4.31E-05	2.80E-06	2.93E+01	1.95E-07	4.52E-02	3.32E-05	5.17E-02	4.49E-03	7.62E-04	3.15E-03	8.56E-04	8.67E-04	4.47E-03	9.80E-05	0.00E+00	2.28E-03	9.75E-03
9	F29	60	Passenger Car	190	0.00E+00	2.81E-06	3.04E-07	9.44E+00	1.96E-05	7.04E-02	6.26E-06	3.87E-04	1.93E-03	2.96E-04	6.09E-04	3.92E-04	4.03E-04	3.97E-05	4.78E-05	1.32E-08	2.06E-04	6.05E-05
9	F29	60	Passenger Truck	318	0.00E+00	6.21E-06	6.55E-07	2.15E+01	3.88E-05	1.26E-01	1.28E-05	1.26E-03	3.54E-03	5.49E-04	1.22E-03	7.93E-04	8.12E-04	1.68E-04	1.08E-04	2.99E-08	4.05E-04	2.09E-04
9	F29	60	Single Unit Short Haul Truck	4	0.00E+00	1.12E-06	5.63E-08	7.17E-01	9.27E-07	1.39E-03	1.20E-06	5.37E-04	9.11E-05	1.65E-05	1.37E-04	3.37E-05	3.43E-05	7.17E-05	2.89E-06	1.19E-09	1.02E-04	1.01E-04
9	F29	60	Combination Short Haul Truck	3	0.00E+00	1.54E-06	1.07E-07	1.00E+00	5.45E-09	1.35E-03	1.14E-06	1.67E-03	1.43E-04	2.84E-05	9.79E-05	3.19E-05	3.20E-05	1.51E-04	3.35E-06	0.00E+00	6.59E-05	3.15E-04
9	F29	60	Combination Long Haul Truck	2	0.00E+00	1.38E-06	8.99E-08	9.38E-01	6.25E-09	1.45E-03	1.06E-06	1.66E-03	1.44E-04	2.44E-05	1.01E-04	2.74E-05	2.78E-05	1.43E-04	3.14E-06	0.00E+00	7.31E-05	3.12E-04
9	F30	60	Passenger Car	242	0.00E+00	3.58E-06	3.87E-07	1.20E+01	2.49E-05	8.95E-02	7.95E-06	4.93E-04	2.45E-03	3.76E-04	7.74E-04	4.99E-04	5.12E-04	5.05E-05	6.07E-05	1.67E-08	2.62E-04	7.70E-05
9	F30	60	Passenger Truck	404	0.00E+00	7.89E-06	8.34E-07	2.74E+01	4.93E-05	1.60E-01	1.63E-05	1.61E-03	4.50E-03	6.98E-04	1.55E-03	1.01E-03	1.03E-03	2.14E-04	1.37E-04	3.80E-08	5.14E-04	2.66E-04
9	F30	60	Single Unit Short Haul Truck	19	0.00E+00	5.62E-06	2.81E-07	3.58E+00	4.64E-06	6.94E-03	6.00E-06	2.69E-03	4.56E-04	8.26E-05	6.83E-04	1.69E-04	1.71E-04	3.59E-04	1.45E-05	5.96E-09	5.12E-04	5.03E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	2.46E-07	1.22E-08	1.53E-01	2.01E-07	2.94E-04	2.62E-07	1.16E-04	2.05E-05	3.66E-06	2.99E-05	7.34E-06	7.46E-06	1.53E-05	6.18E-07	2.54E-10	2.25E-05	2.18E-05
9	F30	60	Combination Short Haul Truck	13	0.00E+00	7.38E-06	5.15E-07	4.80E+00	2.62E-08	6.46E-03	5.48E-06	8.03E-03	6.88E-04	1.36E-04	4.70E-04	1.53E-04	1.54E-04	7.24E-04	1.61E-05	0.00E+00	3.16E-04	1.51E-03
9	F30	60	Combination Long Haul Truck	11	0.00E+00	6.63E-06	4.31E-07	4.50E+00	3.00E-08	6.96E-03	5.11E-06	7.96E-03	6.91E-04	1.17E-04	4.84E-04	1.32E-04	1.33E-04	6.88E-04	1.51E-05	0.00E+00	3.51E-04	1.50E-03
9	F43	60	Passenger Car	45	0.00E+00	6.70E-07	7.25E-08	2.25E+00	4.66E-06	1.68E-02	1.49E-06	9.23E-05	4.59E-04	7.05E-05	1.45E-04	9.35E-05	9.59E-05	9.45E-06	1.14E-05	3.13E-09	4.91E-05	1.44E-05
9	F43	60	Passenger Truck	76	0.00E+00	1.48E-06	1.56E-07	5.13E+00	9.24E-06	2.99E-02	3.05E-06	3.01E-04	8.42E-04	1.31E-04	2.90E-04	1.89E-04	1.93E-04	4.01E-05	2.57E-05	7.11E-09	9.64E-05	4.99E-05
9	F43	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
9	F43	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.30E-05
9	F44	60	Passenger Car	14	0.00E+00	2.05E-07	2.22E-08	6.87E-01	1.43E-06	5.12E-03	4.56E-07	2.82E-05	1.40E-04	2.16E-05	4.43E-05	2.86E-05	2.93E-05	2.89E-06	3.48E-06	9.58E-10	1.50E-05	4.41E-06
9	F44	60	Passenger Truck	23	0.00E+00	4.52E-07	4.77E-08

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F49	60	Combination Long Haul Truck	58	0.00E+00	3.37E-05	2.19E-06	2.29E+01	1.52E-07	3.54E-02	2.60E-05	4.05E-02	3.51E-03	5.96E-04	2.46E-03	6.69E-04	6.78E-04	3.50E-03	7.67E-05	0.00E+00	1.78E-03	7.62E-03
9	F50	60	Passenger Car	636	0.00E+00	9.42E-06	1.02E-06	3.16E+01	6.56E-05	2.36E-01	2.09E-05	1.30E-03	6.46E-03	9.91E-04	2.04E-03	1.31E-03	1.35E-03	1.33E-04	1.60E-04	4.41E-08	6.90E-04	2.03E-04
9	F50	60	Passenger Truck	1065	0.00E+00	2.08E-05	2.19E-06	7.21E+01	1.30E-04	4.20E-01	4.28E-05	4.23E-03	1.18E-02	1.84E-03	4.07E-03	2.65E-03	2.72E-03	5.64E-04	3.62E-04	1.00E-07	1.35E-03	7.01E-04
9	F50	60	Single Unit Short Haul Truck	130	0.00E+00	3.82E-05	1.91E-06	2.44E+01	3.15E-05	4.72E-02	4.08E-05	1.83E-02	3.10E-03	5.62E-04	4.65E-03	1.15E-03	1.17E-03	2.44E-03	9.84E-05	4.05E-08	3.48E-03	3.42E-03
9	F50	60	Single Unit Long Haul Truck	6	0.00E+00	1.67E-06	8.31E-08	1.04E+00	1.37E-06	2.00E-03	1.78E-06	7.90E-04	1.39E-04	2.49E-05	2.04E-04	4.99E-05	5.07E-05	1.04E-04	4.20E-06	1.72E-09	1.53E-04	1.48E-04
9	F50	60	Combination Short Haul Truck	78	0.00E+00	4.61E-05	3.22E-06	3.00E+01	1.63E-07	4.04E-02	3.42E-05	5.02E-02	4.30E-03	8.51E-04	2.94E-03	9.58E-04	9.59E-04	4.53E-03	1.01E-04	0.00E+00	1.98E-03	9.45E-03
9	F50	60	Combination Long Haul Truck	72	0.00E+00	4.14E-05	2.70E-06	2.81E+01	1.87E-07	4.35E-02	3.19E-05	4.97E-02	4.32E-03	7.33E-04	3.03E-03	8.23E-04	8.34E-04	4.30E-03	9.43E-05	0.00E+00	2.19E-03	9.37E-03
10	F51	70	Passenger Car	515	0.00E+00	6.65E-06	7.20E-07	2.45E+01	4.63E-05	1.67E-01	1.48E-05	1.03E-03	3.99E-03	6.41E-04	1.44E-03	9.28E-04	9.52E-04	9.23E-05	1.24E-04	3.39E-08	4.87E-04	1.61E-04
10	F51	70	Passenger Truck	863	0.00E+00	1.46E-05	1.54E-06	5.64E+01	9.22E-05	3.08E-01	3.03E-05	3.23E-03	7.27E-03	1.18E-03	2.89E-03	1.88E-03	1.93E-03	4.18E-04	2.84E-04	7.59E-08	9.64E-04	5.31E-04
10	F51	70	Single Unit Short Haul Truck	36	0.00E+00	8.55E-06	4.28E-07	6.70E+00	6.99E-06	1.34E-02	9.11E-06	4.22E-03	6.02E-04	1.21E-04	1.04E-03	2.56E-04	2.60E-04	6.72E-04	2.70E-05	1.09E-08	7.77E-04	7.91E-04
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	3.73E-07	1.85E-08	2.84E-01	3.02E-07	5.63E-04	3.97E-07	1.82E-04	2.75E-05	5.36E-06	4.54E-05	1.11E-05	1.13E-05	2.84E-05	1.15E-06	4.60E-10	3.41E-05	3.40E-05
10	F51	70	Combination Short Haul Truck	22	0.00E+00	1.17E-05	8.31E-07	8.48E+00	3.80E-08	1.01E-02	8.58E-06	1.23E-02	8.90E-04	1.94E-04	7.13E-04	2.46E-04	2.46E-04	1.28E-03	2.84E-05	0.00E+00	4.67E-04	2.32E-03
10	F51	70	Combination Long Haul Truck	21	0.00E+00	1.06E-05	7.07E-07	7.91E+00	4.38E-08	1.07E-02	8.03E-06	1.21E-02	8.84E-04	1.61E-04	7.37E-04	2.14E-04	2.16E-04	1.21E-03	2.65E-05	0.00E+00	5.21E-04	2.29E-03
10	F52	70	Passenger Car	174	0.00E+00	2.25E-06	2.43E-07	8.28E+00	1.57E-05	5.65E-02	5.00E-06	3.49E-04	1.35E-03	2.17E-04	4.87E-04	3.14E-04	3.22E-04	3.12E-05	4.20E-05	1.14E-08	1.65E-04	5.46E-05
10	F52	70	Passenger Truck	292	0.00E+00	4.93E-06	5.22E-07	1.91E+01	3.12E-05	1.04E-01	1.02E-05	1.09E-03	2.46E-03	3.99E-04	9.77E-04	6.36E-04	6.51E-04	1.41E-04	9.60E-05	2.57E-08	3.26E-04	1.80E-04
10	F52	70	Single Unit Short Haul Truck	8	0.00E+00	1.80E-06	9.02E-08	1.41E+00	1.47E-06	2.82E-03	1.92E-06	8.89E-04	1.27E-04	2.54E-05	2.18E-04	5.39E-05	5.47E-05	1.41E-04	5.69E-06	2.30E-09	1.64E-04	1.66E-04
10	F52	70	Combination Short Haul Truck	4	0.00E+00	2.18E-06	1.55E-07	1.58E+00	7.07E-09	1.87E-03	1.60E-06	2.29E-03	1.66E-04	3.61E-05	1.33E-04	4.58E-05	4.57E-05	2.38E-04	5.28E-06	0.00E+00	8.69E-05	4.32E-04
10	F52	70	Combination Long Haul Truck	4	0.00E+00	1.97E-06	1.32E-07	1.47E+00	8.15E-09	1.98E-03	1.49E-06	2.26E-03	1.65E-04	3.00E-05	1.37E-04	3.98E-05	4.02E-05	2.25E-04	4.93E-06	0.00E+00	9.69E-05	4.25E-04
10	F53	70	Passenger Car	567	0.00E+00	7.32E-06	7.92E-07	2.69E+01	5.09E-05	1.84E-01	1.63E-05	1.14E-03	4.39E-03	7.05E-04	1.58E-03	1.02E-03	1.05E-03	1.02E-04	1.37E-04	3.72E-08	5.36E-04	1.77E-04
10	F53	70	Passenger Truck	949	0.00E+00	1.60E-05	1.70E-06	6.21E+01	1.01E-04	3.39E-01	3.33E-05	3.55E-03	7.99E-03	1.30E-03	3.18E-03	2.07E-03	2.12E-03	4.60E-04	3.12E-04	8.35E-08	1.06E-03	5.84E-04
10	F53	70	Single Unit Short Haul Truck	22	0.00E+00	5.18E-06	2.59E-07	4.05E+00	4.23E-06	8.11E-03	5.52E-06	2.56E-03	3.64E-04	7.29E-05	6.28E-04	1.55E-04	1.57E-04	4.06E-04	1.63E-05	6.60E-09	4.71E-04	4.79E-04
10	F53	70	Single Unit Long Haul Truck	1	0.00E+00	2.26E-07	1.12E-08	1.72E-01	1.83E-07	3.41E-04	2.40E-07	1.10E-04	1.66E-05	3.24E-06	2.74E-05	6.70E-06	6.81E-06	1.72E-05	6.95E-07	2.78E-10	2.06E-05	2.06E-05
10	F53	70	Combination Short Haul Truck	13	0.00E+00	6.80E-06	4.83E-07	4.93E+00	2.21E-08	5.86E-03	4.99E-06	7.16E-03	5.18E-04	1.13E-04	4.14E-04	1.43E-04	1.43E-04	7.43E-04	1.65E-05	0.00E+00	2.71E-04	1.35E-03
10	F53	70	Combination Long Haul Truck	12	0.00E+00	6.15E-06	4.11E-07	4.60E+00	2.55E-08	6.20E-03	4.67E-06	7.06E-03	5.14E-04	9.38E-05	4.28E-04	1.24E-04	1.26E-04	7.03E-04	1.54E-05	0.00E+00	3.03E-04	1.33E-03
10	F54	70	Passenger Car	224	0.00E+00	2.89E-06	3.13E-07	1.06E+01	2.01E-05	7.27E-02	6.43E-06	4.49E-04	1.74E-03	2.79E-04	6.26E-04	4.03E-04	4.14E-04	4.01E-05	5.40E-05	1.47E-08	2.12E-04	7.01E-05
10	F54	70	Passenger Truck	375	0.00E+00	6.34E-06	6.71E-07	2.45E+01	4.01E-05	1.34E-01	1.32E-05	1.40E-03	3.16E-03	5.13E-04	1.26E-03	8.17E-04	8.37E-04	1.82E-04	1.23E-04	3.30E-08	4.19E-04	2.31E-04
10	F54	70	Single Unit Short Haul Truck	4	0.00E+00	9.00E-07	4.51E-08	7.05E-01	7.36E-07	1.41E-03	9.59E-07	4.44E-04	6.33E-05	1.27E-05	1.09E-04	2.69E-05	2.74E-05	7.07E-05	2.84E-06	1.15E-09	8.18E-05	8.32E-05
10	F54	70	Combination Short Haul Truck	2	0.00E+00	8.16E-07	5.80E-08	5.92E-01	2.65E-09	7.03E-04	5.99E-07	8.59E-04	6.21E-05	1.36E-05	4.97E-05	1.72E-05	1.71E-05	8.92E-05	1.98E-06	0.00E+00	3.26E-05	1.62E-04
10	F54	70	Combination Long Haul Truck	1	0.00E+00	7.38E-07	4.93E-08	5.52E-01	3.05E-09	7.44E-04	5.60E-07	8.47E-04	6.17E-05	1.13E-05	5.14E-05	1.49E-05	1.51E-05	8.44E-05	1.85E-06	0.00E+00	3.63E-05	1.60E-04
53	F71	70	Passenger Car	132	0.00E+00	1.65E-06	1.79E-07	6.34E+00	1.15E-05	4.11E-02	3.67E-06	2.69E-04	1.01E-03	1.63E-04	3.58E-04	2.30E-04	2.37E-04	2.36E-05	3.22E-05	8.77E-09	1.21E-04	4.20E-05
53	F71	70	Passenger Truck	221	0.00E+00	3.60E-06	3.81E-07	1.46E+01	2.28E-05	7.57E-02	7.48E-06	8.23E-04	1.81E-03	2.96E-04	7.14E-04	4.64E-04	4.76E-04	1.07E-04	7.36E-05	1.93E-08	2.38E-04	1.35E-04
53	F71	70	Single Unit Short Haul Truck	18	0.00E+00	4.28E-06	2.14E-07	3.35E+00	3.50E-06	6.70E-03	4.56E-06	2.11E-03	3.01E-04	6.03E-05	5.19E-04	1.28E-04	1.30E-04	3.36E-04	1.35E-05	5.45E-09	3.89E-04	3.95E-04
53	F71	70	Single Unit Long Haul Truck	1	0.00E+00	1.86E-07	9.27E-09	1.42E-01	1.51E-07	2.81E-04	1.99E-07	9.08E-05	1.37E-05	2.68E-06	2.27E-05	5.54E-06	5.63E-06	1.42E-05	5.74E-07	2.30E-10	1.70E-05	1.70E-05
53	F71	70	Combination Short Haul Truck	16	0.00E+00	8.43E-06	5.99E-07	6.11E+00	2.74E-08	7.26E-03	6.19E-06	8.88E-03	6.42E-04	1.40E-04	5.14E-04	1.77E-04	1.77E-04	9.22E-04	2.05E-05	0.00E+00	3.37E-04	1.67E-03
53	F71	70	Combination Long Haul Truck	15	0.00E+00	7.62E-06	5.10E-07	5.71E+00	3.16E-08	7.69E-03	5.79E-06	8.75E-03	6.37E-04	1.16E-04	5.31E-04	1.54E-04	1.56E-04	8.72E-04	1.91E-05	0.00E+00	3.75E-04	1.65E-03
50	F72	40	Passenger Car	132	0.00E+00	2.20E-06	2.38E-07	7.60E+00	1.53E-05	5.46E-02	4.89E-06	2.39E-04	2.29E-03	3.27E-04	4.76E-04	3.07E-04	3.15E-04	4.15E-05	3.82E-05	9.28E-09	1.61E-04	3.74E-05
50	F72	40	Passenger Truck	222	0.00E+00	5.03E-06	5.27E-07	1.69E+01	3.02E-05	9.41E-02	1.01E-05	9.06E-04	4.07E-03	5.78E-04	9.49E-04	6.21E-04	6.36E-04	1.47E-04	8.44E-05	1.81E-08	3.13E-04	1.53E-04
50	F72	40	Single Unit Short Haul Truck	51	0.00E+00	2.25E-05	1.18E-06	1.08E+01	1.96E-05	1.86E-02	2.40E-05	1.10E-02	2.06E-03	3.42E-04	2.66E-03	7.03E-04	7.14E-04	1.09E-03	4.37E-05	1.85E-08	1.95E-03	2.07E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	9.87E-07	5.15E-08	4.67E-01	8.59E-07	8.11E-04	1.05E-06	4.80E-04	9.21E-05	1.52E-05	1.17E-04	3.08E-05	3.12E-05	4.72E-05	1.89E-06	8.02E-10	8.59E-05	9.00E-05
50	F72	40	Combination Short Haul Truck	36	0.00E+00	3.15E-05	2.19E-06	1.60E+01	1.13E-07	2.75E-02	2.34E-05	3.52E-02	3.66E-03	6.61E-04	2.04E-03	6.53E-04	6.59E-04	2.41E-03	5.35E-05	0.00E+00	1.38E-03	6.63E-03
50	F72	40	Combination Long Haul Truck	32	0.00E+00	2.87E-05	1.87E-06	1.52E+01	1.29E-07	3.05E-02	2.21E-05	3.53E-02	3.68E-03	5.87E-04	2.10E-03	5.71E-04	5.82E-04	2.32E-03	5.09E-05	0.00E+00	1.52E-03	6.65E-03
52	F73	60	Passenger Car	27	0.00E+00	3.61E-07	3.91E-08	1.32E+00	2.51E-06	8.97E-03	8.03E-07	5.22E-05	2.62E-04	4.03E-05	7.82E-05	5.04E-05	5.17E-05	5.55E-06	6.67E-06	1.78E-09	2.65E-05	8.15E-06
52	F73	60	Passenger Truck	44	0.00E+00	7.94E-07	8.38E-08	3.01E+00	4.95E-06	1.61E-02	1.63E-06	1.68E-04	4.67E-04	7.22E-05	1.55E-04	1.01E-04	1.04E-04	2.31E-05	1.51E-05	3.78E-09	5.16E-05	2.78E-05
52	F73	60	Single Unit Short Haul Truck	1	0.00E+00	2.81E-07	1.41E-08	1.79E-01	2.32E-07	3.47E-04	3.00E-07	1.34E-04	2.28E-05	4.13E-06	3.42E-05	8.43E-06	8.57E-06	1.79E-05	7.24E-07	2.98E-10	2.56E-05	2.52E-05
52	F73	60	Combination Short Haul Truck	1	0.00E+00	3.08E-07	2.14E-08	2.00E-01	1.09E-09	2.69E-04	2.28E-07	3.34E-04	2.86E-05	5.67E-06	1.96E-05	6.39E-06	6.40E-06	3.02E-05	6.70E-07	0.00E+00	1.32E-05	6.30E-05
53	F74	70	Passenger Car	212	0.00E+00	2.66E-06	2.88E-07	1.02E+01	1.85E-05	6.62E-02	5.91E-06	4.33E-04	1.62E-03	2.61E-04	5.75E-04	3.71E-04	3.81E-04	3.80E-05	5.18E-05	1.41E-08	1.95E-04	6.77E-05
53	F74	70	Passenger Truck	356	0.00E+00	5.79E-06	6.13E-07	2.35E+01	3.67E-05	1.22E-01	1.20E-05	1.32E-03	2.91E-03	4.76E-04	1.15E-03	7.47E-04	7.65E-04	1.71E-04	1.18E-04	3.10E-08	3.83E-04	2.17E-04
53	F74	70	Single Unit Short Haul Truck	58	0.00E+00	1.37E-05	6.88E-07	1.08E+01	1.12E-05	2.15E-02	1.46E-05	6.78E-03	9.66E-04	1.93E-04	1.67E-03	4.11E-04	4.17E-04	1.08E-03	4.34E-05	1.75E-08	1.25E-03	1.27E-03
53	F74	70	Single Unit Long Haul Truck	3	0.00E+00	5.98E-07	2.98E-08	4.56E-01	4.85E-07	9.04E-04	6.37E-07	2.91E-04	4.41E-05	8.60E-06	7.28E-05	1.78E-05	1.81E-05	4.56E-05	1.84E-06	7.38E-10	5.47E-05	5.46E-05
53	F74	70	Combination Short Haul Truck	30	0.00E+00	1.58E-05	1.12E-06	1.14E+01	5.13E-08	1.36E-02	1.16E-05	1.66E-02	1.20E-03	2.62E-04	9.61E-04	3.32E-04	3.31E-04	1.72E-03	3.83E-05	0.00E+00	6.30E-04	3.13E-03
53	F74	70	Combination Long Haul Truck	28	0.00E+00	1.43E-05	9.54E-07	1.07E+01	5.91E-08	1.44E-02	1.08E-05	1.64E-02	1.19E-03	2.18E-04	9.94E-04	2.88E-04	2.91E-04	1.63E-03	3.58E-05	0.00E+00	7.02E-04	3.08E-03
52	F75	60	Passenger Car	205	0.00E+00	2.79E-06	3.02E-07	1.02E+01	1.94E-05	6.94E-02	6.21E-06	4.03E-04	2.03E-03	3.11E-04	6.05E-04	3.90E-04	4.00E-04	4.29E-05	5.16E-05	1.38E-08	2.05E-04	6.30E-05
52	F75	60	Passenger Truck	344	0.00E+00	6.14E-06	6.48E-07	2.33E+01	3.83E-05	1.24E-01	1.26E-05	1.30E-03	3.61E-03	5.58E-04	1.20E-03	7.82E-04	8.01E-04	1.78E-04	1.17E-04	2.93E-08	3.99E-04	2.15E-04
52	F75	60	Single Unit Short Haul Truck	50	0.00E+00	1.46E-05	7.31E-07	9.32E+00	1.21E-05	1.80E-02	1.56E-05	6.98E-03	1.18E-03	2.15E-04	1.78E-03	4.39E-04	4.46E-04	9.32E-04	3.76E-05	1.55E-08	1.33E-03	1.31E-03
52	F75	60	Single Unit Long Haul Truck	2	0.00E+00	6.39E-07	3.18E-08	3.98E-01	5.24E-07	7.66E-04	6.82E-07	3.02E-04	5.32E-05	9.50E-06	7.78E-05	1.91E-05	1.94E-05	3.97E-05	1.61E-06	6.59E-10	5.84E-05	5.66E-05
52	F75	60	Combination Short Haul Truck	21	0.00E+00	1.23E-05	8.58E-07	8.01E+00	4.36E-08	1.08E-02	9.13E-06	1.34E-02	1.15E-03	2.27E-04	7.83E-04	2.55E-04	2.56E-04	1.21E-03	2.68E-05	0.00E+00	5.27E-04	2.52E-03
52	F75	60	Combination Long Haul Truck	19	0.00E+00	1.10E-05	7.19E-07	7.51E+00	5.00E-08	1.16E-02	8.52E-06	1.33E-02	1.15E-03	1.95E-04	8.07E-04	2.19E-04	2.22E-04	1.15E-03	2.51E-05	0.00E+00	5.85E-04	2.50E-03
50	F76	40	Passenger Car	80	0.00E+00	1.33E-06	1.44E-07	4.60E+00	9.25E-06	3.30E-02	2.96E-06	1.45E-04	1.38E-03	1.98E-04	2.88E-04	1.86E-04	1.90E-04	2.51E-05	2.31E-05	5.61E-09	9.74E-05	2.26E-05
50	F76	40	Passenger Truck	134	0.00E+00	3.04E-06	3.19E-07	1.02E+01	1.82E-05	5.69E-02	6.09E-06	5.48E-04	2.46E-03	3.49E-04	5.74E-04	3.76E-04	3.84E-04	8.87E-05	5.10E-05	1.09E-08	1.89E-04	9.27E-05
50	F78	40	Passenger Car	276	0.00E+00	4.59E-06	4.96E-07	1.58E+01	3.19E-05	1.14E-01	1.02E-05	4.99E-04	4.77E-03	6.82E-04	9.92E-04	6.40E-04	6.57E-04	8.65E-05	7.96E-05	1.93E-08	3.36E-04	7.79E-05
50	F78	40	Passenger Truck	462	0.00E+00	1.05E-05	1.10E-06	3.53E+01	6.29E-05	1.96E-01	2.10E-05	1.89E-03	8.48E-03	1.20E-03	1.98E-03	1.30E-03	1.33E-03	3.06E-04	1.76E-04	3.76E-08	6.53E-04	3.20E-04
50	F78	40	Single Unit Short Haul Truck	11	0.00E+00	4.67E-06	2.45E-07	2.25E+00	4.07E-06	3.87E-03	4.97E-06	2.29E-03	4.27E-04	7.09E-05	5.53E-04	1.46E-04	1.48E-04	2.27E-04	9.06E-06	3.84E-09	4.05E-04	4.30E-04
50	F78	40	Combination Short Haul Truck	5	0.00E+00	4.63E-06	3.22E-07	2.35E+00	1.67E-08	4.04E-03	3.45E-06	5.18E-03	5.39E-04	9.72E-05	3.00E-04	9.60E-05	9.68E-05	3.54E-04	7.87E-06	0.00E+00	2.03E-04	9.76E-04
50	F78	40	Combination Long Haul Truck	5	0.00E+00	4.22E-06	2.75E-07	2.23E+00	1.89E-08	4.49E-03	3.25E-06	5.19E-03	5.41E-04	8.63E-05	3.09E-04	8.40E-05	8.56E-05	3.42E-04	7.48E-06	0.00E+00	2.24E-04	9.78E-04
52	F79	60	Passenger Car	556	0.00E+00	7.56E-06	8.18E-07	2.76E+01	5.26E-05	1.88E-01	1.68E-05	1.09E-03	5.48E-03	8.42E-04	1.64E-03	1.05E-03	1.08E-03	1.16E-04	1.40E-04	3.73E-08	5.54E-04	1.71E-04
52	F79	60	Passenger Truck	930	0.00E+00	1.66E-05	1.75E-06	6.30E+01	1.04E-04	3.36E-01	3.42E-05	3.51E-03	9.77E-03	1.51E-03	3.25E-03	2.12E-03	2.17E-03	4.83E-04	3.16E-04	7.92E-08	1.08E-03	5.81E-04
52	F79	60	Single Unit Short Haul Truck	11	0.00E+00	3.37E-06	1.69E-07	2.15E+00	2.78E-06	4.16E-03	3.60E-06	1.61E-03	2.73E-04	4.96E-05	4.10E-04	1.01E-04	1.03E-04	2.15E-04	8.68E-06	3.58E-09	3.07E-04	3.02E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	7.33E-09	9.18E-02	1.21E-07	1.77E-04	1.57E-07	6.97E-05	1.23E-05	2.19E-06	1.80E-05	4.40E-06	4.48E-06	9.16E-06	3.71E-07	1.52E-10	1.35E-05	1.31E-05
52	F79	60	Combination Short Haul Truck	6	0.00E+00	3.69E-06	2.57E-07	2.40E+00	1.31E-08	3.23E-03	2.74E-06	4.01E-03	3.44E-04	6.80E-05	2.35E-04	7.66E-05	7.68E-05	3.62E-04	8.04E-06	0.00E+00	1.58E-04	7.56E-04
52	F79	60	Combination Long Haul Truck	6	0.00E+00	3.31E-06	2.16E-07	2.25E+00	1.50E-08	3.48E-03	2.56E-06	3.98E-03	3.46E-04	5.86E-05	2.42E-04	6.58E-05	6.67E-05	3.44E-04	7.54E-06	0.00E+00	1.75E-04	7.50E-04
53	F80	70	Passenger Car	1172	0.00E+00	1.47E-05	1.59E-06	5.63E+01	1.02E-04	3.65E-01	3.26E-05	2.39E-03	8.95E-03	1.44E-03	3.17E-03	2.05E-03	2.10E-03	2.10E-04	2.86E-04	7.79E-08	1.07E-03	3.73E-04
53	F80	70	Passenger Truck	1962	0.00E+00	3.19E-05	3.38E-06	1.30E+02	2.02E-04	6.72E-01	6.64E-05	7.31E-03	1.61E-02	2.62E-03	6.34E-03	4.12E-03	4.22E-03	9.46E-04	6.53E-04	1.71E-07	2.11E-03	1.20E-03
53	F80	70	Single Unit Short Haul Truck	25	0.00E+00	5.85E-06	2.93E-07	4.58E+00	4.79E-06	9.17E-03	6.23E-06	2.89E-03	4.12E-04	8.24E-05	7.10E-04	1.75E-04	1.78E-04	4.59E-04	1.85E-05	7.46E-09	5.32E-04	5.41E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	2.55E-07	1.27E-08	1.94E-01	2.07E-07	3.85E-04	2.72E-07	1.24E-04	1.88E-05	3.67E-06	3.10E-05	7.58E-06	7.70E-06	1.94E-05	7.85E-07	3.15E-10	2.33E-05	2.33E-05
53	F80	70	Combination Short Haul Truck	17	0.00E+00	8.98E-06	6.38E-07	6.51E+00	2.92E-08	7.73E-03	6.59E-06	9.45E-03	6.83E-04	1.49E-04	5.47E-04	1.89E-04	1.88E-04	9.81E-04	2.18E-05	0.00E+00	3.58E-04	1.78E-03
53	F80	70	Combination Long Haul Truck	16	0.00E+00	8.11E-06	5.43E-07	6.07E+00	3.36E-08	8.19E-03	6.16E-06	9.32E-03	6.79E-04	1.24E-04	5.65E-04	1.64E-04	1.66E-04	9.28E-04	2.03E-05	0.00E+00	4.00E-04	1.76E-03

Appendix F.5.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B15	0.00E+00	5.46E-05	5.24E-06	1.92E+02	2.70E-04	1.03E+00	9.83E-05	2.39E-02	1.11E-02	2.37E-03	9.44E-03	5.73E-03	5.87E-03	3.22E-03	9.49E-04	2.52E-07	3.57E-03	4.23E-03
B16	0.00E+00	3.89E-05	3.72E-06	1.37E+02	1.92E-04	7.35E-01	7.01E-05	1.68E-02	7.89E-03	1.69E-03	6.75E-03	4.08E-03	4.18E-03	2.29E-03	6.75E-04	1.80E-07	2.57E-03	2.96E-03
B19	0.00E+00	2.33E-04	2.03E-05	6.53E+02	8.20E-04	3.19E+00	3.50E-04	1.42E-01	3.58E-02	7.91E-03	3.33E-02	1.87E-02	1.91E-02	2.07E-02	3.11E-03	7.84E-07	1.42E-02	2.59E-02
B20	0.00E+00	1.98E-04	1.57E-05	4.11E+02	4.09E-04	1.67E+00	2.36E-04	1.57E-01	2.06E-02	4.83E-03	2.20E-02	1.10E-02	1.12E-02	2.35E-02	1.84E-03	4.05E-07	1.08E-02	2.91E-02
B21	0.00E+00	1.96E-04	1.75E-05	5.79E+02	7.49E-04	2.90E+00	3.06E-04	1.13E-01	3.22E-02	7.05E-03	2.91E-02	1.68E-02	1.72E-02	1.61E-02	2.78E-03	7.08E-07	1.20E-02	2.05E-02
B22	0.00E+00	1.65E-04	1.30E-05	3.34E+02	3.21E-04	1.32E+00	1.92E-04	1.34E-01	1.65E-02	3.90E-03	1.78E-02	8.84E-03	8.98E-03	2.00E-02	1.48E-03	3.18E-07	8.86E-03	2.50E-02
B23	0.00E+00	1.99E-04	1.78E-05	5.91E+02	7.67E-04	2.97E+00	3.12E-04	1.14E-01	3.29E-02	7.20E-03	2.97E-02	1.72E-02	1.75E-02	1.62E-02	2.85E-03	7.24E-07	1.22E-02	2.06E-02
B24	0.00E+00	1.83E-04	1.43E-05	3.68E+02	3.53E-04	1.45E+00	2.13E-04	1.48E-01	1.82E-02	4.30E-03	1.97E-02	9.75E-03	9.90E-03	2.22E-02	1.63E-03	3.51E-07	9.82E-03	2.76E-02
E39	0.00E+00	2.64E-05	2.12E-06	4.91E+01	6.54E-05	2.32E-01	3.39E-05	1.83E-02	6.40E-03	1.09E-03	3.23E-03	1.65E-03	1.68E-03	1.99E-03	2.28E-04	5.38E-08	1.55E-03	3.40E-03
E40	0.00E+00	1.59E-05	1.59E-06	5.20E+01	8.57E-05	2.96E-01	3.00E-05	5.59E-03	7.17E-03	1.17E-03	2.87E-03	1.79E-03	1.84E-03	6.23E-04	2.59E-04	6.80E-08	1.03E-03	9.85E-04
E41	0.00E+00	1.23E-05	1.17E-06	3.58E+01	5.72E-05	1.98E-01	2.13E-05	5.39E-03	4.90E-03	8.03E-04	2.03E-03	1.23E-03	1.26E-03	5.93E-04	1.76E-04	4.56E-08	7.76E-04	9.70E-04
E42	0.00E+00	1.44E-05	1.43E-06	4.63E+01	7.59E-05	2.62E-01	2.68E-05	5.29E-03	6.38E-03	1.04E-03	2.56E-03	1.59E-03	1.63E-03	5.87E-04	2.30E-04	6.03E-08	9.29E-04	9.36E-04
E43	0.00E+00	7.93E-06	7.93E-07	2.63E+01	4.36E-05	1.50E-01	1.52E-05	2.59E-03	3.63E-03	5.91E-04	1.45E-03	9.09E-04	9.31E-04	2.94E-04	1.31E-04	3.47E-08	5.22E-04	4.53E-04
E44	0.00E+00	1.30E-05	1.33E-06	4.56E+01	7.67E-05	2.64E-01	2.59E-05	3.61E-03	6.32E-03	1.03E-03	2.49E-03	1.58E-03	1.62E-03	4.16E-04	2.29E-04	6.09E-08	8.69E-04	6.18E-04
E45	0.00E+00	3.03E-05	2.25E-06	4.99E+01	5.36E-05	1.99E-01	3.48E-05	2.26E-02	4.43E-03	8.51E-04	3.35E-03	1.51E-03	1.54E-03	2.91E-03	2.22E-04	5.12E-08	1.81E-03	4.20E-03
E46	0.00E+00	2.18E-05	1.57E-06	3.04E+01	2.69E-05	1.05E-01	2.24E-05	1.81E-02	2.61E-03	5.16E-04	2.12E-03	8.91E-04	9.05E-04	2.29E-03	1.29E-04	2.62E-08	1.21E-03	3.38E-03
E47	0.00E+00	2.81E-05	2.08E-06	4.62E+01	4.97E-05	1.84E-01	3.23E-05	2.08E-02	4.10E-03	7.88E-04	3.10E-03	1.40E-03	1.43E-03	2.70E-03	2.05E-04	4.76E-08	1.68E-03	3.88E-03
E48	0.00E+00	7.08E-06	5.73E-07	1.46E+01	1.83E-05	6.70E-02	9.27E-06	4.78E-03	1.36E-03	2.53E-04	8.84E-04	4.54E-04	4.64E-04	6.00E-04	6.78E-05	1.64E-08	4.20E-04	8.85E-04
E49	0.00E+00	3.22E-05	2.37E-06	5.08E+01	5.24E-05	1.96E-01	3.60E-05	2.46E-02	4.48E-03	8.65E-04	3.46E-03	1.53E-03	1.56E-03	3.17E-03	2.24E-04	5.06E-08	1.90E-03	4.58E-03
E50	0.00E+00	5.39E-06	4.89E-07	1.50E+01	2.18E-05	7.83E-02	8.68E-06	2.76E-03	1.46E-03	2.64E-04	8.29E-04	4.83E-04	4.94E-04	3.37E-04	7.31E-05	1.89E-08	3.35E-04	5.01E-04
E51	0.00E+00	3.16E-05	2.33E-06	5.00E+01	5.18E-05	1.94E-01	3.55E-05	2.41E-02	4.41E-03	8.52E-04	3.41E-03	1.51E-03	1.53E-03	3.11E-03	2.20E-04	5.00E-08	1.87E-03	4.49E-03
E52	0.00E+00	1.65E-06	1.60E-07	5.28E+00	8.01E-06	2.87E-02	2.92E-06	7.28E-04	5.21E-04	9.32E-05	2.78E-04	1.71E-04	1.75E-04	8.47E-05	2.61E-05	6.82E-09	1.03E-04	1.30E-04
E53	0.00E+00	3.02E-05	2.47E-06	6.49E+01	8.35E-05	3.04E-01	4.08E-05	1.96E-02	6.08E-03	1.13E-03	3.89E-03	2.03E-03	2.07E-03	2.47E-03	3.04E-04	7.47E-08	1.82E-03	3.63E-03
E54	0.00E+00	1.03E-05	8.00E-07	1.77E+01	1.92E-05	7.32E-02	1.18E-05	8.07E-03	1.61E-03	3.06E-04	1.11E-03	5.36E-04	5.46E-04	9.92E-04	7.93E-05	1.72E-08	5.62E-04	1.50E-03
E55	0.00E+00	3.02E-05	2.47E-06	6.49E+01	8.35E-05	3.04E-01	4.08E-05	1.96E-02	6.08E-03	1.13E-03	3.89E-03	2.03E-03	2.07E-03	2.47E-03	3.04E-04	7.47E-08	1.82E-03	3.63E-03
E56	0.00E+00	1.03E-05	8.00E-07	1.77E+01	1.92E-05	7.32E-02	1.18E-05	8.07E-03	1.61E-03	3.06E-04	1.11E-03	5.36E-04	5.46E-04	9.92E-04	7.93E-05	1.72E-08	5.62E-04	1.50E-03
E57	0.00E+00	1.63E-05	1.45E-06	4.09E+01	6.22E-05	2.17E-01	2.54E-05	8.72E-03	5.51E-03	9.13E-04	2.43E-03	1.39E-03	1.43E-03	9.54E-04	1.98E-04	5.00E-08	1.00E-03	1.59E-03
E58	0.00E+00	1.39E-05	1.34E-06	4.29E+01	6.98E-05	2.41E-01	2.52E-05	5.32E-03	5.88E-03	9.61E-04	2.42E-03	1.48E-03	1.51E-03	5.99E-04	2.12E-04	5.57E-08	9.04E-04	9.47E-04
E59	0.00E+00	1.62E-05	1.44E-06	4.26E+01	6.02E-05	2.17E-01	2.50E-05	9.04E-03	4.11E-03	7.46E-04	2.38E-03	1.36E-03	1.39E-03	1.10E-03	2.05E-04	5.22E-08	9.88E-04	1.65E-03
E60	0.00E+00	1.06E-05	1.02E-06	3.43E+01	5.24E-05	1.87E-01	1.91E-05	4.32E-03	3.38E-03	6.04E-04	1.83E-03	1.11E-03	1.14E-03	5.22E-04	1.70E-04	4.52E-08	6.91E-04	7.68E-04
E61	0.00E+00	1.62E-05	1.44E-06	4.26E+01	6.02E-05	2.17E-01	2.50E-05	9.04E-03	4.11E-03	7.46E-04	2.38E-03	1.36E-03	1.39E-03	1.10E-03	2.05E-04	5.22E-08	9.88E-04	1.65E-03
E62	0.00E+00	1.06E-05	1.02E-06	3.43E+01	5.24E-05	1.87E-01	1.91E-05	4.32E-03	3.38E-03	6.04E-04	1.83E-03	1.11E-03	1.14E-03	5.22E-04	1.70E-04	4.52E-08	6.91E-04	7.68E-04
E63	0.00E+00	6.28E-05	4.92E-06	1.09E+02	1.39E-04	4.96E-01	7.74E-05	4.54E-02	1.40E-02	2.39E-03	7.38E-03	3.63E-03	3.70E-03	4.95E-03	4.98E-04	1.16E-07	3.68E-03	8.45E-03
E64	0.00E+00	8.69E-05	6.94E-06	1.58E+02	2.08E-04	7.42E-01	1.10E-04	6.15E-02	2.06E-02	3.50E-03	1.05E-02	5.30E-03	5.41E-03	6.67E-03	7.33E-04	1.71E-07	5.09E-03	1.14E-02
E65	0.00E+00	6.54E-05	5.16E-06	1.16E+02	1.50E-04	5.35E-01	8.19E-05	4.65E-02	1.50E-02	2.55E-03	7.82E-03	3.87E-03	3.95E-03	5.08E-03	5.33E-04	1.25E-07	3.86E-03	8.65E-03
E66	0.00E+00	9.38E-05	7.56E-06	1.76E+02	2.35E-04	8.37E-01	1.21E-04	6.49E-02	2.30E-02	3.89E-03	1.16E-02	5.90E-03	6.03E-03	7.06E-03	8.19E-04	1.94E-07	5.53E-03	1.20E-02
E67	0.00E+00	3.66E-05	2.86E-06	7.04E+01	8.52E-05	3.12E-01	4.62E-05	2.51E-02	6.46E-03	1.21E-03	4.43E-03	2.18E-03	2.22E-03	3.21E-03	3.24E-04	7.83E-08	2.21E-03	4.65E-03
E68	0.00E+00	3.29E-05	2.64E-06	6.80E+01	8.58E-05	3.12E-01	4.34E-05	2.17E-02	6.32E-03	1.18E-03	4.16E-03	2.12E-03	2.16E-03	2.76E-03	3.16E-04	7.77E-08	1.99E-03	4.01E-03
E69	0.00E+00	2.63E-05	2.40E-06	7.30E+01	1.17E-04	4.00E-01	4.48E-05	1.10E-02	9.90E-03	1.63E-03	4.34E-03	2.52E-03	2.58E-03	1.29E-03	3.59E-04	9.46E-08	1.76E-03	1.99E-03
E70	0.00E+00	2.47E-05	2.21E-06	6.32E+01	9.72E-05	3.37E-01	3.93E-05	1.26E-02	8.52E-03	1.41E-03	3.77E-03	2.16E-03	2.21E-03	1.40E-03	3.07E-04	7.84E-08	1.56E-03	2.30E-03
E71	0.00E+00	3.10E-05	2.87E-06	8.87E+01	1.43E-04	4.89E-01	5.38E-05	1.25E-02	1.21E-02	1.98E-03	5.21E-03	3.06E-03	3.13E-03	1.46E-03	4.37E-04	1.15E-07	2.07E-03	2.24E-03
E72	0.00E+00	2.65E-05	2.69E-06	9.09E+01	1.52E-04	5.23E-01	5.20E-05	7.85E-03	1.26E-02	2.04E-03	4.99E-03	3.14E-03	3.22E-03	9.03E-04	4.55E-04	1.21E-07	1.77E-03	1.36E-03
E73	0.00E+00	1.55E-05	1.31E-06	3.15E+01	5.12E-05	1.74E-01	2.28E-05	9.04E-03	5.38E-03	8.53E-04	2.20E-03	1.19E-03	1.21E-03	8.96E-04	1.50E-04	3.87E-08	9.83E-04	1.67E-03
E74	0.00E+00	1.68E-05	1.55E-06	4.15E+01	7.14E-05	2.44E-01	2.77E-05	8.28E-03	7.20E-03	1.13E-03	2.65E-03	1.56E-03	1.60E-03	8.20E-04	2.02E-04	5.29E-08	1.05E-03	1.51E-03
E75	0.00E+00	7.13E-05	6.14E-06	1.70E+02	2.42E-04	8.40E-01	1.05E-04	4.18E-02	2.21E-02	3.70E-03	1.01E-02	5.57E-03	5.70E-03	4.59E-03	8.19E-04	2.02E-07	4.37E-03	7.68E-03
E76	0.00E+00	4.74E-05	4.35E-06	1.36E+02	2.06E-04	7.08E-01	7.96E-05	2.17E-02	1.79E-02	2.96E-03	7.65E-03	4.49E-03	4.59E-03	2.45E-03	6.69E-04	1.71E-07	3.06E-03	3.92E-03
E77	0.00E+00	7.20E-05	6.18E-06	1.70E+02	2.40E-04	8.34E-01	1.05E-04	4.29E-02	2.20E-02	3.69E-03	1.01E-02	5.55E-03	5.67E-03	4.70E-03	8.15E-04	2.00E-07	4.39E-03	7.88E-03
E78	0.00E+00	5.19E-05	4.76E-06	1.48E+02	2.22E-04	7.65E-01	8.63E-05	2.45E-02	1.94E-02	3.21E-03	8.29E-03	4.85E-03	4.97E-03	2.74E-03	7.24E-04	1.85E-07	3.32E-03	4.44E-03
E79	0.00E+00	5.87E-05	5.24E-06	1.59E+02	2.37E-04	8.13E-01	9.48E-05	2.86E-02	2.08E-02	3.44E-03	9.14E-03	5.23E-03	5.35E-03	3.24E-03	7.75E-04	1.98E-07	3.79E-03	5.19E-03
E80	0.00E+00	5.68E-05	4.97E-06	1.44E+02	2.11E-04	7.26E-01	8.78E-05	3.04E-02	1.88E-02	3.13E-03	8.44E-03	4.74E-03	4.85E-03	3.40E-03	7.00E-04	1.76E-07	3.59E-03	5.55E-03
E83	0.00E+00	1.70E-05	1.47E-06	3.91E+01	5.76E-05	2.02E-01	2.51E-05	9.93E-03	5.22E-03	8.70E-04	2.39E-03	1.33E-03	1.36E-03	1.09E-03	1.87E-04	4.66E-08	1.04E-03	1.83E-03
E84	0.00E+00	1.37E-05	1.26E-06	3.66E+01	5.66E-05	1.98E-01	2.23E-05	7.08E-03	4.97E-03	8.20E-04	2.12E-03	1.25E-03	1.28E-03	7.65E-04	1.78E-04	4.51E-08	8.38E-04	1.29E-03
E85	0.00E+00	1.18E-04	9.96E-06	2.39E+02	3.90E-04	1.33E+00	1.73E-04	6.87E-02	4.09E-02	6.48E-03	1.67E-02	9.01E-03	9.22E-03	6.81E-03	1.14E-03	2.94E-07	7.47E-03	1.27E-02
E86	0.00E+00	1.45E-04	1.14E-05	2.41E+02	3.59E-04	1.24E+00	1.88E-04	1.00E-01	4.05E-02	6.52E-03	1.81E-02	9.00E-03	9.19E-03	9.71E-03	1.12E-03	2.74E-07	8.95E-03	1.87E-02
E87	0.00E+00	1.33E-04	1.03E-05	2.09E+02	3.01E-04	1.04E+00	1.67E-04	9.52E-02	3.49E-02	5.63E-03	1.61E-02	7.77E-03	7.94E-03	9.20E-03	9.61E-04	2.32E-07	8.19E-03	1.77E-02
E88	0.00E+00	1.25E-04	1.06E-05	2.52E+02	4.10E-04	1.40E+00	1.83E-04	7.35E-02	4.31E-02	6.84E-03	1.76E-02	9.51E-03	9.72E-03	7.27E-03	1.21E-03	3.09E-07	7.90E-03	1.36E-02
E89	0.00E+00	6.14E-06	5.75E-07	1.62E+01	2.89E-05	9.71E-02	1.08E-05	2.41E-03	2.82E-03	4.41E-04	1.04E-03	6.18E-04	6.32E-04	2.56E-04	7.99E-05	2.15E-08	4.06E-04	4.35E-04
E90	0.00E+00	4.46E-06	4.36E-07	1.29E+01	2.35E-05	7.88E-02	8.33E-06	1.46E-03	2.25E-03	3.51E-04	8.01E-04	4.92E-04	5.04E-04	1.60E-04	6.40E-05	1.74E-08	2.97E-04	2.59E-04
E91	0.00E+00	1.78E-07	1.89E-08	6.10E-01	1.15E-06	3.86E-03	3.75E-07	3.25E-05	1.08E-04	1.66E-05	3.59E-05	2.33E-05	2.39E-05	4.10E-06	3.07E-06	8.47E-10	1.20E-05	5.31E-06
E92	0.00E+00	1.78E-07	1.89E-08	6.10E-01	1.15E-06	3.86E-03	3.75E-07	3.25E-05	1.08E-04	1.66E-05	3.59E-05	2.33E-05	2.39E-05	4.10E-06	3.07E-06	8.47E-10	1.20E-05	5.31E-06
E93	0.00E+00	7.54E-06	7.24E-07	2.10E+01	3.80E-05	1.28E-01	1.37E-05	2.67E-03	3.67E-03	5.72E-04	1.32E-03	8.02E-04	8.21E-04	2.89E-04	1.04E-04	2.82E-08	5.01E-04	4.77E-04
E94	0.00E+00	5.06E-06	4.83E-07	1.41E+01	2.57E-05	8.57E-02	9.28E-06	1.66E-03	2.46E-03	3.83E-04	8.98E-04	5.40E-04	5.53E-04	1.86E-04	7.00E-05	1.92E-08	3.44E-04	2.94E-04
E95	0.00E+00	6.18E-05	5.11E-06	1.37E+02	1.73E-04	6.29E-01	8.36E-05	4.07E-02	1.34E-02	2.43E-03	7.95E-03	4.21E-03	4.29E-03	5.06E-03	6.45E-04	1.53E-07	3.66E-03	7.52E-03
E96	0.00E+00	4.38E-05	3.59E-06	9.48E+01	1.18E-04	4.29E-01	5.82E-05	2.95E-02	9.20E-03	1.68E-03	5.52E-03	2.90E-03	2.96E-03	3.66E-03	4.43E-04	1.04E-07	2.57E-03	5.45E-03
E97	0.00E+00	6.18E-05	5.11E-06	1.37E+02	1.73E-04	6.29E-01	8.36E-05	4.07E-02	1.34E-02	2.43E-03	7.95E-03	4.21E-03	4.29E-03	5.06E-03	6.45E-04	1.53E-07	3.66E-03	7.52E-03
E98	0.00E+00	4.38E-05	3.59E-06	9.48E+01	1.18E-04	4.29E-01	5.82E-05	2.95E-02	9.20E-03	1.68E-03	5.52E-03	2.90E-03	2.96E-03	3.66E-03	4.43E-04	1.04E-07	2.57E-03	5.45E-03
F01	0.00E+00	3.12E-05	2.59E-06	6.02E+01	9.58E-05	3.27E-01	4.42E-05	1.92E-02	1.02E-02	1.63E-03	4.26E-03	2.26E-03	2.31E-03	1.89E-03	2.86E-04	7.24E-08	1.95E-03	3.56E-03
F02	0.00E+00	1.92E-05	1.77E-06	4.81E+01	8.36E-05	2.84E-01	3.22E-05	8.89E-03	8.35E-03	1.31E-03	3.08E-03	1.82E-03	1.86E-03	8.99E-04	2.35E-04	6.21E-08	1.22E-03	1.62E-03
F03	0.00E+00	5.65E-06	4.52E-07	1.16E+01	1.45E-05	5.30E-02	7.42E-06	3.73E-03	1.07E-03	2.00E-04	7.12E-04	3.61E-04	3.68E-04	4.75E-04	5.38E-05	1.32E-08	3.43E-04	6.89E-04
F04	0.00E+00	1.13E-07	1.21E-08	4.57E-01	7.45E-07	2.63E-03	2.42E-07	2.44E-05	4.59E-05	8.10E-06	2.33E-05	1.51E-05	1.55E-05	2.72E-06	2.31E-06	6.35E-10	7.82E-06	3.94E-06
F05	0.00E+00	2.51E-05	1.95E-06	3.91E+01	5.56E-05	1.94E-01	3.11E-05	1.85E-02	6.53E-03	1.06E-03	2.99E-03	1.45E-03	1.48E-03	1.77E-03	1.79E-04	4.25E-08	1.51E-03	3.44E-03
F06	0.00E+00	3.76E-05	2.89E-06	5.70E+01	8.04E-05	2.79E-01	4.61E-05	2.77E-02	9.50E-03	1.54E-03	4.45E-03	2.12E-03	2.16E-03	2.66E-03	2.61E-04	6.20E-08	2.29E-03	5.17E-03
F07	0.00E+00	4.81E-05	3.74E-06	7.67E+01	1.12E-04	3.86E-01	6.08E-05	3.41E-02	1.28E-02	2.07E-03	5.88E-03	2.86E-03	2.92E-03	3.29E-03	3.54E-04	8.59E-08	2.96E-03	6.34E-03
F08	0.00E+00	5.33E-05	4.02E-06	7.76E+01	1.08E-04	3.72E-01	6.42E-05	3.95E-02	1.29E-02	2.09E-03	6.23E-03	2.88E-03	2.94E-03	3.81E-03	3.53E-04	8.37E-08	3.28E-03	7.37E-03
F09	0.00E+00	6.31E-06	5.87E-07	1.88E+01	2.79E-05	9.97E-02	1.06E-05	2.96E-03	1.83E-03	3.30E-04	1.02E-03	6.05E-04	6.19E-04	3.59E-04	9.19E-05	2.41E-08	3.99E-04	5.33E-04
F10	0.00E+00	3.22E-06	3.28E-07	1.16E+01	1.84E-05	6.52E-02	6.28E-06	1.07E-03	1.16E-03	2.06E-04	6.01E-04	3.80E-04	3.90E-04	1.22E-04	5.81E-05	1.56E-08	2.11E-04	1.85E-04
F13	0.00E+00	1.81E-06	1.50E-07	3.95E+00	5.09E-06	1.86E-02	2.45E-06	1.19E-03	3.71E-04	6.86E-05	2.33E-04	1.24E-04	1.26E-04	1.47E-04	1.85E-05	4.50E-09	1.07E-04	2.20E-04
F14	0.00E+00	6.76E-07	5.60E-08	1.34E+00	1.59E-06	6.00E-03	8.38E-07	5.18E-04	1.25E-04	2.34E-05	7.73E-05	4.11E-05	4.19E-05	6.13E-05	6.14E-06	1.35E-09	3.54E-05	9.61E-05
F15	0.00E+00	3.45E-05	2.81E-06	6.70E+01	9.11E-05	3.23E-01	4.56E-05	2.34E-02	8.78E-03	1.48E-03	4.34E-03	2.25E-03	2.30E-03	2.55E-03	3.13E-04	7.46E-08	2.04E-03	4.34E-03
F16	0.00E+00	4.04E-05	3.26E-06	7.62E+01	1.02E-04	3.63E-01	5.25E-05	2.77E-02	9.94E-03	1.68E-03	5.00E-03	2.56E-03	2.61E-03	3.02E-03	3.55E-04	8.42E-08	2.39E-03	5.15E-03
F17	0.00E+00	3.18E-05	2.52E-06	5.64E+01	7.30E-05	2.61E-01	3.97E-05	2.29E-02	7.31E-03	1.25E-03	3.77E-03	1.88E-03	1.92E-03	2.48E-03	2.60E-04	6.03E-08	1.85E-03	4.25E-03
F18	0.00E+00	3.46E-05	2.73E-06	6.05E+01	7.76E-05	2.77E-01	4.29E-05	2.51E-02	7.81E-03	1.33E-03	4.09E-03	2.02E-03	2.06E-03	2.72E-03	2.78E-04	6.44E-08	2.03E-03	4.66E-03
F19	0.00E+00	1.67E-05	1.41E-06	3.74E+01	5.50E-05	1.91E-01	2.44E-05	9.62E-03	4.98E-03	8.30E-04	2.35E-03	1.27E-03	1.30E-03	1.07E-03	1.79E-04	4.50E-08	1.05E-03	1.77E-03
F20	0.00E+00	1.28E-05	1.35E-06	4.82E+01	8.23E-05	2.82E-01	2.70E-05	2.64E-03	6.69E-03	1.08E-03	2.60E-03	1.67E-03	1.71E-03	3.21E-04	2.43E-04	6.54E-08	8.82E-04	4.32E-04
F21	0.00E+00	2.77E-06	2.96E-07	1.06E+01	1.81E-05	6.21E-02	5.89E-06	5.57E-04	1.47E-03	2.38E-04	5.66E-04	3.67E-04	3.76E-04	6.67E-05	5.33E-05	1.43E-08	1.90E-04	9.05E-05
F22	0.00E+00	6.01E-06	6.41E-07	2.29E+01	3.92E-05	1.34E-01	1.28E-05	1.21E-03	3.19E-03	5.16E-04	1.23E-03	7.95E-04	8.15E-04	1.44E-04	1.15E-04	3.11E-08	4.11E-04	1.96E-04
F23	0.00E+00	4.79E-06	4.06E-07	1.05E+01	1.51E-05	5.30E-02	6.82E-06	2.96E-03	1.39E-03	2.33E-04	6.51E-04	3.54E-04	3.62E-04	3.22E-04	4.98E-05	1.22E-08	2.88E-04	5.45E-04
F24	0.00E+00	5.81E-06	5.02E-07	1.36E+01	2.04E-05	7.09E-02	8.74E-06	3.23E-03	1.82E-03	3.03E-04	8.39E-04	4.65E-04	4.76E-04	3.60E-04	6.57E-05	1.66E-08	3.63E-04	5.93E-04
F25	0.00E+00	2.67E-05	2.12E-06	4.46E+01	6.61E-05	2.29E-01	3.45E-05	1.88E-02	7.51E-03	1.21E-03	3.31E-03	1.66E-03	1.69E-03	1.80E-03	2.07E-04	5.02E-08	1.62E-03	3.49E-03
F26	0.00E+00	2.83E-05	2.29E-06	5.08E+01	7.82E-05	2.69E-01	3.83E-05	1.86E-02	8.60E-03	1.37E-03	3.68E-03	1.90E-03	1.94E-03	1.81E-03	2.39E-04	5.93E-08	1.74E-03	3.45E-03
F27	0.00E+00	1.53E-04	1.11E-05	2.01E+02	2.63E-04	9.06E-01	1.75E-04	1.17E-01	3.28E-02	5.38E-03	1.71E-02	7.45E-03	7.60E-03	1.13E-02	8.96E-04	2.09E-07	9.49E-03	2.18E-02
F28	0.00E+00	1.63E-04	1.14E-05	1.91E+02	2.30E-04	7.95E-01	1.77E-04	1.29E-01	3.06E-02	5.09E-03	1.73E-02	7.06E-03	7.20E-03	1.25E-02	8.31E-04	1.88E-07	1.02E-02	2.42E-02
F29	0.00E+00	1.31E-05	1.22E-06	3.37E+01	5.94E-05	2.00E-01	2.25E-05	5.54E-03	5.85E-03	9.15E-04	2.17E-03	1.28E-03	1.31E-03	5.77E-04	1.65E-04	4.43E-08	8.57E-04	1.00E-03
F30	0.00E+00	3.14E-05	2.46E-06	5.24E+01	7.91E-05	2.70E-01	4.11E-05	2.09E-02	8.80E-03	1.41E-03	3.99E-03	1.97E-03	2.01E-03

Appendix F.5.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2041 No Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F74	0.00E+00	5.28E-05	3.69E-06	6.71E+01	6.70E-05	2.38E-01	5.56E-05	4.18E-02	7.93E-03	1.42E-03	5.42E-03	2.17E-03	2.20E-03	4.69E-03	2.89E-04	6.34E-08	3.21E-03	7.82E-03
F75	0.00E+00	4.75E-05	3.29E-06	5.87E+01	7.04E-05	2.35E-01	5.28E-05	3.56E-02	9.17E-03	1.52E-03	5.25E-03	2.10E-03	2.14E-03	3.55E-03	2.59E-04	5.92E-08	3.11E-03	6.66E-03
F76	0.00E+00	4.37E-06	4.63E-07	1.48E+01	2.75E-05	8.99E-02	9.05E-06	6.93E-04	3.84E-03	5.47E-04	8.62E-04	5.61E-04	5.75E-04	1.14E-04	7.41E-05	1.65E-08	2.87E-04	1.15E-04
F78	0.00E+00	2.88E-05	2.45E-06	5.81E+01	9.91E-05	3.23E-01	4.31E-05	1.51E-02	1.48E-02	2.14E-03	4.16E-03	2.27E-03	2.32E-03	1.32E-03	2.80E-04	6.10E-08	1.84E-03	2.80E-03
F79	0.00E+00	3.47E-05	3.22E-06	9.75E+01	1.59E-04	5.35E-01	6.00E-05	1.43E-02	1.62E-02	2.53E-03	5.79E-03	3.42E-03	3.50E-03	1.53E-03	4.80E-04	1.20E-07	2.29E-03	2.57E-03
F80	0.00E+00	6.98E-05	6.45E-06	2.04E+02	3.09E-04	1.06E+00	1.18E-04	3.15E-02	2.68E-02	4.43E-03	1.14E-02	6.70E-03	6.86E-03	3.54E-03	1.00E-03	2.57E-07	4.50E-03	5.67E-03

Appendix F.1.1: MOVES Emission Factors by Road Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.37E-05	3.66E-06	1.47E+02	2.39E-04	7.18E-01	7.60E-05	3.88E-03	1.15E-02	2.21E-03	7.41E-03	4.78E-03	4.90E-03	4.28E-04	7.44E-04	1.56E-07	2.51E-03	6.06E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	4.16E-05	4.45E-06	2.03E+02	2.77E-04	8.28E-01	8.97E-05	5.79E-03	1.20E-02	2.33E-03	8.65E-03	5.60E-03	5.74E-03	1.33E-03	1.01E-03	1.85E-07	2.91E-03	9.51E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	4.67E-05	4.90E-06	2.23E+02	2.89E-04	7.28E-01	9.54E-05	8.94E-03	1.32E-02	2.78E-03	8.64E-03	5.90E-03	6.00E-03	2.82E-03	1.10E-03	3.94E-07	2.63E-03	1.52E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.00E-03	2.81E-05	1.02E+03	8.62E-04	8.70E+00	5.90E-03	5.49E-01	3.64E-02	8.25E-03	9.21E-01	5.41E-02	5.68E-02	9.06E-02	4.36E-03	1.13E-06	8.64E-01	1.00E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.25E-03	3.19E-05	1.03E+03	1.10E-03	9.09E+00	6.24E-03	4.89E-01	2.77E-02	7.12E-03	9.68E-01	6.04E-02	6.31E-02	9.14E-02	4.40E-03	1.22E-06	9.05E-01	8.86E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	3.59E-04	1.39E-05	7.44E+02	1.93E-04	1.58E+00	3.82E-04	2.95E-01	3.31E-02	7.64E-03	4.82E-02	8.32E-03	8.52E-03	1.01E-01	2.74E-03	2.62E-07	3.97E-02	5.53E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	6.07E-03	2.59E-05	1.02E+03	1.09E-04	4.02E+00	6.99E-03	7.88E-01	3.41E-02	7.78E-03	1.11E+00	4.91E-02	5.25E-02	1.50E-01	3.63E-03	9.87E-10	1.06E+00	1.46E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.42E-04	1.26E-05	5.88E+02	2.62E-04	1.21E+00	3.88E-04	1.51E-01	2.33E-02	6.02E-03	4.91E-02	9.06E-03	9.22E-03	6.02E-02	2.38E-03	9.71E-07	3.98E-02	2.81E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.43E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.67E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.23E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.25E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.24E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.74E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.08E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.04E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.00E-01	2.79E-02	2.00E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	3.56E-05	3.87E-06	1.53E+02	2.53E-04	8.67E-01	8.03E-05	4.26E-03	8.75E-03	1.92E-03	7.83E-03	5.05E-03	5.18E-03	3.89E-04	7.74E-04	1.75E-07	2.65E-03	6.65E-04
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	4.42E-05	4.75E-06	2.13E+02	2.98E-04	1.02E+00	9.61E-05	6.17E-03	8.88E-03	2.01E-03	9.29E-03	6.01E-03	6.16E-03	1.30E-03	1.07E-03	2.07E-07	3.13E-03	1.01E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.68E-05	4.92E-06	2.31E+02	2.95E-04	8.88E-01	9.69E-05	9.03E-03	9.98E-03	2.42E-03	8.88E-03	6.01E-03	6.12E-03	2.83E-03	1.14E-03	3.99E-07	2.76E-03	1.53E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.45E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.18E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.70E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.25E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.10E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.87E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.64E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.60E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.98E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.51E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.82E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.38E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.51E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.02E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.93E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.22E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.30E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.01E-05	4.35E-06	1.61E+02	2.84E-04	1.14E+00	9.03E-05	4.75E-03	7.40E-03	1.87E-03	8.81E-03	5.68E-03	5.83E-03	3.57E-04	8.18E-04	2.10E-07	2.98E-03	7.41E-04
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.96E-05	5.33E-06	2.25E+02	3.37E-04	1.35E+00	1.08E-04	6.71E-03	7.49E-03	1.93E-03	1.05E-02	6.77E-03	6.95E-03	1.29E-03	1.13E-03	2.38E-07	3.53E-03	1.09E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.10E-05	5.37E-06	2.40E+02	3.25E-04	1.14E+00	1.06E-04	9.48E-03	8.39E-03	2.32E-03	9.83E-03	6.61E-03	6.74E-03	2.84E-03	1.18E-03	4.34E-07	3.09E-03	1.60E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.38E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.43E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.17E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.50E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.56E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.82E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.83E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.71E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.19E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.98E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.82E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.10E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.35E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.54E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.06E-05	6.62E-06	2.23E+02	4.32E-04	1.15E+00	1.37E-04	3.38E-03	8.48E-02	1.17E-02	1.34E-02	8.63E-03	8.86E-03	1.43E-03	1.10E-03	1.91E-07	4.53E-03	5.27E-04
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.31E-05	8.70E-06	2.89E+02	4.88E-04	1.13E+00	1.64E-04	9.07E-03	9.16E-02	1.24E-02	1.54E-02	1.01E-02	1.03E-02	2.72E-03	1.42E-03	1.88E-07	5.09E-03	1.59E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.50E-04	1.54E-05	3.28E+02	8.04E-04	1.06E+00	2.78E-04	1.99E-02	9.45E-02	1.34E-02	2.30E-02	1.69E-02	1.71E-02	4.75E-03	1.58E-03	5.84E-07	5.95E-03	3.56E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.85E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.39E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.87E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.42E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.21E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.05E-02	1.49E-01	4.11E-03	4.92E-07	1.70E-01	2.28E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.50E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.60E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.43E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.37E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.19E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.16E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.82E-01	2.44E-01	3.60E-02	7.22E-02	5.18E-02	5.34E-02	4.92E-02	4.78E-03	2.72E-06	1.39E-02	8.99E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.55E-03	3.04E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.74E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.50E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.58E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.17E-05	5.62E-06	1.90E+02	3.67E-04	1.03E+00	1.17E-04	3.28E-03	6.21E-02	8.73E-03	1.14E-02	7.34E-03	7.53E-03	1.07E-03	9.44E-04	1.75E-07	3.85E-03	5.12E-04
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.81E-05	7.16E-06	2.47E+02	4.10E-04	1.01E+00	1.37E-04	7.55E-03	6.57E-02	9.12E-03	1.29E-02	8.44E-03	8.65E-03	2.18E-03	1.22E-03	1.77E-07	4.28E-03	1.31E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.14E-04	1.18E-05	2.78E+02	6.25E-04	9.39E-01	2.15E-04	1.57E-02	6.90E-02	1.01E-02	1.80E-02	1.31E-02	1.32E-02	3.94E-03	1.35E-03	5.06E-07	4.79E-03	2.79E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.40E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.58E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.41E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.60E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.15E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.72E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.05E+00	3.73E-01	5.15E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.78E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.90E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.18E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.84E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.08E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.72E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.93E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.51E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.74E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.91E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.47E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.71E-05	5.12E-06	1.72E+02	3.34E-04	9.35E-01	1.06E-04	3.38E-03	4.70E-02	6.79E-03	1.04E-02	6.68E-03	6.86E-03	8.56E-04	8.57E-04	1.70E-07	3.51E-03	5.28E-04
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.01E-05	6.35E-06	2.25E+02	3.71E-04	9.27E-01	1.23E-04	6.86E-03	4.95E-02	7.07E-03	1.17E-02	7.60E-03	7.78E-03	1.88E-03	1.11E-03	1.78E-07	3.87E-03	1.17E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	6.47E-05	9.73E-06	2.54E+02	3.32E-04	8.58E-01	1.32E-04	1.05E-02	5.30E-02	7.70E-03	1.11E-02	7.12E-03	7.26E-03	3.52E-03	1.24E-03	4.71E-07	4.71E-03	1.52E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.20E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.20E-01
2	RuralR

Appendix F.1.1: MOVES Emission Factors by Road Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100km/h	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.43E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.67E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100km/h	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.23E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.25E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100km/h	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.24E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.74E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100km/h	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.08E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.04E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	21	PassengerCar	grams/mile	0.00E+00	3.56E-05	3.87E-06	1.53E+02	2.53E-04	8.67E-01	8.03E-05	4.26E-03	8.75E-03	1.92E-03	7.83E-03	5.05E-03	5.18E-03	3.89E-04	7.74E-04	1.75E-07	2.65E-03	6.65E-04
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	31	PassengerTruck	grams/mile	0.00E+00	4.42E-05	4.75E-06	2.13E+02	2.98E-04	1.02E+00	9.61E-05	6.17E-03	8.88E-03	2.01E-03	9.29E-03	6.01E-03	6.16E-03	1.30E-03	1.07E-03	2.07E-07	3.13E-03	1.01E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.68E-05	4.92E-06	2.31E+02	2.95E-04	8.88E-01	9.69E-05	9.03E-03	9.98E-03	2.42E-03	8.88E-03	6.01E-03	6.12E-03	2.83E-03	1.14E-03	3.99E-07	2.76E-03	1.53E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.45E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.18E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.70E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.25E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.10E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.87E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.64E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.60E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.98E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.51E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.81E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.38E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.51E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.02E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.93E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.22E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.30E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	21	PassengerCar	grams/mile	0.00E+00	4.01E-05	4.35E-06	1.61E+02	2.84E-04	1.14E+00	9.03E-05	4.75E-03	7.40E-03	1.87E-03	8.81E-03	5.68E-03	5.83E-03	3.57E-04	8.18E-04	2.10E-07	2.98E-03	7.41E-04
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	31	PassengerTruck	grams/mile	0.00E+00	4.96E-05	5.33E-06	2.25E+02	3.37E-04	1.35E+00	1.08E-04	6.71E-03	7.49E-03	1.93E-03	1.05E-02	6.77E-03	6.95E-03	1.29E-03	1.13E-03	2.38E-07	3.53E-03	1.09E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.10E-05	5.37E-06	2.40E+02	3.25E-04	1.14E+00	1.06E-04	9.48E-03	8.39E-03	2.32E-03	9.83E-03	6.61E-03	6.74E-03	2.84E-03	1.18E-03	4.34E-07	3.09E-03	1.60E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.38E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.43E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.17E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.50E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.56E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.82E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.83E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.71E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.19E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.98E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.82E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.32E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.10E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.35E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.54E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	21	PassengerCar	grams/mile	0.00E+00	6.32E-05	6.87E-06	2.00E+02	4.49E-04	1.16E+00	1.43E-04	4.29E-03	6.56E-02	9.29E-03	1.39E-02	8.97E-03	9.20E-03	1.07E-03	9.96E-04	2.08E-07	4.70E-03	6.69E-04
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	31	PassengerTruck	grams/mile	0.00E+00	8.19E-05	8.63E-06	2.63E+02	5.02E-04	1.15E+00	1.67E-04	9.11E-03	7.21E-02	1.02E-02	1.58E-02	1.03E-02	1.05E-02	2.32E-03	1.30E-03	2.47E-07	5.25E-03	1.57E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.29E-04	1.33E-05	2.96E+02	7.17E-04	1.05E+00	2.45E-04	1.85E-02	7.43E-02	1.10E-02	2.08E-02	1.50E-02	1.51E-02	4.32E-03	1.44E-03	6.01E-07	5.64E-03	3.27E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.40E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.58E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.42E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.60E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.54E-01	1.90E-01	3.38E-02	3.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.79E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	51	RefuseTruck	grams/mile	0.00E+00	2.02E-02	9.88E-05	1.27E+03	3.55E-04	6.04E+00	2.33E-02	2.66E+00	3.91E-01	1.50E-01	3.70E+00	1.47E-01	1.78E-01	1.86E-01	4.46E-03	1.53E-06	2.78E+00	3.73E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.90E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.18E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.84E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.08E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.72E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.93E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.51E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.74E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.91E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.47E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	21	PassengerCar	grams/mile	0.00E+00	5.45E-05	5.92E-06	1.74E+02	3.87E-04	1.09E+00	1.23E-04	3.81E-03	4.87E-02	7.06E-03	1.20E-02	7.73E-03	7.93E-03	8.56E-04	8.71E-04	1.86E-07	4.05E-03	5.94E-04
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	31	PassengerTruck	grams/mile	0.00E+00	6.96E-05	7.36E-06	2.29E+02	4.33E-04	1.07E+00	1.43E-04	7.67E-03	5.35E-02	7.72E-03	1.36E-02	8.85E-03	9.06E-03	1.95E-03	1.13E-03	2.20E-07	4.51E-03	1.31E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.10E-04	1.10E-05	2.54E+02	6.03E-04	9.80E-01	2.05E-04	1.52E-02	5.55E-02	8.44E-03	1.75E-02	1.26E-02	1.27E-02	3.70E-03	1.25E-03	5.34E-07	4.78E-03	2.68E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.20E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.20E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.09E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	1.99E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.25E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.36E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.76E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.25E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.15E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.77E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.09E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.66E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.17E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.91E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.16E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.07E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.51E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.74E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.44E+02	2.75E-02	1.03E+01	8.72E-03	6.96E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	21	PassengerCar	grams/mile	0.00E+00	4.70E-05	5.11E-06	1.65E+02	3.34E-04	9.31E-01	1.06E-04	3.82E-03	3.58E-02	5.39E-03	1.03E-02	6.67E-03	6.84E-03	7.14E-04	8.27E-04	1.78E-07	3.50E-03	5.97E-04
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	31	PassengerTruck	grams/mile	0.00E+00	5.91E-05	6.27E-06	2.20E+02	3.74E-04	9.43E-01	1.23E-04	6.97E-03	3.90E-02	5.86E-03	1.17E-02	7.62E-03	7.80E-03	1.74E-03	1.09E-03	2.13E-07	3.90E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.46E-05	8.77E-06	2.46E+02	4.86E-04	8.57E-01	1.64E-04	1.30E-02	4.07E-02	6.51E-03	1.42E-02	1.01E-02	1.02E-02	3.41E-03	1.20E-03	4.88E-07	3.98E-03	2.27E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.09E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.67E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.70E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.59E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.72E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.07E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.41E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.07E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.75E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.75E+02	5.24E-04	1.01E+00	8.60E-04	3.01E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.73E-07	8.55E-02	5.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.34E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.35E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.59E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.00E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.86E

Appendix F.1.1: MOVES Emission Factors by Road Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.38E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.43E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.17E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.50E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.56E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.82E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.83E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.25E-04	1.46E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.71E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.19E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.98E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.82E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.10E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.35E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.54E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.09E-05	6.62E-06	2.23E+02	4.32E-04	1.15E+00	1.37E-04	3.38E-03	8.48E-02	1.17E-02	1.34E-02	8.63E-03	8.86E-03	1.43E-03	1.10E-03	1.91E-07	4.53E-03	5.27E-04
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.31E-05	8.70E-06	2.89E+02	4.88E-04	1.13E+00	1.64E-04	9.07E-03	9.16E-02	1.24E-02	1.54E-02	1.01E-02	1.03E-02	2.72E-03	1.42E-03	1.88E-07	5.09E-03	1.59E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.50E-04	1.54E-05	3.28E+02	8.04E-04	1.06E+00	2.78E-04	1.99E-02	9.45E-02	1.34E-02	2.30E-02	1.69E-02	1.71E-02	4.75E-03	1.58E-03	5.84E-07	5.95E-03	3.56E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.85E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.39E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.87E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.42E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.21E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.25E-02	1.49E-01	4.11E-03	1.70E-01	4.92E-01	2.28E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.50E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.60E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.43E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.37E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.19E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.19E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.82E-01	2.44E-01	3.68E-02	7.22E-02	5.85E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.38E-02	8.99E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.55E-03	3.04E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.74E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.50E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.58E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.17E-05	5.62E-06	1.90E+02	3.67E-04	1.03E+00	1.17E-04	3.28E-03	6.21E-02	8.73E-03	1.14E-02	7.34E-03	7.53E-03	1.07E-03	9.44E-04	1.75E-07	3.85E-03	5.12E-04
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.81E-05	7.14E-06	2.47E+02	4.10E-04	1.01E+00	1.37E-04	7.55E-03	6.57E-02	9.12E-03	1.29E-02	8.44E-03	8.65E-03	2.18E-03	1.22E-03	1.77E-07	4.28E-03	1.32E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.14E-04	1.18E-05	2.78E+02	6.25E-04	9.39E-01	2.15E-04	1.57E-02	6.90E-02	1.01E-02	1.80E-02	1.31E-02	1.32E-02	3.94E-03	1.35E-03	5.06E-07	4.79E-03	2.79E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.40E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.58E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.41E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.60E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.15E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.72E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.05E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.78E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.90E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.18E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.84E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.08E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.72E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.93E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.51E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.74E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.91E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.47E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.71E-05	5.12E-06	1.72E+02	3.34E-04	9.35E-01	1.06E-04	3.38E-03	4.70E-02	6.79E-03	1.04E-02	6.68E-03	6.86E-03	8.56E-04	8.57E-04	1.70E-07	3.51E-03	5.28E-04
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.01E-05	6.35E-06	2.25E+02	3.71E-04	9.27E-01	1.23E-04	6.86E-03	4.95E-02	7.07E-03	1.17E-02	7.60E-03	7.78E-03	1.88E-03	1.11E-03	1.78E-07	3.87E-03	1.17E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	9.47E-05	9.79E-06	2.54E+02	5.32E-04	8.58E-01	1.81E-04	1.37E-02	5.28E-02	7.96E-03	1.54E-02	1.11E-02	1.12E-02	3.52E-03	1.24E-03	4.71E-07	4.18E-03	2.41E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.20E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.20E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.34E-02	6.55E-05	1.16E+03	1.11E-03	5.09E+00	1.56E-02	1.21E+00	1.95E-01	2.99E-02	2.47E+00	1.24E-01	1.32E-01	1.12E-01	4.84E-03	1.52E-06	2.33E+00	2.22E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.15E-03	5.52E-05	9.28E+02	3.12E-04	1.15E+00	1.09E-03	7.65E-01	2.08E-01	3.44E-02	1.30E-01	2.39E-02	2.47E-02	1.25E-01	3.43E-03	3.80E-07	1.05E-01	1.44E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.76E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.25E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.78E-05	6.67E+02	6.85E-04	1.03E+00	1.06E-03	4.15E-01	1.24E-01	1.92E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.13E-06	9.79E-02	7.79E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.09E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.66E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.17E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.91E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.16E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.07E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.51E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.74E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.24E-05	4.61E-06	1.64E+02	3.01E-04	8.45E-01	9.56E-05	3.57E-03	3.53E-02	5.30E-03	9.32E-03	6.01E-03	6.17E-03	7.14E-04	8.23E-04	1.68E-07	3.15E-03	5.57E-04
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.34E-05	5.66E-06	2.18E+02	3.37E-04	8.65E-01	1.11E-04	6.50E-03	3.75E-02	5.57E-03	1.06E-02	6.87E-03	7.04E-03	1.71E-03	1.08E-03	1.83E-07	3.52E-03	1.10E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	7.78E-05	8.06E-06	2.45E+02	4.46E-04	7.95E-01	1.51E-04	1.21E-02	3.99E-02	6.29E-03	1.30E-02	9.25E-03	9.36E-03	3.31E-03	1.20E-03	4.47E-07	3.63E-03	2.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.08E-01	1.71E-01	2.51E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.94E+00	1.87E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.10E-02	4.94E-05	1.03E+03	9.70E-04	5.43E+00	1.29E-02	9.00E-01	1.37E-01	2.17E-02	2.03E+00	1.02E-01	1.08E-01	9.77E-02	4.34E-03	1.34E-06	1.92E+00	1.65E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.78E-04	3.89E-05	7.97E+02	2.65E-04	1.20E+00	8.54E-04	5.59E-01	1.45E-01	2.37E-02	1.05E-01	1.80E-02	1.86E-02	1.07E-01	2.94E-03	3.06E-07	8.64E-02	1.05E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.41E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.07E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.75E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.01E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.64E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.34E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.35E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.59E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.00E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.86E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.50E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.86E-03	4.20E-04	3.61E+02	2.62E-02	1.12E+01	8.32E-03	8.31E-01	3.98E-02	1.95E-02	6.08E-01	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.41E-06	8.87E-02	3.00E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	3.90E-05	4.24E-06	1.59E+02	2.77E-04	7.80E-01	8.79E-05	3.70E-03	2.73E-02	4.27E-03	8.57E-03	5.53E-03	5.67E-03	6.12E-04	7.98E-04	1.66E-07	2.90E-03	5.78E-04
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	4.86E-05	5.17E-06	2.14E+02	3.12E-04	8.21E-01	1.02E-04	6.24E-03	2.91E-02	4.53E-03	9.77E-03	6.35E-03	6.50E-03	1.59E-03	1.06E-03	1.86E-07	3.26E-03	1.05E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.57E-05	6.83E-06	2.39E+02	3.84E-04	7.50E-01	1.29E-04	1.10E-02	3.09E-02	5.13E-03	1.13E-02	7.94E-03	8.05E-03	3.16E-03	1.17E-03	4.29E-07	3.24E-03	1.90E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.52E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.38E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.09E-03	3.95E-05	1.01E+03	8.78E-04	5.76E+00	1.06E-02	7.30E-01	8.80E-02	1.53E-02	1.68E+00	8.52E-02	9.01E-02	9.39E-02	4.24E-03	1.32E-06	1.59E+00	1.34E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.83E-04	2.87E-05	7.58E+02	2.21E-04	1.23E+00	6.78E-04	4.53E-01	9.93E-02	1.70E-02	8.47E-02	1.39E-02	1.44E-02	1.02E-01	2.80E-03	2.79E-07	7.04E-02	8.52E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.10E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/m

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.32E-05	6.87E-06	2.00E+02	4.49E-04	1.16E+00	1.43E-04	4.29E-03	6.56E-02	9.29E-03	1.39E-02	8.97E-03	9.20E-03	1.07E-03	9.96E-04	2.08E-07	4.70E-03	6.69E-04
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.19E-05	8.63E-06	2.63E+02	5.02E-04	1.15E+00	1.67E-04	9.11E-03	7.21E-02	1.02E-02	1.58E-02	1.03E-02	1.05E-02	2.32E-03	1.30E-03	2.47E-07	5.25E-03	1.57E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.29E-04	1.33E-05	2.96E+02	7.17E-04	1.05E+00	2.45E-04	1.85E-02	7.43E-02	1.10E-02	2.08E-02	1.50E-02	1.51E-02	4.32E-03	1.44E-03	6.01E-07	5.64E-03	3.27E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.40E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.58E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.42E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.60E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.54E-01	1.90E-01	3.38E-02	1.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.79E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.05E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.78E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.90E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.18E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.84E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.08E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.72E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.93E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.51E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.74E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.91E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.47E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.45E-05	5.92E-06	1.74E+02	3.87E-04	1.09E+00	1.23E-04	3.81E-03	4.87E-02	7.07E-03	1.20E-02	7.73E-03	7.93E-03	8.56E-04	8.71E-04	1.86E-07	4.05E-03	5.94E-04
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.96E-05	7.36E-06	2.29E+02	4.33E-04	1.07E+00	1.43E-04	7.67E-03	5.35E-02	7.72E-03	1.36E-02	8.85E-03	9.06E-03	1.95E-03	1.13E-03	2.20E-07	4.51E-03	1.31E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.07E-04	1.10E-05	2.56E+02	6.03E-04	9.80E-01	2.05E-04	1.52E-02	5.55E-02	8.46E-03	1.75E-02	1.26E-02	1.27E-02	3.70E-03	1.25E-03	5.34E-07	4.78E-03	2.68E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.20E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.20E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.09E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	1.99E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.25E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.36E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.76E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.25E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.15E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.77E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.09E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.66E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.17E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.91E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.16E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.07E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.51E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.74E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.61E-05	5.01E-06	1.64E+02	3.27E-04	9.25E-01	1.04E-04	3.71E-03	3.64E-02	5.44E-03	1.01E-02	6.54E-03	6.71E-03	7.14E-04	8.23E-04	1.73E-07	3.43E-03	5.78E-04
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.85E-05	6.20E-06	2.19E+02	3.69E-04	9.46E-01	1.21E-04	6.88E-03	3.97E-02	5.90E-03	1.16E-02	7.52E-03	7.71E-03	1.74E-03	1.08E-03	2.01E-07	3.85E-03	1.17E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.44E-05	8.75E-06	2.45E+02	4.84E-04	8.60E-01	1.64E-04	1.29E-02	4.14E-02	6.55E-03	1.41E-02	1.00E-02	1.02E-02	3.40E-03	1.19E-03	4.75E-07	3.95E-03	2.25E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.09E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.67E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.70E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.59E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.72E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.07E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.41E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.07E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.75E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.01E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.64E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.34E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.35E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.59E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.00E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.86E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.50E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.02E-05	4.37E-06	1.57E+02	2.85E-04	8.11E-01	9.07E-05	3.64E-03	2.77E-02	4.32E-03	8.85E-03	5.70E-03	5.85E-03	6.12E-04	7.89E-04	1.64E-07	2.99E-03	5.68E-04
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	5.06E-05	5.37E-06	2.11E+02	3.24E-04	8.56E-01	1.06E-04	6.32E-03	3.00E-02	4.64E-03	1.01E-02	6.59E-03	6.75E-03	1.60E-03	1.05E-03	1.88E-07	3.39E-03	1.06E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.85E-05	7.12E-06	2.36E+02	3.99E-04	7.76E-01	1.34E-04	1.12E-02	3.15E-02	5.21E-03	1.17E-02	8.26E-03	8.37E-03	3.19E-03	1.15E-03	4.33E-07	3.36E-03	1.95E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.52E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.38E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.25E-03	3.84E-05	1.06E+03	9.20E-04	6.72E+00	9.67E-03	7.13E-01	7.10E-02	1.33E-02	1.52E+00	7.97E-02	8.42E-02	9.82E-02	4.50E-03	1.39E-06	1.44E+00	1.30E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.42E-04	2.74E-05	8.14E+02	2.14E-04	1.32E+00	6.36E-04	4.62E-01	7.73E-02	1.48E-02	7.91E-02	1.33E-02	1.37E-02	1.10E-01	3.00E-03	2.97E-07	6.54E-02	8.68E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.10E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.34E-04	2.57E-05	5.90E+02	4.25E-04	1.07E+00	6.89E-04	2.51E-01	5.72E-02	1.05E-02	8.54E-02	1.63E-02	1.66E-02	5.99E-02	2.40E-03	9.69E-07	6.88E-02	4.69E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.25E-04	2.52E-05	5.67E+02	4.14E-04	1.02E+00	6.80E-04	2.45E-01	5.94E-02	1.06E-02	8.45E-02	1.59E-02	1.63E-02	5.73E-02	2.31E-03	9.26E-07	6.82E-02	4.58E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	2.71E-04	2.64E-05	7.23E+02	9.60E-04	2.27E+00	3.91E-04	1.94E-01	6.44E-02	1.23E-02	2.76E-02	2.24E-02	2.24E-02	3.54E-02	3.44E-03	1.93E-06	5.22E-03	3.60E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	9.26E-04	6.89E-05	1.25E+03	2.35E-06	1.34E+00	6.60E-04	1.38E+00	1.31E-01	2.18E-02	5.56E-02	2.01E-02	2.08E-02	1.99E-01	4.19E-03	0.00E+00	3.47E-02	2.59E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.39E-03	7.93E-05	1.29E+03	8.74E-06	1.75E+00	1.15E-03	1.61E+00	1.49E-01	2.25E-02	1.27E-01	2.55E-02	2.65E-02	2.07E-01	4.32E-03	0.00E+00	1.00E-01	3.04E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	3.75E-05	4.07E-06	1.53E+02	2.66E-04	7.75E-01	8.45E-05	3.73E-03	1.96E-02	3.29E-03	8.24E-03	5.31E-03	5.45E-03	5.35E-04	7.68E-04	1.64E-07	2.79E-03	5.82E-04
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	4.61E-05	4.91E-06	2.06E+02	3.00E-04	8.17E-01	9.76E-05	6.01E-03	2.09E-02	3.47E-03	9.37E-03	6.08E-03	6.23E-03	1.48E-03	1.03E-03	1.87E-07	3.14E-03	1.00E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	5.82E-05	6.07E-06	2.28E+02	3.46E-04	7.33E-01	1.16E-04	1.01E-02	2.24E-02	4.02E-03	1.02E-02	7.13E-03	7.24E-03	3.00E-03	1.12E-03	4.13E-07	3.01E-03	1.74E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.06E-03	2.93E-05	9.83E+02	6.70E-04	6.09E+00	8.27E-03	6.35E-01	7.31E-02	1.33E-02	1.31E+00	6.57E-02	6.95E-02	9.09E-02	4.17E-03	1.23E-06	1.24E+00	1.16E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.01E-03	3.19E-05	1.03E+03	8.67E-04	6.81E+00	8.24E-03	5.94E-01	5.08E-02	1.05E-02	1.30E+00	6.90E-02	7.27E-02	9.39E-02	4.35E-03	1.35E-06	1.22E+00	1.08E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	5.13E-04	2.09E-05	7.77E+02	1.89E-04	1.31E+00	5.18E-04	3.81E-01	5.78E-02	1.15E-02	6.52E-02	1.07E-02	1.10E-02	1.05E-01	2.86E-03	2.77E-07	5.42E-02	7.14E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.85E-03	3.88E-05	1.02E+03	1.56E-04	4.17E+00	1.02E-02	9.46E-01	8.56E-02	1.46E-02	1.62E+00	7.18E-02	7.68E-02	1.50E-01	3.63E-03	9.59E-10	1.54E+00	1.75E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.94E-04	1.93E-05	5.90E+02	3.35E-04	1.07E+00	5.43E-04	2.04E-01	4.04E-02	8.27E-03	6.80E-02	1.26E-02	1.28E-02	6.00E-02	2.40E-03	9.51E-07	5.52E-02	3.82E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.87E-04	1.88E-05	5.65E+02	3.24E-04	1.01E+00	5.35E-04	1.98E-01	4.21E-02	8.32E-03	6.73E-02	1.23E-02	1.25E-02	5.72E-02	2.30E-03	8.98E-07	5.48E-02	3.70E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	2.12E-04	2.09E-05	7.20E+02	7.93E-04	2.40E+00	3.16E-04	1.60E-01	4.51E-02	9.79E-03	2.24E-02	1.83E-02	1.82E-02	3.52E-02	3.42E-03	1.93E-06	4.15E-03	2.96E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.42E-04	5.49E-05	1.21E+03	1.94E-06	1.13E+00	5.30E-04	1.14E+00	8.59E-02	1.56E-02	4.50E-02	1.60E-02	1.66E-02	1.92E-01	4.04E-03	0.00E+00	2.84E-02	2.14E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	6.40E-05	1.23E+03	7.21E-06	1.47E+00	9.35E-04	1.33E+00	9.74E-02	1.56E-02	1.04E-01	2.06E-02	2.15E-02	1.97E-01	4.12E-03	0.00E+00	8.24E-02	2.51E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	3.56E-05	3.87E-06	1.50E+02	2.53E-04	7.67E-01	8.03E-05	3.85E-03	1.46E-02	2.64E-03	7.83E-03	5.05E-03	5.18E-03	4.76E-04	7.57E-04	1.65E-07	2.65E-03	6.00E-04
5	UrbanUnrestrictedA

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1508	0.00E+00	1.49E-05	1.62E-06	6.40E+01	1.06E-04	3.63E-01	3.36E-05	1.79E-03	3.66E-03	8.03E-04	3.28E-03	2.12E-03	2.17E-03	1.63E-04	3.24E-04	7.33E-08	1.11E-03	2.79E-04
17	A01	110	Passenger Truck	2526	0.00E+00	3.10E-05	3.33E-06	1.49E+02	2.09E-04	7.17E-01	6.74E-05	4.33E-03	6.23E-03	1.41E-03	6.52E-03	4.21E-03	4.32E-03	9.14E-04	7.50E-04	1.45E-07	2.19E-03	7.06E-04
17	A01	110	Single Unit Short Haul Truck	477	0.00E+00	4.39E-05	1.78E-06	8.19E+01	4.00E-05	1.98E-01	5.04E-05	2.12E-02	2.64E-03	7.78E-04	6.17E-03	1.30E-03	1.32E-03	8.51E-03	3.30E-04	1.47E-07	4.86E-03	3.95E-03
17	A01	110	Single Unit Long Haul Truck	21	0.00E+00	1.90E-06	7.39E-08	3.43E+00	1.61E-06	7.85E-03	2.17E-06	8.82E-04	1.18E-04	3.35E-05	2.69E-04	5.35E-05	5.43E-05	3.55E-04	1.38E-05	5.98E-09	2.15E-04	1.64E-04
17	A01	110	Combination Short Haul Truck	246	0.00E+00	4.38E-05	3.38E-06	8.66E+01	8.51E-08	6.41E-02	3.04E-05	6.99E-02	2.16E-03	6.32E-04	2.41E-03	9.73E-04	1.01E-03	1.38E-02	2.90E-04	0.00E+00	1.40E-03	1.32E-02
17	A01	110	Combination Long Haul Truck	225	0.00E+00	5.93E-05	3.76E-06	7.81E+01	2.89E-07	7.39E-02	4.63E-05	7.61E-02	2.10E-03	4.61E-04	4.71E-03	1.16E-03	1.21E-03	1.25E-02	2.62E-04	0.00E+00	3.50E-03	1.43E-02
17	A02	110	Passenger Car	1676	0.00E+00	1.66E-05	1.80E-06	7.12E+01	1.18E-04	4.04E-01	3.74E-05	1.98E-03	4.07E-03	8.93E-04	3.65E-03	2.35E-03	2.41E-03	1.81E-04	3.61E-04	8.15E-08	1.23E-03	3.10E-04
17	A02	110	Passenger Truck	2808	0.00E+00	3.45E-05	3.70E-06	1.66E+02	2.33E-04	7.96E-01	7.49E-05	4.81E-03	6.93E-03	1.57E-03	7.24E-03	4.69E-03	4.80E-03	1.02E-03	8.33E-04	1.61E-07	2.44E-03	7.85E-04
17	A02	110	Single Unit Short Haul Truck	465	0.00E+00	4.29E-05	1.74E-06	7.99E+01	3.90E-05	1.93E-01	4.92E-05	2.07E-02	2.58E-03	7.59E-04	6.03E-03	1.26E-03	1.28E-03	8.31E-03	3.22E-04	1.43E-07	4.74E-03	3.85E-03
17	A02	110	Single Unit Long Haul Truck	21	0.00E+00	1.85E-06	7.21E-08	3.35E+00	1.57E-06	7.66E-03	2.11E-06	8.61E-04	1.16E-04	3.26E-05	2.62E-04	5.22E-05	5.30E-05	3.47E-04	1.35E-05	5.84E-09	2.09E-04	1.60E-04
17	A02	110	Combination Short Haul Truck	230	0.00E+00	4.09E-05	3.16E-06	8.09E+01	7.95E-08	5.99E-02	2.84E-05	6.53E-02	2.02E-03	5.90E-04	2.25E-03	9.09E-04	9.43E-04	1.29E-02	2.70E-04	0.00E+00	1.31E-03	1.23E-02
17	A02	110	Combination Long Haul Truck	210	0.00E+00	5.54E-05	3.52E-06	7.30E+01	2.70E-07	6.91E-02	4.33E-05	7.11E-02	1.96E-03	4.31E-04	4.40E-03	1.08E-03	1.13E-03	1.17E-02	2.45E-04	0.00E+00	3.27E-03	1.34E-02
17	A03	110	Passenger Car	1638	0.00E+00	1.62E-05	1.76E-06	6.96E+01	1.15E-04	3.95E-01	3.65E-05	1.94E-03	3.98E-03	8.73E-04	3.56E-03	2.30E-03	2.36E-03	1.77E-04	3.52E-04	7.96E-08	1.21E-03	3.03E-04
17	A03	110	Passenger Truck	2744	0.00E+00	3.37E-05	3.62E-06	1.62E+02	2.27E-04	7.78E-01	7.32E-05	4.70E-03	6.77E-03	1.53E-03	7.08E-03	4.58E-03	4.70E-03	9.93E-04	8.14E-04	1.58E-07	2.38E-03	7.67E-04
17	A03	110	Single Unit Short Haul Truck	456	0.00E+00	4.20E-05	1.70E-06	7.83E+01	3.82E-05	1.89E-01	4.82E-05	2.02E-02	2.52E-03	7.44E-04	5.90E-03	1.24E-03	1.26E-03	8.14E-03	3.15E-04	1.40E-07	4.64E-03	3.77E-03
17	A03	110	Single Unit Long Haul Truck	20	0.00E+00	1.81E-06	7.06E-08	3.28E+00	1.54E-06	7.50E-03	2.07E-06	8.43E-04	1.13E-04	3.20E-05	2.57E-04	5.11E-05	5.19E-05	3.39E-04	1.32E-05	5.72E-09	2.05E-04	1.57E-04
17	A03	110	Combination Short Haul Truck	230	0.00E+00	4.09E-05	3.16E-06	8.09E+01	7.95E-08	5.99E-02	2.84E-05	6.53E-02	2.02E-03	5.90E-04	2.25E-03	9.09E-04	9.43E-04	1.29E-02	2.70E-04	0.00E+00	1.31E-03	1.23E-02
17	A03	110	Combination Long Haul Truck	210	0.00E+00	5.54E-05	3.52E-06	7.30E+01	2.70E-07	6.91E-02	4.33E-05	7.11E-02	1.96E-03	4.31E-04	4.40E-03	1.08E-03	1.13E-03	1.17E-02	2.45E-04	0.00E+00	3.27E-03	1.34E-02
17	A04	110	Passenger Car	1977	0.00E+00	1.96E-05	2.13E-06	8.40E+01	1.39E-04	4.76E-01	4.41E-05	2.34E-03	4.80E-03	1.05E-03	4.30E-03	2.77E-03	2.85E-03	2.14E-04	4.25E-04	9.61E-08	1.46E-03	3.65E-04
17	A04	110	Passenger Truck	3312	0.00E+00	4.07E-05	4.36E-06	1.96E+02	2.74E-04	9.39E-01	8.84E-05	5.67E-03	8.17E-03	1.85E-03	8.54E-03	5.53E-03	5.67E-03	1.20E-03	9.83E-04	1.90E-07	2.88E-03	9.26E-04
17	A04	110	Single Unit Short Haul Truck	475	0.00E+00	4.37E-05	1.77E-06	8.16E+01	3.99E-05	1.97E-01	5.02E-05	2.11E-02	2.63E-03	7.75E-04	6.15E-03	1.29E-03	1.31E-03	8.48E-03	3.28E-04	1.46E-07	4.84E-03	3.93E-03
17	A04	110	Single Unit Long Haul Truck	21	0.00E+00	1.89E-06	7.36E-08	3.42E+00	1.60E-06	7.82E-03	2.16E-06	8.78E-04	1.18E-04	3.33E-05	2.68E-04	5.33E-05	5.41E-05	3.54E-04	1.38E-05	5.96E-09	2.14E-04	1.64E-04
17	A04	110	Combination Short Haul Truck	222	0.00E+00	3.94E-05	3.04E-06	7.79E+01	7.66E-08	5.77E-02	2.74E-05	6.30E-02	1.95E-03	5.69E-04	2.17E-03	8.75E-04	9.08E-04	1.24E-02	2.61E-04	0.00E+00	1.26E-03	1.19E-02
17	A04	110	Combination Long Haul Truck	202	0.00E+00	5.34E-05	3.39E-06	7.04E+01	2.60E-07	6.66E-02	4.17E-05	6.85E-02	1.89E-03	4.15E-04	4.24E-03	1.04E-03	1.09E-03	1.13E-02	2.36E-04	0.00E+00	3.15E-03	1.29E-02
17	A05	110	Passenger Car	1478	0.00E+00	1.46E-05	1.59E-06	6.27E+01	1.04E-04	3.56E-01	3.30E-05	1.75E-03	3.59E-03	7.87E-04	3.21E-03	2.07E-03	2.13E-03	1.60E-04	3.18E-04	7.18E-08	1.09E-03	2.73E-04
17	A05	110	Passenger Truck	2474	0.00E+00	3.04E-05	3.26E-06	1.46E+02	2.05E-04	7.02E-01	6.60E-05	4.24E-03	6.11E-03	1.38E-03	6.38E-03	4.13E-03	4.23E-03	8.96E-04	7.34E-04	1.42E-07	2.15E-03	6.92E-04
17	A05	110	Single Unit Short Haul Truck	358	0.00E+00	3.30E-05	1.34E-06	6.15E+01	3.00E-05	1.48E-01	3.79E-05	1.59E-02	1.98E-03	5.84E-04	4.64E-03	9.73E-04	9.88E-04	6.39E-03	2.48E-04	1.10E-07	3.65E-03	2.96E-03
17	A05	110	Single Unit Long Haul Truck	16	0.00E+00	1.42E-06	5.55E-08	2.58E+00	1.21E-06	5.89E-03	1.63E-06	6.62E-04	8.90E-05	2.51E-05	2.02E-04	4.02E-05	4.08E-05	2.67E-04	1.04E-05	4.49E-09	1.61E-04	1.23E-04
17	A05	110	Combination Short Haul Truck	186	0.00E+00	3.30E-05	2.55E-06	6.53E+01	6.41E-08	4.83E-02	2.29E-05	5.27E-02	1.63E-03	4.76E-04	1.82E-03	7.33E-04	7.61E-04	1.04E-02	2.18E-04	0.00E+00	1.06E-03	9.93E-03
17	A05	110	Combination Long Haul Truck	169	0.00E+00	4.47E-05	2.84E-06	5.89E+01	2.18E-07	5.57E-02	3.49E-05	5.73E-02	1.58E-03	3.48E-04	3.55E-03	8.74E-04	9.09E-04	9.45E-03	1.97E-04	0.00E+00	2.64E-03	1.08E-02
17	A06	110	Passenger Car	1587	0.00E+00	1.57E-05	1.71E-06	6.74E+01	1.11E-04	3.82E-01	3.54E-05	1.88E-03	3.86E-03	8.45E-04	3.45E-03	2.23E-03	2.28E-03	1.72E-04	3.41E-04	7.71E-08	1.17E-03	2.93E-04
17	A06	110	Passenger Truck	2657	0.00E+00	3.26E-05	3.50E-06	1.57E+02	2.20E-04	7.54E-01	7.09E-05	4.55E-03	6.56E-03	1.48E-03	6.86E-03	4.43E-03	4.55E-03	9.62E-04	7.89E-04	1.53E-07	2.31E-03	7.43E-04
17	A06	110	Single Unit Short Haul Truck	345	0.00E+00	3.18E-05	1.29E-06	5.92E+01	2.89E-05	1.43E-01	3.64E-05	1.53E-02	1.91E-03	5.62E-04	4.46E-03	9.37E-04	9.51E-04	6.15E-03	2.38E-04	1.06E-07	3.51E-03	2.85E-03
17	A06	110	Single Unit Long Haul Truck	15	0.00E+00	1.37E-06	5.34E-08	2.48E+00	1.16E-06	5.67E-03	1.57E-06	6.37E-04	8.57E-05	2.42E-05	1.94E-04	3.87E-05	3.93E-05	2.57E-04	1.00E-05	4.33E-09	1.55E-04	1.19E-04
17	A06	110	Combination Short Haul Truck	168	0.00E+00	2.98E-05	2.30E-06	5.90E+01	5.80E-08	4.37E-02	2.07E-05	4.77E-02	1.47E-03	4.31E-04	1.64E-03	6.63E-04	6.88E-04	9.38E-03	1.97E-04	0.00E+00	9.55E-04	8.98E-03
17	A06	110	Combination Long Haul Truck	153	0.00E+00	4.04E-05	2.56E-06	5.33E+01	1.97E-07	5.04E-02	3.16E-05	5.18E-02	1.43E-03	3.14E-04	3.21E-03	7.90E-04	8.22E-04	8.55E-03	1.78E-04	0.00E+00	2.39E-03	9.76E-03
17	A07	110	Passenger Car	1144	0.00E+00	1.13E-05	1.23E-06	4.86E+01	8.03E-05	2.75E-01	2.55E-05	1.35E-03	2.78E-03	6.09E-04	2.49E-03	1.60E-03	1.65E-03	1.24E-04	2.46E-04	5.56E-08	8.42E-04	2.11E-04
17	A07	110	Passenger Truck	1915	0.00E+00	2.35E-05	2.52E-06	1.13E+02	1.59E-04	5.43E-01	5.11E-05	3.28E-03	4.73E-03	1.07E-03	4.94E-03	3.20E-03	3.28E-03	6.93E-04	5.68E-04	1.10E-07	1.66E-03	5.36E-04
17	A07	110	Single Unit Short Haul Truck	374	0.00E+00	3.45E-05	1.40E-06	6.43E+01	3.14E-05	1.55E-01	3.96E-05	1.66E-02	2.07E-03	6.11E-04	4.85E-03	1.02E-03	1.03E-03	6.68E-03	2.59E-04	1.15E-07	3.82E-03	3.10E-03
17	A07	110	Single Unit Long Haul Truck	17	0.00E+00	1.49E-06	5.80E-08	2.69E+00	1.26E-06	6.16E-03	1.70E-06	6.92E-04	9.30E-05	2.63E-05	2.11E-04	4.20E-05	4.27E-05	2.79E-04	1.09E-05	4.70E-09	1.69E-04	1.29E-04
17	A07	110	Combination Short Haul Truck	206	0.00E+00	3.65E-05	2.82E-06	7.22E+01	7.10E-08	5.35E-02	2.54E-05	5.84E-02	1.80E-03	5.27E-04	2.01E-03	8.11E-04	8.42E-04	1.15E-02	2.42E-04	0.00E+00	1.17E-03	1.10E-02
17	A07	110	Combination Long Haul Truck	187	0.00E+00	4.95E-05	3.14E-06	6.52E+01	2.41E-07	6.17E-02	3.86E-05	6.35E-02	1.75E-03	3.85E-04	3.93E-03	9.68E-04	1.01E-03	1.05E-02	2.18E-04	0.00E+00	2.92E-03	1.20E-02
17	A08	110	Passenger Car	1536	0.00E+00	1.52E-05	1.65E-06	6.52E+01	1.08E-04	3.70E-01	3.43E-05	1.82E-03	3.73E-03	8.18E-04	3.34E-03	2.15E-03	2.21E-03	1.66E-04	3.30E-04	7.46E-08	1.13E-03	2.84E-04
17	A08	110	Passenger Truck	2572	0.00E+00	3.16E-05	3.39E-06	1.52E+02	2.13E-04	7.30E-01	6.87E-05	4.41E-03	6.35E-03	1.43E-03	6.64E-03	4.29E-03	4.40E-03	9.31E-04	7.63E-04	1.48E-07	2.23E-03	7.19E-04
17	A08	110	Single Unit Short Haul Truck	336	0.00E+00	3.10E-05	1.25E-06	5.77E+01	2.82E-05	1.39E-01	3.55E-05	1.49E-02	1.86E-03	5.48E-04	4.35E-03	9.14E-04	9.27E-04	6.00E-03	2.32E-04	1.03E-07	3.42E-03	2.78E-03
17	A08	110	Single Unit Long Haul Truck	15	0.00E+00	1.34E-06	5.21E-08	2.42E+00	1.13E-06	5.53E-03	1.53E-06	6.22E-04	8.35E-05	2.36E-05	1.90E-04	3.77E-05	3.83E-05	2.50E-04	9.75E-06	4.22E-09	1.51E-04	1.16E-04
17	A08	110	Combination Short Haul Truck	174	0.00E+00	3.10E-05	2.39E-06	6.12E+01	6.02E-08	4.54E-02	2.15E-05	4.94E-02	1.53E-03	4.47E-04	1.70E-03	6.88E-04	7.13E-04	9.73E-03	2.05E-04	0.00E+00	9.91E-04	9.32E-03
17	A08	110	Combination Long Haul Truck	159	0.00E+00	4.19E-05	2.66E-06	5.53E+01	2.04E-07	5.23E-02	3.27E-05	5.38E-02	1.48E-03	3.26E-04	3.33E-03	8.20E-04	8.53E-04	8.86E-03	1.85E-04	0.00E+00	2.47E-03	1.01E-02
17	A09	110	Passenger Car	1465	0.00E+00	1.45E-05	1.58E-06	6.22E+01	1.03E-04	3.53E-01	3.27E-05	1.73E-03	3.56E-03	7.80E-04	3.19E-03	2.06E-03	2.11E-03	1.58E-04	3.15E-04	7.12E-08	1.08E-03	2.71E-04
17	A09	110	Passenger Truck	2454	0.00E+00	3.01E-05	3.23E-06	1.45E+02	2.03E-04	6.96E-01	6.55E-05	4.20E-03	6.05E-03	1.37E-03	6.33E-03	4.09E-03	4.20E-03	8.88E-04	7.28E-04	1.41E-07	2.13E-03	6.86E-04
17	A09	110	Single Unit Short Haul Truck	477	0.00E+00	4.39E-05	1.78E-06	8.19E+01	4.00E-05	1.98E-01	5.04E-05	2.12E-02	2.64E-03	7.78E-04	6.17E-03	1.30E-03	1.32E-03	8.51E-03	3.30E-04	1.47E-07	4.86E-03	3.95E-03
17	A09	110	Single Unit Long Haul Truck	21	0.00E+00	1.90E-06	7.39E-08	3.43E+00	1.61E-06	7.85E-03	2.17E-06	8.82E-04	1.18E-04	3.35E-05	2.69E-04	5.35E-05	5.43E-05	3.55E-04	1.38E-05	5.98E-09	2.15E-04	1.64E-04
17	A09	110	Combination Short Haul Truck	264	0.00E+00	4.69E-05	3.62E-06	9.27E+01	9.11E-08	6.86E-02	3.26E-05	7.48E-02	2.31E-03	6.76E-04	2.58E-03	1.04E-03	1.08E-03	1.47E-02	3.10E-04	0.00E+00	1.50E-03	1.41E-02
17	A09	110	Combination Long Haul Truck	240	0.00E+00	6.35E-05	4.03E-06	8.36E+01	3.09E-07	7.91E-02	4.96E-05	8.14E-02	2.25E-03	4.94E-04	5.04E-03	1.24E-03	1.29E-03	1.34E-02	2.80E-04	0.00E+00	3.75E-03	1.53E-02
17	A10	110	Passenger Car	1527	0.00E+00	1.51E-05	1.64E-06	6.48E+01	1.07E-04	3.68E-01	3.41E-05	1.81E-03	3.71E-03	8.13E-04	3.32E-03	2.14E-03	2.20E-03	1.65E-04	3.28E-04	7.42E-08	1.12E-03	2.82E-04
17	A10	110	Passenger Truck	2558	0.00E+00	3.14E-05	3.37E-06	1.51E+02	2.12E-04	7.26E-01	6.83E-05	4.38E-03	6.31E-03	1.43E-03	6.60E-03	4.27E-03	4.38E-03	9.26E-04	7.59E-04	1.47E-07	2.22E-03	7.15E-04
17	A10	110	Single Unit Short Haul Truck	385	0.00E+00	3.55E-05	1.44E-06	6.61E+01	3.23E-05	1.60E-01	4.07E-05	1.71E-02	2.13E-03	6.28E-04	4.98E-03	1.05E-03	1.06E-03	6.87E-03	2.66E-04	1.18E-07	3.92E-03	3.19E-03
17	A10	110	Single Unit Long Haul Truck	17	0.00E+00	1.53E-06	5.96E-08	2.77E+00	1.30E-06	6.34E-03	1.75E-06	7.12E-04	9.57E-05	2.70E-05	2.17E-04	4.32E-05	4.39E-05	2.87E-04	1.12E-05	4.83E-09	1.73E-04	1.33E-04
17	A10	110	Combination Short Haul Truck	214	0.00E+00	3.80E-05	2.94E-06	7.52E+01	7.39E-08	5.57E-02	2.64E-05	6.07E-02	1.88E-03	5.49E-04	2.09E-03	8.45E-04	8.76E-04	1.19E-02	2.51E-04	0.00E+00	1.22E-03	1.14E-02
17	A10	110	Combination Long Haul Truck	195	0.00E+00	5.15E-05	3.27E-06	6.79E+01	2.51E-07	6.42E-02	4.02E-05	6.60E-02	1.82E-03	4.01E-04	4.09E-03	1.01E-03	1.05E-03	1.09E-02	2.27E-04	0.00E+00	3.04E-03	1.24E-02
16	B05	100	Passenger Car	1483	0.00E+00	1.39E-05	1.51E-06	6.06E+01	9.85E-05	2.96E-01	3.13E-05	1.60E-03	4.74E-03	9.09E-04	3.05E-03	1.97E-03	2.02E-03	1.76E-04	3.07E-04	6.44E-08	1.03E-03	2.50E-04
16	B05	100	Passenger Truck	2484	0.00E+00	2.87E-05	3.07E-06	1.40E+02	1.91E-04	5.71E-01	6.19E-05	3.99E-03	8.28E-03	1.61E-03	5.97E-03	3.86E-03	3.96E-03	9.15E-04	7.00E-04	1.28E-07	2.00E-03	6.56E-04
16	B05	100	Single Unit Short Haul Truck	344	0.00E+00	3.27E-05	1.21E-06	5.61E+01	2.50E-05	1.16E-01	3.70E-05	1.44E-02	2.22E-03	5.75E-04	4.69E-03	8.65E-04	8.80E-04	5.75E-03	2.27E-04	9.28E-08	3.81E-03	2.68E-03
16	B05	100	Single Unit Long Haul Truck	15	0.00E+00	1.42E-06	5.10E-08	2.36E+00	1.03E-06	4.74E-03	1.61E-06	6.04E-04	1.01E-04	2.50E-05	2.05E-04	3.65E-05	3.72E-05	2.40E-04	9.58E-06	3.80E-09	1.68E-04	1.13E-04
16	B05	100	Combination Short Haul Truck	227	0.00E+00	3.25E-05	2.40E-06	7.56E+01	8.61E-08	5.85E-02	2.32E-05	5.83E-02	2.20E-03	5.58E-04	1.98E-03	7.00E-04	7.27E-04	1.20E-02	2.53E-04	0.00E+00	1.25E-03	1.10E-02
16	B05	100	Combination Long Haul Truck	207	0.00E+00	4.59E-05	2.59E-06	6.85E+01	2.93E-07	6.81E-02	3.79E-05	6.24E-02	2.20E-03	4.49E-04	4.21E-03	8.34E-04	8.69E-04	1.10E-02	2.30E-04	0.00E+00	3.34E-03	1.17E-02
16	B06	100	Passenger Car	396	0.00E+00	3.70E-06	4.02E-07	1.62E+01	2.63E-05	7.89E-02	8.35E-06	4.27E-04	1.26E-03	2.42E-04	8.14E-04	5.25E-04	5.39E-04	4.70E-05	8.18E-05	1.72E-08	2.75E-04	6.66E-05
16	B06	100	Passenger Truck	662	0.00E+00	7.65E-06	8.19E-07	3.73E+01	5.10E-05	1.52E-01	1.65E-05	1.07E-03	2.21E-03	4.28E-04	1.59E-03	1.03E-03	1.06E-03	2.44E-04	1.87E-04	3.40E-08	5.35E-04	1.75E-04
16	B06	100	Single Unit Short Haul Truck	573	0.00E+00	5.44E-05	2.01E-06	9.35E+01	4.16E-05	1.93E-01	6.17E-05	2.40E-02	3.70E-03	9.58E-04	7.80E-03	1.44E-03	1.47E-03	9.58E-03	3.79E-04	1.55E-07	6.34E-03	4.47E-03
16	B06	100	Single Unit Long Haul Truck	25	0.00E+00	2.36E-06	8.50E-08	3.93E+00	1.72E-06	7.90E-03	2.67E-06	1.01E-03	1.68E-04	4.16E-05	3.41E-04	6.08E-05	6.19E-05	4.00E-04	1.60E-05	6.32E-09	2.79E-04	1.88E-04
16	B06	100	Combination Short Haul Truck	289	0.00E+00	4.14E-05	3.06E-06	9.64E+01	1.10E-07	7.45E-02	2.96E-05	7.43E-02	2.80E-03	7.10E-04	2.52E-03	8.92E-04	9.26E-04	1.53E-02	3.22E-04	0.00E+00	1.59E-03	1.40E-02
16	B06	100	Combination Long Haul Truck	264	0.00E+00	5.85E-05	3.30E-06	8.73E+01	3.73E-07	8.67E-02	4.83E-05	7.95E-02	2.81E-03	5.72E-04	5.36E-03	1.06E-03	1.11E-03	1.40E-02	2.93E-04	0.00E+00	4.26E-03	1.50E-02
16	B07	100	Passenger Car	1614	0.00E+00	1.51E-05	1.64E-06	6.60E+01	1.07E-04	3.22E-01	3.41E-05	1.74E-03	5.16E-03	9.89E-04	3.32E-03	2.14E-03	2.20E-03	1.92E-04	3.34E-04	7.01E-08	1.12E-03	2.72E-04
16	B07	100	Passenger Truck	2703	0.00E+00	3.12E-05	3.34E-06	1.52E+02	2.08E-04	6.22E-01	6.73E-05	4.35E-03	9.01E-03	1.75E-03	6.49E-03	4.20E-03	4.31E-03	9.96E-04	7.62E-04	1.39E-07	2.18E-03	7.14E-04
16	B07	100	Single Unit Short Haul Truck	374	0.00E+00	3.55E-05	1.31E-06	6.10E+01	2.72E-05	1.26E-01	4.02E-05	1.56E-02	2.41E-03	6.25E-04	5.09E-03	9.40E-04	9.56E-04	6.25E-03	2.47E-04	1.01E-07	4.13E-03	2.92E-03
16	B07	100	Single Unit Long Haul Truck	16	0.00E+00	1.54E-06	5.54E-08	2.57E+00	1.12E-06	5.15E-03	1.74E-06	6.56E-04	1.10E-04	2.71E-05	2.23E-04	3.96E-05	4.04E-05	2.61E-04	1.04E-05	4.12E-09	1.82E-04	1.22E-04
16	B07	100	Combination Short Haul Truck	198	0.00E+00	2.84E-05	2.09E-06	6.61E+01	7.52E-08	5.10E-02	2.03E-05	5.09E-02	1.92E-03	4.87E-04	1.73E-03	6.12E-04	6.35E-04	1.05E-02	2.21E-04	0.00E+00	1.09E-03	9.59E-03
16	B07	100	Combination Long Haul Truck	181	0.00E+00	4.01E-05	2.26E-06	5.98E+01	2.55E-07	5.94E-02	3.31E-05	5.45E-02	1.92E-03	3.92E-04	3.68E-03	7.29E-04	7.59E-04	9.60E-03	2.00E-04	0.00E+00	2.92E-03	1.03E-02
16	B08	100	Passenger Car	816	0.00E+00	7.64E-06	8.30E-07	3.34E+01	5.42E-05	1.63E-01	1.72E-05	8.80E-04	2.61E-03	5.00E-04	1.68E-03	1.08E-03	1.11E-03	9.71E-05	1.69E-04	3.54E-08	5.68E-04	1.37E-04
16	B08	100	Passenger Truck	1367	0.00E+00	1.58E-05	1.69E-06	7.69E+01	1.05E-04	3.14E-01	3.40E-05	2.20E-03	4.55E-03	8.84E-04	3.28E-03	2.13E-03	2.18E-03	5.04E-04	3.85E-04	7.02E-08	1.10E-03	3.61E-04
16	B08	100	Single Unit Short Haul Truck	62	0.00E+00	5.92E-06	2.19E-07	1.02E+01	4.53E-06	2.10E-02	6.71E-06	2.61E-03	4.02E-04	1.04E-04	8.48E-04	1.57E-04	1.59E-04	1.04E-03	4.11E-05	1.68E-08	6.89E-04	4.86E-04
16	B08	100	Single Unit Long Haul Truck	3	0.00E+00	2.57E-07	9.24E-09	4.28E-01	1.87E-07	8.59E-04	2.91E-07	1.09E-04	1.83E-05	4.52E-06	3.71E-05	6.61E-06	6.73E-06	4.35E-05	1.74E-06	6.87E-10	3.04E-05	2.

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C14	70	Combination Short Haul Truck	16	0.00E+00	4.17E-06	3.10E-07	5.64E+00	1.06E-08	6.03E-03	2.97E-06	6.20E-03	5.88E-04	9.81E-05	2.50E-04	9.04E-05	9.39E-05	8.96E-04	1.89E-05	0.00E+00	1.56E-04	1.17E-03
53	C14	70	Combination Long Haul Truck	15	0.00E+00	5.72E-06	3.25E-07	5.29E+00	3.59E-08	7.19E-03	4.70E-06	6.63E-03	6.12E-04	9.22E-05	5.20E-04	1.05E-04	1.09E-04	8.50E-04	1.77E-05	0.00E+00	4.11E-04	1.25E-03
50	C15	40	Passenger Car	121	0.00E+00	1.74E-06	1.89E-07	6.40E+00	1.24E-05	3.46E-02	3.93E-06	1.11E-04	2.09E-03	2.94E-04	3.83E-04	2.47E-04	2.53E-04	3.60E-05	3.18E-05	5.89E-09	1.30E-04	1.72E-05
50	C15	40	Passenger Truck	203	0.00E+00	3.84E-06	4.03E-07	1.39E+01	2.31E-05	5.72E-02	7.71E-06	4.25E-04	3.70E-03	5.14E-04	7.28E-04	4.76E-04	4.87E-04	1.23E-04	6.85E-05	1.00E-08	2.41E-04	7.37E-05
50	C15	40	Single Unit Short Haul Truck	20	0.00E+00	6.82E-06	3.03E-07	3.80E+00	4.72E-06	5.96E-03	7.29E-06	2.74E-03	7.92E-04	1.24E-04	8.77E-04	1.83E-04	1.86E-04	3.88E-04	1.55E-05	6.57E-09	6.91E-04	5.13E-04
50	C15	40	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.32E-08	1.64E-01	2.07E-07	2.59E-04	3.20E-07	1.19E-04	3.55E-05	5.50E-06	3.86E-05	8.00E-06	8.15E-06	1.68E-05	6.69E-07	2.85E-10	3.04E-05	2.24E-05
50	C15	40	Combination Short Haul Truck	20	0.00E+00	9.59E-06	7.16E-07	8.24E+00	2.37E-08	1.36E-02	6.81E-06	1.39E-02	1.93E-03	2.88E-04	5.70E-04	2.08E-04	2.16E-04	1.31E-03	2.76E-05	0.00E+00	3.54E-04	2.61E-03
50	C15	40	Combination Long Haul Truck	18	0.00E+00	1.27E-05	7.19E-07	7.91E+00	8.10E-08	1.65E-02	1.05E-05	1.46E-02	2.01E-03	2.82E-04	1.17E-03	2.32E-04	2.42E-04	1.27E-03	2.65E-05	0.00E+00	9.26E-04	2.76E-03
52	C16	60	Passenger Car	141	0.00E+00	1.66E-06	1.81E-07	6.45E+00	1.18E-05	3.32E-02	3.75E-06	1.40E-04	1.39E-03	2.08E-04	3.66E-04	2.36E-04	2.42E-04	2.80E-05	3.23E-05	6.58E-09	1.24E-04	2.19E-05
52	C16	60	Passenger Truck	237	0.00E+00	3.51E-06	3.72E-07	1.44E+01	2.21E-05	5.69E-02	7.28E-06	4.27E-04	2.46E-03	3.66E-04	6.94E-04	4.51E-04	4.63E-04	1.12E-04	7.13E-05	1.20E-08	2.31E-04	7.23E-05
52	C16	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.53E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.22E-04
52	C16	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.01E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.67E-04
52	C16	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.20E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.04E-04
53	C17	70	Passenger Car	424	0.00E+00	4.60E-06	4.99E-07	1.87E+01	3.26E-05	9.19E-02	1.04E-05	4.37E-04	3.22E-03	5.04E-04	1.01E-03	6.52E-04	6.69E-04	7.21E-05	9.41E-05	1.95E-08	3.42E-04	6.81E-05
53	C17	70	Passenger Truck	711	0.00E+00	9.60E-06	1.02E-06	4.22E+01	6.16E-05	1.62E-01	2.02E-05	1.23E-03	5.75E-03	8.93E-04	1.93E-03	1.25E-03	1.28E-03	3.13E-04	2.10E-04	3.68E-08	6.44E-04	2.06E-04
53	C17	70	Single Unit Short Haul Truck	110	0.00E+00	1.94E-05	7.87E-07	1.80E+01	1.30E-05	3.27E-02	2.11E-05	7.68E-03	1.75E-03	3.21E-04	2.61E-03	4.98E-04	5.08E-04	1.83E-03	7.34E-05	2.96E-08	2.11E-03	1.44E-03
53	C17	70	Single Unit Long Haul Truck	5	0.00E+00	8.43E-07	3.40E-08	7.65E-01	5.59E-07	1.37E-03	9.17E-07	3.30E-04	8.01E-05	1.44E-05	1.14E-04	2.15E-05	2.19E-05	7.74E-05	3.12E-06	1.25E-09	9.21E-05	6.18E-05
53	C17	70	Combination Short Haul Truck	49	0.00E+00	1.25E-05	9.31E-07	1.69E+01	3.18E-08	1.81E-02	8.92E-06	1.86E-02	1.76E-03	2.94E-04	7.51E-04	2.71E-04	2.82E-04	2.69E-03	5.66E-05	0.00E+00	4.69E-04	3.50E-03
53	C17	70	Combination Long Haul Truck	44	0.00E+00	1.72E-05	9.76E-07	1.59E+01	1.08E-07	2.16E-02	1.41E-05	1.99E-02	1.84E-03	2.77E-04	1.56E-03	3.14E-04	3.27E-04	2.55E-03	5.32E-05	0.00E+00	1.23E-03	3.75E-03
52	C18	60	Passenger Car	166	0.00E+00	1.96E-06	2.13E-07	7.59E+00	1.39E-05	3.90E-02	4.42E-06	1.65E-04	1.63E-03	2.45E-04	4.31E-04	2.78E-04	2.85E-04	3.30E-05	3.80E-05	7.75E-09	1.46E-04	2.57E-05
52	C18	60	Passenger Truck	279	0.00E+00	4.13E-06	4.38E-07	1.69E+01	2.61E-05	6.69E-02	8.57E-06	5.03E-04	2.90E-03	4.31E-04	8.17E-04	5.31E-04	5.45E-04	1.32E-04	8.39E-05	1.42E-08	2.72E-04	8.51E-05
52	C18	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.55E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.90E-04
52	C18	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.72E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
52	C18	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.47E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.54E-04
52	C18	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.70E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.96E-04
50	C19	40	Passenger Car	51	0.00E+00	7.31E-07	7.94E-08	2.69E+00	5.19E-06	1.45E-02	1.65E-06	4.64E-05	8.77E-04	1.23E-04	1.61E-04	1.04E-04	1.06E-04	1.51E-05	1.33E-05	2.47E-09	5.44E-05	7.24E-06
50	C19	40	Passenger Truck	85	0.00E+00	1.61E-06	1.69E-07	5.85E+00	9.70E-06	2.40E-02	3.24E-06	1.79E-04	1.55E-03	2.16E-04	3.06E-04	2.00E-04	2.05E-04	5.16E-05	2.88E-05	4.20E-09	1.01E-04	3.09E-05
50	C19	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.22E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.77E-05
50	C19	40	Combination Short Haul Truck	2	0.00E+00	1.01E-06	7.54E-08	8.68E-01	2.50E-09	1.43E-03	7.17E-07	1.46E-03	2.03E-04	3.03E-05	6.00E-05	2.19E-05	2.28E-05	1.38E-04	2.90E-06	0.00E+00	3.73E-05	2.75E-04
50	C19	40	Combination Long Haul Truck	2	0.00E+00	1.34E-06	7.57E-08	8.33E-01	8.52E-09	1.73E-03	1.11E-06	1.54E-03	2.11E-04	2.97E-05	1.23E-04	2.44E-05	2.54E-05	1.34E-04	2.79E-06	0.00E+00	9.74E-05	2.90E-04
53	C20	70	Passenger Car	81	0.00E+00	8.75E-07	9.51E-08	3.56E+00	6.21E-06	1.75E-02	1.97E-06	8.31E-05	6.13E-04	9.59E-05	1.92E-04	1.24E-04	1.27E-04	1.37E-05	1.79E-05	3.72E-09	6.51E-05	1.30E-05
53	C20	70	Passenger Truck	135	0.00E+00	1.83E-06	1.94E-07	8.03E+00	1.17E-05	3.08E-02	3.84E-06	2.35E-04	1.09E-03	1.70E-04	3.67E-04	2.38E-04	2.44E-04	5.96E-05	4.00E-05	7.00E-09	1.23E-04	3.93E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.34E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.25E-05
53	C20	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.00E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
53	C20	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.56E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.61E-04
50	C21	40	Passenger Car	296	0.00E+00	4.25E-06	4.62E-07	1.56E+01	3.02E-05	8.45E-02	9.58E-06	2.70E-04	5.10E-03	7.17E-04	9.35E-04	6.03E-04	6.19E-04	8.79E-05	7.75E-05	1.44E-08	3.16E-04	4.21E-05
50	C21	40	Passenger Truck	495	0.00E+00	9.37E-06	9.85E-07	3.40E+01	5.64E-05	1.40E-01	1.88E-05	1.04E-03	9.04E-03	1.26E-03	1.78E-03	1.16E-03	1.19E-03	3.00E-04	1.67E-04	2.44E-08	5.89E-04	1.80E-04
50	C21	40	Single Unit Short Haul Truck	85	0.00E+00	2.89E-05	1.29E-06	1.61E+01	2.00E-05	2.52E-02	3.09E-05	1.16E-02	3.35E-03	5.24E-04	3.72E-03	7.75E-04	7.90E-04	1.64E-03	6.56E-05	2.78E-08	2.93E-03	2.17E-03
50	C21	40	Single Unit Long Haul Truck	4	0.00E+00	1.27E-06	5.62E-08	6.95E-01	8.76E-07	1.10E-03	1.36E-06	5.06E-04	1.50E-04	2.33E-05	1.63E-04	3.39E-05	3.45E-05	7.10E-05	2.83E-06	1.21E-09	1.29E-04	9.48E-05
50	C21	40	Combination Short Haul Truck	33	0.00E+00	1.61E-05	1.21E-06	1.39E+01	4.00E-08	2.28E-02	1.15E-05	2.34E-02	3.26E-03	4.85E-04	9.60E-04	3.51E-04	3.64E-04	2.21E-03	4.64E-05	0.00E+00	5.96E-04	4.40E-03
50	C21	40	Combination Long Haul Truck	31	0.00E+00	2.15E-05	1.21E-06	1.33E+01	1.36E-07	2.77E-02	1.77E-05	2.46E-02	3.38E-03	4.75E-04	1.97E-03	3.90E-04	4.07E-04	2.14E-03	4.46E-05	0.00E+00	1.56E-03	4.64E-03
52	C22	60	Passenger Car	238	0.00E+00	2.80E-06	3.04E-07	1.09E+01	1.99E-05	5.58E-02	6.31E-06	2.36E-04	2.33E-03	3.50E-04	6.16E-04	3.97E-04	4.07E-04	4.71E-05	5.43E-05	1.11E-08	2.08E-04	3.68E-05
52	C22	60	Passenger Truck	398	0.00E+00	5.91E-06	6.26E-07	2.42E+01	3.72E-05	9.57E-02	1.22E-05	7.19E-04	4.15E-03	6.16E-04	1.17E-03	7.60E-04	7.78E-04	1.89E-04	1.20E-04	2.02E-08	3.89E-04	1.22E-04
52	C22	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.63E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.06E-04
52	C22	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.07E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.32E-05
52	C22	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.01E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.67E-04
52	C22	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.20E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.04E-04
53	C23	70	Passenger Car	479	0.00E+00	5.19E-06	5.64E-07	2.11E+01	3.68E-05	1.04E-01	1.17E-05	4.93E-04	3.63E-03	5.69E-04	1.14E-03	7.36E-04	7.55E-04	8.14E-05	1.06E-04	2.21E-08	3.86E-04	7.69E-05
53	C23	70	Passenger Truck	802	0.00E+00	1.08E-05	1.15E-06	4.76E+01	6.96E-05	1.83E-01	2.27E-05	1.39E-03	6.49E-03	1.01E-03	2.18E-03	1.41E-03	1.45E-03	3.53E-04	2.37E-04	4.15E-08	7.27E-04	2.33E-04
53	C23	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.21E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.87E-04
53	C23	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.81E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.39E-05
53	C23	70	Combination Short Haul Truck	23	0.00E+00	5.92E-06	4.41E-07	8.00E+00	1.50E-08	8.55E-03	4.22E-06	8.80E-03	8.35E-04	1.39E-04	3.55E-04	1.28E-04	1.33E-04	1.27E-03	2.68E-05	0.00E+00	2.22E-04	1.66E-03
53	C23	70	Combination Long Haul Truck	21	0.00E+00	8.12E-06	4.62E-07	7.51E+00	5.09E-08	1.02E-02	6.68E-06	9.41E-03	8.69E-04	1.31E-04	7.38E-04	1.48E-04	1.55E-04	1.21E-03	2.52E-05	0.00E+00	5.84E-04	1.77E-03
52	C24	60	Passenger Car	72	0.00E+00	8.50E-07	9.23E-08	3.29E+00	6.03E-06	1.69E-02	1.92E-06	7.16E-05	7.08E-04	1.06E-04	1.87E-04	1.20E-04	1.24E-04	1.43E-05	1.65E-05	3.36E-09	6.32E-05	1.12E-05
52	C24	60	Passenger Truck	121	0.00E+00	1.79E-06	1.90E-07	7.33E+00	1.13E-05	2.90E-02	3.72E-06	2.18E-04	1.26E-03	1.87E-04	3.54E-04	2.31E-04	2.36E-04	5.73E-05	3.64E-05	6.14E-09	1.18E-04	3.69E-05
52	C24	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.17E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
52	C24	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.94E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
52	C24	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.39E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.39E-04
50	C25	40	Passenger Car	259	0.00E+00	3.73E-06	4.05E-07	1.37E+01	2.65E-05	7.41E-02	8.41E-06	2.37E-04	4.47E-03	6.29E-04	8.20E-04	5.29E-04	5.43E-04	7.71E-05	6.80E-05	1.26E-08	2.77E-04	3.69E-05
50	C25	40	Passenger Truck	435	0.00E+00	8.22E-06	8.64E-07	2.98E+01	4.95E-05	1.22E-01	1.65E-05	9.11E-04	7.93E-03	1.10E-03	1.56E-03	1.02E-03	1.04E-03	2.63E-04	1.47E-04	2.14E-08	5.17E-04	1.58E-04
50	C25	40	Single Unit Short Haul Truck	62	0.00E+00	2.11E-05	9.39E-07	1.18E+01	1.46E-05	1.84E-02	2.26E-05	8.47E-03	2.45E-03	3.83E-04	2.72E-03	5.66E-04	5.77E-04	1.20E-03	4.79E-05	2.03E-08	2.14E-03	1.59E-03
50	C25	40	Single Unit Long Haul Truck	3	0.00E+00	9.26E-07	4.10E-08	5.08E-01	6.40E-07	8.02E-04	9.91E-07	3.69E-04	1.10E-04	1.70E-05	1.19E-04	2.48E-05	2.52E-05	5.19E-05	2.07E-06	8.82E-10	9.41E-05	6.92E-05
50	C25	40	Combination Short Haul Truck	33	0.00E+00	1.59E-05	1.19E-06	1.37E+01	3.94E-08	2.25E-02	1.13E-05	2.30E-02	3.20E-03	4.78E-04	9.45E-04	3.45E-04	3.58E-04	2.17E-03	4.57E-05	0.00E+00	5.87E-04	4.33E-03
50	C25	40	Combination Long Haul Truck	30	0.00E+00	2.11E-05	1.19E-06	1.31E+01	1.34E-07	2.73E-02	1.74E-05	2.43E-02	3.33E-03	4.67E-04	1.94E-03	3.84E-04	4.00E-04	2.11E-03	4.39E-05	0.00E+00	1.53E-03	4.57E-03
53	C26	70	Passenger Car	324	0.00E+00	3.51E-06	3.81E-07	1.43E+01	2.49E-05	7.01E-02	7.91E-06	3.33E-04	2.46E-03	3.84E-04	7.71E-04	4.97E-04	5.10E-04	5.50E-05	7.18E-05	1.49E-08	2.61E-04	5.20E-05
53	C26	70	Passenger Truck	542	0.00E+00	7.32E-06	7.79E-07	3.22E+01	4.70E-05	1.24E-01	1.54E-05	9.40E-04	4.39E-03	6.82E-04	1.47E-03	9.56E-04	9.80E-04	2.39E-04	1.60E-04	2.81E-08	4.92E-04	1.57E-04
53	C26	70	Single Unit Short Haul Truck	57	0.00E+00	1.01E-05	4.11E-07	9.42E+00	6.78E-06	1.71E-02	1.10E-05	4.01E-03	9.13E-04	1.68E-04	1.36E-03	2.60E-04	2.65E-04	9.57E-04	3.83E-05	1.55E-08	1.10E-03	7.49E-04
53	C26	70	Single Unit Long Haul Truck	3	0.00E+00	4.40E-07	1.77E-08	3.99E-01	2.92E-07	7.17E-04	4.79E-07	1.72E-04	4.18E-05	7.49E-06	5.95E-05	1.12E-05	1.14E-05	4.04E-05	1.63E-06	6.52E-10	4.80E-05	3.23E-05
53	C26	70	Combination Short Haul Truck	30	0.00E+00	7.67E-06	5.71E-07	1.04E+01	1.95E-08	1.11E-02	5.47E-06	1.14E-02	1.08E-03	1.80E-04	4.60E-04	1.66E-04	1.73E-04	1.65E-03	3.47E-05	0.00E+00	2.88E-04	2.15E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.22E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.30E-03
50	C27	40	Passenger Car	362	0.00E+00	5.20E-06	5.65E-07	1.91E+01	3.69E-05	1.03E-01	1.17E-05	3.30E-04	6.23E-03	8.76E-04	1.14E-03	7.37E-04	7.56E-04	1.07E-04	9.48E-05	1.76E-08	3.87E-04	5.15E-05
50	C27	40	Passenger Truck	605	0.00E+00	1.15E-05	1.20E-06	4.16E+01	6.90E-05	1.71E-01	2.30E-05	1.27E-03	1.11E-02	1.53E-03	2.17E-03	1.42E-03	1.45E-03	3.67E-04	2.05E-04	2.98E-08	7.20E-04	2.20E-04
50	C27	40	Single Unit Short Haul Truck	56	0.00E+00	1.88E-05	8.38E-07	1.05E+01	1.30E-05	1.65E-02	2.01E-05	7.56E-03	2.19E-03	3.41E-04	2.42E-03	5.05E-04	5.15E-04	1.07E-03	4.28E-05	1.81E-08	1.91E-03	1.42E-03
50	C27	40	Single Unit Long Haul Truck	2	0.00E+00	8.26E-07	3.66E-08	4.53E-01	5.71E-07	7.16E-04	8.84E-07	3.30E-04	9.80E-05	1.52E-05	1.07E-04	2.21E-05	2.25E-05	4.63E-05	1.85E-06	7.87E-10	8.40E-05	6.18E-05
50	C27	40	Combination Short Haul Truck	17	0.00E+00	8.33E-06	6.22E-07	7.16E+00	2.06E-08	1.18E-02	5.92E-06	1.20E-02	1.68E-03	2.50E-04	4.95E-04	1.81E-04	1.88E-04	1.14E-03	2.39E-05	0.00E+00	3.07E-04	2.27E-03
50	C27	40	Combination Long Haul Truck	16	0.00E+00	1.11E-05	6.25E-07	6.87E+00	7.03E-08	1.43E-02	9.12E-06	1.27E-02	1.74E-03	2.45E-04	1.01E-03	2.01E-04	2.10E-04	1.10E-03	2.30E-05	0.00E+00	8.04E-04	2.39E-03
52	C28	60	Passenger Car	167	0.00E+00	1.97E-06	2.14E-07	7.63E+00	1.40E-05	3.92E-02	4.44E-06	1.66E-04	1.64E-03	2.46E-04	4.33E-04	2.79E-04	2.86E-04	3.31E-05	3.82E-05	7.78E-09	1.46E-04	2.59E-05
52	C28	60	Passenger Truck	280	0.00E+00	4.15E-06	4.40E-07	1.70E+01	2.62E-05	6.73E-02	8.61E-06	5.05E-04	2.91E-03	4.33E-04	8.20E-04	5.34E-04	5.47E-04	1.33E-04	8.43E-05	1.42E-08	2.73E-04	8.55E-05
52	C28	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.08E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.64E-05
52	C28	60	Single Unit Long Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.62E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.05E-04
52	C28	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.73E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.25E-04
53	C29	70	Passenger Car	33	0.00E+00	3.52E-07	3.83E-08	1.44E+00	2.50E-06	7.05E-03	7.94E-07	3.35E-05	2.47E-04	3.86E-05	7.75E-05	5.00E-05	5.13E-05	5.53E-06	7.21E-06	1.50E-09	2.62E-05	5.22E-06
53	C29	70	Passenger Truck	54	0.00E+00

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C33	60	Passenger Truck	101	0.00E+00	1.50E-06	1.58E-07	6.12E+00	9.43E-06	2.42E-02	3.10E-06	1.82E-04	1.05E-03	1.56E-04	2.96E-04	1.92E-04	1.97E-04	4.78E-05	3.04E-05	5.12E-09	9.85E-05	3.08E-05
52	C33	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.63E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
50	C34	40	Passenger Car	84	0.00E+00	1.20E-06	1.31E-07	4.43E+00	8.54E-06	2.39E-02	2.71E-06	7.64E-05	1.44E-03	2.03E-04	2.65E-04	1.71E-04	1.75E-04	2.49E-05	2.20E-05	4.07E-09	8.95E-05	1.19E-05
50	C34	40	Passenger Truck	140	0.00E+00	2.65E-06	2.79E-07	9.63E+00	1.60E-05	3.95E-02	5.33E-06	2.94E-04	2.56E-03	3.55E-04	5.04E-04	3.29E-04	3.37E-04	8.50E-05	4.74E-05	6.91E-09	1.67E-04	5.09E-05
50	C34	40	Single Unit Short Haul Truck	7	0.00E+00	2.27E-06	1.01E-07	1.27E+00	1.57E-06	1.99E-03	2.43E-06	9.13E-04	2.64E-04	4.12E-05	2.92E-04	6.09E-05	6.21E-05	1.29E-04	5.16E-06	2.19E-09	2.30E-04	1.71E-04
50	C34	40	Combination Short Haul Truck	3	0.00E+00	1.26E-06	9.42E-08	1.08E+00	3.12E-09	1.78E-03	8.96E-07	1.83E-03	2.54E-04	3.79E-05	7.50E-05	2.74E-05	2.85E-05	1.72E-04	3.63E-06	0.00E+00	4.66E-05	3.44E-04
50	C34	40	Combination Long Haul Truck	2	0.00E+00	1.68E-06	9.47E-08	1.04E+00	1.07E-08	2.17E-03	1.38E-06	1.93E-03	2.64E-04	3.71E-05	1.54E-04	3.05E-05	3.18E-05	1.67E-04	3.49E-06	0.00E+00	1.22E-04	3.63E-04
53	C35	70	Passenger Car	116	0.00E+00	1.26E-06	1.36E-07	5.12E+00	8.91E-06	2.51E-02	2.83E-06	1.19E-04	8.79E-04	1.38E-04	2.76E-04	1.78E-04	1.83E-04	1.97E-05	2.57E-05	5.34E-09	9.34E-05	1.86E-05
53	C35	70	Passenger Truck	194	0.00E+00	2.62E-06	2.79E-07	1.15E+01	1.68E-05	4.43E-02	5.50E-06	3.37E-04	1.57E-03	2.44E-04	5.27E-04	3.42E-04	3.51E-04	8.55E-05	5.73E-05	1.01E-08	1.76E-04	5.64E-05
53	C35	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.20E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.25E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.17E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.68E-06
53	C35	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.00E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.42E-04
53	C35	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.35E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
52	C39	60	Passenger Car	123	0.00E+00	1.45E-06	1.57E-07	5.61E+00	1.03E-05	2.89E-02	3.27E-06	1.22E-04	1.21E-03	1.81E-04	3.18E-04	2.05E-04	2.11E-04	2.44E-05	2.81E-05	5.73E-09	1.08E-04	1.90E-05
52	C39	60	Passenger Truck	206	0.00E+00	3.06E-06	3.24E-07	1.25E+01	1.93E-05	4.95E-02	6.34E-06	3.72E-04	2.14E-03	3.18E-04	6.04E-04	3.93E-04	4.03E-04	9.77E-05	6.20E-05	1.05E-08	2.01E-04	6.29E-05
52	C39	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.53E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.22E-04
52	C39	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.17E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.85E-04
52	C39	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.44E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.36E-04
9	D01	60	Passenger Car	1267	0.00E+00	1.62E-05	1.76E-06	5.78E+01	1.15E-04	3.26E-01	3.66E-05	1.30E-03	1.28E-02	1.92E-03	3.57E-03	2.30E-03	2.36E-03	2.51E-04	2.90E-04	6.08E-08	1.21E-03	2.03E-04
9	D01	60	Passenger Truck	2121	0.00E+00	3.45E-05	3.65E-06	1.29E+02	2.17E-04	5.57E-01	7.15E-05	4.05E-03	2.34E-02	3.48E-03	6.81E-03	4.43E-03	4.54E-03	1.03E-03	6.39E-04	1.19E-07	2.27E-03	6.87E-04
9	D01	60	Single Unit Short Haul Truck	25	0.00E+00	5.56E-06	2.30E-07	4.14E+00	3.68E-06	7.29E-03	6.01E-06	2.12E-03	5.73E-04	9.63E-05	7.42E-04	1.43E-04	1.46E-04	4.20E-04	1.69E-05	6.96E-09	5.96E-04	3.98E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	2.43E-07	9.97E-09	1.77E-01	1.60E-07	3.09E-04	2.62E-07	9.20E-05	2.57E-05	4.27E-06	3.24E-05	6.21E-06	6.33E-06	1.78E-05	7.21E-07	2.96E-10	2.61E-05	1.72E-05
9	D01	60	Combination Short Haul Truck	80	0.00E+00	2.34E-05	1.72E-06	2.82E+01	6.40E-08	3.49E-02	1.68E-05	3.54E-02	4.08E-03	6.37E-04	1.44E-03	5.02E-04	5.21E-04	4.48E-03	9.43E-05	0.00E+00	9.18E-04	6.67E-03
9	D01	60	Combination Long Haul Truck	73	0.00E+00	3.21E-05	1.75E-06	2.66E+01	2.17E-07	4.19E-02	2.68E-05	3.77E-02	4.27E-03	6.18E-04	3.04E-03	5.73E-04	5.97E-04	4.27E-03	8.92E-05	0.00E+00	2.45E-03	7.10E-03
9	D02	60	Passenger Car	936	0.00E+00	1.20E-05	1.30E-06	4.27E+01	8.51E-05	2.41E-01	2.70E-05	9.64E-04	9.45E-03	1.42E-03	2.64E-03	1.70E-03	1.75E-03	1.86E-04	2.14E-04	4.50E-08	8.92E-04	1.50E-04
9	D02	60	Passenger Truck	1568	0.00E+00	2.55E-05	2.70E-06	9.52E+01	1.61E-04	4.12E-01	5.28E-05	3.00E-03	1.73E-02	2.57E-03	5.04E-03	3.28E-03	3.36E-03	7.60E-04	4.73E-04	8.76E-08	1.68E-03	5.08E-04
9	D02	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.96E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.67E-04
9	D02	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.49E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	D02	60	Combination Short Haul Truck	28	0.00E+00	8.09E-06	5.94E-07	9.76E+00	2.22E-08	1.21E-02	5.81E-06	1.23E-02	1.41E-03	2.21E-04	4.99E-04	1.74E-04	1.80E-04	1.55E-03	3.26E-05	0.00E+00	3.18E-04	2.31E-03
9	D02	60	Combination Long Haul Truck	25	0.00E+00	1.11E-05	6.07E-07	9.22E+00	7.50E-08	1.45E-02	9.30E-06	1.31E-02	1.48E-03	2.14E-04	1.05E-03	1.98E-04	2.07E-04	1.48E-03	3.09E-05	0.00E+00	8.48E-04	2.46E-03
9	D03	60	Passenger Car	1414	0.00E+00	1.81E-05	1.97E-06	6.45E+01	1.29E-04	3.64E-01	4.09E-05	1.46E-03	1.43E-02	2.14E-03	3.99E-03	2.57E-03	2.64E-03	2.80E-04	3.23E-04	6.79E-08	1.35E-03	2.27E-04
9	D03	60	Passenger Truck	2369	0.00E+00	3.85E-05	4.08E-06	1.44E+02	2.43E-04	6.22E-01	7.98E-05	4.53E-03	2.61E-02	3.88E-03	7.61E-03	4.95E-03	5.07E-03	1.15E-03	7.14E-04	1.32E-07	2.54E-03	7.67E-04
9	D03	60	Single Unit Short Haul Truck	54	0.00E+00	1.20E-05	4.95E-07	8.92E+00	7.93E-06	1.57E-02	1.30E-05	4.57E-03	1.23E-03	2.07E-04	1.60E-03	3.08E-04	3.14E-04	9.04E-04	3.64E-05	1.50E-08	1.28E-03	8.56E-04
9	D03	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.15E-08	3.80E-01	3.44E-07	6.66E-04	5.65E-07	1.98E-04	5.54E-05	9.20E-06	6.99E-05	1.34E-05	1.36E-05	3.84E-05	1.55E-06	6.37E-10	5.62E-05	3.71E-05
9	D03	60	Combination Short Haul Truck	46	0.00E+00	1.33E-05	9.76E-07	1.60E+01	3.64E-08	1.98E-02	9.54E-06	2.01E-02	2.32E-03	3.62E-04	8.18E-04	2.85E-04	2.96E-04	2.55E-03	5.36E-05	0.00E+00	5.22E-04	3.80E-03
9	D03	60	Combination Long Haul Truck	41	0.00E+00	1.82E-05	9.97E-07	1.51E+01	1.23E-07	2.38E-02	1.53E-05	2.14E-02	2.43E-03	3.51E-04	1.73E-03	3.26E-04	3.39E-04	2.43E-03	5.07E-05	0.00E+00	1.39E-03	4.04E-03
9	D04	60	Passenger Car	765	0.00E+00	9.80E-06	1.06E-06	3.49E+01	6.95E-05	1.97E-01	2.21E-05	7.87E-04	7.72E-03	1.16E-03	2.15E-03	1.39E-03	1.43E-03	1.52E-04	1.75E-04	3.67E-08	7.29E-04	1.23E-04
9	D04	60	Passenger Truck	1280	0.00E+00	2.08E-05	2.20E-06	7.78E+01	1.31E-04	3.36E-01	4.31E-05	2.45E-03	1.41E-02	2.10E-03	4.11E-03	2.68E-03	2.74E-03	6.20E-04	3.86E-04	7.16E-08	1.37E-03	4.15E-04
9	D04	60	Single Unit Short Haul Truck	65	0.00E+00	1.45E-05	6.01E-07	1.08E+01	9.63E-06	1.91E-02	1.57E-05	5.55E-03	1.50E-03	2.52E-04	1.94E-03	3.74E-04	3.81E-04	1.10E-03	4.42E-05	1.82E-08	1.56E-03	1.04E-03
9	D04	60	Single Unit Long Haul Truck	3	0.00E+00	6.35E-07	2.61E-08	4.62E-01	4.18E-07	8.09E-04	6.86E-07	2.41E-04	6.73E-05	1.12E-05	8.48E-05	1.62E-05	1.66E-05	4.67E-05	1.88E-06	7.74E-10	6.83E-05	4.50E-05
9	D04	60	Combination Short Haul Truck	88	0.00E+00	2.58E-05	1.90E-06	3.11E+01	7.07E-08	3.85E-02	1.85E-05	3.91E-02	4.50E-03	7.04E-04	1.59E-03	5.54E-04	5.76E-04	4.95E-03	1.04E-04	0.00E+00	1.01E-03	7.37E-03
9	D04	60	Combination Long Haul Truck	81	0.00E+00	3.54E-05	1.94E-06	2.94E+01	2.39E-07	4.63E-02	2.96E-05	4.17E-02	4.72E-03	6.83E-04	3.36E-03	6.32E-04	6.59E-04	4.72E-03	9.85E-05	0.00E+00	2.70E-03	7.85E-03
9	D05	60	Passenger Car	1239	0.00E+00	1.59E-05	1.72E-06	5.65E+01	1.13E-04	3.18E-01	3.58E-05	1.28E-03	1.25E-02	1.87E-03	3.49E-03	2.25E-03	2.31E-03	2.46E-04	2.83E-04	5.95E-08	1.18E-03	1.99E-04
9	D05	60	Passenger Truck	2074	0.00E+00	3.37E-05	3.57E-06	1.26E+02	2.13E-04	5.45E-01	6.99E-05	3.96E-03	2.29E-02	3.40E-03	6.66E-03	4.33E-03	4.44E-03	1.01E-03	6.25E-04	1.16E-07	2.22E-03	6.72E-04
9	D05	60	Single Unit Short Haul Truck	57	0.00E+00	1.28E-05	5.30E-07	9.56E+00	8.50E-06	1.68E-02	1.39E-05	4.90E-03	1.32E-03	2.22E-04	1.71E-03	3.30E-04	3.36E-04	9.69E-04	3.90E-05	1.61E-08	1.38E-03	9.17E-04
9	D05	60	Single Unit Long Haul Truck	3	0.00E+00	5.60E-07	2.30E-08	4.08E-01	3.69E-07	7.14E-04	6.06E-07	2.12E-04	5.94E-05	9.85E-06	7.48E-05	1.43E-05	1.46E-05	4.12E-05	1.66E-06	6.83E-10	6.02E-05	3.97E-05
9	D05	60	Combination Short Haul Truck	72	0.00E+00	2.09E-05	1.54E-06	2.52E+01	5.73E-08	3.12E-02	1.50E-05	3.17E-02	3.65E-03	5.71E-04	1.29E-03	4.49E-04	4.67E-04	4.01E-03	8.44E-05	0.00E+00	8.22E-04	5.98E-03
9	D05	60	Combination Long Haul Truck	65	0.00E+00	2.87E-05	1.57E-06	2.38E+01	1.94E-07	3.75E-02	2.40E-05	3.38E-02	3.83E-03	5.53E-04	2.73E-03	5.13E-04	5.34E-04	3.83E-03	7.99E-05	0.00E+00	2.19E-03	6.36E-03
9	D06	60	Passenger Car	922	0.00E+00	1.18E-05	1.28E-06	4.21E+01	8.38E-05	2.37E-01	2.66E-05	9.49E-04	9.31E-03	1.39E-03	2.60E-03	1.67E-03	1.72E-03	1.83E-04	2.11E-04	4.43E-08	8.78E-04	1.48E-04
9	D06	60	Passenger Truck	1543	0.00E+00	2.51E-05	2.66E-06	9.37E+01	1.58E-04	4.05E-01	5.20E-05	2.95E-03	1.70E-02	2.53E-03	4.96E-03	3.23E-03	3.30E-03	7.48E-04	4.65E-04	8.63E-08	1.65E-03	5.00E-04
9	D06	60	Single Unit Short Haul Truck	135	0.00E+00	3.02E-05	1.25E-06	2.25E+01	2.00E-05	3.95E-02	3.26E-05	1.15E-02	3.11E-03	5.22E-04	4.02E-03	7.75E-04	7.90E-04	2.28E-03	9.16E-05	3.77E-08	3.23E-03	2.16E-03
9	D06	60	Single Unit Long Haul Truck	6	0.00E+00	1.32E-06	5.41E-08	9.58E-01	8.66E-07	1.68E-03	1.42E-06	4.99E-04	1.40E-04	2.32E-05	1.76E-04	3.37E-05	3.43E-05	9.68E-05	3.91E-06	1.60E-09	1.42E-04	9.34E-05
9	D06	60	Combination Short Haul Truck	78	0.00E+00	2.27E-05	1.67E-06	2.74E+01	6.23E-08	3.40E-02	1.63E-05	3.45E-02	3.97E-03	6.21E-04	1.40E-03	4.89E-04	5.07E-04	4.36E-03	9.18E-05	0.00E+00	8.94E-04	6.50E-03
9	D06	60	Combination Long Haul Truck	71	0.00E+00	3.13E-05	1.71E-06	2.59E+01	2.11E-07	4.08E-02	2.61E-05	3.67E-02	4.16E-03	6.02E-04	2.96E-03	5.58E-04	5.81E-04	4.16E-03	8.69E-05	0.00E+00	2.38E-03	6.92E-03
11	D07	80	Passenger Car	1300	0.00E+00	1.35E-05	1.47E-06	5.51E+01	9.60E-05	2.80E-01	3.05E-05	1.35E-03	7.08E-03	1.19E-03	2.97E-03	1.92E-03	1.97E-03	1.93E-04	2.77E-04	5.92E-08	1.01E-03	2.10E-04
11	D07	80	Passenger Truck	2176	0.00E+00	2.78E-05	2.97E-06	1.24E+02	1.81E-04	4.94E-01	5.90E-05	3.63E-03	1.26E-02	2.10E-03	5.66E-03	3.67E-03	3.77E-03	8.94E-04	6.20E-04	1.13E-07	1.90E-03	6.05E-04
11	D07	80	Single Unit Short Haul Truck	86	0.00E+00	1.18E-05	4.62E-07	1.41E+01	8.02E-06	2.57E-02	1.30E-05	4.89E-03	9.68E-04	1.98E-04	1.63E-03	3.02E-04	3.07E-04	1.44E-03	5.74E-05	2.28E-08	1.32E-03	9.15E-04
11	D07	80	Single Unit Long Haul Truck	4	0.00E+00	5.14E-07	1.98E-08	5.97E-01	3.42E-07	1.07E-03	5.65E-07	2.09E-04	4.44E-05	8.79E-06	7.10E-05	1.29E-05	1.32E-05	6.04E-05	2.43E-06	9.49E-10	5.78E-05	3.91E-05
11	D07	80	Combination Short Haul Truck	84	0.00E+00	1.72E-05	1.28E-06	2.81E+01	4.52E-08	2.63E-02	1.23E-05	2.64E-02	2.00E-03	3.62E-04	1.05E-03	3.73E-04	3.87E-04	4.46E-03	9.38E-05	0.00E+00	6.59E-04	4.98E-03
11	D07	80	Combination Long Haul Truck	76	0.00E+00	2.40E-05	1.36E-06	2.60E+01	1.53E-07	3.11E-02	1.98E-05	2.83E-02	2.06E-03	3.30E-04	2.20E-03	4.37E-04	4.55E-04	4.18E-03	8.73E-05	0.00E+00	1.75E-03	5.32E-03
11	D08	80	Passenger Car	903	0.00E+00	9.39E-06	1.02E-06	3.82E+01	6.67E-05	1.94E-01	2.12E-05	9.36E-04	4.92E-03	8.24E-04	2.07E-03	1.33E-03	1.37E-03	1.34E-04	1.93E-04	4.11E-08	6.99E-04	1.46E-04
11	D08	80	Passenger Truck	1511	0.00E+00	1.93E-05	2.06E-06	8.63E+01	1.26E-04	3.43E-01	4.10E-05	2.52E-03	8.76E-03	1.46E-03	3.93E-03	2.55E-03	2.62E-03	6.21E-04	4.31E-04	7.83E-08	1.32E-03	4.20E-04
11	D08	80	Single Unit Short Haul Truck	139	0.00E+00	1.91E-05	7.44E-07	2.28E+01	1.29E-05	4.14E-02	2.09E-05	7.89E-03	1.56E-03	3.19E-04	2.62E-03	4.86E-04	4.95E-04	2.32E-03	9.25E-05	3.67E-08	2.13E-03	1.47E-03
11	D08	80	Single Unit Long Haul Truck	6	0.00E+00	8.28E-07	3.19E-08	9.62E-01	5.50E-07	1.72E-03	9.10E-07	3.37E-04	7.15E-05	1.42E-05	1.14E-04	2.09E-05	2.13E-05	9.73E-05	3.92E-06	1.53E-09	9.32E-05	6.30E-05
11	D08	80	Combination Short Haul Truck	67	0.00E+00	1.38E-05	1.02E-06	2.24E+01	3.61E-08	2.10E-02	9.86E-06	2.12E-02	1.60E-03	2.89E-04	8.37E-04	2.98E-04	3.09E-04	3.57E-03	7.51E-05	0.00E+00	5.27E-04	3.99E-03
11	D08	80	Combination Long Haul Truck	61	0.00E+00	1.92E-05	1.09E-06	2.08E+01	1.22E-07	2.49E-02	1.59E-05	2.26E-02	1.65E-03	2.64E-04	1.76E-03	3.50E-04	3.64E-04	3.34E-03	6.98E-05	0.00E+00	1.40E-03	4.26E-03
11	D09	80	Passenger Car	1085	0.00E+00	1.13E-05	1.23E-06	4.60E+01	8.02E-05	2.34E-01	2.55E-05	1.13E-03	5.92E-03	9.91E-04	2.48E-03	1.60E-03	1.64E-03	1.61E-04	2.32E-04	4.95E-08	8.40E-04	1.76E-04
11	D09	80	Passenger Truck	1818	0.00E+00	2.33E-05	2.48E-06	1.04E+02	1.51E-04	4.12E-01	4.93E-05	3.03E-03	1.05E-02	1.75E-03	4.73E-03	3.07E-03	3.14E-03	7.46E-04	5.18E-04	9.42E-08	1.58E-03	5.05E-04
11	D09	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.18E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.07E-04
11	D09	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.29E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.74E-05
11	D09	80	Combination Short Haul Truck	47	0.00E+00	9.59E-06	7.10E-07	1.56E+01	2.51E-08	1.46E-02	6.86E-06	1.47E-02	1.11E-03	2.01E-04	5.82E-04	2.07E-04	2.15E-04	2.48E-03	5.22E-05	0.00E+00	3.67E-04	2.77E-03
11	D09	80	Combination Long Haul Truck	42	0.00E+00	1.34E-05	7.54E-07	1.45E+01	8.50E-08	1.73E-02	1.10E-05	1.57E-02	1.15E-03	1.84E-04	1.22E-03	2.43E-04	2.53E-04	2.32E-03	4.85E-05	0.00E+00	9.72E-04	2.96E-03
11	D10	80	Passenger Car	703	0.00E+00	7.32E-06	7.95E-07	2.98E+01	5.19E-05	1.51E-01	1.65E-05	7.29E-04	3.83E-03	6.42E-04	1.61E-03	1.04E-03	1.06E-03	1.04E-04	1.50E-04	3.20E-08	5.44E-04	1.14E-04
11	D10	80	Passenger Truck	1177	0.00E+00	1.51E-05	1.61E-06	6.72E+01	9.80E-05	2.67E-01	3.19E-05	1.96E-03	6.82E-03	1.14E-03	3.06E-03	1.99E-03	2.04E-03	4.83E-04	3.35E-04	6.10E-08	1.03E-03	3.27E-04
11	D10	80	Single Unit Short Haul Truck	107	0.00E+00	1.47E-05	5.75E-07	1.76E+01	9.98E-06	3.19E-02	1.62E-05	6.09E-03	1.21E-03	2.47E-04	2.03E-03	3.75E-04	3.83E-04	1.79E-03	7.14E-05	2.83E-08	1.64E-03	1.14E-03
11	D10	80	Single Unit Long Haul Truck	5	0.00E+00	6.39E-07	2.47E-08	7.43E-01	4.25E-07	1.33E-03	7.03E-07	2.60E-04	5.53E-05	1.09E-05	8.84E-05	1.61E-05	1.64E-05	7.52E-05	3.02E-06	1.18E-09	7.20E-05	4.86E-05
11	D10	80	Combination Short Haul Truck	39	0.00E+00	7.98E-06	5.91E-07	1.30E+01	2.09E-08	1.22E-02	5.70E-06	1.22E-02	9.24E-04	1.67E-04	4.84E-04	1.72E-04	1.79E-04	2.06E-03	4.34E-05	0.00E+00	3.05E-04	2.31E-03
11	D10	80	Combination Long Haul Truck	35	0.00E+00	1.11E-05	6.27E-07	1.20E+01	7.07E-08	1.44E-02	9.17E-06	1.31E-02	9.55E-04	1.53E-04	1.02E-03	2.02E-04	2.11E-04	1.93E-03	4.04E-05	0.00E+00	8.08E-04	2.46E-03
11	D11	80	Passenger Car	1379	0.00E+00	1.44E-05	1.56E-06	5.84E+01	1.02E-04	2.97E-01	3.24E-05	1.43E-03	7.52E-03	1.26E-03	3.16E-03	2.04E-03	2.09E-03	2.05E-04	2.94E-04	6.29E-08	1.07E-03	2.23E-04
11	D11	80	Passenger Truck	2310	0.00E+00	2.96E-05	3.15E-06	1.32E+02	1.92E-04	5.24E-01	6.26E-05	3.86E-03	1.34E-02	2.23E-03	6.01E-03	3.90E-03	4.00E-03	9.48E-04	6.58E-04	1.20E-07	2.01E-03	6.42E-04
11	D11	80	Single Unit Short Haul Truck	67	0.00E+00	9.20E-06	3.59E-07	1.10E+01	6.24E-06	2.00E-02	1.01E-05	3.81E-03	7.53E-04	1.54E-04	1.27E-03	2.35E-04	2.39E-04	1.12E-03	4.47E-05	1.77E-08	1.03E-03	7.11E-04
11	D11	80	Single Unit Long Haul Truck	3	0.00E+00	4.00E-07	1.54E-08	4.64E-01	2.66E-07	8.31E-04	4.39E-07	1.63E-04	3.45E-05	6.84E-06	5.52E-05	1.01E-05	1.03E-05	4.70E-05	1.89E-06	7.38E-10	4.50E-05	3.04E-05
11	D11

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D15	60	Single Unit Long Haul Truck	3	0.00E+00	5.60E-07	2.30E-08	4.08E-01	3.69E-07	7.14E-04	6.06E-07	2.12E-04	5.94E-05	9.85E-06	7.48E-05	1.43E-05	1.46E-05	4.12E-05	1.66E-06	6.83E-10	6.02E-05	3.97E-05
9	D15	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.97E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.71E-03
9	D15	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.10E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.95E-03
9	D16	60	Passenger Car	709	0.00E+00	9.09E-06	9.88E-07	3.24E+01	6.45E-05	1.82E-01	2.05E-05	7.30E-04	7.16E-03	1.07E-03	2.00E-03	1.29E-03	1.32E-03	1.41E-04	1.62E-04	3.41E-08	6.76E-04	1.14E-04
9	D16	60	Passenger Truck	1188	0.00E+00	1.93E-05	2.04E-06	7.21E+01	1.22E-04	3.12E-01	4.00E-05	2.27E-03	1.31E-02	1.95E-03	3.81E-03	2.48E-03	2.54E-03	5.75E-04	3.58E-04	6.64E-08	1.27E-03	3.85E-04
9	D16	60	Single Unit Short Haul Truck	76	0.00E+00	1.69E-05	6.98E-07	1.26E+01	1.12E-05	2.21E-02	1.83E-05	6.45E-03	1.74E-03	2.93E-04	2.25E-03	4.34E-04	4.43E-04	1.28E-03	5.13E-05	2.11E-08	1.81E-03	1.21E-03
9	D16	60	Single Unit Long Haul Truck	3	0.00E+00	7.37E-07	3.03E-08	5.37E-01	4.85E-07	9.40E-04	7.97E-07	2.79E-04	7.82E-05	1.30E-05	9.85E-05	1.89E-05	1.92E-05	5.42E-05	2.19E-06	8.99E-10	7.93E-05	5.23E-05
9	D16	60	Combination Short Haul Truck	53	0.00E+00	1.54E-05	1.13E-06	1.86E+01	4.22E-08	2.30E-02	1.11E-05	2.34E-02	2.69E-03	4.21E-04	9.50E-04	3.31E-04	3.44E-04	2.96E-03	6.22E-05	0.00E+00	6.06E-04	4.41E-03
9	D16	60	Combination Long Haul Truck	48	0.00E+00	2.12E-05	1.16E-06	1.76E+01	1.43E-07	2.77E-02	1.77E-05	2.49E-02	2.82E-03	4.08E-04	2.01E-03	3.78E-04	3.94E-04	2.82E-03	5.89E-05	0.00E+00	1.62E-03	4.69E-03
10	D17	70	Passenger Car	60	0.00E+00	6.73E-07	7.31E-08	2.63E+00	4.77E-06	1.36E-02	1.52E-06	6.09E-05	4.64E-04	7.22E-05	1.48E-04	9.54E-05	9.79E-05	1.02E-05	1.32E-05	2.74E-09	5.00E-05	9.50E-06
10	D17	70	Passenger Truck	101	0.00E+00	1.42E-06	1.50E-07	5.91E+00	9.07E-06	2.40E-02	2.97E-06	1.77E-04	8.40E-04	1.30E-04	2.84E-04	1.84E-04	1.89E-04	4.47E-05	2.94E-05	5.27E-09	9.48E-05	2.97E-05
10	D17	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.60E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.60E-06
10	D17	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.20E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.91E-04
10	D17	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.49E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.46E-04
10	D18	70	Passenger Car	398	0.00E+00	4.45E-06	4.84E-07	1.74E+01	3.16E-05	8.97E-02	1.00E-05	4.03E-04	3.07E-03	4.78E-04	9.78E-04	6.31E-04	6.47E-04	6.77E-05	8.73E-05	1.81E-08	3.31E-04	6.28E-05
10	D18	70	Passenger Truck	667	0.00E+00	9.37E-06	9.95E-07	3.91E+01	6.00E-05	1.58E-01	1.96E-05	1.17E-03	5.55E-03	8.59E-04	1.88E-03	1.22E-03	1.25E-03	2.96E-04	1.95E-04	3.49E-08	6.27E-04	1.96E-04
10	D18	70	Single Unit Short Haul Truck	51	0.00E+00	8.93E-06	3.63E-07	8.32E+00	5.99E-06	1.51E-02	9.72E-06	3.54E-03	8.07E-04	1.48E-04	1.20E-03	2.29E-04	2.34E-04	8.45E-04	3.38E-05	1.37E-08	9.70E-04	6.62E-04
10	D18	70	Single Unit Long Haul Truck	2	0.00E+00	3.89E-07	1.57E-08	3.52E-01	2.58E-07	6.33E-04	4.23E-07	1.52E-04	3.69E-05	6.62E-06	5.25E-05	9.91E-06	1.01E-05	3.57E-05	1.44E-06	5.76E-10	4.24E-05	2.85E-05
10	D18	70	Combination Short Haul Truck	52	0.00E+00	1.33E-05	9.91E-07	1.80E+01	3.38E-08	1.92E-02	9.50E-06	1.98E-02	1.88E-03	3.13E-04	7.99E-04	2.89E-04	3.00E-04	2.86E-03	6.02E-05	0.00E+00	5.00E-04	3.73E-03
10	D18	70	Combination Long Haul Truck	47	0.00E+00	1.83E-05	1.04E-06	1.69E+01	1.15E-07	2.30E-02	1.50E-05	2.12E-02	1.96E-03	2.95E-04	1.66E-03	3.34E-04	3.48E-04	2.71E-03	5.66E-05	0.00E+00	1.31E-03	3.99E-03
11	D19	80	Passenger Car	1461	0.00E+00	1.52E-05	1.65E-06	6.19E+01	1.08E-04	3.14E-01	3.43E-05	1.52E-03	7.97E-03	1.33E-03	3.34E-03	2.16E-03	2.21E-03	2.17E-04	3.12E-04	6.66E-08	1.13E-03	2.36E-04
11	D19	80	Passenger Truck	2448	0.00E+00	3.13E-05	3.34E-06	1.40E+02	2.04E-04	5.55E-01	6.64E-05	4.09E-03	1.42E-02	2.36E-03	6.37E-03	4.13E-03	4.23E-03	1.01E-03	6.98E-04	1.27E-07	2.13E-03	6.80E-04
11	D19	80	Single Unit Short Haul Truck	141	0.00E+00	1.93E-05	7.54E-07	2.31E+01	1.31E-05	4.19E-02	2.12E-05	7.99E-03	1.58E-03	3.24E-04	2.66E-03	4.93E-04	5.02E-04	2.35E-03	9.38E-05	3.72E-08	2.16E-03	1.49E-03
11	D19	80	Single Unit Long Haul Truck	6	0.00E+00	8.39E-07	3.24E-08	9.75E-01	5.58E-07	1.75E-03	9.22E-07	3.42E-04	7.25E-05	1.44E-05	1.16E-04	2.11E-05	2.16E-05	9.86E-05	3.97E-06	1.55E-09	9.44E-05	6.38E-05
11	D19	80	Combination Short Haul Truck	71	0.00E+00	1.46E-05	1.08E-06	2.37E+01	3.81E-08	2.22E-02	1.04E-05	2.23E-02	1.68E-03	3.05E-04	8.82E-04	3.14E-04	3.26E-04	3.76E-03	7.92E-05	0.00E+00	5.56E-04	4.21E-03
11	D19	80	Combination Long Haul Truck	64	0.00E+00	2.03E-05	1.14E-06	2.20E+01	1.29E-07	2.63E-02	1.67E-05	2.38E-02	1.74E-03	2.79E-04	1.86E-03	3.69E-04	3.84E-04	3.53E-03	7.36E-05	0.00E+00	1.47E-03	4.49E-03
11	D20	80	Passenger Car	497	0.00E+00	5.17E-06	5.62E-07	2.10E+01	3.67E-05	1.07E-01	1.17E-05	5.15E-04	2.71E-03	4.53E-04	1.14E-03	7.33E-04	7.52E-04	7.38E-05	1.06E-04	2.26E-08	3.84E-04	8.03E-05
11	D20	80	Passenger Truck	831	0.00E+00	1.06E-05	1.13E-06	4.75E+01	6.92E-05	1.89E-01	2.25E-05	1.39E-03	4.82E-03	8.02E-04	2.16E-03	1.40E-03	1.44E-03	3.41E-04	2.37E-04	4.31E-08	7.25E-04	2.31E-04
11	D20	80	Single Unit Short Haul Truck	440	0.00E+00	6.03E-05	2.36E-06	7.21E+01	4.09E-05	1.31E-01	6.63E-05	2.50E-02	4.94E-03	1.01E-03	8.31E-03	1.54E-03	1.57E-03	7.33E-03	2.93E-04	1.16E-07	6.74E-03	4.67E-03
11	D20	80	Single Unit Long Haul Truck	19	0.00E+00	2.62E-06	1.01E-07	3.05E+00	1.74E-06	5.45E-03	2.88E-06	1.07E-03	2.26E-04	4.48E-05	3.62E-04	6.60E-05	6.73E-05	3.08E-04	1.24E-05	4.84E-09	2.95E-04	1.99E-04
11	D20	80	Combination Short Haul Truck	232	0.00E+00	4.79E-05	3.54E-06	7.79E+01	1.25E-07	7.29E-02	3.42E-05	7.34E-02	5.54E-03	1.00E-03	2.90E-03	1.03E-03	1.07E-03	1.24E-02	2.60E-04	0.00E+00	1.83E-03	1.38E-02
11	D20	80	Combination Long Haul Truck	212	0.00E+00	6.67E-05	3.76E-06	7.23E+01	4.24E-07	8.64E-02	5.50E-05	7.84E-02	5.73E-03	9.17E-04	6.11E-03	1.21E-03	1.26E-03	1.16E-02	2.42E-04	0.00E+00	4.85E-03	1.48E-02
11	D21	80	Passenger Car	1159	0.00E+00	1.21E-05	1.31E-06	4.91E+01	8.56E-05	2.49E-01	2.72E-05	1.20E-03	6.32E-03	1.06E-03	2.65E-03	1.71E-03	1.76E-03	1.72E-04	2.47E-04	5.29E-08	8.98E-04	1.88E-04
11	D21	80	Passenger Truck	1942	0.00E+00	2.48E-05	2.65E-06	1.11E+02	1.62E-04	4.41E-01	5.26E-05	3.24E-03	1.13E-02	1.87E-03	5.05E-03	3.28E-03	3.36E-03	7.97E-04	5.53E-04	1.01E-07	1.69E-03	5.39E-04
11	D21	80	Single Unit Short Haul Truck	63	0.00E+00	8.67E-06	3.39E-07	1.04E+01	5.88E-06	1.88E-02	9.53E-06	3.59E-03	7.10E-04	1.45E-04	1.19E-03	2.21E-04	2.25E-04	1.05E-03	4.21E-05	1.67E-08	9.69E-04	6.71E-04
11	D21	80	Single Unit Long Haul Truck	3	0.00E+00	3.77E-07	1.45E-08	4.38E-01	2.51E-07	7.84E-04	4.14E-07	1.53E-04	3.26E-05	6.45E-06	5.21E-05	9.49E-06	9.68E-06	4.43E-05	1.78E-06	6.96E-10	4.24E-05	2.87E-05
11	D21	80	Combination Short Haul Truck	27	0.00E+00	5.61E-06	4.15E-07	9.12E+00	1.47E-08	8.54E-03	4.01E-06	8.60E-03	6.49E-04	1.18E-04	3.40E-04	1.21E-04	1.26E-04	1.45E-03	3.05E-05	0.00E+00	2.14E-04	1.62E-03
11	D21	80	Combination Long Haul Truck	25	0.00E+00	7.81E-06	4.41E-07	8.46E+00	4.97E-08	1.01E-02	6.44E-06	9.18E-03	6.71E-04	1.07E-04	7.16E-04	1.42E-04	1.48E-04	1.36E-03	2.84E-05	0.00E+00	5.68E-04	1.73E-03
11	D22	80	Passenger Car	576	0.00E+00	6.00E-06	6.52E-07	2.44E+01	4.26E-05	1.24E-01	1.35E-05	5.97E-04	3.14E-03	5.26E-04	1.32E-03	8.50E-04	8.73E-04	8.57E-05	1.23E-04	2.63E-08	4.46E-04	9.32E-05
11	D22	80	Passenger Truck	965	0.00E+00	1.23E-05	1.32E-06	5.51E+01	8.03E-05	2.19E-01	2.62E-05	1.61E-03	5.59E-03	9.31E-04	2.51E-03	1.63E-03	1.67E-03	3.96E-04	2.75E-04	5.00E-08	8.41E-04	2.68E-04
11	D22	80	Single Unit Short Haul Truck	360	0.00E+00	4.94E-05	1.93E-06	5.90E+01	3.35E-05	1.07E-01	5.43E-05	2.04E-02	4.05E-03	8.28E-04	6.81E-03	1.26E-03	1.28E-03	6.01E-03	2.40E-04	9.51E-08	5.52E-03	3.82E-03
11	D22	80	Single Unit Long Haul Truck	16	0.00E+00	2.15E-06	8.28E-08	2.49E+00	1.43E-06	4.47E-03	2.36E-06	8.74E-04	1.86E-04	3.67E-05	2.97E-04	5.41E-05	5.52E-05	2.52E-04	1.02E-05	3.96E-09	2.42E-04	1.63E-04
11	D22	80	Combination Short Haul Truck	240	0.00E+00	4.94E-05	3.65E-06	8.03E+01	1.29E-07	7.52E-02	3.53E-05	7.57E-02	5.72E-03	1.04E-03	2.99E-03	1.07E-03	1.11E-03	1.28E-02	2.69E-04	0.00E+00	1.89E-03	1.43E-02
11	D22	80	Combination Long Haul Truck	218	0.00E+00	6.88E-05	3.88E-06	7.46E+01	4.37E-07	8.91E-02	5.67E-05	8.09E-02	5.91E-03	9.45E-04	6.30E-03	1.25E-03	1.30E-03	1.20E-02	2.50E-04	0.00E+00	5.00E-03	1.52E-02
9	D23	60	Passenger Car	1432	0.00E+00	1.83E-05	1.99E-06	6.53E+01	1.30E-04	3.68E-01	4.14E-05	1.47E-03	1.45E-02	2.17E-03	4.03E-03	2.60E-03	2.67E-03	2.84E-04	3.27E-04	6.88E-08	1.36E-03	2.30E-04
9	D23	60	Passenger Truck	2398	0.00E+00	3.89E-05	4.13E-06	1.46E+02	2.46E-04	6.30E-01	8.08E-05	4.58E-03	2.64E-02	3.93E-03	7.70E-03	5.01E-03	5.13E-03	1.16E-03	7.23E-04	1.34E-07	2.57E-03	7.76E-04
9	D23	60	Single Unit Short Haul Truck	58	0.00E+00	1.30E-05	5.39E-07	9.72E+00	8.64E-06	1.71E-02	1.41E-05	4.98E-03	1.34E-03	2.26E-04	1.74E-03	3.35E-04	3.42E-04	9.85E-04	3.96E-05	1.63E-08	1.40E-03	9.33E-04
9	D23	60	Single Unit Long Haul Truck	3	0.00E+00	5.69E-07	2.34E-08	4.14E-01	3.75E-07	7.26E-04	6.16E-07	2.16E-04	6.04E-05	1.00E-05	7.61E-05	1.46E-05	1.49E-05	4.19E-05	1.69E-06	6.94E-10	6.12E-05	4.04E-05
9	D23	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.06E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.01E-03
9	D23	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.13E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.14E-03
9	D24	60	Passenger Car	690	0.00E+00	8.84E-06	9.61E-07	3.15E+01	6.28E-05	1.77E-01	1.99E-05	7.11E-04	6.97E-03	1.04E-03	1.94E-03	1.25E-03	1.29E-03	1.37E-04	1.58E-04	3.31E-08	6.58E-04	1.11E-04
9	D24	60	Passenger Truck	1156	0.00E+00	1.88E-05	1.99E-06	7.02E+01	1.18E-04	3.04E-01	3.89E-05	2.21E-03	1.27E-02	1.90E-03	3.71E-03	2.42E-03	2.47E-03	5.60E-04	3.48E-04	6.46E-08	1.24E-03	3.74E-04
9	D24	60	Single Unit Short Haul Truck	90	0.00E+00	2.01E-05	8.30E-07	1.50E+01	1.33E-05	2.63E-02	2.17E-05	7.68E-03	2.07E-03	3.48E-04	2.68E-03	5.17E-04	5.27E-04	1.52E-03	6.10E-05	2.51E-08	2.16E-03	1.44E-03
9	D24	60	Single Unit Long Haul Truck	4	0.00E+00	8.77E-07	3.61E-08	6.39E-01	5.78E-07	1.12E-03	9.49E-07	3.32E-04	9.30E-05	1.54E-05	1.17E-04	2.24E-05	2.29E-05	6.45E-05	2.61E-06	1.07E-09	9.44E-05	6.22E-05
9	D24	60	Combination Short Haul Truck	44	0.00E+00	1.28E-05	9.42E-07	1.55E+01	3.51E-08	1.92E-02	9.21E-06	1.94E-02	2.24E-03	3.50E-04	7.90E-04	2.76E-04	2.86E-04	2.46E-03	5.17E-05	0.00E+00	5.04E-04	3.66E-03
9	D24	60	Combination Long Haul Truck	40	0.00E+00	1.76E-05	9.62E-07	1.46E+01	1.19E-07	2.30E-02	1.47E-05	2.07E-02	2.35E-03	3.39E-04	1.67E-03	3.14E-04	3.28E-04	2.35E-03	4.90E-05	0.00E+00	1.34E-03	3.90E-03
9	D25	60	Passenger Car	1211	0.00E+00	1.55E-05	1.69E-06	5.53E+01	1.10E-04	3.11E-01	3.50E-05	1.25E-03	1.22E-02	1.83E-03	3.41E-03	2.20E-03	2.26E-03	2.40E-04	2.77E-04	5.82E-08	1.15E-03	1.95E-04
9	D25	60	Passenger Truck	2029	0.00E+00	3.29E-05	3.49E-06	1.23E+02	2.08E-04	5.33E-01	6.83E-05	3.88E-03	2.24E-02	3.33E-03	6.52E-03	4.24E-03	4.34E-03	9.83E-04	6.11E-04	1.13E-07	2.17E-03	6.57E-04
9	D25	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.47E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.02E-03
9	D25	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.37E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.44E-05
9	D25	60	Combination Short Haul Truck	28	0.00E+00	8.09E-06	5.94E-07	9.76E+00	2.22E-08	1.21E-02	5.81E-06	1.23E-02	1.41E-03	2.21E-04	4.99E-04	1.74E-04	1.80E-04	1.55E-03	3.26E-05	0.00E+00	3.18E-04	2.31E-03
9	D25	60	Combination Long Haul Truck	25	0.00E+00	1.11E-05	6.07E-07	9.22E+00	7.50E-08	1.45E-02	9.30E-06	1.31E-02	1.48E-03	2.14E-04	1.05E-03	1.98E-04	2.07E-04	1.48E-03	3.09E-05	0.00E+00	8.48E-04	2.46E-03
9	D26	60	Passenger Car	814	0.00E+00	1.04E-05	1.13E-06	3.71E+01	7.40E-05	2.09E-01	2.35E-05	8.38E-04	8.22E-03	1.23E-03	2.29E-03	1.48E-03	1.52E-03	1.61E-04	1.86E-04	3.91E-08	7.75E-04	1.31E-04
9	D26	60	Passenger Truck	1362	0.00E+00	2.21E-05	2.35E-06	8.27E+01	1.40E-04	3.58E-01	4.59E-05	2.60E-03	1.50E-02	2.23E-03	4.38E-03	2.85E-03	2.92E-03	6.60E-04	4.11E-04	7.61E-08	1.46E-03	4.41E-04
9	D26	60	Single Unit Short Haul Truck	97	0.00E+00	2.16E-05	8.92E-07	1.61E+01	1.43E-05	2.83E-02	2.34E-05	8.25E-03	2.23E-03	3.74E-04	2.88E-03	5.55E-04	5.66E-04	1.63E-03	6.56E-05	2.70E-08	2.32E-03	1.54E-03
9	D26	60	Single Unit Long Haul Truck	4	0.00E+00	9.43E-07	3.87E-08	6.86E-01	6.21E-07	1.20E-03	1.02E-06	3.57E-04	1.00E-04	1.66E-05	1.26E-04	2.41E-05	2.46E-05	6.93E-05	2.80E-06	1.15E-09	1.01E-04	6.69E-05
9	D26	60	Combination Short Haul Truck	42	0.00E+00	1.24E-05	9.08E-07	1.49E+01	3.39E-08	1.85E-02	8.88E-06	1.88E-02	2.16E-03	3.37E-04	7.62E-04	2.66E-04	2.76E-04	2.37E-03	4.99E-05	0.00E+00	4.86E-04	3.53E-03
9	D26	60	Combination Long Haul Truck	39	0.00E+00	1.70E-05	9.28E-07	1.41E+01	1.15E-07	2.22E-02	1.42E-05	2.00E-02	2.26E-03	3.27E-04	1.61E-03	3.03E-04	3.16E-04	2.26E-03	4.72E-05	0.00E+00	1.30E-03	3.76E-03
11	D27	80	Passenger Car	588	0.00E+00	6.12E-06	6.66E-07	2.49E+01	4.35E-05	1.27E-01	1.38E-05	6.10E-04	3.21E-03	5.37E-04	1.35E-03	8.68E-04	8.91E-04	8.75E-05	1.26E-04	2.68E-08	4.56E-04	9.52E-05
11	D27	80	Passenger Truck	986	0.00E+00	1.26E-05	1.34E-06	5.63E+01	8.20E-05	2.24E-01	2.67E-05	1.65E-03	5.71E-03	9.51E-04	2.56E-03	1.66E-03	1.71E-03	4.05E-04	2.81E-04	5.11E-08	8.59E-04	2.74E-04
11	D27	80	Single Unit Short Haul Truck	35	0.00E+00	4.86E-06	1.90E-07	5.81E+00	3.30E-06	1.06E-02	5.34E-06	2.01E-03	3.98E-04	8.14E-05	6.70E-04	1.24E-04	1.26E-04	5.91E-04	2.36E-05	9.36E-09	5.43E-04	3.76E-04
11	D27	80	Single Unit Long Haul Truck	2	0.00E+00	2.11E-07	8.15E-09	2.45E-01	1.40E-07	4.39E-04	2.32E-07	8.60E-05	1.83E-05	3.61E-06	2.92E-05	5.32E-06	5.43E-06	2.48E-05	9.99E-07	3.90E-10	2.38E-05	1.61E-05
11	D27	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.78E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.28E-03
11	D27	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.24E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.36E-03
11	D28	80	Passenger Car	1140	0.00E+00	1.19E-05	1.29E-06	4.83E+01	8.42E-05	2.45E-01	2.68E-05	1.18E-03	6.22E-03	1.04E-03	2.61E-03	1.68E-03	1.73E-03	1.70E-04	2.43E-04	5.20E-08	8.83E-04	1.84E-04
11	D28	80	Passenger Truck	1910	0.00E+00	2.44E-05	2.60E-06	1.09E+02	1.59E-04	4.33E-01	5.18E-05	3.19E-03	1.11E-02	1.84E-03	4.97E-03	3.22E-03	3.30E-03	7.84E-04	5.44E-04	9.90E-08	1.66E-03	5.31E-04
11	D28	80	Single Unit Short Haul Truck	84	0.00E+00	1.16E-05	4.52E-07	1.38E+01	7.84E-06	2.51E-02	1.27E-05	4.79E-03	9.47E-04	1.94E-04	1.59E-03	2.95E-04	3.01E-04	1.41E-03	5.61E-05	2.23E-08	1.29E-03	8.94E-04
11	D28	80	Single Unit Long Haul Truck	4	0.00E+00	5.02E-07	1.94E-08	5.84E-01	3.34E-07	1.05E-03	5.52E-07	2.04E-04	4.34E-05	8.59E-06	6.94E-05	1.27E-05	1.29E-05	5.90E-05	2.38E-06	9.27E-10	5.65E-05	3.82E-05
11	D28	80	Combination Short Haul Truck	53	0.00E+00	1.09E-05	8.06E-07	1.77E+01	2.85E-08	1.66E-02	7.78E-06	1.67E-02	1.26E-03	2.28E-04	6.60E-04	2.35E-04	2.44E-04	2.82E-03	5.92E-05	0.00E+00	4.16E-04	3.15E-03
11	D28	80	Combination Long Haul Truck	48	0.00E+00	1.52E-05	8.56E-07	1.64E+01	9.65E-08	1.96E-02	1.25E-05	1.78E-02	1.30E-03	2.08E-04	1.39E-03	2.76E-04	2.87E-04	2.64E-03	5.51E-05	0.00E+00	1.10E-03	3.36E-03
11	D29	80	Passenger Car	511	0.00E+00	5.32E-06	5.78E-07	2.16E+01	3.77E-05	1.10E-01	1.20E-05	5.30E-04	2.78E-03	4.66E-04	1.17E-03	7.54E-04	7.73E-04	7.59E-05	1.09E-04	2.33E-08	3.95E-04	8.26E-05
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Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D33	60	Passenger Car	301	0.00E+00	3.85E-06	4.19E-07	1.37E+01	2.73E-05	7.73E-02	8.68E-06	3.09E-04	3.04E-03	4.55E-04	8.47E-04	5.46E-04	5.60E-04	5.96E-05	6.87E-05	1.44E-08	2.87E-04	4.83E-05
9	D33	60	Passenger Truck	503	0.00E+00	8.18E-06	8.67E-07	3.06E+01	5.16E-05	1.32E-01	1.70E-05	9.62E-04	5.55E-03	8.26E-04	1.62E-03	1.05E-03	1.08E-03	2.44E-04	1.52E-04	2.81E-08	5.39E-04	1.63E-04
9	D33	60	Single Unit Short Haul Truck	50	0.00E+00	1.11E-05	4.59E-07	8.29E+00	7.37E-06	1.46E-02	1.20E-05	4.25E-03	1.15E-03	1.93E-04	1.48E-03	2.86E-04	2.91E-04	8.40E-04	3.38E-05	1.39E-08	1.19E-03	7.95E-04
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	4.85E-07	1.99E-08	3.53E-01	3.19E-07	6.19E-04	5.25E-07	1.84E-04	5.15E-05	8.54E-06	6.49E-05	1.24E-05	1.27E-05	3.57E-05	1.44E-06	5.92E-10	5.22E-05	3.44E-05
9	D33	60	Combination Short Haul Truck	32	0.00E+00	9.46E-06	6.95E-07	1.14E+01	2.59E-08	1.41E-02	6.80E-06	1.44E-02	1.65E-03	2.58E-04	5.83E-04	2.03E-04	2.11E-04	1.82E-03	3.82E-05	0.00E+00	3.72E-04	2.70E-03
9	D33	60	Combination Long Haul Truck	30	0.00E+00	1.30E-05	7.10E-07	1.08E+01	8.78E-08	1.70E-02	1.09E-05	1.53E-02	1.73E-03	2.50E-04	1.23E-03	2.32E-04	2.42E-04	1.73E-03	3.61E-05	0.00E+00	9.92E-04	2.88E-03
9	D34	60	Passenger Car	302	0.00E+00	3.87E-06	4.21E-07	1.38E+01	2.75E-05	7.77E-02	8.73E-06	3.11E-04	3.05E-03	4.57E-04	8.51E-04	5.49E-04	5.63E-04	5.99E-05	6.91E-05	1.45E-08	2.88E-04	4.85E-05
9	D34	60	Passenger Truck	506	0.00E+00	8.22E-06	8.71E-07	3.07E+01	5.18E-05	1.33E-01	1.70E-05	9.67E-04	5.57E-03	8.30E-04	1.62E-03	1.06E-03	1.08E-03	2.45E-04	1.52E-04	2.83E-08	5.42E-04	1.64E-04
9	D34	60	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.24E-07	2.23E+00	1.98E-06	3.92E-03	3.24E-06	1.14E-03	3.08E-04	5.18E-05	3.99E-04	7.69E-05	7.85E-05	2.26E-04	9.09E-06	3.75E-09	3.21E-04	2.14E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.37E-09	9.51E-02	8.60E-08	1.67E-04	1.41E-07	4.95E-05	1.39E-05	2.30E-06	1.75E-05	3.34E-06	3.41E-06	9.61E-06	3.88E-07	1.59E-10	1.41E-05	9.27E-06
9	D34	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.01E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.67E-04
9	D34	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.20E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.04E-04
9	D35	60	Passenger Car	459	0.00E+00	5.89E-06	6.40E-07	2.10E+01	4.18E-05	1.18E-01	1.33E-05	4.73E-04	4.64E-03	6.95E-04	1.29E-03	8.35E-04	8.57E-04	9.11E-05	1.05E-04	2.21E-08	4.38E-04	7.38E-05
9	D35	60	Passenger Truck	770	0.00E+00	1.25E-05	1.32E-06	4.67E+01	7.88E-05	2.02E-01	2.59E-05	1.47E-03	8.48E-03	1.26E-03	2.47E-03	1.61E-03	1.65E-03	3.73E-04	2.32E-04	4.30E-08	8.24E-04	2.49E-04
9	D35	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.21E-04
9	D35	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.43E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.39E-05
9	D35	60	Combination Short Haul Truck	15	0.00E+00	4.43E-06	3.25E-07	5.34E+00	1.21E-08	6.61E-03	3.18E-06	6.71E-03	7.73E-04	1.21E-04	2.73E-04	9.51E-05	9.88E-05	8.49E-04	1.79E-05	0.00E+00	1.74E-04	1.27E-03
9	D35	60	Combination Long Haul Truck	14	0.00E+00	6.08E-06	3.32E-07	5.05E+00	4.11E-08	7.95E-03	5.09E-06	7.15E-03	8.10E-04	1.17E-04	5.77E-04	1.09E-04	1.13E-04	8.10E-04	1.69E-05	0.00E+00	4.64E-04	1.35E-03
9	D36	60	Passenger Car	174	0.00E+00	2.23E-06	2.43E-07	7.95E+00	1.58E-05	4.48E-02	5.03E-06	1.79E-04	1.76E-03	2.64E-04	4.91E-04	3.17E-04	3.25E-04	3.45E-05	3.98E-05	8.37E-09	1.66E-04	2.80E-05
9	D36	60	Passenger Truck	292	0.00E+00	4.74E-06	5.02E-07	1.77E+01	2.99E-05	7.66E-02	9.83E-06	5.58E-04	3.22E-03	4.79E-04	9.37E-04	6.10E-04	6.25E-04	1.41E-04	8.79E-05	1.63E-08	3.12E-04	9.45E-05
9	D36	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.29E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.28E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.90E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.85E-05
9	D36	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.57E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.61E-03
9	D36	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.12E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D37	60	Passenger Car	102	0.00E+00	1.31E-06	1.42E-07	4.66E+00	9.28E-06	2.62E-02	2.95E-06	1.05E-04	1.03E-03	1.54E-04	2.88E-04	1.85E-04	1.90E-04	2.02E-05	2.33E-05	4.90E-09	9.73E-05	1.64E-05
9	D37	60	Passenger Truck	171	0.00E+00	2.78E-06	2.94E-07	1.04E+01	1.75E-05	4.49E-02	5.76E-06	3.27E-04	1.88E-03	2.80E-04	5.49E-04	3.57E-04	3.66E-04	8.28E-05	5.15E-05	9.55E-09	1.83E-04	5.53E-05
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.63E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
9	D37	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.39E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.62E-04
9	D37	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.48E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.79E-04
9	D38	60	Passenger Car	289	0.00E+00	3.70E-06	4.02E-07	1.32E+01	2.62E-05	7.42E-02	8.34E-06	2.97E-04	2.91E-03	4.37E-04	8.13E-04	5.24E-04	5.38E-04	5.72E-05	6.60E-05	1.39E-08	2.75E-04	4.64E-05
9	D38	60	Passenger Truck	483	0.00E+00	7.85E-06	8.32E-07	2.94E+01	4.95E-05	1.27E-01	1.63E-05	9.24E-04	5.33E-03	7.93E-04	1.55E-03	1.01E-03	1.04E-03	2.34E-04	1.46E-04	2.70E-08	5.17E-04	1.56E-04
9	D38	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.35E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
9	D38	60	Combination Short Haul Truck	20	0.00E+00	5.95E-06	4.37E-07	7.18E+00	1.63E-08	8.90E-03	4.28E-06	9.03E-03	1.04E-03	1.62E-04	3.67E-04	1.28E-04	1.33E-04	1.14E-03	2.40E-05	0.00E+00	2.34E-04	1.70E-03
9	D38	60	Combination Long Haul Truck	19	0.00E+00	8.18E-06	4.47E-07	6.79E+00	5.52E-08	1.07E-02	6.84E-06	9.61E-03	1.09E-03	1.58E-04	7.76E-04	1.46E-04	1.52E-04	1.09E-03	2.27E-05	0.00E+00	6.24E-04	1.81E-03
9	D39	60	Passenger Car	158	0.00E+00	2.03E-06	2.20E-07	7.22E+00	1.44E-05	4.07E-02	4.57E-06	1.63E-04	1.60E-03	2.39E-04	4.46E-04	2.87E-04	2.95E-04	3.13E-05	3.62E-05	7.59E-09	1.51E-04	2.54E-05
9	D39	60	Passenger Truck	265	0.00E+00	4.30E-06	4.56E-07	1.61E+01	2.71E-05	6.96E-02	8.92E-06	5.06E-04	2.92E-03	4.34E-04	8.51E-04	5.53E-04	5.67E-04	1.28E-04	7.98E-05	1.48E-08	2.84E-04	8.57E-05
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.17E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	D39	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.94E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
9	D39	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.39E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.39E-04
9	D40	60	Passenger Car	358	0.00E+00	4.58E-06	4.98E-07	1.63E+01	3.25E-05	9.20E-02	1.03E-05	3.68E-04	3.61E-03	5.41E-04	1.01E-03	6.50E-04	6.67E-04	7.09E-05	8.18E-05	1.72E-08	3.41E-04	5.75E-05
9	D40	60	Passenger Truck	599	0.00E+00	9.73E-06	1.03E-06	3.64E+01	6.14E-05	1.57E-01	2.02E-05	1.14E-03	6.60E-03	9.83E-04	1.92E-03	1.25E-03	1.28E-03	2.90E-04	1.81E-04	3.35E-08	6.41E-04	1.94E-04
9	D40	60	Single Unit Short Haul Truck	21	0.00E+00	4.71E-06	1.94E-07	3.51E+00	3.12E-06	6.17E-03	5.09E-06	1.80E-03	4.85E-04	8.15E-05	6.28E-04	1.21E-04	1.23E-04	3.55E-04	1.43E-05	5.89E-09	5.04E-04	3.36E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.44E-09	1.49E-01	1.35E-07	2.62E-04	2.22E-07	7.78E-05	2.18E-05	3.61E-06	2.74E-05	5.25E-06	5.36E-06	1.51E-05	6.10E-07	2.50E-10	2.21E-05	1.46E-05
9	D40	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.57E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.61E-03
9	D40	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.12E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D41	60	Passenger Car	148	0.00E+00	1.90E-06	2.06E-07	6.76E+00	1.35E-05	3.81E-02	4.28E-06	1.52E-04	1.50E-03	2.24E-04	4.17E-04	2.69E-04	2.76E-04	2.93E-05	3.38E-05	7.11E-09	1.41E-04	2.38E-05
9	D41	60	Passenger Truck	248	0.00E+00	4.03E-06	4.27E-07	1.51E+01	2.54E-05	6.51E-02	8.35E-06	4.74E-04	2.73E-03	4.07E-04	7.96E-04	5.18E-04	5.31E-04	1.20E-04	7.47E-05	1.39E-08	2.65E-04	8.03E-05
9	D42	60	Passenger Car	176	0.00E+00	2.26E-06	2.46E-07	8.05E+00	1.60E-05	4.54E-02	5.10E-06	1.82E-04	1.78E-03	2.67E-04	4.97E-04	3.21E-04	3.29E-04	3.50E-05	4.03E-05	8.47E-09	1.68E-04	2.83E-05
9	D42	60	Passenger Truck	296	0.00E+00	4.80E-06	5.09E-07	1.79E+01	3.03E-05	7.76E-02	9.96E-06	5.65E-04	3.26E-03	4.85E-04	9.49E-04	6.18E-04	6.33E-04	1.43E-04	8.91E-05	1.65E-08	3.16E-04	9.57E-05
9	D42	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.80E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.83E-04
9	D42	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.24E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.95E-06
9	D42	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.57E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.61E-03
9	D42	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.12E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D43	60	Passenger Car	299	0.00E+00	3.83E-06	4.16E-07	1.36E+01	2.72E-05	7.69E-02	8.64E-06	3.08E-04	3.02E-03	4.52E-04	8.43E-04	5.43E-04	5.58E-04	5.93E-05	6.84E-05	1.44E-08	2.85E-04	4.80E-05
9	D43	60	Passenger Truck	501	0.00E+00	8.14E-06	8.62E-07	3.04E+01	5.13E-05	1.32E-01	1.69E-05	9.57E-04	5.52E-03	8.21E-04	1.61E-03	1.05E-03	1.07E-03	2.43E-04	1.51E-04	2.80E-08	5.36E-04	1.62E-04
9	D44	60	Passenger Car	198	0.00E+00	2.53E-06	2.75E-07	9.03E+00	1.80E-05	5.08E-02	5.71E-06	2.04E-04	2.00E-03	2.99E-04	5.57E-04	3.59E-04	3.69E-04	3.92E-05	4.52E-05	9.50E-09	1.89E-04	3.18E-05
9	D44	60	Passenger Truck	331	0.00E+00	5.38E-06	5.70E-07	2.01E+01	3.39E-05	8.70E-02	1.12E-05	6.33E-04	3.65E-03	5.43E-04	1.06E-03	6.92E-04	7.09E-04	1.60E-04	9.98E-05	1.85E-08	3.55E-04	1.07E-04
9	D44	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.43E-04
9	D44	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	D44	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.41E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.40E-03
9	D44	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.89E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.49E-03
9	D45	60	Passenger Car	584	0.00E+00	7.48E-06	8.13E-07	2.66E+01	5.31E-05	1.50E-01	1.69E-05	6.01E-04	5.89E-03	8.83E-04	1.64E-03	1.06E-03	1.09E-03	1.16E-04	1.33E-04	2.80E-08	5.56E-04	9.37E-05
9	D45	60	Passenger Truck	977	0.00E+00	1.59E-05	1.68E-06	5.94E+01	1.00E-04	2.57E-01	3.29E-05	1.87E-03	1.08E-02	1.60E-03	3.14E-03	2.04E-03	2.09E-03	4.74E-04	2.95E-04	5.46E-08	1.05E-03	3.16E-04
9	D45	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.47E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.02E-03
9	D45	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.37E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.44E-05
9	D45	60	Combination Short Haul Truck	53	0.00E+00	1.54E-05	1.13E-06	1.86E+01	4.22E-08	2.30E-02	1.11E-05	2.34E-02	2.69E-03	4.21E-04	9.50E-04	3.31E-04	3.44E-04	2.96E-03	6.22E-05	0.00E+00	6.06E-04	4.41E-03
9	D45	60	Combination Long Haul Truck	48	0.00E+00	2.12E-05	1.16E-06	1.76E+01	1.43E-07	2.77E-02	1.77E-05	2.49E-02	2.82E-03	4.08E-04	2.01E-03	3.78E-04	3.94E-04	2.82E-03	5.89E-05	0.00E+00	1.62E-03	4.69E-03
9	D46	60	Passenger Car	495	0.00E+00	6.35E-06	6.90E-07	2.26E+01	4.50E-05	1.27E-01	1.43E-05	5.10E-04	5.00E-03	7.49E-04	1.40E-03	9.00E-04	9.24E-04	9.82E-05	1.13E-04	2.38E-08	4.72E-04	7.96E-05
9	D46	60	Passenger Truck	830	0.00E+00	1.35E-05	1.43E-06	5.04E+01	8.50E-05	2.18E-01	2.79E-05	1.59E-03	9.14E-03	1.36E-03	2.66E-03	1.73E-03	1.78E-03	4.02E-04	2.50E-04	4.64E-08	8.88E-04	2.69E-04
9	D46	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.13E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	D46	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.65E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.97E-05
9	D46	60	Combination Short Haul Truck	57	0.00E+00	1.66E-05	1.22E-06	2.01E+01	4.56E-08	2.49E-02	1.20E-05	2.52E-02	2.90E-03	4.54E-04	1.03E-03	3.58E-04	3.71E-04	3.19E-03	6.71E-05	0.00E+00	6.54E-04	4.75E-03
9	D46	60	Combination Long Haul Truck	52	0.00E+00	2.29E-05	1.25E-06	1.90E+01	1.54E-07	2.99E-02	1.91E-05	2.69E-02	3.05E-03	4.40E-04	2.17E-03	4.08E-04	4.25E-04	3.04E-03	6.35E-05	0.00E+00	1.74E-03	5.06E-03
9	D47	60	Passenger Car	824	0.00E+00	1.06E-05	1.15E-06	3.76E+01	7.50E-05	2.12E-01	2.38E-05	8.49E-04	8.33E-03	1.25E-03	2.32E-03	1.50E-03	1.54E-03	1.63E-04	1.88E-04	3.96E-08	7.86E-04	1.32E-04
9	D47	60	Passenger Truck	1381	0.00E+00	2.24E-05	2.38E-06	8.38E+01	1.41E-04	3.63E-01	4.65E-05	2.64E-03	1.52E-02	2.26E-03	4.43E-03	2.88E-03	2.96E-03	6.69E-04	4.16E-04	7.72E-08	1.48E-03	4.47E-04
9	D47	60	Single Unit Short Haul Truck	83	0.00E+00	1.86E-05	7.69E-07	1.39E+01	1.23E-05	2.44E-02	2.01E-05	7.11E-03	1.92E-03	3.22E-04	2.48E-03	4.78E-04	4.88E-04	1.40E-03	5.65E-05	2.33E-08	1.99E-03	1.33E-03
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	8.12E-07	3.34E-08	5.91E-01	5.35E-07	1.04E-03	8.78E-07	3.08E-04	8.61E-05	1.43E-05	1.09E-04	2.08E-05	2.12E-05	5.97E-05	2.41E-06	9.90E-10	8.73E-05	5.76E-05
9	D47	60	Combination Short Haul Truck	56	0.00E+00	1.65E-05	1.21E-06	1.99E+01	4.52E-08	2.46E-02	1.18E-05	2.50E-02	2.88E-03	4.50E-04	1.02E-03	3.54E-04	3.68E-04	3.16E-03	6.65E-05	0.00E+00	6.48E-04	4.71E-03
9	D47	60	Combination Long Haul Truck	52	0.00E+00	2.27E-05	1.24E-06	1.88E+01	1.53E-07	2.96E-02	1.89E-05	2.66E-02	3.02E-03	4.36E-04	2.15E-03	4.04E-04	4.21E-04	3.02E-03	6.30E-05	0.00E+00	1.73E-03	5.01E-03
9	D48	60	Passenger Car	381	0.00E+00	4.88E-06	5.30E-07	1.74E+01	3.46E-05	9.78E-02	1.10E-05	3.92E-04	3.84E-03	5.76E-04	1.07E-03	6.91E-04	7.10E-04	7.54E-05	8.70E-05	1.83E-08	3.63E-04	6.11E-05
9	D48	60	Passenger Truck	637	0.00E+00	1.04E-05	1.10E-06	3.87E+01	6.53E-05	1.67E-01	2.15E-05	1.22E-03	7.02E-03	1.05E-03	2.05E-03	1.33E-03	1.36E-03	3.09E-04	1.92E-04	3.56E-08	6.82E-04	2.06E-04
9	D48	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.04E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.82E-04
9	D48	60	Single Unit Long Haul Truck	1	0.00E+00	2.

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D52	60	Single Unit Short Haul Truck	61	0.00E+00	1.37E-05	5.65E-07	1.02E+01	9.07E-06	1.79E-02	1.48E-05	5.23E-03	1.41E-03	2.37E-04	1.83E-03	3.52E-04	3.59E-04	1.03E-03	4.16E-05	1.71E-08	1.47E-03	9.79E-04
9	D52	60	Single Unit Long Haul Truck	3	0.00E+00	5.97E-07	2.46E-08	4.35E-01	3.93E-07	7.61E-04	6.46E-07	2.26E-04	6.33E-05	1.05E-05	7.98E-05	1.53E-05	1.56E-05	4.39E-05	1.77E-06	7.28E-10	6.42E-05	4.24E-05
9	D52	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.48E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.79E-03
9	D52	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.97E-03
9	D53	60	Passenger Car	316	0.00E+00	4.04E-06	4.39E-07	1.44E+01	2.87E-05	8.11E-02	9.12E-06	3.25E-04	3.19E-03	4.77E-04	8.89E-04	5.73E-04	5.88E-04	6.26E-05	7.21E-05	1.52E-08	3.01E-04	5.07E-05
9	D53	60	Passenger Truck	528	0.00E+00	8.58E-06	9.10E-07	3.21E+01	5.41E-05	1.39E-01	1.78E-05	1.01E-03	5.82E-03	8.67E-04	1.70E-03	1.10E-03	1.13E-03	2.56E-04	1.59E-04	2.95E-08	5.66E-04	1.71E-04
9	D53	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.08E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.64E-04
9	D53	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.31E-05
9	D53	60	Combination Short Haul Truck	27	0.00E+00	7.94E-06	5.83E-07	9.58E+00	2.17E-08	1.19E-02	5.70E-06	1.20E-02	1.39E-03	2.17E-04	4.89E-04	1.71E-04	1.77E-04	1.52E-03	3.20E-05	0.00E+00	3.12E-04	2.27E-03
9	D53	60	Combination Long Haul Truck	25	0.00E+00	1.09E-05	5.96E-07	9.05E+00	7.36E-08	1.42E-02	9.12E-06	1.28E-02	1.45E-03	2.10E-04	1.03E-03	1.95E-04	2.03E-04	1.45E-03	3.03E-05	0.00E+00	8.32E-04	2.41E-03
9	D54	60	Passenger Car	374	0.00E+00	4.80E-06	5.21E-07	1.71E+01	3.40E-05	9.62E-02	1.08E-05	3.85E-04	3.78E-03	5.66E-04	1.05E-03	6.80E-04	6.98E-04	7.42E-05	8.56E-05	1.80E-08	3.57E-04	6.01E-05
9	D54	60	Passenger Truck	627	0.00E+00	1.02E-05	1.08E-06	3.81E+01	6.42E-05	1.65E-01	2.11E-05	1.20E-03	6.91E-03	1.03E-03	2.01E-03	1.31E-03	1.34E-03	3.04E-04	1.89E-04	3.50E-08	6.71E-04	2.03E-04
9	D54	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.47E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.02E-03
9	D54	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.37E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.44E-05
9	D54	60	Combination Short Haul Truck	28	0.00E+00	8.24E-06	6.06E-07	9.95E+00	2.26E-08	1.23E-02	5.92E-06	1.25E-02	1.44E-03	2.25E-04	5.08E-04	1.77E-04	1.84E-04	1.58E-03	3.33E-05	0.00E+00	3.24E-04	2.36E-03
9	D54	60	Combination Long Haul Truck	26	0.00E+00	1.13E-05	6.19E-07	9.40E+00	7.64E-08	1.48E-02	9.47E-06	1.33E-02	1.51E-03	2.18E-04	1.07E-03	2.02E-04	2.11E-04	1.51E-03	3.15E-05	0.00E+00	8.64E-04	2.51E-03
11	D55	80	Passenger Car	664	0.00E+00	6.91E-06	7.51E-07	2.81E+01	4.90E-05	1.43E-01	1.56E-05	6.88E-04	3.62E-03	6.06E-04	1.52E-03	9.80E-04	1.01E-03	9.87E-05	1.42E-04	3.03E-08	5.14E-04	1.07E-04
11	D55	80	Passenger Truck	1112	0.00E+00	1.42E-05	1.52E-06	6.35E+01	9.25E-05	2.52E-01	3.01E-05	1.86E-03	6.44E-03	1.07E-03	2.89E-03	1.88E-03	1.92E-03	4.57E-04	3.17E-04	5.76E-08	9.69E-04	3.09E-04
11	D55	80	Single Unit Short Haul Truck	93	0.00E+00	1.27E-05	4.98E-07	1.52E+01	8.64E-06	2.77E-02	1.40E-05	5.28E-03	1.04E-03	2.14E-04	1.76E-03	3.25E-04	3.31E-04	1.55E-03	6.19E-05	2.45E-08	1.42E-03	9.86E-04
11	D55	80	Single Unit Long Haul Truck	4	0.00E+00	5.54E-07	2.14E-08	6.44E-01	3.68E-07	1.15E-03	6.09E-07	2.25E-04	4.79E-05	9.47E-06	7.65E-05	1.40E-05	1.42E-05	6.51E-05	2.62E-06	1.02E-09	6.23E-05	4.21E-05
11	D55	80	Combination Short Haul Truck	57	0.00E+00	1.17E-05	8.70E-07	1.91E+01	3.08E-08	1.79E-02	8.40E-06	1.80E-02	1.36E-03	2.46E-04	7.13E-04	2.54E-04	2.63E-04	3.04E-03	6.39E-05	0.00E+00	4.49E-04	3.40E-03
11	D55	80	Combination Long Haul Truck	52	0.00E+00	1.64E-05	9.24E-07	1.77E+01	1.04E-07	2.12E-02	1.35E-05	1.93E-02	1.41E-03	2.25E-04	1.50E-03	2.98E-04	3.10E-04	2.85E-03	5.95E-05	0.00E+00	1.19E-03	3.63E-03
11	D56	80	Passenger Car	362	0.00E+00	3.77E-06	4.10E-07	1.54E+01	2.68E-05	7.79E-02	8.50E-06	3.76E-04	1.97E-03	3.31E-04	8.29E-04	5.35E-04	5.49E-04	5.39E-05	7.73E-05	1.65E-08	2.80E-04	5.86E-05
11	D56	80	Passenger Truck	607	0.00E+00	7.76E-06	8.28E-07	3.47E+01	5.05E-05	1.38E-01	1.64E-05	1.01E-03	3.52E-03	5.85E-04	1.58E-03	1.02E-03	1.05E-03	2.49E-04	1.73E-04	3.14E-08	5.29E-04	1.69E-04
11	D56	80	Single Unit Short Haul Truck	43	0.00E+00	5.91E-06	2.31E-07	7.07E+00	4.01E-06	1.28E-02	6.50E-06	2.45E-03	4.84E-04	9.91E-05	8.14E-04	1.51E-04	1.54E-04	7.19E-04	2.87E-05	1.14E-08	6.61E-04	4.57E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	2.57E-07	9.91E-09	2.99E-01	1.71E-07	5.34E-04	2.82E-07	1.05E-04	2.22E-05	4.39E-06	3.55E-05	6.47E-06	6.60E-06	3.02E-05	1.22E-06	4.74E-10	2.89E-05	1.95E-05
11	D56	80	Combination Short Haul Truck	24	0.00E+00	4.96E-06	3.67E-07	8.07E+00	1.30E-08	7.56E-03	3.54E-06	7.60E-03	5.74E-04	1.04E-04	3.01E-04	1.07E-04	1.11E-04	1.28E-03	2.70E-05	0.00E+00	1.90E-04	1.43E-03
11	D56	80	Combination Long Haul Truck	22	0.00E+00	6.91E-06	3.90E-07	7.49E+00	4.39E-08	8.95E-03	5.70E-06	8.12E-03	5.93E-04	9.50E-05	6.33E-04	1.26E-04	1.31E-04	1.20E-03	2.51E-05	0.00E+00	5.02E-04	1.53E-03
11	D57	80	Passenger Car	805	0.00E+00	8.37E-06	9.10E-07	3.41E+01	5.94E-05	1.73E-01	1.89E-05	8.34E-04	4.39E-03	7.34E-04	1.84E-03	1.19E-03	1.22E-03	1.20E-04	1.72E-04	3.67E-08	6.23E-04	1.30E-04
11	D57	80	Passenger Truck	1347	0.00E+00	1.72E-05	1.84E-06	7.70E+01	1.12E-04	3.06E-01	3.65E-05	2.25E-03	7.81E-03	1.30E-03	3.51E-03	2.27E-03	2.33E-03	5.53E-04	3.84E-04	6.98E-08	1.17E-03	3.74E-04
11	D57	80	Single Unit Short Haul Truck	113	0.00E+00	1.55E-05	6.05E-07	1.85E+01	1.05E-05	3.37E-02	1.70E-05	6.42E-03	1.27E-03	2.60E-04	2.14E-03	3.95E-04	4.03E-04	1.88E-03	7.53E-05	2.98E-08	1.73E-03	1.20E-03
11	D57	80	Single Unit Long Haul Truck	5	0.00E+00	6.74E-07	2.60E-08	7.83E-01	4.48E-07	1.40E-03	7.40E-07	2.74E-04	5.82E-05	1.15E-05	9.31E-05	1.70E-05	1.73E-05	7.92E-05	3.19E-06	1.24E-09	7.58E-05	5.12E-05
11	D57	80	Combination Short Haul Truck	66	0.00E+00	1.37E-05	1.01E-06	2.23E+01	3.59E-08	2.09E-02	9.79E-06	2.10E-02	1.58E-03	2.87E-04	8.30E-04	2.96E-04	3.07E-04	3.54E-03	7.45E-05	0.00E+00	5.23E-04	3.96E-03
11	D57	80	Combination Long Haul Truck	61	0.00E+00	1.91E-05	1.08E-06	2.07E+01	1.21E-07	2.47E-02	1.57E-05	2.24E-02	1.64E-03	2.62E-04	1.75E-03	3.47E-04	3.61E-04	3.32E-03	6.93E-05	0.00E+00	1.39E-03	4.22E-03
11	D58	80	Passenger Car	1166	0.00E+00	1.21E-05	1.32E-06	4.94E+01	8.61E-05	2.51E-01	2.74E-05	1.21E-03	6.35E-03	1.06E-03	2.67E-03	1.72E-03	1.77E-03	1.73E-04	2.49E-04	5.31E-08	9.02E-04	1.89E-04
11	D58	80	Passenger Truck	1952	0.00E+00	2.50E-05	2.66E-06	1.12E+02	1.62E-04	4.43E-01	5.29E-05	3.26E-03	1.13E-02	1.88E-03	5.08E-03	3.30E-03	3.38E-03	8.02E-04	5.56E-04	1.01E-07	1.70E-03	5.42E-04
11	D58	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.39E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.47E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.02E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.91E-05
11	D58	80	Combination Short Haul Truck	26	0.00E+00	5.28E-06	3.91E-07	8.59E+00	1.38E-08	8.05E-03	3.78E-06	8.10E-03	6.12E-04	1.11E-04	3.20E-04	1.14E-04	1.18E-04	1.37E-03	2.87E-05	0.00E+00	2.02E-04	1.53E-03
11	D58	80	Combination Long Haul Truck	23	0.00E+00	7.36E-06	4.15E-07	7.98E+00	4.68E-08	9.53E-03	6.07E-06	8.65E-03	6.32E-04	1.01E-04	6.74E-04	1.34E-04	1.39E-04	1.28E-03	2.67E-05	0.00E+00	5.35E-04	1.63E-03
11	D59	80	Passenger Car	432	0.00E+00	4.49E-06	4.88E-07	1.83E+01	3.19E-05	9.29E-02	1.01E-05	4.48E-04	2.35E-03	3.94E-04	9.88E-04	6.37E-04	6.54E-04	6.42E-05	9.21E-05	1.97E-08	3.34E-04	6.99E-05
11	D59	80	Passenger Truck	723	0.00E+00	9.25E-06	9.86E-07	4.13E+01	6.02E-05	1.64E-01	1.96E-05	1.21E-03	4.19E-03	6.98E-04	1.88E-03	1.22E-03	1.25E-03	2.97E-04	2.06E-04	3.75E-08	6.30E-04	2.01E-04
11	D59	80	Single Unit Short Haul Truck	77	0.00E+00	1.05E-05	4.11E-07	1.26E+01	7.13E-06	2.28E-02	1.16E-05	4.35E-03	8.61E-04	1.76E-04	1.45E-03	2.68E-04	2.73E-04	1.28E-03	5.10E-05	2.02E-08	1.17E-03	8.13E-04
11	D59	80	Single Unit Long Haul Truck	3	0.00E+00	4.57E-07	1.76E-08	5.31E-01	3.04E-07	9.50E-04	5.02E-07	1.86E-04	3.95E-05	7.81E-06	6.31E-05	1.15E-05	1.17E-05	5.37E-05	2.16E-06	8.43E-10	5.14E-05	3.47E-05
11	D59	80	Combination Short Haul Truck	39	0.00E+00	7.98E-06	5.91E-07	1.30E+01	2.09E-08	1.22E-02	5.70E-06	1.22E-02	9.24E-04	1.67E-04	4.84E-04	1.72E-04	1.79E-04	2.06E-03	4.34E-05	0.00E+00	3.05E-04	2.31E-03
11	D59	80	Combination Long Haul Truck	35	0.00E+00	1.11E-05	6.27E-07	1.20E+01	7.07E-08	1.44E-02	9.17E-06	1.31E-02	9.55E-04	1.53E-04	1.02E-03	2.02E-04	2.11E-04	1.93E-03	4.04E-05	0.00E+00	8.08E-04	2.46E-03
11	D60	80	Passenger Car	501	0.00E+00	5.22E-06	5.67E-07	2.12E+01	3.70E-05	1.08E-01	1.18E-05	5.20E-04	2.73E-03	4.58E-04	1.15E-03	7.40E-04	7.59E-04	7.45E-05	1.07E-04	2.29E-08	3.88E-04	8.11E-05
11	D60	80	Passenger Truck	840	0.00E+00	1.07E-05	1.15E-06	4.80E+01	6.99E-05	1.91E-01	2.28E-05	1.40E-03	4.87E-03	8.10E-04	2.18E-03	1.42E-03	1.45E-03	3.45E-04	2.39E-04	4.35E-08	7.32E-04	2.33E-04
11	D60	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.12E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.96E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.06E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.69E-05
11	D60	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.46E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	D60	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.83E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
11	D61	80	Passenger Car	57	0.00E+00	5.91E-07	6.43E-08	2.41E+00	4.20E-06	1.22E-02	1.33E-06	5.89E-05	3.10E-04	5.19E-05	1.30E-04	8.39E-05	8.61E-05	8.45E-06	1.21E-05	2.59E-09	4.40E-05	9.19E-06
11	D61	80	Passenger Truck	95	0.00E+00	1.22E-06	1.30E-07	5.44E+00	7.92E-06	2.16E-02	2.58E-06	1.59E-04	5.52E-04	9.18E-05	2.48E-04	1.61E-04	1.65E-04	3.91E-05	2.71E-05	4.93E-09	8.29E-05	2.64E-05
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	5.98E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D61	80	Single Unit Long Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.80E-04
11	D61	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	2.99E-04
11	D62	80	Passenger Car	244	0.00E+00	2.54E-06	2.76E-07	1.03E+01	1.80E-05	5.25E-02	5.73E-06	2.53E-04	1.33E-03	2.23E-04	5.59E-04	3.60E-04	3.70E-04	3.63E-05	5.21E-05	1.11E-08	1.89E-04	3.95E-05
11	D62	80	Passenger Truck	409	0.00E+00	5.23E-06	5.58E-07	2.34E+01	3.40E-05	9.28E-02	1.11E-05	6.82E-04	2.37E-03	3.95E-04	1.06E-03	6.90E-04	7.07E-04	1.68E-04	1.17E-04	2.12E-08	3.56E-04	1.14E-04
11	D62	80	Single Unit Short Haul Truck	79	0.00E+00	1.08E-05	4.21E-07	1.29E+01	7.31E-06	2.34E-02	1.18E-05	4.46E-03	8.82E-04	1.80E-04	1.48E-03	2.75E-04	2.80E-04	1.31E-03	5.23E-05	2.07E-08	1.20E-03	8.33E-04
11	D62	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	1.81E-08	5.44E-01	3.11E-07	9.74E-04	5.14E-07	1.91E-04	4.05E-05	8.01E-06	6.47E-05	1.18E-05	1.20E-05	5.50E-05	2.21E-06	8.64E-10	5.27E-05	3.56E-05
11	D62	80	Combination Short Haul Truck	32	0.00E+00	6.68E-06	4.95E-07	1.09E+01	1.75E-08	1.02E-02	4.78E-06	1.02E-02	7.74E-04	1.40E-04	4.05E-04	1.44E-04	1.50E-04	1.73E-03	3.64E-05	0.00E+00	2.55E-04	1.93E-03
11	D62	80	Combination Long Haul Truck	30	0.00E+00	9.31E-06	5.26E-07	1.01E+01	5.92E-08	1.21E-02	7.68E-06	1.10E-02	8.00E-04	1.28E-04	8.53E-04	1.69E-04	1.76E-04	1.62E-03	3.38E-05	0.00E+00	6.77E-04	2.06E-03
10	D63	70	Passenger Car	47	0.00E+00	5.31E-07	5.77E-08	2.07E+00	3.77E-06	1.07E-02	1.20E-06	4.80E-05	3.66E-04	5.70E-05	1.17E-04	7.52E-05	7.72E-05	8.07E-06	1.04E-05	2.16E-09	3.95E-05	7.49E-06
10	D63	70	Passenger Truck	80	0.00E+00	1.12E-06	1.19E-07	4.66E+00	7.15E-06	1.89E-02	2.34E-06	1.40E-04	6.62E-04	1.02E-04	2.24E-04	1.45E-04	1.49E-04	3.53E-05	2.32E-05	4.16E-09	7.48E-05	2.34E-05
10	D63	70	Single Unit Short Haul Truck	44	0.00E+00	7.75E-06	3.15E-07	7.22E+00	5.20E-06	1.31E-02	8.43E-06	3.07E-03	7.00E-04	1.29E-04	1.05E-03	1.99E-04	2.03E-04	7.33E-04	2.94E-05	1.19E-08	8.42E-04	5.75E-04
10	D63	70	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.36E-08	3.06E-01	2.24E-07	5.49E-04	3.67E-07	1.32E-04	3.21E-05	5.75E-06	4.56E-05	8.60E-06	8.77E-06	3.09E-05	1.25E-06	5.00E-10	3.68E-05	2.47E-05
10	D63	70	Combination Short Haul Truck	19	0.00E+00	4.98E-06	3.71E-07	6.73E+00	1.27E-08	7.19E-03	3.55E-06	7.40E-03	7.02E-04	1.17E-04	2.99E-04	1.08E-04	1.12E-04	1.07E-03	2.25E-05	0.00E+00	1.87E-04	1.39E-03
10	D63	70	Combination Long Haul Truck	18	0.00E+00	6.83E-06	3.88E-07	6.32E+00	4.28E-08	8.58E-03	5.62E-06	7.92E-03	7.31E-04	1.10E-04	6.21E-04	1.25E-04	1.30E-04	1.01E-03	2.12E-05	0.00E+00	4.91E-04	1.49E-03
10	D64	70	Passenger Car	33	0.00E+00	3.63E-07	3.95E-08	1.42E+00	2.58E-06	7.33E-03	8.20E-07	3.29E-05	2.51E-04	3.90E-05	7.99E-05	5.15E-05	5.29E-05	5.53E-06	7.13E-06	1.48E-09	2.70E-05	5.13E-06
10	D64	70	Passenger Truck	54	0.00E+00	7.65E-07	8.13E-08	3.19E+00	4.90E-06	1.29E-02	1.60E-06	9.56E-05	4.54E-04	7.02E-05	1.53E-04	9.96E-05	1.02E-04	2.42E-05	1.59E-05	2.85E-09	5.12E-05	1.60E-05
10	D64	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.67E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.74E-05
10	D64	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.00E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
10	D64	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.56E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.61E-04
11	D65	80	Passenger Car	348	0.00E+00	3.63E-06	3.94E-07	1.48E+01	2.57E-05	7.50E-02	8.18E-06	3.61E-04	1.90E-03	3.18E-04	7.97E-04	5.14E-04	5.28E-04	5.18E-05	7.43E-05	1.59E-08	2.70E-04	5.64E-05
11	D65	80	Passenger Truck	584	0.00E+00	7.47E-06	7.96E-07	3.33E+01	4.86E-05	1.32E-01	1.58E-05	9.74E-04	3.38E-03	5.63E-04	1.52E-03	9.85E-04	1.01E-03	2.40E-04	1.66E-04	3.02E-08	5.09E-04	1.62E-04
11	D65	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.41E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.23E-04
11	D65	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.88E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.52E-05
11	D65	80	Combination Short Haul Truck	33	0.00E+00	6.79E-06	5.03E-07	1.10E+01	1.78E-08	1.04E-02	4.85E-06	1.04E-02	7.86E-04	1.42E-04	4.12E-04	1.47E-04	1.52E-04	1.76E-03	3.69E-05	0.00E+00	2.60E-04	1.96E-03
11	D65	80	Combination Long Haul Truck	30	0.00E+00	9.46E-06	5.34E-07	1.03E+01	6.02E-08	1.23E-02	7.80E-06	1.11E-02	8.13E-04	1.30E-04	8.67E-04	1.72E-04	1.79E-04	1.65E-03	3.44E-05	0.00E+00	6.88E-04	2.10E-03
11	D66	80	Passenger Car	212	0.00E+00	2.20E-06	2.39E-07	8.97E+00	1.56E-05	4.55E-02	4.97E-06	2.19E-04	1.15E-03	1.93E-04	4.84E-04	3.12E-04	3.20E-04	3.15E-05	4.52E-05	9.65E-09	1.64E-04	3.42E-05
11	D66	80	Passenger Truck	354	0.00E+00	4.53E-06	4.83E-07	2.02E+01	2.95E-05	8.04E-02	9.61E-06	5.92E-04	2.05E-03	3.42E-04	9.22E-04	5.98E-04	6.13E-04	1.46E-04	1.01E-04	1.84E-08	3.09E-04	9.85E-05
11	D66	80	Single

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D70	80	Passenger Truck	347	0.00E+00	4.45E-06	4.74E-07	1.98E+01	2.89E-05	7.88E-02	9.42E-06	5.80E-04	2.01E-03	3.35E-04	9.04E-04	5.87E-04	6.01E-04	1.43E-04	9.90E-05	1.80E-08	3.03E-04	9.65E-05
11	D70	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.83E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.29E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.26E-05
11	D70	80	Combination Short Haul Truck	32	0.00E+00	6.58E-06	4.87E-07	1.07E+01	1.72E-08	1.00E-02	4.70E-06	1.01E-02	7.61E-04	1.38E-04	3.99E-04	1.42E-04	1.47E-04	1.70E-03	3.58E-05	0.00E+00	2.51E-04	1.90E-03
11	D70	80	Combination Long Haul Truck	29	0.00E+00	9.16E-06	5.17E-07	9.93E+00	5.83E-08	1.19E-02	7.56E-06	1.08E-02	7.87E-04	1.26E-04	8.39E-04	1.67E-04	1.74E-04	1.59E-03	3.33E-05	0.00E+00	6.66E-04	2.03E-03
10	D71	70	Passenger Car	215	0.00E+00	2.41E-06	2.62E-07	9.40E+00	1.71E-05	4.85E-02	5.43E-06	2.18E-04	1.66E-03	2.58E-04	5.29E-04	3.41E-04	3.50E-04	3.66E-05	4.72E-05	9.81E-09	1.79E-04	3.40E-05
10	D71	70	Passenger Truck	361	0.00E+00	5.07E-06	5.38E-07	2.12E+01	3.24E-05	8.57E-02	1.06E-05	6.33E-04	3.00E-03	4.65E-04	1.02E-03	6.60E-04	6.76E-04	1.60E-04	1.05E-04	1.89E-08	3.39E-04	1.06E-04
10	D71	70	Single Unit Short Haul Truck	38	0.00E+00	6.74E-06	2.74E-07	6.28E+00	4.52E-06	1.14E-02	7.33E-06	2.67E-03	6.09E-04	1.12E-04	9.09E-04	1.73E-04	1.77E-04	6.38E-04	2.55E-05	1.03E-08	7.32E-04	5.00E-04
10	D71	70	Single Unit Long Haul Truck	2	0.00E+00	2.93E-07	1.18E-08	2.66E-01	1.94E-07	4.78E-04	3.19E-07	1.15E-04	2.79E-05	5.00E-06	3.97E-05	7.48E-06	7.63E-06	2.69E-05	1.08E-06	4.34E-10	3.20E-05	2.15E-05
10	D71	70	Combination Short Haul Truck	35	0.00E+00	8.88E-06	6.61E-07	1.20E+01	2.26E-08	1.28E-02	6.33E-06	1.32E-02	1.25E-03	2.09E-04	5.33E-04	1.93E-04	2.00E-04	1.91E-03	4.01E-05	0.00E+00	3.33E-04	2.49E-03
10	D71	70	Combination Long Haul Truck	31	0.00E+00	1.22E-05	6.93E-07	1.13E+01	7.64E-08	1.53E-02	1.00E-05	1.41E-02	1.30E-03	1.96E-04	1.11E-03	2.23E-04	2.32E-04	1.81E-03	3.78E-05	0.00E+00	8.76E-04	2.66E-03
10	D72	70	Passenger Car	183	0.00E+00	2.05E-06	2.22E-07	8.00E+00	1.45E-05	4.13E-02	4.62E-06	1.85E-04	1.41E-03	2.20E-04	4.50E-04	2.90E-04	2.98E-04	3.11E-05	4.02E-05	8.34E-09	1.52E-04	2.89E-05
10	D72	70	Passenger Truck	307	0.00E+00	4.31E-06	4.58E-07	1.80E+01	2.76E-05	7.29E-02	9.03E-06	5.38E-04	2.56E-03	3.95E-04	8.64E-04	5.61E-04	5.75E-04	1.36E-04	8.95E-05	1.60E-08	2.89E-04	9.04E-05
10	D72	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.41E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.37E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.74E-05
10	D72	70	Combination Short Haul Truck	37	0.00E+00	9.42E-06	7.01E-07	1.27E+01	2.39E-08	1.36E-02	6.71E-06	1.40E-02	1.33E-03	2.22E-04	5.65E-04	2.04E-04	2.12E-04	2.02E-03	4.26E-05	0.00E+00	3.53E-04	2.64E-03
10	D72	70	Combination Long Haul Truck	33	0.00E+00	1.29E-05	7.35E-07	1.20E+01	8.10E-08	1.62E-02	1.06E-05	1.50E-02	1.38E-03	2.08E-04	1.17E-03	2.36E-04	2.46E-04	1.92E-03	4.01E-05	0.00E+00	9.29E-04	2.82E-03
10	D73	70	Passenger Car	122	0.00E+00	1.37E-06	1.48E-07	5.34E+00	9.70E-06	2.76E-02	3.08E-06	1.24E-04	9.42E-04	1.47E-04	3.00E-04	1.94E-04	1.99E-04	2.08E-05	2.68E-05	5.57E-09	1.02E-04	1.93E-05
10	D73	70	Passenger Truck	205	0.00E+00	2.88E-06	3.06E-07	1.20E+01	1.84E-05	4.87E-02	6.03E-06	3.59E-04	1.71E-03	2.64E-04	5.76E-04	3.75E-04	3.84E-04	9.08E-05	5.97E-05	1.07E-08	1.93E-04	6.03E-05
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.67E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.00E-05
10	D73	70	Combination Short Haul Truck	12	0.00E+00	2.96E-06	2.20E-07	4.00E+00	7.52E-09	4.28E-03	2.11E-06	4.40E-03	4.17E-04	6.96E-05	1.78E-04	6.42E-05	6.66E-05	6.36E-04	1.34E-05	0.00E+00	1.11E-04	8.29E-04
10	D73	70	Combination Long Haul Truck	10	0.00E+00	4.06E-06	2.31E-07	3.76E+00	2.55E-08	5.10E-03	3.34E-06	4.71E-03	4.35E-04	6.55E-05	3.69E-04	7.42E-05	7.73E-05	6.03E-04	1.26E-05	0.00E+00	2.92E-04	8.86E-04
10	D74	70	Passenger Car	222	0.00E+00	2.48E-06	2.70E-07	9.69E+00	1.76E-05	5.01E-02	5.60E-06	2.25E-04	1.71E-03	2.67E-04	5.46E-04	3.52E-04	3.61E-04	3.77E-05	4.87E-05	1.01E-08	1.85E-04	3.50E-05
10	D74	70	Passenger Truck	372	0.00E+00	5.22E-06	5.55E-07	2.18E+01	3.34E-05	8.84E-02	1.09E-05	6.53E-04	3.10E-03	4.79E-04	1.05E-03	6.80E-04	6.97E-04	1.65E-04	1.09E-04	1.94E-08	3.50E-04	1.10E-04
10	D74	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.68E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.62E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.74E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	6.99E-06
10	D74	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.00E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.54E-04
10	D74	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.28E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.06E-04
11	D75	80	Passenger Car	147	0.00E+00	1.53E-06	1.67E-07	6.24E+00	1.09E-05	3.17E-02	3.46E-06	1.53E-04	8.03E-04	1.34E-04	3.37E-04	2.17E-04	2.23E-04	2.19E-05	3.14E-05	6.72E-09	1.14E-04	2.38E-05
11	D75	80	Passenger Truck	247	0.00E+00	3.16E-06	3.36E-07	1.41E+01	2.05E-05	5.60E-02	6.69E-06	4.12E-04	1.43E-03	2.38E-04	6.42E-04	4.16E-04	4.27E-04	1.01E-04	7.03E-05	1.28E-08	2.15E-04	6.85E-05
11	D75	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.07E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.32E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.02E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.64E-06
11	D75	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.31E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.36E-04
11	D75	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.47E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.66E-04
11	D76	80	Passenger Car	133	0.00E+00	1.39E-06	1.51E-07	5.66E+00	9.86E-06	2.87E-02	3.13E-06	1.38E-04	7.28E-04	1.22E-04	3.05E-04	1.97E-04	2.02E-04	1.98E-05	2.85E-05	6.08E-09	1.03E-04	2.16E-05
11	D76	80	Passenger Truck	224	0.00E+00	2.86E-06	3.05E-07	1.28E+01	1.86E-05	5.07E-02	6.06E-06	3.73E-04	1.30E-03	2.16E-04	5.82E-04	3.77E-04	3.87E-04	9.18E-05	6.37E-05	1.16E-08	1.95E-04	6.21E-05
11	D76	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.14E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.13E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.88E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.12E-06
11	D76	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.31E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.23E-04
11	D76	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.53E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.65E-04
11	D77	80	Passenger Car	91	0.00E+00	9.46E-07	1.03E-07	3.85E+00	6.71E-06	1.95E-02	2.13E-06	9.42E-05	4.95E-04	8.29E-05	2.08E-04	1.34E-04	1.38E-04	1.35E-05	1.94E-05	4.14E-09	7.03E-05	1.47E-05
11	D77	80	Passenger Truck	152	0.00E+00	1.95E-06	2.08E-07	8.69E+00	1.27E-05	3.45E-02	4.13E-06	2.54E-04	8.82E-04	1.47E-04	3.96E-04	2.57E-04	2.63E-04	6.25E-05	4.34E-05	7.88E-09	1.33E-04	4.23E-05
11	D77	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.74E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.27E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
11	D77	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.97E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.48E-04
11	D77	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.24E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	7.98E-04
11	D78	80	Passenger Car	208	0.00E+00	2.17E-06	2.36E-07	8.82E+00	1.54E-05	4.48E-02	4.89E-06	2.16E-04	1.14E-03	1.90E-04	4.77E-04	3.07E-04	3.15E-04	3.10E-05	4.44E-05	9.49E-09	1.61E-04	3.37E-05
11	D78	80	Passenger Truck	349	0.00E+00	4.46E-06	4.76E-07	1.99E+01	2.90E-05	7.91E-02	9.46E-06	5.82E-04	2.02E-03	3.37E-04	9.07E-04	5.89E-04	6.03E-04	1.43E-04	9.94E-05	1.81E-08	3.04E-04	9.69E-05
11	D78	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.07E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.86E-04
11	D78	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.83E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.65E-05
11	D78	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.45E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.21E-03
11	D78	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.89E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
10	D79	70	Passenger Car	172	0.00E+00	1.93E-06	2.09E-07	7.52E+00	1.37E-05	3.88E-02	4.34E-06	1.74E-04	1.33E-03	2.07E-04	4.24E-04	2.73E-04	2.80E-04	2.93E-05	3.78E-05	7.85E-09	1.43E-04	2.72E-05
10	D79	70	Passenger Truck	289	0.00E+00	4.05E-06	4.31E-07	1.69E+01	2.60E-05	6.86E-02	8.50E-06	5.07E-04	2.40E-03	3.72E-04	8.13E-04	5.28E-04	5.41E-04	1.28E-04	8.42E-05	1.51E-08	2.72E-04	8.50E-05
10	D79	70	Single Unit Short Haul Truck	42	0.00E+00	7.42E-06	3.01E-07	6.91E+00	4.97E-06	1.25E-02	8.07E-06	2.94E-03	6.70E-04	1.23E-04	1.00E-03	1.90E-04	1.94E-04	7.02E-04	2.81E-05	1.13E-08	8.06E-04	5.50E-04
10	D79	70	Single Unit Long Haul Truck	2	0.00E+00	3.23E-07	1.30E-08	2.93E-01	2.14E-07	5.26E-04	3.51E-07	1.26E-04	3.07E-05	5.50E-06	4.36E-05	8.23E-06	8.39E-06	2.96E-05	1.19E-06	4.78E-10	3.52E-05	2.37E-05
10	D79	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.08E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.03E-03
10	D79	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.16E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.18E-03
10	D80	70	Passenger Car	252	0.00E+00	2.82E-06	3.06E-07	1.10E+01	2.00E-05	5.69E-02	6.36E-06	2.55E-04	1.94E-03	3.03E-04	6.20E-04	4.00E-04	4.10E-04	4.29E-05	5.53E-05	1.15E-08	2.10E-04	3.98E-05
10	D80	70	Passenger Truck	423	0.00E+00	5.94E-06	6.31E-07	2.48E+01	3.80E-05	1.00E-01	1.24E-05	7.42E-04	3.52E-03	5.45E-04	1.19E-03	7.73E-04	7.92E-04	1.87E-04	1.23E-04	2.21E-08	3.98E-04	1.25E-04
10	D80	70	Single Unit Short Haul Truck	53	0.00E+00	9.27E-06	3.77E-07	8.63E+00	6.21E-06	1.56E-02	1.01E-05	3.67E-03	8.37E-04	1.54E-04	1.25E-03	2.38E-04	2.43E-04	8.77E-04	3.51E-05	1.42E-08	1.01E-03	6.87E-04
10	D80	70	Single Unit Long Haul Truck	2	0.00E+00	4.03E-07	1.62E-08	3.66E-01	2.67E-07	6.57E-04	4.39E-07	1.58E-04	3.83E-05	6.87E-06	5.45E-05	1.03E-05	1.05E-05	3.70E-05	1.49E-06	5.97E-10	4.40E-05	2.96E-05
10	D80	70	Combination Short Haul Truck	26	0.00E+00	6.60E-06	4.91E-07	8.91E+00	1.68E-08	9.53E-03	4.70E-06	9.80E-03	9.30E-04	1.55E-04	3.96E-04	1.43E-04	1.48E-04	1.42E-03	2.98E-05	0.00E+00	2.47E-04	1.85E-03
10	D80	70	Combination Long Haul Truck	23	0.00E+00	9.05E-06	5.14E-07	8.37E+00	5.67E-08	1.14E-02	7.44E-06	1.05E-02	9.68E-04	1.46E-04	8.22E-04	1.65E-04	1.72E-04	1.34E-03	2.80E-05	0.00E+00	6.50E-04	1.97E-03
9	F31	60	Passenger Car	746	0.00E+00	9.56E-06	1.04E-06	3.41E+01	6.79E-05	1.92E-01	2.16E-05	7.68E-04	7.54E-03	1.13E-03	2.10E-03	1.36E-03	1.39E-03	1.48E-04	1.71E-04	3.58E-08	7.11E-04	1.20E-04
9	F31	60	Passenger Truck	1250	0.00E+00	2.03E-05	2.15E-06	7.59E+01	1.28E-04	3.28E-01	4.21E-05	2.39E-03	1.38E-02	2.05E-03	4.01E-03	2.61E-03	2.68E-03	6.05E-04	3.77E-04	6.99E-08	1.34E-03	4.05E-04
9	F31	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.45E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.59E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	F31	60	Combination Short Haul Truck	41	0.00E+00	1.19E-05	8.75E-07	1.44E+01	3.26E-08	1.78E-02	8.55E-06	1.81E-02	2.08E-03	3.25E-04	7.34E-04	2.56E-04	2.66E-04	2.28E-03	4.80E-05	0.00E+00	4.68E-04	3.40E-03
9	F31	60	Combination Long Haul Truck	37	0.00E+00	1.64E-05	8.94E-07	1.36E+01	1.10E-07	2.14E-02	1.37E-05	1.92E-02	2.18E-03	3.15E-04	1.55E-03	2.92E-04	3.04E-04	2.18E-03	4.55E-05	0.00E+00	1.25E-03	3.62E-03
9	F32	60	Passenger Car	759	0.00E+00	9.72E-06	1.06E-06	3.46E+01	6.90E-05	1.95E-01	2.19E-05	7.81E-04	7.66E-03	1.15E-03	2.14E-03	1.38E-03	1.41E-03	1.50E-04	1.73E-04	3.64E-08	7.23E-04	1.22E-04
9	F32	60	Passenger Truck	1270	0.00E+00	2.06E-05	2.19E-06	7.72E+01	1.30E-04	3.34E-01	4.28E-05	2.43E-03	1.40E-02	2.08E-03	4.08E-03	2.65E-03	2.72E-03	6.16E-04	3.83E-04	7.10E-08	1.36E-03	4.11E-04
9	F32	60	Single Unit Short Haul Truck	113	0.00E+00	2.52E-05	1.04E-06	1.88E+01	1.67E-05	3.31E-02	2.73E-05	9.64E-03	2.60E-03	4.37E-04	3.37E-03	6.48E-04	6.61E-04	1.91E-03	7.66E-05	3.16E-08	2.71E-03	1.80E-03
9	F32	60	Single Unit Long Haul Truck	5	0.00E+00	1.10E-06	4.53E-08	8.02E-01	7.25E-07	1.40E-03	1.19E-06	4.17E-04	1.17E-04	1.94E-05	1.47E-04	2.82E-05	2.87E-05	8.10E-05	3.27E-06	1.34E-09	1.18E-04	7.81E-05
9	F32	60	Combination Short Haul Truck	51	0.00E+00	1.50E-05	1.10E-06	1.81E+01	4.10E-08	2.24E-02	1.07E-05	2.27E-02	2.61E-03	4.08E-04	9.22E-04	3.21E-04	3.34E-04	2.87E-03	6.04E-05	0.00E+00	5.88E-04	4.28E-03
9	F32	60	Combination Long Haul Truck	47	0.00E+00	2.06E-05	1.12E-06	1.71E+01	1.39E-07	2.69E-02	1.72E-05	2.42E-02	2.74E-03	3.96E-04	1.95E-03	3.67E-04	3.82E-04	2.74E-03	5.71E-05	0.00E+00	1.57E-03	4.55E-03
9	F33	60	Passenger Car	188	0.00E+00	2.41E-06	2.62E-07	8.60E+00	1.71E-05	4.84E-02	5.44E-06	1.94E-04	1.90E-03	2.85E-04	5.31E-04	3.42E-04	3.51E-04	3.74E-05	4.31E-05	9.05E-09	1.80E-04	3.03E-05
9	F33	60	Passenger Truck	316	0.00E+00	5.13E-06	5.43E-07	1.92E+01	3.23E-05	8.29E-02	1.06E-05	6.03E-04	3.48E-03	5.18E-04	1.01E-03	6.59E-04	6.76E-04	1.53E-04	9.51E-05	1.76E-08	3.38E-04	1.02E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.17E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	F33	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.94E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
9	F33	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.39E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.39E-04
9	F34	60	Passenger Car	557	0.00E+00	7.14E-06	7.76E-07	2.54E+01	5.07E-05	1.43E-01	1.61E-05	5.74E-04	5.63E-03	8.43E-04	1.57E-03	1.01E-03	1.04E-03	1.11E-04	1.27E-04	2.68E-08	5.31E-04	8.95E-05
9	F34	60	Passenger Truck

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	G04	100	Passenger Truck	373	0.00E+00	4.31E-06	4.62E-07	2.10E+01	2.87E-05	8.58E-02	9.29E-06	6.00E-04	1.24E-03	2.41E-04	8.96E-04	5.80E-04	5.95E-04	1.37E-04	1.05E-04	1.92E-08	3.01E-04	9.86E-05
16	G04	100	Single Unit Short Haul Truck	185	0.00E+00	1.76E-05	6.49E-07	3.02E+01	1.34E-05	6.23E-02	1.99E-05	7.74E-03	1.19E-03	3.09E-04	2.52E-03	4.65E-04	4.73E-04	3.09E-03	1.22E-04	4.99E-08	2.05E-03	1.44E-03
16	G04	100	Single Unit Long Haul Truck	8	0.00E+00	7.63E-07	2.74E-08	1.27E+00	5.56E-07	2.55E-03	8.63E-07	3.25E-04	5.43E-05	1.34E-05	1.10E-04	1.96E-05	2.00E-05	1.29E-04	5.15E-06	2.04E-09	9.02E-05	6.05E-05
16	G04	100	Combination Short Haul Truck	134	0.00E+00	1.92E-05	1.42E-06	4.48E+01	5.10E-08	3.46E-02	1.38E-05	3.45E-02	1.30E-03	3.30E-04	1.17E-03	4.15E-04	4.31E-04	7.12E-03	1.50E-04	0.00E+00	7.41E-04	6.50E-03
16	G04	100	Combination Long Haul Truck	123	0.00E+00	2.72E-05	1.53E-06	4.06E+01	1.73E-07	4.03E-02	2.24E-05	3.69E-02	1.30E-03	2.66E-04	2.49E-03	4.94E-04	5.15E-04	6.51E-03	1.36E-04	0.00E+00	1.98E-03	6.96E-03
16	G05	100	Passenger Car	202	0.00E+00	1.89E-06	2.05E-07	8.25E+00	1.34E-05	4.03E-02	4.26E-06	2.18E-04	6.45E-04	1.24E-04	4.16E-04	2.68E-04	2.75E-04	2.40E-05	4.17E-05	8.76E-09	1.41E-04	3.40E-05
16	G05	100	Passenger Truck	338	0.00E+00	3.90E-06	4.18E-07	1.90E+01	2.60E-05	7.78E-02	8.42E-06	5.44E-04	1.13E-03	2.19E-04	8.12E-04	5.26E-04	5.39E-04	1.25E-04	9.53E-05	1.74E-08	2.73E-04	8.93E-05
16	G05	100	Single Unit Short Haul Truck	4	0.00E+00	3.64E-07	1.35E-08	6.26E-01	2.79E-07	1.29E-03	4.13E-07	1.60E-04	2.48E-05	6.41E-06	5.22E-05	9.64E-06	9.81E-06	6.41E-05	2.53E-06	1.03E-09	4.24E-05	2.99E-05
16	G05	100	Combination Short Haul Truck	2	0.00E+00	2.24E-07	1.66E-08	5.23E-01	5.96E-10	4.04E-04	1.61E-07	4.03E-04	1.52E-05	3.85E-06	1.37E-05	4.84E-06	5.03E-06	8.31E-05	1.75E-06	0.00E+00	8.65E-06	7.59E-05
16	G05	100	Combination Long Haul Truck	1	0.00E+00	3.17E-07	1.79E-08	4.74E-01	2.02E-09	4.71E-04	2.62E-07	4.31E-04	1.52E-05	3.10E-06	2.91E-05	5.77E-06	6.01E-06	7.60E-05	1.59E-06	0.00E+00	2.31E-05	8.12E-05
56	G06	100	Passenger Car	15	0.00E+00	1.43E-07	1.56E-08	6.27E-01	1.02E-06	3.06E-03	3.24E-07	1.65E-05	4.90E-05	9.39E-06	3.16E-05	2.03E-05	2.09E-05	1.82E-06	3.17E-06	6.65E-10	1.07E-05	2.58E-06
56	G06	100	Passenger Truck	26	0.00E+00	2.96E-07	3.18E-08	1.44E+00	1.98E-06	5.90E-03	6.39E-07	4.13E-05	8.55E-05	1.66E-05	6.16E-05	3.99E-05	4.09E-05	9.46E-06	7.24E-06	1.32E-09	2.07E-05	6.78E-06
53	G07	70	Passenger Car	170	0.00E+00	1.84E-06	2.00E-07	7.49E+00	1.30E-05	3.68E-02	4.15E-06	1.75E-04	1.29E-03	2.02E-04	4.04E-04	2.61E-04	2.68E-04	2.88E-05	3.76E-05	7.82E-09	1.37E-04	2.72E-05
53	G07	70	Passenger Truck	284	0.00E+00	3.84E-06	4.08E-07	1.69E+01	2.46E-05	6.48E-02	8.06E-06	4.93E-04	2.30E-03	3.57E-04	7.71E-04	5.01E-04	5.14E-04	1.25E-04	8.40E-05	1.47E-08	2.58E-04	8.25E-05
53	G07	70	Single Unit Short Haul Truck	99	0.00E+00	1.74E-05	7.05E-07	1.62E+01	1.16E-05	2.93E-02	1.89E-05	6.88E-03	1.57E-03	2.88E-04	2.34E-03	4.46E-04	4.55E-04	1.64E-03	6.57E-05	2.65E-08	1.89E-03	1.29E-03
53	G07	70	Single Unit Long Haul Truck	4	0.00E+00	7.55E-07	3.04E-08	6.85E-01	5.01E-07	1.23E-03	8.22E-07	2.96E-04	7.18E-05	1.29E-05	1.02E-04	1.93E-05	1.96E-05	6.93E-05	2.79E-06	1.12E-09	8.25E-05	5.54E-05
53	G07	70	Combination Short Haul Truck	60	0.00E+00	1.55E-05	1.15E-06	2.09E+01	3.93E-08	2.24E-02	1.10E-05	2.30E-02	2.18E-03	3.64E-04	9.29E-04	3.35E-04	3.48E-04	3.32E-03	6.99E-05	0.00E+00	5.80E-04	4.33E-03
53	G07	70	Combination Long Haul Truck	55	0.00E+00	2.12E-05	1.21E-06	1.96E+01	1.33E-07	2.67E-02	1.75E-05	2.46E-02	2.27E-03	3.42E-04	1.93E-03	3.88E-04	4.04E-04	3.15E-03	6.58E-05	0.00E+00	1.53E-03	4.63E-03
54	G08	80	Passenger Car	116	0.00E+00	1.18E-06	1.28E-07	4.94E+00	8.35E-06	2.39E-02	2.65E-06	1.21E-04	6.65E-04	1.09E-04	2.59E-04	1.67E-04	1.71E-04	1.72E-05	2.49E-05	5.15E-09	8.75E-05	1.88E-05
54	G08	80	Passenger Truck	194	0.00E+00	2.45E-06	2.61E-07	1.12E+01	1.59E-05	4.35E-02	5.19E-06	3.24E-04	1.19E-03	1.95E-04	4.98E-04	3.23E-04	3.31E-04	7.97E-05	5.60E-05	9.92E-09	1.67E-04	5.39E-05
54	G08	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.63E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.05E-05
54	G08	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.27E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.56E-04
54	G08	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.83E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.66E-04
50	G09	40	Passenger Car	48	0.00E+00	6.93E-07	7.53E-08	2.55E+00	4.92E-06	1.38E-02	1.56E-06	4.40E-05	8.32E-04	1.17E-04	1.52E-04	9.83E-05	1.01E-04	1.43E-05	1.26E-05	2.34E-09	5.16E-05	6.86E-06
50	G09	40	Passenger Truck	81	0.00E+00	1.53E-06	1.61E-07	5.55E+00	9.20E-06	2.28E-02	3.07E-06	1.69E-04	1.47E-03	2.05E-04	2.90E-04	1.89E-04	1.94E-04	4.89E-05	2.73E-05	3.98E-09	9.61E-05	2.93E-05
50	G09	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.22E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.77E-05
50	G09	40	Combination Short Haul Truck	10	0.00E+00	4.79E-06	3.58E-07	4.12E+00	1.19E-08	6.78E-03	3.41E-06	6.94E-03	9.66E-04	1.44E-04	2.85E-04	1.04E-04	1.08E-04	6.55E-04	1.38E-05	0.00E+00	1.77E-04	1.31E-03
50	G09	40	Combination Long Haul Truck	9	0.00E+00	6.37E-06	3.60E-07	3.96E+00	4.05E-08	8.23E-03	5.25E-06	7.32E-03	1.00E-03	1.41E-04	5.84E-04	1.16E-04	1.21E-04	6.35E-04	1.33E-05	0.00E+00	4.63E-04	1.38E-03
53	G10	70	Passenger Car	518	0.00E+00	5.61E-06	6.10E-07	2.29E+01	3.98E-05	1.12E-01	1.27E-05	5.33E-04	3.93E-03	6.15E-04	1.23E-03	7.96E-04	8.17E-04	8.80E-05	1.15E-04	2.39E-08	4.18E-04	8.32E-05
53	G10	70	Passenger Truck	868	0.00E+00	1.17E-05	1.25E-06	5.15E+01	7.53E-05	1.98E-01	2.46E-05	1.51E-03	7.02E-03	1.09E-03	2.35E-03	1.53E-03	1.57E-03	3.82E-04	2.56E-04	4.49E-08	7.87E-04	2.52E-04
53	G10	70	Single Unit Short Haul Truck	142	0.00E+00	2.49E-05	1.01E-06	2.32E+01	1.67E-05	4.21E-02	2.71E-05	9.88E-03	2.25E-03	4.14E-04	3.36E-03	6.41E-04	6.53E-04	2.36E-03	9.45E-05	3.81E-08	2.71E-03	1.85E-03
53	G10	70	Single Unit Long Haul Truck	6	0.00E+00	1.09E-06	4.37E-08	9.84E-01	7.20E-07	1.77E-03	1.18E-06	4.25E-04	1.03E-04	1.85E-05	1.47E-04	2.77E-05	2.82E-05	9.96E-05	4.01E-06	1.61E-09	1.19E-04	7.96E-05
53	G10	70	Combination Short Haul Truck	92	0.00E+00	2.36E-05	1.75E-06	3.18E+01	5.98E-08	3.40E-02	1.68E-05	3.50E-02	3.32E-03	5.54E-04	1.41E-03	5.10E-04	5.30E-04	5.06E-03	1.06E-04	0.00E+00	8.83E-04	6.59E-03
53	G10	70	Combination Long Haul Truck	83	0.00E+00	3.23E-05	1.84E-06	2.99E+01	2.03E-07	4.06E-02	2.66E-05	3.74E-02	3.46E-03	5.21E-04	2.94E-03	5.90E-04	6.15E-04	4.80E-03	1.00E-04	0.00E+00	2.32E-03	7.05E-03
16	H01	100	Passenger Car	3434	0.00E+00	3.21E-05	3.49E-06	1.40E+02	2.28E-04	6.85E-01	7.25E-05	3.70E-03	1.10E-02	2.10E-03	7.07E-03	4.56E-03	4.68E-03	4.08E-04	7.10E-04	1.49E-07	2.39E-03	5.78E-04
16	H01	100	Passenger Truck	5751	0.00E+00	6.64E-05	7.11E-06	3.24E+02	4.43E-04	1.32E+00	1.43E-04	9.25E-03	1.92E-02	3.72E-03	1.38E-02	8.94E-03	9.17E-03	2.12E-03	1.62E-03	2.95E-07	4.64E-03	1.52E-03
16	H01	100	Single Unit Short Haul Truck	959	0.00E+00	9.11E-05	3.37E-06	1.57E+02	6.97E-05	3.23E-01	1.03E-04	4.01E-02	6.19E-03	1.60E-03	1.31E-02	2.41E-03	2.45E-03	1.60E-02	6.34E-04	2.59E-07	1.06E-02	7.48E-03
16	H01	100	Single Unit Long Haul Truck	42	0.00E+00	3.96E-06	1.42E-07	6.58E+00	2.88E-06	1.32E-02	4.48E-06	1.68E-03	2.82E-04	6.96E-05	5.71E-04	1.02E-04	1.04E-04	6.70E-04	2.67E-05	1.06E-08	4.68E-04	3.14E-04
16	H01	100	Combination Short Haul Truck	737	0.00E+00	1.06E-04	7.79E-06	2.46E+02	2.80E-07	1.90E-01	7.55E-05	1.89E-01	7.14E-03	1.81E-03	6.43E-03	2.28E-03	2.36E-03	3.91E-02	8.22E-04	0.00E+00	4.06E-03	3.57E-02
16	H01	100	Combination Long Haul Truck	673	0.00E+00	1.49E-04	8.41E-06	2.23E+02	9.50E-07	2.21E-01	1.23E-04	2.03E-01	7.16E-03	1.46E-03	1.37E-02	2.71E-03	2.82E-03	3.57E-02	7.46E-04	0.00E+00	1.09E-02	3.82E-02
16	H02	100	Passenger Car	2895	0.00E+00	2.71E-05	2.94E-06	1.18E+02	1.92E-04	5.77E-01	6.11E-05	3.12E-03	9.25E-03	1.77E-03	5.96E-03	3.84E-03	3.94E-03	3.44E-04	5.98E-04	1.26E-07	2.02E-03	4.87E-04
16	H02	100	Passenger Truck	4847	0.00E+00	5.60E-05	6.00E-06	2.73E+02	3.73E-04	1.11E+00	1.21E-04	7.79E-03	1.62E-02	3.14E-03	1.16E-02	7.54E-03	7.73E-03	1.79E-03	1.37E-03	2.49E-07	3.91E-03	1.28E-03
16	H02	100	Single Unit Short Haul Truck	627	0.00E+00	5.96E-05	2.20E-06	1.02E+02	4.56E-05	2.11E-01	6.76E-05	2.63E-02	4.05E-03	1.05E-03	8.55E-03	1.58E-03	1.61E-03	1.05E-02	4.15E-04	1.69E-07	6.94E-03	4.90E-03
16	H02	100	Single Unit Long Haul Truck	28	0.00E+00	2.59E-06	9.31E-08	4.31E+00	1.89E-06	8.65E-03	2.93E-06	1.10E-03	1.84E-04	4.56E-05	3.74E-04	6.66E-05	6.78E-05	4.38E-04	1.75E-05	6.93E-09	3.06E-04	2.05E-04
16	H02	100	Combination Short Haul Truck	640	0.00E+00	9.15E-05	6.76E-06	2.13E+02	2.43E-07	1.65E-01	6.55E-05	1.64E-01	6.20E-03	1.57E-03	5.57E-03	1.97E-03	2.05E-03	3.39E-02	7.13E-04	0.00E+00	3.53E-03	3.09E-02
16	H02	100	Combination Long Haul Truck	583	0.00E+00	1.29E-04	7.29E-06	1.93E+02	8.24E-07	1.92E-01	1.07E-04	1.76E-01	6.21E-03	1.26E-03	1.19E-02	2.35E-03	2.45E-03	3.10E-02	6.47E-04	0.00E+00	9.42E-03	3.31E-02
16	H03	100	Passenger Car	3036	0.00E+00	2.84E-05	3.09E-06	1.24E+02	2.02E-04	6.05E-01	6.41E-05	3.27E-03	9.70E-03	1.86E-03	6.25E-03	4.03E-03	4.13E-03	3.61E-04	6.27E-04	1.32E-07	2.11E-03	5.11E-04
16	H03	100	Passenger Truck	5083	0.00E+00	5.87E-05	6.29E-06	2.86E+02	3.92E-04	1.17E+00	1.27E-04	8.17E-03	1.69E-02	3.29E-03	1.22E-02	7.90E-03	8.11E-03	1.87E-03	1.43E-03	2.61E-07	4.10E-03	1.34E-03
16	H03	100	Single Unit Short Haul Truck	610	0.00E+00	5.80E-05	2.14E-06	9.96E+01	4.44E-05	2.06E-01	6.57E-05	2.55E-02	3.94E-03	1.02E-03	8.31E-03	1.54E-03	1.56E-03	1.02E-02	4.03E-04	1.65E-07	6.75E-03	4.76E-03
16	H03	100	Single Unit Long Haul Truck	27	0.00E+00	2.52E-06	9.06E-08	4.19E+00	1.84E-06	8.42E-03	2.85E-06	1.07E-03	1.79E-04	4.43E-05	3.63E-04	6.47E-05	6.59E-05	4.26E-04	1.70E-05	6.74E-09	2.98E-04	2.00E-04
16	H03	100	Combination Short Haul Truck	613	0.00E+00	8.77E-05	6.48E-06	2.04E+02	2.33E-07	1.58E-01	6.28E-05	1.57E-01	5.94E-03	1.51E-03	5.34E-03	1.89E-03	1.96E-03	3.25E-02	6.83E-04	0.00E+00	3.38E-03	2.97E-02
16	H03	100	Combination Long Haul Truck	559	0.00E+00	1.24E-04	6.99E-06	1.85E+02	7.90E-07	1.84E-01	1.02E-04	1.68E-01	5.95E-03	1.21E-03	1.14E-02	2.25E-03	2.35E-03	2.97E-02	6.20E-04	0.00E+00	9.02E-03	3.17E-02
16	H04	100	Passenger Car	2035	0.00E+00	1.90E-05	2.07E-06	8.32E+01	1.35E-04	4.06E-01	4.29E-05	2.19E-03	6.50E-03	1.25E-03	4.19E-03	2.70E-03	2.77E-03	2.42E-04	4.21E-04	8.83E-08	1.42E-03	3.42E-04
16	H04	100	Passenger Truck	3408	0.00E+00	3.94E-05	4.22E-06	1.92E+02	2.62E-04	7.84E-01	8.49E-05	5.48E-03	1.14E-02	2.20E-03	8.18E-03	5.30E-03	5.43E-03	1.26E-03	9.61E-04	1.75E-07	2.75E-03	9.00E-04
16	H04	100	Single Unit Short Haul Truck	516	0.00E+00	4.91E-05	1.81E-06	8.43E+01	3.75E-05	1.74E-01	5.56E-05	2.16E-02	3.34E-03	8.63E-04	7.03E-03	1.30E-03	1.32E-03	8.63E-03	3.41E-04	1.39E-07	5.71E-03	4.03E-03
16	H04	100	Single Unit Long Haul Truck	23	0.00E+00	2.13E-06	7.66E-08	3.55E+00	1.55E-06	7.12E-03	2.41E-06	9.06E-04	1.52E-04	3.75E-05	3.08E-04	5.48E-05	5.58E-05	3.61E-04	1.44E-05	5.70E-09	2.52E-04	1.69E-04
16	H04	100	Combination Short Haul Truck	541	0.00E+00	7.74E-05	5.72E-06	1.80E+02	2.05E-07	1.39E-01	5.54E-05	1.39E-01	5.24E-03	1.33E-03	4.71E-03	1.67E-03	1.73E-03	2.86E-02	6.03E-04	0.00E+00	2.98E-03	2.62E-02
16	H04	100	Combination Long Haul Truck	493	0.00E+00	1.09E-04	6.16E-06	1.63E+02	6.97E-07	1.62E-01	9.02E-05	1.49E-01	5.25E-03	1.07E-03	1.00E-02	1.99E-03	2.07E-03	2.62E-02	5.47E-04	0.00E+00	7.96E-03	2.80E-02
56	H05	100	Passenger Car	1021	0.00E+00	9.55E-06	1.04E-06	4.17E+01	6.78E-05	2.04E-01	2.15E-05	1.10E-03	3.26E-03	6.25E-04	2.10E-03	1.35E-03	1.39E-03	1.21E-04	2.11E-04	4.43E-08	7.11E-04	1.72E-04
56	H05	100	Passenger Truck	1709	0.00E+00	1.97E-05	2.11E-06	9.62E+01	1.32E-04	3.93E-01	4.26E-05	2.75E-03	5.70E-03	1.11E-03	4.10E-03	2.66E-03	2.73E-03	6.30E-04	4.82E-04	8.78E-08	1.38E-03	4.51E-04
56	H05	100	Single Unit Short Haul Truck	228	0.00E+00	2.17E-05	8.00E-07	3.72E+01	1.66E-05	7.68E-02	2.46E-05	9.54E-03	1.47E-03	3.81E-04	3.11E-03	5.74E-04	5.84E-04	3.81E-03	1.51E-04	6.15E-08	2.52E-03	1.78E-03
56	H05	100	Single Unit Long Haul Truck	10	0.00E+00	9.41E-07	3.38E-08	1.57E+00	6.86E-07	3.14E-03	1.06E-06	4.00E-04	6.70E-05	1.66E-05	1.36E-04	2.42E-05	2.46E-05	1.59E-04	6.35E-06	2.52E-09	1.11E-04	7.46E-05
56	H05	100	Combination Short Haul Truck	198	0.00E+00	2.84E-05	2.09E-06	6.61E+01	7.52E-08	5.10E-02	2.03E-05	5.09E-02	1.92E-03	4.87E-04	1.73E-03	6.12E-04	6.35E-04	1.05E-02	2.21E-04	0.00E+00	1.09E-03	9.59E-03
56	H05	100	Combination Long Haul Truck	181	0.00E+00	4.01E-05	2.26E-06	5.98E+01	2.55E-07	5.94E-02	3.31E-05	5.45E-02	1.92E-03	3.92E-04	3.68E-03	7.29E-04	7.59E-04	9.60E-03	2.00E-04	0.00E+00	2.92E-03	1.03E-02
56	H06	100	Passenger Car	1014	0.00E+00	9.49E-06	1.03E-06	4.15E+01	6.74E-05	2.02E-01	2.14E-05	1.09E-03	3.24E-03	6.21E-04	2.09E-03	1.35E-03	1.38E-03	1.21E-04	2.10E-04	4.40E-08	7.06E-04	1.71E-04
56	H06	100	Passenger Truck	1699	0.00E+00	1.96E-05	2.10E-06	9.56E+01	1.31E-04	3.91E-01	4.23E-05	2.73E-03	5.66E-03	1.10E-03	4.08E-03	2.64E-03	2.71E-03	6.26E-04	4.79E-04	8.72E-08	1.37E-03	4.49E-04
56	H06	100	Single Unit Short Haul Truck	288	0.00E+00	2.74E-05	1.01E-06	4.71E+01	2.10E-05	9.72E-02	3.11E-05	1.21E-02	1.86E-03	4.82E-04	3.93E-03	7.25E-04	7.38E-04	4.82E-03	1.91E-04	7.78E-08	3.19E-03	2.25E-03
56	H06	100	Single Unit Long Haul Truck	13	0.00E+00	1.19E-06	4.28E-08	1.98E+00	8.67E-07	3.98E-03	1.35E-06	5.06E-04	8.47E-05	2.09E-05	1.72E-04	3.06E-05	3.11E-05	2.01E-04	8.03E-06	3.18E-09	1.41E-04	9.44E-05
56	H06	100	Combination Short Haul Truck	343	0.00E+00	4.90E-05	3.62E-06	1.14E+02	1.30E-07	8.82E-02	3.51E-05	8.80E-02	3.32E-03	8.41E-04	2.99E-03	1.06E-03	1.10E-03	1.81E-02	3.82E-04	0.00E+00	1.89E-03	1.66E-02
56	H06	100	Combination Long Haul Truck	312	0.00E+00	6.93E-05	3.90E-06	1.03E+02	4.41E-07	1.03E-01	5.72E-05	9.41E-02	3.32E-03	6.77E-04	6.35E-03	1.26E-03	1.31E-03	1.66E-02	3.46E-04	0.00E+00	5.04E-03	1.77E-02
16	H07	100	Passenger Car	2288	0.00E+00	2.14E-05	2.33E-06	9.35E+01	1.52E-04	4.56E-01	4.83E-05	2.47E-03	7.31E-03	1.40E-03	4.71E-03	3.04E-03	3.12E-03	2.72E-04	4.73E-04	9.93E-08	1.59E-03	3.85E-04
16	H07	100	Passenger Truck	3831	0.00E+00	4.42E-05	4.74E-06	2.16E+02	2.95E-04	8.81E-01	9.54E-05	6.16E-03	1.28E-02	2.48E-03	9.20E-03	5.96E-03	6.11E-03	1.41E-03	1.08E-03	1.97E-07	3.09E-03	1.01E-03
16	H07	100	Single Unit Short Haul Truck	546	0.00E+00	5.19E-05	1.92E-06	8.91E+01	3.97E-05	1.84E-01	5.88E-05	2.29E-02	3.53E-03	9.13E-04	7.44E-03	1.37E-03	1.40E-03	9.13E-03	3.61E-04	1.47E-07	6.04E-03	4.26E-03
16	H07	100	Single Unit Long Haul Truck	24	0.00E+00	2.25E-06	8.10E-08	3.75E+00	1.64E-06	7.53E-03	2.55E-06	9.59E-04	1.60E-04	3.96E-05	3.25E-04	5.79E-05	5.90E-05	3.81E-04	1.52E-05	6.03E-09	2.66E-04	1.79E-04
16	H07	100	Combination Short Haul Truck	563	0.00E+00	8.05E-05	5.95E-06	1.88E+02	2.14E-07	1.45E-01	5.76E-05	1.44E-01	5.45E-03	1.38E-03	4.90E-03	1.74E-03	1.80E-03	2.98E-02	6.27E-04	0.00E+00	3.10E-03	2.72E-02
16	H07	100	Combination Long Haul Truck	513	0.00E+00	1.14E-04	6.41E-06	1.70E+02	7.25E-07	1.69E-01	9.39E-05	1.55E-01	5.46E-03	1.11E-03	1.04E-02	2.07E-03	2.15E-03	2.73E-02	5.69E-04	0.00E+00	8.28E-03	2.91E-02
52	H08	60	Passenger Car	298	0.00E+00	3.51E-06	3.82E-07	1.36E+01	2.49E-05	7.00E-02	7.92E-06	2.96E-04	2.93E-03	4.39E-04	7.72E-04	4.98E-04	5.11E-04	5.91E-05	6.82E-05	1.39E-08	2.61E-04	4.62E-05
52	H08	60	Passenger Truck	500	0.00E+00	7.41E-06	7.86E-07	3.03E+01	4.67E-05	1.20E-01	1.54E-05	9.02E-04	5.20E-03	7.72E-04	1.46E-03	9.53E-04	9.77E-04	2.37E-04	1.50E-04	2.54E-08	4.88E-04	1.53E-04
52	H08	60	Single Unit Short Haul Truck	34	0.00E+00	7.70E-06	3.18E-07	5.74E+00	5.10E-06	1.01E-02	8.33E-06	2.94E-03	7.93E-04	1.33E-04	1.03E-03	1.98E-04	2.02E-04	5.81E-04	2.34E-05	9.63E-09	8.25E-04	5.50E-04
52	H08	60	Single Unit Long Haul Truck	2	0.00E+00	3.36E-07	1.38E-08	2.45E-01	2.21E-07	4.28E-04	3.63E-07	1.27E-04	3.56E-05	5.91E-06	4.49E-05	8.60E-06	8.77E-06	2.47E-05	9.98E-07	4.10E-10	3.61E-05	2.38E-05
52	H08	60	Combination Short Haul Truck	48	0.00E+00	1.40E-05	1.03E-06	1.69E+01	3.85E-08	2.10E-02	1.01E-05	2.13E-02	2.45E-03	3.83E-04	8.65E-04	3.02E-04	3.13E-04	2.69E-03	5.67E-05	0.00E+00	5.52E-04	4.01E-03
52	H08	60	Combination Long Haul Truck	44	0.00E+00	1.93E-05	1.05E-06	1.60E+01	1.30E-07	2.52E-02	1.61E-05	2.27E-02	2.57E-03	3.72E-04	1.83E-03	3.44E-04	3.59E-04	2.57E-03	5.36E-05	0.00E+00	1.47E-03	4.27E-03
50	H09	40	Passenger

Appendix F.1.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
54	H13	80	Passenger Truck	1396	0.00E+00	1.76E-05	1.88E-06	8.07E+01	1.15E-04	3.13E-01	3.73E-05	2.33E-03	8.54E-03	1.40E-03	3.58E-03	2.32E-03	2.38E-03	5.73E-04	4.03E-04	7.14E-08	1.20E-03	3.88E-04
54	H13	80	Single Unit Short Haul Truck	334	0.00E+00	4.59E-05	1.79E-06	5.48E+01	3.11E-05	9.95E-02	5.04E-05	1.90E-02	3.76E-03	7.68E-04	6.32E-03	1.17E-03	1.19E-03	5.57E-03	2.23E-04	8.83E-08	5.12E-03	3.55E-03
54	H13	80	Single Unit Long Haul Truck	15	0.00E+00	1.99E-06	7.69E-08	2.32E+00	1.32E-06	4.15E-03	2.19E-06	8.11E-04	1.72E-04	3.41E-05	2.75E-04	5.02E-05	5.12E-05	2.34E-04	9.43E-06	3.68E-09	2.24E-04	1.52E-04
54	H13	80	Combination Short Haul Truck	128	0.00E+00	2.63E-05	1.95E-06	4.28E+01	6.89E-08	4.01E-02	1.88E-05	4.03E-02	3.05E-03	5.52E-04	1.60E-03	5.68E-04	5.90E-04	6.80E-03	1.43E-04	0.00E+00	1.01E-03	7.60E-03
54	H13	80	Combination Long Haul Truck	116	0.00E+00	3.66E-05	2.07E-06	3.97E+01	2.33E-07	4.75E-02	3.02E-05	4.31E-02	3.15E-03	5.04E-04	3.36E-03	6.67E-04	6.94E-04	6.37E-03	1.33E-04	0.00E+00	2.66E-03	8.12E-03
53	H14	70	Passenger Car	33	0.00E+00	3.56E-07	3.87E-08	1.45E+00	2.53E-06	7.13E-03	8.03E-07	3.39E-05	2.50E-04	3.91E-05	7.84E-05	5.05E-05	5.19E-05	5.59E-06	7.30E-06	1.51E-09	2.65E-05	5.28E-06
53	H14	70	Passenger Truck	55	0.00E+00	7.44E-07	7.91E-08	3.27E+00	4.78E-06	1.26E-02	1.56E-06	9.56E-05	4.46E-04	6.93E-05	1.50E-04	9.71E-05	9.96E-05	2.43E-05	1.63E-05	2.85E-09	5.00E-05	1.60E-05
53	H14	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.00E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.75E-05
53	H14	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.60E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.78E-04
53	H14	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.85E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.25E-04
54	H15	80	Passenger Car	1153	0.00E+00	1.17E-05	1.27E-06	4.92E+01	8.31E-05	2.37E-01	2.64E-05	1.20E-03	6.62E-03	1.09E-03	2.58E-03	1.66E-03	1.70E-03	1.71E-04	2.48E-04	5.13E-08	8.71E-04	1.88E-04
54	H15	80	Passenger Truck	1932	0.00E+00	2.43E-05	2.59E-06	1.12E+02	1.58E-04	4.32E-01	5.16E-05	3.23E-03	1.18E-02	1.94E-03	4.95E-03	3.21E-03	3.29E-03	7.93E-04	5.57E-04	9.87E-08	1.66E-03	5.37E-04
54	H15	80	Single Unit Short Haul Truck	77	0.00E+00	1.05E-05	4.11E-07	1.26E+01	7.13E-06	2.28E-02	1.16E-05	4.35E-03	8.61E-04	1.76E-04	1.45E-03	2.68E-04	2.73E-04	1.28E-03	5.10E-05	2.02E-08	1.17E-03	8.13E-04
54	H15	80	Single Unit Long Haul Truck	3	0.00E+00	4.57E-07	1.76E-08	5.31E-01	3.04E-07	9.50E-04	5.02E-07	1.86E-04	3.95E-05	7.81E-06	6.31E-05	1.15E-05	1.17E-05	5.37E-05	2.16E-06	8.43E-10	5.14E-05	3.47E-05
54	H15	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	7.93E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.50E-03
54	H15	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.48E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.60E-03
53	H16	70	Passenger Car	976	0.00E+00	1.06E-05	1.15E-06	4.31E+01	7.50E-05	2.11E-01	2.38E-05	1.00E-03	7.40E-03	1.16E-03	2.32E-03	1.50E-03	1.54E-03	1.66E-04	2.16E-04	4.49E-08	7.86E-04	1.57E-04
53	H16	70	Passenger Truck	1634	0.00E+00	2.21E-05	2.35E-06	9.70E+01	1.42E-04	3.73E-01	4.63E-05	2.83E-03	1.32E-02	2.05E-03	4.43E-03	2.88E-03	2.95E-03	7.20E-04	4.83E-04	8.46E-08	1.48E-03	4.75E-04
53	H16	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.20E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.25E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.17E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.68E-06
53	H16	70	Combination Short Haul Truck	17	0.00E+00	4.31E-06	3.20E-07	5.82E+00	1.09E-08	6.22E-03	3.07E-06	6.40E-03	6.07E-04	1.01E-04	2.58E-04	9.33E-05	9.69E-05	9.25E-04	1.95E-05	0.00E+00	1.62E-04	1.21E-03
53	H16	70	Combination Long Haul Truck	15	0.00E+00	5.91E-06	3.36E-07	5.46E+00	3.70E-08	7.42E-03	4.86E-06	6.85E-03	6.32E-04	9.52E-05	5.37E-04	1.08E-04	1.12E-04	8.77E-04	1.83E-05	0.00E+00	4.25E-04	1.29E-03

Appendix F.1.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	1.95E-04	1.39E-05	4.63E+02	3.57E-04	1.42E+00	2.30E-04	1.74E-01	1.69E-02	4.12E-03	2.34E-02	9.81E-03	1.01E-02	3.62E-02	1.97E-03	3.71E-07	1.33E-02	3.26E-02
A02	0.00E+00	1.92E-04	1.40E-05	4.74E+02	3.91E-04	1.53E+00	2.35E-04	1.65E-01	1.77E-02	4.27E-03	2.38E-02	1.03E-02	1.06E-02	3.44E-02	2.04E-03	3.92E-07	1.32E-02	3.08E-02
A03	0.00E+00	1.90E-04	1.38E-05	4.67E+02	3.82E-04	1.50E+00	2.32E-04	1.64E-01	1.74E-02	4.20E-03	2.34E-02	1.02E-02	1.04E-02	3.42E-02	2.01E-03	3.83E-07	1.30E-02	3.07E-02
A04	0.00E+00	1.99E-04	1.48E-05	5.13E+02	4.55E-04	1.74E+00	2.54E-04	1.61E-01	1.96E-02	4.69E-03	2.57E-02	1.16E-02	1.19E-02	3.39E-02	2.25E-03	4.39E-07	1.38E-02	3.01E-02
A05	0.00E+00	1.57E-04	1.16E-05	3.97E+02	3.40E-04	1.32E+00	1.96E-04	1.33E-01	1.50E-02	3.60E-03	1.98E-02	8.82E-03	9.06E-03	2.75E-02	1.73E-03	3.29E-07	1.07E-02	2.48E-02
A06	0.00E+00	1.52E-04	1.14E-05	3.98E+02	3.62E-04	1.38E+00	1.97E-04	1.22E-01	1.53E-02	3.66E-03	1.98E-02	9.09E-03	9.33E-03	2.55E-02	1.75E-03	3.40E-07	1.05E-02	2.28E-02
A07	0.00E+00	1.57E-04	1.12E-05	3.66E+02	2.72E-04	1.10E+00	1.82E-04	1.44E-01	1.32E-02	3.23E-03	1.84E-02	7.64E-03	7.85E-03	2.97E-02	1.54E-03	2.86E-07	1.06E-02	2.69E-02
A08	0.00E+00	1.52E-04	1.14E-05	3.94E+02	3.50E-04	1.34E+00	1.94E-04	1.25E-01	1.50E-02	3.60E-03	1.95E-02	8.90E-03	9.14E-03	2.59E-02	1.73E-03	3.30E-07	1.04E-02	2.33E-02
A09	0.00E+00	2.01E-04	1.43E-05	4.69E+02	3.48E-04	1.40E+00	2.33E-04	1.84E-01	1.69E-02	4.13E-03	2.36E-02	9.78E-03	1.00E-02	3.81E-02	1.98E-03	3.65E-07	1.35E-02	3.45E-02
A10	0.00E+00	1.73E-04	1.27E-05	4.28E+02	3.53E-04	1.38E+00	2.11E-04	1.51E-01	1.59E-02	3.84E-03	2.13E-02	9.35E-03	9.60E-03	3.11E-02	1.84E-03	3.45E-07	1.17E-02	2.82E-02
B05	0.00E+00	1.55E-04	1.08E-05	4.03E+02	3.16E-04	1.11E+00	1.93E-04	1.41E-01	1.97E-02	4.12E-03	2.01E-02	8.27E-03	8.49E-03	3.01E-02	1.73E-03	2.88E-07	1.16E-02	2.64E-02
B06	0.00E+00	1.68E-04	9.67E-06	3.35E+02	1.21E-04	5.93E-01	1.67E-04	1.80E-01	1.29E-02	2.95E-03	1.84E-02	5.01E-03	5.16E-03	3.96E-02	1.28E-03	2.12E-07	1.33E-02	3.39E-02
B07	0.00E+00	1.52E-04	1.07E-05	4.07E+02	3.44E-04	1.18E+00	1.97E-04	1.28E-01	2.05E-02	4.27E-03	2.05E-02	8.66E-03	8.90E-03	2.78E-02	1.77E-03	3.14E-07	1.16E-02	2.39E-02
B08	0.00E+00	4.84E-05	3.94E-06	1.55E+02	1.64E-04	5.29E-01	7.29E-05	3.47E-02	8.64E-03	1.73E-03	7.33E-03	3.74E-03	3.84E-03	7.20E-03	7.12E-04	1.23E-07	3.49E-03	6.45E-03
C11	0.00E+00	3.15E-05	2.36E-06	6.96E+01	7.90E-05	2.31E-01	4.18E-05	2.20E-02	9.38E-03	1.48E-03	4.26E-03	1.95E-03	2.00E-03	3.36E-03	3.17E-04	5.41E-08	2.26E-03	4.10E-03
C12	0.00E+00	1.61E-05	1.63E-06	5.92E+01	9.44E-05	2.51E-01	3.21E-05	3.26E-03	1.09E-02	1.62E-03	3.11E-03	1.94E-03	1.99E-03	6.10E-04	2.92E-04	5.23E-08	1.12E-03	5.78E-04
C13	0.00E+00	1.92E-05	1.40E-06	3.13E+01	4.30E-05	1.18E-01	2.45E-05	1.30E-02	8.48E-03	1.20E-03	2.49E-03	1.10E-03	1.13E-03	1.40E-03	1.43E-04	2.23E-08	1.37E-03	2.44E-03
C14	0.00E+00	3.47E-05	2.89E-06	9.71E+01	1.29E-04	3.60E-01	5.46E-05	1.74E-02	1.36E-02	2.14E-03	5.47E-03	2.87E-03	2.95E-03	2.82E-03	4.62E-04	8.37E-08	2.52E-03	3.22E-03
C15	0.00E+00	3.50E-05	2.35E-06	4.04E+01	4.05E-05	1.28E-01	3.66E-05	3.19E-02	1.06E-02	1.51E-03	3.76E-03	1.35E-03	1.39E-03	3.14E-03	1.71E-04	2.27E-08	2.37E-03	6.00E-03
C16	0.00E+00	1.17E-05	9.21E-07	2.68E+01	3.51E-05	9.89E-02	1.67E-05	7.46E-03	4.75E-03	7.12E-04	1.68E-03	8.25E-04	8.46E-04	1.02E-03	1.25E-04	2.08E-08	8.32E-04	1.39E-03
C17	0.00E+00	6.41E-05	4.25E-06	1.13E+02	1.08E-04	3.28E-01	7.56E-05	4.82E-02	1.44E-02	2.30E-03	7.98E-03	3.01E-03	3.09E-03	7.53E-03	4.90E-04	8.72E-08	4.89E-03	9.02E-03
C18	0.00E+00	1.58E-05	1.17E-06	3.30E+01	4.28E-05	1.19E-01	2.18E-05	9.46E-03	5.79E-03	8.72E-04	2.25E-03	1.02E-03	1.05E-03	1.34E-03	1.53E-04	2.72E-08	1.20E-03	1.76E-03
C19	0.00E+00	6.05E-06	4.60E-07	1.10E+01	1.58E-05	4.29E-02	8.16E-06	3.77E-03	3.00E-03	4.24E-04	8.24E-04	3.86E-04	3.96E-04	4.15E-04	5.09E-05	7.97E-09	4.28E-04	7.05E-04
C20	0.00E+00	4.86E-06	4.07E-07	1.38E+01	1.85E-05	5.15E-02	7.75E-06	2.32E-03	1.94E-03	3.05E-04	7.77E-04	4.10E-04	4.21E-04	3.82E-04	6.59E-05	1.21E-08	3.57E-04	4.29E-04
C21	0.00E+00	8.14E-05	5.21E-06	9.36E+01	1.08E-04	3.01E-01	8.99E-05	6.14E-02	2.43E-02	3.48E-03	9.52E-03	3.31E-03	3.40E-03	6.45E-03	4.04E-04	6.78E-08	6.12E-03	1.15E-02
C22	0.00E+00	1.79E-05	1.41E-06	4.30E+01	6.01E-05	1.64E-01	2.71E-05	8.87E-03	7.65E-03	1.15E-03	2.76E-03	1.36E-03	1.40E-03	1.32E-03	2.03E-04	3.69E-08	1.36E-03	1.65E-03
C23	0.00E+00	4.11E-05	3.07E-06	9.46E+01	1.14E-04	3.24E-01	5.74E-05	2.45E-02	1.28E-02	2.03E-03	5.90E-03	2.71E-03	2.78E-03	3.96E-03	4.37E-04	8.05E-08	3.12E-03	4.56E-03
C24	0.00E+00	3.95E-06	3.60E-07	1.19E+01	1.75E-05	4.78E-02	6.73E-06	1.81E-03	2.15E-03	3.22E-04	6.59E-04	3.78E-04	3.88E-04	2.60E-04	5.72E-05	9.78E-09	2.71E-04	3.34E-04
C25	0.00E+00	7.10E-05	4.63E-06	8.26E+01	9.14E-05	2.66E-01	7.72E-05	5.73E-02	2.15E-02	3.07E-03	8.10E-03	2.87E-03	2.95E-03	5.87E-03	3.54E-04	5.52E-08	5.15E-03	1.08E-02
C26	0.00E+00	3.96E-05	2.76E-06	7.64E+01	7.91E-05	2.36E-01	4.89E-05	2.90E-02	1.00E-02	1.59E-03	5.08E-03	2.08E-03	2.14E-03	4.50E-03	3.39E-04	5.91E-08	2.94E-03	5.44E-03
C27	0.00E+00	5.57E-05	3.89E-06	8.56E+01	1.20E-04	3.17E-01	7.08E-05	3.42E-02	2.30E-02	3.26E-03	7.36E-03	3.07E-03	3.14E-03	3.83E-03	3.91E-04	6.63E-08	4.21E-03	6.41E-03
C28	0.00E+00	9.77E-06	8.59E-07	2.79E+01	4.09E-05	1.11E-01	1.62E-05	4.44E-03	5.05E-03	7.55E-04	1.61E-03	8.91E-04	9.14E-04	6.51E-04	1.34E-04	2.34E-08	6.93E-04	8.21E-04
C29	0.00E+00	2.54E-06	2.06E-07	6.24E+00	7.35E-06	2.15E-02	3.52E-06	1.85E-03	8.58E-04	1.35E-04	3.48E-04	1.76E-04	1.80E-04	2.71E-04	2.87E-05	4.59E-09	1.68E-04	3.46E-04
C30	0.00E+00	6.08E-05	3.80E-06	5.64E+01	4.43E-05	1.52E-01	5.87E-05	5.73E-02	1.42E-02	2.05E-03	6.19E-03	1.88E-03	1.94E-03	5.62E-03	2.25E-04	3.04E-08	4.25E-03	1.08E-02
C31	0.00E+00	3.42E-05	2.35E-06	6.11E+01	7.21E-05	2.05E-01	4.34E-05	2.29E-02	1.05E-02	1.59E-03	4.57E-03	1.85E-03	1.90E-03	3.21E-03	2.75E-04	4.92E-08	2.66E-03	4.29E-03
C32	0.00E+00	4.29E-05	2.78E-06	6.58E+01	4.95E-05	1.66E-01	4.54E-05	3.85E-02	8.12E-03	1.30E-03	4.78E-03	1.64E-03	1.68E-03	5.75E-03	2.72E-04	4.16E-08	3.09E-03	7.23E-03
C33	0.00E+00	2.65E-06	2.54E-07	9.20E+00	1.48E-05	3.89E-02	5.18E-06	4.12E-04	1.69E-03	2.52E-04	5.11E-04	3.04E-04	3.12E-04	9.34E-05	4.55E-05	8.48E-09	1.99E-04	7.20E-05
C34	0.00E+00	9.17E-06	7.04E-07	1.75E+01	2.62E-05	6.95E-02	1.29E-05	5.07E-03	4.80E-03	6.76E-04	1.30E-03	6.21E-04	6.37E-04	5.84E-04	8.18E-05	1.33E-08	6.65E-04	9.48E-04
C35	0.00E+00	1.50E-05	1.06E-06	2.84E+01	2.79E-05	8.54E-02	1.80E-05	1.21E-02	3.70E-03	5.88E-04	1.85E-03	7.59E-04	7.80E-04	1.81E-03	1.25E-04	2.02E-08	1.07E-03	2.26E-03
C39	0.00E+00	1.28E-05	9.63E-07	2.59E+01	3.08E-05	8.97E-02	1.67E-05	9.78E-03	4.52E-03	6.78E-04	1.69E-03	7.71E-04	7.92E-04	1.29E-03	1.17E-04	1.84E-08	8.96E-04	1.83E-03
D01	0.00E+00	1.12E-04	9.12E-06	2.46E+02	3.37E-04	9.67E-01	1.58E-04	8.07E-02	4.51E-02	6.75E-03	1.56E-02	7.96E-03	8.17E-03	1.05E-02	1.13E-03	1.87E-07	7.47E-03	1.51E-02
D02	0.00E+00	6.20E-05	5.43E-06	1.61E+02	2.49E-04	6.86E-01	1.01E-04	3.13E-02	3.02E-02	4.51E-03	9.94E-03	5.49E-03	5.63E-03	4.38E-03	7.66E-04	1.39E-07	4.31E-03	5.81E-03
D03	0.00E+00	1.01E-04	8.54E-06	2.49E+02	3.80E-04	1.05E+00	1.59E-04	5.23E-02	4.64E-02	6.95E-03	1.58E-02	8.45E-03	8.67E-03	7.35E-03	1.18E-03	2.16E-07	7.14E-03	9.72E-03
D04	0.00E+00	1.07E-04	7.73E-06	1.84E+02	2.11E-04	6.38E-01	1.30E-04	8.98E-02	3.26E-02	4.91E-03	1.32E-02	5.64E-03	5.80E-03	1.16E-02	8.09E-04	1.27E-07	7.44E-03	1.68E-02
D05	0.00E+00	1.13E-04	8.95E-06	2.42E+02	3.34E-04	9.50E-01	1.59E-04	7.58E-02	4.42E-02	6.63E-03	1.60E-02	7.89E-03	8.10E-03	1.01E-02	1.11E-03	1.92E-07	7.85E-03	1.42E-02
D06	0.00E+00	1.22E-04	8.62E-06	2.13E+02	2.63E-04	7.58E-01	1.55E-04	8.71E-02	3.77E-02	5.69E-03	1.61E-02	6.75E-03	6.94E-03	1.18E-02	9.50E-04	1.70E-07	9.18E-03	1.63E-02
D07	0.00E+00	9.50E-05	7.55E-06	2.48E+02	2.86E-04	8.58E-01	1.35E-04	6.48E-02	2.48E-02	4.19E-03	1.36E-02	6.72E-03	6.90E-03	1.12E-02	1.14E-03	1.96E-07	6.69E-03	1.21E-02
D08	0.00E+00	8.16E-05	5.96E-06	1.92E+02	2.06E-04	6.26E-01	1.10E-04	5.54E-02	1.86E-02	3.17E-03	1.13E-02	5.04E-03	5.17E-03	1.01E-02	8.65E-04	1.58E-07	6.16E-03	1.03E-02
D09	0.00E+00	6.30E-05	5.39E-06	1.86E+02	2.35E-04	6.90E-01	9.87E-05	3.69E-02	1.92E-02	3.22E-03	9.78E-03	5.26E-03	5.40E-03	6.38E-03	8.77E-04	1.54E-07	4.38E-03	6.84E-03
D10	0.00E+00	5.68E-05	4.22E-06	1.40E+02	1.60E-04	4.78E-01	8.02E-05	3.43E-02	1.38E-02	2.35E-03	8.29E-03	3.79E-03	3.89E-03	6.45E-03	6.44E-04	1.23E-07	4.40E-03	6.39E-03
D11	0.00E+00	9.12E-05	7.49E-06	2.51E+02	3.01E-04	8.94E-01	1.35E-04	5.92E-02	2.54E-02	4.28E-03	1.35E-02	6.92E-03	7.10E-03	1.02E-02	1.16E-03	2.01E-07	6.35E-03	1.10E-02
D12	0.00E+00	5.96E-05	4.29E-06	1.39E+02	1.51E-04	4.56E-01	8.06E-05	3.85E-02	1.34E-02	2.30E-03	8.39E-03	3.67E-03	3.77E-03	7.18E-03	6.29E-04	1.19E-07	4.62E-03	7.19E-03
D13	0.00E+00	2.75E-05	1.95E-06	4.83E+01	5.99E-05	1.73E-01	3.50E-05	1.97E-02	8.58E-03	1.29E-03	3.62E-03	1.53E-03	1.58E-03	2.66E-03	2.16E-04	3.83E-08	2.05E-03	3.69E-03
D14	0.00E+00	7.24E-05	5.34E-06	1.36E+02	1.76E-04	5.04E-01	9.52E-05	5.12E-02	2.44E-02	3.68E-03	9.75E-03	4.36E-03	4.48E-03	6.88E-03	6.15E-04	1.08E-07	5.27E-03	9.59E-03
D15	0.00E+00	7.69E-05	5.97E-06	1.61E+02	2.24E-04	6.30E-01	1.08E-04	4.92E-02	2.94E-02	4.41E-03	1.10E-02	5.29E-03	5.43E-03	6.70E-03	7.42E-04	1.32E-07	5.55E-03	9.19E-03
D16	0.00E+00	8.26E-05	6.05E-06	1.54E+02	1.98E-04	5.68E-01	1.08E-04	5.80E-02	2.76E-02	4.15E-03	1.11E-02	4.93E-03	5.07E-03	7.82E-03	6.95E-04	1.22E-07	6.06E-03	1.09E-02
D17	0.00E+00	1.16E-05	7.69E-07	1.86E+01	1.58E-05	5.12E-02	1.27E-05	1.00E-02	2.37E-03	3.78E-04	1.33E-03	4.84E-04	4.98E-04	1.50E-03	7.80E-05	1.23E-08	8.35E-04	1.89E-03
D18	0.00E+00	5.47E-05	3.89E-06	1.00E+02	9.79E-05	3.06E-01	6.43E-05	4.62E-02	1.33E-02	2.10E-03	6.57E-03	2.71E-03	2.79E-03	6.82E-03	4.34E-04	6.72E-08	3.78E-03	8.67E-03
D19	0.00E+00	1.02E-04	8.00E-06	2.71E+02	3.25E-04	9.62E-01	1.50E-04	6.01E-02	2.72E-02	4.62E-03	1.52E-02	7.48E-03	7.68E-03	1.10E-02	1.26E-03	2.32E-07	7.55E-03	1.12E-02
D20	0.00E+00	1.93E-04	1.15E-05	2.94E+02	1.49E-04	5.91E-01	1.93E-04	1.80E-01	2.40E-02	4.23E-03	2.10E-02	5.99E-03	6.16E-03	3.20E-02	1.15E-03	1.87E-07	1.48E-02	3.38E-02
D21	0.00E+00	5.94E-05	5.17E-06	1.88E+02	2.53E-04	7.28E-01	1.00E-04	2.60E-02	1.96E-02	3.31E-03	1.00E-02	5.48E-03	5.62E-03	4.88E-03	9.03E-04	1.71E-07	4.38E-03	4.78E-03
D22	0.00E+00	1.88E-04	1.15E-05	2.96E+02	1.58E-04	6.19E-01	1.88E-04	1.80E-01	2.46E-02	4.30E-03	2.02E-02	6.11E-03	6.29E-03	3.15E-02	1.17E-03	1.75E-07	1.39E-02	3.38E-02
D23	0.00E+00	8.76E-05	7.73E-06	2.38E+02	3.85E-04	1.04E+00	1.50E-04	3.32E-02	4.48E-02	6.71E-03	1.49E-02	8.29E-03	8.50E-03	5.10E-03	1.15E-03	2.20E-07	6.40E-03	6.12E-03
D24	0.00E+00	7.90E-05	5.72E-06	1.47E+02	1.95E-04	5.51E-01	1.06E-04	5.11E-02	2.65E-02	3.99E-03	1.09E-02	4.80E-03	4.93E-03	7.08E-03	6.70E-04	1.24E-07	5.99E-03	9.55E-03
D25	0.00E+00	8.26E-05	7.00E-06	2.09E+02	3.28E-04	8.90E-01	1.35E-04	3.62E-02	3.90E-02	5.85E-03	1.35E-02	7.20E-03	7.38E-03	5.38E-03	9.97E-04	1.90E-07	6.10E-03	6.69E-03
D26	0.00E+00	8.44E-05	6.25E-06	1.66E+02	2.29E-04	6.37E-01	1.17E-04	5.08E-02	3.00E-02	4.52E-03	1.20E-02	5.47E-03	5.62E-03	7.15E-03	7.62E-04	1.43E-07	6.43E-03	9.48E-03
D27	0.00E+00	3.44E-05	2.88E-06	1.01E+02	1.29E-04	3.76E-01	5.43E-05	1.84E-02	1.04E-02	1.75E-03	5.44E-03	2.87E-03	2.94E-03	3.32E-03	4.77E-04	8.76E-08	2.50E-03	3.40E-03
D28	0.00E+00	7.44E-05	6.03E-06	2.06E+02	2.51E-04	7.41E-01	1.12E-04	4.39E-02	2.08E-02	3.52E-03	1.13E-02	5.72E-03	5.88E-03	7.87E-03	9.60E-04	1.74E-07	5.41E-03	8.15E-03
D29	0.00E+00	3.65E-05	2.87E-06	9.63E+01	1.14E-04	3.37E-01	5.32E-05	2.26E-02	9.62E-03	1.63E-03	5.39E-03	2.64E-03	2.71E-03	4.07E-03	4.45E-04	8.08E-08	2.69E-03	4.20E-03
D30	0.00E+00	6.23E-05	4.98E-06	1.67E+02	1.98E-04	5.88E-01	9.10E-05	3.95E-02	1.68E-02	2.83E-03	9.17E-03	4.57E-03	4.70E-03	6.97E-03	7.71E-04	1.37E-07	4.47E-03	7.35E-03
D31	0.00E+00	2.03E-05	1.47E-06	4.59E+01	4.68E-05	1.45E-01	2.63E-05	1.50E-02	4.39E-03	7.50E-04	2.72E-03	1.18E-03	1.21E-03	2.66E-03	2.04E-04	3.58E-08	1.50E-03	2.80E-03
D32	0.00E+00	2.95E-05	2.35E-06	7.75E+01	9.00E-05	2.69E-01	4.23E-05	1.97E-02	7.75E-03	1.31E-03	4.26E-03	2.11E-03	2.16E-03	3.43E-03	3.56E-04	6.20E-08	2.09E-03	3.67E-03
D33	0.00E+00	4.61E-05	3.17E-06	7.51E+01	8.67E-05	2.56E-01	5.59E-05	3.53E-02	1.32E-02	1.99E-03	5.83E-03	2.33E-03	2.40E-03	4.73E-03	3.30E-04	5.71E-08	3.43E-03	6.62E-03
D34	0.00E+00	1.99E-05	1.72E-06	5.15E+01	8.14E-05	2.21E-01	3.29E-05	8.68E-03	9.66E-03	1.45E-03	3.27E-03	1.78E-03	1.82E-03	1.28E-03	2.47E-04	4.67E-08	1.45E-03	1.61E-03
D35	0.00E+00	3.36E-05	2.82E-06	8.16E+01	1.24E-04	3.41E-01	5.25E-05	1.76E-02	1.52E-02	2.28E-03	5.24E-03	2.77E-03	2.84E-03	2.48E-03	3.86E-04	7.09E-08	2.40E-03	3.27E-03
D36	0.00E+00	2.66E-05	1.84E-06	4.36E+01	4.99E-05	1.48E-01	3.22E-05	2.08E-02	7.64E-03	1.15E-03	3.35E-03	1.35E-03	1.38E-03	2.76E-03	1.91E-04	3.25E-08	1.96E-03	3.90E-03
D37	0.00E+00	6.70E-06	5.91E-07	1.75E+01	2.71E-05	7.47E-02	1.09E-05	3.47E-03	3.29E-03	4.92E-04	1.07E-03	5.96E-04	6.12E-04	4.80E-04	8.34E-05	1.50E-08	4.60E-04	6.44E-04
D38	0.00E+00	2.77E-05	2.20E-06	5.80E+01	7.72E-05	2.23E-01	3.79E-05	2.06E-02	1.06E-02	1.58E-03	3.78E-03	1.86E-03	1.91E-03	2.67E-03	2.65E-04	4.34E-08	1.87E-03	3.86E-03
D39	0.00E+00	7.64E-06	7.53E-07	2.45E+01	4.17E-05	1.12E-01	1.46E-05	2.19E-03	4.70E-03	7.02E-04	1.41E-03	8.68E-04	8.90E-04	3.48E-04	1.20E-04	2.27E-08	5.24E-04	3.97E-04
D40	0.00E+00	3.26E-05	2.57E-06	6.96E+01	9.72E-05	2.74E-01	4.64E-05	2.11E-02	1.27E-02	1.91E-03	4.67E-03	2.29E-03	2.35E-03	2.85E-03	3.22E-04	5.68E-08	2.32E-03	3.93E-03
D41	0.00E+00	5.92E-06	6.33E-07	2.18E+01	3.89E-05	1.03E-01	1.26E-05	6.26E-04	4.23E-03	6.31E-04	1.21E-03	7.87E-04	8.07E-04	1.49E-04	1.09E-04	2.10E-08	4.07E-04	1.04E-04
D42	0.00E+00	2.31E-05	1.70E-06	4.12E+01	4.82E-05	1.45E-01	2.85E-05	1.95E-02	7.33E-03	1.10E-03	2.89E-03	1.27E-03	1.30E-03	2.50E-03	1.82E-04	2.83E-08	1.59E-03	3.65E-03
D43	0.00E+00	1.20E-05	1.28E-06	4.41E+01	7.85E-05	2.08E-01	2.55E-05	1.27E-03	8.54E-03	1.27E-03	2.45E-03	1.59E-03	1.63E-03	3.02E-04	2.19E-04	4.24E-08	8.21E-04	2.10E-04
D44	0.00E+00	2.60E-05	1.84E-06	4.54E+01	5.63E-05	1.62E-01	3.30E-05	1.86E-02	8.06E-03	1.22E-03	3.42E-03	1.44E-03	1.48E-03	2.52E-03	2.03E-04	3.61E-08	1.94E-03	3.48E-03
D45	0.00E+00	7.49E-05	5.40E-06	1.33E+02	1.63E-04	4.77E-01	9.48E-05	5.65E-02	2.37E-02	3.57E-03	9.74E-03	4.20E-03	4.31E-03	7.49E-03	5.94E-04	1.01E-07	5.43E-03	1.06E-02
D46	0.00E+00	7.61E-05	5.28E-06	1.24E+02	1.41E-04	4.22E-01	9.14E-05	6.06E-02	2.18E-02	3.29E-03	9.49E-03	3.83E-03	3.94E-03	8.00E-03	5.45E-04	9.11E-08	5.55E-03	1.14E-02
D47	0.00E+00	9.15E-05	6.77E-06	1.75E+02	2.29E-04	6.54E-01	1.22E-04	6.25E-02	3.14E-02	4.73E-03	1.25E-02	5.64E-03	5.79E-03	8.47E-03	7.93E-04	1.41E-07	6.72E-03	1.17E-02
D48	0.00E+00	3.57E-05	2.79E-06	7.49E+01	1.04E-04	2.93E-01	5.02E-05	2.33E-02	1.37E-02	2.05E-03	5.07E-03	2.45E-03	2.52E-03	3.15E-03	3.45E-04	6.09E-08	2.55E-03	4.36E-03
D49	0.00E+00	1.53E-04	1.00E-05	2.28E+02	2.45E-04	7.34E-01	1.78E-04	1.19E-01	3.93E-02	5.96E-03	1.88E-02	6.97E-03	7.16E-03	1.60E-02	9.85E-04	1.73E-07	1.16E-02	2.24E-02
D50	0.00E+00	1.65E-04	1.10E-05	2.57E+02	2.89E-04	8.54E-01	1.96E-04	1.25E-01	4.47E-02	6.77E-03	2.07E-02	7.95E-03	8.16E-03	1.69E-02	1.12E-03	1.98E-07	1.25E-02	2.34E-02
D51	0.00E+00	2.43E-05	1.78E-06	4.64E+01	6.21E-05	1.75E-01	3.28E-05	1.57E-02	8.36E-03	1.26E-03	3.38E-03	1.51E-03	1.55E-03	2.17E-03	2.12E-04	3.89E-08	1.83E-03	2.93E-03
D52	0.00E+00	4.69E-05	3.05E-06	6.84E+01	7.17E-05	2.16E-01	5.39E-05	3.70E-02	1.17E-02	1.78E-03	5.72E-03	2.07E-03	2.13E-03	4.98E-03	2.94E-04	5.14E-08	3.59E-03	6.95E-03
D53	0.00E+00	4.26E-05	2.99E-06	7.34E+01	9.03E-05	2.61E-01	5.38E-05	3.05E-02	1.30E-02	1.96E-03	5.60E-03	2.33E-03	2.39E-03	4.13E-03	3.28E-04	5.86E-08	3.21E-03	5.70E-03
D54	0.00E+00	4.95E-05	3.44E-06	8.56E+01	1.08E-04	3.08E-01	6.35E-05	3.31E-02	1.52E-02	2.30E-03	6.65E-03	2.75E-03	2.83E-03

Appendix F.1.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D70	0.00E+00	2.95E-05	1.99E-06	5.78E+01	4.92E-05	1.61E-01	3.44E-05	2.46E-02	5.28E-03	9.08E-04	3.60E-03	1.38E-03	1.42E-03	4.33E-03	2.47E-04	4.12E-08	2.18E-03	4.61E-03
D71	0.00E+00	3.56E-05	2.44E-06	6.04E+01	5.43E-05	1.74E-01	4.00E-05	3.10E-02	7.86E-03	1.25E-03	4.13E-03	1.60E-03	1.64E-03	4.58E-03	2.57E-04	3.94E-08	2.49E-03	5.81E-03
D72	0.00E+00	3.77E-05	2.48E-06	5.90E+01	4.82E-05	1.59E-01	4.07E-05	3.32E-02	7.49E-03	1.19E-03	4.26E-03	1.52E-03	1.57E-03	4.96E-03	2.46E-04	3.81E-08	2.70E-03	6.24E-03
D73	0.00E+00	1.20E-05	9.34E-07	2.58E+01	2.86E-05	8.68E-02	1.53E-05	9.87E-03	3.56E-03	5.57E-04	1.52E-03	7.25E-04	7.45E-04	1.42E-03	1.15E-04	1.73E-08	7.74E-04	1.85E-03
D74	0.00E+00	1.64E-05	1.33E-06	4.07E+01	5.26E-05	1.51E-01	2.40E-05	1.01E-02	5.79E-03	9.07E-04	2.40E-03	1.22E-03	1.25E-03	1.54E-03	1.89E-04	3.30E-08	1.15E-03	1.87E-03
D75	0.00E+00	1.01E-05	8.03E-07	2.72E+01	3.26E-05	9.66E-02	1.49E-05	6.09E-03	2.73E-03	4.63E-04	1.51E-03	7.50E-04	7.70E-04	1.10E-03	1.26E-04	2.29E-08	7.39E-04	1.13E-03
D76	0.00E+00	1.23E-05	8.97E-07	2.86E+01	3.04E-05	9.28E-02	1.64E-05	8.54E-03	2.77E-03	4.72E-04	1.69E-03	7.49E-04	7.69E-04	1.54E-03	1.29E-04	2.32E-08	9.21E-04	1.59E-03
D77	0.00E+00	1.28E-05	8.50E-07	2.51E+01	2.19E-05	7.07E-02	1.51E-05	1.01E-02	2.29E-03	3.96E-04	1.60E-03	6.07E-04	6.23E-04	1.82E-03	1.08E-04	1.91E-08	9.78E-04	1.89E-03
D78	0.00E+00	2.19E-05	1.56E-06	4.82E+01	4.80E-05	1.49E-01	2.79E-05	1.63E-02	4.57E-03	7.83E-04	2.89E-03	1.23E-03	1.26E-03	2.91E-03	2.13E-04	3.76E-08	1.63E-03	3.05E-03
D79	0.00E+00	3.10E-05	2.06E-06	5.07E+01	4.49E-05	1.44E-01	3.46E-05	2.61E-02	6.52E-03	1.04E-03	3.62E-03	1.34E-03	1.38E-03	3.93E-03	2.15E-04	3.48E-08	2.24E-03	4.90E-03
D80	0.00E+00	3.41E-05	2.34E-06	6.21E+01	6.46E-05	1.95E-01	4.15E-05	2.51E-02	8.24E-03	1.31E-03	4.33E-03	1.73E-03	1.78E-03	3.90E-03	2.73E-04	4.84E-08	2.56E-03	4.70E-03
F31	0.00E+00	6.48E-05	5.24E-06	1.43E+02	2.00E-04	5.68E-01	9.31E-05	4.30E-02	2.63E-02	3.93E-03	9.30E-03	4.69E-03	4.81E-03	5.72E-03	6.61E-04	1.14E-07	4.48E-03	8.03E-03
F32	0.00E+00	9.22E-05	6.55E-06	1.66E+02	2.17E-04	6.12E-01	1.21E-04	6.01E-02	2.97E-02	4.49E-03	1.26E-02	5.40E-03	5.54E-03	8.36E-03	7.54E-04	1.40E-07	7.06E-03	1.12E-02
F33	0.00E+00	8.85E-06	8.83E-07	2.90E+01	4.96E-05	1.33E-01	1.72E-05	2.32E-03	5.57E-03	8.31E-04	1.66E-03	1.03E-03	1.05E-03	3.79E-04	1.42E-04	2.70E-08	6.07E-04	4.19E-04
F34	0.00E+00	7.75E-05	5.52E-06	1.33E+02	1.56E-04	4.64E-01	9.54E-05	6.11E-02	2.35E-02	3.54E-03	9.82E-03	4.13E-03	4.24E-03	8.04E-03	5.87E-04	9.76E-08	5.58E-03	1.15E-02
G01	0.00E+00	8.11E-06	7.99E-07	3.19E+01	4.59E-05	1.28E-01	1.59E-05	2.09E-03	3.59E-03	5.92E-04	1.55E-03	9.47E-04	9.71E-04	4.10E-04	1.58E-04	2.93E-08	5.83E-04	3.72E-04
G02	0.00E+00	3.79E-05	2.88E-06	9.46E+01	1.02E-04	3.07E-01	5.17E-05	2.67E-02	9.61E-03	1.61E-03	5.26E-03	2.46E-03	2.53E-03	4.70E-03	4.29E-04	7.30E-08	2.73E-03	4.99E-03
G03	0.00E+00	9.47E-05	5.34E-06	1.82E+02	5.38E-05	2.94E-01	9.14E-05	1.04E-01	6.76E-03	1.57E-03	1.01E-02	2.57E-03	2.65E-03	2.28E-02	6.82E-04	1.12E-07	7.50E-03	1.95E-02
G04	0.00E+00	7.11E-05	4.32E-06	1.47E+02	5.78E-05	2.70E-01	7.10E-05	8.04E-02	5.81E-03	1.30E-03	7.65E-03	2.27E-03	2.34E-03	1.70E-02	5.64E-04	8.07E-08	5.31E-03	1.51E-02
G05	0.00E+00	6.72E-06	6.72E-07	2.89E+01	3.97E-05	1.20E-01	1.35E-05	1.76E-03	1.83E-03	3.56E-04	1.32E-03	8.14E-04	8.35E-04	3.74E-04	1.43E-04	2.72E-08	4.89E-04	3.12E-04
G06	0.00E+00	4.40E-07	4.73E-08	2.07E+00	3.00E-06	8.96E-03	9.63E-07	5.78E-05	1.35E-04	2.60E-05	9.32E-05	6.03E-05	6.18E-05	1.13E-05	1.04E-05	1.98E-09	3.14E-05	9.36E-06
G07	0.00E+00	6.05E-05	3.70E-06	8.18E+01	5.00E-05	1.81E-01	6.04E-05	5.54E-02	9.68E-03	1.57E-03	6.48E-03	1.95E-03	2.01E-03	8.34E-03	3.26E-04	5.02E-08	4.47E-03	1.04E-02
G08	0.00E+00	5.32E-06	4.87E-07	1.83E+01	2.46E-05	7.00E-02	9.30E-06	2.32E-03	2.01E-03	3.33E-04	9.15E-04	5.26E-04	5.39E-04	4.17E-04	8.85E-05	1.59E-08	3.75E-04	4.27E-04
G09	0.00E+00	1.47E-05	1.01E-06	1.69E+01	1.51E-05	5.27E-02	1.47E-05	1.50E-02	4.43E-03	6.31E-04	1.49E-03	5.44E-04	5.61E-04	1.43E-03	7.00E-05	7.63E-09	9.25E-04	2.82E-03
G10	0.00E+00	9.92E-05	6.50E-06	1.60E+02	1.33E-04	4.29E-01	1.09E-04	8.48E-02	2.01E-02	3.21E-03	1.14E-02	4.09E-03	4.21E-03	1.28E-02	6.76E-04	1.09E-07	7.24E-03	1.59E-02
H01	0.00E+00	4.48E-04	3.03E-05	1.10E+03	7.45E-04	2.75E+00	5.22E-04	4.47E-01	5.09E-02	1.08E-02	5.46E-02	2.10E-02	2.16E-02	9.40E-02	4.56E-03	7.14E-07	3.30E-02	8.37E-02
H02	0.00E+00	3.66E-04	2.53E-05	9.04E+02	6.14E-04	2.27E+00	4.25E-04	3.78E-01	4.20E-02	8.84E-03	4.40E-02	1.73E-02	1.78E-02	7.79E-02	3.76E-03	5.51E-07	2.61E-02	7.09E-02
H03	0.00E+00	3.59E-04	2.51E-05	9.03E+02	6.40E-04	2.33E+00	4.24E-04	3.64E-01	4.26E-02	8.93E-03	4.38E-02	1.77E-02	1.82E-02	7.50E-02	3.78E-03	5.64E-07	2.57E-02	6.82E-02
H04	0.00E+00	2.96E-04	2.01E-05	7.06E+02	4.38E-04	1.67E+00	3.31E-04	3.18E-01	3.18E-02	6.75E-03	3.45E-02	1.30E-02	1.34E-02	6.53E-02	2.89E-03	4.08E-07	2.11E-02	5.96E-02
H05	0.00E+00	1.20E-04	8.34E-06	3.03E+02	2.17E-04	7.87E-01	1.43E-04	1.19E-01	1.43E-02	3.01E-03	1.49E-02	5.95E-03	6.12E-03	2.48E-02	1.27E-03	1.96E-07	8.73E-03	2.23E-02
H06	0.00E+00	1.76E-04	1.17E-05	4.04E+02	2.21E-04	8.85E-01	1.88E-04	1.99E-01	1.75E-02	3.74E-03	1.96E-02	7.06E-03	7.27E-03	4.05E-02	1.62E-03	2.12E-07	1.23E-02	3.73E-02
H07	0.00E+00	3.14E-04	2.14E-05	7.59E+02	4.89E-04	1.84E+00	3.57E-04	3.32E-01	3.47E-02	7.33E-03	3.70E-02	1.42E-02	1.46E-02	6.83E-02	3.13E-03	4.49E-07	2.24E-02	6.22E-02
H08	0.00E+00	5.23E-05	3.58E-06	8.29E+01	7.71E-05	2.47E-01	5.82E-05	4.82E-02	1.40E-02	2.11E-03	6.00E-03	2.30E-03	2.37E-03	6.16E-03	3.53E-04	4.93E-08	3.63E-03	9.06E-03
H09	0.00E+00	9.08E-05	6.62E-06	1.22E+02	1.25E-04	4.15E-01	9.66E-05	9.12E-02	3.27E-02	4.62E-03	9.53E-03	3.94E-03	4.06E-03	8.68E-03	5.22E-04	5.74E-08	5.47E-03	1.71E-02
H10	0.00E+00	6.28E-05	4.44E-06	1.10E+02	9.19E-05	3.04E-01	6.88E-05	6.00E-02	1.41E-02	2.23E-03	6.96E-03	2.78E-03	2.86E-03	8.57E-03	4.66E-04	6.22E-08	4.09E-03	1.13E-02
H11	0.00E+00	3.58E-05	2.75E-06	7.43E+01	7.34E-05	2.30E-01	4.31E-05	3.27E-02	9.90E-03	1.55E-03	4.25E-03	1.96E-03	2.02E-03	4.60E-03	3.27E-04	4.48E-08	2.23E-03	6.12E-03
H12	0.00E+00	8.21E-05	5.03E-06	1.91E+02	1.31E-04	4.86E-01	9.75E-05	6.85E-02	8.87E-03	1.93E-03	1.07E-02	3.65E-03	3.75E-03	1.61E-02	8.02E-04	1.63E-07	6.91E-03	1.28E-02
H13	0.00E+00	1.37E-04	8.68E-06	2.56E+02	2.07E-04	6.75E-01	1.58E-04	1.06E-01	2.34E-02	4.04E-03	1.70E-02	5.98E-03	6.14E-03	1.97E-02	1.09E-03	2.00E-07	1.08E-02	1.99E-02
H14	0.00E+00	7.37E-06	5.09E-07	1.16E+01	7.69E-06	2.83E-02	7.40E-06	7.79E-03	1.44E-03	2.28E-04	7.46E-04	2.74E-04	2.83E-04	1.09E-03	4.68E-05	5.17E-09	4.63E-04	1.46E-03
H15	0.00E+00	5.94E-05	5.09E-06	1.90E+02	2.49E-04	7.11E-01	9.97E-05	2.54E-02	2.06E-02	3.42E-03	1.00E-02	5.40E-03	5.54E-03	4.89E-03	9.12E-04	1.71E-07	4.48E-03	4.66E-03
H16	0.00E+00	4.60E-05	4.28E-06	1.54E+02	2.19E-04	6.03E-01	8.15E-05	1.83E-02	2.21E-02	3.46E-03	7.98E-03	4.66E-03	4.78E-03	2.99E-03	7.49E-04	1.34E-07	3.20E-03	3.36E-03

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1464	0.00E+00	1.45E-05	1.57E-06	6.21E+01	1.03E-04	3.52E-01	3.26E-05	1.73E-03	3.56E-03	7.80E-04	3.18E-03	2.05E-03	2.11E-03	1.58E-04	3.15E-04	7.11E-08	1.08E-03	2.70E-04
17	A01	110	Passenger Truck	2451	0.00E+00	3.01E-05	3.23E-06	1.45E+02	2.03E-04	6.95E-01	6.54E-05	4.20E-03	6.05E-03	1.37E-03	6.32E-03	4.09E-03	4.19E-03	8.87E-04	7.27E-04	1.41E-07	2.13E-03	6.86E-04
17	A01	110	Single Unit Short Haul Truck	314	0.00E+00	2.89E-05	1.17E-06	5.39E+01	2.64E-05	1.30E-01	3.32E-05	1.39E-02	1.74E-03	5.12E-04	4.07E-03	8.54E-04	8.66E-04	5.61E-03	2.17E-04	9.66E-08	3.20E-03	2.60E-03
17	A01	110	Single Unit Long Haul Truck	14	0.00E+00	1.25E-06	4.87E-08	2.26E+00	1.06E-06	5.17E-03	1.43E-06	5.81E-04	7.80E-05	2.20E-05	1.77E-04	3.52E-05	3.58E-05	2.34E-04	9.11E-06	3.94E-09	1.41E-04	1.08E-04
17	A01	110	Combination Short Haul Truck	232	0.00E+00	4.12E-05	3.18E-06	8.14E+01	8.00E-08	6.03E-02	2.86E-05	6.58E-02	2.03E-03	5.94E-04	2.27E-03	9.15E-04	9.49E-04	1.29E-02	2.72E-04	0.00E+00	1.32E-03	1.24E-02
17	A01	110	Combination Long Haul Truck	211	0.00E+00	5.58E-05	3.54E-06	7.35E+01	2.72E-07	6.95E-02	4.36E-05	7.15E-02	1.97E-03	4.34E-04	4.43E-03	1.09E-03	1.13E-03	1.18E-02	2.46E-04	0.00E+00	3.29E-03	1.35E-02
17	A02	110	Passenger Car	1510	0.00E+00	1.49E-05	1.62E-06	6.41E+01	1.06E-04	3.64E-01	3.37E-05	1.79E-03	3.67E-03	8.04E-04	3.28E-03	2.12E-03	2.17E-03	1.63E-04	3.25E-04	7.34E-08	1.11E-03	2.79E-04
17	A02	110	Passenger Truck	2528	0.00E+00	3.10E-05	3.33E-06	1.49E+02	2.09E-04	7.17E-01	6.75E-05	4.33E-03	6.24E-03	1.41E-03	6.52E-03	4.22E-03	4.33E-03	9.15E-04	7.50E-04	1.45E-07	2.20E-03	7.07E-04
17	A02	110	Single Unit Short Haul Truck	360	0.00E+00	3.32E-05	1.34E-06	6.18E+01	3.02E-05	1.49E-01	3.81E-05	1.60E-02	1.99E-03	5.87E-04	4.66E-03	9.79E-04	9.93E-04	6.43E-03	2.49E-04	1.11E-07	3.67E-03	2.98E-03
17	A02	110	Single Unit Long Haul Truck	16	0.00E+00	1.43E-06	5.58E-08	2.59E+00	1.22E-06	5.93E-03	1.64E-06	6.66E-04	8.95E-05	2.53E-05	2.03E-04	4.04E-05	4.10E-05	2.68E-04	1.04E-05	4.52E-09	1.62E-04	1.24E-04
17	A02	110	Combination Short Haul Truck	220	0.00E+00	3.90E-05	3.01E-06	7.72E+01	7.59E-08	5.72E-02	2.71E-05	6.24E-02	1.93E-03	5.63E-04	2.15E-03	8.67E-04	9.00E-04	1.23E-02	2.58E-04	0.00E+00	1.25E-03	1.18E-02
17	A02	110	Combination Long Haul Truck	200	0.00E+00	5.29E-05	3.36E-06	6.97E+01	2.57E-07	6.59E-02	4.13E-05	6.78E-02	1.87E-03	4.11E-04	4.20E-03	1.03E-03	1.08E-03	1.12E-02	2.33E-04	0.00E+00	3.12E-03	1.28E-02
17	A03	110	Passenger Car	1931	0.00E+00	1.91E-05	2.08E-06	8.20E+01	1.36E-04	4.65E-01	4.31E-05	2.29E-03	4.69E-03	1.03E-03	4.20E-03	2.71E-03	2.78E-03	2.09E-04	4.15E-04	9.38E-08	1.42E-03	3.57E-04
17	A03	110	Passenger Truck	3234	0.00E+00	3.97E-05	4.26E-06	1.91E+02	2.68E-04	9.17E-01	8.63E-05	5.54E-03	7.98E-03	1.80E-03	8.34E-03	5.40E-03	5.53E-03	1.17E-03	9.60E-04	1.86E-07	2.81E-03	9.05E-04
17	A03	110	Single Unit Short Haul Truck	300	0.00E+00	2.76E-05	1.12E-06	5.15E+01	2.51E-05	1.24E-01	3.17E-05	1.33E-02	1.66E-03	4.89E-04	3.88E-03	8.15E-04	8.27E-04	5.35E-03	2.07E-04	9.22E-08	3.05E-03	2.48E-03
17	A03	110	Single Unit Long Haul Truck	13	0.00E+00	1.19E-06	4.64E-08	2.16E+00	1.01E-06	4.93E-03	1.36E-06	5.54E-04	7.45E-05	2.10E-05	1.69E-04	3.36E-05	3.42E-05	2.23E-04	8.69E-06	3.76E-09	1.35E-04	1.03E-04
17	A03	110	Combination Short Haul Truck	209	0.00E+00	3.71E-05	2.86E-06	7.34E+01	7.21E-08	5.43E-02	2.58E-05	5.92E-02	1.83E-03	5.35E-04	2.04E-03	8.24E-04	8.55E-04	1.17E-02	2.45E-04	0.00E+00	1.19E-03	1.12E-02
17	A03	110	Combination Long Haul Truck	190	0.00E+00	5.02E-05	3.19E-06	6.62E+01	2.45E-07	6.26E-02	3.92E-05	6.44E-02	1.78E-03	3.91E-04	3.99E-03	9.82E-04	1.02E-03	1.06E-02	2.22E-04	0.00E+00	2.96E-03	1.21E-02
17	A04	110	Passenger Car	1734	0.00E+00	1.72E-05	1.86E-06	7.36E+01	1.22E-04	4.18E-01	3.87E-05	2.05E-03	4.21E-03	9.24E-04	3.77E-03	2.43E-03	2.50E-03	1.87E-04	3.73E-04	8.43E-08	1.28E-03	3.20E-04
17	A04	110	Passenger Truck	2904	0.00E+00	3.57E-05	3.83E-06	1.72E+02	2.40E-04	8.24E-01	7.75E-05	4.98E-03	7.17E-03	1.62E-03	7.49E-03	4.85E-03	4.97E-03	1.05E-03	8.62E-04	1.67E-07	2.52E-03	8.12E-04
17	A04	110	Single Unit Short Haul Truck	352	0.00E+00	3.25E-05	1.31E-06	6.05E+01	2.96E-05	1.46E-01	3.73E-05	1.56E-02	1.95E-03	5.75E-04	4.56E-03	9.58E-04	9.72E-04	6.29E-03	2.44E-04	1.08E-07	3.59E-03	2.92E-03
17	A04	110	Single Unit Long Haul Truck	16	0.00E+00	1.40E-06	5.46E-08	2.54E+00	1.19E-06	5.80E-03	1.60E-06	6.52E-04	8.76E-05	2.47E-05	1.99E-04	3.95E-05	4.02E-05	2.62E-04	1.02E-05	4.42E-09	1.59E-04	1.21E-04
17	A04	110	Combination Short Haul Truck	211	0.00E+00	3.75E-05	2.89E-06	7.41E+01	7.28E-08	5.49E-02	2.60E-05	5.98E-02	1.85E-03	5.40E-04	2.06E-03	8.32E-04	8.63E-04	1.18E-02	2.48E-04	0.00E+00	1.20E-03	1.13E-02
17	A04	110	Combination Long Haul Truck	192	0.00E+00	5.07E-05	3.22E-06	6.69E+01	2.47E-07	6.33E-02	3.96E-05	6.51E-02	1.80E-03	3.95E-04	4.03E-03	9.92E-04	1.03E-03	1.07E-02	2.24E-04	0.00E+00	2.99E-03	1.23E-02
17	A05	110	Passenger Car	1526	0.00E+00	1.51E-05	1.64E-06	6.48E+01	1.07E-04	3.67E-01	3.40E-05	1.81E-03	3.71E-03	8.13E-04	3.32E-03	2.14E-03	2.20E-03	1.65E-04	3.28E-04	7.41E-08	1.12E-03	2.82E-04
17	A05	110	Passenger Truck	2555	0.00E+00	3.14E-05	3.37E-06	1.51E+02	2.12E-04	7.25E-01	6.82E-05	4.38E-03	6.30E-03	1.42E-03	6.59E-03	4.26E-03	4.37E-03	9.25E-04	7.58E-04	1.47E-07	2.22E-03	7.15E-04
17	A05	110	Single Unit Short Haul Truck	238	0.00E+00	2.20E-05	8.90E-07	4.10E+01	2.00E-05	9.88E-02	2.52E-05	1.06E-02	1.32E-03	3.89E-04	3.09E-03	6.48E-04	6.58E-04	4.26E-03	1.65E-04	7.33E-08	2.43E-03	1.97E-03
17	A05	110	Single Unit Long Haul Truck	11	0.00E+00	9.48E-07	3.69E-08	1.72E+00	8.05E-07	3.92E-03	1.08E-06	4.41E-04	5.92E-05	1.67E-05	1.34E-04	2.68E-05	2.72E-05	1.78E-04	6.92E-06	2.99E-09	1.07E-04	8.22E-05
17	A05	110	Combination Short Haul Truck	175	0.00E+00	3.10E-05	2.40E-06	6.14E+01	6.03E-08	4.55E-02	2.16E-05	4.96E-02	1.53E-03	4.48E-04	1.71E-03	6.90E-04	7.16E-04	9.76E-03	2.05E-04	0.00E+00	9.94E-04	9.35E-03
17	A05	110	Combination Long Haul Truck	159	0.00E+00	4.21E-05	2.67E-06	5.54E+01	2.05E-07	5.24E-02	3.28E-05	5.39E-02	1.49E-03	3.27E-04	3.34E-03	8.22E-04	8.55E-04	8.89E-03	1.86E-04	0.00E+00	2.48E-03	1.02E-02
17	A06	110	Passenger Car	1597	0.00E+00	1.58E-05	1.72E-06	6.78E+01	1.12E-04	3.85E-01	3.56E-05	1.89E-03	3.88E-03	8.50E-04	3.47E-03	2.24E-03	2.30E-03	1.73E-04	3.43E-04	7.76E-08	1.17E-03	2.95E-04
17	A06	110	Passenger Truck	2674	0.00E+00	3.28E-05	3.52E-06	1.58E+02	2.21E-04	7.59E-01	7.14E-05	4.58E-03	6.60E-03	1.49E-03	6.90E-03	4.46E-03	4.58E-03	9.68E-04	7.94E-04	1.54E-07	2.32E-03	7.48E-04
17	A06	110	Single Unit Short Haul Truck	289	0.00E+00	2.66E-05	1.08E-06	4.97E+01	2.43E-05	1.20E-01	3.06E-05	1.28E-02	1.60E-03	4.72E-04	3.74E-03	7.86E-04	7.98E-04	5.16E-03	2.00E-04	8.90E-08	2.95E-03	2.39E-03
17	A06	110	Single Unit Long Haul Truck	13	0.00E+00	1.15E-06	4.48E-08	2.08E+00	9.76E-07	4.76E-03	1.31E-06	5.35E-04	7.19E-05	2.03E-05	1.63E-04	3.24E-05	3.30E-05	2.15E-04	8.39E-06	3.63E-09	1.30E-04	9.97E-05
17	A06	110	Combination Short Haul Truck	196	0.00E+00	3.48E-05	2.68E-06	6.88E+01	6.76E-08	5.09E-02	2.42E-05	5.55E-02	1.72E-03	5.02E-04	1.91E-03	7.72E-04	8.01E-04	1.09E-02	2.30E-04	0.00E+00	1.11E-03	1.05E-02
17	A06	110	Combination Long Haul Truck	178	0.00E+00	4.71E-05	2.99E-06	6.21E+01	2.29E-07	5.87E-02	3.68E-05	6.04E-02	1.67E-03	3.66E-04	3.74E-03	9.21E-04	9.58E-04	9.96E-03	2.08E-04	0.00E+00	2.78E-03	1.14E-02
17	A07	110	Passenger Car	1511	0.00E+00	1.49E-05	1.62E-06	6.42E+01	1.06E-04	3.64E-01	3.37E-05	1.79E-03	3.67E-03	8.05E-04	3.29E-03	2.12E-03	2.18E-03	1.63E-04	3.25E-04	7.34E-08	1.11E-03	2.79E-04
17	A07	110	Passenger Truck	2531	0.00E+00	3.11E-05	3.34E-06	1.50E+02	2.10E-04	7.18E-01	6.75E-05	4.34E-03	6.24E-03	1.41E-03	6.53E-03	4.22E-03	4.33E-03	9.16E-04	7.51E-04	1.46E-07	2.20E-03	7.08E-04
17	A07	110	Single Unit Short Haul Truck	239	0.00E+00	2.21E-05	8.93E-07	4.11E+01	2.01E-05	9.92E-02	2.53E-05	1.06E-02	1.32E-03	3.91E-04	3.10E-03	6.51E-04	6.60E-04	4.27E-03	1.66E-04	7.36E-08	2.44E-03	1.98E-03
17	A07	110	Single Unit Long Haul Truck	11	0.00E+00	9.52E-07	3.71E-08	1.72E+00	8.08E-07	3.94E-03	1.09E-06	4.43E-04	5.95E-05	1.68E-05	1.35E-04	2.69E-05	2.73E-05	1.78E-04	6.94E-06	3.00E-09	1.08E-04	8.25E-05
17	A07	110	Combination Short Haul Truck	186	0.00E+00	3.31E-05	2.55E-06	6.54E+01	6.43E-08	4.85E-02	2.30E-05	5.29E-02	1.63E-03	4.77E-04	1.82E-03	7.35E-04	7.63E-04	1.04E-02	2.19E-04	0.00E+00	1.06E-03	9.96E-03
17	A07	110	Combination Long Haul Truck	170	0.00E+00	4.48E-05	2.84E-06	5.91E+01	2.18E-07	5.59E-02	3.50E-05	5.75E-02	1.59E-03	3.49E-04	3.56E-03	8.76E-04	9.12E-04	9.48E-03	1.98E-04	0.00E+00	2.65E-03	1.08E-02
17	A08	110	Passenger Car	1192	0.00E+00	1.18E-05	1.28E-06	5.06E+01	8.37E-05	2.87E-01	2.66E-05	1.41E-03	2.90E-03	6.35E-04	2.59E-03	1.67E-03	1.72E-03	1.29E-04	2.56E-04	5.79E-08	8.77E-04	2.20E-04
17	A08	110	Passenger Truck	1997	0.00E+00	2.45E-05	2.63E-06	1.18E+02	1.65E-04	5.66E-01	5.33E-05	3.42E-03	4.93E-03	1.11E-03	5.15E-03	3.33E-03	3.42E-03	7.23E-04	5.93E-04	1.15E-07	1.73E-03	5.58E-04
17	A08	110	Single Unit Short Haul Truck	306	0.00E+00	2.81E-05	1.14E-06	5.25E+01	2.56E-05	1.27E-01	3.23E-05	1.36E-02	1.69E-03	4.98E-04	3.96E-03	8.30E-04	8.42E-04	5.45E-03	2.11E-04	9.40E-08	3.11E-03	2.53E-03
17	A08	110	Single Unit Long Haul Truck	13	0.00E+00	1.21E-06	4.73E-08	2.20E+00	1.03E-06	5.03E-03	1.39E-06	5.65E-04	7.59E-05	2.14E-05	1.72E-04	3.43E-05	3.48E-05	2.27E-04	8.86E-06	3.83E-09	1.37E-04	1.05E-04
17	A08	110	Combination Short Haul Truck	214	0.00E+00	3.81E-05	2.94E-06	7.54E+01	7.41E-08	5.58E-02	2.65E-05	6.09E-02	1.88E-03	5.50E-04	2.10E-03	8.47E-04	8.78E-04	1.20E-02	2.52E-04	0.00E+00	1.22E-03	1.15E-02
17	A08	110	Combination Long Haul Truck	196	0.00E+00	5.16E-05	3.28E-06	6.80E+01	2.51E-07	6.44E-02	4.03E-05	6.62E-02	1.83E-03	4.02E-04	4.10E-03	1.01E-03	1.05E-03	1.09E-02	2.28E-04	0.00E+00	3.05E-03	1.25E-02
17	A09	110	Passenger Car	1556	0.00E+00	1.54E-05	1.67E-06	6.60E+01	1.09E-04	3.75E-01	3.47E-05	1.84E-03	3.78E-03	8.29E-04	3.38E-03	2.18E-03	2.24E-03	1.68E-04	3.35E-04	7.56E-08	1.14E-03	2.87E-04
17	A09	110	Passenger Truck	2605	0.00E+00	3.20E-05	3.43E-06	1.54E+02	2.16E-04	7.39E-01	6.95E-05	4.46E-03	6.43E-03	1.45E-03	6.72E-03	4.35E-03	4.46E-03	9.43E-04	7.73E-04	1.50E-07	2.26E-03	7.29E-04
17	A09	110	Single Unit Short Haul Truck	280	0.00E+00	2.58E-05	1.04E-06	4.80E+01	2.35E-05	1.16E-01	2.96E-05	1.24E-02	1.55E-03	4.56E-04	3.62E-03	7.60E-04	7.71E-04	4.99E-03	1.93E-04	8.60E-08	2.85E-03	2.31E-03
17	A09	110	Single Unit Long Haul Truck	12	0.00E+00	1.11E-06	4.33E-08	2.01E+00	9.44E-07	4.60E-03	1.27E-06	5.17E-04	6.95E-05	1.96E-05	1.58E-04	3.14E-05	3.19E-05	2.08E-04	8.11E-06	3.51E-09	1.26E-04	9.64E-05
17	A09	110	Combination Short Haul Truck	222	0.00E+00	3.95E-05	3.05E-06	7.81E+01	7.68E-08	5.79E-02	2.75E-05	6.31E-02	1.95E-03	5.70E-04	2.18E-03	8.78E-04	9.11E-04	1.24E-02	2.61E-04	0.00E+00	1.26E-03	1.19E-02
17	A09	110	Combination Long Haul Truck	203	0.00E+00	5.35E-05	3.40E-06	7.05E+01	2.60E-07	6.67E-02	4.18E-05	6.86E-02	1.89E-03	4.16E-04	4.25E-03	1.05E-03	1.09E-03	1.13E-02	2.36E-04	0.00E+00	3.16E-03	1.29E-02
17	A10	110	Passenger Car	1366	0.00E+00	1.35E-05	1.47E-06	5.80E+01	9.59E-05	3.29E-01	3.05E-05	1.62E-03	3.32E-03	7.28E-04	2.97E-03	1.92E-03	1.97E-03	1.48E-04	2.94E-04	6.64E-08	1.01E-03	2.52E-04
17	A10	110	Passenger Truck	2288	0.00E+00	2.81E-05	3.02E-06	1.35E+02	1.89E-04	6.49E-01	6.11E-05	3.92E-03	5.65E-03	1.28E-03	5.90E-03	3.82E-03	3.92E-03	8.28E-04	6.79E-04	1.32E-07	1.99E-03	6.40E-04
17	A10	110	Single Unit Short Haul Truck	369	0.00E+00	3.40E-05	1.38E-06	6.33E+01	3.09E-05	1.53E-01	3.90E-05	1.64E-02	2.04E-03	6.01E-04	4.77E-03	1.00E-03	1.02E-03	6.58E-03	2.55E-04	1.13E-07	3.76E-03	3.05E-03
17	A10	110	Single Unit Long Haul Truck	16	0.00E+00	1.47E-06	5.71E-08	2.65E+00	1.24E-06	6.07E-03	1.67E-06	6.82E-04	9.16E-05	2.59E-05	2.08E-04	4.14E-05	4.20E-05	2.75E-04	1.07E-05	4.63E-09	1.66E-04	1.27E-04
17	A10	110	Combination Short Haul Truck	263	0.00E+00	4.68E-05	3.61E-06	9.25E+01	9.09E-08	6.85E-02	3.25E-05	7.47E-02	2.31E-03	6.75E-04	2.57E-03	1.04E-03	1.08E-03	1.47E-02	3.09E-04	0.00E+00	1.50E-03	1.41E-02
17	A10	110	Combination Long Haul Truck	240	0.00E+00	6.33E-05	4.02E-06	8.35E+01	3.08E-07	7.90E-02	4.95E-05	8.12E-02	2.24E-03	4.93E-04	5.03E-03	1.24E-03	1.29E-03	1.34E-02	2.80E-04	0.00E+00	3.74E-03	1.53E-02
16	B05	100	Passenger Car	601	0.00E+00	5.63E-06	6.12E-07	2.46E+01	3.99E-05	1.20E-01	1.27E-05	6.48E-04	1.92E-03	3.68E-04	1.24E-03	7.98E-04	8.19E-04	7.15E-05	1.24E-04	2.61E-08	4.19E-04	1.01E-04
16	B05	100	Passenger Truck	1007	0.00E+00	1.16E-05	1.25E-06	5.66E+01	7.75E-05	2.32E-01	2.51E-05	1.62E-03	3.35E-03	6.51E-04	2.42E-03	1.57E-03	1.61E-03	3.71E-04	2.84E-04	5.17E-08	8.13E-04	2.66E-04
16	B05	100	Single Unit Short Haul Truck	137	0.00E+00	1.30E-05	4.81E-07	2.24E+01	9.96E-06	4.62E-02	1.48E-05	5.73E-03	8.85E-04	2.29E-04	1.87E-03	3.45E-04	3.51E-04	2.29E-03	9.05E-05	3.70E-08	1.52E-03	1.07E-03
16	B05	100	Single Unit Long Haul Truck	6	0.00E+00	5.66E-07	2.03E-08	9.41E-01	4.12E-07	1.89E-03	6.40E-07	2.40E-04	4.02E-05	9.95E-06	8.16E-05	1.45E-05	1.48E-05	9.57E-05	3.82E-06	1.51E-09	6.68E-05	4.48E-05
16	B05	100	Combination Short Haul Truck	44	0.00E+00	6.29E-06	4.64E-07	1.46E+01	1.67E-08	1.13E-02	4.50E-06	1.13E-02	4.26E-04	1.08E-04	3.83E-04	1.36E-04	1.41E-04	2.33E-03	4.90E-05	0.00E+00	2.42E-04	2.13E-03
16	B05	100	Combination Long Haul Truck	40	0.00E+00	8.88E-06	5.01E-07	1.33E+01	5.66E-08	1.32E-02	7.33E-06	1.21E-02	4.26E-04	8.69E-05	8.15E-04	1.61E-04	1.68E-04	2.13E-03	4.44E-05	0.00E+00	6.47E-04	2.27E-03
16	B06	100	Passenger Car	1156	0.00E+00	1.08E-05	1.18E-06	4.73E+01	7.68E-05	2.30E-01	2.44E-05	1.25E-03	3.70E-03	7.08E-04	2.38E-03	1.53E-03	1.57E-03	1.37E-04	2.39E-04	5.02E-08	8.05E-04	1.95E-04
16	B06	100	Passenger Truck	1936	0.00E+00	2.24E-05	2.39E-06	1.09E+02	1.49E-04	4.45E-01	4.82E-05	3.11E-03	6.45E-03	1.25E-03	4.65E-03	3.01E-03	3.09E-03	7.13E-04	5.46E-04	9.94E-08	1.56E-03	5.11E-04
16	B06	100	Single Unit Short Haul Truck	450	0.00E+00	4.28E-05	1.58E-06	7.35E+01	3.27E-05	1.52E-01	4.85E-05	1.88E-02	2.91E-03	7.53E-04	6.13E-03	1.13E-03	1.15E-03	7.53E-03	2.98E-04	1.21E-07	4.98E-03	3.51E-03
16	B06	100	Single Unit Long Haul Truck	20	0.00E+00	1.86E-06	6.68E-08	3.09E+00	1.35E-06	6.21E-03	2.10E-06	7.90E-04	1.32E-04	3.27E-05	2.68E-04	4.78E-05	4.86E-05	3.14E-04	1.25E-05	4.97E-09	2.20E-04	1.47E-04
16	B06	100	Combination Short Haul Truck	53	0.00E+00	7.63E-06	5.64E-07	1.78E+01	2.02E-08	1.37E-02	5.46E-06	1.37E-02	5.17E-04	1.31E-04	4.65E-04	1.65E-04	1.71E-04	2.83E-03	5.94E-05	0.00E+00	2.94E-04	2.58E-03
16	B06	100	Combination Long Haul Truck	49	0.00E+00	1.08E-05	6.08E-07	1.61E+01	6.87E-08	1.60E-02	8.90E-06	1.47E-02	5.18E-04	1.05E-04	9.90E-04	1.96E-04	2.04E-04	2.58E-03	5.40E-05	0.00E+00	7.85E-04	2.76E-03
16	B07	100	Passenger Car	864	0.00E+00	8.09E-06	8.79E-07	3.53E+01	5.74E-05	1.72E-01	1.82E-05	9.32E-04	2.76E-03	5.30E-04	1.78E-03	1.15E-03	1.18E-03	1.03E-04	1.79E-04	3.75E-08	6.02E-04	1.45E-04
16	B07	100	Passenger Truck	1448	0.00E+00	1.67E-05	1.79E-06	8.14E+01	1.11E-04	3.33E-01	3.61E-05	2.33E-03	4.82E-03	9.36E-04	3.48E-03	2.25E-03	2.31E-03	5.33E-04	4.08E-04	7.43E-08	1.17E-03	3.82E-04
16	B08	100	Passenger Car	1516	0.00E+00	1.42E-05	1.54E-06	6.20E+01	1.01E-04	3.02E-01	3.20E-05	1.64E-03	4.85E-03	9.29E-04	3.12E-03	2.01E-03	2.07E-03	1.80E-04	3.13E-04	6.58E-08	1.06E-03	2.55E-04
16	B08	100	Passenger Truck	2540	0.00E+00	2.93E-05	3.14E-06	1.43E+02	1.96E-04	5.84E-01	6.32E-05	4.08E-03	8.46E-03	1.64E-03	6.10E-03	3.95E-03	4.05E-03	9.36E-04	7.16E-04	1.30E-07	2.05E-03	6.71E-04
16	B08	100	Single Unit Short Haul Truck	5	0.00E+00	4.55E-07	1.68E-08	7.82E-01	3.48E-07	1.61E-03	5.16E-07	2.00E-04	3.09E-05	8.01E-06	6.53E-05	1.20E-05	1.23E-05	8.01E-05	3.17E-06	1.29E-09	5.30E-05	3.74E-05
16	B08	100	Combination Short Haul Truck	1	0.00E+00	1.50E-07	1.11E-08	3.49E-01	3.97E-10	2.69E-04	1.07E-07	2.69E-04	1.01E-05	2.57E-06	9.12E-06	3.23E-06	3.35E-06	5.54E-05	1.17E-06	0.00E+00	5.77E-06	5.06E-05
16	B08	100	Combination Long Haul Truck	1	0.00E+00	2.11E-07	1.19E-08	3.16E-01	1.35E-09	3.14E-04	1.75E-07	2.87E-04	1.01E-05	2.07E-06	1.94E-05	3.84E-06	4.01E-06	5.07E-05	1.06E-06	0.00E+00	1.54E-05	5.41E-05
53	C11	70	Passenger Car	311	0.00E+00	3.37E-06	3.66E-07	1.37E+01	2.39E-05	6.74E-02	7.60E-06	3.20E-04	2.36E-03	3.69E-04	7.41E-04	4.78E-04	4.90E-04	5.29E-05	6.90E-05	1.43E-08	2.51E-04	4.99E-05
53	C11	70	Passenger Truck	521	0.00E+00	7.03E-06	7.48E-07	3.09E+01	4.52E-05	1.19E-01	1.48E-05	9.04E-04	4.21E-03	6.55E-04	1.41E-03	9.18E-04	9.41E-04	2.30E-04	1.54E-04	2.70E-08	4.72E-04	1.51E-04
53	C11	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.74E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.25E-04
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Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	C15	40	Single Unit Short Haul Truck	23	0.00E+00	7.80E-06	3.47E-07	4.34E+00	5.40E-06	6.81E-03	8.34E-06	3.13E-03	9.05E-04	1.41E-04	1.00E-03	2.09E-04	2.13E-04	4.44E-04	1.77E-05	7.50E-09	7.90E-04	5.86E-04
50	C15	40	Single Unit Long Haul Truck	1	0.00E+00	3.42E-07	1.51E-08	1.88E-01	2.36E-07	2.96E-04	3.66E-07	1.36E-04	4.05E-05	6.29E-06	4.41E-05	9.14E-06	9.32E-06	1.92E-05	7.64E-07	3.26E-10	3.48E-05	2.56E-05
50	C15	40	Combination Short Haul Truck	31	0.00E+00	1.49E-05	1.11E-06	1.28E+01	3.69E-08	2.10E-02	1.06E-05	2.15E-02	3.00E-03	4.47E-04	8.85E-04	3.23E-04	3.36E-04	2.03E-03	4.28E-05	0.00E+00	5.49E-04	4.06E-03
50	C15	40	Combination Long Haul Truck	28	0.00E+00	1.98E-05	1.12E-06	1.23E+01	1.26E-07	2.55E-02	1.63E-05	2.27E-02	3.12E-03	4.38E-04	1.81E-03	3.60E-04	3.75E-04	1.97E-03	4.12E-05	0.00E+00	1.44E-03	4.28E-03
52	C16	60	Passenger Car	121	0.00E+00	1.43E-06	1.55E-07	5.53E+00	1.01E-05	2.84E-02	3.22E-06	1.20E-04	1.19E-03	1.78E-04	3.14E-04	2.02E-04	2.08E-04	2.40E-05	2.77E-05	5.64E-09	1.06E-04	1.87E-05
52	C16	60	Passenger Truck	203	0.00E+00	3.01E-06	3.19E-07	1.23E+01	1.90E-05	4.87E-02	6.24E-06	3.66E-04	2.11E-03	3.14E-04	5.95E-04	3.87E-04	3.97E-04	9.62E-05	6.11E-05	1.03E-08	1.98E-04	6.19E-05
52	C16	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.27E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.12E-05
52	C16	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.63E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.72E-05
52	C16	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.93E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.29E-05
53	C17	70	Passenger Car	556	0.00E+00	6.02E-06	6.54E-07	2.45E+01	4.27E-05	1.20E-01	1.36E-05	5.72E-04	4.22E-03	6.60E-04	1.32E-03	8.54E-04	8.76E-04	9.45E-05	1.23E-04	2.56E-08	4.48E-04	8.93E-05
53	C17	70	Passenger Truck	931	0.00E+00	1.26E-05	1.34E-06	5.53E+01	8.07E-05	2.12E-01	2.64E-05	1.61E-03	7.53E-03	1.17E-03	2.53E-03	1.64E-03	1.68E-03	4.10E-04	2.75E-04	4.82E-08	8.44E-04	2.70E-04
53	C17	70	Single Unit Short Haul Truck	61	0.00E+00	1.08E-05	4.38E-07	1.00E+01	7.23E-06	1.82E-02	1.17E-05	4.27E-03	9.74E-04	1.79E-04	1.45E-03	2.77E-04	2.83E-04	1.02E-03	4.09E-05	1.65E-08	1.17E-03	7.99E-04
53	C17	70	Single Unit Long Haul Truck	3	0.00E+00	4.69E-07	1.89E-08	4.26E-01	3.11E-07	7.64E-04	5.10E-07	1.84E-04	4.46E-05	7.99E-06	6.35E-05	1.20E-05	1.22E-05	4.31E-05	1.73E-06	6.95E-10	5.12E-05	3.44E-05
53	C17	70	Combination Short Haul Truck	31	0.00E+00	8.08E-06	6.01E-07	1.09E+01	2.05E-08	1.17E-02	5.75E-06	1.20E-02	1.14E-03	1.90E-04	4.85E-04	1.75E-04	1.82E-04	1.73E-03	3.65E-05	0.00E+00	3.03E-04	2.26E-03
53	C17	70	Combination Long Haul Truck	29	0.00E+00	1.11E-05	6.30E-07	1.02E+01	6.94E-08	1.39E-02	9.11E-06	1.28E-02	1.19E-03	1.79E-04	1.01E-03	2.02E-04	2.11E-04	1.64E-03	3.43E-05	0.00E+00	7.96E-04	2.42E-03
52	C18	60	Passenger Car	81	0.00E+00	9.55E-07	1.04E-07	3.70E+00	6.78E-06	1.90E-02	2.15E-06	8.05E-05	7.97E-04	1.19E-04	2.10E-04	1.35E-04	1.39E-04	1.61E-05	1.85E-05	3.78E-09	7.11E-05	1.26E-05
52	C18	60	Passenger Truck	136	0.00E+00	2.02E-06	2.14E-07	8.25E+00	1.27E-05	3.26E-02	4.18E-06	2.45E-04	1.41E-03	2.10E-04	3.98E-04	2.59E-04	2.66E-04	6.45E-05	4.09E-05	6.90E-09	1.33E-04	4.15E-05
52	C18	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.35E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
52	C18	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.62E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.05E-04
52	C18	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.73E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.25E-04
50	C19	40	Passenger Car	7	0.00E+00	9.67E-08	1.05E-08	3.56E-01	6.86E-07	1.92E-03	2.18E-07	6.14E-06	1.16E-04	1.63E-05	2.13E-05	1.37E-05	1.41E-05	2.00E-06	1.76E-06	3.27E-10	7.20E-06	9.58E-07
50	C19	40	Passenger Truck	11	0.00E+00	2.13E-07	2.24E-08	7.74E-01	1.28E-06	3.18E-03	4.28E-07	2.36E-05	2.06E-04	2.86E-05	4.05E-05	2.64E-05	2.71E-05	6.83E-06	3.81E-06	5.56E-10	1.34E-05	4.09E-06
53	C20	70	Passenger Car	179	0.00E+00	1.94E-06	2.11E-07	7.90E+00	1.38E-05	3.88E-02	4.37E-06	1.84E-04	1.36E-03	2.13E-04	4.27E-04	2.75E-04	2.82E-04	3.04E-05	3.97E-05	8.25E-09	1.44E-04	2.87E-05
53	C20	70	Passenger Truck	300	0.00E+00	4.05E-06	4.31E-07	1.78E+01	2.60E-05	6.84E-02	8.51E-06	5.20E-04	2.43E-03	3.77E-04	8.14E-04	5.29E-04	5.42E-04	1.32E-04	8.86E-05	1.55E-08	2.72E-04	8.71E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.34E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.25E-05
53	C20	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.40E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.64E-04
53	C20	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.50E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.82E-04
50	C21	40	Passenger Car	360	0.00E+00	5.18E-06	5.63E-07	1.90E+01	3.68E-05	1.03E-01	1.17E-05	3.29E-04	6.22E-03	8.74E-04	1.14E-03	7.35E-04	7.54E-04	1.07E-04	9.45E-05	1.75E-08	3.85E-04	5.13E-05
50	C21	40	Passenger Truck	604	0.00E+00	1.14E-05	1.20E-06	4.14E+01	6.88E-05	1.70E-01	2.29E-05	1.27E-03	1.10E-02	1.53E-03	2.17E-03	1.42E-03	1.45E-03	3.66E-04	2.04E-04	2.98E-08	7.18E-04	2.19E-04
50	C21	40	Single Unit Short Haul Truck	65	0.00E+00	2.21E-05	9.83E-07	1.23E+01	1.53E-05	1.93E-02	2.36E-05	8.87E-03	2.56E-03	4.00E-04	2.84E-03	5.92E-04	6.03E-04	1.26E-03	5.01E-05	2.13E-08	2.24E-03	1.66E-03
50	C21	40	Single Unit Long Haul Truck	3	0.00E+00	9.69E-07	4.29E-08	5.31E-01	6.69E-07	8.40E-04	1.04E-06	3.86E-04	1.15E-04	1.78E-05	1.25E-04	2.59E-05	2.64E-05	5.43E-05	2.17E-06	9.23E-10	9.85E-05	7.24E-05
50	C21	40	Combination Short Haul Truck	16	0.00E+00	7.82E-06	5.84E-07	6.72E+00	1.94E-08	1.11E-02	5.56E-06	1.13E-02	1.58E-03	2.35E-04	4.65E-04	1.70E-04	1.76E-04	1.07E-03	2.25E-05	0.00E+00	2.89E-04	2.13E-03
50	C21	40	Combination Long Haul Truck	15	0.00E+00	1.04E-05	5.87E-07	6.45E+00	6.61E-08	1.34E-02	8.57E-06	1.19E-02	1.64E-03	2.30E-04	9.52E-04	1.89E-04	1.97E-04	1.04E-03	2.16E-05	0.00E+00	7.55E-04	2.25E-03
52	C22	60	Passenger Car	105	0.00E+00	1.24E-06	1.34E-07	4.79E+00	8.78E-06	2.46E-02	2.79E-06	1.04E-04	1.03E-03	1.55E-04	2.72E-04	1.75E-04	1.80E-04	2.08E-05	2.40E-05	4.89E-09	9.20E-05	1.63E-05
52	C22	60	Passenger Truck	176	0.00E+00	2.61E-06	2.77E-07	1.07E+01	1.65E-05	4.23E-02	5.41E-06	3.18E-04	1.83E-03	2.72E-04	5.16E-04	3.36E-04	3.44E-04	8.35E-05	5.30E-05	8.94E-09	1.72E-04	5.37E-05
52	C22	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.63E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
52	C22	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.94E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
52	C22	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.39E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.39E-04
53	C23	70	Passenger Car	480	0.00E+00	5.20E-06	5.65E-07	2.12E+01	3.69E-05	1.04E-01	1.17E-05	4.94E-04	3.64E-03	5.70E-04	1.14E-03	7.38E-04	7.57E-04	8.16E-05	1.07E-04	2.21E-08	3.87E-04	7.71E-05
53	C23	70	Passenger Truck	805	0.00E+00	1.09E-05	1.16E-06	4.77E+01	6.98E-05	1.84E-01	2.28E-05	1.40E-03	6.51E-03	1.01E-03	2.18E-03	1.42E-03	1.45E-03	3.55E-04	2.38E-04	4.17E-08	7.30E-04	2.34E-04
53	C23	70	Single Unit Short Haul Truck	31	0.00E+00	5.39E-06	2.19E-07	5.02E+00	3.62E-06	9.10E-03	5.87E-06	2.14E-03	4.87E-04	8.94E-05	7.27E-04	1.39E-04	1.41E-04	5.10E-04	2.04E-05	8.25E-09	5.86E-04	4.00E-04
53	C23	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	9.45E-09	2.13E-01	1.56E-07	3.82E-04	2.55E-07	9.19E-05	2.23E-05	4.00E-06	3.17E-05	5.98E-06	6.10E-06	2.15E-05	8.67E-07	3.48E-10	2.56E-05	1.72E-05
53	C23	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.80E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.09E-03
53	C23	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.20E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.17E-03
52	C24	60	Passenger Car	70	0.00E+00	8.23E-07	8.94E-08	3.19E+00	5.84E-06	1.64E-02	1.86E-06	6.93E-05	6.86E-04	1.03E-04	1.81E-04	1.17E-04	1.20E-04	1.39E-05	1.60E-05	3.26E-09	6.12E-05	1.08E-05
52	C24	60	Passenger Truck	117	0.00E+00	1.74E-06	1.84E-07	7.11E+00	1.09E-05	2.81E-02	3.60E-06	2.11E-04	1.22E-03	1.81E-04	3.43E-04	2.23E-04	2.29E-04	5.56E-05	3.53E-05	5.95E-09	1.14E-04	3.57E-05
52	C24	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.31E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.36E-05
50	C25	40	Passenger Car	253	0.00E+00	3.64E-06	3.95E-07	1.34E+01	2.58E-05	7.23E-02	8.20E-06	2.31E-04	4.36E-03	6.14E-04	8.00E-04	5.16E-04	5.29E-04	7.53E-05	6.64E-05	1.23E-08	2.71E-04	3.60E-05
50	C25	40	Passenger Truck	424	0.00E+00	8.02E-06	8.43E-07	2.91E+01	4.83E-05	1.19E-01	1.61E-05	8.89E-04	7.74E-03	1.07E-03	1.52E-03	9.94E-04	1.02E-03	2.57E-04	1.43E-04	2.09E-08	5.04E-04	1.54E-04
50	C25	40	Single Unit Short Haul Truck	36	0.00E+00	1.23E-05	5.49E-07	6.87E+00	8.54E-06	1.08E-02	1.32E-05	4.95E-03	1.43E-03	2.24E-04	1.59E-03	3.31E-04	3.37E-04	7.02E-04	2.80E-05	1.19E-08	1.25E-03	9.28E-04
50	C25	40	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.40E-08	2.97E-01	3.74E-07	4.69E-04	5.79E-07	2.16E-04	6.42E-05	9.96E-06	6.98E-05	1.45E-05	1.48E-05	3.03E-05	1.21E-06	5.16E-10	5.50E-05	4.05E-05
50	C25	40	Combination Short Haul Truck	30	0.00E+00	1.44E-05	1.07E-06	1.24E+01	3.56E-08	2.03E-02	1.02E-05	2.08E-02	2.90E-03	4.32E-04	8.55E-04	3.12E-04	3.24E-04	1.96E-03	4.13E-05	0.00E+00	5.31E-04	3.92E-03
50	C25	40	Combination Long Haul Truck	27	0.00E+00	1.91E-05	1.08E-06	1.19E+01	1.21E-07	2.47E-02	1.58E-05	2.19E-02	3.01E-03	4.23E-04	1.75E-03	3.48E-04	3.62E-04	1.90E-03	3.98E-05	0.00E+00	1.39E-03	4.13E-03
53	C26	70	Passenger Car	343	0.00E+00	3.72E-06	4.04E-07	1.51E+01	2.64E-05	7.43E-02	8.38E-06	3.53E-04	2.60E-03	4.08E-04	8.17E-04	5.27E-04	5.41E-04	5.83E-05	7.61E-05	1.58E-08	2.77E-04	5.51E-05
53	C26	70	Passenger Truck	575	0.00E+00	7.76E-06	8.25E-07	3.41E+01	4.98E-05	1.31E-01	1.63E-05	9.97E-04	4.65E-03	7.23E-04	1.56E-03	1.01E-03	1.04E-03	2.53E-04	1.70E-04	2.98E-08	5.21E-04	1.67E-04
53	C26	70	Single Unit Short Haul Truck	46	0.00E+00	8.09E-06	3.29E-07	7.53E+00	5.42E-06	1.37E-02	8.80E-06	3.20E-03	7.31E-04	1.34E-04	1.09E-03	2.08E-04	2.12E-04	7.65E-04	3.06E-05	1.24E-08	8.79E-04	6.00E-04
53	C26	70	Single Unit Long Haul Truck	2	0.00E+00	3.52E-07	1.42E-08	3.19E-01	2.33E-07	5.73E-04	3.83E-07	1.38E-04	3.34E-05	6.00E-06	4.76E-05	8.98E-06	9.15E-06	3.23E-05	1.30E-06	5.21E-10	3.84E-05	2.58E-05
53	C26	70	Combination Short Haul Truck	29	0.00E+00	7.54E-06	5.61E-07	1.02E+01	1.91E-08	1.09E-02	5.37E-06	1.12E-02	1.06E-03	1.77E-04	4.52E-04	1.63E-04	1.70E-04	1.62E-03	3.41E-05	0.00E+00	2.83E-04	2.11E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.03E-05	5.88E-07	9.56E+00	6.48E-08	1.30E-02	8.50E-06	1.20E-02	1.11E-03	1.67E-04	9.40E-04	1.89E-04	1.97E-04	1.53E-03	3.20E-05	0.00E+00	7.43E-04	2.26E-03
50	C27	40	Passenger Car	194	0.00E+00	2.78E-06	3.03E-07	1.02E+01	1.98E-05	5.53E-02	6.28E-06	1.77E-04	3.34E-03	4.69E-04	6.12E-04	3.95E-04	4.05E-04	5.76E-05	5.08E-05	9.41E-09	2.07E-04	2.76E-05
50	C27	40	Passenger Truck	324	0.00E+00	6.14E-06	6.45E-07	2.23E+01	3.70E-05	9.14E-02	1.23E-05	6.80E-04	5.92E-03	8.22E-04	1.16E-03	7.61E-04	7.79E-04	1.96E-04	1.10E-04	1.60E-08	3.86E-04	1.18E-04
50	C27	40	Single Unit Short Haul Truck	29	0.00E+00	9.75E-06	4.34E-07	5.43E+00	6.74E-06	8.51E-03	1.04E-05	3.91E-03	1.13E-03	1.77E-04	1.25E-03	2.61E-04	2.66E-04	5.54E-04	2.21E-05	9.38E-09	9.87E-04	7.33E-04
50	C27	40	Single Unit Long Haul Truck	1	0.00E+00	4.27E-07	1.89E-08	2.34E-01	2.95E-07	3.70E-04	4.57E-07	1.71E-04	5.07E-05	7.86E-06	5.51E-05	1.14E-05	1.16E-05	2.39E-05	9.56E-07	4.07E-10	4.34E-05	3.19E-05
50	C27	40	Combination Short Haul Truck	10	0.00E+00	5.05E-06	3.77E-07	4.34E+00	1.25E-08	7.14E-03	3.59E-06	7.30E-03	1.02E-03	1.52E-04	3.00E-04	1.10E-04	1.14E-04	6.89E-04	1.45E-05	0.00E+00	1.86E-04	1.38E-03
50	C27	40	Combination Long Haul Truck	10	0.00E+00	6.71E-06	3.79E-07	4.16E+00	4.26E-08	8.66E-03	5.53E-06	7.70E-03	1.06E-03	1.48E-04	6.14E-04	1.22E-04	1.27E-04	6.68E-04	1.40E-05	0.00E+00	4.87E-04	1.45E-03
52	C28	60	Passenger Car	369	0.00E+00	4.34E-06	4.72E-07	1.68E+01	3.08E-05	8.66E-02	9.80E-06	3.66E-04	3.62E-03	5.43E-04	9.55E-04	6.16E-04	6.32E-04	7.31E-05	8.43E-05	1.72E-08	3.23E-04	5.71E-05
52	C28	60	Passenger Truck	618	0.00E+00	9.17E-06	9.72E-07	3.75E+01	5.78E-05	1.48E-01	1.90E-05	1.12E-03	6.43E-03	9.55E-04	1.81E-03	1.18E-03	1.21E-03	2.93E-04	1.86E-04	3.14E-08	6.04E-04	1.89E-04
52	C28	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.63E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
52	C28	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.63E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.72E-05
52	C28	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.93E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.29E-05
53	C29	70	Passenger Car	68	0.00E+00	7.41E-07	8.05E-08	3.02E+00	5.26E-06	1.48E-02	1.67E-06	7.04E-05	5.19E-04	8.12E-05	1.63E-04	1.05E-04	1.08E-04	1.16E-05	1.52E-05	3.15E-09	5.51E-05	1.10E-05
53	C29	70	Passenger Truck	115	0.00E+00	1.55E-06	1.65E-07	6.80E+00	9.94E-06	2.61E-02	3.25E-06	1.99E-04	9.27E-04	1.44E-04	3.11E-04	2.02E-04	2.07E-04	5.05E-05	3.39E-05	5.93E-09	1.04E-04	3.33E-05
53	C29	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.00E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.13E-04
53	C29	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.42E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.21E-04
50	C30	40	Passenger Car	66	0.00E+00	9.51E-07	1.03E-07	3.50E+00	6.75E-06	1.89E-02	2.14E-06	6.04E-05	1.14E-03	1.60E-04	2.09E-04	1.35E-04	1.38E-04	1.97E-05	1.73E-05	3.22E-09	7.08E-05	9.42E-06
50	C30	40	Passenger Truck	111	0.00E+00	2.10E-06	2.20E-07	7.61E+00	1.26E-05	3.12E-02	4.21E-06	2.32E-04	2.02E-03	2.81E-04	3.98E-04	2.60E-04	2.66E-04	6.71E-05	3.74E-05	5.46E-09	1.32E-04	4.03E-05
50	C30	40	Single Unit Short Haul Truck	20	0.00E+00	6.82E-06	3.03E-07	3.80E+00	4.72E-06	5.96E-03	7.29E-06	2.74E-03	7.92E-04	1.24E-04	8.77E-04	1.83E-04	1.86E-04	3.88E-04	1.55E-05	6.57E-09	6.91E-04	5.13E-04
50	C30	40	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.32E-08	1.64E-01	2.07E-07	2.59E-04	3.20E-07	1.19E-04	3.55E-05	5.50E-06	3.86E-05	8.00E-06	8.15E-06	1.68E-05	6.69E-07	2.85E-10	3.04E-05	2.24E-05
50	C30	40	Combination Short Haul Truck	20	0.00E+00	9.84E-06	7.35E-07	8.46E+00	2.44E-08	1.39E-02	6.99E-06	1.42E-02	1.98E-03	2.96E-04	5.85E-04	2.14E-04	2.22E-04	1.34E-03	2.83E-05	0.00E+00	3.63E-04	2.68E-03
50	C30	40	Combination Long Haul Truck	19	0.00E+00	1.31E-05	7.38E-07	8.12E+00	8.31E-08	1.69E-02	1.08E-05	1.50E-02	2.06E-03	2.89E-04	1.20E-03	2.38E-04	2.48E-04	1.30E-03	2.72E-05	0.00E+00	9.50E-04	2.83E-03
52	C31	60	Passenger Car	93	0.00E+00	1.10E-06	1.19E-07	4.25E+00	7.78E-06	2.18E-02	2.47E-06	9.23E-05	9.14E-04	1.37E-04	2.41E-04	1.55E-04	1.59E-04	1.85E-05	2.13E-05	4.33E-09	8.15E-05	1.44E-05
52	C31	60	Passenger Truck	156	0.00E+00	2.31E-06

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C35	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.80E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.39E-04
53	C35	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.93E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.63E-04
52	C39	60	Passenger Car	87	0.00E+00	1.03E-06	1.12E-07	3.99E+00	7.31E-06	2.05E-02	2.32E-06	8.68E-05	8.59E-04	1.29E-04	2.26E-04	1.46E-04	1.50E-04	1.73E-05	2.00E-05	4.07E-09	7.66E-05	1.35E-05
52	C39	60	Passenger Truck	147	0.00E+00	2.17E-06	2.30E-07	8.89E+00	1.37E-05	3.52E-02	4.51E-06	2.65E-04	1.53E-03	2.26E-04	4.30E-04	2.79E-04	2.86E-04	6.95E-05	4.41E-05	7.44E-09	1.43E-04	4.47E-05
52	C39	60	Single Unit Short Haul Truck	17	0.00E+00	3.85E-06	1.59E-07	2.87E+00	2.55E-06	5.04E-03	4.16E-06	1.47E-03	3.97E-04	6.67E-05	5.14E-04	9.89E-05	1.01E-04	2.91E-04	1.17E-05	4.82E-09	4.13E-04	2.75E-04
52	C39	60	Single Unit Long Haul Truck	1	0.00E+00	1.68E-07	6.91E-09	1.22E-01	1.11E-07	2.14E-04	1.82E-07	6.37E-05	1.78E-05	2.96E-06	2.25E-05	4.30E-06	4.38E-06	1.24E-05	4.99E-07	2.05E-10	1.81E-05	1.19E-05
52	C39	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.24E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.11E-04
52	C39	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.45E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.50E-04
9	D01	60	Passenger Car	914	0.00E+00	1.17E-05	1.27E-06	4.17E+01	8.31E-05	2.35E-01	2.64E-05	9.41E-04	9.23E-03	1.38E-03	2.58E-03	1.66E-03	1.70E-03	1.81E-04	2.09E-04	4.39E-08	8.71E-04	1.47E-04
9	D01	60	Passenger Truck	1531	0.00E+00	2.49E-05	2.64E-06	9.30E+01	1.57E-04	4.02E-01	5.16E-05	2.93E-03	1.69E-02	2.51E-03	4.92E-03	3.20E-03	3.28E-03	7.42E-04	4.61E-04	8.56E-08	1.64E-03	4.96E-04
9	D01	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.45E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.59E-05
9	D01	60	Combination Short Haul Truck	27	0.00E+00	7.94E-06	5.83E-07	9.58E+00	2.17E-08	1.19E-02	5.70E-06	1.20E-02	1.39E-03	2.17E-04	4.89E-04	1.71E-04	1.77E-04	1.52E-03	3.20E-05	0.00E+00	3.12E-04	2.27E-03
9	D01	60	Combination Long Haul Truck	25	0.00E+00	1.09E-05	5.96E-07	9.05E+00	7.36E-08	1.42E-02	9.12E-06	1.28E-02	1.45E-03	2.10E-04	1.03E-03	1.95E-04	2.03E-04	1.45E-03	3.03E-05	0.00E+00	8.32E-04	2.41E-03
9	D02	60	Passenger Car	1292	0.00E+00	1.66E-05	1.80E-06	5.90E+01	1.17E-04	3.32E-01	3.73E-05	1.33E-03	1.30E-02	1.95E-03	3.64E-03	2.35E-03	2.41E-03	2.56E-04	2.95E-04	6.20E-08	1.23E-03	2.08E-04
9	D02	60	Passenger Truck	2164	0.00E+00	3.51E-05	3.73E-06	1.31E+02	2.22E-04	5.68E-01	7.29E-05	4.13E-03	2.38E-02	3.55E-03	6.95E-03	4.52E-03	4.63E-03	1.05E-03	6.52E-04	1.21E-07	2.32E-03	7.01E-04
9	D02	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.08E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.64E-05
9	D02	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.57E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.61E-03
9	D02	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.12E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D03	60	Passenger Car	976	0.00E+00	1.25E-05	1.36E-06	4.45E+01	8.87E-05	2.51E-01	2.82E-05	1.00E-03	9.85E-03	1.48E-03	2.75E-03	1.77E-03	1.82E-03	1.93E-04	2.23E-04	4.69E-08	9.30E-04	1.57E-04
9	D03	60	Passenger Truck	1634	0.00E+00	2.65E-05	2.81E-06	9.93E+01	1.67E-04	4.29E-01	5.51E-05	3.12E-03	1.80E-02	2.68E-03	5.25E-03	3.41E-03	3.50E-03	7.92E-04	4.93E-04	9.13E-08	1.75E-03	5.29E-04
9	D03	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.04E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.82E-04
9	D03	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	9.59E-09	1.70E-01	1.54E-07	2.97E-04	2.52E-07	8.84E-05	2.47E-05	4.11E-06	3.12E-05	5.97E-06	6.09E-06	1.72E-05	6.93E-07	2.85E-10	2.51E-05	1.66E-05
9	D03	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.13E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
9	D03	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.27E-03
9	D04	60	Passenger Car	1332	0.00E+00	1.71E-05	1.85E-06	6.08E+01	1.21E-04	3.42E-01	3.85E-05	1.37E-03	1.35E-02	2.01E-03	3.75E-03	2.42E-03	2.48E-03	2.64E-04	3.05E-04	6.40E-08	1.27E-03	2.14E-04
9	D04	60	Passenger Truck	2231	0.00E+00	3.62E-05	3.84E-06	1.35E+02	2.29E-04	5.86E-01	7.52E-05	4.26E-03	2.46E-02	3.66E-03	7.17E-03	4.66E-03	4.78E-03	1.08E-03	6.72E-04	1.25E-07	2.39E-03	7.22E-04
9	D04	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.43E-04
9	D04	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	D04	60	Combination Short Haul Truck	47	0.00E+00	1.37E-05	1.01E-06	1.66E+01	3.76E-08	2.05E-02	9.87E-06	2.08E-02	2.40E-03	3.75E-04	8.47E-04	2.95E-04	3.06E-04	2.64E-03	5.54E-05	0.00E+00	5.40E-04	3.93E-03
9	D04	60	Combination Long Haul Truck	43	0.00E+00	1.89E-05	1.03E-06	1.57E+01	1.27E-07	2.47E-02	1.58E-05	2.22E-02	2.51E-03	3.64E-04	1.79E-03	3.37E-04	3.51E-04	2.51E-03	5.25E-05	0.00E+00	1.44E-03	4.18E-03
9	D05	60	Passenger Car	942	0.00E+00	1.21E-05	1.31E-06	4.30E+01	8.57E-05	2.42E-01	2.72E-05	9.70E-04	9.51E-03	1.43E-03	2.65E-03	1.71E-03	1.76E-03	1.87E-04	2.15E-04	4.52E-08	8.98E-04	1.51E-04
9	D05	60	Passenger Truck	1578	0.00E+00	2.56E-05	2.72E-06	9.58E+01	1.62E-04	4.14E-01	5.32E-05	3.01E-03	1.74E-02	2.59E-03	5.07E-03	3.30E-03	3.38E-03	7.64E-04	4.76E-04	8.82E-08	1.69E-03	5.11E-04
9	D05	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.10E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.81E-04
9	D05	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.34E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.52E-05
9	D05	60	Combination Short Haul Truck	30	0.00E+00	8.85E-06	6.50E-07	1.07E+01	2.43E-08	1.32E-02	6.36E-06	1.34E-02	1.55E-03	2.42E-04	5.46E-04	1.90E-04	1.98E-04	1.70E-03	3.57E-05	0.00E+00	3.48E-04	2.53E-03
9	D05	60	Combination Long Haul Truck	28	0.00E+00	1.22E-05	6.65E-07	1.01E+01	8.21E-08	1.59E-02	1.02E-05	1.43E-02	1.62E-03	2.34E-04	1.15E-03	2.17E-04	2.26E-04	1.62E-03	3.38E-05	0.00E+00	9.28E-04	2.69E-03
9	D06	60	Passenger Car	1503	0.00E+00	1.93E-05	2.09E-06	6.86E+01	1.37E-04	3.86E-01	4.34E-05	1.55E-03	1.52E-02	2.27E-03	4.23E-03	2.73E-03	2.80E-03	2.98E-04	3.44E-04	7.21E-08	1.43E-03	2.41E-04
9	D06	60	Passenger Truck	2516	0.00E+00	4.09E-05	4.33E-06	1.53E+02	2.58E-04	6.61E-01	8.48E-05	4.81E-03	2.77E-02	4.13E-03	8.08E-03	5.26E-03	5.39E-03	1.22E-03	7.58E-04	1.41E-07	2.69E-03	8.15E-04
9	D06	60	Single Unit Short Haul Truck	39	0.00E+00	8.77E-06	3.62E-07	6.53E+00	5.81E-06	1.15E-02	9.48E-06	3.35E-03	9.03E-04	1.52E-04	1.17E-03	2.25E-04	2.30E-04	6.62E-04	2.66E-05	1.10E-08	9.40E-04	6.27E-04
9	D06	60	Single Unit Long Haul Truck	2	0.00E+00	3.83E-07	1.57E-08	2.79E-01	2.52E-07	4.88E-04	4.14E-07	1.45E-04	4.06E-05	6.73E-06	5.11E-05	9.79E-06	9.99E-06	2.81E-05	1.14E-06	4.67E-10	4.12E-05	2.71E-05
9	D06	60	Combination Short Haul Truck	54	0.00E+00	1.59E-05	1.17E-06	1.92E+01	4.35E-08	2.37E-02	1.14E-05	2.41E-02	2.77E-03	4.33E-04	9.78E-04	3.41E-04	3.54E-04	3.04E-03	6.41E-05	0.00E+00	6.24E-04	4.54E-03
9	D06	60	Combination Long Haul Truck	50	0.00E+00	2.18E-05	1.19E-06	1.81E+01	1.47E-07	2.85E-02	1.82E-05	2.56E-02	2.91E-03	4.20E-04	2.07E-03	3.89E-04	4.06E-04	2.90E-03	6.06E-05	0.00E+00	1.66E-03	4.83E-03
11	D07	80	Passenger Car	1140	0.00E+00	1.19E-05	1.29E-06	4.83E+01	8.42E-05	2.45E-01	2.68E-05	1.18E-03	6.22E-03	1.04E-03	2.61E-03	1.68E-03	1.73E-03	1.70E-04	2.43E-04	5.20E-08	8.83E-04	1.84E-04
11	D07	80	Passenger Truck	1910	0.00E+00	2.44E-05	2.60E-06	1.09E+02	1.59E-04	4.33E-01	5.18E-05	3.19E-03	1.11E-02	1.84E-03	4.97E-03	3.22E-03	3.30E-03	7.84E-04	5.44E-04	9.90E-08	1.66E-03	5.31E-04
11	D07	80	Single Unit Short Haul Truck	47	0.00E+00	6.44E-06	2.51E-07	7.69E+00	4.37E-06	1.40E-02	7.08E-06	2.66E-03	5.27E-04	1.08E-04	8.87E-04	1.64E-04	1.67E-04	7.83E-04	3.13E-05	1.24E-08	7.19E-04	4.98E-04
11	D07	80	Single Unit Long Haul Truck	2	0.00E+00	2.80E-07	1.08E-08	3.25E-01	1.86E-07	5.82E-04	3.07E-07	1.14E-04	2.42E-05	4.79E-06	3.87E-05	7.05E-06	7.19E-06	3.29E-05	1.32E-06	5.16E-10	3.15E-05	2.13E-05
11	D07	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.37E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.59E-03
11	D07	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.47E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.76E-03
11	D08	80	Passenger Car	1254	0.00E+00	1.31E-05	1.42E-06	5.31E+01	9.26E-05	2.70E-01	2.94E-05	1.30E-03	6.84E-03	1.14E-03	2.87E-03	1.85E-03	1.90E-03	1.86E-04	2.68E-04	5.72E-08	9.71E-04	2.03E-04
11	D08	80	Passenger Truck	2101	0.00E+00	2.69E-05	2.87E-06	1.20E+02	1.75E-04	4.77E-01	5.70E-05	3.51E-03	1.22E-02	2.03E-03	5.47E-03	3.55E-03	3.63E-03	8.63E-04	5.99E-04	1.09E-07	1.83E-03	5.84E-04
11	D08	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.77E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.18E-04
11	D08	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.18E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.21E-05
11	D08	80	Combination Short Haul Truck	49	0.00E+00	1.01E-05	7.50E-07	1.65E+01	2.65E-08	1.54E-02	7.24E-06	1.55E-02	1.17E-03	2.13E-04	6.14E-04	2.19E-04	2.27E-04	2.62E-03	5.51E-05	0.00E+00	3.87E-04	2.93E-03
11	D08	80	Combination Long Haul Truck	45	0.00E+00	1.41E-05	7.97E-07	1.53E+01	8.98E-08	1.83E-02	1.16E-05	1.66E-02	1.21E-03	1.94E-04	1.29E-03	2.57E-04	2.68E-04	2.46E-03	5.13E-05	0.00E+00	1.03E-03	3.13E-03
11	D09	80	Passenger Car	824	0.00E+00	8.57E-06	9.32E-07	3.49E+01	6.08E-05	1.77E-01	1.93E-05	8.54E-04	4.49E-03	7.52E-04	1.89E-03	1.22E-03	1.25E-03	1.22E-04	1.76E-04	3.75E-08	6.38E-04	1.33E-04
11	D09	80	Passenger Truck	1379	0.00E+00	1.76E-05	1.88E-06	7.88E+01	1.15E-04	3.13E-01	3.74E-05	2.30E-03	7.99E-03	1.33E-03	3.59E-03	2.33E-03	2.39E-03	5.66E-04	3.93E-04	7.15E-08	1.20E-03	3.83E-04
11	D09	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D09	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.11E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.55E-06
11	D09	80	Combination Short Haul Truck	24	0.00E+00	4.85E-06	3.59E-07	7.89E+00	1.27E-08	7.39E-03	3.47E-06	7.44E-03	5.62E-04	1.02E-04	2.94E-04	1.05E-04	1.09E-04	1.25E-03	2.64E-05	0.00E+00	1.85E-04	1.40E-03
11	D09	80	Combination Long Haul Truck	21	0.00E+00	6.76E-06	3.81E-07	7.32E+00	4.30E-08	8.75E-03	5.57E-06	7.95E-03	5.80E-04	9.29E-05	6.19E-04	1.23E-04	1.28E-04	1.18E-03	2.45E-05	0.00E+00	4.91E-04	1.50E-03
11	D10	80	Passenger Car	1198	0.00E+00	1.25E-05	1.35E-06	5.07E+01	8.84E-05	2.58E-01	2.81E-05	1.24E-03	6.53E-03	1.09E-03	2.74E-03	1.77E-03	1.81E-03	1.78E-04	2.56E-04	5.46E-08	9.27E-04	1.94E-04
11	D10	80	Passenger Truck	2005	0.00E+00	2.57E-05	2.74E-06	1.15E+02	1.67E-04	4.55E-01	5.44E-05	3.35E-03	1.16E-02	1.94E-03	5.22E-03	3.38E-03	3.47E-03	8.24E-04	5.72E-04	1.04E-07	1.75E-03	5.57E-04
11	D10	80	Single Unit Short Haul Truck	29	0.00E+00	3.94E-06	1.54E-07	4.71E+00	2.67E-06	8.56E-03	4.33E-06	1.63E-03	3.23E-04	6.60E-05	5.43E-04	1.01E-04	1.02E-04	4.79E-04	1.91E-05	7.59E-09	4.40E-04	3.05E-04
11	D10	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	6.61E-09	1.99E-01	1.14E-07	3.56E-04	1.88E-07	6.97E-05	1.48E-05	2.93E-06	2.37E-05	4.32E-06	4.40E-06	2.01E-05	8.10E-07	3.16E-10	1.93E-05	1.30E-05
11	D10	80	Combination Short Haul Truck	30	0.00E+00	6.25E-06	4.63E-07	1.02E+01	1.64E-08	9.53E-03	4.47E-06	9.59E-03	7.24E-04	1.31E-04	3.79E-04	1.35E-04	1.40E-04	1.62E-03	3.40E-05	0.00E+00	2.39E-04	1.81E-03
11	D10	80	Combination Long Haul Truck	28	0.00E+00	8.71E-06	4.92E-07	9.44E+00	5.54E-08	1.13E-02	7.18E-06	1.02E-02	7.48E-04	1.20E-04	7.98E-04	1.58E-04	1.65E-04	1.52E-03	3.16E-05	0.00E+00	6.33E-04	1.93E-03
11	D11	80	Passenger Car	809	0.00E+00	8.42E-06	9.15E-07	3.43E+01	5.98E-05	1.74E-01	1.90E-05	8.39E-04	4.41E-03	7.39E-04	1.85E-03	1.19E-03	1.23E-03	1.20E-04	1.73E-04	3.69E-08	6.27E-04	1.31E-04
11	D11	80	Passenger Truck	1356	0.00E+00	1.73E-05	1.85E-06	7.74E+01	1.13E-04	3.08E-01	3.68E-05	2.26E-03	7.86E-03	1.31E-03	3.53E-03	2.29E-03	2.35E-03	5.57E-04	3.86E-04	7.02E-08	1.18E-03	3.77E-04
11	D11	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D11	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.11E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.55E-06
11	D11	80	Combination Short Haul Truck	24	0.00E+00	4.96E-06	3.67E-07	8.07E+00	1.30E-08	7.56E-03	3.54E-06	7.60E-03	5.74E-04	1.04E-04	3.01E-04	1.07E-04	1.11E-04	1.28E-03	2.70E-05	0.00E+00	1.90E-04	1.43E-03
11	D11	80	Combination Long Haul Truck	22	0.00E+00	6.91E-06	3.90E-07	7.49E+00	4.39E-08	8.95E-03	5.70E-06	8.12E-03	5.93E-04	9.50E-05	6.33E-04	1.26E-04	1.31E-04	1.20E-03	2.51E-05	0.00E+00	5.02E-04	1.53E-03
11	D12	80	Passenger Car	1347	0.00E+00	1.40E-05	1.52E-06	5.71E+01	9.95E-05	2.90E-01	3.16E-05	1.40E-03	7.34E-03	1.23E-03	3.08E-03	1.99E-03	2.04E-03	2.00E-04	2.87E-04	6.14E-08	1.04E-03	2.18E-04
11	D12	80	Passenger Truck	2257	0.00E+00	2.89E-05	3.08E-06	1.29E+02	1.88E-04	5.12E-01	6.12E-05	3.77E-03	1.31E-02	2.18E-03	5.87E-03	3.81E-03	3.90E-03	9.27E-04	6.43E-04	1.17E-07	1.97E-03	6.27E-04
11	D12	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.12E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.96E-04
11	D12	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.06E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.69E-05
11	D12	80	Combination Short Haul Truck	41	0.00E+00	8.41E-06	6.22E-07	1.37E+01	2.20E-08	1.28E-02	6.01E-06	1.29E-02	9.73E-04	1.76E-04	5.10E-04	1.82E-04	1.89E-04	2.17E-03	4.57E-05	0.00E+00	3.21E-04	2.43E-03
11	D12	80	Combination Long Haul Truck	37	0.00E+00	1.17E-05	6.61E-07	1.27E+01	7.45E-08	1.52E-02	9.66E-06	1.38E-02	1.01E-03	1.61E-04	1.07E-03	2.13E-04	2.22E-04	2.04E-03	4.25E-05	0.00E+00	8.51E-04	2.59E-03
9	D13	60	Passenger Car	462	0.00E+00	5.92E-06	6.43E-07	2.11E+01	4.20E-05	1.19E-01	1.33E-05	4.75E-04	4.66E-03	6.98E-04	1.30E-03	8.39E-04	8.61E-04	9.15E-05	1.06E-04	2.22E-08	4.40E-04	7.42E-05
9	D13	60	Passenger Truck	773	0.00E+00	1.26E-05	1.33E-06	4.70E+01	7.92E-05	2.03E-01	2.61E-05	1.48E-03	8.52E-03	1.27E-03	2.48E-03	1.62E-03	1.66E-03	3.75E-04	2.33E-04	4.32E-08	8.28E-04	2.50E-04
9	D13	60	Single Unit Short Haul Truck	34	0.00E+00	7.49E-06	3.09E-07	5.58E+00	4.96E-06	9.81E-03	8.09E-06	2.86E-03	7.71E-04	1.30E-04	9.99E-04	1.92E-04	1.96E-04	5.65E-04	2.27E-05	9.36E-09	8.02E-04	5.35E-04
9	D13	60	Single Unit Long Haul Truck	1	0.00E+00	3.27E-07	1.34E-08	2.38E-01	2.15E-07	4.16E-04	3.53E-07	1.24E-04	3.46E-05	5.75E-06	4.37E-05	8.36E-06	8.53E-06	2.40E-05	9.70E-07	3.98E-10	3.51E-05	2.32E-05
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Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.02E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.53E-06
10	D17	70	Combination Short Haul Truck	16	0.00E+00	4.04E-06	3.00E-07	5.46E+00	1.03E-08	5.83E-03	2.88E-06	6.00E-03	5.69E-04	9.49E-05	2.42E-04	8.75E-05	9.08E-05	8.67E-04	1.82E-05	0.00E+00	1.51E-04	1.13E-03
10	D17	70	Combination Long Haul Truck	14	0.00E+00	5.54E-06	3.15E-07	5.12E+00	3.47E-08	6.96E-03	4.55E-06	6.42E-03	5.93E-04	8.93E-05	5.03E-04	1.01E-04	1.05E-04	8.22E-04	1.72E-05	0.00E+00	3.98E-04	1.21E-03
10	D18	70	Passenger Car	146	0.00E+00	1.63E-06	1.77E-07	6.36E+00	1.16E-05	3.29E-02	3.67E-06	1.47E-04	1.12E-03	1.75E-04	3.58E-04	2.31E-04	2.37E-04	2.48E-05	3.20E-05	6.64E-09	1.21E-04	2.30E-05
10	D18	70	Passenger Truck	244	0.00E+00	3.43E-06	3.65E-07	1.43E+01	2.20E-05	5.80E-02	7.19E-06	4.28E-04	2.03E-03	3.15E-04	6.88E-04	4.47E-04	4.58E-04	1.08E-04	7.13E-05	1.28E-08	2.30E-04	7.19E-05
10	D18	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.00E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.75E-05
10	D18	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.01E-04
10	D18	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.71E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.22E-04
11	D19	80	Passenger Car	977	0.00E+00	1.02E-05	1.10E-06	4.14E+01	7.21E-05	2.10E-01	2.29E-05	1.01E-03	5.32E-03	8.91E-04	2.23E-03	1.44E-03	1.48E-03	1.45E-04	2.08E-04	4.45E-08	7.56E-04	1.58E-04
11	D19	80	Passenger Truck	1635	0.00E+00	2.09E-05	2.23E-06	9.34E+01	1.36E-04	3.71E-01	4.43E-05	2.73E-03	9.48E-03	1.58E-03	4.25E-03	2.76E-03	2.83E-03	6.72E-04	4.66E-04	8.47E-08	1.43E-03	4.54E-04
11	D19	80	Single Unit Short Haul Truck	174	0.00E+00	2.39E-05	9.34E-07	2.86E+01	1.62E-05	5.19E-02	2.63E-05	9.90E-03	1.96E-03	4.01E-04	3.29E-03	6.10E-04	6.22E-04	2.91E-03	1.16E-04	4.60E-08	2.67E-03	1.85E-03
11	D19	80	Single Unit Long Haul Truck	8	0.00E+00	1.04E-06	4.01E-08	1.21E+00	6.91E-07	2.16E-03	1.14E-06	4.23E-04	8.98E-05	1.78E-05	1.44E-04	2.62E-05	2.67E-05	1.22E-04	4.92E-06	1.92E-09	1.17E-04	7.90E-05
11	D19	80	Combination Short Haul Truck	63	0.00E+00	1.29E-05	9.58E-07	2.10E+01	3.39E-08	1.97E-02	9.25E-06	1.98E-02	1.50E-03	2.71E-04	7.84E-04	2.79E-04	2.90E-04	3.34E-03	7.04E-05	0.00E+00	4.94E-04	3.74E-03
11	D19	80	Combination Long Haul Truck	57	0.00E+00	1.80E-05	1.02E-06	1.95E+01	1.15E-07	2.33E-02	1.49E-05	2.12E-02	1.55E-03	2.48E-04	1.65E-03	3.28E-04	3.42E-04	3.13E-03	6.54E-05	0.00E+00	1.31E-03	3.99E-03
11	D20	80	Passenger Car	1209	0.00E+00	1.26E-05	1.37E-06	5.12E+01	8.93E-05	2.60E-01	2.84E-05	1.25E-03	6.59E-03	1.10E-03	2.77E-03	1.78E-03	1.83E-03	1.80E-04	2.58E-04	5.51E-08	9.36E-04	1.96E-04
11	D20	80	Passenger Truck	2024	0.00E+00	2.59E-05	2.76E-06	1.16E+02	1.68E-04	4.59E-01	5.49E-05	3.38E-03	1.17E-02	1.95E-03	5.27E-03	3.42E-03	3.50E-03	8.31E-04	5.77E-04	1.05E-07	1.76E-03	5.62E-04
11	D20	80	Single Unit Short Haul Truck	230	0.00E+00	3.15E-05	1.23E-06	3.77E+01	2.14E-05	6.85E-02	3.47E-05	1.31E-02	2.58E-03	5.28E-04	4.34E-03	8.04E-04	8.20E-04	3.83E-03	1.53E-04	6.07E-08	3.52E-03	2.44E-03
11	D20	80	Single Unit Long Haul Truck	10	0.00E+00	1.37E-06	5.29E-08	1.59E+00	9.11E-07	2.85E-03	1.51E-06	5.58E-04	1.18E-04	2.34E-05	1.89E-04	3.45E-05	3.52E-05	1.61E-04	6.48E-06	2.53E-09	1.54E-04	1.04E-04
11	D20	80	Combination Short Haul Truck	27	0.00E+00	5.50E-06	4.07E-07	8.94E+00	1.44E-08	8.38E-03	3.93E-06	8.43E-03	6.36E-04	1.15E-04	3.33E-04	1.19E-04	1.23E-04	1.42E-03	2.99E-05	0.00E+00	2.10E-04	1.59E-03
11	D20	80	Combination Long Haul Truck	24	0.00E+00	7.66E-06	4.32E-07	8.30E+00	4.87E-08	9.92E-03	6.32E-06	9.01E-03	6.58E-04	1.05E-04	7.02E-04	1.39E-04	1.45E-04	1.33E-03	2.78E-05	0.00E+00	5.57E-04	1.70E-03
11	D21	80	Passenger Car	890	0.00E+00	9.26E-06	1.01E-06	3.77E+01	6.57E-05	1.92E-01	2.09E-05	9.23E-04	4.85E-03	8.12E-04	2.04E-03	1.31E-03	1.35E-03	1.32E-04	1.90E-04	4.06E-08	6.89E-04	1.44E-04
11	D21	80	Passenger Truck	1491	0.00E+00	1.91E-05	2.03E-06	8.52E+01	1.24E-04	3.38E-01	4.04E-05	2.49E-03	8.64E-03	1.44E-03	3.88E-03	2.52E-03	2.58E-03	6.12E-04	4.25E-04	7.73E-08	1.30E-03	4.14E-04
11	D21	80	Single Unit Short Haul Truck	134	0.00E+00	1.84E-05	7.18E-07	2.20E+01	1.25E-05	3.99E-02	2.02E-05	7.61E-03	1.51E-03	3.08E-04	2.53E-03	4.69E-04	4.78E-04	2.24E-03	8.93E-05	3.54E-08	2.06E-03	1.42E-03
11	D21	80	Single Unit Long Haul Truck	6	0.00E+00	7.99E-07	3.08E-08	9.29E-01	5.31E-07	1.66E-03	8.78E-07	3.25E-04	6.91E-05	1.37E-05	1.10E-04	2.01E-05	2.05E-05	9.39E-05	3.78E-06	1.48E-09	8.99E-05	6.08E-05
11	D21	80	Combination Short Haul Truck	70	0.00E+00	1.43E-05	1.06E-06	2.33E+01	3.75E-08	2.19E-02	1.02E-05	2.20E-02	1.66E-03	3.01E-04	8.69E-04	3.10E-04	3.21E-04	3.71E-03	7.80E-05	0.00E+00	5.48E-04	4.14E-03
11	D21	80	Combination Long Haul Truck	63	0.00E+00	2.00E-05	1.13E-06	2.16E+01	1.27E-07	2.59E-02	1.65E-05	2.35E-02	1.72E-03	2.75E-04	1.83E-03	3.63E-04	3.79E-04	3.47E-03	7.25E-05	0.00E+00	1.45E-03	4.42E-03
11	D22	80	Passenger Car	941	0.00E+00	9.79E-06	1.06E-06	3.99E+01	6.95E-05	2.02E-01	2.21E-05	9.76E-04	5.13E-03	8.59E-04	2.15E-03	1.39E-03	1.43E-03	1.40E-04	2.01E-04	4.29E-08	7.29E-04	1.52E-04
11	D22	80	Passenger Truck	1576	0.00E+00	2.02E-05	2.15E-06	9.00E+01	1.31E-04	3.58E-01	4.27E-05	2.63E-03	9.13E-03	1.52E-03	4.10E-03	2.66E-03	2.73E-03	6.47E-04	4.49E-04	8.17E-08	1.37E-03	4.38E-04
11	D22	80	Single Unit Short Haul Truck	93	0.00E+00	1.27E-05	4.98E-07	1.52E+01	8.64E-06	2.77E-02	1.40E-05	5.28E-03	1.04E-03	2.14E-04	1.76E-03	3.25E-04	3.31E-04	1.55E-03	6.19E-05	2.45E-08	1.42E-03	9.86E-04
11	D22	80	Single Unit Long Haul Truck	4	0.00E+00	5.54E-07	2.14E-08	6.44E-01	3.68E-07	1.15E-03	6.09E-07	2.25E-04	4.79E-05	9.47E-06	7.65E-05	1.40E-05	1.42E-05	6.51E-05	2.62E-06	1.02E-09	6.23E-05	4.21E-05
11	D22	80	Combination Short Haul Truck	56	0.00E+00	1.16E-05	8.62E-07	1.89E+01	3.05E-08	1.77E-02	8.32E-06	1.79E-02	1.35E-03	2.44E-04	7.06E-04	2.51E-04	2.61E-04	3.01E-03	6.33E-05	0.00E+00	4.45E-04	3.36E-03
11	D22	80	Combination Long Haul Truck	52	0.00E+00	1.62E-05	9.16E-07	1.76E+01	1.03E-07	2.10E-02	1.34E-05	1.91E-02	1.39E-03	2.23E-04	1.49E-03	2.95E-04	3.07E-04	2.82E-03	5.89E-05	0.00E+00	1.18E-03	3.59E-03
9	D23	60	Passenger Car	800	0.00E+00	1.02E-05	1.11E-06	3.65E+01	7.27E-05	2.06E-01	2.31E-05	8.23E-04	8.08E-03	1.21E-03	2.25E-03	1.45E-03	1.49E-03	1.59E-04	1.83E-04	3.84E-08	7.62E-04	1.28E-04
9	D23	60	Passenger Truck	1339	0.00E+00	2.18E-05	2.31E-06	8.13E+01	1.37E-04	3.52E-01	4.51E-05	2.56E-03	1.48E-02	2.20E-03	4.30E-03	2.80E-03	2.87E-03	6.49E-04	4.04E-04	7.49E-08	1.43E-03	4.34E-04
9	D23	60	Single Unit Short Haul Truck	69	0.00E+00	1.54E-05	6.36E-07	1.15E+01	1.02E-05	2.02E-02	1.67E-05	5.88E-03	1.59E-03	2.67E-04	2.05E-03	3.96E-04	4.04E-04	1.16E-03	4.68E-05	1.93E-08	1.65E-03	1.10E-03
9	D23	60	Single Unit Long Haul Truck	3	0.00E+00	6.72E-07	2.76E-08	4.89E-01	4.42E-07	8.57E-04	7.27E-07	2.55E-04	7.13E-05	1.18E-05	8.98E-05	1.72E-05	1.75E-05	4.94E-05	2.00E-06	8.20E-10	7.23E-05	4.77E-05
9	D23	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.97E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.71E-03
9	D23	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.10E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.95E-03
9	D24	60	Passenger Car	1143	0.00E+00	1.46E-05	1.59E-06	5.21E+01	1.04E-04	2.94E-01	3.30E-05	1.18E-03	1.15E-02	1.73E-03	3.22E-03	2.08E-03	2.13E-03	2.26E-04	2.61E-04	5.49E-08	1.09E-03	1.84E-04
9	D24	60	Passenger Truck	1913	0.00E+00	3.11E-05	3.29E-06	1.16E+02	1.96E-04	5.03E-01	6.45E-05	3.66E-03	2.11E-02	3.14E-03	6.15E-03	4.00E-03	4.10E-03	9.27E-04	5.77E-04	1.07E-07	2.05E-03	6.19E-04
9	D24	60	Single Unit Short Haul Truck	53	0.00E+00	1.18E-05	4.86E-07	8.76E+00	7.79E-06	1.54E-02	1.27E-05	4.49E-03	1.21E-03	2.04E-04	1.57E-03	3.02E-04	3.08E-04	8.88E-04	3.57E-05	1.47E-08	1.26E-03	8.41E-04
9	D24	60	Single Unit Long Haul Truck	2	0.00E+00	5.13E-07	2.11E-08	3.74E-01	3.38E-07	6.54E-04	5.55E-07	1.95E-04	5.44E-05	9.03E-06	6.86E-05	1.31E-05	1.34E-05	3.78E-05	1.52E-06	6.26E-10	5.52E-05	3.64E-05
9	D24	60	Combination Short Haul Truck	30	0.00E+00	8.85E-06	6.50E-07	1.07E+01	2.43E-08	1.32E-02	6.36E-06	1.34E-02	1.55E-03	2.42E-04	5.46E-04	1.90E-04	1.98E-04	1.70E-03	3.57E-05	0.00E+00	3.48E-04	2.53E-03
9	D24	60	Combination Long Haul Truck	28	0.00E+00	1.22E-05	6.65E-07	1.01E+01	8.21E-08	1.59E-02	1.02E-05	1.43E-02	1.62E-03	2.34E-04	1.15E-03	2.17E-04	2.26E-04	1.62E-03	3.38E-05	0.00E+00	9.28E-04	2.69E-03
9	D25	60	Passenger Car	843	0.00E+00	1.08E-05	1.17E-06	3.85E+01	7.67E-05	2.17E-01	2.44E-05	8.68E-04	8.52E-03	1.28E-03	2.38E-03	1.53E-03	1.57E-03	1.67E-04	1.93E-04	4.05E-08	8.04E-04	1.35E-04
9	D25	60	Passenger Truck	1413	0.00E+00	2.29E-05	2.43E-06	8.58E+01	1.45E-04	3.71E-01	4.76E-05	2.70E-03	1.56E-02	2.32E-03	4.54E-03	2.95E-03	3.02E-03	6.84E-04	4.26E-04	7.89E-08	1.51E-03	4.57E-04
9	D25	60	Single Unit Short Haul Truck	40	0.00E+00	8.98E-06	3.71E-07	6.69E+00	5.95E-06	1.18E-02	9.71E-06	3.43E-03	9.25E-04	1.56E-04	1.20E-03	2.31E-04	2.35E-04	6.78E-04	2.73E-05	1.12E-08	9.63E-04	6.42E-04
9	D25	60	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.61E-08	2.85E-01	2.58E-07	5.00E-04	4.24E-07	1.49E-04	4.16E-05	6.90E-06	5.24E-05	1.00E-05	1.02E-05	2.88E-05	1.16E-06	4.78E-10	4.22E-05	2.78E-05
9	D25	60	Combination Short Haul Truck	25	0.00E+00	7.33E-06	5.38E-07	8.84E+00	2.01E-08	1.09E-02	5.26E-06	1.11E-02	1.28E-03	2.00E-04	4.52E-04	1.57E-04	1.63E-04	1.41E-03	2.96E-05	0.00E+00	2.88E-04	2.09E-03
9	D25	60	Combination Long Haul Truck	23	0.00E+00	1.01E-05	5.50E-07	8.35E+00	6.80E-08	1.32E-02	8.42E-06	1.18E-02	1.34E-03	1.94E-04	9.55E-04	1.80E-04	1.87E-04	1.34E-03	2.80E-05	0.00E+00	7.68E-04	2.23E-03
9	D26	60	Passenger Car	1119	0.00E+00	1.43E-05	1.56E-06	5.11E+01	1.02E-04	2.88E-01	3.23E-05	1.15E-03	1.13E-02	1.69E-03	3.15E-03	2.03E-03	2.09E-03	2.22E-04	2.56E-04	5.37E-08	1.07E-03	1.80E-04
9	D26	60	Passenger Truck	1875	0.00E+00	3.04E-05	3.23E-06	1.14E+02	1.92E-04	4.92E-01	6.32E-05	3.58E-03	2.07E-02	3.07E-03	6.02E-03	3.92E-03	4.01E-03	9.08E-04	5.65E-04	1.05E-07	2.01E-03	6.07E-04
9	D26	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.63E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.06E-04
9	D26	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.07E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.32E-05
9	D26	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.02E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.13E-03
9	D26	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.41E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.21E-03
11	D27	80	Passenger Car	1345	0.00E+00	1.40E-05	1.52E-06	5.70E+01	9.93E-05	2.89E-01	3.16E-05	1.39E-03	7.33E-03	1.23E-03	3.08E-03	1.98E-03	2.04E-03	2.00E-04	2.87E-04	6.13E-08	1.04E-03	2.18E-04
11	D27	80	Passenger Truck	2252	0.00E+00	2.88E-05	3.07E-06	1.29E+02	1.87E-04	5.11E-01	6.11E-05	3.76E-03	1.31E-02	2.17E-03	5.86E-03	3.80E-03	3.90E-03	9.25E-04	6.42E-04	1.17E-07	1.96E-03	6.26E-04
11	D27	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.15E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.20E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D27	80	Combination Short Haul Truck	26	0.00E+00	5.28E-06	3.91E-07	8.59E+00	1.38E-08	8.05E-03	3.78E-06	8.10E-03	6.12E-04	1.11E-04	3.20E-04	1.14E-04	1.18E-04	1.37E-03	2.87E-05	0.00E+00	2.02E-04	1.53E-03
11	D27	80	Combination Long Haul Truck	23	0.00E+00	7.36E-06	4.15E-07	7.98E+00	4.68E-08	9.53E-03	6.07E-06	8.65E-03	6.32E-04	1.01E-04	6.74E-04	1.34E-04	1.39E-04	1.28E-03	2.67E-05	0.00E+00	5.35E-04	1.63E-03
11	D28	80	Passenger Car	674	0.00E+00	7.02E-06	7.62E-07	2.86E+01	4.98E-05	1.45E-01	1.58E-05	6.99E-04	3.67E-03	6.15E-04	1.54E-03	9.95E-04	1.02E-03	1.00E-04	1.44E-04	3.07E-08	5.22E-04	1.09E-04
11	D28	80	Passenger Truck	1129	0.00E+00	1.44E-05	1.54E-06	6.45E+01	9.39E-05	2.56E-01	3.06E-05	1.88E-03	6.54E-03	1.09E-03	2.94E-03	1.91E-03	1.95E-03	4.64E-04	3.22E-04	5.85E-08	9.84E-04	3.14E-04
11	D28	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	5.98E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D28	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.97E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.48E-04
11	D28	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.24E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	7.98E-04
11	D29	80	Passenger Car	992	0.00E+00	1.03E-05	1.12E-06	4.20E+01	7.33E-05	2.13E-01	2.33E-05	1.03E-03	5.41E-03	9.05E-04	2.27E-03	1.46E-03	1.50E-03	1.47E-04	2.12E-04	4.52E-08	7.68E-04	1.60E-04
11	D29	80	Passenger Truck	1661	0.00E+00	2.13E-05	2.27E-06	9.49E+01	1.38E-04	3.77E-01	4.50E-05	2.77E-03	9.63E-03	1.60E-03	4.32E-03	2.80E-03	2.87E-03	6.82E-04	4.73E-04	8.61E-08	1.45E-03	4.61E-04
11	D29	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.56E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.78E-04
11	D29	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.09E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.04E-05
11	D29	80	Combination Short Haul Truck	44	0.00E+00	9.05E-06	6.70E-07	1.47E+01	2.37E-08	1.38E-02	6.47E-06	1.39E-02	1.05E-03	1.90E-04	5.49E-04	1.96E-04	2.03E-04	2.34E-03	4.93E-05	0.00E+00	3.46E-04	2.62E-03
11	D29	80	Combination Long Haul Truck	40	0.00E+00	1.26E-05	7.12E-07	1.37E+01	8.02E-08	1.63E-02	1.04E-05	1.48E-02	1.08E-03	1.73E-04	1.16E-03	2.30E-04	2.39E-04	2.19E-03	4.58E-05	0.00E+00	9.17E-04	2.79E-03
11	D30	80	Passenger Car	549	0.00E+00	5.71E-06	6.21E-07	2.33E+01	4.05E-05	1.18E-01	1.29E-05	5.69E-04	2.99E-03	5.01E-04	1.26E-03	8.10E-04	8.31E-04	8.16E-05	1.17E-04	2.50E-08	4.25E-04	8.88E-05
11	D30	80	Passenger Truck	919	0.00E+00	1.18E-05	1.25E-06	5.25E+01	7.65E-05	2.09E-01	2.49E-05	1.53E-03	5.33E-03	8.87E-04	2.39E-03	1.55E-03	1.59E-03	3.77E-04	2.62E-04	4.76E-08	8.01E-04	2.55E-04
11	D30	80	Single Unit Short Haul Truck	24	0.00E+00	3.29E-06	1.28E-07	3.93E+00	2.23E-06	7.13E-03	3.61E-06	1.36E-03	2.69E-04	5.50E-05	4.52E-04	8.38E-05	8.54E-05	3.99E-04	1.59E-05	6.32E-09	3.67E-04	2.54E-04
11	D30	80	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.51E-09	1.66E-01	9.49E-08	2.97E-04	1.57E-07	5.81E-05	1.23E-05	2.44E-06	1.97E-05	3.60E-06	3.67E-06	1.68E-05	6.75E-07	2.63E-10	1.61E-05	1.09E-05
11	D30	80	Combination Short Haul Truck	22	0.00E+00	4.53E-06	3.35E-07	7.37E+00	1.19E-08	6.90E-03	3.24E-06	6.94E-03	5.24E-04	9.50E-05	2.75E-04	9.78E-05	1.02E-04	1.17E-03	2.46E-05	0.00E+00	1.73E-04	1.31E-03
11	D30	80	Combination Long Haul Truck	20	0.00E+00	6.31E-06	3.56E-07	6.84E+00	4.01E-08	8.17E-03	5.20E-06	7.42E-03	5.42E-04	8.67E-05	5.78E-04	1.15E-04	1.20E-04	1.10E-03	2.29E-05	0.00E+00	4.58E-04	1.40E-03
11	D31	80	Passenger Car	448	0.00E+00	4.67E-06	5.07E-07	1.90E+01	3.31E-05	9.64E-02	1.05E-05	4.65E-04	2.44E-03	4.09E-04	1.03E-03	6.61E-04	6.79E-04	6.66E-05	9.56E-05	2.04E-08	3.47E-04	7.25E-05
11	D31	80	Passenger Truck	751	0.00E+00	9.61E-06	1.02E-06	4.29E+01	6.25E-05	1.70E-01	2.04E-05	1.25E-03	4.35E-03	7.24E-04	1.95E-03	1.27E-03	1.30E-03	3.08E-04	2.14E-04	3.89E-08	6.54E-04	2.09E-04
11	D31	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.70E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D31

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D35	60	Combination Short Haul Truck	5	0.00E+00	1.53E-06	1.12E-07	1.84E+00	4.18E-09	2.28E-03	1.10E-06	2.31E-03	2.66E-04	4.17E-05	9.41E-05	3.28E-05	3.41E-05	2.93E-04	6.16E-06	0.00E+00	6.00E-05	4.36E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.10E-06	1.15E-07	1.74E+00	1.42E-08	2.74E-03	1.75E-06	2.46E-03	2.79E-04	4.04E-05	1.99E-04	3.74E-05	3.90E-05	2.79E-04	5.83E-06	0.00E+00	1.60E-04	4.64E-04
9	D36	60	Passenger Car	492	0.00E+00	6.30E-06	6.85E-07	2.24E+01	4.47E-05	1.26E-01	1.42E-05	5.06E-04	4.96E-03	7.44E-04	1.39E-03	8.93E-04	9.17E-04	9.75E-05	1.12E-04	2.36E-08	4.69E-04	7.90E-05
9	D36	60	Passenger Truck	823	0.00E+00	1.34E-05	1.42E-06	5.00E+01	8.44E-05	2.16E-01	2.77E-05	1.57E-03	9.07E-03	1.35E-03	2.64E-03	1.72E-03	1.76E-03	3.99E-04	2.48E-04	4.60E-08	8.81E-04	2.67E-04
9	D36	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.35E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
9	D36	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.24E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.11E-04
9	D36	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.45E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.50E-04
9	D37	60	Passenger Car	305	0.00E+00	3.91E-06	4.25E-07	1.39E+01	2.78E-05	7.85E-02	8.82E-06	3.14E-04	3.08E-03	4.62E-04	8.61E-04	5.55E-04	5.70E-04	6.05E-05	6.98E-05	1.47E-08	2.91E-04	4.91E-05
9	D37	60	Passenger Truck	512	0.00E+00	8.31E-06	8.81E-07	3.11E+01	5.24E-05	1.34E-01	1.72E-05	9.77E-04	5.64E-03	8.39E-04	1.64E-03	1.07E-03	1.10E-03	2.48E-04	1.54E-04	2.86E-08	5.48E-04	1.66E-04
9	D37	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.17E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	D37	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.47E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.54E-04
9	D37	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.70E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.96E-04
9	D38	60	Passenger Car	154	0.00E+00	1.98E-06	2.15E-07	7.05E+00	1.40E-05	3.97E-02	4.46E-06	1.59E-04	1.56E-03	2.34E-04	4.35E-04	2.81E-04	2.88E-04	3.06E-05	3.53E-05	7.41E-09	1.47E-04	2.48E-05
9	D38	60	Passenger Truck	259	0.00E+00	4.20E-06	4.45E-07	1.57E+01	2.65E-05	6.79E-02	8.71E-06	4.94E-04	2.85E-03	4.24E-04	8.31E-04	5.40E-04	5.54E-04	1.25E-04	7.79E-05	1.45E-08	2.77E-04	8.37E-05
9	D38	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.45E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.59E-05
9	D38	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.26E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.74E-04
9	D38	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.86E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.86E-04
9	D39	60	Passenger Car	314	0.00E+00	4.03E-06	4.38E-07	1.43E+01	2.86E-05	8.08E-02	9.08E-06	3.24E-04	3.18E-03	4.76E-04	8.86E-04	5.71E-04	5.86E-04	6.23E-05	7.19E-05	1.51E-08	3.00E-04	5.05E-05
9	D39	60	Passenger Truck	527	0.00E+00	8.55E-06	9.06E-07	3.20E+01	5.39E-05	1.38E-01	1.77E-05	1.01E-03	5.80E-03	8.64E-04	1.69E-03	1.10E-03	1.13E-03	2.55E-04	1.59E-04	2.94E-08	5.64E-04	1.70E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.17E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	D39	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.86E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.16E-04
9	D39	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.18E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.75E-04
9	D40	60	Passenger Car	210	0.00E+00	2.70E-06	2.93E-07	9.61E+00	1.91E-05	5.41E-02	6.08E-06	2.17E-04	2.13E-03	3.18E-04	5.93E-04	3.82E-04	3.92E-04	4.17E-05	4.81E-05	1.01E-08	2.01E-04	3.38E-05
9	D40	60	Passenger Truck	353	0.00E+00	5.73E-06	6.07E-07	2.14E+01	3.61E-05	9.26E-02	1.19E-05	6.74E-04	3.88E-03	5.78E-04	1.13E-03	7.37E-04	7.55E-04	1.71E-04	1.06E-04	1.97E-08	3.77E-04	1.14E-04
9	D41	60	Passenger Car	91	0.00E+00	1.17E-06	1.27E-07	4.16E+00	8.30E-06	2.35E-02	2.64E-06	9.39E-05	9.21E-04	1.38E-04	2.57E-04	1.66E-04	1.70E-04	1.81E-05	2.09E-05	4.38E-09	8.70E-05	1.47E-05
9	D41	60	Passenger Truck	153	0.00E+00	2.48E-06	2.63E-07	9.28E+00	1.57E-05	4.01E-02	5.15E-06	2.92E-04	1.68E-03	2.51E-04	4.91E-04	3.19E-04	3.27E-04	7.40E-05	4.60E-05	8.54E-09	1.64E-04	4.95E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.17E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	D41	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.16E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.18E-04
9	D41	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.23E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.32E-04
9	D42	60	Passenger Car	157	0.00E+00	2.01E-06	2.19E-07	7.17E+00	1.43E-05	4.04E-02	4.54E-06	1.62E-04	1.59E-03	2.38E-04	4.42E-04	2.85E-04	2.93E-04	3.11E-05	3.59E-05	7.54E-09	1.50E-04	2.52E-05
9	D42	60	Passenger Truck	263	0.00E+00	4.27E-06	4.53E-07	1.60E+01	2.69E-05	6.91E-02	8.86E-06	5.02E-04	2.90E-03	4.31E-04	8.45E-04	5.50E-04	5.63E-04	1.27E-04	7.93E-05	1.47E-08	2.82E-04	8.51E-05
9	D42	60	Passenger Car	145	0.00E+00	1.86E-06	2.03E-07	6.64E+00	1.32E-05	3.74E-02	4.20E-06	1.50E-04	1.47E-03	2.20E-04	4.10E-04	2.64E-04	2.71E-04	2.88E-05	3.32E-05	6.98E-09	1.39E-04	2.34E-05
9	D43	60	Passenger Truck	244	0.00E+00	3.96E-06	4.19E-07	1.48E+01	2.50E-05	6.40E-02	8.21E-06	4.65E-04	2.68E-03	3.99E-04	7.82E-04	5.09E-04	5.22E-04	1.18E-04	7.34E-05	1.36E-08	2.61E-04	7.88E-05
9	D43	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.29E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.31E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.93E-06
9	D43	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.47E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.54E-04
9	D43	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.70E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.96E-04
9	D44	60	Passenger Car	259	0.00E+00	3.32E-06	3.61E-07	1.18E+01	2.36E-05	6.67E-02	7.50E-06	2.67E-04	2.62E-03	3.92E-04	7.31E-04	4.71E-04	4.84E-04	5.14E-05	5.93E-05	1.25E-08	2.47E-04	4.17E-05
9	D44	60	Passenger Truck	435	0.00E+00	7.06E-06	7.48E-07	2.64E+01	4.45E-05	1.14E-01	1.46E-05	8.30E-04	4.79E-03	7.13E-04	1.40E-03	9.08E-04	9.30E-04	2.11E-04	1.31E-04	2.43E-08	4.65E-04	1.41E-04
9	D44	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.63E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.72E-05
9	D44	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.93E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.29E-05
9	D45	60	Passenger Car	544	0.00E+00	6.98E-06	7.58E-07	2.48E+01	4.95E-05	1.40E-01	1.57E-05	5.60E-04	5.50E-03	8.23E-04	1.53E-03	9.89E-04	1.02E-03	1.08E-04	1.24E-04	2.61E-08	5.19E-04	8.74E-05
9	D45	60	Passenger Truck	912	0.00E+00	1.48E-05	1.57E-06	5.54E+01	9.34E-05	2.39E-01	3.07E-05	1.74E-03	1.00E-02	1.50E-03	2.93E-03	1.90E-03	1.95E-03	4.42E-04	2.75E-04	5.10E-08	9.76E-04	2.95E-04
9	D45	60	Single Unit Short Haul Truck	35	0.00E+00	7.91E-06	3.27E-07	5.90E+00	5.24E-06	1.04E-02	8.56E-06	3.02E-03	8.15E-04	1.37E-04	1.06E-03	2.03E-04	2.07E-04	5.97E-04	2.40E-05	9.90E-09	8.48E-04	5.66E-04
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	3.45E-07	1.42E-08	2.51E-01	2.27E-07	4.40E-04	3.73E-07	1.31E-04	3.66E-05	6.08E-06	4.62E-05	8.84E-06	9.01E-06	2.54E-05	1.03E-06	4.21E-10	3.71E-05	2.45E-05
9	D45	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.18E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.22E-03
9	D45	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.26E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.37E-03
9	D46	60	Passenger Car	508	0.00E+00	6.52E-06	7.08E-07	2.32E+01	4.62E-05	1.31E-01	1.47E-05	5.23E-04	5.13E-03	7.69E-04	1.43E-03	9.24E-04	9.48E-04	1.01E-04	1.16E-04	2.44E-08	4.85E-04	8.17E-05
9	D46	60	Passenger Truck	852	0.00E+00	1.38E-05	1.47E-06	5.17E+01	8.72E-05	2.24E-01	2.87E-05	1.63E-03	9.38E-03	1.40E-03	2.73E-03	1.78E-03	1.82E-03	4.13E-04	2.57E-04	4.76E-08	9.12E-04	2.76E-04
9	D46	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.29E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.28E-04
9	D46	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.90E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.85E-05
9	D46	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.97E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.71E-03
9	D46	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.10E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.95E-03
9	D47	60	Passenger Car	761	0.00E+00	9.75E-06	1.06E-06	3.47E+01	6.92E-05	1.96E-01	2.20E-05	7.83E-04	7.68E-03	1.15E-03	2.14E-03	1.38E-03	1.42E-03	1.51E-04	1.74E-04	3.65E-08	7.25E-04	1.22E-04
9	D47	60	Passenger Truck	1274	0.00E+00	2.07E-05	2.19E-06	7.74E+01	1.31E-04	3.35E-01	4.29E-05	2.43E-03	1.40E-02	2.09E-03	4.09E-03	2.66E-03	2.73E-03	6.17E-04	3.84E-04	7.12E-08	1.36E-03	4.12E-04
9	D47	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.10E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.81E-04
9	D47	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.34E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.52E-05
9	D47	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.18E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.22E-03
9	D47	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.26E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.37E-03
9	D48	60	Passenger Car	210	0.00E+00	2.69E-06	2.92E-07	9.57E+00	1.91E-05	5.39E-02	6.06E-06	2.16E-04	2.12E-03	3.17E-04	5.91E-04	3.81E-04	3.91E-04	4.16E-05	4.79E-05	1.01E-08	2.00E-04	3.37E-05
9	D48	60	Passenger Truck	351	0.00E+00	5.70E-06	6.05E-07	2.13E+01	3.60E-05	9.23E-02	1.18E-05	6.71E-04	3.87E-03	5.76E-04	1.13E-03	7.34E-04	7.52E-04	1.70E-04	1.06E-04	1.96E-08	3.76E-04	1.14E-04
9	D48	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.45E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.59E-05
9	D48	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.26E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.74E-04
9	D48	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.86E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.86E-04
9	D49	60	Passenger Car	1125	0.00E+00	1.44E-05	1.57E-06	5.14E+01	1.02E-04	2.89E-01	3.25E-05	1.16E-03	1.14E-02	1.70E-03	3.17E-03	2.04E-03	2.10E-03	2.23E-04	2.57E-04	5.40E-08	1.07E-03	1.81E-04
9	D49	60	Passenger Truck	1885	0.00E+00	3.06E-05	3.24E-06	1.14E+02	1.93E-04	4.95E-01	6.35E-05	3.60E-03	2.08E-02	3.09E-03	6.05E-03	3.94E-03	4.04E-03	9.13E-04	5.68E-04	1.05E-07	2.02E-03	6.10E-04
9	D49	60	Single Unit Short Haul Truck	109	0.00E+00	2.44E-05	1.01E-06	1.82E+01	1.62E-05	3.19E-02	2.64E-05	9.31E-03	2.51E-03	4.22E-04	3.25E-03	6.26E-04	6.39E-04	1.84E-03	7.40E-05	3.05E-08	2.61E-03	1.74E-03
9	D49	60	Single Unit Long Haul Truck	5	0.00E+00	1.06E-06	4.37E-08	7.74E-01	7.00E-07	1.36E-03	1.15E-06	4.03E-04	1.13E-04	1.87E-05	1.42E-04	2.72E-05	2.78E-05	7.83E-05	3.16E-06	1.30E-09	1.14E-04	7.55E-05
9	D49	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.89E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.45E-03
9	D49	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.08E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.80E-03
9	D50	60	Passenger Car	818	0.00E+00	1.05E-05	1.14E-06	3.73E+01	7.44E-05	2.10E-01	2.36E-05	8.42E-04	8.26E-03	1.24E-03	2.30E-03	1.49E-03	1.52E-03	1.62E-04	1.87E-04	3.93E-08	7.79E-04	1.31E-04
9	D50	60	Passenger Truck	1369	0.00E+00	2.22E-05	2.36E-06	8.32E+01	1.40E-04	3.60E-01	4.61E-05	2.62E-03	1.51E-02	2.25E-03	4.40E-03	2.86E-03	2.93E-03	6.63E-04	4.13E-04	7.65E-08	1.47E-03	4.43E-04
9	D50	60	Single Unit Short Haul Truck	104	0.00E+00	2.33E-05	9.63E-07	1.74E+01	1.54E-05	3.05E-02	2.52E-05	8.90E-03	2.40E-03	4.04E-04	3.11E-03	5.99E-04	6.11E-04	1.76E-03	7.08E-05	2.92E-08	2.50E-03	1.67E-03
9	D50	60	Single Unit Long Haul Truck	5	0.00E+00	1.02E-06	4.18E-08	7.40E-01	6.70E-07	1.30E-03	1.10E-06	3.86E-04	1.08E-04	1.79E-05	1.36E-04	2.60E-05	2.66E-05	7.48E-05	3.02E-06	1.24E-09	1.09E-04	7.22E-05
9	D50	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.89E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.45E-03
9	D50	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.08E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.80E-03
9	D51	60	Passenger Car	302	0.00E+00	3.87E-06	4.21E-07	1.38E+01	2.75E-05	7.77E-02	8.73E-06	3.11E-04	3.05E-03	4.57E-04	8.51E-04	5.49E-04	5.63E-04	5.99E-05	6.91E-05	1.45E-08	2.88E-04	4.85E-05
9	D51	60	Passenger Truck	506	0.00E+00	8.22E-06	8.71E-07	3.07E+01	5.18E-05	1.33E-01	1.70E-05	9.67E-04	5.57E-03	8.30E-04	1.62E-03	1.06E-03	1.08E-03	2.45E-04	1.52E-04	2.83E-08	5.42E-04	1.64E-04
9	D51	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.17E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	D51	60	Single Unit Long Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.39E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.62E-04
9	D51	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.48E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.79E-04
9	D52	60	Passenger Car	245	0.00E+00	3.14E-06	3.41E-07	1.12E+01	2.23E-05	6.30E-02	7.08E-06	2.52E-04	2.47E-03	3.70E-04	6.90E-04	4.45E-04	4.57E-04	4.85E-05	5.60E-05	1.18E-08	2.33E-04	3.93E-05
9	D52	60	Passenger Truck	410	0.00E+00	6.66E-06	7.06E-07

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D56	80	Single Unit Short Haul Truck	53	0.00E+00	7.23E-06	2.82E-07	8.64E+00	4.90E-06	1.57E-02	7.95E-06	2.99E-03	5.92E-04	1.21E-04	9.95E-04	1.84E-04	1.88E-04	8.79E-04	3.51E-05	1.39E-08	8.08E-04	5.59E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	3.14E-07	1.21E-08	3.65E-01	2.09E-07	6.53E-04	3.45E-07	1.28E-04	2.71E-05	5.37E-06	4.34E-05	7.91E-06	8.07E-06	3.69E-05	1.49E-06	5.80E-10	3.53E-05	2.39E-05
11	D56	80	Combination Short Haul Truck	31	0.00E+00	6.47E-06	4.79E-07	1.05E+01	1.69E-08	9.86E-03	4.62E-06	9.92E-03	7.49E-04	1.36E-04	3.92E-04	1.40E-04	1.45E-04	1.67E-03	3.52E-05	0.00E+00	2.47E-04	1.87E-03
11	D56	80	Combination Long Haul Truck	29	0.00E+00	9.01E-06	5.09E-07	9.77E+00	5.73E-08	1.17E-02	7.43E-06	1.06E-02	7.74E-04	1.24E-04	8.26E-04	1.64E-04	1.71E-04	1.57E-03	3.27E-05	0.00E+00	6.55E-04	2.00E-03
11	D57	80	Passenger Car	1208	0.00E+00	1.26E-05	1.37E-06	5.12E+01	8.92E-05	2.60E-01	2.84E-05	1.25E-03	6.59E-03	1.10E-03	2.77E-03	1.78E-03	1.83E-03	1.80E-04	2.58E-04	5.51E-08	9.35E-04	1.95E-04
11	D57	80	Passenger Truck	2024	0.00E+00	2.59E-05	2.76E-06	1.16E+02	1.68E-04	4.59E-01	5.49E-05	3.38E-03	1.17E-02	1.95E-03	5.26E-03	3.42E-03	3.50E-03	8.31E-04	5.77E-04	1.05E-07	1.76E-03	5.62E-04
11	D57	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.07E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.86E-04
11	D57	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.83E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.65E-05
11	D57	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.26E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.74E-03
11	D57	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.89E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.86E-03
11	D58	80	Passenger Car	990	0.00E+00	1.03E-05	1.12E-06	4.20E+01	7.31E-05	2.13E-01	2.32E-05	1.03E-03	5.40E-03	9.04E-04	2.27E-03	1.46E-03	1.50E-03	1.47E-04	2.11E-04	4.52E-08	7.67E-04	1.60E-04
11	D58	80	Passenger Truck	1659	0.00E+00	2.12E-05	2.26E-06	9.47E+01	1.38E-04	3.76E-01	4.50E-05	2.77E-03	9.61E-03	1.60E-03	4.32E-03	2.80E-03	2.87E-03	6.81E-04	4.73E-04	8.60E-08	1.45E-03	4.61E-04
11	D58	80	Single Unit Short Haul Truck	69	0.00E+00	9.46E-06	3.69E-07	1.13E+01	6.42E-06	2.05E-02	1.04E-05	3.92E-03	7.75E-04	1.58E-04	1.30E-03	2.41E-04	2.46E-04	1.15E-03	4.59E-05	1.82E-08	1.06E-03	7.32E-04
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	4.11E-07	1.59E-08	4.78E-01	2.73E-07	8.55E-04	4.52E-07	1.67E-04	3.55E-05	7.03E-06	5.68E-05	1.04E-05	1.06E-05	4.83E-05	1.94E-06	7.59E-10	4.63E-05	3.13E-05
11	D58	80	Combination Short Haul Truck	40	0.00E+00	8.19E-06	6.06E-07	1.33E+01	2.15E-08	1.25E-02	5.86E-06	1.26E-02	9.48E-04	1.72E-04	4.97E-04	1.77E-04	1.84E-04	2.12E-03	4.46E-05	0.00E+00	3.13E-04	2.37E-03
11	D58	80	Combination Long Haul Truck	36	0.00E+00	1.14E-05	6.44E-07	1.24E+01	7.26E-08	1.48E-02	9.41E-06	1.34E-02	9.80E-04	1.57E-04	1.05E-03	2.08E-04	2.16E-04	1.99E-03	4.15E-05	0.00E+00	8.30E-04	2.53E-03
11	D59	80	Passenger Car	480	0.00E+00	5.00E-06	5.43E-07	2.03E+01	3.55E-05	1.03E-01	1.13E-05	4.98E-04	2.62E-03	4.38E-04	1.10E-03	7.08E-04	7.27E-04	7.14E-05	1.02E-04	2.19E-08	3.72E-04	7.77E-05
11	D59	80	Passenger Truck	804	0.00E+00	1.03E-05	1.10E-06	4.59E+01	6.69E-05	1.82E-01	2.18E-05	1.34E-03	4.66E-03	7.76E-04	2.09E-03	1.36E-03	1.39E-03	3.30E-04	2.29E-04	4.17E-08	7.01E-04	2.23E-04
11	D59	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.52E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.85E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.51E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	D59	80	Combination Short Haul Truck	16	0.00E+00	3.34E-06	2.47E-07	5.44E+00	8.75E-09	5.09E-03	2.39E-06	5.12E-03	3.87E-04	7.01E-05	2.03E-04	7.22E-05	7.49E-05	8.64E-04	1.82E-05	0.00E+00	1.28E-04	9.66E-04
11	D59	80	Combination Long Haul Truck	15	0.00E+00	4.66E-06	2.63E-07	5.05E+00	2.96E-08	6.03E-03	3.84E-06	5.48E-03	4.00E-04	6.40E-05	4.27E-04	8.47E-05	8.82E-05	8.10E-04	1.69E-05	0.00E+00	3.38E-04	1.03E-03
11	D60	80	Passenger Car	550	0.00E+00	5.73E-06	6.22E-07	2.33E+01	4.06E-05	1.18E-01	1.29E-05	5.71E-04	3.00E-03	5.02E-04	1.26E-03	8.12E-04	8.33E-04	8.18E-05	1.17E-04	2.51E-08	4.26E-04	8.90E-05
11	D60	80	Passenger Truck	922	0.00E+00	1.18E-05	1.26E-06	5.26E+01	7.67E-05	2.09E-01	2.50E-05	1.54E-03	5.34E-03	8.89E-04	2.40E-03	1.56E-03	1.59E-03	3.78E-04	2.63E-04	4.78E-08	8.03E-04	2.56E-04
11	D60	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.72E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.08E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.16E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.17E-05
11	D60	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.78E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.28E-03
11	D60	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.24E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.36E-03
11	D61	80	Passenger Car	179	0.00E+00	1.86E-06	2.02E-07	7.57E+00	1.32E-05	3.85E-02	4.19E-06	1.85E-04	9.74E-04	1.63E-04	4.09E-04	2.64E-04	2.71E-04	2.66E-05	3.81E-05	8.15E-09	1.38E-04	2.89E-05
11	D61	80	Passenger Truck	299	0.00E+00	3.83E-06	4.08E-07	1.71E+01	2.49E-05	6.79E-02	8.11E-06	5.00E-04	1.73E-03	2.89E-04	7.79E-04	5.05E-04	5.18E-04	1.23E-04	8.53E-05	1.55E-08	2.61E-04	8.31E-05
11	D61	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.12E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.96E-04
11	D61	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.06E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.69E-05
11	D61	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.47E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.54E-04
11	D61	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.71E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	6.99E-04
11	D62	80	Passenger Car	94	0.00E+00	9.81E-07	1.07E-07	3.99E+00	6.96E-06	2.03E-02	2.21E-06	9.77E-05	5.14E-04	8.60E-05	2.16E-04	1.39E-04	1.43E-04	1.40E-05	2.01E-05	4.30E-09	7.29E-05	1.52E-05
11	D62	80	Passenger Truck	158	0.00E+00	2.02E-06	2.15E-07	9.01E+00	1.31E-05	3.58E-02	4.28E-06	2.63E-04	9.14E-04	1.52E-04	4.11E-04	2.66E-04	2.73E-04	6.48E-05	4.50E-05	8.18E-09	1.38E-04	4.38E-05
11	D62	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.35E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.13E-05
11	D62	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.80E-04
11	D62	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	2.99E-04
10	D63	70	Passenger Car	3	0.00E+00	3.76E-08	4.09E-09	1.47E-01	2.67E-07	7.58E-04	8.48E-08	3.40E-06	2.59E-05	4.04E-06	8.27E-06	5.33E-06	5.47E-06	5.72E-07	7.38E-07	1.53E-10	2.80E-06	5.31E-07
10	D63	70	Passenger Truck	6	0.00E+00	7.92E-08	8.41E-09	3.30E-01	5.07E-07	1.34E-03	1.66E-07	9.89E-06	4.69E-05	7.26E-06	1.59E-05	1.03E-05	1.06E-05	2.50E-06	1.64E-06	2.95E-10	5.30E-06	1.66E-06
10	D64	70	Passenger Car	42	0.00E+00	4.64E-07	5.04E-08	1.81E+00	3.29E-06	9.35E-03	1.05E-06	4.20E-05	3.20E-04	4.98E-05	1.02E-04	6.58E-05	6.75E-05	7.05E-06	9.10E-06	1.89E-09	3.45E-05	6.55E-06
10	D64	70	Passenger Truck	69	0.00E+00	9.76E-07	1.04E-07	4.08E+00	6.25E-06	1.65E-02	2.05E-06	1.22E-04	5.79E-04	8.95E-05	1.96E-04	1.27E-04	1.30E-04	3.08E-05	2.03E-05	3.63E-09	6.54E-05	2.05E-05
10	D64	70	Single Unit Short Haul Truck	11	0.00E+00	1.85E-06	7.53E-08	1.73E+00	1.24E-06	3.13E-03	2.02E-06	7.34E-04	1.67E-04	3.07E-05	2.50E-04	4.76E-05	4.86E-05	1.75E-04	7.02E-06	2.83E-09	2.01E-04	1.37E-04
10	D64	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.20E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.03E-04
10	D64	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.42E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.45E-04
11	D65	80	Passenger Car	207	0.00E+00	2.16E-06	2.34E-07	8.78E+00	1.53E-05	4.46E-02	4.86E-06	2.15E-04	1.13E-03	1.89E-04	4.74E-04	3.06E-04	3.14E-04	3.08E-05	4.42E-05	9.44E-09	1.60E-04	3.35E-05
11	D65	80	Passenger Truck	347	0.00E+00	4.44E-06	4.73E-07	1.98E+01	2.89E-05	7.87E-02	9.40E-06	5.79E-04	2.01E-03	3.35E-04	9.02E-04	5.85E-04	6.00E-04	1.42E-04	9.89E-05	1.80E-08	3.02E-04	9.64E-05
11	D65	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.15E-04
11	D65	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.20E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D65	80	Combination Short Haul Truck	22	0.00E+00	4.64E-06	3.43E-07	7.54E+00	1.21E-08	7.06E-03	3.31E-06	7.11E-03	5.37E-04	9.72E-05	2.81E-04	1.00E-04	1.04E-04	1.20E-03	2.52E-05	0.00E+00	1.77E-04	1.34E-03
11	D65	80	Combination Long Haul Truck	21	0.00E+00	6.46E-06	3.65E-07	7.00E+00	4.11E-08	8.36E-03	5.33E-06	7.59E-03	5.55E-04	8.88E-05	5.92E-04	1.17E-04	1.22E-04	1.12E-03	2.35E-05	0.00E+00	4.69E-04	1.43E-03
11	D66	80	Passenger Car	255	0.00E+00	2.65E-06	2.88E-07	1.08E+01	1.88E-05	5.49E-02	5.98E-06	2.64E-04	1.39E-03	2.33E-04	5.84E-04	3.76E-04	3.86E-04	3.79E-05	5.44E-05	1.16E-08	1.97E-04	4.12E-05
11	D66	80	Passenger Truck	427	0.00E+00	5.46E-06	5.82E-07	2.44E+01	3.55E-05	9.69E-02	1.16E-05	7.13E-04	2.47E-03	4.12E-04	1.11E-03	7.21E-04	7.39E-04	1.75E-04	1.22E-04	2.21E-08	3.72E-04	1.19E-04
11	D66	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.12E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.96E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.06E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.69E-05
11	D66	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.26E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.74E-03
11	D66	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.89E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.86E-03
11	D67	80	Passenger Car	213	0.00E+00	2.22E-06	2.41E-07	9.03E+00	1.57E-05	4.59E-02	5.00E-06	2.21E-04	1.16E-03	1.95E-04	4.88E-04	3.14E-04	3.23E-04	3.17E-05	4.55E-05	9.72E-09	1.65E-04	3.45E-05
11	D67	80	Passenger Truck	357	0.00E+00	4.57E-06	4.87E-07	2.04E+01	2.97E-05	8.10E-02	9.68E-06	5.96E-04	2.07E-03	3.44E-04	9.29E-04	6.02E-04	6.18E-04	1.47E-04	1.02E-04	1.85E-08	3.11E-04	9.92E-05
11	D67	80	Single Unit Short Haul Truck	105	0.00E+00	1.45E-05	5.64E-07	1.73E+01	9.80E-06	3.14E-02	1.59E-05	5.98E-03	1.18E-03	2.42E-04	1.99E-03	3.69E-04	3.76E-04	1.76E-03	7.02E-05	2.78E-08	1.62E-03	1.12E-03
11	D67	80	Single Unit Long Haul Truck	5	0.00E+00	6.28E-07	2.42E-08	7.30E-01	4.18E-07	1.31E-03	6.90E-07	2.56E-04	5.43E-05	1.07E-05	8.68E-05	1.58E-05	1.61E-05	7.38E-05	2.97E-06	1.16E-09	7.07E-05	4.78E-05
11	D67	80	Combination Short Haul Truck	81	0.00E+00	1.67E-05	1.24E-06	2.72E+01	4.38E-08	2.55E-02	1.19E-05	2.56E-02	1.93E-03	3.50E-04	1.01E-03	3.61E-04	3.75E-04	4.32E-03	9.09E-05	0.00E+00	6.39E-04	4.83E-03
11	D67	80	Combination Long Haul Truck	74	0.00E+00	2.33E-05	1.31E-06	2.52E+01	1.48E-07	3.02E-02	1.92E-05	2.74E-02	2.00E-03	3.20E-04	2.13E-03	4.24E-04	4.41E-04	4.05E-03	8.45E-05	0.00E+00	1.69E-03	5.16E-03
11	D68	80	Passenger Car	195	0.00E+00	2.03E-06	2.21E-07	8.27E+00	1.44E-05	4.20E-02	4.58E-06	2.02E-04	1.06E-03	1.78E-04	4.47E-04	2.88E-04	2.96E-04	2.90E-05	4.16E-05	8.90E-09	1.51E-04	3.16E-05
11	D68	80	Passenger Truck	327	0.00E+00	4.18E-06	4.46E-07	1.87E+01	2.72E-05	7.42E-02	8.86E-06	5.46E-04	1.89E-03	3.15E-04	8.50E-04	5.52E-04	5.66E-04	1.34E-04	9.31E-05	1.69E-08	2.85E-04	9.08E-05
11	D68	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.18E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.07E-04
11	D68	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.29E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.74E-05
11	D68	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.17E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.21E-03
11	D68	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.25E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.36E-03
11	D69	80	Passenger Car	254	0.00E+00	2.65E-06	2.88E-07	1.08E+01	1.88E-05	5.47E-02	5.97E-06	2.64E-04	1.39E-03	2.32E-04	5.82E-04	3.75E-04	3.85E-04	3.78E-05	5.42E-05	1.16E-08	1.97E-04	4.11E-05
11	D69	80	Passenger Truck	426	0.00E+00	5.45E-06	5.81E-07	2.43E+01	3.54E-05	9.66E-02	1.15E-05	7.11E-04	2.47E-03	4.11E-04	1.11E-03	7.19E-04	7.37E-04	1.75E-04	1.21E-04	2.21E-08	3.71E-04	1.18E-04
11	D69	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.03E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.93E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.41E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.25E-06
11	D69	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.46E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	D69	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.83E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
11	D70	80	Passenger Car	102	0.00E+00	1.06E-06	1.15E-07	4.31E+00	7.51E-06	2.19E-02	2.39E-06	1.05E-04	5.54E-04	9.28E-05	2.33E-04	1.50E-04	1.54E-04	1.51E-05	2.17E-05	4.64E-09	7.87E-05	1.64E-05
11	D70	80	Passenger Truck	170	0.00E+00	2.18E-06	2.32E-07	9.73E+00	1.42E-05	3.86E-02	4.62E-06	2.84E-04	9.87E-04	1.64E-04	4.43E-04	2.87E-04	2.95E-04	6.99E-05	4.85E-05	8.83E-09	1.48E-04	4.73E-05
11	D70	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.39E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.47E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.02E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.91E-05
11	D70	80	Combination Short Haul Truck	26	0.00E+00	5.39E-06	3.99E-07	8.77E+00	1.41E-08	8.21E-03	3.85E-06	8.27E-03	6.24E-04	1.13E-04	3.27E-04	1.16E-04	1.21E-04	1.39E-03	2.93E-05	0.00E+00	2.06E-04	1.56E-03
11	D70	80	Combination Long Haul Truck	24	0.00E+00	7.51E-06	4.24E-07	8.14E+00	4.78E-08	9.73E-03	6.19E-06	8.83E-03	6.45E-04	1.03E-04	6.88E-04	1.37E-04	1.42E-04	1.31E-03	2.73E-05	0.00E+00	5.46E-04	1.66E-03
11	D71	70	Passenger Car

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D74	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.22E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.30E-03
11	D75	80	Passenger Car	149	0.00E+00	1.55E-06	1.69E-07	6.32E+00	1.10E-05	3.21E-02	3.50E-06	1.55E-04	8.13E-04	1.36E-04	3.41E-04	2.20E-04	2.26E-04	2.22E-05	3.18E-05	6.80E-09	1.15E-04	2.41E-05
11	D75	80	Passenger Truck	250	0.00E+00	3.20E-06	3.41E-07	1.43E+01	2.08E-05	5.67E-02	6.77E-06	4.17E-04	1.45E-03	2.41E-04	6.50E-04	4.22E-04	4.32E-04	1.03E-04	7.12E-05	1.29E-08	2.18E-04	6.94E-05
11	D75	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.70E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.72E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.95E-06
11	D75	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.80E-04
11	D75	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	2.99E-04
11	D76	80	Passenger Car	99	0.00E+00	1.03E-06	1.12E-07	4.18E+00	7.29E-06	2.12E-02	2.32E-06	1.02E-04	5.38E-04	9.01E-05	2.26E-04	1.46E-04	1.49E-04	1.47E-05	2.11E-05	4.50E-09	7.64E-05	1.60E-05
11	D76	80	Passenger Truck	165	0.00E+00	2.12E-06	2.25E-07	9.44E+00	1.38E-05	3.75E-02	4.48E-06	2.76E-04	9.58E-04	1.59E-04	4.30E-04	2.79E-04	2.86E-04	6.79E-05	4.71E-05	8.57E-09	1.44E-04	4.59E-05
11	D76	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.35E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.13E-05
11	D76	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.80E-04
11	D76	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	2.99E-04
11	D77	80	Passenger Car	196	0.00E+00	2.04E-06	2.22E-07	8.32E+00	1.45E-05	4.22E-02	4.61E-06	2.04E-04	1.07E-03	1.79E-04	4.49E-04	2.90E-04	2.97E-04	2.92E-05	4.19E-05	8.95E-09	1.52E-04	3.18E-05
11	D77	80	Passenger Truck	329	0.00E+00	4.21E-06	4.48E-07	1.88E+01	2.74E-05	7.46E-02	8.91E-06	5.49E-04	1.91E-03	3.17E-04	8.55E-04	5.55E-04	5.69E-04	1.35E-04	9.37E-05	1.70E-08	2.86E-04	9.13E-05
11	D77	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.14E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.13E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.88E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.12E-06
11	D77	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.31E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.23E-04
11	D77	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.53E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.65E-04
11	D78	80	Passenger Car	72	0.00E+00	7.51E-07	8.16E-08	3.06E+00	5.33E-06	1.55E-02	1.69E-06	7.48E-05	3.93E-04	6.59E-05	1.65E-04	1.06E-04	1.09E-04	1.07E-05	1.54E-05	3.29E-09	5.59E-05	1.17E-05
11	D78	80	Passenger Truck	121	0.00E+00	1.55E-06	1.65E-07	6.90E+00	1.01E-05	2.74E-02	3.28E-06	2.02E-04	7.00E-04	1.17E-04	3.14E-04	2.04E-04	2.09E-04	4.96E-05	3.44E-05	6.26E-09	1.05E-04	3.36E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	5.98E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D78	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.31E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.36E-04
11	D78	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.47E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.66E-04
10	D79	70	Passenger Car	227	0.00E+00	2.53E-06	2.75E-07	9.89E+00	1.80E-05	5.11E-02	5.71E-06	2.29E-04	1.75E-03	2.72E-04	5.57E-04	3.59E-04	3.68E-04	3.85E-05	4.97E-05	1.03E-08	1.88E-04	3.57E-05
10	D79	70	Passenger Truck	379	0.00E+00	5.33E-06	5.66E-07	2.23E+01	3.41E-05	9.02E-02	1.12E-05	6.66E-04	3.16E-03	4.89E-04	1.07E-03	6.94E-04	7.11E-04	1.68E-04	1.11E-04	1.98E-08	3.57E-04	1.12E-04
10	D79	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.00E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.62E-04
10	D79	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.29E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.42E-05
10	D79	70	Combination Short Haul Truck	39	0.00E+00	1.01E-05	7.51E-07	1.36E+01	2.56E-08	1.46E-02	7.19E-06	1.50E-02	1.42E-03	2.37E-04	6.06E-04	2.19E-04	2.27E-04	2.17E-03	4.56E-05	0.00E+00	3.79E-04	2.83E-03
10	D79	70	Combination Long Haul Truck	36	0.00E+00	1.38E-05	7.87E-07	1.28E+01	8.68E-08	1.74E-02	1.14E-05	1.60E-02	1.48E-03	2.23E-04	1.26E-03	2.53E-04	2.64E-04	2.06E-03	4.29E-05	0.00E+00	9.95E-04	3.02E-03
10	D80	70	Passenger Car	471	0.00E+00	5.26E-06	5.72E-07	2.06E+01	3.74E-05	1.06E-01	1.19E-05	4.76E-04	3.63E-03	5.65E-04	1.16E-03	7.46E-04	7.66E-04	8.00E-05	1.03E-04	2.14E-08	3.92E-04	7.43E-05
10	D80	70	Passenger Truck	789	0.00E+00	1.11E-05	1.18E-06	4.63E+01	7.10E-05	1.88E-01	2.32E-05	1.38E-03	6.57E-03	1.02E-03	2.22E-03	1.44E-03	1.48E-03	3.50E-04	2.30E-04	4.12E-08	7.42E-04	2.32E-04
10	D80	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.67E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.12E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.18E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.34E-05
10	D80	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.08E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.03E-03
10	D80	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.16E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.18E-03
9	F31	60	Passenger Car	932	0.00E+00	1.19E-05	1.30E-06	4.25E+01	8.47E-05	2.40E-01	2.69E-05	9.59E-04	9.41E-03	1.41E-03	2.63E-03	1.69E-03	1.74E-03	1.85E-04	2.13E-04	4.47E-08	8.88E-04	1.50E-04
9	F31	60	Passenger Truck	1560	0.00E+00	2.53E-05	2.69E-06	9.48E+01	1.60E-04	4.10E-01	5.26E-05	2.98E-03	1.72E-02	2.56E-03	5.01E-03	3.26E-03	3.34E-03	7.56E-04	4.70E-04	8.72E-08	1.67E-03	5.05E-04
9	F31	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.43E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	F31	60	Combination Short Haul Truck	29	0.00E+00	8.40E-06	6.17E-07	1.01E+01	2.30E-08	1.25E-02	6.03E-06	1.27E-02	1.47E-03	2.29E-04	5.17E-04	1.80E-04	1.87E-04	1.61E-03	3.39E-05	0.00E+00	3.30E-04	2.40E-03
9	F31	60	Combination Long Haul Truck	26	0.00E+00	1.15E-05	6.30E-07	9.57E+00	7.79E-08	1.51E-02	9.65E-06	1.36E-02	1.54E-03	2.22E-04	1.09E-03	2.06E-04	2.14E-04	1.54E-03	3.21E-05	0.00E+00	8.80E-04	2.55E-03
9	F32	60	Passenger Car	898	0.00E+00	1.15E-05	1.25E-06	4.10E+01	8.16E-05	2.31E-01	2.59E-05	9.24E-04	9.07E-03	1.36E-03	2.53E-03	1.63E-03	1.67E-03	1.78E-04	2.05E-04	4.31E-08	8.56E-04	1.44E-04
9	F32	60	Passenger Truck	1503	0.00E+00	2.44E-05	2.59E-06	9.13E+01	1.54E-04	3.95E-01	5.06E-05	2.87E-03	1.66E-02	2.47E-03	4.83E-03	3.14E-03	3.22E-03	7.28E-04	4.53E-04	8.40E-08	1.61E-03	4.87E-04
9	F32	60	Single Unit Short Haul Truck	32	0.00E+00	7.06E-06	2.92E-07	5.26E+00	4.68E-06	9.25E-03	7.63E-06	2.70E-03	7.27E-04	1.22E-04	9.42E-04	1.81E-04	1.85E-04	5.33E-04	2.14E-05	8.83E-09	7.57E-04	5.05E-04
9	F32	60	Single Unit Long Haul Truck	1	0.00E+00	3.08E-07	1.27E-08	2.24E-01	2.03E-07	3.93E-04	3.33E-07	1.17E-04	3.27E-05	5.42E-06	4.12E-05	7.88E-06	8.04E-06	2.27E-05	9.15E-07	3.76E-10	3.31E-05	2.18E-05
9	F32	60	Combination Short Haul Truck	32	0.00E+00	9.31E-06	6.84E-07	1.12E+01	2.55E-08	1.39E-02	6.69E-06	1.41E-02	1.63E-03	2.54E-04	5.74E-04	2.00E-04	2.08E-04	1.79E-03	3.76E-05	0.00E+00	3.66E-04	2.66E-03
9	F32	60	Combination Long Haul Truck	29	0.00E+00	1.28E-05	6.99E-07	1.06E+01	8.64E-08	1.67E-02	1.07E-05	1.50E-02	1.70E-03	2.46E-04	1.21E-03	2.28E-04	2.38E-04	1.70E-03	3.56E-05	0.00E+00	9.76E-04	2.83E-03
9	F33	60	Passenger Car	500	0.00E+00	6.41E-06	6.96E-07	2.28E+01	4.55E-05	1.29E-01	1.44E-05	5.15E-04	5.05E-03	7.56E-04	1.41E-03	9.08E-04	9.32E-04	9.91E-05	1.14E-04	2.40E-08	4.76E-04	8.03E-05
9	F33	60	Passenger Truck	837	0.00E+00	1.36E-05	1.44E-06	5.08E+01	8.58E-05	2.20E-01	2.82E-05	1.60E-03	9.22E-03	1.37E-03	2.69E-03	1.75E-03	1.79E-03	4.06E-04	2.52E-04	4.68E-08	8.96E-04	2.71E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.17E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	F33	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.86E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.16E-04
9	F33	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.18E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.75E-04
9	F34	60	Passenger Car	304	0.00E+00	3.89E-06	4.23E-07	1.39E+01	2.76E-05	7.81E-02	8.78E-06	3.13E-04	3.07E-03	4.60E-04	8.56E-04	5.52E-04	5.67E-04	6.03E-05	6.95E-05	1.46E-08	2.90E-04	4.88E-05
9	F34	60	Passenger Truck	509	0.00E+00	8.27E-06	8.76E-07	3.09E+01	5.22E-05	1.34E-01	1.71E-05	9.73E-04	5.61E-03	8.35E-04	1.63E-03	1.06E-03	1.09E-03	2.47E-04	1.53E-04	2.85E-08	5.45E-04	1.65E-04
54	G01	80	Passenger Car	303	0.00E+00	3.08E-06	3.35E-07	1.29E+01	2.18E-05	6.24E-02	6.94E-06	3.16E-04	1.74E-03	2.86E-04	6.77E-04	4.37E-04	4.48E-04	4.51E-05	6.51E-05	1.35E-08	2.29E-04	4.93E-05
54	G01	80	Passenger Truck	508	0.00E+00	6.40E-06	6.82E-07	2.93E+01	4.17E-05	1.14E-01	1.36E-05	8.49E-04	3.11E-03	5.09E-04	1.30E-03	8.45E-04	8.66E-04	2.08E-04	1.46E-04	2.59E-08	4.36E-04	1.41E-04
54	G01	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.15E-04
54	G01	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.20E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
54	G01	80	Combination Short Haul Truck	39	0.00E+00	7.98E-06	5.91E-07	1.30E+01	2.09E-08	1.22E-02	5.70E-06	1.22E-02	9.24E-04	1.67E-04	4.84E-04	1.72E-04	1.79E-04	2.06E-03	4.34E-05	0.00E+00	3.05E-04	2.31E-03
54	G01	80	Combination Long Haul Truck	35	0.00E+00	1.11E-05	6.27E-07	1.20E+01	7.07E-08	1.44E-02	9.17E-06	1.31E-02	9.55E-04	1.53E-04	1.02E-03	2.02E-04	2.11E-04	1.93E-03	4.04E-05	0.00E+00	8.08E-04	2.46E-03
54	G02	80	Passenger Car	392	0.00E+00	3.98E-06	4.32E-07	1.67E+01	2.82E-05	8.07E-02	8.97E-06	4.08E-04	2.25E-03	3.70E-04	8.75E-04	5.64E-04	5.79E-04	5.83E-05	8.41E-05	1.74E-08	2.96E-04	6.37E-05
54	G02	80	Passenger Truck	656	0.00E+00	8.27E-06	8.81E-07	3.79E+01	5.38E-05	1.47E-01	1.75E-05	1.10E-03	4.01E-03	6.58E-04	1.68E-03	1.09E-03	1.12E-03	2.69E-04	1.89E-04	3.35E-08	5.63E-04	1.82E-04
54	G02	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.74E-04
54	G02	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.27E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
54	G02	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.46E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
54	G02	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.83E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
16	G03	100	Passenger Car	200	0.00E+00	1.87E-06	2.03E-07	8.16E+00	1.33E-05	3.98E-02	4.21E-06	2.15E-04	6.38E-04	1.22E-04	4.11E-04	2.65E-04	2.72E-04	2.37E-05	4.13E-05	8.67E-09	1.39E-04	3.36E-05
16	G03	100	Passenger Truck	334	0.00E+00	3.86E-06	4.14E-07	1.88E+01	2.58E-05	7.69E-02	8.33E-06	5.38E-04	1.11E-03	2.16E-04	8.03E-04	5.20E-04	5.33E-04	1.23E-04	9.42E-05	1.72E-08	2.70E-04	8.83E-05
16	G03	100	Single Unit Short Haul Truck	253	0.00E+00	2.40E-05	8.88E-07	4.13E+01	1.84E-05	8.52E-02	2.72E-05	1.06E-02	1.63E-03	4.23E-04	3.45E-03	6.36E-04	6.47E-04	4.23E-03	1.67E-04	6.82E-08	2.80E-03	1.97E-03
16	G03	100	Single Unit Long Haul Truck	11	0.00E+00	1.04E-06	3.75E-08	1.74E+00	7.61E-07	3.49E-03	1.18E-06	4.44E-04	7.43E-05	1.84E-05	1.51E-04	2.68E-05	2.73E-05	1.77E-04	7.05E-06	2.79E-09	1.23E-04	8.28E-05
16	G03	100	Combination Short Haul Truck	30	0.00E+00	4.27E-06	3.15E-07	9.93E+00	1.13E-08	7.68E-03	3.05E-06	7.65E-03	2.89E-04	7.32E-05	2.60E-04	9.20E-05	9.55E-05	1.58E-03	3.32E-05	0.00E+00	1.64E-04	1.44E-03
16	G03	100	Combination Long Haul Truck	27	0.00E+00	6.03E-06	3.40E-07	9.00E+00	3.84E-08	8.94E-03	4.97E-06	8.19E-03	2.89E-04	5.89E-05	5.53E-04	1.10E-04	1.14E-04	1.44E-03	3.02E-05	0.00E+00	4.39E-04	1.54E-03
16	G04	100	Passenger Car	187	0.00E+00	1.75E-06	1.91E-07	7.66E+00	1.24E-05	3.73E-02	3.95E-06	2.02E-04	5.99E-04	1.15E-04	3.86E-04	2.49E-04	2.55E-04	2.23E-05	3.87E-05	8.13E-09	1.30E-04	3.15E-05
16	G04	100	Passenger Truck	314	0.00E+00	3.62E-06	3.88E-07	1.76E+01	2.42E-05	7.21E-02	7.81E-06	5.04E-04	1.05E-03	2.03E-04	7.53E-04	4.88E-04	5.00E-04	1.16E-04	8.84E-05	1.61E-08	2.53E-04	8.28E-05
16	G04	100	Single Unit Short Haul Truck	130	0.00E+00	1.24E-05	4.57E-07	2.13E+01	9.47E-06	4.39E-02	1.40E-05	5.45E-03	8.42E-04	2.18E-04	1.77E-03	3.28E-04	3.33E-04	2.18E-03	8.61E-05	3.51E-08	1.44E-03	1.02E-03
16	G04	100	Single Unit Long Haul Truck	6	0.00E+00	5.38E-07	1.93E-08	8.95E-01	3.92E-07	1.80E-03	6.08E-07	2.29E-04	3.83E-05	9.46E-06	7.76E-05	1.38E-05	1.41E-05	9.10E-05	3.63E-06	1.44E-09	6.35E-05	4.26E-05
16	G04	100	Combination Short Haul Truck	42	0.00E+00	5.99E-06	4.42E-07	1.39E+01	1.59E-08	1.08E-02	4.29E-06	1.07E-02	4.05E-04	1.03E-04	3.65E-04	1.29E-04	1.34E-04	2.22E-03	4.66E-05	0.00E+00	2.31E-04	2.02E-03
16	G04	100	Combination Long Haul Truck	38	0.00E+00	8.46E-06	4.77E-07	1.26E+01	5.39E-08	1.25E-02	6.98E-06	1.15E-02	4.06E-04	8.27E-05	7.76E-04	1.54E-04	1.60E-04	2.03E-03	4.23E-05	0.00E+00	6.16E-04	2.17E-03
16	G05	100	Passenger Car	229	0.00E+00	2.14E-06	2.33E-07	9.35E+00	1.52E-05	4.56E-02	4.83E-06	2.47E-04	7.31E-04	1.40E-04	4.71E-04	3.04E-04	3.12E-04	2.72E-05	4.73E-05	9.93E-09	1.59E-04	3.85E-05
16	G05	100	Passenger Truck	383	0.00E+00	4.42E-06	4.74E-07	2.16E+01	2.95E-05	8.81E-02	9.54E-06	6.16E-04	1.28E-03	2.48E-04	9.20E-04	5.96E-04	6.11E-04	1.41E-04	1.08E-04	1.97E-08	3.09E-04	1.01E-04
16	G05	100	Single Unit Short Haul Truck	30	0.00E+00	2.82E-06	1.04E-07	4.85E+00	2.16E-06	1.00E-02	3.20E-06	1.24E-03	1.92E-04	4.97E-05	4.05E-04	7.47E-05	7.60E-05	4.97E-04	1.96E-05	8.01E-09	3.29E-04	2.32E-04
16	G05	100	Single Unit Long Haul Truck	1	0.00E+00	1.23E-07	4.41E-09	2.04E-01	8.93E-08	4.10E-04	1.39E-07	5.21E-05	8.72E-06	2.16E-06	1.77E-05	3.15E-06	3.21E-06	2.07E-05	8.28E-07	3.28E-10	1.45E-05	9.72E-06
16	G05	100	Combination Short Haul Truck	37	0

Appendix F.1.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	G10	70	Combination Long Haul Truck	20	0.00E+00	7.57E-06	4.30E-07	7.00E+00	4.75E-08	9.51E-03	6.22E-06	8.77E-03	8.10E-04	1.22E-04	6.88E-04	1.38E-04	1.44E-04	1.12E-03	2.35E-05	0.00E+00	5.44E-04	1.65E-03
16	H01	100	Passenger Car	3003	0.00E+00	2.81E-05	3.05E-06	1.23E+02	2.00E-04	5.99E-01	6.34E-05	3.24E-03	9.60E-03	1.84E-03	6.18E-03	3.99E-03	4.09E-03	3.57E-04	6.21E-04	1.30E-07	2.09E-03	5.05E-04
16	H01	100	Passenger Truck	5030	0.00E+00	5.81E-05	6.22E-06	2.83E+02	3.87E-04	1.16E+00	1.25E-04	8.09E-03	1.68E-02	3.25E-03	1.21E-02	7.82E-03	8.02E-03	1.85E-03	1.42E-03	2.58E-07	4.06E-03	1.33E-03
16	H01	100	Single Unit Short Haul Truck	490	0.00E+00	4.66E-05	1.72E-06	8.01E+01	3.57E-05	1.65E-01	5.28E-05	2.05E-02	3.17E-03	8.20E-04	6.68E-03	1.23E-03	1.26E-03	8.20E-03	3.24E-04	1.32E-07	5.43E-03	3.83E-03
16	H01	100	Single Unit Long Haul Truck	22	0.00E+00	2.02E-06	7.28E-08	3.37E+00	1.48E-06	6.76E-03	2.29E-06	8.61E-04	1.44E-04	3.56E-05	2.92E-04	5.20E-05	5.30E-05	3.43E-04	1.37E-05	5.41E-09	2.39E-04	1.61E-04
16	H01	100	Combination Short Haul Truck	604	0.00E+00	8.63E-05	6.38E-06	2.01E+02	2.29E-07	1.55E-01	6.18E-05	1.55E-01	5.85E-03	1.48E-03	5.26E-03	1.86E-03	1.93E-03	3.20E-02	6.72E-04	0.00E+00	3.33E-03	2.92E-02
16	H01	100	Combination Long Haul Truck	550	0.00E+00	1.22E-04	6.88E-06	1.82E+02	7.78E-07	1.81E-01	1.01E-04	1.66E-01	5.86E-03	1.19E-03	1.12E-02	2.22E-03	2.31E-03	2.92E-02	6.10E-04	0.00E+00	8.88E-03	3.12E-02
16	H02	100	Passenger Car	2361	0.00E+00	2.21E-05	2.40E-06	9.65E+01	1.57E-04	4.71E-01	4.98E-05	2.55E-03	7.55E-03	1.45E-03	4.86E-03	3.13E-03	3.22E-03	2.81E-04	4.88E-04	1.03E-07	1.64E-03	3.97E-04
16	H02	100	Passenger Truck	3955	0.00E+00	4.57E-05	4.89E-06	2.22E+02	3.05E-04	9.09E-01	9.85E-05	6.36E-03	1.32E-02	2.56E-03	9.50E-03	6.15E-03	6.31E-03	1.46E-03	1.11E-03	2.03E-07	3.19E-03	1.04E-03
16	H02	100	Single Unit Short Haul Truck	322	0.00E+00	3.06E-05	1.13E-06	5.25E+01	2.34E-05	1.08E-01	3.47E-05	1.35E-02	2.08E-03	5.38E-04	4.39E-03	8.10E-04	8.24E-04	5.38E-03	2.13E-04	8.68E-08	3.56E-03	2.51E-03
16	H02	100	Single Unit Long Haul Truck	14	0.00E+00	1.33E-06	4.78E-08	2.21E+00	9.68E-07	4.44E-03	1.50E-06	5.65E-04	9.45E-05	2.34E-05	1.92E-04	3.41E-05	3.48E-05	2.25E-04	8.97E-06	3.55E-09	1.57E-04	1.05E-04
16	H02	100	Combination Short Haul Truck	434	0.00E+00	6.20E-05	4.58E-06	1.44E+02	1.65E-07	1.12E-01	4.44E-05	1.11E-01	4.20E-03	1.07E-03	3.78E-03	1.34E-03	1.39E-03	2.30E-02	4.83E-04	0.00E+00	2.39E-03	2.10E-02
16	H02	100	Combination Long Haul Truck	395	0.00E+00	8.77E-05	4.94E-06	1.31E+02	5.59E-07	1.30E-01	7.23E-05	1.19E-01	4.21E-03	8.57E-04	8.04E-03	1.59E-03	1.66E-03	2.10E-02	4.39E-04	0.00E+00	6.38E-03	2.24E-02
16	H03	100	Passenger Car	2636	0.00E+00	2.47E-05	2.68E-06	1.08E+02	1.75E-04	5.26E-01	5.56E-05	2.84E-03	8.43E-03	1.61E-03	5.43E-03	3.50E-03	3.59E-03	3.13E-04	5.45E-04	1.14E-07	1.84E-03	4.43E-04
16	H03	100	Passenger Truck	4414	0.00E+00	5.10E-05	5.46E-06	2.48E+02	3.40E-04	1.02E+00	1.10E-04	7.10E-03	1.47E-02	2.86E-03	1.06E-02	6.86E-03	7.04E-03	1.63E-03	1.24E-03	2.27E-07	3.56E-03	1.17E-03
16	H03	100	Single Unit Short Haul Truck	312	0.00E+00	2.97E-05	1.10E-06	5.10E+01	2.27E-05	1.05E-01	3.36E-05	1.31E-02	2.02E-03	5.22E-04	4.25E-03	7.86E-04	7.99E-04	5.22E-03	2.06E-04	8.42E-08	3.46E-03	2.44E-03
16	H03	100	Single Unit Long Haul Truck	14	0.00E+00	1.29E-06	4.63E-08	2.14E+00	9.39E-07	4.31E-03	1.46E-06	5.48E-04	9.17E-05	2.27E-05	1.86E-04	3.31E-05	3.37E-05	2.18E-04	8.70E-06	3.45E-09	1.52E-04	1.02E-04
16	H03	100	Combination Short Haul Truck	387	0.00E+00	5.54E-05	4.09E-06	1.29E+02	1.47E-07	9.97E-02	3.96E-05	9.94E-02	3.75E-03	9.51E-04	3.37E-03	1.19E-03	1.24E-03	2.05E-02	4.31E-04	0.00E+00	2.13E-03	1.87E-02
16	H03	100	Combination Long Haul Truck	353	0.00E+00	7.82E-05	4.41E-06	1.17E+02	4.99E-07	1.16E-01	6.46E-05	1.06E-01	3.76E-03	7.65E-04	7.18E-03	1.42E-03	1.48E-03	1.87E-02	3.91E-04	0.00E+00	5.70E-03	2.00E-02
16	H04	100	Passenger Car	2803	0.00E+00	2.62E-05	2.85E-06	1.15E+02	1.86E-04	5.59E-01	5.91E-05	3.02E-03	8.96E-03	1.72E-03	5.77E-03	3.72E-03	3.82E-03	3.33E-04	5.79E-04	1.22E-07	1.95E-03	4.72E-04
16	H04	100	Passenger Truck	4693	0.00E+00	5.42E-05	5.81E-06	2.64E+02	3.61E-04	1.08E+00	1.17E-04	7.55E-03	1.56E-02	3.04E-03	1.13E-02	7.30E-03	7.48E-03	1.73E-03	1.32E-03	2.41E-07	3.79E-03	1.24E-03
16	H04	100	Single Unit Short Haul Truck	268	0.00E+00	2.55E-05	9.42E-07	4.38E+01	1.95E-05	9.04E-02	2.89E-05	1.12E-02	1.73E-03	4.49E-04	3.65E-03	6.75E-04	6.87E-04	4.49E-03	1.77E-04	7.24E-08	2.97E-03	2.09E-03
16	H04	100	Single Unit Long Haul Truck	12	0.00E+00	1.11E-06	3.98E-08	1.84E+00	8.07E-07	3.70E-03	1.25E-06	4.71E-04	7.88E-05	1.95E-05	1.60E-04	2.85E-05	2.90E-05	1.87E-04	7.47E-06	2.96E-09	1.31E-04	8.78E-05
16	H04	100	Combination Short Haul Truck	474	0.00E+00	6.78E-05	5.01E-06	1.58E+02	1.80E-07	1.22E-01	4.85E-05	1.22E-01	4.59E-03	1.16E-03	4.13E-03	1.46E-03	1.52E-03	2.51E-02	5.28E-04	0.00E+00	2.61E-03	2.29E-02
16	H04	100	Combination Long Haul Truck	432	0.00E+00	9.58E-05	5.40E-06	1.43E+02	6.11E-07	1.42E-01	7.91E-05	1.30E-01	4.60E-03	9.37E-04	8.79E-03	1.74E-03	1.81E-03	2.30E-02	4.79E-04	0.00E+00	6.98E-03	2.45E-02
56	H05	100	Passenger Car	1064	0.00E+00	9.96E-06	1.08E-06	4.35E+01	7.07E-05	2.12E-01	2.25E-05	1.15E-03	3.40E-03	6.52E-04	2.19E-03	1.41E-03	1.45E-03	1.27E-04	2.20E-04	4.62E-08	7.41E-04	1.79E-04
56	H05	100	Passenger Truck	1782	0.00E+00	2.06E-05	2.20E-06	1.00E+02	1.37E-04	4.10E-01	4.44E-05	2.87E-03	5.94E-03	1.15E-03	4.28E-03	2.77E-03	2.84E-03	6.56E-04	5.02E-04	9.15E-08	1.44E-03	4.71E-04
56	H05	100	Single Unit Short Haul Truck	132	0.00E+00	1.26E-05	4.64E-07	2.16E+01	9.61E-06	4.46E-02	1.42E-05	5.53E-03	8.54E-04	2.21E-04	1.80E-03	3.33E-04	3.38E-04	2.21E-03	8.74E-05	3.57E-08	1.46E-03	1.03E-03
56	H05	100	Single Unit Long Haul Truck	6	0.00E+00	5.46E-07	1.96E-08	9.08E-01	3.98E-07	1.82E-03	6.17E-07	2.32E-04	3.88E-05	9.60E-06	7.87E-05	1.40E-05	1.43E-05	9.23E-05	3.68E-06	1.46E-09	6.45E-05	4.33E-05
56	H05	100	Combination Short Haul Truck	171	0.00E+00	2.45E-05	1.81E-06	5.70E+01	6.49E-08	4.40E-02	1.75E-05	4.39E-02	1.66E-03	4.20E-04	1.49E-03	5.28E-04	5.48E-04	9.06E-03	1.91E-04	0.00E+00	9.43E-04	8.27E-03
56	H05	100	Combination Long Haul Truck	156	0.00E+00	3.46E-05	1.95E-06	5.16E+01	2.20E-07	5.13E-02	2.85E-05	4.70E-02	1.66E-03	3.38E-04	3.17E-03	6.29E-04	6.55E-04	8.28E-03	1.73E-04	0.00E+00	2.52E-03	8.85E-03
56	H06	100	Passenger Car	1739	0.00E+00	1.63E-05	1.77E-06	7.11E+01	1.15E-04	3.47E-01	3.67E-05	1.88E-03	5.56E-03	1.07E-03	3.58E-03	2.31E-03	2.37E-03	2.07E-04	3.59E-04	7.55E-08	1.21E-03	2.93E-04
56	H06	100	Passenger Truck	2911	0.00E+00	3.36E-05	3.60E-06	1.64E+02	2.24E-04	6.70E-01	7.25E-05	4.68E-03	9.70E-03	1.88E-03	6.99E-03	4.53E-03	4.64E-03	1.07E-03	8.21E-04	1.49E-07	2.35E-03	7.69E-04
56	H06	100	Single Unit Short Haul Truck	136	0.00E+00	1.29E-05	4.78E-07	2.22E+01	9.89E-06	4.58E-02	1.47E-05	5.69E-03	8.79E-04	2.27E-04	1.85E-03	3.42E-04	3.48E-04	2.27E-03	8.99E-05	3.67E-08	1.51E-03	1.06E-03
56	H06	100	Single Unit Long Haul Truck	6	0.00E+00	5.62E-07	2.02E-08	9.34E-01	4.09E-07	1.88E-03	6.35E-07	2.39E-04	3.99E-05	9.88E-06	8.10E-05	1.44E-05	1.47E-05	9.50E-05	3.79E-06	1.50E-09	6.63E-05	4.45E-05
56	H06	100	Combination Short Haul Truck	303	0.00E+00	4.33E-05	3.20E-06	1.01E+02	1.15E-07	7.80E-02	3.10E-05	7.78E-02	2.93E-03	7.44E-04	2.64E-03	9.34E-04	9.70E-04	1.60E-02	3.37E-04	0.00E+00	1.67E-03	1.47E-02
56	H06	100	Combination Long Haul Truck	276	0.00E+00	6.12E-05	3.45E-06	9.14E+01	3.90E-07	9.08E-02	5.05E-05	8.32E-02	2.94E-03	5.99E-04	5.62E-03	1.11E-03	1.16E-03	1.47E-02	3.06E-04	0.00E+00	4.46E-03	1.57E-02
16	H07	100	Passenger Car	3152	0.00E+00	2.95E-05	3.21E-06	1.29E+02	2.09E-04	6.29E-01	6.65E-05	3.40E-03	1.01E-02	1.93E-03	6.49E-03	4.18E-03	4.29E-03	3.75E-04	6.52E-04	1.37E-07	2.19E-03	5.30E-04
16	H07	100	Passenger Truck	5279	0.00E+00	6.10E-05	6.53E-06	2.97E+02	4.07E-04	1.21E+00	1.31E-04	8.49E-03	1.76E-02	3.41E-03	1.27E-02	8.21E-03	8.42E-03	1.94E-03	1.49E-03	2.71E-07	4.26E-03	1.39E-03
16	H07	100	Single Unit Short Haul Truck	311	0.00E+00	2.96E-05	1.09E-06	5.08E+01	2.26E-05	1.05E-01	3.35E-05	1.30E-02	2.01E-03	5.21E-04	4.24E-03	7.83E-04	7.97E-04	5.21E-03	2.06E-04	8.40E-08	3.44E-03	2.43E-03
16	H07	100	Single Unit Long Haul Truck	14	0.00E+00	1.29E-06	4.62E-08	2.14E+00	9.36E-07	4.29E-03	1.45E-06	5.47E-04	9.14E-05	2.26E-05	1.85E-04	3.30E-05	3.36E-05	2.17E-04	8.68E-06	3.44E-09	1.52E-04	1.02E-04
16	H07	100	Combination Short Haul Truck	534	0.00E+00	7.64E-05	5.64E-06	1.78E+02	2.03E-07	1.38E-01	5.47E-05	1.37E-01	5.17E-03	1.31E-03	4.65E-03	1.65E-03	1.71E-03	2.83E-02	5.95E-04	0.00E+00	2.94E-03	2.58E-02
16	H07	100	Combination Long Haul Truck	487	0.00E+00	1.08E-04	6.09E-06	1.61E+02	6.88E-07	1.60E-01	8.91E-05	1.47E-01	5.18E-03	1.06E-03	9.91E-03	1.96E-03	2.04E-03	2.59E-02	5.40E-04	0.00E+00	7.86E-03	2.76E-02
52	H08	60	Passenger Car	275	0.00E+00	3.24E-06	3.52E-07	1.25E+01	2.30E-05	6.45E-02	7.29E-06	2.73E-04	2.70E-03	4.04E-04	7.11E-04	4.59E-04	4.71E-04	5.45E-05	6.28E-05	1.28E-08	2.41E-04	4.25E-05
52	H08	60	Passenger Truck	460	0.00E+00	6.83E-06	7.23E-07	2.79E+01	4.30E-05	1.11E-01	1.42E-05	8.31E-04	4.79E-03	7.11E-04	1.35E-03	8.78E-04	9.00E-04	2.18E-04	1.39E-04	2.34E-08	4.50E-04	1.41E-04
52	H08	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.80E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.83E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.24E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.95E-06
52	H08	60	Combination Short Haul Truck	23	0.00E+00	6.72E-06	4.93E-07	8.11E+00	1.84E-08	1.00E-02	4.82E-06	1.02E-02	1.17E-03	1.83E-04	4.14E-04	1.44E-04	1.50E-04	1.29E-03	2.71E-05	0.00E+00	2.64E-04	1.92E-03
52	H08	60	Combination Long Haul Truck	21	0.00E+00	9.23E-06	5.04E-07	7.66E+00	6.23E-08	1.21E-02	7.72E-06	1.08E-02	1.23E-03	1.78E-04	8.75E-04	1.65E-04	1.72E-04	1.23E-03	2.57E-05	0.00E+00	7.04E-04	2.04E-03
50	H09	40	Passenger Car	366	0.00E+00	5.26E-06	5.72E-07	1.93E+01	3.73E-05	1.05E-01	1.19E-05	3.34E-04	6.31E-03	8.87E-04	1.16E-03	7.46E-04	7.66E-04	1.09E-04	9.60E-05	1.78E-08	3.91E-04	5.21E-05
50	H09	40	Passenger Truck	613	0.00E+00	1.16E-05	1.22E-06	4.21E+01	6.99E-05	1.73E-01	2.33E-05	1.29E-03	1.12E-02	1.55E-03	2.20E-03	1.44E-03	1.47E-03	3.71E-04	2.07E-04	3.02E-08	7.29E-04	2.23E-04
50	H09	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.61E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.89E-05
50	H09	40	Combination Short Haul Truck	5	0.00E+00	2.27E-06	1.70E-07	1.95E+00	5.62E-09	3.21E-03	1.61E-06	3.29E-03	4.58E-04	6.82E-05	1.35E-04	4.93E-05	5.12E-05	3.10E-04	6.53E-06	0.00E+00	8.38E-05	6.19E-04
50	H09	40	Combination Long Haul Truck	4	0.00E+00	3.02E-06	1.70E-07	1.87E+00	1.92E-08	3.90E-03	2.49E-06	3.47E-03	4.75E-04	6.68E-05	2.76E-04	5.49E-05	5.72E-05	3.01E-04	6.28E-06	0.00E+00	2.19E-04	6.53E-04
53	H10	70	Passenger Car	277	0.00E+00	3.00E-06	3.26E-07	1.22E+01	2.13E-05	6.00E-02	6.77E-06	2.85E-04	2.10E-03	3.29E-04	6.60E-04	4.25E-04	4.37E-04	4.71E-05	6.14E-05	1.28E-08	2.23E-04	4.45E-05
53	H10	70	Passenger Truck	464	0.00E+00	6.27E-06	6.66E-07	2.75E+01	4.02E-05	1.06E-01	1.32E-05	8.05E-04	3.75E-03	5.83E-04	1.26E-03	8.18E-04	8.38E-04	2.04E-04	1.37E-04	2.40E-08	4.21E-04	1.35E-04
53	H10	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.35E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.75E-04
53	H10	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.02E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.53E-06
53	H10	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.04E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.96E-03
53	H10	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.11E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.10E-03
53	H11	70	Passenger Car	364	0.00E+00	3.94E-06	4.28E-07	1.61E+01	2.80E-05	7.88E-02	8.88E-06	3.74E-04	2.76E-03	4.32E-04	8.66E-04	5.59E-04	5.73E-04	6.18E-05	8.07E-05	1.68E-08	2.93E-04	5.84E-05
53	H11	70	Passenger Truck	609	0.00E+00	8.23E-06	8.75E-07	3.62E+01	5.28E-05	1.39E-01	1.73E-05	1.06E-03	4.93E-03	7.66E-04	1.65E-03	1.07E-03	1.10E-03	2.68E-04	1.80E-04	3.15E-08	5.52E-04	1.77E-04
53	H11	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.00E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.77E-05
16	H12	100	Passenger Car	642	0.00E+00	6.01E-06	6.53E-07	2.62E+01	4.26E-05	1.28E-01	1.35E-05	6.92E-04	2.05E-03	3.93E-04	1.32E-03	8.52E-04	8.74E-04	7.63E-05	1.33E-04	2.79E-08	4.47E-04	1.08E-04
16	H12	100	Passenger Truck	1075	0.00E+00	1.24E-05	1.33E-06	6.05E+01	8.28E-05	2.47E-01	2.68E-05	1.73E-03	3.58E-03	6.95E-04	2.58E-03	1.67E-03	1.71E-03	3.96E-04	3.03E-04	5.52E-08	8.68E-04	2.84E-04
16	H12	100	Single Unit Short Haul Truck	169	0.00E+00	1.60E-05	5.92E-07	2.75E+01	1.23E-05	5.68E-02	1.82E-05	7.06E-03	1.09E-03	2.82E-04	2.30E-03	4.24E-04	4.32E-04	2.82E-03	1.11E-04	4.55E-08	1.87E-03	1.32E-03
16	H12	100	Single Unit Long Haul Truck	7	0.00E+00	6.96E-07	2.50E-08	1.16E+00	5.07E-07	2.33E-03	7.87E-07	2.96E-04	4.95E-05	1.22E-05	1.00E-04	1.79E-05	1.82E-05	1.18E-04	4.70E-06	1.86E-09	8.22E-05	5.52E-05
16	H12	100	Combination Short Haul Truck	170	0.00E+00	2.43E-05	1.80E-06	5.66E+01	6.45E-08	4.38E-02	1.74E-05	4.36E-02	1.65E-03	4.18E-04	1.48E-03	5.24E-04	5.45E-04	9.00E-03	1.89E-04	0.00E+00	9.37E-04	8.22E-03
16	H12	100	Combination Long Haul Truck	155	0.00E+00	3.44E-05	1.94E-06	5.13E+01	2.19E-07	5.10E-02	2.84E-05	4.67E-02	1.65E-03	3.36E-04	3.15E-03	6.25E-04	6.51E-04	8.23E-03	1.72E-04	0.00E+00	2.50E-03	8.80E-03
54	H13	80	Passenger Car	988	0.00E+00	1.00E-05	1.09E-06	4.21E+01	7.12E-05	2.03E-01	2.26E-05	1.03E-03	5.67E-03	9.32E-04	2.21E-03	1.42E-03	1.46E-03	1.47E-04	2.12E-04	4.39E-08	7.46E-04	1.61E-04
54	H13	80	Passenger Truck	1654	0.00E+00	2.08E-05	2.22E-06	9.56E+01	1.36E-04	3.70E-01	4.42E-05	2.76E-03	1.01E-02	1.66E-03	4.24E-03	2.75E-03	2.82E-03	6.79E-04	4.77E-04	8.45E-08	1.42E-03	4.60E-04
54	H13	80	Single Unit Short Haul Truck	164	0.00E+00	2.25E-05	8.77E-07	2.69E+01	1.52E-05	4.88E-02	2.47E-05	9.30E-03	1.84E-03	3.76E-04	3.10E-03	5.73E-04	5.84E-04	2.73E-03	1.09E-04	4.32E-08	2.51E-03	1.74E-03
54	H13	80	Single Unit Long Haul Truck	7	0.00E+00	9.76E-07	3.77E-08	1.13E+00	6.49E-07	2.03E-03	1.07E-06	3.97E-04	8.44E-05	1.67E-05	1.35E-04	2.46E-05	2.51E-05	1.15E-04	4.62E-06	1.80E-09	1.10E-04	7.42E-05
54	H13	80	Combination Short Haul Truck	160	0.00E+00	3.30E-05	2.44E-06	5.37E+01	8.64E-08	5.03E-02	2.36E-05	5.06E-02	3.82E-03	6.92E-04	2.00E-03	7.12E-04	7.40E-04	8.53E-03	1.79E-04	0.00E+00	1.26E-03	9.53E-03
54	H13	80	Combination Long Haul Truck	146	0.00E+00	4.60E-05	2.59E-06	4.98E+01	2.92E-07	5.95E-02	3.79E-05	5.40E-02	3.95E-03	6.32E-04	4.21E-03	8.36E-04	8.71E-04	7.99E-03	1.67E-04	0.00E+00	3.34E-03	1.02E-02
53	H14	70	Passenger Car	18	0.00E+00	1.94E-07	2.11E-08	7.92E-01	1.38E-06	3.89E-03	4.38E-07	1.85E-05	1.36E-04	2.13E-05	4.27E-05	2.76E-05	2.83E-05	3.05E-06	3.98E-06	8.26E-10	1.45E-05	2.88E-06
53	H14	70	Passenger Truck	30	0.00E+00	4.06E-07	4.32E-08	1.78E+00	2.61E-06	6.85E-03	8.52E-07	5.21E-05	2.43E-04	3.78E-05	8.16E-05	5.30E-05	5.43E-05	1.32E-05	8.88E-06	1.56E-09	2.73E-05	8.73E-06
53	H14	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.34E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.25E-05
53	H14	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.00E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.54E-04
53	H14	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.28E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.06E-04
54	H15	80	Passenger Car	817	0.00E+00	8.30E-06	9.01E-07	3.48E+01	5.89E-05	1.68E-01	1.87E-05	8.51E-04	4.69E-03	7.71E-04	1.82E-03	1.18E-03	1.21E-03	1.21E-04	1.75E-04	3.63E-08	6.17E-04	1.33E-04
54	H15	80	Passenger Truck	1368	0.00E+00	1.72E-05	1.84E-06	7.90E+01	1.12E-04	3.06E-01	3.66E-05	2.29E-03	8.37E-03	1.37E-03	3.51E-03	2.28E-03	2.33E-03	5.62E-04	3.95E-04	6.99E-08	1.17E-03	3.80E-04
54	H15	80	Single Unit

Appendix F.1.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	1.72E-04	1.27E-05	4.18E+02	3.34E-04	1.31E+00	2.05E-04	1.58E-01	1.54E-02	3.71E-03	2.04E-02	9.04E-03	9.29E-03	3.16E-02	1.79E-03	3.13E-07	1.12E-02	2.95E-02
A02	0.00E+00	1.73E-04	1.27E-05	4.25E+02	3.47E-04	1.36E+00	2.09E-04	1.53E-01	1.58E-02	3.80E-03	2.10E-02	9.26E-03	9.51E-03	3.12E-02	1.83E-03	3.34E-07	1.15E-02	2.86E-02
A03	0.00E+00	1.75E-04	1.36E-05	4.66E+02	4.30E-04	1.63E+00	2.27E-04	1.45E-01	1.80E-02	4.27E-03	2.26E-02	1.08E-02	1.11E-02	2.92E-02	2.06E-03	3.76E-07	1.16E-02	2.71E-02
A04	0.00E+00	1.75E-04	1.32E-05	4.49E+02	3.93E-04	1.51E+00	2.21E-04	1.48E-01	1.71E-02	4.08E-03	2.21E-02	1.01E-02	1.04E-02	3.03E-02	1.96E-03	3.64E-07	1.17E-02	2.77E-02
A05	0.00E+00	1.42E-04	1.10E-05	3.75E+02	3.40E-04	1.29E+00	1.83E-04	1.21E-01	1.44E-02	3.42E-03	1.82E-02	8.59E-03	8.82E-03	2.42E-02	1.65E-03	2.97E-07	9.35E-03	2.26E-02
A06	0.00E+00	1.58E-04	1.20E-05	4.08E+02	3.59E-04	1.38E+00	2.00E-04	1.36E-01	1.55E-02	3.70E-03	1.99E-02	9.21E-03	9.46E-03	2.74E-02	1.78E-03	3.24E-07	1.05E-02	2.54E-02
A07	0.00E+00	1.47E-04	1.13E-05	3.81E+02	3.37E-04	1.29E+00	1.86E-04	1.28E-01	1.45E-02	3.45E-03	1.84E-02	8.63E-03	8.87E-03	2.54E-02	1.67E-03	2.96E-07	9.56E-03	2.38E-02
A08	0.00E+00	1.55E-04	1.13E-05	3.67E+02	2.76E-04	1.11E+00	1.80E-04	1.46E-01	1.33E-02	3.22E-03	1.81E-02	7.72E-03	7.94E-03	2.94E-02	1.55E-03	2.71E-07	1.01E-02	2.74E-02
A09	0.00E+00	1.67E-04	1.26E-05	4.19E+02	3.50E-04	1.36E+00	2.04E-04	1.51E-01	1.57E-02	3.74E-03	2.03E-02	9.24E-03	9.50E-03	3.00E-02	1.81E-03	3.15E-07	1.08E-02	2.82E-02
A10	0.00E+00	1.87E-04	1.35E-05	4.35E+02	3.18E-04	1.28E+00	2.14E-04	1.78E-01	1.56E-02	3.80E-03	2.15E-02	9.05E-03	9.31E-03	3.59E-02	1.83E-03	3.16E-07	1.21E-02	3.34E-02
B05	0.00E+00	4.60E-05	3.32E-06	1.32E+02	1.28E-04	4.24E-01	6.50E-05	3.16E-02	7.05E-03	1.45E-03	6.80E-03	3.02E-03	3.10E-03	7.28E-03	5.96E-04	1.16E-07	3.70E-03	5.88E-03
B06	0.00E+00	9.62E-05	6.39E-06	2.67E+02	2.60E-04	8.63E-01	1.38E-04	5.24E-02	1.42E-02	2.98E-03	1.49E-02	6.09E-03	6.24E-03	1.41E-02	1.21E-03	2.76E-07	8.65E-03	9.71E-03
B07	0.00E+00	2.48E-05	2.67E-06	1.17E+02	1.69E-04	5.05E-01	5.43E-05	3.26E-03	7.59E-03	1.47E-03	5.26E-03	3.40E-03	3.49E-03	6.36E-04	5.87E-04	1.12E-07	1.77E-03	5.28E-04
B08	0.00E+00	4.44E-05	4.72E-06	2.06E+02	2.97E-04	8.89E-01	9.61E-05	6.48E-03	1.34E-02	2.58E-03	9.32E-03	5.98E-03	6.13E-03	1.31E-03	1.03E-03	1.98E-07	3.18E-03	1.07E-03
C11	0.00E+00	3.60E-05	2.65E-06	7.22E+01	7.22E-05	2.22E-01	4.37E-05	3.03E-02	9.54E-03	1.51E-03	4.41E-03	1.93E-03	1.98E-03	4.43E-03	3.18E-04	4.83E-08	2.43E-03	5.69E-03
C12	0.00E+00	3.26E-05	2.91E-06	9.58E+01	1.42E-04	3.85E-01	5.52E-05	1.41E-02	1.74E-02	2.59E-03	5.44E-03	3.06E-03	3.14E-03	2.09E-03	4.62E-04	8.06E-08	2.30E-03	2.61E-03
C13	0.00E+00	2.59E-05	1.94E-06	4.32E+01	5.79E-05	1.63E-01	3.27E-05	1.91E-02	1.17E-02	1.66E-03	3.29E-03	1.49E-03	1.53E-03	1.99E-03	1.96E-04	2.88E-08	1.76E-03	3.58E-03
C14	0.00E+00	3.90E-05	3.07E-06	9.32E+01	1.10E-04	3.19E-01	5.40E-05	2.68E-02	1.27E-02	2.01E-03	5.42E-03	2.64E-03	2.71E-03	4.05E-03	4.29E-04	7.19E-08	2.71E-03	5.00E-03
C15	0.00E+00	5.32E-05	3.70E-06	6.76E+01	7.21E-05	2.25E-01	5.74E-05	4.85E-02	1.79E-02	2.54E-03	5.82E-03	2.25E-03	2.32E-03	4.77E-03	2.90E-04	3.75E-08	3.50E-03	9.12E-03
C16	0.00E+00	6.05E-06	5.56E-07	1.92E+01	2.97E-05	7.93E-02	1.10E-05	1.78E-03	3.50E-03	5.24E-04	1.09E-03	6.26E-04	6.42E-04	3.02E-04	9.39E-05	1.71E-08	4.44E-04	3.25E-04
C17	0.00E+00	4.90E-05	3.68E-06	1.11E+02	1.31E-04	3.77E-01	6.71E-05	3.15E-02	1.51E-02	2.39E-03	6.86E-03	3.16E-03	3.25E-03	4.95E-03	5.12E-04	9.10E-08	3.61E-03	5.87E-03
C18	0.00E+00	7.52E-06	5.59E-07	1.59E+01	2.08E-05	5.78E-02	1.05E-05	4.44E-03	2.80E-03	4.22E-04	1.08E-03	4.95E-04	5.08E-04	6.32E-04	7.40E-05	1.32E-08	5.73E-04	8.28E-04
C19	0.00E+00	3.10E-07	3.29E-08	1.13E+00	1.97E-06	5.10E-03	6.47E-07	2.98E-05	3.22E-04	4.49E-05	6.17E-05	4.01E-05	4.11E-05	8.83E-06	5.57E-06	8.82E-10	2.06E-05	5.05E-06
C20	0.00E+00	9.10E-06	8.21E-07	2.90E+01	4.04E-05	1.12E-01	1.56E-05	3.95E-03	4.14E-03	6.47E-04	1.53E-03	8.70E-04	8.93E-04	6.40E-04	1.40E-04	2.51E-08	6.40E-04	7.27E-04
C21	0.00E+00	5.79E-05	3.96E-06	8.65E+01	1.22E-04	3.18E-01	7.34E-05	3.41E-02	2.31E-02	3.29E-03	7.69E-03	3.13E-03	3.21E-03	3.89E-03	3.95E-04	6.94E-08	4.48E-03	6.39E-03
C22	0.00E+00	5.38E-06	4.97E-07	1.69E+01	2.55E-05	6.90E-02	9.54E-06	2.03E-03	3.07E-03	4.59E-04	9.35E-04	5.44E-04	5.57E-04	3.10E-04	8.20E-05	1.44E-08	3.78E-04	3.72E-04
C23	0.00E+00	3.10E-05	2.54E-06	8.44E+01	1.11E-04	3.09E-01	4.79E-05	1.61E-02	1.18E-02	1.85E-03	4.81E-03	2.48E-03	2.55E-03	2.60E-03	4.00E-04	7.24E-08	2.26E-03	2.99E-03
C24	0.00E+00	2.92E-06	2.96E-07	1.07E+01	1.68E-05	4.50E-02	5.74E-06	7.59E-04	1.96E-03	2.92E-04	5.54E-04	3.47E-04	3.56E-04	1.27E-04	5.24E-05	9.20E-09	1.98E-04	1.37E-04
C25	0.00E+00	5.80E-05	3.97E-06	7.39E+01	8.32E-05	2.48E-01	6.41E-05	4.90E-02	1.95E-02	2.78E-03	6.59E-03	2.52E-03	2.59E-03	4.93E-03	3.20E-04	4.56E-08	4.00E-03	9.21E-03
C26	0.00E+00	3.78E-05	2.72E-06	7.69E+01	8.20E-05	2.44E-01	4.77E-05	2.79E-02	1.02E-02	1.61E-03	4.91E-03	2.11E-03	2.17E-03	4.26E-03	3.44E-04	5.85E-08	2.74E-03	5.21E-03
C27	0.00E+00	3.08E-05	2.16E-06	4.67E+01	6.38E-05	1.71E-01	3.86E-05	1.99E-02	1.25E-02	1.78E-03	4.00E-03	1.66E-03	1.70E-03	2.19E-03	2.12E-04	3.52E-08	2.30E-03	3.74E-03
C28	0.00E+00	1.47E-05	1.51E-06	5.54E+01	8.89E-05	2.37E-01	2.99E-05	2.61E-03	1.02E-02	1.52E-03	2.89E-03	1.82E-03	1.87E-03	5.14E-04	2.74E-04	4.91E-08	1.02E-03	4.58E-04
C29	0.00E+00	3.60E-06	3.21E-07	1.12E+01	1.54E-05	4.28E-02	6.05E-06	1.65E-03	1.59E-03	2.50E-04	5.96E-04	3.35E-04	3.44E-04	2.64E-04	5.39E-05	9.62E-09	2.52E-04	3.04E-04
C30	0.00E+00	3.31E-05	2.11E-06	3.16E+01	2.44E-05	8.72E-02	3.17E-05	3.24E-02	8.04E-03	1.16E-03	3.31E-03	1.04E-03	1.07E-03	3.14E-03	1.26E-04	1.55E-08	2.24E-03	6.10E-03
C31	0.00E+00	1.63E-05	1.09E-06	2.55E+01	2.49E-05	7.68E-02	1.85E-05	1.38E-02	4.29E-03	6.49E-04	1.94E-03	7.26E-04	7.46E-04	1.81E-03	1.10E-04	1.70E-08	1.19E-03	2.58E-03
C32	0.00E+00	4.85E-05	3.28E-06	8.38E+01	7.48E-05	2.36E-01	5.50E-05	4.08E-02	1.07E-02	1.70E-03	5.73E-03	2.18E-03	2.24E-03	6.12E-03	3.60E-04	5.73E-08	3.48E-03	7.66E-03
C33	0.00E+00	1.69E-06	1.66E-07	6.06E+00	9.75E-06	2.58E-02	3.36E-06	2.46E-04	1.11E-03	1.66E-04	3.30E-04	2.00E-04	2.05E-04	5.65E-05	3.00E-05	5.54E-09	1.24E-04	4.26E-05
C34	0.00E+00	3.77E-06	2.68E-07	6.12E+00	8.83E-06	2.32E-02	4.95E-06	2.16E-03	1.65E-03	2.34E-04	5.13E-04	2.20E-04	2.26E-04	2.48E-04	2.82E-05	4.83E-09	2.87E-04	4.05E-04
C35	0.00E+00	1.04E-05	8.53E-07	2.85E+01	3.75E-05	1.05E-01	1.62E-05	5.20E-03	3.98E-03	6.26E-04	1.63E-03	8.41E-04	8.63E-04	8.54E-04	1.35E-04	2.48E-08	7.72E-04	9.63E-04
C39	0.00E+00	1.23E-05	8.26E-07	2.09E+01	2.37E-05	6.80E-02	1.52E-05	8.58E-03	3.56E-03	5.40E-04	1.60E-03	6.27E-04	6.44E-04	1.19E-03	9.31E-05	1.65E-08	9.58E-04	1.61E-03
D01	0.00E+00	5.61E-05	5.11E-06	1.54E+02	2.41E-04	6.64E-01	9.35E-05	2.90E-02	2.90E-02	4.33E-03	9.11E-03	5.24E-03	5.38E-03	3.95E-03	7.35E-04	1.30E-07	3.73E-03	5.37E-03
D02	0.00E+00	6.62E-05	6.41E-06	2.04E+02	3.40E-04	9.21E-01	1.22E-04	2.36E-02	3.90E-02	5.83E-03	1.18E-02	7.16E-03	7.34E-03	3.51E-03	9.95E-04	1.84E-07	4.48E-03	4.32E-03
D03	0.00E+00	6.24E-05	5.51E-06	1.65E+02	2.60E-04	7.12E-01	1.03E-04	2.97E-02	3.11E-02	4.65E-03	1.02E-02	5.68E-03	5.82E-03	4.21E-03	7.91E-04	1.45E-07	4.36E-03	5.50E-03
D04	0.00E+00	9.24E-05	8.00E-06	2.33E+02	3.54E-04	9.82E-01	1.46E-04	5.11E-02	4.36E-02	6.52E-03	1.44E-02	7.88E-03	8.09E-03	6.98E-03	1.10E-03	1.97E-07	6.33E-03	9.50E-03
D05	0.00E+00	6.72E-05	5.69E-06	1.66E+02	2.53E-04	6.97E-01	1.06E-04	3.49E-02	3.09E-02	4.64E-03	1.06E-02	5.63E-03	5.78E-03	4.91E-03	7.86E-04	1.44E-07	4.77E-03	6.49E-03
D06	0.00E+00	1.07E-04	9.16E-06	2.65E+02	4.01E-04	1.11E+00	1.68E-04	5.96E-02	4.95E-02	7.41E-03	1.66E-02	8.95E-03	9.19E-03	8.16E-03	1.25E-03	2.24E-07	7.39E-03	1.11E-02
D07	0.00E+00	6.44E-05	5.52E-06	1.93E+02	2.48E-04	7.23E-01	1.03E-04	3.55E-02	1.99E-02	3.36E-03	1.02E-02	5.50E-03	5.64E-03	6.25E-03	9.14E-04	1.64E-07	4.55E-03	6.58E-03
D08	0.00E+00	7.12E-05	6.10E-06	2.13E+02	2.72E-04	7.95E-01	1.13E-04	3.98E-02	2.20E-02	3.70E-03	1.12E-02	6.05E-03	6.21E-03	6.97E-03	1.01E-03	1.79E-07	5.00E-03	7.38E-03
D09	0.00E+00	4.08E-05	3.67E-06	1.33E+02	1.78E-04	5.13E-01	6.91E-05	1.98E-02	1.39E-02	2.33E-03	6.80E-03	3.85E-03	3.95E-03	3.48E-03	6.34E-04	1.15E-07	2.85E-03	3.65E-03
D10	0.00E+00	5.72E-05	5.20E-06	1.90E+02	2.58E-04	7.42E-01	9.87E-05	2.61E-02	2.00E-02	3.35E-03	9.70E-03	5.55E-03	5.70E-03	4.63E-03	9.13E-04	1.66E-07	4.01E-03	4.80E-03
D11	0.00E+00	4.07E-05	3.64E-06	1.31E+02	1.75E-04	5.05E-01	6.83E-05	2.01E-02	1.37E-02	2.30E-03	6.73E-03	3.79E-03	3.89E-03	3.53E-03	6.26E-04	1.13E-07	2.84E-03	3.70E-03
D12	0.00E+00	6.84E-05	6.09E-06	2.19E+02	2.91E-04	8.41E-01	1.14E-04	3.40E-02	2.28E-02	3.83E-03	1.13E-02	6.33E-03	6.49E-03	5.99E-03	1.04E-03	1.89E-07	4.78E-03	6.28E-03
D13	0.00E+00	4.95E-05	3.75E-06	9.68E+01	1.27E-04	3.64E-01	6.61E-05	3.55E-02	1.75E-02	2.63E-03	6.70E-03	3.10E-03	3.19E-03	4.72E-03	4.39E-04	7.52E-08	3.51E-03	6.65E-03
D14	0.00E+00	3.23E-05	2.46E-06	6.51E+01	8.85E-05	2.51E-01	4.45E-05	2.13E-02	1.18E-02	1.78E-03	4.52E-03	2.12E-03	2.18E-03	2.90E-03	2.98E-04	5.31E-08	2.34E-03	3.99E-03
D15	0.00E+00	5.28E-05	4.01E-06	1.05E+02	1.39E-04	3.98E-01	7.15E-05	3.66E-02	1.90E-02	2.85E-03	7.25E-03	3.38E-03	3.47E-03	4.90E-03	4.77E-04	8.30E-08	3.78E-03	6.85E-03
D16	0.00E+00	6.65E-05	5.40E-06	1.52E+02	2.23E-04	6.20E-01	9.97E-05	3.80E-02	2.81E-02	4.22E-03	1.00E-02	5.10E-03	5.23E-03	5.27E-03	7.13E-04	1.30E-07	4.77E-03	7.08E-03
D17	0.00E+00	2.28E-05	1.87E-06	5.70E+01	7.32E-05	2.11E-01	3.33E-05	1.46E-02	8.12E-03	1.27E-03	3.31E-03	1.70E-03	1.74E-03	2.21E-03	2.65E-04	4.52E-08	1.57E-03	2.72E-03
D18	0.00E+00	8.14E-06	7.27E-07	2.40E+01	3.39E-05	9.52E-02	1.34E-05	4.10E-03	3.51E-03	5.48E-04	1.32E-03	7.42E-04	7.61E-04	6.33E-04	1.15E-04	2.02E-08	5.55E-04	7.58E-04
D19	0.00E+00	8.70E-05	6.28E-06	2.05E+02	2.25E-04	6.78E-01	1.19E-04	5.51E-02	1.99E-02	3.41E-03	1.24E-02	5.44E-03	5.59E-03	1.03E-02	9.31E-04	1.77E-07	6.77E-03	1.03E-02
D20	0.00E+00	8.45E-05	6.25E-06	2.23E+02	2.80E-04	8.09E-01	1.30E-04	3.57E-02	2.23E-02	3.83E-03	1.36E-02	6.30E-03	6.46E-03	7.76E-03	1.05E-03	2.23E-07	7.14E-03	6.59E-03
D21	0.00E+00	8.18E-05	5.98E-06	1.91E+02	2.03E-04	6.19E-01	1.09E-04	5.68E-02	1.84E-02	3.15E-03	1.13E-02	4.99E-03	5.13E-03	1.03E-02	8.58E-04	1.55E-07	6.13E-03	1.06E-02
D22	0.00E+00	7.11E-05	5.51E-06	1.82E+02	2.10E-04	6.28E-01	1.01E-04	4.60E-02	1.81E-02	3.07E-03	1.03E-02	4.93E-03	5.07E-03	8.23E-03	8.37E-04	1.50E-07	5.21E-03	8.57E-03
D23	0.00E+00	7.89E-05	6.01E-06	1.60E+02	2.21E-04	6.21E-01	1.10E-04	5.01E-02	2.91E-02	4.38E-03	1.12E-02	5.26E-03	5.40E-03	6.88E-03	7.37E-04	1.33E-07	5.79E-03	9.36E-03
D24	0.00E+00	7.90E-05	6.71E-06	1.98E+02	3.08E-04	8.41E-01	1.27E-04	3.72E-02	3.71E-02	5.55E-03	1.27E-02	6.80E-03	6.97E-03	5.40E-03	9.45E-04	1.77E-07	5.73E-03	6.90E-03
D25	0.00E+00	6.05E-05	5.08E-06	1.48E+02	2.28E-04	6.24E-01	9.58E-05	3.01E-02	2.77E-02	4.15E-03	9.57E-03	5.06E-03	5.19E-03	4.30E-03	7.05E-04	1.31E-07	4.38E-03	5.59E-03
D26	0.00E+00	5.87E-05	5.56E-06	1.78E+02	2.97E-04	7.99E-01	1.08E-04	1.89E-02	3.38E-02	5.06E-03	1.05E-02	6.25E-03	6.41E-03	2.95E-03	8.66E-04	1.64E-07	4.12E-03	3.45E-03
D27	0.00E+00	5.97E-05	5.57E-06	2.07E+02	2.90E-04	8.27E-01	1.07E-04	2.37E-02	2.20E-02	3.68E-03	1.05E-02	6.14E-03	6.30E-03	4.29E-03	1.00E-03	1.86E-07	4.22E-03	4.33E-03
D28	0.00E+00	2.92E-05	2.76E-06	1.03E+02	1.45E-04	4.13E-01	5.29E-05	1.14E-02	1.09E-02	1.83E-03	5.17E-03	3.06E-03	3.14E-03	2.04E-03	5.00E-04	9.21E-08	2.04E-03	2.09E-03
D29	0.00E+00	5.97E-05	5.02E-06	1.73E+02	2.16E-04	6.34E-01	9.23E-05	3.52E-02	1.77E-02	2.98E-03	9.18E-03	4.86E-03	4.99E-03	6.15E-03	8.11E-04	1.44E-07	4.20E-03	6.53E-03
D30	0.00E+00	3.17E-05	2.70E-06	9.40E+01	1.19E-04	3.49E-01	5.00E-05	1.79E-02	9.67E-03	1.63E-03	4.97E-03	2.66E-03	2.73E-03	3.14E-03	4.43E-04	7.92E-08	2.24E-03	3.31E-03
D31	0.00E+00	2.21E-05	1.98E-06	7.19E+01	9.71E-05	2.79E-01	3.77E-05	1.01E-02	7.53E-03	1.27E-03	3.73E-03	2.10E-03	2.15E-03	1.83E-03	3.45E-04	6.36E-08	1.58E-03	1.87E-03
D32	0.00E+00	1.04E-05	9.74E-07	3.57E+01	4.91E-05	1.41E-01	1.83E-05	4.75E-03	3.78E-03	6.32E-04	1.78E-03	1.05E-03	1.08E-03	8.19E-04	1.72E-04	3.09E-08	7.08E-04	8.73E-04
D33	0.00E+00	2.16E-05	1.77E-06	4.97E+01	7.26E-05	2.02E-01	3.24E-05	1.28E-02	9.19E-03	1.38E-03	3.24E-03	1.66E-03	1.70E-03	1.75E-03	2.33E-04	4.17E-08	1.53E-03	2.38E-03
D34	0.00E+00	4.09E-05	3.06E-06	7.75E+01	9.84E-05	2.86E-01	5.33E-05	3.07E-02	1.39E-02	2.09E-03	5.41E-03	2.46E-03	2.53E-03	4.04E-03	3.49E-04	5.86E-08	2.89E-03	5.74E-03
D35	0.00E+00	1.84E-05	1.66E-06	5.14E+01	8.37E-05	2.26E-01	3.20E-05	6.96E-03	9.72E-03	1.46E-03	3.16E-03	1.79E-03	1.84E-03	1.06E-03	2.49E-04	4.72E-08	1.32E-03	1.28E-03
D36	0.00E+00	2.68E-05	2.50E-06	7.90E+01	1.30E-04	3.52E-01	4.81E-05	9.54E-03	1.50E-02	2.24E-03	4.71E-03	2.76E-03	2.83E-03	1.45E-03	3.83E-04	7.21E-08	1.87E-03	1.75E-03
D37	0.00E+00	1.79E-05	1.66E-06	5.05E+01	8.04E-05	2.21E-01	3.06E-05	8.55E-03	9.56E-03	1.43E-03	2.97E-03	1.73E-03	1.78E-03	1.18E-03	2.43E-04	4.35E-08	1.19E-03	1.58E-03
D38	0.00E+00	8.30E-06	7.78E-07	2.47E+01	4.10E-05	1.11E-01	1.50E-05	2.82E-03	4.70E-03	7.02E-04	1.47E-03	8.66E-04	8.88E-04	4.35E-04	1.20E-04	2.27E-08	5.84E-04	5.17E-04
D39	0.00E+00	2.04E-05	1.83E-06	5.40E+01	8.27E-05	2.30E-01	3.31E-05	1.15E-02	1.01E-02	1.52E-03	3.22E-03	1.82E-03	1.87E-03	1.54E-03	2.56E-04	4.48E-08	1.35E-03	2.13E-03
D40	0.00E+00	8.42E-06	9.00E-07	3.10E+01	5.53E-05	1.47E-01	1.80E-05	8.90E-04	6.01E-03	8.96E-04	1.73E-03	1.12E-03	1.15E-03	2.13E-04	1.54E-04	2.98E-08	5.78E-04	1.48E-04
D41	0.00E+00	5.69E-06	5.13E-07	1.54E+01	2.41E-05	6.64E-02	9.45E-06	2.86E-03	2.90E-03	4.33E-04	9.24E-04	5.26E-04	5.40E-04	3.95E-04	7.36E-05	1.32E-08	3.84E-04	5.30E-04
D42	0.00E+00	6.28E-06	6.71E-07	2.31E+01	4.12E-05	1.09E-01	1.34E-05	6.64E-04	4.48E-03	6.69E-04	1.29E-03	8.35E-04	8.56E-04	1.59E-04	1.15E-04	2.22E-08	4.31E-04	1.10E-04
D43	0.00E+00	1.46E-05	1.10E-06	2.93E+01	4.04E-05	1.13E-01	2.03E-05	9.06E-03	5.32E-03	8.01E-04	2.08E-03	9.65E-04	9.90E-04	1.26E-03	1.35E-04	2.48E-08	1.09E-03	1.69E-03
D44	0.00E+00	1.11E-05	1.15E-06	3.89E+01	6.81E-05	1.82E-01	2.27E-05	2.05E-03	7.52E-03	1.12E-03	2.19E-03	1.39E-03	1.43E-03	3.76E-04	1.93E-04	3.67E-08	7.56E-04	3.62E-04
D45	0.00E+00	4.85E-05	3.82E-06	1.05E+02	1.48E-04	4.16E-01	6.99E-05	2.98E-02	1.92E-02	2.88E-03	7.06E-03	3.46E-03	3.56E-03	4.09E-03	4.85E-04	8.74E-08	3.50E-03	5.57E-03
D46	0.00E+00	5.74E-05	4.36E-06	1.10E+02	1.38E-04	4.05E-01	7.44E-05	4.52E-02	1.98E-02	2.97E-03	7.49E-03	3.46E-03	3.56E-03	5.85E-03	4.94E-04	7.98E-08	3.94E-03	8.46E-03
D47	0.00E+00	5.74E-05	4.76E-06	1.37E+02	2.05E-04	5.67E-01	8.86E-05	3.08E-02	2.54E-02	3.81E-03	8.86E-03	4.62E-03	4.74E-03	4.33E-03	6.45E-04	1.18E-07	4.12E-03	5.73E-03
D48	0.00E+00	1.05E-05	1.02E-06	3.28E+01	5.55E-05	1.49E-01	1.98E-05	3.05E-03	6.28E-03	9.38E-04	1.93E-03	1.16E-03	1.19E-03	4.91E-04	1.61E-04	3.05E-08	7.36E-04	5.55E-04
D49	0.00E+00	1.16E-04	8.70E-06	2.30E+02	3.12E-04	8.80E-01	1.59E-04	7.42E-02	4.16E-02	6.26E-03	1.63E-02	7.51E-03	7.71E-03	1.02E-02	1.05E-03	1.91E-07	8.57E-03	1.39E-02
D50	0.00E+00	1.02E-04	7.33E-06	1.83E+02	2.31E-04	6.64E-01	1.32E-04	7.25E-02	3.27E-02	4.93E-03	1.36E-02	5.85E-03	6.01E-03	9.81E-03	8.23E-04	1.46E-07	7.60E-03	1.36E-02
D51	0.00E+00	1.65E-05	1.52E-06	4.83E+01	8.08E-05	2.16E-01	2.99E-05	5.00E-03	9.18E-03	1.37E-03	2.95E-03	1.71E-03	1.75E-03	8.17E-04	2.35E-04	4.56E-08	1.20E-03	9.12E-04
D52	0.00E+00	1.34E-05	1.23E-06	3.92E+01	6.55E-05	1.76E-01	2.42E-05	4.11E-03	7.45E-03	1.11E-03	2.39E-03	1.38E-03	1.42E-03	6.68E-04	1.91E-04	3.69E-08	9.74E-04	7.50E-04
D53	0.00E+00	1.87E-05	1.60E-06	4.76E+01	7.47E-05	2.03E-01	3.05E-05	8.49E-03	8.92E-03	1.34E-03	3.04E-03	1.64E-03	1.68E-03	1.24E-03	2.28E-04	4.29E-08	1.36E-03	1.57E-03
D54	0.00E+00	1.07E-05	9.38E-07	2.85E+01	4.54E-05	1.23E-01	1.79E-05	4.57E-03	5.36E-03	8.02E-04	1.77E-03	9.84E-04	1.01E-03

Appendix F.1.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D70	0.00E+00	2.22E-05	1.41E-06	3.81E+01	2.58E-05	9.15E-02	2.37E-05	2.00E-02	3.31E-03	5.75E-04	2.52E-03	8.44E-04	8.69E-04	3.52E-03	1.56E-04	2.51E-08	1.65E-03	3.75E-03
D71	0.00E+00	3.65E-05	2.53E-06	6.22E+01	5.49E-05	1.78E-01	4.06E-05	3.30E-02	8.11E-03	1.28E-03	4.16E-03	1.63E-03	1.68E-03	4.80E-03	2.64E-04	3.83E-08	2.48E-03	6.19E-03
D72	0.00E+00	3.96E-05	2.66E-06	6.53E+01	5.77E-05	1.85E-01	4.42E-05	3.39E-02	8.43E-03	1.34E-03	4.60E-03	1.72E-03	1.77E-03	5.07E-03	2.77E-04	4.38E-08	2.83E-03	6.36E-03
D73	0.00E+00	3.23E-05	2.21E-06	4.97E+01	3.46E-05	1.25E-01	3.27E-05	3.33E-02	6.27E-03	9.91E-04	3.32E-03	1.21E-03	1.25E-03	4.71E-03	2.01E-04	2.35E-08	2.07E-03	6.25E-03
D74	0.00E+00	2.88E-05	1.98E-06	4.79E+01	4.09E-05	1.34E-01	3.16E-05	2.62E-02	6.19E-03	9.80E-04	3.25E-03	1.24E-03	1.28E-03	3.82E-03	2.02E-04	2.93E-08	1.97E-03	4.92E-03
D75	0.00E+00	9.27E-06	7.43E-07	2.63E+01	3.33E-05	9.68E-02	1.45E-05	4.56E-03	2.67E-03	4.53E-04	1.48E-03	7.43E-04	7.63E-04	8.77E-04	1.24E-04	2.40E-08	7.14E-04	8.43E-04
D76	0.00E+00	6.56E-06	5.28E-07	1.80E+01	2.18E-05	6.43E-02	9.81E-06	3.91E-03	1.81E-03	3.07E-04	9.90E-04	4.98E-04	5.11E-04	7.02E-04	8.37E-05	1.52E-08	4.78E-04	7.26E-04
D77	0.00E+00	1.43E-05	1.11E-06	3.73E+01	4.38E-05	1.30E-01	2.07E-05	8.78E-03	3.72E-03	6.31E-04	2.11E-03	1.02E-03	1.05E-03	1.59E-03	1.72E-04	3.15E-08	1.06E-03	1.63E-03
D78	0.00E+00	7.42E-06	5.36E-07	1.65E+01	1.64E-05	5.12E-02	9.44E-06	5.69E-03	1.57E-03	2.68E-04	9.72E-04	4.20E-04	4.31E-04	9.99E-04	7.30E-05	1.24E-08	5.40E-04	1.06E-03
D79	0.00E+00	3.97E-05	2.70E-06	6.59E+01	5.75E-05	1.87E-01	4.41E-05	3.51E-02	8.53E-03	1.35E-03	4.56E-03	1.73E-03	1.78E-03	5.18E-03	2.79E-04	4.22E-08	2.78E-03	6.58E-03
D80	0.00E+00	3.80E-05	3.04E-06	9.00E+01	1.11E-04	3.24E-01	5.33E-05	2.60E-02	1.27E-02	1.99E-03	5.31E-03	2.64E-03	2.71E-03	3.89E-03	4.14E-04	6.94E-08	2.60E-03	4.84E-03
F31	0.00E+00	6.37E-05	5.50E-06	1.62E+02	2.49E-04	6.85E-01	1.02E-04	3.27E-02	3.03E-02	4.53E-03	1.01E-02	5.51E-03	5.65E-03	4.58E-03	7.69E-04	1.40E-07	4.46E-03	6.07E-03
F32	0.00E+00	6.54E-05	5.52E-06	1.60E+02	2.41E-04	6.66E-01	1.02E-04	3.58E-02	2.97E-02	4.45E-03	1.01E-02	5.39E-03	5.53E-03	4.95E-03	7.54E-04	1.36E-07	4.60E-03	6.65E-03
F33	0.00E+00	2.78E-05	2.62E-06	8.13E+01	1.31E-04	3.59E-01	4.89E-05	1.22E-02	1.54E-02	2.31E-03	4.74E-03	2.81E-03	2.88E-03	1.72E-03	3.92E-04	7.11E-08	1.86E-03	2.26E-03
F34	0.00E+00	1.22E-05	1.30E-06	4.48E+01	7.98E-05	2.12E-01	2.59E-05	1.29E-03	8.68E-03	1.29E-03	2.49E-03	1.62E-03	1.66E-03	3.07E-04	2.23E-04	4.30E-08	8.35E-04	2.14E-04
G01	0.00E+00	3.28E-05	2.40E-06	7.24E+01	6.65E-05	2.12E-01	4.01E-05	2.82E-02	7.07E-03	1.19E-03	4.07E-03	1.76E-03	1.81E-03	4.76E-03	3.16E-04	4.76E-08	2.25E-03	5.29E-03
G02	0.00E+00	2.45E-05	2.00E-06	7.02E+01	8.46E-05	2.47E-01	3.72E-05	1.43E-02	7.40E-03	1.23E-03	3.74E-03	1.92E-03	1.97E-03	2.56E-03	3.29E-04	5.81E-08	1.77E-03	2.66E-03
G03	0.00E+00	4.11E-05	2.20E-06	8.89E+01	5.82E-05	2.22E-01	4.90E-05	2.76E-02	4.04E-03	9.12E-04	5.62E-03	1.65E-03	1.69E-03	7.58E-03	3.73E-04	9.68E-08	3.93E-03	5.16E-03
G04	0.00E+00	3.27E-05	1.97E-06	7.40E+01	4.65E-05	1.79E-01	3.77E-05	2.86E-02	3.34E-03	7.30E-04	4.13E-03	1.36E-03	1.40E-03	6.65E-03	3.06E-04	6.08E-08	2.74E-03	5.36E-03
G05	0.00E+00	2.23E-05	1.63E-06	5.95E+01	4.70E-05	1.65E-01	2.77E-05	2.19E-02	2.93E-03	6.04E-04	2.83E-03	1.23E-03	1.26E-03	4.45E-03	2.55E-04	3.79E-08	1.56E-03	4.10E-03
G06	0.00E+00	2.68E-06	2.64E-07	1.10E+01	1.45E-05	4.44E-02	5.10E-06	1.11E-03	6.83E-04	1.33E-04	4.95E-04	3.03E-04	3.11E-04	2.14E-04	5.38E-05	9.63E-09	1.84E-04	2.03E-04
G07	0.00E+00	4.86E-06	3.87E-07	1.15E+01	1.32E-05	3.89E-02	6.56E-06	3.68E-03	1.57E-03	2.47E-04	6.50E-04	3.21E-04	3.30E-04	5.37E-04	5.26E-05	8.28E-09	3.20E-04	6.88E-04
G08	0.00E+00	5.49E-07	5.89E-08	2.45E+00	3.68E-06	1.02E-02	1.19E-06	6.75E-05	2.81E-04	4.61E-05	1.15E-04	7.43E-05	7.61E-05	1.47E-05	1.23E-05	2.28E-09	3.85E-05	1.10E-05
G09	0.00E+00	1.55E-05	1.04E-06	1.61E+01	1.22E-05	4.67E-02	1.47E-05	1.65E-02	4.16E-03	5.94E-04	1.48E-03	5.07E-04	5.23E-04	1.55E-03	6.45E-05	6.31E-09	9.61E-04	3.10E-03
G10	0.00E+00	3.27E-05	2.60E-06	8.13E+01	9.95E-05	2.85E-01	4.68E-05	2.07E-02	1.12E-02	1.76E-03	4.70E-03	2.33E-03	2.39E-03	3.18E-03	3.78E-04	6.52E-08	2.31E-03	3.85E-03
H01	0.00E+00	3.43E-04	2.43E-05	8.72E+02	6.25E-04	2.26E+00	4.06E-04	3.54E-01	4.14E-02	8.62E-03	4.17E-02	1.72E-02	1.77E-02	7.20E-02	3.66E-03	5.26E-07	2.40E-02	6.63E-02
H02	0.00E+00	2.49E-04	1.80E-05	6.49E+02	4.87E-04	1.73E+00	3.01E-04	2.53E-01	3.13E-02	6.49E-03	3.08E-02	1.31E-02	1.34E-02	5.13E-02	2.75E-03	3.96E-07	1.73E-02	4.75E-02
H03	0.00E+00	2.40E-04	1.78E-05	6.55E+02	5.39E-04	1.87E+00	3.05E-04	2.29E-01	3.27E-02	6.73E-03	3.10E-02	1.38E-02	1.42E-02	4.66E-02	2.83E-03	4.29E-07	1.68E-02	4.29E-02
H04	0.00E+00	2.71E-04	2.00E-05	7.25E+02	5.69E-04	2.00E+00	3.34E-04	2.74E-01	3.56E-02	7.32E-03	3.38E-02	1.49E-02	1.53E-02	5.48E-02	3.09E-03	4.38E-07	1.84E-02	5.13E-02
H05	0.00E+00	1.03E-04	7.53E-06	2.75E+02	2.18E-04	7.64E-01	1.28E-04	1.01E-01	1.35E-02	2.79E-03	1.30E-02	5.69E-03	5.85E-03	2.04E-02	1.18E-03	1.75E-07	7.17E-03	1.89E-02
H06	0.00E+00	1.68E-04	1.25E-05	4.50E+02	3.51E-04	1.23E+00	2.06E-04	1.73E-01	2.20E-02	4.53E-03	2.08E-02	9.24E-03	9.50E-03	3.44E-02	1.92E-03	2.63E-07	1.13E-02	3.25E-02
H07	0.00E+00	3.06E-04	2.26E-05	8.18E+02	6.40E-04	2.25E+00	3.77E-04	3.09E-01	4.01E-02	8.26E-03	3.82E-02	1.68E-02	1.73E-02	6.19E-02	3.49E-03	4.95E-07	2.09E-02	5.79E-02
H08	0.00E+00	2.87E-05	2.18E-06	5.82E+01	6.78E-05	2.01E-01	3.69E-05	2.32E-02	1.02E-02	1.52E-03	3.71E-03	1.71E-03	1.76E-03	2.99E-03	2.62E-04	3.95E-08	1.95E-03	4.34E-03
H09	0.00E+00	2.28E-05	2.16E-06	6.56E+01	1.08E-04	2.85E-01	4.00E-05	8.64E-03	1.85E-02	2.59E-03	3.86E-03	2.31E-03	2.36E-03	1.13E-03	3.17E-04	4.86E-08	1.49E-03	1.60E-03
H10	0.00E+00	2.83E-05	2.16E-06	6.04E+01	6.33E-05	1.92E-01	3.55E-05	2.36E-02	8.09E-03	1.27E-03	3.54E-03	1.63E-03	1.68E-03	3.41E-03	2.69E-04	4.05E-08	1.86E-03	4.42E-03
H11	0.00E+00	1.25E-05	1.32E-06	5.26E+01	8.08E-05	2.18E-01	2.64E-05	1.84E-03	7.73E-03	1.20E-03	2.54E-03	1.64E-03	1.68E-03	3.87E-04	2.62E-04	4.83E-08	8.64E-04	3.13E-04
H12	0.00E+00	9.38E-05	6.33E-06	2.23E+02	1.38E-04	5.29E-01	1.05E-04	1.00E-01	1.01E-02	2.14E-03	1.09E-02	4.11E-03	4.23E-03	2.06E-02	9.13E-04	1.30E-07	6.70E-03	1.88E-02
H13	0.00E+00	1.33E-04	9.26E-06	2.69E+02	2.23E-04	7.34E-01	1.54E-04	1.18E-01	2.55E-02	4.31E-03	1.59E-02	6.32E-03	6.50E-03	2.02E-02	1.15E-03	1.73E-07	9.39E-03	2.21E-02
H14	0.00E+00	7.86E-06	5.10E-07	1.04E+01	4.60E-06	2.08E-02	7.20E-06	8.70E-03	1.23E-03	1.96E-04	7.40E-04	2.29E-04	2.36E-04	1.23E-03	3.98E-05	3.73E-09	5.04E-04	1.64E-03
H15	0.00E+00	1.26E-04	8.84E-06	2.44E+02	1.80E-04	6.23E-01	1.37E-04	1.25E-01	2.27E-02	3.82E-03	1.39E-02	5.49E-03	5.65E-03	2.06E-02	1.02E-03	1.29E-07	8.28E-03	2.35E-02
H16	0.00E+00	5.14E-05	4.18E-06	1.29E+02	1.54E-04	4.47E-01	7.25E-05	3.61E-02	1.77E-02	2.78E-03	7.18E-03	3.65E-03	3.74E-03	5.34E-03	5.94E-04	9.66E-08	3.43E-03	6.74E-03

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B05	100	Passenger Car	1580	0.00E+00	1.48E-05	1.61E-06	6.46E+01	1.05E-04	3.15E-01	3.33E-05	1.70E-03	5.05E-03	9.68E-04	3.25E-03	2.10E-03	2.15E-03	1.88E-04	3.26E-04	6.86E-08	1.10E-03	2.66E-04
16	B05	100	Passenger Truck	2645	0.00E+00	3.05E-05	3.27E-06	1.49E+02	2.04E-04	6.08E-01	6.59E-05	4.25E-03	8.81E-03	1.71E-03	6.35E-03	4.11E-03	4.22E-03	9.75E-04	7.46E-04	1.36E-07	2.14E-03	6.99E-04
16	B05	100	Single Unit Short Haul Truck	173	0.00E+00	1.65E-05	6.09E-07	2.83E+01	1.26E-05	5.84E-02	1.87E-05	7.26E-03	1.12E-03	2.90E-04	2.36E-03	4.36E-04	4.44E-04	2.90E-03	1.15E-04	4.68E-08	1.92E-03	1.35E-03
16	B05	100	Single Unit Long Haul Truck	8	0.00E+00	7.16E-07	2.57E-08	1.19E+00	5.22E-07	2.39E-03	8.09E-07	3.04E-04	5.09E-05	1.26E-05	1.03E-04	1.84E-05	1.87E-05	1.21E-04	4.83E-06	1.91E-09	8.45E-05	5.68E-05
16	B05	100	Combination Short Haul Truck	178	0.00E+00	2.54E-05	1.88E-06	5.93E+01	6.75E-08	4.58E-02	1.82E-05	4.57E-02	1.72E-03	4.37E-04	1.55E-03	5.49E-04	5.70E-04	9.42E-03	1.98E-04	0.00E+00	9.80E-04	8.60E-03
16	B05	100	Combination Long Haul Truck	162	0.00E+00	3.59E-05	2.03E-06	5.37E+01	2.29E-07	5.33E-02	2.97E-05	4.89E-02	1.73E-03	3.52E-04	3.30E-03	6.54E-04	6.81E-04	8.61E-03	1.80E-04	0.00E+00	2.62E-03	9.20E-03
16	B06	100	Passenger Car	829	0.00E+00	7.76E-06	8.43E-07	3.39E+01	5.50E-05	1.65E-01	1.75E-05	8.94E-04	2.65E-03	5.08E-04	1.71E-03	1.10E-03	1.13E-03	9.85E-05	1.71E-04	3.60E-08	5.77E-04	1.39E-04
16	B06	100	Passenger Truck	1387	0.00E+00	1.60E-05	1.72E-06	7.81E+01	1.07E-04	3.19E-01	3.46E-05	2.23E-03	4.62E-03	8.97E-04	3.33E-03	2.16E-03	2.21E-03	5.11E-04	3.91E-04	7.12E-08	1.12E-03	3.66E-04
16	B06	100	Single Unit Short Haul Truck	100	0.00E+00	9.47E-06	3.50E-07	1.63E+01	7.24E-06	3.36E-02	1.07E-05	4.17E-03	6.44E-04	1.67E-04	1.36E-03	2.51E-04	2.55E-04	1.67E-03	6.58E-05	2.69E-08	1.10E-03	7.78E-04
16	B06	100	Single Unit Long Haul Truck	4	0.00E+00	4.11E-07	1.48E-08	6.84E-01	3.00E-07	1.37E-03	4.65E-07	1.75E-04	2.93E-05	7.23E-06	5.93E-05	1.06E-05	1.08E-05	6.96E-05	2.78E-06	1.10E-09	4.86E-05	3.26E-05
16	B06	100	Combination Short Haul Truck	75	0.00E+00	1.08E-05	7.96E-07	2.51E+01	2.86E-08	1.94E-02	7.71E-06	1.93E-02	7.30E-04	1.85E-04	6.56E-04	2.32E-04	2.41E-04	3.99E-03	8.39E-05	0.00E+00	4.15E-04	3.64E-03
16	B06	100	Combination Long Haul Truck	69	0.00E+00	1.52E-05	8.58E-07	2.27E+01	9.71E-08	2.26E-02	1.26E-05	2.07E-02	7.31E-04	1.49E-04	1.40E-03	2.77E-04	2.88E-04	3.65E-03	7.62E-05	0.00E+00	1.11E-03	3.90E-03
16	B07	100	Passenger Car	1661	0.00E+00	1.55E-05	1.69E-06	6.79E+01	1.10E-04	3.31E-01	3.51E-05	1.79E-03	5.31E-03	1.02E-03	3.42E-03	2.20E-03	2.26E-03	1.98E-04	3.43E-04	7.21E-08	1.16E-03	2.79E-04
16	B07	100	Passenger Truck	2782	0.00E+00	3.21E-05	3.44E-06	1.57E+02	2.14E-04	6.40E-01	6.93E-05	4.47E-03	9.27E-03	1.80E-03	6.68E-03	4.33E-03	4.44E-03	1.02E-03	7.84E-04	1.43E-07	2.25E-03	7.35E-04
16	B07	100	Single Unit Short Haul Truck	605	0.00E+00	5.75E-05	2.13E-06	9.88E+01	4.40E-05	2.04E-01	6.52E-05	2.53E-02	3.91E-03	1.01E-03	8.25E-03	1.52E-03	1.55E-03	1.01E-02	4.00E-04	1.63E-07	6.70E-03	4.73E-03
16	B07	100	Single Unit Long Haul Truck	27	0.00E+00	2.50E-06	8.98E-08	4.16E+00	1.82E-06	8.35E-03	2.83E-06	1.06E-03	1.78E-04	4.40E-05	3.61E-04	6.42E-05	6.54E-05	4.23E-04	1.69E-05	6.68E-09	2.95E-04	1.98E-04
16	B07	100	Combination Short Haul Truck	444	0.00E+00	6.35E-05	4.69E-06	1.48E+02	1.69E-07	1.14E-01	4.55E-05	1.14E-01	4.30E-03	1.09E-03	3.87E-03	1.37E-03	1.42E-03	2.35E-02	4.95E-04	0.00E+00	2.45E-03	2.15E-02
16	B07	100	Combination Long Haul Truck	405	0.00E+00	8.98E-05	5.06E-06	1.34E+02	5.72E-07	1.33E-01	7.41E-05	1.22E-01	4.31E-03	8.78E-04	8.24E-03	1.63E-03	1.70E-03	2.15E-02	4.49E-04	0.00E+00	6.54E-03	2.30E-02
16	B08	100	Passenger Car	821	0.00E+00	7.68E-06	8.35E-07	3.35E+01	5.45E-05	1.64E-01	1.73E-05	8.85E-04	2.62E-03	5.03E-04	1.69E-03	1.09E-03	1.12E-03	9.76E-05	1.70E-04	3.56E-08	5.71E-04	1.38E-04
16	B08	100	Passenger Truck	1374	0.00E+00	1.59E-05	1.70E-06	7.73E+01	1.06E-04	3.16E-01	3.42E-05	2.21E-03	4.58E-03	8.89E-04	3.30E-03	2.14E-03	2.19E-03	5.06E-04	3.87E-04	7.06E-08	1.11E-03	3.63E-04
16	B08	100	Single Unit Short Haul Truck	582	0.00E+00	5.53E-05	2.04E-06	9.51E+01	4.23E-05	1.96E-01	6.27E-05	2.44E-02	3.76E-03	9.74E-04	7.94E-03	1.47E-03	1.49E-03	9.74E-03	3.85E-04	1.57E-07	6.44E-03	4.55E-03
16	B08	100	Single Unit Long Haul Truck	26	0.00E+00	2.40E-06	8.64E-08	4.00E+00	1.75E-06	8.03E-03	2.72E-06	1.02E-03	1.71E-04	4.23E-05	3.47E-04	6.18E-05	6.29E-05	4.07E-04	1.62E-05	6.43E-09	2.84E-04	1.91E-04
16	B08	100	Combination Short Haul Truck	443	0.00E+00	6.34E-05	4.68E-06	1.48E+02	1.68E-07	1.14E-01	4.54E-05	1.14E-01	4.29E-03	1.09E-03	3.86E-03	1.37E-03	1.42E-03	2.35E-02	4.94E-04	0.00E+00	2.44E-03	2.14E-02
16	B08	100	Combination Long Haul Truck	404	0.00E+00	8.96E-05	5.05E-06	1.34E+02	5.71E-07	1.33E-01	7.39E-05	1.22E-01	4.30E-03	8.76E-04	8.22E-03	1.63E-03	1.70E-03	2.15E-02	4.48E-04	0.00E+00	6.52E-03	2.29E-02
9	D01	60	Passenger Car	1201	0.00E+00	1.54E-05	1.67E-06	5.48E+01	1.09E-04	3.09E-01	3.47E-05	1.24E-03	1.21E-02	1.82E-03	3.38E-03	2.18E-03	2.24E-03	2.38E-04	2.74E-04	5.76E-08	1.14E-03	1.93E-04
9	D01	60	Passenger Truck	2010	0.00E+00	3.27E-05	3.46E-06	1.22E+02	2.06E-04	5.28E-01	6.77E-05	3.84E-03	2.22E-02	3.30E-03	6.46E-03	4.20E-03	4.31E-03	9.74E-04	6.06E-04	1.12E-07	2.15E-03	6.51E-04
9	D01	60	Single Unit Short Haul Truck	21	0.00E+00	4.71E-06	1.94E-07	3.51E+00	3.12E-06	6.17E-03	5.09E-06	1.80E-03	4.85E-04	8.15E-05	6.28E-04	1.21E-04	1.23E-04	3.55E-04	1.43E-05	5.89E-09	5.04E-04	3.36E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.44E-09	1.49E-01	1.35E-07	2.62E-04	2.22E-07	7.78E-05	2.18E-05	3.61E-06	2.74E-05	5.25E-06	5.36E-06	1.51E-05	6.10E-07	2.50E-10	2.21E-05	1.46E-05
9	D01	60	Combination Short Haul Truck	71	0.00E+00	2.08E-05	1.52E-06	2.51E+01	5.69E-08	3.10E-02	1.49E-05	3.15E-02	3.62E-03	5.67E-04	1.28E-03	4.46E-04	4.63E-04	3.98E-03	8.38E-05	0.00E+00	8.16E-04	5.93E-03
9	D01	60	Combination Long Haul Truck	65	0.00E+00	2.85E-05	1.56E-06	2.37E+01	1.93E-07	3.73E-02	2.39E-05	3.35E-02	3.80E-03	5.49E-04	2.71E-03	5.09E-04	5.30E-04	3.80E-03	7.93E-05	0.00E+00	2.18E-03	6.31E-03
9	D02	60	Passenger Car	844	0.00E+00	1.08E-05	1.18E-06	3.85E+01	7.68E-05	2.17E-01	2.44E-05	8.69E-04	8.53E-03	1.28E-03	2.38E-03	1.53E-03	1.57E-03	1.67E-04	1.93E-04	4.05E-08	8.05E-04	1.36E-04
9	D02	60	Passenger Truck	1414	0.00E+00	2.30E-05	2.43E-06	8.59E+01	1.45E-04	3.71E-01	4.76E-05	2.70E-03	1.56E-02	2.32E-03	4.54E-03	2.95E-03	3.03E-03	6.85E-04	4.26E-04	7.90E-08	1.51E-03	4.58E-04
9	D02	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E-06	3.80E-07	6.85E+00	6.09E-06	1.21E-02	9.94E-06	3.51E-03	9.47E-04	1.59E-04	1.23E-03	2.36E-04	2.41E-04	6.94E-04	2.79E-05	1.15E-08	9.86E-04	6.57E-04
9	D02	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.52E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.85E-05
9	D02	60	Combination Short Haul Truck	38	0.00E+00	1.11E-05	8.19E-07	1.34E+01	3.05E-08	1.66E-02	8.00E-06	1.69E-02	1.94E-03	3.04E-04	6.87E-04	2.39E-04	2.49E-04	2.14E-03	4.50E-05	0.00E+00	4.38E-04	3.18E-03
9	D02	60	Combination Long Haul Truck	35	0.00E+00	1.53E-05	8.36E-07	1.27E+01	1.03E-07	2.00E-02	1.28E-05	1.80E-02	2.04E-03	2.95E-04	1.45E-03	2.73E-04	2.85E-04	2.04E-03	4.26E-05	0.00E+00	1.17E-03	3.39E-03
9	D03	60	Passenger Car	1486	0.00E+00	1.90E-05	2.07E-06	6.78E+01	1.35E-04	3.82E-01	4.29E-05	1.53E-03	1.50E-02	2.25E-03	4.19E-03	2.70E-03	2.77E-03	2.95E-04	3.40E-04	7.14E-08	1.42E-03	2.39E-04
9	D03	60	Passenger Truck	2489	0.00E+00	4.04E-05	4.28E-06	1.51E+02	2.55E-04	6.54E-01	8.38E-05	4.76E-03	2.74E-02	4.08E-03	7.99E-03	5.20E-03	5.33E-03	1.21E-03	7.50E-04	1.39E-07	2.66E-03	8.06E-04
9	D03	60	Single Unit Short Haul Truck	60	0.00E+00	1.35E-05	5.57E-07	1.00E+01	8.93E-06	1.77E-02	1.46E-05	5.15E-03	1.39E-03	2.33E-04	1.80E-03	3.46E-04	3.53E-04	1.02E-03	4.09E-05	1.69E-08	1.44E-03	9.63E-04
9	D03	60	Single Unit Long Haul Truck	3	0.00E+00	5.88E-07	2.42E-08	4.28E-01	3.87E-07	7.49E-04	6.36E-07	2.23E-04	6.24E-05	1.03E-05	7.86E-05	1.50E-05	1.53E-05	4.33E-05	1.75E-06	7.17E-10	6.32E-05	4.17E-05
9	D03	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.97E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.71E-03
9	D03	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.10E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.95E-03
9	D04	60	Passenger Car	1023	0.00E+00	1.31E-05	1.42E-06	4.67E+01	9.30E-05	2.63E-01	2.96E-05	1.05E-03	1.03E-02	1.55E-03	2.88E-03	1.86E-03	1.91E-03	2.03E-04	2.34E-04	4.91E-08	9.75E-04	1.64E-04
9	D04	60	Passenger Truck	1713	0.00E+00	2.78E-05	2.95E-06	1.04E+02	1.76E-04	4.50E-01	5.77E-05	3.27E-03	1.89E-02	2.81E-03	5.50E-03	3.58E-03	3.67E-03	8.30E-04	5.16E-04	9.57E-08	1.83E-03	5.55E-04
9	D04	60	Single Unit Short Haul Truck	57	0.00E+00	1.26E-05	5.21E-07	9.40E+00	8.36E-06	1.65E-02	1.36E-05	4.82E-03	1.30E-03	2.18E-04	1.68E-03	3.24E-04	3.31E-04	9.53E-04	3.83E-05	1.58E-08	1.35E-03	9.02E-04
9	D04	60	Single Unit Long Haul Truck	2	0.00E+00	5.51E-07	2.26E-08	4.01E-01	3.63E-07	7.02E-04	5.96E-07	2.09E-04	5.84E-05	9.69E-06	7.36E-05	1.41E-05	1.44E-05	4.05E-05	1.64E-06	6.72E-10	5.92E-05	3.91E-05
9	D04	60	Combination Short Haul Truck	59	0.00E+00	1.72E-05	1.27E-06	2.08E+01	4.72E-08	2.58E-02	1.24E-05	2.62E-02	3.01E-03	4.71E-04	1.06E-03	3.71E-04	3.85E-04	3.31E-03	6.96E-05	0.00E+00	6.78E-04	4.93E-03
9	D04	60	Combination Long Haul Truck	54	0.00E+00	2.37E-05	1.29E-06	1.97E+01	1.60E-07	3.10E-02	1.98E-05	2.79E-02	3.16E-03	4.56E-04	2.25E-03	4.23E-04	4.41E-04	3.16E-03	6.59E-05	0.00E+00	1.81E-03	5.25E-03
9	D05	60	Passenger Car	1296	0.00E+00	1.66E-05	1.80E-06	5.92E+01	1.18E-04	3.33E-01	3.74E-05	1.33E-03	1.31E-02	1.96E-03	3.65E-03	2.35E-03	2.42E-03	2.57E-04	2.96E-04	6.22E-08	1.24E-03	2.08E-04
9	D05	60	Passenger Truck	2171	0.00E+00	3.53E-05	3.74E-06	1.32E+02	2.22E-04	5.70E-01	7.31E-05	4.15E-03	2.39E-02	3.56E-03	6.97E-03	4.54E-03	4.65E-03	1.05E-03	6.54E-04	1.21E-07	2.32E-03	7.03E-04
9	D05	60	Single Unit Short Haul Truck	56	0.00E+00	1.24E-05	5.12E-07	9.24E+00	8.22E-06	1.63E-02	1.34E-05	4.74E-03	1.28E-03	2.15E-04	1.65E-03	3.19E-04	3.25E-04	9.36E-04	3.77E-05	1.55E-08	1.33E-03	8.87E-04
9	D05	60	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.23E-08	3.94E-01	3.56E-07	6.90E-04	5.85E-07	2.05E-04	5.74E-05	9.53E-06	7.23E-05	1.39E-05	1.41E-05	3.98E-05	1.61E-06	6.60E-10	5.82E-05	3.84E-05
9	D05	60	Combination Short Haul Truck	58	0.00E+00	1.68E-05	1.23E-06	2.03E+01	4.60E-08	2.51E-02	1.21E-05	2.55E-02	2.93E-03	4.58E-04	1.03E-03	3.61E-04	3.75E-04	3.22E-03	6.78E-05	0.00E+00	6.60E-04	4.80E-03
9	D05	60	Combination Long Haul Truck	52	0.00E+00	2.31E-05	1.26E-06	1.91E+01	1.56E-07	3.01E-02	1.93E-05	2.71E-02	3.07E-03	4.44E-04	2.19E-03	4.12E-04	4.29E-04	3.07E-03	6.41E-05	0.00E+00	1.76E-03	5.11E-03
9	D06	60	Passenger Car	1110	0.00E+00	1.42E-05	1.55E-06	5.06E+01	1.01E-04	2.85E-01	3.21E-05	1.14E-03	1.12E-02	1.68E-03	3.13E-03	2.02E-03	2.07E-03	2.20E-04	2.54E-04	5.33E-08	1.06E-03	1.78E-04
9	D06	60	Passenger Truck	1858	0.00E+00	3.02E-05	3.20E-06	1.13E+02	1.90E-04	4.88E-01	6.26E-05	3.55E-03	2.05E-02	3.05E-03	5.97E-03	3.88E-03	3.98E-03	9.00E-04	5.60E-04	1.04E-07	1.99E-03	6.02E-04
9	D06	60	Single Unit Short Haul Truck	66	0.00E+00	1.48E-05	6.10E-07	1.10E+01	9.78E-06	1.93E-02	1.60E-05	5.64E-03	1.52E-03	2.56E-04	1.97E-03	3.79E-04	3.87E-04	1.11E-03	4.48E-05	1.85E-08	1.58E-03	1.05E-03
9	D06	60	Single Unit Long Haul Truck	3	0.00E+00	6.44E-07	2.65E-08	4.69E-01	4.24E-07	8.21E-04	6.96E-07	2.44E-04	6.83E-05	1.13E-05	8.61E-05	1.65E-05	1.68E-05	4.74E-05	1.91E-06	7.85E-10	6.93E-05	4.57E-05
9	D06	60	Combination Short Haul Truck	43	0.00E+00	1.25E-05	9.19E-07	1.51E+01	3.43E-08	1.87E-02	8.99E-06	1.90E-02	2.18E-03	3.42E-04	7.71E-04	2.69E-04	2.79E-04	2.40E-03	5.05E-05	0.00E+00	4.92E-04	3.58E-03
9	D06	60	Combination Long Haul Truck	39	0.00E+00	1.72E-05	9.40E-07	1.43E+01	1.16E-07	2.25E-02	1.44E-05	2.02E-02	2.29E-03	3.31E-04	1.63E-03	3.07E-04	3.20E-04	2.29E-03	4.78E-05	0.00E+00	1.31E-03	3.81E-03
11	D07	80	Passenger Car	1339	0.00E+00	1.39E-05	1.51E-06	5.67E+01	9.89E-05	2.88E-01	3.14E-05	1.39E-03	7.30E-03	1.22E-03	3.06E-03	1.98E-03	2.03E-03	1.99E-04	2.86E-04	6.11E-08	1.04E-03	2.17E-04
11	D07	80	Passenger Truck	2243	0.00E+00	2.87E-05	3.06E-06	1.28E+02	1.87E-04	5.09E-01	6.08E-05	3.74E-03	1.30E-02	2.16E-03	5.84E-03	3.79E-03	3.88E-03	9.21E-04	6.39E-04	1.16E-07	1.95E-03	6.23E-04
11	D07	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.41E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.23E-04
11	D07	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.88E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.52E-05
11	D07	80	Combination Short Haul Truck	70	0.00E+00	1.44E-05	1.07E-06	2.35E+01	3.78E-08	2.20E-02	1.03E-05	2.22E-02	1.67E-03	3.03E-04	8.76E-04	3.12E-04	3.24E-04	3.73E-03	7.86E-05	0.00E+00	5.52E-04	4.17E-03
11	D07	80	Combination Long Haul Truck	64	0.00E+00	2.01E-05	1.14E-06	2.18E+01	1.28E-07	2.61E-02	1.66E-05	2.37E-02	1.73E-03	2.77E-04	1.84E-03	3.66E-04	3.81E-04	3.50E-03	7.31E-05	0.00E+00	1.46E-03	4.46E-03
11	D08	80	Passenger Car	1074	0.00E+00	1.12E-05	1.21E-06	4.55E+01	7.93E-05	2.31E-01	2.52E-05	1.11E-03	5.85E-03	9.80E-04	2.46E-03	1.58E-03	1.63E-03	1.60E-04	2.29E-04	4.90E-08	8.31E-04	1.74E-04
11	D08	80	Passenger Truck	1798	0.00E+00	2.30E-05	2.45E-06	1.03E+02	1.50E-04	4.08E-01	4.88E-05	3.00E-03	1.04E-02	1.74E-03	4.68E-03	3.04E-03	3.11E-03	7.38E-04	5.12E-04	9.32E-08	1.57E-03	5.00E-04
11	D08	80	Single Unit Short Haul Truck	64	0.00E+00	8.81E-06	3.44E-07	1.05E+01	5.97E-06	1.91E-02	9.68E-06	3.64E-03	7.21E-04	1.47E-04	1.21E-03	2.25E-04	2.29E-04	1.07E-03	4.27E-05	1.69E-08	9.84E-04	6.81E-04
11	D08	80	Single Unit Long Haul Truck	3	0.00E+00	3.83E-07	1.48E-08	4.45E-01	2.54E-07	7.96E-04	4.20E-07	1.56E-04	3.31E-05	6.54E-06	5.29E-05	9.64E-06	9.83E-06	4.50E-05	1.81E-06	7.06E-10	4.30E-05	2.91E-05
11	D08	80	Combination Short Haul Truck	38	0.00E+00	7.76E-06	5.75E-07	1.26E+01	2.03E-08	1.18E-02	5.55E-06	1.19E-02	8.99E-04	1.63E-04	4.71E-04	1.68E-04	1.74E-04	2.01E-03	4.22E-05	0.00E+00	2.97E-04	2.24E-03
11	D08	80	Combination Long Haul Truck	34	0.00E+00	1.08E-05	6.10E-07	1.17E+01	6.88E-08	1.40E-02	8.92E-06	1.27E-02	9.29E-04	1.49E-04	9.91E-04	1.97E-04	2.05E-04	1.88E-03	3.93E-05	0.00E+00	7.86E-04	2.40E-03
11	D09	80	Passenger Car	1094	0.00E+00	1.14E-05	1.24E-06	4.64E+01	8.08E-05	2.35E-01	2.57E-05	1.13E-03	5.97E-03	9.99E-04	2.50E-03	1.61E-03	1.66E-03	1.63E-04	2.33E-04	4.99E-08	8.47E-04	1.77E-04
11	D09	80	Passenger Truck	1833	0.00E+00	2.34E-05	2.50E-06	1.05E+02	1.53E-04	4.16E-01	4.97E-05	3.06E-03	1.06E-02	1.77E-03	4.77E-03	3.09E-03	3.17E-03	7.53E-04	5.22E-04	9.50E-08	1.60E-03	5.09E-04
11	D09	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.83E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.29E-04
11	D09	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.26E-05
11	D09	80	Combination Short Haul Truck	39	0.00E+00	8.08E-06	5.98E-07	1.32E+01	2.12E-08	1.23E-02	5.78E-06	1.24E-02	9.36E-04	1.70E-04	4.90E-04	1.75E-04	1.81E-04	2.09E-03	4.40E-05	0.00E+00	3.09E-04	2.34E-03
11	D09	80	Combination Long Haul Truck	36	0.00E+00	1.13E-05	6.36E-07	1.22E+01	7.16E-08	1.46E-02	9.29E-06	1.32E-02	9.67E-04	1.55E-04	1.03E-03	2.05E-04	2.13E-04	1.96E-03	4.09E-05	0.00E+00	8.19E-04	2.49E-03
11	D10	80	Passenger Car	886	0.00E+00	9.22E-06	1.00E-06	3.75E+01	6.54E-05	1.91E-01	2.08E-05	9.18E-04	4.83E-03	8.08E-04	2.03E-03	1.31E-03	1.34E-03	1.32E-04	1.89E-04	4.04E-08	6.86E-04	1.43E-04
11	D10	80	Passenger Truck	1483	0.00E+00	1.90E-05	2.02E-06	8.47E+01	1.23E-04	3.37E-01	4.02E-05	2.48E-03	8.60E-03	1.43E-03	3.86E-03	2.50E-03	2.57E-03	6.09E-04	4.23E-04	7.69E-08	1.29E-03	4.12E-04
11	D10	80	Single Unit Short Haul Truck	47	0.00E+00	6.44E-06	2.51E-07	7.69E+00	4.37E-06	1.40E-02	7.08E-06	2.66E-03	5.27E-04	1.08E-04	8.87E-04	1.64E-04	1.67E-04	7.83E-04	3.13E-05	1.24E-08	7.19E-04	4.98E-04
11	D10	80	Single Unit Long Haul Truck	2	0.00E+00	2.80E-07	1.08E-08	3.25E-01	1.86E-07	5.82E-04	3.07E-07	1.14E-04	2.42E-05	4.79E-06	3.87E-05	7.05E-06	7.19E-06	3.29E-05	1.32E-06	5.16E-10	3.15E-05	2.

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D14	60	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.23E-08	3.94E-01	3.56E-07	6.90E-04	5.85E-07	2.05E-04	5.74E-05	9.53E-06	7.23E-05	1.39E-05	1.41E-05	3.98E-05	1.61E-06	6.60E-10	5.82E-05	3.84E-05
9	D14	60	Combination Short Haul Truck	39	0.00E+00	1.14E-05	8.41E-07	1.38E+01	3.14E-08	1.71E-02	8.22E-06	1.74E-02	2.00E-03	3.12E-04	7.06E-04	2.46E-04	2.55E-04	2.20E-03	4.62E-05	0.00E+00	4.50E-04	3.27E-03
9	D14	60	Combination Long Haul Truck	36	0.00E+00	1.57E-05	8.59E-07	1.30E+01	1.06E-07	2.06E-02	1.32E-05	1.85E-02	2.10E-03	3.03E-04	1.49E-03	2.81E-04	2.92E-04	2.09E-03	4.37E-05	0.00E+00	1.20E-03	3.48E-03
9	D15	60	Passenger Car	842	0.00E+00	1.08E-05	1.17E-06	3.84E+01	7.66E-05	2.16E-01	2.43E-05	8.67E-04	8.50E-03	1.27E-03	2.37E-03	1.53E-03	1.57E-03	1.67E-04	1.92E-04	4.04E-08	8.03E-04	1.35E-04
9	D15	60	Passenger Truck	1410	0.00E+00	2.29E-05	2.43E-06	8.56E+01	1.44E-04	3.70E-01	4.75E-05	2.69E-03	1.55E-02	2.31E-03	4.53E-03	2.95E-03	3.02E-03	6.83E-04	4.25E-04	7.88E-08	1.51E-03	4.56E-04
9	D15	60	Single Unit Short Haul Truck	57	0.00E+00	1.28E-05	5.30E-07	9.56E+00	8.50E-06	1.68E-02	1.39E-05	4.90E-03	1.32E-03	2.22E-04	1.71E-03	3.30E-04	3.36E-04	9.69E-04	3.90E-05	1.61E-08	1.38E-03	9.17E-04
9	D15	60	Single Unit Long Haul Truck	3	0.00E+00	5.60E-07	2.30E-08	4.08E-01	3.69E-07	7.14E-04	6.06E-07	2.12E-04	5.94E-05	9.85E-06	7.48E-05	1.43E-05	1.46E-05	4.12E-05	1.66E-06	6.83E-10	6.02E-05	3.97E-05
9	D15	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.48E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.79E-03
9	D15	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.97E-03
9	D16	60	Passenger Car	794	0.00E+00	1.02E-05	1.11E-06	3.62E+01	7.22E-05	2.04E-01	2.29E-05	8.17E-04	8.02E-03	1.20E-03	2.24E-03	1.44E-03	1.48E-03	1.57E-04	1.81E-04	3.81E-08	7.57E-04	1.27E-04
9	D16	60	Passenger Truck	1329	0.00E+00	2.16E-05	2.29E-06	8.07E+01	1.36E-04	3.49E-01	4.48E-05	2.54E-03	1.46E-02	2.18E-03	4.27E-03	2.78E-03	2.85E-03	6.44E-04	4.01E-04	7.43E-08	1.42E-03	4.30E-04
9	D16	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.13E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	D16	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.65E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.97E-05
9	D16	60	Combination Short Haul Truck	48	0.00E+00	1.39E-05	1.02E-06	1.68E+01	3.80E-08	2.08E-02	9.98E-06	2.11E-02	2.42E-03	3.79E-04	8.56E-04	2.98E-04	3.10E-04	2.66E-03	5.61E-05	0.00E+00	5.46E-04	3.97E-03
9	D16	60	Combination Long Haul Truck	43	0.00E+00	1.91E-05	1.04E-06	1.58E+01	1.29E-07	2.49E-02	1.60E-05	2.24E-02	2.54E-03	3.68E-04	1.81E-03	3.41E-04	3.55E-04	2.54E-03	5.31E-05	0.00E+00	1.46E-03	4.22E-03
10	D17	70	Passenger Car	126	0.00E+00	1.40E-06	1.53E-07	5.48E+00	9.96E-06	2.83E-02	3.17E-06	1.27E-04	9.68E-04	1.51E-04	3.09E-04	1.99E-04	2.04E-04	2.13E-05	2.75E-05	5.72E-09	1.04E-04	1.98E-05
10	D17	70	Passenger Truck	210	0.00E+00	2.95E-06	3.14E-07	1.23E+01	1.89E-05	5.00E-02	6.19E-06	3.69E-04	1.75E-03	2.71E-04	5.92E-04	3.85E-04	3.94E-04	9.33E-05	6.14E-05	1.10E-08	1.98E-04	6.20E-05
10	D17	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.01E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.50E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.45E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.45E-06
10	D17	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.20E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.03E-04
10	D17	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.42E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.45E-04
10	D18	70	Passenger Car	409	0.00E+00	4.57E-06	4.97E-07	1.79E+01	3.25E-05	9.23E-02	1.03E-05	4.14E-04	3.15E-03	4.91E-04	1.01E-03	6.49E-04	6.66E-04	6.96E-05	8.97E-05	1.86E-08	3.40E-04	6.46E-05
10	D18	70	Passenger Truck	686	0.00E+00	9.63E-06	1.02E-06	4.02E+01	6.17E-05	1.63E-01	2.02E-05	1.20E-03	5.71E-03	8.83E-04	1.93E-03	1.25E-03	1.29E-03	3.04E-04	2.00E-04	3.58E-08	6.45E-04	2.02E-04
10	D18	70	Single Unit Short Haul Truck	37	0.00E+00	6.57E-06	2.67E-07	6.12E+00	4.41E-06	1.11E-02	7.15E-06	2.60E-03	5.94E-04	1.09E-04	8.86E-04	1.69E-04	1.72E-04	6.22E-04	2.49E-05	1.00E-08	7.14E-04	4.87E-04
10	D18	70	Single Unit Long Haul Truck	2	0.00E+00	2.86E-07	1.15E-08	2.59E-01	1.90E-07	4.66E-04	3.11E-07	1.12E-04	2.72E-05	4.87E-06	3.87E-05	7.29E-06	7.44E-06	2.62E-05	1.06E-06	4.24E-10	3.12E-05	2.10E-05
10	D18	70	Combination Short Haul Truck	35	0.00E+00	9.02E-06	6.71E-07	1.22E+01	2.29E-08	1.30E-02	6.43E-06	1.34E-02	1.27E-03	2.12E-04	5.41E-04	1.95E-04	2.03E-04	1.94E-03	4.07E-05	0.00E+00	3.38E-04	2.52E-03
10	D18	70	Combination Long Haul Truck	32	0.00E+00	1.24E-05	7.03E-07	1.14E+01	7.75E-08	1.55E-02	1.02E-05	1.43E-02	1.32E-03	1.99E-04	1.12E-03	2.26E-04	2.35E-04	1.84E-03	3.83E-05	0.00E+00	8.89E-04	2.70E-03
11	D19	80	Passenger Car	1491	0.00E+00	1.55E-05	1.69E-06	6.32E+01	1.10E-04	3.21E-01	3.50E-05	1.55E-03	8.13E-03	1.36E-03	3.41E-03	2.20E-03	2.26E-03	2.22E-04	3.18E-04	6.80E-08	1.15E-03	2.41E-04
11	D19	80	Passenger Truck	2496	0.00E+00	3.19E-05	3.40E-06	1.43E+02	2.08E-04	5.66E-01	6.77E-05	4.17E-03	1.45E-02	2.41E-03	6.49E-03	4.21E-03	4.32E-03	1.03E-03	7.11E-04	1.29E-07	2.18E-03	6.94E-04
11	D19	80	Single Unit Short Haul Truck	121	0.00E+00	1.66E-05	6.47E-07	1.98E+01	1.12E-05	3.59E-02	1.82E-05	6.85E-03	1.36E-03	2.77E-04	2.28E-03	4.22E-04	4.30E-04	2.01E-03	8.04E-05	3.19E-08	1.85E-03	1.28E-03
11	D19	80	Single Unit Long Haul Truck	5	0.00E+00	7.19E-07	2.78E-08	8.36E-01	4.78E-07	1.50E-03	7.90E-07	2.93E-04	6.22E-05	1.23E-05	9.94E-05	1.81E-05	1.85E-05	8.45E-05	3.40E-06	1.33E-09	8.09E-05	5.47E-05
11	D19	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.90E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.58E-03
11	D19	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.03E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.83E-03
11	D20	80	Passenger Car	760	0.00E+00	7.91E-06	8.59E-07	3.22E+01	5.61E-05	1.63E-01	1.78E-05	7.88E-04	4.14E-03	6.93E-04	1.74E-03	1.12E-03	1.15E-03	1.13E-04	1.62E-04	3.46E-08	5.88E-04	1.23E-04
11	D20	80	Passenger Truck	1272	0.00E+00	1.63E-05	1.74E-06	7.27E+01	1.06E-04	2.89E-01	3.45E-05	2.12E-03	7.37E-03	1.23E-03	3.31E-03	2.15E-03	2.20E-03	5.22E-04	3.63E-04	6.59E-08	1.11E-03	3.53E-04
11	D20	80	Single Unit Short Haul Truck	443	0.00E+00	6.09E-05	2.38E-06	7.27E+01	4.13E-05	1.32E-01	6.69E-05	2.52E-02	4.98E-03	1.02E-03	8.38E-03	1.55E-03	1.58E-03	7.40E-03	2.95E-04	1.17E-07	6.80E-03	4.71E-03
11	D20	80	Single Unit Long Haul Truck	20	0.00E+00	2.64E-06	1.02E-07	3.07E+00	1.76E-06	5.50E-03	2.90E-06	1.08E-03	2.28E-04	4.52E-05	3.65E-04	6.66E-05	6.79E-05	3.11E-04	1.25E-05	4.88E-09	2.97E-04	2.01E-04
11	D20	80	Combination Short Haul Truck	138	0.00E+00	2.85E-05	2.11E-06	4.63E+01	7.45E-08	4.34E-02	2.03E-05	4.36E-02	3.29E-03	5.97E-04	1.73E-03	6.15E-04	6.38E-04	7.36E-03	1.55E-04	0.00E+00	1.09E-03	8.22E-03
11	D20	80	Combination Long Haul Truck	126	0.00E+00	3.96E-05	2.24E-06	4.30E+01	2.52E-07	5.14E-02	3.27E-05	4.66E-02	3.41E-03	5.45E-04	3.63E-03	7.21E-04	7.51E-04	6.90E-03	1.44E-04	0.00E+00	2.88E-03	8.78E-03
11	D21	80	Passenger Car	1207	0.00E+00	1.26E-05	1.36E-06	5.11E+01	8.91E-05	2.60E-01	2.83E-05	1.25E-03	6.58E-03	1.10E-03	2.76E-03	1.78E-03	1.83E-03	1.79E-04	2.58E-04	5.50E-08	9.34E-04	1.95E-04
11	D21	80	Passenger Truck	2021	0.00E+00	2.59E-05	2.76E-06	1.15E+02	1.68E-04	4.59E-01	5.48E-05	3.37E-03	1.17E-02	1.95E-03	5.26E-03	3.41E-03	3.50E-03	8.30E-04	5.76E-04	1.05E-07	1.76E-03	5.62E-04
11	D21	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.56E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.78E-04
11	D21	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.09E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.04E-05
11	D21	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.29E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	9.97E-04
11	D21	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.65E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.06E-03
11	D22	80	Passenger Car	843	0.00E+00	8.77E-06	9.54E-07	3.57E+01	6.23E-05	1.81E-01	1.98E-05	8.74E-04	4.60E-03	7.69E-04	1.93E-03	1.24E-03	1.28E-03	1.25E-04	1.80E-04	3.84E-08	6.53E-04	1.36E-04
11	D22	80	Passenger Truck	1412	0.00E+00	1.81E-05	1.93E-06	8.06E+01	1.18E-04	3.20E-01	3.83E-05	2.36E-03	8.18E-03	1.36E-03	3.67E-03	2.38E-03	2.44E-03	5.80E-04	4.02E-04	7.32E-08	1.23E-03	3.92E-04
11	D22	80	Single Unit Short Haul Truck	197	0.00E+00	2.71E-05	1.06E-06	3.23E+01	1.84E-05	5.88E-02	2.98E-05	1.12E-02	2.22E-03	4.53E-04	3.73E-03	6.90E-04	7.04E-04	3.29E-03	1.31E-04	5.21E-08	3.02E-03	2.09E-03
11	D22	80	Single Unit Long Haul Truck	9	0.00E+00	1.18E-06	4.54E-08	1.37E+00	7.82E-07	2.45E-03	1.29E-06	4.79E-04	1.02E-04	2.01E-05	1.63E-04	2.96E-05	3.02E-05	1.38E-04	5.56E-06	2.17E-09	1.32E-04	8.94E-05
11	D22	80	Combination Short Haul Truck	126	0.00E+00	2.60E-05	1.92E-06	4.23E+01	6.80E-08	3.96E-02	1.86E-05	3.98E-02	3.01E-03	5.45E-04	1.58E-03	5.61E-04	5.83E-04	6.72E-03	1.41E-04	0.00E+00	9.93E-04	7.51E-03
11	D22	80	Combination Long Haul Truck	115	0.00E+00	3.62E-05	2.04E-06	3.92E+01	2.30E-07	4.69E-02	2.99E-05	4.26E-02	3.11E-03	4.97E-04	3.32E-03	6.58E-04	6.86E-04	6.30E-03	1.31E-04	0.00E+00	2.63E-03	8.02E-03
9	D23	60	Passenger Car	1267	0.00E+00	1.62E-05	1.76E-06	5.78E+01	1.15E-04	3.26E-01	3.66E-05	1.30E-03	1.28E-02	1.92E-03	3.57E-03	2.30E-03	2.36E-03	2.51E-04	2.90E-04	6.08E-08	1.21E-03	2.03E-04
9	D23	60	Passenger Truck	2121	0.00E+00	3.45E-05	3.65E-06	1.29E+02	2.17E-04	5.57E-01	7.15E-05	4.05E-03	2.34E-02	3.48E-03	6.81E-03	4.43E-03	4.54E-03	1.03E-03	6.39E-04	1.19E-07	2.27E-03	6.87E-04
9	D23	60	Single Unit Short Haul Truck	91	0.00E+00	2.03E-05	8.39E-07	1.51E+01	1.35E-05	2.66E-02	2.20E-05	7.76E-03	2.09E-03	3.52E-04	2.71E-03	5.22E-04	5.32E-04	1.53E-03	6.17E-05	2.54E-08	2.18E-03	1.45E-03
9	D23	60	Single Unit Long Haul Truck	4	0.00E+00	8.87E-07	3.64E-08	6.45E-01	5.84E-07	1.13E-03	9.59E-07	3.36E-04	9.40E-05	1.56E-05	1.19E-04	2.27E-05	2.31E-05	6.52E-05	2.63E-06	1.08E-09	9.54E-05	6.29E-05
9	D23	60	Combination Short Haul Truck	36	0.00E+00	1.04E-05	7.62E-07	1.25E+01	2.84E-08	1.55E-02	7.46E-06	1.57E-02	1.81E-03	2.83E-04	6.40E-04	2.23E-04	2.32E-04	1.99E-03	4.19E-05	0.00E+00	4.08E-04	2.97E-03
9	D23	60	Combination Long Haul Truck	32	0.00E+00	1.43E-05	7.79E-07	1.18E+01	9.63E-08	1.86E-02	1.19E-05	1.68E-02	1.90E-03	2.75E-04	1.35E-03	2.54E-04	2.65E-04	1.90E-03	3.96E-05	0.00E+00	1.09E-03	3.16E-03
9	D24	60	Passenger Car	611	0.00E+00	7.83E-06	8.51E-07	2.79E+01	5.56E-05	1.57E-01	1.77E-05	6.29E-04	6.17E-03	9.25E-04	1.72E-03	1.11E-03	1.14E-03	1.21E-04	1.40E-04	2.94E-08	5.83E-04	9.82E-05
9	D24	60	Passenger Truck	1024	0.00E+00	1.66E-05	1.76E-06	6.22E+01	1.05E-04	2.69E-01	3.45E-05	1.96E-03	1.13E-02	1.68E-03	3.29E-03	2.14E-03	2.19E-03	4.96E-04	3.09E-04	5.72E-08	1.10E-03	3.31E-04
9	D24	60	Single Unit Short Haul Truck	111	0.00E+00	2.48E-05	1.02E-06	1.85E+01	1.64E-05	3.25E-02	2.68E-05	9.47E-03	2.56E-03	4.30E-04	3.31E-03	6.37E-04	6.50E-04	1.87E-03	7.53E-05	3.10E-08	2.66E-03	1.77E-03
9	D24	60	Single Unit Long Haul Truck	5	0.00E+00	1.08E-06	4.45E-08	7.88E-01	7.13E-07	1.38E-03	1.17E-06	4.10E-04	1.15E-04	1.91E-05	1.45E-04	2.77E-05	2.83E-05	7.96E-05	3.21E-06	1.32E-09	1.16E-04	7.68E-05
9	D24	60	Combination Short Haul Truck	52	0.00E+00	1.53E-05	1.12E-06	1.84E+01	4.18E-08	2.28E-02	1.10E-05	2.31E-02	2.66E-03	4.17E-04	9.41E-04	3.28E-04	3.41E-04	2.93E-03	6.16E-05	0.00E+00	6.00E-04	4.36E-03
9	D24	60	Combination Long Haul Truck	48	0.00E+00	2.10E-05	1.15E-06	1.74E+01	1.42E-07	2.74E-02	1.75E-05	2.46E-02	2.79E-03	4.04E-04	1.99E-03	3.74E-04	3.90E-04	2.79E-03	5.83E-05	0.00E+00	1.60E-03	4.64E-03
9	D25	60	Passenger Car	1266	0.00E+00	1.62E-05	1.76E-06	5.78E+01	1.15E-04	3.25E-01	3.66E-05	1.30E-03	1.28E-02	1.91E-03	3.57E-03	2.30E-03	2.36E-03	2.51E-04	2.89E-04	6.08E-08	1.21E-03	2.03E-04
9	D25	60	Passenger Truck	2120	0.00E+00	3.44E-05	3.65E-06	1.29E+02	2.17E-04	5.57E-01	7.14E-05	4.05E-03	2.34E-02	3.48E-03	6.81E-03	4.43E-03	4.54E-03	1.03E-03	6.39E-04	1.18E-07	2.27E-03	6.86E-04
9	D25	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.27E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.36E-03
9	D25	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.15E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.89E-05
9	D25	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.18E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.22E-03
9	D25	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.26E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.37E-03
9	D26	60	Passenger Car	908	0.00E+00	1.16E-05	1.26E-06	4.14E+01	8.26E-05	2.33E-01	2.62E-05	9.35E-04	9.17E-03	1.37E-03	2.56E-03	1.65E-03	1.69E-03	1.80E-04	2.08E-04	4.36E-08	8.66E-04	1.46E-04
9	D26	60	Passenger Truck	1521	0.00E+00	2.47E-05	2.62E-06	9.24E+01	1.56E-04	3.99E-01	5.12E-05	2.91E-03	1.68E-02	2.49E-03	4.88E-03	3.18E-03	3.26E-03	7.37E-04	4.58E-04	8.50E-08	1.63E-03	4.92E-04
9	D26	60	Single Unit Short Haul Truck	101	0.00E+00	2.25E-05	9.28E-07	1.67E+01	1.49E-05	2.94E-02	2.43E-05	8.58E-03	2.31E-03	3.89E-04	3.00E-03	5.77E-04	5.88E-04	1.70E-03	6.82E-05	2.81E-08	2.41E-03	1.61E-03
9	D26	60	Single Unit Long Haul Truck	4	0.00E+00	9.80E-07	4.03E-08	7.13E-01	6.45E-07	1.25E-03	1.06E-06	3.71E-04	1.04E-04	1.72E-05	1.31E-04	2.51E-05	2.56E-05	7.21E-05	2.91E-06	1.20E-09	1.05E-04	6.95E-05
9	D26	60	Combination Short Haul Truck	40	0.00E+00	1.18E-05	8.63E-07	1.42E+01	3.22E-08	1.76E-02	8.44E-06	1.78E-02	2.05E-03	3.21E-04	7.24E-04	2.53E-04	2.62E-04	2.25E-03	4.74E-05	0.00E+00	4.62E-04	3.36E-03
9	D26	60	Combination Long Haul Truck	37	0.00E+00	1.62E-05	8.82E-07	1.34E+01	1.09E-07	2.11E-02	1.35E-05	1.90E-02	2.15E-03	3.11E-04	1.53E-03	2.88E-04	3.00E-04	2.15E-03	4.49E-05	0.00E+00	1.23E-03	3.57E-03
11	D27	80	Passenger Car	322	0.00E+00	3.35E-06	3.64E-07	1.36E+01	2.38E-05	6.93E-02	7.55E-06	3.34E-04	1.75E-03	2.94E-04	7.37E-04	4.75E-04	4.88E-04	4.79E-05	6.87E-05	1.47E-08	2.49E-04	5.21E-05
11	D27	80	Passenger Truck	539	0.00E+00	6.90E-06	7.35E-07	3.08E+01	4.49E-05	1.22E-01	1.46E-05	9.00E-04	3.12E-03	5.20E-04	1.40E-03	9.10E-04	9.33E-04	2.21E-04	1.54E-04	2.79E-08	4.70E-04	1.50E-04
11	D27	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.15E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.20E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D27	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.45E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.21E-03
11	D27	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.89E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
11	D28	80	Passenger Car	787	0.00E+00	8.19E-06	8.90E-07	3.33E+01	5.81E-05	1.69E-01	1.85E-05	8.16E-04	4.29E-03	7.18E-04	1.80E-03	1.16E-03	1.19E-03	1.17E-04	1.68E-04	3.59E-08	6.09E-04	1.27E-04

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D32	80	Passenger Car	478	0.00E+00	4.97E-06	5.40E-07	2.02E+01	3.53E-05	1.03E-01	1.12E-05	4.95E-04	2.60E-03	4.36E-04	1.09E-03	7.05E-04	7.24E-04	7.10E-05	1.02E-04	2.18E-08	3.70E-04	7.73E-05
11	D32	80	Passenger Truck	800	0.00E+00	1.02E-05	1.09E-06	4.57E+01	6.66E-05	1.82E-01	2.17E-05	1.34E-03	4.64E-03	7.72E-04	2.08E-03	1.35E-03	1.38E-03	3.29E-04	2.28E-04	4.15E-08	6.97E-04	2.22E-04
11	D32	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.77E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.18E-04
11	D32	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.18E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.21E-05
11	D32	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.12E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.12E-03
11	D32	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.20E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.26E-03
9	D33	60	Passenger Car	308	0.00E+00	3.94E-06	4.28E-07	1.40E+01	2.80E-05	7.91E-02	8.89E-06	3.17E-04	3.11E-03	4.65E-04	8.67E-04	5.59E-04	5.74E-04	6.10E-05	7.03E-05	1.48E-08	2.93E-04	4.94E-05
9	D33	60	Passenger Truck	515	0.00E+00	8.37E-06	8.87E-07	3.13E+01	5.28E-05	1.35E-01	1.74E-05	9.85E-04	5.68E-03	8.45E-04	1.66E-03	1.08E-03	1.10E-03	2.50E-04	1.55E-04	2.88E-08	5.52E-04	1.67E-04
9	D33	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E-06	3.80E-07	6.85E+00	6.09E-06	1.21E-02	9.94E-06	3.51E-03	9.47E-04	1.59E-04	1.23E-03	2.36E-04	2.41E-04	6.94E-04	2.79E-05	1.15E-08	9.86E-04	6.57E-04
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.52E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.85E-05
9	D33	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.13E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
9	D33	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.27E-03
9	D34	60	Passenger Car	246	0.00E+00	3.15E-06	3.42E-07	1.12E+01	2.23E-05	6.31E-02	7.10E-06	2.53E-04	2.48E-03	3.72E-04	6.92E-04	4.46E-04	4.58E-04	4.87E-05	5.62E-05	1.18E-08	2.34E-04	3.95E-05
9	D34	60	Passenger Truck	411	0.00E+00	6.68E-06	7.08E-07	2.50E+01	4.21E-05	1.08E-01	1.39E-05	7.86E-04	4.53E-03	6.75E-04	1.32E-03	8.60E-04	8.81E-04	1.99E-04	1.24E-04	2.30E-08	4.40E-04	1.33E-04
9	D34	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	8.98E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.68E-04
9	D34	60	Combination Short Haul Truck	5	0.00E+00	1.37E-06	1.01E-07	1.66E+00	3.76E-09	2.05E-03	9.87E-07	2.08E-03	2.40E-04	3.75E-05	8.47E-05	2.95E-05	3.06E-05	2.64E-04	5.54E-06	0.00E+00	5.40E-05	3.93E-04
9	D34	60	Combination Long Haul Truck	4	0.00E+00	1.89E-06	1.03E-07	1.57E+00	1.27E-08	2.47E-03	1.58E-06	2.22E-03	2.51E-04	3.64E-05	1.79E-04	3.37E-05	3.51E-05	2.51E-04	5.25E-06	0.00E+00	1.44E-04	4.18E-04
9	D35	60	Passenger Car	408	0.00E+00	5.23E-06	5.68E-07	1.86E+01	3.71E-05	1.05E-01	1.18E-05	4.20E-04	4.12E-03	6.18E-04	1.15E-03	7.42E-04	7.61E-04	8.09E-05	9.33E-05	1.96E-08	3.89E-04	6.56E-05
9	D35	60	Passenger Truck	684	0.00E+00	1.11E-05	1.18E-06	4.15E+01	7.00E-05	1.80E-01	2.30E-05	1.31E-03	7.53E-03	1.12E-03	2.20E-03	1.43E-03	1.46E-03	3.31E-04	2.06E-04	3.82E-08	7.32E-04	2.21E-04
9	D35	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.17E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	D35	60	Combination Short Haul Truck	6	0.00E+00	1.68E-06	1.23E-07	2.03E+00	4.60E-09	2.51E-03	1.21E-06	2.55E-03	2.93E-04	4.58E-05	1.03E-04	3.61E-05	3.75E-05	3.22E-04	6.78E-06	0.00E+00	6.60E-05	4.80E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.31E-06	1.26E-07	1.91E+00	1.56E-08	3.01E-03	1.93E-06	2.71E-03	3.07E-04	4.44E-05	2.19E-04	4.12E-05	4.29E-05	3.07E-04	6.41E-06	0.00E+00	1.76E-04	5.11E-04
9	D36	60	Passenger Car	116	0.00E+00	1.49E-06	1.62E-07	5.31E+00	1.06E-05	2.99E-02	3.36E-06	1.20E-04	1.17E-03	1.76E-04	3.28E-04	2.11E-04	2.17E-04	2.30E-05	2.66E-05	5.58E-09	1.11E-04	1.87E-05
9	D36	60	Passenger Truck	195	0.00E+00	3.16E-06	3.35E-07	1.18E+01	1.99E-05	5.11E-02	6.56E-06	3.72E-04	2.15E-03	3.19E-04	6.25E-04	4.07E-04	4.17E-04	9.43E-05	5.87E-05	1.09E-08	2.08E-04	6.30E-05
9	D36	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.96E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.67E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.49E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	D36	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.87E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.48E-03
9	D36	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.38E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.58E-03
9	D37	60	Passenger Car	243	0.00E+00	3.11E-06	3.38E-07	1.11E+01	2.21E-05	6.25E-02	7.02E-06	2.50E-04	2.45E-03	3.68E-04	6.85E-04	4.42E-04	4.53E-04	4.82E-05	5.56E-05	1.17E-08	2.32E-04	3.90E-05
9	D37	60	Passenger Truck	407	0.00E+00	6.61E-06	7.01E-07	2.47E+01	4.17E-05	1.07E-01	1.37E-05	7.78E-04	4.48E-03	6.67E-04	1.31E-03	8.50E-04	8.71E-04	1.97E-04	1.23E-04	2.27E-08	4.36E-04	1.32E-04
9	D37	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.45E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.59E-05
9	D37	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.85E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.49E-04
9	D37	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.97E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.71E-04
9	D38	60	Passenger Car	469	0.00E+00	6.01E-06	6.53E-07	2.14E+01	4.26E-05	1.21E-01	1.35E-05	4.83E-04	4.73E-03	7.09E-04	1.32E-03	8.52E-04	8.74E-04	9.29E-05	1.07E-04	2.25E-08	4.47E-04	7.53E-05
9	D38	60	Passenger Truck	785	0.00E+00	1.28E-05	1.35E-06	4.77E+01	8.04E-05	2.06E-01	2.65E-05	1.50E-03	8.65E-03	1.29E-03	2.52E-03	1.64E-03	1.68E-03	3.80E-04	2.37E-04	4.39E-08	8.41E-04	2.54E-04
9	D38	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.63E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.06E-04
9	D38	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.07E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.32E-05
9	D38	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.13E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
9	D38	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.27E-03
9	D39	60	Passenger Car	195	0.00E+00	2.50E-06	2.72E-07	8.91E+00	1.77E-05	5.02E-02	5.64E-06	2.01E-04	1.97E-03	2.95E-04	5.50E-04	3.55E-04	3.64E-04	3.87E-05	4.46E-05	9.37E-09	1.86E-04	3.13E-05
9	D39	60	Passenger Truck	327	0.00E+00	5.31E-06	5.63E-07	1.99E+01	3.35E-05	8.58E-02	1.10E-05	6.25E-04	3.60E-03	5.36E-04	1.05E-03	6.83E-04	7.00E-04	1.58E-04	9.85E-05	1.83E-08	3.50E-04	1.06E-04
9	D39	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.63E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.72E-05
9	D39	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.93E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.29E-05
9	D40	60	Passenger Car	340	0.00E+00	4.36E-06	4.74E-07	1.55E+01	3.09E-05	8.75E-02	9.83E-06	3.50E-04	3.44E-03	5.15E-04	9.59E-04	6.18E-04	6.34E-04	6.74E-05	7.78E-05	1.63E-08	3.24E-04	5.46E-05
9	D40	60	Passenger Truck	570	0.00E+00	9.25E-06	9.81E-07	3.46E+01	5.84E-05	1.50E-01	1.92E-05	1.09E-03	6.28E-03	9.34E-04	1.83E-03	1.19E-03	1.22E-03	2.76E-04	1.72E-04	3.18E-08	6.10E-04	1.84E-04
9	D40	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.39E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.60E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.01E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	D40	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.80E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.66E-03
9	D40	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.37E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.76E-03
9	D41	60	Passenger Car	357	0.00E+00	4.57E-06	4.97E-07	1.63E+01	3.24E-05	9.17E-02	1.03E-05	3.67E-04	3.60E-03	5.39E-04	1.01E-03	6.48E-04	6.65E-04	7.07E-05	8.15E-05	1.71E-08	3.40E-04	5.73E-05
9	D41	60	Passenger Truck	597	0.00E+00	9.70E-06	1.03E-06	3.63E+01	6.12E-05	1.57E-01	2.01E-05	1.14E-03	6.58E-03	9.80E-04	1.92E-03	1.25E-03	1.28E-03	2.89E-04	1.80E-04	3.34E-08	6.39E-04	1.93E-04
9	D42	60	Passenger Car	95	0.00E+00	1.22E-06	1.33E-07	4.35E+00	8.67E-06	2.45E-02	2.75E-06	9.82E-05	9.63E-04	1.44E-04	2.69E-04	1.73E-04	1.78E-04	1.89E-05	2.18E-05	4.58E-09	9.09E-05	1.53E-05
9	D42	60	Passenger Truck	160	0.00E+00	2.59E-06	2.75E-07	9.70E+00	1.64E-05	4.19E-02	5.38E-06	3.05E-04	1.76E-03	2.62E-04	5.13E-04	3.34E-04	3.42E-04	7.74E-05	4.81E-05	8.92E-09	1.71E-04	5.17E-05
9	D42	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.63E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
9	D42	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.62E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.05E-04
9	D42	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.73E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.25E-04
9	D43	60	Passenger Car	253	0.00E+00	3.25E-06	3.53E-07	1.16E+01	2.31E-05	6.52E-02	7.32E-06	2.61E-04	2.56E-03	3.83E-04	7.14E-04	4.61E-04	4.73E-04	5.02E-05	5.79E-05	1.22E-08	2.42E-04	4.07E-05
9	D43	60	Passenger Truck	425	0.00E+00	6.89E-06	7.31E-07	2.58E+01	4.35E-05	1.12E-01	1.43E-05	8.11E-04	4.68E-03	6.96E-04	1.36E-03	8.87E-04	9.09E-04	2.06E-04	1.28E-04	2.37E-08	4.54E-04	1.37E-04
9	D43	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.94E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
9	D43	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.39E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.39E-04
9	D44	60	Passenger Car	80	0.00E+00	1.02E-06	1.11E-07	3.63E+00	7.24E-06	2.05E-02	2.30E-06	8.20E-05	8.04E-04	1.20E-04	2.24E-04	1.45E-04	1.48E-04	1.58E-05	1.82E-05	3.82E-09	7.59E-05	1.28E-05
9	D44	60	Passenger Truck	133	0.00E+00	2.17E-06	2.30E-07	8.10E+00	1.37E-05	3.50E-02	4.49E-06	2.55E-04	1.47E-03	2.19E-04	4.28E-04	2.79E-04	2.86E-04	6.46E-05	4.02E-05	7.45E-09	1.43E-04	4.32E-05
9	D44	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.10E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.81E-04
9	D44	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.34E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.52E-05
9	D44	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.57E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.61E-03
9	D44	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.12E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D45	60	Passenger Car	630	0.00E+00	8.08E-06	8.78E-07	2.88E+01	5.73E-05	1.62E-01	1.82E-05	6.49E-04	6.37E-03	9.53E-04	1.78E-03	1.15E-03	1.18E-03	1.25E-04	1.44E-04	3.03E-08	6.01E-04	1.01E-04
9	D45	60	Passenger Truck	1056	0.00E+00	1.71E-05	1.82E-06	6.41E+01	1.08E-04	2.77E-01	3.56E-05	2.02E-03	1.16E-02	1.73E-03	3.39E-03	2.21E-03	2.26E-03	5.11E-04	3.18E-04	5.90E-08	1.13E-03	3.42E-04
9	D45	60	Single Unit Short Haul Truck	94	0.00E+00	2.10E-05	8.66E-07	1.56E+01	1.39E-05	2.75E-02	2.27E-05	8.00E-03	2.16E-03	3.63E-04	2.80E-03	5.39E-04	5.49E-04	1.58E-03	6.36E-05	2.62E-08	2.25E-03	1.50E-03
9	D45	60	Single Unit Long Haul Truck	4	0.00E+00	9.15E-07	3.76E-08	6.66E-01	6.02E-07	1.17E-03	9.89E-07	3.47E-04	9.70E-05	1.61E-05	1.22E-04	2.34E-05	2.39E-05	6.73E-05	2.72E-06	1.12E-09	9.84E-05	6.49E-05
9	D45	60	Combination Short Haul Truck	63	0.00E+00	1.85E-05	1.36E-06	2.23E+01	5.06E-08	2.76E-02	1.33E-05	2.80E-02	3.22E-03	5.04E-04	1.14E-03	3.97E-04	4.12E-04	3.54E-03	7.45E-05	0.00E+00	7.26E-04	5.28E-03
9	D45	60	Combination Long Haul Truck	58	0.00E+00	2.54E-05	1.39E-06	2.11E+01	1.71E-07	3.32E-02	2.12E-05	2.98E-02	3.38E-03	4.89E-04	2.41E-03	4.53E-04	4.72E-04	3.38E-03	7.05E-05	0.00E+00	1.94E-03	5.62E-03
9	D46	60	Passenger Car	534	0.00E+00	6.84E-06	7.43E-07	2.44E+01	4.85E-05	1.37E-01	1.54E-05	5.50E-04	5.39E-03	8.08E-04	1.50E-03	9.70E-04	9.95E-04	1.06E-04	1.22E-04	2.56E-08	5.09E-04	8.58E-05
9	D46	60	Passenger Truck	894	0.00E+00	1.45E-05	1.54E-06	5.43E+01	9.16E-05	2.35E-01	3.01E-05	1.71E-03	9.85E-03	1.47E-03	2.87E-03	1.87E-03	1.91E-03	4.33E-04	2.69E-04	5.00E-08	9.57E-04	2.89E-04
9	D46	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	9.96E-03	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.87E-03
9	D46	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.32E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.08E-05
9	D46	60	Combination Short Haul Truck	67	0.00E+00	1.95E-05	1.44E-06	2.36E+01	5.35E-08	2.92E-02	1.40E-05	2.96E-02	3.41E-03	5.33E-04	1.20E-03	4.20E-04	4.36E-04	3.75E-03	7.89E-05	0.00E+00	7.68E-04	5.58E-03
9	D46	60	Combination Long Haul Truck	61	0.00E+00	2.68E-05	1.47E-06	2.23E+01	1.81E-07	3.51E-02	2.25E-05	3.16E-02	3.58E-03	5.17E-04	2.55E-03	4.79E-04	4.99E-04	3.57E-03	7.46E-05	0.00E+00	2.05E-03	5.94E-03
9	D47	60	Passenger Car	695	0.00E+00	8.91E-06	9.68E-07	3.17E+01	6.32E-05	1.79E-01	2.01E-05	7.16E-04	7.02E-03	1.05E-03	1.96E-03	1.26E-03	1.30E-03	1.38E-04	1.59E-04	3.34E-08	6.63E-04	1.12E-04
9	D47	60	Passenger Truck	1165	0.00E+00	1.89E-05	2.00E-06	7.07E+01	1.19E-04	3.06E-01	3.92E-05	2.23E-03	1.28E-02	1.91E-03	3.74E-03	2.43E-03	2.49E-03	5.64E-04	3.51E-04	6.51E-08	1.25E-03	3.77E-04
9	D47	60	Single Unit Short Haul Truck	101	0.00E+00	2.25E-05	9.28E-07	1.67E+01	1.49E-05	2.94E-02	2.43E-05	8.58E-03	2.31E-03	3.89E-04	3.00E-03	5.77E-04	5.88E-04	1.70E-03	6.82E-05	2.81E-08	2.41E-03	1.61E-03
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	9.80E-07	4.03E-08	7.13E-01	6.45E-07	1.25E-03	1.06E-06	3.71E-04	1.04E-04	1.72E-05	1.31E-04	2.51E-05	2.56E-05	7.21E-05	2.91E-06	1.20E-09	1.05E-04	6.95E-05
9	D47	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.20E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.25E-05
9	D51	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.41E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.40E-03
9	D51	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.89E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.49E-03
9	D52	60	Passenger Car	341	0.00E+00	4.36E-06	4.74E-07	1.55E+01	3.10E-05	8.76E-02	9.84E-06	3.51E-04	3.44E-03	5.15E-04	9.60E-04	6.19E-04	6.35E-04	6.75E-05	7.79E-05	1.64E-08	3.25E-04	5.47E-05
9	D52	60	Passenger Truck	570	0.00E+00	9.26E-06	9.82E-07	3.46E+01	5.84E-05	1.50E-01	1.92E-05	1.09E-03	6.29E-03	9.35E-04	1.83E-03	1.19E-03	1.22E-03	2.76E-04	1.72E-04	3.19E-08	6.11E-04	1.85E-04
9	D52	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.21E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.43E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.39E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.47E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.54E-04
9	D52	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.70E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.96E-04
9	D53	60	Passenger Car	242	0.00E+00	3.10E-06	3.37E-07	1.11E+01	2.20E-05	6.23E-02	7.00E-06	2.49E-04	2.45E-03	3.66E-04	6.83E-04	4.40E-04	4.52E-04	4.80E-05	5.54E-05	1.16E-08	2.31E-04	3.89E-05
9	D53	60	Passenger Truck	406	0.00E+00	6.59E-06	6.98E-07	2.46E+01	4.16E-05	1.07E-01	1.37E-05	7.75E-04	4.47E-03	6.65E-04	1.30E-03	8.48E-04	8.69E-04	1.97E-04	1.22E-04	2.27E-08	4.34E-04	1.31E-04
9	D53	60	Single Unit Short Haul Truck	22	0.00E+00	4.92E-06	2.03E-07	3.66E+00	3.26E-06	6.45E-03	5.32E-06	1.88E-03	5.07E-04	8.52E-05	6.56E-04	1.26E-04	1.29E-04	3.71E-04	1.49E-05	6.15E-09	5.27E-04	3.52E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	8.82E-09	1.56E-01	1.41E-07	2.74E-04	2.32E-07	8.13E-05	2.28E-05	3.78E-06	2.87E-05	5.49E-06	5.60E-06	1.58E-05	6.37E-07	2.62E-10	2.31E-05	1.52E-05
9	D53	60	Combination Short Haul Truck	12	0.00E+00	3.51E-06	2.58E-07	4.24E+00	9.62E-09	5.25E-03	2.52E-06	5.32E-03	6.13E-04	9.58E-05	2.16E-04	7.54E-05	7.83E-05	6.73E-04	1.42E-05	0.00E+00	1.38E-04	1.00E-03
9	D53	60	Combination Long Haul Truck	11	0.00E+00	4.82E-06	2.64E-07	4.00E+00	3.26E-08	6.30E-03	4.03E-06	5.67E-03	6.43E-04	9.29E-05	4.58E-04	8.61E-05	8.97E-05	6.42E-04	1.34E-05	0.00E+00	3.68E-04	1.07E-03
9	D54	60	Passenger Car	470	0.00E+00	6.02E-06	6.54E-07	2.14E+01	4.27E-05	1.21E-01	1.36E-05	4.84E-04	4.75E-03	7.11E-04	1.32E-03	8.54E-04	8.76E-04	9.32E-05	1.07E-04	2.26E-08	4.48E-04	7.55E-05
9	D54	60	Passenger Truck	787	0.00E+00	1.28E-05	1.35E-06	4.78E+01	8.06E-05	2.07E-01	2.65E-05	1.50E-03	8.67E-03	1.29E-03	2.53E-03	1.64E-03	1.69E-03	3.81E-04	2.37E-04	4.40E-08	8.43E-04	2.55E-04
9	D54	60	Single Unit Short Haul Truck	25	0.00E+00	5.56E-06	2.30E-07	4.14E+00	3.68E-06	7.29E-03	6.01E-06	2.12E-03	5.73E-04	9.63E-05	7.42E-04	1.43E-04	1.46E-04	4.20E-04	1.69E-05	6.96E-09	5.96E-04	3.98E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	2.43E-07	9.97E-09	1.77E-01	1.60E-07	3.09E-04	2.62E-07	9.20E-05	2.57E-05	4.27E-06	3.24E-05	6.21E-06	6.33E-06	1.78E-05	7.21E-07	2.96E-10	2.61E-05	1.72E-05
9	D54	60	Combination Short Haul Truck	9	0.00E+00	2.59E-06	1.91E-07	3.13E+00	7.11E-09	3.88E-03	1.86E-06	3.94E-03	4.53E-04	7.08E-05	1.60E-04	5.58E-05	5.79E-05	4.98E-04	1.05E-05	0.00E+00	1.02E-04	7.42E-04
9	D54	60	Combination Long Haul Truck	8	0.00E+00	3.57E-06	1.95E-07	2.96E+00	2.41E-08	4.66E-03	2.98E-06	4.19E-03	4.75E-04	6.87E-05	3.38E-04	6.36E-05	6.63E-05	4.75E-04	9.91E-06	0.00E+00	2.72E-04	7.89E-04
11	D55	80	Passenger Car	630	0.00E+00	6.56E-06	7.13E-07	2.67E+01	4.66E-05	1.36E-01	1.48E-05	6.54E-04	3.44E-03	5.75E-04	1.44E-03	9.30E-04	9.55E-04	9.37E-05	1.34E-04	2.87E-08	4.88E-04	1.02E-04
11	D55	80	Passenger Truck	1056	0.00E+00	1.35E-05	1.44E-06	6.03E+01	8.79E-05	2.40E-01	2.86E-05	1.76E-03	6.12E-03	1.02E-03	2.75E-03	1.78E-03	1.83E-03	4.33E-04	3.01E-04	5.47E-08	9.20E-04	2.93E-04
11	D55	80	Single Unit Short Haul Truck	64	0.00E+00	8.81E-06	3.44E-07	1.05E+01	5.97E-06	1.91E-02	9.68E-06	3.64E-03	7.21E-04	1.47E-04	1.21E-03	2.25E-04	2.29E-04	1.07E-03	4.27E-05	1.69E-08	9.84E-04	6.81E-04
11	D55	80	Single Unit Long Haul Truck	3	0.00E+00	3.83E-07	1.48E-08	4.45E-01	2.54E-07	7.96E-04	4.20E-07	1.56E-04	3.31E-05	6.54E-06	5.29E-05	9.64E-06	9.83E-06	4.50E-05	1.81E-06	7.06E-10	4.30E-05	2.91E-05
11	D55	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.17E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.21E-03
11	D55	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.25E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.36E-03
11	D56	80	Passenger Car	321	0.00E+00	3.34E-06	3.63E-07	1.36E+01	2.37E-05	6.90E-02	7.53E-06	3.33E-04	1.75E-03	2.93E-04	7.34E-04	4.73E-04	4.86E-04	4.77E-05	6.84E-05	1.46E-08	2.48E-04	5.19E-05
11	D56	80	Passenger Truck	537	0.00E+00	6.87E-06	7.33E-07	3.07E+01	4.47E-05	1.22E-01	1.46E-05	8.97E-04	3.11E-03	5.18E-04	1.40E-03	9.07E-04	9.30E-04	2.21E-04	1.53E-04	2.78E-08	4.68E-04	1.49E-04
11	D56	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.56E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.78E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.09E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.04E-05
11	D56	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.77E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.46E-03
11	D56	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.30E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.56E-03
11	D57	80	Passenger Car	575	0.00E+00	5.99E-06	6.51E-07	2.44E+01	4.25E-05	1.24E-01	1.35E-05	5.97E-04	3.14E-03	5.25E-04	1.32E-03	8.49E-04	8.71E-04	8.55E-05	1.23E-04	2.62E-08	4.45E-04	9.31E-05
11	D57	80	Passenger Truck	964	0.00E+00	1.23E-05	1.31E-06	5.50E+01	8.02E-05	2.19E-01	2.61E-05	1.61E-03	5.58E-03	9.30E-04	2.51E-03	1.63E-03	1.67E-03	3.96E-04	2.75E-04	4.99E-08	8.40E-04	2.68E-04
11	D57	80	Single Unit Short Haul Truck	112	0.00E+00	1.54E-05	6.00E-07	1.84E+01	1.04E-05	3.34E-02	1.69E-05	6.36E-03	1.26E-03	2.58E-04	2.12E-03	3.92E-04	4.00E-04	1.87E-03	7.46E-05	2.96E-08	1.72E-03	1.19E-03
11	D57	80	Single Unit Long Haul Truck	5	0.00E+00	6.68E-07	2.58E-08	7.76E-01	4.44E-07	1.39E-03	7.34E-07	2.72E-04	5.77E-05	1.14E-05	9.23E-05	1.68E-05	1.72E-05	7.85E-05	3.16E-06	1.23E-09	7.52E-05	5.08E-05
11	D57	80	Combination Short Haul Truck	61	0.00E+00	1.25E-05	9.26E-07	2.03E+01	3.27E-08	1.91E-02	8.94E-06	1.92E-02	1.45E-03	2.62E-04	7.58E-04	2.70E-04	2.80E-04	3.23E-03	6.80E-05	0.00E+00	4.78E-04	3.61E-03
11	D57	80	Combination Long Haul Truck	55	0.00E+00	1.74E-05	9.83E-07	1.89E+01	1.11E-07	2.26E-02	1.44E-05	2.05E-02	1.50E-03	2.39E-04	1.60E-03	3.17E-04	3.30E-04	3.03E-03	6.33E-05	0.00E+00	1.27E-03	3.86E-03
11	D58	80	Passenger Car	641	0.00E+00	6.67E-06	7.25E-07	2.72E+01	4.73E-05	1.38E-01	1.50E-05	6.64E-04	3.49E-03	5.85E-04	1.47E-03	9.46E-04	9.70E-04	9.53E-05	1.37E-04	2.92E-08	4.96E-04	1.04E-04
11	D58	80	Passenger Truck	1073	0.00E+00	1.37E-05	1.46E-06	6.13E+01	8.93E-05	2.43E-01	2.91E-05	1.79E-03	6.22E-03	1.04E-03	2.79E-03	1.81E-03	1.86E-03	4.41E-04	3.06E-04	5.56E-08	9.35E-04	2.98E-04
11	D58	80	Single Unit Short Haul Truck	51	0.00E+00	6.97E-06	2.72E-07	8.32E+00	4.72E-06	1.51E-02	7.66E-06	2.88E-03	5.70E-04	1.17E-04	9.59E-04	1.78E-04	1.81E-04	8.47E-04	3.38E-05	1.34E-08	7.78E-04	5.39E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	3.03E-07	1.17E-08	3.52E-01	2.01E-07	6.29E-04	3.33E-07	1.23E-04	2.62E-05	5.18E-06	4.18E-05	7.62E-06	7.78E-06	3.56E-05	1.43E-06	5.59E-10	3.41E-05	2.30E-05
11	D58	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.26E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.74E-03
11	D58	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.89E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.86E-03
11	D59	80	Passenger Car	575	0.00E+00	5.99E-06	6.51E-07	2.44E+01	4.25E-05	1.24E-01	1.35E-05	5.97E-04	3.14E-03	5.25E-04	1.32E-03	8.49E-04	8.71E-04	8.55E-05	1.23E-04	2.62E-08	4.45E-04	9.31E-05
11	D59	80	Passenger Truck	964	0.00E+00	1.23E-05	1.31E-06	5.50E+01	8.02E-05	2.19E-01	2.61E-05	1.61E-03	5.58E-03	9.30E-04	2.51E-03	1.63E-03	1.67E-03	3.96E-04	2.75E-04	4.99E-08	8.40E-04	2.68E-04
11	D59	80	Single Unit Short Haul Truck	112	0.00E+00	1.54E-05	6.00E-07	1.84E+01	1.04E-05	3.34E-02	1.69E-05	6.36E-03	1.26E-03	2.58E-04	2.12E-03	3.92E-04	4.00E-04	1.87E-03	7.46E-05	2.96E-08	1.72E-03	1.19E-03
11	D59	80	Single Unit Long Haul Truck	5	0.00E+00	6.68E-07	2.58E-08	7.76E-01	4.44E-07	1.39E-03	7.34E-07	2.72E-04	5.77E-05	1.14E-05	9.23E-05	1.68E-05	1.72E-05	7.85E-05	3.16E-06	1.23E-09	7.52E-05	5.08E-05
11	D59	80	Combination Short Haul Truck	61	0.00E+00	1.25E-05	9.26E-07	2.03E+01	3.27E-08	1.91E-02	8.94E-06	1.92E-02	1.45E-03	2.62E-04	7.58E-04	2.70E-04	2.80E-04	3.23E-03	6.80E-05	0.00E+00	4.78E-04	3.61E-03
11	D59	80	Combination Long Haul Truck	55	0.00E+00	1.74E-05	9.83E-07	1.89E+01	1.11E-07	2.26E-02	1.44E-05	2.05E-02	1.50E-03	2.39E-04	1.60E-03	3.17E-04	3.30E-04	3.03E-03	6.33E-05	0.00E+00	1.27E-03	3.86E-03
11	D60	80	Passenger Car	641	0.00E+00	6.67E-06	7.25E-07	2.72E+01	4.73E-05	1.38E-01	1.50E-05	6.64E-04	3.49E-03	5.85E-04	1.47E-03	9.46E-04	9.70E-04	9.53E-05	1.37E-04	2.92E-08	4.96E-04	1.04E-04
11	D60	80	Passenger Truck	1073	0.00E+00	1.37E-05	1.46E-06	6.13E+01	8.93E-05	2.43E-01	2.91E-05	1.79E-03	6.22E-03	1.04E-03	2.79E-03	1.81E-03	1.86E-03	4.41E-04	3.06E-04	5.56E-08	9.35E-04	2.98E-04
11	D60	80	Single Unit Short Haul Truck	51	0.00E+00	6.97E-06	2.72E-07	8.32E+00	4.72E-06	1.51E-02	7.66E-06	2.88E-03	5.70E-04	1.17E-04	9.59E-04	1.78E-04	1.81E-04	8.47E-04	3.38E-05	1.34E-08	7.78E-04	5.39E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	3.03E-07	1.17E-08	3.52E-01	2.01E-07	6.29E-04	3.33E-07	1.23E-04	2.62E-05	5.18E-06	4.18E-05	7.62E-06	7.78E-06	3.56E-05	1.43E-06	5.59E-10	3.41E-05	2.30E-05
11	D60	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.26E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.74E-03
11	D60	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.89E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.86E-03
11	D61	80	Passenger Car	72	0.00E+00	7.47E-07	8.12E-08	3.04E+00	5.30E-06	1.54E-02	1.68E-06	7.44E-05	3.91E-04	6.55E-05	1.64E-04	1.06E-04	1.09E-04	1.07E-05	1.53E-05	3.27E-09	5.56E-05	1.16E-05
11	D61	80	Passenger Truck	120	0.00E+00	1.54E-06	1.64E-07	6.87E+00	1.00E-05	2.73E-02	3.26E-06	2.01E-04	6.97E-04	1.16E-04	3.13E-04	2.03E-04	2.08E-04	4.94E-05	3.43E-05	6.23E-09	1.05E-04	3.34E-05
11	D61	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.70E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D61	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.72E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.95E-06
11	D61	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.31E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.36E-04
11	D61	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.47E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.66E-04
11	D62	80	Passenger Car	234	0.00E+00	2.43E-06	2.64E-07	9.90E+00	1.73E-05	5.03E-02	5.48E-06	2.42E-04	1.27E-03	2.13E-04	5.35E-04	3.45E-04	3.54E-04	3.47E-05	4.99E-05	1.07E-08	1.81E-04	3.78E-05
11	D62	80	Passenger Truck	391	0.00E+00	5.01E-06	5.34E-07	2.24E+01	3.26E-05	8.88E-02	1.06E-05	6.53E-04	2.27E-03	3.78E-04	1.02E-03	6.61E-04	6.77E-04	1.61E-04	1.12E-04	2.03E-08	3.41E-04	1.09E-04
11	D62	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.74E-04
11	D62	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.27E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
11	D62	80	Combination Short Haul Truck	12	0.00E+00	2.37E-06	1.76E-07	3.86E+00	6.21E-09	3.61E-03	1.70E-06	3.64E-03	2.75E-04	4.97E-05	1.44E-04	5.12E-05	5.32E-05	6.13E-04	1.29E-05	0.00E+00	9.06E-05	6.85E-04
11	D62	80	Combination Long Haul Truck	10	0.00E+00	3.30E-06	1.87E-07	3.58E+00	2.10E-08	4.28E-03	2.72E-06	3.89E-03	2.84E-04	4.54E-05	3.03E-04	6.01E-05	6.26E-05	5.75E-04	1.20E-05	0.00E+00	2.40E-04	7.32E-04
10	D63	70	Passenger Car	56	0.00E+00	6.31E-07	6.86E-08	2.46E+00	4.48E-06	1.27E-02	1.42E-06	5.71E-05	4.35E-04	6.78E-05	1.39E-04	8.95E-05	9.18E-05	9.59E-06	1.24E-05	2.57E-09	4.69E-05	8.91E-06
10	D63	70	Passenger Truck	95	0.00E+00	1.33E-06	1.41E-07	5.54E+00	8.50E-06	2.25E-02	2.78E-06	1.66E-04	7.87E-04	1.22E-04	2.66E-04	1.73E-04	1.77E-04	4.19E-05	2.76E-05	4.94E-09	8.89E-05	2.79E-05
10	D63	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.87E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.50E-04
10	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.05E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	D63	70	Combination Short Haul Truck	14	0.00E+00	3.63E-06	2.70E-07	4.91E+00	9.23E-09	5.25E-03	2.59E-06	5.40E-03	5.12E-04	8.54E-05	2.18E-04	7.88E-05	8.18E-05	7.80E-04	1.64E-05	0.00E+00	1.36E-04	1.02E-03
10	D63	70	Combination Long Haul Truck	13	0.00E+00	4.98E-06	2.83E-07	4.61E+00	3.12E-08	6.26E-03	4.10E-06	5.78E-03	5.33E-04	8.03E-05	4.53E-04	9.11E-05	9.49E-05	7.40E-04	1.54E-05	0.00E+00	3.58E-04	1.09E-03
10	D64	70	Passenger Car	93	0.00E+00	1.04E-06	1.13E-07	4.05E+00	7.35E-06	2.09E-02	2.34E-06	9.38E-05	7.14E-04	1.11E-04	2.28E-04	1.47E-04	1.51E-04	1.58E-05	2.03E-05	4.22E-09	7.71E-05	1.46E-05
10	D64	70	Passenger Truck	155	0.00E+00	2.18E-06	2.32E-07	9.11E+00	1.40E-05	3.69E-02	4.57E-06	2.72E-04	1.29E-03	2.00E-04	4.37E-04	2.84E-04	2.91E-04	6.88E-05	4.53E-05	8.12E-09	1.46E-04	4.57E-05
10	D64	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.80E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.37E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.76E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.45E-05
10	D64	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.00E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.54E-04
10	D64	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.28E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.06E-04
11	D65	80	Passenger Car	264	0.00E+00	2.75E-06	2.99E-07	1.12E+01	1.95E-05	5.69E-02	6.20E-06	2.74E-04	1.44E-03	2.41E-04	6.05E-04	3.90E-04	4.00E-04	3.93E-05	5.64E-05	1.21E-08	2.05E-04	4.28E-05
11	D65	80

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D69	80	Passenger Car	121	0.00E+00	1.26E-06	1.37E-07	5.13E+00	8.95E-06	2.61E-02	2.84E-06	1.26E-04	6.60E-04	1.11E-04	2.77E-04	1.79E-04	1.83E-04	1.80E-05	2.58E-05	5.52E-09	9.38E-05	1.96E-05
11	D69	80	Passenger Truck	203	0.00E+00	2.60E-06	2.77E-07	1.16E+01	1.69E-05	4.60E-02	5.50E-06	3.39E-04	1.18E-03	1.96E-04	5.28E-04	3.42E-04	3.51E-04	8.33E-05	5.78E-05	1.05E-08	1.77E-04	5.64E-05
11	D69	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.39E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.47E-04
11	D69	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.02E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.91E-05
11	D69	80	Combination Short Haul Truck	20	0.00E+00	4.10E-06	3.03E-07	6.66E+00	1.07E-08	6.24E-03	2.93E-06	6.28E-03	4.74E-04	8.59E-05	2.48E-04	8.85E-05	9.18E-05	1.06E-03	2.23E-05	0.00E+00	1.57E-04	1.18E-03
11	D69	80	Combination Long Haul Truck	18	0.00E+00	5.71E-06	3.22E-07	6.19E+00	3.63E-08	7.39E-03	4.71E-06	6.71E-03	4.90E-04	7.84E-05	5.23E-04	1.04E-04	1.08E-04	9.93E-04	2.07E-05	0.00E+00	4.15E-04	1.26E-03
11	D70	80	Passenger Car	192	0.00E+00	2.00E-06	2.17E-07	8.14E+00	1.42E-05	4.13E-02	4.51E-06	1.99E-04	1.05E-03	1.75E-04	4.40E-04	2.84E-04	2.91E-04	2.86E-05	4.10E-05	8.76E-09	1.49E-04	3.11E-05
11	D70	80	Passenger Truck	322	0.00E+00	4.12E-06	4.39E-07	1.84E+01	2.68E-05	7.30E-02	8.73E-06	5.37E-04	1.87E-03	3.11E-04	8.37E-04	5.43E-04	5.57E-04	1.32E-04	9.17E-05	1.67E-08	2.80E-04	8.94E-05
11	D70	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.79E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.35E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.67E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.43E-05
11	D70	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	5.95E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.12E-03
11	D70	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.36E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.20E-03
10	D71	70	Passenger Car	276	0.00E+00	3.08E-06	3.35E-07	1.20E+01	2.19E-05	6.22E-02	6.95E-06	2.79E-04	2.13E-03	3.31E-04	6.78E-04	4.37E-04	4.49E-04	4.69E-05	6.05E-05	1.26E-08	2.29E-04	4.35E-05
10	D71	70	Passenger Truck	462	0.00E+00	6.49E-06	6.90E-07	2.71E+01	4.16E-05	1.10E-01	1.36E-05	8.11E-04	3.85E-03	5.95E-04	1.30E-03	8.45E-04	8.66E-04	2.05E-04	1.35E-04	2.42E-08	4.35E-04	1.36E-04
10	D71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.40E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.62E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.03E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	D71	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.00E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.54E-04
10	D71	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.28E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.06E-04
10	D72	70	Passenger Car	273	0.00E+00	3.05E-06	3.32E-07	1.19E+01	2.17E-05	6.16E-02	6.89E-06	2.76E-04	2.11E-03	3.28E-04	6.72E-04	4.33E-04	4.44E-04	4.64E-05	5.99E-05	1.24E-08	2.27E-04	4.31E-05
10	D72	70	Passenger Truck	458	0.00E+00	6.43E-06	6.83E-07	2.68E+01	4.12E-05	1.09E-01	1.35E-05	8.03E-04	3.81E-03	5.90E-04	1.29E-03	8.37E-04	8.58E-04	2.03E-04	1.34E-04	2.39E-08	4.31E-04	1.35E-04
10	D72	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.20E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.12E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.48E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.77E-05
10	D72	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.00E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.51E-03
10	D72	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.56E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.61E-03
10	D73	70	Passenger Car	196	0.00E+00	2.19E-06	2.37E-07	8.53E+00	1.55E-05	4.41E-02	4.93E-06	1.98E-04	1.51E-03	2.35E-04	4.81E-04	3.10E-04	3.18E-04	3.32E-05	4.29E-05	8.90E-09	1.63E-04	3.09E-05
10	D73	70	Passenger Truck	327	0.00E+00	4.60E-06	4.89E-07	1.92E+01	2.95E-05	7.78E-02	9.64E-06	5.75E-04	2.73E-03	4.22E-04	9.22E-04	5.99E-04	6.14E-04	1.45E-04	9.56E-05	1.71E-08	3.08E-04	9.65E-05
10	D73	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.01E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.49E-05
10	D73	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.20E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.26E-04
10	D73	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.28E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.42E-04
10	D74	70	Passenger Car	207	0.00E+00	2.31E-06	2.51E-07	9.02E+00	1.64E-05	4.66E-02	5.21E-06	2.09E-04	1.59E-03	2.48E-04	5.08E-04	3.28E-04	3.36E-04	3.51E-05	4.53E-05	9.41E-09	1.72E-04	3.26E-05
10	D74	70	Passenger Truck	346	0.00E+00	4.86E-06	5.17E-07	2.03E+01	3.11E-05	8.23E-02	1.02E-05	6.08E-04	2.88E-03	4.46E-04	9.75E-04	6.33E-04	6.49E-04	1.54E-04	1.01E-04	1.81E-08	3.26E-04	1.02E-04
10	D74	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.00E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.87E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.31E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.06E-06
10	D74	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.60E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.67E-04
10	D74	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.92E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.27E-04
11	D75	80	Passenger Car	168	0.00E+00	1.75E-06	1.90E-07	7.13E+00	1.24E-05	3.62E-02	3.95E-06	1.74E-04	9.17E-04	1.54E-04	3.85E-04	2.48E-04	2.55E-04	2.50E-05	3.59E-05	7.67E-09	1.30E-04	2.72E-05
11	D75	80	Passenger Truck	282	0.00E+00	3.61E-06	3.84E-07	1.61E+01	2.34E-05	6.39E-02	7.64E-06	4.70E-04	1.63E-03	2.72E-04	7.33E-04	4.76E-04	4.88E-04	1.16E-04	8.03E-05	1.46E-08	2.46E-04	7.83E-05
11	D75	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.11E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.55E-06
11	D75	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.31E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.23E-04
11	D75	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.53E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.65E-04
11	D76	80	Passenger Car	192	0.00E+00	2.00E-06	2.17E-07	8.13E+00	1.42E-05	4.13E-02	4.50E-06	1.99E-04	1.05E-03	1.75E-04	4.39E-04	2.83E-04	2.90E-04	2.85E-05	4.09E-05	8.74E-09	1.48E-04	3.10E-05
11	D76	80	Passenger Truck	321	0.00E+00	4.11E-06	4.38E-07	1.83E+01	2.67E-05	7.29E-02	8.71E-06	5.36E-04	1.86E-03	3.10E-04	8.36E-04	5.42E-04	5.56E-04	1.32E-04	9.15E-05	1.66E-08	2.80E-04	8.92E-05
11	D76	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.12E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.96E-04
11	D76	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.06E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.69E-05
11	D76	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.45E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.21E-03
11	D76	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.89E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
11	D77	80	Passenger Car	93	0.00E+00	9.65E-07	1.05E-07	3.93E+00	6.85E-06	1.99E-02	2.18E-06	9.61E-05	5.05E-04	8.46E-05	2.12E-04	1.37E-04	1.40E-04	1.38E-05	1.98E-05	4.23E-09	7.18E-05	1.50E-05
11	D77	80	Passenger Truck	155	0.00E+00	1.99E-06	2.12E-07	8.87E+00	1.29E-05	3.52E-02	4.21E-06	2.59E-04	9.00E-04	1.50E-04	4.04E-04	2.62E-04	2.69E-04	6.38E-05	4.43E-05	8.05E-09	1.35E-04	4.31E-05
11	D77	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.74E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.27E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
11	D77	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.97E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.48E-04
11	D77	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.24E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	7.98E-04
11	D78	80	Passenger Car	205	0.00E+00	2.13E-06	2.32E-07	8.68E+00	1.51E-05	4.41E-02	4.81E-06	2.12E-04	1.12E-03	1.87E-04	4.69E-04	3.02E-04	3.10E-04	3.05E-05	4.37E-05	9.34E-09	1.59E-04	3.31E-05
11	D78	80	Passenger Truck	343	0.00E+00	4.39E-06	4.68E-07	1.96E+01	2.86E-05	7.79E-02	9.30E-06	5.73E-04	1.99E-03	3.31E-04	8.93E-04	5.79E-04	5.94E-04	1.41E-04	9.78E-05	1.78E-08	2.99E-04	9.53E-05
11	D78	80	Single Unit Short Haul Truck	84	0.00E+00	1.16E-05	4.52E-07	1.38E+01	7.84E-06	2.51E-02	1.27E-05	4.79E-03	9.47E-04	1.94E-04	1.59E-03	2.95E-04	3.01E-04	1.41E-03	5.61E-05	2.23E-08	1.29E-03	8.94E-04
11	D78	80	Single Unit Long Haul Truck	4	0.00E+00	5.02E-07	1.94E-08	5.84E-01	3.34E-07	1.05E-03	5.52E-07	2.04E-04	4.34E-05	8.59E-06	6.94E-05	1.27E-05	1.29E-05	5.90E-05	2.38E-06	9.27E-10	5.65E-05	3.82E-05
11	D78	80	Combination Short Haul Truck	46	0.00E+00	9.49E-06	7.02E-07	1.54E+01	2.48E-08	1.45E-02	6.78E-06	1.45E-02	1.10E-03	1.99E-04	5.75E-04	2.05E-04	2.13E-04	2.45E-03	5.16E-05	0.00E+00	3.63E-04	2.74E-03
11	D78	80	Combination Long Haul Truck	42	0.00E+00	1.32E-05	7.46E-07	1.43E+01	8.40E-08	1.71E-02	1.09E-05	1.55E-02	1.14E-03	1.82E-04	1.21E-03	2.40E-04	2.50E-04	2.30E-03	4.80E-05	0.00E+00	9.61E-04	2.93E-03
10	D79	70	Passenger Car	245	0.00E+00	2.74E-06	2.97E-07	1.07E+01	1.94E-05	5.52E-02	6.17E-06	2.48E-04	1.89E-03	2.94E-04	6.02E-04	3.88E-04	3.98E-04	4.16E-05	5.37E-05	1.12E-08	2.04E-04	3.86E-05
10	D79	70	Passenger Truck	410	0.00E+00	5.76E-06	6.12E-07	2.41E+01	3.69E-05	9.75E-02	1.21E-05	7.20E-04	3.42E-03	5.28E-04	1.15E-03	7.50E-04	7.69E-04	1.82E-04	1.20E-04	2.14E-08	3.86E-04	1.21E-04
10	D79	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.60E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.60E-06
10	D79	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.20E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.03E-04
10	D79	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.42E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.45E-04
10	D80	70	Passenger Car	307	0.00E+00	3.43E-06	3.73E-07	1.34E+01	2.43E-05	6.92E-02	7.73E-06	3.10E-04	2.36E-03	3.68E-04	7.54E-04	4.86E-04	4.99E-04	5.22E-05	6.73E-05	1.40E-08	2.55E-04	4.84E-05
10	D80	70	Passenger Truck	514	0.00E+00	7.22E-06	7.67E-07	3.01E+01	4.62E-05	1.22E-01	1.51E-05	9.02E-04	4.28E-03	6.62E-04	1.45E-03	9.40E-04	9.64E-04	2.28E-04	1.50E-04	2.69E-08	4.84E-04	1.51E-04
10	D80	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.67E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.12E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.18E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.34E-05
10	D80	70	Combination Short Haul Truck	15	0.00E+00	3.77E-06	2.80E-07	5.09E+00	9.57E-09	5.44E-03	2.69E-06	5.60E-03	5.31E-04	8.86E-05	2.26E-04	8.17E-05	8.48E-05	8.09E-04	1.70E-05	0.00E+00	1.41E-04	1.05E-03
10	D80	70	Combination Long Haul Truck	13	0.00E+00	5.17E-06	2.94E-07	4.78E+00	3.24E-08	6.50E-03	4.25E-06	5.99E-03	5.53E-04	8.33E-05	4.70E-04	9.45E-05	9.84E-05	7.67E-04	1.60E-05	0.00E+00	3.71E-04	1.13E-03
9	F31	60	Passenger Car	790	0.00E+00	1.01E-05	1.10E-06	3.60E+01	7.18E-05	2.03E-01	2.28E-05	8.13E-04	7.97E-03	1.19E-03	2.22E-03	1.43E-03	1.47E-03	1.57E-04	1.81E-04	3.79E-08	7.53E-04	1.27E-04
9	F31	60	Passenger Truck	1322	0.00E+00	2.15E-05	2.28E-06	8.03E+01	1.35E-04	3.47E-01	4.46E-05	2.53E-03	1.46E-02	2.17E-03	4.25E-03	2.76E-03	2.83E-03	6.41E-04	3.99E-04	7.39E-08	1.42E-03	4.28E-04
9	F31	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.43E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	F31	60	Combination Short Haul Truck	31	0.00E+00	9.01E-06	6.62E-07	1.09E+01	2.47E-08	1.35E-02	6.47E-06	1.37E-02	1.57E-03	2.46E-04	5.55E-04	1.94E-04	2.01E-04	1.73E-03	3.63E-05	0.00E+00	3.54E-04	2.57E-03
9	F31	60	Combination Long Haul Truck	28	0.00E+00	1.24E-05	6.76E-07	1.03E+01	8.35E-08	1.62E-02	1.03E-05	1.45E-02	1.65E-03	2.38E-04	1.17E-03	2.21E-04	2.30E-04	1.65E-03	3.44E-05	0.00E+00	9.44E-04	2.74E-03
9	F32	60	Passenger Car	919	0.00E+00	1.18E-05	1.28E-06	4.19E+01	8.36E-05	2.36E-01	2.66E-05	9.46E-04	9.28E-03	1.39E-03	2.59E-03	1.67E-03	1.71E-03	1.82E-04	2.10E-04	4.41E-08	8.76E-04	1.48E-04
9	F32	60	Passenger Truck	1539	0.00E+00	2.50E-05	2.65E-06	9.35E+01	1.58E-04	4.04E-01	5.18E-05	2.94E-03	1.70E-02	2.52E-03	4.94E-03	3.22E-03	3.30E-03	7.46E-04	4.64E-04	8.60E-08	1.65E-03	4.98E-04
9	F32	60	Single Unit Short Haul Truck	34	0.00E+00	7.70E-06	3.18E-07	5.74E+00	5.10E-06	1.01E-02	8.33E-06	2.94E-03	7.93E-04	1.33E-04	1.03E-03	1.98E-04	2.02E-04	5.81E-04	2.34E-05	9.63E-09	8.25E-04	5.50E-04
9	F32	60	Single Unit Long Haul Truck	2	0.00E+00	3.36E-07	1.38E-08	2.45E-01	2.21E-07	4.28E-04	3.63E-07	1.27E-04	3.56E-05	5.91E-06	4.49E-05	8.60E-06	8.77E-06	2.47E-05	9.98E-07	4.10E-10	3.61E-05	2.38E-05
9	F32	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.87E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.48E-03
9	F32	60	Combination

Appendix F.1.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	G10	70	Passenger Truck	316	0.00E+00	4.27E-06	4.54E-07	1.88E+01	2.74E-05	7.21E-02	8.97E-06	5.48E-04	2.56E-03	3.97E-04	8.58E-04	5.57E-04	5.71E-04	1.39E-04	9.34E-05	1.64E-08	2.87E-04	9.18E-05
53	G10	70	Single Unit Short Haul Truck	92	0.00E+00	1.62E-05	6.57E-07	1.51E+01	1.08E-05	2.73E-02	1.76E-05	6.41E-03	1.46E-03	2.68E-04	2.18E-03	4.16E-04	4.24E-04	1.53E-03	6.13E-05	2.47E-08	1.76E-03	1.20E-03
53	G10	70	Single Unit Long Haul Truck	4	0.00E+00	7.04E-07	2.84E-08	6.38E-01	4.67E-07	1.15E-03	7.66E-07	2.76E-04	6.69E-05	1.20E-05	9.52E-05	1.80E-05	1.83E-05	6.46E-05	2.60E-06	1.04E-09	7.69E-05	5.16E-05
53	G10	70	Combination Short Haul Truck	61	0.00E+00	1.57E-05	1.17E-06	2.13E+01	4.00E-08	2.27E-02	1.12E-05	2.34E-02	2.22E-03	3.70E-04	9.45E-04	3.41E-04	3.54E-04	3.38E-03	7.11E-05	0.00E+00	5.91E-04	4.41E-03
53	G10	70	Combination Long Haul Truck	56	0.00E+00	2.16E-05	1.23E-06	2.00E+01	1.35E-07	2.71E-02	1.78E-05	2.50E-02	2.31E-03	3.48E-04	1.96E-03	3.95E-04	4.11E-04	3.21E-03	6.69E-05	0.00E+00	1.55E-03	4.71E-03
16	H01	100	Passenger Car	3059	0.00E+00	2.86E-05	3.11E-06	1.25E+02	2.03E-04	6.10E-01	6.46E-05	3.30E-03	9.78E-03	1.87E-03	6.30E-03	4.06E-03	4.17E-03	3.64E-04	6.32E-04	1.33E-07	2.13E-03	5.15E-04
16	H01	100	Passenger Truck	5123	0.00E+00	5.92E-05	6.34E-06	2.88E+02	3.95E-04	1.18E+00	1.28E-04	8.24E-03	1.71E-02	3.31E-03	1.23E-02	7.97E-03	8.17E-03	1.89E-03	1.44E-03	2.63E-07	4.13E-03	1.35E-03
16	H01	100	Single Unit Short Haul Truck	979	0.00E+00	9.30E-05	3.44E-06	1.60E+02	7.12E-05	3.30E-01	1.05E-04	4.10E-02	6.32E-03	1.64E-03	1.33E-02	2.46E-03	2.51E-03	1.64E-02	6.47E-04	2.64E-07	1.08E-02	7.64E-03
16	H01	100	Single Unit Long Haul Truck	43	0.00E+00	4.04E-06	1.45E-07	6.72E+00	2.94E-06	1.35E-02	4.57E-06	1.72E-03	2.87E-04	7.11E-05	5.83E-04	1.04E-04	1.06E-04	6.84E-04	2.73E-05	1.08E-08	4.77E-04	3.20E-04
16	H01	100	Combination Short Haul Truck	884	0.00E+00	1.27E-04	9.35E-06	2.95E+02	3.36E-07	2.28E-01	9.06E-05	2.27E-01	8.57E-03	2.17E-03	7.71E-03	2.73E-03	2.83E-03	4.68E-02	9.85E-04	0.00E+00	4.87E-03	4.28E-02
16	H01	100	Combination Long Haul Truck	807	0.00E+00	1.79E-04	1.01E-05	2.67E+02	1.14E-06	2.65E-01	1.48E-04	2.43E-01	8.58E-03	1.75E-03	1.64E-02	3.25E-03	3.39E-03	4.28E-02	8.94E-04	0.00E+00	1.30E-02	4.58E-02
16	H02	100	Passenger Car	3059	0.00E+00	2.86E-05	3.11E-06	1.25E+02	2.03E-04	6.10E-01	6.46E-05	3.30E-03	9.78E-03	1.87E-03	6.30E-03	4.06E-03	4.17E-03	3.64E-04	6.32E-04	1.33E-07	2.13E-03	5.15E-04
16	H02	100	Passenger Truck	5123	0.00E+00	5.92E-05	6.34E-06	2.88E+02	3.95E-04	1.18E+00	1.28E-04	8.24E-03	1.71E-02	3.31E-03	1.23E-02	7.97E-03	8.17E-03	1.89E-03	1.44E-03	2.63E-07	4.13E-03	1.35E-03
16	H02	100	Single Unit Short Haul Truck	979	0.00E+00	9.30E-05	3.44E-06	1.60E+02	7.12E-05	3.30E-01	1.05E-04	4.10E-02	6.32E-03	1.64E-03	1.33E-02	2.46E-03	2.51E-03	1.64E-02	6.47E-04	2.64E-07	1.08E-02	7.64E-03
16	H02	100	Single Unit Long Haul Truck	43	0.00E+00	4.04E-06	1.45E-07	6.72E+00	2.94E-06	1.35E-02	4.57E-06	1.72E-03	2.87E-04	7.11E-05	5.83E-04	1.04E-04	1.06E-04	6.84E-04	2.73E-05	1.08E-08	4.77E-04	3.20E-04
16	H02	100	Combination Short Haul Truck	884	0.00E+00	1.27E-04	9.35E-06	2.95E+02	3.36E-07	2.28E-01	9.06E-05	2.27E-01	8.57E-03	2.17E-03	7.71E-03	2.73E-03	2.83E-03	4.68E-02	9.85E-04	0.00E+00	4.87E-03	4.28E-02
16	H02	100	Combination Long Haul Truck	807	0.00E+00	1.79E-04	1.01E-05	2.67E+02	1.14E-06	2.65E-01	1.48E-04	2.43E-01	8.58E-03	1.75E-03	1.64E-02	3.25E-03	3.39E-03	4.28E-02	8.94E-04	0.00E+00	1.30E-02	4.58E-02
16	H03	100	Passenger Car	3153	0.00E+00	2.95E-05	3.21E-06	1.29E+02	2.09E-04	6.29E-01	6.65E-05	3.40E-03	1.01E-02	1.93E-03	6.49E-03	4.18E-03	4.29E-03	3.75E-04	6.52E-04	1.37E-07	2.20E-03	5.30E-04
16	H03	100	Passenger Truck	5279	0.00E+00	6.10E-05	6.53E-06	2.97E+02	4.07E-04	1.21E+00	1.31E-04	8.49E-03	1.76E-02	3.41E-03	1.27E-02	8.21E-03	8.42E-03	1.94E-03	1.49E-03	2.71E-07	4.26E-03	1.39E-03
16	H03	100	Single Unit Short Haul Truck	600	0.00E+00	5.70E-05	2.11E-06	9.79E+01	4.36E-05	2.02E-01	6.46E-05	2.51E-02	3.87E-03	1.00E-03	8.17E-03	1.51E-03	1.54E-03	1.00E-02	3.96E-04	1.62E-07	6.63E-03	4.68E-03
16	H03	100	Single Unit Long Haul Truck	26	0.00E+00	2.48E-06	8.90E-08	4.12E+00	1.80E-06	8.27E-03	2.80E-06	1.05E-03	1.76E-04	4.35E-05	3.57E-04	6.36E-05	6.48E-05	4.19E-04	1.67E-05	6.62E-09	2.92E-04	1.96E-04
16	H03	100	Combination Short Haul Truck	621	0.00E+00	8.88E-05	6.56E-06	2.07E+02	2.36E-07	1.60E-01	6.36E-05	1.59E-01	6.01E-03	1.52E-03	5.41E-03	1.92E-03	1.99E-03	3.29E-02	6.92E-04	0.00E+00	3.42E-03	3.00E-02
16	H03	100	Combination Long Haul Truck	566	0.00E+00	1.26E-04	7.08E-06	1.87E+02	8.00E-07	1.86E-01	1.04E-04	1.71E-01	6.02E-03	1.23E-03	1.15E-02	2.28E-03	2.38E-03	3.01E-02	6.28E-04	0.00E+00	9.14E-03	3.21E-02
16	H04	100	Passenger Car	2321	0.00E+00	2.17E-05	2.36E-06	9.49E+01	1.54E-04	4.63E-01	4.90E-05	2.50E-03	7.42E-03	1.42E-03	4.78E-03	3.08E-03	3.16E-03	2.76E-04	4.80E-04	1.01E-07	1.62E-03	3.90E-04
16	H04	100	Passenger Truck	3886	0.00E+00	4.49E-05	4.81E-06	2.19E+02	2.99E-04	8.94E-01	9.68E-05	6.25E-03	1.29E-02	2.51E-03	9.33E-03	6.04E-03	6.20E-03	1.43E-03	1.10E-03	2.00E-07	3.14E-03	1.03E-03
16	H04	100	Single Unit Short Haul Truck	525	0.00E+00	4.99E-05	1.84E-06	8.57E+01	3.82E-05	1.77E-01	5.65E-05	2.20E-02	3.39E-03	8.78E-04	7.15E-03	1.32E-03	1.34E-03	8.78E-03	3.47E-04	1.42E-07	5.81E-03	4.10E-03
16	H04	100	Single Unit Long Haul Truck	23	0.00E+00	2.17E-06	7.79E-08	3.60E+00	1.58E-06	7.24E-03	2.45E-06	9.22E-04	1.54E-04	3.81E-05	3.13E-04	5.57E-05	5.67E-05	3.67E-04	1.46E-05	5.79E-09	2.56E-04	1.72E-04
16	H04	100	Combination Short Haul Truck	527	0.00E+00	7.54E-05	5.57E-06	1.76E+02	2.00E-07	1.36E-01	5.40E-05	1.35E-01	5.11E-03	1.29E-03	4.59E-03	1.63E-03	1.69E-03	2.79E-02	5.87E-04	0.00E+00	2.91E-03	2.55E-02
16	H04	100	Combination Long Haul Truck	481	0.00E+00	1.07E-04	6.01E-06	1.59E+02	6.79E-07	1.58E-01	8.80E-05	1.45E-01	5.12E-03	1.04E-03	9.78E-03	1.94E-03	2.02E-03	2.55E-02	5.33E-04	0.00E+00	7.76E-03	2.73E-02
56	H05	100	Passenger Car	1207	0.00E+00	1.13E-05	1.23E-06	4.93E+01	8.01E-05	2.41E-01	2.55E-05	1.30E-03	3.86E-03	7.39E-04	2.48E-03	1.60E-03	1.64E-03	1.43E-04	2.49E-04	5.24E-08	8.40E-04	2.03E-04
56	H05	100	Passenger Truck	2020	0.00E+00	2.33E-05	2.50E-06	1.14E+02	1.56E-04	4.65E-01	5.03E-05	3.25E-03	6.73E-03	1.31E-03	4.85E-03	3.14E-03	3.22E-03	7.44E-04	5.70E-04	1.04E-07	1.63E-03	5.34E-04
56	H05	100	Single Unit Short Haul Truck	252	0.00E+00	2.39E-05	8.85E-07	4.11E+01	1.83E-05	8.49E-02	2.71E-05	1.05E-02	1.63E-03	4.21E-04	3.43E-03	6.34E-04	6.45E-04	4.21E-03	1.66E-04	6.80E-08	2.79E-03	1.97E-03
56	H05	100	Single Unit Long Haul Truck	11	0.00E+00	1.04E-06	3.74E-08	1.73E+00	7.58E-07	3.47E-03	1.18E-06	4.42E-04	7.40E-05	1.83E-05	1.50E-04	2.67E-05	2.72E-05	1.76E-04	7.02E-06	2.78E-09	1.23E-04	8.25E-05
56	H05	100	Combination Short Haul Truck	200	0.00E+00	2.87E-05	2.12E-06	6.68E+01	7.60E-08	5.16E-02	2.05E-05	5.14E-02	1.94E-03	4.92E-04	1.75E-03	6.18E-04	6.42E-04	1.06E-02	2.23E-04	0.00E+00	1.10E-03	9.69E-03
56	H05	100	Combination Long Haul Truck	183	0.00E+00	4.05E-05	2.28E-06	6.05E+01	2.58E-07	6.01E-02	3.34E-05	5.50E-02	1.94E-03	3.96E-04	3.72E-03	7.36E-04	7.67E-04	9.70E-03	2.03E-04	0.00E+00	2.95E-03	1.04E-02
56	H06	100	Passenger Car	1114	0.00E+00	1.04E-05	1.13E-06	4.55E+01	7.40E-05	2.22E-01	2.35E-05	1.20E-03	3.56E-03	6.83E-04	2.29E-03	1.48E-03	1.52E-03	1.33E-04	2.30E-04	4.84E-08	7.76E-04	1.87E-04
56	H06	100	Passenger Truck	1866	0.00E+00	2.15E-05	2.31E-06	1.05E+02	1.44E-04	4.29E-01	4.65E-05	3.00E-03	6.22E-03	1.21E-03	4.48E-03	2.90E-03	2.97E-03	6.87E-04	5.26E-04	9.58E-08	1.51E-03	4.93E-04
56	H06	100	Single Unit Short Haul Truck	273	0.00E+00	2.59E-05	9.59E-07	4.46E+01	1.98E-05	9.20E-02	2.94E-05	1.14E-02	1.76E-03	4.57E-04	3.72E-03	6.87E-04	6.99E-04	4.57E-03	1.80E-04	7.37E-08	3.02E-03	2.13E-03
56	H06	100	Single Unit Long Haul Truck	12	0.00E+00	1.13E-06	4.05E-08	1.87E+00	8.21E-07	3.77E-03	1.27E-06	4.79E-04	8.02E-05	1.98E-05	1.63E-04	2.90E-05	2.95E-05	1.91E-04	7.61E-06	3.01E-09	1.33E-04	8.94E-05
56	H06	100	Combination Short Haul Truck	327	0.00E+00	4.68E-05	3.45E-06	1.09E+02	1.24E-07	8.42E-02	3.35E-05	8.39E-02	3.17E-03	8.03E-04	2.85E-03	1.01E-03	1.05E-03	1.73E-02	3.64E-04	0.00E+00	1.80E-03	1.58E-02
56	H06	100	Combination Long Haul Truck	298	0.00E+00	6.61E-05	3.73E-06	9.87E+01	4.21E-07	9.80E-02	5.45E-05	8.98E-02	3.17E-03	6.46E-04	6.06E-03	1.20E-03	1.25E-03	1.58E-02	3.31E-04	0.00E+00	4.81E-03	1.69E-02
16	H07	100	Passenger Car	2326	0.00E+00	2.18E-05	2.37E-06	9.51E+01	1.54E-04	4.64E-01	4.91E-05	2.51E-03	7.43E-03	1.42E-03	4.79E-03	3.09E-03	3.17E-03	2.77E-04	4.81E-04	1.01E-07	1.62E-03	3.91E-04
16	H07	100	Passenger Truck	3894	0.00E+00	4.50E-05	4.82E-06	2.19E+02	3.00E-04	8.96E-01	9.70E-05	6.26E-03	1.30E-02	2.52E-03	9.35E-03	6.06E-03	6.21E-03	1.43E-03	1.10E-03	2.00E-07	3.14E-03	1.03E-03
16	H07	100	Single Unit Short Haul Truck	533	0.00E+00	5.07E-05	1.87E-06	8.71E+01	3.88E-05	1.80E-01	5.75E-05	2.23E-02	3.45E-03	8.92E-04	7.27E-03	1.34E-03	1.37E-03	8.92E-03	3.53E-04	1.44E-07	5.90E-03	4.16E-03
16	H07	100	Single Unit Long Haul Truck	24	0.00E+00	2.20E-06	7.92E-08	3.66E+00	1.60E-06	7.36E-03	2.49E-06	9.37E-04	1.57E-04	3.87E-05	3.18E-04	5.66E-05	5.76E-05	3.73E-04	1.49E-05	5.89E-09	2.60E-04	1.75E-04
16	H07	100	Combination Short Haul Truck	527	0.00E+00	7.54E-05	5.57E-06	1.76E+02	2.00E-07	1.36E-01	5.40E-05	1.35E-01	5.11E-03	1.29E-03	4.59E-03	1.63E-03	1.69E-03	2.79E-02	5.87E-04	0.00E+00	2.91E-03	2.55E-02
16	H07	100	Combination Long Haul Truck	481	0.00E+00	1.07E-04	6.01E-06	1.59E+02	6.79E-07	1.58E-01	8.80E-05	1.45E-01	5.12E-03	1.04E-03	9.78E-03	1.94E-03	2.02E-03	2.55E-02	5.33E-04	0.00E+00	7.76E-03	2.73E-02
52	H08	60	Passenger Car	250	0.00E+00	2.94E-06	3.20E-07	1.14E+01	2.09E-05	5.87E-02	6.64E-06	2.48E-04	2.46E-03	3.68E-04	6.48E-04	4.18E-04	4.28E-04	4.96E-05	5.72E-05	1.16E-08	2.19E-04	3.87E-05
52	H08	60	Passenger Truck	419	0.00E+00	6.21E-06	6.59E-07	2.54E+01	3.92E-05	1.01E-01	1.29E-05	7.56E-04	4.36E-03	6.48E-04	1.23E-03	7.99E-04	8.19E-04	1.99E-04	1.26E-04	2.13E-08	4.09E-04	1.28E-04
52	H08	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.43E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
52	H08	60	Combination Short Haul Truck	49	0.00E+00	1.43E-05	1.05E-06	1.73E+01	3.93E-08	2.14E-02	1.03E-05	2.18E-02	2.50E-03	3.92E-04	8.84E-04	3.08E-04	3.20E-04	2.75E-03	5.79E-05	0.00E+00	5.64E-04	4.10E-03
52	H08	60	Combination Long Haul Truck	45	0.00E+00	1.97E-05	1.08E-06	1.64E+01	1.33E-07	2.58E-02	1.65E-05	2.32E-02	2.63E-03	3.80E-04	1.87E-03	3.52E-04	3.67E-04	2.63E-03	5.48E-05	0.00E+00	1.50E-03	4.36E-03
50	H09	40	Passenger Car	176	0.00E+00	2.54E-06	2.76E-07	9.32E+00	1.80E-05	5.04E-02	5.72E-06	1.61E-04	3.04E-03	4.28E-04	5.58E-04	3.60E-04	3.69E-04	5.25E-05	4.63E-05	8.57E-09	1.89E-04	2.51E-05
50	H09	40	Passenger Truck	296	0.00E+00	5.59E-06	5.88E-07	2.03E+01	3.37E-05	8.33E-02	1.12E-05	6.20E-04	5.40E-03	7.49E-04	1.06E-03	6.93E-04	7.10E-04	1.79E-04	9.98E-05	1.46E-08	3.51E-04	1.07E-04
50	H09	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.91E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.33E-05
50	H09	40	Combination Short Haul Truck	97	0.00E+00	4.67E-05	3.49E-06	4.01E+01	1.16E-07	6.60E-02	3.32E-05	6.75E-02	9.41E-03	1.40E-03	2.78E-03	1.01E-03	1.05E-03	6.38E-03	1.34E-04	0.00E+00	1.72E-03	1.27E-02
50	H09	40	Combination Long Haul Truck	88	0.00E+00	6.20E-05	3.50E-06	3.85E+01	3.94E-07	8.01E-02	5.12E-05	7.12E-02	9.77E-03	1.37E-03	5.68E-03	1.13E-03	1.18E-03	6.18E-03	1.29E-04	0.00E+00	4.51E-03	1.34E-02
53	H14	70	Passenger Car	150	0.00E+00	1.62E-06	1.76E-07	6.60E+00	1.15E-05	3.24E-02	3.65E-06	1.54E-04	1.13E-03	1.78E-04	3.56E-04	2.30E-04	2.36E-04	2.54E-05	3.32E-05	6.89E-09	1.20E-04	2.40E-05
53	H14	70	Passenger Truck	250	0.00E+00	3.38E-06	3.60E-07	1.49E+01	2.17E-05	5.71E-02	7.10E-06	4.34E-04	2.03E-03	3.15E-04	6.80E-04	4.42E-04	4.53E-04	1.10E-04	7.40E-05	1.30E-08	2.27E-04	7.27E-05
53	H14	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.60E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.00E-04
53	H14	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.90E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.29E-05
53	H14	70	Combination Short Haul Truck	26	0.00E+00	6.60E-06	4.91E-07	8.91E+00	1.68E-08	9.53E-03	4.70E-06	9.80E-03	9.30E-04	1.55E-04	3.96E-04	1.43E-04	1.48E-04	1.42E-03	2.98E-05	0.00E+00	2.47E-04	1.85E-03
53	H14	70	Combination Long Haul Truck	23	0.00E+00	9.05E-06	5.14E-07	8.37E+00	5.67E-08	1.14E-02	7.44E-06	1.05E-02	9.68E-04	1.46E-04	8.22E-04	1.65E-04	1.72E-04	1.34E-03	2.80E-05	0.00E+00	6.50E-04	1.97E-03
53	H16	70	Passenger Car	536	0.00E+00	5.81E-06	6.31E-07	2.37E+01	4.12E-05	1.16E-01	1.31E-05	5.52E-04	4.07E-03	6.37E-04	1.28E-03	8.23E-04	8.45E-04	9.11E-05	1.19E-04	2.47E-08	4.32E-04	8.61E-05
53	H16	70	Passenger Truck	898	0.00E+00	1.21E-05	1.29E-06	5.33E+01	7.79E-05	2.05E-01	2.55E-05	1.56E-03	7.26E-03	1.13E-03	2.44E-03	1.58E-03	1.62E-03	3.96E-04	2.65E-04	4.65E-08	8.14E-04	2.61E-04
53	H16	70	Single Unit Short Haul Truck	31	0.00E+00	5.39E-06	2.19E-07	5.02E+00	3.62E-06	9.10E-03	5.87E-06	2.14E-03	4.87E-04	8.94E-05	7.27E-04	1.39E-04	1.41E-04	5.10E-04	2.04E-05	8.25E-09	5.86E-04	4.00E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	9.45E-09	2.13E-01	1.56E-07	3.82E-04	2.55E-07	9.19E-05	2.23E-05	4.00E-06	3.17E-05	5.98E-06	6.10E-06	2.15E-05	8.67E-07	3.48E-10	2.56E-05	1.72E-05
53	H16	70	Combination Short Haul Truck	30	0.00E+00	7.67E-06	5.71E-07	1.04E+01	1.95E-08	1.11E-02	5.47E-06	1.14E-02	1.08E-03	1.80E-04	4.60E-04	1.66E-04	1.73E-04	1.65E-03	3.47E-05	0.00E+00	2.88E-04	2.15E-03
53	H16	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.22E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.30E-03

Appendix F.1.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B05	0.00E+00	1.24E-04	9.42E-06	3.56E+02	3.22E-04	1.08E+00	1.67E-04	1.08E-01	1.85E-02	3.77E-03	1.69E-02	7.87E-03	8.08E-03	2.22E-02	1.57E-03	2.53E-07	8.84E-03	2.02E-02
B06	0.00E+00	5.97E-05	4.58E-06	1.77E+02	1.70E-04	5.61E-01	8.35E-05	4.75E-02	9.40E-03	1.91E-03	8.51E-03	4.03E-03	4.14E-03	9.98E-03	7.91E-04	1.35E-07	4.37E-03	8.86E-03
B07	0.00E+00	2.61E-04	1.71E-05	6.09E+02	3.71E-04	1.43E+00	2.92E-04	2.69E-01	2.73E-02	5.84E-03	3.08E-02	1.11E-02	1.14E-02	5.68E-02	2.49E-03	3.85E-07	1.94E-02	5.04E-02
B08	0.00E+00	2.34E-04	1.44E-05	4.91E+02	2.05E-04	9.31E-01	2.36E-04	2.64E-01	1.97E-02	4.37E-03	2.53E-02	7.75E-03	7.98E-03	5.57E-02	1.90E-03	2.70E-07	1.74E-02	4.96E-02
D01	0.00E+00	1.02E-04	8.42E-06	2.29E+02	3.19E-04	9.11E-01	1.46E-04	7.20E-02	4.22E-02	6.31E-03	1.45E-02	7.46E-03	7.67E-03	9.36E-03	1.06E-03	1.76E-07	6.81E-03	1.34E-02
D02	0.00E+00	6.98E-05	5.66E-06	1.58E+02	2.28E-04	6.38E-01	1.03E-04	4.21E-02	2.91E-02	4.36E-03	1.03E-02	5.25E-03	5.39E-03	5.75E-03	7.36E-04	1.32E-07	4.95E-03	7.85E-03
D03	0.00E+00	1.04E-04	8.86E-06	2.60E+02	4.00E-04	1.10E+00	1.66E-04	5.23E-02	4.85E-02	7.27E-03	1.65E-02	8.86E-03	9.09E-03	7.42E-03	1.23E-03	2.28E-07	7.46E-03	9.70E-03
D04	0.00E+00	9.50E-05	7.48E-06	2.01E+02	2.77E-04	7.87E-01	1.34E-04	6.34E-02	3.67E-02	5.51E-03	1.35E-02	6.57E-03	6.75E-03	8.49E-03	9.26E-04	1.61E-07	6.71E-03	1.18E-02
D05	0.00E+00	1.05E-04	8.57E-06	2.40E+02	3.49E-04	9.76E-01	1.56E-04	6.30E-02	4.43E-02	6.65E-03	1.56E-02	8.00E-03	8.21E-03	8.58E-03	1.12E-03	2.00E-07	7.37E-03	1.17E-02
D06	0.00E+00	8.95E-05	7.24E-06	2.04E+02	3.02E-04	8.35E-01	1.35E-04	4.98E-02	3.77E-02	5.67E-03	1.36E-02	6.87E-03	7.05E-03	6.97E-03	9.59E-04	1.76E-07	6.50E-03	9.26E-03
D07	0.00E+00	8.83E-05	7.21E-06	2.43E+02	2.93E-04	8.69E-01	1.31E-04	5.55E-02	2.46E-02	4.15E-03	1.32E-02	6.72E-03	6.90E-03	9.70E-03	1.13E-03	1.99E-07	6.25E-03	1.03E-02
D08	0.00E+00	6.19E-05	5.21E-06	1.84E+02	2.35E-04	6.85E-01	9.85E-05	3.25E-02	1.89E-02	3.18E-03	9.86E-03	5.22E-03	5.36E-03	5.90E-03	8.68E-04	1.60E-07	4.51E-03	6.02E-03
D09	0.00E+00	6.13E-05	5.25E-06	1.85E+02	2.38E-04	6.94E-01	9.83E-05	3.28E-02	1.91E-02	3.21E-03	9.78E-03	5.27E-03	5.41E-03	5.83E-03	8.75E-04	1.59E-07	4.37E-03	6.07E-03
D10	0.00E+00	4.42E-05	3.88E-06	1.42E+02	1.93E-04	5.55E-01	7.56E-05	1.85E-02	1.49E-02	2.51E-03	7.54E-03	4.16E-03	4.27E-03	3.50E-03	6.85E-04	1.30E-07	3.27E-03	3.39E-03
D11	0.00E+00	8.37E-05	6.93E-06	2.37E+02	2.92E-04	8.60E-01	1.27E-04	5.04E-02	2.41E-02	4.07E-03	1.27E-02	6.61E-03	6.79E-03	8.84E-03	1.11E-03	1.96E-07	5.93E-03	9.36E-03
D12	0.00E+00	4.32E-05	3.76E-06	1.37E+02	1.84E-04	5.29E-01	7.29E-05	1.89E-02	1.43E-02	2.41E-03	7.28E-03	3.99E-03	4.09E-03	3.56E-03	6.57E-04	1.24E-07	3.19E-03	3.48E-03
D13	0.00E+00	3.25E-05	2.52E-06	6.87E+01	9.76E-05	2.72E-01	4.66E-05	1.94E-02	1.26E-02	1.89E-03	4.74E-03	2.28E-03	2.34E-03	2.69E-03	3.19E-04	5.86E-08	2.40E-03	3.61E-03
D14	0.00E+00	6.93E-05	5.35E-06	1.44E+02	2.00E-04	5.63E-01	9.76E-05	4.39E-02	2.63E-02	3.95E-03	9.90E-03	4.74E-03	4.86E-03	6.00E-03	6.64E-04	1.19E-07	5.04E-03	8.19E-03
D15	0.00E+00	7.03E-05	5.60E-06	1.57E+02	2.30E-04	6.36E-01	1.05E-04	3.93E-02	2.89E-02	4.34E-03	1.06E-02	5.27E-03	5.41E-03	5.52E-03	7.35E-04	1.36E-07	5.16E-03	7.31E-03
D16	0.00E+00	8.15E-05	6.15E-06	1.62E+02	2.20E-04	6.21E-01	1.12E-04	5.32E-02	2.94E-02	4.42E-03	1.14E-02	5.29E-03	5.43E-03	7.27E-03	7.42E-04	1.33E-07	5.98E-03	9.95E-03
D17	0.00E+00	1.16E-05	8.81E-07	2.54E+01	3.03E-05	8.87E-02	1.56E-05	7.95E-03	3.53E-03	5.55E-04	1.58E-03	7.39E-04	7.59E-04	1.21E-03	1.16E-04	1.99E-08	8.25E-04	1.49E-03
D18	0.00E+00	4.25E-05	3.17E-06	8.81E+01	9.88E-05	2.95E-01	5.46E-05	3.21E-02	1.21E-02	1.90E-03	5.53E-03	2.50E-03	2.57E-03	4.79E-03	3.95E-04	6.50E-08	2.96E-03	6.00E-03
D19	0.00E+00	9.44E-05	7.66E-06	2.65E+02	3.30E-04	9.66E-01	1.45E-04	5.22E-02	2.69E-02	4.56E-03	1.46E-02	7.44E-03	7.63E-03	9.55E-03	1.24E-03	2.31E-07	6.99E-03	9.68E-03
D20	0.00E+00	1.56E-04	9.42E-06	2.70E+02	2.05E-04	6.84E-01	1.75E-04	1.19E-01	2.34E-02	4.13E-03	1.92E-02	6.22E-03	6.39E-03	2.26E-02	1.13E-03	2.23E-07	1.28E-02	2.24E-02
D21	0.00E+00	5.31E-05	4.90E-06	1.85E+02	2.62E-04	7.44E-01	9.66E-05	1.82E-02	1.96E-02	3.30E-03	9.56E-03	5.52E-03	5.66E-03	3.52E-03	9.01E-04	1.72E-07	3.90E-03	3.32E-03
D22	0.00E+00	1.17E-04	7.95E-06	2.32E+02	1.99E-04	6.49E-01	1.38E-04	9.73E-02	2.12E-02	3.65E-03	1.44E-02	5.57E-03	5.72E-03	1.71E-02	9.92E-04	1.66E-07	8.66E-03	1.82E-02
D23	0.00E+00	9.65E-05	7.83E-06	2.27E+02	3.47E-04	9.45E-01	1.50E-04	4.60E-02	4.21E-02	6.32E-03	1.52E-02	7.76E-03	7.96E-03	6.77E-03	1.07E-03	2.06E-07	7.25E-03	8.53E-03
D24	0.00E+00	8.66E-05	5.95E-06	1.45E+02	1.78E-04	5.10E-01	1.09E-04	6.03E-02	2.56E-02	3.87E-03	1.14E-02	4.62E-03	4.74E-03	8.29E-03	6.47E-04	1.19E-07	6.65E-03	1.13E-02
D25	0.00E+00	8.90E-05	7.39E-06	2.20E+02	3.46E-04	9.34E-01	1.44E-04	3.73E-02	4.10E-02	6.15E-03	1.45E-02	7.60E-03	7.79E-03	5.69E-03	1.05E-03	2.04E-07	6.73E-03	6.90E-03
D26	0.00E+00	8.77E-05	6.60E-06	1.79E+02	2.54E-04	7.02E-01	1.25E-04	4.96E-02	3.25E-02	4.91E-03	1.28E-02	5.97E-03	6.13E-03	7.09E-03	8.29E-04	1.58E-07	6.70E-03	9.25E-03
D27	0.00E+00	2.46E-05	1.91E-06	6.27E+01	7.16E-05	2.15E-01	3.47E-05	1.63E-02	6.22E-03	1.05E-03	3.52E-03	1.69E-03	1.74E-03	2.89E-03	2.87E-04	5.08E-08	1.78E-03	3.04E-03
D28	0.00E+00	5.81E-05	4.57E-06	1.51E+02	1.74E-04	5.22E-01	8.29E-05	3.83E-02	1.50E-02	2.54E-03	8.38E-03	4.09E-03	4.20E-03	6.76E-03	6.93E-04	1.22E-07	4.18E-03	7.14E-03
D29	0.00E+00	2.46E-05	1.91E-06	6.27E+01	7.16E-05	2.15E-01	3.47E-05	1.63E-02	6.22E-03	1.05E-03	3.52E-03	1.69E-03	1.74E-03	2.89E-03	2.87E-04	5.08E-08	1.78E-03	3.04E-03
D30	0.00E+00	5.81E-05	4.57E-06	1.51E+02	1.74E-04	5.22E-01	8.29E-05	3.83E-02	1.50E-02	2.54E-03	8.38E-03	4.09E-03	4.20E-03	6.76E-03	6.93E-04	1.22E-07	4.18E-03	7.14E-03
D31	0.00E+00	2.45E-05	1.84E-06	6.02E+01	6.73E-05	2.02E-01	3.40E-05	1.61E-02	5.91E-03	1.01E-03	3.49E-03	1.61E-03	1.65E-03	2.91E-03	2.74E-04	5.00E-08	1.83E-03	2.99E-03
D32	0.00E+00	3.97E-05	3.02E-06	9.73E+01	1.07E-04	3.24E-01	5.43E-05	2.80E-02	9.54E-03	1.62E-03	5.52E-03	2.58E-03	2.65E-03	4.92E-03	4.41E-04	7.67E-08	2.87E-03	5.22E-03
D33	0.00E+00	3.97E-05	2.82E-06	7.00E+01	8.72E-05	2.52E-01	5.06E-05	2.84E-02	1.24E-02	1.88E-03	5.24E-03	2.23E-03	2.29E-03	3.84E-03	3.14E-04	5.56E-08	2.95E-03	5.31E-03
D34	0.00E+00	1.55E-05	1.36E-06	4.12E+01	6.61E-05	1.79E-01	2.62E-05	6.28E-03	7.76E-03	1.16E-03	2.60E-03	1.43E-03	1.47E-03	9.48E-04	1.98E-04	3.79E-08	1.14E-03	1.16E-03
D35	0.00E+00	2.26E-05	2.09E-06	6.58E+01	1.09E-04	2.93E-01	4.04E-05	7.84E-03	1.25E-02	1.87E-03	3.97E-03	2.31E-03	2.36E-03	1.21E-03	3.19E-04	6.06E-08	1.60E-03	1.44E-03
D36	0.00E+00	2.23E-05	1.49E-06	3.33E+01	3.41E-05	1.05E-01	2.54E-05	1.88E-02	5.73E-03	8.67E-04	2.66E-03	9.95E-04	1.02E-03	2.47E-03	1.42E-04	2.32E-08	1.64E-03	3.53E-03
D37	0.00E+00	1.33E-05	1.25E-06	3.92E+01	6.43E-05	1.74E-01	2.37E-05	5.11E-03	7.44E-03	1.11E-03	2.32E-03	1.37E-03	1.40E-03	7.53E-04	1.90E-04	3.53E-08	9.15E-04	9.39E-04
D38	0.00E+00	4.10E-05	3.30E-06	9.00E+01	1.26E-04	3.57E-01	5.88E-05	2.71E-02	1.65E-02	2.48E-03	5.87E-03	2.95E-03	3.03E-03	3.61E-03	4.16E-04	7.20E-08	2.84E-03	5.06E-03
D39	0.00E+00	8.53E-06	8.80E-07	2.95E+01	5.12E-05	1.37E-01	1.72E-05	1.78E-03	5.68E-03	8.48E-04	1.66E-03	1.05E-03	1.08E-03	3.11E-04	1.46E-04	2.76E-08	5.80E-04	3.17E-04
D40	0.00E+00	3.12E-05	2.47E-06	6.66E+01	9.19E-05	2.61E-01	4.40E-05	2.11E-02	1.22E-02	1.83E-03	4.41E-03	2.17E-03	2.23E-03	2.80E-03	3.07E-04	5.29E-08	2.18E-03	3.93E-03
D41	0.00E+00	1.43E-05	1.52E-06	5.26E+01	9.36E-05	2.49E-01	3.04E-05	1.51E-03	1.02E-02	1.52E-03	2.92E-03	1.90E-03	1.94E-03	3.60E-04	2.62E-04	5.05E-08	9.79E-04	2.51E-04
D42	0.00E+00	6.80E-06	5.85E-07	1.69E+01	2.53E-05	7.05E-02	1.06E-05	3.92E-03	3.15E-03	4.71E-04	1.05E-03	5.67E-04	5.82E-04	5.30E-04	7.97E-05	1.41E-08	4.64E-04	7.29E-04
D43	0.00E+00	1.12E-05	1.15E-06	3.84E+01	6.65E-05	1.78E-01	2.25E-05	2.51E-03	7.40E-03	1.10E-03	2.17E-03	1.37E-03	1.40E-03	4.28E-04	1.89E-04	3.59E-08	7.62E-04	4.48E-04
D44	0.00E+00	2.51E-05	1.53E-06	3.13E+01	2.66E-05	8.52E-02	2.65E-05	2.13E-02	5.17E-03	7.90E-04	2.87E-03	9.01E-04	9.27E-04	2.84E-03	1.28E-04	2.19E-08	1.94E-03	3.99E-03
D45	0.00E+00	9.09E-05	6.34E-06	1.53E+02	1.80E-04	5.29E-01	1.12E-04	6.89E-02	2.69E-02	4.06E-03	1.16E-02	4.76E-03	4.89E-03	9.21E-03	6.74E-04	1.17E-07	6.74E-03	1.29E-02
D46	0.00E+00	9.50E-05	6.31E-06	1.45E+02	1.58E-04	4.72E-01	1.11E-04	7.38E-02	2.50E-02	3.80E-03	1.18E-02	4.44E-03	4.56E-03	9.91E-03	6.28E-04	1.10E-07	7.20E-03	1.38E-02
D47	0.00E+00	9.66E-05	6.77E-06	1.65E+02	1.98E-04	5.78E-01	1.20E-04	7.16E-02	2.91E-02	4.39E-03	1.25E-02	5.18E-03	5.32E-03	9.62E-03	7.31E-04	1.28E-07	7.17E-03	1.34E-02
D48	0.00E+00	2.92E-05	2.37E-06	6.54E+01	9.34E-05	2.63E-01	4.26E-05	1.85E-02	1.21E-02	1.81E-03	4.26E-03	2.16E-03	2.22E-03	2.49E-03	3.04E-04	5.33E-08	2.04E-03	3.45E-03
D49	0.00E+00	9.66E-05	6.77E-06	1.65E+02	1.98E-04	5.78E-01	1.20E-04	7.16E-02	2.91E-02	4.39E-03	1.25E-02	5.18E-03	5.32E-03	9.62E-03	7.31E-04	1.28E-07	7.17E-03	1.34E-02
D50	0.00E+00	1.04E-04	7.17E-06	1.71E+02	2.02E-04	5.89E-01	1.28E-04	7.76E-02	3.01E-02	4.55E-03	1.34E-02	5.36E-03	5.51E-03	1.05E-02	7.56E-04	1.34E-07	7.85E-03	1.46E-02
D51	0.00E+00	3.11E-05	2.31E-06	6.09E+01	8.31E-05	2.33E-01	4.27E-05	1.95E-02	1.10E-02	1.66E-03	4.39E-03	2.00E-03	2.05E-03	2.70E-03	2.79E-04	5.16E-08	2.33E-03	3.63E-03
D52	0.00E+00	2.38E-05	1.99E-06	5.90E+01	9.25E-05	2.51E-01	3.84E-05	1.04E-02	1.10E-02	1.65E-03	3.86E-03	2.04E-03	2.09E-03	1.56E-03	2.82E-04	5.41E-08	1.77E-03	1.93E-03
D53	0.00E+00	2.32E-05	1.77E-06	4.78E+01	6.70E-05	1.87E-01	3.28E-05	1.40E-02	8.70E-03	1.31E-03	3.34E-03	1.58E-03	1.62E-03	1.95E-03	2.21E-04	4.07E-08	1.72E-03	2.61E-03
D54	0.00E+00	3.08E-05	2.63E-06	7.97E+01	1.27E-04	3.44E-01	5.12E-05	1.23E-02	1.49E-02	2.24E-03	5.12E-03	2.77E-03	2.84E-03	1.88E-03	3.83E-04	7.38E-08	2.29E-03	2.28E-03
D55	0.00E+00	4.76E-05	3.68E-06	1.22E+02	1.41E-04	4.21E-01	6.78E-05	3.05E-02	1.21E-02	2.06E-03	6.90E-03	3.31E-03	3.39E-03	5.48E-03	5.60E-04	1.01E-07	3.50E-03	5.68E-03
D56	0.00E+00	2.88E-05	2.12E-06	6.79E+01	7.28E-05	2.22E-01	3.86E-05	2.00E-02	6.58E-03	1.12E-03	3.97E-03	1.78E-03	1.83E-03	3.59E-03	3.06E-04	5.48E-08	2.14E-03	3.73E-03
D57	0.00E+00	6.43E-05	4.50E-06	1.38E+02	1.34E-04	4.19E-01	8.06E-05	4.85E-02	1.30E-02	2.23E-03	8.39E-03	3.47E-03	3.57E-03	8.69E-03	6.06E-04	1.07E-07	4.82E-03	9.07E-03
D58	0.00E+00	4.21E-05	3.39E-06	1.16E+02	1.42E-04	4.17E-01	6.34E-05	2.46E-02	1.17E-02	1.98E-03	6.40E-03	3.23E-03	3.31E-03	4.44E-03	5.41E-04	9.88E-08	3.09E-03	4.57E-03
D59	0.00E+00	6.43E-05	4.50E-06	1.38E+02	1.34E-04	4.19E-01	8.06E-05	4.85E-02	1.30E-02	2.23E-03	8.39E-03	3.47E-03	3.57E-03	8.69E-03	6.06E-04	1.07E-07	4.82E-03	9.07E-03
D60	0.00E+00	4.21E-05	3.39E-06	1.16E+02	1.42E-04	4.17E-01	6.34E-05	2.46E-02	1.17E-02	1.98E-03	6.40E-03	3.23E-03	3.31E-03	4.44E-03	5.41E-04	9.88E-08	3.09E-03	4.57E-03
D61	0.00E+00	8.09E-06	5.61E-07	1.73E+01	1.68E-05	5.25E-02	1.02E-05	5.97E-03	1.62E-03	2.79E-04	1.06E-03	4.36E-04	4.47E-04	1.08E-03	7.61E-05	1.37E-08	6.16E-04	1.12E-03
D62	0.00E+00	1.68E-05	1.30E-06	4.41E+01	5.24E-05	1.55E-01	2.46E-05	9.95E-03	4.40E-03	7.48E-04	2.51E-03	1.21E-03	1.24E-03	1.83E-03	2.04E-04	3.80E-08	1.27E-03	1.85E-03
D63	0.00E+00	1.55E-05	9.64E-07	2.21E+01	1.63E-05	5.50E-02	1.62E-05	1.33E-02	2.71E-03	4.37E-04	1.74E-03	5.59E-04	5.75E-04	2.04E-03	9.05E-05	1.50E-08	1.17E-03	2.51E-03
D64	0.00E+00	1.44E-05	9.48E-07	2.46E+01	2.45E-05	7.43E-02	1.70E-05	1.05E-02	3.21E-03	5.13E-04	1.80E-03	6.79E-04	6.97E-04	1.66E-03	1.07E-04	1.96E-08	1.11E-03	1.97E-03
D65	0.00E+00	4.84E-05	3.08E-06	8.71E+01	6.66E-05	2.25E-01	5.41E-05	4.04E-02	7.69E-03	1.34E-03	5.78E-03	2.01E-03	2.07E-03	7.27E-03	3.65E-04	6.37E-08	3.72E-03	7.57E-03
D66	0.00E+00	4.90E-05	3.59E-06	1.14E+02	1.20E-04	3.67E-01	6.48E-05	3.49E-02	1.10E-02	1.87E-03	6.68E-03	2.96E-03	3.04E-03	6.24E-03	5.10E-04	9.05E-08	3.63E-03	6.51E-03
D67	0.00E+00	4.84E-05	3.08E-06	8.71E+01	6.66E-05	2.25E-01	5.41E-05	4.04E-02	7.69E-03	1.34E-03	5.78E-03	2.01E-03	2.07E-03	7.27E-03	3.65E-04	6.37E-08	3.72E-03	7.57E-03
D68	0.00E+00	4.90E-05	3.59E-06	1.14E+02	1.20E-04	3.67E-01	6.48E-05	3.49E-02	1.10E-02	1.87E-03	6.68E-03	2.96E-03	3.04E-03	6.24E-03	5.10E-04	9.05E-08	3.63E-03	6.51E-03
D69	0.00E+00	1.97E-05	1.27E-06	3.68E+01	3.00E-05	9.88E-02	2.26E-05	1.60E-02	3.30E-03	5.72E-04	2.41E-03	8.67E-04	8.91E-04	2.89E-03	1.56E-04	2.76E-08	1.52E-03	2.99E-03
D70	0.00E+00	1.99E-05	1.43E-06	4.41E+01	4.41E-05	1.37E-01	2.54E-05	1.49E-02	4.20E-03	7.17E-04	2.63E-03	1.12E-03	1.15E-03	2.65E-03	1.95E-04	3.41E-08	1.48E-03	2.79E-03
D71	0.00E+00	1.97E-05	1.59E-06	4.96E+01	6.59E-05	1.87E-01	2.95E-05	1.08E-02	7.08E-03	1.11E-03	2.97E-03	1.50E-03	1.54E-03	1.73E-03	2.33E-04	4.24E-08	1.43E-03	2.01E-03
D72	0.00E+00	2.81E-05	2.07E-06	5.83E+01	6.68E-05	1.97E-01	3.66E-05	1.99E-02	7.99E-03	1.26E-03	3.74E-03	1.67E-03	1.72E-03	3.05E-03	2.63E-04	4.52E-08	2.02E-03	3.73E-03
D73	0.00E+00	9.76E-06	8.92E-07	3.08E+01	4.57E-05	1.26E-01	1.72E-05	3.67E-03	4.56E-03	7.11E-04	1.69E-03	9.74E-04	9.99E-04	6.16E-04	1.49E-04	2.76E-08	6.95E-04	6.73E-04
D74	0.00E+00	1.72E-05	1.35E-06	3.99E+01	4.93E-05	1.43E-01	2.40E-05	1.14E-02	5.61E-03	8.79E-04	2.41E-03	1.17E-03	1.20E-03	1.73E-03	1.83E-04	3.15E-08	1.21E-03	2.12E-03
D75	0.00E+00	1.35E-05	1.02E-06	3.36E+01	3.79E-05	1.14E-01	1.89E-05	8.73E-03	3.31E-03	5.63E-04	1.94E-03	9.02E-04	9.26E-04	1.59E-03	1.53E-04	2.81E-08	1.01E-03	1.63E-03
D76	0.00E+00	2.15E-05	1.51E-06	4.60E+01	4.46E-05	1.40E-01	2.69E-05	1.63E-02	4.34E-03	7.43E-04	2.80E-03	1.16E-03	1.19E-03	2.92E-03	2.03E-04	3.57E-08	1.61E-03	3.05E-03
D77	0.00E+00	1.28E-05	8.56E-07	2.53E+01	2.23E-05	7.18E-02	1.53E-05	1.01E-02	2.32E-03	4.00E-04	1.61E-03	6.15E-04	6.32E-04	1.82E-03	1.09E-04	1.94E-08	9.82E-04	1.89E-03
D78	0.00E+00	4.13E-05	2.62E-06	7.24E+01	5.20E-05	1.80E-01	4.51E-05	3.59E-02	6.33E-03	1.10E-03	4.81E-03	1.63E-03	1.68E-03	6.39E-03	3.00E-04	5.03E-08	3.13E-03	6.73E-03
D79	0.00E+00	1.64E-05	1.35E-06	4.30E+01	5.82E-05	1.64E-01	2.53E-05	8.70E-03	6.18E-03	9.67E-04	2.53E-03	1.31E-03	1.35E-03	1.39E-03	2.03E-04	3.69E-08	1.19E-03	1.62E-03
D80	0.00E+00	2.40E-05	1.89E-06	5.75E+01	7.36E-05	2.11E-01	3.46E-05	1.45E-02	8.13E-03	1.28E-03	3.49E-03	1.72E-03	1.76E-03	2.27E-03	2.67E-04	4.76E-08	1.73E-03	2.71E-03
F31	0.00E+00	5.94E-05	4.98E-06	1.42E+02	2.12E-04	5.88E-01	9.12E-05	3.40E-02	2.64E-02	3.96E-03	9.06E-03	4.78E-03	4.90E-03	4.66E-03	6.69E-04	1.20E-07	4.16E-03	6.33E-03
F32	0.00E+00	5.71E-05	5.03E-06	1.54E+02	2.47E-04	6.68E-01	9.68E-05	2.32E-02	2.89E-02	4.33E-03	9.60E-03	5.33E-03	5.47E-03	3.48E-03	7.39E-04	1.40E-07	4.13E-03	4.28E-03
F33	0.00E+00	9.21E-06	9.52E-07	3.20E+01	5.57E-05	1.49E-01	1.87E-05	1.85E-03	6.16E-03	9.19E-04	1.80E-03	1.14E-03	1.17E-03	3.28E-04	1.58E-04	3.00E-08	6.26E-04	3.29E-04
F34	0.00E+00	3.85E-05	3.26E-06	9.36E+01	1.40E-04	3.89E-01	5.96E-05	2.18E-02	1.74E-02	2.61E-03	5.91E-03	3.15E-03	3.23E-03	2.99E-03	4.41E-04	7.89E-08	2.68E-03	4.06E-03
G07	0.00E+00	6.06E-05	3.76E-06	8.41E+01	5.34E-05	1.91E-01	6.09E-05	5.59E-02	1.00E-02	1.62E-03	6.49E-03	2.02E-03	2.08E-03	8.35E-03	3.37E-04	5.08E-08	4.42E-03	1.05E-02
G09	0.00E+00	1.39E-05	9.26E-07	1.39E+01	9.86E-06	3.91E-02	1.30E-05	1.49E-02	3.58E-03	5.12E-04	1.32E-03	4.37E-04	4.51E-04	1.41E-03	5.52E-05	5.28E-09	8.70E-04	2.81E-03
G10	0.00E+00	6.06E-05	3.76E-06	8.41E+01	5.34E-05	1.91E-01	6.09E-05	5.59E-02	1.00E-02	1.62E-03	6.49E-03	2.02E-03	2.08E-03	8.35E-03	3.37E-04	5.08E-08	4.42E-03	1.05E-02
H01	0.00E+00	4.90E-04	3.25E-05	1.14E+03	6.73E-04	2.62E+00	5.40E-04	5.24E-01	5.06E-02	1.08E-02	5.66E-02	2.06E-02	2.12E-02	1.09E-01	4.63E-03	6.71E-07	3.55E-02	9.84E-02
H02	0.00E+00	4.90E-04	3.25E-05	1.14E+03	6.73E-04	2.62E+00	5.40E-04	5.24E-01	5.06E-02	1.08E-02	5.66E-02	2.06E-02	2.12E-02	1.09E-01	4.63E-03	6.71E-07	3.55E-02	9.84E-02
H03	0.00E+00	3.64E-04	2.56E-05	9.22E+02	6.62E-04	2.40E+00	4.33E-04	3.68E-01	4.38E-02	9.14E-03	4.46E-02	1.82E-02	1.87E-02

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B05	100	Passenger Car	550	0.00E+00	5.15E-06	5.60E-07	2.25E+01	3.66E-05	1.10E-01	1.16E-05	5.94E-04	1.76E-03	3.37E-04	1.13E-03	7.30E-04	7.50E-04	6.55E-05	1.14E-04	2.39E-08	3.83E-04	9.26E-05
16	B05	100	Passenger Truck	922	0.00E+00	1.06E-05	1.14E-06	5.19E+01	7.10E-05	2.12E-01	2.30E-05	1.48E-03	3.07E-03	5.96E-04	2.21E-03	1.43E-03	1.47E-03	3.40E-04	2.60E-04	4.73E-08	7.44E-04	2.43E-04
16	B06	100	Passenger Car	1533	0.00E+00	1.43E-05	1.56E-06	6.27E+01	1.02E-04	3.06E-01	3.24E-05	1.65E-03	4.90E-03	9.39E-04	3.16E-03	2.03E-03	2.09E-03	1.82E-04	3.17E-04	6.65E-08	1.07E-03	2.58E-04
16	B06	100	Passenger Truck	2567	0.00E+00	2.96E-05	3.18E-06	1.44E+02	1.98E-04	5.90E-01	6.39E-05	4.13E-03	8.55E-03	1.66E-03	6.16E-03	3.99E-03	4.09E-03	9.46E-04	7.24E-04	1.32E-07	2.07E-03	6.78E-04
16	B07	100	Passenger Car	1092	0.00E+00	1.02E-05	1.11E-06	4.46E+01	7.25E-05	2.18E-01	2.30E-05	1.18E-03	3.49E-03	6.69E-04	2.25E-03	1.45E-03	1.49E-03	1.30E-04	2.26E-04	4.74E-08	7.60E-04	1.84E-04
16	B07	100	Passenger Truck	1828	0.00E+00	2.11E-05	2.26E-06	1.03E+02	1.41E-04	4.20E-01	4.55E-05	2.94E-03	6.09E-03	1.18E-03	4.39E-03	2.84E-03	2.92E-03	6.74E-04	5.15E-04	9.39E-08	1.48E-03	4.83E-04
16	B07	100	Single Unit Short Haul Truck	8	0.00E+00	7.28E-07	2.69E-08	1.25E+00	5.57E-07	2.58E-03	8.26E-07	3.21E-04	4.95E-05	1.28E-05	1.04E-04	1.93E-05	1.96E-05	1.28E-04	5.06E-06	2.07E-09	8.48E-05	5.98E-05
16	B07	100	Combination Short Haul Truck	2	0.00E+00	2.24E-07	1.66E-08	5.23E-01	5.96E-10	4.04E-04	1.61E-07	4.03E-04	1.52E-05	3.85E-06	1.37E-05	4.84E-06	5.03E-06	8.31E-05	1.75E-06	0.00E+00	8.65E-06	7.59E-05
16	B07	100	Combination Long Haul Truck	1	0.00E+00	3.17E-07	1.79E-08	4.74E-01	2.02E-09	4.71E-04	2.62E-07	4.31E-04	1.52E-05	3.10E-06	2.91E-05	5.77E-06	6.01E-06	7.60E-05	1.59E-06	0.00E+00	2.31E-05	8.12E-05
16	B08	100	Passenger Car	1588	0.00E+00	1.49E-05	1.62E-06	6.49E+01	1.06E-04	3.17E-01	3.35E-05	1.71E-03	5.08E-03	9.73E-04	3.27E-03	2.11E-03	2.16E-03	1.89E-04	3.28E-04	6.89E-08	1.11E-03	2.67E-04
16	B08	100	Passenger Truck	2660	0.00E+00	3.07E-05	3.29E-06	1.50E+02	2.05E-04	6.12E-01	6.62E-05	4.28E-03	8.86E-03	1.72E-03	6.39E-03	4.14E-03	4.24E-03	9.80E-04	7.50E-04	1.37E-07	2.15E-03	7.02E-04
16	B08	100	Single Unit Short Haul Truck	355	0.00E+00	3.38E-05	1.25E-06	5.80E+01	2.58E-05	1.20E-01	3.83E-05	1.49E-02	2.30E-03	5.94E-04	4.84E-03	8.94E-04	9.10E-04	5.94E-03	2.35E-04	9.59E-08	3.93E-03	2.77E-03
16	B08	100	Single Unit Long Haul Truck	16	0.00E+00	1.47E-06	5.27E-08	2.44E+00	1.07E-06	4.90E-03	1.66E-06	6.24E-04	1.04E-04	2.58E-05	2.12E-04	3.77E-05	3.84E-05	2.48E-04	9.90E-06	3.92E-09	1.73E-04	1.16E-04
16	B08	100	Combination Short Haul Truck	73	0.00E+00	1.04E-05	7.68E-07	2.42E+01	2.76E-08	1.87E-02	7.45E-06	1.87E-02	7.04E-04	1.79E-04	6.34E-04	2.24E-04	2.33E-04	3.85E-03	8.10E-05	0.00E+00	4.01E-04	3.52E-03
16	B08	100	Combination Long Haul Truck	66	0.00E+00	1.47E-05	8.29E-07	2.19E+01	9.37E-08	2.18E-02	1.21E-05	2.00E-02	7.05E-04	1.44E-04	1.35E-03	2.67E-04	2.78E-04	3.52E-03	7.35E-05	0.00E+00	1.07E-03	3.76E-03
9	D01	60	Passenger Car	803	0.00E+00	1.03E-05	1.12E-06	3.66E+01	7.30E-05	2.06E-01	2.32E-05	8.26E-04	8.11E-03	1.21E-03	2.26E-03	1.46E-03	1.50E-03	1.59E-04	1.84E-04	3.85E-08	7.65E-04	1.29E-04
9	D01	60	Passenger Truck	1344	0.00E+00	2.18E-05	2.31E-06	8.16E+01	1.38E-04	3.53E-01	4.53E-05	2.57E-03	1.48E-02	2.20E-03	4.32E-03	2.81E-03	2.88E-03	6.51E-04	4.05E-04	7.51E-08	1.44E-03	4.35E-04
9	D01	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.45E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.66E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
9	D01	60	Combination Short Haul Truck	54	0.00E+00	1.57E-05	1.15E-06	1.90E+01	4.31E-08	2.35E-02	1.13E-05	2.38E-02	2.74E-03	4.29E-04	9.69E-04	3.38E-04	3.51E-04	3.02E-03	6.34E-05	0.00E+00	6.18E-04	4.49E-03
9	D01	60	Combination Long Haul Truck	49	0.00E+00	2.16E-05	1.18E-06	1.79E+01	1.46E-07	2.82E-02	1.81E-05	2.54E-02	2.88E-03	4.16E-04	2.05E-03	3.85E-04	4.02E-04	2.88E-03	6.01E-05	0.00E+00	1.65E-03	4.78E-03
9	D02	60	Passenger Car	1157	0.00E+00	1.48E-05	1.61E-06	5.28E+01	1.05E-04	2.97E-01	3.34E-05	1.19E-03	1.17E-02	1.75E-03	3.26E-03	2.10E-03	2.16E-03	2.29E-04	2.65E-04	5.56E-08	1.10E-03	1.86E-04
9	D02	60	Passenger Truck	1938	0.00E+00	3.15E-05	3.34E-06	1.18E+02	1.99E-04	5.09E-01	6.53E-05	3.70E-03	2.14E-02	3.18E-03	6.22E-03	4.05E-03	4.15E-03	9.39E-04	5.84E-04	1.08E-07	2.07E-03	6.27E-04
9	D02	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.35E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
9	D02	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.17E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.85E-04
9	D02	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.44E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.36E-04
9	D03	60	Passenger Car	1046	0.00E+00	1.34E-05	1.46E-06	4.78E+01	9.52E-05	2.69E-01	3.02E-05	1.08E-03	1.06E-02	1.58E-03	2.95E-03	1.90E-03	1.95E-03	2.07E-04	2.39E-04	5.02E-08	9.97E-04	1.68E-04
9	D03	60	Passenger Truck	1753	0.00E+00	2.85E-05	3.02E-06	1.06E+02	1.80E-04	4.60E-01	5.90E-05	3.35E-03	1.93E-02	2.87E-03	5.63E-03	3.66E-03	3.75E-03	8.49E-04	5.28E-04	9.80E-08	1.88E-03	5.67E-04
9	D03	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.53E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.74E-04
9	D03	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.05E-05
9	D03	60	Combination Short Haul Truck	40	0.00E+00	1.18E-05	8.63E-07	1.42E+01	3.22E-08	1.76E-02	8.44E-06	1.78E-02	2.05E-03	3.21E-04	7.24E-04	2.53E-04	2.62E-04	2.25E-03	4.74E-05	0.00E+00	4.62E-04	3.36E-03
9	D03	60	Combination Long Haul Truck	37	0.00E+00	1.62E-05	8.82E-07	1.34E+01	1.09E-07	2.11E-02	1.35E-05	1.90E-02	2.15E-03	3.11E-04	1.53E-03	2.88E-04	3.00E-04	2.15E-03	4.49E-05	0.00E+00	1.23E-03	3.57E-03
9	D04	60	Passenger Car	1454	0.00E+00	1.86E-05	2.03E-06	6.64E+01	1.32E-04	3.74E-01	4.20E-05	1.50E-03	1.47E-02	2.20E-03	4.10E-03	2.64E-03	2.71E-03	2.88E-04	3.32E-04	6.98E-08	1.39E-03	2.34E-04
9	D04	60	Passenger Truck	2436	0.00E+00	3.96E-05	4.19E-06	1.48E+02	2.50E-04	6.40E-01	8.21E-05	4.65E-03	2.68E-02	3.99E-03	7.82E-03	5.09E-03	5.22E-03	1.18E-03	7.34E-04	1.36E-07	2.61E-03	7.88E-04
9	D04	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.45E-04
9	D04	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.66E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
9	D04	60	Combination Short Haul Truck	28	0.00E+00	8.09E-06	5.94E-07	9.76E+00	2.22E-08	1.21E-02	5.81E-06	1.23E-02	1.41E-03	2.21E-04	4.99E-04	1.74E-04	1.80E-04	1.55E-03	3.26E-05	0.00E+00	3.18E-04	2.31E-03
9	D04	60	Combination Long Haul Truck	25	0.00E+00	1.11E-05	6.07E-07	9.22E+00	7.50E-08	1.45E-02	9.30E-06	1.31E-02	1.48E-03	2.14E-04	1.05E-03	1.98E-04	2.07E-04	1.48E-03	3.09E-05	0.00E+00	8.48E-04	2.46E-03
9	D05	60	Passenger Car	1016	0.00E+00	1.30E-05	1.41E-06	4.64E+01	9.24E-05	2.61E-01	2.94E-05	1.05E-03	1.03E-02	1.54E-03	2.86E-03	1.85E-03	1.89E-03	2.01E-04	2.32E-04	4.88E-08	9.69E-04	1.63E-04
9	D05	60	Passenger Truck	1702	0.00E+00	2.76E-05	2.93E-06	1.03E+02	1.74E-04	4.47E-01	5.73E-05	3.25E-03	1.88E-02	2.79E-03	5.47E-03	3.56E-03	3.64E-03	8.25E-04	5.13E-04	9.51E-08	1.82E-03	5.51E-04
9	D05	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.78E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.20E-04
9	D05	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.20E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.25E-05
9	D05	60	Combination Short Haul Truck	35	0.00E+00	1.01E-05	7.40E-07	1.22E+01	2.76E-08	1.51E-02	7.24E-06	1.53E-02	1.76E-03	2.75E-04	6.21E-04	2.16E-04	2.25E-04	1.93E-03	4.07E-05	0.00E+00	3.96E-04	2.88E-03
9	D05	60	Combination Long Haul Truck	31	0.00E+00	1.38E-05	7.56E-07	1.15E+01	9.34E-08	1.81E-02	1.16E-05	1.63E-02	1.84E-03	2.67E-04	1.31E-03	2.47E-04	2.57E-04	1.84E-03	3.85E-05	0.00E+00	1.06E-03	3.06E-03
9	D06	60	Passenger Car	1671	0.00E+00	2.14E-05	2.33E-06	7.63E+01	1.52E-04	4.30E-01	4.83E-05	1.72E-03	1.69E-02	2.53E-03	4.71E-03	3.04E-03	3.12E-03	3.31E-04	3.82E-04	8.02E-08	1.59E-03	2.68E-04
9	D06	60	Passenger Truck	2799	0.00E+00	4.55E-05	4.82E-06	1.70E+02	2.87E-04	7.35E-01	9.43E-05	5.35E-03	3.08E-02	4.59E-03	8.99E-03	5.85E-03	5.99E-03	1.36E-03	8.43E-04	1.56E-07	3.00E-03	9.06E-04
9	D06	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.53E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.22E-04
9	D06	60	Combination Short Haul Truck	20	0.00E+00	5.95E-06	4.37E-07	7.18E+00	1.63E-08	8.90E-03	4.28E-06	9.03E-03	1.04E-03	1.62E-04	3.67E-04	1.28E-04	1.33E-04	1.14E-03	2.40E-05	0.00E+00	2.34E-04	1.70E-03
9	D06	60	Combination Long Haul Truck	19	0.00E+00	8.18E-06	4.47E-07	6.79E+00	5.52E-08	1.07E-02	6.84E-06	9.61E-03	1.09E-03	1.58E-04	7.76E-04	1.46E-04	1.52E-04	1.09E-03	2.27E-05	0.00E+00	6.24E-04	1.81E-03
11	D07	80	Passenger Car	1104	0.00E+00	1.15E-05	1.25E-06	4.68E+01	8.16E-05	2.38E-01	2.59E-05	1.15E-03	6.02E-03	1.01E-03	2.53E-03	1.63E-03	1.67E-03	1.64E-04	2.36E-04	5.03E-08	8.55E-04	1.79E-04
11	D07	80	Passenger Truck	1850	0.00E+00	2.37E-05	2.52E-06	1.06E+02	1.54E-04	4.20E-01	5.01E-05	3.09E-03	1.07E-02	1.78E-03	4.81E-03	3.12E-03	3.20E-03	7.59E-04	5.27E-04	9.58E-08	1.61E-03	5.14E-04
11	D07	80	Single Unit Short Haul Truck	53	0.00E+00	7.23E-06	2.82E-07	8.64E+00	4.90E-06	1.57E-02	7.95E-06	2.99E-03	5.92E-04	1.21E-04	9.95E-04	1.84E-04	1.88E-04	8.79E-04	3.51E-05	1.39E-08	8.08E-04	5.59E-04
11	D07	80	Single Unit Long Haul Truck	2	0.00E+00	3.14E-07	1.21E-08	3.65E-01	2.09E-07	6.53E-04	3.45E-07	1.28E-04	2.71E-05	5.37E-06	4.34E-05	7.91E-06	8.07E-06	3.69E-05	1.49E-06	5.80E-10	3.53E-05	2.39E-05
11	D07	80	Combination Short Haul Truck	53	0.00E+00	1.09E-05	8.06E-07	1.77E+01	2.85E-08	1.66E-02	7.78E-06	1.67E-02	1.26E-03	2.28E-04	6.60E-04	2.35E-04	2.44E-04	2.82E-03	5.92E-05	0.00E+00	4.16E-04	3.15E-03
11	D07	80	Combination Long Haul Truck	48	0.00E+00	1.52E-05	8.56E-07	1.64E+01	9.65E-08	1.96E-02	1.25E-05	1.78E-02	1.30E-03	2.08E-04	1.39E-03	2.76E-04	2.87E-04	2.64E-03	5.51E-05	0.00E+00	1.10E-03	3.36E-03
11	D08	80	Passenger Car	1360	0.00E+00	1.42E-05	1.54E-06	5.76E+01	1.00E-04	2.93E-01	3.19E-05	1.41E-03	7.41E-03	1.24E-03	3.11E-03	2.01E-03	2.06E-03	2.02E-04	2.90E-04	6.20E-08	1.05E-03	2.20E-04
11	D08	80	Passenger Truck	2278	0.00E+00	2.91E-05	3.11E-06	1.30E+02	1.90E-04	5.17E-01	6.18E-05	3.80E-03	1.32E-02	2.20E-03	5.93E-03	3.84E-03	3.94E-03	9.35E-04	6.49E-04	1.18E-07	1.99E-03	6.33E-04
11	D08	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.53E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	D08	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.79E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.21E-06
11	D08	80	Combination Short Haul Truck	16	0.00E+00	3.23E-06	2.39E-07	5.26E+00	8.47E-09	4.93E-03	2.31E-06	4.96E-03	3.74E-04	6.78E-05	1.96E-04	6.98E-05	7.25E-05	8.36E-04	1.76E-05	0.00E+00	1.24E-04	9.35E-04
11	D08	80	Combination Long Haul Truck	14	0.00E+00	4.51E-06	2.54E-07	4.88E+00	2.87E-08	5.84E-03	3.72E-06	5.30E-03	3.87E-04	6.19E-05	4.13E-04	8.20E-05	8.54E-05	7.84E-04	1.64E-05	0.00E+00	3.27E-04	9.98E-04
11	D09	80	Passenger Car	883	0.00E+00	9.19E-06	9.99E-07	3.74E+01	6.52E-05	1.90E-01	2.07E-05	9.16E-04	4.81E-03	8.06E-04	2.02E-03	1.30E-03	1.34E-03	1.31E-04	1.88E-04	4.03E-08	6.84E-04	1.43E-04
11	D09	80	Passenger Truck	1479	0.00E+00	1.89E-05	2.02E-06	8.45E+01	1.23E-04	3.36E-01	4.01E-05	2.47E-03	8.57E-03	1.43E-03	3.85E-03	2.50E-03	2.56E-03	6.07E-04	4.21E-04	7.66E-08	1.29E-03	4.11E-04
11	D09	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.41E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.64E-04
11	D09	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.04E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	D09	80	Combination Short Haul Truck	30	0.00E+00	6.25E-06	4.63E-07	1.02E+01	1.64E-08	9.53E-03	4.47E-06	9.59E-03	7.24E-04	1.31E-04	3.79E-04	1.35E-04	1.40E-04	1.62E-03	3.40E-05	0.00E+00	2.39E-04	1.81E-03
11	D09	80	Combination Long Haul Truck	28	0.00E+00	8.71E-06	4.92E-07	9.44E+00	5.54E-08	1.13E-02	7.18E-06	1.02E-02	7.48E-04	1.20E-04	7.98E-04	1.58E-04	1.65E-04	1.52E-03	3.16E-05	0.00E+00	6.33E-04	1.93E-03
11	D10	80	Passenger Car	1309	0.00E+00	1.36E-05	1.48E-06	5.55E+01	9.67E-05	2.82E-01	3.07E-05	1.36E-03	7.14E-03	1.20E-03	3.00E-03	1.93E-03	1.98E-03	1.95E-04	2.79E-04	5.97E-08	1.01E-03	2.12E-04
11	D10	80	Passenger Truck	2193	0.00E+00	2.81E-05	2.99E-06	1.25E+02	1.82E-04	4.98E-01	5.94E-05	3.66E-03	1.27E-02	2.12E-03	5.70E-03	3.70E-03	3.79E-03	9.00E-04	6.25E-04	1.14E-07	1.91E-03	6.09E-04
11	D10	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.72E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.08E-05
11	D10	80	Single Unit Long Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.64E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	4.98E-04
11	D10	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.83E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.32E-04
11	D11	80	Passenger Car	843	0.00E+00	8.77E-06	9.54E-07	3.57E+01	6.23E-05	1.81E-01	1.98E-05	8.74E-04	4.60E-03	7.69E-04	1.93E-03	1.24E-03	1.28E-03	1.25E-04	1.80E-04	3.84E-08	6.53E-04	1.36E-04
11	D11	80	Passenger Truck	1412	0.00E+00	1.81E-05	1.93E-06	8.06E+01	1.18E-04	3.20E-01	3.83E-05	2.36E-03	8.18E-03	1.36E-03	3.67E-03	2.38E-03	2.44E-03	5.80E-04	4.02E-04	7.32E-08	1.23E-03	3.92E-04
11	D11	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.41E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.64E-04
11	D11	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.04E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	D11	80	Combination Short Haul Truck	30	0.00E+00	6.14E-06	4.55E-07	1.00E+01	1.61E-08	9.36E-03	4.39E-06	9.42E-03	7.11E-04	1.29E-04	3.73E-04	1.33E-04	1.38E-04	1.59E-03	3.34E-05	0.00E+00	2.35E-04	1.78E-03
11	D11	80	Combination Long Haul Truck	27	0.00E+00	8.56E-06	4.83E-07	9.28E+00	5.44E-08	1.11E-02	7.06E-06	1.01E-02	7.35E-04	1.18E-04	7.84E-04	1.56E-04	1.62E-04	1.49E-03	3.11E-05	0.00E+00	6.22E-04	1.90E-03
11	D12	80	Passenger Car	1397	0.00E+00	1.45E-05	1.58E-06	5.92E+01	1.03E-04	3.01E-01	3.28E-05	1.45E-03	7.62E-03	1.28E-03	3.20E-03	2.06E-03	2.12E-03	2.08E-04	2.98E-04	6.37E-08	1.08E-03	2.26E-04
11	D12	80	Passenger Truck	2340	0.00E+00	2.99E-05	3.19E-06	1.34E+02	1.95E-04	5.31E-01	6.34E-05	3.91E-03	1.36E-02	2.26E-03	6.09E-03	3.95E-03	4.05E-03	9.61E-04	6.67E-04	1.21E-07	2.04E-03	6.50E-04
11	D12	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.35E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.13E-05
11	D12	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.30E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.10E-04
11	D12	80	Combination

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D16	60	Combination Short Haul Truck	28	0.00E+00	8.09E-06	5.94E-07	9.76E+00	2.22E-08	1.21E-02	5.81E-06	1.23E-02	1.41E-03	2.21E-04	4.99E-04	1.74E-04	1.80E-04	1.55E-03	3.26E-05	0.00E+00	3.18E-04	2.31E-03
9	D16	60	Combination Long Haul Truck	25	0.00E+00	1.11E-05	6.07E-07	9.22E+00	7.50E-08	1.45E-02	9.30E-06	1.31E-02	1.48E-03	2.14E-04	1.05E-03	1.98E-04	2.07E-04	1.48E-03	3.09E-05	0.00E+00	8.48E-04	2.46E-03
10	D17	70	Passenger Car	303	0.00E+00	3.38E-06	3.68E-07	1.32E+01	2.40E-05	6.83E-02	7.63E-06	3.06E-04	2.33E-03	3.63E-04	7.44E-04	4.80E-04	4.92E-04	5.15E-05	6.64E-05	1.38E-08	2.52E-04	4.78E-05
10	D17	70	Passenger Truck	507	0.00E+00	7.12E-06	7.57E-07	2.97E+01	4.56E-05	1.21E-01	1.49E-05	8.90E-04	4.22E-03	6.53E-04	1.43E-03	9.28E-04	9.51E-04	2.25E-04	1.48E-04	2.65E-08	4.77E-04	1.49E-04
10	D17	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.68E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.62E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.74E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	6.99E-06
10	D17	70	Combination Short Haul Truck	17	0.00E+00	4.31E-06	3.20E-07	5.82E+00	1.09E-08	6.22E-03	3.07E-06	6.40E-03	6.07E-04	1.01E-04	2.58E-04	9.33E-05	9.69E-05	9.25E-04	1.95E-05	0.00E+00	1.62E-04	1.21E-03
10	D17	70	Combination Long Haul Truck	15	0.00E+00	5.91E-06	3.36E-07	5.46E+00	3.70E-08	7.42E-03	4.86E-06	6.85E-03	6.32E-04	9.52E-05	5.37E-04	1.08E-04	1.12E-04	8.77E-04	1.83E-05	0.00E+00	4.25E-04	1.29E-03
10	D18	70	Passenger Car	160	0.00E+00	1.79E-06	1.94E-07	6.98E+00	1.27E-05	3.61E-02	4.03E-06	1.62E-04	1.23E-03	1.92E-04	3.93E-04	2.54E-04	2.60E-04	2.72E-05	3.51E-05	7.29E-09	1.33E-04	2.52E-05
10	D18	70	Passenger Truck	268	0.00E+00	3.76E-06	4.00E-07	1.57E+01	2.41E-05	6.37E-02	7.89E-06	4.70E-04	2.23E-03	3.45E-04	7.55E-04	4.90E-04	5.02E-04	1.19E-04	7.82E-05	1.40E-08	2.52E-04	7.90E-05
10	D18	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.00E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.75E-05
10	D18	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.00E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.13E-04
10	D18	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.42E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.21E-04
11	D19	80	Passenger Car	872	0.00E+00	9.08E-06	9.86E-07	3.70E+01	6.44E-05	1.88E-01	2.05E-05	9.04E-04	4.75E-03	7.96E-04	2.00E-03	1.29E-03	1.32E-03	1.30E-04	1.86E-04	3.98E-08	6.75E-04	1.41E-04
11	D19	80	Passenger Truck	1461	0.00E+00	1.87E-05	1.99E-06	8.34E+01	1.22E-04	3.31E-01	3.96E-05	2.44E-03	8.47E-03	1.41E-03	3.80E-03	2.47E-03	2.53E-03	6.00E-04	4.16E-04	7.57E-08	1.27E-03	4.06E-04
11	D19	80	Single Unit Short Haul Truck	173	0.00E+00	2.38E-05	9.29E-07	2.84E+01	1.61E-05	5.16E-02	2.61E-05	9.84E-03	1.95E-03	3.98E-04	3.28E-03	6.06E-04	6.18E-04	2.89E-03	1.15E-04	4.58E-08	2.66E-03	1.84E-03
11	D19	80	Single Unit Long Haul Truck	8	0.00E+00	1.03E-06	3.99E-08	1.20E+00	6.87E-07	2.15E-03	1.14E-06	4.21E-04	8.93E-05	1.77E-05	1.43E-04	2.60E-05	2.66E-05	1.21E-04	4.89E-06	1.91E-09	1.16E-04	7.86E-05
11	D19	80	Combination Short Haul Truck	87	0.00E+00	1.79E-05	1.32E-06	2.91E+01	4.69E-08	2.73E-02	1.28E-05	2.74E-02	2.07E-03	3.75E-04	1.09E-03	3.86E-04	4.01E-04	4.63E-03	9.73E-05	0.00E+00	6.84E-04	5.17E-03
11	D19	80	Combination Long Haul Truck	79	0.00E+00	2.49E-05	1.41E-06	2.70E+01	1.59E-07	3.23E-02	2.06E-05	2.93E-02	2.14E-03	3.43E-04	2.28E-03	4.54E-04	4.72E-04	4.34E-03	9.05E-05	0.00E+00	1.81E-03	5.52E-03
11	D20	80	Passenger Car	1282	0.00E+00	1.33E-05	1.45E-06	5.43E+01	9.47E-05	2.76E-01	3.01E-05	1.33E-03	6.99E-03	1.17E-03	2.93E-03	1.89E-03	1.94E-03	1.91E-04	2.73E-04	5.84E-08	9.92E-04	2.07E-04
11	D20	80	Passenger Truck	2146	0.00E+00	2.75E-05	2.93E-06	1.23E+02	1.79E-04	4.87E-01	5.82E-05	3.58E-03	1.24E-02	2.07E-03	5.58E-03	3.62E-03	3.71E-03	8.81E-04	6.12E-04	1.11E-07	1.87E-03	5.96E-04
11	D20	80	Single Unit Short Haul Truck	75	0.00E+00	1.03E-05	4.00E-07	1.22E+01	6.95E-06	2.22E-02	1.13E-05	4.24E-03	8.39E-04	1.72E-04	1.41E-03	2.61E-04	2.66E-04	1.25E-03	4.98E-05	1.97E-08	1.15E-03	7.93E-04
11	D20	80	Single Unit Long Haul Truck	3	0.00E+00	4.45E-07	1.72E-08	5.17E-01	2.96E-07	9.26E-04	4.89E-07	1.81E-04	3.85E-05	7.62E-06	6.16E-05	1.12E-05	1.14E-05	5.23E-05	2.11E-06	8.22E-10	5.01E-05	3.39E-05
11	D20	80	Combination Short Haul Truck	62	0.00E+00	1.28E-05	9.50E-07	2.09E+01	3.36E-08	1.96E-02	9.17E-06	1.97E-02	1.49E-03	2.69E-04	7.78E-04	2.77E-04	2.88E-04	3.32E-03	6.98E-05	0.00E+00	4.90E-04	3.71E-03
11	D20	80	Combination Long Haul Truck	57	0.00E+00	1.79E-05	1.01E-06	1.94E+01	1.14E-07	2.31E-02	1.47E-05	2.10E-02	1.54E-03	2.46E-04	1.64E-03	3.25E-04	3.39E-04	3.11E-03	6.49E-05	0.00E+00	1.30E-03	3.96E-03
11	D21	80	Passenger Car	926	0.00E+00	9.64E-06	1.05E-06	3.93E+01	6.84E-05	1.99E-01	2.17E-05	9.61E-04	5.05E-03	8.46E-04	2.12E-03	1.37E-03	1.40E-03	1.38E-04	1.98E-04	4.22E-08	7.17E-04	1.50E-04
11	D21	80	Passenger Truck	1552	0.00E+00	1.99E-05	2.12E-06	8.86E+01	1.29E-04	3.52E-01	4.21E-05	2.59E-03	8.99E-03	1.50E-03	4.04E-03	2.62E-03	2.68E-03	6.37E-04	4.42E-04	8.04E-08	1.35E-03	4.31E-04
11	D21	80	Single Unit Short Haul Truck	176	0.00E+00	2.42E-05	9.44E-07	2.89E+01	1.64E-05	5.25E-02	2.66E-05	1.00E-02	1.98E-03	4.05E-04	3.33E-03	6.17E-04	6.29E-04	2.94E-03	1.17E-04	4.65E-08	2.70E-03	1.87E-03
11	D21	80	Single Unit Long Haul Truck	8	0.00E+00	1.05E-06	4.05E-08	1.22E+00	6.98E-07	2.19E-03	1.15E-06	4.28E-04	9.08E-05	1.80E-05	1.45E-04	2.65E-05	2.70E-05	1.23E-04	4.97E-06	1.94E-09	1.18E-04	7.99E-05
11	D21	80	Combination Short Haul Truck	84	0.00E+00	1.74E-05	1.28E-06	2.82E+01	4.55E-08	2.65E-02	1.24E-05	2.66E-02	2.01E-03	3.64E-04	1.05E-03	3.75E-04	3.89E-04	4.49E-03	9.44E-05	0.00E+00	6.63E-04	5.02E-03
11	D21	80	Combination Long Haul Truck	77	0.00E+00	2.42E-05	1.36E-06	2.62E+01	1.54E-07	3.13E-02	1.99E-05	2.84E-02	2.08E-03	3.32E-04	2.22E-03	4.40E-04	4.58E-04	4.21E-03	8.78E-05	0.00E+00	1.76E-03	5.36E-03
11	D22	80	Passenger Car	989	0.00E+00	1.03E-05	1.12E-06	4.19E+01	7.30E-05	2.13E-01	2.32E-05	1.02E-03	5.39E-03	9.02E-04	2.26E-03	1.46E-03	1.50E-03	1.47E-04	2.11E-04	4.51E-08	7.65E-04	1.60E-04
11	D22	80	Passenger Truck	1655	0.00E+00	2.12E-05	2.26E-06	9.46E+01	1.38E-04	3.76E-01	4.49E-05	2.76E-03	9.59E-03	1.60E-03	4.31E-03	2.79E-03	2.86E-03	6.80E-04	4.72E-04	8.58E-08	1.44E-03	4.60E-04
11	D22	80	Single Unit Short Haul Truck	34	0.00E+00	4.60E-06	1.80E-07	5.50E+00	3.12E-06	9.98E-03	5.06E-06	1.90E-03	3.77E-04	7.70E-05	6.33E-04	1.17E-04	1.20E-04	5.59E-04	2.23E-05	8.85E-09	5.14E-04	3.56E-04
11	D22	80	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	7.71E-09	2.32E-01	1.33E-07	4.16E-04	2.20E-07	8.13E-05	1.73E-05	3.42E-06	2.76E-05	5.04E-06	5.14E-06	2.35E-05	9.45E-07	3.69E-10	2.25E-05	1.52E-05
11	D22	80	Combination Short Haul Truck	28	0.00E+00	5.82E-06	4.31E-07	9.47E+00	1.52E-08	8.87E-03	4.16E-06	8.93E-03	6.74E-04	1.22E-04	3.53E-04	1.26E-04	1.31E-04	1.51E-03	3.17E-05	0.00E+00	2.22E-04	1.68E-03
11	D22	80	Combination Long Haul Truck	26	0.00E+00	8.11E-06	4.58E-07	8.79E+00	5.16E-08	1.05E-02	6.69E-06	9.54E-03	6.97E-04	1.11E-04	7.43E-04	1.48E-04	1.54E-04	1.41E-03	2.95E-05	0.00E+00	5.89E-04	1.80E-03
9	D23	60	Passenger Car	738	0.00E+00	9.46E-06	1.03E-06	3.37E+01	6.71E-05	1.90E-01	2.13E-05	7.60E-04	7.46E-03	1.12E-03	2.08E-03	1.34E-03	1.38E-03	1.46E-04	1.69E-04	3.55E-08	7.04E-04	1.19E-04
9	D23	60	Passenger Truck	1237	0.00E+00	2.01E-05	2.13E-06	7.51E+01	1.27E-04	3.25E-01	4.17E-05	2.36E-03	1.36E-02	2.03E-03	3.97E-03	2.58E-03	2.65E-03	5.99E-04	3.73E-04	6.91E-08	1.32E-03	4.00E-04
9	D23	60	Single Unit Short Haul Truck	68	0.00E+00	1.52E-05	6.27E-07	1.13E+01	1.01E-05	1.99E-02	1.64E-05	5.80E-03	1.56E-03	2.63E-04	2.03E-03	3.90E-04	3.98E-04	1.15E-03	4.61E-05	1.90E-08	1.63E-03	1.09E-03
9	D23	60	Single Unit Long Haul Truck	3	0.00E+00	6.63E-07	2.72E-08	4.82E-01	4.36E-07	8.45E-04	7.17E-07	2.51E-04	7.03E-05	1.17E-05	8.86E-05	1.70E-05	1.73E-05	4.87E-05	1.97E-06	8.08E-10	7.13E-05	4.70E-05
9	D23	60	Combination Short Haul Truck	41	0.00E+00	1.21E-05	8.86E-07	1.46E+01	3.30E-08	1.80E-02	8.66E-06	1.83E-02	2.10E-03	3.29E-04	7.43E-04	2.59E-04	2.69E-04	2.31E-03	4.87E-05	0.00E+00	4.74E-04	3.45E-03
9	D23	60	Combination Long Haul Truck	38	0.00E+00	1.66E-05	9.05E-07	1.37E+01	1.12E-07	2.16E-02	1.39E-05	1.95E-02	2.21E-03	3.19E-04	1.57E-03	2.96E-04	3.08E-04	2.21E-03	4.61E-05	0.00E+00	1.26E-03	3.67E-03
9	D24	60	Passenger Car	1015	0.00E+00	1.30E-05	1.41E-06	4.63E+01	9.23E-05	2.61E-01	2.93E-05	1.05E-03	1.03E-02	1.54E-03	2.86E-03	1.84E-03	1.89E-03	2.01E-04	2.32E-04	4.87E-08	9.68E-04	1.63E-04
9	D24	60	Passenger Truck	1700	0.00E+00	2.76E-05	2.93E-06	1.03E+02	1.74E-04	4.47E-01	5.73E-05	3.25E-03	1.87E-02	2.79E-03	5.46E-03	3.55E-03	3.64E-03	8.24E-04	5.12E-04	9.50E-08	1.82E-03	5.50E-04
9	D24	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.10E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.81E-04
9	D24	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.34E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.52E-05
9	D24	60	Combination Short Haul Truck	21	0.00E+00	6.26E-06	4.60E-07	7.55E+00	1.71E-08	9.35E-03	4.50E-06	9.49E-03	1.09E-03	1.71E-04	3.86E-04	1.34E-04	1.40E-04	1.20E-03	2.53E-05	0.00E+00	2.46E-04	1.79E-03
9	D24	60	Combination Long Haul Truck	20	0.00E+00	8.60E-06	4.70E-07	7.13E+00	5.80E-08	1.12E-02	7.19E-06	1.01E-02	1.15E-03	1.66E-04	8.16E-04	1.53E-04	1.60E-04	1.14E-03	2.39E-05	0.00E+00	6.56E-04	1.90E-03
9	D25	60	Passenger Car	934	0.00E+00	1.20E-05	1.30E-06	4.26E+01	8.49E-05	2.40E-01	2.70E-05	9.61E-04	9.43E-03	1.41E-03	2.63E-03	1.70E-03	1.74E-03	1.85E-04	2.13E-04	4.48E-08	8.90E-04	1.50E-04
9	D25	60	Passenger Truck	1563	0.00E+00	2.54E-05	2.69E-06	9.50E+01	1.60E-04	4.11E-01	5.27E-05	2.99E-03	1.72E-02	2.56E-03	5.02E-03	3.27E-03	3.35E-03	7.57E-04	4.71E-04	8.74E-08	1.67E-03	5.06E-04
9	D25	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.08E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.64E-04
9	D25	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.31E-05
9	D25	60	Combination Short Haul Truck	26	0.00E+00	7.63E-06	5.61E-07	9.21E+00	2.09E-08	1.14E-02	5.48E-06	1.16E-02	1.33E-03	2.08E-04	4.70E-04	1.64E-04	1.70E-04	1.46E-03	3.08E-05	0.00E+00	3.00E-04	2.18E-03
9	D25	60	Combination Long Haul Truck	24	0.00E+00	1.05E-05	5.73E-07	8.70E+00	7.08E-08	1.37E-02	8.77E-06	1.23E-02	1.40E-03	2.02E-04	9.95E-04	1.87E-04	1.95E-04	1.40E-03	2.92E-05	0.00E+00	8.00E-04	2.32E-03
9	D26	60	Passenger Car	1224	0.00E+00	1.57E-05	1.70E-06	5.58E+01	1.11E-04	3.15E-01	3.54E-05	1.26E-03	1.24E-02	1.85E-03	3.45E-03	2.22E-03	2.28E-03	2.43E-04	2.80E-04	5.88E-08	1.17E-03	1.97E-04
9	D26	60	Passenger Truck	2049	0.00E+00	3.33E-05	3.53E-06	1.24E+02	2.10E-04	5.38E-01	6.90E-05	3.92E-03	2.26E-02	3.36E-03	6.58E-03	4.28E-03	4.39E-03	9.93E-04	6.18E-04	1.15E-07	2.19E-03	6.63E-04
9	D26	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.63E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.06E-04
9	D26	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.07E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.32E-05
9	D26	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.86E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.16E-04
9	D26	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.18E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.75E-04
11	D27	80	Passenger Car	812	0.00E+00	8.45E-06	9.18E-07	3.44E+01	5.99E-05	1.75E-01	1.90E-05	8.42E-04	4.42E-03	7.41E-04	1.86E-03	1.20E-03	1.23E-03	1.21E-04	1.73E-04	3.70E-08	6.28E-04	1.31E-04
11	D27	80	Passenger Truck	1359	0.00E+00	1.74E-05	1.85E-06	7.76E+01	1.13E-04	3.08E-01	3.69E-05	2.27E-03	7.88E-03	1.31E-03	3.54E-03	2.29E-03	2.35E-03	5.58E-04	3.87E-04	7.04E-08	1.18E-03	3.78E-04
11	D27	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.58E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.95E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.74E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.26E-05
11	D27	80	Combination Short Haul Truck	22	0.00E+00	4.53E-06	3.35E-07	7.37E+00	1.19E-08	6.90E-03	3.24E-06	6.94E-03	5.24E-04	9.50E-05	2.75E-04	9.78E-05	1.02E-04	1.17E-03	2.46E-05	0.00E+00	1.73E-04	1.31E-03
11	D27	80	Combination Long Haul Truck	20	0.00E+00	6.31E-06	3.56E-07	6.84E+00	4.01E-08	8.17E-03	5.20E-06	7.42E-03	5.42E-04	8.67E-05	5.78E-04	1.15E-04	1.20E-04	1.10E-03	2.29E-05	0.00E+00	4.58E-04	1.40E-03
11	D28	80	Passenger Car	350	0.00E+00	3.64E-06	3.95E-07	1.48E+01	2.58E-05	7.52E-02	8.20E-06	3.62E-04	1.91E-03	3.19E-04	8.00E-04	5.16E-04	5.29E-04	5.20E-05	7.46E-05	1.59E-08	2.71E-04	5.65E-05
11	D28	80	Passenger Truck	585	0.00E+00	7.49E-06	7.98E-07	3.34E+01	4.87E-05	1.33E-01	1.59E-05	9.77E-04	3.39E-03	5.65E-04	1.52E-03	9.88E-04	1.01E-03	2.40E-04	1.67E-04	3.03E-08	5.10E-04	1.63E-04
11	D28	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.89E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.15E-05
11	D28	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.14E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.92E-04
11	D28	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.36E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.32E-04
11	D29	80	Passenger Car	812	0.00E+00	8.45E-06	9.18E-07	3.44E+01	5.99E-05	1.75E-01	1.90E-05	8.42E-04	4.42E-03	7.41E-04	1.86E-03	1.20E-03	1.23E-03	1.21E-04	1.73E-04	3.70E-08	6.28E-04	1.31E-04
11	D29	80	Passenger Truck	1359	0.00E+00	1.74E-05	1.85E-06	7.76E+01	1.13E-04	3.08E-01	3.69E-05	2.27E-03	7.88E-03	1.31E-03	3.54E-03	2.29E-03	2.35E-03	5.58E-04	3.87E-04	7.04E-08	1.18E-03	3.78E-04
11	D29	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.58E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.95E-04
11	D29	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.74E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.26E-05
11	D29	80	Combination Short Haul Truck	22	0.00E+00	4.53E-06	3.35E-07	7.37E+00	1.19E-08	6.90E-03	3.24E-06	6.94E-03	5.24E-04	9.50E-05	2.75E-04	9.78E-05	1.02E-04	1.17E-03	2.46E-05	0.00E+00	1.73E-04	1.31E-03
11	D29	80	Combination Long Haul Truck	20	0.00E+00	6.31E-06	3.56E-07	6.84E+00	4.01E-08	8.17E-03	5.20E-06	7.42E-03	5.42E-04	8.67E-05	5.78E-04	1.15E-04	1.20E-04	1.10E-03	2.29E-05	0.00E+00	4.58E-04	1.40E-03
11	D30	80	Passenger Car	350	0.00E+00	3.64E-06	3.95E-07	1.48E+01	2.58E-05	7.52E-02	8.20E-06	3.62E-04	1.91E-03	3.19E-04	8.00E-04	5.16E-04	5.29E-04	5.20E-05	7.46E-05	1.59E-08	2.71E-04	5.65E-05
11	D30	80	Passenger Truck	585	0.00E+00	7.49E-06	7.98E-07	3.34E+01	4.87E-05	1.33E-01	1.59E-05	9.77E-04	3.39E-03	5.65E-04	1.52E-03	9.88E-04	1.01E-03	2.40E-04	1.67E-04	3.03E-08	5.10E-04	1.63E-04
11	D30	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.89E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.15E-05
11	D30	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.14E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.92E-04
11	D30

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D35	60	Passenger Car	231	0.00E+00	2.96E-06	3.22E-07	1.05E+01	2.10E-05	5.94E-02	6.68E-06	2.38E-04	2.33E-03	3.49E-04	6.51E-04	4.20E-04	4.31E-04	4.58E-05	5.28E-05	1.11E-08	2.20E-04	3.71E-05
9	D35	60	Passenger Truck	387	0.00E+00	6.28E-06	6.66E-07	2.35E+01	3.96E-05	1.02E-01	1.30E-05	7.39E-04	4.26E-03	6.35E-04	1.24E-03	8.09E-04	8.29E-04	1.87E-04	1.17E-04	2.16E-08	4.14E-04	1.25E-04
9	D35	60	Single Unit Short Haul Truck	7	0.00E+00	1.50E-06	6.18E-08	1.12E+00	9.92E-07	1.96E-03	1.62E-06	5.72E-04	1.54E-04	2.59E-05	2.00E-04	3.85E-05	3.92E-05	1.13E-04	4.55E-06	1.87E-09	1.60E-04	1.07E-04
9	D35	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.78E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.23E-04
9	D35	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.96E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.57E-04
9	D36	60	Passenger Car	400	0.00E+00	5.13E-06	5.58E-07	1.83E+01	3.64E-05	1.03E-01	1.16E-05	4.12E-04	4.04E-03	6.06E-04	1.13E-03	7.27E-04	7.47E-04	7.94E-05	9.15E-05	1.92E-08	3.82E-04	6.43E-05
9	D36	60	Passenger Truck	671	0.00E+00	1.09E-05	1.15E-06	4.07E+01	6.87E-05	1.76E-01	2.26E-05	1.28E-03	7.39E-03	1.10E-03	2.15E-03	1.40E-03	1.44E-03	3.25E-04	2.02E-04	3.75E-08	7.18E-04	2.17E-04
9	D36	60	Single Unit Short Haul Truck	7	0.00E+00	1.50E-06	6.18E-08	1.12E+00	9.92E-07	1.96E-03	1.62E-06	5.72E-04	1.54E-04	2.59E-05	2.00E-04	3.85E-05	3.92E-05	1.13E-04	4.55E-06	1.87E-09	1.60E-04	1.07E-04
9	D36	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.01E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.67E-04
9	D36	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.20E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.04E-04
9	D37	60	Passenger Car	491	0.00E+00	6.29E-06	6.84E-07	2.24E+01	4.46E-05	1.26E-01	1.42E-05	5.05E-04	4.96E-03	7.42E-04	1.38E-03	8.92E-04	9.15E-04	9.73E-05	1.12E-04	2.36E-08	4.68E-04	7.88E-05
9	D37	60	Passenger Truck	822	0.00E+00	1.34E-05	1.42E-06	4.99E+01	8.42E-05	2.16E-01	2.77E-05	1.57E-03	9.06E-03	1.35E-03	2.64E-03	1.72E-03	1.76E-03	3.98E-04	2.48E-04	4.59E-08	8.80E-04	2.66E-04
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.63E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
9	D37	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.17E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.85E-04
9	D37	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.44E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.36E-04
9	D38	60	Passenger Car	326	0.00E+00	4.17E-06	4.53E-07	1.49E+01	2.96E-05	8.37E-02	9.41E-06	3.35E-04	3.29E-03	4.93E-04	9.18E-04	5.92E-04	6.07E-04	6.46E-05	7.44E-05	1.56E-08	3.10E-04	5.23E-05
9	D38	60	Passenger Truck	545	0.00E+00	8.86E-06	9.39E-07	3.31E+01	5.59E-05	1.43E-01	1.84E-05	1.04E-03	6.01E-03	8.94E-04	1.75E-03	1.14E-03	1.17E-03	2.64E-04	1.64E-04	3.05E-08	5.84E-04	1.77E-04
9	D38	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.27E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.12E-05
9	D38	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.39E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.62E-04
9	D38	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.48E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.79E-04
9	D39	60	Passenger Car	294	0.00E+00	3.77E-06	4.09E-07	1.34E+01	2.67E-05	7.55E-02	8.49E-06	3.03E-04	2.97E-03	4.44E-04	8.28E-04	5.34E-04	5.48E-04	5.83E-05	6.72E-05	1.41E-08	2.80E-04	4.72E-05
9	D39	60	Passenger Truck	492	0.00E+00	7.99E-06	8.47E-07	2.99E+01	5.04E-05	1.29E-01	1.66E-05	9.40E-04	5.42E-03	8.07E-04	1.58E-03	1.03E-03	1.05E-03	2.38E-04	1.48E-04	2.75E-08	5.27E-04	1.59E-04
9	D39	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.85E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.49E-04
9	D39	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.97E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.71E-04
9	D40	60	Passenger Car	205	0.00E+00	2.62E-06	2.85E-07	9.33E+00	1.86E-05	5.26E-02	5.91E-06	2.11E-04	2.07E-03	3.09E-04	5.76E-04	3.72E-04	3.81E-04	4.05E-05	4.68E-05	9.82E-09	1.95E-04	3.28E-05
9	D40	60	Passenger Truck	342	0.00E+00	5.56E-06	5.90E-07	2.08E+01	3.51E-05	9.00E-02	1.15E-05	6.54E-04	3.77E-03	5.62E-04	1.10E-03	7.16E-04	7.33E-04	1.66E-04	1.03E-04	1.91E-08	3.67E-04	1.11E-04
9	D40	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.63E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.72E-05
9	D40	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.93E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.29E-05
9	D41	60	Passenger Car	88	0.00E+00	1.13E-06	1.22E-07	4.01E+00	7.99E-06	2.26E-02	2.54E-06	9.05E-05	8.87E-04	1.33E-04	2.48E-04	1.60E-04	1.64E-04	1.74E-05	2.01E-05	4.22E-09	8.37E-05	1.41E-05
9	D41	60	Passenger Truck	147	0.00E+00	2.39E-06	2.53E-07	8.94E+00	1.51E-05	3.86E-02	4.96E-06	2.81E-04	1.62E-03	2.41E-04	4.73E-04	3.07E-04	3.15E-04	7.13E-05	4.43E-05	8.22E-09	1.58E-04	4.76E-05
9	D41	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.63E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.72E-05
9	D41	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.93E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.29E-05
9	D42	60	Passenger Car	281	0.00E+00	3.60E-06	3.91E-07	1.28E+01	2.55E-05	7.22E-02	8.11E-06	2.89E-04	2.84E-03	4.25E-04	7.91E-04	5.10E-04	5.24E-04	5.57E-05	6.42E-05	1.35E-08	2.68E-04	4.51E-05
9	D42	60	Passenger Truck	470	0.00E+00	7.64E-06	8.09E-07	2.86E+01	4.82E-05	1.24E-01	1.58E-05	8.98E-04	5.18E-03	7.71E-04	1.51E-03	9.83E-04	1.01E-03	2.28E-04	1.42E-04	2.63E-08	5.03E-04	1.52E-04
9	D42	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.31E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.36E-05
9	D43	60	Passenger Car	165	0.00E+00	2.12E-06	2.30E-07	7.54E+00	1.50E-05	4.25E-02	4.77E-06	1.70E-04	1.67E-03	2.50E-04	4.66E-04	3.00E-04	3.08E-04	3.28E-05	3.78E-05	7.93E-09	1.58E-04	2.65E-05
9	D43	60	Passenger Truck	277	0.00E+00	4.49E-06	4.76E-07	1.68E+01	2.84E-05	7.27E-02	9.32E-06	5.29E-04	3.05E-03	4.54E-04	8.89E-04	5.78E-04	5.93E-04	1.34E-04	8.34E-05	1.55E-08	2.96E-04	8.96E-05
9	D43	60	Single Unit Short Haul Truck	31	0.00E+00	6.84E-06	2.83E-07	5.10E+00	4.53E-06	8.97E-03	7.40E-06	2.61E-03	7.05E-04	1.18E-04	9.13E-04	1.76E-04	1.79E-04	5.17E-04	2.08E-05	8.56E-09	7.34E-04	4.89E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.23E-08	2.17E-01	1.97E-07	3.81E-04	3.23E-07	1.13E-04	3.17E-05	5.26E-06	3.99E-05	7.64E-06	7.79E-06	2.20E-05	8.87E-07	3.64E-10	3.21E-05	2.12E-05
9	D43	60	Combination Short Haul Truck	15	0.00E+00	4.43E-06	3.25E-07	5.34E+00	1.21E-08	6.61E-03	3.18E-06	6.71E-03	7.73E-04	1.21E-04	2.73E-04	9.51E-05	9.88E-05	8.49E-04	1.79E-05	0.00E+00	1.74E-04	1.27E-03
9	D43	60	Combination Long Haul Truck	14	0.00E+00	6.08E-06	3.32E-07	5.05E+00	4.11E-08	7.95E-03	5.09E-06	7.15E-03	8.10E-04	1.17E-04	5.77E-04	1.09E-04	1.13E-04	8.10E-04	1.69E-05	0.00E+00	4.64E-04	1.35E-03
9	D44	60	Passenger Car	315	0.00E+00	4.03E-06	4.38E-07	1.44E+01	2.86E-05	8.09E-02	9.09E-06	3.24E-04	3.18E-03	4.76E-04	8.87E-04	5.72E-04	5.87E-04	6.24E-05	7.20E-05	1.51E-08	3.00E-04	5.06E-05
9	D44	60	Passenger Truck	527	0.00E+00	8.56E-06	9.08E-07	3.20E+01	5.40E-05	1.38E-01	1.78E-05	1.01E-03	5.81E-03	8.65E-04	1.69E-03	1.10E-03	1.13E-03	2.55E-04	1.59E-04	2.95E-08	5.64E-04	1.71E-04
9	D44	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.63E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
9	D44	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.16E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.18E-04
9	D44	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.23E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.32E-04
9	D45	60	Passenger Car	621	0.00E+00	7.95E-06	8.64E-07	2.83E+01	5.64E-05	1.60E-01	1.79E-05	6.39E-04	6.27E-03	9.39E-04	1.75E-03	1.13E-03	1.16E-03	1.23E-04	1.42E-04	2.98E-08	5.92E-04	9.97E-05
9	D45	60	Passenger Truck	1039	0.00E+00	1.69E-05	1.79E-06	6.31E+01	1.06E-04	2.73E-01	3.50E-05	1.99E-03	1.15E-02	1.70E-03	3.34E-03	2.17E-03	2.23E-03	5.04E-04	3.13E-04	5.81E-08	1.11E-03	3.36E-04
9	D45	60	Single Unit Short Haul Truck	54	0.00E+00	1.20E-05	4.95E-07	8.92E+00	7.93E-06	1.57E-02	1.30E-05	4.57E-03	1.23E-03	2.07E-04	1.60E-03	3.08E-04	3.14E-04	9.04E-04	3.64E-05	1.50E-08	1.28E-03	8.56E-04
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.15E-08	3.80E-01	3.44E-07	6.66E-04	5.65E-07	1.98E-04	5.54E-05	9.20E-06	6.99E-05	1.34E-05	1.36E-05	3.84E-05	1.55E-06	6.37E-10	5.62E-05	3.71E-05
9	D45	60	Combination Short Haul Truck	37	0.00E+00	1.07E-05	7.85E-07	1.29E+01	2.93E-08	1.60E-02	7.68E-06	1.62E-02	1.86E-03	2.92E-04	6.59E-04	2.30E-04	2.38E-04	2.05E-03	4.31E-05	0.00E+00	4.20E-04	3.05E-03
9	D45	60	Combination Long Haul Truck	33	0.00E+00	1.47E-05	8.02E-07	1.22E+01	9.91E-08	1.92E-02	1.23E-05	1.73E-02	1.96E-03	2.83E-04	1.39E-03	2.62E-04	2.73E-04	1.95E-03	4.08E-05	0.00E+00	1.12E-03	3.25E-03
9	D46	60	Passenger Car	606	0.00E+00	7.77E-06	8.44E-07	2.77E+01	5.51E-05	1.56E-01	1.75E-05	6.24E-04	6.12E-03	9.17E-04	1.71E-03	1.10E-03	1.13E-03	1.20E-04	1.39E-04	2.91E-08	5.78E-04	9.73E-05
9	D46	60	Passenger Truck	1015	0.00E+00	1.65E-05	1.75E-06	6.16E+01	1.04E-04	2.67E-01	3.42E-05	1.94E-03	1.12E-02	1.66E-03	3.26E-03	2.12E-03	2.17E-03	4.92E-04	3.06E-04	5.67E-08	1.09E-03	3.29E-04
9	D46	60	Single Unit Short Haul Truck	59	0.00E+00	1.33E-05	5.48E-07	9.88E+00	8.78E-06	1.74E-02	1.43E-05	5.06E-03	1.37E-03	2.30E-04	1.77E-03	3.41E-04	3.47E-04	1.00E-03	4.03E-05	1.66E-08	1.42E-03	9.48E-04
9	D46	60	Single Unit Long Haul Truck	3	0.00E+00	5.79E-07	2.38E-08	4.21E-01	3.81E-07	7.38E-04	6.26E-07	2.19E-04	6.14E-05	1.02E-05	7.73E-05	1.48E-05	1.51E-05	4.26E-05	1.72E-06	7.06E-10	6.22E-05	4.11E-05
9	D46	60	Combination Short Haul Truck	49	0.00E+00	1.42E-05	1.04E-06	1.71E+01	3.89E-08	2.12E-02	1.02E-05	2.15E-02	2.48E-03	3.87E-04	8.75E-04	3.05E-04	3.17E-04	2.72E-03	5.73E-05	0.00E+00	5.58E-04	4.06E-03
9	D46	60	Combination Long Haul Truck	44	0.00E+00	1.95E-05	1.07E-06	1.62E+01	1.32E-07	2.55E-02	1.63E-05	2.29E-02	2.60E-03	3.76E-04	1.85E-03	3.48E-04	3.63E-04	2.60E-03	5.42E-05	0.00E+00	1.49E-03	4.32E-03
9	D47	60	Passenger Car	826	0.00E+00	1.06E-05	1.15E-06	3.77E+01	7.51E-05	2.12E-01	2.39E-05	8.50E-04	8.34E-03	1.25E-03	2.33E-03	1.50E-03	1.54E-03	1.64E-04	1.89E-04	3.97E-08	7.87E-04	1.33E-04
9	D47	60	Passenger Truck	1383	0.00E+00	2.25E-05	2.38E-06	8.40E+01	1.42E-04	3.63E-01	4.66E-05	2.64E-03	1.52E-02	2.27E-03	4.44E-03	2.89E-03	2.96E-03	6.70E-04	4.17E-04	7.73E-08	1.48E-03	4.48E-04
9	D47	60	Single Unit Short Haul Truck	56	0.00E+00	1.24E-05	5.12E-07	9.24E+00	8.22E-06	1.63E-02	1.34E-05	4.74E-03	1.28E-03	2.15E-04	1.65E-03	3.19E-04	3.25E-04	9.36E-04	3.77E-05	1.55E-08	1.33E-03	8.87E-04
9	D47	60	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.23E-08	3.94E-01	3.56E-07	6.90E-04	5.85E-07	2.05E-04	5.74E-05	9.53E-06	7.23E-05	1.39E-05	1.41E-05	3.98E-05	1.61E-06	6.60E-10	5.82E-05	3.84E-05
9	D47	60	Combination Short Haul Truck	39	0.00E+00	1.14E-05	8.41E-07	1.38E+01	3.14E-08	1.71E-02	8.22E-06	1.74E-02	2.00E-03	3.12E-04	7.06E-04	2.46E-04	2.55E-04	2.20E-03	4.62E-05	0.00E+00	4.50E-04	3.27E-03
9	D47	60	Combination Long Haul Truck	36	0.00E+00	1.57E-05	8.59E-07	1.30E+01	1.06E-07	2.06E-02	1.32E-05	1.85E-02	2.10E-03	3.03E-04	1.49E-03	2.81E-04	2.92E-04	2.09E-03	4.37E-05	0.00E+00	1.20E-03	3.48E-03
9	D48	60	Passenger Car	200	0.00E+00	2.56E-06	2.78E-07	9.11E+00	1.82E-05	5.13E-02	5.77E-06	2.06E-04	2.02E-03	3.02E-04	5.63E-04	3.63E-04	3.72E-04	3.96E-05	4.56E-05	9.59E-09	1.90E-04	3.21E-05
9	D48	60	Passenger Truck	334	0.00E+00	5.43E-06	5.76E-07	2.03E+01	3.43E-05	8.78E-02	1.13E-05	6.39E-04	3.68E-03	5.48E-04	1.07E-03	6.99E-04	7.16E-04	1.62E-04	1.01E-04	1.87E-08	3.58E-04	1.08E-04
9	D48	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.63E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.72E-05
9	D48	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.93E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.29E-05
9	D49	60	Passenger Car	826	0.00E+00	1.06E-05	1.15E-06	3.77E+01	7.51E-05	2.12E-01	2.39E-05	8.50E-04	8.34E-03	1.25E-03	2.33E-03	1.50E-03	1.54E-03	1.64E-04	1.89E-04	3.97E-08	7.87E-04	1.33E-04
9	D49	60	Passenger Truck	1383	0.00E+00	2.25E-05	2.38E-06	8.40E+01	1.42E-04	3.63E-01	4.66E-05	2.64E-03	1.52E-02	2.27E-03	4.44E-03	2.89E-03	2.96E-03	6.70E-04	4.17E-04	7.73E-08	1.48E-03	4.48E-04
9	D49	60	Single Unit Short Haul Truck	56	0.00E+00	1.24E-05	5.12E-07	9.24E+00	8.22E-06	1.63E-02	1.34E-05	4.74E-03	1.28E-03	2.15E-04	1.65E-03	3.19E-04	3.25E-04	9.36E-04	3.77E-05	1.55E-08	1.33E-03	8.87E-04
9	D49	60	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.23E-08	3.94E-01	3.56E-07	6.90E-04	5.85E-07	2.05E-04	5.74E-05	9.53E-06	7.23E-05	1.39E-05	1.41E-05	3.98E-05	1.61E-06	6.60E-10	5.82E-05	3.84E-05
9	D49	60	Combination Short Haul Truck	39	0.00E+00	1.14E-05	8.41E-07	1.38E+01	3.14E-08	1.71E-02	8.22E-06	1.74E-02	2.00E-03	3.12E-04	7.06E-04	2.46E-04	2.55E-04	2.20E-03	4.62E-05	0.00E+00	4.50E-04	3.27E-03
9	D49	60	Combination Long Haul Truck	36	0.00E+00	1.57E-05	8.59E-07	1.30E+01	1.06E-07	2.06E-02	1.32E-05	1.85E-02	2.10E-03	3.03E-04	1.49E-03	2.81E-04	2.92E-04	2.09E-03	4.37E-05	0.00E+00	1.20E-03	3.48E-03
9	D50	60	Passenger Car	740	0.00E+00	9.48E-06	1.03E-06	3.38E+01	6.73E-05	1.90E-01	2.14E-05	7.62E-04	7.47E-03	1.12E-03	2.08E-03	1.34E-03	1.38E-03	1.47E-04	1.69E-04	3.55E-08	7.05E-04	1.19E-04
9	D50	60	Passenger Truck	1239	0.00E+00	2.01E-05	2.13E-06	7.53E+01	1.27E-04	3.25E-01	4.17E-05	2.37E-03	1.37E-02	2.03E-03	3.98E-03	2.59E-03	2.65E-03	6.00E-04	3.73E-04	6.93E-08	1.33E-03	4.01E-04
9	D50	60	Single Unit Short Haul Truck	62	0.00E+00	1.39E-05	5.74E-07	1.04E+01	9.21E-06	1.82E-02	1.50E-05	5.31E-03	1.43E-03	2.41E-04	1.85E-03	3.57E-04	3.64E-04	1.05E-03	4.22E-05	1.74E-08	1.49E-03	9.94E-04
9	D50	60	Single Unit Long Haul Truck	3	0.00E+00	6.07E-07	2.49E-08	4.42E-01	3.99E-07	7.73E-04	6.56E-07	2.30E-04	6.43E-05	1.07E-05	8.11E-05	1.55E-05	1.58E-05	4.46E-05	1.80E-06	7.40E-10	6.52E-05	4.30E-05
9	D50	60	Combination Short Haul Truck	49	0.00E+00	1.42E-05	1.04E-06	1.71E+01	3.89E-08	2.12E-02	1.02E-05	2.15E-02	2.48E-03	3.87E-04	8.75E-04	3.05E-04	3.17E-04	2.72E-03	5.73E-05	0.00E+00	5.58E-04	4.06E-03
9	D50	60	Combination Long Haul Truck	44	0.00E+00	1.95E-05	1.07E-06	1.62E+01	1.32E-07	2.55E-02	1.63E-05	2.29E-02	2.60E-03	3.76E-04	1.85E-03	3.48E-04	3.63E-04	2.60E-03	5.42E-05	0.00E+00	1.49E-03	4.32E-03
9	D51	60	Passenger Car	300	0.00E+00	3.85E-06	4.18E-07	1.37E+01	2.73E-05	7.72E-02	8.67E-06	3.09E-04	3.03E-03	4.54E-04	8.46E-04	5.45E-04	5.60E-04	5.95E-05	6.86E-05	1.44E-08	2.86E-04	4.82E-05
9	D51	60	Passenger Truck	503	0.00E+00	8.17E-06	8.66E-07	3.05E+01	5.15E-05	1.32E-01	1.69E-05	9.61E-04	5.54E-03	8.25E-04	1.61E-03	1.05E-03	1.08E-03	2.44E-04	1.52E-04	2.81E-08	5.38E-04	1.63E-04
9	D51	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D55	80	Combination Long Haul Truck	13	0.00E+00	4.20E-06	2.37E-07	4.56E+00	2.67E-08	5.45E-03	3.47E-06	4.95E-03	3.61E-04	5.78E-05	3.85E-04	7.65E-05	7.97E-05	7.31E-04	1.53E-05	0.00E+00	3.06E-04	9.31E-04
11	D56	80	Passenger Car	617	0.00E+00	6.42E-06	6.98E-07	2.62E+01	4.56E-05	1.33E-01	1.45E-05	6.40E-04	3.36E-03	5.63E-04	1.41E-03	9.11E-04	9.35E-04	9.18E-05	1.32E-04	2.81E-08	4.78E-04	9.98E-05
11	D56	80	Passenger Truck	1034	0.00E+00	1.32E-05	1.41E-06	5.90E+01	8.60E-05	2.35E-01	2.80E-05	1.73E-03	5.99E-03	9.97E-04	2.69E-03	1.74E-03	1.79E-03	4.24E-04	2.95E-04	5.36E-08	9.01E-04	2.87E-04
11	D56	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.74E-04
11	D56	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.27E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
11	D56	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.45E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.21E-03
11	D56	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.89E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
11	D57	80	Passenger Car	670	0.00E+00	6.98E-06	7.58E-07	2.84E+01	4.95E-05	1.44E-01	1.57E-05	6.95E-04	3.65E-03	6.12E-04	1.53E-03	9.89E-04	1.02E-03	9.97E-05	1.43E-04	3.06E-08	5.19E-04	1.08E-04
11	D57	80	Passenger Truck	1123	0.00E+00	1.44E-05	1.53E-06	6.41E+01	9.34E-05	2.55E-01	3.04E-05	1.87E-03	6.51E-03	1.08E-03	2.92E-03	1.89E-03	1.94E-03	4.61E-04	3.20E-04	5.82E-08	9.78E-04	3.12E-04
11	D57	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D57	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.11E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.55E-06
11	D57	80	Combination Short Haul Truck	18	0.00E+00	3.67E-06	2.71E-07	5.96E+00	9.60E-09	5.59E-03	2.62E-06	5.62E-03	4.24E-04	7.69E-05	2.22E-04	7.92E-05	8.22E-05	9.48E-04	1.99E-05	0.00E+00	1.40E-04	1.06E-03
11	D57	80	Combination Long Haul Truck	16	0.00E+00	5.11E-06	2.88E-07	5.53E+00	3.25E-08	6.61E-03	4.21E-06	6.01E-03	4.39E-04	7.02E-05	4.68E-04	9.29E-05	9.68E-05	8.88E-04	1.85E-05	0.00E+00	3.71E-04	1.13E-03
11	D58	80	Passenger Car	629	0.00E+00	6.54E-06	7.11E-07	2.66E+01	4.64E-05	1.35E-01	1.48E-05	6.52E-04	3.43E-03	5.74E-04	1.44E-03	9.28E-04	9.52E-04	9.35E-05	1.34E-04	2.87E-08	4.87E-04	1.02E-04
11	D58	80	Passenger Truck	1053	0.00E+00	1.35E-05	1.44E-06	6.02E+01	8.76E-05	2.39E-01	2.86E-05	1.76E-03	6.10E-03	1.02E-03	2.74E-03	1.78E-03	1.82E-03	4.32E-04	3.00E-04	5.46E-08	9.18E-04	2.93E-04
11	D58	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.83E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.29E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.26E-05
11	D58	80	Combination Short Haul Truck	35	0.00E+00	7.11E-06	5.27E-07	1.16E+01	1.86E-08	1.08E-02	5.09E-06	1.09E-02	8.24E-04	1.49E-04	4.31E-04	1.54E-04	1.60E-04	1.84E-03	3.87E-05	0.00E+00	2.72E-04	2.06E-03
11	D58	80	Combination Long Haul Truck	31	0.00E+00	9.91E-06	5.60E-07	1.07E+01	6.30E-08	1.28E-02	8.17E-06	1.17E-02	8.51E-04	1.36E-04	9.08E-04	1.80E-04	1.88E-04	1.72E-03	3.60E-05	0.00E+00	7.20E-04	2.20E-03
11	D59	80	Passenger Car	670	0.00E+00	6.98E-06	7.58E-07	2.84E+01	4.95E-05	1.44E-01	1.57E-05	6.95E-04	3.65E-03	6.12E-04	1.53E-03	9.89E-04	1.02E-03	9.97E-05	1.43E-04	3.06E-08	5.19E-04	1.08E-04
11	D59	80	Passenger Truck	1123	0.00E+00	1.44E-05	1.53E-06	6.41E+01	9.34E-05	2.55E-01	3.04E-05	1.87E-03	6.51E-03	1.08E-03	2.92E-03	1.89E-03	1.94E-03	4.61E-04	3.20E-04	5.82E-08	9.78E-04	3.12E-04
11	D59	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.11E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.55E-06
11	D59	80	Combination Short Haul Truck	18	0.00E+00	3.67E-06	2.71E-07	5.96E+00	9.60E-09	5.59E-03	2.62E-06	5.62E-03	4.24E-04	7.69E-05	2.22E-04	7.92E-05	8.22E-05	9.48E-04	1.99E-05	0.00E+00	1.40E-04	1.06E-03
11	D59	80	Combination Long Haul Truck	16	0.00E+00	5.11E-06	2.88E-07	5.53E+00	3.25E-08	6.61E-03	4.21E-06	6.01E-03	4.39E-04	7.02E-05	4.68E-04	9.29E-05	9.68E-05	8.88E-04	1.85E-05	0.00E+00	3.71E-04	1.13E-03
11	D60	80	Passenger Car	629	0.00E+00	6.54E-06	7.11E-07	2.66E+01	4.64E-05	1.35E-01	1.48E-05	6.52E-04	3.43E-03	5.74E-04	1.44E-03	9.28E-04	9.52E-04	9.35E-05	1.34E-04	2.87E-08	4.87E-04	1.02E-04
11	D60	80	Passenger Truck	1053	0.00E+00	1.35E-05	1.44E-06	6.02E+01	8.76E-05	2.39E-01	2.86E-05	1.76E-03	6.10E-03	1.02E-03	2.74E-03	1.78E-03	1.82E-03	4.32E-04	3.00E-04	5.46E-08	9.18E-04	2.93E-04
11	D60	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.83E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.29E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.26E-05
11	D60	80	Combination Short Haul Truck	35	0.00E+00	7.11E-06	5.27E-07	1.16E+01	1.86E-08	1.08E-02	5.09E-06	1.09E-02	8.24E-04	1.49E-04	4.31E-04	1.54E-04	1.60E-04	1.84E-03	3.87E-05	0.00E+00	2.72E-04	2.06E-03
11	D60	80	Combination Long Haul Truck	31	0.00E+00	9.91E-06	5.60E-07	1.07E+01	6.30E-08	1.28E-02	8.17E-06	1.17E-02	8.51E-04	1.36E-04	9.08E-04	1.80E-04	1.88E-04	1.72E-03	3.60E-05	0.00E+00	7.20E-04	2.20E-03
11	D61	80	Passenger Car	246	0.00E+00	2.56E-06	2.78E-07	1.04E+01	1.81E-05	5.28E-02	5.76E-06	2.55E-04	1.34E-03	2.24E-04	5.62E-04	3.62E-04	3.72E-04	3.65E-05	5.24E-05	1.12E-08	1.90E-04	3.97E-05
11	D61	80	Passenger Truck	411	0.00E+00	5.26E-06	5.61E-07	2.35E+01	3.42E-05	9.33E-02	1.12E-05	6.87E-04	2.38E-03	3.97E-04	1.07E-03	6.94E-04	7.12E-04	1.69E-04	1.17E-04	2.13E-08	3.58E-04	1.14E-04
11	D61	80	Single Unit Short Haul Truck	41	0.00E+00	5.65E-06	2.21E-07	6.75E+00	3.83E-06	1.23E-02	6.21E-06	2.34E-03	4.63E-04	9.46E-05	7.78E-04	1.44E-04	1.47E-04	6.87E-04	2.74E-05	1.09E-08	6.31E-04	4.37E-04
11	D61	80	Single Unit Long Haul Truck	2	0.00E+00	2.46E-07	9.47E-09	2.85E-01	1.63E-07	5.11E-04	2.70E-07	9.99E-05	2.12E-05	4.20E-06	3.39E-05	6.19E-06	6.31E-06	2.89E-05	1.16E-06	4.53E-10	2.76E-05	1.87E-05
11	D61	80	Combination Short Haul Truck	15	0.00E+00	3.13E-06	2.31E-07	5.09E+00	8.19E-09	4.76E-03	2.23E-06	4.79E-03	3.62E-04	6.56E-05	1.90E-04	6.75E-05	7.01E-05	8.08E-04	1.70E-05	0.00E+00	1.19E-04	9.03E-04
11	D61	80	Combination Long Haul Truck	14	0.00E+00	4.35E-06	2.46E-07	4.72E+00	2.77E-08	5.64E-03	3.59E-06	5.12E-03	3.74E-04	5.99E-05	3.99E-04	7.92E-05	8.25E-05	7.58E-04	1.58E-05	0.00E+00	3.17E-04	9.65E-04
11	D62	80	Passenger Car	81	0.00E+00	8.40E-07	9.13E-08	3.42E+00	5.96E-06	1.74E-02	1.90E-06	8.37E-05	4.40E-04	7.37E-05	1.85E-04	1.19E-04	1.22E-04	1.20E-05	1.72E-05	3.68E-09	6.25E-05	1.31E-05
11	D62	80	Passenger Truck	135	0.00E+00	1.73E-06	1.84E-07	7.72E+00	1.13E-05	3.07E-02	3.67E-06	2.26E-04	7.84E-04	1.30E-04	3.52E-04	2.28E-04	2.34E-04	5.55E-05	3.85E-05	7.01E-09	1.18E-04	3.76E-05
11	D62	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.44E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	D62	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.31E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.36E-04
11	D62	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.47E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.66E-04
10	D63	70	Passenger Car	54	0.00E+00	6.02E-07	6.54E-08	2.35E+00	4.27E-06	1.21E-02	1.36E-06	5.44E-05	4.15E-04	6.46E-05	1.32E-04	8.53E-05	8.75E-05	9.15E-06	1.18E-05	2.45E-09	4.48E-05	8.49E-06
10	D63	70	Passenger Truck	90	0.00E+00	1.27E-06	1.35E-07	5.29E+00	8.11E-06	2.14E-02	2.65E-06	1.58E-04	7.51E-04	1.16E-04	2.54E-04	1.65E-04	1.69E-04	4.00E-05	2.63E-05	4.71E-09	8.48E-05	2.66E-05
10	D63	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.00E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.75E-05
10	D63	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.00E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.54E-05
10	D63	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.28E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.06E-05
10	D64	70	Passenger Car	66	0.00E+00	7.35E-07	7.99E-08	2.87E+00	5.22E-06	1.48E-02	1.66E-06	6.65E-05	5.07E-04	7.90E-05	1.62E-04	1.04E-04	1.07E-04	1.12E-05	1.44E-05	3.00E-09	5.47E-05	1.04E-05
10	D64	70	Passenger Truck	110	0.00E+00	1.55E-06	1.65E-07	6.46E+00	9.91E-06	2.62E-02	3.24E-06	1.93E-04	9.18E-04	1.42E-04	3.10E-04	2.02E-04	2.07E-04	4.89E-05	3.22E-05	5.76E-09	1.04E-04	3.25E-05
10	D64	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.12E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.88E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.14E-06
10	D64	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.20E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.91E-04
10	D64	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.49E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.46E-04
11	D65	80	Passenger Car	283	0.00E+00	2.94E-06	3.20E-07	1.20E+01	2.09E-05	6.08E-02	6.63E-06	2.93E-04	1.54E-03	2.58E-04	6.47E-04	4.17E-04	4.28E-04	4.20E-05	6.03E-05	1.29E-08	2.19E-04	4.57E-05
11	D65	80	Passenger Truck	473	0.00E+00	6.06E-06	6.46E-07	2.70E+01	3.94E-05	1.07E-01	1.28E-05	7.90E-04	2.74E-03	4.57E-04	1.23E-03	7.99E-04	8.19E-04	1.94E-04	1.35E-04	2.45E-08	4.13E-04	1.32E-04
11	D65	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.72E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.08E-04
11	D65	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.16E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.17E-05
11	D65	80	Combination Short Haul Truck	30	0.00E+00	6.14E-06	4.55E-07	1.00E+01	1.61E-08	9.36E-03	4.39E-06	9.42E-03	7.11E-04	1.29E-04	3.73E-04	1.33E-04	1.38E-04	1.59E-03	3.34E-05	0.00E+00	2.35E-04	1.78E-03
11	D65	80	Combination Long Haul Truck	27	0.00E+00	8.56E-06	4.83E-07	9.28E+00	5.44E-08	1.11E-02	7.06E-06	1.01E-02	7.35E-04	1.18E-04	7.84E-04	1.56E-04	1.62E-04	1.49E-03	3.11E-05	0.00E+00	6.22E-04	1.90E-03
11	D66	80	Passenger Car	270	0.00E+00	2.81E-06	3.06E-07	1.15E+01	2.00E-05	5.82E-02	6.34E-06	2.80E-04	1.47E-03	2.47E-04	6.19E-04	3.99E-04	4.09E-04	4.02E-05	5.77E-05	1.23E-08	2.09E-04	4.37E-05
11	D66	80	Passenger Truck	453	0.00E+00	5.79E-06	6.17E-07	2.59E+01	3.77E-05	1.03E-01	1.23E-05	7.56E-04	2.62E-03	4.37E-04	1.18E-03	7.64E-04	7.83E-04	1.86E-04	1.29E-04	2.35E-08	3.95E-04	1.26E-04
11	D66	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.79E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.35E-04
11	D66	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.67E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.43E-05
11	D66	80	Combination Short Haul Truck	28	0.00E+00	5.71E-06	4.23E-07	9.29E+00	1.50E-08	8.71E-03	4.08E-06	8.76E-03	6.61E-04	1.20E-04	3.46E-04	1.23E-04	1.28E-04	1.48E-03	3.11E-05	0.00E+00	2.18E-04	1.65E-03
11	D66	80	Combination Long Haul Truck	25	0.00E+00	7.96E-06	4.49E-07	8.63E+00	5.06E-08	1.03E-02	6.56E-06	9.36E-03	6.84E-04	1.09E-04	7.29E-04	1.45E-04	1.51E-04	1.38E-03	2.89E-05	0.00E+00	5.79E-04	1.76E-03
11	D67	80	Passenger Car	283	0.00E+00	2.94E-06	3.20E-07	1.20E+01	2.09E-05	6.08E-02	6.63E-06	2.93E-04	1.54E-03	2.58E-04	6.47E-04	4.17E-04	4.28E-04	4.20E-05	6.03E-05	1.29E-08	2.19E-04	4.57E-05
11	D67	80	Passenger Truck	473	0.00E+00	6.06E-06	6.46E-07	2.70E+01	3.94E-05	1.07E-01	1.28E-05	7.90E-04	2.74E-03	4.57E-04	1.23E-03	7.99E-04	8.19E-04	1.94E-04	1.35E-04	2.45E-08	4.13E-04	1.32E-04
11	D67	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.72E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.08E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.16E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.17E-05
11	D67	80	Combination Short Haul Truck	30	0.00E+00	6.14E-06	4.55E-07	1.00E+01	1.61E-08	9.36E-03	4.39E-06	9.42E-03	7.11E-04	1.29E-04	3.73E-04	1.33E-04	1.38E-04	1.59E-03	3.34E-05	0.00E+00	2.35E-04	1.78E-03
11	D67	80	Combination Long Haul Truck	27	0.00E+00	8.56E-06	4.83E-07	9.28E+00	5.44E-08	1.11E-02	7.06E-06	1.01E-02	7.35E-04	1.18E-04	7.84E-04	1.56E-04	1.62E-04	1.49E-03	3.11E-05	0.00E+00	6.22E-04	1.90E-03
11	D68	80	Passenger Car	270	0.00E+00	2.81E-06	3.06E-07	1.15E+01	2.00E-05	5.82E-02	6.34E-06	2.80E-04	1.47E-03	2.47E-04	6.19E-04	3.99E-04	4.09E-04	4.02E-05	5.77E-05	1.23E-08	2.09E-04	4.37E-05
11	D68	80	Passenger Truck	453	0.00E+00	5.79E-06	6.17E-07	2.59E+01	3.77E-05	1.03E-01	1.23E-05	7.56E-04	2.62E-03	4.37E-04	1.18E-03	7.64E-04	7.83E-04	1.86E-04	1.29E-04	2.35E-08	3.95E-04	1.26E-04
11	D68	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.79E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.35E-04
11	D68	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.67E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.43E-05
11	D68	80	Combination Short Haul Truck	28	0.00E+00	5.71E-06	4.23E-07	9.29E+00	1.50E-08	8.71E-03	4.08E-06	8.76E-03	6.61E-04	1.20E-04	3.46E-04	1.23E-04	1.28E-04	1.48E-03	3.11E-05	0.00E+00	2.18E-04	1.65E-03
11	D68	80	Combination Long Haul Truck	25	0.00E+00	7.96E-06	4.49E-07	8.63E+00	5.06E-08	1.03E-02	6.56E-06	9.36E-03	6.84E-04	1.09E-04	7.29E-04	1.45E-04	1.51E-04	1.38E-03	2.89E-05	0.00E+00	5.79E-04	1.76E-03
11	D69	80	Passenger Car	126	0.00E+00	1.31E-06	1.42E-07	5.32E+00	9.28E-06	2.70E-02	2.95E-06	1.30E-04	6.85E-04	1.15E-04	2.88E-04	1.85E-04	1.90E-04	1.87E-05	2.68E-05	5.73E-09	9.73E-05	2.03E-05
11	D69	80	Passenger Truck	210	0.00E+00	2.69E-06	2.87E-07	1.20E+01	1.75E-05	4.77E-02	5.70E-06	3.51E-04	1.22E-03	2.03E-04	5.47E-04	3.55E-04	3.64E-04	8.64E-05	6.00E-05	1.09E-08	1.83E-04	5.84E-05
11	D69	80	Single Unit Short Haul Truck	16	0.00E+00	2.23E-06	8.72E-08	2.67E+00	1.51E-06	4.85E-03	2.46E-06	9.25E-04	1.83E-04	3.74E-05	3.08E-04	5.70E-05	5.81E-05	2.72E-04	1.08E-05	4.30E-09	2.50E-04	1.73E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	9.71E-08	3.75E-09	1.13E-01	6.45E-08	2.02E-04	1.07E-07	3.95E-05	8.39E-06	1.66E-06	1.34E-05	2.45E-06	2.49E-06	1.14E-05	4.59E-07	1.79E-10	1.09E-05	7.38E-06
11	D69	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.47E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.54E-04
11	D69	80	Combination

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D73	70	Combination Long Haul Truck	7	0.00E+00	2.77E-06	1.57E-07	2.56E+00	1.74E-08	3.48E-03	2.28E-06	3.21E-03	2.96E-04	4.46E-05	2.52E-04	5.06E-05	5.27E-05	4.11E-04	8.58E-06	0.00E+00	1.99E-04	6.04E-04
10	D74	70	Passenger Car	233	0.00E+00	2.60E-06	2.82E-07	1.02E+01	1.84E-05	5.24E-02	5.86E-06	2.35E-04	1.79E-03	2.79E-04	5.71E-04	3.68E-04	3.78E-04	3.95E-05	5.10E-05	1.06E-08	1.93E-04	3.67E-05
10	D74	70	Passenger Truck	389	0.00E+00	5.47E-06	5.81E-07	2.28E+01	3.50E-05	9.26E-02	1.15E-05	6.83E-04	3.24E-03	5.02E-04	1.10E-03	7.12E-04	7.30E-04	1.73E-04	1.14E-04	2.04E-08	3.66E-04	1.15E-04
10	D74	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	D74	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.00E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
10	D74	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.56E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.61E-04
11	D75	80	Passenger Car	95	0.00E+00	9.92E-07	1.08E-07	4.04E+00	7.04E-06	2.05E-02	2.24E-06	9.89E-05	5.20E-04	8.70E-05	2.18E-04	1.41E-04	1.44E-04	1.42E-05	2.03E-05	4.35E-09	7.38E-05	1.54E-05
11	D75	80	Passenger Truck	160	0.00E+00	2.04E-06	2.18E-07	9.12E+00	1.33E-05	3.62E-02	4.33E-06	2.67E-04	9.25E-04	1.54E-04	4.15E-04	2.69E-04	2.76E-04	6.56E-05	4.55E-05	8.27E-09	1.39E-04	4.44E-05
11	D75	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.35E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.13E-05
11	D75	80	Combination Short Haul Truck	3	0.00E+00	6.47E-07	4.79E-08	1.05E+00	1.69E-09	9.86E-04	4.62E-07	9.92E-04	7.49E-05	1.36E-05	3.92E-05	1.40E-05	1.45E-05	1.67E-04	3.52E-06	0.00E+00	2.47E-05	1.87E-04
11	D75	80	Combination Long Haul Truck	3	0.00E+00	9.01E-07	5.09E-08	9.77E-01	5.73E-09	1.17E-03	7.43E-07	1.06E-03	7.74E-05	1.24E-05	8.26E-05	1.64E-05	1.71E-05	1.57E-04	3.27E-06	0.00E+00	6.55E-05	2.00E-04
11	D76	80	Passenger Car	159	0.00E+00	1.65E-06	1.80E-07	6.73E+00	1.17E-05	3.42E-02	3.73E-06	1.65E-04	8.66E-04	1.45E-04	3.64E-04	2.34E-04	2.41E-04	2.36E-05	3.39E-05	7.24E-09	1.23E-04	2.57E-05
11	D76	80	Passenger Truck	266	0.00E+00	3.40E-06	3.63E-07	1.52E+01	2.21E-05	6.04E-02	7.21E-06	4.44E-04	1.54E-03	2.57E-04	6.92E-04	4.49E-04	4.60E-04	1.09E-04	7.58E-05	1.38E-08	2.32E-04	7.39E-05
11	D76	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.07E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.32E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.02E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.64E-06
11	D76	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.64E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	4.98E-04
11	D76	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.83E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.32E-04
11	D77	80	Passenger Car	105	0.00E+00	1.10E-06	1.19E-07	4.47E+00	7.79E-06	2.27E-02	2.47E-06	1.09E-04	5.75E-04	9.62E-05	2.41E-04	1.56E-04	1.60E-04	1.57E-05	2.25E-05	4.81E-09	8.16E-05	1.71E-05
11	D77	80	Passenger Truck	177	0.00E+00	2.26E-06	2.41E-07	1.01E+01	1.47E-05	4.01E-02	4.79E-06	2.95E-04	1.02E-03	1.70E-04	4.59E-04	2.98E-04	3.06E-04	7.25E-05	5.03E-05	9.15E-09	1.54E-04	4.91E-05
11	D77	80	Single Unit Short Haul Truck	23	0.00E+00	3.15E-06	1.23E-07	3.77E+00	2.14E-06	6.85E-03	3.47E-06	1.31E-03	2.58E-04	5.28E-05	4.34E-04	8.04E-05	8.20E-05	3.83E-04	1.53E-05	6.07E-09	3.52E-04	2.44E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	5.29E-09	1.59E-01	9.11E-08	2.85E-04	1.51E-07	5.58E-05	1.18E-05	2.34E-06	1.89E-05	3.45E-06	3.52E-06	1.61E-05	6.48E-07	2.53E-10	1.54E-05	1.04E-05
11	D77	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.31E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.23E-04
11	D77	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.53E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.65E-04
11	D78	80	Passenger Car	82	0.00E+00	8.56E-07	9.30E-08	3.49E+00	6.08E-06	1.77E-02	1.93E-06	8.53E-05	4.48E-04	7.51E-05	1.88E-04	1.21E-04	1.25E-04	1.22E-05	1.75E-05	3.75E-09	6.37E-05	1.33E-05
11	D78	80	Passenger Truck	138	0.00E+00	1.76E-06	1.88E-07	7.87E+00	1.15E-05	3.13E-02	3.73E-06	2.30E-04	7.98E-04	1.33E-04	3.58E-04	2.33E-04	2.38E-04	5.66E-05	3.93E-05	7.14E-09	1.20E-04	3.83E-05
11	D78	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.70E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.72E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.95E-06
11	D78	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.47E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.54E-04
11	D78	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.71E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	6.99E-04
10	D79	70	Passenger Car	288	0.00E+00	3.21E-06	3.49E-07	1.25E+01	2.28E-05	6.48E-02	7.24E-06	2.91E-04	2.21E-03	3.45E-04	7.07E-04	4.56E-04	4.68E-04	4.89E-05	6.30E-05	1.31E-08	2.39E-04	4.54E-05
10	D79	70	Passenger Truck	481	0.00E+00	6.76E-06	7.19E-07	2.82E+01	4.33E-05	1.14E-01	1.42E-05	8.45E-04	4.01E-03	6.20E-04	1.36E-03	8.81E-04	9.03E-04	2.13E-04	1.41E-04	2.52E-08	4.53E-04	1.42E-04
10	D79	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.35E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.75E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.02E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.53E-06
10	D79	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.20E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.80E-04
10	D79	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.56E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.05E-03
10	D80	70	Passenger Car	491	0.00E+00	5.48E-06	5.96E-07	2.14E+01	3.89E-05	1.11E-01	1.24E-05	4.96E-04	3.78E-03	5.89E-04	1.21E-03	7.77E-04	7.98E-04	8.33E-05	1.08E-04	2.23E-08	4.08E-04	7.74E-05
10	D80	70	Passenger Truck	821	0.00E+00	1.15E-05	1.23E-06	4.82E+01	7.39E-05	1.95E-01	2.42E-05	1.44E-03	6.84E-03	1.06E-03	2.31E-03	1.50E-03	1.54E-03	3.64E-04	2.40E-04	4.29E-08	7.73E-04	2.42E-04
10	D80	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.60E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.60E-06
10	D80	70	Combination Short Haul Truck	18	0.00E+00	4.71E-06	3.51E-07	6.36E+00	1.20E-08	6.80E-03	3.36E-06	7.00E-03	6.64E-04	1.11E-04	2.83E-04	1.02E-04	1.06E-04	1.01E-03	2.13E-05	0.00E+00	1.77E-04	1.32E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	6.46E-06	3.67E-07	5.98E+00	4.05E-08	8.12E-03	5.31E-06	7.49E-03	6.91E-04	1.04E-04	5.87E-04	1.18E-04	1.23E-04	9.59E-04	2.00E-05	0.00E+00	4.64E-04	1.41E-03
9	F31	60	Passenger Car	944	0.00E+00	1.21E-05	1.31E-06	4.31E+01	8.58E-05	2.43E-01	2.73E-05	9.72E-04	9.53E-03	1.43E-03	2.66E-03	1.71E-03	1.76E-03	1.87E-04	2.16E-04	4.53E-08	8.99E-04	1.52E-04
9	F31	60	Passenger Truck	1580	0.00E+00	2.57E-05	2.72E-06	9.60E+01	1.62E-04	4.15E-01	5.32E-05	3.02E-03	1.74E-02	2.59E-03	5.08E-03	3.30E-03	3.38E-03	7.66E-04	4.76E-04	8.83E-08	1.69E-03	5.12E-04
9	F31	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.43E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	F31	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.48E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.79E-03
9	F31	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.97E-03
9	F32	60	Passenger Car	1007	0.00E+00	1.29E-05	1.40E-06	4.59E+01	9.16E-05	2.59E-01	2.91E-05	1.04E-03	1.02E-02	1.52E-03	2.84E-03	1.83E-03	1.88E-03	2.00E-04	2.30E-04	4.83E-08	9.60E-04	1.62E-04
9	F32	60	Passenger Truck	1686	0.00E+00	2.74E-05	2.90E-06	1.02E+02	1.73E-04	4.43E-01	5.68E-05	3.22E-03	1.86E-02	2.77E-03	5.42E-03	3.52E-03	3.61E-03	8.17E-04	5.08E-04	9.42E-08	1.81E-03	5.46E-04
9	F32	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.45E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.59E-05
9	F32	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.78E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.23E-04
9	F32	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.96E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.57E-04
9	F33	60	Passenger Car	453	0.00E+00	5.81E-06	6.31E-07	2.07E+01	4.12E-05	1.16E-01	1.31E-05	4.67E-04	4.58E-03	6.85E-04	1.28E-03	8.23E-04	8.45E-04	8.98E-05	1.04E-04	2.18E-08	4.32E-04	7.28E-05
9	F33	60	Passenger Truck	759	0.00E+00	1.23E-05	1.31E-06	4.61E+01	7.77E-05	1.99E-01	2.56E-05	1.45E-03	8.36E-03	1.24E-03	2.44E-03	1.59E-03	1.62E-03	3.68E-04	2.29E-04	4.24E-08	8.12E-04	2.46E-04
9	F33	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.85E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.49E-04
9	F33	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.97E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.71E-04
9	F34	60	Passenger Car	246	0.00E+00	3.16E-06	3.43E-07	1.12E+01	2.24E-05	6.33E-02	7.12E-06	2.54E-04	2.49E-03	3.73E-04	6.94E-04	4.48E-04	4.59E-04	4.88E-05	5.63E-05	1.18E-08	2.35E-04	3.96E-05
9	F34	60	Passenger Truck	413	0.00E+00	6.70E-06	7.10E-07	2.51E+01	4.23E-05	1.08E-01	1.39E-05	7.88E-04	4.55E-03	6.77E-04	1.33E-03	8.62E-04	8.84E-04	2.00E-04	1.24E-04	2.31E-08	4.42E-04	1.34E-04
9	F34	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.63E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.72E-05
9	F34	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.93E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.29E-05
53	G07	70	Passenger Car	62	0.00E+00	6.76E-07	7.35E-08	2.76E+00	4.80E-06	1.35E-02	1.52E-06	6.43E-05	4.74E-04	7.41E-05	1.49E-04	9.59E-05	9.84E-05	1.06E-05	1.38E-05	2.88E-09	5.03E-05	1.00E-05
53	G07	70	Passenger Truck	105	0.00E+00	1.41E-06	1.50E-07	6.21E+00	9.07E-06	2.38E-02	2.97E-06	1.81E-04	8.46E-04	1.31E-04	2.84E-04	1.84E-04	1.89E-04	4.61E-05	3.09E-05	5.41E-09	9.48E-05	3.04E-05
53	G07	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
53	G07	70	Single Unit Long Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.01E-04
53	G07	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.71E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.22E-04
50	G09	40	Passenger Car	39	0.00E+00	5.64E-07	6.13E-08	2.07E+00	4.00E-06	1.12E-02	1.27E-06	3.58E-05	6.77E-04	9.52E-05	1.24E-04	8.00E-05	8.21E-05	1.17E-05	1.03E-05	1.91E-09	4.20E-05	5.59E-06
50	G09	40	Passenger Truck	66	0.00E+00	1.24E-06	1.31E-07	4.51E+00	7.49E-06	1.85E-02	2.50E-06	1.38E-04	1.20E-03	1.67E-04	2.36E-04	1.54E-04	1.58E-04	3.98E-05	2.22E-05	3.24E-09	7.82E-05	2.39E-05
50	G09	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.22E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.77E-05
50	G09	40	Combination Short Haul Truck	10	0.00E+00	5.05E-06	3.77E-07	4.34E+00	1.25E-08	7.14E-03	3.59E-06	7.30E-03	1.02E-03	1.52E-04	3.00E-04	1.10E-04	1.14E-04	6.89E-04	1.45E-05	0.00E+00	1.86E-04	1.38E-03
50	G09	40	Combination Long Haul Truck	10	0.00E+00	6.71E-06	3.79E-07	4.16E+00	4.26E-08	8.66E-03	5.53E-06	7.70E-03	1.06E-03	1.48E-04	6.14E-04	1.22E-04	1.27E-04	6.68E-04	1.40E-05	0.00E+00	4.87E-04	1.45E-03
53	G10	70	Passenger Car	62	0.00E+00	6.76E-07	7.35E-08	2.76E+00	4.80E-06	1.35E-02	1.52E-06	6.43E-05	4.74E-04	7.41E-05	1.49E-04	9.59E-05	9.84E-05	1.06E-05	1.38E-05	2.88E-09	5.03E-05	1.00E-05
53	G10	70	Passenger Truck	105	0.00E+00	1.41E-06	1.50E-07	6.21E+00	9.07E-06	2.38E-02	2.97E-06	1.81E-04	8.46E-04	1.31E-04	2.84E-04	1.84E-04	1.89E-04	4.61E-05	3.09E-05	5.41E-09	9.48E-05	3.04E-05
53	G10	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
53	G10	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.01E-04
53	G10	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.71E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.22E-04
16	H01	100	Passenger Car	2825	0.00E+00	2.64E-05	2.87E-06	1.15E+02	1.88E-04	5.63E-01	5.96E-05	3.05E-03	9.03E-03	1.73E-03	5.81E-03	3.75E-03	3.85E-03	3.36E-04	5.84E-04	1.23E-07	1.97E-03	4.75E-04
16	H01	100	Passenger Truck	4730	0.00E+00	5.46E-05	5.85E-06	2.66E+02	3.64E-04	1.09E+00	1.18E-04	7.61E-03	1.58E-02	3.06E-03	1.14E-02	7.36E-03	7.54E-03	1.74E-03	1.33E-03	2.43E-07	3.82E-03	1.25E-03
16	H01	100	Single Unit Short Haul Truck	415	0.00E+00	3.94E-05	1.46E-06	6.77E+01	3.02E-05	1.40E-01	4.47E-05	1.74E-02	2.68E-03	6.94E-04	5.65E-03	1.04E-03	1.06E-03	6.94E-03	2.74E-04	1.12E-07	4.59E-03	3.24E-03
16	H01	100	Single Unit Long Haul Truck	18	0.00E+00	1.71E-06	6.16E-08	2.85E+00	1.25E-06	5.72E-03	1.94E-06	7.28E-04	1.22E-04	3.01E-05	2.47E-04	4.40E-05	4.48E-05	2.90E-04	1.16E-05	4.58E-09	2.02E-04	1.36E-04
16	H01	100	Combination Short Haul Truck	511	0.00E+00	7.31E-05	5.40E-06	1.70E+02	1.94E-07	1.32E-01	5.23E-05	1.31E-01	4.95E-03	1.26E-03	4.45E-03	1.58E-03	1.64E-03	2.71E-02	5.69E-04	0.00E+00	2.82E-03	2.47E-02
16	H01	100	Combination Long Haul Truck	466	0.00E+00	1.03E-04	5.82E-06	1.54E+02	6.59E-07	1.53E-01	8.52E-05	1.40E-01	4.96E-03	1.01E-03	9.48E-03	1.88E-03	1.96E-03	2.47E-02	5.17E-04	0.00E+00	7.52E-03	2.64E-02
16	H02	100	Passenger Car	2825	0.00E+00	2.64E-05	2.87E-06	1.15E+02	1.88E-04	5.63E-01	5.96E-05	3.05E-03	9.03E-03	1.73E-03	5.81E-03	3.75E-03	3.85E-03	3.36E-04	5.84E-04	1.23E-07	1.97E-03	4.75E-04
16	H02	100	Passenger Truck	4730	0.00E+00	5.46

Appendix F.1.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
56	H06	100	Passenger Car	1797	0.00E+00	1.68E-05	1.83E-06	7.34E+01	1.19E-04	3.58E-01	3.79E-05	1.94E-03	5.74E-03	1.10E-03	3.70E-03	2.38E-03	2.45E-03	2.14E-04	3.71E-04	7.80E-08	1.25E-03	3.02E-04
56	H06	100	Passenger Truck	3009	0.00E+00	3.47E-05	3.72E-06	1.69E+02	2.32E-04	6.92E-01	7.49E-05	4.84E-03	1.00E-02	1.95E-03	7.23E-03	4.68E-03	4.80E-03	1.11E-03	8.48E-04	1.54E-07	2.43E-03	7.95E-04
56	H06	100	Single Unit Short Haul Truck	120	0.00E+00	1.14E-05	4.20E-07	1.95E+01	8.70E-06	4.04E-02	1.29E-05	5.01E-03	7.74E-04	2.00E-04	1.63E-03	3.01E-04	3.07E-04	2.00E-03	7.91E-05	3.23E-08	1.32E-03	9.35E-04
56	H06	100	Single Unit Long Haul Truck	5	0.00E+00	4.94E-07	1.78E-08	8.22E-01	3.60E-07	1.65E-03	5.59E-07	2.10E-04	3.52E-05	8.69E-06	7.13E-05	1.27E-05	1.29E-05	8.36E-05	3.34E-06	1.32E-09	5.84E-05	3.92E-05
56	H06	100	Combination Short Haul Truck	295	0.00E+00	4.22E-05	3.12E-06	9.83E+01	1.12E-07	7.60E-02	3.02E-05	7.57E-02	2.86E-03	7.25E-04	2.57E-03	9.10E-04	9.45E-04	1.56E-02	3.29E-04	0.00E+00	1.63E-03	1.43E-02
56	H06	100	Combination Long Haul Truck	269	0.00E+00	5.96E-05	3.36E-06	8.90E+01	3.80E-07	8.85E-02	4.92E-05	8.11E-02	2.86E-03	5.83E-04	5.47E-03	1.08E-03	1.13E-03	1.43E-02	2.98E-04	0.00E+00	4.34E-03	1.53E-02
16	H07	100	Passenger Car	3334	0.00E+00	3.12E-05	3.39E-06	1.36E+02	2.21E-04	6.65E-01	7.04E-05	3.60E-03	1.07E-02	2.04E-03	6.86E-03	4.43E-03	4.54E-03	3.97E-04	6.89E-04	1.45E-07	2.32E-03	5.61E-04
16	H07	100	Passenger Truck	5584	0.00E+00	6.45E-05	6.91E-06	3.14E+02	4.30E-04	1.28E+00	1.39E-04	8.98E-03	1.86E-02	3.61E-03	1.34E-02	8.68E-03	8.90E-03	2.06E-03	1.57E-03	2.87E-07	4.51E-03	1.47E-03
16	H07	100	Single Unit Short Haul Truck	291	0.00E+00	2.77E-05	1.02E-06	4.75E+01	2.12E-05	9.81E-02	3.14E-05	1.22E-02	1.88E-03	4.87E-04	3.97E-03	7.33E-04	7.45E-04	4.87E-03	1.92E-04	7.86E-08	3.22E-03	2.27E-03
16	H07	100	Single Unit Long Haul Truck	13	0.00E+00	1.20E-06	4.32E-08	2.00E+00	8.76E-07	4.02E-03	1.36E-06	5.11E-04	8.55E-05	2.11E-05	1.73E-04	3.09E-05	3.15E-05	2.03E-04	8.11E-06	3.21E-09	1.42E-04	9.53E-05
16	H07	100	Combination Short Haul Truck	532	0.00E+00	7.62E-05	5.63E-06	1.77E+02	2.02E-07	1.37E-01	5.45E-05	1.37E-01	5.16E-03	1.31E-03	4.64E-03	1.64E-03	1.71E-03	2.82E-02	5.93E-04	0.00E+00	2.93E-03	2.58E-02
16	H07	100	Combination Long Haul Truck	486	0.00E+00	1.08E-04	6.07E-06	1.61E+02	6.86E-07	1.60E-01	8.88E-05	1.46E-01	5.17E-03	1.05E-03	9.88E-03	1.96E-03	2.04E-03	2.58E-02	5.38E-04	0.00E+00	7.84E-03	2.76E-02
52	H08	60	Passenger Car	345	0.00E+00	4.06E-06	4.41E-07	1.57E+01	2.88E-05	8.10E-02	9.16E-06	3.42E-04	3.39E-03	5.08E-04	8.93E-04	5.76E-04	5.91E-04	6.84E-05	7.89E-05	1.61E-08	3.02E-04	5.34E-05
52	H08	60	Passenger Truck	578	0.00E+00	8.57E-06	9.09E-07	3.51E+01	5.40E-05	1.39E-01	1.78E-05	1.04E-03	6.02E-03	8.93E-04	1.69E-03	1.10E-03	1.13E-03	2.74E-04	1.74E-04	2.94E-08	5.65E-04	1.76E-04
52	H08	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.06E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.60E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.61E-06
52	H08	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.06E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.01E-03
52	H08	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.13E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.14E-03
50	H09	40	Passenger Car	80	0.00E+00	1.16E-06	1.26E-07	4.25E+00	8.20E-06	2.30E-02	2.61E-06	7.33E-05	1.39E-03	1.95E-04	2.54E-04	1.64E-04	1.68E-04	2.39E-05	2.11E-05	3.91E-09	8.59E-05	1.14E-05
50	H09	40	Passenger Truck	135	0.00E+00	2.55E-06	2.68E-07	9.24E+00	1.53E-05	3.79E-02	5.12E-06	2.82E-04	2.46E-03	3.41E-04	4.83E-04	3.16E-04	3.23E-04	8.16E-05	4.55E-05	6.64E-09	1.60E-04	4.89E-05
50	H09	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.91E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.33E-05
50	H09	40	Combination Short Haul Truck	5	0.00E+00	2.27E-06	1.70E-07	1.95E+00	5.62E-09	3.21E-03	1.61E-06	3.29E-03	4.58E-04	6.82E-05	1.35E-04	4.93E-05	5.12E-05	3.10E-04	6.53E-06	0.00E+00	8.38E-05	6.19E-04
50	H09	40	Combination Long Haul Truck	4	0.00E+00	3.02E-06	1.70E-07	1.87E+00	1.92E-08	3.90E-03	2.49E-06	3.47E-03	4.75E-04	6.68E-05	2.76E-04	5.49E-05	5.72E-05	3.01E-04	6.28E-06	0.00E+00	2.19E-04	6.53E-04
53	H14	70	Passenger Car	197	0.00E+00	2.14E-06	2.32E-07	8.71E+00	1.52E-05	4.28E-02	4.82E-06	2.03E-04	1.50E-03	2.34E-04	4.70E-04	3.03E-04	3.11E-04	3.35E-05	4.38E-05	9.09E-09	1.59E-04	3.17E-05
53	H14	70	Passenger Truck	331	0.00E+00	4.46E-06	4.75E-07	1.96E+01	2.87E-05	7.54E-02	9.38E-06	5.73E-04	2.67E-03	4.16E-04	8.97E-04	5.83E-04	5.97E-04	1.46E-04	9.77E-05	1.71E-08	3.00E-04	9.60E-05
53	H14	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.34E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.25E-05
53	H14	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.00E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.54E-04
53	H14	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.28E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.06E-04
53	H16	70	Passenger Car	451	0.00E+00	4.88E-06	5.31E-07	1.99E+01	3.47E-05	9.77E-02	1.10E-05	4.64E-04	3.42E-03	5.35E-04	1.07E-03	6.92E-04	7.11E-04	7.66E-05	1.00E-04	2.08E-08	3.63E-04	7.24E-05
53	H16	70	Passenger Truck	755	0.00E+00	1.02E-05	1.08E-06	4.48E+01	6.55E-05	1.72E-01	2.14E-05	1.31E-03	6.11E-03	9.49E-04	2.05E-03	1.33E-03	1.36E-03	3.33E-04	2.23E-04	3.91E-08	6.85E-04	2.19E-04
53	H16	70	Single Unit Short Haul Truck	18	0.00E+00	3.20E-06	1.30E-07	2.98E+00	2.15E-06	5.41E-03	3.48E-06	1.27E-03	2.89E-04	5.31E-05	4.32E-04	8.23E-05	8.39E-05	3.03E-04	1.21E-05	4.90E-09	3.48E-04	2.37E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	5.61E-09	1.26E-01	9.24E-08	2.27E-04	1.52E-07	5.46E-05	1.32E-05	2.37E-06	1.88E-05	3.55E-06	3.62E-06	1.28E-05	5.15E-07	2.06E-10	1.52E-05	1.02E-05
53	H16	70	Combination Short Haul Truck	19	0.00E+00	4.85E-06	3.61E-07	6.55E+00	1.23E-08	7.00E-03	3.45E-06	7.20E-03	6.83E-04	1.14E-04	2.91E-04	1.05E-04	1.09E-04	1.04E-03	2.19E-05	0.00E+00	1.82E-04	1.36E-03
53	H16	70	Combination Long Haul Truck	17	0.00E+00	6.65E-06	3.78E-07	6.15E+00	4.17E-08	8.35E-03	5.46E-06	7.70E-03	7.11E-04	1.07E-04	6.04E-04	1.21E-04	1.27E-04	9.87E-04	2.06E-05	0.00E+00	4.78E-04	1.45E-03

Appendix F.1.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 1

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B05	0.00E+00	1.58E-05	1.70E-06	7.43E+01	1.08E-04	3.22E-01	3.46E-05	2.08E-03	4.83E-03	9.33E-04	3.35E-03	2.16E-03	2.22E-03	4.05E-04	3.74E-04	7.12E-08	1.13E-03	3.36E-04
B06	0.00E+00	4.40E-05	4.73E-06	2.07E+02	3.00E-04	8.96E-01	9.63E-05	5.78E-03	1.35E-02	2.60E-03	9.32E-03	6.03E-03	6.18E-03	1.13E-03	1.04E-03	1.98E-07	3.14E-03	9.36E-04
B07	0.00E+00	3.26E-05	3.43E-06	1.50E+02	2.14E-04	6.42E-01	6.99E-05	5.29E-03	9.66E-03	1.87E-03	6.79E-03	4.32E-03	4.43E-03	1.10E-03	7.50E-04	1.43E-07	2.36E-03	8.86E-04
B08	0.00E+00	1.06E-04	7.80E-06	3.21E+02	3.37E-04	1.09E+00	1.59E-04	6.01E-02	1.77E-02	3.64E-03	1.67E-02	7.67E-03	7.86E-03	1.47E-02	1.48E-03	3.05E-07	8.83E-03	1.11E-02
D01	0.00E+00	7.30E-05	5.91E-06	1.58E+02	2.13E-04	6.16E-01	1.02E-04	5.40E-02	2.89E-02	4.33E-03	1.01E-02	5.08E-03	5.22E-03	6.97E-03	7.23E-04	1.18E-07	4.85E-03	1.01E-02
D02	0.00E+00	5.48E-05	5.44E-06	1.78E+02	3.05E-04	8.18E-01	1.06E-04	1.43E-02	3.42E-02	5.11E-03	1.03E-02	6.33E-03	6.49E-03	2.35E-03	8.76E-04	1.66E-07	3.79E-03	2.58E-03
D03	0.00E+00	7.67E-05	6.51E-06	1.87E+02	2.79E-04	7.77E-01	1.19E-04	4.39E-02	3.48E-02	5.21E-03	1.18E-02	6.28E-03	6.45E-03	5.98E-03	8.81E-04	1.57E-07	5.31E-03	8.16E-03
D04	0.00E+00	8.10E-05	7.57E-06	2.36E+02	3.84E-04	1.04E+00	1.43E-04	3.28E-02	4.48E-02	6.69E-03	1.40E-02	8.20E-03	8.41E-03	4.77E-03	1.14E-03	2.10E-07	5.54E-03	6.05E-03
D05	0.00E+00	7.22E-05	6.15E-06	1.79E+02	2.72E-04	7.51E-01	1.14E-04	3.87E-02	3.34E-02	5.00E-03	1.13E-02	6.06E-03	6.22E-03	5.37E-03	8.47E-04	1.53E-07	5.06E-03	7.20E-03
D06	0.00E+00	8.28E-05	8.10E-06	2.62E+02	4.40E-04	1.19E+00	1.56E-04	2.64E-02	5.00E-02	7.47E-03	1.51E-02	9.20E-03	9.44E-03	4.05E-03	1.28E-03	2.39E-07	5.64E-03	4.81E-03
D07	0.00E+00	6.88E-05	5.73E-06	1.96E+02	2.41E-04	7.10E-01	1.05E-04	4.19E-02	1.99E-02	3.36E-03	1.04E-02	5.45E-03	5.60E-03	7.29E-03	9.14E-04	1.61E-07	4.83E-03	7.78E-03
D08	0.00E+00	5.27E-05	5.20E-06	2.00E+02	2.91E-04	8.24E-01	1.02E-04	1.62E-02	2.15E-02	3.60E-03	9.87E-03	6.05E-03	6.20E-03	2.96E-03	9.81E-04	1.83E-07	3.67E-03	2.91E-03
D09	0.00E+00	4.66E-05	4.11E-06	1.46E+02	1.91E-04	5.54E-01	7.64E-05	2.47E-02	1.51E-02	2.54E-03	7.54E-03	4.18E-03	4.29E-03	4.30E-03	6.93E-04	1.24E-07	3.24E-03	4.57E-03
D10	0.00E+00	4.65E-05	4.76E-06	1.87E+02	2.80E-04	7.86E-01	9.41E-05	1.08E-02	2.03E-02	3.39E-03	9.12E-03	5.73E-03	5.88E-03	2.04E-03	9.26E-04	1.75E-07	3.24E-03	1.90E-03
D11	0.00E+00	4.51E-05	3.96E-06	1.40E+02	1.82E-04	5.30E-01	7.34E-05	2.42E-02	1.45E-02	2.44E-03	7.25E-03	4.01E-03	4.11E-03	4.22E-03	6.64E-04	1.18E-07	3.14E-03	4.48E-03
D12	0.00E+00	5.23E-05	5.24E-06	2.03E+02	2.99E-04	8.43E-01	1.03E-04	1.47E-02	2.19E-02	3.66E-03	9.96E-03	6.17E-03	6.33E-03	2.71E-03	1.00E-03	1.87E-07	3.63E-03	2.64E-03
D13	0.00E+00	4.65E-05	3.79E-06	1.06E+02	1.54E-04	4.30E-01	6.91E-05	2.77E-02	1.96E-02	2.93E-03	6.92E-03	3.53E-03	3.63E-03	3.79E-03	4.95E-04	8.87E-08	3.29E-03	5.17E-03
D14	0.00E+00	4.27E-05	3.21E-06	8.34E+01	1.11E-04	3.15E-01	5.76E-05	2.92E-02	1.51E-02	2.27E-03	5.88E-03	2.70E-03	2.77E-03	3.94E-03	3.80E-04	6.70E-08	3.11E-03	5.46E-03
D15	0.00E+00	4.97E-05	3.95E-06	1.08E+02	1.53E-04	4.30E-01	7.17E-05	3.11E-02	1.98E-02	2.98E-03	7.22E-03	3.57E-03	3.67E-03	4.23E-03	5.01E-04	8.94E-08	3.55E-03	5.80E-03
D16	0.00E+00	5.94E-05	4.93E-06	1.42E+02	2.13E-04	5.87E-01	9.18E-05	3.20E-02	2.63E-02	3.94E-03	9.17E-03	4.79E-03	4.91E-03	4.48E-03	6.68E-04	1.22E-07	4.26E-03	5.95E-03
D17	0.00E+00	2.30E-05	1.87E-06	5.64E+01	7.12E-05	2.06E-01	3.30E-05	1.53E-02	8.00E-03	1.25E-03	3.28E-03	1.67E-03	1.71E-03	2.29E-03	2.61E-04	4.38E-08	1.56E-03	2.86E-03
D18	0.00E+00	7.04E-06	6.77E-07	2.42E+01	3.71E-05	1.02E-01	1.32E-05	2.08E-03	3.63E-03	5.65E-04	1.29E-03	7.76E-04	7.96E-04	3.65E-04	1.19E-04	2.21E-08	4.97E-04	3.77E-04
D19	0.00E+00	9.54E-05	6.68E-06	2.06E+02	2.03E-04	6.32E-01	1.21E-04	7.04E-02	1.95E-02	3.34E-03	1.26E-02	5.23E-03	5.37E-03	1.27E-02	9.11E-04	1.63E-07	7.22E-03	1.32E-02
D20	0.00E+00	8.22E-05	6.75E-06	2.30E+02	2.81E-04	8.29E-01	1.24E-04	5.00E-02	2.33E-02	3.93E-03	1.24E-02	6.39E-03	6.56E-03	8.80E-03	1.07E-03	1.90E-07	5.85E-03	9.30E-03
D21	0.00E+00	9.63E-05	6.80E-06	2.12E+02	2.15E-04	6.64E-01	1.24E-04	6.90E-02	2.02E-02	3.46E-03	1.29E-02	5.44E-03	5.59E-03	1.25E-02	9.44E-04	1.71E-07	7.31E-03	1.29E-02
D22	0.00E+00	5.02E-05	4.45E-06	1.60E+02	2.14E-04	6.18E-01	8.42E-05	2.42E-02	1.67E-02	2.81E-03	8.33E-03	4.65E-03	4.77E-03	4.32E-03	7.67E-04	1.40E-07	3.56E-03	4.47E-03
D23	0.00E+00	7.40E-05	5.60E-06	1.49E+02	2.04E-04	5.75E-01	1.03E-04	4.69E-02	2.70E-02	4.07E-03	1.05E-02	4.89E-03	5.02E-03	6.46E-03	6.84E-04	1.24E-07	5.46E-03	8.77E-03
D24	0.00E+00	6.40E-05	5.62E-06	1.71E+02	2.72E-04	7.39E-01	1.07E-04	2.71E-02	3.21E-02	4.81E-03	1.07E-02	5.90E-03	6.05E-03	4.01E-03	8.19E-04	1.54E-07	4.60E-03	5.01E-03
D25	0.00E+00	6.66E-05	5.59E-06	1.64E+02	2.53E-04	6.90E-01	1.06E-04	3.21E-02	3.05E-02	4.58E-03	1.06E-02	5.60E-03	5.75E-03	4.64E-03	7.78E-04	1.46E-07	4.86E-03	5.96E-03
D26	0.00E+00	6.10E-05	5.89E-06	1.91E+02	3.24E-04	8.69E-01	1.15E-04	1.69E-02	3.65E-02	5.46E-03	1.12E-02	6.77E-03	6.94E-03	2.77E-03	9.36E-04	1.79E-07	4.30E-03	3.07E-03
D27	0.00E+00	4.07E-05	3.62E-06	1.31E+02	1.76E-04	5.07E-01	6.87E-05	1.91E-02	1.37E-02	2.30E-03	6.79E-03	3.81E-03	3.91E-03	3.43E-03	6.27E-04	1.15E-07	2.89E-03	3.52E-03
D28	0.00E+00	1.73E-05	1.55E-06	5.61E+01	7.54E-05	2.18E-01	2.92E-05	8.35E-03	5.88E-03	9.87E-04	2.88E-03	1.63E-03	1.67E-03	1.47E-03	2.69E-04	4.86E-08	1.20E-03	1.54E-03
D29	0.00E+00	4.07E-05	3.62E-06	1.31E+02	1.76E-04	5.07E-01	6.87E-05	1.91E-02	1.37E-02	2.30E-03	6.79E-03	3.81E-03	3.91E-03	3.43E-03	6.27E-04	1.15E-07	2.89E-03	3.52E-03
D30	0.00E+00	1.73E-05	1.55E-06	5.61E+01	7.54E-05	2.18E-01	2.92E-05	8.35E-03	5.88E-03	9.87E-04	2.88E-03	1.63E-03	1.67E-03	1.47E-03	2.69E-04	4.86E-08	1.20E-03	1.54E-03
D31	0.00E+00	2.52E-05	2.19E-06	7.78E+01	1.02E-04	2.96E-01	4.12E-05	1.28E-02	8.07E-03	1.36E-03	4.08E-03	2.24E-03	2.29E-03	2.29E-03	3.70E-04	6.74E-08	1.79E-03	2.37E-03
D32	0.00E+00	1.34E-05	1.18E-06	4.21E+01	5.55E-05	1.61E-01	2.21E-05	6.91E-03	4.38E-03	7.36E-04	2.18E-03	1.21E-03	1.24E-03	1.21E-03	2.01E-04	3.61E-08	9.36E-04	1.28E-03
D33	0.00E+00	1.60E-05	1.38E-06	4.06E+01	6.23E-05	1.72E-01	2.56E-05	8.28E-03	7.59E-03	1.14E-03	2.53E-03	1.38E-03	1.41E-03	1.15E-03	1.93E-04	3.50E-08	1.12E-03	1.54E-03
D34	0.00E+00	2.44E-05	2.13E-06	6.36E+01	9.94E-05	2.72E-01	4.00E-05	1.17E-02	1.19E-02	1.79E-03	3.96E-03	2.18E-03	2.23E-03	1.66E-03	3.03E-04	5.60E-08	1.73E-03	2.16E-03
D35	0.00E+00	1.52E-05	1.32E-06	3.95E+01	6.17E-05	1.69E-01	2.48E-05	7.31E-03	7.41E-03	1.11E-03	2.45E-03	1.35E-03	1.39E-03	1.04E-03	1.89E-04	3.47E-08	1.07E-03	1.35E-03
D36	0.00E+00	2.23E-05	2.07E-06	6.48E+01	1.06E-04	2.88E-01	3.96E-05	8.50E-03	1.23E-02	1.84E-03	3.87E-03	2.26E-03	2.32E-03	1.27E-03	3.14E-04	5.87E-08	1.55E-03	1.56E-03
D37	0.00E+00	2.66E-05	2.53E-06	7.91E+01	1.29E-04	3.52E-01	4.75E-05	1.09E-02	1.50E-02	2.25E-03	4.61E-03	2.75E-03	2.82E-03	1.56E-03	3.83E-04	7.01E-08	1.79E-03	2.00E-03
D38	0.00E+00	1.61E-05	1.57E-06	5.08E+01	8.61E-05	2.31E-01	3.05E-05	4.59E-03	9.72E-03	1.45E-03	2.96E-03	1.80E-03	1.84E-03	7.39E-04	2.49E-04	4.72E-08	1.12E-03	8.33E-04
D39	0.00E+00	1.47E-05	1.44E-06	4.62E+01	7.72E-05	2.09E-01	2.74E-05	5.07E-03	8.83E-03	1.32E-03	2.64E-03	1.62E-03	1.66E-03	7.54E-04	2.25E-04	4.16E-08	9.83E-04	9.27E-04
D40	0.00E+00	8.91E-06	9.20E-07	3.09E+01	5.37E-05	1.44E-01	1.80E-05	1.82E-03	5.95E-03	8.87E-04	1.73E-03	1.10E-03	1.13E-03	3.21E-04	1.52E-04	2.90E-08	6.06E-04	3.24E-04
D41	0.00E+00	4.24E-06	4.21E-07	1.37E+01	2.31E-05	6.22E-02	8.07E-06	1.33E-03	2.62E-03	3.91E-04	7.79E-04	4.81E-04	4.94E-04	2.03E-04	6.68E-05	1.24E-08	2.85E-04	2.42E-04
D42	0.00E+00	1.16E-05	1.22E-06	4.17E+01	7.37E-05	1.96E-01	2.42E-05	1.67E-03	8.07E-03	1.20E-03	2.33E-03	1.50E-03	1.54E-03	3.41E-04	2.07E-04	3.98E-08	7.93E-04	2.87E-04
D43	0.00E+00	2.43E-05	1.66E-06	4.01E+01	4.82E-05	1.39E-01	3.01E-05	1.73E-02	7.04E-03	1.07E-03	3.16E-03	1.27E-03	1.30E-03	2.36E-03	1.78E-04	3.23E-08	1.86E-03	3.24E-03
D44	0.00E+00	1.49E-05	1.48E-06	4.85E+01	8.29E-05	2.22E-01	2.88E-05	3.89E-03	9.31E-03	1.39E-03	2.79E-03	1.72E-03	1.76E-03	6.38E-04	2.38E-04	4.51E-08	1.02E-03	7.03E-04
D45	0.00E+00	6.27E-05	4.76E-06	1.26E+02	1.71E-04	4.84E-01	8.64E-05	4.09E-02	2.28E-02	3.43E-03	8.81E-03	4.11E-03	4.22E-03	5.57E-03	5.77E-04	1.04E-07	4.58E-03	7.63E-03
D46	0.00E+00	7.18E-05	5.27E-06	1.33E+02	1.68E-04	4.87E-01	9.32E-05	5.23E-02	2.38E-02	3.58E-03	9.54E-03	4.23E-03	4.35E-03	6.98E-03	5.98E-04	1.03E-07	5.19E-03	9.79E-03
D47	0.00E+00	7.32E-05	5.77E-06	1.58E+02	2.26E-04	6.30E-01	1.06E-04	4.43E-02	2.90E-02	4.36E-03	1.07E-02	5.25E-03	5.39E-03	6.10E-03	7.35E-04	1.33E-07	5.31E-03	8.26E-03
D48	0.00E+00	8.71E-06	8.99E-07	3.01E+01	5.24E-05	1.40E-01	1.76E-05	1.80E-03	5.81E-03	8.67E-04	1.70E-03	1.08E-03	1.10E-03	3.16E-04	1.49E-04	2.83E-08	5.92E-04	3.20E-04
D49	0.00E+00	7.32E-05	5.77E-06	1.58E+02	2.26E-04	6.30E-01	1.06E-04	4.43E-02	2.90E-02	4.36E-03	1.07E-02	5.25E-03	5.39E-03	6.10E-03	7.35E-04	1.33E-07	5.31E-03	8.26E-03
D50	0.00E+00	7.78E-05	5.87E-06	1.53E+02	2.04E-04	5.81E-01	1.05E-04	5.31E-02	2.77E-02	4.17E-03	1.07E-02	4.96E-03	5.09E-03	7.16E-03	6.98E-04	1.23E-07	5.63E-03	9.93E-03
D51	0.00E+00	1.71E-05	1.56E-06	4.88E+01	8.03E-05	2.16E-01	3.03E-05	5.95E-03	9.24E-03	1.38E-03	2.99E-03	1.71E-03	1.75E-03	9.29E-04	2.37E-04	4.53E-08	1.24E-03	1.09E-03
D52	0.00E+00	1.64E-05	1.57E-06	5.05E+01	8.53E-05	2.29E-01	3.06E-05	4.74E-03	9.65E-03	1.44E-03	2.99E-03	1.79E-03	1.83E-03	7.69E-04	2.47E-04	4.72E-08	1.16E-03	8.62E-04
D53	0.00E+00	1.97E-05	1.85E-06	5.93E+01	9.97E-05	2.67E-01	3.63E-05	5.78E-03	1.13E-02	1.69E-03	3.57E-03	2.10E-03	2.15E-03	9.47E-04	2.90E-04	5.58E-08	1.42E-03	1.05E-03
D54	0.00E+00	1.25E-05	1.19E-06	3.84E+01	6.46E-05	1.74E-01	2.32E-05	3.76E-03	7.33E-03	1.09E-03	2.26E-03	1.35E-03	1.39E-03	5.99E-04	1.87E-04	3.56E-08	8.75E-04	6.85E-04
D55	0.00E+00	2.33E-05	2.00E-06	7.06E+01	9.13E-05	2.65E-01	3.75E-05	1.23E-02	7.29E-03	1.23E-03	3.73E-03	2.01E-03	2.07E-03	2.20E-03	3.34E-04	6.07E-08	1.66E-03	2.28E-03
D56	0.00E+00	3.34E-05	2.89E-06	1.03E+02	1.34E-04	3.89E-01	5.44E-05	1.72E-02	1.06E-02	1.79E-03	5.40E-03	2.95E-03	3.02E-03	3.07E-03	4.88E-04	8.88E-08	2.38E-03	3.19E-03
D57	0.00E+00	3.31E-05	2.97E-06	1.08E+02	1.45E-04	4.18E-01	5.63E-05	1.54E-02	1.13E-02	1.89E-03	5.56E-03	3.13E-03	3.22E-03	2.76E-03	5.16E-04	9.45E-08	2.35E-03	2.84E-03
D58	0.00E+00	4.42E-05	3.51E-06	1.18E+02	1.39E-04	4.13E-01	6.44E-05	2.79E-02	1.18E-02	2.00E-03	6.50E-03	3.22E-03	3.31E-03	4.95E-03	5.44E-04	9.69E-08	3.19E-03	5.20E-03
D59	0.00E+00	3.31E-05	2.97E-06	1.08E+02	1.45E-04	4.18E-01	5.63E-05	1.54E-02	1.13E-02	1.89E-03	5.56E-03	3.13E-03	3.22E-03	2.76E-03	5.16E-04	9.45E-08	2.35E-03	2.84E-03
D60	0.00E+00	4.42E-05	3.51E-06	1.18E+02	1.39E-04	4.13E-01	6.44E-05	2.79E-02	1.18E-02	2.00E-03	6.50E-03	3.22E-03	3.31E-03	4.95E-03	5.44E-04	9.69E-08	3.19E-03	5.20E-03
D61	0.00E+00	2.12E-05	1.55E-06	5.07E+01	5.64E-05	1.69E-01	2.92E-05	1.33E-02	4.94E-03	8.45E-04	3.03E-03	1.35E-03	1.39E-03	2.49E-03	2.31E-04	4.38E-08	1.64E-03	2.48E-03
D62	0.00E+00	7.55E-06	5.60E-07	1.75E+01	1.82E-05	5.61E-02	9.88E-06	5.66E-03	1.69E-03	2.88E-04	1.01E-03	4.53E-04	4.66E-04	9.90E-04	7.83E-05	1.33E-08	5.44E-04	1.06E-03
D63	0.00E+00	3.03E-06	2.62E-07	8.83E+00	1.27E-05	3.53E-02	5.08E-06	1.25E-03	1.29E-03	2.02E-04	5.07E-04	2.76E-04	2.83E-04	2.12E-04	4.25E-05	7.97E-09	2.24E-04	2.30E-04
D64	0.00E+00	1.20E-05	7.97E-07	1.95E+01	1.72E-05	5.50E-02	1.34E-05	1.01E-02	2.51E-03	4.00E-04	1.40E-03	5.15E-04	5.29E-04	1.52E-03	8.27E-05	1.33E-08	8.68E-04	1.90E-03
D65	0.00E+00	3.06E-05	2.17E-06	6.65E+01	6.50E-05	2.04E-01	3.85E-05	2.34E-02	6.29E-03	1.08E-03	3.98E-03	1.68E-03	1.73E-03	4.15E-03	2.93E-04	5.06E-08	2.25E-03	4.38E-03
D66	0.00E+00	2.68E-05	1.97E-06	6.06E+01	6.08E-05	1.90E-01	3.42E-05	2.10E-02	5.81E-03	9.89E-04	3.50E-03	1.55E-03	1.59E-03	3.64E-03	2.69E-04	4.45E-08	1.91E-03	3.93E-03
D67	0.00E+00	3.06E-05	2.17E-06	6.65E+01	6.50E-05	2.04E-01	3.85E-05	2.34E-02	6.29E-03	1.08E-03	3.98E-03	1.68E-03	1.73E-03	4.15E-03	2.93E-04	5.06E-08	2.25E-03	4.38E-03
D68	0.00E+00	2.68E-05	1.97E-06	6.06E+01	6.08E-05	1.90E-01	3.42E-05	2.10E-02	5.81E-03	9.89E-04	3.50E-03	1.55E-03	1.59E-03	3.64E-03	2.69E-04	4.45E-08	1.91E-03	3.93E-03
D69	0.00E+00	1.17E-05	8.66E-07	2.72E+01	2.84E-05	8.73E-02	1.54E-05	8.63E-03	2.63E-03	4.48E-04	1.58E-03	7.06E-04	7.25E-04	1.52E-03	1.22E-04	2.11E-08	8.57E-04	1.61E-03
D70	0.00E+00	9.99E-06	7.48E-07	2.36E+01	2.51E-05	7.68E-02	1.33E-05	7.32E-03	2.30E-03	3.90E-04	1.35E-03	6.17E-04	6.34E-04	1.28E-03	1.06E-04	1.82E-08	7.20E-04	1.37E-03
D71	0.00E+00	3.19E-05	2.46E-06	6.93E+01	7.97E-05	2.37E-01	4.19E-05	2.43E-02	9.61E-03	1.51E-03	4.20E-03	1.98E-03	2.04E-03	3.58E-03	3.13E-04	5.03E-08	2.16E-03	4.55E-03
D72	0.00E+00	1.83E-05	1.53E-06	4.89E+01	6.66E-05	1.88E-01	2.85E-05	9.68E-03	7.05E-03	1.10E-03	2.85E-03	1.49E-03	1.53E-03	1.54E-03	2.31E-04	4.18E-08	1.31E-03	1.80E-03
D73	0.00E+00	1.34E-05	1.19E-06	3.84E+01	5.31E-05	1.50E-01	2.15E-05	7.39E-03	5.60E-03	8.72E-04	2.11E-03	1.18E-03	1.21E-03	1.12E-03	1.82E-04	3.15E-08	9.02E-04	1.37E-03
D74	0.00E+00	9.70E-06	9.60E-07	3.47E+01	5.37E-05	1.47E-01	1.87E-05	2.71E-03	5.22E-03	8.11E-04	1.81E-03	1.12E-03	1.14E-03	4.71E-04	1.71E-04	3.15E-08	6.71E-04	4.89E-04
D75	0.00E+00	5.68E-06	4.67E-07	1.65E+01	2.11E-05	6.13E-02	8.98E-06	2.87E-03	1.69E-03	2.85E-04	9.06E-04	4.68E-04	4.81E-04	5.37E-04	7.80E-05	1.47E-08	4.26E-04	5.31E-04
D76	0.00E+00	1.10E-05	8.76E-07	2.95E+01	3.51E-05	1.04E-01	1.61E-05	6.82E-03	2.96E-03	5.01E-04	1.63E-03	8.10E-04	8.32E-04	1.21E-03	1.36E-04	2.45E-08	7.95E-04	1.27E-03
D77	0.00E+00	1.18E-05	8.18E-07	2.52E+01	2.47E-05	7.71E-02	1.49E-05	8.60E-03	2.38E-03	4.08E-04	1.56E-03	6.39E-04	6.56E-04	1.57E-03	1.11E-04	2.03E-08	9.04E-04	1.61E-03
D78	0.00E+00	1.02E-05	7.12E-07	2.11E+01	1.91E-05	6.12E-02	1.23E-05	8.40E-03	1.96E-03	3.36E-04	1.28E-03	5.16E-04	5.30E-04	1.47E-03	9.12E-05	1.51E-08	7.45E-04	1.57E-03
D79	0.00E+00	2.07E-05	1.70E-06	5.22E+01	6.78E-05	1.94E-01	3.05E-05	1.29E-02	7.45E-03	1.17E-03	3.04E-03	1.56E-03	1.60E-03	1.96E-03	2.44E-04	4.20E-08	1.44E-03	2.40E-03
D80	0.00E+00	3.10E-05	2.65E-06	8.45E+01	1.15E-04	3.25E-01	4.83E-05	1.75E-02	1.22E-02	1.91E-03	4.77E-03	2.57E-03	2.64E-03	2.68E-03	3.99E-04	6.96E-08	2.13E-03	3.26E-03
F31	0.00E+00	6.74E-05	5.75E-06	1.67E+02	2.52E-04	6.98E-01	1.06E-04	3.71E-02	3.11E-02	4.66E-03	1.05E-02	5.63E-03	5.78E-03	5.10E-03	7.88E-04	1.42E-07	4.69E-03	6.89E-03
F32	0.00E+00	4.53E-05	4.60E-06	1.53E+02	2.65E-04	7.09E-01	9.00E-05	1.03E-02	2.95E-02	4.40E-03	8.69E-03	5.45E-03	5.59E-03	1.75E-03	7.55E-04	1.43E-07	3.10E-03	1.84E-03
F33	0.00E+00	2.10E-05	2.12E-06	6.96E+01	1.19E-04	3.20E-01	4.09E-05	5.74E-03	1.34E-02	2.00E-03	3.95E-03	2.47E-03	2.53E-03	9.15E-04	3.42E-04	6.42E-08	1.42E-03	1.04E-03
F34	0.00E+00	1.06E-05	1.10E-06	3.70E+01	6.47E-05	1.73E-01	2.16E-05	2.00E-03	7.14E-03	1.07E-03	2.08E-03	1.32E-03	1.36E-03	3.63E-04	1.83E-04	3.49E-08	7.21E-04	3.53E-04
G07	0.00E+00	4.99E-06	4.02E-07	1.21E+01	1.41E-05	4.14E-02	6.85E-06	3.70E-03	1.66E-03	2.61E-04	6.79E-04	3.40E-04	3.49E-04	5.40E-04	5.55E-05	8.83E-09	3.30E-04	6.90E-04
G09	0.00E+00	1.49E-05	1.01E-06	1.58E+01	1.25E-05	4.67E-02	1.43E-05	1.57E-02	4.11E-03	5.86E-04	1.45E-03	5.02E-04	5.18E-04	1.49E-03	6.40E-05	6.45E-09	9.31E-04	2.96E-03
G10	0.00E+00	4.99E-06	4.02E-07	1.21E+01	1.41E-05	4.14E-02	6.85E-06	3.70E-03	1.66E-03	2.61E-04	6.79E-04	3.40E-04	3.49E-04	5.40E-04	5.55E-05	8.83E-09	3.30E-04	6.90E-04
H01	0.00E+00	2.99E-04	2.15E-05	7.77E+02	5.84E-04	2.08E+00	3.62E-04	3.00E-01	3.75E-02	7.78E-03	3.70E-02	1.56E-02	1.61E-02	6.11E-02	3.29E-03	4.82E-07	2.09E-02	5.63E-02
H02	0.00E+00	2.99E-04	2.15E-05	7.77E+02	5.84E-04	2.08E+00	3.62E-04	3.00E-01	3.75E-02	7.78E-03	3.70E-02	1.56E-02	1.61E-02	6.11E-02	3.29E-03	4.82E-07	2.09E-02	5.63E-02
H03	0.00E+00	2.62E-04	1.89E-05	6.89E+02	5.32E-04	1.88E+00	3.21E-04	2.59E-01	3.36E-02	6.95E-03	3.28E-02	1.41E-02	1.44E-02

Appendix F.2.1: MOVES Emission Factors by Road Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.36E-05	3.65E-06	1.47E+02	2.39E-04	7.12E-01	7.58E-05	3.88E-03	1.15E-02	2.21E-03	7.39E-03	4.77E-03	4.89E-03	4.28E-04	7.44E-04	1.56E-07	2.50E-03	6.06E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	4.15E-05	4.44E-06	2.02E+02	2.77E-04	8.22E-01	8.95E-05	5.79E-03	1.20E-02	2.33E-03	8.63E-03	5.59E-03	5.73E-03	1.33E-03	1.01E-03	1.85E-07	2.90E-03	9.51E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	4.66E-05	4.89E-06	2.22E+02	2.88E-04	7.22E-01	9.52E-05	8.94E-03	1.32E-02	2.78E-03	8.62E-03	5.89E-03	5.99E-03	2.82E-03	1.10E-03	3.94E-07	2.63E-03	1.52E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.00E-03	2.81E-05	1.02E+03	8.62E-04	8.70E+00	5.90E-03	5.51E-01	3.64E-02	8.25E-03	9.21E-01	5.41E-02	5.68E-02	9.06E-02	4.36E-03	1.13E-06	8.64E-01	1.01E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.25E-03	3.19E-05	1.03E+03	1.10E-03	9.09E+00	6.24E-03	4.90E-01	2.77E-02	7.12E-03	9.68E-01	6.04E-02	6.31E-02	9.14E-02	4.40E-03	1.22E-06	9.05E-01	8.89E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	3.59E-04	1.39E-05	7.44E+02	1.93E-04	1.58E+00	3.82E-04	2.95E-01	3.31E-02	7.64E-03	4.82E-02	8.32E-03	8.52E-03	1.01E-01	2.74E-03	2.62E-07	3.97E-02	5.54E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	6.07E-03	2.59E-05	1.02E+03	1.09E-04	4.02E+00	6.99E-03	7.90E-01	3.41E-02	7.78E-03	1.11E+00	4.91E-02	5.25E-02	1.50E-01	3.63E-03	9.87E-10	1.06E+00	1.46E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.42E-04	1.26E-05	5.88E+02	2.62E-04	1.21E+00	3.88E-04	1.51E-01	2.33E-02	6.02E-03	4.91E-02	9.06E-03	9.22E-03	6.02E-02	2.38E-03	9.71E-07	3.98E-02	2.82E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.44E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.68E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.23E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.26E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.27E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.75E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.09E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.05E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.05E-01	2.79E-02	2.00E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	3.55E-05	3.86E-06	1.53E+02	2.52E-04	8.60E-01	8.01E-05	4.26E-03	8.75E-03	1.92E-03	7.81E-03	5.04E-03	5.17E-03	3.89E-04	7.74E-04	1.75E-07	2.64E-03	6.65E-04
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	4.41E-05	4.74E-06	2.13E+02	2.98E-04	1.01E+00	9.59E-05	6.17E-03	8.88E-03	2.01E-03	9.27E-03	6.00E-03	6.15E-03	1.30E-03	1.07E-03	2.07E-07	3.12E-03	1.01E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.67E-05	4.91E-06	2.30E+02	2.94E-04	8.81E-01	9.67E-05	9.04E-03	9.98E-03	2.42E-03	8.86E-03	6.00E-03	6.11E-03	2.83E-03	1.14E-03	3.99E-07	2.76E-03	1.53E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.47E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.19E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.71E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.26E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.11E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.89E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.65E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.60E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.99E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.51E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.82E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.38E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.93E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.22E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.30E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.00E-05	4.34E-06	1.61E+02	2.84E-04	1.13E+00	9.01E-05	4.75E-03	7.40E-03	1.87E-03	8.79E-03	5.67E-03	5.82E-03	3.57E-04	8.18E-04	2.10E-07	2.97E-03	7.41E-04
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.95E-05	5.32E-06	2.25E+02	3.36E-04	1.34E+00	1.08E-04	6.71E-03	7.49E-03	1.93E-03	1.05E-02	6.76E-03	6.93E-03	1.29E-03	1.13E-03	2.38E-07	3.52E-03	1.09E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.09E-05	5.36E-06	2.39E+02	3.25E-04	1.14E+00	1.06E-04	9.48E-03	8.39E-03	2.32E-03	9.81E-03	6.60E-03	6.73E-03	2.84E-03	1.18E-03	4.34E-07	3.09E-03	1.60E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.40E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.45E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.51E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.58E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.85E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.83E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.20E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.98E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.82E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.11E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.35E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.55E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.06E-05	6.61E-06	2.23E+02	4.31E-04	1.14E+00	1.37E-04	3.38E-03	8.48E-02	1.17E-02	1.34E-02	8.62E-03	8.85E-03	1.43E-03	1.10E-03	1.91E-07	4.52E-03	5.27E-04
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.30E-05	8.68E-06	2.89E+02	4.87E-04	1.12E+00	1.64E-04	9.08E-03	9.16E-02	1.24E-02	1.54E-02	1.01E-02	1.03E-02	2.72E-03	1.42E-03	1.88E-07	5.08E-03	1.59E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.49E-04	1.54E-05	3.27E+02	8.03E-04	1.05E+00	2.78E-04	1.99E-02	9.45E-02	1.34E-02	2.30E-02	1.69E-02	1.70E-02	4.75E-03	1.58E-03	5.84E-07	5.94E-03	3.56E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.85E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.40E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.87E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.43E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.21E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.05E-02	1.49E-01	4.11E-03	4.92E-07	1.70E-01	2.28E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.50E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.61E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.45E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.39E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.20E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.16E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+01	1.03E-03	4.35E-01	2.44E-01	3.40E-02	7.22E-02	4.56E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.39E-02	9.00E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.55E-03	3.05E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.75E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.51E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.60E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.16E-05	5.61E-06	1.90E+02	3.67E-04	1.02E+00	1.16E-04	3.28E-03	6.21E-02	8.73E-03	1.14E-02	7.32E-03	7.52E-03	1.07E-03	9.44E-04	1.75E-07	3.84E-03	5.12E-04
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.80E-05	7.15E-06	2.47E+02	4.09E-04	1.01E+00	1.37E-04	7.55E-03	6.57E-02	9.12E-03	1.29E-02	8.43E-03	8.63E-03	2.18E-03	1.22E-03	1.77E-07	4.27E-03	1.31E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.14E-04	1.17E-05	2.78E+02	6.24E-04	9.32E-01	2.15E-04	1.57E-02	6.90E-02	1.01E-02	1.80E-02	1.31E-02	1.32E-02	3.94E-03	1.35E-03	5.06E-07	4.78E-03	2.79E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.58E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.42E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.61E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.18E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.73E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.05E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.81E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.91E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.20E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.85E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.10E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.73E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.95E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.52E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.75E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.92E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.49E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.70E-05	5.11E-06	1.72E+02	3.34E-04	9.28E-01	1.06E-04	3.38E-03	4.70E-02	6.79E-03	1.03E-02	6.67E-03	6.84E-03	8.56E-04	8.57E-04	1.70E-07	3.50E-03	5.28E-04
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.00E-05	6.33E-06	2.25E+02	3.70E-04	9.20E-01	1.23E-04	6.86E-03	4.95E-02	7.07E-03	1.16E-02	7.58E-03	7.77E-03	1.88E-03	1.11E-03	1.78E-07	3.86E-03	1.17E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	9.46E-05	9.73E-06	2.52E+02	5.31E-04	8.51E-01	1.76E-04	1.31E-02	5.17E-02	7.91E-03	1.61E-02	1.12E-02	1.12E-02	3.52E-03	1.24E-03	4.71E-07	4.71E-03	2.21E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.20E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.21E-01
2	Rural

Appendix F.2.1: MOVES Emission Factors by Road Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100km/h	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.44E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.68E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100km/h	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.23E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.26E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100km/h	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.27E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.75E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100km/h	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.09E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.05E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	21	PassengerCar	grams/mile	0.00E+00	3.55E-05	3.86E-06	1.53E+02	2.52E-04	8.60E-01	8.01E-05	4.26E-03	8.75E-03	1.92E-03	7.81E-03	5.04E-03	5.17E-03	3.89E-04	7.74E-04	1.75E-07	2.64E-03	6.65E-04
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	31	PassengerTruck	grams/mile	0.00E+00	4.41E-05	4.74E-06	2.13E+02	2.98E-04	1.01E+00	9.59E-05	6.17E-03	8.88E-03	2.01E-03	9.27E-03	6.00E-03	6.15E-03	1.30E-03	1.07E-03	2.07E-07	3.12E-03	1.01E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.67E-05	4.91E-06	2.30E+02	2.94E-04	8.81E-01	9.67E-05	9.04E-03	9.98E-03	2.42E-03	8.86E-03	6.00E-03	6.11E-03	2.83E-03	1.14E-03	3.99E-07	2.76E-03	1.53E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.47E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.19E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.71E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.26E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.11E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.89E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.65E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.60E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.99E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.51E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.82E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.38E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.93E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110km/h	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.22E+00	3.39E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.30E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	21	PassengerCar	grams/mile	0.00E+00	4.00E-05	4.34E-06	1.61E+02	2.84E-04	1.13E+00	9.01E-05	4.75E-03	7.40E-03	1.87E-03	8.79E-03	5.67E-03	5.82E-03	3.57E-04	8.18E-04	2.10E-07	2.97E-03	7.41E-04
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	31	PassengerTruck	grams/mile	0.00E+00	4.95E-05	5.32E-06	2.25E+02	3.36E-04	1.34E+00	1.08E-04	6.71E-03	7.49E-03	1.93E-03	1.05E-02	6.76E-03	6.93E-03	1.29E-03	1.13E-03	2.38E-07	3.52E-03	1.09E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.09E-05	5.36E-06	2.39E+02	3.25E-04	1.14E+00	1.06E-04	9.48E-03	8.39E-03	2.32E-03	9.81E-03	6.60E-03	6.73E-03	2.84E-03	1.18E-03	4.34E-07	3.09E-03	1.60E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.40E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.45E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.51E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.58E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.85E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.83E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.20E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.98E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.82E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.32E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.11E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120km/h	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.35E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.55E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	21	PassengerCar	grams/mile	0.00E+00	6.31E-05	6.86E-06	2.00E+02	4.48E-04	1.15E+00	1.42E-04	4.29E-03	6.56E-02	9.29E-03	1.39E-02	8.95E-03	9.18E-03	1.07E-03	9.96E-04	2.08E-07	4.70E-03	6.69E-04
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	31	PassengerTruck	grams/mile	0.00E+00	8.17E-05	8.62E-06	2.63E+02	5.01E-04	1.14E+00	1.66E-04	9.11E-03	7.21E-02	1.02E-02	1.58E-02	1.03E-02	1.05E-02	2.32E-03	1.30E-03	2.47E-07	5.24E-03	1.57E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.29E-04	1.33E-05	2.95E+02	7.15E-04	1.04E+00	2.45E-04	1.85E-02	7.43E-02	1.10E-02	2.07E-02	1.49E-02	1.51E-02	4.32E-03	1.44E-03	6.01E-07	5.63E-03	3.27E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.58E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.43E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.61E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.57E-01	1.90E-01	3.38E-02	3.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.80E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	51	RefuseTruck	grams/mile	0.00E+00	2.02E-02	9.80E-05	1.27E+03	3.55E-04	6.54E+00	2.33E-02	2.66E+00	3.10E-01	1.50E-02	3.10E+00	1.47E-01	1.78E-01	1.86E-01	4.48E-03	1.53E-06	4.55E+00	2.68E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.91E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.20E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.85E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.10E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.73E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.95E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.52E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.75E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40km/h	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.92E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.49E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	21	PassengerCar	grams/mile	0.00E+00	5.44E-05	5.91E-06	1.74E+02	3.86E-04	1.08E+00	1.23E-04	3.81E-03	4.87E-02	7.06E-03	1.20E-02	7.71E-03	7.92E-03	8.56E-04	8.71E-04	1.86E-07	4.05E-03	5.94E-04
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	31	PassengerTruck	grams/mile	0.00E+00	6.95E-05	7.35E-06	2.29E+02	4.32E-04	1.07E+00	1.43E-04	7.68E-03	5.35E-02	7.72E-03	1.36E-02	8.83E-03	9.05E-03	1.95E-03	1.13E-03	2.20E-07	4.51E-03	1.31E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.07E-04	1.10E-05	2.54E+02	6.01E-04	9.72E-01	2.05E-04	1.52E-02	5.55E-02	8.44E-03	1.74E-02	1.25E-02	1.27E-02	3.70E-03	1.25E-03	5.34E-07	4.77E-03	2.68E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.20E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.21E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.09E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	2.00E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.27E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.37E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.76E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.26E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.16E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.78E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.10E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.68E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.18E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.92E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.17E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.08E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50km/h	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.52E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.75E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.44E+02	2.75E-02	1.10E+01	8.72E-03	1.99E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	21	PassengerCar	grams/mile	0.00E+00	4.69E-05	5.10E-06	1.65E+02	3.33E-04	9.24E-01	1.06E-04	3.82E-03	3.58E-02	5.39E-03	1.03E-02	6.66E-03	6.83E-03	7.14E-04	8.27E-04	1.78E-07	3.49E-03	5.97E-04
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	31	PassengerTruck	grams/mile	0.00E+00	5.90E-05	6.25E-06	2.19E+02	3.73E-04	9.36E-01	1.23E-04	6.97E-03	3.90E-02	5.86E-03	1.17E-02	7.60E-03	7.79E-03	1.74E-03	1.09E-03	2.13E-07	3.90E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.44E-05	8.76E-06	2.45E+02	4.85E-04	8.50E-01	1.64E-04	1.30E-02	4.07E-02	6.51E-03	1.42E-02	1.01E-02	1.02E-02	3.41E-03	1.20E-03	4.88E-07	3.98E-03	2.27E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.12E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.73E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.59E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.73E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.08E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.42E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.08E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.76E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.75E+02	5.24E-04	1.01E+00	8.60E-04	3.02E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.66E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.34E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.36E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.60E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.01E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60km/h	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.87E

Appendix F.2.1: MOVES Emission Factors by Road Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.40E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.45E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.51E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.58E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.85E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.83E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.46E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.20E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.98E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.82E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.11E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.35E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.55E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.08E-05	6.61E-06	2.23E+02	4.31E-04	1.14E+00	1.37E-04	3.38E-03	8.48E-02	1.17E-02	1.34E-02	8.62E-03	8.85E-03	1.43E-03	1.10E-03	1.91E-07	4.52E-03	5.27E-04
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.30E-05	8.68E-06	2.89E+02	4.87E-04	1.12E+00	1.64E-04	9.08E-03	9.16E-02	1.24E-02	1.54E-02	1.01E-02	1.03E-02	2.72E-03	1.42E-03	1.88E-07	5.08E-03	1.59E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.49E-04	1.54E-05	3.27E+02	8.03E-04	1.05E+00	2.78E-04	1.99E-02	9.45E-02	1.34E-02	2.30E-02	1.69E-02	1.70E-02	4.75E-03	1.58E-03	5.84E-07	5.94E-03	3.56E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.85E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.40E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.87E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.43E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.21E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.25E-02	1.49E-01	4.11E-03	4.92E-07	1.70E-01	2.28E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.50E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.61E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.45E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.39E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.20E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.19E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.83E-01	2.44E-01	3.68E-02	7.22E-02	5.85E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.38E-02	9.02E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.55E-03	3.05E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.75E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.51E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.60E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.16E-05	5.61E-06	1.90E+02	3.67E-04	1.02E+00	1.16E-04	3.28E-03	6.21E-02	8.73E-03	1.14E-02	7.32E-03	7.52E-03	1.07E-03	9.44E-04	1.75E-07	3.84E-03	5.12E-04
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	5.38E-05	7.15E-06	2.41E+02	4.06E-04	1.01E+00	1.37E-04	7.55E-03	6.57E-02	9.12E-03	1.29E-02	8.43E-03	8.63E-03	2.18E-03	1.22E-03	1.77E-07	4.27E-03	1.33E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.14E-04	1.17E-05	2.78E+02	6.24E-04	9.32E-01	2.15E-04	1.57E-02	6.90E-02	1.01E-02	1.80E-02	1.31E-02	1.32E-02	3.94E-03	1.35E-03	5.06E-07	4.78E-03	2.79E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.58E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.42E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.61E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.18E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.73E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.05E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.80E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.91E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.20E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.85E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.10E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.73E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.95E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.52E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.75E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.92E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.49E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.70E-05	5.11E-06	1.72E+02	3.34E-04	9.28E-01	1.06E-04	3.38E-03	4.70E-02	6.79E-03	1.03E-02	6.67E-03	6.84E-03	8.56E-04	8.57E-04	1.70E-07	3.50E-03	5.28E-04
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.00E-05	6.33E-06	2.25E+02	3.70E-04	9.20E-01	1.23E-04	6.86E-03	4.95E-02	7.07E-03	1.16E-02	7.58E-03	7.77E-03	1.88E-03	1.11E-03	1.78E-07	3.86E-03	1.17E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	9.45E-05	9.78E-06	2.53E+02	5.31E-04	8.51E-01	1.81E-04	1.37E-02	5.28E-02	7.96E-03	1.54E-02	1.11E-02	1.12E-02	3.52E-03	1.24E-03	4.71E-07	4.17E-03	2.41E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.20E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.21E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.34E-02	6.55E-05	1.16E+03	1.11E-03	5.09E+00	1.56E-02	1.21E+00	1.95E-01	2.99E-02	2.47E+00	1.24E-01	1.32E-01	1.12E-01	4.84E-03	1.52E-06	2.33E+00	2.22E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.15E-03	5.52E-05	9.28E+02	3.12E-04	1.15E+00	1.09E-03	7.67E-01	2.08E-01	3.44E-02	1.30E-01	2.39E-02	2.47E-02	1.25E-01	3.43E-03	3.80E-07	1.05E-01	1.44E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.76E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.26E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.78E-05	6.67E+02	6.85E-04	1.03E+00	1.06E-03	4.16E-01	1.23E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.13E-06	9.79E-02	7.78E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.10E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.68E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.18E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.92E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.17E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.08E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.52E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.75E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.23E-05	4.60E-06	1.64E+02	3.00E-04	8.38E-01	9.54E-05	3.57E-03	3.53E-02	5.30E-03	9.30E-03	6.00E-03	6.16E-03	7.14E-04	8.23E-04	1.68E-07	3.15E-03	5.57E-04
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.33E-05	5.65E-06	2.18E+02	3.36E-04	8.59E-01	1.11E-04	6.50E-03	3.75E-02	5.57E-03	1.05E-02	6.85E-03	7.02E-03	1.71E-03	1.08E-03	1.83E-07	3.51E-03	1.10E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	7.76E-05	8.05E-06	2.45E+02	4.45E-04	7.89E-01	1.51E-04	1.21E-02	3.99E-02	6.29E-03	1.30E-02	9.23E-03	9.35E-03	3.31E-03	1.20E-03	4.47E-07	3.62E-03	2.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.12E-01	1.71E-01	2.51E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.18E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.10E-02	4.94E-05	1.03E+03	9.70E-04	5.43E+00	1.29E-02	9.02E-01	1.37E-01	2.17E-02	2.03E+00	1.02E-01	1.08E-01	9.77E-02	4.34E-03	1.34E-06	1.92E+00	1.65E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.78E-04	3.89E-05	7.97E+02	2.65E-04	1.20E+00	8.54E-04	5.60E-01	1.45E-01	2.37E-02	1.05E-01	1.80E-02	1.86E-02	1.07E-01	2.94E-03	3.06E-07	8.64E-02	1.05E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.42E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.08E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.76E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.02E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.66E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.34E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.36E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.60E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.01E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.87E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.52E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.86E-03	3.65E-04	2.62E+02	2.62E-02	1.12E+01	8.32E-03	1.38E-01	3.98E-02	1.95E-02	5.08E-01	5.23E-01	5.13E-01	1.96E-03	1.95E-03	9.44E-06	8.87E-02	1.40E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	3.89E-05	4.23E-06	1.59E+02	2.76E-04	7.74E-01	8.77E-05	3.70E-03	2.73E-02	4.27E-03	8.56E-03	5.52E-03	5.66E-03	6.12E-04	7.98E-04	1.66E-07	2.89E-03	5.78E-04
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	4.85E-05	5.16E-06	2.13E+02	3.12E-04	8.15E-01	1.02E-04	6.25E-03	2.91E-02	4.53E-03	9.75E-03	6.33E-03	6.49E-03	1.59E-03	1.06E-03	1.86E-07	3.26E-03	1.05E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.55E-05	6.82E-06	2.39E+02	3.83E-04	7.45E-01	1.29E-04	1.10E-02	3.09E-02	5.13E-03	1.13E-02	7.93E-03	8.03E-03	3.16E-03	1.17E-03	4.29E-07	3.23E-03	1.90E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.54E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.38E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.09E-03	3.95E-05	1.01E+03	8.78E-04	5.76E+00	1.06E-02	7.32E-01	8.80E-02	1.53E-02	1.68E+00	8.52E-02	9.01E-02	9.39E-02	4.24E-03	1.32E-06	1.59E+00	1.34E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.83E-04	2.87E-05	7.58E+02	2.21E-04	1.23E+00	6.78E-04	4.55E-01	9.93E-02	1.70E-02	8.47E-02	1.39E-02	1.44E-02	1.02E-01	2.80E-03	2.79E-07	7.04E-02	8.54E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.10E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/m

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.31E-05	6.86E-06	2.00E+02	4.48E-04	1.15E+00	1.42E-04	4.29E-03	6.56E-02	9.29E-03	1.39E-02	8.95E-03	9.18E-03	1.07E-03	9.96E-04	2.08E-07	4.70E-03	6.69E-04
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.17E-05	8.62E-06	2.63E+02	5.01E-04	1.14E+00	1.66E-04	9.11E-03	7.21E-02	1.02E-02	1.58E-02	1.03E-02	1.05E-02	2.32E-03	1.30E-03	2.47E-07	5.24E-03	1.57E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.29E-04	1.33E-05	2.95E+02	7.15E-04	1.04E+00	2.45E-04	1.85E-02	7.43E-02	1.10E-02	2.07E-02	1.49E-02	1.51E-02	4.32E-03	1.44E-03	6.01E-07	5.63E-03	3.27E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.58E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.43E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.61E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.57E-01	1.90E-01	3.38E-02	1.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.80E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.05E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.80E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.91E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.20E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.85E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.10E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.73E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.95E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.52E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.75E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.92E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.49E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.44E-05	5.91E-06	1.74E+02	3.86E-04	1.08E+00	1.23E-04	3.81E-03	4.87E-02	7.07E-03	1.20E-02	7.71E-03	7.91E-03	8.56E-04	8.71E-04	1.86E-07	4.05E-03	5.94E-04
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.95E-05	7.35E-06	2.29E+02	4.32E-04	1.07E+00	1.43E-04	7.68E-03	5.35E-02	7.72E-03	1.36E-02	8.83E-03	9.05E-03	1.95E-03	1.13E-03	2.20E-07	4.51E-03	1.31E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.07E-04	1.10E-05	2.56E+02	6.01E-04	9.72E-01	2.05E-04	1.52E-02	5.55E-02	8.46E-03	1.74E-02	1.25E-02	1.27E-02	3.70E-03	1.25E-03	5.34E-07	4.77E-03	2.68E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.20E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.21E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.09E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	2.00E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.27E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.37E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.76E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.26E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.16E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.78E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.10E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.68E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.18E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.92E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.17E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.08E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.52E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.75E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.60E-05	5.00E-06	1.64E+02	3.27E-04	9.18E-01	1.04E-04	3.71E-03	3.64E-02	5.44E-03	1.01E-02	6.53E-03	6.70E-03	7.14E-04	8.23E-04	1.73E-07	3.42E-03	5.78E-04
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.84E-05	6.19E-06	2.18E+02	3.68E-04	9.38E-01	1.21E-04	6.88E-03	3.97E-02	5.90E-03	1.15E-02	7.51E-03	7.69E-03	1.74E-03	1.08E-03	2.01E-07	3.85E-03	1.17E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.42E-05	8.74E-06	2.44E+02	4.83E-04	8.54E-01	1.63E-04	1.29E-02	4.14E-02	6.55E-03	1.41E-02	1.00E-02	1.01E-02	3.40E-03	1.19E-03	4.75E-07	3.94E-03	2.25E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.12E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.73E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.59E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.73E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.08E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.42E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.08E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.76E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.02E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.66E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.34E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.36E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.60E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.01E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.87E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.52E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.01E-05	4.36E-06	1.57E+02	2.85E-04	8.05E-01	9.05E-05	3.64E-03	2.77E-02	4.32E-03	8.83E-03	5.69E-03	5.84E-03	6.12E-04	7.89E-04	1.64E-07	2.99E-03	5.68E-04
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	5.05E-05	5.36E-06	2.11E+02	3.23E-04	8.49E-01	1.06E-04	6.32E-03	3.00E-02	4.64E-03	1.01E-02	6.57E-03	6.74E-03	1.60E-03	1.05E-03	1.88E-07	3.38E-03	1.06E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.84E-05	7.11E-06	2.36E+02	3.98E-04	7.70E-01	1.34E-04	1.12E-02	3.15E-02	5.21E-03	1.17E-02	8.24E-03	8.35E-03	3.19E-03	1.15E-03	4.33E-07	3.35E-03	1.95E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.54E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.38E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.25E-03	3.84E-05	1.06E+03	9.20E-04	6.72E+00	9.67E-03	7.15E-01	7.10E-02	1.33E-02	1.52E+00	7.97E-02	8.42E-02	9.82E-02	4.50E-03	1.39E-06	1.44E+00	1.30E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.42E-04	2.74E-05	8.14E+02	2.14E-04	1.32E+00	6.36E-04	4.64E-01	7.73E-02	1.48E-02	7.91E-02	1.33E-02	1.37E-02	1.10E-01	3.00E-03	2.97E-07	6.54E-02	8.71E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.10E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.34E-04	2.57E-05	5.90E+02	4.25E-04	1.07E+00	6.89E-04	2.51E-01	5.72E-02	1.05E-02	8.54E-02	1.63E-02	1.66E-02	5.99E-02	2.40E-03	9.69E-07	6.88E-02	4.70E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.25E-04	2.52E-05	5.67E+02	4.14E-04	1.02E+00	6.80E-04	2.45E-01	5.94E-02	1.06E-02	8.45E-02	1.59E-02	1.63E-02	5.73E-02	2.31E-03	9.26E-07	6.82E-02	4.59E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	2.71E-04	2.64E-05	7.23E+02	9.60E-04	2.27E+00	3.91E-04	1.94E-01	6.44E-02	1.23E-02	2.76E-02	2.24E-02	2.24E-02	3.54E-02	3.44E-03	1.93E-06	5.22E-03	3.60E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	9.26E-04	6.89E-05	1.25E+03	2.35E-06	1.34E+00	6.60E-04	1.38E+00	1.31E-01	2.18E-02	5.56E-02	2.01E-02	2.08E-02	1.99E-01	4.19E-03	0.00E+00	3.47E-02	2.60E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.39E-03	7.93E-05	1.29E+03	8.74E-06	1.75E+00	1.15E-03	1.62E+00	1.49E-01	2.25E-02	1.27E-01	2.55E-02	2.65E-02	2.07E-01	4.32E-03	0.00E+00	1.00E-01	3.05E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	3.74E-05	4.06E-06	1.52E+02	2.65E-04	7.69E-01	8.43E-05	3.73E-03	1.96E-02	3.29E-03	8.22E-03	5.30E-03	5.44E-03	5.35E-04	7.68E-04	1.64E-07	2.78E-03	5.82E-04
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	4.60E-05	4.90E-06	2.05E+02	2.99E-04	8.11E-01	9.74E-05	6.01E-03	2.09E-02	3.47E-03	9.35E-03	6.06E-03	6.22E-03	1.48E-03	1.03E-03	1.87E-07	3.13E-03	1.00E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	5.81E-05	6.06E-06	2.28E+02	3.45E-04	7.27E-01	1.16E-04	1.01E-02	2.24E-02	4.02E-03	1.02E-02	7.12E-03	7.22E-03	3.00E-03	1.12E-03	4.13E-07	3.00E-03	1.74E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.06E-03	2.93E-05	9.83E+02	6.70E-04	6.09E+00	8.27E-03	6.37E-01	7.31E-02	1.33E-02	1.31E+00	6.57E-02	6.95E-02	9.09E-02	4.17E-03	1.23E-06	1.24E+00	1.16E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.01E-03	3.19E-05	1.03E+03	8.67E-04	6.81E+00	8.24E-03	5.96E-01	5.08E-02	1.05E-02	1.30E+00	6.90E-02	7.27E-02	9.39E-02	4.35E-03	1.35E-06	1.22E+00	1.08E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	5.13E-04	2.09E-05	7.77E+02	1.89E-04	1.31E+00	5.18E-04	3.82E-01	5.78E-02	1.15E-02	6.52E-02	1.07E-02	1.10E-02	1.05E-01	2.86E-03	2.77E-07	5.42E-02	7.16E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.85E-03	3.88E-05	1.02E+03	1.56E-04	4.17E+00	1.02E-02	9.49E-01	8.56E-02	1.46E-02	1.62E+00	7.18E-02	7.68E-02	1.50E-01	3.63E-03	9.59E-10	1.54E+00	1.75E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.94E-04	1.93E-05	5.90E+02	3.35E-04	1.07E+00	5.43E-04	2.05E-01	4.04E-02	8.27E-03	6.80E-02	1.26E-02	1.28E-02	6.00E-02	2.40E-03	9.51E-07	5.52E-02	3.83E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.87E-04	1.88E-05	5.65E+02	3.24E-04	1.01E+00	5.35E-04	1.98E-01	4.21E-02	8.32E-03	6.73E-02	1.23E-02	1.25E-02	5.72E-02	2.30E-03	8.98E-07	5.48E-02	3.71E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	2.12E-04	2.09E-05	7.20E+02	7.93E-04	2.40E+00	3.16E-04	1.60E-01	4.51E-02	9.79E-03	2.24E-02	1.83E-02	1.82E-02	3.52E-02	3.42E-03	1.93E-06	4.15E-03	2.96E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.42E-04	5.49E-05	1.21E+03	1.94E-06	1.13E+00	5.30E-04	1.14E+00	8.59E-02	1.56E-02	4.50E-02	1.60E-02	1.66E-02	1.92E-01	4.04E-03	0.00E+00	2.84E-02	2.15E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	6.40E-05	1.23E+03	7.21E-06	1.47E+00	9.35E-04	1.34E+00	9.74E-02	1.56E-02	1.04E-01	2.06E-02	2.15E-02	1.97E-01	4.12E-03	0.00E+00	8.24E-02	2.52E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	3.55E-05	3.86E-06	1.50E+02	2.52E-04	7.61E-01	8.01E-05	3.85E-03	1.46E-02	2.64E-03	7.82E-03	5.04E-03	5.17E-03	4.76E-04	7.57E-04	1.65E-07	2.64E-03	6.00E-04
5	UrbanUnrestrictedA

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1508	0.00E+00	1.49E-05	1.62E-06	6.39E+01	1.06E-04	3.60E-01	3.36E-05	1.79E-03	3.66E-03	8.03E-04	3.27E-03	2.11E-03	2.17E-03	1.63E-04	3.24E-04	7.33E-08	1.11E-03	2.79E-04
17	A01	110	Passenger Truck	2526	0.00E+00	3.10E-05	3.32E-06	1.49E+02	2.09E-04	7.11E-01	6.73E-05	4.33E-03	6.23E-03	1.41E-03	6.50E-03	4.21E-03	4.31E-03	9.14E-04	7.50E-04	1.45E-07	2.19E-03	7.07E-04
17	A01	110	Single Unit Short Haul Truck	477	0.00E+00	4.39E-05	1.78E-06	8.19E+01	4.00E-05	1.98E-01	5.04E-05	2.12E-02	2.64E-03	7.78E-04	6.17E-03	1.30E-03	1.32E-03	8.51E-03	3.30E-04	1.47E-07	4.86E-03	3.96E-03
17	A01	110	Single Unit Long Haul Truck	21	0.00E+00	1.90E-06	7.39E-08	3.43E+00	1.61E-06	7.85E-03	2.17E-06	8.84E-04	1.18E-04	3.35E-05	2.69E-04	5.35E-05	5.43E-05	3.55E-04	1.38E-05	5.98E-09	2.15E-04	1.65E-04
17	A01	110	Combination Short Haul Truck	246	0.00E+00	4.38E-05	3.38E-06	8.66E+01	8.51E-08	6.41E-02	3.04E-05	7.02E-02	2.16E-03	6.32E-04	2.41E-03	9.73E-04	1.01E-03	1.38E-02	2.90E-04	0.00E+00	1.40E-03	1.32E-02
17	A01	110	Combination Long Haul Truck	225	0.00E+00	5.93E-05	3.76E-06	7.81E+01	2.89E-07	7.39E-02	4.63E-05	7.63E-02	2.10E-03	4.61E-04	4.71E-03	1.16E-03	1.21E-03	1.25E-02	2.62E-04	0.00E+00	3.50E-03	1.44E-02
17	A02	110	Passenger Car	1676	0.00E+00	1.65E-05	1.80E-06	7.11E+01	1.17E-04	4.01E-01	3.73E-05	1.98E-03	4.07E-03	8.93E-04	3.64E-03	2.35E-03	2.41E-03	1.81E-04	3.61E-04	8.15E-08	1.23E-03	3.10E-04
17	A02	110	Passenger Truck	2808	0.00E+00	3.44E-05	3.69E-06	1.66E+02	2.32E-04	7.90E-01	7.48E-05	4.81E-03	6.93E-03	1.57E-03	7.23E-03	4.68E-03	4.79E-03	1.02E-03	8.33E-04	1.61E-07	2.43E-03	7.85E-04
17	A02	110	Single Unit Short Haul Truck	465	0.00E+00	4.29E-05	1.74E-06	7.99E+01	3.90E-05	1.93E-01	4.92E-05	2.07E-02	2.58E-03	7.59E-04	6.03E-03	1.26E-03	1.28E-03	8.31E-03	3.22E-04	1.43E-07	4.74E-03	3.86E-03
17	A02	110	Single Unit Long Haul Truck	21	0.00E+00	1.85E-06	7.21E-08	3.35E+00	1.57E-06	7.66E-03	2.11E-06	8.62E-04	1.16E-04	3.26E-05	2.62E-04	5.22E-05	5.30E-05	3.47E-04	1.35E-05	5.84E-09	2.09E-04	1.61E-04
17	A02	110	Combination Short Haul Truck	230	0.00E+00	4.09E-05	3.16E-06	8.09E+01	7.95E-08	5.99E-02	2.84E-05	6.55E-02	2.02E-03	5.90E-04	2.25E-03	9.09E-04	9.43E-04	1.29E-02	2.70E-04	0.00E+00	1.31E-03	1.24E-02
17	A02	110	Combination Long Haul Truck	210	0.00E+00	5.54E-05	3.52E-06	7.30E+01	2.70E-07	6.91E-02	4.33E-05	7.13E-02	1.96E-03	4.31E-04	4.40E-03	1.08E-03	1.13E-03	1.17E-02	2.45E-04	0.00E+00	3.27E-03	1.34E-02
17	A03	110	Passenger Car	1638	0.00E+00	1.62E-05	1.76E-06	6.95E+01	1.15E-04	3.91E-01	3.65E-05	1.94E-03	3.98E-03	8.73E-04	3.56E-03	2.29E-03	2.35E-03	1.77E-04	3.52E-04	7.96E-08	1.20E-03	3.03E-04
17	A03	110	Passenger Truck	2744	0.00E+00	3.36E-05	3.61E-06	1.62E+02	2.27E-04	7.72E-01	7.31E-05	4.70E-03	6.77E-03	1.53E-03	7.06E-03	4.57E-03	4.69E-03	9.93E-04	8.14E-04	1.58E-07	2.38E-03	7.68E-04
17	A03	110	Single Unit Short Haul Truck	456	0.00E+00	4.20E-05	1.70E-06	7.83E+01	3.82E-05	1.89E-01	4.82E-05	2.03E-02	2.52E-03	7.44E-04	5.90E-03	1.24E-03	1.26E-03	8.14E-03	3.15E-04	1.40E-07	4.64E-03	3.78E-03
17	A03	110	Single Unit Long Haul Truck	20	0.00E+00	1.81E-06	7.06E-08	3.28E+00	1.54E-06	7.50E-03	2.07E-06	8.45E-04	1.13E-04	3.20E-05	2.57E-04	5.11E-05	5.19E-05	3.39E-04	1.32E-05	5.72E-09	2.05E-04	1.57E-04
17	A03	110	Combination Short Haul Truck	230	0.00E+00	4.09E-05	3.16E-06	8.09E+01	7.95E-08	5.99E-02	2.84E-05	6.55E-02	2.02E-03	5.90E-04	2.25E-03	9.09E-04	9.43E-04	1.29E-02	2.70E-04	0.00E+00	1.31E-03	1.24E-02
17	A03	110	Combination Long Haul Truck	210	0.00E+00	5.54E-05	3.52E-06	7.30E+01	2.70E-07	6.91E-02	4.33E-05	7.13E-02	1.96E-03	4.31E-04	4.40E-03	1.08E-03	1.13E-03	1.17E-02	2.45E-04	0.00E+00	3.27E-03	1.34E-02
17	A04	110	Passenger Car	1977	0.00E+00	1.95E-05	2.12E-06	8.38E+01	1.39E-04	4.73E-01	4.40E-05	2.34E-03	4.80E-03	1.05E-03	4.29E-03	2.77E-03	2.84E-03	2.14E-04	4.25E-04	9.61E-08	1.45E-03	3.65E-04
17	A04	110	Passenger Truck	3312	0.00E+00	4.06E-05	4.36E-06	1.96E+02	2.74E-04	9.32E-01	8.82E-05	5.67E-03	8.17E-03	1.85E-03	8.53E-03	5.51E-03	5.66E-03	1.20E-03	9.83E-04	1.90E-07	2.87E-03	9.26E-04
17	A04	110	Single Unit Short Haul Truck	475	0.00E+00	4.37E-05	1.77E-06	8.16E+01	3.99E-05	1.97E-01	5.02E-05	2.11E-02	2.63E-03	7.75E-04	6.15E-03	1.29E-03	1.31E-03	8.48E-03	3.28E-04	1.46E-07	4.84E-03	3.94E-03
17	A04	110	Single Unit Long Haul Truck	21	0.00E+00	1.89E-06	7.36E-08	3.42E+00	1.60E-06	7.82E-03	2.16E-06	8.80E-04	1.18E-04	3.33E-05	2.68E-04	5.33E-05	5.41E-05	3.54E-04	1.38E-05	5.96E-09	2.14E-04	1.64E-04
17	A04	110	Combination Short Haul Truck	222	0.00E+00	3.94E-05	3.04E-06	7.79E+01	7.66E-08	5.77E-02	2.74E-05	6.32E-02	1.95E-03	5.69E-04	2.17E-03	8.75E-04	9.08E-04	1.24E-02	2.61E-04	0.00E+00	1.26E-03	1.19E-02
17	A04	110	Combination Long Haul Truck	202	0.00E+00	5.34E-05	3.39E-06	7.04E+01	2.60E-07	6.66E-02	4.17E-05	6.87E-02	1.89E-03	4.15E-04	4.24E-03	1.04E-03	1.09E-03	1.13E-02	2.36E-04	0.00E+00	3.15E-03	1.29E-02
17	A05	110	Passenger Car	1478	0.00E+00	1.46E-05	1.58E-06	6.26E+01	1.04E-04	3.53E-01	3.29E-05	1.75E-03	3.59E-03	7.87E-04	3.21E-03	2.07E-03	2.12E-03	1.60E-04	3.18E-04	7.18E-08	1.08E-03	2.73E-04
17	A05	110	Passenger Truck	2474	0.00E+00	3.03E-05	3.25E-06	1.46E+02	2.04E-04	6.97E-01	6.59E-05	4.24E-03	6.11E-03	1.38E-03	6.37E-03	4.12E-03	4.23E-03	8.96E-04	7.34E-04	1.42E-07	2.14E-03	6.92E-04
17	A05	110	Single Unit Short Haul Truck	358	0.00E+00	3.30E-05	1.34E-06	6.15E+01	3.00E-05	1.48E-01	3.79E-05	1.59E-02	1.98E-03	5.84E-04	4.64E-03	9.73E-04	9.88E-04	6.39E-03	2.48E-04	1.10E-07	3.65E-03	2.97E-03
17	A05	110	Single Unit Long Haul Truck	16	0.00E+00	1.42E-06	5.55E-08	2.58E+00	1.21E-06	5.89E-03	1.63E-06	6.64E-04	8.90E-05	2.51E-05	2.02E-04	4.02E-05	4.08E-05	2.67E-04	1.04E-05	4.49E-09	1.61E-04	1.24E-04
17	A05	110	Combination Short Haul Truck	186	0.00E+00	3.30E-05	2.55E-06	6.53E+01	6.41E-08	4.83E-02	2.29E-05	5.29E-02	1.63E-03	4.76E-04	1.82E-03	7.33E-04	7.61E-04	1.04E-02	2.18E-04	0.00E+00	1.06E-03	9.96E-03
17	A05	110	Combination Long Haul Truck	169	0.00E+00	4.47E-05	2.84E-06	5.89E+01	2.18E-07	5.57E-02	3.49E-05	5.75E-02	1.58E-03	3.48E-04	3.55E-03	8.74E-04	9.09E-04	9.45E-03	1.97E-04	0.00E+00	2.64E-03	1.08E-02
17	A06	110	Passenger Car	1587	0.00E+00	1.57E-05	1.70E-06	6.73E+01	1.11E-04	3.79E-01	3.53E-05	1.88E-03	3.86E-03	8.45E-04	3.44E-03	2.22E-03	2.28E-03	1.72E-04	3.41E-04	7.71E-08	1.17E-03	2.93E-04
17	A06	110	Passenger Truck	2657	0.00E+00	3.26E-05	3.50E-06	1.57E+02	2.20E-04	7.48E-01	7.08E-05	4.55E-03	6.56E-03	1.48E-03	6.84E-03	4.43E-03	4.54E-03	9.62E-04	7.89E-04	1.53E-07	2.30E-03	7.43E-04
17	A06	110	Single Unit Short Haul Truck	345	0.00E+00	3.18E-05	1.29E-06	5.92E+01	2.89E-05	1.43E-01	3.64E-05	1.53E-02	1.91E-03	5.62E-04	4.46E-03	9.37E-04	9.51E-04	6.15E-03	2.38E-04	1.06E-07	3.51E-03	2.86E-03
17	A06	110	Single Unit Long Haul Truck	15	0.00E+00	1.37E-06	5.34E-08	2.48E+00	1.16E-06	5.67E-03	1.57E-06	6.39E-04	8.57E-05	2.42E-05	1.94E-04	3.87E-05	3.93E-05	2.57E-04	1.00E-05	4.33E-09	1.55E-04	1.19E-04
17	A06	110	Combination Short Haul Truck	168	0.00E+00	2.98E-05	2.30E-06	5.90E+01	5.80E-08	4.37E-02	2.07E-05	4.78E-02	1.47E-03	4.31E-04	1.64E-03	6.63E-04	6.88E-04	9.38E-03	1.97E-04	0.00E+00	9.55E-04	9.01E-03
17	A06	110	Combination Long Haul Truck	153	0.00E+00	4.04E-05	2.56E-06	5.33E+01	1.97E-07	5.04E-02	3.16E-05	5.20E-02	1.43E-03	3.14E-04	3.21E-03	7.90E-04	8.22E-04	8.55E-03	1.78E-04	0.00E+00	2.39E-03	9.80E-03
17	A07	110	Passenger Car	1144	0.00E+00	1.13E-05	1.23E-06	4.85E+01	8.01E-05	2.73E-01	2.55E-05	1.35E-03	2.78E-03	6.09E-04	2.48E-03	1.60E-03	1.64E-03	1.24E-04	2.46E-04	5.56E-08	8.40E-04	2.11E-04
17	A07	110	Passenger Truck	1915	0.00E+00	2.35E-05	2.52E-06	1.13E+02	1.58E-04	5.39E-01	5.10E-05	3.28E-03	4.73E-03	1.07E-03	4.93E-03	3.19E-03	3.27E-03	6.93E-04	5.68E-04	1.10E-07	1.66E-03	5.36E-04
17	A07	110	Single Unit Short Haul Truck	374	0.00E+00	3.45E-05	1.40E-06	6.43E+01	3.14E-05	1.55E-01	3.96E-05	1.67E-02	2.07E-03	6.11E-04	4.85E-03	1.02E-03	1.03E-03	6.68E-03	2.59E-04	1.15E-07	3.82E-03	3.11E-03
17	A07	110	Single Unit Long Haul Truck	17	0.00E+00	1.49E-06	5.80E-08	2.69E+00	1.26E-06	6.16E-03	1.70E-06	6.94E-04	9.30E-05	2.63E-05	2.11E-04	4.20E-05	4.27E-05	2.79E-04	1.09E-05	4.70E-09	1.69E-04	1.29E-04
17	A07	110	Combination Short Haul Truck	206	0.00E+00	3.65E-05	2.82E-06	7.22E+01	7.10E-08	5.35E-02	2.54E-05	5.85E-02	1.80E-03	5.27E-04	2.01E-03	8.11E-04	8.42E-04	1.15E-02	2.42E-04	0.00E+00	1.17E-03	1.10E-02
17	A07	110	Combination Long Haul Truck	187	0.00E+00	4.95E-05	3.14E-06	6.52E+01	2.41E-07	6.17E-02	3.86E-05	6.37E-02	1.75E-03	3.85E-04	3.93E-03	9.68E-04	1.01E-03	1.05E-02	2.18E-04	0.00E+00	2.92E-03	1.20E-02
17	A08	110	Passenger Car	1536	0.00E+00	1.52E-05	1.65E-06	6.51E+01	1.08E-04	3.67E-01	3.42E-05	1.82E-03	3.73E-03	8.18E-04	3.33E-03	2.15E-03	2.21E-03	1.66E-04	3.30E-04	7.46E-08	1.13E-03	2.84E-04
17	A08	110	Passenger Truck	2572	0.00E+00	3.15E-05	3.38E-06	1.52E+02	2.13E-04	7.24E-01	6.85E-05	4.41E-03	6.35E-03	1.43E-03	6.62E-03	4.28E-03	4.39E-03	9.31E-04	7.63E-04	1.48E-07	2.23E-03	7.20E-04
17	A08	110	Single Unit Short Haul Truck	336	0.00E+00	3.10E-05	1.25E-06	5.77E+01	2.82E-05	1.39E-01	3.55E-05	1.50E-02	1.86E-03	5.48E-04	4.35E-03	9.14E-04	9.27E-04	6.00E-03	2.32E-04	1.03E-07	3.42E-03	2.79E-03
17	A08	110	Single Unit Long Haul Truck	15	0.00E+00	1.34E-06	5.21E-08	2.42E+00	1.13E-06	5.53E-03	1.53E-06	6.23E-04	8.35E-05	2.36E-05	1.90E-04	3.77E-05	3.83E-05	2.50E-04	9.75E-06	4.22E-09	1.51E-04	1.16E-04
17	A08	110	Combination Short Haul Truck	174	0.00E+00	3.10E-05	2.39E-06	6.12E+01	6.02E-08	4.54E-02	2.15E-05	4.96E-02	1.53E-03	4.47E-04	1.70E-03	6.88E-04	7.13E-04	9.73E-03	2.05E-04	0.00E+00	9.91E-04	9.35E-03
17	A08	110	Combination Long Haul Truck	159	0.00E+00	4.19E-05	2.66E-06	5.53E+01	2.04E-07	5.23E-02	3.27E-05	5.40E-02	1.48E-03	3.26E-04	3.33E-03	8.20E-04	8.53E-04	8.86E-03	1.85E-04	0.00E+00	2.47E-03	1.02E-02
17	A09	110	Passenger Car	1465	0.00E+00	1.45E-05	1.57E-06	6.21E+01	1.03E-04	3.50E-01	3.26E-05	1.73E-03	3.56E-03	7.80E-04	3.18E-03	2.05E-03	2.10E-03	1.58E-04	3.15E-04	7.12E-08	1.08E-03	2.71E-04
17	A09	110	Passenger Truck	2454	0.00E+00	3.01E-05	3.23E-06	1.45E+02	2.03E-04	6.91E-01	6.54E-05	4.21E-03	6.05E-03	1.37E-03	6.32E-03	4.09E-03	4.19E-03	8.88E-04	7.28E-04	1.41E-07	2.13E-03	6.86E-04
17	A09	110	Single Unit Short Haul Truck	477	0.00E+00	4.39E-05	1.78E-06	8.19E+01	4.00E-05	1.98E-01	5.04E-05	2.12E-02	2.64E-03	7.78E-04	6.17E-03	1.30E-03	1.32E-03	8.51E-03	3.30E-04	1.47E-07	4.86E-03	3.96E-03
17	A09	110	Single Unit Long Haul Truck	21	0.00E+00	1.90E-06	7.39E-08	3.43E+00	1.61E-06	7.85E-03	2.17E-06	8.84E-04	1.18E-04	3.35E-05	2.69E-04	5.35E-05	5.43E-05	3.55E-04	1.38E-05	5.98E-09	2.15E-04	1.65E-04
17	A09	110	Combination Short Haul Truck	264	0.00E+00	4.69E-05	3.62E-06	9.27E+01	9.11E-08	6.86E-02	3.26E-05	7.51E-02	2.31E-03	6.76E-04	2.58E-03	1.04E-03	1.08E-03	1.47E-02	3.10E-04	0.00E+00	1.50E-03	1.41E-02
17	A09	110	Combination Long Haul Truck	240	0.00E+00	6.35E-05	4.03E-06	8.36E+01	3.09E-07	7.91E-02	4.96E-05	8.17E-02	2.25E-03	4.94E-04	5.04E-03	1.24E-03	1.29E-03	1.34E-02	2.80E-04	0.00E+00	3.75E-03	1.54E-02
17	A10	110	Passenger Car	1527	0.00E+00	1.51E-05	1.64E-06	6.48E+01	1.07E-04	3.65E-01	3.40E-05	1.81E-03	3.71E-03	8.13E-04	3.32E-03	2.14E-03	2.19E-03	1.65E-04	3.28E-04	7.42E-08	1.12E-03	2.82E-04
17	A10	110	Passenger Truck	2558	0.00E+00	3.13E-05	3.36E-06	1.51E+02	2.11E-04	7.20E-01	6.81E-05	4.38E-03	6.31E-03	1.43E-03	6.58E-03	4.26E-03	4.37E-03	9.26E-04	7.59E-04	1.47E-07	2.22E-03	7.16E-04
17	A10	110	Single Unit Short Haul Truck	385	0.00E+00	3.55E-05	1.44E-06	6.61E+01	3.23E-05	1.60E-01	4.07E-05	1.71E-02	2.13E-03	6.28E-04	4.98E-03	1.05E-03	1.06E-03	6.87E-03	2.66E-04	1.18E-07	3.92E-03	3.19E-03
17	A10	110	Single Unit Long Haul Truck	17	0.00E+00	1.53E-06	5.96E-08	2.77E+00	1.30E-06	6.34E-03	1.75E-06	7.13E-04	9.57E-05	2.70E-05	2.17E-04	4.32E-05	4.39E-05	2.87E-04	1.12E-05	4.83E-09	1.73E-04	1.33E-04
17	A10	110	Combination Short Haul Truck	214	0.00E+00	3.80E-05	2.94E-06	7.52E+01	7.39E-08	5.57E-02	2.64E-05	6.09E-02	1.88E-03	5.49E-04	2.09E-03	8.45E-04	8.76E-04	1.19E-02	2.51E-04	0.00E+00	1.22E-03	1.15E-02
17	A10	110	Combination Long Haul Truck	195	0.00E+00	5.15E-05	3.27E-06	6.79E+01	2.51E-07	6.42E-02	4.02E-05	6.63E-02	1.82E-03	4.01E-04	4.09E-03	1.01E-03	1.05E-03	1.09E-02	2.27E-04	0.00E+00	3.04E-03	1.25E-02
17	A11	110	Passenger Car	1819	0.00E+00	1.80E-05	1.95E-06	7.71E+01	1.27E-04	4.35E-01	4.05E-05	2.15E-03	4.42E-03	9.69E-04	3.95E-03	2.55E-03	2.61E-03	1.97E-04	3.91E-04	8.84E-08	1.34E-03	3.36E-04
17	A11	110	Passenger Truck	3046	0.00E+00	3.73E-05	4.01E-06	1.80E+02	2.52E-04	8.58E-01	8.11E-05	5.22E-03	7.52E-03	1.70E-03	7.84E-03	5.07E-03	5.20E-03	1.10E-03	9.04E-04	1.75E-07	2.64E-03	8.52E-04
17	A11	110	Single Unit Short Haul Truck	535	0.00E+00	4.93E-05	2.00E-06	9.19E+01	4.49E-05	2.22E-01	5.66E-05	2.38E-02	2.96E-03	8.73E-04	6.93E-03	1.45E-03	1.48E-03	9.56E-03	3.70E-04	1.65E-07	5.45E-03	4.44E-03
17	A11	110	Single Unit Long Haul Truck	24	0.00E+00	2.13E-06	8.29E-08	3.85E+00	1.81E-06	8.81E-03	2.43E-06	9.92E-04	1.33E-04	3.76E-05	3.02E-04	6.01E-05	6.10E-05	3.99E-04	1.55E-05	6.72E-09	2.41E-04	1.85E-04
17	A11	110	Combination Short Haul Truck	332	0.00E+00	5.89E-05	4.55E-06	1.17E+02	1.15E-07	8.63E-02	4.10E-05	9.44E-02	2.91E-03	8.50E-04	3.25E-03	1.31E-03	1.36E-03	1.85E-02	3.90E-04	0.00E+00	1.89E-03	1.78E-02
17	A11	110	Combination Long Haul Truck	302	0.00E+00	7.98E-05	5.07E-06	1.05E+02	3.89E-07	9.95E-02	6.23E-05	1.03E-01	2.82E-03	6.21E-04	6.33E-03	1.56E-03	1.62E-03	1.69E-02	3.52E-04	0.00E+00	4.71E-03	1.94E-02
17	A12	110	Passenger Car	1510	0.00E+00	1.49E-05	1.62E-06	6.40E+01	1.06E-04	3.61E-01	3.36E-05	1.79E-03	3.67E-03	8.04E-04	3.28E-03	2.11E-03	2.17E-03	1.63E-04	3.25E-04	7.34E-08	1.11E-03	2.79E-04
17	A12	110	Passenger Truck	2529	0.00E+00	3.10E-05	3.33E-06	1.49E+02	2.09E-04	7.12E-01	6.74E-05	4.33E-03	6.24E-03	1.41E-03	6.51E-03	4.21E-03	4.32E-03	9.15E-04	7.51E-04	1.45E-07	2.19E-03	7.08E-04
17	A12	110	Single Unit Short Haul Truck	443	0.00E+00	4.08E-05	1.65E-06	7.61E+01	3.72E-05	1.84E-01	4.69E-05	1.97E-02	2.45E-03	7.23E-04	5.74E-03	1.21E-03	1.22E-03	7.92E-03	3.07E-04	1.36E-07	4.52E-03	3.68E-03
17	A12	110	Single Unit Long Haul Truck	20	0.00E+00	1.76E-06	6.87E-08	3.19E+00	1.50E-06	7.30E-03	2.01E-06	8.21E-04	1.10E-04	3.11E-05	2.50E-04	4.97E-05	5.05E-05	3.30E-04	1.29E-05	5.56E-09	2.00E-04	1.53E-04
17	A12	110	Combination Short Haul Truck	251	0.00E+00	4.46E-05	3.44E-06	8.82E+01	8.67E-08	6.54E-02	3.10E-05	7.15E-02	2.20E-03	6.44E-04	2.46E-03	9.91E-04	1.03E-03	1.40E-02	2.95E-04	0.00E+00	1.43E-03	1.35E-02
17	A12	110	Combination Long Haul Truck	229	0.00E+00	6.04E-05	3.84E-06	7.96E+01	2.94E-07	7.54E-02	4.72E-05	7.78E-02	2.14E-03	4.70E-04	4.80E-03	1.18E-03	1.23E-03	1.28E-02	2.67E-04	0.00E+00	3.57E-03	1.47E-02
17	A13	110	Passenger Car	1640	0.00E+00	1.62E-05	1.76E-06	6.95E+01	1.15E-04	3.92E-01	3.65E-05	1.94E-03	3.99E-03	8.74E-04	3.56E-03	2.30E-03	2.36E-03	1.77E-04	3.53E-04	7.97E-08	1.20E-03	3.03E-04
17	A13	110	Passenger Truck	2747	0.00E+00	3.37E-05	3.61E-06	1.62E+02	2.27E-04	7.73E-01	7.32E-05	4.71E-03	6.78E-03	1.53E-03	7.07E-03	4.57E-03	4.69E-03	9.94E-04	8.15E-04	1.58E-07	2.38E-03	7.68E-04
17	A13	110	Single Unit Short Haul Truck	560	0.00E+00	5.16E-05	2.09E-06	9.62E+01	4.70E-05	2.32E-01	5.92E-05	2.49E-02	3.10E-03	9.14E-04	7.25E-03	1.52E-03	1.55E-03	1.00E-02	3.87E-04	1.72E-07	5.71E-03	4.65E-03
17	A13	110	Single Unit Long Haul Truck	25	0.00E+00	2.23E-06	8.68E-08	4.03E+00	1.89E-06	9.22E-03	2.54E-06	1.04E-03	1.39E-04	3.93E-05	3.16E-04	6.28E-05	6.38E-05	4.17E-04	1.62E-05	7.03E-09	2.52E-04	1.94E-04
17	A13	110	Combination Short Haul Truck	304	0.00E+00	5.40E-05	4.17E-06	1.07E+02	1.05E-07	7.91E-02	3.75E-05	8.65E-02	2.67E-03	7.79E-04	2.97E-03	1.20E-03	1.24E-03	1.70E-02	3.57E-04	0.00E+00	1.73E-03	1.63E-02
17	A13	110	Combination Long Haul Truck	277	0.00E+00	7.32E-05	4.64E-06	9.64E+01	3.56E-07	9.12E-02	5.71E-05	9.41E-02	2.59E-03	5.69E-04	5.81E-03	1.43E-03	1.49E-03	1.55E-02	3.23E-04	0.00E+00	4.32E-03	1.77E-02
17	A14	110	Passenger Car	1768	0.00E+00	1.74E-05	1.90E-06	7.49E+01	1.24E-04	4.22E-01	3.93E-05	2.09E-03	4.30E-03	9.42E-04	3.84E-03	2.47E-03	2.54E-03	1.91E-04	3.80E-04	8.59E-08	1.30E-03	3.26E-04
17	A14	110	Passenger Truck	2960	0.00E+00	3.63E-05	3.89E-06	1.75E+02	2.45E-04	8.33E-01	7.89E-05	5.07E-03	7.30E-03	1.65E-03	7.62E-03	4.93E-03	5.06E-03	1.07E-03	8.79E-04	1.70E-07	2.57E-03	8.28E-04
17	A14	110	Single Unit Short Haul Truck	428	0.00E+00	3.94E-05	1.60E-06	7.35E+01	3.59E-05	1.77E-01	4.53E-05	1.90E-02	2.37E-03	6.98E-04	5.54E-03	1.16E-03	1.18E-03	7.64E-03	2.96E-04	1.32E-07	4.36E-03	3.55E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	1.70E-06	6.63E-08	3.08E+00	1.45E-06	7.05E-03	1.94E-06	7.93E-04	1.06E-04	3.00E-05	2.41E-04	4.80E-05	4.88E-05	3.19E-04	1.24E-05	5.37E-09	1.93E-04

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A18	110	Single Unit Long Haul Truck	23	0.00E+00	2.08E-06	8.10E-08	3.76E+00	1.77E-06	8.61E-03	2.37E-06	9.69E-04	1.30E-04	3.67E-05	2.95E-04	5.87E-05	5.96E-05	3.89E-04	1.52E-05	6.56E-09	2.35E-04	1.81E-04
17	A18	110	Combination Short Haul Truck	301	0.00E+00	5.35E-05	4.13E-06	1.06E+02	1.04E-07	7.83E-02	3.71E-05	8.56E-02	2.64E-03	7.71E-04	2.94E-03	1.19E-03	1.23E-03	1.68E-02	3.53E-04	0.00E+00	1.71E-03	1.61E-02
17	A18	110	Combination Long Haul Truck	274	0.00E+00	7.24E-05	4.59E-06	9.54E+01	3.52E-07	9.03E-02	5.65E-05	9.32E-02	2.56E-03	5.63E-04	5.75E-03	1.42E-03	1.47E-03	1.53E-02	3.20E-04	0.00E+00	4.27E-03	1.76E-02
17	A19	110	Passenger Car	1383	0.00E+00	1.36E-05	1.48E-06	5.86E+01	9.69E-05	3.30E-01	3.08E-05	1.64E-03	3.36E-03	7.36E-04	3.00E-03	1.94E-03	1.99E-03	1.49E-04	2.97E-04	6.72E-08	1.02E-03	2.55E-04
17	A19	110	Passenger Truck	2315	0.00E+00	2.84E-05	3.05E-06	1.37E+02	1.91E-04	6.52E-01	6.17E-05	3.97E-03	5.71E-03	1.29E-03	5.96E-03	3.86E-03	3.95E-03	8.38E-04	6.87E-04	1.33E-07	2.01E-03	6.48E-04
17	A19	110	Single Unit Short Haul Truck	518	0.00E+00	4.77E-05	1.93E-06	8.90E+01	4.35E-05	2.15E-01	5.48E-05	2.30E-02	2.87E-03	8.45E-04	6.71E-03	1.41E-03	1.43E-03	9.25E-03	3.58E-04	1.59E-07	5.28E-03	4.30E-03
17	A19	110	Single Unit Long Haul Truck	23	0.00E+00	2.06E-06	8.03E-08	3.73E+00	1.75E-06	8.53E-03	2.35E-06	9.60E-04	1.29E-04	3.63E-05	2.92E-04	5.81E-05	5.90E-05	3.86E-04	1.50E-05	6.50E-09	2.33E-04	1.79E-04
17	A19	110	Combination Short Haul Truck	299	0.00E+00	5.31E-05	4.10E-06	1.05E+02	1.03E-07	7.78E-02	3.69E-05	8.50E-02	2.62E-03	7.66E-04	2.92E-03	1.18E-03	1.22E-03	1.67E-02	3.51E-04	0.00E+00	1.70E-03	1.60E-02
17	A19	110	Combination Long Haul Truck	272	0.00E+00	7.19E-05	4.56E-06	9.47E+01	3.50E-07	8.96E-02	5.61E-05	9.25E-02	2.54E-03	5.59E-04	5.71E-03	1.41E-03	1.46E-03	1.52E-02	3.17E-04	0.00E+00	4.24E-03	1.74E-02
17	A20	110	Passenger Car	1247	0.00E+00	1.23E-05	1.34E-06	5.29E+01	8.74E-05	2.98E-01	2.78E-05	1.48E-03	3.03E-03	6.64E-04	2.71E-03	1.75E-03	1.79E-03	1.35E-04	2.68E-04	6.06E-08	9.16E-04	2.30E-04
17	A20	110	Passenger Truck	2089	0.00E+00	2.56E-05	2.75E-06	1.23E+02	1.73E-04	5.88E-01	5.56E-05	3.58E-03	5.15E-03	1.16E-03	5.38E-03	3.48E-03	3.57E-03	7.56E-04	6.20E-04	1.20E-07	1.81E-03	5.84E-04
17	A20	110	Single Unit Short Haul Truck	538	0.00E+00	4.96E-05	2.01E-06	9.24E+01	4.52E-05	2.23E-01	5.69E-05	2.39E-02	2.98E-03	8.78E-04	6.97E-03	1.46E-03	1.48E-03	9.61E-03	3.72E-04	1.66E-07	5.48E-03	4.46E-03
17	A20	110	Single Unit Long Haul Truck	24	0.00E+00	2.14E-06	8.34E-08	3.87E+00	1.82E-06	8.86E-03	2.44E-06	9.97E-04	1.34E-04	3.78E-05	3.04E-04	6.04E-05	6.13E-05	4.01E-04	1.56E-05	6.75E-09	2.42E-04	1.86E-04
17	A20	110	Combination Short Haul Truck	307	0.00E+00	5.45E-05	4.21E-06	1.08E+02	1.06E-07	7.98E-02	3.79E-05	8.73E-02	2.69E-03	7.86E-04	3.00E-03	1.21E-03	1.26E-03	1.71E-02	3.60E-04	0.00E+00	1.74E-03	1.64E-02
17	A20	110	Combination Long Haul Truck	279	0.00E+00	7.38E-05	4.68E-06	9.72E+01	3.59E-07	9.20E-02	5.76E-05	9.50E-02	2.61E-03	5.74E-04	5.85E-03	1.44E-03	1.50E-03	1.56E-02	3.26E-04	0.00E+00	4.35E-03	1.79E-02
16	B05	100	Passenger Car	1483	0.00E+00	1.39E-05	1.51E-06	6.05E+01	9.83E-05	2.93E-01	3.12E-05	1.60E-03	4.74E-03	9.09E-04	3.05E-03	1.96E-03	2.02E-03	1.76E-04	3.07E-04	6.44E-08	1.03E-03	2.50E-04
16	B05	100	Passenger Truck	2484	0.00E+00	2.86E-05	3.07E-06	1.40E+02	1.91E-04	5.67E-01	6.17E-05	3.99E-03	8.28E-03	1.61E-03	5.95E-03	3.85E-03	3.95E-03	9.15E-04	7.00E-04	1.28E-07	2.00E-03	6.56E-04
16	B05	100	Single Unit Short Haul Truck	344	0.00E+00	3.27E-05	1.21E-06	5.61E+01	2.50E-05	1.16E-01	3.70E-05	1.44E-02	2.22E-03	5.75E-04	4.69E-03	8.65E-04	8.80E-04	5.75E-03	2.27E-04	9.28E-08	3.81E-03	2.69E-03
16	B05	100	Single Unit Long Haul Truck	15	0.00E+00	1.42E-06	5.10E-08	2.36E+00	1.03E-06	4.74E-03	1.61E-06	6.05E-04	1.01E-04	2.50E-05	2.05E-04	3.65E-05	3.72E-05	2.40E-04	9.58E-06	3.80E-09	1.68E-04	1.13E-04
16	B05	100	Combination Short Haul Truck	227	0.00E+00	3.25E-05	2.40E-06	7.56E+01	8.61E-08	5.85E-02	2.32E-05	5.85E-02	2.20E-03	5.58E-04	1.98E-03	7.00E-04	7.27E-04	1.20E-02	2.53E-04	0.00E+00	1.25E-03	1.10E-02
16	B05	100	Combination Long Haul Truck	207	0.00E+00	4.59E-05	2.59E-06	6.85E+01	2.93E-07	6.81E-02	3.79E-05	6.26E-02	2.20E-03	4.49E-04	4.21E-03	8.34E-04	8.69E-04	1.10E-02	2.30E-04	0.00E+00	3.34E-03	1.18E-02
16	B06	100	Passenger Car	396	0.00E+00	3.69E-06	4.02E-07	1.61E+01	2.62E-05	7.83E-02	8.33E-06	4.27E-04	1.26E-03	2.42E-04	8.13E-04	5.24E-04	5.38E-04	4.70E-05	8.18E-05	1.72E-08	2.75E-04	6.66E-05
16	B06	100	Passenger Truck	662	0.00E+00	7.63E-06	8.18E-07	3.72E+01	5.09E-05	1.51E-01	1.65E-05	1.07E-03	2.21E-03	4.28E-04	1.59E-03	1.03E-03	1.05E-03	2.44E-04	1.87E-04	3.40E-08	5.34E-04	1.75E-04
16	B06	100	Single Unit Short Haul Truck	573	0.00E+00	5.44E-05	2.01E-06	9.35E+01	4.16E-05	1.93E-01	6.17E-05	2.40E-02	3.70E-03	9.58E-04	7.80E-03	1.44E-03	1.47E-03	9.58E-03	3.79E-04	1.55E-07	6.34E-03	4.48E-03
16	B06	100	Single Unit Long Haul Truck	25	0.00E+00	2.36E-06	8.50E-08	3.93E+00	1.72E-06	7.90E-03	2.67E-06	1.01E-03	1.68E-04	4.16E-05	3.41E-04	6.08E-05	6.19E-05	4.00E-04	1.60E-05	6.32E-09	2.79E-04	1.88E-04
16	B06	100	Combination Short Haul Truck	289	0.00E+00	4.14E-05	3.06E-06	9.64E+01	1.10E-07	7.45E-02	2.96E-05	7.45E-02	2.80E-03	7.10E-04	2.52E-03	8.92E-04	9.26E-04	1.53E-02	3.22E-04	0.00E+00	1.59E-03	1.40E-02
16	B06	100	Combination Long Haul Truck	264	0.00E+00	5.85E-05	3.30E-06	8.73E+01	3.73E-07	8.67E-02	4.83E-05	7.98E-02	2.81E-03	5.72E-04	5.36E-03	1.06E-03	1.11E-03	1.40E-02	2.93E-04	0.00E+00	4.26E-03	1.50E-02
16	B07	100	Passenger Car	1614	0.00E+00	1.51E-05	1.64E-06	6.59E+01	1.07E-04	3.19E-01	3.40E-05	1.74E-03	5.16E-03	9.89E-04	3.32E-03	2.14E-03	2.19E-03	1.92E-04	3.34E-04	7.01E-08	1.12E-03	2.72E-04
16	B07	100	Passenger Truck	2703	0.00E+00	3.12E-05	3.34E-06	1.52E+02	2.08E-04	6.17E-01	6.72E-05	4.35E-03	9.01E-03	1.75E-03	6.48E-03	4.19E-03	4.30E-03	9.96E-04	7.62E-04	1.39E-07	2.18E-03	7.14E-04
16	B07	100	Single Unit Short Haul Truck	374	0.00E+00	3.55E-05	1.31E-06	6.10E+01	2.72E-05	1.26E-01	4.02E-05	1.57E-02	2.41E-03	6.25E-04	5.09E-03	9.40E-04	9.56E-04	6.25E-03	2.47E-04	1.01E-07	4.13E-03	2.92E-03
16	B07	100	Single Unit Long Haul Truck	16	0.00E+00	1.54E-06	5.54E-08	2.57E+00	1.12E-06	5.15E-03	1.74E-06	6.57E-04	1.10E-04	2.71E-05	2.23E-04	3.96E-05	4.04E-05	2.61E-04	1.04E-05	4.12E-09	1.82E-04	1.23E-04
16	B07	100	Combination Short Haul Truck	198	0.00E+00	2.84E-05	2.09E-06	6.61E+01	7.52E-08	5.10E-02	2.03E-05	5.11E-02	1.92E-03	4.87E-04	1.73E-03	6.12E-04	6.35E-04	1.05E-02	2.21E-04	0.00E+00	1.09E-03	9.62E-03
16	B07	100	Combination Long Haul Truck	181	0.00E+00	4.01E-05	2.26E-06	5.98E+01	2.55E-07	5.94E-02	3.31E-05	5.47E-02	1.92E-03	3.92E-04	3.68E-03	7.29E-04	7.59E-04	9.60E-03	2.00E-04	0.00E+00	2.92E-03	1.03E-02
16	B08	100	Passenger Car	816	0.00E+00	7.62E-06	8.28E-07	3.33E+01	5.41E-05	1.61E-01	1.72E-05	8.80E-04	2.61E-03	5.00E-04	1.68E-03	1.08E-03	1.11E-03	9.71E-05	1.69E-04	3.54E-08	5.67E-04	1.37E-04
16	B08	100	Passenger Truck	1367	0.00E+00	1.58E-05	1.69E-06	7.68E+01	1.05E-04	3.12E-01	3.40E-05	2.20E-03	4.55E-03	8.84E-04	3.28E-03	2.12E-03	2.17E-03	5.04E-04	3.85E-04	7.02E-08	1.10E-03	3.61E-04
16	B08	100	Single Unit Short Haul Truck	62	0.00E+00	5.92E-06	2.19E-07	1.02E+01	4.53E-06	2.10E-02	6.71E-06	2.61E-03	4.02E-04	1.04E-04	8.48E-04	1.57E-04	1.59E-04	1.04E-03	4.11E-05	1.68E-08	6.89E-04	4.87E-04
16	B08	100	Single Unit Long Haul Truck	3	0.00E+00	2.57E-07	9.24E-09	4.28E-01	1.87E-07	8.59E-04	2.91E-07	1.10E-04	1.83E-05	4.52E-06	3.71E-05	6.61E-06	6.73E-06	4.35E-05	1.74E-06	6.87E-10	3.04E-05	2.04E-05
16	B08	100	Combination Short Haul Truck	54	0.00E+00	7.78E-06	5.75E-07	1.81E+01	2.06E-08	1.40E-02	5.57E-06	1.40E-02	5.27E-04	1.34E-04	4.74E-04	1.68E-04	1.74E-04	2.88E-03	6.06E-05	0.00E+00	3.00E-04	2.64E-03
16	B08	100	Combination Long Haul Truck	50	0.00E+00	1.10E-05	6.20E-07	1.64E+01	7.01E-08	1.63E-02	9.07E-06	1.50E-02	5.28E-04	1.08E-04	1.01E-03	2.00E-04	2.08E-04	2.63E-03	5.50E-05	0.00E+00	8.01E-04	2.83E-03
16	B09	100	Passenger Car	920	0.00E+00	8.60E-06	9.34E-07	3.76E+01	6.10E-05	1.82E-01	1.94E-05	9.93E-04	2.94E-03	5.64E-04	1.89E-03	1.22E-03	1.25E-03	1.09E-04	1.90E-04	4.00E-08	6.40E-04	1.55E-04
16	B09	100	Passenger Truck	1542	0.00E+00	1.78E-05	1.90E-06	8.66E+01	1.18E-04	3.52E-01	3.83E-05	2.48E-03	5.14E-03	9.97E-04	3.69E-03	2.39E-03	2.45E-03	5.68E-04	4.34E-04	7.91E-08	1.24E-03	4.07E-04
16	B09	100	Single Unit Short Haul Truck	174	0.00E+00	1.66E-05	6.12E-07	2.85E+01	1.27E-05	5.88E-02	1.88E-05	7.31E-03	1.13E-03	2.92E-04	2.38E-03	4.39E-04	4.46E-04	2.92E-03	1.15E-04	4.70E-08	1.93E-03	1.36E-03
16	B09	100	Single Unit Long Haul Truck	8	0.00E+00	7.20E-07	2.59E-08	1.20E+00	5.24E-07	2.40E-03	8.14E-07	3.07E-04	5.12E-05	1.27E-05	1.04E-04	1.85E-05	1.88E-05	1.22E-04	4.86E-06	1.92E-09	8.50E-05	5.72E-05
16	B09	100	Combination Short Haul Truck	93	0.00E+00	1.32E-05	9.78E-07	3.08E+01	3.51E-08	2.38E-02	9.48E-06	2.38E-02	8.97E-04	2.27E-04	8.07E-04	2.86E-04	2.97E-04	4.90E-03	1.03E-04	0.00E+00	5.10E-04	4.49E-03
16	B09	100	Combination Long Haul Truck	84	0.00E+00	1.87E-05	1.06E-06	2.79E+01	1.19E-07	2.78E-02	1.54E-05	2.55E-02	8.98E-04	1.83E-04	1.72E-03	3.40E-04	3.54E-04	4.48E-03	9.36E-05	0.00E+00	1.36E-03	4.81E-03
16	B10	100	Passenger Car	1742	0.00E+00	1.63E-05	1.77E-06	7.11E+01	1.15E-04	3.45E-01	3.67E-05	1.88E-03	5.57E-03	1.07E-03	3.58E-03	2.31E-03	2.37E-03	2.07E-04	3.60E-04	7.56E-08	1.21E-03	2.93E-04
16	B10	100	Passenger Truck	2916	0.00E+00	3.36E-05	3.60E-06	1.64E+02	2.24E-04	6.66E-01	7.25E-05	4.69E-03	9.72E-03	1.89E-03	6.99E-03	4.53E-03	4.64E-03	1.07E-03	8.22E-04	1.50E-07	2.35E-03	7.70E-04
16	B10	100	Single Unit Short Haul Truck	106	0.00E+00	1.01E-05	3.73E-07	1.74E+01	7.73E-06	3.58E-02	1.15E-05	4.46E-03	6.87E-04	1.78E-04	1.45E-03	2.67E-04	2.72E-04	1.78E-03	7.03E-05	2.87E-08	1.18E-03	8.32E-04
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	4.39E-07	1.58E-08	7.30E-01	3.20E-07	1.47E-03	4.96E-07	1.87E-04	3.12E-05	7.72E-06	6.33E-05	1.13E-05	1.15E-05	7.43E-05	2.96E-06	1.17E-09	5.19E-05	3.49E-05
16	B10	100	Combination Short Haul Truck	200	0.00E+00	2.86E-05	2.11E-06	6.66E+01	7.58E-08	5.15E-02	2.05E-05	5.15E-02	1.94E-03	4.91E-04	1.74E-03	6.16E-04	6.40E-04	1.06E-02	2.23E-04	0.00E+00	1.10E-03	9.70E-03
16	B10	100	Combination Long Haul Truck	182	0.00E+00	4.04E-05	2.28E-06	6.03E+01	2.57E-07	5.99E-02	3.33E-05	5.51E-02	1.94E-03	3.95E-04	3.71E-03	7.34E-04	7.65E-04	9.68E-03	2.02E-04	0.00E+00	2.94E-03	1.04E-02
16	B11	100	Passenger Car	335	0.00E+00	3.13E-06	3.40E-07	1.37E+01	2.22E-05	6.62E-02	7.05E-06	3.61E-04	1.07E-03	2.05E-04	6.87E-04	4.43E-04	4.55E-04	3.98E-05	6.92E-05	1.45E-08	2.33E-04	5.63E-05
16	B11	100	Passenger Truck	560	0.00E+00	6.46E-06	6.92E-07	3.15E+01	4.31E-05	1.28E-01	1.39E-05	9.01E-04	1.87E-03	3.62E-04	1.34E-03	8.70E-04	8.92E-04	2.06E-04	1.58E-04	2.88E-08	4.51E-04	1.48E-04
16	B11	100	Single Unit Short Haul Truck	102	0.00E+00	9.65E-06	3.56E-07	1.66E+01	7.38E-06	3.42E-02	1.09E-05	4.26E-03	6.56E-04	1.70E-04	1.38E-03	2.55E-04	2.60E-04	1.70E-03	6.71E-05	2.74E-08	1.12E-03	7.94E-04
16	B11	100	Single Unit Long Haul Truck	4	0.00E+00	4.19E-07	1.51E-08	6.97E-01	3.05E-07	1.40E-03	4.74E-07	1.79E-04	2.98E-05	7.37E-06	6.05E-05	1.08E-05	1.10E-05	7.09E-05	2.83E-06	1.12E-09	4.95E-05	3.33E-05
16	B11	100	Combination Short Haul Truck	47	0.00E+00	6.66E-06	4.92E-07	1.55E+01	1.77E-08	1.20E-02	4.77E-06	1.20E-02	4.51E-04	1.14E-04	4.06E-04	1.44E-04	1.49E-04	2.47E-03	5.19E-05	0.00E+00	2.57E-04	2.26E-03
16	B11	100	Combination Long Haul Truck	42	0.00E+00	9.41E-06	5.31E-07	1.41E+01	6.00E-08	1.40E-02	7.77E-06	1.28E-02	4.52E-04	9.20E-05	8.63E-04	1.71E-04	1.78E-04	2.25E-03	4.71E-05	0.00E+00	6.85E-04	2.42E-03
16	B12	100	Passenger Car	859	0.00E+00	8.02E-06	8.72E-07	3.51E+01	5.69E-05	1.70E-01	1.81E-05	9.26E-04	2.75E-03	5.26E-04	1.76E-03	1.14E-03	1.17E-03	1.02E-04	1.78E-04	3.73E-08	5.97E-04	1.44E-04
16	B12	100	Passenger Truck	1438	0.00E+00	1.66E-05	1.78E-06	8.08E+01	1.11E-04	3.28E-01	3.57E-05	2.31E-03	4.79E-03	9.30E-04	3.45E-03	2.23E-03	2.29E-03	5.30E-04	4.05E-04	7.38E-08	1.16E-03	3.80E-04
16	B12	100	Single Unit Short Haul Truck	39	0.00E+00	3.73E-06	1.38E-07	6.41E+00	2.86E-06	1.32E-02	4.23E-06	1.65E-03	2.54E-04	6.57E-05	5.35E-04	9.88E-05	1.01E-04	6.57E-04	2.60E-05	1.06E-08	4.35E-04	3.07E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	1.62E-07	5.83E-09	2.70E-01	1.18E-07	5.42E-04	1.83E-07	6.91E-05	1.15E-05	2.85E-06	2.34E-05	4.17E-06	4.24E-06	2.74E-05	1.09E-06	4.34E-10	1.92E-05	1.29E-05
16	B12	100	Combination Short Haul Truck	44	0.00E+00	6.29E-06	4.64E-07	1.46E+01	1.67E-08	1.13E-02	4.50E-06	1.13E-02	4.26E-04	1.08E-04	3.83E-04	1.36E-04	1.41E-04	2.33E-03	4.90E-05	0.00E+00	2.42E-04	2.13E-03
16	B12	100	Combination Long Haul Truck	40	0.00E+00	8.88E-06	5.01E-07	1.33E+01	5.66E-08	1.32E-02	7.33E-06	1.21E-02	4.26E-04	8.69E-05	8.15E-04	1.61E-04	1.68E-04	2.13E-03	4.44E-05	0.00E+00	6.47E-04	2.28E-03
16	B13	100	Passenger Car	842	0.00E+00	7.86E-06	8.55E-07	3.44E+01	5.58E-05	1.67E-01	1.77E-05	9.08E-04	2.69E-03	5.16E-04	1.73E-03	1.12E-03	1.14E-03	1.00E-04	1.74E-04	3.65E-08	5.85E-04	1.42E-04
16	B13	100	Passenger Truck	1410	0.00E+00	1.62E-05	1.74E-06	7.92E+01	1.08E-04	3.22E-01	3.50E-05	2.27E-03	4.70E-03	9.12E-04	3.38E-03	2.19E-03	2.24E-03	5.19E-04	3.97E-04	7.24E-08	1.14E-03	3.73E-04
16	B13	100	Single Unit Short Haul Truck	64	0.00E+00	6.10E-06	2.25E-07	1.05E+01	4.67E-06	2.16E-02	6.91E-06	2.69E-03	4.15E-04	1.07E-04	8.74E-04	1.61E-04	1.64E-04	1.07E-03	4.24E-05	1.73E-08	7.10E-04	5.02E-04
16	B13	100	Single Unit Long Haul Truck	3	0.00E+00	2.65E-07	9.53E-09	4.41E-01	1.93E-07	8.85E-04	3.00E-07	1.13E-04	1.88E-05	4.66E-06	3.82E-05	6.81E-06	6.93E-06	4.48E-05	1.79E-06	7.08E-10	3.13E-05	2.11E-05
16	B13	100	Combination Short Haul Truck	89	0.00E+00	1.28E-05	9.45E-07	2.98E+01	3.39E-08	2.30E-02	9.16E-06	2.30E-02	8.66E-04	2.20E-04	7.79E-04	2.76E-04	2.86E-04	4.74E-03	9.97E-05	0.00E+00	4.93E-04	4.34E-03
16	B13	100	Combination Long Haul Truck	82	0.00E+00	1.81E-05	1.02E-06	2.70E+01	1.15E-07	2.68E-02	1.49E-05	2.47E-02	8.68E-04	1.77E-04	1.66E-03	3.29E-04	3.42E-04	4.33E-03	9.05E-05	0.00E+00	1.32E-03	4.65E-03
16	B14	100	Passenger Car	401	0.00E+00	3.74E-06	4.07E-07	1.64E+01	2.66E-05	7.93E-02	8.44E-06	4.32E-04	1.28E-03	2.46E-04	8.23E-04	5.31E-04	5.45E-04	4.77E-05	8.28E-05	1.74E-08	2.78E-04	6.74E-05
16	B14	100	Passenger Truck	671	0.00E+00	7.74E-06	8.29E-07	3.77E+01	5.16E-05	1.53E-01	1.67E-05	1.08E-03	2.24E-03	4.34E-04	1.61E-03	1.04E-03	1.07E-03	2.47E-04	1.89E-04	3.45E-08	5.41E-04	1.77E-04
16	B14	100	Single Unit Short Haul Truck	90	0.00E+00	8.56E-06	3.16E-07	1.47E+01	6.55E-06	3.03E-02	9.70E-06	3.78E-03	5.82E-04	1.51E-04	1.23E-03	2.27E-04	2.30E-04	1.51E-03	5.95E-05	2.43E-08	9.96E-04	7.04E-04
16	B14	100	Single Unit Long Haul Truck	4	0.00E+00	3.72E-07	1.34E-08	6.18E-01	2.71E-07	1.24E-03	4.20E-07	1.58E-04	2.64E-05	6.54E-06	5.36E-05	9.55E-06	9.73E-06	6.29E-05	2.51E-06	9.94E-10	4.39E-05	2.95E-05
16	B14	100	Combination Short Haul Truck	44	0.00E+00	6.36E-06	4.70E-07	1.48E+01	1.69E-08	1.14E-02	4.55E-06	1.15E-02	4.31E-04	1.09E-04	3.87E-04	1.37E-04	1.42E-04	2.35E-03	4.95E-05	0.00E+00	2.45E-04	2.16E-03
16	B14	100	Combination Long Haul Truck	41	0.00E+00	8.99E-06	5.07E-07	1.34E+01	5.73E-08	1.33E-02	7.42E-06	1.23E-02	4.31E-04	8.79E-05	8.25E-04	1.63E-04	1.70E-04	2.15E-03	4.50E-05	0.00E+00	6.54E-04	2.31E-03
53	C11	70	Passenger Car	337	0.00E+00	3.64E-06	3.96E-07	1.48E+01	2.58E-05	7.24E-02	8.21E-06	3.47E-04	2.56E-03	4.00E-04	8.01E-04	5.16E-04	5.30E-04	5.72E-05	7.47E-05	1.55E-08	2.71E-04	5.41E-05
53	C11	70	Passenger Truck	564	0.00E+00	7.60E-06	8.09E-07	3.34E+01	4.88E-05	1.28E-01	1.60E-05	9.79E-04	4.56E-03	7.09E-04	1.53E-03	9.93E-04	1.02E-03	2.49E-04	1.67E-04	2.92E-08	5.11E-04	1.64E-04
53	C11	70	Single Unit Short Haul Truck	34	0.00E+00	5.90E-06	2.40E-07	5.49E+00	3.95E-06	9.96E-03	6.42E-06	2.34E-03	5.33E-04	9.78E-05	7.95E-04	1.52E-04	1.55E-04	5.58E-04	2.23E-05	9.02E-09	6.41E-04	4.38E-04
53	C11	70	Single Unit Long Haul Truck	1	0.00E+00	2.57E-07	1.03E-08	2.33E-01	1.70E-07	4.18E-04	2.79E-07	1.01E-04	2.44E-05	4.37E-06	3.47E-05	6.54E-06	6.67E-06	2.35E-05	9.48E-07	3.80E-10	2.80E-05	1.89E-05
53	C11	70	Combination Short Haul Truck	23	0.00E+00	5.92E-06	4.41E-07	8.00E+00	1.50E-08	8.55E-03	4.22E-06	8.82E-03	8.35E-04	1.39E-04	3.55E-04	1.28E-04	1.33E-04	1.27E-03	2.68E-05	0.00E+00	2.22E-04	1.66E-03
53	C11	70	Combination Long Haul Truck	21	0.00E+00	8.12E-06	4.62E-07	7.51E+00	5.09E-08	1.02E-02	6.68E-06	9.44E-03	8.69E-04	1.31E-04	7.38E-04	1.48E-04	1.55E-04	1.21E-03	2.52E-05	0.00E+00	5.84E-04	1.78E-03
52	C12	60	Passenger Car	391	0.00E+00	4.60E-06	4.99E-07	1.78E+01	3.26E-05	9.10E-02	1.04E-05	3.88E-04	3.84E-03	5.76E-04	1.01E-03	6.52E-04	6.69E-04	7.75E-05	8.94E-05	1.82E-08	3.42E-04	6.05E-05

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C16	60	Passenger Truck	237	0.00E+00	3.50E-06	3.71E-07	1.43E+01	2.21E-05	5.64E-02	7.27E-06	4.27E-04	2.46E-03	3.66E-04	6.92E-04	4.51E-04	4.62E-04	1.12E-04	7.13E-05	1.20E-08	2.31E-04	7.23E-05
52	C16	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.55E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
52	C16	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.02E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.69E-04
52	C16	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.22E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.06E-04
53	C17	70	Passenger Car	424	0.00E+00	4.59E-06	4.98E-07	1.87E+01	3.26E-05	9.12E-02	1.03E-05	4.37E-04	3.22E-03	5.04E-04	1.01E-03	6.50E-04	6.67E-04	7.21E-05	9.41E-05	1.95E-08	3.41E-04	6.81E-05
53	C17	70	Passenger Truck	711	0.00E+00	9.58E-06	1.02E-06	4.21E+01	6.15E-05	1.61E-01	2.01E-05	1.23E-03	5.75E-03	8.93E-04	1.92E-03	1.25E-03	1.28E-03	3.13E-04	2.10E-04	3.68E-08	6.43E-04	2.06E-04
53	C17	70	Single Unit Short Haul Truck	110	0.00E+00	1.94E-05	7.87E-07	1.80E+01	1.30E-05	3.27E-02	2.11E-05	7.69E-03	1.75E-03	3.21E-04	2.61E-03	4.98E-04	5.08E-04	1.83E-03	7.34E-05	2.96E-08	2.11E-03	1.44E-03
53	C17	70	Single Unit Long Haul Truck	5	0.00E+00	8.43E-07	3.40E-08	7.65E-01	5.59E-07	1.37E-03	9.17E-07	3.31E-04	8.01E-05	1.44E-05	1.14E-04	2.15E-05	2.19E-05	7.74E-05	3.12E-06	1.25E-09	9.21E-05	6.19E-05
53	C17	70	Combination Short Haul Truck	49	0.00E+00	1.25E-05	9.31E-07	1.69E+01	3.18E-08	1.81E-02	8.92E-06	1.87E-02	1.76E-03	2.94E-04	7.51E-04	2.71E-04	2.82E-04	2.69E-03	5.66E-05	0.00E+00	4.69E-04	3.51E-03
53	C17	70	Combination Long Haul Truck	44	0.00E+00	1.72E-05	9.76E-07	1.59E+01	1.08E-07	2.16E-02	1.41E-05	2.00E-02	1.84E-03	2.77E-04	1.56E-03	3.14E-04	3.27E-04	2.55E-03	5.32E-05	0.00E+00	1.23E-03	3.76E-03
52	C18	60	Passenger Car	166	0.00E+00	1.95E-06	2.12E-07	7.58E+00	1.39E-05	3.87E-02	4.41E-06	1.65E-04	1.63E-03	2.45E-04	4.30E-04	2.77E-04	2.84E-04	3.30E-05	3.80E-05	7.75E-09	1.45E-04	2.57E-05
52	C18	60	Passenger Truck	279	0.00E+00	4.13E-06	4.37E-07	1.69E+01	2.60E-05	6.64E-02	8.55E-06	5.03E-04	2.90E-03	4.31E-04	8.15E-04	5.30E-04	5.44E-04	1.32E-04	8.39E-05	1.42E-08	2.72E-04	8.51E-05
52	C18	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.91E-04
52	C18	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.73E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
52	C18	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.48E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.56E-04
52	C18	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.71E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.99E-04
50	C19	40	Passenger Car	51	0.00E+00	7.29E-07	7.93E-08	2.68E+00	5.18E-06	1.44E-02	1.64E-06	4.64E-05	8.77E-04	1.23E-04	1.60E-04	1.03E-04	1.06E-04	1.51E-05	1.33E-05	2.47E-09	5.43E-05	7.24E-06
50	C19	40	Passenger Truck	85	0.00E+00	1.61E-06	1.69E-07	5.84E+00	9.69E-06	2.38E-02	3.23E-06	1.79E-04	1.55E-03	2.16E-04	3.05E-04	1.99E-04	2.04E-04	5.16E-05	2.88E-05	4.20E-09	1.01E-04	3.09E-05
50	C19	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.23E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.79E-05
50	C19	40	Single Unit Long Haul Truck	2	0.00E+00	1.01E-06	7.54E-08	8.68E-01	2.50E-09	1.43E-03	7.17E-07	1.46E-03	2.03E-04	3.03E-05	6.00E-05	2.19E-05	2.28E-05	1.38E-04	2.90E-06	0.00E+00	3.73E-05	2.76E-04
50	C19	40	Combination Long Haul Truck	2	0.00E+00	1.34E-06	7.57E-08	8.33E-01	8.52E-09	1.73E-03	1.11E-06	1.55E-03	2.11E-04	2.97E-05	1.23E-04	2.44E-05	2.54E-05	1.34E-04	2.79E-06	0.00E+00	9.74E-05	2.91E-04
53	C20	70	Passenger Car	81	0.00E+00	8.73E-07	9.49E-08	3.56E+00	6.19E-06	1.74E-02	1.97E-06	8.31E-05	6.13E-04	9.59E-05	1.92E-04	1.24E-04	1.27E-04	1.37E-05	1.79E-05	3.72E-09	6.49E-05	1.30E-05
53	C20	70	Passenger Truck	135	0.00E+00	1.82E-06	1.94E-07	8.01E+00	1.17E-05	3.06E-02	3.83E-06	2.35E-04	1.09E-03	1.70E-04	3.66E-04	2.38E-04	2.44E-04	5.96E-05	4.00E-05	7.00E-09	1.22E-04	3.93E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.26E-05
53	C20	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.02E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
53	C20	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.59E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
50	C21	40	Passenger Car	296	0.00E+00	4.24E-06	4.61E-07	1.56E+01	3.01E-05	8.38E-02	9.57E-06	2.70E-04	5.10E-03	7.17E-04	9.33E-04	6.02E-04	6.17E-04	8.79E-05	7.75E-05	1.44E-08	3.16E-04	4.21E-05
50	C21	40	Passenger Truck	495	0.00E+00	9.35E-06	9.83E-07	3.39E+01	5.63E-05	1.39E-01	1.88E-05	1.04E-03	9.04E-03	1.26E-03	1.78E-03	1.16E-03	1.19E-03	3.00E-04	1.67E-04	2.44E-08	5.88E-04	1.80E-04
50	C21	40	Single Unit Short Haul Truck	85	0.00E+00	2.89E-05	1.29E-06	1.61E+01	2.00E-05	2.52E-02	3.09E-05	1.16E-02	3.35E-03	5.24E-04	3.72E-03	7.75E-04	7.90E-04	1.64E-03	6.56E-05	2.78E-08	2.93E-03	2.18E-03
50	C21	40	Single Unit Long Haul Truck	4	0.00E+00	1.27E-06	5.62E-08	6.95E-01	8.76E-07	1.10E-03	1.36E-06	5.07E-04	1.50E-04	2.33E-05	1.63E-04	3.39E-05	3.45E-05	7.10E-05	2.83E-06	1.21E-09	1.29E-04	9.50E-05
50	C21	40	Combination Short Haul Truck	33	0.00E+00	1.61E-05	1.21E-06	1.39E+01	4.00E-08	2.28E-02	1.15E-05	2.34E-02	3.26E-03	4.85E-04	9.60E-04	3.51E-04	3.64E-04	2.21E-03	4.64E-05	0.00E+00	5.96E-04	4.42E-03
50	C21	40	Combination Long Haul Truck	31	0.00E+00	2.15E-05	1.21E-06	1.33E+01	1.36E-07	2.77E-02	1.77E-05	2.47E-02	3.38E-03	4.75E-04	1.97E-03	3.90E-04	4.07E-04	2.14E-03	4.46E-05	0.00E+00	1.56E-03	4.66E-03
52	C22	60	Passenger Car	238	0.00E+00	2.79E-06	3.04E-07	1.08E+01	1.98E-05	5.54E-02	6.30E-06	2.36E-04	2.33E-03	3.50E-04	6.14E-04	3.96E-04	4.07E-04	4.71E-05	5.43E-05	1.11E-08	2.08E-04	3.68E-05
52	C22	60	Passenger Truck	398	0.00E+00	5.90E-06	6.25E-07	2.41E+01	3.72E-05	9.50E-02	1.22E-05	7.19E-04	4.15E-03	6.16E-04	1.17E-03	7.58E-04	7.77E-04	1.89E-04	1.20E-04	2.02E-08	3.88E-04	1.22E-04
52	C22	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.06E-04
52	C22	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.09E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
52	C22	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.02E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.69E-04
52	C22	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.22E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.06E-04
53	C23	70	Passenger Car	479	0.00E+00	5.18E-06	5.63E-07	2.11E+01	3.67E-05	1.03E-01	1.17E-05	4.93E-04	3.63E-03	5.69E-04	1.14E-03	7.34E-04	7.53E-04	8.14E-05	1.06E-04	2.21E-08	3.85E-04	7.69E-05
53	C23	70	Passenger Truck	802	0.00E+00	1.08E-05	1.15E-06	4.75E+01	6.94E-05	1.82E-01	2.27E-05	1.39E-03	6.49E-03	1.01E-03	2.17E-03	1.41E-03	1.45E-03	3.53E-04	2.37E-04	4.15E-08	7.26E-04	2.33E-04
53	C23	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.22E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.89E-04
53	C23	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.81E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.39E-05
53	C23	70	Combination Short Haul Truck	23	0.00E+00	5.92E-06	4.41E-07	8.00E+00	1.50E-08	8.55E-03	4.22E-06	8.82E-03	8.35E-04	1.39E-04	3.55E-04	1.28E-04	1.33E-04	1.27E-03	2.68E-05	0.00E+00	2.22E-04	1.66E-03
53	C23	70	Combination Long Haul Truck	21	0.00E+00	8.12E-06	4.62E-07	7.51E+00	5.09E-08	1.02E-02	6.68E-06	9.44E-03	8.69E-04	1.31E-04	7.38E-04	1.48E-04	1.55E-04	1.21E-03	2.52E-05	0.00E+00	5.84E-04	1.78E-03
52	C24	60	Passenger Car	72	0.00E+00	8.48E-07	9.21E-08	3.29E+00	6.02E-06	1.68E-02	1.91E-06	7.16E-05	7.08E-04	1.06E-04	1.86E-04	1.20E-04	1.23E-04	1.43E-05	1.65E-05	3.36E-09	6.31E-05	1.12E-05
52	C24	60	Passenger Truck	121	0.00E+00	1.79E-06	1.90E-07	7.32E+00	1.13E-05	2.88E-02	3.71E-06	2.18E-04	1.26E-03	1.87E-04	3.54E-04	2.30E-04	2.36E-04	5.73E-05	3.64E-05	6.14E-09	1.18E-04	3.69E-05
52	C24	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.18E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
52	C24	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.97E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
52	C24	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.42E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
50	C25	40	Passenger Car	259	0.00E+00	3.72E-06	4.05E-07	1.37E+01	2.64E-05	7.35E-02	8.39E-06	2.37E-04	4.47E-03	6.29E-04	8.19E-04	5.28E-04	5.42E-04	7.71E-05	6.80E-05	1.26E-08	2.77E-04	3.69E-05
50	C25	40	Passenger Truck	435	0.00E+00	8.21E-06	8.63E-07	2.98E+01	4.94E-05	1.22E-01	1.65E-05	9.12E-04	7.93E-03	1.10E-03	1.56E-03	1.02E-03	1.04E-03	2.63E-04	1.47E-04	2.14E-08	5.16E-04	1.58E-04
50	C25	40	Single Unit Short Haul Truck	62	0.00E+00	2.11E-05	9.39E-07	1.18E+01	1.46E-05	1.84E-02	2.26E-05	8.49E-03	2.45E-03	3.83E-04	2.72E-03	5.66E-04	5.77E-04	1.20E-03	4.79E-05	2.03E-08	2.14E-03	1.59E-03
50	C25	40	Single Unit Long Haul Truck	3	0.00E+00	9.26E-07	4.10E-08	5.08E-01	6.40E-07	8.02E-04	9.91E-07	3.70E-04	1.10E-04	1.70E-05	1.19E-04	2.48E-05	2.52E-05	5.19E-05	2.07E-06	8.82E-10	9.41E-05	6.94E-05
50	C25	40	Combination Short Haul Truck	33	0.00E+00	1.59E-05	1.19E-06	1.37E+01	3.94E-08	2.25E-02	1.13E-05	2.31E-02	3.20E-03	4.78E-04	9.45E-04	3.45E-04	3.58E-04	2.17E-03	4.57E-05	0.00E+00	5.87E-04	4.35E-03
50	C25	40	Combination Long Haul Truck	30	0.00E+00	2.11E-05	1.19E-06	1.31E+01	1.34E-07	2.73E-02	1.74E-05	2.43E-02	3.33E-03	4.67E-04	1.94E-03	3.84E-04	4.00E-04	2.11E-03	4.39E-05	0.00E+00	1.53E-03	4.58E-03
53	C26	70	Passenger Car	324	0.00E+00	3.50E-06	3.80E-07	1.43E+01	2.48E-05	6.96E-02	7.89E-06	3.33E-04	2.46E-03	3.84E-04	7.70E-04	4.96E-04	5.09E-04	5.50E-05	7.18E-05	1.49E-08	2.60E-04	5.20E-05
53	C26	70	Passenger Truck	542	0.00E+00	7.31E-06	7.77E-07	3.21E+01	4.69E-05	1.23E-01	1.53E-05	9.41E-04	4.39E-03	6.82E-04	1.47E-03	9.54E-04	9.78E-04	2.39E-04	1.60E-04	2.81E-08	4.91E-04	1.58E-04
53	C26	70	Single Unit Short Haul Truck	57	0.00E+00	1.01E-05	4.11E-07	9.42E+00	6.78E-06	1.71E-02	1.10E-05	4.01E-03	9.13E-04	1.68E-04	1.36E-03	2.60E-04	2.65E-04	9.57E-04	3.83E-05	1.55E-08	1.10E-03	7.51E-04
53	C26	70	Single Unit Long Haul Truck	3	0.00E+00	4.40E-07	1.77E-08	3.99E-01	2.92E-07	7.17E-04	4.79E-07	1.73E-04	4.18E-05	7.49E-06	5.95E-05	1.12E-05	1.14E-05	4.04E-05	1.63E-06	6.52E-10	4.80E-05	3.23E-05
53	C26	70	Combination Short Haul Truck	30	0.00E+00	7.67E-06	5.71E-07	1.04E+01	1.95E-08	1.11E-02	5.47E-06	1.14E-02	1.08E-03	1.80E-04	4.60E-04	1.66E-04	1.73E-04	1.65E-03	3.47E-05	0.00E+00	2.88E-04	2.15E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.22E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.30E-03
50	C27	40	Passenger Car	362	0.00E+00	5.19E-06	5.64E-07	1.91E+01	3.68E-05	1.02E-01	1.17E-05	3.30E-04	6.23E-03	8.76E-04	1.14E-03	7.35E-04	7.55E-04	1.07E-04	9.48E-05	1.76E-08	3.86E-04	5.15E-05
50	C27	40	Passenger Truck	605	0.00E+00	1.14E-05	1.20E-06	4.15E+01	6.89E-05	1.69E-01	2.30E-05	1.27E-03	1.11E-02	1.53E-03	2.17E-03	1.42E-03	1.45E-03	3.67E-04	2.05E-04	2.98E-08	7.19E-04	2.20E-04
50	C27	40	Single Unit Short Haul Truck	56	0.00E+00	1.88E-05	8.38E-07	1.05E+01	1.30E-05	1.65E-02	2.01E-05	7.58E-03	2.19E-03	3.41E-04	2.42E-03	5.05E-04	5.15E-04	1.07E-03	4.28E-05	1.81E-08	1.91E-03	1.42E-03
50	C27	40	Single Unit Long Haul Truck	2	0.00E+00	8.26E-07	3.66E-08	4.53E-01	5.71E-07	7.16E-04	8.84E-07	3.30E-04	9.80E-05	1.52E-05	1.07E-04	2.21E-05	2.25E-05	4.63E-05	1.85E-06	7.87E-10	8.40E-05	6.19E-05
50	C27	40	Combination Short Haul Truck	17	0.00E+00	8.33E-06	6.22E-07	7.16E+00	2.06E-08	1.18E-02	5.92E-06	1.21E-02	1.68E-03	2.50E-04	4.95E-04	1.81E-04	1.88E-04	1.14E-03	2.39E-05	0.00E+00	3.07E-04	2.28E-03
50	C27	40	Combination Long Haul Truck	16	0.00E+00	1.11E-05	6.25E-07	6.87E+00	7.03E-08	1.43E-02	9.12E-06	1.27E-02	1.74E-03	2.45E-04	1.01E-03	2.01E-04	2.10E-04	1.10E-03	2.30E-05	0.00E+00	8.04E-04	2.40E-03
52	C28	60	Passenger Car	167	0.00E+00	1.96E-06	2.13E-07	7.61E+00	1.39E-05	3.89E-02	4.43E-06	1.66E-04	1.64E-03	2.46E-04	4.32E-04	2.78E-04	2.86E-04	3.31E-05	3.82E-05	7.78E-09	1.46E-04	2.59E-05
52	C28	60	Passenger Truck	280	0.00E+00	4.14E-06	4.39E-07	1.70E+01	2.61E-05	6.67E-02	8.59E-06	5.05E-04	2.91E-03	4.33E-04	8.19E-04	5.33E-04	5.46E-04	1.33E-04	8.43E-05	1.42E-08	2.73E-04	8.55E-05
52	C28	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.09E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.66E-05
52	C28	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.06E-04
52	C28	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.73E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.26E-04
53	C29	70	Passenger Car	33	0.00E+00	3.52E-07	3.82E-08	1.43E+00	2.50E-06	6.99E-03	7.93E-07	3.35E-05	2.47E-04	3.86E-05	7.73E-05	4.99E-05	5.12E-05	5.53E-06	7.21E-06	1.50E-09	2.62E-05	5.22E-06
53	C29	70	Passenger Truck	54	0.00E+00	7.34E-07	7.81E-08	3.23E+00	4.71E-06	1.23E-02	1.54E-06	9.45E-05	4.41E-04	6.85E-05	1.48E-04	9.58E-05	9.82E-05	2.40E-05	1.61E-05	2.82E-09	4.93E-05	1.58E-05
53	C29	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.02E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
53	C29	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.59E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
50	C30	40	Passenger Car	112	0.00E+00	1.61E-06	1.75E-07	5.92E+00	1.14E-05	3.18E-02	3.63E-06	1.02E-04	1.93E-03	2.72E-04	3.54E-04	2.28E-04	2.34E-04	3.34E-05	2.94E-05	5.45E-09	1.20E-04	1.60E-05
50	C30	40	Passenger Truck	188	0.00E+00	3.55E-06	3.73E-07	1.29E+01	2.14E-05	5.25E-02	7.13E-06	3.94E-04	3.43E-03	4.76E-04	6.73E-04	4.40E-04	4.50E-04	1.14E-04	6.35E-05	9.26E-09	2.23E-04	6.83E-05
50	C30	40	Single Unit Short Haul Truck	46	0.00E+00	1.56E-05	6.94E-07	8.68E+00	1.08E-05	1.36E-02	1.67E-05	6.27E-03	1.81E-03	2.83E-04	2.01E-03	4.18E-04	4.26E-04	8.87E-04	3.54E-05	1.50E-08	1.58E-03	1.18E-03
50	C30	40	Single Unit Long Haul Truck	2	0.00E+00	6.84E-07	3.03E-08	3.75E-01	4.72E-07	5.93E-04	7.32E-07	2.73E-04	8.11E-05	1.26E-05	8.81E-05	1.83E-05	1.86E-05	3.83E-05	1.53E-06	6.51E-10	6.95E-05	5.12E-05
50	C30	40	Combination Short Haul Truck	35	0.00E+00	1.69E-05	1.26E-06	1.45E+01	4.19E-08	2.39E-02	1.20E-05	2.45E-02	3.41E-03	5.08E-04	1.01E-03	3.67E-04	3.81E-04	2.31E-03	4.86E-05	0.00E+00	6.24E-04	4.62E-03
50	C30	40	Combination Long Haul Truck	32

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C35	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.20E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.25E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.18E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.70E-06
53	C35	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.01E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.45E-04
53	C35	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.37E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
50	C36	40	Passenger Car	329	0.00E+00	4.73E-06	5.14E-07	1.74E+01	3.35E-05	9.33E-02	1.07E-05	3.00E-04	5.68E-03	7.98E-04	1.04E-03	6.70E-04	6.88E-04	9.79E-05	8.64E-05	1.60E-08	3.52E-04	4.69E-05
50	C36	40	Passenger Truck	552	0.00E+00	1.04E-05	1.10E-06	3.78E+01	6.27E-05	1.54E-01	2.09E-05	1.16E-03	1.01E-02	1.40E-03	1.98E-03	1.29E-03	1.32E-03	3.34E-04	1.86E-04	2.72E-08	6.55E-04	2.00E-04
50	C36	40	Single Unit Short Haul Truck	46	0.00E+00	1.56E-05	6.94E-07	8.68E+00	1.08E-05	1.36E-02	1.67E-05	6.27E-03	1.81E-03	2.83E-04	2.01E-03	4.18E-04	4.26E-04	8.87E-04	3.54E-05	1.50E-08	1.58E-03	1.18E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	6.84E-07	3.03E-08	3.75E-01	4.72E-07	5.93E-04	7.32E-07	2.73E-04	8.11E-05	1.26E-05	8.81E-05	1.83E-05	1.86E-05	3.83E-05	1.53E-06	6.51E-10	6.95E-05	5.12E-05
50	C36	40	Combination Short Haul Truck	60	0.00E+00	2.88E-05	2.15E-06	2.47E+01	7.12E-08	4.07E-02	2.04E-05	4.17E-02	5.80E-03	8.64E-04	1.71E-03	6.25E-04	6.49E-04	3.93E-03	8.27E-05	0.00E+00	1.06E-03	7.87E-03
50	C36	40	Combination Long Haul Truck	54	0.00E+00	3.82E-05	2.16E-06	2.37E+01	2.43E-07	4.94E-02	3.15E-05	4.40E-02	6.02E-03	8.46E-04	3.50E-03	6.96E-04	7.25E-04	3.81E-03	7.95E-05	0.00E+00	2.78E-03	8.29E-03
52	C37	60	Passenger Car	99	0.00E+00	1.17E-06	1.27E-07	4.53E+00	8.29E-06	2.32E-02	2.63E-06	9.86E-05	9.76E-04	1.46E-04	2.57E-04	1.66E-04	1.70E-04	1.97E-05	2.27E-05	4.63E-09	8.69E-05	1.54E-05
52	C37	60	Passenger Truck	167	0.00E+00	2.47E-06	2.61E-07	1.01E+01	1.55E-05	3.97E-02	5.11E-06	3.01E-04	1.73E-03	2.57E-04	4.87E-04	3.17E-04	3.25E-04	7.90E-05	5.02E-05	8.46E-09	1.62E-04	5.09E-05
52	C37	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.11E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.82E-04
52	C37	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.52E-05
52	C37	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
52	C37	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.28E-03
53	C38	70	Passenger Car	149	0.00E+00	1.61E-06	1.75E-07	6.56E+00	1.14E-05	3.20E-02	3.63E-06	1.53E-04	1.13E-03	1.77E-04	3.54E-04	2.28E-04	2.34E-04	2.53E-05	3.30E-05	6.85E-09	1.20E-04	2.39E-05
53	C38	70	Passenger Truck	249	0.00E+00	3.36E-06	3.57E-07	1.48E+01	2.16E-05	5.64E-02	7.05E-06	4.32E-04	2.02E-03	3.13E-04	6.75E-04	4.38E-04	4.49E-04	1.10E-04	7.36E-05	1.29E-08	2.26E-04	7.24E-05
53	C38	70	Single Unit Short Haul Truck	73	0.00E+00	1.28E-05	5.20E-07	1.19E+01	8.59E-06	2.16E-02	1.39E-05	5.09E-03	1.16E-03	2.12E-04	1.73E-03	3.29E-04	3.36E-04	1.21E-03	4.85E-05	1.96E-08	1.39E-03	9.51E-04
53	C38	70	Single Unit Long Haul Truck	3	0.00E+00	5.57E-07	2.24E-08	5.05E-01	3.70E-07	9.08E-04	6.06E-07	2.19E-04	5.30E-05	9.49E-06	7.54E-05	1.42E-05	1.45E-05	5.11E-05	2.06E-06	8.25E-10	6.09E-05	4.09E-05
53	C38	70	Combination Short Haul Truck	50	0.00E+00	1.29E-05	9.61E-07	1.75E+01	3.28E-08	1.87E-02	9.21E-06	1.93E-02	1.82E-03	3.04E-04	7.75E-04	2.80E-04	2.91E-04	2.77E-03	5.84E-05	0.00E+00	4.85E-04	3.63E-03
53	C38	70	Combination Long Haul Truck	46	0.00E+00	1.77E-05	1.01E-06	1.64E+01	1.11E-07	2.23E-02	1.46E-05	2.06E-02	1.90E-03	2.86E-04	1.61E-03	3.24E-04	3.37E-04	2.63E-03	5.49E-05	0.00E+00	1.27E-03	3.88E-03
52	C39	60	Passenger Car	123	0.00E+00	1.45E-06	1.57E-07	5.60E+00	1.03E-05	2.86E-02	3.26E-06	1.22E-04	1.21E-03	1.81E-04	3.18E-04	2.05E-04	2.10E-04	2.44E-05	2.81E-05	5.73E-09	1.08E-04	1.90E-05
52	C39	60	Passenger Truck	206	0.00E+00	3.05E-06	3.23E-07	1.25E+01	1.92E-05	4.91E-02	6.32E-06	3.72E-04	2.14E-03	3.18E-04	6.03E-04	3.92E-04	4.02E-04	9.77E-05	6.20E-05	1.05E-08	2.01E-04	6.29E-05
52	C39	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.55E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
52	C39	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.18E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.88E-04
52	C39	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.45E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.38E-04
50	C40	40	Passenger Car	123	0.00E+00	1.76E-06	1.92E-07	6.49E+00	1.25E-05	3.49E-02	3.98E-06	1.12E-04	2.12E-03	2.98E-04	3.88E-04	2.50E-04	2.57E-04	3.66E-05	3.22E-05	5.98E-09	1.31E-04	1.75E-05
50	C40	40	Passenger Truck	206	0.00E+00	3.89E-06	4.09E-07	1.41E+01	2.34E-05	5.76E-02	7.82E-06	4.32E-04	3.76E-03	5.22E-04	7.38E-04	4.82E-04	4.94E-04	1.25E-04	6.96E-05	1.02E-08	2.45E-04	7.49E-05
50	C40	40	Single Unit Short Haul Truck	8	0.00E+00	2.60E-06	1.16E-07	1.45E+00	1.80E-06	2.27E-03	2.78E-06	1.05E-03	3.02E-04	4.71E-05	3.34E-04	6.96E-05	7.10E-05	1.48E-04	5.90E-06	2.50E-09	2.63E-04	1.96E-04
50	C40	40	Combination Short Haul Truck	9	0.00E+00	4.54E-06	3.39E-07	3.90E+00	1.12E-08	6.42E-03	3.23E-06	6.59E-03	9.16E-04	1.36E-04	2.70E-04	9.87E-05	1.02E-04	6.21E-04	1.31E-05	0.00E+00	1.68E-04	1.24E-03
50	C40	40	Combination Long Haul Truck	9	0.00E+00	6.03E-06	3.41E-07	3.75E+00	3.84E-08	7.79E-03	4.98E-06	6.95E-03	9.51E-04	1.34E-04	5.53E-04	1.10E-04	1.14E-04	6.02E-04	1.26E-05	0.00E+00	4.38E-04	1.31E-03
55	C41	90	Passenger Car	361	0.00E+00	3.48E-06	3.78E-07	1.49E+01	2.47E-05	7.14E-02	7.84E-06	3.77E-04	1.54E-03	2.70E-04	7.65E-04	4.93E-04	5.06E-04	4.77E-05	7.51E-05	1.53E-08	2.59E-04	5.87E-05
55	C41	90	Passenger Truck	605	0.00E+00	7.21E-06	7.71E-07	3.39E+01	4.75E-05	1.34E-01	1.54E-05	9.78E-04	2.73E-03	4.79E-04	1.48E-03	9.61E-04	9.85E-04	2.32E-04	1.70E-04	3.00E-08	4.97E-04	1.62E-04
55	C41	90	Single Unit Short Haul Truck	37	0.00E+00	4.01E-06	1.48E-07	6.12E+00	2.77E-06	1.12E-02	4.47E-06	1.74E-03	2.94E-04	6.90E-05	5.68E-04	1.01E-04	1.03E-04	6.23E-04	2.48E-05	9.73E-09	4.65E-04	3.25E-04
55	C41	90	Single Unit Long Haul Truck	2	0.00E+00	1.74E-07	6.32E-09	2.58E-01	1.16E-07	4.63E-04	1.94E-07	7.38E-05	1.34E-05	3.03E-06	2.48E-05	4.32E-06	4.41E-06	2.61E-05	1.05E-06	4.02E-10	2.04E-05	1.38E-05
55	C41	90	Combination Short Haul Truck	54	0.00E+00	7.72E-06	5.55E-07	1.73E+01	2.39E-08	1.44E-02	5.63E-06	1.37E-02	7.42E-04	1.54E-04	4.99E-04	1.63E-04	1.70E-04	2.75E-03	5.79E-05	0.00E+00	3.29E-04	2.58E-03
55	C41	90	Combination Long Haul Truck	49	0.00E+00	1.12E-05	5.87E-07	1.58E+01	8.10E-08	1.69E-02	9.52E-06	1.45E-02	7.61E-04	1.36E-04	1.11E-03	1.95E-04	2.03E-04	2.53E-03	5.29E-05	0.00E+00	9.03E-04	2.73E-03
55	C42	90	Passenger Car	362	0.00E+00	3.48E-06	3.78E-07	1.49E+01	2.47E-05	7.15E-02	7.85E-06	3.77E-04	1.54E-03	2.70E-04	7.65E-04	4.93E-04	5.06E-04	4.78E-05	7.52E-05	1.53E-08	2.59E-04	5.88E-05
55	C42	90	Passenger Truck	605	0.00E+00	7.22E-06	7.72E-07	3.40E+01	4.75E-05	1.35E-01	1.54E-05	9.79E-04	2.73E-03	4.80E-04	1.48E-03	9.62E-04	9.86E-04	2.32E-04	1.70E-04	3.01E-08	4.98E-04	1.62E-04
55	C42	90	Single Unit Short Haul Truck	24	0.00E+00	2.57E-06	9.50E-08	3.92E+00	1.77E-06	7.17E-03	2.87E-06	1.12E-03	1.88E-04	4.43E-05	3.64E-04	6.50E-05	6.62E-05	4.00E-04	1.59E-05	6.24E-09	2.98E-04	2.09E-04
55	C42	90	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.05E-09	1.65E-01	7.46E-08	2.97E-04	1.24E-07	4.73E-05	8.60E-06	1.94E-06	1.59E-05	2.77E-06	2.82E-06	1.67E-05	6.73E-07	2.57E-10	1.31E-05	8.84E-06
55	C42	90	Combination Short Haul Truck	16	0.00E+00	2.32E-06	1.67E-07	5.21E+00	7.20E-09	4.32E-03	1.69E-06	4.12E-03	2.23E-04	4.64E-05	1.50E-04	4.92E-05	5.11E-05	8.28E-04	1.74E-05	0.00E+00	9.90E-05	7.75E-04
55	C42	90	Combination Long Haul Truck	15	0.00E+00	3.37E-06	1.77E-07	4.75E+00	2.44E-08	5.07E-03	2.87E-06	4.36E-03	2.29E-04	4.10E-05	3.33E-04	5.87E-05	6.12E-05	7.63E-04	1.59E-05	0.00E+00	2.72E-04	8.21E-04
55	C43	90	Passenger Car	173	0.00E+00	1.67E-06	1.81E-07	7.12E+00	1.18E-05	3.42E-02	3.76E-06	1.80E-04	7.38E-04	1.29E-04	3.66E-04	2.36E-04	2.42E-04	2.29E-05	3.60E-05	7.34E-09	1.24E-04	2.82E-05
55	C43	90	Passenger Truck	290	0.00E+00	3.46E-06	3.69E-07	1.63E+01	2.28E-05	6.44E-02	7.39E-06	4.69E-04	1.31E-03	2.30E-04	7.11E-04	4.61E-04	4.72E-04	1.11E-04	8.15E-05	1.44E-08	2.38E-04	7.75E-05
55	C43	90	Single Unit Short Haul Truck	53	0.00E+00	5.66E-06	2.09E-07	8.63E+00	3.90E-06	1.58E-02	6.31E-06	2.46E-03	4.14E-04	9.74E-05	8.01E-04	1.43E-04	1.46E-04	8.79E-04	3.50E-05	1.37E-08	6.55E-04	4.59E-04
55	C43	90	Single Unit Long Haul Truck	2	0.00E+00	2.46E-07	8.92E-09	3.64E-01	1.64E-07	6.53E-04	2.73E-07	1.04E-04	1.89E-05	4.27E-06	3.49E-05	6.09E-06	6.21E-06	3.68E-05	1.48E-06	5.66E-10	2.87E-05	1.94E-05
55	C43	90	Combination Short Haul Truck	21	0.00E+00	3.00E-06	2.15E-07	6.72E+00	9.29E-09	5.58E-03	2.19E-06	5.31E-03	2.88E-04	5.99E-05	1.94E-04	6.35E-05	6.59E-05	1.07E-03	2.25E-05	0.00E+00	1.28E-04	1.00E-03
55	C43	90	Combination Long Haul Truck	19	0.00E+00	4.35E-06	2.28E-07	6.13E+00	3.14E-08	6.54E-03	3.70E-06	5.63E-03	2.96E-04	5.29E-05	4.30E-04	7.57E-05	7.89E-05	9.84E-04	2.05E-05	0.00E+00	3.51E-04	1.06E-03
55	C44	90	Passenger Car	143	0.00E+00	1.38E-06	1.50E-07	5.89E+00	9.78E-06	2.83E-02	3.11E-06	1.49E-04	6.10E-04	1.07E-04	3.03E-04	1.95E-04	2.01E-04	1.89E-05	2.98E-05	6.07E-09	1.03E-04	2.33E-05
55	C44	90	Passenger Truck	240	0.00E+00	2.86E-06	3.06E-07	1.35E+01	1.88E-05	5.33E-02	6.11E-06	3.88E-04	1.08E-03	1.90E-04	5.88E-04	3.81E-04	3.91E-04	9.21E-05	6.74E-05	1.19E-08	1.97E-04	6.41E-05
55	C44	90	Single Unit Short Haul Truck	31	0.00E+00	3.29E-06	1.22E-07	5.02E+00	2.27E-06	9.18E-03	3.67E-06	1.43E-03	2.41E-04	5.66E-05	4.66E-04	8.32E-05	8.48E-05	5.11E-04	2.04E-05	7.98E-09	3.81E-04	2.67E-04
55	C44	90	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.19E-09	2.12E-01	9.55E-08	3.80E-04	1.59E-07	6.06E-05	1.10E-05	2.48E-06	2.03E-05	3.54E-06	3.61E-06	2.14E-05	8.62E-07	3.30E-10	1.67E-05	1.13E-05
55	C44	90	Combination Short Haul Truck	17	0.00E+00	2.40E-06	1.72E-07	5.38E+00	7.43E-09	4.46E-03	1.75E-06	4.25E-03	2.31E-04	4.79E-05	1.55E-04	5.08E-05	5.28E-05	8.55E-04	1.80E-05	0.00E+00	1.02E-04	8.00E-04
55	C44	90	Combination Long Haul Truck	15	0.00E+00	3.48E-06	1.82E-07	4.91E+00	2.52E-08	5.24E-03	2.96E-06	4.50E-03	2.37E-04	4.23E-05	3.44E-04	6.06E-05	6.32E-05	7.87E-04	1.64E-05	0.00E+00	2.81E-04	8.48E-04
53	C45	70	Passenger Car	184	0.00E+00	1.99E-06	2.17E-07	8.12E+00	1.41E-05	3.96E-02	4.49E-06	1.90E-04	1.40E-03	2.19E-04	4.38E-04	2.82E-04	2.90E-04	3.13E-05	4.09E-05	8.49E-09	1.48E-04	2.96E-05
53	C45	70	Passenger Truck	309	0.00E+00	4.16E-06	4.42E-07	1.83E+01	2.67E-05	6.99E-02	8.74E-06	5.36E-04	2.50E-03	3.88E-04	8.36E-04	5.43E-04	5.57E-04	1.36E-04	9.12E-05	1.60E-08	2.79E-04	8.97E-05
53	C45	70	Single Unit Short Haul Truck	51	0.00E+00	8.93E-06	3.63E-07	8.32E+00	5.99E-06	1.51E-02	9.72E-06	3.55E-03	8.07E-04	1.48E-04	1.20E-03	2.29E-04	2.34E-04	8.45E-04	3.38E-05	1.37E-08	9.70E-04	6.63E-04
53	C45	70	Single Unit Long Haul Truck	2	0.00E+00	3.89E-07	1.57E-08	3.52E-01	2.58E-07	6.33E-04	4.23E-07	1.53E-04	3.69E-05	6.62E-06	5.25E-05	9.91E-06	1.01E-05	3.57E-05	1.44E-06	5.76E-10	4.24E-05	2.86E-05
53	C45	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.02E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.51E-03
53	C45	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.59E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.62E-03
50	C46	40	Passenger Car	116	0.00E+00	1.66E-06	1.81E-07	6.11E+00	1.18E-05	3.28E-02	3.75E-06	1.06E-04	2.00E-03	2.81E-04	3.66E-04	2.36E-04	2.42E-04	3.45E-05	3.04E-05	5.63E-09	1.24E-04	1.65E-05
50	C46	40	Passenger Truck	194	0.00E+00	3.67E-06	3.85E-07	1.33E+01	2.21E-05	5.43E-02	7.37E-06	4.07E-04	3.54E-03	4.92E-04	6.96E-04	4.54E-04	4.65E-04	1.18E-04	6.56E-05	9.57E-09	2.30E-04	7.05E-05
50	C46	40	Single Unit Short Haul Truck	56	0.00E+00	1.88E-05	8.38E-07	1.05E+01	1.30E-05	1.65E-02	2.01E-05	7.58E-03	2.19E-03	3.41E-04	2.42E-03	5.05E-04	5.15E-04	1.07E-03	4.28E-05	1.81E-08	1.91E-03	1.42E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	8.26E-07	3.66E-08	4.53E-01	5.71E-07	7.16E-04	8.84E-07	3.30E-04	9.80E-05	1.52E-05	1.07E-04	2.21E-05	2.25E-05	4.63E-05	1.85E-06	7.87E-10	8.40E-05	6.19E-05
50	C46	40	Combination Short Haul Truck	35	0.00E+00	1.67E-05	1.24E-06	1.43E+01	4.12E-08	2.35E-02	1.18E-05	2.42E-02	3.36E-03	5.00E-04	9.90E-04	3.62E-04	3.76E-04	2.28E-03	4.79E-05	0.00E+00	6.15E-04	4.55E-03
50	C46	40	Combination Long Haul Truck	31	0.00E+00	2.21E-05	1.25E-06	1.37E+01	1.41E-07	2.86E-02	1.82E-05	2.55E-02	3.49E-03	4.90E-04	2.03E-03	4.03E-04	4.19E-04	2.21E-03	4.60E-05	0.00E+00	1.61E-03	4.80E-03
53	C48	70	Passenger Car	80	0.00E+00	8.61E-07	9.35E-08	3.51E+00	6.11E-06	1.71E-02	1.94E-06	8.19E-05	6.04E-04	9.46E-05	1.89E-04	1.22E-04	1.25E-04	1.35E-05	1.77E-05	3.67E-09	6.40E-05	1.28E-05
53	C48	70	Passenger Truck	133	0.00E+00	1.80E-06	1.91E-07	7.90E+00	1.15E-05	3.02E-02	3.77E-06	2.31E-04	1.08E-03	1.68E-04	3.61E-04	2.35E-04	2.40E-04	5.88E-05	3.94E-05	6.91E-09	1.21E-04	3.87E-05
53	C48	70	Single Unit Short Haul Truck	97	0.00E+00	1.70E-05	6.92E-07	1.59E+01	1.14E-05	2.87E-02	1.85E-05	6.76E-03	1.54E-03	2.82E-04	2.29E-03	4.37E-04	4.46E-04	1.61E-03	6.45E-05	2.60E-08	1.85E-03	1.26E-03
53	C48	70	Single Unit Long Haul Truck	4	0.00E+00	7.41E-07	2.98E-08	6.72E-01	4.91E-07	1.21E-03	8.06E-07	2.91E-04	7.04E-05	1.26E-05	1.00E-04	1.89E-05	1.93E-05	6.80E-05	2.74E-06	1.10E-09	8.09E-05	5.44E-05
53	C48	70	Combination Short Haul Truck	62	0.00E+00	1.59E-05	1.18E-06	2.15E+01	4.03E-08	2.29E-02	1.13E-05	2.37E-02	2.24E-03	3.73E-04	9.53E-04	3.44E-04	3.57E-04	3.41E-03	7.18E-05	0.00E+00	5.96E-04	4.46E-03
53	C48	70	Combination Long Haul Truck	56	0.00E+00	2.18E-05	1.24E-06	2.01E+01	1.37E-07	2.74E-02	1.79E-05	2.53E-02	2.33E-03	3.51E-04	1.98E-03	3.98E-04	4.15E-04	3.23E-03	6.75E-05	0.00E+00	1.57E-03	4.77E-03
52	C49	60	Passenger Car	323	0.00E+00	3.80E-06	4.12E-07	1.47E+01	2.69E-05	7.52E-02	8.56E-06	3.20E-04	3.17E-03	4.75E-04	8.35E-04	5.38E-04	5.52E-04	6.40E-05	7.38E-05	1.50E-08	2.82E-04	5.00E-05
52	C49	60	Passenger Truck	541	0.00E+00	8.01E-06	8.49E-07	3.28E+01	5.05E-05	1.29E-01	1.66E-05	9.77E-04	5.63E-03	8.36E-04	1.58E-03	1.03E-03	1.06E-03	2.57E-04	1.63E-04	2.75E-08	5.27E-04	1.65E-04
52	C49	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.78E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.21E-04
52	C49	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
52	C49	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.82E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.66E-03
52	C49	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.40E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.77E-03
50	C50	40	Passenger Car	7	0.00E+00	1.07E-07	1.17E-08	3.94E-01	7.61E-07	2.12E-03	2.42E-07	6.82E-06	1.29E-04	1.81E-05	2.36E-05	1.52E-05	1.56E-05	2.22E-06	1.96E-06	3.63E-10	7.98E-06	1.06E-06
50	C50	40	Passenger Truck	13	0.00E+00	2.37E-07	2.49E-08	8.58E-01	1.42E-06	3.50E-03	4.75E-07	2.63E-05	2.29E-04	3.17E-05	4.49E-05	2.93E-05	3.00E-05	7.59E-06	4.23E-06	6.17E-10	1.49E-05	4.55E-06
50	C50	40	Combination Short Haul

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C54	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.81E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.07E-04
53	C54	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.15E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.70E-04
52	C55	60	Passenger Car	206	0.00E+00	2.42E-06	2.64E-07	9.40E+00	1.72E-05	4.80E-02	5.47E-06	2.05E-04	2.03E-03	3.04E-04	5.33E-04	3.44E-04	3.53E-04	4.09E-05	4.72E-05	9.61E-09	1.80E-04	3.19E-05
52	C55	60	Passenger Truck	346	0.00E+00	5.12E-06	5.42E-07	2.09E+01	3.23E-05	8.24E-02	1.06E-05	6.24E-04	3.60E-03	5.34E-04	1.01E-03	6.58E-04	6.74E-04	1.64E-04	1.04E-04	1.76E-08	3.37E-04	1.06E-04
52	C55	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.44E-04
52	C55	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
52	C55	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.89E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
52	C55	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.41E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.58E-03
50	C56	40	Passenger Car	5	0.00E+00	7.51E-08	8.16E-09	2.76E-01	5.33E-07	1.48E-03	1.69E-07	4.78E-06	9.03E-05	1.27E-05	1.65E-05	1.06E-05	1.09E-05	1.56E-06	1.37E-06	2.54E-10	5.59E-06	7.45E-07
50	C56	40	Passenger Truck	9	0.00E+00	1.66E-07	1.74E-08	6.01E-01	9.97E-07	2.45E-03	3.33E-07	1.84E-05	1.60E-04	2.22E-05	3.14E-05	2.05E-05	2.10E-05	5.31E-06	2.96E-06	4.32E-10	1.04E-05	3.19E-06
50	C56	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.92E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.34E-05
50	C56	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.32E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.38E-04
50	C56	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.73E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
53	C57	70	Passenger Car	205	0.00E+00	2.21E-06	2.40E-07	9.01E+00	1.57E-05	4.40E-02	4.98E-06	2.10E-04	1.55E-03	2.43E-04	4.86E-04	3.13E-04	3.22E-04	3.47E-05	4.54E-05	9.42E-09	1.64E-04	3.28E-05
53	C57	70	Passenger Truck	342	0.00E+00	4.62E-06	4.91E-07	2.03E+01	2.96E-05	7.75E-02	9.69E-06	5.94E-04	2.77E-03	4.31E-04	9.28E-04	6.03E-04	6.18E-04	1.51E-04	1.01E-04	1.77E-08	3.10E-04	9.95E-05
53	C57	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.76E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.64E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
53	C57	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.01E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.45E-04
53	C57	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.37E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
50	C58	40	Passenger Car	56	0.00E+00	8.10E-07	8.80E-08	2.98E+00	5.75E-06	1.60E-02	1.83E-06	5.15E-05	9.74E-04	1.37E-04	1.78E-04	1.15E-04	1.18E-04	1.68E-05	1.48E-05	2.74E-09	6.02E-05	8.03E-06
50	C58	40	Passenger Truck	95	0.00E+00	1.79E-06	1.88E-07	6.48E+00	1.08E-05	2.64E-02	3.59E-06	1.98E-04	1.73E-03	2.40E-04	3.39E-04	2.21E-04	2.27E-04	5.73E-05	3.19E-05	4.66E-09	1.12E-04	3.44E-05
50	C58	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.61E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.90E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	2.52E-07	1.88E-08	2.17E-01	6.25E-10	3.57E-04	1.79E-07	3.66E-04	5.09E-05	7.58E-06	1.50E-05	5.48E-06	5.69E-06	3.45E-05	7.25E-07	0.00E+00	9.31E-06	6.90E-05
53	C59	70	Passenger Car	53	0.00E+00	5.70E-07	6.19E-08	2.32E+00	4.04E-06	1.13E-02	1.28E-06	5.42E-05	4.00E-04	6.26E-05	1.25E-04	8.08E-05	8.29E-05	8.96E-06	1.17E-05	2.43E-09	4.24E-05	8.46E-06
53	C59	70	Passenger Truck	88	0.00E+00	1.19E-06	1.27E-07	5.23E+00	7.64E-06	2.00E-02	2.50E-06	1.53E-04	7.14E-04	1.11E-04	2.39E-04	1.55E-04	1.59E-04	3.89E-05	2.61E-05	4.57E-09	7.99E-05	2.56E-05
53	C59	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
53	C59	70	Single Unit Long Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.01E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.56E-05
53	C59	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.29E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.09E-05
52	C60	60	Passenger Car	205	0.00E+00	2.40E-06	2.61E-07	9.32E+00	1.71E-05	4.76E-02	5.42E-06	2.03E-04	2.01E-03	3.01E-04	5.28E-04	3.41E-04	3.50E-04	4.05E-05	4.67E-05	9.52E-09	1.79E-04	3.16E-05
52	C60	60	Passenger Truck	342	0.00E+00	5.07E-06	5.37E-07	2.08E+01	3.20E-05	8.17E-02	1.05E-05	6.19E-04	3.57E-03	5.29E-04	1.00E-03	6.52E-04	6.68E-04	1.62E-04	1.03E-04	1.74E-08	3.34E-04	1.05E-04
52	C60	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.29E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.29E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.92E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
52	C60	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.43E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.40E-03
52	C60	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.91E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.49E-03
9	D01	60	Passenger Car	1267	0.00E+00	1.62E-05	1.76E-06	5.77E+01	1.15E-04	3.23E-01	3.65E-05	1.30E-03	1.28E-02	1.92E-03	3.56E-03	2.30E-03	2.36E-03	2.51E-04	2.90E-04	6.08E-08	1.20E-03	2.03E-04
9	D01	60	Passenger Truck	2121	0.00E+00	3.44E-05	3.64E-06	1.29E+02	2.17E-04	5.53E-01	7.13E-05	4.05E-03	2.34E-02	3.48E-03	6.80E-03	4.42E-03	4.53E-03	1.03E-03	6.39E-04	1.19E-07	2.27E-03	6.87E-04
9	D01	60	Single Unit Short Haul Truck	25	0.00E+00	5.56E-06	2.30E-07	4.14E+00	3.68E-06	7.29E-03	6.01E-06	2.13E-03	5.73E-04	9.63E-05	7.42E-04	1.43E-04	1.46E-04	4.20E-04	1.69E-05	6.96E-09	5.96E-04	3.98E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	2.43E-07	9.97E-09	1.77E-01	1.60E-07	3.09E-04	2.62E-07	9.22E-05	2.57E-05	4.27E-06	3.24E-05	6.21E-06	6.33E-06	1.78E-05	7.21E-07	2.96E-10	2.61E-05	1.73E-05
9	D01	60	Combination Short Haul Truck	80	0.00E+00	2.34E-05	1.72E-06	2.82E+01	6.40E-08	3.49E-02	1.68E-05	3.55E-02	4.08E-03	6.37E-04	1.44E-03	5.02E-04	5.21E-04	4.48E-03	9.43E-05	0.00E+00	9.18E-04	6.69E-03
9	D01	60	Combination Long Haul Truck	73	0.00E+00	3.21E-05	1.75E-06	2.66E+01	2.17E-07	4.19E-02	2.68E-05	3.78E-02	4.27E-03	6.18E-04	3.04E-03	5.73E-04	5.97E-04	4.27E-03	8.92E-05	0.00E+00	2.45E-03	7.13E-03
9	D02	60	Passenger Car	936	0.00E+00	1.20E-05	1.30E-06	4.27E+01	8.50E-05	2.39E-01	2.70E-05	9.64E-04	9.45E-03	1.42E-03	2.63E-03	1.70E-03	1.74E-03	1.86E-04	2.14E-04	4.50E-08	8.91E-04	1.50E-04
9	D02	60	Passenger Truck	1568	0.00E+00	2.54E-05	2.69E-06	9.51E+01	1.60E-04	4.09E-01	5.27E-05	3.00E-03	1.73E-02	2.57E-03	5.03E-03	3.27E-03	3.35E-03	7.60E-04	4.73E-04	8.76E-08	1.68E-03	5.08E-04
9	D02	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.96E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	D02	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.51E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	D02	60	Combination Short Haul Truck	28	0.00E+00	8.09E-06	5.94E-07	9.76E+00	2.22E-08	1.21E-02	5.81E-06	1.23E-02	1.41E-03	2.21E-04	4.99E-04	1.74E-04	1.80E-04	1.55E-03	3.26E-05	0.00E+00	3.18E-04	2.32E-03
9	D02	60	Combination Long Haul Truck	25	0.00E+00	1.11E-05	6.07E-07	9.22E+00	7.50E-08	1.45E-02	9.30E-06	1.31E-02	1.48E-03	2.14E-04	1.05E-03	1.98E-04	2.07E-04	1.48E-03	3.09E-05	0.00E+00	8.48E-04	2.47E-03
9	D03	60	Passenger Car	1414	0.00E+00	1.81E-05	1.97E-06	6.44E+01	1.28E-04	3.61E-01	4.08E-05	1.46E-03	1.43E-02	2.14E-03	3.98E-03	2.56E-03	2.63E-03	2.80E-04	3.23E-04	6.79E-08	1.35E-03	2.27E-04
9	D03	60	Passenger Truck	2369	0.00E+00	3.84E-05	4.07E-06	1.44E+02	2.42E-04	6.17E-01	7.96E-05	4.53E-03	2.61E-02	3.88E-03	7.59E-03	4.94E-03	5.06E-03	1.15E-03	7.14E-04	1.32E-07	2.53E-03	7.67E-04
9	D03	60	Single Unit Short Haul Truck	54	0.00E+00	1.20E-05	4.95E-07	8.92E+00	7.93E-06	1.57E-02	1.30E-05	4.58E-03	1.23E-03	2.07E-04	1.60E-03	3.08E-04	3.14E-04	9.04E-04	3.64E-05	1.50E-08	1.28E-03	8.58E-04
9	D03	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.15E-08	3.80E-01	3.44E-07	6.66E-04	5.65E-07	1.98E-04	5.54E-05	9.20E-06	6.99E-05	1.34E-05	1.36E-05	3.84E-05	1.55E-06	6.37E-10	5.62E-05	3.72E-05
9	D03	60	Combination Short Haul Truck	46	0.00E+00	1.33E-05	9.76E-07	1.60E+01	3.64E-08	1.98E-02	9.54E-06	2.02E-02	2.32E-03	3.62E-04	8.18E-04	2.85E-04	2.96E-04	2.55E-03	5.36E-05	0.00E+00	5.22E-04	3.81E-03
9	D03	60	Combination Long Haul Truck	41	0.00E+00	1.82E-05	9.97E-07	1.51E+01	1.23E-07	2.38E-02	1.53E-05	2.15E-02	2.43E-03	3.51E-04	1.73E-03	3.26E-04	3.39E-04	2.43E-03	5.07E-05	0.00E+00	1.39E-03	4.05E-03
9	D04	60	Passenger Car	765	0.00E+00	9.78E-06	1.06E-06	3.48E+01	6.94E-05	1.95E-01	2.20E-05	7.87E-04	7.72E-03	1.16E-03	2.15E-03	1.39E-03	1.42E-03	1.52E-04	1.75E-04	3.67E-08	7.27E-04	1.23E-04
9	D04	60	Passenger Truck	1280	0.00E+00	2.08E-05	2.20E-06	7.76E+01	1.31E-04	3.34E-01	4.31E-05	2.45E-03	1.41E-02	2.10E-03	4.10E-03	2.67E-03	2.74E-03	6.20E-04	3.86E-04	7.16E-08	1.37E-03	4.15E-04
9	D04	60	Single Unit Short Haul Truck	65	0.00E+00	1.45E-05	6.01E-07	1.08E+01	9.63E-06	1.91E-02	1.57E-05	5.57E-03	1.50E-03	2.52E-04	1.94E-03	3.74E-04	3.81E-04	1.10E-03	4.42E-05	1.82E-08	1.56E-03	1.04E-03
9	D04	60	Single Unit Long Haul Truck	3	0.00E+00	6.35E-07	2.61E-08	4.62E-01	4.18E-07	8.09E-04	6.86E-07	2.41E-04	6.73E-05	1.12E-05	8.48E-05	1.62E-05	1.66E-05	4.67E-05	1.88E-06	7.74E-10	6.83E-05	4.51E-05
9	D04	60	Combination Short Haul Truck	88	0.00E+00	2.58E-05	1.90E-06	3.11E+01	7.07E-08	3.85E-02	1.85E-05	3.92E-02	4.50E-03	7.04E-04	1.59E-03	5.54E-04	5.76E-04	4.95E-03	1.04E-04	0.00E+00	1.01E-03	7.39E-03
9	D04	60	Combination Long Haul Truck	81	0.00E+00	3.54E-05	1.94E-06	2.94E+01	2.39E-07	4.63E-02	2.96E-05	4.18E-02	4.72E-03	6.83E-04	3.36E-03	6.32E-04	6.59E-04	4.72E-03	9.85E-05	0.00E+00	2.70E-03	7.87E-03
9	D05	60	Passenger Car	1239	0.00E+00	1.58E-05	1.72E-06	5.64E+01	1.12E-04	3.16E-01	3.57E-05	1.28E-03	1.25E-02	1.87E-03	3.48E-03	2.25E-03	2.30E-03	2.46E-04	2.83E-04	5.95E-08	1.18E-03	1.99E-04
9	D05	60	Passenger Truck	2074	0.00E+00	3.36E-05	3.56E-06	1.26E+02	2.12E-04	5.41E-01	6.98E-05	3.97E-03	2.29E-02	3.40E-03	6.65E-03	4.33E-03	4.43E-03	1.01E-03	6.25E-04	1.16E-07	2.22E-03	6.72E-04
9	D05	60	Single Unit Short Haul Truck	57	0.00E+00	1.28E-05	5.30E-07	9.56E+00	8.50E-06	1.68E-02	1.39E-05	4.91E-03	1.32E-03	2.22E-04	1.71E-03	3.30E-04	3.36E-04	9.69E-04	3.90E-05	1.61E-08	1.38E-03	9.19E-04
9	D05	60	Single Unit Long Haul Truck	3	0.00E+00	5.60E-07	2.30E-08	4.08E-01	3.69E-07	7.14E-04	6.06E-07	2.13E-04	5.94E-05	9.85E-06	7.48E-05	1.43E-05	1.46E-05	4.12E-05	1.66E-06	6.83E-10	6.02E-05	3.98E-05
9	D05	60	Combination Short Haul Truck	72	0.00E+00	2.09E-05	1.54E-06	2.52E+01	5.73E-08	3.12E-02	1.50E-05	3.18E-02	3.65E-03	5.71E-04	1.29E-03	4.49E-04	4.67E-04	4.01E-03	8.44E-05	0.00E+00	8.22E-04	5.99E-03
9	D05	60	Combination Long Haul Truck	65	0.00E+00	2.87E-05	1.57E-06	2.38E+01	1.94E-07	3.75E-02	2.40E-05	3.39E-02	3.83E-03	5.53E-04	2.73E-03	5.13E-04	5.34E-04	3.83E-03	7.99E-05	0.00E+00	2.19E-03	6.38E-03
9	D06	60	Passenger Car	922	0.00E+00	1.18E-05	1.28E-06	4.20E+01	8.36E-05	2.35E-01	2.66E-05	9.49E-04	9.31E-03	1.39E-03	2.59E-03	1.67E-03	1.72E-03	1.83E-04	2.11E-04	4.43E-08	8.77E-04	1.48E-04
9	D06	60	Passenger Truck	1543	0.00E+00	2.50E-05	2.65E-06	9.36E+01	1.58E-04	4.02E-01	5.19E-05	2.95E-03	1.70E-02	2.53E-03	4.95E-03	3.22E-03	3.30E-03	7.48E-04	4.65E-04	8.63E-08	1.65E-03	5.00E-04
9	D06	60	Single Unit Short Haul Truck	135	0.00E+00	3.02E-05	1.25E-06	2.25E+01	2.00E-05	3.95E-02	3.26E-05	1.15E-02	3.11E-03	5.22E-04	4.02E-03	7.75E-04	7.90E-04	2.28E-03	9.16E-05	3.77E-08	3.23E-03	2.16E-03
9	D06	60	Single Unit Long Haul Truck	6	0.00E+00	1.32E-06	5.41E-08	9.58E-01	8.66E-07	1.68E-03	1.42E-06	5.00E-04	1.40E-04	2.32E-05	1.76E-04	3.37E-05	3.43E-05	9.68E-05	3.91E-06	1.60E-09	1.42E-04	9.36E-05
9	D06	60	Combination Short Haul Truck	78	0.00E+00	2.27E-05	1.67E-06	2.74E+01	6.23E-08	3.40E-02	1.63E-05	3.46E-02	3.97E-03	6.21E-04	1.40E-03	4.89E-04	5.07E-04	4.36E-03	9.18E-05	0.00E+00	8.94E-04	6.52E-03
9	D06	60	Combination Long Haul Truck	71	0.00E+00	3.13E-05	1.71E-06	2.59E+01	2.11E-07	4.08E-02	2.61E-05	3.68E-02	4.16E-03	6.02E-04	2.96E-03	5.58E-04	5.81E-04	4.16E-03	8.69E-05	0.00E+00	2.38E-03	6.94E-03
11	D07	80	Passenger Car	1300	0.00E+00	1.35E-05	1.47E-06	5.50E+01	9.58E-05	2.77E-01	3.04E-05	1.35E-03	7.08E-03	1.19E-03	2.97E-03	1.91E-03	1.96E-03	1.93E-04	2.77E-04	5.92E-08	1.00E-03	2.10E-04
11	D07	80	Passenger Truck	2176	0.00E+00	2.78E-05	2.96E-06	1.24E+02	1.81E-04	4.90E-01	5.89E-05	3.63E-03	1.26E-02	2.10E-03	5.65E-03	3.67E-03	3.76E-03	8.94E-04	6.20E-04	1.13E-07	1.89E-03	6.05E-04
11	D07	80	Single Unit Short Haul Truck	86	0.00E+00	1.18E-05	4.62E-07	1.41E+01	8.02E-06	2.57E-02	1.30E-05	4.90E-03	9.68E-04	1.98E-04	1.63E-03	3.02E-04	3.07E-04	1.44E-03	5.74E-05	2.28E-08	1.32E-03	9.17E-04
11	D07	80	Single Unit Long Haul Truck	4	0.00E+00	5.14E-07	1.98E-08	5.97E-01	3.42E-07	1.07E-03	5.65E-07	2.10E-04	4.44E-05	8.79E-06	7.10E-05	1.29E-05	1.32E-05	6.04E-05	2.43E-06	9.49E-10	5.78E-05	3.92E-05
11	D07	80	Combination Short Haul Truck	84	0.00E+00	1.72E-05	1.28E-06	2.81E+01	4.52E-08	2.63E-02	1.23E-05	2.65E-02	2.00E-03	3.62E-04	1.05E-03	3.73E-04	3.87E-04	4.46E-03	9.38E-05	0.00E+00	6.59E-04	5.00E-03
11	D07	80	Combination Long Haul Truck	76	0.00E+00	2.40E-05	1.36E-06	2.60E+01	1.53E-07	3.11E-02	1.98E-05	2.84E-02	2.06E-03	3.30E-04	2.20E-03	4.37E-04	4.55E-04	4.18E-03	8.73E-05	0.00E+00	1.75E-03	5.34E-03
11	D08	80	Passenger Car	903	0.00E+00	9.37E-06	1.02E-06	3.82E+01	6.65E-05	1.93E-01	2.11E-05	9.36E-04	4.92E-03	8.24E-04	2.06E-03	1.33E-03	1.36E-03	1.34E-04	1.93E-04	4.11E-08	6.97E-04	1.46E-04
11	D08	80	Passenger Truck	1511	0.00E+00	1.93E-05	2.06E-06	8.62E+01	1.26E-04	3.40E-01	4.09E-05	2.52E-03	8.76E-03	1.46E-03	3.92E-03	2.55E-03	2.61E-03	6.21E-04	4.31E-04	7.83E-08	1.31E-03	4.20E-04
11	D08	80	Single Unit Short Haul Truck	139	0.00E+00	1.91E-05	7.44E-07	2.28E+01	1.29E-05	4.14E-02	2.09E-05	7.90E-03	1.56E-03	3.19E-04	2.62E-03	4.86E-04	4.95E-04	2.32E-03	9.25E-05	3.67E-08	2.13E-03	1.48E-03
11	D08	80	Single Unit Long Haul Truck	6	0.00E+00	8.28E-07	3.19E-08	9.62E-01	5.50E-07	1.72E-03	9.10E-07	3.38E-04	7.15E-05	1.42E-05	1.14E-04	2.09E-05	2.13E-05	9.73E-05	3.92E-06	1.53E-09	9.32E-05	6.31E-05
11	D08	80	Combination Short Haul Truck	67	0.00E+00	1.38E-05	1.02E-06	2.24E+01	3.61E-08	2.10E-02	9.86E-06	2.12E-02	1.60E-03	2.89E-04	8.37E-04	2.98E-04	3.09E-04	3.57E-03	7.51E-05	0.00E+00	5.27E-04	4.00E-03
11	D08	80	Combination Long Haul Truck	61	0.00E+00	1.92E-05	1.09E-06	2.08E+01	1.22E-07	2.49E-02	1.59E-05	2.27E-02	1.65E-03	2.64E-04	1.76E-03	3.50E-04	3.64E-04	3.34E-03	6.98E-05	0.00E+00	1.40E-03	4.27E-03
11	D09

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D12	80	Combination Long Haul Truck	41	0.00E+00	1.28E-05	7.21E-07	1.38E+01	8.12E-08	1.65E-02	1.05E-05	1.51E-02	1.10E-03	1.75E-04	1.17E-03	2.32E-04	2.42E-04	2.22E-03	4.64E-05	0.00E+00	9.28E-04	2.84E-03
9	D13	60	Passenger Car	211	0.00E+00	2.70E-06	2.94E-07	9.62E+00	1.92E-05	5.39E-02	6.09E-06	2.17E-04	2.13E-03	3.20E-04	5.94E-04	3.83E-04	3.93E-04	4.19E-05	4.83E-05	1.01E-08	2.01E-04	3.39E-05
9	D13	60	Passenger Truck	354	0.00E+00	5.73E-06	6.08E-07	2.15E+01	3.62E-05	9.22E-02	1.19E-05	6.76E-04	3.90E-03	5.80E-04	1.13E-03	7.38E-04	7.56E-04	1.71E-04	1.07E-04	1.98E-08	3.78E-04	1.15E-04
9	D13	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.60E-04
9	D13	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	D13	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.89E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
9	D13	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.41E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.58E-03
9	D14	60	Passenger Car	631	0.00E+00	8.08E-06	8.78E-07	2.88E+01	5.73E-05	1.61E-01	1.82E-05	6.50E-04	6.38E-03	9.55E-04	1.78E-03	1.14E-03	1.18E-03	1.25E-04	1.44E-04	3.03E-08	6.01E-04	1.01E-04
9	D14	60	Passenger Truck	1058	0.00E+00	1.71E-05	1.82E-06	6.41E+01	1.08E-04	2.76E-01	3.56E-05	2.02E-03	1.17E-02	1.73E-03	3.39E-03	2.21E-03	2.26E-03	5.12E-04	3.19E-04	5.91E-08	1.13E-03	3.43E-04
9	D14	60	Single Unit Short Haul Truck	62	0.00E+00	1.39E-05	5.74E-07	1.04E+01	9.21E-06	1.82E-02	1.50E-05	5.32E-03	1.43E-03	2.41E-04	1.85E-03	3.57E-04	3.64E-04	1.05E-03	4.22E-05	1.74E-08	1.49E-03	9.96E-04
9	D14	60	Single Unit Long Haul Truck	3	0.00E+00	6.07E-07	2.49E-08	4.42E-01	3.99E-07	7.73E-04	6.56E-07	2.30E-04	6.43E-05	1.07E-05	8.11E-05	1.55E-05	1.58E-05	4.46E-05	1.80E-06	7.40E-10	6.52E-05	4.31E-05
9	D14	60	Combination Short Haul Truck	47	0.00E+00	1.37E-05	1.01E-06	1.66E+01	3.76E-08	2.05E-02	9.87E-06	2.09E-02	2.40E-03	3.75E-04	8.47E-04	2.95E-04	3.06E-04	2.64E-03	5.54E-05	0.00E+00	5.40E-04	3.94E-03
9	D14	60	Combination Long Haul Truck	43	0.00E+00	1.89E-05	1.03E-06	1.57E+01	1.27E-07	2.47E-02	1.58E-05	2.23E-02	2.51E-03	3.64E-04	1.79E-03	3.37E-04	3.51E-04	2.51E-03	5.25E-05	0.00E+00	1.44E-03	4.19E-03
9	D15	60	Passenger Car	817	0.00E+00	1.05E-05	1.14E-06	3.72E+01	7.42E-05	2.08E-01	2.36E-05	8.41E-04	8.25E-03	1.24E-03	2.30E-03	1.48E-03	1.52E-03	1.62E-04	1.87E-04	3.92E-08	7.77E-04	1.31E-04
9	D15	60	Passenger Truck	1369	0.00E+00	2.22E-05	2.35E-06	8.30E+01	1.40E-04	3.57E-01	4.60E-05	2.62E-03	1.51E-02	2.24E-03	4.39E-03	2.85E-03	2.93E-03	6.63E-04	4.13E-04	7.65E-08	1.46E-03	4.43E-04
9	D15	60	Single Unit Short Haul Truck	57	0.00E+00	1.28E-05	5.30E-07	9.56E+00	8.50E-06	1.68E-02	1.39E-05	4.91E-03	1.32E-03	2.22E-04	1.71E-03	3.30E-04	3.36E-04	9.69E-04	3.90E-05	1.61E-08	1.38E-03	9.19E-04
9	D15	60	Single Unit Long Haul Truck	3	0.00E+00	5.60E-07	2.30E-08	4.08E-01	3.69E-07	7.14E-04	6.06E-07	2.13E-04	5.94E-05	9.85E-06	7.48E-05	1.43E-05	1.46E-05	4.12E-05	1.66E-06	6.83E-10	6.02E-05	3.98E-05
9	D15	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.97E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.72E-03
9	D15	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.10E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.96E-03
9	D16	60	Passenger Car	709	0.00E+00	9.07E-06	9.86E-07	3.23E+01	6.44E-05	1.81E-01	2.05E-05	7.30E-04	7.16E-03	1.07E-03	1.99E-03	1.29E-03	1.32E-03	1.41E-04	1.62E-04	3.41E-08	6.75E-04	1.14E-04
9	D16	60	Passenger Truck	1188	0.00E+00	1.93E-05	2.04E-06	7.20E+01	1.21E-04	3.10E-01	3.99E-05	2.27E-03	1.31E-02	1.95E-03	3.81E-03	2.48E-03	2.54E-03	5.75E-04	3.58E-04	6.64E-08	1.27E-03	3.85E-04
9	D16	60	Single Unit Short Haul Truck	76	0.00E+00	1.69E-05	6.98E-07	1.26E+01	1.12E-05	2.21E-02	1.83E-05	6.47E-03	1.74E-03	2.93E-04	2.25E-03	4.34E-04	4.43E-04	1.28E-03	5.13E-05	2.11E-08	1.81E-03	1.21E-03
9	D16	60	Single Unit Long Haul Truck	3	0.00E+00	7.37E-07	3.03E-08	5.37E-01	4.85E-07	9.40E-04	7.97E-07	2.80E-04	7.82E-05	1.30E-05	9.85E-05	1.89E-05	1.92E-05	5.42E-05	2.19E-06	8.99E-10	7.93E-05	5.24E-05
9	D16	60	Combination Short Haul Truck	53	0.00E+00	1.54E-05	1.13E-06	1.86E+01	4.22E-08	2.30E-02	1.11E-05	2.35E-02	2.69E-03	4.21E-04	9.50E-04	3.31E-04	3.44E-04	2.96E-03	6.22E-05	0.00E+00	6.06E-04	4.42E-03
9	D16	60	Combination Long Haul Truck	48	0.00E+00	2.12E-05	1.16E-06	1.76E+01	1.43E-07	2.77E-02	1.77E-05	2.50E-02	2.82E-03	4.08E-04	2.01E-03	3.78E-04	3.94E-04	2.82E-03	5.89E-05	0.00E+00	1.62E-03	4.70E-03
10	D17	70	Passenger Car	60	0.00E+00	6.71E-07	7.29E-08	2.62E+00	4.76E-06	1.35E-02	1.51E-06	6.09E-05	4.64E-04	7.22E-05	1.48E-04	9.52E-05	9.77E-05	1.02E-05	1.32E-05	2.74E-09	4.99E-05	9.50E-06
10	D17	70	Passenger Truck	101	0.00E+00	1.41E-06	1.50E-07	5.90E+00	9.05E-06	2.38E-02	2.96E-06	1.77E-04	8.40E-04	1.30E-04	2.83E-04	1.84E-04	1.89E-04	4.47E-05	2.94E-05	5.27E-09	9.47E-05	2.97E-05
10	D17	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.62E-06
10	D17	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.21E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.94E-04
10	D17	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.51E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.49E-04
10	D18	70	Passenger Car	398	0.00E+00	4.44E-06	4.83E-07	1.74E+01	3.15E-05	8.91E-02	1.00E-05	4.03E-04	3.07E-03	4.78E-04	9.76E-04	6.30E-04	6.46E-04	6.77E-05	8.73E-05	1.81E-08	3.30E-04	6.28E-05
10	D18	70	Passenger Truck	667	0.00E+00	9.35E-06	9.94E-07	3.90E+01	5.99E-05	1.57E-01	1.96E-05	1.17E-03	5.55E-03	8.59E-04	1.87E-03	1.22E-03	1.25E-03	2.96E-04	1.95E-04	3.49E-08	6.26E-04	1.97E-04
10	D18	70	Single Unit Short Haul Truck	51	0.00E+00	8.93E-06	3.63E-07	8.32E+00	5.99E-06	1.51E-02	9.72E-06	3.55E-03	8.07E-04	1.48E-04	1.20E-03	2.29E-04	2.34E-04	8.45E-04	3.38E-05	1.37E-08	9.70E-04	6.63E-04
10	D18	70	Single Unit Long Haul Truck	2	0.00E+00	3.89E-07	1.57E-08	3.52E-01	2.58E-07	6.33E-04	4.23E-07	1.53E-04	3.69E-05	6.62E-06	5.25E-05	9.91E-06	1.01E-05	3.57E-05	1.44E-06	5.76E-10	4.24E-05	2.86E-05
10	D18	70	Combination Short Haul Truck	52	0.00E+00	1.33E-05	9.91E-07	1.80E+01	3.38E-08	1.92E-02	9.50E-06	1.99E-02	1.88E-03	3.13E-04	7.99E-04	2.89E-04	3.00E-04	2.86E-03	6.02E-05	0.00E+00	5.00E-04	3.74E-03
10	D18	70	Combination Long Haul Truck	47	0.00E+00	1.83E-05	1.04E-06	1.69E+01	1.15E-07	2.30E-02	1.50E-05	2.12E-02	1.96E-03	2.95E-04	1.66E-03	3.34E-04	3.48E-04	2.71E-03	5.66E-05	0.00E+00	1.31E-03	4.00E-03
11	D19	80	Passenger Car	1461	0.00E+00	1.52E-05	1.65E-06	6.18E+01	1.08E-04	3.12E-01	3.42E-05	1.52E-03	7.97E-03	1.33E-03	3.34E-03	2.15E-03	2.21E-03	2.17E-04	3.12E-04	6.66E-08	1.13E-03	2.36E-04
11	D19	80	Passenger Truck	2448	0.00E+00	3.13E-05	3.33E-06	1.40E+02	2.03E-04	5.51E-01	6.62E-05	4.09E-03	1.42E-02	2.36E-03	6.36E-03	4.12E-03	4.23E-03	1.01E-03	6.98E-04	1.27E-07	2.13E-03	6.80E-04
11	D19	80	Single Unit Short Haul Truck	141	0.00E+00	1.93E-05	7.54E-07	2.31E+01	1.31E-05	4.19E-02	2.12E-05	8.01E-03	1.58E-03	3.24E-04	2.66E-03	4.93E-04	5.02E-04	2.35E-03	9.38E-05	3.72E-08	2.16E-03	1.50E-03
11	D19	80	Single Unit Long Haul Truck	6	0.00E+00	8.39E-07	3.24E-08	9.75E-01	5.58E-07	1.75E-03	9.22E-07	3.42E-04	7.25E-05	1.44E-05	1.16E-04	2.11E-05	2.16E-05	9.86E-05	3.97E-06	1.55E-09	9.44E-05	6.40E-05
11	D19	80	Combination Short Haul Truck	71	0.00E+00	1.46E-05	1.08E-06	2.37E+01	3.81E-08	2.22E-02	1.04E-05	2.24E-02	1.68E-03	3.05E-04	8.82E-04	3.14E-04	3.26E-04	3.76E-03	7.92E-05	0.00E+00	5.56E-04	4.22E-03
11	D19	80	Combination Long Haul Truck	64	0.00E+00	2.03E-05	1.14E-06	2.20E+01	1.29E-07	2.63E-02	1.67E-05	2.39E-02	1.74E-03	2.79E-04	1.86E-03	3.69E-04	3.84E-04	3.53E-03	7.36E-05	0.00E+00	1.47E-03	4.51E-03
11	D20	80	Passenger Car	497	0.00E+00	5.16E-06	5.60E-07	2.10E+01	3.66E-05	1.06E-01	1.16E-05	5.15E-04	2.71E-03	4.53E-04	1.13E-03	7.31E-04	7.50E-04	7.38E-05	1.06E-04	2.26E-08	3.84E-04	8.03E-05
11	D20	80	Passenger Truck	831	0.00E+00	1.06E-05	1.13E-06	4.74E+01	6.91E-05	1.87E-01	2.25E-05	1.39E-03	4.82E-03	8.02E-04	2.16E-03	1.40E-03	1.44E-03	3.41E-04	2.37E-04	4.31E-08	7.23E-04	2.31E-04
11	D20	80	Single Unit Short Haul Truck	440	0.00E+00	6.03E-05	2.36E-06	7.21E+01	4.09E-05	1.31E-01	6.63E-05	2.50E-02	4.94E-03	1.01E-03	8.31E-03	1.54E-03	1.57E-03	7.33E-03	2.93E-04	1.16E-07	6.74E-03	4.67E-03
11	D20	80	Single Unit Long Haul Truck	19	0.00E+00	2.62E-06	1.01E-07	3.05E+00	1.74E-06	5.45E-03	2.88E-06	1.07E-03	2.26E-04	4.48E-05	3.62E-04	6.60E-05	6.73E-05	3.08E-04	1.24E-05	4.84E-09	2.95E-04	2.00E-04
11	D20	80	Combination Short Haul Truck	232	0.00E+00	4.79E-05	3.54E-06	7.79E+01	1.25E-07	7.29E-02	3.42E-05	7.36E-02	5.54E-03	1.00E-03	2.90E-03	1.03E-03	1.07E-03	1.24E-02	2.60E-04	0.00E+00	1.83E-03	1.39E-02
11	D20	80	Combination Long Haul Truck	212	0.00E+00	6.67E-05	3.76E-06	7.23E+01	4.24E-07	8.64E-02	5.50E-05	7.87E-02	5.73E-03	9.17E-04	6.11E-03	1.21E-03	1.26E-03	1.16E-02	2.42E-04	0.00E+00	4.85E-03	1.48E-02
11	D21	80	Passenger Car	1159	0.00E+00	1.20E-05	1.31E-06	4.91E+01	8.55E-05	2.48E-01	2.72E-05	1.20E-03	6.32E-03	1.06E-03	2.65E-03	1.71E-03	1.75E-03	1.72E-04	2.47E-04	5.29E-08	8.96E-04	1.88E-04
11	D21	80	Passenger Truck	1942	0.00E+00	2.48E-05	2.64E-06	1.11E+02	1.61E-04	4.37E-01	5.25E-05	3.24E-03	1.13E-02	1.87E-03	5.04E-03	3.27E-03	3.35E-03	7.97E-04	5.53E-04	1.01E-07	1.69E-03	5.40E-04
11	D21	80	Single Unit Short Haul Truck	63	0.00E+00	8.67E-06	3.39E-07	1.04E+01	5.88E-06	1.88E-02	9.53E-06	3.60E-03	7.10E-04	1.45E-04	1.19E-03	2.21E-04	2.25E-04	1.05E-03	4.21E-05	1.67E-08	9.69E-04	6.72E-04
11	D21	80	Single Unit Long Haul Truck	3	0.00E+00	3.77E-07	1.45E-08	4.38E-01	2.51E-07	7.84E-04	4.14E-07	1.54E-04	3.26E-05	6.45E-06	5.21E-05	9.49E-06	9.68E-06	4.43E-05	1.78E-06	6.96E-10	4.24E-05	2.87E-05
11	D21	80	Combination Short Haul Truck	27	0.00E+00	5.61E-06	4.15E-07	9.12E+00	1.47E-08	8.54E-03	4.01E-06	8.62E-03	6.49E-04	1.18E-04	3.40E-04	1.21E-04	1.26E-04	1.45E-03	3.05E-05	0.00E+00	2.14E-04	1.62E-03
11	D21	80	Combination Long Haul Truck	25	0.00E+00	7.81E-06	4.41E-07	8.46E+00	4.97E-08	1.01E-02	6.44E-06	9.22E-03	6.71E-04	1.07E-04	7.16E-04	1.42E-04	1.48E-04	1.36E-03	2.84E-05	0.00E+00	5.68E-04	1.74E-03
11	D22	80	Passenger Car	576	0.00E+00	5.98E-06	6.50E-07	2.44E+01	4.25E-05	1.23E-01	1.35E-05	5.97E-04	3.14E-03	5.26E-04	1.32E-03	8.48E-04	8.71E-04	8.57E-05	1.23E-04	2.63E-08	4.45E-04	9.32E-05
11	D22	80	Passenger Truck	965	0.00E+00	1.23E-05	1.31E-06	5.50E+01	8.01E-05	2.17E-01	2.61E-05	1.61E-03	5.59E-03	9.31E-04	2.51E-03	1.63E-03	1.67E-03	3.96E-04	2.75E-04	5.00E-08	8.39E-04	2.68E-04
11	D22	80	Single Unit Short Haul Truck	360	0.00E+00	4.94E-05	1.93E-06	5.90E+01	3.35E-05	1.07E-01	5.43E-05	2.05E-02	4.05E-03	8.28E-04	6.81E-03	1.26E-03	1.28E-03	6.01E-03	2.40E-04	9.51E-08	5.52E-03	3.83E-03
11	D22	80	Single Unit Long Haul Truck	16	0.00E+00	2.15E-06	8.28E-08	2.49E+00	1.43E-06	4.47E-03	2.36E-06	8.75E-04	1.86E-04	3.67E-05	2.97E-04	5.41E-05	5.52E-05	2.52E-04	1.02E-05	3.96E-09	2.42E-04	1.64E-04
11	D22	80	Combination Short Haul Truck	240	0.00E+00	4.94E-05	3.65E-06	8.03E+01	1.29E-07	7.52E-02	3.53E-05	7.59E-02	5.72E-03	1.04E-03	2.99E-03	1.07E-03	1.11E-03	1.28E-02	2.69E-04	0.00E+00	1.89E-03	1.43E-02
11	D22	80	Combination Long Haul Truck	218	0.00E+00	6.88E-05	3.88E-06	7.46E+01	4.37E-07	8.91E-02	5.67E-05	8.12E-02	5.91E-03	9.45E-04	6.30E-03	1.25E-03	1.30E-03	1.20E-02	2.50E-04	0.00E+00	5.00E-03	1.53E-02
9	D23	60	Passenger Car	1432	0.00E+00	1.83E-05	1.99E-06	6.52E+01	1.30E-04	3.65E-01	4.13E-05	1.47E-03	1.45E-02	2.17E-03	4.03E-03	2.60E-03	2.66E-03	2.84E-04	3.27E-04	6.88E-08	1.36E-03	2.30E-04
9	D23	60	Passenger Truck	2398	0.00E+00	3.89E-05	4.12E-06	1.45E+02	2.45E-04	6.25E-01	8.06E-05	4.58E-03	2.64E-02	3.93E-03	7.69E-03	5.00E-03	5.13E-03	1.16E-03	7.23E-04	1.34E-07	2.56E-03	7.77E-04
9	D23	60	Single Unit Short Haul Truck	58	0.00E+00	1.30E-05	5.39E-07	9.72E+00	8.64E-06	1.71E-02	1.41E-05	4.99E-03	1.34E-03	2.26E-04	1.74E-03	3.35E-04	3.42E-04	9.85E-04	3.96E-05	1.63E-08	1.40E-03	9.35E-04
9	D23	60	Single Unit Long Haul Truck	3	0.00E+00	5.69E-07	2.34E-08	4.14E-01	3.75E-07	7.26E-04	6.16E-07	2.16E-04	6.04E-05	1.00E-05	7.61E-05	1.46E-05	1.49E-05	4.19E-05	1.69E-06	6.94E-10	6.12E-05	4.05E-05
9	D23	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.01E-03
9	D23	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.14E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.14E-03
9	D24	60	Passenger Car	690	0.00E+00	8.83E-06	9.59E-07	3.14E+01	6.26E-05	1.76E-01	1.99E-05	7.11E-04	6.97E-03	1.04E-03	1.94E-03	1.25E-03	1.28E-03	1.37E-04	1.58E-04	3.31E-08	6.57E-04	1.11E-04
9	D24	60	Passenger Truck	1156	0.00E+00	1.87E-05	1.99E-06	7.01E+01	1.18E-04	3.01E-01	3.89E-05	2.21E-03	1.27E-02	1.90E-03	3.71E-03	2.41E-03	2.47E-03	5.60E-04	3.48E-04	6.46E-08	1.24E-03	3.74E-04
9	D24	60	Single Unit Short Haul Truck	90	0.00E+00	2.01E-05	8.30E-07	1.50E+01	1.33E-05	2.63E-02	2.17E-05	7.69E-03	2.07E-03	3.48E-04	2.68E-03	5.17E-04	5.27E-04	1.52E-03	6.10E-05	2.51E-08	2.16E-03	1.44E-03
9	D24	60	Single Unit Long Haul Truck	4	0.00E+00	8.77E-07	3.61E-08	6.39E-01	5.78E-07	1.12E-03	9.49E-07	3.33E-04	9.30E-05	1.54E-05	1.17E-04	2.24E-05	2.29E-05	6.45E-05	2.61E-06	1.07E-09	9.44E-05	6.24E-05
9	D24	60	Combination Short Haul Truck	44	0.00E+00	1.28E-05	9.42E-07	1.55E+01	3.51E-08	1.92E-02	9.21E-06	1.95E-02	2.24E-03	3.50E-04	7.90E-04	2.76E-04	2.86E-04	2.46E-03	5.17E-05	0.00E+00	5.04E-04	3.68E-03
9	D24	60	Combination Long Haul Truck	40	0.00E+00	1.76E-05	9.62E-07	1.46E+01	1.19E-07	2.30E-02	1.47E-05	2.08E-02	2.35E-03	3.39E-04	1.67E-03	3.14E-04	3.28E-04	2.35E-03	4.90E-05	0.00E+00	1.34E-03	3.91E-03
9	D25	60	Passenger Car	1211	0.00E+00	1.55E-05	1.68E-06	5.52E+01	1.10E-04	3.09E-01	3.49E-05	1.25E-03	1.22E-02	1.83E-03	3.41E-03	2.20E-03	2.25E-03	2.40E-04	2.77E-04	5.82E-08	1.15E-03	1.95E-04
9	D25	60	Passenger Truck	2029	0.00E+00	3.29E-05	3.49E-06	1.23E+02	2.07E-04	5.29E-01	6.82E-05	3.88E-03	2.24E-02	3.33E-03	6.50E-03	4.23E-03	4.34E-03	9.83E-04	6.11E-04	1.13E-07	2.17E-03	6.57E-04
9	D25	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.48E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.03E-03
9	D25	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.37E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.45E-05
9	D25	60	Combination Short Haul Truck	28	0.00E+00	8.09E-06	5.94E-07	9.76E+00	2.22E-08	1.21E-02	5.81E-06	1.23E-02	1.41E-03	2.21E-04	4.99E-04	1.74E-04	1.80E-04	1.55E-03	3.26E-05	0.00E+00	3.18E-04	2.32E-03
9	D25	60	Combination Long Haul Truck	25	0.00E+00	1.11E-05	6.07E-07	9.22E+00	7.50E-08	1.45E-02	9.30E-06	1.31E-02	1.48E-03	2.14E-04	1.05E-03	1.98E-04	2.07E-04	1.48E-03	3.09E-05	0.00E+00	8.48E-04	2.47E-03
9	D26	60	Passenger Car	814	0.00E+00	1.04E-05	1.13E-06	3.71E+01	7.38E-05	2.08E-01	2.35E-05	8.38E-04	8.22E-03	1.23E-03	2.29E-03	1.48E-03	1.51E-03	1.61E-04	1.86E-04	3.91E-08	7.74E-04	1.31E-04
9	D26	60	Passenger Truck	1362	0.00E+00	2.21E-05	2.34E-06	8.26E+01	1.39E-04	3.55E-01	4.58E-05	2.60E-03	1.50E-02	2.23E-03	4.37E-03	2.84E-03	2.91E-03	6.60E-04	4.11E-04	7.61E-08	1.46E-03	4.41E-04
9	D26	60	Single Unit Short Haul Truck	97	0.00E+00	2.16E-05	8.92E-07	1.61E+01	1.43E-05	2.83E-02	2.34E-05	8.27E-03	2.23E-03	3.74E-04	2.88E-03	5.55E-04	5.66E-04	1.63E-03	6.56E-05	2.70E-08	2.32E-03	1.55E-03
9	D26

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

Highway 413
GTA West

MOVES L nkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D30	80	Single Unit Short Haul Truck	66	0.00E+00	9.07E-06	3.54E-07	1.08E+01	6.15E-06	1.97E-02	9.97E-06	3.76E-03	7.42E-04	1.52E-04	1.25E-03	2.31E-04	2.36E-04	1.10E-03	4.40E-05	1.74E-08	1.01E-03	7.03E-04
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	3.94E-07	1.52E-08	4.58E-01	2.62E-07	8.20E-04	4.33E-07	1.61E-04	3.40E-05	6.74E-06	5.45E-05	9.93E-06	1.01E-05	4.63E-05	1.86E-06	7.27E-10	4.43E-05	3.00E-05
11	D30	80	Combination Short Haul Truck	49	0.00E+00	1.01E-05	7.50E-07	1.65E+01	2.65E-08	1.54E-02	7.24E-06	1.56E-02	1.17E-03	2.13E-04	6.14E-04	2.19E-04	2.27E-04	2.62E-03	5.51E-05	0.00E+00	3.87E-04	2.94E-03
11	D30	80	Combination Long Haul Truck	45	0.00E+00	1.41E-05	7.97E-07	1.53E+01	8.98E-08	1.83E-02	1.16E-05	1.67E-02	1.21E-03	1.94E-04	1.29E-03	2.57E-04	2.68E-04	2.46E-03	5.13E-05	0.00E+00	1.03E-03	3.14E-03
11	D31	80	Passenger Car	205	0.00E+00	2.13E-06	2.31E-07	8.67E+00	1.51E-05	4.37E-02	4.80E-06	2.12E-04	1.12E-03	1.87E-04	4.68E-04	3.02E-04	3.10E-04	3.05E-05	4.37E-05	9.34E-09	1.58E-04	3.31E-05
11	D31	80	Passenger Truck	343	0.00E+00	4.38E-06	4.67E-07	1.96E+01	2.85E-05	7.73E-02	9.28E-06	5.73E-04	1.99E-03	3.31E-04	8.91E-04	5.78E-04	5.92E-04	1.41E-04	9.78E-05	1.78E-08	2.98E-04	9.54E-05
11	D31	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.36E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.68E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	D31	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	5.97E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.12E-03
11	D31	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.38E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.20E-03
11	D32	80	Passenger Car	409	0.00E+00	4.24E-06	4.61E-07	1.73E+01	3.01E-05	8.72E-02	9.57E-06	4.24E-04	2.23E-03	3.73E-04	9.33E-04	6.02E-04	6.18E-04	6.08E-05	8.72E-05	1.86E-08	3.16E-04	6.61E-05
11	D32	80	Passenger Truck	684	0.00E+00	8.74E-06	9.32E-07	3.90E+01	5.68E-05	1.54E-01	1.85E-05	1.14E-03	3.97E-03	6.60E-04	1.78E-03	1.15E-03	1.18E-03	2.81E-04	1.95E-04	3.55E-08	5.95E-04	1.90E-04
11	D32	80	Single Unit Short Haul Truck	29	0.00E+00	3.94E-06	1.54E-07	4.71E+00	2.67E-06	8.56E-03	4.33E-06	1.63E-03	3.23E-04	6.60E-05	5.43E-04	1.01E-04	1.02E-04	4.79E-04	1.91E-05	7.59E-09	4.40E-04	3.06E-04
11	D32	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	6.61E-09	1.99E-01	1.14E-07	3.56E-04	1.88E-07	6.98E-05	1.48E-05	2.93E-06	2.37E-05	4.32E-06	4.40E-06	2.01E-05	8.10E-07	3.16E-10	1.93E-05	1.31E-05
11	D32	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	7.96E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.50E-03
11	D32	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.51E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.60E-03
9	D33	60	Passenger Car	301	0.00E+00	3.84E-06	4.18E-07	1.37E+01	2.73E-05	7.67E-02	8.67E-06	3.09E-04	3.04E-03	4.55E-04	8.45E-04	5.45E-04	5.59E-04	5.96E-05	6.87E-05	1.44E-08	2.86E-04	4.83E-05
9	D33	60	Passenger Truck	503	0.00E+00	8.16E-06	8.65E-07	3.05E+01	5.15E-05	1.31E-01	1.69E-05	9.62E-04	5.55E-03	8.26E-04	1.61E-03	1.05E-03	1.08E-03	2.44E-04	1.52E-04	2.81E-08	5.38E-04	1.63E-04
9	D33	60	Single Unit Short Haul Truck	50	0.00E+00	1.11E-05	4.59E-07	8.29E+00	7.37E-06	1.46E-02	1.20E-05	4.26E-03	1.15E-03	1.93E-04	1.48E-03	2.86E-04	2.91E-04	8.40E-04	3.38E-05	1.39E-08	1.19E-03	7.97E-04
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	4.85E-07	1.99E-08	3.53E-01	3.19E-07	6.19E-04	5.25E-07	1.84E-04	5.15E-05	8.54E-06	6.49E-05	1.24E-05	1.27E-05	3.57E-05	1.44E-06	5.92E-10	5.22E-05	3.45E-05
9	D33	60	Combination Short Haul Truck	32	0.00E+00	9.46E-06	6.95E-07	1.14E+01	2.59E-08	1.41E-02	6.80E-06	1.44E-02	1.65E-03	2.58E-04	5.83E-04	2.03E-04	2.11E-04	1.82E-03	3.82E-05	0.00E+00	3.72E-04	2.71E-03
9	D33	60	Combination Long Haul Truck	30	0.00E+00	1.30E-05	7.10E-07	1.08E+01	8.78E-08	1.70E-02	1.09E-05	1.53E-02	1.73E-03	2.50E-04	1.23E-03	2.32E-04	2.42E-04	1.73E-03	3.61E-05	0.00E+00	9.92E-04	2.89E-03
9	D34	60	Passenger Car	302	0.00E+00	3.86E-06	4.20E-07	1.38E+01	2.74E-05	7.71E-02	8.71E-06	3.11E-04	3.05E-03	4.57E-04	8.50E-04	5.48E-04	5.62E-04	5.99E-05	6.91E-05	1.45E-08	2.87E-04	4.85E-05
9	D34	60	Passenger Truck	506	0.00E+00	8.20E-06	8.69E-07	3.07E+01	5.17E-05	1.32E-01	1.70E-05	9.67E-04	5.57E-03	8.30E-04	1.62E-03	1.06E-03	1.08E-03	2.45E-04	1.52E-04	2.83E-08	5.41E-04	1.64E-04
9	D34	60	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.24E-07	2.23E+00	1.98E-06	3.92E-03	3.24E-06	1.15E-03	3.08E-04	5.18E-05	3.99E-04	7.69E-05	7.85E-05	2.26E-04	9.09E-06	3.75E-09	3.21E-04	2.15E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.37E-09	9.51E-02	8.60E-08	1.67E-04	1.41E-07	4.96E-05	1.39E-05	2.30E-06	1.75E-05	3.34E-06	3.41E-06	9.61E-06	3.88E-07	1.59E-10	1.41E-05	9.29E-06
9	D34	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.02E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.69E-04
9	D34	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.22E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.06E-04
9	D35	60	Passenger Car	459	0.00E+00	5.88E-06	6.39E-07	2.09E+01	4.17E-05	1.17E-01	1.32E-05	4.73E-04	4.64E-03	6.95E-04	1.29E-03	8.33E-04	8.55E-04	9.11E-05	1.05E-04	2.21E-08	4.37E-04	7.38E-05
9	D35	60	Passenger Truck	770	0.00E+00	1.25E-05	1.32E-06	4.67E+01	7.87E-05	2.01E-01	2.59E-05	1.47E-03	8.48E-03	1.26E-03	2.47E-03	1.60E-03	1.64E-03	3.73E-04	2.32E-04	4.30E-08	8.22E-04	2.49E-04
9	D35	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.22E-04
9	D35	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.44E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.39E-05
9	D35	60	Combination Short Haul Truck	15	0.00E+00	4.43E-06	3.25E-07	5.34E+00	1.21E-08	6.61E-03	3.18E-06	6.73E-03	7.73E-04	1.21E-04	2.73E-04	9.51E-05	9.88E-05	8.49E-04	1.79E-05	0.00E+00	1.74E-04	1.27E-03
9	D35	60	Combination Long Haul Truck	14	0.00E+00	6.08E-06	3.32E-07	5.05E+00	4.11E-08	7.95E-03	5.09E-06	7.17E-03	8.10E-04	1.17E-04	5.77E-04	1.09E-04	1.13E-04	8.10E-04	1.69E-05	0.00E+00	4.64E-04	1.35E-03
9	D36	60	Passenger Car	174	0.00E+00	2.23E-06	2.42E-07	7.94E+00	1.58E-05	4.44E-02	5.02E-06	1.79E-04	1.76E-03	2.64E-04	4.90E-04	3.16E-04	3.24E-04	3.45E-05	3.98E-05	8.37E-09	1.66E-04	2.80E-05
9	D36	60	Passenger Truck	292	0.00E+00	4.73E-06	5.01E-07	1.77E+01	2.98E-05	7.61E-02	9.81E-06	5.58E-04	3.22E-03	4.79E-04	9.35E-04	6.09E-04	6.24E-04	1.41E-04	8.79E-05	1.63E-08	3.12E-04	9.45E-05
9	D36	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.29E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.29E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.92E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	D36	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.59E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.62E-03
9	D36	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.15E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D37	60	Passenger Car	102	0.00E+00	1.31E-06	1.42E-07	4.65E+00	9.26E-06	2.60E-02	2.94E-06	1.05E-04	1.03E-03	1.54E-04	2.87E-04	1.85E-04	1.90E-04	2.02E-05	2.33E-05	4.90E-09	9.71E-05	1.64E-05
9	D37	60	Passenger Truck	171	0.00E+00	2.77E-06	2.94E-07	1.04E+01	1.75E-05	4.46E-02	5.75E-06	3.27E-04	1.88E-03	2.80E-04	5.48E-04	3.57E-04	3.65E-04	8.28E-05	5.15E-05	9.55E-09	1.83E-04	5.54E-05
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
9	D37	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.39E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.63E-04
9	D37	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.48E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.79E-04
9	D38	60	Passenger Car	289	0.00E+00	3.69E-06	4.01E-07	1.32E+01	2.62E-05	7.36E-02	8.32E-06	2.97E-04	2.91E-03	4.37E-04	8.12E-04	5.23E-04	5.37E-04	5.72E-05	6.60E-05	1.39E-08	2.75E-04	4.64E-05
9	D38	60	Passenger Truck	483	0.00E+00	7.84E-06	8.31E-07	2.93E+01	4.94E-05	1.26E-01	1.63E-05	9.24E-04	5.33E-03	7.93E-04	1.55E-03	1.01E-03	1.03E-03	2.34E-04	1.46E-04	2.70E-08	5.16E-04	1.57E-04
9	D38	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.37E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
9	D38	60	Combination Short Haul Truck	20	0.00E+00	5.95E-06	4.37E-07	7.18E+00	1.63E-08	8.90E-03	4.28E-06	9.06E-03	1.04E-03	1.62E-04	3.67E-04	1.28E-04	1.33E-04	1.14E-03	2.40E-05	0.00E+00	2.34E-04	1.71E-03
9	D38	60	Combination Long Haul Truck	19	0.00E+00	8.18E-06	4.47E-07	6.79E+00	5.52E-08	1.07E-02	6.84E-06	9.65E-03	1.09E-03	1.58E-04	7.76E-04	1.46E-04	1.52E-04	1.09E-03	2.27E-05	0.00E+00	6.24E-04	1.82E-03
9	D39	60	Passenger Car	158	0.00E+00	2.02E-06	2.20E-07	7.21E+00	1.44E-05	4.03E-02	4.56E-06	1.63E-04	1.60E-03	2.39E-04	4.45E-04	2.87E-04	2.94E-04	3.13E-05	3.62E-05	7.59E-09	1.50E-04	2.54E-05
9	D39	60	Passenger Truck	265	0.00E+00	4.29E-06	4.55E-07	1.61E+01	2.71E-05	6.90E-02	8.91E-06	5.06E-04	2.92E-03	4.34E-04	8.49E-04	5.52E-04	5.66E-04	1.28E-04	7.98E-05	1.48E-08	2.83E-04	8.58E-05
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.18E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	D39	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.97E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
9	D39	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.42E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	D40	60	Passenger Car	358	0.00E+00	4.58E-06	4.97E-07	1.63E+01	3.25E-05	9.13E-02	1.03E-05	3.68E-04	3.61E-03	5.41E-04	1.01E-03	6.49E-04	6.66E-04	7.09E-05	8.18E-05	1.72E-08	3.40E-04	5.75E-05
9	D40	60	Passenger Truck	599	0.00E+00	9.71E-06	1.03E-06	3.63E+01	6.13E-05	1.56E-01	2.01E-05	1.15E-03	6.60E-03	9.83E-04	1.92E-03	1.25E-03	1.28E-03	2.90E-04	1.81E-04	3.35E-08	6.40E-04	1.94E-04
9	D40	60	Single Unit Short Haul Truck	21	0.00E+00	4.71E-06	1.94E-07	3.51E+00	3.12E-06	6.17E-03	5.09E-06	1.80E-03	4.85E-04	8.15E-05	6.28E-04	1.21E-04	1.23E-04	3.55E-04	1.43E-05	5.89E-09	5.04E-04	3.37E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.44E-09	1.49E-01	1.35E-07	2.62E-04	2.22E-07	7.80E-05	2.18E-05	3.61E-06	2.74E-05	5.25E-06	5.36E-06	1.51E-05	6.10E-07	2.50E-10	2.21E-05	1.46E-05
9	D40	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.59E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.62E-03
9	D40	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.15E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D41	60	Passenger Car	148	0.00E+00	1.89E-06	2.06E-07	6.75E+00	1.34E-05	3.78E-02	4.27E-06	1.52E-04	1.50E-03	2.24E-04	4.16E-04	2.68E-04	2.76E-04	2.93E-05	3.38E-05	7.11E-09	1.41E-04	2.38E-05
9	D41	60	Passenger Truck	248	0.00E+00	4.02E-06	4.26E-07	1.50E+01	2.54E-05	6.46E-02	8.34E-06	4.74E-04	2.73E-03	4.07E-04	7.95E-04	5.17E-04	5.30E-04	1.20E-04	7.47E-05	1.39E-08	2.65E-04	8.03E-05
9	D42	60	Passenger Car	176	0.00E+00	2.26E-06	2.45E-07	8.04E+00	1.60E-05	4.50E-02	5.09E-06	1.82E-04	1.78E-03	2.67E-04	4.96E-04	3.20E-04	3.28E-04	3.50E-05	4.03E-05	8.47E-09	1.68E-04	2.83E-05
9	D42	60	Passenger Truck	296	0.00E+00	4.79E-06	5.08E-07	1.79E+01	3.02E-05	7.70E-02	9.94E-06	5.65E-04	3.26E-03	4.85E-04	9.47E-04	6.16E-04	6.32E-04	1.43E-04	8.91E-05	1.65E-08	3.16E-04	9.57E-05
9	D42	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.82E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	D42	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.25E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.96E-06
9	D42	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.59E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.62E-03
9	D42	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.15E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D43	60	Passenger Car	299	0.00E+00	3.83E-06	4.16E-07	1.36E+01	2.71E-05	7.63E-02	8.62E-06	3.08E-04	3.02E-03	4.52E-04	8.41E-04	5.42E-04	5.57E-04	5.93E-05	6.84E-05	1.44E-08	2.85E-04	4.80E-05
9	D43	60	Passenger Truck	501	0.00E+00	8.12E-06	8.61E-07	3.04E+01	5.12E-05	1.31E-01	1.68E-05	9.57E-04	5.52E-03	8.21E-04	1.61E-03	1.04E-03	1.07E-03	2.43E-04	1.51E-04	2.80E-08	5.35E-04	1.62E-04
9	D44	60	Passenger Car	198	0.00E+00	2.53E-06	2.75E-07	9.01E+00	1.79E-05	5.05E-02	5.70E-06	2.04E-04	2.00E-03	2.99E-04	5.56E-04	3.59E-04	3.68E-04	3.92E-05	4.52E-05	9.50E-09	1.88E-04	3.18E-05
9	D44	60	Passenger Truck	331	0.00E+00	5.37E-06	5.69E-07	2.01E+01	3.39E-05	8.63E-02	1.11E-05	6.33E-04	3.65E-03	5.43E-04	1.06E-03	6.91E-04	7.08E-04	1.60E-04	9.98E-05	1.85E-08	3.54E-04	1.07E-04
9	D44	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.44E-04
9	D44	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	D44	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.43E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.40E-03
9	D44	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.91E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.49E-03
9	D45	60	Passenger Car	584	0.00E+00	7.46E-06	8.11E-07	2.66E+01	5.30E-05	1.49E-01	1.68E-05	6.01E-04	5.89E-03	8.83E-04	1.64E-03	1.06E-03	1.09E-03	1.16E-04	1.33E-04	2.80E-08	5.55E-04	9.37E-05
9	D45	60	Passenger Truck	977	0.00E+00	1.58E-05	1.68E-06	5.93E+01	9.99E-05	2.55E-01	3.29E-05	1.87E-03	1.08E-02	1.60E-03	3.13E-03	2.04E-03	2.09E-03	4.74E-04	2.95E-04	5.46E-08	1.04E-03	3.17E-04
9	D45	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.48E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.03E-03
9	D45	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.37E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.45E-05
9	D45	60	Combination Short Haul Truck	53	0.00E+00	1.54E-05	1.13E-06	1.86E+01	4.22E-08	2.30E-02	1.11E-05	2.35E-02	2.69E-03	4.21E-04	9.50E-04	3.31E-04	3.44E-04	2.96E-03	6.22E-05	0.00E+00	6.06E-04	4.42E-03
9	D45	60	Combination Long Haul Truck	48	0.00E+00	2.12E-05	1.16E-06	1.76E+01	1.43E-07	2.77E-02	1.77E-05	2.50E-02	2.82E-03	4.08E-04	2.01E-03	3.78E-04	3.94E-04	2.82E-03	5.89E-05	0.00E+00	1.62E-03	4.70E-03
9	D46	60	Passenger Car	495	0.00E+00	6.34E-06	6.88E-07	2.26E+01	4.50E-05	1.26E-01	1.43E-05	5.10E-04	5.00E-03	7.49E-04	1.39E-03	8.98E-04	9.22E-04	9.82E-05	1.13E-04	2.38E-08	4.71E-04	7.96E-05
9	D46	60	Passenger Truck	830	0.00E+00	1.34E-05	1.43E-06	5.03E+01	8.48E-05	2.16E-01	2.79E-05	1.59E-03	9.14E-03	1.36E-03	2.66E-03	1.73E-03	1.77E-03	4.02E-04	2.50E-04	4.64E-08	8.86E-04	2.69E-04
9	D46	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.14E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	D46	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.66E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.98E-05
9	D46	60	Combination Short Haul Truck	57	0.00E+00	1.66E-05	1.22E-06	2.01E+01	4.56E-08	2.49E-02	1.20E-05	2.53E-02	2.90E-03	4.54E-04	1.03E-03	3.58E-04	3.71E-04	3.19E-03	6.71E-05	0.00E+00	6.54E-04	4.77E-03
9	D46	60	Combination Long Haul Truck	52	0.00E+00	2.29E-05	1.25E-06	1.90E+01	1.54E-07	2.99E-02	1.91E-05	2.70E-02	3.05E-03	4.40E-04	2.17E-03	4.08E-04	4.25E-04	3.04E-03	6.35E-05	0.00E+00	1.74E-03	5.08E-03
9	D47	60	Passenger Car	824	0.00E+00	1.05E-05	1.15E-06	3.76E+01	7.48E-05	2.10E-01	2.38E-05	8.49E-04	8.33E-03	1.25E-03	2.32E-03	1.49E-03	1.53E-03	1.63E-04	1.88E-04	3.96E-08	7.84E-04	1.32E-04
9	D47	60	Passenger Truck	1381	0.00E+00	2.24E-05	2.37E-06	8.37E+01	1.41E-04	3.60E-01	4.64E-05	2.64E-03	1.52E-02	2.26E-03	4.43E-03	2.88E-03	2.95E-03	6.69E-04	4.16E-04	7.72E-08	1.48E-03	4.47E-04
9	D47	60	Single Unit Short Haul Truck	83	0.00E+00	1.86E-05	7.69E-07	1.39E+01	1.23E-05	2.44E-02	2.01E-05	7.12E-03	1.92E-03	3.22E-04	2.48E-03	4.78E-04	4.88E-04	1.40E-03	5.65E-05	2.33E-08	1.99E-03	1.33E-03
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	8.12E-07	3.34E-08	5.91E-01	5.35E-07	1.04E-03	8.78E-07	3.08E-04	8.61E-05	1.43E-05	1.09E-04	2.08E-05	2.12E-05	5.97E-05	2.41E-06	9.90E-10	8.73E-05	5.77E-05
9	D47	60	Combination Short Haul Truck	56	0.00E+00	1.65E-05	1.21E-06	1.99E+01	4.52E-08	2.46E-02	1.18E-05	2.51E-02	2.88E-03	4.50E-04	1.02E-03	3.54E-04	3.68E-04	3.16E-03	6.65E-05	0.00E+00	6.48E-04	4.73E-03
9	D47	60	Combination Long Haul Truck	52	0.00E+00	2.27E-05	1.24E-06	1.88E+01	1.53E-07	2.96E-02	1.89E-05	2.67E-02	3.02E-03	4.36E-04	2.15E-03	4.04E-04	4.21E-04	3.02E-03	6.30E-05	0.00E+00	1.73E-03	5.03E-03
9	D48	60	Passenger Car	381	0.00E+00	4.87E-06	5.29E-07	1.73E+01	3.45E-05	9.71E-02	1.10E-05	3.92E-04	3.84E-03	5.76E-04	1.07E-03	6.90E-04	7.08E-04	7.54E-05	8.70E-05	1.83E-08	3.62E-04	6.11E-05
9	D48	60	Passenger Truck	637	0.00E+00	1.03E-05	1.10E-06	3.87E+01	6.52E-05	1.66E-01	2.14E-05	1.22E-03	7.02E-03	1.05E-03	2.04E-03	1.33E-03	1.36E-03	3.09E-04	1.92E-04	3.56E-08	6.81E-04	2.06E-04
9	D48	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.05E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.83E-04
9	D48	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	9.59E-09	1.70E-01	1.54E-07	2.97E-04	2.52E-07	8.86E-05	2.47E-05	4.11E-06	3.12E-05	5.97E-06	6.09E-06	1.72E-05	6.93E-07	2.85E-10	2.51E-05	1.66E-05
9	D48	60	Combination Short Haul Truck	21	0.00E+00	6.26E-06	4.60E-07	7.55E+00	1.71E-08	9.35E-03	4.50E-06	9.52E-03	1.09E-03	1.71E-04	3.86E-04	1.34E-04	1.40E-04	1.20E-03	2.53E-05	0.00E+00	2.46E-04	1.79E-03
9	D48	60	Combination Long Haul Truck	20	0.00E+00	8.60E-06	4.70E-07	7.13E+00	5.80E-08	1.12E-02	7.19E-06	1.01E-02	1.15E-03	1.66E-04	8.16E-04	1.53E-04	1.60E-04	1.14E-03	2.39E-05	0.00E+00	6.56E-04	1.91E-03
9	D49	60	Passenger Car	819	0.00E+00	1.05E-05	1.14E-06	3.73E+01	7.43E-05	2.09E-01	2.36E-05	8.43E-04	8.27E-03	1.24E-03	2.30E-03	1.49E-03	1.52E-03	1.62E-04	1.87E-04	3.93E-08	7.79E-04	1.32E-04
9	D49	60	Passenger Truck	1372	0.00E+00	2.22E-05	2.36E-06	8.32E+01	1.40E-04	3.58E-01	4.61E-05	2.62E-03	1.51E-02	2.25E-03	4.40E-03	2.86E-03	2.93E-03	6.65E-04	4.13E-04	7.67E-08	1.47E-03	4.44E-04
9	D49	60	Single Unit Short Haul Truck	194	0.00E+00	4.34E-05	1.79E-06	3.23E+01	2.88E-05	5.69E-02	4.69E-05	1.66E-02	4.47E-03	7.52E-04	5.79E-03	1.12E-03	1.14E-03	3.28E-03	1.32E-04	5.43E-08	4.65E-03	3.11E-03
9	D49	60	Single Unit Long Haul Truck	9	0.00E+00	1.89E-06	7.79E-08	1.38E+00	1.25E-06	2.42E-03	2.05E-06	7.20E-04	2.01E-04	3.33E-05	2.53E-04	4.85E-05	4.94E-05	1.39E-04	5.63E-06	2.31E-09	2.04E-04	1.35E-04

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D49	60	Combination Short Haul Truck	108	0.00E+00	3.14E-05	2.31E-06	3.80E+01	8.61E-08	4.70E-02	2.26E-05	4.78E-02	5.49E-03	8.58E-04	1.94E-03	6.76E-04	7.02E-04	6.03E-03	1.27E-04	0.00E+00	1.24E-03	9.01E-03
9	D49	60	Combination Long Haul Truck	98	0.00E+00	4.32E-05	2.36E-06	3.58E+01	2.92E-07	5.64E-02	3.61E-05	5.09E-02	5.76E-03	8.32E-04	4.10E-03	7.71E-04	8.03E-04	5.75E-03	1.20E-04	0.00E+00	3.29E-03	9.60E-03
9	D50	60	Passenger Car	981	0.00E+00	1.25E-05	1.36E-06	4.47E+01	8.90E-05	2.50E-01	2.83E-05	1.01E-03	9.91E-03	1.48E-03	2.76E-03	1.78E-03	1.83E-03	1.94E-04	2.24E-04	4.71E-08	9.33E-04	1.58E-04
9	D50	60	Passenger Truck	1643	0.00E+00	2.66E-05	2.82E-06	9.96E+01	1.68E-04	4.28E-01	5.52E-05	3.14E-03	1.81E-02	2.69E-03	5.27E-03	3.43E-03	3.51E-03	7.96E-04	4.95E-04	9.18E-08	1.76E-03	5.32E-04
9	D50	60	Single Unit Short Haul Truck	204	0.00E+00	4.56E-05	1.88E-06	3.39E+01	3.02E-05	5.97E-02	4.93E-05	1.74E-02	4.69E-03	7.89E-04	6.08E-03	1.17E-03	1.19E-03	3.44E-03	1.38E-04	5.70E-08	4.88E-03	3.26E-03
9	D50	60	Single Unit Long Haul Truck	9	0.00E+00	1.99E-06	8.17E-08	1.45E+00	1.31E-06	2.53E-03	2.15E-06	7.55E-04	2.11E-04	3.50E-05	2.66E-04	5.09E-05	5.19E-05	1.46E-04	5.90E-06	2.42E-09	2.14E-04	1.41E-04
9	D50	60	Combination Short Haul Truck	112	0.00E+00	3.28E-05	2.41E-06	3.96E+01	8.99E-08	4.90E-02	2.36E-05	4.99E-02	5.73E-03	8.96E-04	2.02E-03	7.05E-04	7.32E-04	6.29E-03	1.32E-04	0.00E+00	1.29E-03	9.41E-03
9	D50	60	Combination Long Haul Truck	103	0.00E+00	4.51E-05	2.46E-06	3.74E+01	3.04E-07	5.89E-02	3.77E-05	5.32E-02	6.01E-03	8.68E-04	4.28E-03	8.05E-04	8.38E-04	6.00E-03	1.25E-04	0.00E+00	3.44E-03	1.00E-02
9	D51	60	Passenger Car	221	0.00E+00	2.83E-06	3.08E-07	1.01E+01	2.01E-05	5.65E-02	6.38E-06	2.28E-04	2.24E-03	3.35E-04	6.22E-04	4.01E-04	4.12E-04	4.39E-05	5.06E-05	1.06E-08	2.11E-04	3.55E-05
9	D51	60	Passenger Truck	371	0.00E+00	6.01E-06	6.37E-07	2.25E+01	3.79E-05	9.66E-02	1.25E-05	7.09E-04	4.08E-03	6.08E-04	1.19E-03	7.73E-04	7.92E-04	1.80E-04	1.12E-04	2.07E-08	3.96E-04	1.20E-04
9	D51	60	Single Unit Short Haul Truck	26	0.00E+00	5.77E-06	2.39E-07	4.30E+00	3.83E-06	7.57E-03	6.24E-06	2.21E-03	5.95E-04	1.00E-04	7.70E-04	1.48E-04	1.51E-04	4.36E-04	1.75E-05	7.22E-09	6.19E-04	4.14E-04
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	2.52E-07	1.04E-08	1.83E-01	1.66E-07	3.21E-04	2.73E-07	9.57E-05	2.67E-05	4.43E-06	3.37E-05	6.45E-06	6.58E-06	1.85E-05	7.48E-07	3.07E-10	2.71E-05	1.79E-05
9	D51	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.04E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
9	D51	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.43E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.21E-03
9	D52	60	Passenger Car	237	0.00E+00	3.03E-06	3.29E-07	1.08E+01	2.15E-05	6.04E-02	6.82E-06	2.44E-04	2.39E-03	3.58E-04	6.66E-04	4.29E-04	4.40E-04	4.69E-05	5.41E-05	1.14E-08	2.25E-04	3.80E-05
9	D52	60	Passenger Truck	396	0.00E+00	6.42E-06	6.81E-07	2.40E+01	4.05E-05	1.03E-01	1.33E-05	7.58E-04	4.37E-03	6.50E-04	1.27E-03	8.27E-04	8.47E-04	1.92E-04	1.19E-04	2.22E-08	4.23E-04	1.28E-04
9	D52	60	Single Unit Short Haul Truck	61	0.00E+00	1.37E-05	5.65E-07	1.02E+01	9.07E-06	1.79E-02	1.48E-05	5.24E-03	1.41E-03	2.37E-04	1.83E-03	3.52E-04	3.59E-04	1.03E-03	4.16E-05	1.71E-08	1.47E-03	9.81E-04
9	D52	60	Single Unit Long Haul Truck	3	0.00E+00	5.97E-07	2.46E-08	4.35E-01	3.93E-07	7.61E-04	6.46E-07	2.27E-04	6.33E-05	1.05E-05	7.98E-05	1.53E-05	1.56E-05	4.39E-05	1.77E-06	7.28E-10	6.42E-05	4.25E-05
9	D52	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.80E-03
9	D52	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.98E-03
9	D53	60	Passenger Car	316	0.00E+00	4.04E-06	4.39E-07	1.44E+01	2.86E-05	8.05E-02	9.10E-06	3.25E-04	3.19E-03	4.77E-04	8.87E-04	5.72E-04	5.87E-04	6.26E-05	7.21E-05	1.52E-08	3.00E-04	5.07E-05
9	D53	60	Passenger Truck	528	0.00E+00	8.57E-06	9.08E-07	3.20E+01	5.40E-05	1.38E-01	1.78E-05	1.01E-03	5.82E-03	8.67E-04	1.69E-03	1.10E-03	1.13E-03	2.56E-04	1.59E-04	2.95E-08	5.65E-04	1.71E-04
9	D53	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.09E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.66E-04
9	D53	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.32E-05
9	D53	60	Combination Short Haul Truck	27	0.00E+00	7.94E-06	5.83E-07	9.58E+00	2.17E-08	1.19E-02	5.70E-06	1.21E-02	1.39E-03	2.17E-04	4.89E-04	1.71E-04	1.77E-04	1.52E-03	3.20E-05	0.00E+00	3.12E-04	2.28E-03
9	D53	60	Combination Long Haul Truck	25	0.00E+00	1.09E-05	5.96E-07	9.05E+00	7.36E-08	1.42E-02	9.12E-06	1.29E-02	1.45E-03	2.10E-04	1.03E-03	1.95E-04	2.03E-04	1.45E-03	3.03E-05	0.00E+00	8.32E-04	2.42E-03
9	D54	60	Passenger Car	374	0.00E+00	4.79E-06	5.20E-07	1.71E+01	3.40E-05	9.55E-02	1.08E-05	3.85E-04	3.78E-03	5.66E-04	1.05E-03	6.79E-04	6.96E-04	7.42E-05	8.56E-05	1.80E-08	3.56E-04	6.01E-05
9	D54	60	Passenger Truck	627	0.00E+00	1.02E-05	1.08E-06	3.80E+01	6.41E-05	1.63E-01	2.11E-05	1.20E-03	6.91E-03	1.03E-03	2.01E-03	1.31E-03	1.34E-03	3.04E-04	1.89E-04	3.50E-08	6.70E-04	2.03E-04
9	D54	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.48E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.03E-03
9	D54	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.37E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.45E-05
9	D54	60	Combination Short Haul Truck	28	0.00E+00	8.24E-06	6.06E-07	9.95E+00	2.26E-08	1.23E-02	5.92E-06	1.25E-02	1.44E-03	2.25E-04	5.08E-04	1.77E-04	1.84E-04	1.58E-03	3.33E-05	0.00E+00	3.24E-04	2.36E-03
9	D54	60	Combination Long Haul Truck	26	0.00E+00	1.13E-05	6.19E-07	9.40E+00	7.64E-08	1.48E-02	9.47E-06	1.34E-02	1.51E-03	2.18E-04	1.07E-03	2.02E-04	2.11E-04	1.51E-03	3.15E-05	0.00E+00	8.64E-04	2.52E-03
11	D55	80	Passenger Car	664	0.00E+00	6.90E-06	7.49E-07	2.81E+01	4.89E-05	1.42E-01	1.55E-05	6.88E-04	3.62E-03	6.06E-04	1.52E-03	9.78E-04	1.00E-03	9.87E-05	1.42E-04	3.03E-08	5.13E-04	1.07E-04
11	D55	80	Passenger Truck	1112	0.00E+00	1.42E-05	1.51E-06	6.34E+01	9.24E-05	2.50E-01	3.01E-05	1.86E-03	6.44E-03	1.07E-03	2.89E-03	1.87E-03	1.92E-03	4.57E-04	3.17E-04	5.76E-08	9.67E-04	3.09E-04
11	D55	80	Single Unit Short Haul Truck	93	0.00E+00	1.27E-05	4.98E-07	1.52E+01	8.64E-06	2.77E-02	1.40E-05	5.29E-03	1.04E-03	2.14E-04	1.76E-03	3.25E-04	3.31E-04	1.55E-03	6.19E-05	2.45E-08	1.42E-03	9.88E-04
11	D55	80	Single Unit Long Haul Truck	4	0.00E+00	5.54E-07	2.14E-08	6.44E-01	3.68E-07	1.15E-03	6.09E-07	2.26E-04	4.79E-05	9.47E-06	7.65E-05	1.40E-05	1.42E-05	6.51E-05	2.62E-06	1.02E-09	6.23E-05	4.22E-05
11	D55	80	Combination Short Haul Truck	57	0.00E+00	1.17E-05	8.70E-07	1.91E+01	3.08E-08	1.79E-02	8.40E-06	1.81E-02	1.36E-03	2.46E-04	7.13E-04	2.54E-04	2.63E-04	3.04E-03	6.39E-05	0.00E+00	4.49E-04	3.41E-03
11	D55	80	Combination Long Haul Truck	52	0.00E+00	1.64E-05	9.24E-07	1.77E+01	1.04E-07	2.12E-02	1.35E-05	1.93E-02	1.41E-03	2.25E-04	1.50E-03	2.98E-04	3.10E-04	2.85E-03	5.95E-05	0.00E+00	1.19E-03	3.64E-03
11	D56	80	Passenger Car	362	0.00E+00	3.76E-06	4.09E-07	1.53E+01	2.67E-05	7.73E-02	8.48E-06	3.76E-04	1.97E-03	3.31E-04	8.27E-04	5.34E-04	5.48E-04	5.39E-05	7.73E-05	1.65E-08	2.80E-04	5.86E-05
11	D56	80	Passenger Truck	607	0.00E+00	7.75E-06	8.26E-07	3.46E+01	5.04E-05	1.37E-01	1.64E-05	1.01E-03	3.52E-03	5.85E-04	1.58E-03	1.02E-03	1.05E-03	2.49E-04	1.73E-04	3.14E-08	5.28E-04	1.69E-04
11	D56	80	Single Unit Short Haul Truck	43	0.00E+00	5.91E-06	2.31E-07	7.07E+00	4.01E-06	1.28E-02	6.50E-06	2.45E-03	4.84E-04	9.91E-05	8.14E-04	1.51E-04	1.54E-04	7.19E-04	2.87E-05	1.14E-08	6.61E-04	4.58E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	2.57E-07	9.91E-09	2.99E-01	1.71E-07	5.34E-04	2.82E-07	1.05E-04	2.22E-05	4.39E-06	3.55E-05	6.47E-06	6.60E-06	3.02E-05	1.22E-06	4.74E-10	2.89E-05	1.96E-05
11	D56	80	Combination Short Haul Truck	24	0.00E+00	4.96E-06	3.67E-07	8.07E+00	1.30E-08	7.56E-03	3.54E-06	7.63E-03	5.74E-04	1.04E-04	3.01E-04	1.07E-04	1.11E-04	1.28E-03	2.70E-05	0.00E+00	1.90E-04	1.44E-03
11	D56	80	Combination Long Haul Truck	22	0.00E+00	6.91E-06	3.90E-07	7.49E+00	4.39E-08	8.95E-03	5.70E-06	8.15E-03	5.93E-04	9.50E-05	6.33E-04	1.26E-04	1.31E-04	1.20E-03	2.51E-05	0.00E+00	5.02E-04	1.54E-03
11	D57	80	Passenger Car	805	0.00E+00	8.36E-06	9.08E-07	3.40E+01	5.93E-05	1.72E-01	1.88E-05	8.34E-04	4.39E-03	7.34E-04	1.84E-03	1.18E-03	1.22E-03	1.20E-04	1.72E-04	3.67E-08	6.22E-04	1.30E-04
11	D57	80	Passenger Truck	1347	0.00E+00	1.72E-05	1.83E-06	7.68E+01	1.12E-04	3.03E-01	3.65E-05	2.25E-03	7.81E-03	1.30E-03	3.50E-03	2.27E-03	2.33E-03	5.53E-04	3.84E-04	6.98E-08	1.17E-03	3.74E-04
11	D57	80	Single Unit Short Haul Truck	113	0.00E+00	1.55E-05	6.05E-07	1.85E+01	1.05E-05	3.37E-02	1.70E-05	6.43E-03	1.27E-03	2.60E-04	2.14E-03	3.95E-04	4.03E-04	1.88E-03	7.53E-05	2.98E-08	1.73E-03	1.20E-03
11	D57	80	Single Unit Long Haul Truck	5	0.00E+00	6.74E-07	2.60E-08	7.83E-01	4.48E-07	1.40E-03	7.40E-07	2.75E-04	5.82E-05	1.15E-05	9.31E-05	1.70E-05	1.73E-05	7.92E-05	3.19E-06	1.24E-09	7.58E-05	5.13E-05
11	D57	80	Combination Short Haul Truck	66	0.00E+00	1.37E-05	1.01E-06	2.23E+01	3.59E-08	2.09E-02	9.79E-06	2.11E-02	1.58E-03	2.87E-04	8.30E-04	2.96E-04	3.07E-04	3.54E-03	7.45E-05	0.00E+00	5.23E-04	3.97E-03
11	D57	80	Combination Long Haul Truck	61	0.00E+00	1.91E-05	1.08E-06	2.07E+01	1.21E-07	2.47E-02	1.57E-05	2.25E-02	1.64E-03	2.62E-04	1.75E-03	3.47E-04	3.61E-04	3.32E-03	6.93E-05	0.00E+00	1.39E-03	4.24E-03
11	D58	80	Passenger Car	1166	0.00E+00	1.21E-05	1.32E-06	4.93E+01	8.59E-05	2.49E-01	2.73E-05	1.21E-03	6.35E-03	1.06E-03	2.66E-03	1.72E-03	1.76E-03	1.73E-04	2.49E-04	5.31E-08	9.01E-04	1.89E-04
11	D58	80	Passenger Truck	1952	0.00E+00	2.49E-05	2.66E-06	1.11E+02	1.62E-04	4.40E-01	5.28E-05	3.26E-03	1.13E-02	1.88E-03	5.07E-03	3.29E-03	3.37E-03	8.02E-04	5.56E-04	1.01E-07	1.70E-03	5.43E-04
11	D58	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.40E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.48E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.02E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.91E-05
11	D58	80	Combination Short Haul Truck	26	0.00E+00	5.28E-06	3.91E-07	8.59E+00	1.38E-08	8.05E-03	3.78E-06	8.13E-03	6.12E-04	1.11E-04	3.20E-04	1.14E-04	1.18E-04	1.37E-03	2.87E-05	0.00E+00	2.02E-04	1.53E-03
11	D58	80	Combination Long Haul Truck	23	0.00E+00	7.36E-06	4.15E-07	7.98E+00	4.68E-08	9.53E-03	6.07E-06	8.68E-03	6.32E-04	1.01E-04	6.74E-04	1.34E-04	1.39E-04	1.28E-03	2.67E-05	0.00E+00	5.35E-04	1.64E-03
11	D59	80	Passenger Car	432	0.00E+00	4.49E-06	4.87E-07	1.83E+01	3.18E-05	9.22E-02	1.01E-05	4.48E-04	2.35E-03	3.94E-04	9.86E-04	6.36E-04	6.53E-04	6.42E-05	9.21E-05	1.97E-08	3.34E-04	6.99E-05
11	D59	80	Passenger Truck	723	0.00E+00	9.23E-06	9.84E-07	4.12E+01	6.01E-05	1.63E-01	1.96E-05	1.21E-03	4.19E-03	6.98E-04	1.88E-03	1.22E-03	1.25E-03	2.97E-04	2.06E-04	3.75E-08	6.29E-04	2.01E-04
11	D59	80	Single Unit Short Haul Truck	77	0.00E+00	1.05E-05	4.11E-07	1.26E+01	7.13E-06	2.28E-02	1.16E-05	4.36E-03	8.61E-04	1.76E-04	1.45E-03	2.68E-04	2.73E-04	1.28E-03	5.10E-05	2.02E-08	1.17E-03	8.15E-04
11	D59	80	Single Unit Long Haul Truck	3	0.00E+00	4.57E-07	1.76E-08	5.31E-01	3.04E-07	9.50E-04	5.02E-07	1.86E-04	3.95E-05	7.81E-06	6.31E-05	1.15E-05	1.17E-05	5.37E-05	2.16E-06	8.43E-10	5.14E-05	3.48E-05
11	D59	80	Combination Short Haul Truck	39	0.00E+00	7.98E-06	5.91E-07	1.30E+01	2.09E-08	1.22E-02	5.70E-06	1.23E-02	9.24E-04	1.67E-04	4.84E-04	1.72E-04	1.79E-04	2.06E-03	4.34E-05	0.00E+00	3.05E-04	2.31E-03
11	D59	80	Combination Long Haul Truck	35	0.00E+00	1.11E-05	6.27E-07	1.20E+01	7.07E-08	1.44E-02	9.17E-06	1.31E-02	9.55E-04	1.53E-04	1.02E-03	2.02E-04	2.11E-04	1.93E-03	4.04E-05	0.00E+00	8.08E-04	2.47E-03
11	D60	80	Passenger Car	501	0.00E+00	5.21E-06	5.66E-07	2.12E+01	3.70E-05	1.07E-01	1.17E-05	5.20E-04	2.73E-03	4.58E-04	1.15E-03	7.38E-04	7.58E-04	7.45E-05	1.07E-04	2.29E-08	3.87E-04	8.11E-05
11	D60	80	Passenger Truck	840	0.00E+00	1.07E-05	1.14E-06	4.79E+01	6.97E-05	1.89E-01	2.27E-05	1.40E-03	4.87E-03	8.10E-04	2.18E-03	1.41E-03	1.45E-03	3.45E-04	2.39E-04	4.35E-08	7.30E-04	2.33E-04
11	D60	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.97E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.08E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D60	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.47E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	D60	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.85E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
11	D61	80	Passenger Car	57	0.00E+00	5.90E-07	6.41E-08	2.40E+00	4.19E-06	1.21E-02	1.33E-06	5.89E-05	3.10E-04	5.19E-05	1.30E-04	8.37E-05	8.59E-05	8.45E-06	1.21E-05	2.59E-09	4.39E-05	9.19E-06
11	D61	80	Passenger Truck	95	0.00E+00	1.22E-06	1.30E-07	5.43E+00	7.90E-06	2.14E-02	2.58E-06	1.59E-04	5.52E-04	9.18E-05	2.47E-04	1.60E-04	1.64E-04	3.91E-05	2.71E-05	4.93E-09	8.28E-05	2.64E-05
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	5.99E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D61	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.81E-04
11	D61	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.00E-04
11	D62	80	Passenger Car	244	0.00E+00	2.54E-06	2.76E-07	1.03E+01	1.80E-05	5.21E-02	5.72E-06	2.53E-04	1.33E-03	2.23E-04	5.58E-04	3.60E-04	3.69E-04	3.63E-05	5.21E-05	1.11E-08	1.89E-04	3.95E-05
11	D62	80	Passenger Truck	409	0.00E+00	5.22E-06	5.57E-07	2.33E+01	3.40E-05	9.21E-02	1.11E-05	6.83E-04	2.37E-03	3.95E-04	1.06E-03	6.89E-04	7.06E-04	1.68E-04	1.17E-04	2.12E-08	3.56E-04	1.14E-04
11	D62	80	Single Unit Short Haul Truck	79	0.00E+00	1.08E-05	4.21E-07	1.29E+01	7.31E-06	2.34E-02	1.18E-05	4.47E-03	8.82E-04	1.80E-04	1.48E-03	2.75E-04	2.80E-04	1.31E-03	5.23E-05	2.07E-08	1.20E-03	8.35E-04
11	D62	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	1.81E-08	5.44E-01	3.11E-07	9.74E-04	5.14E-07	1.91E-04	4.05E-05	8.01E-06	6.47E-05	1.18E-05	1.20E-05	5.50E-05	2.21E-06	8.64E-10	5.27E-05	3.57E-05
11	D62	80	Combination Short Haul Truck	32	0.00E+00	6.68E-06	4.95E-07	1.09E+01	1.75E-08	1.02E-02	4.78E-06	1.03E-02	7.74E-04	1.40E-04	4.05E-04	1.44E-04	1.50E-04	1.73E-03	3.64E-05	0.00E+00	2.55E-04	1.94E-03
11	D62	80	Combination Long Haul Truck	30	0.00E+00	9.31E-06	5.26E-07	1.01E+01	5.92E-08	1.21E-02	7.68E-06	1.10E-02	8.00E-04	1.28E-04	8.53E-04	1.69E-04	1.76E-04	1.62E-03	3.38E-05	0.00E+00	6.77E-04	2.07E-03
10	D63	70	Passenger Car	47	0.00E+00	5.30E-07	5.75E-08	2.07E+00	3.76E-06	1.06E-02	1.19E-06	4.80E-05	3.66E-04	5.70E-05	1.16E-04	7.51E-05	7.71E-05	8.07E-06	1.04E-05	2.16E-09	3.94E-05	7.49E-06
10	D63	70	Passenger Truck	80	0.00E+00	1.11E-06	1.18E-07	4.66E+00	7.14E-06	1.88E-02	2.34E-06	1.40E-04	6.62E-04	1.02E-04	2.23E-04	1.45E-04	1.49E-04	3.53E-05	2.32E-05	4.16E-09	7.47E-05	2.34E-05
10	D63	70	Single Unit Short Haul Truck	44	0.00E+00	7.75E-06	3.15E-07	7.22E+00	5.20E-06	1.31E-02	8.43E-06	3.08E-03	7.00E-04	1.29E-04	1.05E-03	1.99E-04	2.03E-04	7.33E-04	2.94E-05	1.19E-08	8.42E-04	5.76E-04
10	D63	70	Single Un

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	3.20E-07	1.23E-08	3.72E-01	2.13E-07	6.65E-04	3.51E-07	1.30E-04	2.76E-05	5.47E-06	4.42E-05	8.06E-06	8.22E-06	3.76E-05	1.51E-06	5.90E-10	3.60E-05	2.44E-05
11	D67	80	Combination Short Haul Truck	35	0.00E+00	7.22E-06	5.35E-07	1.18E+01	1.89E-08	1.10E-02	5.16E-06	1.11E-02	8.36E-04	1.51E-04	4.38E-04	1.56E-04	1.62E-04	1.87E-03	3.93E-05	0.00E+00	2.76E-04	2.09E-03
11	D67	80	Combination Long Haul Truck	32	0.00E+00	1.01E-05	5.68E-07	1.09E+01	6.40E-08	1.30E-02	8.30E-06	1.19E-02	8.64E-04	1.38E-04	9.22E-04	1.83E-04	1.91E-04	1.75E-03	3.65E-05	0.00E+00	7.31E-04	2.24E-03
11	D68	80	Passenger Car	375	0.00E+00	3.89E-06	4.23E-07	1.58E+01	2.76E-05	8.00E-02	8.77E-06	3.88E-04	2.04E-03	3.42E-04	8.56E-04	5.52E-04	5.66E-04	5.57E-05	7.99E-05	1.71E-08	2.89E-04	6.06E-05
11	D68	80	Passenger Truck	627	0.00E+00	8.01E-06	8.54E-07	3.58E+01	5.21E-05	1.41E-01	1.70E-05	1.05E-03	3.64E-03	6.05E-04	1.63E-03	1.06E-03	1.08E-03	2.58E-04	1.79E-04	3.25E-08	5.46E-04	1.74E-04
11	D68	80	Single Unit Short Haul Truck	92	0.00E+00	1.26E-05	4.93E-07	1.51E+01	8.55E-06	2.74E-02	1.39E-05	5.23E-03	1.03E-03	2.11E-04	1.74E-03	3.22E-04	3.28E-04	1.53E-03	6.12E-05	2.43E-08	1.41E-03	9.78E-04
11	D68	80	Single Unit Long Haul Truck	4	0.00E+00	5.48E-07	2.11E-08	6.37E-01	3.64E-07	1.14E-03	6.02E-07	2.24E-04	4.74E-05	9.38E-06	7.58E-05	1.38E-05	1.41E-05	6.44E-05	2.59E-06	1.01E-09	6.17E-05	4.18E-05
11	D68	80	Combination Short Haul Truck	60	0.00E+00	1.23E-05	9.10E-07	2.00E+01	3.22E-08	1.87E-02	8.78E-06	1.89E-02	1.42E-03	2.58E-04	7.45E-04	2.65E-04	2.76E-04	3.18E-03	6.69E-05	0.00E+00	4.70E-04	3.56E-03
11	D68	80	Combination Long Haul Truck	54	0.00E+00	1.71E-05	9.66E-07	1.86E+01	1.09E-07	2.22E-02	1.41E-05	2.02E-02	1.47E-03	2.35E-04	1.57E-03	3.11E-04	3.24E-04	2.98E-03	6.22E-05	0.00E+00	1.24E-03	3.81E-03
11	D69	80	Passenger Car	43	0.00E+00	4.50E-07	4.89E-08	1.83E+00	3.20E-06	9.26E-03	1.02E-06	4.50E-05	2.36E-04	3.96E-05	9.91E-05	6.39E-05	6.55E-05	6.45E-06	9.25E-06	1.98E-09	3.35E-05	7.02E-06
11	D69	80	Passenger Truck	73	0.00E+00	9.27E-07	9.89E-08	4.14E+00	6.03E-06	1.64E-02	1.97E-06	1.21E-04	4.21E-04	7.01E-05	1.89E-04	1.22E-04	1.25E-04	2.98E-05	2.07E-05	3.76E-09	6.32E-05	2.02E-05
11	D69	80	Single Unit Short Haul Truck	22	0.00E+00	3.02E-06	1.18E-07	3.61E+00	2.05E-06	6.56E-03	3.32E-06	1.25E-03	2.47E-04	5.06E-05	4.16E-04	7.71E-05	7.86E-05	3.67E-04	1.47E-05	5.82E-09	3.38E-04	2.34E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.07E-09	1.53E-01	8.73E-08	2.73E-04	1.44E-07	5.36E-05	1.13E-05	2.25E-06	1.82E-05	3.31E-06	3.37E-06	1.54E-05	6.21E-07	2.42E-10	1.48E-05	1.00E-05
11	D69	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.25E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.54E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.68E-04
11	D70	80	Passenger Car	208	0.00E+00	2.16E-06	2.34E-07	8.78E+00	1.53E-05	4.43E-02	4.86E-06	2.15E-04	1.13E-03	1.89E-04	4.74E-04	3.06E-04	3.14E-04	3.08E-05	4.43E-05	9.46E-09	1.60E-04	3.36E-05
11	D70	80	Passenger Truck	347	0.00E+00	4.44E-06	4.73E-07	1.98E+01	2.89E-05	7.83E-02	9.40E-06	5.80E-04	2.01E-03	3.35E-04	9.02E-04	5.85E-04	6.00E-04	1.43E-04	9.90E-05	1.80E-08	3.02E-04	9.66E-05
11	D70	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.83E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.30E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.26E-05
11	D70	80	Combination Short Haul Truck	32	0.00E+00	6.58E-06	4.87E-07	1.07E+01	1.72E-08	1.00E-02	4.70E-06	1.01E-02	7.61E-04	1.38E-04	3.99E-04	1.42E-04	1.47E-04	1.70E-03	3.58E-05	0.00E+00	2.51E-04	1.91E-03
11	D70	80	Combination Long Haul Truck	29	0.00E+00	9.16E-06	5.17E-07	9.93E+00	5.83E-08	1.19E-02	7.56E-06	1.08E-02	7.87E-04	1.26E-04	8.39E-04	1.67E-04	1.74E-04	1.59E-03	3.33E-05	0.00E+00	6.66E-04	2.04E-03
10	D71	70	Passenger Car	215	0.00E+00	2.40E-06	2.61E-07	9.38E+00	1.70E-05	4.82E-02	5.42E-06	2.18E-04	1.66E-03	2.58E-04	5.28E-04	3.41E-04	3.49E-04	3.66E-05	4.72E-05	9.81E-09	1.79E-04	3.40E-05
10	D71	70	Passenger Truck	361	0.00E+00	5.06E-06	5.37E-07	2.11E+01	3.24E-05	8.51E-02	1.06E-05	6.33E-04	3.00E-03	4.65E-04	1.01E-03	6.58E-04	6.75E-04	1.60E-04	1.05E-04	1.89E-08	3.39E-04	1.06E-04
10	D71	70	Single Unit Short Haul Truck	38	0.00E+00	6.74E-06	2.74E-07	6.28E+00	4.52E-06	1.14E-02	7.33E-06	2.68E-03	6.09E-04	1.12E-04	9.09E-04	1.73E-04	1.77E-04	6.38E-04	2.55E-05	1.03E-08	7.32E-04	5.01E-04
10	D71	70	Single Unit Long Haul Truck	2	0.00E+00	2.93E-07	1.18E-08	2.66E-01	1.94E-07	4.78E-04	3.19E-07	1.15E-04	2.79E-05	5.00E-06	3.97E-05	7.48E-06	7.63E-06	2.69E-05	1.08E-06	4.34E-10	3.20E-05	2.15E-05
10	D71	70	Combination Short Haul Truck	35	0.00E+00	8.88E-06	6.61E-07	1.20E+01	2.26E-08	1.28E-02	6.33E-06	1.32E-02	1.25E-03	2.09E-04	5.33E-04	1.93E-04	2.00E-04	1.91E-03	4.01E-05	0.00E+00	3.33E-04	2.49E-03
10	D71	70	Combination Long Haul Truck	31	0.00E+00	1.22E-05	6.93E-07	1.13E+01	7.64E-08	1.53E-02	1.00E-05	1.42E-02	1.30E-03	1.96E-04	1.11E-03	2.23E-04	2.32E-04	1.81E-03	3.78E-05	0.00E+00	8.76E-04	2.67E-03
10	D72	70	Passenger Car	183	0.00E+00	2.04E-06	2.22E-07	7.98E+00	1.45E-05	4.10E-02	4.61E-06	1.85E-04	1.41E-03	2.20E-04	4.49E-04	2.90E-04	2.97E-04	3.11E-05	4.02E-05	8.34E-09	1.52E-04	2.89E-05
10	D72	70	Passenger Truck	307	0.00E+00	4.30E-06	4.57E-07	1.80E+01	2.75E-05	7.24E-02	9.01E-06	5.39E-04	2.56E-03	3.95E-04	8.62E-04	5.60E-04	5.74E-04	1.36E-04	8.95E-05	1.60E-08	2.88E-04	9.04E-05
10	D72	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.41E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.38E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.75E-05
10	D72	70	Combination Short Haul Truck	37	0.00E+00	9.42E-06	7.01E-07	1.27E+01	2.39E-08	1.36E-02	6.71E-06	1.40E-02	1.33E-03	2.22E-04	5.65E-04	2.04E-04	2.12E-04	2.02E-03	4.26E-05	0.00E+00	3.53E-04	2.65E-03
10	D72	70	Combination Long Haul Truck	33	0.00E+00	1.29E-05	7.35E-07	1.20E+01	8.10E-08	1.62E-02	1.06E-05	1.50E-02	1.38E-03	2.08E-04	1.17E-03	2.36E-04	2.46E-04	1.92E-03	4.01E-05	0.00E+00	9.29E-04	2.83E-03
10	D73	70	Passenger Car	122	0.00E+00	1.36E-06	1.48E-07	5.33E+00	9.68E-06	2.73E-02	3.07E-06	1.24E-04	9.42E-04	1.47E-04	3.00E-04	1.93E-04	1.98E-04	2.08E-05	2.68E-05	5.57E-09	1.01E-04	1.93E-05
10	D73	70	Passenger Truck	205	0.00E+00	2.87E-06	3.05E-07	1.20E+01	1.84E-05	4.83E-02	6.02E-06	3.59E-04	1.71E-03	2.64E-04	5.75E-04	3.74E-04	3.83E-04	9.08E-05	5.97E-05	1.07E-08	1.92E-04	6.03E-05
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	D73	70	Combination Short Haul Truck	12	0.00E+00	2.96E-06	2.20E-07	4.00E+00	7.52E-09	4.28E-03	2.11E-06	4.41E-03	4.17E-04	6.96E-05	1.78E-04	6.42E-05	6.66E-05	6.36E-04	1.34E-05	0.00E+00	1.11E-04	8.31E-04
10	D73	70	Combination Long Haul Truck	10	0.00E+00	4.06E-06	2.31E-07	3.76E+00	2.55E-08	5.10E-03	3.34E-06	4.72E-03	4.35E-04	6.55E-05	3.69E-04	7.42E-05	7.73E-05	6.03E-04	1.26E-05	0.00E+00	2.92E-04	8.89E-04
10	D74	70	Passenger Car	222	0.00E+00	2.48E-06	2.69E-07	9.68E+00	1.76E-05	4.97E-02	5.58E-06	2.25E-04	1.71E-03	2.67E-04	5.45E-04	3.51E-04	3.60E-04	3.77E-05	4.87E-05	1.01E-08	1.84E-04	3.50E-05
10	D74	70	Passenger Truck	372	0.00E+00	5.21E-06	5.54E-07	2.18E+01	3.34E-05	8.77E-02	1.09E-05	6.53E-04	3.10E-03	4.79E-04	1.05E-03	6.79E-04	6.96E-04	1.65E-04	1.09E-04	1.94E-08	3.49E-04	1.10E-04
10	D74	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.70E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.74E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.00E-06
10	D74	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.01E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.56E-04
10	D74	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.29E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.09E-04
11	D75	80	Passenger Car	147	0.00E+00	1.53E-06	1.66E-07	6.23E+00	1.09E-05	3.14E-02	3.45E-06	1.53E-04	8.03E-04	1.34E-04	3.36E-04	2.17E-04	2.23E-04	2.19E-05	3.14E-05	6.72E-09	1.14E-04	2.38E-05
11	D75	80	Passenger Truck	247	0.00E+00	3.15E-06	3.36E-07	1.41E+01	2.05E-05	5.56E-02	6.68E-06	4.12E-04	1.43E-03	2.38E-04	6.41E-04	4.16E-04	4.26E-04	1.01E-04	7.03E-05	1.28E-08	2.15E-04	6.86E-05
11	D75	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.08E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.32E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.03E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.66E-06
11	D75	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.32E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.37E-04
11	D75	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.48E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.67E-04
11	D76	80	Passenger Car	133	0.00E+00	1.39E-06	1.51E-07	5.65E+00	9.84E-06	2.85E-02	3.13E-06	1.38E-04	7.28E-04	1.22E-04	3.05E-04	1.97E-04	2.02E-04	1.98E-05	2.85E-05	6.08E-09	1.03E-04	2.16E-05
11	D76	80	Passenger Truck	224	0.00E+00	2.85E-06	3.04E-07	1.27E+01	1.86E-05	5.03E-02	6.05E-06	3.73E-04	1.30E-03	2.16E-04	5.80E-04	3.77E-04	3.86E-04	9.18E-05	6.37E-05	1.16E-08	1.94E-04	6.21E-05
11	D76	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.14E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.14E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.89E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.14E-06
11	D76	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.25E-04
11	D76	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.54E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.68E-04
11	D77	80	Passenger Car	91	0.00E+00	9.44E-07	1.03E-07	3.84E+00	6.70E-06	1.94E-02	2.13E-06	9.42E-05	4.95E-04	8.29E-05	2.07E-04	1.34E-04	1.37E-04	1.35E-05	1.94E-05	4.14E-09	7.02E-05	1.47E-05
11	D77	80	Passenger Truck	152	0.00E+00	1.94E-06	2.07E-07	8.68E+00	1.26E-05	3.43E-02	4.12E-06	2.54E-04	8.82E-04	1.47E-04	3.95E-04	2.56E-04	2.63E-04	6.25E-05	4.34E-05	7.88E-09	1.32E-04	4.23E-05
11	D77	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.75E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.29E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
11	D77	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.98E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.50E-04
11	D77	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.25E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.01E-04
11	D78	80	Passenger Car	208	0.00E+00	2.16E-06	2.35E-07	8.81E+00	1.53E-05	4.45E-02	4.88E-06	2.16E-04	1.14E-03	1.90E-04	4.76E-04	3.07E-04	3.15E-04	3.10E-05	4.44E-05	9.49E-09	1.61E-04	3.37E-05
11	D78	80	Passenger Truck	349	0.00E+00	4.45E-06	4.75E-07	1.99E+01	2.90E-05	7.85E-02	9.44E-06	5.82E-04	2.02E-03	3.37E-04	9.06E-04	5.87E-04	6.02E-04	1.43E-04	9.94E-05	1.81E-08	3.03E-04	9.69E-05
11	D78	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.07E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.87E-04
11	D78	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.85E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.65E-05
11	D78	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.47E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	D78	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.91E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
10	D79	70	Passenger Car	172	0.00E+00	1.92E-06	2.09E-07	7.51E+00	1.36E-05	3.85E-02	4.33E-06	1.74E-04	1.33E-03	2.07E-04	4.23E-04	2.73E-04	2.80E-04	2.93E-05	3.78E-05	7.85E-09	1.43E-04	2.72E-05
10	D79	70	Passenger Truck	289	0.00E+00	4.05E-06	4.30E-07	1.69E+01	2.59E-05	6.81E-02	8.48E-06	5.07E-04	2.40E-03	3.72E-04	8.11E-04	5.27E-04	5.40E-04	1.28E-04	8.42E-05	1.51E-08	2.71E-04	8.51E-05
10	D79	70	Single Unit Short Haul Truck	42	0.00E+00	7.42E-06	3.01E-07	6.91E+00	4.97E-06	1.25E-02	8.07E-06	2.94E-03	6.70E-04	1.23E-04	1.00E-03	1.90E-04	1.94E-04	7.02E-04	2.81E-05	1.13E-08	8.06E-04	5.51E-04
10	D79	70	Single Unit Long Haul Truck	2	0.00E+00	3.23E-07	1.30E-08	2.93E-01	2.14E-07	5.26E-04	3.51E-07	1.27E-04	3.07E-05	5.50E-06	4.36E-05	8.23E-06	8.39E-06	2.96E-05	1.19E-06	4.78E-10	3.52E-05	2.37E-05
10	D79	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.08E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.04E-03
10	D79	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.16E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.18E-03
10	D80	70	Passenger Car	252	0.00E+00	2.81E-06	3.06E-07	1.10E+01	2.00E-05	5.64E-02	6.35E-06	2.55E-04	1.94E-03	3.03E-04	6.19E-04	3.99E-04	4.10E-04	4.29E-05	5.53E-05	1.15E-08	2.09E-04	3.98E-05
10	D80	70	Passenger Truck	423	0.00E+00	5.92E-06	6.30E-07	2.47E+01	3.79E-05	9.97E-02	1.24E-05	7.42E-04	3.52E-03	5.45E-04	1.19E-03	7.72E-04	7.91E-04	1.87E-04	1.23E-04	2.21E-08	3.97E-04	1.25E-04
10	D80	70	Single Unit Short Haul Truck	53	0.00E+00	9.27E-06	3.77E-07	8.63E+00	6.21E-06	1.56E-02	1.01E-05	3.68E-03	8.37E-04	1.54E-04	1.25E-03	2.38E-04	2.43E-04	8.77E-04	3.51E-05	1.42E-08	1.01E-03	6.88E-04
10	D80	70	Single Unit Long Haul Truck	2	0.00E+00	4.03E-07	1.62E-08	3.66E-01	2.67E-07	6.57E-04	4.39E-07	1.58E-04	3.83E-05	6.87E-06	5.45E-05	1.03E-05	1.05E-05	3.70E-05	1.49E-06	5.97E-10	4.40E-05	2.96E-05
10	D80	70	Combination Short Haul Truck	26	0.00E+00	6.60E-06	4.91E-07	8.91E+00	1.68E-08	9.53E-03	4.70E-06	9.83E-03	9.30E-04	1.55E-04	3.96E-04	1.43E-04	1.48E-04	1.42E-03	2.98E-05	0.00E+00	2.47E-04	1.85E-03
10	D80	70	Combination Long Haul Truck	23	0.00E+00	9.05E-06	5.14E-07	8.37E+00	5.67E-08	1.14E-02	7.44E-06	1.05E-02	9.68E-04	1.46E-04	8.22E-04	1.65E-04	1.72E-04	1.34E-03	2.80E-05	0.00E+00	6.50E-04	1.98E-03
10	D81	70	Passenger Car	458	0.00E+00	5.11E-06	5.55E-07	2.00E+01	3.62E-05	1.02E-01	1.15E-05	4.63E-04	3.53E-03	5.50E-04	1.12E-03	7.24E-04	7.43E-04	7.78E-05	1.00E-04	2.09E-08	3.80E-04	7.23E-05
10	D81	70	Passenger Truck	767	0.00E+00	1.08E-05	1.14E-06	4.49E+01	6.88E-05	1.81E-01	2.25E-05	1.35E-03	6.39E-03	9.88E-04	2.16E-03	1.40E-03	1.44E-03	3.40E-04	2.24E-04	4.01E-08	7.20E-04	2.26E-04
10	D81	70	Single Unit Short Ha

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D85	80	Single Unit Short Haul Truck	91	0.00E+00	1.25E-05	4.87E-07	1.49E+01	8.46E-06	2.71E-02	1.37E-05	5.18E-03	1.02E-03	2.09E-04	1.72E-03	3.18E-04	3.25E-04	1.52E-03	6.06E-05	2.40E-08	1.39E-03	9.68E-04
11	D85	80	Single Unit Long Haul Truck	4	0.00E+00	5.42E-07	2.09E-08	6.30E-01	3.61E-07	1.13E-03	5.96E-07	2.21E-04	4.69E-05	9.28E-06	7.50E-05	1.37E-05	1.39E-05	6.37E-05	2.57E-06	1.00E-09	6.10E-05	4.13E-05
11	D85	80	Combination Short Haul Truck	64	0.00E+00	1.32E-05	9.74E-07	2.14E+01	3.44E-08	2.00E-02	9.40E-06	2.02E-02	1.52E-03	2.76E-04	7.98E-04	2.84E-04	2.95E-04	3.40E-03	7.15E-05	0.00E+00	5.03E-04	3.81E-03
11	D85	80	Combination Long Haul Truck	58	0.00E+00	1.83E-05	1.03E-06	1.99E+01	1.17E-07	2.37E-02	1.51E-05	2.16E-02	1.57E-03	2.52E-04	1.68E-03	3.33E-04	3.47E-04	3.19E-03	6.65E-05	0.00E+00	1.33E-03	4.07E-03
11	D86	80	Passenger Car	451	0.00E+00	4.69E-06	5.09E-07	1.91E+01	3.33E-05	9.63E-02	1.06E-05	4.68E-04	2.46E-03	4.12E-04	1.03E-03	6.65E-04	6.82E-04	6.71E-05	9.63E-05	2.06E-08	3.49E-04	7.30E-05
11	D86	80	Passenger Truck	756	0.00E+00	9.65E-06	1.03E-06	4.31E+01	6.28E-05	1.70E-01	2.04E-05	1.26E-03	4.38E-03	7.29E-04	1.96E-03	1.27E-03	1.31E-03	3.10E-04	2.15E-04	3.92E-08	6.57E-04	2.10E-04
11	D86	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.56E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.79E-04
11	D86	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.09E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	D86	80	Combination Short Haul Truck	94	0.00E+00	1.94E-05	1.44E-06	3.16E+01	5.08E-08	2.96E-02	1.39E-05	2.98E-02	2.25E-03	4.07E-04	1.18E-03	4.19E-04	4.35E-04	5.02E-03	1.06E-04	0.00E+00	7.42E-04	5.62E-03
11	D86	80	Combination Long Haul Truck	86	0.00E+00	2.70E-05	1.53E-06	2.93E+01	1.72E-07	3.50E-02	2.23E-05	3.19E-02	2.32E-03	3.72E-04	2.48E-03	4.92E-04	5.12E-04	4.70E-03	9.82E-05	0.00E+00	1.96E-03	6.01E-03
11	D87	80	Passenger Car	348	0.00E+00	3.61E-06	3.92E-07	1.47E+01	2.56E-05	7.42E-02	8.14E-06	3.61E-04	1.90E-03	3.17E-04	7.94E-04	5.12E-04	5.25E-04	5.17E-05	7.42E-05	1.59E-08	2.69E-04	5.62E-05
11	D87	80	Passenger Truck	582	0.00E+00	7.44E-06	7.93E-07	3.32E+01	4.84E-05	1.31E-01	1.58E-05	9.72E-04	3.37E-03	5.62E-04	1.51E-03	9.81E-04	1.01E-03	2.39E-04	1.66E-04	3.02E-08	5.06E-04	1.62E-04
11	D87	80	Single Unit Short Haul Truck	121	0.00E+00	1.66E-05	6.47E-07	1.98E+01	1.12E-05	3.59E-02	1.82E-05	6.87E-03	1.36E-03	2.77E-04	2.28E-03	4.22E-04	4.30E-04	2.01E-03	8.04E-05	3.19E-08	1.85E-03	1.28E-03
11	D87	80	Single Unit Long Haul Truck	5	0.00E+00	7.19E-07	2.78E-08	8.36E-01	4.78E-07	1.50E-03	7.90E-07	2.93E-04	6.22E-05	1.23E-05	9.94E-05	1.81E-05	1.85E-05	8.45E-05	3.40E-06	1.33E-09	8.09E-05	5.48E-05
11	D87	80	Combination Short Haul Truck	82	0.00E+00	1.69E-05	1.25E-06	2.75E+01	4.43E-08	2.58E-02	1.21E-05	2.60E-02	1.96E-03	3.55E-04	1.03E-03	3.66E-04	3.79E-04	4.38E-03	9.21E-05	0.00E+00	6.47E-04	4.91E-03
11	D87	80	Combination Long Haul Truck	75	0.00E+00	2.36E-05	1.33E-06	2.56E+01	1.50E-07	3.05E-02	1.94E-05	2.78E-02	2.03E-03	3.24E-04	2.16E-03	4.29E-04	4.47E-04	4.10E-03	8.56E-05	0.00E+00	1.71E-03	5.24E-03
11	D88	80	Passenger Car	821	0.00E+00	8.53E-06	9.27E-07	3.48E+01	6.05E-05	1.75E-01	1.92E-05	8.52E-04	4.48E-03	7.50E-04	1.88E-03	1.21E-03	1.24E-03	1.22E-04	1.75E-04	3.74E-08	6.35E-04	1.33E-04
11	D88	80	Passenger Truck	1376	0.00E+00	1.76E-05	1.87E-06	7.85E+01	1.14E-04	3.10E-01	3.72E-05	2.30E-03	7.97E-03	1.33E-03	3.57E-03	2.32E-03	2.38E-03	5.65E-04	3.92E-04	7.13E-08	1.20E-03	3.82E-04
11	D88	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.41E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.25E-04
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.52E-05
11	D88	80	Combination Short Haul Truck	123	0.00E+00	2.53E-05	1.88E-06	4.12E+01	6.63E-08	3.86E-02	1.81E-05	3.90E-02	2.93E-03	5.31E-04	1.54E-03	5.47E-04	5.68E-04	6.55E-03	1.38E-04	0.00E+00	9.68E-04	7.34E-03
11	D88	80	Combination Long Haul Truck	112	0.00E+00	3.53E-05	1.99E-06	3.83E+01	2.24E-07	4.57E-02	2.91E-05	4.16E-02	3.03E-03	4.85E-04	3.23E-03	6.42E-04	6.69E-04	6.14E-03	1.28E-04	0.00E+00	2.57E-03	7.84E-03
9	D89	60	Passenger Car	121	0.00E+00	1.55E-06	1.68E-07	5.52E+00	1.10E-05	3.09E-02	3.49E-06	1.25E-04	1.22E-03	1.83E-04	3.41E-04	2.20E-04	2.25E-04	2.40E-05	2.77E-05	5.82E-09	1.15E-04	1.95E-05
9	D89	60	Passenger Truck	203	0.00E+00	3.29E-06	3.49E-07	1.23E+01	2.07E-05	5.29E-02	6.82E-06	3.88E-04	2.24E-03	3.33E-04	6.50E-04	4.23E-04	4.34E-04	9.83E-05	6.11E-05	1.13E-08	2.17E-04	6.57E-05
9	D89	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.06E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
9	D89	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.63E-06
9	D89	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.04E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
9	D89	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.43E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.21E-03
9	D90	60	Passenger Car	184	0.00E+00	2.36E-06	2.56E-07	8.40E+00	1.67E-05	4.70E-02	5.31E-06	1.90E-04	1.86E-03	2.79E-04	5.18E-04	3.34E-04	3.43E-04	3.65E-05	4.21E-05	8.85E-09	1.75E-04	2.96E-05
9	D90	60	Passenger Truck	309	0.00E+00	5.00E-06	5.30E-07	1.87E+01	3.16E-05	8.05E-02	1.04E-05	5.90E-04	3.40E-03	5.06E-04	9.90E-04	6.44E-04	6.60E-04	1.50E-04	9.30E-05	1.73E-08	3.30E-04	1.00E-04
9	D90	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.60E-04
9	D90	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	D90	60	Combination Short Haul Truck	16	0.00E+00	4.73E-06	3.48E-07	5.71E+00	1.30E-08	7.07E-03	3.40E-06	7.20E-03	8.26E-04	1.29E-04	2.92E-04	1.02E-04	1.06E-04	9.08E-04	1.91E-05	0.00E+00	1.86E-04	1.36E-03
9	D90	60	Combination Long Haul Truck	15	0.00E+00	6.50E-06	3.55E-07	5.39E+00	4.39E-08	8.49E-03	5.44E-06	7.67E-03	8.66E-04	1.25E-04	6.17E-04	1.16E-04	1.21E-04	8.66E-04	1.81E-05	0.00E+00	4.96E-04	1.44E-03
10	D91	70	Passenger Car	270	0.00E+00	3.01E-06	3.28E-07	1.18E+01	2.14E-05	6.05E-02	6.80E-06	2.73E-04	2.08E-03	3.24E-04	6.63E-04	4.27E-04	4.39E-04	4.59E-05	5.93E-05	1.23E-08	2.24E-04	4.26E-05
10	D91	70	Passenger Truck	453	0.00E+00	6.35E-06	6.74E-07	2.65E+01	4.06E-05	1.07E-01	1.33E-05	7.95E-04	3.77E-03	5.83E-04	1.27E-03	8.26E-04	8.47E-04	2.01E-04	1.32E-04	2.37E-08	4.25E-04	1.33E-04
10	D91	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.74E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.25E-04
10	D91	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.49E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.40E-05
10	D91	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.82E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
10	D91	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.22E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.17E-03
10	D92	70	Passenger Car	95	0.00E+00	1.06E-06	1.15E-07	4.14E+00	7.52E-06	2.12E-02	2.39E-06	9.60E-05	7.32E-04	1.14E-04	2.33E-04	1.50E-04	1.54E-04	1.61E-05	2.08E-05	4.32E-09	7.88E-05	1.50E-05
10	D92	70	Passenger Truck	159	0.00E+00	2.23E-06	2.37E-07	9.31E+00	1.43E-05	3.75E-02	4.67E-06	2.79E-04	1.32E-03	2.05E-04	4.47E-04	2.90E-04	2.98E-04	7.05E-05	4.64E-05	8.31E-09	1.49E-04	4.69E-05
10	D92	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.26E-05
10	D92	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
10	D92	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
10	D93	70	Passenger Car	227	0.00E+00	2.53E-06	2.75E-07	9.87E+00	1.79E-05	5.07E-02	5.70E-06	2.29E-04	1.75E-03	2.72E-04	5.56E-04	3.58E-04	3.68E-04	3.85E-05	4.97E-05	1.03E-08	1.88E-04	3.57E-05
10	D93	70	Passenger Truck	379	0.00E+00	5.32E-06	5.65E-07	2.22E+01	3.41E-05	8.95E-02	1.11E-05	6.66E-04	3.16E-03	4.89E-04	1.07E-03	6.93E-04	7.10E-04	1.68E-04	1.11E-04	1.98E-08	3.56E-04	1.12E-04
10	D93	70	Single Unit Short Haul Truck	39	0.00E+00	6.91E-06	2.81E-07	6.43E+00	4.63E-06	1.17E-02	7.52E-06	2.74E-03	6.24E-04	1.15E-04	9.32E-04	1.77E-04	1.81E-04	6.54E-04	2.62E-05	1.06E-08	7.51E-04	5.13E-04
10	D93	70	Single Unit Long Haul Truck	2	0.00E+00	3.01E-07	1.21E-08	2.73E-01	1.99E-07	4.90E-04	3.27E-07	1.18E-04	2.86E-05	5.12E-06	4.06E-05	7.67E-06	7.82E-06	2.76E-05	1.11E-06	4.45E-10	3.28E-05	2.21E-05
10	D93	70	Combination Short Haul Truck	25	0.00E+00	6.33E-06	4.71E-07	8.55E+00	1.61E-08	9.14E-03	4.51E-06	9.43E-03	8.92E-04	1.49E-04	3.80E-04	1.37E-04	1.42E-04	1.36E-03	2.86E-05	0.00E+00	2.37E-04	1.78E-03
10	D93	70	Combination Long Haul Truck	22	0.00E+00	8.68E-06	4.93E-07	8.03E+00	5.44E-08	1.09E-02	7.13E-06	1.01E-02	9.28E-04	1.40E-04	7.89E-04	1.59E-04	1.65E-04	1.29E-03	2.69E-05	0.00E+00	6.24E-04	1.90E-03
10	D94	70	Passenger Car	86	0.00E+00	9.55E-07	1.04E-07	3.73E+00	6.78E-06	1.91E-02	2.15E-06	8.66E-05	6.60E-04	1.03E-04	2.10E-04	1.35E-04	1.39E-04	1.45E-05	1.88E-05	3.90E-09	7.10E-05	1.35E-05
10	D94	70	Passenger Truck	143	0.00E+00	2.01E-06	2.14E-07	8.40E+00	1.29E-05	3.38E-02	4.21E-06	2.52E-04	1.19E-03	1.85E-04	4.03E-04	2.62E-04	2.68E-04	6.36E-05	4.18E-05	7.50E-09	1.35E-04	4.23E-05
10	D94	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.26E-05
10	D94	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.00E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	D94	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.07E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.02E-04
9	E01	60	Passenger Car	159	0.00E+00	2.03E-06	2.21E-07	7.24E+00	1.44E-05	4.05E-02	4.58E-06	1.64E-04	1.60E-03	2.40E-04	4.47E-04	2.88E-04	2.96E-04	3.15E-05	3.63E-05	7.63E-09	1.51E-04	2.55E-05
9	E01	60	Passenger Truck	266	0.00E+00	4.31E-06	4.57E-07	1.61E+01	2.72E-05	6.94E-02	8.95E-06	5.09E-04	2.93E-03	4.36E-04	8.53E-04	5.55E-04	5.69E-04	1.29E-04	8.02E-05	1.49E-08	2.84E-04	8.62E-05
9	E01	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.91E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.73E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	E01	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.48E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.56E-04
9	E01	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.71E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.99E-04
9	E02	60	Passenger Car	228	0.00E+00	2.91E-06	3.16E-07	1.04E+01	2.07E-05	5.81E-02	6.57E-06	2.34E-04	2.30E-03	3.44E-04	6.40E-04	4.13E-04	4.24E-04	4.51E-05	5.21E-05	1.09E-08	2.17E-04	3.66E-05
9	E02	60	Passenger Truck	381	0.00E+00	6.18E-06	6.55E-07	2.31E+01	3.90E-05	9.94E-02	1.28E-05	7.29E-04	4.20E-03	6.25E-04	1.22E-03	7.95E-04	8.15E-04	1.85E-04	1.15E-04	2.13E-08	4.07E-04	1.23E-04
9	E02	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.44E-04
9	E02	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	E02	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.59E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.62E-03
9	E02	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.15E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
11	E03	80	Passenger Car	232	0.00E+00	2.41E-06	2.62E-07	9.82E+00	1.71E-05	4.96E-02	5.44E-06	2.41E-04	1.27E-03	2.12E-04	5.30E-04	3.42E-04	3.51E-04	3.45E-05	4.95E-05	1.06E-08	1.79E-04	3.76E-05
11	E03	80	Passenger Truck	389	0.00E+00	4.97E-06	5.29E-07	2.22E+01	3.23E-05	8.76E-02	1.05E-05	6.49E-04	2.25E-03	3.75E-04	1.01E-03	6.55E-04	6.71E-04	1.60E-04	1.11E-04	2.01E-08	3.38E-04	1.08E-04
11	E03	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.81E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.13E-05
11	E03	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.50E-04
11	E03	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.42E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.67E-04
11	E04	80	Passenger Car	135	0.00E+00	1.40E-06	1.52E-07	5.71E+00	9.95E-06	2.88E-02	3.16E-06	1.40E-04	7.36E-04	1.23E-04	3.08E-04	1.99E-04	2.04E-04	2.01E-05	2.88E-05	6.15E-09	1.04E-04	2.18E-05
11	E04	80	Passenger Truck	226	0.00E+00	2.89E-06	3.08E-07	1.29E+01	1.88E-05	5.09E-02	6.12E-06	3.77E-04	1.31E-03	2.18E-04	5.87E-04	3.81E-04	3.90E-04	9.28E-05	6.44E-05	1.17E-08	1.97E-04	6.28E-05
11	E04	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.74E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.26E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.45E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.39E-05
11	E04	80	Combination Short Haul Truck	26	0.00E+00	5.28E-06	3.91E-07	8.59E+00	1.38E-08	8.05E-03	3.78E-06	8.13E-03	6.12E-04	1.11E-04	3.20E-04	1.14E-04	1.18E-04	1.37E-03	2.87E-05	0.00E+00	2.02E-04	1.53E-03
11	E04	80	Combination Long Haul Truck	23	0.00E+00	7.36E-06	4.15E-07	7.98E+00	4.68E-08	9.53E-03	6.07E-06	8.68E-03	6.32E-04	1.01E-04	6.74E-04	1.34E-04	1.39E-04	1.28E-03	2.67E-05	0.00E+00	5.35E-04	1.64E-03
11	E05	80	Passenger Car	109	0.00E+00	1.13E-06	1.23E-07	4.60E+00	8.02E-06	2.32E-02	2.55E-06	1.13E-04	5.93E-04	9.93E-05	2.48E-04	1.60E-04	1.64E-04	1.62E-05	2.32E-05	4.96E-09	8.41E-05	1.76E-05
11	E05	80	Passenger Truck	182	0.00E+00	2.33E-06	2.48E-07	1.04E+01	1.51E-05	4.10E-02	4.93E-06	3.04E-04	1.06E-03	1.76E-04	4.73E-04	3.07E-04	3.15E-04	7.48E-05	5.19E-05	9.44E-09	1.58E-04	5.06E-05
11	E05	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.90E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.17E-05
11	E05	80	Combination Short Haul

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E09	60	Single Unit Long Haul Truck	4	0.00E+00	8.03E-07	3.30E-08	5.84E-01	5.28E-07	1.02E-03	8.68E-07	3.05E-04	8.51E-05	1.41E-05	1.07E-04	2.05E-05	2.09E-05	5.90E-05	2.38E-06	9.79E-10	8.63E-05	5.71E-05
9	E09	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.90E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.47E-03
9	E09	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.09E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.82E-03
9	E10	60	Passenger Car	873	0.00E+00	1.12E-05	1.21E-06	3.98E+01	7.92E-05	2.23E-01	2.52E-05	8.99E-04	8.82E-03	1.32E-03	2.46E-03	1.58E-03	1.62E-03	1.73E-04	2.00E-04	4.19E-08	8.30E-04	1.40E-04
9	E10	60	Passenger Truck	1462	0.00E+00	2.37E-05	2.51E-06	8.87E+01	1.49E-04	3.81E-01	4.92E-05	2.79E-03	1.61E-02	2.40E-03	4.69E-03	3.05E-03	3.12E-03	7.08E-04	4.41E-04	8.17E-08	1.56E-03	4.74E-04
9	E10	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.14E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	E10	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.66E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.98E-05
9	E10	60	Combination Short Haul Truck	37	0.00E+00	1.07E-05	7.85E-07	1.29E+01	2.93E-08	1.60E-02	7.68E-06	1.63E-02	1.86E-03	2.92E-04	6.59E-04	2.30E-04	2.38E-04	2.05E-03	4.31E-05	0.00E+00	4.20E-04	3.06E-03
9	E10	60	Combination Long Haul Truck	33	0.00E+00	1.47E-05	8.02E-07	1.22E+01	9.91E-08	1.92E-02	1.23E-05	1.73E-02	1.96E-03	2.83E-04	1.39E-03	2.62E-04	2.73E-04	1.95E-03	4.08E-05	0.00E+00	1.12E-03	3.26E-03
9	E11	60	Passenger Car	1186	0.00E+00	1.52E-05	1.65E-06	5.40E+01	1.08E-04	3.02E-01	3.42E-05	1.22E-03	1.20E-02	1.79E-03	3.33E-03	2.15E-03	2.21E-03	2.35E-04	2.71E-04	5.69E-08	1.13E-03	1.90E-04
9	E11	60	Passenger Truck	1985	0.00E+00	3.22E-05	3.41E-06	1.20E+02	2.03E-04	5.18E-01	6.68E-05	3.80E-03	2.19E-02	3.26E-03	6.36E-03	4.14E-03	4.24E-03	9.62E-04	5.98E-04	1.11E-07	2.12E-03	6.43E-04
9	E11	60	Single Unit Short Haul Truck	106	0.00E+00	2.37E-05	9.81E-07	1.77E+01	1.57E-05	3.11E-02	2.57E-05	9.09E-03	2.45E-03	4.11E-04	3.17E-03	6.10E-04	6.22E-04	1.79E-03	7.21E-05	2.97E-08	2.54E-03	1.70E-03
9	E11	60	Single Unit Long Haul Truck	5	0.00E+00	1.04E-06	4.26E-08	7.54E-01	6.82E-07	1.32E-03	1.12E-06	3.93E-04	1.10E-04	1.82E-05	1.38E-04	2.65E-05	2.70E-05	7.62E-05	3.08E-06	1.26E-09	1.11E-04	7.37E-05
9	E11	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.90E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.47E-03
9	E11	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.09E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.82E-03
9	E12	60	Passenger Car	904	0.00E+00	1.16E-05	1.26E-06	4.12E+01	8.20E-05	2.31E-01	2.61E-05	9.30E-04	9.13E-03	1.37E-03	2.54E-03	1.64E-03	1.68E-03	1.79E-04	2.07E-04	4.34E-08	8.60E-04	1.45E-04
9	E12	60	Passenger Truck	1513	0.00E+00	2.45E-05	2.60E-06	9.18E+01	1.55E-04	3.95E-01	5.09E-05	2.89E-03	1.67E-02	2.48E-03	4.85E-03	3.16E-03	3.23E-03	7.33E-04	4.56E-04	8.46E-08	1.62E-03	4.90E-04
9	E12	60	Single Unit Short Haul Truck	96	0.00E+00	2.14E-05	8.83E-07	1.59E+01	1.42E-05	2.80E-02	2.31E-05	8.18E-03	2.20E-03	3.70E-04	2.85E-03	5.50E-04	5.60E-04	1.61E-03	6.49E-05	2.68E-08	2.29E-03	1.53E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	9.33E-07	3.84E-08	6.79E-01	6.14E-07	1.19E-03	1.01E-06	3.54E-04	9.90E-05	1.64E-05	1.25E-04	2.39E-05	2.44E-05	6.87E-05	2.77E-06	1.14E-09	1.00E-04	6.64E-05
9	E12	60	Combination Short Haul Truck	83	0.00E+00	2.43E-05	1.78E-06	2.93E+01	6.65E-08	3.63E-02	1.74E-05	3.69E-02	4.24E-03	6.62E-04	1.50E-03	5.22E-04	5.41E-04	4.66E-03	9.79E-05	0.00E+00	9.54E-04	6.96E-03
9	E12	60	Combination Long Haul Truck	76	0.00E+00	3.34E-05	1.82E-06	2.77E+01	2.25E-07	4.36E-02	2.79E-05	3.93E-02	4.44E-03	6.42E-04	3.16E-03	5.95E-04	6.20E-04	4.44E-03	9.27E-05	0.00E+00	2.54E-03	7.41E-03
11	E13	80	Passenger Car	377	0.00E+00	3.92E-06	4.26E-07	1.60E+01	2.78E-05	8.05E-02	8.83E-06	3.91E-04	2.06E-03	3.44E-04	8.62E-04	5.56E-04	5.70E-04	5.61E-05	8.05E-05	1.72E-08	2.91E-04	6.10E-05
11	E13	80	Passenger Truck	632	0.00E+00	8.07E-06	8.60E-07	3.60E+01	5.25E-05	1.42E-01	1.71E-05	1.05E-03	3.66E-03	6.10E-04	1.64E-03	1.06E-03	1.09E-03	2.59E-04	1.80E-04	3.27E-08	5.49E-04	1.76E-04
11	E13	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.18E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.07E-04
11	E13	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.31E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.74E-05
11	E13	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.31E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E13	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.67E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E14	80	Passenger Car	550	0.00E+00	5.71E-06	6.20E-07	2.33E+01	4.05E-05	1.17E-01	1.29E-05	5.70E-04	3.00E-03	5.02E-04	1.26E-03	8.09E-04	8.31E-04	8.17E-05	1.17E-04	2.51E-08	4.25E-04	8.89E-05
11	E14	80	Passenger Truck	920	0.00E+00	1.18E-05	1.25E-06	5.25E+01	7.64E-05	2.07E-01	2.49E-05	1.54E-03	5.33E-03	8.88E-04	2.39E-03	1.55E-03	1.59E-03	3.78E-04	2.62E-04	4.77E-08	8.00E-04	2.56E-04
11	E14	80	Single Unit Short Haul Truck	54	0.00E+00	7.36E-06	2.87E-07	8.79E+00	4.99E-06	1.60E-02	8.09E-06	3.05E-03	6.03E-04	1.23E-04	1.01E-03	1.88E-04	1.91E-04	8.94E-04	3.57E-05	1.42E-08	8.22E-04	5.70E-04
11	E14	80	Single Unit Long Haul Truck	2	0.00E+00	3.20E-07	1.23E-08	3.72E-01	2.13E-07	6.65E-04	3.51E-07	1.30E-04	2.76E-05	5.47E-06	4.42E-05	8.06E-06	8.22E-06	3.76E-05	1.51E-06	5.90E-10	3.60E-05	2.44E-05
11	E14	80	Combination Short Haul Truck	31	0.00E+00	6.47E-06	4.79E-07	1.05E+01	1.69E-08	9.86E-03	4.62E-06	9.95E-03	7.49E-04	1.36E-04	3.92E-04	1.40E-04	1.45E-04	1.67E-03	3.52E-05	0.00E+00	2.47E-04	1.87E-03
11	E14	80	Combination Long Haul Truck	29	0.00E+00	9.01E-06	5.09E-07	9.77E+00	5.73E-08	1.17E-02	7.43E-06	1.06E-02	7.74E-04	1.24E-04	8.26E-04	1.64E-04	1.71E-04	1.57E-03	3.27E-05	0.00E+00	6.55E-04	2.00E-03
11	E15	80	Passenger Car	180	0.00E+00	1.87E-06	2.03E-07	7.62E+00	1.33E-05	3.85E-02	4.22E-06	1.87E-04	9.82E-04	1.64E-04	4.12E-04	2.65E-04	2.72E-04	2.68E-05	3.85E-05	8.22E-09	1.39E-04	2.92E-05
11	E15	80	Passenger Truck	302	0.00E+00	3.85E-06	4.11E-07	1.72E+01	2.51E-05	6.80E-02	8.17E-06	5.04E-04	1.75E-03	2.91E-04	7.84E-04	5.08E-04	5.21E-04	1.24E-04	8.60E-05	1.56E-08	2.62E-04	8.39E-05
11	E15	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.14E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.14E-04
11	E15	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.89E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.14E-06
11	E15	80	Combination Short Haul Truck	12	0.00E+00	2.37E-06	1.76E-07	3.86E+00	6.21E-09	3.61E-03	1.70E-06	3.65E-03	2.75E-04	4.97E-05	1.44E-04	5.12E-05	5.32E-05	6.13E-04	1.29E-05	0.00E+00	9.06E-05	6.87E-04
11	E15	80	Combination Long Haul Truck	10	0.00E+00	3.30E-06	1.87E-07	3.58E+00	2.10E-08	4.28E-03	2.72E-06	3.90E-03	2.84E-04	4.54E-05	3.03E-04	6.01E-05	6.26E-05	5.75E-04	1.20E-05	0.00E+00	2.40E-04	7.34E-04
11	E16	80	Passenger Car	338	0.00E+00	3.51E-06	3.81E-07	1.43E+01	2.49E-05	7.21E-02	7.91E-06	3.50E-04	1.84E-03	3.08E-04	7.71E-04	4.97E-04	5.10E-04	5.02E-05	7.20E-05	1.54E-08	2.61E-04	5.46E-05
11	E16	80	Passenger Truck	565	0.00E+00	7.22E-06	7.70E-07	3.22E+01	4.70E-05	1.27E-01	1.53E-05	9.44E-04	3.28E-03	5.46E-04	1.47E-03	9.52E-04	9.76E-04	2.32E-04	1.61E-04	2.93E-08	4.92E-04	1.57E-04
11	E16	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.72E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	E16	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.73E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.96E-06
11	E16	80	Combination Short Haul Truck	42	0.00E+00	8.73E-06	6.46E-07	1.42E+01	2.29E-08	1.33E-02	6.24E-06	1.34E-02	1.01E-03	1.83E-04	5.29E-04	1.89E-04	1.96E-04	2.26E-03	4.75E-05	0.00E+00	3.34E-04	2.53E-03
11	E16	80	Combination Long Haul Truck	39	0.00E+00	1.22E-05	6.87E-07	1.32E+01	7.74E-08	1.58E-02	1.00E-05	1.44E-02	1.04E-03	1.67E-04	1.11E-03	2.21E-04	2.31E-04	2.12E-03	4.42E-05	0.00E+00	8.84E-04	2.70E-03
11	E17	80	Passenger Car	90	0.00E+00	9.32E-07	1.01E-07	3.80E+00	6.61E-06	1.92E-02	2.10E-06	9.30E-05	4.89E-04	8.19E-05	2.05E-04	1.32E-04	1.36E-04	1.33E-05	1.91E-05	4.09E-09	6.93E-05	1.45E-05
11	E17	80	Passenger Truck	150	0.00E+00	1.92E-06	2.05E-07	8.57E+00	1.25E-05	3.38E-02	4.07E-06	2.51E-04	8.71E-04	1.45E-04	3.90E-04	2.53E-04	2.59E-04	6.17E-05	4.28E-05	7.79E-09	1.31E-04	4.18E-05
11	E17	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.75E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.29E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
11	E17	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.65E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.00E-04
11	E17	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.34E-04
11	E18	80	Passenger Car	261	0.00E+00	2.71E-06	2.95E-07	1.10E+01	1.92E-05	5.57E-02	6.11E-06	2.71E-04	1.42E-03	2.38E-04	5.96E-04	3.84E-04	3.94E-04	3.88E-05	5.57E-05	1.19E-08	2.02E-04	4.22E-05
11	E18	80	Passenger Truck	437	0.00E+00	5.58E-06	5.95E-07	2.49E+01	3.63E-05	9.84E-02	1.18E-05	7.30E-04	2.53E-03	4.22E-04	1.13E-03	7.36E-04	7.55E-04	1.79E-04	1.25E-04	2.26E-08	3.80E-04	1.21E-04
11	E18	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.27E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.11E-05
11	E18	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.50E-04
11	E18	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.42E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.67E-04
9	E19	60	Passenger Car	1009	0.00E+00	1.29E-05	1.40E-06	4.60E+01	9.15E-05	2.57E-01	2.91E-05	1.04E-03	1.02E-02	1.53E-03	2.84E-03	1.83E-03	1.88E-03	2.00E-04	2.31E-04	4.84E-08	9.60E-04	1.62E-04
9	E19	60	Passenger Truck	1689	0.00E+00	2.74E-05	2.90E-06	1.02E+02	1.73E-04	4.40E-01	5.68E-05	3.23E-03	1.86E-02	2.77E-03	5.42E-03	3.52E-03	3.61E-03	8.18E-04	5.09E-04	9.44E-08	1.81E-03	5.47E-04
9	E19	60	Single Unit Short Haul Truck	77	0.00E+00	1.71E-05	7.07E-07	1.27E+01	1.13E-05	2.24E-02	1.85E-05	6.55E-03	1.76E-03	2.96E-04	2.28E-03	4.40E-04	4.48E-04	1.29E-03	5.19E-05	2.14E-08	1.83E-03	1.23E-03
9	E19	60	Single Unit Long Haul Truck	3	0.00E+00	7.47E-07	3.07E-08	5.43E-01	4.92E-07	9.52E-04	8.07E-07	2.84E-04	7.92E-05	1.31E-05	9.98E-05	1.91E-05	1.95E-05	5.49E-05	2.22E-06	9.11E-10	8.03E-05	5.31E-05
9	E19	60	Combination Short Haul Truck	36	0.00E+00	1.04E-05	7.62E-07	1.25E+01	2.84E-08	1.55E-02	7.46E-06	1.58E-02	1.81E-03	2.83E-04	6.40E-04	2.23E-04	2.32E-04	1.99E-03	4.19E-05	0.00E+00	4.08E-04	2.98E-03
9	E19	60	Combination Long Haul Truck	32	0.00E+00	1.43E-05	7.79E-07	1.18E+01	9.63E-08	1.86E-02	1.19E-05	1.68E-02	1.90E-03	2.75E-04	1.35E-03	2.54E-04	2.65E-04	1.90E-03	3.96E-05	0.00E+00	1.09E-03	3.17E-03
9	E20	60	Passenger Car	588	0.00E+00	7.53E-06	8.18E-07	2.68E+01	5.34E-05	1.50E-01	1.70E-05	6.06E-04	5.94E-03	8.90E-04	1.65E-03	1.07E-03	1.10E-03	1.17E-04	1.35E-04	2.83E-08	5.60E-04	9.45E-05
9	E20	60	Passenger Truck	986	0.00E+00	1.60E-05	1.69E-06	5.98E+01	1.01E-04	2.57E-01	3.31E-05	1.88E-03	1.09E-02	1.62E-03	3.16E-03	2.06E-03	2.11E-03	4.77E-04	2.97E-04	5.51E-08	1.05E-03	3.19E-04
9	E20	60	Single Unit Short Haul Truck	108	0.00E+00	2.42E-05	9.98E-07	1.80E+01	1.60E-05	3.17E-02	2.61E-05	9.25E-03	2.49E-03	4.18E-04	3.22E-03	6.21E-04	6.33E-04	1.82E-03	7.34E-05	3.02E-08	2.59E-03	1.73E-03
9	E20	60	Single Unit Long Haul Truck	5	0.00E+00	1.05E-06	4.34E-08	7.68E-01	6.94E-07	1.34E-03	1.14E-06	4.01E-04	1.12E-04	1.86E-05	1.41E-04	2.70E-05	2.75E-05	7.76E-05	3.13E-06	1.29E-09	1.13E-04	7.50E-05
9	E20	60	Combination Short Haul Truck	52	0.00E+00	1.53E-05	1.12E-06	1.84E+01	4.18E-08	2.28E-02	1.10E-05	2.32E-02	2.66E-03	4.17E-04	9.41E-04	3.28E-04	3.41E-04	2.93E-03	6.16E-05	0.00E+00	6.00E-04	4.38E-03
9	E20	60	Combination Long Haul Truck	48	0.00E+00	2.10E-05	1.15E-06	1.74E+01	1.42E-07	2.74E-02	1.75E-05	2.47E-02	2.79E-03	4.04E-04	1.99E-03	3.74E-04	3.90E-04	2.79E-03	5.83E-05	0.00E+00	1.60E-03	4.66E-03
11	E21	80	Passenger Car	9	0.00E+00	9.32E-08	1.01E-08	3.80E-01	6.61E-07	1.92E-03	2.10E-07	9.30E-06	4.89E-05	8.19E-06	2.05E-05	1.32E-05	1.36E-05	1.33E-06	1.91E-06	4.09E-10	6.93E-06	1.45E-06
11	E21	80	Passenger Truck	15	0.00E+00	1.92E-07	2.05E-08	8.57E-01	1.25E-06	3.38E-03	4.07E-07	2.51E-05	8.71E-05	1.45E-05	3.90E-05	2.53E-05	2.59E-05	6.17E-06	4.28E-06	7.79E-10	1.31E-05	4.18E-06
11	E21	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.45E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E21	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.97E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.37E-05
11	E21	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.32E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
11	E22	80	Passenger Car	114	0.00E+00	1.18E-06	1.29E-07	4.82E+00	8.40E-06	2.43E-02	2.67E-06	1.18E-04	6.22E-04	1.04E-04	2.60E-04	1.68E-04	1.72E-04	1.70E-05	2.43E-05	5.20E-09	8.81E-05	1.84E-05
11	E22	80	Passenger Truck	191	0.00E+00	2.44E-06	2.60E-07	1.09E+01	1.59E-05	4.30E-02	5.17E-06	3.19E-04	1.11E-03	1.84E-04	4.96E-04	3.22E-04	3.30E-04	7.84E-05	5.44E-05	9.90E-09	1.66E-04	5.31E-05
11	E22	80	Single Unit Short Haul Truck	17	0.00E+00	2.37E-06	9.24E-08	2.83E+00	1.60E-06	5.13E-03	2.60E-06	9.81E-04	1.94E-04	3.96E-05	3.26E-04	6.03E-05	6.15E-05	2.88E-04	1.15E-05	4.55E-09	2.64E-04	1.83E-04
11	E22	80	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	3.97E-09	1.19E-01	6.83E-08	2.14E-04	1.13E-07	4.19E-05	8.88E-06	1.76E-06	1.42E-05	2.59E-06	2.64E-06	1.21E-05	4.86E-07	1.90E-10	1.16E-05	7.83E-06
11	E22	80	Combination Short Haul Truck	16	0.00E+00	3.23E-06	2.39E-07	5.26E+00	8.47E-09	4.93E-03	2.31E-06	4.97E-03	3.74E-04	6.78E-05	1.96E-04	6.98E-05	7.25E-05	8.36E-04	1.76E-05	0.00E+00	1.24E-04	9.37E-04
11	E22	80	Combination Long Haul Truck	14	0.00E+00	4.51E-06	2.54E-07	4.88E+00	2.87E-08	5.84E-03	3.72E-06	5.32E-03	3.87E-04	6.19E-05	4.13E-04	8.20E-05	8.54E-05	7.84E-04	1.64E-05	0.00E+00	3.27E-04	1.00E-03
11	E23	80	Passenger Car	125	0.00E+00	1.30E-06	1.41E-07	5.30E+00	9.23E-06	2.67E-02	2.93E-06	1.30E-04	6.83E-04	1.14E-04	2.86E-04	1.84E-04	1.89E-04	1.86E-05	2.67E-05	5.71E-09	9.68E-05	2.03E-05
11	E23	80	Passenger Truck	210	0.00E+00	2.68E-06	2.86E-07	1.20E+01	1.74E-05	4.72E-02	5.68E-06	3.50E-04	1.22E-03	2.02E-04	5.45E-04	3.53E-04	3.62E-04	8.61E-05	5.98E-05	1.09E-08	1.82E-04	5.83E-05
11	E23	80	Single Unit Short Haul Truck	122	0.00E+00	1.67E-05	6.52E-07	1.99E+01	1.13E-05	3.62E-02	1.83E-05	6.92E-03	1.37E-03	2.80E-04	2.30E-03	4.26E-04	4.34E-04	2.03E-03	8.10E-05	3.21E-08	1.86E-03	1.29E-03
11	E23	80	Single

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E27	70	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	1.74E-08	3.92E-01	2.87E-07	7.05E-04	4.71E-07	1.70E-04	4.11E-05	7.37E-06	5.85E-05	1.10E-05	1.13E-05	3.97E-05	1.60E-06	6.41E-10	4.72E-05	3.18E-05
10	E27	70	Combination Short Haul Truck	39	0.00E+00	1.01E-05	7.51E-07	1.36E+01	2.56E-08	1.46E-02	7.19E-06	1.50E-02	1.42E-03	2.37E-04	6.06E-04	2.19E-04	2.27E-04	2.17E-03	4.56E-05	0.00E+00	3.79E-04	2.83E-03
10	E27	70	Combination Long Haul Truck	36	0.00E+00	1.38E-05	7.87E-07	1.28E+01	8.68E-08	1.74E-02	1.14E-05	1.61E-02	1.48E-03	2.23E-04	1.26E-03	2.53E-04	2.64E-04	2.06E-03	4.29E-05	0.00E+00	9.95E-04	3.03E-03
10	E28	70	Passenger Car	179	0.00E+00	2.00E-06	2.17E-07	7.82E+00	1.42E-05	4.01E-02	4.51E-06	1.81E-04	1.38E-03	2.15E-04	4.40E-04	2.84E-04	2.91E-04	3.05E-05	3.93E-05	8.17E-09	1.49E-04	2.83E-05
10	E28	70	Passenger Truck	301	0.00E+00	4.21E-06	4.48E-07	1.76E+01	2.70E-05	7.09E-02	8.83E-06	5.28E-04	2.50E-03	3.87E-04	8.45E-04	5.49E-04	5.62E-04	1.33E-04	8.77E-05	1.57E-08	2.82E-04	8.86E-05
10	E28	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	E28	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.62E-06
10	E28	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.61E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.80E-04
10	E28	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.86E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.28E-04
10	E29	70	Passenger Car	16	0.00E+00	1.79E-07	1.95E-08	7.01E-01	1.27E-06	3.60E-03	4.04E-07	1.63E-05	1.24E-04	1.93E-05	3.94E-05	2.54E-05	2.61E-05	2.73E-06	3.52E-06	7.32E-10	1.33E-05	2.54E-06
10	E29	70	Passenger Truck	27	0.00E+00	3.77E-07	4.01E-08	1.58E+00	2.42E-06	6.35E-03	7.91E-07	4.73E-05	2.24E-04	3.47E-05	7.57E-05	4.92E-05	5.04E-05	1.19E-05	7.86E-06	1.41E-09	2.53E-05	7.94E-06
10	E30	70	Passenger Car	232	0.00E+00	2.59E-06	2.81E-07	1.01E+01	1.84E-05	5.19E-02	5.84E-06	2.35E-04	1.79E-03	2.79E-04	5.69E-04	3.67E-04	3.77E-04	3.94E-05	5.09E-05	1.06E-08	1.93E-04	3.66E-05
10	E30	70	Passenger Truck	389	0.00E+00	5.45E-06	5.79E-07	2.28E+01	3.49E-05	9.17E-02	1.14E-05	6.83E-04	3.24E-03	5.01E-04	1.09E-03	7.10E-04	7.28E-04	1.72E-04	1.13E-04	2.03E-08	3.65E-04	1.15E-04
10	E30	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
10	E30	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.90E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.16E-06
10	E30	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.21E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.94E-04
10	E30	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.51E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.49E-04
10	E31	70	Passenger Car	32	0.00E+00	3.59E-07	3.90E-08	1.40E+00	2.54E-06	7.19E-03	8.08E-07	3.25E-05	2.48E-04	3.86E-05	7.89E-05	5.08E-05	5.22E-05	5.46E-06	7.05E-06	1.46E-09	2.67E-05	5.07E-06
10	E31	70	Passenger Truck	54	0.00E+00	7.55E-07	8.02E-08	3.15E+00	4.83E-06	1.27E-02	1.58E-06	9.45E-05	4.48E-04	6.94E-05	1.51E-04	9.83E-05	1.01E-04	2.39E-05	1.57E-05	2.82E-09	5.06E-05	1.59E-05
10	E32	70	Passenger Car	411	0.00E+00	4.58E-06	4.98E-07	1.79E+01	3.25E-05	9.19E-02	1.03E-05	4.16E-04	3.17E-03	4.93E-04	1.01E-03	6.50E-04	6.67E-04	6.98E-05	9.01E-05	1.87E-08	3.41E-04	6.48E-05
10	E32	70	Passenger Truck	688	0.00E+00	9.65E-06	1.03E-06	4.03E+01	6.18E-05	1.62E-01	2.02E-05	1.21E-03	5.73E-03	8.87E-04	1.93E-03	1.26E-03	1.29E-03	3.05E-04	2.01E-04	3.60E-08	6.46E-04	2.03E-04
10	E32	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.62E-06
10	E32	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.81E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.18E-04
10	E32	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.08E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.68E-04
9	E33	60	Passenger Car	228	0.00E+00	2.92E-06	3.17E-07	1.04E+01	2.07E-05	5.83E-02	6.59E-06	2.35E-04	2.31E-03	3.46E-04	6.42E-04	4.14E-04	4.25E-04	4.53E-05	5.22E-05	1.10E-08	2.17E-04	3.67E-05
9	E33	60	Passenger Truck	383	0.00E+00	6.20E-06	6.57E-07	2.32E+01	3.91E-05	9.97E-02	1.29E-05	7.31E-04	4.22E-03	6.27E-04	1.23E-03	7.98E-04	8.18E-04	1.85E-04	1.15E-04	2.14E-08	4.09E-04	1.24E-04
9	E33	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.06E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.63E-06
9	E33	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.25E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.13E-04
9	E33	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.46E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.52E-04
9	E34	60	Passenger Car	799	0.00E+00	1.02E-05	1.11E-06	3.64E+01	7.25E-05	2.04E-01	2.30E-05	8.22E-04	8.06E-03	1.21E-03	2.25E-03	1.45E-03	1.49E-03	1.58E-04	1.83E-04	3.83E-08	7.60E-04	1.28E-04
9	E34	60	Passenger Truck	1337	0.00E+00	2.17E-05	2.30E-06	8.11E+01	1.37E-04	3.49E-01	4.50E-05	2.56E-03	1.47E-02	2.19E-03	4.29E-03	2.79E-03	2.86E-03	6.48E-04	4.03E-04	7.47E-08	1.43E-03	4.33E-04
9	E34	60	Single Unit Short Haul Truck	58	0.00E+00	1.30E-05	5.39E-07	9.72E+00	8.64E-06	1.71E-02	1.41E-05	4.99E-03	1.34E-03	2.26E-04	1.74E-03	3.35E-04	3.42E-04	9.85E-04	3.96E-05	1.63E-08	1.40E-03	9.35E-04
9	E34	60	Single Unit Long Haul Truck	3	0.00E+00	5.69E-07	2.34E-08	4.14E-01	3.75E-07	7.26E-04	6.16E-07	2.16E-04	6.04E-05	1.00E-05	7.61E-05	1.46E-05	1.49E-05	4.19E-05	1.69E-06	6.94E-10	6.12E-05	4.05E-05
9	E34	60	Combination Short Haul Truck	41	0.00E+00	1.19E-05	8.75E-07	1.44E+01	3.26E-08	1.78E-02	8.55E-06	1.81E-02	2.08E-03	3.25E-04	7.34E-04	2.56E-04	2.66E-04	2.28E-03	4.80E-05	0.00E+00	4.68E-04	3.41E-03
9	E34	60	Combination Long Haul Truck	37	0.00E+00	1.64E-05	8.94E-07	1.36E+01	1.10E-07	2.14E-02	1.37E-05	1.93E-02	2.18E-03	3.15E-04	1.55E-03	2.92E-04	3.04E-04	2.18E-03	4.55E-05	0.00E+00	1.25E-03	3.63E-03
9	E35	60	Passenger Car	261	0.00E+00	3.34E-06	3.63E-07	1.19E+01	2.37E-05	6.66E-02	7.52E-06	2.69E-04	2.64E-03	3.95E-04	7.34E-04	4.73E-04	4.86E-04	5.17E-05	5.97E-05	1.25E-08	2.48E-04	4.19E-05
9	E35	60	Passenger Truck	437	0.00E+00	7.08E-06	7.51E-07	2.65E+01	4.47E-05	1.14E-01	1.47E-05	8.35E-04	4.82E-03	7.17E-04	1.40E-03	9.11E-04	9.34E-04	2.12E-04	1.32E-04	2.44E-08	4.67E-04	1.42E-04
9	E35	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.60E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	E35	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.89E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
9	E35	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.41E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.58E-03
9	E36	60	Passenger Car	632	0.00E+00	8.09E-06	8.79E-07	2.88E+01	5.74E-05	1.61E-01	1.82E-05	6.51E-04	6.38E-03	9.56E-04	1.78E-03	1.15E-03	1.18E-03	1.25E-04	1.45E-04	3.04E-08	6.01E-04	1.02E-04
9	E36	60	Passenger Truck	1059	0.00E+00	1.72E-05	1.82E-06	6.42E+01	1.08E-04	2.76E-01	3.56E-05	2.02E-03	1.17E-02	1.74E-03	3.39E-03	2.21E-03	2.26E-03	5.13E-04	3.19E-04	5.92E-08	1.13E-03	3.43E-04
9	E36	60	Single Unit Short Haul Truck	53	0.00E+00	1.18E-05	4.86E-07	8.76E+00	7.79E-06	1.54E-02	1.27E-05	4.50E-03	1.21E-03	2.04E-04	1.57E-03	3.02E-04	3.08E-04	8.88E-04	3.57E-05	1.47E-08	1.26E-03	8.43E-04
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	5.13E-07	2.11E-08	3.74E-01	3.38E-07	6.54E-04	5.55E-07	1.95E-04	5.44E-05	9.03E-06	6.86E-05	1.31E-05	1.34E-05	3.78E-05	1.52E-06	6.26E-10	5.52E-05	3.65E-05
9	E36	60	Combination Short Haul Truck	37	0.00E+00	1.07E-05	7.85E-07	1.29E+01	2.93E-08	1.60E-02	7.68E-06	1.63E-02	1.86E-03	2.92E-04	6.59E-04	2.30E-04	2.38E-04	2.05E-03	4.31E-05	0.00E+00	4.20E-04	3.06E-03
9	E36	60	Combination Long Haul Truck	33	0.00E+00	1.47E-05	8.02E-07	1.22E+01	9.91E-08	1.92E-02	1.23E-05	1.73E-02	1.96E-03	2.83E-04	1.39E-03	2.62E-04	2.73E-04	1.95E-03	4.08E-05	0.00E+00	1.12E-03	3.26E-03
9	E37	60	Passenger Car	254	0.00E+00	3.25E-06	3.53E-07	1.16E+01	2.31E-05	6.49E-02	7.33E-06	2.62E-04	2.57E-03	3.85E-04	7.15E-04	4.61E-04	4.73E-04	5.04E-05	5.81E-05	1.22E-08	2.42E-04	4.08E-05
9	E37	60	Passenger Truck	426	0.00E+00	6.90E-06	7.32E-07	2.58E+01	4.35E-05	1.11E-01	1.43E-05	8.14E-04	4.69E-03	6.98E-04	1.36E-03	8.88E-04	9.10E-04	2.06E-04	1.28E-04	2.38E-08	4.55E-04	1.38E-04
9	E37	60	Single Unit Short Haul Truck	34	0.00E+00	7.70E-06	3.18E-07	5.74E+00	5.10E-06	1.01E-02	8.33E-06	2.95E-03	7.93E-04	1.33E-04	1.03E-03	1.98E-04	2.02E-04	5.81E-04	2.34E-05	9.63E-09	8.25E-04	5.52E-04
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	3.36E-07	1.38E-08	2.45E-01	2.21E-07	4.28E-04	3.63E-07	1.28E-04	3.56E-05	5.91E-06	4.49E-05	8.60E-06	8.77E-06	2.47E-05	9.98E-07	4.10E-10	3.61E-05	2.39E-05
9	E37	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.89E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
9	E37	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.41E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.58E-03
9	E38	60	Passenger Car	620	0.00E+00	7.93E-06	8.62E-07	2.83E+01	5.63E-05	1.58E-01	1.79E-05	6.39E-04	6.26E-03	9.38E-04	1.74E-03	1.12E-03	1.15E-03	1.23E-04	1.42E-04	2.98E-08	5.90E-04	9.96E-05
9	E38	60	Passenger Truck	1039	0.00E+00	1.68E-05	1.78E-06	6.30E+01	1.06E-04	2.71E-01	3.49E-05	1.99E-03	1.14E-02	1.70E-03	3.33E-03	2.17E-03	2.22E-03	5.03E-04	3.13E-04	5.81E-08	1.11E-03	3.36E-04
9	E38	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.09E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.66E-04
9	E38	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.32E-05
9	E38	60	Combination Short Haul Truck	35	0.00E+00	1.01E-05	7.40E-07	1.22E+01	2.76E-08	1.51E-02	7.24E-06	1.53E-02	1.76E-03	2.75E-04	6.21E-04	2.16E-04	2.25E-04	1.93E-03	4.07E-05	0.00E+00	3.96E-04	2.89E-03
9	E38	60	Combination Long Haul Truck	31	0.00E+00	1.38E-05	7.56E-07	1.15E+01	9.34E-08	1.81E-02	1.16E-05	1.63E-02	1.84E-03	2.67E-04	1.31E-03	2.47E-04	2.57E-04	1.84E-03	3.85E-05	0.00E+00	1.06E-03	3.07E-03
10	E39	70	Passenger Car	247	0.00E+00	2.76E-06	2.99E-07	1.08E+01	1.96E-05	5.53E-02	6.21E-06	2.50E-04	1.90E-03	2.97E-04	6.06E-04	3.91E-04	4.01E-04	4.20E-05	5.42E-05	1.13E-08	2.05E-04	3.90E-05
10	E39	70	Passenger Truck	414	0.00E+00	5.80E-06	6.17E-07	2.42E+01	3.71E-05	9.76E-02	1.22E-05	7.27E-04	3.45E-03	5.33E-04	1.16E-03	7.56E-04	7.74E-04	1.83E-04	1.21E-04	2.16E-08	3.89E-04	1.22E-04
10	E39	70	Single Unit Short Haul Truck	21	0.00E+00	3.71E-06	1.51E-07	3.45E+00	2.49E-06	6.26E-03	4.03E-06	1.47E-03	3.35E-04	6.15E-05	5.00E-04	9.52E-05	9.71E-05	3.51E-04	1.40E-05	5.67E-09	4.03E-04	2.75E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.61E-07	6.50E-09	1.46E-01	1.07E-07	2.63E-04	1.75E-07	6.33E-05	1.53E-05	2.75E-06	2.18E-05	4.11E-06	4.20E-06	1.48E-05	5.96E-07	2.39E-10	1.76E-05	1.19E-05
10	E39	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.01E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.56E-04
10	E39	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.29E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.09E-04
10	E40	70	Passenger Car	402	0.00E+00	4.48E-06	4.87E-07	1.75E+01	3.18E-05	8.98E-02	1.01E-05	4.06E-04	3.09E-03	4.82E-04	9.85E-04	6.35E-04	6.52E-04	6.82E-05	8.80E-05	1.83E-08	3.33E-04	6.34E-05
10	E40	70	Passenger Truck	672	0.00E+00	9.43E-06	1.00E-06	3.94E+01	6.04E-05	1.59E-01	1.98E-05	1.18E-03	5.60E-03	8.66E-04	1.89E-03	1.23E-03	1.26E-03	2.98E-04	1.96E-04	3.52E-08	6.31E-04	1.98E-04
10	E40	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.01E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.51E-05
10	E40	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
10	E40	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
10	E41	70	Passenger Car	231	0.00E+00	2.58E-06	2.80E-07	1.01E+01	1.83E-05	5.17E-02	5.81E-06	2.34E-04	1.78E-03	2.77E-04	5.67E-04	3.65E-04	3.75E-04	3.93E-05	5.06E-05	1.05E-08	1.92E-04	3.65E-05
10	E41	70	Passenger Truck	387	0.00E+00	5.42E-06	5.77E-07	2.27E+01	3.47E-05	9.13E-02	1.14E-05	6.79E-04	3.22E-03	4.99E-04	1.09E-03	7.06E-04	7.24E-04	1.72E-04	1.13E-04	2.02E-08	3.63E-04	1.14E-04
10	E41	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.00E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	E41	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.07E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.02E-04
10	E42	70	Passenger Car	253	0.00E+00	2.82E-06	3.07E-07	1.10E+01	2.00E-05	5.66E-02	6.36E-06	2.56E-04	1.95E-03	3.04E-04	6.21E-04	4.00E-04	4.11E-04	4.30E-05	5.55E-05	1.15E-08	2.10E-04	3.99E-05
10	E42	70	Passenger Truck	424	0.00E+00	5.94E-06	6.32E-07	2.48E+01	3.80E-05	1.00E-01	1.25E-05	7.44E-04	3.53E-03	5.46E-04	1.19E-03	7.74E-04	7.93E-04	1.88E-04	1.24E-04	2.22E-08	3.98E-04	1.25E-04
10	E42	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.68E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.76E-05
10	E42	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.21E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.05E-04
10	E42	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.43E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.47E-04
10	E43	70	Passenger Car	207	0.00E+00

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E47	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.81E-04
11	E47	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.00E-04
11	E48	80	Passenger Car	448	0.00E+00	4.66E-06	5.06E-07	1.90E+01	3.30E-05	9.57E-02	1.05E-05	4.65E-04	2.44E-03	4.09E-04	1.02E-03	6.60E-04	6.77E-04	6.66E-05	9.56E-05	2.04E-08	3.46E-04	7.25E-05
11	E48	80	Passenger Truck	751	0.00E+00	9.59E-06	1.02E-06	4.28E+01	6.24E-05	1.69E-01	2.03E-05	1.25E-03	4.35E-03	7.24E-04	1.95E-03	1.26E-03	1.30E-03	3.08E-04	2.14E-04	3.89E-08	6.53E-04	2.09E-04
11	E48	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.97E-04
11	E48	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.08E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E48	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.80E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.09E-03
11	E48	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.20E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E49	80	Passenger Car	36	0.00E+00	3.77E-07	4.09E-08	1.53E+00	2.67E-06	7.74E-03	8.49E-07	3.76E-05	1.98E-04	3.31E-05	8.28E-05	5.34E-05	5.48E-05	5.39E-06	7.74E-06	1.65E-09	2.80E-05	5.87E-06
11	E49	80	Passenger Truck	61	0.00E+00	7.76E-07	8.27E-08	3.46E+00	5.04E-06	1.37E-02	1.64E-06	1.01E-04	3.52E-04	5.86E-05	1.58E-04	1.02E-04	1.05E-04	2.49E-05	1.73E-05	3.15E-09	5.28E-05	1.69E-05
11	E49	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.45E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E49	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.97E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.37E-05
11	E49	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.32E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
11	E50	80	Passenger Car	364	0.00E+00	3.78E-06	4.11E-07	1.54E+01	2.68E-05	7.77E-02	8.52E-06	3.77E-04	1.98E-03	3.32E-04	8.31E-04	5.36E-04	5.50E-04	5.41E-05	7.76E-05	1.66E-08	2.81E-04	5.88E-05
11	E50	80	Passenger Truck	609	0.00E+00	7.78E-06	8.29E-07	3.47E+01	5.06E-05	1.37E-01	1.65E-05	1.02E-03	3.53E-03	5.88E-04	1.58E-03	1.03E-03	1.05E-03	2.50E-04	1.74E-04	3.16E-08	5.30E-04	1.69E-04
11	E50	80	Single Unit Short Haul Truck	52	0.00E+00	7.10E-06	2.77E-07	8.48E+00	4.81E-06	1.54E-02	7.80E-06	2.94E-03	5.81E-04	1.19E-04	9.77E-04	1.81E-04	1.84E-04	8.63E-04	3.44E-05	1.37E-08	7.93E-04	5.50E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	3.08E-07	1.19E-08	3.58E-01	2.05E-07	6.41E-04	3.39E-07	1.26E-04	2.66E-05	5.27E-06	4.26E-05	7.77E-06	7.92E-06	3.62E-05	1.46E-06	5.69E-10	3.47E-05	2.35E-05
11	E50	80	Combination Short Haul Truck	42	0.00E+00	8.62E-06	6.38E-07	1.40E+01	2.26E-08	1.31E-02	6.16E-06	1.33E-02	9.98E-04	1.81E-04	5.23E-04	1.86E-04	1.93E-04	2.23E-03	4.69E-05	0.00E+00	3.30E-04	2.50E-03
11	E50	80	Combination Long Haul Truck	38	0.00E+00	1.20E-05	6.78E-07	1.30E+01	7.64E-08	1.56E-02	9.91E-06	1.42E-02	1.03E-03	1.65E-04	1.10E-03	2.19E-04	2.28E-04	2.09E-03	4.36E-05	0.00E+00	8.73E-04	2.67E-03
11	E51	80	Passenger Car	5	0.00E+00	5.05E-08	5.49E-09	2.06E-01	3.58E-07	1.04E-03	1.14E-07	5.04E-06	2.65E-05	4.44E-06	1.11E-05	7.16E-06	7.35E-06	7.23E-07	1.04E-06	2.22E-10	3.76E-06	7.86E-07
11	E51	80	Passenger Truck	8	0.00E+00	1.04E-07	1.11E-08	4.64E-01	6.76E-07	1.83E-03	2.20E-07	1.36E-05	4.72E-05	7.85E-06	2.11E-05	1.37E-05	1.41E-05	3.34E-06	2.32E-06	4.22E-10	7.08E-06	2.26E-06
11	E52	80	Passenger Car	297	0.00E+00	3.08E-06	3.35E-07	1.26E+01	2.19E-05	6.34E-02	6.95E-06	3.08E-04	1.62E-03	2.71E-04	6.78E-04	4.37E-04	4.49E-04	4.41E-05	6.33E-05	1.35E-08	2.29E-04	4.80E-05
11	E52	80	Passenger Truck	497	0.00E+00	6.35E-06	6.77E-07	2.84E+01	4.13E-05	1.12E-01	1.35E-05	8.30E-04	2.88E-03	4.80E-04	1.29E-03	8.37E-04	8.58E-04	2.04E-04	1.42E-04	2.58E-08	4.32E-04	1.38E-04
11	E52	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.89E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.09E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.22E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.26E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.37E-03
11	E53	80	Passenger Car	184	0.00E+00	1.91E-06	2.07E-07	7.77E+00	1.35E-05	3.92E-02	4.30E-06	1.90E-04	1.00E-03	1.68E-04	4.19E-04	2.70E-04	2.77E-04	2.73E-05	3.92E-05	8.37E-09	1.42E-04	2.97E-05
11	E53	80	Passenger Truck	307	0.00E+00	3.93E-06	4.18E-07	1.75E+01	2.55E-05	6.92E-02	8.32E-06	5.13E-04	1.78E-03	2.97E-04	7.98E-04	5.18E-04	5.31E-04	1.26E-04	8.76E-05	1.59E-08	2.67E-04	8.54E-05
11	E53	80	Single Unit Short Haul Truck	39	0.00E+00	5.39E-06	2.10E-07	6.44E+00	3.65E-06	1.17E-02	5.92E-06	2.23E-03	4.41E-04	9.02E-05	7.42E-04	1.37E-04	1.40E-04	6.55E-04	2.62E-05	1.04E-08	6.02E-04	4.18E-04
11	E53	80	Single Unit Long Haul Truck	2	0.00E+00	2.34E-07	9.03E-09	2.72E-01	1.56E-07	4.87E-04	2.57E-07	9.55E-05	2.02E-05	4.00E-06	3.24E-05	5.90E-06	6.02E-06	2.75E-05	1.11E-06	4.32E-10	2.63E-05	1.78E-05
11	E53	80	Combination Short Haul Truck	28	0.00E+00	5.82E-06	4.31E-07	9.47E+00	1.52E-08	8.87E-03	4.16E-06	8.95E-03	6.74E-04	1.22E-04	3.53E-04	1.26E-04	1.31E-04	1.51E-03	3.17E-05	0.00E+00	2.22E-04	1.69E-03
11	E53	80	Combination Long Haul Truck	26	0.00E+00	8.11E-06	4.58E-07	8.79E+00	5.16E-08	1.05E-02	6.69E-06	9.57E-03	6.97E-04	1.11E-04	7.43E-04	1.48E-04	1.54E-04	1.41E-03	2.95E-05	0.00E+00	5.89E-04	1.80E-03
11	E54	80	Passenger Car	445	0.00E+00	4.62E-06	5.02E-07	1.88E+01	3.28E-05	9.50E-02	1.04E-05	4.61E-04	2.43E-03	4.06E-04	1.02E-03	6.55E-04	6.72E-04	6.61E-05	9.49E-05	2.03E-08	3.44E-04	7.20E-05
11	E54	80	Passenger Truck	745	0.00E+00	9.51E-06	1.01E-06	4.25E+01	6.19E-05	1.68E-01	2.02E-05	1.24E-03	4.32E-03	7.19E-04	1.93E-03	1.26E-03	1.29E-03	3.06E-04	2.12E-04	3.86E-08	6.48E-04	2.07E-04
11	E54	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.78E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.19E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.22E-05
11	E54	80	Combination Short Haul Truck	35	0.00E+00	7.22E-06	5.35E-07	1.18E+01	1.89E-08	1.10E-02	5.16E-06	1.11E-02	8.36E-04	1.51E-04	4.38E-04	1.56E-04	1.62E-04	1.87E-03	3.93E-05	0.00E+00	2.76E-04	2.09E-03
11	E54	80	Combination Long Haul Truck	32	0.00E+00	1.01E-05	5.68E-07	1.09E+01	6.40E-08	1.30E-02	8.30E-06	1.19E-02	8.64E-04	1.38E-04	9.22E-04	1.83E-04	1.91E-04	1.75E-03	3.65E-05	0.00E+00	7.31E-04	2.24E-03
11	E55	80	Passenger Car	63	0.00E+00	6.56E-07	7.13E-08	2.67E+00	4.66E-06	1.35E-02	1.48E-06	6.55E-05	3.44E-04	5.77E-05	1.44E-04	9.30E-05	9.55E-05	9.39E-06	1.35E-05	2.88E-09	4.88E-05	1.02E-05
11	E55	80	Passenger Truck	106	0.00E+00	1.35E-06	1.44E-07	6.04E+00	8.79E-06	2.38E-02	2.86E-06	1.77E-04	6.13E-04	1.02E-04	2.75E-04	1.78E-04	1.83E-04	4.35E-05	3.02E-05	5.48E-09	9.20E-05	2.94E-05
11	E55	80	Single Unit Short Haul Truck	52	0.00E+00	7.10E-06	2.77E-07	8.48E+00	4.81E-06	1.54E-02	7.80E-06	2.94E-03	5.81E-04	1.19E-04	9.77E-04	1.81E-04	1.84E-04	8.63E-04	3.44E-05	1.37E-08	7.93E-04	5.50E-04
11	E55	80	Single Unit Long Haul Truck	2	0.00E+00	3.08E-07	1.19E-08	3.58E-01	2.05E-07	6.41E-04	3.39E-07	1.26E-04	2.66E-05	5.27E-06	4.26E-05	7.77E-06	7.92E-06	3.62E-05	1.46E-06	5.69E-10	3.47E-05	2.35E-05
11	E55	80	Combination Short Haul Truck	31	0.00E+00	6.36E-06	4.71E-07	1.03E+01	1.67E-08	9.69E-03	4.55E-06	9.78E-03	7.36E-04	1.33E-04	3.86E-04	1.37E-04	1.43E-04	1.64E-03	3.46E-05	0.00E+00	2.43E-04	1.84E-03
11	E55	80	Combination Long Haul Truck	28	0.00E+00	8.86E-06	5.00E-07	9.60E+00	5.64E-08	1.15E-02	7.31E-06	1.05E-02	7.61E-04	1.22E-04	8.12E-04	1.61E-04	1.68E-04	1.54E-03	3.22E-05	0.00E+00	6.44E-04	1.97E-03
11	E56	80	Passenger Car	385	0.00E+00	4.00E-06	4.34E-07	1.63E+01	2.84E-05	8.21E-02	9.01E-06	3.99E-04	2.10E-03	3.51E-04	8.79E-04	5.67E-04	5.81E-04	5.72E-05	8.21E-05	1.75E-08	2.97E-04	6.22E-05
11	E56	80	Passenger Truck	644	0.00E+00	8.23E-06	8.77E-07	3.67E+01	5.35E-05	1.45E-01	1.74E-05	1.08E-03	3.73E-03	6.22E-04	1.67E-03	1.09E-03	1.11E-03	2.65E-04	1.84E-04	3.34E-08	5.60E-04	1.79E-04
11	E56	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	E56	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.12E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.57E-06
11	E56	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.47E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	E56	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.85E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
9	F31	60	Passenger Car	746	0.00E+00	9.54E-06	1.04E-06	3.40E+01	6.77E-05	1.90E-01	2.15E-05	7.68E-04	7.54E-03	1.13E-03	2.10E-03	1.35E-03	1.39E-03	1.48E-04	1.71E-04	3.58E-08	7.10E-04	1.20E-04
9	F31	60	Passenger Truck	1250	0.00E+00	2.03E-05	2.15E-06	7.58E+01	1.28E-04	3.26E-01	4.20E-05	2.39E-03	1.38E-02	2.05E-03	4.01E-03	2.61E-03	2.67E-03	6.05E-04	3.77E-04	6.99E-08	1.34E-03	4.05E-04
9	F31	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.60E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	F31	60	Combination Short Haul Truck	41	0.00E+00	1.19E-05	8.75E-07	1.44E+01	3.26E-08	1.78E-02	8.55E-06	1.81E-02	2.08E-03	3.25E-04	7.34E-04	2.56E-04	2.66E-04	2.28E-03	4.80E-05	0.00E+00	4.68E-04	3.41E-03
9	F31	60	Combination Long Haul Truck	37	0.00E+00	1.64E-05	8.94E-07	1.36E+01	1.10E-07	2.14E-02	1.37E-05	1.93E-02	2.18E-03	3.15E-04	1.55E-03	2.92E-04	3.04E-04	2.18E-03	4.55E-05	0.00E+00	1.25E-03	3.63E-03
9	F32	60	Passenger Car	759	0.00E+00	9.70E-06	1.05E-06	3.46E+01	6.88E-05	1.94E-01	2.19E-05	7.81E-04	7.66E-03	1.15E-03	2.13E-03	1.38E-03	1.41E-03	1.50E-04	1.73E-04	3.64E-08	7.22E-04	1.22E-04
9	F32	60	Passenger Truck	1270	0.00E+00	2.06E-05	2.18E-06	7.70E+01	1.30E-04	3.31E-01	4.27E-05	2.43E-03	1.40E-02	2.08E-03	4.07E-03	2.65E-03	2.72E-03	6.16E-04	3.83E-04	7.10E-08	1.36E-03	4.11E-04
9	F32	60	Single Unit Short Haul Truck	113	0.00E+00	2.52E-05	1.04E-06	1.88E+01	1.67E-05	3.31E-02	2.73E-05	9.66E-03	2.60E-03	4.37E-04	3.37E-03	6.48E-04	6.61E-04	1.91E-03	7.66E-05	3.16E-08	2.71E-03	1.81E-03
9	F32	60	Single Unit Long Haul Truck	5	0.00E+00	1.10E-06	4.53E-08	8.02E-01	7.25E-07	1.40E-03	1.19E-06	4.18E-04	1.17E-04	1.94E-05	1.47E-04	2.82E-05	2.87E-05	8.10E-05	3.27E-06	1.34E-09	1.18E-04	7.83E-05
9	F32	60	Combination Short Haul Truck	51	0.00E+00	1.50E-05	1.10E-06	1.81E+01	4.10E-08	2.24E-02	1.07E-05	2.28E-02	2.61E-03	4.08E-04	9.22E-04	3.21E-04	3.34E-04	2.87E-03	6.04E-05	0.00E+00	5.88E-04	4.29E-03
9	F32	60	Combination Long Haul Truck	47	0.00E+00	2.06E-05	1.12E-06	1.71E+01	1.39E-07	2.69E-02	1.72E-05	2.42E-02	2.74E-03	3.96E-04	1.95E-03	3.67E-04	3.82E-04	2.74E-03	5.71E-05	0.00E+00	1.57E-03	4.56E-03
9	F33	60	Passenger Car	188	0.00E+00	2.41E-06	2.62E-07	8.59E+00	1.71E-05	4.81E-02	5.43E-06	1.94E-04	1.90E-03	2.85E-04	5.30E-04	3.42E-04	3.51E-04	3.74E-05	4.31E-05	9.05E-09	1.79E-04	3.03E-05
9	F33	60	Passenger Truck	316	0.00E+00	5.12E-06	5.42E-07	1.91E+01	3.23E-05	8.23E-02	1.06E-05	6.03E-04	3.48E-03	5.18E-04	1.01E-03	6.58E-04	6.74E-04	1.53E-04	9.51E-05	1.76E-08	3.37E-04	1.02E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.18E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	F33	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.97E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
9	F33	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.42E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	F34	60	Passenger Car	557	0.00E+00	7.13E-06	7.75E-07	2.54E+01	5.06E-05	1.42E-01	1.61E-05	5.74E-04	5.63E-03	8.43E-04	1.57E-03	1.01E-03	1.04E-03	1.11E-04	1.27E-04	2.68E-08	5.30E-04	8.95E-05
9	F34	60	Passenger Truck	934	0.00E+00	1.51E-05	1.60E-06	5.66E+01	9.55E-05	2.43E-01	3.14E-05	1.78E-03	1.03E-02	1.53E-03	2.99E-03	1.95E-03	2.00E-03	4.52E-04	2.81E-04	5.22E-08	9.98E-04	3.02E-04
9	F34	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.48E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.03E-03
9	F34	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.37E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.45E-05
9	F34	60	Combination Short Haul Truck	58	0.00E+00	1.69E-05	1.24E-06	2.04E+01	4.64E-08	2.53E-02	1.22E-05	2.58E-02	2.96E-03	4.62E-04	1.04E-03	3.64E-04	3.78E-04	3.25E-03	6.84E-05	0.00E+00	6.66E-04	4.86E-03
9	F34	60	Combination Long Haul Truck	53	0.00E+00	2.33E-05	1.27E-06	1.93E+01	1.57E-07	3.04E-02	1.95E-05	2.75E-02	3.10E-03	4.48E-04	2.21E-03	4.15E-04	4.33E-04	3.10E-03	6.47E-05	0.00E+00	1.78E-03	5.17E-03
11	F35	80	Passenger Car	74	0.00E+00	7.65E-07	8.31E-08	3.12E+00	5.43E-06	1.57E-02	1.72E-06	7.64E-05	4.01E-04	6.72E-05	1.68E-04	1.08E-04	1.11E-04	1.10E-05	1.57E-05	3.36E-09	5.69E-05	1.19E-05
11	F35	80	Passenger Truck	123	0.00E+00	1.58E-06	1.68E-07	7.04E+00	1.02E-05	2.78E-02	3.34E-06	2.06E-04	7.15E-04	1.19E-04	3.20E-04	2.08E-04	2.13E-04	5.06E-05	3.52E-05	6.39E-09	1.07E-04	3.43E-05
11	F35	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.07E-05
11	F35	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.97E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.37E-05
11	F35	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.32E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
11	F36	80	Passenger Car	273	0.00E+00	2.83E-06	3.08E-07	1.15E+01	2.01E-05	5.82E-02	6.38E-06	2.83E-04	1.49E-03	2.49E-04	6.22E-04	4.01E-04	4.12E-04	4.05E-05	5.82E-05	1.24E-08	2.11E-04	4.41E-05
11	F36	80	Passenger Truck	456	0.00E+00	5.83E-06	6.21E-07	2.60E+01	3.79E-05	1.03E-01	1.24E-05	7.62E-04	2.65E-03	4.40E-04	1.19E-03	7.69E-04	7.88E-04	1.87E-04	1.30E-04	2.37E-08	3.97E-04	1.27E-04
11	F36	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.58E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.95E-04
11	F36	80	Single Unit Long Haul Truck	1	0

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F40	80	Combination Short Haul Truck	13	0.00E+00	2.69E-06	1.99E-07	4.38E+00	7.06E-09	4.11E-03	1.93E-06	4.15E-03	3.12E-04	5.65E-05	1.63E-04	5.82E-05	6.04E-05	6.97E-04	1.47E-05	0.00E+00	1.03E-04	7.81E-04
11	F40	80	Combination Long Haul Truck	12	0.00E+00	3.75E-06	2.12E-07	4.07E+00	2.39E-08	4.86E-03	3.10E-06	4.43E-03	3.22E-04	5.16E-05	3.44E-04	6.83E-05	7.12E-05	6.53E-04	1.36E-05	0.00E+00	2.73E-04	8.34E-04
10	F41	70	Passenger Car	257	0.00E+00	2.86E-06	3.11E-07	1.12E+01	2.03E-05	5.74E-02	6.46E-06	2.60E-04	1.98E-03	3.08E-04	6.30E-04	4.06E-04	4.17E-04	4.36E-05	5.63E-05	1.17E-08	2.13E-04	4.05E-05
10	F41	70	Passenger Truck	430	0.00E+00	6.03E-06	6.41E-07	2.52E+01	3.86E-05	1.01E-01	1.26E-05	7.55E-04	3.58E-03	5.54E-04	1.21E-03	7.85E-04	8.05E-04	1.91E-04	1.26E-04	2.25E-08	4.04E-04	1.27E-04
10	F41	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	F41	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.01E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.45E-04
10	F41	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.37E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
10	F42	70	Passenger Car	217	0.00E+00	2.42E-06	2.63E-07	9.45E+00	1.72E-05	4.85E-02	5.45E-06	2.19E-04	1.67E-03	2.60E-04	5.32E-04	3.43E-04	3.52E-04	3.68E-05	4.75E-05	9.87E-09	1.80E-04	3.42E-05
10	F42	70	Passenger Truck	363	0.00E+00	5.09E-06	5.41E-07	2.13E+01	3.26E-05	8.57E-02	1.07E-05	6.37E-04	3.02E-03	4.68E-04	1.02E-03	6.63E-04	6.80E-04	1.61E-04	1.06E-04	1.90E-08	3.41E-04	1.07E-04
53	F83	70	Passenger Car	129	0.00E+00	1.39E-06	1.52E-07	5.68E+00	9.89E-06	2.77E-02	3.14E-06	1.33E-04	9.78E-04	1.53E-04	3.07E-04	1.98E-04	2.03E-04	2.19E-05	2.86E-05	5.94E-09	1.04E-04	2.07E-05
53	F83	70	Passenger Truck	216	0.00E+00	2.91E-06	3.10E-07	1.28E+01	1.87E-05	4.89E-02	6.11E-06	3.75E-04	1.75E-03	2.72E-04	5.85E-04	3.80E-04	3.90E-04	9.52E-05	6.38E-05	1.12E-08	1.96E-04	6.28E-05
53	F83	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
53	F83	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.62E-06
53	F83	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.61E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.80E-04
53	F83	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.86E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.28E-04
50	F84	40	Passenger Car	73	0.00E+00	1.05E-06	1.14E-07	3.85E+00	7.42E-06	2.07E-02	2.36E-06	6.65E-05	1.26E-03	1.77E-04	2.30E-04	1.48E-04	1.52E-04	2.17E-05	1.91E-05	3.54E-09	7.78E-05	1.04E-05
50	F84	40	Passenger Truck	122	0.00E+00	2.31E-06	2.42E-07	8.37E+00	1.39E-05	3.42E-02	4.63E-06	2.56E-04	2.23E-03	3.09E-04	4.38E-04	2.86E-04	2.93E-04	7.40E-05	4.12E-05	6.02E-09	1.45E-04	4.44E-05
50	F84	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.45E-05
50	F84	40	Combination Short Haul Truck	33	0.00E+00	1.61E-05	1.21E-06	1.39E+01	4.00E-08	2.28E-02	1.15E-05	2.34E-02	3.26E-03	4.85E-04	9.60E-04	3.51E-04	3.64E-04	2.21E-03	4.64E-05	0.00E+00	5.96E-04	4.42E-03
50	F84	40	Combination Long Haul Truck	31	0.00E+00	2.15E-05	1.21E-06	1.33E+01	1.36E-07	2.77E-02	1.77E-05	2.47E-02	3.38E-03	4.75E-04	1.97E-03	3.90E-04	4.07E-04	2.14E-03	4.46E-05	0.00E+00	1.56E-03	4.66E-03
52	F85	60	Passenger Car	219	0.00E+00	2.57E-06	2.79E-07	9.96E+00	1.82E-05	5.09E-02	5.79E-06	2.17E-04	2.15E-03	3.22E-04	5.65E-04	3.64E-04	3.74E-04	4.34E-05	5.00E-05	1.02E-08	1.91E-04	3.38E-05
52	F85	60	Passenger Truck	366	0.00E+00	5.42E-06	5.75E-07	2.22E+01	3.42E-05	8.74E-02	1.12E-05	6.62E-04	3.81E-03	5.66E-04	1.07E-03	6.97E-04	7.15E-04	1.74E-04	1.10E-04	1.86E-08	3.57E-04	1.12E-04
52	F85	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.09E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.66E-05
52	F85	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
52	F85	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.28E-03
53	F86	70	Passenger Car	329	0.00E+00	3.56E-06	3.87E-07	1.45E+01	2.53E-05	7.08E-02	8.03E-06	3.39E-04	2.50E-03	3.91E-04	7.83E-04	5.05E-04	5.18E-04	5.60E-05	7.30E-05	1.52E-08	2.65E-04	5.29E-05
53	F86	70	Passenger Truck	552	0.00E+00	7.43E-06	7.91E-07	3.27E+01	4.77E-05	1.25E-01	1.56E-05	9.57E-04	4.46E-03	6.93E-04	1.49E-03	9.71E-04	9.95E-04	2.43E-04	1.63E-04	2.86E-08	4.99E-04	1.60E-04
53	F86	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.38E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.77E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.45E-05
53	F86	70	Combination Short Haul Truck	24	0.00E+00	6.19E-06	4.61E-07	8.37E+00	1.57E-08	8.94E-03	4.41E-06	9.23E-03	8.73E-04	1.46E-04	3.71E-04	1.34E-04	1.39E-04	1.33E-03	2.80E-05	0.00E+00	2.32E-04	1.74E-03
53	F86	70	Combination Long Haul Truck	22	0.00E+00	8.49E-06	4.83E-07	7.85E+00	5.32E-08	1.07E-02	6.98E-06	9.87E-03	9.09E-04	1.37E-04	7.72E-04	1.55E-04	1.62E-04	1.26E-03	2.63E-05	0.00E+00	6.10E-04	1.86E-03
52	F87	60	Passenger Car	38	0.00E+00	4.48E-07	4.87E-08	1.74E+00	3.18E-06	8.88E-03	1.01E-06	3.78E-05	3.74E-04	5.61E-05	9.85E-05	6.35E-05	6.52E-05	7.56E-06	8.71E-06	1.78E-09	3.33E-05	5.90E-06
52	F87	60	Passenger Truck	64	0.00E+00	9.46E-07	1.00E-07	3.87E+00	5.96E-06	1.52E-02	1.96E-06	1.15E-04	6.65E-04	9.87E-05	1.87E-04	1.22E-04	1.25E-04	3.03E-05	1.92E-05	3.24E-09	6.23E-05	1.95E-05
52	F87	60	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.24E-07	2.23E+00	1.98E-06	3.92E-03	3.24E-06	1.15E-03	3.08E-04	5.18E-05	3.99E-04	7.69E-05	7.85E-05	2.26E-04	9.09E-06	3.75E-09	3.21E-04	2.15E-04
52	F87	60	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.37E-09	9.51E-02	8.60E-08	1.67E-04	1.41E-07	4.96E-05	1.39E-05	2.30E-06	1.75E-05	3.34E-06	3.41E-06	9.61E-06	3.88E-07	1.59E-10	1.41E-05	9.29E-06
52	F87	60	Combination Short Haul Truck	5	0.00E+00	1.53E-06	1.12E-07	1.84E+00	4.18E-09	2.28E-03	1.10E-06	2.32E-03	2.66E-04	4.17E-05	9.41E-05	3.28E-05	3.41E-05	2.93E-04	6.16E-06	0.00E+00	6.00E-05	4.38E-04
52	F87	60	Combination Long Haul Truck	5	0.00E+00	2.10E-06	1.15E-07	1.74E+00	1.42E-08	2.74E-03	1.75E-06	2.47E-03	2.79E-04	4.04E-05	1.99E-04	3.74E-05	3.90E-05	2.79E-04	5.83E-06	0.00E+00	1.60E-04	4.66E-04
50	F88	40	Passenger Car	71	0.00E+00	1.02E-06	1.11E-07	3.77E+00	7.27E-06	2.02E-02	2.31E-06	6.51E-05	1.23E-03	1.73E-04	2.25E-04	1.45E-04	1.49E-04	2.12E-05	1.87E-05	3.47E-09	7.62E-05	1.02E-05
50	F88	40	Passenger Truck	120	0.00E+00	2.26E-06	2.37E-07	8.20E+00	1.36E-05	3.35E-02	4.54E-06	2.51E-04	2.18E-03	3.03E-04	4.29E-04	2.80E-04	2.87E-04	7.25E-05	4.04E-05	5.89E-09	1.42E-04	4.35E-05
50	F88	40	Single Unit Short Haul Truck	25	0.00E+00	8.45E-06	3.76E-07	4.70E+00	5.85E-06	7.38E-03	9.03E-06	3.40E-03	9.80E-04	1.53E-04	1.09E-03	2.26E-04	2.31E-04	4.81E-04	1.92E-05	8.13E-09	8.56E-04	6.36E-04
50	F88	40	Single Unit Long Haul Truck	1	0.00E+00	3.70E-07	1.64E-08	2.03E-01	2.56E-07	3.21E-04	3.96E-07	1.48E-04	4.39E-05	6.81E-06	4.77E-05	9.90E-06	1.01E-05	2.08E-05	8.28E-07	3.53E-10	3.77E-05	2.77E-05
50	F88	40	Combination Short Haul Truck	15	0.00E+00	7.06E-06	5.28E-07	6.07E+00	1.75E-08	9.99E-03	5.02E-06	1.03E-02	1.42E-03	2.12E-04	4.20E-04	1.53E-04	1.59E-04	9.65E-04	2.03E-05	0.00E+00	2.61E-04	1.93E-03
50	F88	40	Combination Long Haul Truck	13	0.00E+00	9.39E-06	5.30E-07	5.83E+00	5.97E-08	1.21E-02	7.74E-06	1.08E-02	1.48E-03	2.08E-04	8.60E-04	1.71E-04	1.78E-04	9.36E-04	1.95E-05	0.00E+00	6.82E-04	2.04E-03
54	G01	80	Passenger Car	217	0.00E+00	2.20E-06	2.39E-07	9.24E+00	1.56E-05	4.44E-02	4.96E-06	2.26E-04	1.25E-03	2.05E-04	4.84E-04	3.12E-04	3.20E-04	3.23E-05	4.66E-05	9.65E-09	1.64E-04	3.53E-05
54	G01	80	Passenger Truck	364	0.00E+00	4.57E-06	4.88E-07	2.10E+01	2.98E-05	8.08E-02	9.70E-06	6.08E-04	2.23E-03	3.65E-04	9.31E-04	6.04E-04	6.19E-04	1.49E-04	1.05E-04	1.86E-08	3.12E-04	1.01E-04
54	G01	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.07E-05
54	G01	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.97E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.37E-05
54	G01	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.32E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
54	G02	80	Passenger Car	464	0.00E+00	4.71E-06	5.11E-07	1.98E+01	3.34E-05	9.49E-02	1.06E-05	4.84E-04	2.66E-03	4.38E-04	1.03E-03	6.67E-04	6.85E-04	6.90E-05	9.97E-05	2.06E-08	3.50E-04	7.55E-05
54	G02	80	Passenger Truck	778	0.00E+00	9.78E-06	1.04E-06	4.49E+01	6.37E-05	1.73E-01	2.07E-05	1.30E-03	4.76E-03	7.80E-04	1.99E-03	1.29E-03	1.32E-03	3.19E-04	2.24E-04	3.97E-08	6.66E-04	2.16E-04
54	G02	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.89E-04
54	G02	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.09E-05
54	G02	80	Combination Short Haul Truck	34	0.00E+00	7.01E-06	5.19E-07	1.14E+01	1.84E-08	1.07E-02	5.01E-06	1.08E-02	8.11E-04	1.47E-04	4.25E-04	1.51E-04	1.57E-04	1.81E-03	3.81E-05	0.00E+00	2.68E-04	2.03E-03
54	G02	80	Combination Long Haul Truck	31	0.00E+00	9.76E-06	5.51E-07	1.06E+01	6.21E-08	1.26E-02	8.05E-06	1.15E-02	8.38E-04	1.34E-04	8.95E-04	1.78E-04	1.85E-04	1.70E-03	3.55E-05	0.00E+00	7.10E-04	2.17E-03
16	G03	100	Passenger Car	146	0.00E+00	1.36E-06	1.48E-07	5.95E+00	9.67E-06	2.88E-02	3.07E-06	1.57E-04	4.66E-04	8.93E-05	3.00E-04	1.93E-04	1.98E-04	1.73E-05	3.01E-05	6.33E-09	1.01E-04	2.45E-05
16	G03	100	Passenger Truck	244	0.00E+00	2.81E-06	3.01E-07	1.37E+01	1.88E-05	5.57E-02	6.07E-06	3.93E-04	8.14E-04	1.58E-04	5.85E-04	3.79E-04	3.89E-04	9.00E-05	6.88E-05	1.25E-08	1.97E-04	6.45E-05
16	G03	100	Single Unit Short Haul Truck	330	0.00E+00	3.14E-05	1.16E-06	5.40E+01	2.40E-05	1.11E-01	3.56E-05	1.39E-02	2.13E-03	5.53E-04	4.50E-03	8.31E-04	8.46E-04	5.53E-03	2.18E-04	8.92E-08	3.66E-03	2.59E-03
16	G03	100	Single Unit Long Haul Truck	15	0.00E+00	1.36E-06	4.90E-08	2.27E+00	9.94E-07	4.56E-03	1.54E-06	5.81E-04	9.71E-05	2.40E-05	1.97E-04	3.51E-05	3.57E-05	2.31E-04	9.21E-06	3.65E-09	1.61E-04	1.08E-04
16	G03	100	Combination Short Haul Truck	167	0.00E+00	2.39E-05	1.77E-06	5.58E+01	6.35E-08	4.31E-02	1.71E-05	4.31E-02	1.62E-03	4.11E-04	1.46E-03	5.16E-04	5.36E-04	8.86E-03	1.86E-04	0.00E+00	9.22E-04	8.12E-03
16	G03	100	Combination Long Haul Truck	153	0.00E+00	3.38E-05	1.91E-06	5.05E+01	2.16E-07	5.02E-02	2.79E-05	4.62E-02	1.62E-03	3.31E-04	3.10E-03	6.15E-04	6.41E-04	8.11E-03	1.69E-04	0.00E+00	2.46E-03	8.69E-03
16	G04	100	Passenger Car	223	0.00E+00	2.08E-06	2.26E-07	9.10E+00	1.48E-05	4.41E-02	4.69E-06	2.40E-04	7.12E-04	1.37E-04	4.58E-04	2.95E-04	3.03E-04	2.65E-05	4.61E-05	9.67E-09	1.55E-04	3.75E-05
16	G04	100	Passenger Truck	373	0.00E+00	4.30E-06	4.61E-07	2.10E+01	2.87E-05	8.52E-02	9.27E-06	6.00E-04	1.24E-03	2.41E-04	8.94E-04	5.79E-04	5.94E-04	1.37E-04	1.05E-04	1.92E-08	3.01E-04	9.86E-05
16	G04	100	Single Unit Short Haul Truck	185	0.00E+00	1.76E-05	6.49E-07	3.02E+01	1.34E-05	6.23E-02	1.99E-05	7.75E-03	1.19E-03	3.09E-04	2.52E-03	4.65E-04	4.73E-04	3.09E-03	1.22E-04	4.99E-08	2.05E-03	1.45E-03
16	G04	100	Single Unit Long Haul Truck	8	0.00E+00	7.63E-07	2.74E-08	1.27E+00	5.56E-07	2.55E-03	8.63E-07	3.25E-04	5.43E-05	1.34E-05	1.10E-04	1.96E-05	2.00E-05	1.29E-04	5.15E-06	2.04E-09	9.02E-05	6.06E-05
16	G04	100	Combination Short Haul Truck	134	0.00E+00	1.92E-05	1.42E-06	4.48E+01	5.10E-08	3.46E-02	1.38E-05	3.46E-02	1.30E-03	3.30E-04	1.17E-03	4.15E-04	4.31E-04	7.12E-03	1.50E-04	0.00E+00	7.41E-04	6.52E-03
16	G04	100	Combination Long Haul Truck	123	0.00E+00	2.72E-05	1.53E-06	4.06E+01	1.73E-07	4.03E-02	2.24E-05	3.71E-02	1.30E-03	2.66E-04	2.49E-03	4.94E-04	5.15E-04	6.51E-03	1.36E-04	0.00E+00	1.98E-03	6.98E-03
16	G05	100	Passenger Car	202	0.00E+00	1.89E-06	2.05E-07	8.24E+00	1.34E-05	3.99E-02	4.25E-06	2.18E-04	6.45E-04	1.24E-04	4.15E-04	2.67E-04	2.74E-04	2.40E-05	4.17E-05	8.76E-09	1.40E-04	3.40E-05
16	G05	100	Passenger Truck	338	0.00E+00	3.90E-06	4.17E-07	1.90E+01	2.60E-05	7.72E-02	8.40E-06	5.44E-04	1.13E-03	2.19E-04	8.10E-04	5.25E-04	5.38E-04	1.25E-04	9.53E-05	1.74E-08	2.72E-04	8.93E-05
16	G05	100	Single Unit Short Haul Truck	4	0.00E+00	3.64E-07	1.35E-08	6.26E-01	2.79E-07	1.29E-03	4.13E-07	1.61E-04	2.48E-05	6.41E-06	5.22E-05	9.64E-06	9.81E-06	6.41E-05	2.53E-06	1.03E-09	4.24E-05	3.00E-05
16	G05	100	Combination Short Haul Truck	2	0.00E+00	2.24E-07	1.66E-08	5.23E-01	5.96E-10	4.04E-04	1.61E-07	4.04E-04	1.52E-05	3.85E-06	1.37E-05	4.84E-06	5.03E-06	8.31E-05	1.75E-06	0.00E+00	8.65E-06	7.62E-05
16	G05	100	Combination Long Haul Truck	1	0.00E+00	3.17E-07	1.79E-08	4.74E-01	2.02E-09	4.71E-04	2.62E-07	4.33E-04	1.52E-05	3.10E-06	2.91E-05	5.77E-06	6.01E-06	7.60E-05	1.59E-06	0.00E+00	2.31E-05	8.15E-05
56	G06	100	Passenger Car	15	0.00E+00	1.43E-07	1.56E-08	6.26E-01	1.02E-06	3.03E-03	3.23E-07	1.65E-05	4.90E-05	9.39E-06	3.15E-05	2.03E-05	2.08E-05	1.82E-06	3.17E-06	6.65E-10	1.07E-05	2.58E-06
56	G06	100	Passenger Truck	26	0.00E+00	2.96E-07	3.17E-08	1.44E+00	1.97E-06	5.86E-03	6.38E-07	4.13E-05	8.55E-05	1.66E-05	6.15E-05	3.98E-05	4.08E-05	9.46E-06	7.24E-06	1.32E-09	2.07E-05	6.78E-06
53	G07	70	Passenger Car	170	0.00E+00	1.83E-06	1.99E-07	7.48E+00	1.30E-05	3.65E-02	4.14E-06	1.75E-04	1.29E-03	2.02E-04	4.03E-04	2.60E-04	2.67E-04	2.88E-05	3.76E-05	7.82E-09	1.36E-04	2.72E-05
53	G07	70	Passenger Truck	284	0.00E+00	3.83E-06	4.07E-07	1.68E+01	2.46E-05	6.43E-02	8.05E-06	4.93E-04	2.30E-03	3.57E-04	7.70E-04	5.00E-04	5.13E-04	1.25E-04	8.40E-05	1.47E-08	2.57E-04	8.26E-05
53	G07	70	Single Unit Short Haul Truck	99	0.00E+00	1.74E-05	7.05E-07	1.62E+01	1.16E-05	2.93E-02	1.89E-05	6.89E-03	1.57E-03	2.88E-04	2.34E-03	4.46E-04	4.55E-04	1.64E-03	6.57E-05	2.65E-08	1.89E-03	1.29E-03
53	G07	70	Single Unit Long Haul Truck	4	0.00E+00	7.55E-07	3.04E-08	6.85E-01	5.01E-07	1.23E-03	8.22E-07	2.97E-04	7.18E-05	1.29E-05	1.02E-04	1.93E-05	1.96E-05	6.93E-05	2.79E-06	1.12E-09	8.25E-05	5.55E-05
53	G07	70	Combination Short Haul Truck	60	0.00E+00	1.55E-05	1.15E-06	2.09E+01	3.93E-08	2.24E-02	1.10E-05	2.31E-02	2.18E-03	3.64E-04	9.29E-04	3.35E-04	3.48E-04	3.32E-03	6.99E-05	0.00E+00	5.80E-04	4.35E-03
53	G07	70	Combination Long Haul Truck	55	0.00E+00	2.12E-05	1.21E-06	1.96E+01	1.33E-07	2.67E-02	1.75E-05	2.47E-02	2.27E-03	3.42E-04	1.93E-03	3.88E-04	4.04E-04	3.15E-03	6.58E-05	0.00E+00	1.53E-03	4.65E-03
54	G08	80	Passenger Car	116	0.00E+00	1.17E-06	1.28E-07	4.93E+00	8.33E-06	2.37E-02	2.65E-06	1.21E-04	6.65E-04	1.09E-04	2.58E-04	1.67E-04	1.71E-04	1.72E-05	2.49E-05	5.15E-09	8.74E-05	1.88E-05
54	G08	80	Passenger Truck	194	0.00E+00	2.44E-06	2.60E-07	1.12E+01	1.59E-05	4.31E-02	5.18E-06	3.25E-04	1.19E-03	1.95E-04	4.97E-04	3.22E-04	3.30E-04	7.97E-05	5.60E-05	9.92E-09	1.66E-04	5.39E-05
54	G08	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.63E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.06E-05
54	G08	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07

Appendix F.2.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	H02	100	Combination Short Haul Truck	640	0.00E+00	9.15E-05	6.76E-06	2.13E+02	2.43E-07	1.65E-01	6.55E-05	1.65E-01	6.20E-03	1.57E-03	5.57E-03	1.97E-03	2.05E-03	3.39E-02	7.13E-04	0.00E+00	3.53E-03	3.10E-02
16	H02	100	Combination Long Haul Truck	583	0.00E+00	1.29E-04	7.29E-06	1.93E+02	8.24E-07	1.92E-01	1.07E-04	1.76E-01	6.21E-03	1.26E-03	1.19E-02	2.35E-03	2.45E-03	3.10E-02	6.47E-04	0.00E+00	9.42E-03	3.32E-02
16	H03	100	Passenger Car	3036	0.00E+00	2.84E-05	3.08E-06	1.24E+02	2.01E-04	6.01E-01	6.39E-05	3.27E-03	9.70E-03	1.86E-03	6.24E-03	4.02E-03	4.13E-03	3.61E-04	6.27E-04	1.32E-07	2.11E-03	5.11E-04
16	H03	100	Passenger Truck	5083	0.00E+00	5.86E-05	6.27E-06	2.86E+02	3.91E-04	1.16E+00	1.26E-04	8.18E-03	1.69E-02	3.29E-03	1.22E-02	7.89E-03	8.09E-03	1.87E-03	1.43E-03	2.61E-07	4.09E-03	1.34E-03
16	H03	100	Single Unit Short Haul Truck	610	0.00E+00	5.80E-05	2.14E-06	9.96E+01	4.44E-05	2.06E-01	6.57E-05	2.56E-02	3.94E-03	1.02E-03	8.31E-03	1.54E-03	1.56E-03	1.02E-02	4.03E-04	1.65E-07	6.75E-03	4.77E-03
16	H03	100	Single Unit Long Haul Truck	27	0.00E+00	2.52E-06	9.06E-08	4.19E+00	1.84E-06	8.42E-03	2.85E-06	1.07E-03	1.79E-04	4.43E-05	3.63E-04	6.47E-05	6.59E-05	4.26E-04	1.70E-05	6.74E-09	2.98E-04	2.00E-04
16	H03	100	Combination Short Haul Truck	613	0.00E+00	8.77E-05	6.48E-06	2.04E+02	2.33E-07	1.58E-01	6.28E-05	1.58E-01	5.94E-03	1.51E-03	5.34E-03	1.89E-03	1.96E-03	3.25E-02	6.83E-04	0.00E+00	3.38E-03	2.98E-02
16	H03	100	Combination Long Haul Truck	559	0.00E+00	1.24E-04	6.99E-06	1.85E+02	7.90E-07	1.84E-01	1.02E-04	1.69E-01	5.95E-03	1.21E-03	1.14E-02	2.25E-03	2.35E-03	2.97E-02	6.20E-04	0.00E+00	9.02E-03	3.18E-02
16	H04	100	Passenger Car	2035	0.00E+00	1.90E-05	2.07E-06	8.31E+01	1.35E-04	4.03E-01	4.29E-05	2.19E-03	6.50E-03	1.25E-03	4.18E-03	2.70E-03	2.77E-03	2.42E-04	4.21E-04	8.83E-08	1.41E-03	3.42E-04
16	H04	100	Passenger Truck	3408	0.00E+00	3.93E-05	4.21E-06	1.91E+02	2.62E-04	7.78E-01	8.47E-05	5.48E-03	1.14E-02	2.20E-03	8.17E-03	5.29E-03	5.42E-03	1.26E-03	9.61E-04	1.75E-07	2.75E-03	9.00E-04
16	H04	100	Single Unit Short Haul Truck	516	0.00E+00	4.91E-05	1.81E-06	8.43E+01	3.75E-05	1.74E-01	5.56E-05	2.17E-02	3.34E-03	8.63E-04	7.03E-03	1.30E-03	1.32E-03	8.63E-03	3.41E-04	1.39E-07	5.71E-03	4.04E-03
16	H04	100	Single Unit Long Haul Truck	23	0.00E+00	2.13E-06	7.66E-08	3.55E+00	1.55E-06	7.12E-03	2.41E-06	9.08E-04	1.52E-04	3.75E-05	3.08E-04	5.48E-05	5.58E-05	3.61E-04	1.44E-05	5.70E-09	2.52E-04	1.69E-04
16	H04	100	Combination Short Haul Truck	541	0.00E+00	7.74E-05	5.72E-06	1.80E+02	2.05E-07	1.39E-01	5.54E-05	1.39E-01	5.24E-03	1.33E-03	4.71E-03	1.67E-03	1.73E-03	2.86E-02	6.03E-04	0.00E+00	2.98E-03	2.62E-02
16	H04	100	Combination Long Haul Truck	493	0.00E+00	1.09E-04	6.16E-06	1.63E+02	6.97E-07	1.62E-01	9.02E-05	1.49E-01	5.25E-03	1.07E-03	1.00E-02	1.99E-03	2.07E-03	2.62E-02	5.47E-04	0.00E+00	7.96E-03	2.81E-02
56	H05	100	Passenger Car	1021	0.00E+00	9.53E-06	1.04E-06	4.17E+01	6.77E-05	2.02E-01	2.15E-05	1.10E-03	3.26E-03	6.25E-04	2.10E-03	1.35E-03	1.39E-03	1.21E-04	2.11E-04	4.43E-08	7.09E-04	1.72E-04
56	H05	100	Passenger Truck	1709	0.00E+00	1.97E-05	2.11E-06	9.60E+01	1.31E-04	3.90E-01	4.25E-05	2.75E-03	5.70E-03	1.11E-03	4.10E-03	2.65E-03	2.72E-03	6.30E-04	4.82E-04	8.78E-08	1.38E-03	4.52E-04
56	H05	100	Single Unit Short Haul Truck	228	0.00E+00	2.17E-05	8.00E-07	3.72E+01	1.66E-05	7.68E-02	2.46E-05	9.56E-03	1.47E-03	3.81E-04	3.11E-03	5.74E-04	5.84E-04	3.81E-03	1.51E-04	6.15E-08	2.52E-03	1.78E-03
56	H05	100	Single Unit Long Haul Truck	10	0.00E+00	9.41E-07	3.38E-08	1.57E+00	6.86E-07	3.14E-03	1.06E-06	4.01E-04	6.70E-05	1.66E-05	1.36E-04	2.42E-05	2.46E-05	1.59E-04	6.35E-06	2.52E-09	1.11E-04	7.48E-05
56	H05	100	Combination Short Haul Truck	198	0.00E+00	2.84E-05	2.09E-06	6.61E+01	7.52E-08	5.10E-02	2.03E-05	5.11E-02	1.92E-03	4.87E-04	1.73E-03	6.12E-04	6.35E-04	1.05E-02	2.21E-04	0.00E+00	1.09E-03	9.62E-03
56	H05	100	Combination Long Haul Truck	181	0.00E+00	4.01E-05	2.26E-06	5.98E+01	2.55E-07	5.94E-02	3.31E-05	5.47E-02	1.92E-03	3.92E-04	3.68E-03	7.29E-04	7.59E-04	9.60E-03	2.00E-04	0.00E+00	2.92E-03	1.03E-02
56	H06	100	Passenger Car	1014	0.00E+00	9.47E-06	1.03E-06	4.14E+01	6.72E-05	2.01E-01	2.14E-05	1.09E-03	3.24E-03	6.21E-04	2.08E-03	1.34E-03	1.38E-03	1.21E-04	2.10E-04	4.40E-08	7.05E-04	1.71E-04
56	H06	100	Passenger Truck	1699	0.00E+00	1.96E-05	2.10E-06	9.54E+01	1.31E-04	3.88E-01	4.22E-05	2.73E-03	5.66E-03	1.10E-03	4.07E-03	2.64E-03	2.70E-03	6.26E-04	4.79E-04	8.72E-08	1.37E-03	4.49E-04
56	H06	100	Single Unit Short Haul Truck	288	0.00E+00	2.74E-05	1.01E-06	4.71E+01	2.10E-05	9.72E-02	3.11E-05	1.21E-02	1.86E-03	4.82E-04	3.93E-03	7.25E-04	7.38E-04	4.82E-03	1.91E-04	7.78E-08	3.19E-03	2.26E-03
56	H06	100	Single Unit Long Haul Truck	13	0.00E+00	1.19E-06	4.28E-08	1.98E+00	8.67E-07	3.98E-03	1.35E-06	5.07E-04	8.47E-05	2.09E-05	1.72E-04	3.06E-05	3.11E-05	2.01E-04	8.03E-06	3.18E-09	1.41E-04	9.46E-05
56	H06	100	Combination Short Haul Truck	343	0.00E+00	4.90E-05	3.62E-06	1.14E+02	1.30E-07	8.82E-02	3.51E-05	8.82E-02	3.32E-03	8.41E-04	2.99E-03	1.06E-03	1.10E-03	1.81E-02	3.82E-04	0.00E+00	1.89E-03	1.66E-02
56	H06	100	Combination Long Haul Truck	312	0.00E+00	6.93E-05	3.90E-06	1.03E+02	4.41E-07	1.03E-01	5.72E-05	9.45E-02	3.32E-03	6.77E-04	6.35E-03	1.26E-03	1.31E-03	1.66E-02	3.46E-04	0.00E+00	5.04E-03	1.78E-02
16	H07	100	Passenger Car	2288	0.00E+00	2.14E-05	2.32E-06	9.34E+01	1.52E-04	4.53E-01	4.82E-05	2.47E-03	7.31E-03	1.40E-03	4.70E-03	3.03E-03	3.11E-03	2.72E-04	4.73E-04	9.93E-08	1.59E-03	3.85E-04
16	H07	100	Passenger Truck	3831	0.00E+00	4.42E-05	4.73E-06	2.15E+02	2.94E-04	8.74E-01	9.52E-05	6.16E-03	1.28E-02	2.48E-03	9.18E-03	5.95E-03	6.10E-03	1.41E-03	1.08E-03	1.97E-07	3.09E-03	1.01E-03
16	H07	100	Single Unit Short Haul Truck	546	0.00E+00	5.19E-05	1.92E-06	8.91E+01	3.97E-05	1.84E-01	5.88E-05	2.29E-02	3.53E-03	9.13E-04	7.44E-03	1.37E-03	1.40E-03	9.13E-03	3.61E-04	1.47E-07	6.04E-03	4.27E-03
16	H07	100	Single Unit Long Haul Truck	24	0.00E+00	2.25E-06	8.10E-08	3.75E+00	1.64E-06	7.53E-03	2.55E-06	9.60E-04	1.60E-04	3.96E-05	3.25E-04	5.79E-05	5.90E-05	3.81E-04	1.52E-05	6.03E-09	2.66E-04	1.79E-04
16	H07	100	Combination Short Haul Truck	563	0.00E+00	8.05E-05	5.95E-06	1.88E+02	2.14E-07	1.45E-01	5.76E-05	1.45E-01	5.45E-03	1.38E-03	4.90E-03	1.74E-03	1.80E-03	2.98E-02	6.27E-04	0.00E+00	3.10E-03	2.73E-02
16	H07	100	Combination Long Haul Truck	513	0.00E+00	1.14E-04	6.41E-06	1.70E+02	7.25E-07	1.69E-01	9.39E-05	1.55E-01	5.46E-03	1.11E-03	1.04E-02	2.07E-03	2.15E-03	2.73E-02	5.69E-04	0.00E+00	8.28E-03	2.92E-02
52	H08	60	Passenger Car	298	0.00E+00	3.51E-06	3.81E-07	1.36E+01	2.49E-05	6.95E-02	7.90E-06	2.96E-04	2.93E-03	4.39E-04	7.71E-04	4.97E-04	5.10E-04	5.91E-05	6.82E-05	1.39E-08	2.61E-04	4.62E-05
52	H08	60	Passenger Truck	500	0.00E+00	7.40E-06	7.84E-07	3.03E+01	4.66E-05	1.19E-01	1.53E-05	9.02E-04	5.20E-03	7.72E-04	1.46E-03	9.51E-04	9.75E-04	2.37E-04	1.50E-04	2.54E-08	4.87E-04	1.53E-04
52	H08	60	Single Unit Short Haul Truck	34	0.00E+00	7.70E-06	3.18E-07	5.74E+00	5.10E-06	1.01E-02	8.33E-06	2.95E-03	7.93E-04	1.33E-04	1.03E-03	1.98E-04	2.02E-04	5.81E-04	2.34E-05	9.63E-09	8.25E-04	5.52E-04
52	H08	60	Single Unit Long Haul Truck	2	0.00E+00	3.36E-07	1.38E-08	2.45E-01	2.21E-07	4.28E-04	3.63E-07	1.28E-04	3.56E-05	5.91E-06	4.49E-05	8.60E-06	8.77E-06	2.47E-05	9.98E-07	4.10E-10	3.61E-05	2.39E-05
52	H08	60	Combination Short Haul Truck	48	0.00E+00	1.40E-05	1.03E-06	1.69E+01	3.85E-08	2.10E-02	1.01E-05	2.14E-02	2.45E-03	3.83E-04	8.65E-04	3.02E-04	3.13E-04	2.69E-03	5.67E-05	0.00E+00	5.52E-04	4.03E-03
52	H08	60	Combination Long Haul Truck	44	0.00E+00	1.93E-05	1.05E-06	1.60E+01	1.30E-07	2.52E-02	1.61E-05	2.28E-02	2.57E-03	3.72E-04	1.83E-03	3.44E-04	3.59E-04	2.57E-03	5.36E-05	0.00E+00	1.47E-03	4.29E-03
50	H09	40	Passenger Car	422	0.00E+00	6.06E-06	6.59E-07	2.23E+01	4.30E-05	1.20E-01	1.37E-05	3.85E-04	7.29E-03	1.02E-03	1.33E-03	8.59E-04	8.82E-04	1.26E-04	1.11E-04	2.05E-08	4.51E-04	6.01E-05
50	H09	40	Passenger Truck	708	0.00E+00	1.34E-05	1.40E-06	4.85E+01	8.05E-05	1.98E-01	2.68E-05	1.48E-03	1.29E-02	1.79E-03	2.54E-03	1.66E-03	1.70E-03	4.29E-04	2.39E-04	3.49E-08	8.40E-04	2.57E-04
50	H09	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.84E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	H09	40	Combination Short Haul Truck	62	0.00E+00	2.98E-05	2.22E-06	2.56E+01	7.37E-08	4.21E-02	2.12E-05	4.32E-02	6.00E-03	8.95E-04	1.77E-03	6.47E-04	6.71E-04	4.07E-03	8.56E-05	0.00E+00	1.10E-03	8.14E-03
50	H09	40	Combination Long Haul Truck	56	0.00E+00	3.96E-05	2.23E-06	2.46E+01	2.51E-07	5.11E-02	3.26E-05	4.56E-02	6.23E-03	8.75E-04	3.62E-03	7.20E-04	7.50E-04	3.94E-03	8.23E-05	0.00E+00	2.87E-03	8.58E-03
53	H10	70	Passenger Car	393	0.00E+00	4.25E-06	4.62E-07	1.73E+01	3.02E-05	8.45E-02	9.59E-06	4.05E-04	2.98E-03	4.67E-04	9.35E-04	6.03E-04	6.19E-04	6.68E-05	8.72E-05	1.81E-08	3.16E-04	6.31E-05
53	H10	70	Passenger Truck	659	0.00E+00	8.88E-06	9.44E-07	3.90E+01	5.70E-05	1.49E-01	1.86E-05	1.14E-03	5.33E-03	8.28E-04	1.78E-03	1.16E-03	1.19E-03	2.90E-04	1.95E-04	3.41E-08	5.96E-04	1.91E-04
53	H10	70	Single Unit Short Haul Truck	35	0.00E+00	6.24E-06	2.53E-07	5.81E+00	4.18E-06	1.05E-02	6.78E-06	2.48E-03	5.63E-04	1.03E-04	8.41E-04	1.60E-04	1.63E-04	5.90E-04	2.36E-05	9.53E-09	6.77E-04	4.63E-04
53	H10	70	Single Unit Long Haul Truck	2	0.00E+00	2.71E-07	1.09E-08	2.46E-01	1.80E-07	4.42E-04	2.95E-07	1.07E-04	2.58E-05	4.62E-06	3.67E-05	6.92E-06	7.06E-06	2.49E-05	1.00E-06	4.02E-10	2.96E-05	1.99E-05
53	H10	70	Combination Short Haul Truck	71	0.00E+00	1.82E-05	1.35E-06	2.46E+01	4.62E-08	2.62E-02	1.29E-05	2.71E-02	2.56E-03	4.27E-04	1.09E-03	3.94E-04	4.09E-04	3.90E-03	8.21E-05	0.00E+00	6.81E-04	5.10E-03
53	H10	70	Combination Long Haul Truck	64	0.00E+00	2.49E-05	1.42E-06	2.31E+01	1.56E-07	3.13E-02	2.05E-05	2.90E-02	2.67E-03	4.02E-04	2.27E-03	4.55E-04	4.74E-04	3.70E-03	7.72E-05	0.00E+00	1.79E-03	5.46E-03
53	H11	70	Passenger Car	328	0.00E+00	3.54E-06	3.85E-07	1.44E+01	2.51E-05	7.04E-02	7.98E-06	3.37E-04	2.48E-03	3.89E-04	7.79E-04	5.02E-04	5.15E-04	5.56E-05	7.26E-05	1.51E-08	2.63E-04	5.26E-05
53	H11	70	Passenger Truck	548	0.00E+00	7.39E-06	7.86E-07	3.25E+01	4.75E-05	1.24E-01	1.55E-05	9.52E-04	4.44E-03	6.89E-04	1.49E-03	9.65E-04	9.89E-04	2.42E-04	1.62E-04	2.84E-08	4.96E-04	1.59E-04
53	H11	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.26E-05
53	H11	70	Combination Short Haul Truck	39	0.00E+00	1.01E-05	7.51E-07	1.36E+01	2.56E-08	1.46E-02	7.19E-06	1.50E-02	1.42E-03	2.37E-04	6.06E-04	2.19E-04	2.27E-04	2.17E-03	4.56E-05	0.00E+00	3.79E-04	2.83E-03
53	H11	70	Combination Long Haul Truck	36	0.00E+00	1.38E-05	7.87E-07	1.28E+01	8.68E-08	1.74E-02	1.14E-05	1.61E-02	1.48E-03	2.23E-04	1.26E-03	2.53E-04	2.64E-04	2.06E-03	4.29E-05	0.00E+00	9.95E-04	3.03E-03
16	H12	100	Passenger Car	540	0.00E+00	5.04E-06	5.48E-07	2.20E+01	3.58E-05	1.07E-01	1.14E-05	5.82E-04	1.72E-03	3.31E-04	1.11E-03	7.15E-04	7.33E-04	6.42E-05	1.12E-04	2.34E-08	3.75E-04	9.08E-05
16	H12	100	Passenger Truck	903	0.00E+00	1.04E-05	1.12E-06	5.08E+01	6.94E-05	2.06E-01	2.25E-05	1.45E-03	3.01E-03	5.84E-04	2.17E-03	1.40E-03	1.44E-03	3.33E-04	2.55E-04	4.64E-08	7.28E-04	2.39E-04
16	H12	100	Single Unit Short Haul Truck	331	0.00E+00	3.15E-05	1.16E-06	5.41E+01	2.41E-05	1.12E-01	3.57E-05	1.39E-02	2.14E-03	5.54E-04	4.52E-03	8.34E-04	8.48E-04	5.54E-03	2.19E-04	8.94E-08	3.67E-03	2.59E-03
16	H12	100	Single Unit Long Haul Truck	15	0.00E+00	1.37E-06	4.92E-08	2.28E+00	9.97E-07	4.57E-03	1.55E-06	5.83E-04	9.73E-05	2.41E-05	1.97E-04	3.52E-05	3.58E-05	2.32E-04	9.24E-06	3.66E-09	1.62E-04	1.09E-04
16	H12	100	Combination Short Haul Truck	98	0.00E+00	1.40E-05	1.03E-06	3.26E+01	3.71E-08	2.52E-02	1.00E-05	2.52E-02	9.48E-04	2.40E-04	8.52E-04	3.02E-04	3.13E-04	5.18E-03	1.09E-04	0.00E+00	5.39E-04	4.75E-03
16	H12	100	Combination Long Haul Truck	89	0.00E+00	1.98E-05	1.11E-06	2.95E+01	1.26E-07	2.93E-02	1.63E-05	2.70E-02	9.49E-04	1.93E-04	1.81E-03	3.59E-04	3.74E-04	4.74E-03	9.89E-05	0.00E+00	1.44E-03	5.08E-03
54	H13	80	Passenger Car	834	0.00E+00	8.45E-06	9.18E-07	3.55E+01	6.00E-05	1.70E-01	1.90E-05	8.69E-04	4.78E-03	7.87E-04	1.86E-03	1.20E-03	1.23E-03	1.24E-04	1.79E-04	3.71E-08	6.28E-04	1.36E-04
54	H13	80	Passenger Truck	1396	0.00E+00	1.76E-05	1.87E-06	8.06E+01	1.14E-04	3.10E-01	3.72E-05	2.33E-03	8.54E-03	1.40E-03	3.57E-03	2.32E-03	2.38E-03	5.73E-04	4.03E-04	7.14E-08	1.20E-03	3.88E-04
54	H13	80	Single Unit Short Haul Truck	334	0.00E+00	4.59E-05	1.79E-06	5.48E+01	3.11E-05	9.95E-02	5.04E-05	1.90E-02	3.76E-03	7.68E-04	6.32E-03	1.17E-03	1.19E-03	5.57E-03	2.23E-04	8.83E-08	5.12E-03	3.55E-03
54	H13	80	Single Unit Long Haul Truck	15	0.00E+00	1.99E-06	7.69E-08	2.32E+00	1.32E-06	4.15E-03	2.19E-06	8.13E-04	1.72E-04	3.41E-05	2.75E-04	5.02E-05	5.12E-05	2.34E-04	9.43E-06	3.68E-09	2.24E-04	1.52E-04
54	H13	80	Combination Short Haul Truck	128	0.00E+00	2.63E-05	1.95E-06	4.28E+01	6.89E-08	4.01E-02	1.88E-05	4.05E-02	3.05E-03	5.52E-04	1.60E-03	5.68E-04	5.90E-04	6.80E-03	1.43E-04	0.00E+00	1.01E-03	7.62E-03
54	H13	80	Combination Long Haul Truck	116	0.00E+00	3.66E-05	2.07E-06	3.97E+01	2.33E-07	4.75E-02	3.02E-05	4.32E-02	3.15E-03	5.04E-04	3.36E-03	6.67E-04	6.94E-04	6.37E-03	1.33E-04	0.00E+00	2.66E-03	8.14E-03
53	H14	70	Passenger Car	33	0.00E+00	3.56E-07	3.86E-08	1.45E+00	2.52E-06	7.07E-03	8.02E-07	3.39E-05	2.50E-04	3.91E-05	7.82E-05	5.04E-05	5.18E-05	5.59E-06	7.30E-06	1.51E-09	2.65E-05	5.28E-06
53	H14	70	Passenger Truck	55	0.00E+00	7.43E-07	7.90E-08	3.26E+00	4.77E-06	1.25E-02	1.56E-06	9.56E-05	4.46E-04	6.93E-05	1.49E-04	9.69E-05	9.94E-05	2.43E-05	1.63E-05	2.85E-09	4.99E-05	1.60E-05
53	H14	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
53	H14	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.61E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.80E-04
53	H14	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.86E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.28E-04
54	H15	80	Passenger Car	1153	0.00E+00	1.17E-05	1.27E-06	4.91E+01	8.29E-05	2.36E-01	2.64E-05	1.20E-03	6.62E-03	1.09E-03	2.57E-03	1.66E-03	1.70E-03	1.71E-04	2.48E-04	5.13E-08	8.69E-04	1.88E-04
54	H15	80	Passenger Truck	1932	0.00E+00	2.43E-05	2.59E-06	1.11E+02	1.58E-04	4.29E-01	5.15E-05	3.23E-03	1.18E-02	1.94E-03	4.94E-03	3.21E-03	3.29E-03	7.93E-04	5.57E-04	9.87E-08	1.66E-03	5.37E-04
54	H15	80	Single Unit Short Haul Truck	77	0.00E+00	1.05E-05	4.11E-07	1.26E+01	7.13E-06	2.28E-02	1.16E-05	4.36E-03	8.61E-04	1.76E-04	1.45E-03	2.68E-04	2.73E-04	1.28E-03	5.10E-05	2.02E-08	1.17E-03	8.15E-04
54	H15	80	Single Unit Long Haul Truck	3	0.00E+00	4.57E-07	1.76E-08	5.31E-01	3.04E-07	9.50E-04	5.02E-07	1.86E-04	3.95E-05	7.81E-06	6.31E-05	1.15E-05	1.17E-05	5.37E-05	2.16E-06	8.43E-10	5.14E-05	3.48E-05
54	H15	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	7.96E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.50E-03
54	H15	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.51E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.60E-03
53	H16	70	Passenger Car	976	0.00E+00	1.05E-05	1.15E-06	4.30E+01	7.49E-05	2.10E-01	2.38E-05	1.00E-03	7.40E-03	1.16E-03	2.32E-03	1.50E-03	1.53E-03	1.66E-04	2.16E-04	4.49E-08	7.85E-04	1.57E-04
53	H16	70	Passenger Truck	1634	0.00E+00	2.20E-05	2.34E-06	9.68E+01	1.41E-04	3.70E-01	4.63E-05	2.84E-03	1.32E-02	2.05E-03	4.43E-03	2.88E-03	2.95E-03	7.20E-04	4.83E-04	8.46E-08	1.48E-03	4.75E-04
53	H16	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.20E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.25E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.18E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.70E-06
53	H16	70	Combination Short Haul Truck	17	0.00E+00	4.31E-06	3.20E-07	5.82E+00	1.09E-08	6.22E-03	3.07E-06	6.42E-03	6.07E-04	1.01E-04	2.58E-04	9.33E-05	9.69E-05	9.25E-04	1.95E-05	0.00E+00	1.62E-04	1.21E-03
53	H16

Appendix F.2.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	1.95E-04	1.39E-05	4.63E+02	3.56E-04	1.42E+00	2.30E-04	1.75E-01	1.69E-02	4.12E-03	2.33E-02	9.80E-03	1.01E-02	3.62E-02	1.97E-03	3.71E-07	1.33E-02	3.27E-02
A02	0.00E+00	1.92E-04	1.40E-05	4.74E+02	3.90E-04	1.52E+00	2.35E-04	1.65E-01	1.77E-02	4.27E-03	2.38E-02	1.03E-02	1.06E-02	3.44E-02	2.04E-03	3.92E-07	1.32E-02	3.09E-02
A03	0.00E+00	1.90E-04	1.38E-05	4.67E+02	3.82E-04	1.49E+00	2.31E-04	1.65E-01	1.74E-02	4.20E-03	2.34E-02	1.01E-02	1.04E-02	3.42E-02	2.01E-03	3.83E-07	1.30E-02	3.08E-02
A04	0.00E+00	1.99E-04	1.48E-05	5.13E+02	4.54E-04	1.73E+00	2.54E-04	1.62E-01	1.96E-02	4.69E-03	2.56E-02	1.15E-02	1.19E-02	3.39E-02	2.25E-03	4.39E-07	1.38E-02	3.02E-02
A05	0.00E+00	1.57E-04	1.16E-05	3.97E+02	3.40E-04	1.31E+00	1.96E-04	1.33E-01	1.50E-02	3.60E-03	1.98E-02	8.81E-03	9.05E-03	2.75E-02	1.73E-03	3.29E-07	1.07E-02	2.49E-02
A06	0.00E+00	1.52E-04	1.14E-05	3.98E+02	3.61E-04	1.37E+00	1.96E-04	1.22E-01	1.53E-02	3.66E-03	1.98E-02	9.07E-03	9.32E-03	2.55E-02	1.75E-03	3.40E-07	1.05E-02	2.28E-02
A07	0.00E+00	1.57E-04	1.12E-05	3.66E+02	2.71E-04	1.09E+00	1.82E-04	1.44E-01	1.32E-02	3.23E-03	1.84E-02	7.63E-03	7.84E-03	2.97E-02	1.54E-03	2.86E-07	1.06E-02	2.70E-02
A08	0.00E+00	1.52E-04	1.14E-05	3.94E+02	3.50E-04	1.33E+00	1.94E-04	1.25E-01	1.50E-02	3.60E-03	1.95E-02	8.89E-03	9.13E-03	2.59E-02	1.73E-03	3.30E-07	1.04E-02	2.34E-02
A09	0.00E+00	2.01E-04	1.43E-05	4.69E+02	3.47E-04	1.39E+00	2.33E-04	1.85E-01	1.69E-02	4.13E-03	2.36E-02	9.77E-03	1.00E-02	3.81E-02	1.98E-03	3.65E-07	1.35E-02	3.46E-02
A10	0.00E+00	1.73E-04	1.27E-05	4.28E+02	3.52E-04	1.37E+00	2.11E-04	1.51E-01	1.59E-02	3.84E-03	2.13E-02	9.34E-03	9.59E-03	3.11E-02	1.84E-03	3.45E-07	1.17E-02	2.83E-02
A11	0.00E+00	2.45E-04	1.77E-05	5.74E+02	4.26E-04	1.71E+00	2.84E-04	2.29E-01	2.08E-02	5.05E-03	2.86E-02	1.20E-02	1.23E-02	4.67E-02	2.42E-03	4.35E-07	1.63E-02	4.30E-02
A12	0.00E+00	1.94E-04	1.39E-05	4.61E+02	3.54E-04	1.40E+00	2.28E-04	1.76E-01	1.68E-02	4.08E-03	2.30E-02	9.75E-03	1.00E-02	3.61E-02	1.96E-03	3.61E-07	1.30E-02	3.29E-02
A13	0.00E+00	2.31E-04	1.64E-05	5.35E+02	3.91E-04	1.58E+00	2.66E-04	2.13E-01	1.93E-02	4.71E-03	2.70E-02	1.11E-02	1.14E-02	4.40E-02	2.25E-03	4.17E-07	1.56E-02	4.00E-02
A14	0.00E+00	1.98E-04	1.46E-05	4.90E+02	4.06E-04	1.58E+00	2.42E-04	1.73E-01	1.83E-02	4.41E-03	2.43E-02	1.07E-02	1.10E-02	3.54E-02	2.12E-03	3.93E-07	1.33E-02	3.23E-02
A15	0.00E+00	2.32E-04	1.63E-05	5.25E+02	3.64E-04	1.49E+00	2.61E-04	2.20E-01	1.86E-02	4.57E-03	2.65E-02	1.07E-02	1.09E-02	4.53E-02	2.19E-03	3.99E-07	1.56E-02	4.12E-02
A16	0.00E+00	2.15E-04	1.52E-05	4.93E+02	3.50E-04	1.42E+00	2.45E-04	2.03E-01	1.76E-02	4.30E-03	2.47E-02	1.01E-02	1.04E-02	4.16E-02	2.06E-03	3.73E-07	1.44E-02	3.81E-02
A17	0.00E+00	2.31E-04	1.62E-05	5.21E+02	3.61E-04	1.48E+00	2.59E-04	2.19E-01	1.85E-02	4.54E-03	2.63E-02	1.06E-02	1.09E-02	4.50E-02	2.17E-03	3.94E-07	1.54E-02	4.11E-02
A18	0.00E+00	2.20E-04	1.55E-05	4.98E+02	3.46E-04	1.41E+00	2.47E-04	2.09E-01	1.76E-02	4.33E-03	2.51E-02	1.01E-02	1.04E-02	4.29E-02	2.07E-03	3.76E-07	1.47E-02	3.91E-02
A19	0.00E+00	2.17E-04	1.52E-05	4.88E+02	3.34E-04	1.37E+00	2.43E-04	2.07E-01	1.72E-02	4.23E-03	2.46E-02	9.84E-03	1.01E-02	4.25E-02	2.03E-03	3.66E-07	1.45E-02	3.88E-02
A20	0.00E+00	2.18E-04	1.51E-05	4.77E+02	3.07E-04	1.29E+00	2.38E-04	2.12E-01	1.66E-02	4.10E-03	2.42E-02	9.40E-03	9.66E-03	4.36E-02	1.96E-03	3.53E-07	1.46E-02	3.98E-02
B05	0.00E+00	1.55E-04	1.08E-05	4.03E+02	3.16E-04	1.11E+00	1.93E-04	1.42E-01	1.97E-02	4.12E-03	2.01E-02	8.26E-03	8.48E-03	3.01E-02	1.73E-03	2.88E-07	1.16E-02	2.65E-02
B06	0.00E+00	1.68E-04	9.67E-06	3.35E+02	1.21E-04	5.92E-01	1.67E-04	1.81E-01	1.29E-02	2.95E-03	1.84E-02	5.01E-03	5.15E-03	3.96E-02	1.28E-03	2.12E-07	1.33E-02	3.40E-02
B07	0.00E+00	1.52E-04	1.07E-05	4.07E+02	3.43E-04	1.18E+00	1.97E-04	1.28E-01	2.05E-02	4.27E-03	2.05E-02	8.65E-03	8.89E-03	2.78E-02	1.77E-03	3.14E-07	1.16E-02	2.39E-02
B08	0.00E+00	4.83E-05	3.94E-06	1.55E+02	1.64E-04	5.26E-01	7.28E-05	3.48E-02	8.64E-03	1.73E-03	7.32E-03	3.73E-03	3.83E-03	7.20E-03	7.12E-04	1.23E-07	3.49E-03	6.47E-03
B09	0.00E+00	7.56E-05	5.51E-06	2.13E+02	1.93E-04	6.47E-01	1.02E-04	6.05E-02	1.11E-02	2.28E-03	1.06E-02	4.69E-03	4.82E-03	1.31E-02	9.42E-04	1.68E-07	5.77E-03	1.13E-02
B10	0.00E+00	1.29E-04	1.01E-05	3.80E+02	3.48E-04	1.16E+00	1.75E-04	1.18E-01	1.99E-02	4.02E-03	1.75E-02	8.46E-03	8.70E-03	2.34E-02	1.68E-03	2.55E-07	8.83E-03	2.20E-02
B11	0.00E+00	3.57E-05	2.43E-06	9.20E+01	7.30E-05	2.56E-01	4.49E-05	3.05E-02	4.53E-03	9.51E-04	4.74E-03	1.89E-03	1.94E-03	6.73E-03	3.96E-04	7.18E-08	2.80E-03	5.71E-03
B12	0.00E+00	4.37E-05	3.76E-06	1.50E+02	1.71E-04	5.36E-01	7.01E-05	2.84E-02	8.65E-03	1.72E-03	6.97E-03	3.77E-03	3.87E-03	5.77E-03	7.03E-04	1.22E-07	3.10E-03	5.26E-03
B13	0.00E+00	6.14E-05	4.79E-06	1.81E+02	1.69E-04	5.61E-01	8.41E-05	5.37E-02	9.56E-03	1.94E-03	8.46E-03	4.08E-03	4.19E-03	1.08E-02	8.06E-04	1.27E-07	4.27E-03	1.00E-02
B14	0.00E+00	3.58E-05	2.54E-06	9.76E+01	8.50E-05	2.89E-01	4.72E-05	2.92E-02	4.99E-03	1.03E-03	4.92E-03	2.11E-03	2.17E-03	6.37E-03	4.29E-04	7.71E-08	2.76E-03	5.45E-03
C11	0.00E+00	3.14E-05	2.36E-06	6.95E+01	7.89E-05	2.29E-01	4.18E-05	2.20E-02	9.38E-03	1.48E-03	4.25E-03	1.94E-03	2.00E-03	3.36E-03	3.17E-04	5.41E-08	2.26E-03	4.12E-03
C12	0.00E+00	1.60E-05	1.62E-06	5.91E+01	9.42E-05	2.50E-01	3.20E-05	3.27E-03	1.09E-02	1.62E-03	3.10E-03	1.94E-03	1.99E-03	6.10E-04	2.92E-04	5.23E-08	1.12E-03	5.80E-04
C13	0.00E+00	1.92E-05	1.40E-06	3.13E+01	4.29E-05	1.17E-01	2.44E-05	1.30E-02	8.48E-03	1.20E-03	2.49E-03	1.10E-03	1.12E-03	1.40E-03	1.43E-04	2.23E-08	1.37E-03	2.44E-03
C14	0.00E+00	3.46E-05	2.89E-06	9.70E+01	1.29E-04	3.57E-01	5.45E-05	1.75E-02	1.36E-02	2.14E-03	5.46E-03	2.87E-03	2.94E-03	2.82E-03	4.62E-04	8.37E-08	2.52E-03	3.23E-03
C15	0.00E+00	3.50E-05	2.34E-06	4.04E+01	4.04E-05	1.27E-01	3.66E-05	3.20E-02	1.06E-02	1.51E-03	3.76E-03	1.35E-03	1.39E-03	3.14E-03	1.71E-04	2.27E-08	2.37E-03	6.01E-03
C16	0.00E+00	1.17E-05	9.20E-07	2.68E+01	3.51E-05	9.82E-02	1.66E-05	7.48E-03	4.75E-03	7.12E-04	1.68E-03	8.23E-04	8.45E-04	1.02E-03	1.25E-04	2.08E-08	8.32E-04	1.40E-03
C17	0.00E+00	6.41E-05	4.25E-06	1.12E+02	1.08E-04	3.26E-01	7.55E-05	4.83E-02	1.44E-02	2.30E-03	7.97E-03	3.01E-03	3.09E-03	7.53E-03	4.90E-04	8.72E-08	4.89E-03	9.05E-03
C18	0.00E+00	1.58E-05	1.16E-06	3.30E+01	4.27E-05	1.18E-01	2.18E-05	9.48E-03	5.79E-03	8.72E-04	2.25E-03	1.02E-03	1.05E-03	1.34E-03	1.53E-04	2.72E-08	1.20E-03	1.77E-03
C19	0.00E+00	6.04E-06	4.60E-07	1.10E+01	1.58E-05	4.26E-02	8.15E-06	3.78E-03	3.00E-03	4.24E-04	8.23E-04	3.85E-04	3.95E-04	4.15E-04	5.09E-05	7.97E-09	4.27E-04	7.07E-04
C20	0.00E+00	4.85E-06	4.06E-07	1.38E+01	1.85E-05	5.12E-02	7.74E-06	2.33E-03	1.94E-03	3.05E-04	7.76E-04	4.09E-04	4.20E-04	3.82E-04	6.59E-05	1.21E-08	3.56E-04	4.30E-04
C21	0.00E+00	8.14E-05	5.20E-06	9.35E+01	1.08E-04	2.99E-01	8.98E-05	6.16E-02	2.43E-02	3.48E-03	9.52E-03	3.31E-03	3.40E-03	6.45E-03	4.04E-04	6.78E-08	6.12E-03	1.16E-02
C22	0.00E+00	1.79E-05	1.41E-06	4.29E+01	6.00E-05	1.63E-01	2.71E-05	8.90E-03	7.65E-03	1.15E-03	2.76E-03	1.36E-03	1.40E-03	1.32E-03	2.03E-04	3.69E-08	1.36E-03	1.65E-03
C23	0.00E+00	4.11E-05	3.06E-06	9.45E+01	1.14E-04	3.22E-01	5.73E-05	2.45E-02	1.28E-02	2.03E-03	5.90E-03	2.71E-03	2.78E-03	3.96E-03	4.37E-04	8.05E-08	3.12E-03	4.57E-03
C24	0.00E+00	3.95E-06	3.59E-07	1.18E+01	1.74E-05	4.74E-02	6.72E-06	1.81E-03	2.15E-03	3.22E-04	6.58E-04	3.77E-04	3.87E-04	2.60E-04	5.72E-05	9.78E-09	2.71E-04	3.35E-04
C25	0.00E+00	7.10E-05	4.63E-06	8.25E+01	9.13E-05	2.64E-01	7.72E-05	5.74E-02	2.15E-02	3.07E-03	8.09E-03	2.87E-03	2.94E-03	5.87E-03	3.54E-04	5.52E-08	5.15E-03	1.08E-02
C26	0.00E+00	3.96E-05	2.76E-06	7.63E+01	7.89E-05	2.34E-01	4.88E-05	2.91E-02	1.00E-02	1.59E-03	5.08E-03	2.08E-03	2.14E-03	4.50E-03	3.39E-04	5.91E-08	2.94E-03	5.45E-03
C27	0.00E+00	5.57E-05	3.89E-06	8.55E+01	1.19E-04	3.15E-01	7.07E-05	3.43E-02	2.30E-02	3.26E-03	7.35E-03	3.06E-03	3.14E-03	3.83E-03	3.91E-04	6.63E-08	4.21E-03	6.43E-03
C28	0.00E+00	9.76E-06	8.57E-07	2.79E+01	4.08E-05	1.11E-01	1.62E-05	4.45E-03	5.05E-03	7.55E-04	1.60E-03	8.89E-04	9.12E-04	6.51E-04	1.34E-04	2.34E-08	6.93E-04	8.24E-04
C29	0.00E+00	2.54E-06	2.05E-07	6.24E+00	7.33E-06	2.13E-02	3.52E-06	1.86E-03	8.58E-04	1.35E-04	3.48E-04	1.75E-04	1.80E-04	2.71E-04	2.87E-05	4.59E-09	1.68E-04	3.47E-04
C30	0.00E+00	6.08E-05	3.80E-06	5.63E+01	4.42E-05	1.51E-01	5.87E-05	5.75E-02	1.42E-02	2.05E-03	6.18E-03	1.88E-03	1.94E-03	5.62E-03	2.25E-04	3.04E-08	4.25E-03	1.08E-02
C31	0.00E+00	3.42E-05	2.34E-06	6.11E+01	7.20E-05	2.04E-01	4.34E-05	2.30E-02	1.05E-02	1.59E-03	4.56E-03	1.85E-03	1.90E-03	3.21E-03	2.75E-04	4.92E-08	2.66E-03	4.31E-03
C32	0.00E+00	4.29E-05	2.78E-06	6.58E+01	4.94E-05	1.65E-01	4.54E-05	3.86E-02	8.12E-03	1.30E-03	4.77E-03	1.64E-03	1.68E-03	5.75E-03	2.72E-04	4.16E-08	3.09E-03	7.26E-03
C33	0.00E+00	2.65E-06	2.53E-07	9.18E+00	1.47E-05	3.86E-02	5.17E-06	4.13E-04	1.69E-03	2.52E-04	5.10E-04	3.04E-04	3.11E-04	9.34E-05	4.55E-05	8.48E-09	1.99E-04	7.21E-05
C34	0.00E+00	9.16E-06	7.03E-07	1.75E+01	2.61E-05	6.90E-02	1.28E-05	5.09E-03	4.80E-03	6.76E-04	1.30E-03	6.20E-04	6.36E-04	5.84E-04	8.18E-05	1.33E-08	6.65E-04	9.51E-04
C35	0.00E+00	1.50E-05	1.06E-06	2.84E+01	2.78E-05	8.48E-02	1.80E-05	1.21E-02	3.70E-03	5.88E-04	1.85E-03	7.58E-04	7.79E-04	1.81E-03	1.25E-04	2.02E-08	1.07E-03	2.27E-03
C36	0.00E+00	9.84E-05	6.64E-06	1.13E+02	1.08E-04	3.52E-01	1.01E-04	9.38E-02	2.95E-02	4.20E-03	1.03E-02	3.72E-03	3.83E-03	9.10E-03	4.72E-04	5.89E-08	6.49E-03	1.76E-02
C37	0.00E+00	2.99E-05	1.85E-06	3.85E+01	2.95E-05	9.86E-02	3.09E-05	2.71E-02	6.26E-03	9.53E-04	3.31E-03	1.04E-03	1.08E-03	3.54E-03	1.57E-04	2.37E-08	2.24E-03	5.10E-03
C38	0.00E+00	4.90E-05	3.04E-06	6.76E+01	4.21E-05	1.52E-01	4.90E-05	4.57E-02	8.07E-03	1.30E-03	5.22E-03	1.61E-03	1.66E-03	6.80E-03	2.71E-04	4.02E-08	3.56E-03	8.60E-03
C39	0.00E+00	1.28E-05	9.62E-07	2.59E+01	3.07E-05	8.91E-02	1.66E-05	9.81E-03	4.52E-03	6.78E-04	1.69E-03	7.69E-04	7.90E-04	1.29E-03	1.17E-04	1.84E-08	8.96E-04	1.84E-03
C40	0.00E+00	1.89E-05	1.40E-06	2.98E+01	3.79E-05	1.09E-01	2.29E-05	1.52E-02	8.06E-03	1.14E-03	2.30E-03	1.01E-03	1.04E-03	1.54E-03	1.34E-04	1.87E-08	1.26E-03	2.85E-03
C41	0.00E+00	3.38E-05	2.44E-06	8.83E+01	7.52E-05	2.49E-01	4.31E-05	3.13E-02	6.08E-03	1.11E-03	4.45E-03	1.92E-03	1.97E-03	6.21E-03	3.82E-04	5.55E-08	2.47E-03	5.87E-03
C42	0.00E+00	1.91E-05	1.59E-06	6.29E+01	7.41E-05	2.23E-01	3.08E-05	1.10E-02	4.92E-03	8.83E-04	3.11E-03	1.63E-03	1.67E-03	2.29E-03	2.95E-04	5.19E-08	1.44E-03	2.03E-03
C43	0.00E+00	1.84E-05	1.21E-06	4.52E+01	3.87E-05	1.27E-01	2.36E-05	1.42E-02	3.06E-03	5.73E-04	2.54E-03	9.85E-04	1.01E-03	3.10E-03	1.97E-04	3.60E-08	1.53E-03	2.64E-03
C44	0.00E+00	1.36E-05	9.37E-07	3.49E+01	3.10E-05	1.01E-01	1.78E-05	1.08E-02	2.41E-03	4.46E-04	1.88E-03	7.75E-04	7.96E-04	2.29E-03	1.53E-04	2.63E-08	1.08E-03	2.01E-03
C45	0.00E+00	2.82E-05	1.86E-06	4.92E+01	4.72E-05	1.42E-01	3.33E-05	2.10E-02	6.29E-03	1.01E-03	3.53E-03	1.32E-03	1.35E-03	3.30E-03	2.15E-04	3.87E-08	2.17E-03	3.94E-03
C46	0.00E+00	6.38E-05	3.93E-06	5.84E+01	4.77E-05	1.56E-01	6.22E-05	5.81E-02	1.47E-02	2.12E-03	6.61E-03	1.98E-03	2.04E-03	5.75E-03	2.34E-04	3.41E-08	4.57E-03	1.09E-02
C48	0.00E+00	5.81E-05	3.43E-06	6.95E+01	2.97E-05	1.28E-01	5.43E-05	5.64E-02	7.86E-03	1.28E-03	5.88E-03	1.56E-03	1.60E-03	8.39E-03	2.64E-04	3.77E-08	4.28E-03	1.06E-02
C49	0.00E+00	3.32E-05	2.44E-06	6.68E+01	8.25E-05	2.33E-01	4.42E-05	2.24E-02	1.17E-02	1.76E-03	4.54E-03	2.03E-03	2.08E-03	3.07E-03	3.05E-04	5.20E-08	2.46E-03	4.19E-03
C50	0.00E+00	1.52E-06	1.12E-07	2.10E+00	2.19E-06	7.20E-03	1.63E-06	1.54E-03	5.65E-04	7.99E-05	1.60E-04	6.77E-05	6.97E-05	1.46E-04	9.04E-06	9.81E-10	9.02E-05	2.89E-04
C51	0.00E+00	1.75E-05	1.30E-06	3.99E+01	4.78E-05	1.36E-01	2.43E-05	1.06E-02	5.42E-03	8.58E-04	2.50E-03	1.14E-03	1.17E-03	1.70E-03	1.85E-04	3.40E-08	1.33E-03	1.97E-03
C52	0.00E+00	1.31E-05	9.20E-07	1.92E+01	2.51E-05	6.91E-02	1.59E-05	9.37E-03	5.15E-03	7.31E-04	1.64E-03	6.74E-04	6.92E-04	9.92E-04	8.65E-05	1.37E-08	9.50E-04	1.76E-03
C53	0.00E+00	1.10E-05	7.94E-07	2.13E+01	2.56E-05	7.29E-02	1.43E-05	7.66E-03	3.70E-03	5.57E-04	1.48E-03	6.43E-04	6.60E-04	1.04E-03	9.66E-05	1.64E-08	8.22E-04	1.43E-03
C54	0.00E+00	1.69E-05	1.17E-06	3.21E+01	3.30E-05	9.80E-02	2.07E-05	1.24E-02	4.20E-03	6.68E-04	2.16E-03	8.74E-04	8.98E-04	1.92E-03	1.42E-04	2.51E-08	1.27E-03	2.32E-03
C55	0.00E+00	2.63E-05	1.84E-06	4.73E+01	5.38E-05	1.56E-01	3.28E-05	1.96E-02	8.15E-03	1.23E-03	3.40E-03	1.41E-03	1.45E-03	2.64E-03	2.12E-04	3.53E-08	1.96E-03	3.67E-03
C56	0.00E+00	2.43E-06	1.46E-07	2.29E+00	2.24E-06	6.40E-03	2.50E-06	1.94E-03	5.76E-04	8.33E-05	2.70E-04	8.16E-05	8.38E-05	2.00E-04	9.49E-06	1.67E-09	1.86E-04	3.64E-04
C57	0.00E+00	2.01E-05	1.46E-06	4.30E+01	4.89E-05	1.41E-01	2.66E-05	1.33E-02	5.77E-03	9.14E-04	2.75E-03	1.21E-03	1.24E-03	2.09E-03	1.96E-04	3.52E-08	1.51E-03	2.48E-03
C58	0.00E+00	3.86E-06	3.44E-07	1.03E+01	1.70E-05	4.38E-02	6.59E-06	1.28E-03	2.88E-03	4.04E-04	6.50E-04	3.66E-04	3.75E-04	1.81E-04	4.97E-05	8.06E-09	2.75E-04	2.35E-04
C59	0.00E+00	2.93E-06	2.51E-07	8.75E+00	1.20E-05	3.31E-02	4.85E-06	1.25E-03	1.24E-03	1.95E-04	4.85E-04	2.62E-04	2.69E-04	2.10E-04	4.21E-05	7.80E-09	2.16E-04	2.30E-04
C60	0.00E+00	2.53E-05	1.78E-06	4.62E+01	5.32E-05	1.54E-01	3.18E-05	1.86E-02	7.96E-03	1.20E-03	3.30E-03	1.38E-03	1.42E-03	2.50E-03	2.07E-04	3.47E-08	1.89E-03	3.47E-03
D01	0.00E+00	1.12E-04	9.11E-06	2.45E+02	3.36E-04	9.61E-01	1.58E-04	8.09E-02	4.51E-02	6.75E-03	1.56E-02	7.94E-03	8.16E-03	1.05E-02	1.13E-03	1.87E-07	7.46E-03	1.51E-02
D02	0.00E+00	6.20E-05	5.42E-06	1.61E+02	2.49E-04	6.81E-01	1.01E-04	3.14E-02	3.02E-02	4.51E-03	9.93E-03	5.48E-03	5.62E-03	4.38E-03	7.66E-04	1.39E-07	4.31E-03	5.83E-03
D03	0.00E+00	1.01E-04	8.52E-06	2.49E+02	3.79E-04	1.04E+00	1.59E-04	5.25E-02	4.64E-02	6.95E-03	1.58E-02	8.44E-03	8.66E-03	7.35E-03	1.18E-03	2.16E-07	7.13E-03	9.75E-03
D04	0.00E+00	1.07E-04	7.72E-06	1.84E+02	2.11E-04	6.34E-01	1.30E-04	9.01E-02	3.26E-02	4.91E-03	1.32E-02	5.63E-03	5.79E-03	1.16E-02	8.09E-04	1.27E-07	7.44E-03	1.69E-02
D05	0.00E+00	1.13E-04	8.94E-06	2.41E+02	3.34E-04	9.43E-01	1.59E-04	7.61E-02	4.42E-02	6.63E-03	1.59E-02	7.88E-03	8.09E-03	1.01E-02	1.11E-03	1.92E-07	7.84E-03	1.42E-02
D06	0.00E+00	1.22E-04	8.61E-06	2.12E+02	2.63E-04	7.53E-01	1.55E-04	8.74E-02	3.77E-02	5.69E-03	1.61E-02	6.74E-03	6.93E-03	1.18E-02	9.50E-04	1.70E-07	9.18E-03	1.64E-02
D07	0.00E+00	9.49E-05	7.54E-06	2.48E+02	2.85E-04	8.52E-01	1.35E-04	6.50E-02	2.48E-02	4.19E-03	1.36E-02	6.70E-03	6.89E-03	1.12E-02	1.14E-03	1.96E-07	6.68E-03	1.21E-02
D08	0.00E+00	8.16E-05	5.96E-06	1.91E+02	2.06E-04	6.22E-01	1.10E-04	5.56E-02	1.86E-02	3.17E-03	1.13E-02	5.03E-03	5.16E-03	1.01E-02	8.65E-04	1.58E-07	6.16E-03	1.04E-02
D09	0.00E+00	6.29E-05	5.38E-06	1.86E+02	2.35E-04	6.85E-01	9.85E-05	3.70E-02	1.92E-02	3.22E-03	9.76E-03	5.25E-03	5.39E-03	6.38E-03	8.77E-04	1.54E-07	4.37E-03	6.86E-03
D10	0.00E+00	5.68E-05	4.21E-06	1.40E+02	1.60E-04	4.75E-01	8.01E-05	3.44E-02	1.38E-02	2.35E-03	8.28E-03	3.78E-03	3.88E-03	6.45E-03	6.44E-04	1.23E-07	4.40E-03	6.41E-03
D11	0.00E+00	9.11E-05	7.48E-06	2.51E+02	3.00E-04	8.88E-01	1.35E-04	5.93E-02	2.54E-02	4.28E-03	1.34E-02	6.91E-03	7.09E-03	1.02E-02	1.16E-03	2.01E-07	6.34E-03	1.10E-02
D12	0.00E+00	5.95E-05	4.28E-06	1.39E+02	1.51E-04	4.53E-01	8.05E-05	3.87E-02	1.34E-02	2.30E-03	8.38E-03	3.66E-03	3.76E-03	7.18E-03	6.29E-04	1.19E-07	4.62E-03	7.21E-03
D13	0.00E+00	2.75E-05	1.95E-06	4.82E+01	5.98E-05	1.72E-01	3.49E-05	1.98E-02	8.58E-03	1.29E-03	3.62E-03	1.53E-03	1.57E-03	2.66E-03	2.16E-04	3.83E-08	2.04E-03	3.70E-03
D14	0.00E+00	7.23E-05	5.33E-06	1.36E+02	1.75E-04	5.01E-01	9.51E-05	5.14E-02	2.44E-02	3.68E-03	9.74E-03	4.36E-03	4.47E-03	6.88E-03	6.15E-04	1.08E-07	5.27E-03	9.61E-03
D15	0.00E+00	7.68E-05	5.97E-06	1.61E+02	2.23E-04	6.26E-01	1.08E-04	4.93E-02	2.94E-02	4.41E-03	1.10E-02	5.28E-03	5.42E-03

Appendix F.2.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D31	0.00E+00	2.03E-05	1.47E-06	4.58E+01	4.67E-05	1.44E-01	2.63E-05	1.50E-02	4.39E-03	7.50E-04	2.71E-03	1.18E-03	1.21E-03	2.66E-03	2.04E-04	3.58E-08	1.50E-03	2.81E-03
D32	0.00E+00	2.95E-05	2.34E-06	7.75E+01	8.98E-05	2.67E-01	4.23E-05	1.97E-02	7.75E-03	1.31E-03	4.25E-03	2.10E-03	2.16E-03	3.43E-03	3.56E-04	6.20E-08	2.09E-03	3.68E-03
D33	0.00E+00	4.61E-05	3.17E-06	7.51E+01	8.66E-05	2.54E-01	5.58E-05	3.54E-02	1.32E-02	1.99E-03	5.82E-03	2.33E-03	2.39E-03	4.73E-03	3.30E-04	5.71E-08	3.43E-03	6.64E-03
D34	0.00E+00	1.99E-05	1.71E-06	5.14E+01	8.12E-05	2.20E-01	3.28E-05	8.71E-03	9.66E-03	1.45E-03	3.27E-03	1.77E-03	1.82E-03	1.28E-03	2.47E-04	4.67E-08	1.45E-03	1.61E-03
D35	0.00E+00	3.35E-05	2.81E-06	8.15E+01	1.24E-04	3.39E-01	5.25E-05	1.76E-02	1.52E-02	2.28E-03	5.23E-03	2.76E-03	2.83E-03	2.48E-03	3.86E-04	7.09E-08	2.40E-03	3.28E-03
D36	0.00E+00	2.66E-05	1.84E-06	4.35E+01	4.99E-05	1.47E-01	3.21E-05	2.09E-02	7.64E-03	1.15E-03	3.34E-03	1.34E-03	1.38E-03	2.76E-03	1.91E-04	3.25E-08	1.96E-03	3.91E-03
D37	0.00E+00	6.70E-06	5.90E-07	1.75E+01	2.70E-05	7.42E-02	1.09E-05	3.48E-03	3.29E-03	4.92E-04	1.07E-03	5.95E-04	6.11E-04	4.80E-04	8.34E-05	1.50E-08	4.60E-04	6.46E-04
D38	0.00E+00	2.77E-05	2.20E-06	5.79E+01	7.70E-05	2.22E-01	3.79E-05	2.07E-02	1.06E-02	1.58E-03	3.77E-03	1.86E-03	1.91E-03	2.67E-03	2.65E-04	4.34E-08	1.86E-03	3.87E-03
D39	0.00E+00	7.63E-06	7.52E-07	2.45E+01	4.16E-05	1.11E-01	1.46E-05	2.19E-03	4.70E-03	7.02E-04	1.41E-03	8.66E-04	8.88E-04	3.48E-04	1.20E-04	2.27E-08	5.23E-04	3.98E-04
D40	0.00E+00	3.26E-05	2.57E-06	6.95E+01	9.71E-05	2.72E-01	4.63E-05	2.11E-02	1.27E-02	1.91E-03	4.67E-03	2.28E-03	2.35E-03	2.85E-03	3.22E-04	5.68E-08	2.32E-03	3.95E-03
D41	0.00E+00	5.91E-06	6.32E-07	2.18E+01	3.88E-05	1.02E-01	1.26E-05	6.26E-04	4.23E-03	6.31E-04	1.21E-03	7.86E-04	8.05E-04	1.49E-04	1.09E-04	2.10E-08	4.06E-04	1.04E-04
D42	0.00E+00	2.31E-05	1.70E-06	4.12E+01	4.81E-05	1.44E-01	2.85E-05	1.95E-02	7.33E-03	1.10E-03	2.89E-03	1.26E-03	1.30E-03	2.50E-03	1.82E-04	2.83E-08	1.58E-03	3.66E-03
D43	0.00E+00	1.19E-05	1.28E-06	4.40E+01	7.84E-05	2.07E-01	2.55E-05	1.27E-03	8.54E-03	1.27E-03	2.45E-03	1.59E-03	1.63E-03	3.02E-04	2.19E-04	4.24E-08	8.20E-04	2.10E-04
D44	0.00E+00	2.60E-05	1.84E-06	4.54E+01	5.62E-05	1.61E-01	3.30E-05	1.87E-02	8.06E-03	1.22E-03	3.42E-03	1.44E-03	1.48E-03	2.52E-03	2.03E-04	3.61E-08	1.94E-03	3.49E-03
D45	0.00E+00	7.49E-05	5.40E-06	1.33E+02	1.63E-04	4.74E-01	9.47E-05	5.66E-02	2.37E-02	3.57E-03	9.73E-03	4.19E-03	4.30E-03	7.49E-03	5.94E-04	1.01E-07	5.42E-03	1.06E-02
D46	0.00E+00	7.60E-05	5.28E-06	1.24E+02	1.41E-04	4.19E-01	9.14E-05	6.08E-02	2.18E-02	3.29E-03	9.48E-03	3.82E-03	3.93E-03	8.00E-03	5.45E-04	9.11E-08	5.55E-03	1.14E-02
D47	0.00E+00	9.15E-05	6.77E-06	1.74E+02	2.29E-04	6.50E-01	1.22E-04	6.27E-02	3.14E-02	4.73E-03	1.25E-02	5.63E-03	5.78E-03	8.47E-03	7.93E-04	1.41E-07	6.72E-03	1.17E-02
D48	0.00E+00	3.56E-05	2.78E-06	7.48E+01	1.03E-04	2.91E-01	5.01E-05	2.34E-02	1.37E-02	2.05E-03	5.06E-03	2.45E-03	2.52E-03	3.15E-03	3.45E-04	6.09E-08	2.54E-03	4.37E-03
D49	0.00E+00	1.53E-04	1.00E-05	2.28E+02	2.45E-04	7.29E-01	1.77E-04	1.20E-01	3.93E-02	5.96E-03	1.88E-02	6.96E-03	7.15E-03	1.60E-02	9.85E-04	1.73E-07	1.16E-02	2.24E-02
D50	0.00E+00	1.65E-04	1.10E-05	2.57E+02	2.89E-04	8.49E-01	1.96E-04	1.25E-01	4.47E-02	6.77E-03	2.07E-02	7.94E-03	8.15E-03	1.69E-02	1.12E-03	1.98E-07	1.25E-02	2.35E-02
D51	0.00E+00	2.43E-05	1.78E-06	4.64E+01	6.20E-05	1.74E-01	3.28E-05	1.57E-02	8.36E-03	1.26E-03	3.38E-03	1.51E-03	1.55E-03	2.17E-03	2.12E-04	3.89E-08	1.82E-03	2.94E-03
D52	0.00E+00	4.69E-05	3.05E-06	6.84E+01	7.16E-05	2.15E-01	5.38E-05	3.72E-02	1.17E-02	1.78E-03	5.72E-03	2.07E-03	2.13E-03	4.98E-03	2.94E-04	5.14E-08	3.59E-03	6.97E-03
D53	0.00E+00	4.26E-05	2.99E-06	7.34E+01	9.02E-05	2.59E-01	5.38E-05	3.05E-02	1.30E-02	1.96E-03	5.59E-03	2.33E-03	2.39E-03	4.13E-03	3.28E-04	5.86E-08	3.21E-03	5.72E-03
D54	0.00E+00	4.95E-05	3.44E-06	8.55E+01	1.08E-04	3.06E-01	6.34E-05	3.32E-02	1.52E-02	2.30E-03	6.64E-03	2.75E-03	2.82E-03	4.59E-03	3.85E-04	7.17E-08	3.82E-03	6.21E-03
D55	0.00E+00	6.25E-05	4.58E-06	1.44E+02	1.50E-04	4.60E-01	8.22E-05	4.54E-02	1.39E-02	2.37E-03	8.45E-03	3.74E-03	3.84E-03	8.06E-03	6.46E-04	1.13E-07	4.61E-03	8.49E-03
D56	0.00E+00	2.95E-05	2.23E-06	7.29E+01	8.13E-05	2.44E-01	4.09E-05	1.97E-02	7.16E-03	1.22E-03	4.19E-03	1.95E-03	2.00E-03	3.54E-03	3.32E-04	5.98E-08	2.19E-03	3.68E-03
D57	0.00E+00	7.45E-05	5.46E-06	1.73E+02	1.82E-04	5.56E-01	9.86E-05	5.34E-02	1.67E-02	2.86E-03	1.01E-02	4.51E-03	4.63E-03	9.49E-03	7.78E-04	1.38E-07	5.51E-03	9.97E-03
D58	0.00E+00	5.57E-05	5.02E-06	1.84E+02	2.52E-04	7.19E-01	9.66E-05	2.38E-02	1.94E-02	3.26E-03	9.56E-03	5.41E-03	5.55E-03	4.35E-03	8.90E-04	1.66E-07	4.01E-03	4.37E-03
D59	0.00E+00	4.38E-05	3.12E-06	9.76E+01	9.94E-05	3.05E-01	5.66E-05	3.16E-02	9.32E-03	1.60E-03	5.88E-03	2.51E-03	2.58E-03	5.69E-03	4.35E-04	7.82E-08	3.30E-03	5.90E-03
D60	0.00E+00	2.98E-05	2.46E-06	8.66E+01	1.10E-04	3.20E-01	4.70E-05	1.55E-02	8.88E-03	1.50E-03	4.73E-03	2.46E-03	2.52E-03	2.85E-03	4.10E-04	7.66E-08	2.21E-03	2.86E-03
D61	0.00E+00	5.64E-06	4.01E-07	1.27E+01	1.31E-05	4.01E-02	7.37E-06	3.93E-03	1.21E-03	2.08E-04	7.67E-04	3.28E-04	3.37E-04	7.17E-04	5.67E-05	1.04E-08	4.31E-04	7.34E-04
D62	0.00E+00	3.50E-05	2.29E-06	6.80E+01	5.96E-05	1.91E-01	4.16E-05	2.69E-02	6.20E-03	1.07E-03	4.43E-03	1.65E-03	1.69E-03	4.92E-03	2.93E-04	5.39E-08	2.73E-03	5.03E-03
D63	0.00E+00	2.15E-05	1.26E-06	2.73E+01	1.64E-05	5.88E-02	2.15E-05	1.88E-02	3.19E-03	5.21E-04	2.35E-03	6.61E-04	6.80E-04	2.89E-03	1.08E-04	1.87E-08	1.67E-03	3.53E-03
D64	0.00E+00	3.63E-06	2.53E-07	7.16E+00	8.29E-06	2.39E-02	4.75E-06	2.28E-03	9.71E-04	1.54E-04	4.98E-04	2.08E-04	2.13E-04	3.71E-04	3.24E-05	6.21E-09	2.85E-04	4.25E-04
D65	0.00E+00	3.84E-05	2.66E-06	8.26E+01	8.18E-05	2.52E-01	4.88E-05	2.75E-02	7.79E-03	1.34E-03	5.12E-03	2.10E-03	2.15E-03	5.04E-03	3.66E-04	6.75E-08	2.97E-03	5.15E-03
D66	0.00E+00	3.08E-05	2.07E-06	5.98E+01	5.00E-05	1.64E-01	3.56E-05	2.61E-02	5.45E-03	9.38E-04	3.72E-03	1.42E-03	1.46E-03	4.57E-03	2.55E-04	4.20E-08	2.26E-03	4.90E-03
D67	0.00E+00	2.96E-05	1.90E-06	5.19E+01	3.62E-05	1.27E-01	3.19E-05	2.67E-02	4.53E-03	7.86E-04	3.38E-03	1.16E-03	1.19E-03	4.67E-03	2.14E-04	3.40E-08	2.19E-03	5.02E-03
D68	0.00E+00	5.45E-05	3.67E-06	1.06E+02	8.88E-05	2.91E-01	6.31E-05	4.60E-02	9.65E-03	1.66E-03	6.61E-03	2.52E-03	2.59E-03	8.07E-03	4.52E-04	7.49E-08	4.02E-03	8.62E-03
D69	0.00E+00	9.69E-06	6.00E-07	1.65E+01	1.14E-05	3.96E-02	1.05E-05	8.33E-03	1.42E-03	2.49E-04	1.13E-03	3.68E-04	3.78E-04	1.50E-03	6.79E-05	1.18E-08	7.50E-04	1.56E-03
D70	0.00E+00	2.95E-05	1.99E-06	5.77E+01	4.91E-05	1.60E-01	3.44E-05	2.47E-02	5.28E-03	9.08E-04	3.60E-03	1.38E-03	1.42E-03	4.33E-03	2.47E-04	4.12E-08	2.18E-03	4.62E-03
D71	0.00E+00	3.56E-05	2.44E-06	6.03E+01	5.42E-05	1.73E-01	4.00E-05	3.10E-02	7.86E-03	1.25E-03	4.13E-03	1.59E-03	1.64E-03	4.58E-03	2.57E-04	3.94E-08	2.49E-03	5.82E-03
D72	0.00E+00	3.77E-05	2.48E-06	5.90E+01	4.82E-05	1.58E-01	4.07E-05	3.33E-02	7.49E-03	1.19E-03	4.26E-03	1.52E-03	1.56E-03	4.96E-03	2.46E-04	3.81E-08	2.70E-03	6.26E-03
D73	0.00E+00	1.20E-05	9.33E-07	2.57E+01	2.86E-05	8.62E-02	1.53E-05	9.90E-03	3.56E-03	5.57E-04	1.52E-03	7.24E-04	7.44E-04	1.42E-03	1.15E-04	1.73E-08	7.73E-04	1.85E-03
D74	0.00E+00	1.64E-05	1.33E-06	4.06E+01	5.25E-05	1.50E-01	2.40E-05	1.01E-02	5.79E-03	9.07E-04	2.40E-03	1.21E-03	1.25E-03	1.54E-03	1.89E-04	3.30E-08	1.15E-03	1.88E-03
D75	0.00E+00	1.01E-05	8.02E-07	2.72E+01	3.26E-05	9.59E-02	1.49E-05	6.11E-03	2.73E-03	4.63E-04	1.51E-03	7.49E-04	7.69E-04	1.10E-03	1.26E-04	2.29E-08	7.38E-04	1.14E-03
D76	0.00E+00	1.23E-05	8.96E-07	2.86E+01	3.04E-05	9.22E-02	1.64E-05	8.57E-03	2.77E-03	4.72E-04	1.69E-03	7.48E-04	7.68E-04	1.54E-03	1.29E-04	2.32E-08	9.20E-04	1.60E-03
D77	0.00E+00	1.28E-05	8.49E-07	2.51E+01	2.19E-05	7.03E-02	1.51E-05	1.01E-02	2.29E-03	3.96E-04	1.60E-03	6.06E-04	6.23E-04	1.82E-03	1.08E-04	1.91E-08	9.77E-04	1.89E-03
D78	0.00E+00	2.19E-05	1.55E-06	4.81E+01	4.79E-05	1.48E-01	2.79E-05	1.63E-02	4.57E-03	7.83E-04	2.89E-03	1.22E-03	1.26E-03	2.91E-03	2.13E-04	3.76E-08	1.63E-03	3.05E-03
D79	0.00E+00	3.09E-05	2.06E-06	5.07E+01	4.48E-05	1.43E-01	3.46E-05	2.62E-02	6.52E-03	1.04E-03	3.62E-03	1.34E-03	1.38E-03	3.93E-03	2.15E-04	3.48E-08	2.24E-03	4.91E-03
D80	0.00E+00	3.41E-05	2.33E-06	6.20E+01	6.45E-05	1.93E-01	4.14E-05	2.52E-02	8.24E-03	1.31E-03	4.33E-03	1.73E-03	1.77E-03	3.90E-03	2.73E-04	4.84E-08	2.55E-03	4.72E-03
D81	0.00E+00	3.63E-05	2.88E-06	8.65E+01	1.09E-04	3.13E-01	5.18E-05	2.32E-02	1.22E-02	1.92E-03	5.20E-03	2.56E-03	2.63E-03	3.56E-03	4.00E-04	6.98E-08	2.57E-03	4.33E-03
D82	0.00E+00	7.60E-06	7.49E-07	2.71E+01	4.19E-05	1.14E-01	1.46E-05	2.10E-03	4.08E-03	6.34E-04	1.42E-03	8.71E-04	8.93E-04	3.68E-04	1.33E-04	2.47E-08	5.30E-04	3.79E-04
D83	0.00E+00	5.54E-05	3.77E-06	1.11E+02	9.86E-05	3.17E-01	6.60E-05	4.48E-02	1.03E-02	1.76E-03	6.91E-03	2.70E-03	2.78E-03	7.93E-03	4.80E-04	8.23E-08	4.13E-03	8.39E-03
D84	0.00E+00	5.00E-05	3.56E-06	1.00E+02	8.18E-05	2.74E-01	5.68E-05	4.75E-02	9.24E-03	1.57E-03	5.76E-03	2.36E-03	2.43E-03	7.87E-03	4.24E-04	5.88E-08	3.34E-03	8.92E-03
D85	0.00E+00	5.57E-05	3.72E-06	1.06E+02	8.42E-05	2.81E-01	6.31E-05	4.86E-02	9.53E-03	1.64E-03	6.62E-03	2.47E-03	2.54E-03	8.46E-03	4.46E-04	7.18E-08	4.08E-03	9.11E-03
D86	0.00E+00	6.72E-05	4.75E-06	1.31E+02	1.01E-04	3.45E-01	7.43E-05	6.61E-02	1.19E-02	2.03E-03	7.53E-03	3.01E-03	3.10E-03	1.09E-02	5.47E-04	7.21E-08	4.43E-03	1.24E-02
D87	0.00E+00	6.88E-05	4.44E-06	1.22E+02	8.59E-05	2.99E-01	7.44E-05	6.23E-02	1.07E-02	1.85E-03	7.87E-03	2.73E-03	2.81E-03	1.09E-02	5.02E-04	7.92E-08	5.07E-03	1.17E-02
D88	0.00E+00	9.78E-05	7.10E-06	2.06E+02	1.83E-04	5.94E-01	1.16E-04	8.84E-02	1.93E-02	3.28E-03	1.17E-02	5.00E-03	5.14E-03	1.47E-02	8.87E-04	1.30E-07	6.61E-03	1.66E-02
D89	0.00E+00	1.72E-05	1.23E-06	2.93E+01	3.37E-05	1.01E-01	2.09E-05	1.41E-02	5.18E-03	7.80E-04	2.14E-03	9.00E-04	9.25E-04	1.83E-03	1.29E-04	2.08E-08	1.22E-03	2.64E-03
D90	0.00E+00	2.53E-05	1.77E-06	4.32E+01	5.28E-05	1.52E-01	3.18E-05	1.82E-02	7.65E-03	1.16E-03	3.31E-03	1.37E-03	1.40E-03	2.46E-03	1.93E-04	3.45E-08	1.90E-03	3.41E-03
D91	0.00E+00	2.32E-05	1.78E-06	5.28E+01	6.51E-05	1.87E-01	3.23E-05	1.49E-02	7.39E-03	1.16E-03	3.27E-03	1.55E-03	1.60E-03	2.31E-03	2.43E-04	4.30E-08	1.68E-03	2.78E-03
D92	0.00E+00	6.72E-06	5.52E-07	1.71E+01	2.24E-05	6.36E-02	1.00E-05	4.05E-03	2.45E-03	3.83E-04	9.97E-04	5.13E-04	5.27E-04	6.20E-04	8.00E-05	1.40E-08	4.70E-04	7.53E-04
D93	0.00E+00	3.01E-05	2.10E-06	5.54E+01	5.69E-05	1.72E-01	3.63E-05	2.33E-02	7.38E-03	1.17E-03	3.76E-03	1.53E-03	1.57E-03	3.53E-03	2.43E-04	4.12E-08	2.19E-03	4.36E-03
D94	0.00E+00	5.44E-06	4.56E-07	1.47E+01	2.02E-05	5.66E-02	8.56E-06	2.76E-03	2.13E-03	3.33E-04	8.56E-04	4.51E-04	4.63E-04	4.43E-04	6.98E-05	1.27E-08	3.93E-04	5.12E-04
E01	0.00E+00	1.60E-05	1.19E-06	3.19E+01	4.45E-05	1.23E-01	2.24E-05	9.49E-03	5.79E-03	8.73E-04	2.31E-03	1.06E-03	1.09E-03	1.34E-03	1.47E-04	2.78E-08	1.22E-03	1.77E-03
E02	0.00E+00	2.90E-05	2.08E-06	5.16E+01	6.40E-05	1.85E-01	3.69E-05	2.12E-02	9.19E-03	1.39E-03	3.81E-03	1.63E-03	1.68E-03	2.83E-03	2.31E-04	4.03E-08	2.13E-03	3.97E-03
E03	0.00E+00	1.04E-05	9.60E-07	3.58E+01	5.01E-05	1.42E-01	1.86E-05	4.03E-03	3.80E-03	6.38E-04	1.83E-03	1.06E-03	1.09E-03	7.43E-04	1.74E-04	3.26E-08	7.45E-04	7.37E-04
E04	0.00E+00	2.13E-05	1.44E-06	4.04E+01	3.18E-05	1.07E-01	2.39E-05	1.91E-02	3.65E-03	6.27E-04	2.49E-03	9.39E-04	9.66E-04	3.29E-03	1.70E-04	2.63E-08	1.53E-03	3.59E-03
E05	0.00E+00	6.75E-06	5.51E-07	1.92E+01	2.40E-05	6.98E-02	1.04E-05	3.67E-03	1.95E-03	3.30E-04	1.05E-03	5.39E-04	5.53E-04	6.73E-04	9.02E-05	1.68E-08	5.01E-04	6.81E-04
E06	0.00E+00	2.47E-05	1.87E-06	6.11E+01	6.85E-05	2.05E-01	3.43E-05	1.64E-02	6.02E-03	1.02E-03	3.51E-03	1.64E-03	1.68E-03	2.94E-03	2.79E-04	5.04E-08	1.83E-03	3.05E-03
E07	0.00E+00	1.10E-04	8.52E-06	2.29E+02	3.18E-04	8.90E-01	1.55E-04	7.05E-02	4.18E-02	6.28E-03	1.57E-02	7.52E-03	7.72E-03	9.59E-03	1.06E-03	1.89E-07	7.98E-03	1.32E-02
E08	0.00E+00	7.67E-05	5.78E-06	1.55E+02	2.17E-04	6.01E-01	1.08E-04	4.60E-02	2.82E-02	4.25E-03	1.10E-02	5.14E-03	5.27E-03	6.43E-03	7.17E-04	1.34E-07	5.77E-03	8.58E-03
E09	0.00E+00	1.09E-04	8.35E-06	2.22E+02	3.03E-04	8.54E-01	1.51E-04	7.20E-02	4.04E-02	6.07E-03	1.53E-02	7.24E-03	7.44E-03	9.72E-03	1.02E-03	1.81E-07	7.84E-03	1.34E-02
E10	0.00E+00	7.70E-05	6.00E-06	1.66E+02	2.40E-04	6.61E-01	1.12E-04	4.37E-02	3.05E-02	4.58E-03	1.14E-02	5.55E-03	5.70E-03	6.15E-03	7.75E-04	1.45E-07	5.73E-03	8.14E-03
E11	0.00E+00	1.17E-04	8.92E-06	2.38E+02	3.27E-04	9.15E-01	1.63E-04	7.44E-02	4.32E-02	6.50E-03	1.67E-02	7.80E-03	8.01E-03	1.02E-02	1.09E-03	1.99E-07	8.66E-03	1.39E-02
E12	0.00E+00	1.16E-04	8.38E-06	2.07E+02	2.52E-04	7.34E-01	1.46E-04	8.86E-02	3.68E-02	5.54E-03	1.50E-02	6.48E-03	6.66E-03	1.17E-02	9.21E-04	1.56E-07	8.37E-03	1.66E-02
E13	0.00E+00	2.57E-05	2.03E-06	6.94E+01	8.40E-05	2.46E-01	3.84E-05	1.47E-02	6.98E-03	1.18E-03	3.91E-03	1.92E-03	1.97E-03	2.71E-03	3.23E-04	6.05E-08	1.94E-03	2.73E-03
E14	0.00E+00	4.06E-05	3.16E-06	1.05E+02	1.22E-04	3.63E-01	5.83E-05	2.59E-02	1.05E-02	1.78E-03	5.92E-03	2.86E-03	2.94E-03	4.63E-03	4.85E-04	8.75E-08	2.99E-03	4.82E-03
E15	0.00E+00	1.43E-05	1.09E-06	3.57E+01	4.03E-05	1.21E-01	2.00E-05	9.43E-03	3.53E-03	5.99E-04	2.04E-03	9.58E-04	9.84E-04	1.69E-03	1.63E-04	2.94E-08	1.05E-03	1.76E-03
E16	0.00E+00	3.38E-05	2.57E-06	7.65E+01	7.34E-05	2.33E-01	4.19E-05	3.00E-02	7.35E-03	1.24E-03	4.19E-03	1.92E-03	1.97E-03	4.92E-03	3.35E-04	4.89E-08	2.22E-03	5.62E-03
E17	0.00E+00	1.07E-05	7.14E-07	2.22E+01	2.16E-05	6.68E-02	1.35E-05	7.37E-03	2.07E-03	3.58E-04	1.43E-03	5.61E-04	5.76E-04	1.39E-03	9.80E-05	1.90E-08	8.54E-04	1.38E-03
E18	0.00E+00	1.12E-05	1.05E-06	3.97E+01	5.61E-05	1.59E-01	2.04E-05	4.09E-03	4.23E-03	7.08E-04	2.01E-03	1.18E-03	1.21E-03	7.50E-04	1.93E-04	3.61E-08	7.94E-04	7.44E-04
E19	0.00E+00	8.28E-05	6.58E-06	1.86E+02	2.76E-04	7.55E-01	1.25E-04	4.37E-02	3.44E-02	5.16E-03	1.26E-02	6.29E-03	6.45E-03	6.25E-03	8.75E-04	1.65E-07	6.17E-03	8.13E-03
E20	0.00E+00	8.50E-05	5.82E-06	1.41E+02	1.71E-04	4.90E-01	1.06E-04	6.01E-02	2.49E-02	3.76E-03	1.11E-02	4.47E-03	4.59E-03	8.22E-03	6.28E-04	1.15E-07	6.52E-03	1.13E-02
E21	0.00E+00	1.20E-06	8.53E-08	2.41E+00	2.01E-06	6.67E-03	1.37E-06	1.12E-03	2.23E-04	3.80E-05	1.39E-04	5.72E-05	5.89E-05	1.86E-04	1.03E-05	1.45E-09	8.04E-05	2.10E-04
E22	0.00E+00	1.38E-05	9.79E-07	2.88E+01	2.60E-05	8.35E-02	1.66E-05	1.18E-02	2.69E-03	4.59E-04	1.71E-03	7.04E-04	7.24E-04	2.01E-03	1.25E-04	1.98E-08	9.81E-04	2.20E-03
E23	0.00E+00	5.54E-05	3.28E-06	8.27E+01	3.86E-05	1.59E-01	5.43E-05	5.30E-02	6.68E-03	1.18E-03	5.91E-03	1.65E-03	1.70E-03	9.35E-03	3.20E-04	5.00E-08	4.21E-03	9.96E-03
E24	0.00E+00	4.22E-05	3.22E-06	1.05E+02	1.17E-04	3.52E-01	5.85E-05	2.86E-02	1.03E-02	1.76E-03	5.96E-03	2.80E-03	2.88E-03	5.08E-03	4.78E-04	8.48E-08	3.08E-03	5.34E-03
E25	0.00E+00	2.95E-05	2.06E-06	5.28E+01	5.10E-05	1.59E-01	3.44E-05	2.47E-02	6.97E-03	1.10E-03	3.54E-03	1.43E-03	1.47E-03	3.66E-03	2.28E-04	3.61E-08	2.08E-03	4.63E-03
E26	0.00E+00	2.22E-05	1.90E-06	6.00E+01	8.08E-05	2.29E-01	3.43E-05	1.29E-02	8.68E-03	1.35E-03	3.39E-03	1.82E-03	1.87E-03	1.96E-03	2.83E-04	4.90E-08	1.52E-03	2.40E-03
E27	0.00E+00	4.02E-05	2.59E-06	6.04E+01	4.64E-05	1.55E-01	4.26E-05	3.59E-02	7.55E-03	1.21E-03	4.49E-03	1.53E-03	1.58E-03	5.36E-03	2.49E-04	3.86E-08	2.91E-03	6.75E-03
E28	0.00E+00	1.48E-05	1.15E-06	3.44E+01	4.31E-05	1.23E-01	2.09E-05	9.30E-03	4.84E-03	7.60E-04	2.11E-03	1.02E-03	1.05E-03	1.44E-03	1.59E-04	2.82E-08	1.07E-03	1.73E-03
E29	0.00E+00	5.57E-07	5.96E-08	2.28E+00	3.69E-06	9.95E-03	1.20E-06	6.35E-05	3.48E-04	5.40E-05	1.15E-04	7.46E-05	7.65E-05	1.47E-05	1.14E-05	2.14E-09	3.86E-05	1.05E-05
E30	0.00E+00	1.77E-05	1.41E-06	4.31E+01	5.53E-05	1.58E-01	2.57E-05	1.08E-02	6.11E-03	9.58E-04	2.59E-03	1.29E-03	1.32E-03

Appendix F.2.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E46	0.00E+00	2.70E-05	1.89E-06	5.90E+01	5.94E-05	1.83E-01	3.47E-05	1.92E-02	5.60E-03	9.61E-04	3.62E-03	1.51E-03	1.55E-03	3.50E-03	2.62E-04	4.82E-08	2.07E-03	3.59E-03
E47	0.00E+00	5.21E-06	3.73E-07	1.17E+01	1.19E-05	3.66E-02	6.74E-06	3.80E-03	1.12E-03	1.91E-04	6.97E-04	3.00E-04	3.08E-04	6.79E-04	5.21E-05	9.25E-09	3.89E-04	7.10E-04
E48	0.00E+00	2.86E-05	2.31E-06	8.00E+01	9.91E-05	2.89E-01	4.37E-05	1.59E-02	8.12E-03	1.37E-03	4.42E-03	2.24E-03	2.30E-03	2.91E-03	3.75E-04	6.96E-08	2.12E-03	2.96E-03
E49	0.00E+00	2.06E-06	1.78E-07	6.18E+00	7.81E-06	2.28E-02	3.25E-06	1.22E-03	6.37E-04	1.07E-04	3.20E-04	1.74E-04	1.79E-04	2.09E-04	2.91E-05	5.06E-09	1.41E-04	2.27E-04
E50	0.00E+00	3.96E-05	2.85E-06	8.60E+01	8.25E-05	2.60E-01	4.92E-05	3.19E-02	8.15E-03	1.39E-03	5.06E-03	2.16E-03	2.22E-03	5.52E-03	3.78E-04	6.24E-08	2.84E-03	5.97E-03
E51	0.00E+00	1.54E-07	1.66E-08	6.70E-01	1.03E-06	2.87E-03	3.34E-07	1.86E-05	7.37E-05	1.23E-05	3.22E-05	2.09E-05	2.14E-05	4.06E-06	3.36E-06	6.43E-10	1.08E-05	3.05E-06
E52	0.00E+00	3.43E-05	2.44E-06	7.28E+01	6.77E-05	2.15E-01	4.19E-05	2.82E-02	6.84E-03	1.17E-03	4.32E-03	1.80E-03	1.85E-03	4.88E-03	3.17E-04	5.19E-08	2.46E-03	5.28E-03
E53	0.00E+00	2.54E-05	1.73E-06	5.03E+01	4.29E-05	1.40E-01	2.96E-05	2.16E-02	4.61E-03	7.92E-04	3.09E-03	1.20E-03	1.24E-03	3.75E-03	2.15E-04	3.51E-08	1.85E-03	4.04E-03
E54	0.00E+00	3.84E-05	2.89E-06	9.23E+01	9.95E-05	3.02E-01	5.17E-05	2.76E-02	9.02E-03	1.53E-03	5.27E-03	2.43E-03	2.49E-03	4.84E-03	4.17E-04	7.23E-08	2.78E-03	5.15E-03
E55	0.00E+00	2.46E-05	1.48E-06	3.75E+01	1.85E-05	7.45E-02	2.43E-05	2.35E-02	3.06E-03	5.39E-04	2.64E-03	7.59E-04	7.81E-04	4.14E-03	1.46E-04	2.26E-08	1.86E-03	4.43E-03
E56	0.00E+00	2.38E-05	1.97E-06	6.78E+01	8.40E-05	2.46E-01	3.64E-05	1.40E-02	6.92E-03	1.17E-03	3.64E-03	1.90E-03	1.95E-03	2.47E-03	3.18E-04	5.67E-08	1.69E-03	2.61E-03
F31	0.00E+00	6.48E-05	5.23E-06	1.43E+02	2.00E-04	5.64E-01	9.30E-05	4.31E-02	2.63E-02	3.93E-03	9.28E-03	4.68E-03	4.80E-03	5.72E-03	6.61E-04	1.14E-07	4.48E-03	8.05E-03
F32	0.00E+00	9.21E-05	6.55E-06	1.66E+02	2.16E-04	6.08E-01	1.21E-04	6.03E-02	2.97E-02	4.49E-03	1.26E-02	5.39E-03	5.53E-03	8.36E-03	7.54E-04	1.40E-07	7.06E-03	1.13E-02
F33	0.00E+00	8.84E-06	8.81E-07	2.90E+01	4.95E-05	1.32E-01	1.71E-05	2.32E-03	5.57E-03	8.31E-04	1.66E-03	1.03E-03	1.05E-03	3.79E-04	1.42E-04	2.70E-08	6.06E-04	4.19E-04
F34	0.00E+00	7.74E-05	5.51E-06	1.33E+02	1.56E-04	4.61E-01	9.53E-05	6.13E-02	2.35E-02	3.54E-03	9.81E-03	4.12E-03	4.24E-03	8.04E-03	5.87E-04	9.76E-08	5.57E-03	1.15E-02
F35	0.00E+00	3.66E-06	3.22E-07	1.18E+01	1.60E-05	4.58E-02	6.27E-06	1.54E-03	1.24E-03	2.08E-04	6.25E-04	3.45E-04	3.54E-04	2.90E-04	5.69E-05	1.08E-08	2.71E-04	2.83E-04
F36	0.00E+00	1.93E-05	1.51E-06	5.11E+01	6.07E-05	1.79E-01	2.83E-05	1.16E-02	5.12E-03	8.68E-04	2.88E-03	1.40E-03	1.44E-03	2.11E-03	2.37E-04	4.37E-08	1.44E-03	2.16E-03
F37	0.00E+00	8.33E-05	6.52E-06	1.77E+02	2.50E-04	6.97E-01	1.19E-04	5.21E-02	3.25E-02	4.88E-03	1.20E-02	5.86E-03	6.01E-03	7.11E-03	8.22E-04	1.48E-07	6.02E-03	9.72E-03
F38	0.00E+00	7.36E-05	5.42E-06	1.38E+02	1.80E-04	5.11E-01	9.72E-05	5.14E-02	2.49E-02	3.75E-03	9.97E-03	4.45E-03	4.57E-03	6.92E-03	6.27E-04	1.11E-07	5.40E-03	9.61E-03
F39	0.00E+00	4.79E-06	3.98E-07	1.36E+01	1.67E-05	4.90E-02	7.28E-06	2.92E-03	1.38E-03	2.33E-04	7.26E-04	3.78E-04	3.89E-04	5.09E-04	6.35E-05	1.12E-08	3.37E-04	5.43E-04
F40	0.00E+00	2.05E-05	1.82E-06	6.51E+01	8.59E-05	2.48E-01	3.39E-05	1.07E-02	6.79E-03	1.14E-03	3.34E-03	1.87E-03	1.92E-03	1.85E-03	3.10E-04	5.54E-08	1.42E-03	1.97E-03
F41	0.00E+00	1.76E-05	1.49E-06	4.59E+01	5.94E-05	1.71E-01	2.61E-05	1.17E-02	6.59E-03	1.03E-03	2.55E-03	1.37E-03	1.40E-03	1.71E-03	2.14E-04	3.53E-08	1.15E-03	2.18E-03
F42	0.00E+00	7.51E-06	8.04E-07	3.07E+01	4.98E-05	1.34E-01	1.61E-05	8.57E-04	4.70E-03	7.28E-04	1.55E-03	1.01E-03	1.03E-03	1.98E-04	1.54E-04	2.89E-08	5.21E-04	1.41E-04
FB3	0.00E+00	1.29E-05	9.45E-07	2.74E+01	3.05E-05	8.90E-02	1.68E-05	9.10E-03	3.68E-03	5.82E-04	1.72E-03	7.63E-04	7.84E-04	1.40E-03	1.24E-04	2.14E-08	9.35E-04	1.70E-03
FB4	0.00E+00	4.13E-05	2.79E-06	3.96E+01	2.17E-05	1.06E-01	3.65E-05	4.86E-02	1.02E-02	1.45E-03	3.64E-03	1.18E-03	1.23E-03	4.46E-03	1.52E-04	9.89E-09	2.41E-03	9.15E-03
FB5	0.00E+00	2.69E-05	2.01E-06	5.05E+01	5.33E-05	1.64E-01	3.22E-05	2.48E-02	8.75E-03	1.31E-03	3.22E-03	1.43E-03	1.48E-03	3.10E-03	2.22E-04	3.02E-08	1.75E-03	4.65E-03
FB6	0.00E+00	3.04E-05	2.31E-06	6.78E+01	7.63E-05	2.23E-01	4.02E-05	2.23E-02	9.17E-03	1.45E-03	4.06E-03	1.89E-03	1.94E-03	3.34E-03	3.08E-04	5.10E-08	2.12E-03	4.16E-03
FB7	0.00E+00	8.14E-06	5.05E-07	1.15E+01	1.12E-05	3.32E-02	9.20E-06	6.14E-03	1.91E-03	2.91E-04	9.95E-04	3.36E-04	3.45E-04	8.46E-04	4.94E-05	8.92E-09	6.51E-04	1.15E-03
FB8	0.00E+00	2.86E-05	1.80E-06	2.88E+01	2.71E-05	8.35E-02	2.90E-05	2.49E-02	7.34E-03	1.06E-03	3.07E-03	9.86E-04	1.01E-03	2.50E-03	1.19E-04	1.78E-08	2.05E-03	4.69E-03
G01	0.00E+00	8.10E-06	7.98E-07	3.19E+01	4.58E-05	1.27E-01	1.59E-05	2.09E-03	3.59E-03	5.92E-04	1.55E-03	9.45E-04	9.69E-04	4.10E-04	1.58E-04	2.93E-08	5.82E-04	3.73E-04
G02	0.00E+00	3.78E-05	2.88E-06	9.45E+01	1.02E-04	3.05E-01	5.16E-05	2.68E-02	9.61E-03	1.61E-03	5.25E-03	2.45E-03	2.52E-03	4.70E-03	4.29E-04	7.30E-08	2.73E-03	5.00E-03
G03	0.00E+00	9.47E-05	5.34E-06	1.82E+02	5.37E-05	2.94E-01	9.13E-05	1.04E-01	6.76E-03	1.57E-03	1.01E-02	2.57E-03	2.65E-03	2.28E-02	6.82E-04	1.12E-07	7.50E-03	1.96E-02
G04	0.00E+00	7.11E-05	4.32E-06	1.47E+02	5.77E-05	2.69E-01	7.09E-05	8.06E-02	5.81E-03	1.30E-03	7.65E-03	2.27E-03	2.34E-03	1.70E-02	5.64E-04	8.07E-08	5.31E-03	1.51E-02
G05	0.00E+00	6.70E-06	6.71E-07	2.89E+01	3.97E-05	1.19E-01	1.35E-05	1.77E-03	1.83E-03	3.56E-04	1.32E-03	8.13E-04	8.34E-04	3.74E-04	1.43E-04	2.72E-08	4.89E-04	3.12E-04
G06	0.00E+00	4.39E-07	4.72E-08	2.07E+00	2.99E-06	8.89E-03	9.61E-07	5.78E-05	1.35E-04	2.60E-05	9.30E-05	6.01E-05	6.17E-05	1.13E-05	1.04E-05	1.98E-09	3.13E-05	9.36E-06
G07	0.00E+00	6.05E-05	3.70E-06	8.17E+01	4.99E-05	1.80E-01	6.04E-05	5.56E-02	9.68E-03	1.57E-03	6.47E-03	1.95E-03	2.01E-03	8.34E-03	3.26E-04	5.02E-08	4.47E-03	1.04E-02
G08	0.00E+00	5.32E-06	4.86E-07	1.83E+01	2.45E-05	6.95E-02	9.28E-06	2.33E-03	2.01E-03	3.33E-04	9.13E-04	5.25E-04	5.38E-04	4.17E-04	8.85E-05	1.59E-08	3.75E-04	4.28E-04
G09	0.00E+00	1.47E-05	1.01E-06	1.69E+01	1.51E-05	5.25E-02	1.47E-05	1.51E-02	4.43E-03	6.31E-04	1.48E-03	5.44E-04	5.60E-04	1.43E-03	7.00E-05	7.63E-09	9.25E-04	2.83E-03
G10	0.00E+00	9.92E-05	6.50E-06	1.60E+02	1.33E-04	4.26E-01	1.09E-04	8.50E-02	2.01E-02	3.21E-03	1.14E-02	4.09E-03	4.21E-03	1.28E-02	6.76E-04	1.09E-07	7.24E-03	1.60E-02
H01	0.00E+00	4.48E-04	3.03E-05	1.09E+03	7.43E-04	2.74E+00	5.22E-04	4.48E-01	5.09E-02	1.08E-02	5.46E-02	2.10E-02	2.16E-02	9.40E-02	4.56E-03	7.14E-07	3.30E-02	8.40E-02
H02	0.00E+00	3.66E-04	2.53E-05	9.03E+02	6.13E-04	2.26E+00	4.24E-04	3.79E-01	4.20E-02	8.84E-03	4.39E-02	1.73E-02	1.78E-02	7.79E-02	3.76E-03	5.51E-07	2.61E-02	7.12E-02
H03	0.00E+00	3.59E-04	2.51E-05	9.03E+02	6.39E-04	2.32E+00	4.24E-04	3.65E-01	4.26E-02	8.93E-03	4.38E-02	1.77E-02	1.82E-02	7.50E-02	3.78E-03	5.64E-07	2.57E-02	6.84E-02
H04	0.00E+00	2.96E-04	2.00E-05	7.06E+02	4.37E-04	1.66E+00	3.31E-04	3.19E-01	3.18E-02	6.75E-03	3.44E-02	1.30E-02	1.34E-02	6.53E-02	2.89E-03	4.08E-07	2.11E-02	5.98E-02
H05	0.00E+00	1.20E-04	8.33E-06	3.02E+02	2.17E-04	7.83E-01	1.43E-04	1.20E-01	1.43E-02	3.01E-03	1.48E-02	5.94E-03	6.11E-03	2.48E-02	1.27E-03	1.96E-07	8.73E-03	2.24E-02
H06	0.00E+00	1.76E-04	1.17E-05	4.03E+02	2.20E-04	8.80E-01	1.88E-04	1.99E-01	1.75E-02	3.74E-03	1.96E-02	7.05E-03	7.26E-03	4.05E-02	1.62E-03	2.12E-07	1.23E-02	3.74E-02
H07	0.00E+00	3.14E-04	2.14E-05	7.59E+02	4.88E-04	1.83E+00	3.56E-04	3.33E-01	3.47E-02	7.33E-03	3.70E-02	1.42E-02	1.46E-02	6.83E-02	3.13E-03	4.49E-07	2.24E-02	6.24E-02
H08	0.00E+00	5.23E-05	3.58E-06	8.28E+01	7.70E-05	2.45E-01	5.82E-05	4.84E-02	1.40E-02	2.11E-03	6.00E-03	2.30E-03	2.37E-03	6.16E-03	3.53E-04	4.93E-08	3.63E-03	9.09E-03
H09	0.00E+00	9.08E-05	6.61E-06	1.22E+02	1.25E-04	4.13E-01	9.65E-05	9.15E-02	3.27E-02	4.62E-03	9.53E-03	3.94E-03	4.05E-03	8.68E-03	5.22E-04	5.74E-08	5.47E-03	1.72E-02
H10	0.00E+00	6.27E-05	4.44E-06	1.10E+02	9.17E-05	3.02E-01	6.87E-05	6.02E-02	1.41E-02	2.23E-03	6.95E-03	2.78E-03	2.86E-03	8.57E-03	4.66E-04	6.22E-08	4.09E-03	1.13E-02
H11	0.00E+00	3.58E-05	2.75E-06	7.42E+01	7.33E-05	2.28E-01	4.30E-05	3.28E-02	9.90E-03	1.55E-03	4.25E-03	1.96E-03	2.02E-03	4.60E-03	3.27E-04	4.48E-08	2.23E-03	6.14E-03
H12	0.00E+00	8.21E-05	5.02E-06	1.91E+02	1.30E-04	4.84E-01	9.74E-05	6.87E-02	8.87E-03	1.93E-03	1.07E-02	3.65E-03	3.74E-03	1.61E-02	8.02E-04	1.63E-07	6.91E-03	1.29E-02
H13	0.00E+00	1.37E-04	8.67E-06	2.56E+02	2.07E-04	6.72E-01	1.58E-04	1.07E-01	2.34E-02	4.04E-03	1.70E-02	5.97E-03	6.13E-03	1.97E-02	1.09E-03	2.00E-07	1.08E-02	2.00E-02
H14	0.00E+00	7.37E-06	5.08E-07	1.16E+01	7.67E-06	2.81E-02	7.39E-06	7.81E-03	1.44E-03	2.28E-04	7.46E-04	2.74E-04	2.83E-04	1.09E-03	4.68E-05	5.17E-09	4.63E-04	1.47E-03
H15	0.00E+00	5.93E-05	5.08E-06	1.90E+02	2.49E-04	7.06E-01	9.96E-05	2.54E-02	2.06E-02	3.42E-03	1.00E-02	5.39E-03	5.53E-03	4.89E-03	9.12E-04	1.71E-07	4.47E-03	4.68E-03
H16	0.00E+00	4.60E-05	4.27E-06	1.54E+02	2.18E-04	5.99E-01	8.14E-05	1.84E-02	2.21E-02	3.46E-03	7.97E-03	4.65E-03	4.77E-03	2.99E-03	7.49E-04	1.34E-07	3.19E-03	3.37E-03

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1464	0.00E+00	1.44E-05	1.57E-06	6.21E+01	1.03E-04	3.50E-01	3.26E-05	1.73E-03	3.56E-03	7.80E-04	3.18E-03	2.05E-03	2.10E-03	1.58E-04	3.15E-04	7.11E-08	1.07E-03	2.70E-04
17	A01	110	Passenger Truck	2451	0.00E+00	3.00E-05	3.22E-06	1.45E+02	2.03E-04	6.90E-01	6.53E-05	4.20E-03	6.05E-03	1.37E-03	6.31E-03	4.08E-03	4.19E-03	8.87E-04	7.27E-04	1.41E-07	2.12E-03	6.86E-04
17	A01	110	Single Unit Short Haul Truck	314	0.00E+00	2.89E-05	1.17E-06	5.39E+01	2.64E-05	1.30E-01	3.32E-05	1.40E-02	1.74E-03	5.12E-04	4.07E-03	8.54E-04	8.66E-04	5.61E-03	2.17E-04	9.66E-08	3.20E-03	2.60E-03
17	A01	110	Single Unit Long Haul Truck	14	0.00E+00	1.25E-06	4.87E-08	2.26E+00	1.06E-06	5.17E-03	1.43E-06	5.82E-04	7.80E-05	2.20E-05	1.77E-04	3.52E-05	3.58E-05	2.34E-04	9.11E-06	3.94E-09	1.41E-04	1.09E-04
17	A01	110	Combination Short Haul Truck	232	0.00E+00	4.12E-05	3.18E-06	8.14E+01	8.00E-08	6.03E-02	2.86E-05	6.60E-02	2.03E-03	5.94E-04	2.27E-03	9.15E-04	9.49E-04	1.29E-02	2.72E-04	0.00E+00	1.32E-03	1.24E-02
17	A01	110	Combination Long Haul Truck	211	0.00E+00	5.58E-05	3.54E-06	7.35E+01	2.72E-07	6.95E-02	4.36E-05	7.18E-02	1.97E-03	4.34E-04	4.43E-03	1.09E-03	1.13E-03	1.18E-02	2.46E-04	0.00E+00	3.29E-03	1.35E-02
17	A02	110	Passenger Car	1510	0.00E+00	1.49E-05	1.62E-06	6.40E+01	1.06E-04	3.61E-01	3.36E-05	1.79E-03	3.67E-03	8.04E-04	3.28E-03	2.11E-03	2.17E-03	1.63E-04	3.25E-04	7.34E-08	1.11E-03	2.79E-04
17	A02	110	Passenger Truck	2528	0.00E+00	3.10E-05	3.33E-06	1.49E+02	2.09E-04	7.12E-01	6.73E-05	4.33E-03	6.24E-03	1.41E-03	6.51E-03	4.21E-03	4.32E-03	9.15E-04	7.50E-04	1.45E-07	2.19E-03	7.07E-04
17	A02	110	Single Unit Short Haul Truck	360	0.00E+00	3.32E-05	1.34E-06	6.18E+01	3.02E-05	1.49E-01	3.81E-05	1.60E-02	1.99E-03	5.87E-04	4.66E-03	9.79E-04	9.93E-04	6.43E-03	2.49E-04	1.11E-07	3.67E-03	2.99E-03
17	A02	110	Single Unit Long Haul Truck	16	0.00E+00	1.43E-06	5.58E-08	2.59E+00	1.22E-06	5.93E-03	1.64E-06	6.67E-04	8.95E-05	2.53E-05	2.03E-04	4.04E-05	4.10E-05	2.68E-04	1.04E-05	4.52E-09	1.62E-04	1.24E-04
17	A02	110	Combination Short Haul Truck	220	0.00E+00	3.90E-05	3.01E-06	7.72E+01	7.59E-08	5.72E-02	2.71E-05	6.26E-02	1.93E-03	5.63E-04	2.15E-03	8.67E-04	9.00E-04	1.23E-02	2.58E-04	0.00E+00	1.25E-03	1.18E-02
17	A02	110	Combination Long Haul Truck	200	0.00E+00	5.29E-05	3.36E-06	6.97E+01	2.57E-07	6.59E-02	4.13E-05	6.81E-02	1.87E-03	4.11E-04	4.20E-03	1.03E-03	1.08E-03	1.12E-02	2.33E-04	0.00E+00	3.12E-03	1.28E-02
17	A03	110	Passenger Car	1931	0.00E+00	1.91E-05	2.07E-06	8.19E+01	1.35E-04	4.61E-01	4.30E-05	2.29E-03	4.69E-03	1.03E-03	4.19E-03	2.70E-03	2.77E-03	2.09E-04	4.15E-04	9.38E-08	1.42E-03	3.57E-04
17	A03	110	Passenger Truck	3234	0.00E+00	3.96E-05	4.25E-06	1.91E+02	2.67E-04	9.11E-01	8.61E-05	5.54E-03	7.98E-03	1.80E-03	8.33E-03	5.39E-03	5.52E-03	1.17E-03	9.60E-04	1.86E-07	2.80E-03	9.05E-04
17	A03	110	Single Unit Short Haul Truck	300	0.00E+00	2.76E-05	1.12E-06	5.15E+01	2.51E-05	1.24E-01	3.17E-05	1.33E-02	1.66E-03	4.89E-04	3.88E-03	8.15E-04	8.27E-04	5.35E-03	2.07E-04	9.22E-08	3.05E-03	2.49E-03
17	A03	110	Single Unit Long Haul Truck	13	0.00E+00	1.19E-06	4.64E-08	2.16E+00	1.01E-06	4.93E-03	1.36E-06	5.55E-04	7.45E-05	2.10E-05	1.69E-04	3.36E-05	3.42E-05	2.23E-04	8.69E-06	3.76E-09	1.35E-04	1.04E-04
17	A03	110	Combination Short Haul Truck	209	0.00E+00	3.71E-05	2.86E-06	7.34E+01	7.21E-08	5.43E-02	2.58E-05	5.94E-02	1.83E-03	5.35E-04	2.04E-03	8.24E-04	8.55E-04	1.17E-02	2.45E-04	0.00E+00	1.19E-03	1.12E-02
17	A03	110	Combination Long Haul Truck	190	0.00E+00	5.02E-05	3.19E-06	6.62E+01	2.45E-07	6.26E-02	3.92E-05	6.47E-02	1.78E-03	3.91E-04	3.99E-03	9.82E-04	1.02E-03	1.06E-02	2.22E-04	0.00E+00	2.96E-03	1.22E-02
17	A04	110	Passenger Car	1734	0.00E+00	1.71E-05	1.86E-06	7.35E+01	1.21E-04	4.14E-01	3.86E-05	2.05E-03	4.21E-03	9.24E-04	3.76E-03	2.43E-03	2.49E-03	1.87E-04	3.73E-04	8.43E-08	1.27E-03	3.20E-04
17	A04	110	Passenger Truck	2904	0.00E+00	3.56E-05	3.82E-06	1.71E+02	2.40E-04	8.18E-01	7.73E-05	4.98E-03	7.17E-03	1.62E-03	7.48E-03	4.84E-03	4.96E-03	1.05E-03	8.62E-04	1.67E-07	2.52E-03	8.12E-04
17	A04	110	Single Unit Short Haul Truck	352	0.00E+00	3.25E-05	1.31E-06	6.05E+01	2.96E-05	1.46E-01	3.73E-05	1.57E-02	1.95E-03	5.75E-04	4.56E-03	9.58E-04	9.72E-04	6.29E-03	2.44E-04	1.08E-07	3.59E-03	2.92E-03
17	A04	110	Single Unit Long Haul Truck	16	0.00E+00	1.40E-06	5.46E-08	2.54E+00	1.19E-06	5.80E-03	1.60E-06	6.53E-04	8.76E-05	2.47E-05	1.99E-04	3.95E-05	4.02E-05	2.62E-04	1.02E-05	4.42E-09	1.59E-04	1.22E-04
17	A04	110	Combination Short Haul Truck	211	0.00E+00	3.75E-05	2.89E-06	7.41E+01	7.28E-08	5.49E-02	2.60E-05	6.00E-02	1.85E-03	5.40E-04	2.06E-03	8.32E-04	8.63E-04	1.18E-02	2.48E-04	0.00E+00	1.20E-03	1.13E-02
17	A04	110	Combination Long Haul Truck	192	0.00E+00	5.07E-05	3.22E-06	6.69E+01	2.47E-07	6.33E-02	3.96E-05	6.53E-02	1.80E-03	3.95E-04	4.03E-03	9.92E-04	1.03E-03	1.07E-02	2.24E-04	0.00E+00	2.99E-03	1.23E-02
17	A05	110	Passenger Car	1526	0.00E+00	1.51E-05	1.64E-06	6.47E+01	1.07E-04	3.65E-01	3.40E-05	1.81E-03	3.71E-03	8.13E-04	3.31E-03	2.14E-03	2.19E-03	1.65E-04	3.28E-04	7.41E-08	1.12E-03	2.82E-04
17	A05	110	Passenger Truck	2555	0.00E+00	3.13E-05	3.36E-06	1.51E+02	2.11E-04	7.19E-01	6.81E-05	4.38E-03	6.30E-03	1.42E-03	6.58E-03	4.26E-03	4.36E-03	9.25E-04	7.58E-04	1.47E-07	2.21E-03	7.15E-04
17	A05	110	Single Unit Short Haul Truck	238	0.00E+00	2.20E-05	8.90E-07	4.10E+01	2.00E-05	9.88E-02	2.52E-05	1.06E-02	1.32E-03	3.89E-04	3.09E-03	6.48E-04	6.58E-04	4.26E-03	1.65E-04	7.33E-08	2.43E-03	1.98E-03
17	A05	110	Single Unit Long Haul Truck	11	0.00E+00	9.48E-07	3.69E-08	1.72E+00	8.05E-07	3.92E-03	1.08E-06	4.42E-04	5.92E-05	1.67E-05	1.34E-04	2.68E-05	2.72E-05	1.78E-04	6.92E-06	2.99E-09	1.07E-04	8.24E-05
17	A05	110	Combination Short Haul Truck	175	0.00E+00	3.10E-05	2.40E-06	6.14E+01	6.03E-08	4.55E-02	2.16E-05	4.97E-02	1.53E-03	4.48E-04	1.71E-03	6.90E-04	7.16E-04	9.76E-03	2.05E-04	0.00E+00	9.94E-04	9.37E-03
17	A05	110	Combination Long Haul Truck	159	0.00E+00	4.21E-05	2.67E-06	5.54E+01	2.05E-07	5.24E-02	3.28E-05	5.41E-02	1.49E-03	3.27E-04	3.34E-03	8.22E-04	8.55E-04	8.89E-03	1.86E-04	0.00E+00	2.48E-03	1.02E-02
17	A06	110	Passenger Car	1597	0.00E+00	1.58E-05	1.71E-06	6.77E+01	1.12E-04	3.82E-01	3.55E-05	1.89E-03	3.88E-03	8.50E-04	3.47E-03	2.23E-03	2.29E-03	1.73E-04	3.43E-04	7.76E-08	1.17E-03	2.95E-04
17	A06	110	Passenger Truck	2674	0.00E+00	3.28E-05	3.52E-06	1.58E+02	2.21E-04	7.53E-01	7.12E-05	4.58E-03	6.60E-03	1.49E-03	6.88E-03	4.45E-03	4.57E-03	9.68E-04	7.94E-04	1.54E-07	2.32E-03	7.48E-04
17	A06	110	Single Unit Short Haul Truck	289	0.00E+00	2.66E-05	1.08E-06	4.97E+01	2.43E-05	1.20E-01	3.06E-05	1.29E-02	1.60E-03	4.72E-04	3.74E-03	7.86E-04	7.98E-04	5.16E-03	2.00E-04	8.90E-08	2.95E-03	2.40E-03
17	A06	110	Single Unit Long Haul Truck	13	0.00E+00	1.15E-06	4.48E-08	2.08E+00	9.76E-07	4.76E-03	1.31E-06	5.36E-04	7.19E-05	2.03E-05	1.63E-04	3.24E-05	3.30E-05	2.15E-04	8.39E-06	3.63E-09	1.30E-04	9.99E-05
17	A06	110	Combination Short Haul Truck	196	0.00E+00	3.48E-05	2.68E-06	6.88E+01	6.76E-08	5.09E-02	2.42E-05	5.57E-02	1.72E-03	5.02E-04	1.91E-03	7.72E-04	8.01E-04	1.09E-02	2.30E-04	0.00E+00	1.11E-03	1.05E-02
17	A06	110	Combination Long Haul Truck	178	0.00E+00	4.71E-05	2.99E-06	6.21E+01	2.29E-07	5.87E-02	3.68E-05	6.06E-02	1.67E-03	3.66E-04	3.74E-03	9.21E-04	9.58E-04	9.96E-03	2.08E-04	0.00E+00	2.78E-03	1.14E-02
17	A07	110	Passenger Car	1511	0.00E+00	1.49E-05	1.62E-06	6.41E+01	1.06E-04	3.61E-01	3.36E-05	1.79E-03	3.67E-03	8.05E-04	3.28E-03	2.12E-03	2.17E-03	1.63E-04	3.25E-04	7.34E-08	1.11E-03	2.79E-04
17	A07	110	Passenger Truck	2531	0.00E+00	3.10E-05	3.33E-06	1.49E+02	2.09E-04	7.13E-01	6.74E-05	4.34E-03	6.24E-03	1.41E-03	6.52E-03	4.21E-03	4.32E-03	9.16E-04	7.51E-04	1.46E-07	2.19E-03	7.08E-04
17	A07	110	Single Unit Short Haul Truck	239	0.00E+00	2.21E-05	8.93E-07	4.11E+01	2.01E-05	9.92E-02	2.53E-05	1.06E-02	1.32E-03	3.91E-04	3.10E-03	6.51E-04	6.60E-04	4.27E-03	1.66E-04	7.36E-08	2.44E-03	1.99E-03
17	A07	110	Single Unit Long Haul Truck	11	0.00E+00	9.52E-07	3.71E-08	1.72E+00	8.08E-07	3.94E-03	1.09E-06	4.44E-04	5.95E-05	1.68E-05	1.35E-04	2.69E-05	2.73E-05	1.78E-04	6.94E-06	3.00E-09	1.08E-04	8.27E-05
17	A07	110	Combination Short Haul Truck	186	0.00E+00	3.31E-05	2.55E-06	6.54E+01	6.43E-08	4.85E-02	2.30E-05	5.30E-02	1.63E-03	4.77E-04	1.82E-03	7.35E-04	7.63E-04	1.04E-02	2.19E-04	0.00E+00	1.06E-03	9.99E-03
17	A07	110	Combination Long Haul Truck	170	0.00E+00	4.48E-05	2.84E-06	5.91E+01	2.18E-07	5.59E-02	3.50E-05	5.77E-02	1.59E-03	3.49E-04	3.56E-03	8.76E-04	9.12E-04	9.48E-03	1.98E-04	0.00E+00	2.65E-03	1.09E-02
17	A08	110	Passenger Car	1192	0.00E+00	1.18E-05	1.28E-06	5.06E+01	8.35E-05	2.85E-01	2.65E-05	1.41E-03	2.90E-03	6.35E-04	2.59E-03	1.67E-03	1.71E-03	1.29E-04	2.56E-04	5.79E-08	8.75E-04	2.20E-04
17	A08	110	Passenger Truck	1997	0.00E+00	2.45E-05	2.63E-06	1.18E+02	1.65E-04	5.62E-01	5.32E-05	3.42E-03	4.93E-03	1.11E-03	5.14E-03	3.33E-03	3.41E-03	7.23E-04	5.93E-04	1.15E-07	1.73E-03	5.59E-04
17	A08	110	Single Unit Short Haul Truck	306	0.00E+00	2.81E-05	1.14E-06	5.25E+01	2.56E-05	1.27E-01	3.23E-05	1.36E-02	1.69E-03	4.98E-04	3.96E-03	8.30E-04	8.42E-04	5.45E-03	2.11E-04	9.40E-08	3.11E-03	2.53E-03
17	A08	110	Single Unit Long Haul Truck	13	0.00E+00	1.21E-06	4.73E-08	2.20E+00	1.03E-06	5.03E-03	1.39E-06	5.66E-04	7.59E-05	2.14E-05	1.72E-04	3.43E-05	3.48E-05	2.27E-04	8.86E-06	3.83E-09	1.37E-04	1.06E-04
17	A08	110	Combination Short Haul Truck	214	0.00E+00	3.81E-05	2.94E-06	7.54E+01	7.41E-08	5.58E-02	2.65E-05	6.11E-02	1.88E-03	5.50E-04	2.10E-03	8.47E-04	8.78E-04	1.20E-02	2.52E-04	0.00E+00	1.22E-03	1.15E-02
17	A08	110	Combination Long Haul Truck	196	0.00E+00	5.16E-05	3.28E-06	6.80E+01	2.51E-07	6.44E-02	4.03E-05	6.64E-02	1.83E-03	4.02E-04	4.10E-03	1.01E-03	1.05E-03	1.09E-02	2.28E-04	0.00E+00	3.05E-03	1.25E-02
17	A09	110	Passenger Car	1556	0.00E+00	1.54E-05	1.67E-06	6.60E+01	1.09E-04	3.72E-01	3.46E-05	1.84E-03	3.78E-03	8.29E-04	3.38E-03	2.18E-03	2.23E-03	1.68E-04	3.35E-04	7.56E-08	1.14E-03	2.87E-04
17	A09	110	Passenger Truck	2605	0.00E+00	3.19E-05	3.43E-06	1.54E+02	2.15E-04	7.34E-01	6.94E-05	4.46E-03	6.43E-03	1.45E-03	6.71E-03	4.34E-03	4.45E-03	9.43E-04	7.73E-04	1.50E-07	2.26E-03	7.29E-04
17	A09	110	Single Unit Short Haul Truck	280	0.00E+00	2.58E-05	1.04E-06	4.80E+01	2.35E-05	1.16E-01	2.96E-05	1.24E-02	1.55E-03	4.56E-04	3.62E-03	7.60E-04	7.71E-04	4.99E-03	1.93E-04	8.60E-08	2.85E-03	2.32E-03
17	A09	110	Single Unit Long Haul Truck	12	0.00E+00	1.11E-06	4.33E-08	2.01E+00	9.44E-07	4.60E-03	1.27E-06	5.18E-04	6.95E-05	1.96E-05	1.58E-04	3.14E-05	3.19E-05	2.08E-04	8.11E-06	3.51E-09	1.26E-04	9.66E-05
17	A09	110	Combination Short Haul Truck	222	0.00E+00	3.95E-05	3.05E-06	7.81E+01	7.68E-08	5.79E-02	2.75E-05	6.33E-02	1.95E-03	5.70E-04	2.18E-03	8.78E-04	9.11E-04	1.24E-02	2.61E-04	0.00E+00	1.26E-03	1.19E-02
17	A09	110	Combination Long Haul Truck	203	0.00E+00	5.35E-05	3.40E-06	7.05E+01	2.60E-07	6.67E-02	4.18E-05	6.89E-02	1.89E-03	4.16E-04	4.25E-03	1.05E-03	1.09E-03	1.13E-02	2.36E-04	0.00E+00	3.16E-03	1.30E-02
17	A10	110	Passenger Car	1366	0.00E+00	1.35E-05	1.47E-06	5.79E+01	9.57E-05	3.26E-01	3.04E-05	1.62E-03	3.32E-03	7.28E-04	2.97E-03	1.91E-03	1.96E-03	1.48E-04	2.94E-04	6.64E-08	1.00E-03	2.52E-04
17	A10	110	Passenger Truck	2288	0.00E+00	2.80E-05	3.01E-06	1.35E+02	1.89E-04	6.44E-01	6.09E-05	3.92E-03	5.65E-03	1.28E-03	5.89E-03	3.81E-03	3.91E-03	8.28E-04	6.79E-04	1.32E-07	1.98E-03	6.40E-04
17	A10	110	Single Unit Short Haul Truck	369	0.00E+00	3.40E-05	1.38E-06	6.33E+01	3.09E-05	1.53E-01	3.90E-05	1.64E-02	2.04E-03	6.01E-04	4.77E-03	1.00E-03	1.02E-03	6.58E-03	2.55E-04	1.13E-07	3.76E-03	3.06E-03
17	A10	110	Single Unit Long Haul Truck	16	0.00E+00	1.47E-06	5.71E-08	2.65E+00	1.24E-06	6.07E-03	1.67E-06	6.83E-04	9.16E-05	2.59E-05	2.08E-04	4.14E-05	4.20E-05	2.75E-04	1.07E-05	4.63E-09	1.66E-04	1.27E-04
17	A10	110	Combination Short Haul Truck	263	0.00E+00	4.68E-05	3.61E-06	9.25E+01	9.09E-08	6.85E-02	3.25E-05	7.49E-02	2.31E-03	6.75E-04	2.57E-03	1.04E-03	1.08E-03	1.47E-02	3.09E-04	0.00E+00	1.50E-03	1.41E-02
17	A10	110	Combination Long Haul Truck	240	0.00E+00	6.33E-05	4.02E-06	8.35E+01	3.08E-07	7.90E-02	4.95E-05	8.15E-02	2.24E-03	4.93E-04	5.03E-03	1.24E-03	1.29E-03	1.34E-02	2.80E-04	0.00E+00	3.74E-03	1.54E-02
17	A11	110	Passenger Car	1507	0.00E+00	1.49E-05	1.62E-06	6.39E+01	1.06E-04	3.60E-01	3.36E-05	1.78E-03	3.66E-03	8.03E-04	3.27E-03	2.11E-03	2.17E-03	1.63E-04	3.24E-04	7.33E-08	1.11E-03	2.78E-04
17	A11	110	Passenger Truck	2525	0.00E+00	3.09E-05	3.32E-06	1.49E+02	2.09E-04	7.11E-01	6.72E-05	4.33E-03	6.23E-03	1.41E-03	6.50E-03	4.20E-03	4.31E-03	9.14E-04	7.49E-04	1.45E-07	2.19E-03	7.06E-04
17	A11	110	Single Unit Short Haul Truck	325	0.00E+00	2.99E-05	1.21E-06	5.58E+01	2.72E-05	1.35E-01	3.43E-05	1.44E-02	1.80E-03	5.30E-04	4.20E-03	8.82E-04	8.95E-04	5.80E-03	2.24E-04	9.99E-08	3.31E-03	2.69E-03
17	A11	110	Single Unit Long Haul Truck	14	0.00E+00	1.29E-06	5.03E-08	2.34E+00	1.10E-06	5.34E-03	1.47E-06	6.01E-04	8.07E-05	2.28E-05	1.83E-04	3.64E-05	3.70E-05	2.42E-04	9.42E-06	4.07E-09	1.46E-04	1.12E-04
17	A11	110	Combination Short Haul Truck	271	0.00E+00	4.82E-05	3.72E-06	9.52E+01	9.36E-08	7.05E-02	3.35E-05	7.72E-02	2.38E-03	6.95E-04	2.65E-03	1.07E-03	1.11E-03	1.51E-02	3.18E-04	0.00E+00	1.54E-03	1.45E-02
17	A11	110	Combination Long Haul Truck	247	0.00E+00	6.52E-05	4.14E-06	8.59E+01	3.17E-07	8.13E-02	5.09E-05	8.39E-02	2.31E-03	5.07E-04	5.18E-03	1.28E-03	1.33E-03	1.38E-02	2.88E-04	0.00E+00	3.85E-03	1.58E-02
17	A12	110	Passenger Car	1746	0.00E+00	1.72E-05	1.87E-06	7.40E+01	1.22E-04	4.17E-01	3.89E-05	2.07E-03	4.24E-03	9.30E-04	3.79E-03	2.44E-03	2.51E-03	1.89E-04	3.76E-04	8.48E-08	1.28E-03	3.22E-04
17	A12	110	Passenger Truck	2924	0.00E+00	3.58E-05	3.85E-06	1.73E+02	2.42E-04	8.23E-01	7.79E-05	5.01E-03	7.21E-03	1.63E-03	7.53E-03	4.87E-03	4.99E-03	1.06E-03	8.68E-04	1.68E-07	2.53E-03	8.18E-04
17	A12	110	Single Unit Short Haul Truck	414	0.00E+00	3.81E-05	1.54E-06	7.10E+01	3.47E-05	1.71E-01	4.37E-05	1.84E-02	2.29E-03	6.75E-04	5.36E-03	1.12E-03	1.14E-03	7.39E-03	2.86E-04	1.27E-07	4.22E-03	3.43E-03
17	A12	110	Single Unit Long Haul Truck	18	0.00E+00	1.65E-06	6.41E-08	2.98E+00	1.40E-06	6.81E-03	1.88E-06	7.66E-04	1.03E-04	2.90E-05	2.33E-04	4.64E-05	4.71E-05	3.08E-04	1.20E-05	5.19E-09	1.86E-04	1.43E-04
17	A12	110	Combination Short Haul Truck	316	0.00E+00	5.62E-05	4.34E-06	1.11E+02	1.09E-07	8.24E-02	3.91E-05	9.01E-02	2.78E-03	8.11E-04	3.10E-03	1.25E-03	1.30E-03	1.77E-02	3.72E-04	0.00E+00	1.80E-03	1.70E-02
17	A12	110	Combination Long Haul Truck	289	0.00E+00	7.62E-05	4.83E-06	1.00E+02	3.71E-07	9.50E-02	5.95E-05	9.80E-02	2.70E-03	5.92E-04	6.04E-03	1.49E-03	1.55E-03	1.61E-02	3.36E-04	0.00E+00	4.50E-03	1.85E-02
17	A13	110	Passenger Car	1702	0.00E+00	1.68E-05	1.83E-06	7.21E+01	1.19E-04	4.07E-01	3.79E-05	2.01E-03	4.13E-03	9.06E-04	3.69E-03	2.38E-03	2.44E-03	1.84E-04	3.66E-04	8.27E-08	1.25E-03	3.14E-04
17	A13	110	Passenger Truck	2849	0.00E+00	3.49E-05	3.75E-06	1.68E+02	2.35E-04	8.02E-01	7.59E-05	4.88E-03	7.03E-03	1.59E-03	7.34E-03	4.75E-03	4.87E-03	1.03E-03	8.46E-04	1.64E-07	2.47E-03	7.97E-04
17	A13	110	Single Unit Short Haul Truck	329	0.00E+00	3.03E-05	1.23E-06	5.66E+01	2.76E-05	1.36E-01	3.48E-05	1.47E-02	1.82E-03	5.37E-04	4.27E-03	8.95E-04	9.09E-04	5.88E-03	2.28E-04	1.01E-07	3.36E-03	2.73E-03
17	A13	110	Single Unit Long Haul Truck	15	0.00E+00	1.31E-06	5.10E-08	2.37E+00	1.11E-06	5.42E-03	1.50E-06	6.10E-04	8.19E-05	2.31E-05	1.86E-04	3.70E-05	3.75E-05	2.45E-04	9.55E-06	4.13E-09	1.48E-04	1.14E-04
17	A13	110	Combination Short Haul Truck	271	0.00E+00	4.82E-05	3.72E-06	9.52E+01	9.36E-08	7.05E-02	3.35E-05	7.72E-02	2.38E-03	6.95E-04	2.65E-03	1.07E-03	1.11E-03	1.51E-02	3.18E-04	0.00E+00	1.54E-03	1.45E-02
17	A13	110	Combination Long Haul Truck	247	0.00E+00	6.52E-05	4.14E-06	8.59E+01	3.17E-07	8.13E-02	5.09E-05	8.39E-02	2.31E-03	5.07E-04	5.18E-03	1.28E-03	1.33E-03	1.38E-02	2.88E-04	0.00E+00	3.85E-03	1.58E-02
17	A14	110	Passenger Car	1547	0.00E+00	1.53E-05	1.66E-06	6.56E+01	1.08E-04	3.70E-01	3.44E-05	1.83E-03	3.76E-03	8.24E-04	3.36E-03	2.16E-03	2.22E-03	1.67E-04	3.33E-04	7.52E-08	1.14E-03	2.86E-04
17	A14	110	Passenger Truck	2590	0.00E+00	3.17E-05	3.41E-06	1.53E+02	2.14E-04	7.29E-01	6.90E-05	4.44E-03	6.39E-03	1.44E-03	6.67E-03	4.31E-03	4.42E-03	9.38E-04	7.69E-04	1.49E-07	2.25E-03	7.25E-04
17	A14	110	Single Unit Short Haul Truck	441	0.00E+00	4.06E-05	1.64E-06	7.57E+01	3.70E-05	1.83E-01	4.66E-05	1.96E-02	2.44E-03	7.19E-04	5.70E-03	1.20E-03	1.21E-03	7.86E-03	3.05E-04	1.36E-07	4.49E-03	3.65E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	1.75E-06	6.82E-08	3.17E+00	1.49E-06	7.25E-03	2.00E-06	8.16E-04	1.09E-04	3.09E-05	2.48E-04	4.94E-05	5.02E-05	3.28E-04	1.28E-05	5.53E-09	1.98E-04

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A18	110	Single Unit Long Haul Truck	20	0.00E+00	1.80E-06	7.02E-08	3.26E+00	1.53E-06	7.45E-03	2.06E-06	8.39E-04	1.13E-04	3.18E-05	2.55E-04	5.08E-05	5.16E-05	3.37E-04	1.31E-05	5.68E-09	2.04E-04	1.56E-04
17	A18	110	Combination Short Haul Truck	339	0.00E+00	6.02E-05	4.65E-06	1.19E+02	1.17E-07	8.83E-02	4.19E-05	9.65E-02	2.97E-03	8.69E-04	3.32E-03	1.34E-03	1.39E-03	1.89E-02	3.98E-04	0.00E+00	1.93E-03	1.82E-02
17	A18	110	Combination Long Haul Truck	309	0.00E+00	8.16E-05	5.18E-06	1.08E+02	3.97E-07	1.02E-01	6.37E-05	1.05E-01	2.89E-03	6.35E-04	6.47E-03	1.60E-03	1.66E-03	1.73E-02	3.60E-04	0.00E+00	4.82E-03	1.98E-02
17	A19	110	Passenger Car	1250	0.00E+00	1.23E-05	1.34E-06	5.30E+01	8.75E-05	2.99E-01	2.78E-05	1.48E-03	3.04E-03	6.66E-04	2.71E-03	1.75E-03	1.79E-03	1.35E-04	2.69E-04	6.07E-08	9.17E-04	2.31E-04
17	A19	110	Passenger Truck	2092	0.00E+00	2.56E-05	2.75E-06	1.24E+02	1.73E-04	5.89E-01	5.57E-05	3.59E-03	5.16E-03	1.17E-03	5.39E-03	3.48E-03	3.57E-03	7.57E-04	6.21E-04	1.20E-07	1.81E-03	5.85E-04
17	A19	110	Single Unit Short Haul Truck	336	0.00E+00	3.10E-05	1.25E-06	5.77E+01	2.82E-05	1.39E-01	3.55E-05	1.50E-02	1.86E-03	5.48E-04	4.35E-03	9.14E-04	9.27E-04	6.00E-03	2.32E-04	1.03E-07	3.42E-03	2.79E-03
17	A19	110	Single Unit Long Haul Truck	15	0.00E+00	1.34E-06	5.21E-08	2.42E+00	1.13E-06	5.53E-03	1.53E-06	6.23E-04	8.35E-05	2.36E-05	1.90E-04	3.77E-05	3.83E-05	2.50E-04	9.75E-06	4.22E-09	1.51E-04	1.16E-04
17	A19	110	Combination Short Haul Truck	284	0.00E+00	5.05E-05	3.90E-06	9.98E+01	9.81E-08	7.40E-02	3.51E-05	8.09E-02	2.49E-03	7.28E-04	2.78E-03	1.12E-03	1.16E-03	1.59E-02	3.34E-04	0.00E+00	1.62E-03	1.52E-02
17	A19	110	Combination Long Haul Truck	259	0.00E+00	6.84E-05	4.34E-06	9.01E+01	3.33E-07	8.52E-02	5.34E-05	8.80E-02	2.42E-03	5.32E-04	5.43E-03	1.34E-03	1.39E-03	1.45E-02	3.02E-04	0.00E+00	4.03E-03	1.66E-02
17	A20	110	Passenger Car	1313	0.00E+00	1.30E-05	1.41E-06	5.57E+01	9.20E-05	3.14E-01	2.92E-05	1.55E-03	3.19E-03	7.00E-04	2.85E-03	1.84E-03	1.89E-03	1.42E-04	2.82E-04	6.38E-08	9.64E-04	2.43E-04
17	A20	110	Passenger Truck	2200	0.00E+00	2.70E-05	2.89E-06	1.30E+02	1.82E-04	6.19E-01	5.86E-05	3.77E-03	5.43E-03	1.23E-03	5.66E-03	3.66E-03	3.76E-03	7.96E-04	6.53E-04	1.26E-07	1.91E-03	6.15E-04
17	A20	110	Single Unit Short Haul Truck	430	0.00E+00	3.96E-05	1.60E-06	7.38E+01	3.61E-05	1.78E-01	4.55E-05	1.91E-02	2.38E-03	7.01E-04	5.57E-03	1.17E-03	1.19E-03	7.68E-03	2.97E-04	1.32E-07	4.38E-03	3.57E-03
17	A20	110	Single Unit Long Haul Truck	19	0.00E+00	1.71E-06	6.66E-08	3.09E+00	1.45E-06	7.08E-03	1.95E-06	7.97E-04	1.07E-04	3.02E-05	2.43E-04	4.82E-05	4.90E-05	3.20E-04	1.25E-05	5.40E-09	1.94E-04	1.49E-04
17	A20	110	Combination Short Haul Truck	323	0.00E+00	5.74E-05	4.43E-06	1.14E+02	1.12E-07	8.42E-02	3.99E-05	9.20E-02	2.84E-03	8.29E-04	3.16E-03	1.28E-03	1.32E-03	1.81E-02	3.80E-04	0.00E+00	1.84E-03	1.73E-02
17	A20	110	Combination Long Haul Truck	295	0.00E+00	7.78E-05	4.94E-06	1.03E+02	3.79E-07	9.70E-02	6.08E-05	1.00E-01	2.75E-03	6.05E-04	6.17E-03	1.52E-03	1.58E-03	1.65E-02	3.44E-04	0.00E+00	4.59E-03	1.89E-02
16	B05	100	Passenger Car	601	0.00E+00	5.62E-06	6.10E-07	2.45E+01	3.99E-05	1.19E-01	1.27E-05	6.48E-04	1.92E-03	3.68E-04	1.23E-03	7.96E-04	8.17E-04	7.15E-05	1.24E-04	2.61E-08	4.18E-04	1.01E-04
16	B05	100	Passenger Truck	1007	0.00E+00	1.16E-05	1.24E-06	5.66E+01	7.74E-05	2.30E-01	2.50E-05	1.62E-03	3.35E-03	6.51E-04	2.41E-03	1.56E-03	1.60E-03	3.71E-04	2.84E-04	5.17E-08	8.11E-04	2.66E-04
16	B05	100	Single Unit Short Haul Truck	137	0.00E+00	1.30E-05	4.81E-07	2.24E+01	9.96E-06	4.62E-02	1.48E-05	5.75E-03	8.85E-04	2.29E-04	1.87E-03	3.45E-04	3.51E-04	2.29E-03	9.05E-05	3.70E-08	1.52E-03	1.07E-03
16	B05	100	Single Unit Long Haul Truck	6	0.00E+00	5.66E-07	2.03E-08	9.41E-01	4.12E-07	1.89E-03	6.40E-07	2.41E-04	4.02E-05	9.95E-06	8.16E-05	1.45E-05	1.48E-05	9.57E-05	3.82E-06	1.51E-09	6.68E-05	4.49E-05
16	B05	100	Combination Short Haul Truck	44	0.00E+00	6.29E-06	4.64E-07	1.46E+01	1.67E-08	1.13E-02	4.50E-06	1.13E-02	4.26E-04	1.08E-04	3.83E-04	1.36E-04	1.41E-04	2.33E-03	4.90E-05	0.00E+00	2.42E-04	2.13E-03
16	B05	100	Combination Long Haul Truck	40	0.00E+00	8.88E-06	5.01E-07	1.33E+01	5.66E-08	1.32E-02	7.33E-06	1.21E-02	4.26E-04	8.69E-05	8.15E-04	1.61E-04	1.68E-04	2.13E-03	4.44E-05	0.00E+00	6.47E-04	2.28E-03
16	B06	100	Passenger Car	1156	0.00E+00	1.08E-05	1.17E-06	4.72E+01	7.66E-05	2.29E-01	2.43E-05	1.25E-03	3.70E-03	7.08E-04	2.37E-03	1.53E-03	1.57E-03	1.37E-04	2.39E-04	5.02E-08	8.03E-04	1.95E-04
16	B06	100	Passenger Truck	1936	0.00E+00	2.23E-05	2.39E-06	1.09E+02	1.49E-04	4.42E-01	4.81E-05	3.11E-03	6.45E-03	1.25E-03	4.64E-03	3.00E-03	3.08E-03	7.13E-04	5.46E-04	9.94E-08	1.56E-03	5.11E-04
16	B06	100	Single Unit Short Haul Truck	450	0.00E+00	4.28E-05	1.58E-06	7.35E+01	3.27E-05	1.52E-01	4.85E-05	1.89E-02	2.91E-03	7.53E-04	6.13E-03	1.13E-03	1.15E-03	7.53E-03	2.98E-04	1.21E-07	4.98E-03	3.52E-03
16	B06	100	Single Unit Long Haul Truck	20	0.00E+00	1.86E-06	6.68E-08	3.09E+00	1.35E-06	6.21E-03	2.10E-06	7.92E-04	1.32E-04	3.27E-05	2.68E-04	4.78E-05	4.86E-05	3.14E-04	1.25E-05	4.97E-09	2.20E-04	1.48E-04
16	B06	100	Combination Short Haul Truck	53	0.00E+00	7.63E-06	5.64E-07	1.78E+01	2.02E-08	1.37E-02	5.46E-06	1.37E-02	5.17E-04	1.31E-04	4.65E-04	1.65E-04	1.71E-04	2.83E-03	5.94E-05	0.00E+00	2.94E-04	2.59E-03
16	B06	100	Combination Long Haul Truck	49	0.00E+00	1.08E-05	6.08E-07	1.61E+01	6.87E-08	1.60E-02	8.90E-06	1.47E-02	5.18E-04	1.05E-04	9.90E-04	1.96E-04	2.04E-04	2.58E-03	5.40E-05	0.00E+00	7.85E-04	2.77E-03
16	B07	100	Passenger Car	864	0.00E+00	8.07E-06	8.77E-07	3.53E+01	5.73E-05	1.71E-01	1.82E-05	9.32E-04	2.76E-03	5.30E-04	1.78E-03	1.14E-03	1.17E-03	1.03E-04	1.79E-04	3.75E-08	6.01E-04	1.45E-04
16	B07	100	Passenger Truck	1448	0.00E+00	1.67E-05	1.79E-06	8.13E+01	1.11E-04	3.30E-01	3.60E-05	2.33E-03	4.82E-03	9.36E-04	3.47E-03	2.25E-03	2.30E-03	5.33E-04	4.08E-04	7.43E-08	1.17E-03	3.82E-04
16	B07	100	Passenger Car	1516	0.00E+00	1.42E-05	1.54E-06	6.19E+01	1.01E-04	3.00E-01	3.19E-05	1.64E-03	4.85E-03	9.29E-04	3.11E-03	2.01E-03	2.06E-03	1.80E-04	3.13E-04	6.58E-08	1.05E-03	2.55E-04
16	B08	100	Passenger Truck	2540	0.00E+00	2.93E-05	3.13E-06	1.43E+02	1.95E-04	5.80E-01	6.31E-05	4.08E-03	8.46E-03	1.64E-03	6.09E-03	3.94E-03	4.04E-03	9.36E-04	7.16E-04	1.30E-07	2.05E-03	6.71E-04
16	B08	100	Single Unit Short Haul Truck	5	0.00E+00	4.55E-07	1.68E-08	7.82E-01	3.48E-07	1.61E-03	5.16E-07	2.01E-04	3.09E-05	8.01E-06	6.53E-05	1.20E-05	1.23E-05	8.01E-05	3.17E-06	1.29E-09	5.30E-05	3.75E-05
16	B08	100	Combination Short Haul Truck	1	0.00E+00	1.50E-07	1.11E-08	3.49E-01	3.97E-10	2.69E-04	1.07E-07	2.69E-04	1.01E-05	2.57E-06	9.12E-06	3.23E-06	3.35E-06	5.54E-05	1.17E-06	0.00E+00	5.77E-06	5.08E-05
16	B08	100	Combination Long Haul Truck	1	0.00E+00	2.11E-07	1.19E-08	3.16E-01	1.35E-09	3.14E-04	1.75E-07	2.88E-04	1.01E-05	2.07E-06	1.94E-05	3.84E-06	4.01E-06	5.07E-05	1.06E-06	0.00E+00	1.54E-05	5.43E-05
16	B09	100	Passenger Car	1470	0.00E+00	1.37E-05	1.49E-06	6.00E+01	9.74E-05	2.91E-01	3.10E-05	1.59E-03	4.70E-03	9.00E-04	3.02E-03	1.95E-03	2.00E-03	1.75E-04	3.04E-04	6.38E-08	1.02E-03	2.47E-04
16	B09	100	Passenger Truck	2461	0.00E+00	2.84E-05	3.04E-06	1.38E+02	1.89E-04	5.62E-01	6.12E-05	3.96E-03	8.20E-03	1.59E-03	5.90E-03	3.82E-03	3.92E-03	9.07E-04	6.94E-04	1.26E-07	1.98E-03	6.50E-04
16	B09	100	Single Unit Short Haul Truck	65	0.00E+00	6.19E-06	2.29E-07	1.06E+01	4.74E-06	2.20E-02	7.02E-06	2.73E-03	4.21E-04	1.09E-04	8.87E-04	1.64E-04	1.67E-04	1.09E-03	4.30E-05	1.76E-08	7.21E-04	5.10E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	2.69E-07	9.67E-09	4.47E-01	1.96E-07	8.98E-04	3.04E-07	1.15E-04	1.91E-05	4.73E-06	3.88E-05	6.91E-06	7.04E-06	4.55E-05	1.82E-06	7.19E-10	3.18E-05	2.14E-05
16	B09	100	Combination Short Haul Truck	75	0.00E+00	1.07E-05	7.90E-07	2.49E+01	2.84E-08	1.93E-02	7.66E-06	1.93E-02	7.25E-04	1.84E-04	6.52E-04	2.31E-04	2.40E-04	3.96E-03	8.33E-05	0.00E+00	4.12E-04	3.63E-03
16	B09	100	Combination Long Haul Truck	68	0.00E+00	1.51E-05	8.53E-07	2.26E+01	9.64E-08	2.24E-02	1.25E-05	2.06E-02	7.26E-04	1.48E-04	1.39E-03	2.75E-04	2.86E-04	3.62E-03	7.56E-05	0.00E+00	1.10E-03	3.88E-03
16	B10	100	Passenger Car	1305	0.00E+00	1.22E-05	1.32E-06	5.33E+01	8.65E-05	2.58E-01	2.75E-05	1.41E-03	4.17E-03	7.99E-04	2.68E-03	1.73E-03	1.77E-03	1.55E-04	2.70E-04	5.66E-08	9.07E-04	2.20E-04
16	B10	100	Passenger Truck	2185	0.00E+00	2.52E-05	2.70E-06	1.23E+02	1.68E-04	4.99E-01	5.43E-05	3.51E-03	7.28E-03	1.41E-03	5.24E-03	3.39E-03	3.48E-03	8.05E-04	6.16E-04	1.12E-07	1.76E-03	5.77E-04
16	B10	100	Single Unit Short Haul Truck	84	0.00E+00	8.01E-06	2.96E-07	1.38E+01	6.13E-06	2.84E-02	9.08E-06	3.54E-03	5.45E-04	1.41E-04	1.15E-03	2.12E-04	2.16E-04	1.41E-03	5.57E-05	2.27E-08	9.33E-04	6.59E-04
16	B10	100	Single Unit Long Haul Truck	4	0.00E+00	3.48E-07	1.25E-08	5.79E-01	2.54E-07	1.16E-03	3.94E-07	1.48E-04	2.48E-05	6.12E-06	5.02E-05	8.94E-06	9.11E-06	5.89E-05	2.35E-06	9.30E-10	4.11E-05	2.77E-05
16	B10	100	Combination Short Haul Truck	85	0.00E+00	1.22E-05	9.01E-07	2.84E+01	3.24E-08	2.20E-02	8.73E-06	2.20E-02	8.26E-04	2.09E-04	7.43E-04	2.63E-04	2.73E-04	4.51E-03	9.50E-05	0.00E+00	4.70E-04	4.14E-03
16	B10	100	Combination Long Haul Truck	78	0.00E+00	1.72E-05	9.72E-07	2.57E+01	1.10E-07	2.56E-02	1.42E-05	2.35E-02	8.27E-04	1.69E-04	1.58E-03	3.13E-04	3.26E-04	4.13E-03	8.62E-05	0.00E+00	1.25E-03	4.43E-03
16	B11	100	Passenger Car	798	0.00E+00	7.45E-06	8.10E-07	3.26E+01	5.29E-05	1.58E-01	1.68E-05	8.61E-04	2.55E-03	4.89E-04	1.64E-03	1.06E-03	1.08E-03	9.49E-05	1.65E-04	3.46E-08	5.54E-04	1.34E-04
16	B11	100	Passenger Truck	1336	0.00E+00	1.54E-05	1.65E-06	7.51E+01	1.03E-04	3.05E-01	3.32E-05	2.15E-03	4.45E-03	8.64E-04	3.20E-03	2.07E-03	2.13E-03	4.92E-04	3.77E-04	6.86E-08	1.08E-03	3.53E-04
16	B11	100	Single Unit Short Haul Truck	20	0.00E+00	1.91E-06	7.06E-08	3.28E+00	1.46E-06	6.78E-03	2.17E-06	8.44E-04	1.30E-04	3.36E-05	2.74E-04	5.06E-05	5.15E-05	3.36E-04	1.33E-05	5.43E-09	2.23E-04	1.57E-04
16	B11	100	Single Unit Long Haul Truck	1	0.00E+00	8.30E-08	2.99E-09	1.38E-01	6.05E-08	2.77E-04	9.39E-08	3.54E-05	5.91E-06	1.46E-06	1.20E-05	2.13E-06	2.17E-06	1.41E-05	5.61E-07	2.22E-10	9.81E-06	6.60E-06
16	B11	100	Combination Short Haul Truck	24	0.00E+00	3.44E-06	2.54E-07	8.02E+00	9.13E-09	6.20E-03	2.46E-06	6.20E-03	2.33E-04	5.91E-05	2.10E-04	7.42E-05	7.71E-05	1.27E-03	2.68E-05	0.00E+00	1.33E-04	1.17E-03
16	B11	100	Combination Long Haul Truck	22	0.00E+00	4.86E-06	2.74E-07	7.26E+00	3.10E-08	7.21E-03	4.01E-06	6.63E-03	2.33E-04	4.76E-05	4.46E-04	8.84E-05	9.21E-05	1.17E-03	2.43E-05	0.00E+00	3.54E-04	1.25E-03
16	B12	100	Passenger Car	327	0.00E+00	3.06E-06	3.32E-07	1.34E+01	2.17E-05	6.47E-02	6.89E-06	3.53E-04	1.05E-03	2.00E-04	6.72E-04	4.33E-04	4.45E-04	3.89E-05	6.76E-05	1.42E-08	2.27E-04	5.50E-05
16	B12	100	Passenger Truck	548	0.00E+00	6.31E-06	6.76E-07	3.08E+01	4.21E-05	1.25E-01	1.36E-05	8.81E-04	1.83E-03	3.54E-04	1.31E-03	8.50E-04	8.72E-04	2.02E-04	1.54E-04	2.81E-08	4.41E-04	1.45E-04
16	B12	100	Single Unit Short Haul Truck	40	0.00E+00	3.82E-06	1.41E-07	6.57E+00	2.92E-06	1.36E-02	4.33E-06	1.69E-03	2.60E-04	6.73E-05	5.48E-04	1.01E-04	1.03E-04	6.73E-04	2.66E-05	1.09E-08	4.45E-04	3.15E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	1.66E-07	5.97E-09	2.76E-01	1.21E-07	5.55E-04	1.88E-07	7.08E-05	1.18E-05	2.92E-06	2.40E-05	4.27E-06	4.35E-06	2.81E-05	1.12E-06	4.44E-10	1.96E-05	1.32E-05
16	B12	100	Combination Short Haul Truck	28	0.00E+00	4.04E-06	2.98E-07	9.41E+00	1.07E-08	7.27E-03	2.89E-06	7.27E-03	2.74E-04	6.94E-05	2.46E-04	8.71E-05	9.05E-05	1.50E-03	3.15E-05	0.00E+00	1.56E-04	1.37E-03
16	B12	100	Combination Long Haul Truck	26	0.00E+00	5.71E-06	3.22E-07	8.53E+00	3.64E-08	8.47E-03	4.71E-06	7.79E-03	2.74E-04	5.58E-05	5.24E-04	1.04E-04	1.08E-04	1.37E-03	2.86E-05	0.00E+00	4.16E-04	1.47E-03
16	B13	100	Passenger Car	695	0.00E+00	6.50E-06	7.06E-07	2.84E+01	4.61E-05	1.38E-01	1.46E-05	7.50E-04	2.22E-03	4.26E-04	1.43E-03	9.21E-04	9.45E-04	8.27E-05	1.44E-04	3.02E-08	4.83E-04	1.17E-04
16	B13	100	Passenger Truck	1165	0.00E+00	1.34E-05	1.44E-06	6.54E+01	8.95E-05	2.66E-01	2.89E-05	1.87E-03	3.88E-03	7.53E-04	2.79E-03	1.81E-03	1.85E-03	4.29E-04	3.28E-04	5.98E-08	9.38E-04	3.08E-04
16	B13	100	Single Unit Short Haul Truck	41	0.00E+00	3.91E-06	1.45E-07	6.73E+00	2.99E-06	1.39E-02	4.44E-06	1.73E-03	2.66E-04	6.89E-05	5.61E-04	1.04E-04	1.05E-04	6.89E-04	2.72E-05	1.11E-08	4.56E-04	3.22E-04
16	B13	100	Single Unit Long Haul Truck	2	0.00E+00	1.70E-07	6.11E-09	2.83E-01	1.24E-07	5.68E-04	1.92E-07	7.25E-05	1.21E-05	2.99E-06	2.45E-05	4.37E-06	4.45E-06	2.88E-05	1.15E-06	4.55E-10	2.01E-05	1.35E-05
16	B13	100	Combination Short Haul Truck	47	0.00E+00	6.66E-06	4.92E-07	1.55E+01	1.77E-08	1.20E-02	4.77E-06	1.20E-02	4.51E-04	1.14E-04	4.06E-04	1.44E-04	1.49E-04	2.47E-03	5.19E-05	0.00E+00	2.57E-04	2.26E-03
16	B13	100	Combination Long Haul Truck	42	0.00E+00	9.41E-06	5.31E-07	1.41E+01	6.00E-08	1.40E-02	7.77E-06	1.28E-02	4.52E-04	9.20E-05	8.63E-04	1.71E-04	1.78E-04	2.25E-03	4.71E-05	0.00E+00	6.85E-04	2.42E-03
16	B14	100	Passenger Car	717	0.00E+00	6.70E-06	7.28E-07	2.93E+01	4.76E-05	1.42E-01	1.51E-05	7.74E-04	2.29E-03	4.40E-04	1.47E-03	9.50E-04	9.75E-04	8.53E-05	1.48E-04	3.11E-08	4.99E-04	1.21E-04
16	B14	100	Passenger Truck	1202	0.00E+00	1.38E-05	1.48E-06	6.75E+01	9.23E-05	2.74E-01	2.99E-05	1.93E-03	4.00E-03	7.77E-04	2.88E-03	1.86E-03	1.91E-03	4.43E-04	3.39E-04	6.17E-08	9.68E-04	3.17E-04
16	B14	100	Single Unit Short Haul Truck	45	0.00E+00	4.28E-06	1.58E-07	7.35E+00	3.27E-06	1.52E-02	4.85E-06	1.89E-03	2.91E-04	7.53E-05	6.13E-04	1.13E-04	1.15E-04	7.53E-04	2.98E-05	1.21E-08	4.98E-04	3.52E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	1.86E-07	6.68E-09	3.09E-01	1.35E-07	6.21E-04	2.10E-07	7.92E-05	1.32E-05	3.27E-06	2.68E-05	4.78E-06	4.86E-06	3.14E-05	1.25E-06	4.97E-10	2.20E-05	1.48E-05
16	B14	100	Combination Short Haul Truck	41	0.00E+00	5.84E-06	4.31E-07	1.36E+01	1.55E-08	1.05E-02	4.18E-06	1.05E-02	3.95E-04	1.00E-04	3.56E-04	1.26E-04	1.31E-04	2.16E-03	4.55E-05	0.00E+00	2.25E-04	1.98E-03
16	B14	100	Combination Long Haul Truck	37	0.00E+00	8.25E-06	4.65E-07	1.23E+01	5.26E-08	1.22E-02	6.81E-06	1.12E-02	3.96E-04	8.06E-05	7.57E-04	1.50E-04	1.56E-04	1.98E-03	4.13E-05	0.00E+00	6.01E-04	2.12E-03
53	C11	70	Passenger Car	311	0.00E+00	3.36E-06	3.65E-07	1.37E+01	2.39E-05	6.69E-02	7.58E-06	3.20E-04	2.36E-03	3.69E-04	7.39E-04	4.77E-04	4.89E-04	5.29E-05	6.90E-05	1.43E-08	2.50E-04	4.99E-05
53	C11	70	Passenger Truck	521	0.00E+00	7.02E-06	7.47E-07	3.09E+01	4.51E-05	1.18E-01	1.47E-05	9.04E-04	4.21E-03	6.55E-04	1.41E-03	9.17E-04	9.39E-04	2.30E-04	1.54E-04	2.70E-08	4.72E-04	1.51E-04
53	C11	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.74E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.25E-04
53	C11	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.49E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.40E-05
53	C11	70	Combination Short Haul Truck	35	0.00E+00	8.88E-06	6.61E-07	1.20E+01	2.26E-08	1.28E-02	6.33E-06	1.32E-02	1.25E-03	2.09E-04	5.33E-04	1.93E-04	2.00E-04	1.91E-03	4.01E-05	0.00E+00	3.33E-04	2.49E-03
53	C11	70	Combination Long Haul Truck	31	0.00E+00	1.22E-05	6.93E-07	1.13E+01	7.64E-08	1.53E-02	1.00E-05	1.42E-02	1.30E-03	1.96E-04	1.11E-03	2.23E-04	2.32E-04	1.81E-03	3.78E-05	0.00E+00	8.76E-04	2.67E-03
52	C12	60	Passenger Car	580	0.00E+00	6.82E-06	7.41E-07	2.64E+01	4.84E-05	1.35E-01	1.54E-05	5.75E-04	5.70E-03	8.54E-04	1.50E-03	9.67E-04	9.92E-04	1.15E-04	1.33E-04	2.70E-08	5.07E-04	8.98E-05
52	C12	60	Passenger Truck	972	0.00E+00	1.44E-05	1.52E-06	5.89E+01	9.07E-05	2.32E-01	2.98E-05	1.76E-03	1.01E-02	1.50E-03	2.84E-03	1.85E-03	1.90E-03	4.61E-04	2.93E-04	4.94E-08	9.47E-04	2.97E-04
52	C12	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.30E-04
52	C12	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.32E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.95E-06
52	C12	60	Combination Short Haul Truck	12	0.00E+00	3.36E-06	2.47E-07	4.05E+00	9.20E-09	5.02E-03	2.41E-06	5.11E-03	5.86E-04	9.17E-05	2.07E-04	7.22E-05	7.49E-05	6.44E-04	1.36E-05	0.00E+00	1.32E-04	9.63E-04
52	C12	60	Combination Long Haul Truck	10	0.00E+00	4.61E-06	2.52E-07	3.83E+00	3.11E-08	6.03E-03	3.86E-06	5.44E-03	6.15E-04	8.89E-05	4.38E-04	8.23E-05	8.58E-05	6.14E-04	1.28E-05	0.00E+00	3.52E-04	1.02E-03
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Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C17	70	Passenger Car	556	0.00E+00	6.01E-06	6.53E-07	2.45E+01	4.26E-05	1.20E-01	1.35E-05	5.72E-04	4.22E-03	6.60E-04	1.32E-03	8.52E-04	8.74E-04	9.45E-05	1.23E-04	2.56E-08	4.47E-04	8.93E-05
53	C17	70	Passenger Truck	931	0.00E+00	1.25E-05	1.33E-06	5.52E+01	8.06E-05	2.11E-01	2.64E-05	1.62E-03	7.53E-03	1.17E-03	2.52E-03	1.64E-03	1.68E-03	4.10E-04	2.75E-04	4.82E-08	8.43E-04	2.70E-04
53	C17	70	Single Unit Short Haul Truck	61	0.00E+00	1.08E-05	4.38E-07	1.00E+01	7.23E-06	1.82E-02	1.17E-05	4.28E-03	9.74E-04	1.79E-04	1.45E-03	2.77E-04	2.83E-04	1.02E-03	4.09E-05	1.65E-08	1.17E-03	8.01E-04
53	C17	70	Single Unit Long Haul Truck	3	0.00E+00	4.69E-07	1.89E-08	4.26E-01	3.11E-07	7.64E-04	5.10E-07	1.84E-04	4.46E-05	7.99E-06	6.35E-05	1.20E-05	1.22E-05	4.31E-05	1.73E-06	6.95E-10	5.12E-05	3.45E-05
53	C17	70	Combination Short Haul Truck	31	0.00E+00	8.08E-06	6.01E-07	1.09E+01	2.05E-08	1.17E-02	5.75E-06	1.20E-02	1.14E-03	1.90E-04	4.85E-04	1.75E-04	1.82E-04	1.73E-03	3.65E-05	0.00E+00	3.03E-04	2.27E-03
53	C17	70	Combination Long Haul Truck	29	0.00E+00	1.11E-05	6.30E-07	1.02E+01	6.94E-08	1.39E-02	9.11E-06	1.29E-02	1.19E-03	1.79E-04	1.01E-03	2.02E-04	2.11E-04	1.64E-03	3.43E-05	0.00E+00	7.96E-04	2.43E-03
52	C18	60	Passenger Car	81	0.00E+00	9.53E-07	1.04E-07	3.70E+00	6.76E-06	1.89E-02	2.15E-06	8.05E-05	7.97E-04	1.19E-04	2.10E-04	1.35E-04	1.39E-04	1.61E-05	1.85E-05	3.78E-09	7.09E-05	1.26E-05
52	C18	60	Passenger Truck	136	0.00E+00	2.01E-06	2.13E-07	8.23E+00	1.27E-05	3.24E-02	4.17E-06	2.45E-04	1.41E-03	2.10E-04	3.98E-04	2.59E-04	2.65E-04	6.45E-05	4.09E-05	6.90E-09	1.32E-04	4.15E-05
52	C18	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.37E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
52	C18	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.06E-04
52	C18	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.73E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.26E-04
50	C19	40	Passenger Car	7	0.00E+00	9.65E-08	1.05E-08	3.55E-01	6.85E-07	1.91E-03	2.18E-07	6.14E-06	1.16E-04	1.63E-05	2.12E-05	1.37E-05	1.40E-05	2.00E-06	1.76E-06	3.27E-10	7.18E-06	9.58E-07
50	C19	40	Passenger Truck	11	0.00E+00	2.13E-07	2.24E-08	7.72E-01	1.28E-06	3.15E-03	4.28E-07	2.36E-05	2.06E-04	2.86E-05	4.04E-05	2.64E-05	2.70E-05	6.83E-06	3.81E-06	5.56E-10	1.34E-05	4.10E-06
53	C20	70	Passenger Car	179	0.00E+00	1.94E-06	2.10E-07	7.89E+00	1.37E-05	3.85E-02	4.36E-06	1.84E-04	1.36E-03	2.13E-04	4.26E-04	2.74E-04	2.82E-04	3.04E-05	3.97E-05	8.25E-09	1.44E-04	2.87E-05
53	C20	70	Passenger Truck	300	0.00E+00	4.04E-06	4.30E-07	1.78E+01	2.60E-05	6.79E-02	8.49E-06	5.20E-04	2.43E-03	3.77E-04	8.12E-04	5.28E-04	5.41E-04	1.32E-04	8.86E-05	1.55E-08	2.71E-04	8.71E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.26E-05
53	C20	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.40E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
53	C20	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.50E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.83E-04
50	C21	40	Passenger Car	360	0.00E+00	5.17E-06	5.62E-07	1.90E+01	3.67E-05	1.02E-01	1.17E-05	3.29E-04	6.22E-03	8.74E-04	1.14E-03	7.33E-04	7.52E-04	1.07E-04	9.45E-05	1.75E-08	3.85E-04	5.13E-05
50	C21	40	Passenger Truck	604	0.00E+00	1.14E-05	1.20E-06	4.14E+01	6.87E-05	1.69E-01	2.29E-05	1.27E-03	1.10E-02	1.53E-03	2.16E-03	1.41E-03	1.45E-03	3.66E-04	2.04E-04	2.98E-08	7.16E-04	2.19E-04
50	C21	40	Single Unit Short Haul Truck	65	0.00E+00	2.21E-05	9.83E-07	1.23E+01	1.53E-05	1.93E-02	2.36E-05	8.88E-03	2.56E-03	4.00E-04	2.84E-03	5.92E-04	6.03E-04	1.26E-03	5.01E-05	2.13E-08	2.24E-03	1.66E-03
50	C21	40	Single Unit Long Haul Truck	3	0.00E+00	9.69E-07	4.29E-08	5.31E-01	6.69E-07	8.40E-04	1.04E-06	3.87E-04	1.15E-04	1.78E-05	1.25E-04	2.59E-05	2.64E-05	5.43E-05	2.17E-06	9.23E-10	9.85E-05	7.26E-05
50	C21	40	Combination Short Haul Truck	16	0.00E+00	7.82E-06	5.84E-07	6.72E+00	1.94E-08	1.11E-02	5.56E-06	1.14E-02	1.58E-03	2.35E-04	4.65E-04	1.70E-04	1.76E-04	1.07E-03	2.25E-05	0.00E+00	2.89E-04	2.14E-03
50	C21	40	Combination Long Haul Truck	15	0.00E+00	1.04E-05	5.87E-07	6.45E+00	6.61E-08	1.34E-02	8.57E-06	1.20E-02	1.64E-03	2.30E-04	9.52E-04	1.89E-04	1.97E-04	1.04E-03	2.16E-05	0.00E+00	7.55E-04	2.26E-03
52	C22	60	Passenger Car	105	0.00E+00	1.23E-06	1.34E-07	4.79E+00	8.76E-06	2.45E-02	2.78E-06	1.04E-04	1.03E-03	1.55E-04	2.71E-04	1.75E-04	1.80E-04	2.08E-05	2.40E-05	4.89E-09	9.18E-05	1.63E-05
52	C22	60	Passenger Truck	176	0.00E+00	2.60E-06	2.76E-07	1.07E+01	1.64E-05	4.20E-02	5.40E-06	3.18E-04	1.83E-03	2.72E-04	5.15E-04	3.35E-04	3.43E-04	8.35E-05	5.30E-05	8.94E-09	1.72E-04	5.37E-05
52	C22	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
52	C22	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.97E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.31E-04
52	C22	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.42E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
53	C23	70	Passenger Car	480	0.00E+00	5.19E-06	5.64E-07	2.12E+01	3.69E-05	1.03E-01	1.17E-05	4.94E-04	3.64E-03	5.70E-04	1.14E-03	7.36E-04	7.56E-04	8.16E-05	1.07E-04	2.21E-08	3.86E-04	7.71E-05
53	C23	70	Passenger Truck	805	0.00E+00	1.08E-05	1.15E-06	4.77E+01	6.96E-05	1.82E-01	2.28E-05	1.40E-03	6.51E-03	1.01E-03	2.18E-03	1.42E-03	1.45E-03	3.55E-04	2.38E-04	4.17E-08	7.28E-04	2.34E-04
53	C23	70	Single Unit Short Haul Truck	31	0.00E+00	5.39E-06	2.19E-07	5.02E+00	3.62E-06	9.10E-03	5.87E-06	2.14E-03	4.87E-04	8.94E-05	7.27E-04	1.39E-04	1.41E-04	5.10E-04	2.04E-05	8.25E-09	5.86E-04	4.01E-04
53	C23	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	9.45E-09	2.13E-01	1.56E-07	3.82E-04	2.55E-07	9.21E-05	2.23E-05	4.00E-06	3.17E-05	5.98E-06	6.10E-06	2.15E-05	8.67E-07	3.48E-10	2.56E-05	1.72E-05
53	C23	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.82E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
53	C23	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.22E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.17E-03
52	C24	60	Passenger Car	70	0.00E+00	8.21E-07	8.93E-08	3.18E+00	5.83E-06	1.63E-02	1.85E-06	6.93E-05	6.86E-04	1.03E-04	1.81E-04	1.16E-04	1.20E-04	1.39E-05	1.60E-05	3.26E-09	6.11E-05	1.08E-05
52	C24	60	Passenger Truck	117	0.00E+00	1.73E-06	1.84E-07	7.09E+00	1.09E-05	2.79E-02	3.59E-06	2.11E-04	1.22E-03	1.81E-04	3.43E-04	2.23E-04	2.28E-04	5.56E-05	3.53E-05	5.95E-09	1.14E-04	3.58E-05
52	C24	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.32E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.38E-05
50	C25	40	Passenger Car	253	0.00E+00	3.63E-06	3.95E-07	1.33E+01	2.58E-05	7.17E-02	8.19E-06	2.31E-04	4.36E-03	6.14E-04	7.99E-04	5.15E-04	5.28E-04	7.53E-05	6.64E-05	1.23E-08	2.70E-04	3.60E-05
50	C25	40	Passenger Truck	424	0.00E+00	8.01E-06	8.42E-07	2.91E+01	4.82E-05	1.19E-01	1.61E-05	8.89E-04	7.74E-03	1.07E-03	1.52E-03	9.92E-04	1.02E-03	2.57E-04	1.43E-04	2.09E-08	5.03E-04	1.54E-04
50	C25	40	Single Unit Short Haul Truck	36	0.00E+00	1.23E-05	5.49E-07	6.87E+00	8.54E-06	1.08E-02	1.32E-05	4.96E-03	1.43E-03	2.24E-04	1.59E-03	3.31E-04	3.37E-04	7.02E-04	2.80E-05	1.19E-08	1.25E-03	9.30E-04
50	C25	40	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.40E-08	2.97E-01	3.74E-07	4.69E-04	5.79E-07	2.16E-04	6.42E-05	9.96E-06	6.98E-05	1.45E-05	1.48E-05	3.03E-05	1.21E-06	5.16E-10	5.50E-05	4.06E-05
50	C25	40	Combination Short Haul Truck	30	0.00E+00	1.44E-05	1.07E-06	1.24E+01	3.56E-08	2.03E-02	1.02E-05	2.09E-02	2.90E-03	4.32E-04	8.55E-04	3.12E-04	3.24E-04	1.96E-03	4.13E-05	0.00E+00	5.31E-04	3.93E-03
50	C25	40	Combination Long Haul Truck	27	0.00E+00	1.91E-05	1.08E-06	1.19E+01	1.21E-07	2.47E-02	1.58E-05	2.20E-02	3.01E-03	4.23E-04	1.75E-03	3.48E-04	3.62E-04	1.90E-03	3.98E-05	0.00E+00	1.39E-03	4.15E-03
53	C26	70	Passenger Car	343	0.00E+00	3.71E-06	4.03E-07	1.51E+01	2.63E-05	7.38E-02	8.36E-06	3.53E-04	2.60E-03	4.08E-04	8.16E-04	5.26E-04	5.40E-04	5.83E-05	7.61E-05	1.58E-08	2.76E-04	5.51E-05
53	C26	70	Passenger Truck	575	0.00E+00	7.75E-06	8.24E-07	3.41E+01	4.97E-05	1.30E-01	1.63E-05	9.97E-04	4.65E-03	7.23E-04	1.56E-03	1.01E-03	1.04E-03	2.53E-04	1.70E-04	2.98E-08	5.20E-04	1.67E-04
53	C26	70	Single Unit Short Haul Truck	46	0.00E+00	8.09E-06	3.29E-07	7.53E+00	5.42E-06	1.37E-02	8.80E-06	3.21E-03	7.31E-04	1.34E-04	1.09E-03	2.08E-04	2.12E-04	7.65E-04	3.06E-05	1.24E-08	8.79E-04	6.01E-04
53	C26	70	Single Unit Long Haul Truck	2	0.00E+00	3.52E-07	1.42E-08	3.19E-01	2.33E-07	5.73E-04	3.83E-07	1.38E-04	3.34E-05	6.00E-06	4.76E-05	8.98E-06	9.15E-06	3.23E-05	1.30E-06	5.21E-10	3.84E-05	2.59E-05
53	C26	70	Combination Short Haul Truck	29	0.00E+00	7.54E-06	5.61E-07	1.02E+01	1.91E-08	1.09E-02	5.37E-06	1.12E-02	1.06E-03	1.77E-04	4.52E-04	1.63E-04	1.70E-04	1.62E-03	3.41E-05	0.00E+00	2.83E-04	2.12E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.03E-05	5.88E-07	9.56E+00	6.48E-08	1.30E-02	8.50E-06	1.20E-02	1.11E-03	1.67E-04	9.40E-04	1.89E-04	1.97E-04	1.53E-03	3.20E-05	0.00E+00	7.43E-04	2.26E-03
50	C27	40	Passenger Car	194	0.00E+00	2.78E-06	3.02E-07	1.02E+01	1.97E-05	5.49E-02	6.26E-06	1.77E-04	3.34E-03	4.69E-04	6.11E-04	3.94E-04	4.04E-04	5.76E-05	5.08E-05	9.41E-09	2.07E-04	2.76E-05
50	C27	40	Passenger Truck	324	0.00E+00	6.13E-06	6.44E-07	2.22E+01	3.69E-05	9.07E-02	1.23E-05	6.80E-04	5.92E-03	8.22E-04	1.16E-03	7.59E-04	7.77E-04	1.96E-04	1.10E-04	1.60E-08	3.85E-04	1.18E-04
50	C27	40	Single Unit Short Haul Truck	29	0.00E+00	9.75E-06	4.34E-07	5.43E+00	6.74E-06	8.51E-03	1.04E-05	3.92E-03	1.13E-03	1.77E-04	1.25E-03	2.61E-04	2.66E-04	5.54E-04	2.21E-05	9.38E-09	9.87E-04	7.34E-04
50	C27	40	Single Unit Long Haul Truck	1	0.00E+00	4.27E-07	1.89E-08	2.34E-01	2.95E-07	3.70E-04	4.57E-07	1.71E-04	5.07E-05	7.86E-06	5.51E-05	1.14E-05	1.16E-05	2.39E-05	9.56E-07	4.07E-10	4.34E-05	3.20E-05
50	C27	40	Combination Short Haul Truck	10	0.00E+00	5.05E-06	3.77E-07	4.34E+00	1.25E-08	7.14E-03	3.59E-06	7.32E-03	1.02E-03	1.52E-04	3.00E-04	1.10E-04	1.14E-04	6.89E-04	1.45E-05	0.00E+00	1.86E-04	1.38E-03
50	C27	40	Combination Long Haul Truck	10	0.00E+00	6.71E-06	3.79E-07	4.16E+00	4.26E-08	8.66E-03	5.53E-06	7.73E-03	1.06E-03	1.48E-04	6.14E-04	1.22E-04	1.27E-04	6.68E-04	1.40E-05	0.00E+00	4.87E-04	1.46E-03
52	C28	60	Passenger Car	369	0.00E+00	4.34E-06	4.71E-07	1.68E+01	3.08E-05	8.59E-02	9.78E-06	3.66E-04	3.62E-03	5.43E-04	9.53E-04	6.15E-04	6.31E-04	7.31E-05	8.43E-05	1.72E-08	3.23E-04	5.71E-05
52	C28	60	Passenger Truck	618	0.00E+00	9.15E-06	9.70E-07	3.74E+01	5.77E-05	1.47E-01	1.90E-05	1.12E-03	6.43E-03	9.55E-04	1.81E-03	1.18E-03	1.21E-03	2.93E-04	1.86E-04	3.14E-08	6.03E-04	1.89E-04
52	C28	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
52	C28	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.64E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.75E-05
52	C28	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.95E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.32E-05
53	C29	70	Passenger Car	68	0.00E+00	7.40E-07	8.04E-08	3.01E+00	5.25E-06	1.47E-02	1.67E-06	7.04E-05	5.19E-04	8.12E-05	1.63E-04	1.05E-04	1.08E-04	1.16E-05	1.52E-05	3.15E-09	5.50E-05	1.10E-05
53	C29	70	Passenger Truck	115	0.00E+00	1.54E-06	1.64E-07	6.79E+00	9.92E-06	2.59E-02	3.24E-06	1.99E-04	9.27E-04	1.44E-04	3.10E-04	2.02E-04	2.07E-04	5.05E-05	3.39E-05	5.93E-09	1.04E-04	3.33E-05
53	C29	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.02E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.13E-04
53	C29	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.44E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.21E-04
50	C30	40	Passenger Car	66	0.00E+00	9.49E-07	1.03E-07	3.49E+00	6.74E-06	1.88E-02	2.14E-06	6.04E-05	1.14E-03	1.60E-04	2.09E-04	1.35E-04	1.38E-04	1.97E-05	1.73E-05	3.22E-09	7.06E-05	9.42E-06
50	C30	40	Passenger Truck	111	0.00E+00	2.09E-06	2.20E-07	7.60E+00	1.26E-05	3.10E-02	4.21E-06	2.32E-04	2.02E-03	2.81E-04	3.97E-04	2.59E-04	2.66E-04	6.71E-05	3.74E-05	5.46E-09	1.32E-04	4.03E-05
50	C30	40	Single Unit Short Haul Truck	20	0.00E+00	6.82E-06	3.03E-07	3.80E+00	4.72E-06	5.96E-03	7.29E-06	2.74E-03	7.92E-04	1.24E-04	8.77E-04	1.83E-04	1.86E-04	3.88E-04	1.55E-05	6.57E-09	6.91E-04	5.14E-04
50	C30	40	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.32E-08	1.64E-01	2.07E-07	2.59E-04	3.20E-07	1.20E-04	3.55E-05	5.50E-06	3.86E-05	8.00E-06	8.15E-06	1.68E-05	6.69E-07	2.85E-10	3.04E-05	2.24E-05
50	C30	40	Combination Short Haul Truck	20	0.00E+00	9.84E-06	7.35E-07	8.46E+00	2.44E-08	1.39E-02	6.99E-06	1.43E-02	1.98E-03	2.96E-04	5.85E-04	2.14E-04	2.22E-04	1.34E-03	2.83E-05	0.00E+00	3.63E-04	2.69E-03
50	C30	40	Combination Long Haul Truck	19	0.00E+00	1.31E-05	7.38E-07	8.12E+00	8.31E-08	1.69E-02	1.08E-05	1.51E-02	2.06E-03	2.89E-04	1.20E-03	2.38E-04	2.48E-04	1.30E-03	2.72E-05	0.00E+00	9.50E-04	2.84E-03
52	C31	60	Passenger Car	93	0.00E+00	1.09E-06	1.19E-07	4.24E+00	7.76E-06	2.17E-02	2.47E-06	9.23E-05	9.14E-04	1.37E-04	2.41E-04	1.55E-04	1.59E-04	1.85E-05	2.13E-05	4.33E-09	8.14E-05	1.44E-05
52	C31	60	Passenger Truck	156	0.00E+00	2.31E-06	2.45E-07	9.45E+00	1.46E-05	3.72E-02	4.79E-06	2.82E-04	1.62E-03	2.41E-04	4.56E-04	2.97E-04	3.04E-04	7.40E-05	4.70E-05	7.92E-09	1.52E-04	4.76E-05
52	C31	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.39E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.60E-04
52	C31	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.03E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
52	C31	60	Combination Short Haul Truck	13	0.00E+00	3.82E-06	2.80E-07	4.61E+00	1.05E-08	5.70E-03	2.74E-06	5.80E-03	6.66E-04	1.04E-04	2.35E-04	8.20E-05	8.51E-05	7.32E-04	1.54E-05	0.00E+00	1.50E-04	1.09E-03
52	C31	60	Combination Long Haul Truck	12	0.00E+00	5.24E-06	2.86E-07	4.35E+00	3.54E-08	6.85E-03	4.39E-06	6.18E-03	6.98E-04	1.01E-04	4.97E-04	9.36E-05	9.75E-05	6.98E-04	1.46E-05	0.00E+00	4.00E-04	1.16E-03
53	C32	70	Passenger Car	302	0.00E+00	3.27E-06	3.55E-07	1.33E+01	2.32E-05	6.50E-02	7.37E-06	3.11E-04	2.29E-03	3.59E-04	7.19E-04	4.64E-04	4.76E-04	5.14E-05	6.71E-05	1.39E-08	2.43E-04	4.86E-05
53	C32	70	Passenger Truck	507	0.00E+00	6.83E-06	7.26E-07	3.00E+01	4.38E-05	1.15E-01	1.43E-05	8.79E-04	4.10E-03	6.37E-04	1.37E-03	8.91E-04	9.13E-04	2.23E-04	1.50E-04	2.62E-08	4.58E-04	1.47E-04
53	C32	70	Single Unit Short Haul Truck	61	0.00E+00	1.08E-05	4.38E-07	1.00E+01	7.23E-06	1.82E-02	1.17E-05	4.28E-03	9.74E-04	1.79E-04	1.45E-03	2.77E-04	2.83E-04	1.02E-03	4.09E-05	1.65E-08	1.17E-03	8.01E-04
53	C32	70	Single Unit Long Haul Truck	3	0.00E+00	4.69E-07	1.89E-08	4.26E-01	3.11E-07	7.64E-04	5.10E-07	1.84E-04	4.46E-05	7.99E-06	6.35E-05	1.20E-05	1.22E-05	4.31E-05	1.73E-06	6.95E-10	5.12E-05	3.45E-05
53	C32	70	Combination Short Haul Truck	44	0.00E+00	1.14E-05

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C37	60	Passenger Truck	103	0.00E+00	1.53E-06	1.62E-07	6.26E+00	9.64E-06	2.46E-02	3.17E-06	1.87E-04	1.08E-03	1.60E-04	3.02E-04	1.97E-04	2.02E-04	4.90E-05	3.11E-05	5.25E-09	1.01E-04	3.16E-05
52	C37	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.45E-04
52	C37	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.67E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
52	C37	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.04E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
52	C37	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.43E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.21E-03
53	C38	70	Passenger Car	507	0.00E+00	5.48E-06	5.95E-07	2.23E+01	3.89E-05	1.09E-01	1.23E-05	5.21E-04	3.84E-03	6.02E-04	1.20E-03	7.76E-04	7.97E-04	8.61E-05	1.12E-04	2.33E-08	4.07E-04	8.13E-05
53	C38	70	Passenger Truck	848	0.00E+00	1.14E-05	1.22E-06	5.03E+01	7.34E-05	1.92E-01	2.40E-05	1.47E-03	6.86E-03	1.07E-03	2.30E-03	1.49E-03	1.53E-03	3.74E-04	2.51E-04	4.39E-08	7.68E-04	2.46E-04
53	C38	70	Single Unit Short Haul Truck	55	0.00E+00	9.61E-06	3.90E-07	8.95E+00	6.44E-06	1.62E-02	1.04E-05	3.81E-03	8.68E-04	1.59E-04	1.30E-03	2.47E-04	2.52E-04	9.09E-04	3.64E-05	1.47E-08	1.04E-03	7.13E-04
53	C38	70	Single Unit Long Haul Truck	2	0.00E+00	4.18E-07	1.68E-08	3.79E-01	2.77E-07	6.81E-04	4.55E-07	1.64E-04	3.97E-05	7.12E-06	5.65E-05	1.07E-05	1.09E-05	3.83E-05	1.54E-06	6.19E-10	4.56E-05	3.07E-05
53	C38	70	Combination Short Haul Truck	55	0.00E+00	1.43E-05	1.06E-06	1.93E+01	3.62E-08	2.06E-02	1.02E-05	2.13E-02	2.01E-03	3.35E-04	8.56E-04	3.09E-04	3.21E-04	3.06E-03	6.45E-05	0.00E+00	5.35E-04	4.01E-03
53	C38	70	Combination Long Haul Truck	51	0.00E+00	1.96E-05	1.11E-06	1.81E+01	1.23E-07	2.46E-02	1.61E-05	2.28E-02	2.09E-03	3.15E-04	1.78E-03	3.58E-04	3.73E-04	2.90E-03	6.06E-05	0.00E+00	1.41E-03	4.29E-03
52	C39	60	Passenger Car	87	0.00E+00	1.03E-06	1.12E-07	3.99E+00	7.29E-06	2.04E-02	2.32E-06	8.68E-05	8.59E-04	1.29E-04	2.26E-04	1.46E-04	1.50E-04	1.73E-05	2.00E-05	4.07E-09	7.65E-05	1.35E-05
52	C39	60	Passenger Truck	147	0.00E+00	2.17E-06	2.30E-07	8.88E+00	1.37E-05	3.49E-02	4.50E-06	2.65E-04	1.53E-03	2.26E-04	4.29E-04	2.79E-04	2.86E-04	6.95E-05	4.41E-05	7.44E-09	1.43E-04	4.48E-05
52	C39	60	Single Unit Short Haul Truck	17	0.00E+00	3.85E-06	1.59E-07	2.87E+00	2.55E-06	5.04E-03	4.16E-06	1.47E-03	3.97E-04	6.67E-05	5.14E-04	9.89E-05	1.01E-04	2.91E-04	1.17E-05	4.82E-09	4.13E-04	2.76E-04
52	C39	60	Single Unit Long Haul Truck	1	0.00E+00	1.68E-07	6.91E-09	1.22E-01	1.11E-07	2.14E-04	1.82E-07	6.38E-05	1.78E-05	2.96E-06	2.25E-05	4.30E-06	4.38E-06	1.24E-05	4.99E-07	2.05E-10	1.81E-05	1.19E-05
52	C39	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.25E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.13E-04
52	C39	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.46E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.52E-04
50	C40	40	Passenger Car	87	0.00E+00	1.26E-06	1.36E-07	4.61E+00	8.91E-06	2.48E-02	2.83E-06	7.98E-05	1.51E-03	2.12E-04	2.76E-04	1.78E-04	1.83E-04	2.60E-05	2.29E-05	4.25E-09	9.34E-05	1.25E-05
50	C40	40	Passenger Truck	147	0.00E+00	2.77E-06	2.91E-07	1.00E+01	1.67E-05	4.10E-02	5.56E-06	3.07E-04	2.67E-03	3.71E-04	5.25E-04	3.43E-04	3.51E-04	8.88E-05	4.95E-05	7.22E-09	1.74E-04	5.32E-05
50	C40	40	Single Unit Short Haul Truck	17	0.00E+00	5.85E-06	2.60E-07	3.26E+00	4.05E-06	5.11E-03	6.25E-06	2.35E-03	6.78E-04	1.06E-04	7.52E-04	1.57E-04	1.60E-04	3.33E-04	1.33E-05	5.63E-09	5.92E-04	4.41E-04
50	C40	40	Single Unit Long Haul Truck	1	0.00E+00	2.56E-07	1.14E-08	1.41E-01	1.77E-07	2.22E-04	2.74E-07	1.03E-04	3.04E-05	4.72E-06	3.31E-05	6.86E-06	6.99E-06	1.44E-05	5.73E-07	2.44E-10	2.61E-05	1.92E-05
50	C40	40	Combination Short Haul Truck	7	0.00E+00	3.53E-06	2.64E-07	3.04E+00	8.75E-09	4.99E-03	2.51E-06	5.13E-03	7.12E-04	1.06E-04	2.10E-04	7.67E-05	7.97E-05	4.83E-04	1.02E-05	0.00E+00	1.30E-04	9.66E-04
50	C40	40	Combination Long Haul Truck	7	0.00E+00	4.69E-06	2.65E-07	2.91E+00	2.98E-08	6.06E-03	3.87E-06	5.41E-03	7.40E-04	1.04E-04	4.30E-04	8.54E-05	8.90E-05	4.68E-04	9.77E-06	0.00E+00	3.41E-04	1.02E-03
55	C41	90	Passenger Car	90	0.00E+00	8.71E-07	9.46E-08	3.72E+00	6.18E-06	1.79E-02	1.96E-06	9.43E-05	3.86E-04	6.75E-05	1.92E-04	1.23E-04	1.27E-04	1.20E-05	1.88E-05	3.84E-09	6.48E-05	1.47E-05
55	C41	90	Passenger Truck	152	0.00E+00	1.81E-06	1.93E-07	8.50E+00	1.19E-05	3.37E-02	3.86E-06	2.45E-04	6.83E-04	1.20E-04	3.71E-04	2.41E-04	2.47E-04	5.82E-05	4.26E-05	7.52E-09	1.25E-04	4.05E-05
55	C41	90	Single Unit Short Haul Truck	2	0.00E+00	2.06E-07	7.60E-09	3.14E-01	1.42E-07	5.74E-04	2.29E-07	8.94E-05	1.51E-05	3.54E-06	2.91E-05	5.20E-06	5.30E-06	3.20E-05	1.27E-06	4.99E-10	2.38E-05	1.67E-05
55	C41	90	Combination Short Haul Truck	3	0.00E+00	4.50E-07	3.23E-08	1.01E+00	1.39E-09	8.36E-04	3.28E-07	7.96E-04	4.32E-05	8.98E-06	2.91E-05	9.52E-06	9.89E-06	1.60E-04	3.37E-06	0.00E+00	1.92E-05	1.50E-04
55	C41	90	Combination Long Haul Truck	3	0.00E+00	6.53E-07	3.42E-08	9.20E-01	4.72E-09	9.82E-04	5.55E-07	8.44E-04	4.44E-05	7.93E-06	6.44E-05	1.14E-05	1.18E-05	1.48E-04	3.08E-06	0.00E+00	5.26E-05	1.59E-04
55	C42	90	Passenger Car	221	0.00E+00	2.13E-06	2.32E-07	9.10E+00	1.51E-05	4.38E-02	4.80E-06	2.31E-04	9.43E-04	1.65E-04	4.69E-04	3.02E-04	3.10E-04	2.93E-05	4.60E-05	9.38E-09	1.58E-04	3.60E-05
55	C42	90	Passenger Truck	371	0.00E+00	4.42E-06	4.72E-07	2.08E+01	2.91E-05	8.23E-02	9.45E-06	5.99E-04	1.67E-03	2.94E-04	9.09E-04	5.89E-04	6.04E-04	1.42E-04	1.04E-04	1.84E-08	3.05E-04	9.91E-05
55	C42	90	Single Unit Short Haul Truck	40	0.00E+00	4.32E-06	1.60E-07	6.59E+00	2.98E-06	1.21E-02	4.82E-06	1.88E-03	3.16E-04	7.44E-05	6.12E-04	1.09E-04	1.11E-04	6.71E-04	2.68E-05	1.05E-08	5.01E-04	3.51E-04
55	C42	90	Single Unit Long Haul Truck	2	0.00E+00	1.88E-07	6.81E-09	2.78E-01	1.25E-07	4.99E-04	2.09E-07	7.95E-05	1.44E-05	3.26E-06	2.67E-05	4.65E-06	4.74E-06	2.81E-05	1.13E-06	4.32E-10	2.19E-05	1.48E-05
55	C42	90	Combination Short Haul Truck	26	0.00E+00	3.75E-06	2.69E-07	8.40E+00	1.16E-08	6.97E-03	2.73E-06	6.64E-03	3.60E-04	7.48E-05	2.42E-04	7.94E-05	8.24E-05	1.34E-03	2.81E-05	0.00E+00	1.60E-04	1.25E-03
55	C42	90	Combination Long Haul Truck	24	0.00E+00	5.44E-06	2.85E-07	7.67E+00	3.93E-08	8.18E-03	4.62E-06	7.04E-03	3.70E-04	6.61E-05	5.37E-04	9.46E-05	9.87E-05	1.23E-03	2.57E-05	0.00E+00	4.38E-04	1.32E-03
55	C43	90	Passenger Car	257	0.00E+00	2.48E-06	2.69E-07	1.06E+01	1.76E-05	5.09E-02	5.58E-06	2.68E-04	1.10E-03	1.92E-04	5.45E-04	3.51E-04	3.60E-04	3.40E-05	5.35E-05	1.09E-08	1.84E-04	4.18E-05
55	C43	90	Passenger Truck	431	0.00E+00	5.14E-06	5.49E-07	2.42E+01	3.38E-05	9.57E-02	1.10E-05	6.96E-04	1.94E-03	3.41E-04	1.06E-03	6.85E-04	7.02E-04	1.65E-04	1.21E-04	2.14E-08	3.54E-04	1.15E-04
55	C43	90	Single Unit Short Haul Truck	11	0.00E+00	1.13E-06	4.18E-08	1.73E+00	7.81E-07	3.16E-03	1.26E-06	4.92E-04	8.28E-05	1.95E-05	1.60E-04	2.86E-05	2.91E-05	1.76E-04	7.01E-06	2.74E-09	1.31E-04	9.18E-05
55	C43	90	Combination Short Haul Truck	6	0.00E+00	8.25E-07	5.92E-08	1.85E+00	2.55E-09	1.53E-03	6.01E-07	1.46E-03	7.92E-05	1.65E-05	5.33E-05	1.75E-05	1.81E-05	2.94E-04	6.18E-06	0.00E+00	3.51E-05	2.75E-04
55	C43	90	Combination Long Haul Truck	5	0.00E+00	1.20E-06	6.27E-08	1.69E+00	8.65E-09	1.80E-03	1.02E-06	1.55E-03	8.13E-05	1.45E-05	1.18E-04	2.08E-05	2.17E-05	2.71E-04	5.65E-06	0.00E+00	9.64E-05	2.91E-04
55	C44	90	Passenger Car	429	0.00E+00	4.13E-06	4.49E-07	1.76E+01	2.93E-05	8.48E-02	9.31E-06	4.47E-04	1.83E-03	3.20E-04	9.08E-04	5.85E-04	6.01E-04	5.67E-05	8.92E-05	1.82E-08	3.07E-04	6.97E-05
55	C44	90	Passenger Truck	718	0.00E+00	8.57E-06	9.15E-07	4.03E+01	5.64E-05	1.60E-01	1.83E-05	1.16E-03	3.24E-03	5.69E-04	1.76E-03	1.14E-03	1.17E-03	2.76E-04	2.02E-04	3.56E-08	5.91E-04	1.92E-04
55	C44	90	Single Unit Short Haul Truck	13	0.00E+00	1.44E-06	5.32E-08	2.20E+00	9.94E-07	4.02E-03	1.61E-06	6.26E-04	1.05E-04	2.48E-05	2.04E-04	3.64E-05	3.71E-05	2.24E-04	8.92E-06	3.49E-09	1.67E-04	1.17E-04
55	C44	90	Single Unit Long Haul Truck	1	0.00E+00	6.25E-08	2.27E-09	9.27E-02	4.18E-08	1.66E-04	6.96E-08	2.65E-05	4.82E-06	1.09E-06	8.89E-06	1.55E-06	1.58E-06	9.37E-06	3.77E-07	1.44E-10	7.31E-06	4.95E-06
55	C44	90	Combination Short Haul Truck	23	0.00E+00	3.30E-06	2.37E-07	7.39E+00	1.02E-08	6.13E-03	2.41E-06	5.84E-03	3.17E-04	6.58E-05	2.13E-04	6.98E-05	7.25E-05	1.18E-03	2.47E-05	0.00E+00	1.41E-04	1.10E-03
55	C44	90	Combination Long Haul Truck	21	0.00E+00	4.79E-06	2.51E-07	6.75E+00	3.46E-08	7.20E-03	4.07E-06	6.19E-03	3.25E-04	5.82E-05	4.73E-04	8.33E-05	8.68E-05	1.08E-03	2.26E-05	0.00E+00	3.86E-04	1.17E-03
53	C45	70	Passenger Car	240	0.00E+00	2.60E-06	2.82E-07	1.06E+01	1.84E-05	5.17E-02	5.86E-06	2.47E-04	1.82E-03	2.85E-04	5.71E-04	3.68E-04	3.78E-04	4.08E-05	5.33E-05	1.11E-08	1.93E-04	3.86E-05
53	C45	70	Passenger Truck	403	0.00E+00	5.43E-06	5.77E-07	2.39E+01	3.48E-05	9.11E-02	1.14E-05	6.98E-04	3.26E-03	5.06E-04	1.09E-03	7.08E-04	7.26E-04	1.77E-04	1.19E-04	2.08E-08	3.64E-04	1.17E-04
53	C45	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
53	C45	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.90E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.16E-06
53	C45	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.21E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.94E-04
53	C45	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.51E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.49E-04
50	C46	40	Passenger Car	77	0.00E+00	1.10E-06	1.19E-07	4.04E+00	7.80E-06	2.17E-02	2.48E-06	6.99E-05	1.32E-03	1.86E-04	2.42E-04	1.56E-04	1.60E-04	2.28E-05	2.01E-05	3.72E-09	8.18E-05	1.09E-05
50	C46	40	Passenger Truck	128	0.00E+00	2.42E-06	2.55E-07	8.80E+00	1.46E-05	3.59E-02	4.87E-06	2.69E-04	2.34E-03	3.25E-04	4.60E-04	3.00E-04	3.08E-04	7.78E-05	4.34E-05	6.33E-09	1.52E-04	4.66E-05
50	C46	40	Single Unit Short Haul Truck	44	0.00E+00	1.49E-05	6.65E-07	8.32E+00	1.03E-05	1.30E-02	1.60E-05	6.01E-03	1.73E-03	2.71E-04	1.92E-03	4.00E-04	4.08E-04	8.50E-04	3.39E-05	1.44E-08	1.51E-03	1.13E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	6.55E-07	2.90E-08	3.59E-01	4.53E-07	5.68E-04	7.01E-07	2.62E-04	7.77E-05	1.21E-05	8.45E-05	1.75E-05	1.79E-05	3.67E-05	1.47E-06	6.24E-10	6.66E-05	4.91E-05
50	C46	40	Combination Short Haul Truck	39	0.00E+00	1.89E-05	1.41E-06	1.63E+01	4.69E-08	2.68E-02	1.34E-05	2.75E-02	3.81E-03	5.69E-04	1.13E-03	4.11E-04	4.27E-04	2.59E-03	5.44E-05	0.00E+00	6.99E-04	5.18E-03
50	C46	40	Combination Long Haul Truck	36	0.00E+00	2.51E-05	1.42E-06	1.56E+01	1.60E-07	3.25E-02	2.07E-05	2.90E-02	3.96E-03	5.56E-04	2.30E-03	4.58E-04	4.77E-04	2.51E-03	5.23E-05	0.00E+00	1.83E-03	5.46E-03
52	C47	60	Passenger Car	25	0.00E+00	2.94E-07	3.20E-08	1.14E+00	2.09E-06	5.83E-03	6.64E-07	2.48E-05	2.46E-04	3.69E-05	6.47E-05	4.17E-05	4.28E-05	4.97E-06	5.72E-06	1.17E-09	2.19E-05	3.88E-06
52	C47	60	Passenger Truck	42	0.00E+00	6.21E-07	6.58E-08	2.54E+00	3.92E-06	1.00E-02	1.29E-06	7.58E-05	4.37E-04	6.48E-05	1.23E-04	7.99E-05	8.18E-05	1.99E-05	1.26E-05	2.13E-09	4.09E-05	1.28E-05
52	C47	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.18E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
52	C47	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.32E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.38E-05
53	C48	70	Passenger Car	136	0.00E+00	1.48E-06	1.60E-07	6.01E+00	1.05E-05	2.93E-02	3.33E-06	1.40E-04	1.04E-03	1.62E-04	3.24E-04	2.09E-04	2.15E-04	2.32E-05	3.03E-05	6.28E-09	1.10E-04	2.19E-05
53	C48	70	Passenger Truck	229	0.00E+00	3.08E-06	3.28E-07	1.35E+01	1.98E-05	5.17E-02	6.47E-06	3.97E-04	1.85E-03	2.87E-04	6.19E-04	4.02E-04	4.12E-04	1.01E-04	6.75E-05	1.18E-08	2.07E-04	6.64E-05
53	C48	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.22E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.89E-04
53	C48	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.81E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.39E-05
53	C48	70	Combination Short Haul Truck	43	0.00E+00	1.12E-05	8.31E-07	1.51E+01	2.84E-08	1.61E-02	7.96E-06	1.66E-02	1.57E-03	2.63E-04	6.70E-04	2.42E-04	2.51E-04	2.40E-03	5.05E-05	0.00E+00	4.19E-04	3.14E-03
53	C48	70	Combination Long Haul Truck	40	0.00E+00	1.53E-05	8.71E-07	1.42E+01	9.61E-08	1.93E-02	1.26E-05	1.78E-02	1.64E-03	2.47E-04	1.39E-03	2.80E-04	2.92E-04	2.27E-03	4.75E-05	0.00E+00	1.10E-03	3.36E-03
52	C49	60	Passenger Car	217	0.00E+00	2.55E-06	2.77E-07	9.88E+00	1.81E-05	5.05E-02	5.74E-06	2.15E-04	2.13E-03	3.19E-04	5.60E-04	3.61E-04	3.71E-04	4.30E-05	4.96E-05	1.01E-08	1.90E-04	3.35E-05
52	C49	60	Passenger Truck	363	0.00E+00	5.38E-06	5.70E-07	2.20E+01	3.39E-05	8.66E-02	1.11E-05	6.56E-04	3.78E-03	5.61E-04	1.06E-03	6.91E-04	7.08E-04	1.72E-04	1.09E-04	1.84E-08	3.54E-04	1.11E-04
52	C49	60	Single Unit Short Haul Truck	40	0.00E+00	8.98E-06	3.71E-07	6.69E+00	5.95E-06	1.18E-02	9.71E-06	3.44E-03	9.25E-04	1.56E-04	1.20E-03	2.31E-04	2.35E-04	6.78E-04	2.73E-05	1.12E-08	9.63E-04	6.44E-04
52	C49	60	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.61E-08	2.85E-01	2.58E-07	5.00E-04	4.24E-07	1.49E-04	4.16E-05	6.90E-06	5.24E-05	1.00E-05	1.02E-05	2.88E-05	1.16E-06	4.78E-10	4.22E-05	2.79E-05
52	C49	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.82E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.66E-03
52	C49	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.40E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.77E-03
50	C50	40	Passenger Car	30	0.00E+00	4.29E-07	4.66E-08	1.58E+00	3.05E-06	8.48E-03	9.67E-07	2.73E-05	5.16E-04	7.25E-05	9.44E-05	6.08E-05	6.24E-05	8.89E-06	7.84E-06	1.45E-09	3.19E-05	4.26E-06
50	C50	40	Passenger Truck	50	0.00E+00	9.46E-07	9.94E-08	3.43E+00	5.70E-06	1.40E-02	1.90E-06	1.05E-04	9.15E-04	1.27E-04	1.80E-04	1.17E-04	1.20E-04	3.03E-05	1.69E-05	2.47E-09	5.95E-05	1.82E-05
50	C50	40	Combination Short Haul Truck	1	0.00E+00	2.52E-07	1.88E-08	2.17E-01	6.25E-10	3.57E-04	1.79E-07	3.66E-04	5.09E-05	7.58E-06	1.50E-05	5.48E-06	5.69E-06	3.45E-05	7.25E-07	0.00E+00	9.31E-06	6.90E-05
53	C51	70	Passenger Car	256	0.00E+00	2.77E-06	3.01E-07	1.13E+01	1.97E-05	5.51E-02	6.25E-06	2.64E-04	1.95E-03	3.05E-04	6.10E-04	3.93E-04	4.03E-04	4.36E-05	5.69E-05	1.18E-08	2.06E-04	4.12E-05
53	C51	70	Passenger Truck	430	0.00E+00	5.79E-06	6.16E-07	2.55E+01	3.72E-05	9.72E-02	1.22E-05	7.45E-04	3.47E-03	5.40E-04	1.16E-03	7.56E-04	7.75E-04	1.89E-04	1.27E-04	2.22E-08	3.89E-04	1.25E-04
53	C51	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.87E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.50E-04
53	C51	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.06E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
53	C51	70	Combination Short Haul Truck	19	0.00E+00	4.85E-06	3.61E-07	6.55E+00	1.23E-08	7.00E-03	3.45E-06	7.22E-03	6.83E-04	1.14E-04	2.91E-04	1.05E-04	1.09E-04	1.04E-03	2.19E-05	0.00E+00	1.82E-04	1.36E-03
53	C51	70	Combination Long Haul Truck	17	0.00E+00	6.65E-06	3.78E-07	6.15E+00	4.17E-08	8.35E-03	5.46E-06	7.73E-03	7.11E-04	1.07E-04	6.04E-04	1.21E-04	1.27E-04	9.87E-04	2.06E-05	0.00E+00	4.78E-04	1.46E-03
50	C52	40	Passenger Car	58	0.00

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C57	70	Passenger Car	182	0.00E+00	1.97E-06	2.14E-07	8.04E+00	1.40E-05	3.92E-02	4.45E-06	1.88E-04	1.38E-03	2.17E-04	4.34E-04	2.80E-04	2.87E-04	3.10E-05	4.05E-05	8.40E-09	1.47E-04	2.93E-05
53	C57	70	Passenger Truck	306	0.00E+00	4.12E-06	4.38E-07	1.81E+01	2.64E-05	6.92E-02	8.65E-06	5.30E-04	2.47E-03	3.84E-04	8.28E-04	5.38E-04	5.51E-04	1.35E-04	9.03E-05	1.58E-08	2.77E-04	8.88E-05
53	C57	70	Single Unit Short Haul Truck	19	0.00E+00	3.37E-06	1.37E-07	3.14E+00	2.26E-06	5.69E-03	3.67E-06	1.34E-03	3.04E-04	5.59E-05	4.54E-04	8.66E-05	8.83E-05	3.19E-04	1.28E-05	5.15E-09	3.66E-04	2.50E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	5.91E-09	1.33E-01	9.72E-08	2.39E-04	1.60E-07	5.76E-05	1.39E-05	2.50E-06	1.98E-05	3.74E-06	3.81E-06	1.35E-05	5.42E-07	2.17E-10	1.60E-05	1.08E-05
53	C57	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.62E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	C57	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.08E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.33E-03
50	C58	40	Passenger Car	38	0.00E+00	5.42E-07	5.89E-08	1.99E+00	3.84E-06	1.07E-02	1.22E-06	3.44E-05	6.51E-04	9.15E-05	1.19E-04	7.68E-05	7.88E-05	1.12E-05	9.90E-06	1.83E-09	4.03E-05	5.37E-06
50	C58	40	Passenger Truck	63	0.00E+00	1.19E-06	1.26E-07	4.33E+00	7.19E-06	1.77E-02	2.40E-06	1.33E-04	1.15E-03	1.60E-04	2.27E-04	1.48E-04	1.52E-04	3.83E-05	2.14E-05	3.12E-09	7.51E-05	2.30E-05
50	C58	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.45E-05
50	C58	40	Combination Short Haul Truck	2	0.00E+00	7.57E-07	5.65E-08	6.51E-01	1.87E-09	1.07E-03	5.38E-07	1.10E-03	1.53E-04	2.27E-05	4.50E-05	1.64E-05	1.71E-05	1.03E-04	2.18E-06	0.00E+00	2.79E-05	2.07E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	1.01E-06	5.68E-08	6.24E-01	6.39E-09	1.30E-03	8.29E-07	1.16E-03	1.58E-04	2.23E-05	9.21E-05	1.83E-05	1.91E-05	1.00E-04	2.09E-06	0.00E+00	7.31E-05	2.18E-04
53	C59	70	Passenger Car	114	0.00E+00	1.23E-06	1.34E-07	5.01E+00	8.72E-06	2.44E-02	2.77E-06	1.17E-04	8.62E-04	1.35E-04	2.70E-04	1.74E-04	1.79E-04	1.93E-05	2.52E-05	5.23E-09	9.14E-05	1.82E-05
53	C59	70	Passenger Truck	190	0.00E+00	2.57E-06	2.73E-07	1.13E+01	1.65E-05	4.31E-02	5.39E-06	3.30E-04	1.54E-03	2.39E-04	5.16E-04	3.35E-04	3.43E-04	8.39E-05	5.62E-05	9.86E-09	1.72E-04	5.53E-05
53	C59	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.35E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
53	C59	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.78E-04
53	C59	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.04E-04
52	C60	60	Passenger Car	243	0.00E+00	2.86E-06	3.10E-07	1.11E+01	2.03E-05	5.66E-02	6.44E-06	2.41E-04	2.39E-03	3.58E-04	6.28E-04	4.05E-04	4.16E-04	4.82E-05	5.55E-05	1.13E-08	2.12E-04	3.76E-05
52	C60	60	Passenger Truck	407	0.00E+00	6.03E-06	6.39E-07	2.47E+01	3.80E-05	9.71E-02	1.25E-05	7.35E-04	4.24E-03	6.29E-04	1.19E-03	7.75E-04	7.94E-04	1.93E-04	1.23E-04	2.07E-08	3.97E-04	1.24E-04
52	C60	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.39E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.60E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.03E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
52	C60	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.41E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.31E-04
52	C60	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.70E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.85E-04
9	D01	60	Passenger Car	914	0.00E+00	1.17E-05	1.27E-06	4.16E+01	8.30E-05	2.33E-01	2.64E-05	9.41E-04	9.23E-03	1.38E-03	2.57E-03	1.66E-03	1.70E-03	1.81E-04	2.09E-04	4.39E-08	8.70E-04	1.47E-04
9	D01	60	Passenger Truck	1531	0.00E+00	2.48E-05	2.63E-06	9.28E+01	1.57E-04	3.99E-01	5.15E-05	2.93E-03	1.69E-02	2.51E-03	4.91E-03	3.19E-03	3.27E-03	7.42E-04	4.61E-04	8.56E-08	1.64E-03	4.96E-04
9	D01	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	D01	60	Combination Short Haul Truck	27	0.00E+00	7.94E-06	5.83E-07	9.58E+00	2.17E-08	1.19E-02	5.70E-06	1.21E-02	1.39E-03	2.17E-04	4.89E-04	1.71E-04	1.77E-04	1.52E-03	3.20E-05	0.00E+00	3.12E-04	2.28E-03
9	D01	60	Combination Long Haul Truck	25	0.00E+00	1.09E-05	5.96E-07	9.05E+00	7.36E-08	1.42E-02	9.12E-06	1.29E-02	1.45E-03	2.10E-04	1.03E-03	1.95E-04	2.03E-04	1.45E-03	3.03E-05	0.00E+00	8.32E-04	2.42E-03
9	D02	60	Passenger Car	1292	0.00E+00	1.65E-05	1.80E-06	5.89E+01	1.17E-04	3.30E-01	3.73E-05	1.33E-03	1.30E-02	1.95E-03	3.63E-03	2.34E-03	2.40E-03	2.56E-04	2.95E-04	6.20E-08	1.23E-03	2.08E-04
9	D02	60	Passenger Truck	2164	0.00E+00	3.51E-05	3.72E-06	1.31E+02	2.21E-04	5.64E-01	7.28E-05	4.14E-03	2.38E-02	3.55E-03	6.94E-03	4.51E-03	4.62E-03	1.05E-03	6.52E-04	1.21E-07	2.31E-03	7.01E-04
9	D02	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.09E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.66E-05
9	D02	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.59E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.62E-03
9	D02	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.15E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.72E-03
9	D03	60	Passenger Car	976	0.00E+00	1.25E-05	1.36E-06	4.45E+01	8.86E-05	2.49E-01	2.81E-05	1.00E-03	9.85E-03	1.48E-03	2.74E-03	1.77E-03	1.82E-03	1.93E-04	2.23E-04	4.69E-08	9.28E-04	1.57E-04
9	D03	60	Passenger Truck	1634	0.00E+00	2.65E-05	2.81E-06	9.91E+01	1.67E-04	4.26E-01	5.50E-05	3.12E-03	1.80E-02	2.68E-03	5.24E-03	3.41E-03	3.49E-03	7.92E-04	4.93E-04	9.13E-08	1.75E-03	5.29E-04
9	D03	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.05E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.83E-04
9	D03	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	9.59E-09	1.70E-01	1.54E-07	2.97E-04	2.52E-07	8.86E-05	2.47E-05	4.11E-06	3.12E-05	5.97E-06	6.09E-06	1.72E-05	6.93E-07	2.85E-10	2.51E-05	1.66E-05
9	D03	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
9	D03	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.28E-03
9	D04	60	Passenger Car	1332	0.00E+00	1.70E-05	1.85E-06	6.07E+01	1.21E-04	3.40E-01	3.84E-05	1.37E-03	1.35E-02	2.01E-03	3.75E-03	2.42E-03	2.48E-03	2.64E-04	3.05E-04	6.40E-08	1.27E-03	2.14E-04
9	D04	60	Passenger Truck	2231	0.00E+00	3.62E-05	3.83E-06	1.35E+02	2.28E-04	5.82E-01	7.50E-05	4.26E-03	2.46E-02	3.66E-03	7.15E-03	4.65E-03	4.77E-03	1.08E-03	6.72E-04	1.25E-07	2.38E-03	7.23E-04
9	D04	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.44E-04
9	D04	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	D04	60	Combination Short Haul Truck	47	0.00E+00	1.37E-05	1.01E-06	1.66E+01	3.76E-08	2.05E-02	9.87E-06	2.09E-02	2.40E-03	3.75E-04	8.47E-04	2.95E-04	3.06E-04	2.64E-03	5.54E-05	0.00E+00	5.40E-04	3.94E-03
9	D04	60	Combination Long Haul Truck	43	0.00E+00	1.89E-05	1.03E-06	1.57E+01	1.27E-07	2.47E-02	1.58E-05	2.23E-02	2.51E-03	3.64E-04	1.79E-03	3.37E-04	3.51E-04	2.51E-03	5.25E-05	0.00E+00	1.44E-03	4.19E-03
9	D05	60	Passenger Car	942	0.00E+00	1.20E-05	1.31E-06	4.29E+01	8.55E-05	2.40E-01	2.72E-05	9.70E-04	9.51E-03	1.43E-03	2.65E-03	1.71E-03	1.75E-03	1.87E-04	2.15E-04	4.52E-08	8.96E-04	1.51E-04
9	D05	60	Passenger Truck	1578	0.00E+00	2.56E-05	2.71E-06	9.57E+01	1.61E-04	4.11E-01	5.31E-05	3.02E-03	1.74E-02	2.59E-03	5.06E-03	3.29E-03	3.37E-03	7.64E-04	4.76E-04	8.82E-08	1.69E-03	5.11E-04
9	D05	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.11E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.82E-04
9	D05	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.52E-05
9	D05	60	Combination Short Haul Truck	30	0.00E+00	8.85E-06	6.50E-07	1.07E+01	2.43E-08	1.32E-02	6.36E-06	1.35E-02	1.55E-03	2.42E-04	5.46E-04	1.90E-04	1.98E-04	1.70E-03	3.57E-05	0.00E+00	3.48E-04	2.54E-03
9	D05	60	Combination Long Haul Truck	28	0.00E+00	1.22E-05	6.65E-07	1.01E+01	8.21E-08	1.59E-02	1.02E-05	1.43E-02	1.62E-03	2.34E-04	1.15E-03	2.17E-04	2.26E-04	1.62E-03	3.38E-05	0.00E+00	9.28E-04	2.70E-03
9	D06	60	Passenger Car	1503	0.00E+00	1.92E-05	2.09E-06	6.85E+01	1.36E-04	3.83E-01	4.33E-05	1.55E-03	1.52E-02	2.27E-03	4.23E-03	2.72E-03	2.80E-03	2.98E-04	3.44E-04	7.21E-08	1.43E-03	2.41E-04
9	D06	60	Passenger Truck	2516	0.00E+00	4.08E-05	4.32E-06	1.53E+02	2.57E-04	6.56E-01	8.46E-05	4.81E-03	2.77E-02	4.13E-03	8.07E-03	5.25E-03	5.38E-03	1.22E-03	7.58E-04	1.41E-07	2.69E-03	8.15E-04
9	D06	60	Single Unit Short Haul Truck	39	0.00E+00	8.77E-06	3.62E-07	6.53E+00	5.81E-06	1.15E-02	9.48E-06	3.36E-03	9.03E-04	1.52E-04	1.17E-03	2.25E-04	2.30E-04	6.62E-04	2.66E-05	1.10E-08	9.40E-04	6.28E-04
9	D06	60	Single Unit Long Haul Truck	2	0.00E+00	3.83E-07	1.57E-08	2.79E-01	2.52E-07	4.88E-04	4.14E-07	1.45E-04	4.06E-05	6.73E-06	5.11E-05	9.79E-06	9.99E-06	2.81E-05	1.14E-06	4.67E-10	4.12E-05	2.72E-05
9	D06	60	Combination Short Haul Truck	54	0.00E+00	1.59E-05	1.17E-06	1.92E+01	4.35E-08	2.37E-02	1.14E-05	2.41E-02	2.77E-03	4.33E-04	9.78E-04	3.41E-04	3.54E-04	3.04E-03	6.41E-05	0.00E+00	6.24E-04	4.55E-03
9	D06	60	Combination Long Haul Truck	50	0.00E+00	2.18E-05	1.19E-06	1.81E+01	1.47E-07	2.85E-02	1.82E-05	2.57E-02	2.91E-03	4.20E-04	2.07E-03	3.89E-04	4.06E-04	2.90E-03	6.06E-05	0.00E+00	1.66E-03	4.84E-03
11	D07	80	Passenger Car	1140	0.00E+00	1.18E-05	1.29E-06	4.82E+01	8.40E-05	2.43E-01	2.67E-05	1.18E-03	6.22E-03	1.04E-03	2.60E-03	1.68E-03	1.72E-03	1.70E-04	2.43E-04	5.20E-08	8.81E-04	1.84E-04
11	D07	80	Passenger Truck	1910	0.00E+00	2.44E-05	2.60E-06	1.09E+02	1.59E-04	4.30E-01	5.17E-05	3.19E-03	1.11E-02	1.84E-03	4.96E-03	3.22E-03	3.30E-03	7.84E-04	5.44E-04	9.90E-08	1.66E-03	5.31E-04
11	D07	80	Single Unit Short Haul Truck	47	0.00E+00	6.44E-06	2.51E-07	7.69E+00	4.37E-06	1.40E-02	7.08E-06	2.67E-03	5.27E-04	1.08E-04	8.87E-04	1.64E-04	1.67E-04	7.83E-04	3.13E-05	1.24E-08	7.19E-04	4.99E-04
11	D07	80	Single Unit Long Haul Truck	2	0.00E+00	2.80E-07	1.08E-08	3.25E-01	1.86E-07	5.82E-04	3.07E-07	1.14E-04	2.42E-05	4.79E-06	3.87E-05	7.05E-06	7.19E-06	3.29E-05	1.32E-06	5.16E-10	3.15E-05	2.13E-05
11	D07	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.59E-03
11	D07	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.47E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.77E-03
11	D08	80	Passenger Car	1254	0.00E+00	1.30E-05	1.42E-06	5.31E+01	9.25E-05	2.68E-01	2.94E-05	1.30E-03	6.84E-03	1.14E-03	2.86E-03	1.85E-03	1.90E-03	1.86E-04	2.68E-04	5.72E-08	9.69E-04	2.03E-04
11	D08	80	Passenger Truck	2101	0.00E+00	2.68E-05	2.86E-06	1.20E+02	1.74E-04	4.73E-01	5.68E-05	3.51E-03	1.22E-02	2.03E-03	5.45E-03	3.54E-03	3.63E-03	8.63E-04	5.99E-04	1.09E-07	1.83E-03	5.84E-04
11	D08	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.78E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.19E-04
11	D08	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.22E-05
11	D08	80	Combination Short Haul Truck	49	0.00E+00	1.01E-05	7.50E-07	1.65E+01	2.65E-08	1.54E-02	7.24E-06	1.56E-02	1.17E-03	2.13E-04	6.14E-04	2.19E-04	2.27E-04	2.62E-03	5.51E-05	0.00E+00	3.87E-04	2.94E-03
11	D08	80	Combination Long Haul Truck	45	0.00E+00	1.41E-05	7.97E-07	1.53E+01	8.98E-08	1.83E-02	1.16E-05	1.67E-02	1.21E-03	1.94E-04	1.29E-03	2.57E-04	2.68E-04	2.46E-03	5.13E-05	0.00E+00	1.03E-03	3.14E-03
11	D09	80	Passenger Car	824	0.00E+00	8.55E-06	9.30E-07	3.48E+01	6.07E-05	1.76E-01	1.93E-05	8.54E-04	4.49E-03	7.52E-04	1.88E-03	1.21E-03	1.24E-03	1.22E-04	1.76E-04	3.75E-08	6.36E-04	1.33E-04
11	D09	80	Passenger Truck	1379	0.00E+00	1.76E-05	1.88E-06	7.87E+01	1.15E-04	3.11E-01	3.73E-05	2.30E-03	7.99E-03	1.33E-03	3.58E-03	2.32E-03	2.38E-03	5.66E-04	3.93E-04	7.15E-08	1.20E-03	3.83E-04
11	D09	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D09	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.12E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.57E-06
11	D09	80	Combination Short Haul Truck	24	0.00E+00	4.85E-06	3.59E-07	7.89E+00	1.27E-08	7.39E-03	3.47E-06	7.46E-03	5.62E-04	1.02E-04	2.94E-04	1.05E-04	1.09E-04	1.25E-03	2.64E-05	0.00E+00	1.85E-04	1.41E-03
11	D09	80	Combination Long Haul Truck	21	0.00E+00	6.76E-06	3.81E-07	7.32E+00	4.30E-08	8.75E-03	5.57E-06	7.97E-03	5.80E-04	9.29E-05	6.19E-04	1.23E-04	1.28E-04	1.18E-03	2.45E-05	0.00E+00	4.91E-04	1.50E-03
11	D10	80	Passenger Car	1198	0.00E+00	1.24E-05	1.35E-06	5.07E+01	8.83E-05	2.56E-01	2.80E-05	1.24E-03	6.53E-03	1.09E-03	2.74E-03	1.76E-03	1.81E-03	1.78E-04	2.56E-04	5.46E-08	9.25E-04	1.94E-04
11	D10	80	Passenger Truck	2005	0.00E+00	2.56E-05	2.73E-06	1.14E+02	1.67E-04	4.52E-01	5.43E-05	3.35E-03	1.16E-02	1.94E-03	5.21E-03	3.38E-03	3.46E-03	8.24E-04	5.72E-04	1.04E-07	1.74E-03	5.57E-04
11	D10	80	Single Unit Short Haul Truck	29	0.00E+00	3.94E-06	1.54E-07	4.71E+00	2.67E-06	8.56E-03	4.33E-06	1.63E-03	3.23E-04	6.60E-05	5.43E-04	1.01E-04	1.02E-04	4.79E-04	1.91E-05	7.59E-09	4.40E-04	3.06E-04
11	D10	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	6.61E-09	1.99E-01	1.14E-07	3.56E-04	1.88E-07	6.98E-05	1.48E-05	2.93E-06	2.37E-05	4.32E-06	4.40E-06	2.01E-05	8.10E-07	3.16E-10	1.93E-05	1.31E-05
11	D10	80	Combination Short Haul Truck	30	0.00E+00	6.25E-06	4.63E-07	1.02E+01	1.64E-08	9.53E-03	4.47E-06	9.62E-03	7.24E-04	1.31E-04	3.79E-04	1.35E-04	1.40E-04	1.62E-03	3.40E-05	0.00E+00	2.39E-04	1.81E-03
11	D10	80	Combination Long Haul Truck	28	0.00E+00	8.71E-06	4.92E-07	9.44E+00	5.54E-08	1.13E-02	7.18E-06	1.03E-02	7.48E-04	1.20E-04	7.98E-04	1.58E-04	1.65E-04	1.52E-03	3.16E-05	0.00E+00	6.33E-04	1.94E-03
11	D11	80	Passenger Car	809	0.00E+00	8.41E-06	9.14E-07	3.42E+01	5.97E-05	1.73E-01	1.90E-05	8.39E-04	4.41E-03	7.39E-04	1.85E-03	1.19E-03	1.22E-03	1.20E-04	1.73E-04	3.69E-08	6.25E-04	1.31E-04
11	D11	80	Passenger Truck	1356	0.00E+00	1.73E-05	1.85E-06	7.73E+01	1.13E-04	3.05E-01	3.67E-05	2.26E-03	7.86E-03	1.31E-03	3.52E-03	2.28E-03	2.34E-03	5.57E-04	3.86E-04	7.02E-08	1.18E-03	3.77E-04
11	D11	80	Single Unit

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D15	60	Passenger Truck	850	0.00E+00	1.38E-05	1.46E-06	5.15E+01	8.69E-05	2.21E-01	2.86E-05	1.62E-03	9.36E-03	1.39E-03	2.72E-03	1.77E-03	1.82E-03	4.12E-04	2.56E-04	4.75E-08	9.08E-04	2.75E-04
9	D15	60	Single Unit Short Haul Truck	38	0.00E+00	8.55E-06	3.53E-07	6.37E+00	5.67E-06	1.12E-02	9.25E-06	3.27E-03	8.81E-04	1.48E-04	1.14E-03	2.20E-04	2.24E-04	6.46E-04	2.60E-05	1.07E-08	9.17E-04	6.13E-04
9	D15	60	Single Unit Long Haul Truck	2	0.00E+00	3.73E-07	1.53E-08	2.72E-01	2.46E-07	4.76E-04	4.04E-07	1.42E-04	3.96E-05	6.57E-06	4.99E-05	9.55E-06	9.74E-06	2.75E-05	1.11E-06	4.55E-10	4.02E-05	2.65E-05
9	D15	60	Combination Short Haul Truck	34	0.00E+00	9.92E-06	7.29E-07	1.20E+01	2.72E-08	1.48E-02	7.13E-06	1.51E-02	1.73E-03	2.71E-04	6.11E-04	2.13E-04	2.21E-04	1.90E-03	4.00E-05	0.00E+00	3.90E-04	2.84E-03
9	D15	60	Combination Long Haul Truck	31	0.00E+00	1.36E-05	7.45E-07	1.13E+01	9.20E-08	1.78E-02	1.14E-05	1.61E-02	1.82E-03	2.63E-04	1.29E-03	2.43E-04	2.53E-04	1.82E-03	3.79E-05	0.00E+00	1.04E-03	3.03E-03
9	D16	60	Passenger Car	825	0.00E+00	1.05E-05	1.15E-06	3.76E+01	7.49E-05	2.10E-01	2.38E-05	8.49E-04	8.33E-03	1.25E-03	2.32E-03	1.50E-03	1.53E-03	1.63E-04	1.89E-04	3.96E-08	7.85E-04	1.32E-04
9	D16	60	Passenger Truck	1381	0.00E+00	2.24E-05	2.37E-06	8.38E+01	1.41E-04	3.60E-01	4.64E-05	2.64E-03	1.52E-02	2.27E-03	4.43E-03	2.88E-03	2.95E-03	6.69E-04	4.16E-04	7.72E-08	1.48E-03	4.47E-04
9	D16	60	Single Unit Short Haul Truck	44	0.00E+00	9.84E-06	4.06E-07	7.33E+00	6.52E-06	1.29E-02	1.06E-05	3.76E-03	1.01E-03	1.70E-04	1.31E-03	2.53E-04	2.58E-04	7.43E-04	2.99E-05	1.23E-08	1.05E-03	7.05E-04
9	D16	60	Single Unit Long Haul Truck	2	0.00E+00	4.29E-07	1.76E-08	3.12E-01	2.83E-07	5.47E-04	4.64E-07	1.63E-04	4.55E-05	7.56E-06	5.74E-05	1.10E-05	1.12E-05	3.16E-05	1.27E-06	5.24E-10	4.62E-05	3.05E-05
9	D16	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.80E-03
9	D16	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.98E-03
10	D17	70	Passenger Car	311	0.00E+00	3.47E-06	3.77E-07	1.36E+01	2.46E-05	6.96E-02	7.82E-06	3.15E-04	2.40E-03	3.73E-04	7.63E-04	4.92E-04	5.05E-04	5.29E-05	6.82E-05	1.42E-08	2.58E-04	4.91E-05
10	D17	70	Passenger Truck	521	0.00E+00	7.30E-06	7.76E-07	3.05E+01	4.68E-05	1.23E-01	1.53E-05	9.14E-04	4.34E-03	6.71E-04	1.46E-03	9.51E-04	9.75E-04	2.31E-04	1.52E-04	2.72E-08	4.89E-04	1.54E-04
10	D17	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.37E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.75E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.03E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.54E-06
10	D17	70	Combination Short Haul Truck	16	0.00E+00	4.04E-06	3.00E-07	5.46E+00	1.03E-08	5.83E-03	2.88E-06	6.02E-03	5.69E-04	9.49E-05	2.42E-04	8.75E-05	9.08E-05	8.67E-04	1.82E-05	0.00E+00	1.51E-04	1.13E-03
10	D17	70	Combination Long Haul Truck	14	0.00E+00	5.54E-06	3.15E-07	5.12E+00	3.47E-08	6.96E-03	4.55E-06	6.44E-03	5.93E-04	8.93E-05	5.03E-04	1.01E-04	1.05E-04	8.22E-04	1.72E-05	0.00E+00	3.98E-04	1.21E-03
10	D18	70	Passenger Car	146	0.00E+00	1.63E-06	1.77E-07	6.35E+00	1.15E-05	3.26E-02	3.67E-06	1.47E-04	1.12E-03	1.75E-04	3.58E-04	2.31E-04	2.37E-04	2.48E-05	3.20E-05	6.64E-09	1.21E-04	2.30E-05
10	D18	70	Passenger Truck	244	0.00E+00	3.42E-06	3.64E-07	1.43E+01	2.19E-05	5.76E-02	7.17E-06	4.29E-04	2.03E-03	3.15E-04	6.86E-04	4.46E-04	4.57E-04	1.08E-04	7.13E-05	1.28E-08	2.29E-04	7.20E-05
10	D18	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	D18	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
10	D18	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
11	D19	80	Passenger Car	977	0.00E+00	1.01E-05	1.10E-06	4.13E+01	7.20E-05	2.08E-01	2.29E-05	1.01E-03	5.32E-03	8.91E-04	2.23E-03	1.44E-03	1.48E-03	1.45E-04	2.08E-04	4.45E-08	7.54E-04	1.58E-04
11	D19	80	Passenger Truck	1635	0.00E+00	2.09E-05	2.23E-06	9.33E+01	1.36E-04	3.68E-01	4.43E-05	2.73E-03	9.48E-03	1.58E-03	4.25E-03	2.75E-03	2.82E-03	6.72E-04	4.66E-04	8.47E-08	1.42E-03	4.55E-04
11	D19	80	Single Unit Short Haul Truck	174	0.00E+00	2.39E-05	9.34E-07	2.86E+01	1.62E-05	5.19E-02	2.63E-05	9.92E-03	1.96E-03	4.01E-04	3.29E-03	6.10E-04	6.22E-04	2.91E-03	1.16E-04	4.60E-08	2.67E-03	1.85E-03
11	D19	80	Single Unit Long Haul Truck	8	0.00E+00	1.04E-06	4.01E-08	1.21E+00	6.91E-07	2.16E-03	1.14E-06	4.24E-04	8.98E-05	1.78E-05	1.44E-04	2.62E-05	2.67E-05	1.22E-04	4.92E-06	1.92E-09	1.17E-04	7.92E-05
11	D19	80	Combination Short Haul Truck	63	0.00E+00	1.29E-05	9.58E-07	2.10E+01	3.39E-08	1.97E-02	9.25E-06	1.99E-02	1.50E-03	2.71E-04	7.84E-04	2.79E-04	2.90E-04	3.34E-03	7.04E-05	0.00E+00	4.94E-04	3.75E-03
11	D19	80	Combination Long Haul Truck	57	0.00E+00	1.80E-05	1.02E-06	1.95E+01	1.15E-07	2.33E-02	1.49E-05	2.13E-02	1.55E-03	2.48E-04	1.65E-03	3.28E-04	3.42E-04	3.13E-03	6.54E-05	0.00E+00	1.31E-03	4.01E-03
11	D20	80	Passenger Car	1209	0.00E+00	1.26E-05	1.36E-06	5.11E+01	8.91E-05	2.58E-01	2.83E-05	1.25E-03	6.59E-03	1.10E-03	2.76E-03	1.78E-03	1.83E-03	1.80E-04	2.58E-04	5.51E-08	9.34E-04	1.96E-04
11	D20	80	Passenger Truck	2024	0.00E+00	2.58E-05	2.76E-06	1.15E+02	1.68E-04	4.56E-01	5.48E-05	3.38E-03	1.17E-02	1.95E-03	5.26E-03	3.41E-03	3.50E-03	8.31E-04	5.77E-04	1.05E-07	1.76E-03	5.63E-04
11	D20	80	Single Unit Short Haul Truck	230	0.00E+00	3.15E-05	1.23E-06	3.77E+01	2.14E-05	6.85E-02	3.47E-05	1.31E-02	2.58E-03	5.28E-04	4.34E-03	8.04E-04	8.20E-04	3.83E-03	1.53E-04	6.07E-08	3.52E-03	2.44E-03
11	D20	80	Single Unit Long Haul Truck	10	0.00E+00	1.37E-06	5.29E-08	1.59E+00	9.11E-07	2.85E-03	1.51E-06	5.59E-04	1.18E-04	2.34E-05	1.89E-04	3.45E-05	3.52E-05	1.61E-04	6.48E-06	2.53E-09	1.54E-04	1.04E-04
11	D20	80	Combination Short Haul Truck	27	0.00E+00	5.50E-06	4.07E-07	8.94E+00	1.44E-08	8.38E-03	3.93E-06	8.46E-03	6.36E-04	1.15E-04	3.33E-04	1.19E-04	1.23E-04	1.42E-03	2.99E-05	0.00E+00	2.10E-04	1.59E-03
11	D20	80	Combination Long Haul Truck	24	0.00E+00	7.66E-06	4.32E-07	8.30E+00	4.87E-08	9.92E-03	6.32E-06	9.04E-03	6.58E-04	1.05E-04	7.02E-04	1.39E-04	1.45E-04	1.33E-03	2.78E-05	0.00E+00	5.57E-04	1.70E-03
11	D21	80	Passenger Car	890	0.00E+00	9.25E-06	1.00E-06	3.77E+01	6.56E-05	1.90E-01	2.08E-05	9.23E-04	4.85E-03	8.12E-04	2.03E-03	1.31E-03	1.35E-03	1.32E-04	1.90E-04	4.06E-08	6.88E-04	1.44E-04
11	D21	80	Passenger Truck	1491	0.00E+00	1.90E-05	2.03E-06	8.50E+01	1.24E-04	3.36E-01	4.03E-05	2.49E-03	8.64E-03	1.44E-03	3.87E-03	2.51E-03	2.57E-03	6.12E-04	4.25E-04	7.73E-08	1.30E-03	4.14E-04
11	D21	80	Single Unit Short Haul Truck	134	0.00E+00	1.84E-05	7.18E-07	2.20E+01	1.25E-05	3.99E-02	2.02E-05	7.63E-03	1.51E-03	3.08E-04	2.53E-03	4.69E-04	4.78E-04	2.24E-03	8.93E-05	3.54E-08	2.06E-03	1.43E-03
11	D21	80	Single Unit Long Haul Truck	6	0.00E+00	7.99E-07	3.08E-08	9.29E-01	5.31E-07	1.66E-03	8.78E-07	3.26E-04	6.91E-05	1.37E-05	1.10E-04	2.01E-05	2.05E-05	9.39E-05	3.78E-06	1.48E-09	8.99E-05	6.09E-05
11	D21	80	Combination Short Haul Truck	70	0.00E+00	1.43E-05	1.06E-06	2.33E+01	3.75E-08	2.19E-02	1.02E-05	2.21E-02	1.66E-03	3.01E-04	8.69E-04	3.10E-04	3.21E-04	3.71E-03	7.80E-05	0.00E+00	5.48E-04	4.16E-03
11	D21	80	Combination Long Haul Truck	63	0.00E+00	2.00E-05	1.13E-06	2.16E+01	1.27E-07	2.59E-02	1.65E-05	2.36E-02	1.72E-03	2.75E-04	1.83E-03	3.63E-04	3.79E-04	3.47E-03	7.25E-05	0.00E+00	1.45E-03	4.44E-03
11	D22	80	Passenger Car	941	0.00E+00	9.77E-06	1.06E-06	3.98E+01	6.94E-05	2.01E-01	2.20E-05	9.76E-04	5.13E-03	8.59E-04	2.15E-03	1.39E-03	1.42E-03	1.40E-04	2.01E-04	4.29E-08	7.27E-04	1.52E-04
11	D22	80	Passenger Truck	1576	0.00E+00	2.01E-05	2.15E-06	8.99E+01	1.31E-04	3.55E-01	4.26E-05	2.63E-03	9.13E-03	1.52E-03	4.09E-03	2.65E-03	2.72E-03	6.47E-04	4.49E-04	8.17E-08	1.37E-03	4.38E-04
11	D22	80	Single Unit Short Haul Truck	93	0.00E+00	1.27E-05	4.98E-07	1.52E+01	8.64E-06	2.77E-02	1.40E-05	5.29E-03	1.04E-03	2.14E-04	1.76E-03	3.25E-04	3.31E-04	1.55E-03	6.19E-05	2.45E-08	1.42E-03	9.88E-04
11	D22	80	Single Unit Long Haul Truck	4	0.00E+00	5.54E-07	2.14E-08	6.44E-01	3.68E-07	1.15E-03	6.09E-07	2.26E-04	4.79E-05	9.47E-06	7.65E-05	1.40E-05	1.42E-05	6.51E-05	2.62E-06	1.02E-09	6.23E-05	4.22E-05
11	D22	80	Combination Short Haul Truck	56	0.00E+00	1.16E-05	8.62E-07	1.89E+01	3.05E-08	1.77E-02	8.32E-06	1.79E-02	1.35E-03	2.44E-04	7.06E-04	2.51E-04	2.61E-04	3.01E-03	6.33E-05	0.00E+00	4.45E-04	3.37E-03
11	D22	80	Combination Long Haul Truck	52	0.00E+00	1.62E-05	9.16E-07	1.76E+01	1.03E-07	2.10E-02	1.34E-05	1.91E-02	1.39E-03	2.23E-04	1.49E-03	2.95E-04	3.07E-04	2.82E-03	5.89E-05	0.00E+00	1.18E-03	3.60E-03
9	D23	60	Passenger Car	800	0.00E+00	1.02E-05	1.11E-06	3.64E+01	7.26E-05	2.04E-01	2.31E-05	8.23E-04	8.08E-03	1.21E-03	2.25E-03	1.45E-03	1.49E-03	1.59E-04	1.83E-04	3.84E-08	7.61E-04	1.28E-04
9	D23	60	Passenger Truck	1339	0.00E+00	2.17E-05	2.30E-06	8.12E+01	1.37E-04	3.49E-01	4.50E-05	2.56E-03	1.48E-02	2.20E-03	4.29E-03	2.79E-03	2.86E-03	6.49E-04	4.04E-04	7.49E-08	1.43E-03	4.34E-04
9	D23	60	Single Unit Short Haul Truck	69	0.00E+00	1.54E-05	6.36E-07	1.15E+01	1.02E-05	2.02E-02	1.67E-05	5.89E-03	1.59E-03	2.67E-04	2.05E-03	3.96E-04	4.04E-04	1.16E-03	4.68E-05	1.93E-08	1.65E-03	1.10E-03
9	D23	60	Single Unit Long Haul Truck	3	0.00E+00	6.72E-07	2.76E-08	4.89E-01	4.42E-07	8.57E-04	7.27E-07	2.55E-04	7.13E-05	1.18E-05	8.98E-05	1.72E-05	1.75E-05	4.94E-05	2.00E-06	8.20E-10	7.23E-05	4.78E-05
9	D23	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.97E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.72E-03
9	D23	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.10E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.96E-03
9	D24	60	Passenger Car	1143	0.00E+00	1.46E-05	1.59E-06	5.21E+01	1.04E-04	2.91E-01	3.29E-05	1.18E-03	1.15E-02	1.73E-03	3.21E-03	2.07E-03	2.13E-03	2.26E-04	2.61E-04	5.49E-08	1.09E-03	1.84E-04
9	D24	60	Passenger Truck	1913	0.00E+00	3.10E-05	3.29E-06	1.16E+02	1.96E-04	4.99E-01	6.43E-05	3.66E-03	2.11E-02	3.14E-03	6.13E-03	3.99E-03	4.09E-03	9.27E-04	5.77E-04	1.07E-07	2.04E-03	6.20E-04
9	D24	60	Single Unit Short Haul Truck	53	0.00E+00	1.18E-05	4.86E-07	8.76E+00	7.79E-06	1.54E-02	1.27E-05	4.50E-03	1.21E-03	2.04E-04	1.57E-03	3.02E-04	3.08E-04	8.88E-04	3.57E-05	1.47E-08	1.26E-03	8.43E-04
9	D24	60	Single Unit Long Haul Truck	2	0.00E+00	5.13E-07	2.11E-08	3.74E-01	3.38E-07	6.54E-04	5.55E-07	1.95E-04	5.44E-05	9.03E-06	6.86E-05	1.31E-05	1.34E-05	3.78E-05	1.52E-06	6.26E-10	5.52E-05	3.65E-05
9	D24	60	Combination Short Haul Truck	30	0.00E+00	8.85E-06	6.50E-07	1.07E+01	2.43E-08	1.32E-02	6.36E-06	1.35E-02	1.55E-03	2.42E-04	5.46E-04	1.90E-04	1.98E-04	1.70E-03	3.57E-05	0.00E+00	3.48E-04	2.54E-03
9	D24	60	Combination Long Haul Truck	28	0.00E+00	1.22E-05	6.65E-07	1.01E+01	8.21E-08	1.59E-02	1.02E-05	1.43E-02	1.62E-03	2.34E-04	1.15E-03	2.17E-04	2.26E-04	1.62E-03	3.38E-05	0.00E+00	9.28E-04	2.70E-03
9	D25	60	Passenger Car	843	0.00E+00	1.08E-05	1.17E-06	3.84E+01	7.65E-05	2.15E-01	2.43E-05	8.68E-04	8.52E-03	1.28E-03	2.37E-03	1.53E-03	1.57E-03	1.67E-04	1.93E-04	4.05E-08	8.02E-04	1.35E-04
9	D25	60	Passenger Truck	1413	0.00E+00	2.29E-05	2.43E-06	8.57E+01	1.44E-04	3.68E-01	4.75E-05	2.70E-03	1.56E-02	2.32E-03	4.53E-03	2.95E-03	3.02E-03	6.84E-04	4.26E-04	7.89E-08	1.51E-03	4.57E-04
9	D25	60	Single Unit Short Haul Truck	40	0.00E+00	8.98E-06	3.71E-07	6.69E+00	5.95E-06	1.18E-02	9.71E-06	3.44E-03	9.25E-04	1.56E-04	1.20E-03	2.31E-04	2.35E-04	6.78E-04	2.73E-05	1.12E-08	9.63E-04	6.44E-04
9	D25	60	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.61E-08	2.85E-01	2.58E-07	5.00E-04	4.24E-07	1.49E-04	4.16E-05	6.90E-06	5.24E-05	1.00E-05	1.02E-05	2.88E-05	1.16E-06	4.78E-10	4.22E-05	2.79E-05
9	D25	60	Combination Short Haul Truck	25	0.00E+00	7.33E-06	5.38E-07	8.84E+00	2.01E-08	1.09E-02	5.26E-06	1.11E-02	1.28E-03	2.00E-04	4.52E-04	1.57E-04	1.63E-04	1.41E-03	2.96E-05	0.00E+00	2.88E-04	2.10E-03
9	D25	60	Combination Long Haul Truck	23	0.00E+00	1.01E-05	5.50E-07	8.35E+00	6.80E-08	1.32E-02	8.42E-06	1.19E-02	1.34E-03	1.94E-04	9.55E-04	1.80E-04	1.87E-04	1.34E-03	2.80E-05	0.00E+00	7.68E-04	2.24E-03
9	D26	60	Passenger Car	1119	0.00E+00	1.43E-05	1.56E-06	5.10E+01	1.02E-04	2.86E-01	3.23E-05	1.15E-03	1.13E-02	1.69E-03	3.15E-03	2.03E-03	2.08E-03	2.22E-04	2.56E-04	5.37E-08	1.06E-03	1.80E-04
9	D26	60	Passenger Truck	1875	0.00E+00	3.04E-05	3.22E-06	1.14E+02	1.92E-04	4.89E-01	6.30E-05	3.58E-03	2.07E-02	3.07E-03	6.01E-03	3.91E-03	4.01E-03	9.08E-04	5.65E-04	1.05E-07	2.00E-03	6.07E-04
9	D26	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.06E-04
9	D26	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.09E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	D26	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.04E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
9	D26	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.43E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.21E-03
11	D27	80	Passenger Car	1345	0.00E+00	1.40E-05	1.52E-06	5.69E+01	9.91E-05	2.87E-01	3.15E-05	1.39E-03	7.33E-03	1.23E-03	3.07E-03	1.98E-03	2.03E-03	2.00E-04	2.87E-04	6.13E-08	1.04E-03	2.18E-04
11	D27	80	Passenger Truck	2252	0.00E+00	2.88E-05	3.07E-06	1.28E+02	1.87E-04	5.07E-01	6.09E-05	3.76E-03	1.31E-02	2.17E-03	5.85E-03	3.79E-03	3.89E-03	9.25E-04	6.42E-04	1.17E-07	1.96E-03	6.26E-04
11	D27	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.16E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.22E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D27	80	Combination Short Haul Truck	26	0.00E+00	5.28E-06	3.91E-07	8.59E+00	1.38E-08	8.05E-03	3.78E-06	8.13E-03	6.12E-04	1.11E-04	3.20E-04	1.14E-04	1.18E-04	1.37E-03	2.87E-05	0.00E+00	2.02E-04	1.53E-03
11	D27	80	Combination Long Haul Truck	23	0.00E+00	7.36E-06	4.15E-07	7.98E+00	4.68E-08	9.53E-03	6.07E-06	8.68E-03	6.32E-04	1.01E-04	6.74E-04	1.34E-04	1.39E-04	1.28E-03	2.67E-05	0.00E+00	5.35E-04	1.64E-03
11	D28	80	Passenger Car	674	0.00E+00	7.00E-06	7.61E-07	2.85E+01	4.97E-05	1.44E-01	1.58E-05	6.99E-04	3.67E-03	6.15E-04	1.54E-03	9.93E-04	1.02E-03	1.00E-04	1.44E-04	3.07E-08	5.21E-04	1.09E-04
11	D28	80	Passenger Truck	1129	0.00E+00	1.44E-05	1.54E-06	6.44E+01	9.38E-05	2.54E-01	3.05E-05	1.88E-03	6.54E-03	1.09E-03	2.93E-03	1.90E-03	1.95E-03	4.64E-04	3.22E-04	5.85E-08	9.82E-04	3.14E-04
11	D28	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	5.99E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D28	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.98E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.50E-04
11	D28	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.25E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.01E-04
11	D29	80	Passenger Car	992	0.00E+00	1.03E-05	1.12E-06	4.20E+01	7.31E-05	2.12E-01	2.32E-05	1.03E-03	5.41E-03	9.05E-04	2.27E-03	1.46E-03	1.50E-03	1.47E-04	2.12E-04	4.52E-08	7.66E-04	1.60E-04
11	D29

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D33	60	Passenger Truck	451	0.00E+00	7.31E-06	7.75E-07	2.73E+01	4.61E-05	1.18E-01	1.52E-05	8.62E-04	4.97E-03	7.39E-04	1.45E-03	9.40E-04	9.63E-04	2.18E-04	1.36E-04	2.52E-08	4.82E-04	1.46E-04
9	D33	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.06E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
9	D33	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.63E-06
9	D33	60	Combination Short Haul Truck	12	0.00E+00	3.36E-06	2.47E-07	4.05E+00	9.20E-09	5.02E-03	2.41E-06	5.11E-03	5.86E-04	9.17E-05	2.07E-04	7.22E-05	7.49E-05	6.44E-04	1.36E-05	0.00E+00	1.32E-04	9.63E-04
9	D33	60	Combination Long Haul Truck	10	0.00E+00	4.61E-06	2.52E-07	3.83E+00	3.11E-08	6.03E-03	3.86E-06	5.44E-03	6.15E-04	8.89E-05	4.38E-04	8.23E-05	8.58E-05	6.14E-04	1.28E-05	0.00E+00	3.52E-04	1.02E-03
9	D34	60	Passenger Car	359	0.00E+00	4.59E-06	4.98E-07	1.63E+01	3.25E-05	9.15E-02	1.03E-05	3.69E-04	3.62E-03	5.42E-04	1.01E-03	6.50E-04	6.67E-04	7.11E-05	8.20E-05	1.72E-08	3.41E-04	5.76E-05
9	D34	60	Passenger Truck	600	0.00E+00	9.73E-06	1.03E-06	3.64E+01	6.14E-05	1.57E-01	2.02E-05	1.15E-03	6.62E-03	9.85E-04	1.92E-03	1.25E-03	1.28E-03	2.91E-04	1.81E-04	3.36E-08	6.42E-04	1.94E-04
9	D34	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.29E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.29E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.92E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	D34	60	Combination Short Haul Truck	29	0.00E+00	8.55E-06	6.28E-07	1.03E+01	2.34E-08	1.28E-02	6.14E-06	1.30E-02	1.49E-03	2.33E-04	5.27E-04	1.84E-04	1.91E-04	1.64E-03	3.45E-05	0.00E+00	3.36E-04	2.45E-03
9	D34	60	Combination Long Haul Truck	27	0.00E+00	1.17E-05	6.42E-07	9.74E+00	7.93E-08	1.53E-02	9.82E-06	1.38E-02	1.56E-03	2.26E-04	1.11E-03	2.10E-04	2.18E-04	1.56E-03	3.26E-05	0.00E+00	8.96E-04	2.61E-03
9	D35	60	Passenger Car	313	0.00E+00	4.01E-06	4.35E-07	1.43E+01	2.84E-05	7.99E-02	9.03E-06	3.23E-04	3.16E-03	4.74E-04	8.81E-04	5.68E-04	5.83E-04	6.21E-05	7.16E-05	1.50E-08	2.98E-04	5.03E-05
9	D35	60	Passenger Truck	525	0.00E+00	8.51E-06	9.02E-07	3.18E+01	5.37E-05	1.37E-01	1.76E-05	1.00E-03	5.78E-03	8.60E-04	1.68E-03	1.09E-03	1.12E-03	2.54E-04	1.58E-04	2.93E-08	5.61E-04	1.70E-04
9	D35	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.18E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	D35	60	Combination Short Haul Truck	5	0.00E+00	1.53E-06	1.12E-07	1.84E+00	4.18E-09	2.28E-03	1.10E-06	2.32E-03	2.66E-04	4.17E-05	9.41E-05	3.28E-05	3.41E-05	2.93E-04	6.16E-06	0.00E+00	6.00E-05	4.38E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.10E-06	1.15E-07	1.74E+00	1.42E-08	2.74E-03	1.75E-06	2.47E-03	2.79E-04	4.04E-05	1.99E-04	3.74E-05	3.90E-05	2.79E-04	5.83E-06	0.00E+00	1.60E-04	4.66E-04
9	D36	60	Passenger Car	492	0.00E+00	6.29E-06	6.83E-07	2.24E+01	4.46E-05	1.25E-01	1.42E-05	5.06E-04	4.96E-03	7.44E-04	1.38E-03	8.91E-04	9.15E-04	9.75E-05	1.12E-04	2.36E-08	4.68E-04	7.90E-05
9	D36	60	Passenger Truck	823	0.00E+00	1.33E-05	1.41E-06	4.99E+01	8.42E-05	2.15E-01	2.77E-05	1.57E-03	9.07E-03	1.35E-03	2.64E-03	1.72E-03	1.76E-03	3.99E-04	2.48E-04	4.60E-08	8.80E-04	2.67E-04
9	D36	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.37E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
9	D36	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.25E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.13E-04
9	D36	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.46E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.52E-04
9	D37	60	Passenger Car	305	0.00E+00	3.91E-06	4.24E-07	1.39E+01	2.77E-05	7.79E-02	8.81E-06	3.14E-04	3.08E-03	4.62E-04	8.59E-04	5.54E-04	5.68E-04	6.05E-05	6.98E-05	1.47E-08	2.91E-04	4.91E-05
9	D37	60	Passenger Truck	512	0.00E+00	8.29E-06	8.79E-07	3.10E+01	5.23E-05	1.33E-01	1.72E-05	9.78E-04	5.64E-03	8.39E-04	1.64E-03	1.07E-03	1.09E-03	2.48E-04	1.54E-04	2.86E-08	5.47E-04	1.66E-04
9	D37	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.18E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	D37	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.48E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.56E-04
9	D37	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.71E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.99E-04
9	D38	60	Passenger Car	154	0.00E+00	1.97E-06	2.15E-07	7.04E+00	1.40E-05	3.94E-02	4.45E-06	1.59E-04	1.56E-03	2.34E-04	4.34E-04	2.80E-04	2.87E-04	3.06E-05	3.53E-05	7.41E-09	1.47E-04	2.48E-05
9	D38	60	Passenger Truck	259	0.00E+00	4.19E-06	4.44E-07	1.57E+01	2.64E-05	6.74E-02	8.70E-06	4.94E-04	2.85E-03	4.24E-04	8.29E-04	5.39E-04	5.53E-04	1.25E-04	7.79E-05	1.45E-08	2.76E-04	8.37E-05
9	D38	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	D38	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.29E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.75E-04
9	D38	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.89E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.86E-04
9	D39	60	Passenger Car	314	0.00E+00	4.02E-06	4.37E-07	1.43E+01	2.85E-05	8.02E-02	9.07E-06	3.24E-04	3.18E-03	4.76E-04	8.84E-04	5.70E-04	5.85E-04	6.23E-05	7.19E-05	1.51E-08	2.99E-04	5.05E-05
9	D39	60	Passenger Truck	527	0.00E+00	8.54E-06	9.05E-07	3.19E+01	5.38E-05	1.37E-01	1.77E-05	1.01E-03	5.80E-03	8.64E-04	1.69E-03	1.10E-03	1.13E-03	2.55E-04	1.59E-04	2.94E-08	5.63E-04	1.71E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.18E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	D39	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.88E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.19E-04
9	D39	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.19E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.78E-04
9	D40	60	Passenger Car	210	0.00E+00	2.69E-06	2.93E-07	9.59E+00	1.91E-05	5.37E-02	6.07E-06	2.17E-04	2.13E-03	3.18E-04	5.92E-04	3.82E-04	3.92E-04	4.17E-05	4.81E-05	1.01E-08	2.00E-04	3.38E-05
9	D40	60	Passenger Truck	353	0.00E+00	5.71E-06	6.06E-07	2.14E+01	3.60E-05	9.19E-02	1.19E-05	6.74E-04	3.88E-03	5.78E-04	1.13E-03	7.35E-04	7.53E-04	1.71E-04	1.06E-04	1.97E-08	3.77E-04	1.14E-04
9	D41	60	Passenger Car	91	0.00E+00	1.17E-06	1.27E-07	4.16E+00	8.28E-06	2.33E-02	2.63E-06	9.39E-05	9.21E-04	1.38E-04	2.57E-04	1.65E-04	1.70E-04	1.81E-05	2.09E-05	4.38E-09	8.68E-05	1.47E-05
9	D41	60	Passenger Truck	153	0.00E+00	2.48E-06	2.62E-07	9.26E+00	1.56E-05	3.98E-02	5.14E-06	2.92E-04	1.68E-03	2.51E-04	4.90E-04	3.19E-04	3.27E-04	7.40E-05	4.60E-05	8.54E-09	1.63E-04	4.95E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.18E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	D41	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.16E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.19E-04
9	D41	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.33E-04
9	D42	60	Passenger Car	157	0.00E+00	2.01E-06	2.18E-07	7.15E+00	1.43E-05	4.01E-02	4.53E-06	1.62E-04	1.59E-03	2.38E-04	4.42E-04	2.85E-04	2.92E-04	3.11E-05	3.59E-05	7.54E-09	1.49E-04	2.52E-05
9	D42	60	Passenger Truck	263	0.00E+00	4.26E-06	4.52E-07	1.59E+01	2.69E-05	6.86E-02	8.84E-06	5.03E-04	2.90E-03	4.31E-04	8.43E-04	5.48E-04	5.62E-04	1.27E-04	7.93E-05	1.47E-08	2.81E-04	8.52E-05
9	D43	60	Passenger Car	145	0.00E+00	1.86E-06	2.02E-07	6.63E+00	1.32E-05	3.71E-02	4.19E-06	1.50E-04	1.47E-03	2.20E-04	4.09E-04	2.64E-04	2.71E-04	2.88E-05	3.32E-05	6.98E-09	1.38E-04	2.34E-05
9	D43	60	Passenger Truck	244	0.00E+00	3.95E-06	4.18E-07	1.48E+01	2.49E-05	6.35E-02	8.19E-06	4.66E-04	2.68E-03	3.99E-04	7.81E-04	5.08E-04	5.21E-04	1.18E-04	7.34E-05	1.36E-08	2.60E-04	7.89E-05
9	D43	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.30E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.32E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.95E-06
9	D43	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.48E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.56E-04
9	D43	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.71E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.99E-04
9	D44	60	Passenger Car	259	0.00E+00	3.32E-06	3.61E-07	1.18E+01	2.35E-05	6.62E-02	7.48E-06	2.67E-04	2.62E-03	3.92E-04	7.30E-04	4.70E-04	4.83E-04	5.14E-05	5.93E-05	1.25E-08	2.47E-04	4.17E-05
9	D44	60	Passenger Truck	435	0.00E+00	7.04E-06	7.47E-07	2.63E+01	4.44E-05	1.13E-01	1.46E-05	8.31E-04	4.79E-03	7.13E-04	1.39E-03	9.06E-04	9.29E-04	2.11E-04	1.31E-04	2.43E-08	4.64E-04	1.41E-04
9	D44	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.64E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.75E-05
9	D44	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.95E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.32E-05
9	D45	60	Passenger Car	544	0.00E+00	6.96E-06	7.56E-07	2.48E+01	4.94E-05	1.39E-01	1.57E-05	5.60E-04	5.50E-03	8.23E-04	1.53E-03	9.87E-04	1.01E-03	1.08E-04	1.24E-04	2.61E-08	5.18E-04	8.74E-05
9	D45	60	Passenger Truck	912	0.00E+00	1.48E-05	1.57E-06	5.53E+01	9.32E-05	2.38E-01	3.07E-05	1.74E-03	1.00E-02	1.50E-03	2.92E-03	1.90E-03	1.95E-03	4.42E-04	2.75E-04	5.10E-08	9.74E-04	2.95E-04
9	D45	60	Single Unit Short Haul Truck	35	0.00E+00	7.91E-06	3.27E-07	5.90E+00	5.24E-06	1.04E-02	8.56E-06	3.03E-03	8.15E-04	1.37E-04	1.06E-03	2.03E-04	2.07E-04	5.97E-04	2.40E-05	9.90E-09	8.48E-04	5.67E-04
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	3.45E-07	1.42E-08	2.51E-01	2.27E-07	4.40E-04	3.73E-07	1.31E-04	3.66E-05	6.08E-06	4.62E-05	8.84E-06	9.01E-06	2.54E-05	1.03E-06	4.21E-10	3.71E-05	2.46E-05
9	D45	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.18E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.23E-03
9	D45	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.26E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.38E-03
9	D46	60	Passenger Car	508	0.00E+00	6.50E-06	7.07E-07	2.32E+01	4.61E-05	1.30E-01	1.47E-05	5.23E-04	5.13E-03	7.69E-04	1.43E-03	9.22E-04	9.46E-04	1.01E-04	1.16E-04	2.44E-08	4.84E-04	8.17E-05
9	D46	60	Passenger Truck	852	0.00E+00	1.38E-05	1.46E-06	5.16E+01	8.71E-05	2.22E-01	2.86E-05	1.63E-03	9.38E-03	1.40E-03	2.73E-03	1.78E-03	1.82E-03	4.13E-04	2.57E-04	4.76E-08	9.10E-04	2.76E-04
9	D46	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.29E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.29E-04
9	D46	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.92E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	D46	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.97E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.72E-03
9	D46	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.10E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.96E-03
9	D47	60	Passenger Car	761	0.00E+00	9.73E-06	1.06E-06	3.47E+01	6.90E-05	1.94E-01	2.19E-05	7.83E-04	7.68E-03	1.15E-03	2.14E-03	1.38E-03	1.42E-03	1.51E-04	1.74E-04	3.65E-08	7.24E-04	1.22E-04
9	D47	60	Passenger Truck	1274	0.00E+00	2.07E-05	2.19E-06	7.73E+01	1.30E-04	3.32E-01	4.28E-05	2.44E-03	1.40E-02	2.09E-03	4.08E-03	2.66E-03	2.72E-03	6.17E-04	3.84E-04	7.12E-08	1.36E-03	4.13E-04
9	D47	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.11E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.82E-04
9	D47	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.52E-05
9	D47	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.18E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.23E-03
9	D47	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.26E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.38E-03
9	D48	60	Passenger Car	210	0.00E+00	2.68E-06	2.91E-07	9.56E+00	1.90E-05	5.35E-02	6.05E-06	2.16E-04	2.12E-03	3.17E-04	5.90E-04	3.80E-04	3.90E-04	4.16E-05	4.79E-05	1.01E-08	2.00E-04	3.37E-05
9	D48	60	Passenger Truck	351	0.00E+00	5.69E-06	6.04E-07	2.13E+01	3.59E-05	9.16E-02	1.18E-05	6.71E-04	3.87E-03	5.76E-04	1.13E-03	7.33E-04	7.51E-04	1.70E-04	1.06E-04	1.96E-08	3.75E-04	1.14E-04
9	D48	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	D48	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.29E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.75E-04
9	D48	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.89E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.86E-04
9	D49	60	Passenger Car	1125	0.00E+00	1.44E-05	1.56E-06	5.13E+01	1.02E-04	2.87E-01	3.24E-05	1.16E-03	1.14E-02	1.70E-03	3.16E-03	2.04E-03	2.09E-03	2.23E-04	2.57E-04	5.40E-08	1.07E-03	1.81E-04
9	D49	60	Passenger Truck	1885	0.00E+00	3.06E-05	3.24E-06	1.14E+02	1.93E-04	4.91E-01	6.34E-05	3.60E-03	2.08E-02	3.09E-03	6.04E-03	3.93E-03	4.03E-03	9.13E-04	5.68E-04	1.05E-07	2.01E-03	6.10E-04
9	D49	60	Single Unit Short Haul Truck	109	0.00E+00	2.44E-05	1.01E-06	1.82E+01	1.62E-05	3.19E-02	2.64E-05	9.33E-03	2.51E-03	4.22E-04	3.25E-03	6.26E-04	6.39E-04	1.84E-03	7.40E-05	3.05E-08	2.61E-03	1.75E-03
9	D49	60	Single Unit Long Haul Truck	5	0.00E+00	1.06E-06	4.37E-08	7.74E-01	7.00E-07	1.36E-03	1.15E-06	4.04E-04	1.13E-04	1.87E-05	1.42E-04	2.72E-05	2.78E-05	7.83E-05	3.16E-06	1.30E-09	1.14E-04	7.56E-05
9	D49	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D53	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.22E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.06E-04
9	D54	60	Passenger Car	169	0.00E+00	2.17E-06	2.35E-07	7.72E+00	1.54E-05	4.32E-02	4.88E-06	1.74E-04	1.71E-03	2.56E-04	4.76E-04	3.07E-04	3.15E-04	3.36E-05	3.87E-05	8.13E-09	1.61E-04	2.72E-05
9	D54	60	Passenger Truck	284	0.00E+00	4.60E-06	4.87E-07	1.72E+01	2.90E-05	7.39E-02	9.54E-06	5.42E-04	3.13E-03	4.65E-04	9.09E-04	5.92E-04	6.06E-04	1.37E-04	8.55E-05	1.59E-08	3.03E-04	9.19E-05
9	D54	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.91E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.19E-05
9	D54	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.06E-04
9	D54	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.73E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.26E-04
11	D55	80	Passenger Car	370	0.00E+00	3.84E-06	4.17E-07	1.56E+01	2.73E-05	7.89E-02	8.66E-06	3.83E-04	2.02E-03	3.37E-04	8.45E-04	5.45E-04	5.59E-04	5.50E-05	7.89E-05	1.69E-08	2.86E-04	5.98E-05
11	D55	80	Passenger Truck	619	0.00E+00	7.91E-06	8.43E-07	3.53E+01	5.14E-05	1.39E-01	1.68E-05	1.03E-03	3.59E-03	5.97E-04	1.61E-03	1.04E-03	1.07E-03	2.54E-04	1.76E-04	3.21E-08	5.39E-04	1.72E-04
11	D55	80	Single Unit Short Haul Truck	35	0.00E+00	4.86E-06	1.90E-07	5.81E+00	3.30E-06	1.06E-02	5.34E-06	2.02E-03	3.98E-04	8.14E-05	6.70E-04	1.24E-04	1.26E-04	5.91E-04	2.36E-05	9.36E-09	5.43E-04	3.77E-04
11	D55	80	Single Unit Long Haul Truck	2	0.00E+00	2.11E-07	8.15E-09	2.45E-01	1.40E-07	4.39E-04	2.32E-07	8.61E-05	1.83E-05	3.61E-06	2.92E-05	5.32E-06	5.43E-06	2.48E-05	9.99E-07	3.90E-10	2.38E-05	1.61E-05
11	D55	80	Combination Short Haul Truck	27	0.00E+00	5.61E-06	4.15E-07	9.12E+00	1.47E-08	8.54E-03	4.01E-06	8.62E-03	6.49E-04	1.18E-04	3.40E-04	1.21E-04	1.26E-04	1.45E-03	3.05E-05	0.00E+00	2.14E-04	1.62E-03
11	D55	80	Combination Long Haul Truck	25	0.00E+00	7.81E-06	4.41E-07	8.46E+00	4.97E-08	1.01E-02	6.44E-06	9.22E-03	6.71E-04	1.07E-04	7.16E-04	1.42E-04	1.48E-04	1.36E-03	2.84E-05	0.00E+00	5.68E-04	1.74E-03
11	D56	80	Passenger Car	595	0.00E+00	6.18E-06	6.72E-07	2.52E+01	4.39E-05	1.27E-01	1.39E-05	6.17E-04	3.24E-03	5.43E-04	1.36E-03	8.77E-04	9.00E-04	8.85E-05	1.27E-04	2.71E-08	4.60E-04	9.63E-05
11	D56	80	Passenger Truck	997	0.00E+00	1.27E-05	1.36E-06	5.69E+01	8.28E-05	2.24E-01	2.70E-05	1.66E-03	5.78E-03	9.62E-04	2.59E-03	1.68E-03	1.72E-03	4.09E-04	2.84E-04	5.17E-08	8.67E-04	2.77E-04
11	D56	80	Single Unit Short Haul Truck	53	0.00E+00	7.23E-06	2.82E-07	8.64E+00	4.90E-06	1.57E-02	7.95E-06	3.00E-03	5.92E-04	1.21E-04	9.95E-04	1.84E-04	1.88E-04	8.79E-04	3.51E-05	1.39E-08	8.08E-04	5.60E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	3.14E-07	1.21E-08	3.65E-01	2.09E-07	6.53E-04	3.45E-07	1.28E-04	2.71E-05	5.37E-06	4.34E-05	7.91E-06	8.07E-06	3.69E-05	1.49E-06	5.80E-10	3.53E-05	2.39E-05
11	D56	80	Combination Short Haul Truck	31	0.00E+00	6.47E-06	4.79E-07	1.05E+01	1.69E-08	9.86E-03	4.62E-06	9.95E-03	7.49E-04	1.36E-04	3.92E-04	1.40E-04	1.45E-04	1.67E-03	3.52E-05	0.00E+00	2.47E-04	1.87E-03
11	D56	80	Combination Long Haul Truck	29	0.00E+00	9.01E-06	5.09E-07	9.77E+00	5.73E-08	1.17E-02	7.43E-06	1.06E-02	7.74E-04	1.24E-04	8.26E-04	1.64E-04	1.71E-04	1.57E-03	3.27E-05	0.00E+00	6.55E-04	2.00E-03
11	D57	80	Passenger Car	1208	0.00E+00	1.26E-05	1.36E-06	5.11E+01	8.91E-05	2.58E-01	2.83E-05	1.25E-03	6.59E-03	1.10E-03	2.76E-03	1.78E-03	1.83E-03	1.80E-04	2.58E-04	5.51E-08	9.34E-04	1.95E-04
11	D57	80	Passenger Truck	2024	0.00E+00	2.58E-05	2.75E-06	1.15E+02	1.68E-04	4.56E-01	5.48E-05	3.38E-03	1.17E-02	1.95E-03	5.25E-03	3.41E-03	3.49E-03	8.31E-04	5.77E-04	1.05E-07	1.76E-03	5.62E-04
11	D57	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.07E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.87E-04
11	D57	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.85E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.65E-05
11	D57	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.29E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.75E-03
11	D57	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.92E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.87E-03
11	D58	80	Passenger Car	990	0.00E+00	1.03E-05	1.12E-06	4.19E+01	7.30E-05	2.11E-01	2.32E-05	1.03E-03	5.40E-03	9.04E-04	2.26E-03	1.46E-03	1.50E-03	1.47E-04	2.11E-04	4.52E-08	7.65E-04	1.60E-04
11	D58	80	Passenger Truck	1659	0.00E+00	2.12E-05	2.26E-06	9.46E+01	1.38E-04	3.73E-01	4.49E-05	2.77E-03	9.61E-03	1.60E-03	4.31E-03	2.79E-03	2.86E-03	6.81E-04	4.73E-04	8.60E-08	1.44E-03	4.61E-04
11	D58	80	Single Unit Short Haul Truck	69	0.00E+00	9.46E-06	3.69E-07	1.13E+01	6.42E-06	2.05E-02	1.04E-05	3.92E-03	7.75E-04	1.58E-04	1.30E-03	2.41E-04	2.46E-04	1.15E-03	4.59E-05	1.82E-08	1.06E-03	7.33E-04
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	4.11E-07	1.59E-08	4.78E-01	2.73E-07	8.55E-04	4.52E-07	1.68E-04	3.55E-05	7.03E-06	5.68E-05	1.04E-05	1.06E-05	4.83E-05	1.94E-06	7.59E-10	4.63E-05	3.13E-05
11	D58	80	Combination Short Haul Truck	40	0.00E+00	8.19E-06	6.06E-07	1.33E+01	2.15E-08	1.25E-02	5.86E-06	1.26E-02	9.48E-04	1.72E-04	4.97E-04	1.77E-04	1.84E-04	2.12E-03	4.46E-05	0.00E+00	3.13E-04	2.37E-03
11	D58	80	Combination Long Haul Truck	36	0.00E+00	1.14E-05	6.44E-07	1.24E+01	7.26E-08	1.48E-02	9.41E-06	1.35E-02	9.80E-04	1.57E-04	1.05E-03	2.08E-04	2.16E-04	1.99E-03	4.15E-05	0.00E+00	8.30E-04	2.54E-03
11	D59	80	Passenger Car	480	0.00E+00	4.99E-06	5.42E-07	2.03E+01	3.54E-05	1.02E-01	1.12E-05	4.98E-04	2.62E-03	4.38E-04	1.10E-03	7.07E-04	7.26E-04	7.14E-05	1.02E-04	2.19E-08	3.71E-04	7.77E-05
11	D59	80	Passenger Truck	804	0.00E+00	1.03E-05	1.09E-06	4.59E+01	6.68E-05	1.81E-01	2.18E-05	1.34E-03	4.66E-03	7.76E-04	2.09E-03	1.35E-03	1.39E-03	3.30E-04	2.29E-04	4.17E-08	6.99E-04	2.23E-04
11	D59	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.53E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.85E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.52E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	D59	80	Combination Short Haul Truck	16	0.00E+00	3.34E-06	2.47E-07	5.44E+00	8.75E-09	5.09E-03	2.39E-06	5.14E-03	3.87E-04	7.01E-05	2.03E-04	7.22E-05	7.49E-05	8.64E-04	1.82E-05	0.00E+00	1.28E-04	9.69E-04
11	D59	80	Combination Long Haul Truck	15	0.00E+00	4.66E-06	2.63E-07	5.05E+00	2.96E-08	6.03E-03	3.84E-06	5.49E-03	4.00E-04	6.40E-05	4.27E-04	8.47E-05	8.82E-05	8.10E-04	1.69E-05	0.00E+00	3.38E-04	1.03E-03
11	D60	80	Passenger Car	550	0.00E+00	5.72E-06	6.21E-07	2.33E+01	4.06E-05	1.17E-01	1.29E-05	5.71E-04	3.00E-03	5.02E-04	1.26E-03	8.10E-04	8.32E-04	8.18E-05	1.17E-04	2.51E-08	4.25E-04	8.90E-05
11	D60	80	Passenger Truck	922	0.00E+00	1.18E-05	1.25E-06	5.26E+01	7.65E-05	2.08E-01	2.49E-05	1.54E-03	5.34E-03	8.89E-04	2.39E-03	1.55E-03	1.59E-03	3.78E-04	2.63E-04	4.78E-08	8.02E-04	2.56E-04
11	D60	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.72E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.09E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.16E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	D60	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.80E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.28E-03
11	D60	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.27E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.37E-03
11	D61	80	Passenger Car	179	0.00E+00	1.86E-06	2.02E-07	7.56E+00	1.32E-05	3.82E-02	4.19E-06	1.85E-04	9.74E-04	1.63E-04	4.08E-04	2.63E-04	2.70E-04	2.66E-05	3.81E-05	8.15E-09	1.38E-04	2.89E-05
11	D61	80	Passenger Truck	299	0.00E+00	3.82E-06	4.07E-07	1.71E+01	2.49E-05	6.74E-02	8.10E-06	5.00E-04	1.73E-03	2.89E-04	7.77E-04	5.04E-04	5.17E-04	1.23E-04	8.53E-05	1.55E-08	2.60E-04	8.32E-05
11	D61	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.97E-04
11	D61	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.08E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D61	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.48E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.56E-04
11	D61	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.72E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.01E-04
11	D62	80	Passenger Car	94	0.00E+00	9.79E-07	1.06E-07	3.99E+00	6.94E-06	2.01E-02	2.21E-06	9.77E-05	5.14E-04	8.60E-05	2.15E-04	1.39E-04	1.42E-04	1.40E-05	2.01E-05	4.30E-09	7.28E-05	1.52E-05
11	D62	80	Passenger Truck	158	0.00E+00	2.01E-06	2.15E-07	9.00E+00	1.31E-05	3.55E-02	4.27E-06	2.63E-04	9.14E-04	1.52E-04	4.10E-04	2.66E-04	2.72E-04	6.48E-05	4.50E-05	8.18E-09	1.37E-04	4.39E-05
11	D62	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.36E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.15E-05
11	D62	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.81E-04
11	D62	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.00E-04
10	D63	70	Passenger Car	3	0.00E+00	3.75E-08	4.08E-09	1.47E-01	2.66E-07	7.53E-04	8.46E-08	3.40E-06	2.59E-05	4.04E-06	8.25E-06	5.32E-06	5.46E-06	5.72E-07	7.38E-07	1.53E-10	2.79E-06	5.31E-07
10	D63	70	Passenger Truck	6	0.00E+00	7.90E-08	8.40E-09	3.30E-01	5.06E-07	1.33E-03	1.66E-07	9.89E-06	4.69E-05	7.26E-06	1.58E-05	1.03E-05	1.05E-05	2.50E-06	1.64E-06	2.95E-10	5.29E-06	1.66E-06
10	D64	70	Passenger Car	42	0.00E+00	4.63E-07	5.03E-08	1.81E+00	3.28E-06	9.28E-03	1.04E-06	4.20E-05	3.20E-04	4.98E-05	1.02E-04	6.56E-05	6.73E-05	7.05E-06	9.10E-06	1.89E-09	3.44E-05	6.55E-06
10	D64	70	Passenger Truck	69	0.00E+00	9.74E-07	1.04E-07	4.07E+00	6.24E-06	1.64E-02	2.04E-06	1.22E-04	5.79E-04	8.95E-05	1.95E-04	1.27E-04	1.30E-04	3.08E-05	2.03E-05	3.63E-09	6.53E-05	2.05E-05
10	D64	70	Single Unit Short Haul Truck	11	0.00E+00	1.85E-06	7.53E-08	1.73E+00	1.24E-06	3.13E-03	2.02E-06	7.36E-04	1.67E-04	3.07E-05	2.50E-04	4.76E-05	4.86E-05	1.75E-04	7.02E-06	2.83E-09	2.01E-04	1.38E-04
10	D64	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.21E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.05E-04
10	D64	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.43E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.47E-04
11	D65	80	Passenger Car	207	0.00E+00	2.15E-06	2.34E-07	8.76E+00	1.53E-05	4.42E-02	4.85E-06	2.15E-04	1.13E-03	1.89E-04	4.73E-04	3.05E-04	3.13E-04	3.08E-05	4.42E-05	9.44E-09	1.60E-04	3.35E-05
11	D65	80	Passenger Truck	347	0.00E+00	4.43E-06	4.72E-07	1.98E+01	2.88E-05	7.81E-02	9.39E-06	5.79E-04	2.01E-03	3.35E-04	9.01E-04	5.84E-04	5.99E-04	1.42E-04	9.89E-05	1.80E-08	3.02E-04	9.64E-05
11	D65	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.16E-04
11	D65	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.22E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D65	80	Combination Short Haul Truck	22	0.00E+00	4.64E-06	3.43E-07	7.54E+00	1.21E-08	7.06E-03	3.31E-06	7.13E-03	5.37E-04	9.72E-05	2.81E-04	1.00E-04	1.04E-04	1.20E-03	2.52E-05	0.00E+00	1.77E-04	1.34E-03
11	D65	80	Combination Long Haul Truck	21	0.00E+00	6.46E-06	3.65E-07	7.00E+00	4.11E-08	8.36E-03	5.33E-06	7.62E-03	5.55E-04	8.88E-05	5.92E-04	1.17E-04	1.22E-04	1.12E-03	2.35E-05	0.00E+00	4.69E-04	1.44E-03
11	D66	80	Passenger Car	255	0.00E+00	2.65E-06	2.88E-07	1.08E+01	1.88E-05	5.44E-02	5.97E-06	2.64E-04	1.39E-03	2.33E-04	5.82E-04	3.75E-04	3.85E-04	3.79E-05	5.44E-05	1.16E-08	1.97E-04	4.12E-05
11	D66	80	Passenger Truck	427	0.00E+00	5.45E-06	5.81E-07	2.44E+01	3.55E-05	9.62E-02	1.16E-05	7.13E-04	2.47E-03	4.12E-04	1.11E-03	7.19E-04	7.37E-04	1.75E-04	1.22E-04	2.21E-08	3.71E-04	1.19E-04
11	D66	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.97E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.08E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D66	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.29E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.75E-03
11	D66	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.92E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.87E-03
11	D67	80	Passenger Car	213	0.00E+00	2.21E-06	2.41E-07	9.02E+00	1.57E-05	4.55E-02	4.99E-06	2.21E-04	1.16E-03	1.95E-04	4.87E-04	3.14E-04	3.22E-04	3.17E-05	4.55E-05	9.72E-09	1.65E-04	3.45E-05
11	D67	80	Passenger Truck	357	0.00E+00	4.56E-06	4.86E-07	2.04E+01	2.96E-05	8.04E-02	9.66E-06	5.96E-04	2.07E-03	3.44E-04	9.27E-04	6.01E-04	6.16E-04	1.47E-04	1.02E-04	1.85E-08	3.10E-04	9.92E-05
11	D67	80	Single Unit Short Haul Truck	105	0.00E+00	1.45E-05	5.64E-07	1.73E+01	9.80E-06	3.14E-02	1.59E-05	5.99E-03	1.18E-03	2.42E-04	1.99E-03	3.69E-04	3.76E-04	1.76E-03	7.02E-05	2.78E-08	1.62E-03	1.12E-03
11	D67	80	Single Unit Long Haul Truck	5	0.00E+00	6.28E-07	2.42E-08	7.30E-01	4.18E-07	1.31E-03	6.90E-07	2.56E-04	5.43E-05	1.07E-05	8.68E-05	1.58E-05	1.61E-05	7.38E-05	2.97E-06	1.16E-09	7.07E-05	4.79E-05
11	D67	80	Combination Short Haul Truck	81	0.00E+00	1.67E-05	1.24E-06	2.72E+01	4.38E-08	2.55E-02	1.19E-05	2.57E-02	1.93E-03	3.50E-04	1.01E-03	3.61E-04	3.75E-04	4.32E-03	9.09E-05	0.00E+00	6.39E-04	4.84E-03
11	D67	80	Combination Long Haul Truck	74	0.00E+00	2.33E-05	1.31E-06	2.52E+01	1.48E-07	3.02E-02	1.92E-05	2.75E-02	2.00E-03	3.20E-04	2.13E-03	4.24E-04	4.41E-04	4.05E-03	8.45E-05	0.00E+00	1.69E-03	5.17E-03
11	D68	80	Passenger Car	195	0.00E+00	2.03E-06	2.20E-07	8.26E+00	1.44E-05	4.17E-02	4.57E-06	2.02E-04	1.06E-03	1.78E-04	4.46E-04	2.87E-04	2.95E-04	2.90E-05	4.16E-05	8.90E-09	1.51E-04	3.16E-05
11	D68	80	Passenger Truck	327	0.00E+00	4.17E-06	4.45E-07	1.86E+01	2.71E-05	7.36E-02	8.84E-06	5.46E-04	1.89E-03	3.15E-04	8.49E-04	5.51E-04	5.64E-04	1.34E-04	9.31E-05	1.69E-08	2.84E-04	9.08E-05
11	D68	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.18E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.07E-04
11	D68	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.31E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.74E-05
11	D68	80	Combination Short Haul Truck	37

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.81E-07	1.54E-08	3.46E-01	2.53E-07	6.21E-04	4.15E-07	1.50E-04	3.62E-05	6.49E-06	5.16E-05	9.72E-06	9.92E-06	3.50E-05	1.41E-06	5.65E-10	4.16E-05	2.80E-05
10	D72	70	Combination Short Haul Truck	37	0.00E+00	9.56E-06	7.11E-07	1.29E+01	2.43E-08	1.38E-02	6.81E-06	1.42E-02	1.35E-03	2.25E-04	5.73E-04	2.07E-04	2.15E-04	2.05E-03	4.32E-05	0.00E+00	3.58E-04	2.68E-03
10	D72	70	Combination Long Haul Truck	34	0.00E+00	1.31E-05	7.45E-07	1.21E+01	8.22E-08	1.65E-02	1.08E-05	1.52E-02	1.40E-03	2.11E-04	1.19E-03	2.40E-04	2.50E-04	1.95E-03	4.06E-05	0.00E+00	9.42E-04	2.87E-03
10	D73	70	Passenger Car	141	0.00E+00	1.57E-06	1.70E-07	6.13E+00	1.11E-05	3.14E-02	3.53E-06	1.42E-04	1.08E-03	1.69E-04	3.45E-04	2.22E-04	2.28E-04	2.39E-05	3.08E-05	6.40E-09	1.17E-04	2.22E-05
10	D73	70	Passenger Truck	235	0.00E+00	3.30E-06	3.51E-07	1.38E+01	2.11E-05	5.55E-02	6.92E-06	4.13E-04	1.96E-03	3.03E-04	6.62E-04	4.30E-04	4.41E-04	1.04E-04	6.87E-05	1.23E-08	2.21E-04	6.94E-05
10	D73	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.20E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.25E-04
10	D73	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.18E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.70E-06
10	D73	70	Combination Short Haul Truck	40	0.00E+00	1.02E-05	7.61E-07	1.38E+01	2.60E-08	1.48E-02	7.29E-06	1.52E-02	1.44E-03	2.41E-04	6.14E-04	2.22E-04	2.30E-04	2.20E-03	4.62E-05	0.00E+00	3.84E-04	2.87E-03
10	D73	70	Combination Long Haul Truck	36	0.00E+00	1.40E-05	7.98E-07	1.30E+01	8.80E-08	1.76E-02	1.15E-05	1.63E-02	1.50E-03	2.26E-04	1.28E-03	2.56E-04	2.67E-04	2.08E-03	4.35E-05	0.00E+00	1.01E-03	3.07E-03
10	D74	70	Passenger Car	163	0.00E+00	1.82E-06	1.98E-07	7.12E+00	1.29E-05	3.65E-02	4.11E-06	1.65E-04	1.26E-03	1.96E-04	4.01E-04	2.58E-04	2.65E-04	2.78E-05	3.58E-05	7.44E-09	1.36E-04	2.58E-05
10	D74	70	Passenger Truck	274	0.00E+00	3.84E-06	4.08E-07	1.60E+01	2.46E-05	6.45E-02	8.04E-06	4.80E-04	2.28E-03	3.53E-04	7.69E-04	5.00E-04	5.12E-04	1.21E-04	7.98E-05	1.43E-08	2.57E-04	8.06E-05
10	D74	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.87E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.50E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.06E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	D74	70	Combination Short Haul Truck	30	0.00E+00	7.67E-06	5.71E-07	1.04E+01	1.95E-08	1.11E-02	5.47E-06	1.14E-02	1.08E-03	1.80E-04	4.60E-04	1.66E-04	1.73E-04	1.65E-03	3.47E-05	0.00E+00	2.88E-04	2.15E-03
10	D74	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.22E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.30E-03
11	D75	80	Passenger Car	149	0.00E+00	1.55E-06	1.68E-07	6.31E+00	1.10E-05	3.18E-02	3.49E-06	1.55E-04	8.13E-04	1.36E-04	3.41E-04	2.20E-04	2.25E-04	2.22E-05	3.18E-05	6.80E-09	1.15E-04	2.41E-05
11	D75	80	Passenger Truck	250	0.00E+00	3.19E-06	3.40E-07	1.42E+01	2.07E-05	5.63E-02	6.76E-06	4.17E-04	1.45E-03	2.41E-04	6.49E-04	4.21E-04	4.31E-04	1.03E-04	7.12E-05	1.29E-08	2.17E-04	6.94E-05
11	D75	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.72E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.73E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.96E-06
11	D75	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.81E-04
11	D75	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.00E-04
11	D76	80	Passenger Car	99	0.00E+00	1.03E-06	1.11E-07	4.18E+00	7.28E-06	2.11E-02	2.31E-06	1.02E-04	5.38E-04	9.01E-05	2.25E-04	1.45E-04	1.49E-04	1.47E-05	2.11E-05	4.50E-09	7.63E-05	1.60E-05
11	D76	80	Passenger Truck	165	0.00E+00	2.11E-06	2.25E-07	9.43E+00	1.37E-05	3.72E-02	4.47E-06	2.76E-04	9.58E-04	1.59E-04	4.29E-04	2.78E-04	2.85E-04	6.79E-05	4.71E-05	8.57E-09	1.44E-04	4.59E-05
11	D76	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.36E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.15E-05
11	D76	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.49E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.81E-04
11	D76	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.59E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.00E-04
11	D77	80	Passenger Car	196	0.00E+00	2.04E-06	2.22E-07	8.30E+00	1.45E-05	4.19E-02	4.60E-06	2.04E-04	1.07E-03	1.79E-04	4.48E-04	2.89E-04	2.97E-04	2.92E-05	4.19E-05	8.95E-09	1.52E-04	3.18E-05
11	D77	80	Passenger Truck	329	0.00E+00	4.20E-06	4.47E-07	1.87E+01	2.73E-05	7.40E-02	8.89E-06	5.49E-04	1.91E-03	3.17E-04	8.54E-04	5.54E-04	5.68E-04	1.35E-04	9.37E-05	1.70E-08	2.86E-04	9.14E-05
11	D77	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.14E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.14E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.89E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.14E-06
11	D77	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.25E-04
11	D77	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.54E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.68E-04
11	D78	80	Passenger Car	72	0.00E+00	7.49E-07	8.14E-08	3.05E+00	5.32E-06	1.54E-02	1.69E-06	7.48E-05	3.93E-04	6.59E-05	1.65E-04	1.06E-04	1.09E-04	1.07E-05	1.54E-05	3.29E-09	5.57E-05	1.17E-05
11	D78	80	Passenger Truck	121	0.00E+00	1.54E-06	1.64E-07	6.89E+00	1.00E-05	2.72E-02	3.27E-06	2.02E-04	7.00E-04	1.17E-04	3.14E-04	2.04E-04	2.09E-04	4.96E-05	3.44E-05	6.26E-09	1.05E-04	3.36E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	5.99E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D78	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.32E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.37E-04
11	D78	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.48E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.67E-04
10	D79	70	Passenger Car	227	0.00E+00	2.53E-06	2.75E-07	9.87E+00	1.79E-05	5.07E-02	5.70E-06	2.29E-04	1.75E-03	2.72E-04	5.56E-04	3.58E-04	3.68E-04	3.85E-05	4.97E-05	1.03E-08	1.88E-04	3.57E-05
10	D79	70	Passenger Truck	379	0.00E+00	5.32E-06	5.65E-07	2.22E+01	3.41E-05	8.95E-02	1.11E-05	6.66E-04	3.16E-03	4.89E-04	1.07E-03	6.93E-04	7.10E-04	1.68E-04	1.11E-04	1.98E-08	3.56E-04	1.12E-04
10	D79	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.01E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.63E-04
10	D79	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.42E-05
10	D79	70	Combination Short Haul Truck	39	0.00E+00	1.01E-05	7.51E-07	1.36E+01	2.56E-08	1.46E-02	7.19E-06	1.50E-02	1.42E-03	2.37E-04	6.06E-04	2.19E-04	2.27E-04	2.17E-03	4.56E-05	0.00E+00	3.79E-04	2.83E-03
10	D79	70	Combination Long Haul Truck	36	0.00E+00	1.38E-05	7.87E-07	1.28E+01	8.68E-08	1.74E-02	1.14E-05	1.61E-02	1.48E-03	2.23E-04	1.26E-03	2.53E-04	2.64E-04	2.06E-03	4.29E-05	0.00E+00	9.95E-04	3.03E-03
10	D80	70	Passenger Car	471	0.00E+00	5.25E-06	5.71E-07	2.05E+01	3.73E-05	1.05E-01	1.18E-05	4.76E-04	3.63E-03	5.65E-04	1.16E-03	7.45E-04	7.64E-04	8.00E-05	1.03E-04	2.14E-08	3.91E-04	7.43E-05
10	D80	70	Passenger Truck	789	0.00E+00	1.11E-05	1.18E-06	4.62E+01	7.08E-05	1.86E-01	2.32E-05	1.38E-03	6.57E-03	1.02E-03	2.22E-03	1.44E-03	1.48E-03	3.50E-04	2.30E-04	4.12E-08	7.41E-04	2.33E-04
10	D80	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.67E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.13E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.20E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
10	D80	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.08E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.04E-03
10	D80	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.16E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.18E-03
10	D81	70	Passenger Car	194	0.00E+00	2.16E-06	2.35E-07	8.46E+00	1.54E-05	4.34E-02	4.88E-06	1.96E-04	1.49E-03	2.33E-04	4.76E-04	3.07E-04	3.15E-04	3.30E-05	4.25E-05	8.84E-09	1.61E-04	3.06E-05
10	D81	70	Passenger Truck	325	0.00E+00	4.56E-06	4.84E-07	1.90E+01	2.92E-05	7.67E-02	9.55E-06	5.70E-04	2.71E-03	4.19E-04	9.13E-04	5.93E-04	6.08E-04	1.44E-04	9.48E-05	1.70E-08	3.05E-04	9.58E-05
10	D81	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	D81	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
10	D81	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
10	D82	70	Passenger Car	357	0.00E+00	3.98E-06	4.33E-07	1.56E+01	2.83E-05	7.99E-02	8.98E-06	3.61E-04	2.75E-03	4.29E-04	8.76E-04	5.65E-04	5.79E-04	6.07E-05	7.83E-05	1.63E-08	2.96E-04	5.63E-05
10	D82	70	Passenger Truck	598	0.00E+00	8.38E-06	8.91E-07	3.50E+01	5.37E-05	1.41E-01	1.76E-05	1.05E-03	4.98E-03	7.70E-04	1.68E-03	1.09E-03	1.12E-03	2.65E-04	1.74E-04	3.13E-08	5.61E-04	1.76E-04
10	D82	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	D82	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.78E-05
11	D83	80	Passenger Car	541	0.00E+00	5.62E-06	6.11E-07	2.29E+01	3.99E-05	1.16E-01	1.27E-05	5.61E-04	2.95E-03	4.94E-04	1.24E-03	7.97E-04	8.18E-04	8.05E-05	1.16E-04	2.47E-08	4.18E-04	8.76E-05
11	D83	80	Passenger Truck	907	0.00E+00	1.16E-05	1.23E-06	5.17E+01	7.53E-05	2.04E-01	2.45E-05	1.51E-03	5.25E-03	8.75E-04	2.35E-03	1.53E-03	1.57E-03	3.72E-04	2.58E-04	4.70E-08	7.89E-04	2.52E-04
11	D83	80	Single Unit Short Haul Truck	33	0.00E+00	4.47E-06	1.74E-07	5.34E+00	3.03E-06	9.70E-03	4.91E-06	1.85E-03	3.66E-04	7.48E-05	6.15E-04	1.14E-04	1.16E-04	5.43E-04	2.17E-05	8.60E-09	4.99E-04	3.46E-04
11	D83	80	Single Unit Long Haul Truck	1	0.00E+00	1.94E-07	7.49E-09	2.26E-01	1.29E-07	4.04E-04	2.13E-07	7.92E-05	1.68E-05	3.32E-06	2.68E-05	4.89E-06	4.99E-06	2.28E-05	9.18E-07	3.58E-10	2.18E-05	1.48E-05
11	D83	80	Combination Short Haul Truck	40	0.00E+00	8.19E-06	6.06E-07	1.33E+01	2.15E-08	1.25E-02	5.86E-06	1.26E-02	9.48E-04	1.72E-04	4.97E-04	1.77E-04	1.84E-04	2.12E-03	4.46E-05	0.00E+00	3.13E-04	2.37E-03
11	D83	80	Combination Long Haul Truck	36	0.00E+00	1.14E-05	6.44E-07	1.24E+01	7.26E-08	1.48E-02	9.41E-06	1.35E-02	9.80E-04	1.57E-04	1.05E-03	2.08E-04	2.16E-04	1.99E-03	4.15E-05	0.00E+00	8.30E-04	2.54E-03
11	D84	80	Passenger Car	448	0.00E+00	4.66E-06	5.06E-07	1.90E+01	3.30E-05	9.57E-02	1.05E-05	4.65E-04	2.44E-03	4.09E-04	1.02E-03	6.60E-04	6.77E-04	6.66E-05	9.56E-05	2.04E-08	3.46E-04	7.25E-05
11	D84	80	Passenger Truck	751	0.00E+00	9.59E-06	1.02E-06	4.28E+01	6.24E-05	1.69E-01	2.03E-05	1.25E-03	4.35E-03	7.24E-04	1.95E-03	1.26E-03	1.30E-03	3.08E-04	2.14E-04	3.89E-08	6.53E-04	2.09E-04
11	D84	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.74E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.26E-04
11	D84	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.45E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.39E-05
11	D84	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.12E-03
11	D84	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.27E-03
11	D85	80	Passenger Car	292	0.00E+00	3.03E-06	3.30E-07	1.24E+01	2.15E-05	6.23E-02	6.84E-06	3.03E-04	1.59E-03	2.67E-04	6.67E-04	4.30E-04	4.41E-04	4.34E-05	6.23E-05	1.33E-08	2.26E-04	4.72E-05
11	D85	80	Passenger Truck	489	0.00E+00	6.24E-06	6.66E-07	2.79E+01	4.06E-05	1.10E-01	1.32E-05	8.16E-04	2.83E-03	4.72E-04	1.27E-03	8.24E-04	8.44E-04	2.01E-04	1.39E-04	2.53E-08	4.25E-04	1.36E-04
11	D85	80	Single Unit Short Haul Truck	29	0.00E+00	3.94E-06	1.54E-07	4.71E+00	2.67E-06	8.56E-03	4.33E-06	1.63E-03	3.23E-04	6.60E-05	5.43E-04	1.01E-04	1.02E-04	4.79E-04	1.91E-05	7.59E-09	4.40E-04	3.06E-04
11	D85	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	6.61E-09	1.99E-01	1.14E-07	3.56E-04	1.88E-07	6.98E-05	1.48E-05	2.93E-06	2.37E-05	4.32E-06	4.40E-06	2.01E-05	8.10E-07	3.16E-10	1.93E-05	1.31E-05
11	D85	80	Combination Short Haul Truck	33	0.00E+00	6.90E-06	5.11E-07	1.12E+01	1.81E-08	1.05E-02	4.93E-06	1.06E-02	7.99E-04	1.45E-04	4.18E-04	1.49E-04	1.55E-04	1.78E-03	3.75E-05	0.00E+00	2.64E-04	2.00E-03
11	D85	80	Combination Long Haul Truck	31	0.00E+00	9.61E-06	5.43E-07	1.04E+01	6.11E-08	1.25E-02	7.93E-06	1.13E-02	8.26E-04	1.32E-04	8.81E-04	1.75E-04	1.82E-04	1.67E-03	3.49E-05	0.00E+00	6.99E-04	2.14E-03
11	D86	80	Passenger Car	379	0.00E+00	3.93E-06	4.27E-07	1.60E+01	2.79E-05	8.09E-02	8.87E-06	3.93E-04	2.06E-03	3.46E-04	8.65E-04	5.58E-04	5.72E-04	5.63E-05	8.08E-05	1.73E-08	2.93E-04	6.13E-05
11	D86	80	Passenger Truck	634	0.00E+00	8.10E-06	8.63E-07	3.62E+01	5.27E-05	1.43E-01	1.72E-05	1.06E-03	3.68E-03	6.12E-04	1.65E-03	1.07E-03	1.10E-03	2.60E-04	1.81E-04	3.29E-08	5.52E-04	1.76E-04
11	D86	80	Single Unit Short Haul Truck	16	0.00E+00	2.23E-06	8.72E-08	2.67E+00	1.51E-06	4.85E-03	2.46E-06	9.26E-04	1.83E-04	3.74E-05	3.08E-04	5.70E-05	5.81E-05	2.72E-04	1.08E-05	4.30E-09	2.50E-04	1.73E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	9.71E-08	3.75E-09	1.13E-01	6.45E-08	2.02E-04	1.07E-07	3.96E-05	8.39E-06	1.66E-06	1.34E-05	2.45E-06	2.49E-06	1.14E-05	4.59E-07	1.79E-10	1.09E-05	7.40E-06
11	D86	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.79E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.47E-03
11	D86	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.33E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.57E-03
11	D87	80	Passenger Car	813

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D91	70	Passenger Car	75	0.00E+00	8.34E-07	9.06E-08	3.26E+00	5.92E-06	1.67E-02	1.88E-06	7.56E-05	5.76E-04	8.98E-05	1.83E-04	1.18E-04	1.21E-04	1.27E-05	1.64E-05	3.40E-09	6.20E-05	1.18E-05
10	D91	70	Passenger Truck	125	0.00E+00	1.76E-06	1.87E-07	7.33E+00	1.12E-05	2.95E-02	3.68E-06	2.20E-04	1.04E-03	1.61E-04	3.52E-04	2.29E-04	2.34E-04	5.55E-05	3.65E-05	6.55E-09	1.18E-04	3.69E-05
10	D91	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	D91	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.02E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.13E-04
10	D91	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.44E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.21E-04
10	D92	70	Passenger Car	261	0.00E+00	2.91E-06	3.16E-07	1.14E+01	2.07E-05	5.84E-02	6.56E-06	2.64E-04	2.01E-03	3.13E-04	6.40E-04	4.13E-04	4.23E-04	4.43E-05	5.72E-05	1.19E-08	2.16E-04	4.12E-05
10	D92	70	Passenger Truck	437	0.00E+00	6.13E-06	6.51E-07	2.56E+01	3.92E-05	1.03E-01	1.28E-05	7.67E-04	3.64E-03	5.63E-04	1.23E-03	7.98E-04	8.18E-04	1.94E-04	1.28E-04	2.28E-08	4.10E-04	1.29E-04
10	D92	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.69E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	D92	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.01E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.56E-05
10	D92	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.29E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.09E-05
10	D93	70	Passenger Car	69	0.00E+00	7.71E-07	8.38E-08	3.01E+00	5.47E-06	1.55E-02	1.74E-06	7.00E-05	5.33E-04	8.30E-05	1.70E-04	1.09E-04	1.12E-04	1.18E-05	1.52E-05	3.15E-09	5.74E-05	1.09E-05
10	D93	70	Passenger Truck	116	0.00E+00	1.62E-06	1.73E-07	6.78E+00	1.04E-05	2.73E-02	3.40E-06	2.03E-04	9.65E-04	1.49E-04	3.26E-04	2.11E-04	2.17E-04	5.14E-05	3.38E-05	6.06E-09	1.09E-04	3.41E-05
10	D93	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	D93	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.78E-05
10	D94	70	Passenger Car	229	0.00E+00	2.55E-06	2.77E-07	9.97E+00	1.81E-05	5.12E-02	5.75E-06	2.31E-04	1.76E-03	2.75E-04	5.61E-04	3.62E-04	3.71E-04	3.89E-05	5.02E-05	1.04E-08	1.90E-04	3.61E-05
10	D94	70	Passenger Truck	383	0.00E+00	5.37E-06	5.71E-07	2.24E+01	3.44E-05	9.04E-02	1.13E-05	6.73E-04	3.19E-03	4.94E-04	1.08E-03	7.00E-04	7.17E-04	1.70E-04	1.12E-04	2.00E-08	3.60E-04	1.13E-04
10	D94	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.02E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	D94	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.20E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	D94	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
9	E01	60	Passenger Car	225	0.00E+00	2.88E-06	3.13E-07	1.03E+01	2.05E-05	5.75E-02	6.50E-06	2.32E-04	2.28E-03	3.41E-04	6.34E-04	4.09E-04	4.20E-04	4.47E-05	5.15E-05	1.08E-08	2.14E-04	3.62E-05
9	E01	60	Passenger Truck	378	0.00E+00	6.12E-06	6.49E-07	2.29E+01	3.86E-05	9.84E-02	1.27E-05	7.22E-04	4.16E-03	6.19E-04	1.21E-03	7.87E-04	8.07E-04	1.83E-04	1.14E-04	2.11E-08	4.03E-04	1.22E-04
9	E01	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.00E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	E01	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.25E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.13E-04
9	E01	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.46E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.52E-04
9	E02	60	Passenger Car	267	0.00E+00	3.41E-06	3.70E-07	1.21E+01	2.42E-05	6.80E-02	7.69E-06	2.74E-04	2.69E-03	4.03E-04	7.50E-04	4.83E-04	4.96E-04	5.28E-05	6.09E-05	1.28E-08	2.54E-04	4.28E-05
9	E02	60	Passenger Truck	446	0.00E+00	7.24E-06	7.67E-07	2.71E+01	4.56E-05	1.16E-01	1.50E-05	8.53E-04	4.92E-03	7.32E-04	1.43E-03	9.31E-04	9.54E-04	2.16E-04	1.35E-04	2.50E-08	4.77E-04	1.45E-04
9	E02	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.00E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	E02	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.18E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.88E-04
9	E02	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.45E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.38E-04
11	E03	80	Passenger Car	109	0.00E+00	1.13E-06	1.23E-07	4.62E+00	8.05E-06	2.33E-02	2.56E-06	1.13E-04	5.95E-04	9.96E-05	2.49E-04	1.61E-04	1.65E-04	1.62E-05	2.33E-05	4.98E-09	8.43E-05	1.77E-05
11	E03	80	Passenger Truck	183	0.00E+00	2.33E-06	2.49E-07	1.04E+01	1.52E-05	4.12E-02	4.95E-06	3.05E-04	1.06E-03	1.76E-04	4.75E-04	3.08E-04	3.16E-04	7.51E-05	5.21E-05	9.47E-09	1.59E-04	5.08E-05
11	E03	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.90E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.17E-05
11	E03	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.12E-04
11	E03	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.77E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.34E-04
11	E04	80	Passenger Car	183	0.00E+00	1.90E-06	2.07E-07	7.75E+00	1.35E-05	3.91E-02	4.29E-06	1.90E-04	9.99E-04	1.67E-04	4.18E-04	2.70E-04	2.77E-04	2.72E-05	3.91E-05	8.35E-09	1.42E-04	2.96E-05
11	E04	80	Passenger Truck	307	0.00E+00	3.92E-06	4.18E-07	1.75E+01	2.55E-05	6.91E-02	8.30E-06	5.12E-04	1.78E-03	2.96E-04	7.97E-04	5.17E-04	5.30E-04	1.26E-04	8.74E-05	1.59E-08	2.67E-04	8.53E-05
11	E04	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.36E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.15E-05
11	E04	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.12E-04
11	E04	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.77E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.34E-04
11	E05	80	Passenger Car	190	0.00E+00	1.97E-06	2.14E-07	8.02E+00	1.40E-05	4.05E-02	4.44E-06	1.97E-04	1.03E-03	1.73E-04	4.33E-04	2.79E-04	2.86E-04	2.82E-05	4.04E-05	8.64E-09	1.46E-04	3.07E-05
11	E05	80	Passenger Truck	317	0.00E+00	4.05E-06	4.32E-07	1.81E+01	2.64E-05	7.15E-02	8.59E-06	5.30E-04	1.84E-03	3.06E-04	8.24E-04	5.35E-04	5.48E-04	1.30E-04	9.05E-05	1.65E-08	2.76E-04	8.82E-05
11	E05	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.36E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.15E-05
11	E05	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.50E-04
11	E05	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.42E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.67E-04
11	E06	80	Passenger Car	62	0.00E+00	6.48E-07	7.05E-08	2.64E+00	4.60E-06	1.33E-02	1.46E-06	6.47E-05	3.40E-04	5.70E-05	1.43E-04	9.19E-05	9.44E-05	9.28E-06	1.33E-05	2.85E-09	4.82E-05	1.01E-05
11	E06	80	Passenger Truck	105	0.00E+00	1.34E-06	1.42E-07	5.96E+00	8.68E-06	2.35E-02	2.83E-06	1.75E-04	6.06E-04	1.01E-04	2.72E-04	1.76E-04	1.81E-04	4.29E-05	2.98E-05	5.42E-09	9.09E-05	2.91E-05
11	E06	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.81E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.13E-05
11	E06	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.32E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.25E-05
11	E06	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.54E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.68E-05
9	E07	60	Passenger Car	945	0.00E+00	1.21E-05	1.31E-06	4.31E+01	8.58E-05	2.41E-01	2.73E-05	9.73E-04	9.54E-03	1.43E-03	2.66E-03	1.71E-03	1.76E-03	1.87E-04	2.16E-04	4.54E-08	8.99E-04	1.52E-04
9	E07	60	Passenger Truck	1583	0.00E+00	2.57E-05	2.72E-06	9.60E+01	1.62E-04	4.13E-01	5.32E-05	3.03E-03	1.74E-02	2.60E-03	5.07E-03	3.30E-03	3.38E-03	7.67E-04	4.77E-04	8.85E-08	1.69E-03	5.13E-04
9	E07	60	Single Unit Short Haul Truck	42	0.00E+00	9.41E-06	3.89E-07	7.01E+00	6.23E-06	1.23E-02	1.02E-05	3.60E-03	9.70E-04	1.63E-04	1.26E-03	2.42E-04	2.47E-04	7.10E-04	2.86E-05	1.18E-08	1.01E-03	6.74E-04
9	E07	60	Single Unit Long Haul Truck	2	0.00E+00	4.11E-07	1.69E-08	2.99E-01	2.70E-07	5.23E-04	4.44E-07	1.56E-04	4.35E-05	7.23E-06	5.49E-05	1.05E-05	1.07E-05	3.02E-05	1.22E-06	5.01E-10	4.42E-05	2.92E-05
9	E07	60	Combination Short Haul Truck	42	0.00E+00	1.22E-05	8.97E-07	1.47E+01	3.35E-08	1.82E-02	8.77E-06	1.86E-02	2.13E-03	3.33E-04	7.53E-04	2.62E-04	2.72E-04	2.34E-03	4.93E-05	0.00E+00	4.80E-04	3.50E-03
9	E07	60	Combination Long Haul Truck	38	0.00E+00	1.68E-05	9.17E-07	1.39E+01	1.13E-07	2.19E-02	1.40E-05	1.98E-02	2.24E-03	3.23E-04	1.59E-03	2.99E-04	3.12E-04	2.23E-03	4.66E-05	0.00E+00	1.28E-03	3.73E-03
9	E08	60	Passenger Car	1096	0.00E+00	1.40E-05	1.52E-06	4.99E+01	9.95E-05	2.80E-01	3.16E-05	1.13E-03	1.11E-02	1.66E-03	3.08E-03	1.99E-03	2.04E-03	2.17E-04	2.51E-04	5.26E-08	1.04E-03	1.76E-04
9	E08	60	Passenger Truck	1836	0.00E+00	2.98E-05	3.15E-06	1.11E+02	1.88E-04	4.79E-01	6.17E-05	3.51E-03	2.02E-02	3.01E-03	5.89E-03	3.83E-03	3.92E-03	8.89E-04	5.53E-04	1.03E-07	1.96E-03	5.95E-04
9	E08	60	Single Unit Short Haul Truck	25	0.00E+00	5.56E-06	2.30E-07	4.14E+00	3.68E-06	7.29E-03	6.01E-06	2.13E-03	5.73E-04	9.63E-05	7.42E-04	1.43E-04	1.46E-04	4.20E-04	1.69E-05	6.96E-09	5.96E-04	3.98E-04
9	E08	60	Single Unit Long Haul Truck	1	0.00E+00	2.43E-07	9.97E-09	1.77E-01	1.60E-07	3.09E-04	2.62E-07	9.22E-05	2.57E-05	4.27E-06	3.24E-05	6.21E-06	6.33E-06	1.78E-05	7.21E-07	2.96E-10	2.61E-05	1.73E-05
9	E08	60	Combination Short Haul Truck	25	0.00E+00	7.33E-06	5.38E-07	8.84E+00	2.01E-08	1.09E-02	5.26E-06	1.11E-02	1.28E-03	2.00E-04	4.52E-04	1.57E-04	1.63E-04	1.41E-03	2.96E-05	0.00E+00	2.88E-04	2.10E-03
9	E08	60	Combination Long Haul Truck	23	0.00E+00	1.01E-05	5.50E-07	8.35E+00	6.80E-08	1.32E-02	8.42E-06	1.19E-02	1.34E-03	1.94E-04	9.55E-04	1.80E-04	1.87E-04	1.34E-03	2.80E-05	0.00E+00	7.68E-04	2.24E-03
9	E09	60	Passenger Car	856	0.00E+00	1.09E-05	1.19E-06	3.90E+01	7.77E-05	2.18E-01	2.47E-05	8.81E-04	8.64E-03	1.29E-03	2.41E-03	1.55E-03	1.59E-03	1.70E-04	1.96E-04	4.11E-08	8.14E-04	1.37E-04
9	E09	60	Passenger Truck	1433	0.00E+00	2.32E-05	2.46E-06	8.69E+01	1.47E-04	3.74E-01	4.82E-05	2.74E-03	1.58E-02	2.35E-03	4.59E-03	2.99E-03	3.06E-03	6.94E-04	4.32E-04	8.01E-08	1.53E-03	4.64E-04
9	E09	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E-06	3.80E-07	6.85E+00	6.09E-06	1.21E-02	9.94E-06	3.52E-03	9.47E-04	1.59E-04	1.23E-03	2.36E-04	2.41E-04	6.94E-04	2.79E-05	1.15E-08	9.86E-04	6.59E-04
9	E09	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.52E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.85E-05
9	E09	60	Combination Short Haul Truck	40	0.00E+00	1.18E-05	8.63E-07	1.42E+01	3.22E-08	1.76E-02	8.44E-06	1.79E-02	2.05E-03	3.21E-04	7.24E-04	2.53E-04	2.62E-04	2.25E-03	4.74E-05	0.00E+00	4.62E-04	3.37E-03
9	E09	60	Combination Long Haul Truck	37	0.00E+00	1.62E-05	8.82E-07	1.34E+01	1.09E-07	2.11E-02	1.35E-05	1.90E-02	2.15E-03	3.11E-04	1.53E-03	2.88E-04	3.00E-04	2.15E-03	4.49E-05	0.00E+00	1.23E-03	3.59E-03
9	E10	60	Passenger Car	939	0.00E+00	1.20E-05	1.31E-06	4.28E+01	8.52E-05	2.40E-01	2.71E-05	9.67E-04	9.48E-03	1.42E-03	2.64E-03	1.70E-03	1.75E-03	1.86E-04	2.15E-04	4.51E-08	8.93E-04	1.51E-04
9	E10	60	Passenger Truck	1573	0.00E+00	2.55E-05	2.70E-06	9.54E+01	1.61E-04	4.10E-01	5.29E-05	3.01E-03	1.73E-02	2.58E-03	5.04E-03	3.28E-03	3.36E-03	7.62E-04	4.74E-04	8.79E-08	1.68E-03	5.09E-04
9	E10	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.05E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.83E-04
9	E10	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	9.59E-09	1.70E-01	1.54E-07	2.97E-04	2.52E-07	8.86E-05	2.47E-05	4.11E-06	3.12E-05	5.97E-06	6.09E-06	1.72E-05	6.93E-07	2.85E-10	2.51E-05	1.66E-05
9	E10	60	Combination Short Haul Truck	22	0.00E+00	6.56E-06	4.82E-07	7.92E+00	1.80E-08	9.81E-03	4.72E-06	9.98E-03	1.15E-03	1.79E-04	4.05E-04	1.41E-04	1.46E-04	1.26E-03	2.65E-05	0.00E+00	2.58E-04	1.88E-03
9	E10	60	Combination Long Haul Truck	21	0.00E+00	9.02E-06	4.93E-07	7.48E+00	6.09E-08	1.18E-02	7.54E-06	1.06E-02	1.20E-03	1.74E-04	8.55E-04	1.61E-04	1.68E-04	1.20E-03	2.51E-05	0.00E+00	6.88E-04	2.00E-03
9	E11	60	Passenger Car	909	0.00E+00	1.16E-05	1.26E-06	4.14E+01	8.25E-05	2.32E-01	2.62E-05	9.36E-04	9.18E-03	1.38E-03	2.56E-03	1.65E-03	1.69E-03	1.80E-04	2.08E-04	4.37E-08	8.65E-04	1.46E-04
9	E11	60	Passenger Truck	1523	0.00E+00	2.47E-05	2.62E-06	9.23E+01	1.56E-04	3.97E-01	5.12E-05	2.91E-03	1.68E-02	2.50E-03	4.88E-03	3.18E-03	3.25E-03	7.38E-04	4.59E-04	8.51E-08	1.63E-03	4.93E-04
9	E11	60	Single Unit Short Haul Truck	43	0.00E+00	9.62E-06	3.98E-07	7.17E+00	6.38E-06	1.26E-02	1.04E-05	3.68E-03	9.92E-04	1.67E-04	1.28E-03	2.47E-04	2.52E-04	7.27E-04	2.92E-05	1.20E-08	1.03E-03	6.89E-04
9	E11	60	Single Unit Long Haul Truck	2	0.00E+00	4.20E-07	1.73E-08	3.06E-01	2.76E-07	5.35E-04	4.54E-07	1.60E-04	4.45E-05	7.39E-06	5.61E-05	1.07E-05	1.10E-05	3.09E-05	1.25E-06	5.12E-10	4.52E-05	2.99E-05
9	E11	60	Combination Short Haul Truck	45	0.00E+00	1.31E-05	9.64E-07	1.58E+01	3.60E-08	1.96E-02	9.43E-06	2.00E-02	2.29E-03	3.58E-04	8.09E-04	2.82E-04	2.93E-04	2.52E-03	5.30E-05	0.00E+00	5.16E-04	3.76E-03
9	E11	60	Combination Long Haul Truck	41	0.00E+00	1.80E-05	9.85E-07	1.50E+01	1.22E-07	2.36E-02	1.51E-05	2.13E-02	2.40E-03	3.47E-04	1.71E-03	3.22E-04	3.35E-04	2.40E-03	5.01E-05	0.00E+00	1.38E-03	4.01E-03
9	E12	60	Passenger Car	1277	0.00E+00	1.63E-05	1.77E-06	5.82E+01	1.16E-04	3.26E-01	3.68E-05	1.31E-03	1.29E-02	1.93E-03	3.59E-03	2.32E-03	2.38E-03	2.53E-04	2.92E-04	6.13E-08	1.21E-03	2.05E-04
9	E12	60	Passenger Truck	2138	0.00E+00	3.47E-05	3.67E-06	1.30E+02	2.19E-04	5.57E-01	7.19E-05	4.09E-03	2.36E-02	3.51E-03	6.85E-03	4.46E-03	4.57E-03	1.04E-03	6.44E-04	1.20E-07	2.28E-03	6.93E-04
9	E12	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.54E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.75E-04
9	E12	60	Single Unit Long Haul Truck	1	0.00E+00	2

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E16	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.32E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.37E-04
11	E16	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.48E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.67E-04
11	E17	80	Passenger Car	218	0.00E+00	2.26E-06	2.46E-07	9.22E+00	1.61E-05	4.65E-02	5.10E-06	2.26E-04	1.19E-03	1.99E-04	4.98E-04	3.21E-04	3.29E-04	3.24E-05	4.65E-05	9.94E-09	1.68E-04	3.53E-05
11	E17	80	Passenger Truck	365	0.00E+00	4.66E-06	4.97E-07	2.08E+01	3.03E-05	8.22E-02	9.88E-06	6.09E-04	2.12E-03	3.52E-04	9.48E-04	6.15E-04	6.30E-04	1.50E-04	1.04E-04	1.89E-08	3.17E-04	1.01E-04
11	E17	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.90E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.17E-05
11	E17	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.12E-04
11	E17	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.77E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.34E-04
11	E18	80	Passenger Car	112	0.00E+00	1.16E-06	1.26E-07	4.73E+00	8.24E-06	2.39E-02	2.62E-06	1.16E-04	6.09E-04	1.02E-04	2.55E-04	1.65E-04	1.69E-04	1.66E-05	2.39E-05	5.10E-09	8.64E-05	1.81E-05
11	E18	80	Passenger Truck	187	0.00E+00	2.39E-06	2.55E-07	1.07E+01	1.55E-05	4.22E-02	5.07E-06	3.13E-04	1.08E-03	1.81E-04	4.86E-04	3.15E-04	3.23E-04	7.69E-05	5.34E-05	9.70E-09	1.63E-04	5.20E-05
11	E18	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.54E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.79E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.22E-06
11	E18	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.16E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.06E-04
11	E18	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.30E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.34E-04
9	E19	60	Passenger Car	514	0.00E+00	6.58E-06	7.15E-07	2.34E+01	4.67E-05	1.31E-01	1.48E-05	5.30E-04	5.20E-03	7.78E-04	1.45E-03	9.33E-04	9.57E-04	1.02E-04	1.18E-04	2.47E-08	4.89E-04	8.26E-05
9	E19	60	Passenger Truck	862	0.00E+00	1.40E-05	1.48E-06	5.22E+01	8.81E-05	2.25E-01	2.90E-05	1.65E-03	9.49E-03	1.41E-03	2.76E-03	1.80E-03	1.84E-03	4.17E-04	2.60E-04	4.82E-08	9.21E-04	2.79E-04
9	E19	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.09E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.66E-04
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.32E-05
9	E19	60	Combination Short Haul Truck	35	0.00E+00	1.01E-05	7.40E-07	1.22E+01	2.76E-08	1.51E-02	7.24E-06	1.53E-02	1.76E-03	2.75E-04	6.21E-04	2.16E-04	2.25E-04	1.93E-03	4.07E-05	0.00E+00	3.96E-04	2.89E-03
9	E19	60	Combination Long Haul Truck	31	0.00E+00	1.38E-05	7.56E-07	1.15E+01	9.34E-08	1.81E-02	1.16E-05	1.63E-02	1.84E-03	2.67E-04	1.31E-03	2.47E-04	2.57E-04	1.84E-03	3.85E-05	0.00E+00	1.06E-03	3.07E-03
9	E20	60	Passenger Car	516	0.00E+00	6.59E-06	7.16E-07	2.35E+01	4.68E-05	1.32E-01	1.49E-05	5.31E-04	5.21E-03	7.80E-04	1.45E-03	9.35E-04	9.59E-04	1.02E-04	1.18E-04	2.48E-08	4.90E-04	8.28E-05
9	E20	60	Passenger Truck	863	0.00E+00	1.40E-05	1.48E-06	5.24E+01	8.83E-05	2.25E-01	2.90E-05	1.65E-03	9.51E-03	1.42E-03	2.77E-03	1.80E-03	1.85E-03	4.18E-04	2.60E-04	4.83E-08	9.23E-04	2.80E-04
9	E20	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.22E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.44E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.39E-05
9	E20	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.88E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.19E-04
9	E20	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.19E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.78E-04
11	E21	80	Passenger Car	120	0.00E+00	1.25E-06	1.35E-07	5.08E+00	8.85E-06	2.56E-02	2.81E-06	1.24E-04	6.54E-04	1.10E-04	2.74E-04	1.77E-04	1.81E-04	1.78E-05	2.56E-05	5.47E-09	9.27E-05	1.94E-05
11	E21	80	Passenger Truck	201	0.00E+00	2.57E-06	2.74E-07	1.15E+01	1.67E-05	4.53E-02	5.44E-06	3.36E-04	1.16E-03	1.94E-04	5.22E-04	3.39E-04	3.47E-04	8.25E-05	5.73E-05	1.04E-08	1.75E-04	5.59E-05
11	E21	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.72E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.09E-05
11	E21	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	1.99E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.75E-04
11	E21	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.13E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.01E-04
11	E22	80	Passenger Car	16	0.00E+00	1.63E-07	1.77E-08	6.64E-01	1.16E-06	3.35E-03	3.68E-07	1.63E-05	8.56E-05	1.43E-05	3.59E-05	2.31E-05	2.37E-05	2.33E-06	3.35E-06	7.16E-10	1.21E-05	2.54E-06
11	E22	80	Passenger Truck	26	0.00E+00	3.36E-07	3.58E-08	1.50E+00	2.18E-06	5.92E-03	7.12E-07	4.39E-05	1.52E-04	2.54E-05	6.83E-05	4.43E-05	4.54E-05	1.08E-05	7.49E-06	1.36E-09	2.29E-05	7.31E-06
11	E22	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.32E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.25E-05
11	E22	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.54E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.68E-05
11	E23	80	Passenger Car	471	0.00E+00	4.89E-06	5.31E-07	1.99E+01	3.47E-05	1.00E-01	1.10E-05	4.88E-04	2.57E-03	4.30E-04	1.08E-03	6.93E-04	7.11E-04	7.00E-05	1.00E-04	2.15E-08	3.64E-04	7.61E-05
11	E23	80	Passenger Truck	788	0.00E+00	1.01E-05	1.07E-06	4.50E+01	6.55E-05	1.78E-01	2.13E-05	1.32E-03	4.57E-03	7.61E-04	2.05E-03	1.33E-03	1.36E-03	3.24E-04	2.25E-04	4.08E-08	6.86E-04	2.19E-04
11	E23	80	Single Unit Short Haul Truck	73	0.00E+00	9.99E-06	3.90E-07	1.19E+01	6.77E-06	2.17E-02	1.10E-05	4.14E-03	8.18E-04	1.67E-04	1.38E-03	2.55E-04	2.60E-04	1.21E-03	4.85E-05	1.92E-08	1.12E-03	7.74E-04
11	E23	80	Single Unit Long Haul Truck	3	0.00E+00	4.34E-07	1.67E-08	5.04E-01	2.89E-07	9.03E-04	4.77E-07	1.77E-04	3.75E-05	7.42E-06	6.00E-05	1.09E-05	1.12E-05	5.10E-05	2.05E-06	8.01E-10	4.88E-05	3.31E-05
11	E23	80	Combination Short Haul Truck	53	0.00E+00	1.09E-05	8.06E-07	1.77E+01	2.85E-08	1.66E-02	7.78E-06	1.67E-02	1.26E-03	2.28E-04	6.60E-04	2.35E-04	2.44E-04	2.82E-03	5.92E-05	0.00E+00	4.16E-04	3.16E-03
11	E23	80	Combination Long Haul Truck	48	0.00E+00	1.52E-05	8.56E-07	1.64E+01	9.65E-08	1.96E-02	1.25E-05	1.79E-02	1.30E-03	2.08E-04	1.39E-03	2.76E-04	2.87E-04	2.64E-03	5.51E-05	0.00E+00	1.10E-03	3.37E-03
11	E24	80	Passenger Car	276	0.00E+00	2.87E-06	3.12E-07	1.17E+01	2.04E-05	5.90E-02	6.47E-06	2.86E-04	1.51E-03	2.52E-04	6.31E-04	4.07E-04	4.18E-04	4.11E-05	5.90E-05	1.26E-08	2.13E-04	4.47E-05
11	E24	80	Passenger Truck	463	0.00E+00	5.91E-06	6.30E-07	2.64E+01	3.84E-05	1.04E-01	1.25E-05	7.73E-04	2.68E-03	4.46E-04	1.20E-03	7.79E-04	7.99E-04	1.90E-04	1.32E-04	2.40E-08	4.02E-04	1.29E-04
11	E24	80	Single Unit Short Haul Truck	68	0.00E+00	9.33E-06	3.64E-07	1.11E+01	6.33E-06	2.03E-02	1.03E-05	3.87E-03	7.64E-04	1.56E-04	1.29E-03	2.38E-04	2.43E-04	1.13E-03	4.53E-05	1.80E-08	1.04E-03	7.23E-04
11	E24	80	Single Unit Long Haul Truck	3	0.00E+00	4.05E-07	1.56E-08	4.71E-01	2.70E-07	8.43E-04	4.45E-07	1.65E-04	3.50E-05	6.93E-06	5.60E-05	1.02E-05	1.04E-05	4.76E-05	1.92E-06	7.48E-10	4.56E-05	3.09E-05
11	E24	80	Combination Short Haul Truck	49	0.00E+00	1.00E-05	7.42E-07	1.63E+01	2.63E-08	1.53E-02	7.17E-06	1.54E-02	1.16E-03	2.10E-04	6.08E-04	2.17E-04	2.25E-04	2.59E-03	5.45E-05	0.00E+00	3.83E-04	2.91E-03
11	E24	80	Combination Long Haul Truck	44	0.00E+00	1.40E-05	7.88E-07	1.51E+01	8.88E-08	1.81E-02	1.15E-05	1.65E-02	1.20E-03	1.92E-04	1.28E-03	2.54E-04	2.65E-04	2.43E-03	5.07E-05	0.00E+00	1.02E-03	3.10E-03
10	E25	70	Passenger Car	264	0.00E+00	2.94E-06	3.19E-07	1.15E+01	2.09E-05	5.90E-02	6.63E-06	2.67E-04	2.03E-03	3.16E-04	6.46E-04	4.17E-04	4.28E-04	4.48E-05	5.78E-05	1.20E-08	2.19E-04	4.16E-05
10	E25	70	Passenger Truck	441	0.00E+00	6.19E-06	6.58E-07	2.58E+01	3.96E-05	1.04E-01	1.30E-05	7.75E-04	3.68E-03	5.69E-04	1.24E-03	8.06E-04	8.26E-04	1.96E-04	1.29E-04	2.31E-08	4.14E-04	1.30E-04
10	E25	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	E25	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.78E-04
10	E25	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.04E-04
10	E26	70	Passenger Car	278	0.00E+00	3.10E-06	3.37E-07	1.21E+01	2.20E-05	6.21E-02	6.99E-06	2.81E-04	2.14E-03	3.33E-04	6.81E-04	4.39E-04	4.51E-04	4.72E-05	6.09E-05	1.26E-08	2.30E-04	4.38E-05
10	E26	70	Passenger Truck	465	0.00E+00	6.52E-06	6.93E-07	2.72E+01	4.18E-05	1.10E-01	1.37E-05	8.17E-04	3.87E-03	5.99E-04	1.31E-03	8.49E-04	8.70E-04	2.06E-04	1.36E-04	2.43E-08	4.37E-04	1.37E-04
10	E26	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	E26	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
10	E26	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
10	E27	70	Passenger Car	203	0.00E+00	2.27E-06	2.46E-07	8.86E+00	1.61E-05	4.55E-02	5.11E-06	2.06E-04	1.57E-03	2.44E-04	4.99E-04	3.22E-04	3.30E-04	3.46E-05	4.46E-05	9.26E-09	1.69E-04	3.21E-05
10	E27	70	Passenger Truck	341	0.00E+00	4.77E-06	5.07E-07	1.99E+01	3.06E-05	8.03E-02	1.00E-05	5.98E-04	2.84E-03	4.39E-04	9.57E-04	6.22E-04	6.37E-04	1.51E-04	9.94E-05	1.78E-08	3.20E-04	1.00E-04
10	E27	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.69E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	E27	70	Combination Short Haul Truck	19	0.00E+00	4.85E-06	3.61E-07	6.55E+00	1.23E-08	7.00E-03	3.45E-06	7.22E-03	6.83E-04	1.14E-04	2.91E-04	1.05E-04	1.09E-04	1.04E-03	2.19E-05	0.00E+00	1.82E-04	1.36E-03
10	E27	70	Combination Long Haul Truck	17	0.00E+00	6.65E-06	3.78E-07	6.15E+00	4.17E-08	8.35E-03	5.46E-06	7.73E-03	7.11E-04	1.07E-04	6.04E-04	1.21E-04	1.27E-04	9.87E-04	2.06E-05	0.00E+00	4.78E-04	1.46E-03
10	E28	70	Passenger Car	310	0.00E+00	3.46E-06	3.76E-07	1.35E+01	2.46E-05	6.94E-02	7.80E-06	3.14E-04	2.39E-03	3.72E-04	7.61E-04	4.91E-04	5.04E-04	5.27E-05	6.80E-05	1.41E-08	2.57E-04	4.90E-05
10	E28	70	Passenger Truck	520	0.00E+00	7.29E-06	7.74E-07	3.04E+01	4.66E-05	1.23E-01	1.53E-05	9.12E-04	4.33E-03	6.70E-04	1.46E-03	9.49E-04	9.72E-04	2.30E-04	1.52E-04	2.72E-08	4.88E-04	1.53E-04
10	E28	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	E28	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.02E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.13E-04
10	E28	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.44E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.21E-04
10	E29	70	Passenger Car	155	0.00E+00	1.73E-06	1.88E-07	6.76E+00	1.23E-05	3.47E-02	3.90E-06	1.57E-04	1.20E-03	1.86E-04	3.81E-04	2.45E-04	2.52E-04	2.64E-05	3.40E-05	7.06E-09	1.29E-04	2.45E-05
10	E29	70	Passenger Truck	260	0.00E+00	3.64E-06	3.87E-07	1.52E+01	2.33E-05	6.13E-02	7.63E-06	4.56E-04	2.16E-03	3.35E-04	7.30E-04	4.74E-04	4.86E-04	1.15E-04	7.58E-05	1.36E-08	2.44E-04	7.66E-05
10	E29	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E29	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.02E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
10	E29	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.59E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	E30	70	Passenger Car	36	0.00E+00	4.00E-07	4.35E-08	1.56E+00	2.84E-06	8.03E-03	9.03E-07	3.63E-05	2.77E-04	4.31E-05	8.80E-05	5.68E-05	5.82E-05	6.10E-06	7.87E-06	1.63E-09	2.98E-05	5.66E-06
10	E30	70	Passenger Truck	60	0.00E+00	8.43E-07	8.96E-08	3.52E+00	5.40E-06	1.42E-02	1.77E-06	1.06E-04	5.01E-04	7.74E-05	1.69E-04	1.10E-04	1.12E-04	2.66E-05	1.75E-05	3.14E-09	5.64E-05	1.77E-05
10	E30	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E31	70	Passenger Car	418	0.00E+00	4.66E-06	5.06E-07	1.82E+01	3.31E-05	9.34E-02	1.05E-05	4.22E-04	3.22E-03	5.01E-04	1.02E-03	6.60E-04	6.78E-04	7.10E-05	9.15E-05	1.90E-08	3.46E-04	6.59E-05
10	E31	70	Passenger Truck	699	0.00E+00	9.80E-06	1.04E-06	4.10E+01	6.28E-05	1.65E-01	2.05E-05	1.23E-03	5.82E-03	9.01E-04	1.97E-03	1.28E-03	1.31E-03	3.10E-04	2.04E-04	3.66E-08	6.57E-04	2.06E-04
10	E31	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.01E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.51E-05
10	E31	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.40E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	E31	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.50E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.83E-04
10	E32	70	Passenger Car	88	0.00E+00	9.80E-07	1.06E-07	3.83E+00	6.95E-06	1.97E-02	2.21E-06	8.89E-05	6.77E-04	1.05E-04	2.15E-04	1.39E-04	1.43E-04	1.49E-05	1.93E-05	4.00E-09	7.29E-05	1.39E-05
10	E32	70	Passenger Truck	147	0.00E+00	2.06E-06	2.19E-07	8.62E+00	1.32E-05	3.47E-02	4.32E-06	2.58E-04	1.23E-03	1.90E-04	4.13E-04	2.69E-04	2.75E-04	6.52E-05	4.29E-05	7.69E-09	1.38E-04	4.34E-05
10	E32	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E32	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E37	60	Passenger Car	669	0.00E+00	8.55E-06	9.30E-07	3.05E+01	6.07E-05	1.71E-01	1.93E-05	6.89E-04	6.75E-03	1.01E-03	1.88E-03	1.21E-03	1.24E-03	1.33E-04	1.53E-04	3.21E-08	6.36E-04	1.07E-04
9	E37	60	Passenger Truck	1120	0.00E+00	1.82E-05	1.92E-06	6.79E+01	1.15E-04	2.92E-01	3.77E-05	2.14E-03	1.23E-02	1.84E-03	3.59E-03	2.34E-03	2.39E-03	5.43E-04	3.38E-04	6.26E-08	1.20E-03	3.63E-04
9	E37	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.78E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.21E-04
9	E37	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
9	E37	60	Combination Short Haul Truck	32	0.00E+00	9.31E-06	6.84E-07	1.12E+01	2.55E-08	1.39E-02	6.69E-06	1.42E-02	1.63E-03	2.54E-04	5.74E-04	2.00E-04	2.08E-04	1.79E-03	3.76E-05	0.00E+00	3.66E-04	2.67E-03
9	E37	60	Combination Long Haul Truck	29	0.00E+00	1.28E-05	6.99E-07	1.06E+01	8.64E-08	1.67E-02	1.07E-05	1.51E-02	1.70E-03	2.46E-04	1.21E-03	2.28E-04	2.38E-04	1.70E-03	3.56E-05	0.00E+00	9.76E-04	2.84E-03
9	E38	60	Passenger Car	249	0.00E+00	3.18E-06	3.46E-07	1.13E+01	2.26E-05	6.35E-02	7.18E-06	2.56E-04	2.51E-03	3.77E-04	7.00E-04	4.51E-04	4.63E-04	4.94E-05	5.69E-05	1.20E-08	2.37E-04	4.00E-05
9	E38	60	Passenger Truck	417	0.00E+00	6.76E-06	7.16E-07	2.53E+01	4.26E-05	1.09E-01	1.40E-05	7.97E-04	4.59E-03	6.84E-04	1.34E-03	8.70E-04	8.91E-04	2.02E-04	1.26E-04	2.33E-08	4.46E-04	1.35E-04
9	E38	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.45E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.67E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
9	E38	60	Combination Short Haul Truck	15	0.00E+00	4.27E-06	3.14E-07	5.16E+00	1.17E-08	6.39E-03	3.07E-06	6.50E-03	7.46E-04	1.17E-04	2.63E-04	9.18E-05	9.54E-05	8.20E-04	1.72E-05	0.00E+00	1.68E-04	1.23E-03
9	E38	60	Combination Long Haul Truck	13	0.00E+00	5.87E-06	3.21E-07	4.87E+00	3.96E-08	7.67E-03	4.91E-06	6.92E-03	7.82E-04	1.13E-04	5.57E-04	1.05E-04	1.09E-04	7.82E-04	1.63E-05	0.00E+00	4.48E-04	1.30E-03
10	E39	70	Passenger Car	525	0.00E+00	5.85E-06	6.36E-07	2.29E+01	4.15E-05	1.17E-01	1.32E-05	5.31E-04	4.04E-03	6.30E-04	1.29E-03	8.30E-04	8.52E-04	8.92E-05	1.15E-04	2.39E-08	4.35E-04	8.28E-05
10	E39	70	Passenger Truck	879	0.00E+00	1.23E-05	1.31E-06	5.15E+01	7.89E-05	2.07E-01	2.58E-05	1.54E-03	7.32E-03	1.13E-03	2.47E-03	1.60E-03	1.64E-03	3.90E-04	2.57E-04	4.60E-08	8.25E-04	2.59E-04
10	E39	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.02E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E39	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.91E-04
10	E39	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.79E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.26E-04
10	E40	70	Passenger Car	388	0.00E+00	4.33E-06	4.70E-07	1.69E+01	3.07E-05	8.68E-02	9.76E-06	3.92E-04	2.99E-03	4.66E-04	9.52E-04	6.14E-04	6.30E-04	6.59E-05	8.51E-05	1.77E-08	3.22E-04	6.12E-05
10	E40	70	Passenger Truck	650	0.00E+00	9.11E-06	9.68E-07	3.81E+01	5.83E-05	1.53E-01	1.91E-05	1.14E-03	5.41E-03	8.37E-04	1.83E-03	1.19E-03	1.22E-03	2.88E-04	1.90E-04	3.40E-08	6.10E-04	1.92E-04
10	E40	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.62E-06
10	E40	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.61E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.80E-04
10	E40	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.86E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.28E-04
10	E41	70	Passenger Car	267	0.00E+00	2.97E-06	3.23E-07	1.16E+01	2.11E-05	5.96E-02	6.70E-06	2.70E-04	2.05E-03	3.20E-04	6.54E-04	4.22E-04	4.33E-04	4.53E-05	5.84E-05	1.21E-08	2.21E-04	4.21E-05
10	E41	70	Passenger Truck	446	0.00E+00	6.26E-06	6.65E-07	2.61E+01	4.01E-05	1.05E-01	1.31E-05	7.84E-04	3.72E-03	5.75E-04	1.25E-03	8.15E-04	8.35E-04	1.98E-04	1.30E-04	2.33E-08	4.19E-04	1.32E-04
10	E41	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E41	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.80E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.40E-04
10	E41	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.93E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.64E-04
10	E42	70	Passenger Car	306	0.00E+00	3.41E-06	3.71E-07	1.33E+01	2.42E-05	6.85E-02	7.70E-06	3.10E-04	2.36E-03	3.68E-04	7.51E-04	4.84E-04	4.97E-04	5.20E-05	6.71E-05	1.39E-08	2.54E-04	4.83E-05
10	E42	70	Passenger Truck	513	0.00E+00	7.19E-06	7.64E-07	3.00E+01	4.60E-05	1.21E-01	1.51E-05	9.00E-04	4.27E-03	6.61E-04	1.44E-03	9.36E-04	9.60E-04	2.27E-04	1.50E-04	2.68E-08	4.81E-04	1.51E-04
10	E42	70	Single Unit Short Haul Truck	22	0.00E+00	3.88E-06	1.57E-07	3.61E+00	2.60E-06	6.54E-03	4.22E-06	1.54E-03	3.50E-04	6.43E-05	5.23E-04	9.96E-05	1.02E-04	3.67E-04	1.47E-05	5.93E-09	4.21E-04	2.88E-04
10	E42	70	Single Unit Long Haul Truck	1	0.00E+00	1.69E-07	6.79E-09	1.53E-01	1.12E-07	2.75E-04	1.83E-07	6.62E-05	1.60E-05	2.87E-06	2.28E-05	4.30E-06	4.39E-06	1.55E-05	6.23E-07	2.50E-10	1.84E-05	1.24E-05
10	E42	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.21E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.83E-04
10	E42	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.58E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.05E-03
10	E43	70	Passenger Car	223	0.00E+00	2.49E-06	2.70E-07	9.71E+00	1.76E-05	4.98E-02	5.60E-06	2.25E-04	1.72E-03	2.67E-04	5.46E-04	3.52E-04	3.62E-04	3.79E-05	4.88E-05	1.01E-08	1.85E-04	3.52E-05
10	E43	70	Passenger Truck	373	0.00E+00	5.23E-06	5.56E-07	2.19E+01	3.35E-05	8.80E-02	1.10E-05	6.55E-04	3.11E-03	4.81E-04	1.05E-03	6.81E-04	6.98E-04	1.65E-04	1.09E-04	1.95E-08	3.50E-04	1.10E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E43	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.00E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	E43	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.07E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.02E-04
10	E44	70	Passenger Car	381	0.00E+00	4.24E-06	4.61E-07	1.66E+01	3.01E-05	8.51E-02	9.57E-06	3.85E-04	2.93E-03	4.57E-04	9.33E-04	6.02E-04	6.18E-04	6.47E-05	8.34E-05	1.73E-08	3.16E-04	6.00E-05
10	E44	70	Passenger Truck	637	0.00E+00	8.94E-06	9.50E-07	3.73E+01	5.72E-05	1.50E-01	1.87E-05	1.12E-03	5.31E-03	8.21E-04	1.79E-03	1.16E-03	1.19E-03	2.83E-04	1.86E-04	3.33E-08	5.98E-04	1.88E-04
10	E44	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.01E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.51E-05
10	E44	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.91E-04
10	E44	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.79E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.26E-04
11	E45	80	Passenger Car	339	0.00E+00	3.52E-06	3.82E-07	1.43E+01	2.50E-05	7.23E-02	7.93E-06	3.51E-04	1.85E-03	3.09E-04	7.74E-04	4.99E-04	5.12E-04	5.04E-05	7.23E-05	1.54E-08	2.62E-04	5.48E-05
11	E45	80	Passenger Truck	567	0.00E+00	7.24E-06	7.72E-07	3.24E+01	4.71E-05	1.28E-01	1.53E-05	9.47E-04	3.29E-03	5.47E-04	1.47E-03	9.56E-04	9.80E-04	2.33E-04	1.62E-04	2.94E-08	4.93E-04	1.58E-04
11	E45	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.36E-04
11	E45	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.68E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	E45	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.47E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	E45	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.85E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
11	E46	80	Passenger Car	202	0.00E+00	2.10E-06	2.28E-07	8.54E+00	1.49E-05	4.31E-02	4.73E-06	2.09E-04	1.10E-03	1.84E-04	4.61E-04	2.97E-04	3.05E-04	3.00E-05	4.31E-05	9.20E-09	1.56E-04	3.27E-05
11	E46	80	Passenger Truck	338	0.00E+00	4.32E-06	4.60E-07	1.93E+01	2.81E-05	7.61E-02	9.15E-06	5.65E-04	1.96E-03	3.26E-04	8.78E-04	5.70E-04	5.84E-04	1.39E-04	9.64E-05	1.75E-08	2.94E-04	9.40E-05
11	E46	80	Single Unit Short Haul Truck	24	0.00E+00	3.29E-06	1.28E-07	3.93E+00	2.23E-06	7.13E-03	3.61E-06	1.36E-03	2.69E-04	5.50E-05	4.52E-04	8.38E-05	8.54E-05	3.99E-04	1.59E-05	6.32E-09	3.67E-04	2.55E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.51E-09	1.66E-01	9.49E-08	2.97E-04	1.57E-07	5.82E-05	1.23E-05	2.44E-06	1.97E-05	3.60E-06	3.67E-06	1.68E-05	6.75E-07	2.63E-10	1.61E-05	1.09E-05
11	E46	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.31E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.12E-04
11	E46	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.61E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.68E-04
11	E47	80	Passenger Car	409	0.00E+00	4.24E-06	4.61E-07	1.73E+01	3.01E-05	8.72E-02	9.57E-06	4.24E-04	2.23E-03	3.73E-04	9.33E-04	6.02E-04	6.18E-04	6.08E-05	8.72E-05	1.86E-08	3.16E-04	6.61E-05
11	E47	80	Passenger Truck	684	0.00E+00	8.74E-06	9.32E-07	3.90E+01	5.68E-05	1.54E-01	1.85E-05	1.14E-03	3.97E-03	6.60E-04	1.78E-03	1.15E-03	1.18E-03	2.81E-04	1.95E-04	3.55E-08	5.95E-04	1.90E-04
11	E47	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E47	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.05E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E47	80	Combination Short Haul Truck	14	0.00E+00	2.91E-06	2.15E-07	4.74E+00	7.62E-09	4.44E-03	2.08E-06	4.48E-03	3.37E-04	6.11E-05	1.76E-04	6.29E-05	6.53E-05	7.53E-04	1.58E-05	0.00E+00	1.11E-04	8.44E-04
11	E47	80	Combination Long Haul Truck	13	0.00E+00	4.05E-06	2.29E-07	4.39E+00	2.58E-08	5.25E-03	3.34E-06	4.78E-03	3.48E-04	5.57E-05	3.72E-04	7.38E-05	7.68E-05	7.05E-04	1.47E-05	0.00E+00	2.95E-04	9.01E-04
11	E48	80	Passenger Car	67	0.00E+00	6.95E-07	7.55E-08	2.83E+00	4.93E-06	1.43E-02	1.57E-06	6.94E-05	3.65E-04	6.11E-05	1.53E-04	9.86E-05	1.01E-04	9.95E-06	1.43E-05	3.05E-09	5.17E-05	1.08E-05
11	E48	80	Passenger Truck	112	0.00E+00	1.43E-06	1.53E-07	6.39E+00	9.31E-06	2.52E-02	3.03E-06	1.87E-04	6.50E-04	1.08E-04	2.91E-04	1.89E-04	1.94E-04	4.60E-05	3.19E-05	5.81E-09	9.75E-05	3.11E-05
11	E48	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.90E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.17E-05
11	E48	80	Combination Short Haul Truck	6	0.00E+00	1.19E-06	8.78E-08	1.93E+00	3.11E-09	1.81E-03	8.48E-07	1.82E-03	1.37E-04	2.49E-05	7.19E-05	2.56E-05	2.66E-05	3.07E-04	6.45E-06	0.00E+00	4.53E-05	3.44E-04
11	E48	80	Combination Long Haul Truck	5	0.00E+00	1.65E-06	9.33E-08	1.79E+00	1.05E-08	2.14E-03	1.36E-06	1.95E-03	1.42E-04	2.27E-05	1.51E-04	3.01E-05	3.13E-05	2.87E-04	6.00E-06	0.00E+00	1.20E-04	3.67E-04
11	E49	80	Passenger Car	328	0.00E+00	3.41E-06	3.70E-07	1.39E+01	2.42E-05	7.00E-02	7.68E-06	3.40E-04	1.79E-03	2.99E-04	7.49E-04	4.83E-04	4.96E-04	4.87E-05	7.00E-05	1.49E-08	2.53E-04	5.30E-05
11	E49	80	Passenger Truck	549	0.00E+00	7.01E-06	7.47E-07	3.13E+01	4.56E-05	1.24E-01	1.49E-05	9.17E-04	3.18E-03	5.30E-04	1.43E-03	9.25E-04	9.48E-04	2.25E-04	1.56E-04	2.85E-08	4.78E-04	1.53E-04
11	E49	80	Single Unit Short Haul Truck	34	0.00E+00	4.60E-06	1.80E-07	5.50E+00	3.12E-06	9.98E-03	5.06E-06	1.91E-03	3.77E-04	7.70E-05	6.33E-04	1.17E-04	1.20E-04	5.59E-04	2.23E-05	8.85E-09	5.14E-04	3.56E-04
11	E49	80	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	7.71E-09	2.32E-01	1.33E-07	4.16E-04	2.20E-07	8.15E-05	1.73E-05	3.42E-06	2.76E-05	5.04E-06	5.14E-06	2.35E-05	9.45E-07	3.69E-10	2.25E-05	1.52E-05
11	E49	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.80E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.09E-03
11	E49	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.20E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E50	80	Passenger Car	72	0.00E+00	7.49E-07	8.14E-08	3.05E+00	5.32E-06	1.54E-02	1.69E-06	7.48E-05	3.93E-04	6.59E-05	1.65E-04	1.06E-04	1.09E-04	1.07E-05	1.54E-05	3.29E-09	5.57E-05	1.17E-05
11	E50	80	Passenger Truck	121	0.00E+00	1.54E-06	1.64E-07	6.89E+00	1.00E-05	2.72E-02	3.27E-06	2.02E-04	7.00E-04	1.17E-04	3.14E-04	2.04E-04	2.09E-04	4.96E-05	3.44E-05	6.26E-09	1.05E-04	3.36E-05
11	E50	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.63E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.06E-05
11	E50	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.16E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.19E-04
11	E50	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.24E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.34E-04
11	E51	80	Passenger Car	392	0.00E+00	4.07E-06	4.42E-07	1.66E+01	2.89E-05	8.37E-02	9.18E-06	4.06E-04	2.14E-03	3.58E-04	8.95E-04	5.77E-04	5.92E-04	5.83E-05	8.36E-05	1.79E-08	3.03E-04	6.34E-05
11	E51	80	Passenger Truck	656	0.00E+00	8.38E-06	8.93E-07	3.74E+01	5.45E-05	1.48E-01	1.78E-05	1.10E-03	3.80E-03	6.33E-04	1.70E-03	1.11E-03	1.13E-03	2.69E-04	1.87E-04	3.40E-08	5.71E-04	1.82E-04
11	E51	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.74E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.26E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.45E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.39E-05
11	E51	80	Combination Short Haul Truck	18	0.00E

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E55	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	2.98E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.62E-04
11	E55	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.19E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.01E-04
11	E56	80	Passenger Car	233	0.00E+00	2.42E-06	2.62E-07	9.84E+00	1.71E-05	4.96E-02	5.45E-06	2.41E-04	1.27E-03	2.12E-04	5.31E-04	3.42E-04	3.51E-04	3.46E-05	4.96E-05	1.06E-08	1.80E-04	3.76E-05
11	E56	80	Passenger Truck	389	0.00E+00	4.97E-06	5.30E-07	2.22E+01	3.23E-05	8.77E-02	1.05E-05	6.50E-04	2.26E-03	3.76E-04	1.01E-03	6.56E-04	6.73E-04	1.60E-04	1.11E-04	2.02E-08	3.39E-04	1.08E-04
11	E56	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.54E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E56	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.79E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.22E-06
11	E56	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.48E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.56E-04
11	E56	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.72E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.01E-04
9	F31	60	Passenger Car	932	0.00E+00	1.19E-05	1.29E-06	4.24E+01	8.46E-05	2.38E-01	2.69E-05	9.59E-04	9.41E-03	1.41E-03	2.62E-03	1.69E-03	1.73E-03	1.85E-04	2.13E-04	4.47E-08	8.86E-04	1.50E-04
9	F31	60	Passenger Truck	1560	0.00E+00	2.53E-05	2.68E-06	9.46E+01	1.60E-04	4.07E-01	5.25E-05	2.98E-03	1.72E-02	2.56E-03	5.00E-03	3.25E-03	3.33E-03	7.56E-04	4.70E-04	8.72E-08	1.67E-03	5.05E-04
9	F31	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.44E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	F31	60	Combination Short Haul Truck	29	0.00E+00	8.40E-06	6.17E-07	1.01E+01	2.30E-08	1.25E-02	6.03E-06	1.28E-02	1.47E-03	2.29E-04	5.17E-04	1.80E-04	1.87E-04	1.61E-03	3.39E-05	0.00E+00	3.30E-04	2.41E-03
9	F31	60	Combination Long Haul Truck	26	0.00E+00	1.15E-05	6.30E-07	9.57E+00	7.79E-08	1.51E-02	9.65E-06	1.36E-02	1.54E-03	2.22E-04	1.09E-03	2.06E-04	2.14E-04	1.54E-03	3.21E-05	0.00E+00	8.80E-04	2.56E-03
9	F32	60	Passenger Car	898	0.00E+00	1.15E-05	1.25E-06	4.09E+01	8.15E-05	2.29E-01	2.59E-05	9.24E-04	9.07E-03	1.36E-03	2.52E-03	1.63E-03	1.67E-03	1.78E-04	2.05E-04	4.31E-08	8.54E-04	1.44E-04
9	F32	60	Passenger Truck	1503	0.00E+00	2.44E-05	2.58E-06	9.12E+01	1.54E-04	3.92E-01	5.05E-05	2.87E-03	1.66E-02	2.47E-03	4.82E-03	3.14E-03	3.21E-03	7.28E-04	4.53E-04	8.40E-08	1.61E-03	4.87E-04
9	F32	60	Single Unit Short Haul Truck	32	0.00E+00	7.06E-06	2.92E-07	5.26E+00	4.68E-06	9.25E-03	7.63E-06	2.70E-03	7.27E-04	1.22E-04	9.42E-04	1.81E-04	1.85E-04	5.33E-04	2.14E-05	8.83E-09	7.57E-04	5.06E-04
9	F32	60	Single Unit Long Haul Truck	1	0.00E+00	3.08E-07	1.27E-08	2.24E-01	2.03E-07	3.93E-04	3.33E-07	1.17E-04	3.27E-05	5.42E-06	4.12E-05	7.88E-06	8.04E-06	2.27E-05	9.15E-07	3.76E-10	3.31E-05	2.19E-05
9	F32	60	Combination Short Haul Truck	32	0.00E+00	9.31E-06	6.84E-07	1.12E+01	2.55E-08	1.39E-02	6.69E-06	1.42E-02	1.63E-03	2.54E-04	5.74E-04	2.00E-04	2.08E-04	1.79E-03	3.76E-05	0.00E+00	3.66E-04	2.67E-03
9	F32	60	Combination Long Haul Truck	29	0.00E+00	1.28E-05	6.99E-07	1.06E+01	8.64E-08	1.67E-02	1.07E-05	1.51E-02	1.70E-03	2.46E-04	1.21E-03	2.28E-04	2.38E-04	1.70E-03	3.56E-05	0.00E+00	9.76E-04	2.84E-03
9	F33	60	Passenger Car	500	0.00E+00	6.39E-06	6.95E-07	2.28E+01	4.54E-05	1.28E-01	1.44E-05	5.15E-04	5.05E-03	7.56E-04	1.41E-03	9.06E-04	9.30E-04	9.91E-05	1.14E-04	2.40E-08	4.76E-04	8.03E-05
9	F33	60	Passenger Truck	837	0.00E+00	1.36E-05	1.44E-06	5.08E+01	8.56E-05	2.18E-01	2.81E-05	1.60E-03	9.22E-03	1.37E-03	2.68E-03	1.75E-03	1.79E-03	4.06E-04	2.52E-04	4.68E-08	8.94E-04	2.71E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.18E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	F33	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.88E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.19E-04
9	F33	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.19E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.78E-04
9	F34	60	Passenger Car	304	0.00E+00	3.89E-06	4.22E-07	1.38E+01	2.76E-05	7.75E-02	8.76E-06	3.13E-04	3.07E-03	4.60E-04	8.55E-04	5.51E-04	5.66E-04	6.03E-05	6.95E-05	1.46E-08	2.89E-04	4.88E-05
9	F34	60	Passenger Truck	509	0.00E+00	8.25E-06	8.75E-07	3.09E+01	5.21E-05	1.33E-01	1.71E-05	9.73E-04	5.61E-03	8.35E-04	1.63E-03	1.06E-03	1.09E-03	2.47E-04	1.53E-04	2.85E-08	5.44E-04	1.65E-04
11	F35	80	Passenger Car	193	0.00E+00	2.01E-06	2.18E-07	8.18E+00	1.42E-05	4.13E-02	4.53E-06	2.00E-04	1.05E-03	1.76E-04	4.41E-04	2.85E-04	2.92E-04	2.87E-05	4.12E-05	8.81E-09	1.49E-04	3.13E-05
11	F35	80	Passenger Truck	324	0.00E+00	4.13E-06	4.41E-07	1.85E+01	2.69E-05	7.29E-02	8.76E-06	5.40E-04	1.88E-03	3.12E-04	8.41E-04	5.45E-04	5.59E-04	1.33E-04	9.23E-05	1.68E-08	2.82E-04	9.00E-05
11	F35	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.90E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.17E-05
11	F35	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.50E-04
11	F35	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.42E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.67E-04
11	F36	80	Passenger Car	47	0.00E+00	4.93E-07	5.36E-08	2.01E+00	3.50E-06	1.01E-02	1.11E-06	4.92E-05	2.59E-04	4.33E-05	1.08E-04	6.99E-05	7.18E-05	7.06E-06	1.01E-05	2.16E-09	3.67E-05	7.68E-06
11	F36	80	Passenger Truck	80	0.00E+00	1.02E-06	1.08E-07	4.54E+00	6.60E-06	1.79E-02	2.15E-06	1.33E-04	4.61E-04	7.67E-05	2.06E-04	1.34E-04	1.37E-04	3.27E-05	2.27E-05	4.12E-09	6.92E-05	2.21E-05
11	F36	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.72E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.09E-05
11	F36	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.97E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.37E-05
11	F36	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.32E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
9	F37	60	Passenger Car	726	0.00E+00	9.28E-06	1.01E-06	3.31E+01	6.59E-05	1.85E-01	2.09E-05	7.47E-04	7.33E-03	1.10E-03	2.04E-03	1.32E-03	1.35E-03	1.44E-04	1.66E-04	3.48E-08	6.90E-04	1.17E-04
9	F37	60	Passenger Truck	1215	0.00E+00	1.97E-05	2.09E-06	7.37E+01	1.24E-04	3.17E-01	4.09E-05	2.32E-03	1.34E-02	1.99E-03	3.90E-03	2.53E-03	2.60E-03	5.89E-04	3.66E-04	6.79E-08	1.30E-03	3.94E-04
9	F37	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E-06	3.80E-07	6.85E+00	6.09E-06	1.21E-02	9.94E-06	3.52E-03	9.47E-04	1.59E-04	1.23E-03	2.36E-04	2.41E-04	6.94E-04	2.79E-05	1.15E-08	9.86E-04	6.59E-04
9	F37	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.52E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.85E-05
9	F37	60	Combination Short Haul Truck	39	0.00E+00	1.14E-05	8.41E-07	1.38E+01	3.14E-08	1.71E-02	8.22E-06	1.74E-02	2.00E-03	3.12E-04	7.06E-04	2.46E-04	2.55E-04	2.20E-03	4.62E-05	0.00E+00	4.50E-04	3.28E-03
9	F37	60	Combination Long Haul Truck	36	0.00E+00	1.57E-05	8.59E-07	1.30E+01	1.06E-07	2.06E-02	1.32E-05	1.85E-02	2.10E-03	3.03E-04	1.49E-03	2.81E-04	2.92E-04	2.09E-03	4.37E-05	0.00E+00	1.20E-03	3.49E-03
9	F38	60	Passenger Car	939	0.00E+00	1.20E-05	1.31E-06	4.28E+01	8.52E-05	2.40E-01	2.71E-05	9.67E-04	9.48E-03	1.42E-03	2.64E-03	1.70E-03	1.75E-03	1.86E-04	2.15E-04	4.51E-08	8.93E-04	1.51E-04
9	F38	60	Passenger Truck	1573	0.00E+00	2.55E-05	2.70E-06	9.54E+01	1.61E-04	4.10E-01	5.29E-05	3.01E-03	1.73E-02	2.58E-03	5.04E-03	3.28E-03	3.36E-03	7.62E-04	4.74E-04	8.79E-08	1.68E-03	5.09E-04
9	F38	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.91E-04
9	F38	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.73E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	F38	60	Combination Short Haul Truck	24	0.00E+00	6.87E-06	5.05E-07	8.29E+00	1.88E-08	1.03E-02	4.93E-06	1.04E-02	1.20E-03	1.87E-04	4.23E-04	1.48E-04	1.53E-04	1.32E-03	2.77E-05	0.00E+00	2.70E-04	1.97E-03
9	F38	60	Combination Long Haul Truck	21	0.00E+00	9.44E-06	5.16E-07	7.83E+00	6.37E-08	1.23E-02	7.89E-06	1.11E-02	1.26E-03	1.82E-04	8.95E-04	1.68E-04	1.75E-04	1.26E-03	2.62E-05	0.00E+00	7.20E-04	2.10E-03
11	F39	80	Passenger Car	299	0.00E+00	3.10E-06	3.37E-07	1.26E+01	2.20E-05	6.38E-02	7.00E-06	3.10E-04	1.63E-03	2.73E-04	6.82E-04	4.40E-04	4.51E-04	4.44E-05	6.37E-05	1.36E-08	2.31E-04	4.83E-05
11	F39	80	Passenger Truck	500	0.00E+00	6.39E-06	6.81E-07	2.85E+01	4.16E-05	1.13E-01	1.35E-05	8.35E-04	2.90E-03	4.83E-04	1.30E-03	8.43E-04	8.64E-04	2.05E-04	1.43E-04	2.59E-08	4.35E-04	1.39E-04
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.27E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.11E-05
11	F39	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.65E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.00E-04
11	F39	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.34E-04
11	F40	80	Passenger Car	97	0.00E+00	1.01E-06	1.09E-07	4.10E+00	7.14E-06	2.07E-02	2.27E-06	1.00E-04	5.28E-04	8.84E-05	2.21E-04	1.43E-04	1.46E-04	1.44E-05	2.07E-05	4.41E-09	7.48E-05	1.57E-05
11	F40	80	Passenger Truck	162	0.00E+00	2.07E-06	2.21E-07	9.25E+00	1.35E-05	3.65E-02	4.39E-06	2.71E-04	9.40E-04	1.56E-04	4.21E-04	2.73E-04	2.80E-04	6.66E-05	4.62E-05	8.40E-09	1.41E-04	4.51E-05
11	F40	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	F40	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.12E-04
11	F40	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.77E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.34E-04
10	F41	70	Passenger Car	222	0.00E+00	2.47E-06	2.69E-07	9.66E+00	1.75E-05	4.96E-02	5.57E-06	2.24E-04	1.71E-03	2.66E-04	5.44E-04	3.51E-04	3.60E-04	3.77E-05	4.86E-05	1.01E-08	1.84E-04	3.50E-05
10	F41	70	Passenger Truck	371	0.00E+00	5.20E-06	5.53E-07	2.17E+01	3.33E-05	8.76E-02	1.09E-05	6.52E-04	3.09E-03	4.78E-04	1.04E-03	6.78E-04	6.95E-04	1.65E-04	1.08E-04	1.94E-08	3.49E-04	1.09E-04
10	F41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	F41	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.01E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.56E-05
10	F41	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.29E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.09E-05
10	F42	70	Passenger Car	290	0.00E+00	3.24E-06	3.52E-07	1.26E+01	2.30E-05	6.49E-02	7.30E-06	2.93E-04	2.24E-03	3.48E-04	7.12E-04	4.59E-04	4.71E-04	4.93E-05	6.36E-05	1.32E-08	2.41E-04	4.58E-05
10	F42	70	Passenger Truck	486	0.00E+00	6.81E-06	7.24E-07	2.85E+01	4.36E-05	1.15E-01	1.43E-05	8.53E-04	4.05E-03	6.26E-04	1.37E-03	8.87E-04	9.09E-04	2.15E-04	1.42E-04	2.54E-08	4.56E-04	1.43E-04
10	F42	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
53	F83	70	Passenger Car	11	0.00E+00	1.17E-07	1.27E-08	4.78E-01	8.32E-07	2.33E-03	2.64E-07	1.12E-05	8.22E-05	1.29E-05	2.58E-05	1.66E-05	1.71E-05	1.84E-06	2.40E-06	4.99E-10	8.72E-06	1.74E-06
53	F83	70	Passenger Truck	18	0.00E+00	2.45E-07	2.60E-08	1.08E+00	1.57E-06	4.11E-03	5.14E-07	3.15E-05	1.47E-04	2.28E-05	4.92E-05	3.19E-05	3.27E-05	8.00E-06	5.36E-06	9.40E-10	1.64E-05	5.27E-06
53	F83	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
53	F83	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.78E-05
50	F84	40	Passenger Car	225	0.00E+00	3.22E-06	3.50E-07	1.19E+01	2.29E-05	6.37E-02	7.27E-06	2.05E-04	3.87E-03	5.45E-04	7.09E-04	4.57E-04	4.69E-04	6.68E-05	5.89E-05	1.09E-08	2.40E-04	3.20E-05
50	F84	40	Passenger Truck	376	0.00E+00	7.11E-06	7.47E-07	2.58E+01	4.28E-05	1.05E-01	1.43E-05	7.89E-04	6.87E-03	9.54E-04	1.35E-03	8.81E-04	9.02E-04	2.28E-04	1.27E-04	1.85E-08	4.47E-04	1.37E-04
50	F84	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.92E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.34E-05
50	F84	40	Combination Short Haul Truck	8	0.00E+00	4.04E-06	3.02E-07	3.47E+00	1.00E-08	5.71E-03	2.87E-06	5.86E-03	8.14E-04	1.21E-04	2.40E-04	8.77E-05	9.10E-05	5.52E-04	1.16E-05	0.00E+00	1.49E-04	1.10E-03
50	F84	40	Combination Long Haul Truck	8	0.00E+00	5.36E-06	3.03E-07	3.33E+00	3.41E-08	6.93E-03	4.42E-06	6.18E-03	8.45E-04	1.19E-04	4.91E-04	9.76E-05	1.02E-04	5.35E-04	1.12E-05	0.00E+00	3.90E-04	1.16E-03
52	F85	60	Passenger Car	204	0.00E+00	2.39E-06	2.60E-07	9.28E+00	1.70E-05	4.74E-02	5.40E-06	2.02E-04	2.00E-03	3.00E-04	5.26E-04	3.39E-04	3.48E-04	4.04E-05	4.66E-05	9.49E-09	1.78E-04	3.15E-05
52	F85	60	Passenger Truck	341	0.00E+00	5.05E-06	5.35E-07	2.07E+01	3.18E-05	8.14E-02	1.05E-05	6.16E-04	3.55E-03	5.28E-04	9.98E-04	6.50E-04	6.66E-04	1.62E-04	1.03E-04	1.73E-08	3.33E-04	1.04E-04
52	F85	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.27E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.13E-05
52	F85	60	Combination Short Haul Truck	8	0.00E+00	2.44E-06	1.79E-07	2.95E+00	6.69E-09	3.65E-03	1.75E-06	3.72E-03	4.26E-04	6.67E-05	1.51E-04	5.25E-05	5.45E-05	4.68E-04	9.86E-06	0.00E+00	9.60E-05	7.00E-04
52	F85	60	Combination Long Haul Truck	8	0.00E+00	3.36E-06	1.83E-07	2.78E+00	2.27E-08	4.38E-03	2.81E-06	3.96E-03	4.47E-04	6.46E-05	3.18E-04	5.99E-05	6.24E-05	4.47E-04	9.33E-06	0.00E+00	2.56E-04	7.45E-04
53	F86	70	Passenger Car	148	0.00E+00	1.60E-06	1.74E-07	6.54E+00	1.14E-05	3.19E-02	3.62E-06	1.53E-04	1.13E-03	1.76E-04	3.53E-04	2.27E-04	2.33E-04	2.52E-05	3.29E-05	6.83E-09	1.19E-04	2.38E-05
53	F86	70	Passenger Truck	249	0.00E+00	3.35E-06	3.56E-07

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	G03	100	Passenger Car	200	0.00E+00	1.86E-06	2.03E-07	8.15E+00	1.32E-05	3.95E-02	4.20E-06	2.15E-04	6.38E-04	1.22E-04	4.10E-04	2.64E-04	2.71E-04	2.37E-05	4.13E-05	8.67E-09	1.39E-04	3.36E-05
16	G03	100	Passenger Truck	334	0.00E+00	3.85E-06	4.13E-07	1.88E+01	2.57E-05	7.63E-02	8.31E-06	5.38E-04	1.11E-03	2.16E-04	8.01E-04	5.19E-04	5.32E-04	1.23E-04	9.42E-05	1.72E-08	2.69E-04	8.83E-05
16	G03	100	Single Unit Short Haul Truck	253	0.00E+00	2.40E-05	8.88E-07	4.13E+01	1.84E-05	8.52E-02	2.72E-05	1.06E-02	1.63E-03	4.23E-04	3.45E-03	6.36E-04	6.47E-04	4.23E-03	1.67E-04	6.82E-08	2.80E-03	1.98E-03
16	G03	100	Single Unit Long Haul Truck	11	0.00E+00	1.04E-06	3.75E-08	1.74E+00	7.61E-07	3.49E-03	1.18E-06	4.45E-04	7.43E-05	1.84E-05	1.51E-04	2.68E-05	2.73E-05	1.77E-04	7.05E-06	2.79E-09	1.23E-04	8.30E-05
16	G03	100	Combination Short Haul Truck	30	0.00E+00	4.27E-06	3.15E-07	9.93E+00	1.13E-08	7.68E-03	3.05E-06	7.68E-03	2.89E-04	7.32E-05	2.60E-04	9.20E-05	9.55E-05	1.58E-03	3.32E-05	0.00E+00	1.64E-04	1.45E-03
16	G03	100	Combination Long Haul Truck	27	0.00E+00	6.03E-06	3.40E-07	9.00E+00	3.84E-08	8.94E-03	4.97E-06	8.22E-03	2.89E-04	5.89E-05	5.53E-04	1.10E-04	1.14E-04	1.44E-03	3.02E-05	0.00E+00	4.39E-04	1.55E-03
16	G04	100	Passenger Car	187	0.00E+00	1.75E-06	1.90E-07	7.65E+00	1.24E-05	3.71E-02	3.94E-06	2.02E-04	5.99E-04	1.15E-04	3.85E-04	2.48E-04	2.55E-04	2.23E-05	3.87E-05	8.13E-09	1.30E-04	3.15E-05
16	G04	100	Passenger Truck	314	0.00E+00	3.62E-06	3.87E-07	1.76E+01	2.41E-05	7.16E-02	7.80E-06	5.05E-04	1.05E-03	2.03E-04	7.52E-04	4.87E-04	4.99E-04	1.16E-04	8.84E-05	1.61E-08	2.53E-04	8.29E-05
16	G04	100	Single Unit Short Haul Truck	130	0.00E+00	1.24E-05	4.57E-07	2.13E+01	9.47E-06	4.39E-02	1.40E-05	5.46E-03	8.42E-04	2.18E-04	1.77E-03	3.28E-04	3.33E-04	2.18E-03	8.61E-05	3.51E-08	1.44E-03	1.02E-03
16	G04	100	Single Unit Long Haul Truck	6	0.00E+00	5.38E-07	1.93E-08	8.95E-01	3.92E-07	1.80E-03	6.08E-07	2.29E-04	3.83E-05	9.46E-06	7.76E-05	1.38E-05	1.41E-05	9.10E-05	3.63E-06	1.44E-09	6.35E-05	4.27E-05
16	G04	100	Combination Short Haul Truck	42	0.00E+00	5.99E-06	4.42E-07	1.39E+01	1.59E-08	1.08E-02	4.29E-06	1.08E-02	4.05E-04	1.03E-04	3.65E-04	1.29E-04	1.34E-04	2.22E-03	4.66E-05	0.00E+00	2.31E-04	2.03E-03
16	G04	100	Combination Long Haul Truck	38	0.00E+00	8.46E-06	4.77E-07	1.26E+01	5.39E-08	1.25E-02	6.98E-06	1.15E-02	4.06E-04	8.27E-05	7.76E-04	1.54E-04	1.60E-04	2.03E-03	4.23E-05	0.00E+00	6.16E-04	2.17E-03
16	G05	100	Passenger Car	229	0.00E+00	2.14E-06	2.32E-07	9.34E+00	1.52E-05	4.53E-02	4.82E-06	2.47E-04	7.31E-04	1.40E-04	4.70E-04	3.03E-04	3.11E-04	2.72E-05	4.73E-05	9.93E-09	1.59E-04	3.85E-05
16	G05	100	Passenger Truck	383	0.00E+00	4.42E-06	4.73E-07	2.15E+01	2.95E-05	8.75E-02	9.52E-06	6.16E-04	1.28E-03	2.48E-04	9.18E-04	5.95E-04	6.10E-04	1.41E-04	1.08E-04	1.97E-08	3.09E-04	1.01E-04
16	G05	100	Single Unit Short Haul Truck	30	0.00E+00	2.82E-06	1.04E-07	4.85E+00	2.16E-06	1.00E-02	3.20E-06	1.25E-03	1.92E-04	4.97E-05	4.05E-04	7.47E-05	7.60E-05	4.97E-04	1.96E-05	8.01E-09	3.29E-04	2.32E-04
16	G05	100	Single Unit Long Haul Truck	1	0.00E+00	1.23E-07	4.41E-09	2.04E-01	8.93E-08	4.10E-04	1.39E-07	5.22E-05	8.72E-06	2.16E-06	1.77E-05	3.15E-06	3.21E-06	2.07E-05	8.28E-07	3.28E-10	1.45E-05	9.74E-06
16	G05	100	Combination Short Haul Truck	37	0.00E+00	5.31E-06	3.92E-07	1.24E+01	1.41E-08	9.56E-03	3.80E-06	9.56E-03	3.60E-04	9.12E-05	3.24E-04	1.15E-04	1.19E-04	1.97E-03	4.14E-05	0.00E+00	2.05E-04	1.80E-03
16	G05	100	Combination Long Haul Truck	34	0.00E+00	7.51E-06	4.23E-07	1.12E+01	4.79E-08	1.11E-02	6.20E-06	1.02E-02	3.60E-04	7.34E-05	6.89E-04	1.36E-04	1.42E-04	1.80E-03	3.76E-05	0.00E+00	5.47E-04	1.93E-03
56	G06	100	Passenger Car	74	0.00E+00	6.95E-07	7.55E-08	3.04E+00	4.93E-06	1.47E-02	1.57E-06	8.02E-05	2.38E-04	4.56E-05	1.53E-04	9.85E-05	1.01E-04	8.85E-06	1.54E-05	3.23E-09	5.17E-05	1.25E-05
56	G06	100	Passenger Truck	125	0.00E+00	1.44E-06	1.54E-07	7.00E+00	9.58E-06	2.84E-02	3.10E-06	2.00E-04	4.15E-04	8.06E-05	2.99E-04	1.93E-04	1.98E-04	4.59E-05	3.51E-05	6.40E-09	1.00E-04	3.29E-05
56	G06	100	Combination Short Haul Truck	2	0.00E+00	2.24E-07	1.66E-08	5.23E-01	5.96E-10	4.04E-04	1.61E-07	4.04E-04	1.52E-05	3.85E-06	1.37E-05	4.84E-06	5.03E-06	8.31E-05	1.75E-06	0.00E+00	8.65E-06	7.62E-05
56	G06	100	Combination Long Haul Truck	1	0.00E+00	3.17E-07	1.79E-08	4.74E-01	2.02E-09	4.71E-04	2.62E-07	4.33E-04	1.52E-05	3.10E-06	2.91E-05	5.77E-06	6.01E-06	7.60E-05	1.59E-06	0.00E+00	2.31E-05	8.15E-05
53	G07	70	Passenger Car	58	0.00E+00	6.30E-07	6.85E-08	2.57E+00	4.47E-06	1.25E-02	1.42E-06	6.00E-05	4.42E-04	6.93E-05	1.39E-04	8.94E-05	9.17E-05	9.91E-06	1.29E-05	2.69E-09	4.69E-05	9.36E-06
53	G07	70	Passenger Truck	98	0.00E+00	1.32E-06	1.40E-07	5.79E+00	8.45E-06	2.21E-02	2.76E-06	1.69E-04	7.90E-04	1.23E-04	2.65E-04	1.72E-04	1.76E-04	4.30E-05	2.89E-05	5.06E-09	8.84E-05	2.84E-05
53	G07	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
53	G07	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
53	G07	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
54	G08	80	Passenger Car	18	0.00E+00	1.78E-07	1.94E-08	7.48E-01	1.26E-06	3.59E-03	4.01E-07	1.83E-05	1.01E-04	1.66E-05	3.92E-05	2.52E-05	2.59E-05	2.61E-06	3.77E-06	7.81E-10	1.32E-05	2.86E-06
54	G08	80	Passenger Truck	29	0.00E+00	3.70E-07	3.94E-08	1.70E+00	2.41E-06	6.54E-03	7.85E-07	4.92E-05	1.80E-04	2.95E-05	7.53E-05	4.89E-05	5.01E-05	1.21E-05	8.49E-06	1.50E-09	2.52E-05	8.18E-06
50	G09	40	Passenger Car	38	0.00E+00	5.47E-07	5.95E-08	2.01E+00	3.88E-06	1.08E-02	1.23E-06	3.48E-05	6.58E-04	9.24E-05	1.20E-04	7.76E-05	7.96E-05	1.13E-05	1.00E-05	1.85E-09	4.07E-05	5.43E-06
50	G09	40	Passenger Truck	64	0.00E+00	1.21E-06	1.27E-07	4.38E+00	7.26E-06	1.79E-02	2.42E-06	1.34E-04	1.17E-03	1.62E-04	2.29E-04	1.49E-04	1.53E-04	3.87E-05	2.16E-05	3.15E-09	7.58E-05	2.32E-05
50	G09	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.23E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.79E-05
50	G09	40	Combination Short Haul Truck	11	0.00E+00	5.30E-06	3.96E-07	4.55E+00	1.31E-08	7.49E-03	3.77E-06	7.69E-03	1.07E-03	1.59E-04	3.15E-04	1.15E-04	1.19E-04	7.24E-04	1.52E-05	0.00E+00	1.96E-04	1.45E-03
50	G09	40	Combination Long Haul Truck	10	0.00E+00	7.04E-06	3.98E-07	4.37E+00	4.47E-08	9.09E-03	5.81E-06	8.11E-03	1.11E-03	1.56E-04	6.45E-04	1.28E-04	1.33E-04	7.02E-04	1.46E-05	0.00E+00	5.12E-04	1.53E-03
53	G10	70	Passenger Car	433	0.00E+00	4.68E-06	5.08E-07	1.91E+01	3.32E-05	9.30E-02	1.05E-05	4.45E-04	3.28E-03	5.14E-04	1.03E-03	6.63E-04	6.80E-04	7.35E-05	9.59E-05	1.99E-08	3.48E-04	6.94E-05
53	G10	70	Passenger Truck	724	0.00E+00	9.76E-06	1.04E-06	4.29E+01	6.27E-05	1.64E-01	2.05E-05	1.26E-03	5.86E-03	9.11E-04	1.96E-03	1.27E-03	1.31E-03	3.19E-04	2.14E-04	3.75E-08	6.56E-04	2.10E-04
53	G10	70	Single Unit Short Haul Truck	28	0.00E+00	4.89E-06	1.99E-07	4.55E+00	3.28E-06	8.25E-03	5.32E-06	1.94E-03	4.41E-04	8.10E-05	6.59E-04	1.26E-04	1.28E-04	4.62E-04	1.85E-05	7.47E-09	5.31E-04	3.63E-04
53	G10	70	Single Unit Long Haul Truck	1	0.00E+00	2.13E-07	8.56E-09	1.93E-01	1.41E-07	3.46E-04	2.31E-07	8.35E-05	2.02E-05	3.62E-06	2.88E-05	5.42E-06	5.53E-06	1.95E-05	7.86E-07	3.15E-10	2.32E-05	1.56E-05
53	G10	70	Combination Short Haul Truck	21	0.00E+00	5.52E-06	4.11E-07	7.46E+00	1.40E-08	7.97E-03	3.93E-06	8.22E-03	7.78E-04	1.30E-04	3.31E-04	1.20E-04	1.24E-04	1.18E-03	2.49E-05	0.00E+00	2.07E-04	1.55E-03
53	G10	70	Combination Long Haul Truck	20	0.00E+00	7.57E-06	4.30E-07	7.00E+00	4.75E-08	9.51E-03	6.22E-06	8.80E-03	8.10E-04	1.22E-04	6.88E-04	1.38E-04	1.44E-04	1.12E-03	2.35E-05	0.00E+00	5.44E-04	1.66E-03
16	H01	100	Passenger Car	3003	0.00E+00	2.81E-05	3.05E-06	1.23E+02	1.99E-04	5.94E-01	6.33E-05	3.24E-03	9.60E-03	1.84E-03	6.17E-03	3.98E-03	4.08E-03	3.57E-04	6.21E-04	1.30E-07	2.09E-03	5.05E-04
16	H01	100	Passenger Truck	5030	0.00E+00	5.80E-05	6.21E-06	2.83E+02	3.87E-04	1.15E+00	1.25E-04	8.09E-03	1.68E-02	3.25E-03	1.21E-02	7.81E-03	8.00E-03	1.85E-03	1.42E-03	2.58E-07	4.05E-03	1.33E-03
16	H01	100	Single Unit Short Haul Truck	490	0.00E+00	4.66E-05	1.72E-06	8.01E+01	3.57E-05	1.65E-01	5.28E-05	2.06E-02	3.17E-03	8.20E-04	6.68E-03	1.23E-03	1.26E-03	8.20E-03	3.24E-04	1.32E-07	5.43E-03	3.84E-03
16	H01	100	Single Unit Long Haul Truck	22	0.00E+00	2.02E-06	7.28E-08	3.37E+00	1.48E-06	6.76E-03	2.29E-06	8.63E-04	1.44E-04	3.56E-05	2.92E-04	5.20E-05	5.30E-05	3.43E-04	1.37E-05	5.41E-09	2.39E-04	1.61E-04
16	H01	100	Combination Short Haul Truck	604	0.00E+00	8.63E-05	6.38E-06	2.01E+02	2.29E-07	1.55E-01	6.18E-05	1.55E-01	5.85E-03	1.48E-03	5.26E-03	1.86E-03	1.93E-03	3.20E-02	6.72E-04	0.00E+00	3.33E-03	2.93E-02
16	H01	100	Combination Long Haul Truck	550	0.00E+00	1.22E-04	6.88E-06	1.82E+02	7.78E-07	1.81E-01	1.01E-04	1.66E-01	5.86E-03	1.19E-03	1.12E-02	2.22E-03	2.31E-03	2.92E-02	6.10E-04	0.00E+00	8.88E-03	3.13E-02
16	H02	100	Passenger Car	2361	0.00E+00	2.21E-05	2.40E-06	9.64E+01	1.57E-04	4.67E-01	4.97E-05	2.55E-03	7.55E-03	1.45E-03	4.85E-03	3.13E-03	3.21E-03	2.81E-04	4.88E-04	1.03E-07	1.64E-03	3.97E-04
16	H02	100	Passenger Truck	3955	0.00E+00	4.56E-05	4.88E-06	2.22E+02	3.04E-04	9.03E-01	9.83E-05	6.36E-03	1.32E-02	2.56E-03	9.48E-03	6.14E-03	6.29E-03	1.46E-03	1.11E-03	2.03E-07	3.19E-03	1.04E-03
16	H02	100	Single Unit Short Haul Truck	322	0.00E+00	3.06E-05	1.13E-06	5.25E+01	2.34E-05	1.08E-01	3.47E-05	1.35E-02	2.08E-03	5.38E-04	4.39E-03	8.10E-04	8.24E-04	5.38E-03	2.13E-04	8.68E-08	3.56E-03	2.52E-03
16	H02	100	Single Unit Long Haul Truck	14	0.00E+00	1.33E-06	4.78E-08	2.21E+00	9.68E-07	4.44E-03	1.50E-06	5.66E-04	9.45E-05	2.34E-05	1.92E-04	3.41E-05	3.48E-05	2.25E-04	8.97E-06	3.55E-09	1.57E-04	1.06E-04
16	H02	100	Combination Short Haul Truck	434	0.00E+00	6.20E-05	4.58E-06	1.44E+02	1.65E-07	1.12E-01	4.44E-05	1.12E-01	4.20E-03	1.07E-03	3.78E-03	1.34E-03	1.39E-03	2.30E-02	4.83E-04	0.00E+00	2.39E-03	2.10E-02
16	H02	100	Combination Long Haul Truck	395	0.00E+00	8.77E-05	4.94E-06	1.31E+02	5.59E-07	1.30E-01	7.23E-05	1.20E-01	4.21E-03	8.57E-04	8.04E-03	1.59E-03	1.66E-03	2.10E-02	4.39E-04	0.00E+00	6.38E-03	2.25E-02
16	H03	100	Passenger Car	2636	0.00E+00	2.46E-05	2.68E-06	1.08E+02	1.75E-04	5.21E-01	5.55E-05	2.84E-03	8.43E-03	1.61E-03	5.41E-03	3.49E-03	3.58E-03	3.13E-04	5.45E-04	1.14E-07	1.83E-03	4.43E-04
16	H03	100	Passenger Truck	4414	0.00E+00	5.09E-05	5.45E-06	2.48E+02	3.39E-04	1.01E+00	1.10E-04	7.10E-03	1.47E-02	2.86E-03	1.06E-02	6.85E-03	7.02E-03	1.63E-03	1.24E-03	2.27E-07	3.56E-03	1.17E-03
16	H03	100	Single Unit Short Haul Truck	312	0.00E+00	2.97E-05	1.10E-06	5.10E+01	2.27E-05	1.05E-01	3.36E-05	1.31E-02	2.02E-03	5.22E-04	4.25E-03	7.86E-04	7.99E-04	5.22E-03	2.06E-04	8.42E-08	3.46E-03	2.44E-03
16	H03	100	Single Unit Long Haul Truck	14	0.00E+00	1.29E-06	4.63E-08	2.14E+00	9.39E-07	4.31E-03	1.46E-06	5.49E-04	9.17E-05	2.27E-05	1.86E-04	3.31E-05	3.37E-05	2.18E-04	8.70E-06	3.45E-09	1.52E-04	1.02E-04
16	H03	100	Combination Short Haul Truck	387	0.00E+00	5.54E-05	4.09E-06	1.29E+02	1.47E-07	9.97E-02	3.96E-05	9.97E-02	3.75E-03	9.51E-04	3.37E-03	1.19E-03	1.24E-03	2.05E-02	4.31E-04	0.00E+00	2.13E-03	1.88E-02
16	H03	100	Combination Long Haul Truck	353	0.00E+00	7.82E-05	4.41E-06	1.17E+02	4.99E-07	1.16E-01	6.46E-05	1.07E-01	3.76E-03	7.65E-04	7.18E-03	1.42E-03	1.48E-03	1.87E-02	3.91E-04	0.00E+00	5.70E-03	2.01E-02
16	H04	100	Passenger Car	2803	0.00E+00	2.62E-05	2.84E-06	1.14E+02	1.86E-04	5.54E-01	5.90E-05	3.02E-03	8.96E-03	1.72E-03	5.76E-03	3.71E-03	3.81E-03	3.33E-04	5.79E-04	1.22E-07	1.95E-03	4.72E-04
16	H04	100	Passenger Truck	4693	0.00E+00	5.41E-05	5.79E-06	2.64E+02	3.61E-04	1.07E+00	1.17E-04	7.55E-03	1.56E-02	3.04E-03	1.12E-02	7.28E-03	7.47E-03	1.73E-03	1.32E-03	2.41E-07	3.78E-03	1.24E-03
16	H04	100	Single Unit Short Haul Truck	268	0.00E+00	2.55E-05	9.42E-07	4.38E+01	1.95E-05	9.04E-02	2.89E-05	1.13E-02	1.73E-03	4.49E-04	3.65E-03	6.75E-04	6.87E-04	4.49E-03	1.77E-04	7.24E-08	2.97E-03	2.10E-03
16	H04	100	Single Unit Long Haul Truck	12	0.00E+00	1.11E-06	3.98E-08	1.84E+00	8.07E-07	3.70E-03	1.25E-06	4.72E-04	7.88E-05	1.95E-05	1.60E-04	2.85E-05	2.90E-05	1.87E-04	7.47E-06	2.96E-09	1.31E-04	8.80E-05
16	H04	100	Combination Short Haul Truck	474	0.00E+00	6.78E-05	5.01E-06	1.58E+02	1.80E-07	1.22E-01	4.85E-05	1.22E-01	4.59E-03	1.16E-03	4.13E-03	1.46E-03	1.52E-03	2.51E-02	5.28E-04	0.00E+00	2.61E-03	2.30E-02
16	H04	100	Combination Long Haul Truck	432	0.00E+00	9.58E-05	5.40E-06	1.43E+02	6.11E-07	1.42E-01	7.91E-05	1.31E-01	4.60E-03	9.37E-04	8.79E-03	1.74E-03	1.81E-03	2.30E-02	4.79E-04	0.00E+00	6.98E-03	2.46E-02
56	H05	100	Passenger Car	1064	0.00E+00	9.94E-06	1.08E-06	4.34E+01	7.05E-05	2.11E-01	2.24E-05	1.15E-03	3.40E-03	6.52E-04	2.19E-03	1.41E-03	1.45E-03	1.27E-04	2.20E-04	4.62E-08	7.39E-04	1.79E-04
56	H05	100	Passenger Truck	1782	0.00E+00	2.05E-05	2.20E-06	1.00E+02	1.37E-04	4.07E-01	4.43E-05	2.87E-03	5.94E-03	1.15E-03	4.27E-03	2.77E-03	2.84E-03	6.56E-04	5.02E-04	9.15E-08	1.44E-03	4.71E-04
56	H05	100	Single Unit Short Haul Truck	132	0.00E+00	1.26E-05	4.64E-07	2.16E+01	9.61E-06	4.46E-02	1.42E-05	5.54E-03	8.54E-04	2.21E-04	1.80E-03	3.33E-04	3.38E-04	2.21E-03	8.74E-05	3.57E-08	1.46E-03	1.03E-03
56	H05	100	Single Unit Long Haul Truck	6	0.00E+00	5.46E-07	1.96E-08	9.08E-01	3.98E-07	1.82E-03	6.17E-07	2.33E-04	3.88E-05	9.60E-06	7.87E-05	1.40E-05	1.43E-05	9.23E-05	3.68E-06	1.46E-09	6.45E-05	4.34E-05
56	H05	100	Combination Short Haul Truck	171	0.00E+00	2.45E-05	1.81E-06	5.70E+01	6.49E-08	4.40E-02	1.75E-05	4.41E-02	1.66E-03	4.20E-04	1.49E-03	5.28E-04	5.48E-04	9.06E-03	1.91E-04	0.00E+00	9.43E-04	8.30E-03
56	H05	100	Combination Long Haul Truck	156	0.00E+00	3.46E-05	1.95E-06	5.16E+01	2.20E-07	5.13E-02	2.85E-05	4.72E-02	1.66E-03	3.38E-04	3.17E-03	6.29E-04	6.55E-04	8.28E-03	1.73E-04	0.00E+00	2.52E-03	8.88E-03
56	H06	100	Passenger Car	1739	0.00E+00	1.62E-05	1.76E-06	7.10E+01	1.15E-04	3.44E-01	3.66E-05	1.88E-03	5.56E-03	1.07E-03	3.57E-03	2.30E-03	2.36E-03	2.07E-04	3.59E-04	7.55E-08	1.21E-03	2.93E-04
56	H06	100	Passenger Truck	2911	0.00E+00	3.36E-05	3.59E-06	1.64E+02	2.24E-04	6.64E-01	7.24E-05	4.68E-03	9.70E-03	1.88E-03	6.98E-03	4.52E-03	4.63E-03	1.07E-03	8.21E-04	1.49E-07	2.35E-03	7.69E-04
56	H06	100	Single Unit Short Haul Truck	136	0.00E+00	1.29E-05	4.78E-07	2.22E+01	9.89E-06	4.58E-02	1.47E-05	5.71E-03	8.79E-04	2.27E-04	1.85E-03	3.42E-04	3.48E-04	2.27E-03	8.99E-05	3.67E-08	1.51E-03	1.06E-03
56	H06	100	Single Unit Long Haul Truck	6	0.00E+00	5.62E-07	2.02E-08	9.34E-01	4.09E-07	1.88E-03	6.35E-07	2.39E-04	3.99E-05	9.88E-06	8.10E-05	1.44E-05	1.47E-05	9.50E-05	3.79E-06	1.50E-09	6.63E-05	4.46E-05
56	H06	100	Combination Short Haul Truck	303	0.00E+00	4.33E-05	3.20E-06	1.01E+02	1.15E-07	7.80E-02	3.10E-05	7.80E-02	2.93E-03	7.44E-04	2.64E-03	9.34E-04	9.70E-04	1.60E-02	3.37E-04	0.00E+00	1.67E-03	1.47E-02
56	H06	100	Combination Long Haul Truck	276	0.00E+00	6.12E-05	3.45E-06	9.14E+01	3.90E-07	9.08E-02	5.05E-05	8.35E-02	2.94E-03	5.99E-04	5.62E-03	1.11E-03	1.16E-03	1.47E-02	3.06E-04	0.00E+00	4.46E-03	1.57E-02
16	H07	100	Passenger Car	3152	0.00E+00	2.94E-05	3.20E-06	1.29E+02	2.09E-04	6.24E-01	6.64E-05	3.40E-03	1.01E-02	1.93E-03	6.47E-03	4.17E-03	4.28E-03	3.75E-04	6.52E-04	1.37E-07	2.19E-03	5.30E-04
16	H07	100	Passenger Truck	5279	0.00E+00	6.08E-05	6.52E-06	2.97E+02	4.06E-04	1.20E+00	1.31E-04	8.49E-03	1.76E-02	3.41E-03	1.27E-02	8.19E-03	8.40E-03	1.94E-03	1.49E-03	2.71E-07	4.25E-03	1.39E-03
16	H07	100	Single Unit Short Haul Truck	311	0.00E+00	2.96E-05	1.09E-06	5.08E+01	2.26E-05	1.05E-01	3.35E-05	1.31E-02	2.01E-03	5.21E-04	4.24E-03	7.83E-04	7.97E-04	5.21E-03	2.06E-04	8.40E-08	3.44E-03	2.44E-03
16	H07	100	Single Unit Long Haul Truck	14	0.00E+00	1.29E-06	4.62E-08	2.14E+00	9.36E-07	4.29E-03	1.45E-06	5.48E-04	9.14E-05	2.26E-05	1.85E-04	3.30E-05	3.36E-05	2.17E-04	8.68E-06	3.44E-09	1.52E-04	1.02E-04
16	H07	100	Combination Short Haul Truck	534	0.00E+00	7.64E-05	5.64E-06	1.78E+02	2.03E-07	1.38E-01	5.47E-05	1.38E-01	5.17E-03	1.31E-03	4.65E-03	1.65E-03	1.71E-03	2.83E-02	5.95E-04	0.00E+00	2.94E-03	2.59E-02
16	H07	100	Combination Long Haul Truck	487	0.00E+00	1.08E-04	6.09E-06	1.61E+02	6.88E-07	1.60E-01	8.91E-05	1.47E-01	5.18E-03	1.06E-03	9.91E-03	1.96E-03	2.04E-03	2.59E-02	5.40E-04	0.00E+00	7.86E-03	2.77E-02
52	H08	60	Passenger Car

Appendix F.2.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	H12	100	Single Unit Long Haul Truck	7	0.00E+00	6.96E-07	2.50E-08	1.16E+00	5.07E-07	2.33E-03	7.87E-07	2.97E-04	4.95E-05	1.22E-05	1.00E-04	1.79E-05	1.82E-05	1.18E-04	4.70E-06	1.86E-09	8.22E-05	5.53E-05
16	H12	100	Combination Short Haul Truck	170	0.00E+00	2.43E-05	1.80E-06	5.66E+01	6.45E-08	4.38E-02	1.74E-05	4.38E-02	1.65E-03	4.18E-04	1.48E-03	5.24E-04	5.45E-04	9.00E-03	1.89E-04	0.00E+00	9.37E-04	8.25E-03
16	H12	100	Combination Long Haul Truck	155	0.00E+00	3.44E-05	1.94E-06	5.13E+01	2.19E-07	5.10E-02	2.84E-05	4.69E-02	1.65E-03	3.36E-04	3.15E-03	6.25E-04	6.51E-04	8.23E-03	1.72E-04	0.00E+00	2.50E-03	8.83E-03
54	H13	80	Passenger Car	988	0.00E+00	1.00E-05	1.09E-06	4.20E+01	7.10E-05	2.02E-01	2.26E-05	1.03E-03	5.67E-03	9.32E-04	2.20E-03	1.42E-03	1.46E-03	1.47E-04	2.12E-04	4.39E-08	7.45E-04	1.61E-04
54	H13	80	Passenger Truck	1654	0.00E+00	2.08E-05	2.22E-06	9.54E+01	1.35E-04	3.68E-01	4.41E-05	2.77E-03	1.01E-02	1.66E-03	4.23E-03	2.75E-03	2.82E-03	6.79E-04	4.77E-04	8.45E-08	1.42E-03	4.60E-04
54	H13	80	Single Unit Short Haul Truck	164	0.00E+00	2.25E-05	8.77E-07	2.69E+01	1.52E-05	4.88E-02	2.47E-05	9.32E-03	1.84E-03	3.76E-04	3.10E-03	5.73E-04	5.84E-04	2.73E-03	1.09E-04	4.32E-08	2.51E-03	1.74E-03
54	H13	80	Single Unit Long Haul Truck	7	0.00E+00	9.76E-07	3.77E-08	1.13E+00	6.49E-07	2.03E-03	1.07E-06	3.98E-04	8.44E-05	1.67E-05	1.35E-04	2.46E-05	2.51E-05	1.15E-04	4.62E-06	1.80E-09	1.10E-04	7.44E-05
54	H13	80	Combination Short Haul Truck	160	0.00E+00	3.30E-05	2.44E-06	5.37E+01	8.64E-08	5.03E-02	2.36E-05	5.07E-02	3.82E-03	6.92E-04	2.00E-03	7.12E-04	7.40E-04	8.53E-03	1.79E-04	0.00E+00	1.26E-03	9.56E-03
54	H13	80	Combination Long Haul Truck	146	0.00E+00	4.60E-05	2.59E-06	4.98E+01	2.92E-07	5.95E-02	3.79E-05	5.42E-02	3.95E-03	6.32E-04	4.21E-03	8.36E-04	8.71E-04	7.99E-03	1.67E-04	0.00E+00	3.34E-03	1.02E-02
53	H14	70	Passenger Car	18	0.00E+00	1.94E-07	2.11E-08	7.91E-01	1.38E-06	3.86E-03	4.37E-07	1.85E-05	1.36E-04	2.13E-05	4.27E-05	2.75E-05	2.82E-05	3.05E-06	3.98E-06	8.26E-10	1.44E-05	2.88E-06
53	H14	70	Passenger Truck	30	0.00E+00	4.05E-07	4.31E-08	1.78E+00	2.60E-06	6.80E-03	8.51E-07	5.21E-05	2.43E-04	3.78E-05	8.14E-05	5.29E-05	5.42E-05	1.32E-05	8.88E-06	1.56E-09	2.72E-05	8.73E-06
53	H14	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.26E-05
53	H14	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.01E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.56E-04
53	H14	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.29E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.09E-04
54	H15	80	Passenger Car	817	0.00E+00	8.28E-06	9.00E-07	3.48E+01	5.87E-05	1.67E-01	1.87E-05	8.51E-04	4.69E-03	7.71E-04	1.82E-03	1.17E-03	1.20E-03	1.21E-04	1.75E-04	3.63E-08	6.16E-04	1.33E-04
54	H15	80	Passenger Truck	1368	0.00E+00	1.72E-05	1.83E-06	7.89E+01	1.12E-04	3.04E-01	3.65E-05	2.29E-03	8.37E-03	1.37E-03	3.50E-03	2.27E-03	2.33E-03	5.62E-04	3.95E-04	6.99E-08	1.17E-03	3.80E-04
54	H15	80	Single Unit Short Haul Truck	84	0.00E+00	1.16E-05	4.52E-07	1.38E+01	7.84E-06	2.51E-02	1.27E-05	4.80E-03	9.47E-04	1.94E-04	1.59E-03	2.95E-04	3.01E-04	1.41E-03	5.61E-05	2.23E-08	1.29E-03	8.96E-04
54	H15	80	Single Unit Long Haul Truck	4	0.00E+00	5.02E-07	1.94E-08	5.84E-01	3.34E-07	1.05E-03	5.52E-07	2.05E-04	4.34E-05	8.59E-06	6.94E-05	1.27E-05	1.29E-05	5.90E-05	2.38E-06	9.27E-10	5.65E-05	3.83E-05
54	H15	80	Combination Short Haul Truck	179	0.00E+00	3.69E-05	2.73E-06	6.00E+01	9.66E-08	5.62E-02	2.64E-05	5.67E-02	4.27E-03	7.73E-04	2.24E-03	7.96E-04	8.27E-04	9.53E-03	2.01E-04	0.00E+00	1.41E-03	1.07E-02
54	H15	80	Combination Long Haul Truck	163	0.00E+00	5.14E-05	2.90E-06	5.57E+01	3.27E-07	6.65E-02	4.24E-05	6.06E-02	4.41E-03	7.06E-04	4.71E-03	9.34E-04	9.73E-04	8.93E-03	1.87E-04	0.00E+00	3.73E-03	1.14E-02
53	H16	70	Passenger Car	681	0.00E+00	7.36E-06	8.00E-07	3.00E+01	5.23E-05	1.46E-01	1.66E-05	7.01E-04	5.17E-03	8.09E-04	1.62E-03	1.04E-03	1.07E-03	1.16E-04	1.51E-04	3.14E-08	5.48E-04	1.09E-04
53	H16	70	Passenger Truck	1141	0.00E+00	1.54E-05	1.64E-06	6.76E+01	9.87E-05	2.58E-01	3.23E-05	1.98E-03	9.23E-03	1.43E-03	3.09E-03	2.01E-03	2.06E-03	5.03E-04	3.37E-04	5.91E-08	1.03E-03	3.31E-04
53	H16	70	Single Unit Short Haul Truck	22	0.00E+00	3.88E-06	1.57E-07	3.61E+00	2.60E-06	6.54E-03	4.22E-06	1.54E-03	3.50E-04	6.43E-05	5.23E-04	9.96E-05	1.02E-04	3.67E-04	1.47E-05	5.93E-09	4.21E-04	2.88E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	1.69E-07	6.79E-09	1.53E-01	1.12E-07	2.75E-04	1.83E-07	6.62E-05	1.60E-05	2.87E-06	2.28E-05	4.30E-06	4.39E-06	1.55E-05	6.23E-07	2.50E-10	1.84E-05	1.24E-05
53	H16	70	Combination Short Haul Truck	40	0.00E+00	1.04E-05	7.71E-07	1.40E+01	2.63E-08	1.50E-02	7.39E-06	1.54E-02	1.46E-03	2.44E-04	6.22E-04	2.25E-04	2.33E-04	2.23E-03	4.68E-05	0.00E+00	3.89E-04	2.91E-03
53	H16	70	Combination Long Haul Truck	37	0.00E+00	1.42E-05	8.08E-07	1.31E+01	8.91E-08	1.79E-02	1.17E-05	1.65E-02	1.52E-03	2.29E-04	1.29E-03	2.60E-04	2.71E-04	2.11E-03	4.41E-05	0.00E+00	1.02E-03	3.11E-03

Appendix F.2.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	1.72E-04	1.27E-05	4.18E+02	3.33E-04	1.31E+00	2.05E-04	1.58E-01	1.54E-02	3.71E-03	2.04E-02	9.02E-03	9.27E-03	3.16E-02	1.79E-03	3.13E-07	1.12E-02	2.96E-02
A02	0.00E+00	1.72E-04	1.27E-05	4.25E+02	3.46E-04	1.35E+00	2.09E-04	1.53E-01	1.58E-02	3.80E-03	2.10E-02	9.24E-03	9.50E-03	3.12E-02	1.83E-03	3.34E-07	1.15E-02	2.87E-02
A03	0.00E+00	1.75E-04	1.35E-05	4.66E+02	4.29E-04	1.62E+00	2.27E-04	1.46E-01	1.80E-02	4.27E-03	2.26E-02	1.07E-02	1.10E-02	2.92E-02	2.06E-03	3.76E-07	1.16E-02	2.72E-02
A04	0.00E+00	1.75E-04	1.32E-05	4.49E+02	3.93E-04	1.50E+00	2.20E-04	1.49E-01	1.71E-02	4.08E-03	2.21E-02	1.01E-02	1.04E-02	3.03E-02	1.96E-03	3.64E-07	1.17E-02	2.78E-02
A05	0.00E+00	1.42E-04	1.10E-05	3.75E+02	3.39E-04	1.28E+00	1.83E-04	1.21E-01	1.44E-02	3.42E-03	1.82E-02	8.58E-03	8.81E-03	2.42E-02	1.65E-03	2.97E-07	9.35E-03	2.26E-02
A06	0.00E+00	1.58E-04	1.20E-05	4.08E+02	3.58E-04	1.37E+00	2.00E-04	1.36E-01	1.55E-02	3.70E-03	1.99E-02	9.20E-03	9.45E-03	2.74E-02	1.78E-03	3.24E-07	1.05E-02	2.55E-02
A07	0.00E+00	1.47E-04	1.13E-05	3.81E+02	3.36E-04	1.28E+00	1.85E-04	1.28E-01	1.45E-02	3.45E-03	1.84E-02	8.62E-03	8.85E-03	2.54E-02	1.67E-03	2.96E-07	9.56E-03	2.39E-02
A08	0.00E+00	1.55E-04	1.13E-05	3.67E+02	2.76E-04	1.10E+00	1.80E-04	1.46E-01	1.33E-02	3.22E-03	1.81E-02	7.71E-03	7.93E-03	2.94E-02	1.55E-03	2.71E-07	1.01E-02	2.74E-02
A09	0.00E+00	1.67E-04	1.26E-05	4.18E+02	3.49E-04	1.35E+00	2.04E-04	1.51E-01	1.57E-02	3.74E-03	2.03E-02	9.23E-03	9.49E-03	3.00E-02	1.81E-03	3.15E-07	1.08E-02	2.83E-02
A10	0.00E+00	1.87E-04	1.35E-05	4.35E+02	3.17E-04	1.28E+00	2.14E-04	1.79E-01	1.56E-02	3.80E-03	2.14E-02	9.04E-03	9.29E-03	3.59E-02	1.83E-03	3.16E-07	1.21E-02	3.35E-02
A11	0.00E+00	1.90E-04	1.41E-05	4.52E+02	3.43E-04	1.36E+00	2.21E-04	1.82E-01	1.65E-02	3.97E-03	2.20E-02	9.58E-03	9.85E-03	3.60E-02	1.91E-03	3.22E-07	1.21E-02	3.41E-02
A12	0.00E+00	2.25E-04	1.65E-05	5.32E+02	4.01E-04	1.60E+00	2.61E-04	2.14E-01	1.93E-02	4.67E-03	2.60E-02	1.12E-02	1.15E-02	4.27E-02	2.25E-03	3.85E-07	1.45E-02	4.02E-02
A13	0.00E+00	1.97E-04	1.47E-05	4.81E+02	3.84E-04	1.50E+00	2.34E-04	1.83E-01	1.78E-02	4.26E-03	2.33E-02	1.04E-02	1.07E-02	3.63E-02	2.06E-03	3.52E-07	1.26E-02	3.43E-02
A14	0.00E+00	2.23E-04	1.60E-05	5.11E+02	3.61E-04	1.47E+00	2.52E-04	2.17E-01	1.82E-02	4.44E-03	2.52E-02	1.05E-02	1.08E-02	4.34E-02	2.13E-03	3.65E-07	1.44E-02	4.06E-02
A15	0.00E+00	2.08E-04	1.52E-05	4.82E+02	3.47E-04	1.40E+00	2.36E-04	2.04E-01	1.73E-02	4.19E-03	2.35E-02	9.99E-03	1.03E-02	4.03E-02	2.02E-03	3.36E-07	1.32E-02	3.82E-02
A16	0.00E+00	2.32E-04	1.65E-05	5.14E+02	3.34E-04	1.39E+00	2.53E-04	2.33E-01	1.79E-02	4.39E-03	2.54E-02	1.02E-02	1.05E-02	4.66E-02	2.11E-03	3.53E-07	1.49E-02	4.37E-02
A17	0.00E+00	2.01E-04	1.46E-05	4.60E+02	3.24E-04	1.31E+00	2.25E-04	1.99E-01	1.64E-02	3.97E-03	2.24E-02	9.44E-03	9.71E-03	3.92E-02	1.92E-03	3.16E-07	1.27E-02	3.72E-02
A18	0.00E+00	2.28E-04	1.62E-05	5.07E+02	3.34E-04	1.39E+00	2.50E-04	2.28E-01	1.77E-02	4.34E-03	2.51E-02	1.01E-02	1.04E-02	4.56E-02	2.09E-03	3.50E-07	1.46E-02	4.28E-02
A19	0.00E+00	1.89E-04	1.36E-05	4.27E+02	2.90E-04	1.19E+00	2.09E-04	1.90E-01	1.51E-02	3.66E-03	2.08E-02	8.64E-03	8.89E-03	3.75E-02	1.77E-03	2.89E-07	1.20E-02	3.55E-02
A20	0.00E+00	2.16E-04	1.53E-05	4.79E+02	3.12E-04	1.30E+00	2.36E-04	2.17E-01	1.67E-02	4.09E-03	2.37E-02	9.52E-03	9.78E-03	4.34E-02	1.97E-03	3.28E-07	1.39E-02	4.08E-02
B05	0.00E+00	4.60E-05	3.32E-06	1.32E+02	1.28E-04	4.21E-01	6.49E-05	3.17E-02	7.05E-03	1.45E-03	6.79E-03	3.01E-03	3.09E-03	7.28E-03	5.96E-04	1.16E-07	3.70E-03	5.90E-03
B06	0.00E+00	9.62E-05	6.38E-06	2.66E+02	2.60E-04	8.58E-01	1.37E-04	5.25E-02	1.42E-02	2.98E-03	1.49E-02	6.08E-03	6.23E-03	1.41E-02	1.21E-03	2.76E-07	8.64E-03	9.74E-03
B07	0.00E+00	2.48E-05	2.66E-06	1.17E+02	1.69E-04	5.01E-01	5.42E-05	3.26E-03	7.59E-03	1.47E-03	5.24E-03	3.39E-03	3.48E-03	6.36E-04	5.87E-04	1.12E-07	1.77E-03	5.28E-04
B08	0.00E+00	4.43E-05	4.71E-06	2.06E+02	2.96E-04	8.82E-01	9.59E-05	6.49E-03	1.34E-02	2.58E-03	9.30E-03	5.97E-03	6.12E-03	1.31E-03	1.03E-03	1.98E-07	3.18E-03	1.07E-03
B09	0.00E+00	7.44E-05	6.41E-06	2.57E+02	2.92E-04	9.17E-01	1.20E-04	4.83E-02	1.48E-02	2.94E-03	1.19E-02	6.44E-03	6.61E-03	9.80E-03	1.20E-03	2.08E-07	5.27E-03	8.94E-03
B10	0.00E+00	7.52E-05	6.20E-06	2.45E+02	2.61E-04	8.34E-01	1.14E-04	5.41E-02	1.37E-02	2.74E-03	1.14E-02	5.92E-03	6.08E-03	1.11E-02	1.12E-03	1.92E-07	5.37E-03	1.00E-02
B11	0.00E+00	3.32E-05	3.06E-06	1.26E+02	1.57E-04	4.83E-01	5.87E-05	1.67E-02	7.60E-03	1.49E-03	5.78E-03	3.35E-03	3.43E-03	3.38E-03	6.07E-04	1.09E-07	2.35E-03	3.07E-03
B12	0.00E+00	2.31E-05	1.78E-06	6.89E+01	6.69E-05	2.20E-01	3.26E-05	1.81E-02	3.69E-03	7.50E-04	3.33E-03	1.58E-03	1.62E-03	3.81E-03	3.10E-04	5.36E-08	1.70E-03	3.37E-03
B13	0.00E+00	4.01E-05	3.32E-06	1.30E+02	1.39E-04	4.44E-01	6.08E-05	2.92E-02	7.28E-03	1.46E-03	6.07E-03	3.15E-03	3.24E-03	5.95E-03	5.99E-04	1.02E-07	2.84E-03	5.44E-03
B14	0.00E+00	3.91E-05	3.27E-06	1.30E+02	1.43E-04	4.55E-01	6.10E-05	2.64E-02	7.39E-03	1.48E-03	6.11E-03	3.21E-03	3.29E-03	5.45E-03	6.05E-04	1.05E-07	2.81E-03	4.90E-03
C11	0.00E+00	3.60E-05	2.65E-06	7.21E+01	7.21E-05	2.21E-01	4.36E-05	3.04E-02	9.54E-03	1.51E-03	4.41E-03	1.93E-03	1.98E-03	4.43E-03	3.18E-04	4.83E-08	2.43E-03	5.70E-03
C12	0.00E+00	3.25E-05	2.90E-06	9.57E+01	1.41E-04	3.82E-01	5.51E-05	1.42E-02	1.74E-02	2.59E-03	5.43E-03	3.06E-03	3.14E-03	2.09E-03	4.62E-04	8.06E-08	2.30E-03	2.61E-03
C13	0.00E+00	2.59E-05	1.94E-06	4.31E+01	5.78E-05	1.62E-01	3.27E-05	1.92E-02	1.17E-02	1.66E-03	3.28E-03	1.49E-03	1.53E-03	1.99E-03	1.96E-04	2.88E-08	1.76E-03	3.59E-03
C14	0.00E+00	3.90E-05	3.06E-06	9.31E+01	1.10E-04	3.17E-01	5.39E-05	2.69E-02	1.27E-02	2.01E-03	5.41E-03	2.63E-03	2.70E-03	4.05E-03	4.29E-04	7.19E-08	2.71E-03	5.02E-03
C15	0.00E+00	5.32E-05	3.70E-06	6.76E+01	7.20E-05	2.24E-01	5.73E-05	4.87E-02	1.79E-02	2.54E-03	5.82E-03	2.25E-03	2.32E-03	4.77E-03	2.90E-04	3.75E-08	3.50E-03	9.15E-03
C16	0.00E+00	6.04E-06	5.55E-07	1.92E+01	2.96E-05	7.88E-02	1.10E-05	1.79E-03	3.50E-03	5.24E-04	1.08E-03	6.25E-04	6.41E-04	3.02E-04	9.39E-05	1.71E-08	4.43E-04	3.25E-04
C17	0.00E+00	4.90E-05	3.68E-06	1.11E+02	1.31E-04	3.75E-01	6.70E-05	3.16E-02	1.51E-02	2.39E-03	6.85E-03	3.16E-03	3.24E-03	4.95E-03	5.12E-04	9.10E-08	3.61E-03	5.89E-03
C18	0.00E+00	7.51E-06	5.58E-07	1.59E+01	2.08E-05	5.74E-02	1.05E-05	4.45E-03	2.80E-03	4.22E-04	1.08E-03	4.95E-04	5.08E-04	6.32E-04	7.40E-05	1.32E-08	5.73E-04	8.30E-04
C19	0.00E+00	3.09E-07	3.29E-08	1.13E+00	1.97E-06	5.06E-03	6.45E-07	2.98E-05	3.22E-04	4.49E-05	6.16E-05	4.01E-05	4.11E-05	8.83E-06	5.57E-06	8.82E-10	2.06E-05	5.05E-06
C20	0.00E+00	9.09E-06	8.20E-07	2.89E+01	4.03E-05	1.11E-01	1.55E-05	3.96E-03	4.14E-03	6.47E-04	1.53E-03	8.69E-04	8.91E-04	6.40E-04	1.40E-04	2.51E-08	6.39E-04	7.29E-04
C21	0.00E+00	5.79E-05	3.96E-06	8.64E+01	1.21E-04	3.16E-01	7.33E-05	3.42E-02	2.31E-02	3.29E-03	7.68E-03	3.12E-03	3.20E-03	3.89E-03	3.95E-04	6.94E-08	4.48E-03	6.40E-03
C22	0.00E+00	5.37E-06	4.97E-07	1.69E+01	2.55E-05	6.85E-02	9.52E-06	2.03E-03	3.07E-03	4.59E-04	9.34E-04	5.43E-04	5.56E-04	3.10E-04	8.20E-05	1.44E-08	3.77E-04	3.73E-04
C23	0.00E+00	3.09E-05	2.54E-06	8.43E+01	1.10E-04	3.07E-01	4.78E-05	1.62E-02	1.18E-02	1.85E-03	4.80E-03	2.48E-03	2.54E-03	2.60E-03	4.00E-04	7.24E-08	2.26E-03	3.00E-03
C24	0.00E+00	2.92E-06	2.96E-07	1.06E+01	1.68E-05	4.47E-02	5.73E-06	7.60E-04	1.96E-03	2.92E-04	5.53E-04	3.46E-04	3.55E-04	1.27E-04	5.24E-05	9.20E-09	1.97E-04	1.37E-04
C25	0.00E+00	5.80E-05	3.96E-06	7.38E+01	8.31E-05	2.47E-01	6.40E-05	4.92E-02	1.95E-02	2.78E-03	6.58E-03	2.51E-03	2.58E-03	4.93E-03	3.20E-04	4.56E-08	4.00E-03	9.24E-03
C26	0.00E+00	3.78E-05	2.72E-06	7.68E+01	8.18E-05	2.42E-01	4.77E-05	2.80E-02	1.02E-02	1.61E-03	4.90E-03	2.11E-03	2.16E-03	4.26E-03	3.44E-04	5.85E-08	2.74E-03	5.23E-03
C27	0.00E+00	3.08E-05	2.15E-06	4.66E+01	6.37E-05	1.70E-01	3.86E-05	2.00E-02	1.25E-02	1.78E-03	4.00E-03	1.66E-03	1.70E-03	2.19E-03	2.12E-04	3.52E-08	2.30E-03	3.75E-03
C28	0.00E+00	1.47E-05	1.50E-06	5.53E+01	8.87E-05	2.35E-01	2.98E-05	2.61E-03	1.02E-02	1.52E-03	2.88E-03	1.82E-03	1.86E-03	5.14E-04	2.74E-04	4.91E-08	1.02E-03	4.58E-04
C29	0.00E+00	3.59E-06	3.20E-07	1.12E+01	1.54E-05	4.25E-02	6.04E-06	1.65E-03	1.59E-03	2.50E-04	5.95E-04	3.34E-04	3.43E-04	2.64E-04	5.39E-05	9.62E-09	2.52E-04	3.05E-04
C30	0.00E+00	3.31E-05	2.11E-06	3.16E+01	2.44E-05	8.68E-02	3.17E-05	3.25E-02	8.04E-03	1.16E-03	3.30E-03	1.04E-03	1.07E-03	3.14E-03	1.26E-04	1.55E-08	2.24E-03	6.11E-03
C31	0.00E+00	1.63E-05	1.09E-06	2.55E+01	2.49E-05	7.64E-02	1.85E-05	1.38E-02	4.29E-03	6.49E-04	1.94E-03	7.25E-04	7.45E-04	1.81E-03	1.10E-04	1.70E-08	1.19E-03	2.59E-03
C32	0.00E+00	4.85E-05	3.28E-06	8.38E+01	7.47E-05	2.35E-01	5.50E-05	4.09E-02	1.07E-02	1.70E-03	5.72E-03	2.18E-03	2.24E-03	6.12E-03	3.60E-04	5.73E-08	3.48E-03	7.68E-03
C33	0.00E+00	1.69E-06	1.65E-07	6.05E+00	9.74E-06	2.56E-02	3.36E-06	2.46E-04	1.11E-03	1.66E-04	3.29E-04	2.00E-04	2.05E-04	5.65E-05	3.00E-05	5.54E-09	1.24E-04	4.26E-05
C34	0.00E+00	3.77E-06	2.67E-07	6.11E+00	8.81E-06	2.30E-02	4.94E-06	2.17E-03	1.65E-03	2.34E-04	5.12E-04	2.20E-04	2.25E-04	2.48E-04	2.82E-05	4.83E-09	2.87E-04	4.06E-04
C35	0.00E+00	1.04E-05	8.52E-07	2.84E+01	3.75E-05	1.04E-01	1.62E-05	5.21E-03	3.98E-03	6.26E-04	1.63E-03	8.39E-04	8.61E-04	8.54E-04	1.35E-04	2.48E-08	7.71E-04	9.66E-04
C36	0.00E+00	6.37E-05	4.07E-06	6.18E+01	4.97E-05	1.72E-01	6.18E-05	6.14E-02	1.57E-02	2.26E-03	6.45E-03	2.04E-03	2.10E-03	5.96E-03	2.49E-04	3.17E-08	4.35E-03	1.15E-02
C37	0.00E+00	1.52E-05	9.78E-07	2.10E+01	1.72E-05	5.67E-02	1.61E-05	1.41E-02	3.47E-03	5.26E-04	1.70E-03	5.74E-04	5.91E-04	1.82E-03	8.72E-05	1.26E-08	1.11E-03	2.65E-03
C38	0.00E+00	6.08E-05	4.39E-06	1.19E+02	1.19E-04	3.63E-01	7.35E-05	5.00E-02	1.57E-02	2.49E-03	7.49E-03	3.19E-03	3.28E-03	7.38E-03	5.26E-04	8.26E-08	4.21E-03	9.36E-03
C39	0.00E+00	1.23E-05	8.25E-07	2.09E+01	2.37E-05	6.76E-02	1.52E-05	8.60E-03	3.56E-03	5.40E-04	1.60E-03	6.26E-04	6.43E-04	1.19E-03	9.31E-05	1.65E-08	9.58E-04	1.61E-03
C40	0.00E+00	1.84E-05	1.23E-06	2.40E+01	2.98E-05	8.22E-02	2.13E-05	1.34E-02	6.34E-03	9.04E-04	2.23E-03	8.47E-04	8.69E-04	1.41E-03	1.06E-04	1.73E-08	1.36E-03	2.51E-03
C41	0.00E+00	4.00E-06	3.62E-07	1.45E+01	1.82E-05	5.40E-02	6.95E-06	2.07E-03	1.17E-03	2.08E-04	6.87E-04	3.91E-04	4.01E-04	4.11E-04	6.92E-05	1.19E-08	2.86E-04	3.82E-04
C42	0.00E+00	2.02E-05	1.42E-06	5.28E+01	4.74E-05	1.54E-01	2.66E-05	1.65E-02	3.68E-03	6.77E-04	2.79E-03	1.18E-03	1.21E-03	3.44E-03	2.32E-04	3.87E-08	1.58E-03	3.08E-03
C43	0.00E+00	1.08E-05	9.83E-07	4.01E+01	5.22E-05	1.53E-01	1.95E-05	4.48E-03	3.29E-03	5.84E-04	1.94E-03	1.10E-03	1.13E-03	9.47E-04	1.94E-04	3.51E-08	8.07E-04	8.19E-04
C44	0.00E+00	2.23E-05	1.91E-06	7.44E+01	8.68E-05	2.62E-01	3.58E-05	1.43E-02	5.82E-03	1.04E-03	3.57E-03	1.92E-03	1.97E-03	2.82E-03	3.48E-04	5.75E-08	1.60E-03	2.65E-03
C45	0.00E+00	1.77E-05	1.41E-06	4.46E+01	5.53E-05	1.57E-01	2.57E-05	1.09E-02	6.16E-03	9.70E-04	2.59E-03	1.29E-03	1.32E-03	1.68E-03	2.08E-04	3.65E-08	1.27E-03	2.02E-03
C46	0.00E+00	6.32E-05	3.90E-06	5.34E+01	3.34E-05	1.30E-01	5.82E-05	6.30E-02	1.33E-02	1.92E-03	6.14E-03	1.74E-03	1.80E-03	6.08E-03	2.06E-04	2.51E-08	4.34E-03	1.19E-02
C47	0.00E+00	1.50E-06	1.30E-07	4.21E+00	6.15E-06	1.66E-02	2.48E-06	6.65E-04	7.60E-04	1.14E-04	2.47E-04	1.34E-04	1.38E-04	9.89E-05	2.02E-05	3.58E-09	1.09E-04	1.23E-04
C48	0.00E+00	4.21E-05	2.64E-06	5.91E+01	3.78E-05	1.35E-01	4.24E-05	3.94E-02	7.10E-03	1.14E-03	4.50E-03	1.42E-03	1.46E-03	5.84E-03	2.38E-04	3.50E-08	3.04E-03	7.40E-03
C49	0.00E+00	3.11E-05	2.10E-06	5.25E+01	5.83E-05	1.68E-01	3.79E-05	2.27E-02	8.95E-03	1.35E-03	3.99E-03	1.56E-03	1.60E-03	3.10E-03	2.33E-04	4.03E-08	2.38E-03	4.25E-03
C50	0.00E+00	1.96E-06	1.84E-07	5.44E+00	8.75E-06	2.33E-02	3.32E-06	8.85E-04	1.53E-03	2.14E-04	3.20E-04	1.90E-04	1.95E-04	1.07E-04	2.62E-05	3.92E-09	1.25E-04	1.64E-04
C51	0.00E+00	2.50E-05	1.86E-06	5.40E+01	6.02E-05	1.76E-01	3.27E-05	1.79E-02	7.26E-03	1.15E-03	3.33E-03	1.50E-03	1.54E-03	2.73E-03	2.45E-04	4.16E-08	1.79E-03	3.35E-03
C52	0.00E+00	1.15E-05	8.04E-07	1.57E+01	1.86E-05	5.43E-02	1.31E-05	9.49E-03	4.19E-03	5.94E-04	1.34E-03	5.36E-04	5.51E-04	9.58E-04	6.90E-05	9.88E-09	7.88E-04	1.78E-03
C53	0.00E+00	2.30E-06	2.30E-07	8.16E+00	1.27E-05	3.41E-02	4.42E-06	6.93E-04	1.50E-03	2.24E-04	4.27E-04	2.65E-04	2.72E-04	1.10E-04	4.01E-05	6.99E-09	1.55E-04	1.26E-04
C54	0.00E+00	6.72E-06	4.91E-07	1.43E+01	1.61E-05	4.67E-02	8.81E-06	4.63E-03	1.92E-03	3.04E-04	9.05E-04	4.00E-04	4.11E-04	7.18E-04	6.51E-05	1.14E-08	4.94E-04	8.65E-04
C55	0.00E+00	2.98E-06	1.96E-07	4.68E+00	4.81E-06	1.43E-02	3.47E-06	2.33E-03	7.89E-04	1.20E-04	3.68E-04	1.36E-04	1.40E-04	3.14E-04	2.04E-05	3.43E-09	2.28E-04	4.37E-04
C56	0.00E+00	1.11E-05	7.03E-07	1.18E+01	1.21E-05	3.56E-02	1.17E-05	9.17E-03	3.03E-03	4.35E-04	1.23E-03	4.09E-04	4.21E-04	9.34E-04	4.96E-05	7.85E-09	8.14E-04	1.72E-03
C57	0.00E+00	2.01E-05	1.47E-06	4.11E+01	4.28E-05	1.28E-01	2.51E-05	1.58E-02	5.45E-03	8.62E-04	2.56E-03	1.12E-03	1.15E-03	2.36E-03	1.83E-04	2.96E-08	1.41E-03	2.96E-03
C58	0.00E+00	3.84E-06	3.13E-07	7.79E+00	1.13E-05	3.11E-02	5.35E-06	2.56E-03	2.16E-03	3.03E-04	5.27E-04	2.69E-04	2.76E-04	2.72E-04	3.63E-05	5.28E-09	2.51E-04	4.79E-04
C59	0.00E+00	8.39E-06	6.69E-07	2.11E+01	2.61E-05	7.42E-02	1.22E-05	5.16E-03	2.92E-03	4.59E-04	1.22E-03	6.08E-04	6.24E-04	7.99E-04	9.86E-05	1.72E-08	6.00E-04	9.60E-04
C60	0.00E+00	1.96E-05	1.54E-06	4.54E+01	6.08E-05	1.68E-01	2.85E-05	1.15E-02	8.05E-03	1.21E-03	2.88E-03	1.41E-03	1.45E-03	1.61E-03	2.12E-04	3.67E-08	1.43E-03	2.15E-03
D01	0.00E+00	5.60E-05	5.11E-06	1.54E+02	2.40E-04	6.59E-01	9.34E-05	2.91E-02	2.90E-02	4.33E-03	9.09E-03	5.23E-03	5.37E-03	3.95E-03	7.35E-04	1.30E-07	3.72E-03	5.39E-03
D02	0.00E+00	6.61E-05	6.40E-06	2.04E+02	3.39E-04	9.14E-01	1.22E-04	2.36E-02	3.90E-02	5.83E-03	1.18E-02	7.14E-03	7.33E-03	3.51E-03	9.95E-04	1.84E-07	4.47E-03	4.33E-03
D03	0.00E+00	6.23E-05	5.51E-06	1.65E+02	2.59E-04	7.07E-01	1.03E-04	2.98E-02	3.11E-02	4.65E-03	1.02E-02	5.67E-03	5.81E-03	4.21E-03	7.91E-04	1.45E-07	4.35E-03	5.51E-03
D04	0.00E+00	9.23E-05	7.99E-06	2.33E+02	3.53E-04	9.75E-01	1.46E-04	5.13E-02	4.36E-02	6.52E-03	1.44E-02	7.87E-03	8.07E-03	6.98E-03	1.10E-03	1.97E-07	6.32E-03	9.53E-03
D05	0.00E+00	6.71E-05	5.69E-06	1.66E+02	2.53E-04	6.92E-01	1.06E-04	3.50E-02	3.09E-02	4.64E-03	1.05E-02	5.62E-03	5.77E-03	4.91E-03	7.86E-04	1.44E-07	4.77E-03	6.51E-03
D06	0.00E+00	1.07E-04	9.15E-06	2.65E+02	4.00E-04	1.10E+00	1.67E-04	5.97E-02	4.95E-02	7.41E-03	1.66E-02	8.94E-03	9.17E-03	8.16E-03	1.25E-03	2.24E-07	7.39E-03	1.11E-02
D07	0.00E+00	6.44E-05	5.51E-06	1.93E+02	2.47E-04	7.18E-01	1.02E-04	3.56E-02	1.99E-02	3.36E-03	1.02E-02	5.49E-03	5.63E-03	6.25E-03	9.14E-04	1.64E-07	4.54E-03	6.60E-03
D08	0.00E+00	7.11E-05	6.10E-06	2.13E+02	2.72E-04	7.90E-01	1.13E-04	4.00E-02	2.20E-02	3.70E-03	1.12E-02	6.04E-03	6.20E-03	6.97E-03	1.01E-03	1.79E-07	4.99E-03	7.40E-03
D09	0.00E+00	4.08E-05	3.67E-06	1.32E+02	1.77E-04	5.09E-01	6.90E-05	1.98E-02	1.39E-02	2.33E-03	6.79E-03	3.84E-03	3.94E-03	3.48E-03	6.34E-04	1.15E-07	2.85E-03	3.66E-03
D10	0.00E+00	5.71E-05	5.20E-06	1.90E+02	2.58E-04	7.37E-01	9.85E-05	2.62E-02	2.00E-02	3.35E-03	9.69E-03	5.54E-03	5.69E-03	4.63E-03	9.13E-04	1.66E-07	4.00E-03	4.82E-03
D11	0.00E+00	4.06E-05	3.63E-06	1.31E+02	1.74E-04	5.01E-01	6.82E-05	2.01E-02	1.37E-02	2.30E-03	6.72E-03	3.79E-03	3.88E-03	3.53E-03	6.26E-04	1.13E-07	2.83E-03	3.71E-03
D12	0.00E+00	6.83E-05	6.08E-06	2.18E+02	2.90E-04	8.35E-01	1.14E-04	3.41E-02	2.28E-02	3.83E-03	1.13E-02	6.32E-03	6.48E-03	5.99E-03	1.04E-03	1.89E-07	4.77E-03	6.30E-03
D13	0.00E+00	4.94E-05	3.74E-06	9.67E+01	1.26E-04	3.62E-01	6.60E-05	3.56E-02	1.75E-02	2.63E-03	6.69E-03	3.10E-03	3.18E-03	4.72E-03	4.39E-04	7.52E-08	3.51E-03	6.67E-03
D14	0.00E+00	3.23E-05	2.46E-06	6.50E+01	8.83E-05	2.49E-01	4.44E-05	2.14E-02	1.18E-02	1.78E-03	4.52E-03	2.12E-03	2.18E-03

Appendix F.2.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D30	0.00E+00	3.17E-05	2.70E-06	9.39E+01	1.19E-04	3.47E-01	4.99E-05	1.79E-02	9.67E-03	1.63E-03	4.96E-03	2.66E-03	2.73E-03	3.14E-03	4.43E-04	7.92E-08	2.24E-03	3.32E-03
D31	0.00E+00	2.21E-05	1.98E-06	7.18E+01	9.69E-05	2.77E-01	3.76E-05	1.02E-02	7.53E-03	1.27E-03	3.72E-03	2.09E-03	2.15E-03	1.83E-03	3.45E-04	6.36E-08	1.58E-03	1.87E-03
D32	0.00E+00	1.04E-05	9.73E-07	3.56E+01	4.90E-05	1.40E-01	1.83E-05	4.77E-03	3.78E-03	6.32E-04	1.78E-03	1.05E-03	1.07E-03	8.19E-04	1.72E-04	3.09E-08	7.07E-04	8.76E-04
D33	0.00E+00	2.16E-05	1.77E-06	4.96E+01	7.25E-05	2.01E-01	3.23E-05	1.28E-02	9.19E-03	1.38E-03	3.23E-03	1.66E-03	1.70E-03	1.75E-03	2.33E-04	4.17E-08	1.53E-03	2.38E-03
D34	0.00E+00	4.09E-05	3.06E-06	7.75E+01	9.82E-05	2.84E-01	5.33E-05	3.08E-02	1.39E-02	2.09E-03	5.41E-03	2.46E-03	2.52E-03	4.04E-03	3.49E-04	5.86E-08	2.88E-03	5.76E-03
D35	0.00E+00	1.84E-05	1.66E-06	5.13E+01	8.36E-05	2.25E-01	3.19E-05	6.97E-03	9.72E-03	1.46E-03	3.15E-03	1.79E-03	1.84E-03	1.06E-03	2.49E-04	4.72E-08	1.32E-03	1.28E-03
D36	0.00E+00	2.67E-05	2.50E-06	7.88E+01	1.30E-04	3.50E-01	4.80E-05	9.56E-03	1.50E-02	2.24E-03	4.70E-03	2.76E-03	2.83E-03	1.45E-03	3.83E-04	7.21E-08	1.87E-03	1.75E-03
D37	0.00E+00	1.79E-05	1.65E-06	5.05E+01	8.02E-05	2.19E-01	3.05E-05	8.57E-03	9.56E-03	1.43E-03	2.97E-03	1.73E-03	1.78E-03	1.18E-03	2.43E-04	4.35E-08	1.19E-03	1.59E-03
D38	0.00E+00	8.29E-06	7.77E-07	2.46E+01	4.09E-05	1.10E-01	1.50E-05	2.83E-03	4.70E-03	7.02E-04	1.47E-03	8.65E-04	8.87E-04	4.35E-04	1.20E-04	2.27E-08	5.83E-04	5.18E-04
D39	0.00E+00	2.04E-05	1.83E-06	5.39E+01	8.26E-05	2.28E-01	3.30E-05	1.15E-02	1.01E-02	1.52E-03	3.22E-03	1.82E-03	1.87E-03	1.54E-03	2.56E-04	4.48E-08	1.35E-03	2.13E-03
D40	0.00E+00	8.41E-06	8.98E-07	3.10E+01	5.51E-05	1.46E-01	1.79E-05	8.91E-04	6.01E-03	8.96E-04	1.72E-03	1.12E-03	1.15E-03	2.13E-04	1.54E-04	2.98E-08	5.77E-04	1.48E-04
D41	0.00E+00	5.68E-06	5.12E-07	1.54E+01	2.41E-05	6.59E-02	9.43E-06	2.87E-03	2.90E-03	4.33E-04	9.23E-04	5.25E-04	5.39E-04	3.95E-04	7.36E-05	1.32E-08	3.84E-04	5.32E-04
D42	0.00E+00	6.27E-06	6.70E-07	2.31E+01	4.11E-05	1.09E-01	1.34E-05	6.64E-04	4.48E-03	6.69E-04	1.28E-03	8.33E-04	8.54E-04	1.59E-04	1.15E-04	2.22E-08	4.30E-04	1.10E-04
D43	0.00E+00	1.46E-05	1.10E-06	2.93E+01	4.03E-05	1.13E-01	2.03E-05	9.09E-03	5.32E-03	8.01E-04	2.08E-03	9.63E-04	9.88E-04	1.26E-03	1.35E-04	2.48E-08	1.09E-03	1.70E-03
D44	0.00E+00	1.11E-05	1.15E-06	3.89E+01	6.80E-05	1.80E-01	2.27E-05	2.06E-03	7.52E-03	1.12E-03	2.18E-03	1.39E-03	1.43E-03	3.76E-04	1.93E-04	3.67E-08	7.55E-04	3.63E-04
D45	0.00E+00	4.85E-05	3.82E-06	1.04E+02	1.48E-04	4.13E-01	6.98E-05	2.99E-02	1.92E-02	2.88E-03	7.05E-03	3.46E-03	3.55E-03	4.09E-03	4.85E-04	8.74E-08	3.50E-03	5.58E-03
D46	0.00E+00	5.74E-05	4.35E-06	1.10E+02	1.38E-04	4.03E-01	7.43E-05	4.53E-02	1.98E-02	2.97E-03	7.48E-03	3.46E-03	3.55E-03	5.85E-03	4.94E-04	7.98E-08	3.93E-03	8.48E-03
D47	0.00E+00	5.73E-05	4.75E-06	1.37E+02	2.05E-04	5.63E-01	8.85E-05	3.09E-02	2.54E-02	3.81E-03	8.85E-03	4.61E-03	4.73E-03	4.33E-03	6.45E-04	1.18E-07	4.12E-03	5.75E-03
D48	0.00E+00	1.05E-05	1.01E-06	3.28E+01	5.54E-05	1.48E-01	1.97E-05	3.06E-03	6.28E-03	9.38E-04	1.92E-03	1.16E-03	1.19E-03	4.91E-04	1.61E-04	3.05E-08	7.35E-04	5.57E-04
D49	0.00E+00	1.16E-04	8.69E-06	2.29E+02	3.12E-04	8.74E-01	1.59E-04	7.44E-02	4.16E-02	6.26E-03	1.63E-02	7.50E-03	7.70E-03	1.02E-02	1.05E-03	1.91E-07	8.56E-03	1.39E-02
D50	0.00E+00	1.02E-04	7.33E-06	1.83E+02	2.31E-04	6.60E-01	1.32E-04	7.27E-02	3.27E-02	4.93E-03	1.36E-02	5.84E-03	6.00E-03	9.81E-03	8.23E-04	1.46E-07	7.60E-03	1.36E-02
D51	0.00E+00	1.65E-05	1.52E-06	4.83E+01	8.06E-05	2.15E-01	2.98E-05	5.01E-03	9.18E-03	1.37E-03	2.94E-03	1.70E-03	1.75E-03	8.17E-04	2.35E-04	4.56E-08	1.20E-03	9.14E-04
D52	0.00E+00	1.34E-05	1.23E-06	3.91E+01	6.54E-05	1.74E-01	2.42E-05	4.12E-03	7.45E-03	1.11E-03	2.39E-03	1.38E-03	1.42E-03	6.68E-04	1.91E-04	3.69E-08	9.73E-04	7.52E-04
D53	0.00E+00	1.87E-05	1.60E-06	4.76E+01	7.45E-05	2.02E-01	3.04E-05	8.52E-03	8.92E-03	1.34E-03	3.03E-03	1.64E-03	1.68E-03	1.24E-03	2.28E-04	4.29E-08	1.36E-03	1.58E-03
D54	0.00E+00	1.06E-05	9.37E-07	2.84E+01	4.53E-05	1.22E-01	1.79E-05	4.59E-03	5.36E-03	8.02E-04	1.77E-03	9.82E-04	1.01E-03	6.72E-04	1.37E-04	2.57E-08	7.62E-04	8.47E-04
D55	0.00E+00	3.02E-05	2.31E-06	7.46E+01	8.22E-05	2.48E-01	4.14E-05	2.14E-02	7.34E-03	1.24E-03	4.21E-03	1.98E-03	2.03E-03	3.73E-03	3.39E-04	5.87E-08	2.17E-03	3.99E-03
D56	0.00E+00	4.19E-05	3.31E-06	1.11E+02	1.32E-04	3.89E-01	6.13E-05	2.60E-02	1.12E-02	1.89E-03	6.20E-03	3.05E-03	3.13E-03	4.65E-03	5.16E-04	9.33E-08	3.07E-03	4.83E-03
D57	0.00E+00	5.80E-05	5.24E-06	1.92E+02	2.61E-04	7.45E-01	1.00E-04	2.60E-02	2.02E-02	3.39E-03	9.87E-03	5.60E-03	5.75E-03	4.67E-03	9.23E-04	1.70E-07	4.12E-03	4.78E-03
D58	0.00E+00	6.09E-05	5.01E-06	1.74E+02	2.18E-04	6.34E-01	9.42E-05	3.40E-02	1.78E-02	3.00E-03	9.47E-03	4.89E-03	5.02E-03	6.13E-03	8.18E-04	1.50E-07	4.45E-03	6.30E-03
D59	0.00E+00	2.71E-05	2.30E-06	8.12E+01	1.05E-04	3.03E-01	4.34E-05	1.41E-02	8.38E-03	1.41E-03	4.34E-03	2.32E-03	2.38E-03	2.54E-03	3.85E-04	7.09E-08	1.97E-03	2.60E-03
D60	0.00E+00	3.49E-05	2.82E-06	9.79E+01	1.22E-04	3.55E-01	5.36E-05	1.90E-02	9.94E-03	1.68E-03	5.43E-03	2.75E-03	2.82E-03	3.51E-03	4.60E-04	8.60E-08	2.61E-03	3.53E-03
D61	0.00E+00	1.64E-05	1.16E-06	3.81E+01	4.17E-05	1.25E-01	2.24E-05	1.01E-02	3.68E-03	6.32E-04	2.35E-03	1.01E-03	1.04E-03	1.93E-03	1.73E-04	3.39E-08	1.31E-03	1.88E-03
D62	0.00E+00	6.41E-06	5.12E-07	1.73E+01	2.08E-05	6.13E-02	9.49E-06	3.90E-03	1.75E-03	2.96E-04	9.59E-04	4.78E-04	4.91E-04	6.98E-04	8.06E-05	1.46E-08	4.68E-04	7.26E-04
D63	0.00E+00	1.17E-07	1.25E-08	4.77E-01	7.72E-07	2.08E-03	2.50E-07	1.33E-05	7.29E-05	1.13E-05	2.41E-05	1.56E-05	1.60E-05	3.07E-06	2.38E-06	4.48E-10	8.08E-06	2.19E-06
D64	0.00E+00	8.48E-06	5.61E-07	1.33E+01	1.08E-05	3.58E-02	9.15E-06	7.57E-03	1.69E-03	2.70E-04	9.56E-04	3.43E-04	3.53E-04	1.12E-03	5.56E-05	8.48E-09	6.03E-04	1.42E-03
D65	0.00E+00	2.19E-05	1.58E-06	4.82E+01	4.70E-05	1.47E-01	2.75E-05	1.73E-02	4.58E-03	7.81E-04	2.83E-03	1.22E-03	1.25E-03	3.01E-03	2.12E-04	3.56E-08	1.58E-03	3.24E-03
D66	0.00E+00	2.79E-05	2.00E-06	6.05E+01	5.80E-05	1.82E-01	3.47E-05	2.24E-02	5.72E-03	9.77E-04	3.56E-03	1.51E-03	1.56E-03	3.89E-03	2.65E-04	4.40E-08	2.01E-03	4.19E-03
D67	0.00E+00	6.18E-05	3.87E-06	9.98E+01	5.58E-05	2.14E-01	6.24E-05	6.02E-02	8.40E-03	1.46E-03	6.64E-03	2.08E-03	2.15E-03	1.04E-02	3.96E-04	5.72E-08	4.49E-03	1.13E-02
D68	0.00E+00	3.00E-05	2.05E-06	5.75E+01	4.53E-05	1.53E-01	3.37E-05	2.74E-02	5.21E-03	8.93E-04	3.49E-03	1.34E-03	1.38E-03	4.66E-03	2.42E-04	3.64E-08	2.12E-03	5.14E-03
D69	0.00E+00	1.92E-05	1.51E-06	4.93E+01	5.59E-05	1.68E-01	2.70E-05	1.34E-02	4.90E-03	8.29E-04	2.71E-03	1.32E-03	1.36E-03	2.31E-03	2.26E-04	3.87E-08	1.35E-03	2.49E-03
D70	0.00E+00	2.22E-05	1.40E-06	3.81E+01	2.58E-05	9.11E-02	2.37E-05	2.00E-02	3.31E-03	5.75E-04	2.52E-03	8.43E-04	8.68E-04	3.52E-03	1.56E-04	2.51E-08	1.65E-03	3.76E-03
D71	0.00E+00	3.65E-05	2.53E-06	6.21E+01	5.48E-05	1.77E-01	4.06E-05	3.31E-02	8.11E-03	1.28E-03	4.16E-03	1.63E-03	1.68E-03	4.80E-03	2.64E-04	3.83E-08	2.48E-03	6.21E-03
D72	0.00E+00	3.96E-05	2.66E-06	6.53E+01	5.76E-05	1.84E-01	4.42E-05	3.40E-02	8.43E-03	1.34E-03	4.60E-03	1.72E-03	1.77E-03	5.07E-03	2.77E-04	4.38E-08	2.83E-03	6.38E-03
D73	0.00E+00	3.23E-05	2.21E-06	4.97E+01	3.45E-05	1.25E-01	3.27E-05	3.34E-02	6.27E-03	9.91E-04	3.32E-03	1.21E-03	1.25E-03	4.71E-03	2.01E-04	2.35E-08	2.07E-03	6.27E-03
D74	0.00E+00	2.88E-05	1.97E-06	4.78E+01	4.09E-05	1.34E-01	3.16E-05	2.63E-02	6.19E-03	9.80E-04	3.25E-03	1.24E-03	1.28E-03	3.82E-03	2.02E-04	2.93E-08	1.97E-03	4.93E-03
D75	0.00E+00	9.26E-06	7.42E-07	2.62E+01	3.32E-05	9.61E-02	1.45E-05	4.57E-03	2.67E-03	4.53E-04	1.47E-03	7.42E-04	7.61E-04	8.77E-04	1.24E-04	2.40E-08	7.13E-04	8.45E-04
D76	0.00E+00	6.55E-06	5.27E-07	1.80E+01	2.18E-05	6.39E-02	9.80E-06	3.92E-03	1.81E-03	3.07E-04	9.88E-04	4.97E-04	5.10E-04	7.02E-04	8.37E-05	1.52E-08	4.78E-04	7.28E-04
D77	0.00E+00	1.43E-05	1.11E-06	3.73E+01	4.37E-05	1.29E-01	2.07E-05	8.81E-03	3.72E-03	6.31E-04	2.10E-03	1.02E-03	1.04E-03	1.59E-03	1.72E-04	3.15E-08	1.06E-03	1.64E-03
D78	0.00E+00	7.41E-06	5.35E-07	1.65E+01	1.64E-05	5.09E-02	9.43E-06	5.70E-03	1.57E-03	2.68E-04	9.71E-04	4.19E-04	4.31E-04	9.99E-04	7.30E-05	1.24E-08	5.40E-04	1.07E-03
D79	0.00E+00	3.97E-05	2.70E-06	6.59E+01	5.74E-05	1.85E-01	4.40E-05	3.52E-02	8.53E-03	1.35E-03	4.55E-03	1.73E-03	1.78E-03	5.18E-03	2.79E-04	4.22E-08	2.78E-03	6.60E-03
D80	0.00E+00	3.79E-05	3.03E-06	8.99E+01	1.11E-04	3.22E-01	5.32E-05	2.60E-02	1.27E-02	1.99E-03	5.31E-03	2.64E-03	2.71E-03	3.89E-03	4.14E-04	6.94E-08	2.60E-03	4.86E-03
D81	0.00E+00	9.80E-06	9.05E-07	3.08E+01	4.49E-05	1.24E-01	1.70E-05	4.30E-03	4.56E-03	7.09E-04	1.66E-03	9.64E-04	9.89E-04	6.77E-04	1.49E-04	2.66E-08	6.70E-04	7.91E-04
D82	0.00E+00	1.30E-05	1.36E-06	5.13E+01	8.22E-05	2.22E-01	2.72E-05	1.97E-03	7.80E-03	1.21E-03	2.63E-03	1.67E-03	1.71E-03	4.15E-04	2.55E-04	4.81E-08	9.14E-04	3.37E-04
D83	0.00E+00	4.15E-05	3.28E-06	1.06E+02	1.18E-04	3.57E-01	5.76E-05	3.01E-02	1.05E-02	1.78E-03	5.78E-03	2.83E-03	2.90E-03	5.12E-03	4.83E-04	8.06E-08	2.87E-03	5.61E-03
D84	0.00E+00	3.62E-05	2.82E-06	9.00E+01	9.84E-05	2.99E-01	4.93E-05	2.69E-02	8.88E-03	1.50E-03	4.96E-03	2.38E-03	2.45E-03	4.58E-03	4.08E-04	6.78E-08	2.51E-03	5.02E-03
D85	0.00E+00	2.99E-05	2.21E-06	6.68E+01	6.50E-05	2.04E-01	3.75E-05	2.48E-02	6.39E-03	1.08E-03	3.80E-03	1.68E-03	1.73E-03	4.20E-03	2.94E-04	4.66E-08	2.07E-03	4.64E-03
D86	0.00E+00	2.65E-05	2.16E-06	7.09E+01	8.22E-05	2.46E-01	3.80E-05	1.85E-02	7.12E-03	1.20E-03	3.79E-03	1.92E-03	1.98E-03	3.14E-03	3.26E-04	5.46E-08	1.81E-03	3.46E-03
D87	0.00E+00	7.38E-05	5.56E-06	1.74E+02	1.81E-04	5.56E-01	9.68E-05	5.68E-02	1.69E-02	2.86E-03	9.83E-03	4.50E-03	4.62E-03	9.75E-03	7.77E-04	1.29E-07	5.20E-03	1.06E-02
D88	0.00E+00	5.57E-05	3.97E-06	1.18E+02	1.09E-04	3.47E-01	6.75E-05	4.67E-02	1.11E-02	1.89E-03	6.93E-03	2.91E-03	2.99E-03	8.01E-03	5.13E-04	8.21E-08	3.94E-03	8.74E-03
D89	0.00E+00	1.18E-05	8.75E-07	2.26E+01	2.97E-05	8.42E-02	1.58E-05	8.10E-03	4.07E-03	6.13E-04	1.61E-03	7.29E-04	7.48E-04	1.09E-03	1.03E-04	1.82E-08	8.64E-04	1.52E-03
D90	0.00E+00	1.61E-05	9.85E-07	2.02E+01	1.71E-05	5.47E-02	1.70E-05	1.38E-02	3.34E-03	5.09E-04	1.84E-03	5.80E-04	5.96E-04	1.83E-03	8.29E-05	1.40E-08	1.24E-03	2.59E-03
D91	0.00E+00	3.72E-06	3.46E-07	1.18E+01	1.73E-05	4.78E-02	6.49E-06	1.61E-03	1.75E-03	2.72E-04	6.34E-04	3.70E-04	3.80E-04	2.54E-04	5.71E-05	1.02E-08	2.54E-04	2.96E-04
D92	0.00E+00	1.14E-05	1.08E-06	3.93E+01	6.11E-05	1.65E-01	2.18E-05	2.56E-03	5.89E-03	9.18E-04	2.15E-03	1.27E-03	1.30E-03	5.17E-04	1.94E-04	3.74E-08	8.55E-04	4.57E-04
D93	0.00E+00	2.89E-06	2.84E-07	1.03E+01	1.60E-05	4.35E-02	5.58E-06	7.58E-04	1.55E-03	2.41E-04	5.44E-04	3.32E-04	3.40E-04	1.36E-04	5.08E-05	9.47E-09	2.04E-04	1.36E-04
D94	0.00E+00	1.14E-05	1.04E-06	3.60E+01	5.36E-05	1.47E-01	2.02E-05	4.02E-03	5.33E-03	8.31E-04	2.00E-03	1.14E-03	1.17E-03	6.96E-04	1.75E-04	3.29E-08	8.31E-04	7.36E-04
E01	0.00E+00	1.65E-05	1.38E-06	4.00E+01	6.07E-05	1.66E-01	2.58E-05	8.61E-03	7.45E-03	1.12E-03	2.58E-03	1.36E-03	1.39E-03	1.21E-03	1.90E-04	3.50E-08	1.19E-03	1.60E-03
E02	0.00E+00	1.96E-05	1.65E-06	4.75E+01	7.15E-05	1.97E-01	3.05E-05	1.07E-02	8.85E-03	1.33E-03	3.04E-03	1.60E-03	1.65E-03	1.48E-03	2.25E-04	4.08E-08	1.39E-03	1.99E-03
E03	0.00E+00	7.28E-06	5.85E-07	1.99E+01	2.41E-05	7.07E-02	1.09E-05	4.36E-03	2.01E-03	3.40E-04	1.10E-03	5.51E-04	5.65E-04	7.81E-04	9.27E-05	1.68E-08	5.32E-04	8.10E-04
E04	0.00E+00	9.50E-06	8.32E-07	2.99E+01	3.97E-05	1.14E-01	1.58E-05	4.59E-03	3.12E-03	5.25E-04	1.57E-03	8.65E-04	8.88E-04	8.26E-04	1.43E-04	2.64E-08	6.81E-04	8.46E-04
E05	0.00E+00	9.18E-06	8.21E-07	3.01E+01	4.11E-05	1.17E-01	1.58E-05	3.93E-03	3.17E-03	5.32E-04	1.57E-03	8.82E-04	9.05E-04	7.24E-04	1.45E-04	2.72E-08	6.65E-04	7.21E-04
E06	0.00E+00	3.46E-06	2.83E-07	1.04E+01	1.39E-05	3.97E-02	5.75E-06	1.32E-03	1.08E-03	1.83E-04	5.87E-04	3.03E-04	3.10E-04	2.77E-04	5.00E-05	1.01E-08	2.77E-04	2.43E-04
E07	0.00E+00	7.66E-05	6.25E-06	1.75E+02	2.54E-04	7.07E-01	1.14E-04	4.61E-02	3.24E-02	4.85E-03	1.14E-02	5.83E-03	5.98E-03	6.27E-03	8.19E-04	1.46E-07	5.40E-03	8.59E-03
E08	0.00E+00	6.70E-05	6.01E-06	1.83E+02	2.91E-04	7.90E-01	1.13E-04	2.99E-02	3.45E-02	5.16E-03	1.11E-02	6.30E-03	6.47E-03	4.29E-03	8.79E-04	1.62E-07	4.68E-03	5.52E-03
E09	0.00E+00	7.17E-05	5.79E-06	1.61E+02	2.31E-04	6.43E-01	1.05E-04	4.42E-02	2.96E-02	4.44E-03	1.05E-02	5.33E-03	5.47E-03	5.99E-03	7.49E-04	1.33E-07	5.07E-03	8.24E-03
E10	0.00E+00	5.87E-05	5.21E-06	1.58E+02	2.50E-04	6.78E-01	9.83E-05	2.67E-02	2.97E-02	4.45E-03	9.69E-03	5.43E-03	5.57E-03	3.83E-03	7.57E-04	1.40E-07	4.12E-03	4.94E-03
E11	0.00E+00	7.75E-05	6.24E-06	1.72E+02	2.45E-04	6.85E-01	1.13E-04	4.89E-02	3.17E-02	4.75E-03	1.13E-02	5.69E-03	5.84E-03	6.60E-03	8.00E-04	1.41E-07	5.46E-03	9.13E-03
E12	0.00E+00	7.97E-05	7.09E-06	2.14E+02	3.39E-04	9.22E-01	1.33E-04	3.68E-02	4.04E-02	6.05E-03	1.31E-02	7.37E-03	7.57E-03	5.24E-03	1.03E-03	1.89E-07	5.56E-03	6.81E-03
E13	0.00E+00	2.59E-05	2.17E-06	7.54E+01	9.51E-05	2.77E-01	4.05E-05	1.45E-02	7.73E-03	1.30E-03	4.05E-03	2.13E-03	2.18E-03	2.58E-03	3.55E-04	6.45E-08	1.87E-03	2.68E-03
E14	0.00E+00	1.78E-05	1.56E-06	5.57E+01	7.31E-05	2.11E-01	2.93E-05	9.18E-03	5.80E-03	9.74E-04	2.90E-03	1.60E-03	1.64E-03	1.62E-03	2.65E-04	4.80E-08	1.25E-03	1.70E-03
E15	0.00E+00	1.82E-05	1.56E-06	5.34E+01	6.62E-05	1.94E-01	2.81E-05	1.15E-02	5.48E-03	9.21E-04	2.76E-03	1.49E-03	1.53E-03	1.94E-03	2.50E-04	4.26E-08	1.23E-03	2.14E-03
E16	0.00E+00	1.17E-05	1.05E-06	3.78E+01	5.03E-05	1.45E-01	1.97E-05	5.98E-03	3.96E-03	6.64E-04	1.93E-03	1.09E-03	1.12E-03	1.03E-03	1.81E-04	3.23E-08	8.09E-04	1.10E-03
E17	0.00E+00	1.07E-05	9.56E-07	3.49E+01	4.72E-05	1.35E-01	1.83E-05	4.78E-03	3.66E-03	6.15E-04	1.82E-03	1.02E-03	1.04E-03	8.72E-04	1.68E-04	3.12E-08	7.74E-04	8.79E-04
E18	0.00E+00	8.55E-06	6.59E-07	2.18E+01	2.49E-05	7.43E-02	1.21E-05	5.57E-03	2.16E-03	3.66E-04	1.23E-03	5.88E-04	6.03E-04	9.95E-04	9.99E-05	1.80E-08	6.29E-04	1.04E-03
E19	0.00E+00	5.56E-05	4.15E-06	1.08E+02	1.42E-04	4.04E-01	7.47E-05	3.81E-02	1.94E-02	2.93E-03	7.63E-03	3.48E-03	3.57E-03	5.14E-03	4.90E-04	8.68E-08	4.06E-03	7.12E-03
E20	0.00E+00	3.29E-05	2.87E-06	8.69E+01	1.38E-04	3.73E-01	5.50E-05	1.40E-02	1.64E-02	2.45E-03	5.46E-03	3.00E-03	3.08E-03	2.08E-03	4.17E-04	7.89E-08	2.38E-03	2.60E-03
E21	0.00E+00	7.59E-06	6.33E-07	2.14E+01	2.60E-05	7.67E-02	1.14E-05	4.86E-03	2.18E-03	3.67E-04	1.13E-03	5.93E-04	6.09E-04	8.32E-04	9.98E-05	1.72E-08	5.25E-04	9.04E-04
E22	0.00E+00	1.01E-06	8.64E-08	2.84E+00	3.34E-06	9.99E-03	1.48E-06	7.46E-04	2.89E-04	4.84E-05	1.45E-04	7.75E-05	7.97E-05	1.21E-04	1.31E-05	2.08E-09	6.51E-05	1.39E-04
E23	0.00E+00	5.14E-05	3.67E-06	1.11E+02	1.07E-04	3.37E-01	6.41E-05	4.08E-02	1.06E-02	1.80E-03	6.61E-03	2.80E-03	2.87E-03	7.11E-03	4.90E-04	8.23E-08	3.73E-03	7.63E-03
E24	0.00E+00	4.25E-05	2.85E-06	8.11E+01	6.55E-05	2.18E-01	4.84E-05	3.70E-02	7.35E-03	1.26E-03	5.06E-03	1.91E-03	1.96E-03	6.43E-03	3.43E-04	5.53E-08	3.10E-03	6.94E-03
E25	0.00E+00	1.27E-05	1.20E-06	4.12E+01	6.07E-05	1.68E-01	2.25E-05	5.33E-03	6.13E-03	9.52E-04	2.18E-03	1.29E-03	1.33E-03	8.37E-04	2.00E-04	3.56E-08	8.54E-04	9.80E-04
E26	0.00E+00	1.25E-05	1.21E-06	4.25E+01	6.40E-05	1.76E-01	2.30E-05	4.56E-03	6.36E-03	9.88E-04	2.23E-03	1.35E-03	1.38E-03	7.37E-04	2.07E-04	3.75E-08	8.52E-04	8.33E-04
E27	0.00E+00	2.03E-05	1.56E-06	4.31E+01	4.79E-05	1.44E-01	2.60E-05	1.64E-02	5.96E-03	9.33E-04	2.59E-03	1.22E-03	1.25E-03	2.38E-03	1.93E-04	2.98E-08	1.34E-03	3.08E-03
E28	0.00E+00	1.21E-05	1.23E-06	4.53E+01	7.14E-05	1.94E-01	2.42E-05	2.61E-03	6.87E-03	1.07E-03	2.34E-03	1.47E-03	1.50E-03	4.85E-04	2.25E-04	4.18E-08	8.39E-04	4.63E-04
E29	0.00E+00	7.18E-06	6.79E-07	2.39E+01	3.60E-05	9.86E-02	1.31E-05	2.48E-03	3.56E-03	5.54E-04	1.28E-03	7.58E-04	7.78E-04

Appendix F.2.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E45	0.00E+00	2.38E-05	1.87E-06	6.32E+01	7.52E-05	2.22E-01	3.49E-05	1.45E-02	6.34E-03	1.08E-03	3.54E-03	1.74E-03	1.78E-03	2.61E-03	2.93E-04	5.35E-08	1.76E-03	2.70E-03
E46	0.00E+00	1.66E-05	1.25E-06	4.07E+01	4.53E-05	1.36E-01	2.29E-05	1.11E-02	4.00E-03	6.80E-04	2.34E-03	1.09E-03	1.11E-03	1.99E-03	1.85E-04	3.33E-08	1.22E-03	2.07E-03
E47	0.00E+00	2.35E-05	1.98E-06	6.97E+01	8.94E-05	2.59E-01	3.74E-05	1.23E-02	7.17E-03	1.21E-03	3.75E-03	1.98E-03	2.03E-03	2.23E-03	3.30E-04	6.09E-08	1.72E-03	2.28E-03
E48	0.00E+00	6.20E-06	4.57E-07	1.44E+01	1.51E-05	4.61E-02	8.17E-06	4.54E-03	1.39E-03	2.37E-04	8.37E-04	3.74E-04	3.85E-04	8.00E-04	6.47E-05	1.12E-08	4.53E-04	8.48E-04
E49	0.00E+00	2.42E-05	1.88E-06	6.28E+01	7.31E-05	2.17E-01	3.48E-05	1.53E-02	6.25E-03	1.06E-03	3.55E-03	1.71E-03	1.75E-03	2.75E-03	2.89E-04	5.26E-08	1.79E-03	2.84E-03
E50	0.00E+00	4.51E-06	3.77E-07	1.28E+01	1.56E-05	4.60E-02	6.82E-06	2.85E-03	1.31E-03	2.20E-04	6.77E-04	3.56E-04	3.65E-04	4.88E-04	5.98E-05	1.03E-08	3.12E-04	5.29E-04
E51	0.00E+00	2.59E-05	2.08E-06	7.11E+01	8.64E-05	2.53E-01	3.88E-05	1.53E-02	7.19E-03	1.22E-03	3.91E-03	1.97E-03	2.02E-03	2.75E-03	3.31E-04	6.03E-08	1.89E-03	2.85E-03
E52	0.00E+00	8.78E-06	7.31E-07	2.36E+01	2.69E-05	8.12E-02	1.24E-05	6.71E-03	2.38E-03	3.99E-04	1.22E-03	6.36E-04	6.53E-04	1.09E-03	1.08E-04	1.69E-08	5.67E-04	1.25E-03
E53	0.00E+00	2.32E-05	1.94E-06	6.71E+01	8.39E-05	2.45E-01	3.60E-05	1.34E-02	6.87E-03	1.16E-03	3.60E-03	1.89E-03	1.94E-03	2.36E-03	3.15E-04	5.67E-08	1.66E-03	2.48E-03
E54	0.00E+00	3.88E-05	2.71E-06	7.80E+01	6.64E-05	2.18E-01	4.51E-05	3.44E-02	7.20E-03	1.23E-03	4.64E-03	1.87E-03	1.92E-03	5.85E-03	3.33E-04	5.11E-08	2.72E-03	6.44E-03
E55	0.00E+00	1.85E-05	1.68E-06	6.12E+01	8.32E-05	2.38E-01	3.19E-05	8.34E-03	6.44E-03	1.08E-03	3.15E-03	1.79E-03	1.84E-03	1.49E-03	2.95E-04	5.42E-08	1.31E-03	1.53E-03
E56	0.00E+00	1.45E-05	1.20E-06	4.11E+01	5.06E-05	1.48E-01	2.20E-05	8.78E-03	4.19E-03	7.06E-04	2.20E-03	1.15E-03	1.18E-03	1.53E-03	1.92E-04	3.39E-08	1.02E-03	1.63E-03
F31	0.00E+00	6.36E-05	5.49E-06	1.62E+02	2.48E-04	6.81E-01	1.02E-04	3.28E-02	3.03E-02	4.53E-03	1.01E-02	5.50E-03	5.64E-03	4.58E-03	7.69E-04	1.40E-07	4.46E-03	6.09E-03
F32	0.00E+00	6.53E-05	5.52E-06	1.59E+02	2.40E-04	6.61E-01	1.02E-04	3.59E-02	2.97E-02	4.45E-03	1.01E-02	5.38E-03	5.52E-03	4.95E-03	7.54E-04	1.36E-07	4.59E-03	6.67E-03
F33	0.00E+00	2.78E-05	2.62E-06	8.12E+01	1.31E-04	3.57E-01	4.88E-05	1.23E-02	1.54E-02	2.31E-03	4.73E-03	2.81E-03	2.88E-03	1.72E-03	3.92E-04	7.11E-08	1.86E-03	2.26E-03
F34	0.00E+00	1.21E-05	1.30E-06	4.47E+01	7.96E-05	2.10E-01	2.59E-05	1.29E-03	8.68E-03	1.29E-03	2.49E-03	1.61E-03	1.65E-03	3.07E-04	2.23E-04	4.30E-08	8.33E-04	2.14E-04
F35	0.00E+00	9.44E-06	8.39E-07	3.08E+01	4.20E-05	1.20E-01	1.62E-05	4.00E-03	3.23E-03	5.44E-04	1.61E-03	9.02E-04	9.25E-04	7.43E-04	1.49E-04	2.80E-08	6.89E-04	7.34E-04
F36	0.00E+00	2.97E-06	2.38E-07	8.38E+00	1.06E-05	3.06E-02	4.62E-06	1.50E-03	8.52E-04	1.45E-04	4.70E-04	2.37E-04	2.43E-04	2.85E-04	3.95E-05	7.60E-09	2.28E-04	2.77E-04
F37	0.00E+00	6.58E-05	5.19E-06	1.41E+02	1.97E-04	5.52E-01	9.35E-05	4.27E-02	2.58E-02	3.87E-03	9.41E-03	4.62E-03	4.75E-03	5.75E-03	6.51E-04	1.15E-07	4.67E-03	7.97E-03
F38	0.00E+00	5.81E-05	5.20E-06	1.57E+02	2.49E-04	6.78E-01	9.74E-05	2.72E-02	2.97E-02	4.44E-03	9.57E-03	5.41E-03	5.55E-03	3.84E-03	7.56E-04	1.38E-07	4.02E-03	5.03E-03
F39	0.00E+00	1.44E-05	1.31E-06	4.76E+01	6.41E-05	1.84E-01	2.47E-05	6.97E-03	5.00E-03	8.38E-04	2.42E-03	1.38E-03	1.42E-03	1.21E-03	2.28E-04	4.11E-08	9.98E-04	1.29E-03
F40	0.00E+00	5.93E-06	5.05E-07	1.71E+01	2.08E-05	6.14E-02	8.97E-06	3.92E-03	1.74E-03	2.93E-04	8.83E-04	4.73E-04	4.86E-04	6.54E-04	7.95E-05	1.33E-08	3.97E-04	7.28E-04
F41	0.00E+00	8.67E-06	8.77E-07	3.24E+01	5.11E-05	1.39E-01	1.74E-05	1.85E-03	4.91E-03	7.63E-04	1.68E-03	1.05E-03	1.08E-03	3.48E-04	1.61E-04	3.00E-08	6.07E-04	3.27E-04
F42	0.00E+00	1.02E-05	1.08E-06	4.13E+01	6.67E-05	1.80E-01	2.18E-05	1.22E-03	6.30E-03	9.77E-04	2.10E-03	1.35E-03	1.38E-03	2.81E-04	2.06E-04	3.89E-08	7.16E-04	2.02E-04
F83	0.00E+00	8.57E-07	6.64E-08	2.07E+00	2.52E-06	7.16E-03	1.22E-06	5.28E-04	2.84E-04	4.48E-05	1.24E-04	5.94E-05	6.09E-05	8.28E-05	9.61E-06	1.71E-09	6.26E-05	9.83E-05
F84	0.00E+00	2.07E-05	1.75E-06	4.50E+01	6.64E-05	1.82E-01	2.99E-05	1.34E-02	1.25E-02	1.76E-03	2.92E-03	1.55E-03	1.59E-03	1.44E-03	2.11E-04	3.04E-08	1.33E-03	2.51E-03
F85	0.00E+00	1.41E-05	1.20E-06	3.64E+01	4.95E-05	1.38E-01	2.14E-05	8.83E-03	6.52E-03	9.74E-04	2.11E-03	1.12E-03	1.15E-03	1.18E-03	1.71E-04	2.79E-08	9.58E-04	1.65E-03
F86	0.00E+00	1.38E-05	1.08E-06	3.09E+01	3.35E-05	1.00E-01	1.78E-05	1.13E-02	4.18E-03	6.57E-04	1.77E-03	8.45E-04	8.68E-04	1.63E-03	1.39E-04	2.10E-08	8.98E-04	2.12E-03
F87	0.00E+00	2.79E-06	2.21E-07	6.46E+00	8.55E-06	2.38E-02	4.02E-06	1.75E-03	1.15E-03	1.72E-04	4.05E-04	2.00E-04	2.05E-04	2.39E-04	3.02E-05	5.09E-09	2.00E-04	3.26E-04
F88	0.00E+00	3.61E-07	3.83E-08	1.32E+00	2.29E-06	5.90E-03	7.53E-07	3.47E-05	3.75E-04	5.24E-05	7.19E-05	4.67E-05	4.79E-05	1.03E-05	6.50E-06	1.03E-09	2.40E-05	5.90E-06
G01	0.00E+00	3.28E-05	2.40E-06	7.23E+01	6.64E-05	2.11E-01	4.00E-05	2.83E-02	7.07E-03	1.19E-03	4.06E-03	1.76E-03	1.81E-03	4.76E-03	3.16E-04	4.76E-08	2.25E-03	5.30E-03
G02	0.00E+00	2.44E-05	2.00E-06	7.01E+01	8.45E-05	2.46E-01	3.71E-05	1.44E-02	7.40E-03	1.23E-03	3.73E-03	1.91E-03	1.96E-03	2.56E-03	3.29E-04	5.81E-08	1.77E-03	2.67E-03
G03	0.00E+00	4.11E-05	2.20E-06	8.89E+01	5.81E-05	2.21E-01	4.90E-05	2.77E-02	4.04E-03	9.12E-04	5.62E-03	1.65E-03	1.69E-03	7.58E-03	3.73E-04	9.68E-08	3.93E-03	5.18E-03
G04	0.00E+00	3.27E-05	1.97E-06	7.40E+01	4.65E-05	1.78E-01	3.76E-05	2.87E-02	3.34E-03	7.30E-04	4.13E-03	1.36E-03	1.40E-03	6.65E-03	3.06E-04	6.08E-08	2.73E-03	5.38E-03
G05	0.00E+00	2.23E-05	1.63E-06	5.95E+01	4.69E-05	1.64E-01	2.77E-05	2.20E-02	2.93E-03	6.04E-04	2.82E-03	1.23E-03	1.26E-03	4.45E-03	2.55E-04	3.79E-08	1.56E-03	4.11E-03
G06	0.00E+00	2.67E-06	2.64E-07	1.10E+01	1.45E-05	4.40E-02	5.09E-06	1.12E-03	6.83E-04	1.33E-04	4.94E-04	3.03E-04	3.10E-04	2.14E-04	5.38E-05	9.63E-09	1.84E-04	2.03E-04
G07	0.00E+00	4.85E-06	3.87E-07	1.15E+01	1.32E-05	3.87E-02	6.55E-06	3.69E-03	1.57E-03	2.47E-04	6.49E-04	3.21E-04	3.29E-04	5.37E-04	5.26E-05	8.28E-09	3.20E-04	6.90E-04
G08	0.00E+00	5.48E-07	5.88E-08	2.45E+00	3.67E-06	1.01E-02	1.19E-06	6.75E-05	2.81E-04	4.61E-05	1.14E-04	7.41E-05	7.60E-05	1.47E-05	1.23E-05	2.28E-09	3.85E-05	1.10E-05
G09	0.00E+00	1.54E-05	1.04E-06	1.61E+01	1.21E-05	4.64E-02	1.47E-05	1.65E-02	4.16E-03	5.94E-04	1.48E-03	5.07E-04	5.23E-04	1.55E-03	6.45E-05	6.31E-09	9.61E-04	3.11E-03
G10	0.00E+00	3.26E-05	2.59E-06	8.12E+01	9.94E-05	2.83E-01	4.68E-05	2.07E-02	1.12E-02	1.76E-03	4.70E-03	2.33E-03	2.39E-03	3.18E-03	3.78E-04	6.52E-08	2.31E-03	3.87E-03
H01	0.00E+00	3.43E-04	2.43E-05	8.72E+02	6.24E-04	2.25E+00	4.06E-04	3.55E-01	4.14E-02	8.62E-03	4.17E-02	1.71E-02	1.76E-02	7.20E-02	3.66E-03	5.26E-07	2.40E-02	6.65E-02
H02	0.00E+00	2.49E-04	1.80E-05	6.49E+02	4.86E-04	1.72E+00	3.01E-04	2.54E-01	3.13E-02	6.49E-03	3.07E-02	1.30E-02	1.34E-02	5.13E-02	2.75E-03	3.96E-07	1.73E-02	4.76E-02
H03	0.00E+00	2.40E-04	1.78E-05	6.55E+02	5.38E-04	1.85E+00	3.05E-04	2.30E-01	3.27E-02	6.73E-03	3.10E-02	1.38E-02	1.42E-02	4.66E-02	2.83E-03	4.29E-07	1.68E-02	4.30E-02
H04	0.00E+00	2.70E-04	2.00E-05	7.25E+02	5.68E-04	1.98E+00	3.33E-04	2.75E-01	3.56E-02	7.32E-03	3.37E-02	1.49E-02	1.53E-02	5.48E-02	3.09E-03	4.38E-07	1.84E-02	5.15E-02
H05	0.00E+00	1.03E-04	7.52E-06	2.75E+02	2.18E-04	7.59E-01	1.28E-04	1.01E-01	1.35E-02	2.79E-03	1.30E-02	5.68E-03	5.84E-03	2.04E-02	1.18E-03	1.75E-07	7.16E-03	1.89E-02
H06	0.00E+00	1.68E-04	1.25E-05	4.50E+02	3.50E-04	1.22E+00	2.06E-04	1.74E-01	2.20E-02	4.53E-03	2.07E-02	9.22E-03	9.49E-03	3.44E-02	1.92E-03	2.63E-07	1.13E-02	3.26E-02
H07	0.00E+00	3.05E-04	2.26E-05	8.17E+02	6.39E-04	2.24E+00	3.76E-04	3.10E-01	4.01E-02	8.26E-03	3.81E-02	1.68E-02	1.73E-02	6.19E-02	3.49E-03	4.95E-07	2.08E-02	5.81E-02
H08	0.00E+00	2.87E-05	2.18E-06	5.82E+01	6.77E-05	1.99E-01	3.68E-05	2.32E-02	1.02E-02	1.52E-03	3.70E-03	1.71E-03	1.76E-03	2.99E-03	2.62E-04	3.95E-08	1.94E-03	4.35E-03
H09	0.00E+00	2.28E-05	2.16E-06	6.55E+01	1.07E-04	2.83E-01	3.99E-05	8.66E-03	1.85E-02	2.59E-03	3.85E-03	2.30E-03	2.36E-03	1.13E-03	3.17E-04	4.86E-08	1.49E-03	1.60E-03
H10	0.00E+00	2.83E-05	2.16E-06	6.03E+01	6.31E-05	1.91E-01	3.54E-05	2.37E-02	8.09E-03	1.27E-03	3.54E-03	1.63E-03	1.68E-03	3.41E-03	2.69E-04	4.05E-08	1.86E-03	4.43E-03
H11	0.00E+00	1.25E-05	1.32E-06	5.25E+01	8.06E-05	2.17E-01	2.64E-05	1.85E-03	7.73E-03	1.20E-03	2.54E-03	1.64E-03	1.68E-03	3.87E-04	2.62E-04	4.83E-08	8.62E-04	3.14E-04
H12	0.00E+00	9.38E-05	6.33E-06	2.23E+02	1.38E-04	5.26E-01	1.05E-04	1.00E-01	1.01E-02	2.14E-03	1.09E-02	4.11E-03	4.23E-03	2.06E-02	9.13E-04	1.30E-07	6.70E-03	1.88E-02
H13	0.00E+00	1.33E-04	9.26E-06	2.69E+02	2.23E-04	7.30E-01	1.54E-04	1.18E-01	2.55E-02	4.31E-03	1.59E-02	6.31E-03	6.49E-03	2.02E-02	1.15E-03	1.73E-07	9.38E-03	2.22E-02
H14	0.00E+00	7.86E-06	5.10E-07	1.04E+01	4.60E-06	2.07E-02	7.20E-06	8.72E-03	1.23E-03	1.96E-04	7.40E-04	2.29E-04	2.36E-04	1.23E-03	3.98E-05	3.73E-09	5.03E-04	1.64E-03
H15	0.00E+00	1.26E-04	8.83E-06	2.44E+02	1.79E-04	6.20E-01	1.37E-04	1.25E-01	2.27E-02	3.82E-03	1.39E-02	5.48E-03	5.65E-03	2.06E-02	1.02E-03	1.29E-07	8.28E-03	2.35E-02
H16	0.00E+00	5.14E-05	4.18E-06	1.29E+02	1.54E-04	4.44E-01	7.24E-05	3.63E-02	1.77E-02	2.78E-03	7.17E-03	3.64E-03	3.74E-03	5.34E-03	5.94E-04	9.66E-08	3.43E-03	6.76E-03

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B05	100	Passenger Car	1580	0.00E+00	1.48E-05	1.60E-06	6.45E+01	1.05E-04	3.13E-01	3.33E-05	1.70E-03	5.05E-03	9.68E-04	3.24E-03	2.09E-03	2.15E-03	1.88E-04	3.26E-04	6.86E-08	1.10E-03	2.66E-04
16	B05	100	Passenger Truck	2645	0.00E+00	3.05E-05	3.27E-06	1.49E+02	2.03E-04	6.04E-01	6.57E-05	4.25E-03	8.81E-03	1.71E-03	6.34E-03	4.11E-03	4.21E-03	9.75E-04	7.46E-04	1.36E-07	2.13E-03	6.99E-04
16	B05	100	Single Unit Short Haul Truck	173	0.00E+00	1.65E-05	6.09E-07	2.83E+01	1.26E-05	5.84E-02	1.87E-05	7.27E-03	1.12E-03	2.90E-04	2.36E-03	4.36E-04	4.44E-04	2.90E-03	1.15E-04	4.68E-08	1.92E-03	1.36E-03
16	B05	100	Single Unit Long Haul Truck	8	0.00E+00	7.16E-07	2.57E-08	1.19E+00	5.22E-07	2.39E-03	8.09E-07	3.05E-04	5.09E-05	1.26E-05	1.03E-04	1.84E-05	1.87E-05	1.21E-04	4.83E-06	1.91E-09	8.45E-05	5.69E-05
16	B05	100	Combination Short Haul Truck	178	0.00E+00	2.54E-05	1.88E-06	5.93E+01	6.75E-08	4.58E-02	1.82E-05	4.58E-02	1.72E-03	4.37E-04	1.55E-03	5.49E-04	5.70E-04	9.42E-03	1.98E-04	0.00E+00	9.80E-04	8.63E-03
16	B05	100	Combination Long Haul Truck	162	0.00E+00	3.59E-05	2.03E-06	5.37E+01	2.29E-07	5.33E-02	2.97E-05	4.90E-02	1.73E-03	3.52E-04	3.30E-03	6.54E-04	6.81E-04	8.61E-03	1.80E-04	0.00E+00	2.62E-03	9.24E-03
16	B06	100	Passenger Car	829	0.00E+00	7.74E-06	8.41E-07	3.38E+01	5.49E-05	1.64E-01	1.74E-05	8.94E-04	2.65E-03	5.08E-04	1.70E-03	1.10E-03	1.13E-03	9.85E-05	1.71E-04	3.60E-08	5.76E-04	1.39E-04
16	B06	100	Passenger Truck	1387	0.00E+00	1.60E-05	1.71E-06	7.80E+01	1.07E-04	3.17E-01	3.45E-05	2.23E-03	4.62E-03	8.97E-04	3.33E-03	2.15E-03	2.21E-03	5.11E-04	3.91E-04	7.12E-08	1.12E-03	3.67E-04
16	B06	100	Single Unit Short Haul Truck	100	0.00E+00	9.47E-06	3.50E-07	1.63E+01	7.24E-06	3.36E-02	1.07E-05	4.18E-03	6.44E-04	1.67E-04	1.36E-03	2.51E-04	2.55E-04	1.67E-03	6.58E-05	2.69E-08	1.10E-03	7.79E-04
16	B06	100	Single Unit Long Haul Truck	4	0.00E+00	4.11E-07	1.48E-08	6.84E-01	3.00E-07	1.37E-03	4.65E-07	1.75E-04	2.93E-05	7.23E-06	5.93E-05	1.06E-05	1.08E-05	6.96E-05	2.78E-06	1.10E-09	4.86E-05	3.27E-05
16	B06	100	Combination Short Haul Truck	75	0.00E+00	1.08E-05	7.96E-07	2.51E+01	2.86E-08	1.94E-02	7.71E-06	1.94E-02	7.30E-04	1.85E-04	6.56E-04	2.32E-04	2.41E-04	3.99E-03	8.39E-05	0.00E+00	4.15E-04	3.66E-03
16	B06	100	Combination Long Haul Truck	69	0.00E+00	1.52E-05	8.58E-07	2.27E+01	9.71E-08	2.26E-02	1.26E-05	2.08E-02	7.31E-04	1.49E-04	1.40E-03	2.77E-04	2.88E-04	3.65E-03	7.62E-05	0.00E+00	1.11E-03	3.91E-03
16	B07	100	Passenger Car	1661	0.00E+00	1.55E-05	1.69E-06	6.78E+01	1.10E-04	3.29E-01	3.50E-05	1.79E-03	5.31E-03	1.02E-03	3.41E-03	2.20E-03	2.26E-03	1.98E-04	3.43E-04	7.21E-08	1.15E-03	2.79E-04
16	B07	100	Passenger Truck	2782	0.00E+00	3.21E-05	3.43E-06	1.56E+02	2.14E-04	6.35E-01	6.91E-05	4.47E-03	9.27E-03	1.80E-03	6.67E-03	4.32E-03	4.43E-03	1.02E-03	7.84E-04	1.43E-07	2.24E-03	7.35E-04
16	B07	100	Single Unit Short Haul Truck	605	0.00E+00	5.75E-05	2.13E-06	9.88E+01	4.40E-05	2.04E-01	6.52E-05	2.54E-02	3.91E-03	1.01E-03	8.25E-03	1.52E-03	1.55E-03	1.01E-02	4.00E-04	1.63E-07	6.70E-03	4.74E-03
16	B07	100	Single Unit Long Haul Truck	27	0.00E+00	2.50E-06	8.98E-08	4.16E+00	1.82E-06	8.35E-03	2.83E-06	1.06E-03	1.78E-04	4.40E-05	3.61E-04	6.42E-05	6.54E-05	4.23E-04	1.69E-05	6.68E-09	2.95E-04	1.99E-04
16	B07	100	Combination Short Haul Truck	444	0.00E+00	6.35E-05	4.69E-06	1.48E+02	1.69E-07	1.14E-01	4.55E-05	1.14E-01	4.30E-03	1.09E-03	3.87E-03	1.37E-03	1.42E-03	2.35E-02	4.95E-04	0.00E+00	2.45E-03	2.16E-02
16	B07	100	Combination Long Haul Truck	405	0.00E+00	8.98E-05	5.06E-06	1.34E+02	5.72E-07	1.33E-01	7.41E-05	1.22E-01	4.31E-03	8.78E-04	8.24E-03	1.63E-03	1.70E-03	2.15E-02	4.49E-04	0.00E+00	6.54E-03	2.31E-02
16	B08	100	Passenger Car	821	0.00E+00	7.67E-06	8.33E-07	3.35E+01	5.44E-05	1.62E-01	1.73E-05	8.85E-04	2.62E-03	5.03E-04	1.69E-03	1.09E-03	1.12E-03	9.76E-05	1.70E-04	3.56E-08	5.70E-04	1.38E-04
16	B08	100	Passenger Truck	1374	0.00E+00	1.58E-05	1.70E-06	7.72E+01	1.06E-04	3.14E-01	3.42E-05	2.21E-03	4.58E-03	8.89E-04	3.29E-03	2.13E-03	2.19E-03	5.06E-04	3.87E-04	7.06E-08	1.11E-03	3.63E-04
16	B08	100	Single Unit Short Haul Truck	582	0.00E+00	5.53E-05	2.04E-06	9.51E+01	4.23E-05	1.96E-01	6.27E-05	2.44E-02	3.76E-03	9.74E-04	7.94E-03	1.47E-03	1.49E-03	9.74E-03	3.85E-04	1.57E-07	6.44E-03	4.56E-03
16	B08	100	Single Unit Long Haul Truck	26	0.00E+00	2.40E-06	8.64E-08	4.00E+00	1.75E-06	8.03E-03	2.72E-06	1.02E-03	1.71E-04	4.23E-05	3.47E-04	6.18E-05	6.29E-05	4.07E-04	1.62E-05	6.43E-09	2.84E-04	1.91E-04
16	B08	100	Combination Short Haul Truck	443	0.00E+00	6.34E-05	4.68E-06	1.48E+02	1.68E-07	1.14E-01	4.54E-05	1.14E-01	4.29E-03	1.09E-03	3.86E-03	1.37E-03	1.42E-03	2.35E-02	4.94E-04	0.00E+00	2.44E-03	2.15E-02
16	B08	100	Combination Long Haul Truck	404	0.00E+00	8.96E-05	5.05E-06	1.34E+02	5.71E-07	1.33E-01	7.39E-05	1.22E-01	4.30E-03	8.76E-04	8.22E-03	1.63E-03	1.70E-03	2.15E-02	4.48E-04	0.00E+00	6.52E-03	2.30E-02
16	B09	100	Passenger Car	736	0.00E+00	6.88E-06	7.47E-07	3.00E+01	4.88E-05	1.46E-01	1.55E-05	7.94E-04	2.35E-03	4.51E-04	1.51E-03	9.75E-04	1.00E-03	8.76E-05	1.52E-04	3.20E-08	5.12E-04	1.24E-04
16	B09	100	Passenger Truck	1233	0.00E+00	1.42E-05	1.52E-06	6.93E+01	9.48E-05	2.81E-01	3.06E-05	1.98E-03	4.11E-03	7.97E-04	2.95E-03	1.91E-03	1.96E-03	4.54E-04	3.47E-04	6.33E-08	9.93E-04	3.26E-04
16	B09	100	Single Unit Short Haul Truck	166	0.00E+00	1.57E-05	5.82E-07	2.71E+01	1.20E-05	5.58E-02	1.79E-05	6.95E-03	1.07E-03	2.77E-04	2.26E-03	4.17E-04	4.24E-04	2.77E-03	1.10E-04	4.47E-08	1.83E-03	1.30E-03
16	B09	100	Single Unit Long Haul Truck	7	0.00E+00	6.84E-07	2.46E-08	1.14E+00	4.98E-07	2.29E-03	7.74E-07	2.92E-04	4.87E-05	1.20E-05	9.87E-05	1.76E-05	1.79E-05	1.16E-04	4.62E-06	1.83E-09	8.08E-05	5.44E-05
16	B09	100	Combination Short Haul Truck	95	0.00E+00	1.35E-05	1.00E-06	3.15E+01	3.59E-08	2.44E-02	9.70E-06	2.44E-02	9.17E-04	2.33E-04	8.25E-04	2.92E-04	3.03E-04	5.01E-03	1.05E-04	0.00E+00	5.22E-04	4.59E-03
16	B09	100	Combination Long Haul Truck	86	0.00E+00	1.91E-05	1.08E-06	2.86E+01	1.22E-07	2.84E-02	1.58E-05	2.61E-02	9.18E-04	1.87E-04	1.76E-03	3.48E-04	3.62E-04	4.59E-03	9.57E-05	0.00E+00	1.39E-03	4.92E-03
16	B10	100	Passenger Car	1584	0.00E+00	1.48E-05	1.61E-06	6.47E+01	1.05E-04	3.13E-01	3.34E-05	1.71E-03	5.06E-03	9.71E-04	3.25E-03	2.10E-03	2.15E-03	1.88E-04	3.27E-04	6.88E-08	1.10E-03	2.67E-04
16	B10	100	Passenger Truck	2653	0.00E+00	3.06E-05	3.27E-06	1.49E+02	2.04E-04	6.05E-01	6.59E-05	4.27E-03	8.84E-03	1.72E-03	6.36E-03	4.12E-03	4.22E-03	9.77E-04	7.48E-04	1.36E-07	2.14E-03	7.01E-04
16	B10	100	Single Unit Short Haul Truck	97	0.00E+00	9.19E-06	3.40E-07	1.58E+01	7.03E-06	3.26E-02	1.04E-05	4.06E-03	6.25E-04	1.62E-04	1.32E-03	2.43E-04	2.48E-04	1.62E-03	6.39E-05	2.61E-08	1.07E-03	7.57E-04
16	B10	100	Single Unit Long Haul Truck	4	0.00E+00	3.99E-07	1.44E-08	6.64E-01	2.91E-07	1.33E-03	4.52E-07	1.70E-04	2.84E-05	7.02E-06	5.76E-05	1.03E-05	1.05E-05	6.76E-05	2.70E-06	1.07E-09	4.72E-05	3.17E-05
16	B10	100	Combination Short Haul Truck	200	0.00E+00	2.87E-05	2.12E-06	6.68E+01	7.60E-08	5.16E-02	2.05E-05	5.16E-02	1.94E-03	4.92E-04	1.75E-03	6.18E-04	6.42E-04	1.06E-02	2.23E-04	0.00E+00	1.10E-03	9.72E-03
16	B10	100	Combination Long Haul Truck	183	0.00E+00	4.05E-05	2.28E-06	6.05E+01	2.58E-07	6.01E-02	3.34E-05	5.52E-02	1.94E-03	3.96E-04	3.72E-03	7.36E-04	7.67E-04	9.70E-03	2.03E-04	0.00E+00	2.95E-03	1.04E-02
16	B13	100	Passenger Car	985	0.00E+00	9.20E-06	1.00E-06	4.02E+01	6.53E-05	1.95E-01	2.07E-05	1.06E-03	3.15E-03	6.03E-04	2.02E-03	1.30E-03	1.34E-03	1.17E-04	2.04E-04	4.27E-08	6.84E-04	1.66E-04
16	B13	100	Passenger Truck	1649	0.00E+00	1.90E-05	2.04E-06	9.27E+01	1.27E-04	3.76E-01	4.10E-05	2.65E-03	5.50E-03	1.07E-03	3.95E-03	2.56E-03	2.62E-03	6.08E-04	4.65E-04	8.47E-08	1.33E-03	4.36E-04
16	B13	100	Single Unit Short Haul Truck	85	0.00E+00	8.10E-06	2.99E-07	1.39E+01	6.20E-06	2.87E-02	9.18E-06	3.58E-03	5.51E-04	1.43E-04	1.16E-03	2.14E-04	2.18E-04	1.43E-03	5.63E-05	2.30E-08	9.43E-04	6.67E-04
16	B13	100	Single Unit Long Haul Truck	4	0.00E+00	3.52E-07	1.27E-08	5.85E-01	2.56E-07	1.18E-03	3.98E-07	1.50E-04	2.50E-05	6.19E-06	5.08E-05	9.04E-06	9.21E-06	5.95E-05	2.38E-06	9.41E-10	4.16E-05	2.80E-05
16	B13	100	Combination Short Haul Truck	145	0.00E+00	2.08E-05	1.54E-06	4.85E+01	5.52E-08	3.74E-02	1.49E-05	3.74E-02	1.41E-03	3.57E-04	1.27E-03	4.49E-04	4.66E-04	7.70E-03	1.62E-04	0.00E+00	8.01E-04	7.06E-03
16	B13	100	Combination Long Haul Truck	133	0.00E+00	2.94E-05	1.66E-06	4.39E+01	1.87E-07	4.36E-02	2.43E-05	4.01E-02	1.41E-03	2.87E-04	2.70E-03	5.34E-04	5.57E-04	7.04E-03	1.47E-04	0.00E+00	2.14E-03	7.55E-03
16	B14	100	Passenger Car	495	0.00E+00	4.63E-06	5.03E-07	2.02E+01	3.28E-05	9.80E-02	1.04E-05	5.34E-04	1.58E-03	3.04E-04	1.02E-03	6.56E-04	6.73E-04	5.89E-05	1.02E-04	2.15E-08	3.44E-04	8.34E-05
16	B14	100	Passenger Truck	830	0.00E+00	9.56E-06	1.02E-06	4.66E+01	6.38E-05	1.89E-01	2.06E-05	1.33E-03	2.76E-03	5.37E-04	1.99E-03	1.29E-03	1.32E-03	3.06E-04	2.34E-04	4.26E-08	6.68E-04	2.19E-04
16	B14	100	Single Unit Short Haul Truck	130	0.00E+00	1.24E-05	4.57E-07	2.13E+01	9.47E-06	4.39E-02	1.40E-05	5.46E-03	8.42E-04	2.18E-04	1.77E-03	3.28E-04	3.33E-04	2.18E-03	8.61E-05	3.51E-08	1.44E-03	1.02E-03
16	B14	100	Single Unit Long Haul Truck	6	0.00E+00	5.38E-07	1.93E-08	8.95E-01	3.92E-07	1.80E-03	6.08E-07	2.29E-04	3.83E-05	9.46E-06	7.76E-05	1.38E-05	1.41E-05	9.10E-05	3.63E-06	1.44E-09	6.35E-05	4.27E-05
16	B14	100	Combination Short Haul Truck	70	0.00E+00	1.00E-05	7.41E-07	2.34E+01	2.66E-08	1.80E-02	7.18E-06	1.81E-02	6.79E-04	1.72E-04	6.11E-04	2.16E-04	2.25E-04	3.71E-03	7.81E-05	0.00E+00	3.86E-04	3.40E-03
16	B14	100	Combination Long Haul Truck	64	0.00E+00	1.42E-05	7.99E-07	2.12E+01	9.03E-08	2.10E-02	1.17E-05	1.93E-02	6.80E-04	1.39E-04	1.30E-03	2.58E-04	2.68E-04	3.39E-03	7.09E-05	0.00E+00	1.03E-03	3.64E-03
9	D01	60	Passenger Car	1201	0.00E+00	1.54E-05	1.67E-06	5.47E+01	1.09E-04	3.06E-01	3.46E-05	1.24E-03	1.21E-02	1.82E-03	3.38E-03	2.18E-03	2.23E-03	2.38E-04	2.74E-04	5.76E-08	1.14E-03	1.93E-04
9	D01	60	Passenger Truck	2010	0.00E+00	3.26E-05	3.45E-06	1.22E+02	2.06E-04	5.24E-01	6.76E-05	3.84E-03	2.22E-02	3.30E-03	6.45E-03	4.19E-03	4.30E-03	9.74E-04	6.06E-04	1.12E-07	2.15E-03	6.51E-04
9	D01	60	Single Unit Short Haul Truck	21	0.00E+00	4.71E-06	1.94E-07	3.51E+00	3.12E-06	6.17E-03	5.09E-06	1.80E-03	4.85E-04	8.15E-05	6.28E-04	1.21E-04	1.23E-04	3.55E-04	1.43E-05	5.89E-09	5.04E-04	3.37E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.44E-09	1.49E-01	1.35E-07	2.62E-04	2.22E-07	7.80E-05	2.18E-05	3.61E-06	2.74E-05	5.25E-06	5.36E-06	1.51E-05	6.10E-07	2.50E-10	2.21E-05	1.46E-05
9	D01	60	Combination Short Haul Truck	71	0.00E+00	2.08E-05	1.52E-06	2.51E+01	5.69E-08	3.10E-02	1.49E-05	3.16E-02	3.62E-03	5.67E-04	1.28E-03	4.46E-04	4.63E-04	3.98E-03	8.38E-05	0.00E+00	8.16E-04	5.95E-03
9	D01	60	Combination Long Haul Truck	65	0.00E+00	2.85E-05	1.56E-06	2.37E+01	1.93E-07	3.73E-02	2.39E-05	3.36E-02	3.80E-03	5.49E-04	2.71E-03	5.09E-04	5.30E-04	3.80E-03	7.93E-05	0.00E+00	2.18E-03	6.33E-03
9	D02	60	Passenger Car	844	0.00E+00	1.08E-05	1.17E-06	3.85E+01	7.66E-05	2.15E-01	2.43E-05	8.69E-04	8.53E-03	1.28E-03	2.37E-03	1.53E-03	1.57E-03	1.67E-04	1.93E-04	4.05E-08	8.03E-04	1.36E-04
9	D02	60	Passenger Truck	1414	0.00E+00	2.29E-05	2.43E-06	8.57E+01	1.45E-04	3.69E-01	4.75E-05	2.70E-03	1.56E-02	2.32E-03	4.53E-03	2.95E-03	3.02E-03	6.85E-04	4.26E-04	7.90E-08	1.51E-03	4.58E-04
9	D02	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E-06	3.80E-07	6.85E+00	6.09E-06	1.21E-02	9.94E-06	3.52E-03	9.47E-04	1.59E-04	1.23E-03	2.36E-04	2.41E-04	6.94E-04	2.79E-05	1.15E-08	9.86E-04	6.59E-04
9	D02	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.52E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.85E-05
9	D02	60	Combination Short Haul Truck	38	0.00E+00	1.11E-05	8.19E-07	1.34E+01	3.05E-08	1.66E-02	8.00E-06	1.69E-02	1.94E-03	3.04E-04	6.87E-04	2.39E-04	2.49E-04	2.14E-03	4.50E-05	0.00E+00	4.38E-04	3.19E-03
9	D02	60	Combination Long Haul Truck	35	0.00E+00	1.53E-05	8.36E-07	1.27E+01	1.03E-07	2.00E-02	1.28E-05	1.81E-02	2.04E-03	2.95E-04	1.45E-03	2.73E-04	2.85E-04	2.04E-03	4.26E-05	0.00E+00	1.17E-03	3.40E-03
9	D03	60	Passenger Car	1486	0.00E+00	1.90E-05	2.07E-06	6.77E+01	1.35E-04	3.79E-01	4.29E-05	1.53E-03	1.50E-02	2.25E-03	4.18E-03	2.69E-03	2.77E-03	2.95E-04	3.40E-04	7.14E-08	1.41E-03	2.39E-04
9	D03	60	Passenger Truck	2489	0.00E+00	4.03E-05	4.28E-06	1.51E+02	2.54E-04	6.49E-01	8.37E-05	4.76E-03	2.74E-02	4.08E-03	7.98E-03	5.19E-03	5.32E-03	1.21E-03	7.50E-04	1.39E-07	2.66E-03	8.06E-04
9	D03	60	Single Unit Short Haul Truck	60	0.00E+00	1.35E-05	5.57E-07	1.00E+01	8.93E-06	1.77E-02	1.46E-05	5.16E-03	1.39E-03	2.33E-04	1.80E-03	3.46E-04	3.53E-04	1.02E-03	4.09E-05	1.69E-08	1.44E-03	9.65E-04
9	D03	60	Single Unit Long Haul Truck	3	0.00E+00	5.88E-07	2.42E-08	4.28E-01	3.87E-07	7.49E-04	6.36E-07	2.23E-04	6.24E-05	1.03E-05	7.86E-05	1.50E-05	1.53E-05	4.33E-05	1.75E-06	7.17E-10	6.32E-05	4.18E-05
9	D03	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.97E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.72E-03
9	D03	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.10E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.96E-03
9	D04	60	Passenger Car	1023	0.00E+00	1.31E-05	1.42E-06	4.66E+01	9.28E-05	2.61E-01	2.95E-05	1.05E-03	1.03E-02	1.55E-03	2.88E-03	1.85E-03	1.90E-03	2.03E-04	2.34E-04	4.91E-08	9.73E-04	1.64E-04
9	D04	60	Passenger Truck	1713	0.00E+00	2.78E-05	2.94E-06	1.04E+02	1.75E-04	4.47E-01	5.76E-05	3.27E-03	1.89E-02	2.81E-03	5.49E-03	3.57E-03	3.66E-03	8.30E-04	5.16E-04	9.57E-08	1.83E-03	5.55E-04
9	D04	60	Single Unit Short Haul Truck	57	0.00E+00	1.26E-05	5.21E-07	9.40E+00	8.36E-06	1.65E-02	1.36E-05	4.83E-03	1.30E-03	2.18E-04	1.68E-03	3.24E-04	3.31E-04	9.53E-04	3.83E-05	1.58E-08	1.35E-03	9.04E-04
9	D04	60	Single Unit Long Haul Truck	2	0.00E+00	5.51E-07	2.26E-08	4.01E-01	3.63E-07	7.02E-04	5.96E-07	2.09E-04	5.84E-05	9.69E-06	7.36E-05	1.41E-05	1.44E-05	4.05E-05	1.64E-06	6.72E-10	5.92E-05	3.91E-05
9	D04	60	Combination Short Haul Truck	59	0.00E+00	1.72E-05	1.27E-06	2.08E+01	4.72E-08	2.58E-02	1.24E-05	2.62E-02	3.01E-03	4.71E-04	1.06E-03	3.71E-04	3.85E-04	3.31E-03	6.96E-05	0.00E+00	6.78E-04	4.94E-03
9	D04	60	Combination Long Haul Truck	54	0.00E+00	2.37E-05	1.29E-06	1.97E+01	1.60E-07	3.10E-02	1.98E-05	2.79E-02	3.16E-03	4.56E-04	2.25E-03	4.23E-04	4.41E-04	3.16E-03	6.59E-05	0.00E+00	1.81E-03	5.26E-03
9	D05	60	Passenger Car	1296	0.00E+00	1.66E-05	1.80E-06	5.91E+01	1.18E-04	3.31E-01	3.74E-05	1.33E-03	1.31E-02	1.96E-03	3.65E-03	2.35E-03	2.41E-03	2.57E-04	2.96E-04	6.22E-08	1.23E-03	2.08E-04
9	D05	60	Passenger Truck	2171	0.00E+00	3.52E-05	3.73E-06	1.32E+02	2.22E-04	5.66E-01	7.30E-05	4.15E-03	2.39E-02	3.56E-03	6.96E-03	4.53E-03	4.64E-03	1.05E-03	6.54E-04	1.21E-07	2.32E-03	7.03E-04
9	D05	60	Single Unit Short Haul Truck	56	0.00E+00	1.24E-05	5.12E-07	9.24E+00	8.22E-06	1.63E-02	1.34E-05	4.75E-03	1.28E-03	2.15E-04	1.65E-03	3.19E-04	3.25E-04	9.36E-04	3.77E-05	1.55E-08	1.33E-03	8.89E-04
9	D05	60	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.23E-08	3.94E-01	3.56E-07	6.90E-04	5.85E-07	2.06E-04	5.74E-05	9.53E-06	7.23E-05	1.39E-05	1.41E-05	3.98E-05	1.61E-06	6.60E-10	5.82E-05	3.85E-05
9	D05	60	Combination Short Haul Truck	58	0.00E+00	1.68E-05	1.23E-06	2.03E+01	4.60E-08	2.51E-02	1.21E-05	2.55E-02	2.93E-03	4.58E-04	1.03E-03	3.61E-04	3.75E-04	3.22E-03	6.78E-05	0.00E+00	6.60E-04	4.81E-03
9	D05	60	Combination Long Haul Truck	52	0.00E+00	2.31E-05	1.26E-06	1.91E+01	1.56E-07	3.01E-02	1.93E-05	2.72E-02	3.07E-03	4.44E-04	2.19E-03	4.12E-04	4.29E-04	3.07E-03	6.41E-05	0.00E+00	1.76E-03	5.12E-03
9	D06	60	Passenger Car	1110	0.00E+00	1.42E-05	1.54E-06	5.06E+01	1.01E-04	2.83E-01	3.20E-05	1.14E-03	1.12E-02	1.68E-03	3.12E-03	2.01E-03	2.06E-03	2.20E-04	2.54E-04	5.33E-08	1.06E-03	1.78E-04
9	D06	60	Passenger Truck	1858	0.00E+00	3.01E-05	3.19E-06	1.13E+02	1.90E-04	4.84E-01	6.25E-05	3.55E-03	2.05E-02	3.05E-03	5.96E-03	3.88E-03	3.97E-03	9.00E-04	5.60E-04	1.04E-07	1.99E-03	6.02E-04
9	D06	60	Single Unit Short Haul Truck	66	0.00E+00	1.48E-05	6.10E-07	1.10E+01	9.78E-06	1.93E-02	1.60E-05	5.65E-03	1.52E-03	2.56E-04	1.97E-03	3.79E-04	3.87E-04	1.11E-03	4.48E-05	1.85E-08	1.58E-03	1.06E-03
9	D06	60	Single Unit Long Haul Truck	3	0.00E+00	6.44E-07	2.65E-08	4.69E-01	4.24E-07	8.21E-04	6.96E-07	2.45E-04	6.83E-05	1.13E-05	8.61E-05	1.65E-05	1.68E-05	4.74E-05	1.91E-06	7.85E-10	6.93E-05	4.58E-

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D10	80	Single Unit Long Haul Truck	2	0.00E+00	2.80E-07	1.08E-08	3.25E-01	1.86E-07	5.82E-04	3.07E-07	1.14E-04	2.42E-05	4.79E-06	3.87E-05	7.05E-06	7.19E-06	3.29E-05	1.32E-06	5.16E-10	3.15E-05	2.13E-05
11	D10	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	5.97E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.12E-03
11	D10	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.38E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.20E-03
11	D11	80	Passenger Car	1335	0.00E+00	1.39E-05	1.51E-06	5.65E+01	9.84E-05	2.85E-01	3.13E-05	1.38E-03	7.28E-03	1.22E-03	3.05E-03	1.97E-03	2.02E-03	1.98E-04	2.85E-04	6.08E-08	1.03E-03	2.16E-04
11	D11	80	Passenger Truck	2235	0.00E+00	2.85E-05	3.04E-06	1.27E+02	1.86E-04	5.03E-01	6.05E-05	3.73E-03	1.30E-02	2.16E-03	5.80E-03	3.77E-03	3.86E-03	9.18E-04	6.37E-04	1.16E-07	1.94E-03	6.21E-04
11	D11	80	Single Unit Short Haul Truck	72	0.00E+00	9.86E-06	3.85E-07	1.18E+01	6.68E-06	2.14E-02	1.08E-05	4.09E-03	8.07E-04	1.65E-04	1.36E-03	2.51E-04	2.56E-04	1.20E-03	4.78E-05	1.90E-08	1.10E-03	7.64E-04
11	D11	80	Single Unit Long Haul Truck	3	0.00E+00	4.28E-07	1.65E-08	4.98E-01	2.85E-07	8.91E-04	4.71E-07	1.75E-04	3.70E-05	7.32E-06	5.92E-05	1.08E-05	1.10E-05	5.03E-05	2.03E-06	7.90E-10	4.82E-05	3.26E-05
11	D11	80	Combination Short Haul Truck	63	0.00E+00	1.29E-05	9.58E-07	2.10E+01	3.39E-08	1.97E-02	9.25E-06	1.99E-02	1.50E-03	2.71E-04	7.84E-04	2.79E-04	2.90E-04	3.34E-03	7.04E-05	0.00E+00	4.94E-04	3.75E-03
11	D11	80	Combination Long Haul Truck	57	0.00E+00	1.80E-05	1.02E-06	1.95E+01	1.15E-07	2.33E-02	1.49E-05	2.13E-02	1.55E-03	2.48E-04	1.65E-03	3.28E-04	3.42E-04	3.13E-03	6.54E-05	0.00E+00	1.31E-03	4.01E-03
11	D12	80	Passenger Car	843	0.00E+00	8.75E-06	9.51E-07	3.57E+01	6.21E-05	1.80E-01	1.97E-05	8.74E-04	4.59E-03	7.69E-04	1.92E-03	1.24E-03	1.27E-03	1.25E-04	1.80E-04	3.84E-08	6.51E-04	1.36E-04
11	D12	80	Passenger Truck	1411	0.00E+00	1.80E-05	1.92E-06	8.05E+01	1.17E-04	3.18E-01	3.82E-05	2.36E-03	8.18E-03	1.36E-03	3.66E-03	2.38E-03	2.44E-03	5.80E-04	4.02E-04	7.31E-08	1.23E-03	3.92E-04
11	D12	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.89E-04
11	D12	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.09E-05
11	D12	80	Combination Short Haul Truck	20	0.00E+00	4.10E-06	3.03E-07	6.66E+00	1.07E-08	6.24E-03	2.93E-06	6.30E-03	4.74E-04	8.59E-05	2.48E-04	8.85E-05	9.18E-05	1.06E-03	2.23E-05	0.00E+00	1.57E-04	1.19E-03
11	D12	80	Combination Long Haul Truck	18	0.00E+00	5.71E-06	3.22E-07	6.19E+00	3.63E-08	7.39E-03	4.71E-06	6.73E-03	4.90E-04	7.84E-05	5.23E-04	1.04E-04	1.08E-04	9.93E-04	2.07E-05	0.00E+00	4.15E-04	1.27E-03
9	D13	60	Passenger Car	355	0.00E+00	4.54E-06	4.93E-07	1.62E+01	3.22E-05	9.05E-02	1.02E-05	3.65E-04	3.58E-03	5.37E-04	9.98E-04	6.43E-04	6.60E-04	7.03E-05	8.11E-05	1.70E-08	3.38E-04	5.70E-05
9	D13	60	Passenger Truck	594	0.00E+00	9.63E-06	1.02E-06	3.60E+01	6.08E-05	1.55E-01	2.00E-05	1.14E-03	6.55E-03	9.74E-04	1.90E-03	1.24E-03	1.27E-03	2.88E-04	1.79E-04	3.32E-08	6.35E-04	1.92E-04
9	D13	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.60E-04
9	D13	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	D13	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.43E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.40E-03
9	D13	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.91E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.49E-03
9	D14	60	Passenger Car	729	0.00E+00	9.33E-06	1.01E-06	3.32E+01	6.62E-05	1.86E-01	2.10E-05	7.51E-04	7.37E-03	1.10E-03	2.05E-03	1.32E-03	1.36E-03	1.45E-04	1.67E-04	3.50E-08	6.94E-04	1.17E-04
9	D14	60	Passenger Truck	1222	0.00E+00	1.98E-05	2.10E-06	7.41E+01	1.25E-04	3.18E-01	4.11E-05	2.34E-03	1.35E-02	2.00E-03	3.92E-03	2.55E-03	2.61E-03	5.92E-04	3.68E-04	6.83E-08	1.31E-03	3.96E-04
9	D14	60	Single Unit Short Haul Truck	56	0.00E+00	1.24E-05	5.12E-07	9.24E+00	8.22E-06	1.63E-02	1.34E-05	4.75E-03	1.28E-03	2.15E-04	1.65E-03	3.19E-04	3.25E-04	9.36E-04	3.77E-05	1.55E-08	1.33E-03	8.89E-04
9	D14	60	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.23E-08	3.94E-01	3.56E-07	6.90E-04	5.85E-07	2.06E-04	5.74E-05	9.53E-06	7.23E-05	1.39E-05	1.41E-05	3.98E-05	1.61E-06	6.60E-10	5.82E-05	3.85E-05
9	D14	60	Combination Short Haul Truck	39	0.00E+00	1.14E-05	8.41E-07	1.38E+01	3.14E-08	1.71E-02	8.22E-06	1.74E-02	2.00E-03	3.12E-04	7.06E-04	2.46E-04	2.55E-04	2.20E-03	4.62E-05	0.00E+00	4.50E-04	3.28E-03
9	D14	60	Combination Long Haul Truck	36	0.00E+00	1.57E-05	8.59E-07	1.30E+01	1.06E-07	2.06E-02	1.32E-05	1.85E-02	2.10E-03	3.03E-04	1.49E-03	2.81E-04	2.92E-04	2.09E-03	4.37E-05	0.00E+00	1.20E-03	3.49E-03
9	D15	60	Passenger Car	842	0.00E+00	1.08E-05	1.17E-06	3.84E+01	7.64E-05	2.15E-01	2.43E-05	8.67E-04	8.50E-03	1.27E-03	2.37E-03	1.53E-03	1.57E-03	1.67E-04	1.92E-04	4.04E-08	8.01E-04	1.35E-04
9	D15	60	Passenger Truck	1410	0.00E+00	2.29E-05	2.42E-06	8.55E+01	1.44E-04	3.68E-01	4.74E-05	2.70E-03	1.55E-02	2.31E-03	4.52E-03	2.94E-03	3.01E-03	6.83E-04	4.25E-04	7.88E-08	1.51E-03	4.57E-04
9	D15	60	Single Unit Short Haul Truck	57	0.00E+00	1.28E-05	5.30E-07	9.56E+00	8.50E-06	1.68E-02	1.39E-05	4.91E-03	1.32E-03	2.22E-04	1.71E-03	3.30E-04	3.36E-04	9.69E-04	3.90E-05	1.61E-08	1.38E-03	9.19E-04
9	D15	60	Single Unit Long Haul Truck	3	0.00E+00	5.60E-07	2.30E-08	4.08E-01	3.69E-07	7.14E-04	6.06E-07	2.13E-04	5.94E-05	9.85E-06	7.48E-05	1.43E-05	1.46E-05	4.12E-05	1.66E-06	6.83E-10	6.02E-05	3.98E-05
9	D15	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.80E-03
9	D15	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.98E-03
9	D16	60	Passenger Car	794	0.00E+00	1.02E-05	1.10E-06	3.62E+01	7.20E-05	2.02E-01	2.29E-05	8.17E-04	8.02E-03	1.20E-03	2.23E-03	1.44E-03	1.48E-03	1.57E-04	1.81E-04	3.81E-08	7.55E-04	1.27E-04
9	D16	60	Passenger Truck	1329	0.00E+00	2.15E-05	2.28E-06	8.06E+01	1.36E-04	3.47E-01	4.47E-05	2.54E-03	1.46E-02	2.18E-03	4.26E-03	2.77E-03	2.84E-03	6.44E-04	4.01E-04	7.43E-08	1.42E-03	4.31E-04
9	D16	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.14E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	D16	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.66E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.98E-05
9	D16	60	Combination Short Haul Truck	48	0.00E+00	1.39E-05	1.02E-06	1.68E+01	3.80E-08	2.08E-02	9.98E-06	2.11E-02	2.42E-03	3.79E-04	8.56E-04	2.98E-04	3.10E-04	2.66E-03	5.61E-05	0.00E+00	5.46E-04	3.98E-03
9	D16	60	Combination Long Haul Truck	43	0.00E+00	1.91E-05	1.04E-06	1.58E+01	1.29E-07	2.49E-02	1.60E-05	2.25E-02	2.54E-03	3.68E-04	1.81E-03	3.41E-04	3.55E-04	2.54E-03	5.31E-05	0.00E+00	1.46E-03	4.24E-03
10	D17	70	Passenger Car	126	0.00E+00	1.40E-06	1.52E-07	5.47E+00	9.94E-06	2.81E-02	3.16E-06	1.27E-04	9.68E-04	1.51E-04	3.08E-04	1.99E-04	2.04E-04	2.13E-05	2.75E-05	5.72E-09	1.04E-04	1.98E-05
10	D17	70	Passenger Truck	210	0.00E+00	2.95E-06	3.13E-07	1.23E+01	1.89E-05	4.96E-02	6.18E-06	3.69E-04	1.75E-03	2.71E-04	5.91E-04	3.84E-04	3.94E-04	9.33E-05	6.14E-05	1.10E-08	1.98E-04	6.20E-05
10	D17	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.03E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.50E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.46E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.46E-06
10	D17	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.21E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.05E-04
10	D17	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.43E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.47E-04
10	D18	70	Passenger Car	409	0.00E+00	4.57E-06	4.96E-07	1.78E+01	3.24E-05	9.16E-02	1.03E-05	4.14E-04	3.15E-03	4.91E-04	1.00E-03	6.47E-04	6.64E-04	6.96E-05	8.97E-05	1.86E-08	3.40E-04	6.46E-05
10	D18	70	Passenger Truck	686	0.00E+00	9.61E-06	1.02E-06	4.01E+01	6.15E-05	1.62E-01	2.01E-05	1.20E-03	5.71E-03	8.83E-04	1.93E-03	1.25E-03	1.28E-03	3.04E-04	2.00E-04	3.58E-08	6.44E-04	2.02E-04
10	D18	70	Single Unit Short Haul Truck	37	0.00E+00	6.57E-06	2.67E-07	6.12E+00	4.41E-06	1.11E-02	7.15E-06	2.61E-03	5.94E-04	1.09E-04	8.86E-04	1.69E-04	1.72E-04	6.22E-04	2.49E-05	1.00E-08	7.14E-04	4.88E-04
10	D18	70	Single Unit Long Haul Truck	2	0.00E+00	2.86E-07	1.15E-08	2.59E-01	1.90E-07	4.66E-04	3.11E-07	1.12E-04	2.72E-05	4.87E-06	3.87E-05	7.29E-06	7.44E-06	2.62E-05	1.06E-06	4.24E-10	3.12E-05	2.10E-05
10	D18	70	Combination Short Haul Truck	35	0.00E+00	9.02E-06	6.71E-07	1.22E+01	2.29E-08	1.30E-02	6.43E-06	1.34E-02	1.27E-03	2.12E-04	5.41E-04	1.95E-04	2.03E-04	1.94E-03	4.07E-05	0.00E+00	3.38E-04	2.53E-03
10	D18	70	Combination Long Haul Truck	32	0.00E+00	1.24E-05	7.03E-07	1.14E+01	7.75E-08	1.55E-02	1.02E-05	1.44E-02	1.32E-03	1.99E-04	1.12E-03	2.26E-04	2.35E-04	1.84E-03	3.83E-05	0.00E+00	8.89E-04	2.71E-03
11	D19	80	Passenger Car	1491	0.00E+00	1.55E-05	1.68E-06	6.31E+01	1.10E-04	3.18E-01	3.49E-05	1.55E-03	8.13E-03	1.36E-03	3.40E-03	2.20E-03	2.25E-03	2.22E-04	3.18E-04	6.80E-08	1.15E-03	2.41E-04
11	D19	80	Passenger Truck	2496	0.00E+00	3.19E-05	3.40E-06	1.42E+02	2.07E-04	5.62E-01	6.75E-05	4.17E-03	1.45E-02	2.41E-03	6.48E-03	4.21E-03	4.31E-03	1.03E-03	7.11E-04	1.29E-07	2.17E-03	6.94E-04
11	D19	80	Single Unit Short Haul Truck	121	0.00E+00	1.66E-05	6.47E-07	1.98E+01	1.12E-05	3.59E-02	1.82E-05	6.87E-03	1.36E-03	2.77E-04	2.28E-03	4.22E-04	4.30E-04	2.01E-03	8.04E-05	3.19E-08	1.85E-03	1.28E-03
11	D19	80	Single Unit Long Haul Truck	5	0.00E+00	7.19E-07	2.78E-08	8.36E-01	4.78E-07	1.50E-03	7.90E-07	2.93E-04	6.22E-05	1.23E-05	9.94E-05	1.81E-05	1.85E-05	8.45E-05	3.40E-06	1.33E-09	8.09E-05	5.48E-05
11	D19	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.91E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.59E-03
11	D19	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.04E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.84E-03
11	D20	80	Passenger Car	760	0.00E+00	7.89E-06	8.57E-07	3.21E+01	5.60E-05	1.62E-01	1.78E-05	7.88E-04	4.14E-03	6.93E-04	1.74E-03	1.12E-03	1.15E-03	1.13E-04	1.62E-04	3.46E-08	5.87E-04	1.23E-04
11	D20	80	Passenger Truck	1272	0.00E+00	1.62E-05	1.73E-06	7.26E+01	1.06E-04	2.86E-01	3.44E-05	2.12E-03	7.37E-03	1.23E-03	3.30E-03	2.14E-03	2.20E-03	5.22E-04	3.63E-04	6.59E-08	1.11E-03	3.54E-04
11	D20	80	Single Unit Short Haul Truck	443	0.00E+00	6.09E-05	2.38E-06	7.27E+01	4.13E-05	1.32E-01	6.69E-05	2.52E-02	4.98E-03	1.02E-03	8.38E-03	1.55E-03	1.58E-03	7.40E-03	2.95E-04	1.17E-07	6.80E-03	4.72E-03
11	D20	80	Single Unit Long Haul Truck	20	0.00E+00	2.64E-06	1.02E-07	3.07E+00	1.76E-06	5.50E-03	2.90E-06	1.08E-03	2.28E-04	4.52E-05	3.65E-04	6.66E-05	6.79E-05	3.11E-04	1.25E-05	4.88E-09	2.97E-04	2.01E-04
11	D20	80	Combination Short Haul Truck	138	0.00E+00	2.85E-05	2.11E-06	4.63E+01	7.45E-08	4.34E-02	2.03E-05	4.38E-02	3.29E-03	5.97E-04	1.73E-03	6.15E-04	6.38E-04	7.36E-03	1.55E-04	0.00E+00	1.09E-03	8.25E-03
11	D20	80	Combination Long Haul Truck	126	0.00E+00	3.96E-05	2.24E-06	4.30E+01	2.52E-07	5.14E-02	3.27E-05	4.68E-02	3.41E-03	5.45E-04	3.63E-03	7.21E-04	7.51E-04	6.90E-03	1.44E-04	0.00E+00	2.88E-03	8.81E-03
11	D21	80	Passenger Car	1207	0.00E+00	1.25E-05	1.36E-06	5.11E+01	8.90E-05	2.58E-01	2.83E-05	1.25E-03	6.58E-03	1.10E-03	2.76E-03	1.78E-03	1.82E-03	1.79E-04	2.58E-04	5.50E-08	9.32E-04	1.95E-04
11	D21	80	Passenger Truck	2021	0.00E+00	2.58E-05	2.75E-06	1.15E+02	1.68E-04	4.55E-01	5.47E-05	3.37E-03	1.17E-02	1.95E-03	5.25E-03	3.40E-03	3.49E-03	8.30E-04	5.76E-04	1.05E-07	1.76E-03	5.62E-04
11	D21	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.56E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.79E-04
11	D21	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.09E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	D21	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.31E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	D21	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.67E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	D22	80	Passenger Car	843	0.00E+00	8.76E-06	9.52E-07	3.57E+01	6.21E-05	1.80E-01	1.97E-05	8.74E-04	4.60E-03	7.69E-04	1.93E-03	1.24E-03	1.27E-03	1.25E-04	1.80E-04	3.84E-08	6.51E-04	1.36E-04
11	D22	80	Passenger Truck	1412	0.00E+00	1.80E-05	1.92E-06	8.05E+01	1.17E-04	3.18E-01	3.82E-05	2.36E-03	8.18E-03	1.36E-03	3.67E-03	2.38E-03	2.44E-03	5.80E-04	4.02E-04	7.32E-08	1.23E-03	3.92E-04
11	D22	80	Single Unit Short Haul Truck	197	0.00E+00	2.71E-05	1.06E-06	3.23E+01	1.84E-05	5.88E-02	2.98E-05	1.12E-02	2.22E-03	4.53E-04	3.73E-03	6.90E-04	7.04E-04	3.29E-03	1.31E-04	5.21E-08	3.02E-03	2.10E-03
11	D22	80	Single Unit Long Haul Truck	9	0.00E+00	1.18E-06	4.54E-08	1.37E+00	7.82E-07	2.45E-03	1.29E-06	4.80E-04	1.02E-04	2.01E-05	1.63E-04	2.96E-05	3.02E-05	1.38E-04	5.56E-06	2.17E-09	1.32E-04	8.96E-05
11	D22	80	Combination Short Haul Truck	126	0.00E+00	2.60E-05	1.92E-06	4.23E+01	6.80E-08	3.96E-02	1.86E-05	4.00E-02	3.01E-03	5.45E-04	1.58E-03	5.61E-04	5.83E-04	6.72E-03	1.41E-04	0.00E+00	9.93E-04	7.53E-03
11	D22	80	Combination Long Haul Truck	115	0.00E+00	3.62E-05	2.04E-06	3.92E+01	2.30E-07	4.69E-02	2.99E-05	4.27E-02	3.11E-03	4.97E-04	3.32E-03	6.58E-04	6.86E-04	6.30E-03	1.31E-04	0.00E+00	2.63E-03	8.04E-03
9	D23	60	Passenger Car	1267	0.00E+00	1.62E-05	1.76E-06	5.77E+01	1.15E-04	3.23E-01	3.65E-05	1.30E-03	1.28E-02	1.92E-03	3.56E-03	2.30E-03	2.36E-03	2.51E-04	2.90E-04	6.08E-08	1.20E-03	2.03E-04
9	D23	60	Passenger Truck	2121	0.00E+00	3.44E-05	3.64E-06	1.29E+02	2.17E-04	5.53E-01	7.13E-05	4.05E-03	2.34E-02	3.48E-03	6.80E-03	4.42E-03	4.53E-03	1.03E-03	6.39E-04	1.19E-07	2.27E-03	6.87E-04
9	D23	60	Single Unit Short Haul Truck	91	0.00E+00	2.03E-05	8.39E-07	1.51E+01	1.35E-05	2.66E-02	2.20E-05	7.78E-03	2.09E-03	3.52E-04	2.71E-03	5.22E-04	5.32E-04	1.53E-03	6.17E-05	2.54E-08	2.18E-03	1.46E-03
9	D23	60	Single Unit Long Haul Truck	4	0.00E+00	8.87E-07	3.64E-08	6.45E-01	5.84E-07	1.13E-03	9.59E-07	3.37E-04	9.40E-05	1.56E-05	1.19E-04	2.27E-05	2.31E-05	6.52E-05	2.63E-06	1.08E-09	9.54E-05	6.30E-05
9	D23	60	Combination Short Haul Truck	36	0.00E+00	1.04E-05	7.62E-07	1.25E+01	2.84E-08	1.55E-02	7.46E-06	1.58E-02	1.81E-03	2.83E-04	6.40E-04	2.23E-04	2.32E-04	1.99E-03	4.19E-05	0.00E+00	4.08E-04	2.98E-03
9	D23	60	Combination Long Haul Truck	32	0.00E+00	1.43E-05	7.79E-07	1.18E+01	9.63E-08	1.86E-02	1.19E-05	1.68E-02	1.90E-03	2.75E-04	1.35E-03	2.54E-04	2.65E-04	1.90E-03	3.96E-05	0.00E+00	1.09E-03	3.17E-03
9	D24	60	Passenger Car	611	0.00E+00	7.82E-06	8.49E-07	2.79E+01	5.55E-05	1.56E-01	1.76E-05	6.29E-04	6.17E-03	9.25E-04	1.72E-03	1.11E-03	1.14E-03	1.21E-04	1.40E-04	2.94E-08	5.82E-04	9.82E-05

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D28	80	Passenger Car	787	0.00E+00	8.17E-06	8.88E-07	3.33E+01	5.80E-05	1.68E-01	1.84E-05	8.16E-04	4.29E-03	7.18E-04	1.80E-03	1.16E-03	1.19E-03	1.17E-04	1.68E-04	3.59E-08	6.08E-04	1.27E-04
11	D28	80	Passenger Truck	1318	0.00E+00	1.68E-05	1.79E-06	7.52E+01	1.09E-04	2.97E-01	3.57E-05	2.20E-03	7.64E-03	1.27E-03	3.42E-03	2.22E-03	2.28E-03	5.41E-04	3.76E-04	6.83E-08	1.15E-03	3.66E-04
11	D28	80	Single Unit Short Haul Truck	65	0.00E+00	8.94E-06	3.49E-07	1.07E+01	6.06E-06	1.94E-02	9.82E-06	3.71E-03	7.32E-04	1.50E-04	1.23E-03	2.28E-04	2.32E-04	1.09E-03	4.34E-05	1.72E-08	9.98E-04	6.93E-04
11	D28	80	Single Unit Long Haul Truck	3	0.00E+00	3.88E-07	1.50E-08	4.51E-01	2.58E-07	8.08E-04	4.27E-07	1.58E-04	3.36E-05	6.64E-06	5.37E-05	9.78E-06	9.98E-06	4.56E-05	1.84E-06	7.17E-10	4.37E-05	2.96E-05
11	D28	80	Combination Short Haul Truck	48	0.00E+00	9.92E-06	7.34E-07	1.61E+01	2.60E-08	1.51E-02	7.09E-06	1.53E-02	1.15E-03	2.08E-04	6.01E-04	2.14E-04	2.22E-04	2.56E-03	5.40E-05	0.00E+00	3.79E-04	2.87E-03
11	D28	80	Combination Long Haul Truck	44	0.00E+00	1.38E-05	7.80E-07	1.50E+01	8.79E-08	1.79E-02	1.14E-05	1.63E-02	1.19E-03	1.90E-04	1.27E-03	2.51E-04	2.62E-04	2.40E-03	5.02E-05	0.00E+00	1.00E-03	3.07E-03
11	D29	80	Passenger Car	322	0.00E+00	3.34E-06	3.63E-07	1.36E+01	2.37E-05	6.87E-02	7.54E-06	3.34E-04	1.75E-03	2.94E-04	7.35E-04	4.74E-04	4.87E-04	4.79E-05	6.87E-05	1.47E-08	2.49E-04	5.21E-05
11	D29	80	Passenger Truck	539	0.00E+00	6.88E-06	7.34E-07	3.07E+01	4.48E-05	1.21E-01	1.46E-05	9.00E-04	3.12E-03	5.20E-04	1.40E-03	9.08E-04	9.31E-04	2.21E-04	1.54E-04	2.79E-08	4.69E-04	1.50E-04
11	D29	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.16E-04
11	D29	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.22E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D29	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.47E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	D29	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.91E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
11	D30	80	Passenger Car	787	0.00E+00	8.17E-06	8.88E-07	3.33E+01	5.80E-05	1.68E-01	1.84E-05	8.16E-04	4.29E-03	7.18E-04	1.80E-03	1.16E-03	1.19E-03	1.17E-04	1.68E-04	3.59E-08	6.08E-04	1.27E-04
11	D30	80	Passenger Truck	1318	0.00E+00	1.68E-05	1.79E-06	7.52E+01	1.09E-04	2.97E-01	3.57E-05	2.20E-03	7.64E-03	1.27E-03	3.42E-03	2.22E-03	2.28E-03	5.41E-04	3.76E-04	6.83E-08	1.15E-03	3.66E-04
11	D30	80	Single Unit Short Haul Truck	65	0.00E+00	8.94E-06	3.49E-07	1.07E+01	6.06E-06	1.94E-02	9.82E-06	3.71E-03	7.32E-04	1.50E-04	1.23E-03	2.28E-04	2.32E-04	1.09E-03	4.34E-05	1.72E-08	9.98E-04	6.93E-04
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	3.88E-07	1.50E-08	4.51E-01	2.58E-07	8.08E-04	4.27E-07	1.58E-04	3.36E-05	6.64E-06	5.37E-05	9.78E-06	9.98E-06	4.56E-05	1.84E-06	7.17E-10	4.37E-05	2.96E-05
11	D30	80	Combination Short Haul Truck	48	0.00E+00	9.92E-06	7.34E-07	1.61E+01	2.60E-08	1.51E-02	7.09E-06	1.53E-02	1.15E-03	2.08E-04	6.01E-04	2.14E-04	2.22E-04	2.56E-03	5.40E-05	0.00E+00	3.79E-04	2.87E-03
11	D30	80	Combination Long Haul Truck	44	0.00E+00	1.38E-05	7.80E-07	1.50E+01	8.79E-08	1.79E-02	1.14E-05	1.63E-02	1.19E-03	1.90E-04	1.27E-03	2.51E-04	2.62E-04	2.40E-03	5.02E-05	0.00E+00	1.00E-03	3.07E-03
11	D31	80	Passenger Car	298	0.00E+00	3.09E-06	3.36E-07	1.26E+01	2.20E-05	6.36E-02	6.98E-06	3.09E-04	1.62E-03	2.72E-04	6.81E-04	4.39E-04	4.50E-04	4.43E-05	6.36E-05	1.36E-08	2.30E-04	4.82E-05
11	D31	80	Passenger Truck	499	0.00E+00	6.37E-06	6.79E-07	2.85E+01	4.14E-05	1.12E-01	1.35E-05	8.33E-04	2.89E-03	4.81E-04	1.30E-03	8.41E-04	8.62E-04	2.05E-04	1.42E-04	2.59E-08	4.34E-04	1.39E-04
11	D31	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.18E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.07E-04
11	D31	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.31E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.74E-05
11	D31	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.14E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	D31	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.56E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.23E-03
11	D32	80	Passenger Car	478	0.00E+00	4.96E-06	5.39E-07	2.02E+01	3.52E-05	1.02E-01	1.12E-05	4.95E-04	2.60E-03	4.36E-04	1.09E-03	7.04E-04	7.22E-04	7.10E-05	1.02E-04	2.18E-08	3.69E-04	7.73E-05
11	D32	80	Passenger Truck	800	0.00E+00	1.02E-05	1.09E-06	4.56E+01	6.65E-05	1.80E-01	2.17E-05	1.34E-03	4.64E-03	7.72E-04	2.08E-03	1.35E-03	1.38E-03	3.29E-04	2.28E-04	4.15E-08	6.96E-04	2.22E-04
11	D32	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.78E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.19E-04
11	D32	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.22E-05
11	D32	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.12E-03
11	D32	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.27E-03
9	D33	60	Passenger Car	308	0.00E+00	3.93E-06	4.28E-07	1.40E+01	2.79E-05	7.85E-02	8.87E-06	3.17E-04	3.11E-03	4.65E-04	8.65E-04	5.58E-04	5.73E-04	6.10E-05	7.03E-05	1.48E-08	2.93E-04	4.94E-05
9	D33	60	Passenger Truck	515	0.00E+00	8.35E-06	8.85E-07	3.12E+01	5.27E-05	1.34E-01	1.73E-05	9.85E-04	5.68E-03	8.45E-04	1.65E-03	1.07E-03	1.10E-03	2.50E-04	1.55E-04	2.88E-08	5.51E-04	1.67E-04
9	D33	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E-06	3.80E-07	6.85E+00	6.09E-06	1.21E-02	9.94E-06	3.52E-03	9.47E-04	1.59E-04	1.23E-03	2.36E-04	2.41E-04	6.94E-04	2.79E-05	1.15E-08	9.86E-04	6.59E-04
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.52E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.85E-05
9	D33	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
9	D33	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.28E-03
9	D34	60	Passenger Car	246	0.00E+00	3.14E-06	3.41E-07	1.12E+01	2.23E-05	6.27E-02	7.08E-06	2.53E-04	2.48E-03	3.72E-04	6.91E-04	4.45E-04	4.57E-04	4.87E-05	5.62E-05	1.18E-08	2.34E-04	3.95E-05
9	D34	60	Passenger Truck	411	0.00E+00	6.67E-06	7.07E-07	2.49E+01	4.21E-05	1.07E-01	1.38E-05	7.86E-04	4.53E-03	6.75E-04	1.32E-03	8.58E-04	8.79E-04	1.99E-04	1.24E-04	2.30E-08	4.40E-04	1.33E-04
9	D34	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.00E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	D34	60	Combination Short Haul Truck	5	0.00E+00	1.37E-06	1.01E-07	1.66E+00	3.76E-09	2.05E-03	9.87E-07	2.09E-03	2.40E-04	3.75E-05	8.47E-05	2.95E-05	3.06E-05	2.64E-04	5.54E-06	0.00E+00	5.40E-05	3.94E-04
9	D34	60	Combination Long Haul Truck	4	0.00E+00	1.89E-06	1.03E-07	1.57E+00	1.27E-08	2.47E-03	1.58E-06	2.23E-03	2.51E-04	3.64E-05	1.79E-04	3.37E-05	3.51E-05	2.51E-04	5.25E-06	0.00E+00	1.44E-04	4.19E-04
9	D35	60	Passenger Car	408	0.00E+00	5.22E-06	5.67E-07	1.86E+01	3.71E-05	1.04E-01	1.18E-05	4.20E-04	4.12E-03	6.18E-04	1.15E-03	7.40E-04	7.60E-04	8.09E-05	9.33E-05	1.96E-08	3.88E-04	6.56E-05
9	D35	60	Passenger Truck	684	0.00E+00	1.11E-05	1.17E-06	4.15E+01	6.99E-05	1.78E-01	2.30E-05	1.31E-03	7.53E-03	1.12E-03	2.19E-03	1.43E-03	1.46E-03	3.31E-04	2.06E-04	3.82E-08	7.31E-04	2.21E-04
9	D35	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.18E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	D35	60	Combination Short Haul Truck	6	0.00E+00	1.68E-06	1.23E-07	2.03E+00	4.60E-09	2.51E-03	1.21E-06	2.55E-03	2.93E-04	4.58E-05	1.03E-04	3.61E-05	3.75E-05	3.22E-04	6.78E-06	0.00E+00	6.60E-05	4.81E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.31E-06	1.26E-07	1.91E+00	1.56E-08	3.01E-03	1.93E-06	2.72E-03	3.07E-04	4.44E-05	2.19E-04	4.12E-05	4.29E-05	3.07E-04	6.41E-06	0.00E+00	1.76E-04	5.12E-04
9	D36	60	Passenger Car	116	0.00E+00	1.49E-06	1.62E-07	5.30E+00	1.06E-05	2.97E-02	3.35E-06	1.20E-04	1.17E-03	1.76E-04	3.27E-04	2.11E-04	2.16E-04	2.30E-05	2.66E-05	5.58E-09	1.11E-04	1.87E-05
9	D36	60	Passenger Truck	195	0.00E+00	3.16E-06	3.35E-07	1.18E+01	1.99E-05	5.08E-02	6.55E-06	3.72E-04	2.15E-03	3.19E-04	6.24E-04	4.06E-04	4.16E-04	9.43E-05	5.87E-05	1.09E-08	2.08E-04	6.31E-05
9	D36	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.96E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.51E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	D36	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.89E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
9	D36	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.41E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.58E-03
9	D37	60	Passenger Car	243	0.00E+00	3.11E-06	3.38E-07	1.11E+01	2.21E-05	6.20E-02	7.01E-06	2.50E-04	2.45E-03	3.68E-04	6.83E-04	4.41E-04	4.52E-04	4.82E-05	5.56E-05	1.17E-08	2.31E-04	3.90E-05
9	D37	60	Passenger Truck	407	0.00E+00	6.60E-06	6.99E-07	2.47E+01	4.16E-05	1.06E-01	1.37E-05	7.78E-04	4.48E-03	6.67E-04	1.30E-03	8.49E-04	8.70E-04	1.97E-04	1.23E-04	2.27E-08	4.35E-04	1.32E-04
9	D37	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	D37	60	Single Unit Long Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.86E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.50E-04
9	D37	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.98E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.73E-04
9	D38	60	Passenger Car	469	0.00E+00	6.00E-06	6.52E-07	2.14E+01	4.25E-05	1.20E-01	1.35E-05	4.83E-04	4.73E-03	7.09E-04	1.32E-03	8.50E-04	8.72E-04	9.29E-05	1.07E-04	2.25E-08	4.46E-04	7.53E-05
9	D38	60	Passenger Truck	785	0.00E+00	1.27E-05	1.35E-06	4.76E+01	8.03E-05	2.05E-01	2.64E-05	1.50E-03	8.65E-03	1.29E-03	2.52E-03	1.64E-03	1.68E-03	3.80E-04	2.37E-04	4.39E-08	8.39E-04	2.54E-04
9	D38	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.06E-04
9	D38	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.09E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	D38	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
9	D38	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.28E-03
9	D39	60	Passenger Car	195	0.00E+00	2.50E-06	2.71E-07	8.89E+00	1.77E-05	4.98E-02	5.63E-06	2.01E-04	1.97E-03	2.95E-04	5.49E-04	3.54E-04	3.63E-04	3.87E-05	4.46E-05	9.37E-09	1.86E-04	3.13E-05
9	D39	60	Passenger Truck	327	0.00E+00	5.30E-06	5.62E-07	1.98E+01	3.34E-05	8.52E-02	1.10E-05	6.25E-04	3.60E-03	5.36E-04	1.05E-03	6.82E-04	6.99E-04	1.58E-04	9.85E-05	1.83E-08	3.49E-04	1.06E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.64E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.75E-05
9	D39	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.95E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.32E-05
9	D40	60	Passenger Car	340	0.00E+00	4.35E-06	4.73E-07	1.55E+01	3.09E-05	8.68E-02	9.81E-06	3.50E-04	3.44E-03	5.15E-04	9.57E-04	6.17E-04	6.33E-04	6.74E-05	7.78E-05	1.63E-08	3.24E-04	5.46E-05
9	D40	60	Passenger Truck	570	0.00E+00	9.24E-06	9.79E-07	3.45E+01	5.83E-05	1.49E-01	1.92E-05	1.09E-03	6.28E-03	9.34E-04	1.83E-03	1.19E-03	1.22E-03	2.76E-04	1.72E-04	3.18E-08	6.09E-04	1.85E-04
9	D40	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.39E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.60E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.03E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	D40	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.82E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.66E-03
9	D40	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.40E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.77E-03
9	D41	60	Passenger Car	357	0.00E+00	4.56E-06	4.96E-07	1.63E+01	3.24E-05	9.10E-02	1.03E-05	3.67E-04	3.60E-03	5.39E-04	1.00E-03	6.47E-04	6.64E-04	7.07E-05	8.15E-05	1.71E-08	3.39E-04	5.73E-05
9	D41	60	Passenger Truck	597	0.00E+00	9.68E-06	1.03E-06	3.62E+01	6.11E-05	1.56E-01	2.01E-05	1.14E-03	6.58E-03	9.80E-04	1.91E-03	1.25E-03	1.28E-03	2.89E-04	1.80E-04	3.34E-08	6.38E-04	1.93E-04
9	D42	60	Passenger Car	95	0.00E+00	1.22E-06	1.32E-07	4.34E+00	8.65E-06	2.43E-02	2.75E-06	9.82E-05	9.63E-04	1.44E-04	2.68E-04	1.73E-04	1.77E-04	1.89E-05	2.18E-05	4.58E-09	9.07E-05	1.53E-05
9	D42	60	Passenger Truck	160	0.00E+00	2.59E-06	2.74E-07	9.68E+00	1.63E-05	4.16E-02	5.37E-06	3.05E-04	1.76E-03	2.62E-04	5.12E-04	3.33E-04	3.41E-04	7.74E-05	4.81E-05	8.92E-09	1.71E-04	5.17E-05
9	D42	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
9	D42	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.06E-04
9	D42	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.73E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.26E-04
9	D43	60	Passenger Car	253	0.00E+00	3.24E-06	3.52E-07	1.15E+01	2.30E-05	6.47E-02	7.31E-06	2.61E-04	2.56E-03	3.83E-04	7.13E-04	4.60E-04	4.72E-04	5.02E-05	5.79E-05	1.22E-08	2.41E-04	4.07E-05
9	D43	60	Passenger Truck	425	0.00E+00	6.88E-06	7.29E-07	2.57E+01	4.34E-05	1.11E-01	1.43E-05	8.11E-04	4.68E-03	6.96E-04	1.36E-03	8.85E-04	9.07E-04	2.06E-04	1.28E-04	2.37E-08	4.54E-04	1.37E-04
9	D43	60	Combination Short Haul Truck	2	0.00E+00	4.

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	9.80E-07	4.03E-08	7.13E-01	6.45E-07	1.25E-03	1.06E-06	3.72E-04	1.04E-04	1.72E-05	1.31E-04	2.51E-05	2.56E-05	7.21E-05	2.91E-06	1.20E-09	1.05E-04	6.97E-05
9	D47	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.90E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.47E-03
9	D47	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.09E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.82E-03
9	D48	60	Passenger Car	347	0.00E+00	4.44E-06	4.82E-07	1.58E+01	3.15E-05	8.85E-02	1.00E-05	3.57E-04	3.50E-03	5.25E-04	9.76E-04	6.29E-04	6.46E-04	6.88E-05	7.93E-05	1.67E-08	3.30E-04	5.57E-05
9	D48	60	Passenger Truck	581	0.00E+00	9.42E-06	9.98E-07	3.52E+01	5.94E-05	1.51E-01	1.95E-05	1.11E-03	6.40E-03	9.53E-04	1.86E-03	1.21E-03	1.24E-03	2.82E-04	1.75E-04	3.25E-08	6.21E-04	1.88E-04
9	D48	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.30E-04
9	D48	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.32E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.95E-06
9	D48	60	Combination Short Haul Truck	17	0.00E+00	5.04E-06	3.70E-07	6.08E+00	1.38E-08	7.53E-03	3.62E-06	7.66E-03	8.79E-04	1.37E-04	3.10E-04	1.08E-04	1.12E-04	9.66E-04	2.03E-05	0.00E+00	1.98E-04	1.44E-03
9	D48	60	Combination Long Haul Truck	16	0.00E+00	6.92E-06	3.78E-07	5.74E+00	4.67E-08	9.04E-03	5.79E-06	8.16E-03	9.22E-04	1.33E-04	6.57E-04	1.23E-04	1.29E-04	9.22E-04	1.92E-05	0.00E+00	5.28E-04	1.54E-03
9	D49	60	Passenger Car	695	0.00E+00	8.89E-06	9.66E-07	3.17E+01	6.31E-05	1.77E-01	2.01E-05	7.16E-04	7.02E-03	1.05E-03	1.96E-03	1.26E-03	1.29E-03	1.38E-04	1.59E-04	3.34E-08	6.62E-04	1.12E-04
9	D49	60	Passenger Truck	1165	0.00E+00	1.89E-05	2.00E-06	7.06E+01	1.19E-04	3.04E-01	3.92E-05	2.23E-03	1.28E-02	1.91E-03	3.73E-03	2.43E-03	2.49E-03	5.64E-04	3.51E-04	6.51E-08	1.24E-03	3.77E-04
9	D49	60	Single Unit Short Haul Truck	101	0.00E+00	2.25E-05	9.28E-07	1.67E+01	1.49E-05	2.94E-02	2.43E-05	8.59E-03	2.31E-03	3.89E-04	3.00E-03	5.77E-04	5.88E-04	1.70E-03	6.82E-05	2.81E-08	2.41E-03	1.61E-03
9	D49	60	Single Unit Long Haul Truck	4	0.00E+00	9.80E-07	4.03E-08	7.13E-01	6.45E-07	1.25E-03	1.06E-06	3.72E-04	1.04E-04	1.72E-05	1.31E-04	2.51E-05	2.56E-05	7.21E-05	2.91E-06	1.20E-09	1.05E-04	6.97E-05
9	D49	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.90E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.47E-03
9	D49	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.09E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.82E-03
9	D50	60	Passenger Car	697	0.00E+00	8.91E-06	9.68E-07	3.17E+01	6.32E-05	1.78E-01	2.01E-05	7.17E-04	7.03E-03	1.05E-03	1.96E-03	1.26E-03	1.30E-03	1.38E-04	1.59E-04	3.34E-08	6.63E-04	1.12E-04
9	D50	60	Passenger Truck	1166	0.00E+00	1.89E-05	2.00E-06	7.07E+01	1.19E-04	3.04E-01	3.92E-05	2.23E-03	1.29E-02	1.91E-03	3.74E-03	2.43E-03	2.49E-03	5.65E-04	3.52E-04	6.52E-08	1.25E-03	3.78E-04
9	D50	60	Single Unit Short Haul Truck	120	0.00E+00	2.67E-05	1.10E-06	1.99E+01	1.77E-05	3.50E-02	2.89E-05	1.02E-02	2.75E-03	4.63E-04	3.57E-03	6.87E-04	7.01E-04	2.02E-03	8.12E-05	3.34E-08	2.87E-03	1.92E-03
9	D50	60	Single Unit Long Haul Truck	5	0.00E+00	1.17E-06	4.80E-08	8.49E-01	7.68E-07	1.49E-03	1.26E-06	4.43E-04	1.24E-04	2.05E-05	1.56E-04	2.99E-05	3.04E-05	8.58E-05	3.46E-06	1.42E-09	1.25E-04	8.29E-05
9	D50	60	Combination Short Haul Truck	70	0.00E+00	2.05E-05	1.50E-06	2.47E+01	5.60E-08	3.06E-02	1.47E-05	3.11E-02	3.57E-03	5.58E-04	1.26E-03	4.40E-04	4.56E-04	3.92E-03	8.25E-05	0.00E+00	8.04E-04	5.86E-03
9	D50	60	Combination Long Haul Truck	64	0.00E+00	2.81E-05	1.54E-06	2.33E+01	1.90E-07	3.67E-02	2.35E-05	3.31E-02	3.74E-03	5.41E-04	2.67E-03	5.01E-04	5.23E-04	3.74E-03	7.81E-05	0.00E+00	2.14E-03	6.24E-03
9	D51	60	Passenger Car	297	0.00E+00	3.80E-06	4.13E-07	1.35E+01	2.70E-05	7.58E-02	8.57E-06	3.06E-04	3.00E-03	4.50E-04	8.36E-04	5.39E-04	5.53E-04	5.89E-05	6.79E-05	1.43E-08	2.83E-04	4.77E-05
9	D51	60	Passenger Truck	498	0.00E+00	8.07E-06	8.55E-07	3.02E+01	5.09E-05	1.30E-01	1.67E-05	9.52E-04	5.48E-03	8.16E-04	1.60E-03	1.04E-03	1.06E-03	2.41E-04	1.50E-04	2.78E-08	5.32E-04	1.61E-04
9	D51	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.78E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.21E-04
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
9	D51	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.43E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.40E-03
9	D51	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.91E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.49E-03
9	D52	60	Passenger Car	341	0.00E+00	4.36E-06	4.73E-07	1.55E+01	3.09E-05	8.69E-02	9.82E-06	3.51E-04	3.44E-03	5.15E-04	9.58E-04	6.18E-04	6.34E-04	6.75E-05	7.79E-05	1.64E-08	3.24E-04	5.47E-05
9	D52	60	Passenger Truck	570	0.00E+00	9.25E-06	9.80E-07	3.46E+01	5.83E-05	1.49E-01	1.92E-05	1.09E-03	6.29E-03	9.35E-04	1.83E-03	1.19E-03	1.22E-03	2.76E-04	1.72E-04	3.19E-08	6.09E-04	1.85E-04
9	D52	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.22E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.44E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.39E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.48E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.56E-04
9	D52	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.71E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	6.99E-04
9	D53	60	Passenger Car	242	0.00E+00	3.10E-06	3.37E-07	1.10E+01	2.20E-05	6.18E-02	6.99E-06	2.49E-04	2.45E-03	3.66E-04	6.81E-04	4.39E-04	4.51E-04	4.80E-05	5.54E-05	1.16E-08	2.30E-04	3.89E-05
9	D53	60	Passenger Truck	406	0.00E+00	6.58E-06	6.97E-07	2.46E+01	4.15E-05	1.06E-01	1.36E-05	7.76E-04	4.47E-03	6.65E-04	1.30E-03	8.46E-04	8.67E-04	1.97E-04	1.22E-04	2.27E-08	4.34E-04	1.31E-04
9	D53	60	Single Unit Short Haul Truck	22	0.00E+00	4.92E-06	2.03E-07	3.66E+00	3.26E-06	6.45E-03	5.32E-06	1.88E-03	5.07E-04	8.52E-05	6.56E-04	1.26E-04	1.29E-04	3.71E-04	1.49E-05	6.15E-09	5.27E-04	3.52E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	8.82E-09	1.56E-01	1.41E-07	2.74E-04	2.32E-07	8.15E-05	2.28E-05	3.78E-06	2.87E-05	5.49E-06	5.60E-06	1.58E-05	6.37E-07	2.62E-10	2.31E-05	1.53E-05
9	D53	60	Combination Short Haul Truck	12	0.00E+00	3.51E-06	2.58E-07	4.24E+00	9.62E-09	5.25E-03	2.52E-06	5.34E-03	6.13E-04	9.58E-05	2.16E-04	7.54E-05	7.83E-05	6.73E-04	1.42E-05	0.00E+00	1.38E-04	1.01E-03
9	D53	60	Combination Long Haul Truck	11	0.00E+00	4.82E-06	2.64E-07	4.00E+00	3.26E-08	6.30E-03	4.03E-06	5.69E-03	6.43E-04	9.29E-05	4.58E-04	8.61E-05	8.97E-05	6.42E-04	1.34E-05	0.00E+00	3.68E-04	1.07E-03
9	D54	60	Passenger Car	470	0.00E+00	6.01E-06	6.53E-07	2.14E+01	4.27E-05	1.20E-01	1.36E-05	4.84E-04	4.75E-03	7.11E-04	1.32E-03	8.52E-04	8.75E-04	9.32E-05	1.07E-04	2.26E-08	4.47E-04	7.55E-05
9	D54	60	Passenger Truck	787	0.00E+00	1.28E-05	1.35E-06	4.77E+01	8.05E-05	2.05E-01	2.65E-05	1.50E-03	8.67E-03	1.29E-03	2.52E-03	1.64E-03	1.68E-03	3.81E-04	2.37E-04	4.40E-08	8.41E-04	2.55E-04
9	D54	60	Single Unit Short Haul Truck	25	0.00E+00	5.56E-06	2.30E-07	4.14E+00	3.68E-06	7.29E-03	6.01E-06	2.13E-03	5.73E-04	9.63E-05	7.42E-04	1.43E-04	1.46E-04	4.20E-04	1.69E-05	6.96E-09	5.96E-04	3.98E-04
9	D54	60	Single Unit Long Haul Truck	1	0.00E+00	2.43E-07	9.97E-09	1.77E-01	1.60E-07	3.09E-04	2.62E-07	9.22E-05	2.57E-05	4.27E-06	3.24E-05	6.21E-06	6.33E-06	1.78E-05	7.21E-07	2.96E-10	2.61E-05	1.73E-05
9	D54	60	Combination Short Haul Truck	9	0.00E+00	2.59E-06	1.91E-07	3.13E+00	7.11E-09	3.88E-03	1.86E-06	3.95E-03	4.53E-04	7.08E-05	1.60E-04	5.58E-05	5.79E-05	4.98E-04	1.05E-05	0.00E+00	1.02E-04	7.44E-04
9	D54	60	Combination Long Haul Truck	8	0.00E+00	3.57E-06	1.95E-07	2.96E+00	2.41E-08	4.66E-03	2.98E-06	4.20E-03	4.75E-04	6.87E-05	3.38E-04	6.36E-05	6.63E-05	4.75E-04	9.91E-06	0.00E+00	2.72E-04	7.92E-04
11	D55	80	Passenger Car	630	0.00E+00	6.55E-06	7.11E-07	2.67E+01	4.65E-05	1.35E-01	1.48E-05	6.54E-04	3.44E-03	5.75E-04	1.44E-03	9.28E-04	9.53E-04	9.37E-05	1.34E-04	2.87E-08	4.87E-04	1.02E-04
11	D55	80	Passenger Truck	1056	0.00E+00	1.35E-05	1.44E-06	6.02E+01	8.77E-05	2.38E-01	2.86E-05	1.76E-03	6.12E-03	1.02E-03	2.74E-03	1.78E-03	1.82E-03	4.33E-04	3.01E-04	5.47E-08	9.18E-04	2.93E-04
11	D55	80	Single Unit Short Haul Truck	64	0.00E+00	8.81E-06	3.44E-07	1.05E+01	5.97E-06	1.91E-02	9.68E-06	3.65E-03	7.21E-04	1.47E-04	1.21E-03	2.25E-04	2.29E-04	1.07E-03	4.27E-05	1.69E-08	9.84E-04	6.82E-04
11	D55	80	Single Unit Long Haul Truck	3	0.00E+00	3.83E-07	1.48E-08	4.45E-01	2.54E-07	7.96E-04	4.20E-07	1.56E-04	3.31E-05	6.54E-06	5.29E-05	9.64E-06	9.83E-06	4.50E-05	1.81E-06	7.06E-10	4.30E-05	2.92E-05
11	D55	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.22E-03
11	D55	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.26E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.37E-03
11	D56	80	Passenger Car	321	0.00E+00	3.33E-06	3.62E-07	1.36E+01	2.36E-05	6.85E-02	7.51E-06	3.33E-04	1.75E-03	2.93E-04	7.33E-04	4.72E-04	4.85E-04	4.77E-05	6.84E-05	1.46E-08	2.48E-04	5.19E-05
11	D56	80	Passenger Truck	537	0.00E+00	6.86E-06	7.31E-07	3.06E+01	4.46E-05	1.21E-01	1.45E-05	8.97E-04	3.11E-03	5.18E-04	1.39E-03	9.05E-04	9.28E-04	2.21E-04	1.53E-04	2.78E-08	4.67E-04	1.49E-04
11	D56	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.56E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.79E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.09E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	D56	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.79E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.47E-03
11	D56	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.33E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.57E-03
11	D57	80	Passenger Car	575	0.00E+00	5.98E-06	6.49E-07	2.43E+01	4.24E-05	1.23E-01	1.35E-05	5.97E-04	3.14E-03	5.25E-04	1.31E-03	8.47E-04	8.70E-04	8.55E-05	1.23E-04	2.62E-08	4.45E-04	9.31E-05
11	D57	80	Passenger Truck	964	0.00E+00	1.23E-05	1.31E-06	5.50E+01	8.00E-05	2.17E-01	2.61E-05	1.61E-03	5.58E-03	9.30E-04	2.50E-03	1.62E-03	1.66E-03	3.96E-04	2.75E-04	4.99E-08	8.38E-04	2.68E-04
11	D57	80	Single Unit Short Haul Truck	112	0.00E+00	1.54E-05	6.00E-07	1.84E+01	1.04E-05	3.34E-02	1.69E-05	6.38E-03	1.26E-03	2.58E-04	2.12E-03	3.92E-04	4.00E-04	1.87E-03	7.46E-05	2.96E-08	1.72E-03	1.19E-03
11	D57	80	Single Unit Long Haul Truck	5	0.00E+00	6.68E-07	2.58E-08	7.76E-01	4.44E-07	1.39E-03	7.34E-07	2.72E-04	5.77E-05	1.14E-05	9.23E-05	1.68E-05	1.72E-05	7.85E-05	3.16E-06	1.23E-09	7.52E-05	5.09E-05
11	D57	80	Combination Short Haul Truck	61	0.00E+00	1.25E-05	9.26E-07	2.03E+01	3.27E-08	1.91E-02	8.94E-06	1.92E-02	1.45E-03	2.62E-04	7.58E-04	2.70E-04	2.80E-04	3.23E-03	6.80E-05	0.00E+00	4.78E-04	3.62E-03
11	D57	80	Combination Long Haul Truck	55	0.00E+00	1.74E-05	9.83E-07	1.89E+01	1.11E-07	2.26E-02	1.44E-05	2.06E-02	1.50E-03	2.39E-04	1.60E-03	3.17E-04	3.30E-04	3.03E-03	6.33E-05	0.00E+00	1.27E-03	3.87E-03
11	D58	80	Passenger Car	641	0.00E+00	6.66E-06	7.23E-07	2.71E+01	4.72E-05	1.37E-01	1.50E-05	6.64E-04	3.49E-03	5.85E-04	1.46E-03	9.44E-04	9.68E-04	9.53E-05	1.37E-04	2.92E-08	4.95E-04	1.04E-04
11	D58	80	Passenger Truck	1073	0.00E+00	1.37E-05	1.46E-06	6.12E+01	8.91E-05	2.42E-01	2.90E-05	1.79E-03	6.22E-03	1.04E-03	2.79E-03	1.81E-03	1.85E-03	4.41E-04	3.06E-04	5.56E-08	9.33E-04	2.98E-04
11	D58	80	Single Unit Short Haul Truck	51	0.00E+00	6.97E-06	2.72E-07	8.32E+00	4.72E-06	1.51E-02	7.66E-06	2.89E-03	5.70E-04	1.17E-04	9.59E-04	1.78E-04	1.81E-04	8.47E-04	3.38E-05	1.34E-08	7.78E-04	5.40E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	3.03E-07	1.17E-08	3.52E-01	2.01E-07	6.29E-04	3.33E-07	1.23E-04	2.62E-05	5.18E-06	4.18E-05	7.62E-06	7.78E-06	3.56E-05	1.43E-06	5.59E-10	3.41E-05	2.31E-05
11	D58	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.29E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.75E-03
11	D58	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.92E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.87E-03
11	D59	80	Passenger Car	575	0.00E+00	5.98E-06	6.49E-07	2.43E+01	4.24E-05	1.23E-01	1.35E-05	5.97E-04	3.14E-03	5.25E-04	1.31E-03	8.47E-04	8.70E-04	8.55E-05	1.23E-04	2.62E-08	4.45E-04	9.31E-05
11	D59	80	Passenger Truck	964	0.00E+00	1.23E-05	1.31E-06	5.50E+01	8.00E-05	2.17E-01	2.61E-05	1.61E-03	5.58E-03	9.30E-04	2.50E-03	1.62E-03	1.66E-03	3.96E-04	2.75E-04	4.99E-08	8.38E-04	2.68E-04
11	D59	80	Single Unit Short Haul Truck	112	0.00E+00	1.54E-05	6.00E-07	1.84E+01	1.04E-05	3.34E-02	1.69E-05	6.38E-03	1.26E-03	2.58E-04	2.12E-03	3.92E-04	4.00E-04	1.87E-03	7.46E-05	2.96E-08	1.72E-03	1.19E-03
11	D59	80	Single Unit Long Haul Truck	5	0.00E+00	6.68E-07	2.58E-08	7.76E-01	4.44E-07	1.39E-03	7.34E-07	2.72E-04	5.77E-05	1.14E-05	9.23E-05	1.68E-05	1.72E-05	7.85E-05	3.16E-06	1.23E-09	7.52E-05	5.09E-05
11	D59	80	Combination Short Haul Truck	61	0.00E+00	1.25E-05	9.26E-07	2.03E+01	3.27E-08	1.91E-02	8.94E-06	1.92E-02	1.45E-03	2.62E-04	7.58E-04	2.70E-04	2.80E-04	3.23E-03	6.80E-05	0.00E+00	4.78E-04	3.62E-03
11	D59	80	Combination Long Haul Truck	55	0.00E+00	1.74E-05	9.83E-07	1.89E+01	1.11E-07	2.26E-02	1.44E-05	2.06E-02	1.50E-03	2.39E-04	1.60E-03	3.17E-04	3.30E-04	3.03E-03	6.33E-05	0.00E+00	1.27E-03	3.87E-03
11	D60	80	Passenger Car	641	0.00E+00	6.66E-06	7.23E-07	2.71E+01	4.72E-05	1.37E-01	1.50E-05	6.64E-04	3.49E-03	5.85E-04	1.46E-03	9.44E-04	9.68E-04	9.53E-05	1.37E-04	2.92E-08	4.95E-04	1.04E-04
11	D60	80	Passenger Truck	1073	0.00E+00	1.37E-05	1.46E-06	6.12E+01	8.91E-05	2.42E-01	2.90E-05	1.79E-03	6.22E-03	1.04E-03	2.79E-03	1.81E-03	1.85E-03	4.41E-04	3.06E-04	5.56E-08	9.33E-04	2.98E-04
11	D60	80	Single Unit Short Haul Truck	51	0.00E+00	6.97E-06	2.72E-07	8.32E+00	4.72E-06	1.51E-02	7.66E-06	2.89E-03	5.70E-04	1.17E-04	9.59E-04	1.78E-04	1.81E-04	8.47E-04	3.38E-05	1.34E-08	7.78E-04	5.40E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	3.03E-07	1.17E-08	3.52E-01	2.01E-07	6.29E-04	3.33E-07	1.23E-04	2.62E-05	5.18E-06	4.18E-05	7.62E-06	7.78E-06	3.56E-05	1.43E-06	5.59E-10	3.41E-05	2.31E-05
11	D60	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.29E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.75E-03
11	D60	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.92E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.87E-03
11	D61	80	Passenger Car	72	0.00E+00	7.46E-07	8.10E-08	3.04E+00	5.29E-06	1.53E-02	1.68E-06	7.44E-05	3.91E-04	6.55E-05	1.64E-04	1.06E-04	1.08E-04	1.07E-05	1.53E-05	3.27E-09	5.55E-05	1.16E-05
11	D61

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D65	80	Passenger Car	264	0.00E+00	2.75E-06	2.98E-07	1.12E+01	1.95E-05	5.64E-02	6.19E-06	2.74E-04	1.44E-03	2.41E-04	6.04E-04	3.89E-04	3.99E-04	3.93E-05	5.64E-05	1.21E-08	2.04E-04	4.28E-05
11	D65	80	Passenger Truck	443	0.00E+00	5.65E-06	6.03E-07	2.52E+01	3.68E-05	9.97E-02	1.20E-05	7.39E-04	2.57E-03	4.27E-04	1.15E-03	7.46E-04	7.64E-04	1.82E-04	1.26E-04	2.29E-08	3.85E-04	1.23E-04
11	D65	80	Single Unit Short Haul Truck	104	0.00E+00	1.43E-05	5.59E-07	1.71E+01	9.71E-06	3.11E-02	1.57E-05	5.94E-03	1.17E-03	2.40E-04	1.97E-03	3.65E-04	3.72E-04	1.74E-03	6.95E-05	2.76E-08	1.60E-03	1.11E-03
11	D65	80	Single Unit Long Haul Truck	5	0.00E+00	6.22E-07	2.40E-08	7.23E-01	4.14E-07	1.29E-03	6.84E-07	2.54E-04	5.38E-05	1.06E-05	8.60E-05	1.57E-05	1.60E-05	7.31E-05	2.94E-06	1.15E-09	7.00E-05	4.74E-05
11	D65	80	Combination Short Haul Truck	51	0.00E+00	1.05E-05	7.74E-07	1.70E+01	2.74E-08	1.59E-02	7.47E-06	1.61E-02	1.21E-03	2.19E-04	6.34E-04	2.26E-04	2.34E-04	2.70E-03	5.69E-05	0.00E+00	4.00E-04	3.03E-03
11	D65	80	Combination Long Haul Truck	46	0.00E+00	1.46E-05	8.22E-07	1.58E+01	9.26E-08	1.89E-02	1.20E-05	1.72E-02	1.25E-03	2.00E-04	1.33E-03	2.65E-04	2.76E-04	2.53E-03	5.29E-05	0.00E+00	1.06E-03	3.24E-03
11	D66	80	Passenger Car	526	0.00E+00	5.47E-06	5.94E-07	2.23E+01	3.88E-05	1.12E-01	1.23E-05	5.46E-04	2.87E-03	4.80E-04	1.20E-03	7.75E-04	7.96E-04	7.83E-05	1.12E-04	2.40E-08	4.07E-04	8.52E-05
11	D66	80	Passenger Truck	882	0.00E+00	1.13E-05	1.20E-06	5.03E+01	7.32E-05	1.99E-01	2.39E-05	1.47E-03	5.11E-03	8.51E-04	2.29E-03	1.49E-03	1.52E-03	3.62E-04	2.51E-04	4.57E-08	7.67E-04	2.45E-04
11	D66	80	Single Unit Short Haul Truck	76	0.00E+00	1.04E-05	4.05E-07	1.24E+01	7.04E-06	2.25E-02	1.14E-05	4.31E-03	8.50E-04	1.74E-04	1.43E-03	2.65E-04	2.70E-04	1.26E-03	5.04E-05	2.00E-08	1.16E-03	8.05E-04
11	D66	80	Single Unit Long Haul Truck	3	0.00E+00	4.51E-07	1.74E-08	5.24E-01	3.00E-07	9.38E-04	4.96E-07	1.84E-04	3.90E-05	7.71E-06	6.23E-05	1.14E-05	1.16E-05	5.30E-05	2.13E-06	8.33E-10	5.08E-05	3.44E-05
11	D66	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.59E-03
11	D66	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.47E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.77E-03
11	D67	80	Passenger Car	264	0.00E+00	2.75E-06	2.98E-07	1.12E+01	1.95E-05	5.64E-02	6.19E-06	2.74E-04	1.44E-03	2.41E-04	6.04E-04	3.89E-04	3.99E-04	3.93E-05	5.64E-05	1.21E-08	2.04E-04	4.28E-05
11	D67	80	Passenger Truck	443	0.00E+00	5.65E-06	6.03E-07	2.52E+01	3.68E-05	9.97E-02	1.20E-05	7.39E-04	2.57E-03	4.27E-04	1.15E-03	7.46E-04	7.64E-04	1.82E-04	1.26E-04	2.29E-08	3.85E-04	1.23E-04
11	D67	80	Single Unit Short Haul Truck	104	0.00E+00	1.43E-05	5.59E-07	1.71E+01	9.71E-06	3.11E-02	1.57E-05	5.94E-03	1.17E-03	2.40E-04	1.97E-03	3.65E-04	3.72E-04	1.74E-03	6.95E-05	2.76E-08	1.60E-03	1.11E-03
11	D67	80	Single Unit Long Haul Truck	5	0.00E+00	6.22E-07	2.40E-08	7.23E-01	4.14E-07	1.29E-03	6.84E-07	2.54E-04	5.38E-05	1.06E-05	8.60E-05	1.57E-05	1.60E-05	7.31E-05	2.94E-06	1.15E-09	7.00E-05	4.74E-05
11	D67	80	Combination Short Haul Truck	51	0.00E+00	1.05E-05	7.74E-07	1.70E+01	2.74E-08	1.59E-02	7.47E-06	1.61E-02	1.21E-03	2.19E-04	6.34E-04	2.26E-04	2.34E-04	2.70E-03	5.69E-05	0.00E+00	4.00E-04	3.03E-03
11	D67	80	Combination Long Haul Truck	46	0.00E+00	1.46E-05	8.22E-07	1.58E+01	9.26E-08	1.89E-02	1.20E-05	1.72E-02	1.25E-03	2.00E-04	1.33E-03	2.65E-04	2.76E-04	2.53E-03	5.29E-05	0.00E+00	1.06E-03	3.24E-03
11	D68	80	Passenger Car	526	0.00E+00	5.47E-06	5.94E-07	2.23E+01	3.88E-05	1.12E-01	1.23E-05	5.46E-04	2.87E-03	4.80E-04	1.20E-03	7.75E-04	7.96E-04	7.83E-05	1.12E-04	2.40E-08	4.07E-04	8.52E-05
11	D68	80	Passenger Truck	882	0.00E+00	1.13E-05	1.20E-06	5.03E+01	7.32E-05	1.99E-01	2.39E-05	1.47E-03	5.11E-03	8.51E-04	2.29E-03	1.49E-03	1.52E-03	3.62E-04	2.51E-04	4.57E-08	7.67E-04	2.45E-04
11	D68	80	Single Unit Short Haul Truck	76	0.00E+00	1.04E-05	4.05E-07	1.24E+01	7.04E-06	2.25E-02	1.14E-05	4.31E-03	8.50E-04	1.74E-04	1.43E-03	2.65E-04	2.70E-04	1.26E-03	5.04E-05	2.00E-08	1.16E-03	8.05E-04
11	D68	80	Single Unit Long Haul Truck	3	0.00E+00	4.51E-07	1.74E-08	5.24E-01	3.00E-07	9.38E-04	4.96E-07	1.84E-04	3.90E-05	7.71E-06	6.23E-05	1.14E-05	1.16E-05	5.30E-05	2.13E-06	8.33E-10	5.08E-05	3.44E-05
11	D68	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.59E-03
11	D68	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.47E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.77E-03
11	D69	80	Passenger Car	121	0.00E+00	1.26E-06	1.37E-07	5.12E+00	8.93E-06	2.59E-02	2.84E-06	1.26E-04	6.60E-04	1.11E-04	2.77E-04	1.78E-04	1.83E-04	1.80E-05	2.58E-05	5.52E-09	9.36E-05	1.96E-05
11	D69	80	Passenger Truck	203	0.00E+00	2.59E-06	2.76E-07	1.16E+01	1.68E-05	4.57E-02	5.49E-06	3.39E-04	1.18E-03	1.96E-04	5.27E-04	3.42E-04	3.50E-04	8.33E-05	5.78E-05	1.05E-08	1.76E-04	5.64E-05
11	D69	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.40E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.48E-04
11	D69	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.02E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.91E-05
11	D69	80	Combination Short Haul Truck	20	0.00E+00	4.10E-06	3.03E-07	6.66E+00	1.07E-08	6.24E-03	2.93E-06	6.30E-03	4.74E-04	8.59E-05	2.48E-04	8.85E-05	9.18E-05	1.06E-03	2.23E-05	0.00E+00	1.57E-04	1.19E-03
11	D69	80	Combination Long Haul Truck	18	0.00E+00	5.71E-06	3.22E-07	6.19E+00	3.63E-08	7.39E-03	4.71E-06	6.73E-03	4.90E-04	7.84E-05	5.23E-04	1.04E-04	1.08E-04	9.93E-04	2.07E-05	0.00E+00	4.15E-04	1.27E-03
11	D70	80	Passenger Car	192	0.00E+00	2.00E-06	2.17E-07	8.13E+00	1.42E-05	4.10E-02	4.50E-06	1.99E-04	1.05E-03	1.75E-04	4.39E-04	2.83E-04	2.90E-04	2.86E-05	4.10E-05	8.76E-09	1.48E-04	3.11E-05
11	D70	80	Passenger Truck	322	0.00E+00	4.11E-06	4.38E-07	1.84E+01	2.67E-05	7.25E-02	8.71E-06	5.37E-04	1.87E-03	3.11E-04	8.36E-04	5.42E-04	5.56E-04	1.32E-04	9.17E-05	1.67E-08	2.80E-04	8.94E-05
11	D70	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.36E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.68E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	D70	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	5.97E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.12E-03
11	D70	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.38E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.20E-03
10	D71	70	Passenger Car	276	0.00E+00	3.08E-06	3.34E-07	1.20E+01	2.18E-05	6.17E-02	6.94E-06	2.79E-04	2.13E-03	3.31E-04	6.77E-04	4.36E-04	4.48E-04	4.69E-05	6.05E-05	1.26E-08	2.29E-04	4.35E-05
10	D71	70	Passenger Truck	462	0.00E+00	6.48E-06	6.88E-07	2.71E+01	4.15E-05	1.09E-01	1.36E-05	8.11E-04	3.85E-03	5.95E-04	1.30E-03	8.44E-04	8.65E-04	2.05E-04	1.35E-04	2.42E-08	4.34E-04	1.36E-04
10	D71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.63E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.05E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	D71	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.01E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.56E-04
10	D71	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.29E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.09E-04
10	D72	70	Passenger Car	273	0.00E+00	3.05E-06	3.31E-07	1.19E+01	2.16E-05	6.11E-02	6.87E-06	2.76E-04	2.11E-03	3.28E-04	6.70E-04	4.32E-04	4.44E-04	4.64E-05	5.99E-05	1.24E-08	2.27E-04	4.31E-05
10	D72	70	Passenger Truck	458	0.00E+00	6.42E-06	6.82E-07	2.68E+01	4.11E-05	1.08E-01	1.34E-05	8.03E-04	3.81E-03	5.90E-04	1.29E-03	8.36E-04	8.56E-04	2.03E-04	1.34E-04	2.39E-08	4.30E-04	1.35E-04
10	D72	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.21E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.13E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.50E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
10	D72	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.02E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.51E-03
10	D72	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.59E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.62E-03
10	D73	70	Passenger Car	196	0.00E+00	2.18E-06	2.37E-07	8.52E+00	1.55E-05	4.37E-02	4.92E-06	1.98E-04	1.51E-03	2.35E-04	4.80E-04	3.09E-04	3.17E-04	3.32E-05	4.29E-05	8.90E-09	1.62E-04	3.09E-05
10	D73	70	Passenger Truck	327	0.00E+00	4.59E-06	4.88E-07	1.92E+01	2.94E-05	7.72E-02	9.62E-06	5.75E-04	2.73E-03	4.22E-04	9.20E-04	5.98E-04	6.13E-04	1.45E-04	9.56E-05	1.71E-08	3.07E-04	9.65E-05
10	D73	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.01E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.51E-05
10	D73	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.20E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	D73	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	D74	70	Passenger Car	207	0.00E+00	2.31E-06	2.51E-07	9.01E+00	1.64E-05	4.62E-02	5.20E-06	2.09E-04	1.59E-03	2.48E-04	5.07E-04	3.27E-04	3.36E-04	3.51E-05	4.53E-05	9.41E-09	1.72E-04	3.26E-05
10	D74	70	Passenger Truck	346	0.00E+00	4.85E-06	5.16E-07	2.03E+01	3.11E-05	8.17E-02	1.02E-05	6.08E-04	2.88E-03	4.46E-04	9.73E-04	6.32E-04	6.48E-04	1.54E-04	1.01E-04	1.81E-08	3.25E-04	1.02E-04
10	D74	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.00E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.32E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.08E-06
10	D74	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.61E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.69E-04
10	D74	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.94E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.30E-04
11	D75	80	Passenger Car	168	0.00E+00	1.75E-06	1.90E-07	7.12E+00	1.24E-05	3.59E-02	3.94E-06	1.74E-04	9.17E-04	1.54E-04	3.84E-04	2.48E-04	2.54E-04	2.50E-05	3.59E-05	7.67E-09	1.30E-04	2.72E-05
11	D75	80	Passenger Truck	282	0.00E+00	3.60E-06	3.84E-07	1.61E+01	2.34E-05	6.34E-02	7.62E-06	4.70E-04	1.63E-03	2.72E-04	7.32E-04	4.75E-04	4.87E-04	1.16E-04	8.03E-05	1.46E-08	2.45E-04	7.83E-05
11	D75	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.12E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.57E-06
11	D75	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.25E-04
11	D75	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.54E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.68E-04
11	D76	80	Passenger Car	192	0.00E+00	1.99E-06	2.16E-07	8.11E+00	1.41E-05	4.09E-02	4.49E-06	1.99E-04	1.05E-03	1.75E-04	4.38E-04	2.82E-04	2.90E-04	2.85E-05	4.09E-05	8.74E-09	1.48E-04	3.10E-05
11	D76	80	Passenger Truck	321	0.00E+00	4.10E-06	4.37E-07	1.83E+01	2.67E-05	7.23E-02	8.69E-06	5.36E-04	1.86E-03	3.10E-04	8.34E-04	5.41E-04	5.55E-04	1.32E-04	9.15E-05	1.66E-08	2.79E-04	8.93E-05
11	D76	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.97E-04
11	D76	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.08E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D76	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.47E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	D76	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.91E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
11	D77	80	Passenger Car	93	0.00E+00	9.63E-07	1.05E-07	3.92E+00	6.83E-06	1.98E-02	2.17E-06	9.61E-05	5.05E-04	8.46E-05	2.12E-04	1.37E-04	1.40E-04	1.38E-05	1.98E-05	4.23E-09	7.16E-05	1.50E-05
11	D77	80	Passenger Truck	155	0.00E+00	1.98E-06	2.11E-07	8.86E+00	1.29E-05	3.50E-02	4.20E-06	2.59E-04	9.00E-04	1.50E-04	4.03E-04	2.62E-04	2.68E-04	6.38E-05	4.43E-05	8.05E-09	1.35E-04	4.32E-05
11	D77	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.75E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.29E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
11	D77	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.98E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.50E-04
11	D77	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.25E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.01E-04
11	D78	80	Passenger Car	205	0.00E+00	2.13E-06	2.31E-07	8.67E+00	1.51E-05	4.37E-02	4.80E-06	2.12E-04	1.12E-03	1.87E-04	4.68E-04	3.02E-04	3.10E-04	3.05E-05	4.37E-05	9.34E-09	1.58E-04	3.31E-05
11	D78	80	Passenger Truck	343	0.00E+00	4.38E-06	4.67E-07	1.96E+01	2.85E-05	7.73E-02	9.28E-06	5.73E-04	1.99E-03	3.31E-04	8.91E-04	5.78E-04	5.92E-04	1.41E-04	9.78E-05	1.78E-08	2.98E-04	9.54E-05
11	D78	80	Single Unit Short Haul Truck	84	0.00E+00	1.16E-05	4.52E-07	1.38E+01	7.84E-06	2.51E-02	1.27E-05	4.80E-03	9.47E-04	1.94E-04	1.59E-03	2.95E-04	3.01E-04	1.41E-03	5.61E-05	2.23E-08	1.29E-03	8.96E-04
11	D78	80	Single Unit Long Haul Truck	4	0.00E+00	5.02E-07	1.94E-08	5.84E-01	3.34E-07	1.05E-03	5.52E-07	2.05E-04	4.34E-05	8.59E-06	6.94E-05	1.27E-05	1.29E-05	5.90E-05	2.38E-06	9.27E-10	5.65E-05	3.83E-05
11	D78	80	Combination Short Haul Truck	46	0.00E+00	9.49E-06	7.02E-07	1.54E+01	2.48E-08	1.45E-02	6.78E-06	1.46E-02	1.10E-03	1.99E-04	5.75E-04	2.05E-04	2.13E-04	2.45E-03	5.16E-05	0.00E+00	3.63E-04	2.75E-03
11	D78	80	Combination Long

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D83	80	Single Unit Short Haul Truck	181	0.00E+00	2.48E-05	9.70E-07	2.97E+01	1.68E-05	5.39E-02	2.73E-05	1.03E-02	2.03E-03	4.16E-04	3.42E-03	6.33E-04	6.46E-04	3.02E-03	1.21E-04	4.78E-08	2.78E-03	1.92E-03
11	D83	80	Single Unit Long Haul Truck	8	0.00E+00	1.08E-06	4.16E-08	1.25E+00	7.17E-07	2.24E-03	1.19E-06	4.40E-04	9.33E-05	1.85E-05	1.49E-04	2.72E-05	2.77E-05	1.27E-04	5.10E-06	1.99E-09	1.21E-04	8.22E-05
11	D83	80	Combination Short Haul Truck	113	0.00E+00	2.33E-05	1.72E-06	3.79E+01	6.10E-08	3.55E-02	1.66E-05	3.58E-02	2.70E-03	4.88E-04	1.41E-03	5.03E-04	5.22E-04	6.02E-03	1.27E-04	0.00E+00	8.90E-04	6.75E-03
11	D83	80	Combination Long Haul Truck	103	0.00E+00	3.24E-05	1.83E-06	3.52E+01	2.06E-07	4.20E-02	2.68E-05	3.83E-02	2.79E-03	4.46E-04	2.97E-03	5.90E-04	6.15E-04	5.64E-03	1.18E-04	0.00E+00	2.36E-03	7.21E-03
11	D84	80	Passenger Car	792	0.00E+00	8.22E-06	8.93E-07	3.35E+01	5.83E-05	1.69E-01	1.85E-05	8.21E-04	4.31E-03	7.22E-04	1.81E-03	1.17E-03	1.20E-03	1.18E-04	1.69E-04	3.61E-08	6.11E-04	1.28E-04
11	D84	80	Passenger Truck	1325	0.00E+00	1.69E-05	1.80E-06	7.56E+01	1.10E-04	2.98E-01	3.59E-05	2.21E-03	7.68E-03	1.28E-03	3.44E-03	2.23E-03	2.29E-03	5.44E-04	3.78E-04	6.87E-08	1.15E-03	3.68E-04
11	D84	80	Single Unit Short Haul Truck	95	0.00E+00	1.30E-05	5.08E-07	1.55E+01	8.82E-06	2.82E-02	1.43E-05	5.40E-03	1.07E-03	2.18E-04	1.79E-03	3.32E-04	3.38E-04	1.58E-03	6.31E-05	2.50E-08	1.45E-03	1.01E-03
11	D84	80	Single Unit Long Haul Truck	4	0.00E+00	5.65E-07	2.18E-08	6.57E-01	3.76E-07	1.18E-03	6.21E-07	2.30E-04	4.88E-05	9.67E-06	7.81E-05	1.42E-05	1.45E-05	6.64E-05	2.67E-06	1.04E-09	6.36E-05	4.31E-05
11	D84	80	Combination Short Haul Truck	142	0.00E+00	2.93E-05	2.17E-06	4.77E+01	7.68E-08	4.47E-02	2.10E-05	4.51E-02	3.39E-03	6.15E-04	1.78E-03	6.33E-04	6.57E-04	7.58E-03	1.60E-04	0.00E+00	1.12E-03	8.50E-03
11	D84	80	Combination Long Haul Truck	130	0.00E+00	4.08E-05	2.31E-06	4.43E+01	2.60E-07	5.29E-02	3.37E-05	4.82E-02	3.51E-03	5.61E-04	3.74E-03	7.43E-04	7.74E-04	7.10E-03	1.48E-04	0.00E+00	2.97E-03	9.08E-03
11	D85	80	Passenger Car	342	0.00E+00	3.56E-06	3.87E-07	1.45E+01	2.52E-05	7.31E-02	8.02E-06	3.55E-04	1.87E-03	3.13E-04	7.82E-04	5.04E-04	5.18E-04	5.09E-05	7.31E-05	1.56E-08	2.65E-04	5.54E-05
11	D85	80	Passenger Truck	574	0.00E+00	7.32E-06	7.81E-07	3.27E+01	4.76E-05	1.29E-01	1.55E-05	9.58E-04	3.32E-03	5.53E-04	1.49E-03	9.66E-04	9.90E-04	2.36E-04	1.63E-04	2.97E-08	4.99E-04	1.59E-04
11	D85	80	Single Unit Short Haul Truck	152	0.00E+00	2.09E-05	8.16E-07	2.50E+01	1.42E-05	4.54E-02	2.30E-05	8.67E-03	1.71E-03	3.50E-04	2.88E-03	5.33E-04	5.43E-04	2.54E-03	1.01E-04	4.02E-08	2.33E-03	1.62E-03
11	D85	80	Single Unit Long Haul Truck	7	0.00E+00	9.08E-07	3.50E-08	1.05E+00	6.04E-07	1.89E-03	9.98E-07	3.70E-04	7.85E-05	1.55E-05	1.25E-04	2.29E-05	2.33E-05	1.07E-04	4.29E-06	1.68E-09	1.02E-04	6.92E-05
11	D85	80	Combination Short Haul Truck	97	0.00E+00	2.01E-05	1.48E-06	3.26E+01	5.25E-08	3.06E-02	1.43E-05	3.08E-02	2.32E-03	4.21E-04	1.22E-03	4.33E-04	4.50E-04	5.18E-03	1.09E-04	0.00E+00	7.66E-04	5.81E-03
11	D85	80	Combination Long Haul Truck	89	0.00E+00	2.79E-05	1.58E-06	3.03E+01	1.78E-07	3.62E-02	2.30E-05	3.30E-02	2.40E-03	3.84E-04	2.56E-03	5.08E-04	5.29E-04	4.86E-03	1.01E-04	0.00E+00	2.03E-03	6.21E-03
11	D86	80	Passenger Car	799	0.00E+00	8.30E-06	9.02E-07	3.38E+01	5.89E-05	1.71E-01	1.87E-05	8.29E-04	4.36E-03	7.30E-04	1.83E-03	1.18E-03	1.21E-03	1.19E-04	1.71E-04	3.64E-08	6.18E-04	1.29E-04
11	D86	80	Passenger Truck	1339	0.00E+00	1.71E-05	1.82E-06	7.64E+01	1.11E-04	3.01E-01	3.62E-05	2.24E-03	7.76E-03	1.29E-03	3.48E-03	2.25E-03	2.31E-03	5.50E-04	3.81E-04	6.94E-08	1.16E-03	3.72E-04
11	D86	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.41E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.25E-04
11	D86	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.52E-05
11	D86	80	Combination Short Haul Truck	130	0.00E+00	2.68E-05	1.99E-06	4.37E+01	7.03E-08	4.09E-02	1.92E-05	4.13E-02	3.11E-03	5.63E-04	1.63E-03	5.80E-04	6.02E-04	6.94E-03	1.46E-04	0.00E+00	1.03E-03	7.78E-03
11	D86	80	Combination Long Haul Truck	119	0.00E+00	3.74E-05	2.11E-06	4.05E+01	2.38E-07	4.84E-02	3.08E-05	4.41E-02	3.21E-03	5.14E-04	3.43E-03	6.80E-04	7.09E-04	6.50E-03	1.36E-04	0.00E+00	2.72E-03	8.31E-03
11	D87	80	Passenger Car	342	0.00E+00	3.56E-06	3.87E-07	1.45E+01	2.52E-05	7.31E-02	8.02E-06	3.55E-04	1.87E-03	3.13E-04	7.82E-04	5.04E-04	5.18E-04	5.09E-05	7.31E-05	1.56E-08	2.65E-04	5.54E-05
11	D87	80	Passenger Truck	574	0.00E+00	7.32E-06	7.81E-07	3.27E+01	4.76E-05	1.29E-01	1.55E-05	9.58E-04	3.32E-03	5.53E-04	1.49E-03	9.66E-04	9.90E-04	2.36E-04	1.63E-04	2.97E-08	4.99E-04	1.59E-04
11	D87	80	Single Unit Short Haul Truck	152	0.00E+00	2.09E-05	8.16E-07	2.50E+01	1.42E-05	4.54E-02	2.30E-05	8.67E-03	1.71E-03	3.50E-04	2.88E-03	5.33E-04	5.43E-04	2.54E-03	1.01E-04	4.02E-08	2.33E-03	1.62E-03
11	D87	80	Single Unit Long Haul Truck	7	0.00E+00	9.08E-07	3.50E-08	1.05E+00	6.04E-07	1.89E-03	9.98E-07	3.70E-04	7.85E-05	1.55E-05	1.25E-04	2.29E-05	2.33E-05	1.07E-04	4.29E-06	1.68E-09	1.02E-04	6.92E-05
11	D87	80	Combination Short Haul Truck	97	0.00E+00	2.01E-05	1.48E-06	3.26E+01	5.25E-08	3.06E-02	1.43E-05	3.08E-02	2.32E-03	4.21E-04	1.22E-03	4.33E-04	4.50E-04	5.18E-03	1.09E-04	0.00E+00	7.66E-04	5.81E-03
11	D87	80	Combination Long Haul Truck	89	0.00E+00	2.79E-05	1.58E-06	3.03E+01	1.78E-07	3.62E-02	2.30E-05	3.30E-02	2.40E-03	3.84E-04	2.56E-03	5.08E-04	5.29E-04	4.86E-03	1.01E-04	0.00E+00	2.03E-03	6.21E-03
11	D88	80	Passenger Car	799	0.00E+00	8.30E-06	9.02E-07	3.38E+01	5.89E-05	1.71E-01	1.87E-05	8.29E-04	4.36E-03	7.30E-04	1.83E-03	1.18E-03	1.21E-03	1.19E-04	1.71E-04	3.64E-08	6.18E-04	1.29E-04
11	D88	80	Passenger Truck	1339	0.00E+00	1.71E-05	1.82E-06	7.64E+01	1.11E-04	3.01E-01	3.62E-05	2.24E-03	7.76E-03	1.29E-03	3.48E-03	2.25E-03	2.31E-03	5.50E-04	3.81E-04	6.94E-08	1.16E-03	3.72E-04
11	D88	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.41E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.25E-04
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.52E-05
11	D88	80	Combination Short Haul Truck	130	0.00E+00	2.68E-05	1.99E-06	4.37E+01	7.03E-08	4.09E-02	1.92E-05	4.13E-02	3.11E-03	5.63E-04	1.63E-03	5.80E-04	6.02E-04	6.94E-03	1.46E-04	0.00E+00	1.03E-03	7.78E-03
11	D88	80	Combination Long Haul Truck	119	0.00E+00	3.74E-05	2.11E-06	4.05E+01	2.38E-07	4.84E-02	3.08E-05	4.41E-02	3.21E-03	5.14E-04	3.43E-03	6.80E-04	7.09E-04	6.50E-03	1.36E-04	0.00E+00	2.72E-03	8.31E-03
9	D89	60	Passenger Car	98	0.00E+00	1.26E-06	1.37E-07	4.48E+00	8.92E-06	2.51E-02	2.84E-06	1.01E-04	9.93E-04	1.49E-04	2.77E-04	1.78E-04	1.83E-04	1.95E-05	2.25E-05	4.72E-09	9.35E-05	1.58E-05
9	D89	60	Passenger Truck	165	0.00E+00	2.67E-06	2.83E-07	9.99E+00	1.68E-05	4.29E-02	5.54E-06	3.15E-04	1.81E-03	2.70E-04	5.28E-04	3.43E-04	3.52E-04	7.98E-05	4.96E-05	9.20E-09	1.76E-04	5.33E-05
9	D89	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.30E-04
9	D89	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.32E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.95E-06
9	D89	60	Combination Short Haul Truck	14	0.00E+00	4.12E-06	3.03E-07	4.97E+00	1.13E-08	6.16E-03	2.96E-06	6.27E-03	7.19E-04	1.12E-04	2.54E-04	8.86E-05	9.19E-05	7.91E-04	1.66E-05	0.00E+00	1.62E-04	1.18E-03
9	D89	60	Combination Long Haul Truck	13	0.00E+00	5.66E-06	3.09E-07	4.70E+00	3.82E-08	7.40E-03	4.74E-06	6.68E-03	7.54E-04	1.09E-04	5.37E-04	1.01E-04	1.05E-04	7.54E-04	1.57E-05	0.00E+00	4.32E-04	1.26E-03
9	D90	60	Passenger Car	178	0.00E+00	2.28E-06	2.47E-07	8.11E+00	1.62E-05	4.54E-02	5.13E-06	1.83E-04	1.80E-03	2.69E-04	5.00E-04	3.23E-04	3.31E-04	3.53E-05	4.07E-05	8.54E-09	1.69E-04	2.86E-05
9	D90	60	Passenger Truck	298	0.00E+00	4.83E-06	5.12E-07	1.81E+01	3.05E-05	7.77E-02	1.00E-05	5.70E-04	3.28E-03	4.89E-04	9.55E-04	6.22E-04	6.37E-04	1.44E-04	8.98E-05	1.67E-08	3.18E-04	9.65E-05
9	D90	60	Single Unit Short Haul Truck	35	0.00E+00	7.91E-06	3.27E-07	5.90E+00	5.24E-06	1.04E-02	8.56E-06	3.03E-03	8.15E-04	1.37E-04	1.06E-03	2.03E-04	2.07E-04	5.97E-04	2.40E-05	9.90E-09	8.48E-04	5.67E-04
9	D90	60	Single Unit Long Haul Truck	2	0.00E+00	3.45E-07	1.42E-08	2.51E-01	2.27E-07	4.40E-04	3.73E-07	1.31E-04	3.66E-05	6.08E-06	4.62E-05	8.84E-06	9.01E-06	2.54E-05	1.03E-06	4.21E-10	3.71E-05	2.46E-05
9	D90	60	Combination Short Haul Truck	19	0.00E+00	5.50E-06	4.04E-07	6.63E+00	1.51E-08	8.21E-03	3.95E-06	8.36E-03	9.59E-04	1.50E-04	3.39E-04	1.18E-04	1.23E-04	1.05E-03	2.22E-05	0.00E+00	2.16E-04	1.58E-03
9	D90	60	Combination Long Haul Truck	17	0.00E+00	7.55E-06	4.12E-07	6.26E+00	5.10E-08	9.86E-03	6.31E-06	8.90E-03	1.01E-03	1.45E-04	7.16E-04	1.35E-04	1.40E-04	1.01E-03	2.10E-05	0.00E+00	5.76E-04	1.68E-03
10	D91	70	Passenger Car	307	0.00E+00	3.42E-06	3.72E-07	1.34E+01	2.43E-05	6.86E-02	7.71E-06	3.10E-04	2.36E-03	3.68E-04	7.52E-04	4.85E-04	4.98E-04	5.21E-05	6.72E-05	1.40E-08	2.54E-04	4.84E-05
10	D91	70	Passenger Truck	513	0.00E+00	7.20E-06	7.65E-07	3.01E+01	4.61E-05	1.21E-01	1.51E-05	9.01E-04	4.28E-03	6.62E-04	1.44E-03	9.37E-04	9.61E-04	2.28E-04	1.50E-04	2.68E-08	4.82E-04	1.51E-04
10	D91	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.37E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.75E-04
10	D91	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.03E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.54E-06
10	D91	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.78E-04
10	D91	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.04E-04
10	D92	70	Passenger Car	165	0.00E+00	1.83E-06	1.99E-07	7.17E+00	1.30E-05	3.68E-02	4.14E-06	1.66E-04	1.27E-03	1.97E-04	4.03E-04	2.60E-04	2.67E-04	2.80E-05	3.61E-05	7.49E-09	1.36E-04	2.60E-05
10	D92	70	Passenger Truck	275	0.00E+00	3.86E-06	4.10E-07	1.61E+01	2.47E-05	6.50E-02	8.09E-06	4.84E-04	2.29E-03	3.55E-04	7.74E-04	5.03E-04	5.15E-04	1.22E-04	8.04E-05	1.44E-08	2.59E-04	8.12E-05
10	D92	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.68E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.76E-05
10	D92	70	Single Unit Long Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.40E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	D92	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.50E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.83E-04
10	D93	70	Passenger Car	321	0.00E+00	3.58E-06	3.89E-07	1.40E+01	2.54E-05	7.17E-02	8.07E-06	3.24E-04	2.47E-03	3.85E-04	7.87E-04	5.07E-04	5.21E-04	5.45E-05	7.03E-05	1.46E-08	2.66E-04	5.06E-05
10	D93	70	Passenger Truck	537	0.00E+00	7.53E-06	8.00E-07	3.15E+01	4.82E-05	1.27E-01	1.58E-05	9.43E-04	4.47E-03	6.92E-04	1.51E-03	9.81E-04	1.01E-03	2.38E-04	1.57E-04	2.81E-08	5.04E-04	1.58E-04
10	D93	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.01E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.51E-05
10	D93	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.02E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
10	D93	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.59E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	D94	70	Passenger Car	210	0.00E+00	2.35E-06	2.55E-07	9.17E+00	1.67E-05	4.71E-02	5.29E-06	2.13E-04	1.62E-03	2.53E-04	5.16E-04	3.33E-04	3.42E-04	3.58E-05	4.61E-05	9.58E-09	1.75E-04	3.32E-05
10	D94	70	Passenger Truck	353	0.00E+00	4.94E-06	5.25E-07	2.06E+01	3.16E-05	8.32E-02	1.04E-05	6.19E-04	2.94E-03	4.54E-04	9.91E-04	6.44E-04	6.60E-04	1.56E-04	1.03E-04	1.84E-08	3.31E-04	1.04E-04
10	D94	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.69E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	D94	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
10	D94	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
9	E01	60	Passenger Car	223	0.00E+00	2.85E-06	3.10E-07	1.02E+01	2.02E-05	5.68E-02	6.43E-06	2.29E-04	2.25E-03	3.37E-04	6.27E-04	4.04E-04	4.15E-04	4.42E-05	5.09E-05	1.07E-08	2.12E-04	3.58E-05
9	E01	60	Passenger Truck	373	0.00E+00	6.05E-06	6.41E-07	2.26E+01	3.82E-05	9.73E-02	1.25E-05	7.13E-04	4.11E-03	6.12E-04	1.20E-03	7.78E-04	7.98E-04	1.81E-04	1.12E-04	2.09E-08	3.99E-04	1.21E-04
9	E01	60	Single Unit Short Haul Truck	44	0.00E+00	9.84E-06	4.06E-07	7.33E+00	6.52E-06	1.29E-02	1.06E-05	3.76E-03	1.01E-03	1.70E-04	1.31E-03	2.53E-04	2.58E-04	7.43E-04	2.99E-05	1.23E-08	1.05E-03	7.05E-04
9	E01	60	Single Unit Long Haul Truck	2	0.00E+00	4.29E-07	1.76E-08	3.12E-01	2.83E-07	5.47E-04	4.64E-07	1.63E-04	4.55E-05	7.56E-06	5.74E-05	1.10E-05	1.12E-05	3.16E-05	1.27E-06	5.24E-10	4.62E-05	3.05E-05
9	E01	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.82E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.66E-03
9	E01	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.40E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.77E-03
9	E02	60	Passenger Car	267	0.00E+00	3.42E-06	3.71E-07	1.22E+01	2.43E-05	6.82E-02	7.71E-06	2.75E-04	2.70E-03	4.04E-04	7.52E-04	4.85E-04	4.97E-04	5.30E-05	6.11E-05	1.28E-08	2.54E-04	4.29E-05
9	E02	60	Passenger Truck	448	0.00E+00	7.26E-06	7.69E-07	2.71E+01	4.58E-05	1.17E-01	1.51E-05	8.56E-04	4.93E-03	7.34E-04	1.44E-03	9.34E-04	9.57E-04	2.17E-04	1.35E-04	2.50E-08	4.78E-04	1.45E-04
9	E02	60	Single Unit Short Haul Truck	40	0.00E+00	8.98E-06	3.71E-07	6.69E+00	5.95E-06	1.18E-02	9.71E-06	3.44E-03	9.25E-04	1.56E-04	1.20E-03	2.31E-04	2.35E-04	6.78E-04	2.73E-05	1.12E-08	9.63E-04	6.44E-04
9	E02	60	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.61E-08	2.85E-01	2.58E-07	5.00E-04	4.24E-07	1.49E-04	4.16E-05	6.90E-06	5.24E-05	1.00E-05	1.02E-05	2.88E-05	1.16E-06	4.78E-10	4.22E-05	2.79E-05
9	E02	60	Combination Short Haul Truck	29	0.00E+00	8.40E-06	6.17E-07	1.01E+01	2.30E-08	1.25E-02	6.03E-06	1.28E-02	1.47E-03	2.29E-04	5.17E-04	1.80E-04	1.87E-04	1.61E-03	3.39E-05	0.00E+00	3.30E-04	2.41E-03
9	E02	60	Combination Long Haul Truck	26	0.00E+00	1.15E-05	6.30E-07	9.57E+00	7.79E-08	1.51E-02	9.65E-06	1.36E-02	1.54E-03	2.22E-04	1.09E-03	2.06E-04	2.14E-04	1.54E-03	3.21E-05	0.00E+00	8.80E-04	2.56E-03
11	E03	80	Passenger Car	282	0.00E+00	2.92E-06	3.18E-07	1.19E+01	2.08E-05	6.01E-02	6.59E-06	2.92E-04	1.53E-03	2.57E-04	6.43E-04	4.15E-04	4.25E-04	4.19E-05	6.01E-05	1.28E-08	2.18E-04	4.55E-05
11	E03	80	Passenger Truck	471	0.00E+00	6.02E-06	6.42E-07	2.69E+01	3.92E-05	1.06E-01	1.28E-05	7.87E-04	2.73E-03	4.55E-04	1.22E-03	7.94E-04	8.14E-04	1.94E-04	1.34E-04	2.44E-08	4.10E-04	1.31E-04
11	E03	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E07	60	Single Unit Short Haul Truck	98	0.00E+00	2.18E-05	9.01E-07	1.63E+01	1.45E-05	2.86E-02	2.36E-05	8.35E-03	2.25E-03	3.78E-04	2.91E-03	5.61E-04	5.72E-04	1.65E-03	6.62E-05	2.73E-08	2.34E-03	1.56E-03
9	E07	60	Single Unit Long Haul Truck	4	0.00E+00	9.52E-07	3.91E-08	6.93E-01	6.27E-07	1.21E-03	1.03E-06	3.62E-04	1.01E-04	1.68E-05	1.27E-04	2.44E-05	2.48E-05	7.00E-05	2.83E-06	1.16E-09	1.02E-04	6.77E-05
9	E07	60	Combination Short Haul Truck	84	0.00E+00	2.44E-05	1.79E-06	2.95E+01	6.69E-08	3.65E-02	1.75E-05	3.72E-02	4.26E-03	6.67E-04	1.51E-03	5.25E-04	5.45E-04	4.68E-03	9.86E-05	0.00E+00	9.60E-04	7.00E-03
9	E07	60	Combination Long Haul Truck	76	0.00E+00	3.36E-05	1.83E-06	2.78E+01	2.27E-07	4.38E-02	2.81E-05	3.96E-02	4.47E-03	6.46E-04	3.18E-03	5.99E-04	6.24E-04	4.47E-03	9.33E-05	0.00E+00	2.56E-03	7.45E-03
9	E08	60	Passenger Car	867	0.00E+00	1.11E-05	1.20E-06	3.95E+01	7.87E-05	2.21E-01	2.50E-05	8.93E-04	8.76E-03	1.31E-03	2.44E-03	1.57E-03	1.61E-03	1.72E-04	1.98E-04	4.16E-08	8.25E-04	1.39E-04
9	E08	60	Passenger Truck	1452	0.00E+00	2.35E-05	2.49E-06	8.80E+01	1.48E-04	3.79E-01	4.88E-05	2.78E-03	1.60E-02	2.38E-03	4.65E-03	3.03E-03	3.10E-03	7.03E-04	4.38E-04	8.12E-08	1.55E-03	4.70E-04
9	E08	60	Single Unit Short Haul Truck	78	0.00E+00	1.73E-05	7.16E-07	1.29E+01	1.15E-05	2.27E-02	1.87E-05	6.63E-03	1.78E-03	3.00E-04	2.31E-03	4.45E-04	4.54E-04	1.31E-03	5.26E-05	2.17E-08	1.86E-03	1.24E-03
9	E08	60	Single Unit Long Haul Truck	3	0.00E+00	7.56E-07	3.11E-08	5.50E-01	4.98E-07	9.64E-04	8.18E-07	2.87E-04	8.02E-05	1.33E-05	1.01E-04	1.93E-05	1.97E-05	5.56E-05	2.24E-06	9.22E-10	8.13E-05	5.37E-05
9	E08	60	Combination Short Haul Truck	46	0.00E+00	1.33E-05	9.76E-07	1.60E+01	3.64E-08	1.98E-02	9.54E-06	2.02E-02	2.32E-03	3.62E-04	8.18E-04	2.85E-04	2.96E-04	2.55E-03	5.36E-05	0.00E+00	5.22E-04	3.81E-03
9	E08	60	Combination Long Haul Truck	41	0.00E+00	1.82E-05	9.97E-07	1.51E+01	1.23E-07	2.38E-02	1.53E-05	2.15E-02	2.43E-03	3.51E-04	1.73E-03	3.26E-04	3.39E-04	2.43E-03	5.07E-05	0.00E+00	1.39E-03	4.05E-03
9	E09	60	Passenger Car	1141	0.00E+00	1.46E-05	1.59E-06	5.20E+01	1.04E-04	2.91E-01	3.29E-05	1.17E-03	1.15E-02	1.73E-03	3.21E-03	2.07E-03	2.12E-03	2.26E-04	2.61E-04	5.48E-08	1.09E-03	1.83E-04
9	E09	60	Passenger Truck	1910	0.00E+00	3.10E-05	3.28E-06	1.16E+02	1.95E-04	4.98E-01	6.42E-05	3.65E-03	2.10E-02	3.13E-03	6.12E-03	3.98E-03	4.08E-03	9.26E-04	5.76E-04	1.07E-07	2.04E-03	6.19E-04
9	E09	60	Single Unit Short Haul Truck	83	0.00E+00	1.86E-05	7.69E-07	1.39E+01	1.23E-05	2.44E-02	2.01E-05	7.12E-03	1.92E-03	3.22E-04	2.48E-03	4.78E-04	4.88E-04	1.40E-03	5.65E-05	2.33E-08	1.99E-03	1.33E-03
9	E09	60	Single Unit Long Haul Truck	4	0.00E+00	8.12E-07	3.34E-08	5.91E-01	5.35E-07	1.04E-03	8.78E-07	3.08E-04	8.61E-05	1.43E-05	1.09E-04	2.08E-05	2.12E-05	5.97E-05	2.41E-06	9.90E-10	8.73E-05	5.77E-05
9	E09	60	Combination Short Haul Truck	81	0.00E+00	2.37E-05	1.74E-06	2.86E+01	6.48E-08	3.54E-02	1.70E-05	3.60E-02	4.13E-03	6.46E-04	1.46E-03	5.08E-04	5.28E-04	4.54E-03	9.55E-05	0.00E+00	9.30E-04	6.78E-03
9	E09	60	Combination Long Haul Truck	74	0.00E+00	3.25E-05	1.78E-06	2.70E+01	2.19E-07	4.25E-02	2.72E-05	3.83E-02	4.33E-03	6.26E-04	3.08E-03	5.80E-04	6.04E-04	4.33E-03	9.04E-05	0.00E+00	2.48E-03	7.22E-03
9	E10	60	Passenger Car	826	0.00E+00	1.06E-05	1.15E-06	3.76E+01	7.49E-05	2.11E-01	2.38E-05	8.50E-04	8.34E-03	1.25E-03	2.32E-03	1.50E-03	1.54E-03	1.64E-04	1.89E-04	3.96E-08	7.85E-04	1.33E-04
9	E10	60	Passenger Truck	1382	0.00E+00	2.24E-05	2.38E-06	8.38E+01	1.41E-04	3.60E-01	4.65E-05	2.64E-03	1.52E-02	2.27E-03	4.43E-03	2.88E-03	2.95E-03	6.70E-04	4.17E-04	7.73E-08	1.48E-03	4.48E-04
9	E10	60	Single Unit Short Haul Truck	66	0.00E+00	1.48E-05	6.10E-07	1.10E+01	9.78E-06	1.93E-02	1.60E-05	5.65E-03	1.52E-03	2.56E-04	1.97E-03	3.79E-04	3.87E-04	1.11E-03	4.48E-05	1.85E-08	1.58E-03	1.06E-03
9	E10	60	Single Unit Long Haul Truck	3	0.00E+00	6.44E-07	2.65E-08	4.69E-01	4.24E-07	8.21E-04	6.96E-07	2.45E-04	6.83E-05	1.13E-05	8.61E-05	1.65E-05	1.68E-05	4.74E-05	1.91E-06	7.85E-10	6.93E-05	4.58E-05
9	E10	60	Combination Short Haul Truck	41	0.00E+00	1.21E-05	8.86E-07	1.46E+01	3.30E-08	1.80E-02	8.66E-06	1.83E-02	2.10E-03	3.29E-04	7.43E-04	2.59E-04	2.69E-04	2.31E-03	4.87E-05	0.00E+00	4.74E-04	3.46E-03
9	E10	60	Combination Long Haul Truck	38	0.00E+00	1.66E-05	9.05E-07	1.37E+01	1.12E-07	2.16E-02	1.39E-05	1.95E-02	2.21E-03	3.19E-04	1.57E-03	2.96E-04	3.08E-04	2.21E-03	4.61E-05	0.00E+00	1.26E-03	3.68E-03
9	E11	60	Passenger Car	1366	0.00E+00	1.75E-05	1.90E-06	6.22E+01	1.24E-04	3.49E-01	3.94E-05	1.41E-03	1.38E-02	2.07E-03	3.84E-03	2.48E-03	2.54E-03	2.71E-04	3.12E-04	6.56E-08	1.30E-03	2.19E-04
9	E11	60	Passenger Truck	2288	0.00E+00	3.71E-05	3.93E-06	1.39E+02	2.34E-04	5.96E-01	7.69E-05	4.37E-03	2.52E-02	3.75E-03	7.33E-03	4.77E-03	4.89E-03	1.11E-03	6.90E-04	1.28E-07	2.44E-03	7.41E-04
9	E11	60	Single Unit Short Haul Truck	174	0.00E+00	3.89E-05	1.61E-06	2.90E+01	2.58E-05	5.10E-02	4.21E-05	1.49E-02	4.01E-03	6.74E-04	5.19E-03	1.00E-03	1.02E-03	2.94E-03	1.18E-04	4.87E-08	4.17E-03	2.79E-03
9	E11	60	Single Unit Long Haul Truck	8	0.00E+00	1.70E-06	6.98E-08	1.24E+00	1.12E-06	2.17E-03	1.84E-06	6.45E-04	1.80E-04	2.99E-05	2.27E-04	4.35E-05	4.43E-05	1.25E-04	5.04E-06	2.07E-09	1.83E-04	1.21E-04
9	E11	60	Combination Short Haul Truck	110	0.00E+00	3.22E-05	2.37E-06	3.89E+01	8.82E-08	4.81E-02	2.31E-05	4.90E-02	5.62E-03	8.79E-04	1.98E-03	6.92E-04	7.19E-04	6.18E-03	1.30E-04	0.00E+00	1.27E-03	9.23E-03
9	E11	60	Combination Long Haul Truck	101	0.00E+00	4.43E-05	2.42E-06	3.67E+01	2.99E-07	5.78E-02	3.70E-05	5.22E-02	5.89E-03	8.52E-04	4.20E-03	7.90E-04	8.23E-04	5.89E-03	1.23E-04	0.00E+00	3.37E-03	9.83E-03
9	E12	60	Passenger Car	1064	0.00E+00	1.36E-05	1.48E-06	4.85E+01	9.65E-05	2.71E-01	3.07E-05	1.10E-03	1.07E-02	1.61E-03	2.99E-03	1.93E-03	1.98E-03	2.11E-04	2.43E-04	5.11E-08	1.01E-03	1.71E-04
9	E12	60	Passenger Truck	1781	0.00E+00	2.89E-05	3.06E-06	1.08E+02	1.82E-04	4.64E-01	5.99E-05	3.41E-03	1.96E-02	2.92E-03	5.71E-03	3.72E-03	3.81E-03	8.63E-04	5.37E-04	9.96E-08	1.90E-03	5.77E-04
9	E12	60	Single Unit Short Haul Truck	141	0.00E+00	3.14E-05	1.30E-06	2.34E+01	2.08E-05	4.12E-02	3.40E-05	1.20E-02	3.24E-03	5.44E-04	4.19E-03	8.08E-04	8.24E-04	2.37E-03	9.55E-05	3.93E-08	3.37E-03	2.25E-03
9	E12	60	Single Unit Long Haul Truck	6	0.00E+00	1.37E-06	5.64E-08	9.99E-01	9.03E-07	1.75E-03	1.48E-06	5.21E-04	1.45E-04	2.41E-05	1.83E-04	3.51E-05	3.58E-05	1.01E-04	4.07E-06	1.67E-09	1.48E-04	9.75E-05
9	E12	60	Combination Short Haul Truck	128	0.00E+00	3.74E-05	2.75E-06	4.51E+01	1.02E-07	5.59E-02	2.69E-05	5.69E-02	6.53E-03	1.02E-03	2.30E-03	8.04E-04	8.34E-04	7.17E-03	1.51E-04	0.00E+00	1.47E-03	1.07E-02
9	E12	60	Combination Long Haul Truck	117	0.00E+00	5.14E-05	2.81E-06	4.26E+01	3.47E-07	6.71E-02	4.30E-05	6.06E-02	6.84E-03	9.90E-04	4.87E-03	9.17E-04	9.55E-04	6.84E-03	1.43E-04	0.00E+00	3.92E-03	1.14E-02
11	E13	80	Passenger Car	334	0.00E+00	3.46E-06	3.76E-07	1.41E+01	2.46E-05	7.12E-02	7.81E-06	3.46E-04	1.82E-03	3.04E-04	7.62E-04	4.91E-04	5.04E-04	4.96E-05	7.12E-05	1.52E-08	2.58E-04	5.39E-05
11	E13	80	Passenger Truck	558	0.00E+00	7.13E-06	7.60E-07	3.19E+01	4.64E-05	1.26E-01	1.51E-05	9.33E-04	3.24E-03	5.39E-04	1.45E-03	9.41E-04	9.64E-04	2.29E-04	1.59E-04	2.89E-08	4.86E-04	1.55E-04
11	E13	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.78E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.19E-04
11	E13	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.22E-05
11	E13	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.47E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	E13	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.91E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
11	E14	80	Passenger Car	451	0.00E+00	4.68E-06	5.09E-07	1.91E+01	3.32E-05	9.63E-02	1.06E-05	4.68E-04	2.46E-03	4.12E-04	1.03E-03	6.64E-04	6.81E-04	6.70E-05	9.62E-05	2.06E-08	3.48E-04	7.29E-05
11	E14	80	Passenger Truck	755	0.00E+00	9.64E-06	1.03E-06	4.31E+01	6.27E-05	1.70E-01	2.04E-05	1.26E-03	4.38E-03	7.29E-04	1.96E-03	1.27E-03	1.30E-03	3.10E-04	2.15E-04	3.91E-08	6.57E-04	2.10E-04
11	E14	80	Single Unit Short Haul Truck	87	0.00E+00	1.20E-05	4.67E-07	1.43E+01	8.11E-06	2.60E-02	1.31E-05	4.96E-03	9.79E-04	2.00E-04	1.65E-03	3.05E-04	3.11E-04	1.45E-03	5.80E-05	2.30E-08	1.34E-03	9.27E-04
11	E14	80	Single Unit Long Haul Truck	4	0.00E+00	5.20E-07	2.00E-08	6.04E-01	3.45E-07	1.08E-03	5.71E-07	2.12E-04	4.49E-05	8.89E-06	7.18E-05	1.31E-05	1.34E-05	6.11E-05	2.46E-06	9.59E-10	5.85E-05	3.96E-05
11	E14	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.91E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.59E-03
11	E14	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.04E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.84E-03
11	E15	80	Passenger Car	245	0.00E+00	2.54E-06	2.76E-07	1.03E+01	1.80E-05	5.22E-02	5.73E-06	2.54E-04	1.33E-03	2.23E-04	5.58E-04	3.60E-04	3.70E-04	3.64E-05	5.22E-05	1.11E-08	1.89E-04	3.96E-05
11	E15	80	Passenger Truck	409	0.00E+00	5.23E-06	5.57E-07	2.34E+01	3.40E-05	9.22E-02	1.11E-05	6.84E-04	2.37E-03	3.95E-04	1.06E-03	6.90E-04	7.07E-04	1.68E-04	1.17E-04	2.12E-08	3.56E-04	1.14E-04
11	E15	80	Single Unit Short Haul Truck	54	0.00E+00	7.36E-06	2.87E-07	8.79E+00	4.99E-06	1.60E-02	8.09E-06	3.05E-03	6.03E-04	1.23E-04	1.01E-03	1.88E-04	1.91E-04	8.94E-04	3.57E-05	1.42E-08	8.22E-04	5.70E-04
11	E15	80	Single Unit Long Haul Truck	2	0.00E+00	3.20E-07	1.23E-08	3.72E-01	2.13E-07	6.65E-04	3.51E-07	1.30E-04	2.76E-05	5.47E-06	4.42E-05	8.06E-06	8.22E-06	3.76E-05	1.51E-06	5.90E-10	3.60E-05	2.44E-05
11	E15	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	7.96E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.50E-03
11	E15	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.51E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.60E-03
11	E16	80	Passenger Car	399	0.00E+00	4.14E-06	4.50E-07	1.69E+01	2.94E-05	8.51E-02	9.33E-06	4.13E-04	2.17E-03	3.64E-04	9.10E-04	5.87E-04	6.02E-04	5.93E-05	8.50E-05	1.82E-08	3.08E-04	6.45E-05
11	E16	80	Passenger Truck	667	0.00E+00	8.52E-06	9.09E-07	3.81E+01	5.54E-05	1.50E-01	1.81E-05	1.11E-03	3.87E-03	6.44E-04	1.73E-03	1.12E-03	1.15E-03	2.74E-04	1.90E-04	3.46E-08	5.80E-04	1.85E-04
11	E16	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	E16	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.12E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.57E-06
11	E16	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.91E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.59E-03
11	E16	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.04E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.84E-03
11	E17	80	Passenger Car	123	0.00E+00	1.28E-06	1.39E-07	5.20E+00	9.07E-06	2.63E-02	2.88E-06	1.28E-04	6.70E-04	1.12E-04	2.81E-04	1.81E-04	1.86E-04	1.83E-05	2.62E-05	5.61E-09	9.50E-05	1.99E-05
11	E17	80	Passenger Truck	206	0.00E+00	2.63E-06	2.80E-07	1.17E+01	1.71E-05	4.64E-02	5.57E-06	3.44E-04	1.19E-03	1.99E-04	5.35E-04	3.47E-04	3.56E-04	8.46E-05	5.87E-05	1.07E-08	1.79E-04	5.72E-05
11	E17	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.78E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.19E-04
11	E17	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.22E-05
11	E17	80	Combination Short Haul Truck	18	0.00E+00	3.67E-06	2.71E-07	5.96E+00	9.60E-09	5.59E-03	2.62E-06	5.64E-03	4.24E-04	7.69E-05	2.22E-04	7.92E-05	8.22E-05	9.48E-04	1.99E-05	0.00E+00	1.40E-04	1.06E-03
11	E17	80	Combination Long Haul Truck	16	0.00E+00	5.11E-06	2.88E-07	5.53E+00	3.25E-08	6.61E-03	4.21E-06	6.03E-03	4.39E-04	7.02E-05	4.68E-04	9.29E-05	9.68E-05	8.88E-04	1.85E-05	0.00E+00	3.71E-04	1.13E-03
11	E18	80	Passenger Car	287	0.00E+00	2.98E-06	3.24E-07	1.21E+01	2.12E-05	6.13E-02	6.72E-06	2.98E-04	1.57E-03	2.62E-04	6.56E-04	4.23E-04	4.34E-04	4.27E-05	6.13E-05	1.31E-08	2.22E-04	4.64E-05
11	E18	80	Passenger Truck	481	0.00E+00	6.14E-06	6.55E-07	2.74E+01	3.99E-05	1.08E-01	1.30E-05	8.03E-04	2.79E-03	4.64E-04	1.25E-03	8.10E-04	8.30E-04	1.97E-04	1.37E-04	2.49E-08	4.18E-04	1.34E-04
11	E18	80	Single Unit Short Haul Truck	14	0.00E+00	1.97E-06	7.70E-08	2.36E+00	1.34E-06	4.28E-03	2.17E-06	8.17E-04	1.61E-04	3.30E-05	2.71E-04	5.03E-05	5.12E-05	2.40E-04	9.57E-06	3.79E-09	2.20E-04	1.53E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	8.56E-08	3.30E-09	9.95E-02	5.69E-08	1.78E-04	9.41E-08	3.49E-05	7.40E-06	1.46E-06	1.18E-05	2.16E-06	2.20E-06	1.01E-05	4.05E-07	1.58E-10	9.64E-06	6.53E-06
11	E18	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.48E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.56E-04
11	E18	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.72E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.01E-04
9	E19	60	Passenger Car	661	0.00E+00	8.45E-06	9.18E-07	3.01E+01	6.00E-05	1.69E-01	1.90E-05	6.80E-04	6.67E-03	9.99E-04	1.86E-03	1.20E-03	1.23E-03	1.31E-04	1.51E-04	3.17E-08	6.28E-04	1.06E-04
9	E19	60	Passenger Truck	1106	0.00E+00	1.79E-05	1.90E-06	6.71E+01	1.13E-04	2.88E-01	3.72E-05	2.11E-03	1.22E-02	1.81E-03	3.55E-03	2.31E-03	2.36E-03	5.36E-04	3.33E-04	6.18E-08	1.18E-03	3.58E-04
9	E19	60	Single Unit Short Haul Truck	51	0.00E+00	1.13E-05	4.68E-07	8.44E+00	7.51E-06	1.49E-02	1.23E-05	4.34E-03	1.17E-03	1.96E-04	1.51E-03	2.91E-04	2.97E-04	8.56E-04	3.44E-05	1.42E-08	1.22E-03	8.12E-04
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	4.95E-07	2.03E-08	3.60E-01	3.26E-07	6.31E-04	5.35E-07	1.88E-04	5.25E-05	8.70E-06	6.61E-05	1.27E-05	1.29E-05	3.64E-05	1.47E-06	6.03E-10	5.32E-05	3.52E-05
9	E19	60	Combination Short Haul Truck	26	0.00E+00	7.63E-06	5.61E-07	9.21E+00	2.09E-08	1.14E-02	5.48E-06	1.16E-02	1.33E-03	2.08E-04	4.70E-04	1.64E-04	1.70E-04	1.46E-03	3.08E-05	0.00E+00	3.00E-04	2.19E-03
9	E19	60	Combination Long Haul Truck	24	0.00E+00	1.05E-05	5.73E-07	8.70E+00	7.08E-08	1.37E-02	8.77E-06	1.24E-02	1.40E-03	2.02E-04	9.95E-04	1.87E-04	1.95E-04	1.40E-03	2.92E-05	0.00E+00	8.00E-04	2.33E-03
9	E20	60	Passenger Car	496	0.00E+00	6.34E-06	6.89E-07	2.26E+01	4.50E-05	1.27E-01	1.43E-05	5.11E-04	5.01E-03	7.50E-04	1.40E-03	9.00E-04	9.23E-04	9.83E-05	1.13E-04	2.38E-08	4.72E-04	7.97E-05
9	E20	60	Passenger Truck	831	0.00E+00	1.35E-05	1.43E-06	5.04E+01	8.50E-05	2.17E-01	2.79E-05	1.59E-03	9.16E-03	1.36E-03	2.66E-03	1.73E-03	1.78E-03	4.03E-04	2.50E-04	4.64E-08	8.88E-04	2.69E-04
9	E20	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.14E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	E20	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.66E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.98E-05
9	E20	60	Combination Short Haul Truck	25	0.00E+00	7.17E-06	5.27E-07	8.66E+00	1.97E-08	1.07E-02	5.15E-06	1.09E-02	1.25E-03	1.96E-04	4.42E-04	1.54E-04	1.60E-04	1.38E-03	2.90E-05	0.00E+00	2.82E-04	2.06E-03
9	E20	60	Combination Long Haul Truck	22	0.00E+00	9.86E-06	5.39E-07	8.18E+00	6.65E-08	1.29E-02	8.24E-06	1.16E-02	1.31E-03	1.90E-04	9.35E-04	1.76E-04	1.83E-04	1.31E-03	2.74E-05	0.00E+00	7.52E-04	2.19E-03

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E26	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.68E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.76E-05
10	E26	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.21E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.16E-04
10	E26	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.36E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.45E-04
10	E27	70	Passenger Car	245	0.00E+00	2.74E-06	2.97E-07	1.07E+01	1.94E-05	5.49E-02	6.17E-06	2.48E-04	1.89E-03	2.94E-04	6.01E-04	3.88E-04	3.98E-04	4.17E-05	5.38E-05	1.12E-08	2.03E-04	3.87E-05
10	E27	70	Passenger Truck	411	0.00E+00	5.76E-06	6.12E-07	2.41E+01	3.69E-05	9.69E-02	1.21E-05	7.21E-04	3.42E-03	5.29E-04	1.15E-03	7.50E-04	7.69E-04	1.82E-04	1.20E-04	2.15E-08	3.86E-04	1.21E-04
10	E27	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.68E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.76E-05
10	E27	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.21E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.16E-04
10	E27	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.36E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.45E-04
10	E28	70	Passenger Car	200	0.00E+00	2.23E-06	2.42E-07	8.70E+00	1.58E-05	4.47E-02	5.02E-06	2.02E-04	1.54E-03	2.40E-04	4.90E-04	3.16E-04	3.24E-04	3.39E-05	4.38E-05	9.09E-09	1.66E-04	3.15E-05
10	E28	70	Passenger Truck	334	0.00E+00	4.69E-06	4.98E-07	1.96E+01	3.00E-05	7.89E-02	9.82E-06	5.87E-04	2.78E-03	4.31E-04	9.40E-04	6.10E-04	6.26E-04	1.48E-04	9.76E-05	1.75E-08	3.14E-04	9.85E-05
10	E28	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.01E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.51E-05
10	E28	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.78E-04
10	E28	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.04E-04
10	E29	70	Passenger Car	29	0.00E+00	3.21E-07	3.49E-08	1.25E+00	2.28E-06	6.44E-03	7.24E-07	2.91E-05	2.22E-04	3.46E-05	7.06E-05	4.55E-05	4.67E-05	4.89E-06	6.31E-06	1.31E-09	2.39E-05	4.54E-06
10	E29	70	Passenger Truck	48	0.00E+00	6.76E-07	7.18E-08	2.82E+00	4.33E-06	1.14E-02	1.42E-06	8.46E-05	4.02E-04	6.21E-05	1.35E-04	8.80E-05	9.02E-05	2.14E-05	1.41E-05	2.52E-09	4.53E-05	1.42E-05
10	E29	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	E29	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.78E-05
10	E30	70	Passenger Car	244	0.00E+00	2.72E-06	2.96E-07	1.06E+01	1.93E-05	5.46E-02	6.14E-06	2.47E-04	1.88E-03	2.93E-04	5.99E-04	3.86E-04	3.96E-04	4.15E-05	5.35E-05	1.11E-08	2.03E-04	3.85E-05
10	E30	70	Passenger Truck	409	0.00E+00	5.73E-06	6.09E-07	2.39E+01	3.67E-05	9.64E-02	1.20E-05	7.18E-04	3.41E-03	5.27E-04	1.15E-03	7.46E-04	7.65E-04	1.81E-04	1.19E-04	2.14E-08	3.84E-04	1.21E-04
10	E30	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.69E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	E30	70	Combination Short Haul Truck	6	0.00E+00	1.62E-06	1.20E-07	2.18E+00	4.10E-09	2.33E-03	1.15E-06	2.41E-03	2.28E-04	3.80E-05	9.69E-05	3.50E-05	3.63E-05	3.47E-04	7.30E-06	0.00E+00	6.06E-05	4.54E-04
10	E30	70	Combination Long Haul Truck	6	0.00E+00	2.22E-06	1.26E-07	2.05E+00	1.39E-08	2.78E-03	1.82E-06	2.58E-03	2.37E-04	3.57E-05	2.01E-04	4.05E-05	4.22E-05	3.29E-04	6.87E-06	0.00E+00	1.59E-04	4.85E-04
10	E31	70	Passenger Car	67	0.00E+00	7.51E-07	8.16E-08	2.93E+00	5.33E-06	1.51E-02	1.69E-06	6.81E-05	5.18E-04	8.08E-05	1.65E-04	1.06E-04	1.09E-04	1.14E-05	1.48E-05	3.06E-09	5.58E-05	1.06E-05
10	E31	70	Passenger Truck	113	0.00E+00	1.58E-06	1.68E-07	6.60E+00	1.01E-05	2.66E-02	3.31E-06	1.98E-04	9.39E-04	1.45E-04	3.17E-04	2.06E-04	2.11E-04	5.00E-05	3.29E-05	5.89E-09	1.06E-04	3.32E-05
10	E31	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.63E-04
10	E31	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.05E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	E31	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.41E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.42E-04
10	E31	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.65E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.87E-04
10	E32	70	Passenger Car	313	0.00E+00	3.49E-06	3.79E-07	1.36E+01	2.48E-05	7.00E-02	7.87E-06	3.16E-04	2.41E-03	3.76E-04	7.67E-04	4.95E-04	5.08E-04	5.32E-05	6.86E-05	1.42E-08	2.60E-04	4.94E-05
10	E32	70	Passenger Truck	524	0.00E+00	7.35E-06	7.81E-07	3.07E+01	4.70E-05	1.24E-01	1.54E-05	9.20E-04	4.36E-03	6.75E-04	1.47E-03	9.57E-04	9.81E-04	2.32E-04	1.53E-04	2.74E-08	4.92E-04	1.54E-04
10	E32	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.37E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.75E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.03E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.54E-06
10	E32	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.21E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.05E-04
10	E32	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.43E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.47E-04
9	E33	60	Passenger Car	312	0.00E+00	3.99E-06	4.34E-07	1.42E+01	2.83E-05	7.96E-02	9.00E-06	3.21E-04	3.15E-03	4.72E-04	8.78E-04	5.66E-04	5.81E-04	6.19E-05	7.14E-05	1.50E-08	2.97E-04	5.01E-05
9	E33	60	Passenger Truck	523	0.00E+00	8.47E-06	8.98E-07	3.17E+01	5.35E-05	1.36E-01	1.76E-05	9.99E-04	5.76E-03	8.57E-04	1.68E-03	1.09E-03	1.12E-03	2.53E-04	1.58E-04	2.92E-08	5.59E-04	1.69E-04
9	E33	60	Single Unit Short Haul Truck	49	0.00E+00	1.09E-05	4.51E-07	8.13E+00	7.23E-06	1.43E-02	1.18E-05	4.17E-03	1.12E-03	1.89E-04	1.46E-03	2.80E-04	2.86E-04	8.23E-04	3.31E-05	1.36E-08	1.17E-03	7.81E-04
9	E33	60	Single Unit Long Haul Truck	2	0.00E+00	4.76E-07	1.96E-08	3.46E-01	3.13E-07	6.07E-04	5.15E-07	1.81E-04	5.05E-05	8.38E-06	6.36E-05	1.22E-05	1.24E-05	3.50E-05	1.41E-06	5.80E-10	5.12E-05	3.38E-05
9	E33	60	Combination Short Haul Truck	28	0.00E+00	8.24E-06	6.06E-07	9.95E+00	2.26E-08	1.23E-02	5.92E-06	1.25E-02	1.44E-03	2.25E-04	5.08E-04	1.77E-04	1.84E-04	1.58E-03	3.33E-05	0.00E+00	3.24E-04	2.36E-03
9	E33	60	Combination Long Haul Truck	26	0.00E+00	1.13E-05	6.19E-07	9.40E+00	7.64E-08	1.48E-02	9.47E-06	1.34E-02	1.51E-03	2.18E-04	1.07E-03	2.02E-04	2.11E-04	1.51E-03	3.15E-05	0.00E+00	8.64E-04	2.52E-03
9	E34	60	Passenger Car	978	0.00E+00	1.25E-05	1.36E-06	4.46E+01	8.88E-05	2.50E-01	2.82E-05	1.01E-03	9.88E-03	1.48E-03	2.75E-03	1.77E-03	1.82E-03	1.94E-04	2.24E-04	4.70E-08	9.31E-04	1.57E-04
9	E34	60	Passenger Truck	1639	0.00E+00	2.66E-05	2.82E-06	9.94E+01	1.68E-04	4.27E-01	5.51E-05	3.13E-03	1.81E-02	2.69E-03	5.25E-03	3.42E-03	3.50E-03	7.94E-04	4.94E-04	9.16E-08	1.75E-03	5.31E-04
9	E34	60	Single Unit Short Haul Truck	47	0.00E+00	1.05E-05	4.33E-07	7.81E+00	6.94E-06	1.37E-02	1.13E-05	4.01E-03	1.08E-03	1.81E-04	1.40E-03	2.69E-04	2.75E-04	7.91E-04	3.18E-05	1.31E-08	1.12E-03	7.51E-04
9	E34	60	Single Unit Long Haul Truck	2	0.00E+00	4.57E-07	1.88E-08	3.33E-01	3.01E-07	5.83E-04	4.95E-07	1.74E-04	4.85E-05	8.05E-06	6.11E-05	1.17E-05	1.19E-05	3.36E-05	1.36E-06	5.58E-10	4.92E-05	3.25E-05
9	E34	60	Combination Short Haul Truck	36	0.00E+00	1.04E-05	7.62E-07	1.25E+01	2.84E-08	1.55E-02	7.46E-06	1.58E-02	1.81E-03	2.83E-04	6.40E-04	2.23E-04	2.32E-04	1.99E-03	4.19E-05	0.00E+00	4.08E-04	2.98E-03
9	E34	60	Combination Long Haul Truck	32	0.00E+00	1.43E-05	7.79E-07	1.18E+01	9.63E-08	1.86E-02	1.19E-05	1.68E-02	1.90E-03	2.75E-04	1.35E-03	2.54E-04	2.65E-04	1.90E-03	3.96E-05	0.00E+00	1.09E-03	3.17E-03
9	E35	60	Passenger Car	185	0.00E+00	2.37E-06	2.57E-07	8.43E+00	1.68E-05	4.72E-02	5.34E-06	1.91E-04	1.87E-03	2.80E-04	5.20E-04	3.36E-04	3.44E-04	3.67E-05	4.23E-05	8.89E-09	1.76E-04	2.97E-05
9	E35	60	Passenger Truck	310	0.00E+00	5.02E-06	5.33E-07	1.88E+01	3.17E-05	8.08E-02	1.04E-05	5.92E-04	3.42E-03	5.08E-04	9.94E-04	6.46E-04	6.62E-04	1.50E-04	9.34E-05	1.73E-08	3.31E-04	1.00E-04
9	E35	60	Single Unit Short Haul Truck	43	0.00E+00	9.62E-06	3.98E-07	7.17E+00	6.38E-06	1.26E-02	1.04E-05	3.68E-03	9.92E-04	1.67E-04	1.28E-03	2.47E-04	2.52E-04	7.27E-04	2.92E-05	1.20E-08	1.03E-03	6.89E-04
9	E35	60	Single Unit Long Haul Truck	2	0.00E+00	4.20E-07	1.73E-08	3.06E-01	2.76E-07	5.35E-04	4.54E-07	1.60E-04	4.45E-05	7.39E-06	5.61E-05	1.07E-05	1.10E-05	3.09E-05	1.25E-06	5.12E-10	4.52E-05	2.99E-05
9	E35	60	Combination Short Haul Truck	23	0.00E+00	6.72E-06	4.93E-07	8.11E+00	1.84E-08	1.00E-02	4.82E-06	1.02E-02	1.17E-03	1.83E-04	4.14E-04	1.44E-04	1.50E-04	1.29E-03	2.71E-05	0.00E+00	2.64E-04	1.93E-03
9	E35	60	Combination Long Haul Truck	21	0.00E+00	9.23E-06	5.04E-07	7.66E+00	6.23E-08	1.21E-02	7.72E-06	1.09E-02	1.23E-03	1.78E-04	8.75E-04	1.65E-04	1.72E-04	1.23E-03	2.57E-05	0.00E+00	7.04E-04	2.05E-03
9	E36	60	Passenger Car	681	0.00E+00	8.71E-06	9.47E-07	3.10E+01	6.18E-05	1.74E-01	1.96E-05	7.01E-04	6.88E-03	1.03E-03	1.92E-03	1.24E-03	1.27E-03	1.35E-04	1.56E-04	3.27E-08	6.48E-04	1.09E-04
9	E36	60	Passenger Truck	1141	0.00E+00	1.85E-05	1.96E-06	6.92E+01	1.17E-04	2.97E-01	3.84E-05	2.18E-03	1.26E-02	1.87E-03	3.66E-03	2.38E-03	2.44E-03	5.53E-04	3.44E-04	6.38E-08	1.22E-03	3.69E-04
9	E36	60	Single Unit Short Haul Truck	47	0.00E+00	1.05E-05	4.33E-07	7.81E+00	6.94E-06	1.37E-02	1.13E-05	4.01E-03	1.08E-03	1.81E-04	1.40E-03	2.69E-04	2.75E-04	7.91E-04	3.18E-05	1.31E-08	1.12E-03	7.51E-04
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	4.57E-07	1.88E-08	3.33E-01	3.01E-07	5.83E-04	4.95E-07	1.74E-04	4.85E-05	8.05E-06	6.11E-05	1.17E-05	1.19E-05	3.36E-05	1.36E-06	5.58E-10	4.92E-05	3.25E-05
9	E36	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.80E-03
9	E36	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.98E-03
9	E37	60	Passenger Car	185	0.00E+00	2.37E-06	2.57E-07	8.43E+00	1.68E-05	4.72E-02	5.34E-06	1.91E-04	1.87E-03	2.80E-04	5.20E-04	3.36E-04	3.44E-04	3.67E-05	4.23E-05	8.89E-09	1.76E-04	2.97E-05
9	E37	60	Passenger Truck	310	0.00E+00	5.02E-06	5.33E-07	1.88E+01	3.17E-05	8.08E-02	1.04E-05	5.92E-04	3.42E-03	5.08E-04	9.94E-04	6.46E-04	6.62E-04	1.50E-04	9.34E-05	1.73E-08	3.31E-04	1.00E-04
9	E37	60	Single Unit Short Haul Truck	43	0.00E+00	9.62E-06	3.98E-07	7.17E+00	6.38E-06	1.26E-02	1.04E-05	3.68E-03	9.92E-04	1.67E-04	1.28E-03	2.47E-04	2.52E-04	7.27E-04	2.92E-05	1.20E-08	1.03E-03	6.89E-04
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	4.20E-07	1.73E-08	3.06E-01	2.76E-07	5.35E-04	4.54E-07	1.60E-04	4.45E-05	7.39E-06	5.61E-05	1.07E-05	1.10E-05	3.09E-05	1.25E-06	5.12E-10	4.52E-05	2.99E-05
9	E37	60	Combination Short Haul Truck	23	0.00E+00	6.72E-06	4.93E-07	8.11E+00	1.84E-08	1.00E-02	4.82E-06	1.02E-02	1.17E-03	1.83E-04	4.14E-04	1.44E-04	1.50E-04	1.29E-03	2.71E-05	0.00E+00	2.64E-04	1.93E-03
9	E37	60	Combination Long Haul Truck	21	0.00E+00	9.23E-06	5.04E-07	7.66E+00	6.23E-08	1.21E-02	7.72E-06	1.09E-02	1.23E-03	1.78E-04	8.75E-04	1.65E-04	1.72E-04	1.23E-03	2.57E-05	0.00E+00	7.04E-04	2.05E-03
9	E38	60	Passenger Car	681	0.00E+00	8.71E-06	9.47E-07	3.10E+01	6.18E-05	1.74E-01	1.96E-05	7.01E-04	6.88E-03	1.03E-03	1.92E-03	1.24E-03	1.27E-03	1.35E-04	1.56E-04	3.27E-08	6.48E-04	1.09E-04
9	E38	60	Passenger Truck	1141	0.00E+00	1.85E-05	1.96E-06	6.92E+01	1.17E-04	2.97E-01	3.84E-05	2.18E-03	1.26E-02	1.87E-03	3.66E-03	2.38E-03	2.44E-03	5.53E-04	3.44E-04	6.38E-08	1.22E-03	3.69E-04
9	E38	60	Single Unit Short Haul Truck	47	0.00E+00	1.05E-05	4.33E-07	7.81E+00	6.94E-06	1.37E-02	1.13E-05	4.01E-03	1.08E-03	1.81E-04	1.40E-03	2.69E-04	2.75E-04	7.91E-04	3.18E-05	1.31E-08	1.12E-03	7.51E-04
9	E38	60	Single Unit Long Haul Truck	2	0.00E+00	4.57E-07	1.88E-08	3.33E-01	3.01E-07	5.83E-04	4.95E-07	1.74E-04	4.85E-05	8.05E-06	6.11E-05	1.17E-05	1.19E-05	3.36E-05	1.36E-06	5.58E-10	4.92E-05	3.25E-05
9	E38	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.80E-03
9	E38	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.98E-03
10	E39	70	Passenger Car	273	0.00E+00	3.05E-06	3.31E-07	1.19E+01	2.16E-05	6.11E-02	6.87E-06	2.76E-04	2.11E-03	3.28E-04	6.70E-04	4.32E-04	4.44E-04	4.64E-05	5.99E-05	1.24E-08	2.27E-04	4.31E-05
10	E39	70	Passenger Truck	458	0.00E+00	6.42E-06	6.82E-07	2.68E+01	4.11E-05	1.08E-01	1.34E-05	8.03E-04	3.81E-03	5.90E-04	1.29E-03	8.36E-04	8.56E-04	2.03E-04	1.34E-04	2.39E-08	4.30E-04	1.35E-04
10	E39	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.68E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.76E-05
10	E39	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.78E-04
10	E39	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.04E-04
10	E40	70	Passenger Car	272	0.00E+00	3.04E-06	3.30E-07	1.19E+01	2.15E-05	6.09E-02	6.84E-06	2.75E-04	2.10E-03	3.27E-04	6.67E-04	4.30E-04	4.42E-04	4.62E-05	5.97E-05	1.24E-08	2.26E-04	4.29E-05
10	E40	70	Passenger Truck	456	0.00E+00	6.39E-06	6.79E-07	2.67E+01	4.09E-05	1.08E-01	1.34E-05	8.00E-04	3.80E-03	5.87E-04	1.28E-03	8.32E-04	8.53E-04	2.02E-04	1.33E-04	2.38E-08	4.28E-04	1.34E-04
10	E40	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.61E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.00E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.91E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.29E-05
10	E40	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.82E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
10	E40	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.22E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.17E-03
10	E41	70	Passenger Car	219	0.00E+00	2.44E-06	2.66E-07	9.55E+00	1.73E-05	4.90E-02	5.51E-06	2.22E-04	1.69E-03	2.63E-04	5.37E-04	3.46E-04	3.56E-04	3.72E-05	4.80E-05	9.98E-09	1.82E-04	3.46E-05
10	E41	70	Passenger Truck	367	0

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E45	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.22E-03
11	E45	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.26E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.37E-03
11	E46	80	Passenger Car	322	0.00E+00	3.34E-06	3.63E-07	1.36E+01	2.37E-05	6.86E-02	7.53E-06	3.33E-04	1.75E-03	2.93E-04	7.34E-04	4.73E-04	4.86E-04	4.78E-05	6.86E-05	1.47E-08	2.48E-04	5.20E-05
11	E46	80	Passenger Truck	538	0.00E+00	6.88E-06	7.33E-07	3.07E+01	4.47E-05	1.21E-01	1.46E-05	8.99E-04	3.12E-03	5.20E-04	1.40E-03	9.07E-04	9.30E-04	2.21E-04	1.53E-04	2.79E-08	4.68E-04	1.50E-04
11	E46	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.07E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.87E-04
11	E46	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.85E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.65E-05
11	E46	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	5.97E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.12E-03
11	E46	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.38E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.20E-03
11	E47	80	Passenger Car	92	0.00E+00	9.51E-07	1.03E-07	3.88E+00	6.75E-06	1.96E-02	2.15E-06	9.50E-05	4.99E-04	8.36E-05	2.09E-04	1.35E-04	1.38E-04	1.36E-05	1.95E-05	4.18E-09	7.08E-05	1.48E-05
11	E47	80	Passenger Truck	153	0.00E+00	1.96E-06	2.09E-07	8.75E+00	1.27E-05	3.45E-02	4.15E-06	2.56E-04	8.89E-04	1.48E-04	3.98E-04	2.58E-04	2.65E-04	6.30E-05	4.37E-05	7.95E-09	1.33E-04	4.26E-05
11	E47	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.54E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E47	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.79E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.22E-06
11	E47	80	Combination Short Haul Truck	6	0.00E+00	1.19E-06	8.78E-08	1.93E+00	3.11E-09	1.81E-03	8.48E-07	1.82E-03	1.37E-04	2.49E-05	7.19E-05	2.56E-05	2.66E-05	3.07E-04	6.45E-06	0.00E+00	4.53E-05	3.44E-04
11	E47	80	Combination Long Haul Truck	5	0.00E+00	1.65E-06	9.33E-08	1.79E+00	1.05E-08	2.14E-03	1.36E-06	1.95E-03	1.42E-04	2.27E-05	1.51E-04	3.01E-05	3.13E-05	2.87E-04	6.00E-06	0.00E+00	1.20E-04	3.67E-04
11	E48	80	Passenger Car	327	0.00E+00	3.40E-06	3.69E-07	1.38E+01	2.41E-05	6.98E-02	7.66E-06	3.39E-04	1.78E-03	2.99E-04	7.47E-04	4.82E-04	4.94E-04	4.86E-05	6.98E-05	1.49E-08	2.53E-04	5.29E-05
11	E48	80	Passenger Truck	548	0.00E+00	7.00E-06	7.46E-07	3.12E+01	4.55E-05	1.23E-01	1.48E-05	9.15E-04	3.18E-03	5.29E-04	1.42E-03	9.23E-04	9.46E-04	2.25E-04	1.56E-04	2.84E-08	4.76E-04	1.52E-04
11	E48	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.36E-04
11	E48	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.68E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	E48	80	Combination Short Haul Truck	16	0.00E+00	3.34E-06	2.47E-07	5.44E+00	8.75E-09	5.09E-03	2.39E-06	5.14E-03	3.87E-04	7.01E-05	2.03E-04	7.22E-05	7.49E-05	8.64E-04	1.82E-05	0.00E+00	1.28E-04	9.69E-04
11	E48	80	Combination Long Haul Truck	15	0.00E+00	4.66E-06	2.63E-07	5.05E+00	2.96E-08	6.03E-03	3.84E-06	5.49E-03	4.00E-04	6.40E-05	4.27E-04	8.47E-05	8.82E-05	8.10E-04	1.69E-05	0.00E+00	3.38E-04	1.03E-03
11	E49	80	Passenger Car	49	0.00E+00	5.13E-07	5.57E-08	2.09E+00	3.64E-06	1.05E-02	1.16E-06	5.12E-05	2.69E-04	4.50E-05	1.13E-04	7.27E-05	7.46E-05	7.34E-06	1.05E-05	2.25E-09	3.81E-05	7.98E-06
11	E49	80	Passenger Truck	83	0.00E+00	1.06E-06	1.13E-07	4.71E+00	6.86E-06	1.86E-02	2.24E-06	1.38E-04	4.79E-04	7.97E-05	2.15E-04	1.39E-04	1.43E-04	3.39E-05	2.36E-05	4.28E-09	7.19E-05	2.30E-05
11	E49	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.29E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.56E-04
11	E49	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.86E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.67E-04
11	E50	80	Passenger Car	273	0.00E+00	2.83E-06	3.08E-07	1.15E+01	2.01E-05	5.83E-02	6.39E-06	2.83E-04	1.49E-03	2.49E-04	6.23E-04	4.02E-04	4.12E-04	4.06E-05	5.82E-05	1.24E-08	2.11E-04	4.41E-05
11	E50	80	Passenger Truck	457	0.00E+00	5.84E-06	6.22E-07	2.61E+01	3.80E-05	1.03E-01	1.24E-05	7.63E-04	2.65E-03	4.41E-04	1.19E-03	7.70E-04	7.89E-04	1.88E-04	1.30E-04	2.37E-08	3.98E-04	1.27E-04
11	E50	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.56E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.79E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.09E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	E50	80	Combination Short Haul Truck	36	0.00E+00	7.44E-06	5.51E-07	1.21E+01	1.95E-08	1.13E-02	5.32E-06	1.14E-02	8.61E-04	1.56E-04	4.51E-04	1.61E-04	1.67E-04	1.92E-03	4.05E-05	0.00E+00	2.84E-04	2.16E-03
11	E50	80	Combination Long Haul Truck	33	0.00E+00	1.04E-05	5.85E-07	1.12E+01	6.59E-08	1.34E-02	8.55E-06	1.22E-02	8.90E-04	1.42E-04	9.50E-04	1.89E-04	1.96E-04	1.80E-03	3.76E-05	0.00E+00	7.53E-04	2.30E-03
11	E51	80	Passenger Car	12	0.00E+00	1.20E-07	1.31E-08	4.90E-01	8.54E-07	2.47E-03	2.71E-07	1.20E-05	6.32E-05	1.06E-05	2.65E-05	1.71E-05	1.75E-05	1.72E-06	2.47E-06	5.28E-10	8.95E-06	1.87E-06
11	E51	80	Passenger Truck	19	0.00E+00	2.48E-07	2.64E-08	1.11E+00	1.61E-06	4.37E-03	5.25E-07	3.24E-05	1.12E-04	1.87E-05	5.04E-05	3.27E-05	3.35E-05	7.97E-06	5.53E-06	1.01E-09	1.69E-05	5.39E-06
11	E51	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.66E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.12E-05
11	E52	80	Passenger Car	304	0.00E+00	3.15E-06	3.43E-07	1.28E+01	2.24E-05	6.48E-02	7.11E-06	3.15E-04	1.65E-03	2.77E-04	6.93E-04	4.47E-04	4.59E-04	4.51E-05	6.48E-05	1.38E-08	2.35E-04	4.91E-05
11	E52	80	Passenger Truck	508	0.00E+00	6.49E-06	6.92E-07	2.90E+01	4.22E-05	1.14E-01	1.38E-05	8.49E-04	2.95E-03	4.91E-04	1.32E-03	8.56E-04	8.78E-04	2.09E-04	1.45E-04	2.63E-08	4.42E-04	1.41E-04
11	E52	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.72E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.09E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.16E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.22E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.26E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.37E-03
11	E53	80	Passenger Car	102	0.00E+00	1.06E-06	1.15E-07	4.32E+00	7.52E-06	2.18E-02	2.39E-06	1.06E-04	5.56E-04	9.32E-05	2.33E-04	1.50E-04	1.54E-04	1.52E-05	2.18E-05	4.65E-09	7.89E-05	1.65E-05
11	E53	80	Passenger Truck	171	0.00E+00	2.18E-06	2.33E-07	9.75E+00	1.42E-05	3.85E-02	4.63E-06	2.85E-04	9.91E-04	1.65E-04	4.44E-04	2.88E-04	2.95E-04	7.02E-05	4.87E-05	8.86E-09	1.49E-04	4.75E-05
11	E53	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.05E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E53	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.81E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.19E-04
11	E53	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.08E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.68E-04
11	E54	80	Passenger Car	492	0.00E+00	5.11E-06	5.56E-07	2.08E+01	3.63E-05	1.05E-01	1.15E-05	5.11E-04	2.68E-03	4.49E-04	1.12E-03	7.25E-04	7.44E-04	7.32E-05	1.05E-04	2.24E-08	3.80E-04	7.96E-05
11	E54	80	Passenger Truck	825	0.00E+00	1.05E-05	1.12E-06	4.70E+01	6.85E-05	1.86E-01	2.23E-05	1.38E-03	4.78E-03	7.96E-04	2.14E-03	1.39E-03	1.42E-03	3.39E-04	2.35E-04	4.27E-08	7.17E-04	2.29E-04
11	E54	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.97E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.08E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E54	80	Combination Short Haul Truck	29	0.00E+00	5.93E-06	4.39E-07	9.65E+00	1.55E-08	9.04E-03	4.24E-06	9.12E-03	6.86E-04	1.24E-04	3.60E-04	1.28E-04	1.33E-04	1.53E-03	3.23E-05	0.00E+00	2.27E-04	1.72E-03
11	E54	80	Combination Long Haul Truck	26	0.00E+00	8.26E-06	4.66E-07	8.95E+00	5.25E-08	1.07E-02	6.81E-06	9.75E-03	7.09E-04	1.14E-04	7.57E-04	1.50E-04	1.57E-04	1.44E-03	3.00E-05	0.00E+00	6.00E-04	1.84E-03
11	E55	80	Passenger Car	102	0.00E+00	1.06E-06	1.15E-07	4.32E+00	7.52E-06	2.18E-02	2.39E-06	1.06E-04	5.56E-04	9.32E-05	2.33E-04	1.50E-04	1.54E-04	1.52E-05	2.18E-05	4.65E-09	7.89E-05	1.65E-05
11	E55	80	Passenger Truck	171	0.00E+00	2.18E-06	2.33E-07	9.75E+00	1.42E-05	3.85E-02	4.63E-06	2.85E-04	9.91E-04	1.65E-04	4.44E-04	2.88E-04	2.95E-04	7.02E-05	4.87E-05	8.86E-09	1.49E-04	4.75E-05
11	E55	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.05E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E55	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.81E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.19E-04
11	E55	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.08E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.68E-04
11	E56	80	Passenger Car	492	0.00E+00	5.11E-06	5.56E-07	2.08E+01	3.63E-05	1.05E-01	1.15E-05	5.11E-04	2.68E-03	4.49E-04	1.12E-03	7.25E-04	7.44E-04	7.32E-05	1.05E-04	2.24E-08	3.80E-04	7.96E-05
11	E56	80	Passenger Truck	825	0.00E+00	1.05E-05	1.12E-06	4.70E+01	6.85E-05	1.86E-01	2.23E-05	1.38E-03	4.78E-03	7.96E-04	2.14E-03	1.39E-03	1.42E-03	3.39E-04	2.35E-04	4.27E-08	7.17E-04	2.29E-04
11	E56	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.97E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.08E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E56	80	Combination Short Haul Truck	29	0.00E+00	5.93E-06	4.39E-07	9.65E+00	1.55E-08	9.04E-03	4.24E-06	9.12E-03	6.86E-04	1.24E-04	3.60E-04	1.28E-04	1.33E-04	1.53E-03	3.23E-05	0.00E+00	2.27E-04	1.72E-03
11	E56	80	Combination Long Haul Truck	26	0.00E+00	8.26E-06	4.66E-07	8.95E+00	5.25E-08	1.07E-02	6.81E-06	9.75E-03	7.09E-04	1.14E-04	7.57E-04	1.50E-04	1.57E-04	1.44E-03	3.00E-05	0.00E+00	6.00E-04	1.84E-03
9	F31	60	Passenger Car	790	0.00E+00	1.01E-05	1.10E-06	3.60E+01	7.17E-05	2.01E-01	2.28E-05	8.13E-04	7.97E-03	1.19E-03	2.22E-03	1.43E-03	1.47E-03	1.57E-04	1.81E-04	3.79E-08	7.51E-04	1.27E-04
9	F31	60	Passenger Truck	1322	0.00E+00	2.14E-05	2.27E-06	8.02E+01	1.35E-04	3.45E-01	4.45E-05	2.53E-03	1.46E-02	2.17E-03	4.24E-03	2.76E-03	2.83E-03	6.41E-04	3.99E-04	7.39E-08	1.41E-03	4.28E-04
9	F31	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.44E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	F31	60	Combination Short Haul Truck	31	0.00E+00	9.01E-06	6.62E-07	1.09E+01	2.47E-08	1.35E-02	6.47E-06	1.37E-02	1.57E-03	2.46E-04	5.55E-04	1.94E-04	2.01E-04	1.73E-03	3.63E-05	0.00E+00	3.54E-04	2.58E-03
9	F31	60	Combination Long Haul Truck	28	0.00E+00	1.24E-05	6.76E-07	1.03E+01	8.35E-08	1.62E-02	1.03E-05	1.46E-02	1.65E-03	2.38E-04	1.17E-03	2.21E-04	2.30E-04	1.65E-03	3.44E-05	0.00E+00	9.44E-04	2.75E-03
9	F32	60	Passenger Car	919	0.00E+00	1.18E-05	1.28E-06	4.19E+01	8.34E-05	2.34E-01	2.65E-05	9.46E-04	9.28E-03	1.39E-03	2.58E-03	1.67E-03	1.71E-03	1.82E-04	2.10E-04	4.41E-08	8.74E-04	1.48E-04
9	F32	60	Passenger Truck	1539	0.00E+00	2.49E-05	2.64E-06	9.33E+01	1.57E-04	4.01E-01	5.17E-05	2.94E-03	1.70E-02	2.52E-03	4.93E-03	3.21E-03	3.29E-03	7.46E-04	4.64E-04	8.60E-08	1.64E-03	4.98E-04
9	F32	60	Single Unit Short Haul Truck	34	0.00E+00	7.70E-06	3.18E-07	5.74E+00	5.10E-06	1.01E-02	8.33E-06	2.95E-03	7.93E-04	1.33E-04	1.03E-03	1.98E-04	2.02E-04	5.81E-04	2.34E-05	9.63E-09	8.25E-04	5.52E-04
9	F32	60	Single Unit Long Haul Truck	2	0.00E+00	3.36E-07	1.38E-08	2.45E-01	2.21E-07	4.28E-04	3.63E-07	1.28E-04	3.56E-05	5.91E-06	4.49E-05	8.60E-06	8.77E-06	2.47E-05	9.98E-07	4.10E-10	3.61E-05	2.39E-05
9	F32	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.89E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
9	F32	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.41E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.58E-03
9	F33	60	Passenger Car	212	0.00E+00	2.71E-06	2.95E-07	9.66E+00	1.92E-05	5.41E-02	6.11E-06	2.18E-04	2.14E-03	3.21E-04	5.96E-04	3.84E-04	3.94E-04	4.20E-05	4.85E-05	1.02E-08	2.02E-04	3.40E-05
9	F33	60	Passenger Truck	355	0.00E+00	5.75E-06	6.10E-07	2.15E+01	3.63E-05	9.25E-02	1.19E-05	6.79E-04	3.91E-03	5.82E-04	1.14E-03	7.40E-04	7.59E-04	1.72E-04	1.07E-04	1.98E-08	3.79E-04	1.15E-04
9	F33	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.64E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.75E-05
9	F33	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.95E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.32E-05
9	F34	60	Passenger Car	524	0.00E+00	6.70E-06	7.28E-07	2.39E+01	4.75E-05	1.34E-01	1.51E-05	5.39E-04	5.29E-03	7.92E-04	1.47E-03	9.50E-04	9.75E-04	1.04E-04	1.20E-04	2.52E-08	4.98E-04	8.41E-05
9	F34	60	Passenger Truck	877	0.00E+00	1.42E-05	1.51E-06	5.32E+01	8.97E-05	2.29E-01	2.95E-05	1.68E-03	9.67E-03	1.44E-03	2.81E-03	1.83E-03	1.87E-03	4.25E-04	2.64E-04	4.90E-08	9.37E-04	2.84E-04
9	F34	60	Single Unit Short Haul Truck	16	0.

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F38	60	Passenger Truck	1148	0.00E+00	1.86E-05	1.97E-06	6.96E+01	1.17E-04	2.99E-01	3.86E-05	2.19E-03	1.26E-02	1.88E-03	3.68E-03	2.39E-03	2.45E-03	5.56E-04	3.46E-04	6.41E-08	1.23E-03	3.72E-04
9	F38	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	9.99E-03	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.87E-03
9	F38	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.32E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.10E-05
9	F38	60	Combination Short Haul Truck	90	0.00E+00	2.63E-05	1.93E-06	3.17E+01	7.19E-08	3.92E-02	1.89E-05	3.99E-02	4.58E-03	7.17E-04	1.62E-03	5.64E-04	5.86E-04	5.04E-03	1.06E-04	0.00E+00	1.03E-03	7.53E-03
9	F38	60	Combination Long Haul Truck	82	0.00E+00	3.61E-05	1.97E-06	2.99E+01	2.43E-07	4.71E-02	3.02E-05	4.25E-02	4.81E-03	6.95E-04	3.42E-03	6.44E-04	6.71E-04	4.80E-03	1.00E-04	0.00E+00	2.75E-03	8.01E-03
11	F39	80	Passenger Car	26	0.00E+00	2.68E-07	2.91E-08	1.09E+00	1.90E-06	5.51E-03	6.04E-07	2.67E-05	1.41E-04	2.35E-05	5.89E-05	3.80E-05	3.90E-05	3.84E-06	5.50E-06	1.18E-09	1.99E-05	4.17E-06
11	F39	80	Passenger Truck	43	0.00E+00	5.52E-07	5.88E-08	2.46E+00	3.59E-06	9.73E-03	1.17E-06	7.21E-05	2.50E-04	4.17E-05	1.12E-04	7.28E-05	7.46E-05	1.77E-05	1.23E-05	2.24E-09	3.76E-05	1.20E-05
11	F39	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.45E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F39	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.97E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.37E-05
11	F39	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.32E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
11	F40	80	Passenger Car	274	0.00E+00	2.85E-06	3.10E-07	1.16E+01	2.02E-05	5.86E-02	6.43E-06	2.85E-04	1.50E-03	2.50E-04	6.27E-04	4.04E-04	4.15E-04	4.08E-05	5.86E-05	1.25E-08	2.12E-04	4.44E-05
11	F40	80	Passenger Truck	460	0.00E+00	5.87E-06	6.26E-07	2.62E+01	3.82E-05	1.03E-01	1.24E-05	7.67E-04	2.66E-03	4.43E-04	1.19E-03	7.74E-04	7.94E-04	1.89E-04	1.31E-04	2.38E-08	4.00E-04	1.28E-04
11	F40	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.53E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.85E-04
11	F40	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.52E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	F40	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.80E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.28E-03
11	F40	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.27E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.37E-03
10	F41	70	Passenger Car	328	0.00E+00	3.66E-06	3.98E-07	1.43E+01	2.60E-05	7.34E-02	8.25E-06	3.32E-04	2.53E-03	3.94E-04	8.05E-04	5.19E-04	5.33E-04	5.58E-05	7.20E-05	1.49E-08	2.72E-04	5.18E-05
10	F41	70	Passenger Truck	550	0.00E+00	7.71E-06	8.19E-07	3.22E+01	4.93E-05	1.30E-01	1.62E-05	9.65E-04	4.58E-03	7.08E-04	1.54E-03	1.00E-03	1.03E-03	2.44E-04	1.60E-04	2.87E-08	5.16E-04	1.62E-04
10	F42	70	Passenger Car	235	0.00E+00	2.62E-06	2.85E-07	1.02E+01	1.86E-05	5.25E-02	5.90E-06	2.37E-04	1.81E-03	2.82E-04	5.76E-04	3.71E-04	3.81E-04	3.99E-05	5.15E-05	1.07E-08	1.95E-04	3.70E-05
10	F42	70	Passenger Truck	393	0.00E+00	5.51E-06	5.86E-07	2.30E+01	3.53E-05	9.28E-02	1.16E-05	6.90E-04	3.27E-03	5.07E-04	1.10E-03	7.18E-04	7.36E-04	1.74E-04	1.15E-04	2.06E-08	3.69E-04	1.16E-04
10	F42	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	F42	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
10	F42	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
50	F84	40	Passenger Car	219	0.00E+00	3.14E-06	3.42E-07	1.16E+01	2.23E-05	6.21E-02	7.09E-06	2.00E-04	3.78E-03	5.31E-04	6.91E-04	4.46E-04	4.57E-04	6.51E-05	5.74E-05	1.06E-08	2.34E-04	3.12E-05
50	F84	40	Passenger Truck	367	0.00E+00	6.93E-06	7.28E-07	2.51E+01	4.17E-05	1.03E-01	1.39E-05	7.70E-04	6.70E-03	9.30E-04	1.32E-03	8.59E-04	8.80E-04	2.22E-04	1.24E-04	1.81E-08	4.36E-04	1.33E-04
50	F84	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.84E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	F84	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.89E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.45E-03
50	F84	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.05E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.75E-03
52	F85	60	Passenger Car	421	0.00E+00	4.95E-06	5.38E-07	1.92E+01	3.51E-05	9.81E-02	1.12E-05	4.18E-04	4.14E-03	6.20E-04	1.09E-03	7.02E-04	7.20E-04	8.35E-05	9.63E-05	1.96E-08	3.68E-04	6.52E-05
52	F85	60	Passenger Truck	706	0.00E+00	1.04E-05	1.11E-06	4.28E+01	6.59E-05	1.68E-01	2.17E-05	1.27E-03	7.35E-03	1.09E-03	2.06E-03	1.34E-03	1.38E-03	3.35E-04	2.13E-04	3.58E-08	6.88E-04	2.16E-04
52	F85	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.45E-04
52	F85	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.67E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
52	F85	60	Combination Short Haul Truck	32	0.00E+00	9.31E-06	6.84E-07	1.12E+01	2.55E-08	1.39E-02	6.69E-06	1.42E-02	1.63E-03	2.54E-04	5.74E-04	2.00E-04	2.08E-04	1.79E-03	3.76E-05	0.00E+00	3.66E-04	2.67E-03
52	F85	60	Combination Long Haul Truck	29	0.00E+00	1.28E-05	6.99E-07	1.06E+01	8.64E-08	1.67E-02	1.07E-05	1.51E-02	1.70E-03	2.46E-04	1.21E-03	2.28E-04	2.38E-04	1.70E-03	3.56E-05	0.00E+00	9.76E-04	2.84E-03
53	F86	70	Passenger Car	253	0.00E+00	2.73E-06	2.97E-07	1.11E+01	1.94E-05	5.43E-02	6.16E-06	2.60E-04	1.92E-03	3.00E-04	6.01E-04	3.87E-04	3.98E-04	4.29E-05	5.60E-05	1.16E-08	2.03E-04	4.06E-05
53	F86	70	Passenger Truck	423	0.00E+00	5.70E-06	6.07E-07	2.51E+01	3.66E-05	9.58E-02	1.20E-05	7.34E-04	3.42E-03	5.32E-04	1.15E-03	7.45E-04	7.63E-04	1.87E-04	1.25E-04	2.19E-08	3.83E-04	1.23E-04
53	F86	70	Single Unit Short Haul Truck	35	0.00E+00	6.24E-06	2.53E-07	5.81E+00	4.18E-06	1.05E-02	6.78E-06	2.48E-03	5.63E-04	1.03E-04	8.41E-04	1.60E-04	1.63E-04	5.90E-04	2.36E-05	9.53E-09	6.77E-04	4.63E-04
53	F86	70	Single Unit Long Haul Truck	2	0.00E+00	2.71E-07	1.09E-08	2.46E-01	1.80E-07	4.42E-04	2.95E-07	1.07E-04	2.58E-05	4.62E-06	3.67E-05	6.92E-06	7.06E-06	2.49E-05	1.00E-06	4.02E-10	2.96E-05	1.99E-05
53	F86	70	Combination Short Haul Truck	24	0.00E+00	6.19E-06	4.61E-07	8.37E+00	1.57E-08	8.94E-03	4.41E-06	9.23E-03	8.73E-04	1.46E-04	3.71E-04	1.34E-04	1.39E-04	1.33E-03	2.80E-05	0.00E+00	2.32E-04	1.74E-03
53	F86	70	Combination Long Haul Truck	22	0.00E+00	8.49E-06	4.83E-07	7.85E+00	5.32E-08	1.07E-02	6.98E-06	9.87E-03	9.09E-04	1.37E-04	7.72E-04	1.55E-04	1.62E-04	1.26E-03	2.63E-05	0.00E+00	6.10E-04	1.86E-03
52	F87	60	Passenger Car	176	0.00E+00	2.07E-06	2.25E-07	8.02E+00	1.47E-05	4.10E-02	4.67E-06	1.75E-04	1.73E-03	2.59E-04	4.55E-04	2.93E-04	3.01E-04	3.49E-05	4.02E-05	8.20E-09	1.54E-04	2.72E-05
52	F87	60	Passenger Truck	295	0.00E+00	4.37E-06	4.63E-07	1.79E+01	2.75E-05	7.03E-02	9.05E-06	5.33E-04	3.07E-03	4.56E-04	8.63E-04	5.61E-04	5.75E-04	1.40E-04	8.88E-05	1.50E-08	2.88E-04	9.01E-05
52	F87	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.28E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.36E-03
52	F87	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.15E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.91E-05
52	F87	60	Combination Short Haul Truck	54	0.00E+00	1.57E-05	1.15E-06	1.90E+01	4.31E-08	2.35E-02	1.13E-05	2.39E-02	2.74E-03	4.29E-04	9.69E-04	3.38E-04	3.51E-04	3.02E-03	6.34E-05	0.00E+00	6.18E-04	4.51E-03
52	F87	60	Combination Long Haul Truck	49	0.00E+00	2.16E-05	1.18E-06	1.79E+01	1.46E-07	2.82E-02	1.81E-05	2.55E-02	2.88E-03	4.16E-04	2.05E-03	3.85E-04	4.02E-04	2.88E-03	6.01E-05	0.00E+00	1.65E-03	4.80E-03
50	F88	40	Passenger Car	219	0.00E+00	3.14E-06	3.42E-07	1.16E+01	2.23E-05	6.21E-02	7.09E-06	2.00E-04	3.78E-03	5.31E-04	6.91E-04	4.46E-04	4.57E-04	6.51E-05	5.74E-05	1.06E-08	2.34E-04	3.12E-05
50	F88	40	Passenger Truck	367	0.00E+00	6.93E-06	7.28E-07	2.51E+01	4.17E-05	1.03E-01	1.39E-05	7.70E-04	6.70E-03	9.30E-04	1.32E-03	8.59E-04	8.80E-04	2.22E-04	1.24E-04	1.81E-08	4.36E-04	1.33E-04
50	F88	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.84E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	F88	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.89E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.45E-03
50	F88	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.05E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.75E-03
50	F89	40	Passenger Car	511	0.00E+00	7.34E-06	7.97E-07	2.70E+01	5.21E-05	1.45E-01	1.65E-05	4.67E-04	8.82E-03	1.24E-03	1.61E-03	1.04E-03	1.07E-03	1.52E-04	1.34E-04	2.48E-08	5.46E-04	7.28E-05
50	F89	40	Passenger Truck	857	0.00E+00	1.62E-05	1.70E-06	5.87E+01	9.74E-05	2.40E-01	3.25E-05	1.80E-03	1.56E-02	2.17E-03	3.07E-03	2.00E-03	2.05E-03	5.19E-04	2.89E-04	4.22E-08	1.02E-03	3.11E-04
50	F89	40	Single Unit Short Haul Truck	73	0.00E+00	2.47E-05	1.10E-06	1.37E+01	1.71E-05	2.16E-02	2.64E-05	9.93E-03	2.86E-03	4.47E-04	3.18E-03	6.62E-04	6.74E-04	1.40E-03	5.60E-05	2.38E-08	2.50E-03	1.86E-03
50	F89	40	Single Unit Long Haul Truck	3	0.00E+00	1.08E-06	4.79E-08	5.94E-01	7.48E-07	9.38E-04	1.16E-06	4.33E-04	1.28E-04	1.99E-05	1.40E-04	2.89E-05	2.95E-05	6.07E-05	2.42E-06	1.03E-09	1.10E-04	8.11E-05
50	F89	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.89E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.45E-03
50	F89	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.05E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.75E-03
53	G07	70	Passenger Car	189	0.00E+00	2.04E-06	2.22E-07	8.32E+00	1.45E-05	4.06E-02	4.60E-06	1.94E-04	1.43E-03	2.24E-04	4.49E-04	2.89E-04	2.97E-04	3.21E-05	4.19E-05	8.69E-09	1.52E-04	3.03E-05
53	G07	70	Passenger Truck	316	0.00E+00	4.26E-06	4.53E-07	1.87E+01	2.74E-05	7.16E-02	8.95E-06	5.49E-04	2.56E-03	3.97E-04	8.56E-04	5.56E-04	5.70E-04	1.39E-04	9.34E-05	1.64E-08	2.86E-04	9.19E-05
53	G07	70	Single Unit Short Haul Truck	92	0.00E+00	1.62E-05	6.57E-07	1.51E+01	1.08E-05	2.73E-02	1.76E-05	6.42E-03	1.46E-03	2.68E-04	2.18E-03	4.16E-04	4.24E-04	1.53E-03	6.13E-05	2.47E-08	1.76E-03	1.20E-03
53	G07	70	Single Unit Long Haul Truck	4	0.00E+00	7.04E-07	2.84E-08	6.38E-01	4.67E-07	1.15E-03	7.66E-07	2.76E-04	6.69E-05	1.20E-05	9.52E-05	1.80E-05	1.83E-05	6.46E-05	2.60E-06	1.04E-09	7.69E-05	5.17E-05
53	G07	70	Combination Short Haul Truck	61	0.00E+00	1.57E-05	1.17E-06	2.13E+01	4.00E-08	2.27E-02	1.12E-05	2.35E-02	2.22E-03	3.70E-04	9.45E-04	3.41E-04	3.54E-04	3.38E-03	7.11E-05	0.00E+00	5.91E-04	4.42E-03
53	G07	70	Combination Long Haul Truck	56	0.00E+00	2.16E-05	1.23E-06	2.00E+01	1.35E-07	2.71E-02	1.78E-05	2.51E-02	2.31E-03	3.48E-04	1.96E-03	3.95E-04	4.11E-04	3.21E-03	6.69E-05	0.00E+00	1.55E-03	4.73E-03
50	G09	40	Passenger Car	30	0.00E+00	4.34E-07	4.72E-08	1.60E+00	3.08E-06	8.58E-03	9.80E-07	2.76E-05	5.22E-04	7.34E-05	9.55E-05	6.16E-05	6.32E-05	9.00E-06	7.94E-06	1.47E-09	3.23E-05	4.31E-06
50	G09	40	Passenger Truck	51	0.00E+00	9.58E-07	1.01E-07	3.48E+00	5.77E-06	1.42E-02	1.92E-06	1.06E-04	9.26E-04	1.29E-04	1.82E-04	1.19E-04	1.22E-04	3.07E-05	1.71E-05	2.50E-09	6.02E-05	1.84E-05
50	G09	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.23E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.79E-05
50	G09	40	Combination Short Haul Truck	10	0.00E+00	4.79E-06	3.58E-07	4.12E+00	1.19E-08	6.78E-03	3.41E-06	6.96E-03	9.66E-04	1.44E-04	2.85E-04	1.04E-04	1.08E-04	6.55E-04	1.38E-05	0.00E+00	1.77E-04	1.31E-03
50	G09	40	Combination Long Haul Truck	9	0.00E+00	6.37E-06	3.60E-07	3.96E+00	4.05E-08	8.23E-03	5.25E-06	7.34E-03	1.00E-03	1.41E-04	5.84E-04	1.16E-04	1.21E-04	6.35E-04	1.33E-05	0.00E+00	4.63E-04	1.38E-03
53	G10	70	Passenger Car	189	0.00E+00	2.04E-06	2.22E-07	8.32E+00	1.45E-05	4.06E-02	4.60E-06	1.94E-04	1.43E-03	2.24E-04	4.49E-04	2.89E-04	2.97E-04	3.21E-05	4.19E-05	8.69E-09	1.52E-04	3.03E-05
53	G10	70	Passenger Truck	316	0.00E+00	4.26E-06	4.53E-07	1.87E+01	2.74E-05	7.16E-02	8.95E-06	5.49E-04	2.56E-03	3.97E-04	8.56E-04	5.56E-04	5.70E-04	1.39E-04	9.34E-05	1.64E-08	2.86E-04	9.19E-05
53	G10	70	Single Unit Short Haul Truck	92	0.00E+00	1.62E-05	6.57E-07	1.51E+01	1.08E-05	2.73E-02	1.76E-05	6.42E-03	1.46E-03	2.68E-04	2.18E-03	4.16E-04	4.24E-04	1.53E-03	6.13E-05	2.47E-08	1.76E-03	1.20E-03
53	G10	70	Single Unit Long Haul Truck	4	0.00E+00	7.04E-07	2.84E-08	6.38E-01	4.67E-07	1.15E-03	7.66E-07	2.76E-04	6.69E-05	1.20E-05	9.52E-05	1.80E-05	1.83E-05	6.46E-05	2.60E-06	1.04E-09	7.69E-05	5.17E-05
53	G10	70	Combination Short Haul Truck	61	0.00E+00	1.57E-05	1.17E-06	2.13E+01	4.00E-08	2.27E-02	1.12E-05	2.35E-02	2.22E-03	3.70E-04	9.45E-04	3.41E-04	3.54E-04	3.38E-03	7.11E-05	0.00E+00	5.91E-04	4.42E-03
53	G10	70	Combination Long Haul Truck	56	0.00E+00	2.16E-05	1.23E-06	2.00E+01	1.35E-07	2.71E-02	1.78E-05	2.51E-02	2.31E-03	3.48E-04	1.96E-03	3.95E-04	4.11E-04	3.21E-03	6.69E-05	0.00E+00	1.55E-03	4.73E-03
16	H01	100	Passenger Car	3059	0.00E+00	2.86E-05	3.11E-06	1.25E+02	2.03E-04	6.05E-01	6.44E-05	3.30E-03	9.78E-03	1.87E-03	6.28E-03	4.05E-03	4.16E-03	3.64E-04	6.32E-04	1.33E-07	2.13E-03	5.15E-04
16	H01	100	Passenger Truck	5123	0.00E+00	5.90E-05	6.32E-06	2.88E+02	3.94E-04	1.17E+00	1.27E-04	8.24E-03	1.71E-02	3.31E-03	1.23E-02	7.95E-03	8.15E-03	1.89E-03	1.44E-03	2.63E-07	4.13E-03	1.35E-03
16	H01	100	Single Unit Short Haul Truck	979	0.00E+00	9.30E-05	3.44E-06	1.60E+02	7.12E-05	3.30E-01	1.05E-04	4.11E-02	6.32E-03	1.64E-03	1.33E-02	2.46E-03	2.51E-03	1.64E-02	6.47E-04	2.64E-07	1.08E-02	7.66E-03
16	H01	100	Single Unit Long Haul Truck	43	0.00E+00	4.04E-06	1.45E-07	6.72E+00	2.94E-06	1.35E-02	4.57E-06	1.72E-03	2.87E-04	7.11E-05	5.83E-04	1.04E-04	1.06E-04	6.84E-04	2.73E-05	1.08E-08	4.77E-04	3.21E-04
16	H01	100	Combination Short Haul Truck	884	0.00E+00	1.27E-04	9.35E-06	2.95E+02	3.36E-07	2.28E-01	9.06E-05	2.28E-01	8.57E-03	2.17E-03	7.71E-03	2.73E-03	2.83E-03	4.68E-02	9.85E-04	0.00E+00	4.87E-03	4.29E-02
16	H01	100	Combination Long Haul Truck	807	0.00E+00	1.79E-04	1.01E-05	2.67E+02	1.14E-06	2.65E-01	1.48E-04	2.44E-01	8.58E-03	1.75E-03	1.64E-02	3.25E-03	3.39E-03	4.28E-02	8.94E-04	0.00E+00	1.30E-02	4.59E-02
16	H02	100	Passenger Car	3059	0.00E+00	2.86E-05	3.11E-06	1.25E+02	2.03E-04	6.05E-01	6.44E-05	3.30E-03	9.78E-03	1.87E-03	6.28E-03	4.05E-03	4.16E-03	3.64E-04	6.32E-04	1.33E-07	2.13E-03	5.15E-04
16	H02	100	Passenger Truck	5123	0.00E+00	5.90E-05	6.32E-06	2.88E+02	3.94E-04	1.17E+00	1.27E-04	8.24E-03	1.71E-02	3.31E-03	1.23E-02	7.95E-03	8.15E-03	1.89E-03	1.44E-03	2.63E-07	4.13E-03	1.35E-03
16	H02	100	Single Unit Short Haul Truck	979	0.00

Appendix F.2.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
56	H06	100	Passenger Truck	1866	0.00E+00	2.15E-05	2.30E-06	1.05E+02	1.43E-04	4.26E-01	4.64E-05	3.00E-03	6.22E-03	1.21E-03	4.47E-03	2.90E-03	2.97E-03	6.87E-04	5.26E-04	9.58E-08	1.50E-03	4.93E-04
56	H06	100	Single Unit Short Haul Truck	273	0.00E+00	2.59E-05	9.59E-07	4.46E+01	1.98E-05	9.20E-02	2.94E-05	1.15E-02	1.76E-03	4.57E-04	3.72E-03	6.87E-04	6.99E-04	4.57E-03	1.80E-04	7.37E-08	3.02E-03	2.14E-03
56	H06	100	Single Unit Long Haul Truck	12	0.00E+00	1.13E-06	4.05E-08	1.87E+00	8.21E-07	3.77E-03	1.27E-06	4.80E-04	8.02E-05	1.98E-05	1.63E-04	2.90E-05	2.95E-05	1.91E-04	7.61E-06	3.01E-09	1.33E-04	8.95E-05
56	H06	100	Combination Short Haul Truck	327	0.00E+00	4.68E-05	3.45E-06	1.09E+02	1.24E-07	8.42E-02	3.35E-05	8.42E-02	3.17E-03	8.03E-04	2.85E-03	1.01E-03	1.05E-03	1.73E-02	3.64E-04	0.00E+00	1.80E-03	1.59E-02
56	H06	100	Combination Long Haul Truck	298	0.00E+00	6.61E-05	3.73E-06	9.87E+01	4.21E-07	9.80E-02	5.45E-05	9.01E-02	3.17E-03	6.46E-04	6.06E-03	1.20E-03	1.25E-03	1.58E-02	3.31E-04	0.00E+00	4.81E-03	1.70E-02
16	H07	100	Passenger Car	2326	0.00E+00	2.17E-05	2.36E-06	9.49E+01	1.54E-04	4.60E-01	4.90E-05	2.51E-03	7.43E-03	1.42E-03	4.78E-03	3.08E-03	3.16E-03	2.77E-04	4.81E-04	1.01E-07	1.62E-03	3.91E-04
16	H07	100	Passenger Truck	3894	0.00E+00	4.49E-05	4.81E-06	2.19E+02	2.99E-04	8.89E-01	9.68E-05	6.26E-03	1.30E-02	2.52E-03	9.33E-03	6.04E-03	6.20E-03	1.43E-03	1.10E-03	2.00E-07	3.14E-03	1.03E-03
16	H07	100	Single Unit Short Haul Truck	533	0.00E+00	5.07E-05	1.87E-06	8.71E+01	3.88E-05	1.80E-01	5.75E-05	2.24E-02	3.45E-03	8.92E-04	7.27E-03	1.34E-03	1.37E-03	8.92E-03	3.53E-04	1.44E-07	5.90E-03	4.17E-03
16	H07	100	Single Unit Long Haul Truck	24	0.00E+00	2.20E-06	7.92E-08	3.66E+00	1.60E-06	7.36E-03	2.49E-06	9.39E-04	1.57E-04	3.87E-05	3.18E-04	5.66E-05	5.76E-05	3.73E-04	1.49E-05	5.89E-09	2.60E-04	1.75E-04
16	H07	100	Combination Short Haul Truck	527	0.00E+00	7.54E-05	5.57E-06	1.76E+02	2.00E-07	1.36E-01	5.40E-05	1.36E-01	5.11E-03	1.29E-03	4.59E-03	1.63E-03	1.69E-03	2.79E-02	5.87E-04	0.00E+00	2.91E-03	2.56E-02
16	H07	100	Combination Long Haul Truck	481	0.00E+00	1.07E-04	6.01E-06	1.59E+02	6.79E-07	1.58E-01	8.80E-05	1.45E-01	5.12E-03	1.04E-03	9.78E-03	1.94E-03	2.02E-03	2.55E-02	5.33E-04	0.00E+00	7.76E-03	2.74E-02
52	H08	60	Passenger Car	250	0.00E+00	2.94E-06	3.19E-07	1.14E+01	2.09E-05	5.82E-02	6.63E-06	2.48E-04	2.46E-03	3.68E-04	6.46E-04	4.17E-04	4.28E-04	4.96E-05	5.72E-05	1.16E-08	2.19E-04	3.87E-05
52	H08	60	Passenger Truck	419	0.00E+00	6.20E-06	6.57E-07	2.54E+01	3.91E-05	9.99E-02	1.29E-05	7.57E-04	4.36E-03	6.48E-04	1.23E-03	7.97E-04	8.17E-04	1.99E-04	1.26E-04	2.13E-08	4.08E-04	1.28E-04
52	H08	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.44E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
52	H08	60	Combination Short Haul Truck	49	0.00E+00	1.43E-05	1.05E-06	1.73E+01	3.93E-08	2.14E-02	1.03E-05	2.18E-02	2.50E-03	3.92E-04	8.84E-04	3.08E-04	3.20E-04	2.75E-03	5.79E-05	0.00E+00	5.64E-04	4.11E-03
52	H08	60	Combination Long Haul Truck	45	0.00E+00	1.97E-05	1.08E-06	1.64E+01	1.33E-07	2.58E-02	1.65E-05	2.32E-02	2.63E-03	3.80E-04	1.87E-03	3.52E-04	3.67E-04	2.63E-03	5.48E-05	0.00E+00	1.50E-03	4.38E-03
50	H09	40	Passenger Car	176	0.00E+00	2.53E-06	2.75E-07	9.31E+00	1.80E-05	5.00E-02	5.71E-06	1.61E-04	3.04E-03	4.28E-04	5.57E-04	3.59E-04	3.68E-04	5.25E-05	4.63E-05	8.57E-09	1.88E-04	2.51E-05
50	H09	40	Passenger Truck	296	0.00E+00	5.58E-06	5.87E-07	2.03E+01	3.36E-05	8.27E-02	1.12E-05	6.20E-04	5.40E-03	7.49E-04	1.06E-03	6.92E-04	7.08E-04	1.79E-04	9.98E-05	1.46E-08	3.51E-04	1.07E-04
50	H09	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.92E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.34E-05
50	H09	40	Combination Short Haul Truck	97	0.00E+00	4.67E-05	3.49E-06	4.01E+01	1.16E-07	6.60E-02	3.32E-05	6.77E-02	9.41E-03	1.40E-03	2.78E-03	1.01E-03	1.05E-03	6.38E-03	1.34E-04	0.00E+00	1.72E-03	1.28E-02
50	H09	40	Combination Long Haul Truck	88	0.00E+00	6.20E-05	3.50E-06	3.85E+01	3.94E-07	8.01E-02	5.12E-05	7.15E-02	9.77E-03	1.37E-03	5.68E-03	1.13E-03	1.18E-03	6.18E-03	1.29E-04	0.00E+00	4.51E-03	1.35E-02
53	H14	70	Passenger Car	150	0.00E+00	1.62E-06	1.76E-07	6.59E+00	1.15E-05	3.21E-02	3.64E-06	1.54E-04	1.13E-03	1.78E-04	3.55E-04	2.29E-04	2.35E-04	2.54E-05	3.32E-05	6.89E-09	1.20E-04	2.40E-05
53	H14	70	Passenger Truck	250	0.00E+00	3.38E-06	3.59E-07	1.48E+01	2.17E-05	5.67E-02	7.09E-06	4.35E-04	2.03E-03	3.15E-04	6.78E-04	4.41E-04	4.52E-04	1.10E-04	7.40E-05	1.30E-08	2.27E-04	7.28E-05
53	H14	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.61E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.00E-04
53	H14	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.91E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.29E-05
53	H14	70	Combination Short Haul Truck	26	0.00E+00	6.60E-06	4.91E-07	8.91E+00	1.68E-08	9.53E-03	4.70E-06	9.83E-03	9.30E-04	1.55E-04	3.96E-04	1.43E-04	1.48E-04	1.42E-03	2.98E-05	0.00E+00	2.47E-04	1.85E-03
53	H14	70	Combination Long Haul Truck	23	0.00E+00	9.05E-06	5.14E-07	8.37E+00	5.67E-08	1.14E-02	7.44E-06	1.05E-02	9.68E-04	1.46E-04	8.22E-04	1.65E-04	1.72E-04	1.34E-03	2.80E-05	0.00E+00	6.50E-04	1.98E-03
53	H16	70	Passenger Car	536	0.00E+00	5.80E-06	6.30E-07	2.36E+01	4.11E-05	1.15E-01	1.31E-05	5.52E-04	4.07E-03	6.37E-04	1.27E-03	8.22E-04	8.43E-04	9.11E-05	1.19E-04	2.47E-08	4.31E-04	8.61E-05
53	H16	70	Passenger Truck	898	0.00E+00	1.21E-05	1.29E-06	5.32E+01	7.77E-05	2.03E-01	2.54E-05	1.56E-03	7.26E-03	1.13E-03	2.43E-03	1.58E-03	1.62E-03	3.96E-04	2.65E-04	4.65E-08	8.13E-04	2.61E-04
53	H16	70	Single Unit Short Haul Truck	31	0.00E+00	5.39E-06	2.19E-07	5.02E+00	3.62E-06	9.10E-03	5.87E-06	2.14E-03	4.87E-04	8.94E-05	7.27E-04	1.39E-04	1.41E-04	5.10E-04	2.04E-05	8.25E-09	5.86E-04	4.01E-04
53	H16	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	9.45E-09	2.13E-01	1.56E-07	3.82E-04	2.55E-07	9.21E-05	2.23E-05	4.00E-06	3.17E-05	5.98E-06	6.10E-06	2.15E-05	8.67E-07	3.48E-10	2.56E-05	1.72E-05
53	H16	70	Combination Short Haul Truck	30	0.00E+00	7.67E-06	5.71E-07	1.04E+01	1.95E-08	1.11E-02	5.47E-06	1.14E-02	1.08E-03	1.80E-04	4.60E-04	1.66E-04	1.73E-04	1.65E-03	3.47E-05	0.00E+00	2.88E-04	2.15E-03
53	H16	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.22E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.30E-03

Appendix F.2.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B05	0.00E+00	1.24E-04	9.41E-06	3.56E+02	3.21E-04	1.08E+00	1.66E-04	1.08E-01	1.85E-02	3.77E-03	1.69E-02	7.85E-03	8.07E-03	2.22E-02	1.57E-03	2.53E-07	8.83E-03	2.02E-02
B06	0.00E+00	5.96E-05	4.57E-06	1.77E+02	1.69E-04	5.58E-01	8.34E-05	4.76E-02	9.40E-03	1.91E-03	8.50E-03	4.02E-03	4.13E-03	9.98E-03	7.91E-04	1.35E-07	4.37E-03	8.89E-03
B07	0.00E+00	2.61E-04	1.71E-05	6.09E+02	3.71E-04	1.42E+00	2.92E-04	2.70E-01	2.73E-02	5.84E-03	3.08E-02	1.11E-02	1.14E-02	5.68E-02	2.49E-03	3.85E-07	1.94E-02	5.06E-02
B08	0.00E+00	2.34E-04	1.44E-05	4.91E+02	2.05E-04	9.27E-01	2.36E-04	2.65E-01	1.97E-02	4.37E-03	2.53E-02	7.74E-03	7.97E-03	5.57E-02	1.90E-03	2.70E-07	1.74E-02	4.98E-02
B09	0.00E+00	7.02E-05	4.95E-06	1.88E+02	1.56E-04	5.38E-01	9.03E-05	6.05E-02	9.42E-03	1.96E-03	9.40E-03	3.96E-03	4.07E-03	1.30E-02	8.15E-04	1.42E-07	5.33E-03	1.13E-02
B10	0.00E+00	1.24E-04	9.64E-06	3.57E+02	3.17E-04	1.06E+00	1.64E-04	1.17E-01	1.84E-02	3.74E-03	1.64E-02	7.82E-03	8.04E-03	2.32E-02	1.57E-03	2.32E-07	8.41E-03	2.19E-02
B13	0.00E+00	8.69E-05	6.54E-06	2.40E+02	1.99E-04	6.82E-01	1.10E-04	8.50E-02	1.20E-02	2.46E-03	1.12E-02	5.07E-03	5.21E-03	1.70E-02	1.04E-03	1.51E-07	5.94E-03	1.59E-02
B14	0.00E+00	5.13E-05	3.54E-06	1.34E+02	1.07E-04	3.72E-01	6.46E-05	4.49E-02	6.59E-03	1.38E-03	6.77E-03	2.76E-03	2.83E-03	9.74E-03	5.75E-04	1.01E-07	3.94E-03	8.41E-03
D01	0.00E+00	1.02E-04	8.41E-06	2.29E+02	3.18E-04	9.05E-01	1.46E-04	7.22E-02	4.22E-02	6.31E-03	1.45E-02	7.45E-03	7.65E-03	9.36E-03	1.06E-03	1.76E-07	6.81E-03	1.35E-02
D02	0.00E+00	6.98E-05	5.65E-06	1.57E+02	2.28E-04	6.33E-01	1.03E-04	4.22E-02	2.91E-02	4.36E-03	1.03E-02	5.24E-03	5.38E-03	5.75E-03	7.36E-04	1.32E-07	4.95E-03	7.88E-03
D03	0.00E+00	1.04E-04	8.85E-06	2.60E+02	3.99E-04	1.09E+00	1.66E-04	5.24E-02	4.85E-02	7.27E-03	1.65E-02	8.84E-03	9.07E-03	7.42E-03	1.23E-03	2.28E-07	7.45E-03	9.73E-03
D04	0.00E+00	9.50E-05	7.47E-06	2.01E+02	2.77E-04	7.82E-01	1.34E-04	6.35E-02	3.67E-02	5.51E-03	1.34E-02	6.56E-03	6.74E-03	8.49E-03	9.26E-04	1.61E-07	6.70E-03	1.19E-02
D05	0.00E+00	1.05E-04	8.56E-06	2.40E+02	3.48E-04	9.69E-01	1.56E-04	6.32E-02	4.43E-02	6.65E-03	1.56E-02	7.98E-03	8.19E-03	8.58E-03	1.12E-03	2.00E-07	7.36E-03	1.18E-02
D06	0.00E+00	8.94E-05	7.23E-06	2.04E+02	3.01E-04	8.29E-01	1.35E-04	4.99E-02	3.77E-02	5.67E-03	1.35E-02	6.86E-03	7.04E-03	6.97E-03	9.59E-04	1.76E-07	6.50E-03	9.29E-03
D07	0.00E+00	8.82E-05	7.20E-06	2.43E+02	2.93E-04	8.63E-01	1.31E-04	5.57E-02	2.46E-02	4.15E-03	1.31E-02	6.71E-03	6.89E-03	9.70E-03	1.13E-03	1.99E-07	6.24E-03	1.04E-02
D08	0.00E+00	6.19E-05	5.20E-06	1.83E+02	2.35E-04	6.80E-01	9.84E-05	3.26E-02	1.89E-02	3.18E-03	9.85E-03	5.21E-03	5.35E-03	5.90E-03	8.68E-04	1.60E-07	4.50E-03	6.04E-03
D09	0.00E+00	6.12E-05	5.24E-06	1.85E+02	2.38E-04	6.89E-01	9.81E-05	3.29E-02	1.91E-02	3.21E-03	9.76E-03	5.26E-03	5.40E-03	5.83E-03	8.75E-04	1.59E-07	4.36E-03	6.09E-03
D10	0.00E+00	4.41E-05	3.87E-06	1.42E+02	1.93E-04	5.51E-01	7.55E-05	1.85E-02	1.49E-02	2.51E-03	7.53E-03	4.16E-03	4.26E-03	3.50E-03	6.85E-04	1.30E-07	3.27E-03	3.40E-03
D11	0.00E+00	8.36E-05	6.93E-06	2.37E+02	2.91E-04	8.54E-01	1.27E-04	5.05E-02	2.41E-02	4.07E-03	1.27E-02	6.60E-03	6.78E-03	8.84E-03	1.11E-03	1.96E-07	5.93E-03	9.39E-03
D12	0.00E+00	4.32E-05	3.75E-06	1.37E+02	1.84E-04	5.26E-01	7.28E-05	1.90E-02	1.43E-02	2.41E-03	7.27E-03	3.98E-03	4.08E-03	3.56E-03	6.57E-04	1.24E-07	3.19E-03	3.49E-03
D13	0.00E+00	3.25E-05	2.52E-06	6.86E+01	9.75E-05	2.70E-01	4.66E-05	1.94E-02	1.26E-02	1.89E-03	4.73E-03	2.28E-03	2.34E-03	2.69E-03	3.19E-04	5.86E-08	2.39E-03	3.62E-03
D14	0.00E+00	6.93E-05	5.35E-06	1.44E+02	2.00E-04	5.59E-01	9.75E-05	4.40E-02	2.63E-02	3.95E-03	9.89E-03	4.73E-03	4.86E-03	6.00E-03	6.64E-04	1.19E-07	5.04E-03	8.22E-03
D15	0.00E+00	7.02E-05	5.60E-06	1.57E+02	2.30E-04	6.32E-01	1.04E-04	3.94E-02	2.89E-02	4.34E-03	1.05E-02	5.26E-03	5.40E-03	5.52E-03	7.35E-04	1.36E-07	5.15E-03	7.33E-03
D16	0.00E+00	8.14E-05	6.14E-06	1.62E+02	2.19E-04	6.17E-01	1.12E-04	5.34E-02	2.94E-02	4.42E-03	1.14E-02	5.28E-03	5.42E-03	7.27E-03	7.42E-04	1.33E-07	5.97E-03	9.98E-03
D17	0.00E+00	1.16E-05	8.80E-07	2.54E+01	3.03E-05	8.81E-02	1.56E-05	7.98E-03	3.53E-03	5.55E-04	1.58E-03	7.38E-04	7.57E-04	1.21E-03	1.16E-04	1.99E-08	8.24E-04	1.49E-03
D18	0.00E+00	4.24E-05	3.17E-06	8.80E+01	9.86E-05	2.93E-01	5.45E-05	3.22E-02	1.21E-02	1.90E-03	5.52E-03	2.50E-03	2.57E-03	4.79E-03	3.95E-04	6.50E-08	2.96E-03	6.02E-03
D19	0.00E+00	9.43E-05	7.65E-06	2.65E+02	3.29E-04	9.59E-01	1.45E-04	5.23E-02	2.69E-02	4.56E-03	1.46E-02	7.42E-03	7.62E-03	9.55E-03	1.24E-03	2.31E-07	6.98E-03	9.70E-03
D20	0.00E+00	1.56E-04	9.41E-06	2.70E+02	2.05E-04	6.81E-01	1.75E-04	1.20E-01	2.34E-02	4.13E-03	1.91E-02	6.22E-03	6.38E-03	2.26E-02	1.13E-03	2.23E-07	1.28E-02	2.25E-02
D21	0.00E+00	5.30E-05	4.89E-06	1.85E+02	2.61E-04	7.38E-01	9.65E-05	1.83E-02	1.96E-02	3.30E-03	9.54E-03	5.51E-03	5.65E-03	3.52E-03	9.01E-04	1.72E-07	3.89E-03	3.32E-03
D22	0.00E+00	1.17E-04	7.94E-06	2.31E+02	1.99E-04	6.46E-01	1.37E-04	9.76E-02	2.12E-02	3.65E-03	1.44E-02	5.56E-03	5.71E-03	1.71E-02	9.92E-04	1.66E-07	8.66E-03	1.83E-02
D23	0.00E+00	9.64E-05	7.82E-06	2.26E+02	3.46E-04	9.38E-01	1.50E-04	4.61E-02	4.21E-02	6.32E-03	1.52E-02	7.74E-03	7.94E-03	6.77E-03	1.07E-03	2.06E-07	7.24E-03	8.55E-03
D24	0.00E+00	8.65E-05	5.94E-06	1.45E+02	1.77E-04	5.07E-01	1.09E-04	6.04E-02	2.56E-02	3.87E-03	1.14E-02	4.61E-03	4.73E-03	8.29E-03	6.47E-04	1.19E-07	6.65E-03	1.13E-02
D25	0.00E+00	8.89E-05	7.38E-06	2.19E+02	3.45E-04	9.27E-01	1.44E-04	3.74E-02	4.10E-02	6.15E-03	1.45E-02	7.59E-03	7.78E-03	5.69E-03	1.05E-03	2.04E-07	6.72E-03	6.92E-03
D26	0.00E+00	8.76E-05	6.59E-06	1.79E+02	2.54E-04	6.97E-01	1.25E-04	4.97E-02	3.25E-02	4.91E-03	1.28E-02	5.96E-03	6.12E-03	7.09E-03	8.29E-04	1.58E-07	6.70E-03	9.27E-03
D27	0.00E+00	2.45E-05	1.90E-06	6.26E+01	7.14E-05	2.13E-01	3.46E-05	1.64E-02	6.22E-03	1.05E-03	3.51E-03	1.69E-03	1.73E-03	2.89E-03	2.87E-04	5.08E-08	1.78E-03	3.05E-03
D28	0.00E+00	5.81E-05	4.56E-06	1.51E+02	1.74E-04	5.18E-01	8.28E-05	3.84E-02	1.50E-02	2.54E-03	8.37E-03	4.08E-03	4.19E-03	6.76E-03	6.93E-04	1.22E-07	4.18E-03	7.16E-03
D29	0.00E+00	2.45E-05	1.90E-06	6.26E+01	7.14E-05	2.13E-01	3.46E-05	1.64E-02	6.22E-03	1.05E-03	3.51E-03	1.69E-03	1.73E-03	2.89E-03	2.87E-04	5.08E-08	1.78E-03	3.05E-03
D30	0.00E+00	5.81E-05	4.56E-06	1.51E+02	1.74E-04	5.18E-01	8.28E-05	3.84E-02	1.50E-02	2.54E-03	8.37E-03	4.08E-03	4.19E-03	6.76E-03	6.93E-04	1.22E-07	4.18E-03	7.16E-03
D31	0.00E+00	2.45E-05	1.84E-06	6.01E+01	6.72E-05	2.01E-01	3.39E-05	1.61E-02	5.91E-03	1.01E-03	3.48E-03	1.61E-03	1.65E-03	2.91E-03	2.74E-04	5.00E-08	1.83E-03	3.00E-03
D32	0.00E+00	3.97E-05	3.02E-06	9.72E+01	1.07E-04	3.22E-01	5.42E-05	2.81E-02	9.54E-03	1.62E-03	5.51E-03	2.57E-03	2.64E-03	4.92E-03	4.41E-04	7.67E-08	2.87E-03	5.24E-03
D33	0.00E+00	3.96E-05	2.82E-06	7.00E+01	8.71E-05	2.50E-01	5.05E-05	2.85E-02	1.24E-02	1.88E-03	5.23E-03	2.22E-03	2.28E-03	3.84E-03	3.14E-04	5.56E-08	2.95E-03	5.33E-03
D34	0.00E+00	1.55E-05	1.35E-06	4.12E+01	6.60E-05	1.78E-01	2.61E-05	6.29E-03	7.76E-03	1.16E-03	2.60E-03	1.43E-03	1.47E-03	9.48E-04	1.98E-04	3.79E-08	1.13E-03	1.16E-03
D35	0.00E+00	2.25E-05	2.08E-06	6.57E+01	1.08E-04	2.91E-01	4.03E-05	7.86E-03	1.25E-02	1.87E-03	3.96E-03	2.30E-03	2.36E-03	1.21E-03	3.19E-04	6.06E-08	1.60E-03	1.44E-03
D36	0.00E+00	2.23E-05	1.49E-06	3.33E+01	3.41E-05	1.05E-01	2.54E-05	1.88E-02	5.73E-03	8.67E-04	2.66E-03	9.93E-04	1.02E-03	2.47E-03	1.42E-04	2.32E-08	1.64E-03	3.54E-03
D37	0.00E+00	1.33E-05	1.25E-06	3.91E+01	6.41E-05	1.73E-01	2.37E-05	5.12E-03	7.44E-03	1.11E-03	2.31E-03	1.36E-03	1.40E-03	7.53E-04	1.90E-04	3.53E-08	9.14E-04	9.41E-04
D38	0.00E+00	4.09E-05	3.30E-06	8.98E+01	1.26E-04	3.55E-01	5.87E-05	2.72E-02	1.65E-02	2.48E-03	5.87E-03	2.95E-03	3.03E-03	3.61E-03	4.16E-04	7.20E-08	2.84E-03	5.08E-03
D39	0.00E+00	8.52E-06	8.78E-07	2.94E+01	5.11E-05	1.36E-01	1.72E-05	1.78E-03	5.68E-03	8.48E-04	1.66E-03	1.05E-03	1.08E-03	3.11E-04	1.46E-04	2.76E-08	5.79E-04	3.18E-04
D40	0.00E+00	3.12E-05	2.47E-06	6.65E+01	9.17E-05	2.59E-01	4.39E-05	2.11E-02	1.22E-02	1.83E-03	4.40E-03	2.17E-03	2.23E-03	2.80E-03	3.07E-04	5.29E-08	2.18E-03	3.94E-03
D41	0.00E+00	1.42E-05	1.52E-06	5.25E+01	9.34E-05	2.47E-01	3.04E-05	1.51E-03	1.02E-02	1.52E-03	2.92E-03	1.89E-03	1.94E-03	3.60E-04	2.62E-04	5.05E-08	9.78E-04	2.51E-04
D42	0.00E+00	6.79E-06	5.84E-07	1.69E+01	2.53E-05	7.00E-02	1.06E-05	3.93E-03	3.15E-03	4.71E-04	1.04E-03	5.66E-04	5.81E-04	5.30E-04	7.97E-05	1.41E-08	4.63E-04	7.31E-04
D43	0.00E+00	1.12E-05	1.15E-06	3.84E+01	6.64E-05	1.77E-01	2.24E-05	2.51E-03	7.40E-03	1.10E-03	2.16E-03	1.37E-03	1.40E-03	4.28E-04	1.89E-04	3.59E-08	7.61E-04	4.49E-04
D44	0.00E+00	2.51E-05	1.53E-06	3.13E+01	2.65E-05	8.48E-02	2.65E-05	2.13E-02	5.17E-03	7.90E-04	2.87E-03	9.00E-04	9.26E-04	2.84E-03	1.28E-04	2.19E-08	1.94E-03	4.01E-03
D45	0.00E+00	9.09E-05	6.34E-06	1.52E+02	1.80E-04	5.25E-01	1.12E-04	6.91E-02	2.69E-02	4.06E-03	1.16E-02	4.76E-03	4.89E-03	9.21E-03	6.74E-04	1.17E-07	6.73E-03	1.29E-02
D46	0.00E+00	9.49E-05	6.30E-06	1.45E+02	1.58E-04	4.69E-01	1.11E-04	7.41E-02	2.50E-02	3.80E-03	1.18E-02	4.43E-03	4.55E-03	9.91E-03	6.28E-04	1.10E-07	7.20E-03	1.39E-02
D47	0.00E+00	9.65E-05	6.77E-06	1.65E+02	1.98E-04	5.74E-01	1.20E-04	7.18E-02	2.91E-02	4.39E-03	1.25E-02	5.17E-03	5.31E-03	9.62E-03	7.31E-04	1.28E-07	7.17E-03	1.35E-02
D48	0.00E+00	2.92E-05	2.37E-06	6.54E+01	9.32E-05	2.61E-01	4.26E-05	1.86E-02	1.21E-02	1.81E-03	4.25E-03	2.16E-03	2.22E-03	2.49E-03	3.04E-04	5.33E-08	2.04E-03	3.46E-03
D49	0.00E+00	9.65E-05	6.77E-06	1.65E+02	1.98E-04	5.74E-01	1.20E-04	7.18E-02	2.91E-02	4.39E-03	1.25E-02	5.17E-03	5.31E-03	9.62E-03	7.31E-04	1.28E-07	7.17E-03	1.35E-02
D50	0.00E+00	1.04E-04	7.16E-06	1.71E+02	2.01E-04	5.86E-01	1.28E-04	7.79E-02	3.01E-02	4.55E-03	1.33E-02	5.35E-03	5.50E-03	1.05E-02	7.56E-04	1.34E-07	7.85E-03	1.46E-02
D51	0.00E+00	3.11E-05	2.31E-06	6.08E+01	8.30E-05	2.32E-01	4.26E-05	1.95E-02	1.10E-02	1.66E-03	4.38E-03	2.00E-03	2.05E-03	2.70E-03	2.79E-04	5.16E-08	2.33E-03	3.64E-03
D52	0.00E+00	2.37E-05	1.99E-06	5.90E+01	9.24E-05	2.49E-01	3.83E-05	1.04E-02	1.10E-02	1.65E-03	3.85E-03	2.03E-03	2.09E-03	1.56E-03	2.82E-04	5.41E-08	1.77E-03	1.93E-03
D53	0.00E+00	2.31E-05	1.77E-06	4.77E+01	6.69E-05	1.86E-01	3.27E-05	1.40E-02	8.70E-03	1.31E-03	3.34E-03	1.58E-03	1.62E-03	1.95E-03	2.21E-04	4.07E-08	1.72E-03	2.62E-03
D54	0.00E+00	3.07E-05	2.63E-06	7.95E+01	1.27E-04	3.41E-01	5.11E-05	1.24E-02	1.49E-02	2.24E-03	5.12E-03	2.76E-03	2.83E-03	1.88E-03	3.83E-04	7.38E-08	2.28E-03	2.28E-03
D55	0.00E+00	4.75E-05	3.68E-06	1.22E+02	1.40E-04	4.18E-01	6.77E-05	3.06E-02	1.21E-02	2.06E-03	6.89E-03	3.30E-03	3.39E-03	5.48E-03	5.60E-04	1.01E-07	3.50E-03	5.70E-03
D56	0.00E+00	2.88E-05	2.12E-06	6.78E+01	7.27E-05	2.20E-01	3.86E-05	2.00E-02	6.58E-03	1.12E-03	3.97E-03	1.78E-03	1.83E-03	3.59E-03	3.06E-04	5.48E-08	2.14E-03	3.74E-03
D57	0.00E+00	6.43E-05	4.50E-06	1.38E+02	1.33E-04	4.16E-01	8.05E-05	4.86E-02	1.30E-02	2.23E-03	8.38E-03	3.47E-03	3.56E-03	8.69E-03	6.06E-04	1.07E-07	4.82E-03	9.10E-03
D58	0.00E+00	4.21E-05	3.39E-06	1.16E+02	1.41E-04	4.14E-01	6.33E-05	2.47E-02	1.17E-02	1.98E-03	6.39E-03	3.22E-03	3.31E-03	4.44E-03	5.41E-04	9.88E-08	3.08E-03	4.58E-03
D59	0.00E+00	6.43E-05	4.50E-06	1.38E+02	1.33E-04	4.16E-01	8.05E-05	4.86E-02	1.30E-02	2.23E-03	8.38E-03	3.47E-03	3.56E-03	8.69E-03	6.06E-04	1.07E-07	4.82E-03	9.10E-03
D60	0.00E+00	4.21E-05	3.39E-06	1.16E+02	1.41E-04	4.14E-01	6.33E-05	2.47E-02	1.17E-02	1.98E-03	6.39E-03	3.22E-03	3.31E-03	4.44E-03	5.41E-04	9.88E-08	3.08E-03	4.58E-03
D61	0.00E+00	8.09E-06	5.61E-07	1.72E+01	1.68E-05	5.22E-02	1.02E-05	5.99E-03	1.62E-03	2.79E-04	1.06E-03	4.35E-04	4.47E-04	1.08E-03	7.61E-05	1.37E-08	6.16E-04	1.12E-03
D62	0.00E+00	1.68E-05	1.30E-06	4.41E+01	5.23E-05	1.54E-01	2.46E-05	9.98E-03	4.40E-03	7.48E-04	2.51E-03	1.21E-03	1.24E-03	1.83E-03	2.04E-04	3.80E-08	1.27E-03	1.86E-03
D63	0.00E+00	1.55E-05	9.63E-07	2.21E+01	1.63E-05	5.47E-02	1.62E-05	1.34E-02	2.71E-03	4.37E-04	1.74E-03	5.58E-04	5.74E-04	2.04E-03	9.05E-05	1.50E-08	1.17E-03	2.51E-03
D64	0.00E+00	1.43E-05	9.47E-07	2.46E+01	2.45E-05	7.39E-02	1.70E-05	1.06E-02	3.21E-03	5.13E-04	1.80E-03	6.78E-04	6.96E-04	1.66E-03	1.07E-04	1.96E-08	1.10E-03	1.98E-03
D65	0.00E+00	4.84E-05	3.08E-06	8.71E+01	6.65E-05	2.23E-01	5.41E-05	4.05E-02	7.69E-03	1.34E-03	5.78E-03	2.01E-03	2.06E-03	7.27E-03	3.65E-04	6.37E-08	3.72E-03	7.59E-03
D66	0.00E+00	4.90E-05	3.58E-06	1.14E+02	1.19E-04	3.64E-01	6.48E-05	3.50E-02	1.10E-02	1.87E-03	6.67E-03	2.96E-03	3.04E-03	6.24E-03	5.10E-04	9.05E-08	3.63E-03	6.53E-03
D67	0.00E+00	4.84E-05	3.08E-06	8.71E+01	6.65E-05	2.23E-01	5.41E-05	4.05E-02	7.69E-03	1.34E-03	5.78E-03	2.01E-03	2.06E-03	7.27E-03	3.65E-04	6.37E-08	3.72E-03	7.59E-03
D68	0.00E+00	4.90E-05	3.58E-06	1.14E+02	1.19E-04	3.64E-01	6.48E-05	3.50E-02	1.10E-02	1.87E-03	6.67E-03	2.96E-03	3.04E-03	6.24E-03	5.10E-04	9.05E-08	3.63E-03	6.53E-03
D69	0.00E+00	1.97E-05	1.27E-06	3.67E+01	2.99E-05	9.83E-02	2.26E-05	1.60E-02	3.30E-03	5.72E-04	2.41E-03	8.66E-04	8.90E-04	2.89E-03	1.56E-04	2.76E-08	1.52E-03	3.00E-03
D70	0.00E+00	1.99E-05	1.42E-06	4.41E+01	4.40E-05	1.36E-01	2.54E-05	1.50E-02	4.20E-03	7.17E-04	2.63E-03	1.12E-03	1.15E-03	2.65E-03	1.95E-04	3.41E-08	1.48E-03	2.80E-03
D71	0.00E+00	1.96E-05	1.58E-06	4.96E+01	6.58E-05	1.85E-01	2.95E-05	1.09E-02	7.08E-03	1.11E-03	2.97E-03	1.50E-03	1.54E-03	1.73E-03	2.33E-04	4.24E-08	1.43E-03	2.02E-03
D72	0.00E+00	2.80E-05	2.07E-06	5.82E+01	6.67E-05	1.96E-01	3.65E-05	2.00E-02	7.99E-03	1.26E-03	3.73E-03	1.67E-03	1.71E-03	3.05E-03	2.63E-04	4.52E-08	2.02E-03	3.74E-03
D73	0.00E+00	9.74E-06	8.91E-07	3.08E+01	4.56E-05	1.25E-01	1.72E-05	3.68E-03	4.56E-03	7.11E-04	1.69E-03	9.72E-04	9.97E-04	6.16E-04	1.49E-04	2.76E-08	6.94E-04	6.75E-04
D74	0.00E+00	1.71E-05	1.35E-06	3.98E+01	4.92E-05	1.42E-01	2.39E-05	1.14E-02	5.61E-03	8.79E-04	2.41E-03	1.17E-03	1.20E-03	1.73E-03	1.83E-04	3.15E-08	1.20E-03	2.13E-03
D75	0.00E+00	1.35E-05	1.02E-06	3.36E+01	3.79E-05	1.13E-01	1.89E-05	8.76E-03	3.31E-03	5.63E-04	1.94E-03	9.00E-04	9.24E-04	1.59E-03	1.53E-04	2.81E-08	1.01E-03	1.63E-03
D76	0.00E+00	2.15E-05	1.50E-06	4.60E+01	4.45E-05	1.39E-01	2.69E-05	1.63E-02	4.34E-03	7.43E-04	2.80E-03	1.16E-03	1.19E-03	2.92E-03	2.03E-04	3.57E-08	1.61E-03	3.05E-03
D77	0.00E+00	1.28E-05	8.55E-07	2.53E+01	2.23E-05	7.14E-02	1.53E-05	1.01E-02	2.32E-03	4.00E-04	1.61E-03	6.14E-04	6.31E-04	1.82E-03	1.09E-04	1.94E-08	9.81E-04	1.90E-03
D78	0.00E+00	4.13E-05	2.62E-06	7.24E+01	5.19E-05	1.79E-01	4.50E-05	3.60E-02	6.33E-03	1.10E-03	4.81E-03	1.63E-03	1.68E-03	6.39E-03	3.00E-04	5.03E-08	3.13E-03	6.75E-03
D79	0.00E+00	1.64E-05	1.35E-06	4.29E+01	5.81E-05	1.63E-01	2.52E-05	8.73E-03	6.18E-03	9.67E-04	2.53E-03	1.31E-03	1.34E-03	1.39E-03	2.03E-04	3.69E-08	1.19E-03	1.62E-03
D80	0.00E+00	2.40E-05	1.89E-06	5.74E+01	7.34E-05	2.09E-01	3.45E-05	1.46E-02	8.13E-03	1.28E-03	3.49E-03	1.71E-03	1.76E-03	2.27E-03	2.67E-04	4.76E-08	1.73E-03	2.72E-03
D81	0.00E+00	1.13E-05	1.12E-06	4.06E+01	6.30E-05	1.71E-01	2.19E-05	2.95E-03	6.11E-03	9.50E-04	2.12E-03	1.30E-03	1.34E-03	5.24E-04	2.00E-04	3.71E-08	7.86E-04	5.30E-04
D82	0.00E+00	7.56E-06	7.95E-07	3.00E+01	4.80E-05	1.30E-01	1.58E-05	1.24E-03	4.56E-03	7.08E-04	1.52E-03	9.76E-04	1.00E-03	2.47E-04	1.49E-04	2.78E-08	5.20E-04	2.14E-04
D83	0.00E+00	9.64E-05	6.15E-06	1.68E+02	1.17E-04	4.08E-01	1.04E-04	8.66E-02	1.46E-02	2.54E-03	1.10E-02	3.75E-03	3.85E-03	1.52E-02	6.91E-04	1.11E-07	7.18E-03	1.63E-02
D84	0.00E+00	1.09E-04	7.70E-06	2.17E+02	1.78E-04	5.94E-01	1.24E-04	1.02E-01	2.00E-02	3.41E-03	1.26E-02	5.12E-03	5.27E-03	1.70E-02	9.20E-04	1.31E-07	7.37E-03	1.91E-02
D85	0.00E+00	8.07E-05	5.08E-06	1.36E+02	8.79E-05	3.16E-01	8.49E-05	7.42E-02	1.17E-02	2.04E-03	9.05E-03	2.97E-03	3.05E-03	1.30E-02	5.53E-04	8.72E-08	6.00E-03	1.39E-02
D86	0.00E+00	1.01E-04	7.26E-06	2.08E+02	1.78E-04	5.86E-01	1.17E-04	9.31E-02	1.93E-02	3.28E-03	1.19E-02	4.98E-03	5.12E-03

Appendix F.2.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E08	0.00E+00	8.42E-05	6.42E-06	1.72E+02	2.39E-04	6.67E-01	1.18E-04	5.23E-02	3.14E-02	4.72E-03	1.21E-02	5.68E-03	5.83E-03	7.22E-03	7.95E-04	1.45E-07	6.23E-03	9.76E-03
E09	0.00E+00	1.21E-04	9.18E-06	2.38E+02	3.12E-04	8.92E-01	1.62E-04	8.66E-02	4.30E-02	6.47E-03	1.65E-02	7.64E-03	7.85E-03	1.15E-02	1.08E-03	1.86E-07	8.62E-03	1.62E-02
E10	0.00E+00	7.70E-05	5.95E-06	1.61E+02	2.27E-04	6.31E-01	1.09E-04	4.73E-02	2.95E-02	4.43E-03	1.11E-02	5.33E-03	5.47E-03	6.51E-03	7.47E-04	1.36E-07	5.65E-03	8.82E-03
E11	0.00E+00	1.72E-04	1.23E-05	3.07E+02	3.85E-04	1.10E+00	2.20E-04	1.22E-01	5.47E-02	8.25E-03	2.28E-02	9.77E-03	1.00E-02	1.65E-02	1.38E-03	2.44E-07	1.27E-02	2.29E-02
E12	0.00E+00	1.64E-04	1.14E-05	2.69E+02	3.01E-04	9.02E-01	1.96E-04	1.35E-01	4.71E-02	7.11E-03	2.03E-02	8.21E-03	8.44E-03	1.76E-02	1.17E-03	1.92E-07	1.18E-02	2.52E-02
E13	0.00E+00	2.77E-05	2.05E-06	6.75E+01	7.58E-05	2.26E-01	3.84E-05	1.76E-02	6.62E-03	1.13E-03	3.97E-03	1.81E-03	1.86E-03	3.23E-03	3.08E-04	5.76E-08	2.11E-03	3.27E-03
E14	0.00E+00	5.65E-05	3.92E-06	1.16E+02	1.05E-04	3.35E-01	6.78E-05	4.63E-02	1.08E-02	1.85E-03	7.04E-03	2.84E-03	2.91E-03	8.10E-03	5.02E-04	8.37E-08	4.13E-03	8.68E-03
E15	0.00E+00	2.78E-05	1.92E-06	5.91E+01	5.73E-05	1.78E-01	3.49E-05	2.06E-02	5.55E-03	9.55E-04	3.65E-03	1.49E-03	1.53E-03	3.73E-03	2.60E-04	4.71E-08	2.13E-03	3.85E-03
E16	0.00E+00	4.53E-05	3.37E-06	9.74E+01	8.70E-05	2.83E-01	5.38E-05	4.22E-02	9.21E-03	1.56E-03	5.39E-03	2.37E-03	2.44E-03	6.91E-03	4.20E-04	5.86E-08	2.95E-03	7.92E-03
E17	0.00E+00	1.97E-05	1.25E-06	3.68E+01	3.10E-05	1.00E-01	2.30E-05	1.50E-02	3.30E-03	5.75E-04	2.47E-03	8.78E-04	9.02E-04	2.79E-03	1.57E-04	2.97E-08	1.57E-03	2.82E-03
E18	0.00E+00	1.66E-05	1.40E-06	4.91E+01	6.25E-05	1.82E-01	2.62E-05	9.16E-03	5.05E-03	8.51E-04	2.61E-03	1.39E-03	1.43E-03	1.62E-03	2.32E-04	4.20E-08	1.19E-03	1.70E-03
E19	0.00E+00	5.63E-05	4.44E-06	1.24E+02	1.81E-04	4.98E-01	8.33E-05	3.13E-02	2.28E-02	3.43E-03	8.45E-03	4.16E-03	4.27E-03	4.42E-03	5.80E-04	1.08E-07	4.18E-03	5.83E-03
E20	0.00E+00	5.36E-05	3.87E-06	1.02E+02	1.41E-04	3.89E-01	7.37E-05	3.10E-02	1.85E-02	2.79E-03	7.67E-03	3.39E-03	3.48E-03	4.45E-03	4.71E-04	9.12E-08	4.19E-03	5.79E-03
E21	0.00E+00	1.07E-07	1.15E-08	4.64E-01	7.16E-07	1.99E-03	2.31E-07	1.29E-05	5.10E-05	8.51E-06	2.23E-05	1.44E-05	1.48E-05	2.81E-06	2.32E-06	4.45E-10	7.50E-06	2.11E-06
E22	0.00E+00	2.17E-05	1.51E-06	4.40E+01	3.83E-05	1.25E-01	2.55E-05	1.88E-02	4.08E-03	6.97E-04	2.63E-03	1.06E-03	1.09E-03	3.21E-03	1.89E-04	2.98E-08	1.54E-03	3.51E-03
E23	0.00E+00	1.07E-07	1.15E-08	4.64E-01	7.16E-07	1.99E-03	2.31E-07	1.29E-05	5.10E-05	8.51E-06	2.23E-05	1.44E-05	1.48E-05	2.81E-06	2.32E-06	4.45E-10	7.50E-06	2.11E-06
E24	0.00E+00	2.17E-05	1.51E-06	4.40E+01	3.83E-05	1.25E-01	2.55E-05	1.88E-02	4.08E-03	6.97E-04	2.63E-03	1.06E-03	1.09E-03	3.21E-03	1.89E-04	2.98E-08	1.54E-03	3.51E-03
E25	0.00E+00	1.62E-05	1.45E-06	4.87E+01	6.97E-05	1.94E-01	2.73E-05	7.55E-03	7.15E-03	1.11E-03	2.68E-03	1.51E-03	1.55E-03	1.19E-03	2.34E-04	4.20E-08	1.13E-03	1.39E-03
E26	0.00E+00	1.44E-05	1.31E-06	4.45E+01	6.48E-05	1.79E-01	2.48E-05	6.16E-03	6.57E-03	1.02E-03	2.43E-03	1.39E-03	1.43E-03	9.90E-04	2.15E-04	3.89E-08	1.00E-03	1.13E-03
E27	0.00E+00	1.32E-05	1.18E-06	3.98E+01	5.71E-05	1.59E-01	2.23E-05	6.02E-03	5.85E-03	9.12E-04	2.20E-03	1.24E-03	1.27E-03	9.59E-04	1.91E-04	3.45E-08	9.24E-04	1.11E-03
E28	0.00E+00	1.12E-05	9.88E-07	3.28E+01	4.65E-05	1.30E-01	1.85E-05	5.36E-03	4.81E-03	7.49E-04	1.82E-03	1.02E-03	1.04E-03	8.45E-04	1.57E-04	2.82E-08	7.77E-04	9.91E-04
E29	0.00E+00	1.67E-06	1.42E-07	4.76E+00	6.84E-06	1.88E-02	2.77E-06	6.69E-04	6.94E-04	1.09E-04	2.78E-04	1.49E-04	1.53E-04	1.16E-04	2.29E-05	4.37E-09	1.26E-04	1.23E-04
E30	0.00E+00	1.40E-05	1.22E-06	4.04E+01	5.72E-05	1.59E-01	2.30E-05	6.64E-03	5.91E-03	9.23E-04	2.28E-03	1.25E-03	1.29E-03	1.06E-03	1.94E-04	3.52E-08	9.97E-04	1.23E-03
E31	0.00E+00	1.15E-05	7.48E-07	1.90E+01	1.79E-05	5.51E-02	1.32E-05	8.79E-03	2.45E-03	3.92E-04	1.40E-03	5.14E-04	5.28E-04	1.37E-03	8.17E-05	1.46E-08	8.74E-04	1.65E-03
E32	0.00E+00	1.84E-05	1.59E-06	5.23E+01	7.35E-05	2.05E-01	2.99E-05	8.86E-03	7.62E-03	1.19E-03	2.97E-03	1.62E-03	1.66E-03	1.42E-03	2.50E-04	4.54E-08	1.31E-03	1.64E-03
E33	0.00E+00	4.34E-05	3.03E-06	7.37E+01	8.94E-05	2.58E-01	5.43E-05	3.16E-02	1.30E-02	1.97E-03	5.65E-03	2.33E-03	2.39E-03	4.26E-03	3.28E-04	5.84E-08	3.26E-03	5.91E-03
E34	0.00E+00	7.47E-05	6.17E-06	1.76E+02	2.64E-04	7.25E-01	1.15E-04	4.09E-02	3.28E-02	4.91E-03	1.15E-02	5.95E-03	6.11E-03	5.70E-03	8.32E-04	1.52E-07	5.35E-03	7.61E-03
E35	0.00E+00	3.34E-05	2.20E-06	5.05E+01	5.52E-05	1.63E-01	3.92E-05	2.57E-02	8.72E-03	1.32E-03	4.14E-03	1.55E-03	1.59E-03	3.46E-03	2.19E-04	3.88E-08	2.55E-03	4.82E-03
E36	0.00E+00	6.13E-05	4.81E-06	1.31E+02	1.86E-04	5.18E-01	8.81E-05	3.78E-02	2.41E-02	3.62E-03	8.91E-03	4.34E-03	4.46E-03	5.17E-03	6.09E-04	1.10E-07	4.45E-03	7.04E-03
E37	0.00E+00	3.34E-05	2.20E-06	5.05E+01	5.52E-05	1.63E-01	3.92E-05	2.57E-02	8.72E-03	1.32E-03	4.14E-03	1.55E-03	1.59E-03	3.46E-03	2.19E-04	3.88E-08	2.55E-03	4.82E-03
E38	0.00E+00	6.13E-05	4.81E-06	1.31E+02	1.86E-04	5.18E-01	8.81E-05	3.78E-02	2.41E-02	3.62E-03	8.91E-03	4.34E-03	4.46E-03	5.17E-03	6.09E-04	1.10E-07	4.45E-03	7.04E-03
E39	0.00E+00	1.39E-05	1.27E-06	4.34E+01	6.36E-05	1.75E-01	2.41E-05	5.72E-03	6.42E-03	1.00E-03	2.37E-03	1.36E-03	1.40E-03	9.29E-04	2.10E-04	3.83E-08	9.73E-04	1.05E-03
E40	0.00E+00	2.29E-05	1.78E-06	5.27E+01	6.53E-05	1.88E-01	3.20E-05	1.48E-02	7.40E-03	1.16E-03	3.24E-03	1.55E-03	1.59E-03	2.28E-03	2.43E-04	4.27E-08	1.64E-03	2.76E-03
E41	0.00E+00	1.04E-05	9.71E-07	3.40E+01	5.09E-05	1.40E-01	1.87E-05	3.71E-03	5.06E-03	7.87E-04	1.84E-03	1.08E-03	1.10E-03	6.21E-04	1.66E-04	3.05E-08	7.32E-04	6.77E-04
E42	0.00E+00	1.37E-05	1.29E-06	4.40E+01	6.46E-05	1.79E-01	2.41E-05	5.88E-03	6.54E-03	1.02E-03	2.35E-03	1.38E-03	1.42E-03	9.25E-04	2.13E-04	3.81E-08	9.31E-04	1.08E-03
E43	0.00E+00	1.10E-05	9.99E-07	3.47E+01	5.17E-05	1.42E-01	1.94E-05	3.92E-03	5.14E-03	8.02E-04	1.92E-03	1.10E-03	1.13E-03	6.72E-04	1.69E-04	3.16E-08	7.93E-04	7.18E-04
E44	0.00E+00	9.17E-06	8.88E-07	3.12E+01	4.71E-05	1.29E-01	1.69E-05	3.37E-03	4.68E-03	7.27E-04	1.64E-03	9.91E-04	1.02E-03	5.41E-04	1.53E-04	2.75E-08	6.20E-04	6.16E-04
E45	0.00E+00	3.04E-05	1.80E-06	4.57E+01	2.23E-05	8.99E-02	3.00E-05	2.87E-02	3.71E-03	6.56E-04	3.27E-03	9.22E-04	9.49E-04	5.08E-03	1.78E-04	2.84E-08	2.32E-03	5.39E-03
E46	0.00E+00	2.47E-05	1.89E-06	6.27E+01	7.20E-05	2.14E-01	3.51E-05	1.57E-02	6.21E-03	1.06E-03	3.58E-03	1.70E-03	1.74E-03	2.85E-03	2.88E-04	5.26E-08	1.84E-03	2.93E-03
E47	0.00E+00	7.39E-06	5.57E-07	1.83E+01	2.06E-05	6.16E-02	1.03E-05	4.81E-03	1.80E-03	3.07E-04	1.06E-03	4.91E-04	5.04E-04	8.70E-04	8.37E-05	1.53E-08	5.53E-04	8.96E-04
E48	0.00E+00	2.29E-05	1.80E-06	6.10E+01	7.27E-05	2.14E-01	3.37E-05	1.38E-02	6.12E-03	1.04E-03	3.42E-03	1.68E-03	1.72E-03	2.50E-03	2.83E-04	5.20E-08	1.70E-03	2.56E-03
E49	0.00E+00	3.13E-06	2.61E-07	8.82E+00	1.07E-05	3.15E-02	4.70E-06	2.02E-03	8.97E-04	1.51E-04	4.67E-04	2.44E-04	2.51E-04	3.45E-04	4.11E-05	7.06E-09	2.16E-04	3.75E-04
E50	0.00E+00	3.29E-05	2.32E-06	6.86E+01	6.25E-05	2.00E-01	3.97E-05	2.74E-02	6.42E-03	1.10E-03	4.10E-03	1.69E-03	1.73E-03	4.74E-03	2.98E-04	4.85E-08	2.37E-03	5.13E-03
E51	0.00E+00	6.26E-07	5.60E-08	1.94E+00	2.47E-06	7.20E-03	9.98E-07	3.87E-04	2.01E-04	3.36E-05	9.72E-05	5.48E-05	5.63E-05	6.37E-05	9.14E-06	1.53E-09	4.09E-05	7.19E-05
E52	0.00E+00	3.48E-05	2.47E-06	7.40E+01	6.93E-05	2.20E-01	4.27E-05	2.84E-02	6.97E-03	1.19E-03	4.40E-03	1.84E-03	1.89E-03	4.92E-03	3.23E-04	5.34E-08	2.51E-03	5.31E-03
E53	0.00E+00	1.27E-05	8.66E-07	2.61E+01	2.42E-05	7.63E-02	1.56E-05	9.76E-03	2.42E-03	4.17E-04	1.63E-03	6.45E-04	6.63E-04	1.76E-03	1.14E-04	2.04E-08	9.72E-04	1.83E-03
E54	0.00E+00	3.52E-05	2.79E-06	9.28E+01	1.08E-04	3.22E-01	5.08E-05	2.30E-02	9.30E-03	1.57E-03	5.12E-03	2.53E-03	2.60E-03	4.03E-03	4.28E-04	7.55E-08	2.52E-03	4.28E-03
E55	0.00E+00	1.27E-05	8.66E-07	2.61E+01	2.42E-05	7.63E-02	1.56E-05	9.76E-03	2.42E-03	4.17E-04	1.63E-03	6.45E-04	6.63E-04	1.76E-03	1.14E-04	2.04E-08	9.72E-04	1.83E-03
E56	0.00E+00	3.52E-05	2.79E-06	9.28E+01	1.08E-04	3.22E-01	5.08E-05	2.30E-02	9.30E-03	1.57E-03	5.12E-03	2.53E-03	2.60E-03	4.03E-03	4.28E-04	7.55E-08	2.52E-03	4.28E-03
F31	0.00E+00	5.94E-05	4.97E-06	1.42E+02	2.11E-04	5.84E-01	9.11E-05	3.41E-02	2.64E-02	3.96E-03	9.05E-03	4.77E-03	4.90E-03	4.66E-03	6.69E-04	1.20E-07	4.16E-03	6.35E-03
F32	0.00E+00	5.71E-05	5.02E-06	1.53E+02	2.46E-04	6.63E-01	9.66E-05	2.33E-02	2.89E-02	4.33E-03	9.59E-03	5.32E-03	5.46E-03	3.48E-03	7.39E-04	1.40E-07	4.13E-03	4.29E-03
F33	0.00E+00	9.19E-06	9.50E-07	3.19E+01	5.55E-05	1.48E-01	1.86E-05	1.86E-03	6.16E-03	9.19E-04	1.79E-03	1.14E-03	1.17E-03	3.28E-04	1.58E-04	3.00E-08	6.25E-04	3.30E-04
F34	0.00E+00	3.85E-05	3.25E-06	9.35E+01	1.40E-04	3.86E-01	5.95E-05	2.19E-02	1.74E-02	2.61E-03	5.90E-03	3.14E-03	3.23E-03	2.99E-03	4.41E-04	7.89E-08	2.68E-03	4.07E-03
F35	0.00E+00	9.35E-06	6.96E-07	2.27E+01	2.52E-05	7.56E-02	1.29E-05	6.14E-03	2.22E-03	3.79E-04	1.33E-03	6.05E-04	6.21E-04	1.12E-03	1.03E-04	1.90E-08	7.04E-04	1.14E-03
F36	0.00E+00	2.17E-05	1.88E-06	6.75E+01	8.92E-05	2.56E-01	3.59E-05	1.04E-02	7.01E-03	1.18E-03	3.58E-03	1.95E-03	2.00E-03	1.90E-03	3.22E-04	6.00E-08	1.58E-03	1.91E-03
F37	0.00E+00	1.04E-04	7.91E-06	2.10E+02	2.87E-04	8.07E-01	1.43E-04	6.76E-02	3.82E-02	5.75E-03	1.46E-02	6.87E-03	7.05E-03	9.19E-03	9.65E-04	1.73E-07	7.54E-03	1.26E-02
F38	0.00E+00	1.17E-04	7.95E-06	1.83E+02	1.98E-04	5.96E-01	1.37E-04	9.58E-02	3.18E-02	4.80E-03	1.43E-02	5.54E-03	5.70E-03	1.26E-02	7.91E-04	1.31E-07	8.58E-03	1.80E-02
F39	0.00E+00	1.73E-06	1.43E-07	4.73E+00	5.59E-06	1.66E-02	2.53E-06	1.18E-03	4.78E-04	8.05E-05	2.51E-04	1.29E-04	1.33E-04	2.00E-04	2.19E-05	3.68E-09	1.18E-04	2.21E-04
F40	0.00E+00	2.31E-05	1.76E-06	5.63E+01	6.10E-05	1.85E-01	3.13E-05	1.67E-02	5.51E-03	9.36E-04	3.18E-03	1.48E-03	1.52E-03	2.91E-03	2.55E-04	4.37E-08	1.66E-03	3.12E-03
F41	0.00E+00	1.14E-05	1.22E-06	4.65E+01	7.53E-05	2.03E-01	2.44E-05	1.30E-03	7.11E-03	1.10E-03	2.35E-03	1.52E-03	1.56E-03	3.00E-04	2.32E-04	4.37E-08	7.88E-04	2.14E-04
F42	0.00E+00	1.12E-05	1.06E-06	3.66E+01	5.42E-05	1.50E-01	2.00E-05	4.46E-03	5.44E-03	8.46E-04	1.95E-03	1.15E-03	1.18E-03	7.15E-04	1.78E-04	3.21E-08	7.68E-04	8.18E-04
F84	0.00E+00	5.85E-05	4.14E-06	7.14E+01	6.57E-05	2.29E-01	5.92E-05	6.12E-02	1.89E-02	2.68E-03	5.88E-03	2.27E-03	2.34E-03	5.77E-03	2.98E-04	3.07E-08	3.54E-03	1.15E-02
F85	0.00E+00	4.11E-05	3.18E-06	8.65E+01	1.03E-04	3.02E-01	5.41E-05	3.23E-02	1.52E-02	2.27E-03	5.42E-03	2.57E-03	2.64E-03	4.18E-03	3.93E-04	5.99E-08	2.78E-03	6.05E-03
F86	0.00E+00	2.96E-05	2.11E-06	5.85E+01	6.04E-05	1.81E-01	3.66E-05	2.27E-02	7.71E-03	1.22E-03	3.77E-03	1.59E-03	1.63E-03	3.43E-03	2.60E-04	4.35E-08	2.14E-03	4.24E-03
F87	0.00E+00	6.36E-05	3.84E-06	7.76E+01	5.56E-05	1.89E-01	6.46E-05	5.77E-02	1.25E-02	1.90E-03	6.99E-03	2.09E-03	2.15E-03	7.56E-03	3.13E-04	4.80E-08	4.84E-03	1.08E-02
F88	0.00E+00	5.85E-05	4.14E-06	7.14E+01	6.57E-05	2.29E-01	5.92E-05	6.12E-02	1.89E-02	2.68E-03	5.88E-03	2.27E-03	2.34E-03	5.77E-03	2.98E-04	3.07E-08	3.54E-03	1.15E-02
F89	0.00E+00	9.57E-05	6.63E-06	1.34E+02	1.68E-04	4.69E-01	1.13E-04	7.21E-02	3.56E-02	5.06E-03	1.16E-02	4.65E-03	4.78E-03	7.50E-03	5.94E-04	9.19E-08	6.83E-03	1.35E-02
G07	0.00E+00	6.05E-05	3.76E-06	8.40E+01	5.33E-05	1.91E-01	6.09E-05	5.60E-02	1.00E-02	1.62E-03	6.49E-03	2.02E-03	2.07E-03	8.35E-03	3.37E-04	5.08E-08	4.42E-03	1.05E-02
G09	0.00E+00	1.39E-05	9.26E-07	1.39E+01	9.84E-06	3.90E-02	1.30E-05	1.50E-02	3.58E-03	5.12E-04	1.32E-03	4.37E-04	4.51E-04	1.41E-03	5.52E-05	5.28E-09	8.70E-04	2.82E-03
G10	0.00E+00	6.05E-05	3.76E-06	8.40E+01	5.33E-05	1.91E-01	6.09E-05	5.60E-02	1.00E-02	1.62E-03	6.49E-03	2.02E-03	2.07E-03	8.35E-03	3.37E-04	5.08E-08	4.42E-03	1.05E-02
H01	0.00E+00	4.90E-04	3.24E-05	1.14E+03	6.72E-04	2.61E+00	5.40E-04	5.26E-01	5.06E-02	1.08E-02	5.66E-02	2.05E-02	2.11E-02	1.09E-01	4.63E-03	6.71E-07	3.55E-02	9.87E-02
H02	0.00E+00	4.90E-04	3.24E-05	1.14E+03	6.72E-04	2.61E+00	5.40E-04	5.26E-01	5.06E-02	1.08E-02	5.66E-02	2.05E-02	2.11E-02	1.09E-01	4.63E-03	6.71E-07	3.55E-02	9.87E-02
H03	0.00E+00	3.64E-04	2.55E-05	9.22E+02	6.61E-04	2.39E+00	4.32E-04	3.69E-01	4.38E-02	9.14E-03	4.46E-02	1.81E-02	1.87E-02	7.57E-02	3.87E-03	5.76E-07	2.59E-02	6.92E-02
H04	0.00E+00	3.01E-04	2.07E-05	7.37E+02	4.93E-04	1.82E+00	3.46E-04	3.13E-01	3.41E-02	7.19E-03	3.59E-02	1.40E-02	1.44E-02	6.43E-02	3.06E-03	4.48E-07	2.15E-02	5.87E-02
H05	0.00E+00	1.29E-04	9.04E-06	3.33E+02	2.55E-04	9.00E-01	1.58E-04	1.22E-01	1.62E-02	3.37E-03	1.64E-02	6.75E-03	6.94E-03	2.56E-02	1.42E-03	2.27E-07	9.43E-03	2.29E-02
H06	0.00E+00	1.72E-04	1.16E-05	4.04E+02	2.38E-04	9.24E-01	1.89E-04	1.90E-01	1.80E-02	3.81E-03	1.96E-02	7.30E-03	7.51E-03	3.87E-02	1.64E-03	2.21E-07	1.20E-02	3.57E-02
H07	0.00E+00	3.02E-04	2.07E-05	7.39E+02	4.95E-04	1.83E+00	3.48E-04	3.13E-01	3.42E-02	7.21E-03	3.61E-02	1.41E-02	1.45E-02	6.45E-02	3.07E-03	4.51E-07	2.16E-02	5.87E-02
H08	0.00E+00	4.97E-05	3.38E-06	7.53E+01	6.44E-05	2.14E-01	5.33E-05	4.86E-02	1.26E-02	1.90E-03	5.49E-03	2.04E-03	2.10E-03	6.11E-03	3.16E-04	4.10E-08	3.39E-03	9.12E-03
H09	0.00E+00	1.18E-04	7.90E-06	1.09E+02	5.28E-05	2.80E-01	1.02E-04	1.40E-01	2.77E-02	3.97E-03	1.02E-02	3.22E-03	3.33E-03	1.28E-02	4.12E-04	2.41E-08	6.87E-03	2.64E-02
H14	0.00E+00	2.49E-05	1.71E-06	4.26E+01	3.60E-05	1.17E-01	2.75E-05	2.26E-02	5.44E-03	8.63E-04	2.82E-03	1.09E-03	1.12E-03	3.29E-03	1.81E-04	2.63E-08	1.70E-03	4.24E-03
H16	0.00E+00	4.17E-05	3.31E-06	1.02E+02	1.23E-04	3.52E-01	5.87E-05	2.80E-02	1.40E-02	2.21E-03	5.88E-03	2.90E-03	2.98E-03	4.23E-03	4.73E-04	7.98E-08	2.90E-03	5.22E-03

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B05	100	Passenger Car	550	0.00E+00	5.14E-06	5.59E-07	2.25E+01	3.65E-05	1.09E-01	1.16E-05	5.94E-04	1.76E-03	3.37E-04	1.13E-03	7.29E-04	7.48E-04	6.55E-05	1.14E-04	2.39E-08	3.82E-04	9.26E-05
16	B05	100	Passenger Truck	922	0.00E+00	1.06E-05	1.14E-06	5.18E+01	7.08E-05	2.10E-01	2.29E-05	1.48E-03	3.07E-03	5.96E-04	2.21E-03	1.43E-03	1.47E-03	3.40E-04	2.60E-04	4.73E-08	7.42E-04	2.43E-04
16	B06	100	Passenger Car	1533	0.00E+00	1.43E-05	1.56E-06	6.26E+01	1.02E-04	3.03E-01	3.23E-05	1.65E-03	4.90E-03	9.39E-04	3.15E-03	2.03E-03	2.08E-03	1.82E-04	3.17E-04	6.65E-08	1.07E-03	2.58E-04
16	B06	100	Passenger Truck	2567	0.00E+00	2.96E-05	3.17E-06	1.44E+02	1.97E-04	5.86E-01	6.38E-05	4.13E-03	8.55E-03	1.66E-03	6.15E-03	3.98E-03	4.08E-03	9.46E-04	7.24E-04	1.32E-07	2.07E-03	6.78E-04
16	B07	100	Passenger Car	1092	0.00E+00	1.02E-05	1.11E-06	4.46E+01	7.24E-05	2.16E-01	2.30E-05	1.18E-03	3.49E-03	6.69E-04	2.24E-03	1.45E-03	1.48E-03	1.30E-04	2.26E-04	4.74E-08	7.59E-04	1.84E-04
16	B07	100	Passenger Truck	1828	0.00E+00	2.11E-05	2.26E-06	1.03E+02	1.41E-04	4.17E-01	4.54E-05	2.94E-03	6.09E-03	1.18E-03	4.38E-03	2.84E-03	2.91E-03	6.74E-04	5.15E-04	9.39E-08	1.47E-03	4.83E-04
16	B07	100	Single Unit Short Haul Truck	8	0.00E+00	7.28E-07	2.69E-08	1.25E+00	5.57E-07	2.58E-03	8.26E-07	3.21E-04	4.95E-05	1.28E-05	1.04E-04	1.93E-05	1.96E-05	1.28E-04	5.06E-06	2.07E-09	8.48E-05	5.99E-05
16	B07	100	Combination Short Haul Truck	2	0.00E+00	2.24E-07	1.66E-08	5.23E-01	5.96E-10	4.04E-04	1.61E-07	4.04E-04	1.52E-05	3.85E-06	1.37E-05	4.84E-06	5.03E-06	8.31E-05	1.75E-06	0.00E+00	8.65E-06	7.62E-05
16	B07	100	Combination Long Haul Truck	1	0.00E+00	3.17E-07	1.79E-08	4.74E-01	2.02E-09	4.71E-04	2.62E-07	4.33E-04	1.52E-05	3.10E-06	2.91E-05	5.77E-06	6.01E-06	7.60E-05	1.59E-06	0.00E+00	2.31E-05	8.15E-05
16	B08	100	Passenger Car	1588	0.00E+00	1.48E-05	1.61E-06	6.48E+01	1.05E-04	3.14E-01	3.34E-05	1.71E-03	5.08E-03	9.73E-04	3.26E-03	2.10E-03	2.16E-03	1.89E-04	3.28E-04	6.89E-08	1.10E-03	2.67E-04
16	B08	100	Passenger Truck	2660	0.00E+00	3.07E-05	3.28E-06	1.49E+02	2.04E-04	6.07E-01	6.61E-05	4.28E-03	8.86E-03	1.72E-03	6.37E-03	4.13E-03	4.23E-03	9.80E-04	7.50E-04	1.37E-07	2.14E-03	7.03E-04
16	B08	100	Single Unit Short Haul Truck	355	0.00E+00	3.38E-05	1.25E-06	5.80E+01	2.58E-05	1.20E-01	3.83E-05	1.49E-02	2.30E-03	5.94E-04	4.84E-03	8.94E-04	9.10E-04	5.94E-03	2.35E-04	9.59E-08	3.93E-03	2.78E-03
16	B08	100	Single Unit Long Haul Truck	16	0.00E+00	1.47E-06	5.27E-08	2.44E+00	1.07E-06	4.90E-03	1.66E-06	6.25E-04	1.04E-04	2.58E-05	2.12E-04	3.77E-05	3.84E-05	2.48E-04	9.90E-06	3.92E-09	1.73E-04	1.17E-04
16	B08	100	Combination Short Haul Truck	73	0.00E+00	1.04E-05	7.68E-07	2.42E+01	2.76E-08	1.87E-02	7.45E-06	1.87E-02	7.04E-04	1.79E-04	6.34E-04	2.24E-04	2.33E-04	3.85E-03	8.10E-05	0.00E+00	4.01E-04	3.53E-03
16	B08	100	Combination Long Haul Truck	66	0.00E+00	1.47E-05	8.29E-07	2.19E+01	9.37E-08	2.18E-02	1.21E-05	2.00E-02	7.05E-04	1.44E-04	1.35E-03	2.67E-04	2.78E-04	3.52E-03	7.35E-05	0.00E+00	1.07E-03	3.78E-03
16	B09	100	Passenger Car	1340	0.00E+00	1.25E-05	1.36E-06	5.47E+01	8.88E-05	2.65E-01	2.82E-05	1.45E-03	4.28E-03	8.21E-04	2.75E-03	1.78E-03	1.82E-03	1.59E-04	2.77E-04	5.82E-08	9.31E-04	2.26E-04
16	B09	100	Passenger Truck	2245	0.00E+00	2.59E-05	2.77E-06	1.26E+02	1.73E-04	5.12E-01	5.58E-05	3.61E-03	7.48E-03	1.45E-03	5.38E-03	3.48E-03	3.57E-03	8.27E-04	6.33E-04	1.15E-07	1.81E-03	5.93E-04
16	B09	100	Single Unit Short Haul Truck	59	0.00E+00	5.64E-06	2.09E-07	9.70E+00	4.32E-06	2.00E-02	6.40E-06	2.49E-03	3.84E-04	9.93E-05	8.09E-04	1.49E-04	1.52E-04	9.93E-04	3.92E-05	1.60E-08	6.57E-04	4.65E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	2.45E-07	8.81E-09	4.08E-01	1.79E-07	8.19E-04	2.77E-07	1.04E-04	1.74E-05	4.31E-06	3.54E-05	6.30E-06	6.42E-06	4.15E-05	1.66E-06	6.56E-10	2.90E-05	1.95E-05
16	B09	100	Combination Short Haul Truck	73	0.00E+00	1.05E-05	7.74E-07	2.44E+01	2.78E-08	1.89E-02	7.50E-06	1.89E-02	7.09E-04	1.80E-04	6.38E-04	2.26E-04	2.35E-04	3.88E-03	8.16E-05	0.00E+00	4.04E-04	3.55E-03
16	B09	100	Combination Long Haul Truck	67	0.00E+00	1.48E-05	8.35E-07	2.21E+01	9.44E-08	2.20E-02	1.22E-05	2.02E-02	7.10E-04	1.45E-04	1.36E-03	2.69E-04	2.80E-04	3.55E-03	7.41E-05	0.00E+00	1.08E-03	3.80E-03
16	B10	100	Passenger Car	1141	0.00E+00	1.07E-05	1.16E-06	4.66E+01	7.56E-05	2.26E-01	2.40E-05	1.23E-03	3.65E-03	6.99E-04	2.34E-03	1.51E-03	1.55E-03	1.36E-04	2.36E-04	4.95E-08	7.93E-04	1.92E-04
16	B10	100	Passenger Truck	1911	0.00E+00	2.20E-05	2.36E-06	1.07E+02	1.47E-04	4.36E-01	4.75E-05	3.07E-03	6.37E-03	1.24E-03	4.58E-03	2.97E-03	3.04E-03	7.04E-04	5.39E-04	9.81E-08	1.54E-03	5.05E-04
16	B10	100	Single Unit Short Haul Truck	53	0.00E+00	5.01E-06	1.85E-07	8.60E+00	3.83E-06	1.78E-02	5.68E-06	2.21E-03	3.40E-04	8.81E-05	7.18E-04	1.33E-04	1.35E-04	8.81E-04	3.48E-05	1.42E-08	5.83E-04	4.12E-04
16	B10	100	Single Unit Long Haul Truck	2	0.00E+00	2.18E-07	7.82E-09	3.62E-01	1.58E-07	7.27E-04	2.46E-07	9.27E-05	1.55E-05	3.83E-06	3.14E-05	5.59E-06	5.69E-06	3.68E-05	1.47E-06	5.82E-10	2.57E-05	1.73E-05
16	B10	100	Combination Short Haul Truck	68	0.00E+00	9.73E-06	7.19E-07	2.27E+01	2.58E-08	1.75E-02	6.96E-06	1.75E-02	6.59E-04	1.67E-04	5.93E-04	2.10E-04	2.18E-04	3.60E-03	7.58E-05	0.00E+00	3.75E-04	3.30E-03
16	B10	100	Combination Long Haul Truck	62	0.00E+00	1.37E-05	7.75E-07	2.05E+01	8.76E-08	2.04E-02	1.13E-05	1.87E-02	6.60E-04	1.34E-04	1.26E-03	2.50E-04	2.60E-04	3.29E-03	6.88E-05	0.00E+00	1.00E-03	3.53E-03
16	B13	100	Passenger Car	685	0.00E+00	6.40E-06	6.96E-07	2.80E+01	4.54E-05	1.36E-01	1.44E-05	7.39E-04	2.19E-03	4.20E-04	1.41E-03	9.08E-04	9.32E-04	8.15E-05	1.42E-04	2.97E-08	4.76E-04	1.15E-04
16	B13	100	Passenger Truck	1148	0.00E+00	1.32E-05	1.42E-06	6.45E+01	8.82E-05	2.62E-01	2.85E-05	1.85E-03	3.82E-03	7.42E-04	2.75E-03	1.78E-03	1.83E-03	4.23E-04	3.23E-04	5.89E-08	9.24E-04	3.03E-04
16	B13	100	Single Unit Short Haul Truck	35	0.00E+00	3.37E-06	1.24E-07	5.79E+00	2.58E-06	1.19E-02	3.82E-06	1.49E-03	2.29E-04	5.93E-05	4.83E-04	8.92E-05	9.07E-05	5.93E-04	2.34E-05	9.56E-09	3.92E-04	2.77E-04
16	B13	100	Single Unit Long Haul Truck	2	0.00E+00	1.46E-07	5.26E-09	2.43E-01	1.07E-07	4.89E-04	1.65E-07	6.23E-05	1.04E-05	2.57E-06	2.11E-05	3.76E-06	3.83E-06	2.48E-05	9.88E-07	3.91E-10	1.73E-05	1.16E-05
16	B13	100	Combination Short Haul Truck	42	0.00E+00	5.99E-06	4.42E-07	1.39E+01	1.59E-08	1.08E-02	4.29E-06	1.08E-02	4.05E-04	1.03E-04	3.65E-04	1.29E-04	1.34E-04	2.22E-03	4.66E-05	0.00E+00	2.31E-04	2.03E-03
16	B13	100	Combination Long Haul Truck	38	0.00E+00	8.46E-06	4.77E-07	1.26E+01	5.39E-08	1.25E-02	6.98E-06	1.15E-02	4.06E-04	8.27E-05	7.76E-04	1.54E-04	1.60E-04	2.03E-03	4.23E-05	0.00E+00	6.16E-04	2.17E-03
16	B14	100	Passenger Car	1027	0.00E+00	9.60E-06	1.04E-06	4.19E+01	6.81E-05	2.03E-01	2.16E-05	1.11E-03	3.28E-03	6.29E-04	2.11E-03	1.36E-03	1.40E-03	1.22E-04	2.12E-04	4.46E-08	7.14E-04	1.73E-04
16	B14	100	Passenger Truck	1721	0.00E+00	1.98E-05	2.12E-06	9.67E+01	1.32E-04	3.93E-01	4.28E-05	2.77E-03	5.73E-03	1.11E-03	4.12E-03	2.67E-03	2.74E-03	6.34E-04	4.85E-04	8.83E-08	1.39E-03	4.55E-04
16	B14	100	Single Unit Short Haul Truck	57	0.00E+00	5.37E-06	1.98E-07	9.23E+00	4.11E-06	1.90E-02	6.09E-06	2.37E-03	3.65E-04	9.45E-05	7.70E-04	1.42E-04	1.45E-04	9.45E-04	3.74E-05	1.52E-08	6.25E-04	4.42E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.33E-07	8.39E-09	3.88E-01	1.70E-07	7.79E-04	2.64E-07	9.94E-05	1.66E-05	4.10E-06	3.37E-05	6.00E-06	6.11E-06	3.95E-05	1.57E-06	6.24E-10	2.76E-05	1.85E-05
16	B14	100	Combination Short Haul Truck	62	0.00E+00	8.90E-06	6.58E-07	2.07E+01	2.36E-08	1.60E-02	6.37E-06	1.60E-02	6.03E-04	1.53E-04	5.42E-04	1.92E-04	1.99E-04	3.30E-03	6.93E-05	0.00E+00	3.43E-04	3.02E-03
16	B14	100	Combination Long Haul Truck	57	0.00E+00	1.26E-05	7.09E-07	1.88E+01	8.02E-08	1.87E-02	1.04E-05	1.72E-02	6.04E-04	1.23E-04	1.15E-03	2.29E-04	2.38E-04	3.01E-03	6.29E-05	0.00E+00	9.16E-04	3.23E-03
9	D01	60	Passenger Car	803	0.00E+00	1.03E-05	1.12E-06	3.66E+01	7.28E-05	2.05E-01	2.31E-05	8.26E-04	8.11E-03	1.21E-03	2.26E-03	1.46E-03	1.49E-03	1.59E-04	1.84E-04	3.85E-08	7.64E-04	1.29E-04
9	D01	60	Passenger Truck	1344	0.00E+00	2.18E-05	2.31E-06	8.15E+01	1.37E-04	3.50E-01	4.52E-05	2.57E-03	1.48E-02	2.20E-03	4.31E-03	2.80E-03	2.87E-03	6.51E-04	4.05E-04	7.51E-08	1.44E-03	4.35E-04
9	D01	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.45E-04
9	D01	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.67E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
9	D01	60	Combination Short Haul Truck	54	0.00E+00	1.57E-05	1.15E-06	1.90E+01	4.31E-08	2.35E-02	1.13E-05	2.39E-02	2.74E-03	4.29E-04	9.69E-04	3.38E-04	3.51E-04	3.02E-03	6.34E-05	0.00E+00	6.18E-04	4.51E-03
9	D01	60	Combination Long Haul Truck	49	0.00E+00	2.16E-05	1.18E-06	1.79E+01	1.46E-07	2.82E-02	1.81E-05	2.55E-02	2.88E-03	4.16E-04	2.05E-03	3.85E-04	4.02E-04	2.88E-03	6.01E-05	0.00E+00	1.65E-03	4.80E-03
9	D02	60	Passenger Car	1157	0.00E+00	1.48E-05	1.61E-06	5.27E+01	1.05E-04	2.95E-01	3.34E-05	1.19E-03	1.17E-02	1.75E-03	3.25E-03	2.10E-03	2.15E-03	2.29E-04	2.65E-04	5.56E-08	1.10E-03	1.86E-04
9	D02	60	Passenger Truck	1938	0.00E+00	3.14E-05	3.33E-06	1.18E+02	1.98E-04	5.05E-01	6.52E-05	3.70E-03	2.14E-02	3.18E-03	6.21E-03	4.04E-03	4.14E-03	9.39E-04	5.84E-04	1.08E-07	2.07E-03	6.28E-04
9	D02	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.37E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
9	D02	60	Single Unit Long Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.18E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.88E-04
9	D02	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.45E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.38E-04
9	D03	60	Passenger Car	1046	0.00E+00	1.34E-05	1.45E-06	4.77E+01	9.50E-05	2.67E-01	3.02E-05	1.08E-03	1.06E-02	1.58E-03	2.94E-03	1.90E-03	1.95E-03	2.07E-04	2.39E-04	5.02E-08	9.95E-04	1.68E-04
9	D03	60	Passenger Truck	1753	0.00E+00	2.84E-05	3.01E-06	1.06E+02	1.79E-04	4.57E-01	5.89E-05	3.35E-03	1.93E-02	2.87E-03	5.62E-03	3.66E-03	3.75E-03	8.49E-04	5.28E-04	9.80E-08	1.87E-03	5.68E-04
9	D03	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.54E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.75E-04
9	D03	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	D03	60	Combination Short Haul Truck	40	0.00E+00	1.18E-05	8.63E-07	1.42E+01	3.22E-08	1.76E-02	8.44E-06	1.79E-02	2.05E-03	3.21E-04	7.24E-04	2.53E-04	2.62E-04	2.25E-03	4.74E-05	0.00E+00	4.62E-04	3.37E-03
9	D03	60	Combination Long Haul Truck	37	0.00E+00	1.62E-05	8.82E-07	1.34E+01	1.09E-07	2.11E-02	1.35E-05	1.90E-02	2.15E-03	3.11E-04	1.53E-03	2.88E-04	3.00E-04	2.15E-03	4.49E-05	0.00E+00	1.23E-03	3.59E-03
9	D04	60	Passenger Car	1454	0.00E+00	1.86E-05	2.02E-06	6.63E+01	1.32E-04	3.71E-01	4.19E-05	1.50E-03	1.47E-02	2.20E-03	4.09E-03	2.64E-03	2.71E-03	2.88E-04	3.32E-04	6.98E-08	1.38E-03	2.34E-04
9	D04	60	Passenger Truck	2436	0.00E+00	3.95E-05	4.18E-06	1.48E+02	2.49E-04	6.35E-01	8.19E-05	4.66E-03	2.68E-02	3.99E-03	7.81E-03	5.08E-03	5.21E-03	1.18E-03	7.34E-04	1.36E-07	2.60E-03	7.89E-04
9	D04	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.45E-04
9	D04	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.67E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
9	D04	60	Combination Short Haul Truck	28	0.00E+00	8.09E-06	5.94E-07	9.76E+00	2.22E-08	1.21E-02	5.81E-06	1.23E-02	1.41E-03	2.21E-04	4.99E-04	1.74E-04	1.80E-04	1.55E-03	3.26E-05	0.00E+00	3.18E-04	2.32E-03
9	D04	60	Combination Long Haul Truck	25	0.00E+00	1.11E-05	6.07E-07	9.22E+00	7.50E-08	1.45E-02	9.30E-06	1.31E-02	1.48E-03	2.14E-04	1.05E-03	1.98E-04	2.07E-04	1.48E-03	3.09E-05	0.00E+00	8.48E-04	2.47E-03
9	D05	60	Passenger Car	1016	0.00E+00	1.30E-05	1.41E-06	4.63E+01	9.22E-05	2.59E-01	2.93E-05	1.05E-03	1.03E-02	1.54E-03	2.86E-03	1.84E-03	1.89E-03	2.01E-04	2.32E-04	4.88E-08	9.67E-04	1.63E-04
9	D05	60	Passenger Truck	1702	0.00E+00	2.76E-05	2.92E-06	1.03E+02	1.74E-04	4.44E-01	5.72E-05	3.25E-03	1.88E-02	2.79E-03	5.46E-03	3.55E-03	3.64E-03	8.25E-04	5.13E-04	9.51E-08	1.82E-03	5.51E-04
9	D05	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.78E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.21E-04
9	D05	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
9	D05	60	Combination Short Haul Truck	35	0.00E+00	1.01E-05	7.40E-07	1.22E+01	2.76E-08	1.51E-02	7.24E-06	1.53E-02	1.76E-03	2.75E-04	6.21E-04	2.16E-04	2.25E-04	1.93E-03	4.07E-05	0.00E+00	3.96E-04	2.89E-03
9	D05	60	Combination Long Haul Truck	31	0.00E+00	1.38E-05	7.56E-07	1.15E+01	9.34E-08	1.81E-02	1.16E-05	1.63E-02	1.84E-03	2.67E-04	1.31E-03	2.47E-04	2.57E-04	1.84E-03	3.85E-05	0.00E+00	1.06E-03	3.07E-03
9	D06	60	Passenger Car	1671	0.00E+00	2.14E-05	2.32E-06	7.61E+01	1.52E-04	4.26E-01	4.82E-05	1.72E-03	1.69E-02	2.53E-03	4.70E-03	3.03E-03	3.11E-03	3.31E-04	3.82E-04	8.02E-08	1.59E-03	2.68E-04
9	D06	60	Passenger Truck	2799	0.00E+00	4.54E-05	4.81E-06	1.70E+02	2.86E-04	7.30E-01	9.41E-05	5.35E-03	3.08E-02	4.59E-03	8.97E-03	5.84E-03	5.98E-03	1.36E-03	8.43E-04	1.56E-07	2.99E-03	9.06E-04
9	D06	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.55E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
9	D06	60	Combination Short Haul Truck	20	0.00E+00	5.95E-06	4.37E-07	7.18E+00	1.63E-08	8.90E-03	4.28E-06	9.06E-03	1.04E-03	1.62E-04	3.67E-04	1.28E-04	1.33E-04	1.14E-03	2.40E-05	0.00E+00	2.34E-04	1.71E-03
9	D06	60	Combination Long Haul Truck	19	0.00E+00	8.18E-06	4.47E-07	6.79E+00	5.52E-08	1.07E-02	6.84E-06	9.65E-03	1.09E-03	1.58E-04	7.76E-04	1.46E-04	1.52E-04	1.09E-03	2.27E-05	0.00E+00	6.24E-04	1.82E-03
11	D07	80	Passenger Car	1104	0.00E+00	1.15E-05	1.25E-06	4.67E+01	8.14E-05	2.36E-01	2.59E-05	1.15E-03	6.02E-03	1.01E-03	2.52E-03	1.63E-03	1.67E-03	1.64E-04	2.36E-04	5.03E-08	8.53E-04	1.79E-04
11	D07	80	Passenger Truck	1850	0.00E+00	2.36E-05	2.52E-06	1.05E+02	1.54E-04	4.16E-01	5.00E-05	3.09E-03	1.07E-02	1.78E-03	4.80E-03	3.12E-03	3.19E-03	7.59E-04	5.27E-04	9.58E-08	1.61E-03	5.14E-04
11	D07	80	Single Unit Short Haul Truck	53	0.00E+00	7.23E-06	2.82E-07	8.64E+00	4.90E-06	1.57E-02	7.95E-06	3.00E-03	5.92E-04	1.21E-04	9.95E-04	1.84E-04	1.88E-04	8.79E-04	3.51E-05	1.39E-08	8.08E-04	5.60E-04
11	D07	80	Single Unit Long Haul Truck	2	0.00E+00	3.14E-07	1.21E-08	3.65E-01	2.09E-07	6.53E-04	3.45E-07	1.28E-04	2.71E-05	5.37E-06	4.34E-05	7.91E-06	8.07E-06	3.69E-05	1.49E-06	5.80E-10	3.53E-05	2.39E-05
11	D07	80	Combination Short Haul Truck	53	0.00E+00	1.09E-05	8.06E-07	1.77E+01	2.85E-08	1.66E-02	7.78E-06	1.67E-02	1.26E-03	2.28E-04	6.60E-04	2.35E-04	2.44E-04	2.82E-03	5.92E-05	0.00E+00	4.16E-04	3.16E-03
11	D07	80	Combination Long Haul Truck	48	0.00E+00	1.52E-05	8.56E-07	1.64E+01	9.65E-08	1.96E-02	1.25E-05	1.79E-02	1.30E-03	2.08E-04	1.39E-03	2.76E-04	2.87E-04	2.64E-03	5.51E-05	0.00E+00	1.10E-03	3.37E-03
11	D08	80	Passenger Car	1360	0.00E+00	1.41E-05	1.54E-06	5.75E+01	1.00E-04	2.90E-01	3.19E-05	1.41E-03	7.41E-03	1.24E-03	3.11E-03	2.00E-03	2.06E-03	2.02E-04	2.90E-04	6.20E-08	1.05E-03	2.20E-04
11	D08	80	Passenger Truck	2278	0.00E+00	2.91E-05	3.10E-06	1.30E+02	1.89E-04	5.13E-01	6.16E-05	3.80E-03	1.32E-02	2.20E-03	5.91E-03	3.84E-03	3.93E-03	9.35E-04	6.49E-04	1.18E-07	1.98E-03	6.33E-04
11	D08	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.54E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	D08	80

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D12	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.31E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.12E-04
11	D12	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.61E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.68E-04
9	D13	60	Passenger Car	571	0.00E+00	7.30E-06	7.93E-07	2.60E+01	5.18E-05	1.46E-01	1.65E-05	5.88E-04	5.77E-03	8.64E-04	1.61E-03	1.04E-03	1.06E-03	1.13E-04	1.31E-04	2.74E-08	5.43E-04	9.17E-05
9	D13	60	Passenger Truck	956	0.00E+00	1.55E-05	1.64E-06	5.80E+01	9.78E-05	2.49E-01	3.21E-05	1.83E-03	1.05E-02	1.57E-03	3.06E-03	1.99E-03	2.04E-03	4.63E-04	2.88E-04	5.34E-08	1.02E-03	3.10E-04
9	D13	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.29E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.29E-04
9	D13	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.92E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	D13	60	Combination Short Haul Truck	25	0.00E+00	7.33E-06	5.38E-07	8.84E+00	2.01E-08	1.09E-02	5.26E-06	1.11E-02	1.28E-03	2.00E-04	4.52E-04	1.57E-04	1.63E-04	1.41E-03	2.96E-05	0.00E+00	2.88E-04	2.10E-03
9	D13	60	Combination Long Haul Truck	23	0.00E+00	1.01E-05	5.50E-07	8.35E+00	6.80E-08	1.32E-02	8.42E-06	1.19E-02	1.34E-03	1.94E-04	9.55E-04	1.80E-04	1.87E-04	1.34E-03	2.80E-05	0.00E+00	7.68E-04	2.24E-03
9	D14	60	Passenger Car	400	0.00E+00	5.12E-06	5.56E-07	1.82E+01	3.63E-05	1.02E-01	1.15E-05	4.12E-04	4.04E-03	6.05E-04	1.13E-03	7.25E-04	7.44E-04	7.93E-05	9.15E-05	1.92E-08	3.81E-04	6.43E-05
9	D14	60	Passenger Truck	670	0.00E+00	1.09E-05	1.15E-06	4.06E+01	6.85E-05	1.75E-01	2.25E-05	1.28E-03	7.38E-03	1.10E-03	2.15E-03	1.40E-03	1.43E-03	3.25E-04	2.02E-04	3.74E-08	7.16E-04	2.17E-04
9	D14	60	Single Unit Short Haul Truck	35	0.00E+00	7.91E-06	3.27E-07	5.90E+00	5.24E-06	1.04E-02	8.56E-06	3.03E-03	8.15E-04	1.37E-04	1.06E-03	2.03E-04	2.07E-04	5.97E-04	2.40E-05	9.90E-09	8.48E-04	5.67E-04
9	D14	60	Single Unit Long Haul Truck	2	0.00E+00	3.45E-07	1.42E-08	2.51E-01	2.27E-07	4.40E-04	3.73E-07	1.31E-04	3.66E-05	6.08E-06	4.62E-05	8.84E-06	9.01E-06	2.54E-05	1.03E-06	4.21E-10	3.71E-05	2.46E-05
9	D14	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.18E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.23E-03
9	D14	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.26E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.38E-03
9	D15	60	Passenger Car	564	0.00E+00	7.21E-06	7.84E-07	2.57E+01	5.12E-05	1.44E-01	1.63E-05	5.81E-04	5.70E-03	8.53E-04	1.59E-03	1.02E-03	1.05E-03	1.12E-04	1.29E-04	2.71E-08	5.37E-04	9.06E-05
9	D15	60	Passenger Truck	945	0.00E+00	1.53E-05	1.62E-06	5.73E+01	9.66E-05	2.46E-01	3.18E-05	1.81E-03	1.04E-02	1.55E-03	3.03E-03	1.97E-03	2.02E-03	4.58E-04	2.85E-04	5.28E-08	1.01E-03	3.06E-04
9	D15	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.78E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.21E-04
9	D15	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
9	D15	60	Combination Short Haul Truck	28	0.00E+00	8.24E-06	6.06E-07	9.95E+00	2.26E-08	1.23E-02	5.92E-06	1.25E-02	1.44E-03	2.25E-04	5.08E-04	1.77E-04	1.84E-04	1.58E-03	3.33E-05	0.00E+00	3.24E-04	2.36E-03
9	D15	60	Combination Long Haul Truck	26	0.00E+00	1.13E-05	6.19E-07	9.40E+00	7.64E-08	1.48E-02	9.47E-06	1.34E-02	1.51E-03	2.18E-04	1.07E-03	2.02E-04	2.11E-04	1.51E-03	3.15E-05	0.00E+00	8.64E-04	2.52E-03
9	D16	60	Passenger Car	788	0.00E+00	1.01E-05	1.10E-06	3.59E+01	7.15E-05	2.01E-01	2.27E-05	8.11E-04	7.96E-03	1.19E-03	2.22E-03	1.43E-03	1.47E-03	1.56E-04	1.80E-04	3.78E-08	7.50E-04	1.27E-04
9	D16	60	Passenger Truck	1320	0.00E+00	2.14E-05	2.27E-06	8.00E+01	1.35E-04	3.44E-01	4.44E-05	2.52E-03	1.45E-02	2.16E-03	4.23E-03	2.75E-03	2.82E-03	6.39E-04	3.98E-04	7.38E-08	1.41E-03	4.27E-04
9	D16	60	Single Unit Short Haul Truck	37	0.00E+00	8.34E-06	3.45E-07	6.21E+00	5.53E-06	1.09E-02	9.02E-06	3.19E-03	8.59E-04	1.44E-04	1.11E-03	2.14E-04	2.19E-04	6.30E-04	2.53E-05	1.04E-08	8.94E-04	5.98E-04
9	D16	60	Single Unit Long Haul Truck	2	0.00E+00	3.64E-07	1.50E-08	2.65E-01	2.40E-07	4.64E-04	3.94E-07	1.38E-04	3.86E-05	6.41E-06	4.86E-05	9.31E-06	9.50E-06	2.68E-05	1.08E-06	4.44E-10	3.91E-05	2.59E-05
9	D16	60	Combination Short Haul Truck	28	0.00E+00	8.09E-06	5.94E-07	9.76E+00	2.22E-08	1.21E-02	5.81E-06	1.23E-02	1.41E-03	2.21E-04	4.99E-04	1.74E-04	1.80E-04	1.55E-03	3.26E-05	0.00E+00	3.18E-04	2.32E-03
9	D16	60	Combination Long Haul Truck	25	0.00E+00	1.11E-05	6.07E-07	9.22E+00	7.50E-08	1.45E-02	9.30E-06	1.31E-02	1.48E-03	2.14E-04	1.05E-03	1.98E-04	2.07E-04	1.48E-03	3.09E-05	0.00E+00	8.48E-04	2.47E-03
10	D17	70	Passenger Car	303	0.00E+00	3.38E-06	3.67E-07	1.32E+01	2.40E-05	6.77E-02	7.61E-06	3.06E-04	2.33E-03	3.63E-04	7.43E-04	4.79E-04	4.91E-04	5.15E-05	6.64E-05	1.38E-08	2.51E-04	4.78E-05
10	D17	70	Passenger Truck	507	0.00E+00	7.11E-06	7.56E-07	2.97E+01	4.55E-05	1.20E-01	1.49E-05	8.90E-04	4.22E-03	6.53E-04	1.43E-03	9.26E-04	9.49E-04	2.25E-04	1.48E-04	2.65E-08	4.76E-04	1.49E-04
10	D17	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.70E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	D17	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.74E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.00E-06
10	D17	70	Combination Short Haul Truck	17	0.00E+00	4.31E-06	3.20E-07	5.82E+00	1.09E-08	6.22E-03	3.07E-06	6.42E-03	6.07E-04	1.01E-04	2.58E-04	9.33E-05	9.69E-05	9.25E-04	1.95E-05	0.00E+00	1.62E-04	1.21E-03
10	D17	70	Combination Long Haul Truck	15	0.00E+00	5.91E-06	3.36E-07	5.46E+00	3.70E-08	7.42E-03	4.86E-06	6.87E-03	6.32E-04	9.52E-05	5.37E-04	1.08E-04	1.12E-04	8.77E-04	1.83E-05	0.00E+00	4.25E-04	1.29E-03
10	D18	70	Passenger Car	160	0.00E+00	1.78E-06	1.94E-07	6.97E+00	1.27E-05	3.58E-02	4.02E-06	1.62E-04	1.23E-03	1.92E-04	3.92E-04	2.53E-04	2.60E-04	2.72E-05	3.51E-05	7.29E-09	1.33E-04	2.52E-05
10	D18	70	Passenger Truck	268	0.00E+00	3.76E-06	3.99E-07	1.57E+01	2.41E-05	6.32E-02	7.87E-06	4.70E-04	2.23E-03	3.45E-04	7.53E-04	4.89E-04	5.01E-04	1.19E-04	7.82E-05	1.40E-08	2.52E-04	7.90E-05
10	D18	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	D18	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.02E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.13E-04
10	D18	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.44E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.21E-04
11	D19	80	Passenger Car	872	0.00E+00	9.06E-06	9.84E-07	3.69E+01	6.43E-05	1.86E-01	2.04E-05	9.04E-04	4.75E-03	7.96E-04	1.99E-03	1.28E-03	1.32E-03	1.30E-04	1.86E-04	3.98E-08	6.74E-04	1.41E-04
11	D19	80	Passenger Truck	1461	0.00E+00	1.87E-05	1.99E-06	8.33E+01	1.21E-04	3.29E-01	3.95E-05	2.44E-03	8.47E-03	1.41E-03	3.79E-03	2.46E-03	2.52E-03	6.00E-04	4.16E-04	7.57E-08	1.27E-03	4.06E-04
11	D19	80	Single Unit Short Haul Truck	173	0.00E+00	2.38E-05	9.29E-07	2.84E+01	1.61E-05	5.16E-02	2.61E-05	9.86E-03	1.95E-03	3.98E-04	3.28E-03	6.06E-04	6.18E-04	2.89E-03	1.15E-04	4.58E-08	2.66E-03	1.84E-03
11	D19	80	Single Unit Long Haul Truck	8	0.00E+00	1.03E-06	3.99E-08	1.20E+00	6.87E-07	2.15E-03	1.14E-06	4.21E-04	8.93E-05	1.77E-05	1.43E-04	2.60E-05	2.66E-05	1.21E-04	4.89E-06	1.91E-09	1.16E-04	7.88E-05
11	D19	80	Combination Short Haul Truck	87	0.00E+00	1.79E-05	1.32E-06	2.91E+01	4.69E-08	2.73E-02	1.28E-05	2.75E-02	2.07E-03	3.75E-04	1.09E-03	3.86E-04	4.01E-04	4.63E-03	9.73E-05	0.00E+00	6.84E-04	5.19E-03
11	D19	80	Combination Long Haul Truck	79	0.00E+00	2.49E-05	1.41E-06	2.70E+01	1.59E-07	3.23E-02	2.06E-05	2.94E-02	2.14E-03	3.43E-04	2.28E-03	4.54E-04	4.72E-04	4.34E-03	9.05E-05	0.00E+00	1.81E-03	5.54E-03
11	D20	80	Passenger Car	1282	0.00E+00	1.33E-05	1.45E-06	5.42E+01	9.45E-05	2.74E-01	3.00E-05	1.33E-03	6.99E-03	1.17E-03	2.93E-03	1.89E-03	1.94E-03	1.91E-04	2.73E-04	5.84E-08	9.90E-04	2.07E-04
11	D20	80	Passenger Truck	2146	0.00E+00	2.74E-05	2.92E-06	1.22E+02	1.78E-04	4.83E-01	5.81E-05	3.58E-03	1.24E-02	2.07E-03	5.57E-03	3.62E-03	3.71E-03	8.81E-04	6.12E-04	1.11E-07	1.87E-03	5.97E-04
11	D20	80	Single Unit Short Haul Truck	75	0.00E+00	1.03E-05	4.00E-07	1.22E+01	6.95E-06	2.22E-02	1.13E-05	4.25E-03	8.39E-04	1.72E-04	1.41E-03	2.61E-04	2.66E-04	1.25E-03	4.98E-05	1.97E-08	1.15E-03	7.94E-04
11	D20	80	Single Unit Long Haul Truck	3	0.00E+00	4.45E-07	1.72E-08	5.17E-01	2.96E-07	9.26E-04	4.89E-07	1.82E-04	3.85E-05	7.62E-06	6.16E-05	1.12E-05	1.14E-05	5.23E-05	2.11E-06	8.22E-10	5.01E-05	3.39E-05
11	D20	80	Combination Short Haul Truck	62	0.00E+00	1.28E-05	9.50E-07	2.09E+01	3.36E-08	1.96E-02	9.17E-06	1.97E-02	1.49E-03	2.69E-04	7.78E-04	2.77E-04	2.88E-04	3.32E-03	6.98E-05	0.00E+00	4.90E-04	3.72E-03
11	D20	80	Combination Long Haul Truck	57	0.00E+00	1.79E-05	1.01E-06	1.94E+01	1.14E-07	2.31E-02	1.47E-05	2.11E-02	1.54E-03	2.46E-04	1.64E-03	3.25E-04	3.39E-04	3.11E-03	6.49E-05	0.00E+00	1.30E-03	3.97E-03
11	D21	80	Passenger Car	926	0.00E+00	9.62E-06	1.05E-06	3.92E+01	6.83E-05	1.98E-01	2.17E-05	9.61E-04	5.05E-03	8.46E-04	2.12E-03	1.36E-03	1.40E-03	1.38E-04	1.98E-04	4.22E-08	7.16E-04	1.50E-04
11	D21	80	Passenger Truck	1552	0.00E+00	1.98E-05	2.11E-06	8.85E+01	1.29E-04	3.49E-01	4.20E-05	2.59E-03	8.99E-03	1.50E-03	4.03E-03	2.61E-03	2.68E-03	6.37E-04	4.42E-04	8.04E-08	1.35E-03	4.31E-04
11	D21	80	Single Unit Short Haul Truck	176	0.00E+00	2.42E-05	9.44E-07	2.89E+01	1.64E-05	5.25E-02	2.66E-05	1.00E-02	1.98E-03	4.05E-04	3.33E-03	6.17E-04	6.29E-04	2.94E-03	1.17E-04	4.65E-08	2.70E-03	1.87E-03
11	D21	80	Single Unit Long Haul Truck	8	0.00E+00	1.05E-06	4.05E-08	1.22E+00	6.98E-07	2.19E-03	1.15E-06	4.28E-04	9.08E-05	1.80E-05	1.45E-04	2.65E-05	2.70E-05	1.23E-04	4.97E-06	1.94E-09	1.18E-04	8.01E-05
11	D21	80	Combination Short Haul Truck	84	0.00E+00	1.74E-05	1.28E-06	2.82E+01	4.55E-08	2.65E-02	1.24E-05	2.67E-02	2.01E-03	3.64E-04	1.05E-03	3.75E-04	3.89E-04	4.49E-03	9.44E-05	0.00E+00	6.63E-04	5.03E-03
11	D21	80	Combination Long Haul Truck	77	0.00E+00	2.42E-05	1.36E-06	2.62E+01	1.54E-07	3.13E-02	1.99E-05	2.85E-02	2.08E-03	3.32E-04	2.22E-03	4.40E-04	4.58E-04	4.21E-03	8.78E-05	0.00E+00	1.76E-03	5.37E-03
11	D22	80	Passenger Car	989	0.00E+00	1.03E-05	1.12E-06	4.18E+01	7.29E-05	2.11E-01	2.31E-05	1.02E-03	5.39E-03	9.02E-04	2.26E-03	1.46E-03	1.49E-03	1.47E-04	2.11E-04	4.51E-08	7.64E-04	1.60E-04
11	D22	80	Passenger Truck	1655	0.00E+00	2.11E-05	2.25E-06	9.44E+01	1.37E-04	3.73E-01	4.48E-05	2.76E-03	9.59E-03	1.60E-03	4.30E-03	2.79E-03	2.86E-03	6.80E-04	4.72E-04	8.58E-08	1.44E-03	4.60E-04
11	D22	80	Single Unit Short Haul Truck	34	0.00E+00	4.60E-06	1.80E-07	5.50E+00	3.12E-06	9.98E-03	5.06E-06	1.91E-03	3.77E-04	7.70E-05	6.33E-04	1.17E-04	1.20E-04	5.59E-04	2.23E-05	8.85E-09	5.14E-04	3.56E-04
11	D22	80	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	7.71E-09	2.32E-01	1.33E-07	4.16E-04	2.20E-07	8.15E-05	1.73E-05	3.42E-06	2.76E-05	5.04E-06	5.14E-06	2.35E-05	9.45E-07	3.69E-10	2.25E-05	1.52E-05
11	D22	80	Combination Short Haul Truck	28	0.00E+00	5.82E-06	4.31E-07	9.47E+00	1.52E-08	8.87E-03	4.16E-06	8.95E-03	6.74E-04	1.22E-04	3.53E-04	1.26E-04	1.31E-04	1.51E-03	3.17E-05	0.00E+00	2.22E-04	1.69E-03
11	D22	80	Combination Long Haul Truck	26	0.00E+00	8.11E-06	4.58E-07	8.79E+00	5.16E-08	1.05E-02	6.69E-06	9.57E-03	6.97E-04	1.11E-04	7.43E-04	1.48E-04	1.54E-04	1.41E-03	2.95E-05	0.00E+00	5.89E-04	1.80E-03
9	D23	60	Passenger Car	738	0.00E+00	9.44E-06	1.03E-06	3.36E+01	6.70E-05	1.88E-01	2.13E-05	7.60E-04	7.46E-03	1.12E-03	2.08E-03	1.34E-03	1.37E-03	1.46E-04	1.69E-04	3.55E-08	7.02E-04	1.19E-04
9	D23	60	Passenger Truck	1237	0.00E+00	2.00E-05	2.12E-06	7.50E+01	1.26E-04	3.22E-01	4.16E-05	2.36E-03	1.36E-02	2.03E-03	3.96E-03	2.58E-03	2.64E-03	5.99E-04	3.73E-04	6.91E-08	1.32E-03	4.00E-04
9	D23	60	Single Unit Short Haul Truck	68	0.00E+00	1.52E-05	6.27E-07	1.13E+01	1.01E-05	1.99E-02	1.64E-05	5.81E-03	1.56E-03	2.63E-04	2.03E-03	3.90E-04	3.98E-04	1.15E-03	4.61E-05	1.90E-08	1.63E-03	1.09E-03
9	D23	60	Single Unit Long Haul Truck	3	0.00E+00	6.63E-07	2.72E-08	4.82E-01	4.36E-07	8.45E-04	7.17E-07	2.52E-04	7.03E-05	1.17E-05	8.86E-05	1.70E-05	1.73E-05	4.87E-05	1.97E-06	8.08E-10	7.13E-05	4.71E-05
9	D23	60	Combination Short Haul Truck	41	0.00E+00	1.21E-05	8.86E-07	1.46E+01	3.30E-08	1.80E-02	8.66E-06	1.83E-02	2.10E-03	3.29E-04	7.43E-04	2.59E-04	2.69E-04	2.31E-03	4.87E-05	0.00E+00	4.74E-04	3.46E-03
9	D23	60	Combination Long Haul Truck	38	0.00E+00	1.66E-05	9.05E-07	1.37E+01	1.12E-07	2.16E-02	1.39E-05	1.95E-02	2.21E-03	3.19E-04	1.57E-03	2.96E-04	3.08E-04	2.21E-03	4.61E-05	0.00E+00	1.26E-03	3.68E-03
9	D24	60	Passenger Car	1015	0.00E+00	1.30E-05	1.41E-06	4.62E+01	9.21E-05	2.59E-01	2.93E-05	1.05E-03	1.03E-02	1.54E-03	2.85E-03	1.84E-03	1.89E-03	2.01E-04	2.32E-04	4.87E-08	9.66E-04	1.63E-04
9	D24	60	Passenger Truck	1700	0.00E+00	2.76E-05	2.92E-06	1.03E+02	1.74E-04	4.43E-01	5.72E-05	3.25E-03	1.87E-02	2.79E-03	5.45E-03	3.55E-03	3.63E-03	8.24E-04	5.12E-04	9.50E-08	1.82E-03	5.51E-04
9	D24	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.11E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.82E-04
9	D24	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.52E-05
9	D24	60	Combination Short Haul Truck	21	0.00E+00	6.26E-06	4.60E-07	7.55E+00	1.71E-08	9.35E-03	4.50E-06	9.52E-03	1.09E-03	1.71E-04	3.86E-04	1.34E-04	1.40E-04	1.20E-03	2.53E-05	0.00E+00	2.46E-04	1.79E-03
9	D24	60	Combination Long Haul Truck	20	0.00E+00	8.60E-06	4.70E-07	7.13E+00	5.80E-08	1.12E-02	7.19E-06	1.01E-02	1.15E-03	1.66E-04	8.16E-04	1.53E-04	1.60E-04	1.14E-03	2.39E-05	0.00E+00	6.56E-04	1.91E-03
9	D25	60	Passenger Car	934	0.00E+00	1.19E-05	1.30E-06	4.25E+01	8.47E-05	2.38E-01	2.69E-05	9.61E-04	9.43E-03	1.41E-03	2.63E-03	1.69E-03	1.74E-03	1.85E-04	2.13E-04	4.48E-08	8.88E-04	1.50E-04
9	D25	60	Passenger Truck	1563	0.00E+00	2.53E-05	2.69E-06	9.48E+01	1.60E-04	4.08E-01	5.26E-05	2.99E-03	1.72E-02	2.56E-03	5.01E-03	3.26E-03	3.34E-03	7.57E-04	4.71E-04	8.74E-08	1.67E-03	5.06E-04
9	D25	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.09E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.66E-04
9	D25	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.32E-05
9	D25	60	Combination Short Haul Truck	26	0.00E+00	7.63E-06	5.61E-07	9.21E+00	2.09E-08	1.14E-02	5.48E-06	1.16E-02	1.33E-03	2.08E-04	4.70E-04	1.64E-04	1.70E-04	1.46E-03	3.08E-05	0.00E+00	3.00E-04	2.19E-03
9	D25	60	Combination Long Haul Truck	24	0.00E+00	1.05E-05	5.73E-07	8.70E+00	7.08E-08	1.37E-02	8.77E-06	1.24E-02	1.40E-03	2.02E-04	9.95E-04	1.87E-04	1.95E-04	1.40E-03	2.92E-05	0.00E+00	8.00E-04	2.33E-03
9	D26	60	Passenger Car	1224	0.00E+00	1.56E-05	1.70E-06	5.58E+01	1.11E-04	3.12E-01	3.53E-05	1.26E-03	1.24E-02	1.85E-03	3.44E-03	2.22E-03	2.28E-03	2.43E-04	2.80E-04	5.88E-08	1.16E-03	1.97E-04
9	D26	60	Passenger Truck	2049	0.00E+00	3.32E-05	3.52E-06	1.24E+02	2.10E-04	5.34E-01	6.89E-05	3.92E-03	2.26E-02	3.36E-03	6.57E-03	4.27E-03	4.38E-03	9.93E-04	6.18E-04	1.15E-07	2.19E-03	6.64E-04
9	D26	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.06E-04
9	D26

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D30	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.15E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.94E-04
11	D30	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.37E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.34E-04
11	D31	80	Passenger Car	469	0.00E+00	4.87E-06	5.30E-07	1.99E+01	3.46E-05	1.00E-01	1.10E-05	4.87E-04	2.56E-03	4.28E-04	1.07E-03	6.91E-04	7.09E-04	6.98E-05	1.00E-04	2.14E-08	3.63E-04	7.59E-05
11	D31	80	Passenger Truck	786	0.00E+00	1.00E-05	1.07E-06	4.48E+01	6.53E-05	1.77E-01	2.13E-05	1.31E-03	4.55E-03	7.58E-04	2.04E-03	1.32E-03	1.36E-03	3.23E-04	2.24E-04	4.07E-08	6.83E-04	2.18E-04
11	D31	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	4.41E-09	1.33E-01	7.59E-08	2.38E-04	1.25E-07	4.66E-05	9.87E-06	1.95E-06	1.58E-05	2.88E-06	2.93E-06	1.34E-05	5.40E-07	2.11E-10	1.28E-05	8.70E-06
11	D31	80	Combination Short Haul Truck	15	0.00E+00	3.13E-06	2.31E-07	5.09E+00	8.19E-09	4.76E-03	2.23E-06	4.81E-03	3.62E-04	6.56E-05	1.90E-04	6.75E-05	7.01E-05	8.08E-04	1.70E-05	0.00E+00	1.19E-04	9.06E-04
11	D31	80	Combination Long Haul Truck	14	0.00E+00	4.35E-06	2.46E-07	4.72E+00	2.77E-08	5.64E-03	3.59E-06	5.14E-03	3.74E-04	5.99E-05	3.99E-04	7.92E-05	8.25E-05	7.58E-04	1.58E-05	0.00E+00	3.17E-04	9.68E-04
11	D32	80	Passenger Car	256	0.00E+00	2.66E-06	2.89E-07	1.09E+01	1.89E-05	5.48E-02	6.01E-06	2.66E-04	1.40E-03	2.34E-04	5.86E-04	3.78E-04	3.88E-04	3.81E-05	5.47E-05	1.17E-08	1.98E-04	4.15E-05
11	D32	80	Passenger Truck	430	0.00E+00	5.48E-06	5.85E-07	2.45E+01	3.57E-05	9.67E-02	1.16E-05	7.17E-04	2.49E-03	4.14E-04	1.12E-03	7.24E-04	7.42E-04	1.76E-04	1.22E-04	2.23E-08	3.74E-04	1.19E-04
11	D32	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.36E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.15E-05
11	D32	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.65E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.00E-04
11	D32	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.34E-04
9	D33	60	Passenger Car	233	0.00E+00	2.98E-06	3.24E-07	1.06E+01	2.12E-05	5.95E-02	6.73E-06	2.40E-04	2.36E-03	3.53E-04	6.56E-04	4.23E-04	4.34E-04	4.62E-05	5.33E-05	1.12E-08	2.22E-04	3.75E-05
9	D33	60	Passenger Truck	391	0.00E+00	6.33E-06	6.71E-07	2.37E+01	4.00E-05	1.02E-01	1.31E-05	7.47E-04	4.31E-03	6.41E-04	1.25E-03	8.15E-04	8.35E-04	1.89E-04	1.18E-04	2.18E-08	4.17E-04	1.27E-04
9	D33	60	Single Unit Short Haul Truck	7	0.00E+00	1.50E-06	6.18E-08	1.12E+00	9.92E-07	1.96E-03	1.62E-06	5.73E-04	1.54E-04	2.59E-05	2.00E-04	3.85E-05	3.92E-05	1.13E-04	4.55E-06	1.87E-09	1.60E-04	1.07E-04
9	D33	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.25E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.13E-04
9	D33	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.46E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.52E-04
9	D34	60	Passenger Car	372	0.00E+00	4.75E-06	5.16E-07	1.69E+01	3.37E-05	9.48E-02	1.07E-05	3.83E-04	3.75E-03	5.62E-04	1.05E-03	6.74E-04	6.92E-04	7.37E-05	8.50E-05	1.78E-08	3.54E-04	5.97E-05
9	D34	60	Passenger Truck	622	0.00E+00	1.01E-05	1.07E-06	3.77E+01	6.36E-05	1.62E-01	2.09E-05	1.19E-03	6.86E-03	1.02E-03	2.00E-03	1.30E-03	1.33E-03	3.02E-04	1.88E-04	3.48E-08	6.65E-04	2.02E-04
9	D34	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.82E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.25E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.96E-06
9	D34	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.41E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.31E-04
9	D34	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.70E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.85E-04
9	D35	60	Passenger Car	231	0.00E+00	2.95E-06	3.21E-07	1.05E+01	2.10E-05	5.89E-02	6.66E-06	2.38E-04	2.33E-03	3.49E-04	6.50E-04	4.19E-04	4.30E-04	4.58E-05	5.28E-05	1.11E-08	2.20E-04	3.71E-05
9	D35	60	Passenger Truck	387	0.00E+00	6.27E-06	6.65E-07	2.35E+01	3.96E-05	1.01E-01	1.30E-05	7.40E-04	4.26E-03	6.35E-04	1.24E-03	8.07E-04	8.27E-04	1.87E-04	1.17E-04	2.16E-08	4.13E-04	1.25E-04
9	D35	60	Single Unit Short Haul Truck	7	0.00E+00	1.50E-06	6.18E-08	1.12E+00	9.92E-07	1.96E-03	1.62E-06	5.73E-04	1.54E-04	2.59E-05	2.00E-04	3.85E-05	3.92E-05	1.13E-04	4.55E-06	1.87E-09	1.60E-04	1.07E-04
9	D35	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.79E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.25E-04
9	D35	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.97E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.59E-04
9	D36	60	Passenger Car	400	0.00E+00	5.12E-06	5.56E-07	1.82E+01	3.63E-05	1.02E-01	1.15E-05	4.12E-04	4.04E-03	6.06E-04	1.13E-03	7.26E-04	7.45E-04	7.94E-05	9.15E-05	1.92E-08	3.81E-04	6.43E-05
9	D36	60	Passenger Truck	671	0.00E+00	1.09E-05	1.15E-06	4.07E+01	6.86E-05	1.75E-01	2.25E-05	1.28E-03	7.39E-03	1.10E-03	2.15E-03	1.40E-03	1.43E-03	3.25E-04	2.02E-04	3.75E-08	7.17E-04	2.17E-04
9	D36	60	Single Unit Short Haul Truck	7	0.00E+00	1.50E-06	6.18E-08	1.12E+00	9.92E-07	1.96E-03	1.62E-06	5.73E-04	1.54E-04	2.59E-05	2.00E-04	3.85E-05	3.92E-05	1.13E-04	4.55E-06	1.87E-09	1.60E-04	1.07E-04
9	D36	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.02E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.69E-04
9	D36	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.22E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.06E-04
9	D37	60	Passenger Car	491	0.00E+00	6.28E-06	6.82E-07	2.24E+01	4.46E-05	1.25E-01	1.42E-05	5.05E-04	4.96E-03	7.42E-04	1.38E-03	8.90E-04	9.14E-04	9.73E-05	1.12E-04	2.36E-08	4.67E-04	7.88E-05
9	D37	60	Passenger Truck	822	0.00E+00	1.33E-05	1.41E-06	4.99E+01	8.41E-05	2.14E-01	2.76E-05	1.57E-03	9.06E-03	1.35E-03	2.64E-03	1.71E-03	1.76E-03	3.98E-04	2.48E-04	4.59E-08	8.78E-04	2.66E-04
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
9	D37	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.18E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.88E-04
9	D37	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.45E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.38E-04
9	D38	60	Passenger Car	326	0.00E+00	4.16E-06	4.53E-07	1.48E+01	2.96E-05	8.31E-02	9.39E-06	3.35E-04	3.29E-03	4.93E-04	9.16E-04	5.90E-04	6.06E-04	6.46E-05	7.44E-05	1.56E-08	3.10E-04	5.23E-05
9	D38	60	Passenger Truck	545	0.00E+00	8.84E-06	9.37E-07	3.31E+01	5.58E-05	1.42E-01	1.83E-05	1.04E-03	6.01E-03	8.94E-04	1.75E-03	1.14E-03	1.17E-03	2.64E-04	1.64E-04	3.05E-08	5.83E-04	1.77E-04
9	D38	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.27E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.13E-05
9	D38	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.39E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.63E-04
9	D38	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.48E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.79E-04
9	D39	60	Passenger Car	294	0.00E+00	3.76E-06	4.08E-07	1.34E+01	2.67E-05	7.50E-02	8.47E-06	3.03E-04	2.97E-03	4.44E-04	8.26E-04	5.33E-04	5.47E-04	5.83E-05	6.72E-05	1.41E-08	2.80E-04	4.72E-05
9	D39	60	Passenger Truck	492	0.00E+00	7.98E-06	8.46E-07	2.98E+01	5.03E-05	1.28E-01	1.65E-05	9.41E-04	5.42E-03	8.07E-04	1.58E-03	1.03E-03	1.05E-03	2.38E-04	1.48E-04	2.75E-08	5.26E-04	1.59E-04
9	D39	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.86E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.50E-04
9	D39	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.98E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.73E-04
9	D40	60	Passenger Car	205	0.00E+00	2.62E-06	2.84E-07	9.32E+00	1.86E-05	5.22E-02	5.90E-06	2.11E-04	2.07E-03	3.09E-04	5.75E-04	3.71E-04	3.81E-04	4.05E-05	4.68E-05	9.82E-09	1.95E-04	3.28E-05
9	D40	60	Passenger Truck	342	0.00E+00	5.55E-06	5.88E-07	2.08E+01	3.50E-05	8.93E-02	1.15E-05	6.55E-04	3.77E-03	5.62E-04	1.10E-03	7.14E-04	7.32E-04	1.66E-04	1.03E-04	1.91E-08	3.66E-04	1.11E-04
9	D40	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.64E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.75E-05
9	D40	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.95E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.32E-05
9	D41	60	Passenger Car	88	0.00E+00	1.12E-06	1.22E-07	4.00E+00	7.97E-06	2.24E-02	2.53E-06	9.05E-05	8.87E-04	1.33E-04	2.47E-04	1.59E-04	1.63E-04	1.74E-05	2.01E-05	4.22E-09	8.36E-05	1.41E-05
9	D41	60	Passenger Truck	147	0.00E+00	2.39E-06	2.53E-07	8.92E+00	1.50E-05	3.84E-02	4.95E-06	2.81E-04	1.62E-03	2.41E-04	4.72E-04	3.07E-04	3.14E-04	7.13E-05	4.43E-05	8.22E-09	1.57E-04	4.77E-05
9	D41	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.64E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.75E-05
9	D41	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.95E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.32E-05
9	D42	60	Passenger Car	281	0.00E+00	3.59E-06	3.90E-07	1.28E+01	2.55E-05	7.16E-02	8.10E-06	2.89E-04	2.84E-03	4.25E-04	7.90E-04	5.09E-04	5.23E-04	5.57E-05	6.42E-05	1.35E-08	2.67E-04	4.51E-05
9	D42	60	Passenger Truck	470	0.00E+00	7.62E-06	8.08E-07	2.85E+01	4.81E-05	1.23E-01	1.58E-05	8.99E-04	5.18E-03	7.71E-04	1.51E-03	9.81E-04	1.00E-03	2.28E-04	1.42E-04	2.63E-08	5.02E-04	1.52E-04
9	D42	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.32E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.38E-05
9	D43	60	Passenger Car	165	0.00E+00	2.11E-06	2.30E-07	7.53E+00	1.50E-05	4.22E-02	4.76E-06	1.70E-04	1.67E-03	2.50E-04	4.65E-04	3.00E-04	3.08E-04	3.28E-05	3.78E-05	7.93E-09	1.57E-04	2.65E-05
9	D43	60	Passenger Truck	277	0.00E+00	4.49E-06	4.75E-07	1.68E+01	2.83E-05	7.21E-02	9.31E-06	5.29E-04	3.05E-03	4.54E-04	8.87E-04	5.77E-04	5.91E-04	1.34E-04	8.34E-05	1.55E-08	2.96E-04	8.96E-05
9	D43	60	Single Unit Short Haul Truck	31	0.00E+00	6.84E-06	2.83E-07	5.10E+00	4.53E-06	8.97E-03	7.40E-06	2.62E-03	7.05E-04	1.18E-04	9.13E-04	1.76E-04	1.79E-04	5.17E-04	2.08E-05	8.56E-09	7.34E-04	4.90E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.23E-08	2.17E-01	1.97E-07	3.81E-04	3.23E-07	1.13E-04	3.17E-05	5.26E-06	3.99E-05	7.64E-06	7.79E-06	2.20E-05	8.87E-07	3.64E-10	3.21E-05	2.12E-05
9	D43	60	Combination Short Haul Truck	15	0.00E+00	4.43E-06	3.25E-07	5.34E+00	1.21E-08	6.61E-03	3.18E-06	6.73E-03	7.73E-04	1.21E-04	2.73E-04	9.51E-05	9.88E-05	8.49E-04	1.79E-05	0.00E+00	1.74E-04	1.27E-03
9	D43	60	Combination Long Haul Truck	14	0.00E+00	6.08E-06	3.32E-07	5.05E+00	4.11E-08	7.95E-03	5.09E-06	7.17E-03	8.10E-04	1.17E-04	5.77E-04	1.09E-04	1.13E-04	8.10E-04	1.69E-05	0.00E+00	4.64E-04	1.35E-03
9	D44	60	Passenger Car	315	0.00E+00	4.03E-06	4.37E-07	1.43E+01	2.86E-05	8.03E-02	9.08E-06	3.24E-04	3.18E-03	4.76E-04	8.85E-04	5.71E-04	5.86E-04	6.24E-05	7.20E-05	1.51E-08	2.99E-04	5.06E-05
9	D44	60	Passenger Truck	527	0.00E+00	8.55E-06	9.06E-07	3.20E+01	5.39E-05	1.37E-01	1.77E-05	1.01E-03	5.81E-03	8.65E-04	1.69E-03	1.10E-03	1.13E-03	2.55E-04	1.59E-04	2.95E-08	5.63E-04	1.71E-04
9	D44	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.06E-05
9	D44	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.16E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.19E-04
9	D44	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.33E-04
9	D45	60	Passenger Car	621	0.00E+00	7.94E-06	8.62E-07	2.83E+01	5.63E-05	1.58E-01	1.79E-05	6.39E-04	6.27E-03	9.39E-04	1.75E-03	1.13E-03	1.15E-03	1.23E-04	1.42E-04	2.98E-08	5.90E-04	9.97E-05
9	D45	60	Passenger Truck	1039	0.00E+00	1.68E-05	1.79E-06	6.30E+01	1.06E-04	2.71E-01	3.49E-05	1.99E-03	1.15E-02	1.70E-03	3.33E-03	2.17E-03	2.22E-03	5.04E-04	3.13E-04	5.81E-08	1.11E-03	3.37E-04
9	D45	60	Single Unit Short Haul Truck	54	0.00E+00	1.20E-05	4.95E-07	8.92E+00	7.93E-06	1.57E-02	1.30E-05	4.58E-03	1.23E-03	2.07E-04	1.60E-03	3.08E-04	3.14E-04	9.04E-04	3.64E-05	1.50E-08	1.28E-03	8.58E-04
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.15E-08	3.80E-01	3.44E-07	6.66E-04	5.65E-07	1.98E-04	5.54E-05	9.20E-06	6.99E-05	1.34E-05	1.36E-05	3.84E-05	1.55E-06	6.37E-10	5.62E-05	3.72E-05
9	D45	60	Combination Short Haul Truck	37	0.00E+00	1.07E-05	7.85E-07	1.29E+01	2.93E-08	1.60E-02	7.68E-06	1.63E-02	1.86E-03	2.92E-04	6.59E-04	2.30E-04	2.38E-04	2.05E-03	4.31E-05	0.00E+00	4.20E-04	3.06E-03
9	D45	60	Combination Long Haul Truck	33	0.00E+00	1.47E-05	8.02E-07	1.22E+01	9.91E-08	1.92E-02	1.23E-05	1.73E-02	1.96E-03	2.83E-04	1.39E-03	2.62E-04	2.73E-04	1.95E-03	4.08E-05	0.00E+00	1.12E-03	3.26E-03
9	D46	60	Passenger Car	606	0.00E+00	7.75E-06	8.42E-07	2.76E+01	5.50E-05	1.55E-01	1.75E-05	6.24E-04	6.12E-03	9.17E-04	1.70E-03	1.10E-03	1.13E-03	1.20E-04	1.39E-04	2.91E-08	5.77E-04	9.73E-05
9	D46	60	Passenger Truck	1015	0.00E+00	1.65E-05	1.74E-06	6.15E+01	1.04E-04	2.65E-01	3.41E-05	1.94E-03	1.12E-02	1.66E-03	3.25E-03	2.12E-03	2.17E-03	4.92E-04	3.06E-04	5.67E-08	1.08E-03	3.29E-04
9	D46	60	Single Unit Short Haul Truck	59	0.00E+00	1.33E-05	5.48E-07	9.88E+00	8.78E-06	1.74E-02	1.43E-05	5.07E-03	1.37E-03	2.30E-04	1.77E-03	3.41E-04	3.47E-04	1.00E-03	4.03E-05	1.66E-08	1.42E-03	9.50E-04
9	D46	60	Single Unit Long Haul Truck	3	0.00E+00	5.79E-07	2.38E-08	4.21E-01	3.81E-07	7.38E-04	6.26E-07	2.20E-04	6.14E-05	1.02E-05	7.73E-05	1.48E-05	1.51E-05	4.26E-05	1.72E-06	7.06E-10	6.22E-05	4.11E-05
9	D46	60	Combination Short Haul Truck	49	0.00E+00	1.42E-05	1.04E-06	1.71E+01	3.89E-08	2.12E-02	1.02E-05	2.16E-02	2.48E-03	3.87E-04	8.75E-04	3.05E-04	3.17E-04	2.72E-03	5.73E-05	0.00E+00	5.58E-04	4.07E-03
9	D46	60	Combination Long Haul Truck	44	0.00E+00	1.95E-05	1.07E-06	1.62E+01	1.32E-07	2.55E-02	1.63E-05	2.30E-02	2.60E-03	3.76E-04	1.85E-03	3.48E-04	3.63E-04	2.60E-03	5.42E-05	0.00E+00	1.49E-03	4.33E-03
9	D47	60	Passenger Car	826	0.00E+00	1.06E-05	1.15E-06	3.76

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D51	60	Passenger Truck	503	0.00E+00	8.15E-06	8.64E-07	3.05E+01	5.14E-05	1.31E-01	1.69E-05	9.61E-04	5.54E-03	8.25E-04	1.61E-03	1.05E-03	1.07E-03	2.44E-04	1.52E-04	2.81E-08	5.37E-04	1.63E-04
9	D51	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.18E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	D51	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.86E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.50E-04
9	D51	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.98E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.73E-04
9	D52	60	Passenger Car	322	0.00E+00	4.11E-06	4.47E-07	1.46E+01	2.92E-05	8.20E-02	9.27E-06	3.31E-04	3.25E-03	4.86E-04	9.04E-04	5.83E-04	5.98E-04	6.37E-05	7.35E-05	1.54E-08	3.06E-04	5.16E-05
9	D52	60	Passenger Truck	538	0.00E+00	8.73E-06	9.25E-07	3.27E+01	5.51E-05	1.40E-01	1.81E-05	1.03E-03	5.93E-03	8.83E-04	1.73E-03	1.12E-03	1.15E-03	2.61E-04	1.62E-04	3.01E-08	5.75E-04	1.74E-04
9	D52	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.91E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.19E-05
9	D52	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.39E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.63E-04
9	D52	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.48E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.79E-04
9	D53	60	Passenger Car	374	0.00E+00	4.79E-06	5.20E-07	1.71E+01	3.40E-05	9.55E-02	1.08E-05	3.85E-04	3.78E-03	5.66E-04	1.05E-03	6.79E-04	6.96E-04	7.42E-05	8.56E-05	1.80E-08	3.56E-04	6.01E-05
9	D53	60	Passenger Truck	627	0.00E+00	1.02E-05	1.08E-06	3.80E+01	6.41E-05	1.63E-01	2.11E-05	1.20E-03	6.91E-03	1.03E-03	2.01E-03	1.31E-03	1.34E-03	3.04E-04	1.89E-04	3.50E-08	6.70E-04	2.03E-04
9	D53	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.18E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	D53	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.06E-04
9	D53	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.73E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.26E-04
9	D54	60	Passenger Car	244	0.00E+00	3.12E-06	3.39E-07	1.11E+01	2.21E-05	6.22E-02	7.03E-06	2.51E-04	2.46E-03	3.69E-04	6.86E-04	4.42E-04	4.54E-04	4.83E-05	5.57E-05	1.17E-08	2.32E-04	3.92E-05
9	D54	60	Passenger Truck	408	0.00E+00	6.62E-06	7.01E-07	2.48E+01	4.17E-05	1.06E-01	1.37E-05	7.80E-04	4.50E-03	6.70E-04	1.31E-03	8.51E-04	8.72E-04	1.98E-04	1.23E-04	2.28E-08	4.36E-04	1.32E-04
9	D54	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.27E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.13E-05
9	D54	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.16E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.19E-04
9	D54	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.33E-04
11	D55	80	Passenger Car	419	0.00E+00	4.35E-06	4.73E-07	1.77E+01	3.09E-05	8.95E-02	9.81E-06	4.35E-04	2.28E-03	3.83E-04	9.57E-04	6.17E-04	6.33E-04	6.23E-05	8.94E-05	1.91E-08	3.24E-04	6.78E-05
11	D55	80	Passenger Truck	702	0.00E+00	8.96E-06	9.55E-07	4.00E+01	5.83E-05	1.58E-01	1.90E-05	1.17E-03	4.07E-03	6.77E-04	1.82E-03	1.18E-03	1.21E-03	2.88E-04	2.00E-04	3.64E-08	6.10E-04	1.95E-04
11	D55	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04
11	D55	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	4.41E-09	1.33E-01	7.59E-08	2.38E-04	1.25E-07	4.66E-05	9.87E-06	1.95E-06	1.58E-05	2.88E-06	2.93E-06	1.34E-05	5.40E-07	2.11E-10	1.28E-05	8.70E-06
11	D55	80	Combination Short Haul Truck	15	0.00E+00	3.02E-06	2.23E-07	4.91E+00	7.90E-09	4.60E-03	2.16E-06	4.64E-03	3.49E-04	6.33E-05	1.83E-04	6.52E-05	6.77E-05	7.80E-04	1.64E-05	0.00E+00	1.15E-04	8.75E-04
11	D55	80	Combination Long Haul Truck	13	0.00E+00	4.20E-06	2.37E-07	4.56E+00	2.67E-08	5.45E-03	3.47E-06	4.96E-03	3.61E-04	5.78E-05	3.85E-04	7.65E-05	7.97E-05	7.31E-04	1.53E-05	0.00E+00	3.06E-04	9.35E-04
11	D56	80	Passenger Car	617	0.00E+00	6.41E-06	6.97E-07	2.61E+01	4.55E-05	1.32E-01	1.45E-05	6.40E-04	3.36E-03	5.63E-04	1.41E-03	9.09E-04	9.33E-04	9.18E-05	1.32E-04	2.81E-08	4.77E-04	9.98E-05
11	D56	80	Passenger Truck	1034	0.00E+00	1.32E-05	1.41E-06	5.90E+01	8.59E-05	2.33E-01	2.80E-05	1.73E-03	5.99E-03	9.97E-04	2.68E-03	1.74E-03	1.79E-03	4.24E-04	2.95E-04	5.36E-08	8.99E-04	2.87E-04
11	D56	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.75E-04
11	D56	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.29E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.17E-05
11	D56	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.47E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	D56	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.91E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.30E-03
11	D57	80	Passenger Car	670	0.00E+00	6.96E-06	7.57E-07	2.84E+01	4.94E-05	1.43E-01	1.57E-05	6.95E-04	3.65E-03	6.12E-04	1.53E-03	9.87E-04	1.01E-03	9.97E-05	1.43E-04	3.06E-08	5.18E-04	1.08E-04
11	D57	80	Passenger Truck	1123	0.00E+00	1.43E-05	1.53E-06	6.40E+01	9.32E-05	2.53E-01	3.04E-05	1.87E-03	6.51E-03	1.08E-03	2.91E-03	1.89E-03	1.94E-03	4.61E-04	3.20E-04	5.82E-08	9.76E-04	3.12E-04
11	D57	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D57	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.12E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.57E-06
11	D57	80	Combination Short Haul Truck	18	0.00E+00	3.67E-06	2.71E-07	5.96E+00	9.60E-09	5.59E-03	2.62E-06	5.64E-03	4.24E-04	7.69E-05	2.22E-04	7.92E-05	8.22E-05	9.48E-04	1.99E-05	0.00E+00	1.40E-04	1.06E-03
11	D57	80	Combination Long Haul Truck	16	0.00E+00	5.11E-06	2.88E-07	5.53E+00	3.25E-08	6.61E-03	4.21E-06	6.03E-03	4.39E-04	7.02E-05	4.68E-04	9.29E-05	9.68E-05	8.88E-04	1.85E-05	0.00E+00	3.71E-04	1.13E-03
11	D58	80	Passenger Car	629	0.00E+00	6.53E-06	7.10E-07	2.66E+01	4.64E-05	1.34E-01	1.47E-05	6.52E-04	3.43E-03	5.74E-04	1.44E-03	9.26E-04	9.50E-04	9.35E-05	1.34E-04	2.87E-08	4.86E-04	1.02E-04
11	D58	80	Passenger Truck	1053	0.00E+00	1.34E-05	1.43E-06	6.01E+01	8.75E-05	2.37E-01	2.85E-05	1.76E-03	6.10E-03	1.02E-03	2.73E-03	1.77E-03	1.82E-03	4.32E-04	3.00E-04	5.46E-08	9.16E-04	2.93E-04
11	D58	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.83E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.30E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.26E-05
11	D58	80	Combination Short Haul Truck	35	0.00E+00	7.11E-06	5.27E-07	1.16E+01	1.86E-08	1.08E-02	5.09E-06	1.09E-02	8.24E-04	1.49E-04	4.31E-04	1.54E-04	1.60E-04	1.84E-03	3.87E-05	0.00E+00	2.72E-04	2.06E-03
11	D58	80	Combination Long Haul Truck	31	0.00E+00	9.91E-06	5.60E-07	1.07E+01	6.30E-08	1.28E-02	8.17E-06	1.17E-02	8.51E-04	1.36E-04	9.08E-04	1.80E-04	1.88E-04	1.72E-03	3.60E-05	0.00E+00	7.20E-04	2.20E-03
11	D59	80	Passenger Car	670	0.00E+00	6.96E-06	7.57E-07	2.84E+01	4.94E-05	1.43E-01	1.57E-05	6.95E-04	3.65E-03	6.12E-04	1.53E-03	9.87E-04	1.01E-03	9.97E-05	1.43E-04	3.06E-08	5.18E-04	1.08E-04
11	D59	80	Passenger Truck	1123	0.00E+00	1.43E-05	1.53E-06	6.40E+01	9.32E-05	2.53E-01	3.04E-05	1.87E-03	6.51E-03	1.08E-03	2.91E-03	1.89E-03	1.94E-03	4.61E-04	3.20E-04	5.82E-08	9.76E-04	3.12E-04
11	D59	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.12E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.57E-06
11	D59	80	Combination Short Haul Truck	18	0.00E+00	3.67E-06	2.71E-07	5.96E+00	9.60E-09	5.59E-03	2.62E-06	5.64E-03	4.24E-04	7.69E-05	2.22E-04	7.92E-05	8.22E-05	9.48E-04	1.99E-05	0.00E+00	1.40E-04	1.06E-03
11	D59	80	Combination Long Haul Truck	16	0.00E+00	5.11E-06	2.88E-07	5.53E+00	3.25E-08	6.61E-03	4.21E-06	6.03E-03	4.39E-04	7.02E-05	4.68E-04	9.29E-05	9.68E-05	8.88E-04	1.85E-05	0.00E+00	3.71E-04	1.13E-03
11	D60	80	Passenger Car	629	0.00E+00	6.53E-06	7.10E-07	2.66E+01	4.64E-05	1.34E-01	1.47E-05	6.52E-04	3.43E-03	5.74E-04	1.44E-03	9.26E-04	9.50E-04	9.35E-05	1.34E-04	2.87E-08	4.86E-04	1.02E-04
11	D60	80	Passenger Truck	1053	0.00E+00	1.34E-05	1.43E-06	6.01E+01	8.75E-05	2.37E-01	2.85E-05	1.76E-03	6.10E-03	1.02E-03	2.73E-03	1.77E-03	1.82E-03	4.32E-04	3.00E-04	5.46E-08	9.16E-04	2.93E-04
11	D60	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.83E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.30E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.26E-05
11	D60	80	Combination Short Haul Truck	35	0.00E+00	7.11E-06	5.27E-07	1.16E+01	1.86E-08	1.08E-02	5.09E-06	1.09E-02	8.24E-04	1.49E-04	4.31E-04	1.54E-04	1.60E-04	1.84E-03	3.87E-05	0.00E+00	2.72E-04	2.06E-03
11	D60	80	Combination Long Haul Truck	31	0.00E+00	9.91E-06	5.60E-07	1.07E+01	6.30E-08	1.28E-02	8.17E-06	1.17E-02	8.51E-04	1.36E-04	9.08E-04	1.80E-04	1.88E-04	1.72E-03	3.60E-05	0.00E+00	7.20E-04	2.20E-03
11	D61	80	Passenger Car	246	0.00E+00	2.55E-06	2.77E-07	1.04E+01	1.81E-05	5.24E-02	5.75E-06	2.55E-04	1.34E-03	2.24E-04	5.61E-04	3.62E-04	3.71E-04	3.65E-05	5.24E-05	1.12E-08	1.90E-04	3.97E-05
11	D61	80	Passenger Truck	411	0.00E+00	5.25E-06	5.60E-07	2.35E+01	3.42E-05	9.26E-02	1.11E-05	6.87E-04	2.38E-03	3.97E-04	1.07E-03	6.93E-04	7.10E-04	1.69E-04	1.17E-04	2.13E-08	3.58E-04	1.14E-04
11	D61	80	Single Unit Short Haul Truck	41	0.00E+00	5.65E-06	2.21E-07	6.75E+00	3.83E-06	1.23E-02	6.21E-06	2.34E-03	4.63E-04	9.46E-05	7.78E-04	1.44E-04	1.47E-04	6.87E-04	2.74E-05	1.09E-08	6.31E-04	4.38E-04
11	D61	80	Single Unit Long Haul Truck	2	0.00E+00	2.46E-07	9.47E-09	2.85E-01	1.63E-07	5.11E-04	2.70E-07	1.00E-04	2.12E-05	4.20E-06	3.39E-05	6.19E-06	6.31E-06	2.89E-05	1.16E-06	4.53E-10	2.76E-05	1.87E-05
11	D61	80	Combination Short Haul Truck	15	0.00E+00	3.13E-06	2.31E-07	5.09E+00	8.19E-09	4.76E-03	2.23E-06	4.81E-03	3.62E-04	6.56E-05	1.90E-04	6.75E-05	7.01E-05	8.08E-04	1.70E-05	0.00E+00	1.19E-04	9.06E-04
11	D61	80	Combination Long Haul Truck	14	0.00E+00	4.35E-06	2.46E-07	4.72E+00	2.77E-08	5.64E-03	3.59E-06	5.14E-03	3.74E-04	5.99E-05	3.99E-04	7.92E-05	8.25E-05	7.58E-04	1.58E-05	0.00E+00	3.17E-04	9.68E-04
11	D62	80	Passenger Car	81	0.00E+00	8.39E-07	9.11E-08	3.42E+00	5.95E-06	1.72E-02	1.89E-06	8.37E-05	4.40E-04	7.37E-05	1.84E-04	1.19E-04	1.22E-04	1.20E-05	1.72E-05	3.68E-09	6.24E-05	1.31E-05
11	D62	80	Passenger Truck	135	0.00E+00	1.73E-06	1.84E-07	7.71E+00	1.12E-05	3.05E-02	3.66E-06	2.26E-04	7.84E-04	1.30E-04	3.51E-04	2.28E-04	2.34E-04	5.55E-05	3.85E-05	7.01E-09	1.18E-04	3.76E-05
11	D62	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.45E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	D62	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.32E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.37E-04
11	D62	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.48E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.67E-04
10	D63	70	Passenger Car	54	0.00E+00	6.00E-07	6.52E-08	2.35E+00	4.26E-06	1.20E-02	1.35E-06	5.44E-05	4.15E-04	6.46E-05	1.32E-04	8.51E-05	8.74E-05	9.15E-06	1.18E-05	2.45E-09	4.47E-05	8.49E-06
10	D63	70	Passenger Truck	90	0.00E+00	1.26E-06	1.34E-07	5.28E+00	8.09E-06	2.13E-02	2.65E-06	1.58E-04	7.51E-04	1.16E-04	2.53E-04	1.65E-04	1.69E-04	4.00E-05	2.63E-05	4.71E-09	8.47E-05	2.66E-05
10	D63	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	D63	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.01E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.56E-05
10	D63	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.29E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.09E-05
10	D64	70	Passenger Car	66	0.00E+00	7.34E-07	7.97E-08	2.87E+00	5.21E-06	1.47E-02	1.65E-06	6.65E-05	5.07E-04	7.90E-05	1.61E-04	1.04E-04	1.07E-04	1.12E-05	1.44E-05	3.00E-09	5.46E-05	1.04E-05
10	D64	70	Passenger Truck	110	0.00E+00	1.54E-06	1.64E-07	6.45E+00	9.89E-06	2.60E-02	3.24E-06	1.93E-04	9.18E-04	1.42E-04	3.10E-04	2.01E-04	2.06E-04	4.89E-05	3.22E-05	5.76E-09	1.03E-04	3.25E-05
10	D64	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.90E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.16E-06
10	D64	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.21E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.94E-04
10	D64	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.51E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.49E-04
11	D65	80	Passenger Car	283	0.00E+00	2.94E-06	3.19E-07	1.20E+01	2.08E-05	6.03E-02	6.62E-06	2.93E-04	1.54E-03	2.58E-04	6.46E-04	4.16E-04	4.27E-04	4.20E-05	6.03E-05	1.29E-08	2.18E-04	4.57E-05
11	D65	80	Passenger Truck	473	0.00E+00	6.04E-06	6.44E-07	2.70E+01	3.93E-05	1.07E-01	1.28E-05	7.90E-04	2.74E-03	4.57E-04	1.23E-03	7.97E-04	8.17E-04	1.94E-04	1.35E-04	2.45E-08	4.12E-04	1.32E-04
11	D65	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.72E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.09E-04
11	D65	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.16E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	D65	80	Combination Short Haul Truck	30	0.00E+00	6.14E-06	4.55E-07	1.00E+01	1.61E-08	9.36E-03	4.39E-06	9.45E-03	7.11E-04	1.29E-04	3.73E-04	1.33E-04	1.38E-04	1.59E-03	3.34E-05	0.00E+00	2.35E-04	1.78E-03
11	D65	80	Combination Long Haul Truck

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D69	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.48E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.56E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.72E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.01E-04
11	D70	80	Passenger Car	112	0.00E+00	1.16E-06	1.26E-07	4.73E+00	8.24E-06	2.39E-02	2.62E-06	1.16E-04	6.09E-04	1.02E-04	2.55E-04	1.65E-04	1.69E-04	1.66E-05	2.39E-05	5.10E-09	8.64E-05	1.81E-05
11	D70	80	Passenger Truck	187	0.00E+00	2.39E-06	2.55E-07	1.07E+01	1.55E-05	4.22E-02	5.07E-06	3.13E-04	1.08E-03	1.81E-04	4.86E-04	3.15E-04	3.23E-04	7.69E-05	5.34E-05	9.70E-09	1.63E-04	5.20E-05
11	D70	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.08E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.32E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.03E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.66E-06
11	D70	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	2.98E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.62E-04
11	D70	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.19E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.01E-04
10	D71	70	Passenger Car	335	0.00E+00	3.74E-06	4.06E-07	1.46E+01	2.65E-05	7.50E-02	8.43E-06	3.39E-04	2.58E-03	4.03E-04	8.22E-04	5.30E-04	5.44E-04	5.70E-05	7.35E-05	1.53E-08	2.78E-04	5.29E-05
10	D71	70	Passenger Truck	562	0.00E+00	7.87E-06	8.37E-07	3.29E+01	5.04E-05	1.32E-01	1.65E-05	9.86E-04	4.68E-03	7.24E-04	1.58E-03	1.03E-03	1.05E-03	2.49E-04	1.64E-04	2.94E-08	5.27E-04	1.66E-04
10	D71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.63E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.05E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	D71	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.04E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
10	D71	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.10E-03
10	D72	70	Passenger Car	282	0.00E+00	3.14E-06	3.41E-07	1.23E+01	2.23E-05	6.30E-02	7.08E-06	2.85E-04	2.17E-03	3.38E-04	6.90E-04	4.45E-04	4.57E-04	4.78E-05	6.17E-05	1.28E-08	2.34E-04	4.44E-05
10	D72	70	Passenger Truck	471	0.00E+00	6.61E-06	7.02E-07	2.76E+01	4.23E-05	1.11E-01	1.39E-05	8.28E-04	3.93E-03	6.07E-04	1.32E-03	8.61E-04	8.82E-04	2.09E-04	1.38E-04	2.46E-08	4.43E-04	1.39E-04
10	D72	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.62E-06
10	D72	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.61E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.80E-04
10	D72	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.86E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.28E-04
10	D73	70	Passenger Car	229	0.00E+00	2.55E-06	2.77E-07	9.97E+00	1.81E-05	5.12E-02	5.75E-06	2.31E-04	1.76E-03	2.75E-04	5.61E-04	3.62E-04	3.71E-04	3.89E-05	5.02E-05	1.04E-08	1.90E-04	3.61E-05
10	D73	70	Passenger Truck	383	0.00E+00	5.37E-06	5.71E-07	2.24E+01	3.44E-05	9.04E-02	1.13E-05	6.73E-04	3.19E-03	4.94E-04	1.08E-03	7.00E-04	7.17E-04	1.70E-04	1.12E-04	2.00E-08	3.60E-04	1.13E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	D73	70	Combination Short Haul Truck	8	0.00E+00	2.02E-06	1.50E-07	2.73E+00	5.13E-09	2.92E-03	1.44E-06	3.01E-03	2.85E-04	4.75E-05	1.21E-04	4.38E-05	4.54E-05	4.34E-04	9.12E-06	0.00E+00	7.57E-05	5.67E-04
10	D73	70	Combination Long Haul Truck	7	0.00E+00	2.77E-06	1.57E-07	2.56E+00	1.74E-08	3.48E-03	2.28E-06	3.22E-03	2.96E-04	4.46E-05	2.52E-04	5.06E-05	5.27E-05	4.11E-04	8.58E-06	0.00E+00	1.99E-04	6.06E-04
10	D74	70	Passenger Car	233	0.00E+00	2.59E-06	2.82E-07	1.01E+01	1.84E-05	5.20E-02	5.85E-06	2.35E-04	1.79E-03	2.79E-04	5.70E-04	3.68E-04	3.77E-04	3.95E-05	5.10E-05	1.06E-08	1.93E-04	3.67E-05
10	D74	70	Passenger Truck	389	0.00E+00	5.46E-06	5.80E-07	2.28E+01	3.50E-05	9.19E-02	1.14E-05	6.84E-04	3.24E-03	5.02E-04	1.09E-03	7.11E-04	7.29E-04	1.73E-04	1.14E-04	2.04E-08	3.66E-04	1.15E-04
10	D74	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	D74	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.02E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
10	D74	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.59E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
11	D75	80	Passenger Car	95	0.00E+00	9.90E-07	1.08E-07	4.03E+00	7.03E-06	2.04E-02	2.23E-06	9.89E-05	5.20E-04	8.70E-05	2.18E-04	1.40E-04	1.44E-04	1.42E-05	2.03E-05	4.35E-09	7.37E-05	1.54E-05
11	D75	80	Passenger Truck	160	0.00E+00	2.04E-06	2.17E-07	9.11E+00	1.33E-05	3.60E-02	4.32E-06	2.67E-04	9.25E-04	1.54E-04	4.15E-04	2.69E-04	2.76E-04	6.56E-05	4.55E-05	8.27E-09	1.39E-04	4.44E-05
11	D75	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.36E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.15E-05
11	D75	80	Combination Short Haul Truck	3	0.00E+00	6.47E-07	4.79E-08	1.05E+00	1.69E-09	9.86E-04	4.62E-07	9.95E-04	7.49E-05	1.36E-05	3.92E-05	1.40E-05	1.45E-05	1.67E-04	3.52E-06	0.00E+00	2.47E-05	1.87E-04
11	D75	80	Combination Long Haul Truck	3	0.00E+00	9.01E-07	5.09E-08	9.77E-01	5.73E-09	1.17E-03	7.43E-07	1.06E-03	7.74E-05	1.24E-05	8.26E-05	1.64E-05	1.71E-05	1.57E-04	3.27E-06	0.00E+00	6.55E-05	2.00E-04
11	D76	80	Passenger Car	159	0.00E+00	1.65E-06	1.79E-07	6.72E+00	1.17E-05	3.39E-02	3.72E-06	1.65E-04	8.66E-04	1.45E-04	3.63E-04	2.34E-04	2.40E-04	2.36E-05	3.39E-05	7.24E-09	1.23E-04	2.57E-05
11	D76	80	Passenger Truck	266	0.00E+00	3.40E-06	3.62E-07	1.52E+01	2.21E-05	5.99E-02	7.20E-06	4.44E-04	1.54E-03	2.57E-04	6.91E-04	4.48E-04	4.60E-04	1.09E-04	7.58E-05	1.38E-08	2.31E-04	7.40E-05
11	D76	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.08E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.32E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.03E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.66E-06
11	D76	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.65E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.00E-04
11	D76	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.34E-04
11	D77	80	Passenger Car	105	0.00E+00	1.10E-06	1.19E-07	4.46E+00	7.77E-06	2.25E-02	2.47E-06	1.09E-04	5.75E-04	9.62E-05	2.41E-04	1.55E-04	1.59E-04	1.57E-05	2.25E-05	4.81E-09	8.15E-05	1.71E-05
11	D77	80	Passenger Truck	177	0.00E+00	2.25E-06	2.40E-07	1.01E+01	1.47E-05	3.98E-02	4.78E-06	2.95E-04	1.02E-03	1.70E-04	4.58E-04	2.97E-04	3.05E-04	7.25E-05	5.03E-05	9.15E-09	1.54E-04	4.91E-05
11	D77	80	Single Unit Short Haul Truck	23	0.00E+00	3.15E-06	1.23E-07	3.77E+00	2.14E-06	6.85E-03	3.47E-06	1.31E-03	2.58E-04	5.28E-05	4.34E-04	8.04E-05	8.20E-05	3.83E-04	1.53E-05	6.07E-09	3.52E-04	2.44E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	5.29E-09	1.59E-01	9.11E-08	2.85E-04	1.51E-07	5.59E-05	1.18E-05	2.34E-06	1.89E-05	3.45E-06	3.52E-06	1.61E-05	6.48E-07	2.53E-10	1.54E-05	1.04E-05
11	D77	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.25E-04
11	D77	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.54E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.68E-04
11	D78	80	Passenger Car	82	0.00E+00	8.54E-07	9.28E-08	3.48E+00	6.06E-06	1.76E-02	1.93E-06	8.53E-05	4.48E-04	7.51E-05	1.88E-04	1.21E-04	1.24E-04	1.22E-05	1.75E-05	3.75E-09	6.35E-05	1.33E-05
11	D78	80	Passenger Truck	138	0.00E+00	1.76E-06	1.88E-07	7.86E+00	1.14E-05	3.10E-02	3.73E-06	2.30E-04	7.98E-04	1.33E-04	3.58E-04	2.32E-04	2.38E-04	5.66E-05	3.93E-05	7.14E-09	1.20E-04	3.83E-05
11	D78	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.72E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.73E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.96E-06
11	D78	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.48E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.56E-04
11	D78	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.72E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.01E-04
11	D79	70	Passenger Car	288	0.00E+00	3.21E-06	3.48E-07	1.25E+01	2.28E-05	6.43E-02	7.23E-06	2.91E-04	2.21E-03	3.45E-04	7.05E-04	4.55E-04	4.67E-04	4.89E-05	6.30E-05	1.31E-08	2.39E-04	4.54E-05
11	D79	70	Passenger Truck	481	0.00E+00	6.75E-06	7.17E-07	2.82E+01	4.32E-05	1.14E-01	1.41E-05	8.45E-04	4.01E-03	6.20E-04	1.35E-03	8.79E-04	9.01E-04	2.13E-04	1.41E-04	2.52E-08	4.52E-04	1.42E-04
11	D79	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.37E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.75E-04
11	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.03E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.54E-06
11	D79	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.21E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.83E-04
11	D79	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.58E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.05E-03
10	D80	70	Passenger Car	491	0.00E+00	5.47E-06	5.94E-07	2.14E+01	3.88E-05	1.10E-01	1.23E-05	4.96E-04	3.78E-03	5.89E-04	1.20E-03	7.76E-04	7.96E-04	8.33E-05	1.08E-04	2.23E-08	4.07E-04	7.74E-05
10	D80	70	Passenger Truck	821	0.00E+00	1.15E-05	1.22E-06	4.81E+01	7.37E-05	1.94E-01	2.41E-05	1.44E-03	6.84E-03	1.06E-03	2.31E-03	1.50E-03	1.54E-03	3.64E-04	2.40E-04	4.29E-08	7.71E-04	2.42E-04
10	D80	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.00E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.62E-06
10	D80	70	Combination Short Haul Truck	18	0.00E+00	4.71E-06	3.51E-07	6.36E+00	1.20E-08	6.80E-03	3.36E-06	7.02E-03	6.64E-04	1.11E-04	2.83E-04	1.02E-04	1.06E-04	1.01E-03	2.13E-05	0.00E+00	1.77E-04	1.32E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	6.46E-06	3.67E-07	5.98E+00	4.05E-08	8.12E-03	5.31E-06	7.51E-03	6.91E-04	1.04E-04	5.87E-04	1.18E-04	1.23E-04	9.59E-04	2.00E-05	0.00E+00	4.64E-04	1.41E-03
10	D81	70	Passenger Car	280	0.00E+00	3.13E-06	3.40E-07	1.22E+01	2.22E-05	6.27E-02	7.05E-06	2.84E-04	2.16E-03	3.37E-04	6.88E-04	4.43E-04	4.55E-04	4.76E-05	6.15E-05	1.28E-08	2.33E-04	4.42E-05
10	D81	70	Passenger Truck	470	0.00E+00	6.58E-06	7.00E-07	2.75E+01	4.21E-05	1.11E-01	1.38E-05	8.24E-04	3.91E-03	6.05E-04	1.32E-03	8.57E-04	8.79E-04	2.08E-04	1.37E-04	2.45E-08	4.41E-04	1.38E-04
10	D81	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	D81	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.01E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.56E-05
10	D81	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.29E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.09E-05
10	D82	70	Passenger Car	283	0.00E+00	3.16E-06	3.43E-07	1.23E+01	2.24E-05	6.33E-02	7.12E-06	2.86E-04	2.18E-03	3.40E-04	6.94E-04	4.48E-04	4.59E-04	4.81E-05	6.20E-05	1.29E-08	2.35E-04	4.47E-05
10	D82	70	Passenger Truck	474	0.00E+00	6.64E-06	7.06E-07	2.78E+01	4.25E-05	1.12E-01	1.39E-05	8.32E-04	3.95E-03	6.11E-04	1.33E-03	8.65E-04	8.87E-04	2.10E-04	1.38E-04	2.48E-08	4.45E-04	1.40E-04
11	D83	80	Passenger Car	1074	0.00E+00	1.12E-05	1.21E-06	4.54E+01	7.91E-05	2.29E-01	2.51E-05	1.11E-03	5.85E-03	9.80E-04	2.45E-03	1.58E-03	1.62E-03	1.60E-04	2.29E-04	4.90E-08	8.30E-04	1.74E-04
11	D83	80	Passenger Truck	1798	0.00E+00	2.30E-05	2.45E-06	1.03E+02	1.49E-04	4.05E-01	4.87E-05	3.00E-03	1.04E-02	1.74E-03	4.67E-03	3.03E-03	3.11E-03	7.38E-04	5.12E-04	9.32E-08	1.56E-03	5.00E-04
11	D83	80	Single Unit Short Haul Truck	75	0.00E+00	1.03E-05	4.00E-07	1.22E+01	6.95E-06	2.22E-02	1.13E-05	4.25E-03	8.39E-04	1.72E-04	1.41E-03	2.61E-04	2.66E-04	1.25E-03	4.98E-05	1.97E-08	1.15E-03	7.94E-04
11	D83	80	Single Unit Long Haul Truck	3	0.00E+00	4.45E-07	1.72E-08	5.17E-01	2.96E-07	9.26E-04	4.89E-07	1.82E-04	3.85E-05	7.62E-06	6.16E-05	1.12E-05	1.14E-05	5.23E-05	2.11E-06	8.22E-10	5.01E-05	3.39E-05
11	D83	80	Combination Short Haul Truck	84	0.00E+00	1.72E-05	1.28E-06	2.81E+01	4.52E-08	2.63E-02	1.23E-05	2.65E-02	2.00E-03	3.62E-04	1.05E-03	3.73E-04	3.87E-04	4.46E-03	9.38E-05	0.00E+00	6.59E-04	5.00E-03
11	D83	80	Combination Long Haul Truck	76	0.00E+00	2.40E-05	1.36E-06	2.60E+01	1.53E-07	3.11E-02	1.98E-05	2.84E-02	2.06E-03	3.30E-04	2.20E-03	4.37E-04	4.55E-04	4.18E-03	8.73E-05	0.00E+00	1.75E-03	5.34E-03
11	D84	80	Passenger Car	553	0.00E+00	5.74E-06	6.24E-07	2.34E+01	4.07E-05	1.18E-01	1.29E-05	5.73E-04	3.01E-03	5.04E-04	1.26E-03	8.14E-04	8.35E-04	8.22E-05	1.18E-04	2.52E-08	4.27E-04	8.94E-05
11	D84	80	Passenger Truck	925	0.00E+00	1.18E-05	1.26E-06	5.28E+01	7.69E-05	2.08E-01	2.50E-05	1.55E-03	5.36E-03	8.93E-04	2.40E-03	1.56E-03	1.60E-03	3.80E-04	2.64E-04	4.80E-08	8.05E-04	2.57E-04
11	D84	80	Single Unit Short Haul Truck	68	0.00E+00	9.33E-06	3.64E-07	1.11E+01	6.33E-06	2.03E-02	1.03E-05	3.87E-03	7.64E-04	1.56E-04	1.29E-03	2.38E-04	2.43E-04	1.13E-03	4.53E-05	1.80E-08	1.04E-03	7.23E-04
11	D84	80	Single Unit Long Haul Truck	3	0.00E+00	4.05E-07	1.56E-08	4.71E-01	2.70E-07	8.43E-04	4.45E-07	1.65E-04	3.50E-05	6.93E-06	5.60E-05	1.02E-05	1.04E-05	4.76E-05	1.92E-06	7.48E-10	4.56E-05	3.09E-05
11	D84	80	Combination Short Haul Truck	71	0.

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D88	80	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.30E-08	3.91E-01	2.24E-07	7.01E-04	3.70E-07	1.37E-04	2.91E-05	5.76E-06	4.66E-05	8.49E-06	8.66E-06	3.96E-05	1.59E-06	6.22E-10	3.79E-05	2.57E-05
11	D88	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.91E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.59E-03
11	D88	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.04E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.84E-03
9	D89	60	Passenger Car	94	0.00E+00	1.20E-06	1.30E-07	4.28E+00	8.52E-06	2.39E-02	2.71E-06	9.66E-05	9.48E-04	1.42E-04	2.64E-04	1.70E-04	1.75E-04	1.86E-05	2.15E-05	4.51E-09	8.93E-05	1.51E-05
9	D89	60	Passenger Truck	157	0.00E+00	2.55E-06	2.70E-07	9.53E+00	1.61E-05	4.10E-02	5.28E-06	3.00E-04	1.73E-03	2.58E-04	5.04E-04	3.28E-04	3.36E-04	7.61E-05	4.74E-05	8.78E-09	1.68E-04	5.09E-05
9	D89	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.91E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.19E-05
9	D89	60	Combination Short Haul Truck	5	0.00E+00	1.53E-06	1.12E-07	1.84E+00	4.18E-09	2.28E-03	1.10E-06	2.32E-03	2.66E-04	4.17E-05	9.41E-05	3.28E-05	3.41E-05	2.93E-04	6.16E-06	0.00E+00	6.00E-05	4.38E-04
9	D89	60	Combination Long Haul Truck	5	0.00E+00	2.10E-06	1.15E-07	1.74E+00	1.42E-08	2.74E-03	1.75E-06	2.47E-03	2.79E-04	4.04E-05	1.99E-04	3.74E-05	3.90E-05	2.79E-04	5.83E-06	0.00E+00	1.60E-04	4.66E-04
9	D90	60	Passenger Car	36	0.00E+00	4.64E-07	5.04E-08	1.65E+00	3.29E-06	9.25E-03	1.05E-06	3.73E-05	3.66E-04	5.49E-05	1.02E-04	6.58E-05	6.75E-05	7.19E-06	8.29E-06	1.74E-09	3.45E-05	5.82E-06
9	D90	60	Passenger Truck	61	0.00E+00	9.85E-07	1.04E-07	3.68E+00	6.21E-06	1.58E-02	2.04E-06	1.16E-04	6.69E-04	9.96E-05	1.95E-04	1.27E-04	1.30E-04	2.94E-05	1.83E-05	3.39E-09	6.49E-05	1.97E-05
9	D90	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.22E-04
9	D90	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.44E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.39E-05
9	D90	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.25E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.13E-04
9	D90	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.46E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.52E-04
10	D91	70	Passenger Car	224	0.00E+00	2.49E-06	2.71E-07	9.74E+00	1.77E-05	5.00E-02	5.62E-06	2.26E-04	1.72E-03	2.68E-04	5.48E-04	3.54E-04	3.63E-04	3.80E-05	4.90E-05	1.02E-08	1.85E-04	3.53E-05
10	D91	70	Passenger Truck	374	0.00E+00	5.25E-06	5.58E-07	2.19E+01	3.36E-05	8.83E-02	1.10E-05	6.57E-04	3.12E-03	4.82E-04	1.05E-03	6.84E-04	7.01E-04	1.66E-04	1.09E-04	1.96E-08	3.52E-04	1.10E-04
10	D91	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.69E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	D91	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.21E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.05E-04
10	D91	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.43E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.47E-04
10	D92	70	Passenger Car	274	0.00E+00	3.05E-06	3.32E-07	1.19E+01	2.17E-05	6.12E-02	6.88E-06	2.77E-04	2.11E-03	3.28E-04	6.71E-04	4.33E-04	4.44E-04	4.65E-05	6.00E-05	1.25E-08	2.27E-04	4.32E-05
10	D92	70	Passenger Truck	458	0.00E+00	6.42E-06	6.83E-07	2.68E+01	4.11E-05	1.08E-01	1.35E-05	8.05E-04	3.82E-03	5.91E-04	1.29E-03	8.37E-04	8.58E-04	2.03E-04	1.34E-04	2.40E-08	4.30E-04	1.35E-04
10	D92	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.01E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.51E-05
10	D92	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.02E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
10	D92	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.59E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	D93	70	Passenger Car	230	0.00E+00	2.56E-06	2.78E-07	1.00E+01	1.82E-05	5.13E-02	5.77E-06	2.32E-04	1.77E-03	2.76E-04	5.63E-04	3.63E-04	3.73E-04	3.90E-05	5.03E-05	1.05E-08	1.90E-04	3.62E-05
10	D93	70	Passenger Truck	384	0.00E+00	5.39E-06	5.73E-07	2.25E+01	3.45E-05	9.07E-02	1.13E-05	6.75E-04	3.20E-03	4.95E-04	1.08E-03	7.02E-04	7.19E-04	1.70E-04	1.12E-04	2.01E-08	3.61E-04	1.13E-04
10	D93	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.35E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	D93	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.91E-04
10	D93	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.79E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.26E-04
10	D94	70	Passenger Car	278	0.00E+00	3.10E-06	3.37E-07	1.21E+01	2.20E-05	6.21E-02	6.99E-06	2.81E-04	2.14E-03	3.33E-04	6.81E-04	4.39E-04	4.51E-04	4.72E-05	6.09E-05	1.26E-08	2.30E-04	4.38E-05
10	D94	70	Passenger Truck	465	0.00E+00	6.52E-06	6.93E-07	2.72E+01	4.18E-05	1.10E-01	1.37E-05	8.17E-04	3.87E-03	5.99E-04	1.31E-03	8.49E-04	8.70E-04	2.06E-04	1.36E-04	2.43E-08	4.37E-04	1.37E-04
10	D94	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.26E-05
10	D94	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.02E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.13E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.44E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.21E-04
9	E01	60	Passenger Car	236	0.00E+00	3.01E-06	3.27E-07	1.07E+01	2.14E-05	6.01E-02	6.79E-06	2.43E-04	2.38E-03	3.56E-04	6.62E-04	4.27E-04	4.38E-04	4.67E-05	5.38E-05	1.13E-08	2.24E-04	3.78E-05
9	E01	60	Passenger Truck	394	0.00E+00	6.39E-06	6.78E-07	2.39E+01	4.03E-05	1.03E-01	1.33E-05	7.54E-04	4.35E-03	6.47E-04	1.26E-03	8.23E-04	8.43E-04	1.91E-04	1.19E-04	2.20E-08	4.21E-04	1.28E-04
9	E01	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.30E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.32E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.95E-06
9	E01	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.88E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.19E-04
9	E01	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.19E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.78E-04
9	E02	60	Passenger Car	329	0.00E+00	4.20E-06	4.57E-07	1.50E+01	2.98E-05	8.38E-02	9.48E-06	3.38E-04	3.32E-03	4.97E-04	9.24E-04	5.96E-04	6.12E-04	6.51E-05	7.51E-05	1.58E-08	3.13E-04	5.28E-05
9	E02	60	Passenger Truck	550	0.00E+00	8.92E-06	9.46E-07	3.34E+01	5.63E-05	1.43E-01	1.85E-05	1.05E-03	6.06E-03	9.03E-04	1.76E-03	1.15E-03	1.18E-03	2.67E-04	1.66E-04	3.08E-08	5.88E-04	1.78E-04
9	E02	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.06E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
9	E02	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.63E-06
9	E02	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.88E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.19E-04
9	E02	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.19E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.78E-04
11	E03	80	Passenger Car	165	0.00E+00	1.71E-06	1.86E-07	6.96E+00	1.21E-05	3.51E-02	3.85E-06	1.71E-04	8.97E-04	1.50E-04	3.76E-04	2.42E-04	2.49E-04	2.45E-05	3.51E-05	7.50E-09	1.27E-04	2.66E-05
11	E03	80	Passenger Truck	275	0.00E+00	3.52E-06	3.75E-07	1.57E+01	2.29E-05	6.20E-02	7.45E-06	4.60E-04	1.60E-03	2.66E-04	7.15E-04	4.64E-04	4.76E-04	1.13E-04	7.85E-05	1.43E-08	2.40E-04	7.66E-05
11	E03	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.12E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.57E-06
11	E03	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.31E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.12E-04
11	E03	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.61E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.68E-04
11	E04	80	Passenger Car	295	0.00E+00	3.06E-06	3.33E-07	1.25E+01	2.17E-05	6.29E-02	6.90E-06	3.05E-04	1.61E-03	2.69E-04	6.73E-04	4.34E-04	4.45E-04	4.38E-05	6.29E-05	1.34E-08	2.28E-04	4.77E-05
11	E04	80	Passenger Truck	493	0.00E+00	6.30E-06	6.72E-07	2.81E+01	4.10E-05	1.11E-01	1.34E-05	8.24E-04	2.86E-03	4.76E-04	1.28E-03	8.31E-04	8.52E-04	2.03E-04	1.41E-04	2.56E-08	4.29E-04	1.37E-04
11	E04	80	Single Unit Short Haul Truck	24	0.00E+00	3.29E-06	1.28E-07	3.93E+00	2.23E-06	7.13E-03	3.61E-06	1.36E-03	2.69E-04	5.50E-05	4.52E-04	8.38E-05	8.54E-05	3.99E-04	1.59E-05	6.32E-09	3.67E-04	2.55E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.51E-09	1.66E-01	9.49E-08	2.97E-04	1.57E-07	5.82E-05	1.23E-05	2.44E-06	1.97E-05	3.60E-06	3.67E-06	1.68E-05	6.75E-07	2.63E-10	1.61E-05	1.09E-05
11	E04	80	Combination Short Haul Truck	14	0.00E+00	2.91E-06	2.15E-07	4.74E+00	7.62E-09	4.44E-03	2.08E-06	4.48E-03	3.37E-04	6.11E-05	1.76E-04	6.29E-05	6.53E-05	7.53E-04	1.58E-05	0.00E+00	1.11E-04	8.44E-04
11	E04	80	Combination Long Haul Truck	13	0.00E+00	4.05E-06	2.29E-07	4.39E+00	2.58E-08	5.25E-03	3.34E-06	4.78E-03	3.48E-04	5.57E-05	3.72E-04	7.38E-05	7.68E-05	7.05E-04	1.47E-05	0.00E+00	2.95E-04	9.01E-04
11	E05	80	Passenger Car	240	0.00E+00	2.50E-06	2.71E-07	1.02E+01	1.77E-05	5.13E-02	5.63E-06	2.49E-04	1.31E-03	2.19E-04	5.49E-04	3.54E-04	3.63E-04	3.57E-05	5.13E-05	1.10E-08	1.86E-04	3.89E-05
11	E05	80	Passenger Truck	403	0.00E+00	5.14E-06	5.48E-07	2.30E+01	3.34E-05	9.07E-02	1.09E-05	6.72E-04	2.33E-03	3.88E-04	1.05E-03	6.78E-04	6.95E-04	1.65E-04	1.15E-04	2.09E-08	3.50E-04	1.12E-04
11	E05	80	Single Unit Short Haul Truck	17	0.00E+00	2.37E-06	9.24E-08	2.83E+00	1.60E-06	5.13E-03	2.60E-06	9.81E-04	1.94E-04	3.96E-05	3.26E-04	6.03E-05	6.15E-05	2.88E-04	1.15E-05	4.55E-09	2.64E-04	1.83E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	3.97E-09	1.19E-01	6.83E-08	2.14E-04	1.13E-07	4.19E-05	8.88E-06	1.76E-06	1.42E-05	2.59E-06	2.64E-06	1.21E-05	4.86E-07	1.90E-10	1.16E-05	7.83E-06
11	E05	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.48E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.56E-04
11	E05	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.72E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.01E-04
11	E06	80	Passenger Car	120	0.00E+00	1.25E-06	1.36E-07	5.09E+00	8.87E-06	2.57E-02	2.82E-06	1.25E-04	6.56E-04	1.10E-04	2.75E-04	1.77E-04	1.82E-04	1.79E-05	2.57E-05	5.49E-09	9.30E-05	1.95E-05
11	E06	80	Passenger Truck	202	0.00E+00	2.57E-06	2.74E-07	1.15E+01	1.67E-05	4.54E-02	5.46E-06	3.37E-04	1.17E-03	1.95E-04	5.23E-04	3.40E-04	3.48E-04	8.28E-05	5.75E-05	1.04E-08	1.75E-04	5.60E-05
11	E06	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.04E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.94E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.42E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.27E-06
11	E06	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.15E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.94E-04
11	E06	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.37E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.34E-04
9	E07	60	Passenger Car	1021	0.00E+00	1.31E-05	1.42E-06	4.65E+01	9.26E-05	2.60E-01	2.94E-05	1.05E-03	1.03E-02	1.54E-03	2.87E-03	1.85E-03	1.90E-03	2.02E-04	2.33E-04	4.90E-08	9.71E-04	1.64E-04
9	E07	60	Passenger Truck	1709	0.00E+00	2.77E-05	2.94E-06	1.04E+02	1.75E-04	4.46E-01	5.75E-05	3.27E-03	1.88E-02	2.80E-03	5.48E-03	3.57E-03	3.65E-03	8.28E-04	5.15E-04	9.55E-08	1.83E-03	5.54E-04
9	E07	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.54E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.75E-04
9	E07	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E07	60	Combination Short Haul Truck	31	0.00E+00	9.01E-06	6.62E-07	1.09E+01	2.47E-08	1.35E-02	6.47E-06	1.37E-02	1.57E-03	2.46E-04	5.55E-04	1.94E-04	2.01E-04	1.73E-03	3.63E-05	0.00E+00	3.54E-04	2.58E-03
9	E07	60	Combination Long Haul Truck	28	0.00E+00	1.24E-05	6.76E-07	1.03E+01	8.35E-08	1.62E-02	1.03E-05	1.46E-02	1.65E-03	2.38E-04	1.17E-03	2.21E-04	2.30E-04	1.65E-03	3.44E-05	0.00E+00	9.44E-04	2.75E-03
9	E08	60	Passenger Car	1167	0.00E+00	1.49E-05	1.62E-06	5.31E+01	1.06E-04	2.98E-01	3.36E-05	1.20E-03	1.18E-02	1.76E-03	3.28E-03	2.12E-03	2.17E-03	2.31E-04	2.67E-04	5.60E-08	1.11E-03	1.87E-04
9	E08	60	Passenger Truck	1953	0.00E+00	3.17E-05	3.36E-06	1.18E+02	2.00E-04	5.09E-01	6.57E-05	3.73E-03	2.15E-02	3.20E-03	6.26E-03	4.07E-03	4.18E-03	9.46E-04	5.89E-04	1.09E-07	2.09E-03	6.33E-04
9	E08	60	Single Unit Short Haul Truck	34	0.00E+00	7.70E-06	3.18E-07	5.74E+00	5.10E-06	1.01E-02	8.33E-06	2.95E-03	7.93E-04	1.33E-04	1.03E-03	1.98E-04	2.02E-04	5.81E-04	2.34E-05	9.63E-09	8.25E-04	5.52E-04
9	E08	60	Single Unit Long Haul Truck	2	0.00E+00	3.36E-07	1.38E-08	2.45E-01	2.21E-07	4.28E-04	3.63E-07	1.28E-04	3.56E-05	5.91E-06	4.49E-05	8.60E-06	8.77E-06	2.47E-05	9.98E-07	4.10E-10	3.61E-05	2.39E-05
9	E08	60	Combination Short Haul Truck	43	0.00E+00	1.25E-05	9.19E-07	1.51E+01	3.43E-08	1.87E-02	8.99E-06	1.90E-02	2.18E-03	3.42E-04	7.71E-04	2.69E-04	2.79E-04	2.40E-03	5.05E-05	0.00E+00	4.92E-04	3.59E-03
9	E08	60	Combination Long Haul Truck	39	0.00E+00	1.72E-05	9.40E-07	1.43E+01	1.16E-07	2.25E-02	1.44E-05	2.03E-02	2.29E-03	3.31E-04	1.63E-03	3.07E-04	3.20E-04	2.29E-03	4.78E-05	0.00E+00	1.31E-03	3.82E-03
9	E09	60	Passenger Car

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E12	60	Combination Long Haul Truck	72	0.00E+00	3.19E-05	1.74E-06	2.64E+01	2.15E-07	4.16E-02	2.67E-05	3.76E-02	4.25E-03	6.14E-04	3.02E-03	5.69E-04	5.93E-04	4.24E-03	8.86E-05	0.00E+00	2.43E-03	7.08E-03
11	E13	80	Passenger Car	403	0.00E+00	4.18E-06	4.54E-07	1.70E+01	2.97E-05	8.60E-02	9.43E-06	4.18E-04	2.19E-03	3.68E-04	9.20E-04	5.93E-04	6.09E-04	5.99E-05	8.59E-05	1.84E-08	3.11E-04	6.51E-05
11	E13	80	Passenger Truck	674	0.00E+00	8.61E-06	9.18E-07	3.85E+01	5.60E-05	1.52E-01	1.82E-05	1.13E-03	3.91E-03	6.51E-04	1.75E-03	1.14E-03	1.16E-03	2.77E-04	1.92E-04	3.49E-08	5.86E-04	1.87E-04
11	E13	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.36E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.68E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	E13	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.14E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E13	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.56E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.23E-03
11	E14	80	Passenger Car	277	0.00E+00	2.88E-06	3.13E-07	1.17E+01	2.04E-05	5.92E-02	6.50E-06	2.88E-04	1.51E-03	2.53E-04	6.34E-04	4.09E-04	4.19E-04	4.12E-05	5.92E-05	1.26E-08	2.14E-04	4.49E-05
11	E14	80	Passenger Truck	465	0.00E+00	5.93E-06	6.32E-07	2.65E+01	3.86E-05	1.05E-01	1.26E-05	7.76E-04	2.69E-03	4.48E-04	1.21E-03	7.83E-04	8.02E-04	1.91E-04	1.32E-04	2.41E-08	4.04E-04	1.29E-04
11	E14	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.04E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.94E-04
11	E14	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.42E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.27E-06
11	E14	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.31E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E14	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.67E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E15	80	Passenger Car	298	0.00E+00	3.10E-06	3.37E-07	1.26E+01	2.20E-05	6.37E-02	6.99E-06	3.09E-04	1.63E-03	2.72E-04	6.81E-04	4.39E-04	4.51E-04	4.44E-05	6.37E-05	1.36E-08	2.31E-04	4.83E-05
11	E15	80	Passenger Truck	500	0.00E+00	6.38E-06	6.80E-07	2.85E+01	4.15E-05	1.13E-01	1.35E-05	8.34E-04	2.90E-03	4.82E-04	1.30E-03	8.42E-04	8.63E-04	2.05E-04	1.42E-04	2.59E-08	4.35E-04	1.39E-04
11	E15	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.81E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.13E-05
11	E15	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.81E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.19E-04
11	E15	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.08E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.68E-04
11	E16	80	Passenger Car	302	0.00E+00	3.14E-06	3.41E-07	1.28E+01	2.23E-05	6.45E-02	7.07E-06	3.13E-04	1.65E-03	2.76E-04	6.90E-04	4.45E-04	4.57E-04	4.49E-05	6.45E-05	1.38E-08	2.33E-04	4.89E-05
11	E16	80	Passenger Truck	506	0.00E+00	6.46E-06	6.89E-07	2.89E+01	4.20E-05	1.14E-01	1.37E-05	8.45E-04	2.93E-03	4.88E-04	1.31E-03	8.52E-04	8.74E-04	2.08E-04	1.44E-04	2.62E-08	4.40E-04	1.41E-04
11	E16	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.45E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E16	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.31E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.12E-04
11	E16	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.61E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.68E-04
11	E17	80	Passenger Car	241	0.00E+00	2.50E-06	2.72E-07	1.02E+01	1.78E-05	5.15E-02	5.65E-06	2.50E-04	1.31E-03	2.20E-04	5.51E-04	3.55E-04	3.64E-04	3.59E-05	5.15E-05	1.10E-08	1.86E-04	3.90E-05
11	E17	80	Passenger Truck	404	0.00E+00	5.16E-06	5.50E-07	2.30E+01	3.35E-05	9.09E-02	1.09E-05	6.74E-04	2.34E-03	3.90E-04	1.05E-03	6.80E-04	6.97E-04	1.66E-04	1.15E-04	2.09E-08	3.51E-04	1.12E-04
11	E17	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.54E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.79E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.22E-06
11	E17	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.82E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.31E-04
11	E17	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.01E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.67E-04
11	E18	80	Passenger Car	178	0.00E+00	1.84E-06	2.00E-07	7.51E+00	1.31E-05	3.79E-02	4.16E-06	1.84E-04	9.68E-04	1.62E-04	4.06E-04	2.62E-04	2.68E-04	2.64E-05	3.79E-05	8.10E-09	1.37E-04	2.87E-05
11	E18	80	Passenger Truck	297	0.00E+00	3.80E-06	4.05E-07	1.70E+01	2.47E-05	6.70E-02	8.05E-06	4.97E-04	1.72E-03	2.87E-04	7.72E-04	5.01E-04	5.14E-04	1.22E-04	8.48E-05	1.54E-08	2.59E-04	8.27E-05
11	E18	80	Single Unit Short Haul Truck	16	0.00E+00	2.23E-06	8.72E-08	2.67E+00	1.51E-06	4.85E-03	2.46E-06	9.26E-04	1.83E-04	3.74E-05	3.08E-04	5.70E-05	5.81E-05	2.72E-04	1.08E-05	4.30E-09	2.50E-04	1.73E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	9.71E-08	3.75E-09	1.13E-01	6.45E-08	2.02E-04	1.07E-07	3.96E-05	8.39E-06	1.66E-06	1.34E-05	2.45E-06	2.49E-06	1.14E-05	4.59E-07	1.79E-10	1.09E-05	7.40E-06
11	E18	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.15E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.94E-04
11	E18	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.37E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.34E-04
9	E19	60	Passenger Car	575	0.00E+00	7.36E-06	8.00E-07	2.62E+01	5.22E-05	1.47E-01	1.66E-05	5.92E-04	5.81E-03	8.70E-04	1.62E-03	1.04E-03	1.07E-03	1.14E-04	1.32E-04	2.76E-08	5.47E-04	9.24E-05
9	E19	60	Passenger Truck	964	0.00E+00	1.56E-05	1.66E-06	5.84E+01	9.85E-05	2.51E-01	3.24E-05	1.84E-03	1.06E-02	1.58E-03	3.09E-03	2.01E-03	2.06E-03	4.67E-04	2.90E-04	5.39E-08	1.03E-03	3.12E-04
9	E19	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.54E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.75E-04
9	E19	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E19	60	Combination Short Haul Truck	16	0.00E+00	4.58E-06	3.36E-07	5.53E+00	1.25E-08	6.84E-03	3.29E-06	6.97E-03	7.99E-04	1.25E-04	2.82E-04	9.84E-05	1.02E-04	8.78E-04	1.85E-05	0.00E+00	1.80E-04	1.31E-03
9	E19	60	Combination Long Haul Truck	14	0.00E+00	6.29E-06	3.44E-07	5.22E+00	4.25E-08	8.22E-03	5.26E-06	7.42E-03	8.38E-04	1.21E-04	5.97E-04	1.12E-04	1.17E-04	8.38E-04	1.75E-05	0.00E+00	4.80E-04	1.40E-03
9	E20	60	Passenger Car	615	0.00E+00	7.87E-06	8.55E-07	2.80E+01	5.58E-05	1.57E-01	1.77E-05	6.34E-04	6.21E-03	9.31E-04	1.73E-03	1.12E-03	1.15E-03	1.22E-04	1.41E-04	2.95E-08	5.85E-04	9.88E-05
9	E20	60	Passenger Truck	1031	0.00E+00	1.67E-05	1.77E-06	6.25E+01	1.05E-04	2.69E-01	3.47E-05	1.97E-03	1.14E-02	1.69E-03	3.30E-03	2.15E-03	2.20E-03	4.99E-04	3.11E-04	5.76E-08	1.10E-03	3.34E-04
9	E20	60	Single Unit Short Haul Truck	22	0.00E+00	4.92E-06	2.03E-07	3.66E+00	3.26E-06	6.45E-03	5.32E-06	1.88E-03	5.07E-04	8.52E-05	6.56E-04	1.26E-04	1.29E-04	3.71E-04	1.49E-05	6.15E-09	5.27E-04	3.52E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	8.82E-09	1.56E-01	1.41E-07	2.74E-04	2.32E-07	8.15E-05	2.28E-05	3.78E-06	2.87E-05	5.49E-06	5.60E-06	1.58E-05	6.37E-07	2.62E-10	2.31E-05	1.53E-05
9	E20	60	Combination Short Haul Truck	16	0.00E+00	4.58E-06	3.36E-07	5.53E+00	1.25E-08	6.84E-03	3.29E-06	6.97E-03	7.99E-04	1.25E-04	2.82E-04	9.84E-05	1.02E-04	8.78E-04	1.85E-05	0.00E+00	1.80E-04	1.31E-03
9	E20	60	Combination Long Haul Truck	14	0.00E+00	6.29E-06	3.44E-07	5.22E+00	4.25E-08	8.22E-03	5.26E-06	7.42E-03	8.38E-04	1.21E-04	5.97E-04	1.12E-04	1.17E-04	8.38E-04	1.75E-05	0.00E+00	4.80E-04	1.40E-03
11	E21	80	Passenger Car	228	0.00E+00	2.37E-06	2.58E-07	9.66E+00	1.68E-05	4.88E-02	5.35E-06	2.37E-04	1.25E-03	2.08E-04	5.22E-04	3.36E-04	3.45E-04	3.40E-05	4.87E-05	1.04E-08	1.76E-04	3.70E-05
11	E21	80	Passenger Truck	383	0.00E+00	4.89E-06	5.21E-07	2.18E+01	3.18E-05	8.61E-02	1.04E-05	6.39E-04	2.22E-03	3.69E-04	9.93E-04	6.44E-04	6.61E-04	1.57E-04	1.09E-04	1.98E-08	3.33E-04	1.06E-04
11	E21	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.45E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E21	80	Single Unit Long Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.82E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.31E-04
11	E21	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.01E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.67E-04
11	E22	80	Passenger Car	12	0.00E+00	1.28E-07	1.39E-08	5.22E-01	9.09E-07	2.63E-03	2.89E-07	1.28E-05	6.73E-05	1.13E-05	2.82E-05	1.82E-05	1.86E-05	1.83E-06	2.63E-06	5.62E-10	9.53E-06	2.00E-06
11	E22	80	Passenger Truck	21	0.00E+00	2.64E-07	2.81E-08	1.18E+00	1.72E-06	4.65E-03	5.59E-07	3.45E-05	1.20E-04	1.99E-05	5.37E-05	3.48E-05	3.57E-05	8.48E-06	5.89E-06	1.07E-09	1.80E-05	5.74E-06
11	E22	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.07E-05
11	E22	80	Single Unit Long Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.12E-04
11	E22	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.77E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.34E-04
11	E23	80	Passenger Car	228	0.00E+00	2.37E-06	2.58E-07	9.66E+00	1.68E-05	4.88E-02	5.35E-06	2.37E-04	1.25E-03	2.08E-04	5.22E-04	3.36E-04	3.45E-04	3.40E-05	4.87E-05	1.04E-08	1.76E-04	3.70E-05
11	E23	80	Passenger Truck	383	0.00E+00	4.89E-06	5.21E-07	2.18E+01	3.18E-05	8.61E-02	1.04E-05	6.39E-04	2.22E-03	3.69E-04	9.93E-04	6.44E-04	6.61E-04	1.57E-04	1.09E-04	1.98E-08	3.33E-04	1.06E-04
11	E23	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.45E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E23	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.82E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.31E-04
11	E23	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.01E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.67E-04
11	E24	80	Passenger Car	12	0.00E+00	1.28E-07	1.39E-08	5.22E-01	9.09E-07	2.63E-03	2.89E-07	1.28E-05	6.73E-05	1.13E-05	2.82E-05	1.82E-05	1.86E-05	1.83E-06	2.63E-06	5.62E-10	9.53E-06	2.00E-06
11	E24	80	Passenger Truck	21	0.00E+00	2.64E-07	2.81E-08	1.18E+00	1.72E-06	4.65E-03	5.59E-07	3.45E-05	1.20E-04	1.99E-05	5.37E-05	3.48E-05	3.57E-05	8.48E-06	5.89E-06	1.07E-09	1.80E-05	5.74E-06
11	E24	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.07E-05
11	E24	80	Single Unit Long Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.12E-04
11	E24	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.77E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.34E-04
10	E25	70	Passenger Truck	292	0.00E+00	3.26E-06	3.54E-07	1.27E+01	2.31E-05	6.53E-02	7.34E-06	2.95E-04	2.25E-03	3.50E-04	7.16E-04	4.62E-04	4.74E-04	4.96E-05	6.40E-05	1.33E-08	2.42E-04	4.61E-05
10	E25	70	Passenger Truck	489	0.00E+00	6.85E-06	7.29E-07	2.86E+01	4.39E-05	1.15E-01	1.44E-05	8.58E-04	4.07E-03	6.30E-04	1.37E-03	8.93E-04	9.15E-04	2.17E-04	1.43E-04	2.56E-08	4.59E-04	1.44E-04
10	E25	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	E25	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.20E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E25	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E26	70	Passenger Car	309	0.00E+00	3.44E-06	3.74E-07	1.35E+01	2.44E-05	6.91E-02	7.77E-06	3.12E-04	2.38E-03	3.71E-04	7.57E-04	4.88E-04	5.01E-04	5.25E-05	6.77E-05	1.41E-08	2.56E-04	4.87E-05
10	E26	70	Passenger Truck	517	0.00E+00	7.25E-06	7.71E-07	3.03E+01	4.64E-05	1.22E-01	1.52E-05	9.08E-04	4.31E-03	6.66E-04	1.45E-03	9.44E-04	9.68E-04	2.29E-04	1.51E-04	2.70E-08	4.86E-04	1.52E-04
10	E26	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	E26	70	Single Unit Long Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.20E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E26	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E27	70	Passenger Car	403	0.00E+00	4.49E-06	4.88E-07	1.76E+01	3.19E-05	9.01E-02	1.01E-05	4.08E-04	3.10E-03	4.84E-04	9.88E-04	6.37E-04	6.54E-04	6.85E-05	8.83E-05	1.84E-08	3.34E-04	6.36E-05
10	E27	70	Passenger Truck	675	0.00E+00	9.46E-06	1.01E-06	3.95E+01	6.06E-05	1.59E-01	1.98E-05	1.18E-03	5.62E-03	8.70E-04	1.90E-03	1.23E-03	1.26E-03	2.99E-04	1.97E-04	3.53E-08	6.34E-04	1.99E-04
10	E27	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.26E-05
10	E27	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.81E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.29E-04
10	E27	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.00E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.66E-04
10	E28	70	Passenger Car	261	0.00E+

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E32	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.78E-04
10	E32	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.04E-04
9	E33	60	Passenger Car	1041	0.00E+00	1.33E-05	1.45E-06	4.74E+01	9.44E-05	2.65E-01	3.00E-05	1.07E-03	1.05E-02	1.57E-03	2.93E-03	1.89E-03	1.94E-03	2.06E-04	2.38E-04	5.00E-08	9.90E-04	1.67E-04
9	E33	60	Passenger Truck	1742	0.00E+00	2.82E-05	2.99E-06	1.06E+02	1.78E-04	4.54E-01	5.86E-05	3.33E-03	1.92E-02	2.86E-03	5.59E-03	3.63E-03	3.72E-03	8.44E-04	5.25E-04	9.74E-08	1.86E-03	5.64E-04
9	E33	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.91E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.73E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	E33	60	Combination Short Haul Truck	20	0.00E+00	5.95E-06	4.37E-07	7.18E+00	1.63E-08	8.90E-03	4.28E-06	9.06E-03	1.04E-03	1.62E-04	3.67E-04	1.28E-04	1.33E-04	1.14E-03	2.40E-05	0.00E+00	2.34E-04	1.71E-03
9	E33	60	Combination Long Haul Truck	19	0.00E+00	8.18E-06	4.47E-07	6.79E+00	5.52E-08	1.07E-02	6.84E-06	9.65E-03	1.09E-03	1.58E-04	7.76E-04	1.46E-04	1.52E-04	1.09E-03	2.27E-05	0.00E+00	6.24E-04	1.82E-03
9	E34	60	Passenger Car	420	0.00E+00	5.37E-06	5.83E-07	1.91E+01	3.81E-05	1.07E-01	1.21E-05	4.32E-04	4.24E-03	6.35E-04	1.18E-03	7.61E-04	7.81E-04	8.32E-05	9.60E-05	2.02E-08	3.99E-04	6.74E-05
9	E34	60	Passenger Truck	703	0.00E+00	1.14E-05	1.21E-06	4.26E+01	7.19E-05	1.83E-01	2.36E-05	1.34E-03	7.75E-03	1.15E-03	2.25E-03	1.47E-03	1.50E-03	3.41E-04	2.12E-04	3.93E-08	7.51E-04	2.28E-04
9	E34	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.96E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	E34	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.51E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	E34	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.14E-03
9	E34	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.28E-03
9	E35	60	Passenger Car	385	0.00E+00	4.92E-06	5.35E-07	1.75E+01	3.49E-05	9.81E-02	1.11E-05	3.96E-04	3.89E-03	5.82E-04	1.08E-03	6.98E-04	7.16E-04	7.63E-05	8.79E-05	1.85E-08	3.66E-04	6.18E-05
9	E35	60	Passenger Truck	644	0.00E+00	1.04E-05	1.11E-06	3.91E+01	6.59E-05	1.68E-01	2.17E-05	1.23E-03	7.10E-03	1.06E-03	2.07E-03	1.34E-03	1.38E-03	3.12E-04	1.94E-04	3.60E-08	6.88E-04	2.09E-04
9	E35	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.82E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.25E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.96E-06
9	E35	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.57E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.05E-03
9	E35	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.94E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
9	E36	60	Passenger Car	201	0.00E+00	2.57E-06	2.80E-07	9.16E+00	1.83E-05	5.13E-02	5.80E-06	2.07E-04	2.03E-03	3.04E-04	5.66E-04	3.65E-04	3.74E-04	3.99E-05	4.60E-05	9.66E-09	1.91E-04	3.23E-05
9	E36	60	Passenger Truck	337	0.00E+00	5.46E-06	5.79E-07	2.04E+01	3.44E-05	8.78E-02	1.13E-05	6.44E-04	3.71E-03	5.52E-04	1.08E-03	7.03E-04	7.20E-04	1.63E-04	1.02E-04	1.88E-08	3.60E-04	1.09E-04
9	E36	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.96E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	E36	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.51E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	E36	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.01E-03
9	E36	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.14E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.14E-03
9	E37	60	Passenger Car	385	0.00E+00	4.92E-06	5.35E-07	1.75E+01	3.49E-05	9.81E-02	1.11E-05	3.96E-04	3.89E-03	5.82E-04	1.08E-03	6.98E-04	7.16E-04	7.63E-05	8.79E-05	1.85E-08	3.66E-04	6.18E-05
9	E37	60	Passenger Truck	644	0.00E+00	1.04E-05	1.11E-06	3.91E+01	6.59E-05	1.68E-01	2.17E-05	1.23E-03	7.10E-03	1.06E-03	2.07E-03	1.34E-03	1.38E-03	3.12E-04	1.94E-04	3.60E-08	6.88E-04	2.09E-04
9	E37	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.82E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	E37	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.25E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.96E-06
9	E37	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.57E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.05E-03
9	E37	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.94E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
9	E38	60	Passenger Car	201	0.00E+00	2.57E-06	2.80E-07	9.16E+00	1.83E-05	5.13E-02	5.80E-06	2.07E-04	2.03E-03	3.04E-04	5.66E-04	3.65E-04	3.74E-04	3.99E-05	4.60E-05	9.66E-09	1.91E-04	3.23E-05
9	E38	60	Passenger Truck	337	0.00E+00	5.46E-06	5.79E-07	2.04E+01	3.44E-05	8.78E-02	1.13E-05	6.44E-04	3.71E-03	5.52E-04	1.08E-03	7.03E-04	7.20E-04	1.63E-04	1.02E-04	1.88E-08	3.60E-04	1.09E-04
9	E38	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.96E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.51E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	E38	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.01E-03
9	E38	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.14E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.14E-03
10	E39	70	Passenger Car	350	0.00E+00	3.91E-06	4.25E-07	1.53E+01	2.77E-05	7.84E-02	8.81E-06	3.54E-04	2.70E-03	4.20E-04	8.59E-04	5.54E-04	5.69E-04	5.95E-05	7.68E-05	1.60E-08	2.91E-04	5.53E-05
10	E39	70	Passenger Truck	587	0.00E+00	8.22E-06	8.74E-07	3.44E+01	5.27E-05	1.38E-01	1.72E-05	1.03E-03	4.89E-03	7.56E-04	1.65E-03	1.07E-03	1.10E-03	2.60E-04	1.71E-04	3.07E-08	5.51E-04	1.73E-04
10	E39	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.03E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.50E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.46E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.46E-06
10	E39	70	Combination Short Haul Truck	12	0.00E+00	2.96E-06	2.20E-07	4.00E+00	7.52E-09	4.28E-03	2.11E-06	4.41E-03	4.17E-04	6.96E-05	1.78E-04	6.42E-05	6.66E-05	6.36E-04	1.34E-05	0.00E+00	1.11E-04	8.31E-04
10	E39	70	Combination Long Haul Truck	10	0.00E+00	4.06E-06	2.31E-07	3.76E+00	2.55E-08	5.10E-03	3.34E-06	4.72E-03	4.35E-04	6.55E-05	3.69E-04	7.42E-05	7.73E-05	6.03E-04	1.26E-05	0.00E+00	2.92E-04	8.89E-04
10	E40	70	Passenger Car	350	0.00E+00	3.91E-06	4.25E-07	1.53E+01	2.77E-05	7.84E-02	8.81E-06	3.54E-04	2.70E-03	4.20E-04	8.59E-04	5.54E-04	5.69E-04	5.95E-05	7.68E-05	1.60E-08	2.91E-04	5.53E-05
10	E40	70	Passenger Truck	587	0.00E+00	8.22E-06	8.74E-07	3.44E+01	5.27E-05	1.38E-01	1.72E-05	1.03E-03	4.89E-03	7.56E-04	1.65E-03	1.07E-03	1.10E-03	2.60E-04	1.71E-04	3.07E-08	5.51E-04	1.73E-04
10	E40	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E40	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.02E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
10	E40	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.59E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	E41	70	Passenger Car	281	0.00E+00	3.14E-06	3.41E-07	1.23E+01	2.23E-05	6.29E-02	7.07E-06	2.84E-04	2.17E-03	3.37E-04	6.90E-04	4.45E-04	4.56E-04	4.78E-05	6.16E-05	1.28E-08	2.33E-04	4.44E-05
10	E41	70	Passenger Truck	471	0.00E+00	6.60E-06	7.02E-07	2.76E+01	4.23E-05	1.11E-01	1.38E-05	8.27E-04	3.92E-03	6.07E-04	1.32E-03	8.60E-04	8.81E-04	2.09E-04	1.37E-04	2.46E-08	4.42E-04	1.39E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.20E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E42	70	Passenger Car	307	0.00E+00	3.43E-06	3.72E-07	1.34E+01	2.43E-05	6.87E-02	7.73E-06	3.11E-04	2.37E-03	3.69E-04	7.54E-04	4.86E-04	4.99E-04	5.22E-05	6.74E-05	1.40E-08	2.55E-04	4.85E-05
10	E42	70	Passenger Truck	515	0.00E+00	7.21E-06	7.67E-07	3.01E+01	4.62E-05	1.21E-01	1.51E-05	9.03E-04	4.29E-03	6.63E-04	1.45E-03	9.40E-04	9.63E-04	2.28E-04	1.50E-04	2.69E-08	4.83E-04	1.52E-04
10	E42	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E42	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.02E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.51E-04
10	E42	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.59E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	E43	70	Passenger Car	199	0.00E+00	2.22E-06	2.41E-07	8.67E+00	1.57E-05	4.45E-02	5.00E-06	2.01E-04	1.53E-03	2.39E-04	4.88E-04	3.15E-04	3.23E-04	3.38E-05	4.36E-05	9.06E-09	1.65E-04	3.14E-05
10	E43	70	Passenger Truck	333	0.00E+00	4.67E-06	4.96E-07	1.95E+01	2.99E-05	7.86E-02	9.79E-06	5.85E-04	2.77E-03	4.29E-04	9.36E-04	6.08E-04	6.23E-04	1.48E-04	9.72E-05	1.74E-08	3.13E-04	9.82E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.78E-05
10	E44	70	Passenger Car	310	0.00E+00	3.46E-06	3.76E-07	1.35E+01	2.45E-05	6.93E-02	7.79E-06	3.13E-04	2.39E-03	3.72E-04	7.60E-04	4.90E-04	5.03E-04	5.27E-05	6.79E-05	1.41E-08	2.57E-04	4.89E-05
10	E44	70	Passenger Truck	519	0.00E+00	7.28E-06	7.73E-07	3.04E+01	4.66E-05	1.22E-01	1.53E-05	9.11E-04	4.32E-03	6.69E-04	1.46E-03	9.48E-04	9.71E-04	2.30E-04	1.51E-04	2.71E-08	4.87E-04	1.53E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.69E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E44	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.01E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.56E-05
10	E44	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.29E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.09E-05
11	E45	80	Passenger Car	299	0.00E+00	3.11E-06	3.38E-07	1.27E+01	2.21E-05	6.39E-02	7.01E-06	3.11E-04	1.63E-03	2.73E-04	6.84E-04	4.41E-04	4.53E-04	4.45E-05	6.39E-05	1.37E-08	2.31E-04	4.84E-05
11	E45	80	Passenger Truck	502	0.00E+00	6.40E-06	6.83E-07	2.86E+01	4.17E-05	1.13E-01	1.36E-05	8.37E-04	2.91E-03	4.84E-04	1.30E-03	8.45E-04	8.66E-04	2.06E-04	1.43E-04	2.60E-08	4.36E-04	1.39E-04
11	E45	80	Single Unit Short Haul Truck	34	0.00E+00	4.73E-06	1.85E-07	5.65E+00	3.21E-06	1.03E-02	5.20E-06	1.96E-03	3.87E-04	7.92E-05	6.52E-04	1.21E-04	1.23E-04	5.75E-04	2.30E-05	9.10E-09	5.29E-04	3.67E-04
11	E45	80	Single Unit Long Haul Truck	2	0.00E+00	2.06E-07	7.93E-09	2.39E-01	1.37E-07	4.28E-04	2.26E-07	8.38E-05	1.78E-05	3.52E-06	2.84E-05	5.18E-06	5.28E-06	2.42E-05	9.72E-07	3.79E-10	2.31E-05	1.57E-05
11	E45	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.80E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.28E-03
11	E45	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.27E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.37E-03
11	E46	80	Passenger Car	134	0.00E+00	1.39E-06	1.51E-07	5.68E+00	9.89E-06	2.87E-02	3.14E-06	1.39E-04	7.32E-04	1.23E-04	3.07E-04	1.98E-04	2.03E-04	2.00E-05	2.86E-05	6.12E-09	1.04E-04	2.17E-05
11	E46	80	Passenger Truck	225	0.00E+00	2.87E-06	3.06E-07	1.28E+01	1.87E-05	5.06E-02	6.08E-06	3.75E-04	1.30E-03	2.17E-04	5.84E-04	3.79E-04	3.88E-04	9.23E-05	6.41E-05	1.16E-08	1.95E-04	6.25E-05
11	E46	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.36E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.68E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	E46	80	Combination Short Haul Truck	28	0.00E+00	5.82E-06	4.31E-07	9.47E+00	1.52E-08	8.87E-03	4.16E-06	8.95E-03	6.74E-04	1.22E-04	3.53E-04	1.26E-04	1.31E-04	1.51E-03	3.17E-05	0.00E+00	2.22E-04	1.69E-03
11	E46	80	Combination Long Haul Truck	26	0.00E+00	8.11E-06	4.58E-07	8.79E+00	5.16E-08	1.05E-02	6.69E-06	9.57E-03	6.97E-04	1.11E-04	7.43E-04	1.48E-04	1.54E-04	1.41E-03	2.95E-05	0.00E+00	5.89E-04	1.80E-03
11	E47	80	Passenger Car	323	0.00E+00	3.36E-06	3.65E-07	1.37E+01	2.38E-05	6.90E-02	7.56E-06	3.35E-04	1.76E-03	2.95E-04	7.38E-04	4.76E-04	4.88E-04	4.80E-05	6.89E-05	1.47E-08	2.50E-04	5.23E-05
11	E47	80	Passenger Truck	541	0.00E+00	6.91E-06	7.36E-07	3.09E+01	4.49E-05	1.22E-01	1.46E-05	9.03E-04	3.14E-03	5.22E-04	1.40E-03	9.11E-04	9.34E-04	2.22E-04	1.54E-04	2.80E-08	4.70E-04	1.50E-04
11	E47	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.74E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.26E-04
11	E47	80	Single Unit Long Haul Truck	1	0.

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E51	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.31E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E51	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.67E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E52	80	Passenger Car	47	0.00E+00	4.93E-07	5.36E-08	2.01E+00	3.50E-06	1.01E-02	1.11E-06	4.92E-05	2.59E-04	4.33E-05	1.08E-04	6.99E-05	7.18E-05	7.06E-06	1.01E-05	2.16E-09	3.67E-05	7.68E-06
11	E52	80	Passenger Truck	80	0.00E+00	1.02E-06	1.08E-07	4.54E+00	6.60E-06	1.79E-02	2.15E-06	1.33E-04	4.61E-04	7.67E-05	2.06E-04	1.34E-04	1.37E-04	3.27E-05	2.27E-05	4.12E-09	6.92E-05	2.21E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.66E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.12E-05
11	E53	80	Passenger Car	397	0.00E+00	4.12E-06	4.48E-07	1.68E+01	2.92E-05	8.47E-02	9.29E-06	4.11E-04	2.16E-03	3.62E-04	9.06E-04	5.84E-04	6.00E-04	5.90E-05	8.46E-05	1.81E-08	3.06E-04	6.42E-05
11	E53	80	Passenger Truck	664	0.00E+00	8.48E-06	9.04E-07	3.79E+01	5.52E-05	1.50E-01	1.80E-05	1.11E-03	3.85E-03	6.41E-04	1.72E-03	1.12E-03	1.15E-03	2.73E-04	1.89E-04	3.44E-08	5.78E-04	1.85E-04
11	E53	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.05E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E53	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.14E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E53	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.56E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.23E-03
11	E54	80	Passenger Car	98	0.00E+00	1.02E-06	1.11E-07	4.14E+00	7.22E-06	2.09E-02	2.29E-06	1.02E-04	5.34E-04	8.94E-05	2.24E-04	1.44E-04	1.48E-04	1.46E-05	2.09E-05	4.47E-09	7.57E-05	1.58E-05
11	E54	80	Passenger Truck	164	0.00E+00	2.09E-06	2.23E-07	9.36E+00	1.36E-05	3.69E-02	4.44E-06	2.74E-04	9.51E-04	1.58E-04	4.26E-04	2.76E-04	2.83E-04	6.74E-05	4.68E-05	8.50E-09	1.43E-04	4.56E-05
11	E54	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.72E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.09E-05
11	E54	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.16E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.06E-04
11	E54	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.30E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.34E-04
11	E55	80	Passenger Car	397	0.00E+00	4.12E-06	4.48E-07	1.68E+01	2.92E-05	8.47E-02	9.29E-06	4.11E-04	2.16E-03	3.62E-04	9.06E-04	5.84E-04	6.00E-04	5.90E-05	8.46E-05	1.81E-08	3.06E-04	6.42E-05
11	E55	80	Passenger Truck	664	0.00E+00	8.48E-06	9.04E-07	3.79E+01	5.52E-05	1.50E-01	1.80E-05	1.11E-03	3.85E-03	6.41E-04	1.72E-03	1.12E-03	1.15E-03	2.73E-04	1.89E-04	3.44E-08	5.78E-04	1.85E-04
11	E55	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.05E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E55	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.14E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E55	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.56E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.23E-03
11	E56	80	Passenger Car	98	0.00E+00	1.02E-06	1.11E-07	4.14E+00	7.22E-06	2.09E-02	2.29E-06	1.02E-04	5.34E-04	8.94E-05	2.24E-04	1.44E-04	1.48E-04	1.46E-05	2.09E-05	4.47E-09	7.57E-05	1.58E-05
11	E56	80	Passenger Truck	164	0.00E+00	2.09E-06	2.23E-07	9.36E+00	1.36E-05	3.69E-02	4.44E-06	2.74E-04	9.51E-04	1.58E-04	4.26E-04	2.76E-04	2.83E-04	6.74E-05	4.68E-05	8.50E-09	1.43E-04	4.56E-05
11	E56	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.72E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.09E-05
11	E56	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.16E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.06E-04
11	E56	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.30E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.34E-04
9	F31	60	Passenger Car	944	0.00E+00	1.21E-05	1.31E-06	4.30E+01	8.56E-05	2.41E-01	2.72E-05	9.72E-04	9.53E-03	1.43E-03	2.65E-03	1.71E-03	1.76E-03	1.87E-04	2.16E-04	4.53E-08	8.98E-04	1.52E-04
9	F31	60	Passenger Truck	1580	0.00E+00	2.56E-05	2.72E-06	9.58E+01	1.62E-04	4.12E-01	5.31E-05	3.02E-03	1.74E-02	2.59E-03	5.07E-03	3.30E-03	3.38E-03	7.66E-04	4.76E-04	8.83E-08	1.69E-03	5.12E-04
9	F31	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.37E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.44E-04
9	F31	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.92E-05
9	F31	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.80E-03
9	F31	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.58E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.98E-03
9	F32	60	Passenger Car	1007	0.00E+00	1.29E-05	1.40E-06	4.59E+01	9.14E-05	2.57E-01	2.90E-05	1.04E-03	1.02E-02	1.52E-03	2.83E-03	1.83E-03	1.87E-03	2.00E-04	2.30E-04	4.83E-08	9.58E-04	1.62E-04
9	F32	60	Passenger Truck	1686	0.00E+00	2.73E-05	2.90E-06	1.02E+02	1.72E-04	4.40E-01	5.67E-05	3.22E-03	1.86E-02	2.77E-03	5.41E-03	3.52E-03	3.60E-03	8.17E-04	5.08E-04	9.42E-08	1.80E-03	5.46E-04
9	F32	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	F32	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.79E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.25E-04
9	F32	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.97E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.59E-04
9	F33	60	Passenger Car	453	0.00E+00	5.79E-06	6.30E-07	2.06E+01	4.11E-05	1.16E-01	1.31E-05	4.67E-04	4.58E-03	6.85E-04	1.27E-03	8.22E-04	8.43E-04	8.98E-05	1.04E-04	2.18E-08	4.31E-04	7.28E-05
9	F33	60	Passenger Truck	759	0.00E+00	1.23E-05	1.30E-06	4.60E+01	7.76E-05	1.98E-01	2.55E-05	1.45E-03	8.36E-03	1.24E-03	2.43E-03	1.58E-03	1.62E-03	3.68E-04	2.29E-04	4.24E-08	8.11E-04	2.46E-04
9	F33	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.86E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.50E-04
9	F33	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.98E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.73E-04
9	F34	60	Passenger Car	246	0.00E+00	3.15E-06	3.42E-07	1.12E+01	2.24E-05	6.29E-02	7.10E-06	2.54E-04	2.49E-03	3.73E-04	6.93E-04	4.47E-04	4.58E-04	4.88E-05	5.63E-05	1.18E-08	2.34E-04	3.96E-05
9	F34	60	Passenger Truck	413	0.00E+00	6.69E-06	7.09E-07	2.50E+01	4.22E-05	1.08E-01	1.39E-05	7.89E-04	4.55E-03	6.77E-04	1.32E-03	8.61E-04	8.82E-04	2.00E-04	1.24E-04	2.31E-08	4.41E-04	1.34E-04
9	F34	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.64E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.75E-05
9	F34	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.95E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.32E-05
11	F35	80	Passenger Car	262	0.00E+00	2.72E-06	2.95E-07	1.11E+01	1.93E-05	5.59E-02	6.13E-06	2.71E-04	1.43E-03	2.39E-04	5.98E-04	3.85E-04	3.96E-04	3.89E-05	5.58E-05	1.19E-08	2.02E-04	4.23E-05
11	F35	80	Passenger Truck	438	0.00E+00	5.60E-06	5.97E-07	2.50E+01	3.64E-05	9.87E-02	1.19E-05	7.32E-04	2.54E-03	4.23E-04	1.14E-03	7.38E-04	7.57E-04	1.80E-04	1.25E-04	2.27E-08	3.81E-04	1.22E-04
11	F35	80	Single Unit Short Haul Truck	17	0.00E+00	2.37E-06	9.24E-08	2.83E+00	1.60E-06	5.13E-03	2.60E-06	9.81E-04	1.94E-04	3.96E-05	3.26E-04	6.03E-05	6.15E-05	2.88E-04	1.15E-05	4.55E-09	2.64E-04	1.83E-04
11	F35	80	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	3.97E-09	1.19E-01	6.83E-08	2.14E-04	1.13E-07	4.19E-05	8.88E-06	1.76E-06	1.42E-05	2.59E-06	2.64E-06	1.21E-05	4.86E-07	1.90E-10	1.16E-05	7.83E-06
11	F35	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.25E-04
11	F35	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.54E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.68E-04
11	F36	80	Passenger Car	143	0.00E+00	1.48E-06	1.61E-07	6.04E+00	1.05E-05	3.05E-02	3.34E-06	1.48E-04	7.79E-04	1.30E-04	3.26E-04	2.10E-04	2.16E-04	2.12E-05	3.05E-05	6.51E-09	1.10E-04	2.31E-05
11	F36	80	Passenger Truck	239	0.00E+00	3.05E-06	3.26E-07	1.36E+01	1.99E-05	5.39E-02	6.47E-06	3.99E-04	1.39E-03	2.31E-04	6.21E-04	4.03E-04	4.13E-04	9.82E-05	6.82E-05	1.24E-08	2.08E-04	6.65E-05
11	F36	80	Single Unit Short Haul Truck	23	0.00E+00	3.15E-06	1.23E-07	3.77E+00	2.14E-06	6.85E-03	3.47E-06	1.31E-03	2.58E-04	5.28E-05	4.34E-04	8.04E-05	8.20E-05	3.83E-04	1.53E-05	6.07E-09	3.52E-04	2.44E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	5.29E-09	1.59E-01	9.11E-08	2.85E-04	1.51E-07	5.59E-05	1.18E-05	2.34E-06	1.89E-05	3.45E-06	3.52E-06	1.61E-05	6.48E-07	2.53E-10	1.54E-05	1.04E-05
11	F36	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.81E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.19E-04
11	F36	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.08E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.68E-04
9	F37	60	Passenger Car	829	0.00E+00	1.06E-05	1.15E-06	3.77E+01	7.52E-05	2.11E-01	2.39E-05	8.53E-04	8.37E-03	1.25E-03	2.33E-03	1.50E-03	1.54E-03	1.64E-04	1.89E-04	3.98E-08	7.88E-04	1.33E-04
9	F37	60	Passenger Truck	1387	0.00E+00	2.25E-05	2.38E-06	8.41E+01	1.42E-04	3.62E-01	4.67E-05	2.65E-03	1.53E-02	2.28E-03	4.45E-03	2.89E-03	2.97E-03	6.72E-04	4.18E-04	7.75E-08	1.48E-03	4.49E-04
9	F37	60	Single Unit Short Haul Truck	50	0.00E+00	1.11E-05	4.59E-07	8.29E+00	7.37E-06	1.46E-02	1.20E-05	4.26E-03	1.15E-03	1.93E-04	1.48E-03	2.86E-04	2.91E-04	8.40E-04	3.38E-05	1.39E-08	1.19E-03	7.97E-04
9	F37	60	Single Unit Long Haul Truck	2	0.00E+00	4.85E-07	1.99E-08	3.53E-01	3.19E-07	6.19E-04	5.25E-07	1.84E-04	5.15E-05	8.54E-06	6.49E-05	1.24E-05	1.27E-05	3.57E-05	1.44E-06	5.92E-10	5.22E-05	3.45E-05
9	F37	60	Combination Short Haul Truck	52	0.00E+00	1.53E-05	1.12E-06	1.84E+01	4.18E-08	2.28E-02	1.10E-05	2.32E-02	2.66E-03	4.17E-04	9.41E-04	3.28E-04	3.41E-04	2.93E-03	6.16E-05	0.00E+00	6.00E-04	4.38E-03
9	F37	60	Combination Long Haul Truck	48	0.00E+00	2.10E-05	1.15E-06	1.74E+01	1.42E-07	2.74E-02	1.75E-05	2.47E-02	2.79E-03	4.04E-04	1.99E-03	3.74E-04	3.90E-04	2.79E-03	5.83E-05	0.00E+00	1.60E-03	4.66E-03
9	F38	60	Passenger Car	995	0.00E+00	1.27E-05	1.38E-06	4.53E+01	9.03E-05	2.54E-01	2.87E-05	1.02E-03	1.00E-02	1.50E-03	2.80E-03	1.80E-03	1.85E-03	1.97E-04	2.27E-04	4.78E-08	9.46E-04	1.60E-04
9	F38	60	Passenger Truck	1666	0.00E+00	2.70E-05	2.86E-06	1.01E+02	1.70E-04	4.34E-01	5.60E-05	3.18E-03	1.84E-02	2.73E-03	5.34E-03	3.47E-03	3.56E-03	8.07E-04	5.02E-04	9.31E-08	1.78E-03	5.40E-04
9	F38	60	Single Unit Short Haul Truck	51	0.00E+00	1.13E-05	4.68E-07	8.44E+00	7.51E-06	1.49E-02	1.23E-05	4.34E-03	1.17E-03	1.96E-04	1.51E-03	2.91E-04	2.97E-04	8.56E-04	3.44E-05	1.42E-08	1.22E-03	8.12E-04
9	F38	60	Single Unit Long Haul Truck	2	0.00E+00	4.95E-07	2.03E-08	3.60E-01	3.26E-07	6.31E-04	5.35E-07	1.88E-04	5.25E-05	8.70E-06	6.61E-05	1.27E-05	1.29E-05	3.64E-05	1.47E-06	6.03E-10	5.32E-05	3.52E-05
9	F38	60	Combination Short Haul Truck	52	0.00E+00	1.53E-05	1.12E-06	1.84E+01	4.18E-08	2.28E-02	1.10E-05	2.32E-02	2.66E-03	4.17E-04	9.41E-04	3.28E-04	3.41E-04	2.93E-03	6.16E-05	0.00E+00	6.00E-04	4.38E-03
9	F38	60	Combination Long Haul Truck	48	0.00E+00	2.10E-05	1.15E-06	1.74E+01	1.42E-07	2.74E-02	1.75E-05	2.47E-02	2.79E-03	4.04E-04	1.99E-03	3.74E-04	3.90E-04	2.79E-03	5.83E-05	0.00E+00	1.60E-03	4.66E-03
11	F39	80	Passenger Car	338	0.00E+00	3.51E-06	3.82E-07	1.43E+01	2.49E-05	7.22E-02	7.92E-06	3.51E-04	1.84E-03	3.09E-04	7.73E-04	4.98E-04	5.11E-04	5.03E-05	7.22E-05	1.54E-08	2.61E-04	5.47E-05
11	F39	80	Passenger Truck	567	0.00E+00	7.24E-06	7.71E-07	3.23E+01	4.71E-05	1.28E-01	1.53E-05	9.46E-04	3.28E-03	5.47E-04	1.47E-03	9.55E-04	9.78E-04	2.33E-04	1.61E-04	2.94E-08	4.93E-04	1.57E-04
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.27E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.11E-05
11	F39	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	1.99E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.75E-04
11	F39	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.13E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.01E-04
11	F40	80	Passenger Car	72	0.00E+00	7.49E-07	8.14E-08	3.05E+00	5.32E-06	1.54E-02	1.69E-06	7.48E-05	3.93E-04	6.59E-05	1.65E-04	1.06E-04	1.09E-04	1.07E-05	1.54E-05	3.29E-09	5.57E-05	1.17E-05
11	F40	80	Passenger Truck	121	0.00E+00	1.54E-06	1.64E-07	6.89E+00	1.00E-05	2.72E-02	3.27E-06	2.02E-04	7.00E-04	1.17E-04	3.14E-04	2.04E-04	2.09E-04	4.96E-05	3.44E-05	6.26E-09	1.05E-04	3.36E-05
11	F40	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	F40	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.97E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.37E-05
11	F40	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.32E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
10	F41	70	Passenger Car	251	0.00E+00	2.80E-06	3.04E-07	1.09E+01	1.99E-05	5.62E-02	6.32E-06	2.54E-04	1.94E-03	3.02E-04	6.16E-04	3.97E-04	4.08E-04	4.27E-05	5.51E-05	1.14E-08	2.08E-04	3.96E-05
10	F41	70	Passenger Truck	421	0.00E+00	5.90E-06	6.27E-07	2.46E+01	3.78E-05	9.93E-02	1.24E-05	7.39E-04	3.50E-03	5.42E-04	1.18E-03	7.68E-04	7.87E-04	1.87E-04	1.23E-04	2.20E-08	3.95E-04	1.24E-04
10	F41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07

Appendix F.2.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	F87	60	Passenger Truck	649	0.00E+00	9.60E-06	1.02E-06	3.93E+01	6.05E-05	1.55E-01	1.99E-05	1.17E-03	6.75E-03	1.00E-03	1.90E-03	1.23E-03	1.27E-03	3.08E-04	1.95E-04	3.30E-08	6.32E-04	1.98E-04
52	F87	60	Single Unit Short Haul Truck	58	0.00E+00	1.30E-05	5.39E-07	9.72E+00	8.64E-06	1.71E-02	1.41E-05	4.99E-03	1.34E-03	2.26E-04	1.74E-03	3.35E-04	3.42E-04	9.85E-04	3.96E-05	1.63E-08	1.40E-03	9.35E-04
52	F87	60	Single Unit Long Haul Truck	3	0.00E+00	5.69E-07	2.34E-08	4.14E-01	3.75E-07	7.26E-04	6.16E-07	2.16E-04	6.04E-05	1.00E-05	7.61E-05	1.46E-05	1.49E-05	4.19E-05	1.69E-06	6.94E-10	6.12E-05	4.05E-05
52	F87	60	Combination Short Haul Truck	35	0.00E+00	1.02E-05	7.51E-07	1.23E+01	2.80E-08	1.53E-02	7.35E-06	1.56E-02	1.79E-03	2.79E-04	6.30E-04	2.20E-04	2.28E-04	1.96E-03	4.13E-05	0.00E+00	4.02E-04	2.93E-03
52	F87	60	Combination Long Haul Truck	32	0.00E+00	1.41E-05	7.68E-07	1.17E+01	9.49E-08	1.84E-02	1.18E-05	1.66E-02	1.87E-03	2.71E-04	1.33E-03	2.51E-04	2.61E-04	1.87E-03	3.91E-05	0.00E+00	1.07E-03	3.12E-03
50	F88	40	Passenger Car	259	0.00E+00	3.71E-06	4.03E-07	1.36E+01	2.63E-05	7.33E-02	8.37E-06	2.36E-04	4.46E-03	6.27E-04	8.16E-04	5.26E-04	5.40E-04	7.69E-05	6.78E-05	1.26E-08	2.76E-04	3.68E-05
50	F88	40	Passenger Truck	433	0.00E+00	8.18E-06	8.60E-07	2.97E+01	4.93E-05	1.21E-01	1.64E-05	9.09E-04	7.91E-03	1.10E-03	1.55E-03	1.01E-03	1.04E-03	2.62E-04	1.46E-04	2.14E-08	5.14E-04	1.57E-04
50	F88	40	Single Unit Short Haul Truck	10	0.00E+00	3.25E-06	1.45E-07	1.81E+00	2.25E-06	2.84E-03	3.47E-06	1.31E-03	3.77E-04	5.89E-05	4.18E-04	8.71E-05	8.87E-05	1.85E-04	7.37E-06	3.13E-09	3.29E-04	2.45E-04
50	F88	40	Combination Short Haul Truck	17	0.00E+00	8.07E-06	6.03E-07	6.94E+00	2.00E-08	1.14E-02	5.74E-06	1.17E-02	1.63E-03	2.43E-04	4.80E-04	1.75E-04	1.82E-04	1.10E-03	2.32E-05	0.00E+00	2.98E-04	2.21E-03
50	F88	40	Combination Long Haul Truck	15	0.00E+00	1.07E-05	6.06E-07	6.66E+00	6.82E-08	1.39E-02	8.85E-06	1.24E-02	1.69E-03	2.37E-04	9.83E-04	1.95E-04	2.03E-04	1.07E-03	2.23E-05	0.00E+00	7.80E-04	2.33E-03
50	F89	40	Passenger Car	288	0.00E+00	4.13E-06	4.49E-07	1.52E+01	2.93E-05	8.16E-02	9.31E-06	2.63E-04	4.96E-03	6.98E-04	9.08E-04	5.86E-04	6.01E-04	8.56E-05	7.55E-05	1.40E-08	3.07E-04	4.10E-05
50	F89	40	Passenger Truck	482	0.00E+00	9.11E-06	9.57E-07	3.30E+01	5.48E-05	1.35E-01	1.83E-05	1.01E-03	8.80E-03	1.22E-03	1.73E-03	1.13E-03	1.16E-03	2.92E-04	1.63E-04	2.38E-08	5.72E-04	1.75E-04
50	F89	40	Single Unit Short Haul Truck	64	0.00E+00	2.18E-05	9.68E-07	1.21E+01	1.51E-05	1.90E-02	2.33E-05	8.75E-03	2.53E-03	3.94E-04	2.80E-03	5.83E-04	5.94E-04	1.24E-03	4.94E-05	2.09E-08	2.20E-03	1.64E-03
50	F89	40	Single Unit Long Haul Truck	3	0.00E+00	9.55E-07	4.23E-08	5.24E-01	6.59E-07	8.27E-04	1.02E-06	3.82E-04	1.13E-04	1.76E-05	1.23E-04	2.55E-05	2.60E-05	5.35E-05	2.13E-06	9.09E-10	9.70E-05	7.15E-05
50	F89	40	Combination Short Haul Truck	61	0.00E+00	2.95E-05	2.20E-06	2.54E+01	7.31E-08	4.17E-02	2.10E-05	4.28E-02	5.95E-03	8.87E-04	1.76E-03	6.41E-04	6.66E-04	4.03E-03	8.49E-05	0.00E+00	1.09E-03	8.07E-03
50	F89	40	Combination Long Haul Truck	56	0.00E+00	3.92E-05	2.22E-06	2.44E+01	2.49E-07	5.07E-02	3.23E-05	4.52E-02	6.18E-03	8.68E-04	3.59E-03	7.14E-04	7.44E-04	3.91E-03	8.16E-05	0.00E+00	2.85E-03	8.51E-03
53	G07	70	Passenger Car	62	0.00E+00	6.75E-07	7.33E-08	2.75E+00	4.79E-06	1.34E-02	1.52E-06	6.43E-05	4.74E-04	7.41E-05	1.48E-04	9.57E-05	9.82E-05	1.06E-05	1.38E-05	2.88E-09	5.02E-05	1.00E-05
53	G07	70	Passenger Truck	105	0.00E+00	1.41E-06	1.50E-07	6.20E+00	9.05E-06	2.37E-02	2.96E-06	1.81E-04	8.46E-04	1.31E-04	2.83E-04	1.84E-04	1.89E-04	4.61E-05	3.09E-05	5.41E-09	9.46E-05	3.04E-05
53	G07	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
53	G07	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
53	G07	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
50	G09	40	Passenger Car	39	0.00E+00	5.63E-07	6.12E-08	2.07E+00	4.00E-06	1.11E-02	1.27E-06	3.58E-05	6.77E-04	9.52E-05	1.24E-04	7.99E-05	8.20E-05	1.17E-05	1.03E-05	1.91E-09	4.19E-05	5.59E-06
50	G09	40	Passenger Truck	66	0.00E+00	1.24E-06	1.31E-07	4.51E+00	7.48E-06	1.84E-02	2.49E-06	1.38E-04	1.20E-03	1.67E-04	2.36E-04	1.54E-04	1.58E-04	3.98E-05	2.22E-05	3.24E-09	7.80E-05	2.39E-05
50	G09	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.23E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.79E-05
50	G09	40	Combination Short Haul Truck	10	0.00E+00	5.05E-06	3.77E-07	4.34E+00	1.25E-08	7.14E-03	3.59E-06	7.32E-03	1.02E-03	1.52E-04	3.00E-04	1.10E-04	1.14E-04	6.89E-04	1.45E-05	0.00E+00	1.86E-04	1.38E-03
50	G09	40	Combination Long Haul Truck	10	0.00E+00	6.71E-06	3.79E-07	4.16E+00	4.26E-08	8.66E-03	5.53E-06	7.73E-03	1.06E-03	1.48E-04	6.14E-04	1.22E-04	1.27E-04	6.68E-04	1.40E-05	0.00E+00	4.87E-04	1.46E-03
53	G10	70	Passenger Car	62	0.00E+00	6.75E-07	7.33E-08	2.75E+00	4.79E-06	1.34E-02	1.52E-06	6.43E-05	4.74E-04	7.41E-05	1.48E-04	9.57E-05	9.82E-05	1.06E-05	1.38E-05	2.88E-09	5.02E-05	1.00E-05
53	G10	70	Passenger Truck	105	0.00E+00	1.41E-06	1.50E-07	6.20E+00	9.05E-06	2.37E-02	2.96E-06	1.81E-04	8.46E-04	1.31E-04	2.83E-04	1.84E-04	1.89E-04	4.61E-05	3.09E-05	5.41E-09	9.46E-05	3.04E-05
53	G10	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.50E-05
53	G10	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.60E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.02E-04
53	G10	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.23E-04
16	H01	100	Passenger Car	2825	0.00E+00	2.64E-05	2.87E-06	1.15E+02	1.87E-04	5.59E-01	5.95E-05	3.05E-03	9.03E-03	1.73E-03	5.80E-03	3.74E-03	3.84E-03	3.36E-04	5.84E-04	1.23E-07	1.96E-03	4.75E-04
16	H01	100	Passenger Truck	4730	0.00E+00	5.45E-05	5.84E-06	2.66E+02	3.64E-04	1.08E+00	1.18E-04	7.61E-03	1.58E-02	3.06E-03	1.13E-02	7.34E-03	7.53E-03	1.74E-03	1.33E-03	2.43E-07	3.81E-03	1.25E-03
16	H01	100	Single Unit Short Haul Truck	415	0.00E+00	3.94E-05	1.46E-06	6.77E+01	3.02E-05	1.40E-01	4.47E-05	1.74E-02	2.68E-03	6.94E-04	5.65E-03	1.04E-03	1.06E-03	6.94E-03	2.74E-04	1.12E-07	4.59E-03	3.24E-03
16	H01	100	Single Unit Long Haul Truck	18	0.00E+00	1.71E-06	6.16E-08	2.85E+00	1.25E-06	5.72E-03	1.94E-06	7.30E-04	1.22E-04	3.01E-05	2.47E-04	4.40E-05	4.48E-05	2.90E-04	1.16E-05	4.58E-09	2.02E-04	1.36E-04
16	H01	100	Combination Short Haul Truck	511	0.00E+00	7.31E-05	5.40E-06	1.70E+02	1.94E-07	1.32E-01	5.23E-05	1.32E-01	4.95E-03	1.26E-03	4.45E-03	1.58E-03	1.64E-03	2.71E-02	5.69E-04	0.00E+00	2.82E-03	2.48E-02
16	H01	100	Combination Long Haul Truck	466	0.00E+00	1.03E-04	5.82E-06	1.54E+02	6.59E-07	1.53E-01	8.52E-05	1.41E-01	4.96E-03	1.01E-03	9.48E-03	1.88E-03	1.96E-03	2.47E-02	5.17E-04	0.00E+00	7.52E-03	2.65E-02
16	H02	100	Passenger Car	2825	0.00E+00	2.64E-05	2.87E-06	1.15E+02	1.87E-04	5.59E-01	5.95E-05	3.05E-03	9.03E-03	1.73E-03	5.80E-03	3.74E-03	3.84E-03	3.36E-04	5.84E-04	1.23E-07	1.96E-03	4.75E-04
16	H02	100	Passenger Truck	4730	0.00E+00	5.45E-05	5.84E-06	2.66E+02	3.64E-04	1.08E+00	1.18E-04	7.61E-03	1.58E-02	3.06E-03	1.13E-02	7.34E-03	7.53E-03	1.74E-03	1.33E-03	2.43E-07	3.81E-03	1.25E-03
16	H02	100	Single Unit Short Haul Truck	415	0.00E+00	3.94E-05	1.46E-06	6.77E+01	3.02E-05	1.40E-01	4.47E-05	1.74E-02	2.68E-03	6.94E-04	5.65E-03	1.04E-03	1.06E-03	6.94E-03	2.74E-04	1.12E-07	4.59E-03	3.24E-03
16	H02	100	Single Unit Long Haul Truck	18	0.00E+00	1.71E-06	6.16E-08	2.85E+00	1.25E-06	5.72E-03	1.94E-06	7.30E-04	1.22E-04	3.01E-05	2.47E-04	4.40E-05	4.48E-05	2.90E-04	1.16E-05	4.58E-09	2.02E-04	1.36E-04
16	H02	100	Combination Short Haul Truck	511	0.00E+00	7.31E-05	5.40E-06	1.70E+02	1.94E-07	1.32E-01	5.23E-05	1.32E-01	4.95E-03	1.26E-03	4.45E-03	1.58E-03	1.64E-03	2.71E-02	5.69E-04	0.00E+00	2.82E-03	2.48E-02
16	H02	100	Combination Long Haul Truck	466	0.00E+00	1.03E-04	5.82E-06	1.54E+02	6.59E-07	1.53E-01	8.52E-05	1.41E-01	4.96E-03	1.01E-03	9.48E-03	1.88E-03	1.96E-03	2.47E-02	5.17E-04	0.00E+00	7.52E-03	2.65E-02
16	H03	100	Passenger Car	2576	0.00E+00	2.41E-05	2.61E-06	1.05E+02	1.71E-04	5.10E-01	5.42E-05	2.78E-03	8.23E-03	1.58E-03	5.29E-03	3.41E-03	3.50E-03	3.06E-04	5.32E-04	1.12E-07	1.79E-03	4.33E-04
16	H03	100	Passenger Truck	4313	0.00E+00	4.97E-05	5.32E-06	2.42E+02	3.32E-04	9.84E-01	1.07E-04	6.94E-03	1.44E-02	2.79E-03	1.03E-02	6.69E-03	6.86E-03	1.59E-03	1.22E-03	2.21E-07	3.47E-03	1.14E-03
16	H03	100	Single Unit Short Haul Truck	366	0.00E+00	3.48E-05	1.28E-06	5.97E+01	2.66E-05	1.23E-01	3.94E-05	1.53E-02	2.36E-03	6.12E-04	4.99E-03	9.21E-04	9.37E-04	6.12E-03	2.42E-04	9.87E-08	4.05E-03	2.86E-03
16	H03	100	Single Unit Long Haul Truck	16	0.00E+00	1.51E-06	5.43E-08	2.51E+00	1.10E-06	5.05E-03	1.71E-06	6.44E-04	1.07E-04	2.66E-05	2.18E-04	3.88E-05	3.95E-05	2.56E-04	1.02E-05	4.04E-09	1.78E-04	1.20E-04
16	H03	100	Combination Short Haul Truck	439	0.00E+00	6.28E-05	4.64E-06	1.46E+02	1.67E-07	1.13E-01	4.49E-05	1.13E-01	4.25E-03	1.08E-03	3.82E-03	1.35E-03	1.41E-03	2.32E-02	4.89E-04	0.00E+00	2.42E-03	2.13E-02
16	H03	100	Combination Long Haul Truck	400	0.00E+00	8.87E-05	5.00E-06	1.32E+02	5.65E-07	1.32E-01	7.32E-05	1.21E-01	4.26E-03	8.67E-04	8.14E-03	1.61E-03	1.68E-03	2.13E-02	4.44E-04	0.00E+00	6.46E-03	2.28E-02
16	H04	100	Passenger Car	3208	0.00E+00	3.00E-05	3.26E-06	1.31E+02	2.13E-04	6.35E-01	6.76E-05	3.46E-03	1.03E-02	1.97E-03	6.59E-03	4.25E-03	4.36E-03	3.81E-04	6.63E-04	1.39E-07	2.23E-03	5.40E-04
16	H04	100	Passenger Truck	5371	0.00E+00	6.19E-05	6.63E-06	3.02E+02	4.13E-04	1.23E+00	1.33E-04	8.64E-03	1.79E-02	3.47E-03	1.29E-02	8.34E-03	8.55E-03	1.98E-03	1.51E-03	2.76E-07	4.33E-03	1.42E-03
16	H04	100	Single Unit Short Haul Truck	290	0.00E+00	2.76E-05	1.02E-06	4.74E+01	2.11E-05	9.78E-02	3.13E-05	1.22E-02	1.87E-03	4.85E-04	3.95E-03	7.30E-04	7.43E-04	4.85E-03	1.92E-04	7.83E-08	3.21E-03	2.27E-03
16	H04	100	Single Unit Long Haul Truck	13	0.00E+00	1.20E-06	4.31E-08	1.99E+00	8.73E-07	4.00E-03	1.36E-06	5.11E-04	8.52E-05	2.11E-05	1.73E-04	3.08E-05	3.14E-05	2.03E-04	8.09E-06	3.20E-09	1.42E-04	9.52E-05
16	H04	100	Combination Short Haul Truck	530	0.00E+00	7.58E-05	5.60E-06	1.77E+02	2.01E-07	1.36E-01	5.43E-05	1.36E-01	5.13E-03	1.30E-03	4.62E-03	1.63E-03	1.70E-03	2.81E-02	5.90E-04	0.00E+00	2.92E-03	2.57E-02
16	H04	100	Combination Long Haul Truck	483	0.00E+00	1.07E-04	6.04E-06	1.60E+02	6.83E-07	1.59E-01	8.84E-05	1.46E-01	5.14E-03	1.05E-03	9.83E-03	1.95E-03	2.03E-03	2.57E-02	5.36E-04	0.00E+00	7.80E-03	2.75E-02
56	H05	100	Passenger Car	1411	0.00E+00	1.32E-05	1.43E-06	5.76E+01	9.35E-05	2.79E-01	2.97E-05	1.52E-03	4.51E-03	8.64E-04	2.90E-03	1.87E-03	1.92E-03	1.68E-04	2.92E-04	6.12E-08	9.80E-04	2.37E-04
56	H05	100	Passenger Truck	2362	0.00E+00	2.72E-05	2.92E-06	1.33E+02	1.82E-04	5.39E-01	5.87E-05	3.80E-03	7.87E-03	1.53E-03	5.66E-03	3.67E-03	3.76E-03	8.70E-04	6.66E-04	1.21E-07	1.90E-03	6.24E-04
56	H05	100	Single Unit Short Haul Truck	170	0.00E+00	1.62E-05	5.99E-07	2.78E+01	1.24E-05	5.75E-02	1.84E-05	7.15E-03	1.10E-03	2.85E-04	2.32E-03	4.29E-04	4.36E-04	2.85E-03	1.13E-04	4.60E-08	1.89E-03	1.33E-03
56	H05	100	Single Unit Long Haul Truck	8	0.00E+00	7.04E-07	2.53E-08	1.17E+00	5.13E-07	2.35E-03	7.96E-07	3.00E-04	5.01E-05	1.24E-05	1.02E-04	1.81E-05	1.84E-05	1.19E-04	4.75E-06	1.88E-09	8.31E-05	5.59E-05
56	H05	100	Combination Short Haul Truck	235	0.00E+00	3.36E-05	2.48E-06	7.83E+01	8.91E-08	6.05E-02	2.41E-05	6.05E-02	2.28E-03	5.77E-04	2.05E-03	7.25E-04	7.52E-04	1.24E-02	2.62E-04	0.00E+00	1.29E-03	1.14E-02
56	H05	100	Combination Long Haul Truck	214	0.00E+00	4.75E-05	2.68E-06	7.09E+01	3.03E-07	7.04E-02	3.92E-05	6.48E-02	2.28E-03	4.64E-04	4.36E-03	8.63E-04	8.99E-04	1.14E-02	2.38E-04	0.00E+00	3.46E-03	1.22E-02
56	H06	100	Passenger Car	1797	0.00E+00	1.68E-05	1.82E-06	7.33E+01	1.19E-04	3.55E-01	3.78E-05	1.94E-03	5.74E-03	1.10E-03	3.69E-03	2.38E-03	2.44E-03	2.14E-04	3.71E-04	7.80E-08	1.25E-03	3.02E-04
56	H06	100	Passenger Truck	3009	0.00E+00	3.47E-05	3.71E-06	1.69E+02	2.31E-04	6.87E-01	7.48E-05	4.84E-03	1.00E-02	1.95E-03	7.21E-03	4.67E-03	4.79E-03	1.11E-03	8.48E-04	1.54E-07	2.42E-03	7.95E-04
56	H06	100	Single Unit Short Haul Truck	120	0.00E+00	1.14E-05	4.20E-07	1.95E+01	8.70E-06	4.04E-02	1.29E-05	5.02E-03	7.74E-04	2.00E-04	1.63E-03	3.01E-04	3.07E-04	2.00E-03	7.91E-05	3.23E-08	1.32E-03	9.37E-04
56	H06	100	Single Unit Long Haul Truck	5	0.00E+00	4.94E-07	1.78E-08	8.22E-01	3.60E-07	1.65E-03	5.59E-07	2.11E-04	3.52E-05	8.69E-06	7.13E-05	1.27E-05	1.29E-05	8.36E-05	3.34E-06	1.32E-09	5.84E-05	3.93E-05
56	H06	100	Combination Short Haul Truck	295	0.00E+00	4.22E-05	3.12E-06	9.83E+01	1.12E-07	7.60E-02	3.02E-05	7.60E-02	2.86E-03	7.25E-04	2.57E-03	9.10E-04	9.45E-04	1.56E-02	3.29E-04	0.00E+00	1.63E-03	1.43E-02
56	H06	100	Combination Long Haul Truck	269	0.00E+00	5.96E-05	3.36E-06	8.90E+01	3.80E-07	8.85E-02	4.92E-05	8.13E-02	2.86E-03	5.83E-04	5.47E-03	1.08E-03	1.13E-03	1.43E-02	2.98E-04	0.00E+00	4.34E-03	1.53E-02
16	H07	100	Passenger Car	3334	0.00E+00	3.11E-05	3.38E-06	1.36E+02	2.21E-04	6.60E-01	7.02E-05	3.60E-03	1.07E-02	2.04E-03	6.85E-03	4.42E-03	4.53E-03	3.97E-04	6.89E-04	1.45E-07	2.32E-03	5.61E-04
16	H07	100	Passenger Truck	5584	0.00E+00	6.43E-05	6.89E-06	3.14E+02	4.29E-04	1.27E+00	1.39E-04	8.98E-03	1.86E-02	3.61E-03	1.34E-02	8.66E-03	8.88E-03	2.06E-03	1.57E-03	2.87E-07	4.50E-03	1.48E-03
16	H07	100	Single Unit Short Haul Truck	291	0.00E+00	2.77E-05	1.02E-06	4.75E+01	2.12E-05	9.81E-02	3.14E-05	1.22E-02	1.88E-03	4.87E-04	3.97E-03	7.33E-04	7.45E-04	4.87E-03	1.92E-04	7.86E-08	3.22E-03	2.28E-03
16	H07	100	Single Unit Long Haul Truck	13	0.00E+00	1.20E-06	4.32E-08	2.00E+00	8.76E-07	4.02E-03	1.36E-06	5.12E-04	8.55E-05	2.11E-05	1.73E-04	3.09E-05	3.15E-05	2.03E-04	8.11E-06	3.21E-09	1.42E-04	9.55E-05
16	H07	100	Combination Short Haul Truck	532	0.00E+00	7.62E-05	5.63E-06	1.77E+02	2.02E-07	1.37E-01	5.45E-05	1.37E-01	5.16E-03	1.31E-03	4.64E-03	1.64E-03	1.71E-03	2.82E-02	5.93E-04	0.00E+00	2.93E-03	2.58E-02
16	H07	100	Combination Long Haul Truck	486	0.00E+00	1.08E-04	6.07E-06	1.61E+02	6.86E-07	1.60E-01	8.88E-05	1.47E-01	5.17E-03	1.05E-03	9.88E-03	1.96E-03	2.04E-03	2.58E-02	5.38E-04	0.00E+00	7.84E-03	2.77E-02
52	H08	60	Passenger Car	345	0.00E+00	4.05E-06	4.41E-07	1.57E+01	2.88E-05	8.03E-02	9.14E-06	3.42E-04	3.39E-03	5.08E-04	8.92E-04	5.75E-04	5.90E-04	6.84E-05	7.89E-05	1.61E-08	3.02E-04	5.34E-05
52	H08	60	Passenger Truck	578	0.00E+00	8.56E-06	9.07E-07	3.50E+01	5.39E-05	1.38E-01	1.77E-05	1.04E-03	6.02E-03	8.93E-04	1.69E-03	1.10E-03	1.13E-03	2.74E-04	1.74E-04	2.94E-08	5.63E-04	1.77E-04
52	H08	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.06E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
52	H08	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.63E-06
52	H08	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.01E-03
52	H08	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.14E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.14E-03
50	H09	40	Passenger Car	80	0.00E+00	1.15E-06	1.25E-07	4.24E+00	8.18E-06	2.28E-02	2.60E-06	7.33E-05	1.39E-03	1.95E-04	2.54E-04	1.64E-04	1.68E-04	2.39E-05	2.11E-05	3.91E-09	8.58E-05	1.14E-05
50	H09	40	Passenger Truck	135	0.00E+00	2.54E-06	2.67E-07	9.23E+00	1.53E-05	3.77E-02	5.11E-06	2.82E-04	2.46E-03	3.41E-04	4.82E-04	3.15E-04	3.23E-04	8.16E-05	4.55E-05	6.64E-09	1.60E-04	4.89E-05
50	H09	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.92E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.34E-05
50	H09	40

Appendix F.2.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B05	0.00E+00	1.58E-05	1.70E-06	7.42E+01	1.07E-04	3.19E-01	3.45E-05	2.08E-03	4.83E-03	9.33E-04	3.34E-03	2.16E-03	2.21E-03	4.05E-04	3.74E-04	7.12E-08	1.12E-03	3.36E-04
B06	0.00E+00	4.39E-05	4.72E-06	2.07E+02	2.99E-04	8.89E-01	9.61E-05	5.78E-03	1.35E-02	2.60E-03	9.30E-03	6.01E-03	6.17E-03	1.13E-03	1.04E-03	1.98E-07	3.13E-03	9.36E-04
B07	0.00E+00	3.26E-05	3.43E-06	1.50E+02	2.13E-04	6.37E-01	6.97E-05	5.29E-03	9.66E-03	1.87E-03	6.78E-03	4.31E-03	4.42E-03	1.10E-03	7.50E-04	1.43E-07	2.35E-03	8.87E-04
B08	0.00E+00	1.06E-04	7.79E-06	3.21E+02	3.37E-04	1.09E+00	1.59E-04	6.03E-02	1.77E-02	3.64E-03	1.67E-02	7.65E-03	7.85E-03	1.47E-02	1.48E-03	3.05E-07	8.82E-03	1.12E-02
B09	0.00E+00	6.96E-05	5.96E-06	2.37E+02	2.66E-04	8.39E-01	1.10E-04	4.67E-02	1.36E-02	2.70E-03	1.10E-02	5.91E-03	6.07E-03	9.45E-03	1.11E-03	1.90E-07	4.91E-03	8.66E-03
B10	0.00E+00	6.14E-05	5.20E-06	2.06E+02	2.27E-04	7.18E-01	9.58E-05	4.29E-02	1.17E-02	2.33E-03	9.53E-03	5.07E-03	5.21E-03	8.65E-03	9.55E-04	1.62E-07	4.32E-03	7.96E-03
B13	0.00E+00	3.76E-05	3.16E-06	1.25E+02	1.36E-04	4.33E-01	5.82E-05	2.64E-02	7.07E-03	1.41E-03	5.80E-03	3.06E-03	3.15E-03	5.36E-03	5.78E-04	9.86E-08	2.66E-03	4.91E-03
B14	0.00E+00	5.65E-05	4.74E-06	1.88E+02	2.05E-04	6.50E-01	8.75E-05	3.95E-02	1.06E-02	2.12E-03	8.73E-03	4.60E-03	4.72E-03	8.05E-03	8.69E-04	1.49E-07	4.01E-03	7.34E-03
D01	0.00E+00	7.30E-05	5.91E-06	1.58E+02	2.13E-04	6.12E-01	1.02E-04	5.42E-02	2.89E-02	4.33E-03	1.01E-02	5.07E-03	5.21E-03	6.97E-03	7.23E-04	1.18E-07	4.85E-03	1.01E-02
D02	0.00E+00	5.47E-05	5.43E-06	1.78E+02	3.05E-04	8.12E-01	1.06E-04	1.43E-02	3.42E-02	5.11E-03	1.03E-02	6.32E-03	6.48E-03	2.35E-03	8.76E-04	1.66E-07	3.78E-03	2.58E-03
D03	0.00E+00	7.66E-05	6.50E-06	1.87E+02	2.79E-04	7.72E-01	1.19E-04	4.40E-02	3.48E-02	5.21E-03	1.17E-02	6.27E-03	6.44E-03	5.98E-03	8.81E-04	1.57E-07	5.30E-03	8.19E-03
D04	0.00E+00	8.09E-05	7.55E-06	2.36E+02	3.84E-04	1.04E+00	1.43E-04	3.29E-02	4.48E-02	6.69E-03	1.39E-02	8.18E-03	8.39E-03	4.77E-03	1.14E-03	2.10E-07	5.53E-03	6.07E-03
D05	0.00E+00	7.21E-05	6.15E-06	1.79E+02	2.71E-04	7.46E-01	1.14E-04	3.88E-02	3.34E-02	5.00E-03	1.13E-02	6.05E-03	6.21E-03	5.37E-03	8.47E-04	1.53E-07	5.05E-03	7.22E-03
D06	0.00E+00	8.27E-05	8.09E-06	2.61E+02	4.39E-04	1.18E+00	1.55E-04	2.65E-02	5.00E-02	7.47E-03	1.51E-02	9.19E-03	9.42E-03	4.05E-03	1.28E-03	2.39E-07	5.63E-03	4.83E-03
D07	0.00E+00	6.87E-05	5.72E-06	1.95E+02	2.40E-04	7.05E-01	1.04E-04	4.20E-02	1.99E-02	3.36E-03	1.04E-02	5.45E-03	5.59E-03	7.29E-03	9.14E-04	1.61E-07	4.82E-03	7.80E-03
D08	0.00E+00	5.26E-05	5.19E-06	2.00E+02	2.91E-04	8.18E-01	1.01E-04	1.62E-02	2.15E-02	3.60E-03	9.86E-03	6.03E-03	6.19E-03	2.96E-03	9.81E-04	1.83E-07	3.67E-03	2.92E-03
D09	0.00E+00	4.66E-05	4.10E-06	1.46E+02	1.90E-04	5.50E-01	7.63E-05	2.48E-02	1.51E-02	2.54E-03	7.53E-03	4.18E-03	4.29E-03	4.30E-03	6.93E-04	1.24E-07	3.24E-03	4.58E-03
D10	0.00E+00	4.64E-05	4.75E-06	1.87E+02	2.79E-04	7.81E-01	9.40E-05	1.08E-02	2.03E-02	3.39E-03	9.10E-03	5.72E-03	5.87E-03	2.04E-03	9.26E-04	1.75E-07	3.24E-03	1.91E-03
D11	0.00E+00	4.51E-05	3.95E-06	1.40E+02	1.82E-04	5.26E-01	7.33E-05	2.43E-02	1.45E-02	2.44E-03	7.24E-03	4.00E-03	4.10E-03	4.22E-03	6.64E-04	1.18E-07	3.13E-03	4.49E-03
D12	0.00E+00	5.22E-05	5.23E-06	2.03E+02	2.98E-04	8.37E-01	1.02E-04	1.47E-02	2.19E-02	3.66E-03	9.95E-03	6.16E-03	6.32E-03	2.71E-03	1.00E-03	1.87E-07	3.63E-03	2.64E-03
D13	0.00E+00	4.64E-05	3.78E-06	1.06E+02	1.54E-04	4.27E-01	6.91E-05	2.78E-02	1.96E-02	2.93E-03	6.91E-03	3.53E-03	3.62E-03	3.79E-03	4.95E-04	8.87E-08	3.29E-03	5.18E-03
D14	0.00E+00	4.27E-05	3.20E-06	8.33E+01	1.10E-04	3.13E-01	5.75E-05	2.93E-02	1.51E-02	2.27E-03	5.87E-03	2.69E-03	2.77E-03	3.94E-03	3.80E-04	6.70E-08	3.10E-03	5.48E-03
D15	0.00E+00	4.97E-05	3.95E-06	1.08E+02	1.53E-04	4.27E-01	7.16E-05	3.12E-02	1.98E-02	2.98E-03	7.21E-03	3.57E-03	3.66E-03	4.23E-03	5.01E-04	8.94E-08	3.55E-03	5.82E-03
D16	0.00E+00	5.94E-05	4.92E-06	1.41E+02	2.12E-04	5.83E-01	9.16E-05	3.21E-02	2.63E-02	3.94E-03	9.16E-03	4.78E-03	4.90E-03	4.48E-03	6.68E-04	1.22E-07	4.26E-03	5.97E-03
D17	0.00E+00	2.30E-05	1.87E-06	5.63E+01	7.11E-05	2.05E-01	3.29E-05	1.54E-02	8.00E-03	1.25E-03	3.27E-03	1.66E-03	1.71E-03	2.29E-03	2.61E-04	4.38E-08	1.56E-03	2.87E-03
D18	0.00E+00	7.03E-06	6.76E-07	2.42E+01	3.71E-05	1.01E-01	1.32E-05	2.09E-03	3.63E-03	5.65E-04	1.29E-03	7.75E-04	7.95E-04	3.65E-04	1.19E-04	2.21E-08	4.97E-04	3.78E-04
D19	0.00E+00	9.54E-05	6.67E-06	2.06E+02	2.03E-04	6.28E-01	1.21E-04	7.06E-02	1.95E-02	3.34E-03	1.26E-02	5.22E-03	5.36E-03	1.27E-02	9.11E-04	1.63E-07	7.21E-03	1.32E-02
D20	0.00E+00	8.21E-05	6.74E-06	2.30E+02	2.80E-04	8.23E-01	1.24E-04	5.02E-02	2.33E-02	3.93E-03	1.24E-02	6.38E-03	6.55E-03	8.80E-03	1.07E-03	1.90E-07	5.84E-03	9.32E-03
D21	0.00E+00	9.62E-05	6.79E-06	2.12E+02	2.14E-04	6.60E-01	1.24E-04	6.92E-02	2.02E-02	3.46E-03	1.29E-02	5.44E-03	5.58E-03	1.25E-02	9.44E-04	1.71E-07	7.31E-03	1.29E-02
D22	0.00E+00	5.01E-05	4.45E-06	1.60E+02	2.14E-04	6.14E-01	8.41E-05	2.43E-02	1.67E-02	2.81E-03	8.31E-03	4.64E-03	4.76E-03	4.32E-03	7.67E-04	1.40E-07	3.55E-03	4.48E-03
D23	0.00E+00	7.40E-05	5.60E-06	1.49E+02	2.04E-04	5.71E-01	1.03E-04	4.71E-02	2.70E-02	4.07E-03	1.05E-02	4.88E-03	5.01E-03	6.46E-03	6.84E-04	1.24E-07	5.46E-03	8.79E-03
D24	0.00E+00	6.39E-05	5.61E-06	1.70E+02	2.72E-04	7.34E-01	1.07E-04	2.72E-02	3.21E-02	4.81E-03	1.06E-02	5.89E-03	6.04E-03	4.01E-03	8.19E-04	1.54E-07	4.59E-03	5.02E-03
D25	0.00E+00	6.66E-05	5.58E-06	1.64E+02	2.52E-04	6.85E-01	1.06E-04	3.22E-02	3.05E-02	4.58E-03	1.06E-02	5.59E-03	5.74E-03	4.64E-03	7.78E-04	1.46E-07	4.85E-03	5.97E-03
D26	0.00E+00	6.09E-05	5.88E-06	1.91E+02	3.24E-04	8.63E-01	1.15E-04	1.70E-02	3.65E-02	5.46E-03	1.12E-02	6.76E-03	6.93E-03	2.77E-03	9.36E-04	1.79E-07	4.29E-03	3.08E-03
D27	0.00E+00	4.06E-05	3.61E-06	1.31E+02	1.75E-04	5.03E-01	6.86E-05	1.92E-02	1.37E-02	2.30E-03	6.78E-03	3.80E-03	3.90E-03	3.43E-03	6.27E-04	1.15E-07	2.89E-03	3.53E-03
D28	0.00E+00	1.72E-05	1.55E-06	5.61E+01	7.52E-05	2.16E-01	2.92E-05	8.37E-03	5.88E-03	9.87E-04	2.87E-03	1.63E-03	1.67E-03	1.47E-03	2.69E-04	4.86E-08	1.20E-03	1.54E-03
D29	0.00E+00	4.06E-05	3.61E-06	1.31E+02	1.75E-04	5.03E-01	6.86E-05	1.92E-02	1.37E-02	2.30E-03	6.78E-03	3.80E-03	3.90E-03	3.43E-03	6.27E-04	1.15E-07	2.89E-03	3.53E-03
D30	0.00E+00	1.72E-05	1.55E-06	5.61E+01	7.52E-05	2.16E-01	2.92E-05	8.37E-03	5.88E-03	9.87E-04	2.87E-03	1.63E-03	1.67E-03	1.47E-03	2.69E-04	4.86E-08	1.20E-03	1.54E-03
D31	0.00E+00	2.51E-05	2.18E-06	7.77E+01	1.02E-04	2.93E-01	4.11E-05	1.29E-02	8.07E-03	1.36E-03	4.08E-03	2.23E-03	2.29E-03	2.29E-03	3.70E-04	6.74E-08	1.79E-03	2.38E-03
D32	0.00E+00	1.34E-05	1.18E-06	4.21E+01	5.53E-05	1.60E-01	2.20E-05	6.93E-03	4.38E-03	7.36E-04	2.18E-03	1.21E-03	1.24E-03	1.21E-03	2.01E-04	3.61E-08	9.35E-04	1.28E-03
D33	0.00E+00	1.60E-05	1.38E-06	4.05E+01	6.22E-05	1.70E-01	2.55E-05	8.30E-03	7.59E-03	1.14E-03	2.53E-03	1.38E-03	1.41E-03	1.15E-03	1.93E-04	3.50E-08	1.11E-03	1.54E-03
D34	0.00E+00	2.44E-05	2.13E-06	6.35E+01	9.92E-05	2.70E-01	4.00E-05	1.17E-02	1.19E-02	1.79E-03	3.95E-03	2.17E-03	2.23E-03	1.66E-03	3.03E-04	5.60E-08	1.72E-03	2.17E-03
D35	0.00E+00	1.51E-05	1.32E-06	3.95E+01	6.16E-05	1.68E-01	2.48E-05	7.33E-03	7.41E-03	1.11E-03	2.45E-03	1.35E-03	1.39E-03	1.04E-03	1.89E-04	3.47E-08	1.06E-03	1.36E-03
D36	0.00E+00	2.23E-05	2.07E-06	6.47E+01	1.06E-04	2.86E-01	3.95E-05	8.53E-03	1.23E-02	1.84E-03	3.87E-03	2.26E-03	2.31E-03	1.27E-03	3.14E-04	5.87E-08	1.55E-03	1.57E-03
D37	0.00E+00	2.66E-05	2.52E-06	7.90E+01	1.29E-04	3.49E-01	4.74E-05	1.09E-02	1.50E-02	2.25E-03	4.60E-03	2.74E-03	2.81E-03	1.56E-03	3.83E-04	7.01E-08	1.79E-03	2.00E-03
D38	0.00E+00	1.61E-05	1.56E-06	5.07E+01	8.59E-05	2.29E-01	3.04E-05	4.60E-03	9.72E-03	1.45E-03	2.96E-03	1.79E-03	1.84E-03	7.39E-04	2.49E-04	4.72E-08	1.12E-03	8.35E-04
D39	0.00E+00	1.46E-05	1.44E-06	4.61E+01	7.70E-05	2.07E-01	2.73E-05	5.08E-03	8.83E-03	1.32E-03	2.64E-03	1.62E-03	1.66E-03	7.54E-04	2.25E-04	4.16E-08	9.81E-04	9.29E-04
D40	0.00E+00	8.89E-06	9.18E-07	3.08E+01	5.36E-05	1.42E-01	1.80E-05	1.82E-03	5.95E-03	8.87E-04	1.73E-03	1.10E-03	1.13E-03	3.21E-04	1.52E-04	2.90E-08	6.04E-04	3.24E-04
D41	0.00E+00	4.23E-06	4.20E-07	1.36E+01	2.30E-05	6.18E-02	8.05E-06	1.33E-03	2.62E-03	3.91E-04	7.77E-04	4.80E-04	4.93E-04	2.03E-04	6.68E-05	1.24E-08	2.85E-04	2.42E-04
D42	0.00E+00	1.16E-05	1.22E-06	4.17E+01	7.36E-05	1.95E-01	2.42E-05	1.67E-03	8.07E-03	1.20E-03	2.33E-03	1.50E-03	1.53E-03	3.41E-04	2.07E-04	3.98E-08	7.92E-04	2.88E-04
D43	0.00E+00	2.43E-05	1.66E-06	4.00E+01	4.81E-05	1.38E-01	3.01E-05	1.73E-02	7.04E-03	1.07E-03	3.15E-03	1.26E-03	1.30E-03	2.36E-03	1.78E-04	3.23E-08	1.86E-03	3.25E-03
D44	0.00E+00	1.48E-05	1.48E-06	4.84E+01	8.28E-05	2.21E-01	2.87E-05	3.90E-03	9.31E-03	1.39E-03	2.78E-03	1.72E-03	1.76E-03	6.38E-04	2.38E-04	4.51E-08	1.02E-03	7.05E-04
D45	0.00E+00	6.27E-05	4.75E-06	1.26E+02	1.71E-04	4.81E-01	8.63E-05	4.10E-02	2.28E-02	3.43E-03	8.80E-03	4.11E-03	4.22E-03	5.57E-03	5.77E-04	1.04E-07	4.58E-03	7.65E-03
D46	0.00E+00	7.17E-05	5.27E-06	1.33E+02	1.68E-04	4.84E-01	9.31E-05	5.25E-02	2.38E-02	3.58E-03	9.53E-03	4.22E-03	4.34E-03	6.98E-03	5.98E-04	1.03E-07	5.19E-03	9.82E-03
D47	0.00E+00	7.31E-05	5.76E-06	1.58E+02	2.25E-04	6.26E-01	1.06E-04	4.44E-02	2.90E-02	4.36E-03	1.07E-02	5.24E-03	5.38E-03	6.10E-03	7.35E-04	1.33E-07	5.30E-03	8.28E-03
D48	0.00E+00	8.70E-06	8.97E-07	3.01E+01	5.23E-05	1.39E-01	1.76E-05	1.80E-03	5.81E-03	8.67E-04	1.69E-03	1.07E-03	1.10E-03	3.16E-04	1.49E-04	2.83E-08	5.91E-04	3.21E-04
D49	0.00E+00	7.31E-05	5.76E-06	1.58E+02	2.25E-04	6.26E-01	1.06E-04	4.44E-02	2.90E-02	4.36E-03	1.07E-02	5.24E-03	5.38E-03	6.10E-03	7.35E-04	1.33E-07	5.30E-03	8.28E-03
D50	0.00E+00	7.78E-05	5.86E-06	1.53E+02	2.04E-04	5.77E-01	1.05E-04	5.33E-02	2.77E-02	4.17E-03	1.07E-02	4.95E-03	5.08E-03	7.16E-03	6.98E-04	1.23E-07	5.63E-03	9.96E-03
D51	0.00E+00	1.71E-05	1.55E-06	4.87E+01	8.02E-05	2.15E-01	3.03E-05	5.96E-03	9.24E-03	1.38E-03	2.99E-03	1.71E-03	1.75E-03	9.29E-04	2.37E-04	4.53E-08	1.24E-03	1.09E-03
D52	0.00E+00	1.64E-05	1.56E-06	5.04E+01	8.51E-05	2.27E-01	3.05E-05	4.75E-03	9.65E-03	1.44E-03	2.98E-03	1.78E-03	1.83E-03	7.69E-04	2.47E-04	4.72E-08	1.16E-03	8.64E-04
D53	0.00E+00	1.97E-05	1.85E-06	5.92E+01	9.95E-05	2.65E-01	3.63E-05	5.79E-03	1.13E-02	1.69E-03	3.56E-03	2.09E-03	2.15E-03	9.47E-04	2.90E-04	5.58E-08	1.42E-03	1.06E-03
D54	0.00E+00	1.24E-05	1.19E-06	3.83E+01	6.45E-05	1.72E-01	2.31E-05	3.77E-03	7.33E-03	1.09E-03	2.26E-03	1.35E-03	1.39E-03	5.99E-04	1.87E-04	3.56E-08	8.74E-04	6.87E-04
D55	0.00E+00	2.33E-05	2.00E-06	7.05E+01	9.11E-05	2.64E-01	3.74E-05	1.23E-02	7.29E-03	1.23E-03	3.73E-03	2.01E-03	2.06E-03	2.20E-03	3.34E-04	6.07E-08	1.66E-03	2.28E-03
D56	0.00E+00	3.34E-05	2.89E-06	1.03E+02	1.34E-04	3.87E-01	5.43E-05	1.73E-02	1.06E-02	1.79E-03	5.40E-03	2.94E-03	3.02E-03	3.07E-03	4.88E-04	8.88E-08	2.38E-03	3.19E-03
D57	0.00E+00	3.31E-05	2.96E-06	1.07E+02	1.45E-04	4.15E-01	5.62E-05	1.55E-02	1.13E-02	1.89E-03	5.55E-03	3.13E-03	3.21E-03	2.76E-03	5.16E-04	9.45E-08	2.34E-03	2.85E-03
D58	0.00E+00	4.41E-05	3.51E-06	1.17E+02	1.39E-04	4.11E-01	6.43E-05	2.80E-02	1.18E-02	2.00E-03	6.49E-03	3.22E-03	3.30E-03	4.95E-03	5.44E-04	9.69E-08	3.19E-03	5.21E-03
D59	0.00E+00	3.31E-05	2.96E-06	1.07E+02	1.45E-04	4.15E-01	5.62E-05	1.55E-02	1.13E-02	1.89E-03	5.55E-03	3.13E-03	3.21E-03	2.76E-03	5.16E-04	9.45E-08	2.34E-03	2.85E-03
D60	0.00E+00	4.41E-05	3.51E-06	1.17E+02	1.39E-04	4.11E-01	6.43E-05	2.80E-02	1.18E-02	2.00E-03	6.49E-03	3.22E-03	3.30E-03	4.95E-03	5.44E-04	9.69E-08	3.19E-03	5.21E-03
D61	0.00E+00	2.12E-05	1.54E-06	5.07E+01	5.63E-05	1.68E-01	2.92E-05	1.33E-02	4.94E-03	8.45E-04	3.03E-03	1.35E-03	1.39E-03	2.49E-03	2.31E-04	4.38E-08	1.64E-03	2.48E-03
D62	0.00E+00	7.55E-06	5.59E-07	1.75E+01	1.81E-05	5.57E-02	9.87E-06	5.68E-03	1.69E-03	2.88E-04	1.01E-03	4.53E-04	4.65E-04	9.90E-04	7.83E-05	1.33E-08	5.44E-04	1.06E-03
D63	0.00E+00	3.03E-06	2.62E-07	8.82E+00	1.27E-05	3.51E-02	5.07E-06	1.25E-03	1.29E-03	2.02E-04	5.06E-04	2.76E-04	2.83E-04	2.12E-04	4.25E-05	7.97E-09	2.23E-04	2.31E-04
D64	0.00E+00	1.20E-05	7.96E-07	1.95E+01	1.71E-05	5.47E-02	1.33E-05	1.02E-02	2.51E-03	4.00E-04	1.40E-03	5.14E-04	5.29E-04	1.52E-03	8.27E-05	1.33E-08	8.67E-04	1.91E-03
D65	0.00E+00	3.05E-05	2.17E-06	6.64E+01	6.49E-05	2.02E-01	3.84E-05	2.35E-02	6.29E-03	1.08E-03	3.98E-03	1.68E-03	1.72E-03	4.15E-03	2.93E-04	5.06E-08	2.25E-03	4.39E-03
D66	0.00E+00	2.68E-05	1.97E-06	6.06E+01	6.07E-05	1.88E-01	3.42E-05	2.11E-02	5.81E-03	9.89E-04	3.49E-03	1.54E-03	1.59E-03	3.64E-03	2.69E-04	4.45E-08	1.91E-03	3.95E-03
D67	0.00E+00	3.05E-05	2.17E-06	6.64E+01	6.49E-05	2.02E-01	3.84E-05	2.35E-02	6.29E-03	1.08E-03	3.98E-03	1.68E-03	1.72E-03	4.15E-03	2.93E-04	5.06E-08	2.25E-03	4.39E-03
D68	0.00E+00	2.68E-05	1.97E-06	6.06E+01	6.07E-05	1.88E-01	3.42E-05	2.11E-02	5.81E-03	9.89E-04	3.49E-03	1.54E-03	1.59E-03	3.64E-03	2.69E-04	4.45E-08	1.91E-03	3.95E-03
D69	0.00E+00	1.17E-05	8.65E-07	2.72E+01	2.83E-05	8.68E-02	1.54E-05	8.65E-03	2.63E-03	4.48E-04	1.58E-03	7.05E-04	7.24E-04	1.52E-03	1.22E-04	2.11E-08	8.56E-04	1.62E-03
D70	0.00E+00	9.98E-06	7.47E-07	2.36E+01	2.50E-05	7.63E-02	1.33E-05	7.34E-03	2.30E-03	3.90E-04	1.35E-03	6.17E-04	6.33E-04	1.28E-03	1.06E-04	1.82E-08	7.19E-04	1.37E-03
D71	0.00E+00	3.19E-05	2.46E-06	6.93E+01	7.95E-05	2.36E-01	4.18E-05	2.44E-02	9.61E-03	1.51E-03	4.19E-03	1.98E-03	2.03E-03	3.58E-03	3.13E-04	5.03E-08	2.16E-03	4.56E-03
D72	0.00E+00	1.83E-05	1.53E-06	4.88E+01	6.65E-05	1.87E-01	2.85E-05	9.70E-03	7.05E-03	1.10E-03	2.84E-03	1.49E-03	1.53E-03	1.54E-03	2.31E-04	4.18E-08	1.31E-03	1.80E-03
D73	0.00E+00	1.34E-05	1.18E-06	3.84E+01	5.30E-05	1.49E-01	2.15E-05	7.41E-03	5.60E-03	8.72E-04	2.11E-03	1.17E-03	1.20E-03	1.12E-03	1.82E-04	3.15E-08	9.01E-04	1.37E-03
D74	0.00E+00	9.68E-06	9.58E-07	3.47E+01	5.36E-05	1.46E-01	1.87E-05	2.72E-03	5.22E-03	8.11E-04	1.81E-03	1.11E-03	1.14E-03	4.71E-04	1.71E-04	3.15E-08	6.70E-04	4.90E-04
D75	0.00E+00	5.67E-06	4.66E-07	1.65E+01	2.10E-05	6.08E-02	8.96E-06	2.88E-03	1.69E-03	2.85E-04	9.05E-04	4.68E-04	4.80E-04	5.37E-04	7.80E-05	1.47E-08	4.25E-04	5.33E-04
D76	0.00E+00	1.10E-05	8.74E-07	2.94E+01	3.50E-05	1.03E-01	1.61E-05	6.84E-03	2.96E-03	5.01E-04	1.62E-03	8.09E-04	8.30E-04	1.21E-03	1.36E-04	2.45E-08	7.94E-04	1.27E-03
D77	0.00E+00	1.18E-05	8.17E-07	2.52E+01	2.47E-05	7.66E-02	1.49E-05	8.63E-03	2.38E-03	4.08E-04	1.56E-03	6.38E-04	6.55E-04	1.57E-03	1.11E-04	2.03E-08	9.04E-04	1.61E-03
D78	0.00E+00	1.02E-05	7.12E-07	2.11E+01	1.90E-05	6.09E-02	1.23E-05	8.43E-03	1.96E-03	3.36E-04	1.27E-03	5.15E-04	5.30E-04	1.47E-03	9.12E-05	1.51E-08	7.44E-04	1.58E-03
D79	0.00E+00	2.07E-05	1.70E-06	5.22E+01	6.77E-05	1.93E-01	3.05E-05	1.29E-02	7.45E-03	1.17E-03	3.04E-03	1.56E-03	1.60E-03	1.96E-03	2.44E-04	4.20E-08	1.43E-03	2.40E-03
D80	0.00E+00	3.10E-05	2.65E-06	8.44E+01	1.14E-04	3.23E-01	4.82E-05	1.76E-02	1.22E-02	1.91E-03	4.76E-03	2.57E-03	2.64E-03	2.68E-03	3.99E-04	6.96E-08	2.12E-03	3.27E-03
D81	0.00E+00	1.05E-05	1.09E-06	4.06E+01	6.45E-05	1.75E-01	2.15E-05	2.01E-03	6.16E-03	9.57E-04	2.08E-03	1.32E-03	1.35E-03	3.85E-04	2.02E-04	3.76E-08	7.29E-04	3.52E-04
D82	0.00E+00	9.80E-06	1.05E-06	4.01E+01	6.49E-05	1.75E-01	2.10E-05	1.12E-03	6.13E-03	9.50E-04	2.03E-03	1.31E-03	1.35E-03	2.58E-04	2.00E-04	3.77E-08	6.80E-04	1.84E-04
D83	0.00E+00	8.61E-05	6.71E-06	2.15E+02	2.36E-04	7.15E-01	1.18E-04	6.34E-02	2.12E-02	3.59E-03	1.18E-02	5.69E-03	5.85E-03	1.08E-02	9.75E-04	1.63E-07	5.99E-03	1.18E-02
D84	0.00E+00	6.24E-05	4.50E-06	1.34E+02	1.24E-04	3.96E-01	7.60E-05	5.28E-02	1.26E-02	2.15E-03	7.77E-03	3.31E-03	3.40E-03	8.99E-03	5.83E-04	9.19E-08	4.36E-03	9.89E-03
D85	0.00E+00	6.63E-05	5.18E-06	1.66E+02	1.84E-04	5.55E-01	9.10E-05	4.85E-02	1.64E-02	2.78E-03	9.15E-03	4.42E-03	4.54E-03	8.28E-03	7.55E-04	1.26E-07	4.62E-03	9.05E-03
D86	0.00E+00	5.31E-05	3.85E-06	1.15E+02	1.08E-04	3.44E-01	6.52E-05	4.47E-02	1.09E-02	1.85E-03	6.65E-03	2.86E-03	2.94E-03

Appendix F.2.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 2

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E08	0.00E+00	8.43E-05	7.17E-06	2.07E+02	3.11E-04	8.59E-01	1.31E-04	4.73E-02	3.86E-02	5.78E-03	1.30E-02	6.97E-03	7.16E-03	6.47E-03	9.78E-04	1.75E-07	5.86E-03	8.80E-03
E09	0.00E+00	6.01E-05	5.20E-06	1.53E+02	2.36E-04	6.47E-01	9.66E-05	3.09E-02	2.88E-02	4.31E-03	9.56E-03	5.22E-03	5.36E-03	4.31E-03	7.31E-04	1.33E-07	4.20E-03	5.74E-03
E10	0.00E+00	7.17E-05	6.06E-06	1.74E+02	2.60E-04	7.18E-01	1.11E-04	4.12E-02	3.24E-02	4.85E-03	1.10E-02	5.84E-03	6.00E-03	5.61E-03	8.21E-04	1.46E-07	4.97E-03	7.67E-03
E11	0.00E+00	1.12E-04	8.66E-06	2.27E+02	3.04E-04	8.65E-01	1.53E-04	7.90E-02	4.13E-02	6.20E-03	1.55E-02	7.34E-03	7.54E-03	1.05E-02	1.04E-03	1.78E-07	7.93E-03	1.48E-02
E12	0.00E+00	1.34E-04	1.05E-05	2.85E+02	3.98E-04	1.12E+00	1.90E-04	8.67E-02	5.23E-02	7.85E-03	1.91E-02	9.37E-03	9.62E-03	1.17E-02	1.32E-03	2.33E-07	9.50E-03	1.62E-02
E13	0.00E+00	2.69E-05	2.16E-06	7.34E+01	8.88E-05	2.61E-01	4.01E-05	1.61E-02	7.41E-03	1.25E-03	4.04E-03	2.03E-03	2.09E-03	2.88E-03	3.42E-04	6.20E-08	1.96E-03	2.99E-03
E14	0.00E+00	1.97E-05	1.57E-06	5.22E+01	6.08E-05	1.81E-01	2.84E-05	1.31E-02	5.23E-03	8.84E-04	2.85E-03	1.42E-03	1.46E-03	2.28E-03	2.40E-04	4.17E-08	1.39E-03	2.44E-03
E15	0.00E+00	1.64E-05	1.43E-06	5.00E+01	6.42E-05	1.87E-01	2.62E-05	9.43E-03	5.18E-03	8.70E-04	2.58E-03	1.42E-03	1.46E-03	1.61E-03	2.37E-04	4.13E-08	1.12E-03	1.75E-03
E16	0.00E+00	1.77E-05	1.51E-06	5.21E+01	6.52E-05	1.91E-01	2.75E-05	1.06E-02	5.35E-03	8.99E-04	2.72E-03	1.46E-03	1.50E-03	1.82E-03	2.45E-04	4.26E-08	1.22E-03	1.98E-03
E17	0.00E+00	1.37E-05	1.17E-06	4.09E+01	5.25E-05	1.52E-01	2.18E-05	7.44E-03	4.22E-03	7.11E-04	2.17E-03	1.16E-03	1.19E-03	1.32E-03	1.94E-04	3.51E-08	9.77E-04	1.38E-03
E18	0.00E+00	1.29E-05	1.01E-06	3.37E+01	3.94E-05	1.17E-01	1.86E-05	8.16E-03	3.37E-03	5.70E-04	1.88E-03	9.18E-04	9.43E-04	1.46E-03	1.55E-04	2.80E-08	9.42E-04	1.52E-03
E19	0.00E+00	4.08E-05	3.42E-06	1.01E+02	1.55E-04	4.22E-01	6.50E-05	1.95E-02	1.88E-02	2.82E-03	6.51E-03	3.44E-03	3.53E-03	2.82E-03	4.79E-04	9.01E-08	2.98E-03	3.61E-03
E20	0.00E+00	4.06E-05	3.52E-06	1.05E+02	1.65E-04	4.47E-01	6.65E-05	1.90E-02	1.97E-02	2.96E-03	6.60E-03	3.61E-03	3.70E-03	2.72E-03	5.03E-04	9.36E-08	2.90E-03	3.51E-03
E21	0.00E+00	1.30E-05	1.11E-06	3.89E+01	4.96E-05	1.44E-01	2.06E-05	7.28E-03	4.01E-03	6.74E-04	2.05E-03	1.10E-03	1.13E-03	1.28E-03	1.84E-04	3.29E-08	9.18E-04	1.35E-03
E22	0.00E+00	3.52E-06	2.28E-07	5.74E+00	3.01E-06	1.21E-02	3.46E-06	3.70E-03	4.86E-04	8.36E-05	3.60E-04	1.18E-04	1.21E-04	6.17E-04	2.25E-05	2.69E-09	2.39E-04	6.96E-04
E23	0.00E+00	1.30E-05	1.11E-06	3.89E+01	4.96E-05	1.44E-01	2.06E-05	7.28E-03	4.01E-03	6.74E-04	2.05E-03	1.10E-03	1.13E-03	1.28E-03	1.84E-04	3.29E-08	9.18E-04	1.35E-03
E24	0.00E+00	3.52E-06	2.28E-07	5.74E+00	3.01E-06	1.21E-02	3.46E-06	3.70E-03	4.86E-04	8.36E-05	3.60E-04	1.18E-04	1.21E-04	6.17E-04	2.25E-05	2.69E-09	2.39E-04	6.96E-04
E25	0.00E+00	1.24E-05	1.22E-06	4.38E+01	6.72E-05	1.84E-01	2.36E-05	3.78E-03	6.59E-03	1.02E-03	2.29E-03	1.40E-03	1.44E-03	6.37E-04	2.15E-04	3.94E-08	8.49E-04	6.86E-04
E26	0.00E+00	1.33E-05	1.30E-06	4.65E+01	7.13E-05	1.95E-01	2.52E-05	3.99E-03	6.98E-03	1.09E-03	2.45E-03	1.49E-03	1.53E-03	6.86E-04	2.28E-04	4.22E-08	9.28E-04	7.23E-04
E27	0.00E+00	1.93E-05	1.82E-06	6.28E+01	9.31E-05	2.57E-01	3.44E-05	7.75E-03	9.35E-03	1.45E-03	3.35E-03	1.98E-03	2.03E-03	1.24E-03	3.05E-04	5.50E-08	1.32E-03	1.42E-03
E28	0.00E+00	9.36E-06	9.88E-07	3.73E+01	5.99E-05	1.62E-01	1.97E-05	1.45E-03	5.69E-03	8.82E-04	1.89E-03	1.22E-03	1.25E-03	2.94E-04	1.86E-04	3.47E-08	6.45E-04	2.48E-04
E29	0.00E+00	1.49E-05	1.24E-06	3.95E+01	5.35E-05	1.50E-01	2.30E-05	8.03E-03	5.69E-03	8.90E-04	2.30E-03	1.20E-03	1.23E-03	1.27E-03	1.86E-04	3.36E-08	1.07E-03	1.49E-03
E30	0.00E+00	5.81E-06	4.66E-07	1.39E+01	1.74E-05	5.02E-02	8.22E-06	3.89E-03	1.97E-03	3.08E-04	8.21E-04	4.10E-04	4.21E-04	5.84E-04	6.42E-05	1.09E-08	4.00E-04	7.26E-04
E31	0.00E+00	1.62E-05	1.40E-06	4.59E+01	6.44E-05	1.79E-01	2.63E-05	7.80E-03	6.68E-03	1.04E-03	2.62E-03	1.42E-03	1.45E-03	1.25E-03	2.19E-04	4.00E-08	1.16E-03	1.44E-03
E32	0.00E+00	7.71E-06	5.84E-07	1.70E+01	2.05E-05	5.94E-02	1.05E-05	5.12E-03	2.37E-03	3.73E-04	1.07E-03	4.97E-04	5.11E-04	7.90E-04	7.79E-05	1.37E-08	5.59E-04	9.55E-04
E33	0.00E+00	5.99E-05	5.50E-06	1.70E+02	2.75E-04	7.45E-01	1.04E-04	2.47E-02	3.23E-02	4.82E-03	1.02E-02	5.90E-03	6.06E-03	3.60E-03	8.23E-04	1.53E-07	4.16E-03	4.56E-03
E34	0.00E+00	3.99E-05	3.12E-06	8.33E+01	1.14E-04	3.22E-01	5.55E-05	2.73E-02	1.52E-02	2.28E-03	5.59E-03	2.71E-03	2.78E-03	3.63E-03	3.83E-04	6.62E-08	2.80E-03	5.11E-03
E35	0.00E+00	2.67E-05	2.30E-06	6.72E+01	1.03E-04	2.82E-01	4.25E-05	1.42E-02	1.26E-02	1.88E-03	4.21E-03	2.28E-03	2.34E-03	1.96E-03	3.19E-04	5.78E-08	1.87E-03	2.63E-03
E36	0.00E+00	3.01E-05	2.12E-06	5.01E+01	5.63E-05	1.69E-01	3.60E-05	2.50E-02	8.81E-03	1.33E-03	3.71E-03	1.53E-03	1.57E-03	3.24E-03	2.19E-04	3.52E-08	2.14E-03	4.68E-03
E37	0.00E+00	2.67E-05	2.30E-06	6.72E+01	1.03E-04	2.82E-01	4.25E-05	1.42E-02	1.26E-02	1.88E-03	4.21E-03	2.28E-03	2.34E-03	1.96E-03	3.19E-04	5.78E-08	1.87E-03	2.63E-03
E38	0.00E+00	3.01E-05	2.12E-06	5.01E+01	5.63E-05	1.69E-01	3.60E-05	2.50E-02	8.81E-03	1.33E-03	3.71E-03	1.53E-03	1.57E-03	3.24E-03	2.19E-04	3.52E-08	2.14E-03	4.68E-03
E39	0.00E+00	2.13E-05	1.84E-06	5.93E+01	8.18E-05	2.30E-01	3.38E-05	1.14E-02	8.63E-03	1.35E-03	3.34E-03	1.82E-03	1.87E-03	1.76E-03	2.82E-04	4.98E-08	1.47E-03	2.11E-03
E40	0.00E+00	1.36E-05	1.39E-06	5.12E+01	8.05E-05	2.19E-01	2.72E-05	3.11E-03	7.76E-03	1.20E-03	2.63E-03	1.65E-03	1.70E-03	5.61E-04	2.53E-04	4.69E-08	9.34E-04	5.54E-04
E41	0.00E+00	1.20E-05	1.18E-06	4.23E+01	6.48E-05	1.77E-01	2.28E-05	3.74E-03	6.35E-03	9.87E-04	2.21E-03	1.35E-03	1.39E-03	6.28E-04	2.07E-04	3.80E-08	8.23E-04	6.79E-04
E42	0.00E+00	1.21E-05	1.23E-06	4.51E+01	7.06E-05	1.92E-01	2.40E-05	2.94E-03	6.82E-03	1.06E-03	2.32E-03	1.46E-03	1.49E-03	5.22E-04	2.23E-04	4.12E-08	8.31E-04	5.26E-04
E43	0.00E+00	7.21E-06	7.58E-07	2.85E+01	4.56E-05	1.23E-01	1.50E-05	1.20E-03	4.35E-03	6.74E-04	1.45E-03	9.29E-04	9.53E-04	2.38E-04	1.42E-04	2.65E-08	4.96E-04	2.08E-04
E44	0.00E+00	1.15E-05	1.20E-06	4.48E+01	7.12E-05	1.93E-01	2.37E-05	2.12E-03	6.80E-03	1.06E-03	2.29E-03	1.45E-03	1.49E-03	4.12E-04	2.22E-04	4.15E-08	8.00E-04	3.71E-04
E45	0.00E+00	2.50E-05	1.89E-06	6.10E+01	6.71E-05	2.02E-01	3.42E-05	1.73E-02	5.98E-03	1.02E-03	3.50E-03	1.62E-03	1.66E-03	3.06E-03	2.77E-04	4.91E-08	1.84E-03	3.22E-03
E46	0.00E+00	2.27E-05	1.52E-06	4.22E+01	3.17E-05	1.08E-01	2.50E-05	2.09E-02	3.78E-03	6.49E-04	2.61E-03	9.65E-04	9.93E-04	3.58E-03	1.76E-04	2.65E-08	1.62E-03	3.92E-03
E47	0.00E+00	2.37E-05	1.85E-06	6.16E+01	7.18E-05	2.13E-01	3.41E-05	1.51E-02	6.14E-03	1.04E-03	3.46E-03	1.68E-03	1.72E-03	2.69E-03	2.84E-04	5.12E-08	1.74E-03	2.80E-03
E48	0.00E+00	9.13E-06	7.27E-07	2.40E+01	2.78E-05	8.29E-02	1.31E-05	6.14E-03	2.40E-03	4.06E-04	1.32E-03	6.52E-04	6.69E-04	1.07E-03	1.10E-04	1.91E-08	6.46E-04	1.14E-03
E49	0.00E+00	2.28E-05	1.77E-06	5.86E+01	6.74E-05	2.01E-01	3.24E-05	1.49E-02	5.83E-03	9.88E-04	3.29E-03	1.59E-03	1.63E-03	2.64E-03	2.69E-04	4.81E-08	1.66E-03	2.77E-03
E50	0.00E+00	6.22E-06	5.61E-07	2.02E+01	2.71E-05	7.78E-02	1.05E-05	3.05E-03	2.12E-03	3.56E-04	1.03E-03	5.87E-04	6.02E-04	5.33E-04	9.69E-05	1.75E-08	4.32E-04	5.63E-04
E51	0.00E+00	2.17E-05	1.71E-06	5.71E+01	6.71E-05	1.99E-01	3.15E-05	1.37E-02	5.72E-03	9.69E-04	3.19E-03	1.56E-03	1.60E-03	2.45E-03	2.64E-04	4.75E-08	1.59E-03	2.56E-03
E52	0.00E+00	1.77E-06	1.78E-07	6.88E+00	1.01E-05	2.84E-02	3.46E-06	5.25E-04	7.45E-04	1.24E-04	3.35E-04	2.09E-04	2.14E-04	9.37E-05	3.39E-05	6.29E-09	1.21E-04	9.44E-05
E53	0.00E+00	2.57E-05	2.10E-06	7.14E+01	8.69E-05	2.55E-01	3.86E-05	1.57E-02	7.24E-03	1.22E-03	3.87E-03	1.98E-03	2.03E-03	2.76E-03	3.33E-04	5.94E-08	1.84E-03	2.92E-03
E54	0.00E+00	7.15E-06	5.75E-07	1.87E+01	2.13E-05	6.40E-02	1.01E-05	5.12E-03	1.87E-03	3.15E-04	1.01E-03	5.04E-04	5.18E-04	8.67E-04	8.57E-05	1.43E-08	4.90E-04	9.55E-04
E55	0.00E+00	2.57E-05	2.10E-06	7.14E+01	8.69E-05	2.55E-01	3.86E-05	1.57E-02	7.24E-03	1.22E-03	3.87E-03	1.98E-03	2.03E-03	2.76E-03	3.33E-04	5.94E-08	1.84E-03	2.92E-03
E56	0.00E+00	7.15E-06	5.75E-07	1.87E+01	2.13E-05	6.40E-02	1.01E-05	5.12E-03	1.87E-03	3.15E-04	1.01E-03	5.04E-04	5.18E-04	8.67E-04	8.57E-05	1.43E-08	4.90E-04	9.55E-04
F31	0.00E+00	6.74E-05	5.74E-06	1.67E+02	2.52E-04	6.93E-01	1.06E-04	3.72E-02	3.11E-02	4.66E-03	1.05E-02	5.62E-03	5.77E-03	5.10E-03	7.88E-04	1.42E-07	4.69E-03	6.91E-03
F32	0.00E+00	4.52E-05	4.60E-06	1.53E+02	2.64E-04	7.03E-01	8.99E-05	1.03E-02	2.95E-02	4.40E-03	8.68E-03	5.44E-03	5.58E-03	1.75E-03	7.55E-04	1.43E-07	3.10E-03	1.84E-03
F33	0.00E+00	2.10E-05	2.11E-06	6.95E+01	1.19E-04	3.17E-01	4.09E-05	5.75E-03	1.34E-02	2.00E-03	3.94E-03	2.46E-03	2.52E-03	9.15E-04	3.42E-04	6.42E-08	1.42E-03	1.04E-03
F34	0.00E+00	1.06E-05	1.10E-06	3.70E+01	6.46E-05	1.71E-01	2.15E-05	2.00E-03	7.14E-03	1.07E-03	2.07E-03	1.32E-03	1.35E-03	3.63E-04	1.83E-04	3.49E-08	7.19E-04	3.54E-04
F35	0.00E+00	1.59E-05	1.32E-06	4.58E+01	5.74E-05	1.67E-01	2.47E-05	8.89E-03	4.68E-03	7.90E-04	2.48E-03	1.29E-03	1.32E-03	1.60E-03	2.15E-04	3.94E-08	1.16E-03	1.65E-03
F36	0.00E+00	1.38E-05	9.94E-07	3.14E+01	3.27E-05	9.97E-02	1.81E-05	9.80E-03	3.02E-03	5.16E-04	1.87E-03	8.13E-04	8.35E-04	1.76E-03	1.41E-04	2.52E-08	1.03E-03	1.83E-03
F37	0.00E+00	8.09E-05	6.28E-06	1.66E+02	2.25E-04	6.38E-01	1.12E-04	5.59E-02	3.03E-02	4.55E-03	1.13E-02	5.40E-03	5.54E-03	7.43E-03	7.63E-04	1.32E-07	5.71E-03	1.04E-02
F38	0.00E+00	8.78E-05	7.00E-06	1.91E+02	2.69E-04	7.54E-01	1.26E-04	5.67E-02	3.51E-02	5.26E-03	1.26E-02	6.28E-03	6.45E-03	7.62E-03	8.85E-04	1.56E-07	6.19E-03	1.06E-02
F39	0.00E+00	1.47E-05	1.38E-06	5.17E+01	7.26E-05	2.06E-01	2.66E-05	5.75E-03	5.50E-03	9.21E-04	2.60E-03	1.53E-03	1.57E-03	1.03E-03	2.51E-04	4.64E-08	1.03E-03	1.05E-03
F40	0.00E+00	3.34E-06	3.06E-07	1.13E+01	1.55E-05	4.43E-02	5.86E-06	1.42E-03	1.19E-03	2.00E-04	5.77E-04	3.32E-04	3.41E-04	2.56E-04	5.46E-05	1.01E-08	2.37E-04	2.60E-04
F41	0.00E+00	9.69E-06	9.87E-07	3.66E+01	5.79E-05	1.57E-01	1.96E-05	1.96E-03	5.55E-03	8.62E-04	1.90E-03	1.19E-03	1.22E-03	3.75E-04	1.82E-04	3.40E-08	6.78E-04	3.46E-04
F42	0.00E+00	1.08E-05	1.15E-06	4.37E+01	7.06E-05	1.90E-01	2.30E-05	1.28E-03	6.67E-03	1.03E-03	2.22E-03	1.43E-03	1.47E-03	2.97E-04	2.18E-04	4.12E-08	7.57E-04	2.13E-04
F84	0.00E+00	3.41E-05	2.62E-06	5.88E+01	7.81E-05	2.23E-01	4.30E-05	2.66E-02	1.61E-02	2.27E-03	4.27E-03	2.00E-03	2.06E-03	2.70E-03	2.67E-04	3.72E-08	2.21E-03	4.99E-03
F85	0.00E+00	2.08E-05	1.68E-06	4.94E+01	6.52E-05	1.83E-01	3.01E-05	1.35E-02	8.79E-03	1.32E-03	3.01E-03	1.52E-03	1.56E-03	1.82E-03	2.31E-04	3.80E-08	1.46E-03	2.52E-03
F86	0.00E+00	2.62E-05	2.14E-06	6.66E+01	8.08E-05	2.32E-01	3.74E-05	1.80E-02	9.22E-03	1.45E-03	3.70E-03	1.90E-03	1.95E-03	2.66E-03	3.09E-04	5.07E-08	1.76E-03	3.36E-03
F87	0.00E+00	5.21E-05	3.59E-06	9.11E+01	1.02E-04	2.96E-01	6.40E-05	3.89E-02	1.56E-02	2.36E-03	6.68E-03	2.70E-03	2.77E-03	5.24E-03	4.06E-04	6.80E-08	3.90E-03	7.29E-03
F88	0.00E+00	3.41E-05	2.62E-06	5.88E+01	7.81E-05	2.23E-01	4.30E-05	2.66E-02	1.61E-02	2.27E-03	4.27E-03	2.00E-03	2.06E-03	2.70E-03	2.67E-04	3.72E-08	2.21E-03	4.99E-03
F89	0.00E+00	1.05E-04	6.84E-06	1.11E+02	1.00E-04	3.29E-01	1.05E-04	9.84E-02	2.85E-02	4.09E-03	1.09E-02	3.68E-03	3.79E-03	9.61E-03	4.56E-04	5.96E-08	7.12E-03	1.85E-02
G07	0.00E+00	4.99E-06	4.02E-07	1.21E+01	1.41E-05	4.11E-02	6.85E-06	3.71E-03	1.66E-03	2.61E-04	6.78E-04	3.39E-04	3.48E-04	5.40E-04	5.55E-05	8.83E-09	3.30E-04	6.92E-04
G09	0.00E+00	1.49E-05	1.01E-06	1.58E+01	1.25E-05	4.65E-02	1.43E-05	1.58E-02	4.11E-03	5.86E-04	1.45E-03	5.02E-04	5.18E-04	1.49E-03	6.40E-05	6.45E-09	9.31E-04	2.97E-03
G10	0.00E+00	4.99E-06	4.02E-07	1.21E+01	1.41E-05	4.11E-02	6.85E-06	3.71E-03	1.66E-03	2.61E-04	6.78E-04	3.39E-04	3.48E-04	5.40E-04	5.55E-05	8.83E-09	3.30E-04	6.92E-04
H01	0.00E+00	2.98E-04	2.14E-05	7.76E+02	5.83E-04	2.07E+00	3.61E-04	3.01E-01	3.75E-02	7.78E-03	3.70E-02	1.56E-02	1.61E-02	6.11E-02	3.29E-03	4.82E-07	2.09E-02	5.64E-02
H02	0.00E+00	2.98E-04	2.14E-05	7.76E+02	5.83E-04	2.07E+00	3.61E-04	3.01E-01	3.75E-02	7.78E-03	3.70E-02	1.56E-02	1.61E-02	6.11E-02	3.29E-03	4.82E-07	2.09E-02	5.64E-02
H03	0.00E+00	2.62E-04	1.89E-05	6.88E+02	5.31E-04	1.87E+00	3.21E-04	2.60E-01	3.36E-02	6.95E-03	3.28E-02	1.40E-02	1.44E-02	5.28E-02	2.93E-03	4.36E-07	1.84E-02	4.86E-02
H04	0.00E+00	3.04E-04	2.26E-05	8.19E+02	6.48E-04	2.26E+00	3.76E-04	3.07E-01	4.04E-02	8.29E-03	3.80E-02	1.69E-02	1.74E-02	6.11E-02	3.50E-03	4.97E-07	2.06E-02	5.76E-02
H05	0.00E+00	1.38E-04	1.01E-05	3.68E+02	2.88E-04	1.01E+00	1.71E-04	1.38E-01	1.81E-02	3.73E-03	1.74E-02	7.57E-03	7.78E-03	2.78E-02	1.57E-03	2.30E-07	9.60E-03	2.58E-02
H06	0.00E+00	1.65E-04	1.25E-05	4.50E+02	3.60E-04	1.25E+00	2.06E-04	1.69E-01	2.23E-02	4.56E-03	2.06E-02	9.36E-03	9.62E-03	3.33E-02	1.93E-03	2.66E-07	1.10E-02	3.17E-02
H07	0.00E+00	3.08E-04	2.30E-05	8.37E+02	6.73E-04	2.33E+00	3.85E-04	3.09E-01	4.16E-02	8.52E-03	3.89E-02	1.74E-02	1.79E-02	6.15E-02	3.60E-03	5.13E-07	2.10E-02	5.79E-02
H08	0.00E+00	3.22E-05	2.51E-06	6.94E+01	8.47E-05	2.45E-01	4.31E-05	2.46E-02	1.22E-02	1.83E-03	4.32E-03	2.07E-03	2.13E-03	3.19E-03	3.17E-04	4.91E-08	2.19E-03	4.59E-03
H09	0.00E+00	1.00E-05	7.78E-07	1.79E+01	2.42E-05	6.84E-02	1.29E-05	7.54E-03	4.90E-03	6.89E-04	1.28E-03	6.10E-04	6.27E-04	7.74E-04	8.17E-05	1.15E-08	6.52E-04	1.41E-03
H14	0.00E+00	1.39E-05	1.15E-06	3.62E+01	4.44E-05	1.27E-01	2.01E-05	9.43E-03	5.03E-03	7.87E-04	1.98E-03	1.03E-03	1.06E-03	1.39E-03	1.68E-04	2.76E-08	9.20E-04	1.76E-03
H16	0.00E+00	2.99E-05	2.49E-06	8.04E+01	1.02E-04	2.89E-01	4.49E-05	1.80E-02	1.12E-02	1.76E-03	4.46E-03	2.33E-03	2.39E-03	2.75E-03	3.78E-04	6.50E-08	2.07E-03	3.36E-03

Appendix F.3.1: MOVES Emission Factors by Road Type, 2051 Build, Section 3

Highway 413

GTA West

RWDI Project#: 1301992

Road Type D	Road Type De	L nk D	L nk Descr pt on	L nk Avg Speed kph	Source Type D	Source Type De	Un ts	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.32E-05	3.61E-06	1.46E+02	2.36E-04	6.78E-01	7.48E-05	3.88E-03	1.15E-02	2.21E-03	7.30E-03	4.71E-03	4.83E-03	4.28E-04	7.44E-04	1.56E-07	2.47E-03	6.06E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	4.10E-05	4.39E-06	2.01E+02	2.73E-04	7.83E-01	8.83E-05	5.79E-03	1.20E-02	2.33E-03	8.52E-03	5.52E-03	5.66E-03	1.33E-03	1.01E-03	1.85E-07	2.86E-03	9.51E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	4.61E-05	4.83E-06	2.20E+02	2.85E-04	6.88E-01	9.40E-05	8.95E-03	1.32E-02	2.78E-03	8.51E-03	5.82E-03	5.92E-03	2.82E-03	1.10E-03	3.84E-07	2.59E-03	1.52E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.00E-03	2.81E-05	1.02E+03	8.62E-04	8.70E+00	5.90E-03	5.54E-01	3.64E-02	8.25E-03	9.21E-01	5.41E-02	5.68E-02	9.06E-02	4.36E-03	1.13E-06	8.64E-01	1.01E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.25E-03	3.19E-05	1.03E+03	1.10E-03	9.09E+00	6.24E-03	4.92E-01	2.77E-02	7.12E-03	9.68E-01	6.04E-02	6.31E-02	9.14E-02	4.40E-03	1.22E-06	9.05E-01	8.93E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	3.59E-04	1.39E-05	7.44E+02	1.93E-04	1.58E+00	3.82E-04	2.97E-01	3.31E-02	7.64E-03	4.82E-02	8.32E-03	8.52E-03	1.01E-01	2.74E-03	2.62E-07	3.97E-02	5.56E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	6.07E-03	2.59E-05	1.02E+03	1.09E-04	4.02E+00	6.99E-03	7.95E-01	3.41E-02	7.78E-03	1.11E+00	4.91E-02	5.25E-02	1.50E-01	3.63E-03	9.87E-10	1.06E+00	1.47E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.42E-04	1.26E-05	5.88E+02	2.62E-04	1.21E+00	3.88E-04	1.52E-01	2.33E-02	6.02E-03	4.91E-02	9.06E-03	9.22E-03	6.02E-02	2.38E-03	9.71E-07	3.98E-02	2.83E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.44E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.69E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.24E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.27E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.32E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.76E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.09E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.06E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	3.51E-05	3.81E-06	1.51E+02	2.49E-04	8.19E-01	7.91E-05	4.26E-03	8.75E-03	1.92E-03	7.71E-03	4.97E-03	5.10E-03	3.89E-04	7.74E-04	1.75E-07	2.61E-03	6.65E-04
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	4.36E-05	4.68E-06	2.11E+02	2.94E-04	9.66E-01	9.47E-05	6.17E-03	8.88E-03	2.01E-03	9.15E-03	5.92E-03	6.07E-03	1.30E-03	1.07E-03	2.07E-07	3.08E-03	1.01E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.61E-05	4.85E-06	2.28E+02	2.91E-04	8.40E-01	9.54E-05	9.04E-03	9.98E-03	2.42E-03	8.75E-03	5.92E-03	6.03E-03	2.83E-03	1.14E-03	3.99E-07	2.72E-03	1.53E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.50E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.19E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.74E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.28E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.14E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.94E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.66E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.61E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.99E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.52E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.84E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.39E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.94E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.23E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.32E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	3.95E-05	4.29E-06	1.60E+02	2.80E-04	1.08E+00	8.90E-05	4.75E-03	7.40E-03	1.87E-03	8.68E-03	5.59E-03	5.74E-03	3.57E-04	8.18E-04	2.10E-07	2.94E-03	7.41E-04
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.89E-05	5.25E-06	2.23E+02	3.32E-04	1.28E+00	1.07E-04	6.71E-03	7.49E-03	1.93E-03	1.03E-02	6.67E-03	6.85E-03	1.29E-03	1.13E-03	2.38E-07	3.48E-03	1.09E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.03E-05	5.29E-06	2.37E+02	3.21E-04	1.08E+00	1.05E-04	9.48E-03	8.39E-03	2.32E-03	9.69E-03	6.52E-03	6.64E-03	2.84E-03	1.18E-03	4.34E-07	3.05E-03	1.60E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.44E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.37E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.48E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.53E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.60E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.90E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.21E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.61E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.12E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.01E-05	6.53E-06	2.20E+02	4.26E-04	1.09E+00	1.35E-04	3.38E-03	8.68E-02	1.17E-02	1.32E-02	8.52E-03	8.74E-03	1.43E-03	1.10E-03	1.91E-07	4.54E-03	5.27E-04
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.20E-05	8.58E-06	2.85E+02	4.82E-04	1.07E+00	1.62E-04	9.09E-03	9.16E-02	1.24E-02	1.52E-02	9.96E-03	1.02E-02	2.72E-03	1.42E-03	1.88E-07	5.02E-03	1.59E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.48E-04	1.52E-05	3.23E+02	7.94E-04	1.00E+00	2.75E-04	1.99E-02	9.45E-02	1.34E-02	2.27E-02	1.67E-02	1.68E-02	4.75E-03	1.58E-03	5.84E-07	5.87E-03	3.57E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.86E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.42E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.88E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.45E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.22E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.05E-02	1.49E-01	4.11E-03	4.92E-07	1.70E-01	2.29E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.52E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.63E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.47E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.41E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.20E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.19E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.85E-01	2.44E-01	3.68E-02	7.22E-02	5.85E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.38E-02	9.05E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.52E-03	3.07E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.78E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.52E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.64E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.10E-05	5.54E-06	1.88E+02	3.62E-04	9.71E-01	1.15E-04	3.28E-03	6.21E-02	8.73E-03	1.12E-02	7.23E-03	7.42E-03	1.07E-03	9.44E-04	1.75E-07	3.80E-03	5.12E-04
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.72E-05	7.06E-06	2.44E+02	4.05E-04	9.60E-01	1.35E-04	7.56E-03	6.57E-02	9.12E-03	1.28E-02	8.33E-03	8.53E-03	2.18E-03	1.22E-03	1.77E-07	4.22E-03	1.31E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.13E-04	1.16E-05	2.75E+02	6.16E-04	8.89E-01	2.12E-04	1.57E-02	6.90E-02	1.01E-02	1.78E-02	1.29E-02	1.30E-02	3.94E-03	1.35E-03	5.06E-07	4.72E-03	2.79E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.60E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.43E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.62E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.22E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.73E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.73E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.61E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.93E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.23E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.87E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.13E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.74E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.98E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.77E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.93E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.52E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.65E-05	5.05E-06	1.70E+02	3.30E-04	8.84E-01	1.05E-04	3.38E-03	4.70E-02	6.79E-03	1.02E-02	6.59E-03	6.76E-03	8.56E-04	8.57E-04	1.70E-07	3.46E-03	5.28E-04
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	5.93E-05	6.26E-06	2.23E+02	3.66E-04	8.77E-01	1.21E-04	6.86E-03	4.95E-02	7.07E-03	1.15E-02	7.49E-03	7.68E-03	1.88E-03	1.11E-03	1.78E-07	3.82E-03	1.18E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	9.34E-05	9.81E-06	2.52E+02	5.24E-04	8.97E-01	1.74E-04	1.26E-02	5.30E-02	7.70E-03	1.32E-02	9.06E-03	9.32E-03	3.52E-03	1.24E-03	4.71E-07	4.16E-03	2.00E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
2

Appendix F.3.1: MOVES Emission Factors by Road Type, 2051 Build, Section 3

Highway 413

GTA West

RWDI Project#: 1301992

Road Type D	Road Type De	L nk D	L nk Descr pt on	L nk Avg Speed kph	Source Type D	Source Type De	Un ts	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.44E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.69E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.24E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.27E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.32E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.76E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.09E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.06E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	1.51E-03	3.81E-06	1.55E+02	2.49E-04	8.19E-01	4.26E-03	8.75E-03	1.92E-03	7.71E-03	4.97E-03	5.10E-03	3.89E-03	7.74E-04	1.75E-07	2.61E-03	6.65E-04	
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	4.36E-05	4.68E-06	2.11E+02	2.94E-04	9.66E-01	9.47E-05	6.17E-03	8.88E-03	2.01E-03	9.15E-03	5.92E-03	6.07E-03	1.30E-03	1.07E-03	2.07E-07	3.98E-03	1.01E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.61E-05	4.85E-06	2.28E+02	2.91E-04	8.40E-01	9.54E-05	9.04E-03	9.98E-03	2.42E-03	8.75E-03	5.92E-03	6.03E-03	2.83E-03	1.14E-03	3.99E-07	2.72E-03	1.53E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.50E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.19E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.74E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.28E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.14E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.94E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.66E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.61E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.99E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.52E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.83E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.39E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.94E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.23E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.32E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	3.95E-05	4.29E-06	1.60E+02	2.80E-04	1.08E+00	8.90E-05	4.75E-03	7.40E-03	1.87E-03	8.68E-03	5.59E-03	5.74E-03	3.57E-04	8.18E-04	2.10E-07	2.94E-03	7.41E-04
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.89E-05	5.25E-06	2.23E+02	3.32E-04	1.28E+00	1.07E-04	6.71E-03	7.49E-03	1.93E-03	1.03E-02	6.67E-03	6.85E-03	1.29E-03	1.13E-03	2.38E-07	3.48E-03	1.09E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.03E-05	5.29E-06	2.37E+02	3.21E-04	1.08E+00	1.05E-04	9.48E-03	9.89E-03	2.42E-03	8.75E-03	5.92E-03	6.03E-03	2.83E-03	1.14E-03	3.99E-07	2.72E-03	1.53E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.44E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.37E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.48E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.53E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.60E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.90E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.21E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.61E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.12E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.24E-05	6.78E-06	1.97E+02	4.43E-04	1.09E+00	1.41E-04	4.29E-03	6.56E-02	9.29E-03	1.37E-02	8.85E-03	9.08E-03	1.07E-03	9.96E-04	2.08E-07	4.64E-03	6.69E-04
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.08E-05	8.52E-06	2.60E+02	4.96E-04	1.09E+00	1.64E-04	9.12E-03	7.21E-02	1.02E-02	1.56E-02	1.02E-02	1.04E-02	2.32E-03	1.30E-03	2.47E-07	5.18E-03	1.57E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.27E-04	1.31E-05	2.92E+02	7.08E-04	9.93E-01	2.42E-04	1.85E-02	7.43E-02	1.10E-02	2.05E-02	1.48E-02	1.49E-02	4.32E-03	1.44E-03	6.01E-07	5.57E-03	3.27E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.60E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.43E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.62E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.61E-01	1.90E-01	3.38E-02	1.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.81E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.81E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.93E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.23E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.87E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.75E-03	1.17E-06	1.24E-01	3.13E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.74E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.98E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.77E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.93E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.52E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.38E-05	5.84E-06	1.72E+02	3.81E-04	1.03E+00	1.21E-04	3.81E-03	4.87E-02	7.06E-03	1.18E-02	7.62E-03	7.82E-03	8.56E-04	8.71E-04	1.86E-07	4.00E-03	5.94E-04
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.87E-05	7.26E-06	2.26E+02	4.27E-04	1.02E+00	1.41E-04	7.68E-03	5.35E-02	7.72E-03	1.34E-02	8.73E-03	8.94E-03	1.95E-03	1.13E-03	2.20E-07	4.45E-03	1.31E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.05E-04	1.09E-05	2.53E+02	5.95E-04	9.27E-01	2.02E-04	1.53E-02	5.55E-02	8.46E-03	1.72E-02	1.24E-02	1.25E-02	3.70E-03	1.25E-03	5.34E-07	4.72E-03	2.69E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.10E+00	1.53E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	2.01E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.30E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.37E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.28E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.17E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.81E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.11E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.70E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.95E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.18E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.10E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.54E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.78E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.44E+02	2.75E-02	1.00E+01	8.72E-03	6.96E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.64E-05	5.04E-06	1.63E+02	3.29E-04	8.80E-01	1.05E-04	3.82E-03	3.58E-02	5.39E-03	1.02E-02	6.58E-03	6.75E-03	7.14E-04	8.27E-04	1.78E-07	3.45E-03	5.97E-04
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.83E-05	6.18E-06	2.17E+02	3.68E-04	8.92E-01	1.21E-04	6.97E-03	3.90E-02	5.86E-03	1.16E-02	7.51E-03	7.70E-03	1.74E-03	1.09E-03	2.13E-07	3.85E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.35E-05	8.66E-06	2.43E+02	4.79E-04	8.11E-01	1.62E-04	1.30E-02	4.07E-02	6.51E-03	1.40E-02	9.95E-03	1.01E-02	3.41E-03	1.20E-03	4.88E-07	3.93E-03	2.27E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.17E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.77E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.60E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.76E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.08E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.32E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.43E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.09E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.78E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.67E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.04E-04	2.35E-01	9.34E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.19E-06	6.53E-03	4.37E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.61E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.03E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.88E+00

Appendix F.3.1: MOVES Emission Factors by Road Type, 2051 Build, Section 3

Highway 413
GTA West

RWDI Project#: 1301992

Road Type D	Road Type De	L nk D	L nk Descr pt on	L nk Avg Speed kph	Source Type D	Source Type De	Un ts	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.44E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.37E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.48E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.53E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.60E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.90E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.21E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.61E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.12E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.01E-05	6.53E-06	2.20E+02	4.26E-04	1.09E+00	1.35E-04	3.38E-03	8.48E-02	1.17E-02	1.32E-02	8.52E-03	8.74E-03	1.43E-03	1.10E-03	1.91E-07	4.47E-03	5.27E-04
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.20E-05	8.58E-06	2.85E+02	4.82E-04	1.07E+00	1.62E-04	9.09E-03	9.16E-02	1.24E-02	1.52E-02	9.96E-03	1.02E-02	2.72E-03	1.42E-03	1.88E-07	5.02E-03	1.59E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.48E-04	1.52E-05	3.23E+02	7.94E-04	1.00E+00	2.75E-04	1.99E-02	9.45E-02	1.34E-02	2.27E-02	1.67E-02	1.68E-02	4.75E-03	1.58E-03	5.84E-07	5.87E-03	3.57E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.86E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.42E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.88E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.45E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.22E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.05E-02	1.49E-01	4.11E-03	4.92E-07	1.70E-01	2.29E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.52E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.63E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.47E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.41E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.20E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.19E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.85E-01	2.44E-01	3.68E-02	7.22E-02	5.85E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.38E-02	9.05E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.55E-03	3.07E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.78E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.52E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.64E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.10E-05	5.54E-06	1.88E+02	3.62E-04	9.71E-01	1.15E-04	3.28E-03	6.21E-02	8.73E-03	1.12E-02	7.23E-03	7.42E-03	1.07E-03	9.44E-04	1.75E-07	3.80E-03	5.12E-04
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.72E-05	7.06E-06	2.44E+02	4.05E-04	9.60E-01	1.35E-04	7.56E-03	6.57E-02	9.12E-03	1.28E-02	8.33E-03	8.53E-03	1.30E-03	1.22E-03	1.77E-07	4.22E-03	1.31E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.13E-04	1.16E-05	2.75E+02	6.16E-04	8.89E-01	2.12E-04	1.57E-02	6.70E-02	1.01E-02	1.78E-02	1.29E-02	1.30E-02	3.94E-03	1.35E-03	5.68E-07	4.72E-03	2.79E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.60E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.43E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.62E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.22E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.73E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.81E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.93E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.23E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.87E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.13E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.74E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.98E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.77E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.93E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.53E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.65E-05	5.05E-06	1.70E+02	3.30E-04	8.84E-01	1.05E-04	3.38E-03	4.70E-02	6.79E-03	1.02E-02	6.59E-03	6.76E-03	8.56E-04	8.57E-04	1.70E-07	3.46E-03	5.28E-04
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	5.93E-05	6.26E-06	2.23E+02	3.66E-04	8.77E-01	1.21E-04	6.86E-03	4.95E-02	7.07E-03	1.15E-02	7.49E-03	7.68E-03	1.88E-03	1.11E-03	1.78E-07	3.82E-03	1.18E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	9.34E-05	9.66E-06	2.51E+02	5.24E-04	8.12E-01	1.79E-04	1.37E-02	5.28E-02	7.96E-03	1.52E-02	1.09E-02	1.11E-02	3.52E-03	1.24E-03	4.71E-07	4.12E-03	2.41E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.34E-02	6.55E-05	1.16E+03	1.11E-03	5.09E+00	1.56E-02	1.22E+00	1.95E-01	2.99E-02	2.47E+00	1.24E-01	1.32E-01	1.12E-01	4.84E-03	1.52E-06	2.33E+00	2.23E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.15E-03	5.52E-05	9.28E+02	3.12E-04	1.15E+00	1.09E-03	7.70E-01	2.08E-01	3.44E-02	1.30E-01	2.39E-02	2.47E-02	1.25E-01	3.43E-03	3.80E-07	1.05E-01	1.45E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.28E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.24E-05	6.67E+02	6.85E-04	1.08E+00	1.08E-03	4.17E-01	1.14E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.62E-02	7.70E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.11E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.70E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.95E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.18E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.10E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.54E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.78E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.18E-05	4.54E-06	1.62E+02	2.96E-04	7.98E-01	9.42E-05	3.57E-03	3.53E-02	5.30E-03	9.19E-03	5.92E-03	6.08E-03	7.14E-04	8.23E-04	1.68E-07	3.11E-03	5.57E-04
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.27E-05	5.58E-06	2.16E+02	3.32E-04	8.18E-01	1.09E-04	6.51E-03	3.75E-02	5.57E-03	1.04E-02	6.77E-03	6.94E-03	1.71E-03	1.08E-03	1.83E-07	3.47E-03	1.10E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	7.67E-05	7.95E-06	2.42E+02	4.40E-04	7.52E-01	1.49E-04	1.21E-02	3.99E-02	6.29E-03	1.28E-02	9.13E-03	9.24E-03	3.31E-03	1.20E-03	4.47E-07	3.58E-03	2.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.17E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.10E-02	4.94E-05	1.03E+03	9.70E-04	5.43E+00	1.29E-02	9.06E-01	1.37E-01	2.17E-02	2.03E+00	1.02E-01	1.08E-01	9.77E-02	4.34E-03	1.34E-06	1.92E+00	1.66E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.78E-04	3.89E-05	7.97E+02	2.65E-04	1.20E+00	8.54E-04	5.63E-01	1.45E-01	2.37E-02	1.05E-01	1.80E-02	1.86E-02	1.07E-01	2.94E-03	3.06E-07	8.64E-02	1.06E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.32E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.43E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.09E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.78E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.67E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.35E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.37E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.61E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.03E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.88E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.53E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.68E-03	3.41E-04	3.63E+02	2.62E-02	1.12E+01	8.32E-03	8.32E-01	3.38E-02	1.95E-02	6.08E-01	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.45E-06	8.87E-02	3.16E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	3.84E-05	4.18E-06	1.57E+02	2.73E-04	7.37E-01	8.66E-05	3.70E-03	2.73E-02	4.27E-03	8.45E-03	5.45E-03	5.59E-03	6.12E-04	7.98E-04	1.66E-07	2.86E-03	5.78E-04
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	4.79E-05	5.10E-06	2.11E+02	3.08E-04	7.77E-01	1.01E-04	6.25E-03	2.91E-02	4.53E-03	9.63E-03	6.26E-03	6.41E-03	1.59E-03	1.06E-03	1.86E-07	3.22E-03	1.05E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.47E-05	6.73E-06	2.36E+02	3.79E-04	7.10E-01	1.27E-04	1.10E-02	3.09E-02	5.13E-03	1.11E-02	7.83E-03	7.94E-03	3.16E-03	1.17E-03	4.29E-07	3.19E-03	1.90E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.58E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.39E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.09E-03	3.95E-05	1.01E+03	8.78E-04	5.76E+00	1.06E-02	7.36E-01	8.80E-02	1.53E-02	1.68E+00	8.52E-02	9.01E-02	9.39E-02	4.24E-03	1.32E-06	1.59E+00	1.35E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.83E-04	2.87E-05	7.58E+02	2.21E-04	1.23E+00	6.78E-04	4.56E-01	9.93E-02	1.70E-02	8.47E-02	1.39E-02	1.44E-02	1.02E-01	2.80E-03	2.79E-07	7.04E-02	8.57E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.12E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTru

Appendix F.3.1: MOVES Emission Factors by Road Type, 2051 Build, Section 3

Highway 413

GTA West

RWDI Project#: 1301992

Road Type ID	Road Type De	Link ID	Link Descr pt on	Link Avg Speed kph	Source Type ID	Source Type De	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.24E-05	6.78E-06	1.97E+02	4.43E-04	1.09E+00	1.41E-04	4.29E-03	6.56E-02	9.29E-03	1.37E-02	8.85E-03	9.08E-03	1.07E-03	9.96E-04	2.08E-07	4.64E-03	6.69E-04
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.08E-05	8.52E-06	2.60E+02	4.96E-04	1.09E+00	1.64E-04	9.12E-03	7.21E-02	1.02E-02	1.56E-02	1.02E-02	1.04E-02	2.32E-03	1.30E-03	2.47E-07	5.18E-03	1.57E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.27E-04	1.31E-05	2.92E+02	7.08E-04	9.93E-01	2.42E-04	1.85E-02	7.43E-02	1.10E-02	2.05E-02	1.48E-02	1.49E-02	4.32E-03	1.44E-03	6.01E-07	5.57E-03	3.27E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.60E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.43E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.62E+00
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.61E-01	1.90E-01	3.38E-02	1.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.81E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.81E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.93E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.23E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.87E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.13E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.74E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.98E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.77E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.93E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.52E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.37E-05	5.84E-06	1.72E+02	3.81E-04	1.03E+00	1.21E-04	3.81E-03	4.87E-02	7.07E-03	1.18E-02	7.62E-03	7.82E-03	8.56E-04	8.71E-04	1.86E-07	4.00E-03	5.94E-04
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.87E-05	7.26E-06	2.26E+02	4.27E-04	1.02E+00	1.41E-04	7.68E-03	5.35E-02	7.72E-03	1.34E-02	8.73E-03	8.94E-03	1.95E-03	1.13E-03	2.20E-07	4.45E-03	1.31E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.05E-04	1.09E-05	2.53E+02	5.95E-04	9.27E-01	2.02E-04	1.53E-02	5.55E-02	8.46E-03	1.72E-02	1.24E-02	1.25E-02	3.70E-03	1.25E-03	5.34E-07	4.72E-03	2.69E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.10E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	2.01E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.30E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.37E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.28E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.17E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.81E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.11E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.70E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.95E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.18E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.10E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.54E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.78E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.55E-05	4.94E-06	1.62E+02	3.23E-04	8.74E-01	1.03E-04	3.71E-03	3.64E-02	5.44E-03	1.00E-02	6.45E-03	6.62E-03	7.14E-04	8.23E-04	1.73E-07	3.38E-03	5.78E-04
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.77E-05	6.11E-06	2.16E+02	3.64E-04	8.95E-01	1.20E-04	6.89E-03	3.97E-02	5.90E-03	1.14E-02	7.42E-03	7.60E-03	1.74E-03	1.08E-03	2.01E-07	3.80E-03	1.17E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.33E-05	8.63E-06	2.42E+02	4.77E-04	8.14E-01	1.62E-04	1.29E-02	4.14E-02	6.55E-03	1.39E-02	9.91E-03	1.00E-02	3.40E-03	1.19E-03	4.75E-07	3.89E-03	2.26E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.17E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.77E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.60E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.76E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.08E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.32E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.43E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.09E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.78E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.67E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.35E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.37E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.61E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.03E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.88E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.53E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	3.96E-05	4.31E-06	1.55E+02	2.81E-04	7.66E-01	8.94E-05	3.64E-03	2.77E-02	4.32E-03	8.72E-03	5.62E-03	5.77E-03	6.12E-04	7.89E-04	1.64E-07	2.95E-03	5.68E-04
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	4.98E-05	5.30E-06	2.09E+02	3.19E-04	8.09E-01	1.04E-04	6.32E-03	3.00E-02	4.64E-03	9.99E-03	6.49E-03	6.65E-03	1.60E-03	1.05E-03	1.88E-07	3.34E-03	1.06E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.76E-05	7.02E-06	2.33E+02	3.93E-04	7.34E-01	1.33E-04	1.12E-02	3.15E-02	5.21E-03	1.16E-02	8.14E-03	8.25E-03	3.19E-03	1.15E-03	4.33E-07	3.31E-03	1.95E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.58E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.39E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.25E-03	3.84E-05	1.06E+03	9.20E-04	6.72E+00	9.67E-03	7.18E-01	7.10E-02	1.33E-02	1.52E+00	7.97E-02	8.42E-02	9.82E-02	4.50E-03	1.39E-06	1.44E+00	1.31E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.42E-04	2.74E-05	8.14E+02	2.14E-04	1.32E+00	6.36E-04	4.66E-01	7.73E-02	1.48E-02	7.91E-02	1.33E-02	1.37E-02	1.10E-01	3.00E-03	2.97E-07	6.54E-02	8.74E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.12E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.34E-04	2.57E-05	5.90E+02	4.25E-04	1.07E+00	6.89E-04	2.52E-01	5.72E-02	1.05E-02	8.54E-02	1.63E-02	1.66E-02	5.99E-02	2.40E-03	9.69E-07	6.88E-02	4.72E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.25E-04	2.52E-05	5.67E+02	4.14E-04	1.02E+00	6.80E-04	2.46E-01	5.94E-02	1.06E-02	8.45E-02	1.59E-02	1.63E-02	5.73E-02	2.31E-03	9.26E-07	6.82E-02	4.61E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	2.71E-04	2.64E-05	7.23E+02	9.60E-04	2.27E+00	3.91E-04	1.95E-01	6.44E-02	1.23E-02	2.76E-02	2.24E-02	2.24E-02	3.54E-02	3.44E-03	1.93E-06	5.22E-03	3.62E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	9.26E-04	6.89E-05	1.25E+03	2.35E-06	1.34E+00	6.60E-04	1.39E+00	1.31E-01	2.18E-02	5.56E-02	2.01E-02	2.08E-02	1.99E-01	4.19E-03	0.00E+00	3.47E-02	2.61E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.39E-03	7.93E-05	1.29E+03	8.74E-06	1.75E+00	1.15E-03	1.63E+00	1.49E-01	2.25E-02	1.27E-01	2.55E-02	2.65E-02	2.07E-01	4.32E-03	0.00E+00	1.00E-01	3.07E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	3.69E-05	4.01E-06	1.51E+02	2.62E-04	7.32E-01	8.32E-05	3.73E-03	1.96E-02	3.29E-03	8.12E-03	5.23E-03	5.37E-03	5.35E-04	7.68E-04	1.64E-07	2.75E-03	5.82E-04
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	4.54E-05	4.84E-06	2.03E+02	2.95E-04	7.73E-01	9.62E-05	6.01E-03	2.09E-02	3.47E-03	9.23E-03	5.99E-03	6.14E-03	1.48E-03	1.03E-03	1.87E-07	3.09E-03	1.00E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	5.74E-05	5.98E-06	2.26E+02	3.41E-04	6.93E-01	1.14E-04	1.01E-02	2.24E-02	4.02E-03	1.01E-02	7.03E-03	7.13E-03	3.00E-03	1.12E-03	4.13E-07	2.96E-03	1.75E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.06E-03	2.93E-05	9.83E+02	6.70E-04	6.09E+00	8.27E-03	6.40E-01	7.31E-02	1.33E-02	1.31E+00	6.57E-02	6.95E-02	9.09E-02	4.17E-03	1.23E-06	1.24E+00	1.17E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.01E-03	3.19E-05	1.03E+03	8.67E-04	6.81E+00	8.24E-03	5.99E-01	5.08E-02	1.05E-02	1.30E+00	6.90E-02	7.27E-02	9.39E-02	4.35E-03	1.35E-06	1.22E+00	1.09E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	5.13E-04	2.09E-05	7.77E+02	1.89E-04	1.31E+00	5.18E-04	3.83E-01	5.78E-02	1.15E-02	6.52E-02	1.07E-02	1.10E-02	1.05E-01	2.86E-03	2.77E-07	5.42E-02	7.19E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.85E-03	3.88E-05	1.02E+03	1.56E-04	4.17E+00	1.02E-02	9.54E-01	8.56E-02	1.46E-02	1.62E+00	7.18E-02	7.68E-02	1.50E-01	3.63E-03	9.59E-10	1.54E+00	1.76E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.94E-04	1.93E-05	5.90E+02	3.35E-04	1.07E+00	5.43E-04	2.06E-01	4.04E-02	8.27E-03	6.80E-02	1.26E-02	1.28E-02	6.00E-02	2.40E-03	9.51E-07	5.52E-02	3.84E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.87E-04	1.88E-05	5.65E+02	3.24E-04	1.01E+00	5.35E-04	1.99E-01	4.21E-02	8.32E-03	6.73E-02	1.23E-02	1.25E-02	5.72E-02	2.30E-03	8.98E-07	5.48E-02	3.72E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	2.12E-04	2.09E-05	7.20E+02	7.93E-04	2.40E+00	3.16E-04	1.61E-01	4.51E-02	9.79E-03	2.24E-02	1.83E-02	1.82E-02	3.52E-02	3.42E-03	1.93E-06	4.15E-03	2.97E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.42E-04	5.49E-05	1.21E+03	1.94E-06	1.13E+00	5.30E-04	1.15E+00	8.59E-02	1.56E-02	4.50E-02	1.60E-02	1.66E-02	1.92E-01	4.04E-03	0.00E+00	2.84E-02	2.16E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	6.40E-05	1.23E+03	7.21E-06	1.47E+00	9.35E-04	1.34E+00	9.74E-02	1.56E-02	1.04E-01	2.06E-02	2.15E-02	1.97E-01	4.12E-03	0.00E+00	8.24E-02	2.53E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	3.51E-05	3.81E-06	1.48E+02	2.49E-04	7.24E-01	7.91E-05	3.85E-03	1.46E-02	2.64E-03	7.72E-03	4.98E-03	5.11E-03	4.76E-04	7.57E-04	1.65E-07	2.61E-03	6.00E-04
5	UrbanUnrestrictedAccess	12	ArterialRoads_Urban

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1508	0.00E+00	1.47E-05	1.60E-06	6.34E+01	1.04E-04	3.43E-01	3.31E-05	1.79E-03	3.66E-03	8.03E-04	3.23E-03	2.08E-03	2.14E-03	1.63E-04	3.24E-04	7.33E-08	1.09E-03	2.79E-04
17	A01	110	Passenger Truck	2526	0.00E+00	3.06E-05	3.28E-06	1.48E+02	2.06E-04	6.78E-01	6.64E-05	4.33E-03	6.23E-03	1.41E-03	6.42E-03	4.15E-03	4.26E-03	9.14E-04	7.50E-04	1.45E-07	2.16E-03	7.07E-04
17	A01	110	Single Unit Short Haul Truck	477	0.00E+00	4.39E-05	1.78E-06	8.19E+01	4.00E-05	1.98E-01	5.04E-05	2.13E-02	2.64E-03	7.78E-04	6.17E-03	1.30E-03	1.32E-03	8.51E-03	3.30E-04	1.47E-07	4.86E-03	3.97E-03
17	A01	110	Single Unit Long Haul Truck	21	0.00E+00	1.90E-06	7.39E-08	3.43E+00	1.61E-06	7.85E-03	2.17E-06	8.86E-04	1.18E-04	3.35E-05	2.69E-04	5.35E-05	5.43E-05	3.55E-04	1.38E-05	5.98E-09	2.15E-04	1.65E-04
17	A01	110	Combination Short Haul Truck	246	0.00E+00	4.38E-05	3.38E-06	8.66E+01	8.51E-08	6.41E-02	3.04E-05	7.05E-02	2.16E-03	6.32E-04	2.41E-03	9.73E-04	1.01E-03	1.38E-02	2.90E-04	0.00E+00	1.40E-03	1.33E-02
17	A01	110	Combination Long Haul Truck	225	0.00E+00	5.93E-05	3.76E-06	7.81E+01	2.89E-07	7.39E-02	4.63E-05	7.67E-02	2.10E-03	4.61E-04	4.71E-03	1.16E-03	1.21E-03	1.25E-02	2.62E-04	0.00E+00	3.50E-03	1.45E-02
17	A02	110	Passenger Car	1676	0.00E+00	1.63E-05	1.77E-06	7.05E+01	1.16E-04	3.81E-01	3.68E-05	1.98E-03	4.07E-03	8.93E-04	3.59E-03	2.32E-03	2.38E-03	1.81E-04	3.61E-04	8.15E-08	1.21E-03	3.10E-04
17	A02	110	Passenger Truck	2808	0.00E+00	3.40E-05	3.65E-06	1.64E+02	2.29E-04	7.53E-01	7.38E-05	4.81E-03	6.93E-03	1.57E-03	7.14E-03	4.62E-03	4.73E-03	1.02E-03	8.33E-04	1.61E-07	2.40E-03	7.86E-04
17	A02	110	Single Unit Short Haul Truck	465	0.00E+00	4.29E-05	1.74E-06	7.99E+01	3.90E-05	1.93E-01	4.92E-05	2.08E-02	2.58E-03	7.59E-04	6.03E-03	1.26E-03	1.28E-03	8.31E-03	3.22E-04	1.43E-07	4.74E-03	3.87E-03
17	A02	110	Single Unit Long Haul Truck	21	0.00E+00	1.85E-06	7.21E-08	3.35E+00	1.57E-06	7.66E-03	2.11E-06	8.65E-04	1.16E-04	3.26E-05	2.62E-04	5.22E-05	5.30E-05	3.47E-04	1.35E-05	5.84E-09	2.09E-04	1.61E-04
17	A02	110	Combination Short Haul Truck	230	0.00E+00	4.09E-05	3.16E-06	8.09E+01	7.95E-08	5.99E-02	2.84E-05	6.59E-02	2.02E-03	5.90E-04	2.25E-03	9.09E-04	9.43E-04	1.29E-02	2.70E-04	0.00E+00	1.31E-03	1.24E-02
17	A02	110	Combination Long Haul Truck	210	0.00E+00	5.54E-05	3.52E-06	7.30E+01	2.70E-07	6.91E-02	4.33E-05	7.17E-02	1.96E-03	4.31E-04	4.40E-03	1.08E-03	1.13E-03	1.17E-02	2.45E-04	0.00E+00	3.27E-03	1.35E-02
17	A03	110	Passenger Car	1638	0.00E+00	1.60E-05	1.73E-06	6.89E+01	1.13E-04	3.73E-01	3.60E-05	1.94E-03	3.98E-03	8.73E-04	3.51E-03	2.26E-03	2.32E-03	1.77E-04	3.52E-04	7.96E-08	1.19E-03	3.03E-04
17	A03	110	Passenger Truck	2744	0.00E+00	3.32E-05	3.56E-06	1.61E+02	2.24E-04	7.36E-01	7.22E-05	4.70E-03	6.77E-03	1.53E-03	6.97E-03	4.51E-03	4.63E-03	9.93E-04	8.14E-04	1.58E-07	2.35E-03	7.68E-04
17	A03	110	Single Unit Short Haul Truck	456	0.00E+00	4.20E-05	1.70E-06	7.83E+01	3.82E-05	1.89E-01	4.82E-05	2.03E-02	2.52E-03	7.44E-04	5.90E-03	1.24E-03	1.26E-03	8.14E-03	3.15E-04	1.40E-07	4.64E-03	3.79E-03
17	A03	110	Single Unit Long Haul Truck	20	0.00E+00	1.81E-06	7.06E-08	3.28E+00	1.54E-06	7.50E-03	2.07E-06	8.47E-04	1.13E-04	3.20E-05	2.57E-04	5.11E-05	5.19E-05	3.39E-04	1.32E-05	5.72E-09	2.05E-04	1.58E-04
17	A03	110	Combination Short Haul Truck	230	0.00E+00	4.09E-05	3.16E-06	8.09E+01	7.95E-08	5.99E-02	2.84E-05	6.59E-02	2.02E-03	5.90E-04	2.25E-03	9.09E-04	9.43E-04	1.29E-02	2.70E-04	0.00E+00	1.31E-03	1.24E-02
17	A03	110	Combination Long Haul Truck	210	0.00E+00	5.54E-05	3.52E-06	7.30E+01	2.70E-07	6.91E-02	4.33E-05	7.17E-02	1.96E-03	4.31E-04	4.40E-03	1.08E-03	1.13E-03	1.17E-02	2.45E-04	0.00E+00	3.27E-03	1.35E-02
17	A04	110	Passenger Car	1977	0.00E+00	1.93E-05	2.09E-06	8.31E+01	1.37E-04	4.50E-01	4.34E-05	2.34E-03	4.80E-03	1.05E-03	4.24E-03	2.73E-03	2.80E-03	2.14E-04	4.25E-04	9.61E-08	1.43E-03	3.65E-04
17	A04	110	Passenger Truck	3312	0.00E+00	4.01E-05	4.30E-06	1.94E+02	2.70E-04	8.88E-01	8.71E-05	5.68E-03	8.17E-03	1.85E-03	8.42E-03	5.45E-03	5.58E-03	1.20E-03	9.83E-04	1.90E-07	2.83E-03	9.27E-04
17	A04	110	Single Unit Short Haul Truck	475	0.00E+00	4.37E-05	1.77E-06	8.16E+01	3.99E-05	1.97E-01	5.02E-05	2.12E-02	2.63E-03	7.75E-04	6.15E-03	1.29E-03	1.31E-03	8.48E-03	3.28E-04	1.46E-07	4.84E-03	3.95E-03
17	A04	110	Single Unit Long Haul Truck	21	0.00E+00	1.89E-06	7.36E-08	3.42E+00	1.60E-06	7.82E-03	2.16E-06	8.83E-04	1.18E-04	3.33E-05	2.68E-04	5.33E-05	5.41E-05	3.54E-04	1.38E-05	5.96E-09	2.14E-04	1.65E-04
17	A04	110	Combination Short Haul Truck	222	0.00E+00	3.94E-05	3.04E-06	7.79E+01	7.66E-08	5.77E-02	2.74E-05	6.35E-02	1.95E-03	5.69E-04	2.17E-03	8.75E-04	9.08E-04	1.24E-02	2.61E-04	0.00E+00	1.26E-03	1.20E-02
17	A04	110	Combination Long Haul Truck	202	0.00E+00	5.34E-05	3.39E-06	7.04E+01	2.60E-07	6.66E-02	4.17E-05	6.91E-02	1.89E-03	4.15E-04	4.24E-03	1.04E-03	1.09E-03	1.13E-02	2.36E-04	0.00E+00	3.15E-03	1.30E-02
17	A05	110	Passenger Car	1478	0.00E+00	1.44E-05	1.56E-06	6.21E+01	1.02E-04	3.36E-01	3.25E-05	1.75E-03	3.59E-03	7.87E-04	3.17E-03	2.04E-03	2.09E-03	1.60E-04	3.18E-04	7.18E-08	1.07E-03	2.73E-04
17	A05	110	Passenger Truck	2474	0.00E+00	2.99E-05	3.21E-06	1.45E+02	2.02E-04	6.64E-01	6.51E-05	4.24E-03	6.11E-03	1.38E-03	6.29E-03	4.07E-03	4.17E-03	8.96E-04	7.34E-04	1.42E-07	2.12E-03	6.92E-04
17	A05	110	Single Unit Short Haul Truck	358	0.00E+00	3.30E-05	1.34E-06	6.15E+01	3.00E-05	1.48E-01	3.79E-05	1.60E-02	1.98E-03	5.84E-04	4.64E-03	9.73E-04	9.88E-04	6.39E-03	2.48E-04	1.10E-07	3.65E-03	2.98E-03
17	A05	110	Single Unit Long Haul Truck	16	0.00E+00	1.42E-06	5.55E-08	2.58E+00	1.21E-06	5.89E-03	1.63E-06	6.66E-04	8.90E-05	2.51E-05	2.02E-04	4.02E-05	4.08E-05	2.67E-04	1.04E-05	4.49E-09	1.61E-04	1.24E-04
17	A05	110	Combination Short Haul Truck	186	0.00E+00	3.30E-05	2.55E-06	6.53E+01	6.41E-08	4.83E-02	2.29E-05	5.31E-02	1.63E-03	4.76E-04	1.82E-03	7.33E-04	7.61E-04	1.04E-02	2.18E-04	0.00E+00	1.06E-03	1.00E-02
17	A05	110	Combination Long Haul Truck	169	0.00E+00	4.47E-05	2.84E-06	5.89E+01	2.18E-07	5.57E-02	3.49E-05	5.78E-02	1.58E-03	3.48E-04	3.55E-03	8.74E-04	9.09E-04	9.45E-03	1.97E-04	0.00E+00	2.64E-03	1.09E-02
17	A06	110	Passenger Car	1587	0.00E+00	1.55E-05	1.68E-06	6.67E+01	1.10E-04	3.61E-01	3.49E-05	1.88E-03	3.86E-03	8.45E-04	3.40E-03	2.19E-03	2.25E-03	1.72E-04	3.41E-04	7.71E-08	1.15E-03	2.93E-04
17	A06	110	Passenger Truck	2657	0.00E+00	3.22E-05	3.45E-06	1.56E+02	2.17E-04	7.13E-01	6.99E-05	4.56E-03	6.56E-03	1.48E-03	6.75E-03	4.37E-03	4.48E-03	9.62E-04	7.89E-04	1.53E-07	2.27E-03	7.44E-04
17	A06	110	Single Unit Short Haul Truck	345	0.00E+00	3.18E-05	1.29E-06	5.92E+01	2.89E-05	1.43E-01	3.64E-05	1.54E-02	1.91E-03	5.62E-04	4.46E-03	9.37E-04	9.51E-04	6.15E-03	2.38E-04	1.06E-07	3.51E-03	2.87E-03
17	A06	110	Single Unit Long Haul Truck	15	0.00E+00	1.37E-06	5.34E-08	2.48E+00	1.16E-06	5.67E-03	1.57E-06	6.41E-04	8.57E-05	2.42E-05	1.94E-04	3.87E-05	3.93E-05	2.57E-04	1.00E-05	4.33E-09	1.55E-04	1.19E-04
17	A06	110	Combination Short Haul Truck	168	0.00E+00	2.98E-05	2.30E-06	5.90E+01	5.80E-08	4.37E-02	2.07E-05	4.81E-02	1.47E-03	4.31E-04	1.64E-03	6.63E-04	6.88E-04	9.38E-03	1.97E-04	0.00E+00	9.55E-04	9.06E-03
17	A06	110	Combination Long Haul Truck	153	0.00E+00	4.04E-05	2.56E-06	5.33E+01	1.97E-07	5.04E-02	3.16E-05	5.23E-02	1.43E-03	3.14E-04	3.21E-03	7.90E-04	8.22E-04	8.55E-03	1.78E-04	0.00E+00	2.39E-03	9.85E-03
17	A07	110	Passenger Car	1144	0.00E+00	1.11E-05	1.21E-06	4.81E+01	7.91E-05	2.60E-01	2.51E-05	1.35E-03	2.78E-03	6.09E-04	2.45E-03	1.58E-03	1.62E-03	1.24E-04	2.46E-04	5.56E-08	8.29E-04	2.11E-04
17	A07	110	Passenger Truck	1915	0.00E+00	2.32E-05	2.49E-06	1.12E+02	1.56E-04	5.14E-01	5.04E-05	3.28E-03	4.73E-03	1.07E-03	4.87E-03	3.15E-03	3.23E-03	6.93E-04	5.68E-04	1.10E-07	1.64E-03	5.36E-04
17	A07	110	Single Unit Short Haul Truck	374	0.00E+00	3.45E-05	1.40E-06	6.43E+01	3.14E-05	1.55E-01	3.96E-05	1.67E-02	2.07E-03	6.11E-04	4.85E-03	1.02E-03	1.03E-03	6.68E-03	2.59E-04	1.15E-07	3.82E-03	3.12E-03
17	A07	110	Single Unit Long Haul Truck	17	0.00E+00	1.49E-06	5.80E-08	2.69E+00	1.26E-06	6.16E-03	1.70E-06	6.96E-04	9.30E-05	2.63E-05	2.11E-04	4.20E-05	4.27E-05	2.79E-04	1.09E-05	4.70E-09	1.69E-04	1.30E-04
17	A07	110	Combination Short Haul Truck	206	0.00E+00	3.65E-05	2.82E-06	7.22E+01	7.10E-08	5.35E-02	2.54E-05	5.88E-02	1.80E-03	5.27E-04	2.01E-03	8.11E-04	8.42E-04	1.15E-02	2.42E-04	0.00E+00	1.17E-03	1.11E-02
17	A07	110	Combination Long Haul Truck	187	0.00E+00	4.95E-05	3.14E-06	6.52E+01	2.41E-07	6.17E-02	3.86E-05	6.40E-02	1.75E-03	3.85E-04	3.93E-03	9.68E-04	1.01E-03	1.05E-02	2.18E-04	0.00E+00	2.92E-03	1.21E-02
17	A08	110	Passenger Car	1536	0.00E+00	1.50E-05	1.63E-06	6.46E+01	1.06E-04	3.49E-01	3.37E-05	1.82E-03	3.73E-03	8.18E-04	3.29E-03	2.12E-03	2.18E-03	1.66E-04	3.30E-04	7.46E-08	1.11E-03	2.84E-04
17	A08	110	Passenger Truck	2572	0.00E+00	3.11E-05	3.34E-06	1.51E+02	2.10E-04	6.90E-01	6.76E-05	4.41E-03	6.35E-03	1.43E-03	6.54E-03	4.23E-03	4.34E-03	9.31E-04	7.63E-04	1.48E-07	2.20E-03	7.20E-04
17	A08	110	Single Unit Short Haul Truck	336	0.00E+00	3.10E-05	1.25E-06	5.77E+01	2.82E-05	1.39E-01	3.55E-05	1.50E-02	1.86E-03	5.48E-04	4.35E-03	9.14E-04	9.27E-04	6.00E-03	2.32E-04	1.03E-07	3.42E-03	2.80E-03
17	A08	110	Single Unit Long Haul Truck	15	0.00E+00	1.34E-06	5.21E-08	2.42E+00	1.13E-06	5.53E-03	1.53E-06	6.25E-04	8.35E-05	2.36E-05	1.90E-04	3.77E-05	3.83E-05	2.50E-04	9.75E-06	4.22E-09	1.51E-04	1.16E-04
17	A08	110	Combination Short Haul Truck	174	0.00E+00	3.10E-05	2.39E-06	6.12E+01	6.02E-08	4.54E-02	2.15E-05	4.99E-02	1.53E-03	4.47E-04	1.70E-03	6.88E-04	7.13E-04	9.73E-03	2.05E-04	0.00E+00	9.91E-04	9.39E-03
17	A08	110	Combination Long Haul Truck	159	0.00E+00	4.19E-05	2.66E-06	5.53E+01	2.04E-07	5.23E-02	3.27E-05	5.43E-02	1.48E-03	3.26E-04	3.33E-03	8.20E-04	8.53E-04	8.86E-03	1.85E-04	0.00E+00	2.47E-03	1.02E-02
17	A09	110	Passenger Car	1465	0.00E+00	1.43E-05	1.55E-06	6.16E+01	1.01E-04	3.33E-01	3.22E-05	1.73E-03	3.56E-03	7.80E-04	3.14E-03	2.02E-03	2.08E-03	1.58E-04	3.15E-04	7.12E-08	1.06E-03	2.71E-04
17	A09	110	Passenger Truck	2454	0.00E+00	2.97E-05	3.19E-06	1.44E+02	2.00E-04	6.58E-01	6.45E-05	4.21E-03	6.05E-03	1.37E-03	6.24E-03	4.03E-03	4.14E-03	8.88E-04	7.28E-04	1.41E-07	2.10E-03	6.87E-04
17	A09	110	Single Unit Short Haul Truck	477	0.00E+00	4.39E-05	1.78E-06	8.19E+01	4.00E-05	1.98E-01	5.04E-05	2.13E-02	2.64E-03	7.78E-04	6.17E-03	1.30E-03	1.32E-03	8.51E-03	3.30E-04	1.47E-07	4.86E-03	3.97E-03
17	A09	110	Single Unit Long Haul Truck	21	0.00E+00	1.90E-06	7.39E-08	3.43E+00	1.61E-06	7.85E-03	2.17E-06	8.86E-04	1.18E-04	3.35E-05	2.69E-04	5.35E-05	5.43E-05	3.55E-04	1.38E-05	5.98E-09	2.15E-04	1.65E-04
17	A09	110	Combination Short Haul Truck	264	0.00E+00	4.69E-05	3.62E-06	9.27E+01	9.11E-08	6.86E-02	3.26E-05	7.55E-02	2.31E-03	6.76E-04	2.58E-03	1.04E-03	1.08E-03	1.47E-02	3.10E-04	0.00E+00	1.50E-03	1.42E-02
17	A09	110	Combination Long Haul Truck	240	0.00E+00	6.35E-05	4.03E-06	8.36E+01	3.09E-07	7.91E-02	4.96E-05	8.21E-02	2.25E-03	4.94E-04	5.04E-03	1.24E-03	1.29E-03	1.34E-02	2.80E-04	0.00E+00	3.75E-03	1.55E-02
17	A10	110	Passenger Car	1527	0.00E+00	1.49E-05	1.62E-06	6.42E+01	1.06E-04	3.47E-01	3.35E-05	1.81E-03	3.71E-03	8.13E-04	3.27E-03	2.11E-03	2.17E-03	1.65E-04	3.28E-04	7.42E-08	1.11E-03	2.82E-04
17	A10	110	Passenger Truck	2558	0.00E+00	3.09E-05	3.32E-06	1.50E+02	2.09E-04	6.86E-01	6.73E-05	4.38E-03	6.31E-03	1.43E-03	6.50E-03	4.21E-03	4.31E-03	9.26E-04	7.59E-04	1.47E-07	2.19E-03	7.16E-04
17	A10	110	Single Unit Short Haul Truck	385	0.00E+00	3.55E-05	1.44E-06	6.61E+01	3.23E-05	1.60E-01	4.07E-05	1.72E-02	2.13E-03	6.28E-04	4.98E-03	1.05E-03	1.06E-03	6.87E-03	2.66E-04	1.18E-07	3.92E-03	3.20E-03
17	A10	110	Single Unit Long Haul Truck	17	0.00E+00	1.53E-06	5.96E-08	2.77E+00	1.30E-06	6.34E-03	1.75E-06	7.16E-04	9.57E-05	2.70E-05	2.17E-04	4.32E-05	4.39E-05	2.87E-04	1.12E-05	4.83E-09	1.73E-04	1.33E-04
17	A10	110	Combination Short Haul Truck	214	0.00E+00	3.80E-05	2.94E-06	7.52E+01	7.39E-08	5.57E-02	2.64E-05	6.12E-02	1.88E-03	5.49E-04	2.09E-03	8.45E-04	8.76E-04	1.19E-02	2.51E-04	0.00E+00	1.22E-03	1.15E-02
17	A10	110	Combination Long Haul Truck	195	0.00E+00	5.15E-05	3.27E-06	6.79E+01	2.51E-07	6.42E-02	4.02E-05	6.66E-02	1.82E-03	4.01E-04	4.09E-03	1.01E-03	1.05E-03	1.09E-02	2.27E-04	0.00E+00	3.04E-03	1.26E-02
17	A11	110	Passenger Car	1819	0.00E+00	1.77E-05	1.93E-06	7.65E+01	1.26E-04	4.14E-01	4.00E-05	2.15E-03	4.42E-03	9.69E-04	3.90E-03	2.51E-03	2.58E-03	1.97E-04	3.91E-04	8.84E-08	1.32E-03	3.36E-04
17	A11	110	Passenger Truck	3046	0.00E+00	3.69E-05	3.96E-06	1.78E+02	2.49E-04	8.17E-01	8.01E-05	5.22E-03	7.52E-03	1.70E-03	7.74E-03	5.01E-03	5.14E-03	1.10E-03	9.04E-04	1.75E-07	2.61E-03	8.52E-04
17	A11	110	Single Unit Short Haul Truck	535	0.00E+00	4.93E-05	2.00E-06	9.19E+01	4.49E-05	2.22E-01	5.66E-05	2.39E-02	2.96E-03	8.73E-04	6.93E-03	1.45E-03	1.48E-03	9.56E-03	3.70E-04	1.65E-07	5.45E-03	4.45E-03
17	A11	110	Single Unit Long Haul Truck	24	0.00E+00	2.13E-06	8.29E-08	3.85E+00	1.81E-06	8.81E-03	2.43E-06	9.95E-04	1.33E-04	3.76E-05	3.02E-04	6.01E-05	6.10E-05	3.99E-04	1.55E-05	6.72E-09	2.41E-04	1.86E-04
17	A11	110	Combination Short Haul Truck	332	0.00E+00	5.89E-05	4.55E-06	1.17E+02	1.15E-07	8.63E-02	4.10E-05	9.49E-02	2.91E-03	8.50E-04	3.25E-03	1.31E-03	1.36E-03	1.85E-02	3.90E-04	0.00E+00	1.89E-03	1.79E-02
17	A11	110	Combination Long Haul Truck	302	0.00E+00	7.98E-05	5.07E-06	1.05E+02	3.89E-07	9.95E-02	6.23E-05	1.03E-01	2.82E-03	6.21E-04	6.33E-03	1.56E-03	1.62E-03	1.69E-02	3.52E-04	0.00E+00	4.71E-03	1.95E-02
17	A12	110	Passenger Car	1510	0.00E+00	1.47E-05	1.60E-06	6.35E+01	1.04E-04	3.43E-01	3.32E-05	1.79E-03	3.67E-03	8.04E-04	3.24E-03	2.09E-03	2.14E-03	1.63E-04	3.25E-04	7.34E-08	1.09E-03	2.79E-04
17	A12	110	Passenger Truck	2529	0.00E+00	3.06E-05	3.28E-06	1.48E+02	2.06E-04	6.78E-01	6.65E-05	4.33E-03	6.24E-03	1.41E-03	6.43E-03	4.16E-03	4.26E-03	9.15E-04	7.51E-04	1.45E-07	2.16E-03	7.08E-04
17	A12	110	Single Unit Short Haul Truck	443	0.00E+00	4.08E-05	1.65E-06	7.61E+01	3.72E-05	1.84E-01	4.69E-05	1.98E-02	2.45E-03	7.23E-04	5.74E-03	1.21E-03	1.22E-03	7.92E-03	3.07E-04	1.36E-07	4.52E-03	3.69E-03
17	A12	110	Single Unit Long Haul Truck	20	0.00E+00	1.76E-06	6.87E-08	3.19E+00	1.50E-06	7.30E-03	2.01E-06	8.24E-04	1.10E-04	3.11E-05	2.50E-04	4.97E-05	5.05E-05	3.30E-04	1.29E-05	5.56E-09	2.00E-04	1.54E-04
17	A12	110	Combination Short Haul Truck	251	0.00E+00	4.46E-05	3.44E-06	8.82E+01	8.67E-08	6.54E-02	3.10E-05	7.19E-02	2.20E-03	6.44E-04	2.46E-03	9.91E-04	1.03E-03	1.40E-02	2.95E-04	0.00E+00	1.43E-03	1.35E-02
17	A12	110	Combination Long Haul Truck	229	0.00E+00	6.04E-05	3.84E-06	7.96E+01	2.94E-07	7.54E-02	4.72E-05	7.82E-02	2.14E-03	4.70E-04	4.80E-03	1.18E-03	1.23E-03	1.28E-02	2.67E-04	0.00E+00	3.57E-03	1.47E-02
17	A13	110	Passenger Car	1640	0.00E+00	1.60E-05	1.74E-06	6.90E+01	1.13E-04	3.73E-01	3.60E-05	1.94E-03	3.99E-03	8.74E-04	3.51E-03	2.27E-03	2.33E-03	1.77E-04	3.53E-04	7.97E-08	1.19E-03	3.03E-04
17	A13	110	Passenger Truck	2747	0.00E+00	3.32E-05	3.57E-06	1.61E+02	2.24E-04	7.37E-01	7.22E-05	4.71E-03	6.78E-03	1.53E-03	6.98E-03	4.52E-03	4.63E-03	9.94E-04	8.15E-04	1.58E-07	2.35E-03	7.69E-04
17	A13	110	Single Unit Short Haul Truck	560	0.00E+00	5.16E-05	2.09E-06	9.62E+01	4.70E-05	2.32E-01	5.92E-05	2.50E-02	3.10E-03	9.14E-04	7.25E-03	1.52E-03	1.55E-03	1.00E-02	3.87E-04	1.72E-07	5.71E-03	4.66E-03
17	A13	110	Single Unit Long Haul Truck	25	0.00E+00	2.23E-06	8.68E-08	4.03E+00	1.89E-06	9.22E-03	2.54E-06	1.04E-03	1.39E-04	3.93E-05	3.16E-04	6.28E-05	6.38E-05	4.17E-04	1.62E-05	7.03E-09	2.52E-04	1.94E-04
17	A13	110	Combination Short Haul Truck	304	0.00E+00	5.40E-05	4.17E-06	1.07E+02	1.05E-07	7.91E-02	3.75E-05	8.70E-02	2.67E-03	7.79E-04	2.97E-03	1.20E-03	1.24E-03	1.70E-02	3.57E-04	0.00E+00	1.73E-03	1.64E-02
17	A13	110	Combination Long Haul Truck	277	0.00E+00	7.32E-05	4.64E-06	9.64E+01	3.56E-07	9.12E-02	5.71E-05	9.47E-02	2.59E-03	5.69E-04	5.81E-03	1.43E-03	1.49E-03	1.55E-02	3.23E-04	0.00E+00	4.32E-03	1.78E-02
17	A14	110	Passenger Car	1768	0.00E+00	1.72E-05	1.87E-06	7.43E+01	1.22E-04	4.02E-01	3.88E-05	2.09E-03	4.30E-03	9.42E-04	3.79E-03	2.44E-03	2.51E-03	1.91E-04	3.80E-04	8.59E-08	1.28E-03	3.26E-04
17	A14	110	Passenger Truck	2960	0.00E+00	3.58E-05	3.84E-06	1.73E+02	2.42E-04	7.94E-01	7.79E-05	5.07E-03	7.30E-03	1.65E-03	7.53E-03	4.87E-03	4.99E-03	1.07E-03	8.79E-04	1.70E-07	2.53E-03	8.28E-04
17	A14	110	Single Unit Short Haul Truck	428	0.00E+00	3.94E-05	1.60E-06	7.35E+01	3.59E-05	1.77E-01	4.53E-05	1.91E-02	2.37E-03	6.98E-04	5.54E-03	1.16E-03	1.18E-03	7.64E-03	2.96E-04	1.32E-07	4.36E-03	3.56E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	1.70E-06	6.63E-08	3.08E+00	1.45E-06	7.05E-03	1.94E-06	7.96E-04	1.06E-04	3.00E-05	2.41E-04	4.80E-05	4.88E-05	3.19E-04	1.24E-05	5.37E-09	1.93E-04

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A18	110	Single Unit Long Haul Truck	23	0.00E+00	2.08E-06	8.10E-08	3.76E+00	1.77E-06	8.61E-03	2.37E-06	9.72E-04	1.30E-04	3.67E-05	2.95E-04	5.87E-05	5.96E-05	3.89E-04	1.52E-05	6.56E-09	2.35E-04	1.81E-04
17	A18	110	Combination Short Haul Truck	301	0.00E+00	5.35E-05	4.13E-06	1.06E+02	1.04E-07	7.83E-02	3.71E-05	8.61E-02	2.64E-03	7.71E-04	2.94E-03	1.19E-03	1.23E-03	1.68E-02	3.53E-04	0.00E+00	1.71E-03	1.62E-02
17	A18	110	Combination Long Haul Truck	274	0.00E+00	7.24E-05	4.59E-06	9.54E+01	3.52E-07	9.03E-02	5.65E-05	9.37E-02	2.56E-03	5.63E-04	5.75E-03	1.42E-03	1.47E-03	1.53E-02	3.20E-04	0.00E+00	4.27E-03	1.77E-02
17	A19	110	Passenger Car	1383	0.00E+00	1.35E-05	1.46E-06	5.81E+01	9.56E-05	3.14E-01	3.04E-05	1.64E-03	3.36E-03	7.36E-04	2.96E-03	1.91E-03	1.96E-03	1.49E-04	2.97E-04	6.72E-08	1.00E-03	2.55E-04
17	A19	110	Passenger Truck	2315	0.00E+00	2.80E-05	3.01E-06	1.36E+02	1.89E-04	6.21E-01	6.09E-05	3.97E-03	5.71E-03	1.29E-03	5.89E-03	3.81E-03	3.90E-03	8.38E-04	6.87E-04	1.33E-07	1.98E-03	6.48E-04
17	A19	110	Single Unit Short Haul Truck	518	0.00E+00	4.77E-05	1.93E-06	8.90E+01	4.35E-05	2.15E-01	5.48E-05	2.31E-02	2.87E-03	8.45E-04	6.71E-03	1.41E-03	1.43E-03	9.25E-03	3.58E-04	1.59E-07	5.28E-03	4.31E-03
17	A19	110	Single Unit Long Haul Truck	23	0.00E+00	2.06E-06	8.03E-08	3.73E+00	1.75E-06	8.53E-03	2.35E-06	9.63E-04	1.29E-04	3.63E-05	2.92E-04	5.81E-05	5.90E-05	3.86E-04	1.50E-05	6.50E-09	2.33E-04	1.80E-04
17	A19	110	Combination Short Haul Truck	299	0.00E+00	5.31E-05	4.10E-06	1.05E+02	1.03E-07	7.78E-02	3.69E-05	8.55E-02	2.62E-03	7.66E-04	2.92E-03	1.18E-03	1.22E-03	1.67E-02	3.51E-04	0.00E+00	1.70E-03	1.61E-02
17	A19	110	Combination Long Haul Truck	272	0.00E+00	7.19E-05	4.56E-06	9.47E+01	3.50E-07	8.96E-02	5.61E-05	9.30E-02	2.54E-03	5.59E-04	5.71E-03	1.41E-03	1.46E-03	1.52E-02	3.17E-04	0.00E+00	4.24E-03	1.75E-02
17	A20	110	Passenger Car	1247	0.00E+00	1.22E-05	1.32E-06	5.24E+01	8.62E-05	2.84E-01	2.74E-05	1.48E-03	3.03E-03	6.64E-04	2.67E-03	1.72E-03	1.77E-03	1.35E-04	2.68E-04	6.06E-08	9.04E-04	2.30E-04
17	A20	110	Passenger Truck	2089	0.00E+00	2.53E-05	2.71E-06	1.22E+02	1.70E-04	5.60E-01	5.49E-05	3.58E-03	5.15E-03	1.16E-03	5.31E-03	3.43E-03	3.52E-03	7.56E-04	6.20E-04	1.20E-07	1.79E-03	5.85E-04
17	A20	110	Single Unit Short Haul Truck	538	0.00E+00	4.96E-05	2.01E-06	9.24E+01	4.52E-05	2.23E-01	5.69E-05	2.40E-02	2.98E-03	8.78E-04	6.97E-03	1.46E-03	1.48E-03	9.61E-03	3.72E-04	1.66E-07	5.48E-03	4.48E-03
17	A20	110	Single Unit Long Haul Truck	24	0.00E+00	2.14E-06	8.34E-08	3.87E+00	1.82E-06	8.86E-03	2.44E-06	1.00E-03	1.34E-04	3.78E-05	3.04E-04	6.04E-05	6.13E-05	4.01E-04	1.56E-05	6.75E-09	2.42E-04	1.87E-04
17	A20	110	Combination Short Haul Truck	307	0.00E+00	5.45E-05	4.21E-06	1.08E+02	1.06E-07	7.98E-02	3.79E-05	8.77E-02	2.69E-03	7.86E-04	3.00E-03	1.21E-03	1.26E-03	1.71E-02	3.60E-04	0.00E+00	1.74E-03	1.65E-02
17	A20	110	Combination Long Haul Truck	279	0.00E+00	7.38E-05	4.68E-06	9.72E+01	3.59E-07	9.20E-02	5.76E-05	9.55E-02	2.61E-03	5.74E-04	5.85E-03	1.44E-03	1.50E-03	1.56E-02	3.26E-04	0.00E+00	4.35E-03	1.80E-02
17	A21	110	Passenger Car	1674	0.00E+00	1.63E-05	1.77E-06	7.04E+01	1.16E-04	3.81E-01	3.68E-05	1.98E-03	4.07E-03	8.92E-04	3.59E-03	2.31E-03	2.37E-03	1.81E-04	3.60E-04	8.13E-08	1.21E-03	3.09E-04
17	A21	110	Passenger Truck	2803	0.00E+00	3.39E-05	3.64E-06	1.64E+02	2.29E-04	7.52E-01	7.37E-05	4.81E-03	6.92E-03	1.56E-03	7.13E-03	4.61E-03	4.73E-03	1.01E-03	8.32E-04	1.61E-07	2.40E-03	7.84E-04
17	A21	110	Single Unit Short Haul Truck	636	0.00E+00	5.86E-05	2.37E-06	1.09E+02	5.34E-05	2.63E-01	6.72E-05	2.84E-02	3.52E-03	1.04E-03	8.23E-03	1.73E-03	1.75E-03	1.14E-02	4.40E-04	1.96E-07	6.48E-03	5.29E-03
17	A21	110	Single Unit Long Haul Truck	28	0.00E+00	2.53E-06	9.85E-08	4.57E+00	2.15E-06	1.05E-02	2.89E-06	1.18E-03	1.58E-04	4.46E-05	3.59E-04	7.13E-05	7.25E-05	4.74E-04	1.84E-05	7.98E-09	2.86E-04	2.20E-04
17	A21	110	Combination Short Haul Truck	364	0.00E+00	6.47E-05	4.99E-06	1.28E+02	1.26E-07	9.48E-02	4.50E-05	1.04E-01	3.19E-03	9.33E-04	3.56E-03	1.44E-03	1.49E-03	2.03E-02	4.28E-04	0.00E+00	2.07E-03	1.96E-02
17	A21	110	Combination Long Haul Truck	332	0.00E+00	8.76E-05	5.56E-06	1.15E+02	4.27E-07	1.09E-01	6.84E-05	1.13E-01	3.10E-03	6.82E-04	6.95E-03	1.71E-03	1.78E-03	1.85E-02	3.87E-04	0.00E+00	5.17E-03	2.14E-02
17	A22	110	Passenger Car	1641	0.00E+00	1.60E-05	1.74E-06	6.90E+01	1.13E-04	3.73E-01	3.60E-05	1.94E-03	3.99E-03	8.74E-04	3.51E-03	2.27E-03	2.33E-03	1.77E-04	3.53E-04	7.97E-08	1.19E-03	3.03E-04
17	A22	110	Passenger Truck	2747	0.00E+00	3.32E-05	3.57E-06	1.61E+02	2.24E-04	7.37E-01	7.23E-05	4.71E-03	6.78E-03	1.53E-03	6.98E-03	4.52E-03	4.63E-03	9.94E-04	8.15E-04	1.58E-07	2.35E-03	7.69E-04
17	A22	110	Single Unit Short Haul Truck	580	0.00E+00	5.35E-05	2.17E-06	9.97E+01	4.87E-05	2.40E-01	6.13E-05	2.59E-02	3.21E-03	9.47E-04	7.51E-03	1.58E-03	1.60E-03	1.04E-02	4.01E-04	1.79E-07	5.91E-03	4.83E-03
17	A22	110	Single Unit Long Haul Truck	26	0.00E+00	2.31E-06	8.99E-08	4.17E+00	1.96E-06	9.55E-03	2.64E-06	1.08E-03	1.44E-04	4.07E-05	3.27E-04	6.51E-05	6.61E-05	4.32E-04	1.68E-05	7.28E-09	2.61E-04	2.01E-04
17	A22	110	Combination Short Haul Truck	315	0.00E+00	5.61E-05	4.33E-06	1.11E+02	1.09E-07	8.21E-02	3.90E-05	9.03E-02	2.77E-03	8.09E-04	3.09E-03	1.25E-03	1.29E-03	1.76E-02	3.71E-04	0.00E+00	1.79E-03	1.70E-02
17	A22	110	Combination Long Haul Truck	288	0.00E+00	7.59E-05	4.82E-06	1.00E+02	3.70E-07	9.47E-02	5.93E-05	9.83E-02	2.69E-03	5.91E-04	6.02E-03	1.48E-03	1.54E-03	1.61E-02	3.35E-04	0.00E+00	4.48E-03	1.85E-02
17	A23	110	Passenger Car	1324	0.00E+00	1.29E-05	1.40E-06	5.56E+01	9.15E-05	3.01E-01	2.91E-05	1.57E-03	3.22E-03	7.05E-04	2.84E-03	1.83E-03	1.88E-03	1.43E-04	2.85E-04	6.43E-08	9.59E-04	2.44E-04
17	A23	110	Passenger Truck	2216	0.00E+00	2.68E-05	2.88E-06	1.30E+02	1.81E-04	5.95E-01	5.83E-05	3.80E-03	5.47E-03	1.24E-03	5.63E-03	3.64E-03	3.74E-03	8.02E-04	6.58E-04	1.27E-07	1.90E-03	6.20E-04
17	A23	110	Single Unit Short Haul Truck	648	0.00E+00	5.97E-05	2.42E-06	1.11E+02	5.44E-05	2.69E-01	6.85E-05	2.89E-02	3.59E-03	1.06E-03	8.39E-03	1.76E-03	1.79E-03	1.16E-02	4.48E-04	1.99E-07	6.61E-03	5.39E-03
17	A23	110	Single Unit Long Haul Truck	29	0.00E+00	2.58E-06	1.00E-07	4.66E+00	2.19E-06	1.07E-02	2.94E-06	1.21E-03	1.61E-04	4.55E-05	3.66E-04	7.27E-05	7.39E-05	4.83E-04	1.88E-05	8.14E-09	2.92E-04	2.25E-04
17	A23	110	Combination Short Haul Truck	359	0.00E+00	6.39E-05	4.93E-06	1.26E+02	1.24E-07	9.36E-02	4.44E-05	1.03E-01	3.15E-03	9.21E-04	3.52E-03	1.42E-03	1.47E-03	2.01E-02	4.22E-04	0.00E+00	2.04E-03	1.94E-02
17	A23	110	Combination Long Haul Truck	328	0.00E+00	8.65E-05	5.49E-06	1.14E+02	4.21E-07	1.08E-01	6.76E-05	1.12E-01	3.06E-03	6.73E-04	6.86E-03	1.69E-03	1.76E-03	1.83E-02	3.82E-04	0.00E+00	5.11E-03	2.11E-02
17	A24	110	Passenger Car	2004	0.00E+00	1.95E-05	2.12E-06	8.42E+01	1.39E-04	4.56E-01	4.40E-05	2.37E-03	4.87E-03	1.07E-03	4.29E-03	2.77E-03	2.84E-03	2.17E-04	4.31E-04	9.74E-08	1.45E-03	3.70E-04
17	A24	110	Passenger Truck	3356	0.00E+00	4.06E-05	4.36E-06	1.97E+02	2.74E-04	9.00E-01	8.83E-05	5.75E-03	8.28E-03	1.87E-03	8.53E-03	5.52E-03	5.66E-03	1.21E-03	9.96E-04	1.93E-07	2.87E-03	9.39E-04
17	A24	110	Single Unit Short Haul Truck	548	0.00E+00	5.05E-05	2.04E-06	9.41E+01	4.60E-05	2.27E-01	5.79E-05	2.44E-02	3.03E-03	8.94E-04	7.09E-03	1.49E-03	1.51E-03	9.78E-03	3.79E-04	1.68E-07	5.58E-03	4.56E-03
17	A24	110	Single Unit Long Haul Truck	24	0.00E+00	2.18E-06	8.49E-08	3.94E+00	1.85E-06	9.02E-03	2.49E-06	1.02E-03	1.36E-04	3.84E-05	3.09E-04	6.15E-05	6.24E-05	4.08E-04	1.59E-05	6.87E-09	2.47E-04	1.90E-04
17	A24	110	Combination Short Haul Truck	275	0.00E+00	4.89E-05	3.77E-06	9.67E+01	9.50E-08	7.16E-02	3.40E-05	7.87E-02	2.41E-03	7.05E-04	2.69E-03	1.09E-03	1.13E-03	1.54E-02	3.23E-04	0.00E+00	1.57E-03	1.48E-02
17	A24	110	Combination Long Haul Truck	251	0.00E+00	6.62E-05	4.20E-06	8.73E+01	3.22E-07	8.26E-02	5.17E-05	8.57E-02	2.34E-03	5.15E-04	5.26E-03	1.29E-03	1.35E-03	1.40E-02	2.92E-04	0.00E+00	3.91E-03	1.61E-02
16	B09	100	Passenger Car	920	0.00E+00	8.49E-06	9.22E-07	3.72E+01	6.02E-05	1.73E-01	1.91E-05	9.93E-04	2.94E-03	5.64E-04	1.87E-03	1.20E-03	1.23E-03	1.09E-04	1.90E-04	4.00E-08	6.31E-04	1.55E-04
16	B09	100	Passenger Truck	1542	0.00E+00	1.75E-05	1.88E-06	8.59E+01	1.17E-04	3.35E-01	3.78E-05	2.48E-03	5.14E-03	9.97E-04	3.65E-03	2.36E-03	2.42E-03	5.68E-04	4.34E-04	7.91E-08	1.23E-03	4.07E-04
16	B09	100	Single Unit Short Haul Truck	174	0.00E+00	1.66E-05	6.12E-07	2.85E+01	1.27E-05	5.88E-02	1.88E-05	7.34E-03	1.13E-03	2.92E-04	2.38E-03	4.39E-04	4.46E-04	2.92E-03	1.15E-04	4.70E-08	1.93E-03	1.37E-03
16	B09	100	Single Unit Long Haul Truck	8	0.00E+00	7.20E-07	2.59E-08	1.20E+00	5.24E-07	2.40E-03	8.14E-07	3.08E-04	5.12E-05	1.27E-05	1.04E-04	1.85E-05	1.88E-05	1.22E-04	4.86E-06	1.92E-09	8.50E-05	5.74E-05
16	B09	100	Combination Short Haul Truck	93	0.00E+00	1.32E-05	9.78E-07	3.08E+01	3.51E-08	2.38E-02	9.48E-06	2.40E-02	8.97E-04	2.27E-04	8.07E-04	2.86E-04	2.97E-04	4.90E-03	1.03E-04	0.00E+00	5.10E-04	4.52E-03
16	B09	100	Combination Long Haul Truck	84	0.00E+00	1.87E-05	1.06E-06	2.79E+01	1.19E-07	2.78E-02	1.54E-05	2.57E-02	8.98E-04	1.83E-04	1.72E-03	3.40E-04	3.54E-04	4.48E-03	9.36E-05	0.00E+00	1.36E-03	4.84E-03
16	B10	100	Passenger Car	1742	0.00E+00	1.61E-05	1.74E-06	7.05E+01	1.14E-04	3.28E-01	3.62E-05	1.88E-03	5.57E-03	1.07E-03	3.53E-03	2.28E-03	2.34E-03	2.07E-04	3.60E-04	7.56E-08	1.19E-03	2.93E-04
16	B10	100	Passenger Truck	2916	0.00E+00	3.32E-05	3.55E-06	1.62E+02	2.21E-04	6.34E-01	7.16E-05	4.69E-03	9.72E-03	1.89E-03	6.90E-03	4.47E-03	4.58E-03	1.07E-03	8.22E-04	1.50E-07	2.32E-03	7.71E-04
16	B10	100	Single Unit Short Haul Truck	106	0.00E+00	1.01E-05	3.73E-07	1.74E+01	7.73E-06	3.58E-02	1.15E-05	4.47E-03	6.87E-04	1.78E-04	1.45E-03	2.67E-04	2.72E-04	1.78E-03	7.03E-05	2.87E-08	1.18E-03	8.34E-04
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	4.39E-07	1.58E-08	7.30E-01	3.20E-07	1.47E-03	4.96E-07	1.88E-04	3.12E-05	7.72E-06	6.33E-05	1.13E-05	1.15E-05	7.43E-05	2.96E-06	1.17E-09	5.19E-05	3.50E-05
16	B10	100	Combination Short Haul Truck	200	0.00E+00	2.86E-05	2.11E-06	6.66E+01	7.58E-08	5.15E-02	2.05E-05	5.17E-02	1.94E-03	4.91E-04	1.74E-03	6.16E-04	6.40E-04	1.06E-02	2.23E-04	0.00E+00	1.10E-03	9.75E-03
16	B10	100	Combination Long Haul Truck	182	0.00E+00	4.04E-05	2.28E-06	6.03E+01	2.57E-07	5.99E-02	3.33E-05	5.54E-02	1.94E-03	3.95E-04	3.71E-03	7.34E-04	7.65E-04	9.68E-03	2.02E-04	0.00E+00	2.94E-03	1.04E-02
16	B11	100	Passenger Car	335	0.00E+00	3.09E-06	3.35E-07	1.35E+01	2.19E-05	6.30E-02	6.96E-06	3.61E-04	1.07E-03	2.05E-04	6.78E-04	4.37E-04	4.49E-04	3.98E-05	6.92E-05	1.45E-08	2.29E-04	5.63E-05
16	B11	100	Passenger Truck	560	0.00E+00	6.38E-06	6.83E-07	3.12E+01	4.25E-05	1.22E-01	1.38E-05	9.02E-04	1.87E-03	3.62E-04	1.33E-03	8.59E-04	8.80E-04	2.06E-04	1.58E-04	2.88E-08	4.46E-04	1.48E-04
16	B11	100	Single Unit Short Haul Truck	102	0.00E+00	9.65E-06	3.56E-07	1.66E+01	7.38E-06	3.42E-02	1.09E-05	4.27E-03	6.56E-04	1.70E-04	1.38E-03	2.55E-04	2.60E-04	1.70E-03	6.71E-05	2.74E-08	1.12E-03	7.97E-04
16	B11	100	Single Unit Long Haul Truck	4	0.00E+00	4.19E-07	1.51E-08	6.97E-01	3.05E-07	1.40E-03	4.74E-07	1.79E-04	2.98E-05	7.37E-06	6.05E-05	1.08E-05	1.10E-05	7.09E-05	2.83E-06	1.12E-09	4.95E-05	3.34E-05
16	B11	100	Combination Short Haul Truck	47	0.00E+00	6.66E-06	4.92E-07	1.55E+01	1.77E-08	1.20E-02	4.77E-06	1.21E-02	4.51E-04	1.14E-04	4.06E-04	1.44E-04	1.49E-04	2.47E-03	5.19E-05	0.00E+00	2.57E-04	2.27E-03
16	B11	100	Combination Long Haul Truck	42	0.00E+00	9.41E-06	5.31E-07	1.41E+01	6.00E-08	1.40E-02	7.77E-06	1.29E-02	4.52E-04	9.20E-05	8.63E-04	1.71E-04	1.78E-04	2.25E-03	4.71E-05	0.00E+00	6.85E-04	2.43E-03
16	B12	100	Passenger Car	859	0.00E+00	7.92E-06	8.60E-07	3.47E+01	5.62E-05	1.62E-01	1.79E-05	9.26E-04	2.75E-03	5.26E-04	1.74E-03	1.12E-03	1.15E-03	1.02E-04	1.78E-04	3.73E-08	5.89E-04	1.44E-04
16	B12	100	Passenger Truck	1438	0.00E+00	1.64E-05	1.75E-06	8.01E+01	1.09E-04	3.13E-01	3.53E-05	2.31E-03	4.79E-03	9.30E-04	3.40E-03	2.20E-03	2.26E-03	5.30E-04	4.05E-04	7.38E-08	1.14E-03	3.80E-04
16	B12	100	Single Unit Short Haul Truck	39	0.00E+00	3.73E-06	1.38E-07	6.41E+00	2.86E-06	1.32E-02	4.23E-06	1.65E-03	2.54E-04	6.57E-05	5.35E-04	9.88E-05	1.01E-04	6.57E-04	2.60E-05	1.06E-08	4.35E-04	3.08E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	1.62E-07	5.83E-09	2.70E-01	1.18E-07	5.42E-04	1.83E-07	6.93E-05	1.15E-05	2.85E-06	2.34E-05	4.17E-06	4.24E-06	2.74E-05	1.09E-06	4.34E-10	1.92E-05	1.29E-05
16	B12	100	Combination Short Haul Truck	44	0.00E+00	6.29E-06	4.64E-07	1.46E+01	1.67E-08	1.13E-02	4.50E-06	1.14E-02	4.26E-04	1.08E-04	3.83E-04	1.36E-04	1.41E-04	2.33E-03	4.90E-05	0.00E+00	2.42E-04	2.14E-03
16	B12	100	Combination Long Haul Truck	40	0.00E+00	8.88E-06	5.01E-07	1.33E+01	5.66E-08	1.32E-02	7.33E-06	1.22E-02	4.26E-04	8.69E-05	8.15E-04	1.61E-04	1.68E-04	2.13E-03	4.44E-05	0.00E+00	6.47E-04	2.29E-03
16	B13	100	Passenger Car	842	0.00E+00	7.76E-06	8.44E-07	3.41E+01	5.51E-05	1.59E-01	1.75E-05	9.08E-04	2.69E-03	5.16E-04	1.71E-03	1.10E-03	1.13E-03	1.00E-04	1.74E-04	3.65E-08	5.77E-04	1.42E-04
16	B13	100	Passenger Truck	1410	0.00E+00	1.60E-05	1.72E-06	7.86E+01	1.07E-04	3.07E-01	3.46E-05	2.27E-03	4.70E-03	9.12E-04	3.34E-03	2.16E-03	2.22E-03	5.19E-04	3.97E-04	7.24E-08	1.12E-03	3.73E-04
16	B13	100	Single Unit Short Haul Truck	64	0.00E+00	6.10E-06	2.25E-07	1.05E+01	4.67E-06	2.16E-02	6.91E-06	2.70E-03	4.15E-04	1.07E-04	8.74E-04	1.61E-04	1.64E-04	1.07E-03	4.24E-05	1.73E-08	7.10E-04	5.04E-04
16	B13	100	Single Unit Long Haul Truck	3	0.00E+00	2.65E-07	9.53E-09	4.41E-01	1.93E-07	8.85E-04	3.00E-07	1.13E-04	1.88E-05	4.66E-06	3.82E-05	6.81E-06	6.93E-06	4.48E-05	1.79E-06	7.08E-10	3.13E-05	2.11E-05
16	B13	100	Combination Short Haul Truck	89	0.00E+00	1.28E-05	9.45E-07	2.98E+01	3.39E-08	2.30E-02	9.16E-06	2.32E-02	8.66E-04	2.20E-04	7.79E-04	2.76E-04	2.86E-04	4.74E-03	9.97E-05	0.00E+00	4.93E-04	4.36E-03
16	B13	100	Combination Long Haul Truck	82	0.00E+00	1.81E-05	1.02E-06	2.70E+01	1.15E-07	2.68E-02	1.49E-05	2.48E-02	8.68E-04	1.77E-04	1.66E-03	3.29E-04	3.42E-04	4.33E-03	9.05E-05	0.00E+00	1.32E-03	4.67E-03
16	B14	100	Passenger Car	401	0.00E+00	3.70E-06	4.02E-07	1.62E+01	2.62E-05	7.55E-02	8.33E-06	4.32E-04	1.28E-03	2.46E-04	8.13E-04	5.24E-04	5.38E-04	4.77E-05	8.28E-05	1.74E-08	2.75E-04	6.74E-05
16	B14	100	Passenger Truck	671	0.00E+00	7.64E-06	8.18E-07	3.74E+01	5.09E-05	1.46E-01	1.65E-05	1.08E-03	2.24E-03	4.34E-04	1.59E-03	1.03E-03	1.05E-03	2.47E-04	1.89E-04	3.45E-08	5.34E-04	1.77E-04
16	B14	100	Single Unit Short Haul Truck	90	0.00E+00	8.56E-06	3.16E-07	1.47E+01	6.55E-06	3.03E-02	9.70E-06	3.79E-03	5.82E-04	1.51E-04	1.23E-03	2.27E-04	2.30E-04	1.51E-03	5.95E-05	2.43E-08	9.96E-04	7.07E-04
16	B14	100	Single Unit Long Haul Truck	4	0.00E+00	3.72E-07	1.34E-08	6.18E-01	2.71E-07	1.24E-03	4.20E-07	1.59E-04	2.64E-05	6.54E-06	5.36E-05	9.55E-06	9.73E-06	6.29E-05	2.51E-06	9.94E-10	4.39E-05	2.96E-05
16	B14	100	Combination Short Haul Truck	44	0.00E+00	6.36E-06	4.70E-07	1.48E+01	1.69E-08	1.14E-02	4.55E-06	1.15E-02	4.31E-04	1.09E-04	3.87E-04	1.37E-04	1.42E-04	2.35E-03	4.95E-05	0.00E+00	2.45E-04	2.17E-03
16	B14	100	Combination Long Haul Truck	41	0.00E+00	8.99E-06	5.07E-07	1.34E+01	5.73E-08	1.33E-02	7.42E-06	1.23E-02	4.31E-04	8.79E-05	8.25E-04	1.63E-04	1.70E-04	2.15E-03	4.50E-05	0.00E+00	6.54E-04	2.32E-03
16	B15	100	Passenger Car	895	0.00E+00	8.25E-06	8.97E-07	3.62E+01	5.86E-05	1.69E-01	1.86E-05	9.65E-04	2.86E-03	5.48E-04	1.81E-03	1.17E-03	1.20E-03	1.06E-04	1.85E-04	3.89E-08	6.14E-04	1.51E-04
16	B15	100	Passenger Truck	1499	0.00E+00	1.71E-05	1.83E-06	8.35E+01	1.14E-04	3.26E-01	3.68E-05	2.41E-03	4.99E-03	9.70E-04	3.55E-03	2.30E-03	2.36E-03	5.52E-04	4.22E-04	7.70E-08	1.19E-03	3.96E-04
16	B15	100	Single Unit Short Haul Truck	128	0.00E+00	1.22E-05	4.51E-07	2.10E+01	9.33E-06	4.33E-02	1.38E-05	5.40E-03	8.29E-04	2.15E-04	1.75E-03	3.23E-04	3.29E-04	2.15E-03	8.48E-05	3.46E-08	1.42E-03	1.01E-03
16	B15	100	Single Unit Long Haul Truck	6	0.00E+00	5.30E-07	1.91E-08	8.81E-01	3.86E-07	1.77E-03	5.99E-07	2.27E-04	3.77E-05	9.32E-06	7.65E-05	1.36E-05	1.39E-05	8.97E-05	3.58E-06	1.42E-09	6.26E-05	4.22E-05
16	B15	100	Combination Short Haul Truck	63	0.00E+00	9.05E-06	6.69E-07	2.11E+01	2.40E-08	1.63E-02	6.48E-06	1.64E-02	6.13E-04	1.55E-04	5.52E-04	1.95E-04	2.03E-04	3.35E-03	7.05E-05	0.00E+00	3.49E-04	3.09E-03
16	B15	100	Combination Long Haul Truck	58	0.00E+00	1.28E-05	7.21E-07	1.91E+01	8.16E-08	1.90E-02	1.06E-05	1.75E-02	6.14E-04	1.25E-04	1.17E-03	2.33E-04	2.42E-04	3.07E-03	6.40E-05	0.00E+00	9.32E-04	3.31E-03
16	B16	100	Passenger Car	1772	0.00E+00	1.63E-05	1.78E-06	7.17E+01	1.16E-04	3.34E-01	3.68E-05	1.91E-03	5.66E-03	1.09E-03	3.59E-03	2.32E-03	2.38E-03	2.11E-04	3.66E-04	7.69E-08	1.22E-03	2.98E-04

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	C13	40	Passenger Truck	227	0.00E+00	4.23E-06	4.45E-07	1.54E+01	2.55E-05	6.04E-02	8.50E-06	4.76E-04	4.14E-03	5.74E-04	8.03E-04	5.24E-04	5.37E-04	1.37E-04	7.66E-05	1.12E-08	2.66E-04	8.24E-05
50	C13	40	Single Unit Short Haul Truck	13	0.00E+00	4.55E-06	2.02E-07	2.53E+00	3.15E-06	3.97E-03	4.86E-06	1.84E-03	5.28E-04	8.24E-05	5.85E-04	1.22E-04	1.24E-04	2.59E-04	1.03E-05	4.38E-09	4.61E-04	3.44E-04
50	C13	40	Single Unit Long Haul Truck	1	0.00E+00	1.99E-07	8.83E-09	1.09E-01	1.38E-07	1.73E-04	2.13E-07	8.00E-05	2.37E-05	3.67E-06	2.57E-05	5.33E-06	5.43E-06	1.12E-05	4.46E-07	1.90E-10	2.03E-05	1.50E-05
50	C13	40	Combination Short Haul Truck	7	0.00E+00	3.53E-06	2.64E-07	3.04E+00	8.75E-09	4.99E-03	2.51E-06	5.15E-03	7.12E-04	1.06E-04	2.10E-04	7.67E-05	7.97E-05	4.83E-04	1.02E-05	0.00E+00	1.30E-04	9.71E-04
50	C13	40	Combination Long Haul Truck	7	0.00E+00	4.69E-06	2.65E-07	2.91E+00	2.98E-08	6.06E-03	3.87E-06	5.44E-03	7.40E-04	1.04E-04	4.30E-04	8.54E-05	8.90E-05	4.68E-04	9.77E-06	0.00E+00	3.41E-04	1.02E-03
53	C14	70	Passenger Car	562	0.00E+00	6.00E-06	6.52E-07	2.45E+01	4.26E-05	1.15E-01	1.35E-05	5.78E-04	4.26E-03	6.67E-04	1.32E-03	8.51E-04	8.73E-04	9.55E-05	1.25E-04	2.59E-08	4.46E-04	9.02E-05
53	C14	70	Passenger Truck	941	0.00E+00	1.25E-05	1.33E-06	5.52E+01	8.05E-05	2.03E-01	2.63E-05	1.63E-03	7.61E-03	1.18E-03	2.52E-03	1.64E-03	1.68E-03	4.15E-04	2.78E-04	4.87E-08	8.41E-04	2.74E-04
53	C14	70	Single Unit Short Haul Truck	33	0.00E+00	5.73E-06	2.33E-07	5.34E+00	3.84E-06	9.67E-03	6.23E-06	2.28E-03	5.18E-04	9.50E-05	7.73E-04	1.47E-04	1.50E-04	5.42E-04	2.17E-05	8.76E-09	6.22E-04	4.27E-04
53	C14	70	Single Unit Long Haul Truck	1	0.00E+00	2.49E-07	1.00E-08	2.26E-01	1.65E-07	4.06E-04	2.71E-07	9.82E-05	2.37E-05	4.25E-06	3.37E-05	6.36E-06	6.48E-06	2.29E-05	9.21E-07	3.69E-10	2.72E-05	1.84E-05
53	C14	70	Combination Short Haul Truck	16	0.00E+00	4.17E-06	3.10E-07	5.64E+00	1.06E-08	6.03E-03	2.97E-06	6.25E-03	5.88E-04	9.81E-05	2.50E-04	9.04E-05	9.39E-05	8.96E-04	1.89E-05	0.00E+00	1.56E-04	1.18E-03
53	C14	70	Combination Long Haul Truck	15	0.00E+00	5.72E-06	3.25E-07	5.29E+00	3.59E-08	7.19E-03	4.70E-06	6.69E-03	6.12E-04	9.22E-05	5.20E-04	1.05E-04	1.09E-04	8.50E-04	1.77E-05	0.00E+00	4.11E-04	1.26E-03
50	C15	40	Passenger Car	121	0.00E+00	1.72E-06	1.87E-07	6.31E+00	1.22E-05	3.27E-02	3.87E-06	1.11E-04	2.09E-03	2.94E-04	3.78E-04	2.43E-04	2.50E-04	3.60E-05	3.18E-05	5.89E-09	1.28E-04	1.72E-05
50	C15	40	Passenger Truck	203	0.00E+00	3.79E-06	3.98E-07	1.37E+01	2.28E-05	5.41E-02	7.61E-06	4.26E-04	3.70E-03	5.14E-04	7.19E-04	4.69E-04	4.81E-04	1.23E-04	6.85E-05	1.00E-08	2.38E-04	7.38E-05
50	C15	40	Single Unit Short Haul Truck	20	0.00E+00	6.82E-06	3.03E-07	3.80E+00	4.72E-06	5.96E-03	7.29E-06	2.75E-03	7.92E-04	1.24E-04	8.77E-04	1.83E-04	1.86E-04	3.88E-04	1.55E-05	6.57E-09	6.91E-04	5.16E-04
50	C15	40	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.32E-08	1.64E-01	2.07E-07	2.59E-04	3.20E-07	1.20E-04	3.55E-05	5.50E-06	3.86E-05	8.00E-06	8.15E-06	1.68E-05	6.69E-07	2.85E-10	3.04E-05	2.25E-05
50	C15	40	Combination Short Haul Truck	20	0.00E+00	9.59E-06	7.16E-07	8.24E+00	2.37E-08	1.36E-02	6.81E-06	1.40E-02	1.93E-03	2.88E-04	5.70E-04	2.08E-04	2.16E-04	1.31E-03	2.76E-05	0.00E+00	3.54E-04	2.63E-03
50	C15	40	Combination Long Haul Truck	18	0.00E+00	1.27E-05	7.19E-07	7.91E+00	8.10E-08	1.65E-02	1.05E-05	1.48E-02	2.01E-03	2.82E-04	1.17E-03	2.32E-04	2.42E-04	1.27E-03	2.65E-05	0.00E+00	9.26E-04	2.78E-03
52	C16	60	Passenger Car	141	0.00E+00	1.64E-06	1.78E-07	6.37E+00	1.16E-05	3.13E-02	3.70E-06	1.40E-04	1.39E-03	2.08E-04	3.61E-04	2.33E-04	2.39E-04	2.80E-05	3.23E-05	6.58E-09	1.22E-04	2.19E-05
52	C16	60	Passenger Truck	237	0.00E+00	3.46E-06	3.67E-07	1.42E+01	2.18E-05	5.38E-02	7.18E-06	4.28E-04	2.46E-03	3.66E-04	6.84E-04	4.45E-04	4.56E-04	1.12E-04	7.13E-05	1.20E-08	2.28E-04	7.23E-05
52	C16	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.57E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
52	C16	60	Single Unit Long Haul Truck	1	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.03E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.72E-04
52	C16	60	Combination Short Haul Truck	7	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.23E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.09E-04
53	C17	70	Passenger Car	424	0.00E+00	4.53E-06	4.92E-07	1.85E+01	3.21E-05	8.68E-02	1.02E-05	4.37E-04	3.22E-03	5.04E-04	9.96E-04	6.42E-04	6.59E-04	7.21E-05	9.41E-05	1.95E-08	3.37E-04	6.81E-05
53	C17	70	Passenger Truck	711	0.00E+00	9.46E-06	1.01E-06	4.17E+01	6.08E-05	1.53E-01	1.99E-05	1.23E-03	5.75E-03	8.93E-04	1.90E-03	1.24E-03	1.27E-03	3.13E-04	2.10E-04	3.68E-08	6.35E-04	2.07E-04
53	C17	70	Single Unit Short Haul Truck	110	0.00E+00	1.94E-05	7.87E-07	1.80E+01	1.30E-05	3.27E-02	2.11E-05	7.72E-03	1.75E-03	3.21E-04	2.61E-03	4.98E-04	5.08E-04	1.83E-03	7.34E-05	2.96E-08	2.11E-03	1.44E-03
53	C17	70	Single Unit Long Haul Truck	5	0.00E+00	8.43E-07	3.40E-08	7.65E-01	5.59E-07	1.37E-03	9.17E-07	3.32E-04	8.01E-05	1.44E-05	1.14E-04	2.15E-05	2.19E-05	7.74E-05	3.12E-06	1.25E-09	9.21E-05	6.22E-05
53	C17	70	Combination Short Haul Truck	49	0.00E+00	1.25E-05	9.31E-07	1.69E+01	3.18E-08	1.81E-02	8.92E-06	1.87E-02	1.76E-03	2.94E-04	7.51E-04	2.71E-04	2.82E-04	2.69E-03	5.66E-05	0.00E+00	4.69E-04	3.53E-03
53	C17	70	Combination Long Haul Truck	44	0.00E+00	1.72E-05	9.76E-07	1.59E+01	1.08E-07	2.16E-02	1.41E-05	2.01E-02	1.84E-03	2.77E-04	1.56E-03	3.14E-04	3.27E-04	2.55E-03	5.32E-05	0.00E+00	1.23E-03	3.78E-03
52	C18	60	Passenger Car	166	0.00E+00	1.93E-06	2.10E-07	7.50E+00	1.37E-05	3.69E-02	4.35E-06	1.65E-04	1.63E-03	2.45E-04	4.25E-04	2.74E-04	2.81E-04	3.30E-05	3.80E-05	7.75E-09	1.44E-04	2.57E-05
52	C18	60	Passenger Truck	279	0.00E+00	4.08E-06	4.32E-07	1.67E+01	2.57E-05	6.33E-02	8.45E-06	5.03E-04	2.90E-03	4.31E-04	8.06E-04	5.24E-04	5.37E-04	1.32E-04	8.39E-05	1.42E-08	2.68E-04	8.52E-05
52	C18	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
52	C18	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.76E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
52	C18	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.50E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.59E-04
52	C18	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.73E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	7.02E-04
50	C19	40	Passenger Car	51	0.00E+00	7.21E-07	7.83E-08	2.65E+00	5.11E-06	1.37E-02	1.62E-06	4.64E-05	8.77E-04	1.23E-04	1.58E-04	1.02E-04	1.05E-04	1.51E-05	1.33E-05	2.47E-09	5.36E-05	7.24E-06
50	C19	40	Passenger Truck	85	0.00E+00	1.59E-06	1.67E-07	5.77E+00	9.57E-06	2.27E-02	3.19E-06	1.79E-04	1.55E-03	2.16E-04	3.02E-04	1.97E-04	2.02E-04	5.16E-05	2.88E-05	4.20E-09	9.99E-05	3.10E-05
50	C19	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.24E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.83E-05
50	C19	40	Combination Short Haul Truck	2	0.00E+00	1.01E-06	7.54E-08	8.68E-01	2.50E-09	1.43E-03	7.17E-07	1.47E-03	2.03E-04	3.03E-05	6.00E-05	2.19E-05	2.28E-05	1.38E-04	2.90E-06	0.00E+00	3.73E-05	2.77E-04
50	C19	40	Combination Long Haul Truck	2	0.00E+00	1.34E-06	7.57E-08	8.33E-01	8.52E-09	1.73E-03	1.11E-06	1.55E-03	2.11E-04	2.97E-05	1.23E-04	2.44E-05	2.54E-05	1.34E-04	2.79E-06	0.00E+00	9.74E-05	2.93E-04
53	C20	70	Passenger Car	81	0.00E+00	8.62E-07	9.37E-08	3.52E+00	6.12E-06	1.65E-02	1.94E-06	8.31E-05	6.13E-04	9.59E-05	1.90E-04	1.22E-04	1.25E-04	1.37E-05	1.79E-05	3.72E-09	6.41E-05	1.30E-05
53	C20	70	Passenger Truck	135	0.00E+00	1.80E-06	1.92E-07	7.94E+00	1.16E-05	2.92E-02	3.78E-06	2.35E-04	1.09E-03	1.70E-04	3.62E-04	2.35E-04	2.41E-04	5.96E-05	4.00E-05	7.00E-09	1.21E-04	3.93E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
53	C20	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
53	C20	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
50	C21	40	Passenger Car	296	0.00E+00	4.19E-06	4.56E-07	1.54E+01	2.97E-05	7.98E-02	9.45E-06	2.70E-04	5.10E-03	7.17E-04	9.22E-04	5.94E-04	6.10E-04	8.79E-05	7.75E-05	1.44E-08	3.12E-04	4.21E-05
50	C21	40	Passenger Truck	495	0.00E+00	9.24E-06	9.72E-07	3.36E+01	5.57E-05	1.32E-01	1.86E-05	1.04E-03	9.04E-03	1.26E-03	1.75E-03	1.15E-03	1.17E-03	3.00E-04	1.67E-04	2.44E-08	5.81E-04	1.80E-04
50	C21	40	Single Unit Short Haul Truck	85	0.00E+00	2.89E-05	1.29E-06	1.61E+01	2.00E-05	2.52E-02	3.09E-05	1.17E-02	3.35E-03	5.24E-04	3.72E-03	7.75E-04	7.90E-04	1.64E-03	6.56E-05	2.78E-08	2.93E-03	2.19E-03
50	C21	40	Single Unit Long Haul Truck	4	0.00E+00	1.27E-06	5.62E-08	6.95E-01	8.76E-07	1.10E-03	1.36E-06	5.09E-04	1.50E-04	2.33E-05	1.63E-04	3.39E-05	3.45E-05	7.10E-05	2.83E-06	1.21E-09	1.29E-04	9.53E-05
50	C21	40	Combination Short Haul Truck	33	0.00E+00	1.61E-05	1.21E-06	1.39E+01	4.00E-08	2.28E-02	1.15E-05	2.35E-02	3.26E-03	4.85E-04	9.60E-04	3.51E-04	3.64E-04	2.21E-03	4.64E-05	0.00E+00	5.96E-04	4.44E-03
50	C21	40	Combination Long Haul Truck	31	0.00E+00	2.15E-05	1.21E-06	1.33E+01	1.36E-07	2.77E-02	1.77E-05	2.49E-02	3.38E-03	4.75E-04	1.97E-03	3.90E-04	4.07E-04	2.14E-03	4.46E-05	0.00E+00	1.56E-03	4.68E-03
52	C22	60	Passenger Car	238	0.00E+00	2.76E-06	3.00E-07	1.07E+01	1.96E-05	5.27E-02	6.22E-06	2.36E-04	2.33E-03	3.50E-04	6.07E-04	3.91E-04	4.02E-04	4.71E-05	5.43E-05	1.11E-08	2.05E-04	3.68E-05
52	C22	60	Passenger Truck	398	0.00E+00	5.83E-06	6.17E-07	2.39E+01	3.67E-05	9.05E-02	1.21E-05	7.20E-04	4.15E-03	6.16E-04	1.15E-03	7.49E-04	7.68E-04	1.89E-04	1.20E-04	2.02E-08	3.84E-04	1.22E-04
52	C22	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
52	C22	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.11E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
52	C22	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.03E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.72E-04
52	C22	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.23E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.09E-04
53	C23	70	Passenger Car	479	0.00E+00	5.11E-06	5.56E-07	2.09E+01	3.63E-05	9.80E-02	1.15E-05	4.93E-04	3.63E-03	5.69E-04	1.12E-03	7.25E-04	7.44E-04	8.14E-05	1.06E-04	2.21E-08	3.80E-04	7.69E-05
53	C23	70	Passenger Truck	802	0.00E+00	1.07E-05	1.14E-06	4.71E+01	6.86E-05	1.73E-01	2.24E-05	1.39E-03	6.49E-03	1.01E-03	2.15E-03	1.39E-03	1.43E-03	3.53E-04	2.37E-04	4.15E-08	7.17E-04	2.33E-04
53	C23	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.23E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.91E-04
53	C23	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.82E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.41E-05
53	C23	70	Combination Short Haul Truck	23	0.00E+00	5.92E-06	4.41E-07	8.00E+00	1.50E-08	8.55E-03	4.22E-06	8.87E-03	8.35E-04	1.39E-04	3.55E-04	1.28E-04	1.33E-04	1.27E-03	2.68E-05	0.00E+00	2.22E-04	1.67E-03
53	C23	70	Combination Long Haul Truck	21	0.00E+00	8.12E-06	4.62E-07	7.51E+00	5.09E-08	1.02E-02	6.68E-06	9.50E-03	8.69E-04	1.31E-04	7.38E-04	1.48E-04	1.55E-04	1.21E-03	2.52E-05	0.00E+00	5.84E-04	1.79E-03
52	C24	60	Passenger Car	72	0.00E+00	8.37E-07	9.10E-08	3.25E+00	5.94E-06	1.60E-02	1.89E-06	7.16E-05	7.08E-04	1.06E-04	1.84E-04	1.19E-04	1.22E-04	1.43E-05	1.65E-05	3.36E-09	6.23E-05	1.12E-05
52	C24	60	Passenger Truck	121	0.00E+00	1.77E-06	1.87E-07	7.25E+00	1.11E-05	2.75E-02	3.67E-06	2.18E-04	1.26E-03	1.87E-04	3.49E-04	2.27E-04	2.33E-04	5.73E-05	3.64E-05	6.14E-09	1.16E-04	3.69E-05
52	C24	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
52	C24	60	Single Unit Long Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
52	C24	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
50	C25	40	Passenger Car	259	0.00E+00	3.68E-06	4.00E-07	1.35E+01	2.61E-05	7.00E-02	8.29E-06	2.37E-04	4.47E-03	6.29E-04	8.09E-04	5.21E-04	5.35E-04	7.71E-05	6.80E-05	1.26E-08	2.74E-04	3.69E-05
50	C25	40	Passenger Truck	435	0.00E+00	8.11E-06	8.53E-07	2.94E+01	4.88E-05	1.16E-01	1.63E-05	9.12E-04	7.93E-03	1.10E-03	1.54E-03	1.01E-03	1.03E-03	2.63E-04	1.47E-04	2.14E-08	5.10E-04	1.58E-04
50	C25	40	Single Unit Short Haul Truck	62	0.00E+00	2.11E-05	9.39E-07	1.18E+01	1.46E-05	1.84E-02	2.26E-05	8.52E-03	2.45E-03	3.83E-04	2.72E-03	5.66E-04	5.77E-04	1.20E-03	4.79E-05	2.03E-08	2.14E-03	1.60E-03
50	C25	40	Single Unit Long Haul Truck	3	0.00E+00	9.26E-07	4.10E-08	5.08E-01	6.40E-07	8.02E-04	9.91E-07	3.72E-04	1.10E-04	1.70E-05	1.19E-04	2.48E-05	2.52E-05	5.19E-05	2.07E-06	8.82E-10	9.41E-05	6.96E-05
50	C25	40	Combination Short Haul Truck	33	0.00E+00	1.59E-05	1.19E-06	1.37E+01	3.94E-08	2.25E-02	1.13E-05	2.32E-02	3.20E-03	4.78E-04	9.45E-04	3.45E-04	3.58E-04	2.17E-03	4.57E-05	0.00E+00	5.87E-04	4.37E-03
50	C25	40	Combination Long Haul Truck	30	0.00E+00	2.11E-05	1.19E-06	1.31E+01	1.34E-07	2.73E-02	1.74E-05	2.45E-02	3.33E-03	4.67E-04	1.94E-03	3.84E-04	4.00E-04	2.11E-03	4.39E-05	0.00E+00	1.53E-03	4.61E-03
53	C26	70	Passenger Car	324	0.00E+00	3.46E-06	3.76E-07	1.41E+01	2.45E-05	6.63E-02	7.79E-06	3.33E-04	2.46E-03	3.84E-04	7.60E-04	4.90E-04	5.03E-04	5.50E-05	7.18E-05	1.49E-08	2.57E-04	5.20E-05
53	C26	70	Passenger Truck	542	0.00E+00	7.22E-06	7.68E-07	3.18E+01	4.64E-05	1.17E-01	1.52E-05	9.41E-04	4.39E-03	6.82E-04	1.45E-03	9.42E-04	9.66E-04	2.39E-04	1.60E-04	2.81E-08	4.85E-04	1.58E-04
53	C26	70	Single Unit Short Haul Truck	57	0.00E+00	1.01E-05	4.11E-07	9.42E+00	6.78E-06	1.71E-02	1.10E-05	4.03E-03	9.13E-04	1.68E-04	1.36E-03	2.60E-04	2.65E-04	9.57E-04	3.83E-05	1.55E-08	1.10E-03	7.54E-04
53	C26	70	Single Unit Long Haul Truck	3	0.00E+00	4.40E-07	1.77E-08	3.99E-01	2.92E-07	7.17E-04	4.79E-07	1.73E-04	4.18E-05	7.49E-06	5.95E-05	1.12E-05	1.14E-05	4.04E-05	1.63E-06	6.52E-10	4.80E-05	3.24E-05
53	C26	70	Combination Short Haul Truck	30	0.00E+00	7.67E-06	5.71E-07	1.04E+01	1.95E-08	1.11E-02	5.47E-06	1.15E-02	1.08E-03	1.80E-04	4.60E-04	1.66E-04	1.73E-04	1.65E-03	3.47E-05	0.00E+00	2.88E-04	2.16E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.23E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.32E-03
50	C27	40	Passenger Car	362	0.00E+00	5.12E-06	5.57E-07	1.88E+01	3.64E-05	9.76E-02	1.16E-05	3.30E-04	6.23E-03	8.76E-04	1.13E-03	7.27E-04	7.46E-04	1.07E-04	9.48E-05	1.76E-08	3.81E-04	5.15E-05
50	C27	40	Passenger Truck	605	0.00E+00	1.13E-05	1.19E-06	4.10E+01	6.81E-05	1.61E-01	2.27E-05	1.27E-03	1.11E-02	1.53E-03	2.14E-03	1.40E-03	1.43E-03	3.67E-04	2.05E-04	2.98E-08	7.10E-04	2.20E-04
50	C27	40	Single Unit Short Haul Truck	56	0.00E+00	1.88E-05	8.38E-07	1.05E+01	1.30E-05	1.65E-02	2.01E-05	7.60E-03	2.19E-03	3.41E-04	2.42E-03	5.05E-04	5.15E-04	1.07E-03	4.28E-05	1.81E-08	1.91E-03	1.42E-03
50	C27	40	Single Unit Long Haul

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C31	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.63E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.63E-03
52	C31	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.20E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.73E-03
53	C32	70	Passenger Car	190	0.00E+00	2.03E-06	2.20E-07	8.29E+00	1.44E-05	3.89E-02	4.57E-06	1.95E-04	1.44E-03	2.26E-04	4.46E-04	2.87E-04	2.95E-04	3.23E-05	4.21E-05	8.75E-09	1.51E-04	3.05E-05
53	C32	70	Passenger Truck	318	0.00E+00	4.24E-06	4.50E-07	1.87E+01	2.72E-05	6.86E-02	8.89E-06	5.52E-04	2.57E-03	4.00E-04	8.51E-04	5.53E-04	5.67E-04	1.40E-04	9.40E-05	1.65E-08	2.84E-04	9.24E-05
53	C32	70	Single Unit Short Haul Truck	58	0.00E+00	1.03E-05	4.18E-07	9.57E+00	6.89E-06	1.74E-02	1.12E-05	4.09E-03	9.29E-04	1.70E-04	1.39E-03	2.64E-04	2.69E-04	9.73E-04	3.89E-05	1.57E-08	1.12E-03	7.66E-04
53	C32	70	Single Unit Long Haul Truck	3	0.00E+00	4.47E-07	1.80E-08	4.06E-01	2.97E-07	7.29E-04	4.87E-07	1.76E-04	4.25E-05	7.62E-06	6.05E-05	1.14E-05	1.16E-05	4.10E-05	1.65E-06	6.62E-10	4.88E-05	3.30E-05
53	C32	70	Combination Short Haul Truck	42	0.00E+00	1.09E-05	8.11E-07	1.47E+01	2.77E-08	1.57E-02	7.77E-06	1.63E-02	1.54E-03	2.56E-04	6.54E-04	2.36E-04	2.45E-04	2.34E-03	4.93E-05	0.00E+00	4.09E-04	3.08E-03
53	C32	70	Combination Long Haul Truck	39	0.00E+00	1.50E-05	8.50E-07	1.38E+01	9.37E-08	1.88E-02	1.23E-05	1.75E-02	1.60E-03	2.41E-04	1.36E-03	2.73E-04	2.85E-04	2.22E-03	4.63E-05	0.00E+00	1.07E-03	3.29E-03
52	C33	60	Passenger Car	60	0.00E+00	6.99E-07	7.59E-08	2.71E+00	4.96E-06	1.33E-02	1.58E-06	5.97E-05	5.91E-04	8.86E-05	1.54E-04	9.91E-05	1.02E-04	1.19E-05	1.38E-05	2.80E-09	5.20E-05	9.31E-06
52	C33	60	Passenger Truck	101	0.00E+00	1.47E-06	1.56E-07	6.05E+00	9.30E-06	2.29E-02	3.06E-06	1.82E-04	1.05E-03	1.56E-04	2.91E-04	1.90E-04	1.94E-04	4.78E-05	3.04E-05	5.12E-09	9.71E-05	3.08E-05
52	C33	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
50	C34	40	Passenger Car	84	0.00E+00	1.19E-06	1.29E-07	4.37E+00	8.42E-06	2.26E-02	2.68E-06	7.64E-05	1.44E-03	2.03E-04	2.61E-04	1.68E-04	1.73E-04	2.49E-05	2.20E-05	4.07E-09	8.83E-05	1.19E-05
50	C34	40	Passenger Truck	140	0.00E+00	2.62E-06	2.75E-07	9.50E+00	1.58E-05	3.74E-02	5.26E-06	2.94E-04	2.56E-03	3.55E-04	4.97E-04	3.24E-04	3.32E-04	8.50E-05	4.74E-05	6.91E-09	1.65E-04	5.10E-05
50	C34	40	Single Unit Short Haul Truck	7	0.00E+00	2.27E-06	1.01E-07	1.27E+00	1.57E-06	1.99E-03	2.43E-06	9.18E-04	2.64E-04	4.12E-05	2.92E-04	6.09E-05	6.21E-05	1.29E-04	5.16E-06	2.19E-09	2.30E-04	1.72E-04
50	C34	40	Combination Short Haul Truck	3	0.00E+00	1.26E-06	9.42E-08	1.08E+00	3.12E-09	1.78E-03	8.96E-07	1.84E-03	2.54E-04	3.79E-05	7.50E-05	2.74E-05	2.85E-05	1.72E-04	3.63E-06	0.00E+00	4.66E-05	3.47E-04
50	C34	40	Combination Long Haul Truck	2	0.00E+00	1.68E-06	9.47E-08	1.04E+00	1.07E-08	2.17E-03	1.38E-06	1.94E-03	2.64E-04	3.71E-05	1.54E-04	3.05E-05	3.18E-05	1.67E-04	3.49E-06	0.00E+00	1.22E-04	3.66E-04
53	C35	70	Passenger Car	116	0.00E+00	1.24E-06	1.34E-07	5.06E+00	8.78E-06	2.37E-02	2.79E-06	1.19E-04	8.79E-04	1.38E-04	2.72E-04	1.75E-04	1.80E-04	1.97E-05	2.57E-05	5.34E-09	9.20E-05	1.86E-05
53	C35	70	Passenger Truck	194	0.00E+00	2.58E-06	2.75E-07	1.14E+01	1.66E-05	4.19E-02	5.43E-06	3.37E-04	1.57E-03	2.44E-04	5.19E-04	3.37E-04	3.46E-04	8.55E-05	5.73E-05	1.01E-08	1.74E-04	5.64E-05
53	C35	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.20E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.73E-06
53	C35	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.04E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.49E-04
53	C35	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.39E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.02E-03
50	C36	40	Passenger Car	329	0.00E+00	4.67E-06	5.07E-07	1.72E+01	3.31E-05	8.89E-02	1.05E-05	3.00E-04	5.68E-03	7.98E-04	1.03E-03	6.62E-04	6.79E-04	9.79E-05	8.64E-05	1.60E-08	3.47E-04	4.69E-05
50	C36	40	Passenger Truck	552	0.00E+00	1.03E-05	1.08E-06	3.74E+01	6.20E-05	1.47E-01	2.07E-05	1.16E-03	1.01E-02	1.40E-03	1.95E-03	1.28E-03	1.31E-03	3.34E-04	1.86E-04	2.72E-08	6.47E-04	2.01E-04
50	C36	40	Single Unit Short Haul Truck	46	0.00E+00	1.56E-05	6.94E-07	8.68E+00	1.08E-05	1.36E-02	1.67E-05	6.29E-03	1.81E-03	2.83E-04	2.01E-03	4.18E-04	4.26E-04	8.87E-04	3.54E-05	1.50E-08	1.58E-03	1.18E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	6.84E-07	3.03E-08	3.75E-01	4.72E-07	5.93E-04	7.32E-07	2.74E-04	8.11E-05	1.26E-05	8.81E-05	1.83E-05	1.86E-05	3.83E-05	1.53E-06	6.51E-10	6.95E-05	5.14E-05
50	C36	40	Combination Short Haul Truck	60	0.00E+00	2.88E-05	2.15E-06	2.47E+01	7.12E-08	4.07E-02	2.04E-05	4.19E-02	5.80E-03	8.64E-04	1.71E-03	6.25E-04	6.49E-04	3.93E-03	8.27E-05	0.00E+00	1.06E-03	7.90E-03
50	C36	40	Combination Long Haul Truck	54	0.00E+00	3.82E-05	2.16E-06	2.37E+01	2.43E-07	4.94E-02	3.15E-05	4.43E-02	6.02E-03	8.46E-04	3.50E-03	6.96E-04	7.25E-04	3.81E-03	7.95E-05	0.00E+00	2.78E-03	8.34E-03
52	C37	60	Passenger Car	99	0.00E+00	1.15E-06	1.25E-07	4.48E+00	8.19E-06	2.20E-02	2.60E-06	9.86E-05	9.76E-04	1.46E-04	2.54E-04	1.64E-04	1.68E-04	1.97E-05	2.27E-05	4.63E-09	8.59E-05	1.54E-05
52	C37	60	Passenger Truck	167	0.00E+00	2.44E-06	2.58E-07	9.99E+00	1.54E-05	3.79E-02	5.05E-06	3.01E-04	1.73E-03	2.57E-04	4.82E-04	3.13E-04	3.21E-04	7.90E-05	5.02E-05	8.46E-09	1.60E-04	5.09E-05
52	C37	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.12E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.84E-04
52	C37	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.53E-05
52	C37	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.15E-03
52	C37	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.22E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.29E-03
53	C38	70	Passenger Car	149	0.00E+00	1.59E-06	1.73E-07	6.49E+00	1.13E-05	3.04E-02	3.58E-06	1.53E-04	1.13E-03	1.77E-04	3.49E-04	2.25E-04	2.31E-04	2.53E-05	3.30E-05	6.85E-09	1.18E-04	2.39E-05
53	C38	70	Passenger Truck	249	0.00E+00	3.32E-06	3.53E-07	1.46E+01	2.13E-05	5.38E-02	6.97E-06	4.33E-04	2.02E-03	3.13E-04	6.67E-04	4.33E-04	4.44E-04	1.10E-04	7.36E-05	1.29E-08	2.23E-04	7.24E-05
53	C38	70	Single Unit Short Haul Truck	73	0.00E+00	1.28E-05	5.20E-07	1.19E+01	8.59E-06	2.16E-02	1.39E-05	5.10E-03	1.16E-03	2.12E-04	1.73E-03	3.29E-04	3.36E-04	1.21E-03	4.85E-05	1.96E-08	1.39E-03	9.54E-04
53	C38	70	Single Unit Long Haul Truck	3	0.00E+00	5.57E-07	2.24E-08	5.05E-01	3.70E-07	9.08E-04	6.06E-07	2.20E-04	5.30E-05	9.49E-06	7.54E-05	1.42E-05	1.45E-05	5.11E-05	2.06E-06	8.25E-10	6.09E-05	4.11E-05
53	C38	70	Combination Short Haul Truck	50	0.00E+00	1.29E-05	9.61E-07	1.75E+01	3.28E-08	1.87E-02	9.21E-06	1.93E-02	1.82E-03	3.04E-04	7.75E-04	2.80E-04	2.91E-04	2.77E-03	5.84E-05	0.00E+00	4.85E-04	3.65E-03
53	C38	70	Combination Long Haul Truck	46	0.00E+00	1.77E-05	1.01E-06	1.64E+01	1.11E-07	2.23E-02	1.46E-05	2.07E-02	1.90E-03	2.86E-04	1.61E-03	3.24E-04	3.37E-04	2.63E-03	5.49E-05	0.00E+00	1.27E-03	3.90E-03
52	C39	60	Passenger Car	123	0.00E+00	1.43E-06	1.55E-07	5.55E+00	1.01E-05	2.73E-02	3.22E-06	1.22E-04	1.21E-03	1.81E-04	3.14E-04	2.02E-04	2.08E-04	2.44E-05	2.81E-05	5.73E-09	1.06E-04	1.90E-05
52	C39	60	Passenger Truck	206	0.00E+00	3.01E-06	3.19E-07	1.24E+01	1.90E-05	4.68E-02	6.25E-06	3.72E-04	2.14E-03	3.18E-04	5.96E-04	3.88E-04	3.97E-04	9.77E-05	6.20E-05	1.05E-08	1.98E-04	6.30E-05
52	C39	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.57E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
52	C39	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.20E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.91E-04
52	C39	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.48E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.43E-04
50	C40	40	Passenger Car	123	0.00E+00	1.74E-06	1.89E-07	6.41E+00	1.24E-05	3.32E-02	3.93E-06	1.12E-04	2.12E-03	2.98E-04	3.83E-04	2.47E-04	2.54E-04	3.66E-05	3.22E-05	5.98E-09	1.30E-04	1.75E-05
50	C40	40	Passenger Truck	206	0.00E+00	3.85E-06	4.04E-07	1.40E+01	2.32E-05	5.49E-02	7.73E-06	4.32E-04	3.76E-03	5.22E-04	7.30E-04	4.76E-04	4.88E-04	1.25E-04	6.96E-05	1.02E-08	2.42E-04	7.49E-05
50	C40	40	Single Unit Short Haul Truck	8	0.00E+00	2.60E-06	1.16E-07	1.45E+00	1.80E-06	2.27E-03	2.78E-06	1.05E-03	3.02E-04	4.71E-05	3.34E-04	6.96E-05	7.10E-05	1.48E-04	5.90E-06	2.50E-09	2.63E-04	1.97E-04
50	C40	40	Combination Short Haul Truck	9	0.00E+00	4.54E-06	3.39E-07	3.90E+00	1.12E-08	6.42E-03	3.23E-06	6.62E-03	9.16E-04	1.36E-04	2.70E-04	9.87E-05	1.02E-04	6.21E-04	1.31E-05	0.00E+00	1.68E-04	1.25E-03
50	C40	40	Combination Long Haul Truck	9	0.00E+00	6.03E-06	3.41E-07	3.75E+00	3.84E-08	7.79E-03	4.98E-06	6.99E-03	9.51E-04	1.34E-04	5.53E-04	1.10E-04	1.14E-04	6.02E-04	1.26E-05	0.00E+00	4.38E-04	1.32E-03
55	C41	90	Passenger Car	361	0.00E+00	3.43E-06	3.73E-07	1.47E+01	2.44E-05	6.80E-02	7.74E-06	3.77E-04	1.54E-03	2.70E-04	7.55E-04	4.87E-04	4.99E-04	4.77E-05	7.51E-05	1.53E-08	2.55E-04	5.87E-05
55	C41	90	Passenger Truck	605	0.00E+00	7.12E-06	7.61E-07	3.37E+01	4.69E-05	1.28E-01	1.52E-05	9.78E-04	2.73E-03	4.79E-04	1.46E-03	9.49E-04	9.73E-04	2.32E-04	1.70E-04	3.00E-08	4.91E-04	1.62E-04
55	C41	90	Single Unit Short Haul Truck	37	0.00E+00	4.01E-06	1.48E-07	6.12E+00	2.77E-06	1.12E-02	4.47E-06	1.75E-03	2.94E-04	6.90E-05	5.68E-04	1.01E-04	1.03E-04	6.23E-04	2.48E-05	9.73E-09	4.65E-04	3.27E-04
55	C41	90	Single Unit Long Haul Truck	2	0.00E+00	1.74E-07	6.32E-09	2.58E-01	1.16E-07	4.63E-04	1.94E-07	7.41E-05	1.34E-05	3.03E-06	2.48E-05	4.32E-06	4.41E-06	2.61E-05	1.05E-06	4.02E-10	2.04E-05	1.38E-05
55	C41	90	Combination Short Haul Truck	54	0.00E+00	7.72E-06	5.55E-07	1.73E+01	2.39E-08	1.44E-02	5.63E-06	1.37E-02	7.42E-04	1.54E-04	4.99E-04	1.63E-04	1.70E-04	2.75E-03	5.79E-05	0.00E+00	3.29E-04	2.59E-03
55	C41	90	Combination Long Haul Truck	49	0.00E+00	1.12E-05	5.87E-07	1.58E+01	8.10E-08	1.69E-02	9.52E-06	1.46E-02	7.61E-04	1.36E-04	1.11E-03	1.95E-04	2.03E-04	2.53E-03	5.29E-05	0.00E+00	9.03E-04	2.74E-03
55	C42	90	Passenger Car	362	0.00E+00	3.44E-06	3.73E-07	1.47E+01	2.44E-05	6.81E-02	7.75E-06	3.77E-04	1.54E-03	2.70E-04	7.56E-04	4.87E-04	5.00E-04	4.78E-05	7.52E-05	1.53E-08	2.56E-04	5.88E-05
55	C42	90	Passenger Truck	605	0.00E+00	7.13E-06	7.62E-07	3.37E+01	4.70E-05	1.28E-01	1.52E-05	9.79E-04	2.73E-03	4.80E-04	1.47E-03	9.50E-04	9.74E-04	2.32E-04	1.70E-04	3.01E-08	4.92E-04	1.62E-04
55	C42	90	Single Unit Short Haul Truck	24	0.00E+00	2.57E-06	9.50E-08	3.92E+00	1.77E-06	7.17E-03	2.87E-06	1.12E-03	1.88E-04	4.43E-05	3.64E-04	6.50E-05	6.62E-05	4.00E-04	1.59E-05	6.24E-09	2.98E-04	2.09E-04
55	C42	90	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.05E-09	1.65E-01	7.46E-08	2.97E-04	1.24E-07	4.75E-05	8.60E-06	1.94E-06	1.59E-05	2.77E-06	2.82E-06	1.67E-05	6.73E-07	2.57E-10	1.31E-05	8.86E-06
55	C42	90	Combination Short Haul Truck	16	0.00E+00	2.32E-06	1.67E-07	5.21E+00	7.20E-09	4.32E-03	1.69E-06	4.14E-03	2.23E-04	4.64E-05	1.50E-04	4.92E-05	5.11E-05	8.28E-04	1.74E-05	0.00E+00	9.90E-05	7.79E-04
55	C42	90	Combination Long Haul Truck	15	0.00E+00	3.37E-06	1.77E-07	4.75E+00	2.44E-08	5.07E-03	2.87E-06	4.39E-03	2.29E-04	4.10E-05	3.33E-04	5.87E-05	6.12E-05	7.63E-04	1.59E-05	0.00E+00	2.72E-04	8.26E-04
55	C43	90	Passenger Car	173	0.00E+00	1.65E-06	1.79E-07	7.06E+00	1.17E-05	3.26E-02	3.71E-06	1.80E-04	7.38E-04	1.29E-04	3.62E-04	2.33E-04	2.39E-04	2.29E-05	3.60E-05	7.34E-09	1.22E-04	2.82E-05
55	C43	90	Passenger Truck	290	0.00E+00	3.41E-06	3.65E-07	1.61E+01	2.25E-05	6.14E-02	7.30E-06	4.69E-04	1.31E-03	2.30E-04	7.02E-04	4.55E-04	4.66E-04	1.11E-04	8.15E-05	1.44E-08	2.35E-04	7.75E-05
55	C43	90	Single Unit Short Haul Truck	53	0.00E+00	5.66E-06	2.09E-07	8.63E+00	3.90E-06	1.58E-02	6.31E-06	2.47E-03	4.14E-04	9.74E-05	8.01E-04	1.43E-04	1.46E-04	8.79E-04	3.50E-05	1.37E-08	6.55E-04	4.60E-04
55	C43	90	Single Unit Long Haul Truck	2	0.00E+00	2.46E-07	8.92E-09	3.64E-01	1.64E-07	6.53E-04	2.73E-07	1.04E-04	1.89E-05	4.27E-06	3.49E-05	6.09E-06	6.21E-06	3.68E-05	1.48E-06	5.66E-10	2.87E-05	1.95E-05
55	C43	90	Combination Short Haul Truck	21	0.00E+00	3.00E-06	2.15E-07	6.72E+00	9.29E-09	5.58E-03	2.19E-06	5.34E-03	2.88E-04	5.99E-05	1.94E-04	6.35E-05	6.59E-05	1.07E-03	2.25E-05	0.00E+00	1.28E-04	1.01E-03
55	C43	90	Combination Long Haul Truck	19	0.00E+00	4.35E-06	2.28E-07	6.13E+00	3.14E-08	6.54E-03	3.70E-06	5.66E-03	2.96E-04	5.29E-05	4.30E-04	7.57E-05	7.89E-05	9.84E-04	2.05E-05	0.00E+00	3.51E-04	1.07E-03
55	C44	90	Passenger Car	143	0.00E+00	1.36E-06	1.48E-07	5.84E+00	9.66E-06	2.70E-02	3.07E-06	1.49E-04	6.10E-04	1.07E-04	2.99E-04	1.93E-04	1.98E-04	1.89E-05	2.98E-05	6.07E-09	1.01E-04	2.33E-05
55	C44	90	Passenger Truck	240	0.00E+00	2.82E-06	3.02E-07	1.33E+01	1.86E-05	5.08E-02	6.04E-06	3.88E-04	1.08E-03	1.90E-04	5.81E-04	3.76E-04	3.86E-04	9.21E-05	6.74E-05	1.19E-08	1.95E-04	6.41E-05
55	C44	90	Single Unit Short Haul Truck	31	0.00E+00	3.29E-06	1.22E-07	5.02E+00	2.27E-06	9.18E-03	3.67E-06	1.44E-03	2.41E-04	5.66E-05	4.66E-04	8.32E-05	8.48E-05	5.11E-04	2.04E-05	7.98E-09	3.81E-04	2.68E-04
55	C44	90	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.19E-09	2.12E-01	9.55E-08	3.80E-04	1.59E-07	6.08E-05	1.10E-05	2.48E-06	2.03E-05	3.54E-06	3.61E-06	2.14E-05	8.62E-07	3.30E-10	1.67E-05	1.13E-05
55	C44	90	Combination Short Haul Truck	17	0.00E+00	2.40E-06	1.72E-07	5.38E+00	7.43E-09	4.46E-03	1.75E-06	4.27E-03	2.31E-04	4.79E-05	1.55E-04	5.08E-05	5.28E-05	8.55E-04	1.80E-05	0.00E+00	1.02E-04	8.05E-04
55	C44	90	Combination Long Haul Truck	15	0.00E+00	3.48E-06	1.82E-07	4.91E+00	2.52E-08	5.24E-03	2.96E-06	4.53E-03	2.37E-04	4.23E-05	3.44E-04	6.06E-05	6.32E-05	7.87E-04	1.64E-05	0.00E+00	2.81E-04	8.53E-04
53	C45	70	Passenger Car	184	0.00E+00	1.97E-06	2.14E-07	8.04E+00	1.40E-05	3.77E-02	4.44E-06	1.90E-04	1.40E-03	2.19E-04	4.33E-04	2.79E-04	2.86E-04	3.13E-05	4.09E-05	8.49E-09	1.46E-04	2.96E-05
53	C45	70	Passenger Truck	309	0.00E+00	4.11E-06	4.37E-07	1.81E+01	2.64E-05	6.66E-02	8.63E-06	5.36E-04	2.50E-03	3.88E-04	8.26E-04	5.37E-04	5.50E-04	1.36E-04	9.12E-05	1.60E-08	2.76E-04	8.97E-05
53	C45	70	Single Unit Short Haul Truck	51	0.00E+00	8.93E-06	3.63E-07	8.32E+00	5.99E-06	1.51E-02	9.72E-06	3.56E-03	8.07E-04	1.48E-04	1.20E-03	2.29E-04	2.34E-04	8.45E-04	3.38E-05	1.37E-08	9.70E-04	6.66E-04
53	C45	70	Single Unit Long Haul Truck	2	0.00E+00	3.89E-07	1.57E-08	3.52E-01	2.58E-07	6.33E-04	4.23E-07	1.53E-04	3.69E-05	6.62E-06	5.25E-05	9.91E-06	1.01E-05	3.57E-05	1.44E-06	5.76E-10	4.24E-05	2.86E-05
53	C45	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.06E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.52E-03
53	C45	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.63E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.63E-03
50	C46	40	Passenger Car	116	0.00E+00	1.64E-06	1.79E-07	6.04E+00	1.17E-05	3.13E-02	3.70E-06	1.06E-04	2.00E-03	2.81E-04	3.61E-04	2.33E-04	2.39E-04	3.45E-05	3.04E-05	5.63E-09	1.22E-04	1.65E-05
50	C46	40	Passenger Truck	194	0.00E+00	3.62E-06	3.81E-07	1.32E+01	2.18E-05	5.18E-02	7.28E-06	4.07E-04	3.54E-03	4.92E-04	6.88E-04	4.49E-04	4.60E-04	1.18E-04	6.56E-05	9.57E-09	2.28E-04	7.06E-05
50	C46	40	Single Unit Short Haul Truck	56	0.00

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C51	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.80E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
53	C51	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.83E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.22E-04
53	C51	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.10E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.72E-04
50	C52	40	Passenger Car	77	0.00E+00	1.09E-06	1.19E-07	4.01E+00	7.75E-06	2.08E-02	2.46E-06	7.03E-05	1.33E-03	1.87E-04	2.40E-04	1.55E-04	1.59E-04	2.29E-05	2.02E-05	3.74E-09	8.12E-05	1.10E-05
50	C52	40	Passenger Truck	129	0.00E+00	2.41E-06	2.53E-07	8.74E+00	1.45E-05	3.44E-02	4.84E-06	2.71E-04	2.35E-03	3.27E-04	4.57E-04	2.98E-04	3.06E-04	7.81E-05	4.36E-05	6.36E-09	1.51E-04	4.69E-05
50	C52	40	Single Unit Short Haul Truck	11	0.00E+00	3.57E-06	1.59E-07	1.99E+00	2.47E-06	3.12E-03	3.82E-06	1.44E-03	4.15E-04	6.48E-05	4.60E-04	9.58E-05	9.76E-05	2.03E-04	8.11E-06	3.44E-09	3.62E-04	2.70E-04
50	C52	40	Combination Short Haul Truck	5	0.00E+00	2.52E-06	1.88E-07	2.17E+00	6.25E-09	3.57E-03	1.79E-06	3.68E-03	5.09E-04	7.58E-05	1.50E-04	5.48E-05	5.69E-05	3.45E-04	7.25E-06	0.00E+00	9.31E-05	6.93E-04
50	C52	40	Combination Long Haul Truck	5	0.00E+00	3.35E-06	1.89E-07	2.08E+00	2.13E-08	4.33E-03	2.76E-06	3.88E-03	5.28E-04	7.42E-05	3.07E-04	6.10E-05	6.36E-05	3.34E-04	6.98E-06	0.00E+00	2.44E-04	7.31E-04
52	C53	60	Passenger Car	99	0.00E+00	1.15E-06	1.25E-07	4.48E+00	8.19E-06	2.20E-02	2.60E-06	9.86E-05	9.76E-04	1.46E-04	2.54E-04	1.64E-04	1.68E-04	1.97E-05	2.27E-05	4.63E-09	8.59E-05	1.54E-05
52	C53	60	Passenger Truck	167	0.00E+00	2.44E-06	2.58E-07	9.99E+00	1.54E-05	3.79E-02	5.05E-06	3.01E-04	1.73E-03	2.57E-04	4.82E-04	3.13E-04	3.21E-04	7.90E-05	5.02E-05	8.46E-09	1.60E-04	5.09E-05
52	C53	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
52	C53	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
52	C53	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.03E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.72E-04
52	C53	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.23E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.09E-04
53	C54	70	Passenger Car	134	0.00E+00	1.43E-06	1.56E-07	5.86E+00	1.02E-05	2.75E-02	3.23E-06	1.38E-04	1.02E-03	1.59E-04	3.15E-04	2.03E-04	2.08E-04	2.28E-05	2.98E-05	6.18E-09	1.07E-04	2.15E-05
53	C54	70	Passenger Truck	225	0.00E+00	2.99E-06	3.18E-07	1.32E+01	1.92E-05	4.85E-02	6.29E-06	3.90E-04	1.82E-03	2.83E-04	6.01E-04	3.91E-04	4.00E-04	9.91E-05	6.64E-05	1.16E-08	2.01E-04	6.53E-05
53	C54	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.39E-04
53	C54	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.80E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
53	C54	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.84E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.11E-04
53	C54	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.18E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.76E-04
52	C55	60	Passenger Car	206	0.00E+00	2.40E-06	2.60E-07	9.31E+00	1.70E-05	4.57E-02	5.40E-06	2.05E-04	2.03E-03	3.04E-04	5.27E-04	3.40E-04	3.49E-04	4.09E-05	4.72E-05	9.61E-09	1.78E-04	3.19E-05
52	C55	60	Passenger Truck	346	0.00E+00	5.06E-06	5.36E-07	2.07E+01	3.19E-05	7.86E-02	1.05E-05	6.25E-04	3.60E-03	5.34E-04	9.99E-04	6.50E-04	6.66E-04	1.64E-04	1.04E-04	1.76E-08	3.33E-04	1.06E-04
52	C55	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.38E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.46E-04
52	C55	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.93E-05
52	C55	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.93E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
52	C55	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.45E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.59E-03
50	C56	40	Passenger Car	5	0.00E+00	7.42E-08	8.06E-09	2.73E-01	5.26E-07	1.41E-03	1.67E-07	4.78E-06	9.03E-05	1.27E-05	1.63E-05	1.05E-05	1.08E-05	1.56E-06	1.37E-06	2.54E-10	5.52E-06	7.45E-07
50	C56	40	Passenger Truck	9	0.00E+00	1.64E-07	1.72E-08	5.94E-01	9.85E-07	2.34E-03	3.29E-07	1.84E-05	1.60E-04	2.22E-05	3.11E-05	2.03E-05	2.08E-05	5.31E-06	2.96E-06	4.32E-10	1.03E-05	3.19E-06
50	C56	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.93E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.37E-05
50	C56	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.36E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.39E-04
50	C56	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.77E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
53	C57	70	Passenger Car	205	0.00E+00	2.18E-06	2.37E-07	8.92E+00	1.55E-05	4.18E-02	4.92E-06	2.10E-04	1.55E-03	2.43E-04	4.80E-04	3.10E-04	3.18E-04	3.47E-05	4.54E-05	9.42E-09	1.62E-04	3.28E-05
53	C57	70	Passenger Truck	342	0.00E+00	4.56E-06	4.85E-07	2.01E+01	2.93E-05	7.39E-02	9.58E-06	5.94E-04	2.77E-03	4.31E-04	9.16E-04	5.95E-04	6.10E-04	1.51E-04	1.01E-04	1.77E-08	3.06E-04	9.95E-05
53	C57	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.77E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.67E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
53	C57	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.04E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.49E-04
53	C57	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.39E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.02E-03
50	C58	40	Passenger Car	56	0.00E+00	8.00E-07	8.70E-08	2.94E+00	5.68E-06	1.52E-02	1.80E-06	5.15E-05	9.74E-04	1.37E-04	1.76E-04	1.13E-04	1.16E-04	1.68E-05	1.48E-05	2.74E-09	5.95E-05	8.03E-06
50	C58	40	Passenger Truck	95	0.00E+00	1.76E-06	1.85E-07	6.41E+00	1.06E-05	2.52E-02	3.55E-06	1.98E-04	1.73E-03	2.40E-04	3.35E-04	2.19E-04	2.24E-04	5.73E-05	3.19E-05	4.66E-09	1.11E-04	3.44E-05
50	C58	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.91E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	2.52E-07	1.88E-08	2.17E-01	6.25E-10	3.57E-04	1.79E-07	3.68E-04	5.09E-05	7.58E-06	1.50E-05	5.48E-06	5.69E-06	3.45E-05	7.25E-07	0.00E+00	9.31E-06	6.93E-05
53	C59	70	Passenger Car	53	0.00E+00	5.63E-07	6.12E-08	2.30E+00	3.99E-06	1.08E-02	1.27E-06	5.42E-05	4.00E-04	6.26E-05	1.24E-04	7.98E-05	8.19E-05	8.96E-06	1.17E-05	2.43E-09	4.19E-05	8.46E-06
53	C59	70	Passenger Truck	88	0.00E+00	1.18E-06	1.25E-07	5.18E+00	7.55E-06	1.90E-02	2.47E-06	1.53E-04	7.14E-04	1.11E-04	2.36E-04	1.53E-04	1.57E-04	3.89E-05	2.61E-05	4.57E-09	7.89E-05	2.57E-05
53	C59	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
53	C59	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.60E-05
53	C59	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
52	C60	60	Passenger Car	205	0.00E+00	2.37E-06	2.58E-07	9.22E+00	1.68E-05	4.53E-02	5.35E-06	2.03E-04	2.01E-03	3.01E-04	5.22E-04	3.37E-04	3.45E-04	4.05E-05	4.67E-05	9.52E-09	1.77E-04	3.16E-05
52	C60	60	Passenger Truck	342	0.00E+00	5.01E-06	5.31E-07	2.05E+01	3.16E-05	7.79E-02	1.04E-05	6.19E-04	3.57E-03	5.29E-04	9.90E-04	6.44E-04	6.60E-04	1.62E-04	1.03E-04	1.74E-08	3.30E-04	1.05E-04
52	C60	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.96E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
52	C60	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.47E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.41E-03
52	C60	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.96E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.50E-03
53	C61	70	Passenger Car	247	0.00E+00	2.63E-06	2.86E-07	1.08E+01	1.87E-05	5.05E-02	5.94E-06	2.54E-04	1.87E-03	2.93E-04	5.79E-04	3.73E-04	3.83E-04	4.19E-05	5.47E-05	1.14E-08	1.96E-04	3.96E-05
53	C61	70	Passenger Truck	413	0.00E+00	5.50E-06	5.85E-07	2.43E+01	3.53E-05	8.92E-02	1.16E-05	7.17E-04	3.34E-03	5.19E-04	1.11E-03	7.18E-04	7.36E-04	1.82E-04	1.22E-04	2.14E-08	3.70E-04	1.20E-04
53	C61	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
53	C61	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
53	C61	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
50	C62	40	Passenger Car	208	0.00E+00	2.95E-06	3.20E-07	1.08E+01	2.09E-05	5.61E-02	6.64E-06	1.90E-04	3.58E-03	5.04E-04	6.48E-04	4.18E-04	4.29E-04	6.18E-05	5.45E-05	1.01E-08	2.19E-04	2.96E-05
50	C62	40	Passenger Truck	348	0.00E+00	6.50E-06	6.83E-07	2.36E+01	3.91E-05	9.28E-02	1.31E-05	7.31E-04	6.36E-03	8.82E-04	1.23E-03	8.05E-04	8.25E-04	2.11E-04	1.18E-04	1.72E-08	4.08E-04	1.27E-04
50	C62	40	Single Unit Short Haul Truck	15	0.00E+00	5.20E-06	2.31E-07	2.89E+00	3.60E-06	4.54E-03	5.56E-06	2.10E-03	6.03E-04	9.42E-05	6.68E-04	1.39E-04	1.42E-04	2.96E-04	1.18E-05	5.00E-09	5.26E-04	3.93E-04
50	C62	40	Single Unit Long Haul Truck	1	0.00E+00	2.28E-07	1.01E-08	1.25E-01	1.57E-07	1.98E-04	2.44E-07	9.14E-05	2.70E-05	4.19E-06	2.94E-05	6.09E-06	6.21E-06	1.28E-05	5.10E-07	2.17E-10	2.32E-05	1.71E-05
50	C62	40	Combination Short Haul Truck	6	0.00E+00	2.78E-06	2.07E-07	2.39E+00	6.87E-09	3.92E-03	1.97E-06	4.05E-03	5.59E-04	8.34E-05	1.65E-04	6.03E-05	6.26E-05	3.79E-04	7.98E-06	0.00E+00	1.02E-04	7.63E-04
50	C62	40	Combination Long Haul Truck	5	0.00E+00	3.69E-06	2.08E-07	2.29E+00	2.34E-08	4.76E-03	3.04E-06	4.27E-03	5.81E-04	8.16E-05	3.38E-04	6.71E-05	6.99E-05	3.68E-04	7.67E-06	0.00E+00	2.68E-04	8.04E-04
52	C63	60	Passenger Car	330	0.00E+00	3.83E-06	4.16E-07	1.49E+01	2.72E-05	7.31E-02	8.63E-06	3.27E-04	3.24E-03	4.85E-04	8.42E-04	5.43E-04	5.57E-04	6.54E-05	7.54E-05	1.54E-08	2.85E-04	5.10E-05
52	C63	60	Passenger Truck	552	0.00E+00	8.08E-06	8.56E-07	3.31E+01	5.09E-05	1.26E-01	1.68E-05	9.98E-04	5.75E-03	8.54E-04	1.60E-03	1.04E-03	1.06E-03	2.62E-04	1.66E-04	2.81E-08	5.32E-04	1.69E-04
52	C63	60	Single Unit Short Haul Truck	109	0.00E+00	2.44E-05	1.01E-06	1.82E+01	1.62E-05	3.19E-02	2.64E-05	9.36E-03	2.51E-03	4.22E-04	3.25E-03	6.26E-04	6.39E-04	1.84E-03	7.40E-05	3.05E-08	2.61E-03	1.75E-03
52	C63	60	Single Unit Long Haul Truck	5	0.00E+00	1.06E-06	4.37E-08	7.74E-01	7.00E-07	1.36E-03	1.15E-06	4.05E-04	1.13E-04	1.87E-05	1.42E-04	2.72E-05	2.78E-05	7.83E-05	3.16E-06	1.30E-09	1.14E-04	7.59E-05
52	C63	60	Combination Short Haul Truck	60	0.00E+00	1.74E-05	1.28E-06	2.10E+01	4.77E-08	2.60E-02	1.25E-05	2.66E-02	3.04E-03	4.75E-04	1.07E-03	3.74E-04	3.88E-04	3.34E-03	7.02E-05	0.00E+00	6.84E-04	5.01E-03
52	C63	60	Combination Long Haul Truck	54	0.00E+00	2.39E-05	1.31E-06	1.98E+01	1.61E-07	3.12E-02	2.00E-05	2.83E-02	3.18E-03	4.60E-04	2.27E-03	4.27E-04	4.45E-04	3.18E-03	6.65E-05	0.00E+00	1.82E-03	5.34E-03
53	C64	70	Passenger Car	479	0.00E+00	5.11E-06	5.56E-07	2.09E+01	3.63E-05	9.80E-02	1.15E-05	4.93E-04	3.63E-03	5.69E-04	1.12E-03	7.25E-04	7.44E-04	8.14E-05	1.06E-04	2.21E-08	3.80E-04	7.69E-05
53	C64	70	Passenger Truck	802	0.00E+00	1.07E-05	1.14E-06	4.71E+01	6.86E-05	1.73E-01	2.24E-05	1.39E-03	6.49E-03	1.01E-03	2.15E-03	1.39E-03	1.43E-03	3.53E-04	2.37E-04	4.15E-08	7.17E-04	2.33E-04
53	C64	70	Single Unit Short Haul Truck	92	0.00E+00	1.62E-05	6.57E-07	1.51E+01	1.08E-05	2.73E-02	1.76E-05	6.44E-03	1.46E-03	2.68E-04	2.18E-03	4.16E-04	4.24E-04	1.53E-03	6.13E-05	2.47E-08	1.76E-03	1.21E-03
53	C64	70	Single Unit Long Haul Truck	4	0.00E+00	7.04E-07	2.84E-08	6.38E-01	4.67E-07	1.15E-03	7.66E-07	2.77E-04	6.69E-05	1.20E-05	9.52E-05	1.80E-05	1.83E-05	6.46E-05	2.60E-06	1.04E-09	7.69E-05	5.19E-05
53	C64	70	Combination Short Haul Truck	38	0.00E+00	9.69E-06	7.21E-07	1.31E+01	2.46E-08	1.40E-02	6.91E-06	1.45E-02	1.37E-03	2.28E-04	5.81E-04	2.10E-04	2.18E-04	2.08E-03	4.38E-05	0.00E+00	3.63E-04	2.73E-03
53	C64	70	Combination Long Haul Truck	34	0.00E+00	1.33E-05	7.56E-07	1.23E+01	8.33E-08	1.67E-02	1.09E-05	1.55E-02	1.42E-03	2.14E-04	1.21E-03	2.43E-04	2.53E-04	1.97E-03	4.12E-05	0.00E+00	9.55E-04	2.93E-03
52	C65	60	Passenger Car	11	0.00E+00	1.30E-07	1.41E-08	5.06E-01	9.24E-07	2.49E-03	2.94E-07	1.11E-05	1.10E-04	1.65E-05	2.86E-05	1.85E-05	1.89E-05	2.22E-06	2.56E-06	5.22E-10	9.68E-06	1.74E-06
52	C65	60	Passenger Truck	19	0.00E+00	2.75E-07	2.91E-08	1.13E+00	1.73E-06	4.27E-03	5.70E-07	3.39E-05	1.96E-04	2.90E-05	5.43E-05	3.53E-05	3.62E-05	8.91E-06	5.66E-06	9.54E-10	1.81E-05	5.74E-06
50	C66	40	Passenger Car	70	0.00E+00	9.86E-07	1.07E-07	3.62E+00	6.99E-06	1.88E-02	2.22E-06	6.34E-05	1.20E-03	1.69E-04	2.17E-04	1.40E-04	1.43E-04	2.07E-05	1.82E-05	3.38E-09	7.33E-05	9.90E-06
50	C66	40	Passenger Truck	116	0.00E+00	2.17E-06	2.28E-07	7.89E+00	1.31E-05	3.11E-02	4.37E-06	2.44E-04	2.13E-03	2.95E-04	4.13E-04	2.69E-04	2.76E-04	7.06E-05	3.93E-05	5.74E-09	1.37E-04	4.24E-05
50	C66	40	Single Unit Short Haul Truck	19	0.00E+00	6.50E-06	2.89E-07	3.62E+00	4.50E-06	5.67E-03	6.95E-06	2.62E-03	7.54E-04	1.18E-04	8.36E-04	1.74E-04	1.77E-04	3.70E-04	1.47E-05	6.25E-09	6.58E-04	4.91E-04
50	C66	40	Single Unit Long Haul Truck	1	0.00E+00	2.85E-07	1.26E-08	1.56E-01	1.97E-07	2.47E-04	3.05E-07	1.14E-04	3.38E-05	5.24E-06	3.67E-05	7.62E-06	7.76E-06	1.60E-05	6.37E-07	2.71E-10	2.90E-05	2.14E-05
50	C66	40	Combination Short Haul Truck	12	0.00

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
55	C70	90	Single Unit Long Haul Truck	8	0.00E+00	8.26E-07	3.00E-08	1.22E+00	5.52E-07	2.20E-03	9.20E-07	3.51E-04	6.36E-05	1.44E-05	1.17E-04	2.05E-05	2.09E-05	1.24E-04	4.98E-06	1.90E-09	9.66E-05	6.56E-05
55	C70	90	Combination Short Haul Truck	93	0.00E+00	1.33E-05	9.58E-07	2.99E+01	4.13E-08	2.48E-02	9.73E-06	2.37E-02	1.28E-03	2.66E-04	8.62E-04	2.83E-04	2.93E-04	4.75E-03	1.00E-04	0.00E+00	5.69E-04	4.48E-03
55	C70	90	Combination Long Haul Truck	85	0.00E+00	1.94E-05	1.01E-06	2.73E+01	1.40E-07	2.91E-02	1.65E-05	2.52E-02	1.32E-03	2.35E-04	1.91E-03	3.37E-04	3.51E-04	4.38E-03	9.14E-05	0.00E+00	1.56E-03	4.74E-03
53	C71	70	Passenger Car	258	0.00E+00	2.76E-06	3.00E-07	1.13E+01	1.96E-05	5.29E-02	6.22E-06	2.66E-04	1.96E-03	3.07E-04	6.06E-04	3.91E-04	4.01E-04	4.39E-05	5.73E-05	1.19E-08	2.05E-04	4.15E-05
53	C71	70	Passenger Truck	433	0.00E+00	5.76E-06	6.13E-07	2.54E+01	3.70E-05	9.33E-02	1.21E-05	7.51E-04	3.50E-03	5.44E-04	1.16E-03	7.52E-04	7.71E-04	1.91E-04	1.28E-04	2.24E-08	3.87E-04	1.26E-04
53	C71	70	Single Unit Short Haul Truck	54	0.00E+00	9.44E-06	3.83E-07	8.79E+00	6.33E-06	1.59E-02	1.03E-05	3.76E-03	8.52E-04	1.56E-04	1.27E-03	2.42E-04	2.47E-04	8.93E-04	3.57E-05	1.44E-08	1.03E-03	7.03E-04
53	C71	70	Single Unit Long Haul Truck	2	0.00E+00	4.11E-07	1.65E-08	3.72E-01	2.72E-07	6.69E-04	4.47E-07	1.62E-04	3.90E-05	6.99E-06	5.55E-05	1.05E-05	1.07E-05	3.77E-05	1.52E-06	6.08E-10	4.48E-05	3.03E-05
53	C71	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
53	C71	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
52	C74	60	Passenger Car	840	0.00E+00	9.75E-06	1.06E-06	3.79E+01	6.92E-05	1.86E-01	2.20E-05	8.34E-04	8.25E-03	1.24E-03	2.14E-03	1.38E-03	1.42E-03	1.67E-04	1.92E-04	3.91E-08	7.26E-04	1.30E-04
52	C74	60	Passenger Truck	1408	0.00E+00	2.06E-05	2.18E-06	8.44E+01	1.30E-04	3.20E-01	4.27E-05	2.54E-03	1.47E-02	2.18E-03	4.07E-03	2.65E-03	2.71E-03	6.68E-04	4.24E-04	7.15E-08	1.36E-03	4.30E-04
52	C74	60	Single Unit Short Haul Truck	176	0.00E+00	3.94E-05	1.63E-06	2.93E+01	2.61E-05	5.16E-02	4.26E-05	1.51E-02	4.05E-03	6.81E-04	5.25E-03	1.01E-03	1.03E-03	2.97E-03	1.19E-04	4.92E-08	4.22E-03	2.83E-03
52	C74	60	Single Unit Long Haul Truck	8	0.00E+00	1.72E-06	7.06E-08	1.25E+00	1.13E-06	2.19E-03	1.86E-06	6.54E-04	1.82E-04	3.02E-05	2.30E-04	4.39E-05	4.48E-05	1.26E-04	5.10E-06	2.09E-09	1.85E-04	1.23E-04
52	C74	60	Combination Short Haul Truck	78	0.00E+00	2.27E-05	1.67E-06	2.74E+01	6.23E-08	3.40E-02	1.63E-05	3.48E-02	3.97E-03	6.21E-04	1.40E-03	4.89E-04	5.07E-04	4.36E-03	9.18E-05	0.00E+00	8.94E-04	6.55E-03
52	C74	60	Combination Long Haul Truck	71	0.00E+00	3.13E-05	1.71E-06	2.59E+01	2.11E-07	4.08E-02	2.61E-05	3.70E-02	4.16E-03	6.02E-04	2.96E-03	5.58E-04	5.81E-04	4.16E-03	8.69E-05	0.00E+00	2.38E-03	6.98E-03
11	D27	80	Passenger Car	588	0.00E+00	6.03E-06	6.56E-07	2.47E+01	4.28E-05	1.20E-01	1.36E-05	6.10E-04	3.21E-03	5.37E-04	1.33E-03	8.56E-04	8.78E-04	8.75E-05	1.26E-04	2.68E-08	4.49E-04	9.52E-05
11	D27	80	Passenger Truck	986	0.00E+00	1.24E-05	1.32E-06	5.57E+01	8.08E-05	2.11E-01	2.63E-05	1.65E-03	5.71E-03	9.51E-04	2.53E-03	1.64E-03	1.68E-03	4.05E-04	2.81E-04	5.11E-08	8.47E-04	2.74E-04
11	D27	80	Single Unit Short Haul Truck	35	0.00E+00	4.86E-06	1.90E-07	5.81E+00	3.30E-06	1.06E-02	5.34E-06	2.02E-03	3.98E-04	8.14E-05	6.70E-04	1.24E-04	1.26E-04	5.91E-04	2.36E-05	9.36E-09	5.43E-04	3.78E-04
11	D27	80	Single Unit Long Haul Truck	2	0.00E+00	2.11E-07	8.15E-09	2.45E-01	1.40E-07	4.39E-04	2.32E-07	8.64E-05	1.83E-05	3.61E-06	2.92E-05	5.32E-06	5.43E-06	2.48E-05	9.99E-07	3.90E-10	2.38E-05	1.62E-05
11	D27	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.83E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.29E-03
11	D27	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.31E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.38E-03
11	D28	80	Passenger Car	1140	0.00E+00	1.17E-05	1.27E-06	4.78E+01	8.30E-05	2.32E-01	2.64E-05	1.18E-03	6.22E-03	1.04E-03	2.57E-03	1.66E-03	1.70E-03	1.70E-04	2.43E-04	5.20E-08	8.70E-04	1.84E-04
11	D28	80	Passenger Truck	1910	0.00E+00	2.41E-05	2.57E-06	1.08E+02	1.57E-04	4.10E-01	5.10E-05	3.19E-03	1.11E-02	1.84E-03	4.90E-03	3.18E-03	3.26E-03	7.84E-04	5.44E-04	9.90E-08	1.64E-03	5.31E-04
11	D28	80	Single Unit Short Haul Truck	84	0.00E+00	1.16E-05	4.52E-07	1.38E+01	7.84E-06	2.51E-02	1.27E-05	4.81E-03	9.47E-04	1.94E-04	1.59E-03	2.95E-04	3.01E-04	1.41E-03	5.61E-05	2.23E-08	1.29E-03	8.99E-04
11	D28	80	Single Unit Long Haul Truck	4	0.00E+00	5.02E-07	1.94E-08	5.84E-01	3.34E-07	1.05E-03	5.52E-07	2.06E-04	4.34E-05	8.59E-06	6.94E-05	1.27E-05	1.29E-05	5.90E-05	2.38E-06	9.27E-10	5.65E-05	3.84E-05
11	D28	80	Combination Short Haul Truck	53	0.00E+00	1.09E-05	8.06E-07	1.77E+01	2.85E-08	1.66E-02	7.78E-06	1.68E-02	1.26E-03	2.28E-04	6.60E-04	2.35E-04	2.44E-04	2.82E-03	5.92E-05	0.00E+00	4.16E-04	3.17E-03
11	D28	80	Combination Long Haul Truck	48	0.00E+00	1.52E-05	8.56E-07	1.64E+01	9.65E-08	1.96E-02	1.25E-05	1.80E-02	1.30E-03	2.08E-04	1.39E-03	2.76E-04	2.87E-04	2.64E-03	5.51E-05	0.00E+00	1.10E-03	3.39E-03
11	D29	80	Passenger Car	511	0.00E+00	5.24E-06	5.69E-07	2.14E+01	3.72E-05	1.04E-01	1.18E-05	5.30E-04	2.78E-03	4.66E-04	1.15E-03	7.42E-04	7.62E-04	7.59E-05	1.09E-04	2.33E-08	3.90E-04	8.26E-05
11	D29	80	Passenger Truck	855	0.00E+00	1.08E-05	1.15E-06	4.83E+01	7.02E-05	1.84E-01	2.29E-05	1.43E-03	4.96E-03	8.25E-04	2.19E-03	1.42E-03	1.46E-03	3.51E-04	2.44E-04	4.43E-08	7.35E-04	2.38E-04
11	D29	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.73E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.11E-04
11	D29	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.17E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	D29	80	Combination Short Haul Truck	27	0.00E+00	5.61E-06	4.15E-07	9.12E+00	1.47E-08	8.54E-03	4.01E-06	8.67E-03	6.49E-04	1.18E-04	3.40E-04	1.21E-04	1.26E-04	1.45E-03	3.05E-05	0.00E+00	2.14E-04	1.63E-03
11	D29	80	Combination Long Haul Truck	25	0.00E+00	7.81E-06	4.41E-07	8.46E+00	4.97E-08	1.01E-02	6.44E-06	9.27E-03	6.71E-04	1.07E-04	7.16E-04	1.42E-04	1.48E-04	1.36E-03	2.84E-05	0.00E+00	5.68E-04	1.75E-03
11	D30	80	Passenger Car	897	0.00E+00	9.19E-06	9.99E-07	3.76E+01	6.52E-05	1.82E-01	2.07E-05	9.30E-04	4.89E-03	8.18E-04	2.02E-03	1.30E-03	1.34E-03	1.33E-04	1.91E-04	4.09E-08	6.84E-04	1.45E-04
11	D30	80	Passenger Truck	1501	0.00E+00	1.89E-05	2.02E-06	8.49E+01	1.23E-04	3.22E-01	4.01E-05	2.51E-03	8.70E-03	1.45E-03	3.85E-03	2.50E-03	2.56E-03	6.17E-04	4.28E-04	7.78E-08	1.29E-03	4.17E-04
11	D30	80	Single Unit Short Haul Truck	66	0.00E+00	9.07E-06	3.54E-07	1.08E+01	6.15E-06	1.97E-02	9.97E-06	3.77E-03	7.42E-04	1.52E-04	1.25E-03	2.31E-04	2.36E-04	1.10E-03	4.40E-05	1.74E-08	1.01E-03	7.05E-04
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	3.94E-07	1.52E-08	4.58E-01	2.62E-07	8.20E-04	4.33E-07	1.61E-04	3.40E-05	6.74E-06	5.45E-05	9.93E-06	1.01E-05	4.63E-05	1.86E-06	7.27E-10	4.43E-05	3.01E-05
11	D30	80	Combination Short Haul Truck	49	0.00E+00	1.01E-05	7.50E-07	1.65E+01	2.65E-08	1.54E-02	7.24E-06	1.57E-02	1.17E-03	2.13E-04	6.14E-04	2.19E-04	2.27E-04	2.62E-03	5.51E-05	0.00E+00	3.87E-04	2.95E-03
11	D30	80	Combination Long Haul Truck	45	0.00E+00	1.41E-05	7.97E-07	1.53E+01	8.98E-08	1.83E-02	1.16E-05	1.67E-02	1.21E-03	1.94E-04	1.29E-03	2.57E-04	2.68E-04	2.46E-03	5.13E-05	0.00E+00	1.03E-03	3.15E-03
11	D31	80	Passenger Car	205	0.00E+00	2.10E-06	2.28E-07	8.59E+00	1.49E-05	4.16E-02	4.74E-06	2.12E-04	1.12E-03	1.87E-04	4.62E-04	2.98E-04	3.06E-04	3.05E-05	4.37E-05	9.34E-09	1.56E-04	3.31E-05
11	D31	80	Passenger Truck	343	0.00E+00	4.33E-06	4.61E-07	1.94E+01	2.81E-05	7.36E-02	9.17E-06	5.73E-04	1.99E-03	3.31E-04	8.80E-04	5.71E-04	5.85E-04	1.41E-04	9.78E-05	1.78E-08	2.95E-04	9.54E-05
11	D31	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.71E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	D31	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	6.00E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.13E-03
11	D31	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.41E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.21E-03
11	D32	80	Passenger Car	409	0.00E+00	4.19E-06	4.55E-07	1.71E+01	2.97E-05	8.30E-02	9.45E-06	4.24E-04	2.23E-03	3.73E-04	9.21E-04	5.94E-04	6.10E-04	6.08E-05	8.72E-05	1.86E-08	3.12E-04	6.61E-05
11	D32	80	Passenger Truck	684	0.00E+00	8.63E-06	9.20E-07	3.87E+01	5.61E-05	1.47E-01	1.83E-05	1.14E-03	3.97E-03	6.60E-04	1.76E-03	1.14E-03	1.17E-03	2.81E-04	1.95E-04	3.55E-08	5.88E-04	1.90E-04
11	D32	80	Single Unit Short Haul Truck	29	0.00E+00	3.94E-06	1.54E-07	4.71E+00	2.67E-06	8.56E-03	4.33E-06	1.64E-03	3.23E-04	6.60E-05	5.43E-04	1.01E-04	1.02E-04	4.79E-04	1.91E-05	7.59E-09	4.40E-04	3.07E-04
11	D32	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	6.61E-09	1.99E-01	1.14E-07	3.56E-04	1.88E-07	7.01E-05	1.48E-05	2.93E-06	2.37E-05	4.32E-06	4.40E-06	2.01E-05	8.10E-07	3.16E-10	1.93E-05	1.31E-05
11	D32	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	8.00E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.51E-03
11	D32	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.55E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.61E-03
9	D33	60	Passenger Car	301	0.00E+00	3.80E-06	4.13E-07	1.36E+01	2.69E-05	7.30E-02	8.56E-06	3.09E-04	3.04E-03	4.55E-04	8.35E-04	5.38E-04	5.53E-04	5.96E-05	6.87E-05	1.44E-08	2.82E-04	4.83E-05
9	D33	60	Passenger Truck	503	0.00E+00	8.06E-06	8.55E-07	3.02E+01	5.09E-05	1.25E-01	1.67E-05	9.63E-04	5.55E-03	8.26E-04	1.59E-03	1.04E-03	1.06E-03	2.44E-04	1.52E-04	2.81E-08	5.32E-04	1.63E-04
9	D33	60	Single Unit Short Haul Truck	50	0.00E+00	1.11E-05	4.59E-07	8.29E+00	7.37E-06	1.46E-02	1.20E-05	4.27E-03	1.15E-03	1.93E-04	1.48E-03	2.86E-04	2.91E-04	8.40E-04	3.38E-05	1.39E-08	1.19E-03	7.99E-04
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	4.85E-07	1.99E-08	3.53E-01	3.19E-07	6.19E-04	5.25E-07	1.85E-04	5.15E-05	8.54E-06	6.49E-05	1.24E-05	1.27E-05	3.57E-05	1.44E-06	5.92E-10	5.22E-05	3.46E-05
9	D33	60	Combination Short Haul Truck	32	0.00E+00	9.46E-06	6.95E-07	1.14E+01	2.59E-08	1.41E-02	6.80E-06	1.45E-02	1.65E-03	2.58E-04	5.83E-04	2.03E-04	2.11E-04	1.82E-03	3.82E-05	0.00E+00	3.72E-04	2.73E-03
9	D33	60	Combination Long Haul Truck	30	0.00E+00	1.30E-05	7.10E-07	1.08E+01	8.78E-08	1.70E-02	1.09E-05	1.54E-02	1.73E-03	2.50E-04	1.23E-03	2.32E-04	2.42E-04	1.73E-03	3.61E-05	0.00E+00	9.92E-04	2.90E-03
9	D34	60	Passenger Car	302	0.00E+00	3.82E-06	4.15E-07	1.36E+01	2.71E-05	7.34E-02	8.60E-06	3.11E-04	3.05E-03	4.57E-04	8.39E-04	5.41E-04	5.55E-04	5.99E-05	6.91E-05	1.45E-08	2.84E-04	4.85E-05
9	D34	60	Passenger Truck	506	0.00E+00	8.10E-06	8.59E-07	3.04E+01	5.11E-05	1.26E-01	1.68E-05	9.68E-04	5.57E-03	8.30E-04	1.60E-03	1.04E-03	1.07E-03	2.45E-04	1.52E-04	2.83E-08	5.34E-04	1.64E-04
9	D34	60	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.24E-07	2.23E+00	1.98E-06	3.92E-03	3.24E-06	1.15E-03	3.08E-04	5.18E-05	3.99E-04	7.69E-05	7.85E-05	2.26E-04	9.09E-06	3.75E-09	3.21E-04	2.15E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.37E-09	9.51E-02	8.60E-08	1.67E-04	1.41E-07	4.98E-05	1.39E-05	2.30E-06	1.75E-05	3.34E-06	3.41E-06	9.61E-06	3.88E-07	1.59E-10	1.41E-05	9.32E-06
9	D34	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.03E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.72E-04
9	D34	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.23E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.09E-04
9	D35	60	Passenger Car	459	0.00E+00	5.80E-06	6.31E-07	2.07E+01	4.12E-05	1.12E-01	1.31E-05	4.73E-04	4.64E-03	6.95E-04	1.28E-03	8.23E-04	8.45E-04	9.11E-05	1.05E-04	2.21E-08	4.32E-04	7.38E-05
9	D35	60	Passenger Truck	770	0.00E+00	1.23E-05	1.31E-06	4.62E+01	7.78E-05	1.91E-01	2.56E-05	1.47E-03	8.48E-03	1.26E-03	2.44E-03	1.59E-03	1.63E-03	3.73E-04	2.32E-04	4.30E-08	8.12E-04	2.49E-04
9	D35	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.23E-04
9	D35	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.47E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.40E-05
9	D35	60	Combination Short Haul Truck	15	0.00E+00	4.43E-06	3.25E-07	5.34E+00	1.21E-08	6.61E-03	3.18E-06	6.77E-03	7.73E-04	1.21E-04	2.73E-04	9.51E-05	9.88E-05	8.49E-04	1.79E-05	0.00E+00	1.74E-04	1.27E-03
9	D35	60	Combination Long Haul Truck	14	0.00E+00	6.08E-06	3.32E-07	5.05E+00	4.11E-08	7.95E-03	5.09E-06	7.21E-03	8.10E-04	1.17E-04	5.77E-04	1.09E-04	1.13E-04	8.10E-04	1.69E-05	0.00E+00	4.64E-04	1.36E-03
9	D36	60	Passenger Car	174	0.00E+00	2.20E-06	2.39E-07	7.86E+00	1.56E-05	4.23E-02	4.96E-06	1.79E-04	1.76E-03	2.64E-04	4.84E-04	3.12E-04	3.20E-04	3.45E-05	3.98E-05	8.37E-09	1.64E-04	2.80E-05
9	D36	60	Passenger Truck	292	0.00E+00	4.67E-06	4.95E-07	1.75E+01	2.95E-05	7.25E-02	9.69E-06	5.58E-04	3.22E-03	4.79E-04	9.24E-04	6.01E-04	6.16E-04	1.41E-04	8.79E-05	1.63E-08	3.08E-04	9.46E-05
9	D36	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
9	D36	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.96E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	D36	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.63E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.63E-03
9	D36	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.20E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.73E-03
9	D37	60	Passenger Car	102	0.00E+00	1.29E-06	1.40E-07	4.60E+00	9.15E-06	2.48E-02	2.91E-06	1.05E-04	1.03E-03	1.54E-04	2.84E-04	1.83E-04	1.88E-04	2.02E-05	2.33E-05	4.90E-09	9.59E-05	1.64E-05
9	D37	60	Passenger Truck	171	0.00E+00	2.74E-06	2.90E-07	1.03E+01	1.73E-05	4.25E-02	5.68E-06	3.27E-04	1.88E-03	2.80E-04	5.41E-04	3.52E-04	3.61E-04	8.28E-05	5.15E-05	9.55E-09	1.80E-04	5.54E-05
9	D37	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
9	D37	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.40E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.64E-04
9	D37	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.49E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.81E-04
9	D38	60	Passenger Car	289	0.00E+00	3.65E-06	3.96E-07	1.30E+01	2.59E-05	7.01E-02	8.22E-06	2.97E-04	2.91E-03	4.37E-04	8.02E-04	5.17E-04	5.31E-04	5.72E-05	6.60E-05	1.39E-08	2.71E-04	4.64E-05
9	D38	60	Passenger Truck	483	0.00E+00	7.74E-06	8.21E-07	2.90E+01	4.88E-05	1.20E-01	1.61E-05	9.24E-04	5.33E-03	7.93E-04	1.53E-03	9.96E-04	1.02E-03	2.34E-04	1.46E-04	2.70E-08	5.10E-04	1.57E-04
9	D38	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.39E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
9	D38	60	Combination Short Haul Truck	20	0.00E+00	5.95E-06	4.37E-07	7.18E+00	1.63E-08	8.90E-03	4.28E-06	9.10E-03	1.04E-03	1.62E-04	3.67E-04	1.28E-04	1.33E-04	1.14E-03	2.40E-05	0.00E+00	2.34E-04	1.71E-03
9	D38	60	Combination Long Haul Truck	19	0.00E+00	8.18E-06	4.47E-07	6.79E+00	5.52E-08	1.07E-02	6.84E-06	9.70E-03	1.09E-03	1.58E-04	7.76E-04	1.46E-04	1.52E-04	1.09E-03	2.27E-05	0.00E+00	6.24E-04	1.83E-03
9	D39	60	Passenger Car	158	0.00E+00	2.00E-06	2.17E-07	7.13E+00	1.42E-05	3.84E-02	4.50E-06	1.63E-04	1.60E-03	2.39E-04	4.39E-04	2.83E-04	2.91E-04	3.13E-05	3.62E-05	7.59E-09	1.49E-04	2.54E-05
9	D39	60	Passenger Truck	265	0.00E+00	4.24E-06	4.50E-07	1.59E+01	2.68E-05	6.58E-02	8.80E-06	5.07E-04	2.92E-03	4.34E-04	8.39E-04	5.46E-04	5.59E-04	1.28E-04	7.98E-05	1.48E-08	2.80E-04	8.58E-05
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	D39	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
9	D39	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	D40	60	Passenger Car	358	0.00E+00	4.52E-06	4.91E-07	1.61E+01	3.21E-05	8.69E-02	1.02E-05	3.68E-04	3.61E-03	5.41E-04	9.94E-04	6.41E-04	6.58E-04	7.09E-05	8.18E-05	1.72E-08	3.36E-04	5.75E-05
9	D40	60	Passenger Truck	599	0.00E+00	9.60E-06	1.02E-06	3.60E+01	6.05E-05	1.49E-01	1.99E-05	1.15E-03	6.60E-03	9.83E-04	1.90E-03	1.23E-03	1.27E-03	2.90E-04	1.81E-04	3.35E-08	6.33E-04	1.94E-04
9	D40	60	Single Unit Short Haul Truck	21	0.00E+00	4.71E-06	1.94E-07	3.51E+00	3.12E-06	6.17E-03	5.09E-06	1.81E-03	4.85E-04	8.15E-05	6.28E-04	1.21E-04	1.23E-04	3.55E-04	1.43E-05	5.89E-09	5.04E-04	3.38E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.44E-09	1.49E-01	1.35E-07	2.62E-04	2.22E-07	7.82E-05	2.18E-05	3.61E-06	2.74E-05	5.25E-06	5.36E-06	1.51E-05	6.10E-07	2.50E-10	2.21E-05	1.46E-05
9	D40	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.63E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.63E-03
9	D40	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.20E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.73E-03
9	D41	60	Passenger Car	148	0.00E+00	1.87E-06	2.03E-07	6.68E+00	1.33E-05	3.60E-02	4.22E-06	1.52E-04	1.50E-03	2.24E-04	4.11E-04	2.65E-04	2.72E-04	2.93E-05	3.38E-05	7.11E-09	1.39E-04	2.38E-05
9	D41	60	Passenger Truck	248	0.00E+00	3.97E-06	4.21E-07	1.49E+01	2.51E-05	6.16E-02	8.24E-06	4.74E-04	2.73E-03	4.07E-04	7.85E-04	5.11E-04	5.24E-04	1.20E-04	7.47E-05	1.39E-08	2.62E-04	8.03E-05
9	D42	60	Passenger Car	176	0.00E+00	2.23E-06	2.42E-07	7.96E+00	1.58E-05	4.29E-02	5.03E-06	1.82E-04	1.78E-03	2.67E-04	4.90E-04	3.16E-04	3.24E-04	3.50E-05	4.03E-05	8.47E-09	1.66E-04	2.83E-05
9	D42	60	Passenger Truck	296	0.00E+00	4.73E-06	5.02E-07	1.77E+01	2.99E-05	7.34E-02	9.82E-06	5.65E-04	3.26E-03	4.85E-04	9.36E-04	6.09E-04	6.24E-04	1.43E-04	8.91E-05	1.65E-08	3.12E-04	9.58E-05
9	D42	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	D42	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
9	D42	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.63E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.63E-03
9	D42	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.20E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.73E-03
9	D43	60	Passenger Car	299	0.00E+00	3.78E-06	4.11E-07	1.35E+01	2.68E-05	7.26E-02	8.52E-06	3.08E-04	3.02E-03	4.52E-04	8.31E-04	5.36E-04	5.50E-04	5.93E-05	6.84E-05	1.44E-08	2.81E-04	4.80E-05

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D43	60	Passenger Truck	501	0.00E+00	8.02E-06	8.50E-07	3.01E+01	5.06E-05	1.24E-01	1.66E-05	9.58E-04	5.52E-03	8.21E-04	1.59E-03	1.03E-03	1.06E-03	2.43E-04	1.51E-04	2.80E-08	5.29E-04	1.62E-04
9	D44	60	Passenger Car	198	0.00E+00	2.50E-06	2.72E-07	8.92E+00	1.77E-05	4.80E-02	5.63E-06	2.04E-04	2.00E-03	2.99E-04	5.49E-04	3.54E-04	3.64E-04	3.92E-05	4.52E-05	9.50E-09	1.86E-04	3.18E-05
9	D44	60	Passenger Truck	331	0.00E+00	5.31E-06	5.62E-07	1.99E+01	3.35E-05	8.23E-02	1.10E-05	6.33E-04	3.65E-03	5.43E-04	1.05E-03	6.83E-04	7.00E-04	1.60E-04	9.98E-05	1.85E-08	3.50E-04	1.07E-04
9	D44	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.38E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.46E-04
9	D44	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.93E-05
9	D44	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.47E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.41E-03
9	D44	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.96E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.50E-03
9	D45	60	Passenger Car	584	0.00E+00	7.37E-06	8.01E-07	2.63E+01	5.23E-05	1.42E-01	1.66E-05	6.01E-04	5.89E-03	8.83E-04	1.62E-03	1.05E-03	1.07E-03	1.16E-04	1.33E-04	2.80E-08	5.48E-04	9.37E-05
9	D45	60	Passenger Truck	977	0.00E+00	1.57E-05	1.66E-06	5.87E+01	9.88E-05	2.43E-01	3.25E-05	1.87E-03	1.08E-02	1.60E-03	3.10E-03	2.01E-03	2.06E-03	4.74E-04	2.95E-04	5.46E-08	1.03E-03	3.17E-04
9	D45	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.50E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.03E-03
9	D45	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.38E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.46E-05
9	D45	60	Combination Short Haul Truck	53	0.00E+00	1.54E-05	1.13E-06	1.86E+01	4.22E-08	2.30E-02	1.11E-05	2.36E-02	2.69E-03	4.21E-04	9.50E-04	3.31E-04	3.44E-04	2.96E-03	6.22E-05	0.00E+00	6.06E-04	4.44E-03
9	D45	60	Combination Long Haul Truck	48	0.00E+00	2.12E-05	1.16E-06	1.76E+01	1.43E-07	2.77E-02	1.77E-05	2.51E-02	2.82E-03	4.08E-04	2.01E-03	3.78E-04	3.94E-04	2.82E-03	5.89E-05	0.00E+00	1.62E-03	4.73E-03
9	D46	60	Passenger Car	495	0.00E+00	6.26E-06	6.80E-07	2.23E+01	4.44E-05	1.20E-01	1.41E-05	5.10E-04	5.00E-03	7.49E-04	1.38E-03	8.87E-04	9.11E-04	9.82E-05	1.13E-04	2.38E-08	4.65E-04	7.96E-05
9	D46	60	Passenger Truck	830	0.00E+00	1.33E-05	1.41E-06	4.98E+01	8.38E-05	2.06E-01	2.76E-05	1.59E-03	9.14E-03	1.36E-03	2.63E-03	1.71E-03	1.75E-03	4.02E-04	2.50E-04	4.64E-08	8.76E-04	2.69E-04
9	D46	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.16E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	D46	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.67E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.99E-05
9	D46	60	Combination Short Haul Truck	57	0.00E+00	1.66E-05	1.22E-06	2.01E+01	4.56E-08	2.49E-02	1.20E-05	2.54E-02	2.90E-03	4.54E-04	1.03E-03	3.58E-04	3.71E-04	3.19E-03	6.71E-05	0.00E+00	6.54E-04	4.79E-03
9	D46	60	Combination Long Haul Truck	52	0.00E+00	2.29E-05	1.25E-06	1.90E+01	1.54E-07	2.99E-02	1.91E-05	2.71E-02	3.05E-03	4.40E-04	2.17E-03	4.08E-04	4.25E-04	3.04E-03	6.35E-05	0.00E+00	1.74E-03	5.10E-03
9	D47	60	Passenger Car	824	0.00E+00	1.04E-05	1.13E-06	3.72E+01	7.39E-05	2.00E-01	2.35E-05	8.49E-04	8.33E-03	1.25E-03	2.29E-03	1.48E-03	1.52E-03	1.63E-04	1.88E-04	3.96E-08	7.75E-04	1.32E-04
9	D47	60	Passenger Truck	1381	0.00E+00	2.21E-05	2.34E-06	8.29E+01	1.40E-04	3.43E-01	4.59E-05	2.64E-03	1.52E-02	2.26E-03	4.37E-03	2.85E-03	2.92E-03	6.69E-04	4.16E-04	7.72E-08	1.46E-03	4.47E-04
9	D47	60	Single Unit Short Haul Truck	83	0.00E+00	1.86E-05	7.69E-07	1.39E+01	1.23E-05	2.44E-02	2.01E-05	7.14E-03	1.92E-03	3.22E-04	2.48E-03	4.78E-04	4.88E-04	1.40E-03	5.65E-05	2.33E-08	1.99E-03	1.34E-03
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	8.12E-07	3.34E-08	5.91E-01	5.35E-07	1.04E-03	8.78E-07	3.09E-04	8.61E-05	1.43E-05	1.09E-04	2.08E-05	2.12E-05	5.97E-05	2.41E-06	9.90E-10	8.73E-05	5.79E-05
9	D47	60	Combination Short Haul Truck	56	0.00E+00	1.65E-05	1.21E-06	1.99E+01	4.52E-08	2.46E-02	1.18E-05	2.52E-02	2.88E-03	4.50E-04	1.02E-03	3.54E-04	3.68E-04	3.16E-03	6.65E-05	0.00E+00	6.48E-04	4.75E-03
9	D47	60	Combination Long Haul Truck	52	0.00E+00	2.27E-05	1.24E-06	1.88E+01	1.53E-07	2.96E-02	1.89E-05	2.69E-02	3.02E-03	4.36E-04	2.15E-03	4.04E-04	4.21E-04	3.02E-03	6.30E-05	0.00E+00	1.73E-03	5.06E-03
9	D48	60	Passenger Car	381	0.00E+00	4.81E-06	5.22E-07	1.72E+01	3.41E-05	9.24E-02	1.08E-05	3.92E-04	3.84E-03	5.76E-04	1.06E-03	6.82E-04	7.00E-04	7.54E-05	8.70E-05	1.83E-08	3.58E-04	6.11E-05
9	D48	60	Passenger Truck	637	0.00E+00	1.02E-05	1.08E-06	3.83E+01	6.44E-05	1.58E-01	2.12E-05	1.22E-03	7.02E-03	1.05E-03	2.02E-03	1.31E-03	1.35E-03	3.09E-04	1.92E-04	3.56E-08	6.73E-04	2.07E-04
9	D48	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.05E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.84E-04
9	D48	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	9.59E-09	1.70E-01	1.54E-07	2.97E-04	2.52E-07	8.89E-05	2.47E-05	4.11E-06	3.12E-05	5.97E-06	6.09E-06	1.72E-05	6.93E-07	2.85E-10	2.51E-05	1.66E-05
9	D48	60	Combination Short Haul Truck	21	0.00E+00	6.26E-06	4.60E-07	7.55E+00	1.71E-08	9.35E-03	4.50E-06	9.57E-03	1.09E-03	1.71E-04	3.86E-04	1.34E-04	1.40E-04	1.20E-03	2.53E-05	0.00E+00	2.46E-04	1.80E-03
9	D48	60	Combination Long Haul Truck	20	0.00E+00	8.60E-06	4.70E-07	7.13E+00	5.80E-08	1.12E-02	7.19E-06	1.02E-02	1.15E-03	1.66E-04	8.16E-04	1.53E-04	1.60E-04	1.14E-03	2.39E-05	0.00E+00	6.56E-04	1.92E-03
9	D49	60	Passenger Car	819	0.00E+00	1.03E-05	1.12E-06	3.69E+01	7.34E-05	1.99E-01	2.33E-05	8.43E-04	8.27E-03	1.24E-03	2.28E-03	1.47E-03	1.51E-03	1.62E-04	1.87E-04	3.93E-08	7.70E-04	1.32E-04
9	D49	60	Passenger Truck	1372	0.00E+00	2.20E-05	2.33E-06	8.24E+01	1.39E-04	3.41E-01	4.56E-05	2.62E-03	1.51E-02	2.25E-03	4.35E-03	2.83E-03	2.90E-03	6.65E-04	4.13E-04	7.67E-08	1.45E-03	4.45E-04
9	D49	60	Single Unit Short Haul Truck	194	0.00E+00	4.34E-05	1.79E-06	3.23E+01	2.88E-05	5.69E-02	4.69E-05	1.67E-02	4.47E-03	7.52E-04	5.79E-03	1.12E-03	1.14E-03	3.28E-03	1.32E-04	5.43E-08	4.65E-03	3.12E-03
9	D49	60	Single Unit Long Haul Truck	9	0.00E+00	1.89E-06	7.79E-08	1.38E+00	1.25E-06	2.42E-03	2.05E-06	7.22E-04	2.01E-04	3.33E-05	2.53E-04	4.85E-05	4.94E-05	1.39E-04	5.63E-06	2.31E-09	2.04E-04	1.35E-04
9	D49	60	Combination Short Haul Truck	108	0.00E+00	3.14E-05	2.31E-06	3.80E+01	8.61E-08	4.70E-02	2.26E-05	4.81E-02	5.49E-03	8.58E-04	1.94E-03	6.76E-04	7.02E-04	6.03E-03	1.27E-04	0.00E+00	1.24E-03	9.06E-03
9	D49	60	Combination Long Haul Truck	98	0.00E+00	4.32E-05	2.36E-06	3.58E+01	2.92E-07	5.64E-02	3.61E-05	5.12E-02	5.76E-03	8.32E-04	4.10E-03	7.71E-04	8.03E-04	5.75E-03	1.20E-04	0.00E+00	3.29E-03	9.65E-03
9	D50	60	Passenger Car	981	0.00E+00	1.24E-05	1.35E-06	4.42E+01	8.79E-05	2.38E-01	2.79E-05	1.01E-03	9.91E-03	1.48E-03	2.73E-03	1.76E-03	1.80E-03	1.94E-04	2.24E-04	4.71E-08	9.22E-04	1.58E-04
9	D50	60	Passenger Truck	1643	0.00E+00	2.63E-05	2.79E-06	9.86E+01	1.66E-04	4.08E-01	5.46E-05	3.14E-03	1.81E-02	2.69E-03	5.20E-03	3.39E-03	3.47E-03	7.96E-04	4.95E-04	9.18E-08	1.73E-03	5.32E-04
9	D50	60	Single Unit Short Haul Truck	204	0.00E+00	4.56E-05	1.88E-06	3.39E+01	3.02E-05	5.97E-02	4.93E-05	1.75E-02	4.69E-03	7.89E-04	6.08E-03	1.17E-03	1.19E-03	3.44E-03	1.38E-04	5.70E-08	4.88E-03	3.27E-03
9	D50	60	Single Unit Long Haul Truck	9	0.00E+00	1.99E-06	8.17E-08	1.45E+00	1.31E-06	2.53E-03	2.15E-06	7.58E-04	2.11E-04	3.50E-05	2.66E-04	5.09E-05	5.19E-05	1.46E-04	5.90E-06	2.42E-09	2.14E-04	1.42E-04
9	D50	60	Combination Short Haul Truck	112	0.00E+00	3.28E-05	2.41E-06	3.96E+01	8.99E-08	4.90E-02	2.36E-05	5.02E-02	5.73E-03	8.96E-04	2.02E-03	7.05E-04	7.32E-04	6.29E-03	1.32E-04	0.00E+00	1.29E-03	9.45E-03
9	D50	60	Combination Long Haul Truck	103	0.00E+00	4.51E-05	2.46E-06	3.74E+01	3.04E-07	5.89E-02	3.77E-05	5.35E-02	6.01E-03	8.68E-04	4.28E-03	8.05E-04	8.38E-04	6.00E-03	1.25E-04	0.00E+00	3.44E-03	1.01E-02
9	D51	60	Passenger Car	221	0.00E+00	2.80E-06	3.04E-07	9.98E+00	1.98E-05	5.38E-02	6.30E-06	2.28E-04	2.24E-03	3.35E-04	6.15E-04	3.96E-04	4.07E-04	4.39E-05	5.06E-05	1.06E-08	2.08E-04	3.55E-05
9	D51	60	Passenger Truck	371	0.00E+00	5.94E-06	6.29E-07	2.23E+01	3.75E-05	9.21E-02	1.23E-05	7.09E-04	4.08E-03	6.08E-04	1.17E-03	7.64E-04	7.83E-04	1.80E-04	1.12E-04	2.07E-08	3.91E-04	1.20E-04
9	D51	60	Single Unit Short Haul Truck	26	0.00E+00	5.77E-06	2.39E-07	4.30E+00	3.83E-06	7.57E-03	6.24E-06	2.22E-03	5.95E-04	1.00E-04	7.70E-04	1.48E-04	1.51E-04	4.36E-04	1.75E-05	7.22E-09	6.19E-04	4.15E-04
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	2.52E-07	1.04E-08	1.83E-01	1.66E-07	3.21E-04	2.73E-07	9.60E-05	2.67E-05	4.43E-06	3.37E-05	6.45E-06	6.58E-06	1.85E-05	7.48E-07	3.07E-10	2.71E-05	1.80E-05
9	D51	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.07E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
9	D51	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.46E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.22E-03
9	D52	60	Passenger Car	237	0.00E+00	2.99E-06	3.25E-07	1.07E+01	2.12E-05	5.75E-02	6.74E-06	2.44E-04	2.39E-03	3.58E-04	6.57E-04	4.24E-04	4.35E-04	4.69E-05	5.41E-05	1.14E-08	2.22E-04	3.80E-05
9	D52	60	Passenger Truck	396	0.00E+00	6.35E-06	6.73E-07	2.38E+01	4.00E-05	9.85E-02	1.32E-05	7.58E-04	4.37E-03	6.50E-04	1.26E-03	8.17E-04	8.37E-04	1.92E-04	1.19E-04	2.22E-08	4.18E-04	1.28E-04
9	D52	60	Single Unit Short Haul Truck	61	0.00E+00	1.37E-05	5.65E-07	1.02E+01	9.07E-06	1.79E-02	1.48E-05	5.26E-03	1.41E-03	2.37E-04	1.83E-03	3.52E-04	3.59E-04	1.03E-03	4.16E-05	1.71E-08	1.47E-03	9.84E-04
9	D52	60	Single Unit Long Haul Truck	3	0.00E+00	5.97E-07	2.46E-08	4.35E-01	3.93E-07	7.61E-04	6.46E-07	2.28E-04	6.33E-05	1.05E-05	7.98E-05	1.53E-05	1.56E-05	4.39E-05	1.77E-06	7.28E-10	6.42E-05	4.26E-05
9	D52	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.81E-03
9	D52	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.59E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	3.00E-03
9	D53	60	Passenger Car	316	0.00E+00	3.99E-06	4.33E-07	1.42E+01	2.83E-05	7.66E-02	8.99E-06	3.25E-04	3.19E-03	4.77E-04	8.77E-04	5.65E-04	5.80E-04	6.26E-05	7.21E-05	1.52E-08	2.97E-04	5.07E-05
9	D53	60	Passenger Truck	528	0.00E+00	8.46E-06	8.97E-07	3.17E+01	5.34E-05	1.31E-01	1.76E-05	1.01E-03	5.82E-03	8.67E-04	1.67E-03	1.09E-03	1.12E-03	2.56E-04	1.59E-04	2.95E-08	5.58E-04	1.71E-04
9	D53	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.11E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.69E-04
9	D53	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.78E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.33E-05
9	D53	60	Combination Short Haul Truck	27	0.00E+00	7.94E-06	5.83E-07	9.58E+00	2.17E-08	1.19E-02	5.70E-06	1.21E-02	1.39E-03	2.17E-04	4.89E-04	1.71E-04	1.77E-04	1.52E-03	3.20E-05	0.00E+00	3.12E-04	2.29E-03
9	D53	60	Combination Long Haul Truck	25	0.00E+00	1.09E-05	5.96E-07	9.05E+00	7.36E-08	1.42E-02	9.12E-06	1.29E-02	1.45E-03	2.10E-04	1.03E-03	1.95E-04	2.03E-04	1.45E-03	3.03E-05	0.00E+00	8.32E-04	2.44E-03
9	D54	60	Passenger Car	374	0.00E+00	4.73E-06	5.14E-07	1.69E+01	3.36E-05	9.09E-02	1.07E-05	3.85E-04	3.78E-03	5.66E-04	1.04E-03	6.70E-04	6.88E-04	7.42E-05	8.56E-05	1.80E-08	3.52E-04	6.01E-05
9	D54	60	Passenger Truck	627	0.00E+00	1.00E-05	1.06E-06	3.76E+01	6.33E-05	1.56E-01	2.08E-05	1.20E-03	6.91E-03	1.03E-03	1.99E-03	1.29E-03	1.32E-03	3.04E-04	1.89E-04	3.50E-08	6.62E-04	2.03E-04
9	D54	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.50E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.03E-03
9	D54	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.38E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.46E-05
9	D54	60	Combination Short Haul Truck	28	0.00E+00	8.24E-06	6.06E-07	9.95E+00	2.26E-08	1.23E-02	5.92E-06	1.26E-02	1.44E-03	2.25E-04	5.08E-04	1.77E-04	1.84E-04	1.58E-03	3.33E-05	0.00E+00	3.24E-04	2.37E-03
9	D54	60	Combination Long Haul Truck	26	0.00E+00	1.13E-05	6.19E-07	9.40E+00	7.64E-08	1.48E-02	9.47E-06	1.34E-02	1.51E-03	2.18E-04	1.07E-03	2.02E-04	2.11E-04	1.51E-03	3.15E-05	0.00E+00	8.64E-04	2.53E-03
11	D55	80	Passenger Car	664	0.00E+00	6.81E-06	7.40E-07	2.78E+01	4.83E-05	1.35E-01	1.54E-05	6.88E-04	3.62E-03	6.06E-04	1.50E-03	9.65E-04	9.91E-04	9.87E-05	1.42E-04	3.03E-08	5.06E-04	1.07E-04
11	D55	80	Passenger Truck	1112	0.00E+00	1.40E-05	1.50E-06	6.29E+01	9.12E-05	2.39E-01	2.97E-05	1.86E-03	6.44E-03	1.07E-03	2.85E-03	1.85E-03	1.90E-03	4.57E-04	3.17E-04	5.76E-08	9.55E-04	3.09E-04
11	D55	80	Single Unit Short Haul Truck	93	0.00E+00	1.27E-05	4.98E-07	1.52E+01	8.64E-06	2.77E-02	1.40E-05	5.30E-03	1.04E-03	2.14E-04	1.76E-03	3.25E-04	3.31E-04	1.55E-03	6.19E-05	2.45E-08	1.42E-03	9.91E-04
11	D55	80	Single Unit Long Haul Truck	4	0.00E+00	5.54E-07	2.14E-08	6.44E-01	3.68E-07	1.15E-03	6.09E-07	2.27E-04	4.79E-05	9.47E-06	7.65E-05	1.40E-05	1.42E-05	6.51E-05	2.62E-06	1.02E-09	6.23E-05	4.23E-05
11	D55	80	Combination Short Haul Truck	57	0.00E+00	1.17E-05	8.70E-07	1.91E+01	3.08E-08	1.79E-02	8.40E-06	1.82E-02	1.36E-03	2.46E-04	7.13E-04	2.54E-04	2.63E-04	3.04E-03	6.39E-05	0.00E+00	4.49E-04	3.42E-03
11	D55	80	Combination Long Haul Truck	52	0.00E+00	1.64E-05	9.24E-07	1.77E+01	1.04E-07	2.12E-02	1.35E-05	1.94E-02	1.41E-03	2.25E-04	1.50E-03	2.98E-04	3.10E-04	2.85E-03	5.95E-05	0.00E+00	1.19E-03	3.66E-03
11	D56	80	Passenger Car	362	0.00E+00	3.71E-06	4.04E-07	1.52E+01	2.64E-05	7.36E-02	8.38E-06	3.76E-04	1.97E-03	3.31E-04	8.17E-04	5.27E-04	5.41E-04	5.39E-05	7.73E-05	1.65E-08	2.76E-04	5.86E-05
11	D56	80	Passenger Truck	607	0.00E+00	7.65E-06	8.16E-07	3.43E+01	4.98E-05	1.30E-01	1.62E-05	1.01E-03	3.52E-03	5.85E-04	1.56E-03	1.01E-03	1.03E-03	2.49E-04	1.73E-04	3.14E-08	5.21E-04	1.69E-04
11	D56	80	Single Unit Short Haul Truck	43	0.00E+00	5.91E-06	2.31E-07	7.07E+00	4.01E-06	1.28E-02	6.50E-06	2.46E-03	4.84E-04	9.91E-05	8.14E-04	1.51E-04	1.54E-04	7.19E-04	2.87E-05	1.14E-08	6.61E-04	4.60E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	2.57E-07	9.91E-09	2.99E-01	1.71E-07	5.34E-04	2.82E-07	1.05E-04	2.22E-05	4.39E-06	3.55E-05	6.47E-06	6.60E-06	3.02E-05	1.22E-06	4.74E-10	2.89E-05	1.96E-05
11	D56	80	Combination Short Haul Truck	24	0.00E+00	4.96E-06	3.67E-07	8.07E+00	1.30E-08	7.56E-03	3.54E-06	7.67E-03	5.74E-04	1.04E-04	3.01E-04	1.07E-04	1.11E-04	1.28E-03	2.70E-05	0.00E+00	1.90E-04	1.44E-03
11	D56	80	Combination Long Haul Truck	22	0.00E+00	6.91E-06	3.90E-07	7.49E+00	4.39E-08	8.95E-03	5.70E-06	8.20E-03	5.93E-04	9.50E-05	6.33E-04	1.26E-04	1.31E-04	1.20E-03	2.51E-05	0.00E+00	5.02E-04	1.54E-03
11	D57	80	Passenger Car	805	0.00E+00	8.25E-06	8.97E-07	3.37E+01	5.85E-05	1.63E-01	1.86E-05	8.34E-04	4.39E-03	7.34E-04	1.81E-03	1.17E-03	1.20E-03	1.20E-04	1.72E-04	3.67E-08	6.14E-04	1.30E-04
11	D57	80	Passenger Truck	1347	0.00E+00	1.70E-05	1.81E-06	7.62E+01	1.11E-04	2.89E-01	3.60E-05	2.25E-03	7.81E-03	1.30E-03	3.46E-03	2.24E-03	2.30E-03	5.53E-04	3.84E-04	6.98E-08	1.16E-03	3.75E-04
11	D57	80	Single Unit Short Haul Truck	113	0.00E+00	1.55E-05	6.05E-07	1.85E+01	1.05E-05	3.37E-02	1.70E-05	6.45E-03	1.27E-03	2.60E-04	2.14E-03	3.95E-04	4.03E-04	1.88E-03	7.53E-05	2.98E-08	1.73E-03	1.21E-03
11	D57	80	Single Unit

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D61	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	6.01E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D61	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.83E-04
11	D61	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	D62	80	Passenger Car	244	0.00E+00	2.50E-06	2.72E-07	1.02E+01	1.78E-05	4.96E-02	5.64E-06	2.53E-04	1.33E-03	2.23E-04	5.50E-04	3.55E-04	3.64E-04	3.63E-05	5.21E-05	1.11E-08	1.86E-04	3.95E-05
11	D62	80	Passenger Truck	409	0.00E+00	5.16E-06	5.50E-07	2.31E+01	3.35E-05	8.77E-02	1.09E-05	6.83E-04	2.37E-03	3.95E-04	1.05E-03	6.80E-04	6.97E-04	1.68E-04	1.17E-04	2.12E-08	3.51E-04	1.14E-04
11	D62	80	Single Unit Short Haul Truck	79	0.00E+00	1.08E-05	4.21E-07	1.29E+01	7.31E-06	2.34E-02	1.18E-05	4.48E-03	8.82E-04	1.80E-04	1.48E-03	2.75E-04	2.80E-04	1.31E-03	5.23E-05	2.07E-08	1.20E-03	8.38E-04
11	D62	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	1.81E-08	5.44E-01	3.11E-07	9.74E-04	5.14E-07	1.92E-04	4.05E-05	8.01E-06	6.47E-05	1.18E-05	1.20E-05	5.50E-05	2.21E-06	8.64E-10	5.27E-05	3.58E-05
11	D62	80	Combination Short Haul Truck	32	0.00E+00	6.68E-06	4.95E-07	1.09E+01	1.75E-08	1.02E-02	4.78E-06	1.03E-02	7.74E-04	1.40E-04	4.05E-04	1.44E-04	1.50E-04	1.73E-03	3.64E-05	0.00E+00	2.55E-04	1.95E-03
11	D62	80	Combination Long Haul Truck	30	0.00E+00	9.31E-06	5.26E-07	1.01E+01	5.92E-08	1.21E-02	7.68E-06	1.10E-02	8.00E-04	1.28E-04	8.53E-04	1.69E-04	1.76E-04	1.62E-03	3.38E-05	0.00E+00	6.77E-04	2.08E-03
10	D63	70	Passenger Car	47	0.00E+00	5.23E-07	5.68E-08	2.05E+00	3.71E-06	1.01E-02	1.18E-06	4.80E-05	3.66E-04	5.70E-05	1.15E-04	7.41E-05	7.61E-05	8.07E-06	1.04E-05	2.16E-09	3.89E-05	7.49E-06
10	D63	70	Passenger Truck	80	0.00E+00	1.10E-06	1.17E-07	4.61E+00	7.05E-06	1.79E-02	2.31E-06	1.40E-04	6.62E-04	1.02E-04	2.21E-04	1.43E-04	1.47E-04	3.53E-05	2.32E-05	4.16E-09	7.37E-05	2.34E-05
10	D63	70	Single Unit Short Haul Truck	44	0.00E+00	7.75E-06	3.15E-07	7.22E+00	5.20E-06	1.31E-02	8.43E-06	3.09E-03	7.00E-04	1.29E-04	1.05E-03	1.99E-04	2.03E-04	7.33E-04	2.94E-05	1.19E-08	8.42E-04	5.78E-04
10	D63	70	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.36E-08	3.06E-01	2.24E-07	5.49E-04	3.67E-07	1.33E-04	3.21E-05	5.75E-06	4.56E-05	8.60E-06	8.77E-06	3.09E-05	1.25E-06	5.00E-10	3.68E-05	2.49E-05
10	D63	70	Combination Short Haul Truck	19	0.00E+00	4.98E-06	3.71E-07	6.73E+00	1.27E-08	7.19E-03	3.55E-06	7.46E-03	7.02E-04	1.17E-04	2.99E-04	1.08E-04	1.12E-04	1.07E-03	2.25E-05	0.00E+00	1.87E-04	1.41E-03
10	D63	70	Combination Long Haul Truck	18	0.00E+00	6.83E-06	3.88E-07	6.32E+00	4.28E-08	8.58E-03	5.62E-06	7.98E-03	7.31E-04	1.10E-04	6.21E-04	1.25E-04	1.30E-04	1.01E-03	2.12E-05	0.00E+00	4.91E-04	1.50E-03
10	D64	70	Passenger Car	33	0.00E+00	3.58E-07	3.89E-08	1.40E+00	2.54E-06	6.92E-03	8.08E-07	3.29E-05	2.51E-04	3.90E-05	7.88E-05	5.08E-05	5.21E-05	5.53E-06	7.13E-06	1.48E-09	2.66E-05	5.13E-06
10	D64	70	Passenger Truck	54	0.00E+00	7.54E-07	8.02E-08	3.16E+00	4.83E-06	1.22E-02	1.58E-06	9.57E-05	4.54E-04	7.02E-05	1.51E-04	9.82E-05	1.01E-04	2.42E-05	1.59E-05	2.85E-09	5.05E-05	1.61E-05
10	D64	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	D64	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	D64	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
11	D65	80	Passenger Car	348	0.00E+00	3.57E-06	3.88E-07	1.46E+01	2.54E-05	7.08E-02	8.06E-06	3.61E-04	1.90E-03	3.18E-04	7.86E-04	5.07E-04	5.20E-04	5.18E-05	7.43E-05	1.59E-08	2.66E-04	5.64E-05
11	D65	80	Passenger Truck	584	0.00E+00	7.36E-06	7.85E-07	3.30E+01	4.79E-05	1.25E-01	1.56E-05	9.75E-04	3.38E-03	5.63E-04	1.50E-03	9.71E-04	9.95E-04	2.40E-04	1.66E-04	3.02E-08	5.01E-04	1.62E-04
11	D65	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.43E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.28E-04
11	D65	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.54E-05
11	D65	80	Combination Short Haul Truck	33	0.00E+00	6.79E-06	5.03E-07	1.10E+01	1.78E-08	1.04E-02	4.85E-06	1.05E-02	7.86E-04	1.42E-04	4.12E-04	1.47E-04	1.52E-04	1.76E-03	3.69E-05	0.00E+00	2.60E-04	1.98E-03
11	D65	80	Combination Long Haul Truck	30	0.00E+00	9.46E-06	5.34E-07	1.03E+01	6.02E-08	1.23E-02	7.80E-06	1.12E-02	8.13E-04	1.30E-04	8.67E-04	1.72E-04	1.79E-04	1.65E-03	3.44E-05	0.00E+00	6.88E-04	2.11E-03
11	D66	80	Passenger Car	212	0.00E+00	2.17E-06	2.36E-07	8.87E+00	1.54E-05	4.30E-02	4.89E-06	2.19E-04	1.15E-03	1.93E-04	4.77E-04	3.08E-04	3.16E-04	3.15E-05	4.52E-05	9.65E-09	1.61E-04	3.42E-05
11	D66	80	Passenger Truck	354	0.00E+00	4.47E-06	4.76E-07	2.00E+01	2.91E-05	7.60E-02	9.47E-06	5.92E-04	2.05E-03	3.42E-04	9.09E-04	5.90E-04	6.04E-04	1.46E-04	1.01E-04	1.84E-08	3.04E-04	9.85E-05
11	D66	80	Single Unit Short Haul Truck	51	0.00E+00	6.97E-06	2.72E-07	8.32E+00	4.72E-06	1.51E-02	7.66E-06	2.90E-03	5.70E-04	1.17E-04	9.59E-04	1.78E-04	1.81E-04	8.47E-04	3.38E-05	1.34E-08	7.78E-04	5.42E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	3.03E-07	1.17E-08	3.52E-01	2.01E-07	6.29E-04	3.33E-07	1.24E-04	2.62E-05	5.18E-06	4.18E-05	7.62E-06	7.78E-06	3.56E-05	1.43E-06	5.59E-10	3.41E-05	2.31E-05
11	D66	80	Combination Short Haul Truck	34	0.00E+00	7.01E-06	5.19E-07	1.14E+01	1.84E-08	1.07E-02	5.01E-06	1.08E-02	8.11E-04	1.47E-04	4.25E-04	1.51E-04	1.57E-04	1.81E-03	3.81E-05	0.00E+00	2.68E-04	2.04E-03
11	D66	80	Combination Long Haul Truck	31	0.00E+00	9.76E-06	5.51E-07	1.06E+01	6.21E-08	1.26E-02	8.05E-06	1.16E-02	8.38E-04	1.34E-04	8.95E-04	1.78E-04	1.85E-04	1.70E-03	3.55E-05	0.00E+00	7.10E-04	2.18E-03
11	D67	80	Passenger Car	145	0.00E+00	1.49E-06	1.62E-07	6.10E+00	1.06E-05	2.96E-02	3.36E-06	1.51E-04	7.93E-04	1.33E-04	3.28E-04	2.11E-04	2.17E-04	2.16E-05	3.10E-05	6.63E-09	1.11E-04	2.35E-05
11	D67	80	Passenger Truck	244	0.00E+00	3.07E-06	3.27E-07	1.38E+01	2.00E-05	5.23E-02	6.51E-06	4.07E-04	1.41E-03	2.35E-04	6.25E-04	4.05E-04	4.15E-04	1.00E-04	6.94E-05	1.26E-08	2.09E-04	6.77E-05
11	D67	80	Single Unit Short Haul Truck	54	0.00E+00	7.36E-06	2.87E-07	8.79E+00	4.99E-06	1.60E-02	8.09E-06	3.06E-03	6.03E-04	1.23E-04	1.01E-03	1.88E-04	1.91E-04	8.94E-04	3.57E-05	1.42E-08	8.22E-04	5.72E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	3.20E-07	1.23E-08	3.72E-01	2.13E-07	6.65E-04	3.51E-07	1.31E-04	2.76E-05	5.47E-06	4.42E-05	8.06E-06	8.22E-06	3.76E-05	1.51E-06	5.90E-10	3.60E-05	2.44E-05
11	D67	80	Combination Short Haul Truck	35	0.00E+00	7.22E-06	5.35E-07	1.18E+01	1.89E-08	1.10E-02	5.16E-06	1.12E-02	8.36E-04	1.51E-04	4.38E-04	1.56E-04	1.62E-04	1.87E-03	3.93E-05	0.00E+00	2.76E-04	2.10E-03
11	D67	80	Combination Long Haul Truck	32	0.00E+00	1.01E-05	5.68E-07	1.09E+01	6.40E-08	1.30E-02	8.30E-06	1.19E-02	8.64E-04	1.38E-04	9.22E-04	1.83E-04	1.91E-04	1.75E-03	3.65E-05	0.00E+00	7.31E-04	2.25E-03
11	D68	80	Passenger Car	375	0.00E+00	3.84E-06	4.17E-07	1.57E+01	2.73E-05	7.61E-02	8.66E-06	3.88E-04	2.04E-03	3.42E-04	8.45E-04	5.45E-04	5.59E-04	5.57E-05	7.99E-05	1.71E-08	2.86E-04	6.06E-05
11	D68	80	Passenger Truck	627	0.00E+00	7.91E-06	8.43E-07	3.55E+01	5.15E-05	1.35E-01	1.68E-05	1.05E-03	3.64E-03	6.05E-04	1.61E-03	1.04E-03	1.07E-03	2.58E-04	1.79E-04	3.25E-08	5.39E-04	1.74E-04
11	D68	80	Single Unit Short Haul Truck	92	0.00E+00	1.26E-05	4.93E-07	1.51E+01	8.55E-06	2.74E-02	1.39E-05	5.25E-03	1.03E-03	2.11E-04	1.74E-03	3.22E-04	3.28E-04	1.53E-03	6.12E-05	2.43E-08	1.41E-03	9.81E-04
11	D68	80	Single Unit Long Haul Truck	4	0.00E+00	5.48E-07	2.11E-08	6.37E-01	3.64E-07	1.14E-03	6.02E-07	2.24E-04	4.74E-05	9.38E-06	7.58E-05	1.38E-05	1.41E-05	6.44E-05	2.59E-06	1.01E-09	6.17E-05	4.19E-05
11	D68	80	Combination Short Haul Truck	60	0.00E+00	1.23E-05	9.10E-07	2.00E+01	3.22E-08	1.87E-02	8.78E-06	1.90E-02	1.42E-03	2.58E-04	7.45E-04	2.65E-04	2.76E-04	3.18E-03	6.69E-05	0.00E+00	4.70E-04	3.58E-03
11	D68	80	Combination Long Haul Truck	54	0.00E+00	1.71E-05	9.66E-07	1.86E+01	1.09E-07	2.22E-02	1.41E-05	2.03E-02	1.47E-03	2.35E-04	1.57E-03	3.11E-04	3.24E-04	2.98E-03	6.22E-05	0.00E+00	1.24E-03	3.83E-03
11	D69	80	Passenger Car	43	0.00E+00	4.45E-07	4.83E-08	1.82E+00	3.16E-06	8.81E-03	1.00E-06	4.50E-05	2.36E-04	3.96E-05	9.78E-05	6.31E-05	6.47E-05	6.45E-06	9.25E-06	1.98E-09	3.31E-05	7.02E-06
11	D69	80	Passenger Truck	73	0.00E+00	9.16E-07	9.76E-08	4.11E+00	5.96E-06	1.56E-02	1.94E-06	1.21E-04	4.21E-04	7.01E-05	1.86E-04	1.21E-04	1.24E-04	2.98E-05	2.07E-05	3.76E-09	6.24E-05	2.02E-05
11	D69	80	Single Unit Short Haul Truck	22	0.00E+00	3.02E-06	1.18E-07	3.61E+00	2.05E-06	6.56E-03	3.32E-06	1.26E-03	2.47E-04	5.06E-05	4.16E-04	7.71E-05	7.86E-05	3.67E-04	1.47E-05	5.82E-09	3.38E-04	2.35E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.07E-09	1.53E-01	8.73E-08	2.73E-04	1.44E-07	5.37E-05	1.13E-05	2.25E-06	1.82E-05	3.31E-06	3.37E-06	1.54E-05	6.21E-07	2.42E-10	1.48E-05	1.00E-05
11	D69	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.33E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.28E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.56E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.71E-04
11	D70	80	Passenger Car	208	0.00E+00	2.13E-06	2.31E-07	8.70E+00	1.51E-05	4.22E-02	4.80E-06	2.15E-04	1.13E-03	1.89E-04	4.68E-04	3.02E-04	3.10E-04	3.08E-05	4.43E-05	9.46E-09	1.58E-04	3.36E-05
11	D70	80	Passenger Truck	347	0.00E+00	4.38E-06	4.67E-07	1.96E+01	2.85E-05	7.46E-02	9.29E-06	5.80E-04	2.01E-03	3.35E-04	8.91E-04	5.78E-04	5.93E-04	1.43E-04	9.90E-05	1.80E-08	2.98E-04	9.66E-05
11	D70	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.84E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.31E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.27E-05
11	D70	80	Combination Short Haul Truck	32	0.00E+00	6.58E-06	4.87E-07	1.07E+01	1.72E-08	1.00E-02	4.70E-06	1.02E-02	7.61E-04	1.38E-04	3.99E-04	1.42E-04	1.47E-04	1.70E-03	3.58E-05	0.00E+00	2.51E-04	1.92E-03
11	D70	80	Combination Long Haul Truck	29	0.00E+00	9.16E-06	5.17E-07	9.93E+00	5.83E-08	1.19E-02	7.56E-06	1.09E-02	7.87E-04	1.26E-04	8.39E-04	1.67E-04	1.74E-04	1.59E-03	3.33E-05	0.00E+00	6.66E-04	2.05E-03
10	D71	70	Passenger Car	215	0.00E+00	2.37E-06	2.58E-07	9.29E+00	1.68E-05	4.58E-02	5.35E-06	2.18E-04	1.66E-03	2.58E-04	5.21E-04	3.36E-04	3.45E-04	3.66E-05	4.72E-05	9.81E-09	1.76E-04	3.40E-05
10	D71	70	Passenger Truck	361	0.00E+00	4.99E-06	5.31E-07	2.09E+01	3.20E-05	8.11E-02	1.05E-05	6.33E-04	3.00E-03	4.65E-04	1.00E-03	6.50E-04	6.67E-04	1.60E-04	1.05E-04	1.89E-08	3.34E-04	1.06E-04
10	D71	70	Single Unit Short Haul Truck	38	0.00E+00	6.74E-06	2.74E-07	6.28E+00	4.52E-06	1.14E-02	7.33E-06	2.69E-03	6.09E-04	1.12E-04	9.09E-04	1.73E-04	1.77E-04	6.38E-04	2.55E-05	1.03E-08	7.32E-04	5.02E-04
10	D71	70	Single Unit Long Haul Truck	2	0.00E+00	2.93E-07	1.18E-08	2.66E-01	1.94E-07	4.78E-04	3.19E-07	1.16E-04	2.79E-05	5.00E-06	3.97E-05	7.48E-06	7.63E-06	2.69E-05	1.08E-06	4.34E-10	3.20E-05	2.16E-05
10	D71	70	Combination Short Haul Truck	35	0.00E+00	8.88E-06	6.61E-07	1.20E+01	2.26E-08	1.28E-02	6.33E-06	1.33E-02	1.25E-03	2.09E-04	5.33E-04	1.93E-04	2.00E-04	1.91E-03	4.01E-05	0.00E+00	3.33E-04	2.51E-03
10	D71	70	Combination Long Haul Truck	31	0.00E+00	1.22E-05	6.93E-07	1.13E+01	7.64E-08	1.53E-02	1.00E-05	1.42E-02	1.30E-03	1.96E-04	1.11E-03	2.23E-04	2.32E-04	1.81E-03	3.78E-05	0.00E+00	8.76E-04	2.68E-03
10	D72	70	Passenger Car	183	0.00E+00	2.02E-06	2.19E-07	7.91E+00	1.43E-05	3.90E-02	4.55E-06	1.85E-04	1.41E-03	2.20E-04	4.44E-04	2.86E-04	2.94E-04	3.11E-05	4.02E-05	8.34E-09	1.50E-04	2.89E-05
10	D72	70	Passenger Truck	307	0.00E+00	4.25E-06	4.52E-07	1.78E+01	2.72E-05	6.90E-02	8.90E-06	5.39E-04	2.56E-03	3.95E-04	8.52E-04	5.53E-04	5.67E-04	1.36E-04	8.95E-05	1.60E-08	2.85E-04	9.05E-05
10	D72	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.42E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.40E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.76E-05
10	D72	70	Combination Short Haul Truck	37	0.00E+00	9.42E-06	7.01E-07	1.27E+01	2.39E-08	1.36E-02	6.71E-06	1.41E-02	1.33E-03	2.22E-04	5.65E-04	2.04E-04	2.12E-04	2.02E-03	4.26E-05	0.00E+00	3.53E-04	2.66E-03
10	D72	70	Combination Long Haul Truck	33	0.00E+00	1.29E-05	7.35E-07	1.20E+01	8.10E-08	1.62E-02	1.06E-05	1.51E-02	1.38E-03	2.08E-04	1.17E-03	2.36E-04	2.46E-04	1.92E-03	4.01E-05	0.00E+00	9.29E-04	2.85E-03
10	D73	70	Passenger Car	122	0.00E+00	1.35E-06	1.46E-07	5.28E+00	9.55E-06	2.60E-02	3.04E-06	1.24E-04	9.42E-04	1.47E-04	2.96E-04	1.91E-04	1.96E-04	2.08E-05	2.68E-05	5.57E-09	1.00E-04	1.93E-05
10	D73	70	Passenger Truck	205	0.00E+00	2.84E-06	3.01E-07	1.19E+01	1.82E-05	4.60E-02	5.94E-06	3.60E-04	1.71E-03	2.64E-04	5.68E-04	3.69E-04	3.78E-04	9.08E-05	5.97E-05	1.07E-08	1.90E-04	6.04E-05
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.69E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	D73	70	Combination Short Haul Truck	12	0.00E+00	2.96E-06	2.20E-07	4.00E+00	7.52E-09	4.28E-03	2.11E-06	4.43E-03	4.17E-04	6.96E-05	1.78E-04	6.42E-05	6.66E-05	6.36E-04	1.34E-05	0.00E+00	1.11E-04	8.35E-04
10	D73	70	Combination Long Haul Truck	10	0.00E+00	4.06E-06	2.31E-07	3.76E+00	2.55E-08	5.10E-03	3.34E-06	4.75E-03	4.35E-04	6.55E-05	3.69E-04	7.42E-05	7.73E-05	6.03E-04	1.26E-05	0.00E+00	2.92E-04	8.94E-04
10	D74	70	Passenger Car	222	0.00E+00	2.45E-06	2.66E-07	9.58E+00	1.74E-05	4.73E-02	5.51E-06	2.25E-04	1.71E-03	2.67E-04	5.38E-04	3.47E-04	3.56E-04	3.77E-05	4.87E-05	1.01E-08	1.82E-04	3.50E-05
10	D74	70	Passenger Truck	372	0.00E+00	5.15E-06	5.47E-07	2.16E+01	3.30E-05	8.36E-02	1.08E-05	6.53E-04	3.10E-03	4.79E-04	1.03E-03	6.71E-04	6.87E-04	1.65E-04	1.09E-04	1.94E-08	3.45E-04	1.10E-04
10	D74	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.73E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.76E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.03E-06
10	D74	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.03E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.60E-04
10	D74	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.32E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.13E-04
11	D75	80	Passenger Car	147	0.00E+00	1.51E-06	1.64E-07	6.17E+00	1.07E-05	2.99E-02	3.41E-06	1.53E-04	8.03E-04	1.34E-04	3.32E-04	2.14E-04	2.20E-04	2.19E-05	3.14E-05	6.72E-09	1.12E-04	2.38E-05
11	D75	80	Passenger Truck	247	0.00E+00	3.11E-06	3.32E-07	1.39E+01	2.02E-05	5.29E-02	6.59E-06	4.12E-04	1.43E-03	2.38E-04	6.33E-04	4.10E-04	4.21E-04	1.01E-04	7.03E-05	1.28E-08	2.12E-04	6.86E-05
11	D75	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.11E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	D75	80	Single Unit Long Ha

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D79	70	Single Unit Short Haul Truck	42	0.00E+00	7.42E-06	3.01E-07	6.91E+00	4.97E-06	1.25E-02	8.07E-06	2.95E-03	6.70E-04	1.23E-04	1.00E-03	1.90E-04	1.94E-04	7.02E-04	2.81E-05	1.13E-08	8.06E-04	5.53E-04
10	D79	70	Single Unit Long Haul Truck	2	0.00E+00	3.23E-07	1.30E-08	2.93E-01	2.14E-07	5.26E-04	3.51E-07	1.27E-04	3.07E-05	5.50E-06	4.36E-05	8.23E-06	8.39E-06	2.96E-05	1.19E-06	4.78E-10	3.52E-05	2.38E-05
10	D79	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.09E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.05E-03
10	D79	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.17E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.19E-03
10	D80	70	Passenger Car	252	0.00E+00	2.78E-06	3.02E-07	1.09E+01	1.97E-05	5.37E-02	6.27E-06	2.55E-04	1.94E-03	3.03E-04	6.11E-04	3.94E-04	4.04E-04	4.29E-05	5.53E-05	1.15E-08	2.07E-04	3.98E-05
10	D80	70	Passenger Truck	423	0.00E+00	5.85E-06	6.22E-07	2.45E+01	3.75E-05	9.50E-02	1.23E-05	7.42E-04	3.52E-03	5.45E-04	1.17E-03	7.62E-04	7.81E-04	1.87E-04	1.23E-04	2.21E-08	9.32E-04	1.25E-04
10	D80	70	Single Unit Short Haul Truck	53	0.00E+00	9.27E-06	3.77E-07	8.63E+00	6.21E-06	1.56E-02	1.01E-05	3.69E-03	8.37E-04	1.54E-04	1.25E-03	2.38E-04	2.43E-04	8.77E-04	3.51E-05	1.42E-08	1.01E-03	6.91E-04
10	D80	70	Single Unit Long Haul Truck	2	0.00E+00	4.03E-07	1.62E-08	3.66E-01	2.67E-07	6.57E-04	4.39E-07	1.59E-04	3.83E-05	6.87E-06	5.45E-05	1.03E-05	1.05E-05	3.70E-05	1.49E-06	5.97E-10	4.40E-05	2.97E-05
10	D80	70	Combination Short Haul Truck	26	0.00E+00	6.60E-06	4.91E-07	8.91E+00	1.68E-08	9.53E-03	4.70E-06	9.87E-03	9.30E-04	1.55E-04	3.96E-04	1.43E-04	1.48E-04	1.42E-03	2.98E-05	0.00E+00	2.47E-04	1.86E-03
10	D80	70	Combination Long Haul Truck	23	0.00E+00	9.05E-06	5.14E-07	8.37E+00	5.67E-08	1.14E-02	7.44E-06	1.06E-02	9.68E-04	1.46E-04	8.22E-04	1.65E-04	1.72E-04	1.34E-03	2.80E-05	0.00E+00	6.50E-04	1.99E-03
10	D81	70	Passenger Car	458	0.00E+00	5.04E-06	5.48E-07	1.98E+01	3.58E-05	9.75E-02	1.14E-05	4.63E-04	3.53E-03	5.50E-04	1.11E-03	7.15E-04	7.34E-04	7.78E-05	1.00E-04	2.09E-08	3.75E-04	7.23E-05
10	D81	70	Passenger Truck	767	0.00E+00	1.06E-05	1.13E-06	4.45E+01	6.80E-05	1.72E-01	2.23E-05	1.35E-03	6.39E-03	9.88E-04	2.13E-03	1.38E-03	1.42E-03	3.40E-04	2.24E-04	4.01E-08	7.11E-04	2.26E-04
10	D81	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.22E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.14E-04
10	D81	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.53E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
10	D81	70	Combination Short Haul Truck	24	0.00E+00	6.19E-06	4.61E-07	8.37E+00	1.57E-08	8.94E-03	4.41E-06	9.27E-03	8.73E-04	1.46E-04	3.71E-04	1.34E-04	1.39E-04	1.33E-03	2.80E-05	0.00E+00	2.32E-04	1.75E-03
10	D81	70	Combination Long Haul Truck	22	0.00E+00	8.49E-06	4.83E-07	7.85E+00	5.32E-08	1.07E-02	6.98E-06	9.93E-03	9.09E-04	1.37E-04	7.72E-04	1.55E-04	1.62E-04	1.26E-03	2.63E-05	0.00E+00	6.10E-04	1.87E-03
10	D82	70	Passenger Car	182	0.00E+00	2.00E-06	2.17E-07	7.84E+00	1.42E-05	3.87E-02	4.51E-06	1.84E-04	1.40E-03	2.18E-04	4.40E-04	2.84E-04	2.91E-04	3.09E-05	3.98E-05	8.27E-09	1.49E-04	2.87E-05
10	D82	70	Passenger Truck	304	0.00E+00	4.21E-06	4.48E-07	1.77E+01	2.70E-05	6.84E-02	8.83E-06	5.34E-04	2.53E-03	3.92E-04	8.45E-04	5.49E-04	5.62E-04	1.35E-04	8.88E-05	1.59E-08	2.82E-04	8.97E-05
10	D82	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	D82	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	D82	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
11	D83	80	Passenger Car	418	0.00E+00	4.29E-06	4.66E-07	1.75E+01	3.04E-05	8.50E-02	9.67E-06	4.34E-04	2.28E-03	3.82E-04	9.43E-04	6.08E-04	6.24E-04	6.22E-05	8.93E-05	1.91E-08	3.19E-04	6.77E-05
11	D83	80	Passenger Truck	701	0.00E+00	8.84E-06	9.42E-07	3.96E+01	5.75E-05	1.50E-01	1.87E-05	1.17E-03	4.06E-03	6.76E-04	1.80E-03	1.17E-03	1.19E-03	2.88E-04	2.00E-04	3.63E-08	6.02E-04	1.95E-04
11	D83	80	Single Unit Short Haul Truck	98	0.00E+00	1.34E-05	5.23E-07	1.60E+01	9.09E-06	2.91E-02	1.47E-05	5.58E-03	1.10E-03	2.25E-04	1.85E-03	3.42E-04	3.48E-04	1.63E-03	6.51E-05	2.58E-08	1.50E-03	1.04E-03
11	D83	80	Single Unit Long Haul Truck	4	0.00E+00	5.82E-07	2.25E-08	6.77E-01	3.87E-07	1.21E-03	6.40E-07	2.38E-04	5.03E-05	9.96E-06	8.05E-05	1.47E-05	1.50E-05	6.84E-05	2.75E-06	1.08E-09	6.55E-05	4.45E-05
11	D83	80	Combination Short Haul Truck	57	0.00E+00	1.17E-05	8.70E-07	1.91E+01	3.08E-08	1.79E-02	8.40E-06	1.82E-02	1.36E-03	2.46E-04	7.13E-04	2.54E-04	2.63E-04	3.04E-03	6.39E-05	0.00E+00	4.49E-04	3.42E-03
11	D83	80	Combination Long Haul Truck	52	0.00E+00	1.64E-05	9.24E-07	1.77E+01	1.04E-07	2.12E-02	1.35E-05	1.94E-02	1.41E-03	2.25E-04	1.50E-03	2.98E-04	3.10E-04	2.85E-03	5.95E-05	0.00E+00	1.19E-03	3.66E-03
11	D84	80	Passenger Car	366	0.00E+00	3.76E-06	4.08E-07	1.54E+01	2.67E-05	7.45E-02	8.47E-06	3.80E-04	2.00E-03	3.34E-04	8.26E-04	5.33E-04	5.47E-04	5.45E-05	7.82E-05	1.67E-08	2.79E-04	5.93E-05
11	D84	80	Passenger Truck	614	0.00E+00	7.74E-06	8.25E-07	3.47E+01	5.03E-05	1.32E-01	1.64E-05	1.02E-03	3.56E-03	5.92E-04	1.57E-03	1.02E-03	1.05E-03	2.52E-04	1.75E-04	3.18E-08	5.27E-04	1.71E-04
11	D84	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.99E-04
11	D84	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D84	80	Combination Short Haul Truck	67	0.00E+00	1.38E-05	1.02E-06	2.24E+01	3.61E-08	2.10E-02	9.86E-06	2.13E-02	1.60E-03	2.89E-04	8.37E-04	2.98E-04	3.09E-04	3.57E-03	7.51E-05	0.00E+00	5.27E-04	4.02E-03
11	D84	80	Combination Long Haul Truck	61	0.00E+00	1.92E-05	1.09E-06	2.08E+01	1.22E-07	2.49E-02	1.59E-05	2.28E-02	1.65E-03	2.64E-04	1.76E-03	3.50E-04	3.64E-04	3.34E-03	6.98E-05	0.00E+00	1.40E-03	4.30E-03
11	D85	80	Passenger Car	354	0.00E+00	3.63E-06	3.94E-07	1.48E+01	2.57E-05	7.19E-02	8.18E-06	3.67E-04	1.93E-03	3.23E-04	7.98E-04	5.14E-04	5.28E-04	5.26E-05	7.55E-05	1.61E-08	2.70E-04	5.72E-05
11	D85	80	Passenger Truck	592	0.00E+00	7.47E-06	7.96E-07	3.35E+01	4.86E-05	1.27E-01	1.58E-05	9.89E-04	3.43E-03	5.72E-04	1.52E-03	9.85E-04	1.01E-03	2.43E-04	1.69E-04	3.07E-08	5.09E-04	1.65E-04
11	D85	80	Single Unit Short Haul Truck	91	0.00E+00	1.25E-05	4.87E-07	1.49E+01	8.46E-06	2.71E-02	1.37E-05	5.19E-03	1.02E-03	2.09E-04	1.72E-03	3.18E-04	3.25E-04	1.52E-03	6.06E-05	2.40E-08	1.39E-03	9.71E-04
11	D85	80	Single Unit Long Haul Truck	4	0.00E+00	5.42E-07	2.09E-08	6.30E-01	3.61E-07	1.13E-03	5.96E-07	2.22E-04	4.69E-05	9.28E-06	7.50E-05	1.37E-05	1.39E-05	6.37E-05	2.57E-06	1.00E-09	6.10E-05	4.15E-05
11	D85	80	Combination Short Haul Truck	64	0.00E+00	1.32E-05	9.74E-07	2.14E+01	3.44E-08	2.00E-02	9.40E-06	2.03E-02	1.52E-03	2.76E-04	7.98E-04	2.84E-04	2.95E-04	3.40E-03	7.15E-05	0.00E+00	5.03E-04	3.83E-03
11	D85	80	Combination Long Haul Truck	58	0.00E+00	1.83E-05	1.03E-06	1.99E+01	1.17E-07	2.37E-02	1.51E-05	2.17E-02	1.57E-03	2.52E-04	1.68E-03	3.33E-04	3.47E-04	3.19E-03	6.65E-05	0.00E+00	1.33E-03	4.09E-03
11	D86	80	Passenger Car	451	0.00E+00	4.63E-06	5.03E-07	1.89E+01	3.28E-05	9.17E-02	1.04E-05	4.68E-04	2.46E-03	4.12E-04	1.02E-03	6.56E-04	6.73E-04	6.71E-05	9.63E-05	2.06E-08	3.44E-04	7.30E-05
11	D86	80	Passenger Truck	756	0.00E+00	9.53E-06	1.02E-06	4.27E+01	6.20E-05	1.62E-01	2.02E-05	1.26E-03	4.38E-03	7.29E-04	1.94E-03	1.26E-03	1.29E-03	3.10E-04	2.15E-04	3.92E-08	6.49E-04	2.10E-04
11	D86	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.57E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.80E-04
11	D86	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.10E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	D86	80	Combination Short Haul Truck	94	0.00E+00	1.94E-05	1.44E-06	3.16E+01	5.08E-08	2.96E-02	1.39E-05	3.00E-02	2.25E-03	4.07E-04	1.18E-03	4.19E-04	4.35E-04	5.02E-03	1.06E-04	0.00E+00	7.42E-04	5.65E-03
11	D86	80	Combination Long Haul Truck	86	0.00E+00	2.70E-05	1.53E-06	2.93E+01	1.72E-07	3.50E-02	2.23E-05	3.21E-02	2.32E-03	3.72E-04	2.48E-03	4.92E-04	5.12E-04	4.70E-03	9.82E-05	0.00E+00	1.96E-03	6.04E-03
11	D87	80	Passenger Car	348	0.00E+00	3.57E-06	3.87E-07	1.46E+01	2.53E-05	7.07E-02	8.04E-06	3.61E-04	1.90E-03	3.17E-04	7.84E-04	5.06E-04	5.19E-04	5.17E-05	7.42E-05	1.59E-08	2.65E-04	5.62E-05
11	D87	80	Passenger Truck	582	0.00E+00	7.34E-06	7.83E-07	3.29E+01	4.78E-05	1.25E-01	1.56E-05	9.73E-04	3.37E-03	5.62E-04	1.49E-03	9.69E-04	9.93E-04	2.39E-04	1.66E-04	3.02E-08	5.00E-04	1.62E-04
11	D87	80	Single Unit Short Haul Truck	121	0.00E+00	1.66E-05	6.47E-07	1.98E+01	1.12E-05	3.59E-02	1.82E-05	6.89E-03	1.36E-03	2.77E-04	2.28E-03	4.22E-04	4.30E-04	2.01E-03	8.04E-05	3.19E-08	1.85E-03	1.29E-03
11	D87	80	Single Unit Long Haul Truck	5	0.00E+00	7.19E-07	2.78E-08	8.36E-01	4.78E-07	1.50E-03	7.90E-07	2.94E-04	6.22E-05	1.23E-05	9.94E-05	1.81E-05	1.85E-05	8.45E-05	3.40E-06	1.33E-09	8.09E-05	5.50E-05
11	D87	80	Combination Short Haul Truck	82	0.00E+00	1.69E-05	1.25E-06	2.75E+01	4.43E-08	2.58E-02	1.21E-05	2.62E-02	1.96E-03	3.55E-04	1.03E-03	3.66E-04	3.79E-04	4.38E-03	9.21E-05	0.00E+00	6.47E-04	4.93E-03
11	D87	80	Combination Long Haul Truck	75	0.00E+00	2.36E-05	1.33E-06	2.56E+01	1.50E-07	3.05E-02	1.94E-05	2.80E-02	2.03E-03	3.24E-04	2.16E-03	4.29E-04	4.47E-04	4.10E-03	8.56E-05	0.00E+00	1.71E-03	5.27E-03
11	D88	80	Passenger Car	821	0.00E+00	8.42E-06	9.15E-07	3.44E+01	5.98E-05	1.67E-01	1.90E-05	8.52E-04	4.48E-03	7.50E-04	1.85E-03	1.19E-03	1.23E-03	1.22E-04	1.75E-04	3.74E-08	6.27E-04	1.33E-04
11	D88	80	Passenger Truck	1376	0.00E+00	1.73E-05	1.85E-06	7.78E+01	1.13E-04	2.95E-01	3.68E-05	2.30E-03	7.97E-03	1.33E-03	3.53E-03	2.29E-03	2.35E-03	5.65E-04	3.92E-04	7.13E-08	1.18E-03	3.82E-04
11	D88	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.43E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.28E-04
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.54E-05
11	D88	80	Combination Short Haul Truck	123	0.00E+00	2.53E-05	1.88E-06	4.12E+01	6.63E-08	3.86E-02	1.81E-05	3.92E-02	2.93E-03	5.31E-04	1.54E-03	5.47E-04	5.68E-04	6.55E-03	1.38E-04	0.00E+00	9.68E-04	7.38E-03
11	D88	80	Combination Long Haul Truck	112	0.00E+00	3.53E-05	1.99E-06	3.83E+01	2.24E-07	4.57E-02	2.91E-05	4.19E-02	3.03E-03	4.85E-04	3.23E-03	6.42E-04	6.69E-04	6.14E-03	1.28E-04	0.00E+00	2.57E-03	7.89E-03
9	D89	60	Passenger Car	121	0.00E+00	1.53E-06	1.66E-07	5.46E+00	1.09E-05	2.94E-02	3.45E-06	1.25E-04	1.22E-03	1.83E-04	3.36E-04	2.17E-04	2.23E-04	2.40E-05	2.77E-05	5.82E-09	1.14E-04	1.95E-05
9	D89	60	Passenger Truck	203	0.00E+00	3.25E-06	3.44E-07	1.22E+01	2.05E-05	5.04E-02	6.74E-06	3.88E-04	2.24E-03	3.33E-04	6.43E-04	4.18E-04	4.28E-04	9.83E-05	6.11E-05	1.13E-08	2.14E-04	6.57E-05
9	D89	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	2.00E-04
9	D89	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.62E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.66E-06
9	D89	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.07E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
9	D89	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.46E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.22E-03
9	D90	60	Passenger Car	184	0.00E+00	2.33E-06	2.53E-07	8.31E+00	1.65E-05	4.48E-02	5.25E-06	1.90E-04	1.86E-03	2.79E-04	5.12E-04	3.30E-04	3.39E-04	3.65E-05	4.21E-05	8.85E-09	1.73E-04	2.96E-05
9	D90	60	Passenger Truck	309	0.00E+00	4.94E-06	5.24E-07	1.85E+01	3.12E-05	7.67E-02	1.03E-05	5.90E-04	3.40E-03	5.06E-04	9.78E-04	6.36E-04	6.52E-04	1.50E-04	9.30E-05	1.73E-08	3.26E-04	1.00E-04
9	D90	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.61E-04
9	D90	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.07E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	2.00E-05
9	D90	60	Combination Short Haul Truck	16	0.00E+00	4.73E-06	3.48E-07	5.71E+00	1.30E-08	7.07E-03	3.40E-06	7.23E-03	8.26E-04	1.29E-04	2.92E-04	1.02E-04	1.06E-04	9.08E-04	1.91E-05	0.00E+00	1.86E-04	1.36E-03
9	D90	60	Combination Long Haul Truck	15	0.00E+00	6.50E-06	3.55E-07	5.39E+00	4.39E-08	8.49E-03	5.44E-06	7.71E-03	8.66E-04	1.25E-04	6.17E-04	1.16E-04	1.21E-04	8.66E-04	1.81E-05	0.00E+00	4.96E-04	1.45E-03
10	D91	70	Passenger Car	270	0.00E+00	2.98E-06	3.23E-07	1.17E+01	2.11E-05	5.75E-02	6.71E-06	2.73E-04	2.08E-03	3.24E-04	6.55E-04	4.22E-04	4.33E-04	4.59E-05	5.93E-05	1.23E-08	2.21E-04	4.26E-05
10	D91	70	Passenger Truck	453	0.00E+00	6.27E-06	6.66E-07	2.63E+01	4.01E-05	1.02E-01	1.31E-05	7.95E-04	3.77E-03	5.83E-04	1.26E-03	8.16E-04	8.37E-04	2.01E-04	1.32E-04	2.37E-08	4.20E-04	1.33E-04
10	D91	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.75E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.27E-04
10	D91	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.51E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.41E-05
10	D91	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.84E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
10	D91	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.26E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
10	D92	70	Passenger Car	95	0.00E+00	1.05E-06	1.14E-07	4.10E+00	7.42E-06	2.02E-02	2.36E-06	9.60E-05	7.32E-04	1.14E-04	2.30E-04	1.48E-04	1.52E-04	1.61E-05	2.08E-05	4.32E-09	7.78E-05	1.50E-05
10	D92	70	Passenger Truck	159	0.00E+00	2.20E-06	2.34E-07	9.23E+00	1.41E-05	3.58E-02	4.62E-06	2.79E-04	1.32E-03	2.05E-04	4.41E-04	2.87E-04	2.94E-04	7.05E-05	4.64E-05	8.31E-09	1.47E-04	4.69E-05
10	D92	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	D92	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	D92	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
10	D93	70	Passenger Car	227	0.00E+00	2.49E-06	2.71E-07	9.78E+00	1.77E-05	4.82E-02	5.63E-06	2.29E-04	1.75E-03	2.72E-04	5.49E-04	3.54E-04	3.63E-04	3.85E-05	4.97E-05	1.03E-08	1.86E-04	3.57E-05
10	D93	70	Passenger Truck	379	0.00E+00	5.25E-06	5.58E-07	2.20E+01	3.36E-05	8.53E-02	1.10E-05	6.66E-04	3.16E-03	4.89E-04	1.05E-03	6.84E-04	7.01E-04	1.68E-04	1.11E-04	1.98E-08	3.52E-04	1.12E-04
10	D93	70	Single Unit Short

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E03	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.83E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.15E-05
11	E03	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	E03	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.43E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.68E-04
11	E04	80	Passenger Car	135	0.00E+00	1.38E-06	1.50E-07	5.66E+00	9.82E-06	2.74E-02	3.12E-06	1.40E-04	7.36E-04	1.23E-04	3.04E-04	1.96E-04	2.01E-04	2.01E-05	2.88E-05	6.15E-09	1.03E-04	2.18E-05
11	E04	80	Passenger Truck	226	0.00E+00	2.85E-06	3.04E-07	1.28E+01	1.85E-05	4.85E-02	6.04E-06	3.78E-04	1.31E-03	2.18E-04	5.80E-04	3.76E-04	3.85E-04	9.28E-05	6.44E-05	1.17E-08	1.94E-04	6.28E-05
11	E04	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.75E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.27E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.47E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.40E-05
11	E04	80	Combination Short Haul Truck	26	0.00E+00	5.28E-06	3.91E-07	8.59E+00	1.38E-08	8.05E-03	3.78E-06	8.17E-03	6.12E-04	1.11E-04	3.20E-04	1.14E-04	1.18E-04	1.37E-03	2.87E-05	0.00E+00	2.02E-04	1.54E-03
11	E04	80	Combination Long Haul Truck	23	0.00E+00	7.36E-06	4.15E-07	7.98E+00	4.68E-08	9.53E-03	6.07E-06	8.73E-03	6.32E-04	1.01E-04	6.74E-04	1.34E-04	1.39E-04	1.28E-03	2.67E-05	0.00E+00	5.35E-04	1.64E-03
11	E05	80	Passenger Car	109	0.00E+00	1.12E-06	1.21E-07	4.56E+00	7.92E-06	2.21E-02	2.52E-06	1.13E-04	5.93E-04	9.93E-05	2.45E-04	1.58E-04	1.62E-04	1.62E-05	2.32E-05	4.96E-09	8.30E-05	1.76E-05
11	E05	80	Passenger Truck	182	0.00E+00	2.30E-06	2.45E-07	1.03E+01	1.49E-05	3.91E-02	4.87E-06	3.04E-04	1.06E-03	1.76E-04	4.67E-04	3.03E-04	3.11E-04	7.48E-05	5.19E-05	9.44E-09	1.57E-04	5.07E-05
11	E05	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	E05	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	E05	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.43E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.68E-04
11	E06	80	Passenger Car	305	0.00E+00	3.13E-06	3.40E-07	1.28E+01	2.22E-05	6.20E-02	7.05E-06	3.16E-04	1.66E-03	2.78E-04	6.88E-04	4.44E-04	4.55E-04	4.54E-05	6.51E-05	1.39E-08	2.33E-04	4.93E-05
11	E06	80	Passenger Truck	511	0.00E+00	6.44E-06	6.87E-07	2.89E+01	4.19E-05	1.10E-01	1.37E-05	8.53E-04	2.96E-03	4.93E-04	1.31E-03	8.50E-04	8.71E-04	2.10E-04	1.46E-04	2.65E-08	4.39E-04	1.42E-04
11	E06	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.08E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
11	E06	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.88E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.66E-05
11	E06	80	Combination Short Haul Truck	20	0.00E+00	4.10E-06	3.03E-07	6.66E+00	1.07E-08	6.24E-03	2.93E-06	6.33E-03	4.74E-04	8.59E-05	2.48E-04	8.85E-05	9.18E-05	1.06E-03	2.23E-05	0.00E+00	1.57E-04	1.19E-03
11	E06	80	Combination Long Haul Truck	18	0.00E+00	5.71E-06	3.22E-07	6.19E+00	3.63E-08	7.39E-03	4.71E-06	6.77E-03	4.90E-04	7.84E-05	5.23E-04	1.04E-04	1.08E-04	9.93E-04	2.07E-05	0.00E+00	4.15E-04	1.28E-03
9	E07	60	Passenger Car	1162	0.00E+00	1.47E-05	1.59E-06	5.24E+01	1.04E-04	2.82E-01	3.31E-05	1.20E-03	1.17E-02	1.76E-03	3.23E-03	2.08E-03	2.14E-03	2.30E-04	2.66E-04	5.58E-08	1.09E-03	1.87E-04
9	E07	60	Passenger Truck	1945	0.00E+00	3.12E-05	3.30E-06	1.17E+02	1.97E-04	4.83E-01	6.46E-05	3.72E-03	2.14E-02	3.19E-03	6.16E-03	4.01E-03	4.11E-03	9.43E-04	5.86E-04	1.09E-07	2.05E-03	6.30E-04
9	E07	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.31E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.37E-03
9	E07	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.17E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.93E-05
9	E07	60	Combination Short Haul Truck	63	0.00E+00	1.85E-05	1.36E-06	2.23E+01	5.06E-08	2.76E-02	1.33E-05	2.82E-02	3.22E-03	5.04E-04	1.14E-03	3.97E-04	4.12E-04	3.54E-03	7.45E-05	0.00E+00	7.26E-04	5.32E-03
9	E07	60	Combination Long Haul Truck	58	0.00E+00	2.54E-05	1.39E-06	2.11E+01	1.71E-07	3.32E-02	2.12E-05	3.01E-02	3.38E-03	4.89E-04	2.41E-03	4.53E-04	4.72E-04	3.38E-03	7.05E-05	0.00E+00	1.94E-03	5.67E-03
9	E08	60	Passenger Car	780	0.00E+00	9.85E-06	1.07E-06	3.52E+01	6.99E-05	1.89E-01	2.22E-05	8.03E-04	7.87E-03	1.18E-03	2.17E-03	1.40E-03	1.43E-03	1.55E-04	1.78E-04	3.74E-08	7.32E-04	1.25E-04
9	E08	60	Passenger Truck	1305	0.00E+00	2.09E-05	2.22E-06	7.84E+01	1.32E-04	3.24E-01	4.34E-05	2.50E-03	1.44E-02	2.14E-03	4.14E-03	2.69E-03	2.76E-03	6.32E-04	3.93E-04	7.30E-08	1.38E-03	4.23E-04
9	E08	60	Single Unit Short Haul Truck	80	0.00E+00	1.80E-05	7.42E-07	1.34E+01	1.19E-05	2.35E-02	1.94E-05	6.90E-03	1.85E-03	3.11E-04	2.40E-03	4.62E-04	4.71E-04	1.36E-03	5.45E-05	2.25E-08	1.93E-03	1.29E-03
9	E08	60	Single Unit Long Haul Truck	4	0.00E+00	7.84E-07	3.22E-08	5.71E-01	5.16E-07	9.99E-04	8.48E-07	2.99E-04	8.31E-05	1.38E-05	1.05E-04	2.01E-05	2.05E-05	5.77E-05	2.33E-06	9.56E-10	8.43E-05	5.59E-05
9	E08	60	Combination Short Haul Truck	39	0.00E+00	1.13E-05	8.30E-07	1.36E+01	3.09E-08	1.69E-02	8.11E-06	1.73E-02	1.97E-03	3.08E-04	6.96E-04	2.43E-04	2.52E-04	2.17E-03	4.56E-05	0.00E+00	4.44E-04	3.25E-03
9	E08	60	Combination Long Haul Truck	35	0.00E+00	1.55E-05	8.48E-07	1.29E+01	1.05E-07	2.03E-02	1.30E-05	1.84E-02	2.07E-03	2.99E-04	1.47E-03	2.77E-04	2.89E-04	2.07E-03	4.31E-05	0.00E+00	1.18E-03	3.47E-03
9	E09	60	Passenger Car	1107	0.00E+00	1.40E-05	1.52E-06	4.99E+01	9.92E-05	2.69E-01	3.15E-05	1.14E-03	1.12E-02	1.67E-03	3.08E-03	1.98E-03	2.03E-03	2.19E-04	2.53E-04	5.32E-08	1.04E-03	1.78E-04
9	E09	60	Passenger Truck	1854	0.00E+00	2.97E-05	3.15E-06	1.11E+02	1.87E-04	4.61E-01	6.16E-05	3.55E-03	2.04E-02	3.04E-03	5.87E-03	3.82E-03	3.92E-03	8.98E-04	5.59E-04	1.04E-07	1.96E-03	6.01E-04
9	E09	60	Single Unit Short Haul Truck	82	0.00E+00	1.84E-05	7.60E-07	1.37E+01	1.22E-05	2.41E-02	1.99E-05	7.06E-03	1.89E-03	3.18E-04	2.45E-03	4.73E-04	4.82E-04	1.39E-03	5.58E-05	2.30E-08	1.97E-03	1.32E-03
9	E09	60	Single Unit Long Haul Truck	4	0.00E+00	8.03E-07	3.30E-08	5.84E-01	5.28E-07	1.02E-03	8.68E-07	3.06E-04	8.51E-05	1.41E-05	1.07E-04	2.05E-05	2.09E-05	5.90E-05	2.38E-06	9.79E-10	8.63E-05	5.73E-05
9	E09	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.92E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.50E-03
9	E09	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.11E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.85E-03
9	E10	60	Passenger Car	873	0.00E+00	1.10E-05	1.20E-06	3.94E+01	7.83E-05	2.12E-01	2.49E-05	8.99E-04	8.82E-03	1.32E-03	2.43E-03	1.56E-03	1.60E-03	1.73E-04	2.00E-04	4.19E-08	8.20E-04	1.40E-04
9	E10	60	Passenger Truck	1462	0.00E+00	2.34E-05	2.48E-06	8.78E+01	1.48E-04	3.63E-01	4.86E-05	2.80E-03	1.61E-02	2.40E-03	4.63E-03	3.01E-03	3.09E-03	7.08E-04	4.41E-04	8.17E-08	1.54E-03	4.74E-04
9	E10	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.16E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	E10	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.67E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.99E-05
9	E10	60	Combination Short Haul Truck	37	0.00E+00	1.07E-05	7.85E-07	1.29E+01	2.93E-08	1.60E-02	7.68E-06	1.63E-02	1.86E-03	2.92E-04	6.59E-04	2.30E-04	2.38E-04	2.05E-03	4.31E-05	0.00E+00	4.20E-04	3.08E-03
9	E10	60	Combination Long Haul Truck	33	0.00E+00	1.47E-05	8.02E-07	1.22E+01	9.91E-08	1.92E-02	1.23E-05	1.74E-02	1.96E-03	2.83E-04	1.39E-03	2.62E-04	2.73E-04	1.95E-03	4.08E-05	0.00E+00	1.12E-03	3.28E-03
9	E11	60	Passenger Car	1186	0.00E+00	1.50E-05	1.63E-06	5.35E+01	1.06E-04	2.88E-01	3.38E-05	1.22E-03	1.20E-02	1.79E-03	3.29E-03	2.12E-03	2.18E-03	2.35E-04	2.71E-04	5.69E-08	1.11E-03	1.90E-04
9	E11	60	Passenger Truck	1985	0.00E+00	3.18E-05	3.37E-06	1.19E+02	2.01E-04	4.93E-01	6.60E-05	3.80E-03	2.19E-02	3.26E-03	6.29E-03	4.09E-03	4.19E-03	9.62E-04	5.98E-04	1.11E-07	2.10E-03	6.43E-04
9	E11	60	Single Unit Short Haul Truck	106	0.00E+00	2.37E-05	9.81E-07	1.77E+01	1.57E-05	3.11E-02	2.57E-05	9.12E-03	2.45E-03	4.11E-04	3.17E-03	6.10E-04	6.22E-04	1.79E-03	7.21E-05	2.97E-08	2.54E-03	1.71E-03
9	E11	60	Single Unit Long Haul Truck	5	0.00E+00	1.04E-06	4.26E-08	7.54E-01	6.82E-07	1.32E-03	1.12E-06	3.95E-04	1.10E-04	1.82E-05	1.38E-04	2.65E-05	2.70E-05	7.62E-05	3.08E-06	1.26E-09	1.11E-04	7.39E-05
9	E11	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.92E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.50E-03
9	E11	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.11E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.85E-03
9	E12	60	Passenger Car	904	0.00E+00	1.14E-05	1.24E-06	4.08E+01	8.10E-05	2.19E-01	2.57E-05	9.30E-04	9.13E-03	1.37E-03	2.51E-03	1.62E-03	1.66E-03	1.79E-04	2.07E-04	4.34E-08	8.49E-04	1.45E-04
9	E12	60	Passenger Truck	1513	0.00E+00	2.42E-05	2.57E-06	9.09E+01	1.53E-04	3.76E-01	5.03E-05	2.89E-03	1.67E-02	2.48E-03	4.79E-03	3.12E-03	3.20E-03	7.33E-04	4.56E-04	8.46E-08	1.60E-03	4.90E-04
9	E12	60	Single Unit Short Haul Truck	96	0.00E+00	2.14E-05	8.83E-07	1.59E+01	1.42E-05	2.80E-02	2.31E-05	8.21E-03	2.20E-03	3.70E-04	2.85E-03	5.50E-04	5.60E-04	1.61E-03	6.49E-05	2.68E-08	2.29E-03	1.54E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	9.33E-07	3.84E-08	6.79E-01	6.14E-07	1.19E-03	1.01E-06	3.56E-04	9.90E-05	1.64E-05	1.25E-04	2.39E-05	2.44E-05	6.87E-05	2.77E-06	1.14E-09	1.00E-04	6.66E-05
9	E12	60	Combination Short Haul Truck	83	0.00E+00	2.43E-05	1.78E-06	2.93E+01	6.65E-08	3.63E-02	1.74E-05	3.71E-02	4.24E-03	6.62E-04	1.50E-03	5.22E-04	5.41E-04	4.66E-03	9.79E-05	0.00E+00	9.54E-04	6.99E-03
9	E12	60	Combination Long Haul Truck	76	0.00E+00	3.34E-05	1.82E-06	2.77E+01	2.25E-07	4.36E-02	2.79E-05	3.95E-02	4.44E-03	6.42E-04	3.16E-03	5.95E-04	6.20E-04	4.44E-03	9.27E-05	0.00E+00	2.54E-03	7.45E-03
11	E13	80	Passenger Car	377	0.00E+00	3.87E-06	4.20E-07	1.58E+01	2.75E-05	7.67E-02	8.72E-06	3.91E-04	2.06E-03	3.44E-04	8.51E-04	5.48E-04	5.63E-04	5.61E-05	8.05E-05	1.72E-08	2.88E-04	6.10E-05
11	E13	80	Passenger Truck	632	0.00E+00	7.97E-06	8.49E-07	3.57E+01	5.18E-05	1.36E-01	1.69E-05	1.06E-03	3.66E-03	6.10E-04	1.62E-03	1.05E-03	1.08E-03	2.59E-04	1.80E-04	3.27E-08	5.43E-04	1.76E-04
11	E13	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.19E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.09E-04
11	E13	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.34E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.75E-05
11	E13	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.33E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E13	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.70E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E14	80	Passenger Car	550	0.00E+00	5.64E-06	6.12E-07	2.30E+01	4.00E-05	1.12E-01	1.27E-05	5.70E-04	3.00E-03	5.02E-04	1.24E-03	7.99E-04	8.20E-04	8.17E-05	1.17E-04	2.51E-08	4.19E-04	8.89E-05
11	E14	80	Passenger Truck	920	0.00E+00	1.16E-05	1.24E-06	5.20E+01	7.55E-05	1.98E-01	2.46E-05	1.54E-03	5.33E-03	8.88E-04	2.36E-03	1.53E-03	1.57E-03	3.78E-04	2.62E-04	4.77E-08	7.91E-04	2.56E-04
11	E14	80	Single Unit Short Haul Truck	54	0.00E+00	7.36E-06	2.87E-07	8.79E+00	4.99E-06	1.60E-02	8.09E-06	3.06E-03	6.03E-04	1.23E-04	1.01E-03	1.88E-04	1.91E-04	8.94E-04	3.57E-05	1.42E-08	8.22E-04	5.72E-04
11	E14	80	Single Unit Long Haul Truck	2	0.00E+00	3.20E-07	1.23E-08	3.72E-01	2.13E-07	6.65E-04	3.51E-07	1.31E-04	2.76E-05	5.47E-06	4.42E-05	8.06E-06	8.22E-06	3.76E-05	1.51E-06	5.90E-10	3.60E-05	2.44E-05
11	E14	80	Combination Short Haul Truck	31	0.00E+00	6.47E-06	4.79E-07	1.05E+01	1.69E-08	9.86E-03	4.62E-06	1.00E-02	7.49E-04	1.36E-04	3.92E-04	1.40E-04	1.45E-04	1.67E-03	3.52E-05	0.00E+00	2.47E-04	1.88E-03
11	E14	80	Combination Long Haul Truck	29	0.00E+00	9.01E-06	5.09E-07	9.77E+00	5.73E-08	1.17E-02	7.43E-06	1.07E-02	7.74E-04	1.24E-04	8.26E-04	1.64E-04	1.71E-04	1.57E-03	3.27E-05	0.00E+00	6.55E-04	2.01E-03
11	E15	80	Passenger Car	180	0.00E+00	1.85E-06	2.01E-07	7.55E+00	1.31E-05	3.66E-02	4.17E-06	1.87E-04	9.82E-04	1.64E-04	4.06E-04	2.62E-04	2.69E-04	2.68E-05	3.85E-05	8.22E-09	1.37E-04	2.92E-05
11	E15	80	Passenger Truck	302	0.00E+00	3.81E-06	4.06E-07	1.71E+01	2.48E-05	6.48E-02	8.07E-06	5.04E-04	1.75E-03	2.91E-04	7.74E-04	5.02E-04	5.15E-04	1.24E-04	8.60E-05	1.56E-08	2.59E-04	8.39E-05
11	E15	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.15E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.15E-04
11	E15	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.91E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.17E-06
11	E15	80	Combination Short Haul Truck	12	0.00E+00	2.37E-06	1.76E-07	3.86E+00	6.21E-09	3.61E-03	1.70E-06	3.67E-03	2.75E-04	4.97E-05	1.44E-04	5.12E-05	5.32E-05	6.13E-04	1.29E-05	0.00E+00	9.06E-05	6.91E-04
11	E15	80	Combination Long Haul Truck	10	0.00E+00	3.30E-06	1.87E-07	3.58E+00	2.10E-08	4.28E-03	2.72E-06	3.92E-03	2.84E-04	4.54E-05	3.03E-04	6.01E-05	6.26E-05	5.75E-04	1.20E-05	0.00E+00	2.40E-04	7.38E-04
11	E16	80	Passenger Car	338	0.00E+00	3.46E-06	3.76E-07	1.41E+01	2.46E-05	6.86E-02	7.81E-06	3.50E-04	1.84E-03	3.08E-04	7.61E-04	4.91E-04	5.04E-04	5.02E-05	7.20E-05	1.54E-08	2.58E-04	5.46E-05
11	E16	80	Passenger Truck	565	0.00E+00	7.13E-06	7.60E-07	3.20E+01	4.64E-05	1.21E-01	1.51E-05	9.44E-04	3.28E-03	5.46E-04	1.45E-03	9.41E-04	9.64E-04	2.32E-04	1.61E-04	2.93E-08	4.86E-04	1.57E-04
11	E16	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.75E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	E16	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.74E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.98E-06
11	E16	80	Combination Short Haul Truck	42	0.00E+00	8.73E-06	6.46E-07	1.42E+01	2.29E-08	1.33E-02	6.24E-06	1.35E-02	1.01E-03	1.83E-04	5.29E-04	1.89E-04	1.96E-04	2.26E-03	4.75E-05	0.00E+00	3.34E-04	2.54E-03
11	E16	80	Combination Long Haul Truck	39	0.00E+00	1.22E-05	6.87E-07	1.32E+01	7.74E-08	1.58E-02	1.00E-05	1.44E-02	1.04E-03	1.67E-04	1.11E-03	2.21E-04	2.31E-04	2.12E-03	4.42E-05	0.00E+00	8.84E-04	2.72E-03
11	E17	80	Passenger Car	90	0.00E+00	9.20E-07	1.00E-07	3.76E+00	6.53E-06	1.82E-02	2.07E-06	9.30E-05	4.89E-04	8.19E-05	2.02E-04	1.30E-04	1.34E-04	1.33E-05	1.91E-05	4.09E-09	6.84E-05	1.45E-05
11	E17	80	Passenger Truck	150	0.00E+00	1.90E-06	2.02E-07	8.49E+00	1.23E-05	3.22E-02	4.02E-06	2.51E-04	8.71E-04	1.45E-04	3.85E-04	2.50E-04	2.56E-04	6.17E-05	4.28E-05	7.79E-09	1.29E-04	4.18E-05
11	E17	80

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E21	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E21	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	5.00E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.42E-05
11	E21	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.35E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.01E-04
11	E22	80	Passenger Car	114	0.00E+00	1.17E-06	1.27E-07	4.78E+00	8.30E-06	2.32E-02	2.64E-06	1.18E-04	6.22E-04	1.04E-04	2.57E-04	1.66E-04	1.70E-04	1.70E-05	2.43E-05	5.20E-09	8.70E-05	1.84E-05
11	E22	80	Passenger Truck	191	0.00E+00	2.41E-06	2.57E-07	1.08E+01	1.57E-05	4.10E-02	5.10E-06	3.19E-04	1.11E-03	1.84E-04	4.90E-04	3.18E-04	3.26E-04	7.84E-05	5.44E-05	9.90E-09	1.64E-04	5.31E-05
11	E22	80	Single Unit Short Haul Truck	17	0.00E+00	2.37E-06	9.24E-08	2.83E+00	1.60E-06	5.13E-03	2.60E-06	9.84E-04	1.94E-04	3.96E-05	3.26E-04	6.03E-05	6.15E-05	2.88E-04	1.15E-05	4.55E-09	2.64E-04	1.84E-04
11	E22	80	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	3.97E-09	1.19E-01	6.83E-08	2.14E-04	1.13E-07	4.20E-05	8.88E-06	1.76E-06	1.42E-05	2.59E-06	2.64E-06	1.21E-05	4.86E-07	1.90E-10	1.16E-05	7.86E-06
11	E22	80	Combination Short Haul Truck	16	0.00E+00	3.23E-06	2.39E-07	5.26E+00	8.47E-09	4.93E-03	2.31E-06	5.00E-03	3.74E-04	6.78E-05	1.96E-04	6.98E-05	7.25E-05	8.36E-04	1.76E-05	0.00E+00	1.24E-04	9.42E-04
11	E22	80	Combination Long Haul Truck	14	0.00E+00	4.51E-06	2.54E-07	4.88E+00	2.87E-08	5.84E-03	3.72E-06	5.35E-03	3.87E-04	6.19E-05	4.13E-04	8.20E-05	8.54E-05	7.84E-04	1.64E-05	0.00E+00	3.27E-04	1.01E-03
11	E23	80	Passenger Car	125	0.00E+00	1.28E-06	1.40E-07	5.25E+00	9.11E-06	2.55E-02	2.90E-06	1.30E-04	6.83E-04	1.14E-04	2.82E-04	1.82E-04	1.87E-04	1.86E-05	2.67E-05	5.71E-09	9.55E-05	2.03E-05
11	E23	80	Passenger Truck	210	0.00E+00	2.65E-06	2.82E-07	1.19E+01	1.72E-05	4.50E-02	5.61E-06	3.50E-04	1.22E-03	2.02E-04	5.38E-04	3.49E-04	3.58E-04	8.61E-05	5.98E-05	1.09E-08	1.80E-04	5.83E-05
11	E23	80	Single Unit Short Haul Truck	122	0.00E+00	1.67E-05	6.52E-07	1.99E+01	1.13E-05	3.62E-02	1.83E-05	6.94E-03	1.37E-03	2.80E-04	2.30E-03	4.26E-04	4.34E-04	2.03E-03	8.10E-05	3.21E-08	1.86E-03	1.30E-03
11	E23	80	Single Unit Long Haul Truck	5	0.00E+00	7.25E-07	2.80E-08	8.43E-01	4.82E-07	1.51E-03	7.97E-07	2.97E-04	6.27E-05	1.24E-05	1.00E-04	1.83E-05	1.86E-05	8.52E-05	3.43E-06	1.34E-09	8.16E-05	5.54E-05
11	E23	80	Combination Short Haul Truck	69	0.00E+00	1.42E-05	1.05E-06	2.31E+01	3.73E-08	2.17E-02	1.02E-05	2.20E-02	1.65E-03	2.98E-04	8.63E-04	3.07E-04	3.19E-04	3.68E-03	7.74E-05	0.00E+00	5.44E-04	4.14E-03
11	E23	80	Combination Long Haul Truck	63	0.00E+00	1.98E-05	1.12E-06	2.15E+01	1.26E-07	2.57E-02	1.63E-05	2.35E-02	1.70E-03	2.72E-04	1.82E-03	3.61E-04	3.76E-04	3.45E-03	7.20E-05	0.00E+00	1.44E-03	4.43E-03
11	E24	80	Passenger Car	525	0.00E+00	5.39E-06	5.85E-07	2.20E+01	3.82E-05	1.07E-01	1.21E-05	5.45E-04	2.86E-03	4.79E-04	1.18E-03	7.64E-04	7.84E-04	7.81E-05	1.12E-04	2.39E-08	4.01E-04	8.50E-05
11	E24	80	Passenger Truck	880	0.00E+00	1.11E-05	1.18E-06	4.97E+01	7.22E-05	1.89E-01	2.35E-05	1.47E-03	5.10E-03	8.49E-04	2.26E-03	1.46E-03	1.50E-03	3.61E-04	2.51E-04	4.56E-08	7.56E-04	2.45E-04
11	E24	80	Single Unit Short Haul Truck	56	0.00E+00	7.62E-06	2.98E-07	9.11E+00	5.17E-06	1.65E-02	8.38E-06	3.17E-03	6.24E-04	1.28E-04	1.05E-03	1.94E-04	1.98E-04	9.26E-04	3.70E-05	1.47E-08	8.52E-04	5.93E-04
11	E24	80	Single Unit Long Haul Truck	2	0.00E+00	3.31E-07	1.28E-08	3.85E-01	2.20E-07	6.89E-04	3.64E-07	1.35E-04	2.86E-05	5.66E-06	4.58E-05	8.34E-06	8.51E-06	3.89E-05	1.57E-06	6.11E-10	3.73E-05	2.53E-05
11	E24	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.14E-03
11	E24	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
10	E25	70	Passenger Car	205	0.00E+00	2.26E-06	2.45E-07	8.84E+00	1.60E-05	4.36E-02	5.09E-06	2.07E-04	1.58E-03	2.46E-04	4.96E-04	3.20E-04	3.28E-04	3.48E-05	4.49E-05	9.33E-09	1.68E-04	3.23E-05
10	E25	70	Passenger Truck	343	0.00E+00	4.75E-06	5.05E-07	1.99E+01	3.04E-05	7.71E-02	9.96E-06	6.03E-04	2.86E-03	4.42E-04	9.52E-04	6.19E-04	6.34E-04	1.52E-04	1.00E-04	1.79E-08	3.18E-04	1.01E-04
10	E25	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.22E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.14E-04
10	E25	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.53E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
10	E25	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
10	E25	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
10	E26	70	Passenger Car	346	0.00E+00	3.81E-06	4.14E-07	1.49E+01	2.71E-05	7.37E-02	8.60E-06	3.50E-04	2.67E-03	4.16E-04	8.38E-04	5.41E-04	5.55E-04	5.88E-05	7.59E-05	1.58E-08	2.84E-04	5.46E-05
10	E26	70	Passenger Truck	580	0.00E+00	8.03E-06	8.53E-07	3.36E+01	5.14E-05	1.30E-01	1.68E-05	1.02E-03	4.83E-03	7.47E-04	1.61E-03	1.05E-03	1.07E-03	2.57E-04	1.69E-04	3.03E-08	5.38E-04	1.71E-04
10	E26	70	Single Unit Short Haul Truck	11	0.00E+00	1.85E-06	7.53E-08	1.73E+00	1.24E-06	3.13E-03	2.02E-06	7.38E-04	1.67E-04	3.07E-05	2.50E-04	4.76E-05	4.86E-05	1.75E-04	7.02E-06	2.83E-09	2.01E-04	1.38E-04
10	E26	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.24E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.87E-04
10	E26	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.61E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.06E-03
10	E27	70	Passenger Car	171	0.00E+00	1.89E-06	2.05E-07	7.39E+00	1.34E-05	3.65E-02	4.25E-06	1.73E-04	1.32E-03	2.06E-04	4.15E-04	2.67E-04	2.74E-04	2.91E-05	3.75E-05	7.80E-09	1.40E-04	2.70E-05
10	E27	70	Passenger Truck	287	0.00E+00	3.97E-06	4.22E-07	1.66E+01	2.54E-05	6.45E-02	8.32E-06	5.04E-04	2.39E-03	3.69E-04	7.96E-04	5.17E-04	5.30E-04	1.27E-04	8.37E-05	1.50E-08	2.66E-04	8.46E-05
10	E27	70	Single Unit Short Haul Truck	57	0.00E+00	9.95E-06	4.04E-07	9.26E+00	6.67E-06	1.68E-02	1.08E-05	3.96E-03	8.98E-04	1.65E-04	1.34E-03	2.55E-04	2.60E-04	9.41E-04	3.77E-05	1.52E-08	1.08E-03	7.41E-04
10	E27	70	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	1.74E-08	3.92E-01	2.87E-07	7.05E-04	4.71E-07	1.70E-04	4.11E-05	7.37E-06	5.85E-05	1.10E-05	1.13E-05	3.97E-05	1.60E-06	6.41E-10	4.72E-05	3.19E-05
10	E27	70	Combination Short Haul Truck	39	0.00E+00	1.01E-05	7.51E-07	1.36E+01	2.56E-08	1.46E-02	7.19E-06	1.51E-02	1.42E-03	2.37E-04	6.06E-04	2.19E-04	2.27E-04	2.17E-03	4.56E-05	0.00E+00	3.79E-04	2.85E-03
10	E27	70	Combination Long Haul Truck	36	0.00E+00	1.38E-05	7.87E-07	1.28E+01	8.68E-08	1.74E-02	1.14E-05	1.62E-02	1.48E-03	2.23E-04	1.26E-03	2.53E-04	2.64E-04	2.06E-03	4.29E-05	0.00E+00	9.95E-04	3.05E-03
10	E28	70	Passenger Car	179	0.00E+00	1.98E-06	2.15E-07	7.74E+00	1.40E-05	3.82E-02	4.46E-06	1.81E-04	1.38E-03	2.15E-04	4.35E-04	2.80E-04	2.88E-04	3.05E-05	3.93E-05	8.17E-09	1.47E-04	2.83E-05
10	E28	70	Passenger Truck	301	0.00E+00	4.16E-06	4.42E-07	1.74E+01	2.66E-05	6.76E-02	8.72E-06	5.28E-04	2.50E-03	3.87E-04	8.34E-04	5.42E-04	5.55E-04	1.33E-04	8.77E-05	1.57E-08	2.79E-04	8.86E-05
10	E28	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	E28	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.62E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.65E-06
10	E28	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.63E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.84E-04
10	E28	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.88E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.32E-04
10	E29	70	Passenger Car	16	0.00E+00	1.77E-07	1.92E-08	6.94E-01	1.26E-06	3.42E-03	3.99E-07	1.63E-05	1.24E-04	1.93E-05	3.89E-05	2.51E-05	2.58E-05	2.73E-06	3.52E-06	7.32E-10	1.32E-05	2.54E-06
10	E29	70	Passenger Truck	27	0.00E+00	3.73E-07	3.96E-08	1.56E+00	2.39E-06	6.05E-03	7.81E-07	4.73E-05	2.24E-04	3.47E-05	7.47E-05	4.86E-05	4.98E-05	1.19E-05	7.86E-06	1.41E-09	2.50E-05	7.94E-06
10	E30	70	Passenger Car	232	0.00E+00	2.56E-06	2.78E-07	1.00E+01	1.81E-05	4.94E-02	5.76E-06	2.35E-04	1.79E-03	2.79E-04	5.62E-04	3.62E-04	3.72E-04	3.94E-05	5.09E-05	1.06E-08	1.90E-04	3.66E-05
10	E30	70	Passenger Truck	389	0.00E+00	5.38E-06	5.72E-07	2.26E+01	3.45E-05	8.74E-02	1.13E-05	6.83E-04	3.24E-03	5.01E-04	1.08E-03	7.01E-04	7.19E-04	1.72E-04	1.13E-04	2.03E-08	3.61E-04	1.15E-04
10	E30	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
10	E30	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.91E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.19E-06
10	E30	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.23E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.98E-04
10	E30	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.53E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.54E-04
10	E31	70	Passenger Car	32	0.00E+00	3.54E-07	3.85E-08	1.39E+00	2.51E-06	6.85E-03	7.98E-07	3.25E-05	2.48E-04	3.86E-05	7.79E-05	5.02E-05	5.15E-05	5.46E-06	7.05E-06	1.46E-09	2.63E-05	5.07E-06
10	E31	70	Passenger Truck	54	0.00E+00	7.46E-07	7.92E-08	3.12E+00	4.77E-06	1.21E-02	1.56E-06	9.46E-05	4.48E-04	6.94E-05	1.49E-04	9.71E-05	9.95E-05	2.39E-05	1.57E-05	2.82E-09	4.99E-05	1.59E-05
10	E32	70	Passenger Car	411	0.00E+00	4.52E-06	4.92E-07	1.77E+01	3.21E-05	8.75E-02	1.02E-05	4.16E-04	3.17E-03	4.93E-04	9.95E-04	6.42E-04	6.58E-04	6.98E-05	9.01E-05	1.87E-08	3.37E-04	6.48E-05
10	E32	70	Passenger Truck	688	0.00E+00	9.53E-06	1.01E-06	3.99E+01	6.10E-05	1.55E-01	2.00E-05	1.21E-03	5.73E-03	8.87E-04	1.91E-03	1.24E-03	1.27E-03	3.05E-04	2.01E-04	3.60E-08	6.38E-04	2.03E-04
10	E32	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.62E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.65E-06
10	E32	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.83E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.22E-04
10	E32	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.10E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.72E-04
9	E33	60	Passenger Car	228	0.00E+00	2.89E-06	3.14E-07	1.03E+01	2.05E-05	5.55E-02	6.51E-06	2.35E-04	2.31E-03	3.46E-04	6.35E-04	4.09E-04	4.20E-04	4.53E-05	5.22E-05	1.10E-08	2.15E-04	3.67E-05
9	E33	60	Passenger Truck	383	0.00E+00	6.13E-06	6.50E-07	2.30E+01	3.87E-05	9.51E-02	1.27E-05	7.32E-04	4.22E-03	6.27E-04	1.21E-03	7.88E-04	8.08E-04	1.85E-04	1.15E-04	2.14E-08	4.04E-04	1.24E-04
9	E33	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	2.00E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.62E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.66E-06
9	E33	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.27E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.15E-04
9	E33	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
9	E34	60	Passenger Car	799	0.00E+00	1.01E-05	1.10E-06	3.60E+01	7.16E-05	1.94E-01	2.27E-05	8.22E-04	8.06E-03	1.21E-03	2.22E-03	1.43E-03	1.47E-03	1.58E-04	1.83E-04	3.83E-08	7.50E-04	1.28E-04
9	E34	60	Passenger Truck	1337	0.00E+00	2.14E-05	2.27E-06	8.03E+01	1.35E-04	3.32E-01	4.44E-05	2.56E-03	1.47E-02	2.19E-03	4.24E-03	2.76E-03	2.82E-03	6.48E-04	4.03E-04	7.47E-08	1.41E-03	4.33E-04
9	E34	60	Single Unit Short Haul Truck	58	0.00E+00	1.30E-05	5.39E-07	9.72E+00	8.64E-06	1.71E-02	1.41E-05	5.01E-03	1.34E-03	2.26E-04	1.74E-03	3.35E-04	3.42E-04	9.85E-04	3.96E-05	1.63E-08	1.40E-03	9.38E-04
9	E34	60	Single Unit Long Haul Truck	3	0.00E+00	5.69E-07	2.34E-08	4.14E-01	3.75E-07	7.26E-04	6.16E-07	2.17E-04	6.04E-05	1.00E-05	7.61E-05	1.46E-05	1.49E-05	4.19E-05	1.69E-06	6.94E-10	6.12E-05	4.06E-05
9	E34	60	Combination Short Haul Truck	41	0.00E+00	1.19E-05	8.75E-07	1.44E+01	3.26E-08	1.78E-02	8.55E-06	1.82E-02	2.08E-03	3.25E-04	7.34E-04	2.56E-04	2.66E-04	2.28E-03	4.80E-05	0.00E+00	4.68E-04	3.43E-03
9	E34	60	Combination Long Haul Truck	37	0.00E+00	1.64E-05	8.94E-07	1.36E+01	1.10E-07	2.14E-02	1.37E-05	1.94E-02	2.18E-03	3.15E-04	1.55E-03	2.92E-04	3.04E-04	2.18E-03	4.55E-05	0.00E+00	1.25E-03	3.65E-03
9	E35	60	Passenger Car	261	0.00E+00	3.30E-06	3.58E-07	1.18E+01	2.34E-05	6.34E-02	7.43E-06	2.69E-04	2.64E-03	3.95E-04	7.25E-04	4.67E-04	4.80E-04	5.17E-05	5.97E-05	1.25E-08	2.45E-04	4.19E-05
9	E35	60	Passenger Truck	437	0.00E+00	7.00E-06	7.42E-07	2.62E+01	4.42E-05	1.09E-01	1.45E-05	8.36E-04	4.82E-03	7.17E-04	1.38E-03	9.01E-04	9.23E-04	2.12E-04	1.32E-04	2.44E-08	4.61E-04	1.42E-04
9	E35	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.61E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.07E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	2.00E-05
9	E35	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.93E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
9	E35	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.45E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.59E-03
9	E36	60	Passenger Car	632	0.00E+00	7.99E-06	8.68E-07	2.85E+01	5.67E-05	1.54E-01	1.80E-05	6.51E-04	6.38E-03	9.56E-04	1.76E-03	1.13E-03	1.16E-03	1.25E-04	1.45E-04	3.04E-08	5.94E-04	1.02E-04
9	E36	60	Passenger Truck	1059	0.00E+00	1.70E-05	1.80E-06	6.36E+01	1.07E-04	2.63E-01	3.52E-05	2.02E-03	1.17E-02	1.74E-03	3.35E-03	2.18E-03	2.24E-03	5.13E-04	3.19E-04	5.92E-08	1.12E-03	3.43E-04
9	E36	60	Single Unit Short Haul Truck	53	0.00E+00	1.18E-05	4.86E-07	8.76E+00	7.79E-06	1.54E-02	1.27E-05	4.52E-03	1.21E-03	2.04E-04	1.57E-03	3.02E-04	3.08E-04	8.88E-04	3.57E-05	1.47E-08	1.26E-03	8.46E-04
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	5.13E-07	2.11E-08	3.74E-01	3.38E-07	6.54E-04	5.55E-07	1.96E-04	5.44E-05	9.03E-06	6.86E-05	1.31E-05	1.34E-05	3.78E-05	1.52E-06	6.26E-10	5.52E-05	3.66E-05
9	E36	60	Combination Short Haul Truck	37

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E40	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	E40	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
10	E41	70	Passenger Car	231	0.00E+00	2.54E-06	2.76E-07	9.97E+00	1.81E-05	4.92E-02	5.74E-06	2.34E-04	1.78E-03	2.77E-04	5.59E-04	3.61E-04	3.70E-04	3.93E-05	5.06E-05	1.05E-08	1.89E-04	3.65E-05
10	E41	70	Passenger Truck	387	0.00E+00	5.36E-06	5.69E-07	2.24E+01	3.43E-05	8.70E-02	1.12E-05	6.80E-04	3.22E-03	4.99E-04	1.07E-03	6.98E-04	7.15E-04	1.72E-04	1.13E-04	2.02E-08	3.59E-04	1.14E-04
10	E41	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.90E-04
10	E41	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
10	E42	70	Passenger Car	253	0.00E+00	2.79E-06	3.03E-07	1.09E+01	1.98E-05	5.39E-02	6.28E-06	2.56E-04	1.95E-03	3.04E-04	6.13E-04	3.95E-04	4.06E-04	4.30E-05	5.55E-05	1.15E-08	2.07E-04	3.99E-05
10	E42	70	Passenger Truck	424	0.00E+00	5.87E-06	6.24E-07	2.46E+01	3.76E-05	9.53E-02	1.23E-05	7.44E-04	3.53E-03	5.46E-04	1.18E-03	7.64E-04	7.83E-04	1.88E-04	1.24E-04	2.22E-08	3.93E-04	1.25E-04
10	E42	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	E42	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	E42	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
10	E43	70	Passenger Car	207	0.00E+00	2.28E-06	2.48E-07	8.94E+00	1.62E-05	4.41E-02	5.14E-06	2.09E-04	1.60E-03	2.49E-04	5.02E-04	3.23E-04	3.32E-04	3.52E-05	4.54E-05	9.43E-09	1.70E-04	3.27E-05
10	E43	70	Passenger Truck	347	0.00E+00	4.80E-06	5.10E-07	2.01E+01	3.08E-05	7.80E-02	1.01E-05	6.09E-04	2.89E-03	4.47E-04	9.63E-04	6.26E-04	6.41E-04	1.54E-04	1.01E-04	1.81E-08	3.22E-04	1.02E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	E44	70	Passenger Car	230	0.00E+00	2.53E-06	2.75E-07	9.92E+00	1.80E-05	4.90E-02	5.71E-06	2.33E-04	1.77E-03	2.76E-04	5.57E-04	3.59E-04	3.68E-04	3.91E-05	5.04E-05	1.05E-08	1.88E-04	3.63E-05
10	E44	70	Passenger Truck	385	0.00E+00	5.33E-06	5.67E-07	2.23E+01	3.41E-05	8.66E-02	1.12E-05	6.76E-04	3.21E-03	4.96E-04	1.07E-03	6.94E-04	7.12E-04	1.71E-04	1.12E-04	2.01E-08	3.57E-04	1.14E-04
10	E44	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	E44	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.66E-04
10	E44	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.85E-04
11	E45	80	Passenger Car	55	0.00E+00	5.60E-07	6.08E-08	2.29E+00	3.97E-06	1.11E-02	1.26E-06	5.66E-05	2.98E-04	4.98E-05	1.23E-04	7.94E-05	8.14E-05	8.12E-06	1.16E-05	2.49E-09	4.16E-05	8.83E-06
11	E45	80	Passenger Truck	91	0.00E+00	1.15E-06	1.23E-07	5.17E+00	7.50E-06	1.96E-02	2.44E-06	1.53E-04	5.30E-04	8.82E-05	2.34E-04	1.52E-04	1.56E-04	3.75E-05	2.61E-05	4.74E-09	7.85E-05	2.54E-05
11	E45	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.83E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.15E-05
11	E45	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.83E-04
11	E45	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	E46	80	Passenger Car	255	0.00E+00	2.61E-06	2.84E-07	1.07E+01	1.86E-05	5.18E-02	5.90E-06	2.64E-04	1.39E-03	2.33E-04	5.75E-04	3.71E-04	3.80E-04	3.79E-05	5.44E-05	1.16E-08	1.94E-04	4.12E-05
11	E46	80	Passenger Truck	427	0.00E+00	5.39E-06	5.74E-07	2.41E+01	3.50E-05	9.16E-02	1.14E-05	7.13E-04	2.47E-03	4.12E-04	1.10E-03	7.10E-04	7.28E-04	1.75E-04	1.22E-04	2.21E-08	3.67E-04	1.19E-04
11	E46	80	Single Unit Short Haul Truck	53	0.00E+00	7.23E-06	2.82E-07	8.64E+00	4.90E-06	1.57E-02	7.95E-06	3.01E-03	5.92E-04	1.21E-04	9.95E-04	1.84E-04	1.88E-04	8.79E-04	3.51E-05	1.39E-08	8.08E-04	5.62E-04
11	E46	80	Single Unit Long Haul Truck	2	0.00E+00	3.14E-07	1.21E-08	3.65E-01	2.09E-07	6.53E-04	3.45E-07	1.28E-04	2.71E-05	5.37E-06	4.34E-05	7.91E-06	8.07E-06	3.69E-05	1.49E-06	5.80E-10	3.53E-05	2.40E-05
11	E46	80	Combination Short Haul Truck	23	0.00E+00	4.74E-06	3.51E-07	7.72E+00	1.24E-08	7.23E-03	3.39E-06	7.33E-03	5.49E-04	9.95E-05	2.88E-04	1.02E-04	1.06E-04	1.23E-03	2.58E-05	0.00E+00	1.81E-04	1.38E-03
11	E46	80	Combination Long Haul Truck	21	0.00E+00	6.61E-06	3.73E-07	7.16E+00	4.20E-08	8.56E-03	5.45E-06	7.84E-03	5.68E-04	9.08E-05	6.06E-04	1.20E-04	1.25E-04	1.15E-03	2.40E-05	0.00E+00	4.80E-04	1.48E-03
11	E47	80	Passenger Car	52	0.00E+00	5.33E-07	5.79E-08	2.18E+00	3.78E-06	1.06E-02	1.20E-06	5.39E-05	2.83E-04	4.74E-05	1.17E-04	7.56E-05	7.75E-05	7.73E-06	1.11E-05	2.37E-09	3.96E-05	8.41E-06
11	E47	80	Passenger Truck	87	0.00E+00	1.10E-06	1.17E-07	4.92E+00	7.14E-06	1.87E-02	2.33E-06	1.45E-04	5.04E-04	8.40E-05	2.23E-04	1.45E-04	1.48E-04	3.57E-05	2.48E-05	4.51E-09	7.48E-05	2.42E-05
11	E47	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	E47	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.83E-04
11	E47	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	E48	80	Passenger Car	448	0.00E+00	4.60E-06	4.99E-07	1.88E+01	3.26E-05	9.11E-02	1.04E-05	4.65E-04	2.44E-03	4.09E-04	1.01E-03	6.52E-04	6.69E-04	6.66E-05	9.56E-05	2.04E-08	3.42E-04	7.25E-05
11	E48	80	Passenger Truck	751	0.00E+00	9.47E-06	1.01E-06	4.24E+01	6.16E-05	1.61E-01	2.01E-05	1.25E-03	4.35E-03	7.24E-04	1.93E-03	1.25E-03	1.28E-03	3.08E-04	2.14E-04	3.89E-08	6.45E-04	2.09E-04
11	E48	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.99E-04
11	E48	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E48	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.83E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E48	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E49	80	Passenger Car	36	0.00E+00	3.72E-07	4.04E-08	1.52E+00	2.64E-06	7.37E-03	8.38E-07	3.76E-05	1.98E-04	3.31E-05	8.18E-05	5.27E-05	5.41E-05	5.39E-06	7.74E-06	1.65E-09	2.77E-05	5.87E-06
11	E49	80	Passenger Truck	61	0.00E+00	7.66E-07	8.17E-08	3.43E+00	4.98E-06	1.30E-02	1.62E-06	1.01E-04	3.52E-04	5.86E-05	1.56E-04	1.01E-04	1.04E-04	2.49E-05	1.73E-05	3.15E-09	5.22E-05	1.69E-05
11	E49	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E49	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	5.00E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.42E-05
11	E49	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.35E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.01E-04
11	E50	80	Passenger Car	364	0.00E+00	3.73E-06	4.05E-07	1.52E+01	2.65E-05	7.39E-02	8.41E-06	3.77E-04	1.98E-03	3.32E-04	8.20E-04	5.29E-04	5.43E-04	5.41E-05	7.76E-05	1.66E-08	2.77E-04	5.88E-05
11	E50	80	Passenger Truck	609	0.00E+00	7.68E-06	8.19E-07	3.44E+01	5.00E-05	1.31E-01	1.63E-05	1.02E-03	3.53E-03	5.88E-04	1.56E-03	1.01E-03	1.04E-03	2.50E-04	1.74E-04	3.16E-08	5.23E-04	1.69E-04
11	E50	80	Single Unit Short Haul Truck	52	0.00E+00	7.10E-06	2.77E-07	8.48E+00	4.81E-06	1.54E-02	7.80E-06	2.95E-03	5.81E-04	1.19E-04	9.77E-04	1.81E-04	1.84E-04	8.63E-04	3.44E-05	1.37E-08	7.93E-04	5.52E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	3.08E-07	1.19E-08	3.58E-01	2.05E-07	6.41E-04	3.39E-07	1.26E-04	2.66E-05	5.27E-06	4.26E-05	7.77E-06	7.92E-06	3.62E-05	1.46E-06	5.69E-10	3.47E-05	2.36E-05
11	E50	80	Combination Short Haul Truck	42	0.00E+00	8.62E-06	6.38E-07	1.40E+01	2.26E-08	1.31E-02	6.16E-06	1.33E-02	9.98E-04	1.81E-04	5.23E-04	1.86E-04	1.93E-04	2.23E-03	4.69E-05	0.00E+00	3.30E-04	2.51E-03
11	E50	80	Combination Long Haul Truck	38	0.00E+00	1.20E-05	6.78E-07	1.30E+01	7.64E-08	1.56E-02	9.91E-06	1.43E-02	1.03E-03	1.65E-04	1.10E-03	2.19E-04	2.28E-04	2.09E-03	4.36E-05	0.00E+00	8.73E-04	2.68E-03
11	E51	80	Passenger Car	5	0.00E+00	4.98E-08	5.42E-09	2.04E-01	3.54E-07	9.88E-04	1.12E-07	5.04E-06	2.65E-05	4.44E-06	1.10E-05	7.07E-06	7.25E-06	7.23E-07	1.04E-06	2.22E-10	3.71E-06	7.86E-07
11	E51	80	Passenger Truck	8	0.00E+00	1.03E-07	1.09E-08	4.60E-01	6.68E-07	1.75E-03	2.18E-07	1.36E-05	4.72E-05	7.85E-06	2.09E-05	1.35E-05	1.39E-05	3.34E-06	2.32E-06	4.22E-10	6.99E-06	2.26E-06
11	E52	80	Passenger Car	297	0.00E+00	3.04E-06	3.31E-07	1.24E+01	2.16E-05	6.03E-02	6.86E-06	3.08E-04	1.62E-03	2.71E-04	6.69E-04	4.32E-04	4.43E-04	4.41E-05	6.33E-05	1.35E-08	2.26E-04	4.80E-05
11	E52	80	Passenger Truck	497	0.00E+00	6.27E-06	6.68E-07	2.81E+01	4.08E-05	1.07E-01	1.33E-05	8.30E-04	2.88E-03	4.80E-04	1.27E-03	8.27E-04	8.48E-04	2.04E-04	1.42E-04	2.58E-08	4.27E-04	1.38E-04
11	E52	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.90E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.10E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.23E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.27E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	E53	80	Passenger Car	184	0.00E+00	1.88E-06	2.05E-07	7.69E+00	1.34E-05	3.73E-02	4.24E-06	1.90E-04	1.00E-03	1.68E-04	4.14E-04	2.67E-04	2.74E-04	2.73E-05	3.92E-05	8.37E-09	1.40E-04	2.97E-05
11	E53	80	Passenger Truck	307	0.00E+00	3.88E-06	4.13E-07	1.74E+01	2.52E-05	6.60E-02	8.22E-06	5.14E-04	1.78E-03	2.97E-04	7.88E-04	5.11E-04	5.24E-04	1.26E-04	8.76E-05	1.59E-08	2.64E-04	8.55E-05
11	E53	80	Single Unit Short Haul Truck	39	0.00E+00	5.39E-06	2.10E-07	6.44E+00	3.65E-06	1.17E-02	5.92E-06	2.24E-03	4.41E-04	9.02E-05	7.42E-04	1.37E-04	1.40E-04	6.55E-04	2.62E-05	1.04E-08	6.02E-04	4.19E-04
11	E53	80	Single Unit Long Haul Truck	2	0.00E+00	2.34E-07	9.03E-09	2.72E-01	1.56E-07	4.87E-04	2.57E-07	9.58E-05	2.02E-05	4.00E-06	3.24E-05	5.90E-06	6.02E-06	2.75E-05	1.11E-06	4.32E-10	2.63E-05	1.79E-05
11	E53	80	Combination Short Haul Truck	28	0.00E+00	5.82E-06	4.31E-07	9.47E+00	1.52E-08	8.87E-03	4.16E-06	9.00E-03	6.74E-04	1.22E-04	3.53E-04	1.26E-04	1.31E-04	1.51E-03	3.17E-05	0.00E+00	2.22E-04	1.70E-03
11	E53	80	Combination Long Haul Truck	26	0.00E+00	8.11E-06	4.58E-07	8.79E+00	5.16E-08	1.05E-02	6.69E-06	9.62E-03	6.97E-04	1.11E-04	7.43E-04	1.48E-04	1.54E-04	1.41E-03	2.95E-05	0.00E+00	5.89E-04	1.81E-03
11	E54	80	Passenger Car	445	0.00E+00	4.56E-06	4.96E-07	1.86E+01	3.24E-05	9.04E-02	1.03E-05	4.61E-04	2.43E-03	4.06E-04	1.00E-03	6.47E-04	6.64E-04	6.61E-05	9.49E-05	2.03E-08	3.39E-04	7.20E-05
11	E54	80	Passenger Truck	745	0.00E+00	9.40E-06	1.00E-06	4.21E+01	6.11E-05	1.60E-01	1.99E-05	1.24E-03	4.32E-03	7.19E-04	1.91E-03	1.24E-03	1.27E-03	3.06E-04	2.12E-04	3.86E-08	6.40E-04	2.07E-04
11	E54	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.79E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.21E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.23E-05
11	E54	80	Combination Short Haul Truck	35	0.00E+00	7.22E-06	5.35E-07	1.18E+01	1.89E-08	1.10E-02	5.16E-06	1.12E-02	8.36E-04	1.51E-04	4.38E-04	1.56E-04	1.62E-04	1.87E-03	3.93E-05	0.00E+00	2.76E-04	2.10E-03
11	E54	80	Combination Long Haul Truck	32	0.00E+00	1.01E-05	5.68E-07	1.09E+01	6.40E-08	1.30E-02	8.30E-06	1.19E-02	8.64E-04	1.38E-04	9.22E-04	1.83E-04	1.91E-04	1.75E-03	3.65E-05	0.00E+00	7.31E-04	2.25E-03
11	E55	80	Passenger Car	63	0.00E+00	6.48E-07	7.04E-08	2.65E+00	4.60E-06	1.28E-02	1.46E-06	6.55E-05	3.44E-04	5.77E-05	1.42E-04	9.19E-05	9.43E-05	9.39E-06	1.35E-05	2.88E-09	4.82E-05	1.02E-05
11	E55	80	Passenger Truck	106	0.00E+00	1.33E-06	1.42E-07	5.98E+00	8.68E-06	2.27E-02	2.83E-06	1.77E-04	6.13E-04	1.02E-04	2.71E-04	1.76E-04	1.80E-04	4.35E-05	3.02E-05	5.48E-09	9.09E-05	2.94E-05
11	E55	80	Single Unit Short Haul Truck	52	0.00E+00	7.10E-06	2.77E-07	8.48E+00	4.81E-06	1.54E-02	7.80E-06	2.95E-03	5.81E-04	1.19E-04	9.77E-04	1.81E-04	1.84E-04	8.63E-04	3.44E-05	1.37E-08	7.93E-04	5.52E-04
11	E55	80	Single Unit Long Haul Truck	2	0.00E+00	3.08E-07	1.19E-08	3.58E-01	2.05E-07	6.41E-04	3.39E-07	1.26E-04	2.66E-05	5.27E-06	4.26E-05	7.77E-06	7.92E-06	3.62E-05	1.46E-06	5.69E-10	3.47E-05	2.36E-05
11	E55	80	Combination Short Haul Truck	31	0.00E+00	6.36E-06	4.71E-07	1.03E+01	1.67E-08	9.69E-03	4.55E-06	9.83E-03	7.36E-04	1.33E-04	3.86E-04	1.37E-04	1.43E-04	1.64E-03	3.46E-05	0.00E+00	2.43E-04	1.85E-03
11	E55	80	Combination Long Haul Truck	28	0.00E+00	8.86E-06	5.00E-07	9.60E+00	5.64E-08	1.15E-02	7.31E-06	1.05E-02	7.61E-04	1.22E-04	8.12E-04	1.61E-04	1.68E-04	1.54E-03	3.22E-05	0.00E+00	6.44E-04	1.98E-03
11	E56	80	Passenger Car	385	0.00E+00	3.94E-06	4.29E-07	1.61E+01	2.80E-05	7.82E-02	8.89E-06	3.99E-04	2.10E-03	3.51E-04	8.67E-04	5.59E-04	5.74E-04	5.72E-05	8.21E-05	1.75E-08	2.93E-04	6.22E-05
11	E56	80	Passenger Truck	644	0.00E+00	8.13E-06	8.66E-07	3.64E+01	5.29E-05	1.38E-01	1.72E-05	1.08E-03	3.73E-03	6.22E-04	1.65E-03	1.07E-03	1.10E-03	2.65E-04	1.84E-04	3.34E-08	5.53E-04	1.79E-04
11	E56	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E60	80	Single Unit Short Haul Truck	95	0.00E+00	1.30E-05	5.08E-07	1.55E+01	8.82E-06	2.82E-02	1.43E-05	5.41E-03	1.07E-03	2.18E-04	1.79E-03	3.32E-04	3.38E-04	1.58E-03	6.31E-05	2.50E-08	1.45E-03	1.01E-03
11	E60	80	Single Unit Long Haul Truck	4	0.00E+00	5.65E-07	2.18E-08	6.57E-01	3.76E-07	1.18E-03	6.21E-07	2.31E-04	4.88E-05	9.67E-06	7.81E-05	1.42E-05	1.45E-05	6.64E-05	2.67E-06	1.04E-09	6.36E-05	4.32E-05
11	E60	80	Combination Short Haul Truck	42	0.00E+00	8.62E-06	6.38E-07	1.40E+01	2.26E-08	1.31E-02	6.16E-06	1.33E-02	9.98E-04	1.81E-04	5.23E-04	1.86E-04	1.93E-04	2.23E-03	4.69E-05	0.00E+00	3.30E-04	2.51E-03
11	E60	80	Combination Long Haul Truck	38	0.00E+00	1.20E-05	6.78E-07	1.30E+01	7.64E-08	1.56E-02	9.91E-06	1.43E-02	1.03E-03	1.65E-04	1.10E-03	2.19E-04	2.28E-04	2.09E-03	4.36E-05	0.00E+00	8.73E-04	2.68E-03
11	E61	80	Passenger Car	323	0.00E+00	3.31E-06	3.60E-07	1.35E+01	2.35E-05	6.56E-02	7.46E-06	3.35E-04	1.76E-03	2.94E-04	7.28E-04	4.69E-04	4.81E-04	4.80E-05	6.88E-05	1.47E-08	2.46E-04	5.22E-05
11	E61	80	Passenger Truck	540	0.00E+00	6.82E-06	7.26E-07	3.05E+01	4.43E-05	1.16E-01	1.44E-05	9.03E-04	3.13E-03	5.21E-04	1.39E-03	8.99E-04	9.22E-04	2.22E-04	1.54E-04	2.80E-08	4.64E-04	1.50E-04
11	E61	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	6.01E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	E61	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	E61	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.43E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.68E-04
11	E62	80	Passenger Car	329	0.00E+00	3.37E-06	3.66E-07	1.38E+01	2.39E-05	6.68E-02	7.60E-06	3.41E-04	1.79E-03	3.00E-04	7.41E-04	4.78E-04	4.90E-04	4.89E-05	7.01E-05	1.50E-08	2.51E-04	5.32E-05
11	E62	80	Passenger Truck	550	0.00E+00	6.94E-06	7.40E-07	3.11E+01	4.51E-05	1.18E-01	1.47E-05	9.19E-04	3.19E-03	5.31E-04	1.41E-03	9.16E-04	9.39E-04	2.26E-04	1.57E-04	2.85E-08	4.73E-04	1.53E-04
11	E62	80	Single Unit Short Haul Truck	13	0.00E+00	1.84E-06	7.18E-08	2.20E+00	1.25E-06	3.99E-03	2.02E-06	7.65E-04	1.51E-04	3.08E-05	2.53E-04	4.69E-05	4.78E-05	2.24E-04	8.93E-06	3.54E-09	2.06E-04	1.43E-04
11	E62	80	Single Unit Long Haul Truck	1	0.00E+00	7.99E-08	3.08E-09	9.29E-02	5.31E-08	1.66E-04	8.78E-08	3.27E-05	6.91E-06	1.37E-06	1.10E-05	2.01E-06	2.05E-06	9.39E-06	3.78E-07	1.48E-10	8.99E-06	6.11E-06
11	E62	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.67E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.02E-04
11	E62	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.85E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.37E-04
10	E63	70	Passenger Car	762	0.00E+00	8.39E-06	9.11E-07	3.29E+01	5.95E-05	1.62E-01	1.89E-05	7.70E-04	5.87E-03	9.14E-04	1.84E-03	1.19E-03	1.22E-03	1.29E-04	1.67E-04	3.47E-08	6.24E-04	1.20E-04
10	E63	70	Passenger Truck	1275	0.00E+00	1.77E-05	1.88E-06	7.40E+01	1.13E-04	2.87E-01	3.70E-05	2.24E-03	1.06E-02	1.64E-03	3.54E-03	2.30E-03	2.36E-03	5.65E-04	3.72E-04	6.67E-08	1.18E-03	3.76E-04
10	E63	70	Single Unit Short Haul Truck	111	0.00E+00	1.96E-05	7.94E-07	1.82E+01	1.31E-05	3.30E-02	2.13E-05	7.79E-03	1.77E-03	3.24E-04	2.64E-03	5.02E-04	5.12E-04	1.85E-03	7.40E-05	2.99E-08	2.12E-03	1.46E-03
10	E63	70	Single Unit Long Haul Truck	5	0.00E+00	8.51E-07	3.43E-08	7.72E-01	5.64E-07	1.39E-03	9.25E-07	3.35E-04	8.08E-05	1.45E-05	1.15E-04	2.17E-05	2.21E-05	7.80E-05	3.14E-06	1.26E-09	9.29E-05	6.27E-05
10	E63	70	Combination Short Haul Truck	71	0.00E+00	1.82E-05	1.35E-06	2.46E+01	4.62E-08	2.62E-02	1.29E-05	2.72E-02	2.56E-03	4.27E-04	1.09E-03	3.94E-04	4.09E-04	3.90E-03	8.21E-05	0.00E+00	6.81E-04	5.13E-03
10	E63	70	Combination Long Haul Truck	64	0.00E+00	2.49E-05	1.42E-06	2.31E+01	1.56E-07	3.13E-02	2.05E-05	2.91E-02	2.67E-03	4.02E-04	2.27E-03	4.55E-04	4.74E-04	3.70E-03	7.72E-05	0.00E+00	1.79E-03	5.49E-03
10	E64	70	Passenger Car	628	0.00E+00	6.91E-06	7.51E-07	2.71E+01	4.91E-05	1.34E-01	1.56E-05	6.35E-04	4.84E-03	7.53E-04	1.52E-03	9.80E-04	1.01E-03	1.07E-04	1.38E-04	2.86E-08	5.14E-04	9.90E-05
10	E64	70	Passenger Truck	1051	0.00E+00	1.46E-05	1.55E-06	6.10E+01	9.32E-05	2.36E-01	3.05E-05	1.85E-03	8.76E-03	1.35E-03	2.92E-03	1.90E-03	1.94E-03	4.66E-04	3.07E-04	5.50E-08	9.75E-04	3.10E-04
10	E64	70	Single Unit Short Haul Truck	101	0.00E+00	1.77E-05	7.19E-07	1.65E+01	1.19E-05	2.99E-02	1.92E-05	7.05E-03	1.60E-03	2.93E-04	2.39E-03	4.55E-04	4.64E-04	1.67E-03	6.70E-05	2.71E-08	1.92E-03	1.32E-03
10	E64	70	Single Unit Long Haul Truck	4	0.00E+00	7.70E-07	3.10E-08	6.98E-01	5.11E-07	1.25E-03	8.38E-07	3.03E-04	7.32E-05	1.31E-05	1.04E-04	1.96E-05	2.00E-05	7.06E-05	2.85E-06	1.14E-09	8.41E-05	5.68E-05
10	E64	70	Combination Short Haul Truck	55	0.00E+00	1.41E-05	1.05E-06	1.91E+01	3.59E-08	2.04E-02	1.01E-05	2.12E-02	1.99E-03	3.32E-04	8.48E-04	3.06E-04	3.18E-04	3.03E-03	6.38E-05	0.00E+00	5.30E-04	3.99E-03
10	E64	70	Combination Long Haul Truck	50	0.00E+00	1.94E-05	1.10E-06	1.79E+01	1.22E-07	2.44E-02	1.59E-05	2.27E-02	2.07E-03	3.12E-04	1.76E-03	3.54E-04	3.69E-04	2.88E-03	6.01E-05	0.00E+00	1.39E-03	4.27E-03
10	E65	70	Passenger Car	768	0.00E+00	8.46E-06	9.19E-07	3.32E+01	6.00E-05	1.64E-01	1.91E-05	7.77E-04	5.92E-03	9.22E-04	1.86E-03	1.20E-03	1.23E-03	1.31E-04	1.68E-04	3.50E-08	6.29E-04	1.21E-04
10	E65	70	Passenger Truck	1287	0.00E+00	1.78E-05	1.89E-06	7.46E+01	1.14E-04	2.89E-01	3.73E-05	2.26E-03	1.07E-02	1.66E-03	3.57E-03	2.32E-03	2.38E-03	5.70E-04	3.75E-04	6.73E-08	1.19E-03	3.79E-04
10	E65	70	Single Unit Short Haul Truck	34	0.00E+00	6.07E-06	2.46E-07	5.65E+00	4.07E-06	1.02E-02	6.60E-06	2.42E-03	5.48E-04	1.01E-04	8.18E-04	1.56E-04	1.59E-04	5.74E-04	2.30E-05	9.28E-09	6.59E-04	4.52E-04
10	E65	70	Single Unit Long Haul Truck	2	0.00E+00	2.64E-07	1.06E-08	2.39E-01	1.75E-07	4.30E-04	2.87E-07	1.04E-04	2.51E-05	4.50E-06	3.57E-05	6.73E-06	6.87E-06	2.42E-05	9.75E-07	3.91E-10	2.88E-05	1.95E-05
10	E65	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.09E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.05E-03
10	E65	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.17E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.19E-03
10	E66	70	Passenger Car	574	0.00E+00	6.32E-06	6.86E-07	2.47E+01	4.48E-05	1.22E-01	1.42E-05	5.80E-04	4.42E-03	6.88E-04	1.39E-03	8.95E-04	9.19E-04	9.74E-05	1.26E-04	2.61E-08	4.70E-04	9.05E-05
10	E66	70	Passenger Truck	960	0.00E+00	1.33E-05	1.41E-06	5.57E+01	8.52E-05	2.16E-01	2.79E-05	1.69E-03	8.00E-03	1.24E-03	2.67E-03	1.73E-03	1.78E-03	4.26E-04	2.80E-04	5.02E-08	8.91E-04	2.83E-04
10	E66	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.42E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.40E-04
10	E66	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.76E-05
10	E66	70	Combination Short Haul Truck	45	0.00E+00	1.16E-05	8.61E-07	1.56E+01	2.94E-08	1.67E-02	8.25E-06	1.73E-02	1.63E-03	2.72E-04	6.94E-04	2.51E-04	2.60E-04	2.49E-03	5.23E-05	0.00E+00	4.34E-04	3.27E-03
10	E66	70	Combination Long Haul Truck	41	0.00E+00	1.59E-05	9.03E-07	1.47E+01	9.95E-08	2.00E-02	1.31E-05	1.86E-02	1.70E-03	2.56E-04	1.44E-03	2.90E-04	3.02E-04	2.36E-03	4.92E-05	0.00E+00	1.14E-03	3.50E-03
11	E67	80	Passenger Car	316	0.00E+00	3.24E-06	3.52E-07	1.32E+01	2.30E-05	6.41E-02	7.30E-06	3.27E-04	1.72E-03	2.88E-04	7.12E-04	4.59E-04	4.71E-04	4.69E-05	6.73E-05	1.44E-08	2.41E-04	5.10E-05
11	E67	80	Passenger Truck	528	0.00E+00	6.66E-06	7.10E-07	2.99E+01	4.33E-05	1.13E-01	1.41E-05	8.83E-04	3.06E-03	5.10E-04	1.36E-03	8.79E-04	9.01E-04	2.17E-04	1.51E-04	2.74E-08	4.54E-04	1.47E-04
11	E67	80	Single Unit Short Haul Truck	13	0.00E+00	1.84E-06	7.18E-08	2.20E+00	1.25E-06	3.99E-03	2.02E-06	7.65E-04	1.51E-04	3.08E-05	2.53E-04	4.69E-05	4.78E-05	2.24E-04	8.93E-06	3.54E-09	2.06E-04	1.43E-04
11	E67	80	Single Unit Long Haul Truck	1	0.00E+00	7.99E-08	3.08E-09	9.29E-02	5.31E-08	1.66E-04	8.78E-08	3.27E-05	6.91E-06	1.37E-06	1.10E-05	2.01E-06	2.05E-06	9.39E-06	3.78E-07	1.48E-10	8.99E-06	6.11E-06
11	E67	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.83E-04
11	E67	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	E68	80	Passenger Car	580	0.00E+00	5.95E-06	6.46E-07	2.43E+01	4.22E-05	1.18E-01	1.34E-05	6.01E-04	3.16E-03	5.29E-04	1.31E-03	8.43E-04	8.65E-04	8.62E-05	1.24E-04	2.64E-08	4.42E-04	9.38E-05
11	E68	80	Passenger Truck	971	0.00E+00	1.22E-05	1.31E-06	5.49E+01	7.97E-05	2.08E-01	2.60E-05	1.62E-03	5.63E-03	9.37E-04	2.49E-03	1.62E-03	1.66E-03	3.99E-04	2.77E-04	5.03E-08	8.34E-04	2.70E-04
11	E68	80	Single Unit Short Haul Truck	152	0.00E+00	2.09E-05	8.16E-07	2.50E+01	1.42E-05	4.54E-02	2.30E-05	8.69E-03	1.71E-03	3.50E-04	2.88E-03	5.33E-04	5.43E-04	2.54E-03	1.01E-04	4.02E-08	2.33E-03	1.62E-03
11	E68	80	Single Unit Long Haul Truck	7	0.00E+00	9.08E-07	3.50E-08	1.05E+00	6.04E-07	1.89E-03	9.98E-07	3.71E-04	7.85E-05	1.55E-05	1.25E-04	2.29E-05	2.33E-05	1.07E-04	4.29E-06	1.68E-09	1.02E-04	6.94E-05
11	E68	80	Combination Short Haul Truck	87	0.00E+00	1.79E-05	1.32E-06	2.91E+01	4.69E-08	2.73E-02	1.28E-05	2.77E-02	2.07E-03	3.75E-04	1.09E-03	3.86E-04	4.01E-04	4.63E-03	9.73E-05	0.00E+00	6.84E-04	5.21E-03
11	E68	80	Combination Long Haul Truck	79	0.00E+00	2.49E-05	1.41E-06	2.70E+01	1.59E-07	3.23E-02	2.06E-05	2.96E-02	2.14E-03	3.43E-04	2.28E-03	4.54E-04	4.72E-04	4.34E-03	9.05E-05	0.00E+00	1.81E-03	5.57E-03
10	E69	70	Passenger Car	279	0.00E+00	3.08E-06	3.34E-07	1.21E+01	2.18E-05	5.95E-02	6.93E-06	2.82E-04	2.15E-03	3.35E-04	6.76E-04	4.36E-04	4.48E-04	4.75E-05	6.12E-05	1.27E-08	2.29E-04	4.41E-05
10	E69	70	Passenger Truck	468	0.00E+00	6.48E-06	6.88E-07	2.71E+01	4.15E-05	1.05E-01	1.36E-05	8.21E-04	3.90E-03	6.03E-04	1.30E-03	8.43E-04	8.64E-04	2.07E-04	1.36E-04	2.45E-08	4.34E-04	1.38E-04
10	E69	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E69	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.60E-05
10	E69	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
10	E70	70	Passenger Car	578	0.00E+00	6.36E-06	6.92E-07	2.49E+01	4.52E-05	1.23E-01	1.44E-05	5.85E-04	4.45E-03	6.94E-04	1.40E-03	9.02E-04	9.26E-04	9.82E-05	1.27E-04	2.63E-08	4.73E-04	9.12E-05
10	E70	70	Passenger Truck	968	0.00E+00	1.34E-05	1.42E-06	5.62E+01	8.58E-05	2.18E-01	2.81E-05	1.70E-03	8.06E-03	1.25E-03	2.69E-03	1.75E-03	1.79E-03	4.29E-04	2.82E-04	5.06E-08	8.98E-04	2.85E-04
10	E70	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.39E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.80E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
10	E70	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.82E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.32E-04
10	E70	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.02E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.69E-04
10	E71	70	Passenger Car	559	0.00E+00	6.16E-06	6.69E-07	2.41E+01	4.37E-05	1.19E-01	1.39E-05	5.66E-04	4.31E-03	6.71E-04	1.35E-03	8.73E-04	8.96E-04	9.50E-05	1.23E-04	2.55E-08	4.58E-04	8.82E-05
10	E71	70	Passenger Truck	937	0.00E+00	1.30E-05	1.38E-06	5.43E+01	8.30E-05	2.11E-01	2.72E-05	1.65E-03	7.80E-03	1.21E-03	2.60E-03	1.69E-03	1.73E-03	4.15E-04	2.73E-04	4.90E-08	8.69E-04	2.76E-04
10	E71	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E71	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E71	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	E72	70	Passenger Car	657	0.00E+00	7.23E-06	7.86E-07	2.83E+01	5.13E-05	1.40E-01	1.63E-05	6.64E-04	5.06E-03	7.88E-04	1.59E-03	1.03E-03	1.05E-03	1.12E-04	1.44E-04	2.99E-08	5.38E-04	1.04E-04
10	E72	70	Passenger Truck	1099	0.00E+00	1.52E-05	1.62E-06	6.38E+01	9.75E-05	2.47E-01	3.19E-05	1.93E-03	9.16E-03	1.42E-03	3.05E-03	1.98E-03	2.03E-03	4.87E-04	3.21E-04	5.75E-08	1.02E-03	3.24E-04
10	E72	70	Single Unit Short Haul Truck	21	0.00E+00	3.71E-06	1.51E-07	3.45E+00	2.49E-06	6.26E-03	4.03E-06	1.48E-03	3.35E-04	6.15E-05	5.00E-04	9.52E-05	9.71E-05	3.51E-04	1.40E-05	5.67E-09	4.03E-04	2.76E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	1.61E-07	6.50E-09	1.46E-01	1.07E-07	2.63E-04	1.75E-07	6.36E-05	1.53E-05	2.75E-06	2.18E-05	4.11E-06	4.20E-06	1.48E-05	5.96E-07	2.39E-10	1.76E-05	1.19E-05
10	E72	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
10	E72	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
9	E73	60	Passenger Car	184	0.00E+00	2.32E-06	2.52E-07	8.28E+00	1.65E-05	4.46E-02	5.23E-06	1.89E-04	1.85E-03	2.78E-04	5.10E-04	3.29E-04	3.37E-04	3.64E-05	4.20E-05	8.81E-09	1.72E-04	2.95E-05
9	E73	60	Passenger Truck	307	0.00E+00	4.92E-06	5.22E-07	1.85E+01	3.11E-05	7.64E-02	1.02E-05	5.88E-04	3.39E-03	5.04E-04	9.74E-04	6.34E-04	6.49E-04	1.49E-04	9.27E-05	1.72E-08	3.25E-04	9.96E-05
9	E73	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	E73	60	Combination Short Haul Truck	10	0.00E+00	3.05E-06	2.24E-07	3.68E+00	8.36E-09	4.56E-03	2.19E-06	4.67E-03	5.33E-04	8.33E-05	1.88E-04	6.56E-05	6.81E-05	5.86E-04	1.23E-05	0.00E+00	1.20E-04	8.79E-04
9	E73	60	Combination Long Haul Truck	10	0.00E+00	4.20E-06	2.29E-07	3.48E+00	2.83E-08	5.48E-03	3.51E-06	4.97E-03	5.59E-04	8.08E-05	3.98E-04	7.48E-05	7.80E-05	5.59E-04	1.17E-05	0.00E+00	3.20E-04	9.37E-04
9	E74	60	Passenger Car	164	0.00E+00	2.07E-06	2.25E-07	7.39E+00	1.47E-05	3.98E-02	4.66E-06	1.69E-04	1.65E-03	2.48E-04	4.55E-04	2.93E-04	3.01E-04	3.25E-05	3.74E-05	7.86E-09	1.54E-04	2.63E-05
9	E74	60	Passenger Truck	274	0.00E+00	4.39E-06	4.66E-07	1.65E+01	2.77E-05	6.81E-02	9.11E-06	5.25E-04	3.02E-03	4.50E-04	8.69E-04	5.65E-04	5.79E-04	1.33E-04	8.27E-05	1.53E-08	2.90E-04	8.89E-05
9	E74	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
53	E75	70	Passenger Car	685	0.00E+00	7.31E-06	7.95E-07	2.99E+01	5.19E-05	1.40E-01	1.65E-05	7.05E-04	5.20E-03	8.13E-04	1.61E-03	1.04E-03	1.06E-03	1.16E-04	1.52E-04	3.15E-08	5.44E-04	1.10E-04
53	E75	70	Passenger Truck	1147

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	E79	70	Passenger Car	809	0.00E+00	8.64E-06	9.39E-07	3.53E+01	6.13E-05	1.66E-01	1.95E-05	8.33E-04	6.14E-03	9.61E-04	1.90E-03	1.22E-03	1.26E-03	1.37E-04	1.79E-04	3.73E-08	6.42E-04	1.30E-04
53	E79	70	Passenger Truck	1355	0.00E+00	1.80E-05	1.92E-06	7.95E+01	1.16E-04	2.92E-01	3.79E-05	2.35E-03	1.10E-02	1.70E-03	3.63E-03	2.36E-03	2.41E-03	5.97E-04	4.00E-04	7.02E-08	1.21E-03	3.94E-04
53	E79	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.42E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.40E-04
53	E79	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.76E-05
53	E79	70	Combination Short Haul Truck	18	0.00E+00	4.71E-06	3.51E-07	6.36E+00	1.20E-08	6.80E-03	3.36E-06	7.05E-03	6.64E-04	1.11E-04	2.83E-04	1.02E-04	1.06E-04	1.01E-03	2.13E-05	0.00E+00	1.77E-04	1.33E-03
53	E79	70	Combination Long Haul Truck	17	0.00E+00	6.46E-06	3.67E-07	5.98E+00	4.05E-08	8.12E-03	5.31E-06	7.55E-03	6.91E-04	1.04E-04	5.87E-04	1.18E-04	1.23E-04	9.59E-04	2.00E-05	0.00E+00	4.64E-04	1.42E-03
53	E80	70	Passenger Car	246	0.00E+00	2.62E-06	2.85E-07	1.07E+01	1.86E-05	5.03E-02	5.91E-06	2.53E-04	1.86E-03	2.92E-04	5.77E-04	3.72E-04	3.82E-04	4.17E-05	5.45E-05	1.13E-08	1.95E-04	3.94E-05
53	E80	70	Passenger Truck	411	0.00E+00	5.48E-06	5.82E-07	2.41E+01	3.52E-05	8.88E-02	1.15E-05	7.14E-04	3.33E-03	5.17E-04	1.10E-03	7.15E-04	7.33E-04	1.81E-04	1.22E-04	2.13E-08	3.68E-04	1.20E-04
53	E80	70	Single Unit Short Haul Truck	42	0.00E+00	7.42E-06	3.01E-07	6.91E+00	4.97E-06	1.25E-02	8.07E-06	2.95E-03	6.70E-04	1.23E-04	1.00E-03	1.90E-04	1.94E-04	7.02E-04	2.81E-05	1.13E-08	8.06E-04	5.53E-04
53	E80	70	Single Unit Long Haul Truck	2	0.00E+00	3.23E-07	1.30E-08	2.93E-01	2.14E-07	5.26E-04	3.51E-07	1.27E-04	3.07E-05	5.50E-06	4.36E-05	8.23E-06	8.39E-06	2.96E-05	1.19E-06	4.78E-10	3.52E-05	2.38E-05
53	E80	70	Combination Short Haul Truck	26	0.00E+00	6.73E-06	5.01E-07	9.09E+00	1.71E-08	9.72E-03	4.80E-06	1.01E-02	9.49E-04	1.58E-04	4.04E-04	1.46E-04	1.51E-04	1.45E-03	3.04E-05	0.00E+00	2.52E-04	1.90E-03
53	E80	70	Combination Long Haul Truck	24	0.00E+00	9.23E-06	5.25E-07	8.54E+00	5.79E-08	1.16E-02	7.59E-06	1.08E-02	9.88E-04	1.49E-04	8.39E-04	1.69E-04	1.76E-04	1.37E-03	2.86E-05	0.00E+00	6.63E-04	2.03E-03
9	E81	60	Passenger Car	7	0.00E+00	9.45E-08	1.03E-08	3.37E-01	6.70E-07	1.82E-03	2.13E-07	7.70E-06	7.55E-05	1.13E-05	2.08E-05	1.34E-05	1.37E-05	1.48E-06	1.71E-06	3.59E-10	7.03E-06	1.20E-06
9	E81	60	Passenger Truck	13	0.00E+00	2.01E-07	2.13E-08	7.52E-01	1.27E-06	3.11E-03	4.16E-07	2.39E-05	1.38E-04	2.05E-05	3.97E-05	2.58E-05	2.64E-05	6.07E-06	3.77E-06	7.00E-10	1.32E-05	4.06E-06
9	E82	60	Passenger Car	159	0.00E+00	2.00E-06	2.18E-07	7.15E+00	1.42E-05	3.85E-02	4.52E-06	1.63E-04	1.60E-03	2.40E-04	4.40E-04	2.84E-04	2.91E-04	3.14E-05	3.62E-05	7.61E-09	1.49E-04	2.55E-05
9	E82	60	Passenger Truck	265	0.00E+00	4.25E-06	4.51E-07	1.59E+01	2.68E-05	6.60E-02	8.82E-06	5.08E-04	2.93E-03	4.35E-04	8.41E-04	5.47E-04	5.61E-04	1.29E-04	8.00E-05	1.48E-08	2.80E-04	8.60E-05
9	E82	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	E82	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	E82	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
10	E83	70	Passenger Car	277	0.00E+00	3.05E-06	3.31E-07	1.19E+01	2.16E-05	5.89E-02	6.87E-06	2.80E-04	2.13E-03	3.32E-04	6.70E-04	4.32E-04	4.43E-04	4.70E-05	6.06E-05	1.26E-08	2.27E-04	4.37E-05
10	E83	70	Passenger Truck	463	0.00E+00	6.42E-06	6.82E-07	2.69E+01	4.11E-05	1.04E-01	1.34E-05	8.14E-04	3.86E-03	5.97E-04	1.29E-03	8.36E-04	8.56E-04	2.05E-04	1.35E-04	2.42E-08	4.30E-04	1.37E-04
10	E83	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E83	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E83	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E84	70	Passenger Car	273	0.00E+00	3.01E-06	3.27E-07	1.18E+01	2.13E-05	5.81E-02	6.78E-06	2.76E-04	2.10E-03	3.28E-04	6.61E-04	4.26E-04	4.37E-04	4.64E-05	5.98E-05	1.24E-08	2.24E-04	4.31E-05
10	E84	70	Passenger Truck	457	0.00E+00	6.33E-06	6.73E-07	2.65E+01	4.05E-05	1.03E-01	1.33E-05	8.03E-04	3.81E-03	5.89E-04	1.27E-03	8.24E-04	8.45E-04	2.03E-04	1.33E-04	2.39E-08	4.24E-04	1.35E-04
10	E84	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	E84	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
9	E85	60	Passenger Car	1146	0.00E+00	1.45E-05	1.57E-06	5.17E+01	1.03E-04	2.78E-01	3.26E-05	1.18E-03	1.16E-02	1.73E-03	3.18E-03	2.05E-03	2.11E-03	2.27E-04	2.62E-04	5.50E-08	1.08E-03	1.84E-04
9	E85	60	Passenger Truck	1918	0.00E+00	3.07E-05	3.26E-06	1.15E+02	1.94E-04	4.77E-01	6.37E-05	3.67E-03	2.11E-02	3.15E-03	6.08E-03	3.95E-03	4.05E-03	9.29E-04	5.78E-04	1.07E-07	2.03E-03	6.22E-04
9	E85	60	Single Unit Short Haul Truck	60	0.00E+00	1.35E-05	5.57E-07	1.00E+01	8.93E-06	1.77E-02	1.46E-05	5.17E-03	1.39E-03	2.33E-04	1.80E-03	3.46E-04	3.53E-04	1.02E-03	4.09E-05	1.69E-08	1.44E-03	9.69E-04
9	E85	60	Single Unit Long Haul Truck	3	0.00E+00	5.88E-07	2.42E-08	4.28E-01	3.87E-07	7.49E-04	6.36E-07	2.24E-04	6.24E-05	1.03E-05	7.86E-05	1.50E-05	1.53E-05	4.33E-05	1.75E-06	7.17E-10	6.32E-05	4.19E-05
9	E85	60	Combination Short Haul Truck	37	0.00E+00	1.08E-05	7.96E-07	1.31E+01	2.97E-08	1.62E-02	7.79E-06	1.66E-02	1.89E-03	2.96E-04	6.68E-04	2.33E-04	2.42E-04	2.08E-03	4.37E-05	0.00E+00	4.26E-04	3.12E-03
9	E85	60	Combination Long Haul Truck	34	0.00E+00	1.49E-05	8.13E-07	1.24E+01	1.01E-07	1.95E-02	1.25E-05	1.77E-02	1.98E-03	2.87E-04	1.41E-03	2.66E-04	2.77E-04	1.98E-03	4.14E-05	0.00E+00	1.14E-03	3.32E-03
9	E86	60	Passenger Car	1346	0.00E+00	1.70E-05	1.85E-06	6.07E+01	1.21E-04	3.27E-01	3.83E-05	1.39E-03	1.36E-02	2.04E-03	3.74E-03	2.41E-03	2.47E-03	2.67E-04	3.08E-04	6.46E-08	1.26E-03	2.16E-04
9	E86	60	Passenger Truck	2254	0.00E+00	3.61E-05	3.83E-06	1.35E+02	2.28E-04	5.60E-01	7.49E-05	4.31E-03	2.48E-02	3.70E-03	7.14E-03	4.65E-03	4.76E-03	1.09E-03	6.79E-04	1.26E-07	2.38E-03	7.30E-04
9	E86	60	Single Unit Short Haul Truck	42	0.00E+00	9.41E-06	3.89E-07	7.01E+00	6.23E-06	1.23E-02	1.02E-05	3.61E-03	9.70E-04	1.63E-04	1.26E-03	2.42E-04	2.47E-04	7.10E-04	2.86E-05	1.18E-08	1.01E-03	6.76E-04
9	E86	60	Single Unit Long Haul Truck	2	0.00E+00	4.11E-07	1.69E-08	2.99E-01	2.70E-07	5.23E-04	4.44E-07	1.56E-04	4.35E-05	7.23E-06	5.49E-05	1.05E-05	1.07E-05	3.02E-05	1.22E-06	5.01E-10	4.42E-05	2.93E-05
9	E86	60	Combination Short Haul Truck	29	0.00E+00	8.40E-06	6.17E-07	1.01E+01	2.30E-08	1.25E-02	6.03E-06	1.28E-02	1.47E-03	2.29E-04	5.17E-04	1.80E-04	1.87E-04	1.61E-03	3.39E-05	0.00E+00	3.30E-04	2.42E-03
9	E86	60	Combination Long Haul Truck	26	0.00E+00	1.15E-05	6.30E-07	9.57E+00	7.79E-08	1.51E-02	9.65E-06	1.37E-02	1.54E-03	2.22E-04	1.09E-03	2.06E-04	2.14E-04	1.54E-03	3.21E-05	0.00E+00	8.80E-04	2.58E-03
9	E87	60	Passenger Car	715	0.00E+00	9.03E-06	9.81E-07	3.22E+01	6.41E-05	1.74E-01	2.04E-05	7.36E-04	7.22E-03	1.08E-03	1.99E-03	1.28E-03	1.31E-03	1.42E-04	1.63E-04	3.43E-08	6.72E-04	1.15E-04
9	E87	60	Passenger Truck	1197	0.00E+00	1.92E-05	2.03E-06	7.19E+01	1.21E-04	2.97E-01	3.98E-05	2.29E-03	1.32E-02	1.96E-03	3.79E-03	2.47E-03	2.53E-03	5.80E-04	3.61E-04	6.69E-08	1.26E-03	3.88E-04
9	E87	60	Single Unit Short Haul Truck	178	0.00E+00	3.98E-05	1.64E-06	2.96E+01	2.64E-05	5.21E-02	4.30E-05	1.53E-02	4.10E-03	6.89E-04	5.31E-03	1.02E-03	1.04E-03	3.00E-03	1.21E-04	4.98E-08	4.26E-03	2.86E-03
9	E87	60	Single Unit Long Haul Truck	8	0.00E+00	1.74E-06	7.14E-08	1.26E+00	1.14E-06	2.21E-03	1.88E-06	6.61E-04	1.84E-04	3.05E-05	2.32E-04	4.44E-05	4.53E-05	1.28E-04	5.15E-06	2.12E-09	1.87E-04	1.24E-04
9	E87	60	Combination Short Haul Truck	89	0.00E+00	2.59E-05	1.91E-06	3.13E+01	7.11E-08	3.88E-02	1.86E-05	3.97E-02	4.53E-03	7.08E-04	1.60E-03	5.58E-04	5.79E-04	4.98E-03	1.05E-04	0.00E+00	1.02E-03	7.47E-03
9	E87	60	Combination Long Haul Truck	81	0.00E+00	3.57E-05	1.95E-06	2.96E+01	2.41E-07	4.66E-02	2.98E-05	4.23E-02	4.75E-03	6.87E-04	3.38E-03	6.36E-04	6.63E-04	4.75E-03	9.91E-05	0.00E+00	2.72E-03	7.96E-03
9	E88	60	Passenger Car	1073	0.00E+00	1.36E-05	1.47E-06	4.84E+01	9.62E-05	2.61E-01	3.06E-05	1.11E-03	1.08E-02	1.62E-03	2.98E-03	1.92E-03	1.97E-03	2.13E-04	2.45E-04	5.15E-08	1.01E-03	1.72E-04
9	E88	60	Passenger Truck	1798	0.00E+00	2.88E-05	3.05E-06	1.08E+02	1.82E-04	4.47E-01	5.97E-05	3.44E-03	1.98E-02	2.95E-03	5.69E-03	3.70E-03	3.80E-03	8.71E-04	5.42E-04	1.00E-07	1.90E-03	5.83E-04
9	E88	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	1.00E-02	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.88E-03
9	E88	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.34E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.12E-05
9	E88	60	Combination Short Haul Truck	60	0.00E+00	1.76E-05	1.29E-06	2.12E+01	4.81E-08	2.62E-02	1.26E-05	2.68E-02	3.06E-03	4.79E-04	1.08E-03	3.77E-04	3.92E-04	3.37E-03	7.08E-05	0.00E+00	6.90E-04	5.06E-03
9	E88	60	Combination Long Haul Truck	55	0.00E+00	2.41E-05	1.32E-06	2.00E+01	1.63E-07	3.15E-02	2.02E-05	2.86E-02	3.21E-03	4.65E-04	2.29E-03	4.30E-04	4.48E-04	3.21E-03	6.70E-05	0.00E+00	1.84E-03	5.39E-03
9	E89	60	Passenger Car	133	0.00E+00	1.69E-06	1.83E-07	6.02E+00	1.20E-05	3.24E-02	3.80E-06	1.37E-04	1.35E-03	2.02E-04	3.71E-04	2.39E-04	2.45E-04	2.65E-05	3.05E-05	6.41E-09	1.25E-04	2.14E-05
9	E89	60	Passenger Truck	224	0.00E+00	3.58E-06	3.80E-07	1.34E+01	2.26E-05	5.55E-02	7.43E-06	4.28E-04	2.46E-03	3.67E-04	7.08E-04	4.61E-04	4.72E-04	1.08E-04	6.74E-05	1.25E-08	2.36E-04	7.24E-05
9	E89	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	E89	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
9	E90	60	Passenger Car	105	0.00E+00	1.33E-06	1.45E-07	4.75E+00	9.45E-06	2.56E-02	3.00E-06	1.09E-04	1.06E-03	1.59E-04	2.93E-04	1.89E-04	1.94E-04	2.09E-05	2.41E-05	5.06E-09	9.91E-05	1.69E-05
9	E90	60	Passenger Truck	177	0.00E+00	2.83E-06	3.00E-07	1.06E+01	1.78E-05	4.39E-02	5.87E-06	3.38E-04	1.95E-03	2.90E-04	5.59E-04	3.64E-04	3.73E-04	8.55E-05	5.32E-05	9.87E-09	1.86E-04	5.72E-05
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	E90	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
9	E90	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	E91	60	Passenger Car	4	0.00E+00	4.72E-08	5.13E-09	1.69E-01	3.35E-07	9.08E-04	1.06E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.87E-06	7.41E-07	8.55E-07	1.80E-10	3.51E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.98E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.61E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.72E-08	5.13E-09	1.69E-01	3.35E-07	9.08E-04	1.06E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.87E-06	7.41E-07	8.55E-07	1.80E-10	3.51E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.98E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.61E-06	2.03E-06
9	E93	60	Passenger Car	108	0.00E+00	1.36E-06	1.48E-07	4.87E+00	9.69E-06	2.62E-02	3.08E-06	1.11E-04	1.09E-03	1.63E-04	3.00E-04	1.94E-04	1.99E-04	2.14E-05	2.47E-05	5.19E-09	1.02E-04	1.74E-05
9	E93	60	Passenger Truck	181	0.00E+00	2.90E-06	3.07E-07	1.09E+01	1.83E-05	4.50E-02	6.01E-06	3.46E-04	1.99E-03	2.97E-04	5.73E-04	3.73E-04	3.82E-04	8.77E-05	5.45E-05	1.01E-08	1.91E-04	5.86E-05
9	E93	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	E93	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
9	E94	60	Passenger Car	225	0.00E+00	2.84E-06	3.08E-07	1.01E+01	2.01E-05	5.46E-02	6.40E-06	2.31E-04	2.27E-03	3.40E-04	6.24E-04	4.02E-04	4.13E-04	4.45E-05	5.14E-05	1.08E-08	2.11E-04	3.61E-05
9	E94	60	Passenger Truck	376	0.00E+00	6.03E-06	6.39E-07	2.26E+01	3.80E-05	9.35E-02	1.25E-05	7.20E-04	4.15E-03	6.17E-04	1.19E-03	7.76E-04	7.95E-04	1.82E-04	1.13E-04	2.10E-08	3.97E-04	1.22E-04
9	E94	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	E94	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.11E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	E94	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.80E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.28E-04
9	E94	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.62E-04
54	E95	80	Passenger Car	465	0.00E+00	4.66E-06	5.06E-07	1.96E+01	3.31E-05	9.05E-02	1.05E-05	4.85E-04	2.67E-03	4.39E-04	1.02E-03	6.60E-04	6.78E-04	6.92E-05	9.99E-05	2.07E-08	3.46E-04	7.57E-05
54	E95	80	Passenger Truck	780	0.00E+00	9.68E-06	1.03E-06	4.46E+01	6.30E-05	1.65E-01	2.05E-05	1.30E-03	4.77E-03	7.82E-04	1.97E-03	1.28E-03	1.31E-03	3.20E-04	2.25E-04	3.98E-08	6.60E-04	2.17E-04
54	E95	80	Single Unit Short Haul Truck	73	0.00E+00	9.99E-06	3.90E-07	1.19E+01	6.77E-06	2.17E-02	1.10E-05	4.16E-03	8.18E-04	1.67E-04	1.38E-03	2.55E-04	2.60E-04	1.21E-03	4.85E-05	1.92E-08	1.12E-03	7.77E-04
54	E95	80	Single Unit Long Haul Truck	3	0.00E+00	4.34E-07	1.67E-08	5.04E-01	2.89E-07	9.03E-04	4.77E-07	1.78E-04	3.75E-05	7.42E-06	6.00E-05	1.09E-05	1.12E-05	5.10E-05	2.05E-06	8.01E-10	4.88E-05	3.32E-05
54	E95	80	Combination Short Haul Truck	38	0.00E+00	7.76E-06	5.75E-07	1.26E+01	2.03E-08	1.18E-02	5.55E-06	1.20E-02	8.99E-04	1.63E-04	4.71E-04	1.68E-04	1.74E-04	2.01E-03	4.22E-05	0.00E+00	2.97E-04	2.26E-03
54	E95	80	Combination Long Haul Truck	34	0.00E+00	1.08E-05	6.10E-07	1.17E+01	6.88E-08	1.40E-02	8.92E-06	1.28E-02	9.29E-04	1.49E-04	9.91E-04	1.97E-04	2.05E-04	1.88E-03	3.93E-05	0.00E+00	7.86E-04	2.42E-03
54	E96	80	Passenger Car	657	0.00E+00	6.57E-06	7.14E-07

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F34	60	Passenger Car	557	0.00E+00	7.04E-06	7.65E-07	2.51E+01	5.00E-05	1.35E-01	1.59E-05	5.74E-04	5.63E-03	8.43E-04	1.55E-03	9.98E-04	1.02E-03	1.11E-04	1.27E-04	2.68E-08	5.24E-04	8.95E-05
9	F34	60	Passenger Truck	934	0.00E+00	1.50E-05	1.59E-06	5.61E+01	9.43E-05	2.32E-01	3.10E-05	1.79E-03	1.03E-02	1.53E-03	2.96E-03	1.92E-03	1.97E-03	4.52E-04	2.81E-04	5.22E-08	9.86E-04	3.03E-04
9	F34	60	Single Unit Short Haul Truck	64	0.00E+00	1.43E-05	5.92E-07	1.07E+01	9.49E-06	1.88E-02	1.55E-05	5.50E-03	1.48E-03	2.48E-04	1.91E-03	3.68E-04	3.76E-04	1.08E-03	4.35E-05	1.79E-08	1.54E-03	1.03E-03
9	F34	60	Single Unit Long Haul Truck	3	0.00E+00	6.25E-07	2.57E-08	4.55E-01	4.12E-07	7.97E-04	6.76E-07	2.38E-04	6.63E-05	1.10E-05	8.36E-05	1.60E-05	1.63E-05	4.60E-05	1.86E-06	7.63E-10	6.73E-05	4.46E-05
9	F34	60	Combination Short Haul Truck	58	0.00E+00	1.69E-05	1.24E-06	2.04E+01	4.64E-08	2.53E-02	1.22E-05	2.59E-02	2.96E-03	4.62E-04	1.04E-03	3.64E-04	3.78E-04	3.25E-03	6.84E-05	0.00E+00	6.66E-04	4.88E-03
9	F34	60	Combination Long Haul Truck	53	0.00E+00	2.33E-05	1.27E-06	1.93E+01	1.57E-07	3.04E-02	1.95E-05	2.76E-02	3.10E-03	4.48E-04	2.21E-03	4.15E-04	4.33E-04	3.10E-03	6.47E-05	0.00E+00	1.78E-03	5.20E-03
11	F35	80	Passenger Car	74	0.00E+00	7.55E-07	8.21E-08	3.09E+00	5.36E-06	1.50E-02	1.70E-06	7.64E-05	4.01E-04	6.72E-05	1.66E-04	1.07E-04	1.10E-04	1.10E-05	1.57E-05	3.36E-09	5.62E-05	1.19E-05
11	F35	80	Passenger Truck	123	0.00E+00	1.56E-06	1.66E-07	6.97E+00	1.01E-05	2.65E-02	3.30E-06	2.06E-04	7.15E-04	1.19E-04	3.16E-04	2.05E-04	2.10E-04	5.06E-05	3.52E-05	6.39E-09	1.06E-04	3.43E-05
11	F35	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.19E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.09E-05
11	F35	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	5.00E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.42E-05
11	F35	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.35E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.01E-04
11	F36	80	Passenger Car	273	0.00E+00	2.79E-06	3.04E-07	1.14E+01	1.98E-05	5.54E-02	6.30E-06	2.83E-04	1.49E-03	2.49E-04	6.15E-04	3.96E-04	4.07E-04	4.05E-05	5.82E-05	1.24E-08	2.08E-04	4.41E-05
11	F36	80	Passenger Truck	456	0.00E+00	5.76E-06	6.14E-07	2.58E+01	3.74E-05	9.80E-02	1.22E-05	7.62E-04	2.65E-03	4.40E-04	1.17E-03	7.59E-04	7.78E-04	1.87E-04	1.30E-04	2.37E-08	3.92E-04	1.27E-04
11	F36	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.59E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.96E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.77E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.27E-05
11	F36	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.33E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.16E-04
11	F36	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.63E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.73E-04
9	F37	60	Passenger Car	916	0.00E+00	1.16E-05	1.26E-06	4.13E+01	8.21E-05	2.22E-01	2.61E-05	9.43E-04	9.25E-03	1.38E-03	2.54E-03	1.64E-03	1.68E-03	1.82E-04	2.09E-04	4.40E-08	8.60E-04	1.47E-04
9	F37	60	Passenger Truck	1533	0.00E+00	2.46E-05	2.60E-06	9.21E+01	1.55E-04	3.81E-01	5.10E-05	2.93E-03	1.69E-02	2.51E-03	4.86E-03	3.16E-03	3.24E-03	7.43E-04	4.62E-04	8.57E-08	1.62E-03	4.97E-04
9	F37	60	Single Unit Short Haul Truck	62	0.00E+00	1.39E-05	5.74E-07	1.04E+01	9.21E-06	1.82E-02	1.50E-05	5.34E-03	1.43E-03	2.41E-04	1.85E-03	3.57E-04	3.64E-04	1.05E-03	4.22E-05	1.74E-08	1.49E-03	9.99E-04
9	F37	60	Single Unit Long Haul Truck	3	0.00E+00	6.07E-07	2.49E-08	4.42E-01	3.99E-07	7.73E-04	6.56E-07	2.31E-04	6.43E-05	1.07E-05	8.11E-05	1.55E-05	1.58E-05	4.46E-05	1.80E-06	7.40E-10	6.52E-05	4.33E-05
9	F37	60	Combination Short Haul Truck	47	0.00E+00	1.36E-05	9.98E-07	1.64E+01	3.72E-08	2.03E-02	9.76E-06	2.08E-02	2.37E-03	3.71E-04	8.37E-04	2.92E-04	3.03E-04	2.61E-03	5.48E-05	0.00E+00	5.34E-04	3.91E-03
9	F37	60	Combination Long Haul Truck	42	0.00E+00	1.87E-05	1.02E-06	1.55E+01	1.26E-07	2.44E-02	1.56E-05	2.21E-02	2.49E-03	3.60E-04	1.77E-03	3.33E-04	3.47E-04	2.49E-03	5.19E-05	0.00E+00	1.42E-03	4.17E-03
9	F38	60	Passenger Car	645	0.00E+00	8.15E-06	8.86E-07	2.91E+01	5.78E-05	1.57E-01	1.84E-05	6.64E-04	6.52E-03	9.76E-04	1.79E-03	1.16E-03	1.19E-03	1.28E-04	1.48E-04	3.10E-08	6.06E-04	1.04E-04
9	F38	60	Passenger Truck	1081	0.00E+00	1.73E-05	1.83E-06	6.49E+01	1.09E-04	2.69E-01	3.59E-05	2.07E-03	1.19E-02	1.77E-03	3.42E-03	2.23E-03	2.28E-03	5.24E-04	3.26E-04	6.04E-08	1.14E-03	3.50E-04
9	F38	60	Single Unit Short Haul Truck	67	0.00E+00	1.50E-05	6.18E-07	1.12E+01	9.92E-06	1.96E-02	1.62E-05	5.75E-03	1.54E-03	2.59E-04	2.00E-03	3.85E-04	3.92E-04	1.13E-03	4.55E-05	1.87E-08	1.60E-03	1.08E-03
9	F38	60	Single Unit Long Haul Truck	3	0.00E+00	6.53E-07	2.69E-08	4.76E-01	4.30E-07	8.33E-04	7.07E-07	2.49E-04	6.93E-05	1.15E-05	8.73E-05	1.67E-05	1.71E-05	4.81E-05	1.94E-06	7.97E-10	7.03E-05	4.66E-05
9	F38	60	Combination Short Haul Truck	47	0.00E+00	1.36E-05	9.98E-07	1.64E+01	3.72E-08	2.03E-02	9.76E-06	2.08E-02	2.37E-03	3.71E-04	8.37E-04	2.92E-04	3.03E-04	2.61E-03	5.48E-05	0.00E+00	5.34E-04	3.91E-03
9	F38	60	Combination Long Haul Truck	42	0.00E+00	1.87E-05	1.02E-06	1.55E+01	1.26E-07	2.44E-02	1.56E-05	2.21E-02	2.49E-03	3.60E-04	1.77E-03	3.33E-04	3.47E-04	2.49E-03	5.19E-05	0.00E+00	1.42E-03	4.17E-03
11	F39	80	Passenger Car	77	0.00E+00	7.86E-07	8.54E-08	3.21E+00	5.58E-06	1.56E-02	1.77E-06	7.95E-05	4.18E-04	7.00E-05	1.73E-04	1.11E-04	1.14E-04	1.14E-05	1.64E-05	3.49E-09	5.85E-05	1.24E-05
11	F39	80	Passenger Truck	128	0.00E+00	1.62E-06	1.73E-07	7.25E+00	1.05E-05	2.75E-02	3.43E-06	2.14E-04	7.44E-04	1.24E-04	3.29E-04	2.14E-04	2.19E-04	5.27E-05	3.66E-05	6.65E-09	1.10E-04	3.57E-05
11	F39	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.19E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.09E-05
11	F39	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.17E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.20E-04
11	F39	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.25E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.35E-04
11	F40	80	Passenger Car	399	0.00E+00	4.09E-06	4.45E-07	1.67E+01	2.90E-05	8.11E-02	9.22E-06	4.14E-04	2.17E-03	3.64E-04	9.00E-04	5.80E-04	5.95E-04	5.93E-05	8.51E-05	1.82E-08	3.04E-04	6.45E-05
11	F40	80	Passenger Truck	668	0.00E+00	8.43E-06	8.98E-07	3.78E+01	5.48E-05	1.43E-01	1.79E-05	1.12E-03	3.87E-03	6.45E-04	1.71E-03	1.11E-03	1.14E-03	2.74E-04	1.90E-04	3.46E-08	5.74E-04	1.86E-04
11	F40	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	F40	80	Combination Short Haul Truck	13	0.00E+00	2.69E-06	1.99E-07	4.38E+00	7.06E-09	4.11E-03	1.93E-06	4.17E-03	3.12E-04	5.65E-05	1.63E-04	5.82E-05	6.04E-05	6.97E-04	1.47E-05	0.00E+00	1.03E-04	7.85E-04
11	F40	80	Combination Long Haul Truck	12	0.00E+00	3.75E-06	2.12E-07	4.07E+00	2.39E-08	4.86E-03	3.10E-06	4.45E-03	3.22E-04	5.16E-05	3.44E-04	6.83E-05	7.12E-05	6.53E-04	1.36E-05	0.00E+00	2.73E-04	8.39E-04
10	F41	70	Passenger Car	257	0.00E+00	2.83E-06	3.07E-07	1.11E+01	2.01E-05	5.47E-02	6.38E-06	2.60E-04	1.98E-03	3.08E-04	6.22E-04	4.01E-04	4.12E-04	4.36E-05	5.63E-05	1.17E-08	2.10E-04	4.05E-05
10	F41	70	Passenger Truck	430	0.00E+00	5.96E-06	6.33E-07	2.50E+01	3.81E-05	9.67E-02	1.25E-05	7.55E-04	3.58E-03	5.54E-04	1.19E-03	7.76E-04	7.95E-04	1.91E-04	1.26E-04	2.25E-08	3.99E-04	1.27E-04
10	F41	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.69E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	F41	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.04E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.49E-04
10	F41	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.39E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.02E-03
10	F42	70	Passenger Car	217	0.00E+00	2.39E-06	2.59E-07	9.36E+00	1.69E-05	4.62E-02	5.38E-06	2.19E-04	1.67E-03	2.60E-04	5.25E-04	3.39E-04	3.47E-04	3.68E-05	4.75E-05	9.87E-09	1.78E-04	3.42E-05
10	F42	70	Passenger Truck	363	0.00E+00	5.03E-06	5.34E-07	2.11E+01	3.22E-05	8.16E-02	1.05E-05	6.38E-04	3.02E-03	4.68E-04	1.01E-03	6.55E-04	6.71E-04	1.61E-04	1.06E-04	1.90E-08	3.37E-04	1.07E-04
10	F45	70	Passenger Car	277	0.00E+00	3.05E-06	3.31E-07	1.19E+01	2.16E-05	5.89E-02	6.87E-06	2.80E-04	2.13E-03	3.32E-04	6.70E-04	4.32E-04	4.43E-04	4.70E-05	6.06E-05	1.26E-08	2.27E-04	4.37E-05
10	F45	70	Passenger Truck	463	0.00E+00	6.42E-06	6.82E-07	2.69E+01	4.11E-05	1.04E-01	1.34E-05	8.14E-04	3.86E-03	5.97E-04	1.29E-03	8.36E-04	8.56E-04	2.05E-04	1.35E-04	2.42E-08	4.30E-04	1.37E-04
10	F45	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	F45	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	F45	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	F46	70	Passenger Car	273	0.00E+00	3.01E-06	3.27E-07	1.18E+01	2.13E-05	5.81E-02	6.78E-06	2.76E-04	2.10E-03	3.28E-04	6.61E-04	4.26E-04	4.37E-04	4.64E-05	5.98E-05	1.24E-08	2.24E-04	4.31E-05
10	F46	70	Passenger Truck	457	0.00E+00	6.33E-06	6.73E-07	2.65E+01	4.05E-05	1.03E-01	1.33E-05	8.03E-04	3.81E-03	5.89E-04	1.27E-03	8.24E-04	8.45E-04	2.03E-04	1.33E-04	2.39E-08	4.24E-04	1.35E-04
10	F46	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	F46	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
9	F47	60	Passenger Car	11	0.00E+00	1.37E-07	1.49E-08	4.89E-01	9.72E-07	2.63E-03	3.09E-07	1.12E-05	1.09E-04	1.64E-05	3.01E-05	1.94E-05	1.99E-05	2.15E-06	2.48E-06	5.21E-10	1.02E-05	1.74E-06
9	F47	60	Passenger Truck	18	0.00E+00	2.91E-07	3.08E-08	1.09E+00	1.83E-06	4.51E-03	6.03E-07	3.47E-05	2.00E-04	2.98E-05	5.75E-05	3.74E-05	3.83E-05	8.80E-06	5.47E-06	1.01E-09	1.92E-05	5.88E-06
9	F47	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	F47	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	F47	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
9	F48	60	Passenger Car	2	0.00E+00	2.36E-08	2.57E-09	8.43E-02	1.68E-07	4.54E-04	5.32E-08	1.92E-06	1.89E-05	2.83E-06	5.19E-06	3.35E-06	3.44E-06	3.71E-07	4.27E-07	8.98E-11	1.76E-06	3.00E-07
9	F48	60	Passenger Truck	3	0.00E+00	5.01E-08	5.32E-09	1.88E-01	3.16E-07	7.78E-04	1.04E-07	5.99E-06	3.45E-05	5.13E-06	9.92E-06	6.45E-06	6.61E-06	1.52E-06	9.44E-07	1.75E-10	3.31E-06	1.01E-06
9	F48	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
53	F77	70	Passenger Car	446	0.00E+00	4.77E-06	5.18E-07	1.95E+01	3.38E-05	9.13E-02	1.07E-05	4.59E-04	3.39E-03	5.30E-04	1.05E-03	6.76E-04	6.93E-04	7.59E-05	9.90E-05	2.06E-08	3.54E-04	7.17E-05
53	F77	70	Passenger Truck	748	0.00E+00	9.95E-06	1.06E-06	4.39E+01	6.39E-05	1.61E-01	2.09E-05	1.30E-03	6.05E-03	9.40E-04	2.00E-03	1.30E-03	1.33E-03	3.29E-04	2.21E-04	3.87E-08	6.68E-04	2.17E-04
53	F77	70	Single Unit Short Haul Truck	81	0.00E+00	1.43E-05	5.82E-07	1.33E+01	9.60E-06	2.42E-02	1.56E-05	5.71E-03	1.29E-03	2.38E-04	1.93E-03	3.68E-04	3.75E-04	1.36E-03	5.43E-05	2.19E-08	1.56E-03	1.07E-03
53	F77	70	Single Unit Long Haul Truck	4	0.00E+00	6.23E-07	2.51E-08	5.65E-01	4.13E-07	1.02E-03	6.78E-07	2.46E-04	5.92E-05	1.06E-05	8.43E-05	1.59E-05	1.62E-05	5.72E-05	2.30E-06	9.23E-10	6.81E-05	4.59E-05
53	F77	70	Combination Short Haul Truck	38	0.00E+00	9.83E-06	7.31E-07	1.33E+01	2.50E-08	1.42E-02	7.00E-06	1.47E-02	1.38E-03	2.31E-04	5.89E-04	2.13E-04	2.21E-04	2.11E-03	4.44E-05	0.00E+00	3.68E-04	2.77E-03
53	F77	70	Combination Long Haul Truck	35	0.00E+00	1.35E-05	7.66E-07	1.25E+01	8.45E-08	1.69E-02	1.11E-05	1.58E-02	1.44E-03	2.17E-04	1.22E-03	2.46E-04	2.57E-04	2.00E-03	4.18E-05	0.00E+00	9.68E-04	2.97E-03
50	F78	40	Passenger Car	348	0.00E+00	4.94E-06	5.37E-07	1.82E+01	3.50E-05	9.40E-02	1.11E-05	3.18E-04	6.01E-03	8.45E-04	1.09E-03	7.00E-04	7.19E-04	1.04E-04	9.13E-05	1.69E-08	3.67E-04	4.96E-05
50	F78	40	Passenger Truck	584	0.00E+00	1.09E-05	1.14E-06	3.95E+01	6.56E-05	1.56E-01	2.19E-05	1.23E-03	1.07E-02	1.48E-03	2.07E-03	1.35E-03	1.38E-03	3.54E-04	1.97E-04	2.88E-08	6.85E-04	2.12E-04
50	F78	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.91E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	2.52E-07	1.88E-08	2.17E-01	6.25E-10	3.57E-04	1.79E-07	3.68E-04	5.09E-05	7.58E-06	1.50E-05	5.48E-06	5.69E-06	3.45E-05	7.25E-07	0.00E+00	9.31E-06	6.93E-05
52	F79	60	Passenger Car	529	0.00E+00	6.14E-06	6.67E-07	2.39E+01	4.36E-05	1.17E-01	1.38E-05	5.25E-04	5.19E-03	7.79E-04	1.35E-03	8.71E-04	8.93E-04	1.05E-04	1.21E-04	2.46E-08	4.57E-04	8.18E-05
52	F79	60	Passenger Truck	886	0.00E+00	1.30E-05	1.37E-06	5.32E+01	8.17E-05	2.01E-01	2.69E-05	1.60E-03	9.22E-03	1.37E-03	2.56E-03	1.67E-03	1.71E-03	4.20E-04	2.67E-04	4.50E-08	8.54E-04	2.71E-04
52	F79	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
52	F79	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.27E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.15E-04
52	F79	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
53	F80	70	Passenger Car	605	0.00E+00	6.46E-06	7.02E-07	2.64E+01	4.59E-05	1.24E-01	1.46E-05	6.23E-04	4.59E-03	7.19E-04	1.42E-03	9.16E-04	9.40E-04	1.03E-04	1.34E-04	2.79E-08	4.81E-04	9.72E-05
53	F80	70	Passenger Truck	1014	0.00E+00	1.35E-05	1.44E-06	5.95E+01	8.67E-05	2.19E-01	2.83E-05	1.76E-03	8.20E-03	1.27E-03	2.71E-03	1.76E-03	1.81E-03	4.47E-04	3.00E-04	5.25E-08	9.06E-04	2.95E-04
53	F80	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09

Appendix F.3.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	F84	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.46E-05
50	F84	40	Combination Short Haul Truck	33	0.00E+00	1.61E-05	1.21E-06	1.39E+01	4.00E-08	2.28E-02	1.15E-05	2.35E-02	3.26E-03	4.85E-04	9.60E-04	3.51E-04	3.64E-04	2.21E-03	4.64E-05	0.00E+00	5.96E-04	4.44E-03
50	F84	40	Combination Long Haul Truck	31	0.00E+00	2.15E-05	1.21E-06	1.33E+01	1.36E-07	2.77E-02	1.77E-05	2.49E-02	3.38E-03	4.75E-04	1.97E-03	3.90E-04	4.07E-04	2.14E-03	4.46E-05	0.00E+00	1.56E-03	4.68E-03
52	F85	60	Passenger Car	219	0.00E+00	2.54E-06	2.76E-07	9.86E+00	1.80E-05	4.85E-02	5.72E-06	2.17E-04	2.15E-03	3.22E-04	5.58E-04	3.60E-04	3.69E-04	4.34E-05	5.00E-05	1.02E-08	1.89E-04	3.38E-05
52	F85	60	Passenger Truck	366	0.00E+00	5.36E-06	5.68E-07	2.20E+01	3.38E-05	8.33E-02	1.11E-05	6.62E-04	3.81E-03	5.66E-04	1.06E-03	6.89E-04	7.06E-04	1.74E-04	1.10E-04	1.86E-08	3.53E-04	1.12E-04
52	F85	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.11E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.69E-05
52	F85	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.15E-03
52	F85	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.22E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.29E-03
53	F86	70	Passenger Car	329	0.00E+00	3.52E-06	3.82E-07	1.44E+01	2.50E-05	6.74E-02	7.93E-06	3.39E-04	2.50E-03	3.91E-04	7.73E-04	4.99E-04	5.12E-04	5.60E-05	7.30E-05	1.52E-08	2.62E-04	5.29E-05
53	F86	70	Passenger Truck	552	0.00E+00	7.34E-06	7.81E-07	3.24E+01	4.72E-05	1.19E-01	1.54E-05	9.57E-04	4.46E-03	6.93E-04	1.48E-03	9.59E-04	9.83E-04	2.43E-04	1.63E-04	2.86E-08	4.93E-04	1.60E-04
53	F86	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.39E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.80E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
53	F86	70	Combination Short Haul Truck	24	0.00E+00	6.19E-06	4.61E-07	8.37E+00	1.57E-08	8.94E-03	4.41E-06	9.27E-03	8.73E-04	1.46E-04	3.71E-04	1.34E-04	1.39E-04	1.33E-03	2.80E-05	0.00E+00	2.32E-04	1.75E-03
53	F86	70	Combination Long Haul Truck	22	0.00E+00	8.49E-06	4.83E-07	7.85E+00	5.32E-08	1.07E-02	6.98E-06	9.93E-03	9.09E-04	1.37E-04	7.72E-04	1.55E-04	1.62E-04	1.26E-03	2.63E-05	0.00E+00	6.10E-04	1.87E-03
52	F87	60	Passenger Car	38	0.00E+00	4.43E-07	4.81E-08	1.72E+00	3.14E-06	8.45E-03	9.98E-07	3.78E-05	3.74E-04	5.61E-05	9.73E-05	6.28E-05	6.44E-05	7.56E-06	8.71E-06	1.78E-09	3.29E-05	5.90E-06
52	F87	60	Passenger Truck	64	0.00E+00	9.34E-07	9.90E-08	3.83E+00	5.89E-06	1.45E-02	1.94E-06	1.15E-04	6.65E-04	9.87E-05	1.85E-04	1.20E-04	1.23E-04	3.03E-05	1.92E-05	3.24E-09	6.15E-05	1.95E-05
52	F87	60	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.24E-07	2.23E+00	1.98E-06	3.92E-03	3.24E-06	1.15E-03	3.08E-04	5.18E-05	3.99E-04	7.69E-05	7.85E-05	2.26E-04	9.09E-06	3.75E-09	3.21E-04	2.15E-04
52	F87	60	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.37E-09	9.51E-02	8.60E-08	1.67E-04	1.41E-07	4.98E-05	1.39E-05	2.30E-06	1.75E-05	3.34E-06	3.41E-06	9.61E-06	3.88E-07	1.59E-10	1.41E-05	9.32E-06
52	F87	60	Combination Short Haul Truck	5	0.00E+00	1.53E-06	1.12E-07	1.84E+00	4.18E-09	2.28E-03	1.10E-06	2.33E-03	2.66E-04	4.17E-05	9.41E-05	3.28E-05	3.41E-05	2.93E-04	6.16E-06	0.00E+00	6.00E-05	4.40E-04
52	F87	60	Combination Long Haul Truck	5	0.00E+00	2.10E-06	1.15E-07	1.74E+00	1.42E-08	2.74E-03	1.75E-06	2.49E-03	2.79E-04	4.04E-05	1.99E-04	3.74E-05	3.90E-05	2.79E-04	5.83E-06	0.00E+00	1.60E-04	4.68E-04
50	F88	40	Passenger Car	71	0.00E+00	1.01E-06	1.10E-07	3.72E+00	7.18E-06	1.93E-02	2.28E-06	6.51E-05	1.23E-03	1.73E-04	2.23E-04	1.44E-04	1.47E-04	2.12E-05	1.87E-05	3.47E-09	7.53E-05	1.02E-05
50	F88	40	Passenger Truck	120	0.00E+00	2.23E-06	2.35E-07	8.10E+00	1.34E-05	3.19E-02	4.49E-06	2.51E-04	2.18E-03	3.03E-04	4.24E-04	2.77E-04	2.83E-04	7.25E-05	4.04E-05	5.89E-09	1.40E-04	4.35E-05
50	F88	40	Single Unit Short Haul Truck	25	0.00E+00	8.45E-06	3.76E-07	4.70E+00	5.85E-06	7.38E-03	9.03E-06	3.41E-03	9.80E-04	1.53E-04	1.09E-03	2.26E-04	2.31E-04	4.81E-04	1.92E-05	8.13E-09	8.56E-04	6.39E-04
50	F88	40	Single Unit Long Haul Truck	1	0.00E+00	3.70E-07	1.64E-08	2.03E-01	2.56E-07	3.21E-04	3.96E-07	1.49E-04	4.39E-05	6.81E-06	4.77E-05	9.90E-06	1.01E-05	2.08E-05	8.28E-07	3.53E-10	3.77E-05	2.78E-05
50	F88	40	Combination Short Haul Truck	15	0.00E+00	7.06E-06	5.28E-07	6.07E+00	1.75E-08	9.99E-03	5.02E-06	1.03E-02	1.42E-03	2.12E-04	4.20E-04	1.53E-04	1.59E-04	9.65E-04	2.03E-05	0.00E+00	2.61E-04	1.94E-03
50	F88	40	Combination Long Haul Truck	13	0.00E+00	9.39E-06	5.30E-07	5.83E+00	5.97E-08	1.21E-02	7.74E-06	1.09E-02	1.48E-03	2.08E-04	8.60E-04	1.71E-04	1.78E-04	9.36E-04	1.95E-05	0.00E+00	6.82E-04	2.05E-03

Appendix F.3.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	1.94E-04	1.39E-05	4.61E+02	3.52E-04	1.36E+00	2.29E-04	1.76E-01	1.69E-02	4.12E-03	2.32E-02	9.72E-03	9.98E-03	3.62E-02	1.97E-03	3.71E-07	1.32E-02	3.29E-02
A02	0.00E+00	1.91E-04	1.39E-05	4.72E+02	3.86E-04	1.46E+00	2.34E-04	1.66E-01	1.77E-02	4.27E-03	2.37E-02	1.02E-02	1.05E-02	3.44E-02	2.04E-03	3.92E-07	1.31E-02	3.10E-02
A03	0.00E+00	1.89E-04	1.37E-05	4.65E+02	3.77E-04	1.43E+00	2.30E-04	1.65E-01	1.74E-02	4.20E-03	2.33E-02	1.01E-02	1.03E-02	3.42E-02	2.01E-03	3.83E-07	1.30E-02	3.09E-02
A04	0.00E+00	1.98E-04	1.47E-05	5.10E+02	4.49E-04	1.67E+00	2.52E-04	1.63E-01	1.96E-02	4.69E-03	2.55E-02	1.14E-02	1.17E-02	3.39E-02	2.25E-03	4.39E-07	1.37E-02	3.04E-02
A05	0.00E+00	1.56E-04	1.16E-05	3.95E+02	3.36E-04	1.26E+00	1.95E-04	1.34E-01	1.50E-02	3.60E-03	1.97E-02	8.73E-03	8.97E-03	2.75E-02	1.73E-03	3.29E-07	1.07E-02	2.50E-02
A06	0.00E+00	1.51E-04	1.13E-05	3.96E+02	3.57E-04	1.32E+00	1.95E-04	1.23E-01	1.53E-02	3.66E-03	1.97E-02	8.99E-03	9.23E-03	2.55E-02	1.75E-03	3.40E-07	1.04E-02	2.29E-02
A07	0.00E+00	1.56E-04	1.11E-05	3.65E+02	2.68E-04	1.05E+00	1.81E-04	1.45E-01	1.32E-02	3.23E-03	1.83E-02	7.57E-03	7.77E-03	2.97E-02	1.54E-03	2.86E-07	1.05E-02	2.71E-02
A08	0.00E+00	1.51E-04	1.13E-05	3.92E+02	3.46E-04	1.28E+00	1.93E-04	1.26E-01	1.50E-02	3.60E-03	1.94E-02	8.81E-03	9.05E-03	2.59E-02	1.73E-03	3.30E-07	1.04E-02	2.35E-02
A09	0.00E+00	2.00E-04	1.42E-05	4.67E+02	3.44E-04	1.34E+00	2.31E-04	1.86E-01	1.69E-02	4.13E-03	2.34E-02	9.69E-03	9.95E-03	3.81E-02	1.98E-03	3.65E-07	1.35E-02	3.48E-02
A10	0.00E+00	1.72E-04	1.26E-05	4.26E+02	3.48E-04	1.32E+00	2.10E-04	1.52E-01	1.59E-02	3.84E-03	2.12E-02	9.26E-03	9.51E-03	3.11E-02	1.84E-03	3.45E-07	1.16E-02	2.84E-02
A11	0.00E+00	2.45E-04	1.76E-05	5.72E+02	4.22E-04	1.65E+00	2.82E-04	2.30E-01	2.08E-02	5.05E-03	2.85E-02	1.19E-02	1.22E-02	4.67E-02	2.42E-03	4.35E-07	1.62E-02	4.32E-02
A12	0.00E+00	1.93E-04	1.39E-05	4.59E+02	3.50E-04	1.35E+00	2.27E-04	1.77E-01	1.68E-02	4.08E-03	2.29E-02	9.67E-03	9.94E-03	3.61E-02	1.96E-03	3.61E-07	1.30E-02	3.31E-02
A13	0.00E+00	2.30E-04	1.63E-05	5.33E+02	3.87E-04	1.52E+00	2.65E-04	2.14E-01	1.93E-02	4.71E-03	2.68E-02	1.10E-02	1.13E-02	4.40E-02	2.25E-03	4.17E-07	1.55E-02	4.02E-02
A14	0.00E+00	1.97E-04	1.45E-05	4.88E+02	4.02E-04	1.52E+00	2.40E-04	1.74E-01	1.83E-02	4.41E-03	2.42E-02	1.06E-02	1.09E-02	3.54E-02	2.12E-03	3.93E-07	1.32E-02	3.25E-02
A15	0.00E+00	2.32E-04	1.62E-05	5.24E+02	3.60E-04	1.44E+00	2.60E-04	2.21E-01	1.86E-02	4.57E-03	2.64E-02	1.06E-02	1.09E-02	4.53E-02	2.19E-03	3.99E-07	1.55E-02	4.14E-02
A16	0.00E+00	2.15E-04	1.52E-05	4.91E+02	3.46E-04	1.37E+00	2.43E-04	2.04E-01	1.76E-02	4.30E-03	2.46E-02	1.00E-02	1.03E-02	4.16E-02	2.06E-03	3.73E-07	1.43E-02	3.82E-02
A17	0.00E+00	2.30E-04	1.61E-05	5.20E+02	3.57E-04	1.43E+00	2.58E-04	2.20E-01	1.85E-02	4.54E-03	2.62E-02	1.05E-02	1.08E-02	4.50E-02	2.17E-03	3.94E-07	1.54E-02	4.13E-02
A18	0.00E+00	2.19E-04	1.54E-05	4.96E+02	3.42E-04	1.37E+00	2.46E-04	2.10E-01	1.76E-02	4.33E-03	2.49E-02	1.00E-02	1.03E-02	4.29E-02	2.07E-03	3.76E-07	1.46E-02	3.93E-02
A19	0.00E+00	2.16E-04	1.51E-05	4.86E+02	3.30E-04	1.33E+00	2.41E-04	2.08E-01	1.72E-02	4.23E-03	2.45E-02	9.77E-03	1.00E-02	4.25E-02	2.03E-03	3.66E-07	1.44E-02	3.90E-02
A20	0.00E+00	2.17E-04	1.50E-05	4.76E+02	3.04E-04	1.25E+00	2.37E-04	2.13E-01	1.66E-02	4.10E-03	2.41E-02	9.33E-03	9.59E-03	4.36E-02	1.96E-03	3.53E-07	1.45E-02	4.00E-02
A21	0.00E+00	2.64E-04	1.84E-05	5.92E+02	4.01E-04	1.61E+00	2.94E-04	2.54E-01	2.10E-02	5.15E-03	2.98E-02	1.19E-02	1.22E-02	5.19E-02	2.46E-03	4.46E-07	1.76E-02	4.76E-02
A22	0.00E+00	2.37E-04	1.67E-05	5.45E+02	3.89E-04	1.54E+00	2.71E-04	2.22E-01	1.96E-02	4.79E-03	2.75E-02	1.12E-02	1.15E-02	4.56E-02	2.29E-03	4.24E-07	1.60E-02	4.16E-02
A23	0.00E+00	2.52E-04	1.72E-05	5.42E+02	3.29E-04	1.38E+00	2.71E-04	2.50E-01	1.86E-02	4.64E-03	2.76E-02	1.04E-02	1.07E-02	5.14E-02	2.21E-03	3.99E-07	1.69E-02	4.70E-02
A24	0.00E+00	2.28E-04	1.66E-05	5.63E+02	4.61E-04	1.75E+00	2.78E-04	1.98E-01	2.11E-02	5.09E-03	2.82E-02	1.22E-02	1.25E-02	4.10E-02	2.44E-03	4.66E-07	1.56E-02	3.70E-02
B09	0.00E+00	7.53E-05	5.47E-06	2.12E+02	1.91E-04	6.21E-01	1.01E-04	6.08E-02	1.11E-02	2.28E-03	1.05E-02	4.65E-03	4.77E-03	1.31E-02	9.42E-04	1.68E-07	5.74E-03	1.13E-02
B10	0.00E+00	1.29E-04	1.01E-05	3.78E+02	3.44E-04	1.11E+00	1.74E-04	1.18E-01	1.99E-02	4.02E-03	1.74E-02	8.38E-03	8.61E-03	2.34E-02	1.68E-03	2.55E-07	8.78E-03	2.21E-02
B11	0.00E+00	3.56E-05	2.41E-06	9.16E+01	7.22E-05	2.46E-01	4.47E-05	3.07E-02	4.53E-03	9.51E-04	4.72E-03	1.88E-03	1.93E-03	6.73E-03	3.96E-04	7.18E-08	2.79E-03	5.74E-03
B12	0.00E+00	4.33E-05	3.72E-06	1.49E+02	1.68E-04	5.13E-01	6.94E-05	2.85E-02	8.65E-03	1.72E-03	6.90E-03	3.73E-03	3.83E-03	5.77E-03	7.03E-04	1.22E-07	3.08E-03	5.28E-03
B13	0.00E+00	6.10E-05	4.76E-06	1.80E+02	1.67E-04	5.38E-01	8.34E-05	5.39E-02	9.56E-03	1.94E-03	8.40E-03	4.03E-03	4.15E-03	1.08E-02	8.06E-04	1.27E-07	4.25E-03	1.01E-02
B14	0.00E+00	3.56E-05	2.53E-06	9.72E+01	8.41E-05	2.78E-01	4.69E-05	2.93E-02	4.99E-03	1.03E-03	4.89E-03	2.09E-03	2.15E-03	6.37E-03	4.29E-04	7.71E-08	2.75E-03	5.47E-03
B15	0.00E+00	5.99E-05	4.58E-06	1.82E+02	1.82E-04	5.75E-01	8.69E-05	4.29E-02	9.95E-03	2.02E-03	8.91E-03	4.23E-03	4.34E-03	9.31E-03	8.30E-04	1.52E-07	4.57E-03	7.99E-03
B16	0.00E+00	8.08E-05	7.00E-06	2.92E+02	3.51E-04	1.05E+00	1.38E-04	3.99E-02	1.74E-02	3.46E-03	1.39E-02	7.55E-03	7.75E-03	8.79E-03	1.40E-03	2.66E-07	6.13E-03	7.33E-03
B17	0.00E+00	8.31E-05	5.36E-06	1.99E+02	1.34E-04	4.85E-01	9.74E-05	7.73E-02	9.25E-03	1.98E-03	1.04E-02	3.78E-03	3.88E-03	1.69E-02	8.32E-04	1.48E-07	6.54E-03	1.45E-02
B18	0.00E+00	8.58E-05	6.56E-06	2.63E+02	2.69E-04	8.45E-01	1.26E-04	5.81E-02	1.45E-02	2.95E-03	1.30E-02	6.19E-03	6.36E-03	1.29E-02	1.21E-03	2.27E-07	6.66E-03	1.08E-02
C12	0.00E+00	1.59E-05	1.60E-06	5.85E+01	9.31E-05	2.38E-01	3.17E-05	3.27E-03	1.09E-02	1.62E-03	3.07E-03	1.91E-03	1.96E-03	6.10E-04	2.92E-04	5.23E-08	1.11E-03	5.81E-04
C13	0.00E+00	1.91E-05	1.39E-06	3.10E+01	4.24E-05	1.12E-01	2.43E-05	1.31E-02	8.48E-03	1.20E-03	2.48E-03	1.09E-03	1.11E-03	1.40E-03	1.43E-04	2.23E-08	1.36E-03	2.46E-03
C14	0.00E+00	3.44E-05	2.86E-06	9.63E+01	1.27E-04	3.41E-01	5.40E-05	1.75E-02	1.36E-02	2.14E-03	5.41E-03	2.83E-03	2.91E-03	2.82E-03	4.62E-04	8.37E-08	2.51E-03	3.25E-03
C15	0.00E+00	3.50E-05	2.34E-06	4.02E+01	4.00E-05	1.23E-01	3.64E-05	3.21E-02	1.06E-02	1.51E-03	3.75E-03	1.34E-03	1.38E-03	3.14E-03	1.71E-04	2.27E-08	2.37E-03	6.04E-03
C16	0.00E+00	1.16E-05	9.14E-07	2.66E+01	3.47E-05	9.40E-02	1.65E-05	7.52E-03	4.75E-03	7.12E-04	1.66E-03	8.15E-04	8.37E-04	1.02E-03	1.25E-04	2.08E-08	8.27E-04	1.40E-03
C17	0.00E+00	6.39E-05	4.23E-06	1.12E+02	1.07E-04	3.14E-01	7.51E-05	4.85E-02	1.44E-02	2.30E-03	7.94E-03	2.98E-03	3.06E-03	7.53E-03	4.90E-04	8.72E-08	4.87E-03	9.09E-03
C18	0.00E+00	1.57E-05	1.16E-06	3.27E+01	4.22E-05	1.13E-01	2.17E-05	9.53E-03	5.79E-03	8.72E-04	2.24E-03	1.01E-03	1.04E-03	1.34E-03	1.53E-04	2.72E-08	1.20E-03	1.78E-03
C19	0.00E+00	6.02E-06	4.57E-07	1.09E+01	1.56E-05	4.08E-02	8.09E-06	3.80E-03	3.00E-03	4.24E-04	8.17E-04	3.82E-04	3.92E-04	4.15E-04	5.09E-05	7.97E-09	4.26E-04	7.11E-04
C20	0.00E+00	4.82E-06	4.03E-07	1.37E+01	1.83E-05	4.89E-02	7.67E-06	2.34E-03	1.94E-03	3.05E-04	7.69E-04	4.05E-04	4.16E-04	3.82E-04	6.59E-05	1.21E-08	3.54E-04	4.32E-04
C21	0.00E+00	8.12E-05	5.19E-06	9.30E+01	1.06E-04	2.89E-01	8.95E-05	6.19E-02	2.43E-02	3.48E-03	9.48E-03	3.29E-03	3.38E-03	6.45E-03	4.04E-04	6.78E-08	6.11E-03	1.16E-02
C22	0.00E+00	1.78E-05	1.40E-06	4.26E+01	5.93E-05	1.56E-01	2.68E-05	8.93E-03	7.65E-03	1.15E-03	2.73E-03	1.35E-03	1.38E-03	1.32E-03	2.03E-04	3.69E-08	1.35E-03	1.66E-03
C23	0.00E+00	4.09E-05	3.04E-06	9.38E+01	1.12E-04	3.08E-01	5.69E-05	2.47E-02	1.28E-02	2.03E-03	5.86E-03	2.68E-03	2.75E-03	3.96E-03	4.37E-04	8.05E-08	3.11E-03	4.59E-03
C24	0.00E+00	3.92E-06	3.56E-07	1.17E+01	1.72E-05	4.53E-02	6.65E-06	1.82E-03	2.15E-03	3.22E-04	6.51E-04	3.73E-04	3.83E-04	2.60E-04	5.72E-05	9.78E-09	2.69E-04	3.37E-04
C25	0.00E+00	7.09E-05	4.61E-06	8.20E+01	9.04E-05	2.55E-01	7.69E-05	5.77E-02	2.15E-02	3.07E-03	8.06E-03	2.85E-03	2.93E-03	5.87E-03	3.54E-04	5.52E-08	5.14E-03	1.08E-02
C26	0.00E+00	3.94E-05	2.74E-06	7.59E+01	7.80E-05	2.25E-01	4.86E-05	2.93E-02	1.00E-02	1.59E-03	5.05E-03	2.06E-03	2.12E-03	4.50E-03	3.39E-04	5.91E-08	2.93E-03	5.48E-03
C27	0.00E+00	5.55E-05	3.87E-06	8.49E+01	1.18E-04	3.02E-01	7.03E-05	3.45E-02	2.30E-02	3.26E-03	7.31E-03	3.04E-03	3.11E-03	3.83E-03	3.91E-04	6.63E-08	4.20E-03	6.46E-03
C28	0.00E+00	9.69E-06	8.49E-07	2.77E+01	4.03E-05	1.06E-01	1.61E-05	4.47E-03	5.05E-03	7.55E-04	1.59E-03	8.79E-04	9.02E-04	6.51E-04	1.34E-04	2.34E-08	6.88E-04	8.27E-04
C29	0.00E+00	2.53E-06	2.04E-07	6.19E+00	7.25E-06	2.04E-02	3.49E-06	1.87E-03	8.58E-04	1.35E-04	3.45E-04	1.74E-04	1.78E-04	2.71E-04	2.87E-05	4.59E-09	1.67E-04	3.49E-04
C30	0.00E+00	6.07E-05	3.80E-06	5.61E+01	4.38E-05	1.47E-01	5.86E-05	5.77E-02	1.42E-02	2.05E-03	6.17E-03	1.87E-03	1.93E-03	5.62E-03	2.25E-04	3.04E-08	4.24E-03	1.09E-02
C31	0.00E+00	3.41E-05	2.33E-06	6.07E+01	7.12E-05	1.95E-01	4.31E-05	2.31E-02	1.05E-02	1.59E-03	4.54E-03	1.84E-03	1.88E-03	3.21E-03	2.75E-04	4.92E-08	2.66E-03	4.33E-03
C32	0.00E+00	4.28E-05	2.77E-06	6.55E+01	4.89E-05	1.60E-01	4.52E-05	3.88E-02	8.12E-03	1.30E-03	4.76E-03	1.63E-03	1.67E-03	5.75E-03	2.72E-04	4.16E-08	3.08E-03	7.29E-03
C33	0.00E+00	2.62E-06	2.51E-07	9.09E+00	1.45E-05	3.68E-02	5.12E-06	4.13E-04	1.69E-03	2.52E-04	5.05E-04	3.00E-04	3.08E-04	9.34E-05	4.55E-05	8.48E-09	1.97E-04	7.22E-05
C34	0.00E+00	9.12E-06	6.99E-07	1.73E+01	2.58E-05	6.60E-02	1.28E-05	5.11E-03	4.80E-03	6.76E-04	1.29E-03	6.14E-04	6.30E-04	5.84E-04	8.18E-05	1.33E-08	6.62E-04	9.55E-04
C35	0.00E+00	1.50E-05	1.05E-06	2.82E+01	2.75E-05	8.16E-02	1.79E-05	1.21E-02	3.70E-03	5.88E-04	1.84E-03	7.51E-04	7.72E-04	1.81E-03	1.25E-04	2.02E-08	1.07E-03	2.28E-03
C36	0.00E+00	9.82E-05	6.62E-06	1.12E+02	1.07E-04	3.40E-01	1.01E-04	9.42E-02	2.95E-02	4.20E-03	1.03E-02	3.69E-03	3.80E-03	9.10E-03	4.72E-04	5.89E-08	6.48E-03	1.77E-02
C37	0.00E+00	2.98E-05	1.84E-06	3.83E+01	2.93E-05	9.56E-02	3.08E-05	2.73E-02	6.26E-03	9.53E-04	3.30E-03	1.04E-03	1.07E-03	3.54E-03	1.57E-04	2.37E-08	2.23E-03	5.12E-03
C38	0.00E+00	4.89E-05	3.04E-06	6.74E+01	4.17E-05	1.48E-01	4.89E-05	4.60E-02	8.07E-03	1.30E-03	5.20E-03	1.61E-03	1.65E-03	6.80E-03	2.71E-04	4.02E-08	3.55E-03	8.64E-03
C39	0.00E+00	1.28E-05	9.56E-07	2.57E+01	3.03E-05	8.55E-02	1.65E-05	9.85E-03	4.52E-03	6.78E-04	1.68E-03	7.62E-04	7.83E-04	1.29E-03	1.17E-04	1.84E-08	8.92E-04	1.84E-03
C40	0.00E+00	1.89E-05	1.39E-06	2.95E+01	3.75E-05	1.05E-01	2.28E-05	1.53E-02	8.06E-03	1.14E-03	2.28E-03	1.00E-03	1.03E-03	1.54E-03	1.34E-04	1.87E-08	1.25E-03	2.86E-03
C41	0.00E+00	3.37E-05	2.43E-06	8.79E+01	7.43E-05	2.39E-01	4.28E-05	3.15E-02	6.08E-03	1.11E-03	4.42E-03	1.90E-03	1.95E-03	6.21E-03	3.82E-04	5.55E-08	2.46E-03	5.89E-03
C42	0.00E+00	1.89E-05	1.58E-06	6.25E+01	7.32E-05	2.13E-01	3.05E-05	1.10E-02	4.92E-03	8.83E-04	3.08E-03	1.61E-03	1.66E-03	2.29E-03	2.95E-04	5.19E-08	1.43E-03	2.04E-03
C43	0.00E+00	1.83E-05	1.20E-06	4.50E+01	3.83E-05	1.23E-01	2.35E-05	1.42E-02	3.06E-03	5.73E-04	2.52E-03	9.76E-04	1.00E-03	3.10E-03	1.97E-04	3.60E-08	1.52E-03	2.66E-03
C44	0.00E+00	1.35E-05	9.31E-07	3.47E+01	3.07E-05	9.70E-02	1.76E-05	1.08E-02	2.41E-03	4.46E-04	1.86E-03	7.67E-04	7.88E-04	2.29E-03	1.53E-04	2.63E-08	1.08E-03	2.02E-03
C45	0.00E+00	2.82E-05	1.85E-06	4.89E+01	4.67E-05	1.37E-01	3.31E-05	2.11E-02	6.29E-03	1.01E-03	3.51E-03	1.31E-03	1.34E-03	3.30E-03	2.15E-04	3.87E-08	2.17E-03	3.96E-03
C46	0.00E+00	6.37E-05	3.93E-06	5.82E+01	4.73E-05	1.52E-01	6.21E-05	5.84E-02	1.47E-02	2.12E-03	6.60E-03	1.97E-03	2.03E-03	5.75E-03	2.34E-04	3.41E-08	4.56E-03	1.10E-02
C48	0.00E+00	5.81E-05	3.42E-06	6.94E+01	2.95E-05	1.25E-01	5.42E-05	5.66E-02	7.86E-03	1.28E-03	5.87E-03	1.55E-03	1.60E-03	8.39E-03	2.64E-04	3.77E-08	4.27E-03	1.07E-02
C49	0.00E+00	3.30E-05	2.42E-06	6.63E+01	8.16E-05	2.24E-01	4.39E-05	2.25E-02	1.17E-02	1.76E-03	4.51E-03	2.01E-03	2.06E-03	3.07E-03	3.05E-04	5.20E-08	2.45E-03	4.21E-03
C50	0.00E+00	1.51E-06	1.12E-07	2.09E+00	2.17E-06	6.94E-03	1.62E-06	1.55E-03	5.65E-04	7.99E-05	1.59E-04	6.72E-05	6.92E-05	1.46E-04	9.04E-06	9.81E-10	8.99E-05	2.91E-04
C51	0.00E+00	1.74E-05	1.29E-06	3.97E+01	4.73E-05	1.30E-01	2.41E-05	1.06E-02	5.42E-03	8.58E-04	2.49E-03	1.13E-03	1.16E-03	1.70E-03	1.85E-04	3.40E-08	1.32E-03	1.98E-03
C52	0.00E+00	1.31E-05	9.15E-07	1.91E+01	2.49E-05	6.63E-02	1.58E-05	9.41E-03	5.15E-03	7.31E-04	1.63E-03	6.69E-04	6.87E-04	9.92E-04	8.65E-05	1.37E-08	9.47E-04	1.76E-03
C53	0.00E+00	1.10E-05	7.89E-07	2.11E+01	2.53E-05	6.99E-02	1.43E-05	7.69E-03	3.70E-03	5.57E-04	1.47E-03	6.37E-04	6.54E-04	1.04E-03	9.66E-05	1.64E-08	8.19E-04	1.44E-03
C54	0.00E+00	1.68E-05	1.16E-06	3.19E+01	3.26E-05	9.42E-02	2.06E-05	1.24E-02	4.20E-03	6.68E-04	2.15E-03	8.67E-04	8.90E-04	1.92E-03	1.42E-04	2.51E-08	1.26E-03	2.33E-03
C55	0.00E+00	2.62E-05	1.83E-06	4.70E+01	5.32E-05	1.50E-01	3.26E-05	1.97E-02	8.15E-03	1.23E-03	3.39E-03	1.39E-03	1.43E-03	2.64E-03	2.12E-04	3.53E-08	1.95E-03	3.69E-03
C56	0.00E+00	2.43E-06	1.46E-07	2.28E+00	2.22E-06	6.22E-03	2.50E-06	1.95E-03	5.76E-04	8.33E-05	2.70E-04	8.12E-05	8.34E-05	2.00E-04	9.49E-06	1.67E-09	1.86E-04	3.66E-04
C57	0.00E+00	2.00E-05	1.45E-06	4.28E+01	4.83E-05	1.35E-01	2.64E-05	1.33E-02	5.77E-03	9.14E-04	2.73E-03	1.20E-03	1.23E-03	2.09E-03	1.96E-04	3.52E-08	1.50E-03	2.49E-03
C58	0.00E+00	3.83E-06	3.40E-07	1.02E+01	1.68E-05	4.18E-02	6.53E-06	1.28E-03	2.88E-03	4.04E-04	6.44E-04	3.62E-04	3.71E-04	1.81E-04	4.97E-05	8.06E-09	2.73E-04	2.36E-04
C59	0.00E+00	2.90E-06	2.49E-07	8.68E+00	1.19E-05	3.16E-02	4.81E-06	1.25E-03	1.24E-03	1.95E-04	4.81E-04	2.59E-04	2.66E-04	2.10E-04	4.21E-05	7.80E-09	2.15E-04	2.31E-04
C60	0.00E+00	2.52E-05	1.77E-06	4.59E+01	5.26E-05	1.47E-01	3.16E-05	1.86E-02	7.96E-03	1.20E-03	3.28E-03	1.37E-03	1.40E-03	2.50E-03	2.07E-04	3.47E-08	1.88E-03	3.49E-03
C61	0.00E+00	1.32E-05	1.14E-06	4.01E+01	5.57E-05	1.47E-01	2.22E-05	5.29E-03	5.75E-03	9.02E-04	2.22E-03	1.21E-03	1.24E-03	9.07E-04	1.96E-04	3.65E-08	9.79E-04	9.72E-04
C62	0.00E+00	2.13E-05	1.66E-06	4.21E+01	6.38E-05	1.62E-01	3.05E-05	1.14E-02	1.17E-02	1.65E-03	3.08E-03	1.50E-03	1.53E-03	1.33E-03	2.00E-04	3.25E-08	1.55E-03	2.13E-03
C63	0.00E+00	7.87E-05	4.91E-06	1.08E+02	9.51E-05	2.89E-01	8.54E-05	6.60E-02	1.78E-02	2.72E-03	9.17E-03	3.04E-03	3.12E-03	8.77E-03	4.56E-04	7.52E-08	6.05E-03	1.24E-02
C64	0.00E+00	5.57E-05	3.85E-06	1.09E+02	1.16E-04	3.30E-01	7.02E-05	3.87E-02	1.44E-02	2.30E-03	7.34E-03	3.01E-03	3.09E-03	6.08E-03	4.92E-04	8.94E-08	4.25E-03	7.23E-03
C65	0.00E+00	4.05E-07	4.33E-08	1.63E+00	2.66E-06	6.76E-03	8.63E-07	4.51E-05	3.06E-04	4.55E-05	8.29E-05	5.38E-05	5.52E-05	1.11E-05	8.22E-06	1.48E-09	2.78E-05	7.48E-06
C66	0.00E+00	2.29E-05	1.47E-06	2.46E+01	2.48E-05	7.31E-02	2.39E-05	1.97E-02	6.39E-03	9.17E-04	2.51E-03	8.46E-04	8.70E-04	1.97E-03	1.04E-04	1.56E-08	1.64E-03	3.70E-03
C67	0.00E+00	4.24E-05	2.96E-06	1.12E+02	1.03E-04	3.21E-01	5.68E-05	3.25E-02	7.88E-03	1.45E-03	5.99E-03	2.52E-03	2.59E-03	6.91E-03	4.97E-04	8.73E-08	3.40E-03	6.06E-03
C68	0.00E+00	5.31E-05	3.94E-06	1.55E+02	1.65E-04	4.92E-01	7.86E-05	3.26E-02	1.16E-02	2.12E-03	8.20E-03	3.78E-03	3.88E-03	7.22E-03	7.14E-04	1.34E-07	4.32E-03	6.06E-03
C69	0.00E+00	3.45E-05	2.11E-06	6.03E+01	4.39E-05	1.44E-01	3.83E-05	2.78E-02	5.38E-03	9.36E-04	4.17E-03	1.36E-03	1.40E-03	5.12E-03	2.53E-04	4.71E-08	2.77E-03	5.21E-03
C70	0.00E+00	6.47E-05	4.01E-06	1.43E+02	9.57E-05	3.34E-01	7.47E-05	5.91E-02	8.95E-03	1.70E-03	8.13E-03	2.77E-03	2.85E-03	1.25E-02	5.96E-04	1.00E-07	5.29E-03	1.11E-02
C71	0.00E+00	3.50E-05	2.38E-06	6.42E+01	6.32E-05	1.85E-01	4.19E-05	2.66E-02	8.36E-03	1.33E-03	4.38E-03	1.72E-03	1.77E-03	4.09E-03	2.84E-04	4.93E-08	2.61E-03	4.99E-03
C74	0.00E+00	1.25E-04	8.32E-06	2.06E+02	2.27E-04	6.35E-01	1.52E-04	9.09E-02	3.53E-02	5.35E-03	1.61E-02	6.13E-03	6.30E-03

Appendix F.3.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D42	0.00E+00	2.31E-05	1.69E-06	4.10E+01	4.75E-05	1.38E-01	2.83E-05	1.96E-02	7.33E-03	1.10E-03	2.87E-03	1.25E-03	1.29E-03	2.50E-03	1.82E-04	2.83E-08	1.58E-03	3.68E-03
D43	0.00E+00	1.18E-05	1.26E-06	4.36E+01	7.74E-05	1.97E-01	2.52E-05	1.27E-03	8.54E-03	1.27E-03	2.42E-03	1.57E-03	1.61E-03	3.02E-04	2.19E-04	4.24E-08	8.10E-04	2.10E-04
D44	0.00E+00	2.59E-05	1.83E-06	4.51E+01	5.55E-05	1.55E-01	3.28E-05	1.87E-02	8.06E-03	1.22E-03	3.40E-03	1.43E-03	1.47E-03	2.52E-03	2.03E-04	3.61E-08	1.93E-03	3.51E-03
D45	0.00E+00	7.46E-05	5.37E-06	1.32E+02	1.61E-04	4.55E-01	9.41E-05	5.69E-02	2.37E-02	3.57E-03	9.67E-03	4.15E-03	4.27E-03	7.49E-03	5.94E-04	1.01E-07	5.41E-03	1.07E-02
D46	0.00E+00	7.58E-05	5.25E-06	1.24E+02	1.40E-04	4.03E-01	9.08E-05	6.11E-02	2.18E-02	3.29E-03	9.43E-03	3.79E-03	3.90E-03	8.00E-03	5.45E-04	9.11E-08	5.53E-03	1.14E-02
D47	0.00E+00	9.11E-05	6.73E-06	1.73E+02	2.26E-04	6.23E-01	1.21E-04	6.30E-02	3.14E-02	4.73E-03	1.24E-02	5.58E-03	5.73E-03	8.47E-03	7.93E-04	1.41E-07	6.69E-03	1.18E-02
D48	0.00E+00	3.55E-05	2.76E-06	7.43E+01	1.02E-04	2.79E-01	4.97E-05	2.35E-02	1.37E-02	2.05E-03	5.02E-03	2.43E-03	2.49E-03	3.15E-03	3.45E-04	6.09E-08	2.53E-03	4.39E-03
D49	0.00E+00	1.52E-04	1.00E-05	2.27E+02	2.42E-04	7.03E-01	1.77E-04	1.20E-01	3.93E-02	5.96E-03	1.87E-02	6.91E-03	7.10E-03	1.60E-02	9.85E-04	1.73E-07	1.16E-02	2.25E-02
D50	0.00E+00	1.64E-04	1.10E-05	2.55E+02	2.86E-04	8.17E-01	1.95E-04	1.26E-01	4.47E-02	6.77E-03	2.06E-02	7.87E-03	8.09E-03	1.69E-02	1.12E-03	1.98E-07	1.25E-02	2.36E-02
D51	0.00E+00	2.42E-05	1.77E-06	4.60E+01	6.13E-05	1.67E-01	3.25E-05	1.58E-02	8.36E-03	1.26E-03	3.35E-03	1.50E-03	1.54E-03	2.17E-03	2.12E-04	3.89E-08	1.82E-03	2.95E-03
D52	0.00E+00	4.68E-05	3.04E-06	6.80E+01	7.08E-05	2.07E-01	5.36E-05	3.73E-02	1.17E-02	1.78E-03	5.69E-03	2.06E-03	2.11E-03	4.98E-03	2.94E-04	5.14E-08	3.58E-03	7.00E-03
D53	0.00E+00	4.25E-05	2.97E-06	7.29E+01	8.92E-05	2.49E-01	5.34E-05	3.07E-02	1.30E-02	1.96E-03	5.56E-03	2.31E-03	2.37E-03	4.13E-03	3.28E-04	5.86E-08	3.19E-03	5.75E-03
D54	0.00E+00	4.93E-05	3.42E-06	8.50E+01	1.07E-04	2.93E-01	6.30E-05	3.33E-02	1.52E-02	2.30E-03	6.60E-03	2.73E-03	2.80E-03	4.59E-03	3.85E-04	7.17E-08	3.80E-03	6.24E-03
D55	0.00E+00	6.23E-05	4.55E-06	1.43E+02	1.49E-04	4.41E-01	8.16E-05	4.57E-02	1.39E-02	2.37E-03	8.39E-03	3.71E-03	3.81E-03	8.06E-03	6.46E-04	1.13E-07	4.59E-03	8.53E-03
D56	0.00E+00	2.94E-05	2.22E-06	7.24E+01	8.04E-05	2.34E-01	4.06E-05	1.98E-02	7.16E-03	1.22E-03	4.16E-03	1.93E-03	1.98E-03	3.54E-03	3.32E-04	5.98E-08	2.18E-03	3.70E-03
D57	0.00E+00	7.42E-05	5.43E-06	1.72E+02	1.80E-04	5.33E-01	9.79E-05	5.36E-02	1.67E-02	2.86E-03	1.01E-02	4.47E-03	4.59E-03	9.49E-03	7.78E-04	1.38E-07	5.49E-03	1.00E-02
D58	0.00E+00	5.53E-05	4.97E-06	1.83E+02	2.49E-04	6.86E-01	9.56E-05	2.39E-02	1.94E-02	3.26E-03	9.46E-03	5.34E-03	5.48E-03	4.35E-03	8.90E-04	1.66E-07	3.98E-03	4.38E-03
D59	0.00E+00	4.36E-05	3.10E-06	9.71E+01	9.83E-05	2.93E-01	5.62E-05	3.17E-02	9.32E-03	1.60E-03	5.84E-03	2.49E-03	2.55E-03	5.69E-03	4.35E-04	7.82E-08	3.29E-03	5.93E-03
D60	0.00E+00	2.96E-05	2.44E-06	8.60E+01	1.09E-04	3.05E-01	4.65E-05	1.55E-02	8.88E-03	1.50E-03	4.69E-03	2.43E-03	2.49E-03	2.85E-03	4.10E-04	7.66E-08	2.20E-03	2.87E-03
D61	0.00E+00	5.61E-06	3.98E-07	1.26E+01	1.30E-05	3.85E-02	7.32E-06	3.95E-03	1.21E-03	2.08E-04	7.63E-04	3.25E-04	3.34E-04	7.17E-04	5.67E-05	1.04E-08	4.29E-04	7.38E-04
D62	0.00E+00	3.49E-05	2.28E-06	6.77E+01	5.90E-05	1.84E-01	4.14E-05	2.70E-02	6.20E-03	1.07E-03	4.41E-03	1.64E-03	1.68E-03	4.92E-03	2.93E-04	5.39E-08	2.73E-03	5.05E-03
D63	0.00E+00	2.15E-05	1.26E-06	2.72E+01	1.62E-05	5.74E-02	2.15E-05	1.88E-02	3.19E-03	5.21E-04	2.35E-03	6.58E-04	6.77E-04	2.89E-03	1.08E-04	1.87E-08	1.67E-03	3.54E-03
D64	0.00E+00	3.62E-06	2.51E-07	7.12E+00	8.20E-06	2.30E-02	4.72E-06	2.29E-03	9.71E-04	1.54E-04	4.95E-04	2.06E-04	2.11E-04	3.71E-04	3.24E-05	6.21E-09	2.84E-04	4.27E-04
D65	0.00E+00	3.83E-05	2.64E-06	8.21E+01	8.08E-05	2.43E-01	4.85E-05	2.77E-02	7.79E-03	1.34E-03	5.09E-03	2.08E-03	2.14E-03	5.04E-03	3.66E-04	6.75E-08	2.96E-03	5.17E-03
D66	0.00E+00	3.07E-05	2.07E-06	5.96E+01	4.95E-05	1.58E-01	3.54E-05	2.62E-02	5.45E-03	9.38E-04	3.71E-03	1.41E-03	1.45E-03	4.57E-03	2.55E-04	4.20E-08	2.26E-03	4.92E-03
D67	0.00E+00	2.95E-05	1.89E-06	5.17E+01	3.58E-05	1.23E-01	3.18E-05	2.69E-02	4.53E-03	7.86E-04	3.37E-03	1.15E-03	1.18E-03	4.67E-03	2.14E-04	3.40E-08	2.19E-03	5.04E-03
D68	0.00E+00	5.43E-05	3.65E-06	1.05E+02	8.78E-05	2.80E-01	6.28E-05	4.62E-02	9.65E-03	1.66E-03	6.58E-03	2.50E-03	2.57E-03	8.07E-03	4.52E-04	7.49E-08	4.01E-03	8.66E-03
D69	0.00E+00	9.67E-06	5.98E-07	1.65E+01	1.13E-05	3.84E-02	1.04E-05	8.37E-03	1.42E-03	2.49E-04	1.12E-03	3.65E-04	3.76E-04	1.50E-03	6.79E-05	1.18E-08	7.49E-04	1.57E-03
D70	0.00E+00	2.94E-05	1.98E-06	5.75E+01	4.85E-05	1.54E-01	3.42E-05	2.48E-02	5.28E-03	9.08E-04	3.58E-03	1.37E-03	1.41E-03	4.33E-03	2.47E-04	4.12E-08	2.17E-03	4.65E-03
D71	0.00E+00	3.55E-05	2.43E-06	6.00E+01	5.36E-05	1.67E-01	3.98E-05	3.12E-02	7.86E-03	1.25E-03	4.11E-03	1.58E-03	1.63E-03	4.58E-03	2.57E-04	3.94E-08	2.48E-03	5.85E-03
D72	0.00E+00	3.76E-05	2.47E-06	5.87E+01	4.76E-05	1.53E-01	4.05E-05	3.35E-02	7.49E-03	1.19E-03	4.24E-03	1.51E-03	1.55E-03	4.96E-03	2.46E-04	3.81E-08	2.69E-03	6.29E-03
D73	0.00E+00	1.19E-05	9.27E-07	2.56E+01	2.82E-05	8.26E-02	1.52E-05	9.94E-03	3.56E-03	5.57E-04	1.51E-03	7.17E-04	7.37E-04	1.42E-03	1.15E-04	1.73E-08	7.69E-04	1.86E-03
D74	0.00E+00	1.63E-05	1.32E-06	4.03E+01	5.19E-05	1.43E-01	2.37E-05	1.01E-02	5.79E-03	9.07E-04	2.38E-03	1.20E-03	1.23E-03	1.54E-03	1.89E-04	3.30E-08	1.14E-03	1.89E-03
D75	0.00E+00	1.00E-05	7.96E-07	2.70E+01	3.22E-05	9.18E-02	1.48E-05	6.13E-03	2.73E-03	4.63E-04	1.49E-03	7.41E-04	7.61E-04	1.10E-03	1.26E-04	2.29E-08	7.34E-04	1.14E-03
D76	0.00E+00	1.22E-05	8.91E-07	2.84E+01	3.00E-05	8.85E-02	1.62E-05	8.61E-03	2.77E-03	4.72E-04	1.68E-03	7.41E-04	7.60E-04	1.54E-03	1.29E-04	2.32E-08	9.16E-04	1.61E-03
D77	0.00E+00	1.27E-05	8.45E-07	2.49E+01	2.16E-05	6.77E-02	1.51E-05	1.02E-02	2.29E-03	3.96E-04	1.59E-03	6.01E-04	6.18E-04	1.82E-03	1.08E-04	1.91E-08	9.75E-04	1.90E-03
D78	0.00E+00	2.18E-05	1.55E-06	4.78E+01	4.73E-05	1.42E-01	2.77E-05	1.64E-02	4.57E-03	7.83E-04	2.87E-03	1.21E-03	1.25E-03	2.91E-03	2.13E-04	3.76E-08	1.63E-03	3.07E-03
D79	0.00E+00	3.09E-05	2.05E-06	5.04E+01	4.43E-05	1.38E-01	3.44E-05	2.63E-02	6.52E-03	1.04E-03	3.60E-03	1.33E-03	1.37E-03	3.93E-03	2.15E-04	3.48E-08	2.24E-03	4.93E-03
D80	0.00E+00	3.39E-05	2.32E-06	6.17E+01	6.37E-05	1.86E-01	4.12E-05	2.53E-02	8.24E-03	1.31E-03	4.31E-03	1.71E-03	1.76E-03	3.90E-03	2.73E-04	4.84E-08	2.55E-03	4.74E-03
D81	0.00E+00	3.62E-05	2.86E-06	8.59E+01	1.08E-04	2.99E-01	5.13E-05	2.33E-02	1.22E-02	1.92E-03	5.16E-03	2.54E-03	2.60E-03	3.56E-03	4.00E-04	6.98E-08	2.56E-03	4.35E-03
D82	0.00E+00	7.52E-06	7.41E-07	2.69E+01	4.14E-05	1.09E-01	1.45E-05	2.11E-03	4.08E-03	6.34E-04	1.41E-03	8.60E-04	8.82E-04	3.68E-04	1.33E-04	2.47E-08	5.24E-04	3.80E-04
D83	0.00E+00	5.52E-05	3.75E-06	1.11E+02	9.75E-05	3.05E-01	6.57E-05	4.50E-02	1.03E-02	1.76E-03	6.88E-03	2.68E-03	2.76E-03	7.93E-03	4.80E-04	8.23E-08	4.12E-03	8.43E-03
D84	0.00E+00	4.99E-05	3.55E-06	9.97E+01	8.08E-05	2.64E-01	5.65E-05	4.78E-02	9.24E-03	1.57E-03	5.73E-03	2.34E-03	2.41E-03	7.87E-03	4.24E-04	5.88E-08	3.33E-03	8.96E-03
D85	0.00E+00	5.56E-05	3.71E-06	1.05E+02	8.33E-05	2.71E-01	6.28E-05	4.88E-02	9.53E-03	1.64E-03	6.59E-03	2.45E-03	2.52E-03	8.46E-03	4.46E-04	7.18E-08	4.07E-03	9.16E-03
D86	0.00E+00	6.70E-05	4.73E-06	1.30E+02	9.94E-05	3.32E-01	7.39E-05	6.65E-02	1.19E-02	2.03E-03	7.50E-03	2.99E-03	3.08E-03	1.09E-02	5.47E-04	7.21E-08	4.42E-03	1.25E-02
D87	0.00E+00	6.87E-05	4.43E-06	1.21E+02	8.50E-05	2.89E-01	7.41E-05	6.27E-02	1.07E-02	1.85E-03	7.84E-03	2.71E-03	2.79E-03	1.09E-02	5.02E-04	7.92E-08	5.06E-03	1.18E-02
D88	0.00E+00	9.75E-05	7.07E-06	2.05E+02	1.80E-04	5.71E-01	1.15E-04	8.88E-02	1.93E-02	3.28E-03	1.17E-02	4.96E-03	5.10E-03	1.47E-02	8.87E-04	1.30E-07	6.58E-03	1.66E-02
D89	0.00E+00	1.71E-05	1.22E-06	2.91E+01	3.33E-05	9.67E-02	2.07E-05	1.42E-02	5.18E-03	7.80E-04	2.13E-03	8.92E-04	9.17E-04	1.83E-03	1.29E-04	2.08E-08	1.21E-03	2.65E-03
D90	0.00E+00	2.52E-05	1.76E-06	4.29E+01	5.22E-05	1.46E-01	3.16E-05	1.83E-02	7.65E-03	1.16E-03	3.29E-03	1.36E-03	1.39E-03	2.46E-03	1.93E-04	3.45E-08	1.90E-03	3.43E-03
D91	0.00E+00	2.31E-05	1.77E-06	5.24E+01	6.44E-05	1.79E-01	3.20E-05	1.50E-02	7.39E-03	1.16E-03	3.25E-03	1.54E-03	1.58E-03	2.31E-03	2.43E-04	4.30E-08	1.67E-03	2.80E-03
D92	0.00E+00	6.68E-06	5.48E-07	1.70E+01	2.21E-05	6.09E-02	9.91E-06	4.06E-03	2.45E-03	3.83E-04	9.89E-04	5.08E-04	5.21E-04	6.20E-04	8.00E-05	1.40E-08	4.67E-04	7.56E-04
D93	0.00E+00	3.00E-05	2.09E-06	5.51E+01	5.62E-05	1.66E-01	3.61E-05	2.34E-02	7.38E-03	1.17E-03	3.74E-03	1.52E-03	1.56E-03	3.53E-03	2.43E-04	4.12E-08	2.18E-03	4.38E-03
D94	0.00E+00	5.40E-06	4.52E-07	1.46E+01	2.00E-05	5.41E-02	8.48E-06	2.78E-03	2.13E-03	3.33E-04	8.48E-04	4.46E-04	4.58E-04	4.43E-04	6.98E-05	1.27E-08	3.90E-04	5.14E-04
E01	0.00E+00	1.59E-05	1.19E-06	3.17E+01	4.40E-05	1.18E-01	2.22E-05	9.53E-03	5.79E-03	8.73E-04	2.29E-03	1.05E-03	1.07E-03	1.34E-03	1.47E-04	2.78E-08	1.21E-03	1.78E-03
E02	0.00E+00	2.89E-05	2.07E-06	5.12E+01	6.33E-05	1.77E-01	3.67E-05	2.13E-02	9.19E-03	1.39E-03	3.79E-03	1.62E-03	1.66E-03	2.83E-03	2.31E-04	4.03E-08	2.12E-03	3.98E-03
E03	0.00E+00	1.03E-05	9.51E-07	3.56E+01	4.95E-05	1.36E-01	1.84E-05	4.05E-03	3.80E-03	6.38E-04	1.82E-03	1.05E-03	1.08E-03	7.43E-04	1.74E-04	3.26E-08	7.39E-04	7.40E-04
E04	0.00E+00	2.13E-05	1.43E-06	4.02E+01	3.14E-05	1.03E-01	2.38E-05	1.92E-02	3.65E-03	6.27E-04	2.48E-03	9.32E-04	9.59E-04	3.29E-03	1.70E-04	2.63E-08	1.52E-03	3.61E-03
E05	0.00E+00	6.71E-06	5.46E-07	1.90E+01	2.37E-05	6.68E-02	1.03E-05	3.69E-03	1.95E-03	3.30E-04	1.04E-03	5.33E-04	5.47E-04	6.73E-04	9.02E-05	1.68E-08	4.98E-04	6.84E-04
E06	0.00E+00	2.46E-05	1.86E-06	6.07E+01	6.77E-05	1.97E-01	3.41E-05	1.64E-02	6.02E-03	1.02E-03	3.49E-03	1.62E-03	1.66E-03	2.94E-03	2.79E-04	5.04E-08	1.83E-03	3.06E-03
E07	0.00E+00	1.10E-04	8.46E-06	2.27E+02	3.14E-04	8.52E-01	1.54E-04	7.09E-02	4.18E-02	6.28E-03	1.56E-02	7.45E-03	7.65E-03	9.59E-03	1.06E-03	1.89E-07	7.94E-03	1.32E-02
E08	0.00E+00	7.63E-05	5.74E-06	1.54E+02	2.14E-04	5.75E-01	1.07E-04	4.62E-02	2.82E-02	4.25E-03	1.10E-02	5.09E-03	5.22E-03	6.43E-03	7.17E-04	1.34E-07	5.75E-03	8.61E-03
E09	0.00E+00	1.08E-04	8.29E-06	2.20E+02	3.00E-04	8.17E-01	1.50E-04	7.23E-02	4.04E-02	6.07E-03	1.52E-02	7.17E-03	7.37E-03	9.72E-03	1.02E-03	1.81E-07	7.81E-03	1.35E-02
E10	0.00E+00	7.66E-05	5.96E-06	1.65E+02	2.37E-04	6.32E-01	1.11E-04	4.39E-02	3.05E-02	4.58E-03	1.13E-02	5.50E-03	5.64E-03	6.15E-03	7.75E-04	1.45E-07	5.70E-03	8.17E-03
E11	0.00E+00	1.17E-04	8.86E-06	2.36E+02	3.24E-04	8.77E-01	1.62E-04	7.48E-02	4.32E-02	6.50E-03	1.66E-02	7.73E-03	7.93E-03	1.02E-02	1.09E-03	1.99E-07	8.62E-03	1.40E-02
E12	0.00E+00	1.16E-04	8.34E-06	2.05E+02	2.49E-04	7.05E-01	1.45E-04	8.90E-02	3.68E-02	5.54E-03	1.49E-02	6.43E-03	6.60E-03	1.17E-02	9.21E-04	1.56E-07	8.34E-03	1.67E-02
E13	0.00E+00	2.56E-05	2.01E-06	6.89E+01	8.30E-05	2.36E-01	3.81E-05	1.48E-02	6.98E-03	1.18E-03	3.88E-03	1.90E-03	1.95E-03	2.71E-03	3.23E-04	6.05E-08	1.92E-03	2.74E-03
E14	0.00E+00	4.04E-05	3.14E-06	1.05E+02	1.21E-04	3.47E-01	5.78E-05	2.60E-02	1.05E-02	1.78E-03	5.88E-03	2.83E-03	2.91E-03	4.63E-03	4.85E-04	8.75E-08	2.97E-03	4.84E-03
E15	0.00E+00	1.42E-05	1.08E-06	3.55E+01	3.98E-05	1.16E-01	1.98E-05	9.47E-03	3.53E-03	5.99E-04	2.02E-03	9.49E-04	9.74E-04	1.69E-03	1.63E-04	2.94E-08	1.05E-03	1.77E-03
E16	0.00E+00	3.37E-05	2.55E-06	7.61E+01	7.25E-05	2.24E-01	4.16E-05	3.01E-02	7.35E-03	1.24E-03	4.16E-03	1.90E-03	1.95E-03	4.92E-03	3.35E-04	4.89E-08	2.21E-03	5.64E-03
E17	0.00E+00	1.06E-05	7.10E-07	2.21E+01	2.14E-05	6.42E-02	1.34E-05	7.40E-03	2.07E-03	3.58E-04	1.42E-03	5.56E-04	5.71E-04	1.39E-03	9.80E-05	1.90E-08	8.52E-04	1.38E-03
E18	0.00E+00	1.11E-05	1.04E-06	3.93E+01	5.54E-05	1.51E-01	2.02E-05	4.10E-03	4.23E-03	7.08E-04	1.98E-03	1.17E-03	1.20E-03	7.50E-04	1.93E-04	3.61E-08	7.87E-04	7.47E-04
E19	0.00E+00	8.23E-05	6.53E-06	1.85E+02	2.73E-04	7.22E-01	1.24E-04	4.39E-02	3.44E-02	5.16E-03	1.25E-02	6.22E-03	6.39E-03	6.25E-03	8.75E-04	1.65E-07	6.14E-03	8.17E-03
E20	0.00E+00	8.47E-05	5.79E-06	1.40E+02	1.69E-04	4.71E-01	1.05E-04	6.04E-02	2.49E-02	3.76E-03	1.11E-02	4.44E-03	4.55E-03	8.22E-03	6.28E-04	1.15E-07	6.50E-03	1.13E-02
E21	0.00E+00	1.19E-06	8.49E-08	2.40E+00	1.98E-06	6.42E-03	1.36E-06	1.13E-03	2.23E-04	3.80E-05	1.39E-04	5.67E-05	5.84E-05	1.86E-04	1.03E-05	1.45E-09	8.02E-05	2.11E-04
E22	0.00E+00	1.38E-05	9.74E-07	2.87E+01	2.57E-05	8.03E-02	1.65E-05	1.18E-02	2.69E-03	4.59E-04	1.70E-03	6.98E-04	7.18E-04	2.01E-03	1.25E-04	1.98E-08	9.78E-04	2.21E-03
E23	0.00E+00	5.54E-05	3.27E-06	8.25E+01	3.83E-05	1.56E-01	5.42E-05	5.32E-02	6.68E-03	1.18E-03	5.90E-03	1.64E-03	1.69E-03	9.35E-03	3.20E-04	5.00E-08	4.21E-03	1.00E-02
E24	0.00E+00	4.20E-05	3.20E-06	1.04E+02	1.16E-04	3.37E-01	5.81E-05	2.88E-02	1.03E-02	1.76E-03	5.92E-03	2.77E-03	2.85E-03	5.08E-03	4.78E-04	8.48E-08	3.07E-03	5.37E-03
E25	0.00E+00	2.94E-05	2.05E-06	5.25E+01	5.04E-05	1.53E-01	3.42E-05	2.48E-02	6.97E-03	1.10E-03	3.52E-03	1.41E-03	1.45E-03	3.66E-03	2.28E-04	3.61E-08	2.07E-03	4.65E-03
E26	0.00E+00	2.21E-05	1.88E-06	5.95E+01	7.98E-05	2.18E-01	3.40E-05	1.30E-02	8.68E-03	1.35E-03	3.35E-03	1.80E-03	1.85E-03	1.96E-03	2.83E-04	4.90E-08	1.51E-03	2.41E-03
E27	0.00E+00	4.02E-05	2.59E-06	6.01E+01	4.59E-05	1.50E-01	4.24E-05	3.61E-02	7.55E-03	1.21E-03	4.47E-03	1.52E-03	1.57E-03	5.36E-03	2.49E-04	3.86E-08	2.91E-03	6.78E-03
E28	0.00E+00	1.47E-05	1.14E-06	3.41E+01	4.26E-05	1.18E-01	2.07E-05	9.34E-03	4.84E-03	7.60E-04	2.10E-03	1.01E-03	1.03E-03	1.44E-03	1.59E-04	2.82E-08	1.06E-03	1.74E-03
E29	0.00E+00	5.50E-07	5.89E-08	2.26E+00	3.64E-06	9.48E-03	1.18E-06	6.35E-05	3.48E-04	5.40E-05	1.14E-04	7.37E-05	7.55E-05	1.47E-05	1.14E-05	2.14E-09	3.81E-05	1.05E-05
E30	0.00E+00	1.76E-05	1.40E-06	4.28E+01	5.47E-05	1.51E-01	2.55E-05	1.09E-02	6.11E-03	9.58E-04	2.57E-03	1.27E-03	1.31E-03	1.68E-03	2.00E-04	3.55E-08	1.26E-03	2.03E-03
E31	0.00E+00	1.10E-06	1.18E-07	4.51E+00	7.29E-06	1.90E-02	2.36E-06	1.27E-04	6.96E-04	1.08E-04	2.27E-04	1.47E-04	1.51E-04	2.93E-05	2.28E-05	4.28E-09	7.63E-05	2.10E-05
E32	0.00E+00	2.29E-05	2.01E-06	6.70E+01	9.50E-05	2.55E-01	3.79E-05	1.07E-02	9.89E-03	1.54E-03	3.76E-03	2.07E-03	2.13E-03	1.71E-03	3.24E-04	5.90E-08	1.63E-03	1.97E-03
E33	0.00E+00	1.70E-05	1.40E-06	4.04E+01	6.11E-05	1.61E-01	2.63E-05	8.83E-03	7.59E-03	1.14E-03	2.64E-03	1.37E-03	1.41E-03	1.25E-03	1.93E-04	3.60E-08	1.24E-03	1.64E-03
E34	0.00E+00	7.34E-05	5.70E-06	1.54E+02	2.16E-04	5.83E-01	1.04E-04	4.62E-02	2.85E-02	4.28E-03	1.06E-02	5.08E-03	5.22E-03	6.29E-03	7.20E-04	1.30E-07	5.34E-03	8.62E-03
E35	0.00E+00	2.93E-05	2.15E-06	5.52E+01	7.21E-05	1.98E-01	3.89E-05	2.01E-02	1.00E-02	1.51E-03	4.00E-03	1.78E-03	1.83E-03	2.71E-03	2.52E-04	4.53E-08	2.17E-03	3.75E-03
E36	0.00E+00	6.26E-05	4.76E-06	1.26E+02	1.72E-04	4.68E-01	8.64E-05	4.11E-02	2.31E-02	3.48E-03	8.80E-03	4.12E-03	4.23E-03	5.57E-03	5.85E-04	1.05E-07	4.57E-03	7.68E-03
E37	0.00E+00	3.04E-05	2.17E-06	5.52E+01	7.12E-05	1.95E-01	3.98E-05	2.05E-02	9.94E-03	1.50E-03	4.12E-03	1.78E-03	1.83E-03	2.81E-03	2.52E-04	4.60E-08	2.30E-03	3.84E-03
E38	0.00E+00	5.96E-05	4.57E-06	1.22E+02	1.68E-04	4.57E-01	8.31E-05	3.87E-02	2.25E-02	3.38E-03	8.44E-03	4.00E-03	4.11E-03	5.24E-03	5.68E-04	1.02E-07	4.33E-03	7.23E-03
E39	0.00E+00	1.87E-05	1.47E-06	4.53E+01	5.86E-05	1.61E-01	2.73E-05	1.09E-02	6.48E-03	1.02E-03	2.77E-03	1.36E-03	1.39E-03	1.72E-03	2.13E-04	3.88E-08	1.37E-03	2.02E-03
E40	0.00E+00	1.73E-05	1.68E-06	6.01E+01	9.17E-05	2.42E-01	3.26E-05	5.35E-03	9.10E-03	1.42E-03	3.18E-03	1.92E-03	1.97E-03	9.17E-04	2.98E-04	5.50E-08	1.21E-03	9.69E-04
E41	0.00E+00	9.67E-06	9.56E-07	3.43E+01	5.25E-05	1.39E-01	1.84E-05	3.07E-03	5.21E-03	8.10E-04	1.78E-03	1.09E-03	1.12E-03

Appendix F.3.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E57	0.00E+00	1.00E-05	9.71E-07	3.47E+01	5.28E-05	1.39E-01	1.88E-05	3.21E-03	5.25E-03	8.17E-04	1.83E-03	1.11E-03	1.13E-03	5.43E-04	1.72E-04	3.16E-08	6.98E-04	5.83E-04
E58	0.00E+00	2.44E-05	1.71E-06	4.41E+01	4.33E-05	1.30E-01	2.87E-05	2.02E-02	5.88E-03	9.31E-04	2.95E-03	1.20E-03	1.23E-03	2.99E-03	1.93E-04	3.10E-08	1.72E-03	3.78E-03
E59	0.00E+00	1.12E-04	6.94E-06	1.86E+02	1.18E-04	4.17E-01	1.18E-04	1.02E-01	1.60E-02	2.79E-03	1.27E-02	4.04E-03	4.16E-03	1.79E-02	7.58E-04	1.25E-07	8.50E-03	1.91E-02
E60	0.00E+00	5.40E-05	3.97E-06	1.29E+02	1.42E-04	4.13E-01	7.38E-05	3.56E-02	1.27E-02	2.17E-03	7.62E-03	3.43E-03	3.52E-03	6.49E-03	5.92E-04	1.10E-07	4.11E-03	6.65E-03
E61	0.00E+00	1.37E-05	1.28E-06	4.86E+01	6.88E-05	1.88E-01	2.52E-05	4.62E-03	5.22E-03	8.76E-04	2.48E-03	1.45E-03	1.48E-03	8.85E-04	2.39E-04	4.56E-08	9.99E-04	8.39E-04
E62	0.00E+00	1.64E-05	1.44E-06	5.26E+01	7.04E-05	1.95E-01	2.76E-05	7.58E-03	5.54E-03	9.32E-04	2.74E-03	1.52E-03	1.56E-03	1.37E-03	2.54E-04	4.72E-08	1.18E-03	1.39E-03
E63	0.00E+00	8.95E-05	6.39E-06	1.73E+02	1.86E-04	5.41E-01	1.12E-04	6.75E-02	2.36E-02	3.72E-03	1.15E-02	4.86E-03	5.00E-03	1.02E-02	7.76E-04	1.33E-07	6.50E-03	1.26E-02
E64	0.00E+00	7.35E-05	5.20E-06	1.42E+02	1.55E-04	4.46E-01	9.22E-05	5.37E-02	1.93E-02	3.06E-03	9.54E-03	4.01E-03	4.12E-03	8.23E-03	6.38E-04	1.12E-07	5.42E-03	1.00E-02
E65	0.00E+00	4.98E-05	4.18E-06	1.33E+02	1.78E-04	4.87E-01	7.67E-05	2.81E-02	1.93E-02	3.02E-03	7.63E-03	4.02E-03	4.13E-03	4.34E-03	6.32E-04	1.12E-07	3.50E-03	5.22E-03
E66	0.00E+00	5.60E-05	4.23E-06	1.19E+02	1.36E-04	3.90E-01	7.32E-05	4.17E-02	1.66E-02	2.60E-03	7.40E-03	3.40E-03	3.49E-03	6.21E-03	5.41E-04	9.00E-08	3.91E-03	7.80E-03
E67	0.00E+00	1.41E-05	1.29E-06	4.84E+01	6.76E-05	1.85E-01	2.53E-05	5.11E-03	5.17E-03	8.69E-04	2.51E-03	1.43E-03	1.47E-03	9.83E-04	2.37E-04	4.55E-08	1.04E-03	9.32E-04
E68	0.00E+00	8.28E-05	5.53E-06	1.61E+02	1.37E-04	4.33E-01	9.67E-05	6.85E-02	1.48E-02	2.55E-03	1.02E-02	3.85E-03	3.96E-03	1.21E-02	6.94E-04	1.19E-07	6.21E-03	1.28E-02
E69	0.00E+00	1.07E-05	1.08E-06	4.04E+01	6.36E-05	1.66E-01	2.16E-05	2.15E-03	6.17E-03	9.59E-04	2.10E-03	1.31E-03	1.34E-03	4.17E-04	2.02E-04	3.80E-08	7.56E-04	3.79E-04
E70	0.00E+00	2.90E-05	2.60E-06	9.04E+01	1.34E-04	3.55E-01	5.11E-05	1.00E-02	1.35E-02	2.11E-03	5.07E-03	2.86E-03	2.93E-03	1.76E-03	4.44E-04	8.42E-08	2.14E-03	1.83E-03
E71	0.00E+00	2.08E-05	2.14E-06	8.02E+01	1.27E-04	3.32E-01	4.24E-05	4.02E-03	1.23E-02	1.91E-03	4.10E-03	2.60E-03	2.66E-03	7.69E-04	4.02E-04	7.50E-08	1.44E-03	7.05E-04
E72	0.00E+00	2.98E-05	2.79E-06	9.96E+01	1.51E-04	3.98E-01	5.51E-05	8.73E-03	1.50E-02	2.34E-03	5.44E-03	3.18E-03	3.26E-03	1.58E-03	4.92E-04	9.33E-08	2.18E-03	1.58E-03
E73	0.00E+00	1.67E-05	1.32E-06	3.56E+01	4.90E-05	1.34E-01	2.36E-05	1.13E-02	6.56E-03	9.85E-04	2.37E-03	1.16E-03	1.19E-03	1.50E-03	1.65E-04	2.88E-08	1.18E-03	2.11E-03
E74	0.00E+00	6.82E-06	7.13E-07	2.42E+01	4.24E-05	1.08E-01	1.41E-05	1.18E-03	4.73E-03	7.06E-04	1.35E-03	8.66E-04	8.88E-04	2.23E-04	1.21E-04	2.32E-08	4.65E-04	2.06E-04
E75	0.00E+00	5.33E-05	4.25E-06	1.30E+02	1.54E-04	4.31E-01	7.43E-05	3.73E-02	1.80E-02	2.83E-03	7.42E-03	3.67E-03	3.77E-03	5.54E-03	6.05E-04	1.00E-07	3.65E-03	6.96E-03
E76	0.00E+00	9.07E-05	7.15E-06	2.15E+02	2.48E-04	7.00E-01	1.23E-04	6.63E-02	2.96E-02	4.65E-03	1.23E-02	6.01E-03	6.17E-03	9.77E-03	9.92E-04	1.62E-07	6.16E-03	1.24E-02
E77	0.00E+00	6.31E-05	5.10E-06	1.58E+02	1.90E-04	5.30E-01	8.94E-05	4.34E-02	2.20E-02	3.46E-03	8.89E-03	4.49E-03	4.61E-03	6.44E-03	7.39E-04	1.22E-07	4.28E-03	8.10E-03
E78	0.00E+00	1.01E-04	8.02E-06	2.44E+02	2.86E-04	8.03E-01	1.39E-04	7.20E-02	3.37E-02	5.30E-03	1.39E-02	6.86E-03	7.05E-03	1.06E-02	1.13E-03	1.86E-07	6.87E-03	1.34E-02
E79	0.00E+00	4.68E-05	3.94E-06	1.36E+02	1.83E-04	4.88E-01	7.58E-05	2.14E-02	1.93E-02	3.03E-03	7.60E-03	4.03E-03	4.13E-03	3.55E-03	6.55E-04	1.21E-07	3.47E-03	3.94E-03
E80	0.00E+00	3.18E-05	2.21E-06	5.97E+01	5.90E-05	1.73E-01	3.82E-05	2.49E-02	7.83E-03	1.24E-03	3.96E-03	1.60E-03	1.64E-03	3.77E-03	2.64E-04	4.44E-08	2.32E-03	4.67E-03
E81	0.00E+00	2.95E-07	3.15E-08	1.09E+00	1.94E-06	4.93E-03	6.29E-07	3.16E-05	2.13E-04	3.18E-05	6.04E-05	3.92E-05	4.02E-05	7.55E-06	5.48E-06	1.06E-09	2.02E-05	5.26E-06
E82	0.00E+00	8.60E-06	7.96E-07	2.52E+01	4.16E-05	1.08E-01	1.54E-05	2.94E-03	4.84E-03	7.23E-04	1.52E-03	8.82E-04	9.05E-04	4.56E-04	1.24E-04	2.36E-08	6.13E-04	5.39E-04
E83	0.00E+00	1.19E-05	1.16E-06	4.14E+01	6.31E-05	1.67E-01	2.24E-05	3.81E-03	6.27E-03	9.75E-04	2.18E-03	1.32E-03	1.35E-03	6.40E-04	2.05E-04	3.76E-08	8.24E-04	6.91E-04
E84	0.00E+00	1.03E-05	1.06E-06	3.93E+01	6.19E-05	1.62E-01	2.08E-05	2.33E-03	6.03E-03	9.35E-04	2.00E-03	1.27E-03	1.30E-03	4.18E-04	1.97E-04	3.63E-08	7.02E-04	4.14E-04
E85	0.00E+00	8.50E-05	7.02E-06	2.03E+02	3.06E-04	8.09E-01	1.32E-04	4.45E-02	3.80E-02	5.71E-03	1.32E-02	6.87E-03	7.04E-03	6.28E-03	9.68E-04	1.80E-07	6.17E-03	8.26E-03
E86	0.00E+00	8.29E-05	7.33E-06	2.23E+02	3.55E-04	9.28E-01	1.40E-04	3.60E-02	4.24E-02	6.35E-03	1.38E-02	7.69E-03	7.89E-03	5.25E-03	1.08E-03	2.03E-07	5.91E-03	6.65E-03
E87	0.00E+00	1.31E-04	8.58E-06	1.96E+02	2.13E-04	6.11E-01	1.53E-04	1.01E-01	3.40E-02	5.16E-03	1.63E-02	6.01E-03	6.17E-03	1.36E-02	8.54E-04	1.53E-07	1.01E-02	1.89E-02
E88	0.00E+00	1.11E-04	8.26E-06	2.18E+02	2.96E-04	8.01E-01	1.53E-04	7.04E-02	3.97E-02	5.99E-03	1.57E-02	7.13E-03	7.32E-03	9.72E-03	1.01E-03	1.86E-07	8.36E-03	1.32E-02
E89	0.00E+00	6.52E-06	6.22E-07	2.05E+01	3.51E-05	8.96E-02	1.25E-05	1.39E-03	3.96E-03	5.92E-04	1.23E-03	7.30E-04	7.48E-04	2.59E-04	1.02E-04	2.00E-08	4.79E-04	2.49E-04
E90	0.00E+00	5.92E-06	5.40E-07	1.69E+01	2.77E-05	7.19E-02	1.04E-05	2.15E-03	3.24E-03	4.85E-04	1.03E-03	5.91E-04	6.06E-04	3.29E-04	8.29E-05	1.58E-08	4.23E-04	3.95E-04
E91	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.68E-07	2.46E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.02E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E92	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.68E-07	2.46E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.02E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E93	0.00E+00	6.38E-06	5.74E-07	1.77E+01	2.84E-05	7.41E-02	1.10E-05	2.64E-03	3.37E-03	5.05E-04	1.08E-03	6.12E-04	6.28E-04	3.88E-04	8.61E-05	1.61E-08	4.52E-04	4.87E-04
E94	0.00E+00	1.77E-05	1.40E-06	4.03E+01	6.11E-05	1.60E-01	2.72E-05	8.45E-03	7.53E-03	1.13E-03	2.76E-03	1.38E-03	1.41E-03	1.25E-03	1.93E-04	3.74E-08	1.35E-03	1.57E-03
E95	0.00E+00	4.33E-05	3.13E-06	1.01E+02	1.03E-04	3.04E-01	5.70E-05	3.09E-02	1.01E-02	1.71E-03	5.89E-03	2.57E-03	2.64E-03	5.54E-03	4.57E-04	8.05E-08	3.25E-03	5.78E-03
E96	0.00E+00	5.83E-05	4.38E-06	1.39E+02	1.42E-04	4.21E-01	7.63E-05	4.52E-02	1.41E-02	2.36E-03	7.75E-03	3.54E-03	3.63E-03	7.73E-03	6.29E-04	1.03E-07	4.12E-03	8.45E-03
F01	0.00E+00	3.84E-05	2.74E-06	6.83E+01	8.51E-05	2.37E-01	4.90E-05	2.79E-02	1.23E-02	1.85E-03	5.07E-03	2.17E-03	2.23E-03	3.73E-03	3.09E-04	5.44E-08	2.84E-03	5.21E-03
F02	0.00E+00	3.23E-05	2.61E-06	7.41E+01	1.10E-04	2.92E-01	4.89E-05	1.75E-02	1.38E-02	2.08E-03	4.93E-03	2.50E-03	2.56E-03	2.47E-03	3.52E-04	6.55E-08	2.37E-03	3.26E-03
F33	0.00E+00	8.75E-06	8.72E-07	2.87E+01	4.89E-05	1.26E-01	1.69E-05	2.33E-03	5.57E-03	8.31E-04	1.64E-03	1.01E-03	1.04E-03	3.79E-04	1.42E-04	2.70E-08	6.00E-04	4.21E-04
F34	0.00E+00	7.72E-05	5.48E-06	1.32E+02	1.54E-04	4.43E-01	9.47E-05	6.16E-02	2.35E-02	3.54E-03	9.75E-03	4.09E-03	4.20E-03	8.04E-03	5.87E-04	9.76E-08	5.55E-03	1.15E-02
F35	0.00E+00	3.63E-06	3.19E-07	1.17E+01	1.59E-05	4.37E-02	6.20E-06	1.54E-03	1.24E-03	2.08E-04	6.19E-04	3.41E-04	3.50E-04	2.90E-04	5.69E-05	1.08E-08	2.69E-04	2.84E-04
F36	0.00E+00	1.92E-05	1.50E-06	5.08E+01	6.00E-05	1.71E-01	2.81E-05	1.17E-02	5.12E-03	8.68E-04	2.86E-03	1.39E-03	1.43E-03	2.11E-03	2.37E-04	4.37E-08	1.44E-03	2.17E-03
F37	0.00E+00	8.29E-05	6.48E-06	1.76E+02	2.47E-04	6.67E-01	1.18E-04	5.23E-02	3.25E-02	4.88E-03	1.19E-02	5.80E-03	5.95E-03	7.11E-03	8.22E-04	1.48E-07	5.99E-03	9.77E-03
F38	0.00E+00	7.33E-05	5.38E-06	1.38E+02	1.78E-04	4.90E-01	9.66E-05	5.16E-02	2.49E-02	3.75E-03	9.91E-03	4.41E-03	4.53E-03	6.92E-03	6.27E-04	1.11E-07	5.38E-03	9.66E-03
F39	0.00E+00	4.76E-06	3.95E-07	1.35E+01	1.65E-05	4.68E-02	7.21E-06	2.94E-03	1.38E-03	2.33E-04	7.20E-04	3.74E-04	3.84E-04	5.09E-04	6.35E-05	1.12E-08	3.35E-04	5.45E-04
F40	0.00E+00	2.03E-05	1.81E-06	6.46E+01	8.48E-05	2.36E-01	3.36E-05	1.07E-02	6.79E-03	1.14E-03	3.31E-03	1.85E-03	1.90E-03	1.85E-03	3.10E-04	5.54E-08	1.41E-03	1.98E-03
F41	0.00E+00	1.75E-05	1.48E-06	4.55E+01	5.87E-05	1.63E-01	2.58E-05	1.17E-02	6.59E-03	1.03E-03	2.53E-03	1.35E-03	1.39E-03	1.71E-03	2.14E-04	3.53E-08	1.14E-03	2.19E-03
F42	0.00E+00	7.42E-06	7.94E-07	3.04E+01	4.91E-05	1.28E-01	1.59E-05	8.57E-04	4.70E-03	7.28E-04	1.53E-03	9.93E-04	1.02E-03	1.98E-04	1.54E-04	2.89E-08	5.14E-04	1.41E-04
F45	0.00E+00	1.19E-05	1.16E-06	4.14E+01	6.31E-05	1.67E-01	2.24E-05	3.81E-03	6.27E-03	9.75E-04	2.18E-03	1.32E-03	1.35E-03	6.40E-04	2.05E-04	3.76E-08	8.24E-04	6.91E-04
F46	0.00E+00	1.03E-05	1.06E-06	3.93E+01	6.19E-05	1.62E-01	2.08E-05	2.33E-03	6.03E-03	9.35E-04	2.00E-03	1.27E-03	1.30E-03	4.18E-04	1.97E-04	3.63E-08	7.02E-04	4.14E-04
F47	0.00E+00	1.38E-06	1.00E-07	2.46E+00	2.96E-06	8.44E-03	1.72E-06	1.10E-03	4.42E-04	6.65E-05	1.76E-04	7.66E-05	7.87E-05	1.42E-04	1.10E-05	1.81E-09	9.73E-05	2.05E-04
F48	0.00E+00	4.36E-07	3.06E-08	6.30E-01	4.86E-07	1.73E-03	4.42E-07	4.90E-04	1.08E-04	1.62E-05	4.44E-05	1.68E-05	1.74E-05	5.91E-05	2.57E-06	2.65E-10	2.71E-05	9.21E-05
F77	0.00E+00	5.30E-05	3.68E-06	1.03E+02	1.08E-04	3.09E-01	6.60E-05	3.82E-02	1.36E-02	2.17E-03	6.88E-03	2.82E-03	2.89E-03	5.93E-03	4.63E-04	8.21E-08	3.98E-03	7.14E-03
F78	0.00E+00	1.71E-05	1.75E-06	5.85E+01	1.01E-04	2.51E-01	3.42E-05	2.57E-03	1.68E-02	2.35E-03	3.29E-03	2.08E-03	2.13E-03	5.64E-04	2.91E-04	4.63E-08	1.15E-03	4.56E-04
F79	0.00E+00	2.69E-05	2.47E-06	8.40E+01	1.27E-04	3.29E-01	4.76E-05	9.90E-03	1.55E-02	2.31E-03	4.68E-03	2.70E-03	2.77E-03	1.53E-03	4.13E-04	7.30E-08	1.91E-03	1.82E-03
F80	0.00E+00	2.59E-05	2.46E-06	9.21E+01	1.34E-04	3.51E-01	4.83E-05	7.95E-03	1.34E-02	2.10E-03	4.74E-03	2.81E-03	2.88E-03	1.40E-03	4.56E-04	8.41E-08	1.86E-03	1.44E-03
F81	0.00E+00	7.35E-05	4.40E-06	9.31E+01	7.75E-05	2.37E-01	7.81E-05	6.04E-02	1.52E-02	2.32E-03	8.52E-03	2.62E-03	2.69E-03	8.13E-03	3.88E-04	6.76E-08	5.83E-03	1.13E-02
F82	0.00E+00	1.33E-05	8.92E-07	1.71E+01	2.06E-05	5.62E-02	1.52E-05	1.02E-02	4.55E-03	6.48E-04	1.58E-03	5.97E-04	6.13E-04	1.06E-03	7.56E-05	1.20E-08	9.68E-04	1.92E-03
F83	0.00E+00	1.28E-05	9.39E-07	2.73E+01	3.02E-05	8.54E-02	1.67E-05	9.14E-03	3.68E-03	5.82E-04	1.71E-03	7.56E-04	7.77E-04	1.40E-03	1.24E-04	2.14E-08	9.31E-04	1.71E-03
F84	0.00E+00	4.13E-05	2.78E-06	3.95E+01	2.15E-05	1.03E-01	3.64E-05	4.89E-02	1.02E-02	1.45E-03	3.63E-03	1.18E-03	1.22E-03	4.46E-03	1.52E-04	9.89E-09	2.41E-03	9.20E-03
F85	0.00E+00	2.68E-05	2.00E-06	5.02E+01	5.26E-05	1.58E-01	3.20E-05	2.49E-02	8.75E-03	1.31E-03	3.20E-03	1.42E-03	1.46E-03	3.10E-03	2.22E-04	3.02E-08	1.74E-03	4.67E-03
F86	0.00E+00	3.03E-05	2.30E-06	6.74E+01	7.54E-05	2.14E-01	3.99E-05	2.24E-02	9.17E-03	1.45E-03	4.03E-03	1.87E-03	1.92E-03	3.34E-03	3.08E-04	5.10E-08	2.11E-03	4.18E-03
F87	0.00E+00	8.13E-06	5.03E-07	1.15E+01	1.11E-05	3.21E-02	9.16E-06	6.17E-03	1.91E-03	2.91E-04	9.92E-04	3.33E-04	3.42E-04	8.46E-04	4.94E-05	8.92E-09	6.49E-04	1.16E-03
F88	0.00E+00	2.85E-05	1.79E-06	2.86E+01	2.68E-05	8.10E-02	2.90E-05	2.50E-02	7.34E-03	1.06E-03	3.06E-03	9.81E-04	1.01E-03	2.50E-03	1.19E-04	1.78E-08	2.05E-03	4.71E-03

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A01	110	Passenger Car	1464	0.00E+00	1.43E-05	1.55E-06	6.15E+01	1.01E-04	3.33E-01	3.22E-05	1.73E-03	3.56E-03	7.80E-04	3.14E-03	2.02E-03	2.08E-03	1.58E-04	3.15E-04	7.11E-08	1.06E-03	2.70E-04
17	A01	110	Passenger Truck	2451	0.00E+00	2.97E-05	3.18E-06	1.44E+02	2.00E-04	6.58E-01	6.45E-05	4.20E-03	6.05E-03	1.37E-03	6.23E-03	4.03E-03	4.13E-03	8.87E-04	7.27E-04	1.41E-07	2.10E-03	6.86E-04
17	A01	110	Single Unit Short Haul Truck	314	0.00E+00	2.89E-05	1.17E-06	5.39E+01	2.64E-05	1.30E-01	3.32E-05	1.40E-02	1.74E-03	5.12E-04	4.07E-03	8.54E-04	8.66E-04	5.61E-03	2.17E-04	9.66E-08	3.20E-03	2.61E-03
17	A01	110	Single Unit Long Haul Truck	14	0.00E+00	1.25E-06	4.87E-08	2.26E+00	1.06E-06	5.17E-03	1.43E-06	5.84E-04	7.80E-05	2.20E-05	1.77E-04	3.52E-05	3.58E-05	2.34E-04	9.11E-06	3.94E-09	1.41E-04	1.09E-04
17	A01	110	Combination Short Haul Truck	232	0.00E+00	4.12E-05	3.18E-06	8.14E+01	8.00E-08	6.03E-02	2.86E-05	6.63E-02	2.03E-03	5.94E-04	2.27E-03	9.15E-04	9.49E-04	1.29E-02	2.72E-04	0.00E+00	1.32E-03	1.25E-02
17	A01	110	Combination Long Haul Truck	211	0.00E+00	5.58E-05	3.54E-06	7.35E+01	2.72E-07	6.95E-02	4.36E-05	7.22E-02	1.97E-03	4.34E-04	4.43E-03	1.09E-03	1.13E-03	1.18E-02	2.46E-04	0.00E+00	3.29E-03	1.36E-02
17	A02	110	Passenger Car	1510	0.00E+00	1.47E-05	1.60E-06	6.35E+01	1.04E-04	3.43E-01	3.32E-05	1.79E-03	3.67E-03	8.04E-04	3.23E-03	2.09E-03	2.14E-03	1.63E-04	3.25E-04	7.34E-08	1.09E-03	2.79E-04
17	A02	110	Passenger Truck	2528	0.00E+00	3.06E-05	3.28E-06	1.48E+02	2.06E-04	6.78E-01	6.65E-05	4.33E-03	6.24E-03	1.41E-03	6.43E-03	4.16E-03	4.26E-03	9.15E-04	7.50E-04	1.45E-07	2.16E-03	7.08E-04
17	A02	110	Single Unit Short Haul Truck	360	0.00E+00	3.32E-05	1.34E-06	6.18E+01	3.02E-05	1.49E-01	3.81E-05	1.61E-02	1.99E-03	5.87E-04	4.66E-03	9.79E-04	9.93E-04	6.43E-03	2.49E-04	1.11E-07	3.67E-03	3.00E-03
17	A02	110	Single Unit Long Haul Truck	16	0.00E+00	1.43E-06	5.58E-08	2.59E+00	1.22E-06	5.93E-03	1.64E-06	6.69E-04	8.95E-05	2.53E-05	2.03E-04	4.04E-05	4.10E-05	2.68E-04	1.04E-05	4.52E-09	1.62E-04	1.25E-04
17	A02	110	Combination Short Haul Truck	220	0.00E+00	3.90E-05	3.01E-06	7.72E+01	7.59E-08	5.72E-02	2.71E-05	6.29E-02	1.93E-03	5.63E-04	2.15E-03	8.67E-04	9.00E-04	1.23E-02	2.58E-04	0.00E+00	1.25E-03	1.18E-02
17	A02	110	Combination Long Haul Truck	200	0.00E+00	5.29E-05	3.36E-06	6.97E+01	2.57E-07	6.59E-02	4.13E-05	6.84E-02	1.87E-03	4.11E-04	4.20E-03	1.03E-03	1.08E-03	1.12E-02	2.33E-04	0.00E+00	3.12E-03	1.29E-02
17	A03	110	Passenger Car	1931	0.00E+00	1.88E-05	2.04E-06	8.12E+01	1.34E-04	4.39E-01	4.24E-05	2.29E-03	4.69E-03	1.03E-03	4.14E-03	2.67E-03	2.74E-03	2.09E-04	4.15E-04	9.38E-08	1.40E-03	3.57E-04
17	A03	110	Passenger Truck	3234	0.00E+00	3.91E-05	4.20E-06	1.89E+02	2.64E-04	8.68E-01	8.50E-05	5.54E-03	7.98E-03	1.80E-03	8.22E-03	5.32E-03	5.45E-03	1.17E-03	9.60E-04	1.86E-07	2.77E-03	9.05E-04
17	A03	110	Single Unit Short Haul Truck	300	0.00E+00	2.76E-05	1.12E-06	5.15E+01	2.51E-05	1.24E-01	3.17E-05	1.34E-02	1.66E-03	4.89E-04	3.88E-03	8.15E-04	8.27E-04	5.35E-03	2.07E-04	9.22E-08	3.05E-03	2.49E-03
17	A03	110	Single Unit Long Haul Truck	13	0.00E+00	1.19E-06	4.64E-08	2.16E+00	1.01E-06	4.93E-03	1.36E-06	5.57E-04	7.45E-05	2.10E-05	1.69E-04	3.36E-05	3.42E-05	2.23E-04	8.69E-06	3.76E-09	1.35E-04	1.04E-04
17	A03	110	Combination Short Haul Truck	209	0.00E+00	3.71E-05	2.86E-06	7.34E+01	7.21E-08	5.43E-02	2.58E-05	5.97E-02	1.83E-03	5.35E-04	2.04E-03	8.24E-04	8.55E-04	1.17E-02	2.45E-04	0.00E+00	1.19E-03	1.13E-02
17	A03	110	Combination Long Haul Truck	190	0.00E+00	5.02E-05	3.19E-06	6.62E+01	2.45E-07	6.26E-02	3.92E-05	6.50E-02	1.78E-03	3.91E-04	3.99E-03	9.82E-04	1.02E-03	1.06E-02	2.22E-04	0.00E+00	2.96E-03	1.22E-02
17	A04	110	Passenger Car	1734	0.00E+00	1.69E-05	1.84E-06	7.29E+01	1.20E-04	3.94E-01	3.81E-05	2.05E-03	4.21E-03	9.24E-04	3.71E-03	2.40E-03	2.46E-03	1.87E-04	3.73E-04	8.43E-08	1.26E-03	3.20E-04
17	A04	110	Passenger Truck	2904	0.00E+00	3.51E-05	3.77E-06	1.70E+02	2.37E-04	7.79E-01	7.64E-05	4.98E-03	7.17E-03	1.62E-03	7.38E-03	4.77E-03	4.90E-03	1.05E-03	8.62E-04	1.67E-07	2.49E-03	8.13E-04
17	A04	110	Single Unit Short Haul Truck	352	0.00E+00	3.25E-05	1.31E-06	6.05E+01	2.96E-05	1.46E-01	3.73E-05	1.57E-02	1.95E-03	5.75E-04	4.56E-03	9.58E-04	9.72E-04	6.29E-03	2.44E-04	1.08E-07	3.59E-03	2.93E-03
17	A04	110	Single Unit Long Haul Truck	16	0.00E+00	1.40E-06	5.46E-08	2.54E+00	1.19E-06	5.80E-03	1.60E-06	6.55E-04	8.76E-05	2.47E-05	1.99E-04	3.95E-05	4.02E-05	2.62E-04	1.02E-05	4.42E-09	1.59E-04	1.22E-04
17	A04	110	Combination Short Haul Truck	211	0.00E+00	3.75E-05	2.89E-06	7.41E+01	7.28E-08	5.49E-02	2.60E-05	6.03E-02	1.85E-03	5.40E-04	2.06E-03	8.32E-04	8.63E-04	1.18E-02	2.48E-04	0.00E+00	1.20E-03	1.14E-02
17	A04	110	Combination Long Haul Truck	192	0.00E+00	5.07E-05	3.22E-06	6.69E+01	2.47E-07	6.33E-02	3.96E-05	6.57E-02	1.80E-03	3.95E-04	4.03E-03	9.92E-04	1.03E-03	1.07E-02	2.24E-04	0.00E+00	2.99E-03	1.24E-02
17	A05	110	Passenger Car	1526	0.00E+00	1.49E-05	1.62E-06	6.41E+01	1.05E-04	3.47E-01	3.35E-05	1.81E-03	3.71E-03	8.13E-04	3.27E-03	2.11E-03	2.16E-03	1.65E-04	3.28E-04	7.41E-08	1.11E-03	2.82E-04
17	A05	110	Passenger Truck	2555	0.00E+00	3.09E-05	3.32E-06	1.50E+02	2.09E-04	6.86E-01	6.72E-05	4.38E-03	6.30E-03	1.42E-03	6.50E-03	4.20E-03	4.31E-03	9.25E-04	7.58E-04	1.47E-07	2.19E-03	7.15E-04
17	A05	110	Single Unit Short Haul Truck	238	0.00E+00	2.72E-05	8.90E-07	4.10E+01	2.00E-05	9.88E-02	2.52E-05	1.06E-02	1.32E-03	3.89E-04	3.09E-03	6.48E-04	6.58E-04	4.26E-03	1.65E-04	7.33E-08	2.43E-03	1.98E-03
17	A05	110	Single Unit Long Haul Truck	11	0.00E+00	9.48E-07	3.69E-08	1.72E+00	8.05E-07	3.92E-03	1.08E-06	4.43E-04	5.92E-05	1.67E-05	1.34E-04	2.68E-05	2.72E-05	1.78E-04	6.92E-06	2.99E-09	1.07E-04	8.26E-05
17	A05	110	Combination Short Haul Truck	175	0.00E+00	3.10E-05	2.40E-06	6.14E+01	6.03E-08	4.55E-02	2.16E-05	5.00E-02	1.53E-03	4.48E-04	1.71E-03	6.90E-04	7.16E-04	9.76E-03	2.05E-04	0.00E+00	9.94E-04	9.42E-03
17	A05	110	Combination Long Haul Truck	159	0.00E+00	4.21E-05	2.67E-06	5.54E+01	2.05E-07	5.24E-02	3.28E-05	5.44E-02	1.49E-03	3.27E-04	3.34E-03	8.22E-04	8.55E-04	8.89E-03	1.86E-04	0.00E+00	2.48E-03	1.03E-02
17	A06	110	Passenger Car	1597	0.00E+00	1.56E-05	1.69E-06	6.71E+01	1.10E-04	3.63E-01	3.51E-05	1.89E-03	3.88E-03	8.50E-04	3.42E-03	2.21E-03	2.26E-03	1.73E-04	3.43E-04	7.76E-08	1.16E-03	2.95E-04
17	A06	110	Passenger Truck	2674	0.00E+00	3.24E-05	3.47E-06	1.57E+02	2.18E-04	7.17E-01	7.03E-05	4.58E-03	6.60E-03	1.49E-03	6.80E-03	4.40E-03	4.51E-03	9.68E-04	7.94E-04	1.54E-07	2.29E-03	7.48E-04
17	A06	110	Single Unit Short Haul Truck	289	0.00E+00	2.66E-05	1.08E-06	4.97E+01	2.43E-05	1.20E-01	3.06E-05	1.29E-02	1.60E-03	4.72E-04	3.74E-03	7.86E-04	7.98E-04	5.16E-03	2.00E-04	8.90E-08	2.95E-03	2.41E-03
17	A06	110	Single Unit Long Haul Truck	13	0.00E+00	1.15E-06	4.48E-08	2.08E+00	9.76E-07	4.76E-03	1.31E-06	5.38E-04	7.19E-05	2.03E-05	1.63E-04	3.24E-05	3.30E-05	2.15E-04	8.39E-06	3.63E-09	1.30E-04	1.00E-04
17	A06	110	Combination Short Haul Truck	196	0.00E+00	3.48E-05	2.68E-06	6.88E+01	6.76E-08	5.09E-02	2.42E-05	5.60E-02	1.72E-03	5.02E-04	1.91E-03	7.72E-04	8.01E-04	1.09E-02	2.30E-04	0.00E+00	1.11E-03	1.06E-02
17	A06	110	Combination Long Haul Truck	178	0.00E+00	4.71E-05	2.99E-06	6.21E+01	2.29E-07	5.87E-02	3.68E-05	6.09E-02	1.67E-03	3.66E-04	3.74E-03	9.21E-04	9.58E-04	9.96E-03	2.08E-04	0.00E+00	2.78E-03	1.15E-02
17	A07	110	Passenger Car	1511	0.00E+00	1.47E-05	1.60E-06	6.35E+01	1.04E-04	3.44E-01	3.32E-05	1.79E-03	3.67E-03	8.05E-04	3.24E-03	2.09E-03	2.14E-03	1.63E-04	3.25E-04	7.34E-08	1.10E-03	2.79E-04
17	A07	110	Passenger Truck	2531	0.00E+00	3.06E-05	3.29E-06	1.48E+02	2.07E-04	6.79E-01	6.66E-05	4.34E-03	6.24E-03	1.41E-03	6.43E-03	4.16E-03	4.27E-03	9.16E-04	7.51E-04	1.46E-07	2.17E-03	7.08E-04
17	A07	110	Single Unit Short Haul Truck	239	0.00E+00	2.21E-05	8.93E-07	4.11E+01	2.01E-05	9.92E-02	2.53E-05	1.07E-02	1.32E-03	3.91E-04	3.10E-03	6.51E-04	6.60E-04	4.27E-03	1.66E-04	7.36E-08	2.44E-03	1.99E-03
17	A07	110	Single Unit Long Haul Truck	11	0.00E+00	9.52E-07	3.71E-08	1.72E+00	8.08E-07	3.94E-03	1.09E-06	4.45E-04	5.95E-05	1.68E-05	1.35E-04	2.69E-05	2.73E-05	1.78E-04	6.94E-06	3.00E-09	1.08E-04	8.30E-05
17	A07	110	Combination Short Haul Truck	186	0.00E+00	3.31E-05	2.55E-06	6.54E+01	6.43E-08	4.85E-02	2.30E-05	5.33E-02	1.63E-03	4.77E-04	1.82E-03	7.35E-04	7.63E-04	1.04E-02	2.19E-04	0.00E+00	1.06E-03	1.00E-02
17	A07	110	Combination Long Haul Truck	170	0.00E+00	4.48E-05	2.84E-06	5.91E+01	2.18E-07	5.59E-02	3.50E-05	5.80E-02	1.59E-03	3.49E-04	3.56E-03	8.76E-04	9.12E-04	9.48E-03	1.98E-04	0.00E+00	2.65E-03	1.09E-02
17	A08	110	Passenger Car	1192	0.00E+00	1.16E-05	1.26E-06	5.01E+01	8.24E-05	2.71E-01	2.62E-05	1.41E-03	2.90E-03	6.35E-04	2.55E-03	1.65E-03	1.69E-03	1.29E-04	2.56E-04	5.79E-08	8.64E-04	2.20E-04
17	A08	110	Passenger Truck	1997	0.00E+00	2.42E-05	2.59E-06	1.17E+02	1.63E-04	5.36E-01	5.25E-05	3.42E-03	4.93E-03	1.11E-03	5.08E-03	3.28E-03	3.37E-03	7.23E-04	5.93E-04	1.15E-07	1.71E-03	5.59E-04
17	A08	110	Single Unit Short Haul Truck	306	0.00E+00	2.81E-05	1.14E-06	5.25E+01	2.56E-05	1.27E-01	3.23E-05	1.36E-02	1.69E-03	4.98E-04	3.96E-03	8.30E-04	8.42E-04	5.45E-03	2.11E-04	9.40E-08	3.11E-03	2.54E-03
17	A08	110	Single Unit Long Haul Truck	13	0.00E+00	1.21E-06	4.73E-08	2.20E+00	1.03E-06	5.03E-03	1.39E-06	5.68E-04	7.59E-05	2.14E-05	1.72E-04	3.43E-05	3.48E-05	2.27E-04	8.86E-06	3.83E-09	1.37E-04	1.06E-04
17	A08	110	Combination Short Haul Truck	214	0.00E+00	3.81E-05	2.94E-06	7.54E+01	7.41E-08	5.58E-02	2.65E-05	6.14E-02	1.88E-03	5.50E-04	2.10E-03	8.47E-04	8.78E-04	1.20E-02	2.52E-04	0.00E+00	1.22E-03	1.16E-02
17	A08	110	Combination Long Haul Truck	196	0.00E+00	5.16E-05	3.28E-06	6.80E+01	2.51E-07	6.44E-02	4.03E-05	6.68E-02	1.83E-03	4.02E-04	4.10E-03	1.01E-03	1.05E-03	1.09E-02	2.28E-04	0.00E+00	3.05E-03	1.26E-02
17	A09	110	Passenger Car	1556	0.00E+00	1.52E-05	1.65E-06	6.54E+01	1.08E-04	3.54E-01	3.42E-05	1.84E-03	3.78E-03	8.29E-04	3.33E-03	2.15E-03	2.21E-03	1.68E-04	3.35E-04	7.56E-08	1.13E-03	2.87E-04
17	A09	110	Passenger Truck	2605	0.00E+00	3.15E-05	3.38E-06	1.53E+02	2.13E-04	6.99E-01	6.85E-05	4.47E-03	6.43E-03	1.45E-03	6.62E-03	4.28E-03	4.39E-03	9.43E-04	7.73E-04	1.50E-07	2.23E-03	7.29E-04
17	A09	110	Single Unit Short Haul Truck	280	0.00E+00	2.58E-05	1.04E-06	4.80E+01	2.35E-05	1.16E-01	2.96E-05	1.25E-02	1.55E-03	4.56E-04	3.62E-03	7.60E-04	7.71E-04	4.99E-03	1.93E-04	8.60E-08	2.85E-03	2.33E-03
17	A09	110	Single Unit Long Haul Truck	12	0.00E+00	1.11E-06	4.33E-08	2.01E+00	9.44E-07	4.60E-03	1.27E-06	5.20E-04	6.95E-05	1.96E-05	1.58E-04	3.14E-05	3.19E-05	2.08E-04	8.11E-06	3.51E-09	1.26E-04	9.69E-05
17	A09	110	Combination Short Haul Truck	222	0.00E+00	3.95E-05	3.05E-06	7.81E+01	7.68E-08	5.79E-02	2.75E-05	6.36E-02	1.95E-03	5.70E-04	2.18E-03	8.78E-04	9.11E-04	1.24E-02	2.61E-04	0.00E+00	1.26E-03	1.20E-02
17	A09	110	Combination Long Haul Truck	203	0.00E+00	5.35E-05	3.40E-06	7.05E+01	2.60E-07	6.67E-02	4.18E-05	6.93E-02	1.89E-03	4.16E-04	4.25E-03	1.05E-03	1.09E-03	1.13E-02	2.36E-04	0.00E+00	3.16E-03	1.30E-02
17	A10	110	Passenger Car	1366	0.00E+00	1.33E-05	1.45E-06	5.74E+01	9.45E-05	3.11E-01	3.00E-05	1.62E-03	3.32E-03	7.28E-04	2.93E-03	1.89E-03	1.94E-03	1.48E-04	2.94E-04	6.64E-08	9.90E-04	2.52E-04
17	A10	110	Passenger Truck	2288	0.00E+00	2.77E-05	2.97E-06	1.34E+02	1.87E-04	6.14E-01	6.02E-05	3.92E-03	5.65E-03	1.28E-03	5.82E-03	3.76E-03	3.86E-03	8.28E-04	6.79E-04	1.32E-07	1.96E-03	6.40E-04
17	A10	110	Single Unit Short Haul Truck	369	0.00E+00	3.40E-05	1.38E-06	6.33E+01	3.09E-05	1.53E-01	3.90E-05	1.65E-02	2.04E-03	6.01E-04	4.77E-03	1.00E-03	1.02E-03	6.58E-03	2.55E-04	1.13E-07	3.76E-03	3.07E-03
17	A10	110	Single Unit Long Haul Truck	16	0.00E+00	1.47E-06	5.71E-08	2.65E+00	1.24E-06	6.07E-03	1.67E-06	6.85E-04	9.16E-05	2.59E-05	2.08E-04	4.14E-05	4.20E-05	2.75E-04	1.07E-05	4.63E-09	1.66E-04	1.28E-04
17	A10	110	Combination Short Haul Truck	263	0.00E+00	4.68E-05	3.61E-06	9.25E+01	9.09E-08	6.85E-02	3.25E-05	7.53E-02	2.31E-03	6.75E-04	2.57E-03	1.04E-03	1.08E-03	1.47E-02	3.09E-04	0.00E+00	1.50E-03	1.42E-02
17	A10	110	Combination Long Haul Truck	240	0.00E+00	6.33E-05	4.02E-06	8.35E+01	3.08E-07	7.90E-02	4.95E-05	8.20E-02	2.24E-03	4.93E-04	5.03E-03	1.24E-03	1.29E-03	1.34E-02	2.80E-04	0.00E+00	3.74E-03	1.54E-02
17	A11	110	Passenger Car	1507	0.00E+00	1.47E-05	1.60E-06	6.34E+01	1.04E-04	3.43E-01	3.31E-05	1.78E-03	3.66E-03	8.03E-04	3.23E-03	2.08E-03	2.14E-03	1.63E-04	3.24E-04	7.33E-08	1.09E-03	2.78E-04
17	A11	110	Passenger Truck	2525	0.00E+00	3.05E-05	3.28E-06	1.48E+02	2.06E-04	6.77E-01	6.64E-05	4.33E-03	6.23E-03	1.41E-03	6.42E-03	4.15E-03	4.26E-03	9.14E-04	7.49E-04	1.45E-07	2.16E-03	7.07E-04
17	A11	110	Single Unit Short Haul Truck	325	0.00E+00	2.99E-05	1.21E-06	5.58E+01	2.72E-05	1.35E-01	3.43E-05	1.45E-02	1.80E-03	5.30E-04	4.20E-03	8.82E-04	8.95E-04	5.80E-03	2.24E-04	9.99E-08	3.31E-03	2.70E-03
17	A11	110	Single Unit Long Haul Truck	14	0.00E+00	1.29E-06	5.03E-08	2.34E+00	1.10E-06	5.34E-03	1.47E-06	6.03E-04	8.07E-05	2.28E-05	1.83E-04	3.64E-05	3.70E-05	2.42E-04	9.42E-06	4.07E-09	1.46E-04	1.13E-04
17	A11	110	Combination Short Haul Truck	271	0.00E+00	4.82E-05	3.72E-06	9.52E+01	9.36E-08	7.05E-02	3.35E-05	7.75E-02	2.38E-03	6.95E-04	2.65E-03	1.07E-03	1.11E-03	1.51E-02	3.18E-04	0.00E+00	1.54E-03	1.46E-02
17	A11	110	Combination Long Haul Truck	247	0.00E+00	6.52E-05	4.14E-06	8.59E+01	3.17E-07	8.13E-02	5.09E-05	8.44E-02	2.31E-03	5.07E-04	5.18E-03	1.28E-03	1.33E-03	1.38E-02	2.88E-04	0.00E+00	3.85E-03	1.59E-02
17	A12	110	Passenger Car	1746	0.00E+00	1.70E-05	1.85E-06	7.34E+01	1.21E-04	3.97E-01	3.84E-05	2.07E-03	4.24E-03	9.30E-04	3.74E-03	2.41E-03	2.48E-03	1.89E-04	3.76E-04	8.48E-08	1.27E-03	3.22E-04
17	A12	110	Passenger Truck	2924	0.00E+00	3.54E-05	3.80E-06	1.71E+02	2.39E-04	7.84E-01	7.69E-05	5.01E-03	7.21E-03	1.63E-03	7.43E-03	4.81E-03	4.93E-03	1.06E-03	8.68E-04	1.68E-07	2.50E-03	8.18E-04
17	A12	110	Single Unit Short Haul Truck	414	0.00E+00	3.81E-05	1.54E-06	7.10E+01	3.47E-05	1.71E-01	4.37E-05	1.85E-02	2.29E-03	6.75E-04	5.36E-03	1.12E-03	1.14E-03	7.39E-03	2.86E-04	1.27E-07	4.22E-03	3.44E-03
17	A12	110	Single Unit Long Haul Truck	18	0.00E+00	1.65E-06	6.41E-08	2.98E+00	1.40E-06	6.81E-03	1.88E-06	7.69E-04	1.03E-04	2.90E-05	2.33E-04	4.64E-05	4.71E-05	3.08E-04	1.20E-05	5.19E-09	1.86E-04	1.43E-04
17	A12	110	Combination Short Haul Truck	316	0.00E+00	5.62E-05	4.34E-06	1.11E+02	1.09E-07	8.24E-02	3.91E-05	9.06E-02	2.78E-03	8.11E-04	3.10E-03	1.25E-03	1.30E-03	1.77E-02	3.72E-04	0.00E+00	1.80E-03	1.71E-02
17	A12	110	Combination Long Haul Truck	289	0.00E+00	7.62E-05	4.83E-06	1.00E+02	3.71E-07	9.50E-02	5.95E-05	9.86E-02	2.70E-03	5.92E-04	6.04E-03	1.49E-03	1.55E-03	1.61E-02	3.36E-04	0.00E+00	4.50E-03	1.86E-02
17	A13	110	Passenger Car	1702	0.00E+00	1.66E-05	1.80E-06	7.15E+01	1.18E-04	3.87E-01	3.74E-05	2.01E-03	4.13E-03	9.06E-04	3.65E-03	2.35E-03	2.41E-03	1.84E-04	3.66E-04	8.27E-08	1.23E-03	3.14E-04
17	A13	110	Passenger Truck	2849	0.00E+00	3.45E-05	3.70E-06	1.67E+02	2.33E-04	7.64E-01	7.49E-05	4.88E-03	7.03E-03	1.59E-03	7.24E-03	4.69E-03	4.80E-03	1.03E-03	8.46E-04	1.64E-07	2.44E-03	7.97E-04
17	A13	110	Single Unit Short Haul Truck	329	0.00E+00	3.03E-05	1.23E-06	5.66E+01	2.76E-05	1.36E-01	3.48E-05	1.47E-02	1.82E-03	5.37E-04	4.27E-03	8.95E-04	9.09E-04	5.88E-03	2.28E-04	1.01E-07	3.36E-03	2.74E-03
17	A13	110	Single Unit Long Haul Truck	15	0.00E+00	1.31E-06	5.10E-08	2.37E+00	1.11E-06	5.42E-03	1.50E-06	6.12E-04	8.19E-05	2.31E-05	1.86E-04	3.70E-05	3.75E-05	2.45E-04	9.55E-06	4.13E-09	1.48E-04	1.14E-04
17	A13	110	Combination Short Haul Truck	271	0.00E+00	4.82E-05	3.72E-06	9.52E+01	9.36E-08	7.05E-02	3.35E-05	7.75E-02	2.38E-03	6.95E-04	2.65E-03	1.07E-03	1.11E-03	1.51E-02	3.18E-04	0.00E+00	1.54E-03	1.46E-02
17	A13	110	Combination Long Haul Truck	247	0.00E+00	6.52E-05	4.14E-06	8.59E+01	3.17E-07	8.13E-02	5.09E-05	8.44E-02	2.31E-03	5.07E-04	5.18E-03	1.28E-03	1.33E-03	1.38E-02	2.88E-04	0.00E+00	3.85E-03	1.59E-02
17	A14	110	Passenger Car	1547	0.00E+00	1.51E-05	1.64E-06	6.50E+01	1.07E-04	3.52E-01	3.40E-05	1.83E-03	3.76E-03	8.24E-04	3.31E-03	2.14E-03	2.19E-03	1.67E-04	3.33E-04	7.52E-08	1.12E-03	2.86E-04
17	A14	110	Passenger Truck	2590	0.00E+00	3.13E-05	3.36E-06	1.52E+02	2.11E-04	6.95E-01	6.81E-05	4.44E-03	6.39E-03	1.44E-03	6.58E-03	4.26E-03	4.37E-03	9.38E-04	7.69E-04	1.49E-07	2.22E-03	7.25E-04
17	A14	110	Single Unit Short Haul Truck	441	0.00E+00	4.06E-05	1.64E-06	7.57E+01	3.70E-05	1.83E-01	4.66E-05	1.97E-02	2.44E-03	7.19E-04	5.70E-03	1.20E-03	1.21E-03	7.86E-03	3.05E-04	1.36E-07	4.49E-03	3.66E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	1.75E-06	6.82E-08	3.17E+00	1.49E-06	7.25E-03	2.00E-06	8.19E-04	1.09E-04	3.09E-05	2.48E-04	4.94E-05	5.02E-05	3.28E-04	1.28E-05	5.53E-09	1.98E-04

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A18	110	Single Unit Long Haul Truck	20	0.00E+00	1.80E-06	7.02E-08	3.26E+00	1.53E-06	7.45E-03	2.06E-06	8.42E-04	1.13E-04	3.18E-05	2.55E-04	5.08E-05	5.16E-05	3.37E-04	1.31E-05	5.68E-09	2.04E-04	1.57E-04
17	A18	110	Combination Short Haul Truck	339	0.00E+00	6.02E-05	4.65E-06	1.19E+02	1.17E-07	8.83E-02	4.19E-05	9.70E-02	2.97E-03	8.69E-04	3.32E-03	1.34E-03	1.39E-03	1.89E-02	3.98E-04	0.00E+00	1.93E-03	1.83E-02
17	A18	110	Combination Long Haul Truck	309	0.00E+00	8.16E-05	5.18E-06	1.08E+02	3.97E-07	1.02E-01	6.37E-05	1.06E-01	2.89E-03	6.35E-04	6.47E-03	1.60E-03	1.66E-03	1.73E-02	3.60E-04	0.00E+00	4.82E-03	1.99E-02
17	A19	110	Passenger Car	1250	0.00E+00	1.22E-05	1.32E-06	5.25E+01	8.64E-05	2.84E-01	2.74E-05	1.48E-03	3.04E-03	6.66E-04	2.68E-03	1.73E-03	1.77E-03	1.35E-04	2.69E-04	6.07E-08	9.05E-04	2.31E-04
17	A19	110	Passenger Truck	2092	0.00E+00	2.53E-05	2.72E-06	1.23E+02	1.71E-04	5.61E-01	5.50E-05	3.59E-03	5.16E-03	1.17E-03	5.32E-03	3.44E-03	3.53E-03	7.57E-04	6.21E-04	1.20E-07	1.79E-03	5.86E-04
17	A19	110	Single Unit Short Haul Truck	336	0.00E+00	3.10E-05	1.25E-06	5.77E+01	2.82E-05	1.39E-01	3.55E-05	1.50E-02	1.86E-03	5.48E-04	4.35E-03	9.14E-04	9.27E-04	6.00E-03	2.32E-04	1.03E-07	3.42E-03	2.80E-03
17	A19	110	Single Unit Long Haul Truck	15	0.00E+00	1.34E-06	5.21E-08	2.42E+00	1.13E-06	5.53E-03	1.53E-06	6.25E-04	8.35E-05	2.36E-05	1.90E-04	3.77E-05	3.83E-05	2.50E-04	9.75E-06	4.22E-09	1.51E-04	1.16E-04
17	A19	110	Combination Short Haul Truck	284	0.00E+00	5.05E-05	3.90E-06	9.98E+01	9.81E-08	7.40E-02	3.51E-05	8.13E-02	2.49E-03	7.28E-04	2.78E-03	1.12E-03	1.16E-03	1.59E-02	3.34E-04	0.00E+00	1.62E-03	1.53E-02
17	A19	110	Combination Long Haul Truck	259	0.00E+00	6.84E-05	4.34E-06	9.01E+01	3.33E-07	8.52E-02	5.34E-05	8.85E-02	2.42E-03	5.32E-04	5.43E-03	1.34E-03	1.39E-03	1.45E-02	3.02E-04	0.00E+00	4.03E-03	1.67E-02
17	A20	110	Passenger Car	1313	0.00E+00	1.28E-05	1.39E-06	5.52E+01	9.08E-05	2.99E-01	2.89E-05	1.55E-03	3.19E-03	7.00E-04	2.81E-03	1.81E-03	1.86E-03	1.42E-04	2.82E-04	6.38E-08	9.52E-04	2.43E-04
17	A20	110	Passenger Truck	2200	0.00E+00	2.66E-05	2.86E-06	1.29E+02	1.79E-04	5.90E-01	5.78E-05	3.77E-03	5.43E-03	1.23E-03	5.59E-03	3.62E-03	3.71E-03	7.96E-04	6.53E-04	1.26E-07	1.88E-03	6.16E-04
17	A20	110	Single Unit Short Haul Truck	430	0.00E+00	3.96E-05	1.60E-06	7.38E+01	3.61E-05	1.78E-01	4.55E-05	1.92E-02	2.38E-03	7.01E-04	5.57E-03	1.17E-03	1.19E-03	7.68E-03	2.97E-04	1.32E-07	4.38E-03	3.58E-03
17	A20	110	Single Unit Long Haul Truck	19	0.00E+00	1.71E-06	6.66E-08	3.09E+00	1.45E-06	7.08E-03	1.95E-06	7.99E-04	1.07E-04	3.02E-05	2.43E-04	4.82E-05	4.90E-05	3.20E-04	1.25E-05	5.40E-09	1.94E-04	1.49E-04
17	A20	110	Combination Short Haul Truck	323	0.00E+00	5.74E-05	4.43E-06	1.14E+02	1.12E-07	8.42E-02	3.99E-05	9.25E-02	2.84E-03	8.29E-04	3.16E-03	1.28E-03	1.32E-03	1.81E-02	3.80E-04	0.00E+00	1.84E-03	1.74E-02
17	A20	110	Combination Long Haul Truck	295	0.00E+00	7.78E-05	4.94E-06	1.03E+02	3.79E-07	9.70E-02	6.08E-05	1.01E-01	2.75E-03	6.05E-04	6.17E-03	1.52E-03	1.58E-03	1.65E-02	3.44E-04	0.00E+00	4.59E-03	1.90E-02
17	A21	110	Passenger Car	1759	0.00E+00	1.71E-05	1.86E-06	7.39E+01	1.22E-04	4.00E-01	3.86E-05	2.08E-03	4.27E-03	9.37E-04	3.77E-03	2.43E-03	2.49E-03	1.90E-04	3.78E-04	8.55E-08	1.27E-03	3.25E-04
17	A21	110	Passenger Truck	2945	0.00E+00	3.56E-05	3.83E-06	1.72E+02	2.40E-04	7.90E-01	7.75E-05	5.05E-03	7.27E-03	1.64E-03	7.49E-03	4.84E-03	4.97E-03	1.07E-03	8.74E-04	1.69E-07	2.52E-03	8.24E-04
17	A21	110	Single Unit Short Haul Truck	391	0.00E+00	3.60E-05	1.46E-06	6.71E+01	3.28E-05	1.62E-01	4.13E-05	1.74E-02	2.16E-03	6.37E-04	5.06E-03	1.06E-03	1.08E-03	6.98E-03	2.70E-04	1.20E-07	3.98E-03	3.25E-03
17	A21	110	Single Unit Long Haul Truck	17	0.00E+00	1.55E-06	6.05E-08	2.81E+00	1.32E-06	6.43E-03	1.77E-06	7.26E-04	9.71E-05	2.74E-05	2.20E-04	4.38E-05	4.45E-05	2.91E-04	1.13E-05	4.90E-09	1.76E-04	1.35E-04
17	A21	110	Combination Short Haul Truck	329	0.00E+00	5.85E-05	4.51E-06	1.16E+02	1.14E-07	8.57E-02	4.06E-05	9.42E-02	2.89E-03	8.44E-04	3.22E-03	1.30E-03	1.35E-03	1.84E-02	3.87E-04	0.00E+00	1.87E-03	1.77E-02
17	A21	110	Combination Long Haul Truck	300	0.00E+00	7.92E-05	5.03E-06	1.04E+02	3.86E-07	9.87E-02	6.18E-05	1.02E-01	2.80E-03	6.16E-04	6.28E-03	1.55E-03	1.61E-03	1.67E-02	3.50E-04	0.00E+00	4.67E-03	1.93E-02
17	A22	110	Passenger Car	1715	0.00E+00	1.67E-05	1.82E-06	7.21E+01	1.19E-04	3.90E-01	3.77E-05	2.03E-03	4.17E-03	9.14E-04	3.67E-03	2.37E-03	2.43E-03	1.85E-04	3.69E-04	8.34E-08	1.24E-03	3.17E-04
17	A22	110	Passenger Truck	2873	0.00E+00	3.48E-05	3.73E-06	1.68E+02	2.34E-04	7.71E-01	7.55E-05	4.92E-03	7.09E-03	1.60E-03	7.30E-03	4.72E-03	4.84E-03	1.04E-03	8.53E-04	1.65E-07	2.46E-03	8.04E-04
17	A22	110	Single Unit Short Haul Truck	465	0.00E+00	4.28E-05	1.73E-06	7.98E+01	3.90E-05	1.92E-01	4.91E-05	2.07E-02	2.57E-03	7.58E-04	6.01E-03	1.26E-03	1.28E-03	8.29E-03	3.21E-04	1.43E-07	4.73E-03	3.86E-03
17	A22	110	Single Unit Long Haul Truck	20	0.00E+00	1.85E-06	7.19E-08	3.34E+00	1.57E-06	7.64E-03	2.11E-06	8.63E-04	1.15E-04	3.26E-05	2.62E-04	5.21E-05	5.29E-05	3.46E-04	1.35E-05	5.83E-09	2.09E-04	1.61E-04
17	A22	110	Combination Short Haul Truck	346	0.00E+00	6.15E-05	4.75E-06	1.22E+02	1.20E-07	9.02E-02	4.28E-05	9.91E-02	3.04E-03	8.88E-04	3.39E-03	1.37E-03	1.42E-03	1.93E-02	4.07E-04	0.00E+00	1.97E-03	1.87E-02
17	A22	110	Combination Long Haul Truck	316	0.00E+00	8.34E-05	5.29E-06	1.10E+02	4.06E-07	1.04E-01	6.51E-05	1.08E-01	2.95E-03	6.48E-04	6.61E-03	1.63E-03	1.70E-03	1.76E-02	3.68E-04	0.00E+00	4.92E-03	2.03E-02
17	A23	110	Passenger Car	1851	0.00E+00	1.80E-05	1.96E-06	7.78E+01	1.28E-04	4.21E-01	4.07E-05	2.19E-03	4.50E-03	9.86E-04	3.97E-03	2.56E-03	2.62E-03	2.00E-04	3.98E-04	9.00E-08	1.34E-03	3.42E-04
17	A23	110	Passenger Truck	3100	0.00E+00	3.75E-05	4.03E-06	1.82E+02	2.53E-04	8.32E-01	8.15E-05	5.31E-03	7.65E-03	1.73E-03	7.88E-03	5.10E-03	5.23E-03	1.12E-03	9.20E-04	1.78E-07	2.65E-03	8.68E-04
17	A23	110	Single Unit Short Haul Truck	399	0.00E+00	3.68E-05	1.49E-06	6.86E+01	3.35E-05	1.65E-01	4.22E-05	1.78E-02	2.21E-03	6.51E-04	5.17E-03	1.09E-03	1.10E-03	7.13E-03	2.76E-04	1.23E-07	4.07E-03	3.32E-03
17	A23	110	Single Unit Long Haul Truck	18	0.00E+00	1.59E-06	6.19E-08	2.87E+00	1.35E-06	6.57E-03	1.81E-06	7.42E-04	9.92E-05	2.80E-05	2.25E-04	4.48E-05	4.55E-05	2.97E-04	1.16E-05	5.01E-09	1.80E-04	1.38E-04
17	A23	110	Combination Short Haul Truck	349	0.00E+00	6.20E-05	4.79E-06	1.23E+02	1.21E-07	9.08E-02	4.31E-05	9.99E-02	3.06E-03	8.95E-04	3.41E-03	1.38E-03	1.43E-03	1.95E-02	4.10E-04	0.00E+00	1.98E-03	1.88E-02
17	A23	110	Combination Long Haul Truck	318	0.00E+00	8.40E-05	5.33E-06	1.11E+02	4.09E-07	1.05E-01	6.56E-05	1.09E-01	2.97E-03	6.53E-04	6.66E-03	1.64E-03	1.71E-03	1.78E-02	3.71E-04	0.00E+00	4.96E-03	2.05E-02
17	A24	110	Passenger Car	1431	0.00E+00	1.39E-05	1.52E-06	6.02E+01	9.89E-05	3.25E-01	3.14E-05	1.69E-03	3.48E-03	7.62E-04	3.07E-03	1.98E-03	2.03E-03	1.55E-04	3.08E-04	6.96E-08	1.04E-03	2.64E-04
17	A24	110	Passenger Truck	2397	0.00E+00	2.90E-05	3.11E-06	1.40E+02	1.96E-04	6.43E-01	6.30E-05	4.11E-03	5.91E-03	1.34E-03	6.09E-03	3.94E-03	4.04E-03	8.68E-04	7.11E-04	1.38E-07	2.05E-03	6.71E-04
17	A24	110	Single Unit Short Haul Truck	403	0.00E+00	3.71E-05	1.50E-06	6.92E+01	3.38E-05	1.67E-01	4.26E-05	1.80E-02	2.23E-03	6.58E-04	5.22E-03	1.10E-03	1.11E-03	7.20E-03	2.79E-04	1.24E-07	4.11E-03	3.35E-03
17	A24	110	Single Unit Long Haul Truck	18	0.00E+00	1.60E-06	6.25E-08	2.90E+00	1.36E-06	6.64E-03	1.83E-06	7.49E-04	1.00E-04	2.83E-05	2.27E-04	4.52E-05	4.59E-05	3.00E-04	1.17E-05	5.06E-09	1.81E-04	1.40E-04
17	A24	110	Combination Short Haul Truck	312	0.00E+00	5.54E-05	4.28E-06	1.10E+02	1.08E-07	8.12E-02	3.85E-05	8.92E-02	2.73E-03	7.99E-04	3.05E-03	1.23E-03	1.28E-03	1.74E-02	3.66E-04	0.00E+00	1.77E-03	1.68E-02
17	A24	110	Combination Long Haul Truck	284	0.00E+00	7.50E-05	4.76E-06	9.89E+01	3.65E-07	9.36E-02	5.86E-05	9.71E-02	2.66E-03	5.84E-04	5.95E-03	1.47E-03	1.53E-03	1.59E-02	3.31E-04	0.00E+00	4.43E-03	1.83E-02
16	B09	100	Passenger Car	1470	0.00E+00	1.36E-05	1.47E-06	5.95E+01	9.62E-05	2.77E-01	3.06E-05	1.59E-03	4.70E-03	9.00E-04	2.98E-03	1.92E-03	1.97E-03	1.75E-04	3.04E-04	6.38E-08	1.01E-03	2.47E-04
16	B09	100	Passenger Truck	2461	0.00E+00	2.80E-05	3.00E-06	1.37E+02	1.87E-04	5.35E-01	6.04E-05	3.96E-03	8.20E-03	1.59E-03	5.82E-03	3.77E-03	3.87E-03	9.07E-04	6.94E-04	1.26E-07	1.96E-03	6.50E-04
16	B09	100	Single Unit Short Haul Truck	65	0.00E+00	6.19E-06	2.29E-07	1.06E+01	4.74E-06	2.20E-02	7.02E-06	2.74E-03	4.21E-04	1.09E-04	8.87E-04	1.64E-04	1.67E-04	1.09E-03	4.30E-05	1.76E-08	7.21E-04	5.11E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	2.69E-07	9.67E-09	4.47E-01	1.96E-07	8.98E-04	3.04E-07	1.15E-04	1.91E-05	4.73E-06	3.88E-05	6.91E-06	7.04E-06	4.55E-05	1.82E-06	7.19E-10	3.18E-05	2.14E-05
16	B09	100	Combination Short Haul Truck	75	0.00E+00	1.07E-05	7.90E-07	2.49E+01	2.84E-08	1.93E-02	7.66E-06	1.94E-02	7.25E-04	1.84E-04	6.52E-04	2.31E-04	2.40E-04	3.96E-03	8.33E-05	0.00E+00	4.12E-04	3.65E-03
16	B09	100	Combination Long Haul Truck	68	0.00E+00	1.51E-05	8.53E-07	2.26E+01	9.64E-08	2.24E-02	1.25E-05	2.07E-02	7.26E-04	1.48E-04	1.39E-03	2.75E-04	2.86E-04	3.62E-03	7.56E-05	0.00E+00	1.10E-03	3.91E-03
16	B10	100	Passenger Car	1305	0.00E+00	1.20E-05	1.31E-06	5.28E+01	8.54E-05	2.46E-01	2.71E-05	1.41E-03	4.17E-03	7.99E-04	2.65E-03	1.71E-03	1.75E-03	1.55E-04	2.70E-04	5.66E-08	8.95E-04	2.20E-04
16	B10	100	Passenger Truck	2185	0.00E+00	2.49E-05	2.66E-06	1.22E+02	1.66E-04	4.75E-01	5.36E-05	3.52E-03	7.28E-03	1.41E-03	5.17E-03	3.35E-03	3.43E-03	8.05E-04	6.16E-04	1.12E-07	1.74E-03	5.78E-04
16	B10	100	Single Unit Short Haul Truck	84	0.00E+00	8.01E-06	2.96E-07	1.38E+01	6.13E-06	2.84E-02	9.08E-06	3.55E-03	5.45E-04	1.41E-04	1.15E-03	2.12E-04	2.16E-04	1.41E-03	5.57E-05	2.27E-08	9.33E-04	6.61E-04
16	B10	100	Single Unit Long Haul Truck	4	0.00E+00	3.48E-07	1.25E-08	5.79E-01	2.54E-07	1.16E-03	3.94E-07	1.49E-04	2.48E-05	6.12E-06	5.02E-05	8.94E-06	9.11E-06	5.89E-05	2.35E-06	9.30E-10	4.11E-05	2.77E-05
16	B10	100	Combination Short Haul Truck	85	0.00E+00	1.22E-05	9.01E-07	2.84E+01	3.24E-08	2.20E-02	8.73E-06	2.21E-02	8.26E-04	2.09E-04	7.43E-04	2.63E-04	2.73E-04	4.51E-03	9.50E-05	0.00E+00	4.70E-04	4.16E-03
16	B10	100	Combination Long Haul Truck	78	0.00E+00	1.72E-05	9.72E-07	2.57E+01	1.10E-07	2.56E-02	1.42E-05	2.36E-02	8.27E-04	1.69E-04	1.58E-03	3.13E-04	3.26E-04	4.13E-03	8.62E-05	0.00E+00	1.25E-03	4.45E-03
16	B11	100	Passenger Car	798	0.00E+00	7.36E-06	7.99E-07	3.23E+01	5.22E-05	1.50E-01	1.66E-05	8.61E-04	2.55E-03	4.89E-04	1.62E-03	1.04E-03	1.07E-03	9.49E-05	1.65E-04	3.46E-08	5.47E-04	1.34E-04
16	B11	100	Passenger Truck	1336	0.00E+00	1.52E-05	1.63E-06	7.44E+01	1.01E-04	2.91E-01	3.28E-05	2.15E-03	4.45E-03	8.64E-04	3.16E-03	2.05E-03	2.10E-03	4.92E-04	3.77E-04	6.86E-08	1.06E-03	3.53E-04
16	B11	100	Single Unit Short Haul Truck	20	0.00E+00	1.91E-06	7.06E-08	3.28E+00	1.46E-06	6.78E-03	2.17E-06	8.46E-04	1.30E-04	3.36E-05	2.74E-04	5.06E-05	5.15E-05	3.36E-04	1.33E-05	5.43E-09	2.23E-04	1.58E-04
16	B11	100	Single Unit Long Haul Truck	1	0.00E+00	8.30E-08	2.99E-09	1.38E-01	6.05E-08	2.77E-04	9.39E-08	3.55E-05	5.91E-06	1.46E-06	1.20E-05	2.13E-06	2.17E-06	1.41E-05	5.61E-07	2.22E-10	9.81E-06	6.62E-06
16	B11	100	Combination Short Haul Truck	24	0.00E+00	3.44E-06	2.54E-07	8.02E+00	9.13E-09	6.20E-03	2.46E-06	6.23E-03	2.33E-04	5.91E-05	2.10E-04	7.42E-05	7.71E-05	1.27E-03	2.68E-05	0.00E+00	1.33E-04	1.17E-03
16	B11	100	Combination Long Haul Truck	22	0.00E+00	4.86E-06	2.74E-07	7.26E+00	3.10E-08	7.21E-03	4.01E-06	6.67E-03	2.33E-04	4.76E-05	4.46E-04	8.84E-05	9.21E-05	1.17E-03	2.43E-05	0.00E+00	3.54E-04	1.26E-03
16	B12	100	Passenger Car	327	0.00E+00	3.02E-06	3.28E-07	1.32E+01	2.14E-05	6.16E-02	6.80E-06	3.53E-04	1.05E-03	2.00E-04	6.63E-04	4.28E-04	4.39E-04	3.89E-05	6.76E-05	1.42E-08	2.24E-04	5.50E-05
16	B12	100	Passenger Truck	548	0.00E+00	6.23E-06	6.68E-07	3.05E+01	4.16E-05	1.19E-01	1.34E-05	8.81E-04	1.83E-03	3.54E-04	1.30E-03	8.40E-04	8.61E-04	2.02E-04	1.54E-04	2.81E-08	4.36E-04	1.45E-04
16	B12	100	Single Unit Short Haul Truck	40	0.00E+00	3.82E-06	1.41E-07	6.57E+00	2.92E-06	1.36E-02	4.33E-06	1.69E-03	2.60E-04	6.73E-05	5.48E-04	1.01E-04	1.03E-04	6.73E-04	2.66E-05	1.09E-08	4.45E-04	3.16E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	1.66E-07	5.97E-09	2.76E-01	1.21E-07	5.55E-04	1.88E-07	7.10E-05	1.18E-05	2.92E-06	2.40E-05	4.27E-06	4.35E-06	2.81E-05	1.12E-06	4.44E-10	1.96E-05	1.32E-05
16	B12	100	Combination Short Haul Truck	28	0.00E+00	4.04E-06	2.98E-07	9.41E+00	1.07E-08	7.27E-03	2.89E-06	7.31E-03	2.74E-04	6.94E-05	2.46E-04	8.71E-05	9.05E-05	1.50E-03	3.15E-05	0.00E+00	1.56E-04	1.38E-03
16	B12	100	Combination Long Haul Truck	26	0.00E+00	5.71E-06	3.22E-07	8.53E+00	3.64E-08	8.47E-03	4.71E-06	7.83E-03	2.74E-04	5.58E-05	5.24E-04	1.04E-04	1.08E-04	1.37E-03	2.86E-05	0.00E+00	4.16E-04	1.48E-03
16	B13	100	Passenger Car	695	0.00E+00	6.41E-06	6.97E-07	2.81E+01	4.55E-05	1.31E-01	1.45E-05	7.50E-04	2.22E-03	4.26E-04	1.41E-03	9.09E-04	9.33E-04	8.27E-05	1.44E-04	3.02E-08	4.77E-04	1.17E-04
16	B13	100	Passenger Truck	1165	0.00E+00	1.33E-05	1.42E-06	6.49E+01	8.84E-05	2.53E-01	2.86E-05	1.87E-03	3.88E-03	7.53E-04	2.76E-03	1.78E-03	1.83E-03	4.29E-04	3.28E-04	5.98E-08	9.26E-04	3.08E-04
16	B13	100	Single Unit Short Haul Truck	41	0.00E+00	3.91E-06	1.45E-07	6.73E+00	2.99E-06	1.39E-02	4.44E-06	1.73E-03	2.66E-04	6.89E-05	5.61E-04	1.04E-04	1.05E-04	6.89E-04	2.72E-05	1.11E-08	4.56E-04	3.23E-04
16	B13	100	Single Unit Long Haul Truck	2	0.00E+00	1.70E-07	6.11E-09	2.83E-01	1.24E-07	5.68E-04	1.92E-07	7.27E-05	1.21E-05	2.99E-06	2.45E-05	4.37E-06	4.45E-06	2.88E-05	1.15E-06	4.55E-10	2.01E-05	1.36E-05
16	B13	100	Combination Short Haul Truck	47	0.00E+00	6.66E-06	4.92E-07	1.55E+01	1.77E-08	1.20E-02	4.77E-06	1.21E-02	4.51E-04	1.14E-04	4.06E-04	1.44E-04	1.49E-04	2.47E-03	5.19E-05	0.00E+00	2.57E-04	2.27E-03
16	B13	100	Combination Long Haul Truck	42	0.00E+00	9.41E-06	5.31E-07	1.41E+01	6.00E-08	1.40E-02	7.77E-06	1.29E-02	4.52E-04	9.20E-05	8.63E-04	1.71E-04	1.78E-04	2.25E-03	4.71E-05	0.00E+00	6.85E-04	2.43E-03
16	B14	100	Passenger Car	717	0.00E+00	6.62E-06	7.19E-07	2.90E+01	4.69E-05	1.35E-01	1.49E-05	7.74E-04	2.29E-03	4.40E-04	1.45E-03	9.38E-04	9.63E-04	8.53E-05	1.48E-04	3.11E-08	4.92E-04	1.21E-04
16	B14	100	Passenger Truck	1202	0.00E+00	1.37E-05	1.46E-06	6.69E+01	9.12E-05	2.61E-01	2.95E-05	1.93E-03	4.00E-03	7.77E-04	2.84E-03	1.84E-03	1.89E-03	4.43E-04	3.39E-04	6.17E-08	9.56E-04	3.18E-04
16	B14	100	Single Unit Short Haul Truck	45	0.00E+00	4.28E-06	1.58E-07	7.35E+00	3.27E-06	1.52E-02	4.85E-06	1.89E-03	2.91E-04	7.53E-05	6.13E-04	1.13E-04	1.15E-04	7.53E-04	2.98E-05	1.21E-08	4.98E-04	3.53E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	1.86E-07	6.68E-09	3.09E-01	1.35E-07	6.21E-04	2.10E-07	7.94E-05	1.32E-05	3.27E-06	2.68E-05	4.78E-06	4.86E-06	3.14E-05	1.25E-06	4.97E-10	2.20E-05	1.48E-05
16	B14	100	Combination Short Haul Truck	41	0.00E+00	5.84E-06	4.31E-07	1.36E+01	1.55E-08	1.05E-02	4.18E-06	1.06E-02	3.95E-04	1.00E-04	3.56E-04	1.26E-04	1.31E-04	2.16E-03	4.55E-05	0.00E+00	2.25E-04	1.99E-03
16	B14	100	Combination Long Haul Truck	37	0.00E+00	8.25E-06	4.65E-07	1.23E+01	5.26E-08	1.22E-02	6.81E-06	1.13E-02	3.96E-04	8.06E-05	7.57E-04	1.50E-04	1.56E-04	1.98E-03	4.13E-05	0.00E+00	6.01E-04	2.13E-03
16	B15	100	Passenger Car	1929	0.00E+00	1.78E-05	1.93E-06	7.81E+01	1.26E-04	3.63E-01	4.01E-05	2.08E-03	6.17E-03	1.18E-03	3.91E-03	2.52E-03	2.59E-03	2.29E-04	3.99E-04	8.37E-08	1.32E-03	3.25E-04
16	B15	100	Passenger Truck	3231	0.00E+00	3.68E-05	3.94E-06	1.80E+02	2.45E-04	7.03E-01	7.93E-05	5.20E-03	1.08E-02	2.09E-03	7.65E-03	4.95E-03	5.08E-03	1.19E-03	9.11E-04	1.66E-07	2.57E-03	8.54E-04
16	B15	100	Single Unit Short Haul Truck	96	0.00E+00	9.10E-06	3.36E-07	1.56E+01	6.96E-06	3.23E-02	1.03E-05	4.03E-03	6.19E-04	1.60E-04	1.31E-03	2.41E-04	2.45E-04	1.60E-03	6.33E-05	2.58E-08	1.06E-03	7.52E-04
16	B15	100	Single Unit Long Haul Truck	4	0.00E+00	3.95E-07	1.42E-08	6.58E-01	2.88E-07	1.32E-03	4.47E-07	1.69E-04	2.81E-05	6.95E-06	5.71E-05	1.02E-05	1.03E-05	6.69E-05	2.67E-06	1.06E-09	4.67E-05	3.15E-05
16	B15	100	Combination Short Haul Truck	76	0.00E+00	1.09E-05	8.07E-07	2.54E+01	2.90E-08	1.97E-02	7.82E-06	1.98E-02	7.40E-04	1.88E-04	6.65E-04	2.36E-04	2.45E-04	4.04E-03	8.51E-05	0.00E+00	4.21E-04	3.73E-03
16	B15	100	Combination Long Haul Truck	70	0.00E+00	1.54E-05	8.70E-07	2.30E+01	9.84E-08	2.29E-02	1.27E-05	2.12E-02	7.41E-04	1.51E-04	1.42E-03	2.81E-04	2.92E-04	3.70E-03	7.72E-05	0.00E+00	1.12E-03	3.99E-03
16	B16	100	Passenger Car	1175	0.00E+00	1.08E-05	1.18E-06	4.75E+01	7.69E-05	2.21E-01	2.44E-05	1.27E-03	3.76E-03	7.20E-04	2.38E-03	1.54E-03	1.58E-03	1.40E-04	2.43E-04	5.10E-08	8.06E-04	1.98

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	C13	40	Passenger Car	187	0.00E+00	2.65E-06	2.88E-07	9.74E+00	1.88E-05	5.04E-02	5.97E-06	1.71E-04	3.22E-03	4.53E-04	5.83E-04	3.76E-04	3.86E-04	5.56E-05	4.90E-05	9.08E-09	1.97E-04	2.66E-05
50	C13	40	Passenger Truck	313	0.00E+00	5.84E-06	6.14E-07	2.12E+01	3.52E-05	8.35E-02	1.17E-05	6.57E-04	5.72E-03	7.93E-04	1.11E-03	7.24E-04	7.42E-04	1.90E-04	1.06E-04	1.54E-08	3.67E-04	1.14E-04
50	C13	40	Single Unit Short Haul Truck	12	0.00E+00	4.22E-06	1.88E-07	2.35E+00	2.92E-06	3.69E-03	4.52E-06	1.70E-03	4.90E-04	7.65E-05	5.43E-04	1.13E-04	1.15E-04	2.40E-04	9.59E-06	4.06E-09	4.28E-04	3.19E-04
50	C13	40	Single Unit Long Haul Truck	1	0.00E+00	1.85E-07	8.20E-09	1.02E-01	1.28E-07	1.60E-04	1.98E-07	7.43E-05	2.20E-05	3.41E-06	2.39E-05	4.95E-06	5.05E-06	1.04E-05	4.14E-07	1.76E-10	1.88E-05	1.39E-05
50	C13	40	Combination Short Haul Truck	12	0.00E+00	5.55E-06	4.15E-07	4.77E+00	1.37E-08	7.85E-03	3.94E-06	8.09E-03	1.12E-03	1.67E-04	3.30E-04	1.21E-04	1.25E-04	7.58E-04	1.60E-05	0.00E+00	2.05E-04	1.53E-03
50	C13	40	Combination Long Haul Truck	10	0.00E+00	7.38E-06	4.17E-07	4.58E+00	4.69E-08	9.53E-03	6.08E-06	8.54E-03	1.16E-03	1.63E-04	6.76E-04	1.34E-04	1.40E-04	7.35E-04	1.53E-05	0.00E+00	5.36E-04	1.61E-03
53	C14	70	Passenger Car	479	0.00E+00	5.11E-06	5.56E-07	2.09E+01	3.63E-05	9.80E-02	1.15E-05	4.93E-04	3.63E-03	5.69E-04	1.12E-03	7.25E-04	7.44E-04	8.14E-05	1.06E-04	2.21E-08	3.80E-04	7.69E-05
53	C14	70	Passenger Truck	802	0.00E+00	1.07E-05	1.14E-06	4.71E+01	6.86E-05	1.73E-01	2.24E-05	1.39E-03	6.49E-03	1.01E-03	2.15E-03	1.39E-03	1.43E-03	3.53E-04	2.37E-04	4.15E-08	7.17E-04	2.33E-04
53	C14	70	Single Unit Short Haul Truck	30	0.00E+00	5.23E-06	2.12E-07	4.87E+00	3.50E-06	8.82E-03	5.68E-06	2.08E-03	4.72E-04	8.66E-05	7.04E-04	1.34E-04	1.37E-04	4.94E-04	1.98E-05	7.99E-09	5.68E-04	3.89E-04
53	C14	70	Single Unit Long Haul Truck	1	0.00E+00	2.27E-07	9.16E-09	2.06E-01	1.51E-07	3.70E-04	2.47E-07	8.96E-05	2.16E-05	3.87E-06	3.07E-05	5.80E-06	5.91E-06	2.09E-05	8.40E-07	3.37E-10	2.48E-05	1.68E-05
53	C14	70	Combination Short Haul Truck	29	0.00E+00	7.40E-06	5.51E-07	1.00E+01	1.88E-08	1.07E-02	5.28E-06	1.11E-02	1.04E-03	1.74E-04	4.44E-04	1.60E-04	1.67E-04	1.59E-03	3.34E-05	0.00E+00	2.78E-04	2.09E-03
53	C14	70	Combination Long Haul Truck	26	0.00E+00	1.02E-05	5.77E-07	9.39E+00	6.37E-08	1.28E-02	8.35E-06	1.19E-02	1.09E-03	1.64E-04	9.23E-04	1.86E-04	1.93E-04	1.51E-03	3.15E-05	0.00E+00	7.30E-04	2.24E-03
50	C15	40	Passenger Car	227	0.00E+00	3.21E-06	3.49E-07	1.18E+01	2.28E-05	6.11E-02	7.24E-06	2.07E-04	3.91E-03	5.49E-04	7.06E-04	4.55E-04	4.67E-04	6.74E-05	5.94E-05	1.10E-08	2.39E-04	3.22E-05
50	C15	40	Passenger Truck	379	0.00E+00	7.08E-06	7.44E-07	2.57E+01	4.27E-05	1.01E-01	1.42E-05	7.97E-04	6.93E-03	9.62E-04	1.34E-03	8.78E-04	8.99E-04	2.30E-04	1.28E-04	1.87E-08	4.45E-04	1.38E-04
50	C15	40	Single Unit Short Haul Truck	23	0.00E+00	7.80E-06	3.47E-07	4.34E+00	5.40E-06	6.81E-03	8.34E-06	3.15E-03	9.05E-04	1.41E-04	1.00E-03	2.09E-04	2.13E-04	4.44E-04	1.77E-05	7.50E-09	7.90E-04	5.90E-04
50	C15	40	Single Unit Long Haul Truck	1	0.00E+00	3.42E-07	1.51E-08	1.88E-01	2.36E-07	2.96E-04	3.66E-07	1.37E-04	4.05E-05	6.29E-06	4.41E-05	9.14E-06	9.32E-06	1.92E-05	7.64E-07	3.26E-10	3.48E-05	2.57E-05
50	C15	40	Combination Short Haul Truck	31	0.00E+00	1.49E-05	1.11E-06	1.28E+01	3.69E-08	2.10E-02	1.06E-05	2.17E-02	3.00E-03	4.47E-04	8.85E-04	3.23E-04	3.36E-04	2.03E-03	4.28E-05	0.00E+00	5.49E-04	4.09E-03
50	C15	40	Combination Long Haul Truck	28	0.00E+00	1.98E-05	1.12E-06	1.23E+01	1.26E-07	2.55E-02	1.63E-05	2.29E-02	3.12E-03	4.38E-04	1.81E-03	3.60E-04	3.75E-04	1.97E-03	4.12E-05	0.00E+00	1.44E-03	4.32E-03
52	C16	60	Passenger Car	121	0.00E+00	1.41E-06	1.53E-07	5.46E+00	9.98E-06	2.68E-02	3.17E-06	1.20E-04	1.19E-03	1.78E-04	3.09E-04	1.99E-04	2.05E-04	2.40E-05	2.77E-05	5.64E-09	1.05E-04	1.87E-05
52	C16	60	Passenger Truck	203	0.00E+00	2.97E-06	3.15E-07	1.22E+01	1.87E-05	4.61E-02	6.15E-06	3.67E-04	2.11E-03	3.14E-04	5.87E-04	3.82E-04	3.91E-04	9.62E-05	6.11E-05	1.03E-08	1.95E-04	6.20E-05
52	C16	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
52	C16	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
52	C16	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
53	C17	70	Passenger Car	556	0.00E+00	5.93E-06	6.45E-07	2.43E+01	4.21E-05	1.14E-01	1.34E-05	5.72E-04	4.22E-03	6.60E-04	1.31E-03	8.41E-04	8.64E-04	9.45E-05	1.23E-04	2.56E-08	4.41E-04	8.93E-05
53	C17	70	Passenger Truck	931	0.00E+00	1.24E-05	1.32E-06	5.47E+01	7.96E-05	2.01E-01	2.60E-05	1.62E-03	7.53E-03	1.17E-03	2.49E-03	1.62E-03	1.66E-03	4.10E-04	2.75E-04	4.82E-08	8.33E-04	2.71E-04
53	C17	70	Single Unit Short Haul Truck	61	0.00E+00	1.08E-05	4.38E-07	1.00E+01	7.23E-06	1.82E-02	1.17E-05	4.30E-03	9.74E-04	1.79E-04	1.45E-03	2.77E-04	2.83E-04	1.02E-03	4.09E-05	1.65E-08	1.17E-03	8.04E-04
53	C17	70	Single Unit Long Haul Truck	3	0.00E+00	4.69E-07	1.89E-08	4.26E-01	3.11E-07	7.64E-04	5.10E-07	1.85E-04	4.46E-05	7.99E-06	6.35E-05	1.20E-05	1.22E-05	4.31E-05	1.73E-06	6.95E-10	5.12E-05	3.46E-05
53	C17	70	Combination Short Haul Truck	31	0.00E+00	8.08E-06	6.01E-07	1.09E+01	2.05E-08	1.17E-02	5.75E-06	1.21E-02	1.14E-03	1.90E-04	4.85E-04	1.75E-04	1.82E-04	1.73E-03	3.65E-05	0.00E+00	3.03E-04	2.28E-03
53	C17	70	Combination Long Haul Truck	29	0.00E+00	1.11E-05	6.30E-07	1.02E+01	6.94E-08	1.39E-02	9.11E-06	1.29E-02	1.19E-03	1.79E-04	1.01E-03	2.02E-04	2.11E-04	1.64E-03	3.43E-05	0.00E+00	7.96E-04	2.44E-03
52	C18	60	Passenger Car	81	0.00E+00	9.42E-07	1.02E-07	3.66E+00	6.68E-06	1.80E-02	2.12E-06	8.05E-05	7.97E-04	1.19E-04	2.07E-04	1.34E-04	1.37E-04	1.61E-05	1.85E-05	3.78E-09	7.00E-05	1.26E-05
52	C18	60	Passenger Truck	136	0.00E+00	1.99E-06	2.11E-07	8.15E+00	1.25E-05	3.09E-02	4.12E-06	2.46E-04	1.41E-03	2.10E-04	3.93E-04	2.56E-04	2.62E-04	6.45E-05	4.09E-05	6.90E-09	1.31E-04	4.15E-05
52	C18	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.39E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
52	C18	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.08E-04
52	C18	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.74E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.28E-04
50	C19	40	Passenger Car	7	0.00E+00	9.54E-08	1.04E-08	3.51E-01	6.77E-07	1.82E-03	2.15E-07	6.14E-06	1.16E-04	1.63E-05	2.10E-05	1.35E-05	1.39E-05	2.00E-06	1.76E-06	3.27E-10	7.10E-06	9.58E-07
50	C19	40	Passenger Truck	11	0.00E+00	2.10E-07	2.21E-08	7.64E-01	1.27E-06	3.01E-03	4.23E-07	2.37E-05	2.06E-04	2.86E-05	3.99E-05	2.61E-05	2.67E-05	6.83E-06	3.81E-06	5.56E-10	1.32E-05	4.10E-06
50	C20	70	Passenger Car	179	0.00E+00	1.91E-06	2.08E-07	7.81E+00	1.36E-05	3.66E-02	4.31E-06	1.84E-04	1.36E-03	2.13E-04	4.20E-04	2.71E-04	2.78E-04	3.04E-05	3.97E-05	8.25E-09	1.42E-04	2.87E-05
53	C20	70	Passenger Truck	300	0.00E+00	3.99E-06	4.25E-07	1.76E+01	2.56E-05	6.47E-02	8.39E-06	5.21E-04	2.43E-03	3.77E-04	8.02E-04	5.21E-04	5.34E-04	1.32E-04	8.86E-05	1.55E-08	2.68E-04	8.72E-05
53	C20	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
53	C20	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.66E-04
53	C20	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.85E-04
50	C21	40	Passenger Car	360	0.00E+00	5.11E-06	5.55E-07	1.88E+01	3.63E-05	9.73E-02	1.15E-05	3.29E-04	6.22E-03	8.74E-04	1.12E-03	7.24E-04	7.43E-04	1.07E-04	9.45E-05	1.75E-08	3.80E-04	5.13E-05
50	C21	40	Passenger Truck	604	0.00E+00	1.13E-05	1.18E-06	4.09E+01	6.78E-05	1.61E-01	2.26E-05	1.27E-03	1.10E-02	1.53E-03	2.14E-03	1.40E-03	1.43E-03	3.66E-04	2.04E-04	2.98E-08	7.08E-04	2.20E-04
50	C21	40	Single Unit Short Haul Truck	65	0.00E+00	2.21E-05	9.83E-07	1.23E+01	1.53E-05	1.93E-02	2.36E-05	8.91E-03	2.56E-03	4.00E-04	2.84E-03	5.92E-04	6.03E-04	1.26E-03	5.01E-05	2.13E-08	2.24E-03	1.67E-03
50	C21	40	Single Unit Long Haul Truck	3	0.00E+00	9.69E-07	4.29E-08	5.31E-01	6.69E-07	8.40E-04	1.04E-06	3.89E-04	1.15E-04	1.78E-05	1.25E-04	2.59E-05	2.64E-05	5.43E-05	2.17E-06	9.23E-10	9.85E-05	7.28E-05
50	C21	40	Combination Short Haul Truck	16	0.00E+00	7.82E-06	5.84E-07	6.72E+00	1.94E-08	1.11E-02	5.56E-06	1.14E-02	1.58E-03	2.35E-04	4.65E-04	1.70E-04	1.76E-04	1.07E-03	2.25E-05	0.00E+00	2.89E-04	2.15E-03
50	C21	40	Combination Long Haul Truck	15	0.00E+00	1.04E-05	5.87E-07	6.45E+00	6.61E-08	1.34E-02	8.57E-06	1.20E-02	1.64E-03	2.30E-04	9.52E-04	1.89E-04	1.97E-04	1.04E-03	2.16E-05	0.00E+00	7.55E-04	2.27E-03
52	C22	60	Passenger Car	105	0.00E+00	1.22E-06	1.32E-07	4.74E+00	8.65E-06	2.33E-02	2.75E-06	1.04E-04	1.03E-03	1.55E-04	2.68E-04	1.73E-04	1.77E-04	2.08E-05	2.40E-05	4.89E-09	9.07E-05	1.63E-05
52	C22	60	Passenger Truck	176	0.00E+00	2.57E-06	2.73E-07	1.06E+01	1.62E-05	4.00E-02	5.34E-06	3.18E-04	1.83E-03	2.72E-04	5.09E-04	3.31E-04	3.39E-04	8.35E-05	5.30E-05	8.94E-09	1.70E-04	5.38E-05
52	C22	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
52	C22	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
52	C22	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
53	C23	70	Passenger Car	480	0.00E+00	5.13E-06	5.57E-07	2.10E+01	3.64E-05	9.83E-02	1.16E-05	4.94E-04	3.64E-03	5.70E-04	1.13E-03	7.27E-04	7.46E-04	8.16E-05	1.07E-04	2.21E-08	3.81E-04	7.71E-05
53	C23	70	Passenger Truck	805	0.00E+00	1.07E-05	1.14E-06	4.72E+01	6.88E-05	1.74E-01	2.25E-05	1.40E-03	6.51E-03	1.01E-03	2.15E-03	1.40E-03	1.43E-03	3.55E-04	2.38E-04	4.17E-08	7.19E-04	2.34E-04
53	C23	70	Single Unit Short Haul Truck	31	0.00E+00	5.39E-06	2.19E-07	5.02E+00	3.62E-06	9.10E-03	5.87E-06	2.15E-03	4.87E-04	8.94E-05	7.27E-04	1.39E-04	1.41E-04	5.10E-04	2.04E-05	8.25E-09	5.86E-04	4.02E-04
53	C23	70	Single Unit Long Haul Truck	1	0.00E+00	2.35E-07	9.45E-09	2.13E-01	1.56E-07	3.82E-04	2.55E-07	9.24E-05	2.23E-05	4.00E-06	3.17E-05	5.98E-06	6.10E-06	2.15E-05	8.67E-07	3.48E-10	2.56E-05	1.73E-05
53	C23	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.84E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
53	C23	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.26E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
52	C24	60	Passenger Car	70	0.00E+00	8.11E-07	8.82E-08	3.15E+00	5.76E-06	1.55E-02	1.83E-06	6.93E-05	6.86E-04	1.03E-04	1.78E-04	1.15E-04	1.18E-04	1.39E-05	1.60E-05	3.26E-09	6.04E-05	1.08E-05
52	C24	60	Passenger Truck	117	0.00E+00	1.71E-06	1.82E-07	7.02E+00	1.08E-05	2.66E-02	3.55E-06	2.12E-04	1.22E-03	1.81E-04	3.39E-04	2.20E-04	2.26E-04	5.56E-05	3.53E-05	5.95E-09	1.13E-04	3.58E-05
52	C24	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
50	C25	40	Passenger Car	253	0.00E+00	3.59E-06	3.90E-07	1.32E+01	2.55E-05	6.83E-02	8.09E-06	2.31E-04	4.36E-03	6.14E-04	7.89E-04	5.09E-04	5.22E-04	7.53E-05	6.64E-05	1.23E-08	2.67E-04	3.60E-05
50	C25	40	Passenger Truck	424	0.00E+00	7.91E-06	8.32E-07	2.87E+01	4.76E-05	1.13E-01	1.59E-05	8.90E-04	7.74E-03	1.07E-03	1.50E-03	9.80E-04	1.00E-03	2.57E-04	1.43E-04	2.09E-08	4.97E-04	1.54E-04
50	C25	40	Single Unit Short Haul Truck	36	0.00E+00	1.23E-05	5.49E-07	6.87E+00	8.54E-06	1.08E-02	1.32E-05	4.98E-03	1.43E-03	2.24E-04	1.59E-03	3.31E-04	3.37E-04	7.02E-04	2.80E-05	1.19E-08	1.25E-03	9.33E-04
50	C25	40	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.40E-08	2.97E-01	3.74E-07	4.69E-04	5.79E-07	2.17E-04	6.42E-05	9.96E-06	6.98E-05	1.45E-05	1.48E-05	3.03E-05	1.21E-06	5.16E-10	5.50E-05	4.07E-05
50	C25	40	Combination Short Haul Truck	30	0.00E+00	1.44E-05	1.07E-06	1.24E+01	3.56E-08	2.03E-02	1.02E-05	2.10E-02	2.90E-03	4.32E-04	8.55E-04	3.12E-04	3.24E-04	1.96E-03	4.13E-05	0.00E+00	5.31E-04	3.95E-03
50	C25	40	Combination Long Haul Truck	27	0.00E+00	1.91E-05	1.08E-06	1.19E+01	1.21E-07	2.47E-02	1.58E-05	2.21E-02	3.01E-03	4.23E-04	1.75E-03	3.48E-04	3.62E-04	1.90E-03	3.98E-05	0.00E+00	1.39E-03	4.17E-03
53	C26	70	Passenger Car	343	0.00E+00	3.66E-06	3.98E-07	1.50E+01	2.60E-05	7.02E-02	8.26E-06	3.53E-04	2.60E-03	4.08E-04	8.06E-04	5.19E-04	5.33E-04	5.83E-05	7.61E-05	1.58E-08	2.73E-04	5.51E-05
53	C26	70	Passenger Truck	575	0.00E+00	7.65E-06	8.14E-07	3.37E+01	4.91E-05	1.24E-01	1.61E-05	9.98E-04	4.65E-03	7.23E-04	1.54E-03	9.99E-04	1.02E-03	2.53E-04	1.70E-04	2.98E-08	5.14E-04	1.67E-04
53	C26	70	Single Unit Short Haul Truck	46	0.00E+00	8.09E-06	3.29E-07	7.53E+00	5.42E-06	1.37E-02	8.80E-06	3.22E-03	7.31E-04	1.34E-04	1.09E-03	2.08E-04	2.12E-04	7.65E-04	3.06E-05	1.24E-08	8.79E-04	6.03E-04
53	C26	70	Single Unit Long Haul Truck	2	0.00E+00	3.52E-07	1.42E-08	3.19E-01	2.33E-07	5.73E-04	3.83E-07	1.39E-04	3.34E-05	6.00E-06	4.76E-05	8.98E-06	9.15E-06	3.23E-05	1.30E-06	5.21E-10	3.84E-05	2.59E-05
53	C26	70	Combination Short Haul Truck	29	0.00E+00	7.54E-06	5.61E-07	1.02E+01	1.91E-08	1.09E-02	5.37E-06	1.13E-02	1.06E-03	1.77E-04	4.52E-04	1.63E-04	1.70E-04	1.62E-03	3.41E-05	0.00E+00	2.83E-04	2.13E-03
53	C26	70	Combination Long Haul Truck	27	0.00E+00	1.03E-05	5.88E-07	9.56E+00	6.48E-08	1.30E-02	8.50E-06	1.21E-02	1.11E-03	1.67E-04	9.40E-04	1.89E-04	1.97E-04	1.53E-03	3.20E-05	0.00E+00	7.43E-04	2.28E-03
50	C27	40	Passenger Car	194	0.00E+00	2.75E-06	2.98E-07	1.01E+01	1.95E-05	5.23E-02	6.19E-06	1.77E-04	3.34E-03	4.69E-04	6.04E-04	3.89E-04	3.99E-04	5.76E-05	5.08E-05	9.41E-09	2.04E-04	2.76E-05
50	C27	40	Passenger Truck	324	0.00E+00	6.05E-06	6.36E-07	2.20E+01	3.65E-05	8.65E-02	1.22E-05	6.81E-04	5.92E-03	8.22E-04	1.15E-03	7.50E-04	7.68E-04	1.96E-04	1.10E-04	1.60E-08	3.80E-04	1.18E-04
50	C27	40	Single Unit Short Haul Truck	29	0.00E+00	9.75E-06	4.34E-07	5.43E+00	6.74E-06	8.51E-03	1.04E-05	3.93E-03	1.13E-03	1.77E-04	1.25E-03	2.61E-04	2.66E-04	5.54E-04	2.21E-05	9.38E-09	9.87E-04	7.37E-04
50	C27	40	Single Unit Long Haul Truck	1	0.00E+00	4.27E-07	1.89E-08	2.34E-01	2.95E-07	3.70E-04	4.57E-07	1.71E-04	5.07E-05	7.86E-06	5.51E-05	1.14E-05	1.16E-05	2.39E-05	9.56E-07	4.07E-10	4.34E-05	3.21E-05
50	C27	40	Combination Short Haul Truck	10	0.00E+00	5.05E-06	3.77E-07	4.34E+00	1.25E-08	7.14E-03	3.59E-06	7.36E-03	1.02E-03	1.52E-04	3.00E-04	1.10E-04	1.14E-04	6.89E-04	1.45E-05	0.00E+00	1.86E-04	1.39E-03
50	C27	40	Combination Long Haul Truck	10	0.00E+00	6.71E-06	3.79E-07	4.16E+00	4.26E-08	8.66E-03	5.53E-06	7.77E-03	1.06E-03	1.48E-04	6.14E-04	1.22E-04	1.27E-04	6.68E-04	1.40E-05	0.00E+00	4.87E-04	1.46E-03
52	C28	60	Passenger Car	369	0.00E+00	4.28E-06	4.65E-07	1.66E+01	3.04E-05	8.18E-02	9.66E-06	3.66E-04	3.62E-03	5.43E-04	9.42E-04	6.07E-04	6.23E-04	7.31E-05	8.43E-05	1.72E-08	3.19E-04	5.71E-05
52	C28	60	Passenger Truck	618	0.00E+00	9.04E-06	9.58E-07	3.71E+01	5.70E-05	1.40E-01	1.87E-05	1.12E-03	6.43E-03	9.55E-04	1.79E-03	1.16E-03	1.19E-03	2.93E-04	1.86E-04	3.14E-08	5.95E-04	1.89E-04
52	C28	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
52	C28	60	Single Unit Long Haul Truck	1	0.00E+00	3.05E-

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C32	70	Combination Short Haul Truck	44	0.00E+00	1.14E-05	8.51E-07	1.55E+01	2.91E-08	1.65E-02	8.15E-06	1.71E-02	1.61E-03	2.69E-04	6.86E-04	2.48E-04	2.57E-04	2.46E-03	5.17E-05	0.00E+00	4.29E-04	3.23E-03
53	C32	70	Combination Long Haul Truck	41	0.00E+00	1.57E-05	8.92E-07	1.45E+01	9.84E-08	1.97E-02	1.29E-05	1.83E-02	1.68E-03	2.53E-04	1.43E-03	2.87E-04	2.99E-04	2.33E-03	4.86E-05	0.00E+00	1.13E-03	3.45E-03
52	C33	60	Passenger Car	40	0.00E+00	4.64E-07	5.05E-08	1.80E+00	3.29E-06	8.87E-03	1.05E-06	3.97E-05	3.93E-04	5.89E-05	1.02E-04	6.58E-05	6.76E-05	7.93E-06	9.14E-06	1.86E-09	3.45E-05	6.19E-06
52	C33	60	Passenger Truck	67	0.00E+00	9.80E-07	1.04E-07	4.02E+00	6.18E-06	1.52E-02	2.03E-06	1.21E-04	6.97E-04	1.04E-04	1.94E-04	1.26E-04	1.29E-04	3.18E-05	2.02E-05	3.40E-09	6.45E-05	2.05E-05
52	C33	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
50	C34	40	Passenger Car	27	0.00E+00	3.82E-07	4.15E-08	1.40E+00	2.71E-06	7.26E-03	8.60E-07	2.46E-05	4.64E-04	6.53E-05	8.39E-05	5.41E-05	5.55E-05	8.00E-06	7.06E-06	1.31E-09	2.84E-05	3.83E-06
50	C34	40	Passenger Truck	45	0.00E+00	8.42E-07	8.85E-08	3.06E+00	5.07E-06	1.20E-02	1.69E-06	9.46E-05	8.23E-04	1.14E-04	1.60E-04	1.04E-04	1.07E-04	2.73E-05	1.52E-05	2.22E-09	5.29E-05	1.64E-05
50	C34	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.24E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.83E-05
50	C34	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.36E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.39E-04
50	C34	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.77E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
53	C35	70	Passenger Car	163	0.00E+00	1.74E-06	1.89E-07	7.10E+00	1.23E-05	3.33E-02	3.91E-06	1.67E-04	1.23E-03	1.93E-04	3.82E-04	2.46E-04	2.53E-04	2.76E-05	3.61E-05	7.49E-09	1.29E-04	2.61E-05
53	C35	70	Passenger Truck	272	0.00E+00	3.63E-06	3.86E-07	1.60E+01	2.33E-05	5.88E-02	7.62E-06	4.73E-04	2.20E-03	3.42E-04	7.29E-04	4.73E-04	4.85E-04	1.20E-04	8.05E-05	1.41E-08	2.44E-04	7.92E-05
53	C35	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.06E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.51E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.47E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.49E-06
53	C35	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.42E-04
53	C35	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.66E-04
50	C36	40	Passenger Car	135	0.00E+00	1.91E-06	2.08E-07	7.04E+00	1.36E-05	3.64E-02	4.31E-06	1.23E-04	2.33E-03	3.27E-04	4.21E-04	2.71E-04	2.78E-04	4.01E-05	3.54E-05	6.56E-09	1.42E-04	1.92E-05
50	C36	40	Passenger Truck	226	0.00E+00	4.22E-06	4.43E-07	1.53E+01	2.54E-05	6.03E-02	8.48E-06	4.75E-04	4.13E-03	5.73E-04	8.01E-04	5.23E-04	5.36E-04	1.37E-04	7.64E-05	1.11E-08	2.65E-04	8.22E-05
50	C36	40	Single Unit Short Haul Truck	41	0.00E+00	1.40E-05	6.21E-07	7.78E+00	9.67E-06	1.22E-02	1.49E-05	5.64E-03	1.62E-03	2.53E-04	1.80E-03	3.74E-04	3.81E-04	7.95E-04	3.17E-05	1.34E-08	1.41E-03	1.06E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	6.13E-07	2.71E-08	3.36E-01	4.23E-07	5.31E-04	6.55E-07	2.46E-04	7.26E-05	1.13E-05	7.90E-05	1.64E-05	1.67E-05	3.43E-05	1.37E-06	5.84E-10	6.23E-05	4.60E-05
50	C36	40	Combination Short Haul Truck	38	0.00E+00	1.84E-05	1.38E-06	1.58E+01	4.56E-08	2.60E-02	1.31E-05	2.69E-02	3.71E-03	5.53E-04	1.10E-03	4.00E-04	4.15E-04	2.52E-03	5.29E-05	0.00E+00	6.80E-04	5.06E-03
50	C36	40	Combination Long Haul Truck	35	0.00E+00	2.45E-05	1.38E-06	1.52E+01	1.56E-07	3.16E-02	2.02E-05	2.83E-02	3.86E-03	5.42E-04	2.24E-03	4.45E-04	4.64E-04	2.44E-03	5.09E-05	0.00E+00	1.78E-03	5.34E-03
52	C37	60	Passenger Car	62	0.00E+00	7.16E-07	7.78E-08	2.78E+00	5.08E-06	1.37E-02	1.61E-06	6.12E-05	6.06E-04	9.08E-05	1.57E-04	1.02E-04	1.04E-04	1.22E-05	1.41E-05	2.87E-09	5.33E-05	9.54E-06
52	C37	60	Passenger Truck	103	0.00E+00	1.51E-06	1.60E-07	6.20E+00	9.53E-06	2.35E-02	3.13E-06	1.87E-04	1.08E-03	1.60E-04	2.99E-04	1.94E-04	1.99E-04	4.90E-05	3.11E-05	5.25E-09	9.95E-05	3.16E-05
52	C37	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
52	C37	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.69E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.07E-05
52	C37	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.07E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
52	C37	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.46E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.22E-03
53	C38	70	Passenger Car	507	0.00E+00	5.41E-06	5.88E-07	2.21E+01	3.84E-05	1.04E-01	1.22E-05	5.21E-04	3.84E-03	6.02E-04	1.19E-03	7.67E-04	7.87E-04	8.61E-05	1.12E-04	2.33E-08	4.02E-04	8.13E-05
53	C38	70	Passenger Truck	848	0.00E+00	1.13E-05	1.20E-06	4.98E+01	7.25E-05	1.83E-01	2.37E-05	1.47E-03	6.86E-03	1.07E-03	2.27E-03	1.47E-03	1.51E-03	3.74E-04	2.51E-04	4.39E-08	7.59E-04	2.47E-04
53	C38	70	Single Unit Short Haul Truck	55	0.00E+00	9.61E-06	3.90E-07	8.95E+00	6.44E-06	1.62E-02	1.04E-05	3.83E-03	8.68E-04	1.59E-04	1.30E-03	2.47E-04	2.52E-04	9.09E-04	3.64E-05	1.47E-08	1.04E-03	7.16E-04
53	C38	70	Single Unit Long Haul Truck	2	0.00E+00	4.18E-07	1.68E-08	3.79E-01	2.77E-07	6.81E-04	4.55E-07	1.65E-04	3.97E-05	7.12E-06	5.65E-05	1.07E-05	1.09E-05	3.83E-05	1.54E-06	6.19E-10	4.56E-05	3.08E-05
53	C38	70	Combination Short Haul Truck	55	0.00E+00	1.43E-05	1.06E-06	1.93E+01	3.62E-08	2.06E-02	1.02E-05	2.14E-02	2.01E-03	3.35E-04	8.56E-04	3.09E-04	3.21E-04	3.06E-03	6.45E-05	0.00E+00	5.35E-04	4.03E-03
53	C38	70	Combination Long Haul Truck	51	0.00E+00	1.96E-05	1.11E-06	1.81E+01	1.23E-07	2.46E-02	1.61E-05	2.29E-02	2.09E-03	3.15E-04	1.78E-03	3.58E-04	3.73E-04	2.90E-03	6.06E-05	0.00E+00	1.41E-03	4.31E-03
52	C39	60	Passenger Car	87	0.00E+00	1.02E-06	1.10E-07	3.94E+00	7.21E-06	1.94E-02	2.29E-06	8.68E-05	8.59E-04	1.29E-04	2.23E-04	1.44E-04	1.48E-04	1.73E-05	2.00E-05	4.07E-09	7.55E-05	1.35E-05
52	C39	60	Passenger Truck	147	0.00E+00	2.14E-06	2.27E-07	8.79E+00	1.35E-05	3.33E-02	4.44E-06	2.65E-04	1.53E-03	2.26E-04	4.24E-04	2.76E-04	2.82E-04	6.95E-05	4.41E-05	7.44E-09	1.41E-04	4.48E-05
52	C39	60	Single Unit Short Haul Truck	17	0.00E+00	3.85E-06	1.59E-07	2.87E+00	2.55E-06	5.04E-03	4.16E-06	1.48E-03	3.97E-04	6.67E-05	5.14E-04	9.89E-05	1.01E-04	2.91E-04	1.17E-05	4.82E-09	4.13E-04	2.77E-04
52	C39	60	Single Unit Long Haul Truck	1	0.00E+00	1.68E-07	6.91E-09	1.22E-01	1.11E-07	2.14E-04	1.82E-07	6.40E-05	1.78E-05	2.96E-06	2.25E-05	4.30E-06	4.38E-06	1.24E-05	4.99E-07	2.05E-10	1.81E-05	1.20E-05
52	C39	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.27E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.15E-04
52	C39	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
50	C40	40	Passenger Car	87	0.00E+00	1.24E-06	1.35E-07	4.56E+00	8.80E-06	2.36E-02	2.80E-06	7.98E-05	1.51E-03	2.12E-04	2.73E-04	1.76E-04	1.80E-04	2.60E-05	2.29E-05	4.25E-09	9.22E-05	1.25E-05
50	C40	40	Passenger Truck	147	0.00E+00	2.73E-06	2.87E-07	9.93E+00	1.65E-05	3.91E-02	5.50E-06	3.08E-04	2.67E-03	3.71E-04	5.19E-04	3.39E-04	3.47E-04	8.88E-05	4.95E-05	7.22E-09	1.72E-04	5.33E-05
50	C40	40	Single Unit Short Haul Truck	17	0.00E+00	5.85E-06	2.60E-07	3.26E+00	4.05E-06	5.11E-03	6.25E-06	2.36E-03	6.78E-04	1.06E-04	7.52E-04	1.57E-04	1.60E-04	3.33E-04	1.33E-05	5.63E-09	5.92E-04	4.42E-04
50	C40	40	Single Unit Long Haul Truck	1	0.00E+00	2.56E-07	1.14E-08	1.41E-01	1.77E-07	2.22E-04	2.74E-07	1.03E-04	3.04E-05	4.72E-06	3.31E-05	6.86E-06	6.99E-06	1.44E-05	5.73E-07	2.44E-10	2.61E-05	1.93E-05
50	C40	40	Combination Short Haul Truck	7	0.00E+00	3.53E-06	2.64E-07	3.04E+00	8.75E-09	4.99E-03	2.51E-06	5.15E-03	7.12E-04	1.06E-04	2.10E-04	7.67E-05	7.97E-05	4.83E-04	1.02E-05	0.00E+00	1.30E-04	9.71E-04
50	C40	40	Combination Long Haul Truck	7	0.00E+00	4.69E-06	2.65E-07	2.91E+00	2.98E-08	6.06E-03	3.87E-06	5.44E-03	7.40E-04	1.04E-04	4.30E-04	8.54E-05	8.90E-05	4.68E-04	9.77E-06	0.00E+00	3.41E-04	1.02E-03
55	C41	90	Passenger Car	90	0.00E+00	8.60E-07	9.34E-08	3.69E+00	6.10E-06	1.70E-02	1.94E-06	9.43E-05	3.86E-04	6.75E-05	1.89E-04	1.22E-04	1.25E-04	1.20E-05	1.88E-05	3.84E-09	6.40E-05	1.47E-05
55	C41	90	Passenger Truck	152	0.00E+00	1.78E-06	1.91E-07	8.43E+00	1.18E-05	3.21E-02	3.81E-06	2.45E-04	6.83E-04	1.20E-04	3.67E-04	2.38E-04	2.44E-04	5.82E-05	4.26E-05	7.52E-09	1.23E-04	4.05E-05
55	C41	90	Single Unit Short Haul Truck	2	0.00E+00	2.06E-07	7.60E-09	3.14E-01	1.42E-07	5.74E-04	2.29E-07	8.97E-05	1.51E-05	3.54E-06	2.91E-05	5.20E-06	5.30E-06	3.20E-05	1.27E-06	4.99E-10	2.38E-05	1.67E-05
55	C41	90	Combination Short Haul Truck	3	0.00E+00	4.50E-07	3.23E-08	1.01E+00	1.39E-09	8.36E-04	3.28E-07	8.01E-04	4.32E-05	8.98E-06	2.91E-05	9.52E-06	9.89E-06	1.60E-04	3.37E-06	0.00E+00	1.92E-05	1.51E-04
55	C41	90	Combination Long Haul Truck	3	0.00E+00	6.53E-07	3.42E-08	9.20E-01	4.72E-09	9.82E-04	5.55E-07	8.49E-04	4.44E-05	7.93E-06	6.44E-05	1.14E-05	1.18E-05	1.48E-04	3.08E-06	0.00E+00	5.26E-05	1.60E-04
55	C42	90	Passenger Car	221	0.00E+00	2.10E-06	2.29E-07	9.02E+00	1.49E-05	4.17E-02	4.74E-06	2.31E-04	9.43E-04	1.65E-04	4.63E-04	2.98E-04	3.06E-04	2.93E-05	4.60E-05	9.38E-09	1.56E-04	3.60E-05
55	C42	90	Passenger Truck	371	0.00E+00	4.37E-06	4.66E-07	2.06E+01	2.87E-05	7.85E-02	9.33E-06	5.99E-04	1.67E-03	2.94E-04	8.97E-04	5.82E-04	5.96E-04	1.42E-04	1.04E-04	1.84E-08	3.01E-04	9.91E-05
55	C42	90	Single Unit Short Haul Truck	40	0.00E+00	4.32E-06	1.60E-07	6.59E+00	2.98E-06	1.21E-02	4.82E-06	1.88E-03	3.16E-04	7.44E-05	6.12E-04	1.09E-04	1.11E-04	6.71E-04	2.68E-05	1.05E-08	5.01E-04	3.52E-04
55	C42	90	Single Unit Long Haul Truck	2	0.00E+00	1.88E-07	6.81E-09	2.78E-01	1.25E-07	4.99E-04	2.09E-07	7.98E-05	1.44E-05	3.26E-06	2.67E-05	4.65E-06	4.74E-06	2.81E-05	1.13E-06	4.32E-10	2.19E-05	1.49E-05
55	C42	90	Combination Short Haul Truck	26	0.00E+00	3.75E-06	2.69E-07	8.40E+00	1.16E-08	6.97E-03	2.73E-06	6.67E-03	3.60E-04	7.48E-05	2.42E-04	7.94E-05	8.24E-05	1.34E-03	2.81E-05	0.00E+00	1.60E-04	1.26E-03
55	C42	90	Combination Long Haul Truck	24	0.00E+00	5.44E-06	2.85E-07	7.67E+00	3.93E-08	8.18E-03	4.62E-06	7.07E-03	3.70E-04	6.61E-05	5.37E-04	9.46E-05	9.87E-05	1.23E-03	2.57E-05	0.00E+00	4.38E-04	1.33E-03
55	C43	90	Passenger Car	257	0.00E+00	2.44E-06	2.66E-07	1.05E+01	1.73E-05	4.84E-02	5.51E-06	2.68E-04	1.10E-03	1.92E-04	5.38E-04	3.47E-04	3.56E-04	3.40E-05	5.35E-05	1.09E-08	1.82E-04	4.18E-05
55	C43	90	Passenger Truck	431	0.00E+00	5.07E-06	5.42E-07	2.40E+01	3.34E-05	9.12E-02	1.08E-05	6.97E-04	1.94E-03	3.41E-04	1.04E-03	6.76E-04	6.93E-04	1.65E-04	1.21E-04	2.14E-08	3.50E-04	1.15E-04
55	C43	90	Single Unit Short Haul Truck	11	0.00E+00	1.13E-06	4.18E-08	1.73E+00	7.81E-07	3.16E-03	1.26E-06	4.93E-04	8.28E-05	1.95E-05	1.60E-04	2.86E-05	2.91E-05	1.76E-04	7.01E-06	2.74E-09	1.31E-04	9.21E-05
55	C43	90	Combination Short Haul Truck	6	0.00E+00	8.25E-07	5.92E-08	1.85E+00	2.55E-09	1.53E-03	6.01E-07	1.47E-03	7.92E-05	1.65E-05	5.33E-05	1.75E-05	1.81E-05	2.94E-04	6.18E-06	0.00E+00	3.51E-05	2.77E-04
55	C43	90	Combination Long Haul Truck	5	0.00E+00	1.20E-06	6.27E-08	1.69E+00	8.65E-09	1.80E-03	1.02E-06	1.56E-03	8.13E-05	1.45E-05	1.18E-04	2.08E-05	2.17E-05	2.71E-04	5.65E-06	0.00E+00	9.64E-05	2.93E-04
55	C44	90	Passenger Car	429	0.00E+00	4.08E-06	4.43E-07	1.75E+01	2.89E-05	8.07E-02	9.19E-06	4.47E-04	1.83E-03	3.20E-04	8.96E-04	5.78E-04	5.93E-04	5.67E-05	8.92E-05	1.82E-08	3.03E-04	6.97E-05
55	C44	90	Passenger Truck	718	0.00E+00	8.46E-06	9.04E-07	4.00E+01	5.57E-05	1.52E-01	1.81E-05	1.16E-03	3.24E-03	5.69E-04	1.74E-03	1.13E-03	1.16E-03	2.76E-04	2.02E-04	3.56E-08	5.83E-04	1.92E-04
55	C44	90	Single Unit Short Haul Truck	13	0.00E+00	1.44E-06	5.32E-08	2.20E+00	9.94E-07	4.02E-03	1.61E-06	6.28E-04	1.05E-04	2.48E-05	2.04E-04	3.64E-05	3.71E-05	2.24E-04	8.92E-06	3.49E-09	1.67E-04	1.17E-04
55	C44	90	Single Unit Long Haul Truck	1	0.00E+00	6.25E-08	2.27E-09	9.27E-02	4.18E-08	1.66E-04	6.96E-08	2.66E-05	4.82E-06	1.09E-06	8.89E-06	1.55E-06	1.58E-06	9.37E-06	3.77E-07	1.44E-10	7.31E-06	4.96E-06
55	C44	90	Combination Short Haul Truck	23	0.00E+00	3.30E-06	2.37E-07	7.39E+00	1.02E-08	6.13E-03	2.41E-06	5.87E-03	3.17E-04	6.58E-05	2.13E-04	6.98E-05	7.25E-05	1.18E-03	2.47E-05	0.00E+00	1.41E-04	1.11E-03
55	C44	90	Combination Long Haul Truck	21	0.00E+00	4.79E-06	2.51E-07	6.75E+00	3.46E-08	7.20E-03	4.07E-06	6.23E-03	3.25E-04	5.82E-05	4.73E-04	8.33E-05	8.68E-05	1.08E-03	2.26E-05	0.00E+00	3.86E-04	1.17E-03
53	C45	70	Passenger Car	240	0.00E+00	2.57E-06	2.79E-07	1.05E+01	1.82E-05	4.92E-02	5.79E-06	2.47E-04	1.82E-03	2.85E-04	5.64E-04	3.64E-04	3.73E-04	4.08E-05	5.33E-05	1.11E-08	1.91E-04	3.86E-05
53	C45	70	Passenger Truck	403	0.00E+00	5.36E-06	5.70E-07	2.36E+01	3.44E-05	8.69E-02	1.13E-05	6.99E-04	3.26E-03	5.06E-04	1.08E-03	7.00E-04	7.17E-04	1.77E-04	1.19E-04	2.08E-08	3.60E-04	1.17E-04
53	C45	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
53	C45	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.91E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.19E-06
53	C45	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.23E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.98E-04
53	C45	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.53E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.54E-04
50	C46	40	Passenger Car	77	0.00E+00	1.09E-06	1.18E-07	4.00E+00	7.71E-06	2.07E-02	2.45E-06	6.99E-05	1.32E-03	1.86E-04	2.39E-04	1.54E-04	1.58E-04	2.28E-05	2.01E-05	3.72E-09	8.08E-05	1.09E-05
50	C46	40	Passenger Truck	128	0.00E+00	2.40E-06	2.52E-07	8.70E+00	1.44E-05	3.42E-02	4.81E-06	2.69E-04	2.34E-03	3.25E-04	4.55E-04	2.97E-04	3.04E-04	7.78E-05	4.34E-05	6.33E-09	1.51E-04	4.67E-05
50	C46	40	Single Unit Short Haul Truck	44	0.00E+00	1.49E-05	6.65E-07	8.32E+00	1.03E-05	1.30E-02	1.60E-05	6.03E-03	1.73E-03	2.71E-04	1.92E-03	4.00E-04	4.08E-04	8.50E-04	3.39E-05	1.44E-08	1.51E-03	1.13E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	6.55E-07	2.90E-08	3.59E-01	4.53E-07	5.68E-04	7.01E-07	2.63E-04	7.77E-05	1.21E-05	8.45E-05	1.75E-05	1.79E-05	3.67E-05	1.47E-06	6.24E-10	6.66E-05	4.93E-05
50	C46	40	Combination Short Haul Truck	39	0.00E+00	1.89E-05	1.41E-06	1.63E+01	4.69E-08	2.68E-02	1.34E-05	2.76E-02	3.81E-03	5.69E-04	1.13E-03	4.11E-04	4.27E-04	2.59E-03	5.44E-05	0.00E+00	6.99E-04	5.20E-03
50	C46	40	Combination Long Haul Truck	36	0.00E+00	2.51E-05	1.42E-06	1.56E+01	1.60E-07	3.25E-02	2.07E-05	2.91E-02	3.96E-03	5.56E-04	2.30E-03	4.58E-04	4.77E-04	2.51E-03	5.23E-05	0.00E+00	1.83E-03	5.49E-03
52	C47	60	Passenger Car	25	0.00E+00	2.91E-07	3.16E-08	1.13E+00	2.06E-06	5.55E-03	6.55E-07	2.48E-05	2.46E-04	3.69E-05	6.39E-05	4.12E-05	4.23E-05	4.97E-06	5.72E-06	1.17E-09	2.16E-05	3.88E-06
52	C47	60	Passenger Truck	42	0.00E+00	6.14E-07	6.50E-08	2.52E+00	3.87E-06	9.54E-03	1.27E-06	7.58E-05	4.37E-04	6.48E-05	1.21E-04	7.89E-05	8.09E-05	1.99E-05	1.26E-05	2.13E-09	4.04E-05	1.28E-05
52	C47	60	Single Unit Short Haul Truck	1	0.00

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	C52	40	Passenger Car	58	0.00E+00	8.21E-07	8.93E-08	3.02E+00	5.83E-06	1.56E-02	1.85E-06	5.29E-05	9.99E-04	1.40E-04	1.81E-04	1.16E-04	1.20E-04	1.72E-05	1.52E-05	2.82E-09	6.11E-05	8.25E-06
50	C52	40	Passenger Truck	97	0.00E+00	1.81E-06	1.90E-07	6.58E+00	1.09E-05	2.59E-02	3.64E-06	2.04E-04	1.77E-03	2.46E-04	3.44E-04	2.24E-04	2.30E-04	5.88E-05	3.28E-05	4.78E-09	1.14E-04	3.53E-05
50	C52	40	Single Unit Short Haul Truck	7	0.00E+00	2.27E-06	1.01E-07	1.27E+00	1.57E-06	1.99E-03	2.43E-06	9.18E-04	2.64E-04	4.12E-05	2.92E-04	6.09E-05	6.21E-05	1.29E-04	5.16E-06	2.19E-09	2.30E-04	1.72E-04
50	C52	40	Combination Short Haul Truck	6	0.00E+00	2.78E-06	2.07E-07	2.39E+00	6.87E-09	3.92E-03	1.97E-06	4.05E-03	5.59E-04	8.34E-05	1.65E-04	6.03E-05	6.26E-05	3.79E-04	7.98E-06	0.00E+00	1.02E-04	7.63E-04
50	C52	40	Combination Long Haul Truck	5	0.00E+00	3.69E-06	2.08E-07	2.29E+00	2.34E-08	4.76E-03	3.04E-06	4.27E-03	5.81E-04	8.16E-05	3.38E-04	6.71E-05	6.99E-05	3.68E-04	7.67E-06	0.00E+00	2.68E-04	8.04E-04
52	C53	60	Passenger Car	53	0.00E+00	6.16E-07	6.70E-08	2.39E+00	4.37E-06	1.18E-02	1.39E-06	5.27E-05	5.21E-04	7.81E-05	1.35E-04	8.74E-05	8.97E-05	1.05E-05	1.21E-05	2.47E-09	4.58E-05	8.21E-06
52	C53	60	Passenger Truck	89	0.00E+00	1.30E-06	1.38E-07	5.33E+00	8.20E-06	2.02E-02	2.70E-06	1.61E-04	9.26E-04	1.37E-04	2.57E-04	1.67E-04	1.71E-04	4.22E-05	2.68E-05	4.52E-09	8.57E-05	2.72E-05
52	C53	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
53	C54	70	Passenger Car	68	0.00E+00	7.22E-07	7.85E-08	2.95E+00	5.13E-06	1.38E-02	1.63E-06	6.96E-05	5.13E-04	8.04E-05	1.59E-04	1.02E-04	1.05E-04	1.15E-05	1.50E-05	3.12E-09	5.37E-05	1.09E-05
53	C54	70	Passenger Truck	113	0.00E+00	1.51E-06	1.60E-07	6.65E+00	9.69E-06	2.45E-02	3.17E-06	1.97E-04	9.17E-04	1.42E-04	3.03E-04	1.97E-04	2.02E-04	4.99E-05	3.35E-05	5.87E-09	1.01E-04	3.29E-05
53	C54	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
53	C54	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.42E-04
53	C54	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.66E-04
52	C55	60	Passenger Car	18	0.00E+00	2.04E-07	2.22E-08	7.92E-01	1.45E-06	3.89E-03	4.60E-07	1.74E-05	1.73E-04	2.59E-05	4.48E-05	2.89E-05	2.97E-05	3.48E-06	4.02E-06	8.18E-10	1.52E-05	2.72E-06
52	C55	60	Passenger Truck	29	0.00E+00	4.31E-07	4.56E-08	1.77E+00	2.71E-06	6.69E-03	8.93E-07	5.32E-05	3.06E-04	4.55E-05	8.51E-05	5.54E-05	5.67E-05	1.40E-05	8.86E-06	1.49E-09	2.84E-05	8.99E-06
52	C55	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
52	C55	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
52	C55	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
50	C56	40	Passenger Car	33	0.00E+00	4.61E-07	5.01E-08	1.70E+00	3.27E-06	8.78E-03	1.04E-06	2.97E-05	5.61E-04	7.89E-05	1.01E-04	6.54E-05	6.71E-05	9.67E-06	8.53E-06	1.58E-09	3.43E-05	4.63E-06
50	C56	40	Passenger Truck	54	0.00E+00	1.02E-06	1.07E-07	3.69E+00	6.12E-06	1.45E-02	2.04E-06	1.14E-04	9.95E-04	1.38E-04	1.93E-04	1.26E-04	1.29E-04	3.30E-05	1.84E-05	2.68E-09	6.39E-05	1.98E-05
50	C56	40	Single Unit Short Haul Truck	11	0.00E+00	3.57E-06	1.59E-07	1.99E+00	2.47E-06	3.12E-03	3.82E-06	1.44E-03	4.15E-04	6.48E-05	4.60E-04	9.58E-05	9.76E-05	2.03E-04	8.11E-06	3.44E-09	3.62E-04	2.70E-04
50	C56	40	Combination Short Haul Truck	5	0.00E+00	2.52E-06	1.88E-07	2.17E+00	6.25E-09	3.57E-03	1.79E-06	3.68E-03	5.09E-04	7.58E-05	1.50E-04	5.48E-05	5.69E-05	3.45E-04	7.25E-06	0.00E+00	9.31E-05	6.93E-04
50	C56	40	Combination Long Haul Truck	5	0.00E+00	3.35E-06	1.89E-07	2.08E+00	2.13E-08	4.33E-03	2.76E-06	3.88E-03	5.28E-04	7.42E-05	3.07E-04	6.10E-05	6.36E-05	3.34E-04	6.98E-06	0.00E+00	2.44E-04	7.31E-04
53	C57	70	Passenger Car	182	0.00E+00	1.95E-06	2.12E-07	7.96E+00	1.38E-05	3.73E-02	4.39E-06	1.88E-04	1.38E-03	2.17E-04	4.28E-04	2.76E-04	2.83E-04	3.10E-05	4.05E-05	8.40E-09	1.45E-04	2.93E-05
53	C57	70	Passenger Truck	306	0.00E+00	4.07E-06	4.33E-07	1.79E+01	2.61E-05	6.59E-02	8.54E-06	5.30E-04	2.47E-03	3.84E-04	8.18E-04	5.31E-04	5.44E-04	1.35E-04	9.03E-05	1.58E-08	2.73E-04	8.88E-05
53	C57	70	Single Unit Short Haul Truck	19	0.00E+00	3.37E-06	1.37E-07	3.14E+00	2.26E-06	5.69E-03	3.67E-06	1.34E-03	3.04E-04	5.59E-05	4.54E-04	8.66E-05	8.83E-05	3.19E-04	1.28E-05	5.15E-09	3.66E-04	2.51E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	5.91E-09	1.33E-01	9.72E-08	2.39E-04	1.60E-07	5.78E-05	1.39E-05	2.50E-06	1.98E-05	3.74E-06	3.81E-06	1.35E-05	5.42E-07	2.17E-10	1.60E-05	1.08E-05
53	C57	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	C57	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.12E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
50	C58	40	Passenger Car	38	0.00E+00	5.35E-07	5.82E-08	1.97E+00	3.80E-06	1.02E-02	1.21E-06	3.44E-05	6.51E-04	9.15E-05	1.18E-04	7.59E-05	7.79E-05	1.12E-05	9.90E-06	1.83E-09	3.98E-05	5.37E-06
50	C58	40	Passenger Truck	63	0.00E+00	1.18E-06	1.24E-07	4.29E+00	7.11E-06	1.69E-02	2.37E-06	1.33E-04	1.15E-03	1.60E-04	2.24E-04	1.46E-04	1.50E-04	3.83E-05	2.14E-05	3.12E-09	7.42E-05	2.30E-05
50	C58	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.46E-05
50	C58	40	Combination Short Haul Truck	2	0.00E+00	7.57E-07	5.65E-08	6.51E-01	1.87E-09	1.07E-03	5.38E-07	1.10E-03	1.53E-04	2.27E-05	4.50E-05	1.64E-05	1.71E-05	1.03E-04	2.18E-06	0.00E+00	2.79E-05	2.08E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	1.01E-06	5.68E-08	6.24E-01	6.39E-09	1.30E-03	8.29E-07	1.16E-03	1.58E-04	2.23E-05	9.21E-05	1.83E-05	1.91E-05	1.00E-04	2.09E-06	0.00E+00	7.31E-05	2.19E-04
53	C59	70	Passenger Car	114	0.00E+00	1.21E-06	1.32E-07	4.96E+00	8.61E-06	2.33E-02	2.74E-06	1.17E-04	8.62E-04	1.35E-04	2.67E-04	1.72E-04	1.77E-04	1.93E-05	2.52E-05	5.23E-09	9.03E-05	1.82E-05
53	C59	70	Passenger Truck	190	0.00E+00	2.53E-06	2.70E-07	1.12E+01	1.63E-05	4.11E-02	5.32E-06	3.30E-04	1.54E-03	2.39E-04	5.09E-04	3.31E-04	3.39E-04	8.39E-05	5.62E-05	9.86E-09	1.70E-04	5.53E-05
53	C59	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.37E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
53	C59	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
53	C59	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
52	C60	60	Passenger Car	243	0.00E+00	2.82E-06	3.06E-07	1.10E+01	2.00E-05	5.39E-02	6.36E-06	2.41E-04	2.39E-03	3.58E-04	6.20E-04	4.00E-04	4.10E-04	4.82E-05	5.55E-05	1.13E-08	2.10E-04	3.76E-05
52	C60	60	Passenger Truck	407	0.00E+00	5.95E-06	6.31E-07	2.44E+01	3.75E-05	9.25E-02	1.23E-05	7.35E-04	4.24E-03	6.29E-04	1.18E-03	7.66E-04	7.85E-04	1.93E-04	1.23E-04	2.07E-08	3.92E-04	1.24E-04
52	C60	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.40E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.05E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
52	C60	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.43E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.35E-04
52	C60	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.72E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.90E-04
53	C61	70	Passenger Car	128	0.00E+00	1.36E-06	1.48E-07	5.58E+00	9.69E-06	2.62E-02	3.08E-06	1.32E-04	9.70E-04	1.52E-04	3.00E-04	1.94E-04	1.99E-04	2.17E-05	2.84E-05	5.89E-09	1.02E-04	2.05E-05
53	C61	70	Passenger Truck	214	0.00E+00	2.85E-06	3.03E-07	1.26E+01	1.83E-05	4.62E-02	5.99E-06	3.72E-04	1.73E-03	2.69E-04	5.73E-04	3.72E-04	3.81E-04	9.44E-05	6.33E-05	1.11E-08	1.91E-04	6.22E-05
53	C61	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.06E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.51E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.47E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.49E-06
53	C61	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
53	C61	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
50	C62	40	Passenger Car	360	0.00E+00	5.11E-06	5.55E-07	1.88E+01	3.63E-05	9.73E-02	1.15E-05	3.29E-04	6.22E-03	8.74E-04	1.12E-03	7.24E-04	7.43E-04	1.07E-04	9.45E-05	1.75E-08	3.80E-04	5.13E-05
50	C62	40	Passenger Truck	604	0.00E+00	1.13E-05	1.18E-06	4.09E+01	6.78E-05	1.61E-01	2.26E-05	1.27E-03	1.10E-02	1.53E-03	2.14E-03	1.40E-03	1.43E-03	3.66E-04	2.04E-04	2.98E-08	7.08E-04	2.20E-04
50	C62	40	Single Unit Short Haul Truck	5	0.00E+00	1.62E-06	7.23E-08	9.05E-01	1.12E-06	1.42E-03	1.74E-06	6.56E-04	1.88E-04	2.94E-05	2.09E-04	4.35E-05	4.44E-05	9.24E-05	3.69E-06	1.56E-09	1.65E-04	1.23E-04
50	C62	40	Combination Short Haul Truck	3	0.00E+00	1.51E-06	1.13E-07	1.30E+00	3.75E-09	2.14E-03	1.08E-06	2.21E-03	3.05E-04	4.55E-05	9.00E-05	3.29E-05	3.41E-05	2.07E-04	4.35E-06	0.00E+00	5.59E-05	4.16E-04
50	C62	40	Combination Long Haul Truck	3	0.00E+00	2.01E-06	1.14E-07	1.25E+00	1.28E-08	2.60E-03	1.66E-06	2.33E-03	3.17E-04	4.45E-05	1.84E-04	3.66E-05	3.81E-05	2.01E-04	4.19E-06	0.00E+00	1.46E-04	4.39E-04
52	C63	60	Passenger Car	301	0.00E+00	3.49E-06	3.79E-07	1.36E+01	2.48E-05	6.66E-02	7.87E-06	2.98E-04	2.95E-03	4.42E-04	7.67E-04	4.95E-04	5.08E-04	5.96E-05	6.87E-05	1.40E-08	2.60E-04	4.65E-05
52	C63	60	Passenger Truck	503	0.00E+00	7.36E-06	7.81E-07	3.02E+01	4.64E-05	1.14E-01	1.53E-05	9.10E-04	5.24E-03	7.78E-04	1.46E-03	9.47E-04	9.70E-04	2.39E-04	1.52E-04	2.56E-08	4.85E-04	1.54E-04
52	C63	60	Single Unit Short Haul Truck	67	0.00E+00	1.50E-05	6.18E-07	1.12E+01	9.92E-06	1.96E-02	1.62E-05	5.75E-03	1.54E-03	2.59E-04	2.00E-03	3.85E-04	3.92E-04	1.13E-03	4.55E-05	1.87E-08	1.60E-03	1.08E-03
52	C63	60	Single Unit Long Haul Truck	3	0.00E+00	6.53E-07	2.69E-08	4.76E-01	4.30E-07	8.33E-04	7.07E-07	2.49E-04	6.93E-05	1.15E-05	8.73E-05	1.67E-05	1.71E-05	4.81E-05	1.94E-06	7.97E-10	7.03E-05	4.66E-05
52	C63	60	Combination Short Haul Truck	56	0.00E+00	1.63E-05	1.20E-06	1.97E+01	4.47E-08	2.44E-02	1.17E-05	2.50E-02	2.85E-03	4.46E-04	1.01E-03	3.51E-04	3.64E-04	3.13E-03	6.59E-05	0.00E+00	6.42E-04	4.70E-03
52	C63	60	Combination Long Haul Truck	51	0.00E+00	2.24E-05	1.23E-06	1.86E+01	1.51E-07	2.93E-02	1.88E-05	2.66E-02	2.99E-03	4.32E-04	2.13E-03	4.00E-04	4.17E-04	2.99E-03	6.24E-05	0.00E+00	1.71E-03	5.01E-03
53	C64	70	Passenger Car	534	0.00E+00	5.70E-06	6.20E-07	2.33E+01	4.05E-05	1.09E-01	1.29E-05	5.50E-04	4.05E-03	6.34E-04	1.25E-03	8.09E-04	8.30E-04	9.08E-05	1.18E-04	2.46E-08	4.24E-04	8.58E-05
53	C64	70	Passenger Truck	895	0.00E+00	1.19E-05	1.27E-06	5.25E+01	7.65E-05	1.93E-01	2.50E-05	1.55E-03	7.24E-03	1.12E-03	2.39E-03	1.56E-03	1.59E-03	3.94E-04	2.64E-04	4.63E-08	8.00E-04	2.60E-04
53	C64	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.65E-04
53	C64	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
53	C64	70	Combination Short Haul Truck	29	0.00E+00	7.54E-06	5.61E-07	1.02E+01	1.91E-08	1.09E-02	5.37E-06	1.13E-02	1.06E-03	1.77E-04	4.52E-04	1.63E-04	1.70E-04	1.62E-03	3.41E-05	0.00E+00	2.83E-04	2.13E-03
53	C64	70	Combination Long Haul Truck	27	0.00E+00	1.03E-05	5.88E-07	9.56E+00	6.48E-08	1.30E-02	8.50E-06	1.21E-02	1.11E-03	1.67E-04	9.40E-04	1.89E-04	1.97E-04	1.53E-03	3.20E-05	0.00E+00	7.43E-04	2.28E-03
52	C65	60	Passenger Car	7	0.00E+00	7.81E-08	8.49E-09	3.03E-01	5.54E-07	1.49E-03	1.76E-07	6.67E-06	6.61E-05	9.91E-06	1.72E-05	1.11E-05	1.14E-05	1.33E-06	1.54E-06	3.13E-10	5.81E-06	1.04E-06
52	C65	60	Passenger Truck	11	0.00E+00	1.65E-07	1.75E-08	6.76E-01	1.04E-06	2.56E-03	3.42E-07	2.04E-05	1.17E-04	1.74E-05	3.26E-05	2.12E-05	2.17E-05	5.35E-06	3.39E-06	5.73E-10	1.09E-05	3.44E-06
50	C66	40	Passenger Car	133	0.00E+00	1.89E-06	2.05E-07	6.94E+00	1.34E-05	3.59E-02	4.25E-06	1.21E-04	2.30E-03	3.23E-04	4.15E-04	2.67E-04	2.75E-04	3.96E-05	3.49E-05	6.47E-09	1.40E-04	1.89E-05
50	C66	40	Passenger Truck	223	0.00E+00	4.16E-06	4.37E-07	1.51E+01	2.51E-05	5.94E-02	8.36E-06	4.68E-04	4.07E-03	5.65E-04	7.90E-04	5.16E-04	5.28E-04	1.35E-04	7.53E-05	1.10E-08	2.61E-04	8.11E-05
50	C66	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.87E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	C66	40	Combination Short Haul Truck	4	0.00E+00	2.02E-06	1.51E-07	1.74E+00	5.00E-09	2.85E-03	1.43E-06	2.94E-03	4.07E-04	6.06E-05	1.20E-04	4.39E-05	4.55E-05	2.76E-04	5.80E-06	0.00E+00	7.45E-05	5.55E-04
50	C66	40	Combination Long Haul Truck	4	0.00E+00	2.68E-06	1.51E-07	1.67E+00	1.70E-08	3.46E-03	2.21E-06	3.11E-03	4.23E-04	5.93E-05	2.46E-04	4.88E-05	5.08E-05	2.67E-04	5.58E-06	0.00E+00	1.95E-04	5.85E-04
55	C67	90	Passenger Car	480	0.00E+00	4.57E-06	4.96E-07	1.96E+01	3.24E-05	9.04E-02	1.03E-05	5.01E-04	2.05E-03	3.59E-04	1.00E-03	6.47E-04	6.64E-04	6.35E-05	9.99E-05	2.04E-08	3.40E-04	7.81E-05
55	C67	90	Passenger Truck	805	0.00E+00	9.48E-06	1.01E-06	4.48E+01	6.24E-05	1.70E-01	2.03E-05	1.30E-03	3.63E-03	6.37E-04	1.95E-03	1.26E-03	1.29E-03	3.09E-04	2.26E-04	3.99E-08	6.53E-04	2.15E-04
55	C67	90	Single Unit Short Haul Truck	66	0.00E+00	7.09E-06	2.62E-07	1.08E+01	4.90E-06	1.98E-02	7.91E-06	3.09E-03	5.20E-04	1.22E-04	1.01E-03	1.79E-04	1.83E-04	1.10E-03	4.40E-05	1.72E-08	8.22E-04	5.78E-04
55	C67	90	Single Unit Long Haul Truck	3	0.00E+00	3.08E-07	1.12E-08	4.57E-01	2.06E-07	8.20E-04	3.43E-07	1.31E-04	2.37E-05	5.35E-06	4.38E-05	7.64E-06	7.79E-06	4.62E-05	1.86E-06	7.11E-10	3.60E-05	2.45E-05
55	C67	90	Combination Short Haul Truck	54	0.00E+00	7.80E-06	5.60E-07	1.75E+01	2.41E-08	1.45E-02	5.68E-06	1.39E-02	7.49E-04	1.56E-04	5.04E-04	1.65E-04	1.71E-04	2.78E-03	5.84E-05	0.00E+00	3.32E-04	2.61E-03
55	C67	90	Combination Long Haul Truck	50	0.00E+00	1.13E-05	5.92E-07	1.59E+01	8.17E-08	1.70E-02	9.62E-06	1.47E-02	7.69E-04	1.38E-04	1.12E-03	1.97E-04	2.05E-04	2.56E-03	5.34E-05	0.00E+00	9.12E-04	2.77E-03
55	C68	90	Passenger Car	388	0.00E+00	3.69E-06	4.01E-07	1.58E+01	2.62E-05	7.31E-02	8.32E-06	4.05E-04	1.65E-03	2.90E-04	8.11E-04	5.23E-04	5.37E-04	5.13E-05	8.07E-05	1.65E-08	2.74E-04	6.31E-05
55	C68	90	Passenger Truck	650	0.00E+00	7.66E-06	8.18E-07	3.62E

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	C74	60	Passenger Car	432	0.00E+00	5.01E-06	5.45E-07	1.95E+01	3.56E-05	9.57E-02	1.13E-05	4.28E-04	4.24E-03	6.36E-04	1.10E-03	7.11E-04	7.29E-04	8.56E-05	9.87E-05	2.01E-08	3.73E-04	6.68E-05
52	C74	60	Passenger Truck	723	0.00E+00	1.06E-05	1.12E-06	4.34E+01	6.67E-05	1.64E-01	2.19E-05	1.31E-03	7.53E-03	1.12E-03	2.09E-03	1.36E-03	1.39E-03	3.43E-04	2.18E-04	3.67E-08	6.97E-04	2.21E-04
52	C74	60	Single Unit Short Haul Truck	57	0.00E+00	1.26E-05	5.21E-07	9.40E+00	8.36E-06	1.65E-02	1.36E-05	4.85E-03	1.30E-03	2.18E-04	1.68E-03	3.24E-04	3.31E-04	9.53E-04	3.83E-05	1.58E-08	1.35E-03	9.07E-04
52	C74	60	Single Unit Long Haul Truck	2	0.00E+00	5.51E-07	2.26E-08	4.01E-01	3.63E-07	7.02E-04	5.96E-07	2.10E-04	5.84E-05	9.69E-06	7.36E-05	1.41E-05	1.44E-05	4.05E-05	1.64E-06	6.72E-10	5.92E-05	3.93E-05
52	C74	60	Combination Short Haul Truck	48	0.00E+00	1.39E-05	1.02E-06	1.68E+01	3.80E-08	2.08E-02	9.98E-06	2.12E-02	2.42E-03	3.79E-04	8.56E-04	2.98E-04	3.10E-04	2.66E-03	5.61E-05	0.00E+00	5.46E-04	4.00E-03
52	C74	60	Combination Long Haul Truck	43	0.00E+00	1.91E-05	1.04E-06	1.58E+01	1.29E-07	2.49E-02	1.60E-05	2.26E-02	2.54E-03	3.68E-04	1.81E-03	3.41E-04	3.55E-04	2.54E-03	5.31E-05	0.00E+00	1.46E-03	4.26E-03
11	D27	80	Passenger Car	1345	0.00E+00	1.38E-05	1.50E-06	5.64E+01	9.79E-05	2.73E-01	3.11E-05	1.39E-03	7.33E-03	1.23E-03	3.03E-03	1.96E-03	2.01E-03	2.00E-04	2.87E-04	6.13E-08	1.03E-03	2.18E-04
11	D27	80	Passenger Truck	2252	0.00E+00	2.84E-05	3.03E-06	1.27E+02	1.85E-04	4.83E-01	6.02E-05	3.76E-03	1.31E-02	2.17E-03	5.78E-03	3.75E-03	3.84E-03	9.25E-04	6.42E-04	1.17E-07	1.93E-03	6.26E-04
11	D27	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.17E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.24E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D27	80	Combination Short Haul Truck	26	0.00E+00	5.28E-06	3.91E-07	8.59E+00	1.38E-08	8.05E-03	3.78E-06	8.17E-03	6.12E-04	1.11E-04	3.20E-04	1.14E-04	1.18E-04	1.37E-03	2.87E-05	0.00E+00	2.02E-04	1.54E-03
11	D27	80	Combination Long Haul Truck	23	0.00E+00	7.36E-06	4.15E-07	7.98E+00	4.68E-08	9.53E-03	6.07E-06	8.73E-03	6.32E-04	1.01E-04	6.74E-04	1.34E-04	1.39E-04	1.28E-03	2.67E-05	0.00E+00	5.35E-04	1.64E-03
11	D28	80	Passenger Car	674	0.00E+00	6.91E-06	7.51E-07	2.83E+01	4.91E-05	1.37E-01	1.56E-05	6.99E-04	3.67E-03	6.15E-04	1.52E-03	9.80E-04	1.01E-03	1.00E-04	1.44E-04	3.07E-08	5.14E-04	1.09E-04
11	D28	80	Passenger Truck	1129	0.00E+00	1.42E-05	1.52E-06	6.38E+01	9.26E-05	2.42E-01	3.02E-05	1.89E-03	6.54E-03	1.09E-03	2.90E-03	1.88E-03	1.93E-03	4.64E-04	3.22E-04	5.85E-08	9.70E-04	3.14E-04
11	D28	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	6.01E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D28	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	4.00E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.54E-04
11	D28	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.28E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.05E-04
11	D29	80	Passenger Car	992	0.00E+00	1.02E-05	1.11E-06	4.16E+01	7.22E-05	2.02E-01	2.29E-05	1.03E-03	5.41E-03	9.05E-04	2.24E-03	1.44E-03	1.48E-03	1.47E-04	2.12E-04	4.52E-08	7.57E-04	1.60E-04
11	D29	80	Passenger Truck	1661	0.00E+00	2.10E-05	2.23E-06	9.39E+01	1.36E-04	3.56E-01	4.44E-05	2.77E-03	9.63E-03	1.60E-03	4.26E-03	2.76E-03	2.83E-03	6.82E-04	4.73E-04	8.61E-08	1.43E-03	4.62E-04
11	D29	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.57E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.80E-04
11	D29	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.10E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	D29	80	Combination Short Haul Truck	44	0.00E+00	9.05E-06	6.70E-07	1.47E+01	2.37E-08	1.38E-02	6.47E-06	1.40E-02	1.05E-03	1.90E-04	5.49E-04	1.96E-04	2.03E-04	2.34E-03	4.93E-05	0.00E+00	3.46E-04	2.64E-03
11	D29	80	Combination Long Haul Truck	40	0.00E+00	1.26E-05	7.12E-07	1.37E+01	8.02E-08	1.63E-02	1.04E-05	1.50E-02	1.08E-03	1.73E-04	1.16E-03	2.30E-04	2.39E-04	2.19E-03	4.58E-05	0.00E+00	9.17E-04	2.82E-03
11	D30	80	Passenger Car	549	0.00E+00	5.63E-06	6.12E-07	2.30E+01	3.99E-05	1.12E-01	1.27E-05	5.69E-04	2.99E-03	5.01E-04	1.24E-03	7.98E-04	8.19E-04	8.16E-05	1.17E-04	2.50E-08	4.19E-04	8.88E-05
11	D30	80	Passenger Truck	919	0.00E+00	1.16E-05	1.24E-06	5.20E+01	7.54E-05	1.97E-01	2.46E-05	1.54E-03	5.33E-03	8.87E-04	2.36E-03	1.53E-03	1.57E-03	3.77E-04	2.62E-04	4.76E-08	7.90E-04	2.56E-04
11	D30	80	Single Unit Short Haul Truck	24	0.00E+00	3.29E-06	1.28E-07	3.93E+00	2.23E-06	7.13E-03	3.61E-06	1.37E-03	2.69E-04	5.50E-05	4.52E-04	8.38E-05	8.54E-05	3.99E-04	1.59E-05	6.32E-09	3.67E-04	2.55E-04
11	D30	80	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.51E-09	1.66E-01	9.49E-08	2.97E-04	1.57E-07	5.84E-05	1.23E-05	2.44E-06	1.97E-05	3.60E-06	3.67E-06	1.68E-05	6.75E-07	2.63E-10	1.61E-05	1.09E-05
11	D30	80	Combination Short Haul Truck	22	0.00E+00	4.53E-06	3.35E-07	7.37E+00	1.19E-08	6.90E-03	3.24E-06	7.00E-03	5.24E-04	9.50E-05	2.75E-04	9.78E-05	1.02E-04	1.17E-03	2.46E-05	0.00E+00	1.73E-04	1.32E-03
11	D30	80	Combination Long Haul Truck	20	0.00E+00	6.31E-06	3.56E-07	6.84E+00	4.01E-08	8.17E-03	5.20E-06	7.48E-03	5.42E-04	8.67E-05	5.78E-04	1.15E-04	1.20E-04	1.10E-03	2.29E-05	0.00E+00	4.58E-04	1.41E-03
11	D31	80	Passenger Car	448	0.00E+00	4.60E-06	4.99E-07	1.88E+01	3.26E-05	9.11E-02	1.04E-05	4.65E-04	2.44E-03	4.09E-04	1.01E-03	6.52E-04	6.69E-04	6.66E-05	9.56E-05	2.04E-08	3.42E-04	7.25E-05
11	D31	80	Passenger Truck	751	0.00E+00	9.47E-06	1.01E-06	4.24E+01	6.16E-05	1.61E-01	2.01E-05	1.25E-03	4.35E-03	7.24E-04	1.93E-03	1.25E-03	1.28E-03	3.08E-04	2.14E-04	3.89E-08	6.45E-04	2.09E-04
11	D31	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.75E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.74E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.98E-06
11	D31	80	Combination Short Haul Truck	12	0.00E+00	2.37E-06	1.76E-07	3.86E+00	6.21E-09	3.61E-03	1.70E-06	3.67E-03	2.75E-04	4.97E-05	1.44E-04	5.12E-05	5.32E-05	6.13E-04	1.29E-05	0.00E+00	9.06E-05	6.91E-04
11	D31	80	Combination Long Haul Truck	10	0.00E+00	3.30E-06	1.87E-07	3.58E+00	2.10E-08	4.28E-03	2.72E-06	3.92E-03	2.84E-04	4.54E-05	3.03E-04	6.01E-05	6.26E-05	5.75E-04	1.20E-05	0.00E+00	2.40E-04	7.38E-04
11	D32	80	Passenger Car	229	0.00E+00	2.35E-06	2.55E-07	9.61E+00	1.67E-05	4.66E-02	5.30E-06	2.38E-04	1.25E-03	2.09E-04	5.17E-04	3.33E-04	3.42E-04	3.41E-05	4.89E-05	1.04E-08	1.75E-04	3.71E-05
11	D32	80	Passenger Truck	384	0.00E+00	4.84E-06	5.16E-07	2.17E+01	3.15E-05	8.24E-02	1.03E-05	6.41E-04	2.22E-03	3.70E-04	9.84E-04	6.39E-04	6.55E-04	1.58E-04	1.09E-04	1.99E-08	3.30E-04	1.07E-04
11	D32	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	D32	80	Combination Short Haul Truck	6	0.00E+00	1.19E-06	8.78E-08	1.93E+00	3.11E-09	1.81E-03	8.48E-07	1.83E-03	1.37E-04	2.49E-05	7.19E-05	2.56E-05	2.66E-05	3.07E-04	6.45E-06	0.00E+00	4.53E-05	3.45E-04
11	D32	80	Combination Long Haul Truck	5	0.00E+00	1.65E-06	9.33E-08	1.79E+00	1.05E-08	2.14E-03	1.36E-06	1.96E-03	1.42E-04	2.27E-05	1.51E-04	3.01E-05	3.13E-05	2.87E-04	6.00E-06	0.00E+00	1.20E-04	3.69E-04
9	D33	60	Passenger Car	269	0.00E+00	3.40E-06	3.70E-07	1.21E+01	2.41E-05	6.54E-02	7.67E-06	2.77E-04	2.72E-03	4.07E-04	7.48E-04	4.82E-04	4.95E-04	5.34E-05	6.15E-05	1.29E-08	2.53E-04	4.32E-05
9	D33	60	Passenger Truck	451	0.00E+00	7.22E-06	7.65E-07	2.71E+01	4.56E-05	1.12E-01	1.50E-05	8.62E-04	4.97E-03	7.39E-04	1.43E-03	9.29E-04	9.52E-04	2.18E-04	1.36E-04	2.52E-08	4.76E-04	1.46E-04
9	D33	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	2.00E-04
9	D33	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.62E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.66E-06
9	D33	60	Combination Short Haul Truck	12	0.00E+00	3.36E-06	2.47E-07	4.05E+00	9.20E-09	5.02E-03	2.41E-06	5.13E-03	5.86E-04	9.17E-05	2.07E-04	7.22E-05	7.49E-05	6.44E-04	1.36E-05	0.00E+00	1.32E-04	9.67E-04
9	D33	60	Combination Long Haul Truck	10	0.00E+00	4.61E-06	2.52E-07	3.83E+00	3.11E-08	6.03E-03	3.86E-06	5.47E-03	6.15E-04	8.89E-05	4.38E-04	8.23E-05	8.58E-05	6.14E-04	1.28E-05	0.00E+00	3.52E-04	1.03E-03
9	D34	60	Passenger Car	359	0.00E+00	4.53E-06	4.92E-07	1.62E+01	3.21E-05	8.71E-02	1.02E-05	3.69E-04	3.62E-03	5.42E-04	9.96E-04	6.42E-04	6.59E-04	7.11E-05	8.20E-05	1.72E-08	3.37E-04	5.76E-05
9	D34	60	Passenger Truck	600	0.00E+00	9.62E-06	1.02E-06	3.61E+01	6.07E-05	1.49E-01	2.00E-05	1.15E-03	6.62E-03	9.85E-04	1.90E-03	1.24E-03	1.27E-03	2.91E-04	1.81E-04	3.36E-08	6.34E-04	1.95E-04
9	D34	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.96E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	D34	60	Combination Short Haul Truck	29	0.00E+00	8.55E-06	6.28E-07	1.03E+01	2.34E-08	1.28E-02	6.14E-06	1.31E-02	1.49E-03	2.33E-04	5.27E-04	1.84E-04	1.91E-04	1.64E-03	3.45E-05	0.00E+00	3.36E-04	2.46E-03
9	D34	60	Combination Long Haul Truck	27	0.00E+00	1.17E-05	6.42E-07	9.74E+00	7.93E-08	1.53E-02	9.82E-06	1.39E-02	1.56E-03	2.26E-04	1.11E-03	2.10E-04	2.18E-04	1.56E-03	3.26E-05	0.00E+00	8.96E-04	2.62E-03
9	D35	60	Passenger Car	313	0.00E+00	3.96E-06	4.30E-07	1.41E+01	2.81E-05	7.61E-02	8.92E-06	3.23E-04	3.16E-03	4.74E-04	8.70E-04	5.61E-04	5.76E-04	6.21E-05	7.16E-05	1.50E-08	2.94E-04	5.03E-05
9	D35	60	Passenger Truck	525	0.00E+00	8.40E-06	8.91E-07	3.15E+01	5.30E-05	1.30E-01	1.74E-05	1.00E-03	5.78E-03	8.60E-04	1.66E-03	1.08E-03	1.11E-03	2.54E-04	1.58E-04	2.93E-08	5.54E-04	1.70E-04
9	D35	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	D35	60	Combination Short Haul Truck	5	0.00E+00	1.53E-06	1.12E-07	1.84E+00	4.18E-09	2.28E-03	1.10E-06	2.33E-03	2.66E-04	4.17E-05	9.41E-05	3.28E-05	3.41E-05	2.93E-04	6.16E-06	0.00E+00	6.00E-05	4.40E-04
9	D35	60	Combination Long Haul Truck	5	0.00E+00	2.10E-06	1.15E-07	1.74E+00	1.42E-08	2.74E-03	1.75E-06	2.49E-03	2.79E-04	4.04E-05	1.99E-04	3.74E-05	3.90E-05	2.79E-04	5.83E-06	0.00E+00	1.60E-04	4.68E-04
9	D36	60	Passenger Car	492	0.00E+00	6.21E-06	6.75E-07	2.22E+01	4.41E-05	1.19E-01	1.40E-05	5.06E-04	4.96E-03	7.44E-04	1.37E-03	8.81E-04	9.04E-04	9.75E-05	1.12E-04	2.36E-08	4.62E-04	7.90E-05
9	D36	60	Passenger Truck	823	0.00E+00	1.32E-05	1.40E-06	4.94E+01	8.32E-05	2.05E-01	2.74E-05	1.57E-03	9.07E-03	1.35E-03	2.61E-03	1.70E-03	1.74E-03	3.99E-04	2.48E-04	4.60E-08	8.69E-04	2.67E-04
9	D36	60	Single Unit Short Haul Truck	9	0.00E+00	1.92E-06	7.95E-08	1.43E+00	1.28E-06	2.52E-03	2.08E-06	7.39E-04	1.98E-04	3.33E-05	2.57E-04	4.95E-05	5.04E-05	1.45E-04	5.84E-06	2.41E-09	2.06E-04	1.38E-04
9	D36	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.27E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.15E-04
9	D36	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
9	D37	60	Passenger Car	305	0.00E+00	3.86E-06	4.19E-07	1.38E+01	2.74E-05	7.42E-02	8.70E-06	3.14E-04	3.08E-03	4.62E-04	8.49E-04	5.47E-04	5.61E-04	6.05E-05	6.98E-05	1.47E-08	2.87E-04	4.91E-05
9	D37	60	Passenger Truck	512	0.00E+00	8.19E-06	8.69E-07	3.07E+01	5.17E-05	1.27E-01	1.70E-05	9.78E-04	5.64E-03	8.39E-04	1.62E-03	1.05E-03	1.08E-03	2.48E-04	1.54E-04	2.86E-08	5.40E-04	1.66E-04
9	D37	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	D37	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.50E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.59E-04
9	D37	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.73E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	7.02E-04
9	D38	60	Passenger Car	154	0.00E+00	1.95E-06	2.12E-07	6.96E+00	1.38E-05	3.75E-02	4.40E-06	1.59E-04	1.56E-03	2.34E-04	4.29E-04	2.77E-04	2.84E-04	3.06E-05	3.53E-05	7.41E-09	1.45E-04	2.48E-05
9	D38	60	Passenger Truck	259	0.00E+00	4.14E-06	4.39E-07	1.55E+01	2.61E-05	6.43E-02	8.59E-06	4.95E-04	2.85E-03	4.24E-04	8.19E-04	5.33E-04	5.46E-04	1.25E-04	7.79E-05	1.45E-08	2.73E-04	8.38E-05
9	D38	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	D38	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	D38	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
9	D39	60	Passenger Car	314	0.00E+00	3.97E-06	4.32E-07	1.42E+01	2.82E-05	7.64E-02	8.96E-06	3.24E-04	3.18E-03	4.76E-04	8.73E-04	5.63E-04	5.78E-04	6.23E-05	7.19E-05	1.51E-08	2.95E-04	5.05E-05
9	D39	60	Passenger Truck	527	0.00E+00	8.43E-06	8.94E-07	3.16E+01	5.32E-05	1.31E-01	1.75E-05	1.01E-03	5.80E-03	8.64E-04	1.67E-03	1.09E-03	1.11E-03	2.55E-04	1.59E-04	2.94E-08	5.56E-04	1.71E-04
9	D39	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	D39	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.90E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.23E-04
9	D39	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.22E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.83E-04
9	D40	60	Passenger Car	210	0.00E+00	2.66E-06	2.89E-07	9.49E+00	1.89E-05	5.11E-02	6.00E-06	2.17E-04	2.13E-03	3.18E-04	5.85E-04	3.77E-04	3.87E-04	4.17E-05	4.81E-05	1.01E-08	1.98E-04	3.38E-05
9	D40	60	Passenger Truck	353	0.00E+00	5.65E-06	5.98E-07	2.12E+01	3.56E-05	8.76E-02	1.17E-05	6.74E-04	3.88E-03	5.78E-04	1.12E-03	7.27E-04	7.44E-04	1.71E-04	1.06E-04	1.97E-08	3.72E-04	1.14E-04
9	D41	60	Passenger Car	91	0.00E+00	1.15E-06	1.25E-07	4.11E+00	8.18E-06	2.22E-02	2.60E-06	9.39E-05	9.21E-04	1.38E-04	2.53E-04	1.63E-04	1.68E-04	1.81E-05	2.09E-05	4.38E-09	8.57E-05	1.47E-05
9	D41	60	Passenger Truck	153	0.00E+00	2.45E-06	2.59E-07	9.17E+00	1.54E-05	3.80E-02	5.08E-06	2.92E-04	1.68E-03	2.51E-04	4.84E-04	3.15E-04	3.23E-04	7.40E-05	4.60E-05	8.54E-09	1.61E-04	4.95E-05
9	D41	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	D41	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D46	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.96E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	D46	60	Combination Short Haul Truck	44	0.00E+00	1.30E-05	9.53E-07	1.57E+01	3.55E-08	1.94E-02	9.32E-06	1.98E-02	2.26E-03	3.54E-04	8.00E-04	2.79E-04	2.89E-04	2.49E-03	5.24E-05	0.00E+00	5.10E-04	3.74E-03
9	D46	60	Combination Long Haul Truck	41	0.00E+00	1.78E-05	9.74E-07	1.48E+01	1.20E-07	2.33E-02	1.49E-05	2.11E-02	2.37E-03	3.43E-04	1.69E-03	3.18E-04	3.31E-04	2.37E-03	4.96E-05	0.00E+00	1.36E-03	3.98E-03
9	D47	60	Passenger Car	761	0.00E+00	9.61E-06	1.04E-06	3.43E+01	6.82E-05	1.85E-01	2.17E-05	7.83E-04	7.68E-03	1.15E-03	2.11E-03	1.36E-03	1.40E-03	1.51E-04	1.74E-04	3.65E-08	7.15E-04	1.22E-04
9	D47	60	Passenger Truck	1274	0.00E+00	2.04E-05	2.16E-06	7.65E+01	1.29E-04	3.17E-01	4.23E-05	2.44E-03	1.40E-02	2.09E-03	4.04E-03	2.63E-03	2.69E-03	6.17E-04	3.84E-04	7.12E-08	1.35E-03	4.13E-04
9	D47	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.12E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.84E-04
9	D47	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.53E-05
9	D47	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.19E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.24E-03
9	D47	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.27E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.39E-03
9	D48	60	Passenger Car	210	0.00E+00	2.65E-06	2.88E-07	9.46E+00	1.88E-05	5.09E-02	5.97E-06	2.16E-04	2.12E-03	3.17E-04	5.83E-04	3.76E-04	3.86E-04	4.16E-05	4.79E-05	1.01E-08	1.97E-04	3.37E-05
9	D48	60	Passenger Truck	351	0.00E+00	5.63E-06	5.96E-07	2.11E+01	3.55E-05	8.73E-02	1.17E-05	6.72E-04	3.87E-03	5.76E-04	1.11E-03	7.24E-04	7.42E-04	1.70E-04	1.06E-04	1.96E-08	3.71E-04	1.14E-04
9	D48	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	D48	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	D48	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
9	D49	60	Passenger Car	1125	0.00E+00	1.42E-05	1.54E-06	5.08E+01	1.01E-04	2.73E-01	3.21E-05	1.16E-03	1.14E-02	1.70E-03	3.13E-03	2.02E-03	2.07E-03	2.23E-04	2.57E-04	5.40E-08	1.06E-03	1.81E-04
9	D49	60	Passenger Truck	1885	0.00E+00	3.02E-05	3.20E-06	1.13E+02	1.90E-04	4.68E-01	6.26E-05	3.60E-03	2.08E-02	3.09E-03	5.97E-03	3.88E-03	3.98E-03	9.13E-04	5.68E-04	1.05E-07	1.99E-03	6.11E-04
9	D49	60	Single Unit Short Haul Truck	109	0.00E+00	2.44E-05	1.01E-06	1.82E+01	1.62E-05	3.19E-02	2.64E-05	9.36E-03	2.51E-03	4.22E-04	3.25E-03	6.26E-04	6.39E-04	1.84E-03	7.40E-05	3.05E-08	2.61E-03	1.75E-03
9	D49	60	Single Unit Long Haul Truck	5	0.00E+00	1.06E-06	4.37E-08	7.74E-01	7.00E-07	1.36E-03	1.15E-06	4.05E-04	1.13E-04	1.87E-05	1.42E-04	2.72E-05	2.78E-05	7.83E-05	3.16E-06	1.30E-09	1.14E-04	7.59E-05
9	D49	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.92E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.50E-03
9	D49	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.11E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.85E-03
9	D50	60	Passenger Car	818	0.00E+00	1.03E-05	1.12E-06	3.69E+01	7.33E-05	1.99E-01	2.33E-05	8.42E-04	8.26E-03	1.24E-03	2.27E-03	1.46E-03	1.50E-03	1.62E-04	1.87E-04	3.93E-08	7.68E-04	1.31E-04
9	D50	60	Passenger Truck	1369	0.00E+00	2.19E-05	2.32E-06	8.22E+01	1.38E-04	3.40E-01	4.55E-05	2.62E-03	1.51E-02	2.25E-03	4.34E-03	2.82E-03	2.89E-03	6.63E-04	4.13E-04	7.65E-08	1.45E-03	4.44E-04
9	D50	60	Single Unit Short Haul Truck	104	0.00E+00	2.33E-05	9.63E-07	1.74E+01	1.54E-05	3.05E-02	2.52E-05	8.95E-03	2.40E-03	4.04E-04	3.11E-03	5.99E-04	6.11E-04	1.76E-03	7.08E-05	2.92E-08	2.50E-03	1.68E-03
9	D50	60	Single Unit Long Haul Truck	5	0.00E+00	1.02E-06	4.18E-08	7.40E-01	6.70E-07	1.30E-03	1.10E-06	3.88E-04	1.08E-04	1.79E-05	1.36E-04	2.60E-05	2.66E-05	7.48E-05	3.02E-06	1.24E-09	1.09E-04	7.26E-05
9	D50	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.92E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.50E-03
9	D50	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.11E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.85E-03
9	D51	60	Passenger Car	302	0.00E+00	3.82E-06	4.15E-07	1.36E+01	2.71E-05	7.34E-02	8.60E-06	3.11E-04	3.05E-03	4.57E-04	8.39E-04	5.41E-04	5.55E-04	5.99E-05	6.91E-05	1.45E-08	2.84E-04	4.85E-05
9	D51	60	Passenger Truck	506	0.00E+00	8.10E-06	8.59E-07	3.04E+01	5.11E-05	1.26E-01	1.68E-05	9.68E-04	5.57E-03	8.30E-04	1.60E-03	1.04E-03	1.07E-03	2.45E-04	1.52E-04	2.83E-08	5.34E-04	1.64E-04
9	D51	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	D51	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.40E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.64E-04
9	D51	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.49E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.81E-04
9	D52	60	Passenger Car	245	0.00E+00	3.09E-06	3.36E-07	1.10E+01	2.20E-05	5.95E-02	6.97E-06	2.52E-04	2.47E-03	3.70E-04	6.80E-04	4.39E-04	4.50E-04	4.85E-05	5.60E-05	1.18E-08	2.30E-04	3.93E-05
9	D52	60	Passenger Truck	410	0.00E+00	6.57E-06	6.96E-07	2.46E+01	4.14E-05	1.02E-01	1.36E-05	7.84E-04	4.52E-03	6.73E-04	1.30E-03	8.45E-04	8.66E-04	1.99E-04	1.24E-04	2.29E-08	4.33E-04	1.33E-04
9	D52	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.57E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
9	D52	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.17E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.20E-04
9	D52	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.34E-04
9	D53	60	Passenger Car	277	0.00E+00	3.50E-06	3.80E-07	1.25E+01	2.48E-05	6.73E-02	7.89E-06	2.85E-04	2.80E-03	4.19E-04	7.70E-04	4.96E-04	5.09E-04	5.49E-05	6.33E-05	1.33E-08	2.60E-04	4.45E-05
9	D53	60	Passenger Truck	464	0.00E+00	7.43E-06	7.88E-07	2.79E+01	4.69E-05	1.15E-01	1.54E-05	8.87E-04	5.11E-03	7.61E-04	1.47E-03	9.56E-04	9.80E-04	2.25E-04	1.40E-04	2.59E-08	4.90E-04	1.50E-04
9	D53	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	2.00E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.62E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.66E-06
9	D53	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.03E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.72E-04
9	D53	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.23E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.09E-04
9	D54	60	Passenger Car	169	0.00E+00	2.14E-06	2.32E-07	7.64E+00	1.52E-05	4.11E-02	4.82E-06	1.74E-04	1.71E-03	2.56E-04	4.70E-04	3.03E-04	3.11E-04	3.36E-05	3.87E-05	8.13E-09	1.59E-04	2.72E-05
9	D54	60	Passenger Truck	284	0.00E+00	4.54E-06	4.82E-07	1.70E+01	2.87E-05	7.05E-02	9.42E-06	5.42E-04	3.13E-03	4.65E-04	8.98E-04	5.85E-04	5.99E-04	1.37E-04	8.55E-05	1.59E-08	2.99E-04	9.19E-05
9	D54	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.93E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.22E-05
9	D54	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.08E-04
9	D54	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.74E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.28E-04
11	D55	80	Passenger Car	370	0.00E+00	3.79E-06	4.12E-07	1.55E+01	2.69E-05	7.51E-02	8.55E-06	3.83E-04	2.02E-03	3.37E-04	8.34E-04	5.38E-04	5.52E-04	5.50E-05	7.89E-05	1.69E-08	2.82E-04	5.98E-05
11	D55	80	Passenger Truck	619	0.00E+00	7.81E-06	8.33E-07	3.50E+01	5.08E-05	1.33E-01	1.65E-05	1.03E-03	3.59E-03	5.97E-04	1.59E-03	1.03E-03	1.06E-03	2.54E-04	1.76E-04	3.21E-08	5.32E-04	1.72E-04
11	D55	80	Single Unit Short Haul Truck	35	0.00E+00	4.86E-06	1.90E-07	5.81E+00	3.30E-06	1.06E-02	5.34E-06	2.02E-03	3.98E-04	8.14E-05	6.70E-04	1.24E-04	1.26E-04	5.91E-04	2.36E-05	9.36E-09	5.43E-04	3.78E-04
11	D55	80	Single Unit Long Haul Truck	2	0.00E+00	2.11E-07	8.15E-09	2.45E-01	1.40E-07	4.39E-04	2.32E-07	8.64E-05	1.83E-05	3.61E-06	2.92E-05	5.32E-06	5.43E-06	2.48E-05	9.99E-07	3.90E-10	2.38E-05	1.62E-05
11	D55	80	Combination Short Haul Truck	27	0.00E+00	5.61E-06	4.15E-07	9.12E+00	1.47E-08	8.54E-03	4.01E-06	8.67E-03	6.49E-04	1.18E-04	3.40E-04	1.21E-04	1.26E-04	1.45E-03	3.05E-05	0.00E+00	2.14E-04	1.63E-03
11	D55	80	Combination Long Haul Truck	25	0.00E+00	7.81E-06	4.41E-07	8.46E+00	4.97E-08	1.01E-02	6.44E-06	9.27E-03	6.71E-04	1.07E-04	7.16E-04	1.42E-04	1.48E-04	1.36E-03	2.84E-05	0.00E+00	5.68E-04	1.75E-03
11	D56	80	Passenger Car	595	0.00E+00	6.10E-06	6.63E-07	2.49E+01	4.33E-05	1.21E-01	1.38E-05	6.17E-04	3.24E-03	5.43E-04	1.34E-03	8.65E-04	8.88E-04	8.85E-05	1.27E-04	2.71E-08	4.54E-04	9.63E-05
11	D56	80	Passenger Truck	997	0.00E+00	1.26E-05	1.34E-06	5.63E+01	8.18E-05	2.14E-01	2.66E-05	1.67E-03	5.78E-03	9.62E-04	2.56E-03	1.66E-03	1.70E-03	4.09E-04	2.84E-04	5.17E-08	8.56E-04	2.77E-04
11	D56	80	Single Unit Short Haul Truck	53	0.00E+00	7.23E-06	2.82E-07	8.64E+00	4.90E-06	1.57E-02	7.95E-06	3.01E-03	5.92E-04	1.21E-04	9.95E-04	1.84E-04	1.88E-04	8.79E-04	3.51E-05	1.39E-08	8.08E-04	5.62E-04
11	D56	80	Single Unit Long Haul Truck	2	0.00E+00	3.14E-07	1.21E-08	3.65E-01	2.09E-07	6.53E-04	3.45E-07	1.28E-04	2.71E-05	5.37E-06	4.34E-05	7.91E-06	8.07E-06	3.69E-05	1.49E-06	5.80E-10	3.53E-05	2.40E-05
11	D56	80	Combination Short Haul Truck	31	0.00E+00	6.47E-06	4.79E-07	1.05E+01	1.69E-08	9.86E-03	4.62E-06	1.00E-02	7.49E-04	1.36E-04	3.92E-04	1.40E-04	1.45E-04	1.67E-03	3.52E-05	0.00E+00	2.47E-04	1.88E-03
11	D56	80	Combination Long Haul Truck	29	0.00E+00	9.01E-06	5.09E-07	9.77E+00	5.73E-08	1.17E-02	7.43E-06	1.07E-02	7.74E-04	1.24E-04	8.26E-04	1.64E-04	1.71E-04	1.57E-03	3.27E-05	0.00E+00	6.55E-04	2.01E-03
11	D57	80	Passenger Car	1208	0.00E+00	1.24E-05	1.35E-06	5.06E+01	8.79E-05	2.46E-01	2.79E-05	1.25E-03	6.59E-03	1.10E-03	2.72E-03	1.76E-03	1.80E-03	1.80E-04	2.58E-04	5.51E-08	9.22E-04	1.95E-04
11	D57	80	Passenger Truck	2024	0.00E+00	2.55E-05	2.72E-06	1.14E+02	1.66E-04	4.34E-01	5.41E-05	3.38E-03	1.17E-02	1.95E-03	5.19E-03	3.37E-03	3.45E-03	8.31E-04	5.77E-04	1.05E-07	1.74E-03	5.63E-04
11	D57	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.08E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
11	D57	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.88E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.66E-05
11	D57	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.33E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.76E-03
11	D57	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.98E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.88E-03
11	D58	80	Passenger Car	990	0.00E+00	1.02E-05	1.10E-06	4.15E+01	7.21E-05	2.01E-01	2.29E-05	1.03E-03	5.40E-03	9.04E-04	2.23E-03	1.44E-03	1.48E-03	1.47E-04	2.11E-04	4.52E-08	7.55E-04	1.60E-04
11	D58	80	Passenger Truck	1659	0.00E+00	2.09E-05	2.23E-06	9.37E+01	1.36E-04	3.56E-01	4.43E-05	2.77E-03	9.61E-03	1.60E-03	4.25E-03	2.76E-03	2.83E-03	6.81E-04	4.73E-04	8.60E-08	1.42E-03	4.61E-04
11	D58	80	Single Unit Short Haul Truck	69	0.00E+00	9.46E-06	3.69E-07	1.13E+01	6.42E-06	2.05E-02	1.04E-05	3.94E-03	7.75E-04	1.58E-04	1.30E-03	2.41E-04	2.46E-04	1.15E-03	4.59E-05	1.82E-08	1.06E-03	7.36E-04
11	D58	80	Single Unit Long Haul Truck	3	0.00E+00	4.11E-07	1.59E-08	4.78E-01	2.73E-07	8.55E-04	4.52E-07	1.68E-04	3.55E-05	7.03E-06	5.68E-05	1.04E-05	1.06E-05	4.83E-05	1.94E-06	7.59E-10	4.63E-05	3.14E-05
11	D58	80	Combination Short Haul Truck	40	0.00E+00	8.19E-06	6.06E-07	1.33E+01	2.15E-08	1.25E-02	5.86E-06	1.27E-02	9.48E-04	1.72E-04	4.97E-04	1.77E-04	1.84E-04	2.12E-03	4.46E-05	0.00E+00	3.13E-04	2.39E-03
11	D58	80	Combination Long Haul Truck	36	0.00E+00	1.14E-05	6.44E-07	1.24E+01	7.26E-08	1.48E-02	9.41E-06	1.35E-02	9.80E-04	1.57E-04	1.05E-03	2.08E-04	2.16E-04	1.99E-03	4.15E-05	0.00E+00	8.30E-04	2.55E-03
11	D59	80	Passenger Car	480	0.00E+00	4.92E-06	5.35E-07	2.01E+01	3.49E-05	9.76E-02	1.11E-05	4.98E-04	2.62E-03	4.38E-04	1.08E-03	6.98E-04	7.16E-04	7.14E-05	1.02E-04	2.19E-08	3.66E-04	7.77E-05
11	D59	80	Passenger Truck	804	0.00E+00	1.01E-05	1.08E-06	4.54E+01	6.59E-05	1.73E-01	2.15E-05	1.34E-03	4.66E-03	7.76E-04	2.06E-03	1.34E-03	1.37E-03	3.30E-04	2.29E-04	4.17E-08	6.91E-04	2.24E-04
11	D59	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.53E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.86E-04
11	D59	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.54E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	D59	80	Combination Short Haul Truck	16	0.00E+00	3.34E-06	2.47E-07	5.44E+00	8.75E-09	5.09E-03	2.39E-06	5.17E-03	3.87E-04	7.01E-05	2.03E-04	7.22E-05	7.49E-05	8.64E-04	1.82E-05	0.00E+00	1.28E-04	9.73E-04
11	D59	80	Combination Long Haul Truck	15	0.00E+00	4.66E-06	2.63E-07	5.05E+00	2.96E-08	6.03E-03	3.84E-06	5.52E-03	4.00E-04	6.40E-05	4.27E-04	8.47E-05	8.82E-05	8.10E-04	1.69E-05	0.00E+00	3.38E-04	1.04E-03
11	D60	80	Passenger Car	550	0.00E+00	5.64E-06	6.13E-07	2.31E+01	4.00E-05	1.12E-01	1.27E-05	5.71E-04	3.00E-03	5.02E-04	1.24E-03	8.00E-04	8.21E-04	8.18E-05	1.17E-04	2.51E-08	4.20E-04	8.90E-05
11	D60	80	Passenger Truck	922	0.00E+00	1.16E-05	1.24E-06	5.21E+01	7.56E-05	1.98E-01	2.46E-05	1.54E-03	5.34E-03	8.89E-04	2.36E-03	1.53E-03	1.57E-03	3.78E-04	2.63E-04	4.78E-08	7.92E-04	2.56E-04
11	D60	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.73E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.11E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.17E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	D60	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.83E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.29E-03
11	D60	80	Combination

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D65	80	Combination Short Haul Truck	22	0.00E+00	4.64E-06	3.43E-07	7.54E+00	1.21E-08	7.06E-03	3.31E-06	7.17E-03	5.37E-04	9.72E-05	2.81E-04	1.00E-04	1.04E-04	1.20E-03	2.52E-05	0.00E+00	1.77E-04	1.35E-03
11	D65	80	Combination Long Haul Truck	21	0.00E+00	6.46E-06	3.65E-07	7.00E+00	4.11E-08	8.36E-03	5.33E-06	7.66E-03	5.55E-04	8.88E-05	5.92E-04	1.17E-04	1.22E-04	1.12E-03	2.35E-05	0.00E+00	4.69E-04	1.44E-03
11	D66	80	Passenger Car	255	0.00E+00	2.61E-06	2.84E-07	1.07E+01	1.86E-05	5.18E-02	5.90E-06	2.64E-04	1.39E-03	2.33E-04	5.75E-04	3.71E-04	3.80E-04	3.79E-05	5.44E-05	1.16E-08	1.94E-04	4.12E-05
11	D66	80	Passenger Truck	427	0.00E+00	5.39E-06	5.74E-07	2.41E+01	3.50E-05	9.16E-02	1.14E-05	7.13E-04	2.47E-03	4.12E-04	1.10E-03	7.10E-04	7.28E-04	1.75E-04	1.22E-04	2.21E-08	3.67E-04	1.19E-04
11	D66	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.99E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D66	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.33E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.76E-03
11	D66	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.98E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.88E-03
11	D67	80	Passenger Car	213	0.00E+00	2.19E-06	2.37E-07	8.93E+00	1.55E-05	4.33E-02	4.93E-06	2.21E-04	1.16E-03	1.95E-04	4.81E-04	3.10E-04	3.18E-04	3.17E-05	4.55E-05	9.72E-09	1.63E-04	3.45E-05
11	D67	80	Passenger Truck	357	0.00E+00	4.50E-06	4.80E-07	2.02E+01	2.93E-05	7.66E-02	9.54E-06	5.96E-04	2.07E-03	3.44E-04	9.15E-04	5.94E-04	6.09E-04	1.47E-04	1.02E-04	1.85E-08	3.07E-04	9.92E-05
11	D67	80	Single Unit Short Haul Truck	105	0.00E+00	1.45E-05	5.64E-07	1.73E+01	9.80E-06	3.14E-02	1.59E-05	6.01E-03	1.18E-03	2.42E-04	1.99E-03	3.69E-04	3.76E-04	1.76E-03	7.02E-05	2.78E-08	1.62E-03	1.12E-03
11	D67	80	Single Unit Long Haul Truck	5	0.00E+00	6.28E-07	2.42E-08	7.30E-01	4.18E-07	1.31E-03	6.90E-07	2.57E-04	5.43E-05	1.07E-05	8.68E-05	1.58E-05	1.61E-05	7.38E-05	2.97E-06	1.16E-09	7.07E-05	4.80E-05
11	D67	80	Combination Short Haul Truck	81	0.00E+00	1.67E-05	1.24E-06	2.72E+01	4.38E-08	2.55E-02	1.19E-05	2.58E-02	1.93E-03	3.50E-04	1.01E-03	3.61E-04	3.75E-04	4.32E-03	9.09E-05	0.00E+00	6.39E-04	4.87E-03
11	D67	80	Combination Long Haul Truck	74	0.00E+00	2.33E-05	1.31E-06	2.52E+01	1.48E-07	3.02E-02	1.92E-05	2.76E-02	2.00E-03	3.20E-04	2.13E-03	4.24E-04	4.41E-04	4.05E-03	8.45E-05	0.00E+00	1.69E-03	5.20E-03
11	D68	80	Passenger Car	195	0.00E+00	2.00E-06	2.17E-07	8.18E+00	1.42E-05	3.97E-02	4.51E-06	2.02E-04	1.06E-03	1.78E-04	4.40E-04	2.84E-04	2.91E-04	2.90E-05	4.16E-05	8.90E-09	1.49E-04	3.16E-05
11	D68	80	Passenger Truck	327	0.00E+00	4.12E-06	4.39E-07	1.85E+01	2.68E-05	7.01E-02	8.73E-06	5.46E-04	1.89E-03	3.15E-04	8.38E-04	5.44E-04	5.57E-04	1.34E-04	9.31E-05	1.69E-08	2.81E-04	9.09E-05
11	D68	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.19E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.09E-04
11	D68	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.34E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.75E-05
11	D68	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.23E-03
11	D68	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.27E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	D69	80	Passenger Car	254	0.00E+00	2.61E-06	2.83E-07	1.07E+01	1.85E-05	5.17E-02	5.88E-06	2.64E-04	1.39E-03	2.32E-04	5.73E-04	3.70E-04	3.79E-04	3.78E-05	5.42E-05	1.16E-08	1.94E-04	4.11E-05
11	D69	80	Passenger Truck	426	0.00E+00	5.37E-06	5.72E-07	2.41E+01	3.49E-05	9.14E-02	1.14E-05	7.11E-04	2.47E-03	4.11E-04	1.09E-03	7.08E-04	7.26E-04	1.75E-04	1.21E-04	2.21E-08	3.66E-04	1.18E-04
11	D69	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.04E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.94E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.44E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.29E-06
11	D69	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.50E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.04E-03
11	D69	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.88E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.11E-03
11	D70	80	Passenger Car	102	0.00E+00	1.04E-06	1.13E-07	4.26E+00	7.40E-06	2.07E-02	2.35E-06	1.05E-04	5.54E-04	9.28E-05	2.29E-04	1.48E-04	1.52E-04	1.51E-05	2.17E-05	4.64E-09	7.76E-05	1.64E-05
11	D70	80	Passenger Truck	170	0.00E+00	2.15E-06	2.29E-07	9.63E+00	1.40E-05	3.65E-02	4.55E-06	2.84E-04	9.87E-04	1.64E-04	4.37E-04	2.83E-04	2.90E-04	6.99E-05	4.85E-05	8.83E-09	1.46E-04	4.74E-05
11	D70	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.41E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.50E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
11	D70	80	Combination Short Haul Truck	26	0.00E+00	5.39E-06	3.99E-07	8.77E+00	1.41E-08	8.21E-03	3.85E-06	8.33E-03	6.24E-04	1.13E-04	3.27E-04	1.16E-04	1.21E-04	1.39E-03	2.93E-05	0.00E+00	2.06E-04	1.57E-03
11	D70	80	Combination Long Haul Truck	24	0.00E+00	7.51E-06	4.24E-07	8.14E+00	4.78E-08	9.73E-03	6.19E-06	8.91E-03	6.45E-04	1.03E-04	6.88E-04	1.37E-04	1.42E-04	1.31E-03	2.73E-05	0.00E+00	5.46E-04	1.68E-03
10	D71	70	Passenger Car	221	0.00E+00	2.44E-06	2.65E-07	9.55E+00	1.73E-05	4.71E-02	5.50E-06	2.24E-04	1.71E-03	2.66E-04	5.36E-04	3.46E-04	3.55E-04	3.76E-05	4.85E-05	1.01E-08	1.81E-04	3.49E-05
10	D71	70	Passenger Truck	371	0.00E+00	5.13E-06	5.46E-07	2.15E+01	3.29E-05	8.33E-02	1.08E-05	6.51E-04	3.09E-03	4.78E-04	1.03E-03	6.68E-04	6.85E-04	1.64E-04	1.08E-04	1.94E-08	3.44E-04	1.09E-04
10	D71	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.22E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.14E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.53E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
10	D71	70	Combination Short Haul Truck	38	0.00E+00	9.69E-06	7.21E-07	1.31E+01	2.46E-08	1.40E-02	6.91E-06	1.45E-02	1.37E-03	2.28E-04	5.81E-04	2.10E-04	2.18E-04	2.08E-03	4.38E-05	0.00E+00	3.63E-04	2.73E-03
10	D71	70	Combination Long Haul Truck	34	0.00E+00	1.33E-05	7.56E-07	1.23E+01	8.33E-08	1.67E-02	1.09E-05	1.55E-02	1.42E-03	2.14E-04	1.21E-03	2.43E-04	2.53E-04	1.97E-03	4.12E-05	0.00E+00	9.55E-04	2.93E-03
10	D72	70	Passenger Car	224	0.00E+00	2.47E-06	2.68E-07	9.66E+00	1.75E-05	4.77E-02	5.56E-06	2.26E-04	1.73E-03	2.69E-04	5.42E-04	3.50E-04	3.59E-04	3.81E-05	4.91E-05	1.02E-08	1.83E-04	3.53E-05
10	D72	70	Passenger Truck	375	0.00E+00	5.19E-06	5.52E-07	2.18E+01	3.33E-05	8.43E-02	1.09E-05	6.59E-04	3.12E-03	4.83E-04	1.04E-03	6.76E-04	6.93E-04	1.66E-04	1.09E-04	1.96E-08	3.48E-04	1.11E-04
10	D72	70	Single Unit Short Haul Truck	50	0.00E+00	8.77E-06	3.56E-07	8.16E+00	5.87E-06	1.48E-02	9.53E-06	3.49E-03	7.92E-04	1.45E-04	1.18E-03	2.25E-04	2.30E-04	8.29E-04	3.32E-05	1.34E-08	9.52E-04	6.53E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.81E-07	1.54E-08	3.46E-01	2.53E-07	6.21E-04	4.15E-07	1.50E-04	3.62E-05	6.49E-06	5.16E-05	9.72E-06	9.92E-06	3.50E-05	1.41E-06	5.65E-10	4.16E-05	2.81E-05
10	D72	70	Combination Short Haul Truck	37	0.00E+00	9.56E-06	7.11E-07	1.29E+01	2.43E-08	1.38E-02	6.81E-06	1.43E-02	1.35E-03	2.25E-04	5.73E-04	2.07E-04	2.15E-04	2.05E-03	4.32E-05	0.00E+00	3.58E-04	2.70E-03
10	D72	70	Combination Long Haul Truck	34	0.00E+00	1.31E-05	7.45E-07	1.21E+01	8.22E-08	1.65E-02	1.08E-05	1.53E-02	1.40E-03	2.11E-04	1.19E-03	2.40E-04	2.50E-04	1.95E-03	4.06E-05	0.00E+00	9.42E-04	2.89E-03
10	D73	70	Passenger Car	141	0.00E+00	1.55E-06	1.68E-07	6.07E+00	1.10E-05	2.99E-02	3.49E-06	1.42E-04	1.08E-03	1.69E-04	3.40E-04	2.19E-04	2.25E-04	2.39E-05	3.08E-05	6.40E-09	1.15E-04	2.22E-05
10	D73	70	Passenger Truck	235	0.00E+00	3.26E-06	3.46E-07	1.37E+01	2.09E-05	5.29E-02	6.83E-06	4.13E-04	1.96E-03	3.03E-04	6.53E-04	4.25E-04	4.35E-04	1.04E-04	6.87E-05	1.23E-08	2.18E-04	6.94E-05
10	D73	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	D73	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.20E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.73E-06
10	D73	70	Combination Short Haul Truck	40	0.00E+00	1.02E-05	7.61E-07	1.38E+01	2.60E-08	1.48E-02	7.29E-06	1.53E-02	1.44E-03	2.41E-04	6.14E-04	2.22E-04	2.30E-04	2.20E-03	4.62E-05	0.00E+00	3.84E-04	2.89E-03
10	D73	70	Combination Long Haul Truck	36	0.00E+00	1.40E-05	7.98E-07	1.30E+01	8.80E-08	1.76E-02	1.15E-05	1.64E-02	1.50E-03	2.26E-04	1.28E-03	2.56E-04	2.67E-04	2.08E-03	4.35E-05	0.00E+00	1.01E-03	3.09E-03
10	D74	70	Passenger Car	163	0.00E+00	1.80E-06	1.96E-07	7.05E+00	1.28E-05	3.48E-02	4.06E-06	1.65E-04	1.26E-03	1.96E-04	3.96E-04	2.55E-04	2.62E-04	2.78E-05	3.58E-05	7.44E-09	1.34E-04	2.58E-05
10	D74	70	Passenger Truck	274	0.00E+00	3.79E-06	4.03E-07	1.59E+01	2.43E-05	6.15E-02	7.94E-06	4.81E-04	2.28E-03	3.53E-04	7.59E-04	4.93E-04	5.06E-04	1.21E-04	7.98E-05	1.43E-08	2.54E-04	8.07E-05
10	D74	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.52E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.09E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	D74	70	Combination Short Haul Truck	30	0.00E+00	7.67E-06	5.71E-07	1.04E+01	1.95E-08	1.11E-02	5.47E-06	1.15E-02	1.08E-03	1.80E-04	4.60E-04	1.66E-04	1.73E-04	1.65E-03	3.47E-05	0.00E+00	2.88E-04	2.16E-03
10	D74	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.23E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.32E-03
11	D75	80	Passenger Car	149	0.00E+00	1.53E-06	1.66E-07	6.25E+00	1.09E-05	3.03E-02	3.45E-06	1.55E-04	8.13E-04	1.36E-04	3.36E-04	2.17E-04	2.23E-04	2.22E-05	3.18E-05	6.80E-09	1.14E-04	2.41E-05
11	D75	80	Passenger Truck	250	0.00E+00	3.15E-06	3.36E-07	1.41E+01	2.05E-05	5.36E-02	6.68E-06	4.17E-04	1.45E-03	2.41E-04	6.41E-04	4.16E-04	4.26E-04	1.03E-04	7.12E-05	1.29E-08	2.15E-04	6.95E-05
11	D75	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.75E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.74E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.98E-06
11	D75	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.83E-04
11	D75	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	D76	80	Passenger Car	99	0.00E+00	1.01E-06	1.10E-07	4.14E+00	7.18E-06	2.01E-02	2.28E-06	1.02E-04	5.38E-04	9.01E-05	2.23E-04	1.43E-04	1.47E-04	1.47E-05	2.11E-05	4.50E-09	7.53E-05	1.60E-05
11	D76	80	Passenger Truck	165	0.00E+00	2.08E-06	2.22E-07	9.34E+00	1.36E-05	3.55E-02	4.42E-06	2.76E-04	9.58E-04	1.59E-04	4.24E-04	2.75E-04	2.82E-04	6.79E-05	4.71E-05	8.57E-09	1.42E-04	4.60E-05
11	D76	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.17E-05
11	D76	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.83E-04
11	D76	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	D77	80	Passenger Car	196	0.00E+00	2.01E-06	2.19E-07	8.23E+00	1.43E-05	3.99E-02	4.54E-06	2.04E-04	1.07E-03	1.79E-04	4.43E-04	2.85E-04	2.93E-04	2.92E-05	4.19E-05	8.95E-09	1.50E-04	3.18E-05
11	D77	80	Passenger Truck	329	0.00E+00	4.15E-06	4.42E-07	1.86E+01	2.70E-05	7.05E-02	8.78E-06	5.49E-04	1.91E-03	3.17E-04	8.43E-04	5.47E-04	5.61E-04	1.35E-04	9.37E-05	1.70E-08	2.82E-04	9.14E-05
11	D77	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.15E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.15E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.91E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.17E-06
11	D77	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.33E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.28E-04
11	D77	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.56E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.71E-04
11	D78	80	Passenger Car	72	0.00E+00	7.40E-07	8.04E-08	3.02E+00	5.25E-06	1.47E-02	1.67E-06	7.48E-05	3.93E-04	6.59E-05	1.63E-04	1.05E-04	1.08E-04	1.07E-05	1.54E-05	3.29E-09	5.50E-05	1.17E-05
11	D78	80	Passenger Truck	121	0.00E+00	1.52E-06	1.62E-07	6.83E+00	9.91E-06	2.59E-02	3.23E-06	2.02E-04	7.00E-04	1.17E-04	3.10E-04	2.01E-04	2.06E-04	4.96E-05	3.44E-05	6.26E-09	1.04E-04	3.36E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	6.01E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D78	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.33E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.40E-04
11	D78	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.49E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.70E-04
11	D79	70	Passenger Car	227	0.00E+00	2.49E-06	2.71E-07	9.78E+00	1.77E-05	4.82E-02	5.63E-06	2.29E-04	1.75E-03	2.72E-04	5.49E-04	3.54E-04	3.63E-04	3.85E-05	4.97E-05	1.03E-08	1.86E-04	3.57E-05
11	D79	70	Passenger Truck	379	0.00E+00	5.25E-06	5.58E-07	2.20E+01	3.36E-05	8.53E-02	1.10E-05	6.66E-04	3.16E-03	4.89E-04	1.05E-03	6.84E-04	7.01E-04	1.68E-04	1.11E-04	1.98E-08	3.52E-04	1.12E-04
11	D79	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.65E-04
11	D79	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
11	D79	70	Combination Short Haul

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D84	80	Passenger Car	448	0.00E+00	4.60E-06	4.99E-07	1.88E+01	3.26E-05	9.11E-02	1.04E-05	4.65E-04	2.44E-03	4.09E-04	1.01E-03	6.52E-04	6.69E-04	6.66E-05	9.56E-05	2.04E-08	3.42E-04	7.25E-05
11	D84	80	Passenger Truck	751	0.00E+00	9.47E-06	1.01E-06	4.24E+01	6.16E-05	1.61E-01	2.01E-05	1.25E-03	4.35E-03	7.24E-04	1.93E-03	1.25E-03	1.28E-03	3.08E-04	2.14E-04	3.89E-08	6.45E-04	2.09E-04
11	D84	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.75E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.27E-04
11	D84	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.47E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.40E-05
11	D84	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.14E-03
11	D84	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
11	D85	80	Passenger Car	292	0.00E+00	2.99E-06	3.25E-07	1.22E+01	2.12E-05	5.93E-02	6.75E-06	3.03E-04	1.59E-03	2.67E-04	6.58E-04	4.25E-04	4.36E-04	4.34E-05	6.23E-05	1.33E-08	2.23E-04	4.72E-05
11	D85	80	Passenger Truck	489	0.00E+00	6.17E-06	6.57E-07	2.76E+01	4.01E-05	1.05E-01	1.31E-05	8.17E-04	2.83E-03	4.72E-04	1.25E-03	8.14E-04	8.34E-04	2.01E-04	1.39E-04	2.53E-08	4.20E-04	1.36E-04
11	D85	80	Single Unit Short Haul Truck	29	0.00E+00	3.94E-06	1.54E-07	4.71E+00	2.67E-06	8.56E-03	4.33E-06	1.64E-03	3.23E-04	6.60E-05	5.43E-04	1.01E-04	1.02E-04	4.79E-04	1.91E-05	7.59E-09	4.40E-04	3.07E-04
11	D85	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	6.61E-09	1.99E-01	1.14E-07	3.56E-04	1.88E-07	7.01E-05	1.48E-05	2.93E-06	2.37E-05	4.32E-06	4.40E-06	2.01E-05	8.10E-07	3.16E-10	1.93E-05	1.31E-05
11	D85	80	Combination Short Haul Truck	33	0.00E+00	6.90E-06	5.11E-07	1.12E+01	1.81E-08	1.05E-02	4.93E-06	1.07E-02	7.99E-04	1.45E-04	4.18E-04	1.49E-04	1.55E-04	1.78E-03	3.75E-05	0.00E+00	2.64E-04	2.01E-03
11	D85	80	Combination Long Haul Truck	31	0.00E+00	9.61E-06	5.43E-07	1.04E+01	6.11E-08	1.25E-02	7.93E-06	1.14E-02	8.26E-04	1.32E-04	8.81E-04	1.75E-04	1.82E-04	1.67E-03	3.49E-05	0.00E+00	6.99E-04	2.15E-03
11	D86	80	Passenger Car	379	0.00E+00	3.88E-06	4.22E-07	1.59E+01	2.76E-05	7.70E-02	8.76E-06	3.93E-04	2.06E-03	3.46E-04	8.54E-04	5.51E-04	5.65E-04	5.63E-05	8.08E-05	1.73E-08	2.89E-04	6.13E-05
11	D86	80	Passenger Truck	634	0.00E+00	8.00E-06	8.53E-07	3.59E+01	5.20E-05	1.36E-01	1.70E-05	1.06E-03	3.68E-03	6.12E-04	1.63E-03	1.06E-03	1.08E-03	2.60E-04	1.81E-04	3.29E-08	5.45E-04	1.76E-04
11	D86	80	Single Unit Short Haul Truck	16	0.00E+00	2.23E-06	8.72E-08	2.67E+00	1.51E-06	4.85E-03	2.46E-06	9.29E-04	1.83E-04	3.74E-05	3.08E-04	5.70E-05	5.81E-05	2.72E-04	1.08E-05	4.30E-09	2.50E-04	1.74E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	9.71E-08	3.75E-09	1.13E-01	6.45E-08	2.02E-04	1.07E-07	3.97E-05	8.39E-06	1.66E-06	1.34E-05	2.45E-06	2.49E-06	1.14E-05	4.59E-07	1.79E-10	1.09E-05	7.42E-06
11	D86	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.83E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.48E-03
11	D86	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.37E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.58E-03
11	D87	80	Passenger Car	813	0.00E+00	8.34E-06	9.06E-07	3.41E+01	5.92E-05	1.65E-01	1.88E-05	8.43E-04	4.43E-03	7.42E-04	1.83E-03	1.18E-03	1.21E-03	1.21E-04	1.74E-04	3.71E-08	6.20E-04	1.32E-04
11	D87	80	Passenger Truck	1362	0.00E+00	1.72E-05	1.83E-06	7.70E+01	1.12E-04	2.92E-01	3.64E-05	2.27E-03	7.89E-03	1.31E-03	3.49E-03	2.27E-03	2.32E-03	5.59E-04	3.88E-04	7.06E-08	1.17E-03	3.79E-04
11	D87	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.43E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.28E-04
11	D87	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.54E-05
11	D87	80	Combination Short Haul Truck	75	0.00E+00	1.54E-05	1.14E-06	2.51E+01	4.04E-08	2.35E-02	1.10E-05	2.38E-02	1.78E-03	3.23E-04	9.35E-04	3.33E-04	3.46E-04	3.99E-03	8.39E-05	0.00E+00	5.89E-04	4.49E-03
11	D87	80	Combination Long Haul Truck	68	0.00E+00	2.15E-05	1.21E-06	2.33E+01	1.37E-07	2.78E-02	1.77E-05	2.55E-02	1.84E-03	2.95E-04	1.97E-03	3.91E-04	4.07E-04	3.74E-03	7.80E-05	0.00E+00	1.56E-03	4.80E-03
11	D88	80	Passenger Car	479	0.00E+00	4.91E-06	5.34E-07	2.01E+01	3.49E-05	9.73E-02	1.11E-05	4.97E-04	2.61E-03	4.37E-04	1.08E-03	6.96E-04	7.15E-04	7.12E-05	1.02E-04	2.18E-08	3.65E-04	7.75E-05
11	D88	80	Passenger Truck	802	0.00E+00	1.01E-05	1.08E-06	4.53E+01	6.58E-05	1.72E-01	2.14E-05	1.34E-03	4.65E-03	7.74E-04	2.06E-03	1.33E-03	1.37E-03	3.29E-04	2.29E-04	4.16E-08	6.89E-04	2.23E-04
11	D88	80	Single Unit Short Haul Truck	68	0.00E+00	9.33E-06	3.64E-07	1.11E+01	6.33E-06	2.03E-02	1.03E-05	3.88E-03	7.64E-04	1.56E-04	1.29E-03	2.38E-04	2.43E-04	1.13E-03	4.53E-05	1.80E-08	1.04E-03	7.26E-04
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	4.05E-07	1.56E-08	4.71E-01	2.70E-07	8.43E-04	4.45E-07	1.66E-04	3.50E-05	6.93E-06	5.60E-05	1.02E-05	1.04E-05	4.76E-05	1.92E-06	7.48E-10	4.56E-05	3.10E-05
11	D88	80	Combination Short Haul Truck	62	0.00E+00	1.28E-05	9.50E-07	2.09E+01	3.36E-08	1.96E-02	9.17E-06	1.98E-02	1.49E-03	2.69E-04	7.78E-04	2.77E-04	2.88E-04	3.32E-03	6.98E-05	0.00E+00	4.90E-04	3.74E-03
11	D88	80	Combination Long Haul Truck	57	0.00E+00	1.79E-05	1.01E-06	1.94E+01	1.14E-07	2.31E-02	1.47E-05	2.12E-02	1.54E-03	2.46E-04	1.64E-03	3.25E-04	3.39E-04	3.11E-03	6.49E-05	0.00E+00	1.30E-03	3.99E-03
9	D89	60	Passenger Car	107	0.00E+00	1.35E-06	1.47E-07	4.82E+00	9.59E-06	2.60E-02	3.05E-06	1.10E-04	1.08E-03	1.62E-04	2.97E-04	1.92E-04	1.97E-04	2.12E-05	2.44E-05	5.13E-09	1.00E-04	1.72E-05
9	D89	60	Passenger Truck	179	0.00E+00	2.87E-06	3.04E-07	1.08E+01	1.81E-05	4.45E-02	5.95E-06	3.42E-04	1.97E-03	2.94E-04	5.67E-04	3.69E-04	3.78E-04	8.68E-05	5.40E-05	1.00E-08	1.89E-04	5.80E-05
9	D89	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.03E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	D89	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.27E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.15E-04
9	D89	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
9	D90	60	Passenger Car	52	0.00E+00	6.52E-07	7.08E-08	2.33E+00	4.63E-06	1.25E-02	1.47E-06	5.31E-05	5.21E-04	7.80E-05	1.43E-04	9.24E-05	9.48E-05	1.02E-05	1.18E-05	2.48E-09	4.85E-05	8.29E-06
9	D90	60	Passenger Truck	86	0.00E+00	1.38E-06	1.47E-07	5.19E+00	8.73E-06	2.15E-02	2.87E-06	1.65E-04	9.52E-04	1.42E-04	2.74E-04	1.78E-04	1.82E-04	4.19E-05	2.60E-05	4.83E-09	9.12E-05	2.80E-05
9	D90	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.69E-04
9	D90	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.54E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.60E-05
9	D90	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.60E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.06E-03
9	D90	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.97E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
10	D91	70	Passenger Car	75	0.00E+00	8.23E-07	8.95E-08	3.23E+00	5.84E-06	1.59E-02	1.86E-06	7.56E-05	5.76E-04	8.98E-05	1.81E-04	1.17E-04	1.20E-04	1.27E-05	1.64E-05	3.40E-09	6.12E-05	1.18E-05
10	D91	70	Passenger Truck	125	0.00E+00	1.73E-06	1.84E-07	7.26E+00	1.11E-05	2.82E-02	3.63E-06	2.20E-04	1.04E-03	1.61E-04	3.48E-04	2.26E-04	2.31E-04	5.55E-05	3.65E-05	6.55E-09	1.16E-04	3.69E-05
10	D91	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	D91	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	D91	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
10	D92	70	Passenger Car	261	0.00E+00	2.87E-06	3.12E-07	1.13E+01	2.04E-05	5.56E-02	6.48E-06	2.64E-04	2.01E-03	3.13E-04	6.32E-04	4.07E-04	4.18E-04	4.43E-05	5.72E-05	1.19E-08	2.14E-04	4.12E-05
10	D92	70	Passenger Truck	437	0.00E+00	6.05E-06	6.43E-07	2.54E+01	3.87E-05	9.82E-02	1.27E-05	7.68E-04	3.64E-03	5.63E-04	1.21E-03	7.88E-04	8.08E-04	1.94E-04	1.28E-04	2.28E-08	4.05E-04	1.29E-04
10	D92	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.71E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.26E-04
10	D92	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.60E-05
10	D92	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
10	D93	70	Passenger Car	69	0.00E+00	7.62E-07	8.28E-08	2.98E+00	5.40E-06	1.47E-02	1.72E-06	7.00E-05	5.33E-04	8.30E-05	1.67E-04	1.08E-04	1.11E-04	1.18E-05	1.52E-05	3.15E-09	5.67E-05	1.09E-05
10	D93	70	Passenger Truck	116	0.00E+00	1.60E-06	1.70E-07	6.72E+00	1.03E-05	2.60E-02	3.36E-06	2.03E-04	9.65E-04	1.49E-04	3.22E-04	2.09E-04	2.14E-04	5.14E-05	3.38E-05	6.06E-09	1.07E-04	3.42E-05
10	D93	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	D93	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	D94	70	Passenger Car	229	0.00E+00	2.52E-06	2.74E-07	9.87E+00	1.79E-05	4.87E-02	5.68E-06	2.31E-04	1.76E-03	2.75E-04	5.54E-04	3.57E-04	3.67E-04	3.89E-05	5.02E-05	1.04E-08	1.87E-04	3.61E-05
10	D94	70	Passenger Truck	383	0.00E+00	5.31E-06	5.64E-07	2.22E+01	3.40E-05	8.61E-02	1.11E-05	6.73E-04	3.19E-03	4.94E-04	1.06E-03	6.91E-04	7.08E-04	1.70E-04	1.12E-04	2.00E-08	3.55E-04	1.13E-04
10	D94	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	D94	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	D94	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
9	E01	60	Passenger Car	225	0.00E+00	2.85E-06	3.09E-07	1.02E+01	2.02E-05	5.48E-02	6.42E-06	2.32E-04	2.28E-03	3.41E-04	6.26E-04	4.04E-04	4.14E-04	4.47E-05	5.15E-05	1.08E-08	2.12E-04	3.62E-05
9	E01	60	Passenger Truck	378	0.00E+00	6.05E-06	6.41E-07	2.27E+01	3.81E-05	9.38E-02	1.25E-05	7.22E-04	4.16E-03	6.19E-04	1.20E-03	7.78E-04	7.97E-04	1.83E-04	1.14E-04	2.11E-08	3.99E-04	1.22E-04
9	E01	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.03E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	E01	60	Single Unit Long Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.27E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.15E-04
9	E01	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
9	E02	60	Passenger Car	267	0.00E+00	3.37E-06	3.66E-07	1.20E+01	2.39E-05	6.47E-02	7.59E-06	2.74E-04	2.69E-03	4.03E-04	7.41E-04	4.77E-04	4.90E-04	5.28E-05	6.09E-05	1.28E-08	2.50E-04	4.28E-05
9	E02	60	Passenger Truck	446	0.00E+00	7.15E-06	7.58E-07	2.68E+01	4.51E-05	1.11E-01	1.48E-05	8.54E-04	4.92E-03	7.32E-04	1.41E-03	9.20E-04	9.43E-04	2.16E-04	1.35E-04	2.50E-08	4.71E-04	1.45E-04
9	E02	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.03E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	E02	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.20E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.91E-04
9	E02	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.48E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.43E-04
11	E03	80	Passenger Car	109	0.00E+00	1.12E-06	1.22E-07	4.58E+00	7.94E-06	2.22E-02	2.52E-06	1.13E-04	5.95E-04	9.96E-05	2.46E-04	1.59E-04	1.63E-04	1.62E-05	2.33E-05	4.98E-09	8.33E-05	1.77E-05
11	E03	80	Passenger Truck	183	0.00E+00	2.31E-06	2.46E-07	1.03E+01	1.50E-05	3.92E-02	4.89E-06	3.05E-04	1.06E-03	1.76E-04	4.69E-04	3.04E-04	3.12E-04	7.51E-05	5.21E-05	9.47E-09	1.57E-04	5.08E-05
11	E03	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	E03	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.67E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.14E-04
11	E03	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.36E-04
11	E04	80	Passenger Car	183	0.00E+00	1.88E-06	2.04E-07	7.68E+00	1.33E-05	3.72E-02	4.24E-06	1.90E-04	9.99E-04	1.67E-04	4.13E-04	2.66E-04	2.73E-04	2.72E-05	3.91E-05	8.35E-09	1.40E-04	2.96E-05
11	E04	80	Passenger Truck	307	0.00E+00	3.87E-06	4.12E-07	1.73E+01	2.52E-05	6.58E-02	8.20E-06	5.12E-04	1.78E-03	2.96E-04	7.87E-04	5.10E-04	5.23E-04	1.26E-04	8.74E-05	1.59E-08	2.64E-04	8.53E-05
11	E04	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.17E-05
11	E04	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.67E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.14E-04
11	E04	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.36E-04
11	E05	80	Passenger Car	190	0.00E+00	1.94E-06	2.11E-07	7.94E+00	1.38E-05	3.85E-02	4.38E-06	1.97E-04	1.03E-03	1.73E-04	4.27E-04	2.76E-04	2.83E-04	2.82E-05	4.04E-05	8.64E-09	1.45E-04	3.07E-05
11	E05	80	Passenger Truck	317	0.00E+00	4.00E-06	4.27E-07	1.79E+01	2.60E-05	6.81E-02	8.48E-06	5.30E-04	1.84E-03	3.06E-04	8.14E-04	5.28E-04	5.41E-04	1.30E-04	9.05E-05	1.65E-08	2.73E-04	8.83E-05
11	E05	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E09	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.53E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.86E-05
9	E09	60	Combination Short Haul Truck	40	0.00E+00	1.18E-05	8.63E-07	1.42E+01	3.22E-08	1.76E-02	8.44E-06	1.80E-02	2.05E-03	3.21E-04	7.24E-04	2.53E-04	2.62E-04	2.25E-03	4.74E-05	0.00E+00	4.62E-04	3.39E-03
9	E09	60	Combination Long Haul Truck	37	0.00E+00	1.62E-05	8.82E-07	1.34E+01	1.09E-07	2.11E-02	1.35E-05	1.91E-02	2.15E-03	3.11E-04	1.53E-03	2.88E-04	3.00E-04	2.15E-03	4.49E-05	0.00E+00	1.23E-03	3.61E-03
9	E10	60	Passenger Car	939	0.00E+00	1.19E-05	1.29E-06	4.24E+01	8.42E-05	2.28E-01	2.67E-05	9.67E-04	9.48E-03	1.42E-03	2.61E-03	1.68E-03	1.73E-03	1.86E-04	2.15E-04	4.51E-08	8.83E-04	1.51E-04
9	E10	60	Passenger Truck	1573	0.00E+00	2.52E-05	2.67E-06	9.44E+01	1.59E-04	3.91E-01	5.23E-05	3.01E-03	1.73E-02	2.58E-03	4.98E-03	3.24E-03	3.32E-03	7.62E-04	4.74E-04	8.79E-08	1.66E-03	5.10E-04
9	E10	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.05E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.84E-04
9	E10	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	9.59E-09	1.70E-01	1.54E-07	2.97E-04	2.52E-07	8.89E-05	2.47E-05	4.11E-06	3.12E-05	5.97E-06	6.09E-06	1.72E-05	6.93E-07	2.85E-10	2.51E-05	1.66E-05
9	E10	60	Combination Short Haul Truck	22	0.00E+00	6.56E-06	4.82E-07	7.92E+00	1.80E-08	9.81E-03	4.72E-06	1.00E-02	1.15E-03	1.79E-04	4.05E-04	1.41E-04	1.46E-04	1.26E-03	2.65E-05	0.00E+00	2.58E-04	1.89E-03
9	E10	60	Combination Long Haul Truck	21	0.00E+00	9.02E-06	4.93E-07	7.48E+00	6.09E-08	1.18E-02	7.54E-06	1.07E-02	1.20E-03	1.74E-04	8.55E-04	1.61E-04	1.68E-04	1.20E-03	2.51E-05	0.00E+00	6.88E-04	2.01E-03
9	E11	60	Passenger Car	909	0.00E+00	1.15E-05	1.25E-06	4.10E+01	8.15E-05	2.21E-01	2.59E-05	9.36E-04	9.18E-03	1.38E-03	2.53E-03	1.63E-03	1.67E-03	1.80E-04	2.08E-04	4.37E-08	8.54E-04	1.46E-04
9	E11	60	Passenger Truck	1523	0.00E+00	2.44E-05	2.59E-06	9.14E+01	1.54E-04	3.78E-01	5.06E-05	2.91E-03	1.68E-02	2.50E-03	4.82E-03	3.14E-03	3.22E-03	7.38E-04	4.59E-04	8.51E-08	1.61E-03	4.93E-04
9	E11	60	Single Unit Short Haul Truck	43	0.00E+00	9.62E-06	3.98E-07	7.17E+00	6.38E-06	1.26E-02	1.04E-05	3.70E-03	9.92E-04	1.67E-04	1.28E-03	2.47E-04	2.52E-04	7.27E-04	2.92E-05	1.20E-08	1.03E-03	6.92E-04
9	E11	60	Single Unit Long Haul Truck	2	0.00E+00	4.20E-07	1.73E-08	3.06E-01	2.76E-07	5.35E-04	4.54E-07	1.60E-04	4.45E-05	7.39E-06	5.61E-05	1.07E-05	1.10E-05	3.09E-05	1.25E-06	5.12E-10	4.52E-05	3.00E-05
9	E11	60	Combination Short Haul Truck	45	0.00E+00	1.31E-05	9.64E-07	1.58E+01	3.60E-08	1.96E-02	9.43E-06	2.01E-02	2.29E-03	3.58E-04	8.09E-04	2.82E-04	2.93E-04	2.52E-03	5.30E-05	0.00E+00	5.16E-04	3.78E-03
9	E11	60	Combination Long Haul Truck	41	0.00E+00	1.80E-05	9.85E-07	1.50E+01	1.22E-07	2.36E-02	1.51E-05	2.14E-02	2.40E-03	3.47E-04	1.71E-03	3.22E-04	3.35E-04	2.40E-03	5.01E-05	0.00E+00	1.38E-03	4.03E-03
9	E12	60	Passenger Car	1277	0.00E+00	1.61E-05	1.75E-06	5.76E+01	1.14E-04	3.10E-01	3.64E-05	1.31E-03	1.29E-02	1.93E-03	3.55E-03	2.29E-03	2.35E-03	2.53E-04	2.92E-04	6.13E-08	1.20E-03	2.05E-04
9	E12	60	Passenger Truck	2138	0.00E+00	3.43E-05	3.63E-06	1.28E+02	2.16E-04	5.31E-01	7.10E-05	4.09E-03	2.36E-02	3.51E-03	6.77E-03	4.41E-03	4.52E-03	1.04E-03	6.44E-04	1.20E-07	2.26E-03	6.93E-04
9	E12	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.55E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.77E-04
9	E12	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E12	60	Combination Short Haul Truck	31	0.00E+00	9.16E-06	6.73E-07	1.11E+01	2.51E-08	1.37E-02	6.58E-06	1.40E-02	1.60E-03	2.50E-04	5.64E-04	1.97E-04	2.04E-04	1.76E-03	3.70E-05	0.00E+00	3.60E-04	2.64E-03
9	E12	60	Combination Long Haul Truck	29	0.00E+00	1.26E-05	6.87E-07	1.04E+01	8.49E-08	1.64E-02	1.05E-05	1.49E-02	1.68E-03	2.42E-04	1.19E-03	2.25E-04	2.34E-04	1.68E-03	3.50E-05	0.00E+00	9.60E-04	2.81E-03
11	E13	80	Passenger Car	436	0.00E+00	4.47E-06	4.85E-07	1.83E+01	3.17E-05	8.85E-02	1.01E-05	4.52E-04	2.37E-03	3.98E-04	9.82E-04	6.33E-04	6.50E-04	6.48E-05	9.29E-05	1.99E-08	3.32E-04	7.05E-05
11	E13	80	Passenger Truck	729	0.00E+00	9.20E-06	9.81E-07	4.12E+01	5.98E-05	1.57E-01	1.95E-05	1.22E-03	4.23E-03	7.04E-04	1.87E-03	1.21E-03	1.24E-03	3.00E-04	2.08E-04	3.78E-08	6.27E-04	2.03E-04
11	E13	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.14E-05
11	E13	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.50E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.04E-03
11	E13	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.88E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.11E-03
11	E14	80	Passenger Car	338	0.00E+00	3.47E-06	3.77E-07	1.42E+01	2.46E-05	6.88E-02	7.82E-06	3.51E-04	1.84E-03	3.09E-04	7.63E-04	4.92E-04	5.05E-04	5.03E-05	7.22E-05	1.54E-08	2.58E-04	5.47E-05
11	E14	80	Passenger Truck	567	0.00E+00	7.15E-06	7.62E-07	3.20E+01	4.65E-05	1.22E-01	1.51E-05	9.47E-04	3.28E-03	5.47E-04	1.45E-03	9.43E-04	9.66E-04	2.33E-04	1.61E-04	2.94E-08	4.87E-04	1.58E-04
11	E14	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.56E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.23E-04
11	E14	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.24E-06
11	E14	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.50E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.59E-04
11	E14	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.74E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.05E-04
11	E15	80	Passenger Car	308	0.00E+00	3.16E-06	3.43E-07	1.29E+01	2.24E-05	6.26E-02	7.12E-06	3.19E-04	1.68E-03	2.81E-04	6.95E-04	4.48E-04	4.60E-04	4.58E-05	6.57E-05	1.40E-08	2.35E-04	4.98E-05
11	E15	80	Passenger Truck	516	0.00E+00	6.51E-06	6.94E-07	2.92E+01	4.23E-05	1.11E-01	1.38E-05	8.62E-04	2.99E-03	4.98E-04	1.32E-03	8.58E-04	8.80E-04	2.12E-04	1.47E-04	2.67E-08	4.43E-04	1.43E-04
11	E15	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.83E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.15E-05
11	E15	80	Combination Short Haul Truck	15	0.00E+00	3.13E-06	2.31E-07	5.09E+00	8.19E-09	4.76E-03	2.23E-06	4.83E-03	3.62E-04	6.56E-05	1.90E-04	6.75E-05	7.01E-05	8.08E-04	1.70E-05	0.00E+00	1.19E-04	9.11E-04
11	E15	80	Combination Long Haul Truck	14	0.00E+00	4.35E-06	2.46E-07	4.72E+00	2.77E-08	5.64E-03	3.59E-06	5.17E-03	3.74E-04	5.99E-05	3.99E-04	7.92E-05	8.25E-05	7.58E-04	1.58E-05	0.00E+00	3.17E-04	9.73E-04
11	E16	80	Passenger Car	234	0.00E+00	2.40E-06	2.61E-07	9.81E+00	1.70E-05	4.76E-02	5.41E-06	2.43E-04	1.28E-03	2.14E-04	5.28E-04	3.40E-04	3.49E-04	3.48E-05	4.99E-05	1.07E-08	1.79E-04	3.79E-05
11	E16	80	Passenger Truck	392	0.00E+00	4.94E-06	5.27E-07	2.22E+01	3.22E-05	8.41E-02	1.05E-05	6.55E-04	2.27E-03	3.78E-04	1.01E-03	6.52E-04	6.68E-04	1.61E-04	1.12E-04	2.03E-08	3.37E-04	1.09E-04
11	E16	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.11E-05
11	E16	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.33E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.40E-04
11	E16	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.49E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.70E-04
11	E17	80	Passenger Car	218	0.00E+00	2.24E-06	2.43E-07	9.14E+00	1.59E-05	4.43E-02	5.04E-06	2.26E-04	1.19E-03	1.99E-04	4.91E-04	3.17E-04	3.25E-04	3.24E-05	4.65E-05	9.94E-09	1.66E-04	3.53E-05
11	E17	80	Passenger Truck	365	0.00E+00	4.60E-06	4.91E-07	2.06E+01	2.99E-05	7.83E-02	9.76E-06	6.10E-04	2.12E-03	3.52E-04	9.36E-04	6.07E-04	6.23E-04	1.50E-04	1.04E-04	1.89E-08	3.14E-04	1.01E-04
11	E17	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	E17	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.67E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.14E-04
11	E17	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.36E-04
11	E18	80	Passenger Car	112	0.00E+00	1.15E-06	1.25E-07	4.69E+00	8.13E-06	2.27E-02	2.58E-06	1.16E-04	6.09E-04	1.02E-04	2.52E-04	1.63E-04	1.67E-04	1.66E-05	2.39E-05	5.10E-09	8.53E-05	1.81E-05
11	E18	80	Passenger Truck	187	0.00E+00	2.36E-06	2.52E-07	1.06E+01	1.54E-05	4.02E-02	5.00E-06	3.13E-04	1.08E-03	1.81E-04	4.80E-04	3.11E-04	3.19E-04	7.69E-05	5.34E-05	9.70E-09	1.61E-04	5.21E-05
11	E18	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.56E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.23E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.24E-06
11	E18	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.17E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.08E-04
11	E18	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.32E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.36E-04
9	E19	60	Passenger Car	514	0.00E+00	6.50E-06	7.06E-07	2.32E+01	4.61E-05	1.25E-01	1.47E-05	5.30E-04	5.20E-03	7.78E-04	1.43E-03	9.21E-04	9.46E-04	1.02E-04	1.18E-04	2.47E-08	4.83E-04	8.26E-05
9	E19	60	Passenger Truck	862	0.00E+00	1.38E-05	1.46E-06	5.17E+01	8.71E-05	2.14E-01	2.86E-05	1.65E-03	9.49E-03	1.41E-03	2.73E-03	1.78E-03	1.82E-03	4.17E-04	2.60E-04	4.82E-08	9.10E-04	2.79E-04
9	E19	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.11E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.69E-04
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.78E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.33E-05
9	E19	60	Combination Short Haul Truck	35	0.00E+00	1.01E-05	7.40E-07	1.22E+01	2.76E-08	1.51E-02	7.24E-06	1.54E-02	1.76E-03	2.75E-04	6.21E-04	2.16E-04	2.25E-04	1.93E-03	4.07E-05	0.00E+00	3.96E-04	2.90E-03
9	E19	60	Combination Long Haul Truck	31	0.00E+00	1.38E-05	7.56E-07	1.15E+01	9.34E-08	1.81E-02	1.16E-05	1.64E-02	1.84E-03	2.67E-04	1.31E-03	2.47E-04	2.57E-04	1.84E-03	3.85E-05	0.00E+00	1.06E-03	3.09E-03
9	E20	60	Passenger Car	516	0.00E+00	6.51E-06	7.08E-07	2.33E+01	4.62E-05	1.25E-01	1.47E-05	5.31E-04	5.21E-03	7.80E-04	1.43E-03	9.23E-04	9.48E-04	1.02E-04	1.18E-04	2.48E-08	4.84E-04	8.28E-05
9	E20	60	Passenger Truck	863	0.00E+00	1.38E-05	1.47E-06	5.18E+01	8.72E-05	2.15E-01	2.87E-05	1.65E-03	9.51E-03	1.42E-03	2.74E-03	1.78E-03	1.82E-03	4.18E-04	2.60E-04	4.83E-08	9.12E-04	2.80E-04
9	E20	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.23E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.47E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.40E-05
9	E20	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.90E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.23E-04
9	E20	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.22E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.83E-04
11	E21	80	Passenger Car	120	0.00E+00	1.23E-06	1.34E-07	5.03E+00	8.73E-06	2.44E-02	2.77E-06	1.24E-04	6.54E-04	1.10E-04	2.71E-04	1.74E-04	1.79E-04	1.78E-05	2.56E-05	5.47E-09	9.15E-05	1.94E-05
11	E21	80	Passenger Truck	201	0.00E+00	2.53E-06	2.70E-07	1.14E+01	1.65E-05	4.31E-02	5.37E-06	3.36E-04	1.16E-03	1.94E-04	5.15E-04	3.34E-04	3.43E-04	8.25E-05	5.73E-05	1.04E-08	1.73E-04	5.59E-05
11	E21	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.11E-05
11	E21	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	2.00E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.77E-04
11	E21	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.14E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.03E-04
11	E22	80	Passenger Car	16	0.00E+00	1.61E-07	1.75E-08	6.58E-01	1.14E-06	3.19E-03	3.63E-07	1.63E-05	8.56E-05	1.43E-05	3.54E-05	2.28E-05	2.34E-05	2.33E-06	3.35E-06	7.16E-10	1.20E-05	2.54E-06
11	E22	80	Passenger Truck	26	0.00E+00	3.32E-07	3.54E-08	1.49E+00	2.16E-06	5.64E-03	7.03E-07	4.39E-05	1.52E-04	2.54E-05	6.74E-05	4.38E-05	4.48E-05	1.08E-05	7.49E-06	1.36E-09	2.26E-05	7.31E-06
11	E22	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.33E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.28E-05
11	E22	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.56E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.71E-05
11	E23	80	Passenger Car	471	0.00E+00	4.83E-06	5.24E-07	1.97E+01	3.43E-05	9.57E-02	1.09E-05	4.88E-04	2.57E-03	4.30E-04	1.06E-03	6.84E-04	7.02E-04	7.00E-05	1.00E-04	2.15E-08	3.59E-04	7.61E-05
11	E23	80	Passenger Truck	788	0.00E+00	9.94E-06	1.06E-06	4.46E+01	6.47E-05	1.69E-01	2.11E-05	1.32E-03	4.57E-03	7.61E-04	2.02E-03	1.31E-03	1.34E-03	3.24E-04	2.25E-04	4.08E-08	6.77E-04	2.19E-04
11	E23	80	Single Unit Short Haul Truck	73	0.00E+00	9.99E-06	3.90E-07	1.19E+01	6.77E-06	2.17E-02	1.10E-05	4.16E-03	8.18E-04	1.67E-04	1.38E-03	2.55E-04	2.60E-04	1.21E-03	4.85E-05	1.92E-08	1.12E-03	7.77E-04
11	E23	80	Single Unit Long Haul Truck	3	0.00E+00	4.34E-07	1.67E-08	5.04E-01	2.89E-07	9.03E-04	4.77E-07	1.78E-04	3.75E-05	7.42E-06	6.00E-05	1.09E-05	1.12E-05	5.10E-05	2.05E-06	8.01E-10	4.88E-05	3.32E-05
11	E23	80	Combination Short Haul Truck	53	0.00E+00	1.09E-05	8.06E-07	1.77E+01	2.85E-08	1.66E-02	7.78E-06	1.68E-02	1.26E-03	2.28E-04	6.60E-04	2.35E-04	2.44E-04	2.82E-03	5.92E-05	0.00E+00	4.16E-04	3.17E-03
11	E23	80	Combination Long Haul Truck	48	0.00E+00	1.52E-05	8.56E-07	1.64E+01	9.65E-08	1.96E-02	1.25E-05	1.80E-02	1.30E-03	2.08E-04	1.39E-03	2.76E-04	2.87E-04	2.64E-03	5.51E-05	0.00E+00	1.10E-03	3.39E-03
11	E24	80	Passenger Car	276	0.00E+00	2.83E-06	3.08E-07	1.16E+01	2.01E-05	5.61E-02	6.39E-06	2.86E-04	1.51E-03	2.52E-04	6.23E-04	4.02E-04	4.12E-04	4.11E-05	5.90E-05	1.26E-08	2.11E-04	4.47E-05
11	E24	80	Passenger Truck	463	0.00

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E28	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	E28	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
10	E29	70	Passenger Car	155	0.00E+00	1.71E-06	1.86E-07	6.70E+00	1.21E-05	3.30E-02	3.85E-06	1.57E-04	1.20E-03	1.86E-04	3.76E-04	2.42E-04	2.49E-04	2.64E-05	3.40E-05	7.06E-09	1.27E-04	2.45E-05
10	E29	70	Passenger Truck	260	0.00E+00	3.60E-06	3.82E-07	1.51E+01	2.30E-05	5.84E-02	7.54E-06	4.56E-04	2.16E-03	3.35E-04	7.21E-04	4.69E-04	4.80E-04	1.15E-04	7.58E-05	1.36E-08	2.41E-04	7.66E-05
10	E29	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E29	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E29	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	E30	70	Passenger Car	36	0.00E+00	3.95E-07	4.29E-08	1.55E+00	2.80E-06	7.64E-03	8.91E-07	3.63E-05	2.77E-04	4.31E-05	8.69E-05	5.60E-05	5.75E-05	6.10E-06	7.87E-06	1.63E-09	2.94E-05	5.66E-06
10	E30	70	Passenger Truck	60	0.00E+00	8.32E-07	8.85E-08	3.49E+00	5.33E-06	1.35E-02	1.74E-06	1.06E-04	5.01E-04	7.74E-05	1.67E-04	1.08E-04	1.11E-04	2.66E-05	1.75E-05	3.14E-09	5.57E-05	1.77E-05
10	E30	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E31	70	Passenger Car	418	0.00E+00	4.60E-06	5.00E-07	1.80E+01	3.26E-05	8.89E-02	1.04E-05	4.22E-04	3.22E-03	5.01E-04	1.01E-03	6.52E-04	6.69E-04	7.10E-05	9.15E-05	1.90E-08	3.42E-04	6.59E-05
10	E31	70	Passenger Truck	699	0.00E+00	9.68E-06	1.03E-06	4.06E+01	6.20E-05	1.57E-01	2.03E-05	1.23E-03	5.82E-03	9.01E-04	1.94E-03	1.26E-03	1.29E-03	3.10E-04	2.04E-04	3.66E-08	6.49E-04	2.06E-04
10	E31	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.03E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.54E-05
10	E31	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.66E-04
10	E31	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.85E-04
10	E32	70	Passenger Car	88	0.00E+00	9.67E-07	1.05E-07	3.79E+00	6.87E-06	1.87E-02	2.18E-06	8.89E-05	6.77E-04	1.05E-04	2.13E-04	1.37E-04	1.41E-04	1.49E-05	1.93E-05	4.00E-09	7.20E-05	1.39E-05
10	E32	70	Passenger Truck	147	0.00E+00	2.04E-06	2.17E-07	8.54E+00	1.30E-05	3.31E-02	4.27E-06	2.58E-04	1.23E-03	1.90E-04	4.08E-04	2.65E-04	2.72E-04	6.52E-05	4.29E-05	7.69E-09	1.36E-04	4.34E-05
10	E32	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E32	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
9	E33	60	Passenger Car	879	0.00E+00	1.11E-05	1.21E-06	3.96E+01	7.88E-05	2.13E-01	2.50E-05	9.05E-04	8.88E-03	1.33E-03	2.44E-03	1.57E-03	1.62E-03	1.74E-04	2.01E-04	4.22E-08	8.26E-04	1.41E-04
9	E33	60	Passenger Truck	1472	0.00E+00	2.36E-05	2.50E-06	8.84E+01	1.49E-04	3.66E-01	4.89E-05	2.82E-03	1.62E-02	2.41E-03	4.66E-03	3.03E-03	3.11E-03	7.13E-04	4.44E-04	8.23E-08	1.55E-03	4.77E-04
9	E33	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.96E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	E33	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.19E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.24E-03
9	E33	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.27E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.39E-03
9	E34	60	Passenger Car	363	0.00E+00	4.59E-06	4.99E-07	1.64E+01	3.26E-05	8.83E-02	1.04E-05	3.74E-04	3.67E-03	5.50E-04	1.01E-03	6.51E-04	6.68E-04	7.20E-05	8.31E-05	1.74E-08	3.41E-04	5.84E-05
9	E34	60	Passenger Truck	609	0.00E+00	9.75E-06	1.03E-06	3.65E+01	6.15E-05	1.51E-01	2.02E-05	1.16E-03	6.71E-03	9.98E-04	1.93E-03	1.25E-03	1.29E-03	2.95E-04	1.83E-04	3.40E-08	6.43E-04	1.97E-04
9	E34	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	E34	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.20E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.91E-04
9	E34	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.48E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.43E-04
9	E35	60	Passenger Car	618	0.00E+00	7.81E-06	8.48E-07	2.79E+01	5.54E-05	1.50E-01	1.76E-05	6.36E-04	6.24E-03	9.35E-04	1.72E-03	1.11E-03	1.14E-03	1.23E-04	1.41E-04	2.97E-08	5.81E-04	9.93E-05
9	E35	60	Passenger Truck	1035	0.00E+00	1.66E-05	1.76E-06	6.21E+01	1.05E-04	2.57E-01	3.44E-05	1.98E-03	1.14E-02	1.70E-03	3.28E-03	2.13E-03	2.19E-03	5.01E-04	3.12E-04	5.78E-08	1.09E-03	3.35E-04
9	E35	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.55E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.77E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E35	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.81E-03
9	E35	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.59E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	3.00E-03
9	E36	60	Passenger Car	234	0.00E+00	2.95E-06	3.21E-07	1.05E+01	2.09E-05	5.68E-02	6.66E-06	2.41E-04	2.36E-03	3.53E-04	6.49E-04	4.19E-04	4.30E-04	4.63E-05	5.34E-05	1.12E-08	2.20E-04	3.75E-05
9	E36	60	Passenger Truck	391	0.00E+00	6.27E-06	6.64E-07	2.35E+01	3.95E-05	9.72E-02	1.30E-05	7.48E-04	4.31E-03	6.42E-04	1.24E-03	8.07E-04	8.26E-04	1.90E-04	1.18E-04	2.19E-08	4.13E-04	1.27E-04
9	E36	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	E36	60	Combination Short Haul Truck	9	0.00E+00	2.59E-06	1.91E-07	3.13E+00	7.11E-09	3.88E-03	1.86E-06	3.97E-03	4.53E-04	7.08E-05	1.60E-04	5.58E-05	5.79E-05	4.98E-04	1.05E-05	0.00E+00	1.02E-04	7.47E-04
9	E36	60	Combination Long Haul Truck	8	0.00E+00	3.57E-06	1.95E-07	2.96E+00	2.41E-08	4.66E-03	2.98E-06	4.23E-03	4.75E-04	6.87E-05	3.38E-04	6.36E-05	6.63E-05	4.75E-04	9.91E-06	0.00E+00	2.72E-04	7.96E-04
9	E37	60	Passenger Car	669	0.00E+00	8.45E-06	9.18E-07	3.02E+01	6.00E-05	1.62E-01	1.91E-05	6.89E-04	6.75E-03	1.01E-03	1.86E-03	1.20E-03	1.23E-03	1.33E-04	1.53E-04	3.21E-08	6.29E-04	1.07E-04
9	E37	60	Passenger Truck	1120	0.00E+00	1.79E-05	1.90E-06	6.73E+01	1.13E-04	2.78E-01	3.72E-05	2.14E-03	1.23E-02	1.84E-03	3.55E-03	2.31E-03	2.37E-03	5.43E-04	3.38E-04	6.26E-08	1.18E-03	3.63E-04
9	E37	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.79E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.23E-04
9	E37	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
9	E37	60	Combination Short Haul Truck	32	0.00E+00	9.31E-06	6.84E-07	1.12E+01	2.55E-08	1.39E-02	6.69E-06	1.42E-02	1.63E-03	2.54E-04	5.74E-04	2.00E-04	2.08E-04	1.79E-03	3.76E-05	0.00E+00	3.66E-04	2.68E-03
9	E37	60	Combination Long Haul Truck	29	0.00E+00	1.28E-05	6.99E-07	1.06E+01	8.64E-08	1.67E-02	1.07E-05	1.52E-02	1.70E-03	2.46E-04	1.21E-03	2.28E-04	2.38E-04	1.70E-03	3.56E-05	0.00E+00	9.76E-04	2.86E-03
9	E38	60	Passenger Car	249	0.00E+00	3.15E-06	3.42E-07	1.12E+01	2.23E-05	6.05E-02	7.09E-06	2.56E-04	2.51E-03	3.77E-04	6.92E-04	4.46E-04	4.58E-04	4.94E-05	5.69E-05	1.20E-08	2.34E-04	4.00E-05
9	E38	60	Passenger Truck	417	0.00E+00	6.68E-06	7.08E-07	2.50E+01	4.21E-05	1.04E-01	1.39E-05	7.98E-04	4.59E-03	6.84E-04	1.32E-03	8.59E-04	8.81E-04	2.02E-04	1.26E-04	2.33E-08	4.40E-04	1.35E-04
9	E38	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.69E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.07E-05
9	E38	60	Combination Short Haul Truck	15	0.00E+00	4.27E-06	3.14E-07	5.16E+00	1.17E-08	6.39E-03	3.07E-06	6.53E-03	7.46E-04	1.17E-04	2.63E-04	9.18E-05	9.54E-05	8.20E-04	1.72E-05	0.00E+00	1.68E-04	1.23E-03
9	E38	60	Combination Long Haul Truck	13	0.00E+00	5.87E-06	3.21E-07	4.87E+00	3.96E-08	7.67E-03	4.91E-06	6.96E-03	7.82E-04	1.13E-04	5.57E-04	1.05E-04	1.09E-04	7.82E-04	1.63E-05	0.00E+00	4.48E-04	1.31E-03
10	E39	70	Passenger Car	525	0.00E+00	5.78E-06	6.28E-07	2.27E+01	4.10E-05	1.12E-01	1.30E-05	5.31E-04	4.04E-03	6.30E-04	1.27E-03	8.20E-04	8.41E-04	8.92E-05	1.15E-04	2.39E-08	4.30E-04	8.28E-05
10	E39	70	Passenger Truck	879	0.00E+00	1.22E-05	1.29E-06	5.10E+01	7.79E-05	1.98E-01	2.55E-05	1.54E-03	7.32E-03	1.13E-03	2.44E-03	1.59E-03	1.62E-03	3.90E-04	2.57E-04	4.60E-08	8.15E-04	2.59E-04
10	E39	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E39	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	E39	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
10	E40	70	Passenger Car	388	0.00E+00	4.27E-06	4.64E-07	1.67E+01	3.03E-05	8.26E-02	9.64E-06	3.92E-04	2.99E-03	4.66E-04	9.40E-04	6.06E-04	6.22E-04	6.59E-05	8.51E-05	1.77E-08	3.18E-04	6.12E-05
10	E40	70	Passenger Truck	650	0.00E+00	9.00E-06	9.56E-07	3.77E+01	5.76E-05	1.46E-01	1.89E-05	1.14E-03	5.41E-03	8.37E-04	1.80E-03	1.17E-03	1.20E-03	2.88E-04	1.90E-04	3.40E-08	6.03E-04	1.92E-04
10	E40	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.62E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.65E-06
10	E40	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.63E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.84E-04
10	E40	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.88E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.32E-04
10	E41	70	Passenger Car	267	0.00E+00	2.94E-06	3.19E-07	1.15E+01	2.08E-05	5.68E-02	6.62E-06	2.70E-04	2.05E-03	3.20E-04	6.45E-04	4.16E-04	4.27E-04	4.53E-05	5.84E-05	1.21E-08	2.18E-04	4.21E-05
10	E41	70	Passenger Truck	446	0.00E+00	6.18E-06	6.57E-07	2.59E+01	3.96E-05	1.00E-01	1.30E-05	7.84E-04	3.72E-03	5.75E-04	1.24E-03	8.05E-04	8.25E-04	1.98E-04	1.30E-04	2.33E-08	4.14E-04	1.32E-04
10	E41	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E41	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.42E-04
10	E41	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.66E-04
10	E42	70	Passenger Car	306	0.00E+00	3.37E-06	3.66E-07	1.32E+01	2.39E-05	6.52E-02	7.60E-06	3.10E-04	2.36E-03	3.68E-04	7.41E-04	4.78E-04	4.91E-04	5.20E-05	6.71E-05	1.39E-08	2.51E-04	4.83E-05
10	E42	70	Passenger Truck	513	0.00E+00	7.10E-06	7.55E-07	2.97E+01	4.55E-05	1.15E-01	1.49E-05	9.01E-04	4.27E-03	6.61E-04	1.42E-03	9.25E-04	9.48E-04	2.27E-04	1.50E-04	2.68E-08	4.76E-04	1.51E-04
10	E42	70	Single Unit Short Haul Truck	22	0.00E+00	3.88E-06	1.57E-07	3.61E+00	2.60E-06	6.54E-03	4.22E-06	1.54E-03	3.50E-04	6.43E-05	5.23E-04	9.96E-05	1.02E-04	3.67E-04	1.47E-05	5.93E-09	4.21E-04	2.89E-04
10	E42	70	Single Unit Long Haul Truck	1	0.00E+00	1.69E-07	6.79E-09	1.53E-01	1.12E-07	2.75E-04	1.83E-07	6.64E-05	1.60E-05	2.87E-06	2.28E-05	4.30E-06	4.39E-06	1.55E-05	6.23E-07	2.50E-10	1.84E-05	1.24E-05
10	E42	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.24E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.87E-04
10	E42	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.61E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.06E-03
10	E43	70	Passenger Car	223	0.00E+00	2.45E-06	2.67E-07	9.62E+00	1.74E-05	4.74E-02	5.53E-06	2.25E-04	1.72E-03	2.67E-04	5.40E-04	3.48E-04	3.57E-04	3.79E-05	4.88E-05	1.01E-08	1.83E-04	3.52E-05
10	E43	70	Passenger Truck	373	0.00E+00	5.17E-06	5.49E-07	2.16E+01	3.31E-05	8.39E-02	1.08E-05	6.55E-04	3.11E-03	4.81E-04	1.04E-03	6.73E-04	6.90E-04	1.65E-04	1.09E-04	1.95E-08	3.46E-04	1.10E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E43	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.90E-04
10	E43	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
10	E44	70	Passenger Car	381	0.00E+00	4.19E-06	4.55E-07	1.64E+01	2.97E-05	8.10E-02	9.45E-06	3.85E-04	2.93E-03	4.57E-04	9.22E-04	5.94E-04	6.10E-04	6.47E-05	8.34E-05	1.73E-08	3.12E-04	6.00E-05
10	E44	70	Passenger Truck	637	0.00E+00	8.83E-06	9.38E-07	3.70E+01	5.65E-05	1.43E-01	1.85E-05	1.12E-03	5.31E-03	8.21E-04	1.77E-03	1.15E-03	1.18E-03	2.83E-04	1.86E-04	3.33E-08	5.91E-04	1.88E-04
10	E44	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E48	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	E48	80	Combination Short Haul Truck	6	0.00E+00	1.19E-06	8.78E-08	1.93E+00	3.11E-09	1.81E-03	8.48E-07	1.83E-03	1.37E-04	2.49E-05	7.19E-05	2.56E-05	2.66E-05	3.07E-04	6.45E-06	0.00E+00	4.53E-05	3.45E-04
11	E48	80	Combination Long Haul Truck	5	0.00E+00	1.65E-06	9.33E-08	1.79E+00	1.05E-08	2.14E-03	1.36E-06	1.96E-03	1.42E-04	2.27E-05	1.51E-04	3.01E-05	3.13E-05	2.87E-04	6.00E-06	0.00E+00	1.20E-04	3.69E-04
11	E49	80	Passenger Car	328	0.00E+00	3.36E-06	3.65E-07	1.37E+01	2.39E-05	6.66E-02	7.58E-06	3.40E-04	1.79E-03	2.99E-04	7.39E-04	4.77E-04	4.89E-04	4.87E-05	7.00E-05	1.49E-08	2.50E-04	5.30E-05
11	E49	80	Passenger Truck	549	0.00E+00	6.93E-06	7.38E-07	3.10E+01	4.50E-05	1.18E-01	1.47E-05	9.17E-04	3.18E-03	5.30E-04	1.41E-03	9.14E-04	9.37E-04	2.25E-04	1.56E-04	2.85E-08	4.72E-04	1.53E-04
11	E49	80	Single Unit Short Haul Truck	34	0.00E+00	4.60E-06	1.80E-07	5.50E+00	3.12E-06	9.98E-03	5.06E-06	1.91E-03	3.77E-04	7.70E-05	6.33E-04	1.17E-04	1.20E-04	5.59E-04	2.23E-05	8.85E-09	5.14E-04	3.58E-04
11	E49	80	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	7.71E-09	2.32E-01	1.33E-07	4.16E-04	2.20E-07	8.18E-05	1.73E-05	3.42E-06	2.76E-05	5.04E-06	5.14E-06	2.35E-05	9.45E-07	3.69E-10	2.25E-05	1.53E-05
11	E49	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.83E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E49	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E50	80	Passenger Car	72	0.00E+00	7.40E-07	8.04E-08	3.02E+00	5.25E-06	1.47E-02	1.67E-06	7.48E-05	3.93E-04	6.59E-05	1.63E-04	1.05E-04	1.08E-04	1.07E-05	1.54E-05	3.29E-09	5.50E-05	1.17E-05
11	E50	80	Passenger Truck	121	0.00E+00	1.52E-06	1.62E-07	6.83E+00	9.91E-06	2.59E-02	3.23E-06	2.02E-04	7.00E-04	1.17E-04	3.10E-04	2.01E-04	2.06E-04	4.96E-05	3.44E-05	6.26E-09	1.04E-04	3.36E-05
11	E50	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.64E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.07E-05
11	E50	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.17E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.20E-04
11	E50	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.25E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.35E-04
11	E51	80	Passenger Car	392	0.00E+00	4.02E-06	4.37E-07	1.64E+01	2.85E-05	7.96E-02	9.06E-06	4.06E-04	2.14E-03	3.58E-04	8.83E-04	5.70E-04	5.85E-04	5.83E-05	8.36E-05	1.79E-08	2.99E-04	6.34E-05
11	E51	80	Passenger Truck	656	0.00E+00	8.28E-06	8.82E-07	3.71E+01	5.38E-05	1.41E-01	1.75E-05	1.10E-03	3.80E-03	6.33E-04	1.68E-03	1.09E-03	1.12E-03	2.69E-04	1.87E-04	3.40E-08	5.64E-04	1.82E-04
11	E51	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.75E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.27E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.47E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.40E-05
11	E51	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.83E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E51	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E52	80	Passenger Car	126	0.00E+00	1.29E-06	1.40E-07	5.28E+00	9.17E-06	2.56E-02	2.91E-06	1.31E-04	6.87E-04	1.15E-04	2.84E-04	1.83E-04	1.88E-04	1.87E-05	2.69E-05	5.74E-09	9.61E-05	2.04E-05
11	E52	80	Passenger Truck	211	0.00E+00	2.66E-06	2.84E-07	1.19E+01	1.73E-05	4.53E-02	5.64E-06	3.52E-04	1.22E-03	2.04E-04	5.41E-04	3.51E-04	3.60E-04	8.66E-05	6.01E-05	1.09E-08	1.81E-04	5.87E-05
11	E52	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E52	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	3.00E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.65E-04
11	E52	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.21E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.04E-04
11	E53	80	Passenger Car	385	0.00E+00	3.94E-06	4.29E-07	1.61E+01	2.80E-05	7.82E-02	8.89E-06	3.99E-04	2.10E-03	3.51E-04	8.67E-04	5.59E-04	5.74E-04	5.72E-05	8.21E-05	1.75E-08	2.93E-04	6.22E-05
11	E53	80	Passenger Truck	644	0.00E+00	8.13E-06	8.66E-07	3.64E+01	5.29E-05	1.38E-01	1.72E-05	1.08E-03	3.73E-03	6.22E-04	1.65E-03	1.07E-03	1.10E-03	2.65E-04	1.84E-04	3.34E-08	5.53E-04	1.79E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.25E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.14E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.60E-06
11	E53	80	Combination Short Haul Truck	16	0.00E+00	3.34E-06	2.47E-07	5.44E+00	8.75E-09	5.09E-03	2.39E-06	5.17E-03	3.87E-04	7.01E-05	2.03E-04	7.22E-05	7.49E-05	8.64E-04	1.82E-05	0.00E+00	1.28E-04	9.73E-04
11	E53	80	Combination Long Haul Truck	15	0.00E+00	4.66E-06	2.63E-07	5.05E+00	2.96E-08	6.03E-03	3.84E-06	5.52E-03	4.00E-04	6.40E-05	4.27E-04	8.47E-05	8.82E-05	8.10E-04	1.69E-05	0.00E+00	3.38E-04	1.04E-03
11	E54	80	Passenger Car	291	0.00E+00	2.98E-06	3.24E-07	1.22E+01	2.11E-05	5.90E-02	6.72E-06	3.01E-04	1.58E-03	2.65E-04	6.55E-04	4.22E-04	4.33E-04	4.32E-05	6.20E-05	1.32E-08	2.22E-04	4.70E-05
11	E54	80	Passenger Truck	486	0.00E+00	6.14E-06	6.54E-07	2.75E+01	3.99E-05	1.04E-01	1.30E-05	8.13E-04	2.82E-03	4.69E-04	1.25E-03	8.09E-04	8.30E-04	2.00E-04	1.39E-04	2.52E-08	4.18E-04	1.35E-04
11	E54	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.90E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.10E-05
11	E54	80	Combination Short Haul Truck	47	0.00E+00	9.59E-06	7.10E-07	1.56E+01	2.51E-08	1.46E-02	6.86E-06	1.48E-02	1.11E-03	2.01E-04	5.82E-04	2.07E-04	2.15E-04	2.48E-03	5.22E-05	0.00E+00	3.67E-04	2.79E-03
11	E54	80	Combination Long Haul Truck	42	0.00E+00	1.34E-05	7.54E-07	1.45E+01	8.50E-08	1.73E-02	1.10E-05	1.59E-02	1.15E-03	1.84E-04	1.22E-03	2.43E-04	2.53E-04	2.32E-03	4.85E-05	0.00E+00	9.72E-04	2.99E-03
11	E55	80	Passenger Car	386	0.00E+00	3.96E-06	4.30E-07	1.62E+01	2.81E-05	7.84E-02	8.92E-06	4.00E-04	2.10E-03	3.52E-04	8.70E-04	5.61E-04	5.76E-04	5.74E-05	8.23E-05	1.76E-08	2.94E-04	6.24E-05
11	E55	80	Passenger Truck	646	0.00E+00	8.15E-06	8.69E-07	3.65E+01	5.30E-05	1.39E-01	1.73E-05	1.08E-03	3.74E-03	6.23E-04	1.66E-03	1.08E-03	1.10E-03	2.65E-04	1.84E-04	3.35E-08	5.55E-04	1.80E-04
11	E55	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.56E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.23E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.24E-06
11	E55	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	3.00E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.65E-04
11	E55	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.21E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.04E-04
11	E56	80	Passenger Car	233	0.00E+00	2.38E-06	2.59E-07	9.75E+00	1.69E-05	4.73E-02	5.38E-06	2.41E-04	1.27E-03	2.12E-04	5.24E-04	3.38E-04	3.47E-04	3.46E-05	4.96E-05	1.06E-08	1.77E-04	3.76E-05
11	E56	80	Passenger Truck	389	0.00E+00	4.91E-06	5.24E-07	2.20E+01	3.19E-05	8.36E-02	1.04E-05	6.51E-04	2.26E-03	3.76E-04	9.99E-04	6.48E-04	6.64E-04	1.60E-04	1.11E-04	2.02E-08	3.35E-04	1.08E-04
11	E56	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.56E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.23E-04
11	E56	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.24E-06
11	E56	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.50E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.59E-04
11	E56	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.74E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.05E-04
10	E57	70	Passenger Car	178	0.00E+00	1.96E-06	2.13E-07	7.68E+00	1.39E-05	3.79E-02	4.42E-06	1.80E-04	1.37E-03	2.14E-04	4.31E-04	2.78E-04	2.85E-04	3.02E-05	3.90E-05	8.10E-09	1.46E-04	2.81E-05
10	E57	70	Passenger Truck	298	0.00E+00	4.13E-06	4.39E-07	1.73E+01	2.64E-05	6.70E-02	8.65E-06	5.23E-04	2.48E-03	3.84E-04	8.27E-04	5.37E-04	5.51E-04	1.32E-04	8.70E-05	1.56E-08	2.76E-04	8.79E-05
10	E57	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.69E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	E57	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
10	E57	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
10	E58	70	Passenger Car	188	0.00E+00	2.07E-06	2.25E-07	8.13E+00	1.47E-05	4.01E-02	4.68E-06	1.91E-04	1.45E-03	2.26E-04	4.56E-04	2.94E-04	3.02E-04	3.20E-05	4.13E-05	8.58E-09	1.54E-04	2.97E-05
10	E58	70	Passenger Truck	316	0.00E+00	4.37E-06	4.64E-07	1.83E+01	2.80E-05	7.09E-02	9.16E-06	5.54E-04	2.63E-03	4.07E-04	8.76E-04	5.69E-04	5.83E-04	1.40E-04	9.21E-05	1.65E-08	2.93E-04	9.31E-05
10	E58	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E58	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	E58	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
11	E59	80	Passenger Car	610	0.00E+00	6.26E-06	6.80E-07	2.56E+01	4.44E-05	1.24E-01	1.41E-05	6.33E-04	3.33E-03	5.57E-04	1.38E-03	8.87E-04	9.10E-04	9.07E-05	1.30E-04	2.78E-08	4.65E-04	9.87E-05
11	E59	80	Passenger Truck	1022	0.00E+00	1.29E-05	1.37E-06	5.78E+01	8.38E-05	2.19E-01	2.73E-05	1.71E-03	5.92E-03	9.86E-04	2.62E-03	1.70E-03	1.74E-03	4.20E-04	2.91E-04	5.30E-08	8.78E-04	2.84E-04
11	E59	80	Single Unit Short Haul Truck	67	0.00E+00	9.20E-06	3.59E-07	1.10E+01	6.24E-06	2.00E-02	1.01E-05	3.83E-03	7.53E-04	1.54E-04	1.27E-03	2.35E-04	2.39E-04	1.12E-03	4.47E-05	1.77E-08	1.03E-03	7.15E-04
11	E59	80	Single Unit Long Haul Truck	3	0.00E+00	4.00E-07	1.54E-08	4.64E-01	2.66E-07	8.31E-04	4.39E-07	1.64E-04	3.45E-05	6.84E-06	5.52E-05	1.01E-05	1.03E-05	4.70E-05	1.89E-06	7.38E-10	4.50E-05	3.06E-05
11	E59	80	Combination Short Haul Truck	58	0.00E+00	1.20E-05	8.86E-07	1.95E+01	3.13E-08	1.82E-02	8.55E-06	1.85E-02	1.39E-03	2.51E-04	7.26E-04	2.58E-04	2.68E-04	3.09E-03	6.51E-05	0.00E+00	4.57E-04	3.49E-03
11	E59	80	Combination Long Haul Truck	53	0.00E+00	1.67E-05	9.41E-07	1.81E+01	1.06E-07	2.16E-02	1.37E-05	1.98E-02	1.43E-03	2.29E-04	1.53E-03	3.03E-04	3.16E-04	2.90E-03	6.05E-05	0.00E+00	1.21E-03	3.73E-03
11	E60	80	Passenger Car	449	0.00E+00	4.60E-06	5.00E-07	1.88E+01	3.27E-05	9.12E-02	1.04E-05	4.66E-04	2.45E-03	4.10E-04	1.01E-03	6.53E-04	6.70E-04	6.68E-05	9.58E-05	2.05E-08	3.42E-04	7.26E-05
11	E60	80	Passenger Truck	752	0.00E+00	9.48E-06	1.01E-06	4.25E+01	6.17E-05	1.61E-01	2.01E-05	1.26E-03	4.36E-03	7.26E-04	1.93E-03	1.25E-03	1.28E-03	3.09E-04	2.14E-04	3.90E-08	6.46E-04	2.09E-04
11	E60	80	Single Unit Short Haul Truck	61	0.00E+00	8.41E-06	3.28E-07	1.00E+01	5.70E-06	1.83E-02	9.25E-06	3.50E-03	6.89E-04	1.41E-04	1.16E-03	2.14E-04	2.19E-04	1.02E-03	4.08E-05	1.62E-08	9.40E-04	6.54E-04
11	E60	80	Single Unit Long Haul Truck	3	0.00E+00	3.65E-07	1.41E-08	4.25E-01	2.43E-07	7.60E-04	4.02E-07	1.49E-04	3.16E-05	6.25E-06	5.05E-05	9.21E-06	9.39E-06	4.29E-05	1.73E-06	6.75E-10	4.11E-05	2.79E-05
11	E60	80	Combination Short Haul Truck	48	0.00E+00	9.81E-06	7.26E-07	1.60E+01	2.57E-08	1.50E-02	7.01E-06	1.52E-02	1.14E-03	2.06E-04	5.95E-04	2.12E-04	2.20E-04	2.54E-03	5.34E-05	0.00E+00	3.75E-04	2.86E-03
11	E60	80	Combination Long Haul Truck	43	0.00E+00	1.37E-05	7.71E-07	1.48E+01	8.69E-08	1.77E-02	1.13E-05	1.62E-02	1.17E-03	1.88E-04	1.25E-03	2.49E-04	2.59E-04	2.38E-03	4.96E-05	0.00E+00	9.93E-04	3.05E-03
11	E61	80	Passenger Car	459	0.00E+00	4.70E-06	5.11E-07	1.92E+01	3.34E-05	9.32E-02	1.06E-05	4.76E-04	2.50E-03	4.19E-04	1.03E-03	6.67E-04	6.84E-04	6.82E-05	9.79E-05	2.09E-08	3.50E-04	7.42E-05
11	E61	80	Passenger Truck	768	0.00E+00	9.69E-06	1.03E-06	4.34E+01	6.30E-05	1.65E-01	2.05E-05	1.28E-03	4.45E-03	7.41E-04	1.97E-03	1.28E-03	1.31E-03	3.15E-04	2.19E-04	3.98E-08	6.60E-04	2.14E-04
11	E61	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.83E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.15E-05
11	E61	80	Single Unit Long Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.67E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.14E-04
11	E61	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.36E-04
11	E62	80	Passenger Car	413	0.00E+00	4.23E-06	4.60E-07	1.73E+01	3.00E-05	8.39E-02	9.54E-06	4.28E-04	2.25E-03	3.77E-04	9.31E-04	6.00E-04	6.16E-04	6.14E-05	8.81E-05	1.88E-08	3.15E-04	6.68E-05
11	E62	80	Passenger Truck	691	0.00E+00	8.72E-06	9.29E-07	3.91E+01	5.67E-05	1.48E-01	1.85E-05	1.15E-03	4.01E-03	6.67E-04	1.77E-03	1.15E-03	1.18E-03	2.84E-04	1.97E-04	3.58E-08	5.94E-04	1.92E-04
11	E62	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.19E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.09E-05
11	E62	80	Single Unit Long Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.17E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.20E-04
11	E62	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.25E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.35E-04
10	E63	70	Passenger Car	730	0.00E+00	8.04E-06	8.74E-07	3.15E+01	5.71E-05	1.55E-01	1.81E-05	7.38E-04	5.63E-03	8.76E-04	1.77E-03	1.14E-03	1.17E-03	1.24E-04	1.60E-04	3.32E-08	5.98E-04	1.15E-04
10	E63	70	Passenger Truck	1223	0

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E67	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.08E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
11	E67	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.88E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.66E-05
11	E67	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	4.00E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.54E-04
11	E67	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.28E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.05E-04
11	E68	80	Passenger Car	431	0.00E+00	4.42E-06	4.80E-07	1.81E+01	3.13E-05	8.75E-02	9.96E-06	4.47E-04	2.35E-03	3.93E-04	9.71E-04	6.26E-04	6.43E-04	6.40E-05	9.19E-05	1.96E-08	3.29E-04	6.97E-05
11	E68	80	Passenger Truck	721	0.00E+00	9.10E-06	9.70E-07	4.08E+01	5.92E-05	1.55E-01	1.93E-05	1.20E-03	4.18E-03	6.96E-04	1.85E-03	1.20E-03	1.23E-03	2.96E-04	2.06E-04	3.74E-08	6.20E-04	2.01E-04
11	E68	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.17E-05
11	E68	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	E68	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.43E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.68E-04
10	E69	70	Passenger Car	465	0.00E+00	5.13E-06	5.57E-07	2.01E+01	3.64E-05	9.91E-02	1.16E-05	4.71E-04	3.59E-03	5.59E-04	1.13E-03	7.27E-04	7.46E-04	7.91E-05	1.02E-04	2.12E-08	3.81E-04	7.34E-05
10	E69	70	Passenger Truck	780	0.00E+00	1.08E-05	1.15E-06	4.52E+01	6.91E-05	1.75E-01	2.26E-05	1.37E-03	6.49E-03	1.00E-03	2.16E-03	1.41E-03	1.44E-03	3.46E-04	2.27E-04	4.08E-08	7.23E-04	2.30E-04
10	E69	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.73E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.76E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.03E-06
10	E69	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.66E-04
10	E69	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.85E-04
10	E70	70	Passenger Car	337	0.00E+00	3.71E-06	4.04E-07	1.46E+01	2.64E-05	7.18E-02	8.37E-06	3.41E-04	2.60E-03	4.05E-04	8.17E-04	5.27E-04	5.40E-04	5.73E-05	7.39E-05	1.54E-08	2.76E-04	5.32E-05
10	E70	70	Passenger Truck	565	0.00E+00	7.82E-06	8.31E-07	3.28E+01	5.01E-05	1.27E-01	1.64E-05	9.92E-04	4.70E-03	7.28E-04	1.57E-03	1.02E-03	1.04E-03	2.50E-04	1.65E-04	2.95E-08	5.24E-04	1.67E-04
10	E70	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E70	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E70	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	E71	70	Passenger Car	568	0.00E+00	6.25E-06	6.80E-07	2.45E+01	4.44E-05	1.21E-01	1.41E-05	5.74E-04	4.38E-03	6.82E-04	1.38E-03	8.87E-04	9.10E-04	9.65E-05	1.24E-04	2.59E-08	4.65E-04	8.96E-05
10	E71	70	Passenger Truck	951	0.00E+00	1.32E-05	1.40E-06	5.52E+01	8.43E-05	2.14E-01	2.76E-05	1.67E-03	7.92E-03	1.23E-03	2.64E-03	1.72E-03	1.76E-03	4.22E-04	2.78E-04	4.97E-08	8.82E-04	2.80E-04
10	E71	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E71	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E71	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E72	70	Passenger Car	558	0.00E+00	6.15E-06	6.68E-07	2.41E+01	4.36E-05	1.19E-01	1.39E-05	5.65E-04	4.30E-03	6.70E-04	1.35E-03	8.71E-04	8.94E-04	9.48E-05	1.22E-04	2.54E-08	4.57E-04	8.81E-05
10	E72	70	Passenger Truck	935	0.00E+00	1.29E-05	1.38E-06	5.42E+01	8.29E-05	2.10E-01	2.71E-05	1.64E-03	7.79E-03	1.20E-03	2.59E-03	1.69E-03	1.73E-03	4.14E-04	2.73E-04	4.89E-08	8.67E-04	2.76E-04
10	E72	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E72	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.90E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
9	E73	60	Passenger Car	102	0.00E+00	1.29E-06	1.41E-07	4.62E+00	9.18E-06	2.49E-02	2.92E-06	1.05E-04	1.03E-03	1.55E-04	2.85E-04	1.83E-04	1.88E-04	2.03E-05	2.34E-05	4.92E-09	9.63E-05	1.65E-05
9	E73	60	Passenger Truck	172	0.00E+00	2.75E-06	2.91E-07	1.03E+01	1.73E-05	4.26E-02	5.70E-06	3.28E-04	1.89E-03	2.81E-04	5.43E-04	3.54E-04	3.62E-04	8.31E-05	5.17E-05	9.59E-09	1.81E-04	5.56E-05
9	E74	60	Passenger Car	118	0.00E+00	1.49E-06	1.62E-07	5.31E+00	1.06E-05	2.86E-02	3.35E-06	1.21E-04	1.19E-03	1.78E-04	3.27E-04	2.11E-04	2.16E-04	2.33E-05	2.69E-05	5.65E-09	1.11E-04	1.89E-05
9	E74	60	Passenger Truck	197	0.00E+00	3.16E-06	3.35E-07	1.18E+01	1.99E-05	4.90E-02	6.55E-06	3.77E-04	2.17E-03	3.23E-04	6.25E-04	4.06E-04	4.17E-04	9.56E-05	5.94E-05	1.10E-08	2.08E-04	6.39E-05
9	E74	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
53	E75	70	Passenger Car	1068	0.00E+00	1.14E-05	1.24E-06	4.66E+01	8.09E-05	2.19E-01	2.57E-05	1.10E-03	8.10E-03	1.27E-03	2.51E-03	1.62E-03	1.66E-03	1.81E-04	2.37E-04	4.92E-08	8.48E-04	1.71E-04
53	E75	70	Passenger Truck	1789	0.00E+00	2.38E-05	2.53E-06	1.05E+02	1.53E-04	3.86E-01	5.00E-05	3.10E-03	1.45E-02	2.25E-03	4.79E-03	3.11E-03	3.19E-03	7.88E-04	5.29E-04	9.26E-08	1.60E-03	5.20E-04
53	E75	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.14E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.22E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	E75	70	Combination Short Haul Truck	28	0.00E+00	7.13E-06	5.31E-07	9.64E+00	1.81E-08	1.03E-02	5.08E-06	1.07E-02	1.01E-03	1.68E-04	4.28E-04	1.55E-04	1.60E-04	1.53E-03	3.22E-05	0.00E+00	2.68E-04	2.01E-03
53	E75	70	Combination Long Haul Truck	25	0.00E+00	9.78E-06	5.56E-07	9.05E+00	6.13E-08	1.23E-02	8.04E-06	1.14E-02	1.05E-03	1.58E-04	8.89E-04	1.79E-04	1.86E-04	1.45E-03	3.03E-05	0.00E+00	7.03E-04	2.15E-03
53	E76	70	Passenger Car	742	0.00E+00	7.92E-06	8.60E-07	3.24E+01	5.62E-05	1.52E-01	1.79E-05	7.63E-04	5.63E-03	8.81E-04	1.74E-03	1.12E-03	1.15E-03	1.26E-04	1.64E-04	3.42E-08	5.89E-04	1.19E-04
53	E76	70	Passenger Truck	1242	0.00E+00	1.65E-05	1.76E-06	7.29E+01	1.06E-04	2.68E-01	3.47E-05	2.16E-03	1.00E-02	1.56E-03	3.32E-03	2.16E-03	2.21E-03	5.47E-04	3.67E-04	6.43E-08	1.11E-03	3.61E-04
53	E76	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
53	E76	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.83E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.22E-04
53	E76	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.10E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.72E-04
53	E77	70	Passenger Car	1172	0.00E+00	1.25E-05	1.36E-06	5.12E+01	8.88E-05	2.40E-01	2.82E-05	1.21E-03	8.89E-03	1.39E-03	2.75E-03	1.77E-03	1.82E-03	1.99E-04	2.60E-04	5.40E-08	9.31E-04	1.88E-04
53	E77	70	Passenger Truck	1964	0.00E+00	2.61E-05	2.78E-06	1.15E+02	1.68E-04	4.24E-01	5.49E-05	3.41E-03	1.59E-02	2.47E-03	5.25E-03	3.41E-03	3.50E-03	8.65E-04	5.80E-04	1.02E-07	1.76E-03	5.71E-04
53	E77	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.75E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.27E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.51E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.41E-05
53	E77	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
53	E77	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
53	E78	70	Passenger Car	901	0.00E+00	9.62E-06	1.05E-06	3.93E+01	6.83E-05	1.84E-01	2.17E-05	9.27E-04	6.83E-03	1.07E-03	2.12E-03	1.36E-03	1.40E-03	1.53E-04	2.00E-04	4.15E-08	7.15E-04	1.45E-04
53	E78	70	Passenger Truck	1509	0.00E+00	2.01E-05	2.14E-06	8.86E+01	1.29E-04	3.26E-01	4.22E-05	2.62E-03	1.22E-02	1.90E-03	4.04E-03	2.62E-03	2.69E-03	6.65E-04	4.46E-04	7.81E-08	1.35E-03	4.39E-04
53	E78	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.11E-06
53	E78	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.84E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.11E-04
53	E78	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.18E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.76E-04
53	E79	70	Passenger Car	1150	0.00E+00	1.23E-05	1.33E-06	5.02E+01	8.71E-05	2.35E-01	2.77E-05	1.18E-03	8.72E-03	1.37E-03	2.70E-03	1.74E-03	1.79E-03	1.95E-04	2.55E-04	5.30E-08	9.13E-04	1.85E-04
53	E79	70	Passenger Truck	1926	0.00E+00	2.56E-05	2.73E-06	1.13E+02	1.65E-04	4.16E-01	5.39E-05	3.34E-03	1.56E-02	2.42E-03	5.15E-03	3.35E-03	3.43E-03	8.49E-04	5.69E-04	9.97E-08	1.72E-03	5.60E-04
53	E79	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.14E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.22E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	E79	70	Combination Short Haul Truck	14	0.00E+00	3.63E-06	2.70E-07	4.91E+00	9.23E-09	5.25E-03	2.59E-06	5.44E-03	5.12E-04	8.54E-05	2.18E-04	7.88E-05	8.18E-05	7.80E-04	1.64E-05	0.00E+00	1.36E-04	1.03E-03
53	E79	70	Combination Long Haul Truck	13	0.00E+00	4.98E-06	2.83E-07	4.61E+00	3.12E-08	6.26E-03	4.10E-06	5.83E-03	5.33E-04	8.03E-05	4.53E-04	9.11E-05	9.49E-05	7.40E-04	1.54E-05	0.00E+00	3.58E-04	1.10E-03
53	E80	70	Passenger Car	846	0.00E+00	9.04E-06	9.82E-07	3.69E+01	6.41E-05	1.73E-01	2.04E-05	8.71E-04	6.42E-03	1.01E-03	1.99E-03	1.28E-03	1.31E-03	1.44E-04	1.88E-04	3.90E-08	6.72E-04	1.36E-04
53	E80	70	Passenger Truck	1418	0.00E+00	1.89E-05	2.01E-06	8.32E+01	1.21E-04	3.06E-01	3.96E-05	2.46E-03	1.15E-02	1.78E-03	3.79E-03	2.46E-03	2.53E-03	6.25E-04	4.19E-04	7.34E-08	1.27E-03	4.12E-04
53	E80	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.61E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.01E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.93E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.30E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.12E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
9	E81	60	Passenger Car	25	0.00E+00	3.16E-07	3.44E-08	1.13E+00	2.25E-06	6.08E-03	7.13E-07	2.58E-05	2.53E-04	3.79E-05	6.96E-05	4.49E-05	4.60E-05	4.97E-06	5.73E-06	1.20E-09	2.35E-05	4.02E-06
9	E81	60	Passenger Truck	42	0.00E+00	6.72E-07	7.12E-08	2.52E+00	4.24E-06	1.04E-02	1.39E-06	8.02E-05	4.62E-04	6.88E-05	1.33E-04	8.65E-05	8.86E-05	2.03E-05	1.26E-05	2.34E-09	4.43E-05	1.36E-05
9	E81	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	E82	60	Passenger Car	9	0.00E+00	1.18E-07	1.28E-08	4.22E-01	8.38E-07	2.27E-03	2.66E-07	9.62E-06	9.44E-05	1.41E-05	2.60E-05	1.67E-05	1.72E-05	1.85E-06	2.14E-06	4.49E-10	8.78E-06	1.50E-06
9	E82	60	Passenger Truck	16	0.00E+00	2.51E-07	2.66E-08	9.40E-01	1.58E-06	3.89E-03	5.20E-07	2.99E-05	1.72E-04	2.57E-05	4.96E-05	3.23E-05	3.31E-05	7.58E-06	4.72E-06	8.75E-10	1.65E-05	5.07E-06
10	E83	70	Passenger Car	190	0.00E+00	2.09E-06	2.27E-07	8.18E+00	1.48E-05	4.04E-02	4.71E-06	1.92E-04	1.46E-03	2.28E-04	4.59E-04	2.96E-04	3.04E-04	3.22E-05	4.16E-05	8.63E-09	1.55E-04	2.99E-05
10	E83	70	Passenger Truck	317	0.00E+00	4.40E-06	4.67E-07	1.84E+01	2.81E-05	7.14E-02	9.21E-06	5.58E-04	2.64E-03	4.09E-04	8.81E-04	5.72E-04	5.87E-04	1.41E-04	9.26E-05	1.66E-08	2.94E-04	9.36E-05
10	E83	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E83	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	E83	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
10	E84	70	Passenger Car	141	0.00E+00	1.56E-06	1.69E-07	6.10E+00	1.10E-05	3.01E-02	3.51E-06	1.43E-04	1.09E-03	1.70E-04	3.42E-04	2.21E-04	2.26E-04	2.40E-05	3.10E-05	6.43E-09	1.16E-04	2.23E-05
10	E84	70	Passenger Truck	237	0.00E+00	3.28E-06

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E88	60	Single Unit Short Haul Truck	79	0.00E+00	1.78E-05	7.33E-07	1.32E+01	1.18E-05	2.33E-02	1.92E-05	6.82E-03	1.83E-03	3.07E-04	2.37E-03	4.56E-04	4.65E-04	1.34E-03	5.39E-05	2.22E-08	1.90E-03	1.28E-03
9	E88	60	Single Unit Long Haul Truck	4	0.00E+00	7.75E-07	3.18E-08	5.64E-01	5.10E-07	9.87E-04	8.38E-07	2.95E-04	8.22E-05	1.36E-05	1.04E-04	1.98E-05	2.02E-05	5.70E-05	2.30E-06	9.45E-10	8.33E-05	5.53E-05
9	E88	60	Combination Short Haul Truck	62	0.00E+00	1.82E-05	1.33E-06	2.19E+01	4.98E-08	2.71E-02	1.30E-05	2.78E-02	3.17E-03	4.96E-04	1.12E-03	3.90E-04	4.05E-04	3.48E-03	7.33E-05	0.00E+00	7.14E-04	5.23E-03
9	E88	60	Combination Long Haul Truck	57	0.00E+00	2.50E-05	1.36E-06	2.07E+01	1.68E-07	3.26E-02	2.09E-05	2.96E-02	3.32E-03	4.81E-04	2.37E-03	4.45E-04	4.64E-04	3.32E-03	6.94E-05	0.00E+00	1.90E-03	5.57E-03
9	E89	60	Passenger Car	83	0.00E+00	1.05E-06	1.14E-07	3.74E+00	7.44E-06	2.02E-02	2.36E-06	8.55E-05	8.38E-04	1.26E-04	2.31E-04	1.49E-04	1.53E-04	1.65E-05	1.90E-05	3.99E-09	7.80E-05	1.33E-05
9	E89	60	Passenger Truck	139	0.00E+00	2.23E-06	2.36E-07	8.35E+00	1.40E-05	3.45E-02	4.62E-06	2.66E-04	1.53E-03	2.28E-04	4.40E-04	2.86E-04	2.94E-04	6.73E-05	4.19E-05	7.77E-09	1.47E-04	4.50E-05
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	E90	60	Passenger Car	107	0.00E+00	1.35E-06	1.47E-07	4.82E+00	9.59E-06	2.60E-02	3.05E-06	1.10E-04	1.08E-03	1.62E-04	2.97E-04	1.92E-04	1.97E-04	2.12E-05	2.44E-05	5.13E-09	1.00E-04	1.72E-05
9	E90	60	Passenger Truck	179	0.00E+00	2.87E-06	3.04E-07	1.08E+01	1.81E-05	4.45E-02	5.95E-06	3.42E-04	1.97E-03	2.94E-04	5.67E-04	3.69E-04	3.78E-04	8.68E-05	5.40E-05	1.00E-08	1.89E-04	5.80E-05
9	E90	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
9	E91	60	Passenger Car	4	0.00E+00	4.72E-08	5.13E-09	1.69E-01	3.35E-07	9.08E-04	1.06E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.87E-06	7.41E-07	8.55E-07	1.80E-10	3.51E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.98E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.61E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.72E-08	5.13E-09	1.69E-01	3.35E-07	9.08E-04	1.06E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.87E-06	7.41E-07	8.55E-07	1.80E-10	3.51E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.98E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.61E-06	2.03E-06
9	E93	60	Passenger Car	251	0.00E+00	3.17E-06	3.45E-07	1.13E+01	2.25E-05	6.10E-02	7.16E-06	2.59E-04	2.54E-03	3.80E-04	6.98E-04	4.50E-04	4.62E-04	4.98E-05	5.74E-05	1.21E-08	2.36E-04	4.04E-05
9	E93	60	Passenger Truck	421	0.00E+00	6.74E-06	7.14E-07	2.53E+01	4.25E-05	1.05E-01	1.40E-05	8.05E-04	4.64E-03	6.90E-04	1.33E-03	8.67E-04	8.89E-04	2.04E-04	1.27E-04	2.35E-08	4.44E-04	1.36E-04
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	E93	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
9	E94	60	Passenger Car	122	0.00E+00	1.53E-06	1.67E-07	5.48E+00	1.09E-05	2.95E-02	3.46E-06	1.25E-04	1.23E-03	1.84E-04	3.38E-04	2.18E-04	2.23E-04	2.41E-05	2.78E-05	5.83E-09	1.14E-04	1.95E-05
9	E94	60	Passenger Truck	203	0.00E+00	3.26E-06	3.45E-07	1.22E+01	2.06E-05	5.06E-02	6.76E-06	3.89E-04	2.24E-03	3.34E-04	6.45E-04	4.19E-04	4.30E-04	9.86E-05	6.13E-05	1.14E-08	2.15E-04	6.59E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
54	E95	80	Passenger Car	685	0.00E+00	6.85E-06	7.44E-07	2.89E+01	4.86E-05	1.33E-01	1.54E-05	7.13E-04	3.93E-03	6.46E-04	1.51E-03	9.71E-04	9.97E-04	1.02E-04	1.47E-04	3.04E-08	5.09E-04	1.11E-04
54	E95	80	Passenger Truck	1146	0.00E+00	1.42E-05	1.52E-06	6.56E+01	9.27E-05	2.43E-01	3.02E-05	1.92E-03	7.01E-03	1.15E-03	2.90E-03	1.88E-03	1.93E-03	4.71E-04	3.31E-04	5.86E-08	9.70E-04	3.19E-04
54	E95	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.08E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.88E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.66E-05
54	E95	80	Combination Short Haul Truck	38	0.00E+00	7.76E-06	5.75E-07	1.26E+01	2.03E-08	1.18E-02	5.55E-06	1.20E-02	8.99E-04	1.63E-04	4.71E-04	1.68E-04	1.74E-04	2.01E-03	4.22E-05	0.00E+00	2.97E-04	2.26E-03
54	E95	80	Combination Long Haul Truck	34	0.00E+00	1.08E-05	6.10E-07	1.17E+01	6.88E-08	1.40E-02	8.92E-06	1.28E-02	9.29E-04	1.49E-04	9.91E-04	1.97E-04	2.05E-04	1.88E-03	3.93E-05	0.00E+00	7.86E-04	2.42E-03
54	E96	80	Passenger Car	537	0.00E+00	5.38E-06	5.84E-07	2.27E+01	3.81E-05	1.04E-01	1.21E-05	5.60E-04	3.08E-03	5.07E-04	1.18E-03	7.62E-04	7.82E-04	7.99E-05	1.15E-04	2.39E-08	4.00E-04	8.73E-05
54	E96	80	Passenger Truck	900	0.00E+00	1.12E-05	1.19E-06	5.14E+01	7.28E-05	1.91E-01	2.37E-05	1.50E-03	5.50E-03	9.02E-04	2.27E-03	1.48E-03	1.51E-03	3.69E-04	2.59E-04	4.60E-08	7.62E-04	2.50E-04
54	E96	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.99E-04
54	E96	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
54	E96	80	Combination Short Haul Truck	36	0.00E+00	7.44E-06	5.51E-07	1.21E+01	1.95E-08	1.13E-02	5.32E-06	1.15E-02	8.61E-04	1.56E-04	4.51E-04	1.61E-04	1.67E-04	1.92E-03	4.05E-05	0.00E+00	2.84E-04	2.17E-03
54	E96	80	Combination Long Haul Truck	33	0.00E+00	1.04E-05	5.85E-07	1.12E+01	6.59E-08	1.34E-02	8.55E-06	1.23E-02	8.90E-04	1.42E-04	9.50E-04	1.89E-04	1.96E-04	1.80E-03	3.76E-05	0.00E+00	7.53E-04	2.32E-03
9	F01	60	Passenger Car	414	0.00E+00	5.23E-06	5.68E-07	1.87E+01	3.71E-05	1.01E-01	1.18E-05	4.26E-04	4.18E-03	6.26E-04	1.15E-03	7.41E-04	7.61E-04	8.20E-05	9.46E-05	1.99E-08	3.89E-04	6.65E-05
9	F01	60	Passenger Truck	693	0.00E+00	1.11E-05	1.18E-06	4.16E+01	7.00E-05	1.72E-01	2.30E-05	1.33E-03	7.64E-03	1.14E-03	2.20E-03	1.43E-03	1.46E-03	3.36E-04	2.09E-04	3.87E-08	7.32E-04	2.25E-04
9	F01	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.61E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.07E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	2.00E-05
9	F01	60	Combination Short Haul Truck	24	0.00E+00	6.87E-06	5.05E-07	8.29E+00	1.88E-08	1.03E-02	4.93E-06	1.05E-02	1.20E-03	1.87E-04	4.23E-04	1.48E-04	1.53E-04	1.32E-03	2.77E-05	0.00E+00	2.70E-04	1.98E-03
9	F01	60	Combination Long Haul Truck	21	0.00E+00	9.44E-06	5.16E-07	7.83E+00	6.37E-08	1.23E-02	7.89E-06	1.12E-02	1.26E-03	1.82E-04	8.95E-04	1.68E-04	1.75E-04	1.26E-03	2.62E-05	0.00E+00	7.20E-04	2.11E-03
9	F02	60	Passenger Car	292	0.00E+00	3.68E-06	4.00E-07	1.32E+01	2.61E-05	7.08E-02	8.31E-06	3.00E-04	2.94E-03	4.41E-04	8.10E-04	5.22E-04	5.36E-04	5.78E-05	6.67E-05	1.40E-08	2.74E-04	4.68E-05
9	F02	60	Passenger Truck	488	0.00E+00	7.82E-06	8.29E-07	2.93E+01	4.93E-05	1.21E-01	1.62E-05	9.34E-04	5.38E-03	8.01E-04	1.55E-03	1.01E-03	1.03E-03	2.37E-04	1.47E-04	2.73E-08	5.16E-04	1.58E-04
9	F02	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
9	F02	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.43E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.35E-04
9	F02	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.72E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.90E-04
9	F33	60	Passenger Car	500	0.00E+00	6.31E-06	6.86E-07	2.25E+01	4.48E-05	1.21E-01	1.42E-05	5.15E-04	5.05E-03	7.56E-04	1.39E-03	8.95E-04	9.19E-04	9.91E-05	1.14E-04	2.40E-08	4.70E-04	8.03E-05
9	F33	60	Passenger Truck	837	0.00E+00	1.34E-05	1.42E-06	5.03E+01	8.46E-05	2.08E-01	2.78E-05	1.60E-03	9.22E-03	1.37E-03	2.65E-03	1.73E-03	1.77E-03	4.06E-04	2.52E-04	4.68E-08	8.84E-04	2.71E-04
9	F33	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	F33	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.90E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.23E-04
9	F33	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.22E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.83E-04
9	F34	60	Passenger Car	304	0.00E+00	3.84E-06	4.17E-07	1.37E+01	2.72E-05	7.38E-02	8.66E-06	3.13E-04	3.07E-03	4.60E-04	8.44E-04	5.44E-04	5.59E-04	6.03E-05	6.95E-05	1.46E-08	2.86E-04	4.88E-05
9	F34	60	Passenger Truck	509	0.00E+00	8.15E-06	8.64E-07	3.06E+01	5.14E-05	1.26E-01	1.69E-05	9.74E-04	5.61E-03	8.35E-04	1.61E-03	1.05E-03	1.08E-03	2.47E-04	1.53E-04	2.85E-08	5.37E-04	1.65E-04
11	F35	80	Passenger Car	193	0.00E+00	1.98E-06	2.15E-07	8.10E+00	1.41E-05	3.93E-02	4.47E-06	2.00E-04	1.05E-03	1.76E-04	4.36E-04	2.81E-04	2.88E-04	2.87E-05	4.12E-05	8.81E-09	1.47E-04	3.13E-05
11	F35	80	Passenger Truck	324	0.00E+00	4.08E-06	4.35E-07	1.83E+01	2.66E-05	6.95E-02	8.65E-06	5.41E-04	1.88E-03	3.12E-04	8.30E-04	5.39E-04	5.52E-04	1.33E-04	9.23E-05	1.68E-08	2.78E-04	9.00E-05
11	F35	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	F35	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	F35	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.43E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.68E-04
11	F36	80	Passenger Car	47	0.00E+00	4.87E-07	5.29E-08	1.99E+00	3.46E-06	9.65E-03	1.10E-06	4.92E-05	2.59E-04	4.33E-05	1.07E-04	6.90E-05	7.08E-05	7.06E-06	1.01E-05	2.16E-09	3.62E-05	7.68E-06
11	F36	80	Passenger Truck	80	0.00E+00	1.00E-06	1.07E-07	4.49E+00	6.52E-06	1.71E-02	2.13E-06	1.33E-04	4.61E-04	7.67E-05	2.04E-04	1.32E-04	1.36E-04	3.27E-05	2.27E-05	4.12E-09	6.83E-05	2.21E-05
11	F36	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.11E-05
11	F36	80	Single Unit Long Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	5.00E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.42E-05
11	F36	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.35E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.01E-04
9	F37	60	Passenger Car	726	0.00E+00	9.17E-06	9.96E-07	3.27E+01	6.51E-05	1.76E-01	2.07E-05	7.47E-04	7.33E-03	1.10E-03	2.02E-03	1.30E-03	1.33E-03	1.44E-04	1.66E-04	3.48E-08	6.82E-04	1.17E-04
9	F37	60	Passenger Truck	1215	0.00E+00	1.95E-05	2.06E-06	7.30E+01	1.23E-04	3.02E-01	4.04E-05	2.32E-03	1.34E-02	1.99E-03	3.85E-03	2.50E-03	2.57E-03	5.89E-04	3.66E-04	6.79E-08	1.28E-03	3.94E-04
9	F37	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E-06	3.80E-07	6.85E+00	6.09E-06	1.21E-02	9.94E-06	3.53E-03	9.47E-04	1.59E-04	1.23E-03	2.36E-04	2.41E-04	6.94E-04	2.79E-05	1.15E-08	9.86E-04	6.61E-04
9	F37	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.53E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.86E-05
9	F37	60	Combination Short Haul Truck	39	0.00E+00	1.14E-05	8.41E-07	1.38E+01	3.14E-08	1.71E-02	8.22E-06	1.75E-02	2.00E-03	3.12E-04	7.06E-04	2.46E-04	2.55E-04	2.20E-03	4.62E-05	0.00E+00	4.50E-04	3.30E-03
9	F37	60	Combination Long Haul Truck	36	0.00E+00	1.57E-05	8.59E-07	1.30E+01	1.06E-07	2.06E-02	1.32E-05	1.86E-02	2.10E-03	3.03E-04	1.49E-03	2.81E-04	2.92E-04	2.09E-03	4.37E-05	0.00E+00	1.20E-03	3.51E-03
9	F38	60	Passenger Car	939	0.00E+00	1.19E-05	1.29E-06	4.24E+01	8.42E-05	2.28E-01	2.67E-05	9.67E-04	9.48E-03	1.42E-03	2.61E-03	1.68E-03	1.73E-03	1.86E-04	2.15E-04	4.51E-08	8.83E-04	1.51E-04
9	F38	60	Passenger Truck	1573	0.00E+00	2.52E-05	2.67E-06	9.44E+01	1.59E-04	3.91E-01	5.23E-05	3.01E-03	1.73E-02	2.58E-03	4.98E-03	3.24E-03	3.32E-03	7.62E-04	4.74E-04	8.79E-08	1.66E-03	5.10E-04
9	F38	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
9	F38	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.76E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	F38	60	Combination Short Haul Truck	24	0.00E+00	6.87E-06	5.05E-07	8.29E+00	1.88E-08	1.03E-02	4.93E-06	1.05E-02	1.20E-03	1.87E-04	4.23E-04	1.48E-04	1.53E-04	1.32E-03	2.77E-05	0.00E+00	2.70E-04	1.98E-03
9	F38	60	Combination Long Haul Truck	21	0.00E+00	9.44E-06	5.16E-07	7.83E+00	6.37E-08	1.23E-02	7.89E-06	1.12E-02	1.26E-03	1.82E-04	8.95E-04	1.68E-04	1.75E-04	1.26E-03	2.62E-05	0.00E+00	7.20E-04	2.11E-03
11	F39	80	Passenger Car	299	0.00E+00	3.06E-06	3.33E-07	1.25E+01	2.17E-05	6.07E-02	6.91E-06	3.10E-04	1.63E-03	2.73E-04	6.74E-04	4.34E-04	4.46E-04	4.44E-05	6.37E-05	1.36E-08	2.28E-04	4.83E-05
11	F39	80	Passenger Truck	500	0.00E+00	6.31E-06	6.73E-07	2.83E+01	4.10E-05	1.07E-01	1.34E-05	8.36E-04	2.90E-03	4.83E-04	1.28E-03	8.32E-04	8.53E-04	2.05E-04	1.43E-04	2.59E-08	4.30E-04	1.39E-04
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.28E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.13E-05
11	F39	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.67E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.02E-04
11	F39	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.85E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.37E-04
11	F40	80	Passenger Car	97	0.00E+00	9.93E-07	1.08E-07	4.06E+00	7.05E-06	1.97E-02	2.24E-06	1.00E-04	5.28E-04	8.84E-05	2.18E-04	1.41E-04	1.44E-04	1.44E-05	2.07E-05	4.41E-09	7.39E-05	1.57E-05
11	F40	80	Passenger Truck	162	0.00E+00	2.05E-06	2.18E-07	9.17E

Appendix F.3.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F48	60	Passenger Car	34	0.00E+00	4.35E-07	4.72E-08	1.55E+00	3.08E-06	8.35E-03	9.80E-07	3.54E-05	3.47E-04	5.20E-05	9.55E-05	6.16E-05	6.32E-05	6.82E-06	7.86E-06	1.65E-09	3.23E-05	5.52E-06
9	F48	60	Passenger Truck	58	0.00E+00	9.23E-07	9.78E-08	3.46E+00	5.82E-06	1.43E-02	1.91E-06	1.10E-04	6.35E-04	9.45E-05	1.82E-04	1.19E-04	1.22E-04	2.79E-05	1.74E-05	3.22E-09	6.08E-05	1.87E-05
9	F48	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	F48	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	F48	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
53	F77	70	Passenger Car	285	0.00E+00	3.04E-06	3.30E-07	1.24E+01	2.16E-05	5.82E-02	6.85E-06	2.93E-04	2.16E-03	3.38E-04	6.68E-04	4.31E-04	4.42E-04	4.83E-05	6.31E-05	1.31E-08	2.26E-04	4.57E-05
53	F77	70	Passenger Truck	476	0.00E+00	6.34E-06	6.75E-07	2.80E+01	4.07E-05	1.03E-01	1.33E-05	8.27E-04	3.85E-03	5.99E-04	1.27E-03	8.28E-04	8.49E-04	2.10E-04	1.41E-04	2.47E-08	4.26E-04	1.38E-04
53	F77	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.42E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.40E-04
53	F77	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.76E-05
53	F77	70	Combination Short Haul Truck	38	0.00E+00	9.83E-06	7.31E-07	1.33E+01	2.50E-08	1.42E-02	7.00E-06	1.47E-02	1.38E-03	2.31E-04	5.89E-04	2.13E-04	2.21E-04	2.11E-03	4.44E-05	0.00E+00	3.68E-04	2.77E-03
53	F77	70	Combination Long Haul Truck	35	0.00E+00	1.35E-05	7.66E-07	1.25E+01	8.45E-08	1.69E-02	1.11E-05	1.58E-02	1.44E-03	2.17E-04	1.22E-03	2.46E-04	2.57E-04	2.00E-03	4.18E-05	0.00E+00	9.68E-04	2.97E-03
50	F78	40	Passenger Car	102	0.00E+00	1.44E-06	1.57E-07	5.30E+00	1.02E-05	2.74E-02	3.25E-06	9.28E-05	1.75E-03	2.47E-04	3.17E-04	2.04E-04	2.10E-04	3.02E-05	2.67E-05	4.94E-09	1.07E-04	1.45E-05
50	F78	40	Passenger Truck	170	0.00E+00	3.18E-06	3.34E-07	1.15E+01	1.91E-05	4.54E-02	6.39E-06	3.58E-04	3.11E-03	4.32E-04	6.03E-04	3.94E-04	4.03E-04	1.03E-04	5.75E-05	8.39E-09	2.00E-04	6.19E-05
50	F78	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.46E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.36E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.39E-04
50	F78	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.77E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
52	F79	60	Passenger Car	440	0.00E+00	5.11E-06	5.55E-07	1.98E+01	3.62E-05	9.75E-02	1.15E-05	4.36E-04	4.32E-03	6.48E-04	1.12E-03	7.24E-04	7.43E-04	8.72E-05	1.01E-04	2.05E-08	3.80E-04	6.81E-05
52	F79	60	Passenger Truck	737	0.00E+00	1.08E-05	1.14E-06	4.42E+01	6.80E-05	1.68E-01	2.24E-05	1.33E-03	7.67E-03	1.14E-03	2.13E-03	1.39E-03	1.42E-03	3.50E-04	2.22E-04	3.74E-08	7.10E-04	2.25E-04
52	F79	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.93E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.22E-05
52	F79	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.08E-04
52	F79	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.74E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.28E-04
53	F80	70	Passenger Car	964	0.00E+00	1.03E-05	1.12E-06	4.21E+01	7.30E-05	1.97E-01	2.32E-05	9.92E-04	7.31E-03	1.14E-03	2.26E-03	1.46E-03	1.50E-03	1.64E-04	2.14E-04	4.44E-08	7.66E-04	1.55E-04
53	F80	70	Passenger Truck	1615	0.00E+00	2.15E-05	2.29E-06	9.48E+01	1.38E-04	3.48E-01	4.52E-05	2.80E-03	1.31E-02	2.03E-03	4.32E-03	2.81E-03	2.88E-03	7.12E-04	4.77E-04	8.36E-08	1.44E-03	4.69E-04
53	F80	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.11E-06
53	F80	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.82E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.32E-04
53	F80	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.02E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.69E-04
52	F81	60	Passenger Car	246	0.00E+00	2.86E-06	3.10E-07	1.11E+01	2.03E-05	5.45E-02	6.44E-06	2.44E-04	2.42E-03	3.62E-04	6.28E-04	4.05E-04	4.15E-04	4.88E-05	5.62E-05	1.15E-08	2.12E-04	3.81E-05
52	F81	60	Passenger Truck	412	0.00E+00	6.03E-06	6.39E-07	2.47E+01	3.80E-05	9.37E-02	1.25E-05	7.44E-04	4.29E-03	6.37E-04	1.19E-03	7.75E-04	7.94E-04	1.95E-04	1.24E-04	2.09E-08	3.97E-04	1.26E-04
52	F81	60	Single Unit Short Haul Truck	69	0.00E+00	1.54E-05	6.36E-07	1.15E+01	1.02E-05	2.02E-02	1.67E-05	5.91E-03	1.59E-03	2.67E-04	2.05E-03	3.96E-04	4.04E-04	1.16E-03	4.68E-05	1.93E-08	1.65E-03	1.11E-03
52	F81	60	Single Unit Long Haul Truck	3	0.00E+00	6.72E-07	2.76E-08	4.89E-01	4.42E-07	8.57E-04	7.27E-07	2.56E-04	7.13E-05	1.18E-05	8.98E-05	1.72E-05	1.75E-05	4.94E-05	2.00E-06	8.20E-10	7.23E-05	4.79E-05
52	F81	60	Combination Short Haul Truck	46	0.00E+00	1.34E-05	9.87E-07	1.62E+01	3.68E-08	2.01E-02	9.65E-06	2.05E-02	2.34E-03	3.67E-04	8.28E-04	2.89E-04	3.00E-04	2.58E-03	5.42E-05	0.00E+00	5.28E-04	3.87E-03
52	F81	60	Combination Long Haul Truck	42	0.00E+00	1.85E-05	1.01E-06	1.53E+01	1.25E-07	2.41E-02	1.54E-05	2.19E-02	2.46E-03	3.55E-04	1.75E-03	3.29E-04	3.43E-04	2.46E-03	5.13E-05	0.00E+00	1.41E-03	4.12E-03
50	F82	40	Passenger Car	141	0.00E+00	1.99E-06	2.17E-07	7.33E+00	1.41E-05	3.79E-02	4.49E-06	1.28E-04	2.42E-03	3.41E-04	4.38E-04	2.83E-04	2.90E-04	4.18E-05	3.69E-05	6.83E-09	1.48E-04	2.00E-05
50	F82	40	Passenger Truck	235	0.00E+00	4.39E-06	4.62E-07	1.60E+01	2.65E-05	6.28E-02	8.83E-06	4.94E-04	4.30E-03	5.97E-04	8.34E-04	5.45E-04	5.58E-04	1.43E-04	7.95E-05	1.16E-08	2.76E-04	8.56E-05
50	F82	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.91E-05
50	F82	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.36E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.39E-04
50	F82	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.77E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
53	F83	70	Passenger Car	11	0.00E+00	1.16E-07	1.26E-08	4.73E-01	8.21E-07	2.22E-03	2.61E-07	1.12E-05	8.22E-05	1.29E-05	2.55E-05	1.64E-05	1.68E-05	1.84E-06	2.40E-06	4.99E-10	8.61E-06	1.74E-06
53	F83	70	Passenger Truck	18	0.00E+00	2.42E-07	2.57E-08	1.07E+00	1.55E-06	3.92E-03	5.08E-07	3.15E-05	1.47E-04	2.28E-05	4.86E-05	3.16E-05	3.23E-05	8.00E-06	5.36E-06	9.40E-10	1.62E-05	5.28E-06
53	F83	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
53	F83	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
50	F84	40	Passenger Car	225	0.00E+00	3.18E-06	3.46E-07	1.17E+01	2.26E-05	6.06E-02	7.18E-06	2.05E-04	3.87E-03	5.45E-04	7.00E-04	4.52E-04	4.63E-04	6.68E-05	5.89E-05	1.09E-08	2.37E-04	3.20E-05
50	F84	40	Passenger Truck	376	0.00E+00	7.02E-06	7.38E-07	2.55E+01	4.23E-05	1.00E-01	1.41E-05	7.90E-04	6.87E-03	9.54E-04	1.33E-03	8.70E-04	8.92E-04	2.28E-04	1.27E-04	1.85E-08	4.41E-04	1.37E-04
50	F84	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.93E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.37E-05
50	F84	40	Combination Short Haul Truck	8	0.00E+00	4.04E-06	3.02E-07	3.47E+00	1.00E-08	5.71E-03	2.87E-06	5.89E-03	8.14E-04	1.21E-04	2.40E-04	8.77E-05	9.10E-05	5.52E-04	1.16E-05	0.00E+00	1.49E-04	1.11E-03
50	F84	40	Combination Long Haul Truck	8	0.00E+00	5.36E-06	3.03E-07	3.33E+00	3.41E-08	6.93E-03	4.42E-06	6.21E-03	8.45E-04	1.19E-04	4.91E-04	9.76E-05	1.02E-04	5.35E-04	1.12E-05	0.00E+00	3.90E-04	1.17E-03
52	F85	60	Passenger Car	204	0.00E+00	2.36E-06	2.57E-07	9.19E+00	1.68E-05	4.52E-02	5.33E-06	2.02E-04	2.00E-03	3.00E-04	5.20E-04	3.35E-04	3.44E-04	4.04E-05	4.66E-05	9.49E-09	1.76E-04	3.15E-05
52	F85	60	Passenger Truck	341	0.00E+00	4.99E-06	5.29E-07	2.05E+01	3.15E-05	7.76E-02	1.04E-05	6.17E-04	3.55E-03	5.28E-04	9.87E-04	6.42E-04	6.58E-04	1.62E-04	1.03E-04	1.73E-08	3.29E-04	1.04E-04
52	F85	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
52	F85	60	Combination Short Haul Truck	8	0.00E+00	2.44E-06	1.79E-07	2.95E+00	6.69E-09	3.65E-03	1.75E-06	3.73E-03	4.26E-04	6.67E-05	1.51E-04	5.25E-05	5.45E-05	4.68E-04	9.86E-06	0.00E+00	9.60E-05	7.03E-04
52	F85	60	Combination Long Haul Truck	8	0.00E+00	3.36E-06	1.83E-07	2.78E+00	2.27E-08	4.38E-03	2.81E-06	3.98E-03	4.47E-04	6.46E-05	3.18E-04	5.99E-05	6.24E-05	4.47E-04	9.33E-06	0.00E+00	2.56E-04	7.49E-04
53	F86	70	Passenger Car	148	0.00E+00	1.58E-06	1.72E-07	6.48E+00	1.12E-05	3.04E-02	3.57E-06	1.53E-04	1.13E-03	1.76E-04	3.48E-04	2.25E-04	2.31E-04	2.52E-05	3.29E-05	6.83E-09	1.18E-04	2.38E-05
53	F86	70	Passenger Truck	249	0.00E+00	3.31E-06	3.52E-07	1.46E+01	2.13E-05	5.36E-02	6.95E-06	4.31E-04	2.01E-03	3.12E-04	6.65E-04	4.32E-04	4.43E-04	1.10E-04	7.34E-05	1.29E-08	2.22E-04	7.22E-05
53	F86	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
53	F86	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.04E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.49E-04
53	F86	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.39E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.02E-03
52	F87	60	Passenger Car	34	0.00E+00	3.99E-07	4.34E-08	1.55E+00	2.83E-06	7.62E-03	9.00E-07	3.41E-05	3.38E-04	5.06E-05	8.78E-05	5.66E-05	5.81E-05	6.82E-06	7.86E-06	1.60E-09	2.97E-05	5.32E-06
52	F87	60	Passenger Truck	58	0.00E+00	8.43E-07	8.93E-08	3.46E+00	5.31E-06	1.31E-02	1.75E-06	1.04E-04	6.00E-04	8.90E-05	1.67E-04	1.08E-04	1.11E-04	2.73E-05	1.74E-05	2.93E-09	5.55E-05	1.76E-05
52	F87	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
52	F87	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
52	F87	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
50	F88	40	Passenger Car	8	0.00E+00	1.11E-07	1.21E-08	4.09E-01	7.90E-07	2.12E-03	2.51E-07	7.16E-06	1.35E-04	1.90E-05	2.45E-05	1.58E-05	1.62E-05	2.33E-06	2.06E-06	3.81E-10	8.28E-06	1.12E-06
50	F88	40	Passenger Truck	13	0.00E+00	2.45E-07	2.58E-08	8.91E-01	1.48E-06	3.51E-03	4.93E-07	2.76E-05	2.40E-04	3.33E-05	4.66E-05	3.04E-05	3.12E-05	7.97E-06	4.44E-06	6.48E-10	1.54E-05	4.78E-06

Appendix F.3.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A01	0.00E+00	1.71E-04	1.27E-05	4.16E+02	3.29E-04	1.26E+00	2.03E-04	1.59E-01	1.54E-02	3.71E-03	2.03E-02	8.95E-03	9.19E-03	3.16E-02	1.79E-03	3.13E-07	1.11E-02	2.98E-02
A02	0.00E+00	1.72E-04	1.27E-05	4.23E+02	3.42E-04	1.30E+00	2.08E-04	1.54E-01	1.58E-02	3.80E-03	2.09E-02	9.16E-03	9.41E-03	3.12E-02	1.83E-03	3.34E-07	1.15E-02	2.88E-02
A03	0.00E+00	1.74E-04	1.35E-05	4.64E+02	4.24E-04	1.55E+00	2.26E-04	1.47E-01	1.80E-02	4.27E-03	2.24E-02	1.06E-02	1.09E-02	2.92E-02	2.06E-03	3.76E-07	1.15E-02	2.74E-02
A04	0.00E+00	1.74E-04	1.31E-05	4.47E+02	3.88E-04	1.44E+00	2.19E-04	1.49E-01	1.71E-02	4.08E-03	2.19E-02	9.99E-03	1.03E-02	3.03E-02	1.96E-03	3.64E-07	1.17E-02	2.79E-02
A05	0.00E+00	1.42E-04	1.09E-05	3.73E+02	3.35E-04	1.23E+00	1.81E-04	1.22E-01	1.44E-02	3.42E-03	1.80E-02	8.50E-03	8.73E-03	2.42E-02	1.65E-03	2.97E-07	9.31E-03	2.27E-02
A06	0.00E+00	1.58E-04	1.20E-05	4.06E+02	3.54E-04	1.31E+00	1.98E-04	1.37E-01	1.55E-02	3.70E-03	1.98E-02	9.11E-03	9.36E-03	2.74E-02	1.78E-03	3.24E-07	1.04E-02	2.56E-02
A07	0.00E+00	1.46E-04	1.12E-05	3.79E+02	3.32E-04	1.23E+00	1.84E-04	1.29E-01	1.45E-02	3.45E-03	1.83E-02	8.54E-03	8.77E-03	2.54E-02	1.67E-03	2.96E-07	9.51E-03	2.40E-02
A08	0.00E+00	1.55E-04	1.13E-05	3.65E+02	2.72E-04	1.06E+00	1.79E-04	1.47E-01	1.33E-02	3.22E-03	1.80E-02	7.65E-03	7.86E-03	2.94E-02	1.55E-03	2.71E-07	1.01E-02	2.76E-02
A09	0.00E+00	1.67E-04	1.26E-05	4.17E+02	3.45E-04	1.30E+00	2.03E-04	1.52E-01	1.57E-02	3.74E-03	2.02E-02	9.15E-03	9.40E-03	3.00E-02	1.81E-03	3.15E-07	1.08E-02	2.85E-02
A10	0.00E+00	1.87E-04	1.35E-05	4.33E+02	3.14E-04	1.23E+00	2.13E-04	1.80E-01	1.56E-02	3.80E-03	2.13E-02	8.97E-03	9.22E-03	3.59E-02	1.83E-03	3.16E-07	1.21E-02	3.37E-02
A11	0.00E+00	1.90E-04	1.40E-05	4.50E+02	3.39E-04	1.31E+00	2.20E-04	1.83E-01	1.65E-02	3.97E-03	2.19E-02	9.50E-03	9.76E-03	3.60E-02	1.91E-03	3.22E-07	1.21E-02	3.43E-02
A12	0.00E+00	2.25E-04	1.64E-05	5.30E+02	3.96E-04	1.54E+00	2.59E-04	2.15E-01	1.93E-02	4.67E-03	2.59E-02	1.11E-02	1.14E-02	4.27E-02	2.25E-03	3.85E-07	1.45E-02	4.04E-02
A13	0.00E+00	1.96E-04	1.46E-05	4.79E+02	3.79E-04	1.45E+00	2.33E-04	1.84E-01	1.78E-02	4.26E-03	2.32E-02	1.03E-02	1.06E-02	3.63E-02	2.06E-03	3.52E-07	1.26E-02	3.45E-02
A14	0.00E+00	2.22E-04	1.60E-05	5.09E+02	3.57E-04	1.42E+00	2.50E-04	2.18E-01	1.82E-02	4.44E-03	2.51E-02	1.04E-02	1.07E-02	4.34E-02	2.13E-03	3.65E-07	1.44E-02	4.08E-02
A15	0.00E+00	2.08E-04	1.51E-05	4.80E+02	3.43E-04	1.35E+00	2.35E-04	2.05E-01	1.73E-02	4.19E-03	2.34E-02	9.91E-03	1.02E-02	4.03E-02	2.02E-03	3.36E-07	1.32E-02	3.84E-02
A16	0.00E+00	2.32E-04	1.64E-05	5.12E+02	3.30E-04	1.35E+00	2.52E-04	2.34E-01	1.79E-02	4.39E-03	2.53E-02	1.01E-02	1.04E-02	4.66E-02	2.11E-03	3.53E-07	1.49E-02	4.40E-02
A17	0.00E+00	2.00E-04	1.45E-05	4.58E+02	3.20E-04	1.27E+00	2.24E-04	2.00E-01	1.64E-02	3.97E-03	2.23E-02	9.37E-03	9.63E-03	3.92E-02	1.92E-03	3.16E-07	1.27E-02	3.74E-02
A18	0.00E+00	2.28E-04	1.62E-05	5.05E+02	3.31E-04	1.34E+00	2.49E-04	2.29E-01	1.77E-02	4.34E-03	2.49E-02	1.01E-02	1.03E-02	4.56E-02	2.09E-03	3.50E-07	1.46E-02	4.30E-02
A19	0.00E+00	1.89E-04	1.36E-05	4.25E+02	2.87E-04	1.15E+00	2.08E-04	1.90E-01	1.51E-02	3.66E-03	2.07E-02	8.58E-03	8.82E-03	3.75E-02	1.77E-03	2.89E-07	1.19E-02	3.57E-02
A20	0.00E+00	2.16E-04	1.53E-05	4.77E+02	3.08E-04	1.26E+00	2.35E-04	2.19E-01	1.67E-02	4.09E-03	2.36E-02	9.45E-03	9.71E-03	4.34E-02	1.97E-03	3.28E-07	1.38E-02	4.10E-02
A21	0.00E+00	2.28E-04	1.67E-05	5.36E+02	3.97E-04	1.54E+00	2.62E-04	2.22E-01	1.95E-02	4.70E-03	2.60E-02	1.12E-02	1.15E-02	4.36E-02	2.27E-03	3.80E-07	1.45E-02	4.16E-02
A22	0.00E+00	2.41E-04	1.74E-05	5.55E+02	3.94E-04	1.55E+00	2.72E-04	2.36E-01	1.99E-02	4.84E-03	2.73E-02	1.14E-02	1.17E-02	4.68E-02	2.33E-03	3.97E-07	1.55E-02	4.41E-02
A23	0.00E+00	2.40E-04	1.77E-05	5.64E+02	4.16E-04	1.62E+00	2.75E-04	2.35E-01	2.05E-02	4.94E-03	2.73E-02	1.18E-02	1.21E-02	4.60E-02	2.39E-03	3.96E-07	1.52E-02	4.40E-02
A24	0.00E+00	2.12E-04	1.52E-05	4.81E+02	3.30E-04	1.32E+00	2.36E-04	2.11E-01	1.71E-02	4.17E-03	2.36E-02	9.76E-03	1.00E-02	4.18E-02	2.01E-03	3.36E-07	1.36E-02	3.95E-02
B09	0.00E+00	7.38E-05	6.35E-06	2.55E+02	2.88E-04	8.77E-01	1.18E-04	4.85E-02	1.48E-02	2.94E-03	1.18E-02	6.37E-03	6.54E-03	9.80E-03	1.20E-03	2.08E-07	5.23E-03	8.99E-03
B10	0.00E+00	7.47E-05	6.15E-06	2.43E+02	2.58E-04	7.98E-01	1.13E-04	5.43E-02	1.37E-02	2.74E-03	1.13E-02	5.85E-03	6.01E-03	1.11E-02	1.12E-03	1.92E-07	5.33E-03	1.01E-02
B11	0.00E+00	3.29E-05	3.03E-06	1.25E+02	1.55E-04	4.61E-01	5.81E-05	1.68E-02	7.60E-03	1.49E-03	5.72E-03	3.31E-03	3.39E-03	3.38E-03	6.07E-04	1.09E-07	2.33E-03	3.08E-03
B12	0.00E+00	2.30E-05	1.76E-06	6.85E+01	6.61E-05	2.11E-01	3.24E-05	1.81E-02	3.69E-03	7.50E-04	3.30E-03	1.56E-03	1.61E-03	3.81E-03	3.10E-04	5.36E-08	1.70E-03	3.38E-03
B13	0.00E+00	3.98E-05	3.29E-06	1.30E+02	1.37E-04	4.25E-01	6.02E-05	2.94E-02	7.28E-03	1.46E-03	6.02E-03	3.12E-03	3.20E-03	5.95E-03	5.99E-04	1.02E-07	2.82E-03	5.46E-03
B14	0.00E+00	3.88E-05	3.24E-06	1.30E+02	1.42E-04	4.35E-01	6.04E-05	2.66E-02	7.39E-03	1.48E-03	6.05E-03	3.17E-03	3.26E-03	5.45E-03	6.05E-04	1.05E-07	2.79E-03	4.93E-03
B15	0.00E+00	9.04E-05	7.90E-06	3.23E+02	3.79E-04	1.14E+00	1.51E-04	5.24E-02	1.91E-02	3.78E-03	1.50E-02	8.24E-03	8.46E-03	1.08E-02	1.54E-03	2.77E-07	6.54E-03	9.68E-03
B16	0.00E+00	5.59E-05	4.85E-06	1.98E+02	2.31E-04	6.98E-01	9.26E-05	3.27E-02	1.17E-02	2.31E-03	9.24E-03	5.04E-03	5.17E-03	6.79E-03	9.42E-04	1.70E-07	4.06E-03	6.04E-03
B17	0.00E+00	9.63E-05	7.28E-06	2.79E+02	2.58E-04	8.33E-01	1.32E-04	8.02E-02	1.48E-02	3.01E-03	1.35E-02	6.23E-03	6.40E-03	1.67E-02	1.25E-03	2.11E-07	7.06E-03	1.50E-02
B18	0.00E+00	6.19E-05	4.78E-06	1.85E+02	1.79E-04	5.70E-01	8.72E-05	4.95E-02	9.99E-03	2.03E-03	8.87E-03	4.23E-03	4.35E-03	1.03E-02	8.38E-04	1.43E-07	4.52E-03	9.23E-03
C12	0.00E+00	3.23E-05	2.88E-06	9.48E+01	1.40E-04	3.65E-01	5.46E-05	1.42E-02	1.74E-02	2.59E-03	5.38E-03	3.02E-03	3.10E-03	2.09E-03	4.62E-04	8.06E-08	2.28E-03	2.62E-03
C13	0.00E+00	2.58E-05	1.93E-06	4.28E+01	5.71E-05	1.55E-01	3.25E-05	1.92E-02	1.17E-02	1.66E-03	3.26E-03	1.47E-03	1.51E-03	1.99E-03	1.96E-04	2.88E-08	1.75E-03	3.61E-03
C14	0.00E+00	3.88E-05	3.04E-06	9.24E+01	1.09E-04	3.04E-01	5.35E-05	2.70E-02	1.27E-02	2.01E-03	5.37E-03	2.61E-03	2.68E-03	4.05E-03	4.29E-04	7.19E-08	2.70E-03	5.04E-03
C15	0.00E+00	5.31E-05	3.68E-06	6.71E+01	7.12E-05	2.16E-01	5.71E-05	4.89E-02	1.79E-02	2.54E-03	5.79E-03	2.23E-03	2.30E-03	4.77E-03	2.90E-04	3.75E-08	3.50E-03	9.19E-03
C16	0.00E+00	5.99E-06	5.50E-07	1.90E+01	2.93E-05	7.51E-02	1.09E-05	1.79E-03	3.50E-03	5.24E-04	1.07E-03	6.18E-04	6.34E-04	3.02E-04	9.39E-05	1.71E-08	4.40E-04	3.26E-04
C17	0.00E+00	4.87E-05	3.65E-06	1.11E+02	1.29E-04	3.59E-01	6.65E-05	3.17E-02	1.51E-02	2.39E-03	6.81E-03	3.13E-03	3.21E-03	4.95E-03	5.12E-04	9.10E-08	3.60E-03	5.92E-03
C18	0.00E+00	7.47E-06	5.55E-07	1.58E+01	2.06E-05	5.50E-02	1.04E-05	4.47E-03	2.80E-03	4.22E-04	1.07E-03	4.90E-04	5.03E-04	6.32E-04	7.40E-05	1.32E-08	5.70E-04	8.34E-04
C19	0.00E+00	3.06E-07	3.25E-08	1.11E+00	1.94E-06	4.82E-03	6.38E-07	2.98E-05	3.22E-04	4.49E-05	6.09E-05	3.96E-05	4.06E-05	8.83E-06	5.57E-06	8.82E-10	2.03E-05	5.06E-06
C20	0.00E+00	9.02E-06	8.12E-07	2.87E+01	3.98E-05	1.06E-01	1.54E-05	3.98E-03	4.14E-03	6.47E-04	1.52E-03	8.59E-04	8.81E-04	6.40E-04	1.40E-04	2.51E-08	6.34E-04	7.32E-04
C21	0.00E+00	5.77E-05	3.94E-06	8.57E+01	1.20E-04	3.03E-01	7.29E-05	3.43E-02	2.31E-02	3.29E-03	7.64E-03	3.10E-03	3.18E-03	3.89E-03	3.95E-04	6.94E-08	4.47E-03	6.43E-03
C22	0.00E+00	5.33E-06	4.92E-07	1.67E+01	2.52E-05	6.54E-02	9.42E-06	2.04E-03	3.07E-03	4.59E-04	9.24E-04	5.36E-04	5.50E-04	3.10E-04	8.20E-05	1.44E-08	3.74E-04	3.74E-04
C23	0.00E+00	3.07E-05	2.52E-06	8.37E+01	1.09E-04	2.94E-01	4.74E-05	1.62E-02	1.18E-02	1.85E-03	4.76E-03	2.45E-03	2.52E-03	2.60E-03	4.00E-04	7.24E-08	2.24E-03	3.01E-03
C24	0.00E+00	2.89E-06	2.92E-07	1.05E+01	1.66E-05	4.26E-02	5.67E-06	7.63E-04	1.96E-03	2.92E-04	5.46E-04	3.42E-04	3.51E-04	1.27E-04	5.24E-05	9.20E-09	1.95E-04	1.37E-04
C25	0.00E+00	5.79E-05	3.95E-06	7.33E+01	8.22E-05	2.38E-01	6.37E-05	4.94E-02	1.95E-02	2.78E-03	6.55E-03	2.49E-03	2.56E-03	4.93E-03	3.20E-04	4.56E-08	3.99E-03	9.29E-03
C26	0.00E+00	3.76E-05	2.70E-06	7.63E+01	8.09E-05	2.32E-01	4.74E-05	2.81E-02	1.02E-02	1.61E-03	4.87E-03	2.09E-03	2.14E-03	4.26E-03	3.44E-04	5.85E-08	2.73E-03	5.25E-03
C27	0.00E+00	3.07E-05	2.14E-06	4.62E+01	6.30E-05	1.63E-01	3.83E-05	2.01E-02	1.25E-02	1.78E-03	3.98E-03	1.64E-03	1.69E-03	2.19E-03	2.12E-04	3.52E-08	2.29E-03	3.76E-03
C28	0.00E+00	1.45E-05	1.49E-06	5.48E+01	8.77E-05	2.24E-01	2.95E-05	2.62E-03	1.02E-02	1.52E-03	2.85E-03	1.80E-03	1.84E-03	5.14E-04	2.74E-04	4.91E-08	1.01E-03	4.60E-04
C29	0.00E+00	3.57E-06	3.17E-07	1.11E+01	1.52E-05	4.06E-02	5.98E-06	1.66E-03	1.59E-03	2.50E-04	5.89E-04	3.31E-04	3.39E-04	2.64E-04	5.39E-05	9.62E-09	2.50E-04	3.06E-04
C30	0.00E+00	3.30E-05	2.11E-06	3.15E+01	2.41E-05	8.44E-02	3.17E-05	3.27E-02	8.04E-03	1.16E-03	3.30E-03	1.03E-03	1.06E-03	3.14E-03	1.26E-04	1.55E-08	2.23E-03	6.14E-03
C31	0.00E+00	1.62E-05	1.08E-06	2.53E+01	2.46E-05	7.36E-02	1.84E-05	1.39E-02	4.29E-03	6.49E-04	1.93E-03	7.20E-04	7.40E-04	1.81E-03	1.10E-04	1.70E-08	1.19E-03	2.60E-03
C32	0.00E+00	4.84E-05	3.27E-06	8.34E+01	7.39E-05	2.26E-01	5.47E-05	4.11E-02	1.07E-02	1.70E-03	5.70E-03	2.16E-03	2.22E-03	6.12E-03	3.60E-04	5.73E-08	3.47E-03	7.72E-03
C33	0.00E+00	1.67E-06	1.64E-07	5.99E+00	9.62E-06	2.44E-02	3.32E-06	2.46E-04	1.11E-03	1.66E-04	3.26E-04	1.98E-04	2.03E-04	5.65E-05	3.00E-05	5.54E-09	1.23E-04	4.27E-05
C34	0.00E+00	3.75E-06	2.66E-07	6.06E+00	8.72E-06	2.21E-02	4.91E-06	2.18E-03	1.65E-03	2.34E-04	5.09E-04	2.18E-04	2.23E-04	2.48E-04	2.82E-05	4.83E-09	2.86E-04	4.08E-04
C35	0.00E+00	1.03E-05	8.45E-07	2.82E+01	3.70E-05	9.94E-02	1.61E-05	5.24E-03	3.98E-03	6.26E-04	1.62E-03	8.30E-04	8.52E-04	8.54E-04	1.35E-04	2.48E-08	7.67E-04	9.70E-04
C36	0.00E+00	6.36E-05	4.06E-06	6.15E+01	4.93E-05	1.67E-01	6.17E-05	6.17E-02	1.57E-02	2.26E-03	6.43E-03	2.03E-03	2.09E-03	5.96E-03	2.49E-04	3.17E-08	4.34E-03	1.16E-02
C37	0.00E+00	1.52E-05	9.75E-07	2.10E+01	1.70E-05	5.49E-02	1.60E-05	1.41E-02	3.47E-03	5.26E-04	1.69E-03	5.70E-04	5.87E-04	1.82E-03	8.72E-05	1.26E-08	1.11E-03	2.66E-03
C38	0.00E+00	6.06E-05	4.37E-06	1.19E+02	1.18E-04	3.49E-01	7.31E-05	5.02E-02	1.57E-02	2.49E-03	7.45E-03	3.17E-03	3.25E-03	7.38E-03	5.26E-04	8.26E-08	4.19E-03	9.41E-03
C39	0.00E+00	1.23E-05	8.21E-07	2.07E+01	2.34E-05	6.50E-02	1.51E-05	8.64E-03	3.56E-03	5.40E-04	1.59E-03	6.21E-04	6.38E-04	1.19E-03	9.31E-05	1.65E-08	9.55E-04	1.62E-03
C40	0.00E+00	1.83E-05	1.22E-06	2.38E+01	2.95E-05	7.91E-02	2.12E-05	1.34E-02	6.34E-03	9.04E-04	2.22E-03	8.40E-04	8.63E-04	1.41E-03	1.06E-04	1.73E-08	1.35E-03	2.52E-03
C41	0.00E+00	3.96E-06	3.59E-07	1.44E+01	1.80E-05	5.15E-02	6.88E-06	2.08E-03	1.17E-03	2.08E-04	6.80E-04	3.86E-04	3.96E-04	4.11E-04	6.92E-05	1.19E-08	2.84E-04	3.83E-04
C42	0.00E+00	2.02E-05	1.42E-06	5.26E+01	4.68E-05	1.48E-01	2.65E-05	1.65E-02	3.68E-03	6.77E-04	2.78E-03	1.17E-03	1.20E-03	3.44E-03	2.32E-04	3.87E-08	1.58E-03	3.09E-03
C43	0.00E+00	1.07E-05	9.73E-07	3.98E+01	5.16E-05	1.46E-01	1.93E-05	4.50E-03	3.29E-03	5.84E-04	1.92E-03	1.09E-03	1.12E-03	9.47E-04	1.94E-04	3.51E-08	8.00E-04	8.23E-04
C44	0.00E+00	2.21E-05	1.89E-06	7.39E+01	8.57E-05	2.50E-01	3.54E-05	1.44E-02	5.82E-03	1.04E-03	3.53E-03	1.90E-03	1.95E-03	2.82E-03	3.48E-04	5.75E-08	1.59E-03	2.66E-03
C45	0.00E+00	1.76E-05	1.40E-06	4.43E+01	5.47E-05	1.50E-01	2.55E-05	1.09E-02	6.16E-03	9.70E-04	2.57E-03	1.27E-03	1.31E-03	1.68E-03	2.08E-04	3.65E-08	1.26E-03	2.03E-03
C46	0.00E+00	6.32E-05	3.90E-06	5.33E+01	3.31E-05	1.28E-01	5.81E-05	6.34E-02	1.33E-02	1.92E-03	6.13E-03	1.74E-03	1.79E-03	6.08E-03	2.06E-04	2.51E-08	4.34E-03	1.19E-02
C47	0.00E+00	1.49E-06	1.29E-07	4.17E+00	6.08E-06	1.59E-02	2.45E-06	6.68E-04	7.60E-04	1.14E-04	2.44E-04	1.33E-04	1.36E-04	9.89E-05	2.02E-05	3.58E-09	1.08E-04	1.24E-04
C48	0.00E+00	4.21E-05	2.63E-06	5.89E+01	3.74E-05	1.31E-01	4.23E-05	3.96E-02	7.10E-03	1.14E-03	4.49E-03	1.41E-03	1.45E-03	5.84E-03	2.38E-04	3.50E-08	3.04E-03	7.44E-03
C49	0.00E+00	3.10E-05	2.09E-06	5.22E+01	5.76E-05	1.62E-01	3.77E-05	2.28E-02	8.95E-03	1.35E-03	3.97E-03	1.55E-03	1.59E-03	3.10E-03	2.33E-04	4.03E-08	2.38E-03	4.27E-03
C50	0.00E+00	1.95E-06	1.82E-07	5.38E+00	8.64E-06	2.22E-02	3.29E-06	8.89E-04	1.53E-03	2.14E-04	3.16E-04	1.88E-04	1.92E-04	1.07E-04	2.62E-05	3.92E-09	1.24E-04	1.65E-04
C51	0.00E+00	2.49E-05	1.84E-06	5.37E+01	5.95E-05	1.69E-01	3.25E-05	1.80E-02	7.26E-03	1.15E-03	3.31E-03	1.49E-03	1.53E-03	2.73E-03	2.45E-04	4.16E-08	1.78E-03	3.36E-03
C52	0.00E+00	1.15E-05	8.01E-07	1.56E+01	1.84E-05	5.23E-02	1.30E-05	9.53E-03	4.19E-03	5.94E-04	1.33E-03	5.32E-04	5.47E-04	9.58E-04	6.90E-05	9.88E-09	7.86E-04	1.79E-03
C53	0.00E+00	2.28E-06	2.27E-07	8.09E+00	1.26E-05	3.25E-02	4.37E-06	6.95E-04	1.50E-03	2.24E-04	4.22E-04	2.62E-04	2.68E-04	1.10E-04	4.01E-05	6.99E-09	1.53E-04	1.26E-04
C54	0.00E+00	6.69E-06	4.88E-07	1.43E+01	1.59E-05	4.48E-02	8.75E-06	4.65E-03	1.92E-03	3.04E-04	8.99E-04	3.97E-04	4.07E-04	7.18E-04	6.51E-05	1.14E-08	4.92E-04	8.69E-04
C55	0.00E+00	2.98E-06	1.95E-07	4.66E+00	4.76E-06	1.38E-02	3.46E-06	2.34E-03	7.89E-04	1.20E-04	3.66E-04	1.35E-04	1.39E-04	3.14E-04	2.04E-05	3.43E-09	2.27E-04	4.39E-04
C56	0.00E+00	1.11E-05	7.01E-07	1.17E+01	1.20E-05	3.45E-02	1.16E-05	9.21E-03	3.03E-03	4.35E-04	1.23E-03	4.07E-04	4.18E-04	9.34E-04	4.96E-05	7.85E-09	8.13E-04	1.73E-03
C57	0.00E+00	2.01E-05	1.46E-06	4.08E+01	4.24E-05	1.23E-01	2.49E-05	1.59E-02	5.45E-03	8.62E-04	2.54E-03	1.11E-03	1.14E-03	2.36E-03	1.83E-04	2.96E-08	1.40E-03	2.97E-03
C58	0.00E+00	3.82E-06	3.11E-07	7.72E+00	1.11E-05	2.97E-02	5.31E-06	2.57E-03	2.16E-03	3.03E-04	5.22E-04	2.66E-04	2.73E-04	2.72E-04	3.63E-05	5.28E-09	2.49E-04	4.81E-04
C59	0.00E+00	8.35E-06	6.64E-07	2.10E+01	2.58E-05	7.10E-02	1.21E-05	5.18E-03	2.92E-03	4.59E-04	1.21E-03	6.02E-04	6.18E-04	7.99E-04	9.86E-05	1.72E-08	5.96E-04	9.65E-04
C60	0.00E+00	1.95E-05	1.52E-06	4.50E+01	6.01E-05	1.61E-01	2.82E-05	1.16E-02	8.05E-03	1.21E-03	2.86E-03	1.40E-03	1.43E-03	1.61E-03	2.12E-04	3.67E-08	1.43E-03	2.16E-03
C61	0.00E+00	1.14E-05	8.65E-07	2.58E+01	2.94E-05	8.27E-02	1.53E-05	8.02E-03	3.51E-03	5.54E-04	1.56E-03	7.21E-04	7.40E-04	1.22E-03	1.18E-04	2.02E-08	8.15E-04	1.50E-03
C62	0.00E+00	2.16E-05	2.04E-06	6.32E+01	1.05E-04	2.64E-01	3.87E-05	6.82E-03	1.81E-02	2.52E-03	3.75E-03	2.24E-03	2.29E-03	9.77E-04	3.11E-04	4.89E-08	1.46E-03	1.25E-03
C63	0.00E+00	6.53E-05	4.23E-06	9.37E+01	8.17E-05	2.55E-01	7.05E-05	5.88E-02	1.56E-02	2.37E-03	7.44E-03	2.59E-03	2.67E-03	7.60E-03	3.96E-04	5.91E-08	4.77E-03	1.10E-02
C64	0.00E+00	4.34E-05	3.36E-06	1.03E+02	1.22E-04	3.40E-01	6.04E-05	2.86E-02	1.42E-02	2.23E-03	6.11E-03	2.92E-03	3.00E-03	4.39E-03	4.79E-04	8.30E-08	3.11E-03	5.34E-03
C65	0.00E+00	2.43E-07	2.60E-08	9.80E-01	1.59E-06	4.05E-03	5.18E-07	2.70E-05	1.83E-04	2.73E-05	4.98E-05	3.23E-05	3.31E-05	6.68E-06	4.93E-06	8.86E-10	1.67E-05	4.49E-06
C66	0.00E+00	1.28E-05	1.04E-06	2.66E+01	3.99E-05	1.03E-01	1.84E-05	7.46E-03	7.43E-03	1.04E-03	1.83E-03	9.30E-04	9.55E-04	8.33E-04	1.26E-04	1.94E-08	8.77E-04	1.39E-03
C67	0.00E+00	4.06E-05	2.93E-06	1.09E+02	1.00E-04	3.13E-01	5.41E-05	3.36E-02	7.74E-03	1.42E-03	5.62E-03	2.46E-03	2.53E-03	6.86E-03	4.84E-04	7.82E-08	3.10E-03	6.28E-03
C68	0.00E+00	3.17E-05	2.30E-06	8.62E+01	8.09E-05	2.51E-01	4.29E-05	2.53E-02	6.17E-03	1.13E-03	4.47E-03	1.97E-03	2.02E-03	5.22E-03	3.85E-04	6.38E-08	2.44E-03	4.73E-03
C69	0.00E+00	5.52E-05	4.15E-06	1.32E+02	1.33E-04	3.95E-01	7.18E-05	4.36E-02	1.33E-02	2.22E-03	7.28E-03	3.32E-03	3.42E-03	7.40E-03	5.93E-04	9.52E-08	3.86E-03	8.14E-03
C70	0.00E+00	5.59E-05	4.01E-06	1.51E+02	1.41E-04	4.38E-01	7.56E-05	4.39E-02	1.07E-02	1.97E-03	7.90E-03	3.43E-03	3.53E-03	9.14E-03	6.72E-04	1.14E-07	4.37E-03	8.19E-03
C71	0.00E+00	4.89E-05	3.43E-06	9.33E+01	9.31E-05	2.73E-01	5.91E-05	3.85E-02	1.23E-02	1.95E-03	6.10E-03	2.50E-03	2.57E-03

Appendix F.3.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D41	0.00E+00	5.63E-06	5.07E-07	1.52E+01	2.38E-05	6.29E-02	9.34E-06	2.88E-03	2.90E-03	4.33E-04	9.14E-04	5.19E-04	5.33E-04	3.95E-04	7.36E-05	1.32E-08	3.81E-04	5.34E-04
D42	0.00E+00	6.20E-06	6.62E-07	2.29E+01	4.06E-05	1.03E-01	1.32E-05	6.65E-04	4.48E-03	6.69E-04	1.27E-03	8.23E-04	8.44E-04	1.59E-04	1.15E-04	2.22E-08	4.25E-04	1.10E-04
D43	0.00E+00	1.45E-05	1.09E-06	2.90E+01	3.99E-05	1.08E-01	2.01E-05	9.13E-03	5.32E-03	8.01E-04	2.06E-03	9.54E-04	9.79E-04	1.26E-03	1.35E-04	2.48E-08	1.08E-03	1.70E-03
D44	0.00E+00	1.10E-05	1.14E-06	3.85E+01	6.72E-05	1.72E-01	2.24E-05	2.06E-03	7.52E-03	1.12E-03	2.16E-03	1.37E-03	1.41E-03	3.76E-04	1.93E-04	3.67E-08	7.47E-04	3.64E-04
D45	0.00E+00	4.82E-05	3.79E-06	1.04E+02	1.46E-04	3.95E-01	6.93E-05	3.01E-02	1.92E-02	2.88E-03	7.00E-03	3.42E-03	3.51E-03	4.09E-03	4.85E-04	8.74E-08	3.48E-03	5.61E-03
D46	0.00E+00	5.71E-05	4.33E-06	1.09E+02	1.36E-04	3.86E-01	7.38E-05	4.55E-02	1.98E-02	2.97E-03	7.43E-03	3.42E-03	3.52E-03	5.85E-03	4.94E-04	7.98E-08	3.92E-03	8.52E-03
D47	0.00E+00	5.70E-05	4.71E-06	1.35E+02	2.03E-04	5.38E-01	8.77E-05	3.11E-02	2.54E-02	3.81E-03	8.78E-03	4.56E-03	4.68E-03	4.33E-03	6.45E-04	1.18E-07	4.09E-03	5.77E-03
D48	0.00E+00	1.04E-05	1.00E-06	3.25E+01	5.47E-05	1.41E-01	1.95E-05	3.07E-03	6.28E-03	9.38E-04	1.90E-03	1.14E-03	1.17E-03	4.91E-04	1.61E-04	3.05E-08	7.28E-04	5.59E-04
D49	0.00E+00	1.15E-04	8.63E-06	2.28E+02	3.08E-04	8.38E-01	1.58E-04	7.48E-02	4.16E-02	6.26E-03	1.62E-02	7.43E-03	7.63E-03	1.02E-02	1.05E-03	1.91E-07	8.52E-03	1.40E-02
D50	0.00E+00	1.02E-04	7.29E-06	1.82E+02	2.28E-04	6.33E-01	1.31E-04	7.30E-02	3.27E-02	4.93E-03	1.35E-02	5.79E-03	5.95E-03	9.81E-03	8.23E-04	1.46E-07	7.57E-03	1.37E-02
D51	0.00E+00	1.63E-05	1.50E-06	4.78E+01	7.97E-05	2.05E-01	2.95E-05	5.03E-03	9.18E-03	1.37E-03	2.92E-03	1.68E-03	1.73E-03	8.17E-04	2.35E-04	4.56E-08	1.19E-03	9.18E-04
D52	0.00E+00	1.33E-05	1.22E-06	3.88E+01	6.46E-05	1.66E-01	2.40E-05	4.13E-03	7.45E-03	1.11E-03	2.36E-03	1.36E-03	1.40E-03	6.68E-04	1.91E-04	3.69E-08	9.65E-04	7.55E-04
D53	0.00E+00	1.85E-05	1.58E-06	4.72E+01	7.37E-05	1.93E-01	3.02E-05	8.55E-03	8.92E-03	1.34E-03	3.01E-03	1.62E-03	1.66E-03	1.24E-03	2.28E-04	4.29E-08	1.35E-03	1.58E-03
D54	0.00E+00	1.06E-05	9.28E-07	2.82E+01	4.47E-05	1.17E-01	1.77E-05	4.60E-03	5.36E-03	8.02E-04	1.75E-03	9.71E-04	9.97E-04	6.72E-04	1.37E-04	2.57E-08	7.56E-04	8.51E-04
D55	0.00E+00	3.01E-05	2.30E-06	7.41E+01	8.12E-05	2.38E-01	4.11E-05	2.15E-02	7.34E-03	1.24E-03	4.18E-03	1.96E-03	2.01E-03	3.73E-03	3.39E-04	5.87E-08	2.16E-03	4.00E-03
D56	0.00E+00	4.17E-05	3.29E-06	1.11E+02	1.30E-04	3.73E-01	6.07E-05	2.61E-02	1.12E-02	1.89E-03	6.16E-03	3.02E-03	3.10E-03	4.65E-03	5.16E-04	9.33E-08	3.06E-03	4.86E-03
D57	0.00E+00	5.76E-05	5.19E-06	1.90E+02	2.58E-04	7.11E-01	9.90E-05	2.61E-02	2.02E-02	3.39E-03	9.77E-03	5.54E-03	5.68E-03	4.67E-03	9.23E-04	1.70E-07	4.08E-03	4.80E-03
D58	0.00E+00	6.06E-05	4.97E-06	1.73E+02	2.15E-04	6.06E-01	9.33E-05	3.41E-02	1.78E-02	3.00E-03	9.39E-03	4.84E-03	4.96E-03	6.13E-03	8.18E-04	1.50E-07	4.43E-03	6.33E-03
D59	0.00E+00	2.69E-05	2.28E-06	8.06E+01	1.04E-04	2.90E-01	4.30E-05	1.41E-02	8.38E-03	1.41E-03	4.30E-03	2.29E-03	2.35E-03	2.54E-03	3.85E-04	7.09E-08	1.95E-03	2.61E-03
D60	0.00E+00	3.47E-05	2.79E-06	9.72E+01	1.20E-04	3.39E-01	5.31E-05	1.91E-02	9.94E-03	1.68E-03	5.38E-03	2.72E-03	2.79E-03	3.51E-03	4.60E-04	8.60E-08	2.59E-03	3.54E-03
D61	0.00E+00	1.64E-05	1.16E-06	3.79E+01	4.12E-05	1.20E-01	2.22E-05	1.02E-02	3.68E-03	6.32E-04	2.33E-03	1.00E-03	1.03E-03	1.93E-03	1.73E-04	3.39E-08	1.31E-03	1.89E-03
D62	0.00E+00	6.37E-06	5.08E-07	1.72E+01	2.06E-05	5.86E-02	9.41E-06	3.92E-03	1.75E-03	2.96E-04	9.51E-04	4.73E-04	4.86E-04	6.98E-04	8.06E-05	1.46E-08	4.65E-04	7.29E-04
D63	0.00E+00	1.15E-07	1.23E-08	4.72E-01	7.63E-07	1.98E-03	2.47E-07	1.33E-05	7.29E-05	1.13E-05	2.38E-05	1.54E-05	1.58E-05	3.07E-06	2.38E-06	4.48E-10	7.98E-06	2.19E-06
D64	0.00E+00	8.46E-06	5.59E-07	1.33E+01	1.07E-05	3.45E-02	9.11E-06	7.61E-03	1.69E-03	2.70E-04	9.52E-04	3.40E-04	3.50E-04	1.12E-03	5.56E-05	8.48E-09	6.02E-04	1.43E-03
D65	0.00E+00	2.18E-05	1.57E-06	4.79E+01	4.65E-05	1.41E-01	2.74E-05	1.74E-02	4.58E-03	7.81E-04	2.81E-03	1.20E-03	1.24E-03	3.01E-03	2.12E-04	3.56E-08	1.58E-03	3.25E-03
D66	0.00E+00	2.78E-05	1.99E-06	6.01E+01	5.73E-05	1.75E-01	3.44E-05	2.25E-02	5.72E-03	9.77E-04	3.54E-03	1.50E-03	1.54E-03	3.89E-03	2.65E-04	4.40E-08	2.00E-03	4.21E-03
D67	0.00E+00	6.18E-05	3.86E-06	9.95E+01	5.52E-05	2.08E-01	6.22E-05	6.05E-02	8.40E-03	1.46E-03	6.62E-03	2.07E-03	2.13E-03	1.04E-02	3.96E-04	5.72E-08	4.49E-03	1.14E-02
D68	0.00E+00	2.99E-05	2.04E-06	5.72E+01	4.48E-05	1.47E-01	3.35E-05	2.75E-02	5.21E-03	8.93E-04	3.47E-03	1.33E-03	1.36E-03	4.66E-03	2.42E-04	3.64E-08	2.11E-03	5.16E-03
D69	0.00E+00	1.91E-05	1.50E-06	4.90E+01	5.52E-05	1.61E-01	2.68E-05	1.34E-02	4.90E-03	8.29E-04	2.69E-03	1.31E-03	1.35E-03	2.31E-03	2.26E-04	3.87E-08	1.35E-03	2.51E-03
D70	0.00E+00	2.21E-05	1.40E-06	3.80E+01	2.55E-05	8.82E-02	2.36E-05	2.01E-02	3.31E-03	5.75E-04	2.51E-03	8.38E-04	8.62E-04	3.52E-03	1.56E-04	2.51E-08	1.65E-03	3.78E-03
D71	0.00E+00	3.64E-05	2.52E-06	6.18E+01	5.42E-05	1.71E-01	4.04E-05	3.32E-02	8.11E-03	1.28E-03	4.14E-03	1.62E-03	1.66E-03	4.80E-03	2.64E-04	3.83E-08	2.47E-03	6.24E-03
D72	0.00E+00	3.95E-05	2.65E-06	6.50E+01	5.70E-05	1.78E-01	4.40E-05	3.42E-02	8.43E-03	1.34E-03	4.58E-03	1.71E-03	1.76E-03	5.07E-03	2.77E-04	4.38E-08	2.83E-03	6.41E-03
D73	0.00E+00	3.22E-05	2.20E-06	4.95E+01	3.41E-05	1.21E-01	3.26E-05	3.35E-02	6.27E-03	9.91E-04	3.31E-03	1.20E-03	1.24E-03	4.71E-03	2.01E-04	2.35E-08	2.07E-03	6.30E-03
D74	0.00E+00	2.87E-05	1.97E-06	4.76E+01	4.04E-05	1.29E-01	3.15E-05	2.64E-02	6.19E-03	9.80E-04	3.24E-03	1.23E-03	1.27E-03	3.82E-03	2.02E-04	2.93E-08	1.97E-03	4.95E-03
D75	0.00E+00	9.20E-06	7.36E-07	2.60E+01	3.28E-05	9.19E-02	1.43E-05	4.59E-03	2.67E-03	4.53E-04	1.46E-03	7.34E-04	7.53E-04	8.77E-04	1.24E-04	2.40E-08	7.09E-04	8.49E-04
D76	0.00E+00	6.52E-06	5.23E-07	1.78E+01	2.15E-05	6.11E-02	9.71E-06	3.94E-03	1.81E-03	3.07E-04	9.80E-04	4.92E-04	5.05E-04	7.02E-04	8.37E-05	1.52E-08	4.75E-04	7.32E-04
D77	0.00E+00	1.42E-05	1.10E-06	3.70E+01	4.32E-05	1.24E-01	2.05E-05	8.85E-03	3.72E-03	6.31E-04	2.09E-03	1.01E-03	1.03E-03	1.59E-03	1.72E-04	3.15E-08	1.05E-03	1.65E-03
D78	0.00E+00	7.38E-06	5.32E-07	1.64E+01	1.62E-05	4.89E-02	9.37E-06	5.73E-03	1.57E-03	2.68E-04	9.65E-04	4.15E-04	4.27E-04	9.99E-04	7.30E-05	1.24E-08	5.38E-04	1.07E-03
D79	0.00E+00	3.96E-05	2.69E-06	6.56E+01	5.68E-05	1.79E-01	4.38E-05	3.53E-02	8.53E-03	1.35E-03	4.53E-03	1.71E-03	1.76E-03	5.18E-03	2.79E-04	4.22E-08	2.77E-03	6.63E-03
D80	0.00E+00	3.77E-05	3.01E-06	8.92E+01	1.10E-04	3.08E-01	5.27E-05	2.61E-02	1.27E-02	1.99E-03	5.27E-03	2.61E-03	2.68E-03	3.89E-03	4.14E-04	6.94E-08	2.58E-03	4.88E-03
D81	0.00E+00	9.72E-06	8.96E-07	3.05E+01	4.43E-05	1.19E-01	1.68E-05	4.32E-03	4.56E-03	7.09E-04	1.64E-03	9.53E-04	9.78E-04	6.77E-04	1.49E-04	2.66E-08	6.64E-04	7.95E-04
D82	0.00E+00	1.29E-05	1.34E-06	5.08E+01	8.12E-05	2.11E-01	2.68E-05	1.97E-03	7.80E-03	1.21E-03	2.60E-03	1.65E-03	1.69E-03	4.15E-04	2.55E-04	4.81E-08	9.04E-04	3.37E-04
D83	0.00E+00	4.13E-05	3.25E-06	1.05E+02	1.17E-04	3.42E-01	5.71E-05	3.02E-02	1.05E-02	1.78E-03	5.73E-03	2.80E-03	2.88E-03	5.12E-03	4.83E-04	8.06E-08	2.86E-03	5.64E-03
D84	0.00E+00	3.60E-05	2.80E-06	8.95E+01	9.73E-05	2.86E-01	4.89E-05	2.70E-02	8.88E-03	1.50E-03	4.92E-03	2.36E-03	2.42E-03	4.58E-03	4.08E-04	6.78E-08	2.50E-03	5.04E-03
D85	0.00E+00	2.98E-05	2.20E-06	6.64E+01	6.42E-05	1.96E-01	3.72E-05	2.49E-02	6.39E-03	1.08E-03	3.78E-03	1.67E-03	1.71E-03	4.20E-03	2.94E-04	4.66E-08	2.06E-03	4.66E-03
D86	0.00E+00	2.63E-05	2.14E-06	7.04E+01	8.12E-05	2.35E-01	3.77E-05	1.86E-02	7.12E-03	1.20E-03	3.76E-03	1.90E-03	1.95E-03	3.14E-03	3.26E-04	5.46E-08	1.80E-03	3.47E-03
D87	0.00E+00	7.35E-05	5.52E-06	1.73E+02	1.79E-04	5.33E-01	9.61E-05	5.70E-02	1.69E-02	2.86E-03	9.76E-03	4.45E-03	4.58E-03	9.75E-03	7.77E-04	1.29E-07	5.18E-03	1.07E-02
D88	0.00E+00	5.55E-05	3.95E-06	1.17E+02	1.07E-04	3.33E-01	6.71E-05	4.69E-02	1.11E-02	1.89E-03	6.89E-03	2.88E-03	2.96E-03	8.01E-03	5.13E-04	8.21E-08	3.93E-03	8.79E-03
D89	0.00E+00	1.17E-05	8.70E-07	2.24E+01	2.93E-05	8.07E-02	1.56E-05	8.14E-03	4.07E-03	6.13E-04	1.60E-03	7.22E-04	7.41E-04	1.09E-03	1.03E-04	1.82E-08	8.61E-04	1.52E-03
D90	0.00E+00	1.61E-05	9.83E-07	2.01E+01	1.69E-05	5.31E-02	1.70E-05	1.38E-02	3.34E-03	5.09E-04	1.83E-03	5.77E-04	5.93E-04	1.83E-03	8.29E-05	1.40E-08	1.24E-03	2.60E-03
D91	0.00E+00	3.69E-06	3.42E-07	1.17E+01	1.71E-05	4.56E-02	6.43E-06	1.62E-03	1.75E-03	2.72E-04	6.27E-04	3.66E-04	3.75E-04	2.54E-04	5.71E-05	1.02E-08	2.51E-04	2.98E-04
D92	0.00E+00	1.13E-05	1.07E-06	3.90E+01	6.03E-05	1.58E-01	2.16E-05	2.57E-03	5.89E-03	9.18E-04	2.13E-03	1.25E-03	1.29E-03	5.17E-04	1.94E-04	3.74E-08	8.47E-04	4.58E-04
D93	0.00E+00	2.86E-06	2.81E-07	1.02E+01	1.58E-05	4.15E-02	5.52E-06	7.61E-04	1.55E-03	2.41E-04	5.38E-04	3.28E-04	3.36E-04	1.36E-04	5.08E-05	9.47E-09	2.02E-04	1.37E-04
D94	0.00E+00	1.13E-05	1.03E-06	3.57E+01	5.29E-05	1.40E-01	2.00E-05	4.04E-03	5.33E-03	8.31E-04	1.98E-03	1.13E-03	1.16E-03	6.96E-04	1.75E-04	3.29E-08	8.25E-04	7.39E-04
E01	0.00E+00	1.64E-05	1.37E-06	3.97E+01	6.00E-05	1.59E-01	2.56E-05	8.64E-03	7.45E-03	1.12E-03	2.56E-03	1.34E-03	1.38E-03	1.21E-03	1.90E-04	3.50E-08	1.18E-03	1.61E-03
E02	0.00E+00	1.95E-05	1.63E-06	4.71E+01	7.07E-05	1.88E-01	3.02E-05	1.07E-02	8.85E-03	1.33E-03	3.01E-03	1.59E-03	1.63E-03	1.48E-03	2.25E-04	4.08E-08	1.38E-03	2.00E-03
E03	0.00E+00	7.24E-06	5.80E-07	1.98E+01	2.38E-05	6.77E-02	1.08E-05	4.38E-03	2.01E-03	3.40E-04	1.09E-03	5.45E-04	5.59E-04	7.81E-04	9.27E-05	1.68E-08	5.29E-04	8.14E-04
E04	0.00E+00	9.42E-06	8.24E-07	2.97E+01	3.93E-05	1.09E-01	1.56E-05	4.61E-03	3.12E-03	5.25E-04	1.55E-03	8.55E-04	8.78E-04	8.26E-04	1.43E-04	2.64E-08	6.76E-04	8.50E-04
E05	0.00E+00	9.11E-06	8.12E-07	2.99E+01	4.06E-05	1.12E-01	1.57E-05	3.94E-03	3.17E-03	5.32E-04	1.55E-03	8.72E-04	8.95E-04	7.24E-04	1.45E-04	2.72E-08	6.60E-04	7.24E-04
E06	0.00E+00	3.43E-06	2.81E-07	1.03E+01	1.38E-05	3.79E-02	5.69E-06	1.33E-03	1.08E-03	1.83E-04	5.82E-04	2.99E-04	3.07E-04	2.77E-04	5.00E-05	1.01E-08	2.75E-04	2.44E-04
E07	0.00E+00	7.61E-05	6.20E-06	1.74E+02	2.51E-04	6.76E-01	1.13E-04	4.63E-02	3.24E-02	4.85E-03	1.13E-02	5.77E-03	5.92E-03	6.27E-03	8.19E-04	1.46E-07	5.37E-03	8.63E-03
E08	0.00E+00	6.65E-05	5.95E-06	1.81E+02	2.88E-04	7.54E-01	1.12E-04	3.00E-02	3.45E-02	5.16E-03	1.10E-02	6.23E-03	6.39E-03	4.29E-03	8.79E-04	1.62E-07	4.65E-03	5.55E-03
E09	0.00E+00	7.13E-05	5.75E-06	1.59E+02	2.28E-04	6.15E-01	1.04E-04	4.44E-02	2.96E-02	4.44E-03	1.05E-02	5.27E-03	5.41E-03	5.99E-03	7.49E-04	1.33E-07	5.04E-03	8.28E-03
E10	0.00E+00	5.82E-05	5.16E-06	1.56E+02	2.47E-04	6.48E-01	9.73E-05	2.68E-02	2.97E-02	4.45E-03	9.60E-03	5.37E-03	5.51E-03	3.83E-03	7.57E-04	1.40E-07	4.09E-03	4.97E-03
E11	0.00E+00	7.71E-05	6.20E-06	1.71E+02	2.42E-04	6.56E-01	1.12E-04	4.91E-02	3.17E-02	4.75E-03	1.12E-02	5.63E-03	5.78E-03	6.60E-03	8.00E-04	1.41E-07	5.43E-03	9.17E-03
E12	0.00E+00	7.90E-05	7.03E-06	2.13E+02	3.35E-04	8.81E-01	1.32E-04	3.70E-02	4.04E-02	6.05E-03	1.30E-02	7.29E-03	7.48E-03	5.24E-03	1.03E-03	1.89E-07	5.52E-03	6.84E-03
E13	0.00E+00	2.57E-05	2.15E-06	7.49E+01	9.40E-05	2.65E-01	4.01E-05	1.45E-02	7.73E-03	1.30E-03	4.01E-03	2.10E-03	2.16E-03	2.58E-03	3.55E-04	6.45E-08	1.85E-03	2.69E-03
E14	0.00E+00	1.77E-05	1.55E-06	5.53E+01	7.22E-05	2.01E-01	2.90E-05	9.22E-03	5.80E-03	9.74E-04	2.87E-03	1.58E-03	1.62E-03	1.62E-03	2.65E-04	4.80E-08	1.24E-03	1.70E-03
E15	0.00E+00	1.81E-05	1.55E-06	5.30E+01	6.54E-05	1.86E-01	2.78E-05	1.16E-02	5.48E-03	9.21E-04	2.74E-03	1.48E-03	1.52E-03	1.94E-03	2.50E-04	4.26E-08	1.22E-03	2.15E-03
E16	0.00E+00	1.16E-05	1.04E-06	3.75E+01	4.97E-05	1.38E-01	1.95E-05	6.01E-03	3.96E-03	6.64E-04	1.91E-03	1.08E-03	1.11E-03	1.03E-03	1.81E-04	3.23E-08	8.02E-04	1.11E-03
E17	0.00E+00	1.07E-05	9.46E-07	3.46E+01	4.67E-05	1.29E-01	1.82E-05	4.80E-03	3.66E-03	6.15E-04	1.80E-03	1.01E-03	1.03E-03	8.72E-04	1.68E-04	3.12E-08	7.68E-04	8.82E-04
E18	0.00E+00	8.51E-06	6.54E-07	2.16E+01	2.46E-05	7.11E-02	1.20E-05	5.60E-03	2.16E-03	3.66E-04	1.22E-03	5.82E-04	5.97E-04	9.95E-04	9.99E-05	1.80E-08	6.25E-04	1.04E-03
E19	0.00E+00	5.54E-05	4.13E-06	1.07E+02	1.41E-04	3.87E-01	7.42E-05	3.83E-02	1.94E-02	2.93E-03	7.58E-03	3.45E-03	3.54E-03	5.14E-03	4.90E-04	8.68E-08	4.04E-03	7.16E-03
E20	0.00E+00	3.26E-05	2.84E-06	8.61E+01	1.37E-04	3.56E-01	5.44E-05	1.41E-02	1.64E-02	2.45E-03	5.41E-03	2.97E-03	3.05E-03	2.08E-03	4.17E-04	7.89E-08	2.36E-03	2.61E-03
E21	0.00E+00	7.55E-06	6.28E-07	2.13E+01	2.57E-05	7.33E-02	1.13E-05	4.88E-03	2.18E-03	3.67E-04	1.12E-03	5.87E-04	6.03E-04	8.32E-04	9.98E-05	1.72E-08	5.21E-04	9.08E-04
E22	0.00E+00	1.01E-06	8.58E-08	2.82E+00	3.30E-06	9.55E-03	1.47E-06	7.50E-04	2.89E-04	4.84E-05	1.43E-04	7.67E-05	7.88E-05	1.21E-04	1.31E-05	2.08E-09	6.46E-05	1.40E-04
E23	0.00E+00	5.12E-05	3.65E-06	1.11E+02	1.06E-04	3.24E-01	6.37E-05	4.10E-02	1.06E-02	1.80E-03	6.57E-03	2.77E-03	2.85E-03	7.11E-03	4.90E-04	8.23E-08	3.72E-03	7.67E-03
E24	0.00E+00	4.24E-05	2.84E-06	8.08E+01	6.48E-05	2.10E-01	4.81E-05	3.72E-02	7.35E-03	1.26E-03	5.04E-03	1.89E-03	1.94E-03	6.43E-03	3.43E-04	5.53E-08	3.09E-03	6.97E-03
E25	0.00E+00	1.26E-05	1.18E-06	4.08E+01	6.00E-05	1.60E-01	2.22E-05	5.36E-03	6.13E-03	9.52E-04	2.16E-03	1.28E-03	1.31E-03	8.37E-04	2.00E-04	3.56E-08	8.47E-04	9.84E-04
E26	0.00E+00	1.24E-05	1.20E-06	4.21E+01	6.32E-05	1.68E-01	2.28E-05	4.58E-03	6.36E-03	9.88E-04	2.21E-03	1.33E-03	1.37E-03	7.37E-04	2.07E-04	3.75E-08	8.44E-04	8.36E-04
E27	0.00E+00	2.02E-05	1.55E-06	4.29E+01	4.73E-05	1.38E-01	2.58E-05	1.65E-02	5.96E-03	9.33E-04	2.57E-03	1.20E-03	1.24E-03	2.38E-03	1.93E-04	2.98E-08	1.33E-03	3.09E-03
E28	0.00E+00	1.19E-05	1.21E-06	4.49E+01	7.06E-05	1.85E-01	2.39E-05	2.62E-03	6.87E-03	1.07E-03	2.32E-03	1.45E-03	1.49E-03	4.85E-04	2.25E-04	4.18E-08	8.29E-04	4.64E-04
E29	0.00E+00	7.11E-06	6.72E-07	2.37E+01	3.55E-05	9.40E-02	1.30E-05	2.49E-03	3.56E-03	5.54E-04	1.27E-03	7.50E-04	7.69E-04	4.17E-04	1.17E-04	2.15E-08	4.99E-04	4.55E-04
E30	0.00E+00	1.40E-06	1.39E-07	5.20E+00	8.25E-06	2.15E-02	2.83E-06	2.12E-04	7.93E-04	1.23E-04	2.77E-04	1.69E-04	1.73E-04	4.94E-05	2.61E-05	5.05E-09	1.04E-04	3.65E-05
E31	0.00E+00	1.76E-05	1.72E-06	6.20E+01	9.54E-05	2.51E-01	3.35E-05	4.99E-03	9.41E-03	1.46E-03	3.27E-03	1.98E-03	2.04E-03	8.75E-04	3.08E-04	5.72E-08	1.23E-03	9.01E-04
E32	0.00E+00	3.50E-06	3.49E-07	1.28E+01	2.00E-05	5.25E-02	6.89E-06	8.35E-04	1.96E-03	3.04E-04	6.70E-04	4.13E-04	4.24E-04	1.53E-04	6.40E-05	1.20E-08	2.46E-04	1.49E-04
E33	0.00E+00	5.94E-05	5.12E-06	1.51E+02	2.32E-04	6.13E-01	9.52E-05	3.07E-02	2.85E-02	4.27E-03	9.43E-03	5.13E-03	5.26E-03	4.28E-03	7.25E-04	1.32E-07	4.17E-03	5.70E-03
E34	0.00E+00	2.31E-05	2.03E-06	6.10E+01	9.56E-05	2.51E-01	3.81E-05	1.11E-02	1.16E-02	1.73E-03	3.76E-03	2.09E-03	2.14E-03	1.56E-03	2.95E-04	5.43E-08	1.62E-03	2.05E-03
E35	0.00E+00	5.45E-05	4.34E-06	1.18E+02	1.65E-04	4.48E-01	7.77E-05	3.61E-02	2.19E-02	3.28E-03	7.79E-03	3.87E-03	3.97E-03	4.81E-03	5.51E-04	9.62E-08	3.82E-03	6.74E-03
E36	0.00E+00	1.76E-05	1.46E-06	4.18E+01	6.20E-05	1.65E-01	2.69E-05	1.00E-02	7.83E-03	1.17E-03	2.68E-03	1.40E-03	1.44E-03	1.38E-03	1.99E-04	3.59E-08	1.25E-03	1.87E-03
E37	0.00E+00	5.61E-05	4.52E-06	1.25E+02	1.78E-04	4.81E-01	8.19E-05	3.51E-02	2.32E-02	3.48E-03	8.21E-03	4.13E-03	4.24E-03	4.74E-03	5.87E-04	1.04E-07	3.97E-03	6.55E-03
E38	0.00E+00	2.35E-05	1.83E-06	4.90E+01	6.69E-05	1.83E-01	3.28E-05	1.59E-02	9.01E-03	1.35E-03	3.31E-03	1.59E-03	1.64E-03	2.12E-03	2.27E-04	3.97E-08	1.67E-03	2.97E-03
E39	0.00E+00	2.37E-05	2.25E-06	7.97E+01	1.20E-04	3.18E-01	4.35E-05	8.13E-03	1.20E-02	1.87E-03	4.25E-03	2.53E-03	2.59E-03	1.36E-03	3.93E-04	7.23E-08	1.66E-03	1.48E-03
E40	0.00E+00	2.18E-05	1.90E-06	6.34E+01	8.99E-05	2.41E-01	3.60E-05	1.02E-02	9.35E-03	1.46E-03	3.57E-03	1.96E-03	2.01E-03	1

Appendix F.3.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E56	0.00E+00	1.44E-05	1.19E-06	4.08E+01	5.00E-05	1.42E-01	2.18E-05	8.82E-03	4.19E-03	7.06E-04	2.18E-03	1.13E-03	1.16E-03	1.53E-03	1.92E-04	3.39E-08	1.01E-03	1.64E-03
E57	0.00E+00	1.03E-05	9.06E-07	2.95E+01	4.08E-05	1.11E-01	1.66E-05	5.57E-03	4.34E-03	6.77E-04	1.63E-03	9.03E-04	9.26E-04	8.48E-04	1.42E-04	2.48E-08	7.00E-04	1.03E-03
E58	0.00E+00	1.31E-05	1.08E-06	3.36E+01	4.38E-05	1.21E-01	1.95E-05	8.05E-03	4.84E-03	7.57E-04	1.94E-03	1.00E-03	1.03E-03	1.22E-03	1.58E-04	2.75E-08	9.12E-04	1.50E-03
E59	0.00E+00	5.74E-05	4.26E-06	1.32E+02	1.35E-04	4.04E-01	7.43E-05	4.46E-02	1.29E-02	2.18E-03	7.57E-03	3.39E-03	3.49E-03	7.67E-03	5.94E-04	9.92E-08	4.08E-03	8.34E-03
E60	0.00E+00	4.63E-05	3.35E-06	1.03E+02	1.00E-04	3.04E-01	5.84E-05	3.67E-02	9.84E-03	1.68E-03	6.00E-03	2.59E-03	2.66E-03	6.35E-03	4.56E-04	7.63E-08	3.34E-03	6.88E-03
E61	0.00E+00	1.79E-05	1.75E-06	6.72E+01	9.71E-05	2.64E-01	3.42E-05	5.61E-03	7.29E-03	1.22E-03	3.34E-03	2.02E-03	2.07E-03	1.04E-03	3.33E-04	6.26E-08	1.27E-03	1.01E-03
E62	0.00E+00	1.53E-05	1.53E-06	5.94E+01	8.71E-05	2.36E-01	3.00E-05	4.22E-03	6.48E-03	1.08E-03	2.92E-03	1.80E-03	1.85E-03	7.90E-04	2.96E-04	5.57E-08	1.08E-03	7.56E-04
E63	0.00E+00	7.76E-05	5.73E-06	1.58E+02	1.75E-04	5.05E-01	9.88E-05	5.93E-02	2.18E-02	3.43E-03	1.00E-02	4.46E-03	4.59E-03	8.83E-03	7.13E-04	1.18E-07	5.46E-03	1.11E-02
E64	0.00E+00	5.49E-05	4.50E-06	1.38E+02	1.78E-04	4.92E-01	8.05E-05	3.48E-02	1.99E-02	3.11E-03	8.01E-03	4.12E-03	4.23E-03	5.24E-03	6.49E-04	1.12E-07	3.79E-03	6.47E-03
E65	0.00E+00	2.77E-05	2.69E-06	9.67E+01	1.48E-04	3.89E-01	5.23E-05	8.54E-03	1.46E-02	2.28E-03	5.09E-03	3.08E-03	3.16E-03	1.46E-03	4.79E-04	8.83E-08	1.93E-03	1.55E-03
E66	0.00E+00	3.86E-05	3.62E-06	1.24E+02	1.81E-04	4.84E-01	6.77E-05	1.70E-02	1.86E-02	2.89E-03	6.58E-03	3.88E-03	3.98E-03	2.64E-03	6.05E-04	1.08E-07	2.61E-03	3.13E-03
E67	0.00E+00	2.99E-05	2.59E-06	9.51E+01	1.28E-04	3.52E-01	5.07E-05	1.27E-02	1.00E-02	1.69E-03	5.08E-03	2.76E-03	2.83E-03	2.42E-03	4.61E-04	8.83E-08	2.24E-03	2.33E-03
E68	0.00E+00	1.67E-05	1.62E-06	6.28E+01	9.13E-05	2.48E-01	3.20E-05	4.87E-03	6.82E-03	1.14E-03	3.13E-03	1.89E-03	1.94E-03	9.25E-04	3.12E-04	5.91E-08	1.19E-03	8.75E-04
E69	0.00E+00	2.04E-05	1.94E-06	6.99E+01	1.07E-04	2.81E-01	3.84E-05	5.67E-03	1.06E-02	1.64E-03	3.77E-03	2.24E-03	2.29E-03	1.03E-03	3.46E-04	6.54E-08	1.48E-03	1.02E-03
E70	0.00E+00	1.33E-05	1.34E-06	4.92E+01	7.68E-05	2.01E-01	2.63E-05	3.21E-03	7.50E-03	1.17E-03	2.55E-03	1.58E-03	1.62E-03	5.83E-04	2.45E-04	4.57E-08	9.31E-04	5.74E-04
E71	0.00E+00	2.29E-05	2.27E-06	8.33E+01	1.30E-04	3.40E-01	4.49E-05	5.38E-03	1.27E-02	1.97E-03	4.38E-03	2.68E-03	2.75E-03	1.01E-03	4.15E-04	7.80E-08	1.63E-03	9.60E-04
E72	0.00E+00	2.09E-05	2.15E-06	8.02E+01	1.27E-04	3.31E-01	4.24E-05	4.36E-03	1.23E-02	1.91E-03	4.09E-03	2.59E-03	2.66E-03	8.07E-04	4.02E-04	7.46E-08	1.43E-03	7.70E-04
E73	0.00E+00	4.04E-06	4.32E-07	1.49E+01	2.65E-05	6.75E-02	8.62E-06	4.34E-04	2.92E-03	4.36E-04	8.28E-04	5.37E-04	5.51E-04	1.03E-04	7.51E-05	1.45E-08	2.77E-04	7.20E-05
E74	0.00E+00	5.01E-06	5.19E-07	1.75E+01	3.05E-05	7.81E-02	1.02E-05	9.80E-04	3.42E-03	5.10E-04	9.81E-04	6.24E-04	6.40E-04	1.76E-04	8.76E-05	1.67E-08	3.41E-04	1.74E-04
E75	0.00E+00	5.65E-05	5.04E-06	1.74E+02	2.37E-04	6.35E-01	9.36E-05	2.81E-02	2.50E-02	3.92E-03	9.20E-03	5.17E-03	5.31E-03	4.37E-03	8.45E-04	1.49E-07	3.90E-03	5.19E-03
E76	0.00E+00	3.30E-05	3.11E-06	1.14E+02	1.64E-04	4.32E-01	6.00E-05	1.18E-02	1.66E-02	2.60E-03	5.87E-03	3.46E-03	3.55E-03	1.98E-03	5.63E-04	1.02E-07	2.32E-03	2.16E-03
E77	0.00E+00	5.98E-05	5.39E-06	1.89E+02	2.60E-04	6.93E-01	1.01E-04	2.81E-02	2.72E-02	4.26E-03	9.92E-03	5.63E-03	5.78E-03	4.42E-03	9.19E-04	1.63E-07	4.14E-03	5.19E-03
E78	0.00E+00	4.00E-05	3.78E-06	1.39E+02	1.99E-04	5.25E-01	7.27E-05	1.46E-02	2.02E-02	3.16E-03	7.10E-03	4.21E-03	4.31E-03	2.42E-03	6.84E-04	1.24E-07	2.79E-03	2.67E-03
E79	0.00E+00	5.09E-05	4.79E-06	1.77E+02	2.55E-04	6.70E-01	9.30E-05	1.75E-02	2.57E-02	4.03E-03	9.12E-03	5.37E-03	5.51E-03	2.98E-03	8.73E-04	1.59E-07	3.61E-03	3.19E-03
E80	0.00E+00	4.27E-05	3.84E-06	1.36E+02	1.88E-04	5.00E-01	7.28E-05	1.88E-02	1.95E-02	3.06E-03	7.17E-03	4.06E-03	4.17E-03	3.03E-03	6.61E-04	1.19E-07	3.00E-03	3.46E-03
E81	0.00E+00	1.21E-06	1.15E-07	3.81E+00	6.63E-06	1.68E-02	2.35E-06	1.92E-04	7.38E-04	1.11E-04	2.32E-04	1.37E-04	1.40E-04	4.21E-05	1.90E-05	3.83E-09	9.18E-05	3.37E-05
E82	0.00E+00	3.69E-07	3.94E-08	1.36E+00	2.42E-06	6.16E-03	7.86E-07	3.96E-05	2.67E-04	3.98E-05	7.56E-05	4.90E-05	5.02E-05	9.44E-06	6.85E-06	1.32E-09	2.53E-05	6.57E-06
E83	0.00E+00	7.62E-06	7.63E-07	2.78E+01	4.31E-05	1.13E-01	1.49E-05	2.07E-03	4.24E-03	6.58E-04	1.44E-03	8.92E-04	9.15E-04	3.58E-04	1.38E-04	2.55E-08	5.24E-04	3.72E-04
E84	0.00E+00	5.33E-06	5.45E-07	2.03E+01	3.21E-05	8.40E-02	1.08E-05	1.05E-03	3.11E-03	4.84E-04	1.05E-03	6.58E-04	6.75E-04	2.02E-04	1.02E-04	1.91E-08	3.73E-04	1.84E-04
E85	0.00E+00	7.07E-05	6.59E-06	2.09E+02	3.45E-04	8.93E-01	1.27E-04	2.44E-02	4.01E-02	5.99E-03	1.25E-02	7.30E-03	7.49E-03	3.76E-03	1.03E-03	1.94E-07	5.00E-03	4.48E-03
E86	0.00E+00	6.53E-05	5.92E-06	1.84E+02	3.00E-04	7.80E-01	1.14E-04	2.46E-02	3.53E-02	5.28E-03	1.13E-02	6.42E-03	6.59E-03	3.73E-03	9.02E-04	1.71E-07	4.67E-03	4.53E-03
E87	0.00E+00	9.65E-05	7.43E-06	2.00E+02	2.78E-04	7.52E-01	1.36E-04	6.12E-02	3.68E-02	5.53E-03	1.38E-02	6.58E-03	6.75E-03	8.34E-03	9.32E-04	1.69E-07	7.05E-03	1.14E-02
E88	0.00E+00	1.10E-04	8.68E-06	2.37E+02	3.33E-04	8.99E-01	1.58E-04	6.97E-02	4.37E-02	6.57E-03	1.60E-02	7.80E-03	8.00E-03	9.45E-03	1.11E-03	1.98E-07	7.95E-03	1.30E-02
E89	0.00E+00	3.50E-06	3.59E-07	1.23E+01	2.16E-05	5.50E-02	7.22E-06	4.37E-04	2.39E-03	3.57E-04	7.01E-04	4.41E-04	4.52E-04	1.01E-04	6.15E-05	1.20E-08	2.49E-04	7.44E-05
E90	0.00E+00	4.80E-06	4.83E-07	1.61E+01	2.78E-05	7.13E-02	9.52E-06	1.02E-03	3.13E-03	4.67E-04	9.23E-04	5.73E-04	5.88E-04	1.82E-04	8.03E-05	1.54E-08	3.35E-04	1.82E-04
E91	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.68E-07	2.46E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.02E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E92	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.68E-07	2.46E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.02E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E93	0.00E+00	1.11E-05	1.12E-06	3.76E+01	6.53E-05	1.67E-01	2.22E-05	2.20E-03	7.33E-03	1.09E-03	2.15E-03	1.34E-03	1.38E-03	4.02E-04	1.88E-04	3.61E-08	7.72E-04	3.90E-04
E94	0.00E+00	5.24E-06	5.31E-07	1.80E+01	3.18E-05	8.07E-02	1.07E-05	6.86E-04	3.52E-03	5.25E-04	1.04E-03	6.48E-04	6.65E-04	1.56E-04	9.05E-05	1.78E-08	3.77E-04	1.18E-04
E95	0.00E+00	4.49E-05	3.65E-06	1.25E+02	1.45E-04	4.13E-01	6.58E-05	2.96E-02	1.32E-02	2.19E-03	6.58E-03	3.35E-03	3.44E-03	5.09E-03	5.84E-04	9.90E-08	3.14E-03	5.51E-03
E96	0.00E+00	3.97E-05	3.12E-06	1.04E+02	1.15E-04	3.31E-01	5.56E-05	2.81E-02	1.08E-02	1.80E-03	5.59E-03	2.72E-03	2.80E-03	4.82E-03	4.79E-04	8.01E-08	2.80E-03	5.24E-03
F01	0.00E+00	3.93E-05	3.04E-06	8.14E+01	1.12E-04	3.04E-01	5.49E-05	2.60E-02	1.50E-02	2.25E-03	5.56E-03	2.66E-03	2.73E-03	3.50E-03	3.78E-04	6.70E-08	2.83E-03	4.86E-03
F02	0.00E+00	2.11E-05	1.77E-06	5.13E+01	7.73E-05	2.05E-01	3.28E-05	1.14E-02	9.64E-03	1.44E-03	3.27E-03	1.73E-03	1.78E-03	1.58E-03	2.45E-04	4.46E-08	1.49E-03	2.12E-03
F33	0.00E+00	2.76E-05	2.59E-06	8.05E+01	1.30E-04	3.40E-01	4.83E-05	1.23E-02	1.54E-02	2.31E-03	4.69E-03	2.77E-03	2.85E-03	1.72E-03	3.92E-04	7.11E-08	1.84E-03	2.27E-03
F34	0.00E+00	1.20E-05	1.28E-06	4.43E+01	7.87E-05	2.00E-01	2.56E-05	1.29E-03	8.68E-03	1.29E-03	2.46E-03	1.59E-03	1.63E-03	3.07E-04	2.23E-04	4.30E-08	8.23E-04	2.14E-04
F35	0.00E+00	9.36E-06	8.30E-07	3.06E+01	4.15E-05	1.14E-01	1.61E-05	4.01E-03	3.23E-03	5.44E-04	1.60E-03	8.92E-04	9.15E-04	7.43E-04	1.49E-04	2.80E-08	6.84E-04	7.37E-04
F36	0.00E+00	2.95E-06	2.36E-07	8.32E+00	1.04E-05	2.93E-02	4.58E-06	1.50E-03	8.52E-04	1.45E-04	4.66E-04	2.34E-04	2.40E-04	2.85E-04	3.95E-05	7.60E-09	2.26E-04	2.78E-04
F37	0.00E+00	6.54E-05	5.16E-06	1.40E+02	1.94E-04	5.28E-01	9.28E-05	4.29E-02	2.58E-02	3.87E-03	9.34E-03	4.58E-03	4.70E-03	5.75E-03	6.51E-04	1.15E-07	4.64E-03	8.01E-03
F38	0.00E+00	5.76E-05	5.15E-06	1.56E+02	2.46E-04	6.47E-01	9.64E-05	2.73E-02	2.97E-02	4.44E-03	9.48E-03	5.35E-03	5.49E-03	3.84E-03	7.56E-04	1.38E-07	3.99E-03	5.05E-03
F39	0.00E+00	1.43E-05	1.30E-06	4.72E+01	6.34E-05	1.76E-01	2.44E-05	7.00E-03	5.00E-03	8.38E-04	2.39E-03	1.37E-03	1.40E-03	1.21E-03	2.28E-04	4.11E-08	9.90E-04	1.29E-03
F40	0.00E+00	5.89E-06	5.01E-07	1.69E+01	2.05E-05	5.87E-02	8.88E-06	3.93E-03	1.74E-03	2.93E-04	8.75E-04	4.68E-04	4.81E-04	6.54E-04	7.95E-05	1.33E-08	3.94E-04	7.32E-04
F41	0.00E+00	8.57E-06	8.67E-07	3.21E+01	5.05E-05	1.32E-01	1.72E-05	1.85E-03	4.91E-03	7.63E-04	1.66E-03	1.04E-03	1.06E-03	3.48E-04	1.61E-04	3.00E-08	6.01E-04	3.28E-04
F42	0.00E+00	1.01E-05	1.07E-06	4.09E+01	6.59E-05	1.71E-01	2.15E-05	1.22E-03	6.30E-03	9.77E-04	2.07E-03	1.33E-03	1.37E-03	2.81E-04	2.06E-04	3.89E-08	7.07E-04	2.02E-04
F45	0.00E+00	7.62E-06	7.63E-07	2.78E+01	4.31E-05	1.13E-01	1.49E-05	2.07E-03	4.24E-03	6.58E-04	1.44E-03	8.92E-04	9.15E-04	3.58E-04	1.38E-04	2.55E-08	5.24E-04	3.72E-04
F46	0.00E+00	5.33E-06	5.45E-07	2.03E+01	3.21E-05	8.40E-02	1.08E-05	1.05E-03	3.11E-03	4.84E-04	1.05E-03	6.58E-04	6.75E-04	2.02E-04	1.02E-04	1.91E-08	3.73E-04	1.84E-04
F47	0.00E+00	1.33E-07	1.42E-08	4.90E-01	8.71E-07	2.22E-03	2.83E-07	1.42E-05	9.61E-05	1.43E-05	2.72E-05	1.76E-05	1.81E-05	3.40E-06	2.47E-06	4.77E-10	9.11E-06	2.37E-06
F48	0.00E+00	2.31E-06	2.00E-07	5.89E+00	9.06E-06	2.40E-02	3.71E-06	1.20E-03	1.11E-03	1.67E-04	3.66E-04	2.00E-04	2.05E-04	1.66E-04	2.83E-05	5.15E-09	1.61E-04	2.22E-04
F77	0.00E+00	4.17E-05	2.87E-06	7.45E+01	6.84E-05	2.07E-01	4.80E-05	3.52E-02	9.65E-03	1.53E-03	4.97E-03	1.95E-03	2.00E-03	5.22E-03	3.24E-04	5.15E-08	2.96E-03	6.59E-03
F78	0.00E+00	6.13E-06	5.81E-07	1.79E+01	2.96E-05	7.47E-02	1.09E-05	2.10E-03	5.11E-03	7.14E-04	1.06E-03	6.31E-04	6.47E-04	2.88E-04	8.78E-05	1.37E-08	4.09E-04	3.87E-04
F79	0.00E+00	1.98E-05	1.91E-06	6.76E+01	1.05E-04	2.70E-01	3.73E-05	5.66E-03	1.25E-02	1.87E-03	3.64E-03	2.19E-03	2.25E-03	9.38E-04	3.35E-04	5.96E-08	1.39E-03	1.03E-03
F80	0.00E+00	3.89E-05	3.80E-06	1.44E+02	2.13E-04	5.56E-01	7.47E-05	1.07E-02	2.12E-02	3.30E-03	7.29E-03	4.42E-03	4.54E-03	1.91E-03	7.17E-04	1.32E-07	2.75E-03	1.92E-03
F81	0.00E+00	5.68E-05	3.61E-06	7.93E+01	6.91E-05	2.13E-01	6.14E-05	4.96E-02	1.32E-02	2.00E-03	6.54E-03	2.21E-03	2.27E-03	6.49E-03	3.35E-04	5.25E-08	4.27E-03	9.31E-03
F82	0.00E+00	8.24E-06	7.84E-07	2.45E+01	4.11E-05	1.03E-01	1.50E-05	2.41E-03	7.01E-03	9.80E-04	1.45E-03	8.68E-04	8.90E-04	3.59E-04	1.21E-04	1.91E-08	5.60E-04	4.42E-04
F83	0.00E+00	8.53E-07	6.59E-08	2.06E+00	2.49E-06	6.86E-03	1.21E-06	5.30E-04	2.84E-04	4.48E-05	1.23E-04	5.88E-05	6.03E-05	8.28E-05	9.61E-06	1.71E-09	6.23E-05	9.87E-05
F84	0.00E+00	2.06E-05	1.73E-06	4.46E+01	6.56E-05	1.75E-01	2.97E-05	1.35E-02	1.25E-02	1.76E-03	2.90E-03	1.53E-03	1.58E-03	1.44E-03	2.11E-04	3.04E-08	1.32E-03	2.53E-03
F85	0.00E+00	1.40E-05	1.19E-06	3.61E+01	4.89E-05	1.32E-01	2.12E-05	8.87E-03	6.52E-03	9.74E-04	2.09E-03	1.11E-03	1.14E-03	1.18E-03	1.71E-04	2.79E-08	9.52E-04	1.65E-03
F86	0.00E+00	1.38E-05	1.07E-06	3.07E+01	3.31E-05	9.61E-02	1.77E-05	1.14E-02	4.18E-03	6.57E-04	1.75E-03	8.37E-04	8.60E-04	1.63E-03	1.39E-04	2.10E-08	8.94E-04	2.13E-03
F87	0.00E+00	2.78E-06	2.19E-07	6.41E+00	8.45E-06	2.28E-02	3.99E-06	1.76E-03	1.15E-03	1.72E-04	4.02E-04	1.98E-04	2.03E-04	2.39E-04	3.02E-05	5.09E-09	1.99E-04	3.27E-04
F88	0.00E+00	3.57E-07	3.79E-08	1.30E+00	2.27E-06	5.63E-03	7.44E-07	3.48E-05	3.75E-04	5.24E-05	7.10E-05	4.62E-05	4.73E-05	1.03E-05	6.50E-06	1.03E-09	2.37E-05	5.90E-06

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B09	100	Passenger Car	736	0.00E+00	6.79E-06	7.38E-07	2.98E+01	4.82E-05	1.39E-01	1.53E-05	7.94E-04	2.35E-03	4.51E-04	1.49E-03	9.62E-04	9.88E-04	8.76E-05	1.52E-04	3.20E-08	5.05E-04	1.24E-04
16	B09	100	Passenger Truck	1233	0.00E+00	1.40E-05	1.50E-06	6.87E+01	9.36E-05	2.68E-01	3.03E-05	1.98E-03	4.11E-03	7.97E-04	2.92E-03	1.89E-03	1.94E-03	4.54E-04	3.47E-04	6.33E-08	9.81E-04	3.26E-04
16	B09	100	Single Unit Short Haul Truck	166	0.00E+00	1.57E-05	5.82E-07	2.71E+01	1.20E-05	5.58E-02	1.79E-05	6.97E-03	1.07E-03	2.77E-04	2.26E-03	4.17E-04	4.24E-04	2.77E-03	1.10E-04	4.47E-08	1.83E-03	1.30E-03
16	B09	100	Single Unit Long Haul Truck	7	0.00E+00	6.84E-07	2.46E-08	1.14E+00	4.98E-07	2.29E-03	7.74E-07	2.92E-04	4.87E-05	1.20E-05	9.87E-05	1.76E-05	1.79E-05	1.16E-04	4.62E-06	1.83E-09	8.08E-05	5.45E-05
16	B09	100	Combination Short Haul Truck	95	0.00E+00	1.35E-05	1.00E-06	3.15E+01	3.59E-08	2.44E-02	9.70E-06	2.45E-02	9.17E-04	2.33E-04	8.25E-04	2.92E-04	3.03E-04	5.01E-03	1.05E-04	0.00E+00	5.22E-04	4.62E-03
16	B09	100	Combination Long Haul Truck	86	0.00E+00	1.91E-05	1.08E-06	2.86E+01	1.22E-07	2.84E-02	1.58E-05	2.63E-02	9.18E-04	1.87E-04	1.76E-03	3.48E-04	3.62E-04	4.59E-03	9.57E-05	0.00E+00	1.39E-03	4.94E-03
16	B10	100	Passenger Car	1584	0.00E+00	1.46E-05	1.59E-06	6.41E+01	1.04E-04	2.98E-01	3.29E-05	1.71E-03	5.06E-03	9.71E-04	3.21E-03	2.07E-03	2.13E-03	1.88E-04	3.27E-04	6.88E-08	1.09E-03	2.67E-04
16	B10	100	Passenger Truck	2653	0.00E+00	3.02E-05	3.23E-06	1.48E+02	2.01E-04	5.77E-01	6.51E-05	4.27E-03	8.84E-03	1.72E-03	6.28E-03	4.07E-03	4.17E-03	9.77E-04	7.48E-04	1.36E-07	2.11E-03	7.01E-04
16	B10	100	Single Unit Short Haul Truck	97	0.00E+00	9.19E-06	3.40E-07	1.58E+01	7.03E-06	3.26E-02	1.04E-05	4.07E-03	6.25E-04	1.62E-04	1.32E-03	2.43E-04	2.48E-04	1.62E-03	6.39E-05	2.61E-08	1.07E-03	7.59E-04
16	B10	100	Single Unit Long Haul Truck	4	0.00E+00	3.99E-07	1.44E-08	6.64E-01	2.91E-07	1.33E-03	4.52E-07	1.71E-04	2.84E-05	7.02E-06	5.76E-05	1.03E-05	1.05E-05	6.76E-05	2.70E-06	1.07E-09	4.72E-05	3.18E-05
16	B10	100	Combination Short Haul Truck	200	0.00E+00	2.87E-05	2.12E-06	6.68E+01	7.60E-08	5.16E-02	2.05E-05	5.19E-02	1.94E-03	4.92E-04	1.75E-03	6.18E-04	6.42E-04	1.06E-02	2.23E-04	0.00E+00	1.10E-03	9.77E-03
16	B10	100	Combination Long Haul Truck	183	0.00E+00	4.05E-05	2.28E-06	6.05E+01	2.58E-07	6.01E-02	3.34E-05	5.56E-02	1.94E-03	3.96E-04	3.72E-03	7.36E-04	7.67E-04	9.70E-03	2.03E-04	0.00E+00	2.95E-03	1.05E-02
16	B13	100	Passenger Car	985	0.00E+00	9.08E-06	9.87E-07	3.98E+01	6.44E-05	1.85E-01	2.05E-05	1.06E-03	3.15E-03	6.03E-04	2.00E-03	1.29E-03	1.32E-03	1.17E-04	2.04E-04	4.27E-08	6.75E-04	1.66E-04
16	B13	100	Passenger Truck	1649	0.00E+00	1.88E-05	2.01E-06	9.19E+01	1.25E-04	3.59E-01	4.05E-05	2.65E-03	5.50E-03	1.07E-03	3.90E-03	2.53E-03	2.59E-03	6.08E-04	4.65E-04	8.47E-08	1.31E-03	4.36E-04
16	B13	100	Single Unit Short Haul Truck	85	0.00E+00	8.10E-06	2.99E-07	1.39E+01	6.20E-06	2.87E-02	9.18E-06	3.59E-03	5.51E-04	1.43E-04	1.16E-03	2.14E-04	2.18E-04	1.43E-03	5.63E-05	2.30E-08	9.43E-04	6.69E-04
16	B13	100	Single Unit Long Haul Truck	4	0.00E+00	3.52E-07	1.27E-08	5.85E-01	2.56E-07	1.18E-03	3.98E-07	1.50E-04	2.50E-05	6.19E-06	5.08E-05	9.04E-06	9.21E-06	5.95E-05	2.38E-06	9.41E-10	4.16E-05	2.81E-05
16	B13	100	Combination Short Haul Truck	145	0.00E+00	2.08E-05	1.54E-06	4.85E+01	5.52E-08	3.74E-02	1.49E-05	3.76E-02	1.41E-03	3.57E-04	1.27E-03	4.49E-04	4.66E-04	7.70E-03	1.62E-04	0.00E+00	8.01E-04	7.09E-03
16	B13	100	Combination Long Haul Truck	133	0.00E+00	2.94E-05	1.66E-06	4.39E+01	1.87E-07	4.36E-02	2.43E-05	4.03E-02	1.41E-03	2.87E-04	2.70E-03	5.34E-04	5.57E-04	7.04E-03	1.47E-04	0.00E+00	2.14E-03	7.59E-03
16	B14	100	Passenger Car	495	0.00E+00	4.57E-06	4.96E-07	2.00E+01	3.24E-05	9.33E-02	1.03E-05	5.34E-04	1.58E-03	3.04E-04	1.00E-03	6.48E-04	6.65E-04	5.89E-05	1.02E-04	2.15E-08	3.40E-04	8.34E-05
16	B14	100	Passenger Truck	830	0.00E+00	9.44E-06	1.01E-06	4.62E+01	6.30E-05	1.80E-01	2.04E-05	1.33E-03	2.76E-03	5.37E-04	1.96E-03	1.27E-03	1.30E-03	3.06E-04	2.34E-04	4.26E-08	6.60E-04	2.19E-04
16	B14	100	Single Unit Short Haul Truck	130	0.00E+00	1.24E-05	4.57E-07	2.13E+01	9.47E-06	4.39E-02	1.40E-05	5.48E-03	8.42E-04	2.18E-04	1.77E-03	3.28E-04	3.33E-04	2.18E-03	8.61E-05	3.51E-08	1.44E-03	1.02E-03
16	B14	100	Single Unit Long Haul Truck	6	0.00E+00	5.38E-07	1.93E-08	8.95E-01	3.92E-07	1.80E-03	6.08E-07	2.30E-04	3.83E-05	9.46E-06	7.76E-05	1.38E-05	1.41E-05	9.10E-05	3.63E-06	1.44E-09	6.35E-05	4.29E-05
16	B14	100	Combination Short Haul Truck	70	0.00E+00	1.00E-05	7.41E-07	2.34E+01	2.66E-08	1.80E-02	7.18E-06	1.81E-02	6.79E-04	1.72E-04	6.11E-04	2.16E-04	2.25E-04	3.71E-03	7.81E-05	0.00E+00	3.86E-04	3.42E-03
16	B14	100	Combination Long Haul Truck	64	0.00E+00	1.42E-05	7.99E-07	2.12E+01	9.03E-08	2.10E-02	1.17E-05	1.94E-02	6.80E-04	1.39E-04	1.30E-03	2.58E-04	2.68E-04	3.39E-03	7.09E-05	0.00E+00	1.03E-03	3.66E-03
16	B15	100	Passenger Car	767	0.00E+00	7.07E-06	7.69E-07	3.10E+01	5.02E-05	1.44E-01	1.59E-05	8.27E-04	2.45E-03	4.70E-04	1.56E-03	1.00E-03	1.03E-03	9.12E-05	1.59E-04	3.33E-08	5.26E-04	1.29E-04
16	B15	100	Passenger Truck	1285	0.00E+00	1.46E-05	1.57E-06	7.16E+01	9.75E-05	2.79E-01	3.15E-05	2.07E-03	4.28E-03	8.31E-04	3.04E-03	1.97E-03	2.02E-03	4.73E-04	3.62E-04	6.60E-08	1.02E-03	3.40E-04
16	B15	100	Single Unit Short Haul Truck	32	0.00E+00	3.00E-06	1.11E-07	5.16E+00	2.30E-06	1.07E-02	3.41E-06	1.33E-03	2.04E-04	5.29E-05	4.31E-04	7.95E-05	8.09E-05	5.29E-04	2.09E-05	8.53E-09	3.50E-04	2.48E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	4.69E-09	2.17E-01	9.51E-08	4.36E-04	1.48E-07	5.58E-05	9.28E-06	2.30E-06	1.88E-05	3.35E-06	3.41E-06	2.21E-05	8.81E-07	3.49E-10	1.54E-05	1.04E-05
16	B15	100	Combination Short Haul Truck	11	0.00E+00	1.57E-06	1.16E-07	3.66E+00	4.17E-09	2.83E-03	1.12E-06	2.84E-03	1.06E-04	2.70E-05	9.57E-05	3.39E-05	3.52E-05	5.82E-04	1.22E-05	0.00E+00	6.05E-05	5.36E-04
16	B15	100	Combination Long Haul Truck	10	0.00E+00	2.22E-06	1.25E-07	3.32E+00	1.42E-08	3.29E-03	1.83E-06	3.05E-03	1.07E-04	2.17E-05	2.04E-04	4.04E-05	4.21E-05	5.32E-04	1.11E-05	0.00E+00	1.62E-04	5.74E-04
16	B16	100	Passenger Car	1480	0.00E+00	1.36E-05	1.48E-06	5.99E+01	9.68E-05	2.79E-01	3.08E-05	1.60E-03	4.73E-03	9.07E-04	3.00E-03	1.93E-03	1.99E-03	1.76E-04	3.06E-04	6.42E-08	1.02E-03	2.49E-04
16	B16	100	Passenger Truck	2479	0.00E+00	2.82E-05	3.02E-06	1.38E+02	1.88E-04	5.39E-01	6.08E-05	3.99E-03	8.26E-03	1.60E-03	5.87E-03	3.80E-03	3.89E-03	9.13E-04	6.99E-04	1.27E-07	1.97E-03	6.55E-04
16	B16	100	Single Unit Short Haul Truck	33	0.00E+00	3.09E-06	1.14E-07	5.32E+00	2.37E-06	1.10E-02	3.51E-06	1.37E-03	2.10E-04	5.45E-05	4.44E-04	8.19E-05	8.34E-05	5.45E-04	2.15E-05	8.79E-09	3.60E-04	2.56E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	1.34E-07	4.83E-09	2.24E-01	9.80E-08	4.49E-04	1.52E-07	5.75E-05	9.56E-06	2.36E-06	1.94E-05	3.46E-06	3.52E-06	2.27E-05	9.08E-07	3.60E-10	1.59E-05	1.07E-05
16	B16	100	Combination Short Haul Truck	18	0.00E+00	2.62E-06	1.93E-07	6.10E+00	6.95E-09	4.71E-03	1.87E-06	4.74E-03	1.77E-04	4.50E-05	1.60E-04	5.65E-05	5.86E-05	9.69E-04	2.04E-05	0.00E+00	1.01E-04	8.93E-04
16	B16	100	Combination Long Haul Truck	17	0.00E+00	3.70E-06	2.09E-07	5.53E+00	2.36E-08	5.49E-03	3.05E-06	5.08E-03	1.78E-04	3.62E-05	3.40E-04	6.73E-05	7.01E-05	8.87E-04	1.85E-05	0.00E+00	2.69E-04	9.56E-04
11	D27	80	Passenger Car	322	0.00E+00	3.30E-06	3.59E-07	1.35E+01	2.34E-05	6.54E-02	7.44E-06	3.34E-04	1.75E-03	2.94E-04	7.26E-04	4.68E-04	4.80E-04	4.79E-05	6.87E-05	1.47E-08	2.46E-04	5.21E-05
11	D27	80	Passenger Truck	539	0.00E+00	6.80E-06	7.25E-07	3.05E+01	4.42E-05	1.16E-01	1.44E-05	9.00E-04	3.12E-03	5.20E-04	1.38E-03	8.97E-04	9.19E-04	2.21E-04	1.54E-04	2.79E-08	4.63E-04	1.50E-04
11	D27	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.17E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.24E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D27	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.50E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	D27	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.95E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.31E-03
11	D28	80	Passenger Car	787	0.00E+00	8.07E-06	8.77E-07	3.30E+01	5.73E-05	1.60E-01	1.82E-05	8.16E-04	4.29E-03	7.18E-04	1.77E-03	1.14E-03	1.17E-03	1.17E-04	1.68E-04	3.59E-08	6.00E-04	1.27E-04
11	D28	80	Passenger Truck	1318	0.00E+00	1.66E-05	1.77E-06	7.45E+01	1.08E-04	2.83E-01	3.52E-05	2.20E-03	7.64E-03	1.27E-03	3.38E-03	2.19E-03	2.25E-03	5.41E-04	3.76E-04	6.83E-08	1.13E-03	3.66E-04
11	D28	80	Single Unit Short Haul Truck	65	0.00E+00	8.94E-06	3.49E-07	1.07E+01	6.06E-06	1.94E-02	9.82E-06	3.72E-03	7.32E-04	1.50E-04	1.23E-03	2.28E-04	2.32E-04	1.09E-03	4.34E-05	1.72E-08	9.98E-04	6.95E-04
11	D28	80	Single Unit Long Haul Truck	3	0.00E+00	3.88E-07	1.50E-08	4.51E-01	2.58E-07	8.08E-04	4.27E-07	1.59E-04	3.36E-05	6.64E-06	5.37E-05	9.78E-06	9.98E-06	4.56E-05	1.84E-06	7.17E-10	4.37E-05	2.97E-05
11	D28	80	Combination Short Haul Truck	48	0.00E+00	9.92E-06	7.34E-07	1.61E+01	2.60E-08	1.51E-02	7.09E-06	1.53E-02	1.15E-03	2.08E-04	6.01E-04	2.14E-04	2.22E-04	2.56E-03	5.40E-05	0.00E+00	3.79E-04	2.89E-03
11	D28	80	Combination Long Haul Truck	44	0.00E+00	1.38E-05	7.80E-07	1.50E+01	8.79E-08	1.79E-02	1.14E-05	1.64E-02	1.19E-03	1.90E-04	1.27E-03	2.51E-04	2.62E-04	2.40E-03	5.02E-05	0.00E+00	1.00E-03	3.09E-03
11	D29	80	Passenger Car	322	0.00E+00	3.30E-06	3.59E-07	1.35E+01	2.34E-05	6.54E-02	7.44E-06	3.34E-04	1.75E-03	2.94E-04	7.26E-04	4.68E-04	4.80E-04	4.79E-05	6.87E-05	1.47E-08	2.46E-04	5.21E-05
11	D29	80	Passenger Truck	539	0.00E+00	6.80E-06	7.25E-07	3.05E+01	4.42E-05	1.16E-01	1.44E-05	9.00E-04	3.12E-03	5.20E-04	1.38E-03	8.97E-04	9.19E-04	2.21E-04	1.54E-04	2.79E-08	4.63E-04	1.50E-04
11	D29	80	Single Unit Short Haul Truck	30	0.00E+00	4.07E-06	1.59E-07	4.87E+00	2.76E-06	8.84E-03	4.48E-06	1.69E-03	3.34E-04	6.82E-05	5.61E-04	1.04E-04	1.06E-04	4.95E-04	1.98E-05	7.84E-09	4.55E-04	3.17E-04
11	D29	80	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	6.83E-09	2.06E-01	1.18E-07	3.68E-04	1.94E-07	7.24E-05	1.53E-05	3.03E-06	2.45E-05	4.46E-06	4.55E-06	2.08E-05	8.37E-07	3.27E-10	1.99E-05	1.35E-05
11	D29	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.50E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	D29	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.95E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.31E-03
11	D30	80	Passenger Car	787	0.00E+00	8.07E-06	8.77E-07	3.30E+01	5.73E-05	1.60E-01	1.82E-05	8.16E-04	4.29E-03	7.18E-04	1.77E-03	1.14E-03	1.17E-03	1.17E-04	1.68E-04	3.59E-08	6.00E-04	1.27E-04
11	D30	80	Passenger Truck	1318	0.00E+00	1.66E-05	1.77E-06	7.45E+01	1.08E-04	2.83E-01	3.52E-05	2.20E-03	7.64E-03	1.27E-03	3.38E-03	2.19E-03	2.25E-03	5.41E-04	3.76E-04	6.83E-08	1.13E-03	3.66E-04
11	D30	80	Single Unit Short Haul Truck	65	0.00E+00	8.94E-06	3.49E-07	1.07E+01	6.06E-06	1.94E-02	9.82E-06	3.72E-03	7.32E-04	1.50E-04	1.23E-03	2.28E-04	2.32E-04	1.09E-03	4.34E-05	1.72E-08	9.98E-04	6.95E-04
11	D30	80	Single Unit Long Haul Truck	3	0.00E+00	3.88E-07	1.50E-08	4.51E-01	2.58E-07	8.08E-04	4.27E-07	1.59E-04	3.36E-05	6.64E-06	5.37E-05	9.78E-06	9.98E-06	4.56E-05	1.84E-06	7.17E-10	4.37E-05	2.97E-05
11	D30	80	Combination Short Haul Truck	48	0.00E+00	9.92E-06	7.34E-07	1.61E+01	2.60E-08	1.51E-02	7.09E-06	1.53E-02	1.15E-03	2.08E-04	6.01E-04	2.14E-04	2.22E-04	2.56E-03	5.40E-05	0.00E+00	3.79E-04	2.89E-03
11	D30	80	Combination Long Haul Truck	44	0.00E+00	1.38E-05	7.80E-07	1.50E+01	8.79E-08	1.79E-02	1.14E-05	1.64E-02	1.19E-03	1.90E-04	1.27E-03	2.51E-04	2.62E-04	2.40E-03	5.02E-05	0.00E+00	1.00E-03	3.09E-03
11	D31	80	Passenger Car	298	0.00E+00	3.06E-06	3.32E-07	1.25E+01	2.17E-05	6.06E-02	6.89E-06	3.09E-04	1.62E-03	2.72E-04	6.72E-04	4.33E-04	4.45E-04	4.43E-05	6.36E-05	1.36E-08	2.27E-04	4.82E-05
11	D31	80	Passenger Truck	499	0.00E+00	6.29E-06	6.71E-07	2.82E+01	4.09E-05	1.07E-01	1.33E-05	8.34E-04	2.89E-03	4.81E-04	1.28E-03	8.30E-04	8.51E-04	2.05E-04	1.42E-04	2.59E-08	4.29E-04	1.39E-04
11	D31	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.19E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.09E-04
11	D31	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.34E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.75E-05
11	D31	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.17E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	D31	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.59E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	D32	80	Passenger Car	478	0.00E+00	4.90E-06	5.32E-07	2.00E+01	3.48E-05	9.71E-02	1.10E-05	4.95E-04	2.60E-03	4.36E-04	1.08E-03	6.95E-04	7.13E-04	7.10E-05	1.02E-04	2.18E-08	3.64E-04	7.73E-05
11	D32	80	Passenger Truck	800	0.00E+00	1.01E-05	1.08E-06	4.52E+01	6.56E-05	1.72E-01	2.14E-05	1.34E-03	4.64E-03	7.72E-04	2.05E-03	1.33E-03	1.36E-03	3.29E-04	2.28E-04	4.15E-08	6.87E-04	2.22E-04
11	D32	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.79E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.21E-04
11	D32	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.23E-05
11	D32	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.14E-03
11	D32	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
9	D33	60	Passenger Car	308	0.00E+00	3.89E-06	4.22E-07	1.39E+01	2.76E-05	7.47E-02	8.76E-06	3.17E-04	3.11E-03	4.65E-04	8.55E-04	5.51E-04	5.66E-04	6.10E-05	7.03E-05	1.48E-08	2.89E-04	4.94E-05
9	D33	60	Passenger Truck	515	0.00E+00	8.25E-06	8.75E-07	3.09E+01	5.21E-05	1.28E-01	1.71E-05	9.86E-04	5.68E-03	8.45E-04	1.63E-03	1.06E-03	1.09E-03	2.50E-04	1.55E-04	2.88E-08	5.44E-04	1.67E-04
9	D33	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E-06	3.80E-07	6.85E+00	6.09E-06	1.21E-02	9.94E-06	3.53E-03	9.47E-04	1.59E-04	1.23E-03	2.36E-04	2.41E-04	6.94E-04	2.79E-05	1.15E-08	9.86E-04	6.61E-04
9	D33	60	Single Unit Long Haul Truck	2	0.00E+00	4.01E-07	1.65E-08	2.92E-01	2.64E-07	5.12E-04	4.34E-07	1.53E-04	4.26E-05	7.06E-06	5.36E-05	1.03E-05	1.05E-05	2.95E-05	1.19E-06	4.89E-10	4.32E-05	2.86E-05
9	D33	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.15E-03
9	D33	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.22E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.29E-03
9	D34	60	Passenger Car	246	0.00E+00	3.10E-06	3.37E-07	1.11E+01	2.20E-05	5.97E-02	7.00E-06	2.53E-04	2.48E-03	3.72E-04	6.82E-04	4.40E-04	4.52E-04	4.87E-05	5.62E-05	1.18E-08	2.31E-04	3.95E-05
9	D34	60	Passenger Truck	411	0.00E+00	6.59E-06	6.98E-07	2.47E+01	4.16E-05	1.02E-01	1.37E-05	7.87E-04	4.53E-03	6.75E-04	1.30E-03	8.48E-04	8.69E-04	1.99E-04	1.24E-04	2.30E-08	4.34E-04	1.33E-04
9	D34	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.03E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	D34	60	Combination Short Haul Truck	5	0.00E+00	1.37E-06	1.01E-07	1.66E+00	3.76E-09	2.05E-03	9.87E-07	2.10E-03	2.40E-04	3.75E-05	8.47E-05	2.95E-05	3.06E-05	2.64E-04	5.54E-06	0.00E+00	5.40E-05	3.96E-04
9	D34

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D39	60	Passenger Car	195	0.00E+00	2.47E-06	2.68E-07	8.80E+00	1.75E-05	4.74E-02	5.56E-06	2.01E-04	1.97E-03	2.95E-04	5.42E-04	3.50E-04	3.59E-04	3.87E-05	4.46E-05	9.37E-09	1.83E-04	3.13E-05
9	D39	60	Passenger Truck	327	0.00E+00	5.24E-06	5.55E-07	1.96E+01	3.30E-05	8.12E-02	1.09E-05	6.25E-04	3.60E-03	5.36E-04	1.04E-03	6.74E-04	6.90E-04	1.58E-04	9.85E-05	1.83E-08	3.45E-04	1.06E-04
9	D39	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	D39	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
9	D40	60	Passenger Car	340	0.00E+00	4.30E-06	4.67E-07	1.53E+01	3.05E-05	8.26E-02	9.69E-06	3.50E-04	3.44E-03	5.15E-04	9.45E-04	6.09E-04	6.25E-04	6.74E-05	7.78E-05	1.63E-08	3.20E-04	5.46E-05
9	D40	60	Passenger Truck	570	0.00E+00	9.13E-06	9.67E-07	3.42E+01	5.76E-05	1.42E-01	1.89E-05	1.09E-03	6.28E-03	9.34E-04	1.80E-03	1.17E-03	1.20E-03	2.76E-04	1.72E-04	3.18E-08	6.02E-04	1.85E-04
9	D40	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.40E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
9	D40	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.05E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	D40	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.87E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.67E-03
9	D40	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.45E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.78E-03
9	D41	60	Passenger Car	357	0.00E+00	4.51E-06	4.90E-07	1.61E+01	3.20E-05	8.66E-02	1.02E-05	3.67E-04	3.60E-03	5.39E-04	9.91E-04	6.39E-04	6.56E-04	7.07E-05	8.15E-05	1.71E-08	3.35E-04	5.73E-05
9	D41	60	Passenger Truck	597	0.00E+00	9.57E-06	1.01E-06	3.59E+01	6.04E-05	1.48E-01	1.98E-05	1.14E-03	6.58E-03	9.80E-04	1.89E-03	1.23E-03	1.26E-03	2.89E-04	1.80E-04	3.34E-08	6.31E-04	1.94E-04
9	D42	60	Passenger Car	95	0.00E+00	1.20E-06	1.31E-07	4.30E+00	8.55E-06	2.32E-02	2.72E-06	9.82E-05	9.63E-04	1.44E-04	2.65E-04	1.71E-04	1.75E-04	1.89E-05	2.18E-05	4.58E-09	8.96E-05	1.53E-05
9	D42	60	Passenger Truck	160	0.00E+00	2.56E-06	2.71E-07	9.59E+00	1.61E-05	3.97E-02	5.31E-06	3.05E-04	1.76E-03	2.62E-04	5.06E-04	3.29E-04	3.37E-04	7.74E-05	4.81E-05	8.92E-09	1.69E-04	5.17E-05
9	D42	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
9	D42	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.08E-04
9	D42	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.74E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.28E-04
9	D43	60	Passenger Car	253	0.00E+00	3.20E-06	3.48E-07	1.14E+01	2.27E-05	6.16E-02	7.22E-06	2.61E-04	2.56E-03	3.83E-04	7.04E-04	4.54E-04	4.66E-04	5.02E-05	5.79E-05	1.22E-08	2.38E-04	4.07E-05
9	D43	60	Passenger Truck	425	0.00E+00	6.80E-06	7.21E-07	2.55E+01	4.29E-05	1.05E-01	1.41E-05	8.12E-04	4.68E-03	6.96E-04	1.34E-03	8.75E-04	8.97E-04	2.06E-04	1.28E-04	2.37E-08	4.48E-04	1.38E-04
9	D43	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
9	D43	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	D44	60	Passenger Car	80	0.00E+00	1.01E-06	1.09E-07	3.59E+00	7.14E-06	1.93E-02	2.27E-06	8.20E-05	8.04E-04	1.20E-04	2.21E-04	1.43E-04	1.46E-04	1.58E-05	1.82E-05	3.82E-09	7.48E-05	1.28E-05
9	D44	60	Passenger Truck	133	0.00E+00	2.14E-06	2.26E-07	8.01E+00	1.35E-05	3.31E-02	4.43E-06	2.55E-04	1.47E-03	2.19E-04	4.22E-04	2.75E-04	2.82E-04	6.46E-05	4.02E-05	7.45E-09	1.41E-04	4.32E-05
9	D44	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.12E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.84E-04
9	D44	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.53E-05
9	D44	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.63E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.63E-03
9	D44	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.20E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.73E-03
9	D45	60	Passenger Car	630	0.00E+00	7.96E-06	8.65E-07	2.84E+01	5.65E-05	1.53E-01	1.80E-05	6.49E-04	6.37E-03	9.53E-04	1.75E-03	1.13E-03	1.16E-03	1.25E-04	1.44E-04	3.03E-08	5.92E-04	1.01E-04
9	D45	60	Passenger Truck	1056	0.00E+00	1.69E-05	1.79E-06	6.34E+01	1.07E-04	2.62E-01	3.51E-05	2.02E-03	1.16E-02	1.73E-03	3.34E-03	2.18E-03	2.23E-03	5.11E-04	3.18E-04	5.90E-08	1.11E-03	3.42E-04
9	D45	60	Single Unit Short Haul Truck	94	0.00E+00	2.10E-05	8.66E-07	1.56E+01	1.39E-05	2.75E-02	2.27E-05	8.05E-03	2.16E-03	3.63E-04	2.80E-03	5.39E-04	5.49E-04	1.58E-03	6.36E-05	2.62E-08	2.25E-03	1.51E-03
9	D45	60	Single Unit Long Haul Truck	4	0.00E+00	9.15E-07	3.76E-08	6.66E-01	6.02E-07	1.17E-03	9.89E-07	3.49E-04	9.70E-05	1.61E-05	1.22E-04	2.34E-05	2.39E-05	6.73E-05	2.72E-06	1.12E-09	9.84E-05	6.52E-05
9	D45	60	Combination Short Haul Truck	63	0.00E+00	1.85E-05	1.36E-06	2.23E+01	5.06E-08	2.76E-02	1.33E-05	2.82E-02	3.22E-03	5.04E-04	1.14E-03	3.97E-04	4.12E-04	3.54E-03	7.45E-05	0.00E+00	7.26E-04	5.32E-03
9	D45	60	Combination Long Haul Truck	58	0.00E+00	2.54E-05	1.39E-06	2.11E+01	1.71E-07	3.32E-02	2.12E-05	3.01E-02	3.38E-03	4.89E-04	2.41E-03	4.53E-04	4.72E-04	3.38E-03	7.05E-05	0.00E+00	1.94E-03	5.67E-03
9	D46	60	Passenger Car	534	0.00E+00	6.74E-06	7.33E-07	2.41E+01	4.79E-05	1.30E-01	1.52E-05	5.50E-04	5.39E-03	8.08E-04	1.48E-03	9.56E-04	9.81E-04	1.06E-04	1.22E-04	2.56E-08	5.02E-04	8.58E-05
9	D46	60	Passenger Truck	894	0.00E+00	1.43E-05	1.52E-06	5.37E+01	9.03E-05	2.22E-01	2.97E-05	1.71E-03	9.85E-03	1.47E-03	2.83E-03	1.84E-03	1.89E-03	4.33E-04	2.69E-04	5.00E-08	9.44E-04	2.90E-04
9	D46	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	1.00E-02	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.88E-03
9	D46	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.34E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.12E-05
9	D46	60	Combination Short Haul Truck	67	0.00E+00	1.95E-05	1.44E-06	2.36E+01	5.35E-08	2.92E-02	1.40E-05	2.99E-02	3.41E-03	5.33E-04	1.20E-03	4.20E-04	4.36E-04	3.75E-03	7.89E-05	0.00E+00	7.68E-04	5.63E-03
9	D46	60	Combination Long Haul Truck	61	0.00E+00	2.68E-05	1.47E-06	2.23E+01	1.81E-07	3.51E-02	2.25E-05	3.18E-02	3.58E-03	5.17E-04	2.55E-03	4.79E-04	4.99E-04	3.57E-03	7.46E-05	0.00E+00	2.05E-03	5.99E-03
9	D47	60	Passenger Car	695	0.00E+00	8.78E-06	9.55E-07	3.14E+01	6.23E-05	1.69E-01	1.98E-05	7.16E-04	7.02E-03	1.05E-03	1.93E-03	1.25E-03	1.28E-03	1.38E-04	1.59E-04	3.34E-08	6.53E-04	1.12E-04
9	D47	60	Passenger Truck	1165	0.00E+00	1.87E-05	1.98E-06	6.99E+01	1.18E-04	2.89E-01	3.87E-05	2.23E-03	1.28E-02	1.91E-03	3.69E-03	2.40E-03	2.46E-03	5.64E-04	3.51E-04	6.51E-08	1.23E-03	3.77E-04
9	D47	60	Single Unit Short Haul Truck	101	0.00E+00	2.25E-05	9.28E-07	1.67E+01	1.49E-05	2.94E-02	2.43E-05	8.62E-03	2.31E-03	3.89E-04	3.00E-03	5.77E-04	5.88E-04	1.70E-03	6.82E-05	2.81E-08	2.41E-03	1.61E-03
9	D47	60	Single Unit Long Haul Truck	4	0.00E+00	9.80E-07	4.03E-08	7.13E-01	6.45E-07	1.25E-03	1.06E-06	3.73E-04	1.04E-04	1.72E-05	1.31E-04	2.51E-05	2.56E-05	7.21E-05	2.91E-06	1.20E-09	1.05E-04	6.99E-05
9	D47	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.92E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.50E-03
9	D47	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.11E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.85E-03
9	D48	60	Passenger Car	347	0.00E+00	4.38E-06	4.76E-07	1.56E+01	3.11E-05	8.43E-02	9.88E-06	3.57E-04	3.50E-03	5.25E-04	9.64E-04	6.21E-04	6.38E-04	6.88E-05	7.93E-05	1.67E-08	3.26E-04	5.57E-05
9	D48	60	Passenger Truck	581	0.00E+00	9.31E-06	9.87E-07	3.49E+01	5.87E-05	1.44E-01	1.93E-05	1.11E-03	6.40E-03	9.53E-04	1.84E-03	1.20E-03	1.23E-03	2.82E-04	1.75E-04	3.25E-08	6.14E-04	1.88E-04
9	D48	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.31E-04
9	D48	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.33E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.99E-06
9	D48	60	Combination Short Haul Truck	17	0.00E+00	5.04E-06	3.70E-07	6.08E+00	1.38E-08	7.53E-03	3.62E-06	7.70E-03	8.79E-04	1.37E-04	3.10E-04	1.08E-04	1.12E-04	9.66E-04	2.03E-05	0.00E+00	1.98E-04	1.45E-03
9	D48	60	Combination Long Haul Truck	16	0.00E+00	6.92E-06	3.78E-07	5.74E+00	4.67E-08	9.04E-03	5.79E-06	8.20E-03	9.22E-04	1.33E-04	6.57E-04	1.23E-04	1.29E-04	9.22E-04	1.92E-05	0.00E+00	5.28E-04	1.55E-03
9	D49	60	Passenger Car	695	0.00E+00	8.78E-06	9.55E-07	3.14E+01	6.23E-05	1.69E-01	1.98E-05	7.16E-04	7.02E-03	1.05E-03	1.93E-03	1.25E-03	1.28E-03	1.38E-04	1.59E-04	3.34E-08	6.53E-04	1.12E-04
9	D49	60	Passenger Truck	1165	0.00E+00	1.87E-05	1.98E-06	6.99E+01	1.18E-04	2.89E-01	3.87E-05	2.23E-03	1.28E-02	1.91E-03	3.69E-03	2.40E-03	2.46E-03	5.64E-04	3.51E-04	6.51E-08	1.23E-03	3.77E-04
9	D49	60	Single Unit Short Haul Truck	101	0.00E+00	2.25E-05	9.28E-07	1.67E+01	1.49E-05	2.94E-02	2.43E-05	8.62E-03	2.31E-03	3.89E-04	3.00E-03	5.77E-04	5.88E-04	1.70E-03	6.82E-05	2.81E-08	2.41E-03	1.61E-03
9	D49	60	Single Unit Long Haul Truck	4	0.00E+00	9.80E-07	4.03E-08	7.13E-01	6.45E-07	1.25E-03	1.06E-06	3.73E-04	1.04E-04	1.72E-05	1.31E-04	2.51E-05	2.56E-05	7.21E-05	2.91E-06	1.20E-09	1.05E-04	6.99E-05
9	D49	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.92E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.50E-03
9	D49	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.11E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.85E-03
9	D50	60	Passenger Car	697	0.00E+00	8.80E-06	9.56E-07	3.14E+01	6.24E-05	1.69E-01	1.98E-05	7.17E-04	7.03E-03	1.05E-03	1.93E-03	1.25E-03	1.28E-03	1.38E-04	1.59E-04	3.34E-08	6.55E-04	1.12E-04
9	D50	60	Passenger Truck	1166	0.00E+00	1.87E-05	1.98E-06	7.00E+01	1.18E-04	2.90E-01	3.88E-05	2.23E-03	1.29E-02	1.91E-03	3.70E-03	2.40E-03	2.46E-03	5.65E-04	3.52E-04	6.52E-08	1.23E-03	3.78E-04
9	D50	60	Single Unit Short Haul Truck	120	0.00E+00	2.67E-05	1.10E-06	1.99E+01	1.77E-05	3.50E-02	2.89E-05	1.03E-02	2.75E-03	4.63E-04	3.57E-03	6.87E-04	7.01E-04	2.02E-03	8.12E-05	3.34E-08	2.87E-03	1.92E-03
9	D50	60	Single Unit Long Haul Truck	5	0.00E+00	1.17E-06	4.80E-08	8.49E-01	7.68E-07	1.49E-03	1.26E-06	4.45E-04	1.24E-04	2.05E-05	1.56E-04	2.99E-05	3.04E-05	8.58E-05	3.46E-06	1.42E-09	1.25E-04	8.32E-05
9	D50	60	Combination Short Haul Truck	70	0.00E+00	2.05E-05	1.50E-06	2.47E+01	5.60E-08	3.06E-02	1.47E-05	3.13E-02	3.57E-03	5.58E-04	1.26E-03	4.40E-04	4.56E-04	3.92E-03	8.25E-05	0.00E+00	8.04E-04	5.89E-03
9	D50	60	Combination Long Haul Truck	64	0.00E+00	2.81E-05	1.54E-06	2.33E+01	1.90E-07	3.67E-02	2.35E-05	3.33E-02	3.74E-03	5.41E-04	2.67E-03	5.01E-04	5.23E-04	3.74E-03	7.81E-05	0.00E+00	2.14E-03	6.27E-03
9	D51	60	Passenger Car	297	0.00E+00	3.75E-06	4.08E-07	1.34E+01	2.66E-05	7.22E-02	8.47E-06	3.06E-04	3.00E-03	4.50E-04	8.26E-04	5.32E-04	5.46E-04	5.89E-05	6.79E-05	1.43E-08	2.79E-04	4.77E-05
9	D51	60	Passenger Truck	498	0.00E+00	7.97E-06	8.45E-07	2.99E+01	5.03E-05	1.24E-01	1.65E-05	9.52E-04	5.48E-03	8.16E-04	1.58E-03	1.03E-03	1.05E-03	2.41E-04	1.50E-04	2.78E-08	5.26E-04	1.61E-04
9	D51	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.79E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.23E-04
9	D51	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
9	D51	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.47E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.41E-03
9	D51	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.96E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.50E-03
9	D52	60	Passenger Car	341	0.00E+00	4.30E-06	4.68E-07	1.54E+01	3.05E-05	8.27E-02	9.70E-06	3.51E-04	3.44E-03	5.15E-04	9.46E-04	6.10E-04	6.26E-04	6.75E-05	7.79E-05	1.64E-08	3.20E-04	5.47E-05
9	D52	60	Passenger Truck	570	0.00E+00	9.14E-06	9.68E-07	3.42E+01	5.76E-05	1.42E-01	1.90E-05	1.09E-03	6.29E-03	9.35E-04	1.81E-03	1.18E-03	1.20E-03	2.76E-04	1.72E-04	3.19E-08	6.02E-04	1.85E-04
9	D52	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.23E-04
9	D52	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.47E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.40E-05
9	D52	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.50E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.59E-04
9	D52	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.73E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	7.02E-04
9	D53	60	Passenger Car	242	0.00E+00	3.06E-06	3.33E-07	1.09E+01	2.17E-05	5.88E-02	6.90E-06	2.49E-04	2.45E-03	3.66E-04	6.73E-04	4.34E-04	4.45E-04	4.80E-05	5.54E-05	1.16E-08	2.28E-04	3.89E-05
9	D53	60	Passenger Truck	406	0.00E+00	6.50E-06	6.89E-07	2.44E+01	4.10E-05	1.01E-01	1.35E-05	7.76E-04	4.47E-03	6.65E-04	1.29E-03	8.36E-04	8.57E-04	1.97E-04	1.22E-04	2.27E-08	4.28E-04	1.31E-04
9	D53	60	Single Unit Short Haul Truck	22	0.00E+00	4.92E-06	2.03E-07	3.66E+00	3.26E-06	6.45E-03	5.32E-06	1.89E-03	5.07E-04	8.52E-05	6.56E-04	1.26E-04	1.29E-04	3.71E-04	1.49E-05	6.15E-09	5.27E-04	3.54E-04
9	D53	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	8.82E-09	1.56E-01	1.41E-07	2.74E-04	2.32E-07	8.18E-05	2.28E-05	3.78E-06	2.87E-05	5.49E-06	5.60E-06	1.58E-05	6.37E-07	2.62E-10	2.31E-05	1.53E-05
9	D53	60	Combination Short Haul Truck	12	0.00E+00	3.51E-06	2.58E-07	4.24E+00	9.62E-09	5.25E-03	2.52E-06	5.37E-03	6.13E-04	9.58E-05	2.16E-04	7.54E-05	7.83E-05	6.73E-04	1.42E-05	0.00E+00	1.38E-04	1.01E-03
9	D53	60	Combination Long Haul Truck	11	0.00E+00	4.82E-06	2.64E-07	4.00E+00	3.26E-08	6.30E-03	4.03E-06	5.72E-03	6.43E-04	9.29E-05	4.58E-04	8.61E-05	8.97E-05	6.42E-04	1.34E-05	0.00E+00	3.68E-04	1.08E-03
9	D54	60	Passenger Car	470	0.00E+00	5.94E-06	6.45E-07	2.12E+01	4.21E-05	1.14E-01	1.34E-05	4.84E-04	4.75E-03	7.11E-04	1.31E-03	8.42E-04	8.64E-04	9.32E-05	1.07E-04	2.26E-08	4.42E-04	7.55E-05
9	D54	60	Passenger Truck	787	0.00E+00	1.

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D58	80	Passenger Car	641	0.00E+00	6.57E-06	7.14E-07	2.69E+01	4.66E-05	1.30E-01	1.48E-05	6.64E-04	3.49E-03	5.85E-04	1.44E-03	9.32E-04	9.56E-04	9.53E-05	1.37E-04	2.92E-08	4.89E-04	1.04E-04
11	D58	80	Passenger Truck	1073	0.00E+00	1.35E-05	1.44E-06	6.07E+01	8.80E-05	2.30E-01	2.87E-05	1.79E-03	6.22E-03	1.04E-03	2.75E-03	1.79E-03	1.83E-03	4.41E-04	3.06E-04	5.56E-08	9.22E-04	2.98E-04
11	D58	80	Single Unit Short Haul Truck	51	0.00E+00	6.97E-06	2.72E-07	8.32E+00	4.72E-06	1.51E-02	7.66E-06	2.90E-03	5.70E-04	1.17E-04	9.59E-04	1.78E-04	1.81E-04	8.47E-04	3.38E-05	1.34E-08	7.78E-04	5.42E-04
11	D58	80	Single Unit Long Haul Truck	2	0.00E+00	3.03E-07	1.17E-08	3.52E-01	2.01E-07	6.29E-04	3.33E-07	1.24E-04	2.62E-05	5.18E-06	4.18E-05	7.62E-06	7.78E-06	3.56E-05	1.43E-06	5.59E-10	3.41E-05	2.31E-05
11	D58	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.33E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.76E-03
11	D58	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.98E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.88E-03
11	D59	80	Passenger Car	575	0.00E+00	5.90E-06	6.41E-07	2.41E+01	4.19E-05	1.17E-01	1.33E-05	5.97E-04	3.14E-03	5.25E-04	1.30E-03	8.37E-04	8.59E-04	8.55E-05	1.23E-04	2.62E-08	4.39E-04	9.31E-05
11	D59	80	Passenger Truck	964	0.00E+00	1.22E-05	1.30E-06	5.45E+01	7.90E-05	2.07E-01	2.58E-05	1.61E-03	5.58E-03	9.30E-04	2.47E-03	1.60E-03	1.64E-03	3.96E-04	2.75E-04	4.99E-08	8.28E-04	2.68E-04
11	D59	80	Single Unit Short Haul Truck	112	0.00E+00	1.54E-05	6.00E-07	1.84E+01	1.04E-05	3.34E-02	1.69E-05	6.40E-03	1.26E-03	2.58E-04	2.12E-03	3.92E-04	4.00E-04	1.87E-03	7.46E-05	2.96E-08	1.72E-03	1.20E-03
11	D59	80	Single Unit Long Haul Truck	5	0.00E+00	6.68E-07	2.58E-08	7.76E-01	4.44E-07	1.39E-03	7.34E-07	2.73E-04	5.77E-05	1.14E-05	9.23E-05	1.68E-05	1.72E-05	7.85E-05	3.16E-06	1.23E-09	7.52E-05	5.11E-05
11	D59	80	Combination Short Haul Truck	61	0.00E+00	1.25E-05	9.26E-07	2.03E+01	3.27E-08	1.91E-02	8.94E-06	1.93E-02	1.45E-03	2.62E-04	7.58E-04	2.70E-04	2.80E-04	3.23E-03	6.80E-05	0.00E+00	4.78E-04	3.64E-03
11	D59	80	Combination Long Haul Truck	55	0.00E+00	1.74E-05	9.83E-07	1.89E+01	1.11E-07	2.26E-02	1.44E-05	2.07E-02	1.50E-03	2.39E-04	1.60E-03	3.17E-04	3.30E-04	3.03E-03	6.33E-05	0.00E+00	1.27E-03	3.89E-03
11	D60	80	Passenger Car	641	0.00E+00	6.57E-06	7.14E-07	2.69E+01	4.66E-05	1.30E-01	1.48E-05	6.64E-04	3.49E-03	5.85E-04	1.44E-03	9.32E-04	9.56E-04	9.53E-05	1.37E-04	2.92E-08	4.89E-04	1.04E-04
11	D60	80	Passenger Truck	1073	0.00E+00	1.35E-05	1.44E-06	6.07E+01	8.80E-05	2.30E-01	2.87E-05	1.79E-03	6.22E-03	1.04E-03	2.75E-03	1.79E-03	1.83E-03	4.41E-04	3.06E-04	5.56E-08	9.22E-04	2.98E-04
11	D60	80	Single Unit Short Haul Truck	51	0.00E+00	6.97E-06	2.72E-07	8.32E+00	4.72E-06	1.51E-02	7.66E-06	2.90E-03	5.70E-04	1.17E-04	9.59E-04	1.78E-04	1.81E-04	8.47E-04	3.38E-05	1.34E-08	7.78E-04	5.42E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	3.03E-07	1.17E-08	3.52E-01	2.01E-07	6.29E-04	3.33E-07	1.24E-04	2.62E-05	5.18E-06	4.18E-05	7.62E-06	7.78E-06	3.56E-05	1.43E-06	5.59E-10	3.41E-05	2.31E-05
11	D60	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.33E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.76E-03
11	D60	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.98E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.88E-03
11	D61	80	Passenger Car	72	0.00E+00	7.36E-07	8.00E-08	3.01E+00	5.22E-06	1.46E-02	1.66E-06	7.44E-05	3.91E-04	6.55E-05	1.62E-04	1.04E-04	1.07E-04	1.07E-05	1.53E-05	3.27E-09	5.48E-05	1.16E-05
11	D61	80	Passenger Truck	120	0.00E+00	1.52E-06	1.62E-07	6.79E+00	9.86E-06	2.58E-02	3.21E-06	2.01E-04	6.97E-04	1.16E-04	3.08E-04	2.00E-04	2.05E-04	4.94E-05	3.43E-05	6.23E-09	1.03E-04	3.34E-05
11	D61	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.75E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D61	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.74E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.98E-06
11	D61	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.33E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.40E-04
11	D61	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.49E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.70E-04
11	D62	80	Passenger Car	234	0.00E+00	2.40E-06	2.60E-07	9.79E+00	1.70E-05	4.75E-02	5.40E-06	2.42E-04	1.27E-03	2.13E-04	5.27E-04	3.40E-04	3.49E-04	3.47E-05	4.99E-05	1.07E-08	1.78E-04	3.78E-05
11	D62	80	Passenger Truck	391	0.00E+00	4.94E-06	5.26E-07	2.21E+01	3.21E-05	8.40E-02	1.05E-05	6.54E-04	2.27E-03	3.78E-04	1.00E-03	6.51E-04	6.67E-04	1.61E-04	1.12E-04	2.03E-08	3.36E-04	1.09E-04
11	D62	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.48E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.76E-04
11	D62	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.31E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.18E-05
11	D62	80	Combination Short Haul Truck	12	0.00E+00	2.37E-06	1.76E-07	3.86E+00	6.21E-09	3.61E-03	1.70E-06	3.67E-03	2.75E-04	4.97E-05	1.44E-04	5.12E-05	5.32E-05	6.13E-04	1.29E-05	0.00E+00	9.06E-05	6.91E-04
11	D62	80	Combination Long Haul Truck	10	0.00E+00	3.30E-06	1.87E-07	3.58E+00	2.10E-08	4.28E-03	2.72E-06	3.92E-03	2.84E-04	4.54E-05	3.03E-04	6.01E-05	6.26E-05	5.75E-04	1.20E-05	0.00E+00	2.40E-04	7.38E-04
10	D63	70	Passenger Car	56	0.00E+00	6.22E-07	6.76E-08	2.44E+00	4.41E-06	1.20E-02	1.40E-06	5.71E-05	4.35E-04	6.78E-05	1.37E-04	8.81E-05	9.05E-05	9.59E-06	1.24E-05	2.57E-09	4.62E-05	8.91E-06
10	D63	70	Passenger Truck	95	0.00E+00	1.31E-06	1.39E-07	5.48E+00	8.38E-06	2.13E-02	2.74E-06	1.66E-04	7.87E-04	1.22E-04	2.62E-04	1.70E-04	1.75E-04	4.19E-05	2.76E-05	4.94E-09	8.77E-05	2.79E-05
10	D63	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.52E-04
10	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.09E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	D63	70	Combination Short Haul Truck	14	0.00E+00	3.63E-06	2.70E-07	4.91E+00	9.23E-09	5.25E-03	2.59E-06	5.44E-03	5.12E-04	8.54E-05	2.18E-04	7.88E-05	8.18E-05	7.80E-04	1.64E-05	0.00E+00	1.36E-04	1.03E-03
10	D63	70	Combination Long Haul Truck	13	0.00E+00	4.98E-06	2.83E-07	4.61E+00	3.12E-08	6.26E-03	4.10E-06	5.83E-03	5.33E-04	8.03E-05	4.53E-04	9.11E-05	9.49E-05	7.40E-04	1.54E-05	0.00E+00	3.58E-04	1.10E-03
10	D64	70	Passenger Car	93	0.00E+00	1.02E-06	1.11E-07	4.00E+00	7.25E-06	1.97E-02	2.30E-06	9.38E-05	7.14E-04	1.11E-04	2.25E-04	1.45E-04	1.49E-04	1.58E-05	2.03E-05	4.22E-09	7.59E-05	1.46E-05
10	D64	70	Passenger Truck	155	0.00E+00	2.15E-06	2.29E-07	9.01E+00	1.38E-05	3.49E-02	4.51E-06	2.73E-04	1.29E-03	2.00E-04	4.31E-04	2.80E-04	2.87E-04	6.88E-05	4.53E-05	8.12E-09	1.44E-04	4.58E-05
10	D64	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.39E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.80E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
10	D64	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.03E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.60E-04
10	D64	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.32E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.13E-04
11	D65	80	Passenger Car	264	0.00E+00	2.71E-06	2.95E-07	1.11E+01	1.92E-05	5.37E-02	6.11E-06	2.74E-04	1.44E-03	2.41E-04	5.96E-04	3.84E-04	3.94E-04	3.93E-05	5.64E-05	1.21E-08	2.02E-04	4.28E-05
11	D65	80	Passenger Truck	443	0.00E+00	5.58E-06	5.95E-07	2.50E+01	3.63E-05	9.50E-02	1.18E-05	7.39E-04	2.57E-03	4.27E-04	1.14E-03	7.36E-04	7.55E-04	1.82E-04	1.26E-04	2.29E-08	3.80E-04	1.23E-04
11	D65	80	Single Unit Short Haul Truck	104	0.00E+00	1.43E-05	5.59E-07	1.71E+01	9.71E-06	3.11E-02	1.57E-05	5.96E-03	1.17E-03	2.40E-04	1.97E-03	3.65E-04	3.72E-04	1.74E-03	6.95E-05	2.76E-08	1.60E-03	1.11E-03
11	D65	80	Single Unit Long Haul Truck	5	0.00E+00	6.22E-07	2.40E-08	7.23E-01	4.14E-07	1.29E-03	6.84E-07	2.55E-04	5.38E-05	1.06E-05	8.60E-05	1.57E-05	1.60E-05	7.31E-05	2.94E-06	1.15E-09	7.00E-05	4.76E-05
11	D65	80	Combination Short Haul Truck	51	0.00E+00	1.05E-05	7.74E-07	1.70E+01	2.74E-08	1.59E-02	7.47E-06	1.62E-02	1.21E-03	2.19E-04	6.34E-04	2.26E-04	2.34E-04	2.70E-03	5.69E-05	0.00E+00	4.00E-04	3.05E-03
11	D65	80	Combination Long Haul Truck	46	0.00E+00	1.46E-05	8.22E-07	1.58E+01	9.26E-08	1.89E-02	1.20E-05	1.73E-02	1.25E-03	2.00E-04	1.33E-03	2.65E-04	2.76E-04	2.53E-03	5.29E-05	0.00E+00	1.06E-03	3.26E-03
11	D66	80	Passenger Car	526	0.00E+00	5.40E-06	5.87E-07	2.21E+01	3.83E-05	1.07E-01	1.22E-05	5.46E-04	2.87E-03	4.80E-04	1.19E-03	7.65E-04	7.85E-04	7.83E-05	1.12E-04	2.40E-08	4.02E-04	8.52E-05
11	D66	80	Passenger Truck	882	0.00E+00	1.11E-05	1.19E-06	4.98E+01	7.23E-05	1.89E-01	2.36E-05	1.47E-03	5.11E-03	8.51E-04	2.26E-03	1.47E-03	1.50E-03	3.62E-04	2.51E-04	4.57E-08	7.57E-04	2.45E-04
11	D66	80	Single Unit Short Haul Truck	76	0.00E+00	1.04E-05	4.05E-07	1.24E+01	7.04E-06	2.25E-02	1.14E-05	4.32E-03	8.50E-04	1.74E-04	1.43E-03	2.65E-04	2.70E-04	1.26E-03	5.04E-05	2.00E-08	1.16E-03	8.07E-04
11	D66	80	Single Unit Long Haul Truck	3	0.00E+00	4.51E-07	1.74E-08	5.24E-01	3.00E-07	9.38E-04	4.96E-07	1.85E-04	3.90E-05	7.71E-06	6.23E-05	1.14E-05	1.16E-05	5.30E-05	2.13E-06	8.33E-10	5.08E-05	3.45E-05
11	D66	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.61E-03
11	D66	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.48E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.79E-03
11	D67	80	Passenger Car	264	0.00E+00	2.71E-06	2.95E-07	1.11E+01	1.92E-05	5.37E-02	6.11E-06	2.74E-04	1.44E-03	2.41E-04	5.96E-04	3.84E-04	3.94E-04	3.93E-05	5.64E-05	1.21E-08	2.02E-04	4.28E-05
11	D67	80	Passenger Truck	443	0.00E+00	5.58E-06	5.95E-07	2.50E+01	3.63E-05	9.50E-02	1.18E-05	7.39E-04	2.57E-03	4.27E-04	1.14E-03	7.36E-04	7.55E-04	1.82E-04	1.26E-04	2.29E-08	3.80E-04	1.23E-04
11	D67	80	Single Unit Short Haul Truck	104	0.00E+00	1.43E-05	5.59E-07	1.71E+01	9.71E-06	3.11E-02	1.57E-05	5.96E-03	1.17E-03	2.40E-04	1.97E-03	3.65E-04	3.72E-04	1.74E-03	6.95E-05	2.76E-08	1.60E-03	1.11E-03
11	D67	80	Single Unit Long Haul Truck	5	0.00E+00	6.22E-07	2.40E-08	7.23E-01	4.14E-07	1.29E-03	6.84E-07	2.55E-04	5.38E-05	1.06E-05	8.60E-05	1.57E-05	1.60E-05	7.31E-05	2.94E-06	1.15E-09	7.00E-05	4.76E-05
11	D67	80	Combination Short Haul Truck	51	0.00E+00	1.05E-05	7.74E-07	1.70E+01	2.74E-08	1.59E-02	7.47E-06	1.62E-02	1.21E-03	2.19E-04	6.34E-04	2.26E-04	2.34E-04	2.70E-03	5.69E-05	0.00E+00	4.00E-04	3.05E-03
11	D67	80	Combination Long Haul Truck	46	0.00E+00	1.46E-05	8.22E-07	1.58E+01	9.26E-08	1.89E-02	1.20E-05	1.73E-02	1.25E-03	2.00E-04	1.33E-03	2.65E-04	2.76E-04	2.53E-03	5.29E-05	0.00E+00	1.06E-03	3.26E-03
11	D68	80	Passenger Car	526	0.00E+00	5.40E-06	5.87E-07	2.21E+01	3.83E-05	1.07E-01	1.22E-05	5.46E-04	2.87E-03	4.80E-04	1.19E-03	7.65E-04	7.85E-04	7.83E-05	1.12E-04	2.40E-08	4.02E-04	8.52E-05
11	D68	80	Passenger Truck	882	0.00E+00	1.11E-05	1.19E-06	4.98E+01	7.23E-05	1.89E-01	2.36E-05	1.47E-03	5.11E-03	8.51E-04	2.26E-03	1.47E-03	1.50E-03	3.62E-04	2.51E-04	4.57E-08	7.57E-04	2.45E-04
11	D68	80	Single Unit Short Haul Truck	76	0.00E+00	1.04E-05	4.05E-07	1.24E+01	7.04E-06	2.25E-02	1.14E-05	4.32E-03	8.50E-04	1.74E-04	1.43E-03	2.65E-04	2.70E-04	1.26E-03	5.04E-05	2.00E-08	1.16E-03	8.07E-04
11	D68	80	Single Unit Long Haul Truck	3	0.00E+00	4.51E-07	1.74E-08	5.24E-01	3.00E-07	9.38E-04	4.96E-07	1.85E-04	3.90E-05	7.71E-06	6.23E-05	1.14E-05	1.16E-05	5.30E-05	2.13E-06	8.33E-10	5.08E-05	3.45E-05
11	D68	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.61E-03
11	D68	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.48E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.79E-03
11	D69	80	Passenger Car	121	0.00E+00	1.24E-06	1.35E-07	5.08E+00	8.81E-06	2.46E-02	2.80E-06	1.26E-04	6.60E-04	1.11E-04	2.73E-04	1.76E-04	1.81E-04	1.80E-05	2.58E-05	5.52E-09	9.24E-05	1.96E-05
11	D69	80	Passenger Truck	203	0.00E+00	2.56E-06	2.73E-07	1.15E+01	1.66E-05	4.35E-02	5.42E-06	3.39E-04	1.18E-03	1.96E-04	5.20E-04	3.38E-04	3.46E-04	8.33E-05	5.78E-05	1.05E-08	1.74E-04	5.64E-05
11	D69	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.41E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.50E-04
11	D69	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
11	D69	80	Combination Short Haul Truck	20	0.00E+00	4.10E-06	3.03E-07	6.66E+00	1.07E-08	6.24E-03	2.93E-06	6.33E-03	4.74E-04	8.59E-05	2.48E-04	8.85E-05	9.18E-05	1.06E-03	2.23E-05	0.00E+00	1.57E-04	1.19E-03
11	D69	80	Combination Long Haul Truck	18	0.00E+00	5.71E-06	3.22E-07	6.19E+00	3.63E-08	7.39E-03	4.71E-06	6.77E-03	4.90E-04	7.84E-05	5.23E-04	1.04E-04	1.08E-04	9.93E-04	2.07E-05	0.00E+00	4.15E-04	1.28E-03
11	D70	80	Passenger Car	192	0.00E+00	1.97E-06	2.14E-07	8.05E+00	1.40E-05	3.91E-02	4.44E-06	1.99E-04	1.05E-03	1.75E-04	4.33E-04	2.79E-04	2.87E-04	2.86E-05	4.10E-05	8.76E-09	1.47E-04	3.11E-05
11	D70	80	Passenger Truck	322	0.00E+00	4.06E-06	4.33E-07	1.82E+01	2.64E-05	6.91E-02	8.60E-06	5.38E-04	1.87E-03	3.11E-04	8.25E-04	5.35E-04	5.49E-04	1.32E-04	9.17E-05	1.67E-08	2.76E-04	8.95E-05
11	D70	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.71E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	D70	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	6.00E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.13E-03
11	D70	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.41E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.21E-03
10	D71	70	Passenger Car	276	0.00E+00	3.04E-06	3.30E-07	1.19E+01	2.16E-05	5.87E-02	6.85E-06	2.79E-04	2.13E-03	3.31E-04	6.68E-04	4.31E-04	4.42E-04	4.69E-05	6.05E-05	1.26E-08	2.26E-04	4.35E-05
10	D71	70	Passenger Truck	462	0.00E+00	6.40E-06	6.80E-07	2.68E+01	4.10E-05	1.04E-01	1.34E-05	8.12E-04	3.85E-03	5.95E-04	1.28E-03	8.33E-04	8.54E-04	2.05E-04	1.35E-04	2.42E-08	4.29E-04	1.36E-04
10	D71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.64E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.07E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.14E-05
10	D71	70	Comb

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D75	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.33E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.28E-04
11	D75	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.56E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.71E-04
11	D76	80	Passenger Car	192	0.00E+00	1.97E-06	2.14E-07	8.04E+00	1.40E-05	3.90E-02	4.43E-06	1.99E-04	1.05E-03	1.75E-04	4.32E-04	2.79E-04	2.86E-04	2.85E-05	4.09E-05	8.74E-09	1.46E-04	3.10E-05
11	D76	80	Passenger Truck	321	0.00E+00	4.05E-06	4.32E-07	1.82E+01	2.63E-05	6.89E-02	8.58E-06	5.37E-04	1.86E-03	3.10E-04	8.24E-04	5.34E-04	5.48E-04	1.32E-04	9.15E-05	1.66E-08	2.76E-04	8.93E-05
11	D76	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.99E-04
11	D76	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D76	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.50E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	D76	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.95E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.31E-03
11	D77	80	Passenger Car	93	0.00E+00	9.51E-07	1.03E-07	3.89E+00	6.75E-06	1.88E-02	2.14E-06	9.61E-05	5.05E-04	8.46E-05	2.09E-04	1.35E-04	1.38E-04	1.38E-05	1.98E-05	4.23E-09	7.07E-05	1.50E-05
11	D77	80	Passenger Truck	155	0.00E+00	1.96E-06	2.09E-07	8.78E+00	1.27E-05	3.33E-02	4.15E-06	2.59E-04	9.00E-04	1.50E-04	3.98E-04	2.58E-04	2.65E-04	6.38E-05	4.43E-05	8.05E-09	1.33E-04	4.32E-05
11	D77	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.48E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.76E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.31E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.18E-05
11	D77	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	4.00E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.54E-04
11	D77	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.28E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.05E-04
11	D78	80	Passenger Car	205	0.00E+00	2.10E-06	2.28E-07	8.59E+00	1.49E-05	4.16E-02	4.74E-06	2.12E-04	1.12E-03	1.87E-04	4.62E-04	2.98E-04	3.06E-04	3.05E-05	4.37E-05	9.34E-09	1.56E-04	3.31E-05
11	D78	80	Passenger Truck	343	0.00E+00	4.33E-06	4.61E-07	1.94E+01	2.81E-05	7.36E-02	9.17E-06	5.73E-04	1.99E-03	3.31E-04	8.80E-04	5.71E-04	5.85E-04	1.41E-04	9.78E-05	1.78E-08	2.95E-04	9.54E-05
11	D78	80	Single Unit Short Haul Truck	84	0.00E+00	1.16E-05	4.52E-07	1.38E+01	7.84E-06	2.51E-02	1.27E-05	4.81E-03	9.47E-04	1.94E-04	1.59E-03	2.95E-04	3.01E-04	1.41E-03	5.61E-05	2.23E-08	1.29E-03	8.99E-04
11	D78	80	Single Unit Long Haul Truck	4	0.00E+00	5.02E-07	1.94E-08	5.84E-01	3.34E-07	1.05E-03	5.52E-07	2.06E-04	4.34E-05	8.59E-06	6.94E-05	1.27E-05	1.29E-05	5.90E-05	2.38E-06	9.27E-10	5.65E-05	3.84E-05
11	D78	80	Combination Short Haul Truck	46	0.00E+00	9.49E-06	7.02E-07	1.54E+01	2.48E-08	1.45E-02	6.78E-06	1.47E-02	1.10E-03	1.99E-04	5.75E-04	2.05E-04	2.13E-04	2.45E-03	5.16E-05	0.00E+00	3.63E-04	2.76E-03
11	D78	80	Combination Long Haul Truck	42	0.00E+00	1.32E-05	7.46E-07	1.43E+01	8.40E-08	1.71E-02	1.09E-05	1.57E-02	1.14E-03	1.82E-04	1.21E-03	2.40E-04	2.50E-04	2.30E-03	4.80E-05	0.00E+00	9.61E-04	2.95E-03
10	D79	70	Passenger Car	245	0.00E+00	2.70E-06	2.93E-07	1.06E+01	1.91E-05	5.21E-02	6.08E-06	2.48E-04	1.89E-03	2.94E-04	5.93E-04	3.82E-04	3.92E-04	4.16E-05	5.37E-05	1.12E-08	2.01E-04	3.86E-05
10	D79	70	Passenger Truck	410	0.00E+00	5.68E-06	6.04E-07	2.38E+01	3.64E-05	9.22E-02	1.19E-05	7.20E-04	3.42E-03	5.28E-04	1.14E-03	7.40E-04	7.58E-04	1.82E-04	1.20E-04	2.14E-08	3.80E-04	1.21E-04
10	D79	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.62E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.65E-06
10	D79	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	D79	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
10	D80	70	Passenger Car	307	0.00E+00	3.38E-06	3.67E-07	1.32E+01	2.40E-05	6.53E-02	7.62E-06	3.10E-04	2.36E-03	3.68E-04	7.43E-04	4.79E-04	4.92E-04	5.22E-05	6.73E-05	1.40E-08	2.51E-04	4.84E-05
10	D80	70	Passenger Truck	514	0.00E+00	7.12E-06	7.57E-07	2.98E+01	4.56E-05	1.16E-01	1.49E-05	9.03E-04	4.28E-03	6.62E-04	1.43E-03	9.27E-04	9.50E-04	2.28E-04	1.50E-04	2.69E-08	4.77E-04	1.52E-04
10	D80	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.14E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.22E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
10	D80	70	Combination Short Haul Truck	15	0.00E+00	3.77E-06	2.80E-07	5.09E+00	9.57E-09	5.44E-03	2.69E-06	5.64E-03	5.31E-04	8.86E-05	2.26E-04	8.17E-05	8.48E-05	8.09E-04	1.70E-05	0.00E+00	1.41E-04	1.06E-03
10	D80	70	Combination Long Haul Truck	13	0.00E+00	5.17E-06	2.94E-07	4.78E+00	3.24E-08	6.50E-03	4.25E-06	6.04E-03	5.53E-04	8.33E-05	4.70E-04	9.45E-05	9.84E-05	7.67E-04	1.60E-05	0.00E+00	3.71E-04	1.14E-03
10	D81	70	Passenger Car	273	0.00E+00	3.01E-06	3.27E-07	1.18E+01	2.13E-05	5.81E-02	6.78E-06	2.76E-04	2.10E-03	3.28E-04	6.61E-04	4.26E-04	4.37E-04	4.64E-05	5.98E-05	1.24E-08	2.24E-04	4.31E-05
10	D81	70	Passenger Truck	457	0.00E+00	6.33E-06	6.73E-07	2.65E+01	4.05E-05	1.03E-01	1.33E-05	8.03E-04	3.81E-03	5.89E-04	1.27E-03	8.24E-04	8.45E-04	2.03E-04	1.33E-04	2.39E-08	4.24E-04	1.35E-04
10	D81	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	D81	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	D81	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	D82	70	Passenger Car	209	0.00E+00	2.30E-06	2.50E-07	9.02E+00	1.63E-05	4.45E-02	5.19E-06	2.11E-04	1.61E-03	2.51E-04	5.06E-04	3.26E-04	3.35E-04	3.55E-05	4.58E-05	9.52E-09	1.71E-04	3.30E-05
10	D82	70	Passenger Truck	350	0.00E+00	4.85E-06	5.15E-07	2.03E+01	3.10E-05	7.87E-02	1.02E-05	6.15E-04	2.91E-03	4.51E-04	9.72E-04	6.31E-04	6.47E-04	1.55E-04	1.02E-04	1.83E-08	3.25E-04	1.03E-04
10	D82	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
11	D83	80	Passenger Car	464	0.00E+00	4.76E-06	5.17E-07	1.95E+01	3.38E-05	9.44E-02	1.07E-05	4.81E-04	2.53E-03	4.24E-04	1.05E-03	6.75E-04	6.93E-04	6.90E-05	9.91E-05	2.12E-08	3.54E-04	7.51E-05
11	D83	80	Passenger Truck	778	0.00E+00	9.81E-06	1.05E-06	4.40E+01	6.38E-05	1.67E-01	2.08E-05	1.30E-03	4.51E-03	7.50E-04	1.99E-03	1.29E-03	1.33E-03	3.19E-04	2.22E-04	4.03E-08	6.68E-04	2.16E-04
11	D83	80	Single Unit Short Haul Truck	181	0.00E+00	2.48E-05	9.70E-07	2.97E+01	1.68E-05	5.39E-02	2.73E-05	1.03E-02	2.03E-03	4.16E-04	3.42E-03	6.33E-04	6.46E-04	3.02E-03	1.21E-04	4.78E-08	2.78E-03	1.93E-03
11	D83	80	Single Unit Long Haul Truck	8	0.00E+00	1.08E-06	4.16E-08	1.25E+00	7.17E-07	2.24E-03	1.19E-06	4.41E-04	9.33E-05	1.85E-05	1.49E-04	2.72E-05	2.77E-05	1.27E-04	5.10E-06	1.99E-09	1.21E-04	8.25E-05
11	D83	80	Combination Short Haul Truck	113	0.00E+00	2.33E-05	1.72E-06	3.79E+01	6.10E-08	3.55E-02	1.66E-05	3.60E-02	2.70E-03	4.88E-04	1.41E-03	5.03E-04	5.22E-04	6.02E-03	1.27E-04	0.00E+00	8.90E-04	6.78E-03
11	D83	80	Combination Long Haul Truck	103	0.00E+00	3.24E-05	1.83E-06	3.52E+01	2.06E-07	4.20E-02	2.68E-05	3.85E-02	2.79E-03	4.46E-04	2.97E-03	5.90E-04	6.15E-04	5.64E-03	1.18E-04	0.00E+00	2.36E-03	7.25E-03
11	D84	80	Passenger Car	792	0.00E+00	8.12E-06	8.82E-07	3.32E+01	5.76E-05	1.61E-01	1.83E-05	8.21E-04	4.31E-03	7.22E-04	1.78E-03	1.15E-03	1.18E-03	1.18E-04	1.69E-04	3.61E-08	6.04E-04	1.28E-04
11	D84	80	Passenger Truck	1325	0.00E+00	1.67E-05	1.78E-06	7.49E+01	1.09E-04	2.84E-01	3.54E-05	2.21E-03	7.68E-03	1.28E-03	3.40E-03	2.21E-03	2.26E-03	5.44E-04	3.78E-04	6.87E-08	1.14E-03	3.69E-04
11	D84	80	Single Unit Short Haul Truck	95	0.00E+00	1.30E-05	5.08E-07	1.55E+01	8.82E-06	2.82E-02	1.43E-05	5.41E-03	1.07E-03	2.18E-04	1.79E-03	3.32E-04	3.38E-04	1.58E-03	6.31E-05	2.50E-08	1.45E-03	1.01E-03
11	D84	80	Single Unit Long Haul Truck	4	0.00E+00	5.65E-07	2.18E-08	6.57E-01	3.76E-07	1.18E-03	6.21E-07	2.31E-04	4.88E-05	9.67E-06	7.81E-05	1.42E-05	1.45E-05	6.64E-05	2.67E-06	1.04E-09	6.36E-05	4.32E-05
11	D84	80	Combination Short Haul Truck	142	0.00E+00	2.93E-05	2.17E-06	4.77E+01	7.68E-08	4.47E-02	2.10E-05	4.53E-02	3.39E-03	6.15E-04	1.78E-03	6.33E-04	6.57E-04	7.58E-03	1.60E-04	0.00E+00	1.12E-03	8.54E-03
11	D84	80	Combination Long Haul Truck	130	0.00E+00	4.08E-05	2.31E-06	4.43E+01	2.60E-07	5.29E-02	3.37E-05	4.85E-02	3.51E-03	5.61E-04	3.74E-03	7.43E-04	7.74E-04	7.10E-03	1.48E-04	0.00E+00	2.97E-03	9.13E-03
11	D85	80	Passenger Car	342	0.00E+00	3.51E-06	3.82E-07	1.44E+01	2.49E-05	6.96E-02	7.92E-06	3.55E-04	1.87E-03	3.13E-04	7.72E-04	4.98E-04	5.11E-04	5.09E-05	7.31E-05	1.56E-08	2.61E-04	5.54E-05
11	D85	80	Passenger Truck	574	0.00E+00	7.23E-06	7.71E-07	3.24E+01	4.70E-05	1.23E-01	1.53E-05	9.58E-04	3.32E-03	5.53E-04	1.47E-03	9.54E-04	9.78E-04	2.36E-04	1.63E-04	2.97E-08	4.93E-04	1.59E-04
11	D85	80	Single Unit Short Haul Truck	152	0.00E+00	2.09E-05	8.16E-07	2.50E+01	1.42E-05	4.54E-02	2.30E-05	8.69E-03	1.71E-03	3.50E-04	2.88E-03	5.33E-04	5.43E-04	2.54E-03	1.01E-04	4.02E-08	2.33E-03	1.62E-03
11	D85	80	Single Unit Long Haul Truck	7	0.00E+00	9.08E-07	3.50E-08	1.05E+00	6.04E-07	1.89E-03	9.98E-07	3.71E-04	7.85E-05	1.55E-05	1.25E-04	2.29E-05	2.33E-05	1.07E-04	4.29E-06	1.68E-09	1.02E-04	6.94E-05
11	D85	80	Combination Short Haul Truck	97	0.00E+00	2.01E-05	1.48E-06	3.26E+01	5.25E-08	3.06E-02	1.43E-05	3.10E-02	2.32E-03	4.21E-04	1.22E-03	4.33E-04	4.50E-04	5.18E-03	1.09E-04	0.00E+00	7.66E-04	5.84E-03
11	D85	80	Combination Long Haul Truck	89	0.00E+00	2.79E-05	1.58E-06	3.03E+01	1.78E-07	3.62E-02	2.30E-05	3.31E-02	2.40E-03	3.84E-04	2.56E-03	5.08E-04	5.29E-04	4.86E-03	1.01E-04	0.00E+00	2.03E-03	6.24E-03
11	D86	80	Passenger Car	799	0.00E+00	8.20E-06	8.91E-07	3.35E+01	5.82E-05	1.62E-01	1.85E-05	8.29E-04	4.36E-03	7.30E-04	1.80E-03	1.16E-03	1.19E-03	1.19E-04	1.71E-04	3.64E-08	6.10E-04	1.29E-04
11	D86	80	Passenger Truck	1339	0.00E+00	1.69E-05	1.80E-06	7.57E+01	1.10E-04	2.87E-01	3.58E-05	2.24E-03	7.76E-03	1.29E-03	3.43E-03	2.23E-03	2.28E-03	5.50E-04	3.81E-04	6.94E-08	1.15E-03	3.72E-04
11	D86	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.43E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.28E-04
11	D86	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.54E-05
11	D86	80	Combination Short Haul Truck	130	0.00E+00	2.68E-05	1.99E-06	4.37E+01	7.03E-08	4.09E-02	1.92E-05	4.15E-02	3.11E-03	5.63E-04	1.63E-03	5.80E-04	6.02E-04	6.94E-03	1.46E-04	0.00E+00	1.03E-03	7.82E-03
11	D86	80	Combination Long Haul Truck	119	0.00E+00	3.74E-05	2.11E-06	4.05E+01	2.38E-07	4.84E-02	3.08E-05	4.44E-02	3.21E-03	5.14E-04	3.43E-03	6.80E-04	7.09E-04	6.50E-03	1.36E-04	0.00E+00	2.72E-03	8.36E-03
11	D87	80	Passenger Car	342	0.00E+00	3.51E-06	3.82E-07	1.44E+01	2.49E-05	6.96E-02	7.92E-06	3.55E-04	1.87E-03	3.13E-04	7.72E-04	4.98E-04	5.11E-04	5.09E-05	7.31E-05	1.56E-08	2.61E-04	5.54E-05
11	D87	80	Passenger Truck	574	0.00E+00	7.23E-06	7.71E-07	3.24E+01	4.70E-05	1.23E-01	1.53E-05	9.58E-04	3.32E-03	5.53E-04	1.47E-03	9.54E-04	9.78E-04	2.36E-04	1.63E-04	2.97E-08	4.93E-04	1.59E-04
11	D87	80	Single Unit Short Haul Truck	152	0.00E+00	2.09E-05	8.16E-07	2.50E+01	1.42E-05	4.54E-02	2.30E-05	8.69E-03	1.71E-03	3.50E-04	2.88E-03	5.33E-04	5.43E-04	2.54E-03	1.01E-04	4.02E-08	2.33E-03	1.62E-03
11	D87	80	Single Unit Long Haul Truck	7	0.00E+00	9.08E-07	3.50E-08	1.05E+00	6.04E-07	1.89E-03	9.98E-07	3.71E-04	7.85E-05	1.55E-05	1.25E-04	2.29E-05	2.33E-05	1.07E-04	4.29E-06	1.68E-09	1.02E-04	6.94E-05
11	D87	80	Combination Short Haul Truck	97	0.00E+00	2.01E-05	1.48E-06	3.26E+01	5.25E-08	3.06E-02	1.43E-05	3.10E-02	2.32E-03	4.21E-04	1.22E-03	4.33E-04	4.50E-04	5.18E-03	1.09E-04	0.00E+00	7.66E-04	5.84E-03
11	D87	80	Combination Long Haul Truck	89	0.00E+00	2.79E-05	1.58E-06	3.03E+01	1.78E-07	3.62E-02	2.30E-05	3.31E-02	2.40E-03	3.84E-04	2.56E-03	5.08E-04	5.29E-04	4.86E-03	1.01E-04	0.00E+00	2.03E-03	6.24E-03
11	D88	80	Passenger Car	799	0.00E+00	8.20E-06	8.91E-07	3.35E+01	5.82E-05	1.62E-01	1.85E-05	8.29E-04	4.36E-03	7.30E-04	1.80E-03	1.16E-03	1.19E-03	1.19E-04	1.71E-04	3.64E-08	6.10E-04	1.29E-04
11	D88	80	Passenger Truck	1339	0.00E+00	1.69E-05	1.80E-06	7.57E+01	1.10E-04	2.87E-01	3.58E-05	2.24E-03	7.76E-03	1.29E-03	3.43E-03	2.23E-03	2.28E-03	5.50E-04	3.81E-04	6.94E-08	1.15E-03	3.72E-04
11	D88	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.43E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.28E-04
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.54E-05
11	D88	80	Combination Short Haul Truck	130	0.00E+00	2.68E-05	1.99E-06	4.37E+01	7.03E-08	4.09E-02	1.92E-05	4.15E-02	3.11E-03	5.63E-04	1.63E-03	5.80E-04	6.02E-04	6.94E-03	1.46E-04	0.00E+00	1.03E-03	7.82E-03
11	D88	80	Combination Long Haul Truck	119	0.00E+00	3.74E-05	2.11E-06	4.05E+01	2.38E-07	4.84E-02	3.08E-05	4.44E-02	3.21E-03	5.14E-04	3.43E-03	6.80E-04	7.09E-04	6.50E-03	1.36E-04	0.00E+00	2.72E-03	8.36E-03
9	D89	60	Passenger Car	98	0.00E+00	1.24E-06	1.35E-07	4.43E+00	8.81E-06	2.39E-02	2.80E-06	1.01E-04	9.93E-04	1.49E-04	2.73E-04	1.76E-04	1.81E-04	1.95E-05	2.25E-05	4.72E-09	9.24E-05	1.58E-05
9	D89	60	Passenger Truck	165	0.00E+00	2.64E-06	2.80E-07	9.89E+00	1.66E-05	4.09E-02	5.47E-06	3.15E-04	1.81E-03	2.70E-04	5.22E-04	3.39E-04	3.48E-04	7.98E-05	4.96E-05	9.20E-09	1.74E-04	5.34E-05
9	D89	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.31E-04
9	D89	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.33E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.99E-06
9	D89	60	Combination Short Haul Truck	14	0.00E+00	4.12E-06	3.03E-07	4.97E+00	1.13E-08	6.16E-03	2.96E-06	6.30E-03	7.19E-04	1.12E-04	2.54E-04	8.86E-05	9.19E-05	7.91E-04	1.66E-05	0.00E+00	1.62E-04	1.19E-03
9	D89	60	Combination Long Haul Truck	13	0.00E+00	5.66E-06	3.09E-07	4.70E+00	3.82E-08	7.40E-03	4.74E-06	6.71E-03	7.54E-04	1.09E-04	5.37E-04	1.01E-04	1.05E-04	7.54E-04	1.57E-05	0.00E+00	4.32E-04	1.26E-03
9	D90	60	Passenger Car

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D94	70	Passenger Truck	353	0.00E+00	4.88E-06	5.19E-07	2.04E+01	3.13E-05	7.92E-02	1.02E-05	6.19E-04	2.94E-03	4.54E-04	9.78E-04	6.36E-04	6.52E-04	1.56E-04	1.03E-04	1.84E-08	3.27E-04	1.04E-04
10	D94	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.71E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.26E-04
10	D94	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	D94	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
9	E01	60	Passenger Car	223	0.00E+00	2.81E-06	3.06E-07	1.00E+01	2.00E-05	5.41E-02	6.35E-06	2.29E-04	2.25E-03	3.37E-04	6.19E-04	3.99E-04	4.10E-04	4.42E-05	5.09E-05	1.07E-08	2.09E-04	3.58E-05
9	E01	60	Passenger Truck	373	0.00E+00	5.98E-06	6.34E-07	2.24E+01	3.77E-05	9.27E-02	1.24E-05	7.14E-04	4.11E-03	6.12E-04	1.18E-03	7.69E-04	7.88E-04	1.81E-04	1.12E-04	2.09E-08	3.94E-04	1.21E-04
9	E01	60	Single Unit Short Haul Truck	44	0.00E+00	9.84E-06	4.06E-07	7.33E+00	6.52E-06	1.29E-02	1.06E-05	3.78E-03	1.01E-03	1.70E-04	1.31E-03	2.53E-04	2.58E-04	7.43E-04	2.99E-05	1.23E-08	1.05E-03	7.07E-04
9	E01	60	Single Unit Long Haul Truck	2	0.00E+00	4.29E-07	1.76E-08	3.12E-01	2.83E-07	5.47E-04	4.64E-07	1.64E-04	4.55E-05	7.56E-06	5.74E-05	1.10E-05	1.12E-05	3.16E-05	1.27E-06	5.24E-10	4.62E-05	3.06E-05
9	E01	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.87E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.67E-03
9	E01	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.45E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.78E-03
9	E02	60	Passenger Car	267	0.00E+00	3.38E-06	3.67E-07	1.21E+01	2.40E-05	6.49E-02	7.61E-06	2.75E-04	2.70E-03	4.04E-04	7.43E-04	4.79E-04	4.91E-04	5.30E-05	6.11E-05	1.28E-08	2.51E-04	4.29E-05
9	E02	60	Passenger Truck	448	0.00E+00	7.17E-06	7.60E-07	2.69E+01	4.52E-05	1.11E-01	1.49E-05	8.56E-04	4.93E-03	7.34E-04	1.42E-03	9.23E-04	9.45E-04	2.17E-04	1.35E-04	2.50E-08	4.73E-04	1.45E-04
9	E02	60	Single Unit Short Haul Truck	40	0.00E+00	8.98E-06	3.71E-07	6.69E+00	5.95E-06	1.18E-02	9.71E-06	3.45E-03	9.25E-04	1.56E-04	1.20E-03	2.31E-04	2.35E-04	6.78E-04	2.73E-05	1.12E-08	9.63E-04	6.46E-04
9	E02	60	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.61E-08	2.85E-01	2.58E-07	5.00E-04	4.24E-07	1.49E-04	4.16E-05	6.90E-06	5.24E-05	1.00E-05	1.02E-05	2.88E-05	1.16E-06	4.78E-10	4.22E-05	2.80E-05
9	E02	60	Combination Short Haul Truck	29	0.00E+00	8.40E-06	6.17E-07	1.01E+01	2.30E-08	1.25E-02	6.03E-06	1.28E-02	1.47E-03	2.29E-04	5.17E-04	1.80E-04	1.87E-04	1.61E-03	3.39E-05	0.00E+00	3.30E-04	2.42E-03
9	E02	60	Combination Long Haul Truck	26	0.00E+00	1.15E-05	6.30E-07	9.57E+00	7.79E-08	1.51E-02	9.65E-06	1.37E-02	1.54E-03	2.22E-04	1.09E-03	2.06E-04	2.14E-04	1.54E-03	3.21E-05	0.00E+00	8.80E-04	2.58E-03
11	E03	80	Passenger Car	282	0.00E+00	2.89E-06	3.14E-07	1.18E+01	2.05E-05	5.72E-02	6.51E-06	2.92E-04	1.53E-03	2.57E-04	6.35E-04	4.09E-04	4.20E-04	4.19E-05	6.01E-05	1.28E-08	2.15E-04	4.55E-05
11	E03	80	Passenger Truck	471	0.00E+00	5.95E-06	6.34E-07	2.66E+01	3.87E-05	1.01E-01	1.26E-05	7.88E-04	2.73E-03	4.55E-04	1.21E-03	7.84E-04	8.04E-04	1.94E-04	1.34E-04	2.44E-08	4.05E-04	1.31E-04
11	E03	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	4.41E-09	1.33E-01	7.59E-08	2.38E-04	1.25E-07	4.67E-05	9.87E-06	1.95E-06	1.58E-05	2.88E-06	2.93E-06	1.34E-05	5.40E-07	2.11E-10	1.28E-05	8.73E-06
11	E03	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.33E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.28E-04
11	E03	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.56E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.71E-04
11	E04	80	Passenger Car	261	0.00E+00	2.68E-06	2.91E-07	1.10E+01	1.90E-05	5.31E-02	6.04E-06	2.71E-04	1.42E-03	2.39E-04	5.89E-04	3.80E-04	3.90E-04	3.89E-05	5.58E-05	1.19E-08	1.99E-04	4.23E-05
11	E04	80	Passenger Truck	438	0.00E+00	5.52E-06	5.88E-07	2.47E+01	3.59E-05	9.39E-02	1.17E-05	7.31E-04	2.54E-03	4.22E-04	1.12E-03	7.28E-04	7.46E-04	1.80E-04	1.25E-04	2.27E-08	3.76E-04	1.22E-04
11	E04	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.14E-05
11	E04	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.50E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.04E-03
11	E04	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.88E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.11E-03
11	E05	80	Passenger Car	71	0.00E+00	7.32E-07	7.96E-08	2.99E+00	5.20E-06	1.45E-02	1.65E-06	7.40E-05	3.89E-04	6.52E-05	1.61E-04	1.04E-04	1.07E-04	1.06E-05	1.52E-05	3.26E-09	5.45E-05	1.16E-05
11	E05	80	Passenger Truck	120	0.00E+00	1.51E-06	1.61E-07	6.76E+00	9.81E-06	2.57E-02	3.20E-06	2.00E-04	6.93E-04	1.15E-04	3.07E-04	1.99E-04	2.04E-04	4.91E-05	3.41E-05	6.20E-09	1.03E-04	3.33E-05
11	E05	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	4.41E-09	1.33E-01	7.59E-08	2.38E-04	1.25E-07	4.67E-05	9.87E-06	1.95E-06	1.58E-05	2.88E-06	2.93E-06	1.34E-05	5.40E-07	2.11E-10	1.28E-05	8.73E-06
11	E05	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.34E-04
11	E05	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.03E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.71E-04
11	E06	80	Passenger Car	322	0.00E+00	3.30E-06	3.59E-07	1.35E+01	2.34E-05	6.54E-02	7.44E-06	3.34E-04	1.75E-03	2.94E-04	7.26E-04	4.68E-04	4.80E-04	4.79E-05	6.87E-05	1.47E-08	2.46E-04	5.21E-05
11	E06	80	Passenger Truck	539	0.00E+00	6.80E-06	7.25E-07	3.05E+01	4.42E-05	1.16E-01	1.44E-05	9.00E-04	3.12E-03	5.20E-04	1.38E-03	8.97E-04	9.19E-04	2.21E-04	1.54E-04	2.79E-08	4.63E-04	1.50E-04
11	E06	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.75E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.74E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.98E-06
11	E06	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.34E-04
11	E06	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.03E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.71E-04
9	E07	60	Passenger Car	1272	0.00E+00	1.61E-05	1.75E-06	5.73E+01	1.14E-04	3.09E-01	3.62E-05	1.31E-03	1.28E-02	1.92E-03	3.53E-03	2.28E-03	2.34E-03	2.52E-04	2.91E-04	6.11E-08	1.19E-03	2.04E-04
9	E07	60	Passenger Truck	2129	0.00E+00	3.41E-05	3.62E-06	1.28E+02	2.15E-04	5.29E-01	7.08E-05	4.07E-03	2.35E-02	3.49E-03	6.75E-03	4.39E-03	4.50E-03	1.03E-03	6.42E-04	1.19E-07	2.25E-03	6.90E-04
9	E07	60	Single Unit Short Haul Truck	98	0.00E+00	2.18E-05	9.01E-07	1.63E+01	1.45E-05	2.86E-02	2.36E-05	8.38E-03	2.25E-03	3.78E-04	2.91E-03	5.61E-04	5.72E-04	1.65E-03	6.62E-05	2.73E-08	2.34E-03	1.57E-03
9	E07	60	Single Unit Long Haul Truck	4	0.00E+00	9.52E-07	3.91E-08	6.93E-01	6.27E-07	1.21E-03	1.03E-06	3.63E-04	1.01E-04	1.68E-05	1.27E-04	2.44E-05	2.48E-05	7.00E-05	2.83E-06	1.16E-09	1.02E-04	6.79E-05
9	E07	60	Combination Short Haul Truck	84	0.00E+00	2.44E-05	1.79E-06	2.95E+01	6.69E-08	3.65E-02	1.75E-05	3.73E-02	4.26E-03	6.67E-04	1.51E-03	5.25E-04	5.45E-04	4.68E-03	9.86E-05	0.00E+00	9.60E-04	7.03E-03
9	E07	60	Combination Long Haul Truck	76	0.00E+00	3.36E-05	1.83E-06	2.78E+01	2.27E-07	4.38E-02	2.81E-05	3.98E-02	4.47E-03	6.46E-04	3.18E-03	5.99E-04	6.24E-04	4.47E-03	9.33E-05	0.00E+00	2.56E-03	7.49E-03
9	E08	60	Passenger Car	867	0.00E+00	1.10E-05	1.19E-06	3.91E+01	7.77E-05	2.11E-01	2.47E-05	8.93E-04	8.76E-03	1.31E-03	2.41E-03	1.55E-03	1.59E-03	1.72E-04	1.98E-04	4.16E-08	8.15E-04	1.39E-04
9	E08	60	Passenger Truck	1452	0.00E+00	2.33E-05	2.47E-06	8.72E+01	1.47E-04	3.61E-01	4.82E-05	2.78E-03	1.60E-02	2.38E-03	4.60E-03	2.99E-03	3.07E-03	7.03E-04	4.38E-04	8.12E-08	1.53E-03	4.71E-04
9	E08	60	Single Unit Short Haul Truck	78	0.00E+00	1.73E-05	7.16E-07	1.29E+01	1.15E-05	2.27E-02	1.87E-05	6.65E-03	1.78E-03	3.00E-04	2.31E-03	4.45E-04	4.54E-04	1.31E-03	5.26E-05	2.17E-08	1.86E-03	1.25E-03
9	E08	60	Single Unit Long Haul Truck	3	0.00E+00	7.56E-07	3.11E-08	5.50E-01	4.98E-07	9.64E-04	8.18E-07	2.88E-04	8.02E-05	1.33E-05	1.01E-04	1.93E-05	1.97E-05	5.56E-05	2.24E-06	9.22E-10	8.13E-05	5.39E-05
9	E08	60	Combination Short Haul Truck	46	0.00E+00	1.33E-05	9.76E-07	1.60E+01	3.64E-08	1.98E-02	9.54E-06	2.03E-02	2.32E-03	3.62E-04	8.18E-04	2.85E-04	2.96E-04	2.55E-03	5.36E-05	0.00E+00	5.22E-04	3.82E-03
9	E08	60	Combination Long Haul Truck	41	0.00E+00	1.82E-05	9.97E-07	1.51E+01	1.23E-07	2.38E-02	1.53E-05	2.16E-02	2.43E-03	3.51E-04	1.73E-03	3.26E-04	3.39E-04	2.43E-03	5.07E-05	0.00E+00	1.39E-03	4.07E-03
9	E09	60	Passenger Car	1141	0.00E+00	1.44E-05	1.57E-06	5.14E+01	1.02E-04	2.77E-01	3.25E-05	1.17E-03	1.15E-02	1.73E-03	3.17E-03	2.04E-03	2.10E-03	2.26E-04	2.61E-04	5.48E-08	1.07E-03	1.83E-04
9	E09	60	Passenger Truck	1910	0.00E+00	3.06E-05	3.24E-06	1.15E+02	1.93E-04	4.75E-01	6.35E-05	3.65E-03	2.10E-02	3.13E-03	6.05E-03	3.94E-03	4.03E-03	9.26E-04	5.76E-04	1.07E-07	2.02E-03	6.19E-04
9	E09	60	Single Unit Short Haul Truck	83	0.00E+00	1.86E-05	7.69E-07	1.39E+01	1.23E-05	2.44E-02	2.01E-05	7.14E-03	1.92E-03	3.22E-04	2.48E-03	4.78E-04	4.88E-04	1.40E-03	5.65E-05	2.33E-08	1.99E-03	1.34E-03
9	E09	60	Single Unit Long Haul Truck	4	0.00E+00	8.12E-07	3.34E-08	5.91E-01	5.35E-07	1.04E-03	8.78E-07	3.09E-04	8.61E-05	1.43E-05	1.09E-04	2.08E-05	2.12E-05	5.97E-05	2.41E-06	9.90E-10	8.73E-05	5.79E-05
9	E09	60	Combination Short Haul Truck	81	0.00E+00	2.37E-05	1.74E-06	2.86E+01	6.48E-08	3.54E-02	1.70E-05	3.62E-02	4.13E-03	6.46E-04	1.46E-03	5.08E-04	5.28E-04	4.54E-03	9.55E-05	0.00E+00	9.30E-04	6.81E-03
9	E09	60	Combination Long Haul Truck	74	0.00E+00	3.25E-05	1.78E-06	2.70E+01	2.19E-07	4.25E-02	2.72E-05	3.85E-02	4.33E-03	6.26E-04	3.08E-03	5.80E-04	6.04E-04	4.33E-03	9.04E-05	0.00E+00	2.48E-03	7.26E-03
9	E10	60	Passenger Car	826	0.00E+00	1.04E-05	1.13E-06	3.72E+01	7.40E-05	2.01E-01	2.35E-05	8.50E-04	8.34E-03	1.25E-03	2.29E-03	1.48E-03	1.52E-03	1.64E-04	1.89E-04	3.96E-08	7.76E-04	1.33E-04
9	E10	60	Passenger Truck	1382	0.00E+00	2.21E-05	2.35E-06	8.30E+01	1.40E-04	3.44E-01	4.59E-05	2.64E-03	1.52E-02	2.27E-03	4.38E-03	2.85E-03	2.92E-03	6.70E-04	4.17E-04	7.73E-08	1.46E-03	4.48E-04
9	E10	60	Single Unit Short Haul Truck	66	0.00E+00	1.48E-05	6.10E-07	1.10E+01	9.78E-06	1.93E-02	1.60E-05	5.67E-03	1.52E-03	2.56E-04	1.97E-03	3.79E-04	3.87E-04	1.11E-03	4.48E-05	1.85E-08	1.58E-03	1.06E-03
9	E10	60	Single Unit Long Haul Truck	3	0.00E+00	6.44E-07	2.65E-08	4.69E-01	4.24E-07	8.21E-04	6.96E-07	2.45E-04	6.83E-05	1.13E-05	8.61E-05	1.65E-05	1.68E-05	4.74E-05	1.91E-06	7.85E-10	6.93E-05	4.59E-05
9	E10	60	Combination Short Haul Truck	41	0.00E+00	1.21E-05	8.86E-07	1.46E+01	3.30E-08	1.80E-02	8.66E-06	1.84E-02	2.10E-03	3.29E-04	7.43E-04	2.59E-04	2.69E-04	2.31E-03	4.87E-05	0.00E+00	4.74E-04	3.47E-03
9	E10	60	Combination Long Haul Truck	38	0.00E+00	1.66E-05	9.05E-07	1.37E+01	1.12E-07	2.16E-02	1.39E-05	1.96E-02	2.21E-03	3.19E-04	1.57E-03	2.96E-04	3.08E-04	2.21E-03	4.61E-05	0.00E+00	1.26E-03	3.70E-03
9	E11	60	Passenger Car	1366	0.00E+00	1.73E-05	1.88E-06	6.16E+01	1.22E-04	3.32E-01	3.89E-05	1.41E-03	1.38E-02	2.07E-03	3.79E-03	2.45E-03	2.51E-03	2.71E-04	3.12E-04	6.56E-08	1.28E-03	2.19E-04
9	E11	60	Passenger Truck	2288	0.00E+00	3.66E-05	3.88E-06	1.37E+02	2.31E-04	5.69E-01	7.60E-05	4.38E-03	2.52E-02	3.75E-03	7.25E-03	4.72E-03	4.83E-03	1.11E-03	6.90E-04	1.28E-07	2.42E-03	7.41E-04
9	E11	60	Single Unit Short Haul Truck	174	0.00E+00	3.89E-05	1.61E-06	2.90E+01	2.58E-05	5.10E-02	4.21E-05	1.49E-02	4.01E-03	6.74E-04	5.19E-03	1.00E-03	1.02E-03	2.94E-03	1.18E-04	4.87E-08	4.17E-03	2.80E-03
9	E11	60	Single Unit Long Haul Truck	8	0.00E+00	1.70E-06	6.98E-08	1.24E+00	1.12E-06	2.17E-03	1.84E-06	6.47E-04	1.80E-04	2.99E-05	2.27E-04	4.35E-05	4.43E-05	1.25E-04	5.04E-06	2.07E-09	1.83E-04	1.21E-04
9	E11	60	Combination Short Haul Truck	110	0.00E+00	3.22E-05	2.37E-06	3.89E+01	8.82E-08	4.81E-02	2.31E-05	4.92E-02	5.62E-03	8.79E-04	1.98E-03	6.92E-04	7.19E-04	6.18E-03	1.30E-04	0.00E+00	1.27E-03	9.28E-03
9	E11	60	Combination Long Haul Truck	101	0.00E+00	4.43E-05	2.42E-06	3.67E+01	2.99E-07	5.78E-02	3.70E-05	5.25E-02	5.89E-03	8.52E-04	4.20E-03	7.90E-04	8.23E-04	5.89E-03	1.23E-04	0.00E+00	3.37E-03	9.88E-03
9	E12	60	Passenger Car	1064	0.00E+00	1.34E-05	1.46E-06	4.80E+01	9.54E-05	2.58E-01	3.03E-05	1.10E-03	1.07E-02	1.61E-03	2.95E-03	1.91E-03	1.96E-03	2.11E-04	2.43E-04	5.11E-08	1.00E-03	1.71E-04
9	E12	60	Passenger Truck	1781	0.00E+00	2.85E-05	3.02E-06	1.07E+02	1.80E-04	4.43E-01	5.92E-05	3.41E-03	1.96E-02	2.92E-03	5.64E-03	3.67E-03	3.76E-03	8.63E-04	5.37E-04	9.96E-08	1.88E-03	5.77E-04
9	E12	60	Single Unit Short Haul Truck	141	0.00E+00	3.14E-05	1.30E-06	2.34E+01	2.08E-05	4.12E-02	3.40E-05	1.21E-02	3.24E-03	5.44E-04	4.19E-03	8.08E-04	8.24E-04	2.37E-03	9.55E-05	3.93E-08	3.37E-03	2.26E-03
9	E12	60	Single Unit Long Haul Truck	6	0.00E+00	1.37E-06	5.64E-08	9.99E-01	9.03E-07	1.75E-03	1.48E-06	5.23E-04	1.45E-04	2.41E-05	1.83E-04	3.51E-05	3.58E-05	1.01E-04	4.07E-06	1.67E-09	1.48E-04	9.79E-05
9	E12	60	Combination Short Haul Truck	128	0.00E+00	3.74E-05	2.75E-06	4.51E+01	1.02E-07	5.59E-02	2.69E-05	5.72E-02	6.53E-03	1.02E-03	2.30E-03	8.04E-04	8.34E-04	7.17E-03	1.51E-04	0.00E+00	1.47E-03	1.08E-02
9	E12	60	Combination Long Haul Truck	117	0.00E+00	5.14E-05	2.81E-06	4.26E+01	3.47E-07	6.71E-02	4.30E-05	6.09E-02	6.84E-03	9.90E-04	4.87E-03	9.17E-04	9.55E-04	6.84E-03	1.43E-04	0.00E+00	3.92E-03	1.15E-02
11	E13	80	Passenger Car	334	0.00E+00	3.42E-06	3.72E-07	1.40E+01	2.43E-05	6.78E-02	7.71E-06	3.46E-04	1.82E-03	3.04E-04	7.52E-04	4.85E-04	4.98E-04	4.96E-05	7.12E-05	1.52E-08	2.54E-04	5.39E-05
11	E13	80	Passenger Truck	558	0.00E+00	7.04E-06	7.51E-07	3.16E+01	4.58E-05	1.20E-01	1.49E-05	9.33E-04	3.24E-03	5.39E-04	1.43E-03	9.29E-04	9.53E-04	2.29E-04	1.59E-04	2.89E-08	4.80E-04	1.55E-04
11	E13	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.79E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.21E-04
11	E13	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.23E-05
11	E13	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.50E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	E13	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.95E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.31E-03
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Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E17	80	Combination Long Haul Truck	16	0.00E+00	5.11E-06	2.88E-07	5.53E+00	3.25E-08	6.61E-03	4.21E-06	6.06E-03	4.39E-04	7.02E-05	4.68E-04	9.29E-05	9.68E-05	8.88E-04	1.85E-05	0.00E+00	3.71E-04	1.14E-03
11	E18	80	Passenger Car	287	0.00E+00	2.94E-06	3.20E-07	1.20E+01	2.09E-05	5.83E-02	6.64E-06	2.98E-04	1.57E-03	2.62E-04	6.47E-04	4.17E-04	4.28E-04	4.27E-05	6.13E-05	1.31E-08	2.19E-04	4.64E-05
11	E18	80	Passenger Truck	481	0.00E+00	6.06E-06	6.46E-07	2.72E+01	3.94E-05	1.03E-01	1.29E-05	8.03E-04	2.79E-03	4.64E-04	1.23E-03	8.00E-04	8.20E-04	1.97E-04	1.37E-04	2.49E-08	4.13E-04	1.34E-04
11	E18	80	Single Unit Short Haul Truck	14	0.00E+00	1.97E-06	7.70E-08	2.36E+00	1.34E-06	4.28E-03	2.17E-06	8.20E-04	1.61E-04	3.30E-05	2.71E-04	5.03E-05	5.12E-05	2.40E-04	9.57E-06	3.79E-09	2.20E-04	1.53E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	8.56E-08	3.30E-09	9.95E-02	5.69E-08	1.78E-04	9.41E-08	3.50E-05	7.40E-06	1.46E-06	1.18E-05	2.16E-06	2.20E-06	1.01E-05	4.05E-07	1.58E-10	9.64E-06	6.55E-06
11	E18	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.50E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.59E-04
11	E18	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.74E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.05E-04
9	E19	60	Passenger Car	661	0.00E+00	8.35E-06	9.07E-07	2.98E+01	5.92E-05	1.60E-01	1.88E-05	6.80E-04	6.67E-03	9.99E-04	1.84E-03	1.18E-03	1.21E-03	1.31E-04	1.51E-04	3.17E-08	6.21E-04	1.06E-04
9	E19	60	Passenger Truck	1106	0.00E+00	1.77E-05	1.88E-06	6.64E+01	1.12E-04	2.75E-01	3.68E-05	2.12E-03	1.22E-02	1.81E-03	3.50E-03	2.28E-03	2.34E-03	5.36E-04	3.33E-04	6.18E-08	1.17E-03	3.59E-04
9	E19	60	Single Unit Short Haul Truck	51	0.00E+00	1.13E-05	4.68E-07	8.44E+00	7.51E-06	1.49E-02	1.23E-05	4.35E-03	1.17E-03	1.96E-04	1.51E-03	2.91E-04	2.97E-04	8.56E-04	3.44E-05	1.42E-08	1.22E-03	8.15E-04
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	4.95E-07	2.03E-08	3.60E-01	3.26E-07	6.31E-04	5.35E-07	1.88E-04	5.25E-05	8.70E-06	6.61E-05	1.27E-05	1.29E-05	3.64E-05	1.47E-06	6.03E-10	5.32E-05	3.53E-05
9	E19	60	Combination Short Haul Truck	26	0.00E+00	7.63E-06	5.61E-07	9.21E+00	2.09E-08	1.14E-02	5.48E-06	1.17E-02	1.33E-03	2.08E-04	4.70E-04	1.64E-04	1.70E-04	1.46E-03	3.08E-05	0.00E+00	3.00E-04	2.20E-03
9	E19	60	Combination Long Haul Truck	24	0.00E+00	1.05E-05	5.73E-07	8.70E+00	7.08E-08	1.37E-02	8.77E-06	1.24E-02	1.40E-03	2.02E-04	9.95E-04	1.87E-04	1.95E-04	1.40E-03	2.92E-05	0.00E+00	8.00E-04	2.34E-03
9	E20	60	Passenger Car	496	0.00E+00	6.27E-06	6.81E-07	2.24E+01	4.45E-05	1.21E-01	1.41E-05	5.11E-04	5.01E-03	7.50E-04	1.38E-03	8.89E-04	9.12E-04	9.83E-05	1.13E-04	2.38E-08	4.66E-04	7.97E-05
9	E20	60	Passenger Truck	831	0.00E+00	1.33E-05	1.41E-06	4.99E+01	8.40E-05	2.06E-01	2.76E-05	1.59E-03	9.16E-03	1.36E-03	2.63E-03	1.71E-03	1.75E-03	4.03E-04	2.50E-04	4.64E-08	8.77E-04	2.69E-04
9	E20	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.16E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	E20	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.67E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.99E-05
9	E20	60	Combination Short Haul Truck	25	0.00E+00	7.17E-06	5.27E-07	8.66E+00	1.97E-08	1.07E-02	5.15E-06	1.10E-02	1.25E-03	1.96E-04	4.42E-04	1.54E-04	1.60E-04	1.38E-03	2.90E-05	0.00E+00	2.82E-04	2.07E-03
9	E20	60	Combination Long Haul Truck	22	0.00E+00	9.86E-06	5.39E-07	8.18E+00	6.65E-08	1.29E-02	8.24E-06	1.17E-02	1.31E-03	1.90E-04	9.35E-04	1.76E-04	1.83E-04	1.31E-03	2.74E-05	0.00E+00	7.52E-04	2.20E-03
11	E21	80	Passenger Car	3	0.00E+00	3.45E-08	3.75E-09	1.41E-01	2.45E-07	6.84E-04	7.78E-08	3.49E-06	1.83E-05	3.07E-06	7.59E-06	4.89E-06	5.02E-06	5.00E-07	7.18E-07	1.53E-10	2.57E-06	5.44E-07
11	E21	80	Passenger Truck	6	0.00E+00	7.11E-08	7.58E-09	3.19E-01	4.62E-07	1.21E-03	1.51E-07	9.41E-06	3.27E-05	5.44E-06	1.45E-05	9.38E-06	9.61E-06	2.31E-06	1.61E-06	2.92E-10	4.84E-06	1.57E-06
11	E22	80	Passenger Car	167	0.00E+00	1.71E-06	1.86E-07	7.00E+00	1.22E-05	3.40E-02	3.86E-06	1.73E-04	9.11E-04	1.53E-04	3.77E-04	2.43E-04	2.49E-04	2.48E-05	3.57E-05	7.62E-09	1.27E-04	2.70E-05
11	E22	80	Passenger Truck	280	0.00E+00	3.53E-06	3.76E-07	1.58E+01	2.30E-05	6.01E-02	7.48E-06	4.68E-04	1.62E-03	2.70E-04	7.18E-04	4.66E-04	4.77E-04	1.15E-04	7.98E-05	1.45E-08	2.40E-04	7.78E-05
11	E22	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.59E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.96E-04
11	E22	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.77E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.27E-05
11	E22	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	8.00E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.51E-03
11	E22	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.55E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.61E-03
11	E23	80	Passenger Car	3	0.00E+00	3.45E-08	3.75E-09	1.41E-01	2.45E-07	6.84E-04	7.78E-08	3.49E-06	1.83E-05	3.07E-06	7.59E-06	4.89E-06	5.02E-06	5.00E-07	7.18E-07	1.53E-10	2.57E-06	5.44E-07
11	E23	80	Passenger Truck	6	0.00E+00	7.11E-08	7.58E-09	3.19E-01	4.62E-07	1.21E-03	1.51E-07	9.41E-06	3.27E-05	5.44E-06	1.45E-05	9.38E-06	9.61E-06	2.31E-06	1.61E-06	2.92E-10	4.84E-06	1.57E-06
11	E24	80	Passenger Car	167	0.00E+00	1.71E-06	1.86E-07	7.00E+00	1.22E-05	3.40E-02	3.86E-06	1.73E-04	9.11E-04	1.53E-04	3.77E-04	2.43E-04	2.49E-04	2.48E-05	3.57E-05	7.62E-09	1.27E-04	2.70E-05
11	E24	80	Passenger Truck	280	0.00E+00	3.53E-06	3.76E-07	1.58E+01	2.30E-05	6.01E-02	7.48E-06	4.68E-04	1.62E-03	2.70E-04	7.18E-04	4.66E-04	4.77E-04	1.15E-04	7.98E-05	1.45E-08	2.40E-04	7.78E-05
11	E24	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.59E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.96E-04
11	E24	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.77E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.27E-05
11	E24	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	8.00E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.51E-03
11	E24	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.55E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.61E-03
10	E25	70	Passenger Car	299	0.00E+00	3.30E-06	3.58E-07	1.29E+01	2.34E-05	6.38E-02	7.44E-06	3.03E-04	2.31E-03	3.59E-04	7.25E-04	4.68E-04	4.80E-04	5.09E-05	6.56E-05	1.36E-08	2.45E-04	4.72E-05
10	E25	70	Passenger Truck	502	0.00E+00	6.94E-06	7.38E-07	2.91E+01	4.45E-05	1.13E-01	1.46E-05	8.81E-04	4.18E-03	6.46E-04	1.39E-03	9.04E-04	9.27E-04	2.22E-04	1.46E-04	2.62E-08	4.65E-04	1.48E-04
10	E25	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.37E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	E25	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.82E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.32E-04
10	E25	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.02E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.69E-04
10	E26	70	Passenger Car	279	0.00E+00	3.07E-06	3.33E-07	1.20E+01	2.18E-05	5.93E-02	6.92E-06	2.82E-04	2.15E-03	3.34E-04	6.74E-04	4.35E-04	4.46E-04	4.73E-05	6.11E-05	1.27E-08	2.28E-04	4.39E-05
10	E26	70	Passenger Truck	466	0.00E+00	6.46E-06	6.86E-07	2.71E+01	4.14E-05	1.05E-01	1.35E-05	8.19E-04	3.88E-03	6.01E-04	1.29E-03	8.41E-04	8.62E-04	2.07E-04	1.36E-04	2.44E-08	4.33E-04	1.38E-04
10	E26	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	E26	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
10	E26	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
10	E27	70	Passenger Car	245	0.00E+00	2.70E-06	2.93E-07	1.06E+01	1.92E-05	5.22E-02	6.09E-06	2.48E-04	1.89E-03	2.94E-04	5.94E-04	3.83E-04	3.93E-04	4.17E-05	5.38E-05	1.12E-08	2.01E-04	3.87E-05
10	E27	70	Passenger Truck	411	0.00E+00	5.69E-06	6.04E-07	2.38E+01	3.64E-05	9.23E-02	1.19E-05	7.21E-04	3.42E-03	5.29E-04	1.14E-03	7.41E-04	7.59E-04	1.82E-04	1.20E-04	2.15E-08	3.81E-04	1.21E-04
10	E27	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	E27	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
10	E27	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
10	E28	70	Passenger Car	200	0.00E+00	2.20E-06	2.39E-07	8.62E+00	1.56E-05	4.25E-02	4.96E-06	2.02E-04	1.54E-03	2.40E-04	4.83E-04	3.12E-04	3.20E-04	3.39E-05	4.38E-05	9.09E-09	1.64E-04	3.15E-05
10	E28	70	Passenger Truck	334	0.00E+00	4.63E-06	4.92E-07	1.94E+01	2.96E-05	7.52E-02	9.70E-06	5.87E-04	2.78E-03	4.31E-04	9.28E-04	6.03E-04	6.18E-04	1.48E-04	9.76E-05	1.75E-08	3.10E-04	9.86E-05
10	E28	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.03E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.54E-05
10	E28	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	E28	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	E29	70	Passenger Car	29	0.00E+00	3.17E-07	3.44E-08	1.24E+00	2.25E-06	6.13E-03	7.15E-07	2.91E-05	2.22E-04	3.46E-05	6.97E-05	4.49E-05	4.61E-05	4.89E-06	6.31E-06	1.31E-09	2.36E-05	4.54E-06
10	E29	70	Passenger Truck	48	0.00E+00	6.68E-07	7.10E-08	2.80E+00	4.27E-06	1.08E-02	1.40E-06	8.47E-05	4.02E-04	6.21E-05	1.34E-04	8.69E-05	8.91E-05	2.14E-05	1.41E-05	2.52E-09	4.47E-05	1.42E-05
10	E29	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E29	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	E30	70	Passenger Car	244	0.00E+00	2.69E-06	2.92E-07	1.05E+01	1.91E-05	5.20E-02	6.06E-06	2.47E-04	1.88E-03	2.93E-04	5.91E-04	3.81E-04	3.91E-04	4.15E-05	5.35E-05	1.11E-08	2.00E-04	3.85E-05
10	E30	70	Passenger Truck	409	0.00E+00	5.66E-06	6.02E-07	2.37E+01	3.62E-05	9.19E-02	1.19E-05	7.18E-04	3.41E-03	5.27E-04	1.13E-03	7.37E-04	7.56E-04	1.81E-04	1.19E-04	2.14E-08	3.79E-04	1.21E-04
10	E30	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.71E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.26E-04
10	E30	70	Combination Short Haul Truck	6	0.00E+00	1.62E-06	1.20E-07	2.18E+00	4.10E-09	2.33E-03	1.15E-06	2.42E-03	2.28E-04	3.80E-05	9.69E-05	3.50E-05	3.63E-05	3.47E-04	7.30E-06	0.00E+00	6.06E-05	4.56E-04
10	E30	70	Combination Long Haul Truck	6	0.00E+00	2.22E-06	1.26E-07	2.05E+00	1.39E-08	2.78E-03	1.82E-06	2.59E-03	2.37E-04	3.57E-05	2.01E-04	4.05E-05	4.22E-05	3.29E-04	6.87E-06	0.00E+00	1.59E-04	4.88E-04
10	E31	70	Passenger Car	67	0.00E+00	7.41E-07	8.05E-08	2.90E+00	5.26E-06	1.43E-02	1.67E-06	6.81E-05	5.18E-04	8.08E-05	1.63E-04	1.05E-04	1.08E-04	1.14E-05	1.48E-05	3.06E-09	5.51E-05	1.06E-05
10	E31	70	Passenger Truck	113	0.00E+00	1.56E-06	1.66E-07	6.54E+00	9.99E-06	2.53E-02	3.27E-06	1.98E-04	9.39E-04	1.45E-04	3.13E-04	2.03E-04	2.08E-04	5.00E-05	3.29E-05	5.89E-09	1.05E-04	3.32E-05
10	E31	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.64E-04
10	E31	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.07E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.14E-05
10	E31	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.43E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.46E-04
10	E31	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.67E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.91E-04
10	E32	70	Passenger Car	313	0.00E+00	3.45E-06	3.74E-07	1.35E+01	2.45E-05	6.66E-02	7.77E-06	3.16E-04	2.41E-03	3.76E-04	7.58E-04	4.89E-04	5.01E-04	5.32E-05	6.86E-05	1.42E-08	2.56E-04	4.94E-05
10	E32	70	Passenger Truck	524	0.00E+00	7.26E-06	7.71E-07	3.04E+01	4.65E-05	1.18E-01	1.52E-05	9.20E-04	4.36E-03	6.75E-04	1.45E-03	9.45E-04	9.69E-04	2.32E-04	1.53E-04	2.74E-08	4.86E-04	1.55E-04
10	E32	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
10	E32	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	E32	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
9	E33	60	Passenger Car	312	0.00E+00	3.94E-06	4.29E-07	1.41E+01	2.80E-05	7.58E-02	8.89E-06	3.21E-04	3.15E-03	4.72E-04	8.67E-04	5.59E-04	5.74E-04	6.19E-05	7.14E-05	1.50E-08	2.93E-04	5.01E-05
9	E33	60	Passenger Truck	523	0.00E+00	8.37E-06	8.88E-07	3.14E+01	5.28E-05	1.30E-01	1.74E-05	1.00E-03	5.76E-03	8.57E-04	1.66E-03	1.08E-03	1.10E-03	2.53E-04	1.58E-04	2.92E-08	5.52E-04	1.69E-04
9	E33	60	Single Unit Short Haul Truck	49	0.00E+00	1.09E-05	4.51E-07	8.13E+00	7.23E-06	1.43E-02	1.18E-05	4.19E-03	1.12E-03	1.89E-04	1.46E-03	2.80E-04	2.86E-04	8.23E-04	3.31E-05	1.36E-08	1.17E-03	7.84E-04
9	E33	60	Single Unit Long Haul Truck	2	0.00E+00	4.76E-07	1.96E-08	3.46E-01	3.13E-07	6.07E-04	5.15E-07	1.81E-04	5.05E-05	8.38E-06	6.36E-05	1.22E-05	1.24E-05	3.50E-05	1.41E-06	5.80E-10	5.12E-05	3.40E-05
9	E33	60	Combination Short Haul Truck	28	0.00E+00	8.24E-06	6.06E-07	9.95E+00	2.26E-08	1.23E-02	5.92E-06	1.26E-02	1.44E-03	2.25E-04	5.08E-04	1.77E-04	1.84E-04	1.58E-03	3.33E-05	0.00E+00	3.24E-04	2.37E-03
9	E33	60	Combination Long Haul Truck	26	0.00E+00	1.13E-05	6.19E-07	9.40E+00	7.64E-08	1.48E-02	9.47E-06	1.34E-02	1.51E-03	2.18E-04	1.07E-03	2.02E-04	2.11E-04	1.51E-03	3.15E-05	0.00E+00	8.64E-04	2.53E-03
9	E34	60	Passenger Car	978	0.00E+00	1.24E-05	1.34

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E37	60	Combination Long Haul Truck	21	0.00E+00	9.23E-06	5.04E-07	7.66E+00	6.23E-08	1.21E-02	7.72E-06	1.09E-02	1.23E-03	1.78E-04	8.75E-04	1.65E-04	1.72E-04	1.23E-03	2.57E-05	0.00E+00	7.04E-04	2.06E-03
9	E38	60	Passenger Car	681	0.00E+00	8.61E-06	9.35E-07	3.07E+01	6.11E-05	1.65E-01	1.94E-05	7.01E-04	6.88E-03	1.03E-03	1.89E-03	1.22E-03	1.25E-03	1.35E-04	1.56E-04	3.27E-08	6.40E-04	1.09E-04
9	E38	60	Passenger Truck	1141	0.00E+00	1.83E-05	1.94E-06	6.85E+01	1.15E-04	2.83E-01	3.79E-05	2.18E-03	1.26E-02	1.87E-03	3.61E-03	2.35E-03	2.41E-03	5.53E-04	3.44E-04	6.38E-08	1.20E-03	3.70E-04
9	E38	60	Single Unit Short Haul Truck	47	0.00E+00	1.05E-05	4.33E-07	7.81E+00	6.94E-06	1.37E-02	1.13E-05	4.02E-03	1.08E-03	1.81E-04	1.40E-03	2.69E-04	2.75E-04	7.91E-04	3.18E-05	1.31E-08	1.12E-03	7.53E-04
9	E38	60	Single Unit Long Haul Truck	2	0.00E+00	4.57E-07	1.88E-08	3.33E-01	3.01E-07	5.83E-04	4.95E-07	1.74E-04	4.85E-05	8.05E-06	6.11E-05	1.17E-05	1.19E-05	3.36E-05	1.36E-06	5.58E-10	4.92E-05	3.26E-05
9	E38	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.81E-03
9	E38	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.59E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	3.00E-03
10	E39	70	Passenger Car	273	0.00E+00	3.01E-06	3.27E-07	1.18E+01	2.14E-05	5.82E-02	6.79E-06	2.76E-04	2.11E-03	3.28E-04	6.62E-04	4.27E-04	4.38E-04	4.64E-05	5.99E-05	1.24E-08	2.24E-04	4.31E-05
10	E39	70	Passenger Truck	458	0.00E+00	6.34E-06	6.74E-07	2.66E+01	4.06E-05	1.03E-01	1.33E-05	8.04E-04	3.81E-03	5.90E-04	1.27E-03	8.25E-04	8.46E-04	2.03E-04	1.34E-04	2.39E-08	4.24E-04	1.35E-04
10	E39	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	E39	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	E39	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	E40	70	Passenger Car	272	0.00E+00	3.00E-06	3.26E-07	1.17E+01	2.13E-05	5.79E-02	6.76E-06	2.75E-04	2.10E-03	3.27E-04	6.59E-04	4.25E-04	4.36E-04	4.62E-05	5.97E-05	1.24E-08	2.23E-04	4.29E-05
10	E40	70	Passenger Truck	456	0.00E+00	6.31E-06	6.71E-07	2.64E+01	4.04E-05	1.02E-01	1.32E-05	8.01E-04	3.80E-03	5.87E-04	1.27E-03	8.22E-04	8.42E-04	2.02E-04	1.33E-04	2.38E-08	4.23E-04	1.34E-04
10	E40	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.61E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.01E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.93E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.30E-05
10	E40	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.84E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
10	E40	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.26E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
10	E41	70	Passenger Car	219	0.00E+00	2.41E-06	2.62E-07	9.45E+00	1.71E-05	4.66E-02	5.44E-06	2.22E-04	1.69E-03	2.63E-04	5.31E-04	3.42E-04	3.51E-04	3.72E-05	4.80E-05	9.98E-09	1.79E-04	3.46E-05
10	E41	70	Passenger Truck	367	0.00E+00	5.08E-06	5.40E-07	2.13E+01	3.25E-05	8.25E-02	1.06E-05	6.44E-04	3.06E-03	4.73E-04	1.02E-03	6.62E-04	6.78E-04	1.63E-04	1.07E-04	1.92E-08	3.40E-04	1.08E-04
10	E41	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E42	70	Passenger Car	280	0.00E+00	3.08E-06	3.35E-07	1.21E+01	2.19E-05	5.96E-02	6.95E-06	2.83E-04	2.16E-03	3.36E-04	6.78E-04	4.37E-04	4.49E-04	4.76E-05	6.14E-05	1.28E-08	2.29E-04	4.42E-05
10	E42	70	Passenger Truck	469	0.00E+00	6.49E-06	6.90E-07	2.72E+01	4.16E-05	1.05E-01	1.36E-05	8.24E-04	3.91E-03	6.04E-04	1.30E-03	8.46E-04	8.67E-04	2.08E-04	1.37E-04	2.45E-08	4.35E-04	1.38E-04
10	E42	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E42	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
10	E42	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
10	E43	70	Passenger Car	221	0.00E+00	2.43E-06	2.64E-07	9.54E+00	1.73E-05	4.70E-02	5.49E-06	2.23E-04	1.70E-03	2.65E-04	5.35E-04	3.45E-04	3.54E-04	3.75E-05	4.84E-05	1.01E-08	1.81E-04	3.49E-05
10	E43	70	Passenger Truck	370	0.00E+00	5.12E-06	5.45E-07	2.15E+01	3.28E-05	8.32E-02	1.07E-05	6.50E-04	3.08E-03	4.77E-04	1.03E-03	6.67E-04	6.84E-04	1.64E-04	1.08E-04	1.93E-08	3.43E-04	1.09E-04
10	E43	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.37E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	E43	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E43	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E44	70	Passenger Car	205	0.00E+00	2.25E-06	2.45E-07	8.83E+00	1.60E-05	4.35E-02	5.08E-06	2.07E-04	1.58E-03	2.45E-04	4.95E-04	3.19E-04	3.28E-04	3.47E-05	4.48E-05	9.31E-09	1.68E-04	3.23E-05
10	E44	70	Passenger Truck	342	0.00E+00	4.74E-06	5.04E-07	1.99E+01	3.04E-05	7.70E-02	9.94E-06	6.01E-04	2.85E-03	4.41E-04	9.51E-04	6.18E-04	6.33E-04	1.52E-04	9.99E-05	1.79E-08	3.18E-04	1.01E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E44	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E44	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
11	E45	80	Passenger Car	73	0.00E+00	7.51E-07	8.17E-08	3.07E+00	5.33E-06	1.49E-02	1.69E-06	7.60E-05	3.99E-04	6.69E-05	1.65E-04	1.07E-04	1.09E-04	1.09E-05	1.56E-05	3.34E-09	5.59E-05	1.19E-05
11	E45	80	Passenger Truck	123	0.00E+00	1.55E-06	1.65E-07	6.94E+00	1.01E-05	2.63E-02	3.28E-06	2.05E-04	7.11E-04	1.18E-04	3.15E-04	2.04E-04	2.09E-04	5.04E-05	3.50E-05	6.36E-09	1.05E-04	3.41E-05
11	E45	80	Single Unit Short Haul Truck	68	0.00E+00	9.33E-06	3.64E-07	1.11E+01	6.33E-06	2.03E-02	1.03E-05	3.88E-03	7.64E-04	1.56E-04	1.29E-03	2.38E-04	2.43E-04	1.13E-03	4.53E-05	1.80E-08	1.04E-03	7.26E-04
11	E45	80	Single Unit Long Haul Truck	3	0.00E+00	4.05E-07	1.56E-08	4.71E-01	2.70E-07	8.43E-04	4.45E-07	1.66E-04	3.50E-05	6.93E-06	5.60E-05	1.02E-05	1.04E-05	4.76E-05	1.92E-06	7.48E-10	4.56E-05	3.10E-05
11	E45	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.23E-03
11	E45	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.27E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	E46	80	Passenger Car	322	0.00E+00	3.30E-06	3.58E-07	1.35E+01	2.34E-05	6.53E-02	7.43E-06	3.33E-04	1.75E-03	2.93E-04	7.25E-04	4.67E-04	4.80E-04	4.78E-05	6.86E-05	1.47E-08	2.45E-04	5.20E-05
11	E46	80	Passenger Truck	538	0.00E+00	6.79E-06	7.24E-07	3.04E+01	4.42E-05	1.16E-01	1.44E-05	8.99E-04	3.12E-03	5.20E-04	1.38E-03	8.96E-04	9.18E-04	2.21E-04	1.53E-04	2.79E-08	4.63E-04	1.50E-04
11	E46	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.08E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
11	E46	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.88E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.66E-05
11	E46	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	6.00E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.13E-03
11	E46	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.41E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.21E-03
11	E47	80	Passenger Car	92	0.00E+00	9.39E-07	1.02E-07	3.84E+00	6.67E-06	1.86E-02	2.12E-06	9.50E-05	4.99E-04	8.36E-05	2.07E-04	1.33E-04	1.37E-04	1.36E-05	1.95E-05	4.18E-09	6.99E-05	1.48E-05
11	E47	80	Passenger Truck	153	0.00E+00	1.93E-06	2.06E-07	8.67E+00	1.26E-05	3.29E-02	4.10E-06	2.56E-04	8.89E-04	1.48E-04	3.93E-04	2.55E-04	2.62E-04	6.30E-05	4.37E-05	7.95E-09	1.32E-04	4.27E-05
11	E47	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.56E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.23E-04
11	E47	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.24E-06
11	E47	80	Combination Short Haul Truck	6	0.00E+00	1.19E-06	8.78E-08	1.93E+00	3.11E-09	1.81E-03	8.48E-07	1.83E-03	1.37E-04	2.49E-05	7.19E-05	2.56E-05	2.66E-05	3.07E-04	6.45E-06	0.00E+00	4.53E-05	3.45E-04
11	E47	80	Combination Long Haul Truck	5	0.00E+00	1.65E-06	9.33E-08	1.79E+00	1.05E-08	2.14E-03	1.36E-06	1.96E-03	1.42E-04	2.27E-05	1.51E-04	3.01E-05	3.13E-05	2.87E-04	6.00E-06	0.00E+00	1.20E-04	3.69E-04
11	E48	80	Passenger Car	327	0.00E+00	3.35E-06	3.65E-07	1.37E+01	2.38E-05	6.65E-02	7.56E-06	3.39E-04	1.78E-03	2.99E-04	7.38E-04	4.76E-04	4.88E-04	4.86E-05	6.98E-05	1.49E-08	2.50E-04	5.29E-05
11	E48	80	Passenger Truck	548	0.00E+00	6.91E-06	7.37E-07	3.10E+01	4.49E-05	1.18E-01	1.46E-05	9.15E-04	3.18E-03	5.29E-04	1.40E-03	9.11E-04	9.34E-04	2.25E-04	1.56E-04	2.84E-08	4.71E-04	1.52E-04
11	E48	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	E48	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.71E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	E48	80	Combination Short Haul Truck	16	0.00E+00	3.34E-06	2.47E-07	5.44E+00	8.75E-09	5.09E-03	2.39E-06	5.17E-03	3.87E-04	7.01E-05	2.03E-04	7.22E-05	7.49E-05	8.64E-04	1.82E-05	0.00E+00	1.28E-04	9.73E-04
11	E48	80	Combination Long Haul Truck	15	0.00E+00	4.66E-06	2.63E-07	5.05E+00	2.96E-08	6.03E-03	3.84E-06	5.52E-03	4.00E-04	6.40E-05	4.27E-04	8.47E-05	8.82E-05	8.10E-04	1.69E-05	0.00E+00	3.38E-04	1.04E-03
11	E49	80	Passenger Car	49	0.00E+00	5.06E-07	5.50E-08	2.07E+00	3.59E-06	1.00E-02	1.14E-06	5.12E-05	2.69E-04	4.50E-05	1.11E-04	7.17E-05	7.36E-05	7.34E-06	1.05E-05	2.25E-09	3.76E-05	7.98E-06
11	E49	80	Passenger Truck	83	0.00E+00	1.04E-06	1.11E-07	4.67E+00	6.78E-06	1.77E-02	2.21E-06	1.38E-04	4.79E-04	7.97E-05	2.12E-04	1.38E-04	1.41E-04	3.39E-05	2.36E-05	4.28E-09	7.10E-05	2.30E-05
11	E49	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.33E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.57E-04
11	E49	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.91E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.68E-04
11	E50	80	Passenger Car	273	0.00E+00	2.80E-06	3.04E-07	1.14E+01	1.99E-05	5.55E-02	6.31E-06	2.83E-04	1.49E-03	2.49E-04	6.15E-04	3.97E-04	4.07E-04	4.06E-05	5.82E-05	1.24E-08	2.08E-04	4.41E-05
11	E50	80	Passenger Truck	457	0.00E+00	5.76E-06	6.15E-07	2.58E+01	3.75E-05	9.81E-02	1.22E-05	7.63E-04	2.65E-03	4.41E-04	1.17E-03	7.60E-04	7.80E-04	1.88E-04	1.30E-04	2.37E-08	3.93E-04	1.27E-04
11	E50	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.57E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.80E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.10E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	E50	80	Combination Short Haul Truck	36	0.00E+00	7.44E-06	5.51E-07	1.21E+01	1.95E-08	1.13E-02	5.32E-06	1.15E-02	8.61E-04	1.56E-04	4.51E-04	1.61E-04	1.67E-04	1.92E-03	4.05E-05	0.00E+00	2.84E-04	2.17E-03
11	E50	80	Combination Long Haul Truck	33	0.00E+00	1.04E-05	5.85E-07	1.12E+01	6.59E-08	1.34E-02	8.55E-06	1.23E-02	8.90E-04	1.42E-04	9.50E-04	1.89E-04	1.96E-04	1.80E-03	3.76E-05	0.00E+00	7.53E-04	2.32E-03
11	E51	80	Passenger Car	12	0.00E+00	1.19E-07	1.29E-08	4.86E-01	8.43E-07	2.36E-03	2.68E-07	1.20E-05	6.32E-05	1.06E-05	2.61E-05	1.69E-05	1.73E-05	1.72E-06	2.47E-06	5.28E-10	8.84E-06	1.87E-06
11	E51	80	Passenger Truck	19	0.00E+00	2.45E-07	2.61E-08	1.10E+00	1.59E-06	4.17E-03	5.19E-07	3.24E-05	1.12E-04	1.87E-05	4.98E-05	3.23E-05	3.31E-05	7.97E-06	5.53E-06	1.01E-09	1.67E-05	5.40E-06
11	E51	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.67E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.14E-05
11	E52	80	Passenger Car	304	0.00E+00	3.11E-06	3.38E-07	1.27E+01	2.21E-05	6.17E-02	7.02E-06	3.15E-04	1.65E-03	2.77E-04	6.85E-04	4.41E-04	4.53E-04	4.51E-05	6.48E-05	1.38E-08	2.32E-04	4.91E-05
11	E52	80	Passenger Truck	508	0.00E+00	6.41E-06	6.84E-07	2.87E+01	4.17E-05	1.09E-01	1.36E-05	8.49E-04	2.95E-03	4.91E-04	1.30E-03	8.46E-04	8.67E-04	2.09E-04	1.45E-04	2.63E-08	4.37E-04	1.41E-04
11	E52	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.73E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.11E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.17E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.23E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.27E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	E53	80	Passenger Car	102	0.00E+00	1.05

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E56	80	Combination Long Haul Truck	26	0.00E+00	8.26E-06	4.66E-07	8.95E+00	5.25E-08	1.07E-02	6.81E-06	9.80E-03	7.09E-04	1.14E-04	7.57E-04	1.50E-04	1.57E-04	1.44E-03	3.00E-05	0.00E+00	6.00E-04	1.85E-03
10	E57	70	Passenger Car	277	0.00E+00	3.05E-06	3.32E-07	1.20E+01	2.17E-05	5.91E-02	6.89E-06	2.81E-04	2.14E-03	3.33E-04	6.72E-04	4.33E-04	4.45E-04	4.71E-05	6.08E-05	1.26E-08	2.27E-04	4.38E-05
10	E57	70	Passenger Truck	465	0.00E+00	6.43E-06	6.84E-07	2.69E+01	4.12E-05	1.04E-01	1.35E-05	8.16E-04	3.87E-03	5.99E-04	1.29E-03	8.38E-04	8.59E-04	2.06E-04	1.36E-04	2.43E-08	4.31E-04	1.37E-04
10	E57	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.71E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.26E-04
10	E57	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	E57	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
10	E58	70	Passenger Car	228	0.00E+00	2.51E-06	2.72E-07	9.83E+00	1.78E-05	4.85E-02	5.65E-06	2.30E-04	1.75E-03	2.73E-04	5.51E-04	3.55E-04	3.65E-04	3.87E-05	4.99E-05	1.04E-08	1.87E-04	3.59E-05
10	E58	70	Passenger Truck	381	0.00E+00	5.28E-06	5.61E-07	2.21E+01	3.38E-05	8.57E-02	1.11E-05	6.70E-04	3.18E-03	4.91E-04	1.06E-03	6.88E-04	7.05E-04	1.69E-04	1.11E-04	1.99E-08	3.54E-04	1.12E-04
10	E58	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.20E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.73E-06
10	E58	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.64E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.73E-04
10	E58	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.96E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.35E-04
11	E59	80	Passenger Car	222	0.00E+00	2.28E-06	2.48E-07	9.32E+00	1.62E-05	4.52E-02	5.14E-06	2.31E-04	1.21E-03	2.03E-04	5.02E-04	3.23E-04	3.32E-04	3.31E-05	4.75E-05	1.01E-08	1.70E-04	3.60E-05
11	E59	80	Passenger Truck	373	0.00E+00	4.70E-06	5.01E-07	2.11E+01	3.06E-05	7.99E-02	9.96E-06	6.22E-04	2.16E-03	3.59E-04	9.55E-04	6.20E-04	6.35E-04	1.53E-04	1.06E-04	1.93E-08	3.20E-04	1.04E-04
11	E59	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E59	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	2.00E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.77E-04
11	E59	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.14E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.03E-04
11	E60	80	Passenger Car	191	0.00E+00	1.96E-06	2.12E-07	7.99E+00	1.39E-05	3.87E-02	4.41E-06	1.98E-04	1.04E-03	1.74E-04	4.30E-04	2.77E-04	2.85E-04	2.83E-05	4.07E-05	8.69E-09	1.45E-04	3.08E-05
11	E60	80	Passenger Truck	319	0.00E+00	4.03E-06	4.29E-07	1.80E+01	2.62E-05	6.85E-02	8.53E-06	5.33E-04	1.85E-03	3.08E-04	8.19E-04	5.31E-04	5.45E-04	1.31E-04	9.10E-05	1.65E-08	2.74E-04	8.88E-05
11	E60	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.11E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	E60	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.04E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.68E-06
11	E60	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.67E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.02E-04
11	E60	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.85E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.37E-04
11	E61	80	Passenger Car	222	0.00E+00	2.28E-06	2.48E-07	9.32E+00	1.62E-05	4.52E-02	5.14E-06	2.31E-04	1.21E-03	2.03E-04	5.02E-04	3.23E-04	3.32E-04	3.31E-05	4.75E-05	1.01E-08	1.70E-04	3.60E-05
11	E61	80	Passenger Truck	373	0.00E+00	4.70E-06	5.01E-07	2.11E+01	3.06E-05	7.99E-02	9.96E-06	6.22E-04	2.16E-03	3.59E-04	9.55E-04	6.20E-04	6.35E-04	1.53E-04	1.06E-04	1.93E-08	3.20E-04	1.04E-04
11	E61	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E61	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	2.00E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.77E-04
11	E61	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.14E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.03E-04
11	E62	80	Passenger Car	191	0.00E+00	1.96E-06	2.12E-07	7.99E+00	1.39E-05	3.87E-02	4.41E-06	1.98E-04	1.04E-03	1.74E-04	4.30E-04	2.77E-04	2.85E-04	2.83E-05	4.07E-05	8.69E-09	1.45E-04	3.08E-05
11	E62	80	Passenger Truck	319	0.00E+00	4.03E-06	4.29E-07	1.80E+01	2.62E-05	6.85E-02	8.53E-06	5.33E-04	1.85E-03	3.08E-04	8.19E-04	5.31E-04	5.45E-04	1.31E-04	9.10E-05	1.65E-08	2.74E-04	8.88E-05
11	E62	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.11E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	E62	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.04E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.68E-06
11	E62	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.67E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.02E-04
11	E62	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.85E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.37E-04
10	E63	70	Passenger Car	907	0.00E+00	9.98E-06	1.08E-06	3.91E+01	7.08E-05	1.93E-01	2.25E-05	9.17E-04	6.98E-03	1.09E-03	2.20E-03	1.42E-03	1.45E-03	1.54E-04	1.99E-04	4.13E-08	7.43E-04	1.43E-04
10	E63	70	Passenger Truck	1518	0.00E+00	2.10E-05	2.23E-06	8.81E+01	1.35E-04	3.41E-01	4.41E-05	2.67E-03	1.26E-02	1.96E-03	4.21E-03	2.74E-03	2.81E-03	6.73E-04	4.43E-04	7.94E-08	1.41E-03	4.48E-04
10	E63	70	Single Unit Short Haul Truck	98	0.00E+00	1.72E-05	6.98E-07	1.60E+01	1.15E-05	2.90E-02	1.87E-05	6.85E-03	1.55E-03	2.85E-04	2.32E-03	4.42E-04	4.50E-04	1.63E-03	6.51E-05	2.63E-08	1.87E-03	1.28E-03
10	E63	70	Single Unit Long Haul Truck	4	0.00E+00	7.48E-07	3.01E-08	6.78E-01	4.96E-07	1.22E-03	8.14E-07	2.95E-04	7.11E-05	1.27E-05	1.01E-04	1.91E-05	1.95E-05	6.86E-05	2.76E-06	1.11E-09	8.17E-05	5.51E-05
10	E63	70	Combination Short Haul Truck	65	0.00E+00	1.68E-05	1.25E-06	2.27E+01	4.27E-08	2.43E-02	1.20E-05	2.52E-02	2.37E-03	3.96E-04	1.01E-03	3.65E-04	3.79E-04	3.61E-03	7.60E-05	0.00E+00	6.31E-04	4.75E-03
10	E63	70	Combination Long Haul Truck	60	0.00E+00	2.31E-05	1.31E-06	2.13E+01	1.45E-07	2.90E-02	1.90E-05	2.70E-02	2.47E-03	3.72E-04	2.10E-03	4.22E-04	4.39E-04	3.43E-03	7.15E-05	0.00E+00	1.66E-03	5.08E-03
10	E64	70	Passenger Car	680	0.00E+00	7.49E-06	8.14E-07	2.93E+01	5.31E-05	1.45E-01	1.69E-05	6.88E-04	5.24E-03	8.16E-04	1.65E-03	1.06E-03	1.09E-03	1.16E-04	1.49E-04	3.10E-08	5.57E-04	1.07E-04
10	E64	70	Passenger Truck	1139	0.00E+00	1.58E-05	1.68E-06	6.61E+01	1.01E-04	2.56E-01	3.31E-05	2.00E-03	9.49E-03	1.47E-03	3.16E-03	2.05E-03	2.11E-03	5.05E-04	3.32E-04	5.95E-08	1.06E-03	3.36E-04
10	E64	70	Single Unit Short Haul Truck	66	0.00E+00	1.16E-05	4.72E-07	1.08E+01	7.79E-06	1.96E-02	1.26E-05	4.63E-03	1.05E-03	1.93E-04	1.57E-03	2.99E-04	3.05E-04	1.10E-03	4.40E-05	1.78E-08	1.26E-03	8.67E-04
10	E64	70	Single Unit Long Haul Truck	3	0.00E+00	5.06E-07	2.04E-08	4.59E-01	3.35E-07	8.24E-04	5.50E-07	1.99E-04	4.81E-05	8.62E-06	6.84E-05	1.29E-05	1.32E-05	4.64E-05	1.87E-06	7.49E-10	5.53E-05	3.73E-05
10	E64	70	Combination Short Haul Truck	43	0.00E+00	1.10E-05	8.21E-07	1.49E+01	2.80E-08	1.59E-02	7.87E-06	1.65E-02	1.56E-03	2.60E-04	6.62E-04	2.39E-04	2.48E-04	2.37E-03	4.99E-05	0.00E+00	4.14E-04	3.11E-03
10	E64	70	Combination Long Haul Truck	39	0.00E+00	1.51E-05	8.61E-07	1.40E+01	9.49E-08	1.90E-02	1.24E-05	1.77E-02	1.62E-03	2.44E-04	1.38E-03	2.77E-04	2.88E-04	2.25E-03	4.69E-05	0.00E+00	1.09E-03	3.33E-03
10	E65	70	Passenger Car	887	0.00E+00	9.77E-06	1.06E-06	3.83E+01	6.93E-05	1.89E-01	2.20E-05	8.97E-04	6.83E-03	1.06E-03	2.15E-03	1.39E-03	1.42E-03	1.51E-04	1.94E-04	4.04E-08	7.27E-04	1.40E-04
10	E65	70	Passenger Truck	1486	0.00E+00	2.06E-05	2.19E-06	8.62E+01	1.32E-04	3.34E-01	4.31E-05	2.61E-03	1.24E-02	1.91E-03	4.12E-03	2.68E-03	2.75E-03	6.59E-04	4.34E-04	7.77E-08	1.38E-03	4.38E-04
10	E65	70	Single Unit Short Haul Truck	100	0.00E+00	1.75E-05	7.12E-07	1.63E+01	1.17E-05	2.96E-02	1.91E-05	6.98E-03	1.58E-03	2.91E-04	2.36E-03	4.50E-04	4.59E-04	1.66E-03	6.64E-05	2.68E-08	1.90E-03	1.31E-03
10	E65	70	Single Unit Long Haul Truck	4	0.00E+00	7.63E-07	3.07E-08	6.92E-01	5.06E-07	1.24E-03	8.30E-07	3.00E-04	7.25E-05	1.30E-05	1.03E-04	1.94E-05	1.98E-05	7.00E-05	2.82E-06	1.13E-09	8.33E-05	5.62E-05
10	E65	70	Combination Short Haul Truck	67	0.00E+00	1.72E-05	1.28E-06	2.33E+01	4.38E-08	2.49E-02	1.23E-05	2.58E-02	2.43E-03	4.05E-04	1.03E-03	3.73E-04	3.88E-04	3.70E-03	7.78E-05	0.00E+00	6.46E-04	4.86E-03
10	E65	70	Combination Long Haul Truck	61	0.00E+00	2.36E-05	1.34E-06	2.19E+01	1.48E-07	2.97E-02	1.94E-05	2.76E-02	2.53E-03	3.81E-04	2.15E-03	4.32E-04	4.50E-04	3.51E-03	7.32E-05	0.00E+00	1.70E-03	5.20E-03
10	E66	70	Passenger Car	709	0.00E+00	7.80E-06	8.48E-07	3.06E+01	5.54E-05	1.51E-01	1.76E-05	7.17E-04	5.46E-03	8.50E-04	1.72E-03	1.11E-03	1.14E-03	1.20E-04	1.55E-04	3.23E-08	5.80E-04	1.12E-04
10	E66	70	Passenger Truck	1186	0.00E+00	1.64E-05	1.75E-06	6.88E+01	1.05E-04	2.67E-01	3.44E-05	2.08E-03	9.88E-03	1.53E-03	3.29E-03	2.14E-03	2.19E-03	5.26E-04	3.46E-04	6.20E-08	1.10E-03	3.50E-04
10	E66	70	Single Unit Short Haul Truck	73	0.00E+00	1.28E-05	5.20E-07	1.19E+01	8.59E-06	2.16E-02	1.39E-05	5.10E-03	1.16E-03	2.12E-04	1.73E-03	3.29E-04	3.36E-04	1.21E-03	4.85E-05	1.96E-08	1.39E-03	9.54E-04
10	E66	70	Single Unit Long Haul Truck	3	0.00E+00	5.57E-07	2.24E-08	5.05E-01	3.70E-07	9.08E-04	6.06E-07	2.20E-04	5.30E-05	9.49E-06	7.54E-05	1.42E-05	1.45E-05	5.11E-05	2.06E-06	8.25E-10	6.09E-05	4.11E-05
10	E66	70	Combination Short Haul Truck	46	0.00E+00	1.18E-05	8.81E-07	1.60E+01	3.01E-08	1.71E-02	8.44E-06	1.77E-02	1.67E-03	2.78E-04	7.11E-04	2.57E-04	2.66E-04	2.54E-03	5.35E-05	0.00E+00	4.44E-04	3.34E-03
10	E66	70	Combination Long Haul Truck	42	0.00E+00	1.62E-05	9.24E-07	1.50E+01	1.02E-07	2.04E-02	1.34E-05	1.90E-02	1.74E-03	2.62E-04	1.48E-03	2.97E-04	3.09E-04	2.41E-03	5.03E-05	0.00E+00	1.17E-03	3.58E-03
11	E67	80	Passenger Car	378	0.00E+00	3.88E-06	4.22E-07	1.59E+01	2.75E-05	7.69E-02	8.75E-06	3.92E-04	2.06E-03	3.45E-04	8.53E-04	5.50E-04	5.65E-04	5.63E-05	8.07E-05	1.72E-08	2.89E-04	6.12E-05
11	E67	80	Passenger Truck	634	0.00E+00	7.99E-06	8.52E-07	3.58E+01	5.20E-05	1.36E-01	1.69E-05	1.06E-03	3.67E-03	6.11E-04	1.62E-03	1.05E-03	1.08E-03	2.60E-04	1.81E-04	3.28E-08	5.44E-04	1.76E-04
11	E67	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.19E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.09E-04
11	E67	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.34E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.75E-05
11	E67	80	Combination Short Haul Truck	24	0.00E+00	4.85E-06	3.59E-07	7.89E+00	1.27E-08	7.39E-03	3.47E-06	7.50E-03	5.62E-04	1.02E-04	2.94E-04	1.05E-04	1.09E-04	1.25E-03	2.64E-05	0.00E+00	1.85E-04	1.41E-03
11	E67	80	Combination Long Haul Truck	21	0.00E+00	6.76E-06	3.81E-07	7.32E+00	4.30E-08	8.75E-03	5.57E-06	8.02E-03	5.80E-04	9.29E-05	6.19E-04	1.23E-04	1.28E-04	1.18E-03	2.45E-05	0.00E+00	4.91E-04	1.51E-03
11	E68	80	Passenger Car	563	0.00E+00	5.77E-06	6.27E-07	2.36E+01	4.09E-05	1.14E-01	1.30E-05	5.83E-04	3.07E-03	5.14E-04	1.27E-03	8.18E-04	8.40E-04	8.37E-05	1.20E-04	2.57E-08	4.29E-04	9.10E-05
11	E68	80	Passenger Truck	942	0.00E+00	1.19E-05	1.27E-06	5.33E+01	7.73E-05	2.02E-01	2.52E-05	1.57E-03	5.46E-03	9.09E-04	2.42E-03	1.57E-03	1.61E-03	3.87E-04	2.69E-04	4.88E-08	8.09E-04	2.62E-04
11	E68	80	Single Unit Short Haul Truck	64	0.00E+00	8.81E-06	3.44E-07	1.05E+01	5.97E-06	1.91E-02	9.68E-06	3.66E-03	7.21E-04	1.47E-04	1.21E-03	2.25E-04	2.29E-04	1.07E-03	4.27E-05	1.69E-08	9.84E-04	6.85E-04
11	E68	80	Single Unit Long Haul Truck	3	0.00E+00	3.83E-07	1.48E-08	4.45E-01	2.54E-07	7.96E-04	4.20E-07	1.57E-04	3.31E-05	6.54E-06	5.29E-05	9.64E-06	9.83E-06	4.50E-05	1.81E-06	7.06E-10	4.30E-05	2.92E-05
11	E68	80	Combination Short Haul Truck	32	0.00E+00	6.68E-06	4.95E-07	1.09E+01	1.75E-08	1.02E-02	4.78E-06	1.03E-02	7.74E-04	1.40E-04	4.05E-04	1.44E-04	1.50E-04	1.73E-03	3.64E-05	0.00E+00	2.55E-04	1.95E-03
11	E68	80	Combination Long Haul Truck	30	0.00E+00	9.31E-06	5.26E-07	1.01E+01	5.92E-08	1.21E-02	7.68E-06	1.10E-02	8.00E-04	1.28E-04	8.53E-04	1.69E-04	1.76E-04	1.62E-03	3.38E-05	0.00E+00	6.77E-04	2.08E-03
10	E69	70	Passenger Car	354	0.00E+00	3.90E-06	4.24E-07	1.53E+01	2.77E-05	7.54E-02	8.79E-06	3.58E-04	2.73E-03	4.25E-04	8.57E-04	5.53E-04	5.67E-04	6.02E-05	7.76E-05	1.61E-08	2.90E-04	5.59E-05
10	E69	70	Passenger Truck	593	0.00E+00	8.21E-06	8.73E-07	3.44E+01	5.26E-05	1.33E-01	1.72E-05	1.04E-03	4.94E-03	7.64E-04	1.65E-03	1.07E-03	1.10E-03	2.63E-04	1.73E-04	3.10E-08	5.50E-04	1.75E-04
10	E69	70	Single Unit Short Haul Truck	18	0.00E+00	3.20E-06	1.30E-07	2.98E+00	2.15E-06	5.41E-03	3.48E-06	1.28E-03	2.89E-04	5.31E-05	4.32E-04	8.23E-05	8.39E-05	3.03E-04	1.21E-05	4.90E-09	3.48E-04	2.39E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	5.61E-09	1.26E-01	9.24E-08	2.27E-04	1.52E-07	5.49E-05	1.32E-05	2.37E-06	1.88E-05	3.55E-06	3.62E-06	1.28E-05	5.15E-07	2.06E-10	1.52E-05	1.03E-05
10	E69	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.43E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.46E-04
10	E69	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.67E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.91E-04
10	E70	70	Passenger Car	603	0.00E+00	6.64E-06	7.22E-07	2.60E+01	4.71E-05	1.28E-01	1.50E-05	6.10E-04	4.65E-03	7.24E-04	1.46E-03	9.42E-04	9.66E-04	1.02E-04	1.32E-04	2.75E-08	4.94E-04	9.51E-05
10	E70	70	Passenger Truck	1010	0.00E+00	1.40E-05	1.49E-06	5.86E+01	8.95E-05	2.27E-01	2.93E-05	1.77E-03	8.41E-03	1.30E-03	2.80E-03	1.82E-03	1.87E-03	4.48E-04	2.95E-04	5.28E-08	9.37E-04	2.98E-04
10	E70	70	Single Unit Short Haul Truck	30	0.00E+00	5.23E-06	2.12E-07	4.87E+00	3.50E-06	8.82E-03	5.68E-06	2.08E-03	4.72E-04	8.66E-05	7.04E-04	1.34E-04	1.37E-04	4.94E-04	1.98E-05	7.99E-09	5.68E-04	3.89E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	2.27E-07	9.16E-09	2.06E-01	1.51E-07	3.70E-04	2.47E-07	8.96E-05	2.16E-05	3.87E-06	3.07E-05	5.80E-06	5.91E-06	2.09E-05	8.40E-07	3.37E-10	2.48E-05	1.68E-05
10	E70	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	E70	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
11	E71	70	Passenger

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	E75	70	Passenger Truck	1316	0.00E+00	1.75E-05	1.86E-06	7.73E+01	1.13E-04	2.84E-01	3.68E-05	2.28E-03	1.06E-02	1.65E-03	3.52E-03	2.29E-03	2.34E-03	5.80E-04	3.89E-04	6.82E-08	1.18E-03	3.83E-04
53	E75	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.65E-04
53	E75	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
53	E75	70	Combination Short Haul Truck	40	0.00E+00	1.04E-05	7.71E-07	1.40E+01	2.63E-08	1.50E-02	7.39E-06	1.55E-02	1.46E-03	2.44E-04	6.22E-04	2.25E-04	2.33E-04	2.23E-03	4.68E-05	0.00E+00	3.89E-04	2.92E-03
53	E75	70	Combination Long Haul Truck	37	0.00E+00	1.42E-05	8.08E-07	1.31E+01	8.91E-08	1.79E-02	1.17E-05	1.66E-02	1.52E-03	2.29E-04	1.29E-03	2.60E-04	2.71E-04	2.11E-03	4.41E-05	0.00E+00	1.02E-03	3.13E-03
53	E76	70	Passenger Car	1385	0.00E+00	1.48E-05	1.61E-06	6.04E+01	1.05E-04	2.83E-01	3.33E-05	1.43E-03	1.05E-02	1.64E-03	3.25E-03	2.10E-03	2.15E-03	2.35E-04	3.07E-04	6.38E-08	1.10E-03	2.22E-04
53	E76	70	Passenger Truck	2319	0.00E+00	3.09E-05	3.28E-06	1.36E+02	1.98E-04	5.00E-01	6.49E-05	4.03E-03	1.88E-02	2.92E-03	6.21E-03	4.03E-03	4.13E-03	1.02E-03	6.85E-04	1.20E-07	2.07E-03	6.74E-04
53	E76	70	Single Unit Short Haul Truck	55	0.00E+00	9.61E-06	3.90E-07	8.95E+00	6.44E-06	1.62E-02	1.04E-05	3.83E-03	8.68E-04	1.59E-04	1.30E-03	2.47E-04	2.52E-04	9.09E-04	3.64E-05	1.47E-08	1.04E-03	7.16E-04
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	4.18E-07	1.68E-08	3.79E-01	2.77E-07	6.81E-04	4.55E-07	1.65E-04	3.97E-05	7.12E-06	5.65E-05	1.07E-05	1.09E-05	3.83E-05	1.54E-06	6.19E-10	4.56E-05	3.08E-05
53	E76	70	Combination Short Haul Truck	72	0.00E+00	1.86E-05	1.38E-06	2.51E+01	4.72E-08	2.68E-02	1.32E-05	2.78E-02	2.62E-03	4.37E-04	1.11E-03	4.03E-04	4.18E-04	3.99E-03	8.39E-05	0.00E+00	6.97E-04	5.24E-03
53	E76	70	Combination Long Haul Truck	66	0.00E+00	2.55E-05	1.45E-06	2.36E+01	1.60E-07	3.20E-02	2.09E-05	2.98E-02	2.73E-03	4.11E-04	2.32E-03	4.66E-04	4.85E-04	3.78E-03	7.90E-05	0.00E+00	1.83E-03	5.61E-03
53	E77	70	Passenger Car	819	0.00E+00	8.74E-06	9.50E-07	3.57E+01	6.20E-05	1.68E-01	1.97E-05	8.43E-04	6.21E-03	9.72E-04	1.92E-03	1.24E-03	1.27E-03	1.39E-04	1.82E-04	3.77E-08	6.50E-04	1.31E-04
53	E77	70	Passenger Truck	1371	0.00E+00	1.83E-05	1.94E-06	8.05E+01	1.17E-04	2.96E-01	3.83E-05	2.38E-03	1.11E-02	1.72E-03	3.67E-03	2.38E-03	2.44E-03	6.04E-04	4.05E-04	7.10E-08	1.23E-03	3.99E-04
53	E77	70	Single Unit Short Haul Truck	42	0.00E+00	7.42E-06	3.01E-07	6.91E+00	4.97E-06	1.25E-02	8.07E-06	2.95E-03	6.70E-04	1.23E-04	1.00E-03	1.90E-04	1.94E-04	7.02E-04	2.81E-05	1.13E-08	8.06E-04	5.53E-04
53	E77	70	Single Unit Long Haul Truck	2	0.00E+00	3.23E-07	1.30E-08	2.93E-01	2.14E-07	5.26E-04	3.51E-07	1.27E-04	3.07E-05	5.50E-06	4.36E-05	8.23E-06	8.39E-06	2.96E-05	1.19E-06	4.78E-10	3.52E-05	2.38E-05
53	E77	70	Combination Short Haul Truck	46	0.00E+00	1.18E-05	8.81E-07	1.60E+01	3.01E-08	1.71E-02	8.44E-06	1.77E-02	1.67E-03	2.78E-04	7.11E-04	2.57E-04	2.66E-04	2.54E-03	5.35E-05	0.00E+00	4.44E-04	3.34E-03
53	E77	70	Combination Long Haul Truck	42	0.00E+00	1.62E-05	9.24E-07	1.50E+01	1.02E-07	2.04E-02	1.34E-05	1.90E-02	1.74E-03	2.62E-04	1.48E-03	2.97E-04	3.09E-04	2.41E-03	5.03E-05	0.00E+00	1.17E-03	3.58E-03
53	E78	70	Passenger Car	1386	0.00E+00	1.48E-05	1.61E-06	6.05E+01	1.05E-04	2.84E-01	3.34E-05	1.43E-03	1.05E-02	1.65E-03	3.25E-03	2.10E-03	2.15E-03	2.35E-04	3.07E-04	6.38E-08	1.10E-03	2.22E-04
53	E78	70	Passenger Truck	2321	0.00E+00	3.09E-05	3.29E-06	1.36E+02	1.98E-04	5.01E-01	6.49E-05	4.03E-03	1.88E-02	2.92E-03	6.21E-03	4.03E-03	4.14E-03	1.02E-03	6.86E-04	1.20E-07	2.08E-03	6.75E-04
53	E78	70	Single Unit Short Haul Truck	57	0.00E+00	9.95E-06	4.04E-07	9.26E+00	6.67E-06	1.68E-02	1.08E-05	3.96E-03	8.98E-04	1.65E-04	1.34E-03	2.55E-04	2.60E-04	9.41E-04	3.77E-05	1.52E-08	1.08E-03	7.41E-04
53	E78	70	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	1.74E-08	3.92E-01	2.87E-07	7.05E-04	4.71E-07	1.70E-04	4.11E-05	7.37E-06	5.85E-05	1.10E-05	1.13E-05	3.97E-05	1.60E-06	6.41E-10	4.72E-05	3.19E-05
53	E78	70	Combination Short Haul Truck	78	0.00E+00	2.01E-05	1.49E-06	2.71E+01	5.09E-08	2.90E-02	1.43E-05	3.00E-02	2.83E-03	4.72E-04	1.20E-03	4.35E-04	4.51E-04	4.31E-03	9.06E-05	0.00E+00	7.52E-04	5.66E-03
53	E78	70	Combination Long Haul Truck	71	0.00E+00	2.75E-05	1.56E-06	2.54E+01	1.72E-07	3.46E-02	2.26E-05	3.22E-02	2.94E-03	4.43E-04	2.50E-03	5.03E-04	5.24E-04	4.08E-03	8.53E-05	0.00E+00	1.98E-03	6.06E-03
53	E79	70	Passenger Car	775	0.00E+00	8.27E-06	8.99E-07	3.38E+01	5.87E-05	1.59E-01	1.86E-05	7.97E-04	5.88E-03	9.20E-04	1.82E-03	1.17E-03	1.20E-03	1.32E-04	1.72E-04	3.57E-08	6.15E-04	1.24E-04
53	E79	70	Passenger Truck	1297	0.00E+00	1.73E-05	1.84E-06	7.62E+01	1.11E-04	2.80E-01	3.63E-05	2.25E-03	1.05E-02	1.63E-03	3.47E-03	2.26E-03	2.31E-03	5.72E-04	3.83E-04	6.72E-08	1.16E-03	3.77E-04
53	E79	70	Single Unit Short Haul Truck	59	0.00E+00	1.05E-05	4.25E-07	9.73E+00	7.00E-06	1.76E-02	1.14E-05	4.16E-03	9.44E-04	1.73E-04	1.41E-03	2.68E-04	2.74E-04	9.89E-04	3.96E-05	1.60E-08	1.14E-03	7.79E-04
53	E79	70	Single Unit Long Haul Truck	3	0.00E+00	4.55E-07	1.83E-08	4.12E-01	3.01E-07	7.41E-04	4.95E-07	1.79E-04	4.32E-05	7.74E-06	6.15E-05	1.16E-05	1.18E-05	4.17E-05	1.68E-06	6.73E-10	4.96E-05	3.35E-05
53	E79	70	Combination Short Haul Truck	20	0.00E+00	5.12E-06	3.81E-07	6.91E+00	1.30E-08	7.39E-03	3.64E-06	7.66E-03	7.21E-04	1.20E-04	3.07E-04	1.11E-04	1.15E-04	1.10E-03	2.31E-05	0.00E+00	1.92E-04	1.44E-03
53	E79	70	Combination Long Haul Truck	18	0.00E+00	7.02E-06	3.99E-07	6.49E+00	4.40E-08	8.82E-03	5.77E-06	8.20E-03	7.51E-04	1.13E-04	6.38E-04	1.28E-04	1.34E-04	1.04E-03	2.17E-05	0.00E+00	5.04E-04	1.54E-03
53	E80	70	Passenger Car	1281	0.00E+00	1.37E-05	1.49E-06	5.59E+01	9.71E-05	2.62E-01	3.08E-05	1.32E-03	9.72E-03	1.52E-03	3.01E-03	1.94E-03	1.99E-03	2.18E-04	2.84E-04	5.90E-08	1.02E-03	2.06E-04
53	E80	70	Passenger Truck	2146	0.00E+00	2.86E-05	3.04E-06	1.26E+02	1.83E-04	4.63E-01	6.00E-05	3.72E-03	1.74E-02	2.70E-03	5.74E-03	3.73E-03	3.82E-03	9.46E-04	6.34E-04	1.11E-07	1.92E-03	6.24E-04
53	E80	70	Single Unit Short Haul Truck	41	0.00E+00	7.25E-06	2.94E-07	6.75E+00	4.86E-06	1.22E-02	7.88E-06	2.89E-03	6.55E-04	1.20E-04	9.77E-04	1.86E-04	1.90E-04	6.86E-04	2.74E-05	1.11E-08	7.87E-04	5.40E-04
53	E80	70	Single Unit Long Haul Truck	2	0.00E+00	3.15E-07	1.27E-08	2.86E-01	2.09E-07	5.14E-04	3.43E-07	1.24E-04	3.00E-05	5.37E-06	4.26E-05	8.04E-06	8.20E-06	2.89E-05	1.17E-06	4.67E-10	3.44E-05	2.32E-05
53	E80	70	Combination Short Haul Truck	26	0.00E+00	6.73E-06	5.01E-07	9.09E+00	1.71E-08	9.72E-03	4.80E-06	1.01E-02	9.49E-04	1.58E-04	4.04E-04	1.46E-04	1.51E-04	1.45E-03	3.04E-05	0.00E+00	2.52E-04	1.90E-03
53	E80	70	Combination Long Haul Truck	24	0.00E+00	9.23E-06	5.25E-07	8.54E+00	5.79E-08	1.16E-02	7.59E-06	1.08E-02	9.88E-04	1.49E-04	8.39E-04	1.69E-04	1.76E-04	1.37E-03	2.86E-05	0.00E+00	6.63E-04	2.03E-03
10	E83	70	Passenger Car	307	0.00E+00	3.38E-06	3.68E-07	1.33E+01	2.40E-05	6.54E-02	7.63E-06	3.11E-04	2.37E-03	3.69E-04	7.44E-04	4.80E-04	4.92E-04	5.22E-05	6.74E-05	1.40E-08	2.52E-04	4.85E-05
10	E83	70	Passenger Truck	515	0.00E+00	7.13E-06	7.57E-07	2.99E+01	4.56E-05	1.16E-01	1.49E-05	9.04E-04	4.29E-03	6.63E-04	1.43E-03	9.28E-04	9.51E-04	2.28E-04	1.50E-04	2.69E-08	4.77E-04	1.52E-04
10	E83	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E83	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.43E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.46E-04
10	E83	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.67E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.91E-04
10	E84	70	Passenger Car	330	0.00E+00	3.63E-06	3.95E-07	1.42E+01	2.58E-05	7.02E-02	8.19E-06	3.33E-04	2.54E-03	3.96E-04	7.98E-04	5.15E-04	5.28E-04	5.60E-05	7.23E-05	1.50E-08	2.70E-04	5.20E-05
10	E84	70	Passenger Truck	552	0.00E+00	7.65E-06	8.13E-07	3.20E+01	4.90E-05	1.24E-01	1.60E-05	9.70E-04	4.60E-03	7.12E-04	1.53E-03	9.96E-04	1.02E-03	2.45E-04	1.61E-04	2.89E-08	5.12E-04	1.63E-04
10	E84	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	E84	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
10	E84	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.83E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.22E-04
10	E84	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.10E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.72E-04
9	E85	60	Passenger Car	1178	0.00E+00	1.49E-05	1.62E-06	5.31E+01	1.06E-04	2.86E-01	3.36E-05	1.21E-03	1.19E-02	1.78E-03	3.27E-03	2.11E-03	2.17E-03	2.34E-04	2.69E-04	5.66E-08	1.11E-03	1.89E-04
9	E85	60	Passenger Truck	1974	0.00E+00	3.16E-05	3.35E-06	1.19E+02	1.99E-04	4.90E-01	6.56E-05	3.77E-03	2.17E-02	3.24E-03	6.25E-03	4.07E-03	4.17E-03	9.56E-04	5.95E-04	1.10E-07	2.08E-03	6.40E-04
9	E85	60	Single Unit Short Haul Truck	35	0.00E+00	7.91E-06	3.27E-07	5.90E+00	5.24E-06	1.04E-02	8.56E-06	3.04E-03	8.15E-04	1.37E-04	1.06E-03	2.03E-04	2.07E-04	5.97E-04	2.40E-05	9.90E-09	8.48E-04	5.69E-04
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	3.45E-07	1.42E-08	2.51E-01	2.27E-07	4.40E-04	3.73E-07	1.32E-04	3.66E-05	6.08E-06	4.62E-05	8.84E-06	9.01E-06	2.54E-05	1.03E-06	4.21E-10	3.71E-05	2.46E-05
9	E85	60	Combination Short Haul Truck	22	0.00E+00	6.56E-06	4.82E-07	7.92E+00	1.80E-08	9.81E-03	4.72E-06	1.00E-02	1.15E-03	1.79E-04	4.05E-04	1.41E-04	1.46E-04	1.26E-03	2.65E-05	0.00E+00	2.58E-04	1.89E-03
9	E85	60	Combination Long Haul Truck	21	0.00E+00	9.02E-06	4.93E-07	7.48E+00	6.09E-08	1.18E-02	7.54E-06	1.07E-02	1.20E-03	1.74E-04	8.55E-04	1.61E-04	1.68E-04	1.20E-03	2.51E-05	0.00E+00	6.88E-04	2.01E-03
9	E86	60	Passenger Car	1675	0.00E+00	2.12E-05	2.30E-06	7.55E+01	1.50E-04	4.07E-01	4.77E-05	1.72E-03	1.69E-02	2.53E-03	4.65E-03	3.00E-03	3.08E-03	3.32E-04	3.83E-04	8.04E-08	1.57E-03	2.69E-04
9	E86	60	Passenger Truck	2804	0.00E+00	4.49E-05	4.76E-06	1.68E+02	2.83E-04	6.97E-01	9.32E-05	5.36E-03	3.09E-02	4.60E-03	8.88E-03	5.78E-03	5.92E-03	1.36E-03	8.45E-04	1.57E-07	2.96E-03	9.09E-04
9	E86	60	Single Unit Short Haul Truck	102	0.00E+00	2.29E-05	9.45E-07	1.70E+01	1.52E-05	3.00E-02	2.47E-05	8.79E-03	2.36E-03	3.96E-04	3.05E-03	5.88E-04	6.00E-04	1.73E-03	6.95E-05	2.86E-08	2.45E-03	1.64E-03
9	E86	60	Single Unit Long Haul Truck	5	0.00E+00	9.99E-07	4.11E-08	7.27E-01	6.57E-07	1.27E-03	1.08E-06	3.81E-04	1.06E-04	1.76E-05	1.33E-04	2.56E-05	2.61E-05	7.35E-05	2.97E-06	1.22E-09	1.07E-04	7.12E-05
9	E86	60	Combination Short Haul Truck	66	0.00E+00	1.94E-05	1.42E-06	2.34E+01	5.31E-08	2.90E-02	1.39E-05	2.96E-02	3.38E-03	5.29E-04	1.19E-03	4.17E-04	4.32E-04	3.72E-03	7.82E-05	0.00E+00	7.62E-04	5.58E-03
9	E86	60	Combination Long Haul Truck	61	0.00E+00	2.66E-05	1.46E-06	2.21E+01	1.80E-07	3.48E-02	2.23E-05	3.16E-02	3.55E-03	5.13E-04	2.53E-03	4.75E-04	4.95E-04	3.55E-03	7.40E-05	0.00E+00	2.03E-03	5.95E-03
9	E87	60	Passenger Car	1162	0.00E+00	1.47E-05	1.60E-06	5.24E+01	1.04E-04	2.82E-01	3.31E-05	1.20E-03	1.17E-02	1.76E-03	3.23E-03	2.08E-03	2.14E-03	2.30E-04	2.66E-04	5.58E-08	1.09E-03	1.87E-04
9	E87	60	Passenger Truck	1947	0.00E+00	3.12E-05	3.31E-06	1.17E+02	1.97E-04	4.84E-01	6.47E-05	3.72E-03	2.15E-02	3.19E-03	6.17E-03	4.01E-03	4.11E-03	9.43E-04	5.87E-04	1.09E-07	2.06E-03	6.31E-04
9	E87	60	Single Unit Short Haul Truck	113	0.00E+00	2.52E-05	1.04E-06	1.88E+01	1.67E-05	3.31E-02	2.73E-05	9.69E-03	2.60E-03	4.37E-04	3.37E-03	6.48E-04	6.61E-04	1.91E-03	7.66E-05	3.16E-08	2.71E-03	1.81E-03
9	E87	60	Single Unit Long Haul Truck	5	0.00E+00	1.10E-06	4.53E-08	8.02E-01	7.25E-07	1.40E-03	1.19E-06	4.20E-04	1.17E-04	1.94E-05	1.47E-04	2.82E-05	2.87E-05	8.10E-05	3.27E-06	1.34E-09	1.18E-04	7.86E-05
9	E87	60	Combination Short Haul Truck	72	0.00E+00	2.09E-05	1.54E-06	2.52E+01	5.73E-08	3.12E-02	1.50E-05	3.20E-02	3.65E-03	5.71E-04	1.29E-03	4.49E-04	4.67E-04	4.01E-03	8.44E-05	0.00E+00	8.22E-04	6.02E-03
9	E87	60	Combination Long Haul Truck	65	0.00E+00	2.87E-05	1.57E-06	2.38E+01	1.94E-07	3.75E-02	2.40E-05	3.41E-02	3.83E-03	5.53E-04	2.73E-03	5.13E-04	5.34E-04	3.83E-03	7.99E-05	0.00E+00	2.19E-03	6.42E-03
9	E88	60	Passenger Car	1073	0.00E+00	1.36E-05	1.47E-06	4.84E+01	9.62E-05	2.61E-01	3.06E-05	1.11E-03	1.08E-02	1.62E-03	2.98E-03	1.92E-03	1.97E-03	2.13E-04	2.45E-04	5.15E-08	1.01E-03	1.72E-04
9	E88	60	Passenger Truck	1798	0.00E+00	2.88E-05	3.05E-06	1.08E+02	1.82E-04	4.47E-01	5.97E-05	3.44E-03	1.98E-02	2.95E-03	5.69E-03	3.70E-03	3.80E-03	8.71E-04	5.42E-04	1.00E-07	1.90E-03	5.83E-04
9	E88	60	Single Unit Short Haul Truck	110	0.00E+00	2.46E-05	1.02E-06	1.83E+01	1.63E-05	3.22E-02	2.66E-05	9.44E-03	2.53E-03	4.26E-04	3.28E-03	6.32E-04	6.45E-04	1.86E-03	7.47E-05	3.08E-08	2.64E-03	1.77E-03
9	E88	60	Single Unit Long Haul Truck	5	0.00E+00	1.07E-06	4.41E-08	7.81E-01	7.07E-07	1.37E-03	1.16E-06	4.09E-04	1.14E-04	1.89E-05	1.43E-04	2.75E-05	2.80E-05	7.90E-05	3.19E-06	1.31E-09	1.15E-04	7.66E-05
9	E88	60	Combination Short Haul Truck	61	0.00E+00	1.79E-05	1.31E-06	2.16E+01	4.89E-08	2.67E-02	1.28E-05	2.73E-02	3.12E-03	4.87E-04	1.10E-03	3.84E-04	3.98E-04	3.43E-03	7.21E-05	0.00E+00	7.02E-04	5.14E-03
9	E88	60	Combination Long Haul Truck	56	0.00E+00	2.45E-05	1.34E-06	2.04E+01	1.66E-07	3.21E-02	2.05E-05	2.91E-02	3.27E-03	4.73E-04	2.33E-03	4.38E-04	4.56E-04	3.27E-03	6.82E-05	0.00E+00	1.87E-03	5.48E-03
9	E89	60	Passenger Car	181	0.00E+00	2.28E-06	2.48E-07	8.14E+00	1.62E-05	4.39E-02	5.14E-06	1.86E-04	1.82E-03	2.73E-04	5.02E-04	3.23E-04	3.32E-04	3.58E-05	4.13E-05	8.67E-09	1.70E-04	2.90E-05
9	E89	60	Passenger Truck	302	0.00E+00	4.84E-06	5.13E-07	1.82E+01	3.06E-05	7.52E-02	1.00E-05	5.78E-04	3.33E-03	4.96E-04	9.58E-04	6.23E-04	6.39E-04	1.47E-04	9.11E-05	1.69E-08	3.19E-04	9.80E-05
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	E90	60	Passenger Car	238	0.00E+00	3.01E-06	3.27E-07	1.07E+01	2.14E-05	5.78E-02	6.78E-06	2.45E-04	2.41E-03	3.60E-04	6.62E-04	4.27E-04	4.38E-04	4.72E-05	5.44E-05	1.14E-08	2.24E-04	3.83E-05
9	E90	60	Passenger Truck	399	0.00E+00	6.39E-06	6.77E-07	2.39E+01	4.03E-05	9.91E-02	1.33E-05	7.63E-04	4.39E-03	6.54E-04	1.26E-03	8.22E-04	8.42E-04	1.93E-04	1.20E-04	2.23E-08	4.21E-04	1.29E-04
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	E90	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.40E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.64E-04
9	E90	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.49E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.81E-04
9	E91	60	Passenger Car	4	0.00E+00	4.72E-08	5.13E-09	1.69E-01	3.35E-07	9.08E-04	1.06E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.87E-06	7.41E-07	8.55E-07	1.80E-10	3.51E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.98E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.61E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.72E-08	5.13E-09	1.69E-01	3.35E-07	9.08E-04	1.06E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.87E-06	7.41E-07	8.55E-07	1.80E-10	3.51E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.98E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.61E-06	2.03E-06
9	E93	60	Passenger Car

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F01	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
9	F01	60	Combination Short Haul Truck	10	0.00E+00	3.05E-06	2.24E-07	3.68E+00	8.36E-09	4.56E-03	2.19E-06	4.67E-03	5.33E-04	8.33E-05	1.88E-04	6.56E-05	6.81E-05	5.86E-04	1.23E-05	0.00E+00	1.20E-04	8.79E-04
9	F01	60	Combination Long Haul Truck	10	0.00E+00	4.20E-06	2.29E-07	3.48E+00	2.83E-08	5.48E-03	3.51E-06	4.97E-03	5.59E-04	8.08E-05	3.98E-04	7.48E-05	7.80E-05	5.59E-04	1.17E-05	0.00E+00	3.20E-04	9.37E-04
9	F02	60	Passenger Car	313	0.00E+00	3.95E-06	4.30E-07	1.41E+01	2.81E-05	7.60E-02	8.91E-06	3.22E-04	3.16E-03	4.73E-04	8.69E-04	5.60E-04	5.75E-04	6.20E-05	7.15E-05	1.50E-08	2.94E-04	5.03E-05
9	F02	60	Passenger Truck	524	0.00E+00	8.39E-06	8.90E-07	3.15E+01	5.30E-05	1.30E-01	1.74E-05	1.00E-03	5.77E-03	8.59E-04	1.66E-03	1.08E-03	1.11E-03	2.54E-04	1.58E-04	2.93E-08	5.53E-04	1.70E-04
9	F02	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.69E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.54E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.60E-05
9	F02	60	Combination Short Haul Truck	15	0.00E+00	4.27E-06	3.14E-07	5.16E+00	1.17E-08	6.39E-03	3.07E-06	6.53E-03	7.46E-04	1.17E-04	2.63E-04	9.18E-05	9.54E-05	8.20E-04	1.72E-05	0.00E+00	1.68E-04	1.23E-03
9	F02	60	Combination Long Haul Truck	13	0.00E+00	5.87E-06	3.21E-07	4.87E+00	3.96E-08	7.67E-03	4.91E-06	6.96E-03	7.82E-04	1.13E-04	5.57E-04	1.05E-04	1.09E-04	7.82E-04	1.63E-05	0.00E+00	4.48E-04	1.31E-03
9	F33	60	Passenger Car	212	0.00E+00	2.68E-06	2.91E-07	9.56E+00	1.90E-05	5.15E-02	6.04E-06	2.18E-04	2.14E-03	3.21E-04	5.89E-04	3.80E-04	3.90E-04	4.20E-05	4.85E-05	1.02E-08	1.99E-04	3.40E-05
9	F33	60	Passenger Truck	355	0.00E+00	5.69E-06	6.03E-07	2.13E+01	3.59E-05	8.82E-02	1.18E-05	6.79E-04	3.91E-03	5.82E-04	1.12E-03	7.32E-04	7.50E-04	1.72E-04	1.07E-04	1.98E-08	3.75E-04	1.15E-04
9	F33	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	F33	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
9	F34	60	Passenger Car	524	0.00E+00	6.62E-06	7.19E-07	2.36E+01	4.70E-05	1.27E-01	1.49E-05	5.39E-04	5.29E-03	7.92E-04	1.46E-03	9.38E-04	9.63E-04	1.04E-04	1.20E-04	2.52E-08	4.92E-04	8.41E-05
9	F34	60	Passenger Truck	877	0.00E+00	1.41E-05	1.49E-06	5.27E+01	8.86E-05	2.18E-01	2.91E-05	1.68E-03	9.67E-03	1.44E-03	2.78E-03	1.81E-03	1.85E-03	4.25E-04	2.64E-04	4.90E-08	9.26E-04	2.84E-04
9	F34	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.40E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
9	F34	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.05E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	F34	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.87E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.67E-03
9	F34	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.45E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.78E-03
11	F35	80	Passenger Car	111	0.00E+00	1.14E-06	1.24E-07	4.67E+00	8.11E-06	2.26E-02	2.58E-06	1.16E-04	6.07E-04	1.02E-04	2.51E-04	1.62E-04	1.66E-04	1.66E-05	2.38E-05	5.08E-09	8.50E-05	1.80E-05
11	F35	80	Passenger Truck	187	0.00E+00	2.35E-06	2.51E-07	1.05E+01	1.53E-05	4.00E-02	4.99E-06	3.12E-04	1.08E-03	1.80E-04	4.78E-04	3.10E-04	3.18E-04	7.66E-05	5.32E-05	9.67E-09	1.60E-04	5.19E-05
11	F35	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.75E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	F35	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.74E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.98E-06
11	F35	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.33E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.40E-04
11	F35	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.49E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.70E-04
11	F36	80	Passenger Car	409	0.00E+00	4.20E-06	4.56E-07	1.72E+01	2.98E-05	8.32E-02	9.46E-06	4.24E-04	2.23E-03	3.74E-04	9.23E-04	5.95E-04	6.11E-04	6.09E-05	8.74E-05	1.87E-08	3.12E-04	6.62E-05
11	F36	80	Passenger Truck	686	0.00E+00	8.65E-06	9.22E-07	3.88E+01	5.62E-05	1.47E-01	1.83E-05	1.15E-03	3.97E-03	6.62E-04	1.76E-03	1.14E-03	1.17E-03	2.82E-04	1.95E-04	3.55E-08	5.89E-04	1.91E-04
11	F36	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.25E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.14E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.60E-06
11	F36	80	Combination Short Haul Truck	12	0.00E+00	2.37E-06	1.76E-07	3.86E+00	6.21E-09	3.61E-03	1.70E-06	3.67E-03	2.75E-04	4.97E-05	1.44E-04	5.12E-05	5.32E-05	6.13E-04	1.29E-05	0.00E+00	9.06E-05	6.91E-04
11	F36	80	Combination Long Haul Truck	10	0.00E+00	3.30E-06	1.87E-07	3.58E+00	2.10E-08	4.28E-03	2.72E-06	3.92E-03	2.84E-04	4.54E-05	3.03E-04	6.01E-05	6.26E-05	5.75E-04	1.20E-05	0.00E+00	2.40E-04	7.38E-04
9	F37	60	Passenger Car	1045	0.00E+00	1.32E-05	1.43E-06	4.71E+01	9.36E-05	2.54E-01	2.98E-05	1.08E-03	1.05E-02	1.58E-03	2.90E-03	1.87E-03	1.92E-03	2.07E-04	2.39E-04	5.02E-08	9.82E-04	1.68E-04
9	F37	60	Passenger Truck	1749	0.00E+00	2.80E-05	2.97E-06	1.05E+02	1.77E-04	4.35E-01	5.81E-05	3.35E-03	1.93E-02	2.87E-03	5.54E-03	3.61E-03	3.69E-03	8.48E-04	5.27E-04	9.78E-08	1.85E-03	5.67E-04
9	F37	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.31E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.37E-03
9	F37	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.17E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.93E-05
9	F37	60	Combination Short Haul Truck	61	0.00E+00	1.77E-05	1.30E-06	2.14E+01	4.85E-08	2.65E-02	1.27E-05	2.71E-02	3.09E-03	4.83E-04	1.09E-03	3.80E-04	3.95E-04	3.40E-03	7.15E-05	0.00E+00	6.96E-04	5.10E-03
9	F37	60	Combination Long Haul Truck	55	0.00E+00	2.43E-05	1.33E-06	2.02E+01	1.64E-07	3.18E-02	2.03E-05	2.88E-02	3.24E-03	4.69E-04	2.31E-03	4.34E-04	4.52E-04	3.24E-03	6.76E-05	0.00E+00	1.86E-03	5.43E-03
9	F38	60	Passenger Car	685	0.00E+00	8.66E-06	9.41E-07	3.09E+01	6.14E-05	1.66E-01	1.95E-05	7.06E-04	6.92E-03	1.04E-03	1.90E-03	1.23E-03	1.26E-03	1.36E-04	1.57E-04	3.29E-08	6.44E-04	1.10E-04
9	F38	60	Passenger Truck	1148	0.00E+00	1.84E-05	1.95E-06	6.89E+01	1.16E-04	2.85E-01	3.81E-05	2.20E-03	1.26E-02	1.88E-03	3.64E-03	2.37E-03	2.42E-03	5.56E-04	3.46E-04	6.41E-08	1.21E-03	3.72E-04
9	F38	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	1.00E-02	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.88E-03
9	F38	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.34E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.12E-05
9	F38	60	Combination Short Haul Truck	90	0.00E+00	2.63E-05	1.93E-06	3.17E+01	7.19E-08	3.92E-02	1.89E-05	4.01E-02	4.58E-03	7.17E-04	1.62E-03	5.64E-04	5.86E-04	5.04E-03	1.06E-04	0.00E+00	1.03E-03	7.56E-03
9	F38	60	Combination Long Haul Truck	82	0.00E+00	3.61E-05	1.97E-06	2.99E+01	2.43E-07	4.71E-02	3.02E-05	4.28E-02	4.81E-03	6.95E-04	3.42E-03	6.44E-04	6.71E-04	4.80E-03	1.00E-04	0.00E+00	2.75E-03	8.05E-03
11	F39	80	Passenger Car	26	0.00E+00	2.65E-07	2.87E-08	1.08E+00	1.88E-06	5.24E-03	5.96E-07	2.67E-05	1.41E-04	2.35E-05	5.82E-05	3.75E-05	3.85E-05	3.84E-06	5.50E-06	1.18E-09	1.97E-05	4.17E-06
11	F39	80	Passenger Truck	43	0.00E+00	5.45E-07	5.81E-08	2.44E+00	3.54E-06	9.27E-03	1.15E-06	7.22E-05	2.50E-04	4.17E-05	1.11E-04	7.19E-05	7.37E-05	1.77E-05	1.23E-05	2.24E-09	3.71E-05	1.20E-05
11	F39	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F39	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	5.00E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.42E-05
11	F39	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.35E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.01E-04
11	F40	80	Passenger Car	274	0.00E+00	2.81E-06	3.06E-07	1.15E+01	2.00E-05	5.58E-02	6.34E-06	2.85E-04	1.50E-03	2.50E-04	6.19E-04	3.99E-04	4.09E-04	4.08E-05	5.86E-05	1.25E-08	2.09E-04	4.44E-05
11	F40	80	Passenger Truck	460	0.00E+00	5.80E-06	6.18E-07	2.60E+01	3.77E-05	9.86E-02	1.23E-05	7.68E-04	2.66E-03	4.43E-04	1.18E-03	7.65E-04	7.84E-04	1.89E-04	1.31E-04	2.38E-08	3.95E-04	1.28E-04
11	F40	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.53E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.86E-04
11	F40	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.54E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	F40	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.83E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.29E-03
11	F40	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.31E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.38E-03
10	F41	70	Passenger Car	328	0.00E+00	3.61E-06	3.93E-07	1.42E+01	2.57E-05	6.99E-02	8.15E-06	3.32E-04	2.53E-03	3.94E-04	7.95E-04	5.13E-04	5.26E-04	5.58E-05	7.20E-05	1.49E-08	2.69E-04	5.18E-05
10	F41	70	Passenger Truck	550	0.00E+00	7.61E-06	8.09E-07	3.19E+01	4.87E-05	1.24E-01	1.60E-05	9.65E-04	4.58E-03	7.08E-04	1.53E-03	9.91E-04	1.02E-03	2.44E-04	1.60E-04	2.87E-08	5.10E-04	1.62E-04
10	F42	70	Passenger Car	235	0.00E+00	2.59E-06	2.81E-07	1.01E+01	1.83E-05	5.00E-02	5.83E-06	2.37E-04	1.81E-03	2.82E-04	5.69E-04	3.67E-04	3.76E-04	3.99E-05	5.15E-05	1.07E-08	1.92E-04	3.70E-05
10	F42	70	Passenger Truck	393	0.00E+00	5.44E-06	5.79E-07	2.28E+01	3.49E-05	8.84E-02	1.14E-05	6.91E-04	3.27E-03	5.07E-04	1.09E-03	7.09E-04	7.27E-04	1.74E-04	1.15E-04	2.06E-08	3.65E-04	1.16E-04
10	F42	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	F42	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	F42	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
9	F43	60	Passenger Car	13	0.00E+00	1.61E-07	1.74E-08	5.73E-01	1.14E-06	3.09E-03	3.62E-07	1.31E-05	1.28E-04	1.92E-05	3.53E-05	2.28E-05	2.34E-05	2.52E-06	2.91E-06	6.10E-10	1.19E-05	2.04E-06
9	F43	60	Passenger Truck	21	0.00E+00	3.41E-07	3.61E-08	1.28E+00	2.15E-06	5.29E-03	7.07E-07	4.07E-05	2.35E-04	3.49E-05	6.74E-05	4.39E-05	4.50E-05	1.03E-05	6.42E-06	1.19E-09	2.25E-05	6.90E-06
9	F44	60	Passenger Car	201	0.00E+00	2.54E-06	2.76E-07	9.05E+00	1.80E-05	4.88E-02	5.72E-06	2.07E-04	2.03E-03	3.04E-04	5.58E-04	3.60E-04	3.69E-04	3.98E-05	4.59E-05	9.64E-09	1.89E-04	3.22E-05
9	F44	60	Passenger Truck	336	0.00E+00	5.39E-06	5.71E-07	2.02E+01	3.40E-05	8.36E-02	1.12E-05	6.43E-04	3.70E-03	5.51E-04	1.07E-03	6.93E-04	7.10E-04	1.63E-04	1.01E-04	1.88E-08	3.55E-04	1.09E-04
9	F44	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	F44	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	F44	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
10	F45	70	Passenger Car	307	0.00E+00	3.38E-06	3.68E-07	1.33E+01	2.40E-05	6.54E-02	7.63E-06	3.11E-04	2.37E-03	3.69E-04	7.44E-04	4.80E-04	4.92E-04	5.22E-05	6.74E-05	1.40E-08	2.52E-04	4.85E-05
10	F45	70	Passenger Truck	515	0.00E+00	7.13E-06	7.57E-07	2.99E+01	4.56E-05	1.16E-01	1.49E-05	9.04E-04	4.29E-03	6.63E-04	1.43E-03	9.28E-04	9.51E-04	2.28E-04	1.50E-04	2.69E-08	4.77E-04	1.52E-04
10	F45	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	F45	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.43E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.46E-04
10	F45	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.67E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.91E-04
10	F46	70	Passenger Car	330	0.00E+00	3.63E-06	3.95E-07	1.42E+01	2.58E-05	7.02E-02	8.19E-06	3.33E-04	2.54E-03	3.96E-04	7.98E-04	5.15E-04	5.28E-04	5.60E-05	7.23E-05	1.50E-08	2.70E-04	5.20E-05
10	F46	70	Passenger Truck	552	0.00E+00	7.65E-06	8.13E-07	3.20E+01	4.90E-05	1.24E-01	1.60E-05	9.70E-04	4.60E-03	7.12E-04	1.53E-03	9.96E-04	1.02E-03	2.45E-04	1.61E-04	2.89E-08	5.12E-04	1.63E-04
10	F46	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	F46	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
10	F46	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.83E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.22E-04
10	F46	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.10E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.72E-04
9	F47	60	Passenger Car	10	0.00E+00	1.23E-07	1.33E-08	4.38E-01	8.71E-07	2.36E-03	2.77E-07	1.00E-05	9.82E-05	1.47E-05	2.70E-05	1.74E-05	1.79E-05	1.93E-06	2.22E-06	4.67E-10	9.13E-06	1.56E-06
9	F47	60	Passenger Truck	16	0.00E+00	2.61E-07	2.76E-08	9.77E-01	1.64E-06	4.05E-03	5.41E-07	3.11E-05	1.79E-04	2.67E-05	5.16E-05	3.36E-05	3.44E-05	7.89E-06	4.91E-06	9.10E-10	1.72E-05	5.28E-06
9	F47	60	Combination Short Haul Truck	1	0.00E+00	1.53E-

Appendix F.3.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	F84	40	Passenger Truck	367	0.00E+00	6.85E-06	7.20E-07	2.49E+01	4.12E-05	9.79E-02	1.38E-05	7.70E-04	6.70E-03	9.30E-04	1.30E-03	8.49E-04	8.69E-04	2.22E-04	1.24E-04	1.81E-08	4.30E-04	1.33E-04
50	F84	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.87E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	F84	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.91E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.48E-03
50	F84	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.07E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.78E-03
52	F85	60	Passenger Car	421	0.00E+00	4.89E-06	5.31E-07	1.90E+01	3.47E-05	9.34E-02	1.10E-05	4.18E-04	4.14E-03	6.20E-04	1.08E-03	6.93E-04	7.12E-04	8.35E-05	9.63E-05	1.96E-08	3.64E-04	6.52E-05
52	F85	60	Passenger Truck	706	0.00E+00	1.03E-05	1.09E-06	4.23E+01	6.51E-05	1.60E-01	2.14E-05	1.28E-03	7.35E-03	1.09E-03	2.04E-03	1.33E-03	1.36E-03	3.35E-04	2.13E-04	3.58E-08	6.80E-04	2.16E-04
52	F85	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
52	F85	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.69E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.07E-05
52	F85	60	Combination Short Haul Truck	32	0.00E+00	9.31E-06	6.84E-07	1.12E+01	2.55E-08	1.39E-02	6.69E-06	1.42E-02	1.63E-03	2.54E-04	5.74E-04	2.00E-04	2.08E-04	1.79E-03	3.76E-05	0.00E+00	3.66E-04	2.68E-03
52	F85	60	Combination Long Haul Truck	29	0.00E+00	1.28E-05	6.99E-07	1.06E+01	8.64E-08	1.67E-02	1.07E-05	1.52E-02	1.70E-03	2.46E-04	1.21E-03	2.28E-04	2.38E-04	1.70E-03	3.56E-05	0.00E+00	9.76E-04	2.86E-03
53	F86	70	Passenger Car	253	0.00E+00	2.70E-06	2.93E-07	1.10E+01	1.91E-05	5.17E-02	6.08E-06	2.60E-04	1.92E-03	3.00E-04	5.93E-04	3.83E-04	3.93E-04	4.29E-05	5.60E-05	1.16E-08	2.01E-04	4.06E-05
53	F86	70	Passenger Truck	423	0.00E+00	5.64E-06	5.99E-07	2.48E+01	3.62E-05	9.13E-02	1.18E-05	7.35E-04	3.42E-03	5.32E-04	1.13E-03	7.36E-04	7.54E-04	1.87E-04	1.25E-04	2.19E-08	3.78E-04	1.23E-04
53	F86	70	Single Unit Short Haul Truck	35	0.00E+00	6.24E-06	2.53E-07	5.81E+00	4.18E-06	1.05E-02	6.78E-06	2.48E-03	5.63E-04	1.03E-04	8.41E-04	1.60E-04	1.63E-04	5.90E-04	2.36E-05	9.53E-09	6.77E-04	4.65E-04
53	F86	70	Single Unit Long Haul Truck	2	0.00E+00	2.71E-07	1.09E-08	2.46E-01	1.80E-07	4.42E-04	2.95E-07	1.07E-04	2.58E-05	4.62E-06	3.67E-05	6.92E-06	7.06E-06	2.49E-05	1.00E-06	4.02E-10	2.96E-05	2.00E-05
53	F86	70	Combination Short Haul Truck	24	0.00E+00	6.19E-06	4.61E-07	8.37E+00	1.57E-08	8.94E-03	4.41E-06	9.27E-03	8.73E-04	1.46E-04	3.71E-04	1.34E-04	1.39E-04	1.33E-03	2.80E-05	0.00E+00	2.32E-04	1.75E-03
53	F86	70	Combination Long Haul Truck	22	0.00E+00	8.49E-06	4.83E-07	7.85E+00	5.32E-08	1.07E-02	6.98E-06	9.93E-03	9.09E-04	1.37E-04	7.72E-04	1.55E-04	1.62E-04	1.26E-03	2.63E-05	0.00E+00	6.10E-04	1.87E-03
52	F87	60	Passenger Car	176	0.00E+00	2.04E-06	2.22E-07	7.94E+00	1.45E-05	3.90E-02	4.61E-06	1.75E-04	1.73E-03	2.59E-04	4.49E-04	2.90E-04	2.97E-04	3.49E-05	4.02E-05	8.20E-09	1.52E-04	2.72E-05
52	F87	60	Passenger Truck	295	0.00E+00	4.31E-06	4.57E-07	1.77E+01	2.72E-05	6.70E-02	8.95E-06	5.33E-04	3.07E-03	4.56E-04	8.53E-04	5.55E-04	5.68E-04	1.40E-04	8.88E-05	1.50E-08	2.84E-04	9.01E-05
52	F87	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.31E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.37E-03
52	F87	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.17E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.93E-05
52	F87	60	Combination Short Haul Truck	54	0.00E+00	1.57E-05	1.15E-06	1.90E+01	4.31E-08	2.35E-02	1.13E-05	2.40E-02	2.74E-03	4.29E-04	9.69E-04	3.38E-04	3.51E-04	3.02E-03	6.34E-05	0.00E+00	6.18E-04	4.53E-03
52	F87	60	Combination Long Haul Truck	49	0.00E+00	2.16E-05	1.18E-06	1.79E+01	1.46E-07	2.82E-02	1.81E-05	2.56E-02	2.88E-03	4.16E-04	2.05E-03	3.85E-04	4.02E-04	2.88E-03	6.01E-05	0.00E+00	1.65E-03	4.82E-03
50	F88	40	Passenger Car	219	0.00E+00	3.11E-06	3.37E-07	1.14E+01	2.20E-05	5.91E-02	7.00E-06	2.00E-04	3.78E-03	5.31E-04	6.83E-04	4.40E-04	4.52E-04	6.51E-05	5.74E-05	1.06E-08	2.31E-04	3.12E-05
50	F88	40	Passenger Truck	367	0.00E+00	6.85E-06	7.20E-07	2.49E+01	4.12E-05	9.79E-02	1.38E-05	7.70E-04	6.70E-03	9.30E-04	1.30E-03	8.49E-04	8.69E-04	2.22E-04	1.24E-04	1.81E-08	4.30E-04	1.33E-04
50	F88	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.87E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	F88	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.91E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.48E-03
50	F88	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.07E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.78E-03
50	F89	40	Passenger Car	511	0.00E+00	7.25E-06	7.88E-07	2.67E+01	5.14E-05	1.38E-01	1.63E-05	4.67E-04	8.82E-03	1.24E-03	1.59E-03	1.03E-03	1.05E-03	1.52E-04	1.34E-04	2.48E-08	5.39E-04	7.28E-05
50	F89	40	Passenger Truck	857	0.00E+00	1.60E-05	1.68E-06	5.80E+01	9.63E-05	2.28E-01	3.21E-05	1.80E-03	1.56E-02	2.17E-03	3.03E-03	1.98E-03	2.03E-03	5.19E-04	2.89E-04	4.22E-08	1.00E-03	3.12E-04
50	F89	40	Single Unit Short Haul Truck	73	0.00E+00	2.47E-05	1.10E-06	1.37E+01	1.71E-05	2.16E-02	2.64E-05	9.96E-03	2.86E-03	4.47E-04	3.18E-03	6.62E-04	6.74E-04	1.40E-03	5.60E-05	2.38E-08	2.50E-03	1.87E-03
50	F89	40	Single Unit Long Haul Truck	3	0.00E+00	1.08E-06	4.79E-08	5.94E-01	7.48E-07	9.38E-04	1.16E-06	4.34E-04	1.28E-04	1.99E-05	1.40E-04	2.89E-05	2.95E-05	6.07E-05	2.42E-06	1.03E-09	1.10E-04	8.14E-05
50	F89	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.91E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.48E-03
50	F89	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.07E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.78E-03

Appendix F.3.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B09	0.00E+00	6.99E-05	4.93E-06	1.87E+02	1.54E-04	5.18E-01	8.97E-05	6.08E-02	9.42E-03	1.96E-03	9.35E-03	3.93E-03	4.03E-03	1.30E-02	8.15E-04	1.42E-07	5.32E-03	1.14E-02
B10	0.00E+00	1.24E-04	9.57E-06	3.56E+02	3.13E-04	1.02E+00	1.63E-04	1.18E-01	1.84E-02	3.74E-03	1.63E-02	7.74E-03	7.96E-03	2.32E-02	1.57E-03	2.32E-07	8.37E-03	2.20E-02
B13	0.00E+00	8.65E-05	6.50E-06	2.39E+02	1.96E-04	6.55E-01	1.10E-04	8.54E-02	1.20E-02	2.46E-03	1.11E-02	5.02E-03	5.16E-03	1.70E-02	1.04E-03	1.51E-07	5.91E-03	1.60E-02
B14	0.00E+00	5.11E-05	3.52E-06	1.33E+02	1.05E-04	3.58E-01	6.42E-05	4.52E-02	6.59E-03	1.38E-03	6.73E-03	2.73E-03	2.81E-03	9.74E-03	5.75E-04	1.01E-07	3.92E-03	8.45E-03
B15	0.00E+00	2.86E-05	2.69E-06	1.15E+02	1.50E-04	4.41E-01	5.40E-05	1.02E-02	7.16E-03	1.40E-03	5.35E-03	3.13E-03	3.21E-03	2.23E-03	5.66E-04	1.08E-07	2.14E-03	1.84E-03
B16	0.00E+00	5.14E-05	5.03E-06	2.15E+02	2.87E-04	8.39E-01	1.00E-04	1.68E-02	1.36E-02	2.65E-03	9.83E-03	5.94E-03	6.10E-03	3.51E-03	1.07E-03	2.01E-07	3.73E-03	3.02E-03
D27	0.00E+00	2.44E-05	1.89E-06	6.22E+01	7.06E-05	2.04E-01	3.44E-05	1.64E-02	6.22E-03	1.05E-03	3.49E-03	1.67E-03	1.72E-03	2.89E-03	2.87E-04	5.08E-08	1.77E-03	3.07E-03
D28	0.00E+00	5.78E-05	4.53E-06	1.50E+02	1.72E-04	4.96E-01	8.22E-05	3.86E-02	1.50E-02	2.54E-03	8.31E-03	4.04E-03	4.15E-03	6.76E-03	6.93E-04	1.22E-07	4.16E-03	7.19E-03
D29	0.00E+00	2.44E-05	1.89E-06	6.22E+01	7.06E-05	2.04E-01	3.44E-05	1.64E-02	6.22E-03	1.05E-03	3.49E-03	1.67E-03	1.72E-03	2.89E-03	2.87E-04	5.08E-08	1.77E-03	3.07E-03
D30	0.00E+00	5.78E-05	4.53E-06	1.50E+02	1.72E-04	4.96E-01	8.22E-05	3.86E-02	1.50E-02	2.54E-03	8.31E-03	4.04E-03	4.15E-03	6.76E-03	6.93E-04	1.22E-07	4.16E-03	7.19E-03
D31	0.00E+00	2.44E-05	1.83E-06	5.98E+01	6.64E-05	1.93E-01	3.37E-05	1.62E-02	5.91E-03	1.01E-03	3.46E-03	1.59E-03	1.63E-03	2.91E-03	2.74E-04	5.00E-08	1.83E-03	3.02E-03
D32	0.00E+00	3.95E-05	3.00E-06	9.66E+01	1.05E-04	3.08E-01	5.38E-05	2.82E-02	9.54E-03	1.62E-03	5.47E-03	2.55E-03	2.62E-03	4.92E-03	4.41E-04	7.67E-08	2.86E-03	5.26E-03
D33	0.00E+00	3.95E-05	2.80E-06	6.95E+01	8.61E-05	2.40E-01	5.02E-05	2.86E-02	1.24E-02	1.88E-03	5.20E-03	2.20E-03	2.26E-03	3.84E-03	3.14E-04	5.56E-08	2.94E-03	5.35E-03
D34	0.00E+00	1.54E-05	1.34E-06	4.08E+01	6.52E-05	1.70E-01	2.59E-05	6.32E-03	7.76E-03	1.16E-03	2.58E-03	1.41E-03	1.45E-03	9.48E-04	1.98E-04	3.79E-08	1.13E-03	1.17E-03
D35	0.00E+00	2.23E-05	2.06E-06	6.51E+01	1.07E-04	2.78E-01	3.99E-05	7.89E-03	1.25E-02	1.87E-03	3.92E-03	2.27E-03	2.33E-03	1.21E-03	3.19E-04	6.06E-08	1.59E-03	1.45E-03
D36	0.00E+00	2.23E-05	1.48E-06	3.31E+01	3.37E-05	1.01E-01	2.53E-05	1.89E-02	5.73E-03	8.67E-04	2.65E-03	9.86E-04	1.01E-03	2.47E-03	1.42E-04	2.32E-08	1.64E-03	3.55E-03
D37	0.00E+00	1.32E-05	1.23E-06	3.88E+01	6.34E-05	1.65E-01	2.34E-05	5.14E-03	7.44E-03	1.11E-03	2.29E-03	1.35E-03	1.38E-03	7.53E-04	1.90E-04	3.53E-08	9.06E-04	9.45E-04
D38	0.00E+00	4.07E-05	3.27E-06	8.92E+01	1.24E-04	3.39E-01	5.82E-05	2.73E-02	1.65E-02	2.48E-03	5.82E-03	2.92E-03	2.99E-03	3.61E-03	4.16E-04	7.20E-08	2.83E-03	5.10E-03
D39	0.00E+00	8.43E-06	8.68E-07	2.91E+01	5.05E-05	1.30E-01	1.70E-05	1.79E-03	5.68E-03	8.48E-04	1.64E-03	1.04E-03	1.06E-03	3.11E-04	1.46E-04	2.76E-08	5.72E-04	3.19E-04
D40	0.00E+00	3.10E-05	2.45E-06	6.60E+01	9.07E-05	2.48E-01	4.36E-05	2.12E-02	1.22E-02	1.83E-03	4.37E-03	2.15E-03	2.21E-03	2.80E-03	3.07E-04	5.29E-08	2.16E-03	3.96E-03
D41	0.00E+00	1.41E-05	1.50E-06	5.20E+01	9.23E-05	2.35E-01	3.00E-05	1.51E-03	1.02E-02	1.52E-03	2.88E-03	1.87E-03	1.92E-03	3.60E-04	2.62E-04	5.05E-08	9.66E-04	2.51E-04
D42	0.00E+00	6.75E-06	5.79E-07	1.67E+01	2.50E-05	6.69E-02	1.05E-05	3.95E-03	3.15E-03	4.71E-04	1.04E-03	5.60E-04	5.75E-04	5.30E-04	7.97E-05	1.41E-08	4.60E-04	7.35E-04
D43	0.00E+00	1.11E-05	1.14E-06	3.80E+01	6.56E-05	1.69E-01	2.22E-05	2.52E-03	7.40E-03	1.10E-03	2.14E-03	1.35E-03	1.38E-03	4.28E-04	1.89E-04	3.59E-08	7.52E-04	4.51E-04
D44	0.00E+00	2.50E-05	1.52E-06	3.12E+01	2.63E-05	8.22E-02	2.64E-05	2.14E-02	5.17E-03	7.90E-04	2.86E-03	8.95E-04	9.21E-04	2.84E-03	1.28E-04	2.19E-08	1.94E-03	4.02E-03
D45	0.00E+00	9.06E-05	6.30E-06	1.51E+02	1.78E-04	5.05E-01	1.11E-04	6.94E-02	2.69E-02	4.06E-03	1.16E-02	4.72E-03	4.85E-03	9.21E-03	6.74E-04	1.17E-07	6.71E-03	1.30E-02
D46	0.00E+00	9.47E-05	6.28E-06	1.44E+02	1.56E-04	4.52E-01	1.11E-04	7.44E-02	2.50E-02	3.80E-03	1.17E-02	4.40E-03	4.52E-03	9.91E-03	6.28E-04	1.10E-07	7.18E-03	1.40E-02
D47	0.00E+00	9.62E-05	6.73E-06	1.64E+02	1.96E-04	5.52E-01	1.19E-04	7.22E-02	2.91E-02	4.39E-03	1.24E-02	5.13E-03	5.27E-03	9.62E-03	7.31E-04	1.28E-07	7.15E-03	1.35E-02
D48	0.00E+00	2.90E-05	2.35E-06	6.48E+01	9.21E-05	2.50E-01	4.22E-05	1.87E-02	1.21E-02	1.81E-03	4.22E-03	2.14E-03	2.19E-03	2.49E-03	3.04E-04	5.33E-08	2.02E-03	3.48E-03
D49	0.00E+00	9.62E-05	6.73E-06	1.64E+02	1.96E-04	5.52E-01	1.19E-04	7.22E-02	2.91E-02	4.39E-03	1.24E-02	5.13E-03	5.27E-03	9.62E-03	7.31E-04	1.28E-07	7.15E-03	1.35E-02
D50	0.00E+00	1.04E-04	7.13E-06	1.70E+02	1.99E-04	5.63E-01	1.27E-04	7.82E-02	3.01E-02	4.55E-03	1.33E-02	5.31E-03	5.45E-03	1.05E-02	7.56E-04	1.34E-07	7.82E-03	1.47E-02
D51	0.00E+00	3.09E-05	2.29E-06	6.04E+01	8.20E-05	2.22E-01	4.23E-05	1.96E-02	1.10E-02	1.66E-03	4.35E-03	1.98E-03	2.03E-03	2.70E-03	2.79E-04	5.16E-08	2.32E-03	3.66E-03
D52	0.00E+00	2.36E-05	1.97E-06	5.85E+01	9.13E-05	2.38E-01	3.80E-05	1.05E-02	1.10E-02	1.65E-03	3.82E-03	2.01E-03	2.06E-03	1.56E-03	2.82E-04	5.41E-08	1.75E-03	1.94E-03
D53	0.00E+00	2.30E-05	1.75E-06	4.73E+01	6.62E-05	1.78E-01	3.25E-05	1.41E-02	8.70E-03	1.31E-03	3.32E-03	1.56E-03	1.60E-03	1.95E-03	2.21E-04	4.07E-08	1.71E-03	2.63E-03
D54	0.00E+00	3.05E-05	2.61E-06	7.89E+01	1.26E-04	3.26E-01	5.07E-05	1.24E-02	1.49E-02	2.24E-03	5.07E-03	2.73E-03	2.80E-03	1.88E-03	3.83E-04	7.38E-08	2.27E-03	2.29E-03
D55	0.00E+00	4.73E-05	3.65E-06	1.21E+02	1.39E-04	4.00E-01	6.71E-05	3.07E-02	1.21E-02	2.06E-03	6.84E-03	3.27E-03	3.35E-03	5.48E-03	5.60E-04	1.01E-07	3.48E-03	5.72E-03
D56	0.00E+00	2.86E-05	2.10E-06	6.74E+01	7.18E-05	2.11E-01	3.83E-05	2.01E-02	6.58E-03	1.12E-03	3.94E-03	1.76E-03	1.81E-03	3.59E-03	3.06E-04	5.48E-08	2.13E-03	3.76E-03
D57	0.00E+00	6.40E-05	4.47E-06	1.37E+02	1.32E-04	4.00E-01	8.00E-05	4.89E-02	1.30E-02	2.23E-03	8.33E-03	3.44E-03	3.53E-03	8.69E-03	6.06E-04	1.07E-07	4.80E-03	9.14E-03
D58	0.00E+00	4.18E-05	3.36E-06	1.15E+02	1.40E-04	3.96E-01	6.27E-05	2.48E-02	1.17E-02	1.98E-03	6.33E-03	3.19E-03	3.27E-03	4.44E-03	5.41E-04	9.88E-08	3.06E-03	4.60E-03
D59	0.00E+00	6.40E-05	4.47E-06	1.37E+02	1.32E-04	4.00E-01	8.00E-05	4.89E-02	1.30E-02	2.23E-03	8.33E-03	3.44E-03	3.53E-03	8.69E-03	6.06E-04	1.07E-07	4.80E-03	9.14E-03
D60	0.00E+00	4.18E-05	3.36E-06	1.15E+02	1.40E-04	3.96E-01	6.27E-05	2.48E-02	1.17E-02	1.98E-03	6.33E-03	3.19E-03	3.27E-03	4.44E-03	5.41E-04	9.88E-08	3.06E-03	4.60E-03
D61	0.00E+00	8.06E-06	5.58E-07	1.72E+01	1.66E-05	5.02E-02	1.01E-05	6.02E-03	1.62E-03	2.79E-04	1.06E-03	4.31E-04	4.43E-04	1.08E-03	7.61E-05	1.37E-08	6.14E-04	1.12E-03
D62	0.00E+00	1.67E-05	1.29E-06	4.38E+01	5.16E-05	1.47E-01	2.44E-05	1.00E-02	4.40E-03	7.48E-04	2.49E-03	1.20E-03	1.23E-03	1.83E-03	2.04E-04	3.80E-08	1.26E-03	1.86E-03
D63	0.00E+00	1.55E-05	9.61E-07	2.20E+01	1.61E-05	5.31E-02	1.62E-05	1.35E-02	2.71E-03	4.37E-04	1.73E-03	5.55E-04	5.71E-04	2.04E-03	9.05E-05	1.50E-08	1.16E-03	2.53E-03
D64	0.00E+00	1.43E-05	9.43E-07	2.45E+01	2.42E-05	7.12E-02	1.69E-05	1.06E-02	3.21E-03	5.13E-04	1.79E-03	6.73E-04	6.91E-04	1.66E-03	1.07E-04	1.96E-08	1.10E-03	1.99E-03
D65	0.00E+00	4.83E-05	3.07E-06	8.67E+01	6.58E-05	2.16E-01	5.39E-05	4.07E-02	7.69E-03	1.34E-03	5.76E-03	1.99E-03	2.05E-03	7.27E-03	3.65E-04	6.37E-08	3.71E-03	7.63E-03
D66	0.00E+00	4.88E-05	3.56E-06	1.13E+02	1.18E-04	3.49E-01	6.43E-05	3.51E-02	1.10E-02	1.87E-03	6.62E-03	2.93E-03	3.01E-03	6.24E-03	5.10E-04	9.05E-08	3.62E-03	6.56E-03
D67	0.00E+00	4.83E-05	3.07E-06	8.67E+01	6.58E-05	2.16E-01	5.39E-05	4.07E-02	7.69E-03	1.34E-03	5.76E-03	1.99E-03	2.05E-03	7.27E-03	3.65E-04	6.37E-08	3.71E-03	7.63E-03
D68	0.00E+00	4.88E-05	3.56E-06	1.13E+02	1.18E-04	3.49E-01	6.43E-05	3.51E-02	1.10E-02	1.87E-03	6.62E-03	2.93E-03	3.01E-03	6.24E-03	5.10E-04	9.05E-08	3.62E-03	6.56E-03
D69	0.00E+00	1.96E-05	1.27E-06	3.66E+01	2.96E-05	9.49E-02	2.25E-05	1.61E-02	3.30E-03	5.72E-04	2.40E-03	8.60E-04	8.83E-04	2.89E-03	1.56E-04	2.76E-08	1.51E-03	3.01E-03
D70	0.00E+00	1.98E-05	1.42E-06	4.38E+01	4.35E-05	1.31E-01	2.53E-05	1.50E-02	4.20E-03	7.17E-04	2.61E-03	1.11E-03	1.14E-03	2.65E-03	1.95E-04	3.41E-08	1.47E-03	2.81E-03
D71	0.00E+00	1.95E-05	1.57E-06	4.92E+01	6.50E-05	1.77E-01	2.92E-05	1.09E-02	7.08E-03	1.11E-03	2.95E-03	1.48E-03	1.52E-03	1.73E-03	2.33E-04	4.24E-08	1.42E-03	2.03E-03
D72	0.00E+00	2.79E-05	2.06E-06	5.78E+01	6.59E-05	1.88E-01	3.63E-05	2.01E-02	7.99E-03	1.26E-03	3.71E-03	1.65E-03	1.70E-03	3.05E-03	2.63E-04	4.52E-08	2.01E-03	3.76E-03
D73	0.00E+00	9.66E-06	8.82E-07	3.05E+01	4.50E-05	1.20E-01	1.70E-05	3.70E-03	4.56E-03	7.11E-04	1.67E-03	9.61E-04	9.85E-04	6.16E-04	1.49E-04	2.76E-08	6.88E-04	6.78E-04
D74	0.00E+00	1.71E-05	1.34E-06	3.96E+01	4.87E-05	1.36E-01	2.37E-05	1.15E-02	5.61E-03	8.79E-04	2.39E-03	1.16E-03	1.19E-03	1.73E-03	1.83E-04	3.15E-08	1.20E-03	2.14E-03
D75	0.00E+00	1.35E-05	1.01E-06	3.33E+01	3.74E-05	1.08E-01	1.88E-05	8.80E-03	3.31E-03	5.63E-04	1.92E-03	8.91E-04	9.15E-04	1.59E-03	1.53E-04	2.81E-08	1.01E-03	1.64E-03
D76	0.00E+00	2.14E-05	1.50E-06	4.58E+01	4.40E-05	1.33E-01	2.67E-05	1.64E-02	4.34E-03	7.43E-04	2.78E-03	1.15E-03	1.18E-03	2.92E-03	2.03E-04	3.57E-08	1.61E-03	3.07E-03
D77	0.00E+00	1.28E-05	8.52E-07	2.52E+01	2.20E-05	6.88E-02	1.52E-05	1.02E-02	2.32E-03	4.00E-04	1.60E-03	6.09E-04	6.26E-04	1.82E-03	1.09E-04	1.94E-08	9.79E-04	1.90E-03
D78	0.00E+00	4.12E-05	2.61E-06	7.21E+01	5.13E-05	1.73E-01	4.49E-05	3.61E-02	6.33E-03	1.10E-03	4.79E-03	1.62E-03	1.67E-03	6.39E-03	3.00E-04	5.03E-08	3.12E-03	6.78E-03
D79	0.00E+00	1.63E-05	1.34E-06	4.26E+01	5.74E-05	1.56E-01	2.50E-05	8.77E-03	6.18E-03	9.67E-04	2.51E-03	1.29E-03	1.33E-03	1.39E-03	2.03E-04	3.69E-08	1.18E-03	1.63E-03
D80	0.00E+00	2.38E-05	1.88E-06	5.70E+01	7.25E-05	2.00E-01	3.43E-05	1.46E-02	8.13E-03	1.28E-03	3.46E-03	1.70E-03	1.74E-03	2.27E-03	2.67E-04	4.76E-08	1.72E-03	2.73E-03
D81	0.00E+00	1.11E-05	1.10E-06	4.02E+01	6.22E-05	1.63E-01	2.16E-05	2.96E-03	6.11E-03	9.50E-04	2.10E-03	1.29E-03	1.32E-03	5.24E-04	2.00E-04	3.71E-08	7.78E-04	5.32E-04
D82	0.00E+00	7.47E-06	7.86E-07	2.97E+01	4.74E-05	1.24E-01	1.56E-05	1.24E-03	4.56E-03	7.08E-04	1.50E-03	9.64E-04	9.88E-04	2.47E-04	1.49E-04	2.78E-08	5.14E-04	2.15E-04
D83	0.00E+00	9.62E-05	6.13E-06	1.67E+02	1.15E-04	3.95E-01	1.03E-04	8.70E-02	1.46E-02	2.54E-03	1.10E-02	3.72E-03	3.83E-03	1.52E-02	6.91E-04	1.11E-07	7.17E-03	1.63E-02
D84	0.00E+00	1.09E-04	7.67E-06	2.16E+02	1.76E-04	5.72E-01	1.23E-04	1.02E-01	2.00E-02	3.41E-03	1.26E-02	5.08E-03	5.23E-03	1.70E-02	9.20E-04	1.31E-07	7.35E-03	1.92E-02
D85	0.00E+00	8.05E-05	5.06E-06	1.36E+02	8.70E-05	3.07E-01	8.46E-05	7.45E-02	1.17E-02	2.04E-03	9.02E-03	2.95E-03	3.03E-03	1.30E-02	5.53E-04	8.72E-08	5.99E-03	1.40E-02
D86	0.00E+00	1.00E-04	7.22E-06	2.07E+02	1.76E-04	5.63E-01	1.16E-04	9.35E-02	1.93E-02	3.28E-03	1.18E-02	4.93E-03	5.07E-03	1.55E-02	8.88E-04	1.27E-07	6.74E-03	1.75E-02
D87	0.00E+00	8.05E-05	5.06E-06	1.36E+02	8.70E-05	3.07E-01	8.46E-05	7.45E-02	1.17E-02	2.04E-03	9.02E-03	2.95E-03	3.03E-03	1.30E-02	5.53E-04	8.72E-08	5.99E-03	1.40E-02
D88	0.00E+00	1.00E-04	7.22E-06	2.07E+02	1.76E-04	5.63E-01	1.16E-04	9.35E-02	1.93E-02	3.28E-03	1.18E-02	4.93E-03	5.07E-03	1.55E-02	8.88E-04	1.27E-07	6.74E-03	1.75E-02
D89	0.00E+00	1.70E-05	1.16E-06	2.65E+01	2.77E-05	8.27E-02	1.96E-05	1.47E-02	4.63E-03	6.98E-04	2.03E-03	7.91E-04	8.13E-04	1.90E-03	1.15E-04	1.81E-08	1.22E-03	2.76E-03
D90	0.00E+00	2.83E-05	1.91E-06	4.50E+01	5.16E-05	1.46E-01	3.42E-05	2.13E-02	7.90E-03	1.20E-03	3.60E-03	1.40E-03	1.44E-03	2.86E-03	1.99E-04	3.55E-08	2.16E-03	3.99E-03
D91	0.00E+00	1.61E-05	1.43E-06	4.88E+01	7.11E-05	1.89E-01	2.77E-05	6.37E-03	7.25E-03	1.13E-03	2.75E-03	1.53E-03	1.57E-03	1.08E-03	2.38E-04	4.46E-08	1.18E-03	1.17E-03
D92	0.00E+00	9.09E-06	7.96E-07	2.67E+01	3.81E-05	1.02E-01	1.52E-05	4.06E-03	3.94E-03	6.16E-04	1.50E-03	8.29E-04	8.51E-04	6.61E-04	1.29E-04	2.38E-08	6.52E-04	7.49E-04
D93	0.00E+00	1.33E-05	1.30E-06	4.74E+01	7.34E-05	1.93E-01	2.57E-05	3.36E-03	7.20E-03	1.12E-03	2.51E-03	1.52E-03	1.56E-03	6.18E-04	2.36E-04	4.43E-08	9.49E-04	6.02E-04
D94	0.00E+00	1.15E-05	1.01E-06	3.40E+01	4.89E-05	1.30E-01	1.94E-05	4.87E-03	5.03E-03	7.85E-04	1.92E-03	1.06E-03	1.09E-03	8.09E-04	1.65E-04	3.07E-08	8.37E-04	8.97E-04
E01	0.00E+00	3.28E-05	2.22E-06	5.37E+01	6.46E-05	1.79E-01	4.07E-05	2.32E-02	9.50E-03	1.44E-03	4.28E-03	1.70E-03	1.74E-03	3.17E-03	2.40E-04	4.44E-08	2.54E-03	4.34E-03
E02	0.00E+00	3.99E-05	2.76E-06	6.56E+01	7.55E-05	2.16E-01	4.83E-05	3.12E-02	1.16E-02	1.75E-03	5.02E-03	2.03E-03	2.08E-03	4.12E-03	2.90E-04	4.96E-08	2.94E-03	5.86E-03
E03	0.00E+00	1.67E-05	1.38E-06	4.85E+01	6.10E-05	1.72E-01	2.61E-05	9.12E-03	5.00E-03	8.44E-04	2.63E-03	1.36E-03	1.40E-03	1.65E-03	2.30E-04	4.25E-08	1.23E-03	1.69E-03
E04	0.00E+00	2.03E-05	1.56E-06	5.11E+01	5.74E-05	1.67E-01	2.83E-05	1.39E-02	5.09E-03	8.63E-04	2.87E-03	1.37E-03	1.40E-03	2.43E-03	2.35E-04	4.14E-08	1.47E-03	2.58E-03
E05	0.00E+00	9.37E-06	6.27E-07	1.88E+01	1.69E-05	5.22E-02	1.13E-05	7.28E-03	1.74E-03	3.00E-04	1.19E-03	4.59E-04	4.71E-04	1.31E-03	8.19E-05	1.47E-08	7.19E-04	1.36E-03
E06	0.00E+00	1.67E-05	1.45E-06	5.23E+01	6.92E-05	1.92E-01	2.77E-05	8.01E-03	5.49E-03	9.24E-04	2.76E-03	1.51E-03	1.55E-03	1.45E-03	2.52E-04	4.68E-08	1.21E-03	1.48E-03
E07	0.00E+00	1.31E-04	9.93E-06	2.59E+02	3.45E-04	9.48E-01	1.77E-04	9.12E-02	4.74E-02	7.12E-03	1.80E-02	8.37E-03	8.60E-03	1.22E-02	1.19E-03	2.09E-07	9.40E-03	1.71E-02
E08	0.00E+00	8.38E-05	6.37E-06	1.71E+02	2.37E-04	6.39E-01	1.17E-04	5.25E-02	3.14E-02	4.72E-03	1.20E-02	5.62E-03	5.77E-03	7.22E-03	7.95E-04	1.45E-07	6.20E-03	9.81E-03
E09	0.00E+00	1.21E-04	9.13E-06	2.36E+02	3.08E-04	8.55E-01	1.61E-04	8.70E-02	4.30E-02	6.47E-03	1.64E-02	7.57E-03	7.77E-03	1.15E-02	1.08E-03	1.86E-07	8.58E-03	1.63E-02
E10	0.00E+00	7.66E-05	5.91E-06	1.60E+02	2.24E-04	6.04E-01	1.09E-04	4.75E-02	2.95E-02	4.43E-03	1.10E-02	5.28E-03	5.42E-03	6.51E-03	7.47E-04	1.36E-07	5.62E-03	8.86E-03
E11	0.00E+00	1.71E-04	1.22E-05	3.05E+02	3.81E-04	1.06E+00	2.19E-04	1.23E-01	5.47E-02	8.25E-03	2.26E-02	9.69E-03	9.95E-03	1.65E-02	1.38E-03	2.44E-07	1.27E-02	2.30E-02
E12	0.00E+00	1.64E-04	1.14E-05	2.67E+02	2.98E-04	8.67E-01	1.95E-04	1.35E-01	4.71E-02	7.11E-03	2.02E-02	8.14E-03	8.37E-03	1.76E-02	1.17E-03	1.92E-07	1.18E-02	2.53E-02
E13	0.00E+00	2.75E-05	2.04E-06	6.71E+01	7.49E-05	2.17E-01	3.82E-05	1.76E-02	6.62E-03	1.13E-03	3.94E-03	1.79E-03	1.84E-03	3.23E-03	3.08E-04	5.76E-08	2.10E-03	3.29E-03
E14	0.00E+00	5.63E-05	3.90E-06	1.15E+02	1.03E-04	3.22E-01	6.74E-05	4.66E-02	1.08E-02	1.85E-03	7.01E-03	2.81E-03	2.89E-03	8.10E-03	5.02E-04	8.37E-08	4.12E-03	8.72E-03
E15	0.00E+00	2.77E-05	1.91E-06	5.88E+01	5.66E-05	1.71E-01	3.47E-05	2.07E-02	5.55E-03	9.55E-04	3.63E-03	1.48E-03	1.52E-03	3.73E-03	2.60E-04	4.71E-08	2.12E-03	3.87E-03
E16	0.00E+00	4.52E-05	3.35E-06	9.69E+01	8.59E-05	2.72E-01	5.35E-05	4.24E-02	9.21E-03	1.56E-03	5.36E-03	2.35E-03	2.42E-03	6.91E-03	4.20E-04	5.86E-08	2.94E-03	7.96E-03
E17	0.00E+00	1.96E-05	1.25E-06	3.66E+01	3.06E-05	9.66E-02	2.29E-05	1.51E-02	3.30E-03	5.75E-04	2.46E-03	8.72E-04	8.96E-04	2.79E-03	1.57E-04	2.97E-08	1.56E-03	2.83E-03
E18	0.00E+00	1.65E-05	1.39E-06	4.88E+01	6.18E-05	1.74E-01	2.60E-05	9.20E-03	5.05E-03	8.51E-04	2.59E-03	1.38E-03	1.41E-03	1.62E-03	2.32E-04	4.20E-08	1.18E-03	1.70E-03
E19	0.00E+00	5.60E-05	4.41E-06	1.23E+02	1.79E-04	4.76E-01	8.26E-05	3.14E-02	2.28E-02	3.43E-03	8.38E-03	4.12E-03	4.23E-03	4.42E-03	5.80E-04	1.08E-07	4.16E-03	5.85E-03
E20	0.00E+00	5.33E-05	3.85E-06	1.02E+02	1.40E-04	3.72E-01	7.32E-05	3.12E-02	1.85E-02	2.79E-03	7.62E-03	3.36E-03	3.45E-03

Appendix F.3.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E36	0.00E+00	6.10E-05	4.77E-06	1.30E+02	1.84E-04	4.95E-01	8.74E-05	3.79E-02	2.41E-02	3.62E-03	8.84E-03	4.30E-03	4.42E-03	5.17E-03	6.09E-04	1.10E-07	4.42E-03	7.08E-03
E37	0.00E+00	3.33E-05	2.19E-06	5.02E+01	5.46E-05	1.57E-01	3.90E-05	2.58E-02	8.72E-03	1.32E-03	4.13E-03	1.54E-03	1.58E-03	3.46E-03	2.19E-04	3.88E-08	2.55E-03	4.85E-03
E38	0.00E+00	6.10E-05	4.77E-06	1.30E+02	1.84E-04	4.95E-01	8.74E-05	3.79E-02	2.41E-02	3.62E-03	8.84E-03	4.30E-03	4.42E-03	5.17E-03	6.09E-04	1.10E-07	4.42E-03	7.08E-03
E39	0.00E+00	1.38E-05	1.26E-06	4.30E+01	6.28E-05	1.67E-01	2.39E-05	5.74E-03	6.42E-03	1.00E-03	2.35E-03	1.35E-03	1.38E-03	9.29E-04	2.10E-04	3.83E-08	9.65E-04	1.06E-03
E40	0.00E+00	2.28E-05	1.76E-06	5.23E+01	6.46E-05	1.80E-01	3.18E-05	1.49E-02	7.40E-03	1.16E-03	3.21E-03	1.54E-03	1.58E-03	2.28E-03	2.43E-04	4.27E-08	1.64E-03	2.77E-03
E41	0.00E+00	1.03E-05	9.61E-07	3.37E+01	5.02E-05	1.33E-01	1.85E-05	3.72E-03	5.06E-03	7.87E-04	1.82E-03	1.06E-03	1.09E-03	6.21E-04	1.66E-04	3.05E-08	7.25E-04	6.80E-04
E42	0.00E+00	1.36E-05	1.27E-06	4.37E+01	6.38E-05	1.71E-01	2.39E-05	5.91E-03	6.54E-03	1.02E-03	2.32E-03	1.37E-03	1.40E-03	9.25E-04	2.13E-04	3.81E-08	9.23E-04	1.09E-03
E43	0.00E+00	1.09E-05	9.89E-07	3.44E+01	5.10E-05	1.35E-01	1.92E-05	3.94E-03	5.14E-03	8.02E-04	1.90E-03	1.09E-03	1.11E-03	6.72E-04	1.69E-04	3.16E-08	7.87E-04	7.21E-04
E44	0.00E+00	9.09E-06	8.79E-07	3.10E+01	4.65E-05	1.23E-01	1.67E-05	3.38E-03	4.68E-03	7.27E-04	1.62E-03	9.79E-04	1.00E-03	5.41E-04	1.53E-04	2.75E-08	6.14E-04	6.18E-04
E45	0.00E+00	3.04E-05	1.80E-06	4.56E+01	2.21E-05	8.78E-02	2.99E-05	2.88E-02	3.71E-03	6.56E-04	3.26E-03	9.18E-04	9.45E-04	5.08E-03	1.78E-04	2.84E-08	2.32E-03	5.41E-03
E46	0.00E+00	2.46E-05	1.88E-06	6.23E+01	7.11E-05	2.05E-01	3.48E-05	1.58E-02	6.21E-03	1.06E-03	3.55E-03	1.68E-03	1.72E-03	2.85E-03	2.88E-04	5.26E-08	1.83E-03	2.95E-03
E47	0.00E+00	7.36E-06	5.54E-07	1.82E+01	2.04E-05	5.90E-02	1.02E-05	4.83E-03	1.80E-03	3.07E-04	1.05E-03	4.86E-04	4.99E-04	8.70E-04	8.37E-05	1.53E-08	5.51E-04	9.00E-04
E48	0.00E+00	2.28E-05	1.79E-06	6.06E+01	7.19E-05	2.05E-01	3.34E-05	1.38E-02	6.12E-03	1.04E-03	3.40E-03	1.66E-03	1.70E-03	2.50E-03	2.83E-04	5.20E-08	1.69E-03	2.57E-03
E49	0.00E+00	3.11E-06	2.59E-07	8.76E+00	1.06E-05	3.02E-02	4.66E-06	2.03E-03	8.97E-04	1.51E-04	4.63E-04	2.42E-04	2.48E-04	3.45E-04	4.11E-05	7.06E-09	2.14E-04	3.77E-04
E50	0.00E+00	3.28E-05	2.31E-06	6.83E+01	6.18E-05	1.92E-01	3.95E-05	2.75E-02	6.42E-03	1.10E-03	4.08E-03	1.67E-03	1.72E-03	4.74E-03	2.98E-04	4.85E-08	2.36E-03	5.15E-03
E51	0.00E+00	6.22E-07	5.55E-08	1.92E+00	2.44E-06	6.88E-03	9.88E-07	3.89E-04	2.01E-04	3.36E-05	9.62E-05	5.42E-05	5.57E-05	6.37E-05	9.14E-06	1.53E-09	4.05E-05	7.22E-05
E52	0.00E+00	3.47E-05	2.46E-06	7.37E+01	6.85E-05	2.11E-01	4.24E-05	2.85E-02	6.97E-03	1.19E-03	4.37E-03	1.82E-03	1.87E-03	4.92E-03	3.23E-04	5.34E-08	2.50E-03	5.34E-03
E53	0.00E+00	1.27E-05	8.61E-07	2.60E+01	2.39E-05	7.34E-02	1.55E-05	9.80E-03	2.42E-03	4.17E-04	1.63E-03	6.40E-04	6.58E-04	1.76E-03	1.14E-04	2.04E-08	9.69E-04	1.84E-03
E54	0.00E+00	3.50E-05	2.77E-06	9.22E+01	1.07E-04	3.08E-01	5.04E-05	2.31E-02	9.30E-03	1.57E-03	5.08E-03	2.50E-03	2.57E-03	4.03E-03	4.28E-04	7.55E-08	2.51E-03	4.30E-03
E55	0.00E+00	1.27E-05	8.61E-07	2.60E+01	2.39E-05	7.34E-02	1.55E-05	9.80E-03	2.42E-03	4.17E-04	1.63E-03	6.40E-04	6.58E-04	1.76E-03	1.14E-04	2.04E-08	9.69E-04	1.84E-03
E56	0.00E+00	3.50E-05	2.77E-06	9.22E+01	1.07E-04	3.08E-01	5.04E-05	2.31E-02	9.30E-03	1.57E-03	5.08E-03	2.50E-03	2.57E-03	4.03E-03	4.28E-04	7.55E-08	2.51E-03	4.30E-03
E57	0.00E+00	1.54E-05	1.35E-06	4.51E+01	6.41E-05	1.72E-01	2.55E-05	7.22E-03	6.67E-03	1.04E-03	2.52E-03	1.40E-03	1.43E-03	1.15E-03	2.18E-04	3.96E-08	1.09E-03	1.33E-03
E58	0.00E+00	1.83E-05	1.43E-06	4.30E+01	5.38E-05	1.49E-01	2.59E-05	1.18E-02	6.11E-03	9.58E-04	2.61E-03	1.27E-03	1.30E-03	1.80E-03	2.00E-04	3.51E-08	1.31E-03	2.19E-03
E59	0.00E+00	1.14E-05	1.00E-06	3.61E+01	4.77E-05	1.32E-01	1.90E-05	5.56E-03	3.79E-03	6.37E-04	1.89E-03	1.04E-03	1.07E-03	1.00E-03	1.74E-04	3.21E-08	8.23E-04	1.03E-03
E60	0.00E+00	1.19E-05	9.75E-07	3.36E+01	4.13E-05	1.17E-01	1.81E-05	6.99E-03	3.44E-03	5.81E-04	1.82E-03	9.35E-04	9.60E-04	1.24E-03	1.58E-04	2.87E-08	8.60E-04	1.30E-03
E61	0.00E+00	1.14E-05	1.00E-06	3.61E+01	4.77E-05	1.32E-01	1.90E-05	5.56E-03	3.79E-03	6.37E-04	1.89E-03	1.04E-03	1.07E-03	1.00E-03	1.74E-04	3.21E-08	8.23E-04	1.03E-03
E62	0.00E+00	1.19E-05	9.75E-07	3.36E+01	4.13E-05	1.17E-01	1.81E-05	6.99E-03	3.44E-03	5.81E-04	1.82E-03	9.35E-04	9.60E-04	1.24E-03	1.58E-04	2.87E-08	8.60E-04	1.30E-03
E63	0.00E+00	8.89E-05	6.61E-06	1.88E+02	2.18E-04	6.18E-01	1.17E-04	6.29E-02	2.61E-02	4.11E-03	1.19E-02	5.40E-03	5.55E-03	9.56E-03	8.57E-04	1.48E-07	6.39E-03	1.18E-02
E64	0.00E+00	6.16E-05	4.66E-06	1.36E+02	1.62E-04	4.56E-01	8.34E-05	4.17E-02	1.90E-02	2.99E-03	8.48E-03	3.94E-03	4.05E-03	6.38E-03	6.24E-04	1.09E-07	4.43E-03	7.79E-03
E65	0.00E+00	8.95E-05	6.62E-06	1.87E+02	2.14E-04	6.08E-01	1.17E-04	6.42E-02	2.58E-02	4.07E-03	1.19E-02	5.34E-03	5.48E-03	9.74E-03	8.48E-04	1.46E-07	6.44E-03	1.20E-02
E66	0.00E+00	6.57E-05	4.94E-06	1.43E+02	1.70E-04	4.78E-01	8.84E-05	4.48E-02	2.00E-02	3.14E-03	9.00E-03	4.14E-03	4.25E-03	6.86E-03	6.56E-04	1.15E-07	4.74E-03	8.38E-03
E67	0.00E+00	2.90E-05	2.23E-06	7.34E+01	8.33E-05	2.41E-01	4.08E-05	1.92E-02	7.33E-03	1.24E-03	4.15E-03	1.97E-03	2.02E-03	3.41E-03	3.39E-04	6.06E-08	2.12E-03	3.59E-03
E68	0.00E+00	4.28E-05	3.27E-06	1.09E+02	1.25E-04	3.59E-01	6.07E-05	2.74E-02	1.09E-02	1.84E-03	6.21E-03	2.93E-03	3.01E-03	4.93E-03	5.03E-04	9.21E-08	3.20E-03	5.09E-03
E69	0.00E+00	2.09E-05	1.78E-06	5.88E+01	8.25E-05	2.22E-01	3.38E-05	9.82E-03	8.63E-03	1.35E-03	3.38E-03	1.81E-03	1.86E-03	1.60E-03	2.83E-04	5.22E-08	1.51E-03	1.82E-03
E70	0.00E+00	3.12E-05	2.76E-06	9.53E+01	1.40E-04	3.71E-01	5.42E-05	1.12E-02	1.42E-02	2.21E-03	5.40E-03	3.00E-03	3.08E-03	1.97E-03	4.66E-04	8.86E-08	2.32E-03	2.06E-03
E71	0.00E+00	2.15E-05	2.19E-06	8.13E+01	1.28E-04	3.35E-01	4.33E-05	4.59E-03	1.24E-02	1.93E-03	4.19E-03	2.63E-03	2.69E-03	8.61E-04	4.07E-04	7.59E-08	1.50E-03	8.12E-04
E72	0.00E+00	3.51E-05	3.22E-06	1.14E+02	1.72E-04	4.54E-01	6.37E-05	1.08E-02	1.71E-02	2.67E-03	6.30E-03	3.63E-03	3.73E-03	1.95E-03	5.63E-04	1.07E-07	2.58E-03	1.97E-03
E73	0.00E+00	1.61E-05	1.41E-06	4.25E+01	6.67E-05	1.75E-01	2.66E-05	7.54E-03	8.07E-03	1.21E-03	2.64E-03	1.46E-03	1.49E-03	1.08E-03	2.05E-04	3.81E-08	1.14E-03	1.40E-03
E74	0.00E+00	2.42E-05	2.04E-06	6.06E+01	9.45E-05	2.47E-01	3.91E-05	1.09E-02	1.14E-02	1.71E-03	3.92E-03	2.08E-03	2.13E-03	1.61E-03	2.92E-04	5.57E-08	1.79E-03	2.02E-03
E75	0.00E+00	5.84E-05	4.68E-06	1.46E+02	1.77E-04	4.91E-01	8.34E-05	3.84E-02	2.03E-02	3.19E-03	8.35E-03	4.16E-03	4.28E-03	5.80E-03	6.84E-04	1.16E-07	4.07E-03	7.15E-03
E76	0.00E+00	9.97E-05	8.13E-06	2.55E+02	3.10E-04	8.59E-01	1.43E-04	6.70E-02	3.55E-02	5.57E-03	1.42E-02	7.25E-03	7.45E-03	9.97E-03	1.19E-03	1.99E-07	6.79E-03	1.25E-02
E77	0.00E+00	6.28E-05	5.01E-06	1.54E+02	1.85E-04	5.14E-01	8.83E-05	4.30E-02	2.14E-02	3.36E-03	8.82E-03	4.38E-03	4.49E-03	6.43E-03	7.20E-04	1.21E-07	4.33E-03	8.03E-03
E78	0.00E+00	1.04E-04	8.37E-06	2.59E+02	3.11E-04	8.65E-01	1.46E-04	7.18E-02	3.60E-02	5.65E-03	1.46E-02	7.34E-03	7.53E-03	1.06E-02	1.21E-03	2.00E-07	7.03E-03	1.34E-02
E79	0.00E+00	4.86E-05	3.96E-06	1.34E+02	1.77E-04	4.73E-01	7.62E-05	2.32E-02	1.88E-02	2.97E-03	7.70E-03	3.95E-03	4.05E-03	3.87E-03	6.41E-04	1.20E-07	3.66E-03	4.30E-03
E80	0.00E+00	6.58E-05	5.86E-06	2.07E+02	2.86E-04	7.59E-01	1.11E-04	2.89E-02	2.97E-02	4.65E-03	1.10E-02	6.18E-03	6.34E-03	4.69E-03	1.01E-03	1.82E-07	4.67E-03	5.32E-03
E83	0.00E+00	1.75E-05	1.54E-06	5.06E+01	7.07E-05	1.91E-01	2.85E-05	8.94E-03	7.46E-03	1.16E-03	2.81E-03	1.56E-03	1.60E-03	1.39E-03	2.44E-04	4.33E-08	1.21E-03	1.65E-03
E84	0.00E+00	1.98E-05	1.70E-06	5.53E+01	7.64E-05	2.07E-01	3.16E-05	1.02E-02	8.10E-03	1.26E-03	3.14E-03	1.69E-03	1.74E-03	1.60E-03	2.65E-04	4.76E-08	1.40E-03	1.89E-03
E85	0.00E+00	7.03E-05	6.28E-06	1.93E+02	3.11E-04	8.09E-01	1.20E-04	2.89E-02	3.68E-02	5.51E-03	1.19E-02	6.69E-03	6.86E-03	4.27E-03	9.41E-04	1.77E-07	5.02E-03	5.33E-03
E86	0.00E+00	1.36E-04	1.09E-05	3.07E+02	4.50E-04	1.20E+00	2.03E-04	7.75E-02	5.72E-02	8.59E-03	2.04E-02	1.03E-02	1.06E-02	1.08E-02	1.45E-03	2.67E-07	9.89E-03	1.44E-02
E87	0.00E+00	1.22E-04	9.09E-06	2.38E+02	3.19E-04	8.69E-01	1.65E-04	8.11E-02	4.34E-02	6.53E-03	1.69E-02	7.73E-03	7.94E-03	1.10E-02	1.10E-03	1.98E-07	8.98E-03	1.51E-02
E88	0.00E+00	1.10E-04	8.24E-06	2.17E+02	2.95E-04	8.00E-01	1.51E-04	7.08E-02	3.97E-02	5.98E-03	1.55E-02	7.11E-03	7.30E-03	9.71E-03	1.01E-03	1.84E-07	8.23E-03	1.32E-02
E89	0.00E+00	7.35E-06	7.71E-07	2.65E+01	4.69E-05	1.19E-01	1.54E-05	8.50E-04	5.18E-03	7.73E-04	1.49E-03	9.52E-04	9.76E-04	1.99E-04	1.33E-04	2.59E-08	5.13E-04	1.43E-04
E90	0.00E+00	1.22E-05	1.17E-06	3.73E+01	6.21E-05	1.61E-01	2.25E-05	4.16E-03	7.20E-03	1.08E-03	2.19E-03	1.31E-03	1.34E-03	6.34E-04	1.84E-04	3.46E-08	8.49E-04	7.60E-04
E91	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.68E-07	2.46E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.02E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E92	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.68E-07	2.46E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.02E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E93	0.00E+00	1.11E-05	9.95E-07	3.04E+01	4.83E-05	1.27E-01	1.88E-05	4.98E-03	5.79E-03	8.66E-04	1.84E-03	1.05E-03	1.07E-03	7.11E-04	1.47E-04	2.72E-08	7.71E-04	9.20E-04
E94	0.00E+00	1.03E-05	1.04E-06	3.51E+01	6.13E-05	1.56E-01	2.08E-05	1.73E-03	6.84E-03	1.02E-03	2.02E-03	1.26E-03	1.29E-03	3.45E-04	1.76E-04	3.41E-08	7.31E-04	3.04E-04
E95	0.00E+00	3.53E-05	2.47E-06	7.60E+01	7.04E-05	2.14E-01	4.35E-05	2.80E-02	7.41E-03	1.25E-03	4.52E-03	1.86E-03	1.91E-03	4.92E-03	3.35E-04	5.64E-08	2.61E-03	5.24E-03
E96	0.00E+00	7.23E-05	5.36E-06	1.69E+02	1.68E-04	5.02E-01	9.31E-05	5.68E-02	1.69E-02	2.84E-03	9.49E-03	4.24E-03	4.36E-03	9.75E-03	7.58E-04	1.23E-07	5.13E-03	1.06E-02
F01	0.00E+00	2.35E-05	2.01E-06	5.91E+01	9.07E-05	2.40E-01	3.75E-05	1.21E-02	1.12E-02	1.67E-03	3.72E-03	2.01E-03	2.06E-03	1.69E-03	2.84E-04	5.20E-08	1.66E-03	2.25E-03
F02	0.00E+00	2.79E-05	2.18E-06	5.96E+01	8.46E-05	2.27E-01	4.01E-05	1.69E-02	1.10E-02	1.66E-03	4.06E-03	1.97E-03	2.03E-03	2.32E-03	2.79E-04	5.10E-08	2.04E-03	3.15E-03
F33	0.00E+00	9.09E-06	9.39E-07	3.16E+01	5.49E-05	1.41E-01	1.84E-05	1.86E-03	6.16E-03	9.19E-04	1.77E-03	1.13E-03	1.15E-03	3.28E-04	1.58E-04	3.00E-08	6.18E-04	3.31E-04
F34	0.00E+00	3.82E-05	3.23E-06	9.27E+01	1.38E-04	3.69E-01	5.90E-05	2.20E-02	1.74E-02	2.61E-03	5.85E-03	3.11E-03	3.19E-03	2.99E-03	4.41E-04	7.89E-08	2.66E-03	4.09E-03
F35	0.00E+00	9.30E-06	6.91E-07	2.26E+01	2.49E-05	7.25E-02	1.28E-05	6.17E-03	2.22E-03	3.79E-04	1.32E-03	5.99E-04	6.15E-04	1.12E-03	1.03E-04	1.90E-08	7.01E-04	1.15E-03
F36	0.00E+00	2.15E-05	1.86E-06	6.70E+01	8.81E-05	2.45E-01	3.55E-05	1.04E-02	7.01E-03	1.18E-03	3.54E-03	1.92E-03	1.97E-03	1.90E-03	3.22E-04	6.00E-08	1.57E-03	1.92E-03
F37	0.00E+00	1.03E-04	7.85E-06	2.08E+02	2.84E-04	7.73E-01	1.42E-04	6.79E-02	3.82E-02	5.75E-03	1.45E-02	6.80E-03	6.98E-03	9.19E-03	9.65E-04	1.73E-07	7.51E-03	1.27E-02
F38	0.00E+00	1.17E-04	7.91E-06	1.82E+02	1.96E-04	5.74E-01	1.36E-04	9.62E-02	3.18E-02	4.80E-03	1.42E-02	5.50E-03	5.65E-03	1.26E-02	7.91E-04	1.31E-07	8.56E-03	1.81E-02
F39	0.00E+00	1.72E-06	1.42E-07	4.70E+00	5.52E-06	1.59E-02	2.50E-06	1.19E-03	4.78E-04	8.05E-05	2.49E-04	1.28E-04	1.32E-04	2.00E-04	2.19E-05	3.68E-09	1.17E-04	2.22E-04
F40	0.00E+00	2.30E-05	1.75E-06	5.59E+01	6.03E-05	1.77E-01	3.11E-05	1.68E-02	5.51E-03	9.36E-04	3.16E-03	1.47E-03	1.51E-03	2.91E-03	2.55E-04	4.37E-08	1.65E-03	3.13E-03
F41	0.00E+00	1.12E-05	1.20E-06	4.61E+01	7.44E-05	1.93E-01	2.41E-05	1.30E-03	7.11E-03	1.10E-03	2.32E-03	1.50E-03	1.54E-03	3.00E-04	2.32E-04	4.37E-08	7.79E-04	2.14E-04
F42	0.00E+00	1.11E-05	1.05E-06	3.63E+01	5.36E-05	1.43E-01	1.98E-05	4.48E-03	5.44E-03	8.46E-04	1.93E-03	1.14E-03	1.17E-03	7.15E-04	1.78E-04	3.21E-08	7.61E-04	8.21E-04
F43	0.00E+00	5.02E-07	5.36E-08	1.85E+00	3.29E-06	8.38E-03	1.07E-06	5.38E-05	3.63E-04	5.41E-05	1.03E-04	6.66E-05	6.83E-05	1.28E-05	9.32E-06	1.80E-09	3.44E-05	8.94E-06
F44	0.00E+00	1.03E-05	9.74E-07	3.13E+01	5.26E-05	1.35E-01	1.90E-05	3.12E-03	6.04E-03	9.03E-04	1.86E-03	1.10E-03	1.13E-03	4.99E-04	1.55E-04	2.95E-08	7.27E-04	5.69E-04
F45	0.00E+00	1.75E-05	1.54E-06	5.06E+01	7.07E-05	1.91E-01	2.85E-05	8.94E-03	7.46E-03	1.16E-03	2.81E-03	1.56E-03	1.60E-03	1.39E-03	2.44E-04	4.33E-08	1.21E-03	1.65E-03
F46	0.00E+00	1.98E-05	1.70E-06	5.53E+01	7.64E-05	2.07E-01	3.16E-05	1.02E-02	8.10E-03	1.26E-03	3.14E-03	1.69E-03	1.74E-03	1.60E-03	2.65E-04	4.76E-08	1.40E-03	1.89E-03
F47	0.00E+00	7.46E-07	6.37E-08	1.77E+00	2.52E-06	6.91E-03	1.10E-06	5.23E-04	3.32E-04	4.96E-05	1.08E-04	5.80E-05	5.96E-05	6.70E-05	8.33E-06	1.38E-09	4.83E-05	9.76E-05
F48	0.00E+00	4.51E-07	3.21E-08	6.85E-01	5.83E-07	1.98E-03	4.74E-07	4.91E-04	1.19E-04	1.78E-05	4.74E-05	1.88E-05	1.94E-05	5.95E-05	2.84E-06	3.18E-10	2.81E-05	9.24E-05
F78	0.00E+00	4.18E-05	3.75E-06	1.11E+02	1.81E-04	4.56E-01	7.04E-05	1.61E-02	3.15E-02	4.41E-03	6.89E-03	3.92E-03	4.02E-03	2.11E-03	5.41E-04	8.53E-08	2.87E-03	2.98E-03
F79	0.00E+00	4.28E-05	3.97E-06	1.37E+02	2.08E-04	5.38E-01	7.70E-05	1.48E-02	2.52E-02	3.76E-03	7.57E-03	4.41E-03	4.52E-03	2.33E-03	6.73E-04	1.19E-07	3.04E-03	2.70E-03
F80	0.00E+00	3.78E-05	3.38E-06	1.22E+02	1.72E-04	4.53E-01	6.59E-05	1.41E-02	1.76E-02	2.75E-03	6.54E-03	3.68E-03	3.77E-03	2.43E-03	5.96E-04	1.11E-07	2.77E-03	2.58E-03
F84	0.00E+00	5.84E-05	4.13E-06	7.10E+01	6.49E-05	2.21E-01	5.89E-05	6.15E-02	1.89E-02	2.68E-03	5.86E-03	2.26E-03	2.33E-03	5.77E-03	2.98E-04	3.07E-08	3.53E-03	1.16E-02
F85	0.00E+00	4.09E-05	3.16E-06	8.58E+01	1.02E-04	2.89E-01	5.37E-05	3.25E-02	1.52E-02	2.27E-03	5.38E-03	2.54E-03	2.61E-03	4.18E-03	3.93E-04	5.99E-08	2.77E-03	6.08E-03
F86	0.00E+00	2.95E-05	2.10E-06	5.81E+01	5.98E-05	1.74E-01	3.64E-05	2.28E-02	7.71E-03	1.22E-03	3.75E-03	1.57E-03	1.62E-03	3.43E-03	2.60E-04	4.35E-08	2.13E-03	4.26E-03
F87	0.00E+00	6.36E-05	3.83E-06	7.73E+01	5.50E-05	1.84E-01	6.44E-05	5.80E-02	1.25E-02	1.90E-03	6.97E-03	2.08E-03	2.14E-03	7.56E-03	3.13E-04	4.80E-08	4.83E-03	1.09E-02
F88	0.00E+00	5.84E-05	4.13E-06	7.10E+01	6.49E-05	2.21E-01	5.89E-05	6.15E-02	1.89E-02	2.68E-03	5.86E-03	2.26E-03	2.33E-03	5.77E-03	2.98E-04	3.07E-08	3.53E-03	1.16E-02
F89	0.00E+00	9.54E-05	6.60E-06	1.33E+02	1.66E-04	4.51E-01	1.12E-04	7.24E-02	3.56E-02	5.06E-03	1.16E-02	4.61E-03	4.74E-03	7.50E-03	5.94E-04	9.19E-08	6.82E-03	1.36E-02

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B09	100	Passenger Car	1340	0.00E+00	1.24E-05	1.34E-06	5.42E+01	8.77E-05	2.52E-01	2.79E-05	1.45E-03	4.28E-03	8.21E-04	2.72E-03	1.75E-03	1.80E-03	1.59E-04	2.77E-04	5.82E-08	9.19E-04	2.26E-04
16	B09	100	Passenger Truck	2245	0.00E+00	2.55E-05	2.74E-06	1.25E+02	1.70E-04	4.88E-01	5.51E-05	3.61E-03	7.48E-03	1.45E-03	5.31E-03	3.44E-03	3.53E-03	8.27E-04	6.33E-04	1.15E-07	1.79E-03	5.93E-04
16	B09	100	Single Unit Short Haul Truck	59	0.00E+00	5.64E-06	2.09E-07	9.70E+00	4.32E-06	2.00E-02	6.40E-06	2.50E-03	3.84E-04	9.93E-05	8.09E-04	1.49E-04	1.52E-04	9.93E-04	3.92E-05	1.60E-08	6.57E-04	4.66E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	2.45E-07	8.81E-09	4.08E-01	1.79E-07	8.19E-04	2.77E-07	1.05E-04	1.74E-05	4.31E-06	3.54E-05	6.30E-06	6.42E-06	4.15E-05	1.66E-06	6.56E-10	2.90E-05	1.95E-05
16	B09	100	Combination Short Haul Truck	73	0.00E+00	1.05E-05	7.74E-07	2.44E+01	2.78E-08	1.89E-02	7.50E-06	1.90E-02	7.09E-04	1.80E-04	6.38E-04	2.26E-04	2.35E-04	3.88E-03	8.16E-05	0.00E+00	4.04E-04	3.57E-03
16	B09	100	Combination Long Haul Truck	67	0.00E+00	1.48E-05	8.35E-07	2.21E+01	9.44E-08	2.20E-02	1.22E-05	2.03E-02	7.10E-04	1.45E-04	1.36E-03	2.69E-04	2.80E-04	3.55E-03	7.41E-05	0.00E+00	1.08E-03	3.82E-03
16	B10	100	Passenger Car	1141	0.00E+00	1.05E-05	1.14E-06	4.62E+01	7.47E-05	2.15E-01	2.37E-05	1.23E-03	3.65E-03	6.99E-04	2.31E-03	1.49E-03	1.53E-03	1.36E-04	2.36E-04	4.95E-08	7.83E-04	1.92E-04
16	B10	100	Passenger Truck	1911	0.00E+00	2.17E-05	2.33E-06	1.06E+02	1.45E-04	4.16E-01	4.69E-05	3.07E-03	6.37E-03	1.24E-03	4.52E-03	2.93E-03	3.00E-03	7.04E-04	5.39E-04	9.81E-08	1.52E-03	5.05E-04
16	B10	100	Single Unit Short Haul Truck	53	0.00E+00	5.01E-06	1.85E-07	8.60E+00	3.83E-06	1.78E-02	5.68E-06	2.22E-03	3.40E-04	8.81E-05	7.18E-04	1.33E-04	1.35E-04	8.81E-04	3.48E-05	1.42E-08	5.83E-04	4.13E-04
16	B10	100	Single Unit Long Haul Truck	2	0.00E+00	2.18E-07	7.82E-09	3.62E-01	1.58E-07	7.27E-04	2.46E-07	9.30E-05	1.55E-05	3.83E-06	3.14E-05	5.59E-06	5.69E-06	3.68E-05	1.47E-06	5.82E-10	2.57E-05	1.73E-05
16	B10	100	Combination Short Haul Truck	68	0.00E+00	9.73E-06	7.19E-07	2.27E+01	2.58E-08	1.75E-02	6.96E-06	1.76E-02	6.59E-04	1.67E-04	5.93E-04	2.10E-04	2.18E-04	3.60E-03	7.58E-05	0.00E+00	3.75E-04	3.32E-03
16	B10	100	Combination Long Haul Truck	62	0.00E+00	1.37E-05	7.75E-07	2.05E+01	8.76E-08	2.04E-02	1.13E-05	1.89E-02	6.60E-04	1.34E-04	1.26E-03	2.50E-04	2.60E-04	3.29E-03	6.88E-05	0.00E+00	1.00E-03	3.55E-03
16	B13	100	Passenger Car	685	0.00E+00	6.32E-06	6.87E-07	2.77E+01	4.48E-05	1.29E-01	1.42E-05	7.39E-04	2.19E-03	4.20E-04	1.39E-03	8.96E-04	9.19E-04	8.15E-05	1.42E-04	2.97E-08	4.70E-04	1.15E-04
16	B13	100	Passenger Truck	1148	0.00E+00	1.31E-05	1.40E-06	6.39E+01	8.71E-05	2.50E-01	2.82E-05	1.85E-03	3.82E-03	7.42E-04	2.72E-03	1.76E-03	1.80E-03	4.23E-04	3.23E-04	5.89E-08	9.13E-04	3.03E-04
16	B13	100	Single Unit Short Haul Truck	35	0.00E+00	3.37E-06	1.24E-07	5.79E+00	2.58E-06	1.19E-02	3.82E-06	1.49E-03	2.29E-04	5.93E-05	4.83E-04	8.92E-05	9.07E-05	5.93E-04	2.34E-05	9.56E-09	3.92E-04	2.78E-04
16	B13	100	Single Unit Long Haul Truck	2	0.00E+00	1.46E-07	5.26E-09	2.43E-01	1.07E-07	4.89E-04	1.65E-07	6.25E-05	1.04E-05	2.57E-06	2.11E-05	3.76E-06	3.83E-06	2.48E-05	9.88E-07	3.91E-10	1.73E-05	1.17E-05
16	B13	100	Combination Short Haul Truck	42	0.00E+00	5.99E-06	4.42E-07	1.39E+01	1.59E-08	1.08E-02	4.29E-06	1.08E-02	4.05E-04	1.03E-04	3.65E-04	1.29E-04	1.34E-04	2.22E-03	4.66E-05	0.00E+00	2.31E-04	2.04E-03
16	B13	100	Combination Long Haul Truck	38	0.00E+00	8.46E-06	4.77E-07	1.26E+01	5.39E-08	1.25E-02	6.98E-06	1.16E-02	4.06E-04	8.27E-05	7.76E-04	1.54E-04	1.60E-04	2.03E-03	4.23E-05	0.00E+00	6.16E-04	2.19E-03
16	B14	100	Passenger Car	1027	0.00E+00	9.47E-06	1.03E-06	4.16E+01	6.72E-05	1.93E-01	2.14E-05	1.11E-03	3.28E-03	6.29E-04	2.08E-03	1.34E-03	1.38E-03	1.22E-04	2.12E-04	4.46E-08	7.05E-04	1.73E-04
16	B14	100	Passenger Truck	1721	0.00E+00	1.96E-05	2.10E-06	9.59E+01	1.31E-04	3.74E-01	4.22E-05	2.77E-03	5.73E-03	1.11E-03	4.07E-03	2.64E-03	2.70E-03	6.34E-04	4.85E-04	8.83E-08	1.37E-03	4.55E-04
16	B14	100	Single Unit Short Haul Truck	57	0.00E+00	5.37E-06	1.98E-07	9.23E+00	4.11E-06	1.90E-02	6.09E-06	2.38E-03	3.65E-04	9.45E-05	7.70E-04	1.42E-04	1.45E-04	9.45E-04	3.74E-05	1.52E-08	6.25E-04	4.43E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.33E-07	8.39E-09	3.88E-01	1.70E-07	7.79E-04	2.64E-07	9.97E-05	1.66E-05	4.10E-06	3.37E-05	6.00E-06	6.11E-06	3.95E-05	1.57E-06	6.24E-10	2.76E-05	1.86E-05
16	B14	100	Combination Short Haul Truck	62	0.00E+00	8.90E-06	6.58E-07	2.07E+01	2.36E-08	1.60E-02	6.37E-06	1.61E-02	6.03E-04	1.53E-04	5.42E-04	1.92E-04	1.99E-04	3.30E-03	6.93E-05	0.00E+00	3.43E-04	3.04E-03
16	B14	100	Combination Long Haul Truck	57	0.00E+00	1.26E-05	7.09E-07	1.88E+01	8.02E-08	1.87E-02	1.04E-05	1.73E-02	6.04E-04	1.23E-04	1.15E-03	2.29E-04	2.38E-04	3.01E-03	6.29E-05	0.00E+00	9.16E-04	3.25E-03
16	B15	100	Passenger Car	1518	0.00E+00	1.40E-05	1.52E-06	6.14E+01	9.93E-05	2.86E-01	3.16E-05	1.64E-03	4.85E-03	9.30E-04	3.08E-03	1.98E-03	2.04E-03	1.81E-04	3.14E-04	6.59E-08	1.04E-03	2.55E-04
16	B15	100	Passenger Truck	2542	0.00E+00	2.89E-05	3.10E-06	1.42E+02	1.93E-04	5.53E-01	6.24E-05	4.09E-03	8.47E-03	1.64E-03	6.02E-03	3.90E-03	3.99E-03	9.36E-04	7.17E-04	1.31E-07	2.02E-03	6.72E-04
16	B15	100	Single Unit Short Haul Truck	24	0.00E+00	2.28E-06	8.41E-08	3.91E+00	1.74E-06	8.07E-03	2.58E-06	1.01E-03	1.55E-04	4.00E-05	3.26E-04	6.02E-05	6.13E-05	4.00E-04	1.58E-05	6.46E-09	2.65E-04	1.88E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	9.89E-08	3.55E-09	1.64E-01	7.20E-08	3.30E-04	1.12E-07	4.23E-05	7.03E-06	1.74E-06	1.43E-05	2.54E-06	2.59E-06	1.67E-05	6.67E-07	2.64E-10	1.17E-05	7.88E-06
16	B15	100	Combination Short Haul Truck	17	0.00E+00	2.39E-06	1.77E-07	5.58E+00	6.35E-09	4.31E-03	1.71E-06	4.33E-03	1.62E-04	4.11E-05	1.46E-04	5.16E-05	5.36E-05	8.86E-04	1.86E-05	0.00E+00	9.22E-05	8.16E-04
16	B15	100	Combination Long Haul Truck	15	0.00E+00	3.38E-06	1.91E-07	5.05E+00	2.16E-08	5.02E-03	2.79E-06	4.64E-03	1.62E-04	3.31E-05	3.10E-04	6.15E-05	6.41E-05	8.11E-04	1.69E-05	0.00E+00	2.46E-04	8.74E-04
16	B16	100	Passenger Car	975	0.00E+00	8.99E-06	9.77E-07	3.95E+01	6.38E-05	1.84E-01	2.03E-05	1.05E-03	3.12E-03	5.97E-04	1.98E-03	1.27E-03	1.31E-03	1.16E-04	2.02E-04	4.23E-08	6.69E-04	1.64E-04
16	B16	100	Passenger Truck	1633	0.00E+00	1.86E-05	1.99E-06	9.10E+01	1.24E-04	3.55E-01	4.01E-05	2.63E-03	5.44E-03	1.06E-03	3.86E-03	2.50E-03	2.57E-03	6.02E-04	4.60E-04	8.38E-08	1.30E-03	4.32E-04
16	B16	100	Single Unit Short Haul Truck	21	0.00E+00	2.00E-06	7.40E-08	3.44E+00	1.53E-06	7.10E-03	2.27E-06	8.87E-04	1.36E-04	3.52E-05	2.87E-04	5.30E-05	5.39E-05	3.52E-04	1.39E-05	5.69E-09	2.33E-04	1.65E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	8.70E-08	3.13E-09	1.45E-01	6.34E-08	2.91E-04	9.84E-08	3.72E-05	6.19E-06	1.53E-06	1.26E-05	2.24E-06	2.28E-06	1.47E-05	5.87E-07	2.33E-10	1.03E-05	6.93E-06
16	B16	100	Combination Short Haul Truck	11	0.00E+00	1.57E-06	1.16E-07	3.66E+00	4.17E-09	2.83E-03	1.12E-06	2.84E-03	1.06E-04	2.70E-05	9.57E-05	3.39E-05	3.52E-05	5.82E-04	1.22E-05	0.00E+00	6.05E-05	5.36E-04
16	B16	100	Combination Long Haul Truck	10	0.00E+00	2.22E-06	1.25E-07	3.32E+00	1.42E-08	3.29E-03	1.83E-06	3.05E-03	1.07E-04	2.17E-05	2.04E-04	4.04E-05	4.21E-05	5.32E-04	1.11E-05	0.00E+00	1.62E-04	5.74E-04
11	D27	80	Passenger Car	812	0.00E+00	8.32E-06	9.04E-07	3.40E+01	5.91E-05	1.65E-01	1.88E-05	8.42E-04	4.42E-03	7.41E-04	1.83E-03	1.18E-03	1.21E-03	1.21E-04	1.73E-04	3.70E-08	6.19E-04	1.31E-04
11	D27	80	Passenger Truck	1359	0.00E+00	1.71E-05	1.83E-06	7.68E+01	1.12E-04	2.92E-01	3.63E-05	2.27E-03	7.88E-03	1.31E-03	3.49E-03	2.26E-03	2.32E-03	5.58E-04	3.87E-04	7.04E-08	1.17E-03	3.78E-04
11	D27	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.59E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.96E-04
11	D27	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.77E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.27E-05
11	D27	80	Combination Short Haul Truck	22	0.00E+00	4.53E-06	3.35E-07	7.37E+00	1.19E-08	6.90E-03	3.24E-06	7.00E-03	5.24E-04	9.50E-05	2.75E-04	9.78E-05	1.02E-04	1.17E-03	2.46E-05	0.00E+00	1.73E-04	1.32E-03
11	D27	80	Combination Long Haul Truck	20	0.00E+00	6.31E-06	3.56E-07	6.84E+00	4.01E-08	8.17E-03	5.20E-06	7.48E-03	5.42E-04	8.67E-05	5.78E-04	1.15E-04	1.20E-04	1.10E-03	2.29E-05	0.00E+00	4.58E-04	1.41E-03
11	D28	80	Passenger Car	350	0.00E+00	3.58E-06	3.90E-07	1.47E+01	2.54E-05	7.10E-02	8.08E-06	3.62E-04	1.91E-03	3.19E-04	7.88E-04	5.08E-04	5.22E-04	5.20E-05	7.46E-05	1.59E-08	2.67E-04	5.65E-05
11	D28	80	Passenger Truck	585	0.00E+00	7.38E-06	7.87E-07	3.31E+01	4.80E-05	1.26E-01	1.56E-05	9.78E-04	3.39E-03	5.65E-04	1.50E-03	9.74E-04	9.98E-04	2.40E-04	1.67E-04	3.03E-08	5.03E-04	1.63E-04
11	D28	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	D28	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.17E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.97E-04
11	D28	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.39E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.38E-04
11	D29	80	Passenger Car	812	0.00E+00	8.32E-06	9.04E-07	3.40E+01	5.91E-05	1.65E-01	1.88E-05	8.42E-04	4.42E-03	7.41E-04	1.83E-03	1.18E-03	1.21E-03	1.21E-04	1.73E-04	3.70E-08	6.19E-04	1.31E-04
11	D29	80	Passenger Truck	1359	0.00E+00	1.71E-05	1.83E-06	7.68E+01	1.12E-04	2.92E-01	3.63E-05	2.27E-03	7.88E-03	1.31E-03	3.49E-03	2.26E-03	2.32E-03	5.58E-04	3.87E-04	7.04E-08	1.17E-03	3.78E-04
11	D29	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.59E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.96E-04
11	D29	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.77E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.27E-05
11	D29	80	Combination Short Haul Truck	22	0.00E+00	4.53E-06	3.35E-07	7.37E+00	1.19E-08	6.90E-03	3.24E-06	7.00E-03	5.24E-04	9.50E-05	2.75E-04	9.78E-05	1.02E-04	1.17E-03	2.46E-05	0.00E+00	1.73E-04	1.32E-03
11	D29	80	Combination Long Haul Truck	20	0.00E+00	6.31E-06	3.56E-07	6.84E+00	4.01E-08	8.17E-03	5.20E-06	7.48E-03	5.42E-04	8.67E-05	5.78E-04	1.15E-04	1.20E-04	1.10E-03	2.29E-05	0.00E+00	4.58E-04	1.41E-03
11	D30	80	Passenger Car	350	0.00E+00	3.58E-06	3.90E-07	1.47E+01	2.54E-05	7.10E-02	8.08E-06	3.62E-04	1.91E-03	3.19E-04	7.88E-04	5.08E-04	5.22E-04	5.20E-05	7.46E-05	1.59E-08	2.67E-04	5.65E-05
11	D30	80	Passenger Truck	585	0.00E+00	7.38E-06	7.87E-07	3.31E+01	4.80E-05	1.26E-01	1.56E-05	9.78E-04	3.39E-03	5.65E-04	1.50E-03	9.74E-04	9.98E-04	2.40E-04	1.67E-04	3.03E-08	5.03E-04	1.63E-04
11	D30	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	D30	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.17E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.97E-04
11	D30	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.39E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.38E-04
11	D31	80	Passenger Car	469	0.00E+00	4.81E-06	5.23E-07	1.97E+01	3.41E-05	9.53E-02	1.08E-05	4.87E-04	2.56E-03	4.28E-04	1.06E-03	6.82E-04	7.00E-04	6.98E-05	1.00E-04	2.14E-08	3.58E-04	7.59E-05
11	D31	80	Passenger Truck	786	0.00E+00	9.91E-06	1.06E-06	4.44E+01	6.45E-05	1.69E-01	2.10E-05	1.31E-03	4.55E-03	7.58E-04	2.02E-03	1.31E-03	1.34E-03	3.23E-04	2.24E-04	4.07E-08	6.75E-04	2.18E-04
11	D31	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04
11	D31	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	4.41E-09	1.33E-01	7.59E-08	2.38E-04	1.25E-07	4.67E-05	9.87E-06	1.95E-06	1.58E-05	2.88E-06	2.93E-06	1.34E-05	5.40E-07	2.11E-10	1.28E-05	8.73E-06
11	D31	80	Combination Short Haul Truck	15	0.00E+00	3.13E-06	2.31E-07	5.09E+00	8.19E-09	4.76E-03	2.23E-06	4.83E-03	3.62E-04	6.56E-05	1.90E-04	6.75E-05	7.01E-05	8.08E-04	1.70E-05	0.00E+00	1.19E-04	9.11E-04
11	D31	80	Combination Long Haul Truck	14	0.00E+00	4.35E-06	2.46E-07	4.72E+00	2.77E-08	5.64E-03	3.59E-06	5.17E-03	3.74E-04	5.99E-05	3.99E-04	7.92E-05	8.25E-05	7.58E-04	1.58E-05	0.00E+00	3.17E-04	9.73E-04
11	D32	80	Passenger Car	256	0.00E+00	2.63E-06	2.86E-07	1.07E+01	1.87E-05	5.21E-02	5.93E-06	2.66E-04	1.40E-03	2.34E-04	5.78E-04	3.73E-04	3.83E-04	3.81E-05	5.47E-05	1.17E-08	1.96E-04	4.15E-05
11	D32	80	Passenger Truck	430	0.00E+00	5.42E-06	5.77E-07	2.43E+01	3.52E-05	9.22E-02	1.15E-05	7.17E-04	2.49E-03	4.14E-04	1.10E-03	7.15E-04	7.33E-04	1.76E-04	1.22E-04	2.23E-08	3.69E-04	1.19E-04
11	D32	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.17E-05
11	D32	80	Single Unit Long Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.67E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.02E-04
11	D32	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.85E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.37E-04
9	D33	60	Passenger Car	233	0.00E+00	2.95E-06	3.20E-07	1.05E+01	2.09E-05	5.67E-02	6.64E-06	2.40E-04	2.36E-03	3.53E-04	6.48E-04	4.18E-04	4.29E-04	4.62E-05	5.33E-05	1.12E-08	2.19E-04	3.75E-05
9	D33	60	Passenger Truck	391	0.00E+00	6.26E-06	6.63E-07	2.35E+01	3.95E-05	9.71E-02	1.30E-05	7.47E-04	4.31E-03	6.41E-04	1.24E-03	8.05E-04	8.25E-04	1.89E-04	1.18E-04	2.18E-08	4.13E-04	1.27E-04
9	D33	60	Single Unit Short Haul Truck	7	0.00E+00	1.50E-06	6.18E-08	1.12E+00	9.92E-07	1.96E-03	1.62E-06	5.75E-04	1.54E-04	2.59E-05	2.00E-04	3.85E-05	3.92E-05	1.13E-04	4.55E-06	1.87E-09	1.60E-04	1.08E-04
9	D33	60	Single Unit Long Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.27E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.15E-04
9	D33	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
9	D34	60	Passenger Car	372	0.00E+00	4.69E-06	5.10E-07	1.68E+01	3.33E-05	9.03E-02	1.06E-05	3.83E-04	3.75E-03	5.62E-04	1.03E-03	6.66E-04	6.83E-04	7.37E-05	8.50E-05	1.78E-08	3.49E-04	5.97E-05
9	D34	60	Passenger Truck	622	0.00E+00	9.97E-06	1.06E-06	3.74E+01	6.29E-05	1.55E-01	2.07E-05	1.19E-03	6.86E-03	1.02E-03	1.97E-03	1.28E-03	1.31E-03	3.02E-04	1.88E-04	3.48E-08	6.57E-04	2.02E-04
9	D34	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	D34	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
9	D34	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.43E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.35E-04
9	D34	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.72E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.90E-04
9	D35	60	Passenger Car	231	0.00E+00	2.92E-06	3.17E-07	1.04E+01	2.07E-05	5.61E-02	6.58E-06	2.38E-04	2.33E-03	3.49E-04	6.42E-04	4.14E-04	4.25E-04	4.58E-05	5.28E-05	1.11E-08	2.17E-04	3.71E-05
9	D35	60	Passenger Truck	387	0.00E+00	6.20E-06	6.57E-07	2.32E+01	3.91E-05	9.62E-02	1.29E-05	7.40E-04	4.26E-03	6.35E-04	1.23E-03	7.97E-04	8.17E-04	1.87E-04	1.17E-04	2.16E-08	4.09E-04	1.25E-04
9	D35	60	Single Unit

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	D40	60	Passenger Truck	342	0.00E+00	5.49E-06	5.81E-07	2.06E+01	3.46E-05	8.51E-02	1.14E-05	6.55E-04	3.77E-03	5.62E-04	1.08E-03	7.06E-04	7.23E-04	1.66E-04	1.03E-04	1.91E-08	3.62E-04	1.11E-04
9	D40	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	D40	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
9	D41	60	Passenger Car	88	0.00E+00	1.11E-06	1.21E-07	3.96E+00	7.88E-06	2.13E-02	2.50E-06	9.05E-05	8.87E-04	1.33E-04	2.44E-04	1.57E-04	1.62E-04	1.74E-05	2.01E-05	4.22E-09	8.26E-05	1.41E-05
9	D41	60	Passenger Truck	147	0.00E+00	2.36E-06	2.50E-07	8.83E+00	1.49E-05	3.66E-02	4.89E-06	2.81E-04	1.62E-03	2.41E-04	4.66E-04	3.03E-04	3.11E-04	7.13E-05	4.43E-05	8.22E-09	1.55E-04	4.77E-05
9	D41	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	D41	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
9	D42	60	Passenger Car	281	0.00E+00	3.55E-06	3.85E-07	1.27E+01	2.52E-05	6.82E-02	8.00E-06	2.89E-04	2.84E-03	4.25E-04	7.80E-04	5.03E-04	5.16E-04	5.57E-05	6.42E-05	1.35E-08	2.64E-04	4.51E-05
9	D42	60	Passenger Truck	470	0.00E+00	7.53E-06	7.98E-07	2.82E+01	4.75E-05	1.17E-01	1.56E-05	8.99E-04	5.18E-03	7.71E-04	1.49E-03	9.69E-04	9.93E-04	2.28E-04	1.42E-04	2.63E-08	4.96E-04	1.52E-04
9	D42	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
9	D43	60	Passenger Car	165	0.00E+00	2.09E-06	2.27E-07	7.45E+00	1.48E-05	4.01E-02	4.71E-06	1.70E-04	1.67E-03	2.50E-04	4.59E-04	2.96E-04	3.04E-04	3.28E-05	3.78E-05	7.93E-09	1.55E-04	2.65E-05
9	D43	60	Passenger Truck	277	0.00E+00	4.43E-06	4.70E-07	1.66E+01	2.80E-05	6.88E-02	9.20E-06	5.29E-04	3.05E-03	4.54E-04	8.77E-04	5.70E-04	5.84E-04	1.34E-04	8.34E-05	1.55E-08	2.92E-04	8.97E-05
9	D43	60	Single Unit Short Haul Truck	31	0.00E+00	6.84E-06	2.83E-07	5.10E+00	4.53E-06	8.97E-03	7.40E-06	2.63E-03	7.05E-04	1.18E-04	9.13E-04	1.76E-04	1.79E-04	5.17E-04	2.08E-05	8.56E-09	7.34E-04	4.92E-04
9	D43	60	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.23E-08	2.17E-01	1.97E-07	3.81E-04	3.23E-07	1.14E-04	3.17E-05	5.26E-06	3.99E-05	7.64E-06	7.79E-06	2.20E-05	8.87E-07	3.64E-10	3.21E-05	2.13E-05
9	D43	60	Combination Short Haul Truck	15	0.00E+00	4.43E-06	3.25E-07	5.34E+00	1.21E-08	6.61E-03	3.18E-06	6.77E-03	7.73E-04	1.21E-04	2.73E-04	9.51E-05	9.88E-05	8.49E-04	1.79E-05	0.00E+00	1.74E-04	1.27E-03
9	D43	60	Combination Long Haul Truck	14	0.00E+00	6.08E-06	3.32E-07	5.05E+00	4.11E-08	7.95E-03	5.09E-06	7.21E-03	8.10E-04	1.17E-04	5.77E-04	1.09E-04	1.13E-04	8.10E-04	1.69E-05	0.00E+00	4.64E-04	1.36E-03
9	D44	60	Passenger Car	315	0.00E+00	3.98E-06	4.32E-07	1.42E+01	2.82E-05	7.65E-02	8.97E-06	3.24E-04	3.18E-03	4.76E-04	8.74E-04	5.64E-04	5.79E-04	6.24E-05	7.20E-05	1.51E-08	2.96E-04	5.06E-05
9	D44	60	Passenger Truck	527	0.00E+00	8.44E-06	8.95E-07	3.17E+01	5.33E-05	1.31E-01	1.75E-05	1.01E-03	5.81E-03	8.65E-04	1.67E-03	1.09E-03	1.11E-03	2.55E-04	1.59E-04	2.95E-08	5.57E-04	1.71E-04
9	D44	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
9	D44	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.17E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.20E-04
9	D44	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.34E-04
9	D45	60	Passenger Car	621	0.00E+00	7.84E-06	8.52E-07	2.80E+01	5.56E-05	1.51E-01	1.77E-05	6.39E-04	6.27E-03	9.39E-04	1.72E-03	1.11E-03	1.14E-03	1.23E-04	1.42E-04	2.98E-08	5.83E-04	9.97E-05
9	D45	60	Passenger Truck	1039	0.00E+00	1.66E-05	1.76E-06	6.24E+01	1.05E-04	2.58E-01	3.45E-05	1.99E-03	1.15E-02	1.70E-03	3.29E-03	2.14E-03	2.20E-03	5.04E-04	3.13E-04	5.81E-08	1.10E-03	3.37E-04
9	D45	60	Single Unit Short Haul Truck	54	0.00E+00	1.20E-05	4.95E-07	8.92E+00	7.93E-06	1.57E-02	1.30E-05	4.60E-03	1.23E-03	2.07E-04	1.60E-03	3.08E-04	3.14E-04	9.04E-04	3.64E-05	1.50E-08	1.28E-03	8.61E-04
9	D45	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.15E-08	3.80E-01	3.44E-07	6.66E-04	5.65E-07	1.99E-04	5.54E-05	9.20E-06	6.99E-05	1.34E-05	1.36E-05	3.84E-05	1.55E-06	6.37E-10	5.62E-05	3.73E-05
9	D45	60	Combination Short Haul Truck	37	0.00E+00	1.07E-05	7.85E-07	1.29E+01	2.93E-08	1.60E-02	7.68E-06	1.63E-02	1.86E-03	2.92E-04	6.59E-04	2.30E-04	2.38E-04	2.05E-03	4.31E-05	0.00E+00	4.20E-04	3.08E-03
9	D45	60	Combination Long Haul Truck	33	0.00E+00	1.47E-05	8.02E-07	1.22E+01	9.91E-08	1.92E-02	1.23E-05	1.74E-02	1.96E-03	2.83E-04	1.39E-03	2.62E-04	2.73E-04	1.95E-03	4.08E-05	0.00E+00	1.12E-03	3.28E-03
9	D46	60	Passenger Car	606	0.00E+00	7.66E-06	8.32E-07	2.73E+01	5.43E-05	1.47E-01	1.73E-05	6.24E-04	6.12E-03	9.17E-04	1.68E-03	1.09E-03	1.11E-03	1.20E-04	1.39E-04	2.91E-08	5.69E-04	9.73E-05
9	D46	60	Passenger Truck	1015	0.00E+00	1.63E-05	1.72E-06	6.09E+01	1.03E-04	2.52E-01	3.37E-05	1.94E-03	1.12E-02	1.66E-03	3.22E-03	2.09E-03	2.14E-03	4.92E-04	3.06E-04	5.67E-08	1.07E-03	3.29E-04
9	D46	60	Single Unit Short Haul Truck	59	0.00E+00	1.33E-05	5.48E-07	9.88E+00	8.78E-06	1.74E-02	1.43E-05	5.09E-03	1.37E-03	2.30E-04	1.77E-03	3.41E-04	3.47E-04	1.00E-03	4.03E-05	1.66E-08	1.42E-03	9.53E-04
9	D46	60	Single Unit Long Haul Truck	3	0.00E+00	5.79E-07	2.38E-08	4.21E-01	3.81E-07	7.38E-04	6.26E-07	2.20E-04	6.14E-05	1.02E-05	7.73E-05	1.48E-05	1.51E-05	4.26E-05	1.72E-06	7.06E-10	6.22E-05	4.13E-05
9	D46	60	Combination Short Haul Truck	49	0.00E+00	1.42E-05	1.04E-06	1.71E+01	3.89E-08	2.12E-02	1.02E-05	2.17E-02	2.48E-03	3.87E-04	8.75E-04	3.05E-04	3.17E-04	2.72E-03	5.73E-05	0.00E+00	5.58E-04	4.09E-03
9	D46	60	Combination Long Haul Truck	44	0.00E+00	1.95E-05	1.07E-06	1.62E+01	1.32E-07	2.55E-02	1.63E-05	2.31E-02	2.60E-03	3.76E-04	1.85E-03	3.48E-04	3.63E-04	2.60E-03	5.42E-05	0.00E+00	1.49E-03	4.36E-03
9	D47	60	Passenger Car	826	0.00E+00	1.04E-05	1.13E-06	3.72E+01	7.40E-05	2.01E-01	2.35E-05	8.50E-04	8.34E-03	1.25E-03	2.29E-03	1.48E-03	1.52E-03	1.64E-04	1.89E-04	3.97E-08	7.76E-04	1.33E-04
9	D47	60	Passenger Truck	1383	0.00E+00	2.22E-05	2.35E-06	8.30E+01	1.40E-04	3.44E-01	4.60E-05	2.65E-03	1.52E-02	2.27E-03	4.38E-03	2.85E-03	2.92E-03	6.70E-04	4.17E-04	7.73E-08	1.46E-03	4.48E-04
9	D47	60	Single Unit Short Haul Truck	56	0.00E+00	1.24E-05	5.12E-07	9.24E+00	8.22E-06	1.63E-02	1.34E-05	4.76E-03	1.28E-03	2.15E-04	1.65E-03	3.19E-04	3.25E-04	9.36E-04	3.77E-05	1.55E-08	1.33E-03	8.92E-04
9	D47	60	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.23E-08	3.94E-01	3.56E-07	6.90E-04	5.85E-07	2.06E-04	5.74E-05	9.53E-06	7.23E-05	1.39E-05	1.41E-05	3.98E-05	1.61E-06	6.60E-10	5.82E-05	3.86E-05
9	D47	60	Combination Short Haul Truck	39	0.00E+00	1.14E-05	8.41E-07	1.38E+01	3.14E-08	1.71E-02	8.22E-06	1.75E-02	2.00E-03	3.12E-04	7.06E-04	2.46E-04	2.55E-04	2.20E-03	4.62E-05	0.00E+00	4.50E-04	3.30E-03
9	D47	60	Combination Long Haul Truck	36	0.00E+00	1.57E-05	8.59E-07	1.30E+01	1.06E-07	2.06E-02	1.32E-05	1.86E-02	2.10E-03	3.03E-04	1.49E-03	2.81E-04	2.92E-04	2.09E-03	4.37E-05	0.00E+00	1.20E-03	3.51E-03
9	D48	60	Passenger Car	200	0.00E+00	2.52E-06	2.74E-07	9.00E+00	1.79E-05	4.85E-02	5.69E-06	2.06E-04	2.02E-03	3.02E-04	5.55E-04	3.58E-04	3.67E-04	3.96E-05	4.56E-05	9.59E-09	1.88E-04	3.21E-05
9	D48	60	Passenger Truck	334	0.00E+00	5.36E-06	5.68E-07	2.01E+01	3.38E-05	8.31E-02	1.11E-05	6.39E-04	3.68E-03	5.48E-04	1.06E-03	6.89E-04	7.06E-04	1.62E-04	1.01E-04	1.87E-08	3.53E-04	1.08E-04
9	D48	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	D48	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
9	D49	60	Passenger Car	826	0.00E+00	1.04E-05	1.13E-06	3.72E+01	7.40E-05	2.01E-01	2.35E-05	8.50E-04	8.34E-03	1.25E-03	2.29E-03	1.48E-03	1.52E-03	1.64E-04	1.89E-04	3.97E-08	7.76E-04	1.33E-04
9	D49	60	Passenger Truck	1383	0.00E+00	2.22E-05	2.35E-06	8.30E+01	1.40E-04	3.44E-01	4.60E-05	2.65E-03	1.52E-02	2.27E-03	4.38E-03	2.85E-03	2.92E-03	6.70E-04	4.17E-04	7.73E-08	1.46E-03	4.48E-04
9	D49	60	Single Unit Short Haul Truck	56	0.00E+00	1.24E-05	5.12E-07	9.24E+00	8.22E-06	1.63E-02	1.34E-05	4.76E-03	1.28E-03	2.15E-04	1.65E-03	3.19E-04	3.25E-04	9.36E-04	3.77E-05	1.55E-08	1.33E-03	8.92E-04
9	D49	60	Single Unit Long Haul Truck	2	0.00E+00	5.41E-07	2.23E-08	3.94E-01	3.56E-07	6.90E-04	5.85E-07	2.06E-04	5.74E-05	9.53E-06	7.23E-05	1.39E-05	1.41E-05	3.98E-05	1.61E-06	6.60E-10	5.82E-05	3.86E-05
9	D49	60	Combination Short Haul Truck	39	0.00E+00	1.14E-05	8.41E-07	1.38E+01	3.14E-08	1.71E-02	8.22E-06	1.75E-02	2.00E-03	3.12E-04	7.06E-04	2.46E-04	2.55E-04	2.20E-03	4.62E-05	0.00E+00	4.50E-04	3.30E-03
9	D49	60	Combination Long Haul Truck	36	0.00E+00	1.57E-05	8.59E-07	1.30E+01	1.06E-07	2.06E-02	1.32E-05	1.86E-02	2.10E-03	3.03E-04	1.49E-03	2.81E-04	2.92E-04	2.09E-03	4.37E-05	0.00E+00	1.20E-03	3.51E-03
9	D50	60	Passenger Car	740	0.00E+00	9.35E-06	1.02E-06	3.34E+01	6.63E-05	1.80E-01	2.11E-05	7.62E-04	7.47E-03	1.12E-03	2.06E-03	1.33E-03	1.36E-03	1.47E-04	1.69E-04	3.55E-08	6.95E-04	1.19E-04
9	D50	60	Passenger Truck	1239	0.00E+00	1.98E-05	2.10E-06	7.44E+01	1.25E-04	3.08E-01	4.12E-05	2.37E-03	1.37E-02	2.03E-03	3.93E-03	2.55E-03	2.62E-03	6.00E-04	3.73E-04	6.93E-08	1.31E-03	4.02E-04
9	D50	60	Single Unit Short Haul Truck	62	0.00E+00	1.39E-05	5.74E-07	1.04E+01	9.21E-06	1.82E-02	1.50E-05	5.34E-03	1.43E-03	2.41E-04	1.85E-03	3.57E-04	3.64E-04	1.05E-03	4.22E-05	1.74E-08	1.49E-03	9.99E-04
9	D50	60	Single Unit Long Haul Truck	3	0.00E+00	6.07E-07	2.49E-08	4.42E-01	3.99E-07	7.73E-04	6.56E-07	2.31E-04	6.43E-05	1.07E-05	8.11E-05	1.55E-05	1.58E-05	4.46E-05	1.80E-06	7.40E-10	6.52E-05	4.33E-05
9	D50	60	Combination Short Haul Truck	49	0.00E+00	1.42E-05	1.04E-06	1.71E+01	3.89E-08	2.12E-02	1.02E-05	2.17E-02	2.48E-03	3.87E-04	8.75E-04	3.05E-04	3.17E-04	2.72E-03	5.73E-05	0.00E+00	5.58E-04	4.09E-03
9	D50	60	Combination Long Haul Truck	44	0.00E+00	1.95E-05	1.07E-06	1.62E+01	1.32E-07	2.55E-02	1.63E-05	2.31E-02	2.60E-03	3.76E-04	1.85E-03	3.48E-04	3.63E-04	2.60E-03	5.42E-05	0.00E+00	1.49E-03	4.36E-03
9	D51	60	Passenger Car	300	0.00E+00	3.79E-06	4.12E-07	1.35E+01	2.69E-05	7.29E-02	8.55E-06	3.09E-04	3.03E-03	4.54E-04	8.34E-04	5.38E-04	5.52E-04	5.95E-05	6.86E-05	1.44E-08	2.82E-04	4.82E-05
9	D51	60	Passenger Truck	503	0.00E+00	8.05E-06	8.54E-07	3.02E+01	5.08E-05	1.25E-01	1.67E-05	9.62E-04	5.54E-03	8.25E-04	1.59E-03	1.04E-03	1.06E-03	2.44E-04	1.52E-04	2.81E-08	5.31E-04	1.63E-04
9	D51	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	D51	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.87E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.52E-04
9	D51	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.99E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.75E-04
9	D52	60	Passenger Car	322	0.00E+00	4.06E-06	4.41E-07	1.45E+01	2.88E-05	7.81E-02	9.16E-06	3.31E-04	3.25E-03	4.86E-04	8.93E-04	5.76E-04	5.91E-04	6.37E-05	7.35E-05	1.54E-08	3.02E-04	5.16E-05
9	D52	60	Passenger Truck	538	0.00E+00	8.63E-06	9.14E-07	3.23E+01	5.44E-05	1.34E-01	1.79E-05	1.03E-03	5.93E-03	8.83E-04	1.71E-03	1.11E-03	1.14E-03	2.61E-04	1.62E-04	3.01E-08	5.69E-04	1.74E-04
9	D52	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.93E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.22E-05
9	D52	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.40E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.64E-04
9	D52	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.49E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.81E-04
9	D53	60	Passenger Car	374	0.00E+00	4.73E-06	5.14E-07	1.69E+01	3.36E-05	9.09E-02	1.07E-05	3.85E-04	3.78E-03	5.66E-04	1.04E-03	6.70E-04	6.88E-04	7.42E-05	8.56E-05	1.80E-08	3.52E-04	6.01E-05
9	D53	60	Passenger Truck	627	0.00E+00	1.00E-05	1.06E-06	3.76E+01	6.33E-05	1.56E-01	2.08E-05	1.20E-03	6.91E-03	1.03E-03	1.99E-03	1.29E-03	1.32E-03	3.04E-04	1.89E-04	3.50E-08	6.62E-04	2.03E-04
9	D53	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	D53	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.08E-04
9	D53	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.74E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.28E-04
9	D54	60	Passenger Car	244	0.00E+00	3.08E-06	3.35E-07	1.10E+01	2.19E-05	5.92E-02	6.94E-06	2.51E-04	2.46E-03	3.69E-04	6.77E-04	4.37E-04	4.48E-04	4.83E-05	5.57E-05	1.17E-08	2.29E-04	3.92E-05
9	D54	60	Passenger Truck	408	0.00E+00	6.54E-06	6.93E-07	2.45E+01	4.13E-05	1.01E-01	1.36E-05	7.81E-04	4.50E-03	6.70E-04	1.29E-03	8.41E-04	8.62E-04	1.98E-04	1.23E-04	2.28E-08	4.31E-04	1.32E-04
9	D54	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	D54	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.17E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.20E-04
9	D54	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.34E-04
11	D55	80	Passenger Car	419	0.00E+00	4.30E-06	4.67E-07	1.76E+01	3.05E-05	8.52E-02	9.69E-06	4.35E-04	2.28E-03	3.83E-04	9.45E-04	6.09E-04	6.25E-04	6.23E-05	8.94E-05	1.91E-08	3.20E-04	6.78E-05
11	D55	80	Passenger Truck	702	0.00E+00	8.85E-06	9.44E-07	3.97E+01	5.76E-05	1.51E-01	1.88E-05	1.17E-03	4.07E-03	6.77E-04	1.80E-03	1.17E-03	1.20E-03	2.88E-04	2.00E-04	3.64E-08	6.03E-04	1.95E-04
11	D55	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04
11	D55	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	4.41E-09	1.33E-01	7.59E-08	2.38E-04	1.25E-07	4.67E-05	9.87E-06	1.95E-06	1.58E-05	2.88E-06	2.93E-06	1.34E-05	5.40E-07	2.11E-10	1.28E-05	8.73E-06
11	D55	80	Combination Short Haul Truck	15	0.00E+00	3.02E-06	2.23E-07	4.91E+00	7.90E-09	4.60E-03	2.16E-06	4.67E-03	3.49E-04	6.33E-05	1.83E-04	6.52E-05	6.77E-05	7.80E-04	1.64E-05	0.00E+00	1.15E-04	8.79E-04
11	D55	80	Combination Long Haul Truck	13	0.00E+00	4.20E-06	2.37E-07	4.56E+00	2.67E-08	5.45E-03	3.47E-06	4.99E-03	3.61E-04	5.78E-05	3.85E-04	7.65E-05	7.97E-05	7.31E-04	1.53E-05	0.00E+00	3.06E-04	9.40E-04
11	D56	80	Passenger Car	617	0.00E+00	6.33E-06	6.88E-07	2.59E+01	4.49E-05	1.25E-01	1.43E-05	6.40E-04	3.36E-03	5.63E-04	1.39E-03	8.97E-04	9.21E-04	9.18E-05	1.32E-04	2.81E-08	4.71E-04	9.98E-05
11	D56	80	Passenger Truck	1034	0.00E+00	1.30E-05	1.39

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D60	80	Passenger Car	629	0.00E+00	6.45E-06	7.01E-07	2.64E+01	4.58E-05	1.28E-01	1.45E-05	6.52E-04	3.43E-03	5.74E-04	1.42E-03	9.14E-04	9.38E-04	9.35E-05	1.34E-04	2.87E-08	4.80E-04	1.02E-04
11	D60	80	Passenger Truck	1053	0.00E+00	1.33E-05	1.42E-06	5.95E+01	8.64E-05	2.26E-01	2.81E-05	1.76E-03	6.10E-03	1.02E-03	2.70E-03	1.75E-03	1.80E-03	4.32E-04	3.00E-04	5.46E-08	9.05E-04	2.93E-04
11	D60	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.84E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.31E-04
11	D60	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.27E-05
11	D60	80	Combination Short Haul Truck	35	0.00E+00	7.11E-06	5.27E-07	1.16E+01	1.86E-08	1.08E-02	5.09E-06	1.10E-02	8.24E-04	1.49E-04	4.31E-04	1.54E-04	1.60E-04	1.84E-03	3.87E-05	0.00E+00	2.72E-04	2.07E-03
11	D60	80	Combination Long Haul Truck	31	0.00E+00	9.91E-06	5.60E-07	1.07E+01	6.30E-08	1.28E-02	8.17E-06	1.18E-02	8.51E-04	1.36E-04	9.08E-04	1.80E-04	1.88E-04	1.72E-03	3.60E-05	0.00E+00	7.20E-04	2.22E-03
11	D61	80	Passenger Car	246	0.00E+00	2.52E-06	2.74E-07	1.03E+01	1.79E-05	4.99E-02	5.68E-06	2.55E-04	1.34E-03	2.24E-04	5.54E-04	3.57E-04	3.67E-04	3.65E-05	5.24E-05	1.12E-08	1.87E-04	3.97E-05
11	D61	80	Passenger Truck	411	0.00E+00	5.19E-06	5.53E-07	2.33E+01	3.37E-05	8.83E-02	1.10E-05	6.87E-04	2.38E-03	3.97E-04	1.05E-03	6.84E-04	7.02E-04	1.69E-04	1.17E-04	2.13E-08	3.53E-04	1.14E-04
11	D61	80	Single Unit Short Haul Truck	41	0.00E+00	5.65E-06	2.21E-07	6.75E+00	3.83E-06	1.23E-02	6.21E-06	2.35E-03	4.63E-04	9.46E-05	7.78E-04	1.44E-04	1.47E-04	6.87E-04	2.74E-05	1.09E-08	6.31E-04	4.39E-04
11	D61	80	Single Unit Long Haul Truck	2	0.00E+00	2.46E-07	9.47E-09	2.85E-01	1.63E-07	5.11E-04	2.70E-07	1.00E-04	2.12E-05	4.20E-06	3.39E-05	6.19E-06	6.31E-06	2.89E-05	1.16E-06	4.53E-10	2.76E-05	1.88E-05
11	D61	80	Combination Short Haul Truck	15	0.00E+00	3.13E-06	2.31E-07	5.09E+00	8.19E-09	4.76E-03	2.23E-06	4.83E-03	3.62E-04	6.56E-05	1.90E-04	6.75E-05	7.01E-05	8.08E-04	1.70E-05	0.00E+00	1.19E-04	9.11E-04
11	D61	80	Combination Long Haul Truck	14	0.00E+00	4.35E-06	2.46E-07	4.72E+00	2.77E-08	5.64E-03	3.59E-06	5.17E-03	3.74E-04	5.99E-05	3.99E-04	7.92E-05	8.25E-05	7.58E-04	1.58E-05	0.00E+00	3.17E-04	9.73E-04
11	D62	80	Passenger Car	81	0.00E+00	8.28E-07	9.00E-08	3.38E+00	5.88E-06	1.64E-02	1.87E-06	8.37E-05	4.40E-04	7.37E-05	1.82E-04	1.17E-04	1.20E-04	1.20E-05	1.72E-05	3.68E-09	6.16E-05	1.31E-05
11	D62	80	Passenger Truck	135	0.00E+00	1.71E-06	1.82E-07	7.64E+00	1.11E-05	2.90E-02	3.61E-06	2.26E-04	7.84E-04	1.30E-04	3.47E-04	2.25E-04	2.31E-04	5.55E-05	3.85E-05	7.01E-09	1.16E-04	3.76E-05
11	D62	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	D62	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.33E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.40E-04
11	D62	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.49E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.70E-04
10	D63	70	Passenger Car	54	0.00E+00	5.93E-07	6.44E-08	2.32E+00	4.21E-06	1.15E-02	1.34E-06	5.44E-05	4.15E-04	6.46E-05	1.30E-04	8.41E-05	8.63E-05	9.15E-06	1.18E-05	2.45E-09	4.41E-05	8.49E-06
10	D63	70	Passenger Truck	90	0.00E+00	1.25E-06	1.33E-07	5.23E+00	7.99E-06	2.03E-02	2.62E-06	1.58E-04	7.51E-04	1.16E-04	2.50E-04	1.63E-04	1.67E-04	4.00E-05	2.63E-05	4.71E-09	8.36E-05	2.66E-05
10	D63	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	D63	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.60E-05
10	D63	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
10	D64	70	Passenger Car	66	0.00E+00	7.25E-07	7.87E-08	2.84E+00	5.14E-06	1.40E-02	1.63E-06	6.65E-05	5.07E-04	7.90E-05	1.59E-04	1.03E-04	1.05E-04	1.12E-05	1.44E-05	3.00E-09	5.39E-05	1.04E-05
10	D64	70	Passenger Truck	110	0.00E+00	1.53E-06	1.62E-07	6.39E+00	9.77E-06	2.48E-02	3.20E-06	1.94E-04	9.18E-04	1.42E-04	3.06E-04	1.99E-04	2.04E-04	4.89E-05	3.22E-05	5.76E-09	1.02E-04	3.25E-05
10	D64	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.91E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.19E-06
10	D64	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.23E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.98E-04
10	D64	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.53E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.54E-04
11	D65	80	Passenger Car	283	0.00E+00	2.90E-06	3.15E-07	1.18E+01	2.06E-05	5.74E-02	6.53E-06	2.93E-04	1.54E-03	2.58E-04	6.37E-04	4.11E-04	4.22E-04	4.20E-05	6.03E-05	1.29E-08	2.16E-04	4.57E-05
11	D65	80	Passenger Truck	473	0.00E+00	5.97E-06	6.36E-07	2.68E+01	3.88E-05	1.02E-01	1.27E-05	7.91E-04	2.74E-03	4.57E-04	1.21E-03	7.88E-04	8.07E-04	1.94E-04	1.35E-04	2.45E-08	4.07E-04	1.32E-04
11	D65	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.73E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.11E-04
11	D65	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.17E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	D65	80	Combination Short Haul Truck	30	0.00E+00	6.14E-06	4.55E-07	1.00E+01	1.61E-08	9.36E-03	4.39E-06	9.50E-03	7.11E-04	1.29E-04	3.73E-04	1.33E-04	1.38E-04	1.59E-03	3.34E-05	0.00E+00	2.35E-04	1.79E-03
11	D65	80	Combination Long Haul Truck	27	0.00E+00	8.56E-06	4.83E-07	9.28E+00	5.44E-08	1.11E-02	7.06E-06	1.02E-02	7.35E-04	1.18E-04	7.84E-04	1.56E-04	1.62E-04	1.49E-03	3.11E-05	0.00E+00	6.22E-04	1.91E-03
11	D66	80	Passenger Car	270	0.00E+00	2.77E-06	3.01E-07	1.13E+01	1.97E-05	5.49E-02	6.25E-06	2.80E-04	1.47E-03	2.47E-04	6.10E-04	3.93E-04	4.03E-04	4.02E-05	5.77E-05	1.23E-08	2.06E-04	4.37E-05
11	D66	80	Passenger Truck	453	0.00E+00	5.71E-06	6.09E-07	2.56E+01	3.71E-05	9.71E-02	1.21E-05	7.56E-04	2.62E-03	4.37E-04	1.16E-03	7.53E-04	7.72E-04	1.86E-04	1.29E-04	2.35E-08	3.89E-04	1.26E-04
11	D66	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	D66	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.71E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	D66	80	Combination Short Haul Truck	28	0.00E+00	5.71E-06	4.23E-07	9.29E+00	1.50E-08	8.71E-03	4.08E-06	8.83E-03	6.61E-04	1.20E-04	3.46E-04	1.23E-04	1.28E-04	1.48E-03	3.11E-05	0.00E+00	2.18E-04	1.66E-03
11	D66	80	Combination Long Haul Truck	25	0.00E+00	7.96E-06	4.49E-07	8.63E+00	5.06E-08	1.03E-02	6.56E-06	9.44E-03	6.84E-04	1.09E-04	7.29E-04	1.45E-04	1.51E-04	1.38E-03	2.89E-05	0.00E+00	5.79E-04	1.78E-03
11	D67	80	Passenger Car	283	0.00E+00	2.90E-06	3.15E-07	1.18E+01	2.06E-05	5.74E-02	6.53E-06	2.93E-04	1.54E-03	2.58E-04	6.37E-04	4.11E-04	4.22E-04	4.20E-05	6.03E-05	1.29E-08	2.16E-04	4.57E-05
11	D67	80	Passenger Truck	473	0.00E+00	5.97E-06	6.36E-07	2.68E+01	3.88E-05	1.02E-01	1.27E-05	7.91E-04	2.74E-03	4.57E-04	1.21E-03	7.88E-04	8.07E-04	1.94E-04	1.35E-04	2.45E-08	4.07E-04	1.32E-04
11	D67	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.73E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.11E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.17E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	D67	80	Combination Short Haul Truck	30	0.00E+00	6.14E-06	4.55E-07	1.00E+01	1.61E-08	9.36E-03	4.39E-06	9.50E-03	7.11E-04	1.29E-04	3.73E-04	1.33E-04	1.38E-04	1.59E-03	3.34E-05	0.00E+00	2.35E-04	1.79E-03
11	D67	80	Combination Long Haul Truck	27	0.00E+00	8.56E-06	4.83E-07	9.28E+00	5.44E-08	1.11E-02	7.06E-06	1.02E-02	7.35E-04	1.18E-04	7.84E-04	1.56E-04	1.62E-04	1.49E-03	3.11E-05	0.00E+00	6.22E-04	1.91E-03
11	D68	80	Passenger Car	270	0.00E+00	2.77E-06	3.01E-07	1.13E+01	1.97E-05	5.49E-02	6.25E-06	2.80E-04	1.47E-03	2.47E-04	6.10E-04	3.93E-04	4.03E-04	4.02E-05	5.77E-05	1.23E-08	2.06E-04	4.37E-05
11	D68	80	Passenger Truck	453	0.00E+00	5.71E-06	6.09E-07	2.56E+01	3.71E-05	9.71E-02	1.21E-05	7.56E-04	2.62E-03	4.37E-04	1.16E-03	7.53E-04	7.72E-04	1.86E-04	1.29E-04	2.35E-08	3.89E-04	1.26E-04
11	D68	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	D68	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.71E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	D68	80	Combination Short Haul Truck	28	0.00E+00	5.71E-06	4.23E-07	9.29E+00	1.50E-08	8.71E-03	4.08E-06	8.83E-03	6.61E-04	1.20E-04	3.46E-04	1.23E-04	1.28E-04	1.48E-03	3.11E-05	0.00E+00	2.18E-04	1.66E-03
11	D68	80	Combination Long Haul Truck	25	0.00E+00	7.96E-06	4.49E-07	8.63E+00	5.06E-08	1.03E-02	6.56E-06	9.44E-03	6.84E-04	1.09E-04	7.29E-04	1.45E-04	1.51E-04	1.38E-03	2.89E-05	0.00E+00	5.79E-04	1.78E-03
11	D69	80	Passenger Car	126	0.00E+00	1.29E-06	1.40E-07	5.26E+00	9.14E-06	2.55E-02	2.90E-06	1.30E-04	6.85E-04	1.15E-04	2.83E-04	1.83E-04	1.87E-04	1.87E-05	2.68E-05	5.73E-09	9.58E-05	2.03E-05
11	D69	80	Passenger Truck	210	0.00E+00	2.65E-06	2.83E-07	1.19E+01	1.73E-05	4.51E-02	5.62E-06	3.51E-04	1.22E-03	2.03E-04	5.40E-04	3.50E-04	3.59E-04	8.64E-05	6.00E-05	1.09E-08	1.81E-04	5.85E-05
11	D69	80	Single Unit Short Haul Truck	16	0.00E+00	2.23E-06	8.72E-08	2.67E+00	1.51E-06	4.85E-03	2.46E-06	9.29E-04	1.83E-04	3.74E-05	3.08E-04	5.70E-05	5.81E-05	2.72E-04	1.08E-05	4.30E-09	2.50E-04	1.74E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	9.71E-08	3.75E-09	1.13E-01	6.45E-08	2.02E-04	1.07E-07	3.97E-05	8.39E-06	1.66E-06	1.34E-05	2.45E-06	2.49E-06	1.14E-05	4.59E-07	1.79E-10	1.09E-05	7.42E-06
11	D69	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.50E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.59E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.74E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.05E-04
11	D70	80	Passenger Car	112	0.00E+00	1.15E-06	1.25E-07	4.69E+00	8.13E-06	2.27E-02	2.58E-06	1.16E-04	6.09E-04	1.02E-04	2.52E-04	1.63E-04	1.67E-04	1.66E-05	2.39E-05	5.10E-09	8.53E-05	1.81E-05
11	D70	80	Passenger Truck	187	0.00E+00	2.36E-06	2.52E-07	1.06E+01	1.54E-05	4.02E-02	5.00E-06	3.13E-04	1.08E-03	1.81E-04	4.80E-04	3.11E-04	3.19E-04	7.69E-05	5.34E-05	9.70E-09	1.61E-04	5.21E-05
11	D70	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.11E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.04E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.68E-06
11	D70	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	3.00E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.65E-04
11	D70	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.21E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.04E-04
10	D71	70	Passenger Car	335	0.00E+00	3.69E-06	4.01E-07	1.45E+01	2.62E-05	7.14E-02	8.33E-06	3.39E-04	2.58E-03	4.03E-04	8.12E-04	5.24E-04	5.37E-04	5.70E-05	7.35E-05	1.53E-08	2.75E-04	5.29E-05
10	D71	70	Passenger Truck	562	0.00E+00	7.78E-06	8.27E-07	3.26E+01	4.98E-05	1.26E-01	1.63E-05	9.86E-04	4.68E-03	7.24E-04	1.56E-03	1.01E-03	1.04E-03	2.49E-04	1.64E-04	2.94E-08	5.21E-04	1.66E-04
10	D71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.64E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.07E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.14E-05
10	D71	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
10	D71	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
10	D72	70	Passenger Car	282	0.00E+00	3.10E-06	3.37E-07	1.21E+01	2.20E-05	5.99E-02	6.99E-06	2.85E-04	2.17E-03	3.38E-04	6.82E-04	4.40E-04	4.51E-04	4.78E-05	6.17E-05	1.28E-08	2.31E-04	4.44E-05
10	D72	70	Passenger Truck	471	0.00E+00	6.53E-06	6.94E-07	2.73E+01	4.18E-05	1.06E-01	1.37E-05	8.28E-04	3.93E-03	6.07E-04	1.31E-03	8.50E-04	8.71E-04	2.09E-04	1.38E-04	2.46E-08	4.37E-04	1.39E-04
10	D72	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.62E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.65E-06
10	D72	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.63E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.84E-04
10	D72	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.88E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.32E-04
10	D73	70	Passenger Car	229	0.00E+00	2.52E-06	2.74E-07	9.87E+00	1.79E-05	4.87E-02	5.68E-06	2.31E-04	1.76E-03	2.75E-04	5.54E-04	3.57E-04	3.67E-04	3.89E-05	5.02E-05	1.04E-08	1.87E-04	3.61E-05
10	D73	70	Passenger Truck	383	0.00E+00	5.31E-06	5.64E-07	2.22E+01	3.40E-05	8.61E-02	1.11E-05	6.73E-04	3.19E-03	4.94E-04	1.06E-03	6.91E-04	7.08E-04	1.70E-04	1.12E-04	2.00E-08	3.55E-04	1.13E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.69E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	D73	70	Combination Short Haul Truck	8	0.00E+00	2.02E-06	1.50E-07	2.73E+00	5.13E-09	2.92E-03	1.44E-06	3.02E-03	2.85E-04	4.75E-05	1.21E-04	4.38E-05	4.54E-05	4.34E-04	9.12E-06	0.00E+00	7.57E-05	5.70E-04
10	D73	70	Combination Long Haul Truck	7	0.00E+00	2.77E-06	1.57E-07	2.56E+00	1.74E-08	3.48E-03	2.28E-06	3.24E-03	2.96E-04	4.46E-05	2.52E-04	5.06E-05	5.27E-05	4.11E-04	8.58E-06	0.00E+00	1.99E-04	6.10E-04
10	D74	70	Passenger Car	233	0.00E+00	2.56E-06	2.78E-07	1.00E+01	1.82E-05	4.95E-02	5.77E-06	2.35E-04	1.79E-03	2.79E-04	5.63E-04	3.63E-04	3.73E-04	3.95E-05	5.10E-05	1.06E-08	1.90E-04	3.67E-05
10	D74	70	Passenger Truck	389	0

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D78	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.75E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.74E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.98E-06
11	D78	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.50E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.59E-04
11	D78	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.74E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.05E-04
10	D79	70	Passenger Car	288	0.00E+00	3.17E-06	3.44E-07	1.24E+01	2.25E-05	6.12E-02	7.14E-06	2.91E-04	2.21E-03	3.45E-04	6.96E-04	4.49E-04	4.61E-04	4.89E-05	6.30E-05	1.31E-08	2.35E-04	4.54E-05
10	D79	70	Passenger Truck	481	0.00E+00	6.67E-06	7.09E-07	2.79E+01	4.27E-05	1.08E-01	1.40E-05	8.46E-04	4.01E-03	6.20E-04	1.34E-03	8.68E-04	8.90E-04	2.13E-04	1.41E-04	2.52E-08	4.47E-04	1.42E-04
10	D79	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
10	D79	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.24E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.87E-04
10	D79	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.61E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.06E-03
10	D80	70	Passenger Car	491	0.00E+00	5.40E-06	5.87E-07	2.12E+01	3.83E-05	1.04E-01	1.22E-05	4.96E-04	3.78E-03	5.89E-04	1.19E-03	7.66E-04	7.86E-04	8.33E-05	1.08E-04	2.23E-08	4.02E-04	7.74E-05
10	D80	70	Passenger Truck	821	0.00E+00	1.14E-05	1.21E-06	4.77E+01	7.28E-05	1.85E-01	2.38E-05	1.44E-03	6.84E-03	1.06E-03	2.28E-03	1.48E-03	1.52E-03	3.64E-04	2.40E-04	4.29E-08	7.62E-04	2.42E-04
10	D80	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.62E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.65E-06
10	D80	70	Combination Short Haul Truck	18	0.00E+00	4.71E-06	3.51E-07	6.36E+00	1.20E-08	6.80E-03	3.36E-06	7.05E-03	6.64E-04	1.11E-04	2.83E-04	1.02E-04	1.06E-04	1.01E-03	2.13E-05	0.00E+00	1.77E-04	1.33E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	6.46E-06	3.67E-07	5.98E+00	4.05E-08	8.12E-03	5.31E-06	7.55E-03	6.91E-04	1.04E-04	5.87E-04	1.18E-04	1.23E-04	9.59E-04	2.00E-05	0.00E+00	4.64E-04	1.42E-03
10	D81	70	Passenger Car	280	0.00E+00	3.09E-06	3.36E-07	1.21E+01	2.19E-05	5.97E-02	6.96E-06	2.84E-04	2.16E-03	3.37E-04	6.79E-04	4.38E-04	4.49E-04	4.76E-05	6.15E-05	1.28E-08	2.30E-04	4.42E-05
10	D81	70	Passenger Truck	470	0.00E+00	6.50E-06	6.91E-07	2.72E+01	4.16E-05	1.06E-01	1.36E-05	8.25E-04	3.91E-03	6.05E-04	1.30E-03	8.47E-04	8.68E-04	2.08E-04	1.37E-04	2.45E-08	4.36E-04	1.38E-04
10	D81	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	D81	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.60E-05
10	D81	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
10	D82	70	Passenger Car	283	0.00E+00	3.12E-06	3.39E-07	1.22E+01	2.21E-05	6.03E-02	7.03E-06	2.86E-04	2.18E-03	3.40E-04	6.85E-04	4.42E-04	4.53E-04	4.81E-05	6.20E-05	1.29E-08	2.32E-04	4.47E-05
10	D82	70	Passenger Truck	474	0.00E+00	6.56E-06	6.98E-07	2.75E+01	4.20E-05	1.07E-01	1.38E-05	8.32E-04	3.95E-03	6.11E-04	1.32E-03	8.55E-04	8.76E-04	2.10E-04	1.38E-04	2.48E-08	4.40E-04	1.40E-04
11	D83	80	Passenger Car	1074	0.00E+00	1.10E-05	1.20E-06	4.50E+01	7.81E-05	2.18E-01	2.48E-05	1.11E-03	5.85E-03	9.80E-04	2.42E-03	1.56E-03	1.60E-03	1.60E-04	2.29E-04	4.90E-08	8.19E-04	1.74E-04
11	D83	80	Passenger Truck	1798	0.00E+00	2.27E-05	2.42E-06	1.02E+02	1.48E-04	3.86E-01	4.81E-05	3.00E-03	1.04E-02	1.74E-03	4.61E-03	2.99E-03	3.07E-03	7.38E-04	5.12E-04	9.32E-08	1.54E-03	5.00E-04
11	D83	80	Single Unit Short Haul Truck	75	0.00E+00	1.03E-05	4.00E-07	1.22E+01	6.95E-06	2.22E-02	1.13E-05	4.26E-03	8.39E-04	1.72E-04	1.41E-03	2.61E-04	2.66E-04	1.25E-03	4.98E-05	1.97E-08	1.15E-03	7.97E-04
11	D83	80	Single Unit Long Haul Truck	3	0.00E+00	4.45E-07	1.72E-08	5.17E-01	2.96E-07	9.26E-04	4.89E-07	1.82E-04	3.85E-05	7.62E-06	6.16E-05	1.12E-05	1.14E-05	5.23E-05	2.11E-06	8.22E-10	5.01E-05	3.41E-05
11	D83	80	Combination Short Haul Truck	84	0.00E+00	1.72E-05	1.28E-06	2.81E+01	4.52E-08	2.63E-02	1.23E-05	2.67E-02	2.00E-03	3.62E-04	1.05E-03	3.73E-04	3.87E-04	4.46E-03	9.38E-05	0.00E+00	6.59E-04	5.02E-03
11	D83	80	Combination Long Haul Truck	76	0.00E+00	2.40E-05	1.36E-06	2.60E+01	1.53E-07	3.11E-02	1.98E-05	2.85E-02	2.06E-03	3.30E-04	2.20E-03	4.37E-04	4.55E-04	4.18E-03	8.73E-05	0.00E+00	1.75E-03	5.37E-03
11	D84	80	Passenger Car	553	0.00E+00	5.67E-06	6.16E-07	2.32E+01	4.02E-05	1.12E-01	1.28E-05	5.73E-04	3.01E-03	5.04E-04	1.25E-03	8.03E-04	8.25E-04	8.22E-05	1.18E-04	2.52E-08	4.21E-04	8.94E-05
11	D84	80	Passenger Truck	925	0.00E+00	1.17E-05	1.24E-06	5.23E+01	7.59E-05	1.99E-01	2.47E-05	1.55E-03	5.36E-03	8.93E-04	2.37E-03	1.54E-03	1.58E-03	3.80E-04	2.64E-04	4.80E-08	7.95E-04	2.57E-04
11	D84	80	Single Unit Short Haul Truck	68	0.00E+00	9.33E-06	3.64E-07	1.11E+01	6.33E-06	2.03E-02	1.03E-05	3.88E-03	7.64E-04	1.56E-04	1.29E-03	2.38E-04	2.43E-04	1.13E-03	4.53E-05	1.80E-08	1.04E-03	7.26E-04
11	D84	80	Single Unit Long Haul Truck	3	0.00E+00	4.05E-07	1.56E-08	4.71E-01	2.70E-07	8.43E-04	4.45E-07	1.66E-04	3.50E-05	6.93E-06	5.60E-05	1.02E-05	1.04E-05	4.76E-05	1.92E-06	7.48E-10	4.56E-05	3.10E-05
11	D84	80	Combination Short Haul Truck	71	0.00E+00	1.47E-05	1.09E-06	2.39E+01	3.84E-08	2.23E-02	1.05E-05	2.27E-02	1.70E-03	3.08E-04	8.89E-04	3.17E-04	3.29E-04	3.79E-03	7.98E-05	0.00E+00	5.60E-04	4.27E-03
11	D84	80	Combination Long Haul Truck	65	0.00E+00	2.04E-05	1.15E-06	2.21E+01	1.30E-07	2.65E-02	1.68E-05	2.42E-02	1.75E-03	2.81E-04	1.87E-03	3.72E-04	3.87E-04	3.55E-03	7.42E-05	0.00E+00	1.48E-03	4.56E-03
11	D85	80	Passenger Car	836	0.00E+00	8.57E-06	9.32E-07	3.50E+01	6.08E-05	1.70E-01	1.93E-05	8.67E-04	4.56E-03	7.63E-04	1.89E-03	1.22E-03	1.25E-03	1.24E-04	1.78E-04	3.81E-08	6.38E-04	1.35E-04
11	D85	80	Passenger Truck	1400	0.00E+00	1.77E-05	1.88E-06	7.91E+01	1.15E-04	3.00E-01	3.74E-05	2.34E-03	8.11E-03	1.35E-03	3.59E-03	2.33E-03	2.39E-03	5.75E-04	3.99E-04	7.25E-08	1.20E-03	3.89E-04
11	D85	80	Single Unit Short Haul Truck	57	0.00E+00	7.89E-06	3.08E-07	9.42E+00	5.35E-06	1.71E-02	8.67E-06	3.28E-03	6.46E-04	1.32E-04	1.09E-03	2.01E-04	2.05E-04	9.58E-04	3.83E-05	1.52E-08	8.81E-04	6.13E-04
11	D85	80	Single Unit Long Haul Truck	3	0.00E+00	3.43E-07	1.32E-08	3.98E-01	2.28E-07	7.13E-04	3.76E-07	1.40E-04	2.96E-05	5.86E-06	4.74E-05	8.63E-06	8.80E-06	4.03E-05	1.62E-06	6.32E-10	3.85E-05	2.62E-05
11	D85	80	Combination Short Haul Truck	64	0.00E+00	1.32E-05	9.74E-07	2.14E+01	3.44E-08	2.00E-02	9.40E-06	2.03E-02	1.52E-03	2.76E-04	7.98E-04	2.84E-04	2.95E-04	3.40E-03	7.15E-05	0.00E+00	5.03E-04	3.83E-03
11	D85	80	Combination Long Haul Truck	58	0.00E+00	1.83E-05	1.03E-06	1.99E+01	1.17E-07	2.37E-02	1.51E-05	2.17E-02	1.57E-03	2.52E-04	1.68E-03	3.33E-04	3.47E-04	3.19E-03	6.65E-05	0.00E+00	1.33E-03	4.09E-03
11	D86	80	Passenger Car	483	0.00E+00	4.95E-06	5.38E-07	2.02E+01	3.51E-05	9.81E-02	1.12E-05	5.00E-04	2.63E-03	4.41E-04	1.09E-03	7.02E-04	7.20E-04	7.18E-05	1.03E-04	2.20E-08	3.68E-04	7.81E-05
11	D86	80	Passenger Truck	808	0.00E+00	1.02E-05	1.09E-06	4.57E+01	6.63E-05	1.73E-01	2.16E-05	1.35E-03	4.68E-03	7.80E-04	2.07E-03	1.34E-03	1.38E-03	3.32E-04	2.30E-04	4.19E-08	6.94E-04	2.25E-04
11	D86	80	Single Unit Short Haul Truck	57	0.00E+00	7.75E-06	3.03E-07	9.26E+00	5.26E-06	1.68E-02	8.52E-06	3.23E-03	6.35E-04	1.30E-04	1.07E-03	1.98E-04	2.02E-04	9.42E-04	3.76E-05	1.49E-08	8.66E-04	6.03E-04
11	D86	80	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.30E-08	3.91E-01	2.24E-07	7.01E-04	3.70E-07	1.38E-04	2.91E-05	5.76E-06	4.66E-05	8.49E-06	8.66E-06	3.96E-05	1.59E-06	6.22E-10	3.79E-05	2.58E-05
11	D86	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.92E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.61E-03
11	D86	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.05E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.86E-03
11	D87	80	Passenger Car	836	0.00E+00	8.57E-06	9.32E-07	3.50E+01	6.08E-05	1.70E-01	1.93E-05	8.67E-04	4.56E-03	7.63E-04	1.89E-03	1.22E-03	1.25E-03	1.24E-04	1.78E-04	3.81E-08	6.38E-04	1.35E-04
11	D87	80	Passenger Truck	1400	0.00E+00	1.77E-05	1.88E-06	7.91E+01	1.15E-04	3.00E-01	3.74E-05	2.34E-03	8.11E-03	1.35E-03	3.59E-03	2.33E-03	2.39E-03	5.75E-04	3.99E-04	7.25E-08	1.20E-03	3.89E-04
11	D87	80	Single Unit Short Haul Truck	57	0.00E+00	7.89E-06	3.08E-07	9.42E+00	5.35E-06	1.71E-02	8.67E-06	3.28E-03	6.46E-04	1.32E-04	1.09E-03	2.01E-04	2.05E-04	9.58E-04	3.83E-05	1.52E-08	8.81E-04	6.13E-04
11	D87	80	Single Unit Long Haul Truck	3	0.00E+00	3.43E-07	1.32E-08	3.98E-01	2.28E-07	7.13E-04	3.76E-07	1.40E-04	2.96E-05	5.86E-06	4.74E-05	8.63E-06	8.80E-06	4.03E-05	1.62E-06	6.32E-10	3.85E-05	2.62E-05
11	D87	80	Combination Short Haul Truck	64	0.00E+00	1.32E-05	9.74E-07	2.14E+01	3.44E-08	2.00E-02	9.40E-06	2.03E-02	1.52E-03	2.76E-04	7.98E-04	2.84E-04	2.95E-04	3.40E-03	7.15E-05	0.00E+00	5.03E-04	3.83E-03
11	D87	80	Combination Long Haul Truck	58	0.00E+00	1.83E-05	1.03E-06	1.99E+01	1.17E-07	2.37E-02	1.51E-05	2.17E-02	1.57E-03	2.52E-04	1.68E-03	3.33E-04	3.47E-04	3.19E-03	6.65E-05	0.00E+00	1.33E-03	4.09E-03
11	D88	80	Passenger Car	483	0.00E+00	4.95E-06	5.38E-07	2.02E+01	3.51E-05	9.81E-02	1.12E-05	5.00E-04	2.63E-03	4.41E-04	1.09E-03	7.02E-04	7.20E-04	7.18E-05	1.03E-04	2.20E-08	3.68E-04	7.81E-05
11	D88	80	Passenger Truck	808	0.00E+00	1.02E-05	1.09E-06	4.57E+01	6.63E-05	1.73E-01	2.16E-05	1.35E-03	4.68E-03	7.80E-04	2.07E-03	1.34E-03	1.38E-03	3.32E-04	2.30E-04	4.19E-08	6.94E-04	2.25E-04
11	D88	80	Single Unit Short Haul Truck	57	0.00E+00	7.75E-06	3.03E-07	9.26E+00	5.26E-06	1.68E-02	8.52E-06	3.23E-03	6.35E-04	1.30E-04	1.07E-03	1.98E-04	2.02E-04	9.42E-04	3.76E-05	1.49E-08	8.66E-04	6.03E-04
11	D88	80	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.30E-08	3.91E-01	2.24E-07	7.01E-04	3.70E-07	1.38E-04	2.91E-05	5.76E-06	4.66E-05	8.49E-06	8.66E-06	3.96E-05	1.59E-06	6.22E-10	3.79E-05	2.58E-05
11	D88	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.92E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.61E-03
11	D88	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.05E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.86E-03
9	D89	60	Passenger Car	94	0.00E+00	1.19E-06	1.29E-07	4.23E+00	8.41E-06	2.28E-02	2.67E-06	9.66E-05	9.48E-04	1.42E-04	2.61E-04	1.68E-04	1.73E-04	1.86E-05	2.15E-05	4.51E-09	8.82E-05	1.51E-05
9	D89	60	Passenger Truck	157	0.00E+00	2.52E-06	2.67E-07	9.44E+00	1.59E-05	3.91E-02	5.22E-06	3.01E-04	1.73E-03	2.58E-04	4.98E-04	3.24E-04	3.32E-04	7.61E-05	4.74E-05	8.78E-09	1.66E-04	5.09E-05
9	D89	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.93E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.22E-05
9	D89	60	Single Unit Long Haul Truck	5	0.00E+00	1.53E-06	1.12E-07	1.84E+00	4.18E-09	2.28E-03	1.10E-06	2.33E-03	2.66E-04	4.17E-05	9.41E-05	3.28E-05	3.41E-05	2.93E-04	6.16E-06	0.00E+00	6.00E-05	4.40E-04
9	D89	60	Combination Long Haul Truck	5	0.00E+00	2.10E-06	1.15E-07	1.74E+00	1.42E-08	2.74E-03	1.75E-06	2.49E-03	2.79E-04	4.04E-05	1.99E-04	3.74E-05	3.90E-05	2.79E-04	5.83E-06	0.00E+00	1.60E-04	4.68E-04
9	D90	60	Passenger Car	36	0.00E+00	4.58E-07	4.98E-08	1.64E+00	3.25E-06	8.81E-03	1.03E-06	3.73E-05	3.66E-04	5.49E-05	1.01E-04	6.50E-05	6.67E-05	7.19E-06	8.29E-06	1.74E-09	3.41E-05	5.82E-06
9	D90	60	Passenger Truck	61	0.00E+00	9.73E-07	1.03E-07	3.65E+00	6.14E-06	1.51E-02	2.02E-06	1.16E-04	6.69E-04	9.96E-05	1.92E-04	1.25E-04	1.28E-04	2.94E-05	1.83E-05	3.39E-09	6.41E-05	1.97E-05
9	D90	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.23E-04
9	D90	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.47E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.40E-05
9	D90	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.27E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.15E-04
9	D90	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
10	D91	70	Passenger Car	224	0.00E+00	2.46E-06	2.68E-07	9.65E+00	1.75E-05	4.76E-02	5.55E-06	2.26E-04	1.72E-03	2.68E-04	5.41E-04	3.49E-04	3.58E-04	3.80E-05	4.90E-05	1.02E-08	1.83E-04	3.53E-05
10	D91	70	Passenger Truck	374	0.00E+00	5.18E-06	5.51E-07	2.17E+01	3.32E-05	8.42E-02	1.09E-05	6.58E-04	3.12E-03	4.82E-04	1.04E-03	6.75E-04	6.92E-04	1.66E-04	1.09E-04	1.96E-08	3.47E-04	1.10E-04
10	D91	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.71E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.26E-04
10	D91	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	D91	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
10	D92	70	Passenger Car	274	0.00E+00	3.01E-06	3.27E-07	1.18E+01	2.14E-05	5.83E-02	6.79E-06	2.77E-04	2.11E-03	3.28E-04	6.63E-04	4.27E-04	4.39E-04	4.65E-05	6.00E-05	1.25E-08	2.24E-04	4.32E-05
10	D92	70	Passenger Truck	458	0.00E+00	6.35E-06	6.75E-07	2.66E+01	4.06E-05	1.03E-01	1.33E-05	8.05E-04	3.82E-03	5.91E-04	1.27E-03	8.26E-04	8.47E-04	2.03E-04	1.34E-04	2.40E-08	4.25E-04	1.35E-04
10	D92	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.03E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.54E-05
10	D92	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	D92	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	D93	70	Passenger Car	230	0.00E+00	2.53E-06	2.75E-07	9.91E+00	1.79E-05	4.89E-02	5.70E-06	2.32E-04	1.77E-03	2.76E-04	5.56E-04	3.58E-04	3.68E-04	3.90E-05	5.03E-05	1.05E-08	1.88E-04	3.62E-05
10	D93	70	Passenger Truck	384	0.00E+00	5.32E-06	5.66E-07	2.23E+01	3.41E-05	8.64E-02	1.12E-05	6.75E-04	3.20E-03	4.95E-04	1.07E-03	6.93E-04	7.11E-04	1.70E-04	1.12E-04	2.01E-08	3.57E-04	1.13E-04
10	D93	70	Single Unit Short Haul Truck

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.14E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.60E-06
11	E03	80	Combination Long Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.33E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.16E-04
11	E03	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.63E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.73E-04
11	E04	80	Passenger Car	295	0.00E+00	3.02E-06	3.28E-07	1.23E+01	2.14E-05	5.99E-02	6.81E-06	3.05E-04	1.61E-03	2.69E-04	6.64E-04	4.28E-04	4.40E-04	4.38E-05	6.29E-05	1.34E-08	2.25E-04	4.77E-05
11	E04	80	Passenger Truck	493	0.00E+00	6.22E-06	6.63E-07	2.79E+01	4.05E-05	1.06E-01	1.32E-05	8.24E-04	2.86E-03	4.76E-04	1.27E-03	8.21E-04	8.41E-04	2.03E-04	1.41E-04	2.56E-08	4.24E-04	1.37E-04
11	E04	80	Single Unit Short Haul Truck	24	0.00E+00	3.29E-06	1.28E-07	3.93E+00	2.23E-06	7.13E-03	3.61E-06	1.37E-03	2.69E-04	5.50E-05	4.52E-04	8.38E-05	8.54E-05	3.99E-04	1.59E-05	6.32E-09	3.67E-04	2.55E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.51E-09	1.66E-01	9.49E-08	2.97E-04	1.57E-07	5.84E-05	1.23E-05	2.44E-06	1.97E-05	3.60E-06	3.67E-06	1.68E-05	6.75E-07	2.63E-10	1.61E-05	1.09E-05
11	E04	80	Combination Short Haul Truck	14	0.00E+00	2.91E-06	2.15E-07	4.74E+00	7.62E-09	4.44E-03	2.08E-06	4.50E-03	3.37E-04	6.11E-05	1.76E-04	6.29E-05	6.53E-05	7.53E-04	1.58E-05	0.00E+00	1.11E-04	8.48E-04
11	E04	80	Combination Long Haul Truck	13	0.00E+00	4.05E-06	2.29E-07	4.39E+00	2.58E-08	5.25E-03	3.34E-06	4.81E-03	3.48E-04	5.57E-05	3.72E-04	7.38E-05	7.68E-05	7.05E-04	1.47E-05	0.00E+00	2.95E-04	9.06E-04
11	E05	80	Passenger Car	240	0.00E+00	2.47E-06	2.68E-07	1.01E+01	1.75E-05	4.89E-02	5.56E-06	2.49E-04	1.31E-03	2.19E-04	5.42E-04	3.50E-04	3.59E-04	3.57E-05	5.13E-05	1.10E-08	1.83E-04	3.89E-05
11	E05	80	Passenger Truck	403	0.00E+00	5.08E-06	5.41E-07	2.28E+01	3.30E-05	8.64E-02	1.08E-05	6.72E-04	2.33E-03	3.88E-04	1.03E-03	6.70E-04	6.87E-04	1.65E-04	1.15E-04	2.09E-08	3.46E-04	1.12E-04
11	E05	80	Single Unit Short Haul Truck	17	0.00E+00	2.37E-06	9.24E-08	2.83E+00	1.60E-06	5.13E-03	2.60E-06	9.84E-04	1.94E-04	3.96E-05	3.26E-04	6.03E-05	6.15E-05	2.88E-04	1.15E-05	4.55E-09	2.64E-04	1.84E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	3.97E-09	1.19E-01	6.83E-08	2.14E-04	1.13E-07	4.20E-05	8.88E-06	1.76E-06	1.42E-05	2.59E-06	2.64E-06	1.21E-05	4.86E-07	1.90E-10	1.16E-05	7.86E-06
11	E05	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.50E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.59E-04
11	E05	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.74E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.05E-04
11	E06	80	Passenger Car	120	0.00E+00	1.23E-06	1.34E-07	5.05E+00	8.76E-06	2.45E-02	2.78E-06	1.25E-04	6.56E-04	1.10E-04	2.71E-04	1.75E-04	1.80E-04	1.79E-05	2.57E-05	5.49E-09	9.18E-05	1.95E-05
11	E06	80	Passenger Truck	202	0.00E+00	2.54E-06	2.71E-07	1.14E+01	1.65E-05	4.33E-02	5.39E-06	3.37E-04	1.17E-03	1.95E-04	5.17E-04	3.35E-04	3.44E-04	8.28E-05	5.75E-05	1.04E-08	1.73E-04	5.61E-05
11	E06	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.04E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.94E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.44E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.29E-06
11	E06	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.17E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.97E-04
11	E06	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.39E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.38E-04
9	E07	60	Passenger Car	1021	0.00E+00	1.29E-05	1.40E-06	4.60E+01	9.15E-05	2.48E-01	2.91E-05	1.05E-03	1.03E-02	1.54E-03	2.84E-03	1.83E-03	1.88E-03	2.02E-04	2.33E-04	4.90E-08	9.59E-04	1.64E-04
9	E07	60	Passenger Truck	1709	0.00E+00	2.74E-05	2.90E-06	1.03E+02	1.73E-04	4.25E-01	5.68E-05	3.27E-03	1.88E-02	2.80E-03	5.41E-03	3.52E-03	3.61E-03	8.28E-04	5.15E-04	9.55E-08	1.80E-03	5.54E-04
9	E07	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.55E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.77E-04
9	E07	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E07	60	Combination Short Haul Truck	31	0.00E+00	9.01E-06	6.62E-07	1.09E+01	2.47E-08	1.35E-02	6.47E-06	1.38E-02	1.57E-03	2.46E-04	5.55E-04	1.94E-04	2.01E-04	1.73E-03	3.63E-05	0.00E+00	3.54E-04	2.59E-03
9	E07	60	Combination Long Haul Truck	28	0.00E+00	1.24E-05	6.76E-07	1.03E+01	8.35E-08	1.62E-02	1.03E-05	1.47E-02	1.65E-03	2.38E-04	1.17E-03	2.21E-04	2.30E-04	1.65E-03	3.44E-05	0.00E+00	9.44E-04	2.76E-03
9	E08	60	Passenger Car	1167	0.00E+00	1.47E-05	1.60E-06	5.26E+01	1.05E-04	2.83E-01	3.32E-05	1.20E-03	1.18E-02	1.76E-03	3.24E-03	2.09E-03	2.14E-03	2.31E-04	2.67E-04	5.60E-08	1.10E-03	1.87E-04
9	E08	60	Passenger Truck	1953	0.00E+00	3.13E-05	3.32E-06	1.17E+02	1.97E-04	4.85E-01	6.49E-05	3.74E-03	2.15E-02	3.20E-03	6.19E-03	4.03E-03	4.13E-03	9.46E-04	5.89E-04	1.09E-07	2.06E-03	6.33E-04
9	E08	60	Single Unit Short Haul Truck	34	0.00E+00	7.70E-06	3.18E-07	5.74E+00	5.10E-06	1.01E-02	8.33E-06	2.96E-03	7.93E-04	1.33E-04	1.03E-03	1.98E-04	2.02E-04	5.81E-04	2.34E-05	9.63E-09	8.25E-04	5.53E-04
9	E08	60	Single Unit Long Haul Truck	2	0.00E+00	3.36E-07	1.38E-08	2.45E-01	2.21E-07	4.28E-04	3.63E-07	1.28E-04	3.56E-05	5.91E-06	4.49E-05	8.60E-06	8.77E-06	2.47E-05	9.98E-07	4.10E-10	3.61E-05	2.40E-05
9	E08	60	Combination Short Haul Truck	43	0.00E+00	1.25E-05	9.19E-07	1.51E+01	3.43E-08	1.87E-02	8.99E-06	1.91E-02	2.18E-03	3.42E-04	7.71E-04	2.69E-04	2.79E-04	2.40E-03	5.05E-05	0.00E+00	4.92E-04	3.61E-03
9	E08	60	Combination Long Haul Truck	39	0.00E+00	1.72E-05	9.40E-07	1.43E+01	1.16E-07	2.25E-02	1.44E-05	2.04E-02	2.29E-03	3.31E-04	1.63E-03	3.07E-04	3.20E-04	2.29E-03	4.78E-05	0.00E+00	1.31E-03	3.84E-03
9	E09	60	Passenger Car	887	0.00E+00	1.12E-05	1.22E-06	4.00E+01	7.95E-05	2.15E-01	2.53E-05	9.13E-04	8.96E-03	1.34E-03	2.46E-03	1.59E-03	1.63E-03	1.76E-04	2.03E-04	4.26E-08	8.34E-04	1.42E-04
9	E09	60	Passenger Truck	1486	0.00E+00	2.38E-05	2.52E-06	8.92E+01	1.50E-04	3.69E-01	4.94E-05	2.84E-03	1.64E-02	2.44E-03	4.71E-03	3.06E-03	3.14E-03	7.20E-04	4.48E-04	8.30E-08	1.57E-03	4.81E-04
9	E09	60	Single Unit Short Haul Truck	25	0.00E+00	5.56E-06	2.30E-07	4.14E+00	3.68E-06	7.29E-03	6.01E-06	2.14E-03	5.73E-04	9.63E-05	7.42E-04	1.43E-04	1.46E-04	4.20E-04	1.69E-05	6.96E-09	5.96E-04	4.00E-04
9	E09	60	Single Unit Long Haul Truck	1	0.00E+00	2.43E-07	9.97E-09	1.77E-01	1.60E-07	3.09E-04	2.62E-07	9.25E-05	2.57E-05	4.27E-06	3.24E-05	6.21E-06	6.33E-06	1.78E-05	7.21E-07	2.96E-10	2.61E-05	1.73E-05
9	E09	60	Combination Short Haul Truck	27	0.00E+00	7.94E-06	5.83E-07	9.58E+00	2.17E-08	1.19E-02	5.70E-06	1.21E-02	1.39E-03	2.17E-04	4.89E-04	1.71E-04	1.77E-04	1.52E-03	3.20E-05	0.00E+00	3.12E-04	2.29E-03
9	E09	60	Combination Long Haul Truck	25	0.00E+00	1.09E-05	5.96E-07	9.05E+00	7.36E-08	1.42E-02	9.12E-06	1.29E-02	1.45E-03	2.10E-04	1.03E-03	1.95E-04	2.03E-04	1.45E-03	3.03E-05	0.00E+00	8.32E-04	2.44E-03
9	E10	60	Passenger Car	974	0.00E+00	1.23E-05	1.34E-06	4.39E+01	8.73E-05	2.36E-01	2.77E-05	1.00E-03	9.83E-03	1.47E-03	2.70E-03	1.74E-03	1.79E-03	1.93E-04	2.23E-04	4.67E-08	9.15E-04	1.56E-04
9	E10	60	Passenger Truck	1630	0.00E+00	2.61E-05	2.77E-06	9.79E+01	1.65E-04	4.05E-01	5.42E-05	3.12E-03	1.80E-02	2.67E-03	5.16E-03	3.36E-03	3.44E-03	7.90E-04	4.91E-04	9.11E-08	1.72E-03	5.28E-04
9	E10	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.61E-04
9	E10	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.07E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	2.00E-05
9	E10	60	Combination Short Haul Truck	38	0.00E+00	1.10E-05	8.07E-07	1.33E+01	3.01E-08	1.64E-02	7.90E-06	1.68E-02	1.92E-03	3.00E-04	6.77E-04	2.36E-04	2.45E-04	2.11E-03	4.44E-05	0.00E+00	4.32E-04	3.17E-03
9	E10	60	Combination Long Haul Truck	34	0.00E+00	1.51E-05	8.25E-07	1.25E+01	1.02E-07	1.97E-02	1.26E-05	1.79E-02	2.01E-03	2.91E-04	1.43E-03	2.69E-04	2.81E-04	2.01E-03	4.20E-05	0.00E+00	1.15E-03	3.37E-03
9	E11	60	Passenger Car	1116	0.00E+00	1.41E-05	1.53E-06	5.03E+01	1.00E-04	2.71E-01	3.18E-05	1.15E-03	1.13E-02	1.69E-03	3.10E-03	2.00E-03	2.05E-03	2.21E-04	2.55E-04	5.36E-08	1.05E-03	1.79E-04
9	E11	60	Passenger Truck	1870	0.00E+00	2.99E-05	3.17E-06	1.12E+02	1.89E-04	4.65E-01	6.21E-05	3.58E-03	2.06E-02	3.07E-03	5.92E-03	3.85E-03	3.95E-03	9.06E-04	5.63E-04	1.04E-07	1.97E-03	6.06E-04
9	E11	60	Single Unit Short Haul Truck	70	0.00E+00	1.56E-05	6.45E-07	1.16E+01	1.03E-05	2.05E-02	1.69E-05	5.99E-03	1.61E-03	2.70E-04	2.08E-03	4.01E-04	4.09E-04	1.18E-03	4.74E-05	1.95E-08	1.67E-03	1.12E-03
9	E11	60	Single Unit Long Haul Truck	3	0.00E+00	6.81E-07	2.80E-08	4.96E-01	4.49E-07	8.68E-04	7.37E-07	2.60E-04	7.23E-05	1.20E-05	9.11E-05	1.74E-05	1.78E-05	5.01E-05	2.02E-06	8.31E-10	7.33E-05	4.86E-05
9	E11	60	Combination Short Haul Truck	74	0.00E+00	2.17E-05	1.59E-06	2.62E+01	5.94E-08	3.24E-02	1.56E-05	3.31E-02	3.78E-03	5.92E-04	1.34E-03	4.66E-04	4.84E-04	4.16E-03	8.75E-05	0.00E+00	8.52E-04	6.24E-03
9	E11	60	Combination Long Haul Truck	68	0.00E+00	2.98E-05	1.63E-06	2.47E+01	2.01E-07	3.89E-02	2.49E-05	3.53E-02	3.97E-03	5.74E-04	2.83E-03	5.31E-04	5.54E-04	3.97E-03	8.28E-05	0.00E+00	2.27E-03	6.65E-03
9	E12	60	Passenger Car	1469	0.00E+00	1.86E-05	2.02E-06	6.62E+01	1.32E-04	3.57E-01	4.18E-05	1.51E-03	1.48E-02	2.22E-03	4.08E-03	2.63E-03	2.70E-03	2.91E-04	3.36E-04	7.05E-08	1.38E-03	2.36E-04
9	E12	60	Passenger Truck	2460	0.00E+00	3.94E-05	4.18E-06	1.48E+02	2.49E-04	6.11E-01	8.17E-05	4.70E-03	2.71E-02	4.03E-03	7.79E-03	5.07E-03	5.20E-03	1.19E-03	7.41E-04	1.37E-07	2.60E-03	7.97E-04
9	E12	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.31E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.37E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.17E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.93E-05
9	E12	60	Combination Short Haul Truck	80	0.00E+00	2.32E-05	1.70E-06	2.80E+01	6.36E-08	3.47E-02	1.67E-05	3.55E-02	4.05E-03	6.33E-04	1.43E-03	4.99E-04	5.18E-04	4.45E-03	9.36E-05	0.00E+00	9.12E-04	6.68E-03
9	E12	60	Combination Long Haul Truck	72	0.00E+00	3.19E-05	1.74E-06	2.64E+01	2.15E-07	4.16E-02	2.67E-05	3.78E-02	4.25E-03	6.14E-04	3.02E-03	5.69E-04	5.93E-04	4.24E-03	8.86E-05	0.00E+00	2.43E-03	7.12E-03
11	E13	80	Passenger Car	403	0.00E+00	4.13E-06	4.49E-07	1.69E+01	2.93E-05	8.18E-02	9.31E-06	4.18E-04	2.19E-03	3.68E-04	9.08E-04	5.85E-04	6.01E-04	5.99E-05	8.59E-05	1.84E-08	3.07E-04	6.51E-05
11	E13	80	Passenger Truck	674	0.00E+00	8.50E-06	9.07E-07	3.81E+01	5.53E-05	1.45E-01	1.80E-05	1.13E-03	3.91E-03	6.51E-04	1.73E-03	1.12E-03	1.15E-03	2.77E-04	1.92E-04	3.49E-08	5.79E-04	1.87E-04
11	E13	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.71E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	E13	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.17E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E13	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.59E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	E14	80	Passenger Car	277	0.00E+00	2.84E-06	3.09E-07	1.16E+01	2.02E-05	5.64E-02	6.41E-06	2.88E-04	1.51E-03	2.53E-04	6.26E-04	4.03E-04	4.14E-04	4.12E-05	5.92E-05	1.26E-08	2.12E-04	4.49E-05
11	E14	80	Passenger Truck	465	0.00E+00	5.86E-06	6.25E-07	2.63E+01	3.81E-05	9.97E-02	1.24E-05	7.76E-04	2.69E-03	4.48E-04	1.19E-03	7.73E-04	7.92E-04	1.91E-04	1.32E-04	2.41E-08	3.99E-04	1.29E-04
11	E14	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.04E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.94E-04
11	E14	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.44E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.29E-06
11	E14	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.33E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E14	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.70E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E15	80	Passenger Car	298	0.00E+00	3.06E-06	3.32E-07	1.25E+01	2.17E-05	6.06E-02	6.90E-06	3.09E-04	1.63E-03	2.72E-04	6.73E-04	4.34E-04	4.45E-04	4.44E-05	6.37E-05	1.36E-08	2.28E-04	4.83E-05
11	E15	80	Passenger Truck	500	0.00E+00	6.30E-06	6.72E-07	2.82E+01	4.10E-05	1.07E-01	1.34E-05	8.35E-04	2.90E-03	4.82E-04	1.28E-03	8.31E-04	8.52E-04	2.05E-04	1.42E-04	2.59E-08	4.29E-04	1.39E-04
11	E15	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.83E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.15E-05
11	E15	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.83E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.22E-04
11	E15	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.10E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.72E-04
11	E16	80	Passenger Car	302	0.00E+00	3.10E-06	3.37E-07	1.27E+01	2.20E-05	6.14E-02	6.98E-06	3.13E-04	1.65E-03	2.76E-04	6.81E-04	4.39E-04	4.51E-04	4.49E-05	6.45E-05	1.38E-08	2.30E-04	4.89E-05
11	E16	80	Passenger Truck	506	0.00E+00	6.38E-06	6.80E-07	2.86E+01	4.15E-05	1.09E-01	1.35E-05	8.45E-04	2.93E-03	4.88E-04	1.30E-03	8.42E-04	8.63E-04	2.08E-04	1.44E-04	2.62E-08	4.35E-04	1.41E-04
11	E16	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E16	80	Single Unit Long Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.33E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.16E-04
11	E16	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.63E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.73E-04
11	E17	80	Passenger Car	241	0.00E+00	2.47E-06	2.69E-07	1.01E+01	1.75E-05	4.90E-02	5.58E-06	2.50E-04	1.31E-03	2.20E-04	5.44E-04	3.51E-04	3.60E-04	3.59E-05	5.15E-05	1.10E-08	1.84E-04	3.90E-05
11	E17	80	Passenger Truck	404	0.00E+00	5.09E-06	5.43E-07	2.28E+01	3.31E-05	8.67E-02	1.08E-05	6.75E-04	2.34E-03	3.90E-04	1.04E-03	6.72E-04	6.89E-04	1.66E-04	1.15E-04	2.09E-08	3.47E-04	1.12E-04
11	E17	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.56E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.23E-04
11	E17

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E21	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E21	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.34E-04
11	E21	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.03E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.71E-04
11	E22	80	Passenger Car	12	0.00E+00	1.27E-07	1.37E-08	5.17E-01	8.98E-07	2.51E-03	2.85E-07	1.28E-05	6.73E-05	1.13E-05	2.78E-05	1.79E-05	1.84E-05	1.83E-06	2.63E-06	5.62E-10	9.41E-06	2.00E-06
11	E22	80	Passenger Truck	21	0.00E+00	2.61E-07	2.78E-08	1.17E+00	1.69E-06	4.43E-03	5.52E-07	3.45E-05	1.20E-04	1.99E-05	5.30E-05	3.44E-05	3.52E-05	8.48E-06	5.89E-06	1.07E-09	1.77E-05	5.74E-06
11	E22	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.19E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.09E-05
11	E22	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.67E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.14E-04
11	E22	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.36E-04
11	E23	80	Passenger Car	228	0.00E+00	2.34E-06	2.55E-07	9.57E+00	1.66E-05	4.64E-02	5.28E-06	2.37E-04	1.25E-03	2.08E-04	5.15E-04	3.32E-04	3.41E-04	3.40E-05	4.87E-05	1.04E-08	1.74E-04	3.70E-05
11	E23	80	Passenger Truck	383	0.00E+00	4.83E-06	5.14E-07	2.16E+01	3.14E-05	8.21E-02	1.02E-05	6.39E-04	2.22E-03	3.69E-04	9.81E-04	6.36E-04	6.52E-04	1.57E-04	1.09E-04	1.98E-08	3.29E-04	1.06E-04
11	E23	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E23	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.34E-04
11	E23	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.03E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.71E-04
11	E24	80	Passenger Car	12	0.00E+00	1.27E-07	1.37E-08	5.17E-01	8.98E-07	2.51E-03	2.85E-07	1.28E-05	6.73E-05	1.13E-05	2.78E-05	1.79E-05	1.84E-05	1.83E-06	2.63E-06	5.62E-10	9.41E-06	2.00E-06
11	E24	80	Passenger Truck	21	0.00E+00	2.61E-07	2.78E-08	1.17E+00	1.69E-06	4.43E-03	5.52E-07	3.45E-05	1.20E-04	1.99E-05	5.30E-05	3.44E-05	3.52E-05	8.48E-06	5.89E-06	1.07E-09	1.77E-05	5.74E-06
11	E24	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.19E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.09E-05
11	E24	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.67E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.14E-04
11	E24	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.36E-04
10	E25	70	Passenger Car	292	0.00E+00	3.22E-06	3.49E-07	1.26E+01	2.28E-05	6.22E-02	7.25E-06	2.95E-04	2.25E-03	3.50E-04	7.07E-04	4.56E-04	4.68E-04	4.96E-05	6.40E-05	1.33E-08	2.39E-04	4.61E-05
10	E25	70	Passenger Truck	489	0.00E+00	6.77E-06	7.20E-07	2.84E+01	4.34E-05	1.10E-01	1.42E-05	8.59E-04	4.07E-03	6.30E-04	1.36E-03	8.82E-04	9.04E-04	2.17E-04	1.43E-04	2.56E-08	4.54E-04	1.44E-04
10	E25	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E25	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E25	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E26	70	Passenger Car	309	0.00E+00	3.40E-06	3.70E-07	1.33E+01	2.41E-05	6.57E-02	7.67E-06	3.12E-04	2.38E-03	3.71E-04	7.48E-04	4.82E-04	4.95E-04	5.25E-05	6.77E-05	1.41E-08	2.53E-04	4.87E-05
10	E26	70	Passenger Truck	517	0.00E+00	7.16E-06	7.61E-07	3.00E+01	4.59E-05	1.16E-01	1.50E-05	9.08E-04	4.31E-03	6.66E-04	1.44E-03	9.33E-04	9.56E-04	2.29E-04	1.51E-04	2.70E-08	4.80E-04	1.53E-04
10	E26	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.69E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	E26	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E26	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E27	70	Passenger Car	403	0.00E+00	4.44E-06	4.82E-07	1.74E+01	3.15E-05	8.58E-02	1.00E-05	4.08E-04	3.10E-03	4.84E-04	9.76E-04	6.29E-04	6.46E-04	6.85E-05	8.83E-05	1.84E-08	3.30E-04	6.36E-05
10	E27	70	Passenger Truck	675	0.00E+00	9.35E-06	9.93E-07	3.92E+01	5.98E-05	1.52E-01	1.96E-05	1.19E-03	5.62E-03	8.70E-04	1.87E-03	1.22E-03	1.25E-03	2.99E-04	1.97E-04	3.53E-08	6.26E-04	1.99E-04
10	E27	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	E27	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.82E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.32E-04
10	E27	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.02E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.69E-04
10	E28	70	Passenger Car	261	0.00E+00	2.87E-06	3.12E-07	1.13E+01	2.04E-05	5.56E-02	6.48E-06	2.64E-04	2.01E-03	3.13E-04	6.32E-04	4.07E-04	4.18E-04	4.43E-05	5.72E-05	1.19E-08	2.14E-04	4.12E-05
10	E28	70	Passenger Truck	437	0.00E+00	6.05E-06	6.43E-07	2.54E+01	3.87E-05	9.82E-02	1.27E-05	7.68E-04	3.64E-03	5.63E-04	1.21E-03	7.88E-04	8.08E-04	1.94E-04	1.28E-04	2.28E-08	4.05E-04	1.29E-04
10	E28	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	E28	70	Combination Long Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	E29	70	Passenger Car	226	0.00E+00	2.49E-06	2.71E-07	9.76E+00	1.77E-05	4.82E-02	5.62E-06	2.29E-04	1.74E-03	2.71E-04	5.48E-04	3.53E-04	3.62E-04	3.84E-05	4.96E-05	1.03E-08	1.85E-04	3.57E-05
10	E29	70	Passenger Truck	379	0.00E+00	5.25E-06	5.57E-07	2.20E+01	3.36E-05	8.52E-02	1.10E-05	6.65E-04	3.15E-03	4.88E-04	1.05E-03	6.83E-04	7.00E-04	1.68E-04	1.11E-04	1.98E-08	3.51E-04	1.12E-04
10	E29	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.73E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	E29	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.76E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.03E-06
10	E29	70	Combination Short Haul Truck	8	0.00E+00	2.02E-06	1.50E-07	2.73E+00	5.13E-09	2.92E-03	1.44E-06	3.02E-03	2.85E-04	4.75E-05	1.21E-04	4.38E-05	4.54E-05	4.34E-04	9.12E-06	0.00E+00	7.57E-05	5.70E-04
10	E29	70	Combination Long Haul Truck	7	0.00E+00	2.77E-06	1.57E-07	2.56E+00	1.74E-08	3.48E-03	2.28E-06	3.24E-03	2.96E-04	4.46E-05	2.52E-04	5.06E-05	5.27E-05	4.11E-04	8.58E-06	0.00E+00	1.99E-04	6.10E-04
10	E30	70	Passenger Car	74	0.00E+00	8.11E-07	8.81E-08	3.18E+00	5.76E-06	1.57E-02	1.83E-06	7.45E-05	5.67E-04	8.84E-05	1.78E-04	1.15E-04	1.18E-04	1.25E-05	1.61E-05	3.35E-09	6.03E-05	1.16E-05
10	E30	70	Passenger Truck	123	0.00E+00	1.71E-06	1.82E-07	7.16E+00	1.09E-05	2.77E-02	3.58E-06	2.17E-04	1.03E-03	1.59E-04	3.42E-04	2.22E-04	2.28E-04	5.47E-05	3.60E-05	6.45E-09	1.14E-04	3.64E-05
10	E30	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.69E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	E30	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	E30	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
10	E31	70	Passenger Car	274	0.00E+00	3.02E-06	3.28E-07	1.18E+01	2.14E-05	5.83E-02	6.80E-06	2.77E-04	2.11E-03	3.29E-04	6.64E-04	4.28E-04	4.39E-04	4.66E-05	6.01E-05	1.25E-08	2.24E-04	4.32E-05
10	E31	70	Passenger Truck	459	0.00E+00	6.35E-06	6.75E-07	2.66E+01	4.07E-05	1.03E-01	1.33E-05	8.06E-04	3.82E-03	5.91E-04	1.27E-03	8.28E-04	8.48E-04	2.03E-04	1.34E-04	2.40E-08	4.26E-04	1.35E-04
10	E31	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.73E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	E31	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.76E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.03E-06
10	E31	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.82E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.32E-04
10	E31	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.02E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.69E-04
10	E32	70	Passenger Car	85	0.00E+00	9.35E-07	1.02E-07	3.66E+00	6.63E-06	1.81E-02	2.11E-06	8.58E-05	6.54E-04	1.02E-04	2.06E-04	1.33E-04	1.36E-04	1.44E-05	1.86E-05	3.86E-09	6.95E-05	1.34E-05
10	E32	70	Passenger Truck	142	0.00E+00	1.97E-06	2.09E-07	8.24E+00	1.26E-05	3.20E-02	4.12E-06	2.50E-04	1.18E-03	1.83E-04	3.95E-04	2.56E-04	2.63E-04	6.30E-05	4.15E-05	7.43E-09	1.32E-04	4.19E-05
10	E32	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E32	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	E32	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
9	E33	60	Passenger Car	1041	0.00E+00	1.31E-05	1.43E-06	4.69E+01	9.33E-05	2.53E-01	2.96E-05	1.07E-03	1.05E-02	1.57E-03	2.89E-03	1.86E-03	1.91E-03	2.06E-04	2.38E-04	5.00E-08	9.78E-04	1.67E-04
9	E33	60	Passenger Truck	1742	0.00E+00	2.79E-05	2.96E-06	1.05E+02	1.76E-04	4.33E-01	5.79E-05	3.33E-03	1.92E-02	2.86E-03	5.52E-03	3.59E-03	3.68E-03	8.44E-04	5.25E-04	9.74E-08	1.84E-03	5.65E-04
9	E33	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.76E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	E33	60	Combination Short Haul Truck	20	0.00E+00	5.95E-06	4.37E-07	7.18E+00	1.63E-08	8.90E-03	4.28E-06	9.10E-03	1.04E-03	1.62E-04	3.67E-04	1.28E-04	1.33E-04	1.14E-03	2.40E-05	0.00E+00	2.34E-04	1.71E-03
9	E33	60	Combination Long Haul Truck	19	0.00E+00	8.18E-06	4.47E-07	6.79E+00	5.52E-08	1.07E-02	6.84E-06	9.70E-03	1.09E-03	1.58E-04	7.76E-04	1.46E-04	1.52E-04	1.09E-03	2.27E-05	0.00E+00	6.24E-04	1.83E-03
9	E34	60	Passenger Car	420	0.00E+00	5.30E-06	5.76E-07	1.89E+01	3.76E-05	1.02E-01	1.20E-05	4.32E-04	4.24E-03	6.35E-04	1.17E-03	7.52E-04	7.72E-04	8.32E-05	9.60E-05	2.02E-08	3.95E-04	6.74E-05
9	E34	60	Passenger Truck	703	0.00E+00	1.13E-05	1.19E-06	4.22E+01	7.10E-05	1.75E-01	2.34E-05	1.34E-03	7.75E-03	1.15E-03	2.23E-03	1.45E-03	1.48E-03	3.41E-04	2.12E-04	3.93E-08	7.42E-04	2.28E-04
9	E34	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.69E-04
9	E34	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.54E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.60E-05
9	E34	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.15E-03
9	E34	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.22E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.29E-03
9	E35	60	Passenger Car	385	0.00E+00	4.86E-06	5.28E-07	1.73E+01	3.45E-05	9.34E-02	1.10E-05	3.96E-04	3.89E-03	5.82E-04	1.07E-03	6.89E-04	7.07E-04	7.63E-05	8.79E-05	1.85E-08	3.62E-04	6.18E-05
9	E35	60	Passenger Truck	644	0.00E+00	1.03E-05	1.09E-06	3.87E+01	6.51E-05	1.60E-01	2.14E-05	1.23E-03	7.10E-03	1.06E-03	2.04E-03	1.33E-03	1.36E-03	3.12E-04	1.94E-04	3.60E-08	6.80E-04	2.09E-04
9	E35	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
9	E35	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.60E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.06E-03
9	E35	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.97E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
9	E36	60	Passenger Car	201	0.00E+00	2.54E-06	2.76E-07	9.07E+00	1.80E-05	4.89E-02	5.73E-06	2.07E-04	2.03E-03	3.04E-04	5.59E-04	3.60E-04	3.70E-04	3.99E-05	4.60E-05	9.66E-09	1.89E-04	3.23E-05
9	E36	60	Passenger Truck	337	0.00E+00	5.40E-06	5.72E-07	2.02E+01	3.40E-05	8.37E-02	1.12E-05	6.44E-04	3.71E-03	5.52E-04	1.07E-03	6.94E-04	7.11E-04	1.63E-04	1.02E-04	1.88E-08	3.56E-04	1.09E-04
9	E36	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.69E-04
9	E36	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.54E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.60E-05
9	E36	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.02E-03
9	E36	60	Combination Long Haul Truck	22	0.00E+00

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E41	70	Passenger Car	281	0.00E+00	3.10E-06	3.36E-07	1.21E+01	2.20E-05	5.99E-02	6.98E-06	2.84E-04	2.17E-03	3.37E-04	6.81E-04	4.39E-04	4.51E-04	4.78E-05	6.16E-05	1.28E-08	2.30E-04	4.44E-05
10	E41	70	Passenger Truck	471	0.00E+00	6.52E-06	6.93E-07	2.73E+01	4.17E-05	1.06E-01	1.37E-05	8.27E-04	3.92E-03	6.07E-04	1.31E-03	8.49E-04	8.70E-04	2.09E-04	1.37E-04	2.46E-08	4.37E-04	1.39E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E42	70	Passenger Car	307	0.00E+00	3.38E-06	3.68E-07	1.33E+01	2.40E-05	6.54E-02	7.63E-06	3.11E-04	2.37E-03	3.69E-04	7.44E-04	4.80E-04	4.92E-04	5.22E-05	6.74E-05	1.40E-08	2.52E-04	4.85E-05
10	E42	70	Passenger Truck	515	0.00E+00	7.13E-06	7.57E-07	2.99E+01	4.56E-05	1.16E-01	1.49E-05	9.04E-04	4.29E-03	6.63E-04	1.43E-03	9.28E-04	9.51E-04	2.28E-04	1.50E-04	2.69E-08	4.77E-04	1.52E-04
10	E42	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E42	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E42	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	E43	70	Passenger Car	199	0.00E+00	2.19E-06	2.38E-07	8.58E+00	1.55E-05	4.23E-02	4.94E-06	2.01E-04	1.53E-03	2.39E-04	4.82E-04	3.11E-04	3.19E-04	3.38E-05	4.36E-05	9.06E-09	1.63E-04	3.14E-05
10	E43	70	Passenger Truck	333	0.00E+00	4.61E-06	4.90E-07	1.93E+01	2.95E-05	7.49E-02	9.67E-06	5.85E-04	2.77E-03	4.29E-04	9.25E-04	6.01E-04	6.16E-04	1.48E-04	9.72E-05	1.74E-08	3.09E-04	9.82E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	E44	70	Passenger Car	310	0.00E+00	3.41E-06	3.71E-07	1.34E+01	2.42E-05	6.60E-02	7.70E-06	3.13E-04	2.39E-03	3.72E-04	7.51E-04	4.84E-04	4.97E-04	5.27E-05	6.79E-05	1.41E-08	2.54E-04	4.89E-05
10	E44	70	Passenger Truck	519	0.00E+00	7.19E-06	7.64E-07	3.01E+01	4.60E-05	1.17E-01	1.51E-05	9.12E-04	4.32E-03	6.69E-04	1.44E-03	9.36E-04	9.59E-04	2.30E-04	1.51E-04	2.71E-08	4.81E-04	1.53E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E44	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.60E-05
10	E44	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
11	E45	80	Passenger Car	299	0.00E+00	3.07E-06	3.34E-07	1.26E+01	2.18E-05	6.09E-02	6.92E-06	3.11E-04	1.63E-03	2.73E-04	6.75E-04	4.35E-04	4.47E-04	4.45E-05	6.39E-05	1.37E-08	2.28E-04	4.84E-05
11	E45	80	Passenger Truck	502	0.00E+00	6.33E-06	6.74E-07	2.83E+01	4.11E-05	1.08E-01	1.34E-05	8.38E-04	2.91E-03	4.84E-04	1.29E-03	8.34E-04	8.55E-04	2.06E-04	1.43E-04	2.60E-08	4.31E-04	1.39E-04
11	E45	80	Single Unit Short Haul Truck	34	0.00E+00	4.73E-06	1.85E-07	5.65E+00	3.21E-06	1.03E-02	5.20E-06	1.97E-03	3.87E-04	7.92E-05	6.52E-04	1.21E-04	1.23E-04	5.75E-04	2.30E-05	9.10E-09	5.29E-04	3.68E-04
11	E45	80	Single Unit Long Haul Truck	2	0.00E+00	2.06E-07	7.93E-09	2.39E-01	1.37E-07	4.28E-04	2.26E-07	8.41E-05	1.78E-05	3.52E-06	2.84E-05	5.18E-06	5.28E-06	2.42E-05	9.72E-07	3.79E-10	2.31E-05	1.57E-05
11	E45	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.83E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.29E-03
11	E45	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.31E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.38E-03
11	E46	80	Passenger Car	134	0.00E+00	1.38E-06	1.50E-07	5.63E+00	9.77E-06	2.73E-02	3.10E-06	1.39E-04	7.32E-04	1.23E-04	3.03E-04	1.95E-04	2.00E-04	2.00E-05	2.86E-05	6.12E-09	1.02E-04	2.17E-05
11	E46	80	Passenger Truck	225	0.00E+00	2.83E-06	3.02E-07	1.27E+01	1.84E-05	4.82E-02	6.01E-06	3.75E-04	1.30E-03	2.17E-04	5.76E-04	3.74E-04	3.83E-04	9.23E-05	6.41E-05	1.16E-08	1.93E-04	6.25E-05
11	E46	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.71E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	E46	80	Combination Short Haul Truck	28	0.00E+00	5.82E-06	4.31E-07	9.47E+00	1.52E-08	8.87E-03	4.16E-06	9.00E-03	6.74E-04	1.22E-04	3.53E-04	1.26E-04	1.31E-04	1.51E-03	3.17E-05	0.00E+00	2.22E-04	1.70E-03
11	E46	80	Combination Long Haul Truck	26	0.00E+00	8.11E-06	4.58E-07	8.79E+00	5.16E-08	1.05E-02	6.69E-06	9.62E-03	6.97E-04	1.11E-04	7.43E-04	1.48E-04	1.54E-04	1.41E-03	2.95E-05	0.00E+00	5.89E-04	1.81E-03
11	E47	80	Passenger Car	323	0.00E+00	3.31E-06	3.60E-07	1.35E+01	2.35E-05	6.56E-02	7.47E-06	3.35E-04	1.76E-03	2.95E-04	7.28E-04	4.70E-04	4.82E-04	4.80E-05	6.89E-05	1.47E-08	2.46E-04	5.23E-05
11	E47	80	Passenger Truck	541	0.00E+00	6.82E-06	7.27E-07	3.06E+01	4.44E-05	1.16E-01	1.45E-05	9.04E-04	3.14E-03	5.22E-04	1.39E-03	9.00E-04	9.23E-04	2.22E-04	1.54E-04	2.80E-08	4.65E-04	1.50E-04
11	E47	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.75E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.27E-04
11	E47	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.47E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.40E-05
11	E47	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.83E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E47	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E48	80	Passenger Car	127	0.00E+00	1.30E-06	1.41E-07	5.31E+00	9.22E-06	2.58E-02	2.93E-06	1.31E-04	6.91E-04	1.16E-04	2.86E-04	1.84E-04	1.89E-04	1.88E-05	2.70E-05	5.78E-09	9.67E-05	2.05E-05
11	E48	80	Passenger Truck	212	0.00E+00	2.68E-06	2.85E-07	1.20E+01	1.74E-05	4.55E-02	5.67E-06	3.55E-04	1.23E-03	2.05E-04	5.44E-04	3.53E-04	3.62E-04	8.72E-05	6.05E-05	1.10E-08	1.82E-04	5.90E-05
11	E48	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	E48	80	Combination Short Haul Truck	8	0.00E+00	1.62E-06	1.20E-07	2.63E+00	4.23E-09	2.46E-03	1.16E-06	2.50E-03	1.87E-04	3.39E-05	9.81E-05	3.49E-05	3.63E-05	4.18E-04	8.80E-06	0.00E+00	6.18E-05	4.71E-04
11	E48	80	Combination Long Haul Truck	7	0.00E+00	2.25E-06	1.27E-07	2.44E+00	1.43E-08	2.92E-03	1.86E-06	2.67E-03	1.93E-04	3.10E-05	2.06E-04	4.10E-05	4.27E-05	3.92E-04	8.18E-06	0.00E+00	1.64E-04	5.03E-04
11	E49	80	Passenger Car	304	0.00E+00	3.11E-06	3.38E-07	1.27E+01	2.21E-05	6.17E-02	7.02E-06	3.15E-04	1.65E-03	2.77E-04	6.85E-04	4.41E-04	4.53E-04	4.51E-05	6.48E-05	1.38E-08	2.32E-04	4.91E-05
11	E49	80	Passenger Truck	508	0.00E+00	6.41E-06	6.84E-07	2.87E+01	4.17E-05	1.09E-01	1.36E-05	8.49E-04	2.95E-03	4.91E-04	1.30E-03	8.46E-04	8.67E-04	2.09E-04	1.45E-04	2.63E-08	4.37E-04	1.41E-04
11	E49	80	Single Unit Short Haul Truck	29	0.00E+00	3.94E-06	1.54E-07	4.71E+00	2.67E-06	8.56E-03	4.33E-06	1.64E-03	3.23E-04	6.60E-05	5.43E-04	1.01E-04	1.02E-04	4.79E-04	1.91E-05	7.59E-09	4.40E-04	3.07E-04
11	E49	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	6.61E-09	1.99E-01	1.14E-07	3.56E-04	1.88E-07	7.01E-05	1.48E-05	2.93E-06	2.37E-05	4.32E-06	4.40E-06	2.01E-05	8.10E-07	3.16E-10	1.93E-05	1.31E-05
11	E49	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.83E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E49	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E50	80	Passenger Car	126	0.00E+00	1.29E-06	1.40E-07	5.28E+00	9.17E-06	2.56E-02	2.91E-06	1.31E-04	6.87E-04	1.15E-04	2.84E-04	1.83E-04	1.88E-04	1.87E-05	2.69E-05	5.74E-09	9.61E-05	2.04E-05
11	E50	80	Passenger Truck	211	0.00E+00	2.66E-06	2.84E-07	1.19E+01	1.73E-05	4.53E-02	5.64E-06	3.52E-04	1.22E-03	2.04E-04	5.41E-04	3.51E-04	3.60E-04	8.66E-05	6.01E-05	1.09E-08	1.81E-04	5.87E-05
11	E50	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.64E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.07E-05
11	E50	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.17E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.20E-04
11	E50	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.25E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.35E-04
11	E51	80	Passenger Car	303	0.00E+00	3.11E-06	3.37E-07	1.27E+01	2.20E-05	6.15E-02	7.00E-06	3.14E-04	1.65E-03	2.76E-04	6.83E-04	4.40E-04	4.52E-04	4.50E-05	6.46E-05	1.38E-08	2.31E-04	4.90E-05
11	E51	80	Passenger Truck	507	0.00E+00	6.40E-06	6.82E-07	2.87E+01	4.16E-05	1.09E-01	1.36E-05	8.47E-04	2.94E-03	4.89E-04	1.30E-03	8.44E-04	8.65E-04	2.08E-04	1.45E-04	2.63E-08	4.36E-04	1.41E-04
11	E51	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.53E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.86E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.54E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	E51	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.33E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E51	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.70E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E52	80	Passenger Car	47	0.00E+00	4.87E-07	5.29E-08	1.99E+00	3.46E-06	9.65E-03	1.10E-06	4.92E-05	2.59E-04	4.33E-05	1.07E-04	6.90E-05	7.08E-05	7.06E-06	1.01E-05	2.16E-09	3.62E-05	7.68E-06
11	E52	80	Passenger Truck	80	0.00E+00	1.00E-06	1.07E-07	4.49E+00	6.52E-06	1.71E-02	2.13E-06	1.33E-04	4.61E-04	7.67E-05	2.04E-04	1.32E-04	1.36E-04	3.27E-05	2.27E-05	4.12E-09	6.83E-05	2.21E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.67E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.14E-05
11	E53	80	Passenger Car	397	0.00E+00	4.07E-06	4.42E-07	1.66E+01	2.89E-05	8.06E-02	9.17E-06	4.11E-04	2.16E-03	3.62E-04	8.94E-04	5.77E-04	5.92E-04	5.90E-05	8.46E-05	1.81E-08	3.03E-04	6.42E-05
11	E53	80	Passenger Truck	664	0.00E+00	8.38E-06	8.93E-07	3.75E+01	5.45E-05	1.43E-01	1.78E-05	1.11E-03	3.85E-03	6.41E-04	1.70E-03	1.11E-03	1.13E-03	2.73E-04	1.89E-04	3.44E-08	5.71E-04	1.85E-04
11	E53	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.14E-05
11	E53	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.17E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E53	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.59E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	E54	80	Passenger Car	98	0.00E+00	1.00E-06	1.09E-07	4.11E+00	7.13E-06	1.99E-02	2.26E-06	1.02E-04	5.34E-04	8.94E-05	2.21E-04	1.42E-04	1.46E-04	1.46E-05	2.09E-05	4.47E-09	7.47E-05	1.58E-05
11	E54	80	Passenger Truck	164	0.00E+00	2.07E-06	2.21E-07	9.27E+00	1.35E-05	3.52E-02	4.38E-06	2.74E-04	9.51E-04	1.58E-04	4.21E-04	2.73E-04	2.80E-04	6.74E-05	4.68E-05	8.50E-09	1.41E-04	4.56E-05
11	E54	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.11E-05
11	E54	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.17E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.08E-04
11	E54	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.32E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.36E-04
11	E55	80	Passenger Car	397	0.00E+00	4.07E-06	4.42E-07	1.66E+01	2.89E-05	8.06E-02	9.17E-06	4.11E-04	2.16E-03	3.62E-04	8.94E-04	5.77E-04	5.92E-04	5.90E-05	8.46E-05	1.81E-08	3.03E-04	6.42E-05
11	E55	80	Passenger Truck	664	0.00E+00	8.38E-06	8.93E-07	3.75E+01	5.45E-05	1.43E-01	1.78E-05	1.11E-03	3.85E-03	6.41E-04	1.70E-03	1.11E-03	1.13E-03	2.73E-04	1.89E-04	3.44E-08	5.71E-04	1.85E-04
11	E55	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.14E-05
11	E55	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.17E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E55	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.59E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	E56	80	Passenger Car	98	0.00E+00	1.00E-06	1.09E-07	4.11E+00	7.13E-06	1.99E-02	2.26E-06	1.02E-04	5.34E-04	8.94E-05	2.21E-04	1.42E-04	1.46E-04	1.46E-05	2.09E-05	4.47E-09	7.47E-05	1.58E-05
11	E56	80	Passenger Truck	164	0.00E+00	2.07E-06	2.21E-07	9.27E+00	1.35E-05	3.52E-02	4.38E-06	2.74E-04	9.51E-04	1.58E-04	4.21E-04	2.73E-04	2.80E-04	6.74E-05	4.68E-05	8.50E-09	1.41E-04	4.56E-05
11	E56	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.11E-05
11	E56	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.17E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.08E-04
11	E56	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E61	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.83E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.15E-05
11	E61	80	Combination Short Haul Truck	8	0.00E+00	1.62E-06	1.20E-07	2.63E+00	4.23E-09	2.46E-03	1.16E-06	2.50E-03	1.87E-04	3.39E-05	9.81E-05	3.49E-05	3.63E-05	4.18E-04	8.80E-06	0.00E+00	6.18E-05	4.71E-04
11	E61	80	Combination Long Haul Truck	7	0.00E+00	2.25E-06	1.27E-07	2.44E+00	1.43E-08	2.92E-03	1.86E-06	2.67E-03	1.93E-04	3.10E-05	2.06E-04	4.10E-05	4.27E-05	3.92E-04	8.18E-06	0.00E+00	1.64E-04	5.03E-04
11	E62	80	Passenger Car	245	0.00E+00	2.51E-06	2.73E-07	1.03E+01	1.78E-05	4.98E-02	5.66E-06	2.54E-04	1.33E-03	2.24E-04	5.52E-04	3.56E-04	3.65E-04	3.64E-05	5.23E-05	1.12E-08	1.87E-04	3.96E-05
11	E62	80	Passenger Truck	410	0.00E+00	5.17E-06	5.51E-07	2.32E+01	3.36E-05	8.80E-02	1.10E-05	6.85E-04	2.38E-03	3.96E-04	1.05E-03	6.82E-04	6.99E-04	1.68E-04	1.17E-04	2.13E-08	3.52E-04	1.14E-04
11	E62	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	E62	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.33E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.57E-04
11	E62	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.91E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.68E-04
10	E63	70	Passenger Car	726	0.00E+00	8.00E-06	8.69E-07	3.13E+01	5.68E-05	1.55E-01	1.80E-05	7.35E-04	5.60E-03	8.72E-04	1.76E-03	1.13E-03	1.16E-03	1.23E-04	1.59E-04	3.31E-08	5.95E-04	1.15E-04
10	E63	70	Passenger Truck	1217	0.00E+00	1.68E-05	1.79E-06	7.06E+01	1.08E-04	2.73E-01	3.53E-05	2.14E-03	1.01E-02	1.57E-03	3.38E-03	2.19E-03	2.25E-03	5.39E-04	3.55E-04	6.36E-08	1.13E-03	3.59E-04
10	E63	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.65E-04
10	E63	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
10	E63	70	Combination Short Haul Truck	40	0.00E+00	1.02E-05	7.61E-07	1.38E+01	2.60E-08	1.48E-02	7.29E-06	1.53E-02	1.44E-03	2.41E-04	6.14E-04	2.22E-04	2.30E-04	2.20E-03	4.62E-05	0.00E+00	3.84E-04	2.89E-03
10	E63	70	Combination Long Haul Truck	36	0.00E+00	1.40E-05	7.98E-07	1.30E+01	8.80E-08	1.76E-02	1.15E-05	1.64E-02	1.50E-03	2.26E-04	1.28E-03	2.56E-04	2.67E-04	2.08E-03	4.35E-05	0.00E+00	1.01E-03	3.09E-03
10	E64	70	Passenger Car	831	0.00E+00	9.15E-06	9.94E-07	3.58E+01	6.49E-05	1.77E-01	2.06E-05	8.40E-04	6.40E-03	9.97E-04	2.01E-03	1.30E-03	1.33E-03	1.41E-04	1.82E-04	3.78E-08	6.80E-04	1.31E-04
10	E64	70	Passenger Truck	1391	0.00E+00	1.93E-05	2.05E-06	8.07E+01	1.23E-04	3.13E-01	4.04E-05	2.44E-03	1.16E-02	1.79E-03	3.86E-03	2.51E-03	2.57E-03	6.17E-04	4.06E-04	7.27E-08	1.29E-03	4.10E-04
10	E64	70	Single Unit Short Haul Truck	52	0.00E+00	9.10E-06	3.70E-07	8.47E+00	6.10E-06	1.54E-02	9.90E-06	3.63E-03	8.22E-04	1.51E-04	1.23E-03	2.34E-04	2.38E-04	8.61E-04	3.45E-05	1.39E-08	9.89E-04	6.78E-04
10	E64	70	Single Unit Long Haul Truck	2	0.00E+00	3.96E-07	1.59E-08	3.59E-01	2.63E-07	6.45E-04	4.31E-07	1.56E-04	3.76E-05	6.74E-06	5.35E-05	1.01E-05	1.03E-05	3.63E-05	1.46E-06	5.86E-10	4.32E-05	2.92E-05
10	E64	70	Combination Short Haul Truck	54	0.00E+00	1.39E-05	1.03E-06	1.87E+01	3.52E-08	2.00E-02	9.88E-06	2.08E-02	1.95E-03	3.26E-04	8.32E-04	3.00E-04	3.12E-04	2.98E-03	6.26E-05	0.00E+00	5.20E-04	3.91E-03
10	E64	70	Combination Long Haul Truck	49	0.00E+00	1.90E-05	1.08E-06	1.76E+01	1.19E-07	2.39E-02	1.56E-05	2.22E-02	2.03E-03	3.06E-04	1.73E-03	3.48E-04	3.62E-04	2.82E-03	5.89E-05	0.00E+00	1.37E-03	4.19E-03
10	E65	70	Passenger Car	738	0.00E+00	8.13E-06	8.84E-07	3.19E+01	5.77E-05	1.57E-01	1.83E-05	7.47E-04	5.69E-03	8.86E-04	1.79E-03	1.15E-03	1.18E-03	1.25E-04	1.62E-04	3.36E-08	6.05E-04	1.16E-04
10	E65	70	Passenger Truck	1237	0.00E+00	1.71E-05	1.82E-06	7.17E+01	1.10E-04	2.78E-01	3.59E-05	2.17E-03	1.03E-02	1.59E-03	3.43E-03	2.23E-03	2.29E-03	5.48E-04	3.61E-04	6.46E-08	1.15E-03	3.65E-04
10	E65	70	Single Unit Short Haul Truck	46	0.00E+00	8.09E-06	3.29E-07	7.53E+00	5.42E-06	1.37E-02	8.80E-06	3.22E-03	7.31E-04	1.34E-04	1.09E-03	2.08E-04	2.12E-04	7.65E-04	3.06E-05	1.24E-08	8.79E-04	6.03E-04
10	E65	70	Single Unit Long Haul Truck	2	0.00E+00	3.52E-07	1.42E-08	3.19E-01	2.33E-07	5.73E-04	3.83E-07	1.39E-04	3.34E-05	6.00E-06	4.76E-05	8.98E-06	9.15E-06	3.23E-05	1.30E-06	5.21E-10	3.84E-05	2.59E-05
10	E65	70	Combination Short Haul Truck	42	0.00E+00	1.09E-05	8.11E-07	1.47E+01	2.77E-08	1.57E-02	7.77E-06	1.63E-02	1.54E-03	2.56E-04	6.54E-04	2.36E-04	2.45E-04	2.34E-03	4.93E-05	0.00E+00	4.09E-04	3.08E-03
10	E65	70	Combination Long Haul Truck	39	0.00E+00	1.50E-05	8.50E-07	1.38E+01	9.37E-08	1.88E-02	1.23E-05	1.75E-02	1.60E-03	2.41E-04	1.36E-03	2.73E-04	2.85E-04	2.22E-03	4.63E-05	0.00E+00	1.07E-03	3.29E-03
10	E66	70	Passenger Car	859	0.00E+00	9.46E-06	1.03E-06	3.71E+01	6.71E-05	1.83E-01	2.13E-05	8.69E-04	6.62E-03	1.03E-03	2.08E-03	1.34E-03	1.38E-03	1.46E-04	1.88E-04	3.91E-08	7.03E-04	1.35E-04
10	E66	70	Passenger Truck	1438	0.00E+00	1.99E-05	2.12E-06	8.34E+01	1.28E-04	3.23E-01	4.17E-05	2.53E-03	1.20E-02	1.85E-03	3.99E-03	2.59E-03	2.66E-03	6.38E-04	4.20E-04	7.52E-08	1.33E-03	4.24E-04
10	E66	70	Single Unit Short Haul Truck	61	0.00E+00	1.08E-05	4.38E-07	1.00E+01	7.23E-06	1.82E-02	1.17E-05	4.30E-03	9.74E-04	1.79E-04	1.45E-03	2.77E-04	2.83E-04	1.02E-03	4.09E-05	1.65E-08	1.17E-03	8.04E-04
10	E66	70	Single Unit Long Haul Truck	3	0.00E+00	4.69E-07	1.89E-08	4.26E-01	3.11E-07	7.64E-04	5.10E-07	1.85E-04	4.46E-05	7.99E-06	6.35E-05	1.20E-05	1.22E-05	4.31E-05	1.73E-06	6.95E-10	5.12E-05	3.46E-05
10	E66	70	Combination Short Haul Truck	63	0.00E+00	1.63E-05	1.21E-06	2.20E+01	4.14E-08	2.35E-02	1.16E-05	2.44E-02	2.30E-03	3.83E-04	9.77E-04	3.53E-04	3.66E-04	3.50E-03	7.36E-05	0.00E+00	6.11E-04	4.60E-03
10	E66	70	Combination Long Haul Truck	58	0.00E+00	2.23E-05	1.27E-06	2.07E+01	1.40E-07	2.81E-02	1.84E-05	2.61E-02	2.39E-03	3.60E-04	2.03E-03	4.08E-04	4.25E-04	3.32E-03	6.92E-05	0.00E+00	1.61E-03	4.92E-03
11	E67	80	Passenger Car	549	0.00E+00	5.63E-06	6.12E-07	2.30E+01	3.99E-05	1.12E-01	1.27E-05	5.69E-04	2.99E-03	5.01E-04	1.24E-03	7.98E-04	8.19E-04	8.16E-05	1.17E-04	2.50E-08	4.19E-04	8.88E-05
11	E67	80	Passenger Truck	919	0.00E+00	1.16E-05	1.24E-06	5.20E+01	7.54E-05	1.97E-01	2.46E-05	1.54E-03	5.33E-03	8.87E-04	2.36E-03	1.53E-03	1.57E-03	3.77E-04	2.62E-04	4.76E-08	7.90E-04	2.56E-04
11	E67	80	Single Unit Short Haul Truck	170	0.00E+00	2.34E-05	9.13E-07	2.80E+01	1.59E-05	5.08E-02	2.57E-05	9.73E-03	1.92E-03	3.92E-04	3.22E-03	5.96E-04	6.08E-04	2.84E-03	1.14E-04	4.50E-08	2.61E-03	1.82E-03
11	E67	80	Single Unit Long Haul Truck	8	0.00E+00	1.02E-06	3.92E-08	1.18E+00	6.76E-07	2.11E-03	1.12E-06	4.16E-04	8.78E-05	1.74E-05	1.40E-04	2.56E-05	2.61E-05	1.19E-04	4.81E-06	1.88E-09	1.14E-04	7.77E-05
11	E67	80	Combination Short Haul Truck	109	0.00E+00	2.24E-05	1.66E-06	3.65E+01	5.87E-08	3.42E-02	1.60E-05	3.47E-02	2.60E-03	4.70E-04	1.36E-03	4.84E-04	5.03E-04	5.80E-03	1.22E-04	0.00E+00	8.57E-04	6.53E-03
11	E67	80	Combination Long Haul Truck	99	0.00E+00	3.12E-05	1.76E-06	3.39E+01	1.99E-07	4.05E-02	2.58E-05	3.71E-02	2.68E-03	4.29E-04	2.86E-03	5.68E-04	5.92E-04	5.43E-03	1.13E-04	0.00E+00	2.27E-03	6.98E-03
11	E68	80	Passenger Car	442	0.00E+00	4.53E-06	4.92E-07	1.85E+01	3.22E-05	8.98E-02	1.02E-05	4.58E-04	2.41E-03	4.03E-04	9.96E-04	6.42E-04	6.59E-04	6.57E-05	9.43E-05	2.01E-08	3.37E-04	7.15E-05
11	E68	80	Passenger Truck	740	0.00E+00	9.33E-06	9.95E-07	4.18E+01	6.07E-05	1.59E-01	1.98E-05	1.24E-03	4.29E-03	7.14E-04	1.90E-03	1.23E-03	1.26E-03	3.04E-04	2.11E-04	3.84E-08	6.36E-04	2.06E-04
11	E68	80	Single Unit Short Haul Truck	35	0.00E+00	4.86E-06	1.90E-07	5.81E+00	3.30E-06	1.06E-02	5.34E-06	2.02E-03	3.98E-04	8.14E-05	6.70E-04	1.24E-04	1.26E-04	5.91E-04	2.36E-05	9.36E-09	5.43E-04	3.78E-04
11	E68	80	Single Unit Long Haul Truck	2	0.00E+00	2.11E-07	8.15E-09	2.45E-01	1.40E-07	4.39E-04	2.32E-07	8.64E-05	1.83E-05	3.61E-06	2.92E-05	5.32E-06	5.43E-06	2.48E-05	9.99E-07	3.90E-10	2.38E-05	1.62E-05
11	E68	80	Combination Short Haul Truck	24	0.00E+00	4.96E-06	3.67E-07	8.07E+00	1.30E-08	7.56E-03	3.54E-06	7.67E-03	5.74E-04	1.04E-04	3.01E-04	1.07E-04	1.11E-04	1.28E-03	2.70E-05	0.00E+00	1.90E-04	1.44E-03
11	E68	80	Combination Long Haul Truck	22	0.00E+00	6.91E-06	3.90E-07	7.49E+00	4.39E-08	8.95E-03	5.70E-06	8.20E-03	5.93E-04	9.50E-05	6.33E-04	1.26E-04	1.31E-04	1.20E-03	2.51E-05	0.00E+00	5.02E-04	1.54E-03
10	E69	70	Passenger Car	514	0.00E+00	5.66E-06	6.16E-07	2.22E+01	4.02E-05	1.10E-01	1.28E-05	5.20E-04	3.96E-03	6.17E-04	1.25E-03	8.03E-04	8.24E-04	8.74E-05	1.13E-04	2.34E-08	4.21E-04	8.12E-05
10	E69	70	Passenger Truck	862	0.00E+00	1.19E-05	1.27E-06	5.00E+01	7.64E-05	1.94E-01	2.50E-05	1.51E-03	7.18E-03	1.11E-03	2.39E-03	1.55E-03	1.59E-03	3.82E-04	2.51E-04	4.50E-08	7.99E-04	2.54E-04
10	E69	70	Single Unit Short Haul Truck	18	0.00E+00	3.20E-06	1.30E-07	2.98E+00	2.15E-06	5.41E-03	3.48E-06	1.28E-03	2.89E-04	5.31E-05	4.32E-04	8.23E-05	8.39E-05	3.03E-04	1.21E-05	4.90E-09	3.48E-04	2.39E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	5.61E-09	1.26E-01	9.24E-08	2.27E-04	1.52E-07	5.49E-05	1.32E-05	2.37E-06	1.88E-05	3.55E-06	3.62E-06	1.28E-05	5.15E-07	2.06E-10	1.52E-05	1.03E-05
10	E69	70	Combination Short Haul Truck	6	0.00E+00	1.62E-06	1.20E-07	2.18E+00	4.10E-09	2.33E-03	1.15E-06	2.42E-03	2.28E-04	3.80E-05	9.69E-05	3.50E-05	3.63E-05	3.47E-04	7.30E-06	0.00E+00	6.06E-05	4.56E-04
10	E69	70	Combination Long Haul Truck	6	0.00E+00	2.22E-06	1.26E-07	2.05E+00	1.39E-08	2.78E-03	1.82E-06	2.59E-03	2.37E-04	3.57E-05	2.01E-04	4.05E-05	4.22E-05	3.29E-04	6.87E-06	0.00E+00	1.59E-04	4.88E-04
10	E70	70	Passenger Car	376	0.00E+00	4.14E-06	4.50E-07	1.62E+01	2.94E-05	8.00E-02	9.33E-06	3.80E-04	2.89E-03	4.51E-04	9.10E-04	5.87E-04	6.02E-04	6.38E-05	8.24E-05	1.71E-08	3.08E-04	5.93E-05
10	E70	70	Passenger Truck	629	0.00E+00	8.71E-06	9.26E-07	3.65E+01	5.58E-05	1.41E-01	1.83E-05	1.11E-03	5.24E-03	8.11E-04	1.75E-03	1.13E-03	1.16E-03	2.79E-04	1.84E-04	3.29E-08	5.84E-04	1.86E-04
10	E70	70	Single Unit Short Haul Truck	19	0.00E+00	3.37E-06	1.37E-07	3.14E+00	2.26E-06	5.69E-03	3.67E-06	1.34E-03	3.04E-04	5.59E-05	4.54E-04	8.66E-05	8.83E-05	3.19E-04	1.28E-05	5.15E-09	3.66E-04	2.51E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	5.91E-09	1.33E-01	9.72E-08	2.39E-04	1.60E-07	5.78E-05	1.39E-05	2.50E-06	1.98E-05	3.74E-06	3.81E-06	1.35E-05	5.42E-07	2.17E-10	1.60E-05	1.08E-05
10	E70	70	Combination Short Haul Truck	16	0.00E+00	4.04E-06	3.00E-07	5.46E+00	1.03E-08	5.83E-03	2.88E-06	6.05E-03	5.69E-04	9.49E-05	2.42E-04	8.75E-05	9.08E-05	8.67E-04	1.82E-05	0.00E+00	1.51E-04	1.14E-03
10	E70	70	Combination Long Haul Truck	14	0.00E+00	5.54E-06	3.15E-07	5.12E+00	3.47E-08	6.96E-03	4.55E-06	6.47E-03	5.93E-04	8.93E-05	5.03E-04	1.01E-04	1.05E-04	8.22E-04	1.72E-05	0.00E+00	3.98E-04	1.22E-03
10	E71	70	Passenger Car	628	0.00E+00	6.92E-06	7.52E-07	2.71E+01	4.91E-05	1.34E-01	1.56E-05	6.35E-04	4.84E-03	7.54E-04	1.52E-03	9.81E-04	1.01E-03	1.07E-04	1.38E-04	2.86E-08	5.14E-04	9.91E-05
10	E71	70	Passenger Truck	1052	0.00E+00	1.46E-05	1.55E-06	6.10E+01	9.33E-05	2.36E-01	3.05E-05	1.85E-03	8.76E-03	1.36E-03	2.92E-03	1.90E-03	1.94E-03	4.66E-04	3.07E-04	5.50E-08	9.76E-04	3.10E-04
10	E71	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
10	E71	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.42E-04
10	E71	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.66E-04
10	E72	70	Passenger Car	556	0.00E+00	6.13E-06	6.66E-07	2.40E+01	4.35E-05	1.18E-01	1.38E-05	5.63E-04	4.29E-03	6.68E-04	1.35E-03	8.69E-04	8.91E-04	9.45E-05	1.22E-04	2.53E-08	4.56E-04	8.78E-05
10	E72	70	Passenger Truck	932	0.00E+00	1.29E-05	1.37E-06	5.40E+01	8.26E-05	2.09E-01	2.70E-05	1.64E-03	7.76E-03	1.20E-03	2.59E-03	1.68E-03	1.72E-03	4.13E-04	2.72E-04	4.87E-08	8.64E-04	2.75E-04
10	E72	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	E72	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	E72	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
9	E73	60	Passenger Car	255	0.00E+00	3.22E-06	3.50E-07	1.15E+01	2.28E-05	6.18E-02	7.25E-06	2.62E-04	2.57E-03	3.85E-04	7.07E-04	4.56E-04	4.68E-04	5.05E-05	5.82E-05	1.22E-08	2.39E-04	4.09E-05
9	E73	60	Passenger Truck	426	0.00E+00	6.83E-06	7.24E-07	2.56E+01	4.31E-05	1.06E-01	1.42E-05	8.15E-04	4.70E-03	6.99E-04	1.35E-03	8.79E-04	9.01E-04	2.07E-04	1.29E-04	2.38E-08	4.50E-04	1.38E-04
9	E73	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.11E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.69E-05
9	E73	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.87E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.52E-04
9	E73	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.99E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.75E-04
9	E74	60	Passenger Car	219	0.00E+00	2.77E-06	3.01E-07	9.88E+00	1.96E-05	5.32E-02	6.24E-06	2.26E-04	2.21E-03	3.31E-04	6.09E-04	3.92E-04	4.03E-04	4.34E-05	5.01E-05	1.05E-08	2.06E-04	3.52E-05
9	E74	60	Passenger Truck	367	0.00E+00	5.88E-06	6.23E-07	2.20E+01	3.71E-05	9.12E-02	1.22E-05	7.02E-04	4.04E-03	6.02E-04	1.16E-03	7.56E-04	7.75E-04	1.78E-04	1.11E-04	2.05E-08	3.87E-04	1.19E-04
9	E74	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	E74	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	E74	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
53	E75	70	Passenger Car	1144	0.00E+00	1.22E-05	1.33E-06	4.99E+01	8.66E-05	2.34E-01	2.75E-05	1.18E-03	8.68E-03	1.36E-03	2.68E-03	1.73E-03	1.78E-03	1.94E-04	2.54E-04	5.27E-08	9.08E-04	1.84E-04
53	E75	70	Passenger Truck	1915	0.00E+00	2.55E-05	2.71E-06	1.12E+02	1.64E-04	4.13E-01	5.36E-05	3.32E-03	1.55E-02	2.41E-03	5.12E-03	3.33E-03	3.41E-03	8.44E-04	5.66E-04	9.92E-08	1.71E-03	5.57E-04
53	E75	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.77E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.67E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
53	E75	70	Combination Short Haul Truck	27	0.00E+00	6.87E-06	5.11E-07	9.27E+00	1.74E-08	9.92E-03	4.89E-06	1.03E-02	9.68E-04	1.61E-04	4.12E-04	1.49E-04	1.54E-04	1.47E-03	3.10E-05	0.00E+00	2.57E-04	1.94E-03
53	E75	70	Combination

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	E79	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.84E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
53	E79	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.26E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
53	E80	70	Passenger Car	875	0.00E+00	9.34E-06	1.01E-06	3.82E+01	6.63E-05	1.79E-01	2.11E-05	9.00E-04	6.64E-03	1.04E-03	2.05E-03	1.32E-03	1.36E-03	1.49E-04	1.94E-04	4.03E-08	6.95E-04	1.40E-04
53	E80	70	Passenger Truck	1465	0.00E+00	1.95E-05	2.07E-06	8.60E+01	1.25E-04	3.16E-01	4.10E-05	2.54E-03	1.19E-02	1.84E-03	3.92E-03	2.55E-03	2.61E-03	6.46E-04	4.33E-04	7.59E-08	1.31E-03	4.26E-04
53	E80	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.75E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.27E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.51E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.41E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.12E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
10	E83	70	Passenger Car	294	0.00E+00	3.24E-06	3.52E-07	1.27E+01	2.30E-05	6.26E-02	7.31E-06	2.98E-04	2.27E-03	3.53E-04	7.12E-04	4.59E-04	4.71E-04	5.00E-05	6.45E-05	1.34E-08	2.41E-04	4.64E-05
10	E83	70	Passenger Truck	493	0.00E+00	6.82E-06	7.25E-07	2.86E+01	4.37E-05	1.11E-01	1.43E-05	8.65E-04	4.10E-03	6.35E-04	1.37E-03	8.89E-04	9.11E-04	2.18E-04	1.44E-04	2.58E-08	4.57E-04	1.45E-04
10	E83	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	E83	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	E83	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	E84	70	Passenger Car	285	0.00E+00	3.13E-06	3.40E-07	1.23E+01	2.22E-05	6.06E-02	7.06E-06	2.88E-04	2.19E-03	3.42E-04	6.89E-04	4.44E-04	4.56E-04	4.83E-05	6.24E-05	1.30E-08	2.33E-04	4.49E-05
10	E84	70	Passenger Truck	476	0.00E+00	6.60E-06	7.01E-07	2.76E+01	4.22E-05	1.07E-01	1.38E-05	8.37E-04	3.97E-03	6.14E-04	1.32E-03	8.59E-04	8.81E-04	2.11E-04	1.39E-04	2.49E-08	4.42E-04	1.41E-04
10	E84	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E84	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E84	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
9	E85	60	Passenger Car	1442	0.00E+00	1.82E-05	1.98E-06	6.50E+01	1.29E-04	3.50E-01	4.11E-05	1.48E-03	1.46E-02	2.18E-03	4.01E-03	2.58E-03	2.65E-03	2.86E-04	3.30E-04	6.92E-08	1.36E-03	2.32E-04
9	E85	60	Passenger Truck	2415	0.00E+00	3.87E-05	4.10E-06	1.45E+02	2.44E-04	6.00E-01	8.02E-05	4.62E-03	2.66E-02	3.96E-03	7.65E-03	4.98E-03	5.10E-03	1.17E-03	7.28E-04	1.35E-07	2.55E-03	7.83E-04
9	E85	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.11E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.69E-04
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.78E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.33E-05
9	E85	60	Combination Short Haul Truck	38	0.00E+00	1.10E-05	8.07E-07	1.33E+01	3.01E-08	1.64E-02	7.90E-06	1.68E-02	1.92E-03	3.00E-04	6.77E-04	2.36E-04	2.45E-04	2.11E-03	4.44E-05	0.00E+00	4.32E-04	3.17E-03
9	E85	60	Combination Long Haul Truck	34	0.00E+00	1.51E-05	8.25E-07	1.25E+01	1.02E-07	1.97E-02	1.26E-05	1.79E-02	2.01E-03	2.91E-04	1.43E-03	2.69E-04	2.81E-04	2.01E-03	4.20E-05	0.00E+00	1.15E-03	3.37E-03
9	E86	60	Passenger Car	1308	0.00E+00	1.65E-05	1.80E-06	5.90E+01	1.17E-04	3.18E-01	3.72E-05	1.35E-03	1.32E-02	1.98E-03	3.63E-03	2.34E-03	2.40E-03	2.59E-04	2.99E-04	6.28E-08	1.23E-03	2.10E-04
9	E86	60	Passenger Truck	2190	0.00E+00	3.51E-05	3.72E-06	1.32E+02	2.21E-04	5.44E-01	7.28E-05	4.19E-03	2.41E-02	3.59E-03	6.94E-03	4.51E-03	4.63E-03	1.06E-03	6.60E-04	1.22E-07	2.31E-03	7.10E-04
9	E86	60	Single Unit Short Haul Truck	67	0.00E+00	1.50E-05	6.18E-07	1.12E+01	9.92E-06	1.96E-02	1.62E-05	5.75E-03	1.54E-03	2.59E-04	2.00E-03	3.85E-04	3.92E-04	1.13E-03	4.55E-05	1.87E-08	1.60E-03	1.08E-03
9	E86	60	Single Unit Long Haul Truck	3	0.00E+00	6.53E-07	2.69E-08	4.76E-01	4.30E-07	8.33E-04	7.07E-07	2.49E-04	6.93E-05	1.15E-05	8.73E-05	1.67E-05	1.71E-05	4.81E-05	1.94E-06	7.97E-10	7.03E-05	4.66E-05
9	E86	60	Combination Short Haul Truck	57	0.00E+00	1.66E-05	1.22E-06	2.01E+01	4.56E-08	2.49E-02	1.20E-05	2.54E-02	2.90E-03	4.54E-04	1.03E-03	3.58E-04	3.71E-04	3.19E-03	6.71E-05	0.00E+00	6.54E-04	4.79E-03
9	E86	60	Combination Long Haul Truck	52	0.00E+00	2.29E-05	1.25E-06	1.90E+01	1.54E-07	2.99E-02	1.91E-05	2.71E-02	3.05E-03	4.40E-04	2.17E-03	4.08E-04	4.25E-04	3.04E-03	6.35E-05	0.00E+00	1.74E-03	5.10E-03
9	E87	60	Passenger Car	1180	0.00E+00	1.49E-05	1.62E-06	5.32E+01	1.06E-04	2.87E-01	3.36E-05	1.21E-03	1.19E-02	1.78E-03	3.28E-03	2.11E-03	2.17E-03	2.34E-04	2.70E-04	5.67E-08	1.11E-03	1.90E-04
9	E87	60	Passenger Truck	1976	0.00E+00	3.17E-05	3.35E-06	1.19E+02	2.00E-04	4.91E-01	6.57E-05	3.78E-03	2.18E-02	3.24E-03	6.26E-03	4.07E-03	4.17E-03	9.57E-04	5.96E-04	1.10E-07	2.09E-03	6.40E-04
9	E87	60	Single Unit Short Haul Truck	81	0.00E+00	1.82E-05	7.51E-07	1.35E+01	1.20E-05	2.38E-02	1.97E-05	6.98E-03	1.87E-03	3.15E-04	2.43E-03	4.67E-04	4.76E-04	1.37E-03	5.52E-05	2.27E-08	1.95E-03	1.31E-03
9	E87	60	Single Unit Long Haul Truck	4	0.00E+00	7.93E-07	3.26E-08	5.77E-01	5.22E-07	1.01E-03	8.58E-07	3.02E-04	8.41E-05	1.40E-05	1.06E-04	2.03E-05	2.07E-05	5.84E-05	2.36E-06	9.67E-10	8.53E-05	5.66E-05
9	E87	60	Combination Short Haul Truck	67	0.00E+00	1.97E-05	1.45E-06	2.38E+01	5.39E-08	2.94E-02	1.41E-05	3.01E-02	3.44E-03	5.37E-04	1.21E-03	4.23E-04	4.39E-04	3.78E-03	7.95E-05	0.00E+00	7.74E-04	5.67E-03
9	E87	60	Combination Long Haul Truck	62	0.00E+00	2.71E-05	1.48E-06	2.24E+01	1.83E-07	3.53E-02	2.26E-05	3.21E-02	3.60E-03	5.21E-04	2.57E-03	4.83E-04	5.03E-04	3.60E-03	7.52E-05	0.00E+00	2.06E-03	6.04E-03
9	E88	60	Passenger Car	1442	0.00E+00	1.82E-05	1.98E-06	6.50E+01	1.29E-04	3.50E-01	4.11E-05	1.49E-03	1.46E-02	2.18E-03	4.01E-03	2.58E-03	2.65E-03	2.86E-04	3.30E-04	6.93E-08	1.36E-03	2.32E-04
9	E88	60	Passenger Truck	2416	0.00E+00	3.87E-05	4.10E-06	1.45E+02	2.44E-04	6.00E-01	8.03E-05	4.62E-03	2.66E-02	3.96E-03	7.65E-03	4.98E-03	5.10E-03	1.17E-03	7.28E-04	1.35E-07	2.55E-03	7.83E-04
9	E88	60	Single Unit Short Haul Truck	51	0.00E+00	1.13E-05	4.68E-07	8.44E+00	7.51E-06	1.49E-02	1.23E-05	4.35E-03	1.17E-03	1.96E-04	1.51E-03	2.91E-04	2.97E-04	8.56E-04	3.44E-05	1.42E-08	1.22E-03	8.15E-04
9	E88	60	Single Unit Long Haul Truck	2	0.00E+00	4.95E-07	2.03E-08	3.60E-01	3.26E-07	6.31E-04	5.35E-07	1.88E-04	5.25E-05	8.70E-06	6.61E-05	1.27E-05	1.29E-05	3.64E-05	1.47E-06	6.03E-10	5.32E-05	3.53E-05
9	E88	60	Combination Short Haul Truck	41	0.00E+00	1.21E-05	8.86E-07	1.46E+01	3.30E-08	1.80E-02	8.66E-06	1.84E-02	2.10E-03	3.29E-04	7.43E-04	2.59E-04	2.69E-04	2.31E-03	4.87E-05	0.00E+00	4.74E-04	3.47E-03
9	E88	60	Combination Long Haul Truck	38	0.00E+00	1.66E-05	9.05E-07	1.37E+01	1.12E-07	2.16E-02	1.39E-05	1.96E-02	2.21E-03	3.19E-04	1.57E-03	2.96E-04	3.08E-04	2.21E-03	4.61E-05	0.00E+00	1.26E-03	3.70E-03
9	E89	60	Passenger Car	173	0.00E+00	2.18E-06	2.37E-07	7.79E+00	1.55E-05	4.20E-02	4.92E-06	1.78E-04	1.74E-03	2.61E-04	4.80E-04	3.09E-04	3.18E-04	3.42E-05	3.95E-05	8.29E-09	1.62E-04	2.77E-05
9	E89	60	Passenger Truck	289	0.00E+00	4.63E-06	4.91E-07	1.74E+01	2.92E-05	7.19E-02	9.61E-06	5.53E-04	3.19E-03	4.74E-04	9.16E-04	5.96E-04	6.11E-04	1.40E-04	8.72E-05	1.62E-08	3.05E-04	9.37E-05
9	E89	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	E89	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
9	E89	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	E90	60	Passenger Car	132	0.00E+00	1.67E-06	1.81E-07	5.95E+00	1.18E-05	3.21E-02	3.76E-06	1.36E-04	1.33E-03	2.00E-04	3.67E-04	2.36E-04	2.43E-04	2.62E-05	3.02E-05	6.34E-09	1.24E-04	2.12E-05
9	E90	60	Passenger Truck	221	0.00E+00	3.54E-06	3.75E-07	1.33E+01	2.23E-05	5.49E-02	7.34E-06	4.23E-04	2.44E-03	3.62E-04	7.00E-04	4.56E-04	4.67E-04	1.07E-04	6.66E-05	1.24E-08	2.33E-04	7.16E-05
9	E90	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	E90	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
9	E91	60	Passenger Car	4	0.00E+00	4.72E-08	5.13E-09	1.69E-01	3.35E-07	9.08E-04	1.06E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.87E-06	7.41E-07	8.55E-07	1.80E-10	3.51E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.98E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.61E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.72E-08	5.13E-09	1.69E-01	3.35E-07	9.08E-04	1.06E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.87E-06	7.41E-07	8.55E-07	1.80E-10	3.51E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.98E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.61E-06	2.03E-06
9	E93	60	Passenger Car	215	0.00E+00	2.72E-06	2.96E-07	9.71E+00	1.93E-05	5.23E-02	6.13E-06	2.22E-04	2.17E-03	3.26E-04	5.98E-04	3.86E-04	3.96E-04	4.27E-05	4.92E-05	1.03E-08	2.02E-04	3.46E-05
9	E93	60	Passenger Truck	361	0.00E+00	5.78E-06	6.12E-07	2.17E+01	3.64E-05	8.96E-02	1.20E-05	6.90E-04	3.97E-03	5.91E-04	1.14E-03	7.43E-04	7.62E-04	1.75E-04	1.09E-04	2.02E-08	3.81E-04	1.17E-04
9	E93	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	E93	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
9	E94	60	Passenger Car	215	0.00E+00	2.72E-06	2.95E-07	9.69E+00	1.93E-05	5.22E-02	6.12E-06	2.21E-04	2.17E-03	3.25E-04	5.97E-04	3.85E-04	3.95E-04	4.26E-05	4.91E-05	1.03E-08	2.02E-04	3.45E-05
9	E94	60	Passenger Truck	360	0.00E+00	5.77E-06	6.11E-07	2.16E+01	3.64E-05	8.95E-02	1.20E-05	6.89E-04	3.97E-03	5.90E-04	1.14E-03	7.42E-04	7.60E-04	1.74E-04	1.09E-04	2.01E-08	3.80E-04	1.17E-04
9	E94	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	E94	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.37E-05
54	E95	80	Passenger Car	769	0.00E+00	7.70E-06	8.37E-07	3.24E+01	5.46E-05	1.50E-01	1.74E-05	8.02E-04	4.41E-03	7.26E-04	1.69E-03	1.09E-03	1.12E-03	1.14E-04	1.65E-04	3.42E-08	5.73E-04	1.25E-04
54	E95	80	Passenger Truck	1289	0.00E+00	1.60E-05	1.71E-06	7.37E+01	1.04E-04	2.73E-01	3.39E-05	2.16E-03	7.88E-03	1.29E-03	3.26E-03	2.11E-03	2.17E-03	5.29E-04	3.72E-04	6.58E-08	1.09E-03	3.58E-04
54	E95	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.41E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.50E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
54	E95	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.61E-03
54	E95	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.48E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.79E-03
54	E96	80	Passenger Car	542	0.00E+00	5.42E-06	5.89E-07	2.29E+01	3.85E-05	1.05E-01	1.22E-05	5.65E-04	3.11E-03	5.12E-04	1.19E-03	7.69E-04	7.89E-04	8.06E-05	1.16E-04	2.41E-08	4.03E-04	8.81E-05
54	E96	80	Passenger Truck	908	0.00E+00	1.13E-05	1.20E-06	5.19E+01	7.34E-05	1.92E-01	2.39E-05	1.52E-03	5.55E-03	9.10E-04	2.29E-03	1.49E-03	1.53E-03	3.73E-04	2.62E-04	4.64E-08	7.68E-04	2.52E-04
54	E96	80	Single Unit Short Haul Truck	22	0.00E+00	3.02E-06	1.18E-07	3.61E+00	2.05E-06	6.56E-03	3.32E-06	1.26E-03	2.47E-04	5.06E-05	4.16E-04	7.71E-05	7.86E-05	3.67E-04	1.47E-05	5.82E-09	3.38E-04	2.35E-04
54	E96	80	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.07E-09	1.53E-01	8.73E-08	2.73E-04	1.44E-07	5.37E-05	1.13E-05	2.25E-06	1.82E-05	3.31E-06	3.37E-06	1.54E-05	6.21E-07	2.42E-10	1.48E-05	1.00E-05
54	E96	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.83E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.48E-03
54	E96	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.37E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.58E-03
9	F01	60	Passenger Car	418	0.00E+00	5.28E-06	5.73E-07	1.88E+01	3.74E-05	1.01E-01	1.19E-05	4.30E-04	4.22E-03	6.32E-04	1.16E-03	7.48E-04	7.68E-04	8.28E-05	9.55E-05	2.01E-08	3.92E-04	6.71E-05
9	F01	60	Passenger Truck	699	0.00E+00	1.12E-05	1.19E-06	4.20E+01	7.07E-05	1.74E-01	2.32E-05	1.34E-03	7.71E-03	1.15E-03	2.22E-03	1.44E-03	1.48E-03	3.39E-04	2.11E-04	3.91E-08	7.38E-04	2.27E-04
9	F01	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.40E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.05E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	F01	60	Combination Short Haul Truck	14	0.00E+00

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F36	80	Single Unit Short Haul Truck	23	0.00E+00	3.15E-06	1.23E-07	3.77E+00	2.14E-06	6.85E-03	3.47E-06	1.31E-03	2.58E-04	5.28E-05	4.34E-04	8.04E-05	8.20E-05	3.83E-04	1.53E-05	6.07E-09	3.52E-04	2.45E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	5.29E-09	1.59E-01	9.11E-08	2.85E-04	1.51E-07	5.61E-05	1.18E-05	2.34E-06	1.89E-05	3.45E-06	3.52E-06	1.61E-05	6.48E-07	2.53E-10	1.54E-05	1.05E-05
11	F36	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.83E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.22E-04
11	F36	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.10E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.72E-04
9	F37	60	Passenger Car	829	0.00E+00	1.05E-05	1.14E-06	3.74E+01	7.43E-05	2.01E-01	2.36E-05	8.53E-04	8.37E-03	1.25E-03	2.30E-03	1.48E-03	1.52E-03	1.64E-04	1.89E-04	3.98E-08	7.79E-04	1.33E-04
9	F37	60	Passenger Truck	1387	0.00E+00	2.22E-05	2.36E-06	8.33E+01	1.40E-04	3.45E-01	4.61E-05	2.65E-03	1.53E-02	2.28E-03	4.40E-03	2.86E-03	2.93E-03	6.72E-04	4.18E-04	7.75E-08	1.46E-03	4.50E-04
9	F37	60	Single Unit Short Haul Truck	50	0.00E+00	1.11E-05	4.59E-07	8.29E+00	7.37E-06	1.46E-02	1.20E-05	4.27E-03	1.15E-03	1.93E-04	1.48E-03	2.86E-04	2.91E-04	8.40E-04	3.38E-05	1.39E-08	1.19E-03	7.99E-04
9	F37	60	Single Unit Long Haul Truck	2	0.00E+00	4.85E-07	1.99E-08	3.53E-01	3.19E-07	6.19E-04	5.25E-07	1.85E-04	5.15E-05	8.54E-06	6.49E-05	1.24E-05	1.27E-05	3.57E-05	1.44E-06	5.92E-10	5.22E-05	3.46E-05
9	F37	60	Combination Short Haul Truck	52	0.00E+00	1.53E-05	1.12E-06	1.84E+01	4.18E-08	2.28E-02	1.10E-05	2.33E-02	2.66E-03	4.17E-04	9.41E-04	3.28E-04	3.41E-04	2.93E-03	6.16E-05	0.00E+00	6.00E-04	4.40E-03
9	F37	60	Combination Long Haul Truck	48	0.00E+00	2.10E-05	1.15E-06	1.74E+01	1.42E-07	2.74E-02	1.75E-05	2.49E-02	2.79E-03	4.04E-04	1.99E-03	3.74E-04	3.90E-04	2.79E-03	5.83E-05	0.00E+00	1.60E-03	4.68E-03
9	F38	60	Passenger Car	995	0.00E+00	1.26E-05	1.37E-06	4.49E+01	8.92E-05	2.42E-01	2.83E-05	1.02E-03	1.00E-02	1.50E-03	2.76E-03	1.78E-03	1.83E-03	1.97E-04	2.27E-04	4.78E-08	9.35E-04	1.60E-04
9	F38	60	Passenger Truck	1666	0.00E+00	2.67E-05	2.83E-06	1.00E+02	1.68E-04	4.14E-01	5.54E-05	3.19E-03	1.84E-02	2.73E-03	5.28E-03	3.43E-03	3.52E-03	8.07E-04	5.02E-04	9.31E-08	1.76E-03	5.40E-04
9	F38	60	Single Unit Short Haul Truck	51	0.00E+00	1.13E-05	4.68E-07	8.44E+00	7.51E-06	1.49E-02	1.23E-05	4.35E-03	1.17E-03	1.96E-04	1.51E-03	2.91E-04	2.97E-04	8.56E-04	3.44E-05	1.42E-08	1.22E-03	8.15E-04
9	F38	60	Single Unit Long Haul Truck	2	0.00E+00	4.95E-07	2.03E-08	3.60E-01	3.26E-07	6.31E-04	5.35E-07	1.88E-04	5.25E-05	8.70E-06	6.61E-05	1.27E-05	1.29E-05	3.64E-05	1.47E-06	6.03E-10	5.32E-05	3.53E-05
9	F38	60	Combination Short Haul Truck	52	0.00E+00	1.53E-05	1.12E-06	1.84E+01	4.18E-08	2.28E-02	1.10E-05	2.33E-02	2.66E-03	4.17E-04	9.41E-04	3.28E-04	3.41E-04	2.93E-03	6.16E-05	0.00E+00	6.00E-04	4.40E-03
9	F38	60	Combination Long Haul Truck	48	0.00E+00	2.10E-05	1.15E-06	1.74E+01	1.42E-07	2.74E-02	1.75E-05	2.49E-02	2.79E-03	4.04E-04	1.99E-03	3.74E-04	3.90E-04	2.79E-03	5.83E-05	0.00E+00	1.60E-03	4.68E-03
11	F39	80	Passenger Car	338	0.00E+00	3.47E-06	3.77E-07	1.42E+01	2.46E-05	6.88E-02	7.82E-06	3.51E-04	1.84E-03	3.09E-04	7.63E-04	4.92E-04	5.05E-04	5.03E-05	7.22E-05	1.54E-08	2.58E-04	5.47E-05
11	F39	80	Passenger Truck	567	0.00E+00	7.15E-06	7.62E-07	3.20E+01	4.65E-05	1.22E-01	1.51E-05	9.47E-04	3.28E-03	5.47E-04	1.45E-03	9.43E-04	9.66E-04	2.33E-04	1.61E-04	2.94E-08	4.87E-04	1.58E-04
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.28E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.13E-05
11	F39	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	2.00E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.77E-04
11	F39	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.14E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.03E-04
11	F40	80	Passenger Car	72	0.00E+00	7.40E-07	8.04E-08	3.02E+00	5.25E-06	1.47E-02	1.67E-06	7.48E-05	3.93E-04	6.59E-05	1.63E-04	1.05E-04	1.08E-04	1.07E-05	1.54E-05	3.29E-09	5.50E-05	1.17E-05
11	F40	80	Passenger Truck	121	0.00E+00	1.52E-06	1.62E-07	6.83E+00	9.91E-06	2.59E-02	3.23E-06	2.02E-04	7.00E-04	1.17E-04	3.10E-04	2.01E-04	2.06E-04	4.96E-05	3.44E-05	6.26E-09	1.04E-04	3.36E-05
11	F40	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	F40	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	5.00E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.42E-05
11	F40	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.35E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.01E-04
10	F41	70	Passenger Car	251	0.00E+00	2.77E-06	3.01E-07	1.08E+01	1.96E-05	5.35E-02	6.24E-06	2.54E-04	1.94E-03	3.02E-04	6.08E-04	3.92E-04	4.03E-04	4.27E-05	5.51E-05	1.14E-08	2.06E-04	3.96E-05
10	F41	70	Passenger Truck	421	0.00E+00	5.83E-06	6.19E-07	2.44E+01	3.73E-05	9.46E-02	1.22E-05	7.39E-04	3.50E-03	5.42E-04	1.17E-03	7.59E-04	7.78E-04	1.87E-04	1.23E-04	2.20E-08	3.90E-04	1.24E-04
10	F41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	F41	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.60E-05
10	F41	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
10	F42	70	Passenger Car	307	0.00E+00	3.38E-06	3.68E-07	1.33E+01	2.40E-05	6.54E-02	7.63E-06	3.11E-04	2.37E-03	3.69E-04	7.44E-04	4.80E-04	4.92E-04	5.22E-05	6.74E-05	1.40E-08	2.52E-04	4.85E-05
10	F42	70	Passenger Truck	515	0.00E+00	7.13E-06	7.57E-07	2.99E+01	4.56E-05	1.16E-01	1.49E-05	9.04E-04	4.29E-03	6.63E-04	1.43E-03	9.28E-04	9.51E-04	2.28E-04	1.50E-04	2.69E-08	4.77E-04	1.52E-04
10	F42	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
9	F43	60	Passenger Car	55	0.00E+00	6.99E-07	7.60E-08	2.50E+00	4.96E-06	1.34E-02	1.58E-06	5.70E-05	5.59E-04	8.37E-05	1.54E-04	9.91E-05	1.02E-04	1.10E-05	1.26E-05	2.66E-09	5.20E-05	8.89E-06
9	F43	60	Passenger Truck	93	0.00E+00	1.48E-06	1.57E-07	5.56E+00	9.36E-06	2.30E-02	3.08E-06	1.77E-04	1.02E-03	1.52E-04	2.94E-04	1.91E-04	1.96E-04	4.49E-05	2.79E-05	5.18E-09	9.78E-05	3.00E-05
9	F43	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	F43	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
9	F44	60	Passenger Car	14	0.00E+00	1.75E-07	1.90E-08	6.24E-01	1.24E-06	3.36E-03	3.94E-07	1.42E-05	1.40E-04	2.09E-05	3.84E-05	2.48E-05	2.54E-05	2.74E-06	3.16E-06	6.64E-10	1.30E-05	2.22E-06
9	F44	60	Passenger Truck	23	0.00E+00	3.71E-07	3.93E-08	1.39E+00	2.34E-06	5.76E-03	7.70E-07	4.43E-05	2.55E-04	3.80E-05	7.34E-05	4.77E-05	4.89E-05	1.12E-05	6.98E-06	1.29E-09	2.45E-05	7.51E-06
10	F45	70	Passenger Car	294	0.00E+00	3.24E-06	3.52E-07	1.27E+01	2.30E-05	6.26E-02	7.31E-06	2.98E-04	2.27E-03	3.53E-04	7.12E-04	4.59E-04	4.71E-04	5.00E-05	6.45E-05	1.34E-08	2.41E-04	4.64E-05
10	F45	70	Passenger Truck	493	0.00E+00	6.82E-06	7.25E-07	2.86E+01	4.37E-05	1.11E-01	1.43E-05	8.65E-04	4.10E-03	6.35E-04	1.37E-03	8.89E-04	9.11E-04	2.18E-04	1.44E-04	2.58E-08	4.57E-04	1.45E-04
10	F45	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	F45	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	F45	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	F46	70	Passenger Car	285	0.00E+00	3.13E-06	3.40E-07	1.23E+01	2.22E-05	6.06E-02	7.06E-06	2.88E-04	2.19E-03	3.42E-04	6.89E-04	4.44E-04	4.56E-04	4.83E-05	6.24E-05	1.30E-08	2.33E-04	4.49E-05
10	F46	70	Passenger Truck	476	0.00E+00	6.60E-06	7.01E-07	2.76E+01	4.22E-05	1.07E-01	1.38E-05	8.37E-04	3.97E-03	6.14E-04	1.32E-03	8.59E-04	8.81E-04	2.11E-04	1.39E-04	2.49E-08	4.42E-04	1.41E-04
10	F46	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	F46	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	F46	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
9	F47	60	Passenger Car	3	0.00E+00	4.25E-08	4.62E-09	1.52E-01	3.02E-07	8.17E-04	9.58E-08	3.46E-06	3.40E-05	5.09E-06	9.35E-06	6.03E-06	6.19E-06	6.67E-07	7.69E-07	1.62E-10	3.16E-06	5.40E-07
9	F47	60	Passenger Truck	6	0.00E+00	9.03E-08	9.57E-09	3.38E-01	5.69E-07	1.40E-03	1.87E-07	1.08E-05	6.21E-05	9.24E-06	1.79E-05	1.16E-05	1.19E-05	2.73E-06	1.70E-06	3.15E-10	5.95E-06	1.83E-06
9	F48	60	Passenger Car	36	0.00E+00	4.58E-07	4.98E-08	1.64E+00	3.25E-06	8.81E-03	1.03E-06	3.73E-05	3.66E-04	5.49E-05	1.01E-04	6.50E-05	6.67E-05	7.19E-06	8.29E-06	1.74E-09	3.41E-05	5.82E-06
9	F48	60	Passenger Truck	61	0.00E+00	9.73E-07	1.03E-07	3.65E+00	6.14E-06	1.51E-02	2.02E-06	1.16E-04	6.69E-04	9.96E-05	1.92E-04	1.25E-04	1.28E-04	2.94E-05	1.83E-05	3.39E-09	6.41E-05	1.97E-05
9	F48	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	F48	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
9	F48	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
50	F78	40	Passenger Car	325	0.00E+00	4.60E-06	5.00E-07	1.69E+01	3.26E-05	8.76E-02	1.04E-05	2.96E-04	5.60E-03	7.87E-04	1.01E-03	6.52E-04	6.69E-04	9.65E-05	8.51E-05	1.58E-08	3.42E-04	4.62E-05
50	F78	40	Passenger Truck	543	0.00E+00	1.01E-05	1.07E-06	3.68E+01	6.11E-05	1.45E-01	2.04E-05	1.14E-03	9.92E-03	1.38E-03	1.93E-03	1.26E-03	1.29E-03	3.29E-04	1.84E-04	2.68E-08	6.38E-04	1.98E-04
50	F78	40	Single Unit Short Haul Truck	10	0.00E+00	3.25E-06	1.45E-07	1.81E+00	2.25E-06	2.84E-03	3.47E-06	1.31E-03	3.77E-04	5.89E-05	4.18E-04	8.71E-05	8.87E-05	1.85E-04	7.37E-06	3.13E-09	3.29E-04	2.46E-04
50	F78	40	Combination Short Haul Truck	5	0.00E+00	2.27E-06	1.70E-07	1.95E+00	5.62E-09	3.21E-03	1.61E-06	3.31E-03	4.58E-04	6.82E-05	1.35E-04	4.93E-05	5.12E-05	3.10E-04	6.53E-06	0.00E+00	8.38E-05	6.24E-04
50	F78	40	Combination Long Haul Truck	4	0.00E+00	3.02E-06	1.70E-07	1.87E+00	1.92E-08	3.90E-03	2.49E-06	3.49E-03	4.75E-04	6.68E-05	2.76E-04	5.49E-05	5.72E-05	3.01E-04	6.28E-06	0.00E+00	2.19E-04	6.58E-04
52	F79	60	Passenger Car	651	0.00E+00	7.55E-06	8.21E-07	2.93E+01	5.36E-05	1.44E-01	1.70E-05	6.46E-04	6.39E-03	9.58E-04	1.66E-03	1.07E-03	1.10E-03	1.29E-04	1.49E-04	3.03E-08	5.62E-04	1.01E-04
52	F79	60	Passenger Truck	1090	0.00E+00	1.59E-05	1.69E-06	6.54E+01	1.01E-04	2.48E-01	3.31E-05	1.97E-03	1.13E-02	1.69E-03	3.15E-03	2.05E-03	2.10E-03	5.17E-04	3.28E-04	5.54E-08	1.05E-03	3.33E-04
52	F79	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
52	F79	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.80E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.28E-04
52	F79	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.62E-04
53	F80	70	Passenger Car	1518	0.00E+00	1.62E-05	1.76E-06	6.62E+01	1.15E-04	3.11E-01	3.65E-05	1.56E-03	1.15E-02	1.80E-03	3.56E-03	2.30E-03	2.36E-03	2.58E-04	3.37E-04	6.99E-08	1.21E-03	2.44E-04
53	F80	70	Passenger Truck	2542	0.00E+00	3.38E-05	3.60E-06	1.49E+02	2.17E-04	5.48E-01	7.11E-05	4.41E-03	2.06E-02	3.20E-03	6.80E-03	4.42E-03	4.53E-03	1.12E-03	7.51E-04	1.32E-07	2.27E-03	7.39E-04
53	F80	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.14E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.22E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	F80	70	Combination Short Haul Truck	17	0.00E+00	4.31E-06	3.20E-07	5.82E+00	1.09E-08	6.22E-03	3.07E-06	6.45E-03	6.07E-04	1.01E-04	2.58E-04	9.33E-05	9.69E-05	9.25E-04	1.95E-05	0.00E+00	1.62E-04	1.22E-03
53	F80	70	Combination Long Haul Truck	15	0.00E+00	5.91E-06	3.36E-07	5.46E+00	3.70E-08	7.42E-03	4.86E-06	6.91E-03	6.32E-04	9.52E-05	5.37E-04	1.08E-04	1.12E-04	8.77E-04	1.83E-05	0.00E+00	4.25E-04	1.30E-03
50	F84	40	Passenger Car	259	0.00E+00	3.67E-06	3.98E-07	1.35E+01	2.60E-05	6.98E-02	8.27E-06	2.36E-04	4.46E-03	6.27E-04	8.06E-04	5.20E-04	5.34E-04	7.69E-05	6.78E-05	1.26E-08	2.73E-04	3.68E-05
50	F84	40	Passenger Truck	433	0.00E+00	8.09E-06	8.50E-07	2.94E+01	4.87E-05	1.16E-01	1.63E-05	9.10E-04	7.91E-03	1.10E-03	1.53E-03	1.00E-03	1.03E-03	2.62E-04	1.46E-04	2.14E-08	5.08E-04	1.58E-04
50	F84	40	Single Unit Short Haul Truck	10	0.00E+00	3.25E-06	1.45E-07	1.81E+00	2.25E-06	2.84E-03	3.47E-06	1.31E-03	3.77E-04	5.89E-05	4.18E-04	8.71E-05	8.87E-05	1.85E-04	7.37E-06	3.13E-09	3.29E-04	2.46E-04
50	F84	40	Combination Short Haul Truck	17	0.00E+00	8.07E-06	6.03E-07	6.94E+00	2.00E-08	1.14E-02	5.74E-06	1.18E-02	1.63E-03	2.43E-04	4.80E-04	1.75E-04	1.82E-04	1.10E-03	2.32E-05	0.00E+00	2.98E-04	2.22E-03
50	F84	40	Combination Long Haul Truck	15	0.00E+00	1.07E-05	6.06E-07	6.66E+00	6.82E-08	1.39E-02	8.85E-06	1.24E-02	1.69E-03	2.37E-04	9.83E-04	1.95E-04	2.03E-04	1.07E-03	2.23E-05	0.00E+00	7.80E-04	2.34E-03
52	F85	60	Passenger Car	265	0.00E+00	3.08E-06	3.34E-07	1.20E+01	2.18E-05	5.88E-02	6.94E-06	2.63E-04	2.60E-03	3.90E-04	6.77E-04	4.36E-04	4.48E-04	5.25E-05	6.06E-05	1.23E-08	2.29E-04	4.10E-05
52	F85	60	Passenger Truck	444	0.00E+00	6.49E-06	6.88E-07	2.66E+01	4.09E-05	1.01E-01	1.35E-05	8.02E-04	4.62E-03	6.86E-04	1.28E-03	8.35E-04	8.56E-04	2.11E-04	1.34E-04	2.26E-08	4.28E-04	1.36E-04
52	F85	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.03E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
52	F85	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07

Appendix F.3.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	F89	40	Combination Short Haul Truck	61	0.00E+00	2.95E-05	2.20E-06	2.54E+01	7.31E-08	4.17E-02	2.10E-05	4.30E-02	5.95E-03	8.87E-04	1.76E-03	6.41E-04	6.66E-04	4.03E-03	8.49E-05	0.00E+00	1.09E-03	8.11E-03
50	F89	40	Combination Long Haul Truck	56	0.00E+00	3.92E-05	2.22E-06	2.44E+01	2.49E-07	5.07E-02	3.23E-05	4.54E-02	6.18E-03	8.68E-04	3.59E-03	7.14E-04	7.44E-04	3.91E-03	8.16E-05	0.00E+00	2.85E-03	8.56E-03

Appendix F.3.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B09	0.00E+00	6.91E-05	5.90E-06	2.36E+02	2.63E-04	8.02E-01	1.09E-04	4.69E-02	1.36E-02	2.70E-03	1.09E-02	5.84E-03	6.00E-03	9.45E-03	1.11E-03	1.90E-07	4.87E-03	8.70E-03
B10	0.00E+00	6.10E-05	5.16E-06	2.05E+02	2.24E-04	6.87E-01	9.48E-05	4.31E-02	1.17E-02	2.33E-03	9.44E-03	5.02E-03	5.15E-03	8.65E-03	9.55E-04	1.62E-07	4.29E-03	8.00E-03
B13	0.00E+00	3.73E-05	3.13E-06	1.24E+02	1.35E-04	4.14E-01	5.77E-05	2.66E-02	7.07E-03	1.41E-03	5.75E-03	3.03E-03	3.11E-03	5.36E-03	5.78E-04	9.86E-08	2.64E-03	4.94E-03
B14	0.00E+00	5.61E-05	4.70E-06	1.87E+02	2.02E-04	6.22E-01	8.67E-05	3.97E-02	1.06E-02	2.12E-03	8.66E-03	4.55E-03	4.67E-03	8.05E-03	8.69E-04	1.49E-07	3.99E-03	7.38E-03
B15	0.00E+00	5.11E-05	5.07E-06	2.18E+02	2.94E-04	8.56E-01	1.01E-04	1.58E-02	1.38E-02	2.69E-03	9.89E-03	6.06E-03	6.21E-03	3.23E-03	1.08E-03	2.03E-07	3.68E-03	2.81E-03
B16	0.00E+00	3.35E-05	3.29E-06	1.41E+02	1.89E-04	5.52E-01	6.57E-05	1.05E-02	8.91E-03	1.74E-03	6.44E-03	3.91E-03	4.01E-03	2.20E-03	7.00E-04	1.32E-07	2.43E-03	1.88E-03
D27	0.00E+00	4.03E-05	3.58E-06	1.30E+02	1.73E-04	4.80E-01	6.79E-05	1.92E-02	1.37E-02	2.30E-03	6.72E-03	3.76E-03	3.85E-03	3.43E-03	6.27E-04	1.15E-07	2.86E-03	3.55E-03
D28	0.00E+00	1.71E-05	1.54E-06	5.56E+01	7.43E-05	2.06E-01	2.89E-05	8.41E-03	5.88E-03	9.87E-04	2.85E-03	1.61E-03	1.65E-03	1.47E-03	2.69E-04	4.86E-08	1.19E-03	1.55E-03
D29	0.00E+00	4.03E-05	3.58E-06	1.30E+02	1.73E-04	4.80E-01	6.79E-05	1.92E-02	1.37E-02	2.30E-03	6.72E-03	3.76E-03	3.85E-03	3.43E-03	6.27E-04	1.15E-07	2.86E-03	3.55E-03
D30	0.00E+00	1.71E-05	1.54E-06	5.56E+01	7.43E-05	2.06E-01	2.89E-05	8.41E-03	5.88E-03	9.87E-04	2.85E-03	1.61E-03	1.65E-03	1.47E-03	2.69E-04	4.86E-08	1.19E-03	1.55E-03
D31	0.00E+00	2.49E-05	2.16E-06	7.72E+01	1.00E-04	2.80E-01	4.07E-05	1.29E-02	8.07E-03	1.36E-03	4.04E-03	2.21E-03	2.26E-03	2.29E-03	3.70E-04	6.74E-08	1.78E-03	2.39E-03
D32	0.00E+00	1.33E-05	1.17E-06	4.17E+01	5.47E-05	1.52E-01	2.18E-05	6.96E-03	4.38E-03	7.36E-04	2.16E-03	1.20E-03	1.23E-03	1.21E-03	2.01E-04	3.61E-08	9.28E-04	1.29E-03
D33	0.00E+00	1.58E-05	1.37E-06	4.02E+01	6.15E-05	1.63E-01	2.53E-05	8.33E-03	7.59E-03	1.14E-03	2.50E-03	1.36E-03	1.40E-03	1.15E-03	1.93E-04	3.50E-08	1.11E-03	1.55E-03
D34	0.00E+00	2.42E-05	2.11E-06	6.29E+01	9.80E-05	2.58E-01	3.96E-05	1.18E-02	1.19E-02	1.79E-03	3.92E-03	2.15E-03	2.21E-03	1.66E-03	3.03E-04	5.60E-08	1.71E-03	2.18E-03
D35	0.00E+00	1.50E-05	1.31E-06	3.91E+01	6.09E-05	1.60E-01	2.45E-05	7.36E-03	7.41E-03	1.11E-03	2.43E-03	1.34E-03	1.37E-03	1.04E-03	1.89E-04	3.47E-08	1.06E-03	1.36E-03
D36	0.00E+00	2.21E-05	2.05E-06	6.41E+01	1.05E-04	2.72E-01	3.91E-05	8.56E-03	1.23E-02	1.84E-03	3.83E-03	2.23E-03	2.29E-03	1.27E-03	3.14E-04	5.87E-08	1.54E-03	1.57E-03
D37	0.00E+00	2.63E-05	2.50E-06	7.83E+01	1.27E-04	3.33E-01	4.69E-05	1.09E-02	1.50E-02	2.25E-03	4.55E-03	2.71E-03	2.78E-03	1.56E-03	3.83E-04	7.01E-08	1.77E-03	2.01E-03
D38	0.00E+00	1.59E-05	1.55E-06	5.02E+01	8.49E-05	2.19E-01	3.01E-05	4.61E-03	9.72E-03	1.45E-03	2.93E-03	1.77E-03	1.82E-03	7.39E-04	2.49E-04	4.72E-08	1.11E-03	8.38E-04
D39	0.00E+00	1.45E-05	1.42E-06	4.57E+01	7.61E-05	1.98E-01	2.70E-05	5.10E-03	8.83E-03	1.32E-03	2.61E-03	1.60E-03	1.64E-03	7.54E-04	2.25E-04	4.16E-08	9.72E-04	9.33E-04
D40	0.00E+00	8.79E-06	9.08E-07	3.05E+01	5.29E-05	1.36E-01	1.78E-05	1.83E-03	5.95E-03	8.87E-04	1.71E-03	1.09E-03	1.11E-03	3.21E-04	1.52E-04	2.90E-08	5.98E-04	3.25E-04
D41	0.00E+00	4.19E-06	4.16E-07	1.35E+01	2.27E-05	5.89E-02	7.96E-06	1.34E-03	2.62E-03	3.91E-04	7.69E-04	4.75E-04	4.87E-04	2.03E-04	6.68E-05	1.24E-08	2.82E-04	2.43E-04
D42	0.00E+00	1.14E-05	1.21E-06	4.13E+01	7.27E-05	1.86E-01	2.39E-05	1.67E-03	8.07E-03	1.20E-03	2.30E-03	1.48E-03	1.52E-03	3.41E-04	2.07E-04	3.98E-08	7.82E-04	2.88E-04
D43	0.00E+00	2.42E-05	1.65E-06	3.98E+01	4.76E-05	1.33E-01	2.99E-05	1.74E-02	7.04E-03	1.07E-03	3.14E-03	1.25E-03	1.29E-03	2.36E-03	1.78E-04	3.23E-08	1.85E-03	3.26E-03
D44	0.00E+00	1.47E-05	1.46E-06	4.80E+01	8.18E-05	2.11E-01	2.84E-05	3.91E-03	9.31E-03	1.39E-03	2.75E-03	1.70E-03	1.74E-03	6.38E-04	2.38E-04	4.51E-08	1.01E-03	7.07E-04
D45	0.00E+00	6.24E-05	4.72E-06	1.25E+02	1.69E-04	4.61E-01	8.57E-05	4.12E-02	2.28E-02	3.43E-03	8.74E-03	4.07E-03	4.17E-03	5.57E-03	5.77E-04	1.04E-07	4.56E-03	7.69E-03
D46	0.00E+00	7.15E-05	5.24E-06	1.32E+02	1.66E-04	4.64E-01	9.25E-05	5.27E-02	2.38E-02	3.58E-03	9.47E-03	4.19E-03	4.30E-03	6.98E-03	5.98E-04	1.03E-07	5.17E-03	9.86E-03
D47	0.00E+00	7.27E-05	5.72E-06	1.57E+02	2.23E-04	5.99E-01	1.05E-04	4.46E-02	2.90E-02	4.36E-03	1.06E-02	5.19E-03	5.33E-03	6.10E-03	7.35E-04	1.33E-07	5.27E-03	8.32E-03
D48	0.00E+00	8.60E-06	8.87E-07	2.98E+01	5.17E-05	1.33E-01	1.74E-05	1.81E-03	5.81E-03	8.67E-04	1.67E-03	1.06E-03	1.09E-03	3.16E-04	1.49E-04	2.83E-08	5.85E-04	3.22E-04
D49	0.00E+00	7.27E-05	5.72E-06	1.57E+02	2.23E-04	5.99E-01	1.05E-04	4.46E-02	2.90E-02	4.36E-03	1.06E-02	5.19E-03	5.33E-03	6.10E-03	7.35E-04	1.33E-07	5.27E-03	8.32E-03
D50	0.00E+00	7.74E-05	5.83E-06	1.52E+02	2.01E-04	5.53E-01	1.04E-04	5.35E-02	2.77E-02	4.17E-03	1.06E-02	4.90E-03	5.04E-03	7.16E-03	6.98E-04	1.23E-07	5.60E-03	1.00E-02
D51	0.00E+00	1.70E-05	1.54E-06	4.83E+01	7.92E-05	2.05E-01	3.00E-05	5.98E-03	9.24E-03	1.38E-03	2.96E-03	1.69E-03	1.73E-03	9.29E-04	2.37E-04	4.53E-08	1.23E-03	1.10E-03
D52	0.00E+00	1.62E-05	1.55E-06	5.00E+01	8.41E-05	2.17E-01	3.02E-05	4.77E-03	9.65E-03	1.44E-03	2.95E-03	1.76E-03	1.81E-03	7.69E-04	2.47E-04	4.72E-08	1.15E-03	8.67E-04
D53	0.00E+00	1.95E-05	1.83E-06	5.87E+01	9.84E-05	2.53E-01	3.59E-05	5.81E-03	1.13E-02	1.69E-03	3.53E-03	2.07E-03	2.12E-03	9.47E-04	2.90E-04	5.58E-08	1.41E-03	1.06E-03
D54	0.00E+00	1.23E-05	1.18E-06	3.80E+01	6.37E-05	1.64E-01	2.29E-05	3.78E-03	7.33E-03	1.09E-03	2.24E-03	1.34E-03	1.37E-03	5.99E-04	1.87E-04	3.56E-08	8.66E-04	6.90E-04
D55	0.00E+00	2.31E-05	1.98E-06	7.00E+01	9.00E-05	2.52E-01	3.71E-05	1.24E-02	7.29E-03	1.23E-03	3.69E-03	1.99E-03	2.04E-03	2.20E-03	3.34E-04	6.07E-08	1.65E-03	2.30E-03
D56	0.00E+00	3.31E-05	2.86E-06	1.02E+02	1.32E-04	3.69E-01	5.38E-05	1.74E-02	1.06E-02	1.79E-03	5.34E-03	2.91E-03	2.99E-03	3.07E-03	4.88E-04	8.88E-08	2.36E-03	3.21E-03
D57	0.00E+00	3.28E-05	2.93E-06	1.07E+02	1.43E-04	3.96E-01	5.56E-05	1.55E-02	1.13E-02	1.89E-03	5.50E-03	3.09E-03	3.17E-03	2.76E-03	5.16E-04	9.45E-08	2.32E-03	2.86E-03
D58	0.00E+00	4.39E-05	3.48E-06	1.17E+02	1.37E-04	3.93E-01	6.38E-05	2.81E-02	1.18E-02	2.00E-03	6.44E-03	3.18E-03	3.27E-03	4.95E-03	5.44E-04	9.69E-08	3.17E-03	5.24E-03
D59	0.00E+00	3.28E-05	2.93E-06	1.07E+02	1.43E-04	3.96E-01	5.56E-05	1.55E-02	1.13E-02	1.89E-03	5.50E-03	3.09E-03	3.17E-03	2.76E-03	5.16E-04	9.45E-08	2.32E-03	2.86E-03
D60	0.00E+00	4.39E-05	3.48E-06	1.17E+02	1.37E-04	3.93E-01	6.38E-05	2.81E-02	1.18E-02	2.00E-03	6.44E-03	3.18E-03	3.27E-03	4.95E-03	5.44E-04	9.69E-08	3.17E-03	5.24E-03
D61	0.00E+00	2.11E-05	1.53E-06	5.04E+01	5.56E-05	1.61E-01	2.90E-05	1.34E-02	4.94E-03	8.45E-04	3.01E-03	1.34E-03	1.37E-03	2.49E-03	2.31E-04	4.38E-08	1.64E-03	2.50E-03
D62	0.00E+00	7.52E-06	5.56E-07	1.74E+01	1.79E-05	5.34E-02	9.80E-06	5.71E-03	1.69E-03	2.88E-04	1.00E-03	4.48E-04	4.60E-04	9.90E-04	7.83E-05	1.33E-08	5.42E-04	1.07E-03
D63	0.00E+00	3.01E-06	2.60E-07	8.75E+00	1.26E-05	3.35E-02	5.02E-06	1.26E-03	1.29E-03	2.02E-04	5.01E-04	2.73E-04	2.80E-04	2.12E-04	4.25E-05	7.97E-09	2.22E-04	2.32E-04
D64	0.00E+00	1.19E-05	7.93E-07	1.94E+01	1.69E-05	5.28E-02	1.33E-05	1.02E-02	2.51E-03	4.00E-04	1.39E-03	5.10E-04	5.25E-04	1.52E-03	8.27E-05	1.33E-08	8.66E-04	1.92E-03
D65	0.00E+00	3.04E-05	2.16E-06	6.61E+01	6.41E-05	1.94E-01	3.82E-05	2.36E-02	6.29E-03	1.08E-03	3.95E-03	1.66E-03	1.71E-03	4.15E-03	2.93E-04	5.06E-08	2.25E-03	4.41E-03
D66	0.00E+00	2.67E-05	1.96E-06	6.02E+01	5.99E-05	1.81E-01	3.40E-05	2.12E-02	5.81E-03	9.89E-04	3.47E-03	1.53E-03	1.57E-03	3.64E-03	2.69E-04	4.45E-08	1.90E-03	3.96E-03
D67	0.00E+00	3.04E-05	2.16E-06	6.61E+01	6.41E-05	1.94E-01	3.82E-05	2.36E-02	6.29E-03	1.08E-03	3.95E-03	1.66E-03	1.71E-03	4.15E-03	2.93E-04	5.06E-08	2.25E-03	4.41E-03
D68	0.00E+00	2.67E-05	1.96E-06	6.02E+01	5.99E-05	1.81E-01	3.40E-05	2.12E-02	5.81E-03	9.89E-04	3.47E-03	1.53E-03	1.57E-03	3.64E-03	2.69E-04	4.45E-08	1.90E-03	3.96E-03
D69	0.00E+00	1.17E-05	8.59E-07	2.70E+01	2.80E-05	8.33E-02	1.53E-05	8.69E-03	2.63E-03	4.48E-04	1.57E-03	6.98E-04	7.17E-04	1.52E-03	1.22E-04	2.11E-08	8.53E-04	1.62E-03
D70	0.00E+00	9.93E-06	7.42E-07	2.35E+01	2.47E-05	7.32E-02	1.32E-05	7.38E-03	2.30E-03	3.90E-04	1.34E-03	6.11E-04	6.27E-04	1.28E-03	1.06E-04	1.82E-08	7.16E-04	1.38E-03
D71	0.00E+00	3.18E-05	2.44E-06	6.88E+01	7.86E-05	2.26E-01	4.15E-05	2.45E-02	9.61E-03	1.51E-03	4.16E-03	1.96E-03	2.01E-03	3.58E-03	3.13E-04	5.03E-08	2.15E-03	4.58E-03
D72	0.00E+00	1.82E-05	1.51E-06	4.85E+01	6.57E-05	1.78E-01	2.82E-05	9.74E-03	7.05E-03	1.10E-03	2.82E-03	1.48E-03	1.51E-03	1.54E-03	2.31E-04	4.18E-08	1.30E-03	1.81E-03
D73	0.00E+00	1.33E-05	1.17E-06	3.80E+01	5.23E-05	1.42E-01	2.13E-05	7.44E-03	5.60E-03	8.72E-04	2.09E-03	1.16E-03	1.19E-03	1.12E-03	1.82E-04	3.15E-08	8.94E-04	1.38E-03
D74	0.00E+00	9.58E-06	9.48E-07	3.44E+01	5.29E-05	1.39E-01	1.84E-05	2.73E-03	5.22E-03	8.11E-04	1.79E-03	1.10E-03	1.13E-03	4.71E-04	1.71E-04	3.15E-08	6.63E-04	4.92E-04
D75	0.00E+00	5.64E-06	4.62E-07	1.64E+01	2.08E-05	5.82E-02	8.88E-06	2.89E-03	1.69E-03	2.85E-04	8.97E-04	4.63E-04	4.75E-04	5.37E-04	7.80E-05	1.47E-08	4.23E-04	5.35E-04
D76	0.00E+00	1.09E-05	8.68E-07	2.92E+01	3.46E-05	9.90E-02	1.60E-05	6.87E-03	2.96E-03	5.01E-04	1.61E-03	8.00E-04	8.21E-04	1.21E-03	1.36E-04	2.45E-08	7.90E-04	1.28E-03
D77	0.00E+00	1.18E-05	8.12E-07	2.51E+01	2.44E-05	7.36E-02	1.48E-05	8.67E-03	2.38E-03	4.08E-04	1.55E-03	6.32E-04	6.49E-04	1.57E-03	1.11E-04	2.03E-08	9.01E-04	1.62E-03
D78	0.00E+00	1.02E-05	7.08E-07	2.10E+01	1.88E-05	5.86E-02	1.22E-05	8.47E-03	1.96E-03	3.36E-04	1.27E-03	5.11E-04	5.25E-04	1.47E-03	9.12E-05	1.51E-08	7.42E-04	1.59E-03
D79	0.00E+00	2.06E-05	1.69E-06	5.18E+01	6.68E-05	1.85E-01	3.02E-05	1.30E-02	7.45E-03	1.17E-03	3.01E-03	1.54E-03	1.59E-03	1.96E-03	2.44E-04	4.20E-08	1.43E-03	2.41E-03
D80	0.00E+00	3.08E-05	2.63E-06	8.38E+01	1.13E-04	3.09E-01	4.77E-05	1.77E-02	1.22E-02	1.91E-03	4.72E-03	2.54E-03	2.61E-03	2.68E-03	3.99E-04	6.96E-08	2.11E-03	3.28E-03
D81	0.00E+00	1.04E-05	1.07E-06	4.02E+01	6.37E-05	1.66E-01	2.13E-05	2.01E-03	6.16E-03	9.57E-04	2.06E-03	1.30E-03	1.33E-03	3.85E-04	2.02E-04	3.76E-08	7.21E-04	3.53E-04
D82	0.00E+00	9.68E-06	1.04E-06	3.97E+01	6.41E-05	1.67E-01	2.08E-05	1.12E-03	6.13E-03	9.50E-04	2.00E-03	1.30E-03	1.33E-03	2.58E-04	2.00E-04	3.77E-08	6.71E-04	1.84E-04
D83	0.00E+00	8.57E-05	6.66E-06	2.14E+02	2.33E-04	6.85E-01	1.17E-04	6.37E-02	2.12E-02	3.59E-03	1.18E-02	5.64E-03	5.79E-03	1.08E-02	9.75E-04	1.63E-07	5.96E-03	1.19E-02
D84	0.00E+00	6.22E-05	4.48E-06	1.33E+02	1.23E-04	3.81E-01	7.55E-05	5.31E-02	1.26E-02	2.15E-03	7.72E-03	3.28E-03	3.37E-03	8.99E-03	5.83E-04	9.19E-08	4.35E-03	9.94E-03
D85	0.00E+00	6.59E-05	5.14E-06	1.65E+02	1.81E-04	5.32E-01	9.03E-05	4.87E-02	1.64E-02	2.78E-03	9.09E-03	4.37E-03	4.49E-03	8.28E-03	7.55E-04	1.26E-07	4.59E-03	9.09E-03
D86	0.00E+00	5.29E-05	3.83E-06	1.14E+02	1.07E-04	3.30E-01	6.48E-05	4.49E-02	1.09E-02	1.85E-03	6.61E-03	2.83E-03	2.91E-03	7.59E-03	5.03E-04	7.94E-08	3.70E-03	8.40E-03
D87	0.00E+00	6.59E-05	5.14E-06	1.65E+02	1.81E-04	5.32E-01	9.03E-05	4.87E-02	1.64E-02	2.78E-03	9.09E-03	4.37E-03	4.49E-03	8.28E-03	7.55E-04	1.26E-07	4.59E-03	9.09E-03
D88	0.00E+00	5.29E-05	3.83E-06	1.14E+02	1.07E-04	3.30E-01	6.48E-05	4.49E-02	1.09E-02	1.85E-03	6.61E-03	2.83E-03	2.91E-03	7.59E-03	5.03E-04	7.94E-08	3.70E-03	8.40E-03
D89	0.00E+00	8.67E-06	6.78E-07	1.82E+01	2.52E-05	6.86E-02	1.22E-05	5.73E-03	3.36E-03	5.05E-04	1.23E-03	5.97E-04	6.13E-04	7.68E-04	8.49E-05	1.50E-08	6.18E-04	1.07E-03
D90	0.00E+00	1.12E-05	6.64E-07	1.38E+01	1.25E-05	3.71E-02	1.21E-05	8.70E-03	2.28E-03	3.51E-04	1.33E-03	4.09E-04	4.20E-04	1.19E-03	5.76E-05	1.10E-08	9.09E-04	1.63E-03
D91	0.00E+00	1.45E-05	1.22E-06	3.86E+01	5.19E-05	1.42E-01	2.23E-05	8.26E-03	5.62E-03	8.78E-04	2.22E-03	1.17E-03	1.20E-03	1.27E-03	1.84E-04	3.24E-08	1.01E-03	1.53E-03
D92	0.00E+00	1.17E-05	1.13E-06	4.08E+01	6.27E-05	1.65E-01	2.22E-05	3.17E-03	6.18E-03	9.61E-04	2.18E-03	1.31E-03	1.34E-03	5.75E-04	2.02E-04	3.80E-08	8.37E-04	5.71E-04
D93	0.00E+00	1.34E-05	1.16E-06	3.81E+01	5.30E-05	1.43E-01	2.16E-05	6.89E-03	5.60E-03	8.74E-04	2.14E-03	1.17E-03	1.20E-03	1.07E-03	1.83E-04	3.27E-08	9.36E-04	1.28E-03
D94	0.00E+00	1.13E-05	1.11E-06	4.08E+01	6.35E-05	1.66E-01	2.21E-05	2.70E-03	6.21E-03	9.66E-04	2.16E-03	1.31E-03	1.35E-03	5.05E-04	2.04E-04	3.83E-08	8.09E-04	4.82E-04
E01	0.00E+00	2.03E-05	1.61E-06	4.43E+01	6.32E-05	1.70E-01	2.94E-05	1.24E-02	8.22E-03	1.23E-03	2.97E-03	1.47E-03	1.51E-03	1.69E-03	2.08E-04	3.75E-08	1.46E-03	2.31E-03
E02	0.00E+00	2.35E-05	1.98E-06	5.75E+01	8.70E-05	2.31E-01	3.68E-05	1.26E-02	1.08E-02	1.62E-03	3.66E-03	1.94E-03	2.00E-03	1.75E-03	2.75E-04	5.02E-08	1.66E-03	2.35E-03
E03	0.00E+00	1.49E-05	1.10E-06	3.49E+01	3.66E-05	1.08E-01	1.97E-05	1.09E-02	3.40E-03	5.79E-04	2.02E-03	9.06E-04	9.31E-04	1.91E-03	1.58E-04	2.76E-08	1.09E-03	2.03E-03
E04	0.00E+00	1.96E-05	1.57E-06	5.35E+01	6.43E-05	1.83E-01	2.92E-05	1.19E-02	5.43E-03	9.19E-04	2.95E-03	1.47E-03	1.51E-03	2.12E-03	2.51E-04	4.56E-08	1.44E-03	2.21E-03
E05	0.00E+00	1.54E-05	1.25E-06	4.29E+01	5.22E-05	1.48E-01	2.32E-05	9.19E-03	4.38E-03	7.40E-04	2.34E-03	1.19E-03	1.22E-03	1.63E-03	2.02E-04	3.66E-08	1.12E-03	1.71E-03
E06	0.00E+00	1.13E-05	8.20E-07	2.60E+01	2.71E-05	8.02E-02	1.49E-05	8.10E-03	2.52E-03	4.30E-04	1.53E-03	6.73E-04	6.91E-04	1.44E-03	1.17E-04	2.09E-08	8.42E-04	1.51E-03
E07	0.00E+00	6.86E-05	5.93E-06	1.75E+02	2.69E-04	7.11E-01	1.10E-04	3.54E-02	3.31E-02	4.95E-03	1.09E-02	5.94E-03	6.10E-03	4.93E-03	8.40E-04	1.53E-07	4.80E-03	6.57E-03
E08	0.00E+00	8.38E-05	7.11E-06	2.05E+02	3.07E-04	8.20E-01	1.30E-04	4.75E-02	3.86E-02	5.78E-03	1.29E-02	6.90E-03	7.08E-03	6.47E-03	9.78E-04	1.75E-07	5.82E-03	8.84E-03
E09	0.00E+00	5.97E-05	5.16E-06	1.52E+02	2.34E-04	6.18E-01	9.57E-05	3.10E-02	2.88E-02	4.31E-03	9.47E-03	5.17E-03	5.30E-03	4.31E-03	7.31E-04	1.33E-07	4.17E-03	5.76E-03
E10	0.00E+00	7.12E-05	6.01E-06	1.73E+02	2.57E-04	6.87E-01	1.10E-04	4.14E-02	3.24E-02	4.85E-03	1.09E-02	5.78E-03	5.93E-03	5.61E-03	8.21E-04	1.46E-07	4.94E-03	7.70E-03
E11	0.00E+00	1.12E-04	8.60E-06	2.26E+02	3.00E-04	8.28E-01	1.52E-04	7.94E-02	4.13E-02	6.20E-03	1.54E-02	7.27E-03	7.46E-03	1.05E-02	1.04E-03	1.78E-07	7.89E-03	1.48E-02
E12	0.00E+00	1.33E-04	1.05E-05	2.83E+02	3.94E-04	1.07E+00	1.88E-04	8.71E-02	5.23E-02	7.85E-03	1.90E-02	9.28E-03	9.53E-03	1.17E-02	1.32E-03	2.33E-07	9.45E-03	1.63E-02
E13	0.00E+00	2.67E-05	2.14E-06	7.29E+01	8.77E-05	2.50E-01	3.97E-05	1.62E-02	7.41E-03	1.25E-03	4.01E-03	2.01E-03	2.06E-03	2.88E-03	3.42E-04	6.20E-08	1.95E-03	3.01E-03
E14	0.00E+00	1.96E-05	1.56E-06	5.18E+01	6.01E-05	1.73E-01	2.81E-05	1.32E-02	5.23E-03	8.84E-04	2.83E-03	1.40E-03	1.44E-03	2.28E-03	2.40E-04	4.17E-08	1.38E-03	2.46E-03
E15	0.00E+00	1.63E-05	1.42E-06	4.97E+01	6.34E-05	1.78E-01	2.59E-05	9.47E-03	5.18E-03	8.70E-04	2.55E-03	1.41E-03	1.44E-03	1.61E-03	2.37E-04	4.13E-08	1.11E-03	1.76E-03
E16	0.00E+00	1.76E-05	1.50E-06	5.17E+01	6.44E-05	1.82E-01	2.72E-05	1.07E-02	5.35E-03	8.99E-04	2.70E-03	1.45E-03	1.49E-03	1.82E-03	2.45E-04	4.26E-08	1.21E-03	1.99E-03
E17	0.00E+00	1.36E-05	1.16E-06	4.06E+01	5.18E-05	1.45E-01	2.16E-05	7.47E-03	4.22E-03	7.11E-04	2.15E-03	1.15E-03	1.18E-03	1.32E-03	1.94E-04	3.51E-08	9.70E-04	1.38E-03
E18	0.00E+00	1.28E-05	1.00E-06	3.35E+01	3.89E-05	1.12E-01	1.84E-05	8.20E-03	3.37E-03	5.70E-04	1.87E-03	9.09E-04	9.33E-04	1.46E-03	1.55E-04	2.80E-08	9.37E-04	1.53E-03
E19	0.00E+00	4.05E-05	3.39E-06	9.97E+01	1.54E-04	4.03E-01	6.44E-05	1.95E-02	1.88E-02	2.82E-03	6.45E-03	3.40E-03	3.49E-03	2.82E-03	4.79E-04	9.01E-08	2.96E-03	3.63E-03
E20	0.00E+00	4.03E-05	3.49E-06	1.04E+02	1.63E-04	4.27E-01	6.59E-05	1.90E-02	1.97E-02	2.96E-03	6.54E-03	3.57E-03	3.66E-03

Appendix F.3.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 3

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E36	0.00E+00	3.00E-05	2.11E-06	4.98E+01	5.57E-05	1.63E-01	3.58E-05	2.51E-02	8.81E-03	1.33E-03	3.69E-03	1.52E-03	1.56E-03	3.24E-03	2.19E-04	3.52E-08	2.13E-03	4.70E-03
E37	0.00E+00	2.66E-05	2.28E-06	6.66E+01	1.01E-04	2.69E-01	4.21E-05	1.42E-02	1.26E-02	1.88E-03	4.17E-03	2.25E-03	2.31E-03	1.96E-03	3.19E-04	5.78E-08	1.86E-03	2.64E-03
E38	0.00E+00	3.00E-05	2.11E-06	4.98E+01	5.57E-05	1.63E-01	3.58E-05	2.51E-02	8.81E-03	1.33E-03	3.69E-03	1.52E-03	1.56E-03	3.24E-03	2.19E-04	3.52E-08	2.13E-03	4.70E-03
E39	0.00E+00	2.11E-05	1.82E-06	5.89E+01	8.08E-05	2.19E-01	3.35E-05	1.14E-02	8.63E-03	1.35E-03	3.31E-03	1.80E-03	1.84E-03	1.76E-03	2.82E-04	4.98E-08	1.46E-03	2.12E-03
E40	0.00E+00	1.34E-05	1.37E-06	5.07E+01	7.95E-05	2.08E-01	2.69E-05	3.12E-03	7.76E-03	1.20E-03	2.60E-03	1.63E-03	1.68E-03	5.61E-04	2.53E-04	4.69E-08	9.23E-04	5.56E-04
E41	0.00E+00	1.19E-05	1.17E-06	4.19E+01	6.40E-05	1.69E-01	2.25E-05	3.76E-03	6.35E-03	9.87E-04	2.18E-03	1.33E-03	1.37E-03	6.28E-04	2.07E-04	3.80E-08	8.15E-04	6.81E-04
E42	0.00E+00	1.20E-05	1.21E-06	4.47E+01	6.98E-05	1.83E-01	2.37E-05	2.95E-03	6.82E-03	1.06E-03	2.30E-03	1.44E-03	1.47E-03	5.22E-04	2.23E-04	4.12E-08	8.21E-04	5.28E-04
E43	0.00E+00	7.12E-06	7.49E-07	2.83E+01	4.51E-05	1.18E-01	1.49E-05	1.20E-03	4.35E-03	6.74E-04	1.43E-03	9.18E-04	9.41E-04	2.38E-04	1.42E-04	2.65E-08	4.90E-04	2.08E-04
E44	0.00E+00	1.14E-05	1.18E-06	4.44E+01	7.04E-05	1.84E-01	2.34E-05	2.13E-03	6.80E-03	1.06E-03	2.26E-03	1.44E-03	1.47E-03	4.12E-04	2.22E-04	4.15E-08	7.91E-04	3.72E-04
E45	0.00E+00	2.49E-05	1.88E-06	6.07E+01	6.63E-05	1.94E-01	3.40E-05	1.73E-02	5.98E-03	1.02E-03	3.47E-03	1.60E-03	1.65E-03	3.06E-03	2.77E-04	4.91E-08	1.83E-03	3.23E-03
E46	0.00E+00	2.27E-05	1.52E-06	4.20E+01	3.13E-05	1.05E-01	2.49E-05	2.10E-02	3.78E-03	6.49E-04	2.60E-03	9.58E-04	9.85E-04	3.58E-03	1.76E-04	2.65E-08	1.61E-03	3.94E-03
E47	0.00E+00	2.36E-05	1.83E-06	6.12E+01	7.09E-05	2.04E-01	3.38E-05	1.51E-02	6.14E-03	1.04E-03	3.43E-03	1.66E-03	1.70E-03	2.69E-03	2.84E-04	5.12E-08	1.73E-03	2.82E-03
E48	0.00E+00	9.08E-06	7.22E-07	2.39E+01	2.75E-05	7.94E-02	1.30E-05	6.17E-03	2.40E-03	4.06E-04	1.30E-03	6.45E-04	6.62E-04	1.07E-03	1.10E-04	1.91E-08	6.42E-04	1.15E-03
E49	0.00E+00	2.27E-05	1.76E-06	5.82E+01	6.66E-05	1.92E-01	3.22E-05	1.49E-02	5.83E-03	9.88E-04	3.27E-03	1.57E-03	1.61E-03	2.64E-03	2.69E-04	4.81E-08	1.65E-03	2.78E-03
E50	0.00E+00	6.17E-06	5.55E-07	2.01E+01	2.68E-05	7.43E-02	1.04E-05	3.07E-03	2.12E-03	3.56E-04	1.02E-03	5.80E-04	5.95E-04	5.33E-04	9.69E-05	1.75E-08	4.29E-04	5.66E-04
E51	0.00E+00	2.16E-05	1.70E-06	5.68E+01	6.63E-05	1.90E-01	3.12E-05	1.38E-02	5.72E-03	9.69E-04	3.16E-03	1.54E-03	1.59E-03	2.45E-03	2.64E-04	4.75E-08	1.58E-03	2.57E-03
E52	0.00E+00	1.75E-06	1.76E-07	6.82E+00	9.98E-06	2.71E-02	3.42E-06	5.27E-04	7.45E-04	1.24E-04	3.31E-04	2.06E-04	2.12E-04	9.37E-05	3.39E-05	6.29E-09	1.20E-04	9.48E-05
E53	0.00E+00	2.56E-05	2.08E-06	7.09E+01	8.58E-05	2.44E-01	3.83E-05	1.58E-02	7.24E-03	1.22E-03	3.84E-03	1.96E-03	2.01E-03	2.76E-03	3.33E-04	5.94E-08	1.83E-03	2.93E-03
E54	0.00E+00	7.11E-06	5.70E-07	1.86E+01	2.11E-05	6.13E-02	1.00E-05	5.14E-03	1.87E-03	3.15E-04	1.00E-03	4.99E-04	5.12E-04	8.67E-04	8.57E-05	1.43E-08	4.88E-04	9.59E-04
E55	0.00E+00	2.56E-05	2.08E-06	7.09E+01	8.58E-05	2.44E-01	3.83E-05	1.58E-02	7.24E-03	1.22E-03	3.84E-03	1.96E-03	2.01E-03	2.76E-03	3.33E-04	5.94E-08	1.83E-03	2.93E-03
E56	0.00E+00	7.11E-06	5.70E-07	1.86E+01	2.11E-05	6.13E-02	1.00E-05	5.14E-03	1.87E-03	3.15E-04	1.00E-03	4.99E-04	5.12E-04	8.67E-04	8.57E-05	1.43E-08	4.88E-04	9.59E-04
E57	0.00E+00	1.55E-05	1.36E-06	4.43E+01	6.14E-05	1.66E-01	2.49E-05	8.22E-03	6.52E-03	1.02E-03	2.45E-03	1.36E-03	1.39E-03	1.26E-03	2.13E-04	3.75E-08	1.06E-03	1.52E-03
E58	0.00E+00	1.27E-05	1.22E-06	4.31E+01	6.50E-05	1.72E-01	2.34E-05	4.33E-03	6.50E-03	1.01E-03	2.28E-03	1.37E-03	1.40E-03	7.21E-04	2.13E-04	3.90E-08	8.80E-04	7.88E-04
E59	0.00E+00	1.41E-05	1.28E-06	4.65E+01	6.26E-05	1.73E-01	2.41E-05	6.70E-03	4.92E-03	8.26E-04	2.37E-03	1.35E-03	1.38E-03	1.17E-03	2.25E-04	4.08E-08	9.81E-04	1.23E-03
E60	0.00E+00	9.25E-06	9.17E-07	3.55E+01	5.17E-05	1.40E-01	1.79E-05	2.78E-03	3.86E-03	6.45E-04	1.74E-03	1.07E-03	1.10E-03	5.08E-04	1.76E-04	3.29E-08	6.45E-04	5.00E-04
E61	0.00E+00	1.41E-05	1.28E-06	4.65E+01	6.26E-05	1.73E-01	2.41E-05	6.70E-03	4.92E-03	8.26E-04	2.37E-03	1.35E-03	1.38E-03	1.17E-03	2.25E-04	4.08E-08	9.81E-04	1.23E-03
E62	0.00E+00	9.25E-06	9.17E-07	3.55E+01	5.17E-05	1.40E-01	1.79E-05	2.78E-03	3.86E-03	6.45E-04	1.74E-03	1.07E-03	1.10E-03	5.08E-04	1.76E-04	3.29E-08	6.45E-04	5.00E-04
E63	0.00E+00	5.70E-05	4.54E-06	1.36E+02	1.70E-04	4.74E-01	8.08E-05	3.77E-02	1.94E-02	3.04E-03	8.09E-03	4.01E-03	4.12E-03	5.69E-03	6.34E-04	1.09E-07	3.98E-03	7.04E-03
E64	0.00E+00	7.08E-05	5.54E-06	1.62E+02	1.95E-04	5.50E-01	9.68E-05	5.00E-02	2.28E-02	3.58E-03	9.71E-03	4.70E-03	4.83E-03	7.45E-03	7.46E-04	1.25E-07	4.89E-03	9.35E-03
E65	0.00E+00	5.96E-05	4.71E-06	1.40E+02	1.73E-04	4.84E-01	8.35E-05	4.01E-02	1.99E-02	3.12E-03	8.37E-03	4.11E-03	4.22E-03	6.03E-03	6.50E-04	1.11E-07	4.15E-03	7.48E-03
E66	0.00E+00	7.93E-05	6.08E-06	1.74E+02	2.02E-04	5.77E-01	1.05E-04	5.84E-02	2.43E-02	3.81E-03	1.06E-02	4.98E-03	5.12E-03	8.66E-03	7.93E-04	1.31E-07	5.48E-03	1.09E-02
E67	0.00E+00	9.53E-05	6.22E-06	1.74E+02	1.32E-04	4.36E-01	1.06E-04	8.40E-02	1.56E-02	2.70E-03	1.12E-02	4.00E-03	4.12E-03	1.47E-02	7.33E-04	1.20E-07	7.06E-03	1.58E-02
E68	0.00E+00	3.08E-05	2.44E-06	8.20E+01	9.64E-05	2.76E-01	4.48E-05	1.97E-02	8.28E-03	1.40E-03	4.53E-03	2.24E-03	2.30E-03	3.47E-03	3.82E-04	6.82E-08	2.23E-03	3.66E-03
E69	0.00E+00	2.48E-05	2.27E-06	7.95E+01	1.19E-04	3.14E-01	4.44E-05	8.37E-03	1.19E-02	1.86E-03	4.39E-03	2.52E-03	2.58E-03	1.46E-03	3.91E-04	7.36E-08	1.80E-03	1.53E-03
E70	0.00E+00	2.59E-05	2.13E-06	6.66E+01	8.76E-05	2.40E-01	3.88E-05	1.54E-02	9.62E-03	1.50E-03	3.88E-03	2.00E-03	2.05E-03	2.36E-03	3.15E-04	5.54E-08	1.82E-03	2.87E-03
E71	0.00E+00	2.68E-05	2.58E-06	9.36E+01	1.44E-04	3.78E-01	5.10E-05	7.22E-03	1.42E-02	2.21E-03	5.00E-03	3.00E-03	3.07E-03	1.31E-03	4.65E-04	8.73E-08	1.92E-03	1.30E-03
E72	0.00E+00	2.25E-05	2.24E-06	8.17E+01	1.27E-04	3.33E-01	4.38E-05	5.89E-03	1.24E-02	1.93E-03	4.25E-03	2.62E-03	2.69E-03	1.04E-03	4.07E-04	7.54E-08	1.56E-03	1.06E-03
E73	0.00E+00	1.41E-05	1.30E-06	4.08E+01	6.67E-05	1.73E-01	2.49E-05	5.36E-03	7.82E-03	1.17E-03	2.44E-03	1.42E-03	1.46E-03	7.99E-04	2.00E-04	3.75E-08	9.85E-04	9.86E-04
E74	0.00E+00	1.03E-05	1.02E-06	3.35E+01	5.69E-05	1.47E-01	1.98E-05	2.94E-03	6.50E-03	9.70E-04	1.92E-03	1.18E-03	1.21E-03	4.67E-04	1.66E-04	3.13E-08	7.05E-04	5.33E-04
E75	0.00E+00	5.93E-05	5.30E-06	1.85E+02	2.54E-04	6.78E-01	9.95E-05	2.79E-02	2.66E-02	4.17E-03	9.79E-03	5.52E-03	5.66E-03	4.41E-03	9.00E-04	1.60E-07	4.13E-03	5.14E-03
E76	0.00E+00	3.79E-05	3.57E-06	1.31E+02	1.89E-04	4.97E-01	6.90E-05	1.33E-02	1.91E-02	2.99E-03	6.76E-03	3.99E-03	4.09E-03	2.24E-03	6.48E-04	1.18E-07	2.67E-03	2.43E-03
E77	0.00E+00	6.02E-05	5.39E-06	1.89E+02	2.59E-04	6.91E-01	1.01E-04	2.83E-02	2.71E-02	4.25E-03	9.95E-03	5.62E-03	5.77E-03	4.47E-03	9.17E-04	1.63E-07	4.18E-03	5.22E-03
E78	0.00E+00	4.11E-05	3.88E-06	1.42E+02	2.04E-04	5.38E-01	7.47E-05	1.48E-02	2.07E-02	3.24E-03	7.31E-03	4.32E-03	4.43E-03	2.47E-03	7.02E-04	1.27E-07	2.88E-03	2.71E-03
E79	0.00E+00	5.25E-05	4.88E-06	1.79E+02	2.56E-04	6.75E-01	9.46E-05	1.87E-02	2.60E-02	4.07E-03	9.30E-03	5.42E-03	5.56E-03	3.16E-03	8.81E-04	1.61E-07	3.73E-03	3.41E-03
E80	0.00E+00	4.40E-05	3.95E-06	1.40E+02	1.95E-04	5.17E-01	7.52E-05	1.90E-02	2.02E-02	3.16E-03	7.41E-03	4.20E-03	4.30E-03	3.08E-03	6.83E-04	1.23E-07	3.11E-03	3.50E-03
E83	0.00E+00	1.41E-05	1.32E-06	4.56E+01	6.73E-05	1.79E-01	2.50E-05	5.69E-03	6.84E-03	1.06E-03	2.45E-03	1.43E-03	1.47E-03	9.15E-04	2.23E-04	4.05E-08	9.77E-04	1.04E-03
E84	0.00E+00	1.18E-05	1.17E-06	4.22E+01	6.46E-05	1.71E-01	2.26E-05	3.70E-03	6.41E-03	9.95E-04	2.18E-03	1.35E-03	1.38E-03	6.14E-04	2.09E-04	3.81E-08	8.04E-04	6.70E-04
E85	0.00E+00	9.42E-05	8.17E-06	2.44E+02	3.81E-04	1.00E+00	1.54E-04	4.51E-02	4.63E-02	6.93E-03	1.53E-02	8.35E-03	8.57E-03	6.42E-03	1.18E-03	2.18E-07	6.69E-03	8.35E-03
E86	0.00E+00	1.07E-04	8.63E-06	2.41E+02	3.49E-04	9.37E-01	1.58E-04	6.41E-02	4.49E-02	6.74E-03	1.58E-02	8.02E-03	8.24E-03	8.73E-03	1.14E-03	2.05E-07	7.61E-03	1.19E-02
E87	0.00E+00	1.12E-04	8.68E-06	2.32E+02	3.18E-04	8.67E-01	1.57E-04	7.44E-02	4.27E-02	6.41E-03	1.58E-02	7.58E-03	7.78E-03	1.00E-02	1.08E-03	1.91E-07	8.07E-03	1.39E-02
E88	0.00E+00	9.74E-05	8.36E-06	2.47E+02	3.81E-04	1.01E+00	1.57E-04	4.87E-02	4.67E-02	7.00E-03	1.56E-02	8.42E-03	8.64E-03	6.87E-03	1.19E-03	2.19E-07	6.91E-03	9.04E-03
E89	0.00E+00	8.57E-06	8.24E-07	2.67E+01	4.52E-05	1.16E-01	1.61E-05	2.43E-03	5.16E-03	7.72E-04	1.57E-03	9.44E-04	9.68E-04	3.97E-04	1.32E-04	2.53E-08	6.06E-04	4.42E-04
E90	0.00E+00	6.38E-06	6.20E-07	2.03E+01	3.45E-05	8.86E-02	1.22E-05	1.69E-03	3.92E-03	5.86E-04	1.18E-03	7.17E-04	7.36E-04	2.81E-04	1.01E-04	1.92E-08	4.49E-04	3.06E-04
E91	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.68E-07	2.46E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.02E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E92	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.68E-07	2.46E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.02E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E93	0.00E+00	1.08E-05	1.04E-06	3.35E+01	5.63E-05	1.45E-01	2.02E-05	3.18E-03	6.46E-03	9.65E-04	1.98E-03	1.18E-03	1.21E-03	5.14E-04	1.65E-04	3.16E-08	7.67E-04	5.79E-04
E94	0.00E+00	1.01E-05	9.89E-07	3.27E+01	5.62E-05	1.44E-01	1.96E-05	2.22E-03	6.34E-03	9.47E-04	1.92E-03	1.16E-03	1.19E-03	3.99E-04	1.63E-04	3.16E-08	7.22E-04	3.97E-04
E95	0.00E+00	5.11E-05	4.14E-06	1.41E+02	1.63E-04	4.65E-01	7.46E-05	3.41E-02	1.49E-02	2.48E-03	7.47E-03	3.78E-03	3.88E-03	5.86E-03	6.60E-04	1.12E-07	3.59E-03	6.34E-03
E96	0.00E+00	3.20E-05	2.69E-06	9.44E+01	1.14E-04	3.21E-01	4.91E-05	1.96E-02	1.01E-02	1.68E-03	4.88E-03	2.58E-03	2.64E-03	3.37E-03	4.47E-04	7.65E-08	2.23E-03	3.64E-03
F01	0.00E+00	3.01E-05	2.53E-06	7.33E+01	1.11E-04	2.94E-01	4.69E-05	1.62E-02	1.38E-02	2.07E-03	4.67E-03	2.48E-03	2.54E-03	2.25E-03	3.50E-04	6.39E-08	2.13E-03	3.02E-03
F02	0.00E+00	1.75E-05	1.67E-06	5.33E+01	8.85E-05	2.29E-01	3.21E-05	6.12E-03	1.03E-02	1.54E-03	3.13E-03	1.87E-03	1.91E-03	9.25E-04	2.62E-04	4.92E-08	1.21E-03	1.12E-03
F33	0.00E+00	2.08E-05	2.09E-06	6.89E+01	1.17E-04	3.03E-01	4.04E-05	5.77E-03	1.34E-02	2.00E-03	3.90E-03	2.43E-03	2.49E-03	9.15E-04	3.42E-04	6.42E-08	1.40E-03	1.05E-03
F34	0.00E+00	1.04E-05	1.08E-06	3.66E+01	6.38E-05	1.63E-01	2.13E-05	2.01E-03	7.14E-03	1.07E-03	2.05E-03	1.31E-03	1.34E-03	3.63E-04	1.83E-04	3.49E-08	7.11E-04	3.55E-04
F35	0.00E+00	1.58E-05	1.31E-06	4.55E+01	5.67E-05	1.60E-01	2.45E-05	8.93E-03	4.68E-03	7.90E-04	2.46E-03	1.27E-03	1.31E-03	1.60E-03	2.15E-04	3.94E-08	1.15E-03	1.66E-03
F36	0.00E+00	1.37E-05	9.88E-07	3.12E+01	3.23E-05	9.57E-02	1.79E-05	9.85E-03	3.02E-03	5.16E-04	1.86E-03	8.06E-04	8.28E-04	1.76E-03	1.41E-04	2.52E-08	1.03E-03	1.84E-03
F37	0.00E+00	8.05E-05	6.24E-06	1.65E+02	2.22E-04	6.11E-01	1.11E-04	5.62E-02	3.03E-02	4.55E-03	1.12E-02	5.34E-03	5.49E-03	7.43E-03	7.63E-04	1.32E-07	5.69E-03	1.05E-02
F38	0.00E+00	8.73E-05	6.95E-06	1.90E+02	2.66E-04	7.21E-01	1.25E-04	5.69E-02	3.51E-02	5.26E-03	1.26E-02	6.22E-03	6.39E-03	7.62E-03	8.85E-04	1.56E-07	6.16E-03	1.06E-02
F39	0.00E+00	1.45E-05	1.37E-06	5.12E+01	7.17E-05	1.96E-01	2.63E-05	5.78E-03	5.50E-03	9.21E-04	2.57E-03	1.52E-03	1.56E-03	1.03E-03	2.51E-04	4.64E-08	1.02E-03	1.06E-03
F40	0.00E+00	3.31E-06	3.03E-07	1.12E+01	1.54E-05	4.23E-02	5.80E-06	1.43E-03	1.19E-03	2.00E-04	5.71E-04	3.28E-04	3.37E-04	2.56E-04	5.46E-05	1.01E-08	2.35E-04	2.61E-04
F41	0.00E+00	9.58E-06	9.75E-07	3.63E+01	5.72E-05	1.50E-01	1.93E-05	1.97E-03	5.55E-03	8.62E-04	1.87E-03	1.17E-03	1.20E-03	3.75E-04	1.82E-04	3.40E-08	6.71E-04	3.47E-04
F42	0.00E+00	1.07E-05	1.13E-06	4.33E+01	6.98E-05	1.81E-01	2.28E-05	1.28E-03	6.67E-03	1.03E-03	2.20E-03	1.41E-03	1.45E-03	2.97E-04	2.18E-04	4.12E-08	7.48E-04	2.13E-04
F43	0.00E+00	2.77E-06	2.65E-07	8.58E+00	1.45E-05	3.73E-02	5.18E-06	8.02E-04	1.66E-03	2.48E-04	5.06E-04	3.03E-04	3.11E-04	1.30E-04	4.25E-05	8.11E-09	1.96E-04	1.46E-04
F44	0.00E+00	5.46E-07	5.83E-08	2.01E+00	3.58E-06	9.12E-03	1.16E-06	5.85E-05	3.95E-04	5.89E-05	1.12E-04	7.25E-05	7.44E-05	1.40E-05	1.01E-05	1.96E-09	3.75E-05	9.73E-06
F45	0.00E+00	1.41E-05	1.32E-06	4.56E+01	6.73E-05	1.79E-01	2.50E-05	5.69E-03	6.84E-03	1.06E-03	2.45E-03	1.43E-03	1.47E-03	9.15E-04	2.23E-04	4.05E-08	9.77E-04	1.04E-03
F46	0.00E+00	1.18E-05	1.17E-06	4.22E+01	6.46E-05	1.71E-01	2.26E-05	3.70E-03	6.41E-03	9.95E-04	2.18E-03	1.35E-03	1.38E-03	6.14E-04	2.09E-04	3.81E-08	8.04E-04	6.70E-04
F47	0.00E+00	1.33E-07	1.42E-08	4.90E-01	8.71E-07	2.22E-03	2.83E-07	1.42E-05	9.61E-05	1.43E-05	2.72E-05	1.76E-05	1.81E-05	3.40E-06	2.47E-06	4.77E-10	9.11E-06	2.37E-06
F48	0.00E+00	2.74E-06	2.30E-07	6.52E+00	9.54E-06	2.57E-02	4.15E-06	1.68E-03	1.22E-03	1.83E-04	4.11E-04	2.17E-04	2.23E-04	2.25E-04	3.09E-05	5.41E-09	1.88E-04	3.14E-04
F78	0.00E+00	2.34E-05	2.06E-06	5.95E+01	9.61E-05	2.43E-01	3.85E-05	9.61E-03	1.68E-02	2.36E-03	3.78E-03	2.10E-03	2.16E-03	1.23E-03	2.89E-04	4.58E-08	1.63E-03	1.78E-03
F79	0.00E+00	3.05E-05	2.89E-06	1.01E+02	1.56E-04	4.02E-01	5.64E-05	9.43E-03	1.87E-02	2.79E-03	5.52E-03	3.27E-03	3.36E-03	1.53E-03	5.00E-04	8.90E-08	2.16E-03	1.72E-03
F80	0.00E+00	6.47E-05	6.20E-06	2.31E+02	3.35E-04	8.80E-01	1.20E-04	2.11E-02	3.37E-02	5.27E-03	1.18E-02	7.03E-03	7.21E-03	3.60E-03	1.14E-03	2.08E-07	4.54E-03	3.83E-03
F84	0.00E+00	3.39E-05	2.61E-06	5.83E+01	7.72E-05	2.14E-01	4.27E-05	2.67E-02	1.61E-02	2.27E-03	4.24E-03	1.98E-03	2.04E-03	2.70E-03	2.67E-04	3.72E-08	2.20E-03	5.01E-03
F85	0.00E+00	2.07E-05	1.67E-06	4.90E+01	6.44E-05	1.75E-01	2.99E-05	1.36E-02	8.79E-03	1.32E-03	2.99E-03	1.50E-03	1.54E-03	1.82E-03	2.31E-04	3.80E-08	1.45E-03	2.53E-03
F86	0.00E+00	2.60E-05	2.13E-06	6.61E+01	7.98E-05	2.22E-01	3.71E-05	1.81E-02	9.22E-03	1.45E-03	3.67E-03	1.88E-03	1.93E-03	2.66E-03	3.09E-04	5.07E-08	1.75E-03	3.38E-03
F87	0.00E+00	5.19E-05	3.58E-06	9.05E+01	1.01E-04	2.85E-01	6.36E-05	3.91E-02	1.56E-02	2.36E-03	6.64E-03	2.68E-03	2.75E-03	5.24E-03	4.06E-04	6.80E-08	3.89E-03	7.32E-03
F88	0.00E+00	3.39E-05	2.61E-06	5.83E+01	7.72E-05	2.14E-01	4.27E-05	2.67E-02	1.61E-02	2.27E-03	4.24E-03	1.98E-03	2.04E-03	2.70E-03	2.67E-04	3.72E-08	2.20E-03	5.01E-03
F89	0.00E+00	1.05E-04	6.82E-06	1.10E+02	9.92E-05	3.19E-01	1.05E-04	9.89E-02	2.85E-02	4.09E-03	1.09E-02	3.66E-03	3.77E-03	9.61E-03	4.56E-04	5.96E-08	7.11E-03	1.86E-02

Appendix F.4.1: MOVES Emission Factors by Road Type, 2051 Build, Section 4

Highway 413

GTA West

RWDI Project#: 1301992

Road Type ID	Road Type De	L nk D	L nk Descr pt on	L nk Avg Speed kph	Source Type D	Source Type De	Un ts	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.37E-05	3.66E-06	1.47E+02	2.39E-04	7.15E-01	7.59E-05	3.88E-03	1.15E-02	2.21E-03	7.40E-03	4.77E-03	4.90E-03	4.28E-04	7.44E-04	1.56E-07	2.50E-03	6.06E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	4.15E-05	4.45E-06	2.02E+02	2.77E-04	8.25E-01	8.96E-05	5.79E-03	1.20E-02	2.33E-03	8.64E-03	5.59E-03	5.73E-03	1.33E-03	1.01E-03	1.85E-07	2.90E-03	9.51E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	4.67E-05	4.89E-06	2.22E+02	2.88E-04	7.25E-01	9.53E-05	8.95E-03	1.32E-02	2.78E-03	8.63E-03	5.90E-03	6.00E-03	2.82E-03	1.10E-03	3.84E-07	2.63E-03	1.52E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.00E-03	2.81E-05	1.02E+03	8.62E-04	8.70E+00	5.90E-03	5.52E-01	3.64E-02	8.25E-03	9.21E-01	5.41E-02	5.68E-02	9.06E-02	4.36E-03	1.13E-06	8.64E-01	1.01E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.25E-03	3.19E-05	1.03E+03	1.10E-03	9.09E+00	6.24E-03	4.91E-01	2.77E-02	7.12E-03	9.68E-01	6.04E-02	6.31E-02	9.14E-02	4.40E-03	1.22E-06	9.05E-01	8.91E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	3.59E-04	1.39E-05	7.44E+02	1.93E-04	1.58E+00	3.82E-04	2.96E-01	3.31E-02	7.64E-03	4.82E-02	8.32E-03	8.52E-03	1.01E-01	2.74E-03	2.62E-07	3.97E-02	5.55E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	6.07E-03	2.59E-05	1.02E+03	1.09E-04	4.02E+00	6.99E-03	7.92E-01	3.41E-02	7.78E-03	1.11E+00	4.91E-02	5.25E-02	1.50E-01	3.63E-03	9.87E-10	1.06E+00	1.46E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.42E-04	1.26E-05	5.88E+02	2.62E-04	1.21E+00	3.88E-04	1.51E-01	2.33E-02	6.02E-03	4.91E-02	9.06E-03	9.22E-03	6.02E-02	2.38E-03	9.71E-07	3.98E-02	2.82E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.44E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.68E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.23E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.26E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.29E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.75E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.09E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.06E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	3.56E-05	3.87E-06	1.53E+02	2.52E-04	8.64E-01	8.02E-05	4.26E-03	8.75E-03	1.92E-03	7.82E-03	5.04E-03	5.18E-03	3.89E-04	7.74E-04	1.75E-07	2.65E-03	6.65E-04
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	4.42E-05	4.74E-06	2.13E+02	2.98E-04	1.02E+00	9.60E-05	6.17E-03	8.88E-03	2.01E-03	9.28E-03	6.00E-03	6.15E-03	1.30E-03	1.07E-03	2.07E-07	3.12E-03	1.01E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.67E-05	4.91E-06	2.30E+02	2.95E-04	8.84E-01	9.68E-05	9.04E-03	9.98E-03	2.42E-03	8.87E-03	6.00E-03	6.11E-03	2.83E-03	1.14E-03	3.99E-07	2.76E-03	1.53E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.49E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.19E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.73E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.27E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.12E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.92E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.65E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.60E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.99E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.51E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.74E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.38E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.94E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.23E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.31E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.00E-05	4.35E-06	1.61E+02	2.84E-04	1.13E+00	9.02E-05	4.75E-03	7.40E-03	1.87E-03	8.80E-03	5.68E-03	5.82E-03	3.57E-04	8.18E-04	2.10E-07	2.98E-03	7.41E-04
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.96E-05	5.33E-06	2.25E+02	3.36E-04	1.35E+00	1.08E-04	6.71E-03	7.49E-03	1.93E-03	1.05E-02	6.77E-03	6.94E-03	1.29E-03	1.13E-03	2.38E-07	3.53E-03	1.09E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.10E-05	5.37E-06	2.40E+02	3.25E-04	1.14E+00	1.06E-04	9.48E-03	8.39E-03	2.32E-03	9.82E-03	6.61E-03	6.73E-03	2.84E-03	1.18E-03	4.34E-07	3.09E-03	1.60E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.42E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.46E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.52E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.59E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.88E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.20E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.11E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.08E-05	6.61E-06	2.23E+02	4.32E-04	1.14E+00	1.37E-04	3.38E-03	8.68E-03	1.96E-03	1.34E-02	8.63E-03	8.85E-03	1.43E-03	1.10E-03	1.91E-07	4.53E-03	5.27E-04
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.30E-05	8.69E-06	2.89E+02	4.88E-04	1.12E+00	1.64E-04	9.08E-03	9.16E-03	1.24E-03	1.54E-02	1.01E-02	1.03E-02	1.03E-02	1.42E-03	1.88E-07	5.98E-03	1.59E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.50E-04	1.54E-05	3.28E+02	8.04E-04	1.05E+00	2.78E-04	1.99E-02	9.45E-02	1.34E-02	2.30E-02	1.69E-02	1.71E-02	4.75E-03	1.58E-03	5.84E-07	5.94E-03	3.57E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.86E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.41E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.88E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.44E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.22E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.05E-02	1.49E-01	4.11E-03	4.92E-07	1.70E-01	2.29E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.51E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.62E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.46E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.40E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.20E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.19E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.84E-01	2.44E-01	3.68E-02	7.22E-02	5.85E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.38E-02	9.03E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.33E-03	3.06E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.77E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.51E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.62E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.17E-05	5.62E-06	1.90E+02	3.67E-04	1.02E+00	1.17E-04	3.28E-03	6.21E-02	8.73E-03	1.14E-02	7.33E-03	7.52E-03	1.07E-03	9.44E-04	1.75E-07	3.85E-03	5.12E-04
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.81E-05	7.15E-06	2.47E+02	4.10E-04	1.01E+00	1.37E-04	7.55E-03	6.57E-02	9.12E-03	1.29E-02	8.43E-03	8.64E-03	2.18E-03	1.22E-03	1.77E-07	4.28E-03	1.31E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.14E-04	1.17E-05	2.78E+02	6.24E-04	9.36E-01	2.15E-04	1.57E-02	6.90E-02	1.01E-02	1.80E-02	1.31E-02	1.32E-02	3.94E-03	1.35E-03	5.06E-07	4.78E-03	2.79E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.59E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.42E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.61E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.19E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.73E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.73E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	4.76E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.92E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.22E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.86E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.73E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.96E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.76E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.92E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.50E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.71E-05	5.12E-06	1.72E+02	3.34E-04	9.32E-01	1.06E-04	3.38E-03	4.70E-02	6.79E-03	1.04E-02	6.68E-03	6.85E-03	8.56E-04	8.57E-04	1.70E-07	3.50E-03	5.28E-04
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.01E-05	6.34E-06	2.25E+02	3.71E-04	9.23E-01	1.23E-04	6.86E-03	4.95E-02	7.07E-03	1.16E-02	7.59E-03	7.77E-03	1.88E-03	1.11E-03	1.78E-07	3.87E-03	1.18E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	6.62E-05	6.94E-06	2.54E+02	3.51E-04	9.03E-01	1.26E-04	5.31E-03	5.38E-02	7.68E-03	1.11E-02	7.12E-03	7.32E-03	1.24E-03	4.71E-04	1.24E-07	4.71E-03	1.52E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01

Appendix F.4.1: MOVES Emission Factors by Road Type, 2051 Build, Section 4

Highway 413
GTA West

RWDI Project#: 1301992

Road Type D	Road Type De	L nk_D	L nk Descr pt on	L nk Avg Speed kph	Source Type D	Source Type De	Un ts	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.44E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.68E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.23E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.26E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.29E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.75E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.09E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.06E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	3.27E-03	3.87E-06	1.53E+02	2.52E-04	8.64E-01	4.26E-03	8.75E-03	1.92E-03	7.82E-03	5.04E-03	5.18E-03	3.89E-04	7.74E-04	1.75E-07	2.65E-03	6.65E-04	
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	4.42E-05	4.74E-06	2.13E+02	2.98E-04	1.02E+00	9.60E-05	6.17E-03	8.88E-03	2.01E-03	9.28E-03	6.00E-03	6.15E-03	1.30E-03	1.07E-03	2.07E-07	3.32E-03	1.01E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.67E-05	4.91E-06	2.30E+02	2.95E-04	8.84E-01	9.68E-05	9.04E-03	9.98E-03	2.42E-03	8.87E-03	6.00E-03	6.11E-03	2.83E-03	1.14E-03	3.99E-07	2.76E-03	1.53E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.49E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.19E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.73E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.27E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.12E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.92E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.65E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.60E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.99E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.51E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.82E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.38E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.94E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.23E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.31E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	4.00E-05	4.35E-06	1.61E+02	2.84E-04	1.13E+00	9.02E-05	4.75E-03	7.40E-03	1.87E-03	8.80E-03	5.68E-03	5.82E-03	3.57E-04	8.18E-04	2.10E-07	2.98E-03	7.41E-04
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.96E-05	5.33E-06	2.25E+02	3.36E-04	1.35E+00	1.08E-04	6.71E-03	7.49E-03	1.93E-03	1.05E-02	6.77E-03	6.94E-03	1.29E-03	1.13E-03	2.38E-07	3.53E-03	1.09E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.10E-05	5.37E-06	2.40E+02	3.25E-04	1.14E+00	1.06E-04	9.48E-03	8.39E-03	2.32E-03	9.82E-03	6.61E-03	6.73E-03	2.84E-03	1.18E-03	4.34E-07	3.09E-03	1.60E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.42E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.46E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.52E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.59E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.88E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.20E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.11E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.32E-05	6.87E-06	2.00E+02	4.48E-04	1.15E+00	1.42E-04	4.29E-03	6.56E-02	9.29E-03	1.39E-02	8.96E-03	9.19E-03	1.07E-03	9.96E-04	2.08E-07	4.70E-03	6.69E-04
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.18E-05	8.63E-06	2.63E+02	5.02E-04	1.15E+00	1.66E-04	9.11E-03	7.21E-02	1.02E-02	1.58E-02	1.03E-02	1.05E-02	2.32E-03	1.30E-03	2.47E-07	5.24E-03	1.57E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.29E-04	1.33E-05	2.96E+02	7.16E-04	1.05E+00	2.45E-04	1.85E-02	7.43E-02	1.10E-02	2.08E-02	1.50E-02	1.51E-02	4.32E-03	1.44E-03	6.01E-07	5.63E-03	3.27E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.59E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.43E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.62E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.59E-01	1.90E-01	3.38E-02	1.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.80E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.80E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.23E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.92E-01	1.82E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.22E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.86E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.75E-03	1.15E-06	1.24E-01	3.11E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.73E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.96E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.76E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.92E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.50E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.44E-05	5.92E-06	1.74E+02	3.86E-04	1.08E+00	1.23E-04	3.81E-03	4.87E-02	7.06E-03	1.20E-02	7.72E-03	7.92E-03	8.56E-04	8.71E-04	1.86E-07	4.05E-03	5.94E-04
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.96E-05	7.35E-06	2.29E+02	4.32E-04	1.07E+00	1.43E-04	7.68E-03	5.35E-02	7.72E-03	1.36E-02	8.84E-03	9.06E-03	1.95E-03	1.13E-03	2.20E-07	4.51E-03	1.31E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.07E-04	1.10E-05	2.56E+02	6.02E-04	9.76E-01	2.05E-04	1.53E-02	5.55E-02	8.46E-03	1.75E-02	1.25E-02	1.27E-02	3.70E-03	1.25E-03	5.34E-07	4.78E-03	2.68E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.10E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	2.00E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.28E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.37E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.27E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.16E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.80E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.10E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.69E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.93E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.17E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.09E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.53E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.76E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.44E+02	2.75E-02	1.00E+01	8.72E-03	6.96E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.70E-05	5.11E-06	1.65E+02	3.33E-04	9.27E-01	1.06E-04	3.82E-03	3.58E-02	5.39E-03	1.03E-02	6.66E-03	6.84E-03	7.14E-04	8.27E-04	1.78E-07	3.50E-03	5.97E-04
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.90E-05	6.26E-06	2.20E+02	3.73E-04	9.39E-01	1.23E-04	6.97E-03	3.90E-02	5.86E-03	1.17E-02	7.61E-03	7.80E-03	1.74E-03	1.09E-03	2.13E-07	3.90E-03	1.18E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.45E-05	8.77E-06	2.45E+02	4.85E-04	8.54E-01	1.64E-04	1.30E-02	4.07E-02	6.51E-03	1.42E-02	1.01E-02	1.02E-02	3.41E-03	1.20E-03	4.88E-07	3.98E-03	2.27E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.14E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.75E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.60E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.74E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.08E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.42E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.08E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.77E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.66E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.04E-04	2.35E-01	9.36E-02	1.61E-02	2.76E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.19E-06	6.33E-02	4.36E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.60E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.02E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.87E+

Appendix F.4.1: MOVES Emission Factors by Road Type, 2051 Build, Section 4

Highway 413

GTA West

RWDI Project#: 1301992

Road Type D	Road Type De	L nk D	L nk Descr pt on	L nk Avg Speed kph	Source Type D	Source Type De	Un ts	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.42E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.36E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.46E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.52E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.59E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.88E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.20E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.11E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.08E-05	6.61E-06	2.23E+02	4.32E-04	1.14E+00	1.37E-04	3.38E-03	8.48E-02	1.17E-02	1.34E-02	8.63E-03	8.85E-03	1.43E-03	1.10E-03	1.91E-07	4.53E-03	5.27E-04
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.30E-05	8.69E-06	2.89E+02	4.88E-04	1.12E+00	1.64E-04	9.08E-03	9.16E-02	1.24E-02	1.54E-02	1.01E-02	1.03E-02	2.72E-03	1.42E-03	1.88E-07	5.08E-03	1.59E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.50E-04	1.54E-05	3.28E+02	8.04E-04	1.05E+00	2.78E-04	1.99E-02	9.45E-02	1.34E-02	2.30E-02	1.69E-02	1.71E-02	4.75E-03	1.58E-03	5.84E-07	5.94E-03	3.57E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.86E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.41E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.88E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.44E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.22E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.05E-02	1.49E-01	4.11E-03	4.92E-07	1.70E-01	2.29E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.51E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.62E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.46E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.40E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.20E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.19E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.84E-01	2.44E-01	3.68E-02	7.22E-02	5.85E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.38E-02	9.03E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.55E-03	3.06E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.77E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.51E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.62E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.17E-05	5.62E-06	1.90E+02	3.67E-04	1.02E+00	1.17E-04	3.28E-03	6.21E-02	8.73E-03	1.14E-02	7.33E-03	7.52E-03	1.07E-03	9.44E-04	1.75E-07	3.85E-03	5.12E-04
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.81E-05	7.15E-06	2.47E+02	4.10E-04	1.01E+00	1.37E-04	7.55E-03	6.57E-02	9.12E-03	1.29E-02	8.43E-03	8.64E-03	2.18E-03	1.22E-03	1.77E-07	4.28E-03	1.31E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.14E-04	1.17E-05	2.78E+02	6.24E-04	9.36E-01	2.15E-04	1.57E-02	6.90E-02	1.01E-02	1.80E-02	1.31E-02	1.32E-02	3.94E-03	1.35E-03	5.66E-07	4.78E-03	2.79E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.59E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.42E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.61E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.19E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.73E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.80E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.92E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.22E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.86E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.73E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.96E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.76E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.92E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.59E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.71E-05	5.12E-06	1.72E+02	3.34E-04	9.32E-01	1.06E-04	3.38E-03	4.70E-02	6.79E-03	1.04E-02	6.68E-03	6.85E-03	8.56E-04	8.57E-04	1.70E-07	3.50E-03	5.28E-04
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.01E-05	6.34E-06	2.25E+02	3.71E-04	9.23E-01	1.23E-04	6.86E-03	4.95E-02	7.07E-03	1.16E-02	7.59E-03	7.77E-03	1.88E-03	1.11E-03	1.78E-07	3.87E-03	1.18E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	9.46E-05	9.78E-06	2.54E+02	5.31E-04	8.55E-01	1.81E-04	1.37E-02	5.28E-02	7.96E-03	1.54E-02	1.11E-02	1.12E-02	3.52E-03	1.24E-03	4.71E-07	4.18E-03	2.41E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.34E-02	6.55E-05	1.16E+03	1.11E-03	5.09E+00	1.56E-02	1.21E+00	1.95E-01	2.99E-02	2.47E+00	1.24E-01	1.32E-01	1.12E-01	4.84E-03	1.52E-06	2.33E+00	2.23E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.15E-03	5.52E-05	9.28E+02	3.12E-04	1.15E+00	1.09E-03	7.68E-01	2.08E-01	3.44E-02	1.30E-01	2.39E-02	2.47E-02	1.25E-01	3.43E-03	3.80E-07	1.05E-01	1.44E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.27E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.24E-05	6.67E+02	6.85E-04	1.08E+00	1.08E-03	4.16E-01	1.17E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.90E-02	7.58E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.10E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.69E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.93E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.17E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.09E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.53E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.76E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.23E-05	4.60E-06	1.64E+02	3.00E-04	8.41E-01	9.55E-05	3.57E-03	3.53E-02	5.30E-03	9.31E-03	6.00E-03	6.16E-03	7.14E-04	8.23E-04	1.68E-07	3.15E-03	5.57E-04
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.34E-05	5.65E-06	2.18E+02	3.36E-04	8.62E-01	1.11E-04	6.50E-03	3.75E-02	5.57E-03	1.05E-02	6.86E-03	7.03E-03	1.71E-03	1.08E-03	1.83E-07	3.51E-03	1.10E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	7.77E-05	8.06E-06	2.45E+02	4.45E-04	7.92E-01	1.51E-04	1.21E-02	3.99E-02	6.29E-03	1.30E-02	9.24E-03	9.36E-03	3.31E-03	1.20E-03	4.47E-07	3.63E-03	2.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.14E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.10E-02	4.94E-05	1.03E+03	9.70E-04	5.43E+00	1.29E-02	9.04E-01	1.37E-01	2.17E-02	2.03E+00	1.02E-01	1.08E-01	9.77E-02	4.34E-03	1.34E-06	1.92E+00	1.66E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.78E-04	3.89E-05	7.97E+02	2.65E-04	1.20E+00	8.54E-04	5.61E-01	1.45E-01	2.37E-02	1.05E-01	1.80E-02	1.86E-02	1.07E-01	2.94E-03	3.06E-07	8.64E-02	1.06E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.42E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.08E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.77E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.66E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.35E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.36E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.60E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.02E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.87E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.52E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.68E-03	3.63E-04	3.62E+02	2.62E-02	1.12E+01	8.32E-03	8.32E-01	3.38E-02	1.95E-02	6.08E-01	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.45E-06	8.87E-02	3.16E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	3.90E-05	4.23E-06	1.59E+02	2.76E-04	7.77E-01	8.78E-05	3.70E-03	2.73E-02	4.27E-03	8.57E-03	5.52E-03	5.67E-03	6.12E-04	7.98E-04	1.56E-07	2.90E-03	5.78E-04
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	4.86E-05	5.16E-06	2.13E+02	3.12E-04	8.18E-01	1.02E-04	6.25E-03	2.91E-02	4.53E-03	9.76E-03	6.34E-03	6.50E-03	1.59E-03	1.06E-03	1.86E-07	3.26E-03	1.05E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.56E-05	6.82E-06	2.39E+02	3.84E-04	7.48E-01	1.29E-04	1.10E-02	3.09E-02	5.13E-03	1.13E-02	7.94E-03	8.04E-03	3.16E-03	1.17E-03	4.29E-07	3.23E-03	1.90E-03
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.56E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.39E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	9.09E-03	3.95E-05	1.01E+03	8.78E-04	5.76E+00	1.06E-02	7.34E-01	8.80E-02	1.53E-02	1.68E+00	8.52E-02	9.01E-02	9.39E-02	4.24E-03	1.32E-06	1.59E+00	1.34E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.83E-04	2.87E-05	7.58E+02	2.21E-04	1.23E+00	6.78E-04	4.55E-01	9.93E-02	1.70E-02	8.47E-02	1.39E-02	1.44E-02	1.02E-01	2.80E-03	2.79E-07	7.04E-02	8.55E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.11E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	52	SingleUnitShortHaulTru

Appendix F.4.1: MOVES Emission Factors by Road Type, 2051 Build, Section 4

Highway 413

GTA West

RWDI Project#: 1301992

Road Type ID	Road Type De	Link ID	Link Descr pt on	Link Avg Speed kph	Source Type ID	Source Type De	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.32E-05	6.87E-06	2.00E+02	4.48E-04	1.15E+00	1.42E-04	4.29E-03	6.56E-02	9.29E-03	1.39E-02	8.96E-03	9.19E-03	1.07E-03	9.96E-04	2.08E-07	4.70E-03	6.69E-04
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.18E-05	8.63E-06	2.63E+02	5.02E-04	1.15E+00	1.66E-04	9.11E-03	7.21E-02	1.02E-02	1.58E-02	1.03E-02	1.05E-02	2.32E-03	1.30E-03	2.47E-07	5.24E-03	1.57E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.29E-04	1.33E-05	2.96E+02	7.16E-04	1.05E+00	2.45E-04	1.85E-02	7.43E-02	1.10E-02	2.08E-02	1.50E-02	1.51E-02	4.32E-03	1.44E-03	6.01E-07	5.63E-03	3.27E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.59E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.43E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.62E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.59E-01	1.90E-01	3.38E-02	1.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.80E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.80E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.92E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.22E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.86E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.11E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.73E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.96E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.76E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.92E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.50E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.44E-05	5.92E-06	1.74E+02	3.86E-04	1.08E+00	1.23E-04	3.81E-03	4.87E-02	7.07E-03	1.20E-02	7.72E-03	7.92E-03	8.56E-04	8.71E-04	1.86E-07	4.05E-03	5.94E-04
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.96E-05	7.35E-06	2.29E+02	4.32E-04	1.07E+00	1.43E-04	7.68E-03	5.35E-02	7.72E-03	1.36E-02	8.84E-03	9.06E-03	1.95E-03	1.13E-03	2.20E-07	4.51E-03	1.31E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.07E-04	1.10E-05	2.56E+02	6.02E-04	9.76E-01	2.05E-04	1.53E-02	5.55E-02	8.46E-03	1.75E-02	1.25E-02	1.27E-02	3.70E-03	1.25E-03	5.34E-07	4.78E-03	2.68E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.10E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	2.00E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.28E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.37E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.27E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.16E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.80E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.10E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.69E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.93E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.17E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.09E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.53E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.76E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.61E-05	5.01E-06	1.64E+02	3.27E-04	9.22E-01	1.04E-04	3.71E-03	3.64E-02	5.44E-03	1.01E-02	6.53E-03	6.71E-03	7.14E-04	8.23E-04	1.73E-07	3.43E-03	5.78E-04
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.84E-05	6.19E-06	2.18E+02	3.68E-04	9.42E-01	1.21E-04	6.88E-03	3.97E-02	5.90E-03	1.16E-02	7.52E-03	7.70E-03	1.74E-03	1.08E-03	2.01E-07	3.85E-03	1.17E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.43E-05	8.74E-06	2.44E+02	4.83E-04	8.57E-01	1.64E-04	1.29E-02	4.14E-02	6.55E-03	1.41E-02	1.00E-02	1.02E-02	3.40E-03	1.19E-03	4.75E-07	3.94E-03	2.25E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.14E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.75E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.60E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.74E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.08E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.31E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.42E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.08E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.77E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.66E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.35E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.36E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.60E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.02E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.87E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.52E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	4.02E-05	4.37E-06	1.57E+02	2.85E-04	8.08E-01	9.06E-05	3.64E-03	2.77E-02	4.32E-03	8.84E-03	5.70E-03	5.85E-03	6.12E-04	7.89E-04	1.64E-07	2.99E-03	5.68E-04
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	5.05E-05	5.37E-06	2.11E+02	3.23E-04	8.52E-01	1.06E-04	6.32E-03	3.00E-02	4.64E-03	1.01E-02	6.58E-03	6.74E-03	1.60E-03	1.05E-03	1.88E-07	3.38E-03	1.06E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.85E-05	7.12E-06	2.36E+02	3.99E-04	7.73E-01	1.34E-04	1.12E-02	3.15E-02	5.21E-03	1.17E-02	8.25E-03	8.36E-03	3.19E-03	1.15E-03	4.33E-07	3.35E-03	1.95E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.56E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.39E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.25E-03	3.84E-05	1.06E+03	9.20E-04	6.72E+00	9.67E-03	7.16E-01	7.10E-02	1.33E-02	1.52E+00	7.97E-02	8.42E-02	9.82E-02	4.50E-03	1.39E-06	1.44E+00	1.30E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.42E-04	2.74E-05	8.14E+02	2.14E-04	1.32E+00	6.36E-04	4.65E-01	7.73E-02	1.48E-02	7.91E-02	1.33E-02	1.37E-02	1.10E-01	3.00E-03	2.97E-07	6.54E-02	8.72E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.11E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.34E-04	2.57E-05	5.90E+02	4.25E-04	1.07E+00	6.89E-04	2.52E-01	5.72E-02	1.05E-02	8.54E-02	1.63E-02	1.66E-02	5.99E-02	2.40E-03	9.69E-07	6.88E-02	4.71E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.25E-04	2.52E-05	5.67E+02	4.14E-04	1.02E+00	6.80E-04	2.46E-01	5.94E-02	1.06E-02	8.45E-02	1.59E-02	1.63E-02	5.73E-02	2.31E-03	9.26E-07	6.82E-02	4.60E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	2.71E-04	2.64E-05	7.23E+02	9.60E-04	2.27E+00	3.91E-04	1.95E-01	6.44E-02	1.23E-02	2.76E-02	2.24E-02	2.24E-02	3.54E-02	3.44E-03	1.93E-06	5.22E-03	3.61E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	9.26E-04	6.89E-05	1.25E+03	2.35E-06	1.34E+00	6.60E-04	1.38E+00	1.31E-01	2.18E-02	5.56E-02	2.01E-02	2.08E-02	1.99E-01	4.19E-03	0.00E+00	3.47E-02	2.61E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.39E-03	7.93E-05	1.29E+03	8.74E-06	1.75E+00	1.15E-03	1.62E+00	1.49E-01	2.25E-02	1.27E-01	2.55E-02	2.65E-02	2.07E-01	4.32E-03	0.00E+00	1.00E-01	3.06E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	3.74E-05	4.07E-06	1.52E+02	2.66E-04	7.72E-01	8.44E-05	3.73E-03	1.96E-02	3.29E-03	8.23E-03	5.31E-03	5.45E-03	5.35E-04	7.68E-04	1.64E-07	2.78E-03	5.82E-04
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	4.60E-05	4.91E-06	2.05E+02	2.99E-04	8.14E-01	9.75E-05	6.01E-03	2.09E-02	3.47E-03	9.36E-03	6.07E-03	6.22E-03	1.48E-03	1.03E-03	1.87E-07	3.13E-03	1.00E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	5.82E-05	6.06E-06	2.28E+02	3.46E-04	7.30E-01	1.16E-04	1.01E-02	2.24E-02	4.02E-03	1.02E-02	7.12E-03	7.23E-03	3.00E-03	1.12E-03	4.13E-07	3.00E-03	1.75E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.06E-03	2.93E-05	9.83E+02	6.70E-04	6.09E+00	8.27E-03	6.38E-01	7.31E-02	1.33E-02	1.31E+00	6.57E-02	6.95E-02	9.09E-02	4.17E-03	1.23E-06	1.24E+00	1.17E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	42	TransitBus	grams/mile	0.00E+00	7.01E-03	3.19E-05	1.03E+03	8.67E-04	6.81E+00	8.24E-03	5.97E-01	5.08E-02	1.05E-02	1.30E+00	6.90E-02	7.27E-02	9.39E-02	4.35E-03	1.35E-06	1.22E+00	1.09E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	43	SchoolBus	grams/mile	0.00E+00	5.13E-04	2.09E-05	7.77E+02	1.89E-04	1.31E+00	5.18E-04	3.82E-01	5.78E-02	1.15E-02	6.52E-02	1.07E-02	1.10E-02	1.05E-01	2.86E-03	2.77E-07	5.42E-02	7.18E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	51	RefuseTruck	grams/mile	0.00E+00	8.85E-03	3.88E-05	1.02E+03	1.56E-04	4.17E+00	1.02E-02	9.51E-01	8.56E-02	1.46E-02	1.62E+00	7.18E-02	7.68E-02	1.50E-01	3.63E-03	9.59E-10	1.54E+00	1.76E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	4.94E-04	1.93E-05	5.90E+02	3.35E-04	1.07E+00	5.43E-04	2.05E-01	4.04E-02	8.27E-03	6.80E-02	1.26E-02	1.28E-02	6.00E-02	2.40E-03	9.51E-07	5.52E-02	3.83E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	4.87E-04	1.88E-05	5.65E+02	3.24E-04	1.01E+00	5.35E-04	1.99E-01	4.21E-02	8.32E-03	6.73E-02	1.23E-02	1.25E-02	5.72E-02	2.30E-03	8.98E-07	5.48E-02	3.71E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	54	Motorhome	grams/mile	0.00E+00	2.12E-04	2.09E-05	7.20E+02	7.93E-04	2.40E+00	3.16E-04	1.61E-01	4.51E-02	9.79E-03	2.24E-02	1.83E-02	1.82E-02	3.52E-02	3.42E-03	1.93E-06	4.15E-03	2.97E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.42E-04	5.49E-05	1.21E+03	1.94E-06	1.13E+00	5.30E-04	1.14E+00	8.59E-02	1.56E-02	4.50E-02	1.60E-02	1.66E-02	1.92E-01	4.04E-03	0.00E+00	2.84E-02	2.16E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	6.40E-05	1.23E+03	7.21E-06	1.47E+00	9.35E-04	1.34E+00	9.74E-02	1.56E-02	1.04E-01	2.06E-02	2.15E-02	1.97E-01	4.12E-03	0.00E+00	8.24E-02	2.53E-01
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	11	Motorcycle	grams/mile	0.00E+00	3.40E-03	3.70E-04	3.82E+02	2.42E-02	1.15E+01	7.69E-03	8.88E-01	2.94E-02	2.10E-02	5.62E-01	4.84E-01	4.80E-01	1.53E-03	2.04E-03	1.08E-05	8.20E-02	3.38E-02
5	UrbanUnrestrictedAccess	12	ArterialRoads_UrbanUnrestricted_90kmh	90	21	PassengerCar	grams/mile	0.00E+00	3.56E-05	3.87E-06	1.50E+02	2.53E-04	7.64E-01	8.02E-05	3.85E-03	1.46E-02	2.64E-03	7.82E-03	5.05E-03	5.18E-03	4.76E-04	7.57E-04	1.65E-07	2.65E-03	6.00E-04
5	UrbanUnrestrictedAccess	12	ArterialRoads_Urban

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A07	110	Passenger Car	1144	0.00E+00	1.13E-05	1.23E-06	4.85E+01	8.02E-05	2.74E-01	2.55E-05	1.35E-03	2.78E-03	6.09E-04	2.49E-03	1.60E-03	1.64E-03	1.24E-04	2.46E-04	5.56E-08	8.41E-04	2.11E-04
17	A07	110	Passenger Truck	1915	0.00E+00	2.35E-05	2.52E-06	1.13E+02	1.58E-04	5.41E-01	5.11E-05	3.28E-03	4.73E-03	1.07E-03	4.94E-03	3.19E-03	3.27E-03	6.93E-04	5.68E-04	1.10E-07	1.66E-03	5.36E-04
17	A07	110	Single Unit Short Haul Truck	374	0.00E+00	3.45E-05	1.40E-06	6.43E+01	3.14E-05	1.55E-01	3.96E-05	1.67E-02	2.07E-03	6.11E-04	4.85E-03	1.02E-03	1.03E-03	6.68E-03	2.59E-04	1.15E-07	3.82E-03	3.11E-03
17	A07	110	Single Unit Long Haul Truck	17	0.00E+00	1.49E-06	5.80E-08	2.69E+00	1.26E-06	6.16E-03	1.70E-06	6.95E-04	9.30E-05	2.63E-05	2.11E-04	4.20E-05	4.27E-05	2.79E-04	1.09E-05	4.70E-09	1.69E-04	1.30E-04
17	A07	110	Combination Short Haul Truck	206	0.00E+00	3.65E-05	2.82E-06	7.22E+01	7.10E-08	5.35E-02	2.54E-05	5.87E-02	1.80E-03	5.27E-04	2.01E-03	8.11E-04	8.42E-04	1.15E-02	2.42E-04	0.00E+00	1.17E-03	1.11E-02
17	A07	110	Combination Long Haul Truck	187	0.00E+00	4.95E-05	3.14E-06	6.52E+01	2.41E-07	6.17E-02	3.86E-05	6.38E-02	1.75E-03	3.85E-04	3.93E-03	9.68E-04	1.01E-03	1.05E-02	2.18E-04	0.00E+00	2.92E-03	1.20E-02
17	A08	110	Passenger Car	1536	0.00E+00	1.52E-05	1.65E-06	6.52E+01	1.08E-04	3.68E-01	3.42E-05	1.82E-03	3.73E-03	8.18E-04	3.34E-03	2.15E-03	2.21E-03	1.66E-04	3.30E-04	7.46E-08	1.13E-03	2.84E-04
17	A08	110	Passenger Truck	2572	0.00E+00	3.16E-05	3.39E-06	1.52E+02	2.13E-04	7.27E-01	6.86E-05	4.41E-03	6.35E-03	1.43E-03	6.63E-03	4.29E-03	4.40E-03	9.31E-04	7.63E-04	1.48E-07	2.23E-03	7.20E-04
17	A08	110	Single Unit Short Haul Truck	336	0.00E+00	3.10E-05	1.25E-06	5.77E+01	2.82E-05	1.39E-01	3.55E-05	1.50E-02	1.86E-03	5.48E-04	4.35E-03	9.14E-04	9.27E-04	6.00E-03	2.32E-04	1.03E-07	3.42E-03	2.79E-03
17	A08	110	Single Unit Long Haul Truck	15	0.00E+00	1.34E-06	5.21E-08	2.42E+00	1.13E-06	5.53E-03	1.53E-06	6.24E-04	8.35E-05	2.36E-05	1.90E-04	3.77E-05	3.83E-05	2.50E-04	9.75E-06	4.22E-09	1.51E-04	1.16E-04
17	A08	110	Combination Short Haul Truck	174	0.00E+00	3.10E-05	2.39E-06	6.12E+01	6.02E-08	4.54E-02	2.15E-05	4.97E-02	1.53E-03	4.47E-04	1.70E-03	6.88E-04	7.13E-04	9.73E-03	2.05E-04	0.00E+00	9.91E-04	9.37E-03
17	A08	110	Combination Long Haul Truck	159	0.00E+00	4.19E-05	2.66E-06	5.53E+01	2.04E-07	5.23E-02	3.27E-05	5.41E-02	1.48E-03	3.26E-04	3.33E-03	8.20E-04	8.53E-04	8.86E-03	1.85E-04	0.00E+00	2.47E-03	1.02E-02
17	A09	110	Passenger Car	1465	0.00E+00	1.45E-05	1.57E-06	6.22E+01	1.03E-04	3.51E-01	3.26E-05	1.73E-03	3.56E-03	7.80E-04	3.18E-03	2.05E-03	2.11E-03	1.58E-04	3.15E-04	7.12E-08	1.08E-03	2.71E-04
17	A09	110	Passenger Truck	2454	0.00E+00	3.01E-05	3.23E-06	1.45E+02	2.03E-04	6.94E-01	6.54E-05	4.21E-03	6.05E-03	1.37E-03	6.32E-03	4.09E-03	4.19E-03	8.88E-04	7.28E-04	1.41E-07	2.13E-03	6.87E-04
17	A09	110	Single Unit Short Haul Truck	477	0.00E+00	4.39E-05	1.78E-06	8.19E+01	4.00E-05	1.98E-01	5.04E-05	2.12E-02	2.64E-03	7.78E-04	6.17E-03	1.30E-03	1.32E-03	8.51E-03	3.30E-04	1.47E-07	4.86E-03	3.96E-03
17	A09	110	Single Unit Long Haul Truck	21	0.00E+00	1.90E-06	7.39E-08	3.43E+00	1.61E-06	7.85E-03	2.17E-06	8.85E-04	1.18E-04	3.35E-05	2.69E-04	5.35E-05	5.43E-05	3.55E-04	1.38E-05	5.98E-09	2.15E-04	1.65E-04
17	A09	110	Combination Short Haul Truck	264	0.00E+00	4.69E-05	3.62E-06	9.27E+01	9.11E-08	6.86E-02	3.26E-05	7.52E-02	2.31E-03	6.76E-04	2.58E-03	1.04E-03	1.08E-03	1.47E-02	3.10E-04	0.00E+00	1.50E-03	1.42E-02
17	A09	110	Combination Long Haul Truck	240	0.00E+00	6.35E-05	4.03E-06	8.36E+01	3.09E-07	7.91E-02	4.96E-05	8.19E-02	2.25E-03	4.94E-04	5.04E-03	1.24E-03	1.29E-03	1.34E-02	2.80E-04	0.00E+00	3.75E-03	1.54E-02
17	A10	110	Passenger Car	1527	0.00E+00	1.51E-05	1.64E-06	6.48E+01	1.07E-04	3.66E-01	3.40E-05	1.81E-03	3.71E-03	8.13E-04	3.32E-03	2.14E-03	2.20E-03	1.65E-04	3.28E-04	7.42E-08	1.12E-03	2.82E-04
17	A10	110	Passenger Truck	2558	0.00E+00	3.14E-05	3.37E-06	1.51E+02	2.12E-04	7.23E-01	6.82E-05	4.38E-03	6.31E-03	1.43E-03	6.59E-03	4.26E-03	4.37E-03	9.26E-04	7.59E-04	1.47E-07	2.22E-03	7.16E-04
17	A10	110	Single Unit Short Haul Truck	385	0.00E+00	3.55E-05	1.44E-06	6.61E+01	3.23E-05	1.60E-01	4.07E-05	1.71E-02	2.13E-03	6.28E-04	4.98E-03	1.05E-03	1.06E-03	6.87E-03	2.66E-04	1.18E-07	3.92E-03	3.20E-03
17	A10	110	Single Unit Long Haul Truck	17	0.00E+00	1.53E-06	5.96E-08	2.77E+00	1.30E-06	6.34E-03	1.75E-06	7.14E-04	9.57E-05	2.70E-05	2.17E-04	4.32E-05	4.39E-05	2.87E-04	1.12E-05	4.83E-09	1.73E-04	1.33E-04
17	A10	110	Combination Short Haul Truck	214	0.00E+00	3.80E-05	2.94E-06	7.52E+01	7.39E-08	5.57E-02	2.64E-05	6.11E-02	1.88E-03	5.49E-04	2.09E-03	8.45E-04	8.76E-04	1.19E-02	2.51E-04	0.00E+00	1.22E-03	1.15E-02
17	A10	110	Combination Long Haul Truck	195	0.00E+00	5.15E-05	3.27E-06	6.79E+01	2.51E-07	6.42E-02	4.02E-05	6.64E-02	1.82E-03	4.01E-04	4.09E-03	1.01E-03	1.05E-03	1.09E-02	2.27E-04	0.00E+00	3.04E-03	1.25E-02
17	A11	110	Passenger Car	1819	0.00E+00	1.80E-05	1.95E-06	7.72E+01	1.28E-04	4.36E-01	4.05E-05	2.15E-03	4.42E-03	9.69E-04	3.95E-03	2.55E-03	2.62E-03	1.97E-04	3.91E-04	8.84E-08	1.34E-03	3.36E-04
17	A11	110	Passenger Truck	3046	0.00E+00	3.74E-05	4.01E-06	1.80E+02	2.52E-04	8.61E-01	8.12E-05	5.22E-03	7.52E-03	1.70E-03	7.85E-03	5.08E-03	5.21E-03	1.10E-03	9.04E-04	1.75E-07	2.64E-03	8.52E-04
17	A11	110	Single Unit Short Haul Truck	535	0.00E+00	4.93E-05	2.00E-06	9.19E+01	4.49E-05	2.22E-01	5.66E-05	2.38E-02	2.96E-03	8.73E-04	6.93E-03	1.45E-03	1.48E-03	9.56E-03	3.70E-04	1.65E-07	5.45E-03	4.45E-03
17	A11	110	Single Unit Long Haul Truck	24	0.00E+00	2.13E-06	8.29E-08	3.85E+00	1.81E-06	8.81E-03	2.43E-06	9.93E-04	1.33E-04	3.76E-05	3.02E-04	6.01E-05	6.10E-05	3.99E-04	1.55E-05	6.72E-09	2.41E-04	1.85E-04
17	A11	110	Combination Short Haul Truck	332	0.00E+00	5.89E-05	4.55E-06	1.17E+02	1.15E-07	8.63E-02	4.10E-05	9.47E-02	2.91E-03	8.50E-04	3.25E-03	1.31E-03	1.36E-03	1.85E-02	3.90E-04	0.00E+00	1.89E-03	1.78E-02
17	A11	110	Combination Long Haul Truck	302	0.00E+00	7.98E-05	5.07E-06	1.05E+02	3.89E-07	9.95E-02	6.23E-05	1.03E-01	2.82E-03	6.21E-04	6.33E-03	1.56E-03	1.62E-03	1.69E-02	3.52E-04	0.00E+00	4.71E-03	1.94E-02
17	A12	110	Passenger Car	1510	0.00E+00	1.49E-05	1.62E-06	6.41E+01	1.06E-04	3.62E-01	3.36E-05	1.79E-03	3.67E-03	8.04E-04	3.28E-03	2.12E-03	2.17E-03	1.63E-04	3.25E-04	7.34E-08	1.11E-03	2.79E-04
17	A12	110	Passenger Truck	2529	0.00E+00	3.10E-05	3.33E-06	1.49E+02	2.09E-04	7.15E-01	6.74E-05	4.33E-03	6.24E-03	1.41E-03	6.52E-03	4.22E-03	4.32E-03	9.15E-04	7.51E-04	1.45E-07	2.19E-03	7.08E-04
17	A12	110	Single Unit Short Haul Truck	443	0.00E+00	4.08E-05	1.65E-06	7.61E+01	3.72E-05	1.84E-01	4.69E-05	1.98E-02	2.45E-03	7.23E-04	5.74E-03	1.21E-03	1.22E-03	7.92E-03	3.07E-04	1.36E-07	4.52E-03	3.68E-03
17	A12	110	Single Unit Long Haul Truck	20	0.00E+00	1.76E-06	6.87E-08	3.19E+00	1.50E-06	7.30E-03	2.01E-06	8.23E-04	1.10E-04	3.11E-05	2.50E-04	4.97E-05	5.05E-05	3.30E-04	1.29E-05	5.56E-09	2.00E-04	1.53E-04
17	A12	110	Combination Short Haul Truck	251	0.00E+00	4.46E-05	3.44E-06	8.82E+01	8.67E-08	6.54E-02	3.10E-05	7.17E-02	2.20E-03	6.44E-04	2.46E-03	9.91E-04	1.03E-03	1.40E-02	2.95E-04	0.00E+00	1.43E-03	1.35E-02
17	A12	110	Combination Long Haul Truck	229	0.00E+00	6.04E-05	3.84E-06	7.96E+01	2.94E-07	7.54E-02	4.72E-05	7.80E-02	2.14E-03	4.70E-04	4.80E-03	1.18E-03	1.23E-03	1.28E-02	2.67E-04	0.00E+00	3.57E-03	1.47E-02
17	A13	110	Passenger Car	1640	0.00E+00	1.62E-05	1.76E-06	6.96E+01	1.15E-04	3.93E-01	3.65E-05	1.94E-03	3.99E-03	8.74E-04	3.56E-03	2.30E-03	2.36E-03	1.77E-04	3.53E-04	7.97E-08	1.21E-03	3.03E-04
17	A13	110	Passenger Truck	2747	0.00E+00	3.37E-05	3.62E-06	1.62E+02	2.27E-04	7.76E-01	7.32E-05	4.71E-03	6.78E-03	1.53E-03	7.08E-03	4.58E-03	4.70E-03	9.94E-04	8.15E-04	1.58E-07	2.38E-03	7.69E-04
17	A13	110	Single Unit Short Haul Truck	560	0.00E+00	5.16E-05	2.09E-06	9.62E+01	4.70E-05	2.32E-01	5.92E-05	2.50E-02	3.10E-03	9.14E-04	7.25E-03	1.52E-03	1.55E-03	1.00E-02	3.87E-04	1.72E-07	5.71E-03	4.65E-03
17	A13	110	Single Unit Long Haul Truck	25	0.00E+00	2.23E-06	8.68E-08	4.03E+00	1.89E-06	9.22E-03	2.54E-06	1.04E-03	1.39E-04	3.93E-05	3.16E-04	6.28E-05	6.38E-05	4.17E-04	1.62E-05	7.03E-09	2.52E-04	1.94E-04
17	A13	110	Combination Short Haul Truck	304	0.00E+00	5.40E-05	4.17E-06	1.07E+02	1.05E-07	7.91E-02	3.75E-05	8.67E-02	2.67E-03	7.79E-04	2.97E-03	1.20E-03	1.24E-03	1.70E-02	3.57E-04	0.00E+00	1.73E-03	1.63E-02
17	A13	110	Combination Long Haul Truck	277	0.00E+00	7.32E-05	4.64E-06	9.64E+01	3.56E-07	9.12E-02	5.71E-05	9.44E-02	2.59E-03	5.69E-04	5.81E-03	1.43E-03	1.49E-03	1.55E-02	3.23E-04	0.00E+00	4.32E-03	1.78E-02
17	A14	110	Passenger Car	1768	0.00E+00	1.75E-05	1.90E-06	7.50E+01	1.24E-04	4.24E-01	3.94E-05	2.09E-03	4.30E-03	9.42E-04	3.84E-03	2.48E-03	2.54E-03	1.91E-04	3.80E-04	8.59E-08	1.30E-03	3.26E-04
17	A14	110	Passenger Truck	2960	0.00E+00	3.63E-05	3.90E-06	1.75E+02	2.45E-04	8.37E-01	7.89E-05	5.07E-03	7.30E-03	1.65E-03	7.63E-03	4.93E-03	5.06E-03	1.07E-03	8.79E-04	1.70E-07	2.57E-03	8.28E-04
17	A14	110	Single Unit Short Haul Truck	428	0.00E+00	3.94E-05	1.60E-06	7.35E+01	3.59E-05	1.77E-01	4.53E-05	1.91E-02	2.37E-03	6.98E-04	5.54E-03	1.16E-03	1.18E-03	7.64E-03	2.96E-04	1.32E-07	4.36E-03	3.56E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	1.70E-06	6.63E-08	3.08E+00	1.45E-06	7.05E-03	1.94E-06	7.94E-04	1.06E-04	3.00E-05	2.41E-04	4.80E-05	4.88E-05	3.19E-04	1.24E-05	5.37E-09	1.93E-04	1.48E-04
17	A14	110	Combination Short Haul Truck	245	0.00E+00	4.36E-05	3.37E-06	8.62E+01	8.47E-08	6.39E-02	3.03E-05	7.00E-02	2.15E-03	6.29E-04	2.40E-03	9.68E-04	1.00E-03	1.37E-02	2.88E-04	0.00E+00	1.40E-03	1.32E-02
17	A14	110	Combination Long Haul Truck	224	0.00E+00	5.91E-05	3.75E-06	7.78E+01	2.87E-07	7.36E-02	4.61E-05	7.62E-02	2.09E-03	4.59E-04	4.69E-03	1.15E-03	1.20E-03	1.25E-02	2.61E-04	0.00E+00	3.49E-03	1.44E-02
17	A15	110	Passenger Car	1511	0.00E+00	1.49E-05	1.62E-06	6.41E+01	1.06E-04	3.62E-01	3.37E-05	1.79E-03	3.67E-03	8.05E-04	3.28E-03	2.12E-03	2.17E-03	1.63E-04	3.25E-04	7.34E-08	1.11E-03	2.79E-04
17	A15	110	Passenger Truck	2530	0.00E+00	3.10E-05	3.33E-06	1.49E+02	2.09E-04	7.15E-01	6.75E-05	4.34E-03	6.24E-03	1.41E-03	6.52E-03	4.22E-03	4.33E-03	9.16E-04	7.51E-04	1.45E-07	2.20E-03	7.08E-04
17	A15	110	Single Unit Short Haul Truck	562	0.00E+00	5.18E-05	2.10E-06	9.65E+01	4.72E-05	2.33E-01	5.94E-05	2.50E-02	3.11E-03	9.17E-04	7.28E-03	1.53E-03	1.55E-03	1.00E-02	3.89E-04	1.73E-07	5.73E-03	4.67E-03
17	A15	110	Single Unit Long Haul Truck	25	0.00E+00	2.24E-06	8.71E-08	4.04E+00	1.90E-06	9.25E-03	2.55E-06	1.04E-03	1.40E-04	3.94E-05	3.17E-04	6.31E-05	6.41E-05	4.19E-04	1.63E-05	7.05E-09	2.53E-04	1.94E-04
17	A15	110	Combination Short Haul Truck	316	0.00E+00	5.61E-05	4.33E-06	1.11E+02	1.09E-07	8.23E-02	3.90E-05	9.02E-02	2.77E-03	8.10E-04	3.09E-03	1.25E-03	1.29E-03	1.76E-02	3.71E-04	0.00E+00	1.80E-03	1.70E-02
17	A15	110	Combination Long Haul Truck	288	0.00E+00	7.60E-05	4.83E-06	1.00E+02	3.70E-07	9.48E-02	5.94E-05	9.81E-02	2.69E-03	5.92E-04	6.03E-03	1.49E-03	1.55E-03	1.61E-02	3.36E-04	0.00E+00	4.49E-03	1.85E-02
17	A16	110	Passenger Car	1466	0.00E+00	1.45E-05	1.57E-06	6.22E+01	1.03E-04	3.52E-01	3.27E-05	1.74E-03	3.56E-03	7.81E-04	3.19E-03	2.05E-03	2.11E-03	1.59E-04	3.15E-04	7.12E-08	1.08E-03	2.71E-04
17	A16	110	Passenger Truck	2455	0.00E+00	3.01E-05	3.23E-06	1.45E+02	2.03E-04	6.94E-01	6.55E-05	4.21E-03	6.06E-03	1.37E-03	6.33E-03	4.09E-03	4.20E-03	8.89E-04	7.29E-04	1.41E-07	2.13E-03	6.87E-04
17	A16	110	Single Unit Short Haul Truck	503	0.00E+00	4.63E-05	1.88E-06	8.63E+01	4.22E-05	2.08E-01	5.31E-05	2.24E-02	2.78E-03	8.20E-04	6.51E-03	1.37E-03	1.39E-03	8.98E-03	3.48E-04	1.55E-07	5.12E-03	4.18E-03
17	A16	110	Single Unit Long Haul Truck	22	0.00E+00	2.00E-06	7.79E-08	3.62E+00	1.70E-06	8.27E-03	2.28E-06	9.33E-04	1.25E-04	3.53E-05	2.84E-04	5.64E-05	5.73E-05	3.74E-04	1.46E-05	6.31E-09	2.26E-04	1.74E-04
17	A16	110	Combination Short Haul Truck	292	0.00E+00	5.20E-05	4.01E-06	1.03E+02	1.01E-07	7.61E-02	3.61E-05	8.35E-02	2.56E-03	7.50E-04	2.86E-03	1.15E-03	1.20E-03	1.63E-02	3.44E-04	0.00E+00	1.66E-03	1.57E-02
17	A16	110	Combination Long Haul Truck	267	0.00E+00	7.04E-05	4.47E-06	9.27E+01	3.43E-07	8.78E-02	5.50E-05	9.08E-02	2.49E-03	5.47E-04	5.59E-03	1.38E-03	1.43E-03	1.49E-02	3.11E-04	0.00E+00	4.15E-03	1.71E-02
17	A17	110	Passenger Car	1497	0.00E+00	1.48E-05	1.61E-06	6.35E+01	1.05E-04	3.59E-01	3.34E-05	1.77E-03	3.64E-03	7.98E-04	3.25E-03	2.10E-03	2.15E-03	1.62E-04	3.22E-04	7.28E-08	1.10E-03	2.77E-04
17	A17	110	Passenger Truck	2508	0.00E+00	3.08E-05	3.30E-06	1.48E+02	2.07E-04	7.09E-01	6.69E-05	4.30E-03	6.19E-03	1.40E-03	6.46E-03	4.18E-03	4.29E-03	9.08E-04	7.44E-04	1.44E-07	2.18E-03	7.02E-04
17	A17	110	Single Unit Short Haul Truck	554	0.00E+00	5.10E-05	2.07E-06	9.51E+01	4.64E-05	2.29E-01	5.85E-05	2.47E-02	3.06E-03	9.03E-04	7.17E-03	1.50E-03	1.53E-03	9.88E-03	3.83E-04	1.70E-07	5.64E-03	4.60E-03
17	A17	110	Single Unit Long Haul Truck	24	0.00E+00	2.20E-06	8.57E-08	3.98E+00	1.87E-06	9.11E-03	2.51E-06	1.03E-03	1.38E-04	3.88E-05	3.12E-04	6.21E-05	6.31E-05	4.12E-04	1.61E-05	6.95E-09	2.49E-04	1.91E-04
17	A17	110	Combination Short Haul Truck	315	0.00E+00	5.61E-05	4.33E-06	1.11E+02	1.09E-07	8.21E-02	3.90E-05	9.00E-02	2.77E-03	8.09E-04	3.09E-03	1.25E-03	1.29E-03	1.76E-02	3.71E-04	0.00E+00	1.79E-03	1.70E-02
17	A17	110	Combination Long Haul Truck	288	0.00E+00	7.59E-05	4.82E-06	1.00E+02	3.70E-07	9.47E-02	5.93E-05	9.80E-02	2.69E-03	5.91E-04	6.02E-03	1.48E-03	1.54E-03	1.61E-02	3.35E-04	0.00E+00	4.48E-03	1.85E-02
17	A18	110	Passenger Car	1436	0.00E+00	1.42E-05	1.54E-06	6.09E+01	1.01E-04	3.45E-01	3.20E-05	1.70E-03	3.49E-03	7.65E-04	3.12E-03	2.01E-03	2.07E-03	1.55E-04	3.09E-04	6.98E-08	1.06E-03	2.65E-04
17	A18	110	Passenger Truck	2406	0.00E+00	2.95E-05	3.17E-06	1.42E+02	1.99E-04	6.80E-01	6.41E-05	4.12E-03	5.94E-03	1.34E-03	6.20E-03	4.01E-03	4.11E-03	8.71E-04	7.14E-04	1.38E-07	2.09E-03	6.73E-04
17	A18	110	Single Unit Short Haul Truck	523	0.00E+00	4.82E-05	1.95E-06	8.98E+01	4.39E-05	2.17E-01	5.53E-05	2.33E-02	2.89E-03	8.53E-04	6.77E-03	1.42E-03	1.44E-03	9.33E-03	3.62E-04	1.61E-07	5.33E-03	4.34E-03
17	A18	110	Single Unit Long Haul Truck	23	0.00E+00	2.08E-06	8.10E-08	3.76E+00	1.77E-06	8.61E-03	2.37E-06	9.70E-04	1.30E-04	3.67E-05	2.95E-04	5.87E-05	5.96E-05	3.89E-04	1.52E-05	6.56E-09	2.35E-04	1.81E-04
17	A18	110	Combination Short Haul Truck	301	0.00E+00	5.35E-05	4.13E-06	1.06E+02	1.04E-07	7.83E-02	3.71E-05	8.58E-02	2.64E-03	7.71E-04	2.94E-03	1.19E-03	1.23E-03	1.68E-02	3.53E-04	0.00E+00	1.71E-03	1.62E-02
17	A18	110	Combination Long Haul Truck	274	0.00E+00	7.24E-05	4.59E-06	9.54E+01	3.52E-07	9.03E-02	5.65E-05	9.34E-02	2.56E-03	5.63E-04	5.75E-03	1.42E-03	1.47E-03	1.53E-02	3.20E-04	0.00E+00	4.27E-03	1.76E-02
17	A19	110	Passenger Car	1383	0.00E+00	1.37E-05	1.48E-06	5.87E+01	9.70E-05	3.32E-01	3.08E-05	1.64E-03	3.36E-03	7.36E-04	3.00E-03	1.94E-03	1.99E-03	1.49E-04	2.97E-04	6.72E-08	1.02E-03	2.55E-04
17	A19	110	Passenger Truck	2315	0.00E+00	2.84E-05	3.05E-06	1.37E+02	1.92E-04	6.54E-01	6.17E-05	3.97E-03	5.71E-03	1.29E-03	5.97E-03	3.86E-03	3.96E-03	8.38E-04	6.87E-04	1.33E-07	2.01E-03	6.48E-04
17	A19	110	Single Unit Short Haul Truck	518	0.00E+00	4.77E-05	1.93E-06	8.90E+01	4.35E-05	2.15E-01	5.48E-05	2.31E-02	2.87E-03	8.45E-04	6.71E-03	1.41E-03	1.43E-03	9.25E-03	3.58E-04	1.59E-07	5.28E-03	4.30E-03
17	A19	110	Single Unit Long Haul Truck	23	0.00E+00	2.06E-06	8.03E-08	3.73E+00	1.75E-06	8.53E-03	2.35E-06	9.61E-04	1.29E-04	3.63E-05	2.92E-04	5.81E-05	5.90E-05	3.86E-04	1.50E-05	6.50E-09	2.33E-04	1.79E-04
17	A19	110	Combination Short Haul Truck	299	0.00E+00	5.31E-05	4.10E-06	1.05E+02	1.03E-07	7.78E-02	3.69E-05	8.53E-02	2.62E-03	7.66E-04	2.92E-03	1.18E-03	1.22E-03	1.67E-02	3.51E-04	0.00E+00	1.70E-03	1.61E-02
17	A19	110	Combination Long Haul Truck	272	0.00E+00	7.19E-05	4.56E-06	9.47E+01	3.50E-07	8.96E-02	5.61E-05	9.28E-02	2.54E-03	5.59E-04	5.71E-03	1.41E-03	1.46E-03	1.52E-02	3.17E-04	0.00E+00	4.24E-03	1.75E-02
17	A20	110	Passenger Car	1247	0.00E+00	1.23E-05	1.34E-06	5.29E+01	8.75E-05	2.99E-01	2.78E-05	1.48E-03	3.03E-03	6.64E-04	2.71E-03	1.75E-03	1.79E-03	1.35E-04	2.68E-04	6.06E-08	9.17E-04	2.30E-04
17	A20	110	Passenger Truck	2089	0.00E+00	2.56E-05	2.75E-06	1.23E+02	1.73E-04	5.90E-01	5.57E-05	3.58E-03	5.15E-03	1.16E-03	5.38E-03	3.48E-03	3.57E-03	7.56E-04	6.20E-04	1.20E-07	1.81E-03	5.84E-04
17	A20	110	Single Unit Short Haul Truck	538	0.00E+00	4.96E-05	2.01E-06	9.24E+01	4.52E-05	2.23E-01	5.69E-05	2.40E-02	2.98E-03	8.78E-04	6.97E-03	1.46E-03	1.48E-03	9.61E-03	3.72E-04	1.66E-07	5.48E-03	4.47E-03
17	A20	110	Single Unit Long Haul Truck	24	0.00E+00	2.14E-06	8.34E-08	3.87E+00	1.82E-06	8.86E-03	2.44E-06	9.99E-04	1.34E-04	3.78E-05	3.04E-04	6.04E-05	6.13E-05	4.01E-04	1.56E-05	6.75E-09	2.42E-04

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A24	110	Single Unit Long Haul Truck	24	0.00E+00	2.18E-06	8.49E-08	3.94E+00	1.85E-06	9.02E-03	2.49E-06	1.02E-03	1.36E-04	3.84E-05	3.09E-04	6.15E-05	6.24E-05	4.08E-04	1.59E-05	6.87E-09	2.47E-04	1.90E-04
17	A24	110	Combination Short Haul Truck	275	0.00E+00	4.89E-05	3.77E-06	9.67E+01	9.50E-08	7.16E-02	3.40E-05	7.85E-02	2.41E-03	7.05E-04	2.69E-03	1.09E-03	1.13E-03	1.54E-02	3.23E-04	0.00E+00	1.57E-03	1.48E-02
17	A24	110	Combination Long Haul Truck	251	0.00E+00	6.62E-05	4.20E-06	8.73E+01	3.22E-07	8.26E-02	5.17E-05	8.55E-02	2.34E-03	5.15E-04	5.26E-03	1.29E-03	1.35E-03	1.40E-02	2.92E-04	0.00E+00	3.91E-03	1.61E-02
17	A25	110	Passenger Car	1279	0.00E+00	1.26E-05	1.37E-06	5.43E+01	8.97E-05	3.07E-01	2.85E-05	1.51E-03	3.11E-03	6.81E-04	2.78E-03	1.79E-03	1.84E-03	1.38E-04	2.75E-04	6.22E-08	9.40E-04	2.36E-04
17	A25	110	Passenger Truck	2143	0.00E+00	2.63E-05	2.82E-06	1.27E+02	1.77E-04	6.06E-01	5.71E-05	3.67E-03	5.29E-03	1.19E-03	5.52E-03	3.57E-03	3.66E-03	7.76E-04	6.36E-04	1.23E-07	1.86E-03	6.00E-04
17	A25	110	Single Unit Short Haul Truck	606	0.00E+00	5.58E-05	2.26E-06	1.04E+02	5.09E-05	2.51E-01	6.41E-05	2.70E-02	3.35E-03	9.89E-04	7.85E-03	1.65E-03	1.67E-03	1.08E-02	4.19E-04	1.86E-07	6.18E-03	5.03E-03
17	A25	110	Single Unit Long Haul Truck	27	0.00E+00	2.41E-06	9.39E-08	4.36E+00	2.05E-06	9.98E-03	2.75E-06	1.12E-03	1.51E-04	4.25E-05	3.42E-04	6.80E-05	6.91E-05	4.51E-04	1.76E-05	7.61E-09	2.73E-04	2.10E-04
17	A25	110	Combination Short Haul Truck	335	0.00E+00	5.95E-05	4.59E-06	1.18E+02	1.16E-07	8.72E-02	4.13E-05	9.56E-02	2.94E-03	8.58E-04	3.28E-03	1.32E-03	1.37E-03	1.87E-02	3.93E-04	0.00E+00	1.90E-03	1.80E-02
17	A25	110	Combination Long Haul Truck	305	0.00E+00	8.06E-05	5.11E-06	1.06E+02	3.92E-07	1.00E-01	6.29E-05	1.04E-01	2.85E-03	6.27E-04	6.39E-03	1.58E-03	1.64E-03	1.70E-02	3.56E-04	0.00E+00	4.76E-03	1.96E-02
17	A26	110	Passenger Car	1565	0.00E+00	1.55E-05	1.68E-06	6.64E+01	1.10E-04	3.75E-01	3.49E-05	1.85E-03	3.80E-03	8.33E-04	3.40E-03	2.19E-03	2.25E-03	1.69E-04	3.37E-04	7.60E-08	1.15E-03	2.89E-04
17	A26	110	Passenger Truck	2620	0.00E+00	3.21E-05	3.45E-06	1.55E+02	2.17E-04	7.41E-01	6.99E-05	4.49E-03	6.47E-03	1.46E-03	6.75E-03	4.37E-03	4.48E-03	9.48E-04	7.78E-04	1.51E-07	2.27E-03	7.33E-04
17	A26	110	Single Unit Short Haul Truck	465	0.00E+00	4.28E-05	1.73E-06	7.98E+01	3.90E-05	1.92E-01	4.91E-05	2.07E-02	2.57E-03	7.58E-04	6.01E-03	1.26E-03	1.28E-03	8.29E-03	3.21E-04	1.43E-07	4.73E-03	3.86E-03
17	A26	110	Single Unit Long Haul Truck	20	0.00E+00	1.85E-06	7.19E-08	3.34E+00	1.57E-06	7.64E-03	2.11E-06	8.62E-04	1.15E-04	3.26E-05	2.62E-04	5.21E-05	5.29E-05	3.46E-04	1.35E-05	5.83E-09	2.09E-04	1.61E-04
17	A26	110	Combination Short Haul Truck	235	0.00E+00	4.18E-05	3.23E-06	8.27E+01	8.13E-08	6.13E-02	2.91E-05	6.72E-02	2.06E-03	6.04E-04	2.30E-03	9.29E-04	9.64E-04	1.31E-02	2.77E-04	0.00E+00	1.34E-03	1.27E-02
17	A26	110	Combination Long Haul Truck	215	0.00E+00	5.67E-05	3.60E-06	7.47E+01	2.76E-07	7.06E-02	4.42E-05	7.31E-02	2.00E-03	4.41E-04	4.50E-03	1.11E-03	1.15E-03	1.20E-02	2.50E-04	0.00E+00	3.34E-03	1.38E-02
17	A27	110	Passenger Car	1279	0.00E+00	1.26E-05	1.37E-06	5.43E+01	8.97E-05	3.07E-01	2.85E-05	1.51E-03	3.11E-03	6.81E-04	2.78E-03	1.79E-03	1.84E-03	1.38E-04	2.75E-04	6.22E-08	9.40E-04	2.36E-04
17	A27	110	Passenger Truck	2143	0.00E+00	2.63E-05	2.82E-06	1.27E+02	1.77E-04	6.06E-01	5.71E-05	3.67E-03	5.29E-03	1.19E-03	5.52E-03	3.57E-03	3.66E-03	7.76E-04	6.36E-04	1.23E-07	1.86E-03	6.00E-04
17	A27	110	Single Unit Short Haul Truck	606	0.00E+00	5.58E-05	2.26E-06	1.04E+02	5.09E-05	2.51E-01	6.41E-05	2.70E-02	3.35E-03	9.89E-04	7.85E-03	1.65E-03	1.67E-03	1.08E-02	4.19E-04	1.86E-07	6.18E-03	5.03E-03
17	A27	110	Single Unit Long Haul Truck	27	0.00E+00	2.41E-06	9.39E-08	4.36E+00	2.05E-06	9.98E-03	2.75E-06	1.12E-03	1.51E-04	4.25E-05	3.42E-04	6.80E-05	6.91E-05	4.51E-04	1.76E-05	7.61E-09	2.73E-04	2.10E-04
17	A27	110	Combination Short Haul Truck	335	0.00E+00	5.95E-05	4.59E-06	1.18E+02	1.16E-07	8.72E-02	4.13E-05	9.56E-02	2.94E-03	8.58E-04	3.28E-03	1.32E-03	1.37E-03	1.87E-02	3.93E-04	0.00E+00	1.90E-03	1.80E-02
17	A27	110	Combination Long Haul Truck	305	0.00E+00	8.06E-05	5.11E-06	1.06E+02	3.92E-07	1.00E-01	6.29E-05	1.04E-01	2.85E-03	6.27E-04	6.39E-03	1.58E-03	1.64E-03	1.70E-02	3.56E-04	0.00E+00	4.76E-03	1.96E-02
17	A28	110	Passenger Car	1565	0.00E+00	1.55E-05	1.68E-06	6.64E+01	1.10E-04	3.75E-01	3.49E-05	1.85E-03	3.80E-03	8.33E-04	3.40E-03	2.19E-03	2.25E-03	1.69E-04	3.37E-04	7.60E-08	1.15E-03	2.89E-04
17	A28	110	Passenger Truck	2620	0.00E+00	3.21E-05	3.45E-06	1.55E+02	2.17E-04	7.41E-01	6.99E-05	4.49E-03	6.47E-03	1.46E-03	6.75E-03	4.37E-03	4.48E-03	9.48E-04	7.78E-04	1.51E-07	2.27E-03	7.33E-04
17	A28	110	Single Unit Short Haul Truck	465	0.00E+00	4.28E-05	1.73E-06	7.98E+01	3.90E-05	1.92E-01	4.91E-05	2.07E-02	2.57E-03	7.58E-04	6.01E-03	1.26E-03	1.28E-03	8.29E-03	3.21E-04	1.43E-07	4.73E-03	3.86E-03
17	A28	110	Single Unit Long Haul Truck	20	0.00E+00	1.85E-06	7.19E-08	3.34E+00	1.57E-06	7.64E-03	2.11E-06	8.62E-04	1.15E-04	3.26E-05	2.62E-04	5.21E-05	5.29E-05	3.46E-04	1.35E-05	5.83E-09	2.09E-04	1.61E-04
17	A28	110	Combination Short Haul Truck	235	0.00E+00	4.18E-05	3.23E-06	8.27E+01	8.13E-08	6.13E-02	2.91E-05	6.72E-02	2.06E-03	6.04E-04	2.30E-03	9.29E-04	9.64E-04	1.31E-02	2.77E-04	0.00E+00	1.34E-03	1.27E-02
17	A28	110	Combination Long Haul Truck	215	0.00E+00	5.67E-05	3.60E-06	7.47E+01	2.76E-07	7.06E-02	4.42E-05	7.31E-02	2.00E-03	4.41E-04	4.50E-03	1.11E-03	1.15E-03	1.20E-02	2.50E-04	0.00E+00	3.34E-03	1.38E-02
16	B09	100	Passenger Car	920	0.00E+00	8.61E-06	9.35E-07	3.76E+01	6.11E-05	1.83E-01	1.94E-05	9.93E-04	2.94E-03	5.64E-04	1.89E-03	1.22E-03	1.25E-03	1.09E-04	1.90E-04	4.00E-08	6.40E-04	1.55E-04
16	B09	100	Passenger Truck	1542	0.00E+00	1.78E-05	1.90E-06	8.67E+01	1.19E-04	3.53E-01	3.84E-05	2.48E-03	5.14E-03	9.97E-04	3.70E-03	2.39E-03	2.46E-03	5.68E-04	4.34E-04	7.91E-08	1.24E-03	4.07E-04
16	B09	100	Single Unit Short Haul Truck	174	0.00E+00	1.66E-05	6.12E-07	2.85E+01	1.27E-05	5.88E-02	1.88E-05	7.32E-03	1.13E-03	2.92E-04	2.38E-03	4.39E-04	4.46E-04	2.92E-03	1.15E-04	4.70E-08	1.93E-03	1.37E-03
16	B09	100	Single Unit Long Haul Truck	8	0.00E+00	7.20E-07	2.59E-08	1.20E+00	5.24E-07	2.40E-03	8.14E-07	3.07E-04	5.12E-05	1.27E-05	1.04E-04	1.85E-05	1.88E-05	1.22E-04	4.86E-06	1.92E-09	8.50E-05	5.73E-05
16	B09	100	Combination Short Haul Truck	93	0.00E+00	1.32E-05	9.78E-07	3.08E+01	3.51E-08	2.38E-02	9.48E-06	2.39E-02	8.97E-04	2.27E-04	8.07E-04	2.86E-04	2.97E-04	4.90E-03	1.03E-04	0.00E+00	5.10E-04	4.50E-03
16	B09	100	Combination Long Haul Truck	84	0.00E+00	1.87E-05	1.06E-06	2.79E+01	1.19E-07	2.78E-02	1.54E-05	2.56E-02	8.98E-04	1.83E-04	1.72E-03	3.40E-04	3.54E-04	4.48E-03	9.36E-05	0.00E+00	1.36E-03	4.82E-03
16	B10	100	Passenger Car	1742	0.00E+00	1.63E-05	1.77E-06	7.11E+01	1.16E-04	3.46E-01	3.67E-05	1.88E-03	5.57E-03	1.07E-03	3.58E-03	2.31E-03	2.37E-03	2.07E-04	3.60E-04	7.56E-08	1.21E-03	2.93E-04
16	B10	100	Passenger Truck	2916	0.00E+00	3.36E-05	3.60E-06	1.64E+02	2.24E-04	6.68E-01	7.26E-05	4.69E-03	9.72E-03	1.89E-03	7.00E-03	4.53E-03	4.65E-03	1.07E-03	8.22E-04	1.50E-07	2.35E-03	7.71E-04
16	B10	100	Single Unit Short Haul Truck	106	0.00E+00	1.01E-05	3.73E-07	1.74E+01	7.73E-06	3.58E-02	1.15E-05	4.47E-03	6.87E-04	1.78E-04	1.45E-03	2.67E-04	2.72E-04	1.78E-03	7.03E-05	2.87E-08	1.18E-03	8.33E-04
16	B10	100	Single Unit Long Haul Truck	5	0.00E+00	4.39E-07	1.58E-08	7.30E-01	3.20E-07	1.47E-03	4.96E-07	1.87E-04	3.12E-05	7.72E-06	6.33E-05	1.13E-05	1.15E-05	7.43E-05	2.96E-06	1.17E-09	5.19E-05	3.49E-05
16	B10	100	Combination Short Haul Truck	200	0.00E+00	2.86E-05	2.11E-06	6.66E+01	7.58E-08	5.15E-02	2.05E-05	5.16E-02	1.94E-03	4.91E-04	1.74E-03	6.16E-04	6.40E-04	1.06E-02	2.23E-04	0.00E+00	1.10E-03	9.72E-03
16	B10	100	Combination Long Haul Truck	182	0.00E+00	4.04E-05	2.28E-06	6.03E+01	2.57E-07	5.99E-02	3.33E-05	5.52E-02	1.94E-03	3.95E-04	3.71E-03	7.34E-04	7.65E-04	9.68E-03	2.02E-04	0.00E+00	2.94E-03	1.04E-02
16	B11	100	Passenger Car	335	0.00E+00	3.13E-06	3.40E-07	1.37E+01	2.22E-05	6.65E-02	7.05E-06	3.61E-04	1.07E-03	2.05E-04	6.88E-04	4.44E-04	4.55E-04	3.98E-05	6.92E-05	1.45E-08	2.33E-04	5.63E-05
16	B11	100	Passenger Truck	560	0.00E+00	6.46E-06	6.92E-07	3.15E+01	4.31E-05	1.28E-01	1.39E-05	9.01E-04	1.87E-03	3.62E-04	1.34E-03	8.70E-04	8.93E-04	2.06E-04	1.58E-04	2.88E-08	4.52E-04	1.48E-04
16	B11	100	Single Unit Short Haul Truck	102	0.00E+00	9.65E-06	3.56E-07	1.66E+01	7.38E-06	3.42E-02	1.09E-05	4.27E-03	6.56E-04	1.70E-04	1.38E-03	2.55E-04	2.60E-04	1.70E-03	6.71E-05	2.74E-08	1.12E-03	7.95E-04
16	B11	100	Single Unit Long Haul Truck	4	0.00E+00	4.19E-07	1.51E-08	6.97E-01	3.05E-07	1.40E-03	4.74E-07	1.79E-04	2.98E-05	7.37E-06	6.05E-05	1.08E-05	1.10E-05	7.09E-05	2.83E-06	1.12E-09	4.95E-05	3.34E-05
16	B11	100	Combination Short Haul Truck	47	0.00E+00	6.66E-06	4.92E-07	1.55E+01	1.77E-08	1.20E-02	4.77E-06	1.20E-02	4.51E-04	1.14E-04	4.06E-04	1.44E-04	1.49E-04	2.47E-03	5.19E-05	0.00E+00	2.57E-04	2.26E-03
16	B11	100	Combination Long Haul Truck	42	0.00E+00	9.41E-06	5.31E-07	1.41E+01	6.00E-08	1.40E-02	7.77E-06	1.29E-02	4.52E-04	9.20E-05	8.63E-04	1.71E-04	1.78E-04	2.25E-03	4.71E-05	0.00E+00	6.85E-04	2.42E-03
16	B12	100	Passenger Car	859	0.00E+00	8.03E-06	8.73E-07	3.51E+01	5.70E-05	1.71E-01	1.81E-05	9.26E-04	2.75E-03	5.26E-04	1.77E-03	1.14E-03	1.17E-03	1.02E-04	1.78E-04	3.73E-08	5.97E-04	1.44E-04
16	B12	100	Passenger Truck	1438	0.00E+00	1.66E-05	1.78E-06	8.09E+01	1.11E-04	3.29E-01	3.58E-05	2.31E-03	4.79E-03	9.30E-04	3.45E-03	2.23E-03	2.29E-03	5.30E-04	4.05E-04	7.38E-08	1.16E-03	3.80E-04
16	B12	100	Single Unit Short Haul Truck	39	0.00E+00	3.73E-06	1.38E-07	6.41E+00	2.86E-06	1.32E-02	4.23E-06	1.65E-03	2.54E-04	6.57E-05	5.35E-04	9.88E-05	1.01E-04	6.57E-04	2.60E-05	1.06E-08	4.35E-04	3.08E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	1.62E-07	5.83E-09	2.70E-01	1.18E-07	5.42E-04	1.83E-07	6.92E-05	1.15E-05	2.85E-06	2.34E-05	4.17E-06	4.24E-06	2.74E-05	1.09E-06	4.34E-10	1.92E-05	1.29E-05
16	B12	100	Combination Short Haul Truck	44	0.00E+00	6.29E-06	4.64E-07	1.46E+01	1.67E-08	1.13E-02	4.50E-06	1.13E-02	4.26E-04	1.08E-04	3.83E-04	1.36E-04	1.41E-04	2.33E-03	4.90E-05	0.00E+00	2.42E-04	2.14E-03
16	B12	100	Combination Long Haul Truck	40	0.00E+00	8.88E-06	5.01E-07	1.33E+01	5.66E-08	1.32E-02	7.33E-06	1.21E-02	4.26E-04	8.69E-05	8.15E-04	1.61E-04	1.68E-04	2.13E-03	4.44E-05	0.00E+00	6.47E-04	2.29E-03
16	B13	100	Passenger Car	842	0.00E+00	7.87E-06	8.56E-07	3.44E+01	5.59E-05	1.67E-01	1.78E-05	9.08E-04	2.69E-03	5.16E-04	1.73E-03	1.12E-03	1.15E-03	1.00E-04	1.74E-04	3.65E-08	5.86E-04	1.42E-04
16	B13	100	Passenger Truck	1410	0.00E+00	1.63E-05	1.74E-06	7.93E+01	1.08E-04	3.23E-01	3.51E-05	2.27E-03	4.70E-03	9.12E-04	3.38E-03	2.19E-03	2.25E-03	5.19E-04	3.97E-04	7.24E-08	1.14E-03	3.73E-04
16	B13	100	Single Unit Short Haul Truck	64	0.00E+00	6.10E-06	2.25E-07	1.05E+01	4.67E-06	2.16E-02	6.91E-06	2.70E-03	4.15E-04	1.07E-04	8.74E-04	1.61E-04	1.64E-04	1.07E-03	4.24E-05	1.73E-08	7.10E-04	5.03E-04
16	B13	100	Single Unit Long Haul Truck	3	0.00E+00	2.65E-07	9.53E-09	4.41E-01	1.93E-07	8.85E-04	3.00E-07	1.13E-04	1.88E-05	4.66E-06	3.82E-05	6.81E-06	6.93E-06	4.48E-05	1.79E-06	7.08E-10	3.13E-05	2.11E-05
16	B13	100	Combination Short Haul Truck	89	0.00E+00	1.28E-05	9.45E-07	2.98E+01	3.39E-08	2.30E-02	9.16E-06	2.31E-02	8.66E-04	2.20E-04	7.79E-04	2.76E-04	2.86E-04	4.74E-03	9.97E-05	0.00E+00	4.93E-04	4.35E-03
16	B13	100	Combination Long Haul Truck	82	0.00E+00	1.81E-05	1.02E-06	2.70E+01	1.15E-07	2.68E-02	1.49E-05	2.47E-02	8.68E-04	1.77E-04	1.66E-03	3.29E-04	3.42E-04	4.33E-03	9.05E-05	0.00E+00	1.32E-03	4.66E-03
16	B14	100	Passenger Car	401	0.00E+00	3.75E-06	4.07E-07	1.64E+01	2.66E-05	7.96E-02	8.45E-06	4.32E-04	1.28E-03	2.46E-04	8.24E-04	5.31E-04	5.45E-04	4.77E-05	8.28E-05	1.74E-08	2.79E-04	6.74E-05
16	B14	100	Passenger Truck	671	0.00E+00	7.74E-06	8.29E-07	3.77E+01	5.16E-05	1.54E-01	1.67E-05	1.08E-03	2.24E-03	4.34E-04	1.61E-03	1.04E-03	1.07E-03	2.47E-04	1.89E-04	3.45E-08	5.41E-04	1.77E-04
16	B14	100	Single Unit Short Haul Truck	90	0.00E+00	8.56E-06	3.16E-07	1.47E+01	6.55E-06	3.03E-02	9.70E-06	3.78E-03	5.82E-04	1.51E-04	1.23E-03	2.27E-04	2.30E-04	1.51E-03	5.95E-05	2.43E-08	9.96E-04	7.05E-04
16	B14	100	Single Unit Long Haul Truck	4	0.00E+00	3.72E-07	1.34E-08	6.18E-01	2.71E-07	1.24E-03	4.20E-07	1.59E-04	2.64E-05	6.54E-06	5.36E-05	9.55E-06	9.73E-06	6.29E-05	2.51E-06	9.94E-10	4.39E-05	2.96E-05
16	B14	100	Combination Short Haul Truck	44	0.00E+00	6.36E-06	4.70E-07	1.48E+01	1.69E-08	1.14E-02	4.55E-06	1.15E-02	4.31E-04	1.09E-04	3.87E-04	1.37E-04	1.42E-04	2.35E-03	4.95E-05	0.00E+00	2.45E-04	2.16E-03
16	B14	100	Combination Long Haul Truck	41	0.00E+00	8.99E-06	5.07E-07	1.34E+01	5.73E-08	1.33E-02	7.42E-06	1.23E-02	4.31E-04	8.79E-05	8.25E-04	1.63E-04	1.70E-04	2.15E-03	4.50E-05	0.00E+00	6.54E-04	2.32E-03
16	B15	100	Passenger Car	895	0.00E+00	8.37E-06	9.09E-07	3.66E+01	5.94E-05	1.78E-01	1.89E-05	9.65E-04	2.86E-03	5.48E-04	1.84E-03	1.19E-03	1.22E-03	1.06E-04	1.85E-04	3.89E-08	6.23E-04	1.51E-04
16	B15	100	Passenger Truck	1499	0.00E+00	1.73E-05	1.85E-06	8.43E+01	1.15E-04	3.43E-01	3.73E-05	2.41E-03	4.99E-03	9.70E-04	3.60E-03	2.33E-03	2.39E-03	5.52E-04	4.22E-04	7.70E-08	1.21E-03	3.96E-04
16	B15	100	Single Unit Short Haul Truck	128	0.00E+00	1.22E-05	4.51E-07	2.10E+01	9.33E-06	4.33E-02	1.38E-05	5.39E-03	8.29E-04	2.15E-04	1.75E-03	3.23E-04	3.29E-04	2.15E-03	8.48E-05	3.46E-08	1.42E-03	1.01E-03
16	B15	100	Single Unit Long Haul Truck	6	0.00E+00	5.30E-07	1.91E-08	8.81E-01	3.86E-07	1.77E-03	5.99E-07	2.26E-04	3.77E-05	9.32E-06	7.65E-05	1.36E-05	1.39E-05	8.97E-05	3.58E-06	1.42E-09	6.26E-05	4.22E-05
16	B15	100	Combination Short Haul Truck	63	0.00E+00	9.05E-06	6.69E-07	2.11E+01	2.40E-08	1.63E-02	6.48E-06	1.63E-02	6.13E-04	1.55E-04	5.52E-04	1.95E-04	2.03E-04	3.35E-03	7.05E-05	0.00E+00	3.49E-04	3.08E-03
16	B15	100	Combination Long Haul Truck	58	0.00E+00	1.28E-05	7.21E-07	1.91E+01	8.16E-08	1.90E-02	1.06E-05	1.75E-02	6.14E-04	1.25E-04	1.17E-03	2.33E-04	2.42E-04	3.07E-03	6.40E-05	0.00E+00	9.32E-04	3.30E-03
16	B16	100	Passenger Car	1772	0.00E+00	1.66E-05	1.80E-06	7.24E+01	1.18E-04	3.52E-01	3.74E-05	1.91E-03	5.66E-03	1.09E-03	3.64E-03	2.35E-03	2.41E-03	2.11E-04	3.66E-04	7.69E-08	1.23E-03	2.98E-04
16	B16	100	Passenger Truck	2967	0.00E+00	3.42E-05	3.67E-06	1.67E+02	2.28E-04	6.80E-01	7.38E-05	4.77E-03	9.89E-03	1.92E-03	7.12E-03	4.61E-03	4.73E-03	1.09E-03	8.36E-04	1.52E-07	2.39E-03	7.84E-04
16	B16	100	Single Unit Short Haul Truck	131	0.00E+00	1.25E-05	4.61E-07	2.14E+01	9.54E-06	4.42E-02	1.41E-05	5.51E-03	8.48E-04	2.19E-04	1.79E-03	3.30E-04	3.36E-04	2.19E-03	8.67E-05	3.54E-08	1.45E-03	1.03E-03
16	B16	100	Single Unit Long Haul Truck	6	0.00E+00	5.42E-07	1.95E-08	9.01E-01	3.95E-07	1.81E-03	6.13E-07	2.31E-04	3.85E-05	9.53E-06	7.82E-05	1.39E-05	1.42E-05	9.17E-05	3.66E-06	1.45E-09	6.40E-05	4.31E-05
16	B16	100	Combination Short Haul Truck	51	0.00E+00	7.33E-06	5.42E-07	1.71E+01	1.95E-08	1.32E-02	5.25E-06	1.32E-02	4.97E-04	1.26E-04	4.47E-04	1.58E-04	1.64E-04	2.71E-03	5.71E-05	0.00E+00	2.82E-04	2.49E-03
16	B16	100	Combination Long Haul Truck	47	0.00E+00	1.04E-05	5.84E-07	1.55E+01	6.61E-08	1.54E-02	8.55E-06	1.42E-02	4.97E-04	1.01E-04	9.51E-04	1.88E-04	1.96E-04	2.48E-03	5.18E-05	0.00E+00	7.54E-04	2.67E-03
16	B17	100	Passenger Car	596	0.00E+00	5.58E-06	6.06E-07	2.44E+01	3.96E-05	1.18E-01	1.26E-05	6.43E-04	1.91E-03	3.65E-04	1.23E-03	7.91E-04	8.11E-04	7.09E-05	1.23E-04	2.59E-08	4.15E-04	1.00E-04
16	B17	100	Passenger Truck	999	0.00E+00	1.15E-05	1.23E-06	5.61E+01	7.68E-05	2.29E-01	2.48E-05	1.61E-03	3.33E-03	6.46E-04	2.40E-03	1.55E-03	1.59E-03	3.68E-04	2.81E-04	5.13E-08	8.05E-04	2.64E-04
16	B17	100	Single Unit Short Haul Truck	253	0.00E+00	2.40E-05	8.88E-07	4.13E+01	1.84E-05	8.52E-02	2.72E-05	1.06E-02	1.63E-03	4.23E-04	3.45E-03	6.36E-04	6.47E-04	4.23E-03	1.67E-04	6.82E-08	2.80E-03	1.98E-03
16	B17	100	Single Unit Long Haul Truck	11	0.00E+00	1.04E-06	3.75E-08	1.74E+00	7.61E-07	3.49E-03	1.18E-06	4.45E-04	7.43E-05	1.84E-05	1.51E-04	2.68E-05	2.73E-05	1.77E-04	7.05E-06	2.79E-09	1.23E-04	8.31E-05
16	B17	100	Combination Short Haul Truck	119	0.00E+00	1.71E-05	1.26E-06	3.97E+01	4.53E-08	3.07E-02	1.22E-05	3.08E-02	1.16E-03	2.93E-04	1.04E-03	3.68E-04	3.82E-04	6.32E-03	1.33E-04	0.00E+00	6.57E-04	5.80E-03
16	B17	100	Combination Long Haul Truck	109	0.00E+00	2.41E-05	1.36E-06	3.60E+01	1.54E-07	3.58E-02	1.99E-05	3.30E-02	1.16E-03	2.36E-04	2.21E-03	4.38E-04	4.57E-04	5.78E-03	1.21E-04	0.00E+00	1.76E-03	6.21E-03
16	B18	100	Passenger Car	1318	0.00E+00	1.23E-05	1.34E-06	5.38E+01	8.75E-05	2.62E-01	2.78E-05	1.42E-03	4.21E-03	8.08E-04	2.71E-03	1.75E-03	1.79E-03	1.57E-04	2.72E-04	5.72E-08	9.17E-04	2.22E-04

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B22	100	Passenger Car	2787	0.00E+00	2.61E-05	2.83E-06	1.14E+02	1.85E-04	5.54E-01	5.88E-05	3.01E-03	8.91E-03	1.71E-03	5.73E-03	3.70E-03	3.79E-03	3.31E-04	5.76E-04	1.21E-07	1.94E-03	4.69E-04
16	B22	100	Passenger Truck	4668	0.00E+00	5.38E-05	5.77E-06	2.62E+02	3.59E-04	1.07E+00	1.16E-04	7.51E-03	1.56E-02	3.02E-03	1.12E-02	7.25E-03	7.43E-03	1.72E-03	1.32E-03	2.40E-07	3.76E-03	1.23E-03
16	B22	100	Single Unit Short Haul Truck	179	0.00E+00	1.70E-05	6.29E-07	2.92E+01	1.30E-05	6.04E-02	1.93E-05	7.52E-03	1.16E-03	3.00E-04	2.44E-03	4.51E-04	4.59E-04	3.00E-03	1.18E-04	4.83E-08	1.98E-03	1.40E-03
16	B22	100	Single Unit Long Haul Truck	8	0.00E+00	7.40E-07	2.66E-08	1.23E+00	5.39E-07	2.47E-03	8.36E-07	3.16E-04	5.26E-05	1.30E-05	1.07E-04	1.90E-05	1.94E-05	1.25E-04	4.99E-06	1.98E-09	8.74E-05	5.88E-05
16	B22	100	Combination Short Haul Truck	177	0.00E+00	2.53E-05	1.87E-06	5.89E+01	6.71E-08	4.55E-02	1.81E-05	4.56E-02	1.71E-03	4.34E-04	1.54E-03	5.45E-04	5.66E-04	9.36E-03	1.97E-04	0.00E+00	9.74E-04	8.60E-03
16	B22	100	Combination Long Haul Truck	161	0.00E+00	3.57E-05	2.02E-06	5.34E+01	2.28E-07	5.30E-02	2.95E-05	4.89E-02	1.72E-03	3.49E-04	3.28E-03	6.50E-04	6.77E-04	8.56E-03	1.79E-04	0.00E+00	2.60E-03	9.21E-03
16	B23	100	Passenger Car	1026	0.00E+00	9.60E-06	1.04E-06	4.19E+01	6.81E-05	2.04E-01	2.16E-05	1.11E-03	3.28E-03	6.29E-04	2.11E-03	1.36E-03	1.40E-03	1.22E-04	2.12E-04	4.45E-08	7.14E-04	1.73E-04
16	B23	100	Passenger Truck	1719	0.00E+00	1.98E-05	2.12E-06	9.66E+01	1.32E-04	3.94E-01	4.28E-05	2.76E-03	5.73E-03	1.11E-03	4.12E-03	2.67E-03	2.74E-03	6.33E-04	4.84E-04	8.82E-08	1.39E-03	4.54E-04
16	B23	100	Single Unit Short Haul Truck	211	0.00E+00	2.00E-05	7.40E-07	3.44E+01	1.53E-05	7.10E-02	2.27E-05	8.85E-03	1.36E-03	3.52E-04	2.87E-03	5.30E-04	5.39E-04	3.52E-03	1.39E-04	5.69E-08	2.33E-03	1.65E-03
16	B23	100	Single Unit Long Haul Truck	9	0.00E+00	8.70E-07	3.13E-08	1.45E+00	6.34E-07	2.91E-03	9.84E-07	3.71E-04	6.19E-05	1.53E-05	1.26E-04	2.24E-05	2.28E-05	1.47E-04	5.87E-06	2.33E-09	1.03E-04	6.92E-05
16	B23	100	Combination Short Haul Truck	182	0.00E+00	2.60E-05	1.92E-06	6.07E+01	6.91E-08	4.69E-02	1.86E-05	4.70E-02	1.76E-03	4.47E-04	1.59E-03	5.62E-04	5.83E-04	9.64E-03	2.03E-04	0.00E+00	1.00E-03	8.86E-03
16	B23	100	Combination Long Haul Truck	166	0.00E+00	3.68E-05	2.07E-06	5.49E+01	2.35E-07	5.46E-02	3.04E-05	5.03E-02	1.77E-03	3.60E-04	3.38E-03	6.69E-04	6.97E-04	8.82E-03	1.84E-04	0.00E+00	2.68E-03	9.48E-03
16	B24	100	Passenger Car	4052	0.00E+00	3.79E-05	4.12E-06	1.66E+02	2.69E-04	8.05E-01	8.54E-05	4.37E-03	1.30E-02	2.48E-03	8.33E-03	5.37E-03	5.51E-03	4.82E-04	8.37E-04	1.76E-07	2.82E-03	6.82E-04
16	B24	100	Passenger Truck	6785	0.00E+00	7.83E-05	8.38E-06	3.81E+02	5.22E-04	1.55E+00	1.69E-04	1.09E-02	2.26E-02	4.39E-03	1.63E-02	1.05E-02	1.08E-02	2.50E-03	1.91E-03	3.48E-07	5.47E-03	1.79E-03
16	B24	100	Single Unit Short Haul Truck	419	0.00E+00	3.98E-05	1.47E-06	6.83E+01	3.04E-05	1.41E-01	4.51E-05	1.76E-02	2.70E-03	7.00E-04	5.70E-03	1.05E-03	1.07E-03	7.00E-03	2.77E-04	1.13E-07	4.63E-03	3.28E-03
16	B24	100	Single Unit Long Haul Truck	18	0.00E+00	1.73E-06	6.21E-08	2.87E+00	1.26E-06	5.77E-03	1.95E-06	7.37E-04	1.23E-04	3.04E-05	2.49E-04	4.44E-05	4.52E-05	2.92E-04	1.17E-05	4.62E-09	2.04E-04	1.38E-04
16	B24	100	Combination Short Haul Truck	287	0.00E+00	4.10E-05	3.03E-06	9.55E+01	1.09E-07	7.38E-02	2.94E-05	7.40E-02	2.78E-03	7.04E-04	2.50E-03	8.84E-04	9.18E-04	1.52E-02	3.19E-04	0.00E+00	1.58E-03	1.39E-02
16	B24	100	Combination Long Haul Truck	261	0.00E+00	5.79E-05	3.27E-06	8.65E+01	3.69E-07	8.59E-02	4.78E-05	7.92E-02	2.78E-03	5.67E-04	5.32E-03	1.05E-03	1.10E-03	1.39E-02	2.90E-04	0.00E+00	4.22E-03	1.49E-02
53	C29	70	Passenger Car	33	0.00E+00	3.52E-07	3.82E-08	1.43E+00	2.50E-06	7.02E-03	7.94E-07	3.35E-05	2.47E-04	3.86E-05	7.74E-05	4.99E-05	5.12E-05	5.53E-06	7.21E-06	1.50E-09	2.62E-05	5.22E-06
53	C29	70	Passenger Truck	54	0.00E+00	7.35E-07	7.82E-08	3.23E+00	4.72E-06	1.24E-02	1.54E-06	9.45E-05	4.41E-04	6.85E-05	1.48E-04	9.59E-05	9.83E-05	2.40E-05	1.61E-05	2.82E-09	4.94E-05	1.58E-05
53	C29	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
53	C29	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
50	C30	40	Passenger Car	112	0.00E+00	1.61E-06	1.75E-07	5.92E+00	1.14E-05	3.19E-02	3.63E-06	1.02E-04	1.93E-03	2.72E-04	3.54E-04	2.28E-04	2.34E-04	3.34E-05	2.94E-05	5.45E-09	1.20E-04	1.60E-05
50	C30	40	Passenger Truck	188	0.00E+00	3.55E-06	3.73E-07	1.29E+01	2.14E-05	5.27E-02	7.13E-06	3.94E-04	3.43E-03	4.76E-04	6.74E-04	4.40E-04	4.51E-04	1.14E-04	6.35E-05	9.26E-09	2.23E-04	6.83E-05
50	C30	40	Single Unit Short Haul Truck	46	0.00E+00	1.56E-05	6.94E-07	8.68E+00	1.08E-05	1.36E-02	1.67E-05	6.28E-03	1.81E-03	2.83E-04	2.01E-03	4.18E-04	4.26E-04	8.87E-04	3.54E-05	1.50E-08	1.58E-03	1.18E-03
50	C30	40	Single Unit Long Haul Truck	2	0.00E+00	6.84E-07	3.03E-08	3.75E-01	4.72E-07	5.93E-04	7.32E-07	2.74E-04	8.11E-05	1.26E-05	8.81E-05	1.83E-05	1.86E-05	3.83E-05	1.53E-06	6.51E-10	6.95E-05	5.13E-05
50	C30	40	Combination Short Haul Truck	35	0.00E+00	1.69E-05	1.26E-06	1.45E+01	4.19E-08	2.39E-02	1.20E-05	2.46E-02	3.41E-03	5.08E-04	1.01E-03	3.67E-04	3.81E-04	2.31E-03	4.86E-05	0.00E+00	6.24E-04	4.63E-03
50	C30	40	Combination Long Haul Truck	32	0.00E+00	2.25E-05	1.27E-06	1.39E+01	1.43E-07	2.90E-02	1.85E-05	2.59E-02	3.54E-03	4.97E-04	2.06E-03	4.09E-04	4.26E-04	2.24E-03	4.67E-05	0.00E+00	1.63E-03	4.89E-03
52	C31	60	Passenger Car	270	0.00E+00	3.17E-06	3.45E-07	1.23E+01	2.25E-05	6.31E-02	7.16E-06	2.68E-04	2.65E-03	3.97E-04	6.98E-04	4.50E-04	4.62E-04	5.35E-05	6.17E-05	1.26E-08	2.36E-04	4.18E-05
52	C31	60	Passenger Truck	452	0.00E+00	6.70E-06	7.10E-07	2.74E+01	4.22E-05	1.08E-01	1.39E-05	8.17E-04	4.71E-03	6.99E-04	1.32E-03	8.61E-04	8.83E-04	2.14E-04	1.36E-04	2.30E-08	4.41E-04	1.38E-04
52	C31	60	Single Unit Short Haul Truck	47	0.00E+00	1.05E-05	4.33E-07	7.81E+00	6.94E-06	1.37E-02	1.13E-05	4.02E-03	1.08E-03	1.81E-04	1.40E-03	2.69E-04	2.75E-04	7.91E-04	3.18E-05	1.31E-08	1.12E-03	7.52E-04
52	C31	60	Single Unit Long Haul Truck	2	0.00E+00	4.57E-07	1.88E-08	3.33E-01	3.01E-07	5.83E-04	4.95E-07	1.74E-04	4.85E-05	8.05E-06	6.11E-05	1.17E-05	1.19E-05	3.36E-05	1.36E-06	5.58E-10	4.92E-05	3.26E-05
52	C31	60	Combination Short Haul Truck	19	0.00E+00	5.65E-06	4.15E-07	6.82E+00	1.55E-08	8.44E-03	4.06E-06	8.61E-03	9.86E-04	1.54E-04	3.48E-04	1.21E-04	1.26E-04	1.08E-03	2.28E-05	0.00E+00	2.22E-04	1.62E-03
52	C31	60	Combination Long Haul Truck	18	0.00E+00	7.76E-06	4.24E-07	6.44E+00	5.24E-08	1.01E-02	6.49E-06	9.17E-03	1.03E-03	1.49E-04	7.36E-04	1.38E-04	1.44E-04	1.03E-03	2.16E-05	0.00E+00	5.92E-04	1.73E-03
53	C32	70	Passenger Car	190	0.00E+00	2.06E-06	2.23E-07	8.38E+00	1.46E-05	4.10E-02	4.63E-06	1.95E-04	1.44E-03	2.26E-04	4.52E-04	2.91E-04	2.99E-04	3.23E-05	4.21E-05	8.75E-09	1.53E-04	3.05E-05
53	C32	70	Passenger Truck	318	0.00E+00	4.29E-06	4.56E-07	1.89E+01	2.76E-05	7.23E-02	9.01E-06	5.52E-04	2.57E-03	4.00E-04	8.62E-04	5.60E-04	5.74E-04	1.40E-04	9.40E-05	1.65E-08	2.88E-04	9.24E-05
53	C32	70	Single Unit Short Haul Truck	58	0.00E+00	1.03E-05	4.18E-07	9.57E+00	6.89E-06	1.74E-02	1.12E-05	4.09E-03	9.29E-04	1.70E-04	1.39E-03	2.64E-04	2.69E-04	9.73E-04	3.89E-05	1.57E-08	1.12E-03	7.65E-04
53	C32	70	Single Unit Long Haul Truck	3	0.00E+00	4.47E-07	1.80E-08	4.06E-01	2.97E-07	7.29E-04	4.87E-07	1.76E-04	4.25E-05	7.62E-06	6.05E-05	1.14E-05	1.16E-05	4.10E-05	1.65E-06	6.62E-10	4.88E-05	3.29E-05
53	C32	70	Combination Short Haul Truck	42	0.00E+00	1.09E-05	8.11E-07	1.47E+01	2.77E-08	1.57E-02	7.77E-06	1.63E-02	1.54E-03	2.56E-04	6.54E-04	2.36E-04	2.45E-04	2.34E-03	4.93E-05	0.00E+00	4.09E-04	3.07E-03
53	C32	70	Combination Long Haul Truck	39	0.00E+00	1.50E-05	8.50E-07	1.38E+01	9.37E-08	1.88E-02	1.23E-05	1.74E-02	1.60E-03	2.41E-04	1.36E-03	2.73E-04	2.85E-04	2.22E-03	4.63E-05	0.00E+00	1.07E-03	3.28E-03
52	C33	60	Passenger Car	60	0.00E+00	7.08E-07	7.69E-08	2.74E+00	5.02E-06	1.41E-02	1.60E-06	5.97E-05	5.91E-04	8.86E-05	1.56E-04	1.00E-04	1.03E-04	1.19E-05	1.38E-05	2.80E-09	5.27E-05	9.31E-06
52	C33	60	Passenger Truck	101	0.00E+00	1.49E-06	1.58E-07	6.11E+00	9.42E-06	2.41E-02	3.10E-06	1.82E-04	1.05E-03	1.56E-04	2.95E-04	1.92E-04	1.97E-04	4.78E-05	3.04E-05	5.12E-09	9.84E-05	3.08E-05
52	C33	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
50	C34	40	Passenger Car	84	0.00E+00	1.20E-06	1.31E-07	4.42E+00	8.53E-06	2.38E-02	2.71E-06	7.64E-05	1.44E-03	2.03E-04	2.64E-04	1.71E-04	1.75E-04	2.49E-05	2.20E-05	4.07E-09	8.95E-05	1.19E-05
50	C34	40	Passenger Truck	140	0.00E+00	2.65E-06	2.79E-07	9.62E+00	1.60E-05	3.94E-02	5.33E-06	2.94E-04	2.56E-03	3.55E-04	5.03E-04	3.29E-04	3.37E-04	8.50E-05	4.74E-05	6.91E-09	1.67E-04	5.10E-05
50	C34	40	Single Unit Short Haul Truck	7	0.00E+00	2.27E-06	1.01E-07	1.27E+00	1.57E-06	1.99E-03	2.43E-06	9.16E-04	2.64E-04	4.12E-05	2.92E-04	6.09E-05	6.21E-05	1.29E-04	5.16E-06	2.19E-09	2.30E-04	1.72E-04
50	C34	40	Combination Short Haul Truck	3	0.00E+00	1.26E-06	9.42E-08	1.08E+00	3.12E-09	1.78E-03	8.96E-07	1.84E-03	2.54E-04	3.79E-05	7.50E-05	2.74E-05	2.85E-05	1.72E-04	3.63E-06	0.00E+00	4.66E-05	3.46E-04
50	C34	40	Combination Long Haul Truck	2	0.00E+00	1.68E-06	9.47E-08	1.04E+00	1.07E-08	2.17E-03	1.38E-06	1.94E-03	2.64E-04	3.71E-05	1.54E-04	3.05E-05	3.18E-05	1.67E-04	3.49E-06	0.00E+00	1.22E-04	3.65E-04
53	C35	70	Passenger Car	116	0.00E+00	1.25E-06	1.36E-07	5.11E+00	8.90E-06	2.50E-02	2.83E-06	1.19E-04	8.79E-04	1.38E-04	2.76E-04	1.78E-04	1.82E-04	1.97E-05	2.57E-05	5.34E-09	9.33E-05	1.86E-05
53	C35	70	Passenger Truck	194	0.00E+00	2.62E-06	2.78E-07	1.15E+01	1.68E-05	4.41E-02	5.50E-06	3.37E-04	1.57E-03	2.44E-04	5.26E-04	3.42E-04	3.50E-04	8.55E-05	5.73E-05	1.01E-08	1.76E-04	5.64E-05
53	C35	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.19E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.71E-06
53	C35	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.03E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.47E-04
53	C35	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.38E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
50	C36	40	Passenger Car	329	0.00E+00	4.73E-06	5.14E-07	1.74E+01	3.36E-05	9.37E-02	1.07E-05	3.00E-04	5.68E-03	7.98E-04	1.04E-03	6.71E-04	6.88E-04	9.79E-05	8.64E-05	1.60E-08	3.52E-04	4.69E-05
50	C36	40	Passenger Truck	552	0.00E+00	1.04E-05	1.10E-06	3.78E+01	6.28E-05	1.55E-01	2.10E-05	1.16E-03	1.01E-02	1.40E-03	1.98E-03	1.29E-03	1.32E-03	3.34E-04	1.86E-04	2.72E-08	6.55E-04	2.01E-04
50	C36	40	Single Unit Short Haul Truck	46	0.00E+00	1.56E-05	6.94E-07	8.68E+00	1.08E-05	1.36E-02	1.67E-05	6.28E-03	1.81E-03	2.83E-04	2.01E-03	4.18E-04	4.26E-04	8.87E-04	3.54E-05	1.50E-08	1.58E-03	1.18E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	6.84E-07	3.03E-08	3.75E-01	4.72E-07	5.93E-04	7.32E-07	2.74E-04	8.11E-05	1.26E-05	8.81E-05	1.83E-05	1.86E-05	3.83E-05	1.53E-06	6.51E-10	6.95E-05	5.13E-05
50	C36	40	Combination Short Haul Truck	60	0.00E+00	2.88E-05	2.15E-06	2.47E+01	7.12E-08	4.07E-02	2.04E-05	4.18E-02	5.80E-03	8.64E-04	1.71E-03	6.25E-04	6.49E-04	3.93E-03	8.27E-05	0.00E+00	1.06E-03	7.88E-03
50	C36	40	Combination Long Haul Truck	54	0.00E+00	3.82E-05	2.16E-06	2.37E+01	2.43E-07	4.94E-02	3.15E-05	4.41E-02	6.02E-03	8.46E-04	3.50E-03	6.96E-04	7.25E-04	3.81E-03	7.95E-05	0.00E+00	2.78E-03	8.31E-03
52	C37	60	Passenger Car	99	0.00E+00	1.17E-06	1.27E-07	4.53E+00	8.30E-06	2.32E-02	2.64E-06	9.86E-05	9.76E-04	1.46E-04	2.57E-04	1.66E-04	1.70E-04	1.97E-05	2.27E-05	4.63E-09	8.70E-05	1.54E-05
52	C37	60	Passenger Truck	167	0.00E+00	2.47E-06	2.62E-07	1.01E+01	1.56E-05	3.99E-02	5.12E-06	3.01E-04	1.73E-03	2.57E-04	4.88E-04	3.17E-04	3.25E-04	7.90E-05	5.02E-05	8.46E-09	1.63E-04	5.09E-05
52	C37	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.11E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.83E-04
52	C37	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.53E-05
52	C37	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.15E-03
52	C37	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.29E-03
53	C38	70	Passenger Car	149	0.00E+00	1.61E-06	1.75E-07	6.56E+00	1.14E-05	3.21E-02	3.63E-06	1.53E-04	1.13E-03	1.77E-04	3.54E-04	2.28E-04	2.34E-04	2.53E-05	3.30E-05	6.85E-09	1.20E-04	2.39E-05
53	C38	70	Passenger Truck	249	0.00E+00	3.36E-06	3.58E-07	1.48E+01	2.16E-05	5.66E-02	7.06E-06	4.32E-04	2.02E-03	3.13E-04	6.76E-04	4.39E-04	4.50E-04	1.10E-04	7.36E-05	1.29E-08	2.26E-04	7.24E-05
53	C38	70	Single Unit Short Haul Truck	73	0.00E+00	1.28E-05	5.20E-07	1.19E+01	8.59E-06	2.16E-02	1.39E-05	5.09E-03	1.16E-03	2.12E-04	1.73E-03	3.29E-04	3.36E-04	1.21E-03	4.85E-05	1.96E-08	1.39E-03	9.53E-04
53	C38	70	Single Unit Long Haul Truck	3	0.00E+00	5.57E-07	2.24E-08	5.05E-01	3.70E-07	9.08E-04	6.06E-07	2.19E-04	5.30E-05	9.49E-06	7.54E-05	1.42E-05	1.45E-05	5.11E-05	2.06E-06	8.25E-10	6.09E-05	4.10E-05
53	C38	70	Combination Short Haul Truck	50	0.00E+00	1.29E-05	9.61E-07	1.75E+01	3.28E-08	1.87E-02	9.21E-06	1.93E-02	1.82E-03	3.04E-04	7.75E-04	2.80E-04	2.91E-04	2.77E-03	5.84E-05	0.00E+00	4.85E-04	3.64E-03
53	C38	70	Combination Long Haul Truck	46	0.00E+00	1.77E-05	1.01E-06	1.64E+01	1.11E-07	2.23E-02	1.46E-05	2.07E-02	1.90E-03	2.86E-04	1.61E-03	3.24E-04	3.37E-04	2.63E-03	5.49E-05	0.00E+00	1.27E-03	3.89E-03
52	C39	60	Passenger Car	123	0.00E+00	1.45E-06	1.57E-07	5.61E+00	1.03E-05	2.87E-02	3.26E-06	1.22E-04	1.21E-03	1.81E-04	3.18E-04	2.05E-04	2.11E-04	2.44E-05	2.81E-05	5.73E-09	1.08E-04	1.90E-05
52	C39	60	Passenger Truck	206	0.00E+00	3.05E-06	3.24E-07	1.25E+01	1.92E-05	4.93E-02	6.33E-06	3.72E-04	2.14E-03	3.18E-04	6.03E-04	3.93E-04	4.02E-04	9.77E-05	6.20E-05	1.05E-08	2.01E-04	6.29E-05
52	C39	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.56E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
52	C39	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.19E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.89E-04
52	C39	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.46E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.41E-04
50	C40	40	Passenger Car	123	0.00E+00	1.77E-06	1.92E-07	6.49E+00	1.25E-05	3.50E-02	3.98E-06	1.12E-04	2.12E-03	2.98E-04	3.88E-04	2.50E-04	2.57E-04	3.66E-05	3.22E-05	5.98E-09	1.31E-04	1.75E-05
50	C40	40	Passenger Truck	206	0.00E+00	3.89E-06	4.09E-07	1.41E+01	2.35E-05	5.78E-02	7.82E-06	4.32E-04	3.76E-03	5.22E-04	7.39E-04	4.83E-04	4.94E-04	1.25E-04	6.96E-05	1.02E-08	2.45E-04	7.49E-05
50	C40	40	Single Unit Short Haul Truck	8	0.00E+00	2.60E-06	1.16E-07	1.45E+00	1.80E-06	2.27E-03	2.78E-06	1.05E-03	3.02E-04	4.71E-05	3.34E-04	6.96E-05	7.10E-05	1.48E-04	5.90E-06	2.50E-09	2.63E-04	1.96E-04
50	C40	40	Combination Short Haul Truck	9	0.00E+00	4.54E-06	3.39E-07	3.90E+00	1.12E-08	6.42E-03	3.23E-06	6.61E-03	9.16E-04	1.36E-04	2.70E-04	9.87E-05	1.02E-04	6.21E-04	1.31E-05	0.00E+00	1.68E-04	1.24E-03
50	C40	40	Combination Long Haul Truck	9

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

Highway 413
GTA West

MOVES L nkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
55	C44	90	Combination Short Haul Truck	17	0.00E+00	2.40E-06	1.72E-07	5.38E+00	7.43E-09	4.46E-03	1.75E-06	4.26E-03	2.31E-04	4.79E-05	1.55E-04	5.08E-05	5.28E-05	8.55E-04	1.80E-05	0.00E+00	1.02E-04	8.02E-04
55	C44	90	Combination Long Haul Truck	15	0.00E+00	3.48E-06	1.82E-07	4.91E+00	2.52E-08	5.24E-03	2.96E-06	4.51E-03	2.37E-04	4.23E-05	3.44E-04	6.06E-05	6.32E-05	7.87E-04	1.64E-05	0.00E+00	2.81E-04	8.50E-04
53	C45	70	Passenger Car	184	0.00E+00	1.99E-06	2.17E-07	8.13E+00	1.42E-05	3.98E-02	4.50E-06	1.90E-04	1.40E-03	2.19E-04	4.39E-04	2.83E-04	2.90E-04	3.13E-05	4.09E-05	8.49E-09	1.48E-04	2.96E-05
53	C45	70	Passenger Truck	309	0.00E+00	4.16E-06	4.43E-07	1.83E+01	2.67E-05	7.01E-02	8.75E-06	5.36E-04	2.50E-03	3.88E-04	8.37E-04	5.44E-04	5.57E-04	1.36E-04	9.12E-05	1.60E-08	2.80E-04	8.97E-05
53	C45	70	Single Unit Short Haul Truck	51	0.00E+00	8.93E-06	3.63E-07	8.32E+00	5.99E-06	1.51E-02	9.72E-06	3.55E-03	8.07E-04	1.48E-04	1.20E-03	2.29E-04	2.34E-04	8.45E-04	3.38E-05	1.37E-08	9.70E-04	6.64E-04
53	C45	70	Single Unit Long Haul Truck	2	0.00E+00	3.89E-07	1.57E-08	3.52E-01	2.58E-07	6.33E-04	4.23E-07	1.53E-04	3.69E-05	6.62E-06	5.25E-05	9.91E-06	1.01E-05	3.57E-05	1.44E-06	5.76E-10	4.24E-05	2.86E-05
53	C45	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.04E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.52E-03
53	C45	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.61E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.62E-03
50	C46	40	Passenger Car	116	0.00E+00	1.66E-06	1.81E-07	6.12E+00	1.18E-05	3.30E-02	3.75E-06	1.06E-04	2.00E-03	2.81E-04	3.66E-04	2.36E-04	2.42E-04	3.45E-05	3.04E-05	5.63E-09	1.24E-04	1.65E-05
50	C46	40	Passenger Truck	194	0.00E+00	3.67E-06	3.86E-07	1.33E+01	2.21E-05	5.45E-02	7.37E-06	4.07E-04	3.54E-03	4.92E-04	6.96E-04	4.55E-04	4.66E-04	1.18E-04	6.56E-05	9.57E-09	2.31E-04	7.06E-05
50	C46	40	Single Unit Short Haul Truck	56	0.00E+00	1.88E-05	8.38E-07	1.05E+01	1.30E-05	1.65E-02	2.01E-05	7.59E-03	2.19E-03	3.41E-04	2.42E-03	5.05E-04	5.15E-04	1.07E-03	4.28E-05	1.81E-08	1.91E-03	1.42E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	8.26E-07	3.66E-08	4.53E-01	5.71E-07	7.16E-04	8.84E-07	3.31E-04	9.80E-05	1.52E-05	1.07E-04	2.21E-05	2.25E-05	4.63E-05	1.85E-06	7.87E-10	8.40E-05	6.20E-05
50	C46	40	Combination Short Haul Truck	35	0.00E+00	1.67E-05	1.24E-06	1.43E+01	4.12E-08	2.35E-02	1.18E-05	2.42E-02	3.36E-03	5.00E-04	9.90E-04	3.62E-04	3.76E-04	2.28E-03	4.79E-05	0.00E+00	6.15E-04	4.56E-03
50	C46	40	Combination Long Haul Truck	31	0.00E+00	2.21E-05	1.25E-06	1.37E+01	1.41E-07	2.86E-02	1.82E-05	2.56E-02	3.49E-03	4.90E-04	2.03E-03	4.03E-04	4.19E-04	2.21E-03	4.60E-05	0.00E+00	1.61E-03	4.81E-03
53	C48	70	Passenger Car	80	0.00E+00	8.62E-07	9.36E-08	3.51E+00	6.12E-06	1.72E-02	1.94E-06	8.19E-05	6.04E-04	9.46E-05	1.89E-04	1.22E-04	1.25E-04	1.35E-05	1.77E-05	3.67E-09	6.41E-05	1.28E-05
53	C48	70	Passenger Truck	133	0.00E+00	1.80E-06	1.91E-07	7.91E+00	1.16E-05	3.03E-02	3.78E-06	2.31E-04	1.08E-03	1.68E-04	3.62E-04	2.35E-04	2.41E-04	5.88E-05	3.94E-05	6.91E-09	1.21E-04	3.88E-05
53	C48	70	Single Unit Short Haul Truck	97	0.00E+00	1.70E-05	6.92E-07	1.59E+01	1.14E-05	2.87E-02	1.85E-05	6.77E-03	1.54E-03	2.82E-04	2.29E-03	4.37E-04	4.46E-04	1.61E-03	6.45E-05	2.60E-08	1.85E-03	1.27E-03
53	C48	70	Single Unit Long Haul Truck	4	0.00E+00	7.41E-07	2.98E-08	6.72E-01	4.91E-07	1.21E-03	8.06E-07	2.91E-04	7.04E-05	1.26E-05	1.00E-04	1.89E-05	1.93E-05	6.80E-05	2.74E-06	1.10E-09	8.09E-05	5.45E-05
53	C48	70	Combination Short Haul Truck	62	0.00E+00	1.59E-05	1.18E-06	2.15E+01	4.03E-08	2.29E-02	1.13E-05	2.37E-02	2.24E-03	3.73E-04	9.53E-04	3.44E-04	3.57E-04	3.41E-03	7.18E-05	0.00E+00	5.96E-04	4.47E-03
53	C48	70	Combination Long Haul Truck	56	0.00E+00	2.18E-05	1.24E-06	2.01E+01	1.37E-07	2.74E-02	1.79E-05	2.54E-02	2.33E-03	3.51E-04	1.98E-03	3.98E-04	4.15E-04	3.23E-03	6.75E-05	0.00E+00	1.57E-03	4.78E-03
52	C49	60	Passenger Car	323	0.00E+00	3.80E-06	4.13E-07	1.47E+01	2.70E-05	7.55E-02	8.57E-06	3.20E-04	3.17E-03	4.75E-04	8.35E-04	5.39E-04	5.53E-04	6.40E-05	7.38E-05	1.50E-08	2.83E-04	5.00E-05
52	C49	60	Passenger Truck	541	0.00E+00	8.02E-06	8.50E-07	3.28E+01	5.05E-05	1.30E-01	1.66E-05	9.77E-04	5.63E-03	8.36E-04	1.58E-03	1.03E-03	1.06E-03	2.57E-04	1.63E-04	2.75E-08	5.28E-04	1.65E-04
52	C49	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.79E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.22E-04
52	C49	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
52	C49	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.84E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.67E-03
52	C49	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.42E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.77E-03
50	C50	40	Passenger Car	7	0.00E+00	1.07E-07	1.17E-08	3.95E-01	7.62E-07	2.13E-03	2.42E-07	6.82E-06	1.29E-04	1.81E-05	2.36E-05	1.52E-05	1.56E-05	2.22E-06	1.96E-06	3.63E-10	7.99E-06	1.06E-06
50	C50	40	Passenger Truck	13	0.00E+00	2.37E-07	2.49E-08	8.59E-01	1.43E-06	3.52E-03	4.76E-07	2.63E-05	2.29E-04	3.17E-05	4.49E-05	2.93E-05	3.00E-05	7.59E-06	4.23E-06	6.17E-10	1.49E-05	4.55E-06
50	C50	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.34E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.38E-04
50	C50	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.74E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
53	C51	70	Passenger Car	201	0.00E+00	2.18E-06	2.37E-07	8.87E+00	1.54E-05	4.34E-02	4.91E-06	2.07E-04	1.53E-03	2.39E-04	4.79E-04	3.09E-04	3.17E-04	3.42E-05	4.46E-05	9.26E-09	1.62E-04	3.23E-05
53	C51	70	Passenger Truck	337	0.00E+00	4.54E-06	4.83E-07	2.00E+01	2.92E-05	7.65E-02	9.54E-06	5.85E-04	2.72E-03	4.23E-04	9.13E-04	5.93E-04	6.08E-04	1.48E-04	9.95E-05	1.74E-08	3.05E-04	9.79E-05
53	C51	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.38E-04
53	C51	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.79E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
53	C51	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.82E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.20E-04
53	C51	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.09E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.70E-04
50	C52	40	Passenger Car	77	0.00E+00	1.11E-06	1.20E-07	4.07E+00	7.85E-06	2.19E-02	2.49E-06	7.03E-05	1.33E-03	1.87E-04	2.43E-04	1.57E-04	1.61E-04	2.29E-05	2.02E-05	3.74E-09	8.23E-05	1.10E-05
50	C52	40	Passenger Truck	129	0.00E+00	2.44E-06	2.56E-07	8.85E+00	1.47E-05	3.62E-02	4.90E-06	2.71E-04	2.35E-03	3.27E-04	4.63E-04	3.02E-04	3.09E-04	7.81E-05	4.36E-05	6.36E-09	1.53E-04	4.69E-05
50	C52	40	Single Unit Short Haul Truck	11	0.00E+00	3.57E-06	1.59E-07	1.99E+00	2.47E-06	3.12E-03	3.82E-06	1.44E-03	4.15E-04	6.48E-05	4.60E-04	9.58E-05	9.76E-05	2.03E-04	8.11E-06	3.44E-09	3.62E-04	2.70E-04
50	C52	40	Combination Short Haul Truck	5	0.00E+00	2.52E-06	1.88E-07	2.17E+00	6.25E-09	3.57E-03	1.79E-06	3.67E-03	5.09E-04	7.58E-05	1.50E-04	5.48E-05	5.69E-05	3.45E-04	7.25E-06	0.00E+00	9.31E-05	6.92E-04
50	C52	40	Combination Long Haul Truck	5	0.00E+00	3.35E-06	1.89E-07	2.08E+00	2.13E-08	4.33E-03	2.76E-06	3.87E-03	5.28E-04	7.42E-05	3.07E-04	6.10E-05	6.36E-05	3.34E-04	6.98E-06	0.00E+00	2.44E-04	7.29E-04
52	C53	60	Passenger Car	99	0.00E+00	1.17E-06	1.27E-07	4.53E+00	8.30E-06	2.32E-02	2.64E-06	9.86E-05	9.76E-04	1.46E-04	2.57E-04	1.66E-04	1.70E-04	1.97E-05	2.27E-05	4.63E-09	8.70E-05	1.54E-05
52	C53	60	Passenger Truck	167	0.00E+00	2.47E-06	2.62E-07	1.01E+01	1.56E-05	3.99E-02	5.12E-06	3.01E-04	1.73E-03	2.57E-04	4.88E-04	3.17E-04	3.25E-04	7.90E-05	5.02E-05	8.46E-09	1.63E-04	5.09E-05
52	C53	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.84E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
52	C53	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.26E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.97E-06
52	C53	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.03E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.70E-04
52	C53	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.22E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.07E-04
53	C54	70	Passenger Car	134	0.00E+00	1.45E-06	1.58E-07	5.92E+00	1.03E-05	2.90E-02	3.27E-06	1.38E-04	1.02E-03	1.59E-04	3.19E-04	2.06E-04	2.11E-04	2.28E-05	2.98E-05	6.18E-09	1.08E-04	2.15E-05
53	C54	70	Passenger Truck	225	0.00E+00	3.03E-06	3.22E-07	1.33E+01	1.95E-05	5.11E-02	6.37E-06	3.90E-04	1.82E-03	2.83E-04	6.09E-04	3.96E-04	4.06E-04	9.91E-05	6.64E-05	1.16E-08	2.04E-04	6.53E-05
53	C54	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.38E-04
53	C54	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.79E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
53	C54	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.82E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.09E-04
53	C54	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.16E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.73E-04
52	C55	60	Passenger Car	206	0.00E+00	2.43E-06	2.64E-07	9.41E+00	1.72E-05	4.82E-02	5.47E-06	2.05E-04	2.03E-03	3.04E-04	5.34E-04	3.44E-04	3.53E-04	4.09E-05	4.72E-05	9.61E-09	1.81E-04	3.19E-05
52	C55	60	Passenger Truck	346	0.00E+00	5.12E-06	5.43E-07	2.10E+01	3.23E-05	8.27E-02	1.06E-05	6.24E-04	3.60E-03	5.34E-04	1.01E-03	6.59E-04	6.75E-04	1.64E-04	1.04E-04	1.76E-08	3.37E-04	1.06E-04
52	C55	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.38E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.45E-04
52	C55	60	Single Unit Long Haul Truck	1	0.00E+00	2.71E-07	1.11E-08	1.97E-01	1.78E-07	3.45E-04	2.93E-07	1.03E-04	2.87E-05	4.76E-06	3.62E-05	6.93E-06	7.06E-06	1.99E-05	8.04E-07	3.30E-10	2.91E-05	1.93E-05
52	C55	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.91E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
52	C55	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.43E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.59E-03
50	C56	40	Passenger Car	5	0.00E+00	7.52E-08	8.17E-09	2.76E-01	5.33E-07	1.49E-03	1.69E-07	4.78E-06	9.03E-05	1.27E-05	1.65E-05	1.07E-05	1.09E-05	1.56E-06	1.37E-06	2.54E-10	5.59E-06	7.45E-07
50	C56	40	Passenger Truck	9	0.00E+00	1.66E-07	1.74E-08	6.01E-01	9.98E-07	2.46E-03	3.33E-07	1.84E-05	1.60E-04	2.22E-05	3.14E-05	2.05E-05	2.10E-05	5.31E-06	2.96E-06	4.32E-10	1.04E-05	3.19E-06
50	C56	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.93E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.36E-05
50	C56	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.34E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.38E-04
50	C56	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.74E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
53	C57	70	Passenger Car	205	0.00E+00	2.21E-06	2.40E-07	9.02E+00	1.57E-05	4.41E-02	4.99E-06	2.10E-04	1.55E-03	2.43E-04	4.87E-04	3.14E-04	3.22E-04	3.47E-05	4.54E-05	9.42E-09	1.65E-04	3.28E-05
53	C57	70	Passenger Truck	342	0.00E+00	4.62E-06	4.91E-07	2.03E+01	2.97E-05	7.78E-02	9.70E-06	5.94E-04	2.77E-03	4.31E-04	9.29E-04	6.03E-04	6.18E-04	1.51E-04	1.01E-04	1.77E-08	3.10E-04	9.95E-05
53	C57	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.76E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.65E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
53	C57	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.03E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.47E-04
53	C57	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.38E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
50	C58	40	Passenger Car	56	0.00E+00	8.11E-07	8.81E-08	2.98E+00	5.75E-06	1.61E-02	1.83E-06	5.15E-05	9.74E-04	1.37E-04	1.78E-04	1.15E-04	1.18E-04	1.68E-05	1.48E-05	2.74E-09	6.03E-05	8.03E-06
50	C58	40	Passenger Truck	95	0.00E+00	1.79E-06	1.88E-07	6.49E+00	1.08E-05	2.65E-02	3.59E-06	1.98E-04	1.73E-03	2.40E-04	3.39E-04	2.21E-04	2.27E-04	5.73E-05	3.19E-05	4.66E-09	1.12E-04	3.44E-05
50	C58	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.90E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	2.52E-07	1.88E-08	2.17E-01	6.25E-10	3.57E-04	1.79E-07	3.67E-04	5.09E-05	7.58E-06	1.50E-05	5.48E-06	5.69E-06	3.45E-05	7.25E-07	0.00E+00	9.31E-06	6.92E-05
53	C59	70	Passenger Car	53	0.00E+00	5.70E-07	6.20E-08	2.32E+00	4.05E-06	1.14E-02	1.29E-06	5.42E-05	4.00E-04	6.26E-05	1.25E-04	8.09E-05	8.30E-05	8.96E-06	1.17E-05	2.43E-09	4.24E-05	8.46E-06
53	C59	70	Passenger Truck	88	0.00E+00	1.19E-06	1.27E-07	5.24E+00	7.65E-06	2.01E-02	2.50E-06	1.53E-04	7.14E-04	1.11E-04	2.39E-04	1.55E-04	1.59E-04	3.89E-05	2.61E-05	4.57E-09	8.00E-05	2.57E-05
53	C59	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
53	C59	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.02E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.58E-05
53	C59	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.30E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.11E-05
52	C60	60	Passenger Car	205	0.00E+00	2.41E-06	2.61E-07	9.32E+00	1.71E-05	4.78E-02	5.42E-06	2.03E-04	2.01E-03	3.01E-04	5.29E-04	3.41E-04	3.50E-04	4.05E-05	4.67E-05	9.52E-09	1.79E-04	3.16E-05
52	C60	60	Passenger Truck	342	0.00E+00	5.08E-06	5.38E-07	2.08E+01	3.20E-05	8.20E-02	1.05E-05	6.19E-04	3.57E-03	5.29E-04	1.00E-03	6.53E-04	6.69E-04	1.62E-04	1.03E-04	1.74E-08	3.34E-04	1.05E-04
52	C60	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.94E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
52	C60	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.45E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.40E-03
52	C60	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.93E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.49E-03
53	C61	70	Passenger Car	247	0.00E+00	2.67E-06	2.90E-07	1.09E+01	1.89E-05	5.32E-02	6.02E-06	2.54E-04	1.87E-03	2.93E-04	5.87E-04	3.79E-04	3.89E-04	4.19E-05	5.47E-05	1.14E-08	1.99E-04	3.96E-05
53	C61	70	Passenger Truck	413	0.00E+00	5.58E-06	5.93E-07	2.45E+01	3.58E-05	9.39E-02	1.17E-05	7.17E-04	3.34E-03	5.19E-04	1.12E-03	7.28E-04	7.46E-04	1.82E-04	1.22E-04	2.14E-08	3.74E-04	1.20E-04
53	C61	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
53	C61	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.03E-04
53	C61	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.24E-04
50	C62	40	Passenger Car	208	0.00E+00	2.99E-06	3.24E-07	1.10E+01	2.12E-05	5.91E-02	6.73E-06	1.90E-04	3.58E-03	5.04E-04	6.56E-04	4.23E-04	4.34E-04	6.18E-05	5.45E-05	1.01E-08	2.22E-04	2.96E-05
50	C62	40	Passenger Truck	348	0.00E+00	6.58E-06	6.92E-07	2.39E+01	3.96E-05	9.78E-02	1.32E-05	7.31E-04	6.36E-03	8.82E-04	1.25E-03	8.16E-04	8.35E-04	2.11E-04	1.18E-04	1.72E-08	4.14E-04	1.27E-04
50	C62	40	Single Unit Short Haul Truck	15	0.00E+00	5.20E-06	2.31E-07	2.89E+00	3.60E-06	4.54E-03	5.56E-06	2.09E-03	6.03E-04	9.42E-05	6.68E-04	1.39E-04	1.42E-04	2.96E-04	1.18E-05	5.00E-09	5.26E-04	3.92E-04
50	C62	40	Single Unit Long Haul Truck	1	0.00E+00	2.28E-07	1.01E-08	1.25E-01	1.57E-07	1.98E-04	2.44E-07	9.13E-05	2.70E-05	4.19E-06	2.94E-05	6.09E-06	6.21E-06	1.28E-05	5.10E-07	2.17E-10	2.32E-05	1.71E-05
50	C62	40	Combination Short Haul Truck	6	0.00E+00	2.78E-06	2.07E-07	2.39E+00	6.87E-09	3.92E-03	1.97E-06	4.04E-03	5.59E-04	8.34E-05	1.65E-04	6.03E-05	6.26E-05	3.79E-04	7.98E-06	0.00E+00	1.02E-04	7.61E-04
50	C62	40	Combination Long Haul Truck	5	0.00E+00	3.69E-06	2.08E-07	2.29E+00	2.34E-08	4.76E-03	3.04E-06	4.26E-03	5.81E-04	8.16E-05	3.38E-04	6.71E-05	6.99E-05	3.68E-04	7.67E-06	0.00E+00	2.68E-04	8.02E-04
52	C63	60	Passenger Car	330	0.00E+00	3.88E-06	4.21E-07	1.50E+01	2.75E-05	7.71E-02	8.74E-06	3.27E-04	3.24E-03	4.85E-04	8.53E-04	5.50E-04	5.64E-04	6.54E-05	7.54E-05	1.54E-08	2.89E-04	5.10E-05
52	C63	60	Passenger Truck	552	0.00E+00	8.18E-06	8.67E-07	3.35E+01	5.16E-05	1.32E-01	1.70E-05	9.98E-04	5.75E-03	8.54E-04	1.62E-03	1.05E-03	1.08E-03	2.62E-04	1.66E-04	2.81E-08	5.39E-04	1.69E-04
52	C63	60	Single Unit Short Haul Truck	109	0.00E+00	2.44E-05	1.01E-06	1.82E+01	1.62E-05	3.19E-02	2.64E-05	9.34E-03	2.51E-03	4.22E-04	3.25E-03	6.26E-04	6.39E-04	1.84E-03	7.40E-05	3.05E-08	2.61E-03	1.75E-03
52	C63	60	Single Unit Long Haul Truck	5	0.00E+00	1.06E-06	4.37E-08	7.74E-01	7.00E-07	1.36E-03	1.15E-06	4.05E-04	1.13E-04	1.87E-05	1.42E-04	2.72E-05	2.78E-05	7.83E-05	3.16E-06	1.30E-09	1.14E-04	7.58E-05
52	C63	60	Combination Short Haul Truck	60	0.00E+00	1.74E-05	1.28E-06	2.10E+01	4.77E-08	2.60E-02	1.25E-05	2.65E-02	3.04E-03	4.75E-04	1.07E-03	3.74E-04	3.88E-04	3.34E-03	7.02E-05	0.00E+00	6.84E-04	5.00E-03
52	C63	60	Combination Long Haul Truck	54	0.00E+00	2.39E-05	1.31E-06	1.98E+01	1.61E-07	3.12E-02	2.00E-05	2.83E-02	3.18E-03	4.60E-04	2.27E-03	4.27E-04	4.45E-04	3.18E-03	6.65E-05	0.00E+00	1.82E-03	5.32E-03
53	C64	70	Passenger Car	479	0.00E+00	5.18E-06	5.63E-07	2.11E+01	3.68E-05	1.03E-01	1.17E-05	4.93E-04	3.63E-03	5.69E-04	1.14E-03	7.35E-04	7.54E-04	8.14E-05	1.06E-04	2.21E-08	3.85E-04	7.69E-05
53	C64	70	Passenger Truck	802	0.00E+00	1.08E-05	1.15E-06	4.76E+01	6.95E-05	1.82E-01	2.27E-05	1.39E-03	6.49E-03	1.01E-03	2.17E-03	1.41E-03	1.45E-03	3.53E-04	2.37E-04	4.15E-08	7.27E-04	2.33E-04

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C64	70	Single Unit Short Haul Truck	92	0.00E+00	1.62E-05	6.57E-07	1.51E+01	1.08E-05	2.73E-02	1.76E-05	6.43E-03	1.46E-03	2.68E-04	2.18E-03	4.16E-04	4.24E-04	1.53E-03	6.13E-05	2.47E-08	1.76E-03	1.20E-03
53	C64	70	Single Unit Long Haul Truck	4	0.00E+00	7.04E-07	2.84E-08	6.38E-01	4.67E-07	1.15E-03	7.66E-07	2.77E-04	6.69E-05	1.20E-05	9.52E-05	1.80E-05	1.83E-05	6.46E-05	2.60E-06	1.04E-09	7.69E-05	5.18E-05
53	C64	70	Combination Short Haul Truck	38	0.00E+00	9.69E-06	7.21E-07	1.31E+01	2.46E-08	1.40E-02	6.91E-06	1.45E-02	1.37E-03	2.28E-04	5.81E-04	2.10E-04	2.18E-04	2.08E-03	4.38E-05	0.00E+00	3.63E-04	2.73E-03
53	C64	70	Combination Long Haul Truck	34	0.00E+00	1.33E-05	7.56E-07	1.23E+01	8.33E-08	1.67E-02	1.09E-05	1.55E-02	1.42E-03	2.14E-04	1.21E-03	2.43E-04	2.53E-04	1.97E-03	4.12E-05	0.00E+00	9.55E-04	2.92E-03
52	C65	60	Passenger Car	11	0.00E+00	1.32E-07	1.43E-08	5.11E-01	9.36E-07	2.62E-03	2.97E-07	1.11E-05	1.10E-04	1.65E-05	2.90E-05	1.87E-05	1.92E-05	2.22E-06	2.56E-06	5.22E-10	9.81E-06	1.74E-06
52	C65	60	Passenger Truck	19	0.00E+00	2.78E-07	2.95E-08	1.14E+00	1.75E-06	4.50E-03	5.77E-07	3.39E-05	1.96E-04	2.90E-05	5.50E-05	3.58E-05	3.67E-05	8.91E-06	5.66E-06	9.54E-10	1.83E-05	5.74E-06
50	C66	40	Passenger Car	70	0.00E+00	9.99E-07	1.09E-07	3.67E+00	7.09E-06	1.98E-02	2.25E-06	6.34E-05	1.20E-03	1.69E-04	2.20E-04	1.42E-04	1.45E-04	2.07E-05	1.82E-05	3.38E-09	7.43E-05	9.90E-06
50	C66	40	Passenger Truck	116	0.00E+00	2.20E-06	2.31E-07	7.99E+00	1.33E-05	3.27E-02	4.42E-06	2.44E-04	2.13E-03	2.95E-04	4.18E-04	2.73E-04	2.79E-04	7.06E-05	3.93E-05	5.74E-09	1.38E-04	4.23E-05
50	C66	40	Single Unit Short Haul Truck	19	0.00E+00	6.50E-06	2.89E-07	3.62E+00	4.50E-06	5.67E-03	6.95E-06	2.62E-03	7.54E-04	1.18E-04	8.36E-04	1.74E-04	1.77E-04	3.70E-04	1.47E-05	6.25E-09	6.58E-04	4.90E-04
50	C66	40	Single Unit Long Haul Truck	1	0.00E+00	2.85E-07	1.26E-08	1.56E-01	1.97E-07	2.47E-04	3.05E-07	1.14E-04	3.38E-05	5.24E-06	3.67E-05	7.62E-06	7.76E-06	1.60E-05	6.37E-07	2.71E-10	2.90E-05	2.14E-05
50	C66	40	Combination Short Haul Truck	12	0.00E+00	5.55E-06	4.15E-07	4.77E+00	1.37E-08	7.85E-03	3.94E-06	8.07E-03	1.12E-03	1.67E-04	3.30E-04	1.21E-04	1.25E-04	7.58E-04	1.60E-05	0.00E+00	2.05E-04	1.52E-03
50	C66	40	Combination Long Haul Truck	10	0.00E+00	7.38E-06	4.17E-07	4.58E+00	4.69E-08	9.53E-03	6.08E-06	8.52E-03	1.16E-03	1.63E-04	6.76E-04	1.34E-04	1.40E-04	7.35E-04	1.53E-05	0.00E+00	5.36E-04	1.60E-03
55	C67	90	Passenger Car	482	0.00E+00	4.64E-06	5.05E-07	1.98E+01	3.30E-05	9.57E-02	1.05E-05	5.02E-04	2.05E-03	3.60E-04	1.02E-03	6.58E-04	6.76E-04	6.37E-05	1.00E-04	2.04E-08	3.45E-04	7.84E-05
55	C67	90	Passenger Truck	807	0.00E+00	9.64E-06	1.03E-06	4.53E+01	6.34E-05	1.80E-01	2.06E-05	1.30E-03	3.64E-03	6.39E-04	1.98E-03	1.28E-03	1.32E-03	3.10E-04	2.27E-04	4.01E-08	6.64E-04	2.16E-04
55	C67	90	Single Unit Short Haul Truck	99	0.00E+00	1.06E-05	3.91E-07	1.62E+01	7.31E-06	2.96E-02	1.18E-05	4.61E-03	7.75E-04	1.82E-04	1.50E-03	2.68E-04	2.73E-04	1.65E-03	6.56E-05	2.57E-08	1.23E-03	8.61E-04
55	C67	90	Single Unit Long Haul Truck	4	0.00E+00	4.60E-07	1.67E-08	6.82E-01	3.08E-07	1.22E-03	5.12E-07	1.95E-04	3.54E-05	7.99E-06	6.54E-05	1.14E-05	1.16E-05	6.89E-05	2.77E-06	1.06E-09	5.38E-05	3.65E-05
55	C67	90	Combination Short Haul Truck	49	0.00E+00	7.05E-06	5.06E-07	1.58E+01	2.18E-08	1.31E-02	5.14E-06	1.25E-02	6.77E-04	1.41E-04	4.55E-04	1.49E-04	1.55E-04	2.51E-03	5.28E-05	0.00E+00	3.00E-04	2.36E-03
55	C67	90	Combination Long Haul Truck	45	0.00E+00	1.02E-05	5.35E-07	1.44E+01	7.39E-08	1.54E-02	8.69E-06	1.33E-02	6.95E-04	1.24E-04	1.01E-03	1.78E-04	1.86E-04	2.31E-03	4.83E-05	0.00E+00	8.24E-04	2.50E-03
55	C68	90	Passenger Car	785	0.00E+00	7.57E-06	8.22E-07	3.23E+01	5.37E-05	1.56E-01	1.71E-05	8.18E-04	3.35E-03	5.86E-04	1.66E-03	1.07E-03	1.10E-03	1.04E-04	1.63E-04	3.33E-08	5.63E-04	1.28E-04
55	C68	90	Passenger Truck	1315	0.00E+00	1.57E-05	1.68E-06	7.38E+01	1.03E-04	2.93E-01	3.36E-05	2.13E-03	5.93E-03	1.04E-03	3.23E-03	2.09E-03	2.14E-03	5.05E-04	3.70E-04	6.53E-08	1.08E-03	3.51E-04
55	C68	90	Single Unit Short Haul Truck	129	0.00E+00	1.39E-05	5.13E-07	2.12E+01	9.58E-06	3.87E-02	1.55E-05	6.04E-03	1.02E-03	2.39E-04	1.97E-03	3.51E-04	3.58E-04	2.16E-03	8.60E-05	3.37E-08	1.61E-03	1.13E-03
55	C68	90	Single Unit Long Haul Truck	6	0.00E+00	6.03E-07	2.19E-08	8.94E-01	4.03E-07	1.60E-03	6.71E-07	2.56E-04	4.64E-05	1.05E-05	8.57E-05	1.50E-05	1.53E-05	9.04E-05	3.64E-06	1.39E-09	7.05E-05	4.78E-05
55	C68	90	Combination Short Haul Truck	44	0.00E+00	6.37E-06	4.58E-07	1.43E+01	1.97E-08	1.18E-02	4.65E-06	1.13E-02	6.12E-04	1.27E-04	4.12E-04	1.35E-04	1.40E-04	2.27E-03	4.78E-05	0.00E+00	2.71E-04	2.13E-03
55	C68	90	Combination Long Haul Truck	41	0.00E+00	9.24E-06	4.84E-07	1.30E+01	6.68E-08	1.39E-02	7.86E-06	1.20E-02	6.28E-04	1.12E-04	9.13E-04	1.61E-04	1.68E-04	2.09E-03	4.37E-05	0.00E+00	7.45E-04	2.26E-03
54	C69	80	Passenger Car	170	0.00E+00	1.72E-06	1.87E-07	7.23E+00	1.22E-05	3.48E-02	3.88E-06	1.77E-04	9.74E-04	1.60E-04	3.79E-04	2.44E-04	2.51E-04	2.52E-05	3.64E-05	7.54E-09	1.28E-04	2.76E-05
54	C69	80	Passenger Truck	284	0.00E+00	3.58E-06	3.81E-07	1.64E+01	2.33E-05	6.34E-02	7.59E-06	4.75E-04	1.74E-03	2.85E-04	7.28E-04	4.72E-04	4.84E-04	1.17E-04	8.20E-05	1.45E-08	2.44E-04	7.90E-05
54	C69	80	Single Unit Short Haul Truck	91	0.00E+00	1.25E-05	4.87E-07	1.49E+01	8.46E-06	2.71E-02	1.37E-05	5.18E-03	1.02E-03	2.09E-04	1.72E-03	3.18E-04	3.25E-04	1.52E-03	6.06E-05	2.40E-08	1.39E-03	9.69E-04
54	C69	80	Single Unit Long Haul Truck	4	0.00E+00	5.42E-07	2.09E-08	6.30E-01	3.61E-07	1.13E-03	5.96E-07	2.22E-04	4.69E-05	9.28E-06	7.50E-05	1.37E-05	1.39E-05	6.37E-05	2.57E-06	1.00E-09	6.10E-05	4.14E-05
54	C69	80	Combination Short Haul Truck	33	0.00E+00	6.79E-06	5.03E-07	1.10E+01	1.78E-08	1.04E-02	4.85E-06	1.05E-02	7.86E-04	1.42E-04	4.12E-04	1.47E-04	1.52E-04	1.76E-03	3.69E-05	0.00E+00	2.60E-04	1.97E-03
54	C69	80	Combination Long Haul Truck	30	0.00E+00	9.46E-06	5.34E-07	1.03E+01	6.02E-08	1.23E-02	7.80E-06	1.12E-02	8.13E-04	1.30E-04	8.67E-04	1.72E-04	1.79E-04	1.65E-03	3.44E-05	0.00E+00	6.88E-04	2.11E-03
55	C70	90	Passenger Car	415	0.00E+00	4.00E-06	4.34E-07	1.71E+01	2.84E-05	8.23E-02	9.01E-06	4.32E-04	1.77E-03	3.09E-04	8.79E-04	5.67E-04	5.81E-04	5.48E-05	8.62E-05	1.76E-08	2.97E-04	6.74E-05
55	C70	90	Passenger Truck	694	0.00E+00	8.29E-06	8.86E-07	3.90E+01	5.46E-05	1.55E-01	1.77E-05	1.12E-03	3.13E-03	5.50E-04	1.70E-03	1.10E-03	1.13E-03	2.67E-04	1.95E-04	3.45E-08	5.72E-04	1.86E-04
55	C70	90	Single Unit Short Haul Truck	177	0.00E+00	1.90E-05	7.03E-07	2.90E+01	1.31E-05	5.31E-02	2.12E-05	8.28E-03	1.39E-03	3.27E-04	2.69E-03	4.81E-04	4.90E-04	2.96E-03	1.18E-04	4.62E-08	2.20E-03	1.55E-03
55	C70	90	Single Unit Long Haul Truck	8	0.00E+00	8.26E-07	3.00E-08	1.22E+00	5.52E-07	2.20E-03	9.20E-07	3.51E-04	6.36E-05	1.44E-05	1.17E-04	2.05E-05	2.09E-05	1.24E-04	4.98E-06	1.90E-09	9.66E-05	6.55E-05
55	C70	90	Combination Short Haul Truck	93	0.00E+00	1.33E-05	9.58E-07	2.99E+01	4.13E-08	2.48E-02	9.73E-06	2.37E-02	1.28E-03	2.66E-04	8.62E-04	2.83E-04	2.93E-04	4.75E-03	1.00E-04	0.00E+00	5.69E-04	4.46E-03
55	C70	90	Combination Long Haul Truck	85	0.00E+00	1.94E-05	1.01E-06	2.73E+01	1.40E-07	2.91E-02	1.65E-05	2.51E-02	1.32E-03	2.35E-04	1.91E-03	3.37E-04	3.51E-04	4.38E-03	9.14E-05	0.00E+00	1.56E-03	4.73E-03
53	C71	70	Passenger Car	258	0.00E+00	2.80E-06	3.04E-07	1.14E+01	1.98E-05	5.57E-02	6.30E-06	2.66E-04	1.96E-03	3.07E-04	6.15E-04	3.96E-04	4.07E-04	4.39E-05	5.73E-05	1.19E-08	2.08E-04	4.15E-05
53	C71	70	Passenger Truck	433	0.00E+00	5.84E-06	6.21E-07	2.57E+01	3.75E-05	9.83E-02	1.23E-05	7.51E-04	3.50E-03	5.44E-04	1.17E-03	7.62E-04	7.81E-04	1.91E-04	1.28E-04	2.24E-08	3.92E-04	1.26E-04
53	C71	70	Single Unit Short Haul Truck	54	0.00E+00	9.44E-06	3.83E-07	8.79E+00	6.33E-06	1.59E-02	1.03E-05	3.75E-03	8.52E-04	1.56E-04	1.27E-03	2.42E-04	2.47E-04	8.93E-04	3.57E-05	1.44E-08	1.03E-03	7.02E-04
53	C71	70	Single Unit Long Haul Truck	2	0.00E+00	4.11E-07	1.65E-08	3.72E-01	2.72E-07	6.69E-04	4.47E-07	1.61E-04	3.90E-05	6.99E-06	5.55E-05	1.05E-05	1.07E-05	3.77E-05	1.52E-06	6.08E-10	4.48E-05	3.02E-05
53	C71	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
53	C71	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
50	C72	40	Passenger Car	144	0.00E+00	2.07E-06	2.25E-07	7.60E+00	1.47E-05	4.10E-02	4.66E-06	1.31E-04	2.48E-03	3.49E-04	4.55E-04	2.93E-04	3.01E-04	4.28E-05	3.77E-05	6.99E-09	1.54E-04	2.05E-05
50	C72	40	Passenger Truck	241	0.00E+00	4.56E-06	4.79E-07	1.65E+01	2.74E-05	6.77E-02	9.16E-06	5.06E-04	4.40E-03	6.11E-04	8.65E-04	5.65E-04	5.78E-04	1.46E-04	8.14E-05	1.19E-08	2.86E-04	8.76E-05
50	C72	40	Single Unit Short Haul Truck	20	0.00E+00	6.82E-06	3.03E-07	3.80E+00	4.72E-06	5.96E-03	7.29E-06	2.75E-03	7.92E-04	1.24E-04	8.77E-04	1.83E-04	1.86E-04	3.88E-04	1.55E-05	6.57E-09	6.91E-04	5.15E-04
50	C72	40	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.32E-08	1.64E-01	2.07E-07	2.59E-04	3.20E-07	1.20E-04	3.55E-05	5.50E-06	3.86E-05	8.00E-06	8.15E-06	1.68E-05	6.69E-07	2.85E-10	3.04E-05	2.24E-05
50	C72	40	Combination Short Haul Truck	6	0.00E+00	3.03E-06	2.26E-07	2.60E+00	7.50E-09	4.28E-03	2.15E-06	4.40E-03	6.10E-04	9.10E-05	1.80E-04	6.58E-05	6.83E-05	4.14E-04	8.70E-06	0.00E+00	1.12E-04	8.30E-04
50	C72	40	Combination Long Haul Truck	6	0.00E+00	4.02E-06	2.27E-07	2.50E+00	2.56E-08	5.20E-03	3.32E-06	4.65E-03	6.34E-04	8.90E-05	3.69E-04	7.32E-05	7.63E-05	4.01E-04	8.37E-06	0.00E+00	2.92E-04	8.75E-04
51	C73	50	Passenger Car	77	0.00E+00	1.01E-06	1.09E-07	3.67E+00	7.15E-06	1.99E-02	2.27E-06	7.24E-05	1.00E-03	1.45E-04	2.22E-04	1.43E-04	1.47E-04	1.83E-05	1.83E-05	3.64E-09	7.49E-05	1.13E-05
51	C73	50	Passenger Truck	129	0.00E+00	2.15E-06	2.27E-07	8.06E+00	1.33E-05	3.31E-02	4.40E-06	2.46E-04	1.77E-03	2.53E-04	4.17E-04	2.72E-04	2.79E-04	6.73E-05	3.99E-05	6.37E-09	1.39E-04	4.21E-05
51	C73	50	Single Unit Short Haul Truck	23	0.00E+00	6.40E-06	2.97E-07	4.26E+00	4.37E-06	6.90E-03	6.76E-06	2.66E-03	7.39E-04	1.21E-04	8.02E-04	1.73E-04	1.76E-04	4.37E-04	1.73E-05	7.29E-09	6.25E-04	4.98E-04
51	C73	50	Single Unit Long Haul Truck	1	0.00E+00	2.78E-07	1.29E-08	1.83E-01	1.91E-07	2.96E-04	2.93E-07	1.16E-04	3.34E-05	5.41E-06	3.47E-05	7.52E-06	7.66E-06	1.88E-05	7.43E-07	3.14E-10	2.71E-05	2.17E-05
51	C73	50	Combination Short Haul Truck	7	0.00E+00	3.10E-06	2.36E-07	2.96E+00	6.80E-09	4.20E-03	2.18E-06	4.42E-03	5.09E-04	7.97E-05	1.77E-04	6.81E-05	7.07E-05	4.70E-04	9.90E-06	0.00E+00	1.06E-04	8.33E-04
51	C73	50	Combination Long Haul Truck	7	0.00E+00	4.05E-06	2.41E-07	2.82E+00	2.31E-08	5.08E-03	3.27E-06	4.69E-03	5.29E-04	7.61E-05	3.50E-04	7.61E-05	7.93E-05	4.53E-04	9.45E-06	0.00E+00	2.70E-04	8.83E-04
52	C74	60	Passenger Car	840	0.00E+00	9.89E-06	1.07E-06	3.83E+01	7.02E-05	1.96E-01	2.23E-05	8.34E-04	8.25E-03	1.24E-03	2.17E-03	1.40E-03	1.44E-03	1.67E-04	1.92E-04	3.91E-08	7.35E-04	1.30E-04
52	C74	60	Passenger Truck	1408	0.00E+00	2.09E-05	2.21E-06	8.53E+01	1.31E-04	3.37E-01	4.32E-05	2.54E-03	1.47E-02	2.18E-03	4.12E-03	2.68E-03	2.75E-03	6.68E-04	4.24E-04	7.15E-08	1.37E-03	4.30E-04
52	C74	60	Single Unit Short Haul Truck	176	0.00E+00	3.94E-05	1.63E-06	2.93E+01	2.61E-05	5.16E-02	4.26E-05	1.51E-02	4.05E-03	6.81E-04	5.25E-03	1.01E-03	1.03E-03	2.97E-03	1.19E-04	4.92E-08	4.22E-03	2.82E-03
52	C74	60	Single Unit Long Haul Truck	8	0.00E+00	1.72E-06	7.06E-08	1.25E+00	1.13E-06	2.19E-03	1.86E-06	6.53E-04	1.82E-04	3.02E-05	2.30E-04	4.39E-05	4.48E-05	1.26E-04	5.10E-06	2.09E-09	1.85E-04	1.22E-04
52	C74	60	Combination Short Haul Truck	78	0.00E+00	2.27E-05	1.67E-06	2.74E+01	6.23E-08	3.40E-02	1.63E-05	3.47E-02	3.97E-03	6.21E-04	1.40E-03	4.89E-04	5.07E-04	4.36E-03	9.18E-05	0.00E+00	8.94E-04	6.53E-03
52	C74	60	Combination Long Haul Truck	71	0.00E+00	3.13E-05	1.71E-06	2.59E+01	2.11E-07	4.08E-02	2.61E-05	3.69E-02	4.16E-03	6.02E-04	2.96E-03	5.58E-04	5.81E-04	4.16E-03	8.69E-05	0.00E+00	2.38E-03	6.96E-03
53	C81	70	Passenger Car	381	0.00E+00	4.13E-06	4.48E-07	1.68E+01	2.93E-05	8.23E-02	9.30E-06	3.92E-04	2.89E-03	4.53E-04	9.07E-04	5.85E-04	6.00E-04	6.48E-05	8.46E-05	1.76E-08	3.07E-04	6.12E-05
53	C81	70	Passenger Truck	639	0.00E+00	8.62E-06	9.16E-07	3.79E+01	5.53E-05	1.45E-01	1.81E-05	1.11E-03	5.17E-03	8.03E-04	1.73E-03	1.12E-03	1.15E-03	2.81E-04	1.89E-04	3.31E-08	5.79E-04	1.86E-04
53	C81	70	Single Unit Short Haul Truck	84	0.00E+00	1.48E-05	6.03E-07	1.38E+01	9.94E-06	2.50E-02	1.61E-05	5.90E-03	1.34E-03	2.46E-04	2.00E-03	3.81E-04	3.88E-04	1.40E-03	5.62E-05	2.27E-08	1.61E-03	1.10E-03
53	C81	70	Single Unit Long Haul Truck	4	0.00E+00	6.45E-07	2.60E-08	5.85E-01	4.28E-07	1.05E-03	7.02E-07	2.54E-04	6.13E-05	1.10E-05	8.72E-05	1.65E-05	1.68E-05	5.92E-05	2.38E-06	9.56E-10	7.05E-05	4.75E-05
53	C81	70	Combination Short Haul Truck	47	0.00E+00	1.21E-05	9.01E-07	1.64E+01	3.08E-08	1.75E-02	8.63E-06	1.81E-02	1.71E-03	2.85E-04	7.27E-04	2.63E-04	2.73E-04	2.60E-03	5.47E-05	0.00E+00	4.54E-04	3.41E-03
53	C81	70	Combination Long Haul Truck	43	0.00E+00	1.66E-05	9.45E-07	1.54E+01	1.04E-07	2.09E-02	1.37E-05	1.94E-02	1.78E-03	2.68E-04	1.51E-03	3.04E-04	3.16E-04	2.47E-03	5.15E-05	0.00E+00	1.19E-03	3.65E-03
52	C82	60	Passenger Car	453	0.00E+00	5.33E-06	5.79E-07	2.07E+01	3.78E-05	1.06E-01	1.20E-05	4.49E-04	4.45E-03	6.67E-04	1.17E-03	7.56E-04	7.76E-04	8.98E-05	1.04E-04	2.11E-08	3.96E-04	7.01E-05
52	C82	60	Passenger Truck	759	0.00E+00	1.12E-05	1.19E-06	4.60E+01	7.09E-05	1.82E-01	2.33E-05	1.37E-03	7.90E-03	1.17E-03	2.22E-03	1.45E-03	1.48E-03	3.60E-04	2.29E-04	3.85E-08	7.41E-04	2.32E-04
52	C82	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	1.00E-02	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.87E-03
52	C82	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.33E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.11E-05
52	C82	60	Combination Short Haul Truck	60	0.00E+00	1.74E-05	1.28E-06	2.10E+01	4.77E-08	2.60E-02	1.25E-05	2.65E-02	3.04E-03	4.75E-04	1.07E-03	3.74E-04	3.88E-04	3.34E-03	7.02E-05	0.00E+00	6.84E-04	5.00E-03
52	C82	60	Combination Long Haul Truck	54	0.00E+00	2.39E-05	1.31E-06	1.98E+01	1.61E-07	3.12E-02	2.00E-05	2.83E-02	3.18E-03	4.60E-04	2.27E-03	4.27E-04	4.45E-04	3.18E-03	6.65E-05	0.00E+00	1.82E-03	5.32E-03
16	C83	100	Passenger Car	521	0.00E+00	4.87E-06	5.29E-07	2.13E+01	3.46E-05	1.03E-01	1.10E-05	5.62E-04	1.66E-03	3.19E-04	1.07E-03	6.90E-04	7.09E-04	6.19E-05	1.08E-04	2.26E-08	3.62E-04	8.76E-05
16	C83	100	Passenger Truck	872	0.00E+00	1.01E-05	1.08E-06	4.90E+01	6.71E-05	2.00E-01	2.17E-05	1.40E-03	2.91E-03	5.64E-04	2.09E-03	1.35E-03	1.39E-03	3.21E-04	2.46E-04	4.48E-08	7.03E-04	2.30E-04
16	C83	100	Single Unit Short Haul Truck	388	0.00E+00	3.69E-05	1.36E-06	6.33E+01	2.82E-05	1.31E-01	4.18E-05	1.63E-02	2.51E-03	6.49E-04	5.29E-03	9.76E-04	9.93E-04	6.49E-03	2.56E-04	1.05E-07	4.29E-03	3.04E-03
16	C83	100	Single Unit Long Haul Truck	17	0.00E+00	1.60E-06	5.76E-08	2.66E+00	1.17E-06	5.35E-03	1.81E-06	6.83E-04	1.14E-04	2.82E-05	2.31E-04	4.12E-05	4.19E-05	2.71E-04	1.08E-05	4.28E-09	1.89E-04	1.27E-04
16	C83	100	Combination Short Haul Truck	215	0.00E+00	3.08E-05	2.28E-06	7.18E+01	8.18E-08	5.55E-02	2.21E-05	5.56E-02	2.09E-03	5.29E-04	1.88E-03	6.65E-04	6.90E-04	1.14E-02	2.40E-04	0.00E+00	1.19E-03	1.05E-02
16	C83	100	Combination Long Haul Truck	197	0.00E+00	4.36E-05	2.46E-06	6.50E+01	2.78E-07	6.46E-02	3.59E-05	5.96E-02	2.09E-03	4.26E-04	4.00E-03	7.92E-04	8.25E-04	1.04E-02	2.18E-04	0.00E+00	3.17E-03	1.12E-02
55	C84	90	Passenger Car	376	0.00E+00	3.62E-06	3.94E-07	1.55E+01	2.57E-05	7.47E-02	8.17E-06	3.92E-04	1.60E-03	2.81E-04	7.97E-04	5.14E-04	5.27E-04	4.97E-05	7.82E-05	1.59E-08	2.70E-04	6.12E-05
55	C84	90	Passenger Truck	630	0.00E+00	7.52E-06	8.04E-07	3.54E+01	4.95E-05	1.40E-01	1.61E-05	1.02E-03	2.84E-03	4.99E-04	1.55E-03	1.00E-03	1.03E-03	2.42E-04	1.77E-04	3.13E-08	5.19E-04	1.68E-04
55	C84	90	Single Unit Short Haul Truck	139	0.00E+00	1.49E-05	5.51E-07	2.28E+01	1.03E-05	4.16E-02	1.66E-05	6.49E-03	1.09E-03	2.57E-04	2.11E-03	3.77E-04	3.84E-04	2.32E-03	9.24E-05	3.62E-08	1.73E-03	1.21E-03
55	C84	90	Single Unit Long Haul Truck	6	0.00E+00	6.47E-07	2.35E-08	9.60E-01	4.33E-07	1.72E-03	7.21E-07	2.75E-04	4.99E-05	1.12E-05	9.21E-05	1.61E-05	1.64E-05	9.70E-05	3.90E-06	1.49E-09	7.57E-05	5.13E-05
55	C84	90	Combination

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D64	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	D64	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
11	D65	80	Passenger Car	348	0.00E+00	3.62E-06	3.94E-07	1.48E+01	2.57E-05	7.47E-02	8.17E-06	3.61E-04	1.90E-03	3.18E-04	7.97E-04	5.14E-04	5.27E-04	5.18E-05	7.43E-05	1.59E-08	2.69E-04	5.64E-05
11	D65	80	Passenger Truck	584	0.00E+00	7.46E-06	7.95E-07	3.33E+01	4.85E-05	1.32E-01	1.58E-05	9.75E-04	3.38E-03	5.63E-04	1.52E-03	9.84E-04	1.01E-03	2.40E-04	1.66E-04	3.02E-08	5.08E-04	1.62E-04
11	D65	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.42E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.26E-04
11	D65	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.53E-05
11	D65	80	Combination Short Haul Truck	33	0.00E+00	6.79E-06	5.03E-07	1.10E+01	1.78E-08	1.04E-02	4.85E-06	1.05E-02	7.86E-04	1.42E-04	4.12E-04	1.47E-04	1.52E-04	1.76E-03	3.69E-05	0.00E+00	2.60E-04	1.97E-03
11	D65	80	Combination Long Haul Truck	30	0.00E+00	9.46E-06	5.34E-07	1.03E+01	6.02E-08	1.23E-02	7.80E-06	1.12E-02	8.13E-04	1.30E-04	8.67E-04	1.72E-04	1.79E-04	1.65E-03	3.44E-05	0.00E+00	6.88E-04	2.11E-03
11	D66	80	Passenger Car	212	0.00E+00	2.20E-06	2.39E-07	8.96E+00	1.56E-05	4.54E-02	4.96E-06	2.19E-04	1.15E-03	1.93E-04	4.84E-04	3.12E-04	3.20E-04	3.15E-05	4.52E-05	9.65E-09	1.64E-04	3.42E-05
11	D66	80	Passenger Truck	354	0.00E+00	4.53E-06	4.83E-07	2.02E+01	2.95E-05	8.01E-02	9.60E-06	5.92E-04	2.05E-03	3.42E-04	9.21E-04	5.98E-04	6.13E-04	1.46E-04	1.01E-04	1.84E-08	3.09E-04	9.85E-05
11	D66	80	Single Unit Short Haul Truck	51	0.00E+00	6.97E-06	2.72E-07	8.32E+00	4.72E-06	1.51E-02	7.66E-06	2.89E-03	5.70E-04	1.17E-04	9.59E-04	1.78E-04	1.81E-04	8.47E-04	3.38E-05	1.34E-08	7.78E-04	5.41E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	3.03E-07	1.17E-08	3.52E-01	2.01E-07	6.29E-04	3.33E-07	1.24E-04	2.62E-05	5.18E-06	4.18E-05	7.62E-06	7.78E-06	3.56E-05	1.43E-06	5.59E-10	3.41E-05	2.31E-05
11	D66	80	Combination Short Haul Truck	34	0.00E+00	7.01E-06	5.19E-07	1.14E+01	1.84E-08	1.07E-02	5.01E-06	1.08E-02	8.11E-04	1.47E-04	4.25E-04	1.51E-04	1.57E-04	1.81E-03	3.81E-05	0.00E+00	2.68E-04	2.04E-03
11	D66	80	Combination Long Haul Truck	31	0.00E+00	9.76E-06	5.51E-07	1.06E+01	6.21E-08	1.26E-02	8.05E-06	1.15E-02	8.38E-04	1.34E-04	8.95E-04	1.78E-04	1.85E-04	1.70E-03	3.55E-05	0.00E+00	7.10E-04	2.18E-03
11	D67	80	Passenger Car	145	0.00E+00	1.51E-06	1.64E-07	6.16E+00	1.07E-05	3.12E-02	3.41E-06	1.51E-04	7.93E-04	1.33E-04	3.33E-04	2.14E-04	2.20E-04	2.16E-05	3.10E-05	6.63E-09	1.12E-04	2.35E-05
11	D67	80	Passenger Truck	244	0.00E+00	3.11E-06	3.32E-07	1.39E+01	2.02E-05	5.51E-02	6.60E-06	4.07E-04	1.41E-03	2.35E-04	6.33E-04	4.11E-04	4.21E-04	1.00E-04	6.94E-05	1.26E-08	2.12E-04	6.77E-05
11	D67	80	Single Unit Short Haul Truck	54	0.00E+00	7.36E-06	2.87E-07	8.79E+00	4.99E-06	1.60E-02	8.09E-06	3.06E-03	6.03E-04	1.23E-04	1.01E-03	1.88E-04	1.91E-04	8.94E-04	3.57E-05	1.42E-08	8.22E-04	5.71E-04
11	D67	80	Single Unit Long Haul Truck	2	0.00E+00	3.20E-07	1.23E-08	3.72E-01	2.13E-07	6.65E-04	3.51E-07	1.31E-04	2.76E-05	5.47E-06	4.42E-05	8.06E-06	8.22E-06	3.76E-05	1.51E-06	5.90E-10	3.60E-05	2.44E-05
11	D67	80	Combination Short Haul Truck	35	0.00E+00	7.22E-06	5.35E-07	1.18E+01	1.89E-08	1.10E-02	5.16E-06	1.11E-02	8.36E-04	1.51E-04	4.38E-04	1.56E-04	1.62E-04	1.87E-03	3.93E-05	0.00E+00	2.76E-04	2.10E-03
11	D67	80	Combination Long Haul Truck	32	0.00E+00	1.01E-05	5.68E-07	1.09E+01	6.40E-08	1.30E-02	8.30E-06	1.19E-02	8.64E-04	1.38E-04	9.22E-04	1.83E-04	1.91E-04	1.75E-03	3.65E-05	0.00E+00	7.31E-04	2.24E-03
11	D68	80	Passenger Car	375	0.00E+00	3.89E-06	4.23E-07	1.59E+01	2.76E-05	8.03E-02	8.78E-06	3.88E-04	2.04E-03	3.42E-04	8.56E-04	5.52E-04	5.67E-04	5.57E-05	7.99E-05	1.71E-08	2.90E-04	6.06E-05
11	D68	80	Passenger Truck	627	0.00E+00	8.02E-06	8.55E-07	3.58E+01	5.22E-05	1.42E-01	1.70E-05	1.05E-03	3.64E-03	6.05E-04	1.63E-03	1.06E-03	1.08E-03	2.58E-04	1.79E-04	3.25E-08	5.46E-04	1.74E-04
11	D68	80	Single Unit Short Haul Truck	92	0.00E+00	1.26E-05	4.93E-07	1.51E+01	8.55E-06	2.74E-02	1.39E-05	5.24E-03	1.03E-03	2.11E-04	1.74E-03	3.22E-04	3.28E-04	1.53E-03	6.12E-05	2.43E-08	1.41E-03	9.79E-04
11	D68	80	Single Unit Long Haul Truck	4	0.00E+00	5.48E-07	2.11E-08	6.37E-01	3.64E-07	1.14E-03	6.02E-07	2.24E-04	4.74E-05	9.38E-06	7.58E-05	1.38E-05	1.41E-05	6.44E-05	2.59E-06	1.01E-09	6.17E-05	4.18E-05
11	D68	80	Combination Short Haul Truck	60	0.00E+00	1.23E-05	9.10E-07	2.00E+01	3.22E-08	1.87E-02	8.78E-06	1.89E-02	1.42E-03	2.58E-04	7.45E-04	2.65E-04	2.76E-04	3.18E-03	6.69E-05	0.00E+00	4.70E-04	3.57E-03
11	D68	80	Combination Long Haul Truck	54	0.00E+00	1.71E-05	9.66E-07	1.86E+01	1.09E-07	2.22E-02	1.41E-05	2.03E-02	1.47E-03	2.35E-04	1.57E-03	3.11E-04	3.24E-04	2.98E-03	6.22E-05	0.00E+00	1.24E-03	3.81E-03
11	D69	80	Passenger Car	43	0.00E+00	4.51E-07	4.90E-08	1.84E+00	3.20E-06	9.30E-03	1.02E-06	4.50E-05	2.36E-04	3.96E-05	9.92E-05	6.39E-05	6.56E-05	6.45E-06	9.25E-06	1.98E-09	3.35E-05	7.02E-06
11	D69	80	Passenger Truck	73	0.00E+00	9.28E-07	9.90E-08	4.15E+00	6.04E-06	1.64E-02	1.97E-06	1.21E-04	4.21E-04	7.01E-05	1.89E-04	1.22E-04	1.26E-04	2.98E-05	2.07E-05	3.76E-09	6.32E-05	2.02E-05
11	D69	80	Single Unit Short Haul Truck	22	0.00E+00	3.02E-06	1.18E-07	3.61E+00	2.05E-06	6.56E-03	3.32E-06	1.26E-03	2.47E-04	5.06E-05	4.16E-04	7.71E-05	7.86E-05	3.67E-04	1.47E-05	5.82E-09	3.38E-04	2.35E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.07E-09	1.53E-01	8.73E-08	2.73E-04	1.44E-07	5.36E-05	1.13E-05	2.25E-06	1.82E-05	3.31E-06	3.37E-06	1.54E-05	6.21E-07	2.42E-10	1.48E-05	1.00E-05
11	D69	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.26E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.55E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.69E-04
11	D70	80	Passenger Car	208	0.00E+00	2.16E-06	2.34E-07	8.79E+00	1.53E-05	4.45E-02	4.86E-06	2.15E-04	1.13E-03	1.89E-04	4.74E-04	3.06E-04	3.14E-04	3.08E-05	4.43E-05	9.46E-09	1.60E-04	3.36E-05
11	D70	80	Passenger Truck	347	0.00E+00	4.44E-06	4.74E-07	1.98E+01	2.89E-05	7.85E-02	9.41E-06	5.80E-04	2.01E-03	3.35E-04	9.03E-04	5.86E-04	6.01E-04	1.43E-04	9.90E-05	1.80E-08	3.03E-04	9.66E-05
11	D70	80	Single Unit Short Haul Truck	50	0.00E+00	6.83E-06	2.67E-07	8.17E+00	4.63E-06	1.48E-02	7.51E-06	2.84E-03	5.60E-04	1.14E-04	9.41E-04	1.74E-04	1.78E-04	8.31E-04	3.32E-05	1.32E-08	7.64E-04	5.30E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	2.97E-07	1.15E-08	3.45E-01	1.97E-07	6.18E-04	3.26E-07	1.21E-04	2.57E-05	5.08E-06	4.10E-05	7.48E-06	7.63E-06	3.49E-05	1.40E-06	5.48E-10	3.34E-05	2.27E-05
11	D70	80	Combination Short Haul Truck	32	0.00E+00	6.58E-06	4.87E-07	1.07E+01	1.72E-08	1.00E-02	4.70E-06	1.01E-02	7.61E-04	1.38E-04	3.99E-04	1.42E-04	1.47E-04	1.70E-03	3.58E-05	0.00E+00	2.51E-04	1.91E-03
11	D70	80	Combination Long Haul Truck	29	0.00E+00	9.16E-06	5.17E-07	9.93E+00	5.83E-08	1.19E-02	7.56E-06	1.08E-02	7.87E-04	1.26E-04	8.39E-04	1.67E-04	1.74E-04	1.59E-03	3.33E-05	0.00E+00	6.66E-04	2.04E-03
10	D71	70	Passenger Car	215	0.00E+00	2.40E-06	2.61E-07	9.39E+00	1.71E-05	4.84E-02	5.42E-06	2.18E-04	1.66E-03	2.58E-04	5.29E-04	3.41E-04	3.50E-04	3.66E-05	4.72E-05	9.81E-09	1.79E-04	3.40E-05
10	D71	70	Passenger Truck	361	0.00E+00	5.06E-06	5.38E-07	2.11E+01	3.24E-05	8.54E-02	1.06E-05	6.33E-04	3.00E-03	4.65E-04	1.01E-03	6.59E-04	6.75E-04	1.60E-04	1.05E-04	1.89E-08	3.39E-04	1.06E-04
10	D71	70	Single Unit Short Haul Truck	38	0.00E+00	6.74E-06	2.74E-07	6.28E+00	4.52E-06	1.14E-02	7.33E-06	2.68E-03	6.09E-04	1.12E-04	9.09E-04	1.73E-04	1.77E-04	6.38E-04	2.55E-05	1.03E-08	7.32E-04	5.01E-04
10	D71	70	Single Unit Long Haul Truck	2	0.00E+00	2.93E-07	1.18E-08	2.66E-01	1.94E-07	4.78E-04	3.19E-07	1.15E-04	2.79E-05	5.00E-06	3.97E-05	7.48E-06	7.63E-06	2.69E-05	1.08E-06	4.34E-10	3.20E-05	2.16E-05
10	D71	70	Combination Short Haul Truck	35	0.00E+00	8.88E-06	6.61E-07	1.20E+01	2.26E-08	1.28E-02	6.33E-06	1.33E-02	1.25E-03	2.09E-04	5.33E-04	1.93E-04	2.00E-04	1.91E-03	4.01E-05	0.00E+00	3.33E-04	2.50E-03
10	D71	70	Combination Long Haul Truck	31	0.00E+00	1.22E-05	6.93E-07	1.13E+01	7.64E-08	1.53E-02	1.00E-05	1.42E-02	1.30E-03	1.96E-04	1.11E-03	2.23E-04	2.32E-04	1.81E-03	3.78E-05	0.00E+00	8.76E-04	2.67E-03
10	D72	70	Passenger Car	183	0.00E+00	2.05E-06	2.22E-07	7.99E+00	1.45E-05	4.11E-02	4.61E-06	1.85E-04	1.41E-03	2.20E-04	4.50E-04	2.90E-04	2.98E-04	3.11E-05	4.02E-05	8.34E-09	1.52E-04	2.89E-05
10	D72	70	Passenger Truck	307	0.00E+00	4.31E-06	4.58E-07	1.80E+01	2.76E-05	7.26E-02	9.02E-06	5.39E-04	2.56E-03	3.95E-04	8.63E-04	5.61E-04	5.75E-04	1.36E-04	8.95E-05	1.60E-08	2.88E-04	9.04E-05
10	D72	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.42E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.39E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.75E-05
10	D72	70	Combination Short Haul Truck	37	0.00E+00	9.42E-06	7.01E-07	1.27E+01	2.39E-08	1.36E-02	6.71E-06	1.41E-02	1.33E-03	2.22E-04	5.65E-04	2.04E-04	2.12E-04	2.02E-03	4.26E-05	0.00E+00	3.53E-04	2.65E-03
10	D72	70	Combination Long Haul Truck	33	0.00E+00	1.29E-05	7.35E-07	1.20E+01	8.10E-08	1.62E-02	1.06E-05	1.51E-02	1.38E-03	2.08E-04	1.17E-03	2.36E-04	2.46E-04	1.92E-03	4.01E-05	0.00E+00	9.29E-04	2.84E-03
10	D73	70	Passenger Car	122	0.00E+00	1.36E-06	1.48E-07	5.33E+00	9.69E-06	2.75E-02	3.08E-06	1.24E-04	9.42E-04	1.47E-04	3.00E-04	1.94E-04	1.99E-04	2.08E-05	2.68E-05	5.57E-09	1.02E-04	1.93E-05
10	D73	70	Passenger Truck	205	0.00E+00	2.87E-06	3.05E-07	1.20E+01	1.84E-05	4.85E-02	6.02E-06	3.59E-04	1.71E-03	2.64E-04	5.76E-04	3.74E-04	3.83E-04	9.08E-05	5.97E-05	1.07E-08	1.92E-04	6.04E-05
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	D73	70	Combination Short Haul Truck	12	0.00E+00	2.96E-06	2.20E-07	4.00E+00	7.52E-09	4.28E-03	2.11E-06	4.42E-03	4.17E-04	6.96E-05	1.78E-04	6.42E-05	6.66E-05	6.36E-04	1.34E-05	0.00E+00	1.11E-04	8.33E-04
10	D73	70	Combination Long Haul Truck	10	0.00E+00	4.06E-06	2.31E-07	3.76E+00	2.55E-08	5.10E-03	3.34E-06	4.73E-03	4.35E-04	6.55E-05	3.69E-04	7.42E-05	7.73E-05	6.03E-04	1.26E-05	0.00E+00	2.92E-04	8.92E-04
10	D74	70	Passenger Car	222	0.00E+00	2.48E-06	2.69E-07	9.69E+00	1.76E-05	4.99E-02	5.59E-06	2.25E-04	1.71E-03	2.67E-04	5.45E-04	3.52E-04	3.61E-04	3.77E-05	4.87E-05	1.01E-08	1.84E-04	3.50E-05
10	D74	70	Passenger Truck	372	0.00E+00	5.22E-06	5.55E-07	2.18E+01	3.34E-05	8.81E-02	1.09E-05	6.53E-04	3.10E-03	4.79E-04	1.05E-03	6.80E-04	6.97E-04	1.65E-04	1.09E-04	1.94E-08	3.50E-04	1.10E-04
10	D74	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.71E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.75E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.01E-06
10	D74	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.02E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.58E-04
10	D74	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.30E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.11E-04
11	D75	80	Passenger Car	147	0.00E+00	1.53E-06	1.66E-07	6.24E+00	1.09E-05	3.16E-02	3.45E-06	1.53E-04	8.03E-04	1.34E-04	3.37E-04	2.17E-04	2.23E-04	2.19E-05	3.14E-05	6.72E-09	1.14E-04	2.38E-05
11	D75	80	Passenger Truck	247	0.00E+00	3.15E-06	3.36E-07	1.41E+01	2.05E-05	5.58E-02	6.68E-06	4.12E-04	1.43E-03	2.38E-04	6.41E-04	4.16E-04	4.26E-04	1.01E-04	7.03E-05	1.28E-08	2.15E-04	6.86E-05
11	D75	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.10E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.03E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.67E-06
11	D75	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.33E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.38E-04
11	D75	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.49E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.68E-04
11	D76	80	Passenger Car	133	0.00E+00	1.39E-06	1.51E-07	5.65E+00	9.85E-06	2.86E-02	3.13E-06	1.38E-04	7.28E-04	1.22E-04	3.05E-04	1.97E-04	2.02E-04	1.98E-05	2.85E-05	6.08E-09	1.03E-04	2.16E-05
11	D76	80	Passenger Truck	224	0.00E+00	2.86E-06	3.05E-07	1.28E+01	1.86E-05	5.05E-02	6.05E-06	3.73E-04	1.30E-03	2.16E-04	5.81E-04	3.77E-04	3.86E-04	9.18E-05	6.37E-05	1.16E-08	1.95E-04	6.21E-05
11	D76	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.15E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.14E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.90E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.15E-06
11	D76	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.26E-04
11	D76	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.55E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.69E-04
11	D77	80	Passenger Car	91	0.00E+00	9.45E-07	1.03E-07	3.85E+00	6.70E-06	1.95E-02	2.13E-06	9.42E-05	4.95E-04	8.29E-05	2.08E-04	1.34E-04	1.37E-04	1.35E-05	1.94E-05	4.14E-09	7.03E-05	1.47E-05
11	D77	80	Passenger Truck	152	0.00E+00	1.94E-06	2.07E-07	8.68E+00	1.26E-05	3.44E-02	4.12E-06	2.54E-04	8.82E-04	1.47E-04	3.95E-04	2.57E-04	2.63E-04	6.25E-05	4.34E-05	7.88E-09	1.32E-04	4.23E-05
11	D77	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.75E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.30E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.18E-05
11	D77	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.99E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.52E-04
11	D77	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.26E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.03E-04
11	D78	80	Passenger Car	208	0.00E+00	2.17E-06	2.35E-07	8.82E+00	1.54E-05	4.46E-02	4.88E-06	2.16E-04	1.14E-03	1.90E-04	4.76E-04	3.07E-04	3.15E-04	3.10E-05	4.44E-05	9.49E-09	1.61E-04	3.37E-05
11	D78	80	Passenger Truck	349	0.00E+00	4.46E-06	4.75E-07	1.99E+01	2.90E-05	7.88E-02	9.45E-06	5.82E-04	2.02E-03	3.37E-04	9.06E-04	5.88E-04	6.03E-04	1.43E-04	9.94E-05	1.81E-08	3.04E-04	9.69E-05
11	D78	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.07E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
11	D78	80	Single Unit Long Ha

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	D82	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	D82	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	D82	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
11	D83	80	Passenger Car	418	0.00E+00	4.35E-06	4.73E-07	1.77E+01	3.09E-05	8.97E-02	9.81E-06	4.34E-04	2.28E-03	3.82E-04	9.57E-04	6.17E-04	6.33E-04	6.22E-05	8.93E-05	1.91E-08	3.24E-04	6.77E-05
11	D83	80	Passenger Truck	701	0.00E+00	8.96E-06	9.55E-07	4.00E+01	5.83E-05	1.58E-01	1.90E-05	1.17E-03	4.06E-03	6.76E-04	1.82E-03	1.18E-03	1.21E-03	2.88E-04	2.00E-04	3.63E-08	6.10E-04	1.95E-04
11	D83	80	Single Unit Short Haul Truck	98	0.00E+00	1.34E-05	5.23E-07	1.60E+01	9.09E-06	2.91E-02	1.47E-05	5.57E-03	1.10E-03	2.25E-04	1.85E-03	3.42E-04	3.48E-04	1.63E-03	6.51E-05	2.58E-08	1.50E-03	1.04E-03
11	D83	80	Single Unit Long Haul Truck	4	0.00E+00	5.82E-07	2.25E-08	6.77E-01	3.87E-07	1.21E-03	6.40E-07	2.38E-04	5.03E-05	9.96E-06	8.05E-05	1.47E-05	1.50E-05	6.84E-05	2.75E-06	1.08E-09	6.55E-05	4.44E-05
11	D83	80	Combination Short Haul Truck	57	0.00E+00	1.17E-05	8.70E-07	1.91E+01	3.08E-08	1.79E-02	8.40E-06	1.81E-02	1.36E-03	2.46E-04	7.13E-04	2.54E-04	2.63E-04	3.04E-03	6.39E-05	0.00E+00	4.49E-04	3.41E-03
11	D83	80	Combination Long Haul Truck	52	0.00E+00	1.64E-05	9.24E-07	1.77E+01	1.04E-07	2.12E-02	1.35E-05	1.94E-02	1.41E-03	2.25E-04	1.50E-03	2.98E-04	3.10E-04	2.85E-03	5.95E-05	0.00E+00	1.19E-03	3.65E-03
11	D84	80	Passenger Car	366	0.00E+00	3.81E-06	4.14E-07	1.55E+01	2.70E-05	7.85E-02	8.59E-06	3.80E-04	2.00E-03	3.34E-04	8.38E-04	5.40E-04	5.54E-04	5.45E-05	7.82E-05	1.67E-08	2.83E-04	5.93E-05
11	D84	80	Passenger Truck	614	0.00E+00	7.84E-06	8.36E-07	3.50E+01	5.10E-05	1.39E-01	1.66E-05	1.02E-03	3.56E-03	5.92E-04	1.59E-03	1.03E-03	1.06E-03	2.52E-04	1.75E-04	3.18E-08	5.34E-04	1.71E-04
11	D84	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	D84	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.09E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D84	80	Combination Short Haul Truck	67	0.00E+00	1.38E-05	1.02E-06	2.24E+01	3.61E-08	2.10E-02	9.86E-06	2.13E-02	1.60E-03	2.89E-04	8.37E-04	2.98E-04	3.09E-04	3.57E-03	7.51E-05	0.00E+00	5.27E-04	4.01E-03
11	D84	80	Combination Long Haul Truck	61	0.00E+00	1.92E-05	1.09E-06	2.08E+01	1.22E-07	2.49E-02	1.59E-05	2.27E-02	1.65E-03	2.64E-04	1.76E-03	3.50E-04	3.64E-04	3.34E-03	6.98E-05	0.00E+00	1.40E-03	4.28E-03
11	D85	80	Passenger Car	354	0.00E+00	3.68E-06	4.00E-07	1.50E+01	2.61E-05	7.58E-02	8.29E-06	3.67E-04	1.93E-03	3.23E-04	8.09E-04	5.21E-04	5.35E-04	5.26E-05	7.55E-05	1.61E-08	2.74E-04	5.72E-05
11	D85	80	Passenger Truck	592	0.00E+00	7.57E-06	8.07E-07	3.38E+01	4.92E-05	1.34E-01	1.60E-05	9.89E-04	3.43E-03	5.72E-04	1.54E-03	9.99E-04	1.02E-03	2.43E-04	1.69E-04	3.07E-08	5.16E-04	1.65E-04
11	D85	80	Single Unit Short Haul Truck	91	0.00E+00	1.25E-05	4.87E-07	1.49E+01	8.46E-06	2.71E-02	1.37E-05	5.18E-03	1.02E-03	2.09E-04	1.72E-03	3.18E-04	3.25E-04	1.52E-03	6.06E-05	2.40E-08	1.39E-03	9.69E-04
11	D85	80	Single Unit Long Haul Truck	4	0.00E+00	5.42E-07	2.09E-08	6.30E-01	3.61E-07	1.13E-03	5.96E-07	2.22E-04	4.69E-05	9.28E-06	7.50E-05	1.37E-05	1.39E-05	6.37E-05	2.57E-06	1.00E-09	6.10E-05	4.14E-05
11	D85	80	Combination Short Haul Truck	64	0.00E+00	1.32E-05	9.74E-07	2.14E+01	3.44E-08	2.00E-02	9.40E-06	2.03E-02	1.52E-03	2.76E-04	7.98E-04	2.84E-04	2.95E-04	3.40E-03	7.15E-05	0.00E+00	5.03E-04	3.82E-03
11	D85	80	Combination Long Haul Truck	58	0.00E+00	1.83E-05	1.03E-06	1.99E+01	1.17E-07	2.37E-02	1.51E-05	2.17E-02	1.57E-03	2.52E-04	1.68E-03	3.33E-04	3.47E-04	3.19E-03	6.65E-05	0.00E+00	1.33E-03	4.08E-03
11	D86	80	Passenger Car	451	0.00E+00	4.69E-06	5.10E-07	1.91E+01	3.33E-05	9.67E-02	1.06E-05	4.68E-04	2.46E-03	4.12E-04	1.03E-03	6.65E-04	6.83E-04	6.71E-05	9.63E-05	2.06E-08	3.49E-04	7.30E-05
11	D86	80	Passenger Truck	756	0.00E+00	9.66E-06	1.03E-06	4.31E+01	6.28E-05	1.71E-01	2.05E-05	1.26E-03	4.38E-03	7.29E-04	1.96E-03	1.27E-03	1.31E-03	3.10E-04	2.15E-04	3.92E-08	6.58E-04	2.10E-04
11	D86	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.57E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.79E-04
11	D86	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.10E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	D86	80	Combination Short Haul Truck	94	0.00E+00	1.94E-05	1.44E-06	3.16E+01	5.08E-08	2.96E-02	1.39E-05	2.99E-02	2.25E-03	4.07E-04	1.18E-03	4.19E-04	4.35E-04	5.02E-03	1.06E-04	0.00E+00	7.42E-04	5.64E-03
11	D86	80	Combination Long Haul Truck	86	0.00E+00	2.70E-05	1.53E-06	2.93E+01	1.72E-07	3.50E-02	2.23E-05	3.20E-02	2.32E-03	3.72E-04	2.48E-03	4.92E-04	5.12E-04	4.70E-03	9.82E-05	0.00E+00	1.96E-03	6.02E-03
11	D87	80	Passenger Car	348	0.00E+00	3.62E-06	3.93E-07	1.47E+01	2.57E-05	7.45E-02	8.15E-06	3.61E-04	1.90E-03	3.17E-04	7.95E-04	5.13E-04	5.26E-04	5.17E-05	7.42E-05	1.59E-08	2.69E-04	5.62E-05
11	D87	80	Passenger Truck	582	0.00E+00	7.44E-06	7.93E-07	3.32E+01	4.84E-05	1.32E-01	1.58E-05	9.72E-04	3.37E-03	5.62E-04	1.51E-03	9.82E-04	1.01E-03	2.39E-04	1.66E-04	3.02E-08	5.07E-04	1.62E-04
11	D87	80	Single Unit Short Haul Truck	121	0.00E+00	1.66E-05	6.47E-07	1.98E+01	1.12E-05	3.59E-02	1.82E-05	6.88E-03	1.36E-03	2.77E-04	2.28E-03	4.22E-04	4.30E-04	2.01E-03	8.04E-05	3.19E-08	1.85E-03	1.29E-03
11	D87	80	Single Unit Long Haul Truck	5	0.00E+00	7.19E-07	2.78E-08	8.36E-01	4.78E-07	1.50E-03	7.90E-07	2.94E-04	6.22E-05	1.23E-05	9.94E-05	1.81E-05	1.85E-05	8.45E-05	3.40E-06	1.33E-09	8.09E-05	5.49E-05
11	D87	80	Combination Short Haul Truck	82	0.00E+00	1.69E-05	1.25E-06	2.75E+01	4.43E-08	2.58E-02	1.21E-05	2.61E-02	1.96E-03	3.55E-04	1.03E-03	3.66E-04	3.79E-04	4.38E-03	9.21E-05	0.00E+00	6.47E-04	4.92E-03
11	D87	80	Combination Long Haul Truck	75	0.00E+00	2.36E-05	1.33E-06	2.56E+01	1.50E-07	3.05E-02	1.94E-05	2.79E-02	2.03E-03	3.24E-04	2.16E-03	4.29E-04	4.47E-04	4.10E-03	8.56E-05	0.00E+00	1.71E-03	5.25E-03
11	D88	80	Passenger Car	821	0.00E+00	8.54E-06	9.28E-07	3.48E+01	6.06E-05	1.76E-01	1.93E-05	8.52E-04	4.48E-03	7.50E-04	1.88E-03	1.21E-03	1.24E-03	1.22E-04	1.75E-04	3.74E-08	6.35E-04	1.33E-04
11	D88	80	Passenger Truck	1376	0.00E+00	1.76E-05	1.87E-06	7.85E+01	1.14E-04	3.11E-01	3.73E-05	2.30E-03	7.97E-03	1.33E-03	3.58E-03	2.32E-03	2.38E-03	5.65E-04	3.92E-04	7.13E-08	1.20E-03	3.82E-04
11	D88	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.42E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.26E-04
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.53E-05
11	D88	80	Combination Short Haul Truck	123	0.00E+00	2.53E-05	1.88E-06	4.12E+01	6.63E-08	3.86E-02	1.81E-05	3.91E-02	2.93E-03	5.31E-04	1.54E-03	5.47E-04	5.68E-04	6.55E-03	1.38E-04	0.00E+00	9.68E-04	7.36E-03
11	D88	80	Combination Long Haul Truck	112	0.00E+00	3.53E-05	1.99E-06	3.83E+01	2.24E-07	4.57E-02	2.91E-05	4.18E-02	3.03E-03	4.85E-04	3.23E-03	6.42E-04	6.69E-04	6.14E-03	1.28E-04	0.00E+00	2.57E-03	7.86E-03
9	D89	60	Passenger Car	121	0.00E+00	1.55E-06	1.69E-07	5.52E+00	1.10E-05	3.10E-02	3.50E-06	1.25E-04	1.22E-03	1.83E-04	3.41E-04	2.20E-04	2.26E-04	2.40E-05	2.77E-05	5.82E-09	1.15E-04	1.95E-05
9	D89	60	Passenger Truck	203	0.00E+00	3.29E-06	3.49E-07	1.23E+01	2.08E-05	5.31E-02	6.83E-06	3.88E-04	2.24E-03	3.33E-04	6.51E-04	4.24E-04	4.34E-04	9.83E-05	6.11E-05	1.13E-08	2.17E-04	6.57E-05
9	D89	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
9	D89	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.64E-06
9	D89	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.05E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
9	D89	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.45E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.21E-03
9	D90	60	Passenger Car	184	0.00E+00	2.36E-06	2.56E-07	8.40E+00	1.67E-05	4.72E-02	5.32E-06	1.90E-04	1.86E-03	2.79E-04	5.19E-04	3.35E-04	3.43E-04	3.65E-05	4.21E-05	8.85E-09	1.76E-04	2.96E-05
9	D90	60	Passenger Truck	309	0.00E+00	5.01E-06	5.31E-07	1.87E+01	3.16E-05	8.08E-02	1.04E-05	5.90E-04	3.40E-03	5.06E-04	9.90E-04	6.44E-04	6.60E-04	1.50E-04	9.30E-05	1.73E-08	3.30E-04	1.00E-04
9	D90	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.60E-04
9	D90	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	D90	60	Combination Short Haul Truck	16	0.00E+00	4.73E-06	3.48E-07	5.71E+00	1.30E-08	7.07E-03	3.40E-06	7.21E-03	8.26E-04	1.29E-04	2.92E-04	1.02E-04	1.06E-04	9.08E-04	1.91E-05	0.00E+00	1.86E-04	1.36E-03
9	D90	60	Combination Long Haul Truck	15	0.00E+00	6.50E-06	3.55E-07	5.39E+00	4.39E-08	8.49E-03	5.44E-06	7.69E-03	8.66E-04	1.25E-04	6.17E-04	1.16E-04	1.21E-04	8.66E-04	1.81E-05	0.00E+00	4.96E-04	1.45E-03
10	D91	70	Passenger Car	270	0.00E+00	3.02E-06	3.28E-07	1.18E+01	2.14E-05	6.07E-02	6.80E-06	2.73E-04	2.08E-03	3.24E-04	6.64E-04	4.28E-04	4.39E-04	4.59E-05	5.93E-05	1.23E-08	2.24E-04	4.26E-05
10	D91	70	Passenger Truck	453	0.00E+00	6.35E-06	6.75E-07	2.65E+01	4.07E-05	1.07E-01	1.33E-05	7.95E-04	3.77E-03	5.83E-04	1.27E-03	8.27E-04	8.48E-04	2.01E-04	1.32E-04	2.37E-08	4.25E-04	1.33E-04
10	D91	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.74E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.26E-04
10	D91	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.50E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.40E-05
10	D91	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.83E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
10	D91	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.24E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
10	D92	70	Passenger Car	95	0.00E+00	1.06E-06	1.15E-07	4.14E+00	7.52E-06	2.13E-02	2.39E-06	9.60E-05	7.32E-04	1.14E-04	2.33E-04	1.50E-04	1.54E-04	1.61E-05	2.08E-05	4.32E-09	7.89E-05	1.50E-05
10	D92	70	Passenger Truck	159	0.00E+00	2.23E-06	2.37E-07	9.32E+00	1.43E-05	3.77E-02	4.68E-06	2.79E-04	1.32E-03	2.05E-04	4.47E-04	2.91E-04	2.98E-04	7.05E-05	4.64E-05	8.31E-09	1.49E-04	4.69E-05
10	D92	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	D92	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.03E-04
10	D92	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.24E-04
10	D93	70	Passenger Car	227	0.00E+00	2.53E-06	2.75E-07	9.88E+00	1.79E-05	5.09E-02	5.70E-06	2.29E-04	1.75E-03	2.72E-04	5.56E-04	3.59E-04	3.68E-04	3.85E-05	4.97E-05	1.03E-08	1.88E-04	3.57E-05
10	D93	70	Passenger Truck	379	0.00E+00	5.32E-06	5.66E-07	2.22E+01	3.41E-05	8.98E-02	1.12E-05	6.66E-04	3.16E-03	4.89E-04	1.07E-03	6.93E-04	7.11E-04	1.68E-04	1.11E-04	1.98E-08	3.57E-04	1.12E-04
10	D93	70	Single Unit Short Haul Truck	39	0.00E+00	6.91E-06	2.81E-07	6.43E+00	4.63E-06	1.17E-02	7.52E-06	2.75E-03	6.24E-04	1.15E-04	9.32E-04	1.77E-04	1.81E-04	6.54E-04	2.62E-05	1.06E-08	7.51E-04	5.14E-04
10	D93	70	Single Unit Long Haul Truck	2	0.00E+00	3.01E-07	1.21E-08	2.73E-01	1.99E-07	4.90E-04	3.27E-07	1.18E-04	2.86E-05	5.12E-06	4.06E-05	7.67E-06	7.82E-06	2.76E-05	1.11E-06	4.45E-10	3.28E-05	2.21E-05
10	D93	70	Combination Short Haul Truck	25	0.00E+00	6.33E-06	4.71E-07	8.55E+00	1.61E-08	9.14E-03	4.51E-06	9.45E-03	8.92E-04	1.49E-04	3.80E-04	1.37E-04	1.42E-04	1.36E-03	2.86E-05	0.00E+00	2.37E-04	1.78E-03
10	D93	70	Combination Long Haul Truck	22	0.00E+00	8.68E-06	4.93E-07	8.03E+00	5.44E-08	1.09E-02	7.13E-06	1.01E-02	9.28E-04	1.40E-04	7.89E-04	1.59E-04	1.65E-04	1.29E-03	2.69E-05	0.00E+00	6.24E-04	1.90E-03
10	D94	70	Passenger Car	86	0.00E+00	9.56E-07	1.04E-07	3.73E+00	6.78E-06	1.92E-02	2.16E-06	8.66E-05	6.60E-04	1.03E-04	2.10E-04	1.36E-04	1.39E-04	1.45E-05	1.88E-05	3.90E-09	7.11E-05	1.35E-05
10	D94	70	Passenger Truck	143	0.00E+00	2.01E-06	2.14E-07	8.40E+00	1.29E-05	3.40E-02	4.22E-06	2.52E-04	1.19E-03	1.85E-04	4.03E-04	2.62E-04	2.69E-04	6.36E-05	4.18E-05	7.50E-09	1.35E-04	4.23E-05
10	D94	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	D94	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	D94	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
9	E01	60	Passenger Car	159	0.00E+00	2.03E-06	2.21E-07	7.25E+00	1.44E-05	4.07E-02	4.59E-06	1.64E-04	1.60E-03	2.40E-04	4.47E-04	2.88E-04	2.96E-04	3.15E-05	3.63E-05	7.63E-09	1.51E-04	2.55E-05
9	E01	60	Passenger Truck	266	0.00E+00	4.32E-06	4.58E-07	1.61E+01	2.72E-05	6.96E-02	8.96E-06	5.09E-04	2.93E-03	4.36E-04	8.54E-04	5.56E-04	5.69E-04	1.29E-04	8.02E-05	1.49E-08	2.85E-04	8.62E-05
9	E01	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.74E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	E01	60	Combination Short Haul Truck	8	0.00E+00	2.29E-06	1.68E-07	2.76E+00	6.27E-09	3.42E-03	1.64E-06	3.49E-03	4.00E-04	6.25E-05	1.41E-04	4.92E-05	5.11E-05	4.39E-04	9.24E-06	0.00E+00	9.00E-05	6.58E-04
9	E01	60	Combination Long Haul Truck	7	0.00E+00	3.15E-06	1.72E-07	2.61E+00	2.12E-08	4.11E-03	2.63E-06	3.72E-03	4.19E-04	6.06E-05	2.98E-04	5.61E-05	5.85E-05	4.19E-04	8.75E-06	0.00E+00	2.40E-04	7.00E-04
9	E02	60	Passenger Car	228	0.00E+00	2.91E-06	3.17E-07	1.04E+01	2.07E-05	5.83E-02	6.57E-06	2.34E-04	2.30E-03	3.44E-04	6.41E-04	4.13E-04	4.24E-04	4.51E-05	5.21E-05	1.09E-08	2.17E-04	3.66E-05
9	E02	60	Passenger Truck	381	0.00E+00	6.19E-06	6.56E-07	2.31E+01	3.90E-05	9.98E-02	1.28E-05	7.29E-04	4.20E-03	6.25E-04	1.22E-03	7.96E-04	8.16E-04	1.85E-04	1.15E-04	2.13E-08	4.08E-04	1.24E-04
9	E02	60	Single Unit Short Haul Truck	28	0.00E+00	6.20E-06	2.56E-07	4.62E+00	4.11E-06	8.13E-03	6.71E-06	2.38E-03	6.39E-04	1.07E-04	8.27E-04	1.59E-04	1.63E-04	4.68E-04	1.88E-05	7.76E-09	6.65E-04	4.45E-04
9	E02	60	Single Unit Long

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E06	80	Combination Short Haul Truck	20	0.00E+00	4.10E-06	3.03E-07	6.66E+00	1.07E-08	6.24E-03	2.93E-06	6.32E-03	4.74E-04	8.59E-05	2.48E-04	8.85E-05	9.18E-05	1.06E-03	2.23E-05	0.00E+00	1.57E-04	1.19E-03
11	E06	80	Combination Long Haul Truck	18	0.00E+00	5.71E-06	3.22E-07	6.19E+00	3.63E-08	7.39E-03	4.71E-06	6.75E-03	4.90E-04	7.84E-05	5.23E-04	1.04E-04	1.08E-04	9.93E-04	2.07E-05	0.00E+00	4.15E-04	1.27E-03
9	E07	60	Passenger Car	1162	0.00E+00	1.49E-05	1.62E-06	5.30E+01	1.06E-04	2.97E-01	3.35E-05	1.20E-03	1.17E-02	1.76E-03	3.27E-03	2.11E-03	2.16E-03	2.30E-04	2.66E-04	5.58E-08	1.11E-03	1.87E-04
9	E07	60	Passenger Truck	1945	0.00E+00	3.16E-05	3.35E-06	1.18E+02	1.99E-04	5.09E-01	6.55E-05	3.72E-03	2.14E-02	3.19E-03	6.24E-03	4.06E-03	4.16E-03	9.43E-04	5.86E-04	1.09E-07	2.08E-03	6.30E-04
9	E07	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.30E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.37E-03
9	E07	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.16E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.91E-05
9	E07	60	Combination Short Haul Truck	63	0.00E+00	1.85E-05	1.36E-06	2.23E+01	5.06E-08	2.76E-02	1.33E-05	2.82E-02	3.22E-03	5.04E-04	1.14E-03	3.97E-04	4.12E-04	3.54E-03	7.45E-05	0.00E+00	7.26E-04	5.31E-03
9	E07	60	Combination Long Haul Truck	58	0.00E+00	2.54E-05	1.39E-06	2.11E+01	1.71E-07	3.32E-02	2.12E-05	3.00E-02	3.38E-03	4.89E-04	2.41E-03	4.53E-04	4.72E-04	3.38E-03	7.05E-05	0.00E+00	1.94E-03	5.65E-03
9	E08	60	Passenger Car	780	0.00E+00	9.98E-06	1.08E-06	3.55E+01	7.08E-05	2.00E-01	2.25E-05	8.03E-04	7.87E-03	1.18E-03	2.19E-03	1.41E-03	1.45E-03	1.55E-04	1.78E-04	3.74E-08	7.42E-04	1.25E-04
9	E08	60	Passenger Truck	1305	0.00E+00	2.12E-05	2.25E-06	7.92E+01	1.34E-04	3.42E-01	4.39E-05	2.50E-03	1.44E-02	2.14E-03	4.19E-03	2.73E-03	2.79E-03	6.32E-04	3.93E-04	7.30E-08	1.40E-03	4.23E-04
9	E08	60	Single Unit Short Haul Truck	80	0.00E+00	1.80E-05	7.42E-07	1.34E+01	1.19E-05	2.35E-02	1.94E-05	6.89E-03	1.85E-03	3.11E-04	2.40E-03	4.62E-04	4.71E-04	1.36E-03	5.45E-05	2.25E-08	1.93E-03	1.29E-03
9	E08	60	Single Unit Long Haul Truck	4	0.00E+00	7.84E-07	3.22E-08	5.71E-01	5.16E-07	9.99E-04	8.48E-07	2.98E-04	8.31E-05	1.38E-05	1.05E-04	2.01E-05	2.05E-05	5.77E-05	2.33E-06	9.56E-10	8.43E-05	5.58E-05
9	E08	60	Combination Short Haul Truck	39	0.00E+00	1.13E-05	8.30E-07	1.36E+01	3.09E-08	1.69E-02	8.11E-06	1.72E-02	1.97E-03	3.08E-04	6.96E-04	2.43E-04	2.52E-04	2.17E-03	4.56E-05	0.00E+00	4.44E-04	3.25E-03
9	E08	60	Combination Long Haul Truck	35	0.00E+00	1.55E-05	8.48E-07	1.29E+01	1.05E-07	2.03E-02	1.30E-05	1.83E-02	2.07E-03	2.99E-04	1.47E-03	2.77E-04	2.89E-04	2.07E-03	4.31E-05	0.00E+00	1.18E-03	3.46E-03
9	E09	60	Passenger Car	1107	0.00E+00	1.42E-05	1.54E-06	5.05E+01	1.01E-04	2.84E-01	3.20E-05	1.14E-03	1.12E-02	1.67E-03	3.12E-03	2.01E-03	2.06E-03	2.19E-04	2.53E-04	5.32E-08	1.05E-03	1.78E-04
9	E09	60	Passenger Truck	1854	0.00E+00	3.01E-05	3.19E-06	1.13E+02	1.90E-04	4.85E-01	6.24E-05	3.54E-03	2.04E-02	3.04E-03	5.95E-03	3.87E-03	3.97E-03	8.98E-04	5.59E-04	1.04E-07	1.98E-03	6.01E-04
9	E09	60	Single Unit Short Haul Truck	82	0.00E+00	1.84E-05	7.60E-07	1.37E+01	1.22E-05	2.41E-02	1.99E-05	7.05E-03	1.89E-03	3.18E-04	2.45E-03	4.73E-04	4.82E-04	1.39E-03	5.58E-05	2.30E-08	1.97E-03	1.32E-03
9	E09	60	Single Unit Long Haul Truck	4	0.00E+00	8.03E-07	3.30E-08	5.84E-01	5.28E-07	1.02E-03	8.68E-07	3.05E-04	8.51E-05	1.41E-05	1.07E-04	2.05E-05	2.09E-05	5.90E-05	2.38E-06	9.79E-10	8.63E-05	5.72E-05
9	E09	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.91E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.48E-03
9	E09	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.10E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.84E-03
9	E10	60	Passenger Car	873	0.00E+00	1.12E-05	1.21E-06	3.98E+01	7.93E-05	2.24E-01	2.52E-05	8.99E-04	8.82E-03	1.32E-03	2.46E-03	1.58E-03	1.63E-03	1.73E-04	2.00E-04	4.19E-08	8.31E-04	1.40E-04
9	E10	60	Passenger Truck	1462	0.00E+00	2.37E-05	2.51E-06	8.87E+01	1.50E-04	3.83E-01	4.92E-05	2.80E-03	1.61E-02	2.40E-03	4.69E-03	3.05E-03	3.13E-03	7.08E-04	4.41E-04	8.17E-08	1.56E-03	4.74E-04
9	E10	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.15E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	E10	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.66E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.98E-05
9	E10	60	Combination Short Haul Truck	37	0.00E+00	1.07E-05	7.85E-07	1.29E+01	2.93E-08	1.60E-02	7.68E-06	1.63E-02	1.86E-03	2.92E-04	6.59E-04	2.30E-04	2.38E-04	2.05E-03	4.31E-05	0.00E+00	4.20E-04	3.07E-03
9	E10	60	Combination Long Haul Truck	33	0.00E+00	1.47E-05	8.02E-07	1.22E+01	9.91E-08	1.92E-02	1.23E-05	1.74E-02	1.96E-03	2.83E-04	1.39E-03	2.62E-04	2.73E-04	1.95E-03	4.08E-05	0.00E+00	1.12E-03	3.27E-03
9	E11	60	Passenger Car	1186	0.00E+00	1.52E-05	1.65E-06	5.41E+01	1.08E-04	3.04E-01	3.42E-05	1.22E-03	1.20E-02	1.79E-03	3.34E-03	2.15E-03	2.21E-03	2.35E-04	2.71E-04	5.69E-08	1.13E-03	1.90E-04
9	E11	60	Passenger Truck	1985	0.00E+00	3.22E-05	3.41E-06	1.20E+02	2.03E-04	5.20E-01	6.68E-05	3.80E-03	2.19E-02	3.26E-03	6.37E-03	4.14E-03	4.25E-03	9.62E-04	5.98E-04	1.11E-07	2.12E-03	6.43E-04
9	E11	60	Single Unit Short Haul Truck	106	0.00E+00	2.37E-05	9.81E-07	1.77E+01	1.57E-05	3.11E-02	2.57E-05	9.10E-03	2.45E-03	4.11E-04	3.17E-03	6.10E-04	6.22E-04	1.79E-03	7.21E-05	2.97E-08	2.54E-03	1.70E-03
9	E11	60	Single Unit Long Haul Truck	5	0.00E+00	1.04E-06	4.26E-08	7.54E-01	6.82E-07	1.32E-03	1.12E-06	3.94E-04	1.10E-04	1.82E-05	1.38E-04	2.65E-05	2.70E-05	7.62E-05	3.08E-06	1.26E-09	1.11E-04	7.38E-05
9	E11	60	Combination Short Haul Truck	65	0.00E+00	1.91E-05	1.40E-06	2.30E+01	5.23E-08	2.85E-02	1.37E-05	2.91E-02	3.33E-03	5.21E-04	1.18E-03	4.10E-04	4.26E-04	3.66E-03	7.70E-05	0.00E+00	7.50E-04	5.48E-03
9	E11	60	Combination Long Haul Truck	60	0.00E+00	2.62E-05	1.43E-06	2.17E+01	1.77E-07	3.43E-02	2.19E-05	3.10E-02	3.49E-03	5.05E-04	2.49E-03	4.68E-04	4.87E-04	3.49E-03	7.29E-05	0.00E+00	2.00E-03	5.84E-03
9	E12	60	Passenger Car	904	0.00E+00	1.16E-05	1.26E-06	4.12E+01	8.21E-05	2.31E-01	2.61E-05	9.30E-04	9.13E-03	1.37E-03	2.54E-03	1.64E-03	1.68E-03	1.79E-04	2.07E-04	4.34E-08	8.60E-04	1.45E-04
9	E12	60	Passenger Truck	1513	0.00E+00	2.46E-05	2.60E-06	9.18E+01	1.55E-04	3.96E-01	5.09E-05	2.89E-03	1.67E-02	2.48E-03	4.86E-03	3.16E-03	3.24E-03	7.33E-04	4.56E-04	8.46E-08	1.62E-03	4.90E-04
9	E12	60	Single Unit Short Haul Truck	96	0.00E+00	2.14E-05	8.83E-07	1.59E+01	1.42E-05	2.80E-02	2.31E-05	8.20E-03	2.20E-03	3.70E-04	2.85E-03	5.50E-04	5.60E-04	1.61E-03	6.49E-05	2.68E-08	2.29E-03	1.53E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	9.33E-07	3.84E-08	6.79E-01	6.14E-07	1.19E-03	1.01E-06	3.55E-04	9.90E-05	1.64E-05	1.25E-04	2.39E-05	2.44E-05	6.87E-05	2.77E-06	1.14E-09	1.00E-04	6.65E-05
9	E12	60	Combination Short Haul Truck	83	0.00E+00	2.43E-05	1.78E-06	2.93E+01	6.65E-08	3.63E-02	1.74E-05	3.70E-02	4.24E-03	6.62E-04	1.50E-03	5.22E-04	5.41E-04	4.66E-03	9.79E-05	0.00E+00	9.54E-04	6.97E-03
9	E12	60	Combination Long Haul Truck	76	0.00E+00	3.34E-05	1.82E-06	2.77E+01	2.25E-07	4.36E-02	2.79E-05	3.94E-02	4.44E-03	6.42E-04	3.16E-03	5.95E-04	6.20E-04	4.44E-03	9.27E-05	0.00E+00	2.54E-03	7.42E-03
11	E13	80	Passenger Car	377	0.00E+00	3.92E-06	4.26E-07	1.60E+01	2.78E-05	8.09E-02	8.84E-06	3.91E-04	2.06E-03	3.44E-04	8.62E-04	5.56E-04	5.71E-04	5.61E-05	8.05E-05	1.72E-08	2.92E-04	6.10E-05
11	E13	80	Passenger Truck	632	0.00E+00	8.08E-06	8.61E-07	3.61E+01	5.25E-05	1.43E-01	1.71E-05	1.06E-03	3.66E-03	6.10E-04	1.64E-03	1.07E-03	1.09E-03	2.59E-04	1.80E-04	3.27E-08	5.50E-04	1.76E-04
11	E13	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.18E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.08E-04
11	E13	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.33E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.74E-05
11	E13	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.32E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E13	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.69E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E14	80	Passenger Car	550	0.00E+00	5.71E-06	6.21E-07	2.33E+01	4.06E-05	1.18E-01	1.29E-05	5.70E-04	3.00E-03	5.02E-04	1.26E-03	8.10E-04	8.31E-04	8.17E-05	1.17E-04	2.51E-08	4.25E-04	8.89E-05
11	E14	80	Passenger Truck	920	0.00E+00	1.18E-05	1.25E-06	5.25E+01	7.65E-05	2.08E-01	2.49E-05	1.54E-03	5.33E-03	8.88E-04	2.39E-03	1.55E-03	1.59E-03	3.78E-04	2.62E-04	4.77E-08	8.01E-04	2.56E-04
11	E14	80	Single Unit Short Haul Truck	54	0.00E+00	7.36E-06	2.87E-07	8.79E+00	4.99E-06	1.60E-02	8.09E-06	3.06E-03	6.03E-04	1.23E-04	1.01E-03	1.88E-04	1.91E-04	8.94E-04	3.57E-05	1.42E-08	8.22E-04	5.71E-04
11	E14	80	Single Unit Long Haul Truck	2	0.00E+00	3.20E-07	1.23E-08	3.72E-01	2.13E-07	6.65E-04	3.51E-07	1.31E-04	2.76E-05	5.47E-06	4.42E-05	8.06E-06	8.22E-06	3.76E-05	1.51E-06	5.90E-10	3.60E-05	2.44E-05
11	E14	80	Combination Short Haul Truck	31	0.00E+00	6.47E-06	4.79E-07	1.05E+01	1.69E-08	9.86E-03	4.62E-06	9.97E-03	7.49E-04	1.36E-04	3.92E-04	1.40E-04	1.45E-04	1.67E-03	3.52E-05	0.00E+00	2.47E-04	1.88E-03
11	E14	80	Combination Long Haul Truck	29	0.00E+00	9.01E-06	5.09E-07	9.77E+00	5.73E-08	1.17E-02	7.43E-06	1.07E-02	7.74E-04	1.24E-04	8.26E-04	1.64E-04	1.71E-04	1.57E-03	3.27E-05	0.00E+00	6.55E-04	2.01E-03
11	E15	80	Passenger Car	180	0.00E+00	1.87E-06	2.04E-07	7.63E+00	1.33E-05	3.86E-02	4.22E-06	1.87E-04	9.82E-04	1.64E-04	4.12E-04	2.66E-04	2.73E-04	2.68E-05	3.85E-05	8.22E-09	1.39E-04	2.92E-05
11	E15	80	Passenger Truck	302	0.00E+00	3.86E-06	4.11E-07	1.72E+01	2.51E-05	6.82E-02	8.17E-06	5.04E-04	1.75E-03	2.91E-04	7.84E-04	5.09E-04	5.22E-04	1.24E-04	8.60E-05	1.56E-08	2.63E-04	8.39E-05
11	E15	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.15E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.14E-04
11	E15	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.90E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.15E-06
11	E15	80	Combination Short Haul Truck	12	0.00E+00	2.37E-06	1.76E-07	3.86E+00	6.21E-09	3.61E-03	1.70E-06	3.66E-03	2.75E-04	4.97E-05	1.44E-04	5.12E-05	5.32E-05	6.13E-04	1.29E-05	0.00E+00	9.06E-05	6.89E-04
11	E15	80	Combination Long Haul Truck	10	0.00E+00	3.30E-06	1.87E-07	3.58E+00	2.10E-08	4.28E-03	2.72E-06	3.91E-03	2.84E-04	4.54E-05	3.03E-04	6.01E-05	6.26E-05	5.75E-04	1.20E-05	0.00E+00	2.40E-04	7.36E-04
11	E16	80	Passenger Car	338	0.00E+00	3.51E-06	3.81E-07	1.43E+01	2.49E-05	7.24E-02	7.91E-06	3.50E-04	1.84E-03	3.08E-04	7.72E-04	4.98E-04	5.11E-04	5.02E-05	7.20E-05	1.54E-08	2.61E-04	5.46E-05
11	E16	80	Passenger Truck	565	0.00E+00	7.23E-06	7.70E-07	3.23E+01	4.70E-05	1.28E-01	1.53E-05	9.44E-04	3.28E-03	5.46E-04	1.47E-03	9.53E-04	9.77E-04	2.32E-04	1.61E-04	2.93E-08	4.92E-04	1.57E-04
11	E16	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.73E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	E16	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.73E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.97E-06
11	E16	80	Combination Short Haul Truck	42	0.00E+00	8.73E-06	6.46E-07	1.42E+01	2.29E-08	1.33E-02	6.24E-06	1.35E-02	1.01E-03	1.83E-04	5.29E-04	1.89E-04	1.96E-04	2.26E-03	4.75E-05	0.00E+00	3.34E-04	2.54E-03
11	E16	80	Combination Long Haul Truck	39	0.00E+00	1.22E-05	6.87E-07	1.32E+01	7.74E-08	1.58E-02	1.00E-05	1.44E-02	1.04E-03	1.67E-04	1.11E-03	2.21E-04	2.31E-04	2.12E-03	4.42E-05	0.00E+00	8.84E-04	2.71E-03
11	E17	80	Passenger Car	90	0.00E+00	9.33E-07	1.01E-07	3.80E+00	6.62E-06	1.92E-02	2.10E-06	9.30E-05	4.89E-04	8.19E-05	2.05E-04	1.32E-04	1.36E-04	1.33E-05	1.91E-05	4.09E-09	6.94E-05	1.45E-05
11	E17	80	Passenger Truck	150	0.00E+00	1.92E-06	2.05E-07	8.58E+00	1.25E-05	3.40E-02	4.07E-06	2.51E-04	8.71E-04	1.45E-04	3.91E-04	2.53E-04	2.60E-04	6.17E-05	4.28E-05	7.79E-09	1.31E-04	4.18E-05
11	E17	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.75E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.30E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.18E-05
11	E17	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.66E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.01E-04
11	E17	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.35E-04
11	E18	80	Passenger Car	261	0.00E+00	2.71E-06	2.95E-07	1.10E+01	1.93E-05	5.59E-02	6.12E-06	2.71E-04	1.42E-03	2.38E-04	5.97E-04	3.85E-04	3.95E-04	3.88E-05	5.57E-05	1.19E-08	2.02E-04	4.22E-05
11	E18	80	Passenger Truck	437	0.00E+00	5.59E-06	5.96E-07	2.49E+01	3.63E-05	9.88E-02	1.18E-05	7.30E-04	2.53E-03	4.22E-04	1.14E-03	7.37E-04	7.55E-04	1.79E-04	1.25E-04	2.26E-08	3.80E-04	1.21E-04
11	E18	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.27E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.12E-05
11	E18	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	E18	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.42E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.68E-04
9	E19	60	Passenger Car	1009	0.00E+00	1.29E-05	1.40E-06	4.60E+01	9.16E-05	2.58E-01	2.91E-05	1.04E-03	1.02E-02	1.53E-03	2.84E-03	1.83E-03	1.88E-03	2.00E-04	2.31E-04	4.84E-08	9.61E-04	1.62E-04
9	E19	60	Passenger Truck	1689	0.00E+00	2.74E-05	2.91E-06	1.03E+02	1.73E-04	4.42E-01	5.69E-05	3.23E-03	1.86E-02	2.77E-03	5.42E-03	3.53E-03	3.61E-03	8.18E-04	5.09E-04	9.44E-08	1.81E-03	5.47E-04
9	E19	60	Single Unit Short Haul Truck	77	0.00E+00	1.71E-05	7.07E-07	1.27E+01	1.13E-05	2.24E-02	1.85E-05	6.56E-03	1.76E-03	2.96E-04	2.28E-03	4.40E-04	4.48E-04	1.29E-03	5.19E-05	2.14E-08	1.83E-03	1.23E-03
9	E19	60	Single Unit Long Haul Truck	3	0.00E+00	7.47E-07	3.07E-08	5.43E-01	4.92E-07	9.52E-04	8.07E-07	2.84E-04	7.92E-05	1.31E-05	9.98E-05	1.91E-05	1.95E-05	5.49E-05	2.22E-06	9.11E-10	8.03E-05	5.32E-05
9	E19	60	Combination Short Haul Truck	36	0.00E+00	1.04E-05	7.62E-07	1.25E+01	2.84E-08	1.55E-02	7.46E-06	1.58E-02	1.81E-03	2.83E-04	6.40E-04	2.23E-04	2.32E-04	1.99E-03	4.19E-05	0.00E+00	4.08E-04	2.98E-03
9	E19	60	Combination Long Haul Truck	32	0.00E+00	1.43E-05	7.79E-07	1.18E+01	9.63E-08	1.86E-02	1.19E-05	1.69E-02	1.90E-03	2.75E-04	1.35E-03	2.54E-04	2.65E-04	1.90E-03	3.96E-05	0.00E+00	1.09E-03	3.18E-03
9	E20	60	Passenger Car	588	0.00E+00	7.53E-06	8.19E-07	2.68E+01	5.35E-05	1.51E-01	1.70E-05	6.06E-04	5.94E-03	8.90E-04	1.66E-03	1.07E-03	1.10E-03	1.17E-04	1.35E-04	2.83E-08	5.60E-04	9.45E-05
9	E20	60	Passenger Truck	986	0.00E+00	1.60E-05	1.69E-06	5.98E+01	1.01E-04	2.58E-01	3.32E-05	1.88E-03	1.09E-02	1.62E-03	3.16E-03	2.06E-03	2.11E-03	4.77E-04	2.97E-04	5.51E-08	1.05E-03	3.19E-04
9	E20	60	Single Unit Short Haul Truck	108	0.00E+00	2.42E-05	9.98E-07	1.80E+01	1.60E-05	3.17E-02	2.61E-05	9.26E-03	2.49E-03	4.18E-04	3.22E-03	6.21E-04	6.33E-04	1.82E-03	7.34E-05	3.02E-08	2.59E-03	1.73E-03
9	E20	60

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E24	80	Single Unit Long Haul Truck	2	0.00E+00	3.31E-07	1.28E-08	3.85E-01	2.20E-07	6.89E-04	3.64E-07	1.35E-04	2.86E-05	5.66E-06	4.58E-05	8.34E-06	8.51E-06	3.89E-05	1.57E-06	6.11E-10	3.73E-05	2.53E-05
11	E24	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.13E-03
11	E24	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
10	E25	70	Passenger Car	205	0.00E+00	2.29E-06	2.49E-07	8.94E+00	1.62E-05	4.60E-02	5.16E-06	2.07E-04	1.58E-03	2.46E-04	5.03E-04	3.24E-04	3.33E-04	3.48E-05	4.49E-05	9.33E-09	1.70E-04	3.23E-05
10	E25	70	Passenger Truck	343	0.00E+00	4.81E-06	5.12E-07	2.01E+01	3.08E-05	8.12E-02	1.01E-05	6.02E-04	2.86E-03	4.42E-04	9.65E-04	6.27E-04	6.43E-04	1.52E-04	1.00E-04	1.79E-08	3.22E-04	1.01E-04
10	E25	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.21E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.14E-04
10	E25	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.52E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
10	E25	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
10	E25	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
10	E26	70	Passenger Car	346	0.00E+00	3.86E-06	4.20E-07	1.51E+01	2.74E-05	7.77E-02	8.71E-06	3.50E-04	2.67E-03	4.16E-04	8.50E-04	5.48E-04	5.62E-04	5.88E-05	7.59E-05	1.58E-08	2.87E-04	5.46E-05
10	E26	70	Passenger Truck	580	0.00E+00	8.14E-06	8.65E-07	3.40E+01	5.21E-05	1.37E-01	1.71E-05	1.02E-03	4.83E-03	7.47E-04	1.63E-03	1.06E-03	1.09E-03	2.57E-04	1.69E-04	3.03E-08	5.45E-04	1.71E-04
10	E26	70	Single Unit Short Haul Truck	11	0.00E+00	1.85E-06	7.53E-08	1.73E+00	1.24E-06	3.13E-03	2.02E-06	7.37E-04	1.67E-04	3.07E-05	2.50E-04	4.76E-05	4.86E-05	1.75E-04	7.02E-06	2.83E-09	2.01E-04	1.38E-04
10	E26	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.23E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.85E-04
10	E26	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.59E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.05E-03
10	E27	70	Passenger Car	171	0.00E+00	1.91E-06	2.08E-07	7.47E+00	1.36E-05	3.84E-02	4.31E-06	1.73E-04	1.32E-03	2.06E-04	4.20E-04	2.71E-04	2.78E-04	2.91E-05	3.75E-05	7.80E-09	1.42E-04	2.70E-05
10	E27	70	Passenger Truck	287	0.00E+00	4.02E-06	4.28E-07	1.68E+01	2.58E-05	6.79E-02	8.43E-06	5.03E-04	2.39E-03	3.69E-04	8.07E-04	5.24E-04	5.37E-04	1.27E-04	8.37E-05	1.50E-08	2.70E-04	8.45E-05
10	E27	70	Single Unit Short Haul Truck	57	0.00E+00	9.95E-06	4.04E-07	9.26E+00	6.67E-06	1.68E-02	1.08E-05	3.95E-03	8.98E-04	1.65E-04	1.34E-03	2.55E-04	2.60E-04	9.41E-04	3.77E-05	1.52E-08	1.08E-03	7.40E-04
10	E27	70	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	1.74E-08	3.92E-01	2.87E-07	7.05E-04	4.71E-07	1.70E-04	4.11E-05	7.37E-06	5.85E-05	1.10E-05	1.13E-05	3.97E-05	1.60E-06	6.41E-10	4.72E-05	3.18E-05
10	E27	70	Combination Short Haul Truck	39	0.00E+00	1.01E-05	7.51E-07	1.36E+01	2.56E-08	1.46E-02	7.19E-06	1.51E-02	1.42E-03	2.37E-04	6.06E-04	2.19E-04	2.27E-04	2.17E-03	4.56E-05	0.00E+00	3.79E-04	2.84E-03
10	E27	70	Combination Long Haul Truck	36	0.00E+00	1.38E-05	7.87E-07	1.28E+01	8.68E-08	1.74E-02	1.14E-05	1.61E-02	1.48E-03	2.23E-04	1.26E-03	2.53E-04	2.64E-04	2.06E-03	4.29E-05	0.00E+00	9.95E-04	3.04E-03
10	E28	70	Passenger Car	179	0.00E+00	2.00E-06	2.18E-07	7.83E+00	1.42E-05	4.03E-02	4.52E-06	1.81E-04	1.38E-03	2.15E-04	4.41E-04	2.84E-04	2.92E-04	3.05E-05	3.93E-05	8.17E-09	1.49E-04	2.83E-05
10	E28	70	Passenger Truck	301	0.00E+00	4.22E-06	4.48E-07	1.76E+01	2.70E-05	7.12E-02	8.84E-06	5.28E-04	2.50E-03	3.87E-04	8.45E-04	5.49E-04	5.63E-04	1.33E-04	8.77E-05	1.57E-08	2.82E-04	8.86E-05
10	E28	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	E28	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.63E-06
10	E28	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.62E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.82E-04
10	E28	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.87E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.30E-04
10	E29	70	Passenger Car	16	0.00E+00	1.79E-07	1.95E-08	7.01E-01	1.27E-06	3.61E-03	4.05E-07	1.63E-05	1.24E-04	1.93E-05	3.95E-05	2.54E-05	2.61E-05	2.73E-06	3.52E-06	7.32E-10	1.34E-05	2.54E-06
10	E29	70	Passenger Truck	27	0.00E+00	3.78E-07	4.02E-08	1.58E+00	2.42E-06	6.38E-03	7.92E-07	4.73E-05	2.24E-04	3.47E-05	7.57E-05	4.92E-05	5.04E-05	1.19E-05	7.86E-06	1.41E-09	2.53E-05	7.94E-06
10	E30	70	Passenger Car	232	0.00E+00	2.59E-06	2.82E-07	1.01E+01	1.84E-05	5.21E-02	5.84E-06	2.35E-04	1.79E-03	2.79E-04	5.70E-04	3.68E-04	3.77E-04	3.94E-05	5.09E-05	1.06E-08	1.93E-04	3.66E-05
10	E30	70	Passenger Truck	389	0.00E+00	5.46E-06	5.80E-07	2.28E+01	3.49E-05	9.21E-02	1.14E-05	6.83E-04	3.24E-03	5.01E-04	1.09E-03	7.11E-04	7.28E-04	1.72E-04	1.13E-04	2.03E-08	3.65E-04	1.15E-04
10	E30	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
10	E30	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.90E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.17E-06
10	E30	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.22E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.95E-04
10	E30	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.52E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.51E-04
10	E31	70	Passenger Car	32	0.00E+00	3.59E-07	3.90E-08	1.40E+00	2.55E-06	7.22E-03	8.09E-07	3.25E-05	2.48E-04	3.86E-05	7.89E-05	5.09E-05	5.22E-05	5.46E-06	7.05E-06	1.46E-09	2.67E-05	5.07E-06
10	E31	70	Passenger Truck	54	0.00E+00	7.56E-07	8.03E-08	3.16E+00	4.84E-06	1.28E-02	1.58E-06	9.45E-05	4.48E-04	6.94E-05	1.51E-04	9.84E-05	1.01E-04	2.39E-05	1.57E-05	2.82E-09	5.06E-05	1.59E-05
10	E32	70	Passenger Car	411	0.00E+00	4.59E-06	4.98E-07	1.79E+01	3.26E-05	9.23E-02	1.03E-05	4.16E-04	3.17E-03	4.93E-04	1.01E-03	6.50E-04	6.67E-04	6.98E-05	9.01E-05	1.87E-08	3.41E-04	6.48E-05
10	E32	70	Passenger Truck	688	0.00E+00	9.66E-06	1.03E-06	4.03E+01	6.18E-05	1.63E-01	2.02E-05	1.21E-03	5.73E-03	8.87E-04	1.94E-03	1.26E-03	1.29E-03	3.05E-04	2.01E-04	3.60E-08	6.47E-04	2.03E-04
10	E32	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.63E-06
10	E32	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.82E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.20E-04
10	E32	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.09E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.70E-04
9	E33	60	Passenger Car	228	0.00E+00	2.92E-06	3.18E-07	1.04E+01	2.08E-05	5.85E-02	6.59E-06	2.35E-04	2.31E-03	3.46E-04	6.43E-04	4.15E-04	4.26E-04	4.53E-05	5.22E-05	1.10E-08	2.18E-04	3.67E-05
9	E33	60	Passenger Truck	383	0.00E+00	6.21E-06	6.58E-07	2.32E+01	3.92E-05	1.00E-01	1.29E-05	7.31E-04	4.22E-03	6.27E-04	1.23E-03	7.99E-04	8.18E-04	1.85E-04	1.15E-04	2.14E-08	4.09E-04	1.24E-04
9	E33	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.64E-06
9	E33	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.26E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.14E-04
9	E33	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.47E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.54E-04
9	E34	60	Passenger Car	799	0.00E+00	1.02E-05	1.11E-06	3.64E+01	7.25E-05	2.05E-01	2.30E-05	8.22E-04	8.06E-03	1.21E-03	2.25E-03	1.45E-03	1.49E-03	1.58E-04	1.83E-04	3.83E-08	7.60E-04	1.28E-04
9	E34	60	Passenger Truck	1337	0.00E+00	2.17E-05	2.30E-06	8.12E+01	1.37E-04	3.50E-01	4.50E-05	2.56E-03	1.47E-02	2.19E-03	4.29E-03	2.79E-03	2.86E-03	6.48E-04	4.03E-04	7.47E-08	1.43E-03	4.33E-04
9	E34	60	Single Unit Short Haul Truck	58	0.00E+00	1.30E-05	5.39E-07	9.72E+00	8.64E-06	1.71E-02	1.41E-05	5.00E-03	1.34E-03	2.26E-04	1.74E-03	3.35E-04	3.42E-04	9.85E-04	3.96E-05	1.63E-08	1.40E-03	9.36E-04
9	E34	60	Single Unit Long Haul Truck	3	0.00E+00	5.69E-07	2.34E-08	4.14E-01	3.75E-07	7.26E-04	6.16E-07	2.17E-04	6.04E-05	1.00E-05	7.61E-05	1.46E-05	1.49E-05	4.19E-05	1.69E-06	6.94E-10	6.12E-05	4.05E-05
9	E34	60	Combination Short Haul Truck	41	0.00E+00	1.19E-05	8.75E-07	1.44E+01	3.26E-08	1.78E-02	8.55E-06	1.82E-02	2.08E-03	3.25E-04	7.34E-04	2.56E-04	2.66E-04	2.28E-03	4.80E-05	0.00E+00	4.68E-04	3.42E-03
9	E34	60	Combination Long Haul Truck	37	0.00E+00	1.64E-05	8.94E-07	1.36E+01	1.10E-07	2.14E-02	1.37E-05	1.93E-02	2.18E-03	3.15E-04	1.55E-03	2.92E-04	3.04E-04	2.18E-03	4.55E-05	0.00E+00	1.25E-03	3.64E-03
9	E35	60	Passenger Car	261	0.00E+00	3.34E-06	3.63E-07	1.19E+01	2.37E-05	6.68E-02	7.53E-06	2.69E-04	2.64E-03	3.95E-04	7.35E-04	4.74E-04	4.86E-04	5.17E-05	5.97E-05	1.25E-08	2.48E-04	4.19E-05
9	E35	60	Passenger Truck	437	0.00E+00	7.09E-06	7.52E-07	2.65E+01	4.47E-05	1.14E-01	1.47E-05	8.36E-04	4.82E-03	7.17E-04	1.40E-03	9.12E-04	9.35E-04	2.12E-04	1.32E-04	2.44E-08	4.67E-04	1.42E-04
9	E35	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.60E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	E35	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.91E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
9	E35	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.43E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.59E-03
9	E36	60	Passenger Car	632	0.00E+00	8.09E-06	8.79E-07	2.88E+01	5.74E-05	1.62E-01	1.82E-05	6.51E-04	6.38E-03	9.56E-04	1.78E-03	1.15E-03	1.18E-03	1.25E-04	1.45E-04	3.04E-08	6.02E-04	1.02E-04
9	E36	60	Passenger Truck	1059	0.00E+00	1.72E-05	1.82E-06	6.43E+01	1.08E-04	2.77E-01	3.56E-05	2.02E-03	1.17E-02	1.74E-03	3.40E-03	2.21E-03	2.27E-03	5.13E-04	3.19E-04	5.92E-08	1.13E-03	3.43E-04
9	E36	60	Single Unit Short Haul Truck	53	0.00E+00	1.18E-05	4.86E-07	8.76E+00	7.79E-06	1.54E-02	1.27E-05	4.51E-03	1.21E-03	2.04E-04	1.57E-03	3.02E-04	3.08E-04	8.88E-04	3.57E-05	1.47E-08	1.26E-03	8.44E-04
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	5.13E-07	2.11E-08	3.74E-01	3.38E-07	6.54E-04	5.55E-07	1.95E-04	5.44E-05	9.03E-06	6.86E-05	1.31E-05	1.34E-05	3.78E-05	1.52E-06	6.26E-10	5.52E-05	3.66E-05
9	E36	60	Combination Short Haul Truck	37	0.00E+00	1.07E-05	7.85E-07	1.29E+01	2.93E-08	1.60E-02	7.68E-06	1.63E-02	1.86E-03	2.92E-04	6.59E-04	2.30E-04	2.38E-04	2.05E-03	4.31E-05	0.00E+00	4.20E-04	3.07E-03
9	E36	60	Combination Long Haul Truck	33	0.00E+00	1.47E-05	8.02E-07	1.22E+01	9.91E-08	1.92E-02	1.23E-05	1.74E-02	1.96E-03	2.83E-04	1.39E-03	2.62E-04	2.73E-04	1.95E-03	4.08E-05	0.00E+00	1.12E-03	3.27E-03
9	E37	60	Passenger Car	254	0.00E+00	3.25E-06	3.54E-07	1.16E+01	2.31E-05	6.51E-02	7.34E-06	2.62E-04	2.57E-03	3.85E-04	7.16E-04	4.61E-04	4.74E-04	5.04E-05	5.81E-05	1.22E-08	2.42E-04	4.08E-05
9	E37	60	Passenger Truck	426	0.00E+00	6.91E-06	7.32E-07	2.58E+01	4.36E-05	1.11E-01	1.43E-05	8.14E-04	4.69E-03	6.98E-04	1.37E-03	8.89E-04	9.11E-04	2.06E-04	1.28E-04	2.38E-08	4.55E-04	1.38E-04
9	E37	60	Single Unit Short Haul Truck	34	0.00E+00	7.70E-06	3.18E-07	5.74E+00	5.10E-06	1.01E-02	8.33E-06	2.95E-03	7.93E-04	1.33E-04	1.03E-03	1.98E-04	2.02E-04	5.81E-04	2.34E-05	9.63E-09	8.25E-04	5.52E-04
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	3.36E-07	1.38E-08	2.45E-01	2.21E-07	4.28E-04	3.63E-07	1.28E-04	3.56E-05	5.91E-06	4.49E-05	8.60E-06	8.77E-06	2.47E-05	9.98E-07	4.10E-10	3.61E-05	2.39E-05
9	E37	60	Combination Short Haul Truck	18	0.00E+00	5.19E-06	3.81E-07	6.26E+00	1.42E-08	7.75E-03	3.73E-06	7.91E-03	9.06E-04	1.42E-04	3.20E-04	1.12E-04	1.16E-04	9.95E-04	2.09E-05	0.00E+00	2.04E-04	1.49E-03
9	E37	60	Combination Long Haul Truck	16	0.00E+00	7.13E-06	3.90E-07	5.92E+00	4.81E-08	9.32E-03	5.96E-06	8.43E-03	9.50E-04	1.37E-04	6.76E-04	1.27E-04	1.33E-04	9.49E-04	1.98E-05	0.00E+00	5.44E-04	1.59E-03
9	E38	60	Passenger Car	620	0.00E+00	7.94E-06	8.63E-07	2.83E+01	5.63E-05	1.59E-01	1.79E-05	6.39E-04	6.26E-03	9.38E-04	1.75E-03	1.13E-03	1.16E-03	1.23E-04	1.42E-04	2.98E-08	5.91E-04	9.96E-05
9	E38	60	Passenger Truck	1039	0.00E+00	1.69E-05	1.79E-06	6.30E+01	1.06E-04	2.72E-01	3.50E-05	1.99E-03	1.14E-02	1.70E-03	3.33E-03	2.17E-03	2.22E-03	5.03E-04	3.13E-04	5.81E-08	1.11E-03	3.36E-04
9	E38	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.10E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.67E-04
9	E38	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.32E-05
9	E38	60	Combination Short Haul Truck	35	0.00E+00	1.01E-05	7.40E-07	1.22E+01	2.76E-08	1.51E-02	7.24E-06	1.54E-02	1.76E-03	2.75E-04	6.21E-04	2.16E-04	2.25E-04	1.93E-03	4.07E-05	0.00E+00	3.96E-04	2.89E-03
9	E38	60	Combination Long Haul Truck	31	0.00E+00	1.38E-05	7.56E-07	1.15E+01	9.34E-08	1.81E-02	1.16E-05	1.64E-02	1.84E-03	2.67E-04	1.31E-03	2.47E-04	2.57E-04	1.84E-03	3.85E-05	0.00E+00	1.06E-03	3.08E-03
10	E39	70	Passenger Car	247	0.00E+00	2.76E-06	3.00E-07	1.08E+01	1.96E-05	5.55E-02	6.22E-06	2.50E-04	1.90E-03	2.97E-04	6.07E-04	3.91E-04	4.01E-04	4.20E-05	5.42E-05	1.13E-08	2.05E-04	3.90E-05
10	E39	70	Passenger Truck	414	0.00E+00	5.81E-06	6.17E-07	2.43E+01	3.72E-05	9.80E-02	1.22E-05	7.27E-04	3.45E-03	5.33E-04	1.16E-03	7.56E-04	7.75E-04	1.83E-04	1.21E-04	2.16E-08	3.89E-04	1.22E-04
10	E39	70	Single Unit Short Haul Truck	21	0.00E+00	3.71E-06	1.51E-07	3.45E+00	2.49E-06	6.26E-03	4.03E-06	1.47E-03	3.35E-04	6.15E-05	5.00E-04	9.52E-05	9.71E-05	3.51E-04	1.40E-05	5.67E-09	4.03E-04	2.76E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.61E-07	6.50E-09	1.46E-01	1.07E-07	2.63E-04	1.75E-07	6.34E-05	1.53E-05	2.75E-06	2.18E-05	4.11E-06	4.20E-06	1.48E-05	5.96E-07	2.39E-10	1.76E-05	1.19E-05
10	E39	70	Combination Short Haul Truck	10

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E44	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	E44	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	E44	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
11	E45	80	Passenger Car	55	0.00E+00	5.68E-07	6.17E-08	2.31E+00	4.03E-06	1.17E-02	1.28E-06	5.66E-05	2.98E-04	4.98E-05	1.25E-04	8.05E-05	8.26E-05	8.12E-06	1.16E-05	2.49E-09	4.22E-05	8.83E-06
11	E45	80	Passenger Truck	91	0.00E+00	1.17E-06	1.25E-07	5.22E+00	7.60E-06	2.07E-02	2.48E-06	1.53E-04	5.30E-04	8.82E-05	2.38E-04	1.54E-04	1.58E-04	3.75E-05	2.61E-05	4.74E-09	7.96E-05	2.54E-05
11	E45	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.82E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.14E-05
11	E45	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.82E-04
11	E45	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.01E-04
11	E46	80	Passenger Car	255	0.00E+00	2.65E-06	2.88E-07	1.08E+01	1.88E-05	5.47E-02	5.98E-06	2.64E-04	1.39E-03	2.33E-04	5.83E-04	3.76E-04	3.86E-04	3.79E-05	5.44E-05	1.16E-08	1.97E-04	4.12E-05
11	E46	80	Passenger Truck	427	0.00E+00	5.46E-06	5.82E-07	2.44E+01	3.55E-05	9.65E-02	1.16E-05	7.13E-04	2.47E-03	4.12E-04	1.11E-03	7.20E-04	7.38E-04	1.75E-04	1.22E-04	2.21E-08	3.72E-04	1.19E-04
11	E46	80	Single Unit Short Haul Truck	53	0.00E+00	7.23E-06	2.82E-07	8.64E+00	4.90E-06	1.57E-02	7.95E-06	3.00E-03	5.92E-04	1.21E-04	9.95E-04	1.84E-04	1.88E-04	8.79E-04	3.51E-05	1.39E-08	8.08E-04	5.61E-04
11	E46	80	Single Unit Long Haul Truck	2	0.00E+00	3.14E-07	1.21E-08	3.65E-01	2.09E-07	6.53E-04	3.45E-07	1.28E-04	2.71E-05	5.37E-06	4.34E-05	7.91E-06	8.07E-06	3.69E-05	1.49E-06	5.80E-10	3.53E-05	2.40E-05
11	E46	80	Combination Short Haul Truck	23	0.00E+00	4.74E-06	3.51E-07	7.72E+00	1.24E-08	7.23E-03	3.39E-06	7.31E-03	5.49E-04	9.95E-05	2.88E-04	1.02E-04	1.06E-04	1.23E-03	2.58E-05	0.00E+00	1.81E-04	1.38E-03
11	E46	80	Combination Long Haul Truck	21	0.00E+00	6.61E-06	3.73E-07	7.16E+00	4.20E-08	8.56E-03	5.45E-06	7.82E-03	5.68E-04	9.08E-05	6.06E-04	1.20E-04	1.25E-04	1.15E-03	2.40E-05	0.00E+00	4.80E-04	1.47E-03
11	E47	80	Passenger Car	52	0.00E+00	5.40E-07	5.87E-08	2.20E+00	3.83E-06	1.11E-02	1.22E-06	5.39E-05	2.83E-04	4.74E-05	1.19E-04	7.66E-05	7.86E-05	7.73E-06	1.11E-05	2.37E-09	4.02E-05	8.41E-06
11	E47	80	Passenger Truck	87	0.00E+00	1.11E-06	1.19E-07	4.97E+00	7.24E-06	1.97E-02	2.36E-06	1.45E-04	5.04E-04	8.40E-05	2.26E-04	1.47E-04	1.50E-04	3.57E-05	2.48E-05	4.51E-09	7.58E-05	2.42E-05
11	E47	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.91E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.18E-05
11	E47	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.82E-04
11	E47	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.01E-04
11	E48	80	Passenger Car	448	0.00E+00	4.66E-06	5.06E-07	1.90E+01	3.31E-05	9.61E-02	1.05E-05	4.65E-04	2.44E-03	4.09E-04	1.02E-03	6.61E-04	6.78E-04	6.66E-05	9.56E-05	2.04E-08	3.47E-04	7.25E-05
11	E48	80	Passenger Truck	751	0.00E+00	9.60E-06	1.02E-06	4.28E+01	6.24E-05	1.70E-01	2.03E-05	1.25E-03	4.35E-03	7.24E-04	1.95E-03	1.27E-03	1.30E-03	3.08E-04	2.14E-04	3.89E-08	6.54E-04	2.09E-04
11	E48	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	E48	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.09E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E48	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.82E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E48	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.22E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E49	80	Passenger Car	36	0.00E+00	3.77E-07	4.10E-08	1.54E+00	2.68E-06	7.77E-03	8.50E-07	3.76E-05	1.98E-04	3.31E-05	8.29E-05	5.35E-05	5.49E-05	5.39E-06	7.74E-06	1.65E-09	2.80E-05	5.87E-06
11	E49	80	Passenger Truck	61	0.00E+00	7.76E-07	8.28E-08	3.47E+00	5.05E-06	1.37E-02	1.65E-06	1.01E-04	3.52E-04	5.86E-05	1.58E-04	1.02E-04	1.05E-04	2.49E-05	1.73E-05	3.15E-09	5.29E-05	1.69E-05
11	E49	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.46E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E49	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.99E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.40E-05
11	E49	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.33E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
11	E50	80	Passenger Car	364	0.00E+00	3.78E-06	4.11E-07	1.54E+01	2.68E-05	7.80E-02	8.53E-06	3.77E-04	1.98E-03	3.32E-04	8.32E-04	5.36E-04	5.50E-04	5.41E-05	7.76E-05	1.66E-08	2.81E-04	5.88E-05
11	E50	80	Passenger Truck	609	0.00E+00	7.79E-06	8.30E-07	3.48E+01	5.06E-05	1.38E-01	1.65E-05	1.02E-03	3.53E-03	5.88E-04	1.58E-03	1.03E-03	1.05E-03	2.50E-04	1.74E-04	3.16E-08	5.30E-04	1.69E-04
11	E50	80	Single Unit Short Haul Truck	52	0.00E+00	7.10E-06	2.77E-07	8.48E+00	4.81E-06	1.54E-02	7.80E-06	2.95E-03	5.81E-04	1.19E-04	9.77E-04	1.81E-04	1.84E-04	8.63E-04	3.44E-05	1.37E-08	7.93E-04	5.51E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	3.08E-07	1.19E-08	3.58E-01	2.05E-07	6.41E-04	3.39E-07	1.26E-04	2.66E-05	5.27E-06	4.26E-05	7.77E-06	7.92E-06	3.62E-05	1.46E-06	5.69E-10	3.47E-05	2.35E-05
11	E50	80	Combination Short Haul Truck	42	0.00E+00	8.62E-06	6.38E-07	1.40E+01	2.26E-08	1.31E-02	6.16E-06	1.33E-02	9.98E-04	1.81E-04	5.23E-04	1.86E-04	1.93E-04	2.23E-03	4.69E-05	0.00E+00	3.30E-04	2.51E-03
11	E50	80	Combination Long Haul Truck	38	0.00E+00	1.20E-05	6.78E-07	1.30E+01	7.64E-08	1.56E-02	9.91E-06	1.42E-02	1.03E-03	1.65E-04	1.10E-03	2.19E-04	2.28E-04	2.09E-03	4.36E-05	0.00E+00	8.73E-04	2.68E-03
11	E51	80	Passenger Car	5	0.00E+00	5.05E-08	5.49E-09	2.06E-01	3.59E-07	1.04E-03	1.14E-07	5.04E-06	2.65E-05	4.44E-06	1.11E-05	7.16E-06	7.35E-06	7.23E-07	1.04E-06	2.22E-10	3.76E-06	7.86E-07
11	E51	80	Passenger Truck	8	0.00E+00	1.04E-07	1.11E-08	4.65E-01	6.77E-07	1.84E-03	2.20E-07	1.36E-05	4.72E-05	7.85E-06	2.12E-05	1.37E-05	1.41E-05	3.34E-06	2.32E-06	4.22E-10	7.09E-06	2.26E-06
11	E52	80	Passenger Car	297	0.00E+00	3.09E-06	3.35E-07	1.26E+01	2.19E-05	6.36E-02	6.96E-06	3.08E-04	1.62E-03	2.71E-04	6.79E-04	4.38E-04	4.49E-04	4.41E-05	6.33E-05	1.35E-08	2.30E-04	4.80E-05
11	E52	80	Passenger Truck	497	0.00E+00	6.35E-06	6.77E-07	2.84E+01	4.13E-05	1.12E-01	1.35E-05	8.30E-04	2.88E-03	4.80E-04	1.29E-03	8.38E-04	8.59E-04	2.04E-04	1.42E-04	2.58E-08	4.33E-04	1.38E-04
11	E52	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.90E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.09E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.22E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.26E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	E53	80	Passenger Car	184	0.00E+00	1.91E-06	2.07E-07	7.77E+00	1.35E-05	3.93E-02	4.30E-06	1.90E-04	1.00E-03	1.68E-04	4.20E-04	2.71E-04	2.78E-04	2.73E-05	3.92E-05	8.37E-09	1.42E-04	2.97E-05
11	E53	80	Passenger Truck	307	0.00E+00	3.93E-06	4.19E-07	1.75E+01	2.56E-05	6.95E-02	8.33E-06	5.13E-04	1.78E-03	2.97E-04	7.99E-04	5.18E-04	5.31E-04	1.26E-04	8.76E-05	1.59E-08	2.68E-04	8.55E-05
11	E53	80	Single Unit Short Haul Truck	39	0.00E+00	5.39E-06	2.10E-07	6.44E+00	3.65E-06	1.17E-02	5.92E-06	2.24E-03	4.41E-04	9.02E-05	7.42E-04	1.37E-04	1.40E-04	6.55E-04	2.62E-05	1.04E-08	6.02E-04	4.18E-04
11	E53	80	Single Unit Long Haul Truck	2	0.00E+00	2.34E-07	9.03E-09	2.72E-01	1.56E-07	4.87E-04	2.57E-07	9.56E-05	2.02E-05	4.00E-06	3.24E-05	5.90E-06	6.02E-06	2.75E-05	1.11E-06	4.32E-10	2.63E-05	1.79E-05
11	E53	80	Combination Short Haul Truck	28	0.00E+00	5.82E-06	4.31E-07	9.47E+00	1.52E-08	8.87E-03	4.16E-06	8.97E-03	6.74E-04	1.22E-04	3.53E-04	1.26E-04	1.31E-04	1.51E-03	3.17E-05	0.00E+00	2.22E-04	1.69E-03
11	E53	80	Combination Long Haul Truck	26	0.00E+00	8.11E-06	4.58E-07	8.79E+00	5.16E-08	1.05E-02	6.69E-06	9.59E-03	6.97E-04	1.11E-04	7.43E-04	1.48E-04	1.54E-04	1.41E-03	2.95E-05	0.00E+00	5.89E-04	1.81E-03
11	E54	80	Passenger Car	445	0.00E+00	4.63E-06	5.03E-07	1.88E+01	3.28E-05	9.54E-02	1.04E-05	4.61E-04	2.43E-03	4.06E-04	1.02E-03	6.56E-04	6.73E-04	6.61E-05	9.49E-05	2.03E-08	3.44E-04	7.20E-05
11	E54	80	Passenger Truck	745	0.00E+00	9.52E-06	1.02E-06	4.25E+01	6.19E-05	1.68E-01	2.02E-05	1.24E-03	4.32E-03	7.19E-04	1.94E-03	1.26E-03	1.29E-03	3.06E-04	2.12E-04	3.86E-08	6.49E-04	2.07E-04
11	E54	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.78E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.20E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.22E-05
11	E54	80	Combination Short Haul Truck	35	0.00E+00	7.22E-06	5.35E-07	1.18E+01	1.89E-08	1.10E-02	5.16E-06	1.11E-02	8.36E-04	1.51E-04	4.38E-04	1.56E-04	1.62E-04	1.87E-03	3.93E-05	0.00E+00	2.76E-04	2.10E-03
11	E54	80	Combination Long Haul Truck	32	0.00E+00	1.01E-05	5.68E-07	1.09E+01	6.40E-08	1.30E-02	8.30E-06	1.19E-02	8.64E-04	1.38E-04	9.22E-04	1.83E-04	1.91E-04	1.75E-03	3.65E-05	0.00E+00	7.31E-04	2.24E-03
11	E55	80	Passenger Car	63	0.00E+00	6.57E-07	7.14E-08	2.68E+00	4.66E-06	1.35E-02	1.48E-06	6.55E-05	3.44E-04	5.77E-05	1.44E-04	9.31E-05	9.56E-05	9.39E-06	1.35E-05	2.88E-09	4.89E-05	1.02E-05
11	E55	80	Passenger Truck	106	0.00E+00	1.35E-06	1.44E-07	6.04E+00	8.80E-06	2.39E-02	2.87E-06	1.77E-04	6.13E-04	1.02E-04	2.75E-04	1.78E-04	1.83E-04	4.35E-05	3.02E-05	5.48E-09	9.21E-05	2.94E-05
11	E55	80	Single Unit Short Haul Truck	52	0.00E+00	7.10E-06	2.77E-07	8.48E+00	4.81E-06	1.54E-02	7.80E-06	2.95E-03	5.81E-04	1.19E-04	9.77E-04	1.81E-04	1.84E-04	8.63E-04	3.44E-05	1.37E-08	7.93E-04	5.51E-04
11	E55	80	Single Unit Long Haul Truck	2	0.00E+00	3.08E-07	1.19E-08	3.58E-01	2.05E-07	6.41E-04	3.39E-07	1.26E-04	2.66E-05	5.27E-06	4.26E-05	7.77E-06	7.92E-06	3.62E-05	1.46E-06	5.69E-10	3.47E-05	2.35E-05
11	E55	80	Combination Short Haul Truck	31	0.00E+00	6.36E-06	4.71E-07	1.03E+01	1.67E-08	9.69E-03	4.55E-06	9.81E-03	7.36E-04	1.33E-04	3.86E-04	1.37E-04	1.43E-04	1.64E-03	3.46E-05	0.00E+00	2.43E-04	1.85E-03
11	E55	80	Combination Long Haul Truck	28	0.00E+00	8.86E-06	5.00E-07	9.60E+00	5.64E-08	1.15E-02	7.31E-06	1.05E-02	7.61E-04	1.22E-04	8.12E-04	1.61E-04	1.68E-04	1.54E-03	3.22E-05	0.00E+00	6.44E-04	1.97E-03
11	E56	80	Passenger Car	385	0.00E+00	4.00E-06	4.35E-07	1.63E+01	2.84E-05	8.25E-02	9.02E-06	3.99E-04	2.10E-03	3.51E-04	8.80E-04	5.67E-04	5.82E-04	5.72E-05	8.21E-05	1.75E-08	2.98E-04	6.22E-05
11	E56	80	Passenger Truck	644	0.00E+00	8.24E-06	8.78E-07	3.68E+01	5.36E-05	1.46E-01	1.75E-05	1.08E-03	3.73E-03	6.22E-04	1.67E-03	1.09E-03	1.11E-03	2.65E-04	1.84E-04	3.34E-08	5.61E-04	1.79E-04
11	E56	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	E56	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.13E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.59E-06
11	E56	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.48E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	E56	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.86E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
10	E57	70	Passenger Car	231	0.00E+00	2.58E-06	2.81E-07	1.01E+01	1.83E-05	5.20E-02	5.83E-06	2.34E-04	1.78E-03	2.78E-04	5.68E-04	3.66E-04	3.76E-04	3.93E-05	5.07E-05	1.05E-08	1.92E-04	3.65E-05
10	E57	70	Passenger Truck	388	0.00E+00	5.44E-06	5.78E-07	2.27E+01	3.48E-05	9.18E-02	1.14E-05	6.80E-04	3.23E-03	4.99E-04	1.09E-03	7.08E-04	7.26E-04	1.72E-04	1.13E-04	2.03E-08	3.64E-04	1.14E-04
10	E57	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E57	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	E57	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
10	E58	70	Passenger Car	176	0.00E+00	1.97E-06	2.14E-07	7.68E+00	1.40E-05	3.95E-02	4.43E-06	1.78E-04	1.36E-03	2.11E-04	4.32E-04	2.79E-04	2.86E-04	2.99E-05	3.86E-05	8.02E-09	1.46E-04	2.78E-05
10	E58	70	Passenger Truck	295	0.00E+00	4.14E-06	4.40E-07	1.73E+01	2.65E-05	6.98E-02	8.67E-06	5.18E-04	2.46E-03	3.80E-04	8.30E-04	5.39E-04	5.52E-04	1.31E-04	8.61E-05	1.54E-08	2.77E-04	8.69E-05
10	E58	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.51E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.07E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	E58	70	Combination Short Haul Truck	22	0.00E+00	5.65E-06	4.21E-07	7.64E+00	1.44E-08	8.17E-03	4.03E-06	8.44E-03	7.97E-04	1.33E-04	3.39E-04	1.23E-04	1.27E-04	1.21E-03	2.55E-05	0.00E+00	2.12E-04	1.59E-03
10	E58	70	Combination Long Haul Truck	20	0.00E+00	7.75E-06	4.41E-07	7.17E+00	4.86E-08	9.74E-03	6.37E-06	9.04E-03	8.30E-04	1.25E-04	7.05E-04	1.42E-04	1.48E-04	1.15E-03	2.40E-05	0.00E+00	5.57E-04	1.70E-03
11	E59	80	Passenger Car	454	0.00E+00	4.72E-06	5.13E-07	1.92E+01	3.35E-05	9.73E-02	1.06E-05	4.71E-04	2.47E-03	4.14E-04	1.04E-03	6.69E-04	6.87E-04	6.75E-05	9.68E-05	2.07E-08	3.51E-04	7.34E-05
11	E59	80	Passenger Truck	760	0.00E+00	9.72E-06	1.04E-06	4.34E+01	6.32E-05	1.72E-01	2.06E-05	1.27E-03	4.41E-03	7.33E-04	1.98E-03	1.28E-03	1.31E-03	3.12E-04	2.17E-04	3.94E-08	6.62E-04	2.11E-04
11	E59	80	Single Unit Short Haul Truck	235	0.00E+00	3.22E-05	1.26E-06	3.85E+01	2.18E-05	6.99E-02	3.54E-05	1.34E-02	2.64E-03	5.39E-04	4.43E-03	8.21E-04	8.37E-04	3.91E-03	1.56E-04	6.20E-08	3.60E-03	2.50E-03
11	E59	80	Single Unit Long Haul Truck	10	0.00

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E63	70	Single Unit Long Haul Truck	5	0.00E+00	8.51E-07	3.43E-08	7.72E-01	5.64E-07	1.39E-03	9.25E-07	3.35E-04	8.08E-05	1.45E-05	1.15E-04	2.17E-05	2.21E-05	7.80E-05	3.14E-06	1.26E-09	9.29E-05	6.26E-05
10	E63	70	Combination Short Haul Truck	71	0.00E+00	1.82E-05	1.35E-06	2.46E+01	4.62E-08	2.62E-02	1.29E-05	2.71E-02	2.56E-03	4.27E-04	1.09E-03	3.94E-04	4.09E-04	3.90E-03	8.21E-05	0.00E+00	6.81E-04	5.11E-03
10	E63	70	Combination Long Haul Truck	64	0.00E+00	2.49E-05	1.42E-06	2.31E+01	1.56E-07	3.13E-02	2.05E-05	2.90E-02	2.67E-03	4.02E-04	2.27E-03	4.55E-04	4.74E-04	3.70E-03	7.72E-05	0.00E+00	1.79E-03	5.47E-03
10	E64	70	Passenger Car	628	0.00E+00	7.01E-06	7.62E-07	2.74E+01	4.97E-05	1.41E-01	1.58E-05	6.35E-04	4.84E-03	7.53E-04	1.54E-03	9.94E-04	1.02E-03	1.07E-04	1.38E-04	2.86E-08	5.21E-04	9.90E-05
10	E64	70	Passenger Truck	1051	0.00E+00	1.48E-05	1.57E-06	6.16E+01	9.45E-05	2.49E-01	3.09E-05	1.85E-03	8.76E-03	1.35E-03	2.96E-03	1.92E-03	1.97E-03	4.66E-04	3.07E-04	5.50E-08	9.88E-04	3.10E-04
10	E64	70	Single Unit Short Haul Truck	101	0.00E+00	1.77E-05	7.19E-07	1.65E+01	1.19E-05	2.99E-02	1.92E-05	7.04E-03	1.60E-03	2.93E-04	2.39E-03	4.55E-04	4.64E-04	1.67E-03	6.70E-05	2.71E-08	1.92E-03	1.32E-03
10	E64	70	Single Unit Long Haul Truck	4	0.00E+00	7.70E-07	3.10E-08	6.98E-01	5.11E-07	1.25E-03	8.38E-07	3.03E-04	7.32E-05	1.31E-05	1.04E-04	1.96E-05	2.00E-05	7.06E-05	2.85E-06	1.14E-09	8.41E-05	5.66E-05
10	E64	70	Combination Short Haul Truck	55	0.00E+00	1.41E-05	1.05E-06	1.91E+01	3.59E-08	2.04E-02	1.01E-05	2.11E-02	1.99E-03	3.32E-04	8.48E-04	3.06E-04	3.18E-04	3.03E-03	6.38E-05	0.00E+00	5.30E-04	3.98E-03
10	E64	70	Combination Long Haul Truck	50	0.00E+00	1.94E-05	1.10E-06	1.79E+01	1.22E-07	2.44E-02	1.59E-05	2.26E-02	2.07E-03	3.12E-04	1.76E-03	3.54E-04	3.69E-04	2.88E-03	6.01E-05	0.00E+00	1.39E-03	4.26E-03
10	E65	70	Passenger Car	768	0.00E+00	8.58E-06	9.32E-07	3.35E+01	6.09E-05	1.73E-01	1.93E-05	7.77E-04	5.92E-03	9.22E-04	1.89E-03	1.22E-03	1.25E-03	1.31E-04	1.68E-04	3.50E-08	6.38E-04	1.21E-04
10	E65	70	Passenger Truck	1287	0.00E+00	1.81E-05	1.92E-06	7.54E+01	1.16E-04	3.05E-01	3.78E-05	2.26E-03	1.07E-02	1.66E-03	3.62E-03	2.35E-03	2.41E-03	5.70E-04	3.75E-04	6.73E-08	1.21E-03	3.79E-04
10	E65	70	Single Unit Short Haul Truck	34	0.00E+00	6.07E-06	2.46E-07	5.65E+00	4.07E-06	1.02E-02	6.60E-06	2.41E-03	5.48E-04	1.01E-04	8.18E-04	1.56E-04	1.59E-04	5.74E-04	2.30E-05	9.28E-09	6.59E-04	4.51E-04
10	E65	70	Single Unit Long Haul Truck	2	0.00E+00	2.64E-07	1.06E-08	2.39E-01	1.75E-07	4.30E-04	2.87E-07	1.04E-04	2.51E-05	4.50E-06	3.57E-05	6.73E-06	6.87E-06	2.42E-05	9.75E-07	3.91E-10	2.88E-05	1.94E-05
10	E65	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.09E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.05E-03
10	E65	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.16E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.19E-03
10	E66	70	Passenger Car	574	0.00E+00	6.40E-06	6.96E-07	2.50E+01	4.54E-05	1.29E-01	1.44E-05	5.80E-04	4.42E-03	6.88E-04	1.41E-03	9.08E-04	9.32E-04	9.74E-05	1.26E-04	2.61E-08	4.76E-04	9.05E-05
10	E66	70	Passenger Truck	960	0.00E+00	1.35E-05	1.43E-06	5.63E+01	8.63E-05	2.27E-01	2.82E-05	1.69E-03	8.00E-03	1.24E-03	2.70E-03	1.76E-03	1.80E-03	4.26E-04	2.80E-04	5.02E-08	9.03E-04	2.83E-04
10	E66	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.42E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.39E-04
10	E66	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.75E-05
10	E66	70	Combination Short Haul Truck	45	0.00E+00	1.16E-05	8.61E-07	1.56E+01	2.94E-08	1.67E-02	8.25E-06	1.73E-02	1.63E-03	2.72E-04	6.94E-04	2.51E-04	2.60E-04	2.49E-03	5.23E-05	0.00E+00	4.34E-04	3.26E-03
10	E66	70	Combination Long Haul Truck	41	0.00E+00	1.59E-05	9.03E-07	1.47E+01	9.95E-08	2.00E-02	1.31E-05	1.85E-02	1.70E-03	2.56E-04	1.44E-03	2.90E-04	3.02E-04	2.36E-03	4.92E-05	0.00E+00	1.14E-03	3.49E-03
11	E67	80	Passenger Car	316	0.00E+00	3.28E-06	3.57E-07	1.34E+01	2.33E-05	6.76E-02	7.40E-06	3.27E-04	1.72E-03	2.88E-04	7.21E-04	4.65E-04	4.77E-04	4.69E-05	6.73E-05	1.44E-08	2.44E-04	5.10E-05
11	E67	80	Passenger Truck	528	0.00E+00	6.75E-06	7.20E-07	3.02E+01	4.39E-05	1.19E-01	1.43E-05	8.83E-04	3.06E-03	5.10E-04	1.37E-03	8.91E-04	9.13E-04	2.17E-04	1.51E-04	2.74E-08	4.60E-04	1.47E-04
11	E67	80	Single Unit Short Haul Truck	13	0.00E+00	1.84E-06	7.18E-08	2.20E+00	1.25E-06	3.99E-03	2.02E-06	7.64E-04	1.51E-04	3.08E-05	2.53E-04	4.69E-05	4.78E-05	2.24E-04	8.93E-06	3.54E-09	2.06E-04	1.43E-04
11	E67	80	Single Unit Long Haul Truck	1	0.00E+00	7.99E-08	3.08E-09	9.29E-02	5.31E-08	1.66E-04	8.78E-08	3.26E-05	6.91E-06	1.37E-06	1.10E-05	2.01E-06	2.05E-06	9.39E-06	3.78E-07	1.48E-10	8.99E-06	6.10E-06
11	E67	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.82E-04
11	E67	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.01E-04
11	E68	80	Passenger Car	580	0.00E+00	6.03E-06	6.55E-07	2.46E+01	4.28E-05	1.24E-01	1.36E-05	6.01E-04	3.16E-03	5.29E-04	1.33E-03	8.55E-04	8.77E-04	8.62E-05	1.24E-04	2.64E-08	4.48E-04	9.38E-05
11	E68	80	Passenger Truck	971	0.00E+00	1.24E-05	1.32E-06	5.54E+01	8.07E-05	2.20E-01	2.63E-05	1.62E-03	5.63E-03	9.37E-04	2.52E-03	1.64E-03	1.68E-03	3.99E-04	2.77E-04	5.03E-08	8.45E-04	2.70E-04
11	E68	80	Single Unit Short Haul Truck	152	0.00E+00	2.09E-05	8.16E-07	2.50E+01	1.42E-05	4.54E-02	2.30E-05	8.68E-03	1.71E-03	3.50E-04	2.88E-03	5.33E-04	5.43E-04	2.54E-03	1.01E-04	4.02E-08	2.33E-03	1.62E-03
11	E68	80	Single Unit Long Haul Truck	7	0.00E+00	9.08E-07	3.50E-08	1.05E+00	6.04E-07	1.89E-03	9.98E-07	3.71E-04	7.85E-05	1.55E-05	1.25E-04	2.29E-05	2.33E-05	1.07E-04	4.29E-06	1.68E-09	1.02E-04	6.93E-05
11	E68	80	Combination Short Haul Truck	87	0.00E+00	1.79E-05	1.32E-06	2.91E+01	4.69E-08	2.73E-02	1.28E-05	2.76E-02	2.07E-03	3.75E-04	1.09E-03	3.86E-04	4.01E-04	4.63E-03	9.73E-05	0.00E+00	6.84E-04	5.20E-03
11	E68	80	Combination Long Haul Truck	79	0.00E+00	2.49E-05	1.41E-06	2.70E+01	1.59E-07	3.23E-02	2.06E-05	2.95E-02	2.14E-03	3.43E-04	2.28E-03	4.54E-04	4.72E-04	4.34E-03	9.05E-05	0.00E+00	1.81E-03	5.55E-03
10	E69	70	Passenger Car	279	0.00E+00	3.12E-06	3.39E-07	1.22E+01	2.21E-05	6.27E-02	7.03E-06	2.82E-04	2.15E-03	3.35E-04	6.86E-04	4.42E-04	4.54E-04	4.75E-05	6.12E-05	1.27E-08	2.32E-04	4.41E-05
10	E69	70	Passenger Truck	468	0.00E+00	6.56E-06	6.98E-07	2.74E+01	4.20E-05	1.11E-01	1.38E-05	8.21E-04	3.90E-03	6.03E-04	1.32E-03	8.55E-04	8.76E-04	2.07E-04	1.36E-04	2.45E-08	4.40E-04	1.38E-04
10	E69	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E69	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.02E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.58E-05
10	E69	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.30E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.11E-05
10	E70	70	Passenger Car	578	0.00E+00	6.45E-06	7.01E-07	2.52E+01	4.58E-05	1.30E-01	1.45E-05	5.85E-04	4.45E-03	6.94E-04	1.42E-03	9.15E-04	9.39E-04	9.82E-05	1.27E-04	2.63E-08	4.80E-04	9.12E-05
10	E70	70	Passenger Truck	968	0.00E+00	1.36E-05	1.44E-06	5.67E+01	8.70E-05	2.29E-01	2.85E-05	1.70E-03	8.06E-03	1.25E-03	2.72E-03	1.77E-03	1.81E-03	4.29E-04	2.82E-04	5.06E-08	9.10E-04	2.85E-04
10	E70	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.38E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.79E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
10	E70	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.81E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.30E-04
10	E70	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.01E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.67E-04
10	E71	70	Passenger Car	559	0.00E+00	6.24E-06	6.79E-07	2.44E+01	4.43E-05	1.26E-01	1.41E-05	5.66E-04	4.31E-03	6.71E-04	1.37E-03	8.85E-04	9.09E-04	9.50E-05	1.23E-04	2.55E-08	4.64E-04	8.82E-05
10	E71	70	Passenger Truck	937	0.00E+00	1.31E-05	1.40E-06	5.49E+01	8.42E-05	2.22E-01	2.75E-05	1.64E-03	7.80E-03	1.21E-03	2.63E-03	1.71E-03	1.75E-03	4.15E-04	2.73E-04	4.90E-08	8.80E-04	2.76E-04
10	E71	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E71	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E71	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	E72	70	Passenger Car	657	0.00E+00	7.33E-06	7.96E-07	2.86E+01	5.20E-05	1.47E-01	1.65E-05	6.64E-04	5.06E-03	7.88E-04	1.61E-03	1.04E-03	1.07E-03	1.12E-04	1.44E-04	2.99E-08	5.45E-04	1.04E-04
10	E72	70	Passenger Truck	1099	0.00E+00	1.54E-05	1.64E-06	6.44E+01	9.88E-05	2.60E-01	3.23E-05	1.93E-03	9.16E-03	1.42E-03	3.09E-03	2.01E-03	2.06E-03	4.87E-04	3.21E-04	5.75E-08	1.03E-03	3.24E-04
10	E72	70	Single Unit Short Haul Truck	21	0.00E+00	3.71E-06	1.51E-07	3.45E+00	2.49E-06	6.26E-03	4.03E-06	1.47E-03	3.35E-04	6.15E-05	5.00E-04	9.52E-05	9.71E-05	3.51E-04	1.40E-05	5.67E-09	4.03E-04	2.76E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	1.61E-07	6.50E-09	1.46E-01	1.07E-07	2.63E-04	1.75E-07	6.34E-05	1.53E-05	2.75E-06	2.18E-05	4.11E-06	4.20E-06	1.48E-05	5.96E-07	2.39E-10	1.76E-05	1.19E-05
10	E72	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.21E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.17E-04
10	E72	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.46E-04
9	E73	60	Passenger Car	184	0.00E+00	2.35E-06	2.55E-07	8.37E+00	1.67E-05	4.70E-02	5.30E-06	1.89E-04	1.85E-03	2.78E-04	5.17E-04	3.33E-04	3.42E-04	3.64E-05	4.20E-05	8.81E-09	1.75E-04	2.95E-05
9	E73	60	Passenger Truck	307	0.00E+00	4.99E-06	5.29E-07	1.87E+01	3.15E-05	8.04E-02	1.03E-05	5.88E-04	3.39E-03	5.04E-04	9.86E-04	6.42E-04	6.58E-04	1.49E-04	9.27E-05	1.72E-08	3.29E-04	9.96E-05
9	E73	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.20E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	E73	60	Combination Short Haul Truck	10	0.00E+00	3.05E-06	2.24E-07	3.68E+00	8.36E-09	4.56E-03	2.19E-06	4.65E-03	5.33E-04	8.33E-05	1.88E-04	6.56E-05	6.81E-05	5.86E-04	1.23E-05	0.00E+00	1.20E-04	8.77E-04
9	E73	60	Combination Long Haul Truck	10	0.00E+00	4.20E-06	2.29E-07	3.48E+00	2.83E-08	5.48E-03	3.51E-06	4.96E-03	5.59E-04	8.08E-05	3.98E-04	7.48E-05	7.80E-05	5.59E-04	1.17E-05	0.00E+00	3.20E-04	9.34E-04
9	E74	60	Passenger Car	164	0.00E+00	2.10E-06	2.28E-07	7.47E+00	1.49E-05	4.19E-02	4.73E-06	1.69E-04	1.65E-03	2.48E-04	4.61E-04	2.97E-04	3.05E-04	3.25E-05	3.74E-05	7.86E-09	1.56E-04	2.63E-05
9	E74	60	Passenger Truck	274	0.00E+00	4.45E-06	4.72E-07	1.66E+01	2.81E-05	7.18E-02	9.23E-06	5.24E-04	3.02E-03	4.50E-04	8.80E-04	5.73E-04	5.87E-04	1.33E-04	8.27E-05	1.53E-08	2.93E-04	8.88E-05
9	E74	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
53	E75	70	Passenger Car	685	0.00E+00	7.41E-06	8.05E-07	3.02E+01	5.26E-05	1.48E-01	1.67E-05	7.05E-04	5.20E-03	8.13E-04	1.63E-03	1.05E-03	1.08E-03	1.16E-04	1.52E-04	3.15E-08	5.51E-04	1.10E-04
53	E75	70	Passenger Truck	1147	0.00E+00	1.55E-05	1.65E-06	6.80E+01	9.94E-05	2.61E-01	3.25E-05	1.99E-03	9.28E-03	1.44E-03	3.11E-03	2.02E-03	2.07E-03	5.05E-04	3.39E-04	5.94E-08	1.04E-03	3.33E-04
53	E75	70	Single Unit Short Haul Truck	34	0.00E+00	5.90E-06	2.40E-07	5.49E+00	3.95E-06	9.96E-03	6.42E-06	2.35E-03	5.33E-04	9.78E-05	7.95E-04	1.52E-04	1.55E-04	5.58E-04	2.23E-05	9.02E-09	6.41E-04	4.39E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	2.57E-07	1.03E-08	2.33E-01	1.70E-07	4.18E-04	2.79E-07	1.01E-04	2.44E-05	4.37E-06	3.47E-05	6.54E-06	6.67E-06	2.35E-05	9.48E-07	3.80E-10	2.80E-05	1.89E-05
53	E75	70	Combination Short Haul Truck	40	0.00E+00	1.04E-05	7.71E-07	1.40E+01	2.63E-08	1.50E-02	7.39E-06	1.55E-02	1.46E-03	2.44E-04	6.22E-04	2.25E-04	2.33E-04	2.23E-03	4.68E-05	0.00E+00	3.89E-04	2.92E-03
53	E75	70	Combination Long Haul Truck	37	0.00E+00	1.42E-05	8.08E-07	1.31E+01	8.91E-08	1.79E-02	1.17E-05	1.66E-02	1.52E-03	2.29E-04	1.29E-03	2.60E-04	2.71E-04	2.11E-03	4.41E-05	0.00E+00	1.02E-03	3.12E-03
53	E76	70	Passenger Car	1102	0.00E+00	1.19E-05	1.30E-06	4.86E+01	8.46E-05	2.38E-01	2.69E-05	1.13E-03	8.36E-03	1.31E-03	2.62E-03	1.69E-03	1.74E-03	1.87E-04	2.44E-04	5.08E-08	8.87E-04	1.77E-04
53	E76	70	Passenger Truck	1846	0.00E+00	2.49E-05	2.65E-06	1.09E+02	1.60E-04	4.19E-01	5.23E-05	3.20E-03	1.49E-02	2.32E-03	5.00E-03	3.25E-03	3.33E-03	8.13E-04	5.45E-04	9.56E-08	1.67E-03	5.36E-04
53	E76	70	Single Unit Short Haul Truck	55	0.00E+00	9.61E-06	3.90E-07	8.95E+00	6.44E-06	1.62E-02	1.04E-05	3.82E-03	8.68E-04	1.59E-04	1.30E-03	2.47E-04	2.52E-04	9.09E-04	3.64E-05	1.47E-08	1.04E-03	7.15E-04
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	4.18E-07	1.68E-08	3.79E-01	2.77E-07	6.81E-04	4.55E-07	1.64E-04	3.97E-05	7.12E-06	5.65E-05	1.07E-05	1.09E-05	3.83E-05	1.54E-06	6.19E-10	4.56E-05	3.08E-05
53	E76	70	Combination Short Haul Truck	73	0.00E+00	1.87E-05	1.39E-06	2.53E+01	4.75E-08	2.70E-02	1.33E-05	2.79E-02	2.64E-03	4.40E-04	1.12E-03	4.05E-04	4.21E-04	4.02E-03	8.45E-05	0.00E+00	7.02E-04	5.27E-03
53	E76	70	Combination Long Haul Truck	66	0.00E+00	2.57E-05	1.46E-06	2.37E+01	1.61E-07	3.23E-02	2.11E-05	2.99E-02	2.75E-03	4.14E-04	2.33E-03	4.69E-04	4.88E-04	3.81E-03	7.95E-05	0.00E+00	1.84E-03	5.63E-03
53	E77	70	Passenger Car	850	0.00E+00	9.20E-06	9.99E-07	3.75E+01	6.53E-05	1.83E-01	2.07E-05	8.75E-04	6.45E-03	1.01E-03	2.02E-03	1.30E-03	1.34E-03	1.44E-04	1.88E-04	3.91E-08	6.84E-04	1.36E-04
53	E77	70	Passenger Truck	1423	0.00E+00	1.92E-05	2.04E-06	8.44E+01	1.23E-04	3.23E-01	4.03E-05	2.47E-03	1.15E-02	1.79E-03	3.86E-03	2.51E-03	2.57E-03	6.27E-04	4.20E-04	7.37E-08	1.29E-03	4.14E-04
53	E77	70	Single Unit Short Haul Truck	34	0.00E+00	6.07E-06	2.46E-07	5.65E+00	4.07E-06	1.02E-02	6.60E-06	2.41E-03	5.48E-04	1.01E-04	8.18E-04	1.56E-04	1.59E-04	5.74E-04	2.30E-05	9.28E-09	6.59E-04	4.51E-04
53	E77	70	Single Unit Long Haul Truck	2	0.00E+00	2.64E-07	1.06E-08	2.39E-01	1.75E-07	4.30E-04	2.87E-07	1.04E-04	2.51E-05	4.50E-06	3.57E-05	6.73E-06	6.87E-06	2.42E-05	9.75E-07	3.91E-10	2.88E-05	1.94E-05
53	E77	70	Combination Short Haul Truck	47	0.00E+00	1.21E-05	9.01E-07	1.64E+01	3.08E-08	1.75E-02	8.63E-06	1.81E-02	1.71E-03	2.85E-04	7.27E-04	2.63E-04	2.73E-04	2.60E-03	5.47E-05	0.00E+00	4.54E-04	3.41E-03
53	E77	70	Combination Long Haul Truck	43	0.00E+00	1.66E-05	9.45E-07	1.54E+01	1.04E-07	2.09E-02	1.37E-05	1.94E-02	1.78E-03	2.68E-04	1.51E-03	3.04E-04	3.16E-04	2.47E-03	5.15E-05	0.00E+00	1.19E-03	3.65E-03
53	E78	70	Passenger Car	1273	0.00E+00	1.38E-05	1.50E-06	5.61E+01	9.77E-05	2.75E-01	3.10E-05	1.31E-03	9.65E-03	1.51E-03	3.03E-03	1.95E-03	2.00E-03	2.16E-04	2.82E-04	5.86E-08	1.02E-03	2.04E-04
53	E78	70	Passenger Truck	2131

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E82	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.92E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
10	E83	70	Passenger Car	277	0.00E+00	3.09E-06	3.36E-07	1.21E+01	2.19E-05	6.21E-02	6.96E-06	2.80E-04	2.13E-03	3.32E-04	6.79E-04	4.38E-04	4.49E-04	4.70E-05	6.06E-05	1.26E-08	2.30E-04	4.37E-05
10	E83	70	Passenger Truck	463	0.00E+00	6.50E-06	6.91E-07	2.72E+01	4.16E-05	1.10E-01	1.36E-05	8.13E-04	3.86E-03	5.97E-04	1.30E-03	8.47E-04	8.68E-04	2.05E-04	1.35E-04	2.42E-08	4.35E-04	1.37E-04
10	E83	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E83	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E83	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E84	70	Passenger Car	273	0.00E+00	3.05E-06	3.31E-07	1.19E+01	2.16E-05	6.13E-02	6.87E-06	2.76E-04	2.10E-03	3.28E-04	6.70E-04	4.32E-04	4.43E-04	4.64E-05	5.98E-05	1.24E-08	2.27E-04	4.31E-05
10	E84	70	Passenger Truck	457	0.00E+00	6.41E-06	6.82E-07	2.68E+01	4.11E-05	1.08E-01	1.34E-05	8.02E-04	3.81E-03	5.89E-04	1.29E-03	8.35E-04	8.56E-04	2.03E-04	1.33E-04	2.39E-08	4.30E-04	1.35E-04
10	E84	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	E84	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
9	E85	60	Passenger Car	1146	0.00E+00	1.47E-05	1.59E-06	5.22E+01	1.04E-04	2.93E-01	3.31E-05	1.18E-03	1.16E-02	1.73E-03	3.22E-03	2.08E-03	2.13E-03	2.27E-04	2.62E-04	5.50E-08	1.09E-03	1.84E-04
9	E85	60	Passenger Truck	1918	0.00E+00	3.11E-05	3.30E-06	1.16E+02	1.96E-04	5.02E-01	6.46E-05	3.67E-03	2.11E-02	3.15E-03	6.16E-03	4.01E-03	4.10E-03	9.29E-04	5.78E-04	1.07E-07	2.05E-03	6.21E-04
9	E85	60	Single Unit Short Haul Truck	60	0.00E+00	1.35E-05	5.57E-07	1.00E+01	8.93E-06	1.77E-02	1.46E-05	5.16E-03	1.39E-03	2.33E-04	1.80E-03	3.46E-04	3.53E-04	1.02E-03	4.09E-05	1.69E-08	1.44E-03	9.67E-04
9	E85	60	Single Unit Long Haul Truck	3	0.00E+00	5.88E-07	2.42E-08	4.28E-01	3.87E-07	7.49E-04	6.36E-07	2.24E-04	6.24E-05	1.03E-05	7.86E-05	1.50E-05	1.53E-05	4.33E-05	1.75E-06	7.17E-10	6.32E-05	4.19E-05
9	E85	60	Combination Short Haul Truck	37	0.00E+00	1.08E-05	7.96E-07	1.31E+01	2.97E-08	1.62E-02	7.79E-06	1.65E-02	1.89E-03	2.96E-04	6.68E-04	2.33E-04	2.42E-04	2.08E-03	4.37E-05	0.00E+00	4.26E-04	3.11E-03
9	E85	60	Combination Long Haul Truck	34	0.00E+00	1.49E-05	8.13E-07	1.24E+01	1.01E-07	1.95E-02	1.25E-05	1.76E-02	1.98E-03	2.87E-04	1.41E-03	2.66E-04	2.77E-04	1.98E-03	4.14E-05	0.00E+00	1.14E-03	3.32E-03
9	E86	60	Passenger Car	1346	0.00E+00	1.72E-05	1.87E-06	6.14E+01	1.22E-04	3.45E-01	3.88E-05	1.39E-03	1.36E-02	2.04E-03	3.79E-03	2.44E-03	2.51E-03	2.67E-04	3.08E-04	6.46E-08	1.28E-03	2.16E-04
9	E86	60	Passenger Truck	2254	0.00E+00	3.66E-05	3.88E-06	1.37E+02	2.31E-04	5.90E-01	7.59E-05	4.31E-03	2.48E-02	3.70E-03	7.23E-03	4.71E-03	4.82E-03	1.09E-03	6.79E-04	1.26E-07	2.41E-03	7.30E-04
9	E86	60	Single Unit Short Haul Truck	42	0.00E+00	9.41E-06	3.89E-07	7.01E+00	6.23E-06	1.23E-02	1.02E-05	3.61E-03	9.70E-04	1.63E-04	1.26E-03	2.42E-04	2.47E-04	7.10E-04	2.86E-05	1.18E-08	1.01E-03	6.75E-04
9	E86	60	Single Unit Long Haul Truck	2	0.00E+00	4.11E-07	1.69E-08	2.99E-01	2.70E-07	5.23E-04	4.44E-07	1.56E-04	4.35E-05	7.23E-06	5.49E-05	1.05E-05	1.07E-05	3.02E-05	1.22E-06	5.01E-10	4.42E-05	2.92E-05
9	E86	60	Combination Short Haul Truck	29	0.00E+00	8.40E-06	6.17E-07	1.01E+01	2.30E-08	1.25E-02	6.03E-06	1.28E-02	1.47E-03	2.29E-04	5.17E-04	1.80E-04	1.87E-04	1.61E-03	3.39E-05	0.00E+00	3.30E-04	2.41E-03
9	E86	60	Combination Long Haul Truck	26	0.00E+00	1.15E-05	6.30E-07	9.57E+00	7.79E-08	1.51E-02	9.65E-06	1.36E-02	1.54E-03	2.22E-04	1.09E-03	2.06E-04	2.14E-04	1.54E-03	3.21E-05	0.00E+00	8.80E-04	2.57E-03
9	E87	60	Passenger Car	715	0.00E+00	9.15E-06	9.94E-07	3.26E+01	6.49E-05	1.83E-01	2.06E-05	7.36E-04	7.22E-03	1.08E-03	2.01E-03	1.30E-03	1.33E-03	1.42E-04	1.63E-04	3.43E-08	6.81E-04	1.15E-04
9	E87	60	Passenger Truck	1197	0.00E+00	1.94E-05	2.06E-06	7.27E+01	1.23E-04	3.13E-01	4.03E-05	2.29E-03	1.32E-02	1.96E-03	3.84E-03	2.50E-03	2.56E-03	5.80E-04	3.61E-04	6.69E-08	1.28E-03	3.88E-04
9	E87	60	Single Unit Short Haul Truck	178	0.00E+00	3.98E-05	1.64E-06	2.96E+01	2.64E-05	5.21E-02	4.30E-05	1.52E-02	4.10E-03	6.89E-04	5.31E-03	1.02E-03	1.04E-03	3.00E-03	1.21E-04	4.98E-08	4.26E-03	2.85E-03
9	E87	60	Single Unit Long Haul Truck	8	0.00E+00	1.74E-06	7.14E-08	1.26E+00	1.14E-06	2.21E-03	1.88E-06	6.60E-04	1.84E-04	3.05E-05	2.32E-04	4.44E-05	4.53E-05	1.28E-04	5.15E-06	2.12E-09	1.87E-04	1.24E-04
9	E87	60	Combination Short Haul Truck	89	0.00E+00	2.59E-05	1.91E-06	3.13E+01	7.11E-08	3.88E-02	1.86E-05	3.96E-02	4.53E-03	7.08E-04	1.60E-03	5.58E-04	5.79E-04	4.98E-03	1.05E-04	0.00E+00	1.02E-03	7.45E-03
9	E87	60	Combination Long Haul Truck	81	0.00E+00	3.57E-05	1.95E-06	2.96E+01	2.41E-07	4.66E-02	2.98E-05	4.21E-02	4.75E-03	6.87E-04	3.38E-03	6.36E-04	6.63E-04	4.75E-03	9.91E-05	0.00E+00	2.72E-03	7.94E-03
9	E88	60	Passenger Car	1073	0.00E+00	1.37E-05	1.49E-06	4.89E+01	9.75E-05	2.75E-01	3.10E-05	1.11E-03	1.08E-02	1.62E-03	3.02E-03	1.95E-03	2.00E-03	2.13E-04	2.45E-04	5.15E-08	1.02E-03	1.72E-04
9	E88	60	Passenger Truck	1798	0.00E+00	2.92E-05	3.09E-06	1.09E+02	1.84E-04	4.70E-01	6.05E-05	3.44E-03	1.98E-02	2.95E-03	5.77E-03	3.75E-03	3.85E-03	8.71E-04	5.42E-04	1.00E-07	1.92E-03	5.82E-04
9	E88	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	1.00E-02	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.87E-03
9	E88	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.33E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.11E-05
9	E88	60	Combination Short Haul Truck	60	0.00E+00	1.76E-05	1.29E-06	2.12E+01	4.81E-08	2.62E-02	1.26E-05	2.68E-02	3.06E-03	4.79E-04	1.08E-03	3.77E-04	3.92E-04	3.37E-03	7.08E-05	0.00E+00	6.90E-04	5.04E-03
9	E88	60	Combination Long Haul Truck	55	0.00E+00	2.41E-05	1.32E-06	2.00E+01	1.63E-07	3.15E-02	2.02E-05	2.85E-02	3.21E-03	4.65E-04	2.29E-03	4.30E-04	4.48E-04	3.21E-03	6.70E-05	0.00E+00	1.84E-03	5.37E-03
9	E89	60	Passenger Car	133	0.00E+00	1.71E-06	1.86E-07	6.09E+00	1.21E-05	3.42E-02	3.85E-06	1.37E-04	1.35E-03	2.02E-04	3.76E-04	2.42E-04	2.49E-04	2.65E-05	3.05E-05	6.41E-09	1.27E-04	2.14E-05
9	E89	60	Passenger Truck	224	0.00E+00	3.63E-06	3.84E-07	1.36E+01	2.29E-05	5.85E-02	7.52E-06	4.27E-04	2.46E-03	3.67E-04	7.17E-04	4.67E-04	4.78E-04	1.08E-04	6.74E-05	1.25E-08	2.39E-04	7.24E-05
9	E89	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
9	E89	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
9	E90	60	Passenger Car	105	0.00E+00	1.35E-06	1.47E-07	4.81E+00	9.58E-06	2.70E-02	3.04E-06	1.09E-04	1.06E-03	1.59E-04	2.97E-04	1.91E-04	1.96E-04	2.09E-05	2.41E-05	5.06E-09	1.00E-04	1.69E-05
9	E90	60	Passenger Truck	177	0.00E+00	2.86E-06	3.04E-07	1.07E+01	1.81E-05	4.62E-02	5.94E-06	3.38E-04	1.95E-03	2.90E-04	5.67E-04	3.69E-04	3.78E-04	8.55E-05	5.32E-05	9.87E-09	1.89E-04	5.72E-05
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	E90	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.98E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
9	E90	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.44E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	E91	60	Passenger Car	4	0.00E+00	4.79E-08	5.20E-09	1.70E-01	3.40E-07	9.57E-04	1.08E-07	3.85E-06	3.78E-05	5.65E-06	1.05E-05	6.79E-06	6.96E-06	7.41E-07	8.55E-07	1.80E-10	3.56E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.02E-07	1.08E-08	3.80E-01	6.41E-07	1.64E-03	2.11E-07	1.20E-05	6.90E-05	1.03E-05	2.01E-05	1.31E-05	1.34E-05	3.03E-06	1.89E-06	3.50E-10	6.70E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.79E-08	5.20E-09	1.70E-01	3.40E-07	9.57E-04	1.08E-07	3.85E-06	3.78E-05	5.65E-06	1.05E-05	6.79E-06	6.96E-06	7.41E-07	8.55E-07	1.80E-10	3.56E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.02E-07	1.08E-08	3.80E-01	6.41E-07	1.64E-03	2.11E-07	1.20E-05	6.90E-05	1.03E-05	2.01E-05	1.31E-05	1.34E-05	3.03E-06	1.89E-06	3.50E-10	6.70E-06	2.03E-06
9	E93	60	Passenger Car	108	0.00E+00	1.38E-06	1.50E-07	4.93E+00	9.82E-06	2.77E-02	3.12E-06	1.11E-04	1.09E-03	1.63E-04	3.04E-04	1.96E-04	2.01E-04	2.14E-05	2.47E-05	5.19E-09	1.03E-04	1.74E-05
9	E93	60	Passenger Truck	181	0.00E+00	2.94E-06	3.11E-07	1.10E+01	1.85E-05	4.74E-02	6.09E-06	3.46E-04	1.99E-03	2.97E-04	5.81E-04	3.78E-04	3.87E-04	8.77E-05	5.45E-05	1.01E-08	1.94E-04	5.86E-05
9	E93	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	E93	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.31E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.75E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.92E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
9	E94	60	Passenger Car	225	0.00E+00	2.88E-06	3.13E-07	1.02E+01	2.04E-05	5.75E-02	6.49E-06	2.31E-04	2.27E-03	3.40E-04	6.33E-04	4.08E-04	4.19E-04	4.45E-05	5.14E-05	1.08E-08	2.14E-04	3.61E-05
9	E94	60	Passenger Truck	376	0.00E+00	6.11E-06	6.47E-07	2.28E+01	3.85E-05	9.85E-02	1.27E-05	7.19E-04	4.15E-03	6.17E-04	1.21E-03	7.86E-04	8.05E-04	1.82E-04	1.13E-04	2.10E-08	4.02E-04	1.22E-04
9	E94	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	E94	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.10E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	E94	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.79E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.26E-04
9	E94	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.60E-04
54	E95	80	Passenger Car	465	0.00E+00	4.72E-06	5.13E-07	1.98E+01	3.35E-05	9.55E-02	1.06E-05	4.85E-04	2.67E-03	4.39E-04	1.04E-03	6.69E-04	6.87E-04	6.92E-05	9.99E-05	2.07E-08	3.51E-04	7.57E-05
54	E95	80	Passenger Truck	780	0.00E+00	9.81E-06	1.05E-06	4.50E+01	6.39E-05	1.74E-01	2.08E-05	1.30E-03	4.77E-03	7.82E-04	2.00E-03	1.30E-03	1.33E-03	3.20E-04	2.25E-04	3.98E-08	6.69E-04	2.17E-04
54	E95	80	Single Unit Short Haul Truck	73	0.00E+00	9.99E-06	3.90E-07	1.19E+01	6.77E-06	2.17E-02	1.10E-05	4.15E-03	8.18E-04	1.67E-04	1.38E-03	2.55E-04	2.60E-04	1.21E-03	4.85E-05	1.92E-08	1.12E-03	7.75E-04
54	E95	80	Single Unit Long Haul Truck	3	0.00E+00	4.34E-07	1.67E-08	5.04E-01	2.89E-07	9.03E-04	4.77E-07	1.77E-04	3.75E-05	7.42E-06	6.00E-05	1.09E-05	1.12E-05	5.10E-05	2.05E-06	8.01E-10	4.88E-05	3.31E-05
54	E95	80	Combination Short Haul Truck	38	0.00E+00	7.76E-06	5.75E-07	1.26E+01	2.03E-08	1.18E-02	5.55E-06	1.20E-02	8.99E-04	1.63E-04	4.71E-04	1.68E-04	1.74E-04	2.01E-03	4.22E-05	0.00E+00	2.97E-04	2.25E-03
54	E95	80	Combination Long Haul Truck	34	0.00E+00	1.08E-05	6.10E-07	1.17E+01	6.88E-08	1.40E-02	8.92E-06	1.28E-02	9.29E-04	1.49E-04	9.91E-04	1.97E-04	2.05E-04	1.88E-03	3.93E-05	0.00E+00	7.86E-04	2.41E-03
54	E96	80	Passenger Car	657	0.00E+00	6.66E-06	7.24E-07	2.80E+01	4.73E-05	1.35E-01	1.50E-05	6.85E-04	3.77E-03	6.20E-04	1.47E-03	9.45E-04	9.70E-04	9.77E-05	1.41E-04	2.92E-08	4.96E-04	1.07E-04
54	E96	80	Passenger Truck	1100	0.00E+00	1.38E-05	1.48E-06	6.35E+01	9.02E-05	2.45E-01	2.94E-05	1.84E-03	6.73E-03	1.10E-03	2.82E-03	1.83E-03	1.87E-03	4.52E-04	3.17E-04	5.62E-08	9.44E-04	3.06E-04
54	E96	80	Single Unit Short Haul Truck	62	0.00E+00	8.54E-06	3.34E-07	1.02E+01	5.79E-06	1.85E-02	9.39E-06	3.55E-03	6.99E-04	1.43E-04	1.18E-03	2.18E-04	2.22E-04	1.04E-03	4.15E-05	1.64E-08	9.54E-04	6.63E-04
54	E96	80	Single Unit Long Haul Truck	3	0.00E+00	3.71E-07	1.43E-08	4.31E-01	2.47E-07	7.72E-04	4.08E-07	1.52E-04	3.21E-05	6.35E-06	5.13E-05	9.35E-06	9.54E-06	4.36E-05	1.76E-06	6.85E-10	4.18E-05	2.83E-05
54	E96	80	Combination Short Haul Truck	59	0.00E+00	1.22E-05	9.02E-07	1.98E+01	3.19E-08	1.86E-02	8.71E-06	1.88E-02	1.41E-03	2.56E-04	7.39E-04	2.63E-04	2.73E-04	3.15E-03	6.63E-05	0.00E+00	4.66E-04	3.54E-03
54	E96	80	Combination Long Haul Truck	54	0.00E+00	1.70E-05	9.58E-07	1.84E+01	1.08E-07	2.20E-02	1.40E-05	2.01E-02	1.46E-03	2.33E-04	1.56E-03	3.09E-04	3.22E-04	2.95E-03	6.16E-05	0.00E+00	1.23E-03	3.78E-03
54	E97	80	Passenger Car	262	0.00E+00	2.66E-06	2.89E-07	1.12E+01	1.89E-05	5.38E-02	6.00E-06	2.74E-04	1.51E-03	2.48E-04	5.85E-04	3.77E-04	3.87E-04	3.90E-05	5.63E-05	1.17E-08	1.98E-04	4.27E-05
54	E97	80	Passenger Truck	440	0.00E+00	5.53E-06	5.90E-07	2.54E+01	3.60E-05	9.80E-02	1.17E-05	7.35E-04	2.69E-03	4.41E-04	1.13E-03	7.30E-04	7.49E-04	1.80E-04	1.27E-04	2.25E-08	3.77E-04	1.22E-04
54	E97	80	Single Unit Short Haul Truck	79	0.00E+00	1.08E-05	4.21E-07	1.29E+01	7.31E-06	2.34E-02	1.18E-05	4.48E-03	8.82E-04	1.80E-04	1.48E-03	2.75E-04	2.80E-04	1.31E-03	5.23E-05	2.07E-08	1.20E-03	8.36E-04
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	1.81E-08	5.44E-01	3.11E-07	9.74E-04	5.14E-07	1.91E-04	4.05E-05	8.01E-06	6.47E-05	1.18E-05	1.20E-05	5.50E-05	2.21E-06	8.64E-10	5.27E-05	3.57E-05
54	E97	80	Combination Short Haul Truck	40	0.00E+00	8.30E-06	6.14E-07	1.35E+01	2.17E-08	1.27E-02	5.93E-06	1.28E-02	9.61E-04	1.74E-04	5.03E-04	1.79E-04	1.86E-04	2.15E-03	4.52E-05	0.00E+00	3.17E-04	2.41E-03
54	E97	80	Combination Long Haul Truck	37	0.00E+00	1.16E-05	6.53E-07	1.25E+01	7.35E-08	1.50E-02	9.54E-06	1.37E-02	9.93E-04	1.59E-04	1.06E-03	2.10E-04	2.19E-04	2.01E-03	4.20E-05	0.00E+00	8.41E-04	2.58E-03
54	E98	80	Passenger Car	944	0.00E+00	9.57E-06	1.04E-06	4.02E+01	6.79E-05	1.94E-01	2.16E-05	9.83E-04	5.41E-03	8.91E-04	2.10E-03	1.36E-03	1.39E-03	1.40E-04	2.03E-04	4.19E-08	7.12E-04	1.53E-04
54	E98	80	Passenger Truck	1580	0.00E+00	1.99E-05	2.12E-06	9.12E+01	1.30E-04	3.52E-01	4.22E-05	2.64E-03	9.67E-03	1.58E-03	4.05E-03	2.63E-03	2.69E-03	6.49E-04	4.56E-04	8.08E-08	1.36E-03	4.39E-04
54	E98	80	Single Unit Short Haul Truck	117	0.00E+00	1.60E-05	6.26E-07	1.92E+01	1.09E-05	3.48E-02	1.76E-05	6.66E-03	1.31E-03	2.69E-04	2.21E-03	4.09E-04	4.17E-04	1.95E-03	7.78E-05	3.09E-08	1.79E-03	1.24E-03
54	E98	80	Single Unit Long Haul Truck	5	0.00E+00	6.97E-07	2.69E-08	8.09E-01	4.63E-07	1.45E-03	7.65E-07	2.84E-04	6.02E-05	1.19E-05	9.63E-05	1.76E-05	1.79E-05	8.19E-05	3.29E-06	1.29E-09	7.84E-05	5.32E-05
54	E98	80	Combination Short Haul Truck	84	0.00E+00	1.72E-05	1.28E-06	2.81E+01	4.52E-08	2.63E-02	1.23E-05	2.66E-02	2.00E-03	3.62E-04	1.05E-03	3.73E-04	3.87E-04	4.46E-03	9.38E-05	0.00E+00	6.59E-04	5.01E-03
54	E98	80	Combination Long Haul Truck	76	0.00E+00	2.40E-05	1.36E-06	2.60E+01	1.53E-07	3.11E-02	1.98E-05	2.84E-02	2.06E-03	3.30E-04	2.20E-03	4.37E-04	4.55E-04	4.18E-03	8.73E-05	0.00E+00	1.75E-03	5.35E-03
9	F01	60	Passenger Car	305	0.00E+00	3.91E-

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F05	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.02E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	F05	60	Combination Short Haul Truck	8	0.00E+00	2.44E-06	1.79E-07	2.95E+00	6.69E-09	3.65E-03	1.75E-06	3.72E-03	4.26E-04	6.67E-05	1.51E-04	5.25E-05	5.45E-05	4.68E-04	9.86E-06	0.00E+00	9.60E-05	7.02E-04
9	F05	60	Combination Long Haul Truck	8	0.00E+00	3.36E-06	1.83E-07	2.78E+00	2.27E-08	4.38E-03	2.81E-06	3.97E-03	4.47E-04	6.46E-05	3.18E-04	5.99E-05	6.24E-05	4.47E-04	9.33E-06	0.00E+00	2.56E-04	7.47E-04
9	F06	60	Passenger Car	267	0.00E+00	3.42E-06	3.72E-07	1.22E+01	2.43E-05	6.85E-02	7.72E-06	2.75E-04	2.70E-03	4.04E-04	7.52E-04	4.85E-04	4.98E-04	5.30E-05	6.11E-05	1.28E-08	2.55E-04	4.29E-05
9	F06	60	Passenger Truck	448	0.00E+00	7.26E-06	7.70E-07	2.72E+01	4.58E-05	1.17E-01	1.51E-05	8.56E-04	4.93E-03	7.34E-04	1.44E-03	9.35E-04	9.58E-04	2.17E-04	1.35E-04	2.50E-08	4.79E-04	1.45E-04
9	F06	60	Single Unit Short Haul Truck	36	0.00E+00	8.13E-06	3.36E-07	6.05E+00	5.38E-06	1.06E-02	8.79E-06	3.11E-03	8.37E-04	1.41E-04	1.08E-03	2.09E-04	2.13E-04	6.14E-04	2.47E-05	1.02E-08	8.71E-04	5.83E-04
9	F06	60	Single Unit Long Haul Truck	2	0.00E+00	3.55E-07	1.46E-08	2.58E-01	2.33E-07	4.52E-04	3.84E-07	1.35E-04	3.76E-05	6.24E-06	4.74E-05	9.08E-06	9.26E-06	2.61E-05	1.05E-06	4.33E-10	3.81E-05	2.53E-05
9	F06	60	Combination Short Haul Truck	19	0.00E+00	5.50E-06	4.04E-07	6.63E+00	1.51E-08	8.21E-03	3.95E-06	8.38E-03	9.59E-04	1.50E-04	3.39E-04	1.18E-04	1.23E-04	1.05E-03	2.22E-05	0.00E+00	2.16E-04	1.58E-03
9	F06	60	Combination Long Haul Truck	17	0.00E+00	7.55E-06	4.12E-07	6.26E+00	5.10E-08	9.86E-03	6.31E-06	8.93E-03	1.01E-03	1.45E-04	7.16E-04	1.35E-04	1.40E-04	1.01E-03	2.10E-05	0.00E+00	5.76E-04	1.68E-03
9	F07	60	Passenger Car	403	0.00E+00	5.15E-06	5.60E-07	1.84E+01	3.66E-05	1.03E-01	1.16E-05	4.15E-04	4.07E-03	6.09E-04	1.13E-03	7.31E-04	7.50E-04	7.98E-05	9.21E-05	1.93E-08	3.83E-04	6.47E-05
9	F07	60	Passenger Truck	674	0.00E+00	1.09E-05	1.16E-06	4.09E+01	6.90E-05	1.76E-01	2.27E-05	1.29E-03	7.43E-03	1.11E-03	2.16E-03	1.41E-03	1.44E-03	3.27E-04	2.03E-04	3.77E-08	7.21E-04	2.18E-04
9	F07	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.39E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.03E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	F07	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.79E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.26E-04
9	F07	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.60E-04
9	F08	60	Passenger Car	350	0.00E+00	4.48E-06	4.87E-07	1.60E+01	3.18E-05	8.97E-02	1.01E-05	3.61E-04	3.54E-03	5.30E-04	9.86E-04	6.36E-04	6.53E-04	6.94E-05	8.01E-05	1.68E-08	3.34E-04	5.63E-05
9	F08	60	Passenger Truck	587	0.00E+00	9.52E-06	1.01E-06	3.56E+01	6.00E-05	1.54E-01	1.97E-05	1.12E-03	6.46E-03	9.62E-04	1.88E-03	1.22E-03	1.26E-03	2.84E-04	1.77E-04	3.28E-08	6.27E-04	1.90E-04
9	F08	60	Single Unit Short Haul Truck	44	0.00E+00	9.84E-06	4.06E-07	7.33E+00	6.52E-06	1.29E-02	1.06E-05	3.77E-03	1.01E-03	1.70E-04	1.31E-03	2.53E-04	2.58E-04	7.43E-04	2.99E-05	1.23E-08	1.05E-03	7.06E-04
9	F08	60	Single Unit Long Haul Truck	2	0.00E+00	4.29E-07	1.76E-08	3.12E-01	2.83E-07	5.47E-04	4.64E-07	1.63E-04	4.55E-05	7.56E-06	5.74E-05	1.10E-05	1.12E-05	3.16E-05	1.27E-06	5.24E-10	4.62E-05	3.06E-05
9	F08	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.02E-03
9	F08	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.14E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.15E-03
11	F09	80	Passenger Car	48	0.00E+00	4.98E-07	5.41E-08	2.03E+00	3.53E-06	1.03E-02	1.12E-06	4.96E-05	2.61E-04	4.37E-05	1.09E-04	7.05E-05	7.24E-05	7.11E-06	1.02E-05	2.18E-09	3.70E-05	7.74E-06
11	F09	80	Passenger Truck	80	0.00E+00	1.02E-06	1.09E-07	4.57E+00	6.66E-06	1.81E-02	2.17E-06	1.34E-04	4.64E-04	7.73E-05	2.08E-04	1.35E-04	1.39E-04	3.29E-05	2.28E-05	4.15E-09	6.98E-05	2.23E-05
11	F09	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	F09	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.16E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.19E-04
11	F09	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.24E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.34E-04
11	F10	80	Passenger Car	296	0.00E+00	3.08E-06	3.35E-07	1.26E+01	2.19E-05	6.35E-02	6.95E-06	3.07E-04	1.62E-03	2.71E-04	6.78E-04	4.37E-04	4.49E-04	4.41E-05	6.33E-05	1.35E-08	2.29E-04	4.80E-05
11	F10	80	Passenger Truck	497	0.00E+00	6.35E-06	6.77E-07	2.83E+01	4.13E-05	1.12E-01	1.34E-05	8.29E-04	2.88E-03	4.79E-04	1.29E-03	8.37E-04	8.58E-04	2.04E-04	1.41E-04	2.57E-08	4.32E-04	1.38E-04
11	F10	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.46E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	F10	80	Combination Short Haul Truck	13	0.00E+00	2.69E-06	1.99E-07	4.38E+00	7.06E-09	4.11E-03	1.93E-06	4.16E-03	3.12E-04	5.65E-05	1.63E-04	5.82E-05	6.04E-05	6.97E-04	1.47E-05	0.00E+00	1.03E-04	7.83E-04
11	F10	80	Combination Long Haul Truck	12	0.00E+00	3.75E-06	2.12E-07	4.07E+00	2.39E-08	4.86E-03	3.10E-06	4.44E-03	3.22E-04	5.16E-05	3.44E-04	6.83E-05	7.12E-05	6.53E-04	1.36E-05	0.00E+00	2.73E-04	8.37E-04
11	F13	80	Passenger Car	12	0.00E+00	1.28E-07	1.39E-08	5.22E-01	9.10E-07	2.64E-03	2.89E-07	1.28E-05	6.73E-05	1.13E-05	2.82E-05	1.82E-05	1.87E-05	1.83E-06	2.63E-06	5.62E-10	9.54E-06	2.00E-06
11	F13	80	Passenger Truck	21	0.00E+00	2.64E-07	2.82E-08	1.18E+00	1.72E-06	4.67E-03	5.60E-07	3.45E-05	1.20E-04	1.99E-05	5.37E-05	3.48E-05	3.57E-05	8.48E-06	5.89E-06	1.07E-09	1.80E-05	5.74E-06
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.46E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.32E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.26E-05
11	F13	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.55E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.69E-05
11	F14	80	Passenger Car	10	0.00E+00	1.05E-07	1.14E-08	4.27E-01	7.45E-07	2.16E-03	2.37E-07	1.05E-05	5.50E-05	9.21E-06	2.31E-05	1.49E-05	1.53E-05	1.50E-06	2.15E-06	4.60E-10	7.81E-06	1.63E-06
11	F14	80	Passenger Truck	17	0.00E+00	2.16E-07	2.30E-08	9.65E-01	1.41E-06	3.82E-03	4.58E-07	2.82E-05	9.80E-05	1.63E-05	4.39E-05	2.85E-05	2.92E-05	6.94E-06	4.82E-06	8.76E-10	1.47E-05	4.70E-06
11	F14	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.46E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F14	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.32E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.26E-05
11	F14	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.55E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.69E-05
10	F15	70	Passenger Car	439	0.00E+00	4.90E-06	5.33E-07	1.92E+01	3.48E-05	9.86E-02	1.11E-05	4.44E-04	3.38E-03	5.27E-04	1.08E-03	6.95E-04	7.14E-04	7.46E-05	9.63E-05	2.00E-08	3.65E-04	6.93E-05
10	F15	70	Passenger Truck	736	0.00E+00	1.03E-05	1.10E-06	4.31E+01	6.61E-05	1.74E-01	2.16E-05	1.29E-03	6.13E-03	9.48E-04	2.07E-03	1.34E-03	1.38E-03	3.26E-04	2.15E-04	3.85E-08	6.91E-04	2.17E-04
10	F15	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.02E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.52E-05
10	F15	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.03E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.47E-04
10	F15	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.38E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
10	F16	70	Passenger Car	327	0.00E+00	3.65E-06	3.97E-07	1.43E+01	2.59E-05	7.35E-02	8.23E-06	3.31E-04	2.52E-03	3.93E-04	8.03E-04	5.18E-04	5.31E-04	5.56E-05	7.17E-05	1.49E-08	2.72E-04	5.16E-05
10	F16	70	Passenger Truck	548	0.00E+00	7.69E-06	8.17E-07	3.21E+01	4.92E-05	1.30E-01	1.61E-05	9.62E-04	4.56E-03	7.06E-04	1.54E-03	1.00E-03	1.03E-03	2.43E-04	1.60E-04	2.86E-08	5.15E-04	1.62E-04
10	F16	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.36E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	F16	70	Combination Short Haul Truck	26	0.00E+00	6.73E-06	5.01E-07	9.09E+00	1.71E-08	9.72E-03	4.80E-06	1.01E-02	9.49E-04	1.58E-04	4.04E-04	1.46E-04	1.51E-04	1.45E-03	3.04E-05	0.00E+00	2.52E-04	1.89E-03
10	F16	70	Combination Long Haul Truck	24	0.00E+00	9.23E-06	5.25E-07	8.54E+00	5.79E-08	1.16E-02	7.59E-06	1.08E-02	9.88E-04	1.49E-04	8.39E-04	1.69E-04	1.76E-04	1.37E-03	2.86E-05	0.00E+00	6.63E-04	2.03E-03
10	F17	70	Passenger Car	179	0.00E+00	2.00E-06	2.18E-07	7.83E+00	1.42E-05	4.03E-02	4.52E-06	1.81E-04	1.38E-03	2.15E-04	4.41E-04	2.84E-04	2.92E-04	3.05E-05	3.93E-05	8.17E-09	1.49E-04	2.83E-05
10	F17	70	Passenger Truck	301	0.00E+00	4.22E-06	4.48E-07	1.76E+01	2.70E-05	7.12E-02	8.84E-06	5.28E-04	2.50E-03	3.87E-04	8.45E-04	5.49E-04	5.63E-04	1.33E-04	8.77E-05	1.57E-08	2.82E-04	8.86E-05
10	F17	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	F17	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.82E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.09E-04
10	F17	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.16E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.73E-04
10	F18	70	Passenger Car	285	0.00E+00	3.18E-06	3.46E-07	1.24E+01	2.26E-05	6.40E-02	7.17E-06	2.88E-04	2.19E-03	3.42E-04	6.99E-04	4.51E-04	4.63E-04	4.84E-05	6.25E-05	1.30E-08	2.37E-04	4.49E-05
10	F18	70	Passenger Truck	477	0.00E+00	6.69E-06	7.12E-07	2.80E+01	4.29E-05	1.13E-01	1.40E-05	8.38E-04	3.97E-03	6.15E-04	1.34E-03	8.72E-04	8.94E-04	2.12E-04	1.39E-04	2.49E-08	4.48E-04	1.41E-04
10	F18	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.69E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.78E-05
10	F18	70	Combination Short Haul Truck	35	0.00E+00	9.02E-06	6.71E-07	1.22E+01	2.29E-08	1.30E-02	6.43E-06	1.35E-02	1.27E-03	2.12E-04	5.41E-04	1.95E-04	2.03E-04	1.94E-03	4.07E-05	0.00E+00	3.38E-04	2.54E-03
10	F18	70	Combination Long Haul Truck	32	0.00E+00	1.24E-05	7.03E-07	1.14E+01	7.75E-08	1.55E-02	1.02E-05	1.44E-02	1.32E-03	1.99E-04	1.12E-03	2.26E-04	2.35E-04	1.84E-03	3.83E-05	0.00E+00	8.89E-04	2.72E-03
10	F19	70	Passenger Car	331	0.00E+00	3.69E-06	4.01E-07	1.44E+01	2.62E-05	7.43E-02	8.33E-06	3.35E-04	2.55E-03	3.97E-04	8.12E-04	5.24E-04	5.38E-04	5.62E-05	7.25E-05	1.51E-08	2.75E-04	5.22E-05
10	F19	70	Passenger Truck	554	0.00E+00	7.78E-06	8.26E-07	3.25E+01	4.98E-05	1.31E-01	1.63E-05	9.73E-04	4.61E-03	7.14E-04	1.56E-03	1.01E-03	1.04E-03	2.46E-04	1.62E-04	2.90E-08	5.21E-04	1.63E-04
10	F20	70	Passenger Car	492	0.00E+00	5.50E-06	5.97E-07	2.15E+01	3.90E-05	1.11E-01	1.24E-05	4.98E-04	3.79E-03	5.91E-04	1.21E-03	7.79E-04	8.00E-04	8.37E-05	1.08E-04	2.24E-08	4.09E-04	7.77E-05
10	F20	70	Passenger Truck	825	0.00E+00	1.16E-05	1.23E-06	4.83E+01	7.41E-05	1.95E-01	2.43E-05	1.45E-03	6.87E-03	1.06E-03	2.32E-03	1.51E-03	1.54E-03	3.66E-04	2.41E-04	4.31E-08	7.75E-04	2.43E-04
10	F21	70	Passenger Car	310	0.00E+00	3.46E-06	3.76E-07	1.35E+01	2.46E-05	6.96E-02	7.80E-06	3.13E-04	2.39E-03	3.72E-04	7.61E-04	4.91E-04	5.03E-04	5.27E-05	6.79E-05	1.41E-08	2.57E-04	4.89E-05
10	F21	70	Passenger Truck	519	0.00E+00	7.28E-06	7.74E-07	3.04E+01	4.66E-05	1.23E-01	1.53E-05	9.11E-04	4.32E-03	6.69E-04	1.46E-03	9.49E-04	9.72E-04	2.30E-04	1.51E-04	2.71E-08	4.88E-04	1.53E-04
10	F21	70	Single Unit Short Haul Truck	86	0.00E+00	1.52E-05	6.16E-07	1.41E+01	1.02E-05	2.56E-02	1.65E-05	6.03E-03	1.37E-03	2.51E-04	2.04E-03	3.90E-04	3.97E-04	1.44E-03	5.75E-05	2.32E-08	1.65E-03	1.13E-03
10	F21	70	Single Unit Long Haul Truck	4	0.00E+00	6.60E-07	2.66E-08	5.99E-01	4.38E-07	1.07E-03	7.18E-07	2.60E-04	6.27E-05	1.12E-05	8.92E-05	1.68E-05	1.72E-05	6.06E-05	2.44E-06	9.77E-10	7.21E-05	4.86E-05
10	F21	70	Combination Short Haul Truck	48	0.00E+00	1.22E-05	9.11E-07	1.65E+01	3.11E-08	1.77E-02	8.73E-06	1.83E-02	1.73E-03	2.88E-04	7.35E-04	2.65E-04	2.76E-04	2.63E-03	5.53E-05	0.00E+00	4.59E-04	3.45E-03
10	F21	70	Combination Long Haul Truck	43	0.00E+00	1.68E-05	9.55E-07	1.55E+01	1.05E-07	2.11E-02	1.38E-05	1.96E-02	1.80E-03	2.71E-04	1.53E-03	3.07E-04	3.20E-04	2.49E-03	5.21E-05	0.00E+00	1.21E-03	3.69E-03
10	F22	70	Passenger Car	471	0.00E+00	5.25E-06	5.71E-07	2.05E+01	3.73E-05	1.06E-01	1.18E-05	4.76E-04	3.63E-03	5.65E-04	1.16E-03	7.45E-04	7.65E-04	8.00E-05	1.03E-04	2.14E-08	3.91E-04	7.43E-05
10	F22	70	Passenger Truck	788	0.00E+00	1.11E-05	1.18E-06	4.62E+01	7.08E-05	1.87E-01	2.32E-05	1.38E-03	6.57E-03	1.02E-03	2.22E-03	1.44E-03	1.48E-03	3.49E-04	2.30E-04	4.12E-08	7.41E-04	2.32E-04
10	F22	70	Single Unit Short Haul Truck	114	0.00E+00	2.01E-05	8.15E-07	1.87E+01	1.34E-05	3.39E-02	2.18E-05	7.97E-03	1.81E-03	3.33E-04	2.70E-03	5.15E-04	5.25E-04	1.90E-03	7.60E-05	3.07E-08	2.18E-03	1.49E-03
10	F22	70	Single Unit Long Haul Truck	5	0.00E+00	8.73E-07	3.51E-08	7.91E-01	5.79E-07	1.42E-03	9.49E-07	3.43E-04	8.29E-05	1.49E-05	1.18E-04	2.23E-05	2.27E-05	8.01E-05	3.22E-06	1.29E-09	9.53E-05	6.42E-05
10	F22	70	Combination Short Haul Truck	59	0.00E+00	1.51E-05	1.12E-06	2.04E+01	3.83E-08	2.18E-02	1.07E-05	2.25E-02	2.12E-03	3.54E-04	9.04E-04	3.27E-04	3.39E-04	3.24E-03	6.81E-05	0.00E+00	5.65E-04	4.24E-03
10	F22	70	Combination Long Haul Truck	53	0.00E+00	2.07E-05	1.18E-06	1.91E+01	1.30E-07	2.60E-02	1.70E-05	2.41E-02	2.21E-03	3.33E-04	1.88E-03	3.78E-04	3.94E-04	3.07E-03	6.41E-05	0.00E+00	1.49E-03	4.54E-03
10	F23	70	Passenger Car	108	0.00E+00	1.21E-06	1.32E-07	4.73E+00	8.59E-06	2.43E-02	2.73E-06	1.10E-04	8.35E-04	1.30E-04	2.66E-04	1.72E-04	1.76E-04	1.84E-05	2.38E-05	4.94E-09	9.00E-05	1.71E-05
10	F23	70	Passenger Truck	182	0.00E+00	2.55E-06	2.71E-07	1.06E+01	1.63E-05	4.30E-02	5.34E-06	3.19E-04	1.51E-03	2.34E-04	5.11E-04	3.32E-04	3.40E-04	8.05E-05	5.30E-05	9.49E-09	1.71E-04	5.35E-05
10	F23	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.63E-04
10	F23	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.06E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	F23	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.62E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.71E-04
10	F23	70	Combination Long Haul Truck	11

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F27	60	Combination Short Haul Truck	105	0.00E+00	3.07E-05	2.25E-06	3.70E+01	8.40E-08	4.58E-02	2.20E-05	4.68E-02	5.36E-03	8.37E-04	1.89E-03	6.59E-04	6.84E-04	5.88E-03	1.24E-04	0.00E+00	1.21E-03	8.81E-03
9	F27	60	Combination Long Haul Truck	96	0.00E+00	4.22E-05	2.30E-06	3.50E+01	2.85E-07	5.51E-02	3.53E-05	4.98E-02	5.62E-03	8.12E-04	4.00E-03	7.52E-04	7.84E-04	5.61E-03	1.17E-04	0.00E+00	3.21E-03	9.39E-03
9	F28	60	Passenger Car	1045	0.00E+00	1.34E-05	1.45E-06	4.76E+01	9.49E-05	2.68E-01	3.02E-05	1.08E-03	1.06E-02	1.58E-03	2.94E-03	1.90E-03	1.95E-03	2.07E-04	2.39E-04	5.02E-08	9.95E-04	1.68E-04
9	F28	60	Passenger Truck	1750	0.00E+00	2.84E-05	3.01E-06	1.06E+02	1.79E-04	4.58E-01	5.89E-05	3.35E-03	1.93E-02	2.87E-03	5.62E-03	3.65E-03	3.74E-03	8.48E-04	5.27E-04	9.78E-08	1.87E-03	5.67E-04
9	F28	60	Single Unit Short Haul Truck	160	0.00E+00	3.57E-05	1.48E-06	2.66E+01	2.37E-05	4.68E-02	3.86E-05	1.37E-02	3.68E-03	6.18E-04	4.76E-03	9.18E-04	9.36E-04	2.70E-03	1.08E-04	4.47E-08	3.83E-03	2.56E-03
9	F28	60	Single Unit Long Haul Truck	7	0.00E+00	1.56E-06	6.41E-08	1.13E+00	1.03E-06	1.99E-03	1.69E-06	5.93E-04	1.65E-04	2.74E-05	2.08E-04	3.99E-05	4.07E-05	1.15E-04	4.63E-06	1.90E-09	1.68E-04	1.11E-04
9	F28	60	Combination Short Haul Truck	80	0.00E+00	2.34E-05	1.72E-06	2.82E+01	6.40E-08	3.49E-02	1.68E-05	3.56E-02	4.08E-03	6.37E-04	1.44E-03	5.02E-04	5.21E-04	4.48E-03	9.43E-05	0.00E+00	9.18E-04	6.71E-03
9	F28	60	Combination Long Haul Truck	73	0.00E+00	3.21E-05	1.75E-06	2.66E+01	2.17E-07	4.19E-02	2.68E-05	3.79E-02	4.27E-03	6.18E-04	3.04E-03	5.73E-04	5.97E-04	4.27E-03	8.92E-05	0.00E+00	2.45E-03	7.14E-03
9	F29	60	Passenger Car	470	0.00E+00	6.01E-06	6.53E-07	2.14E+01	4.27E-05	1.20E-01	1.36E-05	4.83E-04	4.74E-03	7.10E-04	1.32E-03	8.52E-04	8.75E-04	9.31E-05	1.07E-04	2.25E-08	4.47E-04	7.54E-05
9	F29	60	Passenger Truck	786	0.00E+00	1.28E-05	1.35E-06	4.77E+01	8.05E-05	2.06E-01	2.65E-05	1.50E-03	8.67E-03	1.29E-03	2.52E-03	1.64E-03	1.68E-03	3.81E-04	2.37E-04	4.40E-08	8.41E-04	2.55E-04
9	F29	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
9	F29	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.74E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	F29	60	Combination Short Haul Truck	12	0.00E+00	3.36E-06	2.47E-07	4.05E+00	9.20E-09	5.02E-03	2.41E-06	5.12E-03	5.86E-04	9.17E-05	2.07E-04	7.22E-05	7.49E-05	6.44E-04	1.36E-05	0.00E+00	1.32E-04	9.65E-04
9	F29	60	Combination Long Haul Truck	10	0.00E+00	4.61E-06	2.52E-07	3.83E+00	3.11E-08	6.03E-03	3.86E-06	5.45E-03	6.15E-04	8.89E-05	4.38E-04	8.23E-05	8.58E-05	6.14E-04	1.28E-05	0.00E+00	3.52E-04	1.03E-03
9	F30	60	Passenger Car	298	0.00E+00	3.81E-06	4.15E-07	1.36E+01	2.71E-05	7.63E-02	8.60E-06	3.07E-04	3.01E-03	4.51E-04	8.39E-04	5.41E-04	5.55E-04	5.91E-05	6.81E-05	1.43E-08	2.84E-04	4.79E-05
9	F30	60	Passenger Truck	499	0.00E+00	8.10E-06	8.58E-07	3.03E+01	5.11E-05	1.31E-01	1.68E-05	9.54E-04	5.50E-03	8.18E-04	1.60E-03	1.04E-03	1.07E-03	2.42E-04	1.50E-04	2.79E-08	5.34E-04	1.62E-04
9	F30	60	Single Unit Short Haul Truck	32	0.00E+00	7.06E-06	2.92E-07	5.26E+00	4.68E-06	9.25E-03	7.63E-06	2.71E-03	7.27E-04	1.22E-04	9.42E-04	1.81E-04	1.85E-04	5.33E-04	2.14E-05	8.83E-09	7.57E-04	5.06E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	3.08E-07	1.27E-08	2.24E-01	2.03E-07	3.93E-04	3.33E-07	1.17E-04	3.27E-05	5.42E-06	4.12E-05	7.88E-06	8.04E-06	2.27E-05	9.15E-07	3.76E-10	3.31E-05	2.19E-05
9	F30	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.84E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.67E-03
9	F30	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.42E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.77E-03
11	F35	80	Passenger Car	74	0.00E+00	7.66E-07	8.32E-08	3.12E+00	5.43E-06	1.58E-02	1.73E-06	7.64E-05	4.01E-04	6.72E-05	1.68E-04	1.09E-04	1.11E-04	1.10E-05	1.57E-05	3.36E-09	5.70E-05	1.19E-05
11	F35	80	Passenger Truck	123	0.00E+00	1.58E-06	1.68E-07	7.04E+00	1.03E-05	2.79E-02	3.34E-06	2.06E-04	7.15E-04	1.19E-04	3.21E-04	2.08E-04	2.13E-04	5.06E-05	3.52E-05	6.39E-09	1.07E-04	3.43E-05
11	F35	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.08E-05
11	F35	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.99E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.40E-05
11	F35	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.33E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
11	F36	80	Passenger Car	273	0.00E+00	2.83E-06	3.08E-07	1.15E+01	2.01E-05	5.84E-02	6.39E-06	2.83E-04	1.49E-03	2.49E-04	6.23E-04	4.02E-04	4.12E-04	4.05E-05	5.82E-05	1.24E-08	2.11E-04	4.41E-05
11	F36	80	Passenger Truck	456	0.00E+00	5.83E-06	6.22E-07	2.61E+01	3.79E-05	1.03E-01	1.24E-05	7.62E-04	2.65E-03	4.40E-04	1.19E-03	7.70E-04	7.89E-04	1.87E-04	1.30E-04	2.37E-08	3.97E-04	1.27E-04
11	F36	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.58E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.96E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.76E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.26E-05
11	F36	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.32E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.14E-04
11	F36	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.62E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.70E-04
9	F37	60	Passenger Car	916	0.00E+00	1.17E-05	1.27E-06	4.18E+01	8.32E-05	2.34E-01	2.64E-05	9.43E-04	9.25E-03	1.38E-03	2.58E-03	1.66E-03	1.71E-03	1.82E-04	2.09E-04	4.40E-08	8.72E-04	1.47E-04
9	F37	60	Passenger Truck	1533	0.00E+00	2.49E-05	2.64E-06	9.31E+01	1.57E-04	4.01E-01	5.16E-05	2.93E-03	1.69E-02	2.51E-03	4.92E-03	3.20E-03	3.28E-03	7.43E-04	4.62E-04	8.57E-08	1.64E-03	4.97E-04
9	F37	60	Single Unit Short Haul Truck	62	0.00E+00	1.39E-05	5.74E-07	1.04E+01	9.21E-06	1.82E-02	1.50E-05	5.33E-03	1.43E-03	2.41E-04	1.85E-03	3.57E-04	3.64E-04	1.05E-03	4.22E-05	1.74E-08	1.49E-03	9.97E-04
9	F37	60	Single Unit Long Haul Truck	3	0.00E+00	6.07E-07	2.49E-08	4.42E-01	3.99E-07	7.73E-04	6.56E-07	2.31E-04	6.43E-05	1.07E-05	8.11E-05	1.55E-05	1.58E-05	4.46E-05	1.80E-06	7.40E-10	6.52E-05	4.32E-05
9	F37	60	Combination Short Haul Truck	47	0.00E+00	1.36E-05	9.98E-07	1.64E+01	3.72E-08	2.03E-02	9.76E-06	2.07E-02	2.37E-03	3.71E-04	8.37E-04	2.92E-04	3.03E-04	2.61E-03	5.48E-05	0.00E+00	5.34E-04	3.90E-03
9	F37	60	Combination Long Haul Truck	42	0.00E+00	1.87E-05	1.02E-06	1.55E+01	1.26E-07	2.44E-02	1.56E-05	2.21E-02	2.49E-03	3.60E-04	1.77E-03	3.33E-04	3.47E-04	2.49E-03	5.19E-05	0.00E+00	1.42E-03	4.16E-03
9	F38	60	Passenger Car	645	0.00E+00	8.26E-06	8.98E-07	2.94E+01	5.86E-05	1.65E-01	1.86E-05	6.64E-04	6.52E-03	9.76E-04	1.82E-03	1.17E-03	1.20E-03	1.28E-04	1.48E-04	3.10E-08	6.14E-04	1.04E-04
9	F38	60	Passenger Truck	1081	0.00E+00	1.75E-05	1.86E-06	6.56E+01	1.11E-04	2.83E-01	3.64E-05	2.07E-03	1.19E-02	1.77E-03	3.47E-03	2.26E-03	2.31E-03	5.24E-04	3.26E-04	6.04E-08	1.16E-03	3.50E-04
9	F38	60	Single Unit Short Haul Truck	67	0.00E+00	1.50E-05	6.18E-07	1.12E+01	9.92E-06	1.96E-02	1.62E-05	5.74E-03	1.54E-03	2.59E-04	2.00E-03	3.85E-04	3.92E-04	1.13E-03	4.55E-05	1.87E-08	1.60E-03	1.07E-03
9	F38	60	Single Unit Long Haul Truck	3	0.00E+00	6.53E-07	2.69E-08	4.76E-01	4.30E-07	8.33E-04	7.07E-07	2.48E-04	6.93E-05	1.15E-05	8.73E-05	1.67E-05	1.71E-05	4.81E-05	1.94E-06	7.97E-10	7.03E-05	4.65E-05
9	F38	60	Combination Short Haul Truck	47	0.00E+00	1.36E-05	9.98E-07	1.64E+01	3.72E-08	2.03E-02	9.76E-06	2.07E-02	2.37E-03	3.71E-04	8.37E-04	2.92E-04	3.03E-04	2.61E-03	5.48E-05	0.00E+00	5.34E-04	3.90E-03
9	F38	60	Combination Long Haul Truck	42	0.00E+00	1.87E-05	1.02E-06	1.55E+01	1.26E-07	2.44E-02	1.56E-05	2.21E-02	2.49E-03	3.60E-04	1.77E-03	3.33E-04	3.47E-04	2.49E-03	5.19E-05	0.00E+00	1.42E-03	4.16E-03
11	F39	80	Passenger Car	77	0.00E+00	7.97E-07	8.66E-08	3.25E+00	5.66E-06	1.64E-02	1.80E-06	7.95E-05	4.18E-04	7.00E-05	1.75E-04	1.13E-04	1.16E-04	1.14E-05	1.64E-05	3.49E-09	5.93E-05	1.24E-05
11	F39	80	Passenger Truck	128	0.00E+00	1.64E-06	1.75E-07	7.33E+00	1.07E-05	2.90E-02	3.48E-06	2.14E-04	7.44E-04	1.24E-04	3.34E-04	2.16E-04	2.22E-04	5.27E-05	3.66E-05	6.65E-09	1.12E-04	3.57E-05
11	F39	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.08E-05
11	F39	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.16E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.19E-04
11	F39	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.24E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.34E-04
11	F40	80	Passenger Car	399	0.00E+00	4.15E-06	4.51E-07	1.69E+01	2.94E-05	8.55E-02	9.35E-06	4.14E-04	2.17E-03	3.64E-04	9.12E-04	5.88E-04	6.04E-04	5.93E-05	8.51E-05	1.82E-08	3.09E-04	6.45E-05
11	F40	80	Passenger Truck	668	0.00E+00	8.54E-06	9.10E-07	3.81E+01	5.55E-05	1.51E-01	1.81E-05	1.12E-03	3.87E-03	6.45E-04	1.74E-03	1.13E-03	1.15E-03	2.74E-04	1.90E-04	3.46E-08	5.82E-04	1.86E-04
11	F40	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.46E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	F40	80	Combination Short Haul Truck	13	0.00E+00	2.69E-06	1.99E-07	4.38E+00	7.06E-09	4.11E-03	1.93E-06	4.16E-03	3.12E-04	5.65E-05	1.63E-04	5.82E-05	6.04E-05	6.97E-04	1.47E-05	0.00E+00	1.03E-04	7.83E-04
11	F40	80	Combination Long Haul Truck	12	0.00E+00	3.75E-06	2.12E-07	4.07E+00	2.39E-08	4.86E-03	3.10E-06	4.44E-03	3.22E-04	5.16E-05	3.44E-04	6.83E-05	7.12E-05	6.53E-04	1.36E-05	0.00E+00	2.73E-04	8.37E-04
10	F41	70	Passenger Car	257	0.00E+00	2.87E-06	3.12E-07	1.12E+01	2.03E-05	5.77E-02	6.47E-06	2.60E-04	1.98E-03	3.08E-04	6.31E-04	4.07E-04	4.17E-04	4.36E-05	5.63E-05	1.17E-08	2.13E-04	4.05E-05
10	F41	70	Passenger Truck	430	0.00E+00	6.04E-06	6.42E-07	2.52E+01	3.86E-05	1.02E-01	1.27E-05	7.55E-04	3.58E-03	5.54E-04	1.21E-03	7.86E-04	8.06E-04	1.91E-04	1.26E-04	2.25E-08	4.04E-04	1.27E-04
10	F41	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	F41	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.03E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.47E-04
10	F41	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.38E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
10	F42	70	Passenger Car	217	0.00E+00	2.42E-06	2.63E-07	9.46E+00	1.72E-05	4.87E-02	5.46E-06	2.19E-04	1.67E-03	2.60E-04	5.32E-04	3.43E-04	3.52E-04	3.68E-05	4.75E-05	9.87E-09	1.80E-04	3.42E-05
10	F42	70	Passenger Truck	363	0.00E+00	5.10E-06	5.42E-07	2.13E+01	3.26E-05	8.60E-02	1.07E-05	6.38E-04	3.02E-03	4.68E-04	1.02E-03	6.64E-04	6.80E-04	1.61E-04	1.06E-04	1.90E-08	3.41E-04	1.07E-04
10	F45	70	Passenger Car	277	0.00E+00	3.09E-06	3.36E-07	1.21E+01	2.19E-05	6.21E-02	6.96E-06	2.80E-04	2.13E-03	3.32E-04	6.79E-04	4.38E-04	4.49E-04	4.70E-05	6.06E-05	1.26E-08	2.30E-04	4.37E-05
10	F45	70	Passenger Truck	463	0.00E+00	6.50E-06	6.91E-07	2.72E+01	4.16E-05	1.10E-01	1.36E-05	8.13E-04	3.86E-03	5.97E-04	1.30E-03	8.47E-04	8.68E-04	2.05E-04	1.35E-04	2.42E-08	4.35E-04	1.37E-04
10	F45	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	F45	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	F45	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	F46	70	Passenger Car	273	0.00E+00	3.05E-06	3.31E-07	1.19E+01	2.16E-05	6.13E-02	6.87E-06	2.76E-04	2.10E-03	3.28E-04	6.70E-04	4.32E-04	4.43E-04	4.64E-05	5.98E-05	1.24E-08	2.27E-04	4.31E-05
10	F46	70	Passenger Truck	457	0.00E+00	6.41E-06	6.82E-07	2.68E+01	4.11E-05	1.08E-01	1.34E-05	8.02E-04	3.81E-03	5.89E-04	1.29E-03	8.35E-04	8.56E-04	2.03E-04	1.33E-04	2.39E-08	4.30E-04	1.35E-04
10	F46	70	Single Unit Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	F46	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
9	F47	60	Passenger Car	11	0.00E+00	1.39E-07	1.51E-08	4.94E-01	9.85E-07	2.78E-03	3.13E-07	1.12E-05	1.09E-04	1.64E-05	3.05E-05	1.97E-05	2.02E-05	2.15E-06	2.48E-06	5.21E-10	1.03E-05	1.74E-06
9	F47	60	Passenger Truck	18	0.00E+00	2.95E-07	3.12E-08	1.10E+00	1.86E-06	4.75E-03	6.11E-07	3.47E-05	2.00E-04	2.98E-05	5.83E-05	3.79E-05	3.88E-05	8.80E-06	5.47E-06	1.01E-09	1.94E-05	5.88E-06
9	F47	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	F47	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.65E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.77E-05
9	F47	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.96E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.34E-05
9	F48	60	Passenger Car	2	0.00E+00	2.39E-08	2.60E-09	8.52E-02	1.70E-07	4.79E-04	5.40E-08	1.92E-06	1.89E-05	2.83E-06	5.26E-06	3.39E-06	3.48E-06	3.71E-07	4.27E-07	8.98E-11	1.78E-06	3.00E-07
9	F48	60	Passenger Truck	3	0.00E+00	5.08E-08	5.38E-09	1.90E-01	3.20E-07	8.19E-04	1.05E-07	5.99E-06	3.45E-05	5.13E-06	1.00E-05	6.54E-06	6.70E-06	1.52E-06	9.44E-07	1.75E-10	3.35E-06	1.01E-06
9	F48	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
9	F49	60	Passenger Car	786	0.00E+00	1.01E-05	1.09E-06	3.59E+01	7.14E-05	2.01E-01	2.27E-05	8.09E-04	7.94E-03	1.19E-03	2.21E-03	1.43E-03	1.46E-03	1.56E-04	1.80E-04	3.78E-08	7.49E-04	1.26E-04
9	F49	60	Passenger Truck	1317	0.00E+00	2.14E-05	2.26E-06	7.99E+01	1.35E-04	3.45E-01	4.43E-05	2.52E-03	1.45E-02	2.16E-03	4.23E-03	2.75E-03	2.82E-03	6.38E-04	3.97E-04	7.36E-08	1.41E-03	4.27E-04
9	F49	60	Single Unit Short Haul Truck	147	0.00E+00	3.27E-05	1.35E-06	2.44E+01	2.17E-05	4.29E-02	3.54E-05	1.25E-02	3.37E-03	5.67E-04	4.37E-03	8.41E-04	8.58E-04	2.47E-03	9.94E-05	4.09E-08	3.51E-03	2.35E-03
9	F49	60	Single Unit Long Haul Truck	6	0.00E+00	1.43E-06	5.87E-08	1.04E+00	9.40E-07	1.82E-03	1.54E-06	5.43E-04	1.51E-04	2.51E-05	1.91E-04	3.65E-05	3.73E-05	1.05E-04	4.24E-06	1.74E-09	1.54E-04	1.02E-04
9	F49	60	Combination Short Haul Truck	81	0.00E+00	2.37E-05	1.74E-06	2.86E+01	6.48E-08	3.54E-02	1.70E-05	3.61E-02	4.13E-03	6.46E-04	1.46E-03	5.08E-04	5.28E-04	4.54E-03	9.55E-05	0.00E+00	9.30E-04	6.80E-03
9	F49	60	Combination Long Haul Truck	74	0.00E+00	3.25E-05

Appendix F.4.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F53	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.65E-04
10	F54	70	Passenger Car	769	0.00E+00	8.58E-06	9.33E-07	3.35E+01	6.09E-05	1.73E-01	1.93E-05	7.77E-04	5.92E-03	9.23E-04	1.89E-03	1.22E-03	1.25E-03	1.31E-04	1.69E-04	3.50E-08	6.38E-04	1.21E-04
10	F54	70	Passenger Truck	1287	0.00E+00	1.81E-05	1.92E-06	7.54E+01	1.16E-04	3.05E-01	3.79E-05	2.26E-03	1.07E-02	1.66E-03	3.62E-03	2.35E-03	2.41E-03	5.71E-04	3.76E-04	6.73E-08	1.21E-03	3.79E-04
10	F54	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.36E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	F54	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	F54	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
53	F71	70	Passenger Car	364	0.00E+00	3.94E-06	4.28E-07	1.60E+01	2.79E-05	7.85E-02	8.88E-06	3.74E-04	2.76E-03	4.32E-04	8.66E-04	5.58E-04	5.73E-04	6.18E-05	8.07E-05	1.68E-08	2.93E-04	5.84E-05
53	F71	70	Passenger Truck	609	0.00E+00	8.22E-06	8.74E-07	3.61E+01	5.28E-05	1.38E-01	1.73E-05	1.06E-03	4.93E-03	7.66E-04	1.65E-03	1.07E-03	1.10E-03	2.68E-04	1.80E-04	3.15E-08	5.52E-04	1.77E-04
53	F71	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
53	F71	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
53	F71	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
50	F72	40	Passenger Car	323	0.00E+00	4.64E-06	5.04E-07	1.71E+01	3.29E-05	9.19E-02	1.05E-05	2.95E-04	5.57E-03	7.83E-04	1.02E-03	6.58E-04	6.75E-04	9.60E-05	8.47E-05	1.57E-08	3.45E-04	4.60E-05
50	F72	40	Passenger Truck	541	0.00E+00	1.02E-05	1.07E-06	3.71E+01	6.16E-05	1.52E-01	2.05E-05	1.14E-03	9.88E-03	1.37E-03	1.94E-03	1.27E-03	1.30E-03	3.28E-04	1.83E-04	2.67E-08	6.43E-04	1.97E-04
50	F72	40	Single Unit Short Haul Truck	50	0.00E+00	1.69E-05	7.52E-07	9.41E+00	1.17E-05	1.48E-02	1.81E-05	6.80E-03	1.96E-03	3.06E-04	2.17E-03	4.53E-04	4.61E-04	9.61E-04	3.83E-05	1.63E-08	1.71E-03	1.27E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	7.41E-07	3.28E-08	4.06E-01	5.12E-07	6.42E-04	7.93E-07	2.97E-04	8.78E-05	1.36E-05	9.55E-05	1.98E-05	2.02E-05	4.15E-05	1.66E-06	7.06E-10	7.53E-05	5.56E-05
50	F72	40	Combination Short Haul Truck	22	0.00E+00	1.08E-05	8.10E-07	9.33E+00	2.69E-08	1.53E-02	7.71E-06	1.58E-02	2.19E-03	3.26E-04	6.45E-04	2.36E-04	2.45E-04	1.48E-03	3.12E-05	0.00E+00	4.00E-04	2.97E-03
50	F72	40	Combination Long Haul Truck	21	0.00E+00	1.44E-05	8.14E-07	8.95E+00	9.16E-08	1.86E-02	1.19E-05	1.67E-02	2.27E-03	3.19E-04	1.32E-03	2.62E-04	2.73E-04	1.44E-03	3.00E-05	0.00E+00	1.05E-03	3.14E-03
52	F73	60	Passenger Car	27	0.00E+00	3.12E-07	3.39E-08	1.21E+00	2.22E-06	6.20E-03	7.04E-07	2.63E-05	2.61E-04	3.91E-05	6.87E-05	4.43E-05	4.54E-05	5.26E-06	6.07E-06	1.24E-09	2.32E-05	4.11E-06
52	F73	60	Passenger Truck	44	0.00E+00	6.59E-07	6.98E-08	2.70E+00	4.15E-06	1.06E-02	1.37E-06	8.03E-05	4.63E-04	6.87E-05	1.30E-04	8.47E-05	8.68E-05	2.11E-05	1.34E-05	2.26E-09	4.34E-05	1.36E-05
53	F74	70	Passenger Car	340	0.00E+00	3.68E-06	4.00E-07	1.50E+01	2.61E-05	7.34E-02	8.30E-06	3.50E-04	2.58E-03	4.04E-04	8.10E-04	5.22E-04	5.36E-04	5.78E-05	7.54E-05	1.57E-08	2.74E-04	5.46E-05
53	F74	70	Passenger Truck	570	0.00E+00	7.69E-06	8.17E-07	3.38E+01	4.94E-05	1.29E-01	1.61E-05	9.89E-04	4.61E-03	7.16E-04	1.54E-03	1.00E-03	1.03E-03	2.51E-04	1.68E-04	2.95E-08	5.16E-04	1.66E-04
53	F74	70	Single Unit Short Haul Truck	121	0.00E+00	2.12E-05	8.63E-07	1.98E+01	1.42E-05	3.58E-02	2.31E-05	8.44E-03	1.92E-03	3.52E-04	2.86E-03	5.45E-04	5.56E-04	2.01E-03	8.04E-05	3.25E-08	2.31E-03	1.58E-03
53	F74	70	Single Unit Long Haul Truck	5	0.00E+00	9.24E-07	3.72E-08	8.38E-01	6.13E-07	1.50E-03	1.01E-06	3.63E-04	8.78E-05	1.57E-05	1.25E-04	2.36E-05	2.40E-05	8.48E-05	3.41E-06	1.37E-09	1.01E-04	6.80E-05
53	F74	70	Combination Short Haul Truck	60	0.00E+00	1.53E-05	1.14E-06	2.07E+01	3.90E-08	2.22E-02	1.09E-05	2.29E-02	2.16E-03	3.61E-04	9.21E-04	3.33E-04	3.45E-04	3.29E-03	6.93E-05	0.00E+00	5.75E-04	4.32E-03
53	F74	70	Combination Long Haul Truck	54	0.00E+00	2.10E-05	1.20E-06	1.95E+01	1.32E-07	2.65E-02	1.73E-05	2.45E-02	2.25E-03	3.39E-04	1.91E-03	3.85E-04	4.01E-04	3.12E-03	6.52E-05	0.00E+00	1.51E-03	4.62E-03
52	F75	60	Passenger Car	21	0.00E+00	2.42E-07	2.63E-08	9.38E-01	1.72E-06	4.81E-03	5.45E-07	2.04E-05	2.02E-04	3.03E-05	5.32E-05	3.43E-05	3.52E-05	4.08E-06	4.70E-06	9.57E-10	1.80E-05	3.18E-06
52	F75	60	Passenger Truck	34	0.00E+00	5.10E-07	5.41E-08	2.09E+00	3.22E-06	8.24E-03	1.06E-06	6.22E-05	3.58E-04	5.32E-05	1.01E-04	6.56E-05	6.72E-05	1.63E-05	1.04E-05	1.75E-09	3.36E-05	1.05E-05
52	F75	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
52	F75	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.65E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.77E-05
52	F75	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.96E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.34E-05
50	F76	40	Passenger Car	15	0.00E+00	2.20E-07	2.39E-08	8.09E-01	1.56E-06	4.36E-03	4.96E-07	1.40E-05	2.64E-04	3.72E-05	4.84E-05	3.12E-05	3.20E-05	4.56E-06	4.02E-06	7.45E-10	1.64E-05	2.18E-06
50	F76	40	Passenger Truck	26	0.00E+00	4.85E-07	5.10E-08	1.76E+00	2.92E-06	7.21E-03	9.75E-07	5.39E-05	4.69E-04	6.51E-05	9.21E-05	6.01E-05	6.16E-05	1.56E-05	8.67E-06	1.27E-09	3.05E-05	9.33E-06
53	F77	70	Passenger Car	446	0.00E+00	4.83E-06	5.25E-07	1.97E+01	3.43E-05	9.63E-02	1.09E-05	4.59E-04	3.39E-03	5.30E-04	1.06E-03	6.85E-04	7.03E-04	7.59E-05	9.90E-05	2.06E-08	3.59E-04	7.17E-05
53	F77	70	Passenger Truck	748	0.00E+00	1.01E-05	1.07E-06	4.43E+01	6.48E-05	1.70E-01	2.12E-05	1.30E-03	6.05E-03	9.40E-04	2.03E-03	1.32E-03	1.35E-03	3.29E-04	2.21E-04	3.87E-08	6.77E-04	2.17E-04
53	F77	70	Single Unit Short Haul Truck	81	0.00E+00	1.43E-05	5.82E-07	1.33E+01	9.60E-06	2.42E-02	1.56E-05	5.70E-03	1.29E-03	2.38E-04	1.93E-03	3.68E-04	3.75E-04	1.36E-03	5.43E-05	2.19E-08	1.56E-03	1.07E-03
53	F77	70	Single Unit Long Haul Truck	4	0.00E+00	6.23E-07	2.51E-08	5.65E-01	4.13E-07	1.02E-03	6.78E-07	2.45E-04	5.92E-05	1.06E-05	8.43E-05	1.59E-05	1.62E-05	5.72E-05	2.30E-06	9.23E-10	6.81E-05	4.59E-05
53	F77	70	Combination Short Haul Truck	38	0.00E+00	9.83E-06	7.31E-07	1.33E+01	2.50E-08	1.42E-02	7.00E-06	1.47E-02	1.38E-03	2.31E-04	5.89E-04	2.13E-04	2.21E-04	2.11E-03	4.44E-05	0.00E+00	3.68E-04	2.77E-03
53	F77	70	Combination Long Haul Truck	35	0.00E+00	1.35E-05	7.66E-07	1.25E+01	8.45E-08	1.69E-02	1.11E-05	1.57E-02	1.44E-03	2.17E-04	1.22E-03	2.46E-04	2.57E-04	2.00E-03	4.18E-05	0.00E+00	9.68E-04	2.96E-03
50	F78	40	Passenger Car	348	0.00E+00	5.00E-06	5.44E-07	1.84E+01	3.55E-05	9.91E-02	1.13E-05	3.18E-04	6.01E-03	8.45E-04	1.10E-03	7.09E-04	7.28E-04	1.04E-04	9.13E-05	1.69E-08	3.72E-04	4.96E-05
50	F78	40	Passenger Truck	584	0.00E+00	1.10E-05	1.16E-06	4.00E+01	6.64E-05	1.64E-01	2.22E-05	1.22E-03	1.07E-02	1.48E-03	2.09E-03	1.37E-03	1.40E-03	3.54E-04	1.97E-04	2.88E-08	6.93E-04	2.12E-04
50	F78	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.90E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	2.52E-07	1.88E-08	2.17E-01	6.25E-10	3.57E-04	1.79E-07	3.67E-04	5.09E-05	7.58E-06	1.50E-05	5.48E-06	5.69E-06	3.45E-05	7.25E-07	0.00E+00	9.31E-06	6.92E-05
52	F79	60	Passenger Car	529	0.00E+00	6.22E-06	6.76E-07	2.41E+01	4.42E-05	1.24E-01	1.40E-05	5.25E-04	5.19E-03	7.79E-04	1.37E-03	8.82E-04	9.05E-04	1.05E-04	1.21E-04	2.46E-08	4.63E-04	8.18E-05
52	F79	60	Passenger Truck	886	0.00E+00	1.31E-05	1.39E-06	5.37E+01	8.28E-05	2.12E-01	2.72E-05	1.60E-03	9.22E-03	1.37E-03	2.59E-03	1.69E-03	1.73E-03	4.20E-04	2.67E-04	4.50E-08	8.65E-04	2.71E-04
52	F79	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.84E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.26E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.97E-06
52	F79	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.26E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.14E-04
52	F79	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.47E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.54E-04
53	F80	70	Passenger Car	605	0.00E+00	6.55E-06	7.12E-07	2.67E+01	4.65E-05	1.31E-01	1.48E-05	6.23E-04	4.59E-03	7.19E-04	1.44E-03	9.29E-04	9.53E-04	1.03E-04	1.34E-04	2.79E-08	4.87E-04	9.72E-05
53	F80	70	Passenger Truck	1014	0.00E+00	1.37E-05	1.45E-06	6.01E+01	8.78E-05	2.30E-01	2.87E-05	1.76E-03	8.20E-03	1.27E-03	2.75E-03	1.79E-03	1.83E-03	4.47E-04	3.00E-04	5.25E-08	9.18E-04	2.95E-04
53	F80	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
53	F80	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.21E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.17E-04
53	F80	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.46E-04
52	F81	60	Passenger Car	249	0.00E+00	2.92E-06	3.18E-07	1.13E+01	2.08E-05	5.81E-02	6.59E-06	2.47E-04	2.44E-03	3.66E-04	6.43E-04	4.15E-04	4.26E-04	4.93E-05	5.68E-05	1.16E-08	2.18E-04	3.85E-05
52	F81	60	Passenger Truck	416	0.00E+00	6.17E-06	6.54E-07	2.52E+01	3.89E-05	9.97E-02	1.28E-05	7.52E-04	4.33E-03	6.44E-04	1.22E-03	7.93E-04	8.13E-04	1.98E-04	1.25E-04	2.12E-08	4.06E-04	1.27E-04
52	F81	60	Single Unit Short Haul Truck	120	0.00E+00	2.67E-05	1.10E-06	1.99E+01	1.77E-05	3.50E-02	2.89E-05	1.02E-02	2.75E-03	4.63E-04	3.57E-03	6.87E-04	7.01E-04	2.02E-03	8.12E-05	3.34E-08	2.87E-03	1.92E-03
52	F81	60	Single Unit Long Haul Truck	5	0.00E+00	1.17E-06	4.80E-08	8.49E-01	7.68E-07	1.49E-03	1.26E-06	4.44E-04	1.24E-04	2.05E-05	1.56E-04	2.99E-05	3.04E-05	8.58E-05	3.46E-06	1.42E-09	1.25E-04	8.31E-05
52	F81	60	Combination Short Haul Truck	53	0.00E+00	1.54E-05	1.13E-06	1.86E+01	4.22E-08	2.30E-02	1.11E-05	2.35E-02	2.69E-03	4.21E-04	9.50E-04	3.31E-04	3.44E-04	2.96E-03	6.22E-05	0.00E+00	6.06E-04	4.43E-03
52	F81	60	Combination Long Haul Truck	48	0.00E+00	2.12E-05	1.16E-06	1.76E+01	1.43E-07	2.77E-02	1.77E-05	2.50E-02	2.82E-03	4.08E-04	2.01E-03	3.78E-04	3.94E-04	2.82E-03	5.89E-05	0.00E+00	1.62E-03	4.72E-03
50	F82	40	Passenger Car	61	0.00E+00	8.81E-07	9.57E-08	3.24E+00	6.25E-06	1.74E-02	1.99E-06	5.59E-05	1.06E-03	1.49E-04	1.94E-04	1.25E-04	1.28E-04	1.82E-05	1.61E-05	2.98E-09	6.55E-05	8.73E-06
50	F82	40	Passenger Truck	103	0.00E+00	1.94E-06	2.04E-07	7.04E+00	1.17E-05	2.88E-02	3.90E-06	2.15E-04	1.87E-03	2.60E-04	3.68E-04	2.41E-04	2.46E-04	6.22E-05	3.47E-05	5.06E-09	1.22E-04	3.73E-05
50	F82	40	Single Unit Short Haul Truck	11	0.00E+00	3.90E-06	1.73E-07	2.17E+00	2.70E-06	3.40E-03	4.17E-06	1.57E-03	4.52E-04	7.06E-05	5.01E-04	1.04E-04	1.06E-04	2.22E-04	8.85E-06	3.75E-09	3.95E-04	2.94E-04
50	F82	40	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	7.57E-09	9.38E-02	1.18E-07	1.48E-04	1.83E-07	6.85E-05	2.03E-05	3.15E-06	2.20E-05	4.57E-06	4.66E-06	9.58E-06	3.82E-07	1.63E-10	1.74E-05	1.28E-05
50	F82	40	Combination Short Haul Truck	6	0.00E+00	2.78E-06	2.07E-07	2.39E+00	6.87E-09	3.92E-03	1.97E-06	4.04E-03	5.59E-04	8.34E-05	1.65E-04	6.03E-05	6.26E-05	3.79E-04	7.98E-06	0.00E+00	1.02E-04	7.61E-04
50	F82	40	Combination Long Haul Truck	5	0.00E+00	3.69E-06	2.08E-07	2.29E+00	2.34E-08	4.76E-03	3.04E-06	4.26E-03	5.81E-04	8.16E-05	3.38E-04	6.71E-05	6.99E-05	3.68E-04	7.67E-06	0.00E+00	2.68E-04	8.02E-04
53	F83	70	Passenger Car	129	0.00E+00	1.40E-06	1.52E-07	5.69E+00	9.90E-06	2.78E-02	3.15E-06	1.33E-04	9.78E-04	1.53E-04	3.07E-04	1.98E-04	2.03E-04	2.19E-05	2.86E-05	5.94E-09	1.04E-04	2.07E-05
53	F83	70	Passenger Truck	216	0.00E+00	2.91E-06	3.10E-07	1.28E+01	1.87E-05	4.91E-02	6.12E-06	3.75E-04	1.75E-03	2.72E-04	5.86E-04	3.80E-04	3.90E-04	9.52E-05	6.38E-05	1.12E-08	1.96E-04	6.28E-05
53	F83	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
53	F83	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.63E-06
53	F83	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.62E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.82E-04
53	F83	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.87E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.30E-04
50	F84	40	Passenger Car	73	0.00E+00	1.05E-06	1.14E-07	3.85E+00	7.43E-06	2.07E-02	2.36E-06	6.65E-05	1.26E-03	1.77E-04	2.30E-04	1.48E-04	1.52E-04	2.17E-05	1.91E-05	3.54E-09	7.79E-05	1.04E-05
50	F84	40	Passenger Truck	122	0.00E+00	2.31E-06	2.43E-07	8.38E+00	1.39E-05	3.43E-02	4.64E-06	2.56E-04	2.23E-03	3.09E-04	4.38E-04	2.86E-04	2.93E-04	7.40E-05	4.12E-05	6.02E-09	1.45E-04	4.44E-05
50	F84	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.45E-05
50	F84	40	Combination Short Haul Truck	33	0.00E+00	1.61E-05	1.21E-06	1.39E+01	4.00E-08	2.28E-02	1.15E-05	2.35E-02	3.26E-03	4.85E-04	9.60E-04	3.51E-04	3.64E-04	2.21E-03	4.64E-05	0.00E+00	5.96E-04	4.43E-03
50	F84	40	Combination Long Haul Truck	31	0.00E+00	2.15E-05	1.21E-06	1.33E+01	1.36E-07	2.77E-02	1.77E-05	2.48E-02	3.38E-03	4.75E-04	1.97E-03	3.90E-04	4.07E-04	2.14E-03	4.46E-05	0.00E+00	1.56E-03	4.67E-03
52	F85	60	Passenger Car	219	0.00E+00	2.57E-06	2.80E-07	9.97E+00	1.83E-05	5.11E-02	5.80E-06	2.17E-04	2.15E-03	3.22E-04	5.66E-04	3.65E-04	3.74E-04	4.34E-05	5.00E-05	1.02E-08	1.91E-04	3.38E-05
52	F85	60	Passenger Truck	366	0.00E+00	5.43E-06	5.75E-07	2.22E+01	3.42E-05	8.77E-02	1.13E-05	6.62E-04	3.81E-03	5.66E-04	1.07E-03	6.98E-04	7.15E-04	1.74E-04	1.10E-04	1.86E-08	3.57E-04	1.12E-04
52	F85	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.10E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.67E-05
52	F85	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.15E-03
52	F85	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.29E-03
53	F86	70	Passenger Car	329	0.00E+00	3.56E-06	3.87

Appendix F.4.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A07	0.00E+00	1.57E-04	1.12E-05	3.66E+02	2.72E-04	1.09E+00	1.82E-04	1.45E-01	1.32E-02	3.23E-03	1.84E-02	7.63E-03	7.84E-03	2.97E-02	1.54E-03	2.86E-07	1.06E-02	2.71E-02
A08	0.00E+00	1.52E-04	1.14E-05	3.94E+02	3.50E-04	1.34E+00	1.94E-04	1.26E-01	1.50E-02	3.60E-03	1.95E-02	8.90E-03	9.14E-03	2.59E-02	1.73E-03	3.30E-07	1.04E-02	2.35E-02
A09	0.00E+00	2.01E-04	1.43E-05	4.69E+02	3.48E-04	1.40E+00	2.33E-04	1.85E-01	1.69E-02	4.13E-03	2.36E-02	9.77E-03	1.00E-02	3.81E-02	1.98E-03	3.65E-07	1.35E-02	3.47E-02
A10	0.00E+00	1.73E-04	1.27E-05	4.28E+02	3.53E-04	1.38E+00	2.11E-04	1.52E-01	1.59E-02	3.84E-03	2.13E-02	9.34E-03	9.60E-03	3.11E-02	1.84E-03	3.45E-07	1.17E-02	2.84E-02
A11	0.00E+00	2.46E-04	1.77E-05	5.75E+02	4.27E-04	1.71E+00	2.84E-04	2.30E-01	2.08E-02	5.05E-03	2.86E-02	1.20E-02	1.23E-02	4.67E-02	2.42E-03	4.35E-07	1.63E-02	4.31E-02
A12	0.00E+00	1.94E-04	1.40E-05	4.61E+02	3.54E-04	1.41E+00	2.28E-04	1.76E-01	1.68E-02	4.08E-03	2.30E-02	9.76E-03	1.00E-02	3.61E-02	1.96E-03	3.61E-07	1.30E-02	3.30E-02
A13	0.00E+00	2.31E-04	1.64E-05	5.35E+02	3.92E-04	1.58E+00	2.66E-04	2.14E-01	1.93E-02	4.71E-03	2.70E-02	1.11E-02	1.14E-02	4.40E-02	2.25E-03	4.17E-07	1.56E-02	4.00E-02
A14	0.00E+00	1.98E-04	1.46E-05	4.91E+02	4.07E-04	1.58E+00	2.42E-04	1.73E-01	1.83E-02	4.41E-03	2.43E-02	1.07E-02	1.10E-02	3.54E-02	2.12E-03	3.93E-07	1.33E-02	3.24E-02
A15	0.00E+00	2.32E-04	1.63E-05	5.25E+02	3.65E-04	1.50E+00	2.62E-04	2.21E-01	1.86E-02	4.57E-03	2.65E-02	1.07E-02	1.10E-02	4.53E-02	2.19E-03	3.99E-07	1.56E-02	4.13E-02
A16	0.00E+00	2.15E-04	1.52E-05	4.93E+02	3.50E-04	1.43E+00	2.45E-04	2.04E-01	1.76E-02	4.30E-03	2.48E-02	1.01E-02	1.04E-02	4.16E-02	2.06E-03	3.73E-07	1.44E-02	3.81E-02
A17	0.00E+00	2.31E-04	1.62E-05	5.22E+02	3.61E-04	1.48E+00	2.60E-04	2.20E-01	1.85E-02	4.54E-03	2.63E-02	1.06E-02	1.09E-02	4.50E-02	2.17E-03	3.94E-07	1.54E-02	4.12E-02
A18	0.00E+00	2.20E-04	1.55E-05	4.98E+02	3.46E-04	1.42E+00	2.47E-04	2.09E-01	1.76E-02	4.33E-03	2.51E-02	1.01E-02	1.04E-02	4.29E-02	2.07E-03	3.76E-07	1.47E-02	3.92E-02
A19	0.00E+00	2.17E-04	1.52E-05	4.88E+02	3.34E-04	1.38E+00	2.43E-04	2.08E-01	1.72E-02	4.23E-03	2.46E-02	9.85E-03	1.01E-02	4.25E-02	2.03E-03	3.66E-07	1.45E-02	3.89E-02
A20	0.00E+00	2.18E-04	1.51E-05	4.78E+02	3.08E-04	1.29E+00	2.38E-04	2.13E-01	1.66E-02	4.10E-03	2.42E-02	9.41E-03	9.67E-03	4.36E-02	1.96E-03	3.53E-07	1.46E-02	3.99E-02
A21	0.00E+00	2.64E-04	1.85E-05	5.94E+02	4.05E-04	1.67E+00	2.96E-04	2.53E-01	2.10E-02	5.15E-03	3.00E-02	1.20E-02	1.23E-02	5.19E-02	2.46E-03	4.46E-07	1.77E-02	4.75E-02
A22	0.00E+00	2.38E-04	1.68E-05	5.47E+02	3.93E-04	1.60E+00	2.72E-04	2.22E-01	1.96E-02	4.79E-03	2.76E-02	1.13E-02	1.16E-02	4.56E-02	2.29E-03	4.24E-07	1.60E-02	4.15E-02
A23	0.00E+00	2.53E-04	1.73E-05	5.43E+02	3.33E-04	1.42E+00	2.72E-04	2.50E-01	1.86E-02	4.64E-03	2.77E-02	1.05E-02	1.08E-02	5.14E-02	2.21E-03	3.99E-07	1.69E-02	4.68E-02
A24	0.00E+00	2.29E-04	1.67E-05	5.65E+02	4.66E-04	1.82E+00	2.80E-04	1.98E-01	2.11E-02	5.09E-03	2.84E-02	1.23E-02	1.27E-02	4.10E-02	2.44E-03	4.66E-07	1.57E-02	3.69E-02
A25	0.00E+00	2.37E-04	1.63E-05	5.13E+02	3.20E-04	1.36E+00	2.57E-04	2.33E-01	1.77E-02	4.39E-03	2.62E-02	9.98E-03	1.03E-02	4.79E-02	2.10E-03	3.79E-07	1.59E-02	4.37E-02
A26	0.00E+00	1.91E-04	1.38E-05	4.62E+02	3.67E-04	1.45E+00	2.29E-04	1.68E-01	1.70E-02	4.13E-03	2.32E-02	9.91E-03	1.02E-02	3.49E-02	1.98E-03	3.75E-07	1.30E-02	3.15E-02
A27	0.00E+00	2.37E-04	1.63E-05	5.13E+02	3.20E-04	1.36E+00	2.57E-04	2.33E-01	1.77E-02	4.39E-03	2.62E-02	9.98E-03	1.03E-02	4.79E-02	2.10E-03	3.79E-07	1.59E-02	4.37E-02
A28	0.00E+00	1.91E-04	1.38E-05	4.62E+02	3.67E-04	1.45E+00	2.29E-04	1.68E-01	1.70E-02	4.13E-03	2.32E-02	9.91E-03	1.02E-02	3.49E-02	1.98E-03	3.75E-07	1.30E-02	3.15E-02
B09	0.00E+00	7.56E-05	5.51E-06	2.13E+02	1.93E-04	6.49E-01	1.02E-04	6.06E-02	1.11E-02	2.28E-03	1.06E-02	4.70E-03	4.82E-03	1.31E-02	9.42E-04	1.68E-07	5.77E-03	1.13E-02
B10	0.00E+00	1.29E-04	1.02E-05	3.80E+02	3.48E-04	1.16E+00	1.75E-04	1.18E-01	1.99E-02	4.02E-03	1.75E-02	8.47E-03	8.70E-03	2.34E-02	1.68E-03	2.55E-07	8.83E-03	2.21E-02
B11	0.00E+00	3.57E-05	2.43E-06	9.20E+01	7.31E-05	2.56E-01	4.49E-05	3.06E-02	4.53E-03	9.51E-04	4.75E-03	1.90E-03	1.95E-03	6.73E-03	3.96E-04	7.18E-08	2.80E-03	5.72E-03
B12	0.00E+00	4.37E-05	3.76E-06	1.51E+02	1.71E-04	5.38E-01	7.01E-05	2.84E-02	8.65E-03	1.72E-03	6.97E-03	3.77E-03	3.87E-03	5.77E-03	7.03E-04	1.22E-07	3.10E-03	5.27E-03
B13	0.00E+00	6.14E-05	4.80E-06	1.81E+02	1.69E-04	5.63E-01	8.41E-05	5.38E-02	9.56E-03	1.94E-03	8.47E-03	4.08E-03	4.19E-03	1.08E-02	8.06E-04	1.27E-07	4.27E-03	1.00E-02
B14	0.00E+00	3.58E-05	2.54E-06	9.77E+01	8.51E-05	2.90E-01	4.72E-05	2.92E-02	4.99E-03	1.03E-03	4.93E-03	2.11E-03	2.17E-03	6.37E-03	4.29E-04	7.71E-08	2.76E-03	5.46E-03
B15	0.00E+00	6.02E-05	4.62E-06	1.83E+02	1.85E-04	6.01E-01	8.76E-05	4.28E-02	9.95E-03	2.02E-03	8.99E-03	4.28E-03	4.39E-03	9.31E-03	8.30E-04	1.52E-07	4.59E-03	7.97E-03
B16	0.00E+00	8.15E-05	7.07E-06	2.94E+02	3.56E-04	1.11E+00	1.40E-04	3.98E-02	1.74E-02	3.46E-03	1.40E-02	7.65E-03	7.85E-03	8.79E-03	1.40E-03	2.66E-07	6.18E-03	7.32E-03
B17	0.00E+00	8.33E-05	5.38E-06	1.99E+02	1.36E-04	5.02E-01	9.79E-05	7.71E-02	9.25E-03	1.98E-03	1.05E-02	3.81E-03	3.92E-03	1.69E-02	8.32E-04	1.48E-07	6.55E-03	1.44E-02
B18	0.00E+00	8.63E-05	6.62E-06	2.65E+02	2.73E-04	8.84E-01	1.28E-04	5.80E-02	1.45E-02	2.95E-03	1.31E-02	6.26E-03	6.43E-03	1.29E-02	1.21E-03	2.27E-07	6.69E-03	1.08E-02
B19	0.00E+00	1.97E-04	1.34E-05	4.89E+02	3.49E-04	1.27E+00	2.34E-04	1.90E-01	2.31E-02	4.88E-03	2.45E-02	9.58E-03	9.84E-03	4.02E-02	2.06E-03	3.34E-07	1.47E-02	3.57E-02
B20	0.00E+00	2.26E-04	1.79E-05	7.00E+02	7.10E-04	2.31E+00	3.30E-04	1.69E-01	3.82E-02	7.72E-03	3.35E-02	1.64E-02	1.69E-02	3.54E-02	3.18E-03	5.52E-07	1.66E-02	3.15E-02
B21	0.00E+00	1.10E-04	7.69E-06	2.81E+02	2.10E-04	7.50E-01	1.33E-04	1.07E-01	1.35E-02	2.83E-03	1.38E-02	5.64E-03	5.80E-03	2.22E-02	1.19E-03	1.86E-07	7.97E-03	2.00E-02
B22	0.00E+00	1.59E-04	1.31E-05	5.19E+02	5.58E-04	1.78E+00	2.43E-04	1.13E-01	2.91E-02	5.82E-03	2.43E-02	1.26E-02	1.29E-02	2.31E-02	2.39E-03	4.11E-07	1.13E-02	2.10E-02
B23	0.00E+00	1.13E-04	7.94E-06	2.90E+02	2.17E-04	7.73E-01	1.37E-04	1.10E-01	1.40E-02	2.92E-03	1.42E-02	5.81E-03	5.98E-03	2.29E-02	1.23E-03	1.92E-07	8.22E-03	2.07E-02
B24	0.00E+00	2.57E-04	2.03E-05	8.00E+02	8.23E-04	2.67E+00	3.78E-04	1.87E-01	4.39E-02	8.87E-03	3.84E-02	1.89E-02	1.95E-02	3.93E-02	3.65E-03	6.42E-07	1.89E-02	3.48E-02
C29	0.00E+00	2.54E-06	2.06E-07	6.24E+00	7.34E-06	2.14E-02	3.52E-06	1.86E-03	8.58E-04	1.35E-04	3.48E-04	1.76E-04	1.80E-04	2.71E-04	2.87E-05	4.59E-09	1.68E-04	3.48E-04
C30	0.00E+00	6.08E-05	3.80E-06	5.63E+01	4.43E-05	1.52E-01	5.87E-05	5.76E-02	1.42E-02	2.05E-03	6.18E-03	1.88E-03	1.94E-03	5.62E-03	2.25E-04	3.04E-08	4.25E-03	1.08E-02
C31	0.00E+00	3.42E-05	2.35E-06	6.11E+01	7.21E-05	2.04E-01	4.34E-05	2.31E-02	1.05E-02	1.59E-03	4.57E-03	1.85E-03	1.90E-03	3.21E-03	2.75E-04	4.92E-08	2.66E-03	4.31E-03
C32	0.00E+00	4.29E-05	2.78E-06	6.58E+01	4.94E-05	1.66E-01	4.54E-05	3.87E-02	8.12E-03	1.30E-03	4.77E-03	1.64E-03	1.68E-03	5.75E-03	2.72E-04	4.16E-08	3.09E-03	7.27E-03
C33	0.00E+00	2.65E-06	2.54E-07	9.19E+00	1.47E-05	3.88E-02	5.18E-06	4.13E-04	1.69E-03	2.52E-04	5.10E-04	3.04E-04	3.12E-04	9.34E-05	4.55E-05	8.48E-09	1.99E-04	7.21E-05
C34	0.00E+00	9.17E-06	7.04E-07	1.75E+01	2.62E-05	6.92E-02	1.29E-05	5.10E-03	4.80E-03	6.76E-04	1.30E-03	6.21E-04	6.37E-04	5.84E-04	8.18E-05	1.33E-08	6.65E-04	9.52E-04
C35	0.00E+00	1.50E-05	1.06E-06	2.84E+01	2.79E-05	8.51E-02	1.80E-05	1.21E-02	3.70E-03	5.88E-04	1.85E-03	7.58E-04	7.79E-04	1.81E-03	1.25E-04	2.02E-08	1.07E-03	2.27E-03
C36	0.00E+00	9.84E-05	6.64E-06	1.13E+02	1.08E-04	3.53E-01	1.01E-04	9.40E-02	2.95E-02	4.20E-03	1.03E-02	3.72E-03	3.83E-03	9.10E-03	4.72E-04	5.89E-08	6.49E-03	1.77E-02
C37	0.00E+00	2.99E-05	1.85E-06	3.85E+01	2.96E-05	9.88E-02	3.09E-05	2.72E-02	6.26E-03	9.53E-04	3.31E-03	1.05E-03	1.08E-03	3.54E-03	1.57E-04	2.37E-08	2.24E-03	5.11E-03
C38	0.00E+00	4.90E-05	3.04E-06	6.76E+01	4.21E-05	1.52E-01	4.90E-05	4.59E-02	8.07E-03	1.30E-03	5.22E-03	1.61E-03	1.66E-03	6.80E-03	2.71E-04	4.02E-08	3.56E-03	8.62E-03
C39	0.00E+00	1.28E-05	9.63E-07	2.59E+01	3.07E-05	8.94E-02	1.67E-05	9.83E-03	4.52E-03	6.78E-04	1.69E-03	7.70E-04	7.91E-04	1.29E-03	1.17E-04	1.84E-08	8.96E-04	1.84E-03
C40	0.00E+00	1.90E-05	1.40E-06	2.98E+01	3.79E-05	1.09E-01	2.29E-05	1.52E-02	8.06E-03	1.14E-03	2.30E-03	1.01E-03	1.04E-03	1.54E-03	1.34E-04	1.87E-08	1.26E-03	2.85E-03
C41	0.00E+00	3.38E-05	2.45E-06	8.83E+01	7.52E-05	2.49E-01	4.31E-05	3.14E-02	6.08E-03	1.11E-03	4.45E-03	1.92E-03	1.97E-03	6.21E-03	3.82E-04	5.55E-08	2.47E-03	5.88E-03
C42	0.00E+00	1.91E-05	1.59E-06	6.29E+01	7.42E-05	2.24E-01	3.09E-05	1.10E-02	4.92E-03	8.83E-04	3.12E-03	1.63E-03	1.68E-03	2.29E-03	2.95E-04	5.19E-08	1.44E-03	2.04E-03
C43	0.00E+00	1.84E-05	1.21E-06	4.53E+01	3.87E-05	1.28E-01	2.36E-05	1.42E-02	3.06E-03	5.73E-04	2.54E-03	9.86E-04	1.01E-03	3.10E-03	1.97E-04	3.60E-08	1.53E-03	2.65E-03
C44	0.00E+00	1.36E-05	9.37E-07	3.49E+01	3.10E-05	1.01E-01	1.78E-05	1.08E-02	2.41E-03	4.46E-04	1.88E-03	7.75E-04	7.96E-04	2.29E-03	1.53E-04	2.63E-08	1.08E-03	2.02E-03
C45	0.00E+00	2.83E-05	1.86E-06	4.92E+01	4.72E-05	1.43E-01	3.33E-05	2.11E-02	6.29E-03	1.01E-03	3.53E-03	1.32E-03	1.35E-03	3.30E-03	2.15E-04	3.87E-08	2.17E-03	3.95E-03
C46	0.00E+00	6.38E-05	3.93E-06	5.84E+01	4.77E-05	1.57E-01	6.22E-05	5.82E-02	1.47E-02	2.12E-03	6.61E-03	1.98E-03	2.04E-03	5.75E-03	2.34E-04	3.41E-08	4.57E-03	1.09E-02
C48	0.00E+00	5.81E-05	3.43E-06	6.96E+01	2.97E-05	1.28E-01	5.43E-05	5.65E-02	7.86E-03	1.28E-03	5.88E-03	1.56E-03	1.60E-03	8.39E-03	2.64E-04	3.77E-08	4.28E-03	1.06E-02
C49	0.00E+00	3.32E-05	2.44E-06	6.68E+01	8.26E-05	2.34E-01	4.42E-05	2.25E-02	1.17E-02	1.76E-03	4.55E-03	2.03E-03	2.09E-03	3.07E-03	3.05E-04	5.20E-08	2.46E-03	4.20E-03
C50	0.00E+00	1.52E-06	1.12E-07	2.10E+00	2.19E-06	7.22E-03	1.63E-06	1.54E-03	5.65E-04	7.99E-05	1.60E-04	6.77E-05	6.98E-05	1.46E-04	9.04E-06	9.81E-10	9.02E-05	2.90E-04
C51	0.00E+00	1.75E-05	1.30E-06	4.00E+01	4.78E-05	1.36E-01	2.43E-05	1.06E-02	5.42E-03	8.58E-04	2.50E-03	1.14E-03	1.17E-03	1.70E-03	1.85E-04	3.40E-08	1.33E-03	1.97E-03
C52	0.00E+00	1.32E-05	9.20E-07	1.92E+01	2.51E-05	6.93E-02	1.59E-05	9.39E-03	5.15E-03	7.31E-04	1.64E-03	6.75E-04	6.93E-04	9.92E-04	8.65E-05	1.37E-08	9.50E-04	1.76E-03
C53	0.00E+00	1.10E-05	7.94E-07	2.13E+01	2.57E-05	7.31E-02	1.44E-05	7.67E-03	3.70E-03	5.57E-04	1.48E-03	6.43E-04	6.61E-04	1.04E-03	9.66E-05	1.64E-08	8.23E-04	1.44E-03
C54	0.00E+00	1.69E-05	1.17E-06	3.21E+01	3.30E-05	9.83E-02	2.08E-05	1.24E-02	4.20E-03	6.68E-04	2.17E-03	8.75E-04	8.98E-04	1.92E-03	1.42E-04	2.51E-08	1.27E-03	2.32E-03
C55	0.00E+00	2.63E-05	1.84E-06	4.74E+01	5.39E-05	1.57E-01	3.28E-05	1.97E-02	8.15E-03	1.23E-03	3.41E-03	1.41E-03	1.45E-03	2.64E-03	2.12E-04	3.53E-08	1.96E-03	3.68E-03
C56	0.00E+00	2.43E-06	1.46E-07	2.29E+00	2.24E-06	6.42E-03	2.50E-06	1.94E-03	5.76E-04	8.33E-05	2.70E-04	8.16E-05	8.38E-05	2.00E-04	9.49E-06	1.67E-09	1.86E-04	3.65E-04
C57	0.00E+00	2.01E-05	1.46E-06	4.31E+01	4.89E-05	1.42E-01	2.66E-05	1.33E-02	5.77E-03	9.14E-04	2.75E-03	1.21E-03	1.24E-03	2.09E-03	1.96E-04	3.52E-08	1.51E-03	2.48E-03
C58	0.00E+00	3.86E-06	3.44E-07	1.03E+01	1.70E-05	4.40E-02	6.60E-06	1.28E-03	2.88E-03	4.04E-04	6.50E-04	3.66E-04	3.75E-04	1.81E-04	4.97E-05	8.06E-09	2.75E-04	2.36E-04
C59	0.00E+00	2.93E-06	2.51E-07	8.76E+00	1.21E-05	3.32E-02	4.86E-06	1.25E-03	1.24E-03	1.95E-04	4.86E-04	2.62E-04	2.69E-04	2.10E-04	4.21E-05	7.80E-09	2.16E-04	2.30E-04
C60	0.00E+00	2.53E-05	1.78E-06	4.62E+01	5.33E-05	1.54E-01	3.18E-05	1.86E-02	7.96E-03	1.20E-03	3.30E-03	1.38E-03	1.42E-03	2.50E-03	2.07E-04	3.47E-08	1.89E-03	3.48E-03
C61	0.00E+00	1.33E-05	1.15E-06	4.05E+01	5.64E-05	1.55E-01	2.24E-05	5.28E-03	5.75E-03	9.02E-04	2.24E-03	1.22E-03	1.25E-03	9.07E-04	1.96E-04	3.65E-08	9.87E-04	9.70E-04
C62	0.00E+00	2.15E-05	1.67E-06	4.26E+01	6.46E-05	1.70E-01	3.08E-05	1.14E-02	1.17E-02	1.65E-03	3.11E-03	1.51E-03	1.55E-03	1.33E-03	2.00E-04	3.25E-08	1.56E-03	2.13E-03
C63	0.00E+00	7.88E-05	4.92E-06	1.08E+02	9.62E-05	3.00E-01	8.57E-05	6.59E-02	1.78E-02	2.72E-03	9.21E-03	3.06E-03	3.14E-03	8.77E-03	4.56E-04	7.52E-08	6.06E-03	1.24E-02
C64	0.00E+00	5.59E-05	3.88E-06	1.10E+02	1.18E-04	3.45E-01	7.06E-05	3.86E-02	1.44E-02	2.30E-03	7.38E-03	3.03E-03	3.12E-03	6.08E-03	4.92E-04	8.94E-08	4.27E-03	7.21E-03
C65	0.00E+00	4.10E-07	4.38E-08	1.65E+00	2.69E-06	7.12E-03	8.75E-07	4.51E-05	3.06E-04	4.55E-05	8.40E-05	5.45E-05	5.59E-05	1.11E-05	8.22E-06	1.48E-09	2.81E-05	7.47E-06
C66	0.00E+00	2.29E-05	1.47E-06	2.48E+01	2.51E-05	7.58E-02	2.40E-05	1.96E-02	6.39E-03	9.17E-04	2.52E-03	8.51E-04	8.75E-04	1.97E-03	1.04E-04	1.56E-08	1.64E-03	3.69E-03
C67	0.00E+00	4.26E-05	2.98E-06	1.12E+02	1.04E-04	3.35E-01	5.72E-05	3.24E-02	7.88E-03	1.45E-03	6.03E-03	2.55E-03	2.62E-03	6.91E-03	4.97E-04	8.73E-08	3.42E-03	6.05E-03
C68	0.00E+00	5.34E-05	3.98E-06	1.56E+02	1.67E-04	5.15E-01	7.93E-05	3.25E-02	1.16E-02	2.12E-03	8.27E-03	3.83E-03	3.93E-03	7.22E-03	7.14E-04	1.34E-07	4.34E-03	6.04E-03
C69	0.00E+00	3.46E-05	2.11E-06	6.05E+01	4.44E-05	1.49E-01	3.84E-05	2.77E-02	5.38E-03	9.36E-04	4.18E-03	1.37E-03	1.40E-03	5.12E-03	2.53E-04	4.71E-08	2.78E-03	5.20E-03
C70	0.00E+00	6.48E-05	4.02E-06	1.44E+02	9.68E-05	3.46E-01	7.51E-05	5.90E-02	8.95E-03	1.70E-03	8.17E-03	2.79E-03	2.87E-03	1.25E-02	5.96E-04	1.00E-07	5.30E-03	1.11E-02
C71	0.00E+00	3.51E-05	2.39E-06	6.45E+01	6.40E-05	1.93E-01	4.22E-05	2.66E-02	8.36E-03	1.33E-03	4.41E-03	1.74E-03	1.79E-03	4.09E-03	2.84E-04	4.93E-08	2.62E-03	4.98E-03
C72	0.00E+00	2.08E-05	1.47E-06	3.32E+01	4.71E-05	1.24E-01	2.69E-05	1.26E-02	8.95E-03	1.27E-03	2.78E-03	1.19E-03	1.22E-03	1.41E-03	1.52E-04	2.57E-08	1.57E-03	2.35E-03
C73	0.00E+00	1.70E-05	1.12E-06	2.20E+01	2.50E-05	6.95E-02	1.92E-05	1.22E-02	4.59E-03	6.81E-04	2.00E-03	7.39E-04	7.59E-04	1.46E-03	9.56E-05	1.76E-08	1.24E-03	2.29E-03
C74	0.00E+00	1.26E-04	8.36E-06	2.08E+02	2.29E-04	6.62E-01	1.52E-04	9.07E-02	3.53E-02	5.35E-03	1.61E-02	6.19E-03	6.35E-03	1.25E-02	9.19E-04	1.62E-07	9.79E-03	1.70E-02
C81	0.00E+00	5.70E-05	3.84E-06	1.01E+02	9.51E-05	2.92E-01	6.65E-05	4.51E-02	1.29E-02	2.07E-03	6.96E-03	2.67E-03	2.75E-03	6.88E-03	4.38E-04	7.43E-08	4.22E-03	8.45E-03
C82	0.00E+00	8.51E-05	5.48E-06	1.28E+02	1.27E-04	3.80E-01	9.73E-05	6.70E-02	2.14E-02	3.25E-03	1.04E-02	3.70E-03	3.80E-03	9.02E-03	5.51E-04	9.37E-08	6.56E-03	1.26E-02
C83	0.00E+00	1.28E-04	7.76E-06	2.73E+02	1.31E-04	5.59E-01	1.34E-04	1.34E-01	1.14E-02	2.52E-03	1.46E-02	4.52E-03	4.65E-03	2.90E-02	1.08E-03	1.76E-07	9.91E-03	2.52E-02
C84	0.00E+00	5.32E-05	3.37E-06	1.21E+02	8.61E-05	3.02E-01	6.28E-05	4.77E-02	7.69E-03	1.45E-03	6.79E-03	2.41E-03	2.48E-03	1.01E-02	5.06E-04	8.49E-08	4.31E-03	8.93E-03
C85	0.00E+00	4.87E-05	2.94E-06	1.03E+02	5.98E-05	2.27E-01	5.36E-05	4.73E-02	6.13E-03	1.18E-03	5.87E-03	1.87E-03	1.93E-03	9.93E-03	4.15E-04	6.62E-08	3.95E-03	8.87E-03
C86	0.00E+00	8.81E-05	6.00E-06	2.25E+02	2.01E-04	6.53E-01	1.16E-04	6.78E-02	1.55E-02	2.88E-03	1.23E-02	5.00E-03	5.14E-03	1.46E-02	9.86E-04	1.76E-07	7.16E-03	1.27E-02
D63	0.00E+00	2.15E-05	1.26E-06	2.73E+01	1.64E-05	5.89E-02	2.15E-05	1.88E-02	3.19E-03	5.21E-04	2.35E-03	6.61E-04	6.80E-04	2.89E-03	1.08E-04	1.87E-08	1.67E-03	3.53E-03
D64	0.00E+00	3.64E-06	2.53E-07	7.17E+00	8.30E-06	2.40E-02	4.75E-06	2.28E-03	9.71E-04	1.54E-04	4.98E-04	2.08E-04	2.13E-04	3.71E-04	3.24E-05	6.21E-09	2.85E-04	4.26E-04
D65	0.00E+00	3.84E-05	2.66E-06	8.26E+01	8.18E-05	2.53E-01	4.88E-05	2.76E-02	7.79E-03	1.34E-03	5.12E-03	2.10E-03	2.16E-03	5.04E-03	3.66E-04	6.75E-08	2.97E-03	5.16E-03
D66	0.00E+00	3.08E-05	2.08E-06	5.98E+01	5.01E-05	1.65E-01	3.56E-05	2.62E-02	5.45E-03	9.38E-04	3.73E-03	1.42E-03	1.46E-03	4.57E-03	2.55E-04	4.20E-08	2.26E-03	4.91E-03
D67	0.00E+00	2.96E-05	1.90E-06	5.19E+01	3.63E-05	1.27E-01	3.19E-05	2.68E-02	4.53E-03	7.86E-04	3.38E-03	1.16E-03	1.19E-03	4

Appendix F.4.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D83	0.00E+00	5.54E-05	3.77E-06	1.11E+02	9.87E-05	3.17E-01	6.61E-05	4.49E-02	1.03E-02	1.76E-03	6.92E-03	2.71E-03	2.78E-03	7.93E-03	4.80E-04	8.23E-08	4.14E-03	8.41E-03
D84	0.00E+00	5.00E-05	3.57E-06	1.00E+02	8.18E-05	2.75E-01	5.68E-05	4.76E-02	9.24E-03	1.57E-03	5.77E-03	2.36E-03	2.43E-03	7.87E-03	4.24E-04	5.88E-08	3.34E-03	8.94E-03
D85	0.00E+00	5.57E-05	3.72E-06	1.06E+02	8.43E-05	2.82E-01	6.32E-05	4.87E-02	9.53E-03	1.64E-03	6.62E-03	2.47E-03	2.54E-03	8.46E-03	4.46E-04	7.18E-08	4.08E-03	9.14E-03
D86	0.00E+00	6.72E-05	4.75E-06	1.31E+02	1.01E-04	3.46E-01	7.43E-05	6.63E-02	1.19E-02	2.03E-03	7.54E-03	3.01E-03	3.10E-03	1.09E-02	5.47E-04	7.21E-08	4.43E-03	1.24E-02
D87	0.00E+00	6.88E-05	4.44E-06	1.22E+02	8.60E-05	3.00E-01	7.45E-05	6.25E-02	1.07E-02	1.85E-03	7.88E-03	2.73E-03	2.81E-03	1.09E-02	5.02E-04	7.92E-08	5.07E-03	1.17E-02
D88	0.00E+00	9.79E-05	7.10E-06	2.06E+02	1.83E-04	5.95E-01	1.16E-04	8.86E-02	1.93E-02	3.28E-03	1.18E-02	5.00E-03	5.15E-03	1.47E-02	8.87E-04	1.30E-07	6.61E-03	1.66E-02
D89	0.00E+00	1.72E-05	1.23E-06	2.93E+01	3.37E-05	1.01E-01	2.09E-05	1.41E-02	5.18E-03	7.80E-04	2.14E-03	9.00E-04	9.26E-04	1.83E-03	1.29E-04	2.08E-08	1.22E-03	2.65E-03
D90	0.00E+00	2.53E-05	1.77E-06	4.32E+01	5.28E-05	1.52E-01	3.18E-05	1.82E-02	7.65E-03	1.16E-03	3.31E-03	1.37E-03	1.41E-03	2.46E-03	1.93E-04	3.45E-08	1.91E-03	3.42E-03
D91	0.00E+00	2.32E-05	1.78E-06	5.28E+01	6.52E-05	1.88E-01	3.23E-05	1.50E-02	7.39E-03	1.16E-03	3.27E-03	1.56E-03	1.60E-03	2.31E-03	2.43E-04	4.30E-08	1.68E-03	2.79E-03
D92	0.00E+00	6.73E-06	5.52E-07	1.71E+01	2.24E-05	6.39E-02	1.00E-05	4.05E-03	2.45E-03	3.83E-04	9.98E-04	5.14E-04	5.28E-04	6.20E-04	8.00E-05	1.40E-08	4.70E-04	7.55E-04
D93	0.00E+00	3.01E-05	2.10E-06	5.54E+01	5.69E-05	1.73E-01	3.63E-05	2.33E-02	7.38E-03	1.17E-03	3.76E-03	1.53E-03	1.58E-03	3.53E-03	2.43E-04	4.12E-08	2.19E-03	4.37E-03
D94	0.00E+00	5.44E-06	4.56E-07	1.47E+01	2.03E-05	5.68E-02	8.57E-06	2.77E-03	2.13E-03	3.33E-04	8.56E-04	4.52E-04	4.63E-04	4.43E-04	6.98E-05	1.27E-08	3.93E-04	5.13E-04
E01	0.00E+00	1.60E-05	1.19E-06	3.19E+01	4.45E-05	1.23E-01	2.24E-05	9.51E-03	5.79E-03	8.73E-04	2.31E-03	1.06E-03	1.09E-03	1.34E-03	1.47E-04	2.78E-08	1.22E-03	1.77E-03
E02	0.00E+00	2.90E-05	2.08E-06	5.16E+01	6.41E-05	1.85E-01	3.70E-05	2.12E-02	9.19E-03	1.39E-03	3.81E-03	1.64E-03	1.68E-03	2.83E-03	2.31E-04	4.03E-08	2.13E-03	3.97E-03
E03	0.00E+00	1.04E-05	9.61E-07	3.59E+01	5.01E-05	1.43E-01	1.86E-05	4.04E-03	3.80E-03	6.38E-04	1.84E-03	1.06E-03	1.09E-03	7.43E-04	1.74E-04	3.26E-08	7.46E-04	7.38E-04
E04	0.00E+00	2.13E-05	1.44E-06	4.04E+01	3.18E-05	1.07E-01	2.40E-05	1.92E-02	3.65E-03	6.27E-04	2.50E-03	9.40E-04	9.67E-04	3.29E-03	1.70E-04	2.63E-08	1.53E-03	3.60E-03
E05	0.00E+00	6.76E-06	5.51E-07	1.92E+01	2.40E-05	7.00E-02	1.04E-05	3.68E-03	1.95E-03	3.30E-04	1.05E-03	5.40E-04	5.54E-04	6.73E-04	9.02E-05	1.68E-08	5.01E-04	6.82E-04
E06	0.00E+00	2.47E-05	1.87E-06	6.11E+01	6.86E-05	2.06E-01	3.44E-05	1.64E-02	6.02E-03	1.02E-03	3.51E-03	1.64E-03	1.68E-03	2.94E-03	2.79E-04	5.04E-08	1.83E-03	3.06E-03
E07	0.00E+00	1.10E-04	8.53E-06	2.29E+02	3.18E-04	8.93E-01	1.55E-04	7.07E-02	4.18E-02	6.28E-03	1.57E-02	7.53E-03	7.73E-03	9.59E-03	1.06E-03	1.89E-07	7.98E-03	1.32E-02
E08	0.00E+00	7.67E-05	5.78E-06	1.55E+02	2.17E-04	6.03E-01	1.08E-04	4.60E-02	2.82E-02	4.25E-03	1.11E-02	5.14E-03	5.28E-03	6.43E-03	7.17E-04	1.34E-07	5.78E-03	8.59E-03
E09	0.00E+00	1.09E-04	8.36E-06	2.22E+02	3.03E-04	8.57E-01	1.51E-04	7.21E-02	4.04E-02	6.07E-03	1.53E-02	7.25E-03	7.44E-03	9.72E-03	1.02E-03	1.81E-07	7.84E-03	1.35E-02
E10	0.00E+00	7.70E-05	6.01E-06	1.66E+02	2.40E-04	6.63E-01	1.12E-04	4.38E-02	3.05E-02	4.58E-03	1.14E-02	5.56E-03	5.70E-03	6.15E-03	7.75E-04	1.45E-07	5.73E-03	8.15E-03
E11	0.00E+00	1.17E-04	8.92E-06	2.38E+02	3.28E-04	9.18E-01	1.63E-04	7.46E-02	4.32E-02	6.50E-03	1.67E-02	7.81E-03	8.02E-03	1.02E-02	1.09E-03	1.99E-07	8.66E-03	1.39E-02
E12	0.00E+00	1.16E-04	8.39E-06	2.07E+02	2.52E-04	7.36E-01	1.46E-04	8.88E-02	3.68E-02	5.54E-03	1.50E-02	6.49E-03	6.67E-03	1.17E-02	9.21E-04	1.56E-07	8.37E-03	1.66E-02
E13	0.00E+00	2.57E-05	2.03E-06	6.94E+01	8.41E-05	2.47E-01	3.84E-05	1.47E-02	6.98E-03	1.18E-03	3.91E-03	1.92E-03	1.97E-03	2.71E-03	3.23E-04	6.05E-08	1.94E-03	2.74E-03
E14	0.00E+00	4.06E-05	3.16E-06	1.05E+02	1.22E-04	3.64E-01	5.83E-05	2.59E-02	1.05E-02	1.78E-03	5.92E-03	2.86E-03	2.94E-03	4.63E-03	4.85E-04	8.75E-08	2.99E-03	4.83E-03
E15	0.00E+00	1.43E-05	1.09E-06	3.57E+01	4.04E-05	1.21E-01	2.00E-05	9.45E-03	3.53E-03	5.99E-04	2.04E-03	9.59E-04	9.85E-04	1.69E-03	1.63E-04	2.94E-08	1.05E-03	1.76E-03
E16	0.00E+00	3.38E-05	2.57E-06	7.66E+01	7.35E-05	2.34E-01	4.19E-05	3.01E-02	7.35E-03	1.24E-03	4.19E-03	1.92E-03	1.97E-03	4.92E-03	3.35E-04	4.89E-08	2.22E-03	5.63E-03
E17	0.00E+00	1.07E-05	7.14E-07	2.22E+01	2.16E-05	6.70E-02	1.35E-05	7.38E-03	2.07E-03	3.58E-04	1.43E-03	5.61E-04	5.76E-04	1.39E-03	9.80E-05	1.90E-08	8.55E-04	1.38E-03
E18	0.00E+00	1.12E-05	1.05E-06	3.97E+01	5.62E-05	1.59E-01	2.05E-05	4.09E-03	4.23E-03	7.08E-04	2.01E-03	1.18E-03	1.21E-03	7.50E-04	1.93E-04	3.61E-08	7.95E-04	7.46E-04
E19	0.00E+00	8.28E-05	6.59E-06	1.86E+02	2.76E-04	7.58E-01	1.25E-04	4.38E-02	3.44E-02	5.16E-03	1.26E-02	6.29E-03	6.46E-03	6.25E-03	8.75E-04	1.65E-07	6.18E-03	8.15E-03
E20	0.00E+00	8.50E-05	5.82E-06	1.41E+02	1.71E-04	4.92E-01	1.06E-04	6.02E-02	2.49E-02	3.76E-03	1.11E-02	4.48E-03	4.60E-03	8.22E-03	6.28E-04	1.15E-07	6.52E-03	1.13E-02
E21	0.00E+00	1.20E-06	8.53E-08	2.42E+00	2.01E-06	6.69E-03	1.37E-06	1.12E-03	2.23E-04	3.80E-05	1.39E-04	5.72E-05	5.89E-05	1.86E-04	1.03E-05	1.45E-09	8.05E-05	2.11E-04
E22	0.00E+00	1.38E-05	9.79E-07	2.88E+01	2.60E-05	8.37E-02	1.66E-05	1.18E-02	2.69E-03	4.59E-04	1.71E-03	7.05E-04	7.25E-04	2.01E-03	1.25E-04	1.98E-08	9.81E-04	2.21E-03
E23	0.00E+00	5.55E-05	3.28E-06	8.27E+01	3.86E-05	1.59E-01	5.43E-05	5.31E-02	6.68E-03	1.18E-03	5.91E-03	1.65E-03	1.70E-03	9.35E-03	3.20E-04	5.00E-08	4.21E-03	9.98E-03
E24	0.00E+00	4.22E-05	3.22E-06	1.05E+02	1.17E-04	3.53E-01	5.85E-05	2.87E-02	1.03E-02	1.76E-03	5.96E-03	2.80E-03	2.88E-03	5.08E-03	4.78E-04	8.48E-08	3.08E-03	5.35E-03
E25	0.00E+00	2.95E-05	2.06E-06	5.28E+01	5.10E-05	1.59E-01	3.44E-05	2.48E-02	6.97E-03	1.10E-03	3.54E-03	1.43E-03	1.47E-03	3.66E-03	2.28E-04	3.61E-08	2.08E-03	4.64E-03
E26	0.00E+00	2.22E-05	1.90E-06	6.00E+01	8.09E-05	2.29E-01	3.43E-05	1.30E-02	8.68E-03	1.35E-03	3.39E-03	1.82E-03	1.87E-03	1.96E-03	2.83E-04	4.90E-08	1.52E-03	2.41E-03
E27	0.00E+00	4.03E-05	2.60E-06	6.04E+01	4.64E-05	1.56E-01	4.26E-05	3.60E-02	7.55E-03	1.21E-03	4.49E-03	1.53E-03	1.58E-03	5.36E-03	2.49E-04	3.86E-08	2.91E-03	6.76E-03
E28	0.00E+00	1.48E-05	1.15E-06	3.44E+01	4.31E-05	1.24E-01	2.09E-05	9.32E-03	4.84E-03	7.60E-04	2.11E-03	1.02E-03	1.05E-03	1.44E-03	1.59E-04	2.82E-08	1.07E-03	1.74E-03
E29	0.00E+00	5.57E-07	5.97E-08	2.28E+00	3.69E-06	9.98E-03	1.20E-06	6.35E-05	3.48E-04	5.40E-05	1.15E-04	7.46E-05	7.65E-05	1.47E-05	1.14E-05	2.14E-09	3.87E-05	1.05E-05
E30	0.00E+00	1.77E-05	1.41E-06	4.31E+01	5.54E-05	1.58E-01	2.57E-05	1.08E-02	6.11E-03	9.58E-04	2.59E-03	1.29E-03	1.32E-03	1.68E-03	2.00E-04	3.55E-08	1.27E-03	2.02E-03
E31	0.00E+00	1.11E-06	1.19E-07	4.56E+00	7.39E-06	2.00E-02	2.39E-06	1.27E-04	6.96E-04	1.08E-04	2.30E-04	1.49E-04	1.53E-04	2.93E-05	2.28E-05	4.28E-09	7.73E-05	2.09E-05
E32	0.00E+00	2.31E-05	2.03E-06	6.76E+01	9.63E-05	2.68E-01	3.83E-05	1.06E-02	9.89E-03	1.54E-03	3.80E-03	2.10E-03	2.15E-03	1.71E-03	3.24E-04	5.90E-08	1.64E-03	1.97E-03
E33	0.00E+00	1.71E-05	1.41E-06	4.08E+01	6.19E-05	1.69E-01	2.66E-05	8.81E-03	7.59E-03	1.14E-03	2.67E-03	1.39E-03	1.42E-03	1.25E-03	1.93E-04	3.60E-08	1.25E-03	1.64E-03
E34	0.00E+00	7.38E-05	5.74E-06	1.56E+02	2.19E-04	6.11E-01	1.05E-04	4.61E-02	2.85E-02	4.28E-03	1.06E-02	5.14E-03	5.28E-03	6.29E-03	7.20E-04	1.30E-07	5.37E-03	8.60E-03
E35	0.00E+00	2.94E-05	2.16E-06	5.56E+01	7.29E-05	2.07E-01	3.92E-05	2.00E-02	1.00E-02	1.51E-03	4.03E-03	1.80E-03	1.84E-03	2.71E-03	2.52E-04	4.53E-08	2.18E-03	3.74E-03
E36	0.00E+00	6.29E-05	4.79E-06	1.27E+02	1.74E-04	4.90E-01	8.71E-05	4.10E-02	2.31E-02	3.48E-03	8.87E-03	4.16E-03	4.28E-03	5.57E-03	5.85E-04	1.05E-07	4.59E-03	7.66E-03
E37	0.00E+00	3.05E-05	2.19E-06	5.56E+01	7.21E-05	2.04E-01	4.00E-05	2.05E-02	9.94E-03	1.50E-03	4.15E-03	1.80E-03	1.84E-03	2.81E-03	2.52E-04	4.60E-08	2.31E-03	3.83E-03
E38	0.00E+00	5.99E-05	4.61E-06	1.23E+02	1.70E-04	4.78E-01	8.37E-05	3.86E-02	2.25E-02	3.38E-03	8.50E-03	4.04E-03	4.15E-03	5.24E-03	5.68E-04	1.02E-07	4.35E-03	7.21E-03
E39	0.00E+00	1.88E-05	1.48E-06	4.57E+01	5.94E-05	1.69E-01	2.76E-05	1.08E-02	6.48E-03	1.02E-03	2.79E-03	1.37E-03	1.41E-03	1.72E-03	2.13E-04	3.88E-08	1.38E-03	2.02E-03
E40	0.00E+00	1.75E-05	1.70E-06	6.07E+01	9.29E-05	2.55E-01	3.30E-05	5.34E-03	9.10E-03	1.42E-03	3.22E-03	1.94E-03	1.99E-03	9.17E-04	2.98E-04	5.50E-08	1.23E-03	9.67E-04
E41	0.00E+00	9.78E-06	9.67E-07	3.47E+01	5.32E-05	1.46E-01	1.86E-05	3.06E-03	5.21E-03	8.10E-04	1.80E-03	1.11E-03	1.14E-03	5.09E-04	1.70E-04	3.10E-08	6.66E-04	5.56E-04
E42	0.00E+00	1.51E-05	1.32E-06	4.27E+01	5.90E-05	1.66E-01	2.41E-05	8.15E-03	6.21E-03	9.69E-04	2.38E-03	1.31E-03	1.34E-03	1.25E-03	2.03E-04	3.56E-08	1.04E-03	1.51E-03
E43	0.00E+00	7.67E-06	7.96E-07	2.99E+01	4.77E-05	1.29E-01	1.59E-05	1.30E-03	4.54E-03	7.05E-04	1.53E-03	9.73E-04	9.97E-04	2.62E-04	1.48E-04	2.78E-08	5.35E-04	2.26E-04
E44	0.00E+00	1.11E-05	1.03E-06	3.59E+01	5.34E-05	1.47E-01	1.98E-05	4.17E-03	5.33E-03	8.30E-04	1.94E-03	1.13E-03	1.16E-03	6.87E-04	1.74E-04	3.19E-08	7.77E-04	7.64E-04
E45	0.00E+00	5.02E-06	3.72E-07	1.17E+01	1.23E-05	3.77E-02	6.62E-06	3.70E-03	1.13E-03	1.93E-04	6.77E-04	3.05E-04	3.13E-04	6.48E-04	5.25E-05	9.07E-09	3.64E-04	6.92E-04
E46	0.00E+00	2.70E-05	1.89E-06	5.90E+01	5.95E-05	1.83E-01	3.47E-05	1.92E-02	5.60E-03	9.61E-04	3.62E-03	1.51E-03	1.55E-03	3.50E-03	2.62E-04	4.82E-08	2.07E-03	3.60E-03
E47	0.00E+00	5.21E-06	3.74E-07	1.17E+01	1.19E-05	3.67E-02	6.74E-06	3.81E-03	1.12E-03	1.91E-04	6.98E-04	3.00E-04	3.08E-04	6.79E-04	5.21E-05	9.25E-09	3.89E-04	7.11E-04
E48	0.00E+00	2.86E-05	2.31E-06	8.00E+01	9.92E-05	2.90E-01	4.38E-05	1.60E-02	8.12E-03	1.37E-03	4.42E-03	2.24E-03	2.30E-03	2.91E-03	3.75E-04	6.96E-08	2.12E-03	2.96E-03
E49	0.00E+00	2.06E-06	1.78E-07	6.18E+00	7.82E-06	2.29E-02	3.25E-06	1.23E-03	6.37E-04	1.07E-04	3.21E-04	1.75E-04	1.79E-04	2.09E-04	2.91E-05	5.06E-09	1.41E-04	2.28E-04
E50	0.00E+00	3.96E-05	2.85E-06	8.61E+01	8.26E-05	2.60E-01	4.92E-05	3.20E-02	8.15E-03	1.39E-03	5.06E-03	2.16E-03	2.22E-03	5.52E-03	3.78E-04	6.24E-08	2.84E-03	5.99E-03
E51	0.00E+00	1.55E-07	1.66E-08	6.70E-01	1.04E-06	2.88E-03	3.34E-07	1.86E-05	7.37E-05	1.23E-05	3.23E-05	2.09E-05	2.14E-05	4.06E-06	3.36E-06	6.43E-10	1.08E-05	3.05E-06
E52	0.00E+00	3.43E-05	2.44E-06	7.28E+01	6.78E-05	2.16E-01	4.19E-05	2.83E-02	6.84E-03	1.17E-03	4.32E-03	1.80E-03	1.85E-03	4.88E-03	3.17E-04	5.19E-08	2.47E-03	5.30E-03
E53	0.00E+00	2.54E-05	1.73E-06	5.03E+01	4.30E-05	1.40E-01	2.97E-05	2.16E-02	4.61E-03	7.92E-04	3.09E-03	1.21E-03	1.24E-03	3.75E-03	2.15E-04	3.51E-08	1.85E-03	4.05E-03
E54	0.00E+00	3.84E-05	2.89E-06	9.24E+01	9.96E-05	3.03E-01	5.18E-05	2.76E-02	9.02E-03	1.53E-03	5.28E-03	2.43E-03	2.50E-03	4.84E-03	4.17E-04	7.23E-08	2.78E-03	5.16E-03
E55	0.00E+00	2.46E-05	1.48E-06	3.75E+01	1.85E-05	7.47E-02	2.43E-05	2.36E-02	3.06E-03	5.39E-04	2.64E-03	7.59E-04	7.81E-04	4.14E-03	1.46E-04	2.26E-08	1.86E-03	4.44E-03
E56	0.00E+00	2.38E-05	1.97E-06	6.78E+01	8.40E-05	2.46E-01	3.64E-05	1.41E-02	6.92E-03	1.17E-03	3.64E-03	1.90E-03	1.95E-03	2.47E-03	3.18E-04	5.67E-08	1.69E-03	2.61E-03
E57	0.00E+00	1.01E-05	9.83E-07	3.51E+01	5.35E-05	1.47E-01	1.90E-05	3.21E-03	5.25E-03	8.17E-04	1.85E-03	1.12E-03	1.15E-03	5.43E-04	1.72E-04	3.16E-08	7.05E-04	5.82E-04
E58	0.00E+00	2.44E-05	1.72E-06	4.44E+01	4.38E-05	1.36E-01	2.89E-05	2.01E-02	5.88E-03	9.31E-04	2.97E-03	1.21E-03	1.24E-03	2.99E-03	1.93E-04	3.10E-08	1.73E-03	3.77E-03
E59	0.00E+00	1.12E-04	6.96E-06	1.87E+02	1.20E-04	4.31E-01	1.18E-04	1.01E-01	1.60E-02	2.79E-03	1.27E-02	4.07E-03	4.18E-03	1.79E-02	7.58E-04	1.25E-07	8.51E-03	1.90E-02
E60	0.00E+00	5.43E-05	4.00E-06	1.30E+02	1.44E-04	4.32E-01	7.44E-05	3.56E-02	1.27E-02	2.17E-03	7.68E-03	3.46E-03	3.55E-03	6.49E-03	5.92E-04	1.10E-07	4.13E-03	6.63E-03
E61	0.00E+00	1.38E-05	1.29E-06	4.90E+01	6.98E-05	1.97E-01	2.55E-05	4.61E-03	5.22E-03	8.76E-04	2.51E-03	1.47E-03	1.50E-03	8.85E-04	2.39E-04	4.56E-08	1.01E-03	8.38E-04
E62	0.00E+00	1.65E-05	1.46E-06	5.30E+01	7.13E-05	2.05E-01	2.79E-05	7.56E-03	5.54E-03	9.32E-04	2.77E-03	1.54E-03	1.58E-03	1.37E-03	2.54E-04	4.72E-08	1.19E-03	1.39E-03
E63	0.00E+00	8.99E-05	6.42E-06	1.75E+02	1.89E-04	5.65E-01	1.12E-04	6.73E-02	2.36E-02	3.72E-03	1.16E-02	4.91E-03	5.04E-03	1.02E-02	7.76E-04	1.33E-07	6.52E-03	1.26E-02
E64	0.00E+00	7.37E-05	5.23E-06	1.43E+02	1.57E-04	4.66E-01	9.28E-05	5.35E-02	1.93E-02	3.06E-03	9.60E-03	4.05E-03	4.16E-03	8.23E-03	6.38E-04	1.12E-07	5.44E-03	1.00E-02
E65	0.00E+00	5.02E-05	4.22E-06	1.34E+02	1.81E-04	5.11E-01	7.74E-05	2.80E-02	1.93E-02	3.02E-03	7.70E-03	4.07E-03	4.18E-03	4.34E-03	6.32E-04	1.12E-07	3.52E-03	5.21E-03
E66	0.00E+00	5.63E-05	4.26E-06	1.20E+02	1.38E-04	4.08E-01	7.37E-05	4.16E-02	1.66E-02	2.60E-03	7.46E-03	3.43E-03	3.53E-03	6.21E-03	5.41E-04	9.00E-08	3.93E-03	7.78E-03
E67	0.00E+00	1.43E-05	1.30E-06	4.89E+01	6.85E-05	1.94E-01	2.56E-05	5.10E-03	5.17E-03	8.69E-04	2.54E-03	1.45E-03	1.49E-03	9.83E-04	2.37E-04	4.55E-08	1.05E-03	9.30E-04
E68	0.00E+00	8.31E-05	5.56E-06	1.62E+02	1.38E-04	4.51E-01	9.72E-05	6.84E-02	1.48E-02	2.55E-03	1.02E-02	3.89E-03	4.00E-03	1.21E-02	6.94E-04	1.19E-07	6.23E-03	1.28E-02
E69	0.00E+00	1.08E-05	1.10E-06	4.08E+01	6.45E-05	1.75E-01	2.19E-05	2.15E-03	6.17E-03	9.59E-04	2.12E-03	1.32E-03	1.36E-03	4.17E-04	2.02E-04	3.80E-08	7.65E-04	3.78E-04
E70	0.00E+00	2.93E-05	2.62E-06	9.13E+01	1.36E-04	3.73E-01	5.17E-05	1.00E-02	1.35E-02	2.11E-03	5.13E-03	2.89E-03	2.97E-03	1.76E-03	4.44E-04	8.42E-08	2.16E-03	1.83E-03
E71	0.00E+00	2.10E-05	2.17E-06	8.10E+01	1.29E-04	3.50E-01	4.30E-05	4.01E-03	1.23E-02	1.91E-03	4.15E-03	2.63E-03	2.70E-03	7.69E-04	4.02E-04	7.50E-08	1.46E-03	7.04E-04
E72	0.00E+00	3.01E-05	2.82E-06	1.01E+02	1.53E-04	4.19E-01	5.58E-05	8.71E-03	1.50E-02	2.34E-03	5.50E-03	3.22E-03	3.30E-03	1.58E-03	4.92E-04	9.33E-08	2.20E-03	1.58E-03
E73	0.00E+00	1.68E-05	1.33E-06	3.59E+01	4.97E-05	1.40E-01	2.38E-05	1.12E-02	6.56E-03	9.85E-04	2.39E-03	1.17E-03	1.20E-03	1.50E-03	1.65E-04	2.88E-08	1.18E-03	2.10E-03
E74	0.00E+00	6.91E-06	7.22E-07	2.45E+01	4.29E-05	1.14E-01	1.42E-05	1.17E-03	4.73E-03	7.06E-04	1.37E-03	8.77E-04	8.99E-04	2.23E-04	1.21E-04	2.32E-08	4.71E-04	2.06E-04
E75	0.00E+00	5.36E-05	4.28E-06	1.31E+02	1.56E-04	4.52E-01	7.50E-05	3.72E-02	1.80E-02	2.83E-03	7.48E-03	3.71E-03	3.81E-03	5.54E-03	6.05E-04	1.00E-07	3.67E-03	6.94E-03
E76	0.00E+00	9.12E-05	7.20E-06	2.16E+02	2.51E-04	7.33E-01	1.25E-04	6.62E-02	2.96E-02	4.65E-03	1.24E-02	6.07E-03	6.24E-03	9.77E-03	9.92E-04	1.62E-07	6.19E-03	1.24E-02
E77	0.00E+00	6.35E-05	5.14E-06	1.59E+02	1.93E-04	5.56E-01	9.02E-05	4.33E-02	2.20E-02	3.46E-03	8.97E-03	4.54E-03	4.66E-03	6.44E-03	7.39E-04	1.22E-07	4.31E-03	8.08E-03
E78	0.00E+00	1.01E-04	8.08E-06	2.46E+02	2.90E-04	8.42E-01	1.41E-04	7.18E-02	3.37E-02	5.30E-03	1.40E-02	6.93E-03	7.12E-03	1.06E-02	1.13E-03	1.86E-07	6.91E-03	1.34E-02
E79	0.00E+00	4.72E-05	3.98E-06	1.37E+02	1.86E-04	5.13E-01	7.66E-05	2.13E-02	1.93E-02	3.03E-03	7.68E-03	4.08E-03	4.18E-03	3.55E-03	6.55E-04	1.21E-07	3.49E-03	3.93E-03
E80	0.00E+00	3.19E-05	2.22E-06	6.01E+01	5.98E-05	1.81E-01	3.84E-05	2.49E-02	7.83E-03	1.24E-03	3.99E-03	1.61E-03	1.66E-03	3.77E-03	2.64E-04	4.44E-08	2.33E-03	4.65E-03
E81	0.00E+00	2.99E-07	3.19E-08	1.10E+00	1.96E-06	5.19E-03	6.37E-07	3.16E-05	2.13E-04	3.18E-05	6.12E-05	3.97E-05	4.07E-05	7.55E-06	5.48E-06	1.06E-09	2.05E-05	5.26E-06
E82	0.00E+00	8.68E-06	8.05E-07	2.54E+01	4.22E-05	1.13E-01	1.56E-05	2.94E-03	4.84E-03	7.23E-04	1.53E-03	8.93E-04	9.16E-04

Appendix F.4.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E98	0.00E+00	8.75E-05	6.45E-06	2.06E+02	2.09E-04	6.40E-01	1.14E-04	6.56E-02	2.05E-02	3.45E-03	1.17E-02	5.22E-03	5.36E-03	1.15E-02	9.21E-04	1.55E-07	6.34E-03	1.23E-02
F01	0.00E+00	3.85E-05	2.76E-06	6.88E+01	8.61E-05	2.48E-01	4.94E-05	2.78E-02	1.23E-02	1.85E-03	5.10E-03	2.19E-03	2.25E-03	3.73E-03	3.09E-04	5.44E-08	2.85E-03	5.20E-03
F02	0.00E+00	3.25E-05	2.63E-06	7.47E+01	1.11E-04	3.06E-01	4.94E-05	1.75E-02	1.38E-02	2.08E-03	4.97E-03	2.52E-03	2.59E-03	2.47E-03	3.52E-04	6.55E-08	2.38E-03	3.26E-03
F03	0.00E+00	2.99E-06	2.26E-07	7.01E+00	7.21E-06	2.23E-02	3.90E-06	2.36E-03	6.79E-04	1.15E-04	3.94E-04	1.81E-04	1.86E-04	4.01E-04	3.12E-05	5.10E-09	2.09E-04	4.41E-04
F04	0.00E+00	1.24E-06	9.91E-08	3.03E+00	3.11E-06	9.72E-03	1.61E-06	1.09E-03	2.97E-04	4.98E-05	1.58E-04	7.79E-05	8.01E-05	1.74E-04	1.35E-05	1.93E-09	7.76E-05	2.03E-04
F05	0.00E+00	2.04E-05	1.77E-06	5.24E+01	8.16E-05	2.23E-01	3.32E-05	9.92E-03	9.83E-03	1.47E-03	3.29E-03	1.79E-03	1.84E-03	1.41E-03	2.50E-04	4.62E-08	1.45E-03	1.84E-03
F06	0.00E+00	3.22E-05	2.31E-06	5.86E+01	7.58E-05	2.15E-01	4.22E-05	2.17E-02	1.05E-02	1.58E-03	4.38E-03	1.89E-03	1.94E-03	2.97E-03	2.65E-04	4.85E-08	2.43E-03	4.06E-03
F07	0.00E+00	2.42E-05	2.15E-06	6.64E+01	1.08E-04	2.91E-01	4.18E-05	8.93E-03	1.25E-02	1.88E-03	4.16E-03	2.32E-03	2.38E-03	1.38E-03	3.21E-04	6.18E-08	1.78E-03	1.64E-03
F08	0.00E+00	4.09E-05	2.96E-06	7.57E+01	9.88E-05	2.80E-01	5.41E-05	2.75E-02	1.36E-02	2.05E-03	5.59E-03	2.45E-03	2.51E-03	3.76E-03	3.43E-04	6.24E-08	3.07E-03	5.15E-03
F09	0.00E+00	3.60E-06	2.89E-07	9.29E+00	1.04E-05	3.15E-02	5.00E-06	2.70E-03	9.25E-04	1.56E-04	4.98E-04	2.48E-04	2.55E-04	4.51E-04	4.23E-05	6.86E-09	2.43E-04	5.05E-04
F10	0.00E+00	1.72E-05	1.48E-06	5.10E+01	6.41E-05	1.88E-01	2.69E-05	1.03E-02	5.24E-03	8.81E-04	2.66E-03	1.44E-03	1.47E-03	1.76E-03	2.40E-04	4.19E-08	1.19E-03	1.91E-03
F13	0.00E+00	1.05E-06	8.04E-08	2.54E+00	2.72E-06	8.33E-03	1.40E-06	7.92E-04	2.49E-04	4.21E-05	1.41E-04	6.66E-05	6.85E-05	1.35E-04	1.14E-05	1.90E-09	7.29E-05	1.48E-04
F14	0.00E+00	9.74E-07	7.27E-08	2.23E+00	2.25E-06	7.00E-03	1.25E-06	7.83E-04	2.15E-04	3.65E-05	1.27E-04	5.70E-05	5.86E-05	1.33E-04	9.90E-06	1.60E-09	6.79E-05	1.47E-04
F15	0.00E+00	2.43E-05	2.19E-06	7.21E+01	1.02E-04	2.85E-01	4.00E-05	1.26E-02	1.06E-02	1.65E-03	3.91E-03	2.22E-03	2.28E-03	1.91E-03	3.44E-04	6.01E-08	1.63E-03	2.32E-03
F16	0.00E+00	2.87E-05	2.30E-06	6.53E+01	7.62E-05	2.27E-01	3.83E-05	2.27E-02	9.15E-03	1.43E-03	3.78E-03	1.87E-03	1.92E-03	3.25E-03	2.96E-04	4.57E-08	1.86E-03	4.24E-03
F17	0.00E+00	1.41E-05	1.17E-06	3.41E+01	4.14E-05	1.22E-01	1.95E-05	1.08E-02	4.83E-03	7.53E-04	1.91E-03	9.89E-04	1.02E-03	1.53E-03	1.56E-04	2.42E-08	8.90E-04	2.01E-03
F18	0.00E+00	3.25E-05	2.48E-06	6.52E+01	6.64E-05	2.08E-01	3.91E-05	2.95E-02	8.87E-03	1.39E-03	3.87E-03	1.78E-03	1.83E-03	4.15E-03	2.85E-04	3.98E-08	2.05E-03	5.53E-03
F19	0.00E+00	1.15E-05	1.23E-06	4.69E+01	7.60E-05	2.06E-01	2.46E-05	1.31E-03	7.16E-03	1.11E-03	2.37E-03	1.54E-03	1.58E-03	3.02E-04	2.34E-04	4.40E-08	7.96E-04	2.16E-04
F20	0.00E+00	1.71E-05	1.83E-06	6.98E+01	1.13E-04	3.06E-01	3.66E-05	1.95E-03	1.07E-02	1.65E-03	3.53E-03	2.29E-03	2.34E-03	4.49E-04	3.49E-04	6.55E-08	1.18E-03	3.21E-04
F21	0.00E+00	5.56E-05	3.66E-06	9.07E+01	8.19E-05	2.58E-01	6.28E-05	4.54E-02	1.17E-02	1.86E-03	6.62E-03	2.42E-03	2.49E-03	6.90E-03	3.87E-04	6.54E-08	4.13E-03	8.51E-03
F22	0.00E+00	7.30E-05	4.89E-06	1.26E+02	1.22E-04	3.75E-01	8.55E-05	5.68E-02	1.64E-02	2.62E-03	8.98E-03	3.43E-03	3.52E-03	8.71E-03	5.45E-04	9.46E-08	5.46E-03	1.06E-02
F23	0.00E+00	1.48E-05	1.02E-06	2.69E+01	2.74E-05	8.34E-02	1.78E-05	1.15E-02	3.57E-03	5.67E-04	1.85E-03	7.43E-04	7.63E-04	1.74E-03	1.18E-04	2.01E-08	1.08E-03	2.15E-03
F24	0.00E+00	2.04E-05	1.43E-06	3.87E+01	4.13E-05	1.24E-01	2.52E-05	1.52E-02	5.19E-03	8.23E-04	2.61E-03	1.09E-03	1.11E-03	2.32E-03	1.71E-04	2.97E-08	1.50E-03	2.84E-03
F25	0.00E+00	5.59E-05	3.94E-06	9.80E+01	1.23E-04	3.51E-01	7.14E-05	3.92E-02	1.74E-02	2.63E-03	7.42E-03	3.13E-03	3.21E-03	5.32E-03	4.39E-04	7.93E-08	4.21E-03	7.34E-03
F26	0.00E+00	7.40E-05	4.83E-06	1.09E+02	1.15E-04	3.44E-01	8.54E-05	5.83E-02	1.87E-02	2.84E-03	9.06E-03	3.31E-03	3.40E-03	7.81E-03	4.68E-04	8.22E-08	5.66E-03	1.09E-02
F27	0.00E+00	1.51E-04	9.90E-06	2.25E+02	2.41E-04	7.18E-01	1.76E-04	1.18E-01	3.86E-02	5.87E-03	1.87E-02	6.86E-03	7.05E-03	1.58E-02	9.70E-04	1.72E-07	1.16E-02	2.21E-02
F28	0.00E+00	1.34E-04	9.47E-06	2.36E+02	2.99E-04	8.51E-01	1.73E-04	9.22E-02	4.20E-02	6.35E-03	1.80E-02	7.58E-03	7.78E-03	1.26E-02	1.06E-03	1.95E-07	1.02E-02	1.73E-02
F29	0.00E+00	3.10E-05	2.68E-06	8.02E+01	1.26E-04	3.43E-01	5.09E-05	1.42E-02	1.50E-02	2.25E-03	5.06E-03	2.76E-03	2.83E-03	2.05E-03	3.84E-04	7.18E-08	2.23E-03	2.63E-03
F30	0.00E+00	3.30E-05	2.44E-06	6.30E+01	8.31E-05	2.36E-01	4.42E-05	2.23E-02	1.13E-02	1.71E-03	4.54E-03	2.04E-03	2.09E-03	3.03E-03	2.86E-04	5.14E-08	2.44E-03	4.18E-03
F35	0.00E+00	3.66E-06	3.22E-07	1.18E+01	1.61E-05	4.59E-02	6.27E-06	1.54E-03	1.24E-03	2.08E-04	6.25E-04	3.46E-04	3.55E-04	2.90E-04	5.69E-05	1.08E-08	2.71E-04	2.83E-04
F36	0.00E+00	1.94E-05	1.51E-06	5.11E+01	6.08E-05	1.80E-01	2.83E-05	1.16E-02	5.12E-03	8.68E-04	2.89E-03	1.40E-03	1.44E-03	2.11E-03	2.37E-04	4.37E-08	1.44E-03	2.16E-03
F37	0.00E+00	8.34E-05	6.53E-06	1.77E+02	2.50E-04	6.99E-01	1.19E-04	5.22E-02	3.25E-02	4.88E-03	1.20E-02	5.86E-03	6.02E-03	7.11E-03	8.22E-04	1.48E-07	6.03E-03	9.74E-03
F38	0.00E+00	7.37E-05	5.42E-06	1.39E+02	1.80E-04	5.13E-01	9.73E-05	5.15E-02	2.49E-02	3.75E-03	9.98E-03	4.45E-03	4.57E-03	6.92E-03	6.27E-04	1.11E-07	5.40E-03	9.63E-03
F39	0.00E+00	4.79E-06	3.98E-07	1.36E+01	1.67E-05	4.91E-02	7.28E-06	2.93E-03	1.38E-03	2.33E-04	7.26E-04	3.79E-04	3.89E-04	5.09E-04	6.35E-05	1.12E-08	3.38E-04	5.44E-04
F40	0.00E+00	2.05E-05	1.83E-06	6.51E+01	8.59E-05	2.48E-01	3.40E-05	1.07E-02	6.79E-03	1.14E-03	3.34E-03	1.88E-03	1.93E-03	1.85E-03	3.10E-04	5.54E-08	1.42E-03	1.98E-03
F41	0.00E+00	1.76E-05	1.49E-06	4.59E+01	5.95E-05	1.71E-01	2.61E-05	1.17E-02	6.59E-03	1.03E-03	2.56E-03	1.37E-03	1.40E-03	1.71E-03	2.14E-04	3.53E-08	1.15E-03	2.18E-03
F42	0.00E+00	7.52E-06	8.05E-07	3.07E+01	4.98E-05	1.35E-01	1.61E-05	8.57E-04	4.70E-03	7.28E-04	1.55E-03	1.01E-03	1.03E-03	1.98E-04	1.54E-04	2.89E-08	5.21E-04	1.41E-04
F45	0.00E+00	1.20E-05	1.17E-06	4.18E+01	6.39E-05	1.75E-01	2.27E-05	3.80E-03	6.27E-03	9.75E-04	2.20E-03	1.34E-03	1.37E-03	6.40E-04	2.05E-04	3.76E-08	8.32E-04	6.90E-04
F46	0.00E+00	1.04E-05	1.07E-06	3.97E+01	6.27E-05	1.71E-01	2.11E-05	2.33E-03	6.03E-03	9.35E-04	2.03E-03	1.29E-03	1.32E-03	4.18E-04	1.97E-04	3.63E-08	7.11E-04	4.13E-04
F47	0.00E+00	1.38E-06	1.01E-07	2.48E+00	2.99E-06	8.82E-03	1.74E-06	1.09E-03	4.42E-04	6.65E-05	1.77E-04	7.74E-05	7.95E-05	1.42E-04	1.10E-05	1.81E-09	9.77E-05	2.05E-04
F48	0.00E+00	4.37E-07	3.07E-08	6.33E-01	4.92E-07	1.80E-03	4.44E-07	4.89E-04	1.08E-04	1.62E-05	4.46E-05	1.70E-05	1.75E-05	5.91E-05	2.57E-06	2.65E-10	2.71E-05	9.19E-05
F49	0.00E+00	1.22E-04	8.28E-06	1.97E+02	2.29E-04	6.68E-01	1.48E-04	9.09E-02	3.44E-02	5.21E-03	1.55E-02	6.14E-03	6.31E-03	1.22E-02	8.66E-04	1.54E-07	9.23E-03	1.70E-02
F50	0.00E+00	1.16E-04	8.25E-06	2.08E+02	2.66E-04	7.55E-01	1.51E-04	7.84E-02	3.70E-02	5.59E-03	1.57E-02	6.69E-03	6.87E-03	1.08E-02	9.37E-04	1.73E-07	8.87E-03	1.47E-02
F51	0.00E+00	6.62E-05	4.14E-06	9.88E+01	8.13E-05	2.61E-01	7.21E-05	5.39E-02	1.23E-02	1.99E-03	7.73E-03	2.58E-03	2.65E-03	8.32E-03	4.13E-04	7.29E-08	5.08E-03	1.01E-02
F52	0.00E+00	5.63E-05	4.70E-06	1.51E+02	2.08E-04	5.84E-01	8.84E-05	2.85E-02	2.19E-02	3.42E-03	8.85E-03	4.65E-03	4.77E-03	4.57E-03	7.19E-04	1.32E-07	4.08E-03	5.28E-03
F53	0.00E+00	1.46E-05	1.32E-06	4.54E+01	6.70E-05	1.85E-01	2.55E-05	5.58E-03	6.71E-03	1.05E-03	2.51E-03	1.43E-03	1.47E-03	9.34E-04	2.20E-04	4.08E-08	1.04E-03	1.02E-03
F54	0.00E+00	3.03E-05	3.05E-06	1.13E+02	1.78E-04	4.83E-01	6.05E-05	6.51E-03	1.70E-02	2.65E-03	5.87E-03	3.65E-03	3.74E-03	1.23E-03	5.58E-04	1.04E-07	2.13E-03	1.15E-03
F71	0.00E+00	1.62E-05	1.54E-06	5.65E+01	8.13E-05	2.23E-01	2.96E-05	5.94E-03	8.15E-03	1.27E-03	2.88E-03	1.72E-03	1.76E-03	9.76E-04	2.76E-04	4.96E-08	1.12E-03	1.08E-03
F72	0.00E+00	5.78E-05	3.99E-06	8.23E+01	1.07E-04	2.93E-01	6.95E-05	4.10E-02	2.20E-02	3.12E-03	7.19E-03	2.90E-03	2.97E-03	4.35E-03	3.69E-04	5.93E-08	4.22E-03	7.68E-03
F73	0.00E+00	9.71E-07	1.04E-07	3.91E+00	6.37E-06	1.68E-02	2.07E-06	1.07E-04	7.23E-04	1.08E-04	1.99E-04	1.29E-04	1.32E-04	2.64E-05	1.95E-05	3.49E-09	6.66E-05	1.77E-05
F74	0.00E+00	6.99E-05	4.46E-06	1.10E+02	9.05E-05	2.89E-01	7.68E-05	5.76E-02	1.36E-02	2.19E-03	8.18E-03	2.81E-03	2.89E-03	8.82E-03	4.62E-04	7.90E-08	5.29E-03	1.08E-02
F75	0.00E+00	2.15E-06	1.53E-07	4.24E+00	5.38E-06	1.49E-02	2.90E-06	1.30E-03	7.39E-04	1.12E-04	3.02E-04	1.31E-04	1.35E-04	1.85E-04	1.95E-05	3.54E-09	1.67E-04	2.43E-04
F76	0.00E+00	7.05E-07	7.49E-08	2.57E+00	4.48E-06	1.16E-02	1.47E-06	6.79E-05	7.33E-04	1.02E-04	1.41E-04	9.13E-05	9.36E-05	2.01E-05	1.27E-05	2.01E-09	4.69E-05	1.15E-05
F77	0.00E+00	5.32E-05	3.70E-06	1.04E+02	1.09E-04	3.23E-01	6.64E-05	3.81E-02	1.36E-02	2.17E-03	6.92E-03	2.84E-03	2.92E-03	5.93E-03	4.63E-04	8.21E-08	4.00E-03	7.12E-03
F78	0.00E+00	1.73E-05	1.77E-06	5.92E+01	1.02E-04	2.64E-01	3.46E-05	2.57E-03	1.68E-02	2.35E-03	3.33E-03	2.11E-03	2.16E-03	5.64E-04	2.91E-04	4.63E-08	1.17E-03	4.55E-04
F79	0.00E+00	2.71E-05	2.50E-06	8.49E+01	1.29E-04	3.46E-01	4.81E-05	9.88E-03	1.55E-02	2.31E-03	4.73E-03	2.74E-03	2.81E-03	1.53E-03	4.13E-04	7.30E-08	1.92E-03	1.81E-03
F80	0.00E+00	2.62E-05	2.49E-06	9.30E+01	1.36E-04	3.70E-01	4.89E-05	7.94E-03	1.34E-02	2.10E-03	4.79E-03	2.85E-03	2.92E-03	1.40E-03	4.56E-04	8.41E-08	1.87E-03	1.44E-03
F81	0.00E+00	7.36E-05	4.41E-06	9.35E+01	7.83E-05	2.45E-01	7.83E-05	6.02E-02	1.52E-02	2.32E-03	8.54E-03	2.63E-03	2.71E-03	8.13E-03	3.88E-04	6.76E-08	5.84E-03	1.13E-02
F82	0.00E+00	1.34E-05	8.96E-07	1.72E+01	2.08E-05	5.85E-02	1.53E-05	1.02E-02	4.55E-03	6.48E-04	1.59E-03	6.02E-04	6.18E-04	1.06E-03	7.56E-05	1.20E-08	9.70E-04	1.92E-03
F83	0.00E+00	1.29E-05	9.45E-07	2.75E+01	3.05E-05	8.93E-02	1.68E-05	9.12E-03	3.68E-03	5.82E-04	1.72E-03	7.64E-04	7.84E-04	1.40E-03	1.24E-04	2.14E-08	9.35E-04	1.70E-03
F84	0.00E+00	4.13E-05	2.79E-06	3.96E+01	2.17E-05	1.06E-01	3.65E-05	4.87E-02	1.02E-02	1.45E-03	3.64E-03	1.18E-03	1.23E-03	4.46E-03	1.52E-04	9.89E-09	2.41E-03	9.17E-03
F85	0.00E+00	2.69E-05	2.01E-06	5.06E+01	5.33E-05	1.65E-01	3.22E-05	2.49E-02	8.75E-03	1.31E-03	3.22E-03	1.44E-03	1.48E-03	3.10E-03	2.22E-04	3.02E-08	1.75E-03	4.66E-03
F86	0.00E+00	3.04E-05	2.32E-06	6.79E+01	7.63E-05	2.24E-01	4.02E-05	2.23E-02	9.17E-03	1.45E-03	4.06E-03	1.89E-03	1.94E-03	3.34E-03	3.08E-04	5.10E-08	2.12E-03	4.17E-03
F87	0.00E+00	8.14E-06	5.05E-07	1.15E+01	1.12E-05	3.33E-02	9.20E-06	6.16E-03	1.91E-03	2.91E-04	9.96E-04	3.36E-04	3.45E-04	8.46E-04	4.94E-05	8.92E-09	6.51E-04	1.16E-03
F88	0.00E+00	2.86E-05	1.80E-06	2.88E+01	2.71E-05	8.37E-02	2.90E-05	2.50E-02	7.34E-03	1.06E-03	3.07E-03	9.86E-04	1.01E-03	2.50E-03	1.19E-04	1.78E-08	2.05E-03	4.70E-03

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A07	110	Passenger Car	1511	0.00E+00	1.49E-05	1.62E-06	6.41E+01	1.06E-04	3.63E-01	3.37E-05	1.79E-03	3.67E-03	8.05E-04	3.28E-03	2.12E-03	2.17E-03	1.63E-04	3.25E-04	7.34E-08	1.11E-03	2.79E-04
17	A07	110	Passenger Truck	2531	0.00E+00	3.10E-05	3.33E-06	1.50E+02	2.09E-04	7.15E-01	6.75E-05	4.34E-03	6.24E-03	1.41E-03	6.52E-03	4.22E-03	4.33E-03	9.16E-04	7.51E-04	1.46E-07	2.20E-03	7.08E-04
17	A07	110	Single Unit Short Haul Truck	239	0.00E+00	2.21E-05	8.93E-07	4.11E+01	2.01E-05	9.92E-02	2.53E-05	1.07E-02	1.32E-03	3.91E-04	3.10E-03	6.51E-04	6.60E-04	4.27E-03	1.66E-04	7.36E-08	2.44E-03	1.99E-03
17	A07	110	Single Unit Long Haul Truck	11	0.00E+00	9.52E-07	3.71E-08	1.72E+00	8.08E-07	3.94E-03	1.09E-06	4.44E-04	5.95E-05	1.68E-05	1.35E-04	2.69E-05	2.73E-05	1.78E-04	6.94E-06	3.00E-09	1.08E-04	8.28E-05
17	A07	110	Combination Short Haul Truck	186	0.00E+00	3.31E-05	2.55E-06	6.54E+01	6.43E-08	4.85E-02	2.30E-05	5.32E-02	1.63E-03	4.77E-04	1.82E-03	7.35E-04	7.63E-04	1.04E-02	2.19E-04	0.00E+00	1.06E-03	1.00E-02
17	A07	110	Combination Long Haul Truck	170	0.00E+00	4.48E-05	2.84E-06	5.91E+01	2.18E-07	5.59E-02	3.50E-05	5.78E-02	1.59E-03	3.49E-04	3.56E-03	8.76E-04	9.12E-04	9.48E-03	1.98E-04	0.00E+00	2.65E-03	1.09E-02
17	A08	110	Passenger Car	1192	0.00E+00	1.18E-05	1.28E-06	5.06E+01	8.36E-05	2.86E-01	2.66E-05	1.41E-03	2.90E-03	6.35E-04	2.59E-03	1.67E-03	1.71E-03	1.29E-04	2.56E-04	5.79E-08	8.76E-04	2.20E-04
17	A08	110	Passenger Truck	1997	0.00E+00	2.45E-05	2.63E-06	1.18E+02	1.65E-04	5.64E-01	5.32E-05	3.42E-03	4.93E-03	1.11E-03	5.15E-03	3.33E-03	3.41E-03	7.23E-04	5.93E-04	1.15E-07	1.73E-03	5.59E-04
17	A08	110	Single Unit Short Haul Truck	306	0.00E+00	2.81E-05	1.14E-06	5.25E+01	2.56E-05	1.27E-01	3.23E-05	1.36E-02	1.69E-03	4.98E-04	3.96E-03	8.30E-04	8.42E-04	5.45E-03	2.11E-04	9.40E-08	3.11E-03	2.54E-03
17	A08	110	Single Unit Long Haul Truck	13	0.00E+00	1.21E-06	4.73E-08	2.20E+00	1.03E-06	5.03E-03	1.39E-06	5.67E-04	7.59E-05	2.14E-05	1.72E-04	3.43E-05	3.48E-05	2.27E-04	8.86E-06	3.83E-09	1.37E-04	1.06E-04
17	A08	110	Combination Short Haul Truck	214	0.00E+00	3.81E-05	2.94E-06	7.54E+01	7.41E-08	5.58E-02	2.65E-05	6.12E-02	1.88E-03	5.50E-04	2.10E-03	8.47E-04	8.78E-04	1.20E-02	2.52E-04	0.00E+00	1.22E-03	1.15E-02
17	A08	110	Combination Long Haul Truck	196	0.00E+00	5.16E-05	3.28E-06	6.80E+01	2.51E-07	6.44E-02	4.03E-05	6.66E-02	1.83E-03	4.02E-04	4.10E-03	1.01E-03	1.05E-03	1.09E-02	2.28E-04	0.00E+00	3.05E-03	1.25E-02
17	A09	110	Passenger Car	1556	0.00E+00	1.54E-05	1.67E-06	6.60E+01	1.09E-04	3.73E-01	3.47E-05	1.84E-03	3.78E-03	8.29E-04	3.38E-03	2.18E-03	2.24E-03	1.68E-04	3.35E-04	7.56E-08	1.14E-03	2.87E-04
17	A09	110	Passenger Truck	2605	0.00E+00	3.20E-05	3.43E-06	1.54E+02	2.16E-04	7.36E-01	6.95E-05	4.47E-03	6.43E-03	1.45E-03	6.71E-03	4.34E-03	4.45E-03	9.43E-04	7.73E-04	1.50E-07	2.26E-03	7.29E-04
17	A09	110	Single Unit Short Haul Truck	280	0.00E+00	2.58E-05	1.04E-06	4.80E+01	2.35E-05	1.16E-01	2.96E-05	1.25E-02	1.55E-03	4.56E-04	3.62E-03	7.60E-04	7.71E-04	4.99E-03	1.93E-04	8.60E-08	2.85E-03	2.32E-03
17	A09	110	Single Unit Long Haul Truck	12	0.00E+00	1.11E-06	4.33E-08	2.01E+00	9.44E-07	4.60E-03	1.27E-06	5.19E-04	6.95E-05	1.96E-05	1.58E-04	3.14E-05	3.19E-05	2.08E-04	8.11E-06	3.51E-09	1.26E-04	9.67E-05
17	A09	110	Combination Short Haul Truck	222	0.00E+00	3.95E-05	3.05E-06	7.81E+01	7.68E-08	5.79E-02	2.75E-05	6.35E-02	1.95E-03	5.70E-04	2.18E-03	8.78E-04	9.11E-04	1.24E-02	2.61E-04	0.00E+00	1.26E-03	1.20E-02
17	A09	110	Combination Long Haul Truck	203	0.00E+00	5.35E-05	3.40E-06	7.05E+01	2.60E-07	6.67E-02	4.18E-05	6.90E-02	1.89E-03	4.16E-04	4.25E-03	1.05E-03	1.09E-03	1.13E-02	2.36E-04	0.00E+00	3.16E-03	1.30E-02
17	A10	110	Passenger Car	1366	0.00E+00	1.35E-05	1.47E-06	5.80E+01	9.58E-05	3.28E-01	3.04E-05	1.62E-03	3.32E-03	7.28E-04	2.97E-03	1.91E-03	1.96E-03	1.48E-04	2.94E-04	6.64E-08	1.00E-03	2.52E-04
17	A10	110	Passenger Truck	2288	0.00E+00	2.81E-05	3.01E-06	1.35E+02	1.89E-04	6.47E-01	6.10E-05	3.92E-03	5.65E-03	1.28E-03	5.90E-03	3.81E-03	3.91E-03	8.28E-04	6.79E-04	1.32E-07	1.99E-03	6.40E-04
17	A10	110	Single Unit Short Haul Truck	369	0.00E+00	3.40E-05	1.38E-06	6.33E+01	3.09E-05	1.53E-01	3.90E-05	1.64E-02	2.04E-03	6.01E-04	4.77E-03	1.00E-03	1.02E-03	6.58E-03	2.55E-04	1.13E-07	3.76E-03	3.06E-03
17	A10	110	Single Unit Long Haul Truck	16	0.00E+00	1.47E-06	5.71E-08	2.65E+00	1.24E-06	6.07E-03	1.67E-06	6.84E-04	9.16E-05	2.59E-05	2.08E-04	4.14E-05	4.20E-05	2.75E-04	1.07E-05	4.63E-09	1.66E-04	1.28E-04
17	A10	110	Combination Short Haul Truck	263	0.00E+00	4.68E-05	3.61E-06	9.25E+01	9.09E-08	6.85E-02	3.25E-05	7.51E-02	2.31E-03	6.75E-04	2.57E-03	1.04E-03	1.08E-03	1.47E-02	3.09E-04	0.00E+00	1.50E-03	1.42E-02
17	A10	110	Combination Long Haul Truck	240	0.00E+00	6.33E-05	4.02E-06	8.35E+01	3.08E-07	7.90E-02	4.95E-05	8.17E-02	2.24E-03	4.93E-04	5.03E-03	1.24E-03	1.29E-03	1.34E-02	2.80E-04	0.00E+00	3.74E-03	1.54E-02
17	A11	110	Passenger Car	1507	0.00E+00	1.49E-05	1.62E-06	6.40E+01	1.06E-04	3.62E-01	3.36E-05	1.78E-03	3.66E-03	8.03E-04	3.28E-03	2.11E-03	2.17E-03	1.63E-04	3.24E-04	7.33E-08	1.11E-03	2.78E-04
17	A11	110	Passenger Truck	2525	0.00E+00	3.10E-05	3.32E-06	1.49E+02	2.09E-04	7.14E-01	6.73E-05	4.33E-03	6.23E-03	1.41E-03	6.51E-03	4.21E-03	4.32E-03	9.14E-04	7.49E-04	1.45E-07	2.19E-03	7.06E-04
17	A11	110	Single Unit Short Haul Truck	325	0.00E+00	2.99E-05	1.21E-06	5.58E+01	2.72E-05	1.35E-01	3.43E-05	1.45E-02	1.80E-03	5.30E-04	4.20E-03	8.82E-04	8.95E-04	5.80E-03	2.24E-04	9.99E-08	3.31E-03	2.70E-03
17	A11	110	Single Unit Long Haul Truck	14	0.00E+00	1.29E-06	5.03E-08	2.34E+00	1.10E-06	5.34E-03	1.47E-06	6.02E-04	8.07E-05	2.28E-05	1.83E-04	3.64E-05	3.70E-05	2.42E-04	9.42E-06	4.07E-09	1.46E-04	1.12E-04
17	A11	110	Combination Short Haul Truck	271	0.00E+00	4.82E-05	3.72E-06	9.52E+01	9.36E-08	7.05E-02	3.35E-05	7.73E-02	2.38E-03	6.95E-04	2.65E-03	1.07E-03	1.11E-03	1.51E-02	3.18E-04	0.00E+00	1.54E-03	1.46E-02
17	A11	110	Combination Long Haul Truck	247	0.00E+00	6.52E-05	4.14E-06	8.59E+01	3.17E-07	8.13E-02	5.09E-05	8.42E-02	2.31E-03	5.07E-04	5.18E-03	1.28E-03	1.33E-03	1.38E-02	2.88E-04	0.00E+00	3.85E-03	1.59E-02
17	A12	110	Passenger Car	1746	0.00E+00	1.73E-05	1.87E-06	7.41E+01	1.22E-04	4.19E-01	3.89E-05	2.07E-03	4.24E-03	9.30E-04	3.79E-03	2.45E-03	2.51E-03	1.89E-04	3.76E-04	8.48E-08	1.28E-03	3.22E-04
17	A12	110	Passenger Truck	2924	0.00E+00	3.59E-05	3.85E-06	1.73E+02	2.42E-04	8.26E-01	7.80E-05	5.01E-03	7.21E-03	1.63E-03	7.54E-03	4.87E-03	5.00E-03	1.06E-03	8.68E-04	1.68E-07	2.54E-03	8.18E-04
17	A12	110	Single Unit Short Haul Truck	414	0.00E+00	3.81E-05	1.54E-06	7.10E+01	3.47E-05	1.71E-01	4.37E-05	1.84E-02	2.29E-03	6.75E-04	5.36E-03	1.12E-03	1.14E-03	7.39E-03	2.86E-04	1.27E-07	4.22E-03	3.44E-03
17	A12	110	Single Unit Long Haul Truck	18	0.00E+00	1.65E-06	6.41E-08	2.98E+00	1.40E-06	6.81E-03	1.88E-06	7.68E-04	1.03E-04	2.90E-05	2.33E-04	4.64E-05	4.71E-05	3.08E-04	1.20E-05	5.19E-09	1.86E-04	1.43E-04
17	A12	110	Combination Short Haul Truck	316	0.00E+00	5.62E-05	4.34E-06	1.11E+02	1.09E-07	8.24E-02	3.91E-05	9.03E-02	2.78E-03	8.11E-04	3.10E-03	1.25E-03	1.30E-03	1.77E-02	3.72E-04	0.00E+00	1.80E-03	1.70E-02
17	A12	110	Combination Long Haul Truck	289	0.00E+00	7.62E-05	4.83E-06	1.00E+02	3.71E-07	9.50E-02	5.95E-05	9.83E-02	2.70E-03	5.92E-04	6.04E-03	1.49E-03	1.55E-03	1.61E-02	3.36E-04	0.00E+00	4.50E-03	1.85E-02
17	A13	110	Passenger Car	1702	0.00E+00	1.68E-05	1.83E-06	7.22E+01	1.19E-04	4.08E-01	3.79E-05	2.01E-03	4.13E-03	9.06E-04	3.70E-03	2.38E-03	2.45E-03	1.84E-04	3.66E-04	8.27E-08	1.25E-03	3.14E-04
17	A13	110	Passenger Truck	2849	0.00E+00	3.50E-05	3.75E-06	1.68E+02	2.36E-04	8.05E-01	7.60E-05	4.88E-03	7.03E-03	1.59E-03	7.34E-03	4.75E-03	4.87E-03	1.03E-03	8.46E-04	1.64E-07	2.47E-03	7.97E-04
17	A13	110	Single Unit Short Haul Truck	329	0.00E+00	3.03E-05	1.23E-06	5.66E+01	2.76E-05	1.36E-01	3.48E-05	1.47E-02	1.82E-03	5.37E-04	4.27E-03	8.95E-04	9.09E-04	5.88E-03	2.28E-04	1.01E-07	3.36E-03	2.74E-03
17	A13	110	Single Unit Long Haul Truck	15	0.00E+00	1.31E-06	5.10E-08	2.37E+00	1.11E-06	5.42E-03	1.50E-06	6.11E-04	8.19E-05	2.31E-05	1.86E-04	3.70E-05	3.75E-05	2.45E-04	9.55E-06	4.13E-09	1.48E-04	1.14E-04
17	A13	110	Combination Short Haul Truck	271	0.00E+00	4.82E-05	3.72E-06	9.52E+01	9.36E-08	7.05E-02	3.35E-05	7.73E-02	2.38E-03	6.95E-04	2.65E-03	1.07E-03	1.11E-03	1.51E-02	3.18E-04	0.00E+00	1.54E-03	1.46E-02
17	A13	110	Combination Long Haul Truck	247	0.00E+00	6.52E-05	4.14E-06	8.59E+01	3.17E-07	8.13E-02	5.09E-05	8.42E-02	2.31E-03	5.07E-04	5.18E-03	1.28E-03	1.33E-03	1.38E-02	2.88E-04	0.00E+00	3.85E-03	1.59E-02
17	A14	110	Passenger Car	1547	0.00E+00	1.53E-05	1.66E-06	6.56E+01	1.08E-04	3.71E-01	3.45E-05	1.83E-03	3.76E-03	8.24E-04	3.36E-03	2.17E-03	2.22E-03	1.67E-04	3.33E-04	7.52E-08	1.14E-03	2.86E-04
17	A14	110	Passenger Truck	2590	0.00E+00	3.18E-05	3.41E-06	1.53E+02	2.14E-04	7.32E-01	6.91E-05	4.44E-03	6.39E-03	1.44E-03	6.68E-03	4.32E-03	4.43E-03	9.38E-04	7.69E-04	1.49E-07	2.25E-03	7.25E-04
17	A14	110	Single Unit Short Haul Truck	441	0.00E+00	4.06E-05	1.64E-06	7.57E+01	3.70E-05	1.83E-01	4.66E-05	1.96E-02	2.44E-03	7.19E-04	5.70E-03	1.20E-03	1.21E-03	7.86E-03	3.05E-04	1.36E-07	4.49E-03	3.66E-03
17	A14	110	Single Unit Long Haul Truck	19	0.00E+00	1.75E-06	6.82E-08	3.17E+00	1.49E-06	7.25E-03	2.00E-06	8.17E-04	1.09E-04	3.09E-05	2.48E-04	4.94E-05	5.02E-05	3.28E-04	1.28E-05	5.53E-09	1.98E-04	1.52E-04
17	A14	110	Combination Short Haul Truck	320	0.00E+00	5.68E-05	4.38E-06	1.12E+02	1.10E-07	8.32E-02	3.95E-05	9.12E-02	2.80E-03	8.19E-04	3.13E-03	1.26E-03	1.31E-03	1.79E-02	3.76E-04	0.00E+00	1.82E-03	1.72E-02
17	A14	110	Combination Long Haul Truck	291	0.00E+00	7.69E-05	4.88E-06	1.01E+02	3.74E-07	9.59E-02	6.01E-05	9.93E-02	2.72E-03	5.98E-04	6.10E-03	1.50E-03	1.56E-03	1.63E-02	3.40E-04	0.00E+00	4.54E-03	1.87E-02
17	A15	110	Passenger Car	1512	0.00E+00	1.49E-05	1.62E-06	6.42E+01	1.06E-04	3.63E-01	3.37E-05	1.79E-03	3.67E-03	8.05E-04	3.29E-03	2.12E-03	2.17E-03	1.64E-04	3.25E-04	7.35E-08	1.11E-03	2.79E-04
17	A15	110	Passenger Truck	2533	0.00E+00	3.11E-05	3.33E-06	1.50E+02	2.10E-04	7.16E-01	6.75E-05	4.34E-03	6.25E-03	1.41E-03	6.53E-03	4.22E-03	4.33E-03	9.17E-04	7.52E-04	1.46E-07	2.20E-03	7.09E-04
17	A15	110	Single Unit Short Haul Truck	364	0.00E+00	3.35E-05	1.36E-06	6.25E+01	3.05E-05	1.51E-01	3.85E-05	1.62E-02	2.01E-03	5.94E-04	4.71E-03	9.89E-04	1.00E-03	6.50E-03	2.52E-04	1.12E-07	3.71E-03	3.02E-03
17	A15	110	Single Unit Long Haul Truck	16	0.00E+00	1.45E-06	5.64E-08	2.62E+00	1.23E-06	5.99E-03	1.65E-06	6.75E-04	9.04E-05	2.55E-05	2.05E-04	4.08E-05	4.15E-05	2.71E-04	1.06E-05	4.57E-09	1.64E-04	1.26E-04
17	A15	110	Combination Short Haul Truck	304	0.00E+00	5.40E-05	4.17E-06	1.07E+02	1.05E-07	7.91E-02	3.75E-05	8.67E-02	2.67E-03	7.79E-04	2.97E-03	1.20E-03	1.24E-03	1.70E-02	3.57E-04	0.00E+00	1.73E-03	1.63E-02
17	A15	110	Combination Long Haul Truck	277	0.00E+00	7.32E-05	4.64E-06	9.64E+01	3.56E-07	9.12E-02	5.71E-05	9.44E-02	2.59E-03	5.69E-04	5.81E-03	1.43E-03	1.49E-03	1.55E-02	3.23E-04	0.00E+00	4.32E-03	1.78E-02
17	A16	110	Passenger Car	1405	0.00E+00	1.39E-05	1.51E-06	5.96E+01	9.86E-05	3.37E-01	3.13E-05	1.66E-03	3.41E-03	7.49E-04	3.05E-03	1.97E-03	2.02E-03	1.52E-04	3.02E-04	6.83E-08	1.03E-03	2.60E-04
17	A16	110	Passenger Truck	2354	0.00E+00	2.89E-05	3.10E-06	1.39E+02	1.95E-04	6.65E-01	6.28E-05	4.03E-03	5.81E-03	1.31E-03	6.07E-03	3.92E-03	4.02E-03	8.52E-04	6.98E-04	1.35E-07	2.04E-03	6.59E-04
17	A16	110	Single Unit Short Haul Truck	466	0.00E+00	4.30E-05	1.74E-06	8.01E+01	3.91E-05	1.93E-01	4.93E-05	2.08E-02	2.58E-03	7.61E-04	6.04E-03	1.27E-03	1.29E-03	8.33E-03	3.22E-04	1.43E-07	4.75E-03	3.87E-03
17	A16	110	Single Unit Long Haul Truck	21	0.00E+00	1.85E-06	7.22E-08	3.35E+00	1.57E-06	7.68E-03	2.12E-06	8.65E-04	1.16E-04	3.27E-05	2.63E-04	5.23E-05	5.31E-05	3.47E-04	1.35E-05	5.85E-09	2.10E-04	1.61E-04
17	A16	110	Combination Short Haul Truck	346	0.00E+00	6.15E-05	4.75E-06	1.22E+02	1.20E-07	9.02E-02	4.28E-05	9.88E-02	3.04E-03	8.88E-04	3.39E-03	1.37E-03	1.42E-03	1.93E-02	4.07E-04	0.00E+00	1.97E-03	1.86E-02
17	A16	110	Combination Long Haul Truck	316	0.00E+00	8.34E-05	5.29E-06	1.10E+02	4.06E-07	1.04E-01	6.51E-05	1.08E-01	2.95E-03	6.48E-04	6.61E-03	1.63E-03	1.70E-03	1.76E-02	3.68E-04	0.00E+00	4.92E-03	2.03E-02
17	A17	110	Passenger Car	1404	0.00E+00	1.39E-05	1.51E-06	5.95E+01	9.84E-05	3.37E-01	3.13E-05	1.66E-03	3.41E-03	7.48E-04	3.05E-03	1.97E-03	2.02E-03	1.52E-04	3.02E-04	6.82E-08	1.03E-03	2.59E-04
17	A17	110	Passenger Truck	2350	0.00E+00	2.88E-05	3.09E-06	1.39E+02	1.94E-04	6.64E-01	6.27E-05	4.03E-03	5.80E-03	1.31E-03	6.06E-03	3.92E-03	4.02E-03	8.51E-04	6.98E-04	1.35E-07	2.04E-03	6.58E-04
17	A17	110	Single Unit Short Haul Truck	351	0.00E+00	3.23E-05	1.31E-06	6.02E+01	2.94E-05	1.45E-01	3.71E-05	1.56E-02	1.94E-03	5.72E-04	4.54E-03	9.53E-04	9.67E-04	6.26E-03	2.42E-04	1.08E-07	3.57E-03	2.91E-03
17	A17	110	Single Unit Long Haul Truck	15	0.00E+00	1.39E-06	5.43E-08	2.52E+00	1.18E-06	5.77E-03	1.59E-06	6.50E-04	8.71E-05	2.46E-05	1.98E-04	3.93E-05	3.99E-05	2.61E-04	1.02E-05	4.40E-09	1.58E-04	1.21E-04
17	A17	110	Combination Short Haul Truck	297	0.00E+00	5.28E-05	4.08E-06	1.04E+02	1.03E-07	7.74E-02	3.67E-05	8.48E-02	2.61E-03	7.62E-04	2.91E-03	1.17E-03	1.22E-03	1.66E-02	3.49E-04	0.00E+00	1.69E-03	1.60E-02
17	A17	110	Combination Long Haul Truck	271	0.00E+00	7.15E-05	4.54E-06	9.42E+01	3.48E-07	8.92E-02	5.59E-05	9.23E-02	2.53E-03	5.56E-04	5.68E-03	1.40E-03	1.45E-03	1.51E-02	3.16E-04	0.00E+00	4.22E-03	1.74E-02
17	A18	110	Passenger Car	1412	0.00E+00	1.40E-05	1.52E-06	5.99E+01	9.90E-05	3.39E-01	3.15E-05	1.67E-03	3.43E-03	7.52E-04	3.07E-03	1.98E-03	2.03E-03	1.53E-04	3.04E-04	6.86E-08	1.04E-03	2.61E-04
17	A18	110	Passenger Truck	2364	0.00E+00	2.90E-05	3.11E-06	1.40E+02	1.96E-04	6.68E-01	6.30E-05	4.05E-03	5.83E-03	1.32E-03	6.09E-03	3.94E-03	4.04E-03	8.56E-04	7.02E-04	1.36E-07	2.05E-03	6.62E-04
17	A18	110	Single Unit Short Haul Truck	453	0.00E+00	4.17E-05	1.69E-06	7.78E+01	3.80E-05	1.88E-01	4.79E-05	2.02E-02	2.51E-03	7.39E-04	5.86E-03	1.23E-03	1.25E-03	8.09E-03	3.13E-04	1.39E-07	4.62E-03	3.76E-03
17	A18	110	Single Unit Long Haul Truck	20	0.00E+00	1.80E-06	7.02E-08	3.26E+00	1.53E-06	7.45E-03	2.06E-06	8.40E-04	1.13E-04	3.18E-05	2.55E-04	5.08E-05	5.16E-05	3.37E-04	1.31E-05	5.68E-09	2.04E-04	1.57E-04
17	A18	110	Combination Short Haul Truck	339	0.00E+00	6.02E-05	4.65E-06	1.19E+02	1.17E-07	8.83E-02	4.19E-05	9.67E-02	2.97E-03	8.69E-04	3.32E-03	1.34E-03	1.39E-03	1.89E-02	3.98E-04	0.00E+00	1.93E-03	1.82E-02
17	A18	110	Combination Long Haul Truck	309	0.00E+00	8.16E-05	5.18E-06	1.08E+02	3.97E-07	1.02E-01	6.37E-05	1.05E-01	2.89E-03	6.35E-04	6.47E-03	1.60E-03	1.66E-03	1.73E-02	3.60E-04	0.00E+00	4.82E-03	1.98E-02
17	A19	110	Passenger Car	1250	0.00E+00	1.23E-05	1.34E-06	5.30E+01	8.76E-05	3.00E-01	2.78E-05	1.48E-03	3.04E-03	6.66E-04	2.72E-03	1.75E-03	1.80E-03	1.35E-04	2.69E-04	6.07E-08	9.18E-04	2.31E-04
17	A19	110	Passenger Truck	2092	0.00E+00	2.57E-05	2.76E-06	1.24E+02	1.73E-04	5.91E-01	5.58E-05	3.59E-03	5.16E-03	1.17E-03	5.39E-03	3.49E-03	3.58E-03	7.57E-04	6.21E-04	1.20E-07	1.82E-03	5.85E-04
17	A19	110	Single Unit Short Haul Truck	336	0.00E+00	3.10E-05	1.25E-06	5.77E+01	2.82E-05	1.39E-01	3.55E-05	1.50E-02	1.86E-03	5.48E-04	4.35E-03	9.14E-04	9.27E-04	6.00E-03	2.32E-04	1.03E-07	3.42E-03	2.79E-03
17	A19	110	Single Unit Long Haul Truck	15	0.00E+00	1.34E-06	5.21E-08	2.42E+00	1.13E-06	5.53E-03	1.53E-06	6.24E-04	8.35E-05	2.36E-05	1.90E-04	3.77E-05	3.83E-05	2.50E-04	9.75E-06	4.22E-09	1.51E-04	1.16E-04
17	A19	110	Combination Short Haul Truck	284	0.00E+00	5.05E-05	3.90E-06	9.98E+01	9.81E-08	7.40E-02	3.51E-05	8.11E-02	2.49E-03	7.28E-04	2.78E-03	1.12E-03	1.16E-03	1.59E-02	3.34E-04	0.00E+00	1.62E-03	1.53E-02
17	A19	110	Combination Long Haul Truck	259	0.00E+00	6.84E-05	4.34E-06	9.01E+01	3.33E-07	8.52E-02	5.34E-05	8.82E-02	2.42E-03	5.32E-04	5.43E-03	1.34E-03	1.39E-03	1.45E-02	3.02E-04	0.00E+00	4.03E-03	1.66E-02
17	A20	110	Passenger Car	1313	0.00E+00	1.30E-05	1.41E-06	5.57E+01	9.21E-05	3.15E-01	2.93E-05	1.55E-03	3.19E-03	7.00E-04	2.85E-03	1.84E-03	1.89E-03	1.42E-04	2.82E-04	6.38E-08	9.65E-04	2.43E-04
17	A20	110	Passenger Truck	2200	0.00E+00	2.70E-05	2.90E-06	1.30E+02	1.82E-04	6.22E-01	5.86E-05	3.77E-03	5.43E-03	1.23E-03	5.67E-03	3.67E-03	3.76E-03	7.96E-04	6.53E-04	1.26E-07	1.91E-03	6.15E-04
17	A20	110	Single Unit Short Haul Truck	430	0.00E+00	3.96E-05	1.60E-06	7.38E+01	3.61E-05	1.78E-01	4.55E-05	1.92E-02	2.38E-03	7.01E-04	5.57E-03	1.17E-03	1.19E-03	7.68E-03	2.97E-04	1.32E-07	4.38E-03	3.57E-03
17	A20	110	Single Unit Long Haul Truck	19	0.00E+00	1.71E-06	6.66E-08	3.09E+00	1.45E-06	7.08E-03	1.95E-06	7.98E-04	1.07E-04	3.02E-05	2.43E-04	4.82E-05	4.90E-05	3.20E-04	1.25E-05	5.40E-09	1.94E-04

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A24	110	Single Unit Long Haul Truck	18	0.00E+00	1.60E-06	6.25E-08	2.90E+00	1.36E-06	6.64E-03	1.83E-06	7.48E-04	1.00E-04	2.83E-05	2.27E-04	4.52E-05	4.59E-05	3.00E-04	1.17E-05	5.06E-09	1.81E-04	1.39E-04
17	A24	110	Combination Short Haul Truck	312	0.00E+00	5.54E-05	4.28E-06	1.10E+02	1.08E-07	8.12E-02	3.85E-06	8.90E-02	2.73E-03	7.99E-04	3.05E-03	1.23E-03	1.28E-03	1.74E-02	3.66E-04	0.00E+00	1.77E-03	1.68E-02
17	A24	110	Combination Long Haul Truck	284	0.00E+00	7.50E-05	4.76E-06	9.89E+01	3.65E-07	9.36E-02	5.86E-05	9.68E-02	2.66E-03	5.84E-04	5.95E-03	1.47E-03	1.53E-03	1.59E-02	3.31E-04	0.00E+00	4.43E-03	1.82E-02
17	A25	110	Passenger Car	1516	0.00E+00	1.50E-05	1.63E-06	6.43E+01	1.06E-04	3.64E-01	3.38E-05	1.79E-03	3.68E-03	8.07E-04	3.29E-03	2.12E-03	2.18E-03	1.64E-04	3.26E-04	7.37E-08	1.11E-03	2.80E-04
17	A25	110	Passenger Truck	2538	0.00E+00	3.11E-05	3.34E-06	1.50E+02	2.10E-04	7.17E-01	6.77E-05	4.35E-03	6.26E-03	1.42E-03	6.54E-03	4.23E-03	4.34E-03	9.19E-04	7.53E-04	1.46E-07	2.20E-03	7.10E-04
17	A25	110	Single Unit Short Haul Truck	346	0.00E+00	3.18E-05	1.29E-06	5.94E+01	2.90E-05	1.43E-01	3.65E-05	1.54E-02	1.91E-03	5.64E-04	4.48E-03	9.40E-04	9.53E-04	6.17E-03	2.39E-04	1.06E-07	3.52E-03	2.87E-03
17	A25	110	Single Unit Long Haul Truck	15	0.00E+00	1.37E-06	5.36E-08	2.49E+00	1.17E-06	5.69E-03	1.57E-06	6.41E-04	8.59E-05	2.42E-05	1.95E-04	3.88E-05	3.94E-05	2.57E-04	1.00E-05	4.34E-09	1.56E-04	1.20E-04
17	A25	110	Combination Short Haul Truck	312	0.00E+00	5.55E-05	4.28E-06	1.10E+02	1.08E-07	8.13E-02	3.86E-05	8.91E-02	2.74E-03	8.01E-04	3.06E-03	1.23E-03	1.28E-03	1.74E-02	3.67E-04	0.00E+00	1.78E-03	1.68E-02
17	A25	110	Combination Long Haul Truck	285	0.00E+00	7.52E-05	4.77E-06	9.91E+01	3.66E-07	9.37E-02	5.87E-05	9.70E-02	2.66E-03	5.85E-04	5.96E-03	1.47E-03	1.53E-03	1.59E-02	3.32E-04	0.00E+00	4.44E-03	1.83E-02
17	A26	110	Passenger Car	1371	0.00E+00	1.36E-05	1.47E-06	5.82E+01	9.62E-05	3.29E-01	3.06E-05	1.62E-03	3.33E-03	7.30E-04	2.98E-03	1.92E-03	1.97E-03	1.48E-04	2.95E-04	6.66E-08	1.01E-03	2.53E-04
17	A26	110	Passenger Truck	2297	0.00E+00	2.82E-05	3.02E-06	1.36E+02	1.90E-04	6.49E-01	6.12E-05	3.94E-03	5.67E-03	1.28E-03	5.92E-03	3.83E-03	3.93E-03	8.31E-04	6.82E-04	1.32E-07	1.99E-03	6.43E-04
17	A26	110	Single Unit Short Haul Truck	381	0.00E+00	3.51E-05	1.42E-06	6.55E+01	3.20E-05	1.58E-01	4.03E-05	1.70E-02	2.11E-03	6.22E-04	4.93E-03	1.04E-03	1.05E-03	6.80E-03	2.64E-04	1.17E-07	3.88E-03	3.17E-03
17	A26	110	Single Unit Long Haul Truck	17	0.00E+00	1.52E-06	5.90E-08	2.74E+00	1.29E-06	6.27E-03	1.73E-06	7.07E-04	9.47E-05	2.67E-05	2.15E-04	4.28E-05	4.34E-05	2.84E-04	1.11E-05	4.78E-09	1.72E-04	1.32E-04
17	A26	110	Combination Short Haul Truck	289	0.00E+00	5.14E-05	3.97E-06	1.02E+02	9.99E-08	7.53E-02	3.57E-05	8.26E-02	2.54E-03	7.42E-04	2.83E-03	1.14E-03	1.18E-03	1.62E-02	3.40E-04	0.00E+00	1.65E-03	1.56E-02
17	A26	110	Combination Long Haul Truck	264	0.00E+00	6.96E-05	4.42E-06	9.18E+01	3.39E-07	8.68E-02	5.44E-05	8.98E-02	2.46E-03	5.42E-04	5.53E-03	1.36E-03	1.42E-03	1.47E-02	3.07E-04	0.00E+00	4.11E-03	1.69E-02
17	A27	110	Passenger Car	1516	0.00E+00	1.50E-05	1.63E-06	6.43E+01	1.06E-04	3.64E-01	3.38E-05	1.79E-03	3.68E-03	8.07E-04	3.29E-03	2.12E-03	2.18E-03	1.64E-04	3.26E-04	7.37E-08	1.11E-03	2.80E-04
17	A27	110	Passenger Truck	2538	0.00E+00	3.11E-05	3.34E-06	1.50E+02	2.10E-04	7.17E-01	6.77E-05	4.35E-03	6.26E-03	1.42E-03	6.54E-03	4.23E-03	4.34E-03	9.19E-04	7.53E-04	1.46E-07	2.20E-03	7.10E-04
17	A27	110	Single Unit Short Haul Truck	346	0.00E+00	3.18E-05	1.29E-06	5.94E+01	2.90E-05	1.43E-01	3.65E-05	1.54E-02	1.91E-03	5.64E-04	4.48E-03	9.40E-04	9.53E-04	6.17E-03	2.39E-04	1.06E-07	3.52E-03	2.87E-03
17	A27	110	Single Unit Long Haul Truck	15	0.00E+00	1.37E-06	5.36E-08	2.49E+00	1.17E-06	5.69E-03	1.57E-06	6.41E-04	8.59E-05	2.42E-05	1.95E-04	3.88E-05	3.94E-05	2.57E-04	1.00E-05	4.34E-09	1.56E-04	1.20E-04
17	A27	110	Combination Short Haul Truck	312	0.00E+00	5.55E-05	4.28E-06	1.10E+02	1.08E-07	8.13E-02	3.86E-05	8.91E-02	2.74E-03	8.01E-04	3.06E-03	1.23E-03	1.28E-03	1.74E-02	3.67E-04	0.00E+00	1.78E-03	1.68E-02
17	A27	110	Combination Long Haul Truck	285	0.00E+00	7.52E-05	4.77E-06	9.91E+01	3.66E-07	9.37E-02	5.87E-05	9.70E-02	2.66E-03	5.85E-04	5.96E-03	1.47E-03	1.53E-03	1.59E-02	3.32E-04	0.00E+00	4.44E-03	1.83E-02
17	A28	110	Passenger Car	1371	0.00E+00	1.36E-05	1.47E-06	5.82E+01	9.62E-05	3.29E-01	3.06E-05	1.62E-03	3.33E-03	7.30E-04	2.98E-03	1.92E-03	1.97E-03	1.48E-04	2.95E-04	6.66E-08	1.01E-03	2.53E-04
17	A28	110	Passenger Truck	2297	0.00E+00	2.82E-05	3.02E-06	1.36E+02	1.90E-04	6.49E-01	6.12E-05	3.94E-03	5.67E-03	1.28E-03	5.92E-03	3.83E-03	3.93E-03	8.31E-04	6.82E-04	1.32E-07	1.99E-03	6.43E-04
17	A28	110	Single Unit Short Haul Truck	381	0.00E+00	3.51E-05	1.42E-06	6.55E+01	3.20E-05	1.58E-01	4.03E-05	1.70E-02	2.11E-03	6.22E-04	4.93E-03	1.04E-03	1.05E-03	6.80E-03	2.64E-04	1.17E-07	3.88E-03	3.17E-03
17	A28	110	Single Unit Long Haul Truck	17	0.00E+00	1.52E-06	5.90E-08	2.74E+00	1.29E-06	6.27E-03	1.73E-06	7.07E-04	9.47E-05	2.67E-05	2.15E-04	4.28E-05	4.34E-05	2.84E-04	1.11E-05	4.78E-09	1.72E-04	1.32E-04
17	A28	110	Combination Short Haul Truck	289	0.00E+00	5.14E-05	3.97E-06	1.02E+02	9.99E-08	7.53E-02	3.57E-05	8.26E-02	2.54E-03	7.42E-04	2.83E-03	1.14E-03	1.18E-03	1.62E-02	3.40E-04	0.00E+00	1.65E-03	1.56E-02
17	A28	110	Combination Long Haul Truck	264	0.00E+00	6.96E-05	4.42E-06	9.18E+01	3.39E-07	8.68E-02	5.44E-05	8.98E-02	2.46E-03	5.42E-04	5.53E-03	1.36E-03	1.42E-03	1.47E-02	3.07E-04	0.00E+00	4.11E-03	1.69E-02
16	B09	100	Passenger Car	1470	0.00E+00	1.37E-05	1.49E-06	6.00E+01	9.75E-05	2.92E-01	3.10E-05	1.59E-03	4.70E-03	9.00E-04	3.02E-03	1.95E-03	2.00E-03	1.75E-04	3.04E-04	6.38E-08	1.02E-03	2.47E-04
16	B09	100	Passenger Truck	2461	0.00E+00	2.84E-05	3.04E-06	1.38E+02	1.89E-04	5.64E-01	6.12E-05	3.96E-03	8.20E-03	1.59E-03	5.90E-03	3.82E-03	3.92E-03	9.07E-04	6.94E-04	1.26E-07	1.98E-03	6.50E-04
16	B09	100	Single Unit Short Haul Truck	65	0.00E+00	6.19E-06	2.29E-07	1.06E+01	4.74E-06	2.20E-02	7.02E-06	2.74E-03	4.21E-04	1.09E-04	8.87E-04	1.64E-04	1.67E-04	1.09E-03	4.30E-05	1.76E-08	7.21E-04	5.10E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	2.69E-07	9.67E-09	4.47E-01	1.96E-07	8.98E-04	3.04E-07	1.15E-04	1.91E-05	4.73E-06	3.88E-05	6.91E-06	7.04E-06	4.55E-05	1.82E-06	7.19E-10	3.18E-05	2.14E-05
16	B09	100	Combination Long Haul Truck	75	0.00E+00	1.07E-05	7.90E-07	2.49E+01	2.84E-08	1.93E-02	7.66E-06	1.93E-02	7.25E-04	1.84E-04	6.52E-04	2.31E-04	2.40E-04	3.96E-03	8.33E-05	0.00E+00	4.12E-04	3.64E-03
16	B09	100	Combination Short Haul Truck	68	0.00E+00	1.51E-05	8.53E-07	2.26E+01	9.64E-08	2.24E-02	1.25E-05	2.07E-02	7.26E-04	1.48E-04	1.39E-03	2.75E-04	2.86E-04	3.62E-03	7.56E-05	0.00E+00	1.10E-03	3.89E-03
16	B10	100	Passenger Car	1305	0.00E+00	1.22E-05	1.33E-06	5.33E+01	8.66E-05	2.59E-01	2.75E-05	1.41E-03	4.17E-03	7.99E-04	2.68E-03	1.73E-03	1.78E-03	1.55E-04	2.70E-04	5.66E-08	9.08E-04	2.20E-04
16	B10	100	Passenger Truck	2185	0.00E+00	2.52E-05	2.70E-06	1.23E+02	1.68E-04	5.01E-01	5.44E-05	3.51E-03	7.28E-03	1.41E-03	5.24E-03	3.39E-03	3.48E-03	8.05E-04	6.16E-04	1.12E-07	1.76E-03	5.77E-04
16	B10	100	Single Unit Short Haul Truck	84	0.00E+00	8.01E-06	2.96E-07	1.38E+01	6.13E-06	2.84E-02	9.08E-06	3.54E-03	5.45E-04	1.41E-04	1.15E-03	2.12E-04	2.16E-04	1.41E-03	5.57E-05	2.27E-08	9.33E-04	6.60E-04
16	B10	100	Single Unit Long Haul Truck	4	0.00E+00	3.48E-07	1.25E-08	5.79E-01	2.54E-07	1.16E-03	3.94E-07	1.48E-04	2.48E-05	6.12E-06	5.02E-05	8.94E-06	9.11E-06	5.89E-05	2.35E-06	9.30E-10	4.11E-05	2.77E-05
16	B10	100	Combination Short Haul Truck	85	0.00E+00	1.22E-05	9.01E-07	2.84E+01	3.24E-08	2.20E-02	8.73E-06	2.20E-02	8.26E-04	2.09E-04	7.43E-04	2.63E-04	2.73E-04	4.51E-03	9.50E-05	0.00E+00	4.70E-04	4.15E-03
16	B10	100	Combination Long Haul Truck	78	0.00E+00	1.72E-05	9.72E-07	2.57E+01	1.10E-07	2.56E-02	1.42E-05	2.36E-02	8.27E-04	1.69E-04	1.58E-03	3.13E-04	3.26E-04	4.13E-03	8.62E-05	0.00E+00	1.25E-03	4.44E-03
16	B11	100	Passenger Car	798	0.00E+00	7.46E-06	8.11E-07	3.26E+01	5.29E-05	1.58E-01	1.68E-05	8.61E-04	2.55E-03	4.89E-04	1.64E-03	1.06E-03	1.09E-03	9.49E-05	1.65E-04	3.46E-08	5.55E-04	1.34E-04
16	B11	100	Passenger Truck	1336	0.00E+00	1.54E-05	1.65E-06	7.51E+01	1.03E-04	3.06E-01	3.32E-05	2.15E-03	4.45E-03	8.64E-04	3.21E-03	2.08E-03	2.13E-03	4.92E-04	3.77E-04	6.86E-08	1.08E-03	3.53E-04
16	B11	100	Single Unit Short Haul Truck	20	0.00E+00	1.91E-06	7.06E-08	3.28E+00	1.46E-06	6.78E-03	2.17E-06	8.45E-04	1.30E-04	3.36E-05	2.74E-04	5.06E-05	5.15E-05	3.36E-04	1.33E-05	5.43E-09	2.23E-04	1.58E-04
16	B11	100	Single Unit Long Haul Truck	1	0.00E+00	8.30E-08	2.99E-09	1.38E-01	6.05E-08	2.77E-04	9.39E-08	3.54E-05	5.91E-06	1.46E-06	1.20E-05	2.13E-06	2.17E-06	1.41E-05	5.61E-07	2.22E-10	9.81E-06	6.61E-06
16	B11	100	Combination Short Haul Truck	24	0.00E+00	3.44E-06	2.54E-07	8.02E+00	9.13E-09	6.20E-03	2.46E-06	6.21E-03	2.33E-04	5.91E-05	2.10E-04	7.42E-05	7.71E-05	1.27E-03	2.68E-05	0.00E+00	1.33E-04	1.17E-03
16	B11	100	Combination Long Haul Truck	22	0.00E+00	4.86E-06	2.74E-07	7.26E+00	3.10E-08	7.21E-03	4.01E-06	6.65E-03	2.33E-04	4.76E-05	4.46E-04	8.84E-05	9.21E-05	1.17E-03	2.43E-05	0.00E+00	3.54E-04	1.25E-03
16	B12	100	Passenger Car	327	0.00E+00	3.06E-06	3.32E-07	1.34E+01	2.17E-05	6.50E-02	6.90E-06	3.53E-04	1.05E-03	2.00E-04	6.73E-04	4.34E-04	4.45E-04	3.89E-05	6.76E-05	1.42E-08	2.28E-04	5.50E-05
16	B12	100	Passenger Truck	548	0.00E+00	6.32E-06	6.77E-07	3.08E+01	4.22E-05	1.26E-01	1.36E-05	8.81E-04	1.83E-03	3.54E-04	1.31E-03	8.51E-04	8.73E-04	2.02E-04	1.54E-04	2.81E-08	4.42E-04	1.45E-04
16	B12	100	Single Unit Short Haul Truck	40	0.00E+00	3.82E-06	1.41E-07	6.57E+00	2.92E-06	1.36E-02	4.33E-06	1.69E-03	2.60E-04	6.73E-05	5.48E-04	1.01E-04	1.03E-04	6.73E-04	2.66E-05	1.09E-08	4.45E-04	3.15E-04
16	B12	100	Single Unit Long Haul Truck	2	0.00E+00	1.66E-07	5.97E-09	2.76E-01	1.21E-07	5.55E-04	1.88E-07	7.09E-05	1.18E-05	2.92E-06	2.40E-05	4.27E-06	4.35E-06	2.81E-05	1.12E-06	4.44E-10	1.96E-05	1.32E-05
16	B12	100	Combination Short Haul Truck	28	0.00E+00	4.04E-06	2.98E-07	9.41E+00	1.07E-08	7.27E-03	2.89E-06	7.29E-03	2.74E-04	6.94E-05	2.46E-04	8.71E-05	9.05E-05	1.50E-03	3.15E-05	0.00E+00	1.56E-04	1.37E-03
16	B12	100	Combination Long Haul Truck	26	0.00E+00	5.71E-06	3.22E-07	8.53E+00	3.64E-08	8.47E-03	4.71E-06	7.81E-03	2.74E-04	5.58E-05	5.24E-04	1.04E-04	1.08E-04	1.37E-03	2.86E-05	0.00E+00	4.16E-04	1.47E-03
16	B13	100	Passenger Car	695	0.00E+00	6.50E-06	7.07E-07	2.84E+01	4.61E-05	1.38E-01	1.47E-05	7.50E-04	2.22E-03	4.26E-04	1.43E-03	9.22E-04	9.46E-04	8.27E-05	1.44E-04	3.02E-08	4.84E-04	1.17E-04
16	B13	100	Passenger Truck	1165	0.00E+00	1.34E-05	1.44E-06	6.55E+01	8.96E-05	2.67E-01	2.90E-05	1.87E-03	3.88E-03	7.53E-04	2.79E-03	1.81E-03	1.85E-03	4.29E-04	3.28E-04	5.98E-08	9.39E-04	3.08E-04
16	B13	100	Single Unit Short Haul Truck	41	0.00E+00	3.91E-06	1.45E-07	6.73E+00	2.99E-06	1.39E-02	4.44E-06	1.73E-03	2.66E-04	6.89E-05	5.61E-04	1.04E-04	1.05E-04	6.89E-04	2.72E-05	1.11E-08	4.56E-04	3.23E-04
16	B13	100	Single Unit Long Haul Truck	2	0.00E+00	1.70E-07	6.11E-09	2.83E-01	1.24E-07	5.68E-04	1.92E-07	7.26E-05	1.21E-05	2.99E-06	2.45E-05	4.37E-06	4.45E-06	2.88E-05	1.15E-06	4.55E-10	2.01E-05	1.35E-05
16	B13	100	Combination Short Haul Truck	47	0.00E+00	6.66E-06	4.92E-07	1.55E+01	1.77E-08	1.20E-02	4.77E-06	1.20E-02	4.51E-04	1.14E-04	4.06E-04	1.44E-04	1.49E-04	2.47E-03	5.19E-05	0.00E+00	2.57E-04	2.26E-03
16	B13	100	Combination Long Haul Truck	42	0.00E+00	9.41E-06	5.31E-07	1.41E+01	6.00E-08	1.40E-02	7.77E-06	1.29E-02	4.52E-04	9.20E-05	8.63E-04	1.71E-04	1.78E-04	2.25E-03	4.71E-05	0.00E+00	6.85E-04	2.42E-03
16	B14	100	Passenger Car	717	0.00E+00	6.71E-06	7.29E-07	2.93E+01	4.76E-05	1.43E-01	1.51E-05	7.74E-04	2.29E-03	4.40E-04	1.48E-03	9.51E-04	9.76E-04	8.53E-05	1.48E-04	3.11E-08	4.99E-04	1.21E-04
16	B14	100	Passenger Truck	1202	0.00E+00	1.39E-05	1.48E-06	6.76E+01	9.24E-05	2.75E-01	2.99E-05	1.93E-03	4.00E-03	7.77E-04	2.88E-03	1.87E-03	1.91E-03	4.43E-04	3.39E-04	6.17E-08	9.69E-04	3.17E-04
16	B14	100	Single Unit Short Haul Truck	45	0.00E+00	4.28E-06	1.58E-07	7.35E+00	3.27E-06	1.52E-02	4.85E-06	1.89E-03	2.91E-04	7.53E-05	6.13E-04	1.13E-04	1.15E-04	7.53E-04	2.98E-05	1.21E-08	4.98E-04	3.53E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	1.86E-07	6.68E-09	3.09E-01	1.35E-07	6.21E-04	2.10E-07	7.93E-05	1.32E-05	3.27E-06	2.68E-05	4.78E-06	4.86E-06	3.14E-05	1.25E-06	4.97E-10	2.20E-05	1.48E-05
16	B14	100	Combination Short Haul Truck	41	0.00E+00	5.84E-06	4.31E-07	1.36E+01	1.55E-08	1.05E-02	4.18E-06	1.05E-02	3.95E-04	1.00E-04	3.56E-04	1.26E-04	1.31E-04	2.16E-03	4.55E-05	0.00E+00	2.25E-04	1.98E-03
16	B14	100	Combination Long Haul Truck	37	0.00E+00	8.25E-06	4.65E-07	1.23E+01	5.26E-08	1.22E-02	6.81E-06	1.13E-02	3.96E-04	8.06E-05	7.57E-04	1.50E-04	1.56E-04	1.98E-03	4.13E-05	0.00E+00	6.01E-04	2.12E-03
16	B15	100	Passenger Car	1929	0.00E+00	1.80E-05	1.96E-06	7.88E+01	1.28E-04	3.83E-01	4.07E-05	2.08E-03	6.17E-03	1.18E-03	3.97E-03	2.56E-03	2.63E-03	2.29E-04	3.99E-04	8.37E-08	1.34E-03	3.25E-04
16	B15	100	Passenger Truck	3231	0.00E+00	3.73E-05	3.99E-06	1.82E+02	2.49E-04	7.40E-01	8.04E-05	5.20E-03	1.08E-02	2.09E-03	7.75E-03	5.02E-03	5.15E-03	1.19E-03	9.11E-04	1.66E-07	2.60E-03	8.54E-04
16	B15	100	Single Unit Short Haul Truck	96	0.00E+00	9.10E-06	3.36E-07	1.56E+01	6.96E-06	3.23E-02	1.03E-05	4.02E-03	6.19E-04	1.60E-04	1.31E-03	2.41E-04	2.45E-04	1.60E-03	6.33E-05	2.58E-08	1.06E-03	7.50E-04
16	B15	100	Single Unit Long Haul Truck	4	0.00E+00	3.95E-07	1.42E-08	6.58E-01	2.88E-07	1.32E-03	4.47E-07	1.69E-04	2.81E-05	6.95E-06	5.71E-05	1.02E-05	1.03E-05	6.69E-05	2.67E-06	1.06E-09	4.67E-05	3.15E-05
16	B15	100	Combination Short Haul Truck	76	0.00E+00	1.09E-05	8.07E-07	2.54E+01	2.90E-08	1.97E-02	7.82E-06	1.97E-02	7.40E-04	1.88E-04	6.65E-04	2.36E-04	2.45E-04	4.04E-03	8.51E-05	0.00E+00	4.21E-04	3.72E-03
16	B15	100	Combination Long Haul Truck	70	0.00E+00	1.54E-05	8.70E-07	2.30E+01	9.84E-08	2.29E-02	1.27E-05	2.11E-02	7.41E-04	1.51E-04	1.42E-03	2.81E-04	2.92E-04	3.70E-03	7.72E-05	0.00E+00	1.12E-03	3.98E-03
16	B16	100	Passenger Car	1175	0.00E+00	1.10E-05	1.19E-06	4.80E+01	7.80E-05	2.33E-01	2.48E-05	1.27E-03	3.76E-03	7.20E-04	2.42E-03	1.56E-03	1.60E-03	1.40E-04	2.43E-04	5.10E-08	8.17E-04	1.98E-04
16	B16	100	Passenger Truck	1968	0.00E+00	2.27E-05	2.43E-06	1.11E+02	1.51E-04	4.51E-01	4.90E-05	3.17E-03	6.56E-03	1.27E-03	4.72E-03	3.06E-03	3.13E-03	7.25E-04	5.55E-04	1.01E-07	1.59E-03	5.20E-04
16	B16	100	Single Unit Short Haul Truck	63	0.00E+00	6.01E-06	2.22E-07	1.03E+01	4.60E-06	2.13E-02	6.81E-06	2.66E-03	4.08E-04	1.06E-04	8.61E-04	1.59E-04	1.62E-04	1.06E-03	4.18E-05	1.71E-08	7.00E-04	4.95E-04
16	B16	100	Single Unit Long Haul Truck	3	0.00E+00	2.61E-07	9.38E-09	4.34E-01	1.90E-07	8.72E-04	2.95E-07	1.11E-04	1.86E-05	4.59E-06	3.77E-05	6.71E-06	6.83E-06	4.42E-05	1.76E-06	6.98E-10	3.08E-05	2.08E-05
16	B16	100	Combination Short Haul Truck	48	0.00E+00	6.81E-06	5.03E-07	1.59E+01	1.81E-08	1.23E-02	4.87E-06	1.23E-02	4.61E-04	1.17E-04	4.15E-04	1.47E-04	1.52E-04	2.52E-03	5.30E-05	0.00E+00	2.62E-04	2.32E-03
16	B16	100	Combination Long Haul Truck	43	0.00E+00	9.62E-06	5.43E-07	1.44E+01	6.13E-08	1.43E-02	7.94E-06	1.32E-02	4.62E-04	9.41E-05	8.83E-04	1.75E-04	1.82E-04	2.31E-03	4.81E-05	0.00E+00	7.01E-04	2.48E-03
16	B17	100	Passenger Car	1275	0.00E+00	1.19E-05	1.30E-06	5.21E+01	8.46E-05	2.53E-01	2.69E-05	1.37E-03	4.07E-03	7.81E-04	2.62E-03	1.69E-03	1.73E-03	1.52E-04	2.63E-04	5.53E-08	8.87E-04	2.14E-04
16	B17	100	Passenger Truck	2134	0.00E+00	2.46E-05	2.64E-06	1.20E+02	1.64E-04	4.89E-01	5.31E-05	3.43E-03	7.11E-03	1.38E-03	5.12E-03	3.32E-03	3.40E-03	7.86E-04	6.02E-04	1.10E-07	1.72E-03	5.64E-04
16	B17	100	Single Unit Short Haul Truck	166	0.00E+00	1.57E-05	5.82E-07	2.71E+01	1.20E-05	5.58E-02	1.79E-05	6.96E-03	1.07E-03	2.77E-04	2.26E-03	4.17E-04	4.24E-04	2.77E-03	1.10E-04	4.47E-08	1.83E-03	1.30E-03
16	B17	100	Single Unit Long Haul Truck	7	0.00E+00	6.84E-07	2.46E-08	1.14E+00	4.98E-07	2.29E-03	7.74E-07	2.92E-04	4.87E-05	1.20E-05	9.87E-05	1.76E-05	1.79E-05	1.16E-04	4.62E-06	1.83E-09	8.08E-05	5.44E-05
16	B17	100	Combination Short Haul Truck	127	0.00E+00	1.82E-05	1.34E-06	4.24E+01	4.82E-08	3.27E-02	1.30E-05	3.28E-02	1.23E-03	3.12E-04	1.11E-03	3.92E-04	4.07E-04	6.73E-03	1.42E-04	0.00E+00	7.00E-04	6.18E-03
16	B17	100	Combination Long Haul Truck	116	0.00E+00	2.57E-05	1.45E-06	3.84E+01	1.64E-07	3.81E-02	2.12E-05	3.51E-02	1.23E-03	2.51E-04	2.36E-03	4.67E-04	4.87E-04	6.16E-03	1.29E-04	0.00E+00	1.87E-03	6.62E-03
16	B18	100	Passenger Car	889	0.00E+00	8.32E-06	9.04E-07	3.63E+01	5.90E-05	1.77E-01	1.88E-05	9.59E-04	2.84E-03	5.45E-04	1.83E-03	1.18E-03	1.21E-03	1.06E-04	1.84E-04	3.86E-08	6.19E-04	1.50E

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B22	100	Passenger Car	1124	0.00E+00	1.05E-05	1.14E-06	4.59E+01	7.46E-05	2.23E-01	2.37E-05	1.21E-03	3.59E-03	6.89E-04	2.31E-03	1.49E-03	1.53E-03	1.34E-04	2.32E-04	4.88E-08	7.82E-04	1.89E-04
16	B22	100	Passenger Truck	1882	0.00E+00	2.17E-05	2.33E-06	1.06E+02	1.45E-04	4.31E-01	4.68E-05	3.03E-03	6.27E-03	1.22E-03	4.52E-03	2.92E-03	3.00E-03	6.93E-04	5.31E-04	9.66E-08	1.52E-03	4.97E-04
16	B22	100	Single Unit Short Haul Truck	46	0.00E+00	4.37E-06	1.61E-07	7.51E+00	3.34E-06	1.55E-02	4.95E-06	1.93E-03	2.97E-04	7.69E-05	6.26E-04	1.16E-04	1.18E-04	7.69E-04	3.04E-05	1.24E-08	5.09E-04	3.60E-04
16	B22	100	Single Unit Long Haul Truck	2	0.00E+00	1.90E-07	6.82E-09	3.16E-01	1.38E-07	6.34E-04	2.15E-07	8.10E-05	1.35E-05	3.34E-06	2.74E-05	4.88E-06	4.97E-06	3.21E-05	1.28E-06	5.08E-10	2.24E-05	1.51E-05
16	B22	100	Combination Short Haul Truck	101	0.00E+00	1.45E-05	1.07E-06	3.38E+01	3.85E-08	2.61E-02	1.04E-05	2.62E-02	9.83E-04	2.49E-04	8.84E-04	3.13E-04	3.25E-04	5.37E-03	1.13E-04	0.00E+00	5.59E-04	4.94E-03
16	B22	100	Combination Long Haul Truck	93	0.00E+00	2.05E-05	1.16E-06	3.06E+01	1.31E-07	3.04E-02	1.69E-05	2.81E-02	9.84E-04	2.01E-04	1.88E-03	3.73E-04	3.88E-04	4.91E-03	1.03E-04	0.00E+00	1.49E-03	5.28E-03
16	B23	100	Passenger Car	2997	0.00E+00	2.80E-05	3.05E-06	1.22E+02	1.99E-04	5.95E-01	6.32E-05	3.23E-03	9.58E-03	1.84E-03	6.16E-03	3.97E-03	4.08E-03	3.56E-04	6.20E-04	1.30E-07	2.08E-03	5.04E-04
16	B23	100	Passenger Truck	5020	0.00E+00	5.79E-05	6.20E-06	2.82E+02	3.86E-04	1.15E+00	1.25E-04	8.07E-03	1.67E-02	3.25E-03	1.20E-02	7.80E-03	8.00E-03	1.85E-03	1.41E-03	2.58E-07	4.05E-03	1.33E-03
16	B23	100	Single Unit Short Haul Truck	43	0.00E+00	4.10E-06	1.51E-07	7.04E+00	3.13E-06	1.45E-02	4.64E-06	1.81E-03	2.78E-04	7.21E-05	5.87E-04	1.08E-04	1.10E-04	7.21E-04	2.85E-05	1.16E-08	4.77E-04	3.38E-04
16	B23	100	Single Unit Long Haul Truck	2	0.00E+00	1.78E-07	6.40E-09	2.96E-01	1.30E-07	5.95E-04	2.01E-07	7.59E-05	1.27E-05	3.13E-06	2.57E-05	4.57E-06	4.66E-06	3.01E-05	1.20E-06	4.76E-10	2.10E-05	1.42E-05
16	B23	100	Combination Short Haul Truck	46	0.00E+00	6.51E-06	4.81E-07	1.52E+01	1.73E-08	1.17E-02	4.66E-06	1.17E-02	4.41E-04	1.12E-04	3.97E-04	1.40E-04	1.46E-04	2.41E-03	5.07E-05	0.00E+00	2.51E-04	2.21E-03
16	B23	100	Combination Long Haul Truck	41	0.00E+00	9.20E-06	5.19E-07	1.37E+01	5.86E-08	1.36E-02	7.59E-06	1.26E-02	4.41E-04	9.00E-05	8.44E-04	1.67E-04	1.74E-04	2.20E-03	4.60E-05	0.00E+00	6.70E-04	2.37E-03
16	B24	100	Passenger Car	1743	0.00E+00	1.63E-05	1.77E-06	7.12E+01	1.16E-04	3.46E-01	3.68E-05	1.88E-03	5.57E-03	1.07E-03	3.58E-03	2.31E-03	2.37E-03	2.07E-04	3.60E-04	7.57E-08	1.21E-03	2.93E-04
16	B24	100	Passenger Truck	2920	0.00E+00	3.37E-05	3.61E-06	1.64E+02	2.25E-04	6.69E-01	7.26E-05	4.70E-03	9.73E-03	1.89E-03	7.00E-03	4.54E-03	4.65E-03	1.08E-03	8.23E-04	1.50E-07	2.35E-03	7.71E-04
16	B24	100	Single Unit Short Haul Truck	281	0.00E+00	2.67E-05	9.85E-07	4.58E+01	2.04E-05	9.46E-02	3.02E-05	1.18E-02	1.81E-03	4.69E-04	3.82E-03	7.06E-04	7.18E-04	4.69E-03	1.85E-04	7.57E-08	3.11E-03	2.20E-03
16	B24	100	Single Unit Long Haul Truck	12	0.00E+00	1.16E-06	4.17E-08	1.93E+00	8.44E-07	3.87E-03	1.31E-06	4.94E-04	8.24E-05	2.04E-05	1.67E-04	2.98E-05	3.03E-05	1.96E-04	7.82E-06	3.10E-09	1.37E-04	9.22E-05
16	B24	100	Combination Short Haul Truck	270	0.00E+00	3.87E-05	2.86E-06	9.01E+01	1.03E-07	6.96E-02	2.77E-05	6.98E-02	2.62E-03	6.64E-04	2.36E-03	8.34E-04	8.66E-04	1.43E-02	3.01E-04	0.00E+00	1.49E-03	1.32E-02
16	B24	100	Combination Long Haul Truck	247	0.00E+00	5.47E-05	3.08E-06	8.16E+01	3.48E-07	8.11E-02	4.51E-05	7.48E-02	2.62E-03	5.35E-04	5.02E-03	9.94E-04	1.04E-03	1.31E-02	2.73E-04	0.00E+00	3.98E-03	1.41E-02
53	C29	70	Passenger Car	68	0.00E+00	7.40E-07	8.04E-08	3.02E+00	5.25E-06	1.48E-02	1.67E-06	7.04E-05	5.19E-04	8.12E-05	1.63E-04	1.05E-04	1.08E-04	1.16E-05	1.52E-05	3.15E-09	5.51E-05	1.10E-05
53	C29	70	Passenger Truck	115	0.00E+00	1.55E-06	1.64E-07	6.79E+00	9.93E-06	2.60E-02	3.25E-06	1.99E-04	9.27E-04	1.44E-04	3.11E-04	2.02E-04	2.07E-04	5.05E-05	3.39E-05	5.93E-09	1.04E-04	3.33E-05
53	C29	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
53	C29	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
53	C29	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
50	C30	40	Passenger Car	66	0.00E+00	9.50E-07	1.03E-07	3.49E+00	6.74E-06	1.88E-02	2.14E-06	6.04E-05	1.14E-03	1.60E-04	2.09E-04	1.35E-04	1.38E-04	1.97E-05	1.73E-05	3.22E-09	7.07E-05	9.42E-06
50	C30	40	Passenger Truck	111	0.00E+00	2.10E-06	2.20E-07	7.60E+00	1.26E-05	3.11E-02	4.21E-06	2.33E-04	2.02E-03	2.81E-04	3.98E-04	2.60E-04	2.66E-04	6.71E-05	3.74E-05	5.46E-09	1.32E-04	4.03E-05
50	C30	40	Single Unit Short Haul Truck	20	0.00E+00	6.82E-06	3.03E-07	3.80E+00	4.72E-06	5.96E-03	7.29E-06	2.75E-03	7.92E-04	1.24E-04	8.77E-04	1.83E-04	1.86E-04	3.88E-04	1.55E-05	6.57E-09	6.91E-04	5.15E-04
50	C30	40	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.32E-08	1.64E-01	2.07E-07	2.59E-04	3.20E-07	1.20E-04	3.55E-05	5.50E-06	3.86E-05	8.00E-06	8.15E-06	1.68E-05	6.69E-07	2.85E-10	3.04E-05	2.24E-05
50	C30	40	Combination Short Haul Truck	20	0.00E+00	9.84E-06	7.35E-07	8.46E+00	2.44E-08	1.39E-02	6.99E-06	1.43E-02	1.98E-03	2.96E-04	5.85E-04	2.14E-04	2.22E-04	1.34E-03	2.83E-05	0.00E+00	3.63E-04	2.70E-03
50	C30	40	Combination Long Haul Truck	19	0.00E+00	1.31E-05	7.38E-07	8.12E+00	8.31E-08	1.69E-02	1.08E-05	1.51E-02	2.06E-03	2.89E-04	1.20E-03	2.38E-04	2.48E-04	1.30E-03	2.72E-05	0.00E+00	9.50E-04	2.84E-03
52	C31	60	Passenger Car	93	0.00E+00	1.09E-06	1.19E-07	4.24E+00	7.77E-06	2.18E-02	2.47E-06	9.23E-05	9.14E-04	1.37E-04	2.41E-04	1.55E-04	1.59E-04	1.85E-05	2.13E-05	4.33E-09	8.14E-05	1.44E-05
52	C31	60	Passenger Truck	156	0.00E+00	2.31E-06	2.45E-07	9.45E+00	1.46E-05	3.73E-02	4.79E-06	2.82E-04	1.62E-03	2.41E-04	4.57E-04	2.97E-04	3.04E-04	7.40E-05	4.70E-05	7.92E-09	1.52E-04	4.76E-05
52	C31	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.39E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
52	C31	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.03E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
52	C31	60	Combination Short Haul Truck	13	0.00E+00	3.82E-06	2.80E-07	4.61E+00	1.05E-08	5.70E-03	2.74E-06	5.82E-03	6.66E-04	1.04E-04	2.35E-04	8.20E-05	8.51E-05	7.32E-04	1.54E-05	0.00E+00	1.50E-04	1.10E-03
52	C31	60	Combination Long Haul Truck	12	0.00E+00	5.24E-06	2.86E-07	4.35E+00	3.54E-08	6.85E-03	4.39E-06	6.20E-03	6.98E-04	1.01E-04	4.97E-04	9.36E-05	9.75E-05	6.98E-04	1.46E-05	0.00E+00	4.00E-04	1.17E-03
53	C32	70	Passenger Car	302	0.00E+00	3.27E-06	3.56E-07	1.33E+01	2.32E-05	6.53E-02	7.38E-06	3.11E-04	2.29E-03	3.59E-04	7.20E-04	4.64E-04	4.76E-04	5.14E-05	6.71E-05	1.39E-08	2.43E-04	4.86E-05
53	C32	70	Passenger Truck	507	0.00E+00	6.83E-06	7.27E-07	3.00E+01	4.39E-05	1.15E-01	1.44E-05	8.79E-04	4.10E-03	6.37E-04	1.37E-03	8.92E-04	9.14E-04	2.23E-04	1.50E-04	2.62E-08	4.59E-04	1.47E-04
53	C32	70	Single Unit Short Haul Truck	61	0.00E+00	1.08E-05	4.38E-07	1.00E+01	7.23E-06	1.82E-02	1.17E-05	4.29E-03	9.74E-04	1.79E-04	1.45E-03	2.77E-04	2.83E-04	1.02E-03	4.09E-05	1.65E-08	1.17E-03	8.02E-04
53	C32	70	Single Unit Long Haul Truck	3	0.00E+00	4.69E-07	1.89E-08	4.26E-01	3.11E-07	7.64E-04	5.10E-07	1.85E-04	4.46E-05	7.99E-06	6.35E-05	1.20E-05	1.22E-05	4.31E-05	1.73E-06	6.95E-10	5.12E-05	3.45E-05
53	C32	70	Combination Short Haul Truck	44	0.00E+00	1.14E-05	8.51E-07	1.55E+01	2.91E-08	1.65E-02	8.15E-06	1.71E-02	1.61E-03	2.69E-04	6.86E-04	2.48E-04	2.57E-04	2.46E-03	5.17E-05	0.00E+00	4.29E-04	3.22E-03
53	C32	70	Combination Long Haul Truck	41	0.00E+00	1.57E-05	8.92E-07	1.45E+01	9.84E-08	1.97E-02	1.29E-05	1.83E-02	1.68E-03	2.53E-04	1.43E-03	2.87E-04	2.99E-04	2.33E-03	4.86E-05	0.00E+00	1.13E-03	3.45E-03
52	C33	60	Passenger Car	40	0.00E+00	4.71E-07	5.11E-08	1.82E+00	3.34E-06	9.35E-03	1.06E-06	3.97E-05	3.93E-04	5.89E-05	1.03E-04	6.67E-05	6.85E-05	7.93E-06	9.14E-06	1.86E-09	3.50E-05	6.19E-06
52	C33	60	Passenger Truck	67	0.00E+00	9.93E-07	1.05E-07	4.06E+00	6.26E-06	1.60E-02	2.06E-06	1.21E-04	6.97E-04	1.04E-04	1.96E-04	1.28E-04	1.31E-04	3.18E-05	2.02E-05	3.40E-09	6.54E-05	2.05E-05
52	C33	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
50	C34	40	Passenger Car	27	0.00E+00	3.87E-07	4.20E-08	1.42E+00	2.74E-06	7.66E-03	8.72E-07	2.46E-05	4.64E-04	6.53E-05	8.50E-05	5.48E-05	5.63E-05	8.00E-06	7.06E-06	1.31E-09	2.88E-05	3.83E-06
50	C34	40	Passenger Truck	45	0.00E+00	8.52E-07	8.96E-08	3.09E+00	5.13E-06	1.27E-02	1.71E-06	9.46E-05	8.23E-04	1.14E-04	1.62E-04	1.06E-04	1.08E-04	2.73E-05	1.52E-05	2.22E-09	5.36E-05	1.64E-05
50	C34	40	Single Unit Short Haul Truck	4	0.00E+00	1.30E-06	5.78E-08	7.24E-01	8.99E-07	1.13E-03	1.39E-06	5.23E-04	1.51E-04	2.35E-05	1.67E-04	3.48E-05	3.55E-05	7.39E-05	2.95E-06	1.25E-09	1.32E-04	9.81E-05
50	C34	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.34E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.38E-04
50	C34	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.74E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
53	C35	70	Passenger Car	163	0.00E+00	1.76E-06	1.91E-07	7.17E+00	1.25E-05	3.51E-02	3.97E-06	1.67E-04	1.23E-03	1.93E-04	3.87E-04	2.50E-04	2.56E-04	2.76E-05	3.61E-05	7.49E-09	1.31E-04	2.61E-05
53	C35	70	Passenger Truck	272	0.00E+00	3.67E-06	3.91E-07	1.62E+01	2.36E-05	6.19E-02	7.72E-06	4.73E-04	2.20E-03	3.42E-04	7.38E-04	4.80E-04	4.92E-04	1.20E-04	8.05E-05	1.41E-08	2.47E-04	7.91E-05
53	C35	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.04E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.50E-04
53	C35	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.46E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.47E-06
53	C35	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.41E-04
53	C35	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.65E-04
50	C36	40	Passenger Car	135	0.00E+00	1.94E-06	2.11E-07	7.12E+00	1.38E-05	3.84E-02	4.37E-06	1.23E-04	2.33E-03	3.27E-04	4.26E-04	2.75E-04	2.82E-04	4.01E-05	3.54E-05	6.56E-09	1.44E-04	1.92E-05
50	C36	40	Passenger Truck	226	0.00E+00	4.27E-06	4.49E-07	1.55E+01	2.57E-05	6.35E-02	8.59E-06	4.74E-04	4.13E-03	5.73E-04	8.11E-04	5.30E-04	5.42E-04	1.37E-04	7.64E-05	1.11E-08	2.69E-04	8.22E-05
50	C36	40	Single Unit Short Haul Truck	41	0.00E+00	1.40E-05	6.21E-07	7.78E+00	9.67E-06	1.22E-02	1.49E-05	5.63E-03	1.62E-03	2.53E-04	1.80E-03	3.74E-04	3.81E-04	7.95E-04	3.17E-05	1.34E-08	1.41E-03	1.05E-03
50	C36	40	Single Unit Long Haul Truck	2	0.00E+00	6.13E-07	2.71E-08	3.36E-01	4.23E-07	5.31E-04	6.55E-07	2.45E-04	7.26E-05	1.13E-05	7.90E-05	1.64E-05	1.67E-05	3.43E-05	1.37E-06	5.84E-10	6.23E-05	4.60E-05
50	C36	40	Combination Short Haul Truck	38	0.00E+00	1.84E-05	1.38E-06	1.58E+01	4.56E-08	2.60E-02	1.31E-05	2.68E-02	3.71E-03	5.53E-04	1.10E-03	4.00E-04	4.15E-04	2.52E-03	5.29E-05	0.00E+00	6.80E-04	5.05E-03
50	C36	40	Combination Long Haul Truck	35	0.00E+00	2.45E-05	1.38E-06	1.52E+01	1.56E-07	3.16E-02	2.02E-05	2.83E-02	3.86E-03	5.42E-04	2.24E-03	4.45E-04	4.64E-04	2.44E-03	5.09E-05	0.00E+00	1.78E-03	5.32E-03
52	C37	60	Passenger Car	62	0.00E+00	7.26E-07	7.88E-08	2.81E+00	5.15E-06	1.44E-02	1.64E-06	6.12E-05	6.06E-04	9.08E-05	1.60E-04	1.03E-04	1.06E-04	1.22E-05	1.41E-05	2.87E-09	5.40E-05	9.54E-06
52	C37	60	Passenger Truck	103	0.00E+00	1.53E-06	1.62E-07	6.26E+00	9.65E-06	2.47E-02	3.17E-06	1.87E-04	1.08E-03	1.60E-04	3.03E-04	1.97E-04	2.02E-04	4.90E-05	3.11E-05	5.25E-09	1.01E-04	3.16E-05
52	C37	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
52	C37	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.68E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
52	C37	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.05E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
52	C37	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.45E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.21E-03
53	C38	70	Passenger Car	507	0.00E+00	5.48E-06	5.96E-07	2.23E+01	3.89E-05	1.09E-01	1.24E-05	5.21E-04	3.84E-03	6.02E-04	1.21E-03	7.77E-04	7.98E-04	8.61E-05	1.12E-04	2.33E-08	4.08E-04	8.13E-05
53	C38	70	Passenger Truck	848	0.00E+00	1.14E-05	1.22E-06	5.03E+01	7.35E-05	1.93E-01	2.40E-05	1.47E-03	6.86E-03	1.07E-03	2.30E-03	1.49E-03	1.53E-03	3.74E-04	2.51E-04	4.39E-08	7.69E-04	2.47E-04
53	C38	70	Single Unit Short Haul Truck	55	0.00E+00	9.61E-06	3.90E-07	8.95E+00	6.44E-06	1.62E-02	1.04E-05	3.82E-03	8.68E-04	1.59E-04	1.30E-03	2.47E-04	2.52E-04	9.09E-04	3.64E-05	1.47E-08	1.04E-03	7.15E-04
53	C38	70	Single Unit Long Haul Truck	2	0.00E+00	4.18E-07	1.68E-08	3.79E-01	2.77E-07	6.81E-04	4.55E-07	1.64E-04	3.97E-05	7.12E-06	5.65E-05	1.07E-05	1.09E-05	3.83E-05	1.54E-06	6.19E-10	4.56E-05	3.08E-05
53	C38	70	Combination Short Haul Truck	55	0.00E+00	1.43E-05	1.06E-06	1.93E+01	3.62E-08	2.06E-02	1.02E-05	2.13E-02	2.01E-03	3.35E-04	8.56E-04	3.09E-04	3.21E-04	3.06E-03	6.45E-05	0.00E+00	5.35E-04	4.02E-03
53	C38	70	Combination Long Haul Truck	51	0.00E+00	1.96E-05	1.11E-06	1.81E+01	1.23E-07	2.46E-02	1.61E-05	2.28E-02	2.09E-03	3.15E-04	1.78E-03	3.58E-04	3.73E-04	2.90E-03	6.06E-05	0.00E+00	1.41E-03	4.30E-03
52	C39	60	Passenger Car	87	0.00E+00	1.03E-06	1.12E-07	3.99E+00	7.30E-06	2.04E-02	2.32E-06	8.68E-05	8.59E-04	1.29E-04	2.26E-04	1.46E-04	1.50E-04	1.73E-05	2.00E-05	4.07E-09	7.65E-05	1.35E-05
52	C39	60	Passenger Truck	147	0.00E+00	2.17E-06	2.30E-07	8.88E+00	1.37E-05	3.51E-02	4.50E-06	2.65E-04	1.53E-03	2.26E-04	4.29E-04	2.79E-04	2.86E-04	6.95E-05	4.41E-05	7.44E-09	1.43E-04	4.48E-05
52	C39	60	Single Unit Short Haul Truck	17	0.00E+00	3.85E-06	1.59E-07	2.87E+00	2.55E-06	5.04E-03	4.16E-06	1.48E-03	3.97E-04	6.67E-05	5.14E-04	9.89E-05	1.01E-04	2.91E-04	1.17E-05	4.82E-09	4.13E-04	2.76E-04
52	C39	60	Single Unit Long Haul Truck	1	0.00E+00	1.68E-07	6.91E-09	1.22E-01	1.11E-07	2.14E-04	1.82E-07	6.39E-05	1.78E-05	2.96E-06	2.25E-05	4.30E-06	4.38E-06	1.24E-05	4.99E-07	2.05E-10	1.81E-05	1.20E-05
52	C39	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.26E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.14E-04
52	C39	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.47E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.54E-04
50	C40	40	Passenger Car	87	0.00E+00	1.26E-06	1.37E-07	4.62E+00	8.92E-06	2.49E-02	2.83E-06	7.98E-05	1.51E-03	2.12E-04	2.76E-04	1.78E-04	1.83E-04	2.60E-05	2.29E-05	4.25E-09	9.35E-05	1.25E-05
50	C40	40	Passenger Truck	147	0.00E+00	2.77E-06	2.91E-07	1.01E+01	1.67E-05	4.11E-02	5.57E-06	3.07E-04	2.67E-03	3.71E-04	5.26E-04	3.43E-04	3.52E-04	8.88E-05	4.95E-05	7.22E-09	1.74E-04	5.33E-05
50	C40	40	Single Unit Short Haul Truck	17	0.00E+00	5.85E-06	2.60E-07	3.26E+00	4.05E-06	5.11E-03	6.25E-06	2.36E-03	6.78E-04	1.06E-04	7.52E-04	1.57E-04	1.60E-04	3.33E-04	1.33E-05	5.63E-09	5.92E-04	4.41E-04
50	C40	40	Single Unit Long Haul Truck

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
55	C44	90	Combination Short Haul Truck	23	0.00E+00	3.30E-06	2.37E-07	7.39E+00	1.02E-08	6.13E-03	2.41E-06	5.85E-03	3.17E-04	6.58E-05	2.13E-04	6.98E-05	7.25E-05	1.18E-03	2.47E-05	0.00E+00	1.41E-04	1.10E-03
55	C44	90	Combination Long Haul Truck	21	0.00E+00	4.79E-06	2.51E-07	6.75E+00	3.46E-08	7.20E-03	4.07E-06	6.21E-03	3.25E-04	5.82E-05	4.73E-04	8.33E-05	8.68E-05	1.08E-03	2.26E-05	0.00E+00	3.86E-04	1.17E-03
53	C45	70	Passenger Car	240	0.00E+00	2.60E-06	2.83E-07	1.06E+01	1.85E-05	5.19E-02	5.87E-06	2.47E-04	1.82E-03	2.85E-04	5.72E-04	3.69E-04	3.79E-04	4.08E-05	5.33E-05	1.11E-08	1.93E-04	3.86E-05
53	C45	70	Passenger Truck	403	0.00E+00	5.43E-06	5.78E-07	2.39E+01	3.49E-05	9.15E-02	1.14E-05	6.99E-04	3.26E-03	5.06E-04	1.09E-03	7.09E-04	7.27E-04	1.77E-04	1.19E-04	2.08E-08	3.65E-04	1.17E-04
53	C45	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
53	C45	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.90E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.17E-06
53	C45	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.22E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.95E-04
53	C45	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.52E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.51E-04
50	C46	40	Passenger Car	77	0.00E+00	1.10E-06	1.20E-07	4.05E+00	7.81E-06	2.18E-02	2.48E-06	6.99E-05	1.32E-03	1.86E-04	2.42E-04	1.56E-04	1.60E-04	2.28E-05	2.01E-05	3.72E-09	8.19E-05	1.09E-05
50	C46	40	Passenger Truck	128	0.00E+00	2.43E-06	2.55E-07	8.81E+00	1.46E-05	3.60E-02	4.88E-06	2.69E-04	2.34E-03	3.25E-04	4.60E-04	3.01E-04	3.08E-04	7.78E-05	4.34E-05	6.33E-09	1.53E-04	4.67E-05
50	C46	40	Single Unit Short Haul Truck	44	0.00E+00	1.49E-05	6.65E-07	8.32E+00	1.03E-05	1.30E-02	1.60E-05	6.02E-03	1.73E-03	2.71E-04	1.92E-03	4.00E-04	4.08E-04	8.50E-04	3.39E-05	1.44E-08	1.51E-03	1.13E-03
50	C46	40	Single Unit Long Haul Truck	2	0.00E+00	6.55E-07	2.90E-08	3.59E-01	4.53E-07	5.68E-04	7.01E-07	2.62E-04	7.77E-05	1.21E-05	8.45E-05	1.75E-05	1.79E-05	3.67E-05	1.47E-06	6.24E-10	6.66E-05	4.92E-05
50	C46	40	Combination Short Haul Truck	39	0.00E+00	1.89E-05	1.41E-06	1.63E+01	4.69E-08	2.68E-02	1.34E-05	2.75E-02	3.81E-03	5.69E-04	1.13E-03	4.11E-04	4.27E-04	2.59E-03	5.44E-05	0.00E+00	6.99E-04	5.19E-03
50	C46	40	Combination Long Haul Truck	36	0.00E+00	2.51E-05	1.42E-06	1.56E+01	1.60E-07	3.25E-02	2.07E-05	2.90E-02	3.96E-03	5.56E-04	2.30E-03	4.58E-04	4.77E-04	2.51E-03	5.23E-05	0.00E+00	1.83E-03	5.47E-03
52	C47	60	Passenger Car	25	0.00E+00	2.95E-07	3.20E-08	1.14E+00	2.09E-06	5.85E-03	6.64E-07	2.48E-05	2.46E-04	3.69E-05	6.48E-05	4.18E-05	4.29E-05	4.97E-06	5.72E-06	1.17E-09	2.19E-05	3.88E-06
52	C47	60	Passenger Truck	42	0.00E+00	6.22E-07	6.59E-08	2.54E+00	3.92E-06	1.00E-02	1.29E-06	7.58E-05	4.37E-04	6.48E-05	1.23E-04	7.99E-05	8.19E-05	1.99E-05	1.26E-05	2.13E-09	4.09E-05	1.28E-05
52	C47	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
52	C47	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
53	C48	70	Passenger Car	136	0.00E+00	1.48E-06	1.60E-07	6.02E+00	1.05E-05	2.94E-02	3.33E-06	1.40E-04	1.04E-03	1.62E-04	3.25E-04	2.09E-04	2.15E-04	2.32E-05	3.03E-05	6.28E-09	1.10E-04	2.19E-05
53	C48	70	Passenger Truck	229	0.00E+00	3.08E-06	3.28E-07	1.36E+01	1.98E-05	5.19E-02	6.48E-06	3.97E-04	1.85E-03	2.87E-04	6.20E-04	4.02E-04	4.13E-04	1.01E-04	6.75E-05	1.18E-08	2.07E-04	6.64E-05
53	C48	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.22E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.90E-04
53	C48	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.82E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.40E-05
53	C48	70	Combination Short Haul Truck	43	0.00E+00	1.12E-05	8.31E-07	1.51E+01	2.84E-08	1.61E-02	7.96E-06	1.67E-02	1.57E-03	2.63E-04	6.70E-04	2.42E-04	2.51E-04	2.40E-03	5.05E-05	0.00E+00	4.19E-04	3.14E-03
53	C48	70	Combination Long Haul Truck	40	0.00E+00	1.53E-05	8.71E-07	1.42E+01	9.61E-08	1.93E-02	1.26E-05	1.79E-02	1.64E-03	2.47E-04	1.39E-03	2.80E-04	2.92E-04	2.27E-03	4.75E-05	0.00E+00	1.10E-03	3.36E-03
52	C49	60	Passenger Car	217	0.00E+00	2.55E-06	2.77E-07	9.89E+00	1.81E-05	5.07E-02	5.75E-06	2.15E-04	2.13E-03	3.19E-04	5.61E-04	3.62E-04	3.71E-04	4.30E-05	4.96E-05	1.01E-08	1.90E-04	3.35E-05
52	C49	60	Passenger Truck	363	0.00E+00	5.38E-06	5.70E-07	2.20E+01	3.39E-05	8.69E-02	1.12E-05	6.56E-04	3.78E-03	5.61E-04	1.06E-03	6.92E-04	7.09E-04	1.72E-04	1.09E-04	1.84E-08	3.54E-04	1.11E-04
52	C49	60	Single Unit Short Haul Truck	40	0.00E+00	8.98E-06	3.71E-07	6.69E+00	5.95E-06	1.18E-02	9.71E-06	3.44E-03	9.25E-04	1.56E-04	1.20E-03	2.31E-04	2.35E-04	6.78E-04	2.73E-05	1.12E-08	9.63E-04	6.44E-04
52	C49	60	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.61E-08	2.85E-01	2.58E-07	5.00E-04	4.24E-07	1.49E-04	4.16E-05	6.90E-06	5.24E-05	1.00E-05	1.02E-05	2.88E-05	1.16E-06	4.78E-10	4.22E-05	2.79E-05
52	C49	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.84E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.67E-03
52	C49	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.42E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.77E-03
50	C50	40	Passenger Car	30	0.00E+00	4.30E-07	4.67E-08	1.58E+00	3.05E-06	8.51E-03	9.68E-07	2.73E-05	5.16E-04	7.25E-05	9.45E-05	6.09E-05	6.25E-05	8.89E-06	7.84E-06	1.45E-09	3.20E-05	4.26E-06
50	C50	40	Passenger Truck	50	0.00E+00	9.47E-07	9.95E-08	3.44E+00	5.70E-06	1.41E-02	1.90E-06	1.05E-04	9.15E-04	1.27E-04	1.80E-04	1.17E-04	1.20E-04	3.03E-05	1.69E-05	2.47E-09	5.95E-05	1.82E-05
50	C50	40	Combination Short Haul Truck	1	0.00E+00	2.52E-07	1.88E-08	2.17E-01	6.25E-10	3.57E-04	1.79E-07	3.67E-04	5.09E-05	7.58E-06	1.50E-05	5.48E-06	5.69E-06	3.45E-05	7.25E-07	0.00E+00	9.31E-06	6.92E-05
53	C51	70	Passenger Car	256	0.00E+00	2.78E-06	3.02E-07	1.13E+01	1.97E-05	5.53E-02	6.26E-06	2.64E-04	1.95E-03	3.05E-04	6.10E-04	3.93E-04	4.04E-04	4.36E-05	5.69E-05	1.18E-08	2.06E-04	4.12E-05
53	C51	70	Passenger Truck	430	0.00E+00	5.79E-06	6.16E-07	2.55E+01	3.72E-05	9.76E-02	1.22E-05	7.45E-04	3.47E-03	5.40E-04	1.16E-03	7.56E-04	7.75E-04	1.89E-04	1.27E-04	2.22E-08	3.89E-04	1.25E-04
53	C51	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.51E-04
53	C51	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.07E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
53	C51	70	Combination Short Haul Truck	19	0.00E+00	4.85E-06	3.61E-07	6.55E+00	1.23E-08	7.00E-03	3.45E-06	7.24E-03	6.83E-04	1.14E-04	2.91E-04	1.05E-04	1.09E-04	1.04E-03	2.19E-05	0.00E+00	1.82E-04	1.36E-03
53	C51	70	Combination Long Haul Truck	17	0.00E+00	6.65E-06	3.78E-07	6.15E+00	4.17E-08	8.35E-03	5.46E-06	7.75E-03	7.11E-04	1.07E-04	6.04E-04	1.21E-04	1.27E-04	9.87E-04	2.06E-05	0.00E+00	4.78E-04	1.46E-03
50	C52	40	Passenger Car	58	0.00E+00	8.32E-07	9.04E-08	3.06E+00	5.91E-06	1.65E-02	1.88E-06	5.29E-05	9.99E-04	1.40E-04	1.83E-04	1.18E-04	1.21E-04	1.72E-05	1.52E-05	2.82E-09	6.19E-05	8.25E-06
50	C52	40	Passenger Truck	97	0.00E+00	1.83E-06	1.93E-07	6.66E+00	1.10E-05	2.73E-02	3.69E-06	2.04E-04	1.77E-03	2.46E-04	3.48E-04	2.27E-04	2.33E-04	5.88E-05	3.28E-05	4.78E-09	1.15E-04	3.53E-05
50	C52	40	Single Unit Short Haul Truck	7	0.00E+00	2.27E-06	1.01E-07	1.27E+00	1.57E-06	1.99E-03	2.43E-06	9.16E-04	2.64E-04	4.12E-05	2.92E-04	6.09E-05	6.21E-05	1.29E-04	5.16E-06	2.19E-09	2.30E-04	1.72E-04
50	C52	40	Combination Short Haul Truck	6	0.00E+00	2.78E-06	2.07E-07	2.39E+00	6.87E-09	3.92E-03	1.97E-06	4.04E-03	5.59E-04	8.34E-05	1.65E-04	6.03E-05	6.26E-05	3.79E-04	7.98E-06	0.00E+00	1.02E-04	7.61E-04
50	C52	40	Combination Long Haul Truck	5	0.00E+00	3.69E-06	2.08E-07	2.29E+00	2.34E-08	4.76E-03	3.04E-06	4.26E-03	5.81E-04	8.16E-05	3.38E-04	6.71E-05	6.99E-05	3.68E-04	7.67E-06	0.00E+00	2.68E-04	8.02E-04
52	C53	60	Passenger Car	53	0.00E+00	6.24E-07	6.79E-08	2.42E+00	4.43E-06	1.24E-02	1.41E-06	5.27E-05	5.21E-04	7.81E-05	1.37E-04	8.85E-05	9.09E-05	1.05E-05	1.21E-05	2.47E-09	4.64E-05	8.21E-06
52	C53	60	Passenger Truck	89	0.00E+00	1.32E-06	1.40E-07	5.39E+00	8.31E-06	2.13E-02	2.73E-06	1.61E-04	9.26E-04	1.37E-04	2.60E-04	1.69E-04	1.74E-04	4.22E-05	2.68E-05	4.52E-09	8.68E-05	2.72E-05
52	C53	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
53	C54	70	Passenger Car	68	0.00E+00	7.32E-07	7.96E-08	2.98E+00	5.20E-06	1.46E-02	1.65E-06	6.96E-05	5.13E-04	8.04E-05	1.61E-04	1.04E-04	1.07E-04	1.15E-05	1.50E-05	3.12E-09	5.45E-05	1.09E-05
53	C54	70	Passenger Truck	113	0.00E+00	1.53E-06	1.63E-07	6.72E+00	9.82E-06	2.58E-02	3.21E-06	1.97E-04	9.17E-04	1.42E-04	3.07E-04	2.00E-04	2.05E-04	4.99E-05	3.35E-05	5.87E-09	1.03E-04	3.29E-05
53	C54	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.03E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
53	C54	70	Single Unit Long Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.41E-04
53	C54	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.65E-04
52	C55	60	Passenger Car	18	0.00E+00	2.07E-07	2.25E-08	8.01E-01	1.47E-06	4.11E-03	4.66E-07	1.74E-05	1.73E-04	2.59E-05	4.54E-05	2.93E-05	3.01E-05	3.48E-06	4.02E-06	8.18E-10	1.54E-05	2.72E-06
52	C55	60	Passenger Truck	29	0.00E+00	4.36E-07	4.62E-08	1.78E+00	2.75E-06	7.04E-03	9.04E-07	5.32E-05	3.06E-04	4.55E-05	8.62E-05	5.61E-05	5.75E-05	1.40E-05	8.86E-06	1.49E-09	2.87E-05	8.99E-06
52	C55	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
52	C55	60	Single Unit Long Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.31E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.75E-04
52	C55	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.92E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
50	C56	40	Passenger Car	33	0.00E+00	4.67E-07	5.08E-08	1.72E+00	3.31E-06	9.25E-03	1.05E-06	2.97E-05	5.61E-04	7.89E-05	1.03E-04	6.62E-05	6.80E-05	9.67E-06	8.53E-06	1.58E-09	3.47E-05	4.63E-06
50	C56	40	Passenger Truck	54	0.00E+00	1.03E-06	1.08E-07	3.74E+00	6.20E-06	1.53E-02	2.07E-06	1.14E-04	9.95E-04	1.38E-04	1.95E-04	1.28E-04	1.31E-04	3.30E-05	1.84E-05	2.68E-09	6.47E-05	1.98E-05
50	C56	40	Single Unit Short Haul Truck	11	0.00E+00	3.57E-06	1.59E-07	1.99E+00	2.47E-06	3.12E-03	3.82E-06	1.44E-03	4.15E-04	6.48E-05	4.60E-04	9.58E-05	9.76E-05	2.03E-04	8.11E-06	3.44E-09	3.62E-04	2.70E-04
50	C56	40	Combination Short Haul Truck	5	0.00E+00	2.52E-06	1.88E-07	2.17E+00	6.25E-09	3.57E-03	1.79E-06	3.67E-03	5.09E-04	7.58E-05	1.50E-04	5.48E-05	5.69E-05	3.45E-04	7.25E-06	0.00E+00	9.31E-05	6.92E-04
50	C56	40	Combination Long Haul Truck	5	0.00E+00	3.35E-06	1.89E-07	2.08E+00	2.13E-08	4.33E-03	2.76E-06	3.87E-03	5.28E-04	7.42E-05	3.07E-04	6.10E-05	6.36E-05	3.34E-04	6.98E-06	0.00E+00	2.44E-04	7.29E-04
53	C57	70	Passenger Car	182	0.00E+00	1.97E-06	2.15E-07	8.05E+00	1.40E-05	3.94E-02	4.45E-06	1.88E-04	1.38E-03	2.17E-04	4.34E-04	2.80E-04	2.87E-04	3.10E-05	4.05E-05	8.40E-09	1.47E-04	2.93E-05
53	C57	70	Passenger Truck	306	0.00E+00	4.12E-06	4.38E-07	1.81E+01	2.65E-05	6.94E-02	8.66E-06	5.30E-04	2.47E-03	3.84E-04	8.28E-04	5.38E-04	5.52E-04	1.35E-04	9.03E-05	1.58E-08	2.77E-04	8.88E-05
53	C57	70	Single Unit Short Haul Truck	19	0.00E+00	3.37E-06	1.37E-07	3.14E+00	2.26E-06	5.69E-03	3.67E-06	1.34E-03	3.04E-04	5.59E-05	4.54E-04	8.66E-05	8.83E-05	3.19E-04	1.28E-05	5.15E-09	3.66E-04	2.51E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	5.91E-09	1.33E-01	9.72E-08	2.39E-04	1.60E-07	5.77E-05	1.39E-05	2.50E-06	1.98E-05	3.74E-06	3.81E-06	1.35E-05	5.42E-07	2.17E-10	1.60E-05	1.08E-05
53	C57	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.63E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	C57	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.10E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
50	C58	40	Passenger Car	38	0.00E+00	5.42E-07	5.89E-08	1.99E+00	3.85E-06	1.07E-02	1.22E-06	3.44E-05	6.51E-04	9.15E-05	1.19E-04	7.69E-05	7.89E-05	1.12E-05	9.90E-06	1.83E-09	4.03E-05	5.37E-06
50	C58	40	Passenger Truck	63	0.00E+00	1.20E-06	1.26E-07	4.34E+00	7.20E-06	1.78E-02	2.40E-06	1.33E-04	1.15E-03	1.60E-04	2.27E-04	1.48E-04	1.52E-04	3.83E-05	2.14E-05	3.12E-09	7.51E-05	2.30E-05
50	C58	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.45E-05
50	C58	40	Combination Short Haul Truck	2	0.00E+00	7.57E-07	5.65E-08	6.51E-01	1.87E-09	1.07E-03	5.38E-07	1.10E-03	1.53E-04	2.27E-05	4.50E-05	1.64E-05	1.71E-05	1.03E-04	2.18E-06	0.00E+00	2.79E-05	2.07E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	1.01E-06	5.68E-08	6.24E-01	6.39E-09	1.30E-03	8.29E-07	1.16E-03	1.58E-04	2.23E-05	9.21E-05	1.83E-05	1.91E-05	1.00E-04	2.09E-06	0.00E+00	7.31E-05	2.19E-04
53	C59	70	Passenger Car	114	0.00E+00	1.23E-06	1.34E-07	5.01E+00	8.73E-06	2.45E-02	2.77E-06	1.17E-04	8.62E-04	1.35E-04	2.70E-04	1.74E-04	1.79E-04	1.93E-05	2.52E-05	5.23E-09	9.15E-05	1.82E-05
53	C59	70	Passenger Truck	190	0.00E+00	2.57E-06	2.73E-07	1.13E+01	1.65E-05	4.32E-02	5.39E-06	3.30E-04	1.54E-03	2.39E-04	5.16E-04	3.35E-04	3.44E-04	8.39E-05	5.62E-05	9.86E-09	1.72E-04	5.53E-05
53	C59	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.36E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
53	C59	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
53	C59	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
52	C60	60	Passenger Car	243	0.00E+00	2.86E-06	3.11E-07	1.11E+01	2.03E-05	5.68E-02	6.44E-06	2.41E-04	2.39E-03	3.58E-04	6.29E-04	4.05E-04	4.16E-04	4.82E-05	5.55E-05	1.13E-08	2.13E-04	3.76E-05
52	C60	60	Passenger Truck	407	0.00E+00	6.03E-06	6.39E-07	2.47E+01	3.80E-05	9.74E-02	1.25E-05	7.35E-04	4.24E-03	6.29E-04	1.19E-03	7.76E-04	7.95E-04	1.93E-04	1.23E-04	2.07E-08	3.97E-04	1.24E-04
52	C60	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.39E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.03E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
52	C60	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	C64	70	Combination Short Haul Truck	29	0.00E+00	7.54E-06	5.61E-07	1.02E+01	1.91E-08	1.09E-02	5.37E-06	1.13E-02	1.06E-03	1.77E-04	4.52E-04	1.63E-04	1.70E-04	1.62E-03	3.41E-05	0.00E+00	2.83E-04	2.12E-03
53	C64	70	Combination Long Haul Truck	27	0.00E+00	1.03E-05	5.88E-07	9.56E+00	6.48E-08	1.30E-02	8.50E-06	1.21E-02	1.11E-03	1.67E-04	9.40E-04	1.89E-04	1.97E-04	1.53E-03	3.20E-05	0.00E+00	7.43E-04	2.27E-03
52	C65	60	Passenger Car	7	0.00E+00	7.92E-08	8.60E-09	3.07E-01	5.62E-07	1.57E-03	1.78E-07	6.67E-06	6.61E-05	9.91E-06	1.74E-05	1.12E-05	1.15E-05	1.33E-06	1.54E-06	3.13E-10	5.89E-06	1.04E-06
52	C65	60	Passenger Truck	11	0.00E+00	1.67E-07	1.77E-08	6.83E-01	1.05E-06	2.70E-03	3.46E-07	2.04E-05	1.17E-04	1.74E-05	3.30E-05	2.15E-05	2.20E-05	5.35E-06	3.39E-06	5.73E-10	1.10E-05	3.44E-06
50	C66	40	Passenger Car	133	0.00E+00	1.91E-06	2.08E-07	7.03E+00	1.36E-05	3.79E-02	4.31E-06	1.21E-04	2.30E-03	3.23E-04	4.20E-04	2.71E-04	2.78E-04	3.96E-05	3.49E-05	6.47E-09	1.42E-04	1.89E-05
50	C66	40	Passenger Truck	223	0.00E+00	4.21E-06	4.43E-07	1.53E+01	2.54E-05	6.26E-02	8.47E-06	4.68E-04	4.07E-03	5.65E-04	8.00E-04	5.22E-04	5.35E-04	1.35E-04	7.53E-05	1.10E-08	2.65E-04	8.10E-05
50	C66	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.85E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	C66	40	Combination Short Haul Truck	4	0.00E+00	2.02E-06	1.51E-07	1.74E+00	5.00E-09	2.85E-03	1.43E-06	2.94E-03	4.07E-04	6.06E-05	1.20E-04	4.39E-05	4.55E-05	2.76E-04	5.80E-06	0.00E+00	7.45E-05	5.53E-04
50	C66	40	Combination Long Haul Truck	4	0.00E+00	2.68E-06	1.51E-07	1.67E+00	1.70E-08	3.46E-03	2.21E-06	3.10E-03	4.23E-04	5.93E-05	2.46E-04	4.88E-05	5.08E-05	2.67E-04	5.58E-06	0.00E+00	1.95E-04	5.83E-04
55	C67	90	Passenger Car	480	0.00E+00	4.63E-06	5.03E-07	1.98E+01	3.29E-05	9.54E-02	1.04E-05	5.01E-04	2.05E-03	3.59E-04	1.02E-03	6.56E-04	6.74E-04	6.35E-05	9.99E-05	2.04E-08	3.44E-04	7.81E-05
55	C67	90	Passenger Truck	805	0.00E+00	9.61E-06	1.03E-06	4.52E+01	6.32E-05	1.79E-01	2.05E-05	1.30E-03	3.63E-03	6.37E-04	1.97E-03	1.28E-03	1.31E-03	3.09E-04	2.26E-04	3.99E-08	6.62E-04	2.15E-04
55	C67	90	Single Unit Short Haul Truck	66	0.00E+00	7.09E-06	2.62E-07	1.08E+01	4.90E-06	1.98E-02	7.91E-06	3.09E-03	5.20E-04	1.22E-04	1.01E-03	1.79E-04	1.83E-04	1.10E-03	4.40E-05	1.72E-08	8.22E-04	5.77E-04
55	C67	90	Single Unit Long Haul Truck	3	0.00E+00	3.08E-07	1.12E-08	4.57E-01	2.06E-07	8.20E-04	3.43E-07	1.31E-04	2.37E-05	5.35E-06	4.38E-05	7.64E-06	7.79E-06	4.62E-05	1.86E-06	7.11E-10	3.60E-05	2.44E-05
55	C67	90	Combination Short Haul Truck	54	0.00E+00	7.80E-06	5.60E-07	1.75E+01	2.41E-08	1.45E-02	5.68E-06	1.38E-02	7.49E-04	1.56E-04	5.04E-04	1.65E-04	1.71E-04	2.78E-03	5.84E-05	0.00E+00	3.32E-04	2.61E-03
55	C67	90	Combination Long Haul Truck	50	0.00E+00	1.13E-05	5.92E-07	1.59E+01	8.17E-08	1.70E-02	9.62E-06	1.47E-02	7.69E-04	1.38E-04	1.12E-03	1.97E-04	2.05E-04	2.56E-03	5.34E-05	0.00E+00	9.12E-04	2.76E-03
55	C68	90	Passenger Car	388	0.00E+00	3.74E-06	4.06E-07	1.60E+01	2.65E-05	7.71E-02	8.43E-06	4.05E-04	1.65E-03	2.90E-04	8.22E-04	5.30E-04	5.44E-04	5.13E-05	8.07E-05	1.65E-08	2.78E-04	6.31E-05
55	C68	90	Passenger Truck	650	0.00E+00	7.76E-06	8.29E-07	3.65E+01	5.11E-05	1.45E-01	1.66E-05	1.05E-03	2.93E-03	5.15E-04	1.59E-03	1.03E-03	1.06E-03	2.50E-04	1.83E-04	3.23E-08	5.35E-04	1.74E-04
55	C68	90	Single Unit Short Haul Truck	56	0.00E+00	5.96E-06	2.20E-07	9.10E+00	4.12E-06	1.66E-02	6.65E-06	2.60E-03	4.37E-04	1.03E-04	8.45E-04	1.51E-04	1.54E-04	9.27E-04	3.70E-05	1.45E-08	6.91E-04	4.85E-04
55	C68	90	Single Unit Long Haul Truck	2	0.00E+00	2.59E-07	9.41E-09	3.84E-01	1.73E-07	6.89E-04	2.88E-07	1.10E-04	2.00E-05	4.50E-06	3.68E-05	6.43E-06	6.55E-06	3.88E-05	1.56E-06	5.97E-10	3.03E-05	2.05E-05
55	C68	90	Combination Short Haul Truck	40	0.00E+00	5.77E-06	4.15E-07	1.29E+01	1.79E-08	1.07E-02	4.21E-06	1.02E-02	5.55E-04	1.15E-04	3.73E-04	1.22E-04	1.27E-04	2.06E-03	4.33E-05	0.00E+00	2.46E-04	1.93E-03
55	C68	90	Combination Long Haul Truck	37	0.00E+00	8.37E-06	4.39E-07	1.18E+01	6.05E-08	1.26E-02	7.12E-06	1.09E-02	5.69E-04	1.02E-04	8.27E-04	1.46E-04	1.52E-04	1.89E-03	3.96E-05	0.00E+00	6.75E-04	2.05E-03
54	C69	80	Passenger Car	617	0.00E+00	6.25E-06	6.80E-07	2.63E+01	4.44E-05	1.26E-01	1.41E-05	6.42E-04	3.54E-03	5.82E-04	1.38E-03	8.87E-04	9.10E-04	9.17E-05	1.32E-04	2.74E-08	4.65E-04	1.00E-04
54	C69	80	Passenger Truck	1032	0.00E+00	1.30E-05	1.39E-06	5.96E+01	8.46E-05	2.30E-01	2.76E-05	1.73E-03	6.32E-03	1.04E-03	2.64E-03	1.72E-03	1.76E-03	4.24E-04	2.98E-04	5.28E-08	8.86E-04	2.87E-04
54	C69	80	Single Unit Short Haul Truck	55	0.00E+00	7.49E-06	2.92E-07	8.95E+00	5.08E-06	1.63E-02	8.23E-06	3.11E-03	6.13E-04	1.25E-04	1.03E-03	1.91E-04	1.95E-04	9.10E-04	3.64E-05	1.44E-08	8.37E-04	5.81E-04
54	C69	80	Single Unit Long Haul Truck	2	0.00E+00	3.25E-07	1.26E-08	3.78E-01	2.16E-07	6.77E-04	3.58E-07	1.33E-04	2.81E-05	5.57E-06	4.50E-05	8.20E-06	8.36E-06	3.82E-05	1.54E-06	6.01E-10	3.66E-05	2.48E-05
54	C69	80	Combination Short Haul Truck	58	0.00E+00	1.19E-05	8.78E-07	1.93E+01	3.11E-08	1.81E-02	8.48E-06	1.83E-02	1.37E-03	2.49E-04	7.19E-04	2.56E-04	2.66E-04	3.07E-03	6.45E-05	0.00E+00	4.53E-04	3.45E-03
54	C69	80	Combination Long Haul Truck	52	0.00E+00	1.65E-05	9.33E-07	1.79E+01	1.05E-07	2.14E-02	1.36E-05	1.95E-02	1.42E-03	2.27E-04	1.51E-03	3.01E-04	3.13E-04	2.87E-03	6.00E-05	0.00E+00	1.20E-03	3.68E-03
55	C70	90	Passenger Car	671	0.00E+00	6.47E-06	7.03E-07	2.76E+01	4.59E-05	1.33E-01	1.46E-05	7.00E-04	2.86E-03	5.01E-04	1.42E-03	9.17E-04	9.41E-04	8.87E-05	1.40E-04	2.84E-08	4.81E-04	1.09E-04
55	C70	90	Passenger Truck	1124	0.00E+00	1.34E-05	1.43E-06	6.31E+01	8.84E-05	2.51E-01	2.87E-05	1.82E-03	5.07E-03	8.90E-04	2.76E-03	1.79E-03	1.83E-03	4.31E-04	3.16E-04	5.58E-08	9.25E-04	3.00E-04
55	C70	90	Single Unit Short Haul Truck	109	0.00E+00	1.17E-05	4.33E-07	1.79E+01	8.09E-06	3.27E-02	1.31E-05	5.10E-03	8.58E-04	2.02E-04	1.66E-03	2.96E-04	3.02E-04	1.82E-03	7.26E-05	2.84E-08	1.36E-03	9.53E-04
55	C70	90	Single Unit Long Haul Truck	5	0.00E+00	5.09E-07	1.85E-08	7.55E-01	3.40E-07	1.35E-03	5.67E-07	2.16E-04	3.92E-05	8.84E-06	7.24E-05	1.26E-05	1.29E-05	7.63E-05	3.07E-06	1.17E-09	5.95E-05	4.03E-05
55	C70	90	Combination Short Haul Truck	69	0.00E+00	9.82E-06	7.05E-07	2.20E+01	3.04E-08	1.83E-02	7.16E-06	1.74E-02	9.44E-04	1.96E-04	6.34E-04	2.08E-04	2.16E-04	3.50E-03	7.36E-05	0.00E+00	4.18E-04	3.28E-03
55	C70	90	Combination Long Haul Truck	62	0.00E+00	1.42E-05	7.46E-07	2.01E+01	1.03E-07	2.14E-02	1.21E-05	1.85E-02	9.68E-04	1.73E-04	1.41E-03	2.48E-04	2.59E-04	3.22E-03	6.73E-05	0.00E+00	1.15E-03	3.48E-03
53	C71	70	Passenger Car	391	0.00E+00	4.23E-06	4.59E-07	1.72E+01	3.00E-05	8.43E-02	9.53E-06	4.02E-04	2.96E-03	4.64E-04	9.30E-04	5.99E-04	6.15E-04	6.64E-05	8.66E-05	1.80E-08	3.14E-04	6.27E-05
53	C71	70	Passenger Truck	654	0.00E+00	8.83E-06	9.39E-07	3.88E+01	5.67E-05	1.49E-01	1.85E-05	1.14E-03	5.29E-03	8.23E-04	1.77E-03	1.15E-03	1.18E-03	2.88E-04	1.93E-04	3.39E-08	5.93E-04	1.90E-04
53	C71	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.22E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.90E-04
53	C71	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.82E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.40E-05
53	C71	70	Combination Short Haul Truck	41	0.00E+00	1.05E-05	7.81E-07	1.42E+01	2.67E-08	1.52E-02	7.48E-06	1.57E-02	1.48E-03	2.47E-04	6.30E-04	2.28E-04	2.36E-04	2.25E-03	4.74E-05	0.00E+00	3.94E-04	2.95E-03
53	C71	70	Combination Long Haul Truck	37	0.00E+00	1.44E-05	8.19E-07	1.33E+01	9.03E-08	1.81E-02	1.18E-05	1.68E-02	1.54E-03	2.32E-04	1.31E-03	2.63E-04	2.74E-04	2.14E-03	4.46E-05	0.00E+00	1.03E-03	3.16E-03
50	C72	40	Passenger Car	33	0.00E+00	4.78E-07	5.19E-08	1.76E+00	3.39E-06	9.47E-03	1.08E-06	3.04E-05	5.74E-04	8.07E-05	1.05E-04	6.78E-05	6.95E-05	9.89E-06	8.72E-06	1.62E-09	3.55E-05	4.74E-06
50	C72	40	Passenger Truck	56	0.00E+00	1.05E-06	1.11E-07	3.82E+00	6.34E-06	1.56E-02	2.12E-06	1.17E-04	1.02E-03	1.41E-04	2.00E-04	1.31E-04	1.34E-04	3.38E-05	1.88E-05	2.75E-09	6.62E-05	2.03E-05
50	C72	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.90E-05
50	C72	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.34E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.38E-04
50	C72	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.74E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
51	C73	50	Passenger Car	175	0.00E+00	2.28E-06	2.48E-07	8.33E+00	1.62E-05	4.52E-02	5.15E-06	1.64E-04	2.28E-03	3.29E-04	5.02E-04	3.24E-04	3.32E-04	4.15E-05	4.15E-05	8.26E-09	1.70E-04	2.56E-05
51	C73	50	Passenger Truck	292	0.00E+00	4.88E-06	5.15E-07	1.83E+01	3.01E-05	7.50E-02	9.96E-06	5.57E-04	4.02E-03	5.75E-04	9.45E-04	6.16E-04	6.31E-04	1.53E-04	9.04E-05	1.44E-08	3.14E-04	9.55E-05
51	C73	50	Single Unit Short Haul Truck	14	0.00E+00	4.00E-06	1.85E-07	2.66E+00	2.73E-06	4.31E-03	4.22E-06	1.66E-03	4.62E-04	7.56E-05	5.01E-04	1.08E-04	1.10E-04	2.73E-04	1.08E-05	4.56E-09	3.91E-04	3.11E-04
51	C73	50	Single Unit Long Haul Truck	1	0.00E+00	1.73E-07	8.04E-09	1.14E-01	1.19E-07	1.85E-04	1.83E-07	7.22E-05	2.09E-05	3.38E-06	2.17E-05	4.70E-06	4.79E-06	1.17E-05	4.64E-07	1.96E-10	1.69E-05	1.35E-05
51	C73	50	Combination Short Haul Truck	7	0.00E+00	2.88E-06	2.19E-07	2.75E+00	6.32E-09	3.90E-03	2.02E-06	4.10E-03	4.73E-04	7.40E-05	1.64E-04	6.33E-05	6.57E-05	4.37E-04	9.19E-06	0.00E+00	9.88E-05	7.73E-04
51	C73	50	Combination Long Haul Truck	6	0.00E+00	3.76E-06	2.24E-07	2.62E+00	2.15E-08	4.72E-03	3.03E-06	4.36E-03	4.91E-04	7.06E-05	3.25E-04	7.07E-05	7.36E-05	4.20E-04	8.78E-06	0.00E+00	2.51E-04	8.20E-04
52	C74	60	Passenger Car	432	0.00E+00	5.08E-06	5.52E-07	1.97E+01	3.60E-05	1.01E-01	1.15E-05	4.28E-04	4.24E-03	6.36E-04	1.12E-03	7.20E-04	7.39E-04	8.56E-05	9.87E-05	2.01E-08	3.78E-04	6.68E-05
52	C74	60	Passenger Truck	723	0.00E+00	1.07E-05	1.14E-06	4.39E+01	6.76E-05	1.73E-01	2.22E-05	1.31E-03	7.53E-03	1.12E-03	2.12E-03	1.38E-03	1.41E-03	3.43E-04	2.18E-04	3.67E-08	7.06E-04	2.21E-04
52	C74	60	Single Unit Short Haul Truck	57	0.00E+00	1.26E-05	5.21E-07	9.40E+00	8.36E-06	1.65E-02	1.36E-05	4.84E-03	1.30E-03	2.18E-04	1.68E-03	3.24E-04	3.31E-04	9.53E-04	3.83E-05	1.58E-08	1.35E-03	9.05E-04
52	C74	60	Single Unit Long Haul Truck	2	0.00E+00	5.51E-07	2.26E-08	4.01E-01	3.63E-07	7.02E-04	5.96E-07	2.09E-04	5.84E-05	9.69E-06	7.36E-05	1.41E-05	1.44E-05	4.05E-05	1.64E-06	6.72E-10	5.92E-05	3.92E-05
52	C74	60	Combination Short Haul Truck	48	0.00E+00	1.39E-05	1.02E-06	1.68E+01	3.80E-08	2.08E-02	9.98E-06	2.12E-02	2.42E-03	3.79E-04	8.56E-04	2.98E-04	3.10E-04	2.66E-03	5.61E-05	0.00E+00	5.46E-04	3.99E-03
52	C74	60	Combination Long Haul Truck	43	0.00E+00	1.91E-05	1.04E-06	1.58E+01	1.29E-07	2.49E-02	1.60E-05	2.26E-02	2.54E-03	3.68E-04	1.81E-03	3.41E-04	3.55E-04	2.54E-03	5.31E-05	0.00E+00	1.46E-03	4.25E-03
53	C81	70	Passenger Car	366	0.00E+00	3.96E-06	4.31E-07	1.62E+01	2.81E-05	7.91E-02	8.94E-06	3.77E-04	2.78E-03	4.35E-04	8.72E-04	5.62E-04	5.77E-04	6.23E-05	8.13E-05	1.69E-08	2.95E-04	5.88E-05
53	C81	70	Passenger Truck	614	0.00E+00	8.28E-06	8.80E-07	3.64E+01	5.32E-05	1.39E-01	1.74E-05	1.06E-03	4.96E-03	7.71E-04	1.66E-03	1.08E-03	1.11E-03	2.70E-04	1.81E-04	3.18E-08	5.56E-04	1.78E-04
53	C81	70	Single Unit Short Haul Truck	76	0.00E+00	1.33E-05	5.41E-07	1.24E+01	8.92E-06	2.25E-02	1.45E-05	5.29E-03	1.20E-03	2.21E-04	1.80E-03	3.42E-04	3.49E-04	1.26E-03	5.04E-05	2.04E-08	1.45E-03	9.90E-04
53	C81	70	Single Unit Long Haul Truck	3	0.00E+00	5.79E-07	2.33E-08	5.25E-01	3.84E-07	9.44E-04	6.30E-07	2.28E-04	5.50E-05	9.87E-06	7.83E-05	1.48E-05	1.51E-05	5.32E-05	2.14E-06	8.58E-10	6.33E-05	4.26E-05
53	C81	70	Combination Short Haul Truck	71	0.00E+00	1.83E-05	1.36E-06	2.47E+01	4.65E-08	2.64E-02	1.30E-05	2.73E-02	2.58E-03	4.30E-04	1.10E-03	3.97E-04	4.12E-04	3.93E-03	8.27E-05	0.00E+00	6.86E-04	5.15E-03
53	C81	70	Combination Long Haul Truck	65	0.00E+00	2.51E-05	1.43E-06	2.32E+01	1.57E-07	3.16E-02	2.06E-05	2.93E-02	2.69E-03	4.05E-04	2.28E-03	4.59E-04	4.78E-04	3.73E-03	7.78E-05	0.00E+00	1.80E-03	5.51E-03
52	C82	60	Passenger Car	325	0.00E+00	3.83E-06	4.16E-07	1.48E+01	2.71E-05	7.60E-02	8.63E-06	3.23E-04	3.19E-03	4.79E-04	8.41E-04	5.42E-04	5.57E-04	6.45E-05	7.43E-05	1.51E-08	2.85E-04	5.03E-05
52	C82	60	Passenger Truck	545	0.00E+00	8.07E-06	8.56E-07	3.30E+01	5.09E-05	1.30E-01	1.67E-05	9.84E-04	5.67E-03	8.42E-04	1.60E-03	1.04E-03	1.06E-03	2.58E-04	1.64E-04	2.77E-08	5.32E-04	1.66E-04
52	C82	60	Single Unit Short Haul Truck	68	0.00E+00	1.52E-05	6.27E-07	1.13E+01	1.01E-05	1.99E-02	1.64E-05	5.82E-03	1.56E-03	2.63E-04	2.03E-03	3.90E-04	3.98E-04	1.15E-03	4.61E-05	1.90E-08	1.63E-03	1.09E-03
52	C82	60	Single Unit Long Haul Truck	3	0.00E+00	6.63E-07	2.72E-08	4.82E-01	4.36E-07	8.45E-04	7.17E-07	2.52E-04	7.03E-05	1.17E-05	8.86E-05	1.70E-05	1.73E-05	4.87E-05	1.97E-06	8.08E-10	7.13E-05	4.72E-05
52	C82	60	Combination Short Haul Truck	61	0.00E+00	1.77E-05	1.30E-06	2.14E+01	4.85E-08	2.65E-02	1.27E-05	2.70E-02	3.09E-03	4.83E-04	1.09E-03	3.80E-04	3.95E-04	3.40E-03	7.15E-05	0.00E+00	6.96E-04	5.09E-03
52	C82	60	Combination Long Haul Truck	55	0.00E+00	2.43E-05	1.33E-06	2.02E+01	1.64E-07	3.18E-02	2.03E-05	2.88E-02	3.24E-03	4.69E-04	2.31E-03	4.34E-04	4.52E-04	3.24E-03	6.76E-05	0.00E+00	1.86E-03	5.42E-03
16	C83	100	Passenger Car	926	0.00E+00	8.66E-06	9.41E-07	3.78E+01	6.14E-05	1.84E-01	1.95E-05	9.98E-04	2.96E-03	5.67E-04	1.90E-03	1.23E-03	1.26E-03	1.10E-04	1.91E-04	4.02E-08	6.44E-04	1.56E-04
16	C83	100	Passenger Truck	1550	0.00E+00	1.79E-05	1.92E-06	8.72E+01	1.19E-04	3.55E-01	3.86E-05	2.49E-03	5.17E-03	1.00E-03	3.72E-03	2.41E-03	2.47E-03	5.71E-04	4.37E-04	7.96E-08	1.25E-03	4.10E-04
16	C83	100	Single Unit Short Haul Truck	186	0.00E+00	1.77E-05	6.52E-07	3.03E+01	1.35E-05	6.26E-02	2.00E-05	7.81E-03	1.20E-03	3.11E-04	2.53E-03	4.68E-04	4.76E-04	3.11E-03	1.23E-04	5.01E-08	2.06E-03	1.46E-03
16	C83	100	Single Unit Long Haul Truck	8	0.00E+00	7.67E-07	2.76E-08	1.28E+00	5.59E-07	2.56E-03	8.68E-07	3.27E-04	5.46E-05	1.35E-05	1.11E-04	1.97E-05	2.01E-05	1.30E-04	5.18E-06	2.05E-09	9.06E-05	6.10E-05
16	C83	100	Combination Short Haul Truck	173	0.00E+00	2.48E-05	1.83E-06	5.77E+01	6.57E-08	4.46E-02	1.77E-05	4.47E-02	1.68E-03	4.25E-04	1.51E-03	5.34E-04	5.55E-04	9.17E-03	1.93E-04	0.00E+00	9.54E-04	8.42E-03
16	C83	100	Combination Long Haul Truck	158	0.00E+00	3.50E-05	1.97E-06	5.23E+01	2.23E-07	5.19E-02	2.89E-05	4.79E-02	1.68E-03	3.42E-04	3.21E-03	6.36E-04	6.63E-04	8.38E-03	1.75E-04	0.00E+00	2.55E-03	9.02E-03
55	C84	90	Passenger Car	248	0.00E+00	2.39E-06	2.59E-07	1.02E+01	1.69E-05	4.91E-02	5.38E-06	2.58E-04	1.05E-03	1.85E-04	5.24E-04	3.38E-04	3.47E-04	3.27E-05	5.15E-05	1.05E-08	1.77E-04	4.03E-05
55	C84	90	Passenger Truck	414	0.00E+00	4.95E-06	5.29E-07	2.33E+01	3.26E-05	9.24E-02	1.06E-05	6.70E-04	1.87E-03	3.28E-04	1.02E-03	6.59E-04	6.76E-04	1.59E-04	1.16E-04	2.06E-08	3.41E-04	1.11E-04
55	C84	90	Single Unit Short Haul Truck	92	0.00E+00	9.87E-06	3.65E-07	1.51E+01	6.81E-06	2.76E-02	1.10E-05	4.30E-03	7.23E-04	1.70E-04	1.40E-03	2.50E-04	2.54E-04	1.53E-03	6.12E-05	2.40E-08	1.14E-03	8.02E-04
55	C84	90	Single Unit Long Haul Truck	4	0.00E+00	4.29E-07	1.56E-08	6.35E-01	2.87E-07	1.14E-03	4.77E-07	1.82E-04	3.30E-05	7.45E-06	6.10E-05	1.06E-05	1.08E-05	6.43E-05	2.59E-06	9.89E-10	5.01E-05	3.40E-05
55	C84	90	Combination Short Haul Truck	75	0.00E+00	1.08E-05	7.75E-07	2.42E+01	3.34E-08	2.01E-02	7.87E-06	1.92E-02	1.04E-03	2.15E-04	6.97E-04	2.29E-04	2.37E-04	3.85E-03	8.09E-05	0.00E+00	4.60E-04	3.61E-03
55	C84	90	Combination Long Haul Truck	69	0.00E+00	1.57E-05	8.20E-07	2.21E+01	1.13E-07	2.36E-02	1.33E-05	2.03E-02	1.06E-03	1.90E-04	1.55E-03	2.73E-04	2.84E-04	3.54E-03	7.40E-05	0.00E+00	1.26E-03	3.83E-03
55	C85	90	Passenger Car	502	0.00E+00	4.84E-06	5.26E-07	2.07E+01	3.44E-05	9.98E-02	1.09E-05	5.24E-04	2.14E-03	3.75E-04	1.06E-03	6.87E-04	7.05E-04	6.64E-05	1.04E-04	2.13E-08	3.60E-04	8.17E-05
55	C85	90	Passenger Truck	842	0.00E+00	1.00E-05	1.07E-06	4.73E+01	6.62E-05	1.88E-01	2.15E-05	1.36E-03	3.80E-03	6.66E-04	2.07E-03	1.34E-03	1.37E-03	3.23E-04	2.37E-04	4.18E-08	6.93E-04	2.25E-04
55	C85	90	Single Unit Short Haul Truck	112

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D66	80	Passenger Car	255	0.00E+00	2.65E-06	2.88E-07	1.08E+01	1.88E-05	5.47E-02	5.98E-06	2.64E-04	1.39E-03	2.33E-04	5.83E-04	3.76E-04	3.86E-04	3.79E-05	5.44E-05	1.16E-08	1.97E-04	4.12E-05
11	D66	80	Passenger Truck	427	0.00E+00	5.46E-06	5.82E-07	2.44E+01	3.55E-05	9.65E-02	1.16E-05	7.13E-04	2.47E-03	4.12E-04	1.11E-03	7.20E-04	7.38E-04	1.75E-04	1.22E-04	2.21E-08	3.72E-04	1.19E-04
11	D66	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	D66	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.09E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D66	80	Combination Short Haul Truck	29	0.00E+00	6.04E-06	4.47E-07	9.82E+00	1.58E-08	9.20E-03	4.32E-06	9.31E-03	6.99E-04	1.27E-04	3.66E-04	1.30E-04	1.35E-04	1.56E-03	3.28E-05	0.00E+00	2.31E-04	1.75E-03
11	D66	80	Combination Long Haul Truck	27	0.00E+00	8.41E-06	4.75E-07	9.12E+00	5.35E-08	1.09E-02	6.94E-06	9.95E-03	7.22E-04	1.16E-04	7.71E-04	1.53E-04	1.59E-04	1.46E-03	3.05E-05	0.00E+00	6.11E-04	1.87E-03
11	D67	80	Passenger Car	213	0.00E+00	2.22E-06	2.41E-07	9.02E+00	1.57E-05	4.57E-02	5.00E-06	2.21E-04	1.16E-03	1.95E-04	4.87E-04	3.14E-04	3.22E-04	3.17E-05	4.55E-05	9.72E-09	1.65E-04	3.45E-05
11	D67	80	Passenger Truck	357	0.00E+00	4.56E-06	4.86E-07	2.04E+01	2.97E-05	8.07E-02	9.67E-06	5.96E-04	2.07E-03	3.44E-04	9.28E-04	6.02E-04	6.17E-04	1.47E-04	1.02E-04	1.85E-08	3.11E-04	9.92E-05
11	D67	80	Single Unit Short Haul Truck	105	0.00E+00	1.45E-05	5.64E-07	1.73E+01	9.80E-06	3.14E-02	1.59E-05	6.00E-03	1.18E-03	2.42E-04	1.99E-03	3.69E-04	3.76E-04	1.76E-03	7.02E-05	2.78E-08	1.62E-03	1.12E-03
11	D67	80	Single Unit Long Haul Truck	5	0.00E+00	6.28E-07	2.42E-08	7.30E-01	4.18E-07	1.31E-03	6.90E-07	2.56E-04	5.43E-05	1.07E-05	8.68E-05	1.58E-05	1.61E-05	7.38E-05	2.97E-06	1.16E-09	7.07E-05	4.79E-05
11	D67	80	Combination Short Haul Truck	81	0.00E+00	1.67E-05	1.24E-06	2.72E+01	4.38E-08	2.55E-02	1.19E-05	2.58E-02	1.93E-03	3.50E-04	1.01E-03	3.61E-04	3.75E-04	4.32E-03	9.09E-05	0.00E+00	6.39E-04	4.85E-03
11	D67	80	Combination Long Haul Truck	74	0.00E+00	2.33E-05	1.31E-06	2.52E+01	1.48E-07	3.02E-02	1.92E-05	2.75E-02	2.00E-03	3.20E-04	2.13E-03	4.24E-04	4.41E-04	4.05E-03	8.45E-05	0.00E+00	1.69E-03	5.19E-03
11	D68	80	Passenger Car	195	0.00E+00	2.03E-06	2.20E-07	8.26E+00	1.44E-05	4.18E-02	4.57E-06	2.02E-04	1.06E-03	1.78E-04	4.46E-04	2.88E-04	2.95E-04	2.90E-05	4.16E-05	8.90E-09	1.51E-04	3.16E-05
11	D68	80	Passenger Truck	327	0.00E+00	4.18E-06	4.45E-07	1.87E+01	2.72E-05	7.39E-02	8.85E-06	5.46E-04	1.89E-03	3.15E-04	8.49E-04	5.51E-04	5.65E-04	1.34E-04	9.31E-05	1.69E-08	2.85E-04	9.08E-05
11	D68	80	Single Unit Short Haul Truck	38	0.00E+00	5.26E-06	2.05E-07	6.28E+00	3.56E-06	1.14E-02	5.78E-06	2.18E-03	4.30E-04	8.80E-05	7.24E-04	1.34E-04	1.37E-04	6.39E-04	2.55E-05	1.01E-08	5.87E-04	4.08E-04
11	D68	80	Single Unit Long Haul Truck	2	0.00E+00	2.28E-07	8.81E-09	2.65E-01	1.52E-07	4.75E-04	2.51E-07	9.33E-05	1.97E-05	3.91E-06	3.16E-05	5.75E-06	5.87E-06	2.68E-05	1.08E-06	4.22E-10	2.57E-05	1.74E-05
11	D68	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.22E-03
11	D68	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.26E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	D69	80	Passenger Car	254	0.00E+00	2.64E-06	2.87E-07	1.08E+01	1.88E-05	5.45E-02	5.96E-06	2.64E-04	1.39E-03	2.32E-04	5.81E-04	3.75E-04	3.85E-04	3.78E-05	5.42E-05	1.16E-08	1.97E-04	4.11E-05
11	D69	80	Passenger Truck	426	0.00E+00	5.44E-06	5.80E-07	2.43E+01	3.54E-05	9.62E-02	1.15E-05	7.11E-04	2.47E-03	4.11E-04	1.11E-03	7.18E-04	7.36E-04	1.75E-04	1.21E-04	2.21E-08	3.71E-04	1.18E-04
11	D69	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.04E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.94E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.43E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.28E-06
11	D69	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.48E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	D69	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.86E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
11	D70	80	Passenger Car	102	0.00E+00	1.06E-06	1.15E-07	4.31E+00	7.50E-06	2.18E-02	2.38E-06	1.05E-04	5.54E-04	9.28E-05	2.33E-04	1.50E-04	1.54E-04	1.51E-05	2.17E-05	4.64E-09	7.86E-05	1.64E-05
11	D70	80	Passenger Truck	170	0.00E+00	2.18E-06	2.32E-07	9.72E+00	1.42E-05	3.85E-02	4.61E-06	2.84E-04	9.87E-04	1.64E-04	4.43E-04	2.87E-04	2.94E-04	6.99E-05	4.85E-05	8.83E-09	1.48E-04	4.73E-05
11	D70	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.40E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.49E-04
11	D70	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
11	D70	80	Combination Short Haul Truck	26	0.00E+00	5.39E-06	3.99E-07	8.77E+00	1.41E-08	8.21E-03	3.85E-06	8.31E-03	6.24E-04	1.13E-04	3.27E-04	1.16E-04	1.21E-04	1.39E-03	2.93E-05	0.00E+00	2.06E-04	1.57E-03
11	D70	80	Combination Long Haul Truck	24	0.00E+00	7.51E-06	4.24E-07	8.14E+00	4.78E-08	9.73E-03	6.19E-06	8.88E-03	6.45E-04	1.03E-04	6.88E-04	1.37E-04	1.42E-04	1.31E-03	2.73E-05	0.00E+00	5.46E-04	1.67E-03
10	D71	70	Passenger Car	221	0.00E+00	2.47E-06	2.69E-07	9.65E+00	1.75E-05	4.97E-02	5.57E-06	2.24E-04	1.71E-03	2.66E-04	5.43E-04	3.50E-04	3.60E-04	3.76E-05	4.85E-05	1.01E-08	1.84E-04	3.49E-05
10	D71	70	Passenger Truck	371	0.00E+00	5.20E-06	5.53E-07	2.17E+01	3.33E-05	8.78E-02	1.09E-05	6.51E-04	3.09E-03	4.78E-04	1.04E-03	6.77E-04	6.94E-04	1.64E-04	1.08E-04	1.94E-08	3.48E-04	1.09E-04
10	D71	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.21E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.14E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.52E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
10	D71	70	Combination Short Haul Truck	38	0.00E+00	9.69E-06	7.21E-07	1.31E+01	2.46E-08	1.40E-02	6.91E-06	1.45E-02	1.37E-03	2.28E-04	5.81E-04	2.10E-04	2.18E-04	2.08E-03	4.38E-05	0.00E+00	3.63E-04	2.73E-03
10	D71	70	Combination Long Haul Truck	34	0.00E+00	1.33E-05	7.56E-07	1.23E+01	8.33E-08	1.67E-02	1.09E-05	1.55E-02	1.42E-03	2.14E-04	1.21E-03	2.43E-04	2.53E-04	1.97E-03	4.12E-05	0.00E+00	9.55E-04	2.92E-03
10	D72	70	Passenger Car	224	0.00E+00	2.50E-06	2.72E-07	9.77E+00	1.77E-05	5.03E-02	5.64E-06	2.26E-04	1.73E-03	2.69E-04	5.50E-04	3.54E-04	3.64E-04	3.81E-05	4.91E-05	1.02E-08	1.86E-04	3.53E-05
10	D72	70	Passenger Truck	375	0.00E+00	5.26E-06	5.59E-07	2.20E+01	3.37E-05	8.88E-02	1.10E-05	6.58E-04	3.12E-03	4.83E-04	1.05E-03	6.85E-04	7.02E-04	1.66E-04	1.09E-04	1.96E-08	3.53E-04	1.11E-04
10	D72	70	Single Unit Short Haul Truck	50	0.00E+00	8.77E-06	3.56E-07	8.16E+00	5.87E-06	1.48E-02	9.53E-06	3.48E-03	7.92E-04	1.45E-04	1.18E-03	2.25E-04	2.30E-04	8.29E-04	3.32E-05	1.34E-08	9.52E-04	6.52E-04
10	D72	70	Single Unit Long Haul Truck	2	0.00E+00	3.81E-07	1.54E-08	3.46E-01	2.53E-07	6.21E-04	4.15E-07	1.50E-04	3.62E-05	6.49E-06	5.16E-05	9.72E-06	9.92E-06	3.50E-05	1.41E-06	5.65E-10	4.16E-05	2.81E-05
10	D72	70	Combination Short Haul Truck	37	0.00E+00	9.56E-06	7.11E-07	1.29E+01	2.43E-08	1.38E-02	6.81E-06	1.43E-02	1.35E-03	2.25E-04	5.73E-04	2.07E-04	2.15E-04	2.05E-03	4.32E-05	0.00E+00	3.58E-04	2.69E-03
10	D72	70	Combination Long Haul Truck	34	0.00E+00	1.31E-05	7.45E-07	1.21E+01	8.22E-08	1.65E-02	1.08E-05	1.53E-02	1.40E-03	2.11E-04	1.19E-03	2.40E-04	2.50E-04	1.95E-03	4.06E-05	0.00E+00	9.42E-04	2.88E-03
10	D73	70	Passenger Car	141	0.00E+00	1.57E-06	1.71E-07	6.13E+00	1.11E-05	3.16E-02	3.54E-06	1.42E-04	1.08E-03	1.69E-04	3.45E-04	2.23E-04	2.28E-04	2.39E-05	3.08E-05	6.40E-09	1.17E-04	2.22E-05
10	D73	70	Passenger Truck	235	0.00E+00	3.30E-06	3.51E-07	1.38E+01	2.12E-05	5.57E-02	6.92E-06	4.13E-04	1.96E-03	3.03E-04	6.62E-04	4.30E-04	4.41E-04	1.04E-04	6.87E-05	1.23E-08	2.21E-04	6.94E-05
10	D73	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	D73	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.19E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.71E-06
10	D73	70	Combination Short Haul Truck	40	0.00E+00	1.02E-05	7.61E-07	1.38E+01	2.60E-08	1.48E-02	7.29E-06	1.53E-02	1.44E-03	2.41E-04	6.14E-04	2.22E-04	2.30E-04	2.20E-03	4.62E-05	0.00E+00	3.84E-04	2.88E-03
10	D73	70	Combination Long Haul Truck	36	0.00E+00	1.40E-05	7.98E-07	1.30E+01	8.80E-08	1.76E-02	1.15E-05	1.64E-02	1.50E-03	2.26E-04	1.28E-03	2.56E-04	2.67E-04	2.08E-03	4.35E-05	0.00E+00	1.01E-03	3.08E-03
10	D74	70	Passenger Car	163	0.00E+00	1.82E-06	1.98E-07	7.13E+00	1.29E-05	3.67E-02	4.11E-06	1.65E-04	1.26E-03	1.96E-04	4.01E-04	2.59E-04	2.65E-04	2.78E-05	3.58E-05	7.44E-09	1.36E-04	2.58E-05
10	D74	70	Passenger Truck	274	0.00E+00	3.84E-06	4.08E-07	1.60E+01	2.46E-05	6.48E-02	8.05E-06	4.80E-04	2.28E-03	3.53E-04	7.70E-04	5.00E-04	5.12E-04	1.21E-04	7.98E-05	1.43E-08	2.57E-04	8.07E-05
10	D74	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.51E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.07E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	D74	70	Combination Short Haul Truck	30	0.00E+00	7.67E-06	5.71E-07	1.04E+01	1.95E-08	1.11E-02	5.47E-06	1.15E-02	1.08E-03	1.80E-04	4.60E-04	1.66E-04	1.73E-04	1.65E-03	3.47E-05	0.00E+00	2.88E-04	2.16E-03
10	D74	70	Combination Long Haul Truck	27	0.00E+00	1.05E-05	5.98E-07	9.73E+00	6.60E-08	1.32E-02	8.65E-06	1.23E-02	1.13E-03	1.70E-04	9.56E-04	1.92E-04	2.00E-04	1.56E-03	3.26E-05	0.00E+00	7.56E-04	2.31E-03
11	D75	80	Passenger Car	149	0.00E+00	1.55E-06	1.69E-07	6.32E+00	1.10E-05	3.20E-02	3.50E-06	1.55E-04	8.13E-04	1.36E-04	3.41E-04	2.20E-04	2.26E-04	2.22E-05	3.18E-05	6.80E-09	1.15E-04	2.41E-05
11	D75	80	Passenger Truck	250	0.00E+00	3.19E-06	3.40E-07	1.43E+01	2.08E-05	5.65E-02	6.77E-06	4.17E-04	1.45E-03	2.41E-04	6.49E-04	4.21E-04	4.32E-04	1.03E-04	7.12E-05	1.29E-08	2.17E-04	6.94E-05
11	D75	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.73E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.73E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.97E-06
11	D75	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.82E-04
11	D75	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.01E-04
11	D76	80	Passenger Car	99	0.00E+00	1.03E-06	1.12E-07	4.18E+00	7.28E-06	2.12E-02	2.31E-06	1.02E-04	5.38E-04	9.01E-05	2.26E-04	1.46E-04	1.49E-04	1.47E-05	2.11E-05	4.50E-09	7.63E-05	1.60E-05
11	D76	80	Passenger Truck	165	0.00E+00	2.11E-06	2.25E-07	9.43E+00	1.37E-05	3.74E-02	4.48E-06	2.76E-04	9.58E-04	1.59E-04	4.30E-04	2.79E-04	2.86E-04	6.79E-05	4.71E-05	8.57E-09	1.44E-04	4.59E-05
11	D76	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.16E-05
11	D76	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.82E-04
11	D76	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.01E-04
11	D77	80	Passenger Car	196	0.00E+00	2.04E-06	2.22E-07	8.31E+00	1.45E-05	4.21E-02	4.60E-06	2.04E-04	1.07E-03	1.79E-04	4.49E-04	2.89E-04	2.97E-04	2.92E-05	4.19E-05	8.95E-09	1.52E-04	3.18E-05
11	D77	80	Passenger Truck	329	0.00E+00	4.20E-06	4.48E-07	1.88E+01	2.73E-05	7.43E-02	8.90E-06	5.49E-04	1.91E-03	3.17E-04	8.54E-04	5.54E-04	5.68E-04	1.35E-04	9.37E-05	1.70E-08	2.86E-04	9.14E-05
11	D77	80	Single Unit Short Haul Truck	20	0.00E+00	2.76E-06	1.08E-07	3.30E+00	1.87E-06	5.99E-03	3.03E-06	1.15E-03	2.26E-04	4.62E-05	3.80E-04	7.04E-05	7.17E-05	3.35E-04	1.34E-05	5.31E-09	3.08E-04	2.14E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.20E-07	4.63E-09	1.39E-01	7.97E-08	2.49E-04	1.32E-07	4.90E-05	1.04E-05	2.05E-06	1.66E-05	3.02E-06	3.08E-06	1.41E-05	5.67E-07	2.21E-10	1.35E-05	9.15E-06
11	D77	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.26E-04
11	D77	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.55E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.69E-04
11	D78	80	Passenger Car	72	0.00E+00	7.50E-07	8.15E-08	3.06E+00	5.32E-06	1.55E-02	1.69E-06	7.48E-05	3.93E-04	6.59E-05	1.65E-04	1.06E-04	1.09E-04	1.07E-05	1.54E-05	3.29E-09	5.58E-05	1.17E-05
11	D78	80	Passenger Truck	121	0.00E+00	1.54E-06	1.65E-07	6.90E+00	1.00E-05	2.73E-02	3.27E-06	2.02E-04	7.00E-04	1.17E-04	3.14E-04	2.04E-04	2.09E-04	4.96E-05	3.44E-05	6.26E-09	1.05E-04	3.36E-05
11	D78	80	Single Unit Short Haul Truck	11	0.00E+00	1.45E-06	5.64E-08	1.73E+00	9.80E-07	3.14E-03	1.59E-06	6.00E-04	1.18E-04	2.42E-05	1.99E-04	3.69E-05	3.76E-05	1.76E-04	7.02E-06	2.78E-09	1.62E-04	1.12E-04
11	D78	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.33E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.38E-04
11	D78	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.49E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.68E-04
11	D79	70	Passenger Car	227	0.00E+00	2.53E-06	2.75E-07	9.88E+00	1.79E-05	5.09E-02	5.70E-06	2.29E-04	1.75E-03	2.72E-04	5.56E-04	3.59E-04	3.68E-04	3.85E-05	4.97E-05	1.03E-08	1.88E-04	3.57E-05
11	D79	70	Passenger Truck	379	0.00E+00	5.32E-06	5.66E-07	2.22E+01	3.41E-05	8.98E-02	1.12E-05	6.66E-04	3.16E-03	4.89E-04	1.07E-03	6.93E-04	7.11E-04	1.68E-04	1.11E-04	1.98E-08	3.57E-04	1.12E-04
11	D79	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.64E-04
11	D79	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
11	D79	70	Combination Short Haul Truck	39	0.00E+00	1.01E-05	7.51E-07	1.36E+01	2.56E-08	1.46E-02	7.19E-06	1.51E-02	1.42E-03	2.37E-04	6.06E-04	2.19E-04	2.27E-04	2.17E-03	4.56E-05	0.00E+00	3.79E-04	2.84E-03
11	D79	70	Combination Long Haul Truck	36	0.00E+00	1.38E-05	7.87E-07	1.28E+01	8.68E-08	1.74E-02	1.14E-05	1.61E-02	1.48E-03	2.23E-04	1.26E-03	2.53E-04	2.64E-04	2.06E-03	4.29E-05	0.00E+00	9.95E-04	3.04E-03
11	D80	70	Passenger Car	471

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D84	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.75E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.26E-04
11	D84	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.46E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.39E-05
11	D84	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.13E-03
11	D84	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
11	D85	80	Passenger Car	292	0.00E+00	3.04E-06	3.30E-07	1.24E+01	2.15E-05	6.26E-02	6.84E-06	3.03E-04	1.59E-03	2.67E-04	6.68E-04	4.30E-04	4.42E-04	4.34E-05	6.23E-05	1.33E-08	2.26E-04	4.72E-05
11	D85	80	Passenger Truck	489	0.00E+00	6.25E-06	6.66E-07	2.79E+01	4.07E-05	1.11E-01	1.32E-05	8.17E-04	2.83E-03	4.72E-04	1.27E-03	8.25E-04	8.45E-04	2.01E-04	1.39E-04	2.53E-08	4.26E-04	1.36E-04
11	D85	80	Single Unit Short Haul Truck	29	0.00E+00	3.94E-06	1.54E-07	4.71E+00	2.67E-06	8.56E-03	4.33E-06	1.64E-03	3.23E-04	6.60E-05	5.43E-04	1.01E-04	1.02E-04	4.79E-04	1.91E-05	7.59E-09	4.40E-04	3.06E-04
11	D85	80	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	6.61E-09	1.99E-01	1.14E-07	3.56E-04	1.88E-07	7.00E-05	1.48E-05	2.93E-06	2.37E-05	4.32E-06	4.40E-06	2.01E-05	8.10E-07	3.16E-10	1.93E-05	1.31E-05
11	D85	80	Combination Short Haul Truck	33	0.00E+00	6.90E-06	5.11E-07	1.12E+01	1.81E-08	1.05E-02	4.93E-06	1.06E-02	7.99E-04	1.45E-04	4.18E-04	1.49E-04	1.55E-04	1.78E-03	3.75E-05	0.00E+00	2.64E-04	2.00E-03
11	D85	80	Combination Long Haul Truck	31	0.00E+00	9.61E-06	5.43E-07	1.04E+01	6.11E-08	1.25E-02	7.93E-06	1.14E-02	8.26E-04	1.32E-04	8.81E-04	1.75E-04	1.82E-04	1.67E-03	3.49E-05	0.00E+00	6.99E-04	2.14E-03
11	D86	80	Passenger Car	379	0.00E+00	3.94E-06	4.28E-07	1.60E+01	2.79E-05	8.12E-02	8.88E-06	3.93E-04	2.06E-03	3.46E-04	8.66E-04	5.58E-04	5.73E-04	5.63E-05	8.08E-05	1.73E-08	2.93E-04	6.13E-05
11	D86	80	Passenger Truck	634	0.00E+00	8.11E-06	8.64E-07	3.62E+01	5.27E-05	1.43E-01	1.72E-05	1.06E-03	3.68E-03	6.12E-04	1.65E-03	1.07E-03	1.10E-03	2.60E-04	1.81E-04	3.29E-08	5.52E-04	1.76E-04
11	D86	80	Single Unit Short Haul Truck	16	0.00E+00	2.23E-06	8.72E-08	2.67E+00	1.51E-06	4.85E-03	2.46E-06	9.28E-04	1.83E-04	3.74E-05	3.08E-04	5.70E-05	5.81E-05	2.72E-04	1.08E-05	4.30E-09	2.50E-04	1.73E-04
11	D86	80	Single Unit Long Haul Truck	1	0.00E+00	9.71E-08	3.75E-09	1.13E-01	6.45E-08	2.02E-04	1.07E-07	3.96E-05	8.39E-06	1.66E-06	1.34E-05	2.45E-06	2.49E-06	1.14E-05	4.59E-07	1.79E-10	1.09E-05	7.41E-06
11	D86	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.81E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.47E-03
11	D86	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.35E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.57E-03
11	D87	80	Passenger Car	813	0.00E+00	8.45E-06	9.19E-07	3.44E+01	6.00E-05	1.74E-01	1.91E-05	8.43E-04	4.43E-03	7.42E-04	1.86E-03	1.20E-03	1.23E-03	1.21E-04	1.74E-04	3.71E-08	6.29E-04	1.32E-04
11	D87	80	Passenger Truck	1362	0.00E+00	1.74E-05	1.86E-06	7.77E+01	1.13E-04	3.08E-01	3.69E-05	2.27E-03	7.89E-03	1.31E-03	3.54E-03	2.30E-03	2.35E-03	5.59E-04	3.88E-04	7.06E-08	1.19E-03	3.79E-04
11	D87	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.42E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.26E-04
11	D87	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.53E-05
11	D87	80	Combination Short Haul Truck	75	0.00E+00	1.54E-05	1.14E-06	2.51E+01	4.04E-08	2.35E-02	1.10E-05	2.38E-02	1.78E-03	3.23E-04	9.35E-04	3.33E-04	3.46E-04	3.99E-03	8.39E-05	0.00E+00	5.89E-04	4.48E-03
11	D87	80	Combination Long Haul Truck	68	0.00E+00	2.15E-05	1.21E-06	2.33E+01	1.37E-07	2.78E-02	1.77E-05	2.54E-02	1.84E-03	2.95E-04	1.97E-03	3.91E-04	4.07E-04	3.74E-03	7.80E-05	0.00E+00	1.56E-03	4.79E-03
11	D88	80	Passenger Car	479	0.00E+00	4.98E-06	5.41E-07	2.03E+01	3.53E-05	1.03E-01	1.12E-05	4.97E-04	2.61E-03	4.37E-04	1.09E-03	7.06E-04	7.25E-04	7.12E-05	1.02E-04	2.18E-08	3.70E-04	7.75E-05
11	D88	80	Passenger Truck	802	0.00E+00	1.03E-05	1.09E-06	4.58E+01	6.67E-05	1.81E-01	2.17E-05	1.34E-03	4.65E-03	7.74E-04	2.08E-03	1.35E-03	1.39E-03	3.29E-04	2.29E-04	4.16E-08	6.98E-04	2.23E-04
11	D88	80	Single Unit Short Haul Truck	68	0.00E+00	9.33E-06	3.64E-07	1.11E+01	6.33E-06	2.03E-02	1.03E-05	3.88E-03	7.64E-04	1.56E-04	1.29E-03	2.38E-04	2.43E-04	1.13E-03	4.53E-05	1.80E-08	1.04E-03	7.24E-04
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	4.05E-07	1.56E-08	4.71E-01	2.70E-07	8.43E-04	4.45E-07	1.66E-04	3.50E-05	6.93E-06	5.60E-05	1.02E-05	1.04E-05	4.76E-05	1.92E-06	7.48E-10	4.56E-05	3.09E-05
11	D88	80	Combination Short Haul Truck	62	0.00E+00	1.28E-05	9.50E-07	2.09E+01	3.36E-08	1.96E-02	9.17E-06	1.98E-02	1.49E-03	2.69E-04	7.78E-04	2.77E-04	2.88E-04	3.32E-03	6.98E-05	0.00E+00	4.90E-04	3.73E-03
11	D88	80	Combination Long Haul Truck	57	0.00E+00	1.79E-05	1.01E-06	1.94E+01	1.14E-07	2.31E-02	1.47E-05	2.11E-02	1.54E-03	2.46E-04	1.64E-03	3.25E-04	3.39E-04	3.11E-03	6.49E-05	0.00E+00	1.30E-03	3.98E-03
9	D89	60	Passenger Car	107	0.00E+00	1.37E-06	1.49E-07	4.88E+00	9.71E-06	2.74E-02	3.09E-06	1.10E-04	1.08E-03	1.62E-04	3.01E-04	1.94E-04	1.99E-04	2.12E-05	2.44E-05	5.13E-09	1.02E-04	1.72E-05
9	D89	60	Passenger Truck	179	0.00E+00	2.91E-06	3.08E-07	1.09E+01	1.83E-05	4.69E-02	6.03E-06	3.42E-04	1.97E-03	2.94E-04	5.75E-04	3.74E-04	3.83E-04	8.68E-05	5.40E-05	1.00E-08	1.92E-04	5.80E-05
9	D89	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.02E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	D89	60	Single Unit Long Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.26E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.14E-04
9	D89	60	Combination Short Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.47E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.54E-04
9	D90	60	Passenger Car	52	0.00E+00	6.60E-07	7.18E-08	2.35E+00	4.69E-06	1.32E-02	1.49E-06	5.31E-05	5.21E-04	7.80E-05	1.45E-04	9.36E-05	9.61E-05	1.02E-05	1.18E-05	2.48E-09	4.91E-05	8.29E-06
9	D90	60	Passenger Truck	86	0.00E+00	1.40E-06	1.49E-07	5.24E+00	8.84E-06	2.26E-02	2.91E-06	1.65E-04	9.52E-04	1.42E-04	2.77E-04	1.80E-04	1.85E-04	4.19E-05	2.60E-05	4.83E-09	9.24E-05	2.80E-05
9	D90	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	D90	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.52E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	D90	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.58E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.05E-03
9	D90	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.95E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
10	D91	70	Passenger Car	75	0.00E+00	8.35E-07	9.07E-08	3.26E+00	5.92E-06	1.68E-02	1.88E-06	7.56E-05	5.76E-04	8.98E-05	1.84E-04	1.18E-04	1.21E-04	1.27E-05	1.64E-05	3.40E-09	6.21E-05	1.18E-05
10	D91	70	Passenger Truck	125	0.00E+00	1.76E-06	1.87E-07	7.34E+00	1.13E-05	2.97E-02	3.68E-06	2.20E-04	1.04E-03	1.61E-04	3.52E-04	2.29E-04	2.35E-04	5.55E-05	3.65E-05	6.55E-09	1.18E-04	3.69E-05
10	D91	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	D91	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	D91	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
10	D92	70	Passenger Car	261	0.00E+00	2.91E-06	3.17E-07	1.14E+01	2.07E-05	5.86E-02	6.57E-06	2.64E-04	2.01E-03	3.13E-04	6.41E-04	4.13E-04	4.24E-04	4.43E-05	5.72E-05	1.19E-08	2.17E-04	4.12E-05
10	D92	70	Passenger Truck	437	0.00E+00	6.13E-06	6.52E-07	2.56E+01	3.93E-05	1.03E-01	1.29E-05	7.67E-04	3.64E-03	5.63E-04	1.23E-03	7.99E-04	8.19E-04	1.94E-04	1.28E-04	2.28E-08	4.11E-04	1.29E-04
10	D92	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.70E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	D92	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.02E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.58E-05
10	D92	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.30E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.11E-05
10	D93	70	Passenger Car	69	0.00E+00	7.72E-07	8.39E-08	3.02E+00	5.48E-06	1.55E-02	1.74E-06	7.00E-05	5.33E-04	8.30E-05	1.70E-04	1.09E-04	1.12E-04	1.18E-05	1.52E-05	3.15E-09	5.74E-05	1.09E-05
10	D93	70	Passenger Truck	116	0.00E+00	1.63E-06	1.73E-07	6.79E+00	1.04E-05	2.74E-02	3.41E-06	2.03E-04	9.65E-04	1.49E-04	3.26E-04	2.12E-04	2.17E-04	5.14E-05	3.38E-05	6.06E-09	1.09E-04	3.41E-05
10	D93	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	D93	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.79E-05
10	D94	70	Passenger Car	229	0.00E+00	2.55E-06	2.78E-07	9.98E+00	1.81E-05	5.14E-02	5.76E-06	2.31E-04	1.76E-03	2.75E-04	5.62E-04	3.62E-04	3.72E-04	3.89E-05	5.02E-05	1.04E-08	1.90E-04	3.61E-05
10	D94	70	Passenger Truck	383	0.00E+00	5.38E-06	5.71E-07	2.25E+01	3.44E-05	9.07E-02	1.13E-05	6.73E-04	3.19E-03	4.94E-04	1.08E-03	7.00E-04	7.18E-04	1.70E-04	1.12E-04	2.00E-08	3.60E-04	1.13E-04
10	D94	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.03E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	D94	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	D94	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
9	E01	60	Passenger Car	225	0.00E+00	2.89E-06	3.14E-07	1.03E+01	2.05E-05	5.77E-02	6.51E-06	2.32E-04	2.28E-03	3.41E-04	6.35E-04	4.09E-04	4.20E-04	4.47E-05	5.15E-05	1.08E-08	2.15E-04	3.62E-05
9	E01	60	Passenger Truck	378	0.00E+00	6.13E-06	6.49E-07	2.29E+01	3.86E-05	9.88E-02	1.27E-05	7.22E-04	4.16E-03	6.19E-04	1.21E-03	7.88E-04	8.08E-04	1.83E-04	1.14E-04	2.11E-08	4.04E-04	1.22E-04
9	E01	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.02E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	E01	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.26E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.14E-04
9	E01	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.47E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.54E-04
9	E02	60	Passenger Car	267	0.00E+00	3.41E-06	3.71E-07	1.22E+01	2.42E-05	6.83E-02	7.69E-06	2.74E-04	2.69E-03	4.03E-04	7.50E-04	4.84E-04	4.97E-04	5.28E-05	6.09E-05	1.28E-08	2.54E-04	4.28E-05
9	E02	60	Passenger Truck	446	0.00E+00	7.24E-06	7.68E-07	2.71E+01	4.57E-05	1.17E-01	1.50E-05	8.54E-04	4.92E-03	7.32E-04	1.43E-03	9.32E-04	9.55E-04	2.16E-04	1.35E-04	2.50E-08	4.77E-04	1.45E-04
9	E02	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.02E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	E02	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.19E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.89E-04
9	E02	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.46E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.41E-04
11	E03	80	Passenger Car	109	0.00E+00	1.14E-06	1.23E-07	4.62E+00	8.05E-06	2.34E-02	2.56E-06	1.13E-04	5.95E-04	9.96E-05	2.50E-04	1.61E-04	1.65E-04	1.62E-05	2.33E-05	4.98E-09	8.44E-05	1.77E-05
11	E03	80	Passenger Truck	183	0.00E+00	2.34E-06	2.49E-07	1.04E+01	1.52E-05	4.13E-02	4.95E-06	3.05E-04	1.06E-03	1.76E-04	4.75E-04	3.08E-04	3.16E-04	7.51E-05	5.21E-05	9.47E-09	1.59E-04	5.08E-05
11	E03	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.91E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.18E-05
11	E03	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.13E-04
11	E03	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.35E-04
11	E04	80	Passenger Car	183	0.00E+00	1.90E-06	2.07E-07	7.76E+00	1.35E-05	3.93E-02	4.29E-06	1.90E-04	9.99E-04	1.67E-04	4.19E-04	2.70E-04	2.77E-04	2.72E-05	3.91E-05	8.35E-09	1.42E-04	2.96E-05
11	E04	80	Passenger Truck	307	0.00E+00	3.92E-06	4.18E-07	1.75E+01	2.55E-05	6.93E-02	8.31E-06	5.12E-04	1.78E-03	2.96E-04	7.97E-04	5.17E-04	5.30E-04	1.26E-04	8.74E-05	1.59E-08	2.67E-04	8.53E-05
11	E04	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.16E-05
11	E04	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.13E-04
11	E04	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.35E-04
11	E05	80	Passenger Car	190	0.00E+00	1.97E-06	2.14E-07	8.03E+00	1.40E-05	4.06E-02	4.44E-06	1.97E-04	1.03E-03	1.73E-04	4.33E-04	2.79E-04	2.87E-04	2.82E-05	4.04E-05	8.64E-09	1.47E-04	3.07E-05
11	E05	80	Passenger Truck	317	0.00E+00	4.06E-06	4.33E-07	1.81E+01	2.64E-05	7.18E-02	8.60E-06	5.30E-04	1.84E-03	3.06E-04	8.25E-04	5.35E-04	5.49E-04	1.30E-04	9.05E-05	1.65E-08	2.76E-04	8.82E-05
11	E05	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.16E-05
11	E05	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	E05	80	Combination Long Haul Truck	4	0.00E+00

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E09	60	Combination Long Haul Truck	37	0.00E+00	1.62E-05	8.82E-07	1.34E+01	1.09E-07	2.11E-02	1.35E-05	1.91E-02	2.15E-03	3.11E-04	1.53E-03	2.88E-04	3.00E-04	2.15E-03	4.49E-05	0.00E+00	1.23E-03	3.60E-03
9	E10	60	Passenger Car	939	0.00E+00	1.20E-05	1.31E-06	4.28E+01	8.53E-05	2.41E-01	2.71E-05	9.67E-04	9.48E-03	1.42E-03	2.64E-03	1.70E-03	1.75E-03	1.86E-04	2.15E-04	4.51E-08	8.94E-04	1.51E-04
9	E10	60	Passenger Truck	1573	0.00E+00	2.55E-05	2.70E-06	9.54E+01	1.61E-04	4.12E-01	5.29E-05	3.01E-03	1.73E-02	2.58E-03	5.05E-03	3.28E-03	3.36E-03	7.62E-04	4.74E-04	8.79E-08	1.68E-03	5.10E-04
9	E10	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.05E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.84E-04
9	E10	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	9.59E-09	1.70E-01	1.54E-07	2.97E-04	2.52E-07	8.87E-05	2.47E-05	4.11E-06	3.12E-05	5.97E-06	6.09E-06	1.72E-05	6.93E-07	2.85E-10	2.51E-05	1.66E-05
9	E10	60	Combination Short Haul Truck	22	0.00E+00	6.56E-06	4.82E-07	7.92E+00	1.80E-08	9.81E-03	4.72E-06	1.00E-02	1.15E-03	1.79E-04	4.05E-04	1.41E-04	1.46E-04	1.26E-03	2.65E-05	0.00E+00	2.58E-04	1.89E-03
9	E10	60	Combination Long Haul Truck	21	0.00E+00	9.02E-06	4.93E-07	7.48E+00	6.09E-08	1.18E-02	7.54E-06	1.07E-02	1.20E-03	1.74E-04	8.55E-04	1.61E-04	1.68E-04	1.20E-03	2.51E-05	0.00E+00	6.88E-04	2.01E-03
9	E11	60	Passenger Car	909	0.00E+00	1.16E-05	1.26E-06	4.15E+01	8.26E-05	2.33E-01	2.62E-05	9.36E-04	9.18E-03	1.38E-03	2.56E-03	1.65E-03	1.69E-03	1.80E-04	2.08E-04	4.37E-08	8.66E-04	1.46E-04
9	E11	60	Passenger Truck	1523	0.00E+00	2.47E-05	2.62E-06	9.24E+01	1.56E-04	3.98E-01	5.13E-05	2.91E-03	1.68E-02	2.50E-03	4.89E-03	3.18E-03	3.26E-03	7.38E-04	4.59E-04	8.51E-08	1.63E-03	4.93E-04
9	E11	60	Single Unit Short Haul Truck	43	0.00E+00	9.62E-06	3.98E-07	7.17E+00	6.38E-06	1.26E-02	1.04E-05	3.69E-03	9.92E-04	1.67E-04	1.28E-03	2.47E-04	2.52E-04	7.27E-04	2.92E-05	1.20E-08	1.03E-03	6.91E-04
9	E11	60	Single Unit Long Haul Truck	2	0.00E+00	4.20E-07	1.73E-08	3.06E-01	2.76E-07	5.35E-04	4.54E-07	1.60E-04	4.45E-05	7.39E-06	5.61E-05	1.07E-05	1.10E-05	3.09E-05	1.25E-06	5.12E-10	4.52E-05	2.99E-05
9	E11	60	Combination Short Haul Truck	45	0.00E+00	1.31E-05	9.64E-07	1.58E+01	3.60E-08	1.96E-02	9.43E-06	2.00E-02	2.29E-03	3.58E-04	8.09E-04	2.82E-04	2.93E-04	2.52E-03	5.30E-05	0.00E+00	5.16E-04	3.77E-03
9	E11	60	Combination Long Haul Truck	41	0.00E+00	1.80E-05	9.85E-07	1.50E+01	1.22E-07	2.36E-02	1.51E-05	2.13E-02	2.40E-03	3.47E-04	1.71E-03	3.22E-04	3.35E-04	2.40E-03	5.01E-05	0.00E+00	1.38E-03	4.02E-03
9	E12	60	Passenger Car	1277	0.00E+00	1.63E-05	1.78E-06	5.82E+01	1.16E-04	3.27E-01	3.69E-05	1.31E-03	1.29E-02	1.93E-03	3.59E-03	2.32E-03	2.38E-03	2.53E-04	2.92E-04	6.13E-08	1.22E-03	2.05E-04
9	E12	60	Passenger Truck	2138	0.00E+00	3.47E-05	3.68E-06	1.30E+02	2.19E-04	5.60E-01	7.20E-05	4.09E-03	2.36E-02	3.51E-03	6.86E-03	4.46E-03	4.57E-03	1.04E-03	6.44E-04	1.20E-07	2.29E-03	6.93E-04
9	E12	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.54E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.76E-04
9	E12	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E12	60	Combination Short Haul Truck	31	0.00E+00	9.16E-06	6.73E-07	1.11E+01	2.51E-08	1.37E-02	6.58E-06	1.40E-02	1.60E-03	2.50E-04	5.64E-04	1.97E-04	2.04E-04	1.76E-03	3.70E-05	0.00E+00	3.60E-04	2.63E-03
9	E12	60	Combination Long Haul Truck	29	0.00E+00	1.26E-05	6.87E-07	1.04E+01	8.49E-08	1.64E-02	1.05E-05	1.49E-02	1.68E-03	2.42E-04	1.19E-03	2.25E-04	2.34E-04	1.68E-03	3.50E-05	0.00E+00	9.60E-04	2.80E-03
11	E13	80	Passenger Car	436	0.00E+00	4.53E-06	4.92E-07	1.84E+01	3.21E-05	9.34E-02	1.02E-05	4.52E-04	2.37E-03	3.98E-04	9.96E-04	6.42E-04	6.59E-04	6.48E-05	9.29E-05	1.99E-08	3.37E-04	7.05E-05
11	E13	80	Passenger Truck	729	0.00E+00	9.32E-06	9.94E-07	4.16E+01	6.06E-05	1.65E-01	1.98E-05	1.22E-03	4.23E-03	7.04E-04	1.90E-03	1.23E-03	1.26E-03	3.00E-04	2.08E-04	3.78E-08	6.35E-04	2.03E-04
11	E13	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.06E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E13	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.48E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	E13	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.86E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
11	E14	80	Passenger Car	338	0.00E+00	3.52E-06	3.82E-07	1.43E+01	2.50E-05	7.25E-02	7.93E-06	3.51E-04	1.84E-03	3.09E-04	7.74E-04	4.99E-04	5.12E-04	5.03E-05	7.22E-05	1.54E-08	2.62E-04	5.47E-05
11	E14	80	Passenger Truck	567	0.00E+00	7.24E-06	7.72E-07	3.23E+01	4.71E-05	1.28E-01	1.53E-05	9.46E-04	3.28E-03	5.47E-04	1.47E-03	9.55E-04	9.79E-04	2.33E-04	1.61E-04	2.94E-08	4.93E-04	1.58E-04
11	E14	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.55E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E14	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.23E-06
11	E14	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.49E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.58E-04
11	E14	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.73E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.03E-04
11	E15	80	Passenger Car	308	0.00E+00	3.20E-06	3.48E-07	1.30E+01	2.27E-05	6.60E-02	7.22E-06	3.19E-04	1.68E-03	2.81E-04	7.04E-04	4.54E-04	4.66E-04	4.58E-05	6.57E-05	1.40E-08	2.38E-04	4.98E-05
11	E15	80	Passenger Truck	516	0.00E+00	6.59E-06	7.03E-07	2.94E+01	4.29E-05	1.17E-01	1.40E-05	8.62E-04	2.99E-03	4.98E-04	1.34E-03	8.70E-04	8.92E-04	2.12E-04	1.47E-04	2.67E-08	4.49E-04	1.43E-04
11	E15	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.82E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.14E-05
11	E15	80	Combination Short Haul Truck	15	0.00E+00	3.13E-06	2.31E-07	5.09E+00	8.19E-09	4.76E-03	2.23E-06	4.82E-03	3.62E-04	6.56E-05	1.90E-04	6.75E-05	7.01E-05	8.08E-04	1.70E-05	0.00E+00	1.19E-04	9.08E-04
11	E15	80	Combination Long Haul Truck	14	0.00E+00	4.35E-06	2.46E-07	4.72E+00	2.77E-08	5.64E-03	3.59E-06	5.15E-03	3.74E-04	5.99E-05	3.99E-04	7.92E-05	8.25E-05	7.58E-04	1.58E-05	0.00E+00	3.17E-04	9.70E-04
11	E16	80	Passenger Car	234	0.00E+00	2.43E-06	2.64E-07	9.91E+00	1.73E-05	5.02E-02	5.49E-06	2.43E-04	1.28E-03	2.14E-04	5.35E-04	3.45E-04	3.54E-04	3.48E-05	4.99E-05	1.07E-08	1.81E-04	3.79E-05
11	E16	80	Passenger Truck	392	0.00E+00	5.01E-06	5.34E-07	2.24E+01	3.26E-05	8.86E-02	1.06E-05	6.55E-04	2.27E-03	3.78E-04	1.02E-03	6.61E-04	6.78E-04	1.61E-04	1.12E-04	2.03E-08	3.41E-04	1.09E-04
11	E16	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.10E-05
11	E16	80	Combination Short Haul Truck	7	0.00E+00	1.51E-06	1.12E-07	2.46E+00	3.95E-09	2.30E-03	1.08E-06	2.33E-03	1.75E-04	3.17E-05	9.15E-05	3.26E-05	3.38E-05	3.90E-04	8.21E-06	0.00E+00	5.77E-05	4.38E-04
11	E16	80	Combination Long Haul Truck	7	0.00E+00	2.10E-06	1.19E-07	2.28E+00	1.34E-08	2.72E-03	1.73E-06	2.49E-03	1.81E-04	2.89E-05	1.93E-04	3.83E-05	3.98E-05	3.66E-04	7.64E-06	0.00E+00	1.53E-04	4.68E-04
11	E17	80	Passenger Car	218	0.00E+00	2.27E-06	2.46E-07	9.23E+00	1.61E-05	4.67E-02	5.11E-06	2.26E-04	1.19E-03	1.99E-04	4.98E-04	3.21E-04	3.30E-04	3.24E-05	4.65E-05	9.94E-09	1.69E-04	3.53E-05
11	E17	80	Passenger Truck	365	0.00E+00	4.67E-06	4.97E-07	2.08E+01	3.03E-05	8.25E-02	9.89E-06	6.10E-04	2.12E-03	3.52E-04	9.49E-04	6.16E-04	6.31E-04	1.50E-04	1.04E-04	1.89E-08	3.18E-04	1.01E-04
11	E17	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.91E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.18E-05
11	E17	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.13E-04
11	E17	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.35E-04
11	E18	80	Passenger Car	112	0.00E+00	1.16E-06	1.26E-07	4.73E+00	8.25E-06	2.40E-02	2.62E-06	1.16E-04	6.09E-04	1.02E-04	2.56E-04	1.65E-04	1.69E-04	1.66E-05	2.39E-05	5.10E-09	8.65E-05	1.81E-05
11	E18	80	Passenger Truck	187	0.00E+00	2.39E-06	2.55E-07	1.07E+01	1.56E-05	4.23E-02	5.07E-06	3.13E-04	1.08E-03	1.81E-04	4.87E-04	3.16E-04	3.24E-04	7.69E-05	5.34E-05	9.70E-09	1.63E-04	5.20E-05
11	E18	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.55E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.23E-06
11	E18	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.16E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.07E-04
11	E18	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.31E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.35E-04
9	E19	60	Passenger Car	514	0.00E+00	6.59E-06	7.16E-07	2.35E+01	4.67E-05	1.32E-01	1.48E-05	5.30E-04	5.20E-03	7.78E-04	1.45E-03	9.34E-04	9.58E-04	1.02E-04	1.18E-04	2.47E-08	4.90E-04	8.26E-05
9	E19	60	Passenger Truck	862	0.00E+00	1.40E-05	1.48E-06	5.23E+01	8.82E-05	2.25E-01	2.90E-05	1.65E-03	9.49E-03	1.41E-03	2.76E-03	1.80E-03	1.84E-03	4.17E-04	2.60E-04	4.82E-08	9.21E-04	2.79E-04
9	E19	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.10E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.67E-04
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.32E-05
9	E19	60	Combination Short Haul Truck	35	0.00E+00	1.01E-05	7.40E-07	1.22E+01	2.76E-08	1.51E-02	7.24E-06	1.54E-02	1.76E-03	2.75E-04	6.21E-04	2.16E-04	2.25E-04	1.93E-03	4.07E-05	0.00E+00	3.96E-04	2.89E-03
9	E19	60	Combination Long Haul Truck	31	0.00E+00	1.38E-05	7.56E-07	1.15E+01	9.34E-08	1.81E-02	1.16E-05	1.64E-02	1.84E-03	2.67E-04	1.31E-03	2.47E-04	2.57E-04	1.84E-03	3.85E-05	0.00E+00	1.06E-03	3.08E-03
9	E20	60	Passenger Car	516	0.00E+00	6.60E-06	7.17E-07	2.35E+01	4.68E-05	1.32E-01	1.49E-05	5.31E-04	5.21E-03	7.80E-04	1.45E-03	9.36E-04	9.60E-04	1.02E-04	1.18E-04	2.48E-08	4.91E-04	8.28E-05
9	E20	60	Passenger Truck	863	0.00E+00	1.40E-05	1.48E-06	5.24E+01	8.84E-05	2.26E-01	2.91E-05	1.65E-03	9.51E-03	1.42E-03	2.77E-03	1.80E-03	1.85E-03	4.18E-04	2.60E-04	4.83E-08	9.23E-04	2.80E-04
9	E20	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.22E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.45E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.40E-05
9	E20	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.89E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.21E-04
9	E20	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.21E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.81E-04
11	E21	80	Passenger Car	120	0.00E+00	1.25E-06	1.36E-07	5.08E+00	8.85E-06	2.57E-02	2.81E-06	1.24E-04	6.54E-04	1.10E-04	2.74E-04	1.77E-04	1.82E-04	1.78E-05	2.56E-05	5.47E-09	9.28E-05	1.94E-05
11	E21	80	Passenger Truck	201	0.00E+00	2.57E-06	2.74E-07	1.15E+01	1.67E-05	4.54E-02	5.44E-06	3.36E-04	1.16E-03	1.94E-04	5.22E-04	3.39E-04	3.47E-04	8.25E-05	5.73E-05	1.04E-08	1.75E-04	5.59E-05
11	E21	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.10E-05
11	E21	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	1.99E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.76E-04
11	E21	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.13E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.02E-04
11	E22	80	Passenger Car	16	0.00E+00	1.63E-07	1.77E-08	6.65E-01	1.16E-06	3.37E-03	3.68E-07	1.63E-05	8.56E-05	1.43E-05	3.59E-05	2.31E-05	2.38E-05	2.33E-06	3.35E-06	7.16E-10	1.21E-05	2.54E-06
11	E22	80	Passenger Truck	26	0.00E+00	3.36E-07	3.58E-08	1.50E+00	2.19E-06	5.94E-03	7.12E-07	4.39E-05	1.52E-04	2.54E-05	6.84E-05	4.43E-05	4.55E-05	1.08E-05	7.49E-06	1.36E-09	2.29E-05	7.31E-06
11	E22	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.32E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.26E-05
11	E22	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.55E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.69E-05
11	E23	80	Passenger Car	471	0.00E+00	4.89E-06	5.32E-07	1.99E+01	3.47E-05	1.01E-01	1.10E-05	4.88E-04	2.57E-03	4.30E-04	1.08E-03	6.94E-04	7.12E-04	7.00E-05	1.00E-04	2.15E-08	3.64E-04	7.61E-05
11	E23	80	Passenger Truck	788	0.00E+00	1.01E-05	1.07E-06	4.50E+01	6.55E-05	1.78E-01	2.14E-05	1.32E-03	4.57E-03	7.61E-04	2.05E-03	1.33E-03	1.36E-03	3.24E-04	2.25E-04	4.08E-08	6.86E-04	2.19E-04
11	E23	80	Single Unit Short Haul Truck	73	0.00E+00	9.99E-06	3.90E-07	1.19E+01	6.77E-06	2.17E-02	1.10E-05	4.15E-03	8.18E-04	1.67E-04	1.38E-03	2.55E-04	2.60E-04	1.21E-03	4.85E-05	1.92E-08	1.12E-03	7.75E-04
11	E23	80	Single Unit Long Haul Truck	3	0.00E+00	4.34E-07	1.67E-08	5.04E-01	2.89E-07	9.03E-04	4.77E-07	1.77E-04	3.75E-05	7.42E-06	6.00E-05	1.09E-05	1.12E-05	5.10E-05	2.05E-06	8.01E-10	4.88E-05	3.31E-05
11	E23	80	Combination Short Haul Truck	53	0.00E+00	1.09E-05	8.06E-07	1.77E+01	2.85E-08	1.66E-02	7.78E-06	1.68E-02	1.26E-03	2.28E-04	6.60E-04	2.35E-04	2.44E-04	2.82E-03	5.92E-05	0.00E+00	4.16E-04	3.16E-03
11	E23	80	Combination Long Haul Truck	48	0.00E+00	1.52E-05	8.56E-07	1.64E+01	9.65E-08	1.96E-02	1.25E-05	1.79E-02	1.30E-03	2.08E-04	1.39E-03	2.76E-04	2.87E-04	2.64E-03	5.51E-05	0.00E+00	1.10E-03	3.38E-03
11	E24	80	Passenger Car	276	0.00E+00	2.87E-06	3.12E-07	1.17E+01	2.04E-05	5.92E-02	6.48E-06	2.86E-04	1.51E-03	2.52E-04	6.32E-04	4.07E-04	4.18E-04	4.11E-05	5.90E-05	1.26E-08	2.14E-04	4.47E-05
11	E24	80	Passenger Truck	463	0.00E+00	5.91E-06	6.30E-07	2.64E+01	3.85E-05	1.05E-01	1.25E-05	7.73E-04	2.68E-03	4.46E-04	1.20E-03	7.80E-04	8.00E-04	1.90E-04	1.32E-04	2.40E-08	4.03E-04	1.29E-04
11	E24	80	Single Unit Short Haul Truck	68	0.00E+00	9.33E-06	3.64E-07	1.11E+01	6.33E-06	2.03E-02	1.03E-05	3.88E-03	7.64E-04	1.56E-04	1.29E-03	2.38E-04	2.43E-04	1.13E-03	4.53E-05	1.80E-08	1.04E-03	7.24E-04
11	E24	80	Single Unit Long Haul Truck	3	0

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E29	70	Passenger Car	155	0.00E+00	1.73E-06	1.88E-07	6.77E+00	1.23E-05	3.48E-02	3.91E-06	1.57E-04	1.20E-03	1.86E-04	3.81E-04	2.46E-04	2.52E-04	2.64E-05	3.40E-05	7.06E-09	1.29E-04	2.45E-05
10	E29	70	Passenger Truck	260	0.00E+00	3.65E-06	3.88E-07	1.52E+01	2.33E-05	6.15E-02	7.64E-06	4.56E-04	2.16E-03	3.35E-04	7.31E-04	4.75E-04	4.87E-04	1.15E-04	7.58E-05	1.36E-08	2.44E-04	7.66E-05
10	E29	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E29	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E29	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	E30	70	Passenger Car	36	0.00E+00	4.01E-07	4.35E-08	1.57E+00	2.84E-06	8.06E-03	9.03E-07	3.63E-05	2.77E-04	4.31E-05	8.81E-05	5.68E-05	5.83E-05	6.10E-06	7.87E-06	1.63E-09	2.98E-05	5.66E-06
10	E30	70	Passenger Truck	60	0.00E+00	8.43E-07	8.96E-08	3.52E+00	5.40E-06	1.42E-02	1.77E-06	1.06E-04	5.01E-04	7.74E-05	1.69E-04	1.10E-04	1.13E-04	2.66E-05	1.75E-05	3.14E-09	5.65E-05	1.77E-05
10	E30	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E31	70	Passenger Car	418	0.00E+00	4.66E-06	5.07E-07	1.82E+01	3.31E-05	9.38E-02	1.05E-05	4.22E-04	3.22E-03	5.01E-04	1.03E-03	6.61E-04	6.78E-04	7.10E-05	9.15E-05	1.90E-08	3.47E-04	6.59E-05
10	E31	70	Passenger Truck	699	0.00E+00	9.81E-06	1.04E-06	4.10E+01	6.28E-05	1.66E-01	2.06E-05	1.23E-03	5.82E-03	9.01E-04	1.97E-03	1.28E-03	1.31E-03	3.10E-04	2.04E-04	3.66E-08	6.57E-04	2.06E-04
10	E31	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.02E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.52E-05
10	E31	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	E31	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
10	E32	70	Passenger Car	88	0.00E+00	9.81E-07	1.07E-07	3.83E+00	6.96E-06	1.97E-02	2.21E-06	8.89E-05	6.77E-04	1.05E-04	2.16E-04	1.39E-04	1.43E-04	1.49E-05	1.93E-05	4.00E-09	7.30E-05	1.39E-05
10	E32	70	Passenger Truck	147	0.00E+00	2.06E-06	2.19E-07	8.62E+00	1.32E-05	3.48E-02	4.33E-06	2.58E-04	1.23E-03	1.90E-04	4.14E-04	2.69E-04	2.76E-04	6.52E-05	4.29E-05	7.69E-09	1.38E-04	4.34E-05
10	E32	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E32	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.79E-05
9	E33	60	Passenger Car	879	0.00E+00	1.13E-05	1.22E-06	4.01E+01	7.98E-05	2.25E-01	2.54E-05	9.05E-04	8.88E-03	1.33E-03	2.47E-03	1.60E-03	1.64E-03	1.74E-04	2.01E-04	4.22E-08	8.37E-04	1.41E-04
9	E33	60	Passenger Truck	1472	0.00E+00	2.39E-05	2.53E-06	8.93E+01	1.51E-04	3.85E-01	4.95E-05	2.81E-03	1.62E-02	2.41E-03	4.72E-03	3.07E-03	3.15E-03	7.13E-04	4.44E-04	8.23E-08	1.57E-03	4.77E-04
9	E33	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.94E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	E33	60	Combination Short Haul Truck	27	0.00E+00	7.78E-06	5.72E-07	9.40E+00	2.13E-08	1.16E-02	5.59E-06	1.19E-02	1.36E-03	2.12E-04	4.80E-04	1.67E-04	1.74E-04	1.49E-03	3.14E-05	0.00E+00	3.06E-04	2.24E-03
9	E33	60	Combination Long Haul Truck	24	0.00E+00	1.07E-05	5.84E-07	8.87E+00	7.22E-08	1.40E-02	8.95E-06	1.26E-02	1.42E-03	2.06E-04	1.01E-03	1.91E-04	1.99E-04	1.42E-03	2.97E-05	0.00E+00	8.16E-04	2.38E-03
9	E34	60	Passenger Car	363	0.00E+00	4.65E-06	5.06E-07	1.66E+01	3.30E-05	9.31E-02	1.05E-05	3.74E-04	3.67E-03	5.50E-04	1.02E-03	6.60E-04	6.77E-04	7.20E-05	8.31E-05	1.74E-08	3.46E-04	5.84E-05
9	E34	60	Passenger Truck	609	0.00E+00	9.87E-06	1.05E-06	3.69E+01	6.23E-05	1.59E-01	2.05E-05	1.16E-03	6.71E-03	9.98E-04	1.95E-03	1.27E-03	1.30E-03	2.95E-04	1.83E-04	3.40E-08	6.51E-04	1.97E-04
9	E34	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.20E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	E34	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.19E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.89E-04
9	E34	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.46E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.41E-04
9	E35	60	Passenger Car	618	0.00E+00	7.91E-06	8.60E-07	2.82E+01	5.61E-05	1.58E-01	1.78E-05	6.36E-04	6.24E-03	9.35E-04	1.74E-03	1.12E-03	1.15E-03	1.23E-04	1.41E-04	2.97E-08	5.88E-04	9.93E-05
9	E35	60	Passenger Truck	1035	0.00E+00	1.68E-05	1.78E-06	6.28E+01	1.06E-04	2.71E-01	3.48E-05	1.98E-03	1.14E-02	1.70E-03	3.32E-03	2.16E-03	2.21E-03	5.01E-04	3.12E-04	5.78E-08	1.11E-03	3.35E-04
9	E35	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.54E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.76E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E35	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.81E-03
9	E35	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.59E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.99E-03
9	E36	60	Passenger Car	234	0.00E+00	2.99E-06	3.25E-07	1.07E+01	2.12E-05	5.98E-02	6.74E-06	2.41E-04	2.36E-03	3.53E-04	6.58E-04	4.24E-04	4.35E-04	4.63E-05	5.34E-05	1.12E-08	2.23E-04	3.75E-05
9	E36	60	Passenger Truck	391	0.00E+00	6.35E-06	6.73E-07	2.37E+01	4.01E-05	1.02E-01	1.32E-05	7.48E-04	4.31E-03	6.42E-04	1.26E-03	8.17E-04	8.37E-04	1.90E-04	1.18E-04	2.19E-08	4.19E-04	1.27E-04
9	E36	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.20E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	E36	60	Combination Short Haul Truck	9	0.00E+00	2.59E-06	1.91E-07	3.13E+00	7.11E-09	3.88E-03	1.86E-06	3.96E-03	4.53E-04	7.08E-05	1.60E-04	5.58E-05	5.79E-05	4.98E-04	1.05E-05	0.00E+00	1.02E-04	7.45E-04
9	E36	60	Combination Long Haul Truck	8	0.00E+00	3.57E-06	1.95E-07	2.96E+00	2.41E-08	4.66E-03	2.98E-06	4.21E-03	4.75E-04	6.87E-05	3.38E-04	6.36E-05	6.63E-05	4.75E-04	9.91E-06	0.00E+00	2.72E-04	7.94E-04
9	E37	60	Passenger Car	669	0.00E+00	8.56E-06	9.30E-07	3.05E+01	6.08E-05	1.71E-01	1.93E-05	6.89E-04	6.75E-03	1.01E-03	1.88E-03	1.21E-03	1.25E-03	1.33E-04	1.53E-04	3.21E-08	6.37E-04	1.07E-04
9	E37	60	Passenger Truck	1120	0.00E+00	1.82E-05	1.93E-06	6.80E+01	1.15E-04	2.93E-01	3.77E-05	2.14E-03	1.23E-02	1.84E-03	3.59E-03	2.34E-03	2.40E-03	5.43E-04	3.38E-04	6.26E-08	1.20E-03	3.63E-04
9	E37	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.79E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.22E-04
9	E37	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
9	E37	60	Combination Short Haul Truck	32	0.00E+00	9.31E-06	6.84E-07	1.12E+01	2.55E-08	1.39E-02	6.69E-06	1.42E-02	1.63E-03	2.54E-04	5.74E-04	2.00E-04	2.08E-04	1.79E-03	3.76E-05	0.00E+00	3.66E-04	2.67E-03
9	E37	60	Combination Long Haul Truck	29	0.00E+00	1.28E-05	6.99E-07	1.06E+01	8.64E-08	1.67E-02	1.07E-05	1.51E-02	1.70E-03	2.46E-04	1.21E-03	2.28E-04	2.38E-04	1.70E-03	3.56E-05	0.00E+00	9.76E-04	2.85E-03
9	E38	60	Passenger Car	249	0.00E+00	3.19E-06	3.46E-07	1.14E+01	2.26E-05	6.38E-02	7.19E-06	2.56E-04	2.51E-03	3.77E-04	7.01E-04	4.52E-04	4.64E-04	4.94E-05	5.69E-05	1.20E-08	2.37E-04	4.00E-05
9	E38	60	Passenger Truck	417	0.00E+00	6.77E-06	7.17E-07	2.53E+01	4.27E-05	1.09E-01	1.40E-05	7.97E-04	4.59E-03	6.84E-04	1.34E-03	8.71E-04	8.92E-04	2.02E-04	1.26E-04	2.33E-08	4.46E-04	1.35E-04
9	E38	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.68E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
9	E38	60	Combination Short Haul Truck	15	0.00E+00	4.27E-06	3.14E-07	5.16E+00	1.17E-08	6.39E-03	3.07E-06	6.52E-03	7.46E-04	1.17E-04	2.63E-04	9.18E-05	9.54E-05	8.20E-04	1.72E-05	0.00E+00	1.68E-04	1.23E-03
9	E38	60	Combination Long Haul Truck	13	0.00E+00	5.87E-06	3.21E-07	4.87E+00	3.96E-08	7.67E-03	4.91E-06	6.94E-03	7.82E-04	1.13E-04	5.57E-04	1.05E-04	1.09E-04	7.82E-04	1.63E-05	0.00E+00	4.48E-04	1.31E-03
10	E39	70	Passenger Car	525	0.00E+00	5.86E-06	6.37E-07	2.29E+01	4.16E-05	1.18E-01	1.32E-05	5.31E-04	4.04E-03	6.30E-04	1.29E-03	8.31E-04	8.53E-04	8.92E-05	1.15E-04	2.39E-08	4.36E-04	8.28E-05
10	E39	70	Passenger Truck	879	0.00E+00	1.23E-05	1.31E-06	5.15E+01	7.90E-05	2.08E-01	2.59E-05	1.54E-03	7.32E-03	1.13E-03	2.47E-03	1.61E-03	1.65E-03	3.90E-04	2.57E-04	4.60E-08	8.26E-04	2.59E-04
10	E39	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.03E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E39	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.92E-04
10	E39	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.80E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.27E-04
10	E40	70	Passenger Car	388	0.00E+00	4.33E-06	4.71E-07	1.69E+01	3.07E-05	8.71E-02	9.77E-06	3.92E-04	2.99E-03	4.66E-04	9.53E-04	6.14E-04	6.30E-04	6.59E-05	8.51E-05	1.77E-08	3.22E-04	6.12E-05
10	E40	70	Passenger Truck	650	0.00E+00	9.12E-06	9.69E-07	3.81E+01	5.84E-05	1.54E-01	1.91E-05	1.14E-03	5.41E-03	8.37E-04	1.83E-03	1.19E-03	1.22E-03	2.88E-04	1.90E-04	3.40E-08	6.11E-04	1.92E-04
10	E40	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.63E-06
10	E40	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.62E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.82E-04
10	E40	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.87E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.30E-04
10	E41	70	Passenger Car	267	0.00E+00	2.98E-06	3.23E-07	1.16E+01	2.11E-05	5.99E-02	6.71E-06	2.70E-04	2.05E-03	3.20E-04	6.54E-04	4.22E-04	4.33E-04	4.53E-05	5.84E-05	1.21E-08	2.21E-04	4.21E-05
10	E41	70	Passenger Truck	446	0.00E+00	6.26E-06	6.66E-07	2.62E+01	4.01E-05	1.06E-01	1.31E-05	7.84E-04	3.72E-03	5.75E-04	1.26E-03	8.16E-04	8.36E-04	1.98E-04	1.30E-04	2.33E-08	4.20E-04	1.32E-04
10	E41	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E41	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.41E-04
10	E41	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.65E-04
10	E42	70	Passenger Car	306	0.00E+00	3.42E-06	3.71E-07	1.34E+01	2.43E-05	6.88E-02	7.71E-06	3.10E-04	2.36E-03	3.68E-04	7.52E-04	4.85E-04	4.97E-04	5.20E-05	6.71E-05	1.39E-08	2.54E-04	4.83E-05
10	E42	70	Passenger Truck	513	0.00E+00	7.20E-06	7.65E-07	3.01E+01	4.61E-05	1.21E-01	1.51E-05	9.00E-04	4.27E-03	6.61E-04	1.44E-03	9.37E-04	9.60E-04	2.27E-04	1.50E-04	2.68E-08	4.82E-04	1.51E-04
10	E42	70	Single Unit Short Haul Truck	22	0.00E+00	3.88E-06	1.57E-07	3.61E+00	2.60E-06	6.54E-03	4.22E-06	1.54E-03	3.50E-04	6.43E-05	5.23E-04	9.96E-05	1.02E-04	3.67E-04	1.47E-05	5.93E-09	4.21E-04	2.88E-04
10	E42	70	Single Unit Long Haul Truck	1	0.00E+00	1.69E-07	6.79E-09	1.53E-01	1.12E-07	2.75E-04	1.83E-07	6.63E-05	1.60E-05	2.87E-06	2.28E-05	4.30E-06	4.39E-06	1.55E-05	6.23E-07	2.50E-10	1.84E-05	1.24E-05
10	E42	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.23E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.85E-04
10	E42	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.59E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.05E-03
10	E43	70	Passenger Car	223	0.00E+00	2.49E-06	2.70E-07	9.72E+00	1.77E-05	5.00E-02	5.61E-06	2.25E-04	1.72E-03	2.67E-04	5.47E-04	3.53E-04	3.62E-04	3.79E-05	4.88E-05	1.01E-08	1.85E-04	3.52E-05
10	E43	70	Passenger Truck	373	0.00E+00	5.24E-06	5.57E-07	2.19E+01	3.35E-05	8.84E-02	1.10E-05	6.55E-04	3.11E-03	4.81E-04	1.05E-03	6.82E-04	6.99E-04	1.65E-04	1.09E-04	1.95E-08	3.51E-04	1.10E-04
10	E43	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E43	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	E43	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
10	E44	70	Passenger Car	381	0.00E+00	4.25E-06	4.62E-07	1.66E+01	3.02E-05	8.55E-02	9.58E-06	3.85E-04	2.93E-03	4.57E-04	9.34E-04	6.02E-04	6.18E-04	6.47E-05	8.34E-05	1.73E-08	3.16E-04	6.00E-05
10	E44	70	Passenger Truck	637	0.00E+00	8.94E-06	9.51E-07	3.74E+01	5.73E-05	1.51E-01	1.87E-05	1.12E-03	5.31E-03	8.21E-04	1.79E-03	1.16E-03	1.19E-03	2.83E-04	1.86E-04	3.33E-08	5.99E-04	1.88E-04
10	E44	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.02E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.52E-05
10	E44	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.92E-04
10	E44	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E48	80	Combination Long Haul Truck	5	0.00E+00	1.65E-06	9.33E-08	1.79E+00	1.05E-08	2.14E-03	1.36E-06	1.95E-03	1.42E-04	2.27E-05	1.51E-04	3.01E-05	3.13E-05	2.87E-04	6.00E-06	0.00E+00	1.20E-04	3.68E-04
11	E49	80	Passenger Car	328	0.00E+00	3.41E-06	3.70E-07	1.39E+01	2.42E-05	7.03E-02	7.69E-06	3.40E-04	1.79E-03	2.99E-04	7.50E-04	4.83E-04	4.96E-04	4.87E-05	7.00E-05	1.49E-08	2.54E-04	5.30E-05
11	E49	80	Passenger Truck	549	0.00E+00	7.02E-06	7.48E-07	3.13E+01	4.57E-05	1.24E-01	1.49E-05	9.17E-04	3.18E-03	5.30E-04	1.43E-03	9.26E-04	9.49E-04	2.25E-04	1.56E-04	2.85E-08	4.78E-04	1.53E-04
11	E49	80	Single Unit Short Haul Truck	34	0.00E+00	4.60E-06	1.80E-07	5.50E+00	3.12E-06	9.98E-03	5.06E-06	1.91E-03	3.77E-04	7.70E-05	6.33E-04	1.17E-04	1.20E-04	5.59E-04	2.23E-05	8.85E-09	5.14E-04	3.57E-04
11	E49	80	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	7.71E-09	2.32E-01	1.33E-07	4.16E-04	2.20E-07	8.16E-05	1.73E-05	3.42E-06	2.76E-05	5.04E-06	5.14E-06	2.35E-05	9.45E-07	3.69E-10	2.25E-05	1.53E-05
11	E49	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.82E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E49	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.22E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E50	80	Passenger Car	72	0.00E+00	7.50E-07	8.15E-08	3.06E+00	5.32E-06	1.55E-02	1.69E-06	7.48E-05	3.93E-04	6.59E-05	1.65E-04	1.06E-04	1.09E-04	1.07E-05	1.54E-05	3.29E-09	5.58E-05	1.17E-05
11	E50	80	Passenger Truck	121	0.00E+00	1.54E-06	1.65E-07	6.90E+00	1.00E-05	2.73E-02	3.27E-06	2.02E-04	7.00E-04	1.17E-04	3.14E-04	2.04E-04	2.09E-04	4.96E-05	3.44E-05	6.26E-09	1.05E-04	3.36E-05
11	E50	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.64E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.06E-05
11	E50	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.16E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.19E-04
11	E50	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.24E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.34E-04
11	E51	80	Passenger Car	392	0.00E+00	4.07E-06	4.43E-07	1.66E+01	2.89E-05	8.40E-02	9.19E-06	4.06E-04	2.14E-03	3.58E-04	8.96E-04	5.78E-04	5.93E-04	5.83E-05	8.36E-05	1.79E-08	3.03E-04	6.34E-05
11	E51	80	Passenger Truck	656	0.00E+00	8.39E-06	8.94E-07	3.75E+01	5.46E-05	1.48E-01	1.78E-05	1.10E-03	3.80E-03	6.33E-04	1.71E-03	1.11E-03	1.13E-03	2.69E-04	1.87E-04	3.40E-08	5.71E-04	1.82E-04
11	E51	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.75E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.26E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.46E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.39E-05
11	E51	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.82E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E51	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.22E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E52	80	Passenger Car	126	0.00E+00	1.31E-06	1.42E-07	5.33E+00	9.30E-06	2.70E-02	2.95E-06	1.31E-04	6.87E-04	1.15E-04	2.88E-04	1.86E-04	1.91E-04	1.87E-05	2.69E-05	5.74E-09	9.74E-05	2.04E-05
11	E52	80	Passenger Truck	211	0.00E+00	2.70E-06	2.88E-07	1.20E+01	1.75E-05	4.77E-02	5.72E-06	3.52E-04	1.22E-03	2.04E-04	5.48E-04	3.56E-04	3.65E-04	8.66E-05	6.01E-05	1.09E-08	1.84E-04	5.87E-05
11	E52	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.46E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E52	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	2.99E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.64E-04
11	E52	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.20E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.02E-04
11	E53	80	Passenger Car	385	0.00E+00	4.00E-06	4.35E-07	1.63E+01	2.84E-05	8.25E-02	9.02E-06	3.99E-04	2.10E-03	3.51E-04	8.80E-04	5.67E-04	5.82E-04	5.72E-05	8.21E-05	1.75E-08	2.98E-04	6.22E-05
11	E53	80	Passenger Truck	644	0.00E+00	8.24E-06	8.78E-07	3.68E+01	5.36E-05	1.46E-01	1.75E-05	1.08E-03	3.73E-03	6.22E-04	1.67E-03	1.09E-03	1.11E-03	2.65E-04	1.84E-04	3.34E-08	5.61E-04	1.79E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.13E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.59E-06
11	E53	80	Combination Short Haul Truck	16	0.00E+00	3.34E-06	2.47E-07	5.44E+00	8.75E-09	5.09E-03	2.39E-06	5.15E-03	3.87E-04	7.01E-05	2.03E-04	7.22E-05	7.49E-05	8.64E-04	1.82E-05	0.00E+00	1.28E-04	9.71E-04
11	E53	80	Combination Long Haul Truck	15	0.00E+00	4.66E-06	2.63E-07	5.05E+00	2.96E-08	6.03E-03	3.84E-06	5.51E-03	4.00E-04	6.40E-05	4.27E-04	8.47E-05	8.82E-05	8.10E-04	1.69E-05	0.00E+00	3.38E-04	1.04E-03
11	E54	80	Passenger Car	291	0.00E+00	3.02E-06	3.28E-07	1.23E+01	2.14E-05	6.23E-02	6.81E-06	3.01E-04	1.58E-03	2.65E-04	6.64E-04	4.28E-04	4.40E-04	4.32E-05	6.20E-05	1.32E-08	2.25E-04	4.70E-05
11	E54	80	Passenger Truck	486	0.00E+00	6.22E-06	6.63E-07	2.78E+01	4.04E-05	1.10E-01	1.32E-05	8.12E-04	2.82E-03	4.69E-04	1.26E-03	8.20E-04	8.41E-04	2.00E-04	1.39E-04	2.52E-08	4.24E-04	1.35E-04
11	E54	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.90E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.09E-05
11	E54	80	Combination Short Haul Truck	47	0.00E+00	9.59E-06	7.10E-07	1.56E+01	2.51E-08	1.46E-02	6.86E-06	1.48E-02	1.11E-03	2.01E-04	5.82E-04	2.07E-04	2.15E-04	2.48E-03	5.22E-05	0.00E+00	3.67E-04	2.79E-03
11	E54	80	Combination Long Haul Truck	42	0.00E+00	1.34E-05	7.54E-07	1.45E+01	8.50E-08	1.73E-02	1.10E-05	1.58E-02	1.15E-03	1.84E-04	1.22E-03	2.43E-04	2.53E-04	2.32E-03	4.85E-05	0.00E+00	9.72E-04	2.98E-03
11	E55	80	Passenger Car	386	0.00E+00	4.01E-06	4.36E-07	1.63E+01	2.85E-05	8.27E-02	9.04E-06	4.00E-04	2.10E-03	3.52E-04	8.82E-04	5.69E-04	5.84E-04	5.74E-05	8.23E-05	1.76E-08	2.98E-04	6.24E-05
11	E55	80	Passenger Truck	646	0.00E+00	8.26E-06	8.80E-07	3.69E+01	5.37E-05	1.46E-01	1.75E-05	1.08E-03	3.74E-03	6.23E-04	1.68E-03	1.09E-03	1.12E-03	2.65E-04	1.84E-04	3.35E-08	5.63E-04	1.80E-04
11	E55	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.55E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.23E-06
11	E55	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	2.99E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.64E-04
11	E55	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.20E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.02E-04
11	E56	80	Passenger Car	233	0.00E+00	2.42E-06	2.63E-07	9.85E+00	1.72E-05	4.98E-02	5.45E-06	2.41E-04	1.27E-03	2.12E-04	5.32E-04	3.43E-04	3.52E-04	3.46E-05	4.96E-05	1.06E-08	1.80E-04	3.76E-05
11	E56	80	Passenger Truck	389	0.00E+00	4.98E-06	5.31E-07	2.22E+01	3.24E-05	8.80E-02	1.05E-05	6.50E-04	2.26E-03	3.76E-04	1.01E-03	6.57E-04	6.73E-04	1.60E-04	1.11E-04	2.02E-08	3.39E-04	1.08E-04
11	E56	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.55E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E56	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.23E-06
11	E56	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.49E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.58E-04
11	E56	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.73E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.03E-04
10	E57	70	Passenger Car	178	0.00E+00	1.99E-06	2.16E-07	7.76E+00	1.41E-05	4.00E-02	4.48E-06	1.80E-04	1.37E-03	2.14E-04	4.37E-04	2.82E-04	2.89E-04	3.02E-05	3.90E-05	8.10E-09	1.48E-04	2.81E-05
10	E57	70	Passenger Truck	298	0.00E+00	4.18E-06	4.44E-07	1.75E+01	2.68E-05	7.06E-02	8.77E-06	5.23E-04	2.48E-03	3.84E-04	8.38E-04	5.45E-04	5.58E-04	1.32E-04	8.70E-05	1.56E-08	2.80E-04	8.79E-05
10	E57	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	E57	70	Single Unit Long Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.21E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.17E-04
10	E57	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.46E-04
10	E58	70	Passenger Car	188	0.00E+00	2.10E-06	2.29E-07	8.22E+00	1.49E-05	4.23E-02	4.74E-06	1.91E-04	1.45E-03	2.26E-04	4.63E-04	2.98E-04	3.06E-04	3.20E-05	4.13E-05	8.58E-09	1.56E-04	2.97E-05
10	E58	70	Passenger Truck	316	0.00E+00	4.43E-06	4.71E-07	1.85E+01	2.84E-05	7.47E-02	9.28E-06	5.54E-04	2.63E-03	4.07E-04	8.88E-04	5.77E-04	5.91E-04	1.40E-04	9.21E-05	1.65E-08	2.97E-04	9.30E-05
10	E58	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.03E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E58	70	Single Unit Long Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.06E-04
10	E58	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.44E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.48E-04
11	E59	80	Passenger Car	610	0.00E+00	6.34E-06	6.89E-07	2.58E+01	4.50E-05	1.31E-01	1.43E-05	6.33E-04	3.33E-03	5.57E-04	1.40E-03	8.99E-04	9.23E-04	9.07E-05	1.30E-04	2.78E-08	4.72E-04	9.87E-05
11	E59	80	Passenger Truck	1022	0.00E+00	1.31E-05	1.39E-06	5.83E+01	8.50E-05	2.31E-01	2.77E-05	1.71E-03	5.92E-03	9.86E-04	2.66E-03	1.72E-03	1.77E-03	4.20E-04	2.91E-04	5.30E-08	8.90E-04	2.84E-04
11	E59	80	Single Unit Short Haul Truck	67	0.00E+00	9.20E-06	3.59E-07	1.10E+01	6.24E-06	2.00E-02	1.01E-05	3.82E-03	7.53E-04	1.54E-04	1.27E-03	2.35E-04	2.39E-04	1.12E-03	4.47E-05	1.77E-08	1.03E-03	7.14E-04
11	E59	80	Single Unit Long Haul Truck	3	0.00E+00	4.00E-07	1.54E-08	4.64E-01	2.66E-07	8.31E-04	4.39E-07	1.63E-04	3.45E-05	6.84E-06	5.52E-05	1.01E-05	1.03E-05	4.70E-05	1.89E-06	7.38E-10	4.50E-05	3.05E-05
11	E59	80	Combination Short Haul Truck	58	0.00E+00	1.20E-05	8.86E-07	1.95E+01	3.13E-08	1.82E-02	8.55E-06	1.84E-02	1.39E-03	2.51E-04	7.26E-04	2.58E-04	2.68E-04	3.09E-03	6.51E-05	0.00E+00	4.57E-04	3.48E-03
11	E59	80	Combination Long Haul Truck	53	0.00E+00	1.67E-05	9.41E-07	1.81E+01	1.06E-07	2.16E-02	1.37E-05	1.97E-02	1.43E-03	2.29E-04	1.53E-03	3.03E-04	3.16E-04	2.90E-03	6.05E-05	0.00E+00	1.21E-03	3.71E-03
11	E60	80	Passenger Car	449	0.00E+00	4.67E-06	5.07E-07	1.90E+01	3.31E-05	9.62E-02	1.05E-05	4.66E-04	2.45E-03	4.10E-04	1.03E-03	6.62E-04	6.79E-04	6.68E-05	9.58E-05	2.05E-08	3.47E-04	7.26E-05
11	E60	80	Passenger Truck	752	0.00E+00	9.61E-06	1.02E-06	4.29E+01	6.25E-05	1.70E-01	2.04E-05	1.26E-03	4.36E-03	7.26E-04	1.95E-03	1.27E-03	1.30E-03	3.09E-04	2.14E-04	3.90E-08	6.55E-04	2.09E-04
11	E60	80	Single Unit Short Haul Truck	61	0.00E+00	8.41E-06	3.28E-07	1.00E+01	5.70E-06	1.83E-02	9.25E-06	3.49E-03	6.89E-04	1.41E-04	1.16E-03	2.14E-04	2.19E-04	1.02E-03	4.08E-05	1.62E-08	9.40E-04	6.53E-04
11	E60	80	Single Unit Long Haul Truck	3	0.00E+00	3.65E-07	1.41E-08	4.25E-01	2.43E-07	7.60E-04	4.02E-07	1.49E-04	3.16E-05	6.25E-06	5.05E-05	9.21E-06	9.39E-06	4.29E-05	1.73E-06	6.75E-10	4.11E-05	2.79E-05
11	E60	80	Combination Short Haul Truck	48	0.00E+00	9.81E-06	7.26E-07	1.60E+01	2.57E-08	1.50E-02	7.01E-06	1.51E-02	1.14E-03	2.06E-04	5.95E-04	2.12E-04	2.20E-04	2.54E-03	5.34E-05	0.00E+00	3.75E-04	2.85E-03
11	E60	80	Combination Long Haul Truck	43	0.00E+00	1.37E-05	7.71E-07	1.48E+01	8.69E-08	1.77E-02	1.13E-05	1.62E-02	1.17E-03	1.88E-04	1.25E-03	2.49E-04	2.59E-04	2.38E-03	4.96E-05	0.00E+00	9.93E-04	3.05E-03
11	E61	80	Passenger Car	459	0.00E+00	4.77E-06	5.18E-07	1.94E+01	3.38E-05	9.83E-02	1.08E-05	4.76E-04	2.50E-03	4.19E-04	1.05E-03	6.76E-04	6.94E-04	6.82E-05	9.79E-05	2.09E-08	3.55E-04	7.42E-05
11	E61	80	Passenger Truck	768	0.00E+00	9.82E-06	1.05E-06	4.38E+01	6.39E-05	1.74E-01	2.08E-05	1.28E-03	4.45E-03	7.41E-04	2.00E-03	1.30E-03	1.33E-03	3.15E-04	2.19E-04	3.98E-08	6.69E-04	2.14E-04
11	E61	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.82E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.14E-05
11	E61	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.13E-04
11	E61	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.35E-04
11	E62	80	Passenger Car	413	0.00E+00	4.29E-06	4.66E-07	1.75E+01	3.05E-05	8.85E-02	9.68E-06	4.28E-04	2.25E-03	3.77E-04	9.44E-04	6.08E-04	6.24E-04	6.14E-05	8.81E-05	1.88E-08	3.19E-04	6.68E-05
11	E62	80	Passenger Truck	691	0.00E+00	8.84E-06	9.42E-07	3.95E+01	5.75E-05	1.56E-01	1.87E-05	1.15E-03	4.01E-03	6.67E-04	1.80E-03	1.17E-03	1.19E-03	2.84E-04	1.97E-04	3.58E-08	6.02E-04	1.92E-04
11	E62	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.08E-05
11	E62	80	Single Unit Long Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.16E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.19E-04
11	E62	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.24E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.34E-04
11	E63	70	Passenger Car	730	0.00E+00	8.15E-06	8.86E-07	3.18E+01	5.78E-05	1.64E-01	1.84E-05	7.38E-04	5.63E-03	8.76E-04	1.79E-03	1.16E-03	1.19E-03	1.24E-04	1.60E-04	3.32E-08	6.06E-04	1.15E-04
10	E63	70	Passenger Truck	1223	0.00E+00	1.72E-05	1.82E-06	7.17E+01	1.10E-04	2.90E-01	3.60E-05	2.15E-03	1.02E-02	1.58E-03	3.44E-03	2.23E-03	2.29E-03	5.42E-04	3.57E-04	6.39E-08	1.15E-03	3.60E-04
10	E63	70	Single Unit Short Haul Truck	75	0.00E+00	1.31E-05	5.34E-07	1.22E+01	8.81E-06	2.22E-02	1.43E-05	5.23E-03	1.19E-03	2.18E-04	1.77E-03	3.38E-04	3.44E-04	1.24E-03	4.98E-05	2.01E-08	1.43E-03	9.78E-04
10	E63	70	Single Unit Long Haul Truck	3

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E67	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.99E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.52E-04
11	E67	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.26E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.03E-04
11	E68	80	Passenger Car	431	0.00E+00	4.48E-06	4.87E-07	1.82E+01	3.18E-05	9.23E-02	1.01E-05	4.47E-04	2.35E-03	3.93E-04	9.85E-04	6.35E-04	6.52E-04	6.40E-05	9.19E-05	1.96E-08	3.33E-04	6.97E-05
11	E68	80	Passenger Truck	721	0.00E+00	9.22E-06	9.83E-07	4.12E+01	6.00E-05	1.63E-01	1.95E-05	1.20E-03	4.18E-03	6.96E-04	1.87E-03	1.22E-03	1.25E-03	2.96E-04	2.06E-04	3.74E-08	6.28E-04	2.00E-04
11	E68	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.16E-05
11	E68	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	E68	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.42E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.68E-04
10	E69	70	Passenger Car	465	0.00E+00	5.20E-06	5.65E-07	2.03E+01	3.69E-05	1.05E-01	1.17E-05	4.71E-04	3.59E-03	5.59E-04	1.14E-03	7.37E-04	7.56E-04	7.91E-05	1.02E-04	2.12E-08	3.87E-04	7.34E-05
10	E69	70	Passenger Truck	780	0.00E+00	1.09E-05	1.16E-06	4.57E+01	7.00E-05	1.85E-01	2.29E-05	1.37E-03	6.49E-03	1.00E-03	2.19E-03	1.42E-03	1.46E-03	3.46E-04	2.27E-04	4.08E-08	7.33E-04	2.30E-04
10	E69	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.71E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.75E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.01E-06
10	E69	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	E69	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
10	E70	70	Passenger Car	337	0.00E+00	3.76E-06	4.09E-07	1.47E+01	2.67E-05	7.57E-02	8.49E-06	3.41E-04	2.60E-03	4.05E-04	8.28E-04	5.34E-04	5.48E-04	5.73E-05	7.39E-05	1.54E-08	2.80E-04	5.32E-05
10	E70	70	Passenger Truck	565	0.00E+00	7.92E-06	8.42E-07	3.31E+01	5.07E-05	1.34E-01	1.66E-05	9.92E-04	4.70E-03	7.28E-04	1.59E-03	1.03E-03	1.06E-03	2.50E-04	1.65E-04	2.95E-08	5.31E-04	1.66E-04
10	E70	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E70	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E70	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	E71	70	Passenger Car	568	0.00E+00	6.34E-06	6.89E-07	2.48E+01	4.50E-05	1.28E-01	1.43E-05	5.74E-04	4.38E-03	6.82E-04	1.39E-03	8.99E-04	9.23E-04	9.65E-05	1.24E-04	2.59E-08	4.72E-04	8.96E-05
10	E71	70	Passenger Truck	951	0.00E+00	1.33E-05	1.42E-06	5.57E+01	8.55E-05	2.25E-01	2.80E-05	1.67E-03	7.92E-03	1.23E-03	2.68E-03	1.74E-03	1.78E-03	4.22E-04	2.78E-04	4.97E-08	8.94E-04	2.80E-04
10	E71	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.03E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E71	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E71	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E72	70	Passenger Car	558	0.00E+00	6.23E-06	6.77E-07	2.43E+01	4.42E-05	1.25E-01	1.41E-05	5.65E-04	4.30E-03	6.70E-04	1.37E-03	8.84E-04	9.07E-04	9.48E-05	1.22E-04	2.54E-08	4.64E-04	8.81E-05
10	E72	70	Passenger Truck	935	0.00E+00	1.31E-05	1.39E-06	5.48E+01	8.40E-05	2.21E-01	2.75E-05	1.64E-03	7.79E-03	1.20E-03	2.63E-03	1.71E-03	1.75E-03	4.14E-04	2.73E-04	4.89E-08	8.79E-04	2.76E-04
10	E72	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E72	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
9	E73	60	Passenger Car	102	0.00E+00	1.31E-06	1.43E-07	4.67E+00	9.31E-06	2.62E-02	2.96E-06	1.05E-04	1.03E-03	1.55E-04	2.88E-04	1.86E-04	1.91E-04	2.03E-05	2.34E-05	4.92E-09	9.75E-05	1.65E-05
9	E73	60	Passenger Truck	172	0.00E+00	2.78E-06	2.95E-07	1.04E+01	1.76E-05	4.49E-02	5.77E-06	3.28E-04	1.89E-03	2.81E-04	5.50E-04	3.58E-04	3.67E-04	8.31E-05	5.17E-05	9.59E-09	1.83E-04	5.56E-05
9	E74	60	Passenger Car	118	0.00E+00	1.51E-06	1.64E-07	5.37E+00	1.07E-05	3.02E-02	3.40E-06	1.21E-04	1.19E-03	1.78E-04	3.32E-04	2.14E-04	2.19E-04	2.33E-05	2.69E-05	5.65E-09	1.12E-04	1.89E-05
9	E74	60	Passenger Truck	197	0.00E+00	3.20E-06	3.39E-07	1.20E+01	2.02E-05	5.16E-02	6.64E-06	3.77E-04	2.17E-03	3.23E-04	6.33E-04	4.12E-04	4.22E-04	9.56E-05	5.94E-05	1.10E-08	2.11E-04	6.39E-05
9	E74	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
53	E75	70	Passenger Car	1068	0.00E+00	1.16E-05	1.26E-06	4.71E+01	8.20E-05	2.31E-01	2.61E-05	1.10E-03	8.10E-03	1.27E-03	2.54E-03	1.64E-03	1.68E-03	1.81E-04	2.37E-04	4.92E-08	8.60E-04	1.71E-04
53	E75	70	Passenger Truck	1789	0.00E+00	2.41E-05	2.57E-06	1.06E+02	1.55E-04	4.06E-01	5.07E-05	3.10E-03	1.45E-02	2.25E-03	4.85E-03	3.15E-03	3.23E-03	7.88E-04	5.29E-04	9.26E-08	1.62E-03	5.20E-04
53	E75	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.13E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.21E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	E75	70	Combination Short Haul Truck	28	0.00E+00	7.13E-06	5.31E-07	9.64E+00	1.81E-08	1.03E-02	5.08E-06	1.07E-02	1.01E-03	1.68E-04	4.28E-04	1.55E-04	1.60E-04	1.53E-03	3.22E-05	0.00E+00	2.68E-04	2.01E-03
53	E75	70	Combination Long Haul Truck	25	0.00E+00	9.78E-06	5.56E-07	9.05E+00	6.13E-08	1.23E-02	8.04E-06	1.14E-02	1.05E-03	1.58E-04	8.89E-04	1.79E-04	1.86E-04	1.45E-03	3.03E-05	0.00E+00	7.03E-04	2.15E-03
53	E76	70	Passenger Car	742	0.00E+00	8.03E-06	8.72E-07	3.27E+01	5.70E-05	1.60E-01	1.81E-05	7.63E-04	5.63E-03	8.81E-04	1.76E-03	1.14E-03	1.17E-03	1.26E-04	1.64E-04	3.42E-08	5.97E-04	1.19E-04
53	E76	70	Passenger Truck	1242	0.00E+00	1.68E-05	1.78E-06	7.37E+01	1.08E-04	2.82E-01	3.52E-05	2.16E-03	1.00E-02	1.56E-03	3.37E-03	2.19E-03	2.24E-03	5.47E-04	3.67E-04	6.43E-08	1.13E-03	3.61E-04
53	E76	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
53	E76	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.82E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.20E-04
53	E76	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.09E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.70E-04
53	E77	70	Passenger Car	1172	0.00E+00	1.27E-05	1.38E-06	5.17E+01	9.00E-05	2.53E-01	2.86E-05	1.21E-03	8.89E-03	1.39E-03	2.79E-03	1.80E-03	1.85E-03	1.99E-04	2.60E-04	5.40E-08	9.44E-04	1.88E-04
53	E77	70	Passenger Truck	1964	0.00E+00	2.65E-05	2.82E-06	1.16E+02	1.70E-04	4.46E-01	5.56E-05	3.41E-03	1.59E-02	2.47E-03	5.32E-03	3.46E-03	3.54E-03	8.65E-04	5.80E-04	1.02E-07	1.78E-03	5.71E-04
53	E77	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.74E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.26E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.50E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.40E-05
53	E77	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
53	E77	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
53	E78	70	Passenger Car	901	0.00E+00	9.75E-06	1.06E-06	3.97E+01	6.92E-05	1.94E-01	2.20E-05	9.27E-04	6.83E-03	1.07E-03	2.14E-03	1.38E-03	1.42E-03	1.53E-04	2.00E-04	4.15E-08	7.25E-04	1.45E-04
53	E78	70	Passenger Truck	1509	0.00E+00	2.04E-05	2.16E-06	8.95E+01	1.31E-04	3.43E-01	4.28E-05	2.62E-03	1.22E-02	1.90E-03	4.09E-03	2.66E-03	2.72E-03	6.65E-04	4.46E-04	7.81E-08	1.37E-03	4.38E-04
53	E78	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.09E-06
53	E78	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.82E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.09E-04
53	E78	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.16E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.73E-04
53	E79	70	Passenger Car	1150	0.00E+00	1.24E-05	1.35E-06	5.07E+01	8.83E-05	2.48E-01	2.81E-05	1.18E-03	8.72E-03	1.37E-03	2.74E-03	1.76E-03	1.81E-03	1.95E-04	2.55E-04	5.30E-08	9.26E-04	1.85E-04
53	E79	70	Passenger Truck	1926	0.00E+00	2.60E-05	2.76E-06	1.14E+02	1.67E-04	4.38E-01	5.46E-05	3.34E-03	1.56E-02	2.42E-03	5.22E-03	3.39E-03	3.48E-03	8.49E-04	5.69E-04	9.97E-08	1.74E-03	5.60E-04
53	E79	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.13E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.21E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	E79	70	Combination Short Haul Truck	14	0.00E+00	3.63E-06	2.70E-07	4.91E+00	9.23E-09	5.25E-03	2.59E-06	5.43E-03	5.12E-04	8.54E-05	2.18E-04	7.88E-05	8.18E-05	7.80E-04	1.64E-05	0.00E+00	1.36E-04	1.02E-03
53	E79	70	Combination Long Haul Truck	13	0.00E+00	4.98E-06	2.83E-07	4.61E+00	3.12E-08	6.26E-03	4.10E-06	5.81E-03	5.33E-04	8.03E-05	4.53E-04	9.11E-05	9.49E-05	7.40E-04	1.54E-05	0.00E+00	3.58E-04	1.09E-03
53	E80	70	Passenger Car	846	0.00E+00	9.16E-06	9.95E-07	3.73E+01	6.50E-05	1.83E-01	2.07E-05	8.71E-04	6.42E-03	1.01E-03	2.01E-03	1.30E-03	1.33E-03	1.44E-04	1.88E-04	3.90E-08	6.81E-04	1.36E-04
53	E80	70	Passenger Truck	1418	0.00E+00	1.91E-05	2.03E-06	8.41E+01	1.23E-04	3.22E-01	4.02E-05	2.46E-03	1.15E-02	1.78E-03	3.84E-03	2.50E-03	2.56E-03	6.25E-04	4.19E-04	7.34E-08	1.28E-03	4.12E-04
53	E80	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.61E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.01E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.92E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.29E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.63E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.10E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
9	E81	60	Passenger Car	25	0.00E+00	3.21E-07	3.48E-08	1.14E+00	2.28E-06	6.42E-03	7.23E-07	2.58E-05	2.53E-04	3.79E-05	7.05E-05	4.55E-05	4.67E-05	4.97E-06	5.73E-06	1.20E-09	2.39E-05	4.02E-06
9	E81	60	Passenger Truck	42	0.00E+00	6.81E-07	7.21E-08	2.55E+00	4.29E-06	1.10E-02	1.41E-06	8.02E-05	4.62E-04	6.88E-05	1.35E-04	8.76E-05	8.97E-05	2.03E-05	1.26E-05	2.34E-09	4.49E-05	1.36E-05
9	E81	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	E82	60	Passenger Car	9	0.00E+00	1.20E-07	1.30E-08	4.26E-01	8.49E-07	2.39E-03	2.70E-07	9.62E-06	9.44E-05	1.41E-05	2.63E-05	1.70E-05	1.74E-05	1.85E-06	2.14E-06	4.49E-10	8.90E-06	1.50E-06
9	E82	60	Passenger Truck	16	0.00E+00	2.54E-07	2.69E-08	9.50E-01	1.60E-06	4.10E-03	5.27E-07	2.99E-05	1.72E-04	2.57E-05	5.02E-05	3.27E-05	3.35E-05	7.58E-06	4.72E-06	8.75E-10	1.67E-05	5.07E-06
10	E83	70	Passenger Car	190	0.00E+00	2.12E-06	2.30E-07	8.27E+00	1.50E-05	4.26E-02	4.77E-06	1.92E-04	1.46E-03	2.28E-04	4.65E-04	3.00E-04	3.08E-04	3.22E-05	4.16E-05	8.63E-09	1.57E-04	2.99E-05
10	E83	70	Passenger Truck	317	0.00E+00	4.45E-06	4.73E-07	1.86E+01	2.85E-05	7.52E-02	9.34E-06	5.57E-04	2.64E-03	4.09E-04	8.93E-04	5.80E-04	5.95E-04	1.41E-04	9.26E-05	1.66E-08	2.98E-04	9.36E-05
10	E83	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E83	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	E83	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
10	E84	70	Passenger Car	141	0.00E+00	1.58E-06	1.71E-07	6.16E+00	1.12E-05	3.17E-02	3.56E-06	1.43E-04	1.09E-03	1.70E-04	3.47E-04	2.24E-04	2.30E-04	2.40E-05	3.10E-05	6.43E-09	1.17E-04	2.23E-05
10	E84	70	Passenger Truck	237	0.00E+00	3.32E-06	3.53E-07	1.39E+01	2.13E-05	5.60E-02	6.96E-06	4.16E-04	1.97E-03	3.05E-04	6.66E-04	4.33E-04	4.43E-04	1.05E-04	6.91E-05	1.24E-08	2.22E-04	6.98E-05
10	E84	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E84	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E88	60	Combination Short Haul Truck	62	0.00E+00	1.82E-05	1.33E-06	2.19E+01	4.98E-08	2.71E-02	1.30E-05	2.77E-02	3.17E-03	4.96E-04	1.12E-03	3.90E-04	4.05E-04	3.48E-03	7.33E-05	0.00E+00	7.14E-04	5.22E-03
9	E88	60	Combination Long Haul Truck	57	0.00E+00	2.50E-05	1.36E-06	2.07E+01	1.68E-07	3.26E-02	2.09E-05	2.95E-02	3.32E-03	4.81E-04	2.37E-03	4.45E-04	4.64E-04	3.32E-03	6.94E-05	0.00E+00	1.90E-03	5.56E-03
9	E89	60	Passenger Car	83	0.00E+00	1.06E-06	1.15E-07	3.78E+00	7.54E-06	2.13E-02	2.40E-06	8.55E-05	8.38E-04	1.26E-04	2.34E-04	1.51E-04	1.55E-04	1.65E-05	1.90E-05	3.99E-09	7.90E-05	1.33E-05
9	E89	60	Passenger Truck	139	0.00E+00	2.26E-06	2.39E-07	8.44E+00	1.42E-05	3.64E-02	4.68E-06	2.66E-04	1.53E-03	2.28E-04	4.46E-04	2.90E-04	2.97E-04	6.73E-05	4.19E-05	7.77E-09	1.49E-04	4.50E-05
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	E90	60	Passenger Car	107	0.00E+00	1.37E-06	1.49E-07	4.88E+00	9.71E-06	2.74E-02	3.09E-06	1.10E-04	1.08E-03	1.62E-04	3.01E-04	1.94E-04	1.99E-04	2.12E-05	2.44E-05	5.13E-09	1.02E-04	1.72E-05
9	E90	60	Passenger Truck	179	0.00E+00	2.91E-06	3.08E-07	1.09E+01	1.83E-05	4.69E-02	6.03E-06	3.42E-04	1.97E-03	2.94E-04	5.75E-04	3.74E-04	3.83E-04	8.68E-05	5.40E-05	1.00E-08	1.92E-04	5.80E-05
9	E90	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
9	E91	60	Passenger Car	4	0.00E+00	4.79E-08	5.20E-09	1.70E-01	3.40E-07	9.57E-04	1.08E-07	3.85E-06	3.78E-05	5.65E-06	1.05E-05	6.79E-06	6.96E-06	7.41E-07	8.55E-07	1.80E-10	3.56E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.02E-07	1.08E-08	3.80E-01	6.41E-07	1.64E-03	2.11E-07	1.20E-05	6.90E-05	1.03E-05	2.01E-05	1.31E-05	1.34E-05	3.03E-06	1.89E-06	3.50E-10	6.70E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.79E-08	5.20E-09	1.70E-01	3.40E-07	9.57E-04	1.08E-07	3.85E-06	3.78E-05	5.65E-06	1.05E-05	6.79E-06	6.96E-06	7.41E-07	8.55E-07	1.80E-10	3.56E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.02E-07	1.08E-08	3.80E-01	6.41E-07	1.64E-03	2.11E-07	1.20E-05	6.90E-05	1.03E-05	2.01E-05	1.31E-05	1.34E-05	3.03E-06	1.89E-06	3.50E-10	6.70E-06	2.03E-06
9	E93	60	Passenger Car	251	0.00E+00	3.22E-06	3.49E-07	1.15E+01	2.28E-05	6.43E-02	7.25E-06	2.59E-04	2.54E-03	3.80E-04	7.07E-04	4.56E-04	4.68E-04	4.98E-05	5.74E-05	1.21E-08	2.39E-04	4.04E-05
9	E93	60	Passenger Truck	421	0.00E+00	6.83E-06	7.24E-07	2.55E+01	4.31E-05	1.10E-01	1.42E-05	8.04E-04	4.64E-03	6.90E-04	1.35E-03	8.78E-04	9.00E-04	2.04E-04	1.27E-04	2.35E-08	4.50E-04	1.36E-04
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.65E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.77E-05
9	E93	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.96E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.34E-05
9	E94	60	Passenger Car	122	0.00E+00	1.56E-06	1.69E-07	5.54E+00	1.10E-05	3.11E-02	3.51E-06	1.25E-04	1.23E-03	1.84E-04	3.42E-04	2.21E-04	2.26E-04	2.41E-05	2.78E-05	5.83E-09	1.16E-04	1.95E-05
9	E94	60	Passenger Truck	203	0.00E+00	3.30E-06	3.50E-07	1.23E+01	2.08E-05	5.32E-02	6.85E-06	3.89E-04	2.24E-03	3.34E-04	6.53E-04	4.25E-04	4.35E-04	9.86E-05	6.13E-05	1.14E-08	2.18E-04	6.59E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
54	E95	80	Passenger Car	685	0.00E+00	6.94E-06	7.55E-07	2.92E+01	4.93E-05	1.40E-01	1.57E-05	7.13E-04	3.93E-03	6.46E-04	1.53E-03	9.85E-04	1.01E-03	1.02E-04	1.47E-04	3.04E-08	5.17E-04	1.11E-04
54	E95	80	Passenger Truck	1146	0.00E+00	1.44E-05	1.54E-06	6.62E+01	9.40E-05	2.56E-01	3.06E-05	1.92E-03	7.01E-03	1.15E-03	2.94E-03	1.91E-03	1.95E-03	4.71E-04	3.31E-04	5.86E-08	9.83E-04	3.19E-04
54	E95	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.07E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.86E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.66E-05
54	E95	80	Combination Short Haul Truck	38	0.00E+00	7.76E-06	5.75E-07	1.26E+01	2.03E-08	1.18E-02	5.55E-06	1.20E-02	8.99E-04	1.63E-04	4.71E-04	1.68E-04	1.74E-04	2.01E-03	4.22E-05	0.00E+00	2.97E-04	2.25E-03
54	E95	80	Combination Long Haul Truck	34	0.00E+00	1.08E-05	6.10E-07	1.17E+01	6.88E-08	1.40E-02	8.92E-06	1.28E-02	9.29E-04	1.49E-04	9.91E-04	1.97E-04	2.05E-04	1.88E-03	3.93E-05	0.00E+00	7.86E-04	2.41E-03
54	E96	80	Passenger Car	537	0.00E+00	5.45E-06	5.92E-07	2.29E+01	3.87E-05	1.10E-01	1.23E-05	5.60E-04	3.08E-03	5.07E-04	1.20E-03	7.73E-04	7.93E-04	7.99E-05	1.15E-04	2.39E-08	4.05E-04	8.73E-05
54	E96	80	Passenger Truck	900	0.00E+00	1.13E-05	1.21E-06	5.20E+01	7.37E-05	2.01E-01	2.40E-05	1.50E-03	5.50E-03	9.02E-04	2.30E-03	1.50E-03	1.53E-03	3.69E-04	2.59E-04	4.60E-08	7.72E-04	2.50E-04
54	E96	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
54	E96	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.09E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
54	E96	80	Combination Short Haul Truck	36	0.00E+00	7.44E-06	5.51E-07	1.21E+01	1.95E-08	1.13E-02	5.32E-06	1.15E-02	8.61E-04	1.56E-04	4.51E-04	1.61E-04	1.67E-04	1.92E-03	4.05E-05	0.00E+00	2.84E-04	2.16E-03
54	E96	80	Combination Long Haul Truck	33	0.00E+00	1.04E-05	5.85E-07	1.12E+01	6.59E-08	1.34E-02	8.55E-06	1.23E-02	8.90E-04	1.42E-04	9.50E-04	1.89E-04	1.96E-04	1.80E-03	3.76E-05	0.00E+00	7.53E-04	2.31E-03
54	E97	80	Passenger Car	929	0.00E+00	9.42E-06	1.02E-06	3.96E+01	6.69E-05	1.91E-01	2.12E-05	9.68E-04	5.33E-03	8.77E-04	2.07E-03	1.34E-03	1.37E-03	1.38E-04	1.99E-04	4.13E-08	7.01E-04	1.51E-04
54	E97	80	Passenger Truck	1556	0.00E+00	1.96E-05	2.09E-06	8.98E+01	1.28E-04	3.47E-01	4.15E-05	2.60E-03	9.52E-03	1.56E-03	3.99E-03	2.59E-03	2.65E-03	6.39E-04	4.49E-04	7.95E-08	1.33E-03	4.33E-04
54	E97	80	Single Unit Short Haul Truck	61	0.00E+00	8.41E-06	3.28E-07	1.00E+01	5.70E-06	1.83E-02	9.25E-06	3.49E-03	6.89E-04	1.41E-04	1.16E-03	2.14E-04	2.19E-04	1.02E-03	4.08E-05	1.62E-08	9.40E-04	6.53E-04
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	3.65E-07	1.41E-08	4.25E-01	2.43E-07	7.60E-04	4.02E-07	1.49E-04	3.16E-05	6.25E-06	5.05E-05	9.21E-06	9.39E-06	4.29E-05	1.73E-06	6.75E-10	4.11E-05	2.79E-05
54	E97	80	Combination Short Haul Truck	48	0.00E+00	9.81E-06	7.26E-07	1.60E+01	2.57E-08	1.50E-02	7.01E-06	1.51E-02	1.14E-03	2.06E-04	5.95E-04	2.12E-04	2.20E-04	2.54E-03	5.34E-05	0.00E+00	3.75E-04	2.85E-03
54	E97	80	Combination Long Haul Truck	43	0.00E+00	1.37E-05	7.71E-07	1.48E+01	8.69E-08	1.77E-02	1.13E-05	1.62E-02	1.17E-03	1.88E-04	1.25E-03	2.49E-04	2.59E-04	2.38E-03	4.96E-05	0.00E+00	9.93E-04	3.05E-03
54	E98	80	Passenger Car	507	0.00E+00	5.14E-06	5.59E-07	2.16E+01	3.65E-05	1.04E-01	1.16E-05	5.28E-04	2.91E-03	4.79E-04	1.13E-03	7.29E-04	7.48E-04	7.54E-05	1.09E-04	2.25E-08	3.83E-04	8.24E-05
54	E98	80	Passenger Truck	849	0.00E+00	1.07E-05	1.14E-06	4.90E+01	6.96E-05	1.89E-01	2.27E-05	1.42E-03	5.19E-03	8.51E-04	2.17E-03	1.41E-03	1.45E-03	3.49E-04	2.45E-04	4.34E-08	7.28E-04	2.36E-04
54	E98	80	Single Unit Short Haul Truck	35	0.00E+00	4.86E-06	1.90E-07	5.81E+00	3.30E-06	1.06E-02	5.34E-06	2.02E-03	3.98E-04	8.14E-05	6.70E-04	1.24E-04	1.26E-04	5.91E-04	2.36E-05	9.36E-09	5.43E-04	3.77E-04
54	E98	80	Single Unit Long Haul Truck	2	0.00E+00	2.11E-07	8.15E-09	2.45E-01	1.40E-07	4.39E-04	2.32E-07	8.63E-05	1.83E-05	3.61E-06	2.92E-05	5.32E-06	5.43E-06	2.48E-05	9.99E-07	3.90E-10	2.38E-05	1.61E-05
54	E98	80	Combination Short Haul Truck	38	0.00E+00	7.87E-06	5.83E-07	1.28E+01	2.06E-08	1.20E-02	5.63E-06	1.21E-02	9.11E-04	1.65E-04	4.77E-04	1.70E-04	1.76E-04	2.03E-03	4.28E-05	0.00E+00	3.01E-04	2.29E-03
54	E98	80	Combination Long Haul Truck	35	0.00E+00	1.10E-05	6.19E-07	1.19E+01	6.97E-08	1.42E-02	9.04E-06	1.30E-02	9.42E-04	1.51E-04	1.00E-03	1.99E-04	2.08E-04	1.91E-03	3.98E-05	0.00E+00	7.97E-04	2.44E-03
9	F01	60	Passenger Car	414	0.00E+00	5.30E-06	5.76E-07	1.89E+01	3.76E-05	1.06E-01	1.19E-05	4.26E-04	4.18E-03	6.26E-04	1.17E-03	7.51E-04	7.71E-04	8.20E-05	9.46E-05	1.99E-08	3.94E-04	6.65E-05
9	F01	60	Passenger Truck	693	0.00E+00	1.12E-05	1.19E-06	4.21E+01	7.09E-05	1.81E-01	2.33E-05	1.33E-03	7.64E-03	1.14E-03	2.22E-03	1.45E-03	1.48E-03	3.36E-04	2.09E-04	3.87E-08	7.41E-04	2.25E-04
9	F01	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.60E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.06E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	1.99E-05
9	F01	60	Combination Short Haul Truck	24	0.00E+00	6.87E-06	5.05E-07	8.29E+00	1.88E-08	1.03E-02	4.93E-06	1.05E-02	1.20E-03	1.87E-04	4.23E-04	1.48E-04	1.53E-04	1.32E-03	2.77E-05	0.00E+00	2.70E-04	1.97E-03
9	F01	60	Combination Long Haul Truck	21	0.00E+00	9.44E-06	5.16E-07	7.83E+00	6.37E-08	1.23E-02	7.89E-06	1.12E-02	1.26E-03	1.82E-04	8.95E-04	1.68E-04	1.75E-04	1.26E-03	2.62E-05	0.00E+00	7.20E-04	2.10E-03
9	F02	60	Passenger Car	292	0.00E+00	3.73E-06	4.06E-07	1.33E+01	2.65E-05	7.47E-02	8.42E-06	3.00E-04	2.94E-03	4.41E-04	8.21E-04	5.29E-04	5.43E-04	5.78E-05	6.67E-05	1.40E-08	2.78E-04	4.68E-05
9	F02	60	Passenger Truck	488	0.00E+00	7.92E-06	8.40E-07	2.96E+01	5.00E-05	1.28E-01	1.64E-05	9.34E-04	5.38E-03	8.01E-04	1.57E-03	1.02E-03	1.04E-03	2.37E-04	1.47E-04	2.73E-08	5.22E-04	1.58E-04
9	F02	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.84E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.26E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.97E-06
9	F02	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.42E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.33E-04
9	F02	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.71E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.87E-04
11	F03	80	Passenger Car	16	0.00E+00	1.67E-07	1.82E-08	6.81E-01	1.19E-06	3.45E-03	3.77E-07	1.67E-05	8.76E-05	1.47E-05	3.68E-05	2.37E-05	2.43E-05	2.39E-06	3.43E-06	7.33E-10	1.24E-05	2.60E-06
11	F03	80	Passenger Truck	27	0.00E+00	3.44E-07	3.67E-08	1.54E+00	2.24E-06	6.09E-03	7.29E-07	4.50E-05	1.56E-04	2.60E-05	7.00E-05	4.54E-05	4.65E-05	1.11E-05	7.67E-06	1.40E-09	2.34E-05	7.48E-06
11	F03	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.66E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.13E-05
11	F04	80	Passenger Car	3	0.00E+00	3.11E-08	3.38E-09	1.27E-01	2.21E-07	6.41E-04	7.01E-08	3.10E-06	1.63E-05	2.73E-06	6.84E-06	4.41E-06	4.53E-06	4.45E-07	6.38E-07	1.36E-10	2.31E-06	4.84E-07
11	F04	80	Passenger Truck	5	0.00E+00	6.40E-08	6.83E-09	2.86E-01	4.16E-07	1.13E-03	1.36E-07	8.36E-06	2.90E-05	4.83E-06	1.30E-05	8.45E-06	8.66E-06	2.06E-06	1.43E-06	2.60E-10	4.36E-06	1.39E-06
9	F05	60	Passenger Car	336	0.00E+00	4.30E-06	4.67E-07	1.53E+01	3.05E-05	8.60E-02	9.69E-06	3.46E-04	3.39E-03	5.08E-04	9.45E-04	6.09E-04	6.25E-04	6.66E-05	7.68E-05	1.61E-08	3.20E-04	5.39E-05
9	F05	60	Passenger Truck	562	0.00E+00	9.12E-06	9.67E-07	3.41E+01	5.75E-05	1.47E-01	1.89E-05	1.08E-03	6.20E-03	9.22E-04	1.80E-03	1.17E-03	1.20E-03	2.72E-04	1.69E-04	3.14E-08	6.01E-04	1.82E-04
9	F05	60	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.24E-07	2.23E+00	1.98E-06	3.92E-03	3.24E-06	1.15E-03	3.08E-04	5.18E-05	3.99E-04	7.69E-05	7.85E-05	2.26E-04	9.09E-06	3.75E-09	3.21E-04	2.15E-04
9	F05	60	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.37E-09	9.51E-02	8.60E-08	1.67E-04	1.41E-07	4.97E-05	1.39E-05	2.30E-06	1.75E-05	3.34E-06	3.41E-06	9.61E-06	3.88E-07	1.59E-10	1.41E-05	9.30E-06
9	F05	60	Combination Short Haul Truck	13	0.00E+00	3.82E-06	2.80E-07	4.61E+00	1.05E-08	5.70E-03	2.74E-06	5.82E-03	6.66E-04	1.04E-04	2.35E-04	8.20E-05	8.51E-05	7.32E-04	1.54E-05	0.00E+00	1.50E-04	1.10E-03
9	F05	60	Combination Long Haul Truck	12	0.00E+00	5.24E-06	2.86E-07	4.35E+00	3.54E-08	6.85E-03	4.39E-06	6.20E-03	6.98E-04	1.01E-04	4.97E-04	9.36E-05	9.75E-05	6.98E-04	1.46E-05	0.00E+00	4.00E-04	1.17E-03
9	F06	60	Passenger Car	314	0.00E+00	4.02E-06	4.36E-07	1.43E+01	2.85E-05	8.03E-02	9.05E-06	3.23E-04	3.17E-03	4.74E-04	8.83E-04	5.69E-04	5.84E-04	6.22E-05	7.17E-05	1.51E-08	2.99E-04	5.04E-05
9	F06	60	Passenger Truck	525	0.00E+00	8.52E-06	9.03E-07	3.19E+01	5.38E-05	1.37E-01	1.77E-05	1.00E-03	5.79E-03	8.62E-04	1.69E-03	1.10E-03	1.12E-03	2.55E-04	1.58E-04	2.94E-08	5.62E-04	1.70E-04
9	F06	60	Single Unit Short Haul Truck	31	0.00E+00	6.84E-06	2.83E-07	5.10E+00	4.53E-06	8.97E-03	7.40E-06	2.62E-03	7.05E-04	1.18E-04	9.13E-04	1.76E-04	1.79E-04	5.17E-04	2.08E-05	8.56E-09	7.34E-04	4.91E-04
9	F06	60	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.23E-08	2.17E-01	1.97E-07	3.81E-04	3.23E-07	1.14E-04	3.17E-05	5.26E-06	3.99E-05	7.64E-06	7.79E-06	2.20E-05	8.87E-07	3.64E-10	3.21E-05	2.13E-05
9	F06	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.81E-03
9	F06	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.59E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.99E-03
9	F07	60	Passenger Car	461	0.00E+00	5.90E-06	6.41E-07	2.10E+01	4.19E-05	1.18E-01	1.33E-05	4.75E-04	4.66E-03	6.97E-04	1.30E-03	8.37E-04	8.59E-04	9.14E-05	1.05E-04	2.21E-08	4.39E-04	7.40E-05
9	F07	60	Passenger Truck	772	0.00E+00	1.25E-05	1.33E-06	4.69E+01	7.90E-05	2.02E-01	2.60E-05	1.48E-03	8.51E-03	1.27E-03	2.48E-03	1.61E-03	1.65E-03	3.74E-04	2.33E-04	4.31E-08	8.26E-04	2.50E-04
9	F07	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.10E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	F07	60	Combination Short Haul Truck	15	0.00E+00	4.43E-06	3.25E-07	5.34E+00	1.21E-08	6.61E-03	3.18E-06	6.75E-03	7.73E-04	1.21E-04	2.73E-04	9.51E-05	9.88E-05	8.49E-04	1.79E-05	0.00E+00	1.74E-04	1.27E-03
9	F07	60	Combination Long Haul Truck	14	0.00E+00	6.08E-06	3.32E-07	5.05E+00	4.11E-08	7.95E-03	5.09E-06	7.19E-03	8.10E-04	1.17E-04	5.77E-04	1.09E-04	1.13E-04	8.10E-04	1.69E-05	0.00E+00	4.64E-04	1.35E-03
9	F08	60	Passenger Car	410	0.00E+00	5.25E-06	5.70E-07	1.87E+01	3.72E-05	1.05E-01	1.18E-05	4.22E-04	4.14E-03	6.20E-04	1.15E-03	7.44E-04	7.63E-04	8.12E-05	9.37E-05	1.97E-08	3.90E-04	6.58E-05
9	F08	60	Passenger Truck	686	0.00E+00	1.11E-05	1.18E-06	4.16E+01	7.02E-05	1.80E-01	2.31E-05	1.31E-03	7.56E-03	1.13E-03	2.20E-03	1.43E-03	1.47E-03	3.32E-04	2.07E-04	3.84E-08	7.34E-04	2.22E-04
9	F08	60	Single Unit Short Haul Truck	31	0.00E+00	6.84E-06	2.83E-07	5.10E+

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F15	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	F15	70	Combination Short Haul Truck	8	0.00E+00	2.02E-06	1.50E-07	2.73E+00	5.13E-09	2.92E-03	1.44E-06	3.02E-03	2.85E-04	4.75E-05	1.21E-04	4.38E-05	4.54E-05	4.34E-04	9.12E-06	0.00E+00	7.57E-05	5.68E-04
10	F15	70	Combination Long Haul Truck	7	0.00E+00	2.77E-06	1.57E-07	2.56E+00	1.74E-08	3.48E-03	2.28E-06	3.23E-03	2.96E-04	4.46E-05	2.52E-04	5.06E-05	5.27E-05	4.11E-04	8.58E-06	0.00E+00	1.99E-04	6.08E-04
10	F16	70	Passenger Car	372	0.00E+00	4.15E-06	4.51E-07	1.62E+01	2.95E-05	8.35E-02	9.36E-06	3.76E-04	2.87E-03	4.47E-04	9.13E-04	5.89E-04	6.04E-04	6.32E-05	8.15E-05	1.69E-08	3.09E-04	5.87E-05
10	F16	70	Passenger Truck	623	0.00E+00	8.74E-06	9.29E-07	3.65E+01	5.60E-05	1.48E-01	1.83E-05	1.09E-03	5.19E-03	8.03E-04	1.75E-03	1.14E-03	1.17E-03	2.76E-04	1.82E-04	3.26E-08	5.86E-04	1.84E-04
10	F16	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	F16	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.92E-04
10	F16	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.80E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.27E-04
10	F17	70	Passenger Car	284	0.00E+00	3.17E-06	3.44E-07	1.24E+01	2.25E-05	6.37E-02	7.14E-06	2.87E-04	2.19E-03	3.41E-04	6.97E-04	4.49E-04	4.61E-04	4.82E-05	6.22E-05	1.29E-08	2.36E-04	4.48E-05
10	F17	70	Passenger Truck	475	0.00E+00	6.67E-06	7.09E-07	2.78E+01	4.27E-05	1.13E-01	1.40E-05	8.34E-04	3.96E-03	6.12E-04	1.34E-03	8.68E-04	8.90E-04	2.11E-04	1.39E-04	2.48E-08	4.47E-04	1.40E-04
10	F17	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	F17	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
10	F17	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
10	F18	70	Passenger Car	226	0.00E+00	2.52E-06	2.74E-07	9.85E+00	1.79E-05	5.07E-02	5.68E-06	2.28E-04	1.74E-03	2.71E-04	5.54E-04	3.57E-04	3.67E-04	3.84E-05	4.95E-05	1.03E-08	1.88E-04	3.56E-05
10	F18	70	Passenger Truck	378	0.00E+00	5.31E-06	5.64E-07	2.22E+01	3.40E-05	8.95E-02	1.11E-05	6.64E-04	3.15E-03	4.87E-04	1.06E-03	6.91E-04	7.08E-04	1.68E-04	1.10E-04	1.98E-08	3.55E-04	1.11E-04
10	F18	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	F18	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.06E-04
10	F18	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.44E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.48E-04
10	F19	70	Passenger Car	434	0.00E+00	4.85E-06	5.27E-07	1.89E+01	3.44E-05	9.75E-02	1.09E-05	4.39E-04	3.34E-03	5.21E-04	1.07E-03	6.87E-04	7.05E-04	7.38E-05	9.52E-05	1.98E-08	3.60E-04	6.85E-05
10	F19	70	Passenger Truck	727	0.00E+00	1.02E-05	1.08E-06	4.26E+01	6.53E-05	1.72E-01	2.14E-05	1.28E-03	6.05E-03	9.37E-04	2.04E-03	1.33E-03	1.36E-03	3.22E-04	2.12E-04	3.80E-08	6.83E-04	2.14E-04
10	F20	70	Passenger Car	245	0.00E+00	2.73E-06	2.97E-07	1.07E+01	1.94E-05	5.49E-02	6.15E-06	2.47E-04	1.88E-03	2.93E-04	6.00E-04	3.87E-04	3.97E-04	4.15E-05	5.36E-05	1.11E-08	2.03E-04	3.86E-05
10	F20	70	Passenger Truck	409	0.00E+00	5.75E-06	6.11E-07	2.40E+01	3.68E-05	9.70E-02	1.20E-05	7.19E-04	3.41E-03	5.28E-04	1.15E-03	7.48E-04	7.67E-04	1.82E-04	1.19E-04	2.14E-08	3.85E-04	1.21E-04
10	F21	70	Passenger Car	367	0.00E+00	4.09E-06	4.45E-07	1.60E+01	2.91E-05	8.24E-02	9.23E-06	3.71E-04	2.83E-03	4.40E-04	9.00E-04	5.81E-04	5.96E-04	6.23E-05	8.04E-05	1.67E-08	3.05E-04	5.79E-05
10	F21	70	Passenger Truck	614	0.00E+00	8.62E-06	9.16E-07	3.60E+01	5.52E-05	1.45E-01	1.81E-05	1.08E-03	5.12E-03	7.91E-04	1.73E-03	1.12E-03	1.15E-03	2.72E-04	1.79E-04	3.21E-08	5.77E-04	1.81E-04
10	F21	70	Single Unit Short Haul Truck	68	0.00E+00	1.20E-05	4.86E-07	1.11E+01	8.02E-06	2.02E-02	1.30E-05	4.76E-03	1.08E-03	1.98E-04	1.61E-03	3.07E-04	3.13E-04	1.13E-03	4.53E-05	1.83E-08	1.30E-03	8.90E-04
10	F21	70	Single Unit Long Haul Truck	3	0.00E+00	5.21E-07	2.10E-08	4.72E-01	3.45E-07	8.48E-04	5.66E-07	2.05E-04	4.95E-05	8.87E-06	7.04E-05	1.33E-05	1.35E-05	4.78E-05	1.92E-06	7.71E-10	5.69E-05	3.83E-05
10	F21	70	Combination Short Haul Truck	64	0.00E+00	1.66E-05	1.23E-06	2.24E+01	4.21E-08	2.39E-02	1.18E-05	2.47E-02	2.33E-03	3.89E-04	9.93E-04	3.59E-04	3.72E-04	3.55E-03	7.48E-05	0.00E+00	6.21E-04	4.66E-03
10	F21	70	Combination Long Haul Truck	59	0.00E+00	2.27E-05	1.29E-06	2.10E+01	1.42E-07	2.85E-02	1.87E-05	2.65E-02	2.43E-03	3.66E-04	2.06E-03	4.15E-04	4.32E-04	3.37E-03	7.04E-05	0.00E+00	1.63E-03	4.99E-03
10	F22	70	Passenger Car	278	0.00E+00	3.10E-06	3.37E-07	1.21E+01	2.20E-05	6.24E-02	6.99E-06	2.81E-04	2.14E-03	3.33E-04	6.82E-04	4.40E-04	4.51E-04	4.72E-05	6.09E-05	1.26E-08	2.31E-04	4.38E-05
10	F22	70	Passenger Truck	465	0.00E+00	6.53E-06	6.94E-07	2.73E+01	4.18E-05	1.10E-01	1.37E-05	8.17E-04	3.87E-03	5.99E-04	1.31E-03	8.50E-04	8.71E-04	2.06E-04	1.36E-04	2.43E-08	4.37E-04	1.37E-04
10	F22	70	Single Unit Short Haul Truck	71	0.00E+00	1.25E-05	5.07E-07	1.16E+01	8.36E-06	2.11E-02	1.36E-05	4.96E-03	1.13E-03	2.07E-04	1.68E-03	3.20E-04	3.27E-04	1.18E-03	4.72E-05	1.91E-08	1.35E-03	9.28E-04
10	F22	70	Single Unit Long Haul Truck	3	0.00E+00	5.43E-07	2.19E-08	4.92E-01	3.60E-07	8.84E-04	5.90E-07	2.13E-04	5.16E-05	9.24E-06	7.34E-05	1.38E-05	1.41E-05	4.98E-05	2.01E-06	8.04E-10	5.93E-05	3.99E-05
10	F22	70	Combination Short Haul Truck	64	0.00E+00	1.64E-05	1.22E-06	2.22E+01	4.17E-08	2.37E-02	1.17E-05	2.45E-02	2.31E-03	3.86E-04	9.85E-04	3.56E-04	3.69E-04	3.53E-03	7.42E-05	0.00E+00	6.16E-04	4.62E-03
10	F22	70	Combination Long Haul Truck	58	0.00E+00	2.25E-05	1.28E-06	2.08E+01	1.41E-07	2.83E-02	1.85E-05	2.63E-02	2.41E-03	3.63E-04	2.05E-03	4.12E-04	4.29E-04	3.34E-03	6.98E-05	0.00E+00	1.62E-03	4.94E-03
10	F23	70	Passenger Car	169	0.00E+00	1.89E-06	2.05E-07	7.37E+00	1.34E-05	3.79E-02	4.25E-06	1.71E-04	1.30E-03	2.03E-04	4.15E-04	2.67E-04	2.75E-04	2.87E-05	3.70E-05	7.69E-09	1.40E-04	2.67E-05
10	F23	70	Passenger Truck	283	0.00E+00	3.97E-06	4.22E-07	1.66E+01	2.54E-05	6.70E-02	8.32E-06	4.97E-04	2.36E-03	3.65E-04	7.96E-04	5.17E-04	5.30E-04	1.25E-04	8.26E-05	1.48E-08	2.66E-04	8.34E-05
10	F23	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	F23	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.19E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.71E-06
10	F23	70	Combination Short Haul Truck	18	0.00E+00	4.58E-06	3.41E-07	6.18E+00	1.16E-08	6.61E-03	3.26E-06	6.83E-03	6.45E-04	1.08E-04	2.75E-04	9.92E-05	1.03E-04	9.83E-04	2.07E-05	0.00E+00	1.72E-04	1.29E-03
10	F23	70	Combination Long Haul Truck	16	0.00E+00	6.28E-06	3.57E-07	5.81E+00	3.94E-08	7.89E-03	5.16E-06	7.32E-03	6.72E-04	1.01E-04	5.71E-04	1.15E-04	1.19E-04	9.32E-04	1.95E-05	0.00E+00	4.51E-04	1.38E-03
10	F24	70	Passenger Car	144	0.00E+00	1.61E-06	1.75E-07	6.28E+00	1.14E-05	3.23E-02	3.62E-06	1.46E-04	1.11E-03	1.73E-04	3.53E-04	2.28E-04	2.34E-04	2.45E-05	3.16E-05	6.55E-09	1.20E-04	2.27E-05
10	F24	70	Passenger Truck	241	0.00E+00	3.38E-06	3.60E-07	1.41E+01	2.17E-05	5.71E-02	7.09E-06	4.23E-04	2.01E-03	3.11E-04	6.78E-04	4.41E-04	4.52E-04	1.07E-04	7.03E-05	1.26E-08	2.27E-04	7.11E-05
10	F24	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
10	F24	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.09E-06
10	F24	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.03E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.47E-04
10	F24	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.38E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
9	F25	60	Passenger Car	396	0.00E+00	5.07E-06	5.51E-07	1.81E+01	3.60E-05	1.01E-01	1.14E-05	4.08E-04	4.00E-03	5.99E-04	1.12E-03	7.19E-04	7.38E-04	7.86E-05	9.06E-05	1.90E-08	3.77E-04	6.37E-05
9	F25	60	Passenger Truck	664	0.00E+00	1.08E-05	1.14E-06	4.03E+01	6.79E-05	1.74E-01	2.23E-05	1.27E-03	7.31E-03	1.09E-03	2.13E-03	1.39E-03	1.42E-03	3.22E-04	2.00E-04	3.71E-08	7.10E-04	2.15E-04
9	F25	60	Single Unit Short Haul Truck	54	0.00E+00	1.20E-05	4.95E-07	8.92E+00	7.93E-06	1.57E-02	1.30E-05	4.59E-03	1.23E-03	2.07E-04	1.60E-03	3.08E-04	3.14E-04	9.04E-04	3.64E-05	1.50E-08	1.28E-03	8.59E-04
9	F25	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.15E-08	3.80E-01	3.44E-07	6.66E-04	5.65E-07	1.99E-04	5.54E-05	9.20E-06	6.99E-05	1.34E-05	1.36E-05	3.84E-05	1.55E-06	6.37E-10	5.62E-05	3.72E-05
9	F25	60	Combination Short Haul Truck	50	0.00E+00	1.45E-05	1.07E-06	1.75E+01	3.97E-08	2.17E-02	1.04E-05	2.21E-02	2.53E-03	3.96E-04	8.94E-04	3.12E-04	3.24E-04	2.78E-03	5.85E-05	0.00E+00	5.70E-04	4.17E-03
9	F25	60	Combination Long Haul Truck	45	0.00E+00	1.99E-05	1.09E-06	1.65E+01	1.34E-07	2.60E-02	1.67E-05	2.36E-02	2.65E-03	3.84E-04	1.89E-03	3.56E-04	3.70E-04	2.65E-03	5.54E-05	0.00E+00	1.52E-03	4.44E-03
9	F26	60	Passenger Car	372	0.00E+00	4.76E-06	5.17E-07	1.70E+01	3.38E-05	9.53E-02	1.07E-05	3.83E-04	3.76E-03	5.63E-04	1.05E-03	6.75E-04	6.93E-04	7.37E-05	8.50E-05	1.79E-08	3.54E-04	5.97E-05
9	F26	60	Passenger Truck	623	0.00E+00	1.01E-05	1.07E-06	3.78E+01	6.38E-05	1.63E-01	2.10E-05	1.19E-03	6.86E-03	1.02E-03	2.00E-03	1.30E-03	1.33E-03	3.02E-04	1.88E-04	3.48E-08	6.66E-04	2.02E-04
9	F26	60	Single Unit Short Haul Truck	61	0.00E+00	1.37E-05	5.65E-07	1.02E+01	9.07E-06	1.79E-02	1.48E-05	5.25E-03	1.41E-03	2.37E-04	1.83E-03	3.52E-04	3.59E-04	1.03E-03	4.16E-05	1.71E-08	1.47E-03	9.82E-04
9	F26	60	Single Unit Long Haul Truck	3	0.00E+00	5.97E-07	2.46E-08	4.35E-01	3.93E-07	7.61E-04	6.46E-07	2.27E-04	6.33E-05	1.05E-05	7.98E-05	1.53E-05	1.56E-05	4.39E-05	1.77E-06	7.28E-10	6.42E-05	4.25E-05
9	F26	60	Combination Short Haul Truck	55	0.00E+00	1.60E-05	1.18E-06	1.93E+01	4.39E-08	2.39E-02	1.15E-05	2.44E-02	2.80E-03	4.37E-04	9.88E-04	3.44E-04	3.58E-04	3.07E-03	6.47E-05	0.00E+00	6.30E-04	4.60E-03
9	F26	60	Combination Long Haul Truck	50	0.00E+00	2.20E-05	1.20E-06	1.83E+01	1.49E-07	2.88E-02	1.84E-05	2.60E-02	2.93E-03	4.24E-04	2.09E-03	3.93E-04	4.09E-04	2.93E-03	6.12E-05	0.00E+00	1.68E-03	4.90E-03
9	F27	60	Passenger Car	1025	0.00E+00	1.31E-05	1.43E-06	4.67E+01	9.31E-05	2.63E-01	2.96E-05	1.06E-03	1.04E-02	1.55E-03	2.89E-03	1.86E-03	1.91E-03	2.03E-04	2.34E-04	4.92E-08	9.76E-04	1.65E-04
9	F27	60	Passenger Truck	1717	0.00E+00	2.79E-05	2.95E-06	1.04E+02	1.76E-04	4.49E-01	5.78E-05	3.28E-03	1.89E-02	2.82E-03	5.51E-03	3.58E-03	3.67E-03	8.32E-04	5.17E-04	9.60E-08	1.84E-03	5.56E-04
9	F27	60	Single Unit Short Haul Truck	134	0.00E+00	2.99E-05	1.24E-06	2.23E+01	1.98E-05	3.92E-02	3.24E-05	1.15E-02	3.08E-03	5.18E-04	3.99E-03	7.69E-04	7.85E-04	2.26E-03	9.09E-05	3.75E-08	3.21E-03	2.15E-03
9	F27	60	Single Unit Long Haul Truck	6	0.00E+00	1.31E-06	5.37E-08	9.51E-01	8.60E-07	1.67E-03	1.41E-06	4.97E-04	1.39E-04	2.30E-05	1.75E-04	3.34E-05	3.41E-05	9.61E-05	3.88E-06	1.59E-09	1.41E-04	9.30E-05
9	F27	60	Combination Short Haul Truck	93	0.00E+00	2.70E-05	1.98E-06	3.26E+01	7.40E-08	4.04E-02	1.94E-05	4.12E-02	4.72E-03	7.37E-04	1.67E-03	5.81E-04	6.03E-04	5.18E-03	1.09E-04	0.00E+00	1.06E-03	7.76E-03
9	F27	60	Combination Long Haul Truck	84	0.00E+00	3.71E-05	2.03E-06	3.08E+01	2.51E-07	4.85E-02	3.10E-05	4.39E-02	4.94E-03	7.15E-04	3.52E-03	6.62E-04	6.90E-04	4.94E-03	1.03E-04	0.00E+00	2.83E-03	8.27E-03
9	F28	60	Passenger Car	709	0.00E+00	9.07E-06	9.86E-07	3.23E+01	6.44E-05	1.82E-01	2.05E-05	7.30E-04	7.16E-03	1.07E-03	2.00E-03	1.29E-03	1.32E-03	1.41E-04	1.62E-04	3.40E-08	6.75E-04	1.14E-04
9	F28	60	Passenger Truck	1187	0.00E+00	1.93E-05	2.04E-06	7.20E+01	1.22E-04	3.11E-01	4.00E-05	2.27E-03	1.31E-02	1.95E-03	3.81E-03	2.48E-03	2.54E-03	5.75E-04	3.58E-04	6.64E-08	1.27E-03	3.85E-04
9	F28	60	Single Unit Short Haul Truck	126	0.00E+00	2.82E-05	1.17E-06	2.10E+01	1.87E-05	3.70E-02	3.05E-05	1.08E-02	2.91E-03	4.89E-04	3.77E-03	7.25E-04	7.40E-04	2.13E-03	8.57E-05	3.53E-08	3.03E-03	2.03E-03
9	F28	60	Single Unit Long Haul Truck	6	0.00E+00	1.23E-06	5.06E-08	8.97E-01	8.11E-07	1.57E-03	1.33E-06	4.69E-04	1.31E-04	2.17E-05	1.65E-04	3.15E-05	3.22E-05	9.06E-05	3.66E-06	1.50E-09	1.33E-04	8.77E-05
9	F28	60	Combination Short Haul Truck	93	0.00E+00	2.70E-05	1.98E-06	3.26E+01	7.40E-08	4.04E-02	1.94E-05	4.12E-02	4.72E-03	7.37E-04	1.67E-03	5.81E-04	6.03E-04	5.18E-03	1.09E-04	0.00E+00	1.06E-03	7.76E-03
9	F28	60	Combination Long Haul Truck	84	0.00E+00	3.71E-05	2.03E-06	3.08E+01	2.51E-07	4.85E-02	3.10E-05	4.39E-02	4.94E-03	7.15E-04	3.52E-03	6.62E-04	6.90E-04	4.94E-03	1.03E-04	0.00E+00	2.83E-03	8.27E-03
9	F29	60	Passenger Car	318	0.00E+00	4.07E-06	4.43E-07	1.45E+01	2.89E-05	8.15E-02	9.18E-06	3.28E-04	3.21E-03	4.81E-04	8.96E-04	5.77E-04	5.93E-04	6.31E-05	7.27E-05	1.53E-08	3.03E-04	5.11E-05
9	F29	60	Passenger Truck	533	0.00E+00	8.65E-06	9.16E-07	3.23E+01	5.45E-05	1.39E-01	1.79E-05	1.02E-03	5.87E-03	8.74E-04	1.71E-03	1.11E-03	1.14E-03	2.58E-04	1.61E-04	2.98E-08	5.70E-04	1.73E-04
9	F29	60	Single Unit Short Haul Truck	22	0.00E+00	4.92E-06	2.03E-07	3.66E+00	3.26E-06	6.45E-03	5.32E-06	1.89E-03	5.07E-04	8.52E-05	6.56E-04	1.26E-04	1.29E-04	3.71E-04	1.49E-05	6.15E-09	5.27E-04	3.53E-04
9	F29	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	8.82E-09	1.56E-01	1.41E-07	2.74E-04	2.32E-07	8.16E-05	2.28E-05	3.78E-06	2.87E-05	5.49E-06	5.60E-06	1.58E-05	6.37E-07	2.62E-10	2.31E-05	1.53E-05
9	F29	60	Combination Short Haul Truck	17	0.00E+00	5.04E-06	3.70E-07	6.08E+00	1.38E-08	7.53E-03	3.62E-06	7.68E-03	8.79E-04	1.37E-04	3.10E-04	1.08E-04	1.12E-04	9.66E-04	2.03E-05	0.00E+00	1.98E-04	1.45E-03
9	F29	60	Combination Long Haul Truck	16	0.00E+00	6.92E-06	3.78E-07	5.74E+00	4.67E-08	9.04E-03	5.79E-06	8.18E-03	9.22E-04	1.33E-04	6.57E-04	1.23E-04	1.29E-04	9.22E-04	1.92E-05	0.00E+00	5.28E-04	1.54E-03
9	F30	60	Passenger Car	436	0.00E+00	5.58E-06	6.06E-07	1.99E+01	3.96E-05	1.12E-01	1.26E-05	4.48E-04	4.40E-03	6.59E-04	1.23E-03	7.91E-04	8.11E-04	8.63E-05	9.96E-05	2.09E-08	4.15E-04	7.00E-05
9	F30	60	Passenger Truck	729	0.00E+00	1.18E-05	1.25E-06	4.43E+01	7.47E-05	1.91E-01	2.46E-05	1.39E-03	8.04E-03	1.20E-03	2.34E-03	1.52E-03	1.56E-03	3.53E-04	2.20E-04	4.08E-08	7.80E-04	2.36E-04
9	F30	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.10E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.67E-05
9	F30	60	Single Unit Long Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.07E-04
9	F30	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.74E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.27E-04
11	F35	80	Passenger Car	193	0.00E+00	2.01E-06	2.18E-07	8.18E+00	1.43E-05	4.14E-02	4.53E-06	2.00E-04	1.05E-03	1.76E-04	4.42E-04	2.85E-04	2.92E-04	2.87E-05	4.12E-05	8.81E-09	1.49E-04	3.13E-05
11	F35	80	Passenger Truck	324	0.00E+00	4.

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F39	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.27E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.12E-05
11	F39	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.66E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.01E-04
11	F39	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.35E-04
11	F40	80	Passenger Car	97	0.00E+00	1.01E-06	1.09E-07	4.10E+00	7.14E-06	2.08E-02	2.27E-06	1.00E-04	5.28E-04	8.84E-05	2.21E-04	1.43E-04	1.47E-04	1.44E-05	2.07E-05	4.41E-09	7.49E-05	1.57E-05
11	F40	80	Passenger Truck	162	0.00E+00	2.07E-06	2.21E-07	9.26E+00	1.35E-05	3.67E-02	4.39E-06	2.71E-04	9.40E-04	1.56E-04	4.21E-04	2.73E-04	2.80E-04	6.66E-05	4.62E-05	8.40E-09	1.41E-04	4.51E-05
11	F40	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	F40	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.13E-04
11	F40	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.35E-04
10	F41	70	Passenger Car	222	0.00E+00	2.48E-06	2.69E-07	9.67E+00	1.76E-05	4.98E-02	5.58E-06	2.24E-04	1.71E-03	2.66E-04	5.44E-04	3.51E-04	3.60E-04	3.77E-05	4.86E-05	1.01E-08	1.84E-04	3.50E-05
10	F41	70	Passenger Truck	371	0.00E+00	5.21E-06	5.54E-07	2.18E+01	3.34E-05	8.79E-02	1.09E-05	6.52E-04	3.09E-03	4.78E-04	1.04E-03	6.79E-04	6.95E-04	1.65E-04	1.08E-04	1.94E-08	3.49E-04	1.09E-04
10	F41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	F41	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.02E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.58E-05
10	F41	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.30E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.11E-05
10	F42	70	Passenger Car	290	0.00E+00	3.24E-06	3.52E-07	1.27E+01	2.30E-05	6.51E-02	7.30E-06	2.93E-04	2.24E-03	3.48E-04	7.12E-04	4.59E-04	4.71E-04	4.93E-05	6.36E-05	1.32E-08	2.41E-04	4.58E-05
10	F42	70	Passenger Truck	486	0.00E+00	6.82E-06	7.25E-07	2.85E+01	4.37E-05	1.15E-01	1.43E-05	8.53E-04	4.05E-03	6.26E-04	1.37E-03	8.88E-04	9.10E-04	2.15E-04	1.42E-04	2.54E-08	4.57E-04	1.43E-04
10	F42	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	F45	70	Passenger Car	190	0.00E+00	2.12E-06	2.30E-07	8.27E+00	1.50E-05	4.26E-02	4.77E-06	1.92E-04	1.46E-03	2.28E-04	4.65E-04	3.00E-04	3.08E-04	3.22E-05	4.16E-05	8.63E-09	1.57E-04	2.99E-05
10	F45	70	Passenger Truck	317	0.00E+00	4.45E-06	4.73E-07	1.86E+01	2.85E-05	7.52E-02	9.34E-06	5.57E-04	2.64E-03	4.09E-04	8.93E-04	5.80E-04	5.95E-04	1.41E-04	9.26E-05	1.66E-08	2.98E-04	9.36E-05
10	F45	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	F45	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	F45	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.04E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
10	F46	70	Passenger Car	141	0.00E+00	1.58E-06	1.71E-07	6.16E+00	1.12E-05	3.17E-02	3.56E-06	1.43E-04	1.09E-03	1.70E-04	3.47E-04	2.24E-04	2.30E-04	2.40E-05	3.10E-05	6.43E-09	1.17E-04	2.23E-05
10	F46	70	Passenger Truck	237	0.00E+00	3.32E-06	3.53E-07	1.39E+01	2.13E-05	5.60E-02	6.96E-06	4.16E-04	1.97E-03	3.05E-04	6.66E-04	4.33E-04	4.43E-04	1.05E-04	6.91E-05	1.24E-08	2.22E-04	6.98E-05
10	F46	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	F46	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.79E-05
9	F47	60	Passenger Car	3	0.00E+00	4.31E-08	4.68E-09	1.53E-01	3.06E-07	8.62E-04	9.71E-08	3.46E-06	3.40E-05	5.09E-06	9.47E-06	6.11E-06	6.27E-06	6.67E-07	7.69E-07	1.62E-10	3.20E-06	5.40E-07
9	F47	60	Passenger Truck	6	0.00E+00	9.14E-08	9.69E-09	3.42E-01	5.77E-07	1.47E-03	1.90E-07	1.08E-05	6.21E-05	9.24E-06	1.81E-05	1.18E-05	1.21E-05	2.73E-06	1.70E-06	3.15E-10	6.03E-06	1.83E-06
9	F48	60	Passenger Car	34	0.00E+00	4.40E-07	4.78E-08	1.57E+00	3.12E-06	8.81E-03	9.93E-07	3.54E-05	3.47E-04	5.20E-05	9.68E-05	6.24E-05	6.41E-05	6.82E-06	7.86E-06	1.65E-09	3.28E-05	5.52E-06
9	F48	60	Passenger Truck	58	0.00E+00	9.35E-07	9.91E-08	3.50E+00	5.90E-06	1.51E-02	1.94E-06	1.10E-04	6.35E-04	9.45E-05	1.85E-04	1.20E-04	1.23E-04	2.79E-05	1.74E-05	3.22E-09	6.16E-05	1.87E-05
9	F48	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	F48	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.65E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.77E-05
9	F48	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.96E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.34E-05
9	F49	60	Passenger Car	852	0.00E+00	1.09E-05	1.19E-06	3.89E+01	7.74E-05	2.18E-01	2.46E-05	8.77E-04	8.60E-03	1.29E-03	2.40E-03	1.55E-03	1.59E-03	1.69E-04	1.95E-04	4.09E-08	8.11E-04	1.37E-04
9	F49	60	Passenger Truck	1427	0.00E+00	2.32E-05	2.45E-06	8.66E+01	1.46E-04	3.73E-01	4.80E-05	2.73E-03	1.57E-02	2.34E-03	4.58E-03	2.98E-03	3.05E-03	6.91E-04	4.30E-04	7.98E-08	1.53E-03	4.62E-04
9	F49	60	Single Unit Short Haul Truck	105	0.00E+00	2.35E-05	9.72E-07	1.75E+01	1.56E-05	3.08E-02	2.54E-05	9.02E-03	2.42E-03	4.07E-04	3.14E-03	6.04E-04	6.17E-04	1.78E-03	7.14E-05	2.94E-08	2.52E-03	1.69E-03
9	F49	60	Single Unit Long Haul Truck	5	0.00E+00	1.03E-06	4.22E-08	7.47E-01	6.76E-07	1.31E-03	1.11E-06	3.90E-04	1.09E-04	1.81E-05	1.37E-04	2.63E-05	2.68E-05	7.55E-05	3.05E-06	1.25E-09	1.10E-04	7.31E-05
9	F49	60	Combination Short Haul Truck	78	0.00E+00	2.27E-05	1.67E-06	2.74E+01	6.23E-08	3.40E-02	1.63E-05	3.47E-02	3.97E-03	6.21E-04	1.40E-03	4.89E-04	5.07E-04	4.36E-03	9.18E-05	0.00E+00	8.94E-04	6.53E-03
9	F49	60	Combination Long Haul Truck	71	0.00E+00	3.13E-05	1.71E-06	2.59E+01	2.11E-07	4.08E-02	2.61E-05	3.69E-02	4.16E-03	6.02E-04	2.96E-03	5.58E-04	5.81E-04	4.16E-03	8.69E-05	0.00E+00	2.38E-03	6.96E-03
9	F50	60	Passenger Car	708	0.00E+00	9.06E-06	9.85E-07	3.23E+01	6.43E-05	1.81E-01	2.04E-05	7.29E-04	7.15E-03	1.07E-03	1.99E-03	1.29E-03	1.32E-03	1.40E-04	1.62E-04	3.40E-08	6.74E-04	1.14E-04
9	F50	60	Passenger Truck	1186	0.00E+00	1.92E-05	2.04E-06	7.20E+01	1.21E-04	3.10E-01	3.99E-05	2.27E-03	1.31E-02	1.94E-03	3.81E-03	2.48E-03	2.54E-03	5.75E-04	3.57E-04	6.63E-08	1.27E-03	3.84E-04
9	F50	60	Single Unit Short Haul Truck	122	0.00E+00	2.72E-05	1.12E-06	2.02E+01	1.80E-05	3.56E-02	2.94E-05	1.04E-02	2.80E-03	4.70E-04	3.62E-03	6.98E-04	7.12E-04	2.05E-03	8.25E-05	3.40E-08	2.91E-03	1.95E-03
9	F50	60	Single Unit Long Haul Truck	5	0.00E+00	1.19E-06	4.87E-08	8.63E-01	7.80E-07	1.51E-03	1.28E-06	4.51E-04	1.26E-04	2.09E-05	1.58E-04	3.03E-05	3.09E-05	8.72E-05	3.52E-06	1.45E-09	1.27E-04	8.44E-05
9	F50	60	Combination Short Haul Truck	90	0.00E+00	2.63E-05	1.93E-06	3.17E+01	7.19E-08	3.92E-02	1.89E-05	4.00E-02	4.58E-03	7.17E-04	1.62E-03	5.64E-04	5.86E-04	5.04E-03	1.06E-04	0.00E+00	1.03E-03	7.54E-03
9	F50	60	Combination Long Haul Truck	82	0.00E+00	3.61E-05	1.97E-06	2.99E+01	2.43E-07	4.71E-02	3.02E-05	4.26E-02	4.81E-03	6.95E-04	3.42E-03	6.44E-04	6.71E-04	4.80E-03	1.00E-04	0.00E+00	2.75E-03	8.03E-03
10	F51	70	Passenger Car	631	0.00E+00	7.05E-06	7.66E-07	2.75E+01	5.00E-05	1.42E-01	1.59E-05	6.38E-04	4.86E-03	7.57E-04	1.55E-03	9.99E-04	1.03E-03	1.07E-04	1.38E-04	2.87E-08	5.24E-04	9.96E-05
10	F51	70	Passenger Truck	1057	0.00E+00	1.48E-05	1.58E-06	6.19E+01	9.50E-05	2.50E-01	3.11E-05	1.86E-03	8.80E-03	1.36E-03	2.97E-03	1.93E-03	1.98E-03	4.69E-04	3.08E-04	5.53E-08	9.93E-04	3.12E-04
10	F51	70	Single Unit Short Haul Truck	37	0.00E+00	6.57E-06	2.67E-07	6.12E+00	4.41E-06	1.11E-02	7.15E-06	2.61E-03	5.94E-04	1.09E-04	8.86E-04	1.69E-04	1.72E-04	6.22E-04	2.49E-05	1.00E-08	7.14E-04	4.89E-04
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	2.86E-07	1.15E-08	2.59E-01	1.90E-07	4.66E-04	3.11E-07	1.12E-04	2.72E-05	4.87E-06	3.87E-05	7.29E-06	7.44E-06	2.62E-05	1.06E-06	4.24E-10	3.12E-05	2.10E-05
10	F51	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.63E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
10	F51	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.10E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
10	F52	70	Passenger Car	224	0.00E+00	2.50E-06	2.72E-07	9.77E+00	1.77E-05	5.03E-02	5.64E-06	2.26E-04	1.73E-03	2.69E-04	5.50E-04	3.54E-04	3.64E-04	3.81E-05	4.91E-05	1.02E-08	1.86E-04	3.53E-05
10	F52	70	Passenger Truck	375	0.00E+00	5.26E-06	5.59E-07	2.20E+01	3.37E-05	8.88E-02	1.10E-05	6.58E-04	3.12E-03	4.83E-04	1.05E-03	6.85E-04	7.02E-04	1.66E-04	1.09E-04	1.96E-08	3.53E-04	1.11E-04
10	F52	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	F52	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
10	F52	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.92E-04
10	F52	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.80E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.27E-04
10	F53	70	Passenger Car	633	0.00E+00	7.07E-06	7.68E-07	2.76E+01	5.02E-05	1.42E-01	1.59E-05	6.41E-04	4.88E-03	7.60E-04	1.55E-03	1.00E-03	1.03E-03	1.08E-04	1.39E-04	2.88E-08	5.26E-04	9.99E-05
10	F53	70	Passenger Truck	1061	0.00E+00	1.49E-05	1.58E-06	6.22E+01	9.53E-05	2.51E-01	3.12E-05	1.86E-03	8.83E-03	1.37E-03	2.98E-03	1.94E-03	1.99E-03	4.70E-04	3.10E-04	5.54E-08	9.97E-04	3.13E-04
10	F53	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	F53	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	F53	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
10	F54	70	Passenger Car	396	0.00E+00	4.42E-06	4.80E-07	1.73E+01	3.14E-05	8.89E-02	9.97E-06	4.00E-04	3.05E-03	4.75E-04	9.72E-04	6.27E-04	6.43E-04	6.73E-05	8.68E-05	1.80E-08	3.29E-04	6.25E-05
10	F54	70	Passenger Truck	663	0.00E+00	9.30E-06	9.89E-07	3.89E+01	5.96E-05	1.57E-01	1.95E-05	1.16E-03	5.52E-03	8.54E-04	1.87E-03	1.21E-03	1.24E-03	2.94E-04	1.93E-04	3.47E-08	6.23E-04	1.95E-04
10	F54	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.02E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.52E-05
10	F54	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	F54	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
53	F71	70	Passenger Car	120	0.00E+00	1.29E-06	1.41E-07	5.28E+00	9.19E-06	2.58E-02	2.92E-06	1.23E-04	9.08E-04	1.42E-04	2.85E-04	1.84E-04	1.88E-04	2.03E-05	2.65E-05	5.51E-09	9.63E-05	1.92E-05
53	F71	70	Passenger Truck	200	0.00E+00	2.70E-06	2.87E-07	1.19E+01	1.74E-05	4.55E-02	5.68E-06	3.48E-04	1.62E-03	2.52E-04	5.43E-04	3.53E-04	3.62E-04	8.83E-05	5.92E-05	1.04E-08	1.82E-04	5.82E-05
53	F71	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.71E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
53	F71	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.75E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.01E-06
53	F71	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.62E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.82E-04
53	F71	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.87E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.30E-04
50	F72	40	Passenger Car	276	0.00E+00	3.96E-06	4.30E-07	1.45E+01	2.81E-05	7.84E-02	8.92E-06	2.51E-04	4.75E-03	6.68E-04	8.70E-04	5.61E-04	5.76E-04	8.19E-05	7.22E-05	1.34E-08	2.94E-04	3.92E-05
50	F72	40	Passenger Truck	461	0.00E+00	8.72E-06	9.17E-07	3.17E+01	5.25E-05	1.30E-01	1.75E-05	9.68E-04	8.43E-03	1.17E-03	1.66E-03	1.08E-03	1.11E-03	2.80E-04	1.56E-04	2.27E-08	5.48E-04	1.68E-04
50	F72	40	Single Unit Short Haul Truck	46	0.00E+00	1.56E-05	6.94E-07	8.68E+00	1.08E-05	1.36E-02	1.67E-05	6.28E-03	1.81E-03	2.83E-04	2.01E-03	4.18E-04	4.26E-04	8.87E-04	3.54E-05	1.50E-08	1.58E-03	1.18E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	6.84E-07	3.03E-08	3.75E-01	4.72E-07	5.93E-04	7.32E-07	2.74E-04	8.11E-05	1.26E-05	8.81E-05	1.83E-05	1.86E-05	3.83E-05	1.53E-06	6.51E-10	6.95E-05	5.13E-05
50	F72	40	Combination Short Haul Truck	25	0.00E+00	1.19E-05	8.86E-07	1.02E+01	2.94E-08	1.68E-02	8.43E-06	1.72E-02	2.39E-03	3.56E-04	7.05E-04	2.58E-04	2.67E-04	1.62E-03	3.41E-05	0.00E+00	4.38E-04	3.25E-03
50	F72	40	Combination Long Haul Truck	22	0.00E+00	1.58E-05	8.90E-07	9.78E+00	1.00E-07	2.04E-02	1.30E-05	1.82E-02	2.48E-03	3.49E-04	1.44E-03	2.87E-04	2.99E-04	1.57E-03	3.28E-05	0.00E+00	1.14E-03	3.43E-03
52	F73	60	Passenger Car	173	0.00E+00	2.03E-06	2.21E-07	7.88E+00	1.44E-05	4.04E-02	4.58E-06	1.71E-04	1.70E-03	2.54E-04	4.47E-04	2.88E-04	2.96E-04	3.42E-05	3.95E-05	8.04E-09	1.51E-04	2.67E-05
52	F73	60	Passenger Truck	289	0.00E+00	4.29E-06	4.54E-07	1.75E+01	2.70E-05	6.92E-02	8.89E-06	5.23E-04	3.01E-03	4.47E-04	8.47E-04	5.51E-04	5.65E-04	1.37E-04	8.71E-05	1.47E-08	2.82E-04	8.84E-05
52	F73	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
52	F73	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.16E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.19E-04
52	F73	60	Combination Long Haul Truck	2	0.00E+00	1.05E-

Appendix F.4.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
50	F78	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.45E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.34E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.38E-04
50	F78	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.74E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
52	F79	60	Passenger Car	440	0.00E+00	5.18E-06	5.62E-07	2.01E+01	3.67E-05	1.03E-01	1.17E-05	4.36E-04	4.32E-03	6.48E-04	1.14E-03	7.34E-04	7.53E-04	8.72E-05	1.01E-04	2.05E-08	3.85E-04	6.81E-05
52	F79	60	Passenger Truck	737	0.00E+00	1.09E-05	1.16E-06	4.47E+01	6.88E-05	1.76E-01	2.26E-05	1.33E-03	7.67E-03	1.14E-03	2.16E-03	1.40E-03	1.44E-03	3.50E-04	2.22E-04	3.74E-08	7.19E-04	2.25E-04
52	F79	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.92E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.21E-05
52	F79	60	Combination Short Haul Truck	4	0.00E+00	1.07E-06	7.85E-08	1.29E+00	2.93E-09	1.60E-03	7.68E-07	1.63E-03	1.86E-04	2.92E-05	6.59E-05	2.30E-05	2.38E-05	2.05E-04	4.31E-06	0.00E+00	4.20E-05	3.07E-04
52	F79	60	Combination Long Haul Truck	3	0.00E+00	1.47E-06	8.02E-08	1.22E+00	9.91E-09	1.92E-03	1.23E-06	1.74E-03	1.96E-04	2.83E-05	1.39E-04	2.62E-05	2.73E-05	1.95E-04	4.08E-06	0.00E+00	1.12E-04	3.27E-04
53	F80	70	Passenger Car	964	0.00E+00	1.04E-05	1.13E-06	4.25E+01	7.40E-05	2.08E-01	2.35E-05	9.92E-04	7.31E-03	1.14E-03	2.29E-03	1.48E-03	1.52E-03	1.64E-04	2.14E-04	4.44E-08	7.76E-04	1.55E-04
53	F80	70	Passenger Truck	1615	0.00E+00	2.18E-05	2.32E-06	9.58E+01	1.40E-04	3.67E-01	4.58E-05	2.80E-03	1.31E-02	2.03E-03	4.38E-03	2.84E-03	2.91E-03	7.12E-04	4.77E-04	8.36E-08	1.46E-03	4.69E-04
53	F80	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.09E-06
53	F80	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.81E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.30E-04
53	F80	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.01E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.67E-04
52	F81	60	Passenger Car	246	0.00E+00	2.89E-06	3.14E-07	1.12E+01	2.05E-05	5.75E-02	6.52E-06	2.44E-04	2.42E-03	3.62E-04	6.36E-04	4.10E-04	4.21E-04	4.88E-05	5.62E-05	1.15E-08	2.15E-04	3.81E-05
52	F81	60	Passenger Truck	412	0.00E+00	6.11E-06	6.47E-07	2.50E+01	3.85E-05	9.86E-02	1.27E-05	7.44E-04	4.29E-03	6.37E-04	1.21E-03	7.85E-04	8.05E-04	1.95E-04	1.24E-04	2.09E-08	4.02E-04	1.26E-04
52	F81	60	Single Unit Short Haul Truck	69	0.00E+00	1.54E-05	6.36E-07	1.15E+01	1.02E-05	2.02E-02	1.67E-05	5.90E-03	1.59E-03	2.67E-04	2.05E-03	3.96E-04	4.04E-04	1.16E-03	4.68E-05	1.93E-08	1.65E-03	1.10E-03
52	F81	60	Single Unit Long Haul Truck	3	0.00E+00	6.72E-07	2.76E-08	4.89E-01	4.42E-07	8.57E-04	7.27E-07	2.56E-04	7.13E-05	1.18E-05	8.98E-05	1.72E-05	1.75E-05	4.94E-05	2.00E-06	8.20E-10	7.23E-05	4.78E-05
52	F81	60	Combination Short Haul Truck	46	0.00E+00	1.34E-05	9.87E-07	1.62E+01	3.68E-08	2.01E-02	9.65E-06	2.05E-02	2.34E-03	3.67E-04	8.28E-04	2.89E-04	3.00E-04	2.58E-03	5.42E-05	0.00E+00	5.28E-04	3.86E-03
52	F81	60	Combination Long Haul Truck	42	0.00E+00	1.85E-05	1.01E-06	1.53E+01	1.25E-07	2.41E-02	1.54E-05	2.18E-02	2.46E-03	3.55E-04	1.75E-03	3.29E-04	3.43E-04	2.46E-03	5.13E-05	0.00E+00	1.41E-03	4.11E-03
50	F82	40	Passenger Car	141	0.00E+00	2.02E-06	2.19E-07	7.42E+00	1.43E-05	4.00E-02	4.55E-06	1.28E-04	2.42E-03	3.41E-04	4.44E-04	2.86E-04	2.94E-04	4.18E-05	3.69E-05	6.83E-09	1.50E-04	2.00E-05
50	F82	40	Passenger Truck	235	0.00E+00	4.45E-06	4.68E-07	1.62E+01	2.68E-05	6.61E-02	8.94E-06	4.94E-04	4.30E-03	5.97E-04	8.45E-04	5.52E-04	5.65E-04	1.43E-04	7.95E-05	1.16E-08	2.80E-04	8.56E-05
50	F82	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.90E-05
50	F82	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.34E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.38E-04
50	F82	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.74E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
53	F83	70	Passenger Car	11	0.00E+00	1.17E-07	1.27E-08	4.78E-01	8.33E-07	2.34E-03	2.65E-07	1.12E-05	8.22E-05	1.29E-05	2.58E-05	1.66E-05	1.71E-05	1.84E-06	2.40E-06	4.99E-10	8.73E-06	1.74E-06
53	F83	70	Passenger Truck	18	0.00E+00	2.45E-07	2.61E-08	1.08E+00	1.57E-06	4.13E-03	5.14E-07	3.15E-05	1.47E-04	2.28E-05	4.92E-05	3.20E-05	3.28E-05	8.00E-06	5.36E-06	9.40E-10	1.65E-05	5.28E-06
53	F83	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
53	F83	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.79E-05
50	F84	40	Passenger Car	225	0.00E+00	3.23E-06	3.51E-07	1.19E+01	2.29E-05	6.39E-02	7.28E-06	2.05E-04	3.87E-03	5.45E-04	7.10E-04	4.58E-04	4.70E-04	6.68E-05	5.89E-05	1.09E-08	2.40E-04	3.20E-05
50	F84	40	Passenger Truck	376	0.00E+00	7.11E-06	7.48E-07	2.58E+01	4.28E-05	1.06E-01	1.43E-05	7.90E-04	6.87E-03	9.54E-04	1.35E-03	8.82E-04	9.03E-04	2.28E-04	1.27E-04	1.85E-08	4.47E-04	1.37E-04
50	F84	40	Single Unit Short Haul Truck	3	0.00E+00	9.75E-07	4.34E-08	5.43E-01	6.74E-07	8.51E-04	1.04E-06	3.93E-04	1.13E-04	1.77E-05	1.25E-04	2.61E-05	2.66E-05	5.54E-05	2.21E-06	9.38E-10	9.87E-05	7.36E-05
50	F84	40	Combination Short Haul Truck	8	0.00E+00	4.04E-06	3.02E-07	3.47E+00	1.00E-08	5.71E-03	2.87E-06	5.87E-03	8.14E-04	1.21E-04	2.40E-04	8.77E-05	9.10E-05	5.52E-04	1.16E-05	0.00E+00	1.49E-04	1.11E-03
50	F84	40	Combination Long Haul Truck	8	0.00E+00	5.36E-06	3.03E-07	3.33E+00	3.41E-08	6.93E-03	4.42E-06	6.20E-03	8.45E-04	1.19E-04	4.91E-04	9.76E-05	1.02E-04	5.35E-04	1.12E-05	0.00E+00	3.90E-04	1.17E-03
52	F85	60	Passenger Car	204	0.00E+00	2.40E-06	2.60E-07	9.29E+00	1.70E-05	4.76E-02	5.40E-06	2.02E-04	2.00E-03	3.00E-04	5.27E-04	3.40E-04	3.49E-04	4.04E-05	4.66E-05	9.49E-09	1.78E-04	3.15E-05
52	F85	60	Passenger Truck	341	0.00E+00	5.06E-06	5.36E-07	2.07E+01	3.19E-05	8.17E-02	1.05E-05	6.16E-04	3.55E-03	5.28E-04	9.99E-04	6.50E-04	6.66E-04	1.62E-04	1.03E-04	1.73E-08	3.33E-04	1.04E-04
52	F85	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
52	F85	60	Combination Short Haul Truck	8	0.00E+00	2.44E-06	1.79E-07	2.95E+00	6.69E-09	3.65E-03	1.75E-06	3.72E-03	4.26E-04	6.67E-05	1.51E-04	5.25E-05	5.45E-05	4.68E-04	9.86E-06	0.00E+00	9.60E-05	7.02E-04
52	F85	60	Combination Long Haul Truck	8	0.00E+00	3.36E-06	1.83E-07	2.78E+00	2.27E-08	4.38E-03	2.81E-06	3.97E-03	4.47E-04	6.46E-05	3.18E-04	5.99E-05	6.24E-05	4.47E-04	9.33E-06	0.00E+00	2.56E-04	7.47E-04
53	F86	70	Passenger Car	148	0.00E+00	1.61E-06	1.75E-07	6.55E+00	1.14E-05	3.20E-02	3.62E-06	1.53E-04	1.13E-03	1.76E-04	3.53E-04	2.28E-04	2.34E-04	2.52E-05	3.29E-05	6.83E-09	1.19E-04	2.38E-05
53	F86	70	Passenger Truck	249	0.00E+00	3.35E-06	3.57E-07	1.47E+01	2.15E-05	5.65E-02	7.04E-06	4.31E-04	2.01E-03	3.12E-04	6.74E-04	4.38E-04	4.49E-04	1.10E-04	7.34E-05	1.29E-08	2.25E-04	7.22E-05
53	F86	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
53	F86	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.03E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.47E-04
53	F86	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.38E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.01E-03
52	F87	60	Passenger Car	34	0.00E+00	4.05E-07	4.40E-08	1.57E+00	2.87E-06	8.04E-03	9.12E-07	3.41E-05	3.38E-04	5.06E-05	8.90E-05	5.74E-05	5.89E-05	6.82E-06	7.86E-06	1.60E-09	3.01E-05	5.32E-06
52	F87	60	Passenger Truck	58	0.00E+00	8.54E-07	9.05E-08	3.49E+00	5.38E-06	1.38E-02	1.77E-06	1.04E-04	6.00E-04	8.90E-05	1.69E-04	1.10E-04	1.12E-04	2.73E-05	1.74E-05	2.93E-09	5.62E-05	1.76E-05
52	F87	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
52	F87	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.98E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
52	F87	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.44E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
50	F88	40	Passenger Car	8	0.00E+00	1.13E-07	1.23E-08	4.14E-01	8.00E-07	2.23E-03	2.54E-07	7.16E-06	1.35E-04	1.90E-05	2.48E-05	1.60E-05	1.64E-05	2.33E-06	2.06E-06	3.81E-10	8.39E-06	1.12E-06
50	F88	40	Passenger Truck	13	0.00E+00	2.49E-07	2.61E-08	9.02E-01	1.50E-06	3.69E-03	4.99E-07	2.76E-05	2.40E-04	3.33E-05	4.72E-05	3.08E-05	3.15E-05	7.97E-06	4.44E-06	6.48E-10	1.56E-05	4.78E-06

Appendix F.4.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A07	0.00E+00	1.47E-04	1.13E-05	3.81E+02	3.37E-04	1.29E+00	1.86E-04	1.28E-01	1.45E-02	3.45E-03	1.84E-02	8.63E-03	8.86E-03	2.54E-02	1.67E-03	2.96E-07	9.56E-03	2.40E-02
A08	0.00E+00	1.55E-04	1.13E-05	3.67E+02	2.76E-04	1.10E+00	1.80E-04	1.47E-01	1.33E-02	3.22E-03	1.81E-02	7.72E-03	7.93E-03	2.94E-02	1.55E-03	2.71E-07	1.01E-02	2.75E-02
A09	0.00E+00	1.67E-04	1.26E-05	4.19E+02	3.49E-04	1.35E+00	2.04E-04	1.52E-01	1.57E-02	3.74E-03	2.03E-02	9.24E-03	9.49E-03	3.00E-02	1.81E-03	3.15E-07	1.08E-02	2.84E-02
A10	0.00E+00	1.87E-04	1.35E-05	4.35E+02	3.18E-04	1.28E+00	2.14E-04	1.79E-01	1.56E-02	3.80E-03	2.14E-02	9.05E-03	9.30E-03	3.59E-02	1.83E-03	3.16E-07	1.21E-02	3.36E-02
A11	0.00E+00	1.90E-04	1.41E-05	4.52E+02	3.43E-04	1.37E+00	2.21E-04	1.83E-01	1.65E-02	3.97E-03	2.20E-02	9.58E-03	9.85E-03	3.60E-02	1.91E-03	3.22E-07	1.21E-02	3.42E-02
A12	0.00E+00	2.25E-04	1.65E-05	5.32E+02	4.01E-04	1.60E+00	2.61E-04	2.15E-01	1.93E-02	4.67E-03	2.61E-02	1.12E-02	1.15E-02	4.27E-02	2.25E-03	3.85E-07	1.45E-02	4.03E-02
A13	0.00E+00	1.97E-04	1.47E-05	4.81E+02	3.84E-04	1.51E+00	2.35E-04	1.84E-01	1.78E-02	4.26E-03	2.33E-02	1.04E-02	1.07E-02	3.63E-02	2.06E-03	3.52E-07	1.26E-02	3.44E-02
A14	0.00E+00	2.23E-04	1.61E-05	5.11E+02	3.62E-04	1.47E+00	2.52E-04	2.17E-01	1.82E-02	4.44E-03	2.52E-02	1.05E-02	1.08E-02	4.34E-02	2.13E-03	3.65E-07	1.44E-02	4.07E-02
A15	0.00E+00	2.08E-04	1.52E-05	4.82E+02	3.48E-04	1.41E+00	2.36E-04	2.04E-01	1.73E-02	4.19E-03	2.35E-02	1.00E-02	1.03E-02	4.03E-02	2.02E-03	3.36E-07	1.32E-02	3.83E-02
A16	0.00E+00	2.32E-04	1.65E-05	5.14E+02	3.34E-04	1.40E+00	2.53E-04	2.34E-01	1.79E-02	4.39E-03	2.54E-02	1.02E-02	1.05E-02	4.66E-02	2.11E-03	3.53E-07	1.49E-02	4.38E-02
A17	0.00E+00	2.01E-04	1.46E-05	4.60E+02	3.24E-04	1.32E+00	2.25E-04	1.99E-01	1.64E-02	3.97E-03	2.24E-02	9.45E-03	9.71E-03	3.92E-02	1.92E-03	3.16E-07	1.27E-02	3.73E-02
A18	0.00E+00	2.28E-04	1.62E-05	5.07E+02	3.35E-04	1.39E+00	2.50E-04	2.29E-01	1.77E-02	4.34E-03	2.51E-02	1.01E-02	1.04E-02	4.56E-02	2.09E-03	3.50E-07	1.47E-02	4.29E-02
A19	0.00E+00	1.89E-04	1.36E-05	4.27E+02	2.91E-04	1.20E+00	2.09E-04	1.90E-01	1.51E-02	3.66E-03	2.09E-02	8.65E-03	8.89E-03	3.75E-02	1.77E-03	2.89E-07	1.20E-02	3.56E-02
A20	0.00E+00	2.17E-04	1.54E-05	4.79E+02	3.12E-04	1.30E+00	2.36E-04	2.18E-01	1.67E-02	4.09E-03	2.37E-02	9.52E-03	9.79E-03	4.34E-02	1.97E-03	3.28E-07	1.39E-02	4.09E-02
A21	0.00E+00	2.29E-04	1.68E-05	5.39E+02	4.02E-04	1.61E+00	2.63E-04	2.21E-01	1.95E-02	4.70E-03	2.62E-02	1.13E-02	1.16E-02	4.36E-02	2.27E-03	3.80E-07	1.46E-02	4.15E-02
A22	0.00E+00	2.42E-04	1.75E-05	5.57E+02	3.99E-04	1.62E+00	2.74E-04	2.35E-01	1.99E-02	4.84E-03	2.74E-02	1.15E-02	1.18E-02	4.68E-02	2.33E-03	3.97E-07	1.56E-02	4.40E-02
A23	0.00E+00	2.41E-04	1.77E-05	5.66E+02	4.22E-04	1.69E+00	2.77E-04	2.34E-01	2.05E-02	4.94E-03	2.75E-02	1.19E-02	1.22E-02	4.60E-02	2.39E-03	3.96E-07	1.52E-02	4.38E-02
A24	0.00E+00	2.13E-04	1.53E-05	4.83E+02	3.34E-04	1.37E+00	2.37E-04	2.10E-01	1.71E-02	4.17E-03	2.37E-02	9.84E-03	1.01E-02	4.18E-02	2.01E-03	3.36E-07	1.36E-02	3.94E-02
A25	0.00E+00	2.10E-04	1.54E-05	4.85E+02	3.47E-04	1.40E+00	2.37E-04	2.08E-01	1.73E-02	4.20E-03	2.35E-02	1.00E-02	1.03E-02	4.08E-02	2.03E-03	3.30E-07	1.32E-02	3.90E-02
A26	0.00E+00	1.99E-04	1.44E-05	4.55E+02	3.20E-04	1.30E+00	2.24E-04	1.96E-01	1.62E-02	3.94E-03	2.24E-02	9.33E-03	9.59E-03	3.89E-02	1.90E-03	3.21E-07	1.28E-02	3.67E-02
A27	0.00E+00	2.10E-04	1.54E-05	4.85E+02	3.47E-04	1.40E+00	2.37E-04	2.08E-01	1.73E-02	4.20E-03	2.35E-02	1.00E-02	1.03E-02	4.08E-02	2.03E-03	3.30E-07	1.32E-02	3.90E-02
A28	0.00E+00	1.99E-04	1.44E-05	4.55E+02	3.20E-04	1.30E+00	2.24E-04	1.96E-01	1.62E-02	3.94E-03	2.24E-02	9.33E-03	9.59E-03	3.89E-02	1.90E-03	3.21E-07	1.28E-02	3.67E-02
B09	0.00E+00	7.44E-05	6.42E-06	2.57E+02	2.92E-04	9.20E-01	1.20E-04	4.84E-02	1.48E-02	2.94E-03	1.19E-02	6.45E-03	6.62E-03	9.80E-03	1.20E-03	2.08E-07	5.27E-03	8.96E-03
B10	0.00E+00	7.52E-05	6.21E-06	2.45E+02	2.61E-04	8.37E-01	1.14E-04	5.42E-02	1.37E-02	2.74E-03	1.14E-02	5.92E-03	6.08E-03	1.11E-02	1.12E-03	1.92E-07	5.37E-03	1.01E-02
B11	0.00E+00	3.32E-05	3.06E-06	1.26E+02	1.57E-04	4.85E-01	5.88E-05	1.68E-02	7.60E-03	1.49E-03	5.79E-03	3.35E-03	3.44E-03	3.38E-03	6.07E-04	1.09E-07	2.35E-03	3.07E-03
B12	0.00E+00	2.31E-05	1.78E-06	6.89E+01	6.70E-05	2.20E-01	3.27E-05	1.81E-02	3.69E-03	7.50E-04	3.33E-03	1.58E-03	1.62E-03	3.81E-03	3.10E-04	5.36E-08	1.71E-03	3.37E-03
B13	0.00E+00	4.01E-05	3.32E-06	1.30E+02	1.39E-04	4.45E-01	6.08E-05	2.93E-02	7.28E-03	1.46E-03	6.08E-03	3.15E-03	3.24E-03	5.95E-03	5.99E-04	1.02E-07	2.84E-03	5.45E-03
B14	0.00E+00	3.91E-05	3.27E-06	1.30E+02	1.44E-04	4.56E-01	6.11E-05	2.65E-02	7.39E-03	1.48E-03	6.11E-03	3.21E-03	3.30E-03	5.45E-03	6.05E-04	1.05E-07	2.81E-03	4.91E-03
B15	0.00E+00	9.12E-05	7.98E-06	3.25E+02	3.84E-04	1.20E+00	1.52E-04	5.23E-02	1.91E-02	3.78E-03	1.52E-02	8.34E-03	8.56E-03	1.08E-02	1.54E-03	2.77E-07	6.60E-03	9.65E-03
B16	0.00E+00	5.64E-05	4.90E-06	2.00E+02	2.34E-04	7.33E-01	9.37E-05	3.26E-02	1.17E-02	2.31E-03	9.33E-03	5.10E-03	5.24E-03	6.79E-03	9.42E-04	1.70E-07	4.10E-03	6.03E-03
B17	0.00E+00	9.68E-05	7.33E-06	2.81E+02	2.62E-04	8.71E-01	1.33E-04	8.00E-02	1.48E-02	3.01E-03	1.36E-02	6.30E-03	6.47E-03	1.67E-02	1.25E-03	2.11E-07	7.09E-03	1.49E-02
B18	0.00E+00	6.23E-05	4.82E-06	1.87E+02	1.81E-04	5.96E-01	8.80E-05	4.94E-02	9.99E-03	2.03E-03	8.94E-03	4.28E-03	4.40E-03	1.03E-02	8.38E-04	1.43E-07	4.55E-03	9.21E-03
B19	0.00E+00	1.83E-04	1.57E-05	6.39E+02	7.43E-04	2.33E+00	3.01E-04	1.07E-01	3.72E-02	7.39E-03	3.00E-02	1.62E-02	1.67E-02	2.25E-02	3.01E-03	5.44E-07	1.34E-02	1.99E-02
B20	0.00E+00	1.44E-04	1.09E-05	4.12E+02	3.71E-04	1.25E+00	1.93E-04	1.27E-01	2.14E-02	4.36E-03	1.95E-02	9.09E-03	9.34E-03	2.59E-02	1.82E-03	2.91E-07	1.02E-02	2.37E-02
B21	0.00E+00	1.03E-04	1.00E-05	4.25E+02	5.65E-04	1.72E+00	1.98E-04	3.74E-02	2.64E-02	5.16E-03	1.93E-02	1.17E-02	1.20E-02	7.55E-03	2.08E-03	3.84E-07	7.32E-03	6.75E-03
B22	0.00E+00	7.18E-05	5.86E-06	2.24E+02	2.23E-04	7.27E-01	1.03E-04	6.05E-02	1.21E-02	2.44E-03	1.02E-02	5.22E-03	5.36E-03	1.19E-02	1.01E-03	1.58E-07	4.88E-03	1.13E-02
B23	0.00E+00	1.06E-04	1.04E-05	4.41E+02	5.88E-04	1.79E+00	2.05E-04	3.75E-02	2.75E-02	5.36E-03	2.01E-02	1.22E-02	1.25E-02	7.57E-03	2.16E-03	4.00E-07	7.55E-03	6.77E-03
B24	0.00E+00	1.71E-04	1.23E-05	4.55E+02	3.62E-04	1.26E+00	2.14E-04	1.63E-01	2.24E-02	4.65E-03	2.20E-02	9.41E-03	9.67E-03	3.36E-02	1.95E-03	3.04E-07	1.23E-02	3.06E-02
C29	0.00E+00	3.60E-06	3.21E-07	1.12E+01	1.54E-05	4.27E-02	6.04E-06	1.66E-03	1.59E-03	2.50E-04	5.95E-04	3.35E-04	3.43E-04	2.64E-04	5.39E-05	9.62E-09	2.52E-04	3.06E-04
C30	0.00E+00	3.31E-05	2.11E-06	3.16E+01	2.44E-05	8.70E-02	3.17E-05	3.26E-02	8.04E-03	1.16E-03	3.31E-03	1.04E-03	1.07E-03	3.14E-03	1.26E-04	1.55E-08	2.24E-03	6.13E-03
C31	0.00E+00	1.63E-05	1.09E-06	2.55E+01	2.49E-05	7.66E-02	1.85E-05	1.38E-02	4.29E-03	6.49E-04	1.94E-03	7.25E-04	7.46E-04	1.81E-03	1.10E-04	1.70E-08	1.19E-03	2.60E-03
C32	0.00E+00	4.85E-05	3.28E-06	8.38E+01	7.48E-05	2.36E-01	5.50E-05	4.10E-02	1.07E-02	1.70E-03	5.72E-03	2.18E-03	2.24E-03	6.12E-03	3.60E-04	5.73E-08	3.48E-03	7.70E-03
C33	0.00E+00	1.69E-06	1.66E-07	6.05E+00	9.75E-06	2.57E-02	3.36E-06	2.46E-04	1.11E-03	1.66E-04	3.29E-04	2.00E-04	2.05E-04	5.65E-05	3.00E-05	5.54E-09	1.24E-04	4.27E-05
C34	0.00E+00	3.77E-06	2.67E-07	6.12E+00	8.82E-06	2.31E-02	4.95E-06	2.17E-03	1.65E-03	2.34E-04	5.13E-04	2.20E-04	2.26E-04	2.48E-04	2.82E-05	4.83E-09	2.87E-04	4.07E-04
C35	0.00E+00	1.04E-05	8.52E-07	2.85E+01	3.75E-05	1.04E-01	1.62E-05	5.22E-03	3.98E-03	6.26E-04	1.63E-03	8.40E-04	8.62E-04	8.54E-04	1.35E-04	2.48E-08	7.72E-04	9.68E-04
C36	0.00E+00	6.37E-05	4.07E-06	6.18E+01	4.98E-05	1.72E-01	6.18E-05	6.15E-02	1.57E-02	2.26E-03	6.45E-03	2.04E-03	2.10E-03	5.96E-03	2.49E-04	3.17E-08	4.35E-03	1.16E-02
C37	0.00E+00	1.53E-05	9.78E-07	2.10E+01	1.72E-05	5.69E-02	1.61E-05	1.41E-02	3.47E-03	5.26E-04	1.70E-03	5.74E-04	5.91E-04	1.82E-03	8.72E-05	1.26E-08	1.11E-03	2.65E-03
C38	0.00E+00	6.08E-05	4.39E-06	1.19E+02	1.19E-04	3.64E-01	7.36E-05	5.01E-02	1.57E-02	2.49E-03	7.49E-03	3.20E-03	3.29E-03	7.38E-03	5.26E-04	8.26E-08	4.21E-03	9.38E-03
C39	0.00E+00	1.23E-05	8.25E-07	2.09E+01	2.37E-05	6.78E-02	1.52E-05	8.62E-03	3.56E-03	5.40E-04	1.60E-03	6.27E-04	6.43E-04	1.19E-03	9.31E-05	1.65E-08	9.58E-04	1.61E-03
C40	0.00E+00	1.84E-05	1.23E-06	2.40E+01	2.99E-05	8.24E-02	2.13E-05	1.34E-02	6.34E-03	9.04E-04	2.23E-03	8.47E-04	8.70E-04	1.41E-03	1.06E-04	1.73E-08	1.36E-03	2.52E-03
C41	0.00E+00	4.00E-06	3.62E-07	1.45E+01	1.83E-05	5.42E-02	6.95E-06	2.08E-03	1.17E-03	2.08E-04	6.87E-04	3.91E-04	4.01E-04	4.11E-04	6.92E-05	1.19E-08	2.86E-04	3.82E-04
C42	0.00E+00	2.03E-05	1.42E-06	5.29E+01	4.74E-05	1.54E-01	2.66E-05	1.65E-02	3.68E-03	6.77E-04	2.80E-03	1.18E-03	1.21E-03	3.44E-03	2.32E-04	3.87E-08	1.58E-03	3.08E-03
C43	0.00E+00	1.08E-05	9.84E-07	4.01E+01	5.23E-05	1.54E-01	1.95E-05	4.49E-03	3.29E-03	5.84E-04	1.94E-03	1.10E-03	1.13E-03	9.47E-04	1.94E-04	3.51E-08	8.07E-04	8.21E-04
C44	0.00E+00	2.23E-05	1.91E-06	7.44E+01	8.69E-05	2.63E-01	3.58E-05	1.43E-02	5.82E-03	1.04E-03	3.57E-03	1.92E-03	1.97E-03	2.82E-03	3.48E-04	5.75E-08	1.60E-03	2.66E-03
C45	0.00E+00	1.77E-05	1.41E-06	4.47E+01	5.54E-05	1.57E-01	2.57E-05	1.09E-02	6.16E-03	9.70E-04	2.59E-03	1.29E-03	1.32E-03	1.68E-03	2.08E-04	3.65E-08	1.27E-03	2.02E-03
C46	0.00E+00	6.32E-05	3.90E-06	5.34E+01	3.34E-05	1.31E-01	5.82E-05	6.32E-02	1.33E-02	1.92E-03	6.14E-03	1.74E-03	1.80E-03	6.08E-03	2.06E-04	2.51E-08	4.34E-03	1.19E-02
C47	0.00E+00	1.50E-06	1.30E-07	4.21E+00	6.16E-06	1.67E-02	2.48E-06	6.67E-04	7.60E-04	1.14E-04	2.47E-04	1.34E-04	1.38E-04	9.89E-05	2.02E-05	3.58E-09	1.09E-04	1.23E-04
C48	0.00E+00	4.21E-05	2.64E-06	5.91E+01	3.78E-05	1.35E-01	4.24E-05	3.95E-02	7.10E-03	1.14E-03	4.50E-03	1.42E-03	1.46E-03	5.84E-03	2.38E-04	3.50E-08	3.04E-03	7.42E-03
C49	0.00E+00	3.11E-05	2.10E-06	5.25E+01	5.83E-05	1.69E-01	3.79E-05	2.27E-02	8.95E-03	1.35E-03	3.99E-03	1.56E-03	1.60E-03	3.10E-03	2.33E-04	4.03E-08	2.39E-03	4.26E-03
C50	0.00E+00	1.96E-06	1.84E-07	5.44E+00	8.75E-06	2.34E-02	3.33E-06	8.87E-04	1.53E-03	2.14E-04	3.20E-04	1.90E-04	1.95E-04	1.07E-04	2.62E-05	3.92E-09	1.25E-04	1.65E-04
C51	0.00E+00	2.50E-05	1.86E-06	5.41E+01	6.03E-05	1.77E-01	3.27E-05	1.79E-02	7.26E-03	1.15E-03	3.33E-03	1.50E-03	1.54E-03	2.73E-03	2.45E-04	4.16E-08	1.79E-03	3.35E-03
C52	0.00E+00	1.15E-05	8.04E-07	1.57E+01	1.86E-05	5.45E-02	1.31E-05	9.51E-03	4.19E-03	5.94E-04	1.34E-03	5.36E-04	5.51E-04	9.58E-04	6.90E-05	9.88E-09	7.88E-04	1.79E-03
C53	0.00E+00	2.30E-06	2.30E-07	8.17E+00	1.27E-05	3.42E-02	4.42E-06	6.94E-04	1.50E-03	2.24E-04	4.27E-04	2.65E-04	2.72E-04	1.10E-04	4.01E-05	6.99E-09	1.55E-04	1.26E-04
C54	0.00E+00	6.72E-06	4.91E-07	1.44E+01	1.61E-05	4.69E-02	8.81E-06	4.64E-03	1.92E-03	3.04E-04	9.05E-04	4.01E-04	4.11E-04	7.18E-04	6.51E-05	1.14E-08	4.94E-04	8.67E-04
C55	0.00E+00	2.99E-06	1.96E-07	4.68E+00	4.81E-06	1.43E-02	3.48E-06	2.34E-03	7.89E-04	1.20E-04	3.68E-04	1.36E-04	1.40E-04	3.14E-04	2.04E-05	3.43E-09	2.28E-04	4.38E-04
C56	0.00E+00	1.11E-05	7.03E-07	1.18E+01	1.21E-05	3.57E-02	1.17E-05	9.19E-03	3.03E-03	4.35E-04	1.24E-03	4.10E-04	4.21E-04	9.34E-04	4.96E-05	7.85E-09	8.14E-04	1.73E-03
C57	0.00E+00	2.01E-05	1.47E-06	4.11E+01	4.29E-05	1.29E-01	2.51E-05	1.58E-02	5.45E-03	8.62E-04	2.56E-03	1.12E-03	1.15E-03	2.36E-03	1.83E-04	2.96E-08	1.41E-03	2.97E-03
C58	0.00E+00	3.84E-06	3.13E-07	7.80E+00	1.13E-05	3.12E-02	5.35E-06	2.57E-03	2.16E-03	3.03E-04	5.27E-04	2.69E-04	2.76E-04	2.72E-04	3.63E-05	5.28E-09	2.51E-04	4.80E-04
C59	0.00E+00	8.40E-06	6.69E-07	2.11E+01	2.62E-05	7.44E-02	1.22E-05	5.17E-03	2.92E-03	4.59E-04	1.22E-03	6.09E-04	6.25E-04	7.99E-04	9.86E-05	1.72E-08	6.00E-04	9.62E-04
C60	0.00E+00	1.96E-05	1.54E-06	4.54E+01	6.09E-05	1.69E-01	2.85E-05	1.16E-02	8.05E-03	1.21E-03	2.88E-03	1.41E-03	1.45E-03	1.61E-03	2.12E-04	3.67E-08	1.43E-03	2.15E-03
C61	0.00E+00	1.15E-05	8.72E-07	2.59E+01	2.98E-05	8.66E-02	1.54E-05	8.00E-03	3.51E-03	5.54E-04	1.57E-03	7.28E-04	7.48E-04	1.22E-03	1.18E-04	2.02E-08	8.19E-04	1.49E-03
C62	0.00E+00	2.18E-05	2.06E-06	6.39E+01	1.07E-04	2.78E-01	3.91E-05	6.80E-03	1.81E-02	2.52E-03	3.80E-03	2.26E-03	2.32E-03	9.77E-04	3.11E-04	4.89E-08	1.48E-03	1.25E-03
C63	0.00E+00	6.54E-05	4.25E-06	9.42E+01	8.27E-05	2.65E-01	7.08E-05	5.86E-02	1.56E-02	2.37E-03	7.47E-03	2.61E-03	2.69E-03	7.60E-03	3.96E-04	5.91E-08	4.78E-03	1.10E-02
C64	0.00E+00	4.36E-05	3.38E-06	1.04E+02	1.24E-04	3.56E-01	6.09E-05	2.86E-02	1.42E-02	2.23E-03	6.16E-03	2.95E-03	3.03E-03	4.39E-03	4.79E-04	8.30E-08	3.13E-03	5.32E-03
C65	0.00E+00	2.46E-07	2.63E-08	9.90E-01	1.61E-06	4.27E-03	5.25E-07	2.70E-05	1.83E-04	2.73E-05	5.04E-05	3.27E-05	3.35E-05	6.68E-06	4.93E-06	8.86E-10	1.69E-05	4.48E-06
C66	0.00E+00	1.29E-05	1.04E-06	2.69E+01	4.04E-05	1.09E-01	1.86E-05	7.44E-03	7.43E-03	1.04E-03	1.85E-03	9.40E-04	9.65E-04	8.33E-04	1.26E-04	1.94E-08	8.83E-04	1.39E-03
C67	0.00E+00	4.07E-05	2.96E-06	1.10E+02	1.01E-04	3.27E-01	5.45E-05	3.35E-02	7.74E-03	1.42E-03	5.66E-03	2.49E-03	2.55E-03	6.86E-03	4.84E-04	7.82E-08	3.11E-03	6.27E-03
C68	0.00E+00	3.19E-05	2.32E-06	8.67E+01	8.20E-05	2.63E-01	4.33E-05	2.53E-02	6.17E-03	1.13E-03	4.50E-03	1.99E-03	2.04E-03	5.22E-03	3.85E-04	6.38E-08	2.46E-03	4.72E-03
C69	0.00E+00	5.54E-05	4.18E-06	1.32E+02	1.34E-04	4.13E-01	7.24E-05	4.34E-02	1.33E-02	2.22E-03	7.33E-03	3.36E-03	3.45E-03	7.40E-03	5.93E-04	9.52E-08	3.88E-03	8.12E-03
C70	0.00E+00	5.62E-05	4.04E-06	1.51E+02	1.43E-04	4.58E-01	7.62E-05	4.37E-02	1.07E-02	1.97E-03	7.95E-03	3.47E-03	3.56E-03	9.14E-03	6.72E-04	1.14E-07	4.39E-03	8.17E-03
C71	0.00E+00	4.90E-05	3.45E-06	9.38E+01	9.42E-05	2.85E-01	5.94E-05	3.84E-02	1.23E-02	1.95E-03	6.14E-03	2.53E-03	2.60E-03	5.79E-03	4.14E-04	6.88E-08	3.54E-03	7.19E-03
C72	0.00E+00	3.38E-06	2.68E-07	6.81E+00	1.02E-05	2.73E-02	4.83E-06	1.93E-03	1.88E-03	2.64E-04	4.84E-04	2.40E-04	2.46E-04	2.18E-04	3.19E-05	5.02E-09	2.38E-04	3.60E-04
C73	0.00E+00	1.80E-05	1.40E-06	3.47E+01	4.92E-05	1.33E-01	2.46E-05	1.09E-02	7.75E-03	1.13E-03	2.46E-03	1.19E-03	1.22E-03	1.34E-03	1.61E-04	2.75E-08	1.24E-03	2.04E-03
C74	0.00E+00	6.19E-05	4.29E-06	1.06E+02	1.12E-04	3.37E-01	7.39E-05	5.05E-02	1.81E-02	2.73E-03	7.66E-03	3.08E-03	3.16E-03	6.63E-03	4.66E-04	7.33E-08	4.50E-03	9.47E-03
C81	0.00E+00	6.96E-05	4.67E-06	1.13E+02	9.08E-05	3.00E-01	7.51E-05	6.36E-02	1.43E-02	2.27E-03	7.79E-03	2.86E-03	2.94E-03	9.30E-03	4.76E-04	6.99E-08	4.85E-03	1.19E-02
C82	0.00E+00	6.98E-05	4.56E-06	1.01E+02	8.87E-05	2.85E-01	7.56E-05	6.31E-02	1.68E-02	2.55E-03	7.95E-03	2.80E-03	2.88E-03	8.15E-03	4.26E-04	6.26E-08	5.07E-03	1.19E-02
C83	0.00E+00	1.05E-04	7.34E-06	2.67E+02	1.95E-04	7.01E-01	1.26E-04	1.04E-01	1.27E-02	2.66E-03	1.30E-02	5.29E-03	5.44E-03	2.15E-02	1.12E-03	1.72E-07	7.54E-03	1.95E-02
C84	0.00E+00	4.41E-05	2.76E-06	9.55E+01	5.68E-05	2.14E-01	4.86E-05	4.49E-02	5.78E-03	1.10E-03	5.25E-03	1.76E-03	1.81E-03	9.18E-03	3.87E-04	5.60E-08	3.44E-03	8.42E-03
C85	0.00E+00	5.46E-05	3.70E-06	1.35E+02	1.09E-04	3.67E-01	6.82E-05	4.79E-02	9.02E-03	1.67E-03	7.22E-03	2.86E-03	2.94E-03	9.93E-03	5.78E-04	9.35E-08	4.28E-03	8.97E-03
C86	0.00E+00	8.93E-05	5.59E-06	1.95E+02	1.19E-04	4.44E-01	9.96E-05	8.89E-02	1.19E-02	2.25E-03	1.08E-02	3.63E-03	3.74E-03	1.83E-02	7.93E-04	1.19E-07	7.02E-03	1.67E-02
D63	0.00E+00	1.17E-07	1.25E-08	4.77E-01	7.73E-07	2.09E-03	2.50E-07	1.33E-05	7.29E-05	1.13E-05	2.41E-05	1.56E-05	1.60E-05	3.07E-06	2.38E-06	4.48E-10	8.09E-06	2.19E-06
D64	0.00E+00	8.48E-06	5.61E-07	1.33E+01	1.09E-05	3.59E-02	9.16E-06	7.59E-03	1.69E-03	2.70E-04	9.56E-04	3.43E-04	3.53E-04	1.12E-03	5.56E-05	8.48E-09	6.03E-04	1.43E-03
D65	0.00E+00	2.19E-05	1.58E-06	4.82E+01	4.71E-05	1.47E-01	2.76E-05	1.73E-02	4.58E-03	7.81E-04	2.83E-03	1.22E-03	1.25E-03	3.01E-03	2.12E-04	3.56E-08	1.58E-03	3.25E-03
D66	0.00E+00	2.79E-05	2.00E-06	6.05E+01	5.80E-05	1.83E-01	3.47E-05	2.25E-02	5.72E-03	9.77E-04	3.57E-03	1.52E-03	1.56E-03

Appendix F.4.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
D82	0.00E+00	1.30E-05	1.36E-06	5.13E+01	8.22E-05	2.23E-01	2.72E-05	1.97E-03	7.80E-03	1.21E-03	2.63E-03	1.67E-03	1.72E-03	4.15E-04	2.55E-04	4.81E-08	9.15E-04	3.37E-04
D83	0.00E+00	4.15E-05	3.28E-06	1.06E+02	1.19E-04	3.58E-01	5.76E-05	3.01E-02	1.05E-02	1.78E-03	5.78E-03	2.83E-03	2.91E-03	5.12E-03	4.83E-04	8.06E-08	2.87E-03	5.62E-03
D84	0.00E+00	3.62E-05	2.82E-06	9.01E+01	9.85E-05	3.00E-01	4.93E-05	2.69E-02	8.88E-03	1.50E-03	4.96E-03	2.38E-03	2.45E-03	4.58E-03	4.08E-04	6.78E-08	2.51E-03	5.03E-03
D85	0.00E+00	2.99E-05	2.21E-06	6.68E+01	6.51E-05	2.05E-01	3.75E-05	2.48E-02	6.39E-03	1.08E-03	3.80E-03	1.68E-03	1.73E-03	4.20E-03	2.94E-04	4.66E-08	2.07E-03	4.65E-03
D86	0.00E+00	2.65E-05	2.16E-06	7.09E+01	8.23E-05	2.46E-01	3.81E-05	1.86E-02	7.12E-03	1.20E-03	3.79E-03	1.93E-03	1.98E-03	3.14E-03	3.26E-04	5.46E-08	1.81E-03	3.46E-03
D87	0.00E+00	7.39E-05	5.56E-06	1.74E+02	1.81E-04	5.57E-01	9.69E-05	5.69E-02	1.69E-02	2.86E-03	9.83E-03	4.50E-03	4.63E-03	9.75E-03	7.77E-04	1.29E-07	5.21E-03	1.06E-02
D88	0.00E+00	5.57E-05	3.97E-06	1.18E+02	1.09E-04	3.48E-01	6.76E-05	4.68E-02	1.11E-02	1.89E-03	6.94E-03	2.91E-03	2.99E-03	8.01E-03	5.13E-04	8.21E-08	3.95E-03	8.76E-03
D89	0.00E+00	1.18E-05	8.76E-07	2.26E+01	2.97E-05	8.45E-02	1.58E-05	8.12E-03	4.07E-03	6.13E-04	1.61E-03	7.29E-04	7.49E-04	1.09E-03	1.03E-04	1.82E-08	8.65E-04	1.52E-03
D90	0.00E+00	1.61E-05	9.86E-07	2.02E+01	1.71E-05	5.49E-02	1.70E-05	1.38E-02	3.34E-03	5.09E-04	1.84E-03	5.80E-04	5.97E-04	1.83E-03	8.29E-05	1.40E-08	1.24E-03	2.59E-03
D91	0.00E+00	3.73E-06	3.46E-07	1.18E+01	1.73E-05	4.80E-02	6.50E-06	1.61E-03	1.75E-03	2.72E-04	6.34E-04	3.71E-04	3.80E-04	2.54E-04	5.71E-05	1.02E-08	2.54E-04	2.97E-04
D92	0.00E+00	1.14E-05	1.08E-06	3.93E+01	6.11E-05	1.66E-01	2.18E-05	2.56E-03	5.89E-03	9.18E-04	2.16E-03	1.27E-03	1.30E-03	5.17E-04	1.94E-04	3.74E-08	8.55E-04	4.58E-04
D93	0.00E+00	2.89E-06	2.84E-07	1.03E+01	1.60E-05	4.37E-02	5.59E-06	7.59E-04	1.55E-03	2.41E-04	5.44E-04	3.32E-04	3.40E-04	1.36E-04	5.08E-05	9.47E-09	2.04E-04	1.37E-04
D94	0.00E+00	1.14E-05	1.04E-06	3.60E+01	5.36E-05	1.47E-01	2.02E-05	4.03E-03	5.33E-03	8.31E-04	2.00E-03	1.14E-03	1.17E-03	6.96E-04	1.75E-04	3.29E-08	8.32E-04	7.37E-04
E01	0.00E+00	1.65E-05	1.38E-06	4.00E+01	6.08E-05	1.67E-01	2.59E-05	8.62E-03	7.45E-03	1.12E-03	2.58E-03	1.36E-03	1.39E-03	1.21E-03	1.90E-04	3.50E-08	1.19E-03	1.60E-03
E02	0.00E+00	1.96E-05	1.65E-06	4.75E+01	7.16E-05	1.97E-01	3.05E-05	1.07E-02	8.85E-03	1.33E-03	3.04E-03	1.61E-03	1.65E-03	1.48E-03	2.25E-04	4.08E-08	1.39E-03	1.99E-03
E03	0.00E+00	7.29E-06	5.85E-07	1.99E+01	2.41E-05	7.10E-02	1.09E-05	4.37E-03	2.01E-03	3.40E-04	1.10E-03	5.51E-04	5.66E-04	7.81E-04	9.27E-05	1.68E-08	5.32E-04	8.12E-04
E04	0.00E+00	9.50E-06	8.32E-07	3.00E+01	3.98E-05	1.15E-01	1.58E-05	4.60E-03	3.12E-03	5.25E-04	1.57E-03	8.66E-04	8.89E-04	8.26E-04	1.43E-04	2.64E-08	6.82E-04	8.48E-04
E05	0.00E+00	9.19E-06	8.21E-07	3.02E+01	4.11E-05	1.18E-01	1.59E-05	3.93E-03	3.17E-03	5.32E-04	1.57E-03	8.83E-04	9.06E-04	7.24E-04	1.45E-04	2.72E-08	6.66E-04	7.22E-04
E06	0.00E+00	3.46E-06	2.83E-07	1.04E+01	1.40E-05	3.98E-02	5.75E-06	1.33E-03	1.08E-03	1.83E-04	5.87E-04	3.03E-04	3.11E-04	2.77E-04	5.00E-05	1.01E-08	2.77E-04	2.43E-04
E07	0.00E+00	7.66E-05	6.26E-06	1.75E+02	2.55E-04	7.09E-01	1.14E-04	4.62E-02	3.24E-02	4.85E-03	1.14E-02	5.83E-03	5.99E-03	6.27E-03	8.19E-04	1.46E-07	5.41E-03	8.61E-03
E08	0.00E+00	6.70E-05	6.01E-06	1.83E+02	2.91E-04	7.93E-01	1.13E-04	2.99E-02	3.45E-02	5.16E-03	1.12E-02	6.31E-03	6.47E-03	4.29E-03	8.79E-04	1.62E-07	4.69E-03	5.53E-03
E09	0.00E+00	7.17E-05	5.80E-06	1.61E+02	2.31E-04	6.45E-01	1.05E-04	4.43E-02	2.96E-02	4.44E-03	1.05E-02	5.33E-03	5.47E-03	5.99E-03	7.49E-04	1.33E-07	5.07E-03	8.26E-03
E10	0.00E+00	5.87E-05	5.22E-06	1.58E+02	2.50E-04	6.81E-01	9.83E-05	2.68E-02	2.97E-02	4.45E-03	9.70E-03	5.43E-03	5.57E-03	3.83E-03	7.57E-04	1.40E-07	4.12E-03	4.95E-03
E11	0.00E+00	7.76E-05	6.25E-06	1.72E+02	2.45E-04	6.88E-01	1.13E-04	4.90E-02	3.17E-02	4.75E-03	1.13E-02	5.69E-03	5.84E-03	6.60E-03	8.00E-04	1.41E-07	5.46E-03	9.15E-03
E12	0.00E+00	7.97E-05	7.10E-06	2.15E+02	3.40E-04	9.26E-01	1.33E-04	3.69E-02	4.04E-02	6.05E-03	1.31E-02	7.38E-03	7.57E-03	5.24E-03	1.03E-03	1.89E-07	5.56E-03	6.83E-03
E13	0.00E+00	2.59E-05	2.17E-06	7.55E+01	9.52E-05	2.78E-01	4.05E-05	1.45E-02	7.73E-03	1.30E-03	4.05E-03	2.13E-03	2.19E-03	2.58E-03	3.55E-04	6.45E-08	1.87E-03	2.69E-03
E14	0.00E+00	1.78E-05	1.56E-06	5.57E+01	7.32E-05	2.12E-01	2.93E-05	9.20E-03	5.80E-03	9.74E-04	2.90E-03	1.60E-03	1.64E-03	1.62E-03	2.65E-04	4.80E-08	1.25E-03	1.70E-03
E15	0.00E+00	1.82E-05	1.57E-06	5.34E+01	6.63E-05	1.95E-01	2.81E-05	1.16E-02	5.48E-03	9.21E-04	2.77E-03	1.50E-03	1.54E-03	1.94E-03	2.50E-04	4.26E-08	1.23E-03	2.15E-03
E16	0.00E+00	1.17E-05	1.06E-06	3.78E+01	5.03E-05	1.45E-01	1.97E-05	6.00E-03	3.96E-03	6.64E-04	1.93E-03	1.09E-03	1.12E-03	1.03E-03	1.81E-04	3.23E-08	8.09E-04	1.11E-03
E17	0.00E+00	1.07E-05	9.56E-07	3.49E+01	4.73E-05	1.35E-01	1.84E-05	4.79E-03	3.66E-03	6.15E-04	1.82E-03	1.02E-03	1.05E-03	8.72E-04	1.68E-04	3.12E-08	7.75E-04	8.80E-04
E18	0.00E+00	8.55E-06	6.60E-07	2.18E+01	2.49E-05	7.45E-02	1.21E-05	5.58E-03	2.16E-03	3.66E-04	1.23E-03	5.88E-04	6.04E-04	9.95E-04	9.99E-05	1.80E-08	6.29E-04	1.04E-03
E19	0.00E+00	5.56E-05	4.15E-06	1.08E+02	1.42E-04	4.05E-01	7.47E-05	3.82E-02	1.94E-02	2.93E-03	7.64E-03	3.48E-03	3.58E-03	5.14E-03	4.90E-04	8.68E-08	4.06E-03	7.14E-03
E20	0.00E+00	3.29E-05	2.87E-06	8.69E+01	1.38E-04	3.75E-01	5.50E-05	1.41E-02	1.64E-02	2.45E-03	5.46E-03	3.01E-03	3.08E-03	2.08E-03	4.17E-04	7.89E-08	2.38E-03	2.60E-03
E21	0.00E+00	7.60E-06	6.34E-07	2.14E+01	2.60E-05	7.69E-02	1.14E-05	4.87E-03	2.18E-03	3.67E-04	1.13E-03	5.94E-04	6.10E-04	8.32E-04	9.98E-05	1.72E-08	5.25E-04	9.06E-04
E22	0.00E+00	1.02E-06	8.65E-08	2.84E+00	3.35E-06	1.00E-02	1.48E-06	7.48E-04	2.89E-04	4.84E-05	1.45E-04	7.76E-05	7.97E-05	1.21E-04	1.31E-05	2.08E-09	6.51E-05	1.39E-04
E23	0.00E+00	5.14E-05	3.67E-06	1.12E+02	1.07E-04	3.38E-01	6.41E-05	4.09E-02	1.06E-02	1.80E-03	6.61E-03	2.80E-03	2.88E-03	7.11E-03	4.90E-04	8.23E-08	3.73E-03	7.65E-03
E24	0.00E+00	4.25E-05	2.85E-06	8.12E+01	6.56E-05	2.18E-01	4.84E-05	3.71E-02	7.35E-03	1.26E-03	5.06E-03	1.91E-03	1.96E-03	6.43E-03	3.43E-04	5.53E-08	3.10E-03	6.95E-03
E25	0.00E+00	1.27E-05	1.20E-06	4.12E+01	6.08E-05	1.69E-01	2.25E-05	5.34E-03	6.13E-03	9.52E-04	2.18E-03	1.30E-03	1.33E-03	8.37E-04	2.00E-04	3.56E-08	8.55E-04	9.82E-04
E26	0.00E+00	1.25E-05	1.21E-06	4.25E+01	6.41E-05	1.77E-01	2.30E-05	4.57E-03	6.36E-03	9.88E-04	2.24E-03	1.35E-03	1.38E-03	7.37E-04	2.07E-04	3.75E-08	8.53E-04	8.34E-04
E27	0.00E+00	2.03E-05	1.56E-06	4.32E+01	4.79E-05	1.45E-01	2.60E-05	1.65E-02	5.96E-03	9.33E-04	2.59E-03	1.22E-03	1.25E-03	2.38E-03	1.93E-04	2.98E-08	1.34E-03	3.09E-03
E28	0.00E+00	1.21E-05	1.23E-06	4.54E+01	7.15E-05	1.95E-01	2.42E-05	2.61E-03	6.87E-03	1.07E-03	2.35E-03	1.47E-03	1.51E-03	4.85E-04	2.25E-04	4.18E-08	8.39E-04	4.64E-04
E29	0.00E+00	7.18E-06	6.79E-07	2.39E+01	3.60E-05	9.90E-02	1.31E-05	2.49E-03	3.56E-03	5.54E-04	1.28E-03	7.59E-04	7.79E-04	4.17E-04	1.17E-04	2.15E-08	5.04E-04	4.54E-04
E30	0.00E+00	1.42E-06	1.40E-07	5.25E+00	8.36E-06	2.26E-02	2.86E-06	2.12E-04	7.93E-04	1.23E-04	2.81E-04	1.71E-04	1.75E-04	4.94E-05	2.61E-05	5.05E-09	1.05E-04	3.65E-05
E31	0.00E+00	1.78E-05	1.74E-06	6.26E+01	9.66E-05	2.64E-01	3.40E-05	4.98E-03	9.41E-03	1.46E-03	3.31E-03	2.01E-03	2.06E-03	8.75E-04	3.08E-04	5.72E-08	1.25E-03	8.99E-04
E32	0.00E+00	3.54E-06	3.54E-07	1.30E+01	2.03E-05	5.53E-02	6.98E-06	8.33E-04	1.96E-03	3.04E-04	6.78E-04	4.19E-04	4.29E-04	1.53E-04	6.40E-05	1.20E-08	2.49E-04	1.49E-04
E33	0.00E+00	5.99E-05	5.17E-06	1.52E+02	2.35E-04	6.44E-01	9.62E-05	3.06E-02	2.85E-02	4.27E-03	9.53E-03	5.19E-03	5.32E-03	4.28E-03	7.25E-04	1.32E-07	4.20E-03	5.68E-03
E34	0.00E+00	2.33E-05	2.05E-06	6.16E+01	9.68E-05	2.64E-01	3.85E-05	1.10E-02	1.16E-02	1.73E-03	3.80E-03	2.11E-03	2.17E-03	1.56E-03	2.95E-04	5.43E-08	1.63E-03	2.05E-03
E35	0.00E+00	5.48E-05	4.38E-06	1.19E+02	1.67E-04	4.70E-01	7.84E-05	3.60E-02	2.19E-02	3.28E-03	7.86E-03	3.91E-03	4.01E-03	4.81E-03	5.51E-04	9.62E-08	3.85E-03	6.73E-03
E36	0.00E+00	1.77E-05	1.48E-06	4.22E+01	6.28E-05	1.74E-01	2.72E-05	1.00E-02	7.83E-03	1.17E-03	2.71E-03	1.42E-03	1.46E-03	1.38E-03	1.99E-04	3.59E-08	1.25E-03	1.86E-03
E37	0.00E+00	5.64E-05	4.55E-06	1.26E+02	1.81E-04	5.05E-01	8.26E-05	3.51E-02	2.32E-02	3.48E-03	8.28E-03	4.18E-03	4.29E-03	4.74E-03	5.87E-04	1.04E-07	3.99E-03	6.54E-03
E38	0.00E+00	2.37E-05	1.85E-06	4.93E+01	6.77E-05	1.92E-01	3.31E-05	1.59E-02	9.01E-03	1.35E-03	3.34E-03	1.61E-03	1.65E-03	2.12E-03	2.27E-04	3.97E-08	1.68E-03	2.97E-03
E39	0.00E+00	2.39E-05	2.28E-06	8.05E+01	1.22E-04	3.34E-01	4.40E-05	8.11E-03	1.20E-02	1.87E-03	4.30E-03	2.56E-03	2.63E-03	1.36E-03	3.93E-04	7.23E-08	1.67E-03	1.48E-03
E40	0.00E+00	2.20E-05	1.92E-06	6.40E+01	9.11E-05	2.53E-01	3.64E-05	1.01E-02	9.35E-03	1.46E-03	3.61E-03	1.99E-03	2.04E-03	1.63E-03	3.07E-04	5.59E-08	1.57E-03	1.87E-03
E41	0.00E+00	1.26E-05	1.20E-06	4.15E+01	6.16E-05	1.70E-01	2.26E-05	5.01E-03	6.17E-03	9.59E-04	2.21E-03	1.31E-03	1.34E-03	8.00E-04	2.01E-04	3.63E-08	8.63E-04	9.19E-04
E42	0.00E+00	2.30E-05	1.83E-06	5.63E+01	7.31E-05	2.08E-01	3.36E-05	1.36E-02	8.00E-03	1.26E-03	3.39E-03	1.69E-03	1.73E-03	2.13E-03	2.63E-04	4.69E-08	1.65E-03	2.54E-03
E43	0.00E+00	9.50E-06	9.37E-07	3.35E+01	5.13E-05	1.41E-01	1.80E-05	3.03E-03	5.03E-03	7.82E-04	1.74E-03	1.07E-03	1.10E-03	5.01E-04	1.64E-04	2.99E-08	6.46E-04	5.50E-04
E44	0.00E+00	1.84E-05	1.72E-06	5.95E+01	8.81E-05	2.44E-01	3.27E-05	7.33E-03	8.84E-03	1.38E-03	3.19E-03	1.88E-03	1.92E-03	1.18E-03	2.89E-04	5.23E-08	1.27E-03	1.35E-03
E45	0.00E+00	2.38E-05	1.88E-06	6.33E+01	7.53E-05	2.22E-01	3.49E-05	1.45E-02	6.34E-03	1.08E-03	3.54E-03	1.74E-03	1.78E-03	2.61E-03	2.93E-04	5.35E-08	1.76E-03	2.70E-03
E46	0.00E+00	1.66E-05	1.25E-06	4.07E+01	4.54E-05	1.36E-01	2.29E-05	1.11E-02	4.00E-03	6.80E-04	2.34E-03	1.09E-03	1.12E-03	1.99E-03	1.85E-04	3.33E-08	1.22E-03	2.08E-03
E47	0.00E+00	2.35E-05	1.98E-06	6.97E+01	8.95E-05	2.60E-01	3.75E-05	1.23E-02	7.17E-03	1.21E-03	3.75E-03	1.98E-03	2.04E-03	2.23E-03	3.30E-04	6.09E-08	1.72E-03	2.28E-03
E48	0.00E+00	6.20E-06	4.58E-07	1.44E+01	1.51E-05	4.63E-02	8.17E-06	4.55E-03	1.39E-03	2.37E-04	8.38E-04	3.75E-04	3.85E-04	8.00E-04	6.47E-05	1.12E-08	4.53E-04	8.50E-04
E49	0.00E+00	2.43E-05	1.88E-06	6.28E+01	7.31E-05	2.17E-01	3.49E-05	1.53E-02	6.25E-03	1.06E-03	3.55E-03	1.71E-03	1.75E-03	2.75E-03	2.89E-04	5.26E-08	1.79E-03	2.85E-03
E50	0.00E+00	4.51E-06	3.77E-07	1.28E+01	1.57E-05	4.62E-02	6.82E-06	2.85E-03	1.31E-03	2.20E-04	6.78E-04	3.56E-04	3.66E-04	4.88E-04	5.98E-05	1.03E-08	3.12E-04	5.31E-04
E51	0.00E+00	2.59E-05	2.08E-06	7.11E+01	8.65E-05	2.54E-01	3.88E-05	1.54E-02	7.19E-03	1.22E-03	3.92E-03	1.97E-03	2.03E-03	2.75E-03	3.31E-04	6.03E-08	1.89E-03	2.85E-03
E52	0.00E+00	8.79E-06	7.31E-07	2.36E+01	2.70E-05	8.15E-02	1.24E-05	6.73E-03	2.38E-03	3.99E-04	1.22E-03	6.36E-04	6.54E-04	1.09E-03	1.08E-04	1.69E-08	5.67E-04	1.26E-03
E53	0.00E+00	2.32E-05	1.94E-06	6.71E+01	8.40E-05	2.46E-01	3.60E-05	1.34E-02	6.87E-03	1.16E-03	3.60E-03	1.89E-03	1.94E-03	2.36E-03	3.15E-04	5.67E-08	1.66E-03	2.48E-03
E54	0.00E+00	3.88E-05	2.71E-06	7.80E+01	6.65E-05	2.18E-01	4.51E-05	3.44E-02	7.20E-03	1.23E-03	4.64E-03	1.87E-03	1.92E-03	5.85E-03	3.33E-04	5.11E-08	2.72E-03	6.46E-03
E55	0.00E+00	1.86E-05	1.68E-06	6.13E+01	8.33E-05	2.39E-01	3.20E-05	8.35E-03	6.44E-03	1.08E-03	3.15E-03	1.79E-03	1.84E-03	1.49E-03	2.95E-04	5.42E-08	1.32E-03	1.54E-03
E56	0.00E+00	1.45E-05	1.20E-06	4.11E+01	5.07E-05	1.49E-01	2.20E-05	8.80E-03	4.19E-03	7.06E-04	2.20E-03	1.15E-03	1.18E-03	1.53E-03	1.92E-04	3.39E-08	1.02E-03	1.63E-03
E57	0.00E+00	1.04E-05	9.15E-07	2.98E+01	4.14E-05	1.16E-01	1.67E-05	5.56E-03	4.34E-03	6.77E-04	1.64E-03	9.14E-04	9.38E-04	8.48E-04	1.42E-04	2.48E-08	7.06E-04	1.03E-03
E58	0.00E+00	1.32E-05	1.09E-06	3.38E+01	4.44E-05	1.27E-01	1.97E-05	8.03E-03	4.84E-03	7.57E-04	1.96E-03	1.02E-03	1.04E-03	1.22E-03	1.58E-04	2.75E-08	9.18E-04	1.49E-03
E59	0.00E+00	5.76E-05	4.28E-06	1.33E+02	1.37E-04	4.22E-01	7.48E-05	4.45E-02	1.29E-02	2.18E-03	7.63E-03	3.43E-03	3.52E-03	7.67E-03	5.94E-04	9.92E-08	4.10E-03	8.32E-03
E60	0.00E+00	4.65E-05	3.37E-06	1.03E+02	1.02E-04	3.18E-01	5.88E-05	3.67E-02	9.84E-03	1.68E-03	6.04E-03	2.61E-03	2.69E-03	6.35E-03	4.56E-04	7.63E-08	3.35E-03	6.86E-03
E61	0.00E+00	1.81E-05	1.77E-06	6.78E+01	9.84E-05	2.78E-01	3.46E-05	5.60E-03	7.29E-03	1.22E-03	3.38E-03	2.05E-03	2.10E-03	1.04E-03	3.33E-04	6.26E-08	1.28E-03	1.01E-03
E62	0.00E+00	1.55E-05	1.54E-06	6.00E+01	8.83E-05	2.48E-01	3.04E-05	4.22E-03	6.48E-03	1.08E-03	2.96E-03	1.82E-03	1.87E-03	7.90E-04	2.96E-04	5.57E-08	1.09E-03	7.55E-04
E63	0.00E+00	7.80E-05	5.77E-06	1.59E+02	1.77E-04	5.29E-01	9.95E-05	5.91E-02	2.18E-02	3.43E-03	1.01E-02	4.51E-03	4.63E-03	8.83E-03	7.13E-04	1.18E-07	5.48E-03	1.11E-02
E64	0.00E+00	5.53E-05	4.54E-06	1.39E+02	1.80E-04	5.17E-01	8.13E-05	3.47E-02	1.99E-02	3.11E-03	8.09E-03	4.16E-03	4.27E-03	5.24E-03	6.49E-04	1.12E-07	3.81E-03	6.46E-03
E65	0.00E+00	2.80E-05	2.73E-06	9.76E+01	1.50E-04	4.10E-01	5.29E-05	8.53E-03	1.46E-02	2.28E-03	5.15E-03	3.12E-03	3.20E-03	1.46E-03	4.79E-04	8.83E-08	1.95E-03	1.55E-03
E66	0.00E+00	3.90E-05	3.66E-06	1.25E+02	1.84E-04	5.10E-01	6.84E-05	1.69E-02	1.86E-02	2.89E-03	6.66E-03	3.93E-03	4.03E-03	2.64E-03	6.05E-04	1.08E-07	2.63E-03	3.12E-03
E67	0.00E+00	3.02E-05	2.61E-06	9.59E+01	1.29E-04	3.70E-01	5.12E-05	1.27E-02	1.00E-02	1.69E-03	5.13E-03	2.79E-03	2.87E-03	2.42E-03	4.61E-04	8.83E-08	2.26E-03	2.33E-03
E68	0.00E+00	1.69E-05	1.64E-06	6.34E+01	9.25E-05	2.61E-01	3.24E-05	4.86E-03	6.82E-03	1.14E-03	3.17E-03	1.92E-03	1.97E-03	9.25E-04	3.12E-04	5.91E-08	1.20E-03	8.74E-04
E69	0.00E+00	2.07E-05	1.96E-06	7.06E+01	1.08E-04	2.96E-01	3.89E-05	5.66E-03	1.06E-02	1.64E-03	3.82E-03	2.26E-03	2.32E-03	1.03E-03	3.46E-04	6.54E-08	1.50E-03	1.02E-03
E70	0.00E+00	1.35E-05	1.35E-06	4.97E+01	7.78E-05	2.12E-01	2.67E-05	3.21E-03	7.50E-03	1.17E-03	2.59E-03	1.60E-03	1.65E-03	5.83E-04	2.45E-04	4.57E-08	9.41E-04	5.73E-04
E71	0.00E+00	2.32E-05	2.29E-06	8.41E+01	1.32E-04	3.58E-01	4.55E-05	5.37E-03	1.27E-02	1.97E-03	4.43E-03	2.72E-03	2.78E-03	1.01E-03	4.15E-04	7.80E-08	1.65E-03	9.58E-04
E72	0.00E+00	2.11E-05	2.18E-06	8.11E+01	1.28E-04	3.49E-01	4.30E-05	4.36E-03	1.23E-02	1.91E-03	4.15E-03	2.63E-03	2.69E-03	8.07E-04	4.02E-04	7.46E-08	1.45E-03	7.69E-04
E73	0.00E+00	4.10E-06	4.38E-07	1.51E+01	2.69E-05	7.11E-02	8.73E-06	4.33E-04	2.92E-03	4.36E-04	8.39E-04	5.44E-04	5.58E-04	1.03E-04	7.51E-05	1.45E-08	2.81E-04	7.20E-05
E74	0.00E+00	5.07E-06	5.26E-07	1.77E+01	3.09E-05	8.23E-02	1.03E-05	9.79E-04	3.42E-03	5.10E-04	9.94E-04	6.33E-04	6.49E-04	1.76E-04	8.76E-05	1.67E-08	3.45E-04	1.73E-04
E75	0.00E+00	5.70E-05	5.09E-06	1.76E+02	2.40E-04	6.67E-01	9.47E-05	2.80E-02	2.50E-02	3.92E-03	9.30E-03	5.24E-03	5.37E-03	4.37E-03	8.45E-04	1.49E-07	3.93E-03	5.17E-03
E76	0.00E+00	3.33E-05	3.14E-06	1.15E+02	1.66E-04	4.55E-01	6.07E-05	1.18E-02	1.66E-02	2.60E-03	5.94E-03	3.51E-03	3.60E-03	1.98E-03	5.63E-04	1.02E-07	2.34E-03	2.15E-03
E77	0.00E+00	6.03E-05	5.45E-06	1.91E+02	2.63E-04	7.29E-01	1.02E-04	2.81E-02	2.72E-02	4.26E-03	1.00E-02	5.70E-03	5.85E-03	4.42E-03	9.19E-04	1.63E-07	4.17E-03	5.18E-03
E78	0.00E+00	4.04E-05	3.82E-06	1.40E+02	2.02E-04	5.52E-01	7.35E-05	1.46E-02	2.02E-02	3.16E-03	7.19E-03	4.26E-03	4.37E-03	2.42E-03	6.84E-04	1.24E-07	2.82E-03	2.66E-03
E79	0.00E+00	5.14E-05	4.85E-06	1.79E+02	2.58E-04	7.05E-01	9.41E-05	1.75E-02	2.57E-02	4.03E-03	9.22E-03	5.44E-03	5.58E-03	2.98E-03	8.73E-04	1.59E-07	3.64E-03	3.19E-03
E80	0.00E+00	4.30E-05	3.88E-06	1.37E+02	1.91E-04	5.26E-01	7.36E-05	1.87E-02	1.95E-02	3.06E-03	7.25E-03	4.11E-03	4.22E-03	3.03E-03	6.61E-04	1.19E-07	3.03E-03	3.45E-03
E81	0.00E+00	1.22E-06	1.16E-07	3.85E+00	6.72E-06	1.77E-02	2.38E-06	1.92E-04	7.38E-04	1.11E-04	2.35E-04	1.39E-04	1.42E-04

Appendix F.4.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E97	0.00E+00	6.13E-05	4.95E-06	1.71E+02	2.00E-04	5.89E-01	9.07E-05	3.85E-02	1.79E-02	2.98E-03	9.11E-03	4.61E-03	4.73E-03	6.76E-03	7.94E-04	1.38E-07	4.38E-03	7.16E-03
E98	0.00E+00	3.97E-05	3.10E-06	1.01E+02	1.10E-04	3.31E-01	5.45E-05	2.92E-02	1.04E-02	1.73E-03	5.49E-03	2.64E-03	2.71E-03	4.98E-03	4.61E-04	7.57E-08	2.78E-03	5.44E-03
F01	0.00E+00	3.95E-05	3.06E-06	8.20E+01	1.13E-04	3.19E-01	5.53E-05	2.59E-02	1.50E-02	2.25E-03	5.60E-03	2.69E-03	2.76E-03	3.50E-03	3.78E-04	6.70E-08	2.84E-03	4.85E-03
F02	0.00E+00	2.12E-05	1.79E-06	5.17E+01	7.83E-05	2.16E-01	3.32E-05	1.14E-02	9.64E-03	1.44E-03	3.30E-03	1.75E-03	1.80E-03	1.58E-03	2.45E-04	4.46E-08	1.51E-03	2.12E-03
F03	0.00E+00	7.69E-07	7.13E-08	2.56E+00	3.43E-06	9.89E-03	1.31E-06	4.06E-04	2.69E-04	4.50E-05	1.27E-04	7.42E-05	7.61E-05	6.74E-05	1.22E-05	2.13E-09	5.09E-05	7.49E-05
F04	0.00E+00	9.51E-08	1.02E-08	4.13E-01	6.37E-07	1.77E-03	2.06E-07	1.15E-05	4.53E-05	7.56E-06	1.99E-05	1.29E-05	1.32E-05	2.50E-06	2.07E-06	3.96E-10	6.67E-06	1.88E-06
F05	0.00E+00	2.56E-05	2.13E-06	6.07E+01	9.02E-05	2.50E-01	3.91E-05	1.46E-02	1.13E-02	1.69E-03	3.90E-03	2.04E-03	2.09E-03	2.00E-03	2.86E-04	5.15E-08	1.81E-03	2.72E-03
F06	0.00E+00	4.29E-05	3.09E-06	7.44E+01	8.71E-05	2.59E-01	5.27E-05	3.48E-02	1.32E-02	1.98E-03	5.40E-03	2.30E-03	2.36E-03	4.52E-03	3.28E-04	5.33E-08	3.03E-03	6.53E-03
F07	0.00E+00	3.34E-05	2.81E-06	8.16E+01	1.24E-04	3.40E-01	5.24E-05	1.76E-02	1.52E-02	2.28E-03	5.22E-03	2.77E-03	2.84E-03	2.46E-03	3.86E-04	7.09E-08	2.38E-03	3.27E-03
F08	0.00E+00	4.13E-05	3.16E-06	8.32E+01	1.12E-04	3.18E-01	5.66E-05	2.80E-02	1.51E-02	2.27E-03	5.74E-03	2.70E-03	2.78E-03	3.76E-03	3.81E-04	6.70E-08	2.97E-03	5.24E-03
F09	0.00E+00	8.86E-06	8.26E-07	3.08E+01	4.32E-05	1.23E-01	1.59E-05	3.46E-03	3.27E-03	5.48E-04	1.57E-03	9.14E-04	9.38E-04	6.29E-04	1.50E-04	2.78E-08	6.29E-04	6.32E-04
F10	0.00E+00	3.50E-06	3.55E-07	1.40E+01	2.09E-05	5.85E-02	7.07E-06	7.75E-04	1.52E-03	2.53E-04	6.87E-04	4.28E-04	4.39E-04	1.52E-04	6.92E-05	1.32E-08	2.48E-04	1.37E-04
F13	0.00E+00	1.28E-06	1.06E-07	3.57E+00	4.32E-06	1.28E-02	1.92E-06	8.21E-04	3.62E-04	6.11E-05	1.91E-04	9.88E-05	1.01E-04	1.41E-04	1.66E-05	2.89E-09	8.96E-05	1.53E-04
F14	0.00E+00	4.60E-07	3.81E-08	1.21E+00	1.36E-06	4.13E-03	6.38E-07	3.68E-04	1.22E-04	2.04E-05	6.25E-05	3.24E-05	3.33E-05	5.93E-05	5.52E-06	8.41E-10	2.92E-05	6.88E-05
F15	0.00E+00	2.05E-05	1.93E-06	6.69E+01	9.91E-05	2.74E-01	3.66E-05	8.29E-03	9.95E-03	1.55E-03	3.56E-03	2.11E-03	2.16E-03	1.32E-03	3.25E-04	5.84E-08	1.40E-03	1.52E-03
F16	0.00E+00	1.77E-05	1.68E-06	5.80E+01	8.59E-05	2.38E-01	3.17E-05	7.16E-03	8.62E-03	1.34E-03	3.08E-03	1.83E-03	1.87E-03	1.14E-03	2.81E-04	5.06E-08	1.21E-03	1.31E-03
F17	0.00E+00	1.36E-05	1.28E-06	4.42E+01	6.55E-05	1.81E-01	2.42E-05	5.49E-03	6.58E-03	1.02E-03	2.35E-03	1.39E-03	1.43E-03	8.72E-04	2.15E-04	3.86E-08	9.23E-04	1.01E-03
F18	0.00E+00	1.33E-05	1.18E-06	3.80E+01	5.21E-05	1.48E-01	2.12E-05	7.69E-03	5.54E-03	8.62E-04	2.06E-03	1.16E-03	1.19E-03	1.14E-03	1.80E-04	3.06E-08	8.74E-04	1.43E-03
F19	0.00E+00	1.50E-05	1.61E-06	6.15E+01	9.97E-05	2.70E-01	3.23E-05	1.72E-03	9.40E-03	1.46E-03	3.11E-03	2.02E-03	2.07E-03	3.96E-04	3.07E-04	5.78E-08	1.04E-03	2.83E-04
F20	0.00E+00	8.48E-06	9.07E-07	3.47E+01	5.62E-05	1.52E-01	1.82E-05	9.66E-04	5.29E-03	8.21E-04	1.75E-03	1.14E-03	1.16E-03	2.23E-04	1.73E-04	3.25E-08	5.88E-04	1.59E-04
F21	0.00E+00	6.45E-05	4.39E-06	1.07E+02	9.28E-05	3.01E-01	7.13E-05	5.76E-02	1.38E-02	2.19E-03	7.37E-03	2.80E-03	2.88E-03	8.44E-03	4.52E-04	6.79E-08	4.49E-03	1.08E-02
F22	0.00E+00	6.16E-05	4.06E-06	9.45E+01	7.27E-05	2.46E-01	6.50E-05	5.70E-02	1.19E-02	1.90E-03	6.78E-03	2.39E-03	2.46E-03	8.35E-03	3.90E-04	5.68E-08	4.32E-03	1.07E-02
F23	0.00E+00	1.99E-05	1.45E-06	3.89E+01	4.10E-05	1.25E-01	2.44E-05	1.61E-02	5.26E-03	8.29E-04	2.48E-03	1.08E-03	1.11E-03	2.37E-03	1.72E-04	2.73E-08	1.37E-03	3.01E-03
F24	0.00E+00	1.56E-05	1.15E-06	3.17E+01	3.49E-05	1.05E-01	1.98E-05	1.20E-02	4.32E-03	6.81E-04	2.01E-03	8.93E-04	9.18E-04	1.79E-03	1.41E-04	2.32E-08	1.09E-03	2.25E-03
F25	0.00E+00	6.28E-05	4.36E-06	1.02E+02	1.12E-04	3.39E-01	7.44E-05	5.21E-02	1.78E-02	2.68E-03	7.70E-03	3.09E-03	3.18E-03	6.78E-03	4.42E-04	7.17E-08	4.52E-03	9.78E-03
F26	0.00E+00	6.72E-05	4.56E-06	1.03E+02	1.07E-04	3.30E-01	7.71E-05	5.75E-02	1.78E-02	2.69E-03	8.03E-03	3.08E-03	3.17E-03	7.46E-03	4.42E-04	7.05E-08	4.86E-03	1.08E-02
F27	0.00E+00	1.36E-04	9.68E-06	2.38E+02	2.90E-04	8.42E-01	1.72E-04	1.01E-01	4.22E-02	6.36E-03	1.78E-02	7.49E-03	7.69E-03	1.35E-02	1.06E-03	1.84E-07	1.01E-02	1.90E-02
F28	0.00E+00	1.22E-04	8.26E-06	1.90E+02	2.06E-04	6.20E-01	1.43E-04	9.94E-02	3.29E-02	4.98E-03	1.49E-02	5.76E-03	5.93E-03	1.31E-02	8.21E-04	1.37E-07	9.00E-03	1.86E-02
F29	0.00E+00	2.98E-05	2.32E-06	6.25E+01	8.69E-05	2.44E-01	4.21E-05	1.92E-02	1.14E-02	1.71E-03	4.26E-03	2.05E-03	2.11E-03	2.60E-03	2.88E-04	5.15E-08	2.15E-03	3.58E-03
F30	0.00E+00	2.11E-05	2.07E-06	6.75E+01	1.15E-04	3.07E-01	4.03E-05	5.64E-03	1.29E-02	1.93E-03	3.92E-03	2.39E-03	2.45E-03	9.24E-04	3.31E-04	6.31E-08	1.47E-03	1.02E-03
F35	0.00E+00	9.45E-06	8.39E-07	3.08E+01	4.20E-05	1.20E-01	1.63E-05	4.00E-03	3.23E-03	5.44E-04	1.62E-03	9.03E-04	9.26E-04	7.43E-04	1.49E-04	2.80E-08	6.90E-04	7.35E-04
F36	0.00E+00	2.97E-06	2.38E-07	8.38E+00	1.06E-05	3.07E-02	4.62E-06	1.50E-03	8.52E-04	1.45E-04	4.71E-04	2.37E-04	2.43E-04	2.85E-04	3.95E-05	7.60E-09	2.28E-04	2.77E-04
F37	0.00E+00	6.58E-05	5.20E-06	1.41E+02	1.97E-04	5.54E-01	9.36E-05	4.28E-02	2.58E-02	3.87E-03	9.42E-03	4.63E-03	4.75E-03	5.75E-03	6.51E-04	1.15E-07	4.67E-03	7.99E-03
F38	0.00E+00	5.81E-05	5.21E-06	1.58E+02	2.49E-04	6.80E-01	9.75E-05	2.72E-02	2.97E-02	4.44E-03	9.58E-03	5.41E-03	5.55E-03	3.84E-03	7.56E-04	1.38E-07	4.02E-03	5.04E-03
F39	0.00E+00	1.45E-05	1.31E-06	4.76E+01	6.42E-05	1.85E-01	2.47E-05	6.99E-03	5.00E-03	8.38E-04	2.42E-03	1.39E-03	1.42E-03	1.21E-03	2.28E-04	4.11E-08	9.99E-04	1.29E-03
F40	0.00E+00	5.93E-06	5.06E-07	1.71E+01	2.08E-05	6.16E-02	8.97E-06	3.92E-03	1.74E-03	2.93E-04	8.84E-04	4.74E-04	4.87E-04	6.54E-04	7.95E-05	1.33E-08	3.97E-04	7.30E-04
F41	0.00E+00	8.68E-06	8.78E-07	3.25E+01	5.12E-05	1.39E-01	1.74E-05	1.85E-03	4.91E-03	7.63E-04	1.69E-03	1.05E-03	1.08E-03	3.48E-04	1.61E-04	3.00E-08	6.08E-04	3.27E-04
F42	0.00E+00	1.02E-05	1.08E-06	4.13E+01	6.68E-05	1.80E-01	2.18E-05	1.22E-03	6.30E-03	9.77E-04	2.10E-03	1.35E-03	1.39E-03	2.81E-04	2.06E-04	3.89E-08	7.17E-04	2.02E-04
F45	0.00E+00	7.70E-06	7.72E-07	2.81E+01	4.37E-05	1.19E-01	1.50E-05	2.07E-03	4.24E-03	6.58E-04	1.46E-03	9.04E-04	9.27E-04	3.58E-04	1.38E-04	2.55E-08	5.30E-04	3.72E-04
F46	0.00E+00	5.39E-06	5.52E-07	2.05E+01	3.26E-05	8.85E-02	1.10E-05	1.04E-03	3.11E-03	4.84E-04	1.06E-03	6.67E-04	6.84E-04	2.02E-04	1.02E-04	1.91E-08	3.77E-04	1.84E-04
F47	0.00E+00	1.35E-07	1.44E-08	4.95E-01	8.82E-07	2.34E-03	2.87E-07	1.42E-05	9.61E-05	1.43E-05	2.76E-05	1.79E-05	1.83E-05	3.40E-06	2.47E-06	4.77E-10	9.23E-06	2.37E-06
F48	0.00E+00	2.32E-06	2.01E-07	5.95E+00	9.17E-06	2.52E-02	3.74E-06	1.19E-03	1.11E-03	1.67E-04	3.70E-04	2.02E-04	2.08E-04	1.66E-04	2.83E-05	5.15E-09	1.62E-04	2.21E-04
F49	0.00E+00	1.13E-04	8.03E-06	1.97E+02	2.40E-04	6.99E-01	1.42E-04	8.46E-02	3.50E-02	5.28E-03	1.46E-02	6.20E-03	6.37E-03	1.12E-02	8.78E-04	1.51E-07	8.25E-03	1.59E-02
F50	0.00E+00	1.19E-04	8.09E-06	1.87E+02	2.05E-04	6.15E-01	1.40E-04	9.65E-02	3.25E-02	4.92E-03	1.46E-02	5.70E-03	5.86E-03	1.27E-02	8.12E-04	1.36E-07	8.77E-03	1.81E-02
F51	0.00E+00	3.93E-05	3.30E-06	1.07E+02	1.50E-04	4.18E-01	6.26E-05	1.90E-02	1.56E-02	2.44E-03	6.27E-03	3.31E-03	3.40E-03	3.08E-03	5.12E-04	9.45E-08	2.87E-03	3.51E-03
F52	0.00E+00	1.44E-05	1.20E-06	3.86E+01	5.31E-05	1.49E-01	2.26E-05	7.27E-03	5.58E-03	8.73E-04	2.26E-03	1.18E-03	1.22E-03	1.17E-03	1.83E-04	3.36E-08	1.04E-03	1.35E-03
F53	0.00E+00	2.36E-05	2.44E-06	9.15E+01	1.46E-04	3.96E-01	4.86E-05	4.03E-03	1.39E-02	2.16E-03	4.71E-03	2.98E-03	3.05E-03	8.13E-04	4.55E-04	8.54E-08	1.65E-03	7.00E-04
F54	0.00E+00	1.64E-05	1.61E-06	5.89E+01	9.17E-05	2.50E-01	3.19E-05	4.06E-03	8.86E-03	1.38E-03	3.10E-03	1.90E-03	1.95E-03	7.42E-04	2.90E-04	5.43E-08	1.16E-03	7.28E-04
F71	0.00E+00	1.20E-05	8.90E-07	2.56E+01	2.81E-05	8.29E-02	1.55E-05	8.87E-03	3.43E-03	5.42E-04	1.58E-03	7.08E-04	7.28E-04	1.34E-03	1.16E-04	1.94E-08	8.56E-04	1.66E-03
F72	0.00E+00	5.66E-05	3.85E-06	7.52E+01	9.20E-05	2.59E-01	6.53E-05	4.32E-02	1.99E-02	2.84E-03	6.77E-03	2.62E-03	2.69E-03	4.48E-03	3.32E-04	5.18E-08	4.07E-03	8.11E-03
F73	0.00E+00	9.02E-06	8.25E-07	2.79E+01	4.20E-05	1.13E-01	1.59E-05	3.44E-03	5.07E-03	7.58E-04	1.56E-03	8.97E-04	9.20E-04	5.25E-04	1.35E-04	2.39E-08	6.39E-04	6.32E-04
F74	0.00E+00	4.38E-05	3.03E-06	8.41E+01	8.73E-05	2.59E-01	5.42E-05	3.17E-02	1.10E-02	1.75E-03	5.66E-03	2.30E-03	2.36E-03	4.94E-03	3.74E-04	6.63E-08	3.30E-03	5.94E-03
F75	0.00E+00	1.88E-05	1.47E-06	4.33E+01	5.80E-05	1.61E-01	2.73E-05	1.10E-02	7.67E-03	1.15E-03	2.76E-03	1.35E-03	1.38E-03	1.55E-03	2.02E-04	3.52E-08	1.38E-03	2.06E-03
F76	0.00E+00	4.11E-06	4.37E-07	1.50E+01	2.61E-05	6.74E-02	8.58E-06	3.96E-04	4.27E-03	5.96E-04	8.19E-04	5.33E-04	5.46E-04	1.17E-04	7.40E-05	1.17E-08	2.73E-04	6.71E-05
F77	0.00E+00	4.18E-05	2.88E-06	7.49E+01	6.92E-05	2.16E-01	4.83E-05	3.51E-02	9.65E-03	1.53E-03	4.99E-03	1.97E-03	2.02E-03	5.22E-03	3.24E-04	5.15E-08	2.97E-03	6.57E-03
F78	0.00E+00	6.19E-06	5.88E-07	1.81E+01	3.00E-05	7.86E-02	1.10E-05	2.10E-03	5.11E-03	7.14E-04	1.07E-03	6.38E-04	6.54E-04	2.88E-04	8.78E-05	1.37E-08	4.13E-04	3.86E-04
F79	0.00E+00	2.00E-05	1.93E-06	6.83E+01	1.06E-04	2.85E-01	3.78E-05	5.65E-03	1.25E-02	1.87E-03	3.68E-03	2.22E-03	2.28E-03	9.38E-04	3.35E-04	5.96E-08	1.40E-03	1.02E-03
F80	0.00E+00	3.93E-05	3.84E-06	1.46E+02	2.16E-04	5.85E-01	7.56E-05	1.07E-02	2.12E-02	3.30E-03	7.38E-03	4.48E-03	4.59E-03	1.91E-03	7.17E-04	1.32E-07	2.78E-03	1.92E-03
F81	0.00E+00	5.70E-05	3.62E-06	7.97E+01	6.98E-05	2.21E-01	6.16E-05	4.94E-02	1.32E-02	2.00E-03	6.57E-03	2.23E-03	2.29E-03	6.49E-03	3.35E-04	5.25E-08	4.28E-03	9.28E-03
F82	0.00E+00	8.32E-06	7.93E-07	2.48E+01	4.16E-05	1.08E-01	1.51E-05	2.40E-03	7.01E-03	9.80E-04	1.47E-03	8.79E-04	9.01E-04	3.59E-04	1.21E-04	1.91E-08	5.66E-04	4.41E-04
F83	0.00E+00	8.57E-07	6.65E-08	2.07E+00	2.52E-06	7.19E-03	1.22E-06	5.29E-04	2.84E-04	4.48E-05	1.24E-04	5.94E-05	6.10E-05	8.28E-05	9.61E-06	1.71E-09	6.26E-05	9.85E-05
F84	0.00E+00	2.08E-05	1.75E-06	4.50E+01	6.65E-05	1.83E-01	2.99E-05	1.35E-02	1.25E-02	1.76E-03	2.92E-03	1.55E-03	1.59E-03	1.44E-03	2.11E-04	3.04E-08	1.33E-03	2.52E-03
F85	0.00E+00	1.41E-05	1.20E-06	3.64E+01	4.95E-05	1.39E-01	2.14E-05	8.85E-03	6.52E-03	9.74E-04	2.11E-03	1.13E-03	1.16E-03	1.18E-03	1.71E-04	2.79E-08	9.59E-04	1.65E-03
F86	0.00E+00	1.38E-05	1.08E-06	3.09E+01	3.36E-05	1.01E-01	1.78E-05	1.13E-02	4.18E-03	6.57E-04	1.77E-03	8.45E-04	8.69E-04	1.63E-03	1.39E-04	2.10E-08	8.98E-04	2.12E-03
F87	0.00E+00	2.79E-06	2.21E-07	6.47E+00	8.55E-06	2.39E-02	4.02E-06	1.75E-03	1.15E-03	1.72E-04	4.05E-04	2.00E-04	2.05E-04	2.39E-04	3.02E-05	5.09E-09	2.00E-04	3.27E-04
F88	0.00E+00	3.61E-07	3.84E-08	1.32E+00	2.30E-06	5.93E-03	7.54E-07	3.48E-05	3.75E-04	5.24E-05	7.20E-05	4.68E-05	4.80E-05	1.03E-05	6.50E-06	1.03E-09	2.40E-05	5.90E-06

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B09	100	Passenger Car	736	0.00E+00	6.88E-06	7.48E-07	3.01E+01	4.89E-05	1.46E-01	1.55E-05	7.94E-04	2.35E-03	4.51E-04	1.51E-03	9.76E-04	1.00E-03	8.76E-05	1.52E-04	3.20E-08	5.12E-04	1.24E-04
16	B09	100	Passenger Truck	1233	0.00E+00	1.42E-05	1.52E-06	6.93E+01	9.49E-05	2.82E-01	3.07E-05	1.98E-03	4.11E-03	7.97E-04	2.96E-03	1.92E-03	1.96E-03	4.54E-04	3.47E-04	6.33E-08	9.94E-04	3.26E-04
16	B09	100	Single Unit Short Haul Truck	166	0.00E+00	1.57E-05	5.82E-07	2.71E+01	1.20E-05	5.58E-02	1.79E-05	6.96E-03	1.07E-03	2.77E-04	2.26E-03	4.17E-04	4.24E-04	2.77E-03	1.10E-04	4.47E-08	1.83E-03	1.30E-03
16	B09	100	Single Unit Long Haul Truck	7	0.00E+00	6.84E-07	2.46E-08	1.14E+00	4.98E-07	2.29E-03	7.74E-07	2.92E-04	4.87E-05	1.20E-05	9.87E-05	1.76E-05	1.79E-05	1.16E-04	4.62E-06	1.83E-09	8.08E-05	5.44E-05
16	B09	100	Combination Short Haul Truck	95	0.00E+00	1.35E-05	1.00E-06	3.15E+01	3.59E-08	2.44E-02	9.70E-06	2.44E-02	9.17E-04	2.33E-04	8.25E-04	2.92E-04	3.03E-04	5.01E-03	1.05E-04	0.00E+00	5.22E-04	4.61E-03
16	B09	100	Combination Long Haul Truck	86	0.00E+00	1.91E-05	1.08E-06	2.86E+01	1.22E-07	2.84E-02	1.58E-05	2.62E-02	9.18E-04	1.87E-04	1.76E-03	3.48E-04	3.62E-04	4.59E-03	9.57E-05	0.00E+00	1.39E-03	4.93E-03
16	B10	100	Passenger Car	1584	0.00E+00	1.48E-05	1.61E-06	6.47E+01	1.05E-04	3.15E-01	3.34E-05	1.71E-03	5.06E-03	9.71E-04	3.26E-03	2.10E-03	2.16E-03	1.88E-04	3.27E-04	6.88E-08	1.10E-03	2.67E-04
16	B10	100	Passenger Truck	2653	0.00E+00	3.06E-05	3.28E-06	1.49E+02	2.04E-04	6.08E-01	6.60E-05	4.27E-03	8.84E-03	1.72E-03	6.36E-03	4.12E-03	4.23E-03	9.77E-04	7.48E-04	1.36E-07	2.14E-03	7.01E-04
16	B10	100	Single Unit Short Haul Truck	97	0.00E+00	9.19E-06	3.40E-07	1.58E+01	7.03E-06	3.26E-02	1.04E-05	4.06E-03	6.25E-04	1.62E-04	1.32E-03	2.43E-04	2.48E-04	1.62E-03	6.39E-05	2.61E-08	1.07E-03	7.58E-04
16	B10	100	Single Unit Long Haul Truck	4	0.00E+00	3.99E-07	1.44E-08	6.64E-01	2.91E-07	1.33E-03	4.52E-07	1.70E-04	2.84E-05	7.02E-06	5.76E-05	1.03E-05	1.05E-05	6.76E-05	2.70E-06	1.07E-09	4.72E-05	3.18E-05
16	B10	100	Combination Short Haul Truck	200	0.00E+00	2.87E-05	2.12E-06	6.68E+01	7.60E-08	5.16E-02	2.05E-05	5.17E-02	1.94E-03	4.92E-04	1.75E-03	6.18E-04	6.42E-04	1.06E-02	2.23E-04	0.00E+00	1.10E-03	9.75E-03
16	B10	100	Combination Long Haul Truck	183	0.00E+00	4.05E-05	2.28E-06	6.05E+01	2.58E-07	6.01E-02	3.34E-05	5.54E-02	1.94E-03	3.96E-04	3.72E-03	7.36E-04	7.67E-04	9.70E-03	2.03E-04	0.00E+00	2.95E-03	1.04E-02
16	B13	100	Passenger Car	985	0.00E+00	9.21E-06	1.00E-06	4.02E+01	6.53E-05	1.96E-01	2.08E-05	1.06E-03	3.15E-03	6.03E-04	2.02E-03	1.31E-03	1.34E-03	1.17E-04	2.04E-04	4.27E-08	6.85E-04	1.66E-04
16	B13	100	Passenger Truck	1649	0.00E+00	1.90E-05	2.04E-06	9.27E+01	1.27E-04	3.78E-01	4.10E-05	2.65E-03	5.50E-03	1.07E-03	3.96E-03	2.56E-03	2.63E-03	6.08E-04	4.65E-04	8.47E-08	1.33E-03	4.36E-04
16	B13	100	Single Unit Short Haul Truck	85	0.00E+00	8.10E-06	2.99E-07	1.39E+01	6.20E-06	2.87E-02	9.18E-06	3.58E-03	5.51E-04	1.43E-04	1.16E-03	2.14E-04	2.18E-04	1.43E-03	5.63E-05	2.30E-08	9.43E-04	6.68E-04
16	B13	100	Single Unit Long Haul Truck	4	0.00E+00	3.52E-07	1.27E-08	5.85E-01	2.56E-07	1.18E-03	3.98E-07	1.50E-04	2.50E-05	6.19E-06	5.08E-05	9.04E-06	9.21E-06	5.95E-05	2.38E-06	9.41E-10	4.16E-05	2.80E-05
16	B13	100	Combination Short Haul Truck	145	0.00E+00	2.08E-05	1.54E-06	4.85E+01	5.52E-08	3.74E-02	1.49E-05	3.75E-02	1.41E-03	3.57E-04	1.27E-03	4.49E-04	4.66E-04	7.70E-03	1.62E-04	0.00E+00	8.01E-04	7.07E-03
16	B13	100	Combination Long Haul Truck	133	0.00E+00	2.94E-05	1.66E-06	4.39E+01	1.87E-07	4.36E-02	2.43E-05	4.02E-02	1.41E-03	2.87E-04	2.70E-03	5.34E-04	5.57E-04	7.04E-03	1.47E-04	0.00E+00	2.14E-03	7.57E-03
16	B14	100	Passenger Car	495	0.00E+00	4.63E-06	5.03E-07	2.02E+01	3.29E-05	9.84E-02	1.04E-05	5.34E-04	1.58E-03	3.04E-04	1.02E-03	6.57E-04	6.74E-04	5.89E-05	1.02E-04	2.15E-08	3.45E-04	8.34E-05
16	B14	100	Passenger Truck	830	0.00E+00	9.57E-06	1.03E-06	4.66E+01	6.38E-05	1.90E-01	2.06E-05	1.33E-03	2.76E-03	5.37E-04	1.99E-03	1.29E-03	1.32E-03	3.06E-04	2.34E-04	4.26E-08	6.69E-04	2.19E-04
16	B14	100	Single Unit Short Haul Truck	130	0.00E+00	1.24E-05	4.57E-07	2.13E+01	9.47E-06	4.39E-02	1.40E-05	5.47E-03	8.42E-04	2.18E-04	1.77E-03	3.28E-04	3.33E-04	2.18E-03	8.61E-05	3.51E-08	1.44E-03	1.02E-03
16	B14	100	Single Unit Long Haul Truck	6	0.00E+00	5.38E-07	1.93E-08	8.95E-01	3.92E-07	1.80E-03	6.08E-07	2.29E-04	3.83E-05	9.46E-06	7.76E-05	1.38E-05	1.41E-05	9.10E-05	3.63E-06	1.44E-09	6.35E-05	4.28E-05
16	B14	100	Combination Short Haul Truck	70	0.00E+00	1.00E-05	7.41E-07	2.34E+01	2.66E-08	1.80E-02	7.18E-06	1.81E-02	6.79E-04	1.72E-04	6.11E-04	2.16E-04	2.25E-04	3.71E-03	7.81E-05	0.00E+00	3.86E-04	3.41E-03
16	B14	100	Combination Long Haul Truck	64	0.00E+00	1.42E-05	7.99E-07	2.12E+01	9.03E-08	2.10E-02	1.17E-05	1.94E-02	6.80E-04	1.39E-04	1.30E-03	2.58E-04	2.68E-04	3.39E-03	7.09E-05	0.00E+00	1.03E-03	3.65E-03
16	B15	100	Passenger Car	767	0.00E+00	7.17E-06	7.80E-07	3.13E+01	5.09E-05	1.52E-01	1.62E-05	8.27E-04	2.45E-03	4.70E-04	1.58E-03	1.02E-03	1.04E-03	9.12E-05	1.59E-04	3.33E-08	5.34E-04	1.29E-04
16	B15	100	Passenger Truck	1285	0.00E+00	1.48E-05	1.59E-06	7.22E+01	9.89E-05	2.94E-01	3.20E-05	2.07E-03	4.28E-03	8.31E-04	3.08E-03	2.00E-03	2.05E-03	4.73E-04	3.62E-04	6.60E-08	1.04E-03	3.39E-04
16	B15	100	Single Unit Short Haul Truck	32	0.00E+00	3.00E-06	1.11E-07	5.16E+00	2.30E-06	1.07E-02	3.41E-06	1.33E-03	2.04E-04	5.29E-05	4.31E-04	7.95E-05	8.09E-05	5.29E-04	2.09E-05	8.53E-09	3.50E-04	2.48E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	4.69E-09	2.17E-01	9.51E-08	4.36E-04	1.48E-07	5.57E-05	9.28E-06	2.30E-06	1.88E-05	3.35E-06	3.41E-06	2.21E-05	8.81E-07	3.49E-10	1.54E-05	1.04E-05
16	B15	100	Combination Short Haul Truck	11	0.00E+00	1.57E-06	1.16E-07	3.66E+00	4.17E-09	2.83E-03	1.12E-06	2.84E-03	1.06E-04	2.70E-05	9.57E-05	3.39E-05	3.52E-05	5.82E-04	1.22E-05	0.00E+00	6.05E-05	5.34E-04
16	B15	100	Combination Long Haul Truck	10	0.00E+00	2.22E-06	1.25E-07	3.32E+00	1.42E-08	3.29E-03	1.83E-06	3.04E-03	1.07E-04	2.17E-05	2.04E-04	4.04E-05	4.21E-05	5.32E-04	1.11E-05	0.00E+00	1.62E-04	5.72E-04
16	B16	100	Passenger Car	1480	0.00E+00	1.38E-05	1.50E-06	6.05E+01	9.82E-05	2.94E-01	3.12E-05	1.60E-03	4.73E-03	9.07E-04	3.04E-03	1.96E-03	2.01E-03	1.76E-04	3.06E-04	6.42E-08	1.03E-03	2.49E-04
16	B16	100	Passenger Truck	2479	0.00E+00	2.86E-05	3.06E-06	1.39E+02	1.91E-04	5.68E-01	6.17E-05	3.99E-03	8.26E-03	1.60E-03	5.95E-03	3.85E-03	3.95E-03	9.13E-04	6.99E-04	1.27E-07	2.00E-03	6.55E-04
16	B16	100	Single Unit Short Haul Truck	33	0.00E+00	3.09E-06	1.14E-07	5.32E+00	2.37E-06	1.10E-02	3.51E-06	1.37E-03	2.10E-04	5.45E-05	4.44E-04	8.19E-05	8.34E-05	5.45E-04	2.15E-05	8.79E-09	3.60E-04	2.55E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	1.34E-07	4.83E-09	2.24E-01	9.80E-08	4.49E-04	1.52E-07	5.74E-05	9.56E-06	2.36E-06	1.94E-05	3.46E-06	3.52E-06	2.27E-05	9.08E-07	3.60E-10	1.59E-05	1.07E-05
16	B16	100	Combination Short Haul Truck	18	0.00E+00	2.62E-06	1.93E-07	6.10E+00	6.95E-09	4.71E-03	1.87E-06	4.73E-03	1.77E-04	4.50E-05	1.60E-04	5.65E-05	5.86E-05	9.69E-04	2.04E-05	0.00E+00	1.01E-04	8.91E-04
16	B16	100	Combination Long Haul Truck	17	0.00E+00	3.70E-06	2.09E-07	5.53E+00	2.36E-08	5.49E-03	3.05E-06	5.06E-03	1.78E-04	3.62E-05	3.40E-04	6.73E-05	7.01E-05	8.87E-04	1.85E-05	0.00E+00	2.69E-04	9.53E-04
16	B19	100	Passenger Car	1828	0.00E+00	1.71E-05	1.86E-06	7.47E+01	1.21E-04	3.63E-01	3.85E-05	1.97E-03	5.84E-03	1.12E-03	3.76E-03	2.42E-03	2.49E-03	2.17E-04	3.78E-04	7.93E-08	1.27E-03	3.08E-04
16	B19	100	Passenger Truck	3061	0.00E+00	3.53E-05	3.78E-06	1.72E+02	2.36E-04	7.01E-01	7.62E-05	4.92E-03	1.02E-02	1.98E-03	7.34E-03	4.76E-03	4.88E-03	1.13E-03	8.63E-04	1.57E-07	2.47E-03	8.09E-04
16	B19	100	Single Unit Short Haul Truck	465	0.00E+00	4.41E-05	1.63E-06	7.59E+01	3.38E-05	1.57E-01	5.00E-05	1.95E-02	3.00E-03	7.77E-04	6.33E-03	1.17E-03	1.19E-03	7.77E-03	3.07E-04	1.25E-07	5.14E-03	3.64E-03
16	B19	100	Single Unit Long Haul Truck	20	0.00E+00	1.92E-06	6.90E-08	3.19E+00	1.40E-06	6.41E-03	2.17E-06	8.18E-04	1.36E-04	3.37E-05	2.77E-04	4.93E-05	5.02E-05	3.25E-04	1.29E-05	5.13E-09	2.27E-04	1.53E-04
16	B19	100	Combination Short Haul Truck	320	0.00E+00	4.58E-05	3.38E-06	1.07E+02	1.21E-07	8.24E-02	3.28E-05	8.26E-02	3.10E-03	7.86E-04	2.79E-03	9.88E-04	1.03E-03	1.70E-02	3.57E-04	0.00E+00	1.76E-03	1.56E-02
16	B19	100	Combination Long Haul Truck	292	0.00E+00	6.47E-05	3.65E-06	9.66E+01	4.12E-07	9.60E-02	5.34E-05	8.85E-02	3.11E-03	6.33E-04	5.94E-03	1.18E-03	1.23E-03	1.55E-02	3.24E-04	0.00E+00	4.71E-03	1.67E-02
16	B20	100	Passenger Car	3558	0.00E+00	3.33E-05	3.62E-06	1.45E+02	2.36E-04	7.07E-01	7.50E-05	3.84E-03	1.14E-02	2.18E-03	7.32E-03	4.72E-03	4.84E-03	4.23E-04	7.35E-04	1.54E-07	2.47E-03	5.99E-04
16	B20	100	Passenger Truck	5958	0.00E+00	6.87E-05	7.36E-06	3.35E+02	4.58E-04	1.37E+00	1.48E-04	9.58E-03	1.99E-02	3.85E-03	1.43E-02	9.26E-03	9.49E-03	2.19E-03	1.68E-03	3.06E-07	4.80E-03	1.57E-03
16	B20	100	Single Unit Short Haul Truck	344	0.00E+00	3.27E-05	1.21E-06	5.61E+01	2.50E-05	1.16E-01	3.70E-05	1.44E-02	2.22E-03	5.75E-04	4.69E-03	8.65E-04	8.80E-04	5.75E-03	2.27E-04	9.28E-08	3.81E-03	2.69E-03
16	B20	100	Single Unit Long Haul Truck	15	0.00E+00	1.42E-06	5.10E-08	2.36E+00	1.03E-06	4.74E-03	1.61E-06	6.06E-04	1.01E-04	2.50E-05	2.05E-04	3.65E-05	3.72E-05	2.40E-04	9.58E-06	3.80E-09	1.68E-04	1.13E-04
16	B20	100	Combination Short Haul Truck	263	0.00E+00	3.76E-05	2.78E-06	8.77E+01	9.98E-08	6.77E-02	2.69E-05	6.79E-02	2.55E-03	6.46E-04	2.29E-03	8.12E-04	8.43E-04	1.39E-02	2.93E-04	0.00E+00	1.45E-03	1.28E-02
16	B20	100	Combination Long Haul Truck	240	0.00E+00	5.32E-05	3.00E-06	7.94E+01	3.39E-07	7.89E-02	4.39E-05	7.27E-02	2.55E-03	5.20E-04	4.88E-03	9.67E-04	1.01E-03	1.27E-02	2.66E-04	0.00E+00	3.87E-03	1.37E-02
16	B21	100	Passenger Car	1343	0.00E+00	1.26E-05	1.36E-06	5.49E+01	8.91E-05	2.67E-01	2.83E-05	1.45E-03	4.29E-03	8.23E-04	2.76E-03	1.78E-03	1.83E-03	1.60E-04	2.78E-04	5.83E-08	9.34E-04	2.26E-04
16	B21	100	Passenger Truck	2249	0.00E+00	2.59E-05	2.78E-06	1.26E+02	1.73E-04	5.15E-01	5.60E-05	3.62E-03	7.49E-03	1.45E-03	5.40E-03	3.49E-03	3.58E-03	8.29E-04	6.34E-04	1.15E-07	1.81E-03	5.94E-04
16	B21	100	Single Unit Short Haul Truck	374	0.00E+00	3.55E-05	1.31E-06	6.10E+01	2.72E-05	1.26E-01	4.02E-05	1.57E-02	2.41E-03	6.25E-04	5.09E-03	9.40E-04	9.56E-04	6.25E-03	2.47E-04	1.01E-07	4.13E-03	2.93E-03
16	B21	100	Single Unit Long Haul Truck	16	0.00E+00	1.54E-06	5.54E-08	2.57E+00	1.12E-06	5.15E-03	1.74E-06	6.58E-04	1.10E-04	2.71E-05	2.23E-04	3.96E-05	4.04E-05	2.61E-04	1.04E-05	4.12E-09	1.82E-04	1.23E-04
16	B21	100	Combination Short Haul Truck	277	0.00E+00	3.97E-05	2.93E-06	9.24E+01	1.05E-07	7.14E-02	2.84E-05	7.16E-02	2.69E-03	6.81E-04	2.42E-03	8.55E-04	8.88E-04	1.47E-02	3.09E-04	0.00E+00	1.53E-03	1.35E-02
16	B21	100	Combination Long Haul Truck	253	0.00E+00	5.60E-05	3.16E-06	8.37E+01	3.57E-07	8.31E-02	4.62E-05	7.66E-02	2.69E-03	5.48E-04	5.14E-03	1.02E-03	1.06E-03	1.34E-02	2.80E-04	0.00E+00	4.08E-03	1.44E-02
16	B22	100	Passenger Car	3237	0.00E+00	3.03E-05	3.29E-06	1.32E+02	2.15E-04	6.43E-01	6.82E-05	3.49E-03	1.03E-02	1.98E-03	6.66E-03	4.29E-03	4.40E-03	3.85E-04	6.69E-04	1.40E-07	2.25E-03	5.45E-04
16	B22	100	Passenger Truck	5420	0.00E+00	6.25E-05	6.70E-06	3.05E+02	4.17E-04	1.24E+00	1.35E-04	8.72E-03	1.81E-02	3.51E-03	1.30E-02	8.42E-03	8.63E-03	2.00E-03	1.53E-03	2.78E-07	4.37E-03	1.43E-03
16	B22	100	Single Unit Short Haul Truck	297	0.00E+00	2.82E-05	1.04E-06	4.85E+01	2.16E-05	1.00E-01	3.20E-05	1.25E-02	1.92E-03	4.97E-04	4.05E-03	7.47E-04	7.60E-04	4.97E-03	1.96E-04	8.01E-08	3.29E-03	2.33E-03
16	B22	100	Single Unit Long Haul Truck	13	0.00E+00	1.23E-06	4.41E-08	2.04E+00	8.93E-07	4.10E-03	1.39E-06	5.23E-04	8.72E-05	2.16E-05	1.77E-04	3.15E-05	3.21E-05	2.07E-04	8.28E-06	3.28E-09	1.45E-04	9.75E-05
16	B22	100	Combination Short Haul Truck	247	0.00E+00	3.54E-05	2.61E-06	8.24E+01	9.39E-08	6.37E-02	2.53E-05	6.39E-02	2.40E-03	6.08E-04	2.16E-03	7.63E-04	7.92E-04	1.31E-02	2.76E-04	0.00E+00	1.36E-03	1.20E-02
16	B22	100	Combination Long Haul Truck	226	0.00E+00	5.00E-05	2.82E-06	7.47E+01	3.19E-07	7.42E-02	4.13E-05	6.84E-02	2.40E-03	4.89E-04	4.59E-03	9.09E-04	9.47E-04	1.20E-02	2.50E-04	0.00E+00	3.64E-03	1.29E-02
16	B23	100	Passenger Car	1360	0.00E+00	1.27E-05	1.38E-06	5.55E+01	9.02E-05	2.70E-01	2.87E-05	1.47E-03	4.35E-03	8.33E-04	2.80E-03	1.80E-03	1.85E-03	1.62E-04	2.81E-04	5.90E-08	9.46E-04	2.29E-04
16	B23	100	Passenger Truck	2277	0.00E+00	2.63E-05	2.81E-06	1.28E+02	1.75E-04	5.22E-01	5.67E-05	3.66E-03	7.59E-03	1.47E-03	5.46E-03	3.54E-03	3.63E-03	8.39E-04	6.42E-04	1.17E-07	1.84E-03	6.02E-04
16	B23	100	Single Unit Short Haul Truck	374	0.00E+00	3.55E-05	1.31E-06	6.10E+01	2.72E-05	1.26E-01	4.02E-05	1.57E-02	2.41E-03	6.25E-04	5.09E-03	9.40E-04	9.56E-04	6.25E-03	2.47E-04	1.01E-07	4.13E-03	2.93E-03
16	B23	100	Single Unit Long Haul Truck	16	0.00E+00	1.54E-06	5.54E-08	2.57E+00	1.12E-06	5.15E-03	1.74E-06	6.58E-04	1.10E-04	2.71E-05	2.23E-04	3.96E-05	4.04E-05	2.61E-04	1.04E-05	4.12E-09	1.82E-04	1.23E-04
16	B23	100	Combination Short Haul Truck	278	0.00E+00	3.97E-05	2.93E-06	9.25E+01	1.05E-07	7.15E-02	2.84E-05	7.17E-02	2.69E-03	6.82E-04	2.42E-03	8.57E-04	8.90E-04	1.47E-02	3.09E-04	0.00E+00	1.53E-03	1.35E-02
16	B23	100	Combination Long Haul Truck	253	0.00E+00	5.61E-05	3.17E-06	8.38E+01	3.58E-07	8.33E-02	4.63E-05	7.68E-02	2.69E-03	5.49E-04	5.15E-03	1.02E-03	1.06E-03	1.35E-02	2.81E-04	0.00E+00	4.09E-03	1.45E-02
16	B24	100	Passenger Car	3734	0.00E+00	3.49E-05	3.79E-06	1.53E+02	2.48E-04	7.42E-01	7.87E-05	4.03E-03	1.19E-02	2.29E-03	7.68E-03	4.95E-03	5.08E-03	4.44E-04	7.72E-04	1.62E-07	2.60E-03	6.28E-04
16	B24	100	Passenger Truck	6253	0.00E+00	7.21E-05	7.73E-06	3.52E+02	4.81E-04	1.43E+00	1.56E-04	1.01E-02	2.08E-02	4.04E-03	1.50E-02	9.71E-03	9.96E-03	2.30E-03	1.76E-03	3.21E-07	5.04E-03	1.65E-03
16	B24	100	Single Unit Short Haul Truck	318	0.00E+00	3.02E-05	1.12E-06	5.19E+01	2.31E-05	1.07E-01	3.43E-05	1.34E-02	2.05E-03	5.32E-04	4.33E-03	8.00E-04	8.14E-04	5.32E-03	2.10E-04	8.58E-08	3.52E-03	2.49E-03
16	B24	100	Single Unit Long Haul Truck	14	0.00E+00	1.31E-06	4.72E-08	2.18E+00	9.57E-07	4.39E-03	1.48E-06	5.60E-04	9.34E-05	2.31E-05	1.89E-04	3.37E-05	3.44E-05	2.22E-04	8.86E-06	3.51E-09	1.55E-04	1.04E-04
16	B24	100	Combination Short Haul Truck	264	0.00E+00	3.78E-05	2.79E-06	8.80E+01	1.00E-07	6.80E-02	2.71E-05	6.82E-02	2.56E-03	6.49E-04	2.30E-03	8.15E-04	8.46E-04	1.40E-02	2.94E-04	0.00E+00	1.46E-03	1.29E-02
16	B24	100	Combination Long Haul Truck	241	0.00E+00	5.34E-05	3.01E-06	7.97E+01	3.40E-07	7.92E-02	4.41E-05	7.30E-02	2.56E-03	5.22E-04	4.90E-03	9.71E-04	1.01E-03	1.28E-02	2.67E-04	0.00E+00	3.89E-03	1.38E-02
16	D63	70	Passenger Car	56	0.00E+00	6.30E-07	6.85E-08	2.46E+00	4.47E-06	1.27E-02	1.42E-06	5.71E-05	4.35E-04	6.78E-05	1.39E-04	8.94E-05	9.17E-05	9.59E-06	1.24E-05	2.57E-09	4.69E-05	8.91E-06
16	D63	70	Passenger Truck	95	0.00E+00	1.33E-06	1.41E-07	5.54E+00	8.49E-06	2.24E-02	2.78E-06	1.66E-04	7.87E-04	1.22E-04	2.66E-04	1.73E-04	1.77E-04	4.19E-05	2.76E-05	4.94E-09	8.89E-05	2.79E-05
16	D63	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.51E-04
16	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.07E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
16	D63	70	Combination Short Haul Truck	14	0.00E+00	3.63E-06	2.70E-07	4.91E+00	9.23E-09	5.25E-03	2.59E-06	5.43E-03	5.12E-04	8.54E-05	2.18E-04	7.88E-05	8.18E-05	7.80E-04	1.64E-05	0.00E+00	1.36E-04	1.02E-03
16	D63	70	Combination Long Haul Truck	13	0.00E+00	4.98E-06	2.83E-07	4.61E+00	3.12E-08	6.26E-03	4.10E-06	5.81E-03	5.33E-04	8.03E-05	4.53E-04	9.11E-05	9.49E-05	7.40E-04	1.54E-05	0.00E+00	3.58E-04	1.09E-03
16	D64	70	Passenger Car	93	0.00E+00	1.04E-06	1.12E-07	4.04E+00	7.35E-06	2.08E-02	2.33E-06	9.38E-05	7.14E-04	1.11E-04	2.28E-04	1.47E-04	1.51E-04	1.58E-05	2.03E-05	4.22E-09	7.70E-05	1.46E-05
16	D64	70	Passenger Truck	155	0.00E+00	2.18E-06	2.32E-07	9.10E+00	1.40E-05	3.68E-02	4.57E-06	2.73E-04	1.29E-03	2.00E-04	4.37E-04	2.84E-04	2.91E-04	6.88E-05	4.53E-05	8.12E-09	1.46E-04	4.58E-05
16	D64	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.38E-04
16	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.79E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D68	80	Single Unit Long Haul Truck	3	0.00E+00	4.51E-07	1.74E-08	5.24E-01	3.00E-07	9.38E-04	4.96E-07	1.84E-04	3.90E-05	7.71E-06	6.23E-05	1.14E-05	1.16E-05	5.30E-05	2.13E-06	8.33E-10	5.08E-05	3.44E-05
11	D68	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.60E-03
11	D68	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.47E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.78E-03
11	D69	80	Passenger Car	121	0.00E+00	1.26E-06	1.37E-07	5.13E+00	8.94E-06	2.60E-02	2.84E-06	1.26E-04	6.60E-04	1.11E-04	2.77E-04	1.79E-04	1.83E-04	1.80E-05	2.58E-05	5.52E-09	9.37E-05	1.96E-05
11	D69	80	Passenger Truck	203	0.00E+00	2.59E-06	2.76E-07	1.16E+01	1.69E-05	4.59E-02	5.49E-06	3.39E-04	1.18E-03	1.96E-04	5.27E-04	3.42E-04	3.51E-04	8.33E-05	5.78E-05	1.05E-08	1.77E-04	5.64E-05
11	D69	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.40E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.49E-04
11	D69	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
11	D69	80	Combination Short Haul Truck	20	0.00E+00	4.10E-06	3.03E-07	6.66E+00	1.07E-08	6.24E-03	2.93E-06	6.32E-03	4.74E-04	8.59E-05	2.48E-04	8.85E-05	9.18E-05	1.06E-03	2.23E-05	0.00E+00	1.57E-04	1.19E-03
11	D69	80	Combination Long Haul Truck	18	0.00E+00	5.71E-06	3.22E-07	6.19E+00	3.63E-08	7.39E-03	4.71E-06	6.75E-03	4.90E-04	7.84E-05	5.23E-04	1.04E-04	1.08E-04	9.93E-04	2.07E-05	0.00E+00	4.15E-04	1.27E-03
11	D70	80	Passenger Car	192	0.00E+00	2.00E-06	2.17E-07	8.14E+00	1.42E-05	4.12E-02	4.50E-06	1.99E-04	1.05E-03	1.75E-04	4.39E-04	2.83E-04	2.91E-04	2.86E-05	4.10E-05	8.76E-09	1.49E-04	3.11E-05
11	D70	80	Passenger Truck	322	0.00E+00	4.11E-06	4.39E-07	1.84E+01	2.68E-05	7.27E-02	8.72E-06	5.37E-04	1.87E-03	3.11E-04	8.36E-04	5.43E-04	5.56E-04	1.32E-04	9.17E-05	1.67E-08	2.80E-04	8.95E-05
11	D70	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.69E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	D70	80	Combination Short Haul Truck	19	0.00E+00	3.88E-06	2.87E-07	6.31E+00	1.02E-08	5.91E-03	2.77E-06	5.98E-03	4.49E-04	8.14E-05	2.35E-04	8.38E-05	8.70E-05	1.00E-03	2.11E-05	0.00E+00	1.48E-04	1.13E-03
11	D70	80	Combination Long Haul Truck	17	0.00E+00	5.41E-06	3.05E-07	5.86E+00	3.44E-08	7.00E-03	4.46E-06	6.40E-03	4.64E-04	7.43E-05	4.95E-04	9.84E-05	1.02E-04	9.40E-04	1.96E-05	0.00E+00	3.93E-04	1.20E-03
10	D71	70	Passenger Car	276	0.00E+00	3.08E-06	3.35E-07	1.20E+01	2.19E-05	6.20E-02	6.95E-06	2.79E-04	2.13E-03	3.31E-04	6.77E-04	4.37E-04	4.48E-04	4.69E-05	6.05E-05	1.26E-08	2.29E-04	4.35E-05
10	D71	70	Passenger Truck	462	0.00E+00	6.48E-06	6.89E-07	2.71E+01	4.15E-05	1.09E-01	1.36E-05	8.11E-04	3.85E-03	5.95E-04	1.30E-03	8.44E-04	8.65E-04	2.05E-04	1.35E-04	2.42E-08	4.34E-04	1.36E-04
10	D71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.63E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.06E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	D71	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.02E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.58E-04
10	D71	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.30E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.11E-04
10	D72	70	Passenger Car	273	0.00E+00	3.05E-06	3.32E-07	1.19E+01	2.17E-05	6.14E-02	6.88E-06	2.76E-04	2.11E-03	3.28E-04	6.71E-04	4.33E-04	4.44E-04	4.64E-05	5.99E-05	1.24E-08	2.27E-04	4.31E-05
10	D72	70	Passenger Truck	458	0.00E+00	6.42E-06	6.83E-07	2.68E+01	4.11E-05	1.08E-01	1.35E-05	8.04E-04	3.81E-03	5.90E-04	1.29E-03	8.36E-04	8.57E-04	2.03E-04	1.34E-04	2.39E-08	4.30E-04	1.35E-04
10	D72	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.21E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.14E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.52E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
10	D72	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.04E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.52E-03
10	D72	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.61E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.62E-03
10	D73	70	Passenger Car	196	0.00E+00	2.18E-06	2.37E-07	8.53E+00	1.55E-05	4.39E-02	4.92E-06	1.98E-04	1.51E-03	2.35E-04	4.80E-04	3.10E-04	3.18E-04	3.32E-05	4.29E-05	8.90E-09	1.62E-04	3.09E-05
10	D73	70	Passenger Truck	327	0.00E+00	4.60E-06	4.88E-07	1.92E+01	2.94E-05	7.75E-02	9.63E-06	5.75E-04	2.73E-03	4.22E-04	9.21E-04	5.98E-04	6.13E-04	1.45E-04	9.56E-05	1.71E-08	3.08E-04	9.65E-05
10	D73	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.02E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.52E-05
10	D73	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	D73	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	D74	70	Passenger Car	207	0.00E+00	2.31E-06	2.51E-07	9.02E+00	1.64E-05	4.64E-02	5.20E-06	2.09E-04	1.59E-03	2.48E-04	5.08E-04	3.27E-04	3.36E-04	3.51E-05	4.53E-05	9.41E-09	1.72E-04	3.26E-05
10	D74	70	Passenger Truck	346	0.00E+00	4.86E-06	5.16E-07	2.03E+01	3.11E-05	8.20E-02	1.02E-05	6.08E-04	2.88E-03	4.46E-04	9.74E-04	6.33E-04	6.49E-04	1.54E-04	1.01E-04	1.81E-08	3.25E-04	1.02E-04
10	D74	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
10	D74	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.09E-06
10	D74	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.62E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.71E-04
10	D74	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.95E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.32E-04
11	D75	80	Passenger Car	168	0.00E+00	1.75E-06	1.90E-07	7.12E+00	1.24E-05	3.61E-02	3.94E-06	1.74E-04	9.17E-04	1.54E-04	3.85E-04	2.48E-04	2.55E-04	2.50E-05	3.59E-05	7.67E-09	1.30E-04	2.72E-05
11	D75	80	Passenger Truck	282	0.00E+00	3.60E-06	3.84E-07	1.61E+01	2.34E-05	6.37E-02	7.63E-06	4.71E-04	1.63E-03	2.72E-04	7.32E-04	4.75E-04	4.87E-04	1.16E-04	8.03E-05	1.46E-08	2.45E-04	7.83E-05
11	D75	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	D75	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.13E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.59E-06
11	D75	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.26E-04
11	D75	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.55E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.69E-04
11	D76	80	Passenger Car	192	0.00E+00	1.99E-06	2.17E-07	8.12E+00	1.42E-05	4.11E-02	4.50E-06	1.99E-04	1.05E-03	1.75E-04	4.39E-04	2.83E-04	2.90E-04	2.85E-05	4.09E-05	8.74E-09	1.48E-04	3.10E-05
11	D76	80	Passenger Truck	321	0.00E+00	4.11E-06	4.38E-07	1.83E+01	2.67E-05	7.26E-02	8.70E-06	5.36E-04	1.86E-03	3.10E-04	8.35E-04	5.42E-04	5.55E-04	1.32E-04	9.15E-05	1.66E-08	2.80E-04	8.93E-05
11	D76	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	D76	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.09E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	D76	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.48E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	D76	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.93E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.31E-03
11	D77	80	Passenger Car	93	0.00E+00	9.64E-07	1.05E-07	3.93E+00	6.84E-06	1.99E-02	2.17E-06	9.61E-05	5.05E-04	8.46E-05	2.12E-04	1.37E-04	1.40E-04	1.38E-05	1.98E-05	4.23E-09	7.17E-05	1.50E-05
11	D77	80	Passenger Truck	155	0.00E+00	1.98E-06	2.12E-07	8.86E+00	1.29E-05	3.51E-02	4.21E-06	2.59E-04	9.00E-04	1.50E-04	4.04E-04	2.62E-04	2.68E-04	6.38E-05	4.43E-05	8.05E-09	1.35E-04	4.32E-05
11	D77	80	Single Unit Short Haul Truck	26	0.00E+00	3.55E-06	1.39E-07	4.24E+00	2.41E-06	7.70E-03	3.90E-06	1.47E-03	2.91E-04	5.94E-05	4.89E-04	9.05E-05	9.22E-05	4.31E-04	1.72E-05	6.83E-09	3.96E-04	2.75E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	5.95E-09	1.79E-01	1.02E-07	3.21E-04	1.69E-07	6.30E-05	1.33E-05	2.64E-06	2.13E-05	3.88E-06	3.96E-06	1.81E-05	7.29E-07	2.85E-10	1.73E-05	1.18E-05
11	D77	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	3.99E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.52E-04
11	D77	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.26E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.03E-04
11	D78	80	Passenger Car	205	0.00E+00	2.13E-06	2.31E-07	8.67E+00	1.51E-05	4.39E-02	4.80E-06	2.12E-04	1.12E-03	1.87E-04	4.68E-04	3.02E-04	3.10E-04	3.05E-05	4.37E-05	9.34E-09	1.58E-04	3.31E-05
11	D78	80	Passenger Truck	343	0.00E+00	4.39E-06	4.68E-07	1.96E+01	2.85E-05	7.76E-02	9.29E-06	5.73E-04	1.99E-03	3.31E-04	8.92E-04	5.79E-04	5.93E-04	1.41E-04	9.78E-05	1.78E-08	2.99E-04	9.54E-05
11	D78	80	Single Unit Short Haul Truck	84	0.00E+00	1.16E-05	4.52E-07	1.38E+01	7.84E-06	2.51E-02	1.27E-05	4.80E-03	9.47E-04	1.94E-04	1.59E-03	2.95E-04	3.01E-04	1.41E-03	5.61E-05	2.23E-08	1.29E-03	8.98E-04
11	D78	80	Single Unit Long Haul Truck	4	0.00E+00	5.02E-07	1.94E-08	5.84E-01	3.34E-07	1.05E-03	5.52E-07	2.05E-04	4.34E-05	8.59E-06	6.94E-05	1.27E-05	1.29E-05	5.90E-05	2.38E-06	9.27E-10	5.65E-05	3.83E-05
11	D78	80	Combination Short Haul Truck	46	0.00E+00	9.49E-06	7.02E-07	1.54E+01	2.48E-08	1.45E-02	6.78E-06	1.46E-02	1.10E-03	1.99E-04	5.75E-04	2.05E-04	2.13E-04	2.45E-03	5.16E-05	0.00E+00	3.63E-04	2.76E-03
11	D78	80	Combination Long Haul Truck	42	0.00E+00	1.32E-05	7.46E-07	1.43E+01	8.40E-08	1.71E-02	1.09E-05	1.56E-02	1.14E-03	1.82E-04	1.21E-03	2.40E-04	2.50E-04	2.30E-03	4.80E-05	0.00E+00	9.61E-04	2.94E-03
10	D79	70	Passenger Car	245	0.00E+00	2.73E-06	2.97E-07	1.07E+01	1.94E-05	5.50E-02	6.16E-06	2.48E-04	1.89E-03	2.94E-04	6.01E-04	3.88E-04	3.98E-04	4.16E-05	5.37E-05	1.12E-08	2.03E-04	3.86E-05
10	D79	70	Passenger Truck	410	0.00E+00	5.75E-06	6.12E-07	2.40E+01	3.68E-05	9.71E-02	1.21E-05	7.20E-04	3.42E-03	5.28E-04	1.15E-03	7.49E-04	7.68E-04	1.82E-04	1.20E-04	2.14E-08	3.85E-04	1.21E-04
10	D79	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.63E-06
10	D79	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.06E-04
10	D79	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.44E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.48E-04
10	D80	70	Passenger Car	307	0.00E+00	3.43E-06	3.72E-07	1.34E+01	2.43E-05	6.89E-02	7.73E-06	3.10E-04	2.36E-03	3.68E-04	7.54E-04	4.86E-04	4.99E-04	5.22E-05	6.73E-05	1.40E-08	2.55E-04	4.84E-05
10	D80	70	Passenger Truck	514	0.00E+00	7.21E-06	7.67E-07	3.01E+01	4.62E-05	1.22E-01	1.51E-05	9.03E-04	4.28E-03	6.62E-04	1.45E-03	9.39E-04	9.63E-04	2.28E-04	1.50E-04	2.69E-08	4.83E-04	1.52E-04
10	D80	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.13E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.21E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
10	D80	70	Combination Short Haul Truck	15	0.00E+00	3.77E-06	2.80E-07	5.09E+00	9.57E-09	5.44E-03	2.69E-06	5.63E-03	5.31E-04	8.86E-05	2.26E-04	8.17E-05	8.48E-05	8.09E-04	1.70E-05	0.00E+00	1.41E-04	1.06E-03
10	D80	70	Combination Long Haul Truck	13	0.00E+00	5.17E-06	2.94E-07	4.78E+00	3.24E-08	6.50E-03	4.25E-06	6.03E-03	5.53E-04	8.33E-05	4.70E-04	9.45E-05	9.84E-05	7.67E-04	1.60E-05	0.00E+00	3.71E-04	1.13E-03
10	D81	70	Passenger Car	273	0.00E+00	3.05E-06	3.31E-07	1.19E+01	2.16E-05	6.13E-02	6.87E-06	2.76E-04	2.10E-03	3.28E-04	6.70E-04	4.32E-04	4.43E-04	4.64E-05	5.98E-05	1.24E-08	2.27E-04	4.31E-05
10	D81	70	Passenger Truck	457	0.00E+00	6.41E-06	6.82E-07	2.68E+01	4.11E-05	1.08E-01	1.34E-05	8.02E-04	3.81E-03	5.89E-04	1.29E-03	8.35E-04	8.56E-04	2.03E-04	1.33E-04	2.39E-08	4.30E-04	1.35E-04
10	D81	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	D81	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	D81	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	D82	70	Passenger Car	209	0.00E+00	2.33E-06	2.54E-07	9.12E+00	1.66E-05	4.69E-02	5.26E-06	2.11E-04	1.61E-03	2.51E-04	5.13E-04	3.31E-04	3.40E-04	3.55E-05	4.58E-05	9.52E-09	1.74E-04	3.30E-05
10	D82	70	Passenger Truck	350	0.00E+00	4.91E-06	5.22E-07	2.05E+01	3.14E-05	8.29E-02	1.03E-05	6.15E-04	2.91E-03	4.51E-04	9.85E-04	6.40E-04	6.56E-04	1.55E-04	1.02E-04	1.83E-08	3.29E-04	1.03E-04
10	D82	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.79E-05
11	D83	80	Passenger Car	464

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D86	80	Combination Long Haul Truck	119	0.00E+00	3.74E-05	2.11E-06	4.05E+01	2.38E-07	4.84E-02	3.08E-05	4.42E-02	3.21E-03	5.14E-04	3.43E-03	6.80E-04	7.09E-04	6.50E-03	1.36E-04	0.00E+00	2.72E-03	8.33E-03
11	D87	80	Passenger Car	342	0.00E+00	3.56E-06	3.87E-07	1.45E+01	2.53E-05	7.34E-02	8.03E-06	3.55E-04	1.87E-03	3.13E-04	7.83E-04	5.05E-04	5.18E-04	5.09E-05	7.31E-05	1.56E-08	2.65E-04	5.54E-05
11	D87	80	Passenger Truck	574	0.00E+00	7.33E-06	7.81E-07	3.27E+01	4.77E-05	1.30E-01	1.55E-05	9.58E-04	3.32E-03	5.53E-04	1.49E-03	9.67E-04	9.91E-04	2.36E-04	1.63E-04	2.97E-08	4.99E-04	1.59E-04
11	D87	80	Single Unit Short Haul Truck	152	0.00E+00	2.09E-05	8.16E-07	2.50E+01	1.42E-05	4.54E-02	2.30E-05	8.68E-03	1.71E-03	3.50E-04	2.88E-03	5.33E-04	5.43E-04	2.54E-03	1.01E-04	4.02E-08	2.33E-03	1.62E-03
11	D87	80	Single Unit Long Haul Truck	7	0.00E+00	9.08E-07	3.50E-08	1.05E+00	6.04E-07	1.89E-03	9.98E-07	3.71E-04	7.85E-05	1.55E-05	1.25E-04	2.29E-05	2.33E-05	1.07E-04	4.29E-06	1.68E-09	1.02E-04	6.93E-05
11	D87	80	Combination Short Haul Truck	97	0.00E+00	2.01E-05	1.48E-06	3.26E+01	5.25E-08	3.06E-02	1.43E-05	3.09E-02	2.32E-03	4.21E-04	1.22E-03	4.33E-04	4.50E-04	5.18E-03	1.09E-04	0.00E+00	7.66E-04	5.83E-03
11	D87	80	Combination Long Haul Truck	89	0.00E+00	2.79E-05	1.58E-06	3.03E+01	1.78E-07	3.62E-02	2.30E-05	3.30E-02	2.40E-03	3.84E-04	2.56E-03	5.08E-04	5.29E-04	4.86E-03	1.01E-04	0.00E+00	2.03E-03	6.22E-03
11	D88	80	Passenger Car	799	0.00E+00	8.31E-06	9.03E-07	3.38E+01	5.90E-05	1.71E-01	1.87E-05	8.29E-04	4.36E-03	7.30E-04	1.83E-03	1.18E-03	1.21E-03	1.19E-04	1.71E-04	3.64E-08	6.18E-04	1.29E-04
11	D88	80	Passenger Truck	1339	0.00E+00	1.71E-05	1.82E-06	7.64E+01	1.11E-04	3.03E-01	3.63E-05	2.24E-03	7.76E-03	1.29E-03	3.48E-03	2.26E-03	2.31E-03	5.50E-04	3.81E-04	6.94E-08	1.17E-03	3.72E-04
11	D88	80	Single Unit Short Haul Truck	78	0.00E+00	1.06E-05	4.16E-07	1.27E+01	7.22E-06	2.31E-02	1.17E-05	4.42E-03	8.72E-04	1.78E-04	1.47E-03	2.71E-04	2.77E-04	1.29E-03	5.17E-05	2.05E-08	1.19E-03	8.26E-04
11	D88	80	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.78E-08	5.37E-01	3.07E-07	9.62E-04	5.08E-07	1.89E-04	4.00E-05	7.91E-06	6.39E-05	1.17E-05	1.19E-05	5.44E-05	2.19E-06	8.54E-10	5.20E-05	3.53E-05
11	D88	80	Combination Short Haul Truck	130	0.00E+00	2.68E-05	1.99E-06	4.37E+01	7.03E-08	4.09E-02	1.92E-05	4.14E-02	3.11E-03	5.63E-04	1.63E-03	5.80E-04	6.02E-04	6.94E-03	1.46E-04	0.00E+00	1.03E-03	7.80E-03
11	D88	80	Combination Long Haul Truck	119	0.00E+00	3.74E-05	2.11E-06	4.05E+01	2.38E-07	4.84E-02	3.08E-05	4.42E-02	3.21E-03	5.14E-04	3.43E-03	6.80E-04	7.09E-04	6.50E-03	1.36E-04	0.00E+00	2.72E-03	8.33E-03
9	D89	60	Passenger Car	98	0.00E+00	1.26E-06	1.37E-07	4.48E+00	8.93E-06	2.52E-02	2.84E-06	1.01E-04	9.93E-04	1.49E-04	2.77E-04	1.78E-04	1.83E-04	1.95E-05	2.25E-05	4.72E-09	9.36E-05	1.58E-05
9	D89	60	Passenger Truck	165	0.00E+00	2.67E-06	2.83E-07	9.99E+00	1.69E-05	4.31E-02	5.54E-06	3.15E-04	1.81E-03	2.70E-04	5.28E-04	3.44E-04	3.52E-04	7.98E-05	4.96E-05	9.20E-09	1.76E-04	5.33E-05
9	D89	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.30E-04
9	D89	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.32E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.97E-06
9	D89	60	Combination Short Haul Truck	14	0.00E+00	4.12E-06	3.03E-07	4.97E+00	1.13E-08	6.16E-03	2.96E-06	6.28E-03	7.19E-04	1.12E-04	2.54E-04	8.86E-05	9.19E-05	7.91E-04	1.66E-05	0.00E+00	1.62E-04	1.18E-03
9	D89	60	Combination Long Haul Truck	13	0.00E+00	5.66E-06	3.09E-07	4.70E+00	3.82E-08	7.40E-03	4.74E-06	6.69E-03	7.54E-04	1.09E-04	5.37E-04	1.01E-04	1.05E-04	7.54E-04	1.57E-05	0.00E+00	4.32E-04	1.26E-03
9	D90	60	Passenger Car	178	0.00E+00	2.28E-06	2.48E-07	8.11E+00	1.62E-05	4.56E-02	5.14E-06	1.83E-04	1.80E-03	2.69E-04	5.01E-04	3.23E-04	3.32E-04	3.53E-05	4.07E-05	8.54E-09	1.69E-04	2.86E-05
9	D90	60	Passenger Truck	298	0.00E+00	4.84E-06	5.13E-07	1.81E+01	3.05E-05	7.80E-02	1.00E-05	5.70E-04	3.28E-03	4.89E-04	9.56E-04	6.22E-04	6.38E-04	1.44E-04	8.98E-05	1.67E-08	3.19E-04	9.65E-05
9	D90	60	Single Unit Short Haul Truck	35	0.00E+00	7.91E-06	3.27E-07	5.90E+00	5.24E-06	1.04E-02	8.56E-06	3.03E-03	8.15E-04	1.37E-04	1.06E-03	2.03E-04	2.07E-04	5.97E-04	2.40E-05	9.90E-09	8.48E-04	5.68E-04
9	D90	60	Single Unit Long Haul Truck	2	0.00E+00	3.45E-07	1.42E-08	2.51E-01	2.27E-07	4.40E-04	3.73E-07	1.31E-04	3.66E-05	6.08E-06	4.62E-05	8.84E-06	9.01E-06	2.54E-05	1.03E-06	4.21E-10	3.71E-05	2.46E-05
9	D90	60	Combination Short Haul Truck	19	0.00E+00	5.50E-06	4.04E-07	6.63E+00	1.51E-08	8.21E-03	3.95E-06	8.38E-03	9.59E-04	1.50E-04	3.39E-04	1.18E-04	1.23E-04	1.05E-03	2.22E-05	0.00E+00	2.16E-04	1.58E-03
9	D90	60	Combination Long Haul Truck	17	0.00E+00	7.55E-06	4.12E-07	6.26E+00	5.10E-08	9.86E-03	6.31E-06	8.93E-03	1.01E-03	1.45E-04	7.16E-04	1.35E-04	1.40E-04	1.01E-03	2.10E-05	0.00E+00	5.76E-04	1.68E-03
10	D91	70	Passenger Car	307	0.00E+00	3.42E-06	3.72E-07	1.34E+01	2.43E-05	6.88E-02	7.72E-06	3.10E-04	2.36E-03	3.68E-04	7.53E-04	4.85E-04	4.98E-04	5.21E-05	6.72E-05	1.40E-08	2.55E-04	4.84E-05
10	D91	70	Passenger Truck	513	0.00E+00	7.20E-06	7.66E-07	3.01E+01	4.61E-05	1.22E-01	1.51E-05	9.01E-04	4.28E-03	6.62E-04	1.44E-03	9.38E-04	9.62E-04	2.28E-04	1.50E-04	2.68E-08	4.83E-04	1.51E-04
10	D91	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	D91	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
10	D91	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
10	D91	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
10	D92	70	Passenger Car	165	0.00E+00	1.84E-06	2.00E-07	7.17E+00	1.30E-05	3.69E-02	4.14E-06	1.66E-04	1.27E-03	1.97E-04	4.04E-04	2.60E-04	2.67E-04	2.80E-05	3.61E-05	7.49E-09	1.37E-04	2.60E-05
10	D92	70	Passenger Truck	275	0.00E+00	3.87E-06	4.11E-07	1.61E+01	2.48E-05	6.52E-02	8.10E-06	4.84E-04	2.29E-03	3.55E-04	7.75E-04	5.03E-04	5.16E-04	1.22E-04	8.04E-05	1.44E-08	2.59E-04	8.12E-05
10	D92	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.69E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.78E-05
10	D92	70	Single Unit Long Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	D92	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
10	D93	70	Passenger Car	321	0.00E+00	3.58E-06	3.89E-07	1.40E+01	2.54E-05	7.20E-02	8.07E-06	3.24E-04	2.47E-03	3.85E-04	7.87E-04	5.08E-04	5.21E-04	5.45E-05	7.03E-05	1.46E-08	2.66E-04	5.06E-05
10	D93	70	Passenger Truck	537	0.00E+00	7.54E-06	8.01E-07	3.15E+01	4.83E-05	1.27E-01	1.58E-05	9.43E-04	4.47E-03	6.92E-04	1.51E-03	9.82E-04	1.01E-03	2.38E-04	1.57E-04	2.81E-08	5.05E-04	1.58E-04
10	D93	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.02E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.52E-05
10	D93	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	D93	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	D94	70	Passenger Car	210	0.00E+00	2.35E-06	2.55E-07	9.18E+00	1.67E-05	4.73E-02	5.30E-06	2.13E-04	1.62E-03	2.53E-04	5.17E-04	3.33E-04	3.42E-04	3.58E-05	4.61E-05	9.58E-09	1.75E-04	3.32E-05
10	D94	70	Passenger Truck	353	0.00E+00	4.95E-06	5.26E-07	2.07E+01	3.17E-05	8.35E-02	1.04E-05	6.19E-04	2.94E-03	4.54E-04	9.92E-04	6.44E-04	6.60E-04	1.56E-04	1.03E-04	1.84E-08	3.31E-04	1.04E-04
10	D94	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.70E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	D94	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.03E-04
10	D94	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.24E-04
9	E01	60	Passenger Car	223	0.00E+00	2.85E-06	3.10E-07	1.02E+01	2.02E-05	5.71E-02	6.43E-06	2.29E-04	2.25E-03	3.37E-04	6.27E-04	4.04E-04	4.15E-04	4.42E-05	5.09E-05	1.07E-08	2.12E-04	3.58E-05
9	E01	60	Passenger Truck	373	0.00E+00	6.05E-06	6.42E-07	2.26E+01	3.82E-05	9.77E-02	1.26E-05	7.13E-04	4.11E-03	6.12E-04	1.20E-03	7.79E-04	7.98E-04	1.81E-04	1.12E-04	2.09E-08	3.99E-04	1.21E-04
9	E01	60	Single Unit Short Haul Truck	44	0.00E+00	9.84E-06	4.06E-07	7.33E+00	6.52E-06	1.29E-02	1.06E-05	3.77E-03	1.01E-03	1.70E-04	1.31E-03	2.53E-04	2.58E-04	7.43E-04	2.99E-05	1.23E-08	1.05E-03	7.06E-04
9	E01	60	Single Unit Long Haul Truck	2	0.00E+00	4.29E-07	1.76E-08	3.12E-01	2.83E-07	5.47E-04	4.64E-07	1.63E-04	4.55E-05	7.56E-06	5.74E-05	1.10E-05	1.12E-05	3.16E-05	1.27E-06	5.24E-10	4.62E-05	3.06E-05
9	E01	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.84E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.67E-03
9	E01	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.42E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.77E-03
9	E02	60	Passenger Car	267	0.00E+00	3.42E-06	3.72E-07	1.22E+01	2.43E-05	6.85E-02	7.72E-06	2.75E-04	2.70E-03	4.04E-04	7.52E-04	4.85E-04	4.98E-04	5.30E-05	6.11E-05	1.28E-08	2.55E-04	4.29E-05
9	E02	60	Passenger Truck	448	0.00E+00	7.26E-06	7.70E-07	2.72E+01	4.58E-05	1.17E-01	1.51E-05	8.56E-04	4.93E-03	7.34E-04	1.44E-03	9.35E-04	9.58E-04	2.17E-04	1.35E-04	2.50E-08	4.79E-04	1.45E-04
9	E02	60	Single Unit Short Haul Truck	40	0.00E+00	8.98E-06	3.71E-07	6.69E+00	5.95E-06	1.18E-02	9.71E-06	3.44E-03	9.25E-04	1.56E-04	1.20E-03	2.31E-04	2.35E-04	6.78E-04	2.73E-05	1.12E-08	9.63E-04	6.44E-04
9	E02	60	Single Unit Long Haul Truck	2	0.00E+00	3.92E-07	1.61E-08	2.85E-01	2.58E-07	5.00E-04	4.24E-07	1.49E-04	4.16E-05	6.90E-06	5.24E-05	1.00E-05	1.02E-05	2.88E-05	1.16E-06	4.78E-10	4.22E-05	2.79E-05
9	E02	60	Combination Short Haul Truck	29	0.00E+00	8.40E-06	6.17E-07	1.01E+01	2.30E-08	1.25E-02	6.03E-06	1.28E-02	1.47E-03	2.29E-04	5.17E-04	1.80E-04	1.87E-04	1.61E-03	3.39E-05	0.00E+00	3.30E-04	2.41E-03
9	E02	60	Combination Long Haul Truck	26	0.00E+00	1.15E-05	6.30E-07	9.57E+00	7.79E-08	1.51E-02	9.65E-06	1.36E-02	1.54E-03	2.22E-04	1.09E-03	2.06E-04	2.14E-04	1.54E-03	3.21E-05	0.00E+00	8.80E-04	2.57E-03
11	E03	80	Passenger Car	282	0.00E+00	2.93E-06	3.18E-07	1.19E+01	2.08E-05	6.03E-02	6.60E-06	2.92E-04	1.53E-03	2.57E-04	6.44E-04	4.15E-04	4.26E-04	4.19E-05	6.01E-05	1.28E-08	2.18E-04	4.55E-05
11	E03	80	Passenger Truck	471	0.00E+00	6.03E-06	6.42E-07	2.69E+01	3.92E-05	1.07E-01	1.28E-05	7.87E-04	2.73E-03	4.55E-04	1.23E-03	7.95E-04	8.15E-04	1.94E-04	1.34E-04	2.44E-08	4.10E-04	1.31E-04
11	E03	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	4.41E-09	1.33E-01	7.59E-08	2.38E-04	1.25E-07	4.66E-05	9.87E-06	1.95E-06	1.58E-05	2.88E-06	2.93E-06	1.34E-05	5.40E-07	2.11E-10	1.28E-05	8.72E-06
11	E03	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.26E-04
11	E03	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.55E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.69E-04
11	E04	80	Passenger Car	261	0.00E+00	2.72E-06	2.95E-07	1.11E+01	1.93E-05	5.60E-02	6.13E-06	2.71E-04	1.42E-03	2.39E-04	5.97E-04	3.85E-04	3.95E-04	3.89E-05	5.58E-05	1.19E-08	2.02E-04	4.23E-05
11	E04	80	Passenger Truck	438	0.00E+00	5.59E-06	5.96E-07	2.50E+01	3.64E-05	9.89E-02	1.19E-05	7.31E-04	2.54E-03	4.22E-04	1.14E-03	7.38E-04	7.57E-04	1.80E-04	1.25E-04	2.27E-08	3.81E-04	1.22E-04
11	E04	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.06E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E04	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.48E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.03E-03
11	E04	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.86E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.10E-03
11	E05	80	Passenger Car	71	0.00E+00	7.42E-07	8.07E-08	3.02E+00	5.27E-06	1.53E-02	1.67E-06	7.40E-05	3.89E-04	6.52E-05	1.63E-04	1.05E-04	1.08E-04	1.06E-05	1.52E-05	3.26E-09	5.52E-05	1.16E-05
11	E05	80	Passenger Truck	120	0.00E+00	1.53E-06	1.63E-07	6.83E+00	9.94E-06	2.70E-02	3.24E-06	2.00E-04	6.93E-04	1.15E-04	3.11E-04	2.02E-04	2.07E-04	4.91E-05	3.41E-05	6.20E-09	1.04E-04	3.32E-05
11	E05	80	Single Unit Short Haul Truck	19	0.00E+00	2.63E-06	1.03E-07	3.14E+00	1.78E-06	5.70E-03	2.89E-06	1.09E-03	2.15E-04	4.40E-05	3.62E-04	6.70E-05	6.83E-05	3.19E-04	1.28E-05	5.06E-09	2.94E-04	2.04E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	1.14E-07	4.41E-09	1.33E-01	7.59E-08	2.38E-04	1.25E-07	4.66E-05	9.87E-06	1.95E-06	1.58E-05	2.88E-06	2.93E-06	1.34E-05	5.40E-07	2.11E-10	1.28E-05	8.72E-06
11	E05	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.32E-04
11	E05	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.02E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.69E-04
11	E06	80	Passenger Car	322	0.00E+00	3.35E-06	3.64E-07	1.36E+01	2.38E-05	6.90E-02	7.55E-06	3.34E-04	1.75E-03	2.94E-04	7.36E-04	4.75E-04	4.87E-04	4.79E-05	6.87E-05	1.47E-08	2.49E-04	5.21E-05
11	E06	80	Passenger Truck	539	0.00E+00	6.89E-06	7.35E-07	3.08E+01	4.48E-05	1.22E-01	1.46E-05	9.00E-04	3.12E-03	5.20E-04	1.40E-03	9.09E-04	9.32E-04	2.21E-04	1.54E-04	2.79E-08	4.69E-04	1.50E-04
11	E06	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.73E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.73E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.97E-06
11	E06	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.32E-04
11	E06	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.02E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.69E-04
9	E07	60	Passenger Car

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E10	60	Combination Long Haul Truck	38	0.00E+00	1.66E-05	9.05E-07	1.37E+01	1.12E-07	2.16E-02	1.39E-05	1.96E-02	2.21E-03	3.19E-04	1.57E-03	2.96E-04	3.08E-04	2.21E-03	4.61E-05	0.00E+00	1.26E-03	3.69E-03
9	E11	60	Passenger Car	1366	0.00E+00	1.75E-05	1.90E-06	6.23E+01	1.24E-04	3.50E-01	3.94E-05	1.41E-03	1.38E-02	2.07E-03	3.85E-03	2.48E-03	2.54E-03	2.71E-04	3.12E-04	6.56E-08	1.30E-03	2.19E-04
9	E11	60	Passenger Truck	2288	0.00E+00	3.71E-05	3.93E-06	1.39E+02	2.34E-04	5.99E-01	7.70E-05	4.37E-03	2.52E-02	3.75E-03	7.34E-03	4.78E-03	4.89E-03	1.11E-03	6.90E-04	1.28E-07	2.45E-03	7.41E-04
9	E11	60	Single Unit Short Haul Truck	174	0.00E+00	3.89E-05	1.61E-06	2.90E+01	2.58E-05	5.10E-02	4.21E-05	1.49E-02	4.01E-03	6.74E-04	5.19E-03	1.00E-03	1.02E-03	2.94E-03	1.18E-04	4.87E-08	4.17E-03	2.79E-03
9	E11	60	Single Unit Long Haul Truck	8	0.00E+00	1.70E-06	6.98E-08	1.24E+00	1.12E-06	2.17E-03	1.84E-06	6.46E-04	1.80E-04	2.99E-05	2.27E-04	4.35E-05	4.43E-05	1.25E-04	5.04E-06	2.07E-09	1.83E-04	1.21E-04
9	E11	60	Combination Short Haul Truck	110	0.00E+00	3.22E-05	2.37E-06	3.89E+01	8.82E-08	4.81E-02	2.31E-05	4.91E-02	5.62E-03	8.79E-04	1.98E-03	6.92E-04	7.19E-04	6.18E-03	1.30E-04	0.00E+00	1.27E-03	9.25E-03
9	E11	60	Combination Long Haul Truck	101	0.00E+00	4.43E-05	2.42E-06	3.67E+01	2.99E-07	5.78E-02	3.70E-05	5.23E-02	5.89E-03	8.52E-04	4.20E-03	7.90E-04	8.23E-04	5.89E-03	1.23E-04	0.00E+00	3.37E-03	9.85E-03
9	E12	60	Passenger Car	1064	0.00E+00	1.36E-05	1.48E-06	4.85E+01	9.66E-05	2.72E-01	3.07E-05	1.10E-03	1.07E-02	1.61E-03	2.99E-03	1.93E-03	1.98E-03	2.11E-04	2.43E-04	5.11E-08	1.01E-03	1.71E-04
9	E12	60	Passenger Truck	1781	0.00E+00	2.89E-05	3.06E-06	1.08E+02	1.82E-04	4.66E-01	6.00E-05	3.41E-03	1.96E-02	2.92E-03	5.72E-03	3.72E-03	3.81E-03	8.63E-04	5.37E-04	9.96E-08	1.91E-03	5.77E-04
9	E12	60	Single Unit Short Haul Truck	141	0.00E+00	3.14E-05	1.30E-06	2.34E+01	2.08E-05	4.12E-02	3.40E-05	1.20E-02	3.24E-03	5.44E-04	4.19E-03	8.08E-04	8.24E-04	2.37E-03	9.55E-05	3.93E-08	3.37E-03	2.26E-03
9	E12	60	Single Unit Long Haul Truck	6	0.00E+00	1.37E-06	5.64E-08	9.99E-01	9.03E-07	1.75E-03	1.48E-06	5.22E-04	1.45E-04	2.41E-05	1.83E-04	3.51E-05	3.58E-05	1.01E-04	4.07E-06	1.67E-09	1.48E-04	9.77E-05
9	E12	60	Combination Short Haul Truck	128	0.00E+00	3.74E-05	2.75E-06	4.51E+01	1.02E-07	5.59E-02	2.69E-05	5.70E-02	6.53E-03	1.02E-03	2.30E-03	8.04E-04	8.34E-04	7.17E-03	1.51E-04	0.00E+00	1.47E-03	1.07E-02
9	E12	60	Combination Long Haul Truck	117	0.00E+00	5.14E-05	2.81E-06	4.26E+01	3.47E-07	6.71E-02	4.30E-05	6.07E-02	6.84E-03	9.90E-04	4.87E-03	9.17E-04	9.55E-04	6.84E-03	1.43E-04	0.00E+00	3.92E-03	1.14E-02
11	E13	80	Passenger Car	334	0.00E+00	3.47E-06	3.77E-07	1.41E+01	2.46E-05	7.15E-02	7.82E-06	3.46E-04	1.82E-03	3.04E-04	7.62E-04	4.92E-04	5.05E-04	4.96E-05	7.12E-05	1.52E-08	2.58E-04	5.39E-05
11	E13	80	Passenger Truck	558	0.00E+00	7.14E-06	7.61E-07	3.19E+01	4.64E-05	1.26E-01	1.51E-05	9.33E-04	3.24E-03	5.39E-04	1.45E-03	9.42E-04	9.65E-04	2.29E-04	1.59E-04	2.89E-08	4.86E-04	1.55E-04
11	E13	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.78E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.20E-04
11	E13	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.22E-05
11	E13	80	Combination Short Haul Truck	20	0.00E+00	4.20E-06	3.11E-07	6.84E+00	1.10E-08	6.41E-03	3.01E-06	6.48E-03	4.87E-04	8.82E-05	2.55E-04	9.08E-05	9.43E-05	1.09E-03	2.29E-05	0.00E+00	1.61E-04	1.22E-03
11	E13	80	Combination Long Haul Truck	19	0.00E+00	5.86E-06	3.31E-07	6.35E+00	3.72E-08	7.59E-03	4.83E-06	6.93E-03	5.03E-04	8.05E-05	5.37E-04	1.07E-04	1.11E-04	1.02E-03	2.13E-05	0.00E+00	4.26E-04	1.31E-03
11	E14	80	Passenger Car	451	0.00E+00	4.69E-06	5.09E-07	1.91E+01	3.33E-05	9.66E-02	1.06E-05	4.68E-04	2.46E-03	4.12E-04	1.03E-03	6.65E-04	6.82E-04	6.70E-05	9.62E-05	2.06E-08	3.49E-04	7.29E-05
11	E14	80	Passenger Truck	755	0.00E+00	9.65E-06	1.03E-06	4.31E+01	6.28E-05	1.71E-01	2.05E-05	1.26E-03	4.38E-03	7.29E-04	1.96E-03	1.27E-03	1.31E-03	3.10E-04	2.15E-04	3.91E-08	6.57E-04	2.10E-04
11	E14	80	Single Unit Short Haul Truck	87	0.00E+00	1.20E-05	4.67E-07	1.43E+01	8.11E-06	2.60E-02	1.31E-05	4.97E-03	9.79E-04	2.00E-04	1.65E-03	3.05E-04	3.11E-04	1.45E-03	5.80E-05	2.30E-08	1.34E-03	9.28E-04
11	E14	80	Single Unit Long Haul Truck	4	0.00E+00	5.20E-07	2.00E-08	6.04E-01	3.45E-07	1.08E-03	5.71E-07	2.12E-04	4.49E-05	8.89E-06	7.18E-05	1.31E-05	1.34E-05	6.11E-05	2.46E-06	9.59E-10	5.85E-05	3.97E-05
11	E14	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.91E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.60E-03
11	E14	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.04E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.85E-03
11	E15	80	Passenger Car	245	0.00E+00	2.54E-06	2.76E-07	1.04E+01	1.80E-05	5.24E-02	5.73E-06	2.54E-04	1.33E-03	2.23E-04	5.59E-04	3.60E-04	3.70E-04	3.64E-05	5.22E-05	1.11E-08	1.89E-04	3.96E-05
11	E15	80	Passenger Truck	409	0.00E+00	5.23E-06	5.58E-07	2.34E+01	3.40E-05	9.26E-02	1.11E-05	6.84E-04	2.37E-03	3.95E-04	1.06E-03	6.90E-04	7.08E-04	1.68E-04	1.17E-04	2.12E-08	3.56E-04	1.14E-04
11	E15	80	Single Unit Short Haul Truck	54	0.00E+00	7.36E-06	2.87E-07	8.79E+00	4.99E-06	1.60E-02	8.09E-06	3.06E-03	6.03E-04	1.23E-04	1.01E-03	1.88E-04	1.91E-04	8.94E-04	3.57E-05	1.42E-08	8.22E-04	5.71E-04
11	E15	80	Single Unit Long Haul Truck	2	0.00E+00	3.20E-07	1.23E-08	3.72E-01	2.13E-07	6.65E-04	3.51E-07	1.31E-04	2.76E-05	5.47E-06	4.42E-05	8.06E-06	8.22E-06	3.76E-05	1.51E-06	5.90E-10	3.60E-05	2.44E-05
11	E15	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	7.98E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.50E-03
11	E15	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.53E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.61E-03
11	E16	80	Passenger Car	399	0.00E+00	4.14E-06	4.50E-07	1.69E+01	2.94E-05	8.54E-02	9.34E-06	4.13E-04	2.17E-03	3.64E-04	9.11E-04	5.88E-04	6.03E-04	5.93E-05	8.50E-05	1.82E-08	3.08E-04	6.45E-05
11	E16	80	Passenger Truck	667	0.00E+00	8.53E-06	9.09E-07	3.81E+01	5.55E-05	1.51E-01	1.81E-05	1.11E-03	3.87E-03	6.44E-04	1.73E-03	1.13E-03	1.15E-03	2.74E-04	1.90E-04	3.46E-08	5.81E-04	1.86E-04
11	E16	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	E16	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.13E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.59E-06
11	E16	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.91E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.60E-03
11	E16	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.04E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.85E-03
11	E17	80	Passenger Car	123	0.00E+00	1.28E-06	1.39E-07	5.21E+00	9.08E-06	2.64E-02	2.88E-06	1.28E-04	6.70E-04	1.12E-04	2.81E-04	1.81E-04	1.86E-04	1.83E-05	2.62E-05	5.61E-09	9.51E-05	1.99E-05
11	E17	80	Passenger Truck	206	0.00E+00	2.63E-06	2.81E-07	1.18E+01	1.71E-05	4.66E-02	5.58E-06	3.44E-04	1.19E-03	1.99E-04	5.35E-04	3.47E-04	3.56E-04	8.46E-05	5.87E-05	1.07E-08	1.79E-04	5.73E-05
11	E17	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.78E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.20E-04
11	E17	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.22E-05
11	E17	80	Combination Short Haul Truck	18	0.00E+00	3.67E-06	2.71E-07	5.96E+00	9.60E-09	5.59E-03	2.62E-06	5.65E-03	4.24E-04	7.69E-05	2.22E-04	7.92E-05	8.22E-05	9.48E-04	1.99E-05	0.00E+00	1.40E-04	1.06E-03
11	E17	80	Combination Long Haul Truck	16	0.00E+00	5.11E-06	2.88E-07	5.53E+00	3.25E-08	6.61E-03	4.21E-06	6.04E-03	4.39E-04	7.02E-05	4.68E-04	9.29E-05	9.68E-05	8.88E-04	1.85E-05	0.00E+00	3.71E-04	1.14E-03
11	E18	80	Passenger Car	287	0.00E+00	2.99E-06	3.24E-07	1.22E+01	2.12E-05	6.15E-02	6.73E-06	2.98E-04	1.57E-03	2.62E-04	6.56E-04	4.23E-04	4.34E-04	4.27E-05	6.13E-05	1.31E-08	2.22E-04	4.64E-05
11	E18	80	Passenger Truck	481	0.00E+00	6.15E-06	6.55E-07	2.74E+01	4.00E-05	1.09E-01	1.30E-05	8.03E-04	2.79E-03	4.64E-04	1.25E-03	8.11E-04	8.31E-04	1.97E-04	1.37E-04	2.49E-08	4.19E-04	1.34E-04
11	E18	80	Single Unit Short Haul Truck	14	0.00E+00	1.97E-06	7.70E-08	2.36E+00	1.34E-06	4.28E-03	2.17E-06	8.19E-04	1.61E-04	3.30E-05	2.71E-04	5.03E-05	5.12E-05	2.40E-04	9.57E-06	3.79E-09	2.20E-04	1.53E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	8.56E-08	3.30E-09	9.95E-02	5.69E-08	1.78E-04	9.41E-08	3.50E-05	7.40E-06	1.46E-06	1.18E-05	2.16E-06	2.20E-06	1.01E-05	4.05E-07	1.58E-10	9.64E-06	6.54E-06
11	E18	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.49E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.58E-04
11	E18	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.73E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.03E-04
9	E19	60	Passenger Car	661	0.00E+00	8.46E-06	9.19E-07	3.01E+01	6.00E-05	1.69E-01	1.91E-05	6.80E-04	6.67E-03	9.99E-04	1.86E-03	1.20E-03	1.23E-03	1.31E-04	1.51E-04	3.17E-08	6.29E-04	1.06E-04
9	E19	60	Passenger Truck	1106	0.00E+00	1.80E-05	1.90E-06	6.71E+01	1.13E-04	2.90E-01	3.72E-05	2.12E-03	1.22E-02	1.81E-03	3.55E-03	2.31E-03	2.37E-03	5.36E-04	3.33E-04	6.18E-08	1.18E-03	3.58E-04
9	E19	60	Single Unit Short Haul Truck	51	0.00E+00	1.13E-05	4.68E-07	8.44E+00	7.51E-06	1.49E-02	1.23E-05	4.34E-03	1.17E-03	1.96E-04	1.51E-03	2.91E-04	2.97E-04	8.56E-04	3.44E-05	1.42E-08	1.22E-03	8.13E-04
9	E19	60	Single Unit Long Haul Truck	2	0.00E+00	4.95E-07	2.03E-08	3.60E-01	3.26E-07	6.31E-04	5.35E-07	1.88E-04	5.25E-05	8.70E-06	6.61E-05	1.27E-05	1.29E-05	3.64E-05	1.47E-06	6.03E-10	5.32E-05	3.52E-05
9	E19	60	Combination Short Haul Truck	26	0.00E+00	7.63E-06	5.61E-07	9.21E+00	2.09E-08	1.14E-02	5.48E-06	1.16E-02	1.33E-03	2.08E-04	4.70E-04	1.64E-04	1.70E-04	1.46E-03	3.08E-05	0.00E+00	3.00E-04	2.19E-03
9	E19	60	Combination Long Haul Truck	24	0.00E+00	1.05E-05	5.73E-07	8.70E+00	7.08E-08	1.37E-02	8.77E-06	1.24E-02	1.40E-03	2.02E-04	9.95E-04	1.87E-04	1.95E-04	1.40E-03	2.92E-05	0.00E+00	8.00E-04	2.33E-03
9	E20	60	Passenger Car	496	0.00E+00	6.35E-06	6.90E-07	2.26E+01	4.51E-05	1.27E-01	1.43E-05	5.11E-04	5.01E-03	7.50E-04	1.40E-03	9.00E-04	9.24E-04	9.83E-05	1.13E-04	2.38E-08	4.72E-04	7.97E-05
9	E20	60	Passenger Truck	831	0.00E+00	1.35E-05	1.43E-06	5.04E+01	8.50E-05	2.17E-01	2.80E-05	1.59E-03	9.16E-03	1.36E-03	2.67E-03	1.73E-03	1.78E-03	4.03E-04	2.50E-04	4.64E-08	8.89E-04	2.69E-04
9	E20	60	Single Unit Short Haul Truck	72	0.00E+00	1.60E-05	6.63E-07	1.20E+01	1.06E-05	2.10E-02	1.73E-05	6.15E-03	1.65E-03	2.78E-04	2.14E-03	4.12E-04	4.20E-04	1.21E-03	4.87E-05	2.01E-08	1.72E-03	1.15E-03
9	E20	60	Single Unit Long Haul Truck	3	0.00E+00	7.00E-07	2.88E-08	5.09E-01	4.61E-07	8.92E-04	7.57E-07	2.66E-04	7.42E-05	1.23E-05	9.36E-05	1.79E-05	1.83E-05	5.15E-05	2.08E-06	8.54E-10	7.53E-05	4.98E-05
9	E20	60	Combination Short Haul Truck	25	0.00E+00	7.17E-06	5.27E-07	8.66E+00	1.97E-08	1.07E-02	5.15E-06	1.09E-02	1.25E-03	1.96E-04	4.42E-04	1.54E-04	1.60E-04	1.38E-03	2.90E-05	0.00E+00	2.82E-04	2.06E-03
9	E20	60	Combination Long Haul Truck	22	0.00E+00	9.86E-06	5.39E-07	8.18E+00	6.65E-08	1.29E-02	8.24E-06	1.17E-02	1.31E-03	1.90E-04	9.35E-04	1.76E-04	1.83E-04	1.31E-03	2.74E-05	0.00E+00	7.52E-04	2.19E-03
11	E21	80	Passenger Car	3	0.00E+00	3.50E-08	3.80E-09	1.42E-01	2.48E-07	7.21E-04	7.89E-08	3.49E-06	1.83E-05	3.07E-06	7.69E-06	4.96E-06	5.09E-06	5.00E-07	7.18E-07	1.53E-10	2.60E-06	5.44E-07
11	E21	80	Passenger Truck	6	0.00E+00	7.20E-08	7.68E-09	3.22E-01	4.68E-07	1.27E-03	1.53E-07	9.41E-06	3.27E-05	5.44E-06	1.46E-05	9.50E-06	9.74E-06	2.31E-06	1.61E-06	2.92E-10	4.91E-06	1.57E-06
11	E22	80	Passenger Car	167	0.00E+00	1.74E-06	1.89E-07	7.08E+00	1.23E-05	3.58E-02	3.92E-06	1.73E-04	9.11E-04	1.53E-04	3.82E-04	2.46E-04	2.53E-04	2.48E-05	3.57E-05	7.62E-09	1.29E-04	2.70E-05
11	E22	80	Passenger Truck	280	0.00E+00	3.58E-06	3.81E-07	1.60E+01	2.33E-05	6.33E-02	7.58E-06	4.67E-04	1.62E-03	2.70E-04	7.27E-04	4.72E-04	4.84E-04	1.15E-04	7.98E-05	1.45E-08	2.44E-04	7.78E-05
11	E22	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.58E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.96E-04
11	E22	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.76E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.26E-05
11	E22	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	7.98E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.50E-03
11	E22	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.53E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.61E-03
11	E23	80	Passenger Car	3	0.00E+00	3.50E-08	3.80E-09	1.42E-01	2.48E-07	7.21E-04	7.89E-08	3.49E-06	1.83E-05	3.07E-06	7.69E-06	4.96E-06	5.09E-06	5.00E-07	7.18E-07	1.53E-10	2.60E-06	5.44E-07
11	E23	80	Passenger Truck	6	0.00E+00	7.20E-08	7.68E-09	3.22E-01	4.68E-07	1.27E-03	1.53E-07	9.41E-06	3.27E-05	5.44E-06	1.46E-05	9.50E-06	9.74E-06	2.31E-06	1.61E-06	2.92E-10	4.91E-06	1.57E-06
11	E24	80	Passenger Car	167	0.00E+00	1.74E-06	1.89E-07	7.08E+00	1.23E-05	3.58E-02	3.92E-06	1.73E-04	9.11E-04	1.53E-04	3.82E-04	2.46E-04	2.53E-04	2.48E-05	3.57E-05	7.62E-09	1.29E-04	2.70E-05
11	E24	80	Passenger Truck	280	0.00E+00	3.58E-06	3.81E-07	1.60E+01	2.33E-05	6.33E-02	7.58E-06	4.67E-04	1.62E-03	2.70E-04	7.27E-04	4.72E-04	4.84E-04	1.15E-04	7.98E-05	1.45E-08	2.44E-04	7.78E-05
11	E24	80	Single Unit Short Haul Truck	28	0.00E+00	3.81E-06	1.49E-07	4.55E+00	2.58E-06	8.27E-03	4.19E-06	1.58E-03	3.12E-04	6.38E-05	5.25E-04	9.72E-05	9.91E-05	4.63E-04	1.85E-05	7.33E-09	4.26E-04	2.96E-04
11	E24	80	Single Unit Long Haul Truck	1	0.00E+00	1.66E-07	6.39E-09	1.92E-01	1.10E-07	3.44E-04	1.82E-07	6.76E-05	1.43E-05	2.83E-06	2.29E-05	4.17E-06	4.25E-06	1.95E-05	7.83E-07	3.06E-10	1.86E-05	1.26E-05
11	E24	80	Combination Short Haul Truck	25	0.00E+00	5.17E-06	3.83E-07	8.42E+00	1.36E-08	7.89E-03	3.70E-06	7.98E-03	5.99E-04	1.09E-04	3.14E-04	1.12E-04	1.16E-04	1.34E-03	2.81E-05	0.00E+00	1.98E-04	1.50E-03
11	E24	80	Combination Long Haul Truck	23	0.00E+00	7.21E-06	4.07E-07	7.81E+00	4.58E-08	9.34E-03	5.95E-06	8.53E-03	6.19E-04	9.91E-05	6.61E-04	1.31E-04	1.37E-04	1.25E-03	2.62E-05	0.00E+00	5.24E-04	1.61E-03
10	E25	70	Passenger Car	299	0.00E+00	3.34E-06	3.63E-07	1.31E+01	2.37E-05	6.72E-02	7.54E-06	3.03E-04	2.31E-03	3.59E-04	7.35E-04	4.74E-04	4.86E-04	5.09E-05	6.56E-05	1.36E-08	2.49E-04	4.72E-05
10	E25	70	Passenger Truck	502	0.00E+00	7.04E-06	7.48E-07	2.94E+01	4.51E-05	1.19E-01	1.47E-05	8.81E-04	4.18E-03	6.46E-04	1.41E-03	9.17E-04	9.39E-04	2.22E-04	1.46E-04	2.62E-08	4.71E-04	1.48E-04
10	E25	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.36E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	E25	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.81E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.30E-04
10	E25	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.01E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.67E-04
10	E26	70	Passenger Car	279	0.

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E30	70	Combination Long Haul Truck	6	0.00E+00	2.22E-06	1.26E-07	2.05E+00	1.39E-08	2.78E-03	1.82E-06	2.58E-03	2.37E-04	3.57E-05	2.01E-04	4.05E-05	4.22E-05	3.29E-04	6.87E-06	0.00E+00	1.59E-04	4.86E-04
10	E31	70	Passenger Car	67	0.00E+00	7.51E-07	8.16E-08	2.94E+00	5.33E-06	1.51E-02	1.69E-06	6.81E-05	5.18E-04	8.08E-05	1.65E-04	1.07E-04	1.09E-04	1.14E-05	1.48E-05	3.06E-09	5.59E-05	1.06E-05
10	E31	70	Passenger Truck	113	0.00E+00	1.58E-06	1.68E-07	6.60E+00	1.01E-05	2.67E-02	3.31E-06	1.98E-04	9.39E-04	1.45E-04	3.17E-04	2.06E-04	2.11E-04	5.00E-05	3.29E-05	5.89E-09	1.06E-04	3.32E-05
10	E31	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.63E-04
10	E31	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.06E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	E31	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.42E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.44E-04
10	E31	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.66E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.89E-04
10	E32	70	Passenger Car	313	0.00E+00	3.49E-06	3.80E-07	1.36E+01	2.48E-05	7.03E-02	7.88E-06	3.16E-04	2.41E-03	3.76E-04	7.68E-04	4.95E-04	5.08E-04	5.32E-05	6.86E-05	1.42E-08	2.60E-04	4.94E-05
10	E32	70	Passenger Truck	524	0.00E+00	7.35E-06	7.82E-07	3.07E+01	4.71E-05	1.24E-01	1.54E-05	9.20E-04	4.36E-03	6.75E-04	1.47E-03	9.58E-04	9.82E-04	2.32E-04	1.53E-04	2.74E-08	4.93E-04	1.54E-04
10	E32	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	E32	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
10	E32	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.06E-04
10	E32	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.44E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.48E-04
9	E33	60	Passenger Car	312	0.00E+00	4.00E-06	4.34E-07	1.42E+01	2.84E-05	7.99E-02	9.01E-06	3.21E-04	3.15E-03	4.72E-04	8.79E-04	5.67E-04	5.82E-04	6.19E-05	7.14E-05	1.50E-08	2.97E-04	5.01E-05
9	E33	60	Passenger Truck	523	0.00E+00	8.48E-06	8.99E-07	3.17E+01	5.35E-05	1.37E-01	1.76E-05	1.00E-03	5.76E-03	8.57E-04	1.68E-03	1.09E-03	1.12E-03	2.53E-04	1.58E-04	2.92E-08	5.59E-04	1.69E-04
9	E33	60	Single Unit Short Haul Truck	49	0.00E+00	1.09E-05	4.51E-07	8.13E+00	7.23E-06	1.43E-02	1.18E-05	4.18E-03	1.12E-03	1.89E-04	1.46E-03	2.80E-04	2.86E-04	8.23E-04	3.31E-05	1.36E-08	1.17E-03	7.83E-04
9	E33	60	Single Unit Long Haul Truck	2	0.00E+00	4.76E-07	1.96E-08	3.46E-01	3.13E-07	6.07E-04	5.15E-07	1.81E-04	5.05E-05	8.38E-06	6.36E-05	1.22E-05	1.24E-05	3.50E-05	1.41E-06	5.80E-10	5.12E-05	3.39E-05
9	E33	60	Combination Short Haul Truck	28	0.00E+00	8.24E-06	6.06E-07	9.95E+00	2.26E-08	1.23E-02	5.92E-06	1.26E-02	1.44E-03	2.25E-04	5.08E-04	1.77E-04	1.84E-04	1.58E-03	3.33E-05	0.00E+00	3.24E-04	2.37E-03
9	E33	60	Combination Long Haul Truck	26	0.00E+00	1.13E-05	6.19E-07	9.40E+00	7.64E-08	1.48E-02	9.47E-06	1.34E-02	1.51E-03	2.18E-04	1.07E-03	2.02E-04	2.11E-04	1.51E-03	3.15E-05	0.00E+00	8.64E-04	2.52E-03
9	E34	60	Passenger Car	978	0.00E+00	1.25E-05	1.36E-06	4.46E+01	8.89E-05	2.51E-01	2.82E-05	1.01E-03	9.88E-03	1.48E-03	2.75E-03	1.78E-03	1.82E-03	1.94E-04	2.24E-04	4.70E-08	9.32E-04	1.57E-04
9	E34	60	Passenger Truck	1639	0.00E+00	2.66E-05	2.82E-06	9.94E+01	1.68E-04	4.29E-01	5.52E-05	3.13E-03	1.81E-02	2.69E-03	5.26E-03	3.42E-03	3.51E-03	7.94E-04	4.94E-04	9.16E-08	1.75E-03	5.31E-04
9	E34	60	Single Unit Short Haul Truck	47	0.00E+00	1.05E-05	4.33E-07	7.81E+00	6.94E-06	1.37E-02	1.13E-05	4.02E-03	1.08E-03	1.81E-04	1.40E-03	2.69E-04	2.75E-04	7.91E-04	3.18E-05	1.31E-08	1.12E-03	7.52E-04
9	E34	60	Single Unit Long Haul Truck	2	0.00E+00	4.57E-07	1.88E-08	3.33E-01	3.01E-07	5.83E-04	4.95E-07	1.74E-04	4.85E-05	8.05E-06	6.11E-05	1.17E-05	1.19E-05	3.36E-05	1.36E-06	5.58E-10	4.92E-05	3.26E-05
9	E34	60	Combination Short Haul Truck	36	0.00E+00	1.04E-05	7.62E-07	1.25E+01	2.84E-08	1.55E-02	7.46E-06	1.58E-02	1.81E-03	2.83E-04	6.40E-04	2.23E-04	2.32E-04	1.99E-03	4.19E-05	0.00E+00	4.08E-04	2.98E-03
9	E34	60	Combination Long Haul Truck	32	0.00E+00	1.43E-05	7.79E-07	1.18E+01	9.63E-08	1.86E-02	1.19E-05	1.69E-02	1.90E-03	2.75E-04	1.35E-03	2.54E-04	2.65E-04	1.90E-03	3.96E-05	0.00E+00	1.09E-03	3.18E-03
9	E35	60	Passenger Car	185	0.00E+00	2.37E-06	2.57E-07	8.44E+00	1.68E-05	4.74E-02	5.34E-06	1.91E-04	1.87E-03	2.80E-04	5.21E-04	3.36E-04	3.45E-04	3.67E-05	4.23E-05	8.89E-09	1.76E-04	2.97E-05
9	E35	60	Passenger Truck	310	0.00E+00	5.03E-06	5.33E-07	1.88E+01	3.17E-05	8.11E-02	1.04E-05	5.93E-04	3.42E-03	5.08E-04	9.95E-04	6.47E-04	6.63E-04	1.50E-04	9.34E-05	1.73E-08	3.31E-04	1.00E-04
9	E35	60	Single Unit Short Haul Truck	43	0.00E+00	9.62E-06	3.98E-07	7.17E+00	6.38E-06	1.26E-02	1.04E-05	3.69E-03	9.92E-04	1.67E-04	1.28E-03	2.47E-04	2.52E-04	7.27E-04	2.92E-05	1.20E-08	1.03E-03	6.91E-04
9	E35	60	Single Unit Long Haul Truck	2	0.00E+00	4.20E-07	1.73E-08	3.06E-01	2.76E-07	5.35E-04	4.54E-07	1.60E-04	4.45E-05	7.39E-06	5.61E-05	1.07E-05	1.10E-05	3.09E-05	1.25E-06	5.12E-10	4.52E-05	2.99E-05
9	E35	60	Combination Short Haul Truck	23	0.00E+00	6.72E-06	4.93E-07	8.11E+00	1.84E-08	1.00E-02	4.82E-06	1.02E-02	1.17E-03	1.83E-04	4.14E-04	1.44E-04	1.50E-04	1.29E-03	2.71E-05	0.00E+00	2.64E-04	1.93E-03
9	E35	60	Combination Long Haul Truck	21	0.00E+00	9.23E-06	5.04E-07	7.66E+00	6.23E-08	1.21E-02	7.72E-06	1.09E-02	1.23E-03	1.78E-04	8.75E-04	1.65E-04	1.72E-04	1.23E-03	2.57E-05	0.00E+00	7.04E-04	2.05E-03
9	E36	60	Passenger Car	681	0.00E+00	8.72E-06	9.48E-07	3.11E+01	6.19E-05	1.74E-01	1.97E-05	7.01E-04	6.88E-03	1.03E-03	1.92E-03	1.24E-03	1.27E-03	1.35E-04	1.56E-04	3.27E-08	6.49E-04	1.09E-04
9	E36	60	Passenger Truck	1141	0.00E+00	1.85E-05	1.96E-06	6.92E+01	1.17E-04	2.99E-01	3.84E-05	2.18E-03	1.26E-02	1.87E-03	3.66E-03	2.38E-03	2.44E-03	5.53E-04	3.44E-04	6.38E-08	1.22E-03	3.70E-04
9	E36	60	Single Unit Short Haul Truck	47	0.00E+00	1.05E-05	4.33E-07	7.81E+00	6.94E-06	1.37E-02	1.13E-05	4.02E-03	1.08E-03	1.81E-04	1.40E-03	2.69E-04	2.75E-04	7.91E-04	3.18E-05	1.31E-08	1.12E-03	7.52E-04
9	E36	60	Single Unit Long Haul Truck	2	0.00E+00	4.57E-07	1.88E-08	3.33E-01	3.01E-07	5.83E-04	4.95E-07	1.74E-04	4.85E-05	8.05E-06	6.11E-05	1.17E-05	1.19E-05	3.36E-05	1.36E-06	5.58E-10	4.92E-05	3.26E-05
9	E36	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.81E-03
9	E36	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.59E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.99E-03
9	E37	60	Passenger Car	185	0.00E+00	2.37E-06	2.57E-07	8.44E+00	1.68E-05	4.74E-02	5.34E-06	1.91E-04	1.87E-03	2.80E-04	5.21E-04	3.36E-04	3.45E-04	3.67E-05	4.23E-05	8.89E-09	1.76E-04	2.97E-05
9	E37	60	Passenger Truck	310	0.00E+00	5.03E-06	5.33E-07	1.88E+01	3.17E-05	8.11E-02	1.04E-05	5.93E-04	3.42E-03	5.08E-04	9.95E-04	6.47E-04	6.63E-04	1.50E-04	9.34E-05	1.73E-08	3.31E-04	1.00E-04
9	E37	60	Single Unit Short Haul Truck	43	0.00E+00	9.62E-06	3.98E-07	7.17E+00	6.38E-06	1.26E-02	1.04E-05	3.69E-03	9.92E-04	1.67E-04	1.28E-03	2.47E-04	2.52E-04	7.27E-04	2.92E-05	1.20E-08	1.03E-03	6.91E-04
9	E37	60	Single Unit Long Haul Truck	2	0.00E+00	4.20E-07	1.73E-08	3.06E-01	2.76E-07	5.35E-04	4.54E-07	1.60E-04	4.45E-05	7.39E-06	5.61E-05	1.07E-05	1.10E-05	3.09E-05	1.25E-06	5.12E-10	4.52E-05	2.99E-05
9	E37	60	Combination Short Haul Truck	23	0.00E+00	6.72E-06	4.93E-07	8.11E+00	1.84E-08	1.00E-02	4.82E-06	1.02E-02	1.17E-03	1.83E-04	4.14E-04	1.44E-04	1.50E-04	1.29E-03	2.71E-05	0.00E+00	2.64E-04	1.93E-03
9	E37	60	Combination Long Haul Truck	21	0.00E+00	9.23E-06	5.04E-07	7.66E+00	6.23E-08	1.21E-02	7.72E-06	1.09E-02	1.23E-03	1.78E-04	8.75E-04	1.65E-04	1.72E-04	1.23E-03	2.57E-05	0.00E+00	7.04E-04	2.05E-03
9	E38	60	Passenger Car	681	0.00E+00	8.72E-06	9.48E-07	3.11E+01	6.19E-05	1.74E-01	1.97E-05	7.01E-04	6.88E-03	1.03E-03	1.92E-03	1.24E-03	1.27E-03	1.35E-04	1.56E-04	3.27E-08	6.49E-04	1.09E-04
9	E38	60	Passenger Truck	1141	0.00E+00	1.85E-05	1.96E-06	6.92E+01	1.17E-04	2.99E-01	3.84E-05	2.18E-03	1.26E-02	1.87E-03	3.66E-03	2.38E-03	2.44E-03	5.53E-04	3.44E-04	6.38E-08	1.22E-03	3.70E-04
9	E38	60	Single Unit Short Haul Truck	47	0.00E+00	1.05E-05	4.33E-07	7.81E+00	6.94E-06	1.37E-02	1.13E-05	4.02E-03	1.08E-03	1.81E-04	1.40E-03	2.69E-04	2.75E-04	7.91E-04	3.18E-05	1.31E-08	1.12E-03	7.52E-04
9	E38	60	Single Unit Long Haul Truck	2	0.00E+00	4.57E-07	1.88E-08	3.33E-01	3.01E-07	5.83E-04	4.95E-07	1.74E-04	4.85E-05	8.05E-06	6.11E-05	1.17E-05	1.19E-05	3.36E-05	1.36E-06	5.58E-10	4.92E-05	3.26E-05
9	E38	60	Combination Short Haul Truck	33	0.00E+00	9.77E-06	7.18E-07	1.18E+01	2.68E-08	1.46E-02	7.02E-06	1.49E-02	1.71E-03	2.67E-04	6.02E-04	2.10E-04	2.18E-04	1.87E-03	3.94E-05	0.00E+00	3.84E-04	2.81E-03
9	E38	60	Combination Long Haul Truck	31	0.00E+00	1.34E-05	7.33E-07	1.11E+01	9.06E-08	1.75E-02	1.12E-05	1.59E-02	1.79E-03	2.59E-04	1.27E-03	2.40E-04	2.50E-04	1.79E-03	3.73E-05	0.00E+00	1.02E-03	2.99E-03
10	E39	70	Passenger Car	273	0.00E+00	3.05E-06	3.32E-07	1.19E+01	2.17E-05	6.14E-02	6.88E-06	2.76E-04	2.11E-03	3.28E-04	6.71E-04	4.33E-04	4.44E-04	4.64E-05	5.99E-05	1.24E-08	2.27E-04	4.31E-05
10	E39	70	Passenger Truck	458	0.00E+00	6.42E-06	6.83E-07	2.68E+01	4.11E-05	1.08E-01	1.35E-05	8.04E-04	3.81E-03	5.90E-04	1.29E-03	8.36E-04	8.57E-04	2.03E-04	1.34E-04	2.39E-08	4.30E-04	1.35E-04
10	E39	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.69E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.78E-05
10	E39	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
10	E39	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
10	E40	70	Passenger Car	272	0.00E+00	3.04E-06	3.30E-07	1.19E+01	2.16E-05	6.11E-02	6.85E-06	2.75E-04	2.10E-03	3.27E-04	6.68E-04	4.31E-04	4.42E-04	4.62E-05	5.97E-05	1.24E-08	2.26E-04	4.29E-05
10	E40	70	Passenger Truck	456	0.00E+00	6.40E-06	6.80E-07	2.67E+01	4.10E-05	1.08E-01	1.34E-05	8.00E-04	3.80E-03	5.87E-04	1.28E-03	8.33E-04	8.54E-04	2.02E-04	1.33E-04	2.38E-08	4.28E-04	1.34E-04
10	E40	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.61E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.01E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.92E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.29E-05
10	E40	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.83E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
10	E40	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.24E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
10	E41	70	Passenger Car	219	0.00E+00	2.45E-06	2.66E-07	9.56E+00	1.74E-05	4.92E-02	5.51E-06	2.22E-04	1.69E-03	2.63E-04	5.38E-04	3.47E-04	3.56E-04	3.72E-05	4.80E-05	9.98E-09	1.82E-04	3.46E-05
10	E41	70	Passenger Truck	367	0.00E+00	5.15E-06	5.47E-07	2.15E+01	3.30E-05	8.69E-02	1.08E-05	6.44E-04	3.06E-03	4.73E-04	1.03E-03	6.71E-04	6.87E-04	1.63E-04	1.07E-04	1.92E-08	3.45E-04	1.08E-04
10	E41	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E42	70	Passenger Car	280	0.00E+00	3.13E-06	3.40E-07	1.22E+01	2.22E-05	6.29E-02	7.05E-06	2.83E-04	2.16E-03	3.36E-04	6.87E-04	4.43E-04	4.55E-04	4.76E-05	6.14E-05	1.28E-08	2.33E-04	4.42E-05
10	E42	70	Passenger Truck	469	0.00E+00	6.58E-06	6.99E-07	2.75E+01	4.21E-05	1.11E-01	1.38E-05	8.23E-04	3.91E-03	6.04E-04	1.32E-03	8.57E-04	8.78E-04	2.08E-04	1.37E-04	2.45E-08	4.41E-04	1.38E-04
10	E42	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	E42	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.21E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.17E-04
10	E42	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.46E-04
10	E43	70	Passenger Car	221	0.00E+00	2.47E-06	2.68E-07	9.64E+00	1.75E-05	4.96E-02	5.56E-06	2.23E-04	1.70E-03	2.65E-04	5.42E-04	3.50E-04	3.59E-04	3.75E-05	4.84E-05	1.01E-08	1.83E-04	3.49E-05
10	E43	70	Passenger Truck	370	0.00E+00	5.19E-06	5.52E-07	2.17E+01	3.32E-05	8.76E-02	1.09E-05	6.50E-04	3.08E-03	4.77E-04	1.04E-03	6.76E-04	6.93E-04	1.64E-04	1.08E-04	1.93E-08	3.48E-04	1.09E-04
10	E43	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.36E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	E43	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E43	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E44	70	Passenger Car	205	0.00E+00	2.28E-06	2.48E-07	8.92E+00	1.62E-05	4.59E-02	5.15E-06	2.07E-04	1.58E-03	2.45E-04	5.02E-04	3.24E-04	3.32E-04	3.47E-05	4.48E-05	9.31E-09	1.70E-04	3.23E-05
10	E44	70	Passenger Truck	342	0.00E+00	4.81E-06	5.11E-07	2.01E+01	3.08E-05	8.11E-02	1.01E-05	6.01E-04	2.85E-03	4.41E-04	9.63E-04	6.26E-04	6.41E-04	1.52E-04	9.99E-05	1.79E-08	3.22E-04	1.01E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E44	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E44	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
11	E45	80	Passenger Car	73	0.00E+00	7.62E-07	8.28E-08	3.10E+00	5.41E-06	1.57E-02	1.72E-06	7.60E-05	3.99E-04	6.69E-05	1.68E-04	1.08E-04	1.11E-04	1.09E-05	1.56E-05	3.34E-09	5.67E-05	1.19E-05
11	E45	80	Passenger Truck	123	0.00E+00	1.57E-06	1.67E-07	7.00E+00	1.02E-05	2.77E-02	3.32E-06	2.05E-04	7.11E-04	1.18E-04	3.19E-04	2.07E-04	2.12E-04	5.04E-05	3.50E-05	6.36E-09	1.07E-04	3.41E-05
11	E45	80	Single Unit Short Haul Truck	68	0

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E49	80	Passenger Truck	83	0.00E+00	1.06E-06	1.13E-07	4.72E+00	6.87E-06	1.87E-02	2.24E-06	1.38E-04	4.79E-04	7.97E-05	2.15E-04	1.39E-04	1.43E-04	3.39E-05	2.36E-05	4.28E-09	7.20E-05	2.30E-05
11	E49	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	E49	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.31E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.57E-04
11	E49	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.88E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.67E-04
11	E50	80	Passenger Car	273	0.00E+00	2.84E-06	3.08E-07	1.16E+01	2.01E-05	5.85E-02	6.40E-06	2.83E-04	1.49E-03	2.49E-04	6.24E-04	4.02E-04	4.13E-04	4.06E-05	5.82E-05	1.24E-08	2.11E-04	4.41E-05
11	E50	80	Passenger Truck	457	0.00E+00	5.84E-06	6.23E-07	2.61E+01	3.80E-05	1.03E-01	1.24E-05	7.63E-04	2.65E-03	4.41E-04	1.19E-03	7.71E-04	7.90E-04	1.88E-04	1.30E-04	2.37E-08	3.98E-04	1.27E-04
11	E50	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.57E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.79E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.10E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	E50	80	Combination Short Haul Truck	36	0.00E+00	7.44E-06	5.51E-07	1.21E+01	1.95E-08	1.13E-02	5.32E-06	1.15E-02	8.61E-04	1.56E-04	4.51E-04	1.61E-04	1.67E-04	1.92E-03	4.05E-05	0.00E+00	2.84E-04	2.16E-03
11	E50	80	Combination Long Haul Truck	33	0.00E+00	1.04E-05	5.85E-07	1.12E+01	6.59E-08	1.34E-02	8.55E-06	1.23E-02	8.90E-04	1.42E-04	9.50E-04	1.89E-04	1.96E-04	1.80E-03	3.76E-05	0.00E+00	7.53E-04	2.31E-03
11	E51	80	Passenger Car	12	0.00E+00	1.21E-07	1.31E-08	4.91E-01	8.55E-07	2.48E-03	2.72E-07	1.20E-05	6.32E-05	1.06E-05	2.65E-05	1.71E-05	1.75E-05	1.72E-06	2.47E-06	5.28E-10	8.96E-06	1.87E-06
11	E51	80	Passenger Truck	19	0.00E+00	2.48E-07	2.64E-08	1.11E+00	1.61E-06	4.39E-03	5.26E-07	3.24E-05	1.12E-04	1.87E-05	5.04E-05	3.27E-05	3.36E-05	7.97E-06	5.53E-06	1.01E-09	1.69E-05	5.40E-06
11	E51	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.66E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.13E-05
11	E52	80	Passenger Car	304	0.00E+00	3.16E-06	3.43E-07	1.29E+01	2.24E-05	6.51E-02	7.12E-06	3.15E-04	1.65E-03	2.77E-04	6.94E-04	4.48E-04	4.59E-04	4.51E-05	6.48E-05	1.38E-08	2.35E-04	4.91E-05
11	E52	80	Passenger Truck	508	0.00E+00	6.50E-06	6.93E-07	2.90E+01	4.23E-05	1.15E-01	1.38E-05	8.49E-04	2.95E-03	4.91E-04	1.32E-03	8.57E-04	8.79E-04	2.09E-04	1.45E-04	2.63E-08	4.43E-04	1.41E-04
11	E52	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.73E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.10E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.17E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.22E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.26E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	E53	80	Passenger Car	102	0.00E+00	1.06E-06	1.15E-07	4.32E+00	7.53E-06	2.19E-02	2.39E-06	1.06E-04	5.56E-04	9.32E-05	2.33E-04	1.50E-04	1.54E-04	1.52E-05	2.18E-05	4.65E-09	7.89E-05	1.65E-05
11	E53	80	Passenger Truck	171	0.00E+00	2.18E-06	2.33E-07	9.76E+00	1.42E-05	3.86E-02	4.63E-06	2.85E-04	9.91E-04	1.65E-04	4.44E-04	2.88E-04	2.95E-04	7.02E-05	4.87E-05	8.86E-09	1.49E-04	4.75E-05
11	E53	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.06E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E53	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.82E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.20E-04
11	E53	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.09E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.70E-04
11	E54	80	Passenger Car	492	0.00E+00	5.12E-06	5.56E-07	2.08E+01	3.63E-05	1.06E-01	1.15E-05	5.11E-04	2.68E-03	4.49E-04	1.13E-03	7.26E-04	7.45E-04	7.32E-05	1.05E-04	2.24E-08	3.81E-04	7.96E-05
11	E54	80	Passenger Truck	825	0.00E+00	1.05E-05	1.12E-06	4.71E+01	6.86E-05	1.86E-01	2.23E-05	1.38E-03	4.78E-03	7.96E-04	2.14E-03	1.39E-03	1.43E-03	3.39E-04	2.35E-04	4.27E-08	7.18E-04	2.29E-04
11	E54	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.09E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E54	80	Combination Short Haul Truck	29	0.00E+00	5.93E-06	4.39E-07	9.65E+00	1.55E-08	9.04E-03	4.24E-06	9.14E-03	6.86E-04	1.24E-04	3.60E-04	1.28E-04	1.33E-04	1.53E-03	3.23E-05	0.00E+00	2.27E-04	1.72E-03
11	E54	80	Combination Long Haul Truck	26	0.00E+00	8.26E-06	4.66E-07	8.95E+00	5.25E-08	1.07E-02	6.81E-06	9.77E-03	7.09E-04	1.14E-04	7.57E-04	1.50E-04	1.57E-04	1.44E-03	3.00E-05	0.00E+00	6.00E-04	1.84E-03
11	E55	80	Passenger Car	102	0.00E+00	1.06E-06	1.15E-07	4.32E+00	7.53E-06	2.19E-02	2.39E-06	1.06E-04	5.56E-04	9.32E-05	2.33E-04	1.50E-04	1.54E-04	1.52E-05	2.18E-05	4.65E-09	7.89E-05	1.65E-05
11	E55	80	Passenger Truck	171	0.00E+00	2.18E-06	2.33E-07	9.76E+00	1.42E-05	3.86E-02	4.63E-06	2.85E-04	9.91E-04	1.65E-04	4.44E-04	2.88E-04	2.95E-04	7.02E-05	4.87E-05	8.86E-09	1.49E-04	4.75E-05
11	E55	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.06E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E55	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.82E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.20E-04
11	E55	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.09E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.70E-04
11	E56	80	Passenger Car	492	0.00E+00	5.12E-06	5.56E-07	2.08E+01	3.63E-05	1.06E-01	1.15E-05	5.11E-04	2.68E-03	4.49E-04	1.13E-03	7.26E-04	7.45E-04	7.32E-05	1.05E-04	2.24E-08	3.81E-04	7.96E-05
11	E56	80	Passenger Truck	825	0.00E+00	1.05E-05	1.12E-06	4.71E+01	6.86E-05	1.86E-01	2.23E-05	1.38E-03	4.78E-03	7.96E-04	2.14E-03	1.39E-03	1.43E-03	3.39E-04	2.35E-04	4.27E-08	7.18E-04	2.29E-04
11	E56	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.09E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E56	80	Combination Short Haul Truck	29	0.00E+00	5.93E-06	4.39E-07	9.65E+00	1.55E-08	9.04E-03	4.24E-06	9.14E-03	6.86E-04	1.24E-04	3.60E-04	1.28E-04	1.33E-04	1.53E-03	3.23E-05	0.00E+00	2.27E-04	1.72E-03
11	E56	80	Combination Long Haul Truck	26	0.00E+00	8.26E-06	4.66E-07	8.95E+00	5.25E-08	1.07E-02	6.81E-06	9.77E-03	7.09E-04	1.14E-04	7.57E-04	1.50E-04	1.57E-04	1.44E-03	3.00E-05	0.00E+00	6.00E-04	1.84E-03
10	E57	70	Passenger Car	277	0.00E+00	3.10E-06	3.37E-07	1.21E+01	2.20E-05	6.23E-02	6.98E-06	2.81E-04	2.14E-03	3.33E-04	6.81E-04	4.39E-04	4.51E-04	4.71E-05	6.08E-05	1.26E-08	2.30E-04	4.38E-05
10	E57	70	Passenger Truck	465	0.00E+00	6.52E-06	6.93E-07	2.72E+01	4.17E-05	1.10E-01	1.37E-05	8.16E-04	3.87E-03	5.99E-04	1.31E-03	8.49E-04	8.70E-04	2.06E-04	1.36E-04	2.43E-08	4.37E-04	1.37E-04
10	E57	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.70E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	E57	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.92E-04
10	E57	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.80E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.27E-04
10	E58	70	Passenger Car	228	0.00E+00	2.54E-06	2.76E-07	9.93E+00	1.80E-05	5.11E-02	5.73E-06	2.30E-04	1.75E-03	2.73E-04	5.59E-04	3.60E-04	3.70E-04	3.87E-05	4.99E-05	1.04E-08	1.89E-04	3.59E-05
10	E58	70	Passenger Truck	381	0.00E+00	5.35E-06	5.69E-07	2.23E+01	3.43E-05	9.03E-02	1.12E-05	6.69E-04	3.18E-03	4.91E-04	1.07E-03	6.97E-04	7.14E-04	1.69E-04	1.11E-04	1.99E-08	3.58E-04	1.12E-04
10	E58	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.19E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.71E-06
10	E58	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.62E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.71E-04
10	E58	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.95E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.32E-04
11	E59	80	Passenger Car	222	0.00E+00	2.31E-06	2.51E-07	9.42E+00	1.64E-05	4.77E-02	5.21E-06	2.31E-04	1.21E-03	2.03E-04	5.09E-04	3.28E-04	3.37E-04	3.31E-05	4.75E-05	1.01E-08	1.72E-04	3.60E-05
11	E59	80	Passenger Truck	373	0.00E+00	4.76E-06	5.08E-07	2.13E+01	3.10E-05	8.42E-02	1.01E-05	6.22E-04	2.16E-03	3.59E-04	9.68E-04	6.28E-04	6.44E-04	1.53E-04	1.06E-04	1.93E-08	3.24E-04	1.04E-04
11	E59	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.46E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E59	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	1.99E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.76E-04
11	E59	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.13E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.02E-04
11	E60	80	Passenger Car	191	0.00E+00	1.98E-06	2.15E-07	8.07E+00	1.41E-05	4.09E-02	4.47E-06	1.98E-04	1.04E-03	1.74E-04	4.36E-04	2.81E-04	2.88E-04	2.83E-05	4.07E-05	8.69E-09	1.47E-04	3.08E-05
11	E60	80	Passenger Truck	319	0.00E+00	4.08E-06	4.35E-07	1.82E+01	2.65E-05	7.22E-02	8.65E-06	5.33E-04	1.85E-03	3.08E-04	8.30E-04	5.38E-04	5.52E-04	1.31E-04	9.10E-05	1.65E-08	2.78E-04	8.88E-05
11	E60	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.10E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	E60	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.03E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.67E-06
11	E60	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.66E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.01E-04
11	E60	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.35E-04
11	E61	80	Passenger Car	222	0.00E+00	2.31E-06	2.51E-07	9.42E+00	1.64E-05	4.77E-02	5.21E-06	2.31E-04	1.21E-03	2.03E-04	5.09E-04	3.28E-04	3.37E-04	3.31E-05	4.75E-05	1.01E-08	1.72E-04	3.60E-05
11	E61	80	Passenger Truck	373	0.00E+00	4.76E-06	5.08E-07	2.13E+01	3.10E-05	8.42E-02	1.01E-05	6.22E-04	2.16E-03	3.59E-04	9.68E-04	6.28E-04	6.44E-04	1.53E-04	1.06E-04	1.93E-08	3.24E-04	1.04E-04
11	E61	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.46E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E61	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	1.99E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.76E-04
11	E61	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.13E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.02E-04
11	E62	80	Passenger Car	191	0.00E+00	1.98E-06	2.15E-07	8.07E+00	1.41E-05	4.09E-02	4.47E-06	1.98E-04	1.04E-03	1.74E-04	4.36E-04	2.81E-04	2.88E-04	2.83E-05	4.07E-05	8.69E-09	1.47E-04	3.08E-05
11	E62	80	Passenger Truck	319	0.00E+00	4.08E-06	4.35E-07	1.82E+01	2.65E-05	7.22E-02	8.65E-06	5.33E-04	1.85E-03	3.08E-04	8.30E-04	5.38E-04	5.52E-04	1.31E-04	9.10E-05	1.65E-08	2.78E-04	8.88E-05
11	E62	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.10E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	E62	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.03E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.67E-06
11	E62	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.66E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.01E-04
11	E62	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.35E-04
10	E63	70	Passenger Car	907	0.00E+00	1.01E-05	1.10E-06	3.95E+01	7.18E-05	2.04E-01	2.28E-05	9.17E-04	6.98E-03	1.09E-03	2.23E-03	1.44E-03	1.47E-03	1.54E-04	1.99E-04	4.13E-08	7.53E-04	1.43E-04
10	E63	70	Passenger Truck	1518	0.00E+00	2.13E-05	2.26E-06	8.90E+01	1.36E-04	3.60E-01	4.47E-05	2.67E-03	1.26E-02	1.96E-03	4.27E-03	2.77E-03	2.84E-03	6.73E-04	4.43E-04	7.94E-08	1.43E-03	4.48E-04
10	E63	70	Single Unit Short Haul Truck	98	0.00E+00	1.72E-05	6.98E-07	1.60E+01	1.15E-05	2.90E-02	1.87E-05	6.83E-03	1.55E-03	2.85E-04	2.32E-03	4.42E-04	4.50E-04	1.63E-03	6.51E-05	2.63E-08	1.87E-03	1.28E-03
10	E63	70	Single Unit Long Haul Truck	4	0.00E+00	7.48E-07	3.01E-08	6.78E-01	4.96E-07	1.22E-03	8.14E-07	2.94E-04	7.11E-05	1.27E-05	1.01E-04	1.91E-05	1.95E-05	6.86E-05	2.76E-06	1.11E-09	8.17E-05	5.50E-05
10	E63	70	Combination Short Haul Truck	65	0.00E+00	1.68E-05	1.25E-06	2.27E+01	4.27E-08	2.43E-02	1.20E-05	2.51E-02	2.37E-03	3.96E-04	1.01E-03	3.65E-04	3.79E-04	3.61E-03	7.60E-05	0.00E+00	6.31E-04	4.73E-03
10	E63	70	Combination Long Haul Truck	60	0.00E+00	2.31E-05	1.31E-06	2.13E+01	1.45E-07	2.90E-02	1.90E-05	2.69E-02	2.47E-03	3.72E-04	2.10E-03	4.22E-04	4.39E-04	3.43E-03	7.15E-05	0.00E+00	1.66E-03	5.07E-03
10	E64	70	Passenger Car	680	0.00

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E67	80	Combination Long Haul Truck	21	0.00E+00	6.76E-06	3.81E-07	7.32E+00	4.30E-08	8.75E-03	5.57E-06	8.00E-03	5.80E-04	9.29E-05	6.19E-04	1.23E-04	1.28E-04	1.18E-03	2.45E-05	0.00E+00	4.91E-04	1.51E-03
11	E68	80	Passenger Car	563	0.00E+00	5.85E-06	6.36E-07	2.38E+01	4.15E-05	1.21E-01	1.32E-05	5.83E-04	3.07E-03	5.14E-04	1.29E-03	8.29E-04	8.51E-04	8.37E-05	1.20E-04	2.57E-08	4.35E-04	9.10E-05
11	E68	80	Passenger Truck	942	0.00E+00	1.20E-05	1.28E-06	5.38E+01	7.83E-05	2.13E-01	2.55E-05	1.57E-03	5.46E-03	9.09E-04	2.45E-03	1.59E-03	1.63E-03	3.87E-04	2.69E-04	4.88E-08	8.20E-04	2.62E-04
11	E68	80	Single Unit Short Haul Truck	64	0.00E+00	8.81E-06	3.44E-07	1.05E+01	5.97E-06	1.91E-02	9.68E-06	3.66E-03	7.21E-04	1.47E-04	1.21E-03	2.25E-04	2.29E-04	1.07E-03	4.27E-05	1.69E-08	9.84E-04	6.83E-04
11	E68	80	Single Unit Long Haul Truck	3	0.00E+00	3.83E-07	1.48E-08	4.45E-01	2.54E-07	7.96E-04	4.20E-07	1.56E-04	3.31E-05	6.54E-06	5.29E-05	9.64E-06	9.83E-06	4.50E-05	1.81E-06	7.06E-10	4.30E-05	2.92E-05
11	E68	80	Combination Short Haul Truck	32	0.00E+00	6.68E-06	4.95E-07	1.09E+01	1.75E-08	1.02E-02	4.78E-06	1.03E-02	7.74E-04	1.40E-04	4.05E-04	1.44E-04	1.50E-04	1.73E-03	3.64E-05	0.00E+00	2.55E-04	1.94E-03
11	E68	80	Combination Long Haul Truck	30	0.00E+00	9.31E-06	5.26E-07	1.01E+01	5.92E-08	1.21E-02	7.68E-06	1.10E-02	8.00E-04	1.28E-04	8.53E-04	1.69E-04	1.76E-04	1.62E-03	3.38E-05	0.00E+00	6.77E-04	2.07E-03
10	E69	70	Passenger Car	354	0.00E+00	3.95E-06	4.30E-07	1.54E+01	2.81E-05	7.95E-02	8.91E-06	3.58E-04	2.73E-03	4.25E-04	8.69E-04	5.60E-04	5.75E-04	6.02E-05	7.76E-05	1.61E-08	2.94E-04	5.59E-05
10	E69	70	Passenger Truck	593	0.00E+00	8.32E-06	8.84E-07	3.47E+01	5.33E-05	1.40E-01	1.74E-05	1.04E-03	4.94E-03	7.64E-04	1.67E-03	1.08E-03	1.11E-03	2.63E-04	1.73E-04	3.10E-08	5.57E-04	1.75E-04
10	E69	70	Single Unit Short Haul Truck	18	0.00E+00	3.20E-06	1.30E-07	2.98E+00	2.15E-06	5.41E-03	3.48E-06	1.27E-03	2.89E-04	5.31E-05	4.32E-04	8.23E-05	8.39E-05	3.03E-04	1.21E-05	4.90E-09	3.48E-04	2.38E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	5.61E-09	1.26E-01	9.24E-08	2.27E-04	1.52E-07	5.48E-05	1.32E-05	2.37E-06	1.88E-05	3.55E-06	3.62E-06	1.28E-05	5.15E-07	2.06E-10	1.52E-05	1.03E-05
10	E69	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.42E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.44E-04
10	E69	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.66E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.89E-04
10	E70	70	Passenger Car	603	0.00E+00	6.73E-06	7.32E-07	2.63E+01	4.78E-05	1.35E-01	1.52E-05	6.10E-04	4.65E-03	7.24E-04	1.48E-03	9.55E-04	9.80E-04	1.02E-04	1.32E-04	2.75E-08	5.01E-04	9.51E-05
10	E70	70	Passenger Truck	1010	0.00E+00	1.42E-05	1.51E-06	5.92E+01	9.07E-05	2.39E-01	2.97E-05	1.77E-03	8.41E-03	1.30E-03	2.84E-03	1.85E-03	1.89E-03	4.48E-04	2.95E-04	5.28E-08	9.49E-04	2.98E-04
10	E70	70	Single Unit Short Haul Truck	30	0.00E+00	5.23E-06	2.12E-07	4.87E+00	3.50E-06	8.82E-03	5.68E-06	2.08E-03	4.72E-04	8.66E-05	7.04E-04	1.34E-04	1.37E-04	4.94E-04	1.98E-05	7.99E-09	5.68E-04	3.89E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	2.27E-07	9.16E-09	2.06E-01	1.51E-07	3.70E-04	2.47E-07	8.94E-05	2.16E-05	3.87E-06	3.07E-05	5.80E-06	5.91E-06	2.09E-05	8.40E-07	3.37E-10	2.48E-05	1.67E-05
10	E70	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.06E-04
10	E70	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.44E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.48E-04
10	E71	70	Passenger Car	562	0.00E+00	6.28E-06	6.82E-07	2.45E+01	4.45E-05	1.26E-01	1.42E-05	5.69E-04	4.33E-03	6.75E-04	1.38E-03	8.90E-04	9.13E-04	9.55E-05	1.23E-04	2.56E-08	4.67E-04	8.87E-05
10	E71	70	Passenger Truck	942	0.00E+00	1.32E-05	1.40E-06	5.52E+01	8.46E-05	2.23E-01	2.77E-05	1.65E-03	7.84E-03	1.21E-03	2.65E-03	1.72E-03	1.76E-03	4.18E-04	2.75E-04	4.92E-08	8.85E-04	2.78E-04
10	E71	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	E71	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.89E-04
10	E71	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
10	E72	70	Passenger Car	745	0.00E+00	8.32E-06	9.04E-07	3.25E+01	5.90E-05	1.67E-01	1.88E-05	7.54E-04	5.74E-03	8.94E-04	1.83E-03	1.18E-03	1.21E-03	1.27E-04	1.63E-04	3.39E-08	6.19E-04	1.18E-04
10	E72	70	Passenger Truck	1248	0.00E+00	1.75E-05	1.86E-06	7.31E+01	1.12E-04	2.95E-01	3.67E-05	2.19E-03	1.04E-02	1.61E-03	3.51E-03	2.28E-03	2.34E-03	5.53E-04	3.64E-04	6.52E-08	1.17E-03	3.68E-04
10	E72	70	Single Unit Short Haul Truck	28	0.00E+00	4.89E-06	1.99E-07	4.55E+00	3.28E-06	8.25E-03	5.32E-06	1.94E-03	4.41E-04	8.10E-05	6.59E-04	1.26E-04	1.28E-04	4.62E-04	1.85E-05	7.47E-09	5.31E-04	3.64E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	2.13E-07	8.56E-09	1.93E-01	1.41E-07	3.46E-04	2.31E-07	8.36E-05	2.02E-05	3.62E-06	2.88E-05	5.42E-06	5.53E-06	1.95E-05	7.86E-07	3.15E-10	2.32E-05	1.56E-05
10	E72	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.81E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.30E-04
10	E72	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.01E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.67E-04
9	E73	60	Passenger Car	253	0.00E+00	3.24E-06	3.52E-07	1.15E+01	2.30E-05	6.48E-02	7.31E-06	2.61E-04	2.56E-03	3.83E-04	7.13E-04	4.59E-04	4.71E-04	5.02E-05	5.79E-05	1.22E-08	2.41E-04	4.07E-05
9	E73	60	Passenger Truck	424	0.00E+00	6.88E-06	7.29E-07	2.57E+01	4.34E-05	1.11E-01	1.43E-05	8.10E-04	4.67E-03	6.95E-04	1.36E-03	8.85E-04	9.07E-04	2.05E-04	1.28E-04	2.37E-08	4.53E-04	1.37E-04
9	E73	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.56E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
9	E73	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.79E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.26E-04
9	E73	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.60E-04
9	E74	60	Passenger Car	354	0.00E+00	4.53E-06	4.92E-07	1.61E+01	3.21E-05	9.06E-02	1.02E-05	3.64E-04	3.57E-03	5.35E-04	9.96E-04	6.42E-04	6.59E-04	7.01E-05	8.09E-05	1.70E-08	3.37E-04	5.68E-05
9	E74	60	Passenger Truck	592	0.00E+00	9.61E-06	1.02E-06	3.59E+01	6.06E-05	1.55E-01	1.99E-05	1.13E-03	6.53E-03	9.71E-04	1.90E-03	1.24E-03	1.27E-03	2.87E-04	1.79E-04	3.31E-08	6.34E-04	1.92E-04
9	E74	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	E74	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.10E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	E74	60	Combination Short Haul Truck	8	0.00E+00	2.44E-06	1.79E-07	2.95E+00	6.69E-09	3.65E-03	1.75E-06	3.72E-03	4.26E-04	6.67E-05	1.51E-04	5.25E-05	5.45E-05	4.68E-04	9.86E-06	0.00E+00	9.60E-05	7.02E-04
9	E74	60	Combination Long Haul Truck	8	0.00E+00	3.36E-06	1.83E-07	2.78E+00	2.27E-08	4.38E-03	2.81E-06	3.97E-03	4.47E-04	6.46E-05	3.18E-04	5.99E-05	6.24E-05	4.47E-04	9.33E-06	0.00E+00	2.56E-04	7.47E-04
53	E75	70	Passenger Car	786	0.00E+00	8.50E-06	9.24E-07	3.47E+01	6.03E-05	1.70E-01	1.92E-05	8.09E-04	5.96E-03	9.33E-04	1.87E-03	1.21E-03	1.24E-03	1.34E-04	1.74E-04	3.62E-08	6.33E-04	1.26E-04
53	E75	70	Passenger Truck	1316	0.00E+00	1.78E-05	1.89E-06	7.80E+01	1.14E-04	2.99E-01	3.73E-05	2.28E-03	1.06E-02	1.65E-03	3.57E-03	2.32E-03	2.38E-03	5.80E-04	3.89E-04	6.82E-08	1.19E-03	3.82E-04
53	E75	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.64E-04
53	E75	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
53	E75	70	Combination Short Haul Truck	40	0.00E+00	1.04E-05	7.71E-07	1.40E+01	2.63E-08	1.50E-02	7.39E-06	1.55E-02	1.46E-03	2.44E-04	6.22E-04	2.25E-04	2.33E-04	2.23E-03	4.68E-05	0.00E+00	3.89E-04	2.92E-03
53	E75	70	Combination Long Haul Truck	37	0.00E+00	1.42E-05	8.08E-07	1.31E+01	8.91E-08	1.79E-02	1.17E-05	1.66E-02	1.52E-03	2.29E-04	1.29E-03	2.60E-04	2.71E-04	2.11E-03	4.41E-05	0.00E+00	1.02E-03	3.12E-03
53	E76	70	Passenger Car	1385	0.00E+00	1.50E-05	1.63E-06	6.11E+01	1.06E-04	2.99E-01	3.38E-05	1.43E-03	1.05E-02	1.64E-03	3.30E-03	2.12E-03	2.18E-03	2.35E-04	3.07E-04	6.38E-08	1.11E-03	2.22E-04
53	E76	70	Passenger Truck	2319	0.00E+00	3.13E-05	3.33E-06	1.38E+02	2.01E-04	5.27E-01	6.57E-05	4.02E-03	1.88E-02	2.92E-03	6.29E-03	4.08E-03	4.19E-03	1.02E-03	6.85E-04	1.20E-07	2.10E-03	6.74E-04
53	E76	70	Single Unit Short Haul Truck	55	0.00E+00	9.61E-06	3.90E-07	8.95E+00	6.44E-06	1.62E-02	1.04E-05	3.82E-03	8.68E-04	1.59E-04	1.30E-03	2.47E-04	2.52E-04	9.09E-04	3.64E-05	1.47E-08	1.04E-03	7.15E-04
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	4.18E-07	1.68E-08	3.79E-01	2.77E-07	6.81E-04	4.55E-07	1.64E-04	3.97E-05	7.12E-06	5.65E-05	1.07E-05	1.09E-05	3.83E-05	1.54E-06	6.19E-10	4.56E-05	3.08E-05
53	E76	70	Combination Short Haul Truck	72	0.00E+00	1.86E-05	1.38E-06	2.51E+01	4.72E-08	2.68E-02	1.32E-05	2.77E-02	2.62E-03	4.37E-04	1.11E-03	4.03E-04	4.18E-04	3.99E-03	8.39E-05	0.00E+00	6.97E-04	5.23E-03
53	E76	70	Combination Long Haul Truck	66	0.00E+00	2.55E-05	1.45E-06	2.36E+01	1.60E-07	3.20E-02	2.09E-05	2.97E-02	2.73E-03	4.11E-04	2.32E-03	4.66E-04	4.85E-04	3.78E-03	7.90E-05	0.00E+00	1.83E-03	5.59E-03
53	E77	70	Passenger Car	819	0.00E+00	8.86E-06	9.63E-07	3.61E+01	6.29E-05	1.77E-01	2.00E-05	8.43E-04	6.21E-03	9.72E-04	1.95E-03	1.26E-03	1.29E-03	1.39E-04	1.82E-04	3.77E-08	6.59E-04	1.31E-04
53	E77	70	Passenger Truck	1371	0.00E+00	1.85E-05	1.97E-06	8.13E+01	1.19E-04	3.12E-01	3.89E-05	2.38E-03	1.11E-02	1.72E-03	3.72E-03	2.41E-03	2.48E-03	6.04E-04	4.05E-04	7.10E-08	1.24E-03	3.98E-04
53	E77	70	Single Unit Short Haul Truck	42	0.00E+00	7.42E-06	3.01E-07	6.91E+00	4.97E-06	1.25E-02	8.07E-06	2.95E-03	6.70E-04	1.23E-04	1.00E-03	1.90E-04	1.94E-04	7.02E-04	2.81E-05	1.13E-08	8.06E-04	5.52E-04
53	E77	70	Single Unit Long Haul Truck	2	0.00E+00	3.23E-07	1.30E-08	2.93E-01	2.14E-07	5.26E-04	3.51E-07	1.27E-04	3.07E-05	5.50E-06	4.36E-05	8.23E-06	8.39E-06	2.96E-05	1.19E-06	4.78E-10	3.52E-05	2.37E-05
53	E77	70	Combination Short Haul Truck	46	0.00E+00	1.18E-05	8.81E-07	1.60E+01	3.01E-08	1.71E-02	8.44E-06	1.77E-02	1.67E-03	2.78E-04	7.11E-04	2.57E-04	2.66E-04	2.54E-03	5.35E-05	0.00E+00	4.44E-04	3.33E-03
53	E77	70	Combination Long Haul Truck	42	0.00E+00	1.62E-05	9.24E-07	1.50E+01	1.02E-07	2.04E-02	1.34E-05	1.89E-02	1.74E-03	2.62E-04	1.48E-03	2.97E-04	3.09E-04	2.41E-03	5.03E-05	0.00E+00	1.17E-03	3.57E-03
53	E78	70	Passenger Car	1386	0.00E+00	1.50E-05	1.63E-06	6.11E+01	1.06E-04	2.99E-01	3.38E-05	1.43E-03	1.05E-02	1.65E-03	3.30E-03	2.13E-03	2.18E-03	2.35E-04	3.07E-04	6.38E-08	1.12E-03	2.22E-04
53	E78	70	Passenger Truck	2321	0.00E+00	3.13E-05	3.33E-06	1.38E+02	2.01E-04	5.27E-01	6.58E-05	4.03E-03	1.88E-02	2.92E-03	6.29E-03	4.09E-03	4.19E-03	1.02E-03	6.86E-04	1.20E-07	2.10E-03	6.74E-04
53	E78	70	Single Unit Short Haul Truck	57	0.00E+00	9.95E-06	4.04E-07	9.26E+00	6.67E-06	1.68E-02	1.08E-05	3.95E-03	8.98E-04	1.65E-04	1.34E-03	2.55E-04	2.60E-04	9.41E-04	3.77E-05	1.52E-08	1.08E-03	7.40E-04
53	E78	70	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	1.74E-08	3.92E-01	2.87E-07	7.05E-04	4.71E-07	1.70E-04	4.11E-05	7.37E-06	5.85E-05	1.10E-05	1.13E-05	3.97E-05	1.60E-06	6.41E-10	4.72E-05	3.18E-05
53	E78	70	Combination Short Haul Truck	78	0.00E+00	2.01E-05	1.49E-06	2.71E+01	5.09E-08	2.90E-02	1.43E-05	2.99E-02	2.83E-03	4.72E-04	1.20E-03	4.35E-04	4.51E-04	4.31E-03	9.06E-05	0.00E+00	7.52E-04	5.64E-03
53	E78	70	Combination Long Haul Truck	71	0.00E+00	2.75E-05	1.56E-06	2.54E+01	1.72E-07	3.46E-02	2.26E-05	3.21E-02	2.94E-03	4.43E-04	2.50E-03	5.03E-04	5.24E-04	4.08E-03	8.53E-05	0.00E+00	1.98E-03	6.04E-03
53	E79	70	Passenger Car	775	0.00E+00	8.38E-06	9.11E-07	3.42E+01	5.95E-05	1.67E-01	1.89E-05	7.97E-04	5.88E-03	9.20E-04	1.84E-03	1.19E-03	1.22E-03	1.32E-04	1.72E-04	3.57E-08	6.24E-04	1.24E-04
53	E79	70	Passenger Truck	1297	0.00E+00	1.75E-05	1.86E-06	7.69E+01	1.12E-04	2.95E-01	3.68E-05	2.25E-03	1.05E-02	1.63E-03	3.52E-03	2.28E-03	2.34E-03	5.72E-04	3.83E-04	6.72E-08	1.18E-03	3.77E-04
53	E79	70	Single Unit Short Haul Truck	59	0.00E+00	1.05E-05	4.25E-07	9.73E+00	7.00E-06	1.76E-02	1.14E-05	4.15E-03	9.44E-04	1.73E-04	1.41E-03	2.68E-04	2.74E-04	9.89E-04	3.96E-05	1.60E-08	1.14E-03	7.77E-04
53	E79	70	Single Unit Long Haul Truck	3	0.00E+00	4.55E-07	1.83E-08	4.12E-01	3.01E-07	7.41E-04	4.95E-07	1.79E-04	4.32E-05	7.74E-06	6.15E-05	1.16E-05	1.18E-05	4.17E-05	1.68E-06	6.73E-10	4.96E-05	3.34E-05
53	E79	70	Combination Short Haul Truck	20	0.00E+00	5.12E-06	3.81E-07	6.91E+00	1.30E-08	7.39E-03	3.64E-06	7.64E-03	7.21E-04	1.20E-04	3.07E-04	1.11E-04	1.15E-04	1.10E-03	2.31E-05	0.00E+00	1.92E-04	1.44E-03
53	E79	70	Combination Long Haul Truck	18	0.00E+00	7.02E-06	3.99E-07	6.49E+00	4.40E-08	8.82E-03	5.77E-06	8.18E-03	7.51E-04	1.13E-04	6.38E-04	1.28E-04	1.34E-04	1.04E-03	2.17E-05	0.00E+00	5.04E-04	1.54E-03
53	E80	70	Passenger Car	1281	0.00E+00	1.39E-05	1.51E-06	5.65E+01	9.84E-05	2.76E-01	3.13E-05	1.32E-03	9.72E-03	1.52E-03	3.05E-03	1.97E-03	2.02E-03	2.18E-04	2.84E-04	5.90E-08	1.03E-03	2.06E-04
53	E80	70	Passenger Truck	2146	0.00E+00	2.89E-05	3.08E-06	1.27E+02	1.86E-04	4.88E-01	6.08E-05	3.72E-03	1.74E-02	2.70E-03	5.82E-03	3.78E-03	3.87E-03	9.46E-04	6.34E-04	1.11E-07	1.94E-03	6.23E-04
53	E80	70	Single Unit Short Haul Truck	41	0.00E+00	7.25E-06	2.94E-07	6.75E+00	4.86E-06	1.22E-02	7.88E-06	2.88E-03	6.55E-04	1.20E-04	9.77E-04	1.86E-04	1.90E-04	6.86E-04	2.74E-05	1.11E-08	7.87E-04	5.39E-04
53	E80	70	Single Unit Long Haul Truck	2	0.00E+00	3.15E-07	1.27E-08	2.86E-01	2.09E-07	5.14E-04	3.43E-07	1.24E-04	3.00E-05	5.37E-06	4.26E-05	8.04E-06	8.20E-06	2.89E-05	1.17E-06	4.67E-10	3.44E-05	2.32E-05
53	E80	70	Combination Short Haul Truck	26	0.00E+00	6.73E-06	5.01E-07	9.09E+00	1.71E-08	9.72E-03	4.80E-06	1.01E-02	9.49E-04	1.58E-04	4.04E-04	1.46E-04	1.51E-04	1.45E-03	3.04E-05	0.00E+00	2.52E-04	1.89E-03
53	E80	70	Combination Long Haul Truck	24	0.00E+00	9.23E-06	5.25E-07	8.54E+00	5.79E-08	1.16E-02	7.59E-06	1.08E-02	9.88E-04	1.49E-04	8.39E-04	1.69E-04	1.76E-04	1.37E-03	2.86E-05	0.00E+00	6.63E-04	2.03E-03
10	E83	70	Passenger Car	307	0.00E+00	3.43E-06	3.73E-07	1.34E+01	2.43E-05	6.90E-02	7.74E-06	3.11E-04	2.37E-03	3.69E-04	7.54E-04	4.86E-04	4.99E-04	5.22E-05	6.74E-05	1.40E-08	2.55E-04	4.85E-05
10	E83	70	Passenger Truck	515	0.00E+00	7.22E-06	7.68E-07	3.02E+01	4.62E-05	1.22E-01	1.51E-05	9.04E-04	4.29E-03	6.63E-04	1.45E-03	9.41E-04	9.64E-04	2.28E-04	1.50E-04	2.69E-08	4.84E-04	1.52E-04
10	E83	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.03E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E83	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.42E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.44E-04
10	E83	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.66E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.89E-04
10	E84	70

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E87	60	Combination Long Haul Truck	65	0.00E+00	2.87E-05	1.57E-06	2.38E+01	1.94E-07	3.75E-02	2.40E-05	3.40E-02	3.83E-03	5.53E-04	2.73E-03	5.13E-04	5.34E-04	3.83E-03	7.99E-05	0.00E+00	2.19E-03	6.40E-03
9	E88	60	Passenger Car	1073	0.00E+00	1.37E-05	1.49E-06	4.89E+01	9.75E-05	2.75E-01	3.10E-05	1.11E-03	1.08E-02	1.62E-03	3.02E-03	1.95E-03	2.00E-03	2.13E-04	2.45E-04	5.15E-08	1.02E-03	1.72E-04
9	E88	60	Passenger Truck	1798	0.00E+00	2.92E-05	3.09E-06	1.09E+02	1.84E-04	4.70E-01	6.05E-05	3.44E-03	1.98E-02	2.95E-03	5.77E-03	3.75E-03	3.85E-03	8.71E-04	5.42E-04	1.00E-07	1.92E-03	5.82E-04
9	E88	60	Single Unit Short Haul Truck	110	0.00E+00	2.46E-05	1.02E-06	1.83E+01	1.63E-05	3.22E-02	2.66E-05	9.43E-03	2.53E-03	4.26E-04	3.28E-03	6.32E-04	6.45E-04	1.86E-03	7.47E-05	3.08E-08	2.64E-03	1.76E-03
9	E88	60	Single Unit Long Haul Truck	5	0.00E+00	1.07E-06	4.41E-08	7.81E-01	7.07E-07	1.37E-03	1.16E-06	4.08E-04	1.14E-04	1.89E-05	1.43E-04	2.75E-05	2.80E-05	7.90E-05	3.19E-06	1.31E-09	1.15E-04	7.64E-05
9	E88	60	Combination Short Haul Truck	61	0.00E+00	1.79E-05	1.31E-06	2.16E+01	4.89E-08	2.67E-02	1.28E-05	2.72E-02	3.12E-03	4.87E-04	1.10E-03	3.84E-04	3.98E-04	3.43E-03	7.21E-05	0.00E+00	7.02E-04	5.13E-03
9	E88	60	Combination Long Haul Truck	56	0.00E+00	2.45E-05	1.34E-06	2.04E+01	1.66E-07	3.21E-02	2.05E-05	2.90E-02	3.27E-03	4.73E-04	2.33E-03	4.38E-04	4.56E-04	3.27E-03	6.82E-05	0.00E+00	1.87E-03	5.46E-03
9	E89	60	Passenger Car	181	0.00E+00	2.31E-06	2.51E-07	8.23E+00	1.64E-05	4.62E-02	5.21E-06	1.86E-04	1.82E-03	2.73E-04	5.08E-04	3.28E-04	3.36E-04	3.58E-05	4.13E-05	8.67E-09	1.72E-04	2.90E-05
9	E89	60	Passenger Truck	302	0.00E+00	4.91E-06	5.20E-07	1.84E+01	3.10E-05	7.91E-02	1.02E-05	5.78E-04	3.33E-03	4.96E-04	9.70E-04	6.31E-04	6.47E-04	1.47E-04	9.11E-05	1.69E-08	3.23E-04	9.80E-05
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	E90	60	Passenger Car	238	0.00E+00	3.05E-06	3.31E-07	1.09E+01	2.16E-05	6.10E-02	6.87E-06	2.45E-04	2.41E-03	3.60E-04	6.70E-04	4.32E-04	4.44E-04	4.72E-05	5.44E-05	1.14E-08	2.27E-04	3.83E-05
9	E90	60	Passenger Truck	399	0.00E+00	6.47E-06	6.86E-07	2.42E+01	4.08E-05	1.04E-01	1.34E-05	7.63E-04	4.39E-03	6.54E-04	1.28E-03	8.33E-04	8.53E-04	1.93E-04	1.20E-04	2.23E-08	4.27E-04	1.29E-04
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	E90	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.40E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.63E-04
9	E90	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.49E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.80E-04
9	E91	60	Passenger Car	4	0.00E+00	4.79E-08	5.20E-09	1.70E-01	3.40E-07	9.57E-04	1.08E-07	3.85E-06	3.78E-05	5.65E-06	1.05E-05	6.79E-06	6.96E-06	7.41E-07	8.55E-07	1.80E-10	3.56E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.02E-07	1.08E-08	3.80E-01	6.41E-07	1.64E-03	2.11E-07	1.20E-05	6.90E-05	1.03E-05	2.01E-05	1.31E-05	1.34E-05	3.03E-06	1.89E-06	3.50E-10	6.70E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.79E-08	5.20E-09	1.70E-01	3.40E-07	9.57E-04	1.08E-07	3.85E-06	3.78E-05	5.65E-06	1.05E-05	6.79E-06	6.96E-06	7.41E-07	8.55E-07	1.80E-10	3.56E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.02E-07	1.08E-08	3.80E-01	6.41E-07	1.64E-03	2.11E-07	1.20E-05	6.90E-05	1.03E-05	2.01E-05	1.31E-05	1.34E-05	3.03E-06	1.89E-06	3.50E-10	6.70E-06	2.03E-06
9	E93	60	Passenger Car	184	0.00E+00	2.36E-06	2.56E-07	8.40E+00	1.67E-05	4.72E-02	5.32E-06	1.90E-04	1.86E-03	2.79E-04	5.19E-04	3.35E-04	3.43E-04	3.65E-05	4.21E-05	8.85E-09	1.76E-04	2.96E-05
9	E93	60	Passenger Truck	309	0.00E+00	5.01E-06	5.31E-07	1.87E+01	3.16E-05	8.08E-02	1.04E-05	5.90E-04	3.40E-03	5.06E-04	9.90E-04	6.44E-04	6.60E-04	1.50E-04	9.30E-05	1.73E-08	3.30E-04	1.00E-04
9	E93	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
9	E93	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.86E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.51E-04
9	E93	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.98E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.74E-04
9	E94	60	Passenger Car	235	0.00E+00	3.01E-06	3.27E-07	1.07E+01	2.14E-05	6.02E-02	6.79E-06	2.42E-04	2.37E-03	3.56E-04	6.62E-04	4.27E-04	4.38E-04	4.66E-05	5.38E-05	1.13E-08	2.24E-04	3.78E-05
9	E94	60	Passenger Truck	394	0.00E+00	6.39E-06	6.77E-07	2.39E+01	4.03E-05	1.03E-01	1.33E-05	7.53E-04	4.34E-03	6.46E-04	1.26E-03	8.22E-04	8.43E-04	1.91E-04	1.19E-04	2.20E-08	4.21E-04	1.28E-04
9	E94	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.60E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
54	E95	80	Passenger Car	314	0.00E+00	3.19E-06	3.46E-07	1.34E+01	2.26E-05	6.44E-02	7.18E-06	3.27E-04	1.80E-03	2.96E-04	7.01E-04	4.52E-04	4.64E-04	4.67E-05	6.74E-05	1.40E-08	2.37E-04	5.11E-05
54	E95	80	Passenger Truck	526	0.00E+00	6.62E-06	7.06E-07	3.04E+01	4.31E-05	1.17E-01	1.40E-05	8.79E-04	3.22E-03	5.27E-04	1.35E-03	8.74E-04	8.96E-04	2.16E-04	1.52E-04	2.69E-08	4.51E-04	1.46E-04
54	E95	80	Single Unit Short Haul Truck	57	0.00E+00	7.75E-06	3.03E-07	9.26E+00	5.26E-06	1.68E-02	8.52E-06	3.22E-03	6.35E-04	1.30E-04	1.07E-03	1.98E-04	2.02E-04	9.42E-04	3.76E-05	1.49E-08	8.66E-04	6.02E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.30E-08	3.91E-01	2.24E-07	7.01E-04	3.70E-07	1.38E-04	2.91E-05	5.76E-06	4.66E-05	8.49E-06	8.66E-06	3.96E-05	1.59E-06	6.22E-10	3.79E-05	2.57E-05
54	E95	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.13E-03
54	E95	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
54	E96	80	Passenger Car	774	0.00E+00	7.85E-06	8.54E-07	3.30E+01	5.57E-05	1.59E-01	1.77E-05	8.07E-04	4.44E-03	7.31E-04	1.73E-03	1.11E-03	1.14E-03	1.15E-04	1.66E-04	3.44E-08	5.84E-04	1.26E-04
54	E96	80	Passenger Truck	1297	0.00E+00	1.63E-05	1.74E-06	7.49E+01	1.06E-04	2.89E-01	3.46E-05	2.17E-03	7.93E-03	1.30E-03	3.32E-03	2.16E-03	2.21E-03	5.32E-04	3.74E-04	6.63E-08	1.11E-03	3.60E-04
54	E96	80	Single Unit Short Haul Truck	82	0.00E+00	1.13E-05	4.41E-07	1.35E+01	7.66E-06	2.45E-02	1.24E-05	4.69E-03	9.25E-04	1.89E-04	1.56E-03	2.88E-04	2.94E-04	1.37E-03	5.49E-05	2.17E-08	1.26E-03	8.77E-04
54	E96	80	Single Unit Long Haul Truck	4	0.00E+00	4.91E-07	1.89E-08	5.71E-01	3.26E-07	1.02E-03	5.40E-07	2.01E-04	4.24E-05	8.40E-06	6.79E-05	1.24E-05	1.26E-05	5.77E-05	2.32E-06	9.06E-10	5.53E-05	3.75E-05
54	E96	80	Combination Short Haul Truck	74	0.00E+00	1.53E-05	1.13E-06	2.49E+01	4.01E-08	2.33E-02	1.09E-05	2.36E-02	1.77E-03	3.21E-04	9.28E-04	3.31E-04	3.43E-04	3.96E-03	8.33E-05	0.00E+00	5.85E-04	4.45E-03
54	E96	80	Combination Long Haul Truck	68	0.00E+00	2.13E-05	1.20E-06	2.31E+01	1.36E-07	2.76E-02	1.76E-05	2.52E-02	1.83E-03	2.93E-04	1.95E-03	3.88E-04	4.04E-04	3.71E-03	7.74E-05	0.00E+00	1.55E-03	4.75E-03
54	E97	80	Passenger Car	314	0.00E+00	3.19E-06	3.46E-07	1.34E+01	2.26E-05	6.44E-02	7.18E-06	3.27E-04	1.80E-03	2.96E-04	7.01E-04	4.52E-04	4.64E-04	4.67E-05	6.74E-05	1.40E-08	2.37E-04	5.11E-05
54	E97	80	Passenger Truck	526	0.00E+00	6.62E-06	7.06E-07	3.04E+01	4.31E-05	1.17E-01	1.40E-05	8.79E-04	3.22E-03	5.27E-04	1.35E-03	8.74E-04	8.96E-04	2.16E-04	1.52E-04	2.69E-08	4.51E-04	1.46E-04
54	E97	80	Single Unit Short Haul Truck	57	0.00E+00	7.75E-06	3.03E-07	9.26E+00	5.26E-06	1.68E-02	8.52E-06	3.22E-03	6.35E-04	1.30E-04	1.07E-03	1.98E-04	2.02E-04	9.42E-04	3.76E-05	1.49E-08	8.66E-04	6.02E-04
54	E97	80	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.30E-08	3.91E-01	2.24E-07	7.01E-04	3.70E-07	1.38E-04	2.91E-05	5.76E-06	4.66E-05	8.49E-06	8.66E-06	3.96E-05	1.59E-06	6.22E-10	3.79E-05	2.57E-05
54	E97	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.13E-03
54	E97	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
54	E98	80	Passenger Car	774	0.00E+00	7.85E-06	8.54E-07	3.30E+01	5.57E-05	1.59E-01	1.77E-05	8.07E-04	4.44E-03	7.31E-04	1.73E-03	1.11E-03	1.14E-03	1.15E-04	1.66E-04	3.44E-08	5.84E-04	1.26E-04
54	E98	80	Passenger Truck	1297	0.00E+00	1.63E-05	1.74E-06	7.49E+01	1.06E-04	2.89E-01	3.46E-05	2.17E-03	7.93E-03	1.30E-03	3.32E-03	2.16E-03	2.21E-03	5.32E-04	3.74E-04	6.63E-08	1.11E-03	3.60E-04
54	E98	80	Single Unit Short Haul Truck	82	0.00E+00	1.13E-05	4.41E-07	1.35E+01	7.66E-06	2.45E-02	1.24E-05	4.69E-03	9.25E-04	1.89E-04	1.56E-03	2.88E-04	2.94E-04	1.37E-03	5.49E-05	2.17E-08	1.26E-03	8.77E-04
54	E98	80	Single Unit Long Haul Truck	4	0.00E+00	4.91E-07	1.89E-08	5.71E-01	3.26E-07	1.02E-03	5.40E-07	2.01E-04	4.24E-05	8.40E-06	6.79E-05	1.24E-05	1.26E-05	5.77E-05	2.32E-06	9.06E-10	5.53E-05	3.75E-05
54	E98	80	Combination Short Haul Truck	74	0.00E+00	1.53E-05	1.13E-06	2.49E+01	4.01E-08	2.33E-02	1.09E-05	2.36E-02	1.77E-03	3.21E-04	9.28E-04	3.31E-04	3.43E-04	3.96E-03	8.33E-05	0.00E+00	5.85E-04	4.45E-03
54	E98	80	Combination Long Haul Truck	68	0.00E+00	2.13E-05	1.20E-06	2.31E+01	1.36E-07	2.76E-02	1.76E-05	2.52E-02	1.83E-03	2.93E-04	1.95E-03	3.88E-04	4.04E-04	3.71E-03	7.74E-05	0.00E+00	1.55E-03	4.75E-03
9	F01	60	Passenger Car	343	0.00E+00	4.39E-06	4.77E-07	1.57E+01	3.12E-05	8.79E-02	9.91E-06	3.53E-04	3.47E-03	5.19E-04	9.66E-04	6.23E-04	6.39E-04	6.80E-05	7.85E-05	1.65E-08	3.27E-04	5.51E-05
9	F01	60	Passenger Truck	575	0.00E+00	9.33E-06	9.89E-07	3.49E+01	5.88E-05	1.50E-01	1.93E-05	1.10E-03	6.33E-03	9.43E-04	1.84E-03	1.20E-03	1.23E-03	2.78E-04	1.73E-04	3.21E-08	6.15E-04	1.86E-04
9	F01	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.84E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.26E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.97E-06
9	F01	60	Combination Short Haul Truck	10	0.00E+00	3.05E-06	2.24E-07	3.68E+00	8.36E-09	4.56E-03	2.19E-06	4.65E-03	5.33E-04	8.33E-05	1.88E-04	6.56E-05	6.81E-05	5.86E-04	1.23E-05	0.00E+00	1.20E-04	8.77E-04
9	F01	60	Combination Long Haul Truck	10	0.00E+00	4.20E-06	2.29E-07	3.48E+00	2.83E-08	5.48E-03	3.51E-06	4.96E-03	5.59E-04	8.08E-05	3.98E-04	7.48E-05	7.80E-05	5.59E-04	1.17E-05	0.00E+00	3.20E-04	9.34E-04
9	F02	60	Passenger Car	313	0.00E+00	4.01E-06	4.35E-07	1.43E+01	2.84E-05	8.01E-02	9.03E-06	3.22E-04	3.16E-03	4.73E-04	8.81E-04	5.68E-04	5.83E-04	6.20E-05	7.15E-05	1.50E-08	2.98E-04	5.03E-05
9	F02	60	Passenger Truck	524	0.00E+00	8.50E-06	9.01E-07	3.18E+01	5.36E-05	1.37E-01	1.76E-05	1.00E-03	5.77E-03	8.59E-04	1.68E-03	1.09E-03	1.12E-03	2.54E-04	1.58E-04	2.93E-08	5.61E-04	1.70E-04
9	F02	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.52E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	F02	60	Combination Short Haul Truck	15	0.00E+00	4.27E-06	3.14E-07	5.16E+00	1.17E-08	6.39E-03	3.07E-06	6.52E-03	7.46E-04	1.17E-04	2.63E-04	9.18E-05	9.54E-05	8.20E-04	1.72E-05	0.00E+00	1.68E-04	1.23E-03
9	F02	60	Combination Long Haul Truck	13	0.00E+00	5.87E-06	3.21E-07	4.87E+00	3.96E-08	7.67E-03	4.91E-06	6.94E-03	7.82E-04	1.13E-04	5.57E-04	1.05E-04	1.09E-04	7.82E-04	1.63E-05	0.00E+00	4.48E-04	1.31E-03
11	F03	80	Passenger Car	32	0.00E+00	3.34E-07	3.63E-08	1.36E+00	2.37E-06	6.89E-03	7.54E-07	3.33E-05	1.75E-04	2.93E-05	7.35E-05	4.74E-05	4.86E-05	4.78E-06	6.86E-06	1.47E-09	2.49E-05	5.20E-06
11	F03	80	Passenger Truck	54	0.00E+00	6.88E-07	7.34E-08	3.07E+00	4.48E-06	1.22E-02	1.46E-06	8.99E-05	3.12E-04	5.20E-05	1.40E-04	9.08E-05	9.31E-05	2.21E-05	1.53E-05	2.79E-09	4.69E-05	1.50E-05
11	F03	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.64E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.06E-05
11	F03	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.99E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.40E-05
11	F03	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.33E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
11	F04	80	Passenger Car	141	0.00E+00	1.47E-06	1.60E-07	5.98E+00	1.04E-05	3.03E-02	3.31E-06	1.47E-04	7.70E-04	1.29E-04	3.23E-04	2.08E-04	2.14E-04	2.10E-05	3.02E-05	6.44E-09	1.09E-04	2.29E-05
11	F04	80	Passenger Truck	237	0.00E+00	3.03E-06	3.22E-07	1.35E+01	1.97E-05	5.35E-02	6.41E-06	3.95E-04	1.37E-03	2.28E-04	6.15E-04	3.99E-04	4.09E-04	9.72E-05	6.74E-05	1.23E-08	2.06E-04	6.58E-05
11	F04	80	Single Unit Short Haul Truck	13	0.00E+00	1.84E-06	7.18E-08	2.20E+00	1.25E-06	3.99E-03	2.02E-06	7.64E-04	1.51E-04	3.08E-05	2.53E-04	4.69E-05	4.78E-05	2.24E-04	8.93E-06	3.54E-09	2.06E-04	1.43E-04
11	F04	80	Single Unit Long Haul Truck	1	0.00E+00	7.99E-08	3.08E-09	9.29E-02	5.31E-08	1.66E-04	8.78E-08	3.26E-05	6.91E-06	1.37E-06	1.10E-05	2.01E-06	2.05E-06	9.39E-06	3.78E-07	1.48E-10	8.99E-06	6.10E-06
11	F04	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	1.99E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.76E-04
11	F04	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.13E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.02E-04
9	F05	60	Passenger Car	346	0.00E+00	4.43E-06	4.81E-07	1.58E+01	3.14E-05	8.86E-02	9.98E-06	3.56E-04	3.49E-03	5.23E-04	9.74E-04	6.28E-04	6.44E-04	6.86E-05	7.91E-05	1.66E-08	3.29E-04	5.55E-05
9	F05	60	Passenger Truck	579	0.00E+00	9.40E-06	9.96E-07	3.51E+01	5.93E-05	1.52E-01	1.95E-05	1.11E-03	6.38E-03	9.50E-04	1.86E-03	1.21E-03	1.24E-03	2.81E-04	1.75E-04	3.24E-08	6.19E-04	1.88E-04
9	F05	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	F05	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.10E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	F05	60	Combination Short Haul Truck	16	0.00E+00	4.73E-06	3.48E-07	5.71E+00	1.30E-08	7.07E-03	3.40E-06	7.21E-03	8.26E-04	1.29E-04	2.92E-04	1.02E-04	1.06E-04	9.08E-04	1.91E-05	0.00E+00	1.86E-04	1.36E-03
9	F05	60	Combination Long Haul Truck	15	0.00E+00	6.50E-06	3.55E-07	5.39E+00	4.39E-08	8.49E-03	5.44E-06	7.69E-03	8.66E-04	1.25E-04	6.17E-04	1.16E-04	1.21E-04	8.66E-04	1.81E-05	0.00E+00	4.96E-04	1.45E-03
9	F06	60	Passenger Car	173	0.00E+00	2.22E-06	2.41E-07	7.89E+00	1.57E-05	4.43E-02	5.00E-06	1.78E-04	1.75E-03	2.62E-04	4.87E-04	3.14E-04	3.22E-04	3.43E-05	3.96E-05	8.31E-09	1.65E-04	2.78E-05
9	F06	60	Passenger Truck	290	0.00E+00	4.70E-06	4.

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F10	80	Passenger Car	299	0.00E+00	3.11E-06	3.38E-07	1.27E+01	2.21E-05	6.41E-02	7.01E-06	3.10E-04	1.63E-03	2.73E-04	6.84E-04	4.41E-04	4.53E-04	4.45E-05	6.38E-05	1.36E-08	2.31E-04	4.84E-05
11	F10	80	Passenger Truck	501	0.00E+00	6.40E-06	6.83E-07	2.86E+01	4.16E-05	1.13E-01	1.36E-05	8.36E-04	2.90E-03	4.83E-04	1.30E-03	8.45E-04	8.66E-04	2.06E-04	1.43E-04	2.60E-08	4.36E-04	1.39E-04
11	F10	80	Single Unit Short Haul Truck	17	0.00E+00	2.37E-06	9.24E-08	2.83E+00	1.60E-06	5.13E-03	2.60E-06	9.82E-04	1.94E-04	3.96E-05	3.26E-04	6.03E-05	6.15E-05	2.88E-04	1.15E-05	4.55E-09	2.64E-04	1.84E-04
11	F10	80	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	3.97E-09	1.19E-01	6.83E-08	2.14E-04	1.13E-07	4.20E-05	8.88E-06	1.76E-06	1.42E-05	2.59E-06	2.64E-06	1.21E-05	4.86E-07	1.90E-10	1.16E-05	7.84E-06
11	F10	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.82E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	F10	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.22E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	F13	80	Passenger Car	12	0.00E+00	1.28E-07	1.39E-08	5.22E-01	9.10E-07	2.64E-03	2.89E-07	1.28E-05	6.73E-05	1.13E-05	2.82E-05	1.82E-05	1.87E-05	1.83E-06	2.63E-06	5.62E-10	9.54E-06	2.00E-06
11	F13	80	Passenger Truck	21	0.00E+00	2.64E-07	2.82E-08	1.18E+00	1.72E-06	4.67E-03	5.60E-07	3.45E-05	1.20E-04	1.99E-05	5.37E-05	3.48E-05	3.57E-05	8.48E-06	5.89E-06	1.07E-09	1.80E-05	5.74E-06
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.46E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.32E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.26E-05
11	F13	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.55E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.69E-05
11	F14	80	Passenger Car	10	0.00E+00	1.05E-07	1.14E-08	4.27E-01	7.45E-07	2.16E-03	2.37E-07	1.05E-05	5.50E-05	9.21E-06	2.31E-05	1.49E-05	1.53E-05	1.50E-06	2.15E-06	4.60E-10	7.81E-06	1.63E-06
11	F14	80	Passenger Truck	17	0.00E+00	2.16E-07	2.30E-08	9.65E-01	1.41E-06	3.82E-03	4.58E-07	2.82E-05	9.80E-05	1.63E-05	4.39E-05	2.85E-05	2.92E-05	6.94E-06	4.82E-06	8.76E-10	1.47E-05	4.70E-06
11	F14	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.46E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F14	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.32E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.26E-05
11	F14	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.55E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.69E-05
10	F15	70	Passenger Car	506	0.00E+00	5.65E-06	6.14E-07	2.21E+01	4.01E-05	1.14E-01	1.27E-05	5.12E-04	3.90E-03	6.08E-04	1.24E-03	8.01E-04	8.22E-04	8.60E-05	1.11E-04	2.30E-08	4.20E-04	7.99E-05
10	F15	70	Passenger Truck	848	0.00E+00	1.19E-05	1.26E-06	4.97E+01	7.62E-05	2.01E-01	2.49E-05	1.49E-03	7.06E-03	1.09E-03	2.38E-03	1.55E-03	1.59E-03	3.76E-04	2.47E-04	4.43E-08	7.97E-04	2.50E-04
10	F15	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.74E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.26E-04
10	F15	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.50E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.40E-05
10	F15	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.09E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.05E-03
10	F15	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.16E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.19E-03
10	F16	70	Passenger Car	347	0.00E+00	3.87E-06	4.20E-07	1.51E+01	2.75E-05	7.78E-02	8.72E-06	3.51E-04	2.67E-03	4.16E-04	8.51E-04	5.49E-04	5.63E-04	5.89E-05	7.60E-05	1.58E-08	2.88E-04	5.47E-05
10	F16	70	Passenger Truck	580	0.00E+00	8.14E-06	8.66E-07	3.40E+01	5.21E-05	1.37E-01	1.71E-05	1.02E-03	4.83E-03	7.48E-04	1.63E-03	1.06E-03	1.09E-03	2.57E-04	1.69E-04	3.03E-08	5.46E-04	1.71E-04
10	F16	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.76E-04
10	F16	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.65E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
10	F16	70	Combination Short Haul Truck	25	0.00E+00	6.46E-06	4.81E-07	8.73E+00	1.64E-08	9.33E-03	4.60E-06	9.65E-03	9.11E-04	1.52E-04	3.88E-04	1.40E-04	1.45E-04	1.39E-03	2.92E-05	0.00E+00	2.42E-04	1.82E-03
10	F16	70	Combination Long Haul Truck	23	0.00E+00	8.86E-06	5.04E-07	8.20E+00	5.56E-08	1.11E-02	7.29E-06	1.03E-02	9.48E-04	1.43E-04	8.05E-04	1.62E-04	1.69E-04	1.32E-03	2.75E-05	0.00E+00	6.37E-04	1.95E-03
10	F17	70	Passenger Car	351	0.00E+00	3.92E-06	4.25E-07	1.53E+01	2.78E-05	7.87E-02	8.83E-06	3.55E-04	2.70E-03	4.21E-04	8.61E-04	5.55E-04	5.70E-04	5.96E-05	7.69E-05	1.60E-08	2.91E-04	5.53E-05
10	F17	70	Passenger Truck	587	0.00E+00	8.24E-06	8.76E-07	3.44E+01	5.28E-05	1.39E-01	1.73E-05	1.03E-03	4.89E-03	7.57E-04	1.65E-03	1.07E-03	1.10E-03	2.60E-04	1.71E-04	3.07E-08	5.52E-04	1.73E-04
10	F17	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.51E-04
10	F17	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.07E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	F17	70	Combination Short Haul Truck	29	0.00E+00	7.54E-06	5.61E-07	1.02E+01	1.91E-08	1.09E-02	5.37E-06	1.13E-02	1.06E-03	1.77E-04	4.52E-04	1.63E-04	1.70E-04	1.62E-03	3.41E-05	0.00E+00	2.83E-04	2.12E-03
10	F17	70	Combination Long Haul Truck	27	0.00E+00	1.03E-05	5.88E-07	9.56E+00	6.48E-08	1.30E-02	8.50E-06	1.21E-02	1.11E-03	1.67E-04	9.40E-04	1.89E-04	1.97E-04	1.53E-03	3.20E-05	0.00E+00	7.43E-04	2.27E-03
10	F18	70	Passenger Car	306	0.00E+00	3.42E-06	3.71E-07	1.34E+01	2.43E-05	6.88E-02	7.71E-06	3.10E-04	2.36E-03	3.68E-04	7.52E-04	4.85E-04	4.97E-04	5.20E-05	6.71E-05	1.39E-08	2.54E-04	4.83E-05
10	F18	70	Passenger Truck	513	0.00E+00	7.20E-06	7.65E-07	3.01E+01	4.61E-05	1.21E-01	1.51E-05	9.00E-04	4.27E-03	6.61E-04	1.44E-03	9.37E-04	9.60E-04	2.27E-04	1.50E-04	2.68E-08	4.82E-04	1.51E-04
10	F18	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.76E-04
10	F18	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.65E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
10	F18	70	Combination Short Haul Truck	28	0.00E+00	7.13E-06	5.31E-07	9.64E+00	1.81E-08	1.03E-02	5.08E-06	1.07E-02	1.01E-03	1.68E-04	4.28E-04	1.55E-04	1.60E-04	1.53E-03	3.22E-05	0.00E+00	2.68E-04	2.01E-03
10	F18	70	Combination Long Haul Truck	25	0.00E+00	9.78E-06	5.56E-07	9.05E+00	6.13E-08	1.23E-02	8.04E-06	1.14E-02	1.05E-03	1.58E-04	8.89E-04	1.79E-04	1.86E-04	1.45E-03	3.03E-05	0.00E+00	7.03E-04	2.15E-03
10	F19	70	Passenger Car	385	0.00E+00	4.30E-06	4.67E-07	1.68E+01	3.05E-05	8.65E-02	9.69E-06	3.89E-04	2.97E-03	4.62E-04	9.45E-04	6.10E-04	6.26E-04	6.54E-05	8.44E-05	1.75E-08	3.20E-04	6.08E-05
10	F19	70	Passenger Truck	645	0.00E+00	9.05E-06	9.62E-07	3.78E+01	5.79E-05	1.53E-01	1.90E-05	1.13E-03	5.37E-03	8.31E-04	1.81E-03	1.18E-03	1.21E-03	2.86E-04	1.88E-04	3.37E-08	6.06E-04	1.90E-04
10	F20	70	Passenger Car	290	0.00E+00	3.23E-06	3.52E-07	1.26E+01	2.30E-05	6.51E-02	7.29E-06	2.93E-04	2.23E-03	3.48E-04	7.11E-04	4.59E-04	4.71E-04	4.92E-05	6.35E-05	1.32E-08	2.41E-04	4.57E-05
10	F20	70	Passenger Truck	485	0.00E+00	6.81E-06	7.24E-07	2.84E+01	4.36E-05	1.15E-01	1.43E-05	8.52E-04	4.04E-03	6.25E-04	1.36E-03	8.87E-04	9.09E-04	2.15E-04	1.42E-04	2.54E-08	4.56E-04	1.43E-04
10	F20	70	Single Unit Short Haul Truck	11	0.00E+00	1.85E-06	7.53E-08	1.73E+00	1.24E-06	3.13E-03	2.02E-06	7.37E-04	1.67E-04	3.07E-05	2.50E-04	4.76E-05	4.86E-05	1.75E-04	7.02E-06	2.83E-09	2.01E-04	1.38E-04
10	F20	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
10	F20	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
10	F21	70	Passenger Car	217	0.00E+00	2.43E-06	2.64E-07	9.47E+00	1.72E-05	4.88E-02	5.47E-06	2.20E-04	1.67E-03	2.61E-04	5.33E-04	3.44E-04	3.53E-04	3.69E-05	4.76E-05	9.89E-09	1.80E-04	3.43E-05
10	F21	70	Passenger Truck	364	0.00E+00	5.10E-06	5.43E-07	2.13E+01	3.27E-05	8.61E-02	1.07E-05	6.39E-04	3.03E-03	4.69E-04	1.02E-03	6.65E-04	6.81E-04	1.61E-04	1.06E-04	1.90E-08	3.42E-04	1.07E-04
10	F22	70	Passenger Car	103	0.00E+00	1.15E-06	1.25E-07	4.48E+00	8.15E-06	2.31E-02	2.59E-06	1.04E-04	7.92E-04	1.23E-04	2.52E-04	1.63E-04	1.67E-04	1.75E-05	2.25E-05	4.68E-09	8.54E-05	1.62E-05
10	F22	70	Passenger Truck	172	0.00E+00	2.42E-06	2.57E-07	1.01E+01	1.55E-05	4.08E-02	5.06E-06	3.02E-04	1.43E-03	2.22E-04	4.84E-04	3.15E-04	3.23E-04	7.63E-05	5.02E-05	9.00E-09	1.62E-04	5.08E-05
10	F22	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.79E-05
10	F23	70	Passenger Car	72	0.00E+00	8.06E-07	8.75E-08	3.15E+00	5.72E-06	1.62E-02	1.82E-06	7.30E-05	5.56E-04	8.66E-05	1.77E-04	1.14E-04	1.17E-04	1.23E-05	1.58E-05	3.29E-09	5.99E-05	1.14E-05
10	F23	70	Passenger Truck	121	0.00E+00	1.70E-06	1.80E-07	7.08E+00	1.09E-05	2.86E-02	3.55E-06	2.12E-04	1.01E-03	1.56E-04	3.40E-04	2.21E-04	2.26E-04	5.36E-05	3.53E-05	6.32E-09	1.14E-04	3.56E-05
10	F23	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	F23	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	F23	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	F24	70	Passenger Car	76	0.00E+00	8.43E-07	9.16E-08	3.29E+00	5.98E-06	1.70E-02	1.90E-06	7.64E-05	5.82E-04	9.06E-05	1.85E-04	1.20E-04	1.23E-04	1.28E-05	1.66E-05	3.44E-09	6.27E-05	1.19E-05
10	F24	70	Passenger Truck	126	0.00E+00	1.77E-06	1.89E-07	7.41E+00	1.14E-05	2.99E-02	3.72E-06	2.22E-04	1.05E-03	1.63E-04	3.56E-04	2.31E-04	2.37E-04	5.61E-05	3.69E-05	6.61E-09	1.19E-04	3.73E-05
10	F24	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.02E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.52E-05
10	F24	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.03E-04
10	F24	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.24E-04
9	F25	60	Passenger Car	332	0.00E+00	4.25E-06	4.62E-07	1.51E+01	3.02E-05	8.50E-02	9.58E-06	3.42E-04	3.35E-03	5.02E-04	9.35E-04	6.03E-04	6.18E-04	6.58E-05	7.59E-05	1.59E-08	3.16E-04	5.33E-05
9	F25	60	Passenger Truck	556	0.00E+00	9.02E-06	9.56E-07	3.37E+01	5.69E-05	1.45E-01	1.87E-05	1.06E-03	6.13E-03	9.12E-04	1.78E-03	1.16E-03	1.19E-03	2.69E-04	1.68E-04	3.11E-08	5.95E-04	1.80E-04
9	F25	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
9	F25	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.68E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
9	F25	60	Combination Short Haul Truck	12	0.00E+00	3.51E-06	2.58E-07	4.24E+00	9.62E-09	5.25E-03	2.52E-06	5.35E-03	6.13E-04	9.58E-05	2.16E-04	7.54E-05	7.83E-05	6.73E-04	1.42E-05	0.00E+00	1.38E-04	1.01E-03
9	F25	60	Combination Long Haul Truck	11	0.00E+00	4.82E-06	2.64E-07	4.00E+00	3.26E-08	6.30E-03	4.03E-06	5.70E-03	6.43E-04	9.29E-05	4.58E-04	8.61E-05	8.97E-05	6.42E-04	1.34E-05	0.00E+00	3.68E-04	1.07E-03
9	F26	60	Passenger Car	192	0.00E+00	2.46E-06	2.67E-07	8.76E+00	1.75E-05	4.92E-02	5.55E-06	1.98E-04	1.94E-03	2.91E-04	5.41E-04	3.49E-04	3.58E-04	3.81E-05	4.39E-05	9.23E-09	1.83E-04	3.09E-05
9	F26	60	Passenger Truck	322	0.00E+00	5.22E-06	5.53E-07	1.95E+01	3.29E-05	8.42E-02	1.08E-05	6.15E-04	3.55E-03	5.28E-04	1.03E-03	6.72E-04	6.88E-04	1.56E-04	9.70E-05	1.80E-08	3.44E-04	1.04E-04
9	F26	60	Single Unit Short Haul Truck	22	0.00E+00	4.92E-06	2.03E-07	3.66E+00	3.26E-06	6.45E-03	5.32E-06	1.89E-03	5.07E-04	8.52E-05	6.56E-04	1.26E-04	1.29E-04	3.71E-04	1.49E-05	6.15E-09	5.27E-04	3.53E-04
9	F26	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	8.82E-09	1.56E-01	1.41E-07	2.74E-04	2.32E-07	8.16E-05	2.28E-05	3.78E-06	2.87E-05	5.49E-06	5.60E-06	1.58E-05	6.37E-07	2.62E-10	2.31E-05	1.53E-05
9	F26	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.45E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.40E-03
9	F26	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.93E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.49E-03
9	F27	60	Passenger Car	846	0.00E+00	1.08E-05	1.18E-06	3.86E+01	7.69E-05	2.17E-01	2.44E-05	8.71E-04	8.54E-03	1.28E-03	2.38E-03	1.54E-03	1.58E-03	1.68E-04	1.93E-04	4.06E-08	8.06E-04	1.36E-04
9	F27	60	Passenger Truck	1417	0.00E+00	2.30E-05	2.44E-06	8.60E+01	1.45E-04	3.71E-01	4.77E-05	2.71E-03	1.56E-02	2.32E-03	4.55E-03	2.96E-03	3.03E-03	6.86E-04	4.27E-04	7.92E-08	1.52E-03	4.59E-04
9	F27	60	Single Unit Short Haul Truck	150	0.00E+00	3.36E-05	1.39E-06	2.50E+01	2.22E-05	4.40E-02	3.63E-05	1.29E-02	3.46E-03	5.81E-04	4.48E-03	8.63E-04	8.80E-04	2.53E-03	1.02E-04	4.20E-08	3.60E-03	2.41E-03
9	F27	60	Single Unit Long Haul Truck	7	0.00E+00	1.47E-06	6.02E-08	1.07E+00	9.65E-07	1.87E-03	1.58E-06	5.57E-04	1.55E-04	2.58E-05	1.96E-04	3.75E-05	3.82E-05	1.08E-04	4.35E-06	1.79E-09	1.58E-04	1.04E-04
9	F27	60	Combination Short Haul Truck	82	0.00E+00	2.38E-05	1.75E-06	2.87E+01	6.52E-08	3.56E-02	1.71E-05	3.63E-02	4.16E-03	6.50E-04	1.47E-03	5.12E-04	5.31E-04	4.57E-03	9.61E-05	0.00E+00	9.36E-04	6.84E-03
9	F27	60	Combination Long Haul Truck	74	0.00E+00	3.27E-05	1.79E-06	2.71E+01	2.21E-07	4.27E-02	2.74E-05	3.87E-02	4.36E-03	6.30E-04	3.10E-03	5.84E-04	6.08E-04	4.36E-03	9.10E-05	0.00E+00	2.50E-03	7.28E-03
9	F28	60	Passenger Car	920	0.00E+00	1.18E-05	1.28E-06	4.19E+01	8.36E-05	2.36E-01	2.65E-05	9.47E-04	9.29E-03	1.39E-03	2.59E-03	1.67E-03	1.71E-03	1.82E-04	2.10E-04	4.42E-08	8.76E-04	1.48E-04
9	F28	60	Passenger Truck	1540	0.00E+00	2.50E-05	2.65E-06	9.35E+01	1.58E-04	4.03E-01	5.18E-05	2.94E-03	1.70E-02	2.53E-03	4.94E-03	3.22E-03	3.30E-03	7.46E-04	4.64E-04	8.61E-08	1.65E-03	4.99E-04
9	F28	60	Single Unit Short Haul Truck	172	0.00E+00	3.85E-05	1.59E-06

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F36	80	Combination Long Haul Truck	10	0.00E+00	3.30E-06	1.87E-07	3.58E+00	2.10E-08	4.28E-03	2.72E-06	3.91E-03	2.84E-04	4.54E-05	3.03E-04	6.01E-05	6.26E-05	5.75E-04	1.20E-05	0.00E+00	2.40E-04	7.36E-04
9	F37	60	Passenger Car	1045	0.00E+00	1.34E-05	1.45E-06	4.76E+01	9.49E-05	2.68E-01	3.01E-05	1.08E-03	1.05E-02	1.58E-03	2.94E-03	1.90E-03	1.95E-03	2.07E-04	2.39E-04	5.02E-08	9.95E-04	1.68E-04
9	F37	60	Passenger Truck	1749	0.00E+00	2.84E-05	3.01E-06	1.06E+02	1.79E-04	4.58E-01	5.89E-05	3.34E-03	1.93E-02	2.87E-03	5.61E-03	3.65E-03	3.74E-03	8.48E-04	5.27E-04	9.78E-08	1.87E-03	5.67E-04
9	F37	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.30E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.37E-03
9	F37	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.16E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.91E-05
9	F37	60	Combination Short Haul Truck	61	0.00E+00	1.77E-05	1.30E-06	2.14E+01	4.85E-08	2.65E-02	1.27E-05	2.70E-02	3.09E-03	4.83E-04	1.09E-03	3.80E-04	3.95E-04	3.40E-03	7.15E-05	0.00E+00	6.96E-04	5.09E-03
9	F37	60	Combination Long Haul Truck	55	0.00E+00	2.43E-05	1.33E-06	2.02E+01	1.64E-07	3.18E-02	2.03E-05	2.88E-02	3.24E-03	4.69E-04	2.31E-03	4.34E-04	4.52E-04	3.24E-03	6.76E-05	0.00E+00	1.86E-03	5.42E-03
9	F38	60	Passenger Car	685	0.00E+00	8.77E-06	9.53E-07	3.12E+01	6.23E-05	1.76E-01	1.98E-05	7.06E-04	6.92E-03	1.04E-03	1.93E-03	1.24E-03	1.28E-03	1.36E-04	1.57E-04	3.29E-08	6.53E-04	1.10E-04
9	F38	60	Passenger Truck	1148	0.00E+00	1.86E-05	1.97E-06	6.96E+01	1.17E-04	3.00E-01	3.86E-05	2.19E-03	1.26E-02	1.88E-03	3.68E-03	2.40E-03	2.46E-03	5.56E-04	3.46E-04	6.41E-08	1.23E-03	3.72E-04
9	F38	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	1.00E-02	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.87E-03
9	F38	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.33E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.11E-05
9	F38	60	Combination Short Haul Truck	90	0.00E+00	2.63E-05	1.93E-06	3.17E+01	7.19E-08	3.92E-02	1.89E-05	4.00E-02	4.58E-03	7.17E-04	1.62E-03	5.64E-04	5.86E-04	5.04E-03	1.06E-04	0.00E+00	1.03E-03	7.54E-03
9	F38	60	Combination Long Haul Truck	82	0.00E+00	3.61E-05	1.97E-06	2.99E+01	2.43E-07	4.71E-02	3.02E-05	4.26E-02	4.81E-03	6.95E-04	3.42E-03	6.44E-04	6.71E-04	4.80E-03	1.00E-04	0.00E+00	2.75E-03	8.03E-03
11	F39	80	Passenger Car	26	0.00E+00	2.68E-07	2.91E-08	1.09E+00	1.90E-06	5.53E-03	6.05E-07	2.67E-05	1.41E-04	2.35E-05	5.90E-05	3.80E-05	3.90E-05	3.84E-06	5.50E-06	1.18E-09	2.00E-05	4.17E-06
11	F39	80	Passenger Truck	43	0.00E+00	5.52E-07	5.89E-08	2.47E+00	3.59E-06	9.77E-03	1.17E-06	7.21E-05	2.50E-04	4.17E-05	1.12E-04	7.28E-05	7.47E-05	1.77E-05	1.23E-05	2.24E-09	3.76E-05	1.20E-05
11	F39	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.46E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F39	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	4.99E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.40E-05
11	F39	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.33E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
11	F40	80	Passenger Car	274	0.00E+00	2.85E-06	3.10E-07	1.16E+01	2.02E-05	5.88E-02	6.43E-06	2.85E-04	1.50E-03	2.50E-04	6.27E-04	4.05E-04	4.15E-04	4.08E-05	5.86E-05	1.25E-08	2.12E-04	4.44E-05
11	F40	80	Passenger Truck	460	0.00E+00	5.87E-06	6.26E-07	2.62E+01	3.82E-05	1.04E-01	1.24E-05	7.67E-04	2.66E-03	4.43E-04	1.19E-03	7.75E-04	7.94E-04	1.89E-04	1.31E-04	2.38E-08	4.00E-04	1.28E-04
11	F40	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.53E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.86E-04
11	F40	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.53E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	F40	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.81E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.28E-03
11	F40	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.28E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.37E-03
10	F41	70	Passenger Car	328	0.00E+00	3.66E-06	3.98E-07	1.43E+01	2.60E-05	7.37E-02	8.26E-06	3.32E-04	2.53E-03	3.94E-04	8.06E-04	5.20E-04	5.33E-04	5.58E-05	7.20E-05	1.49E-08	2.73E-04	5.18E-05
10	F41	70	Passenger Truck	550	0.00E+00	7.71E-06	8.20E-07	3.22E+01	4.94E-05	1.30E-01	1.62E-05	9.65E-04	4.58E-03	7.08E-04	1.55E-03	1.00E-03	1.03E-03	2.44E-04	1.60E-04	2.87E-08	5.17E-04	1.62E-04
10	F42	70	Passenger Car	235	0.00E+00	2.62E-06	2.85E-07	1.02E+01	1.86E-05	5.27E-02	5.91E-06	2.37E-04	1.81E-03	2.82E-04	5.76E-04	3.72E-04	3.81E-04	3.99E-05	5.15E-05	1.07E-08	1.95E-04	3.70E-05
10	F42	70	Passenger Truck	393	0.00E+00	5.52E-06	5.86E-07	2.30E+01	3.53E-05	9.31E-02	1.16E-05	6.90E-04	3.27E-03	5.07E-04	1.11E-03	7.19E-04	7.36E-04	1.74E-04	1.15E-04	2.06E-08	3.70E-04	1.16E-04
10	F42	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	F42	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.03E-04
10	F42	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.24E-04
9	F43	60	Passenger Car	13	0.00E+00	1.63E-07	1.77E-08	5.80E-01	1.15E-06	3.26E-03	3.67E-07	1.31E-05	1.28E-04	1.92E-05	3.58E-05	2.31E-05	2.37E-05	2.52E-06	2.91E-06	6.10E-10	1.21E-05	2.04E-06
9	F43	60	Passenger Truck	21	0.00E+00	3.45E-07	3.66E-08	1.29E+00	2.18E-06	5.57E-03	7.17E-07	4.07E-05	2.35E-04	3.49E-05	6.83E-05	4.44E-05	4.55E-05	1.03E-05	6.42E-06	1.19E-09	2.28E-05	6.90E-06
9	F44	60	Passenger Car	201	0.00E+00	2.57E-06	2.79E-07	9.15E+00	1.82E-05	5.14E-02	5.79E-06	2.07E-04	2.03E-03	3.04E-04	5.65E-04	3.64E-04	3.74E-04	3.98E-05	4.59E-05	9.64E-09	1.91E-04	3.22E-05
9	F44	60	Passenger Truck	336	0.00E+00	5.46E-06	5.78E-07	2.04E+01	3.44E-05	8.80E-02	1.13E-05	6.43E-04	3.70E-03	5.51E-04	1.08E-03	7.02E-04	7.19E-04	1.63E-04	1.01E-04	1.88E-08	3.60E-04	1.09E-04
9	F44	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
9	F44	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.31E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.75E-04
9	F44	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.92E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
10	F45	70	Passenger Car	307	0.00E+00	3.43E-06	3.73E-07	1.34E+01	2.43E-05	6.90E-02	7.74E-06	3.11E-04	2.37E-03	3.69E-04	7.54E-04	4.86E-04	4.99E-04	5.22E-05	6.74E-05	1.40E-08	2.55E-04	4.85E-05
10	F45	70	Passenger Truck	515	0.00E+00	7.22E-06	7.68E-07	3.02E+01	4.62E-05	1.22E-01	1.51E-05	9.04E-04	4.29E-03	6.63E-04	1.45E-03	9.41E-04	9.64E-04	2.28E-04	1.50E-04	2.69E-08	4.84E-04	1.52E-04
10	F45	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.03E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	F45	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.42E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.44E-04
10	F45	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.66E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.89E-04
10	F46	70	Passenger Car	330	0.00E+00	3.68E-06	4.00E-07	1.44E+01	2.61E-05	7.40E-02	8.30E-06	3.33E-04	2.54E-03	3.96E-04	8.10E-04	5.22E-04	5.36E-04	5.60E-05	7.23E-05	1.50E-08	2.74E-04	5.20E-05
10	F46	70	Passenger Truck	552	0.00E+00	7.75E-06	8.24E-07	3.24E+01	4.96E-05	1.31E-01	1.62E-05	9.70E-04	4.60E-03	7.12E-04	1.55E-03	1.01E-03	1.03E-03	2.45E-04	1.61E-04	2.89E-08	5.19E-04	1.63E-04
10	F46	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	F46	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
10	F46	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.82E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.20E-04
10	F46	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.09E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.70E-04
9	F47	60	Passenger Car	10	0.00E+00	1.24E-07	1.35E-08	4.43E-01	8.83E-07	2.49E-03	2.81E-07	1.00E-05	9.82E-05	1.47E-05	2.74E-05	1.76E-05	1.81E-05	1.93E-06	2.22E-06	4.67E-10	9.26E-06	1.56E-06
9	F47	60	Passenger Truck	16	0.00E+00	2.64E-07	2.80E-08	9.88E-01	1.67E-06	4.26E-03	5.48E-07	3.11E-05	1.79E-04	2.67E-05	5.22E-05	3.40E-05	3.48E-05	7.89E-06	4.91E-06	9.10E-10	1.74E-05	5.27E-06
9	F47	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
9	F48	60	Passenger Car	2	0.00E+00	2.87E-08	3.12E-09	1.02E-01	2.04E-07	5.74E-04	6.47E-08	2.31E-06	2.27E-05	3.39E-06	6.31E-06	4.07E-06	4.18E-06	4.45E-07	5.13E-07	1.08E-10	2.14E-06	3.60E-07
9	F48	60	Passenger Truck	4	0.00E+00	6.10E-08	6.46E-09	2.28E-01	3.85E-07	9.83E-04	1.26E-07	7.18E-06	4.14E-05	6.16E-06	1.21E-05	7.84E-06	8.04E-06	1.82E-06	1.13E-06	2.10E-10	4.02E-06	1.22E-06
9	F48	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
9	F49	60	Passenger Car	848	0.00E+00	1.08E-05	1.18E-06	3.86E+01	7.70E-05	2.17E-01	2.45E-05	8.73E-04	8.56E-03	1.28E-03	2.39E-03	1.54E-03	1.58E-03	1.68E-04	1.94E-04	4.07E-08	8.07E-04	1.36E-04
9	F49	60	Passenger Truck	1419	0.00E+00	2.30E-05	2.44E-06	8.61E+01	1.45E-04	3.71E-01	4.78E-05	2.71E-03	1.56E-02	2.33E-03	4.55E-03	2.96E-03	3.04E-03	6.88E-04	4.28E-04	7.93E-08	1.52E-03	4.60E-04
9	F49	60	Single Unit Short Haul Truck	140	0.00E+00	3.12E-05	1.29E-06	2.33E+01	2.07E-05	4.09E-02	3.38E-05	1.20E-02	3.22E-03	5.41E-04	4.17E-03	8.02E-04	8.18E-04	2.36E-03	9.48E-05	3.91E-08	3.35E-03	2.24E-03
9	F49	60	Single Unit Long Haul Truck	6	0.00E+00	1.36E-06	5.60E-08	9.92E-01	8.97E-07	1.74E-03	1.47E-06	5.18E-04	1.45E-04	2.40E-05	1.82E-04	3.49E-05	3.56E-05	1.00E-04	4.05E-06	1.66E-09	1.47E-04	9.70E-05
9	F49	60	Combination Short Haul Truck	76	0.00E+00	2.23E-05	1.64E-06	2.69E+01	6.10E-08	3.33E-02	1.60E-05	3.40E-02	3.89E-03	6.08E-04	1.37E-03	4.79E-04	4.97E-04	4.27E-03	8.99E-05	0.00E+00	8.76E-04	6.40E-03
9	F49	60	Combination Long Haul Truck	70	0.00E+00	3.06E-05	1.67E-06	2.54E+01	2.07E-07	4.00E-02	2.56E-05	3.62E-02	4.08E-03	5.90E-04	2.90E-03	5.46E-04	5.69E-04	4.08E-03	8.51E-05	0.00E+00	2.34E-03	6.82E-03
9	F50	60	Passenger Car	897	0.00E+00	1.15E-05	1.25E-06	4.09E+01	8.14E-05	2.30E-01	2.59E-05	9.23E-04	9.05E-03	1.36E-03	2.52E-03	1.63E-03	1.67E-03	1.78E-04	2.05E-04	4.30E-08	8.54E-04	1.44E-04
9	F50	60	Passenger Truck	1501	0.00E+00	2.44E-05	2.58E-06	9.11E+01	1.54E-04	3.93E-01	5.05E-05	2.87E-03	1.65E-02	2.46E-03	4.82E-03	3.13E-03	3.21E-03	7.27E-04	4.53E-04	8.39E-08	1.61E-03	4.86E-04
9	F50	60	Single Unit Short Haul Truck	210	0.00E+00	4.68E-05	1.93E-06	3.49E+01	3.10E-05	6.14E-02	5.06E-05	1.80E-02	4.83E-03	8.11E-04	6.25E-03	1.20E-03	1.23E-03	3.54E-03	1.42E-04	5.86E-08	5.02E-03	3.36E-03
9	F50	60	Single Unit Long Haul Truck	9	0.00E+00	2.04E-06	8.40E-08	1.49E+00	1.35E-06	2.61E-03	2.21E-06	7.77E-04	2.17E-04	3.60E-05	2.73E-04	5.23E-05	5.33E-05	1.50E-04	6.07E-06	2.49E-09	2.20E-04	1.46E-04
9	F50	60	Combination Short Haul Truck	83	0.00E+00	2.43E-05	1.78E-06	2.93E+01	6.65E-08	3.63E-02	1.74E-05	3.70E-02	4.24E-03	6.62E-04	1.50E-03	5.22E-04	5.41E-04	4.66E-03	9.79E-05	0.00E+00	9.54E-04	6.97E-03
9	F50	60	Combination Long Haul Truck	76	0.00E+00	3.34E-05	1.82E-06	2.77E+01	2.25E-07	4.36E-02	2.79E-05	3.94E-02	4.44E-03	6.42E-04	3.16E-03	5.95E-04	6.20E-04	4.44E-03	9.27E-05	0.00E+00	2.54E-03	7.42E-03
10	F51	70	Passenger Car	224	0.00E+00	2.50E-06	2.71E-07	9.75E+00	1.77E-05	5.02E-02	5.63E-06	2.26E-04	1.72E-03	2.68E-04	5.49E-04	3.54E-04	3.63E-04	3.80E-05	4.90E-05	1.02E-08	1.86E-04	3.53E-05
10	F51	70	Passenger Truck	374	0.00E+00	5.25E-06	5.58E-07	2.19E+01	3.36E-05	8.87E-02	1.10E-05	6.57E-04	3.12E-03	4.82E-04	1.05E-03	6.84E-04	7.01E-04	1.66E-04	1.09E-04	1.96E-08	3.52E-04	1.10E-04
10	F51	70	Single Unit Short Haul Truck	107	0.00E+00	1.89E-05	7.67E-07	1.76E+01	1.27E-05	3.19E-02	2.05E-05	7.50E-03	1.70E-03	3.13E-04	2.54E-03	4.85E-04	4.94E-04	1.79E-03	7.15E-05	2.89E-08	2.05E-03	1.40E-03
10	F51	70	Single Unit Long Haul Truck	5	0.00E+00	8.21E-07	3.31E-08	7.45E-01	5.45E-07	1.34E-03	8.93E-07	3.23E-04	7.80E-05	1.40E-05	1.11E-04	2.09E-05	2.14E-05	7.54E-05	3.03E-06	1.22E-09	8.97E-05	6.04E-05
10	F51	70	Combination Short Haul Truck	45	0.00E+00	1.16E-05	8.61E-07	1.56E+01	2.94E-08	1.67E-02	8.25E-06	1.73E-02	1.63E-03	2.72E-04	6.94E-04	2.51E-04	2.60E-04	2.49E-03	5.23E-05	0.00E+00	4.34E-04	3.26E-03
10	F51	70	Combination Long Haul Truck	41	0.00E+00	1.59E-05	9.03E-07	1.47E+01	9.95E-08	2.00E-02	1.31E-05	1.85E-02	1.70E-03	2.56E-04	1.44E-03	2.90E-04	3.02E-04	2.36E-03	4.92E-05	0.00E+00	1.14E-03	3.49E-03
10	F52	70	Passenger Car	853	0.00E+00	9.52E-06	1.04E-06	3.72E+01	6.76E-05	1.92E-01	2.15E-05	8.63E-04	6.57E-03	1.02E-03	2.09E-03	1.35E-03	1.39E-03	1.45E-04	1.87E-04	3.88E-08	7.09E-04	1.35E-04
10	F52	70	Passenger Truck	1429	0.00E+00	2.00E-05	2.13E-06	8.37E+01	1.28E-04	3.38E-01	4.20E-05	2.51E-03	1.19E-02	1.84E-03	4.02E-03	2.61E-03	2.68E-03	6.33E-04	4.17E-04	7.47E-08	1.34E-03	4.21E-04
10	F52	70	Single Unit Short Haul Truck	44	0.00E+00	7.75E-06	3.15E-07	7.22E+00	5.20E-06	1.31E-02	8.43E-06	3.08E-03	7.00E-04	1.29E-04	1.05E-03	1.99E-04	2.03E-04	7.33E-04	2.94E-05	1.19E-08	8.42E-04	5.77E-04
10	F52	70	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.36E-08	3.06E-01	2.24E-07	5.49E-04	3.67E-07	1.33E-04	3.21E-05	5.75E-06	4.56E-05	8.60E-06	8.77E-06	3.09E-05	1.25E-06	5.00E-10	3.68E-05	2.48E-05
10	F52	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.04E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.52E-03
10	F52	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.61E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.62E-03
10	F53	70	Passenger Car	181	0.00E+00	2.02E-06	2.19E-07	7.88E+00	1.43E-05	4.05E-02	4.55E-06	1.83E-04	1.39E-03	2.17E-04	4.43E-04	2.86E-04	2.93E-04	3.07E-05	3.96E-05	8.22E-09	1.50E-04	2.85E-05
10	F53	70	Passenger Truck	302	0.00E+00	4.24E-06	4.51E-07	1.77E+01	2.72E-05	7.16E-02	8.89E-06	5.31E-04	2.52E-03	3.90E-04	8.51E-04	5.53E-04	5.66E-04	1.34E-04	8.82E-05	1.58E-08	2.84E-04	8.92E-05
10	F53	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
10	F53	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.

Appendix F.4.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

Highway 413
GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	F74	70	Passenger Car	209	0.00E+00	2.27E-06	2.46E-07	9.23E+00	1.61E-05	4.52E-02	5.11E-06	2.15E-04	1.59E-03	2.49E-04	4.98E-04	3.21E-04	3.30E-04	3.56E-05	4.64E-05	9.64E-09	1.69E-04	3.36E-05
53	F74	70	Passenger Truck	351	0.00E+00	4.73E-06	5.03E-07	2.08E+01	3.04E-05	7.97E-02	9.93E-06	6.08E-04	2.84E-03	4.41E-04	9.51E-04	6.18E-04	6.33E-04	1.55E-04	1.04E-04	1.82E-08	3.18E-04	1.02E-04
53	F74	70	Single Unit Short Haul Truck	100	0.00E+00	1.75E-05	7.12E-07	1.63E+01	1.17E-05	2.96E-02	1.91E-05	6.97E-03	1.58E-03	2.91E-04	2.36E-03	4.50E-04	4.59E-04	1.66E-03	6.64E-05	2.68E-08	1.90E-03	1.30E-03
53	F74	70	Single Unit Long Haul Truck	4	0.00E+00	7.63E-07	3.07E-08	6.92E-01	5.06E-07	1.24E-03	8.30E-07	3.00E-04	7.25E-05	1.30E-05	1.03E-04	1.94E-05	1.98E-05	7.00E-05	2.82E-06	1.13E-09	8.33E-05	5.61E-05
53	F74	70	Combination Short Haul Truck	48	0.00E+00	1.24E-05	9.21E-07	1.67E+01	3.15E-08	1.79E-02	8.82E-06	1.85E-02	1.75E-03	2.91E-04	7.43E-04	2.68E-04	2.79E-04	2.66E-03	5.59E-05	0.00E+00	4.64E-04	3.48E-03
53	F74	70	Combination Long Haul Truck	44	0.00E+00	1.70E-05	9.66E-07	1.57E+01	1.06E-07	2.13E-02	1.40E-05	1.98E-02	1.82E-03	2.74E-04	1.54E-03	3.10E-04	3.23E-04	2.52E-03	5.26E-05	0.00E+00	1.22E-03	3.73E-03
52	F75	60	Passenger Car	58	0.00E+00	6.82E-07	7.41E-08	2.64E+00	4.84E-06	1.35E-02	1.54E-06	5.75E-05	5.69E-04	8.53E-05	1.50E-04	9.66E-05	9.92E-05	1.15E-05	1.32E-05	2.70E-09	5.07E-05	8.97E-06
52	F75	60	Passenger Truck	97	0.00E+00	1.44E-06	1.52E-07	5.88E+00	9.07E-06	2.32E-02	2.98E-06	1.75E-04	1.01E-03	1.50E-04	2.84E-04	1.85E-04	1.90E-04	4.60E-05	2.92E-05	4.93E-09	9.47E-05	2.97E-05
52	F75	60	Single Unit Short Haul Truck	49	0.00E+00	1.09E-05	4.51E-07	8.13E+00	7.23E-06	1.43E-02	1.18E-05	4.18E-03	1.12E-03	1.89E-04	1.46E-03	2.80E-04	2.86E-04	8.23E-04	3.31E-05	1.36E-08	1.17E-03	7.83E-04
52	F75	60	Single Unit Long Haul Truck	2	0.00E+00	4.76E-07	1.96E-08	3.46E-01	3.13E-07	6.07E-04	5.15E-07	1.81E-04	5.05E-05	8.38E-06	6.36E-05	1.22E-05	1.24E-05	3.50E-05	1.41E-06	5.80E-10	5.12E-05	3.39E-05
52	F75	60	Combination Short Haul Truck	16	0.00E+00	4.73E-06	3.48E-07	5.71E+00	1.30E-08	7.07E-03	3.40E-06	7.21E-03	8.26E-04	1.29E-04	2.92E-04	1.02E-04	1.06E-04	9.08E-04	1.91E-05	0.00E+00	1.86E-04	1.36E-03
52	F75	60	Combination Long Haul Truck	15	0.00E+00	6.50E-06	3.55E-07	5.39E+00	4.39E-08	8.49E-03	5.44E-06	7.69E-03	8.66E-04	1.25E-04	6.17E-04	1.16E-04	1.21E-04	8.66E-04	1.81E-05	0.00E+00	4.96E-04	1.45E-03
50	F76	40	Passenger Car	18	0.00E+00	2.58E-07	2.80E-08	9.47E-01	1.83E-06	5.11E-03	5.81E-07	1.64E-05	3.09E-04	4.35E-05	5.67E-05	3.65E-05	3.75E-05	5.34E-06	4.70E-06	8.72E-10	1.92E-05	2.55E-06
50	F76	40	Passenger Truck	30	0.00E+00	5.68E-07	5.97E-08	2.06E+00	3.42E-06	8.44E-03	1.14E-06	6.31E-05	5.49E-04	7.62E-05	1.08E-04	7.04E-05	7.21E-05	1.82E-05	1.02E-05	1.48E-09	3.57E-05	1.09E-05
50	F78	40	Passenger Car	613	0.00E+00	8.81E-06	9.57E-07	3.24E+01	6.25E-05	1.74E-01	1.99E-05	5.59E-04	1.06E-02	1.49E-03	1.94E-03	1.25E-03	1.28E-03	1.82E-04	1.61E-04	2.98E-08	6.55E-04	8.73E-05
50	F78	40	Passenger Truck	1027	0.00E+00	1.94E-05	2.04E-06	7.04E+01	1.17E-04	2.88E-01	3.90E-05	2.15E-03	1.87E-02	2.60E-03	3.68E-03	2.41E-03	2.46E-03	6.22E-04	3.47E-04	5.06E-08	1.22E-03	3.73E-04
50	F78	40	Single Unit Short Haul Truck	14	0.00E+00	4.87E-06	2.17E-07	2.71E+00	3.37E-06	4.25E-03	5.21E-06	1.96E-03	5.65E-04	8.83E-05	6.27E-04	1.31E-04	1.33E-04	2.77E-04	1.11E-05	4.69E-09	4.94E-04	3.68E-04
50	F78	40	Single Unit Long Haul Truck	1	0.00E+00	2.14E-07	9.46E-09	1.17E-01	1.48E-07	1.85E-04	2.29E-07	8.56E-05	2.53E-05	3.93E-06	2.75E-05	5.71E-06	5.82E-06	1.20E-05	4.78E-07	2.04E-10	2.17E-05	1.60E-05
50	F78	40	Combination Short Haul Truck	8	0.00E+00	3.78E-06	2.83E-07	3.25E+00	9.37E-09	5.35E-03	2.69E-06	5.51E-03	7.63E-04	1.14E-04	2.25E-04	8.22E-05	8.54E-05	5.17E-04	1.09E-05	0.00E+00	1.40E-04	1.04E-03
50	F78	40	Combination Long Haul Truck	7	0.00E+00	5.03E-06	2.84E-07	3.12E+00	3.20E-08	6.50E-03	4.15E-06	5.81E-03	7.92E-04	1.11E-04	4.61E-04	9.15E-05	9.53E-05	5.01E-04	1.05E-05	0.00E+00	3.65E-04	1.09E-03
52	F79	60	Passenger Car	867	0.00E+00	1.02E-05	1.11E-06	3.95E+01	7.24E-05	2.03E-01	2.30E-05	8.60E-04	8.52E-03	1.28E-03	2.24E-03	1.45E-03	1.48E-03	1.72E-04	1.98E-04	4.04E-08	7.59E-04	1.34E-04
52	F79	60	Passenger Truck	1453	0.00E+00	2.15E-05	2.28E-06	8.81E+01	1.36E-04	3.48E-01	4.46E-05	2.62E-03	1.51E-02	2.25E-03	4.25E-03	2.77E-03	2.84E-03	6.89E-04	4.38E-04	7.38E-08	1.42E-03	4.44E-04
52	F79	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.74E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
52	F79	60	Combination Short Haul Truck	10	0.00E+00	3.05E-06	2.24E-07	3.68E+00	8.36E-09	4.56E-03	2.19E-06	4.65E-03	5.33E-04	8.33E-05	1.88E-04	6.56E-05	6.81E-05	5.86E-04	1.23E-05	0.00E+00	1.20E-04	8.77E-04
52	F79	60	Combination Long Haul Truck	10	0.00E+00	4.20E-06	2.29E-07	3.48E+00	2.83E-08	5.48E-03	3.51E-06	4.96E-03	5.59E-04	8.08E-05	3.98E-04	7.48E-05	7.80E-05	5.59E-04	1.17E-05	0.00E+00	3.20E-04	9.34E-04
53	F80	70	Passenger Car	767	0.00E+00	8.30E-06	9.02E-07	3.38E+01	5.89E-05	1.66E-01	1.87E-05	7.89E-04	5.82E-03	9.11E-04	1.83E-03	1.18E-03	1.21E-03	1.30E-04	1.70E-04	3.53E-08	6.18E-04	1.23E-04
53	F80	70	Passenger Truck	1285	0.00E+00	1.73E-05	1.84E-06	7.62E+01	1.11E-04	2.92E-01	3.64E-05	2.23E-03	1.04E-02	1.62E-03	3.48E-03	2.26E-03	2.32E-03	5.66E-04	3.80E-04	6.65E-08	1.16E-03	3.73E-04
53	F80	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.21E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.14E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.52E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
53	F80	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.22E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.95E-04
53	F80	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.52E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.51E-04
50	F84	40	Passenger Car	219	0.00E+00	3.15E-06	3.42E-07	1.16E+01	2.23E-05	6.23E-02	7.09E-06	2.00E-04	3.78E-03	5.31E-04	6.92E-04	4.46E-04	4.58E-04	6.51E-05	5.74E-05	1.06E-08	2.34E-04	3.12E-05
50	F84	40	Passenger Truck	367	0.00E+00	6.94E-06	7.29E-07	2.52E+01	4.18E-05	1.03E-01	1.39E-05	7.70E-04	6.70E-03	9.30E-04	1.32E-03	8.60E-04	8.80E-04	2.22E-04	1.24E-04	1.81E-08	4.36E-04	1.33E-04
50	F84	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.85E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	F84	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.90E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.46E-03
50	F84	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.06E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.76E-03
52	F85	60	Passenger Car	421	0.00E+00	4.96E-06	5.39E-07	1.92E+01	3.52E-05	9.85E-02	1.12E-05	4.18E-04	4.14E-03	6.20E-04	1.09E-03	7.03E-04	7.21E-04	8.35E-05	9.63E-05	1.96E-08	3.69E-04	6.52E-05
52	F85	60	Passenger Truck	706	0.00E+00	1.05E-05	1.11E-06	4.28E+01	6.59E-05	1.69E-01	2.17E-05	1.27E-03	7.35E-03	1.09E-03	2.07E-03	1.34E-03	1.38E-03	3.35E-04	2.13E-04	3.58E-08	6.89E-04	2.16E-04
52	F85	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
52	F85	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.68E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.06E-05
52	F85	60	Combination Short Haul Truck	32	0.00E+00	9.31E-06	6.84E-07	1.12E+01	2.55E-08	1.39E-02	6.69E-06	1.42E-02	1.63E-03	2.54E-04	5.74E-04	2.00E-04	2.08E-04	1.79E-03	3.76E-05	0.00E+00	3.66E-04	2.67E-03
52	F85	60	Combination Long Haul Truck	29	0.00E+00	1.28E-05	6.99E-07	1.06E+01	8.64E-08	1.67E-02	1.07E-05	1.51E-02	1.70E-03	2.46E-04	1.21E-03	2.28E-04	2.38E-04	1.70E-03	3.56E-05	0.00E+00	9.76E-04	2.85E-03
53	F86	70	Passenger Car	253	0.00E+00	2.73E-06	2.97E-07	1.11E+01	1.94E-05	5.45E-02	6.17E-06	2.60E-04	1.92E-03	3.00E-04	6.01E-04	3.88E-04	3.98E-04	4.29E-05	5.60E-05	1.16E-08	2.03E-04	4.06E-05
53	F86	70	Passenger Truck	423	0.00E+00	5.71E-06	6.07E-07	2.51E+01	3.67E-05	9.62E-02	1.20E-05	7.34E-04	3.42E-03	5.32E-04	1.15E-03	7.45E-04	7.64E-04	1.87E-04	1.25E-04	2.19E-08	3.83E-04	1.23E-04
53	F86	70	Single Unit Short Haul Truck	35	0.00E+00	6.24E-06	2.53E-07	5.81E+00	4.18E-06	1.05E-02	6.78E-06	2.48E-03	5.63E-04	1.03E-04	8.41E-04	1.60E-04	1.63E-04	5.90E-04	2.36E-05	9.53E-09	6.77E-04	4.64E-04
53	F86	70	Single Unit Long Haul Truck	2	0.00E+00	2.71E-07	1.09E-08	2.46E-01	1.80E-07	4.42E-04	2.95E-07	1.07E-04	2.58E-05	4.62E-06	3.67E-05	6.92E-06	7.06E-06	2.49E-05	1.00E-06	4.02E-10	2.96E-05	2.00E-05
53	F86	70	Combination Short Haul Truck	24	0.00E+00	6.19E-06	4.61E-07	8.37E+00	1.57E-08	8.94E-03	4.41E-06	9.25E-03	8.73E-04	1.46E-04	3.71E-04	1.34E-04	1.39E-04	1.33E-03	2.80E-05	0.00E+00	2.32E-04	1.74E-03
53	F86	70	Combination Long Haul Truck	22	0.00E+00	8.49E-06	4.83E-07	7.85E+00	5.32E-08	1.07E-02	6.98E-06	9.90E-03	9.09E-04	1.37E-04	7.72E-04	1.55E-04	1.62E-04	1.26E-03	2.63E-05	0.00E+00	6.10E-04	1.86E-03
52	F87	60	Passenger Car	176	0.00E+00	2.07E-06	2.25E-07	8.03E+00	1.47E-05	4.12E-02	4.67E-06	1.75E-04	1.73E-03	2.59E-04	4.55E-04	2.94E-04	3.01E-04	3.49E-05	4.02E-05	8.20E-09	1.54E-04	2.72E-05
52	F87	60	Passenger Truck	295	0.00E+00	4.37E-06	4.63E-07	1.79E+01	2.76E-05	7.06E-02	9.06E-06	5.33E-04	3.07E-03	4.56E-04	8.64E-04	5.62E-04	5.76E-04	1.40E-04	8.88E-05	1.50E-08	2.88E-04	9.01E-05
52	F87	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.30E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.37E-03
52	F87	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.16E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.91E-05
52	F87	60	Combination Short Haul Truck	54	0.00E+00	1.57E-05	1.15E-06	1.90E+01	4.31E-08	2.35E-02	1.13E-05	2.40E-02	2.74E-03	4.29E-04	9.69E-04	3.38E-04	3.51E-04	3.02E-03	6.34E-05	0.00E+00	6.18E-04	4.52E-03
52	F87	60	Combination Long Haul Truck	49	0.00E+00	2.16E-05	1.18E-06	1.79E+01	1.46E-07	2.82E-02	1.81E-05	2.55E-02	2.88E-03	4.16E-04	2.05E-03	3.85E-04	4.02E-04	2.88E-03	6.01E-05	0.00E+00	1.65E-03	4.81E-03
50	F88	40	Passenger Car	219	0.00E+00	3.15E-06	3.42E-07	1.16E+01	2.23E-05	6.23E-02	7.09E-06	2.00E-04	3.78E-03	5.31E-04	6.92E-04	4.46E-04	4.58E-04	6.51E-05	5.74E-05	1.06E-08	2.34E-04	3.12E-05
50	F88	40	Passenger Truck	367	0.00E+00	6.94E-06	7.29E-07	2.52E+01	4.18E-05	1.03E-01	1.39E-05	7.70E-04	6.70E-03	9.30E-04	1.32E-03	8.60E-04	8.80E-04	2.22E-04	1.24E-04	1.81E-08	4.36E-04	1.33E-04
50	F88	40	Single Unit Short Haul Truck	6	0.00E+00	1.95E-06	8.67E-08	1.09E+00	1.35E-06	1.70E-03	2.08E-06	7.85E-04	2.26E-04	3.53E-05	2.51E-04	5.22E-05	5.32E-05	1.11E-04	4.42E-06	1.88E-09	1.97E-04	1.47E-04
50	F88	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.90E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.46E-03
50	F88	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.06E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.76E-03
50	F89	40	Passenger Car	511	0.00E+00	7.34E-06	7.98E-07	2.70E+01	5.21E-05	1.46E-01	1.66E-05	4.67E-04	8.82E-03	1.24E-03	1.62E-03	1.04E-03	1.07E-03	1.52E-04	1.34E-04	2.48E-08	5.46E-04	7.28E-05
50	F89	40	Passenger Truck	857	0.00E+00	1.62E-05	1.70E-06	5.88E+01	9.75E-05	2.41E-01	3.25E-05	1.80E-03	1.56E-02	2.17E-03	3.07E-03	2.01E-03	2.06E-03	5.19E-04	2.89E-04	4.22E-08	1.02E-03	3.11E-04
50	F89	40	Single Unit Short Haul Truck	73	0.00E+00	2.47E-05	1.10E-06	1.37E+01	1.71E-05	2.16E-02	2.64E-05	9.95E-03	2.86E-03	4.47E-04	3.18E-03	6.62E-04	6.74E-04	1.40E-03	5.60E-05	2.38E-08	2.50E-03	1.86E-03
50	F89	40	Single Unit Long Haul Truck	3	0.00E+00	1.08E-06	4.79E-08	5.94E-01	7.48E-07	9.38E-04	1.16E-06	4.34E-04	1.28E-04	1.99E-05	1.40E-04	2.89E-05	2.95E-05	6.07E-05	2.42E-06	1.03E-09	1.10E-04	8.12E-05
50	F89	40	Combination Short Haul Truck	41	0.00E+00	1.99E-05	1.49E-06	1.71E+01	4.94E-08	2.82E-02	1.42E-05	2.90E-02	4.02E-03	5.99E-04	1.19E-03	4.33E-04	4.50E-04	2.72E-03	5.73E-05	0.00E+00	7.36E-04	5.46E-03
50	F89	40	Combination Long Haul Truck	38	0.00E+00	2.65E-05	1.50E-06	1.64E+01	1.68E-07	3.42E-02	2.18E-05	3.06E-02	4.17E-03	5.86E-04	2.43E-03	4.82E-04	5.02E-04	2.64E-03	5.51E-05	0.00E+00	1.92E-03	5.76E-03

Appendix F.4.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B09	0.00E+00	7.02E-05	4.96E-06	1.88E+02	1.56E-04	5.40E-01	9.03E-05	6.06E-02	9.42E-03	1.96E-03	9.41E-03	3.97E-03	4.07E-03	1.30E-02	8.15E-04	1.42E-07	5.34E-03	1.13E-02
B10	0.00E+00	1.24E-04	9.64E-06	3.58E+02	3.17E-04	1.07E+00	1.64E-04	1.17E-01	1.84E-02	3.74E-03	1.65E-02	7.83E-03	8.05E-03	2.32E-02	1.57E-03	2.32E-07	8.41E-03	2.19E-02
B13	0.00E+00	8.69E-05	6.54E-06	2.40E+02	1.99E-04	6.84E-01	1.11E-04	8.52E-02	1.20E-02	2.46E-03	1.12E-02	5.07E-03	5.22E-03	1.70E-02	1.04E-03	1.51E-07	5.94E-03	1.59E-02
B14	0.00E+00	5.13E-05	3.54E-06	1.34E+02	1.07E-04	3.73E-01	6.46E-05	4.50E-02	6.59E-03	1.38E-03	6.77E-03	2.76E-03	2.84E-03	9.74E-03	5.75E-04	1.01E-07	3.94E-03	8.43E-03
B15	0.00E+00	2.89E-05	2.72E-06	1.16E+02	1.52E-04	4.64E-01	5.46E-05	1.02E-02	7.16E-03	1.40E-03	5.41E-03	3.17E-03	3.25E-03	2.23E-03	5.66E-04	1.08E-07	2.16E-03	1.83E-03
B16	0.00E+00	5.20E-05	5.09E-06	2.17E+02	2.91E-04	8.84E-01	1.01E-04	1.68E-02	1.36E-02	2.65E-03	9.95E-03	6.02E-03	6.18E-03	3.51E-03	1.07E-03	2.01E-07	3.77E-03	3.01E-03
B19	0.00E+00	2.09E-04	1.44E-05	5.29E+02	3.93E-04	1.41E+00	2.53E-04	1.98E-01	2.54E-02	5.33E-03	2.64E-02	1.06E-02	1.09E-02	4.19E-02	2.24E-03	3.67E-07	1.56E-02	3.72E-02
B20	0.00E+00	2.27E-04	1.80E-05	7.06E+02	7.21E-04	2.34E+00	3.33E-04	1.69E-01	3.86E-02	7.80E-03	3.37E-02	1.67E-02	1.71E-02	3.53E-02	3.21E-03	5.57E-07	1.66E-02	3.15E-02
B21	0.00E+00	1.71E-04	1.16E-05	4.21E+02	2.91E-04	1.07E+00	2.01E-04	1.70E-01	1.97E-02	4.16E-03	2.10E-02	8.13E-03	8.36E-03	3.56E-02	1.76E-03	2.79E-07	1.27E-02	3.18E-02
B22	0.00E+00	2.08E-04	1.65E-05	6.45E+02	6.55E-04	2.13E+00	3.03E-04	1.57E-01	3.52E-02	7.10E-03	3.06E-02	1.52E-02	1.56E-02	3.26E-02	2.93E-03	5.02E-07	1.51E-02	2.93E-02
B23	0.00E+00	1.72E-04	1.17E-05	4.24E+02	2.94E-04	1.08E+00	2.02E-04	1.70E-01	1.98E-02	4.19E-03	2.11E-02	8.20E-03	8.43E-03	3.57E-02	1.77E-03	2.81E-07	1.27E-02	3.19E-02
B24	0.00E+00	2.30E-04	1.85E-05	7.26E+02	7.53E-04	2.43E+00	3.41E-04	1.69E-01	4.00E-02	8.06E-03	3.44E-02	1.73E-02	1.77E-02	3.51E-02	3.31E-03	5.72E-07	1.67E-02	3.15E-02
D63	0.00E+00	1.55E-05	9.63E-07	2.21E+01	1.63E-05	5.49E-02	1.62E-05	1.34E-02	2.71E-03	4.37E-04	1.74E-03	5.58E-04	5.74E-04	2.04E-03	9.05E-05	1.50E-08	1.17E-03	2.52E-03
D64	0.00E+00	1.43E-05	9.47E-07	2.46E+01	2.45E-05	7.41E-02	1.70E-05	1.06E-02	3.21E-03	5.13E-04	1.80E-03	6.78E-04	6.97E-04	1.66E-03	1.07E-04	1.96E-08	1.11E-03	1.98E-03
D65	0.00E+00	4.84E-05	3.08E-06	8.71E+01	6.66E-05	2.24E-01	5.41E-05	4.06E-02	7.69E-03	1.34E-03	5.78E-03	2.01E-03	2.06E-03	7.27E-03	3.65E-04	6.37E-08	3.72E-03	7.61E-03
D66	0.00E+00	4.90E-05	3.58E-06	1.14E+02	1.20E-04	3.65E-01	6.48E-05	3.51E-02	1.10E-02	1.87E-03	6.67E-03	2.96E-03	3.04E-03	6.24E-03	5.10E-04	9.05E-08	3.63E-03	6.55E-03
D67	0.00E+00	4.84E-05	3.08E-06	8.71E+01	6.66E-05	2.24E-01	5.41E-05	4.06E-02	7.69E-03	1.34E-03	5.78E-03	2.01E-03	2.06E-03	7.27E-03	3.65E-04	6.37E-08	3.72E-03	7.61E-03
D68	0.00E+00	4.90E-05	3.58E-06	1.14E+02	1.20E-04	3.65E-01	6.48E-05	3.51E-02	1.10E-02	1.87E-03	6.67E-03	2.96E-03	3.04E-03	6.24E-03	5.10E-04	9.05E-08	3.63E-03	6.55E-03
D69	0.00E+00	1.97E-05	1.27E-06	3.68E+01	2.99E-05	9.85E-02	2.26E-05	1.60E-02	3.30E-03	5.72E-04	2.41E-03	8.67E-04	8.91E-04	2.89E-03	1.56E-04	2.76E-08	1.52E-03	3.01E-03
D70	0.00E+00	1.99E-05	1.42E-06	4.41E+01	4.40E-05	1.37E-01	2.54E-05	1.50E-02	4.20E-03	7.17E-04	2.63E-03	1.12E-03	1.15E-03	2.65E-03	1.95E-04	3.41E-08	1.48E-03	2.80E-03
D71	0.00E+00	1.96E-05	1.58E-06	4.96E+01	6.59E-05	1.86E-01	2.95E-05	1.09E-02	7.08E-03	1.11E-03	2.97E-03	1.50E-03	1.54E-03	1.73E-03	2.33E-04	4.24E-08	1.43E-03	2.02E-03
D72	0.00E+00	2.80E-05	2.07E-06	5.82E+01	6.67E-05	1.97E-01	3.66E-05	2.00E-02	7.99E-03	1.26E-03	3.74E-03	1.67E-03	1.71E-03	3.05E-03	2.63E-04	4.52E-08	2.02E-03	3.75E-03
D73	0.00E+00	9.75E-06	8.92E-07	3.08E+01	4.56E-05	1.26E-01	1.72E-05	3.69E-03	4.56E-03	7.11E-04	1.69E-03	9.73E-04	9.98E-04	6.16E-04	1.49E-04	2.76E-08	6.95E-04	6.76E-04
D74	0.00E+00	1.71E-05	1.35E-06	3.99E+01	4.93E-05	1.43E-01	2.40E-05	1.14E-02	5.61E-03	8.79E-04	2.41E-03	1.17E-03	1.20E-03	1.73E-03	1.83E-04	3.15E-08	1.20E-03	2.13E-03
D75	0.00E+00	1.35E-05	1.02E-06	3.36E+01	3.79E-05	1.13E-01	1.89E-05	8.77E-03	3.31E-03	5.63E-04	1.94E-03	9.01E-04	9.25E-04	1.59E-03	1.53E-04	2.81E-08	1.01E-03	1.64E-03
D76	0.00E+00	2.15E-05	1.50E-06	4.60E+01	4.45E-05	1.39E-01	2.69E-05	1.64E-02	4.34E-03	7.43E-04	2.80E-03	1.16E-03	1.19E-03	2.92E-03	2.03E-04	3.57E-08	1.61E-03	3.06E-03
D77	0.00E+00	1.28E-05	8.56E-07	2.53E+01	2.23E-05	7.16E-02	1.53E-05	1.01E-02	2.32E-03	4.00E-04	1.61E-03	6.14E-04	6.31E-04	1.82E-03	1.09E-04	1.94E-08	9.82E-04	1.90E-03
D78	0.00E+00	4.13E-05	2.62E-06	7.24E+01	5.19E-05	1.79E-01	4.50E-05	3.61E-02	6.33E-03	1.10E-03	4.81E-03	1.63E-03	1.68E-03	6.39E-03	3.00E-04	5.03E-08	3.13E-03	6.77E-03
D79	0.00E+00	1.64E-05	1.35E-06	4.30E+01	5.82E-05	1.64E-01	2.52E-05	8.74E-03	6.18E-03	9.67E-04	2.53E-03	1.31E-03	1.34E-03	1.39E-03	2.03E-04	3.69E-08	1.19E-03	1.62E-03
D80	0.00E+00	2.40E-05	1.89E-06	5.75E+01	7.35E-05	2.10E-01	3.46E-05	1.46E-02	8.13E-03	1.28E-03	3.49E-03	1.71E-03	1.76E-03	2.27E-03	2.67E-04	4.76E-08	1.73E-03	2.72E-03
D81	0.00E+00	1.13E-05	1.12E-06	4.06E+01	6.30E-05	1.72E-01	2.19E-05	2.95E-03	6.11E-03	9.50E-04	2.13E-03	1.31E-03	1.34E-03	5.24E-04	2.00E-04	3.71E-08	7.87E-04	5.31E-04
D82	0.00E+00	7.56E-06	7.96E-07	3.00E+01	4.80E-05	1.30E-01	1.58E-05	1.24E-03	4.56E-03	7.08E-04	1.52E-03	9.77E-04	1.00E-03	2.47E-04	1.49E-04	2.78E-08	5.21E-04	2.15E-04
D83	0.00E+00	9.64E-05	6.15E-06	1.68E+02	1.17E-04	4.09E-01	1.04E-04	8.68E-02	1.46E-02	2.54E-03	1.10E-02	3.75E-03	3.86E-03	1.52E-02	6.91E-04	1.11E-07	7.18E-03	1.63E-02
D84	0.00E+00	1.09E-04	7.71E-06	2.17E+02	1.78E-04	5.96E-01	1.24E-04	1.02E-01	2.00E-02	3.41E-03	1.26E-02	5.12E-03	5.27E-03	1.70E-02	9.20E-04	1.31E-07	7.37E-03	1.92E-02
D85	0.00E+00	8.07E-05	5.08E-06	1.36E+02	8.80E-05	3.17E-01	8.49E-05	7.43E-02	1.17E-02	2.04E-03	9.05E-03	2.97E-03	3.05E-03	1.30E-02	5.53E-04	8.72E-08	6.00E-03	1.40E-02
D86	0.00E+00	1.01E-04	7.26E-06	2.08E+02	1.78E-04	5.87E-01	1.17E-04	9.33E-02	1.93E-02	3.28E-03	1.19E-02	4.98E-03	5.12E-03	1.55E-02	8.88E-04	1.27E-07	6.77E-03	1.75E-02
D87	0.00E+00	8.07E-05	5.08E-06	1.36E+02	8.80E-05	3.17E-01	8.49E-05	7.43E-02	1.17E-02	2.04E-03	9.05E-03	2.97E-03	3.05E-03	1.30E-02	5.53E-04	8.72E-08	6.00E-03	1.40E-02
D88	0.00E+00	1.01E-04	7.26E-06	2.08E+02	1.78E-04	5.87E-01	1.17E-04	9.33E-02	1.93E-02	3.28E-03	1.19E-02	4.98E-03	5.12E-03	1.55E-02	8.88E-04	1.27E-07	6.77E-03	1.75E-02
D89	0.00E+00	1.71E-05	1.17E-06	2.66E+01	2.81E-05	8.62E-02	1.97E-05	1.47E-02	4.63E-03	6.98E-04	2.04E-03	7.98E-04	8.20E-04	1.90E-03	1.15E-04	1.81E-08	1.22E-03	2.75E-03
D90	0.00E+00	2.84E-05	1.92E-06	4.52E+01	5.22E-05	1.52E-01	3.44E-05	2.12E-02	7.90E-03	1.20E-03	3.61E-03	1.41E-03	1.45E-03	2.86E-03	1.99E-04	3.55E-08	2.17E-03	3.98E-03
D91	0.00E+00	1.63E-05	1.44E-06	4.93E+01	7.21E-05	1.99E-01	2.80E-05	6.35E-03	7.25E-03	1.13E-03	2.78E-03	1.55E-03	1.59E-03	1.08E-03	2.38E-04	4.46E-08	1.19E-03	1.17E-03
D92	0.00E+00	9.17E-06	8.04E-07	2.69E+01	3.86E-05	1.07E-01	1.53E-05	4.05E-03	3.94E-03	6.16E-04	1.52E-03	8.39E-04	8.61E-04	6.61E-04	1.29E-04	2.38E-08	6.57E-04	7.48E-04
D93	0.00E+00	1.35E-05	1.32E-06	4.79E+01	7.44E-05	2.03E-01	2.60E-05	3.35E-03	7.20E-03	1.12E-03	2.54E-03	1.54E-03	1.58E-03	6.18E-04	2.36E-04	4.43E-08	9.59E-04	6.01E-04
D94	0.00E+00	1.16E-05	1.02E-06	3.43E+01	4.95E-05	1.37E-01	1.96E-05	4.86E-03	5.03E-03	7.85E-04	1.94E-03	1.07E-03	1.10E-03	8.09E-04	1.65E-04	3.07E-08	8.44E-04	8.95E-04
E01	0.00E+00	3.29E-05	2.24E-06	5.41E+01	6.53E-05	1.87E-01	4.09E-05	2.31E-02	9.50E-03	1.44E-03	4.31E-03	1.71E-03	1.76E-03	3.17E-03	2.40E-04	4.44E-08	2.55E-03	4.33E-03
E02	0.00E+00	4.00E-05	2.78E-06	6.60E+01	7.64E-05	2.25E-01	4.86E-05	3.12E-02	1.16E-02	1.75E-03	5.05E-03	2.05E-03	2.10E-03	4.12E-03	2.90E-04	4.96E-08	2.95E-03	5.84E-03
E03	0.00E+00	1.69E-05	1.40E-06	4.89E+01	6.19E-05	1.80E-01	2.64E-05	9.09E-03	5.00E-03	8.44E-04	2.65E-03	1.38E-03	1.42E-03	1.65E-03	2.30E-04	4.25E-08	1.24E-03	1.68E-03
E04	0.00E+00	2.04E-05	1.57E-06	5.15E+01	5.81E-05	1.75E-01	2.85E-05	1.38E-02	5.09E-03	8.63E-04	2.90E-03	1.38E-03	1.42E-03	2.43E-03	2.35E-04	4.14E-08	1.48E-03	2.58E-03
E05	0.00E+00	9.40E-06	6.30E-07	1.89E+01	1.71E-05	5.44E-02	1.13E-05	7.26E-03	1.74E-03	3.00E-04	1.20E-03	4.63E-04	4.75E-04	1.31E-03	8.19E-05	1.47E-08	7.21E-04	1.36E-03
E06	0.00E+00	1.68E-05	1.46E-06	5.28E+01	7.01E-05	2.02E-01	2.80E-05	7.99E-03	5.49E-03	9.24E-04	2.78E-03	1.53E-03	1.57E-03	1.45E-03	2.52E-04	4.68E-08	1.22E-03	1.47E-03
E07	0.00E+00	1.32E-04	1.00E-05	2.61E+02	3.49E-04	9.93E-01	1.79E-04	9.10E-02	4.74E-02	7.12E-03	1.81E-02	8.46E-03	8.69E-03	1.22E-02	1.19E-03	2.09E-07	9.45E-03	1.70E-02
E08	0.00E+00	8.43E-05	6.42E-06	1.72E+02	2.40E-04	6.69E-01	1.18E-04	5.24E-02	3.14E-02	4.72E-03	1.21E-02	5.68E-03	5.83E-03	7.22E-03	7.95E-04	1.45E-07	6.23E-03	9.78E-03
E09	0.00E+00	1.21E-04	9.19E-06	2.38E+02	3.12E-04	8.95E-01	1.62E-04	8.68E-02	4.30E-02	6.47E-03	1.65E-02	7.65E-03	7.85E-03	1.15E-02	1.08E-03	1.86E-07	8.62E-03	1.62E-02
E10	0.00E+00	7.70E-05	5.95E-06	1.61E+02	2.27E-04	6.33E-01	1.10E-04	4.74E-02	2.95E-02	4.43E-03	1.11E-02	5.33E-03	5.48E-03	6.51E-03	7.47E-04	1.36E-07	5.65E-03	8.84E-03
E11	0.00E+00	1.72E-04	1.23E-05	3.07E+02	3.86E-04	1.11E+00	2.21E-04	1.23E-01	5.47E-02	8.25E-03	2.28E-02	9.78E-03	1.00E-02	1.65E-02	1.38E-03	2.44E-07	1.27E-02	2.30E-02
E12	0.00E+00	1.64E-04	1.15E-05	2.69E+02	3.01E-04	9.04E-01	1.96E-04	1.35E-01	4.71E-02	7.11E-03	2.03E-02	8.21E-03	8.44E-03	1.76E-02	1.17E-03	1.92E-07	1.18E-02	2.53E-02
E13	0.00E+00	2.77E-05	2.05E-06	6.75E+01	7.58E-05	2.27E-01	3.85E-05	1.76E-02	6.62E-03	1.13E-03	3.97E-03	1.81E-03	1.86E-03	3.23E-03	3.08E-04	5.76E-08	2.11E-03	3.28E-03
E14	0.00E+00	5.65E-05	3.92E-06	1.16E+02	1.05E-04	3.36E-01	6.78E-05	4.65E-02	1.08E-02	1.85E-03	7.05E-03	2.84E-03	2.92E-03	8.10E-03	5.02E-04	8.37E-08	4.13E-03	8.70E-03
E15	0.00E+00	2.78E-05	1.92E-06	5.91E+01	5.73E-05	1.79E-01	3.49E-05	2.06E-02	5.55E-03	9.55E-04	3.66E-03	1.49E-03	1.53E-03	3.73E-03	2.60E-04	4.71E-08	2.13E-03	3.86E-03
E16	0.00E+00	4.54E-05	3.37E-06	9.75E+01	8.71E-05	2.84E-01	5.38E-05	4.23E-02	9.21E-03	1.56E-03	5.40E-03	2.37E-03	2.44E-03	6.91E-03	4.20E-04	5.86E-08	2.96E-03	7.93E-03
E17	0.00E+00	1.97E-05	1.25E-06	3.68E+01	3.10E-05	1.00E-01	2.30E-05	1.51E-02	3.30E-03	5.75E-04	2.47E-03	8.79E-04	9.03E-04	2.79E-03	1.57E-04	2.97E-08	1.57E-03	2.82E-03
E18	0.00E+00	1.66E-05	1.41E-06	4.92E+01	6.26E-05	1.82E-01	2.62E-05	9.18E-03	5.05E-03	8.51E-04	2.62E-03	1.39E-03	1.43E-03	1.62E-03	2.32E-04	4.20E-08	1.19E-03	1.70E-03
E19	0.00E+00	5.64E-05	4.44E-06	1.24E+02	1.81E-04	4.99E-01	8.33E-05	3.14E-02	2.28E-02	3.43E-03	8.45E-03	4.16E-03	4.27E-03	4.42E-03	5.80E-04	1.08E-07	4.18E-03	5.84E-03
E20	0.00E+00	5.36E-05	3.88E-06	1.02E+02	1.41E-04	3.90E-01	7.38E-05	3.11E-02	1.85E-02	2.79E-03	7.67E-03	3.40E-03	3.48E-03	4.45E-03	4.71E-04	9.12E-08	4.19E-03	5.81E-03
E21	0.00E+00	1.07E-07	1.15E-08	4.64E-01	7.17E-07	1.99E-03	2.32E-07	1.29E-05	5.10E-05	8.51E-06	2.23E-05	1.45E-05	1.48E-05	2.81E-06	2.32E-06	4.45E-10	7.51E-06	2.11E-06
E22	0.00E+00	2.17E-05	1.52E-06	4.40E+01	3.84E-05	1.25E-01	2.55E-05	1.88E-02	4.08E-03	6.97E-04	2.63E-03	1.06E-03	1.09E-03	3.21E-03	1.89E-04	2.98E-08	1.54E-03	3.52E-03
E23	0.00E+00	1.07E-07	1.15E-08	4.64E-01	7.17E-07	1.99E-03	2.32E-07	1.29E-05	5.10E-05	8.51E-06	2.23E-05	1.45E-05	1.48E-05	2.81E-06	2.32E-06	4.45E-10	7.51E-06	2.11E-06
E24	0.00E+00	2.17E-05	1.52E-06	4.40E+01	3.84E-05	1.25E-01	2.55E-05	1.88E-02	4.08E-03	6.97E-04	2.63E-03	1.06E-03	1.09E-03	3.21E-03	1.89E-04	2.98E-08	1.54E-03	3.52E-03
E25	0.00E+00	1.63E-05	1.46E-06	4.87E+01	6.97E-05	1.94E-01	2.73E-05	7.57E-03	7.15E-03	1.11E-03	2.68E-03	1.51E-03	1.55E-03	1.19E-03	2.34E-04	4.20E-08	1.13E-03	1.40E-03
E26	0.00E+00	1.44E-05	1.31E-06	4.45E+01	6.48E-05	1.80E-01	2.48E-05	6.17E-03	6.57E-03	1.02E-03	2.44E-03	1.39E-03	1.43E-03	9.90E-04	2.15E-04	3.89E-08	1.00E-03	1.14E-03
E27	0.00E+00	1.32E-05	1.19E-06	3.98E+01	5.72E-05	1.59E-01	2.23E-05	6.04E-03	5.85E-03	9.12E-04	2.20E-03	1.24E-03	1.27E-03	9.59E-04	1.91E-04	3.45E-08	9.25E-04	1.11E-03
E28	0.00E+00	1.12E-05	9.89E-07	3.28E+01	4.66E-05	1.30E-01	1.85E-05	5.37E-03	4.81E-03	7.49E-04	1.82E-03	1.02E-03	1.04E-03	8.45E-04	1.57E-04	2.82E-08	7.78E-04	9.93E-04
E29	0.00E+00	1.67E-06	1.42E-07	4.76E+00	6.85E-06	1.89E-02	2.77E-06	6.70E-04	6.94E-04	1.09E-04	2.79E-04	1.49E-04	1.53E-04	1.16E-04	2.29E-05	4.37E-09	1.26E-04	1.23E-04
E30	0.00E+00	1.41E-05	1.22E-06	4.05E+01	5.73E-05	1.60E-01	2.31E-05	6.66E-03	5.91E-03	9.23E-04	2.28E-03	1.25E-03	1.29E-03	1.06E-03	1.94E-04	3.52E-08	9.98E-04	1.23E-03
E31	0.00E+00	1.15E-05	7.48E-07	1.90E+01	1.80E-05	5.53E-02	1.32E-05	8.81E-03	2.45E-03	3.92E-04	1.40E-03	5.14E-04	5.28E-04	1.37E-03	8.17E-05	1.46E-08	8.74E-04	1.65E-03
E32	0.00E+00	1.84E-05	1.59E-06	5.23E+01	7.36E-05	2.05E-01	2.99E-05	8.87E-03	7.62E-03	1.19E-03	2.97E-03	1.62E-03	1.66E-03	1.42E-03	2.50E-04	4.54E-08	1.31E-03	1.64E-03
E33	0.00E+00	4.34E-05	3.03E-06	7.38E+01	8.95E-05	2.59E-01	5.43E-05	3.16E-02	1.30E-02	1.97E-03	5.66E-03	2.33E-03	2.39E-03	4.26E-03	3.28E-04	5.84E-08	3.26E-03	5.93E-03
E34	0.00E+00	7.47E-05	6.17E-06	1.77E+02	2.64E-04	7.28E-01	1.15E-04	4.10E-02	3.28E-02	4.91E-03	1.15E-02	5.96E-03	6.11E-03	5.70E-03	8.32E-04	1.52E-07	5.35E-03	7.63E-03
E35	0.00E+00	3.34E-05	2.20E-06	5.05E+01	5.53E-05	1.64E-01	3.92E-05	2.58E-02	8.72E-03	1.32E-03	4.14E-03	1.55E-03	1.59E-03	3.46E-03	2.19E-04	3.88E-08	2.55E-03	4.83E-03
E36	0.00E+00	6.14E-05	4.81E-06	1.31E+02	1.86E-04	5.19E-01	8.81E-05	3.78E-02	2.41E-02	3.62E-03	8.91E-03	4.35E-03	4.46E-03	5.17E-03	6.09E-04	1.10E-07	4.45E-03	7.06E-03
E37	0.00E+00	3.34E-05	2.20E-06	5.05E+01	5.53E-05	1.64E-01	3.92E-05	2.58E-02	8.72E-03	1.32E-03	4.14E-03	1.55E-03	1.59E-03	3.46E-03	2.19E-04	3.88E-08	2.55E-03	4.83E-03
E38	0.00E+00	6.14E-05	4.81E-06	1.31E+02	1.86E-04	5.19E-01	8.81E-05	3.78E-02	2.41E-02	3.62E-03	8.91E-03	4.35E-03	4.46E-03	5.17E-03	6.09E-04	1.10E-07	4.45E-03	7.06E-03
E39	0.00E+00	1.39E-05	1.27E-06	4.34E+01	6.36E-05	1.76E-01	2.42E-05	5.73E-03	6.42E-03	1.00E-03	2.37E-03	1.36E-03	1.40E-03	9.29E-04	2.10E-04	3.83E-08	9.74E-04	1.05E-03
E40	0.00E+00	2.29E-05	1.78E-06	5.27E+01	6.54E-05	1.89E-01	3.20E-05	1.48E-02	7.40E-03	1.16E-03	3.24E-03	1.55E-03	1.60E-03	2.28E-03	2.43E-04	4.27E-08	1.64E-03	2.76E-03
E41	0.00E+00	1.04E-05	9.72E-07	3.40E+01	5.09E-05	1.40E-01	1.87E-05	3.71E-03	5.06E-03	7.87E-04	1.84E-03	1.08E-03	1.11E-03	6.21E-04	1.66E-04	3.05E-08	7.32E-04	6.79E-04
E42	0.00E+00	1.37E-05	1.29E-06	4.41E+01	6.47E-05	1.80E-01	2.41E-05	5.89E-03	6.54E-03	1.02E-03	2.35E-03	1.38E-03	1.42E-03	9.25E-04	2.13E-04	3.81E-08	9.32E-04	1.08E-03
E43	0.00E+00	1.10E-05	1.00E-06	3.47E+01	5.17E-05	1.42E-01	1.95E-05	3.93E-03	5.14E-03	8.02E-04	1.92E-03	1.10E-03	1.13E-03	6.72E-04	1.69E-04	3.16E-08	7.94E-04	7.19E-04
E44	0.00E+00	9.18E-06	8.89E-07	3.13E+01	4.71E-05	1.30E-01	1.69E-05	3.38E-03	4.68E-03	7.27E-04	1.64E-03	9.92E-04	1.02E-03	5.41E-04	1.53E-04	2.75E-08	6.21E-04	6.17E-04
E45	0.00E+00	3.04E-05	1.80E-06	4.57E+01	2.23E-05	9.00E-02	3.00E-05	2.87E-02	3.71E-03	6.56E-04	3.27E-03	9.22E-04	9.50E-04	5.08E-03	1.78E-04	2.84E-08	2.32E-03	5.40E-03
E46	0.00E+00	2.47E-05	1.89E-06	6.27E+01	7.21E-05	2.15E-01	3.51E-05	1.58E-02	6.21E-03	1.06E-03	3.58E-03	1.70E-03	1.74E-03	2.85E-03	2.88E-04	5.26E-08	1.84E-03	2.94E-03
E47	0.00E+00	7.40E-06	5.58E-07	1.83E+01	2.06E-05	6.18E-02	1.03E-05	4.82E-03	1.80E-03	3.07E-04	1.06E-03	4.91E-04	5.04E-04	8.70E-04	8.37E-05	1.53E-08	5.54E-04	8.98E-04
E48	0.00E+00	2.29E-05	1.80E-06	6.10E+01	7.28E-05	2.15E-01	3.37E-05	1.38E-02	6.12E-03	1.04E-03	3.42E-03	1.68E-03	1.72E-03	2.50E-03	2.83E-04	5.20E-08	1.70E-03	2.56E-03
E49	0.00E+00	3.13E-06	2.61E-07	8.82E+00	1.07E-05	3.16E-02	4.70E-06	2.02E-03	8.97E-04	1.51E-04	4.67E-04	2.44E-04	2.51E-04	3.45E-04	4.11E-05	7.06E-09	2.16E-04	3.76E-04
E50	0.00E+00	3.29E-05	2.32E-06	6.87E+01	6.26E-05	2.01E-01	3.97E-05	2.74E-02	6.42E-03	1.10E-03	4.10E-03	1.69E-03	1.73E-03

Appendix F.4.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E66	0.00E+00	6.60E-05	4.98E-06	1.44E+02	1.72E-04	5.00E-01	8.91E-05	4.47E-02	2.00E-02	3.14E-03	9.07E-03	4.19E-03	4.30E-03	6.86E-03	6.56E-04	1.15E-07	4.77E-03	8.36E-03
E67	0.00E+00	2.91E-05	2.25E-06	7.39E+01	8.44E-05	2.52E-01	4.11E-05	1.92E-02	7.33E-03	1.24E-03	4.18E-03	1.99E-03	2.05E-03	3.41E-03	3.39E-04	6.06E-08	2.13E-03	3.58E-03
E68	0.00E+00	4.31E-05	3.30E-06	1.10E+02	1.26E-04	3.76E-01	6.13E-05	2.73E-02	1.09E-02	1.84E-03	6.26E-03	2.97E-03	3.05E-03	4.93E-03	5.03E-04	9.21E-08	3.21E-03	5.08E-03
E69	0.00E+00	2.10E-05	1.80E-06	5.93E+01	8.36E-05	2.33E-01	3.42E-05	9.80E-03	8.63E-03	1.35E-03	3.41E-03	1.84E-03	1.88E-03	1.60E-03	2.83E-04	5.22E-08	1.53E-03	1.81E-03
E70	0.00E+00	3.15E-05	2.79E-06	9.62E+01	1.42E-04	3.91E-01	5.48E-05	1.12E-02	1.42E-02	2.21E-03	5.45E-03	3.04E-03	3.12E-03	1.97E-03	4.66E-04	8.86E-08	2.34E-03	2.05E-03
E71	0.00E+00	2.18E-05	2.22E-06	8.21E+01	1.30E-04	3.53E-01	4.39E-05	4.58E-03	1.24E-02	1.93E-03	4.25E-03	2.66E-03	2.73E-03	8.61E-04	4.07E-04	7.59E-08	1.52E-03	8.11E-04
E72	0.00E+00	3.54E-05	3.26E-06	1.15E+02	1.75E-04	4.77E-01	6.45E-05	1.08E-02	1.71E-02	2.67E-03	6.38E-03	3.68E-03	3.77E-03	1.95E-03	5.63E-04	1.07E-07	2.60E-03	1.96E-03
E73	0.00E+00	1.63E-05	1.43E-06	4.29E+01	6.76E-05	1.84E-01	2.69E-05	7.52E-03	8.07E-03	1.21E-03	2.66E-03	1.47E-03	1.51E-03	1.08E-03	2.05E-04	3.81E-08	1.15E-03	1.39E-03
E74	0.00E+00	2.44E-05	2.06E-06	6.11E+01	9.57E-05	2.59E-01	3.95E-05	1.09E-02	1.14E-02	1.71E-03	3.96E-03	2.11E-03	2.16E-03	1.61E-03	2.92E-04	5.57E-08	1.80E-03	2.02E-03
E75	0.00E+00	5.88E-05	4.71E-06	1.47E+02	1.80E-04	5.15E-01	8.41E-05	3.83E-02	2.03E-02	3.19E-03	8.42E-03	4.21E-03	4.32E-03	5.80E-03	6.84E-04	1.16E-07	4.09E-03	7.13E-03
E76	0.00E+00	1.00E-04	8.19E-06	2.57E+02	3.14E-04	9.02E-01	1.45E-04	6.69E-02	3.55E-02	5.57E-03	1.44E-02	7.33E-03	7.53E-03	9.97E-03	1.19E-03	1.99E-07	6.83E-03	1.25E-02
E77	0.00E+00	6.32E-05	5.05E-06	1.56E+02	1.87E-04	5.39E-01	8.90E-05	4.29E-02	2.14E-02	3.36E-03	8.90E-03	4.42E-03	4.54E-03	6.43E-03	7.20E-04	1.21E-07	4.35E-03	8.01E-03
E78	0.00E+00	1.04E-04	8.44E-06	2.61E+02	3.15E-04	9.07E-01	1.48E-04	7.16E-02	3.60E-02	5.65E-03	1.47E-02	7.42E-03	7.62E-03	1.06E-02	1.21E-03	2.00E-07	7.07E-03	1.34E-02
E79	0.00E+00	4.89E-05	3.99E-06	1.35E+02	1.79E-04	4.97E-01	7.69E-05	2.32E-02	1.88E-02	2.97E-03	7.78E-03	3.99E-03	4.10E-03	3.87E-03	6.41E-04	1.20E-07	3.68E-03	4.29E-03
E80	0.00E+00	6.63E-05	5.92E-06	2.08E+02	2.89E-04	7.98E-01	1.13E-04	2.89E-02	2.97E-02	4.65E-03	1.11E-02	6.25E-03	6.42E-03	4.69E-03	1.01E-03	1.82E-07	4.71E-03	5.31E-03
E83	0.00E+00	1.77E-05	1.55E-06	5.10E+01	7.17E-05	2.01E-01	2.88E-05	8.92E-03	7.46E-03	1.16E-03	2.84E-03	1.57E-03	1.62E-03	1.39E-03	2.44E-04	4.33E-08	1.22E-03	1.65E-03
E84	0.00E+00	2.00E-05	1.71E-06	5.57E+01	7.74E-05	2.17E-01	3.19E-05	1.02E-02	8.10E-03	1.26E-03	3.17E-03	1.71E-03	1.76E-03	1.60E-03	2.65E-04	4.76E-08	1.41E-03	1.89E-03
E85	0.00E+00	7.09E-05	6.35E-06	1.95E+02	3.15E-04	8.51E-01	1.22E-04	2.88E-02	3.68E-02	5.51E-03	1.20E-02	6.77E-03	6.95E-03	4.27E-03	9.41E-04	1.77E-07	5.06E-03	5.31E-03
E86	0.00E+00	1.37E-04	1.10E-05	3.10E+02	4.55E-04	1.26E+00	2.05E-04	7.73E-02	5.72E-02	8.59E-03	2.06E-02	1.04E-02	1.07E-02	1.08E-02	1.45E-03	2.67E-07	9.95E-03	1.44E-02
E87	0.00E+00	1.22E-04	9.16E-06	2.40E+02	3.23E-04	9.10E-01	1.67E-04	8.09E-02	4.34E-02	6.53E-03	1.70E-02	7.81E-03	8.02E-03	1.10E-02	1.10E-03	1.98E-07	9.03E-03	1.51E-02
E88	0.00E+00	1.11E-04	8.30E-06	2.19E+02	2.99E-04	8.38E-01	1.53E-04	7.06E-02	3.97E-02	5.98E-03	1.56E-02	7.18E-03	7.37E-03	9.71E-03	1.01E-03	1.84E-07	8.27E-03	1.32E-02
E89	0.00E+00	7.44E-06	7.81E-07	2.68E+01	4.75E-05	1.26E-01	1.56E-05	8.50E-04	5.18E-03	7.73E-04	1.51E-03	9.65E-04	9.89E-04	1.99E-04	1.33E-04	2.59E-08	5.19E-04	1.43E-04
E90	0.00E+00	1.24E-05	1.18E-06	3.77E+01	6.29E-05	1.69E-01	2.27E-05	4.15E-03	7.20E-03	1.08E-03	2.22E-03	1.32E-03	1.36E-03	6.34E-04	1.84E-04	3.46E-08	8.57E-04	7.59E-04
E91	0.00E+00	1.49E-07	1.60E-08	5.50E-01	9.81E-07	2.60E-03	3.19E-07	1.58E-05	1.07E-04	1.59E-05	3.06E-05	1.99E-05	2.04E-05	3.77E-06	2.74E-06	5.29E-10	1.03E-05	2.63E-06
E92	0.00E+00	1.49E-07	1.60E-08	5.50E-01	9.81E-07	2.60E-03	3.19E-07	1.58E-05	1.07E-04	1.59E-05	3.06E-05	1.99E-05	2.04E-05	3.77E-06	2.74E-06	5.29E-10	1.03E-05	2.63E-06
E93	0.00E+00	1.12E-05	1.01E-06	3.07E+01	4.89E-05	1.33E-01	1.90E-05	4.97E-03	5.79E-03	8.66E-04	1.86E-03	1.06E-03	1.09E-03	7.11E-04	1.47E-04	2.72E-08	7.77E-04	9.18E-04
E94	0.00E+00	1.04E-05	1.05E-06	3.55E+01	6.21E-05	1.65E-01	2.11E-05	1.73E-03	6.84E-03	1.02E-03	2.04E-03	1.27E-03	1.31E-03	3.45E-04	1.76E-04	3.41E-08	7.39E-04	3.04E-04
E95	0.00E+00	3.54E-05	2.49E-06	7.64E+01	7.13E-05	2.24E-01	4.38E-05	2.79E-02	7.41E-03	1.25E-03	4.54E-03	1.88E-03	1.93E-03	4.92E-03	3.35E-04	5.64E-08	2.61E-03	5.23E-03
E96	0.00E+00	7.26E-05	5.39E-06	1.70E+02	1.70E-04	5.25E-01	9.38E-05	5.67E-02	1.69E-02	2.84E-03	9.56E-03	4.29E-03	4.41E-03	9.75E-03	7.58E-04	1.23E-07	5.15E-03	1.06E-02
E97	0.00E+00	3.54E-05	2.49E-06	7.64E+01	7.13E-05	2.24E-01	4.38E-05	2.79E-02	7.41E-03	1.25E-03	4.54E-03	1.88E-03	1.93E-03	4.92E-03	3.35E-04	5.64E-08	2.61E-03	5.23E-03
E98	0.00E+00	7.26E-05	5.39E-06	1.70E+02	1.70E-04	5.25E-01	9.38E-05	5.67E-02	1.69E-02	2.84E-03	9.56E-03	4.29E-03	4.41E-03	9.75E-03	7.58E-04	1.23E-07	5.15E-03	1.06E-02
F01	0.00E+00	2.36E-05	2.03E-06	5.97E+01	9.18E-05	2.52E-01	3.78E-05	1.21E-02	1.12E-02	1.67E-03	3.75E-03	2.03E-03	2.09E-03	1.69E-03	2.84E-04	5.20E-08	1.67E-03	2.24E-03
F02	0.00E+00	2.80E-05	2.19E-06	6.01E+01	8.57E-05	2.38E-01	4.04E-05	1.68E-02	1.10E-02	1.66E-03	4.10E-03	2.00E-03	2.05E-03	2.32E-03	2.79E-04	5.10E-08	2.05E-03	3.14E-03
F03	0.00E+00	2.21E-06	1.75E-07	5.94E+00	7.13E-06	2.10E-02	3.27E-06	1.33E-03	5.97E-04	1.01E-04	3.31E-04	1.64E-04	1.68E-04	2.39E-04	2.76E-05	5.05E-09	1.63E-04	2.46E-04
F04	0.00E+00	9.51E-06	7.55E-07	2.58E+01	3.14E-05	9.23E-02	1.42E-05	5.46E-03	2.60E-03	4.41E-04	1.45E-03	7.17E-04	7.36E-04	9.99E-04	1.20E-04	2.24E-08	7.10E-04	1.01E-03
F05	0.00E+00	2.95E-05	2.36E-06	6.53E+01	9.37E-05	2.62E-01	4.31E-05	1.81E-02	1.20E-02	1.80E-03	4.34E-03	2.17E-03	2.23E-03	2.46E-03	3.04E-04	5.46E-08	2.11E-03	3.37E-03
F06	0.00E+00	2.34E-05	1.65E-06	4.04E+01	4.91E-05	1.43E-01	2.93E-05	1.73E-02	7.16E-03	1.08E-03	3.04E-03	1.27E-03	1.31E-03	2.31E-03	1.80E-04	3.15E-08	1.73E-03	3.24E-03
F07	0.00E+00	3.66E-05	2.91E-06	8.16E+01	1.20E-04	3.30E-01	5.44E-05	2.05E-02	1.50E-02	2.26E-03	5.50E-03	2.74E-03	2.81E-03	2.87E-03	3.82E-04	7.09E-08	2.69E-03	3.81E-03
F08	0.00E+00	4.04E-05	3.04E-06	8.14E+01	1.13E-04	3.15E-01	5.65E-05	2.46E-02	1.48E-02	2.23E-03	5.79E-03	2.69E-03	2.76E-03	3.42E-03	3.76E-04	6.97E-08	3.03E-03	4.60E-03
F09	0.00E+00	1.48E-05	1.11E-06	3.53E+01	3.75E-05	1.15E-01	1.97E-05	1.10E-02	3.44E-03	5.84E-04	2.01E-03	9.23E-04	9.48E-04	1.90E-03	1.59E-04	2.70E-08	1.06E-03	2.05E-03
F10	0.00E+00	2.10E-05	1.69E-06	5.60E+01	6.54E-05	1.95E-01	3.03E-05	1.42E-02	5.62E-03	9.49E-04	3.04E-03	1.53E-03	1.57E-03	2.44E-03	2.58E-04	4.43E-08	1.47E-03	2.65E-03
F13	0.00E+00	1.05E-06	8.04E-08	2.54E+00	2.72E-06	8.33E-03	1.40E-06	7.92E-04	2.49E-04	4.21E-05	1.41E-04	6.66E-05	6.85E-05	1.35E-04	1.14E-05	1.90E-09	7.29E-05	1.48E-04
F14	0.00E+00	9.74E-07	7.27E-08	2.23E+00	2.25E-06	7.00E-03	1.25E-06	7.83E-04	2.15E-04	3.65E-05	1.27E-04	5.70E-05	5.86E-05	1.33E-04	9.90E-06	1.60E-09	6.79E-05	1.47E-04
F15	0.00E+00	3.94E-05	3.17E-06	9.51E+01	1.19E-04	3.45E-01	5.60E-05	2.63E-02	1.35E-02	2.11E-03	5.59E-03	2.81E-03	2.88E-03	3.93E-03	4.39E-04	7.44E-08	2.70E-03	4.90E-03
F16	0.00E+00	3.26E-05	2.49E-06	7.10E+01	8.32E-05	2.45E-01	4.34E-05	2.34E-02	9.84E-03	1.55E-03	4.39E-03	2.05E-03	2.10E-03	3.52E-03	3.22E-04	5.42E-08	2.29E-03	4.38E-03
F17	0.00E+00	3.50E-05	2.65E-06	7.40E+01	8.39E-05	2.50E-01	4.53E-05	2.66E-02	1.02E-02	1.60E-03	4.57E-03	2.11E-03	2.17E-03	3.94E-03	3.33E-04	5.42E-08	2.40E-03	4.99E-03
F18	0.00E+00	3.28E-05	2.44E-06	6.70E+01	7.39E-05	2.22E-01	4.17E-05	2.54E-02	9.16E-03	1.44E-03	4.22E-03	1.89E-03	1.94E-03	3.76E-03	2.99E-04	4.88E-08	2.28E-03	4.75E-03
F19	0.00E+00	1.33E-05	1.43E-06	5.46E+01	8.85E-05	2.39E-01	2.87E-05	1.52E-03	8.34E-03	1.29E-03	2.76E-03	1.79E-03	1.83E-03	3.51E-04	2.73E-04	5.12E-08	9.26E-04	2.51E-04
F20	0.00E+00	1.52E-05	1.36E-06	4.64E+01	6.79E-05	1.87E-01	2.61E-05	6.08E-03	6.84E-03	1.07E-03	2.59E-03	1.46E-03	1.50E-03	1.01E-03	2.24E-04	4.15E-08	1.09E-03	1.12E-03
F21	0.00E+00	7.53E-06	8.06E-07	3.08E+01	4.99E-05	1.35E-01	1.62E-05	8.58E-04	4.70E-03	7.29E-04	1.56E-03	1.01E-03	1.03E-03	1.98E-04	1.54E-04	2.89E-08	5.22E-04	1.42E-04
F22	0.00E+00	3.88E-06	4.02E-07	1.49E+01	2.36E-05	6.43E-02	7.90E-06	8.22E-04	2.26E-03	3.51E-04	7.62E-04	4.84E-04	4.96E-04	1.50E-04	7.40E-05	1.37E-08	2.66E-04	1.45E-04
F23	0.00E+00	5.30E-06	4.27E-07	1.32E+01	1.72E-05	4.89E-02	7.81E-06	3.13E-03	1.87E-03	2.94E-04	7.85E-04	3.95E-04	4.06E-04	4.87E-04	6.15E-05	1.09E-08	3.79E-04	5.83E-04
F24	0.00E+00	6.23E-06	4.87E-07	1.45E+01	1.81E-05	5.21E-02	8.75E-06	4.05E-03	2.04E-03	3.20E-04	8.82E-04	4.28E-04	4.40E-04	6.19E-04	6.69E-05	1.17E-08	4.43E-04	7.55E-04
F25	0.00E+00	2.52E-05	2.09E-06	5.98E+01	8.95E-05	2.47E-01	3.87E-05	1.38E-02	1.11E-02	1.66E-03	3.87E-03	2.02E-03	2.07E-03	1.92E-03	2.82E-04	5.15E-08	1.80E-03	2.57E-03
F26	0.00E+00	2.44E-05	1.76E-06	4.36E+01	5.39E-05	1.56E-01	3.11E-05	1.82E-02	7.76E-03	1.17E-03	3.20E-03	1.38E-03	1.41E-03	2.41E-03	1.95E-04	3.36E-08	1.78E-03	3.40E-03
F27	0.00E+00	1.25E-04	8.60E-06	2.07E+02	2.45E-04	7.12E-01	1.54E-04	9.20E-02	3.63E-02	5.49E-03	1.62E-02	6.49E-03	6.66E-03	1.24E-02	9.14E-04	1.64E-07	9.51E-03	1.72E-02
F28	0.00E+00	1.25E-04	8.60E-06	2.13E+02	2.68E-04	7.58E-01	1.60E-04	8.32E-02	3.77E-02	5.70E-03	1.68E-02	6.85E-03	7.03E-03	1.16E-02	9.56E-04	1.80E-07	9.76E-03	1.56E-02
F29	0.00E+00	1.44E-05	1.54E-06	5.31E+01	9.46E-05	2.51E-01	3.07E-05	1.53E-03	1.03E-02	1.54E-03	2.95E-03	1.92E-03	1.96E-03	3.64E-04	2.65E-04	5.11E-08	9.90E-04	2.54E-04
F30	0.00E+00	2.00E-05	1.55E-06	4.19E+01	5.82E-05	1.63E-01	2.83E-05	1.28E-02	7.64E-03	1.15E-03	2.86E-03	1.38E-03	1.41E-03	1.74E-03	1.93E-04	3.46E-08	1.45E-03	2.40E-03
F35	0.00E+00	9.35E-06	6.96E-07	2.27E+01	2.52E-05	7.58E-02	1.29E-05	6.15E-03	2.22E-03	3.79E-04	1.33E-03	6.06E-04	6.22E-04	1.12E-03	1.03E-04	1.90E-08	7.04E-04	1.15E-03
F36	0.00E+00	2.17E-05	1.88E-06	6.75E+01	8.93E-05	2.57E-01	3.59E-05	1.04E-02	7.01E-03	1.18E-03	3.58E-03	1.95E-03	2.00E-03	1.90E-03	3.22E-04	6.00E-08	1.58E-03	1.92E-03
F37	0.00E+00	1.04E-04	7.91E-06	2.10E+02	2.87E-04	8.10E-01	1.44E-04	6.78E-02	3.82E-02	5.75E-03	1.46E-02	6.87E-03	7.06E-03	9.19E-03	9.65E-04	1.73E-07	7.55E-03	1.27E-02
F38	0.00E+00	1.17E-04	7.95E-06	1.83E+02	1.98E-04	5.98E-01	1.37E-04	9.60E-02	3.18E-02	4.80E-03	1.43E-02	5.55E-03	5.70E-03	1.26E-02	7.91E-04	1.31E-07	8.58E-03	1.80E-02
F39	0.00E+00	1.73E-06	1.43E-07	4.74E+00	5.59E-06	1.67E-02	2.53E-06	1.19E-03	4.78E-04	8.05E-05	2.51E-04	1.30E-04	1.33E-04	2.00E-04	2.19E-05	3.68E-09	1.18E-04	2.21E-04
F40	0.00E+00	2.31E-05	1.76E-06	5.63E+01	6.11E-05	1.86E-01	3.13E-05	1.67E-02	5.51E-03	9.36E-04	3.18E-03	1.48E-03	1.53E-03	2.91E-03	2.55E-04	4.37E-08	1.66E-03	3.13E-03
F41	0.00E+00	1.14E-05	1.22E-06	4.65E+01	7.54E-05	2.04E-01	2.44E-05	1.30E-03	7.11E-03	1.10E-03	2.35E-03	1.52E-03	1.56E-03	3.00E-04	2.32E-04	4.37E-08	7.89E-04	2.14E-04
F42	0.00E+00	1.12E-05	1.06E-06	3.66E+01	5.43E-05	1.50E-01	2.00E-05	4.47E-03	5.44E-03	8.46E-04	1.95E-03	1.15E-03	1.18E-03	7.15E-04	1.78E-04	3.21E-08	7.68E-04	8.19E-04
F43	0.00E+00	5.08E-07	5.43E-08	1.87E+00	3.33E-06	8.83E-03	1.08E-06	5.38E-05	3.63E-04	5.41E-05	1.04E-04	6.75E-05	6.92E-05	1.28E-05	9.32E-06	1.80E-09	3.49E-05	8.94E-06
F44	0.00E+00	1.04E-05	9.85E-07	3.17E+01	5.33E-05	1.43E-01	1.92E-05	3.11E-03	6.04E-03	9.03E-04	1.88E-03	1.12E-03	1.15E-03	4.99E-04	1.55E-04	2.95E-08	7.34E-04	5.67E-04
F45	0.00E+00	1.77E-05	1.55E-06	5.10E+01	7.17E-05	2.01E-01	2.88E-05	8.92E-03	7.46E-03	1.16E-03	2.84E-03	1.57E-03	1.62E-03	1.39E-03	2.44E-04	4.33E-08	1.22E-03	1.65E-03
F46	0.00E+00	2.00E-05	1.71E-06	5.57E+01	7.74E-05	2.17E-01	3.19E-05	1.02E-02	8.10E-03	1.26E-03	3.17E-03	1.71E-03	1.76E-03	1.60E-03	2.65E-04	4.76E-08	1.41E-03	1.89E-03
F47	0.00E+00	7.51E-07	6.42E-08	1.79E+00	2.55E-06	7.25E-03	1.11E-06	5.22E-04	3.32E-04	4.96E-05	1.09E-04	5.87E-05	6.02E-05	6.70E-05	8.33E-06	1.38E-09	4.87E-05	9.74E-05
F48	0.00E+00	4.52E-07	3.23E-08	6.88E-01	5.90E-07	2.06E-03	4.76E-07	4.90E-04	1.19E-04	1.78E-05	4.77E-05	1.89E-05	1.95E-05	5.95E-05	2.84E-06	3.18E-10	2.82E-05	9.21E-05
F49	0.00E+00	1.19E-04	8.28E-06	2.01E+02	2.44E-04	7.04E-01	1.49E-04	8.62E-02	3.55E-02	5.37E-03	1.56E-02	6.36E-03	6.54E-03	1.17E-02	8.95E-04	1.61E-07	9.03E-03	1.62E-02
F50	0.00E+00	1.42E-04	9.45E-06	2.25E+02	2.68E-04	7.66E-01	1.75E-04	9.89E-02	3.93E-02	5.97E-03	1.85E-02	7.13E-03	7.32E-03	1.37E-02	9.96E-04	1.88E-07	1.12E-02	1.85E-02
F51	0.00E+00	5.49E-05	3.39E-06	8.03E+01	6.47E-05	2.09E-01	5.94E-05	4.45E-02	9.95E-03	1.61E-03	6.40E-03	2.08E-03	2.14E-03	6.91E-03	3.34E-04	5.98E-08	4.25E-03	8.35E-03
F52	0.00E+00	5.04E-05	4.32E-06	1.43E+02	2.01E-04	5.61E-01	8.22E-05	2.32E-02	2.08E-02	3.24E-03	8.20E-03	4.42E-03	4.54E-03	3.80E-03	6.82E-04	1.26E-07	3.66E-03	4.29E-03
F53	0.00E+00	1.21E-05	9.82E-07	3.16E+01	4.33E-05	1.21E-01	1.88E-05	5.92E-03	4.54E-03	7.12E-04	1.90E-03	9.69E-04	9.94E-04	9.77E-04	1.50E-04	2.81E-08	9.04E-04	1.10E-03
F54	0.00E+00	3.34E-05	3.24E-06	1.17E+02	1.80E-04	4.92E-01	6.35E-05	9.39E-03	1.75E-02	2.73E-03	6.20E-03	3.75E-03	3.84E-03	1.66E-03	5.74E-04	1.07E-07	2.35E-03	1.70E-03
F71	0.00E+00	3.10E-05	2.61E-06	8.65E+01	1.13E-04	3.17E-01	4.81E-05	1.72E-02	1.21E-02	1.90E-03	4.78E-03	2.54E-03	2.60E-03	2.68E-03	4.10E-04	7.19E-08	2.18E-03	3.20E-03
F72	0.00E+00	5.41E-05	3.60E-06	7.07E+01	8.91E-05	2.43E-01	6.32E-05	3.83E-02	1.86E-02	2.66E-03	6.64E-03	2.51E-03	2.58E-03	4.09E-03	3.13E-04	5.25E-08	4.06E-03	7.19E-03
F73	0.00E+00	3.01E-07	3.21E-08	1.21E+00	1.97E-06	5.22E-03	6.41E-07	3.30E-05	2.24E-04	3.34E-05	6.16E-05	4.00E-05	4.10E-05	8.17E-06	6.03E-06	1.08E-09	2.06E-05	5.48E-06
F74	0.00E+00	5.47E-05	3.38E-06	7.95E+01	5.88E-05	1.95E-01	5.77E-05	4.64E-02	9.64E-03	1.56E-03	6.20E-03	1.99E-03	2.04E-03	7.10E-03	3.28E-04	5.57E-08	4.16E-03	8.71E-03
F75	0.00E+00	2.47E-05	1.40E-06	2.81E+01	2.15E-05	6.72E-02	2.57E-05	1.95E-02	4.45E-03	6.87E-04	2.86E-03	7.92E-04	8.13E-04	2.69E-03	1.14E-04	2.19E-08	2.05E-03	3.66E-03
F76	0.00E+00	8.26E-07	8.77E-08	3.01E+00	5.25E-06	1.35E-02	1.72E-06	7.94E-05	8.58E-04	1.20E-04	1.64E-04	1.07E-04	1.10E-04	2.35E-05	1.49E-05	2.35E-09	5.49E-05	1.35E-05
F78	0.00E+00	4.21E-05	3.79E-06	1.12E+02	1.83E-04	4.79E-01	7.11E-05	1.61E-02	3.15E-02	4.41E-03	6.96E-03	3.96E-03	4.06E-03	2.11E-03	5.41E-04	8.53E-08	2.90E-03	2.98E-03
F79	0.00E+00	4.32E-05	4.02E-06	1.38E+02	2.11E-04	5.66E-01	7.79E-05	1.47E-02	2.52E-02	3.76E-03	7.65E-03	4.46E-03	4.58E-03	2.33E-03	6.73E-04	1.19E-07	3.07E-03	2.69E-03
F80	0.00E+00	3.81E-05	3.41E-06	1.23E+02	1.74E-04	4.76E-01	6.66E-05	1.41E-02	1.76E-02	2.75E-03	6.61E-03	3.72E-03	3.82E-03	2.43E-03	5.96E-04	1.11E-07	2.80E-03	2.57E-03
F84	0.00E+00	5.85E-05	4.15E-06	7.14E+01	6.57E-05	2.30E-01	5.92E-05	6.14E-02	1.89E-02	2.68E-03	5.88E-03	2.28E-03	2.35E-03	5.77E-03	2.98E-04	3.07E-08	3.54E-03	1.15E-02
F85	0.00E+00	4.11E-05	3.18E-06	8.65E+01	1.04E-04	3.03E-01	5.41E-05	3.24E-02	1.52E-02	2.27E-03	5.42E-03	2.57E-03	2.64E-03	4.18E-03	3.93E-04	5.99E-08	2.78E-03	6.06E-03
F86	0.00E+00	2.96E-05	2.11E-06	5.85E+01	6.05E-05	1.81E-01	3.66E-05	2.27E-02	7.71E-03	1.22E-03	3.77E-03	1.59E-03	1.63E-03	3.43E-03	2.60E-04	4.35E-08	2.14E-03	4.25E-03
F87	0.00E+00	6.36E-05	3.84E-06	7.76E+01	5.56E-05	1.89E-01	6.46E-05	5.78E-02	1.25E-02	1.90E-03	6.99E-03	2.09E-03	2.15E-03	7.56E-03	3.13E-04	4.80E-08	4.84E-03	1.09E-02
F88	0.00E+00	5.85E-05	4.15E-06	7.14E+01	6.57E-05	2.30E-01	5.92E-05	6.14E-02	1.89E-02	2.68E-03	5.88E-03	2.28E-03	2.35E-03	5.77E-03	2.98E-04	3.07E-08	3.54E-03	1.15E-02
F89	0.00E+00	9.57E-05	6.63E-06	1.34E+02	1.68E-04	4.71E-01	1.13E-04	7.22E-02	3.56E-02	5.06E-03	1.16E-02	4.65E-03	4.78E-03

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B09	100	Passenger Car	1340	0.00E+00	1.25E-05	1.36E-06	5.47E+01	8.89E-05	2.66E-01	2.83E-05	1.45E-03	4.28E-03	8.21E-04	2.76E-03	1.78E-03	1.82E-03	1.59E-04	2.77E-04	5.82E-08	9.32E-04	2.26E-04
16	B09	100	Passenger Truck	2245	0.00E+00	2.59E-05	2.77E-06	1.26E+02	1.73E-04	5.14E-01	5.58E-05	3.61E-03	7.48E-03	1.45E-03	5.39E-03	3.49E-03	3.58E-03	8.27E-04	6.33E-04	1.15E-07	1.81E-03	5.93E-04
16	B09	100	Single Unit Short Haul Truck	59	0.00E+00	5.64E-06	2.09E-07	9.70E+00	4.32E-06	2.00E-02	6.40E-06	2.49E-03	3.84E-04	9.93E-05	8.09E-04	1.49E-04	1.52E-04	9.93E-04	3.92E-05	1.60E-08	6.57E-04	4.65E-04
16	B09	100	Single Unit Long Haul Truck	3	0.00E+00	2.45E-07	8.81E-09	4.08E-01	1.79E-07	8.19E-04	2.77E-07	1.05E-04	1.74E-05	4.31E-06	3.54E-05	6.30E-06	6.42E-06	4.15E-05	1.66E-06	6.56E-10	2.90E-05	1.95E-05
16	B09	100	Combination Short Haul Truck	73	0.00E+00	1.05E-05	7.74E-07	2.44E+01	2.78E-08	1.89E-02	7.50E-06	1.89E-02	7.09E-04	1.80E-04	6.38E-04	2.26E-04	2.35E-04	3.88E-03	8.16E-05	0.00E+00	4.04E-04	3.56E-03
16	B09	100	Combination Long Haul Truck	67	0.00E+00	1.48E-05	8.35E-07	2.21E+01	9.44E-08	2.20E-02	1.22E-05	2.02E-02	7.10E-04	1.45E-04	1.36E-03	2.69E-04	2.80E-04	3.55E-03	7.41E-05	0.00E+00	1.08E-03	3.81E-03
16	B10	100	Passenger Car	1141	0.00E+00	1.07E-05	1.16E-06	4.66E+01	7.57E-05	2.27E-01	2.41E-05	1.23E-03	3.65E-03	6.99E-04	2.35E-03	1.51E-03	1.55E-03	1.36E-04	2.36E-04	4.95E-08	7.94E-04	1.92E-04
16	B10	100	Passenger Truck	1911	0.00E+00	2.20E-05	2.36E-06	1.07E+02	1.47E-04	4.38E-01	4.75E-05	3.07E-03	6.37E-03	1.24E-03	4.58E-03	2.97E-03	3.04E-03	7.04E-04	5.39E-04	9.81E-08	1.54E-03	5.05E-04
16	B10	100	Single Unit Short Haul Truck	53	0.00E+00	5.01E-06	1.85E-07	8.60E+00	3.83E-06	1.78E-02	5.68E-06	2.21E-03	3.40E-04	8.81E-05	7.18E-04	1.33E-04	1.35E-04	8.81E-04	3.48E-05	1.42E-08	5.83E-04	4.13E-04
16	B10	100	Single Unit Long Haul Truck	2	0.00E+00	2.18E-07	7.82E-09	3.62E-01	1.58E-07	7.27E-04	2.46E-07	9.28E-05	1.55E-05	3.83E-06	3.14E-05	5.59E-06	5.69E-06	3.68E-05	1.47E-06	5.82E-10	2.57E-05	1.73E-05
16	B10	100	Combination Short Haul Truck	68	0.00E+00	9.73E-06	7.19E-07	2.27E+01	2.58E-08	1.75E-02	6.96E-06	1.76E-02	6.59E-04	1.67E-04	5.93E-04	2.10E-04	2.18E-04	3.60E-03	7.58E-05	0.00E+00	3.75E-04	3.31E-03
16	B10	100	Combination Long Haul Truck	62	0.00E+00	1.37E-05	7.75E-07	2.05E+01	8.76E-08	2.04E-02	1.13E-05	1.88E-02	6.60E-04	1.34E-04	1.26E-03	2.50E-04	2.60E-04	3.29E-03	6.88E-05	0.00E+00	1.00E-03	3.54E-03
16	B13	100	Passenger Car	685	0.00E+00	6.41E-06	6.96E-07	2.80E+01	4.55E-05	1.36E-01	1.44E-05	7.39E-04	2.19E-03	4.20E-04	1.41E-03	9.09E-04	9.32E-04	8.15E-05	1.42E-04	2.97E-08	4.77E-04	1.15E-04
16	B13	100	Passenger Truck	1148	0.00E+00	1.32E-05	1.42E-06	6.45E+01	8.83E-05	2.63E-01	2.86E-05	1.85E-03	3.82E-03	7.42E-04	2.75E-03	1.78E-03	1.83E-03	4.23E-04	3.23E-04	5.89E-08	9.25E-04	3.03E-04
16	B13	100	Single Unit Short Haul Truck	35	0.00E+00	3.37E-06	1.24E-07	5.79E+00	2.58E-06	1.19E-02	3.82E-06	1.49E-03	2.29E-04	5.93E-05	4.83E-04	8.92E-05	9.07E-05	5.93E-04	2.34E-05	9.56E-09	3.92E-04	2.78E-04
16	B13	100	Single Unit Long Haul Truck	2	0.00E+00	1.46E-07	5.26E-09	2.43E-01	1.07E-07	4.89E-04	1.65E-07	6.24E-05	1.04E-05	2.57E-06	2.11E-05	3.76E-06	3.83E-06	2.48E-05	9.88E-07	3.91E-10	1.73E-05	1.16E-05
16	B13	100	Combination Short Haul Truck	42	0.00E+00	5.99E-06	4.42E-07	1.39E+01	1.59E-08	1.08E-02	4.29E-06	1.08E-02	4.05E-04	1.03E-04	3.65E-04	1.29E-04	1.34E-04	2.22E-03	4.66E-05	0.00E+00	2.31E-04	2.04E-03
16	B13	100	Combination Long Haul Truck	38	0.00E+00	8.46E-06	4.77E-07	1.26E+01	5.39E-08	1.25E-02	6.98E-06	1.16E-02	4.06E-04	8.27E-05	7.76E-04	1.54E-04	1.60E-04	2.03E-03	4.23E-05	0.00E+00	6.16E-04	2.18E-03
16	B14	100	Passenger Car	1027	0.00E+00	9.61E-06	1.04E-06	4.20E+01	6.82E-05	2.04E-01	2.17E-05	1.11E-03	3.28E-03	6.29E-04	2.11E-03	1.36E-03	1.40E-03	1.22E-04	2.12E-04	4.46E-08	7.15E-04	1.73E-04
16	B14	100	Passenger Truck	1721	0.00E+00	1.98E-05	2.13E-06	9.67E+01	1.32E-04	3.94E-01	4.28E-05	2.77E-03	5.73E-03	1.11E-03	4.13E-03	2.67E-03	2.74E-03	6.34E-04	4.85E-04	8.83E-08	1.39E-03	4.55E-04
16	B14	100	Single Unit Short Haul Truck	57	0.00E+00	5.37E-06	1.98E-07	9.23E+00	4.11E-06	1.90E-02	6.09E-06	2.37E-03	3.65E-04	9.45E-05	7.70E-04	1.42E-04	1.45E-04	9.45E-04	3.74E-05	1.52E-08	6.25E-04	4.43E-04
16	B14	100	Single Unit Long Haul Truck	2	0.00E+00	2.33E-07	8.39E-09	3.88E-01	1.70E-07	7.79E-04	2.64E-07	9.96E-05	1.66E-05	4.10E-06	3.37E-05	6.00E-06	6.11E-06	3.95E-05	1.57E-06	6.24E-10	2.76E-05	1.86E-05
16	B14	100	Combination Short Haul Truck	62	0.00E+00	8.90E-06	6.58E-07	2.07E+01	2.36E-08	1.60E-02	6.37E-06	1.61E-02	6.03E-04	1.53E-04	5.42E-04	1.92E-04	1.99E-04	3.30E-03	6.93E-05	0.00E+00	3.43E-04	3.03E-03
16	B14	100	Combination Long Haul Truck	57	0.00E+00	1.26E-05	7.09E-07	1.88E+01	8.02E-08	1.87E-02	1.04E-05	1.72E-02	6.04E-04	1.23E-04	1.15E-03	2.29E-04	2.38E-04	3.01E-03	6.29E-05	0.00E+00	9.16E-04	3.24E-03
16	B15	100	Passenger Car	1518	0.00E+00	1.42E-05	1.54E-06	6.20E+01	1.01E-04	3.01E-01	3.20E-05	1.64E-03	4.85E-03	9.30E-04	3.12E-03	2.01E-03	2.07E-03	1.81E-04	3.14E-04	6.59E-08	1.06E-03	2.55E-04
16	B15	100	Passenger Truck	2542	0.00E+00	2.93E-05	3.14E-06	1.43E+02	1.96E-04	5.82E-01	6.32E-05	4.09E-03	8.47E-03	1.64E-03	6.10E-03	3.95E-03	4.05E-03	9.36E-04	7.17E-04	1.31E-07	2.05E-03	6.72E-04
16	B15	100	Single Unit Short Haul Truck	24	0.00E+00	2.28E-06	8.41E-08	3.91E+00	1.74E-06	8.07E-03	2.58E-06	1.01E-03	1.55E-04	4.00E-05	3.26E-04	6.02E-05	6.13E-05	4.00E-04	1.58E-05	6.46E-09	2.65E-04	1.88E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	9.89E-08	3.55E-09	1.64E-01	7.20E-08	3.30E-04	1.12E-07	4.22E-05	7.03E-06	1.74E-06	1.43E-05	2.54E-06	2.59E-06	1.67E-05	6.67E-07	2.64E-10	1.17E-05	7.87E-06
16	B15	100	Combination Short Haul Truck	17	0.00E+00	2.39E-06	1.77E-07	5.58E+00	6.35E-09	4.31E-03	1.71E-06	4.32E-03	1.62E-04	4.11E-05	1.46E-04	5.16E-05	5.36E-05	8.86E-04	1.86E-05	0.00E+00	9.22E-05	8.14E-04
16	B15	100	Combination Long Haul Truck	15	0.00E+00	3.38E-06	1.91E-07	5.05E+00	2.16E-08	5.02E-03	2.79E-06	4.63E-03	1.62E-04	3.31E-05	3.10E-04	6.15E-05	6.41E-05	8.11E-04	1.69E-05	0.00E+00	2.46E-04	8.72E-04
16	B16	100	Passenger Car	975	0.00E+00	9.12E-06	9.91E-07	3.98E+01	6.47E-05	1.94E-01	2.06E-05	1.05E-03	3.12E-03	5.97E-04	2.00E-03	1.29E-03	1.33E-03	1.16E-04	2.02E-04	4.23E-08	6.78E-04	1.64E-04
16	B16	100	Passenger Truck	1633	0.00E+00	1.88E-05	2.02E-06	9.18E+01	1.26E-04	3.74E-01	4.06E-05	2.63E-03	5.44E-03	1.06E-03	3.92E-03	2.54E-03	2.60E-03	6.02E-04	4.60E-04	8.38E-08	1.32E-03	4.31E-04
16	B16	100	Single Unit Short Haul Truck	21	0.00E+00	2.00E-06	7.40E-08	3.44E+00	1.53E-06	7.10E-03	2.27E-06	8.85E-04	1.36E-04	3.52E-05	2.87E-04	5.30E-05	5.39E-05	3.52E-04	1.39E-05	5.69E-09	2.33E-04	1.65E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	8.70E-08	3.13E-09	1.45E-01	6.34E-08	2.91E-04	9.84E-08	3.71E-05	6.19E-06	1.53E-06	1.26E-05	2.24E-06	2.28E-06	1.47E-05	5.87E-07	2.33E-10	1.03E-05	6.92E-06
16	B16	100	Combination Short Haul Truck	11	0.00E+00	1.57E-06	1.16E-07	3.66E+00	4.17E-09	2.83E-03	1.12E-06	2.84E-03	1.06E-04	2.70E-05	9.57E-05	3.39E-05	3.52E-05	5.82E-04	1.22E-05	0.00E+00	6.05E-05	5.34E-04
16	B16	100	Combination Long Haul Truck	10	0.00E+00	2.22E-06	1.25E-07	3.32E+00	1.42E-08	3.29E-03	1.83E-06	3.04E-03	1.07E-04	2.17E-05	2.04E-04	4.04E-05	4.21E-05	5.32E-04	1.11E-05	0.00E+00	1.62E-04	5.72E-04
16	B19	100	Passenger Car	3889	0.00E+00	3.64E-05	3.95E-06	1.59E+02	2.58E-04	7.73E-01	8.20E-05	4.19E-03	1.24E-02	2.38E-03	8.00E-03	5.16E-03	5.29E-03	4.63E-04	8.04E-04	1.69E-07	2.71E-03	6.54E-04
16	B19	100	Passenger Truck	6514	0.00E+00	7.51E-05	8.05E-06	3.66E+02	5.01E-04	1.49E+00	1.62E-04	1.05E-02	2.17E-02	4.21E-03	1.56E-02	1.01E-02	1.04E-02	2.40E-03	1.84E-03	3.34E-07	5.25E-03	1.72E-03
16	B19	100	Single Unit Short Haul Truck	178	0.00E+00	1.69E-05	6.26E-07	2.91E+01	1.30E-05	6.00E-02	1.92E-05	7.48E-03	1.15E-03	2.98E-04	2.43E-03	4.48E-04	4.56E-04	2.98E-03	1.18E-04	4.81E-08	1.97E-03	1.40E-03
16	B19	100	Single Unit Long Haul Truck	8	0.00E+00	7.36E-07	2.64E-08	1.22E+00	5.36E-07	2.46E-03	8.32E-07	3.14E-04	5.23E-05	1.29E-05	1.06E-04	1.89E-05	1.92E-05	1.24E-04	4.97E-06	1.97E-09	8.69E-05	5.85E-05
16	B19	100	Combination Short Haul Truck	142	0.00E+00	2.04E-05	1.50E-06	4.74E+01	5.40E-08	3.66E-02	1.46E-05	3.67E-02	1.38E-03	3.49E-04	1.24E-03	4.39E-04	4.56E-04	7.53E-03	1.59E-04	0.00E+00	7.84E-04	6.92E-03
16	B19	100	Combination Long Haul Truck	130	0.00E+00	2.88E-05	1.62E-06	4.29E+01	1.83E-07	4.27E-02	2.37E-05	3.93E-02	1.38E-03	2.81E-04	2.64E-03	5.23E-04	5.45E-04	6.89E-03	1.44E-04	0.00E+00	2.09E-03	7.41E-03
16	B20	100	Passenger Car	1922	0.00E+00	1.80E-05	1.95E-06	7.85E+01	1.28E-04	3.82E-01	4.05E-05	2.07E-03	6.15E-03	1.18E-03	3.95E-03	2.55E-03	2.62E-03	2.29E-04	3.97E-04	8.34E-08	1.34E-03	3.23E-04
16	B20	100	Passenger Truck	3220	0.00E+00	3.71E-05	3.98E-06	1.81E+02	2.48E-04	7.38E-01	8.01E-05	5.18E-03	1.07E-02	2.08E-03	7.72E-03	5.00E-03	5.13E-03	1.19E-03	9.07E-04	1.65E-07	2.60E-03	8.51E-04
16	B20	100	Single Unit Short Haul Truck	170	0.00E+00	1.62E-05	5.99E-07	2.78E+01	1.24E-05	5.75E-02	1.84E-05	7.16E-03	1.10E-03	2.85E-04	2.32E-03	4.29E-04	4.36E-04	2.85E-03	1.13E-04	4.60E-08	1.89E-03	1.34E-03
16	B20	100	Single Unit Long Haul Truck	8	0.00E+00	7.04E-07	2.53E-08	1.17E+00	5.13E-07	2.35E-03	7.96E-07	3.00E-04	5.01E-05	1.24E-05	1.02E-04	1.81E-05	1.84E-05	1.19E-04	4.75E-06	1.88E-09	8.31E-05	5.60E-05
16	B20	100	Combination Short Haul Truck	198	0.00E+00	2.83E-05	2.09E-06	6.59E+01	7.50E-08	5.09E-02	2.02E-05	5.10E-02	1.92E-03	4.86E-04	1.72E-03	6.10E-04	6.33E-04	1.05E-02	2.20E-04	0.00E+00	1.09E-03	9.62E-03
16	B20	100	Combination Long Haul Truck	180	0.00E+00	4.00E-05	2.25E-06	5.97E+01	2.55E-07	5.93E-02	3.30E-05	5.47E-02	1.92E-03	3.91E-04	3.67E-03	7.27E-04	7.57E-04	9.58E-03	2.00E-04	0.00E+00	2.91E-03	1.03E-02
16	B21	100	Passenger Car	3576	0.00E+00	3.34E-05	3.63E-06	1.46E+02	2.37E-04	7.10E-01	7.54E-05	3.86E-03	1.14E-02	2.19E-03	7.35E-03	4.74E-03	4.87E-03	4.25E-04	7.39E-04	1.55E-07	2.49E-03	6.02E-04
16	B21	100	Passenger Truck	5988	0.00E+00	6.91E-05	7.40E-06	3.37E+02	4.61E-04	1.37E+00	1.49E-04	9.63E-03	2.00E-02	3.87E-03	1.44E-02	9.30E-03	9.54E-03	2.21E-03	1.69E-03	3.07E-07	4.83E-03	1.58E-03
16	B21	100	Single Unit Short Haul Truck	119	0.00E+00	1.13E-05	4.17E-07	1.94E+01	8.64E-06	4.00E-02	1.28E-05	4.99E-03	7.67E-04	1.99E-04	1.62E-03	2.99E-04	3.04E-04	1.99E-03	7.85E-05	3.20E-08	1.31E-03	9.30E-04
16	B21	100	Single Unit Long Haul Truck	5	0.00E+00	4.90E-07	1.76E-08	8.16E-01	3.57E-07	1.64E-03	5.55E-07	2.09E-04	3.49E-05	8.62E-06	7.08E-05	1.26E-05	1.28E-05	8.30E-05	3.31E-06	1.31E-09	5.79E-05	3.90E-05
16	B21	100	Combination Short Haul Truck	111	0.00E+00	1.59E-05	1.17E-06	3.69E+01	4.21E-08	2.86E-02	1.14E-05	2.86E-02	1.07E-03	2.72E-04	9.66E-04	3.42E-04	3.55E-04	5.87E-03	1.24E-04	0.00E+00	6.11E-04	5.39E-03
16	B21	100	Combination Long Haul Truck	101	0.00E+00	2.24E-05	1.26E-06	3.35E+01	1.43E-07	3.33E-02	1.85E-05	3.07E-02	1.08E-03	2.19E-04	2.06E-03	4.08E-04	4.25E-04	5.37E-03	1.12E-04	0.00E+00	1.63E-03	5.77E-03
16	B22	100	Passenger Car	1508	0.00E+00	1.41E-05	1.53E-06	6.16E+01	1.00E-04	2.99E-01	3.18E-05	1.63E-03	4.82E-03	9.24E-04	3.10E-03	2.00E-03	2.05E-03	1.79E-04	3.12E-04	6.55E-08	1.05E-03	2.54E-04
16	B22	100	Passenger Truck	2525	0.00E+00	2.91E-05	3.12E-06	1.42E+02	1.94E-04	5.79E-01	6.28E-05	4.06E-03	8.41E-03	1.63E-03	6.06E-03	3.92E-03	4.02E-03	9.30E-04	7.12E-04	1.30E-07	2.04E-03	6.67E-04
16	B22	100	Single Unit Short Haul Truck	133	0.00E+00	1.27E-05	4.67E-07	2.17E+01	9.68E-06	4.49E-02	1.43E-05	5.59E-03	8.60E-04	2.23E-04	1.81E-03	3.35E-04	3.41E-04	2.23E-03	8.80E-05	3.59E-08	1.47E-03	1.04E-03
16	B22	100	Single Unit Long Haul Truck	6	0.00E+00	5.50E-07	1.98E-08	9.14E-01	4.01E-07	1.84E-03	6.22E-07	2.35E-04	3.91E-05	9.67E-06	7.93E-05	1.41E-05	1.44E-05	9.30E-05	3.71E-06	1.47E-09	6.49E-05	4.37E-05
16	B22	100	Combination Short Haul Truck	173	0.00E+00	2.47E-05	1.82E-06	5.75E+01	6.55E-08	4.44E-02	1.77E-05	4.46E-02	1.67E-03	4.24E-04	1.50E-03	5.33E-04	5.53E-04	9.14E-03	1.92E-04	0.00E+00	9.51E-04	8.40E-03
16	B22	100	Combination Long Haul Truck	157	0.00E+00	3.49E-05	1.97E-06	5.21E+01	2.22E-07	5.18E-02	2.88E-05	4.77E-02	1.67E-03	3.41E-04	3.20E-03	6.34E-04	6.61E-04	8.36E-03	1.75E-04	0.00E+00	2.54E-03	8.99E-03
16	B23	100	Passenger Car	3664	0.00E+00	3.43E-05	3.72E-06	1.50E+02	2.43E-04	7.28E-01	7.72E-05	3.95E-03	1.17E-02	2.24E-03	7.53E-03	4.86E-03	4.98E-03	4.36E-04	7.57E-04	1.59E-07	2.55E-03	6.16E-04
16	B23	100	Passenger Truck	6135	0.00E+00	7.08E-05	7.58E-06	3.45E+02	4.72E-04	1.41E+00	1.53E-04	9.87E-03	2.04E-02	3.97E-03	1.47E-02	9.53E-03	9.77E-03	2.26E-03	1.73E-03	3.15E-07	4.95E-03	1.62E-03
16	B23	100	Single Unit Short Haul Truck	119	0.00E+00	1.13E-05	4.17E-07	1.94E+01	8.64E-06	4.00E-02	1.28E-05	4.99E-03	7.67E-04	1.99E-04	1.62E-03	2.99E-04	3.04E-04	1.99E-03	7.85E-05	3.20E-08	1.31E-03	9.30E-04
16	B23	100	Single Unit Long Haul Truck	5	0.00E+00	4.90E-07	1.76E-08	8.16E-01	3.57E-07	1.64E-03	5.55E-07	2.09E-04	3.49E-05	8.62E-06	7.08E-05	1.26E-05	1.28E-05	8.30E-05	3.31E-06	1.31E-09	5.79E-05	3.90E-05
16	B23	100	Combination Short Haul Truck	111	0.00E+00	1.59E-05	1.17E-06	3.69E+01	4.21E-08	2.86E-02	1.14E-05	2.86E-02	1.07E-03	2.72E-04	9.66E-04	3.42E-04	3.55E-04	5.87E-03	1.24E-04	0.00E+00	6.11E-04	5.39E-03
16	B23	100	Combination Long Haul Truck	101	0.00E+00	2.24E-05	1.26E-06	3.35E+01	1.43E-07	3.33E-02	1.85E-05	3.07E-02	1.08E-03	2.19E-04	2.06E-03	4.08E-04	4.25E-04	5.37E-03	1.12E-04	0.00E+00	1.63E-03	5.77E-03
16	B24	100	Passenger Car	1658	0.00E+00	1.55E-05	1.68E-06	6.77E+01	1.10E-04	3.29E-01	3.50E-05	1.79E-03	5.30E-03	1.02E-03	3.41E-03	2.20E-03	2.26E-03	1.97E-04	3.43E-04	7.20E-08	1.15E-03	2.79E-04
16	B24	100	Passenger Truck	2776	0.00E+00	3.20E-05	3.43E-06	1.56E+02	2.14E-04	6.36E-01	6.91E-05	4.47E-03	9.25E-03	1.80E-03	6.66E-03	4.31E-03	4.42E-03	1.02E-03	7.83E-04	1.43E-07	2.24E-03	7.34E-04
16	B24	100	Single Unit Short Haul Truck	152	0.00E+00	1.45E-05	5.35E-07	2.49E+01	1.11E-05	5.13E-02	1.64E-05	6.40E-03	9.84E-04	2.55E-04	2.08E-03	3.83E-04	3.90E-04	2.55E-03	1.01E-04	4.11E-08	1.69E-03	1.19E-03
16	B24	100	Single Unit Long Haul Truck	7	0.00E+00	6.29E-07	2.26E-08	1.05E+00	4.58E-07	2.10E-03	7.11E-07	2.68E-04	4.47E-05	1.11E-05	9.07E-05	1.62E-05	1.65E-05	1.06E-04	4.24E-06	1.68E-09	7.43E-05	5.00E-05
16	B24	100	Combination Short Haul Truck	190	0.00E+00	2.72E-05	2.01E-06	6.33E+01	7.21E-08	4.89E-02	1.94E-05	4.90E-02	1.84E-03	4.66E-04	1.65E-03	5.86E-04	6.08E-04	1.01E-02	2.12E-04	0.00E+00	1.05E-03	9.24E-03
16	B24	100	Combination Long Haul Truck	173	0.00E+00	3.84E-05	2.16E-06	5.73E+01	2.45E-07	5.69E-02	3.17E-05	5.25E-02	1.84E-03	3.75E-04	3.52E-03	6.98E-04	7.27E-04	9.20E-03	1.92E-04	0.00E+00	2.79E-03	9.89E-03
10	D63	70	Passenger Car	54	0.00E+00	6.01E-07	6.53E-08	2.35E+00	4.27E-06	1.21E-02	1.36E-06	5.44E-05	4.15E-04	6.46E-05	1.32E-04	8.52E-05	8.75E-05	9.15E-06	1.18E-05	2.45E-09	4.47E-05	8.49E-06
10	D63	70	Passenger Truck	90	0.00E+00	1.27E-06	1.34E-07	5.28E+00	8.10E-06	2.13E-02	2.65E-06	1.58E-04	7.51E-04	1.16E-04	2.54E-04	1.65E-04	1.69E-04	4.00E-05	2.63E-05	4.71E-09	8.47E-05	2.66E-05
10	D63	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	D63	70	Single Unit Long Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.02E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.58E-05
10	D63	70	Combination Short Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.30E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.11E-05
10	D64	70	Passenger Car	66	0.00E+00	7.35E-07	7.98E-08	2.87E+00	5.21E-06	1.48E-02	1.66E-06	6.65E-05	5.07E-04	7.90E-05	1.62E-04	1.04E-04	1.07E-04	1.12E-05	1.44E-05	3.00E-09	5.46E-05	1.04E-05
10	D64	70	Passenger Truck	110	0.00E+00	1.55E-06	1.64E-07	6.46E+00	9.90E-06	2.61E-02	3.24E-06	1.93E-04	9.18E-04	1.42E-04	3.10E-04	2.01E-04	2.06E-04	4.89E-05	3.22E-05	5.76E-09	1.04E-04	3.25E-05
10	D64	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
10	D64	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.90E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.17E-06
10	D64	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.22E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.95E

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D68	80	Combination Short Haul Truck	28	0.00E+00	5.71E-06	4.23E-07	9.29E+00	1.50E-08	8.71E-03	4.08E-06	8.81E-03	6.61E-04	1.20E-04	3.46E-04	1.23E-04	1.28E-04	1.48E-03	3.11E-05	0.00E+00	2.18E-04	1.66E-03
11	D68	80	Combination Long Haul Truck	25	0.00E+00	7.96E-06	4.49E-07	8.63E+00	5.06E-08	1.03E-02	6.56E-06	9.42E-03	6.84E-04	1.09E-04	7.29E-04	1.45E-04	1.51E-04	1.38E-03	2.89E-05	0.00E+00	5.79E-04	1.77E-03
11	D69	80	Passenger Car	126	0.00E+00	1.31E-06	1.42E-07	5.32E+00	9.27E-06	2.69E-02	2.94E-06	1.30E-04	6.85E-04	1.15E-04	2.87E-04	1.85E-04	1.90E-04	1.87E-05	2.68E-05	5.73E-09	9.72E-05	2.03E-05
11	D69	80	Passenger Truck	210	0.00E+00	2.69E-06	2.87E-07	1.20E+01	1.75E-05	4.76E-02	5.70E-06	3.51E-04	1.22E-03	2.03E-04	5.47E-04	3.55E-04	3.64E-04	8.64E-05	6.00E-05	1.09E-08	1.83E-04	5.85E-05
11	D69	80	Single Unit Short Haul Truck	16	0.00E+00	2.23E-06	8.72E-08	2.67E+00	1.51E-06	4.85E-03	2.46E-06	9.28E-04	1.83E-04	3.74E-05	3.08E-04	5.70E-05	5.81E-05	2.72E-04	1.08E-05	4.30E-09	2.50E-04	1.73E-04
11	D69	80	Single Unit Long Haul Truck	1	0.00E+00	9.71E-08	3.75E-09	1.13E-01	6.45E-08	2.02E-04	1.07E-07	3.96E-05	8.39E-06	1.66E-06	1.34E-05	2.45E-06	2.49E-06	1.14E-05	4.59E-07	1.79E-10	1.09E-05	7.41E-06
11	D69	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.49E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.58E-04
11	D69	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.73E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.03E-04
11	D70	80	Passenger Car	112	0.00E+00	1.16E-06	1.26E-07	4.73E+00	8.25E-06	2.40E-02	2.62E-06	1.16E-04	6.09E-04	1.02E-04	2.56E-04	1.65E-04	1.69E-04	1.66E-05	2.39E-05	5.10E-09	8.65E-05	1.81E-05
11	D70	80	Passenger Truck	187	0.00E+00	2.39E-06	2.55E-07	1.07E+01	1.56E-05	4.23E-02	5.07E-06	3.13E-04	1.08E-03	1.81E-04	4.87E-04	3.16E-04	3.24E-04	7.69E-05	5.34E-05	9.70E-09	1.63E-04	5.20E-05
11	D70	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.10E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	D70	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.03E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.67E-06
11	D70	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	2.99E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.64E-04
11	D70	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.20E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.02E-04
10	D71	70	Passenger Car	335	0.00E+00	3.74E-06	4.07E-07	1.46E+01	2.66E-05	7.53E-02	8.44E-06	3.39E-04	2.58E-03	4.03E-04	8.23E-04	5.31E-04	5.45E-04	5.70E-05	7.35E-05	1.53E-08	2.78E-04	5.29E-05
10	D71	70	Passenger Truck	562	0.00E+00	7.88E-06	8.38E-07	3.29E+01	5.05E-05	1.33E-01	1.65E-05	9.86E-04	4.68E-03	7.24E-04	1.58E-03	1.03E-03	1.05E-03	2.49E-04	1.64E-04	2.94E-08	5.28E-04	1.66E-04
10	D71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.63E-04
10	D71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.06E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	D71	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
10	D71	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
10	D72	70	Passenger Car	282	0.00E+00	3.14E-06	3.42E-07	1.23E+01	2.23E-05	6.32E-02	7.09E-06	2.85E-04	2.17E-03	3.38E-04	6.91E-04	4.46E-04	4.57E-04	4.78E-05	6.17E-05	1.28E-08	2.34E-04	4.44E-05
10	D72	70	Passenger Truck	471	0.00E+00	6.62E-06	7.03E-07	2.76E+01	4.24E-05	1.12E-01	1.39E-05	8.28E-04	3.93E-03	6.07E-04	1.33E-03	8.62E-04	8.83E-04	2.09E-04	1.38E-04	2.46E-08	4.43E-04	1.39E-04
10	D72	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	D72	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.63E-06
10	D72	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.62E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.82E-04
10	D72	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.87E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.30E-04
10	D73	70	Passenger Car	229	0.00E+00	2.55E-06	2.78E-07	9.98E+00	1.81E-05	5.14E-02	5.76E-06	2.31E-04	1.76E-03	2.75E-04	5.62E-04	3.62E-04	3.72E-04	3.89E-05	5.02E-05	1.04E-08	1.90E-04	3.61E-05
10	D73	70	Passenger Truck	383	0.00E+00	5.38E-06	5.71E-07	2.25E+01	3.44E-05	9.07E-02	1.13E-05	6.73E-04	3.19E-03	4.94E-04	1.08E-03	7.00E-04	7.18E-04	1.70E-04	1.12E-04	2.00E-08	3.60E-04	1.13E-04
10	D73	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	D73	70	Combination Short Haul Truck	8	0.00E+00	2.02E-06	1.50E-07	2.73E+00	5.13E-09	2.92E-03	1.44E-06	3.02E-03	2.85E-04	4.75E-05	1.21E-04	4.38E-05	4.54E-05	4.34E-04	9.12E-06	0.00E+00	7.57E-05	5.68E-04
10	D73	70	Combination Long Haul Truck	7	0.00E+00	2.77E-06	1.57E-07	2.56E+00	1.74E-08	3.48E-03	2.28E-06	3.23E-03	2.96E-04	4.46E-05	2.52E-04	5.06E-05	5.27E-05	4.11E-04	8.58E-06	0.00E+00	1.99E-04	6.08E-04
10	D74	70	Passenger Car	233	0.00E+00	2.60E-06	2.82E-07	1.01E+01	1.84E-05	5.22E-02	5.85E-06	2.35E-04	1.79E-03	2.79E-04	5.71E-04	3.68E-04	3.78E-04	3.95E-05	5.10E-05	1.06E-08	1.93E-04	3.67E-05
10	D74	70	Passenger Truck	389	0.00E+00	5.46E-06	5.81E-07	2.28E+01	3.50E-05	9.22E-02	1.15E-05	6.84E-04	3.24E-03	5.02E-04	1.10E-03	7.12E-04	7.29E-04	1.73E-04	1.14E-04	2.04E-08	3.66E-04	1.15E-04
10	D74	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	D74	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	D74	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
11	D75	80	Passenger Car	95	0.00E+00	9.91E-07	1.08E-07	4.04E+00	7.03E-06	2.04E-02	2.23E-06	9.89E-05	5.20E-04	8.70E-05	2.18E-04	1.41E-04	1.44E-04	1.42E-05	2.03E-05	4.35E-09	7.37E-05	1.54E-05
11	D75	80	Passenger Truck	160	0.00E+00	2.04E-06	2.18E-07	9.11E+00	1.33E-05	3.61E-02	4.32E-06	2.67E-04	9.25E-04	1.54E-04	4.15E-04	2.69E-04	2.76E-04	6.56E-05	4.55E-05	8.27E-09	1.39E-04	4.44E-05
11	D75	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.16E-05
11	D75	80	Combination Short Haul Truck	3	0.00E+00	6.47E-07	4.79E-08	1.05E+00	1.69E-09	9.86E-04	4.62E-07	9.97E-04	7.49E-05	1.36E-05	3.92E-05	1.40E-05	1.45E-05	1.67E-04	3.52E-06	0.00E+00	2.47E-05	1.88E-04
11	D75	80	Combination Long Haul Truck	3	0.00E+00	9.01E-07	5.09E-08	9.77E-01	5.73E-09	1.17E-03	7.43E-07	1.07E-03	7.74E-05	1.24E-05	8.26E-05	1.64E-05	1.71E-05	1.57E-04	3.27E-06	0.00E+00	6.55E-05	2.01E-04
11	D76	80	Passenger Car	159	0.00E+00	1.65E-06	1.80E-07	6.73E+00	1.17E-05	3.41E-02	3.72E-06	1.65E-04	8.66E-04	1.45E-04	3.63E-04	2.34E-04	2.40E-04	2.36E-05	3.39E-05	7.24E-09	1.23E-04	2.57E-05
11	D76	80	Passenger Truck	266	0.00E+00	3.40E-06	3.63E-07	1.52E+01	2.21E-05	6.02E-02	7.21E-06	4.44E-04	1.54E-03	2.57E-04	6.92E-04	4.49E-04	4.60E-04	1.09E-04	7.58E-05	1.38E-08	2.32E-04	7.40E-05
11	D76	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.10E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	D76	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.03E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.67E-06
11	D76	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.66E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.01E-04
11	D76	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.84E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.35E-04
11	D77	80	Passenger Car	105	0.00E+00	1.10E-06	1.19E-07	4.46E+00	7.78E-06	2.26E-02	2.47E-06	1.09E-04	5.75E-04	9.62E-05	2.41E-04	1.55E-04	1.60E-04	1.57E-05	2.25E-05	4.81E-09	8.15E-05	1.71E-05
11	D77	80	Passenger Truck	177	0.00E+00	2.26E-06	2.41E-07	1.01E+01	1.47E-05	3.99E-02	4.78E-06	2.95E-04	1.02E-03	1.70E-04	4.59E-04	2.98E-04	3.05E-04	7.25E-05	5.03E-05	9.15E-09	1.54E-04	4.91E-05
11	D77	80	Single Unit Short Haul Truck	23	0.00E+00	3.15E-06	1.23E-07	3.77E+00	2.14E-06	6.85E-03	3.47E-06	1.31E-03	2.58E-04	5.28E-05	4.34E-04	8.04E-05	8.20E-05	3.83E-04	1.53E-05	6.07E-09	3.52E-04	2.45E-04
11	D77	80	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	5.29E-09	1.59E-01	9.11E-08	2.85E-04	1.51E-07	5.60E-05	1.18E-05	2.34E-06	1.89E-05	3.45E-06	3.52E-06	1.61E-05	6.48E-07	2.53E-10	1.54E-05	1.05E-05
11	D77	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.26E-04
11	D77	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.55E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.69E-04
11	D78	80	Passenger Car	82	0.00E+00	8.55E-07	9.29E-08	3.48E+00	6.07E-06	1.76E-02	1.93E-06	8.53E-05	4.48E-04	7.51E-05	1.88E-04	1.21E-04	1.24E-04	1.22E-05	1.75E-05	3.75E-09	6.36E-05	1.33E-05
11	D78	80	Passenger Truck	138	0.00E+00	1.76E-06	1.88E-07	7.86E+00	1.15E-05	3.11E-02	3.73E-06	2.30E-04	7.98E-04	1.33E-04	3.58E-04	2.32E-04	2.38E-04	5.66E-05	3.93E-05	7.14E-09	1.20E-04	3.83E-05
11	D78	80	Single Unit Short Haul Truck	15	0.00E+00	2.10E-06	8.21E-08	2.51E+00	1.43E-06	4.56E-03	2.31E-06	8.73E-04	1.72E-04	3.52E-05	2.90E-04	5.36E-05	5.47E-05	2.56E-04	1.02E-05	4.05E-09	2.35E-04	1.63E-04
11	D78	80	Single Unit Long Haul Truck	1	0.00E+00	9.14E-08	3.52E-09	1.06E-01	6.07E-08	1.90E-04	1.00E-07	3.73E-05	7.89E-06	1.56E-06	1.26E-05	2.30E-06	2.35E-06	1.07E-05	4.32E-07	1.69E-10	1.03E-05	6.97E-06
11	D78	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.49E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.58E-04
11	D78	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.73E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.03E-04
10	D79	70	Passenger Car	288	0.00E+00	3.21E-06	3.49E-07	1.25E+01	2.28E-05	6.46E-02	7.24E-06	2.91E-04	2.21E-03	3.45E-04	7.06E-04	4.55E-04	4.67E-04	4.89E-05	6.30E-05	1.31E-08	2.39E-04	4.54E-05
10	D79	70	Passenger Truck	481	0.00E+00	6.76E-06	7.18E-07	2.82E+01	4.33E-05	1.14E-01	1.42E-05	8.45E-04	4.01E-03	6.20E-04	1.35E-03	8.80E-04	9.02E-04	2.13E-04	1.41E-04	2.52E-08	4.53E-04	1.42E-04
10	D79	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	D79	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
10	D79	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.23E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.85E-04
10	D79	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.59E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.05E-03
10	D80	70	Passenger Car	491	0.00E+00	5.48E-06	5.95E-07	2.14E+01	3.89E-05	1.10E-01	1.23E-05	4.96E-04	3.78E-03	5.89E-04	1.20E-03	7.76E-04	7.97E-04	8.33E-05	1.08E-04	2.23E-08	4.07E-04	7.74E-05
10	D80	70	Passenger Truck	821	0.00E+00	1.15E-05	1.23E-06	4.81E+01	7.38E-05	1.95E-01	2.42E-05	1.44E-03	6.84E-03	1.06E-03	2.31E-03	1.50E-03	1.54E-03	3.64E-04	2.40E-04	4.29E-08	7.72E-04	2.42E-04
10	D80	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	D80	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.63E-06
10	D80	70	Combination Short Haul Truck	18	0.00E+00	4.71E-06	3.51E-07	6.36E+00	1.20E-08	6.80E-03	3.36E-06	7.04E-03	6.64E-04	1.11E-04	2.83E-04	1.02E-04	1.06E-04	1.01E-03	2.13E-05	0.00E+00	1.77E-04	1.33E-03
10	D80	70	Combination Long Haul Truck	17	0.00E+00	6.46E-06	3.67E-07	5.98E+00	4.05E-08	8.12E-03	5.31E-06	7.53E-03	6.91E-04	1.04E-04	5.87E-04	1.18E-04	1.23E-04	9.59E-04	2.00E-05	0.00E+00	4.64E-04	1.42E-03
10	D81	70	Passenger Car	280	0.00E+00	3.13E-06	3.40E-07	1.22E+01	2.22E-05	6.30E-02	7.06E-06	2.84E-04	2.16E-03	3.37E-04	6.88E-04	4.44E-04	4.56E-04	4.76E-05	6.15E-05	1.28E-08	2.33E-04	4.42E-05
10	D81	70	Passenger Truck	470	0.00E+00	6.59E-06	7.00E-07	2.75E+01	4.22E-05	1.11E-01	1.38E-05	8.24E-04	3.91E-03	6.05E-04	1.32E-03	8.58E-04	8.80E-04	2.08E-04	1.37E-04	2.45E-08	4.41E-04	1.38E-04
10	D81	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	D81	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.02E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.58E-05
10	D81	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.30E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.11E-05
10	D82	70	Passenger Car	283	0.00E+00	3.16E-06	3.43E-07	1.23E+01	2.24E-05	6.35E-02	7.12E-06	2.86E-04	2.18E-03	3.40E-04	6.95E-04	4.48E-04	4.60E-04	4.81E-05	6.20E-05	1.29E-08	2.35E-04	4.47E-05
10	D82	70	Passenger Truck	474	0.00E+00	6.65E-06	7.07E-07	2.78E+01	4.26E-05	1.12E-01	1.39E-05	8.32E-04	3.95E-03	6.11E-04	1.33E-03	8.66E-04	8.88E-04	2.10E-04	1.38E-04	2.48E-08	4.45E-04	1.40E-04
11	D83	80	Passenger Car	1074	0.00E+00	1.12E-05	1.21E-06	4.55E+01	7.92E-05	2.30E-01	2.52E-05	1.11E-03	5.85E-03	9.80E-04	2.45E-03	1.58E-03	1.62E-03	1.60E-04	2.29E-04	4.90E-08	8.30E-04	1.74E-04
11	D83	80	Passenger Truck	1798	0.00E+00	2.30E-05	2.45E-06	1.03E+02	1.50E-04	4.06E-01	4.87E-05	3.00E-03	1.04E-02	1.74E-03	4.67E-03	3.03E-03	3.11E-03	7.38E-04	5.12E-04	9.32E-08	1.57E-03	5.00E-04
11	D83	80	Single Unit Short Haul Truck	75	0.00E+00	1.03E-05	4.00E-07	1.22E+01	6.95E-06	2.22E-02	1.13E-05	4.26E-03	8.39E-04	1.72E-04	1.41E-03	2.61E-04	2.66E-04	1.25E-03	4.98E-05	1.97E-08	1.15E-03	7.96E-04
11	D83	80	Single Unit Long Haul Truck	3	0.00E+00	4.45E-07	1.72E-08	5.17E-01	2.96E-07	9.26E-04	4.89E-07	1.82E-04	3.85E-05	7.62E-06	6.16E-05	1.12E-05	1.14E-05	5.23E-05	2.11E-06	8.22E-10	5.01E-05	3.40E-05
11	D83	80	Combination Short Haul Truck	84	0.

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	D87	80	Single Unit Long Haul Truck	3	0.00E+00	3.43E-07	1.32E-08	3.98E-01	2.28E-07	7.13E-04	3.76E-07	1.40E-04	2.96E-05	5.86E-06	4.74E-05	8.63E-06	8.80E-06	4.03E-05	1.62E-06	6.32E-10	3.85E-05	2.61E-05
11	D87	80	Combination Short Haul Truck	64	0.00E+00	1.32E-05	9.74E-07	2.14E+01	3.44E-08	2.00E-02	9.40E-06	2.03E-02	1.52E-03	2.76E-04	7.98E-04	2.84E-04	2.95E-04	3.40E-03	7.15E-05	0.00E+00	5.03E-04	3.82E-03
11	D87	80	Combination Long Haul Truck	58	0.00E+00	1.83E-05	1.03E-06	1.99E+01	1.17E-07	2.37E-02	1.51E-05	2.17E-02	1.57E-03	2.52E-04	1.68E-03	3.33E-04	3.47E-04	3.19E-03	6.65E-05	0.00E+00	1.33E-03	4.08E-03
11	D88	80	Passenger Car	483	0.00E+00	5.02E-06	5.45E-07	2.04E+01	3.56E-05	1.03E-01	1.13E-05	5.00E-04	2.63E-03	4.41E-04	1.10E-03	7.12E-04	7.30E-04	7.18E-05	1.03E-04	2.20E-08	3.73E-04	7.81E-05
11	D88	80	Passenger Truck	808	0.00E+00	1.03E-05	1.10E-06	4.61E+01	6.72E-05	1.83E-01	2.19E-05	1.35E-03	4.68E-03	7.80E-04	2.10E-03	1.36E-03	1.40E-03	3.32E-04	2.30E-04	4.19E-08	7.04E-04	2.25E-04
11	D88	80	Single Unit Short Haul Truck	57	0.00E+00	7.75E-06	3.03E-07	9.26E+00	5.26E-06	1.68E-02	8.52E-06	3.22E-03	6.35E-04	1.30E-04	1.07E-03	1.98E-04	2.02E-04	9.42E-04	3.76E-05	1.49E-08	8.66E-04	6.02E-04
11	D88	80	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.30E-08	3.91E-01	2.24E-07	7.01E-04	3.70E-07	1.38E-04	2.91E-05	5.76E-06	4.66E-05	8.49E-06	8.66E-06	3.96E-05	1.59E-06	6.22E-10	3.79E-05	2.57E-05
11	D88	80	Combination Short Haul Truck	60	0.00E+00	1.24E-05	9.18E-07	2.02E+01	3.25E-08	1.89E-02	8.86E-06	1.91E-02	1.44E-03	2.60E-04	7.52E-04	2.68E-04	2.78E-04	3.21E-03	6.74E-05	0.00E+00	4.74E-04	3.60E-03
11	D88	80	Combination Long Haul Truck	55	0.00E+00	1.73E-05	9.75E-07	1.87E+01	1.10E-07	2.24E-02	1.42E-05	2.04E-02	1.48E-03	2.37E-04	1.58E-03	3.14E-04	3.27E-04	3.00E-03	6.27E-05	0.00E+00	1.26E-03	3.85E-03
9	D89	60	Passenger Car	94	0.00E+00	1.20E-06	1.31E-07	4.28E+00	8.53E-06	2.40E-02	2.71E-06	9.66E-05	9.48E-04	1.42E-04	2.64E-04	1.70E-04	1.75E-04	1.86E-05	2.15E-05	4.51E-09	8.94E-05	1.51E-05
9	D89	60	Passenger Truck	157	0.00E+00	2.55E-06	2.70E-07	9.54E+00	1.61E-05	4.11E-02	5.29E-06	3.00E-04	1.73E-03	2.58E-04	5.04E-04	3.28E-04	3.36E-04	7.61E-05	4.74E-05	8.78E-09	1.68E-04	5.09E-05
9	D89	60	Single Unit Short Haul Truck	6	0.00E+00	1.28E-06	5.30E-08	9.56E-01	8.50E-07	1.68E-03	1.39E-06	4.92E-04	1.32E-04	2.22E-05	1.71E-04	3.30E-05	3.36E-05	9.69E-05	3.90E-06	1.61E-09	1.38E-04	9.21E-05
9	D89	60	Combination Short Haul Truck	5	0.00E+00	1.53E-06	1.12E-07	1.84E+00	4.18E-09	2.28E-03	1.10E-06	2.33E-03	2.66E-04	4.17E-05	9.41E-05	3.28E-05	3.41E-05	2.93E-04	6.16E-06	0.00E+00	6.00E-05	4.39E-04
9	D89	60	Combination Long Haul Truck	5	0.00E+00	2.10E-06	1.15E-07	1.74E+00	1.42E-08	2.74E-03	1.75E-06	2.48E-03	2.79E-04	4.04E-05	1.99E-04	3.74E-05	3.90E-05	2.79E-04	5.83E-06	0.00E+00	1.60E-04	4.67E-04
9	D90	60	Passenger Car	36	0.00E+00	4.64E-07	5.04E-08	1.65E+00	3.29E-06	9.29E-03	1.05E-06	3.73E-05	3.66E-04	5.49E-05	1.02E-04	6.58E-05	6.76E-05	7.19E-06	8.29E-06	1.74E-09	3.45E-05	5.82E-06
9	D90	60	Passenger Truck	61	0.00E+00	9.85E-07	1.04E-07	3.69E+00	6.22E-06	1.59E-02	2.04E-06	1.16E-04	6.69E-04	9.96E-05	1.95E-04	1.27E-04	1.30E-04	2.94E-05	1.83E-05	3.39E-09	6.50E-05	1.97E-05
9	D90	60	Single Unit Short Haul Truck	20	0.00E+00	4.49E-06	1.86E-07	3.35E+00	2.98E-06	5.89E-03	4.86E-06	1.72E-03	4.63E-04	7.78E-05	5.99E-04	1.15E-04	1.18E-04	3.39E-04	1.36E-05	5.62E-09	4.81E-04	3.22E-04
9	D90	60	Single Unit Long Haul Truck	1	0.00E+00	1.96E-07	8.06E-09	1.43E-01	1.29E-07	2.50E-04	2.12E-07	7.45E-05	2.08E-05	3.45E-06	2.62E-05	5.02E-06	5.12E-06	1.44E-05	5.82E-07	2.39E-10	2.11E-05	1.40E-05
9	D90	60	Combination Short Haul Truck	7	0.00E+00	2.14E-06	1.57E-07	2.58E+00	5.85E-09	3.19E-03	1.54E-06	3.26E-03	3.73E-04	5.83E-05	1.32E-04	4.59E-05	4.77E-05	4.10E-04	8.62E-06	0.00E+00	8.40E-05	6.14E-04
9	D90	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.47E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.54E-04
10	D91	70	Passenger Car	224	0.00E+00	2.50E-06	2.71E-07	9.75E+00	1.77E-05	5.02E-02	5.63E-06	2.26E-04	1.72E-03	2.68E-04	5.49E-04	3.54E-04	3.63E-04	3.80E-05	4.90E-05	1.02E-08	1.86E-04	3.53E-05
10	D91	70	Passenger Truck	374	0.00E+00	5.25E-06	5.58E-07	2.19E+01	3.36E-05	8.87E-02	1.10E-05	6.57E-04	3.12E-03	4.82E-04	1.05E-03	6.84E-04	7.01E-04	1.66E-04	1.09E-04	1.96E-08	3.52E-04	1.10E-04
10	D91	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.70E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	D91	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.06E-04
10	D91	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.44E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.48E-04
10	D92	70	Passenger Car	274	0.00E+00	3.06E-06	3.32E-07	1.19E+01	2.17E-05	6.14E-02	6.89E-06	2.77E-04	2.11E-03	3.28E-04	6.72E-04	4.33E-04	4.45E-04	4.65E-05	6.00E-05	1.25E-08	2.27E-04	4.32E-05
10	D92	70	Passenger Truck	458	0.00E+00	6.43E-06	6.84E-07	2.69E+01	4.12E-05	1.09E-01	1.35E-05	8.05E-04	3.82E-03	5.91E-04	1.29E-03	8.38E-04	8.58E-04	2.03E-04	1.34E-04	2.40E-08	4.31E-04	1.35E-04
10	D92	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.02E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.52E-05
10	D92	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	D92	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	D93	70	Passenger Car	230	0.00E+00	2.56E-06	2.78E-07	1.00E+01	1.82E-05	5.15E-02	5.78E-06	2.32E-04	1.77E-03	2.76E-04	5.64E-04	3.63E-04	3.73E-04	3.90E-05	5.03E-05	1.05E-08	1.91E-04	3.62E-05
10	D93	70	Passenger Truck	384	0.00E+00	5.39E-06	5.73E-07	2.25E+01	3.45E-05	9.10E-02	1.13E-05	6.75E-04	3.20E-03	4.95E-04	1.08E-03	7.03E-04	7.20E-04	1.70E-04	1.12E-04	2.01E-08	3.61E-04	1.13E-04
10	D93	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.36E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	D93	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.92E-04
10	D93	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.80E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.27E-04
10	D94	70	Passenger Car	278	0.00E+00	3.10E-06	3.37E-07	1.21E+01	2.20E-05	6.24E-02	6.99E-06	2.81E-04	2.14E-03	3.33E-04	6.82E-04	4.40E-04	4.51E-04	4.72E-05	6.09E-05	1.26E-08	2.31E-04	4.38E-05
10	D94	70	Passenger Truck	465	0.00E+00	6.53E-06	6.94E-07	2.73E+01	4.18E-05	1.10E-01	1.37E-05	8.17E-04	3.87E-03	5.99E-04	1.31E-03	8.50E-04	8.71E-04	2.06E-04	1.36E-04	2.43E-08	4.37E-04	1.37E-04
10	D94	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	D94	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.03E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	D94	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.46E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
9	E01	60	Passenger Car	236	0.00E+00	3.02E-06	3.28E-07	1.07E+01	2.14E-05	6.03E-02	6.80E-06	2.43E-04	2.38E-03	3.56E-04	6.63E-04	4.28E-04	4.39E-04	4.67E-05	5.38E-05	1.13E-08	2.24E-04	3.78E-05
9	E01	60	Passenger Truck	394	0.00E+00	6.40E-06	6.78E-07	2.39E+01	4.04E-05	1.03E-01	1.33E-05	7.54E-04	4.35E-03	6.47E-04	1.27E-03	8.23E-04	8.44E-04	1.91E-04	1.19E-04	2.20E-08	4.22E-04	1.28E-04
9	E01	60	Single Unit Short Haul Truck	14	0.00E+00	3.21E-06	1.33E-07	2.39E+00	2.13E-06	4.20E-03	3.47E-06	1.23E-03	3.31E-04	5.55E-05	4.28E-04	8.24E-05	8.41E-05	2.42E-04	9.74E-06	4.01E-09	3.44E-04	2.30E-04
9	E01	60	Single Unit Long Haul Truck	1	0.00E+00	1.40E-07	5.75E-09	1.02E-01	9.22E-08	1.78E-04	1.51E-07	5.32E-05	1.48E-05	2.46E-06	1.87E-05	3.58E-06	3.65E-06	1.03E-05	4.16E-07	1.71E-10	1.51E-05	9.97E-06
9	E01	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.89E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.21E-04
9	E01	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.21E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.81E-04
9	E02	60	Passenger Car	329	0.00E+00	4.21E-06	4.57E-07	1.50E+01	2.99E-05	8.42E-02	9.49E-06	3.38E-04	3.32E-03	4.97E-04	9.25E-04	5.96E-04	6.12E-04	6.51E-05	7.51E-05	1.58E-08	3.13E-04	5.28E-05
9	E02	60	Passenger Truck	550	0.00E+00	8.93E-06	9.47E-07	3.34E+01	5.63E-05	1.44E-01	1.85E-05	1.05E-03	6.06E-03	9.03E-04	1.77E-03	1.15E-03	1.18E-03	2.67E-04	1.66E-04	3.08E-08	5.89E-04	1.78E-04
9	E02	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
9	E02	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.64E-06
9	E02	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.89E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.21E-04
9	E02	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.21E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.81E-04
11	E03	80	Passenger Car	165	0.00E+00	1.71E-06	1.86E-07	6.96E+00	1.21E-05	3.53E-02	3.86E-06	1.71E-04	8.97E-04	1.50E-04	3.76E-04	2.43E-04	2.49E-04	2.45E-05	3.51E-05	7.50E-09	1.27E-04	2.66E-05
11	E03	80	Passenger Truck	275	0.00E+00	3.52E-06	3.75E-07	1.57E+01	2.29E-05	6.23E-02	7.46E-06	4.60E-04	1.60E-03	2.66E-04	7.16E-04	4.65E-04	4.76E-04	1.13E-04	7.85E-05	1.43E-08	2.40E-04	7.66E-05
11	E03	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.24E-04
11	E03	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.13E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.59E-06
11	E03	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.32E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.14E-04
11	E03	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.62E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.70E-04
11	E04	80	Passenger Car	295	0.00E+00	3.06E-06	3.33E-07	1.25E+01	2.17E-05	6.31E-02	6.91E-06	3.05E-04	1.61E-03	2.69E-04	6.74E-04	4.34E-04	4.46E-04	4.38E-05	6.29E-05	1.34E-08	2.28E-04	4.77E-05
11	E04	80	Passenger Truck	493	0.00E+00	6.31E-06	6.72E-07	2.82E+01	4.10E-05	1.12E-01	1.34E-05	8.24E-04	2.86E-03	4.76E-04	1.28E-03	8.32E-04	8.53E-04	2.03E-04	1.41E-04	2.56E-08	4.30E-04	1.37E-04
11	E04	80	Single Unit Short Haul Truck	24	0.00E+00	3.29E-06	1.28E-07	3.93E+00	2.23E-06	7.13E-03	3.61E-06	1.36E-03	2.69E-04	5.50E-05	4.52E-04	8.38E-05	8.54E-05	3.99E-04	1.59E-05	6.32E-09	3.67E-04	2.55E-04
11	E04	80	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.51E-09	1.66E-01	9.49E-08	2.97E-04	1.57E-07	5.83E-05	1.23E-05	2.44E-06	1.97E-05	3.60E-06	3.67E-06	1.68E-05	6.75E-07	2.63E-10	1.61E-05	1.09E-05
11	E04	80	Combination Short Haul Truck	14	0.00E+00	2.91E-06	2.15E-07	4.74E+00	7.62E-09	4.44E-03	2.08E-06	4.49E-03	3.37E-04	6.11E-05	1.76E-04	6.29E-05	6.53E-05	7.53E-04	1.58E-05	0.00E+00	1.11E-04	8.46E-04
11	E04	80	Combination Long Haul Truck	13	0.00E+00	4.05E-06	2.29E-07	4.39E+00	2.58E-08	5.25E-03	3.34E-06	4.80E-03	3.48E-04	5.57E-05	3.72E-04	7.38E-05	7.68E-05	7.05E-04	1.47E-05	0.00E+00	2.95E-04	9.04E-04
11	E05	80	Passenger Car	240	0.00E+00	2.50E-06	2.72E-07	1.02E+01	1.77E-05	5.15E-02	5.64E-06	2.49E-04	1.31E-03	2.19E-04	5.50E-04	3.54E-04	3.64E-04	3.57E-05	5.13E-05	1.10E-08	1.86E-04	3.89E-05
11	E05	80	Passenger Truck	403	0.00E+00	5.15E-06	5.49E-07	2.30E+01	3.35E-05	9.10E-02	1.09E-05	6.72E-04	2.33E-03	3.88E-04	1.05E-03	6.79E-04	6.96E-04	1.65E-04	1.15E-04	2.09E-08	3.51E-04	1.12E-04
11	E05	80	Single Unit Short Haul Truck	17	0.00E+00	2.37E-06	9.24E-08	2.83E+00	1.60E-06	5.13E-03	2.60E-06	9.82E-04	1.94E-04	3.96E-05	3.26E-04	6.03E-05	6.15E-05	2.88E-04	1.15E-05	4.55E-09	2.64E-04	1.84E-04
11	E05	80	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	3.97E-09	1.19E-01	6.83E-08	2.14E-04	1.13E-07	4.20E-05	8.88E-06	1.76E-06	1.42E-05	2.59E-06	2.64E-06	1.21E-05	4.86E-07	1.90E-10	1.16E-05	7.84E-06
11	E05	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.49E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.58E-04
11	E05	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.73E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.03E-04
11	E06	80	Passenger Car	120	0.00E+00	1.25E-06	1.36E-07	5.10E+00	8.88E-06	2.58E-02	2.82E-06	1.25E-04	6.56E-04	1.10E-04	2.75E-04	1.77E-04	1.82E-04	1.79E-05	2.57E-05	5.49E-09	9.31E-05	1.95E-05
11	E06	80	Passenger Truck	202	0.00E+00	2.58E-06	2.75E-07	1.15E+01	1.68E-05	4.56E-02	5.46E-06	3.37E-04	1.17E-03	1.95E-04	5.24E-04	3.40E-04	3.48E-04	8.28E-05	5.75E-05	1.04E-08	1.76E-04	5.60E-05
11	E06	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.04E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.94E-04
11	E06	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.43E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.28E-06
11	E06	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.16E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.95E-04
11	E06	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.38E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.36E-04
9	E07	60	Passenger Car	1021	0.00E+00	1.31E-05	1.42E-06	4.65E+01	9.27E-05	2.61E-01	2.95E-05	1.05E-03	1.03E-02	1.54E-03	2.87E-03	1.85E-03	1.90E-03	2.02E-04	2.33E-04	4.90E-08	9.72E-04	1.64E-04
9	E07	60	Passenger Truck	1709	0.00E+00	2.77E-05	2.94E-06	1.04E+02	1.75E-04	4.47E-01	5.75E-05	3.27E-03	1.88E-02	2.80E-03	5.48E-03	3.57E-03	3.66E-03	8.28E-04	5.15E-04	9.55E-08	1.83E-03	5.54E-04
9	E07	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.54E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.76E-04
9	E07	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E07	60	Combination Short Haul Truck	31	0.00E+00	9.01E-06	6.62E-07	1.09E+01	2.47E-08	1.35E-02	6.47E-06	1.37E-02	1.57E-03	2.46E-04	5.55E-04	1.94E-04	2.01E-04	1.73E-03	3.63E-05	0.00E+00	3.54E-04	2.59E-03
9	E07	60	Combination Long Haul Truck	28	0.00E+00	1.24E-05	6.76E-07	1.03E+01	8.35E-08	1.62E-02	1.03E-05	1.46E-02	1.65E-03	2.38E-04	1.17E-03	2.21E-04	2.30E-04	1.65E-03	3.44E-05	0.00E+00	9.44E-04	2.76E-03
9	E08	60	Passenger Car	1167

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E11	60	Combination Long Haul Truck	68	0.00E+00	2.98E-05	1.63E-06	2.47E+01	2.01E-07	3.89E-02	2.49E-05	3.52E-02	3.97E-03	5.74E-04	2.83E-03	5.31E-04	5.54E-04	3.97E-03	8.28E-05	0.00E+00	2.27E-03	6.63E-03
9	E12	60	Passenger Car	1469	0.00E+00	1.88E-05	2.04E-06	6.70E+01	1.33E-04	3.76E-01	4.24E-05	1.51E-03	1.48E-02	2.22E-03	4.14E-03	2.67E-03	2.74E-03	2.91E-04	3.36E-04	7.05E-08	1.40E-03	2.36E-04
9	E12	60	Passenger Truck	2460	0.00E+00	3.99E-05	4.23E-06	1.49E+02	2.52E-04	6.44E-01	8.28E-05	4.70E-03	2.71E-02	4.03E-03	7.89E-03	5.14E-03	5.26E-03	1.19E-03	7.41E-04	1.37E-07	2.63E-03	7.97E-04
9	E12	60	Single Unit Short Haul Truck	85	0.00E+00	1.90E-05	7.86E-07	1.42E+01	1.26E-05	2.49E-02	2.06E-05	7.30E-03	1.96E-03	3.30E-04	2.54E-03	4.89E-04	4.99E-04	1.44E-03	5.78E-05	2.38E-08	2.04E-03	1.37E-03
9	E12	60	Single Unit Long Haul Truck	4	0.00E+00	8.31E-07	3.41E-08	6.05E-01	5.47E-07	1.06E-03	8.98E-07	3.16E-04	8.81E-05	1.46E-05	1.11E-04	2.13E-05	2.17E-05	6.11E-05	2.47E-06	1.01E-09	8.93E-05	5.91E-05
9	E12	60	Combination Short Haul Truck	80	0.00E+00	2.32E-05	1.70E-06	2.80E+01	6.36E-08	3.47E-02	1.67E-05	3.54E-02	4.05E-03	6.33E-04	1.43E-03	4.99E-04	5.18E-04	4.45E-03	9.36E-05	0.00E+00	9.12E-04	6.67E-03
9	E12	60	Combination Long Haul Truck	72	0.00E+00	3.19E-05	1.74E-06	2.64E+01	2.15E-07	4.16E-02	2.67E-05	3.77E-02	4.25E-03	6.14E-04	3.02E-03	5.69E-04	5.93E-04	4.24E-03	8.86E-05	0.00E+00	2.43E-03	7.10E-03
11	E13	80	Passenger Car	403	0.00E+00	4.19E-06	4.55E-07	1.70E+01	2.97E-05	8.63E-02	9.44E-06	4.18E-04	2.19E-03	3.68E-04	9.21E-04	5.94E-04	6.09E-04	5.99E-05	8.59E-05	1.84E-08	3.11E-04	6.51E-05
11	E13	80	Passenger Truck	674	0.00E+00	8.62E-06	9.19E-07	3.85E+01	5.61E-05	1.52E-01	1.83E-05	1.13E-03	3.91E-03	6.51E-04	1.75E-03	1.14E-03	1.17E-03	2.77E-04	1.92E-04	3.49E-08	5.87E-04	1.87E-04
11	E13	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	E13	80	Single Unit Long Haul Truck	1	0.00E+00	1.88E-07	7.27E-09	2.19E-01	1.25E-07	3.92E-04	2.07E-07	7.69E-05	1.63E-05	3.22E-06	2.60E-05	4.75E-06	4.84E-06	2.21E-05	8.91E-07	3.48E-10	2.12E-05	1.44E-05
11	E13	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.15E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E13	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.57E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	E14	80	Passenger Car	277	0.00E+00	2.88E-06	3.13E-07	1.17E+01	2.05E-05	5.95E-02	6.50E-06	2.88E-04	1.51E-03	2.53E-04	6.34E-04	4.09E-04	4.20E-04	4.12E-05	5.92E-05	1.26E-08	2.15E-04	4.49E-05
11	E14	80	Passenger Truck	465	0.00E+00	5.94E-06	6.33E-07	2.65E+01	3.86E-05	1.05E-01	1.26E-05	7.76E-04	2.69E-03	4.48E-04	1.21E-03	7.83E-04	8.03E-04	1.91E-04	1.32E-04	2.41E-08	4.04E-04	1.29E-04
11	E14	80	Single Unit Short Haul Truck	18	0.00E+00	2.50E-06	9.75E-08	2.98E+00	1.69E-06	5.42E-03	2.74E-06	1.04E-03	2.04E-04	4.18E-05	3.44E-04	6.37E-05	6.49E-05	3.03E-04	1.21E-05	4.80E-09	2.79E-04	1.94E-04
11	E14	80	Single Unit Long Haul Truck	1	0.00E+00	1.08E-07	4.19E-09	1.26E-01	7.21E-08	2.26E-04	1.19E-07	4.43E-05	9.38E-06	1.86E-06	1.50E-05	2.73E-06	2.79E-06	1.27E-05	5.13E-07	2.00E-10	1.22E-05	8.28E-06
11	E14	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.32E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E14	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.69E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E15	80	Passenger Car	298	0.00E+00	3.10E-06	3.37E-07	1.26E+01	2.20E-05	6.39E-02	6.99E-06	3.09E-04	1.63E-03	2.72E-04	6.82E-04	4.40E-04	4.51E-04	4.44E-05	6.37E-05	1.36E-08	2.31E-04	4.83E-05
11	E15	80	Passenger Truck	500	0.00E+00	6.39E-06	6.81E-07	2.85E+01	4.15E-05	1.13E-01	1.35E-05	8.34E-04	2.90E-03	4.82E-04	1.30E-03	8.43E-04	8.64E-04	2.05E-04	1.42E-04	2.59E-08	4.35E-04	1.39E-04
11	E15	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.82E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.14E-05
11	E15	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.82E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.20E-04
11	E15	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.09E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.70E-04
11	E16	80	Passenger Car	302	0.00E+00	3.14E-06	3.41E-07	1.28E+01	2.23E-05	6.47E-02	7.08E-06	3.13E-04	1.65E-03	2.76E-04	6.91E-04	4.45E-04	4.57E-04	4.49E-05	6.45E-05	1.38E-08	2.34E-04	4.89E-05
11	E16	80	Passenger Truck	506	0.00E+00	6.47E-06	6.89E-07	2.89E+01	4.21E-05	1.14E-01	1.37E-05	8.45E-04	2.93E-03	4.88E-04	1.31E-03	8.53E-04	8.74E-04	2.08E-04	1.44E-04	2.62E-08	4.40E-04	1.41E-04
11	E16	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.46E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E16	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.32E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.14E-04
11	E16	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.62E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.70E-04
11	E17	80	Passenger Car	241	0.00E+00	2.51E-06	2.72E-07	1.02E+01	1.78E-05	5.17E-02	5.65E-06	2.50E-04	1.31E-03	2.20E-04	5.51E-04	3.55E-04	3.65E-04	3.59E-05	5.15E-05	1.10E-08	1.87E-04	3.90E-05
11	E17	80	Passenger Truck	404	0.00E+00	5.16E-06	5.50E-07	2.31E+01	3.36E-05	9.13E-02	1.09E-05	6.74E-04	2.34E-03	3.90E-04	1.05E-03	6.81E-04	6.98E-04	1.66E-04	1.15E-04	2.09E-08	3.52E-04	1.12E-04
11	E17	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.55E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.22E-04
11	E17	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.23E-06
11	E17	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.32E-04
11	E17	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.02E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.69E-04
11	E18	80	Passenger Car	178	0.00E+00	1.85E-06	2.01E-07	7.52E+00	1.31E-05	3.81E-02	4.16E-06	1.84E-04	9.68E-04	1.62E-04	4.06E-04	2.62E-04	2.69E-04	2.64E-05	3.79E-05	8.10E-09	1.37E-04	2.87E-05
11	E18	80	Passenger Truck	297	0.00E+00	3.80E-06	4.05E-07	1.70E+01	2.47E-05	6.72E-02	8.06E-06	4.97E-04	1.72E-03	2.87E-04	7.73E-04	5.01E-04	5.14E-04	1.22E-04	8.48E-05	1.54E-08	2.59E-04	8.27E-05
11	E18	80	Single Unit Short Haul Truck	16	0.00E+00	2.23E-06	8.72E-08	2.67E+00	1.51E-06	4.85E-03	2.46E-06	9.28E-04	1.83E-04	3.74E-05	3.08E-04	5.70E-05	5.81E-05	2.72E-04	1.08E-05	4.30E-09	2.50E-04	1.73E-04
11	E18	80	Single Unit Long Haul Truck	1	0.00E+00	9.71E-08	3.75E-09	1.13E-01	6.45E-08	2.02E-04	1.07E-07	3.96E-05	8.39E-06	1.66E-06	1.34E-05	2.45E-06	2.49E-06	1.14E-05	4.59E-07	1.79E-10	1.09E-05	7.41E-06
11	E18	80	Combination Short Haul Truck	10	0.00E+00	2.05E-06	1.52E-07	3.33E+00	5.36E-09	3.12E-03	1.46E-06	3.16E-03	2.37E-04	4.30E-05	1.24E-04	4.42E-05	4.59E-05	5.30E-04	1.11E-05	0.00E+00	7.83E-05	5.95E-04
11	E18	80	Combination Long Haul Truck	9	0.00E+00	2.85E-06	1.61E-07	3.09E+00	1.81E-08	3.70E-03	2.35E-06	3.38E-03	2.45E-04	3.92E-05	2.61E-04	5.19E-05	5.41E-05	4.96E-04	1.04E-05	0.00E+00	2.07E-04	6.36E-04
9	E19	60	Passenger Car	575	0.00E+00	7.37E-06	8.00E-07	2.62E+01	5.23E-05	1.47E-01	1.66E-05	5.92E-04	5.81E-03	8.70E-04	1.62E-03	1.04E-03	1.07E-03	1.14E-04	1.32E-04	2.76E-08	5.48E-04	9.24E-05
9	E19	60	Passenger Truck	964	0.00E+00	1.56E-05	1.66E-06	5.85E+01	9.86E-05	2.52E-01	3.24E-05	1.84E-03	1.06E-02	1.58E-03	3.09E-03	2.01E-03	2.06E-03	4.67E-04	2.90E-04	5.39E-08	1.03E-03	3.12E-04
9	E19	60	Single Unit Short Haul Truck	30	0.00E+00	6.63E-06	2.74E-07	4.94E+00	4.39E-06	8.69E-03	7.17E-06	2.54E-03	6.83E-04	1.15E-04	8.84E-04	1.70E-04	1.74E-04	5.01E-04	2.01E-05	8.29E-09	7.11E-04	4.76E-04
9	E19	60	Single Unit Long Haul Truck	1	0.00E+00	2.89E-07	1.19E-08	2.11E-01	1.90E-07	3.69E-04	3.13E-07	1.10E-04	3.07E-05	5.09E-06	3.87E-05	7.40E-06	7.55E-06	2.13E-05	8.59E-07	3.53E-10	3.11E-05	2.06E-05
9	E19	60	Combination Short Haul Truck	16	0.00E+00	4.58E-06	3.36E-07	5.53E+00	1.25E-08	6.84E-03	3.29E-06	6.98E-03	7.99E-04	1.25E-04	2.82E-04	9.84E-05	1.02E-04	8.78E-04	1.85E-05	0.00E+00	1.80E-04	1.32E-03
9	E19	60	Combination Long Haul Truck	14	0.00E+00	6.29E-06	3.44E-07	5.22E+00	4.25E-08	8.22E-03	5.26E-06	7.44E-03	8.38E-04	1.21E-04	5.97E-04	1.12E-04	1.17E-04	8.38E-04	1.75E-05	0.00E+00	4.80E-04	1.40E-03
9	E20	60	Passenger Car	615	0.00E+00	7.88E-06	8.56E-07	2.81E+01	5.59E-05	1.58E-01	1.78E-05	6.34E-04	6.21E-03	9.31E-04	1.73E-03	1.12E-03	1.15E-03	1.22E-04	1.41E-04	2.95E-08	5.86E-04	9.88E-05
9	E20	60	Passenger Truck	1031	0.00E+00	1.67E-05	1.77E-06	6.25E+01	1.05E-04	2.70E-01	3.47E-05	1.97E-03	1.14E-02	1.69E-03	3.31E-03	2.15E-03	2.20E-03	4.99E-04	3.11E-04	5.76E-08	1.10E-03	3.34E-04
9	E20	60	Single Unit Short Haul Truck	22	0.00E+00	4.92E-06	2.03E-07	3.66E+00	3.26E-06	6.45E-03	5.32E-06	1.89E-03	5.07E-04	8.52E-05	6.56E-04	1.26E-04	1.29E-04	3.71E-04	1.49E-05	6.15E-09	5.27E-04	3.53E-04
9	E20	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	8.82E-09	1.56E-01	1.41E-07	2.74E-04	2.32E-07	8.16E-05	2.28E-05	3.78E-06	2.87E-05	5.49E-06	5.60E-06	1.58E-05	6.37E-07	2.62E-10	2.31E-05	1.53E-05
9	E20	60	Combination Short Haul Truck	16	0.00E+00	4.58E-06	3.36E-07	5.53E+00	1.25E-08	6.84E-03	3.29E-06	6.98E-03	7.99E-04	1.25E-04	2.82E-04	9.84E-05	1.02E-04	8.78E-04	1.85E-05	0.00E+00	1.80E-04	1.32E-03
9	E20	60	Combination Long Haul Truck	14	0.00E+00	6.29E-06	3.44E-07	5.22E+00	4.25E-08	8.22E-03	5.26E-06	7.44E-03	8.38E-04	1.21E-04	5.97E-04	1.12E-04	1.17E-04	8.38E-04	1.75E-05	0.00E+00	4.80E-04	1.40E-03
11	E21	80	Passenger Car	228	0.00E+00	2.38E-06	2.58E-07	9.67E+00	1.69E-05	4.90E-02	5.36E-06	2.37E-04	1.25E-03	2.08E-04	5.22E-04	3.37E-04	3.46E-04	3.40E-05	4.87E-05	1.04E-08	1.77E-04	3.70E-05
11	E21	80	Passenger Truck	383	0.00E+00	4.89E-06	5.21E-07	2.18E+01	3.18E-05	8.65E-02	1.04E-05	6.39E-04	2.22E-03	3.69E-04	9.94E-04	6.45E-04	6.61E-04	1.57E-04	1.09E-04	1.98E-08	3.33E-04	1.06E-04
11	E21	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.46E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E21	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.32E-04
11	E21	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.02E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.69E-04
11	E22	80	Passenger Car	12	0.00E+00	1.28E-07	1.39E-08	5.22E-01	9.10E-07	2.64E-03	2.89E-07	1.28E-05	6.73E-05	1.13E-05	2.82E-05	1.82E-05	1.87E-05	1.83E-06	2.63E-06	5.62E-10	9.54E-06	2.00E-06
11	E22	80	Passenger Truck	21	0.00E+00	2.64E-07	2.82E-08	1.18E+00	1.72E-06	4.67E-03	5.60E-07	3.45E-05	1.20E-04	1.99E-05	5.37E-05	3.48E-05	3.57E-05	8.48E-06	5.89E-06	1.07E-09	1.80E-05	5.74E-06
11	E22	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.08E-05
11	E22	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.13E-04
11	E22	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.35E-04
11	E23	80	Passenger Car	228	0.00E+00	2.38E-06	2.58E-07	9.67E+00	1.69E-05	4.90E-02	5.36E-06	2.37E-04	1.25E-03	2.08E-04	5.22E-04	3.37E-04	3.46E-04	3.40E-05	4.87E-05	1.04E-08	1.77E-04	3.70E-05
11	E23	80	Passenger Truck	383	0.00E+00	4.89E-06	5.21E-07	2.18E+01	3.18E-05	8.65E-02	1.04E-05	6.39E-04	2.22E-03	3.69E-04	9.94E-04	6.45E-04	6.61E-04	1.57E-04	1.09E-04	1.98E-08	3.33E-04	1.06E-04
11	E23	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.46E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E23	80	Combination Short Haul Truck	9	0.00E+00	1.83E-06	1.36E-07	2.98E+00	4.80E-09	2.79E-03	1.31E-06	2.83E-03	2.12E-04	3.84E-05	1.11E-04	3.96E-05	4.11E-05	4.74E-04	9.97E-06	0.00E+00	7.00E-05	5.32E-04
11	E23	80	Combination Long Haul Truck	8	0.00E+00	2.55E-06	1.44E-07	2.77E+00	1.62E-08	3.31E-03	2.11E-06	3.02E-03	2.19E-04	3.51E-05	2.34E-04	4.64E-05	4.84E-05	4.44E-04	9.27E-06	0.00E+00	1.86E-04	5.69E-04
11	E24	80	Passenger Car	12	0.00E+00	1.28E-07	1.39E-08	5.22E-01	9.10E-07	2.64E-03	2.89E-07	1.28E-05	6.73E-05	1.13E-05	2.82E-05	1.82E-05	1.87E-05	1.83E-06	2.63E-06	5.62E-10	9.54E-06	2.00E-06
11	E24	80	Passenger Truck	21	0.00E+00	2.64E-07	2.82E-08	1.18E+00	1.72E-06	4.67E-03	5.60E-07	3.45E-05	1.20E-04	1.99E-05	5.37E-05	3.48E-05	3.57E-05	8.48E-06	5.89E-06	1.07E-09	1.80E-05	5.74E-06
11	E24	80	Single Unit Short Haul Truck	4	0.00E+00	5.26E-07	2.05E-08	6.28E-01	3.56E-07	1.14E-03	5.78E-07	2.18E-04	4.30E-05	8.80E-06	7.24E-05	1.34E-05	1.37E-05	6.39E-05	2.55E-06	1.01E-09	5.87E-05	4.08E-05
11	E24	80	Combination Short Haul Truck	5	0.00E+00	1.08E-06	7.98E-08	1.75E+00	2.82E-09	1.64E-03	7.71E-07	1.66E-03	1.25E-04	2.26E-05	6.54E-05	2.33E-05	2.42E-05	2.79E-04	5.86E-06	0.00E+00	4.12E-05	3.13E-04
11	E24	80	Combination Long Haul Truck	5	0.00E+00	1.50E-06	8.48E-08	1.63E+00	9.55E-09	1.95E-03	1.24E-06	1.78E-03	1.29E-04	2.06E-05	1.38E-04	2.73E-05	2.85E-05	2.61E-04	5.45E-06	0.00E+00	1.09E-04	3.35E-04
10	E25	70	Passenger Car	292	0.00E+00	3.26E-06	3.54E-07	1.27E+01	2.31E-05	6.56E-02	7.35E-06	2.95E-04	2.25E-03	3.50E-04	7.17E-04	4.62E-04	4.74E-04	4.96E-05	6.40E-05	1.33E-08	2.42E-04	4.61E-05
10	E25	70	Passenger Truck	489	0.00E+00	6.86E-06	7.29E-07	2.87E+01	4.39E-05	1.16E-01	1.44E-05	8.59E-04	4.07E-03	6.30E-04	1.38E-03	8.94E-04	9.16E-04	2.17E-04	1.43E-04	2.56E-08	4.60E-04	1.44E-04
10	E25	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E25	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E25	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E26	70	Passenger Car	309	0.00E+00	3.45E-06	3.75E-07	1.35E+01	2.45E-05	6.93E-02	7.77E-06	3.12E-04	2.38E-03	3.71E-04	7.58E-04	4.89E-04	5.02E-04	5.25E-05	6.77E-05	1.41E-08	2.56E-04	4.87E-05
10	E26	70	Passenger Truck	517	0.00E+00	7.26E-06	7.71E-07	3.03E+01	4.65E-05	1.22E-01	1.52E-05	9.08E-04	4.31E-03	6.66E-04	1.45E-03	9.45E-04	9.69E-04	2.29E-04	1.51E-04	2.70E-08	4.86E-04	1.52E-04
10	E26	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	E26	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E26	70	Combination Long Haul Truck	3	0.00E+

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E31	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.75E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.01E-06
10	E31	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.81E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.30E-04
10	E31	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.01E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.67E-04
10	E32	70	Passenger Car	85	0.00E+00	9.47E-07	1.03E-07	3.70E+00	6.72E-06	1.91E-02	2.14E-06	8.58E-05	6.54E-04	1.02E-04	2.08E-04	1.34E-04	1.38E-04	1.44E-05	1.86E-05	3.86E-09	7.05E-05	1.34E-05
10	E32	70	Passenger Truck	142	0.00E+00	1.99E-06	2.12E-07	8.33E+00	1.28E-05	3.37E-02	4.18E-06	2.50E-04	1.18E-03	1.83E-04	4.00E-04	2.60E-04	2.66E-04	6.30E-05	4.15E-05	7.43E-09	1.34E-04	4.19E-05
10	E32	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.03E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E32	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
10	E32	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
9	E33	60	Passenger Car	1041	0.00E+00	1.33E-05	1.45E-06	4.74E+01	9.45E-05	2.66E-01	3.00E-05	1.07E-03	1.05E-02	1.57E-03	2.93E-03	1.89E-03	1.94E-03	2.06E-04	2.38E-04	5.00E-08	9.91E-04	1.67E-04
9	E33	60	Passenger Truck	1742	0.00E+00	2.83E-05	3.00E-06	1.06E+02	1.78E-04	4.56E-01	5.86E-05	3.33E-03	1.92E-02	2.86E-03	5.59E-03	3.64E-03	3.73E-03	8.44E-04	5.25E-04	9.74E-08	1.86E-03	5.64E-04
9	E33	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
9	E33	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.74E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	E33	60	Combination Short Haul Truck	20	0.00E+00	5.95E-06	4.37E-07	7.18E+00	1.63E-08	8.90E-03	4.28E-06	9.08E-03	1.04E-03	1.62E-04	3.67E-04	1.28E-04	1.33E-04	1.14E-03	2.40E-05	0.00E+00	2.34E-04	1.71E-03
9	E33	60	Combination Long Haul Truck	19	0.00E+00	8.18E-06	4.47E-07	6.79E+00	5.52E-08	1.07E-02	6.84E-06	9.67E-03	1.09E-03	1.58E-04	7.76E-04	1.46E-04	1.52E-04	1.09E-03	2.27E-05	0.00E+00	6.24E-04	1.82E-03
9	E34	60	Passenger Car	420	0.00E+00	5.37E-06	5.84E-07	1.91E+01	3.81E-05	1.08E-01	1.21E-05	4.32E-04	4.24E-03	6.35E-04	1.18E-03	7.62E-04	7.82E-04	8.32E-05	9.60E-05	2.02E-08	4.00E-04	6.74E-05
9	E34	60	Passenger Truck	703	0.00E+00	1.14E-05	1.21E-06	4.27E+01	7.20E-05	1.84E-01	2.37E-05	1.34E-03	7.75E-03	1.15E-03	2.26E-03	1.47E-03	1.50E-03	3.41E-04	2.12E-04	3.93E-08	7.52E-04	2.28E-04
9	E34	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	E34	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.52E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	E34	60	Combination Short Haul Truck	26	0.00E+00	7.48E-06	5.49E-07	9.03E+00	2.05E-08	1.12E-02	5.37E-06	1.14E-02	1.31E-03	2.04E-04	4.61E-04	1.61E-04	1.67E-04	1.43E-03	3.02E-05	0.00E+00	2.94E-04	2.15E-03
9	E34	60	Combination Long Haul Truck	23	0.00E+00	1.03E-05	5.61E-07	8.53E+00	6.94E-08	1.34E-02	8.60E-06	1.21E-02	1.37E-03	1.98E-04	9.75E-04	1.83E-04	1.91E-04	1.37E-03	2.86E-05	0.00E+00	7.84E-04	2.29E-03
9	E35	60	Passenger Car	385	0.00E+00	4.92E-06	5.35E-07	1.75E+01	3.49E-05	9.85E-02	1.11E-05	3.96E-04	3.89E-03	5.82E-04	1.08E-03	6.98E-04	7.17E-04	7.63E-05	8.79E-05	1.85E-08	3.66E-04	6.18E-05
9	E35	60	Passenger Truck	644	0.00E+00	1.05E-05	1.11E-06	3.91E+01	6.59E-05	1.69E-01	2.17E-05	1.23E-03	7.10E-03	1.06E-03	2.07E-03	1.35E-03	1.38E-03	3.12E-04	1.94E-04	3.60E-08	6.89E-04	2.09E-04
9	E35	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.84E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	E35	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.26E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.97E-06
9	E35	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.58E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.05E-03
9	E35	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.95E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
9	E36	60	Passenger Car	201	0.00E+00	2.57E-06	2.80E-07	9.17E+00	1.83E-05	5.15E-02	5.81E-06	2.07E-04	2.03E-03	3.04E-04	5.66E-04	3.65E-04	3.75E-04	3.99E-05	4.60E-05	9.66E-09	1.92E-04	3.23E-05
9	E36	60	Passenger Truck	337	0.00E+00	5.47E-06	5.79E-07	2.04E+01	3.45E-05	8.81E-02	1.13E-05	6.44E-04	3.71E-03	5.52E-04	1.08E-03	7.03E-04	7.21E-04	1.63E-04	1.02E-04	1.88E-08	3.60E-04	1.09E-04
9	E36	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	E36	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.52E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	E36	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.02E-03
9	E36	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.14E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.15E-03
9	E37	60	Passenger Car	385	0.00E+00	4.92E-06	5.35E-07	1.75E+01	3.49E-05	9.85E-02	1.11E-05	3.96E-04	3.89E-03	5.82E-04	1.08E-03	6.98E-04	7.17E-04	7.63E-05	8.79E-05	1.85E-08	3.66E-04	6.18E-05
9	E37	60	Passenger Truck	644	0.00E+00	1.05E-05	1.11E-06	3.91E+01	6.59E-05	1.69E-01	2.17E-05	1.23E-03	7.10E-03	1.06E-03	2.07E-03	1.35E-03	1.38E-03	3.12E-04	1.94E-04	3.60E-08	6.89E-04	2.09E-04
9	E37	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.84E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	E37	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.26E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.97E-06
9	E37	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.58E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.05E-03
9	E37	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.95E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
9	E38	60	Passenger Car	201	0.00E+00	2.57E-06	2.80E-07	9.17E+00	1.83E-05	5.15E-02	5.81E-06	2.07E-04	2.03E-03	3.04E-04	5.66E-04	3.65E-04	3.75E-04	3.99E-05	4.60E-05	9.66E-09	1.92E-04	3.23E-05
9	E38	60	Passenger Truck	337	0.00E+00	5.47E-06	5.79E-07	2.04E+01	3.45E-05	8.81E-02	1.13E-05	6.44E-04	3.71E-03	5.52E-04	1.08E-03	7.03E-04	7.21E-04	1.63E-04	1.02E-04	1.88E-08	3.60E-04	1.09E-04
9	E38	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.68E-04
9	E38	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.52E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.59E-05
9	E38	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.02E-03
9	E38	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.14E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.15E-03
10	E39	70	Passenger Car	350	0.00E+00	3.91E-06	4.25E-07	1.53E+01	2.78E-05	7.87E-02	8.82E-06	3.54E-04	2.70E-03	4.20E-04	8.60E-04	5.55E-04	5.69E-04	5.95E-05	7.68E-05	1.60E-08	2.91E-04	5.53E-05
10	E39	70	Passenger Truck	587	0.00E+00	8.23E-06	8.75E-07	3.44E+01	5.27E-05	1.39E-01	1.73E-05	1.03E-03	4.89E-03	7.56E-04	1.65E-03	1.07E-03	1.10E-03	2.60E-04	1.71E-04	3.07E-08	5.51E-04	1.73E-04
10	E39	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.04E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.50E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.46E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.47E-06
10	E39	70	Combination Short Haul Truck	12	0.00E+00	2.96E-06	2.20E-07	4.00E+00	7.52E-09	4.28E-03	2.11E-06	4.42E-03	4.17E-04	6.96E-05	1.78E-04	6.42E-05	6.66E-05	6.36E-04	1.34E-05	0.00E+00	1.11E-04	8.33E-04
10	E39	70	Combination Long Haul Truck	10	0.00E+00	4.06E-06	2.31E-07	3.76E+00	2.55E-08	5.10E-03	3.34E-06	4.73E-03	4.35E-04	6.55E-05	3.69E-04	7.42E-05	7.73E-05	6.03E-04	1.26E-05	0.00E+00	2.92E-04	8.92E-04
10	E40	70	Passenger Car	350	0.00E+00	3.91E-06	4.25E-07	1.53E+01	2.78E-05	7.87E-02	8.82E-06	3.54E-04	2.70E-03	4.20E-04	8.60E-04	5.55E-04	5.69E-04	5.95E-05	7.68E-05	1.60E-08	2.91E-04	5.53E-05
10	E40	70	Passenger Truck	587	0.00E+00	8.23E-06	8.75E-07	3.44E+01	5.27E-05	1.39E-01	1.73E-05	1.03E-03	4.89E-03	7.56E-04	1.65E-03	1.07E-03	1.10E-03	2.60E-04	1.71E-04	3.07E-08	5.51E-04	1.73E-04
10	E40	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E40	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E40	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	E41	70	Passenger Car	281	0.00E+00	3.14E-06	3.41E-07	1.23E+01	2.23E-05	6.31E-02	7.08E-06	2.84E-04	2.17E-03	3.37E-04	6.90E-04	4.45E-04	4.57E-04	4.78E-05	6.16E-05	1.28E-08	2.33E-04	4.44E-05
10	E41	70	Passenger Truck	471	0.00E+00	6.61E-06	7.02E-07	2.76E+01	4.23E-05	1.11E-01	1.38E-05	8.27E-04	3.92E-03	6.07E-04	1.32E-03	8.60E-04	8.82E-04	2.09E-04	1.37E-04	2.46E-08	4.43E-04	1.39E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
10	E42	70	Passenger Car	307	0.00E+00	3.43E-06	3.73E-07	1.34E+01	2.43E-05	6.90E-02	7.74E-06	3.11E-04	2.37E-03	3.69E-04	7.54E-04	4.86E-04	4.99E-04	5.22E-05	6.74E-05	1.40E-08	2.55E-04	4.85E-05
10	E42	70	Passenger Truck	515	0.00E+00	7.22E-06	7.68E-07	3.02E+01	4.62E-05	1.22E-01	1.51E-05	9.04E-04	4.29E-03	6.63E-04	1.45E-03	9.41E-04	9.64E-04	2.28E-04	1.50E-04	2.69E-08	4.84E-04	1.52E-04
10	E42	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E42	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E42	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	E43	70	Passenger Car	199	0.00E+00	2.22E-06	2.41E-07	8.67E+00	1.58E-05	4.47E-02	5.01E-06	2.01E-04	1.53E-03	2.39E-04	4.88E-04	3.15E-04	3.23E-04	3.38E-05	4.36E-05	9.06E-09	1.65E-04	3.14E-05
10	E43	70	Passenger Truck	333	0.00E+00	4.67E-06	4.97E-07	1.95E+01	2.99E-05	7.89E-02	9.80E-06	5.85E-04	2.77E-03	4.29E-04	9.37E-04	6.09E-04	6.24E-04	1.48E-04	9.72E-05	1.74E-08	3.13E-04	9.82E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.79E-05
10	E44	70	Passenger Car	310	0.00E+00	3.46E-06	3.76E-07	1.35E+01	2.46E-05	6.96E-02	7.80E-06	3.13E-04	2.39E-03	3.72E-04	7.61E-04	4.91E-04	5.03E-04	5.27E-05	6.79E-05	1.41E-08	2.57E-04	4.89E-05
10	E44	70	Passenger Truck	519	0.00E+00	7.28E-06	7.74E-07	3.04E+01	4.66E-05	1.23E-01	1.53E-05	9.11E-04	4.32E-03	6.69E-04	1.46E-03	9.49E-04	9.72E-04	2.30E-04	1.51E-04	2.71E-08	4.88E-04	1.53E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E44	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.02E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.58E-05
10	E44	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.30E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.11E-05
11	E45	80	Passenger Car	299	0.00E+00	3.11E-06	3.38E-07	1.27E+01	2.21E-05	6.42E-02	7.02E-06	3.11E-04	1.63E-03	2.73E-04	6.85E-04	4.41E-04	4.53E-04	4.45E-05	6.39E-05	1.37E-08	2.32E-04	4.84E-05
11	E45	80	Passenger Truck	502	0.00E+00	6.41E-06	6.83E-07	2.86E+01	4.17E-05	1.13E-01	1.36E-05	8.38E-04	2.91E-03	4.84E-04	1.30E-03	8.46E-04	8.67E-04	2.06E-04	1.43E-04	2.60E-08	4.37E-04	1.39E-04
11	E45	80	Single Unit Short Haul Truck	34	0.00E+00	4.73E-06	1.85E-07	5.65E+00	3.21E-06	1.03E-02	5.20E-06	1.96E-03	3.87E-04	7.92E-05	6.52E-04	1.21E-04	1.23E-04	5.75E-04	2.30E-05	9.10E-09	5.29E-04	3.67E-04
11	E45	80	Single Unit Long Haul Truck	2	0.00E+00	2.06E-07	7.93E-09	2.39E-01	1.37E-07	4.28E-04	2.26E-07	8.39E-05	1.78E-05	3.52E-06	2.84E-05	5.18E-06	5.28E-06	2.42E-05	9.72E-07	3.79E-10	2.31E-05	1.57E-05
11	E45	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.81E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.28E-03
11	E45	80	Combination Long Haul Truck	20	0.00E+00	6.16E-06	3.48E-07	6.67E+00	3.92E-08	7.98E-03	5.08E-06	7.28E-03	5.29E-04	8.46E-05	5.64E-04	1.12E-04	1.17E-04	1.07E-03	2.24E-05	0.00E+00	4.48E-04	1.37E-03
11	E46	80	Passenger Car	134	0.00E+00	1.40E-06	1.52E-07	5.68E+00	9.90E-06	2.88E-02	3.15E-06	1.39E-04	7.32E-04	1.23E-04	3.07E-04	1.98E-04	2.03E-04	2.00E-05	2.86E-05	6.12E-09	1.04E-04	2.17E-05
11	E46	80	Passenger Truck	225	0.00E+00	2.87E-06	3.06E-07	1.28E+01	1.87E-05	5.08E-02	6.09E-06	3.75E-04	1.30E-03	2.17E-04	5.84E-04	3.79E-04	3.89E-04	9.23E-05	6.41E-05	1.16E-08	1.96E-04	6.25E-05
11	E46	80	Single Unit Short Haul Truck	32	0.00E+00	4.34E-06	1.69E-07	5.18E+00	2.94E-06	9.41E-03	4.77E-06	1.80E-03	3.55E-04	7.26E-05	5.97E-04	1.11E-04	1.13E-04	5.27E-04	2.10E-05	8.35E-09	4.85E-04	3.37E-04
11	E46	80	Single Unit Long Haul Truck	1	0.

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E50	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.16E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.19E-04
11	E50	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.24E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.34E-04
11	E51	80	Passenger Car	303	0.00E+00	3.15E-06	3.42E-07	1.28E+01	2.23E-05	6.49E-02	7.10E-06	3.14E-04	1.65E-03	2.76E-04	6.92E-04	4.46E-04	4.58E-04	4.50E-05	6.46E-05	1.38E-08	2.34E-04	4.90E-05
11	E51	80	Passenger Truck	507	0.00E+00	6.48E-06	6.91E-07	2.89E+01	4.22E-05	1.15E-01	1.37E-05	8.47E-04	2.94E-03	4.89E-04	1.32E-03	8.55E-04	8.77E-04	2.08E-04	1.45E-04	2.63E-08	4.42E-04	1.41E-04
11	E51	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.53E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.86E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.53E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	E51	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.32E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E51	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.69E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E52	80	Passenger Car	47	0.00E+00	4.94E-07	5.36E-08	2.01E+00	3.50E-06	1.02E-02	1.11E-06	4.92E-05	2.59E-04	4.33E-05	1.09E-04	7.00E-05	7.18E-05	7.06E-06	1.01E-05	2.16E-09	3.67E-05	7.68E-06
11	E52	80	Passenger Truck	80	0.00E+00	1.02E-06	1.08E-07	4.54E+00	6.61E-06	1.80E-02	2.15E-06	1.33E-04	4.61E-04	7.67E-05	2.07E-04	1.34E-04	1.37E-04	3.27E-05	2.27E-05	4.12E-09	6.92E-05	2.21E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.66E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.13E-05
11	E53	80	Passenger Car	397	0.00E+00	4.12E-06	4.48E-07	1.68E+01	2.93E-05	8.50E-02	9.30E-06	4.11E-04	2.16E-03	3.62E-04	9.07E-04	5.85E-04	6.00E-04	5.90E-05	8.46E-05	1.81E-08	3.07E-04	6.42E-05
11	E53	80	Passenger Truck	664	0.00E+00	8.49E-06	9.05E-07	3.79E+01	5.52E-05	1.50E-01	1.80E-05	1.11E-03	3.85E-03	6.41E-04	1.73E-03	1.12E-03	1.15E-03	2.73E-04	1.89E-04	3.44E-08	5.78E-04	1.85E-04
11	E53	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.06E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E53	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.15E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E53	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.57E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	E54	80	Passenger Car	98	0.00E+00	1.02E-06	1.11E-07	4.15E+00	7.23E-06	2.10E-02	2.30E-06	1.02E-04	5.34E-04	8.94E-05	2.24E-04	1.44E-04	1.48E-04	1.46E-05	2.09E-05	4.47E-09	7.58E-05	1.58E-05
11	E54	80	Passenger Truck	164	0.00E+00	2.10E-06	2.24E-07	9.36E+00	1.36E-05	3.71E-02	4.44E-06	2.74E-04	9.51E-04	1.58E-04	4.26E-04	2.77E-04	2.84E-04	6.74E-05	4.68E-05	8.50E-09	1.43E-04	4.56E-05
11	E54	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.10E-05
11	E54	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.16E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.07E-04
11	E54	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.31E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.35E-04
11	E55	80	Passenger Car	397	0.00E+00	4.12E-06	4.48E-07	1.68E+01	2.93E-05	8.50E-02	9.30E-06	4.11E-04	2.16E-03	3.62E-04	9.07E-04	5.85E-04	6.00E-04	5.90E-05	8.46E-05	1.81E-08	3.07E-04	6.42E-05
11	E55	80	Passenger Truck	664	0.00E+00	8.49E-06	9.05E-07	3.79E+01	5.52E-05	1.50E-01	1.80E-05	1.11E-03	3.85E-03	6.41E-04	1.73E-03	1.12E-03	1.15E-03	2.73E-04	1.89E-04	3.44E-08	5.78E-04	1.85E-04
11	E55	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.65E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.06E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E55	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.15E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E55	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.57E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	E56	80	Passenger Car	98	0.00E+00	1.02E-06	1.11E-07	4.15E+00	7.23E-06	2.10E-02	2.30E-06	1.02E-04	5.34E-04	8.94E-05	2.24E-04	1.44E-04	1.48E-04	1.46E-05	2.09E-05	4.47E-09	7.58E-05	1.58E-05
11	E56	80	Passenger Truck	164	0.00E+00	2.10E-06	2.24E-07	9.36E+00	1.36E-05	3.71E-02	4.44E-06	2.74E-04	9.51E-04	1.58E-04	4.26E-04	2.77E-04	2.84E-04	6.74E-05	4.68E-05	8.50E-09	1.43E-04	4.56E-05
11	E56	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.10E-05
11	E56	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.16E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.07E-04
11	E56	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.31E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.35E-04
10	E57	70	Passenger Car	267	0.00E+00	2.98E-06	3.24E-07	1.17E+01	2.12E-05	6.00E-02	6.73E-06	2.70E-04	2.06E-03	3.21E-04	6.56E-04	4.23E-04	4.34E-04	4.54E-05	5.86E-05	1.22E-08	2.22E-04	4.22E-05
10	E57	70	Passenger Truck	448	0.00E+00	6.28E-06	6.68E-07	2.62E+01	4.02E-05	1.06E-01	1.32E-05	7.86E-04	3.73E-03	5.77E-04	1.26E-03	8.18E-04	8.39E-04	1.98E-04	1.31E-04	2.34E-08	4.21E-04	1.32E-04
10	E57	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.69E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.78E-05
10	E57	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.06E-04
10	E57	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.44E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.48E-04
10	E58	70	Passenger Car	285	0.00E+00	3.18E-06	3.46E-07	1.24E+01	2.26E-05	6.40E-02	7.17E-06	2.88E-04	2.19E-03	3.42E-04	6.99E-04	4.51E-04	4.63E-04	4.84E-05	6.25E-05	1.30E-08	2.37E-04	4.49E-05
10	E58	70	Passenger Truck	477	0.00E+00	6.69E-06	7.12E-07	2.80E+01	4.29E-05	1.13E-01	1.40E-05	8.38E-04	3.97E-03	6.15E-04	1.34E-03	8.72E-04	8.94E-04	2.12E-04	1.39E-04	2.49E-08	4.48E-04	1.41E-04
10	E58	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.01E-05
10	E58	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	E58	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
11	E59	80	Passenger Car	295	0.00E+00	3.06E-06	3.33E-07	1.25E+01	2.17E-05	6.31E-02	6.91E-06	3.05E-04	1.61E-03	2.69E-04	6.74E-04	4.34E-04	4.46E-04	4.38E-05	6.29E-05	1.34E-08	2.28E-04	4.77E-05
11	E59	80	Passenger Truck	493	0.00E+00	6.31E-06	6.72E-07	2.82E+01	4.10E-05	1.12E-01	1.34E-05	8.24E-04	2.86E-03	4.76E-04	1.28E-03	8.32E-04	8.53E-04	2.03E-04	1.41E-04	2.56E-08	4.30E-04	1.37E-04
11	E59	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.82E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.14E-05
11	E59	80	Combination Short Haul Truck	8	0.00E+00	1.62E-06	1.20E-07	2.63E+00	4.23E-09	2.46E-03	1.16E-06	2.49E-03	1.87E-04	3.39E-05	9.81E-05	3.49E-05	3.63E-05	4.18E-04	8.80E-06	0.00E+00	6.18E-05	4.70E-04
11	E59	80	Combination Long Haul Truck	7	0.00E+00	2.25E-06	1.27E-07	2.44E+00	1.43E-08	2.92E-03	1.86E-06	2.67E-03	1.93E-04	3.10E-05	2.06E-04	4.10E-05	4.27E-05	3.92E-04	8.18E-06	0.00E+00	1.64E-04	5.02E-04
11	E60	80	Passenger Car	245	0.00E+00	2.55E-06	2.77E-07	1.04E+01	1.81E-05	5.25E-02	5.74E-06	2.54E-04	1.33E-03	2.24E-04	5.60E-04	3.61E-04	3.70E-04	3.64E-05	5.23E-05	1.12E-08	1.89E-04	3.96E-05
11	E60	80	Passenger Truck	410	0.00E+00	5.24E-06	5.59E-07	2.34E+01	3.41E-05	9.27E-02	1.11E-05	6.85E-04	2.38E-03	3.96E-04	1.07E-03	6.92E-04	7.09E-04	1.68E-04	1.17E-04	2.13E-08	3.57E-04	1.14E-04
11	E60	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	E60	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.31E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.57E-04
11	E60	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.88E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.67E-04
11	E61	80	Passenger Car	295	0.00E+00	3.06E-06	3.33E-07	1.25E+01	2.17E-05	6.31E-02	6.91E-06	3.05E-04	1.61E-03	2.69E-04	6.74E-04	4.34E-04	4.46E-04	4.38E-05	6.29E-05	1.34E-08	2.28E-04	4.77E-05
11	E61	80	Passenger Truck	493	0.00E+00	6.31E-06	6.72E-07	2.82E+01	4.10E-05	1.12E-01	1.34E-05	8.24E-04	2.86E-03	4.76E-04	1.28E-03	8.32E-04	8.53E-04	2.03E-04	1.41E-04	2.56E-08	4.30E-04	1.37E-04
11	E61	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.82E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.14E-05
11	E61	80	Combination Short Haul Truck	8	0.00E+00	1.62E-06	1.20E-07	2.63E+00	4.23E-09	2.46E-03	1.16E-06	2.49E-03	1.87E-04	3.39E-05	9.81E-05	3.49E-05	3.63E-05	4.18E-04	8.80E-06	0.00E+00	6.18E-05	4.70E-04
11	E61	80	Combination Long Haul Truck	7	0.00E+00	2.25E-06	1.27E-07	2.44E+00	1.43E-08	2.92E-03	1.86E-06	2.67E-03	1.93E-04	3.10E-05	2.06E-04	4.10E-05	4.27E-05	3.92E-04	8.18E-06	0.00E+00	1.64E-04	5.02E-04
11	E62	80	Passenger Car	245	0.00E+00	2.55E-06	2.77E-07	1.04E+01	1.81E-05	5.25E-02	5.74E-06	2.54E-04	1.33E-03	2.24E-04	5.60E-04	3.61E-04	3.70E-04	3.64E-05	5.23E-05	1.12E-08	1.89E-04	3.96E-05
11	E62	80	Passenger Truck	410	0.00E+00	5.24E-06	5.59E-07	2.34E+01	3.41E-05	9.27E-02	1.11E-05	6.85E-04	2.38E-03	3.96E-04	1.07E-03	6.92E-04	7.09E-04	1.68E-04	1.17E-04	2.13E-08	3.57E-04	1.14E-04
11	E62	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	E62	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.31E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.57E-04
11	E62	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.88E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.67E-04
10	E63	70	Passenger Car	726	0.00E+00	8.11E-06	8.81E-07	3.17E+01	5.76E-05	1.63E-01	1.83E-05	7.35E-04	5.60E-03	8.72E-04	1.78E-03	1.15E-03	1.18E-03	1.23E-04	1.59E-04	3.31E-08	6.03E-04	1.15E-04
10	E63	70	Passenger Truck	1217	0.00E+00	1.71E-05	1.81E-06	7.13E+01	1.09E-04	2.88E-01	3.58E-05	2.14E-03	1.01E-02	1.57E-03	3.42E-03	2.22E-03	2.28E-03	5.39E-04	3.55E-04	6.36E-08	1.14E-03	3.59E-04
10	E63	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.64E-04
10	E63	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
10	E63	70	Combination Short Haul Truck	40	0.00E+00	1.02E-05	7.61E-07	1.38E+01	2.60E-08	1.48E-02	7.29E-06	1.53E-02	1.44E-03	2.41E-04	6.14E-04	2.22E-04	2.30E-04	2.20E-03	4.62E-05	0.00E+00	3.84E-04	2.88E-03
10	E63	70	Combination Long Haul Truck	36	0.00E+00	1.40E-05	7.98E-07	1.30E+01	8.80E-08	1.76E-02	1.15E-05	1.64E-02	1.50E-03	2.26E-04	1.28E-03	2.56E-04	2.67E-04	2.08E-03	4.35E-05	0.00E+00	1.01E-03	3.08E-03
10	E64	70	Passenger Car	831	0.00E+00	9.27E-06	1.01E-06	3.62E+01	6.58E-05	1.87E-01	2.09E-05	8.40E-04	6.40E-03	9.97E-04	2.04E-03	1.31E-03	1.35E-03	1.41E-04	1.82E-04	3.78E-08	6.90E-04	1.31E-04
10	E64	70	Passenger Truck	1391	0.00E+00	1.95E-05	2.07E-06	8.15E+01	1.25E-04	3.29E-01	4.09E-05	2.44E-03	1.16E-02	1.79E-03	3.91E-03	2.54E-03	2.61E-03	6.17E-04	4.06E-04	7.27E-08	1.31E-03	4.10E-04
10	E64	70	Single Unit Short Haul Truck	52	0.00E+00	9.10E-06	3.70E-07	8.47E+00	6.10E-06	1.54E-02	9.90E-06	3.62E-03	8.22E-04	1.51E-04	1.23E-03	2.34E-04	2.38E-04	8.61E-04	3.45E-05	1.39E-08	9.89E-04	6.77E-04
10	E64	70	Single Unit Long Haul Truck	2	0.00E+00	3.96E-07	1.59E-08	3.59E-01	2.63E-07	6.45E-04	4.31E-07	1.56E-04	3.76E-05	6.74E-06	5.35E-05	1.01E-05	1.03E-05	3.63E-05	1.46E-06	5.86E-10	4.32E-05	2.91E-05
10	E64	70	Combination Short Haul Truck	54	0.00E+00	1.39E-05	1.03E-06	1.87E+01	3.52E-08	2.00E-02	9.88E-06	2.07E-02	1.95E-03	3.26E-04	8.32E-04	3.00E-04	3.12E-04	2.98E-03	6.26E-05	0.00E+00	5.20E-04	3.90E-03
10	E64	70	Combination Long Haul Truck	49	0.00E+00	1.90E-05	1.08E-06	1.76E+01	1.19E-07	2.39E-02	1.56E-05	2.22E-02	2.03E-03	3.06E-04	1.73E-03	3.48E-04	3.62E-04	2.82E-03	5.89E-05	0.00E+00	1.37E-03	4.17E-03
10	E65	70	Passenger Car	738	0.00E+00	8.24E-06	8.96E-07	3.22E+01	5.85E-05	1.66E-01	1.86E-05	7.47E-04	5.69E-03	8.86E-04	1.81E-03	1.17E-03	1.20E-03	1.25E-04	1.62E-04	3.36E-08	6.13E-04	1.16E-04
10	E65	70	Passenger Truck	1237	0.00E+00	1.74E-05	1.84E-06	7.25E+01	1.11E-04	2.93E-01	3.64E-05	2.17E-03	1.03E-02	1.59E-03	3.48E-03	2.26E-03	2.32E-03	5.48E-04	3.61E-04	6.46E-08	1.16E-03	3.65E-04
10	E65	70	Single Unit Short Haul Truck	46	0.00E+00	8.09E-06	3.29E-07	7.53E+00	5.42E-06	1.37E-02	8.80E-06	3.22E-03	7.31E-04	1.34E-04	1.09E-03	2.08E-04	2.12E-04	7.65E-04	3.06E-05	1.24E-08	8.79E-04	6.02E-04
10	E65	70	Single Unit Long Haul Truck	2	0.00E+00	3.52E-07	1.42E-08	3.19E-01	2.33E-07	5.73E-04	3.83E-07	1.38E-04	3.34E-05	6.00E-06	4.76E-05	8.98E-06	9.15E-06	3.23E-05	1.30E-06	5.21E-10	3.84E-05	2.59E-05
10	E65	70	Combination Short Haul Truck	42	0.00E+00	1.09E-05	8.11E-07	1.47E+01	2.77E-08	1.57E-02	7.77E-06	1.63E-02	1.54E-03	2.56E-04	6.54E-04	2.36E-04	2.45E-04	2.34E-03	4.93E-05	0.00E+00	4.09E-04	3.07E-03
10	E65	70	Combination Long Haul Truck	39	0.00E+00	1.50E-05	8.50E-07	1.38E+01	9.37E-08	1.88E-02	1.23E-05	1.74E-02	1.60E-03	2.41E-04	1.36E-03	2.73E-04	2.85E-04	2.22E-03	4.63E-05	0.00E+00	1.07E-03	3.28E-03
10	E66	70	Passenger Car	859	0.00E+00	9.59E-06	1.04E-06	3.75E+01	6.80E-05	1.93E-01	2.16E-05	8.69E-04	6.62E-03	1.03E-03	2.11E-03	1.36E-03	1.40E-03	1.46E-04	1.88E-04	3.91E-08	7.13E-04	1.35E-04
10	E66	70	Passenger Truck	1438	0.00E+00	2.02E-05

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E70	70	Passenger Car	376	0.00E+00	4.19E-06	4.56E-07	1.64E+01	2.98E-05	8.44E-02	9.46E-06	3.80E-04	2.89E-03	4.51E-04	9.22E-04	5.95E-04	6.10E-04	6.38E-05	8.24E-05	1.71E-08	3.12E-04	5.93E-05
10	E70	70	Passenger Truck	629	0.00E+00	8.83E-06	9.38E-07	3.69E+01	5.65E-05	1.49E-01	1.85E-05	1.10E-03	5.24E-03	8.11E-04	1.77E-03	1.15E-03	1.18E-03	2.79E-04	1.84E-04	3.29E-08	5.91E-04	1.86E-04
10	E70	70	Single Unit Short Haul Truck	19	0.00E+00	3.37E-06	1.37E-07	3.14E+00	2.26E-06	5.69E-03	3.67E-06	1.34E-03	3.04E-04	5.59E-05	4.54E-04	8.66E-05	8.83E-05	3.19E-04	1.28E-05	5.15E-09	3.66E-04	2.51E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	5.91E-09	1.33E-01	9.72E-08	2.39E-04	1.60E-07	5.77E-05	1.39E-05	2.50E-06	1.98E-05	3.74E-06	3.81E-06	1.35E-05	5.42E-07	2.17E-10	1.60E-05	1.08E-05
10	E70	70	Combination Short Haul Truck	16	0.00E+00	4.04E-06	3.00E-07	5.46E+00	1.03E-08	5.83E-03	2.88E-06	6.03E-03	5.69E-04	9.49E-05	2.42E-04	8.75E-05	9.08E-05	8.67E-04	1.82E-05	0.00E+00	1.51E-04	1.14E-03
10	E70	70	Combination Long Haul Truck	14	0.00E+00	5.54E-06	3.15E-07	5.12E+00	3.47E-08	6.96E-03	4.55E-06	6.46E-03	5.93E-04	8.93E-05	5.03E-04	1.01E-04	1.05E-04	8.22E-04	1.72E-05	0.00E+00	3.98E-04	1.22E-03
10	E71	70	Passenger Car	628	0.00E+00	7.01E-06	7.62E-07	2.74E+01	4.98E-05	1.41E-01	1.58E-05	6.35E-04	4.84E-03	7.54E-04	1.54E-03	9.94E-04	1.02E-03	1.07E-04	1.38E-04	2.86E-08	5.22E-04	9.91E-05
10	E71	70	Passenger Truck	1052	0.00E+00	1.48E-05	1.57E-06	6.16E+01	9.45E-05	2.49E-01	3.09E-05	1.85E-03	8.76E-03	1.36E-03	2.96E-03	1.92E-03	1.97E-03	4.66E-04	3.07E-04	5.50E-08	9.89E-04	3.10E-04
10	E71	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.38E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.55E-06
10	E71	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.41E-04
10	E71	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.65E-04
10	E72	70	Passenger Car	556	0.00E+00	6.21E-06	6.75E-07	2.43E+01	4.41E-05	1.25E-01	1.40E-05	5.63E-04	4.29E-03	6.68E-04	1.37E-03	8.81E-04	9.04E-04	9.45E-05	1.22E-04	2.53E-08	4.62E-04	8.78E-05
10	E72	70	Passenger Truck	932	0.00E+00	1.31E-05	1.39E-06	5.46E+01	8.37E-05	2.21E-01	2.74E-05	1.64E-03	7.76E-03	1.20E-03	2.62E-03	1.70E-03	1.75E-03	4.13E-04	2.72E-04	4.87E-08	8.76E-04	2.75E-04
10	E72	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	E72	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.03E-04
10	E72	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.72E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.24E-04
9	E73	60	Passenger Car	255	0.00E+00	3.26E-06	3.54E-07	1.16E+01	2.31E-05	6.52E-02	7.35E-06	2.62E-04	2.57E-03	3.85E-04	7.17E-04	4.62E-04	4.74E-04	5.05E-05	5.82E-05	1.22E-08	2.42E-04	4.09E-05
9	E73	60	Passenger Truck	426	0.00E+00	6.92E-06	7.33E-07	2.59E+01	4.36E-05	1.12E-01	1.44E-05	8.15E-04	4.70E-03	6.99E-04	1.37E-03	8.90E-04	9.12E-04	2.07E-04	1.29E-04	2.38E-08	4.56E-04	1.38E-04
9	E73	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.10E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.67E-05
9	E73	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.86E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.51E-04
9	E73	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.98E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.74E-04
9	E74	60	Passenger Car	219	0.00E+00	2.80E-06	3.05E-07	9.99E+00	1.99E-05	5.61E-02	6.32E-06	2.26E-04	2.21E-03	3.31E-04	6.17E-04	3.98E-04	4.08E-04	4.34E-05	5.01E-05	1.05E-08	2.09E-04	3.52E-05
9	E74	60	Passenger Truck	367	0.00E+00	5.95E-06	6.31E-07	2.23E+01	3.76E-05	9.60E-02	1.23E-05	7.02E-04	4.04E-03	6.02E-04	1.18E-03	7.66E-04	7.85E-04	1.78E-04	1.11E-04	2.05E-08	3.92E-04	1.19E-04
9	E74	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	E74	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.31E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.75E-04
9	E74	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.92E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
53	E75	70	Passenger Car	1144	0.00E+00	1.24E-05	1.34E-06	5.04E+01	8.78E-05	2.47E-01	2.79E-05	1.18E-03	8.68E-03	1.36E-03	2.72E-03	1.75E-03	1.80E-03	1.94E-04	2.54E-04	5.27E-08	9.21E-04	1.84E-04
53	E75	70	Passenger Truck	1915	0.00E+00	2.58E-05	2.75E-06	1.14E+02	1.66E-04	4.35E-01	5.43E-05	3.32E-03	1.55E-02	2.41E-03	5.19E-03	3.37E-03	3.46E-03	8.44E-04	5.66E-04	9.92E-08	1.74E-03	5.57E-04
53	E75	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.76E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.65E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
53	E75	70	Combination Short Haul Truck	27	0.00E+00	6.87E-06	5.11E-07	9.27E+00	1.74E-08	9.92E-03	4.89E-06	1.03E-02	9.68E-04	1.61E-04	4.12E-04	1.49E-04	1.54E-04	1.47E-03	3.10E-05	0.00E+00	2.57E-04	1.93E-03
53	E75	70	Combination Long Haul Truck	24	0.00E+00	9.41E-06	5.35E-07	8.71E+00	5.90E-08	1.18E-02	7.74E-06	1.10E-02	1.01E-03	1.52E-04	8.56E-04	1.72E-04	1.79E-04	1.40E-03	2.92E-05	0.00E+00	6.77E-04	2.07E-03
53	E76	70	Passenger Car	854	0.00E+00	9.24E-06	1.00E-06	3.77E+01	6.56E-05	1.84E-01	2.08E-05	8.79E-04	6.48E-03	1.01E-03	2.03E-03	1.31E-03	1.34E-03	1.45E-04	1.89E-04	3.93E-08	6.87E-04	1.37E-04
53	E76	70	Passenger Truck	1430	0.00E+00	1.93E-05	2.05E-06	8.48E+01	1.24E-04	3.25E-01	4.05E-05	2.48E-03	1.16E-02	1.80E-03	3.88E-03	2.52E-03	2.58E-03	6.30E-04	4.23E-04	7.41E-08	1.30E-03	4.16E-04
53	E76	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.90E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.17E-06
53	E76	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.22E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.95E-04
53	E76	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.52E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.51E-04
53	E77	70	Passenger Car	1167	0.00E+00	1.26E-05	1.37E-06	5.15E+01	8.96E-05	2.52E-01	2.85E-05	1.20E-03	8.85E-03	1.39E-03	2.78E-03	1.79E-03	1.84E-03	1.98E-04	2.59E-04	5.37E-08	9.39E-04	1.87E-04
53	E77	70	Passenger Truck	1954	0.00E+00	2.64E-05	2.80E-06	1.16E+02	1.69E-04	4.44E-01	5.54E-05	3.39E-03	1.58E-02	2.46E-03	5.30E-03	3.44E-03	3.53E-03	8.61E-04	5.77E-04	1.01E-07	1.77E-03	5.68E-04
53	E77	70	Single Unit Short Haul Truck	28	0.00E+00	4.89E-06	1.99E-07	4.55E+00	3.28E-06	8.25E-03	5.32E-06	1.94E-03	4.41E-04	8.10E-05	6.59E-04	1.26E-04	1.28E-04	4.62E-04	1.85E-05	7.47E-09	5.31E-04	3.64E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	2.13E-07	8.56E-09	1.93E-01	1.41E-07	3.46E-04	2.31E-07	8.36E-05	2.02E-05	3.62E-06	2.88E-05	5.42E-06	5.53E-06	1.95E-05	7.86E-07	3.15E-10	2.32E-05	1.56E-05
53	E77	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
53	E77	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
53	E78	70	Passenger Car	924	0.00E+00	1.00E-05	1.09E-06	4.08E+01	7.10E-05	1.99E-01	2.25E-05	9.51E-04	7.01E-03	1.10E-03	2.20E-03	1.42E-03	1.46E-03	1.57E-04	2.05E-04	4.26E-08	7.44E-04	1.48E-04
53	E78	70	Passenger Truck	1548	0.00E+00	2.09E-05	2.22E-06	9.18E+01	1.34E-04	3.52E-01	4.39E-05	2.69E-03	1.25E-02	1.95E-03	4.20E-03	2.73E-03	2.79E-03	6.82E-04	4.57E-04	8.02E-08	1.40E-03	4.50E-04
53	E78	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.90E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.17E-06
53	E78	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.82E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.09E-04
53	E78	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.16E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.73E-04
53	E79	70	Passenger Car	1155	0.00E+00	1.25E-05	1.36E-06	5.09E+01	8.87E-05	2.49E-01	2.82E-05	1.19E-03	8.76E-03	1.37E-03	2.75E-03	1.77E-03	1.82E-03	1.96E-04	2.56E-04	5.32E-08	9.30E-04	1.85E-04
53	E79	70	Passenger Truck	1935	0.00E+00	2.61E-05	2.78E-06	1.15E+02	1.68E-04	4.40E-01	5.48E-05	3.36E-03	1.56E-02	2.43E-03	5.25E-03	3.41E-03	3.49E-03	8.53E-04	5.72E-04	1.00E-07	1.75E-03	5.62E-04
53	E79	70	Single Unit Short Haul Truck	28	0.00E+00	4.89E-06	1.99E-07	4.55E+00	3.28E-06	8.25E-03	5.32E-06	1.94E-03	4.41E-04	8.10E-05	6.59E-04	1.26E-04	1.28E-04	4.62E-04	1.85E-05	7.47E-09	5.31E-04	3.64E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	2.13E-07	8.56E-09	1.93E-01	1.41E-07	3.46E-04	2.31E-07	8.36E-05	2.02E-05	3.62E-06	2.88E-05	5.42E-06	5.53E-06	1.95E-05	7.86E-07	3.15E-10	2.32E-05	1.56E-05
53	E79	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.83E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
53	E79	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.24E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
53	E80	70	Passenger Car	875	0.00E+00	9.47E-06	1.03E-06	3.86E+01	6.72E-05	1.89E-01	2.13E-05	9.00E-04	6.64E-03	1.04E-03	2.08E-03	1.34E-03	1.38E-03	1.49E-04	1.94E-04	4.03E-08	7.04E-04	1.40E-04
53	E80	70	Passenger Truck	1465	0.00E+00	1.98E-05	2.10E-06	8.69E+01	1.27E-04	3.33E-01	4.15E-05	2.54E-03	1.19E-02	1.84E-03	3.97E-03	2.58E-03	2.64E-03	6.46E-04	4.33E-04	7.59E-08	1.33E-03	4.26E-04
53	E80	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.74E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.26E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.50E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.40E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.63E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.10E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
10	E83	70	Passenger Car	294	0.00E+00	3.28E-06	3.57E-07	1.28E+01	2.33E-05	6.61E-02	7.41E-06	2.98E-04	2.27E-03	3.53E-04	7.22E-04	4.66E-04	4.78E-04	5.00E-05	6.45E-05	1.34E-08	2.44E-04	4.64E-05
10	E83	70	Passenger Truck	493	0.00E+00	6.91E-06	7.35E-07	2.89E+01	4.43E-05	1.17E-01	1.45E-05	8.65E-04	4.10E-03	6.35E-04	1.39E-03	9.01E-04	9.23E-04	2.18E-04	1.44E-04	2.58E-08	4.63E-04	1.45E-04
10	E83	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	E83	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
10	E83	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
10	E84	70	Passenger Car	285	0.00E+00	3.18E-06	3.45E-07	1.24E+01	2.25E-05	6.39E-02	7.16E-06	2.88E-04	2.19E-03	3.42E-04	6.98E-04	4.50E-04	4.62E-04	4.83E-05	6.24E-05	1.30E-08	2.36E-04	4.49E-05
10	E84	70	Passenger Truck	476	0.00E+00	6.69E-06	7.11E-07	2.79E+01	4.28E-05	1.13E-01	1.40E-05	8.37E-04	3.97E-03	6.14E-04	1.34E-03	8.71E-04	8.92E-04	2.11E-04	1.39E-04	2.49E-08	4.48E-04	1.40E-04
10	E84	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	E84	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	E84	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
9	E85	60	Passenger Car	1442	0.00E+00	1.85E-05	2.01E-06	6.58E+01	1.31E-04	3.69E-01	4.16E-05	1.48E-03	1.46E-02	2.18E-03	4.06E-03	2.62E-03	2.69E-03	2.86E-04	3.30E-04	6.92E-08	1.37E-03	2.32E-04
9	E85	60	Passenger Truck	2415	0.00E+00	3.92E-05	4.15E-06	1.47E+02	2.47E-04	6.32E-01	8.13E-05	4.62E-03	2.66E-02	3.96E-03	7.75E-03	5.04E-03	5.17E-03	1.17E-03	7.28E-04	1.35E-07	2.58E-03	7.82E-04
9	E85	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.10E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.67E-04
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.77E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.32E-05
9	E85	60	Combination Short Haul Truck	38	0.00E+00	1.10E-05	8.07E-07	1.33E+01	3.01E-08	1.64E-02	7.90E-06	1.68E-02	1.92E-03	3.00E-04	6.77E-04	2.36E-04	2.45E-04	2.11E-03	4.44E-05	0.00E+00	4.32E-04	3.16E-03
9	E85	60	Combination Long Haul Truck	34	0.00E+00	1.51E-05	8.25E-07	1.25E+01	1.02E-07	1.97E-02	1.26E-05	1.79E-02	2.01E-03	2.91E-04	1.43E-03	2.69E-04	2.81E-04	2.01E-03	4.20E-05	0.00E+00	1.15E-03	3.36E-03
9	E86	60	Passenger Car	1308	0.00E+00	1.67E-05	1.82E-06	5.96E+01	1.19E-04	3.35E-01	3.77E-05	1.35E-03	1.32E-02	1.98E-03	3.68E-03	2.37E-03	2.44E-03	2.59E-04	2.99E-04	6.28E-08	1.25E-03	2.10E-04
9	E86	60	Passenger Truck	2190	0.00E+00	3.55E-05	3.77E-06	1.33E+02	2.24E-04	5.73E-01	7.37E-05	4.19E-03	2.41E-02	3.59E-03	7.03E-03	4.57E-03	4.69E-03	1.06E-03	6.60E-04	1.22E-07	2.34E-03	7.10E-04
9	E86	60	Single Unit Short Haul Truck	67	0.00E+00	1.50E-05	6.18E-07	1.12E+01	9.92E-06	1.96E-02	1.62E-05	5.74E-03	1.54E-03	2.59E-04	2.00E-03	3.85E-04	3.92E-04	1.13E-03	4.55E-05	1.87E-08	1.60E-03	1.07E-03
9	E86	60	Single Unit Long

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E90	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.65E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.77E-05
9	E90	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.96E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.34E-05
9	E91	60	Passenger Car	4	0.00E+00	4.79E-08	5.20E-09	1.70E-01	3.40E-07	9.57E-04	1.08E-07	3.85E-06	3.78E-05	5.65E-06	1.05E-05	6.79E-06	6.96E-06	7.41E-07	8.55E-07	1.80E-10	3.56E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.02E-07	1.08E-08	3.80E-01	6.41E-07	1.64E-03	2.11E-07	1.20E-05	6.90E-05	1.03E-05	2.01E-05	1.31E-05	1.34E-05	3.03E-06	1.89E-06	3.50E-10	6.70E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.79E-08	5.20E-09	1.70E-01	3.40E-07	9.57E-04	1.08E-07	3.85E-06	3.78E-05	5.65E-06	1.05E-05	6.79E-06	6.96E-06	7.41E-07	8.55E-07	1.80E-10	3.56E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.02E-07	1.08E-08	3.80E-01	6.41E-07	1.64E-03	2.11E-07	1.20E-05	6.90E-05	1.03E-05	2.01E-05	1.31E-05	1.34E-05	3.03E-06	1.89E-06	3.50E-10	6.70E-06	2.03E-06
9	E93	60	Passenger Car	215	0.00E+00	2.76E-06	3.00E-07	9.82E+00	1.96E-05	5.52E-02	6.22E-06	2.22E-04	2.17E-03	3.26E-04	6.06E-04	3.91E-04	4.01E-04	4.27E-05	4.92E-05	1.03E-08	2.05E-04	3.46E-05
9	E93	60	Passenger Truck	361	0.00E+00	5.85E-06	6.20E-07	2.19E+01	3.69E-05	9.44E-02	1.21E-05	6.90E-04	3.97E-03	5.91E-04	1.16E-03	7.53E-04	7.72E-04	1.75E-04	1.09E-04	2.02E-08	3.86E-04	1.17E-04
9	E93	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
9	E93	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.31E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.75E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.92E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
9	E94	60	Passenger Car	215	0.00E+00	2.75E-06	2.99E-07	9.80E+00	1.95E-05	5.51E-02	6.20E-06	2.21E-04	2.17E-03	3.25E-04	6.05E-04	3.90E-04	4.00E-04	4.26E-05	4.91E-05	1.03E-08	2.05E-04	3.45E-05
9	E94	60	Passenger Truck	360	0.00E+00	5.84E-06	6.19E-07	2.18E+01	3.68E-05	9.42E-02	1.21E-05	6.88E-04	3.97E-03	5.90E-04	1.16E-03	7.52E-04	7.70E-04	1.74E-04	1.09E-04	2.01E-08	3.85E-04	1.17E-04
9	E94	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.65E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.77E-05
9	E94	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.96E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.34E-05
54	E95	80	Passenger Car	769	0.00E+00	7.81E-06	8.48E-07	3.28E+01	5.54E-05	1.58E-01	1.76E-05	8.02E-04	4.41E-03	7.26E-04	1.72E-03	1.11E-03	1.14E-03	1.14E-04	1.65E-04	3.42E-08	5.81E-04	1.25E-04
54	E95	80	Passenger Truck	1289	0.00E+00	1.62E-05	1.73E-06	7.44E+01	1.06E-04	2.87E-01	3.44E-05	2.15E-03	7.88E-03	1.29E-03	3.30E-03	2.14E-03	2.20E-03	5.29E-04	3.72E-04	6.58E-08	1.11E-03	3.58E-04
54	E95	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.40E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.49E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
54	E95	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.60E-03
54	E95	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.47E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.78E-03
54	E96	80	Passenger Car	542	0.00E+00	5.50E-06	5.98E-07	2.31E+01	3.90E-05	1.11E-01	1.24E-05	5.65E-04	3.11E-03	5.12E-04	1.21E-03	7.80E-04	8.00E-04	8.06E-05	1.16E-04	2.41E-08	4.09E-04	8.81E-05
54	E96	80	Passenger Truck	908	0.00E+00	1.14E-05	1.22E-06	5.24E+01	7.44E-05	2.02E-01	2.42E-05	1.52E-03	5.55E-03	9.10E-04	2.33E-03	1.51E-03	1.55E-03	3.73E-04	2.62E-04	4.64E-08	7.79E-04	2.52E-04
54	E96	80	Single Unit Short Haul Truck	22	0.00E+00	3.02E-06	1.18E-07	3.61E+00	2.05E-06	6.56E-03	3.32E-06	1.26E-03	2.47E-04	5.06E-05	4.16E-04	7.71E-05	7.86E-05	3.67E-04	1.47E-05	5.82E-09	3.38E-04	2.35E-04
54	E96	80	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.07E-09	1.53E-01	8.73E-08	2.73E-04	1.44E-07	5.36E-05	1.13E-05	2.25E-06	1.82E-05	3.31E-06	3.37E-06	1.54E-05	6.21E-07	2.42E-10	1.48E-05	1.00E-05
54	E96	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.81E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.47E-03
54	E96	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.35E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.57E-03
54	E97	80	Passenger Car	769	0.00E+00	7.81E-06	8.48E-07	3.28E+01	5.54E-05	1.58E-01	1.76E-05	8.02E-04	4.41E-03	7.26E-04	1.72E-03	1.11E-03	1.14E-03	1.14E-04	1.65E-04	3.42E-08	5.81E-04	1.25E-04
54	E97	80	Passenger Truck	1289	0.00E+00	1.62E-05	1.73E-06	7.44E+01	1.06E-04	2.87E-01	3.44E-05	2.15E-03	7.88E-03	1.29E-03	3.30E-03	2.14E-03	2.20E-03	5.29E-04	3.72E-04	6.58E-08	1.11E-03	3.58E-04
54	E97	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.40E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.49E-04
54	E97	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
54	E97	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.60E-03
54	E97	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.47E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.78E-03
54	E98	80	Passenger Car	542	0.00E+00	5.50E-06	5.98E-07	2.31E+01	3.90E-05	1.11E-01	1.24E-05	5.65E-04	3.11E-03	5.12E-04	1.21E-03	7.80E-04	8.00E-04	8.06E-05	1.16E-04	2.41E-08	4.09E-04	8.81E-05
54	E98	80	Passenger Truck	908	0.00E+00	1.14E-05	1.22E-06	5.24E+01	7.44E-05	2.02E-01	2.42E-05	1.52E-03	5.55E-03	9.10E-04	2.33E-03	1.51E-03	1.55E-03	3.73E-04	2.62E-04	4.64E-08	7.79E-04	2.52E-04
54	E98	80	Single Unit Short Haul Truck	22	0.00E+00	3.02E-06	1.18E-07	3.61E+00	2.05E-06	6.56E-03	3.32E-06	1.26E-03	2.47E-04	5.06E-05	4.16E-04	7.71E-05	7.86E-05	3.67E-04	1.47E-05	5.82E-09	3.38E-04	2.35E-04
54	E98	80	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.07E-09	1.53E-01	8.73E-08	2.73E-04	1.44E-07	5.36E-05	1.13E-05	2.25E-06	1.82E-05	3.31E-06	3.37E-06	1.54E-05	6.21E-07	2.42E-10	1.48E-05	1.00E-05
54	E98	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.81E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.47E-03
54	E98	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.35E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.57E-03
9	F01	60	Passenger Car	418	0.00E+00	5.35E-06	5.81E-07	1.90E+01	3.79E-05	1.07E-01	1.21E-05	4.30E-04	4.22E-03	6.32E-04	1.18E-03	7.58E-04	7.78E-04	8.28E-05	9.55E-05	2.01E-08	3.98E-04	6.71E-05
9	F01	60	Passenger Truck	699	0.00E+00	1.13E-05	1.20E-06	4.24E+01	7.16E-05	1.83E-01	2.35E-05	1.34E-03	7.71E-03	1.15E-03	2.24E-03	1.46E-03	1.50E-03	3.39E-04	2.11E-04	3.91E-08	7.48E-04	2.27E-04
9	F01	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.39E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.03E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	F01	60	Combination Short Haul Truck	14	0.00E+00	4.12E-06	3.03E-07	4.97E+00	1.13E-08	6.16E-03	2.96E-06	6.28E-03	7.19E-04	1.12E-04	2.54E-04	8.86E-05	9.19E-05	7.91E-04	1.66E-05	0.00E+00	1.62E-04	1.18E-03
9	F01	60	Combination Long Haul Truck	13	0.00E+00	5.66E-06	3.09E-07	4.70E+00	3.82E-08	7.40E-03	4.74E-06	6.69E-03	7.54E-04	1.09E-04	5.37E-04	1.01E-04	1.05E-04	7.54E-04	1.57E-05	0.00E+00	4.32E-04	1.26E-03
9	F02	60	Passenger Car	339	0.00E+00	4.35E-06	4.72E-07	1.55E+01	3.08E-05	8.69E-02	9.80E-06	3.50E-04	3.43E-03	5.13E-04	9.56E-04	6.16E-04	6.32E-04	6.73E-05	7.76E-05	1.63E-08	3.23E-04	5.45E-05
9	F02	60	Passenger Truck	569	0.00E+00	9.22E-06	9.78E-07	3.45E+01	5.82E-05	1.49E-01	1.91E-05	1.09E-03	6.26E-03	9.32E-04	1.82E-03	1.19E-03	1.22E-03	2.75E-04	1.71E-04	3.18E-08	6.08E-04	1.84E-04
9	F02	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.14E-05
9	F02	60	Combination Short Haul Truck	5	0.00E+00	1.37E-06	1.01E-07	1.66E+00	3.76E-09	2.05E-03	9.87E-07	2.09E-03	2.40E-04	3.75E-05	8.47E-05	2.95E-05	3.06E-05	2.64E-04	5.54E-06	0.00E+00	5.40E-05	3.95E-04
9	F02	60	Combination Long Haul Truck	4	0.00E+00	1.89E-06	1.03E-07	1.57E+00	1.27E-08	2.47E-03	1.58E-06	2.23E-03	2.51E-04	3.64E-05	1.79E-04	3.37E-05	3.51E-05	2.51E-04	5.25E-06	0.00E+00	1.44E-04	4.20E-04
11	F03	80	Passenger Car	87	0.00E+00	9.02E-07	9.80E-08	3.67E+00	6.40E-06	1.86E-02	2.03E-06	8.99E-05	4.73E-04	7.92E-05	1.98E-04	1.28E-04	1.31E-04	1.29E-05	1.85E-05	3.95E-09	6.71E-05	1.40E-05
11	F03	80	Passenger Truck	145	0.00E+00	1.86E-06	1.98E-07	8.29E+00	1.21E-05	3.28E-02	3.93E-06	2.43E-04	8.42E-04	1.40E-04	3.78E-04	2.45E-04	2.51E-04	5.96E-05	4.14E-05	7.53E-09	1.26E-04	4.04E-05
11	F03	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.27E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.12E-05
11	F03	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.16E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.19E-04
11	F03	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.24E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.34E-04
11	F04	80	Passenger Car	23	0.00E+00	2.37E-07	2.58E-08	9.66E-01	1.68E-06	4.89E-03	5.35E-07	2.36E-05	1.24E-04	2.08E-05	5.21E-05	3.36E-05	3.45E-05	3.39E-06	4.87E-06	1.04E-09	1.76E-05	3.69E-06
11	F04	80	Passenger Truck	38	0.00E+00	4.88E-07	5.20E-08	2.18E+00	3.18E-06	8.63E-03	1.03E-06	6.38E-05	2.21E-04	3.69E-05	9.93E-05	6.44E-05	6.60E-05	1.57E-05	1.09E-05	1.98E-09	3.33E-05	1.06E-05
9	F05	60	Passenger Car	191	0.00E+00	2.45E-06	2.66E-07	8.71E+00	1.74E-05	4.89E-02	5.51E-06	1.97E-04	1.93E-03	2.89E-04	5.38E-04	3.47E-04	3.56E-04	3.79E-05	4.37E-05	9.17E-09	1.82E-04	3.07E-05
9	F05	60	Passenger Truck	320	0.00E+00	5.19E-06	5.50E-07	1.94E+01	3.27E-05	8.37E-02	1.08E-05	6.12E-04	3.53E-03	5.25E-04	1.03E-03	6.68E-04	6.84E-04	1.55E-04	9.64E-05	1.79E-08	3.42E-04	1.04E-04
9	F05	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.02E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	F05	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.89E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.21E-04
9	F05	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.21E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.81E-04
9	F06	60	Passenger Car	322	0.00E+00	4.12E-06	4.48E-07	1.47E+01	2.92E-05	8.24E-02	9.29E-06	3.31E-04	3.25E-03	4.87E-04	9.06E-04	5.84E-04	6.00E-04	6.38E-05	7.36E-05	1.55E-08	3.07E-04	5.17E-05
9	F06	60	Passenger Truck	539	0.00E+00	8.75E-06	9.27E-07	3.27E+01	5.52E-05	1.41E-01	1.81E-05	1.03E-03	5.94E-03	8.84E-04	1.73E-03	1.13E-03	1.15E-03	2.61E-04	1.62E-04	3.01E-08	5.77E-04	1.75E-04
9	F06	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.20E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.53E-04
9	F06	60	Combination Short Haul Truck	9	0.00E+00	2.59E-06	1.91E-07	3.13E+00	7.11E-09	3.88E-03	1.86E-06	3.96E-03	4.53E-04	7.08E-05	1.60E-04	5.58E-05	5.79E-05	4.98E-04	1.05E-05	0.00E+00	1.02E-04	7.45E-04
9	F06	60	Combination Long Haul Truck	8	0.00E+00	3.57E-06	1.95E-07	2.96E+00	2.41E-08	4.66E-03	2.98E-06	4.21E-03	4.75E-04	6.87E-05	3.38E-04	6.36E-05	6.63E-05	4.75E-04	9.91E-06	0.00E+00	2.72E-04	7.94E-04
9	F07	60	Passenger Car	430	0.00E+00	5.51E-06	5.99E-07	1.96E+01	3.91E-05	1.10E-01	1.24E-05	4.43E-04	4.35E-03	6.51E-04	1.21E-03	7.81E-04	8.02E-04	8.53E-05	9.84E-05	2.07E-08	4.10E-04	6.91E-05
9	F07	60	Passenger Truck	721	0.00E+00	1.17E-05	1.24E-06	4.37E+01	7.38E-05	1.89E-01	2.43E-05	1.38E-03	7.94E-03	1.18E-03	2.31E-03	1.50E-03	1.54E-03	3.49E-04	2.17E-04	4.03E-08	7.71E-04	2.33E-04
9	F07	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.94E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	F07	60	Combination Short Haul Truck	22	0.00E+00	6.56E-06	4.82E-07	7.92E+00	1.80E-08	9.81E-03	4.72E-06	1.00E-02	1.15E-03	1.79E-04	4.05E-04	1.41E-04	1.46E-04	1.26E-03	2.65E-05	0.00E+00	2.58E-04	1.89E-03
9	F07	60	Combination Long Haul Truck	21	0.00E+00	9.02E-06	4.93E-07	7.48E+00	6.09E-08	1.18E-02	7.54E-06	1.07E-02	1.20E-03	1.74E-04	8.55E-04	1.61E-04	1.68E-04	1.20E-03	2.51E-05	0.00E+00	6.88E-04	2.01E-03
9	F08	60	Passenger Car	446	0.00E+00	5.71E-06	6.20E-07	2.03E+01	4.05E-05	1.14E-01	1.29E-05	4.59E-04	4.50E-03	6.75E-04	1.26E-03	8.10E-04	8.31E-04	8.84E-05	1.02E-04	2.14E-08	4.25E-04	7.16E-05
9	F08	60	Passenger Truck	747	0.00E+00	1.21E-05	1.28E-06	4.53E+01	7.65E-05	1.95E-01	2.51E-05	1.43E-03	8.23E-03	1.23E-03	2.40E-03	1.56E-03	1.60E-03	3.62E-04	2.25E-04	4.17E-08	7.99E-04	2.42E-04
9	F08	60	Single Unit Short Haul Truck	21	0.00E+00	4.71E-06	1.94E-07	3.51E+00	3.12E-06	6.17E-03	5.09E-06	1.80E-03	4.85E-04	8.15E-05	6.28E-04	1.21E-04	1.23E-04	3.55E-04	1.43E-05	5.89E-09	5.04E-04	3.38E-04
9	F08	60	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.44E-09	1.49E-01	1.35E-07	2.62E-04	2.22E-07	7.81E-05	2.18E-05	3.61E-06	2.74E-05	5.25E-06	5.36E-06	1.51E-05	6.10E-07	2.50E-10	2.21E-05	1.46E-05
9	F08	60	Combination Short Haul Truck	16	0.00E+00	4.58E-06	3.36E-07	5.53E+00	1.25E-08	6.84E-03	3.29E-06	6.98E-03	7.99E-04	1.25E-04	2.82E-04	9.84E-05	1.02E-04	8.78E-04	1.85E-05	0.00E+00	1.80E-04	1.32E-03
9	F08	60	Combination Long Haul Truck	14	0.00E+00	6.29E-06	3.44E-07	5.22E+00	4.25E-08	8.22E-03	5.26E-06	7.44E-03	8.38E-04	1.21E-04	5.97E-04	1.12E-04	1.17E-04	8.38E-04	1.75E-05	0.00E+00	4.80E-04	1.40E-03
11	F09	80	Passenger Car	176	0.00E+00	1.83E-06	1.99E-07	7.44E+00	1.30E-05	3.77E-02	4.12E-06	1.82E-04	9.58E-04	1.60E-04	4.02E-04	2.59E-04	2.66E-04	2.61E-05	3.75E-05	8.01E-09	1.36E-04	2.84E-05
11	F09	80	Passenger Truck	294	0.00E+00	3.76E-06	4.01E-07	1.68E+01	2.45E-05	6.65E-02	7.97E-06	4.91E-04	1.71E-03	2.84E-04	7.65E-04	4.96E-04	5.09E-04	1.21E-04	8.39E-05	1.52E-08	2.56E-04	8.18E-05
11	F09	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F16	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.09E-06
10	F16	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.23E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.85E-04
10	F16	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.59E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.05E-03
10	F17	70	Passenger Car	307	0.00E+00	3.42E-06	3.72E-07	1.34E+01	2.43E-05	6.88E-02	7.72E-06	3.10E-04	2.36E-03	3.68E-04	7.53E-04	4.85E-04	4.98E-04	5.21E-05	6.72E-05	1.40E-08	2.55E-04	4.84E-05
10	F17	70	Passenger Truck	513	0.00E+00	7.20E-06	7.66E-07	3.01E+01	4.61E-05	1.22E-01	1.51E-05	9.01E-04	4.28E-03	6.62E-04	1.44E-03	9.38E-04	9.62E-04	2.28E-04	1.50E-04	2.68E-08	4.83E-04	1.51E-04
10	F17	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	F17	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.19E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.71E-06
10	F17	70	Combination Short Haul Truck	18	0.00E+00	4.71E-06	3.51E-07	6.36E+00	1.20E-08	6.80E-03	3.36E-06	7.04E-03	6.64E-04	1.11E-04	2.83E-04	1.02E-04	1.06E-04	1.01E-03	2.13E-05	0.00E+00	1.77E-04	1.33E-03
10	F17	70	Combination Long Haul Truck	17	0.00E+00	6.46E-06	3.67E-07	5.98E+00	4.05E-08	8.12E-03	5.31E-06	7.53E-03	6.91E-04	1.04E-04	5.87E-04	1.18E-04	1.23E-04	9.59E-04	2.00E-05	0.00E+00	4.64E-04	1.42E-03
10	F18	70	Passenger Car	340	0.00E+00	3.79E-06	4.12E-07	1.48E+01	2.69E-05	7.63E-02	8.55E-06	3.44E-04	2.62E-03	4.08E-04	8.34E-04	5.38E-04	5.52E-04	5.77E-05	7.45E-05	1.55E-08	2.82E-04	5.36E-05
10	F18	70	Passenger Truck	569	0.00E+00	7.99E-06	8.49E-07	3.34E+01	5.11E-05	1.35E-01	1.67E-05	9.99E-04	4.74E-03	7.33E-04	1.60E-03	1.04E-03	1.07E-03	2.52E-04	1.66E-04	2.98E-08	5.35E-04	1.68E-04
10	F18	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.71E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	F18	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.75E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.01E-06
10	F18	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.62E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.71E-04
10	F18	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.95E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.32E-04
10	F19	70	Passenger Car	220	0.00E+00	2.45E-06	2.67E-07	9.59E+00	1.74E-05	4.94E-02	5.53E-06	2.22E-04	1.69E-03	2.64E-04	5.40E-04	3.48E-04	3.57E-04	3.74E-05	4.82E-05	1.00E-08	1.83E-04	3.47E-05
10	F19	70	Passenger Truck	368	0.00E+00	5.17E-06	5.49E-07	2.16E+01	3.31E-05	8.72E-02	1.08E-05	6.46E-04	3.07E-03	4.74E-04	1.04E-03	6.73E-04	6.90E-04	1.63E-04	1.07E-04	1.92E-08	3.46E-04	1.09E-04
10	F19	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.70E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.25E-04
10	F19	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.61E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.92E-04
10	F19	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.80E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.27E-04
10	F20	70	Passenger Car	389	0.00E+00	4.34E-06	4.72E-07	1.70E+01	3.08E-05	8.73E-02	9.79E-06	3.93E-04	3.00E-03	4.67E-04	9.55E-04	6.15E-04	6.32E-04	6.61E-05	8.52E-05	1.77E-08	3.23E-04	6.13E-05
10	F20	70	Passenger Truck	651	0.00E+00	9.14E-06	9.71E-07	3.82E+01	5.85E-05	1.54E-01	1.92E-05	1.14E-03	5.42E-03	8.39E-04	1.83E-03	1.19E-03	1.22E-03	2.89E-04	1.90E-04	3.40E-08	6.12E-04	1.92E-04
10	F20	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	F20	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.01E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.79E-05
10	F21	70	Passenger Car	75	0.00E+00	8.35E-07	9.07E-08	3.26E+00	5.92E-06	1.68E-02	1.88E-06	7.56E-05	5.76E-04	8.98E-05	1.84E-04	1.18E-04	1.21E-04	1.27E-05	1.64E-05	3.40E-09	6.21E-05	1.18E-05
10	F21	70	Passenger Truck	125	0.00E+00	1.76E-06	1.87E-07	7.34E+00	1.13E-05	2.97E-02	3.68E-06	2.20E-04	1.04E-03	1.61E-04	3.52E-04	2.29E-04	2.35E-04	5.55E-05	3.65E-05	6.55E-09	1.18E-04	3.69E-05
10	F22	70	Passenger Car	183	0.00E+00	2.04E-06	2.22E-07	7.97E+00	1.45E-05	4.10E-02	4.60E-06	1.85E-04	1.41E-03	2.19E-04	4.49E-04	2.89E-04	2.97E-04	3.11E-05	4.01E-05	8.32E-09	1.52E-04	2.88E-05
10	F22	70	Passenger Truck	306	0.00E+00	4.30E-06	4.57E-07	1.79E+01	2.75E-05	7.25E-02	9.00E-06	5.38E-04	2.55E-03	3.94E-04	8.61E-04	5.60E-04	5.73E-04	1.36E-04	8.93E-05	1.60E-08	2.88E-04	9.03E-05
10	F23	70	Passenger Car	61	0.00E+00	6.80E-07	7.39E-08	2.66E+00	4.83E-06	1.37E-02	1.53E-06	6.16E-05	4.69E-04	7.31E-05	1.50E-04	9.65E-05	9.90E-05	1.04E-05	1.34E-05	2.77E-09	5.06E-05	9.61E-06
10	F23	70	Passenger Truck	102	0.00E+00	1.43E-06	1.52E-07	5.98E+00	9.17E-06	2.42E-02	3.00E-06	1.79E-04	8.50E-04	1.31E-04	2.87E-04	1.87E-04	1.91E-04	4.52E-05	2.98E-05	5.34E-09	9.59E-05	3.01E-05
10	F23	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	F23	70	Single Unit Long Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	F23	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
10	F24	70	Passenger Car	88	0.00E+00	9.81E-07	1.07E-07	3.83E+00	6.96E-06	1.97E-02	2.21E-06	8.89E-05	6.77E-04	1.05E-04	2.16E-04	1.39E-04	1.43E-04	1.49E-05	1.93E-05	4.00E-09	7.30E-05	1.39E-05
10	F24	70	Passenger Truck	147	0.00E+00	2.06E-06	2.19E-07	8.62E+00	1.32E-05	3.48E-02	4.33E-06	2.58E-04	1.23E-03	1.90E-04	4.14E-04	2.69E-04	2.76E-04	6.52E-05	4.29E-05	7.69E-09	1.38E-04	4.34E-05
10	F24	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.76E-05
10	F24	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.04E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	F24	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.61E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.62E-04
9	F25	60	Passenger Car	235	0.00E+00	3.01E-06	3.27E-07	1.07E+01	2.13E-05	6.01E-02	6.78E-06	2.42E-04	2.37E-03	3.55E-04	6.61E-04	4.26E-04	4.37E-04	4.65E-05	5.37E-05	1.13E-08	2.24E-04	3.77E-05
9	F25	60	Passenger Truck	393	0.00E+00	6.38E-06	6.76E-07	2.39E+01	4.02E-05	1.03E-01	1.32E-05	7.52E-04	4.33E-03	6.45E-04	1.26E-03	8.21E-04	8.41E-04	1.91E-04	1.19E-04	2.20E-08	4.21E-04	1.27E-04
9	F25	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	1.99E-04
9	F25	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.61E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.64E-06
9	F25	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.05E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
9	F25	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.45E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.21E-03
9	F26	60	Passenger Car	311	0.00E+00	3.98E-06	4.33E-07	1.42E+01	2.83E-05	7.97E-02	8.98E-06	3.20E-04	3.14E-03	4.70E-04	8.76E-04	5.65E-04	5.79E-04	6.17E-05	7.11E-05	1.49E-08	2.96E-04	5.00E-05
9	F26	60	Passenger Truck	521	0.00E+00	8.45E-06	8.96E-07	3.16E+01	5.33E-05	1.36E-01	1.75E-05	9.96E-04	5.74E-03	8.54E-04	1.67E-03	1.09E-03	1.11E-03	2.52E-04	1.57E-04	2.91E-08	5.57E-04	1.69E-04
9	F26	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.02E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	F26	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.42E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.33E-04
9	F26	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.71E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.87E-04
9	F27	60	Passenger Car	864	0.00E+00	1.11E-05	1.20E-06	3.94E+01	7.85E-05	2.21E-01	2.49E-05	8.89E-04	8.72E-03	1.31E-03	2.43E-03	1.57E-03	1.61E-03	1.71E-04	1.97E-04	4.15E-08	8.22E-04	1.39E-04
9	F27	60	Passenger Truck	1446	0.00E+00	2.35E-05	2.49E-06	8.78E+01	1.48E-04	3.78E-01	4.87E-05	2.77E-03	1.59E-02	2.37E-03	4.64E-03	3.02E-03	3.09E-03	7.01E-04	4.36E-04	8.08E-08	1.55E-03	4.69E-04
9	F27	60	Single Unit Short Haul Truck	127	0.00E+00	2.84E-05	1.17E-06	2.12E+01	1.88E-05	3.73E-02	3.08E-05	1.09E-02	2.93E-03	4.92E-04	3.79E-03	7.31E-04	7.45E-04	2.15E-03	8.64E-05	3.56E-08	3.05E-03	2.04E-03
9	F27	60	Single Unit Long Haul Truck	6	0.00E+00	1.24E-06	5.10E-08	9.03E-01	8.17E-07	1.58E-03	1.34E-06	4.72E-04	1.32E-04	2.18E-05	1.66E-04	3.18E-05	3.24E-05	9.13E-05	3.69E-06	1.51E-09	1.34E-04	8.84E-05
9	F27	60	Combination Short Haul Truck	84	0.00E+00	2.44E-05	1.79E-06	2.95E+01	6.69E-08	3.65E-02	1.75E-05	3.72E-02	4.26E-03	6.67E-04	1.51E-03	5.25E-04	5.45E-04	4.68E-03	9.86E-05	0.00E+00	9.60E-04	7.02E-03
9	F27	60	Combination Long Haul Truck	76	0.00E+00	3.36E-05	1.83E-06	2.78E+01	2.27E-07	4.38E-02	2.81E-05	3.97E-02	4.47E-03	6.46E-04	3.18E-03	5.99E-04	6.24E-04	4.47E-03	9.33E-05	0.00E+00	2.56E-03	7.47E-03
9	F28	60	Passenger Car	833	0.00E+00	1.07E-05	1.16E-06	3.80E+01	7.57E-05	2.13E-01	2.40E-05	8.58E-04	8.41E-03	1.26E-03	2.34E-03	1.51E-03	1.55E-03	1.65E-04	1.90E-04	4.00E-08	7.93E-04	1.34E-04
9	F28	60	Passenger Truck	1395	0.00E+00	2.26E-05	2.40E-06	8.47E+01	1.43E-04	3.65E-01	4.70E-05	2.67E-03	1.54E-02	2.29E-03	4.48E-03	2.91E-03	2.98E-03	6.76E-04	4.20E-04	7.80E-08	1.49E-03	4.52E-04
9	F28	60	Single Unit Short Haul Truck	113	0.00E+00	2.52E-05	1.04E-06	1.88E+01	1.67E-05	3.31E-02	2.73E-05	9.67E-03	2.60E-03	4.37E-04	3.37E-03	6.48E-04	6.61E-04	1.91E-03	7.66E-05	3.16E-08	2.71E-03	1.81E-03
9	F28	60	Single Unit Long Haul Truck	5	0.00E+00	1.10E-06	4.53E-08	8.02E-01	7.25E-07	1.40E-03	1.19E-06	4.19E-04	1.17E-04	1.94E-05	1.47E-04	2.82E-05	2.87E-05	8.10E-05	3.27E-06	1.34E-09	1.18E-04	7.84E-05
9	F28	60	Combination Short Haul Truck	68	0.00E+00	1.98E-05	1.46E-06	2.39E+01	5.44E-08	2.97E-02	1.43E-05	3.03E-02	3.46E-03	5.42E-04	1.22E-03	4.26E-04	4.43E-04	3.81E-03	8.01E-05	0.00E+00	7.80E-04	5.70E-03
9	F28	60	Combination Long Haul Truck	62	0.00E+00	2.73E-05	1.49E-06	2.26E+01	1.84E-07	3.56E-02	2.28E-05	3.22E-02	3.63E-03	5.25E-04	2.59E-03	4.86E-04	5.07E-04	3.63E-03	7.58E-05	0.00E+00	2.08E-03	6.07E-03
9	F29	60	Passenger Car	231	0.00E+00	2.95E-06	3.21E-07	1.05E+01	2.10E-05	5.91E-02	6.66E-06	2.37E-04	2.33E-03	3.49E-04	6.49E-04	4.19E-04	4.30E-04	4.57E-05	5.27E-05	1.11E-08	2.20E-04	3.71E-05
9	F29	60	Passenger Truck	386	0.00E+00	6.27E-06	6.64E-07	2.34E+01	3.95E-05	1.01E-01	1.30E-05	7.39E-04	4.26E-03	6.34E-04	1.24E-03	8.06E-04	8.26E-04	1.87E-04	1.16E-04	2.16E-08	4.13E-04	1.25E-04
9	F29	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.10E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.67E-05
9	F29	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.16E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.19E-04
9	F29	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.33E-04
9	F30	60	Passenger Car	298	0.00E+00	3.81E-06	4.15E-07	1.36E+01	2.71E-05	7.63E-02	8.60E-06	3.07E-04	3.01E-03	4.51E-04	8.39E-04	5.41E-04	5.55E-04	5.91E-05	6.81E-05	1.43E-08	2.84E-04	4.79E-05
9	F30	60	Passenger Truck	499	0.00E+00	8.10E-06	8.58E-07	3.03E+01	5.11E-05	1.31E-01	1.68E-05	9.54E-04	5.50E-03	8.18E-04	1.60E-03	1.04E-03	1.07E-03	2.42E-04	1.50E-04	2.79E-08	5.34E-04	1.62E-04
9	F30	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.10E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	F30	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.58E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.05E-03
9	F30	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.95E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
11	F35	80	Passenger Car	262	0.00E+00	2.72E-06	2.96E-07	1.11E+01	1.93E-05	5.61E-02	6.14E-06	2.71E-04	1.43E-03	2.39E-04	5.98E-04	3.86E-04	3.96E-04	3.89E-05	5.58E-05	1.19E-08	2.02E-04	4.23E-05
11	F35	80	Passenger Truck	438	0.00E+00	5.60E-06	5.97E-07	2.50E+01	3.64E-05	9.91E-02	1.19E-05	7.32E-04	2.54E-03	4.23E-04	1.14E-03	7.39E-04	7.58E-04	1.80E-04	1.25E-04	2.27E-08	3.82E-04	1.22E-04
11	F35	80	Single Unit Short Haul Truck	17	0.00E+00	2.37E-06	9.24E-08	2.83E+00	1.60E-06	5.13E-03	2.60E-06	9.82E-04	1.94E-04	3.96E-05	3.26E-04	6.03E-05	6.15E-05	2.88E-04	1.15E-05	4.55E-09	2.64E-04	1.84E-04
11	F35	80	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	3.97E-09	1.19E-01	6.83E-08	2.14E-04	1.13E-07	4.20E-05	8.88E-06	1.76E-06	1.42E-05	2.59E-06	2.64E-06	1.21E-05	4.86E-07	1.90E-10	1.16E-05	7.84E-06
11	F35	80	Combination Short Haul Truck	10	0.00E+00	2.16E-06	1.60E-07	3.51E+00	5.65E-09	3.29E-03	1.54E-06	3.32E-03	2.50E-04	4.52E-05	1.31E-04	4.66E-05	4.83E-05	5.57E-04	1.17E-05	0.00E+00	8.24E-05	6.26E-04
11	F35	80	Combination Long Haul Truck	10	0.00E+00	3.00E-06	1.70E-07	3.26E+00	1.91E-08	3.89E-03	2.48E-06	3.55E-03	2.58E-04	4.13E-05	2.75E-04	5.46E-05	5.69E-05	5.22E-04	1.09E-05	0.00E+00	2.18E-04	6.69E-04
11	F36	80	Passenger Car	143	0.00E+00	1.48E-06	1.61E-07	6.05E+00	1.05E-05	3.06E-02	3.35E-06	1.48E-04	7.79E-04	1.30E-04	3.27E-04	2.11E-04	2.16E-04	2.12E-05	3.05E-05	6.51E-09	1.10E-04	2.31E-05
11	F36	80	Passenger Truck	239	0.00E+00	3.06E-06	3.26E-07	1.37E+01	1.99E-05	5.41E-02	6.48E-06	3.99E-04	1.39E-03	2.31E-04	6.22E-04	4.03E-04	4.13E-04	9.82E-05	6.82E-05	1.24E-08	2.08E-04	6.65E-05
11	F36	80	Single Unit Short Haul Truck	23	0.00E+00	3.15E-06	1.23E-07	3.77E+00	2.14E-06	6.85E-03	3.47E-06	1.31E-03	2.58E-04	5.28E-05	4.34E-04	8.04E-05	8.20E-05	3.83E-04	1.53E-05	6.07E-09	3.52E-04	2.45E-04
11	F36	80	Single Unit Long Haul Truck	1	0.00E+00	1.37E-07	5.29E-09	1.59E-01	9.11E-08	2.85E-04	1.51E-07	5.60E-05	1.18E-05	2.34E-06	1.89E-05	3.45E-06	3.52E-06	1.61E-05	6.48E-07	2.53E-10	1.54E-05	1.05E-05
11	F36	80	Combination Short Haul Truck	12	0.00E+00	2.

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F40	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.33E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.00E-04
10	F41	70	Passenger Car	251	0.00E+00	2.80E-06	3.05E-07	1.10E+01	1.99E-05	5.64E-02	6.32E-06	2.54E-04	1.94E-03	3.02E-04	6.17E-04	3.98E-04	4.08E-04	4.27E-05	5.51E-05	1.14E-08	2.09E-04	3.96E-05
10	F41	70	Passenger Truck	421	0.00E+00	5.90E-06	6.28E-07	2.47E+01	3.78E-05	9.96E-02	1.24E-05	7.39E-04	3.50E-03	5.42E-04	1.18E-03	7.69E-04	7.88E-04	1.87E-04	1.23E-04	2.20E-08	3.95E-04	1.24E-04
10	F41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	F41	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.02E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.58E-05
10	F41	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.30E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.11E-05
10	F42	70	Passenger Car	307	0.00E+00	3.43E-06	3.73E-07	1.34E+01	2.43E-05	6.90E-02	7.74E-06	3.11E-04	2.37E-03	3.69E-04	7.54E-04	4.86E-04	4.99E-04	5.22E-05	6.74E-05	1.40E-08	2.55E-04	4.85E-05
10	F42	70	Passenger Truck	515	0.00E+00	7.22E-06	7.68E-07	3.02E+01	4.62E-05	1.22E-01	1.51E-05	9.04E-04	4.29E-03	6.63E-04	1.45E-03	9.41E-04	9.64E-04	2.28E-04	1.50E-04	2.69E-08	4.84E-04	1.52E-04
10	F42	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
9	F43	60	Passenger Car	55	0.00E+00	7.08E-07	7.70E-08	2.52E+00	5.03E-06	1.42E-02	1.60E-06	5.70E-05	5.59E-04	8.37E-05	1.56E-04	1.00E-04	1.03E-04	1.10E-05	1.26E-05	2.66E-09	5.27E-05	8.89E-06
9	F43	60	Passenger Truck	93	0.00E+00	1.50E-06	1.59E-07	5.62E+00	9.48E-06	2.42E-02	3.12E-06	1.77E-04	1.02E-03	1.52E-04	2.97E-04	1.93E-04	1.98E-04	4.49E-05	2.79E-05	5.18E-09	9.91E-05	3.00E-05
9	F43	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	F43	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.39E-05
9	F44	60	Passenger Car	14	0.00E+00	1.77E-07	1.92E-08	6.31E-01	1.26E-06	3.54E-03	3.99E-07	1.42E-05	1.40E-04	2.09E-05	3.89E-05	2.51E-05	2.58E-05	2.74E-06	3.16E-06	6.64E-10	1.32E-05	2.22E-06
9	F44	60	Passenger Truck	23	0.00E+00	3.76E-07	3.98E-08	1.41E+00	2.37E-06	6.06E-03	7.80E-07	4.43E-05	2.55E-04	3.80E-05	7.43E-05	4.84E-05	4.96E-05	1.12E-05	6.98E-06	1.29E-09	2.48E-05	7.50E-06
10	F45	70	Passenger Car	294	0.00E+00	3.28E-06	3.57E-07	1.28E+01	2.33E-05	6.61E-02	7.41E-06	2.98E-04	2.27E-03	3.53E-04	7.22E-04	4.66E-04	4.78E-04	5.00E-05	6.45E-05	1.34E-08	2.44E-04	4.64E-05
10	F45	70	Passenger Truck	493	0.00E+00	6.91E-06	7.35E-07	2.89E+01	4.43E-05	1.17E-01	1.45E-05	8.65E-04	4.10E-03	6.35E-04	1.39E-03	9.01E-04	9.23E-04	2.18E-04	1.44E-04	2.58E-08	4.63E-04	1.45E-04
10	F45	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.35E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.27E-05
10	F45	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.01E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.79E-04
10	F45	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.15E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.05E-04
10	F46	70	Passenger Car	285	0.00E+00	3.18E-06	3.45E-07	1.24E+01	2.25E-05	6.39E-02	7.16E-06	2.88E-04	2.19E-03	3.42E-04	6.98E-04	4.50E-04	4.62E-04	4.83E-05	6.24E-05	1.30E-08	2.36E-04	4.49E-05
10	F46	70	Passenger Truck	476	0.00E+00	6.69E-06	7.11E-07	2.79E+01	4.28E-05	1.13E-01	1.40E-05	8.37E-04	3.97E-03	6.14E-04	1.34E-03	8.71E-04	8.92E-04	2.11E-04	1.39E-04	2.49E-08	4.48E-04	1.40E-04
10	F46	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.70E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.25E-05
10	F46	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.27E-04
10	F46	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.43E-04
9	F47	60	Passenger Car	3	0.00E+00	4.31E-08	4.68E-09	1.53E-01	3.06E-07	8.62E-04	9.71E-08	3.46E-06	3.40E-05	5.09E-06	9.47E-06	6.11E-06	6.27E-06	6.67E-07	7.69E-07	1.62E-10	3.20E-06	5.40E-07
9	F47	60	Passenger Truck	6	0.00E+00	9.14E-08	9.69E-09	3.42E-01	5.77E-07	1.47E-03	1.90E-07	1.08E-05	6.21E-05	9.24E-06	1.81E-05	1.18E-05	1.21E-05	2.73E-06	1.70E-06	3.15E-10	6.03E-06	1.83E-06
9	F48	60	Passenger Car	36	0.00E+00	4.64E-07	5.04E-08	1.65E+00	3.29E-06	9.29E-03	1.05E-06	3.73E-05	3.66E-04	5.49E-05	1.02E-04	6.58E-05	6.76E-05	7.19E-06	8.29E-06	1.74E-09	3.45E-05	5.82E-06
9	F48	60	Passenger Truck	61	0.00E+00	9.85E-07	1.04E-07	3.69E+00	6.22E-06	1.59E-02	2.04E-06	1.16E-04	6.69E-04	9.96E-05	1.95E-04	1.27E-04	1.30E-04	2.94E-05	1.83E-05	3.39E-09	6.50E-05	1.97E-05
9	F48	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
9	F48	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	6.98E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
9	F48	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.44E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	F49	60	Passenger Car	883	0.00E+00	1.13E-05	1.23E-06	4.03E+01	8.02E-05	2.26E-01	2.55E-05	9.09E-04	8.92E-03	1.34E-03	2.49E-03	1.60E-03	1.64E-03	1.75E-04	2.02E-04	4.24E-08	8.41E-04	1.42E-04
9	F49	60	Passenger Truck	1479	0.00E+00	2.40E-05	2.54E-06	8.97E+01	1.51E-04	3.87E-01	4.98E-05	2.83E-03	1.63E-02	2.43E-03	4.75E-03	3.09E-03	3.16E-03	7.17E-04	4.46E-04	8.27E-08	1.58E-03	4.79E-04
9	F49	60	Single Unit Short Haul Truck	107	0.00E+00	2.40E-05	9.89E-07	1.78E+01	1.59E-05	3.14E-02	2.59E-05	9.18E-03	2.47E-03	4.15E-04	3.20E-03	6.15E-04	6.28E-04	1.81E-03	7.27E-05	3.00E-08	2.57E-03	1.72E-03
9	F49	60	Single Unit Long Haul Truck	5	0.00E+00	1.05E-06	4.30E-08	7.61E-01	6.88E-07	1.33E-03	1.13E-06	3.98E-04	1.11E-04	1.84E-05	1.40E-04	2.67E-05	2.73E-05	7.69E-05	3.10E-06	1.27E-09	1.12E-04	7.44E-05
9	F49	60	Combination Short Haul Truck	71	0.00E+00	2.06E-05	1.51E-06	2.49E+01	5.64E-08	3.08E-02	1.48E-05	3.14E-02	3.60E-03	5.62E-04	1.27E-03	4.43E-04	4.60E-04	3.95E-03	8.32E-05	0.00E+00	8.10E-04	5.92E-03
9	F49	60	Combination Long Haul Truck	64	0.00E+00	2.83E-05	1.55E-06	2.35E+01	1.91E-07	3.70E-02	2.37E-05	3.35E-02	3.77E-03	5.45E-04	2.69E-03	5.05E-04	5.26E-04	3.77E-03	7.87E-05	0.00E+00	2.16E-03	6.30E-03
9	F50	60	Passenger Car	771	0.00E+00	9.87E-06	1.07E-06	3.52E+01	7.00E-05	1.97E-01	2.23E-05	7.94E-04	7.79E-03	1.17E-03	2.17E-03	1.40E-03	1.44E-03	1.53E-04	1.76E-04	3.70E-08	7.34E-04	1.24E-04
9	F50	60	Passenger Truck	1291	0.00E+00	2.09E-05	2.22E-06	7.84E+01	1.32E-04	3.38E-01	4.35E-05	2.47E-03	1.42E-02	2.12E-03	4.14E-03	2.70E-03	2.76E-03	6.26E-04	3.89E-04	7.22E-08	1.38E-03	4.18E-04
9	F50	60	Single Unit Short Haul Truck	113	0.00E+00	2.52E-05	1.04E-06	1.88E+01	1.67E-05	3.31E-02	2.73E-05	9.67E-03	2.60E-03	4.37E-04	3.37E-03	6.48E-04	6.61E-04	1.91E-03	7.66E-05	3.16E-08	2.71E-03	1.81E-03
9	F50	60	Single Unit Long Haul Truck	5	0.00E+00	1.10E-06	4.53E-08	8.02E-01	7.25E-07	1.40E-03	1.19E-06	4.19E-04	1.17E-04	1.94E-05	1.47E-04	2.82E-05	2.87E-05	8.10E-05	3.27E-06	1.34E-09	1.18E-04	7.84E-05
9	F50	60	Combination Short Haul Truck	68	0.00E+00	1.98E-05	1.46E-06	2.39E+01	5.44E-08	2.97E-02	1.43E-05	3.03E-02	3.46E-03	5.42E-04	1.22E-03	4.26E-04	4.43E-04	3.81E-03	8.01E-05	0.00E+00	7.80E-04	5.70E-03
9	F50	60	Combination Long Haul Truck	62	0.00E+00	2.73E-05	1.49E-06	2.26E+01	1.84E-07	3.56E-02	2.28E-05	3.22E-02	3.63E-03	5.25E-04	2.59E-03	4.86E-04	5.07E-04	3.63E-03	7.58E-05	0.00E+00	2.08E-03	6.07E-03
10	F51	70	Passenger Car	614	0.00E+00	6.85E-06	7.45E-07	2.68E+01	4.86E-05	1.38E-01	1.55E-05	6.21E-04	4.73E-03	7.37E-04	1.51E-03	9.72E-04	9.97E-04	1.04E-04	1.35E-04	2.80E-08	5.10E-04	9.69E-05
10	F51	70	Passenger Truck	1028	0.00E+00	1.44E-05	1.53E-06	6.02E+01	9.24E-05	2.43E-01	3.02E-05	1.81E-03	8.56E-03	1.32E-03	2.89E-03	1.88E-03	1.93E-03	4.56E-04	3.00E-04	5.37E-08	9.66E-04	3.03E-04
10	F51	70	Single Unit Short Haul Truck	34	0.00E+00	6.07E-06	2.46E-07	5.65E+00	4.07E-06	1.02E-02	6.60E-06	2.41E-03	5.48E-04	1.01E-04	8.18E-04	1.56E-04	1.59E-04	5.74E-04	2.30E-05	9.28E-09	6.59E-04	4.51E-04
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	2.64E-07	1.06E-08	2.39E-01	1.75E-07	4.30E-04	2.87E-07	1.04E-04	2.51E-05	4.50E-06	3.57E-05	6.73E-06	6.87E-06	2.42E-05	9.75E-07	3.91E-10	2.88E-05	1.94E-05
10	F51	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.04E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.52E-03
10	F51	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.61E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.62E-03
10	F52	70	Passenger Car	220	0.00E+00	2.45E-06	2.67E-07	9.59E+00	1.74E-05	4.94E-02	5.53E-06	2.22E-04	1.69E-03	2.64E-04	5.40E-04	3.48E-04	3.57E-04	3.74E-05	4.82E-05	1.00E-08	1.83E-04	3.47E-05
10	F52	70	Passenger Truck	368	0.00E+00	5.17E-06	5.49E-07	2.16E+01	3.31E-05	8.72E-02	1.08E-05	6.46E-04	3.07E-03	4.74E-04	1.04E-03	6.73E-04	6.90E-04	1.63E-04	1.07E-04	1.92E-08	3.46E-04	1.09E-04
10	F52	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.69E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.78E-05
10	F52	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.65E-04
10	F52	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
10	F53	70	Passenger Car	691	0.00E+00	7.72E-06	8.39E-07	3.01E+01	5.48E-05	1.55E-01	1.74E-05	6.99E-04	5.33E-03	8.30E-04	1.70E-03	1.09E-03	1.12E-03	1.17E-04	1.52E-04	3.15E-08	5.74E-04	1.09E-04
10	F53	70	Passenger Truck	1158	0.00E+00	1.62E-05	1.73E-06	6.78E+01	1.04E-04	2.74E-01	3.40E-05	2.03E-03	9.64E-03	1.49E-03	3.26E-03	2.12E-03	2.17E-03	5.13E-04	3.38E-04	6.05E-08	1.09E-03	3.41E-04
10	F53	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	F53	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.61E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.63E-06
10	F53	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.62E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.82E-04
10	F53	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.87E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.30E-04
10	F54	70	Passenger Car	248	0.00E+00	2.76E-06	3.00E-07	1.08E+01	1.96E-05	5.56E-02	6.23E-06	2.50E-04	1.91E-03	2.97E-04	6.08E-04	3.92E-04	4.02E-04	4.21E-05	5.43E-05	1.13E-08	2.06E-04	3.90E-05
10	F54	70	Passenger Truck	414	0.00E+00	5.82E-06	6.18E-07	2.43E+01	3.72E-05	9.81E-02	1.22E-05	7.28E-04	3.45E-03	5.34E-04	1.17E-03	7.57E-04	7.76E-04	1.84E-04	1.21E-04	2.17E-08	3.90E-04	1.22E-04
53	F71	70	Passenger Car	149	0.00E+00	1.61E-06	1.75E-07	6.56E+00	1.14E-05	3.21E-02	3.63E-06	1.53E-04	1.13E-03	1.77E-04	3.54E-04	2.28E-04	2.34E-04	2.53E-05	3.30E-05	6.85E-09	1.20E-04	2.39E-05
53	F71	70	Passenger Truck	249	0.00E+00	3.36E-06	3.58E-07	1.48E+01	2.16E-05	5.66E-02	7.06E-06	4.32E-04	2.02E-03	3.13E-04	6.76E-04	4.39E-04	4.50E-04	1.10E-04	7.36E-05	1.29E-08	2.26E-04	7.24E-05
53	F71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.63E-04
53	F71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.06E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
53	F71	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.63E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	F71	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.10E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
50	F72	40	Passenger Car	150	0.00E+00	2.15E-06	2.34E-07	7.91E+00	1.53E-05	4.27E-02	4.85E-06	1.37E-04	2.59E-03	3.63E-04	4.73E-04	3.05E-04	3.13E-04	4.46E-05	3.93E-05	7.28E-09	1.60E-04	2.13E-05
50	F72	40	Passenger Truck	251	0.00E+00	4.75E-06	4.99E-07	1.72E+01	2.86E-05	7.05E-02	9.54E-06	5.27E-04	4.58E-03	6.36E-04	9.01E-04	5.88E-04	6.02E-04	1.52E-04	8.48E-05	1.24E-08	2.98E-04	9.13E-05
50	F72	40	Single Unit Short Haul Truck	56	0.00E+00	1.88E-05	8.38E-07	1.05E+01	1.30E-05	1.65E-02	2.01E-05	7.59E-03	2.19E-03	3.41E-04	2.42E-03	5.05E-04	5.15E-04	1.07E-03	4.28E-05	1.81E-08	1.91E-03	1.42E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	8.26E-07	3.66E-08	4.53E-01	5.71E-07	7.16E-04	8.84E-07	3.31E-04	9.80E-05	1.52E-05	1.07E-04	2.21E-05	2.25E-05	4.63E-05	1.85E-06	7.87E-10	8.40E-05	6.20E-05
50	F72	40	Combination Short Haul Truck	38	0.00E+00	1.84E-05	1.38E-06	1.58E+01	4.56E-08	2.60E-02	1.31E-05	2.68E-02	3.71E-03	5.53E-04	1.10E-03	4.00E-04	4.15E-04	2.52E-03	5.29E-05	0.00E+00	6.80E-04	5.05E-03
50	F72	40	Combination Long Haul Truck	35	0.00E+00	2.45E-05	1.38E-06	1.52E+01	1.56E-07	3.16E-02	2.02E-05	2.83E-02	3.86E-03	5.42E-04	2.24E-03	4.45E-04	4.64E-04	2.44E-03	5.09E-05	0.00E+00	1.78E-03	5.32E-03
52	F73	60	Passenger Car	30	0.00E+00	3.47E-07	3.78E-08	1.35E+00	2.47E-06	6.90E-03	7.83E-07	2.93E-05	2.90E-04	4.35E-05	7.64E-05	4.93E-05	5.06E-05	5.85E-06	6.75E-06	1.38E-09	2.58E-05	4.57E-06
52	F73	60	Passenger Truck	49	0.00E+00	7.33E-07	7.77E-08	3.00E+00	4.62E-06	1.18E-02	1.52E-06	8.94E-05	5.15E-04	7.65E-05	1.45E-04	9.43E-05	9.66E-05	2.35E-05	1.49E-05	2.51E-09	4.83E-05	1.51E-05
52	F73	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.20E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.53E-05
52	F73	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.65E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.77E-05
52	F73	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.96E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.34E-05
53	F74	70	Passenger Car	239	0.00E+00	2.58E-06	2.80E-07	1.05E+01	1.83E-05	5.15E-02	5.82E-06	2.45E-04	1.81E-03	2.83E-04	5.68E-04	3.66E-04	3.76E-04	4.05E-05	5.29E-05	1.10E-08	1.92E-04	3.83E-05
53	F74	70	Passenger Truck	399	0.00E+00	5.39E-06	5.73E-07	2.37E+01	3.46E-05	9.08E-02	1.13E-05	6.93E-04	3.23E-03	5.02E-04	1.08E-03	7.04E-04	7.21E-04	1.76E-04	1.18E-04	2.07E-08	3.62E-04	1.16E-04
53	F74	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00

Appendix F.4.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
53	F80	70	Passenger Car	1518	0.00E+00	1.64E-05	1.78E-06	6.69E+01	1.17E-04	3.28E-01	3.70E-05	1.56E-03	1.15E-02	1.80E-03	3.61E-03	2.33E-03	2.39E-03	2.58E-04	3.37E-04	6.99E-08	1.22E-03	2.44E-04
53	F80	70	Passenger Truck	2542	0.00E+00	3.43E-05	3.65E-06	1.51E+02	2.20E-04	5.78E-01	7.20E-05	4.41E-03	2.06E-02	3.20E-03	6.89E-03	4.48E-03	4.59E-03	1.12E-03	7.51E-04	1.32E-07	2.30E-03	7.39E-04
53	F80	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.13E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.21E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	F80	70	Combination Short Haul Truck	17	0.00E+00	4.31E-06	3.20E-07	5.82E+00	1.09E-08	6.22E-03	3.07E-06	6.43E-03	6.07E-04	1.01E-04	2.58E-04	9.33E-05	9.69E-05	9.25E-04	1.95E-05	0.00E+00	1.62E-04	1.21E-03
53	F80	70	Combination Long Haul Truck	15	0.00E+00	5.91E-06	3.36E-07	5.46E+00	3.70E-08	7.42E-03	4.86E-06	6.89E-03	6.32E-04	9.52E-05	5.37E-04	1.08E-04	1.12E-04	8.77E-04	1.83E-05	0.00E+00	4.25E-04	1.30E-03
50	F84	40	Passenger Car	259	0.00E+00	3.72E-06	4.04E-07	1.37E+01	2.64E-05	7.36E-02	8.38E-06	2.36E-04	4.46E-03	6.27E-04	8.17E-04	5.27E-04	5.41E-04	7.69E-05	6.78E-05	1.26E-08	2.76E-04	3.68E-05
50	F84	40	Passenger Truck	433	0.00E+00	8.19E-06	8.61E-07	2.97E+01	4.93E-05	1.22E-01	1.65E-05	9.09E-04	7.91E-03	1.10E-03	1.55E-03	1.02E-03	1.04E-03	2.62E-04	1.46E-04	2.14E-08	5.15E-04	1.58E-04
50	F84	40	Single Unit Short Haul Truck	10	0.00E+00	3.25E-06	1.45E-07	1.81E+00	2.25E-06	2.84E-03	3.47E-06	1.31E-03	3.77E-04	5.89E-05	4.18E-04	8.71E-05	8.87E-05	1.85E-04	7.37E-06	3.13E-09	3.29E-04	2.45E-04
50	F84	40	Combination Short Haul Truck	17	0.00E+00	8.07E-06	6.03E-07	6.94E+00	2.00E-08	1.14E-02	5.74E-06	1.17E-02	1.63E-03	2.43E-04	4.80E-04	1.75E-04	1.82E-04	1.10E-03	2.32E-05	0.00E+00	2.98E-04	2.21E-03
50	F84	40	Combination Long Haul Truck	15	0.00E+00	1.07E-05	6.06E-07	6.66E+00	6.82E-08	1.39E-02	8.85E-06	1.24E-02	1.69E-03	2.37E-04	9.83E-04	1.95E-04	2.03E-04	1.07E-03	2.23E-05	0.00E+00	7.80E-04	2.33E-03
52	F85	60	Passenger Car	265	0.00E+00	3.12E-06	3.39E-07	1.21E+01	2.21E-05	6.20E-02	7.03E-06	2.63E-04	2.60E-03	3.90E-04	6.86E-04	4.42E-04	4.54E-04	5.25E-05	6.06E-05	1.23E-08	2.32E-04	4.10E-05
52	F85	60	Passenger Truck	444	0.00E+00	6.58E-06	6.97E-07	2.69E+01	4.15E-05	1.06E-01	1.36E-05	8.02E-04	4.62E-03	6.86E-04	1.30E-03	8.46E-04	8.67E-04	2.11E-04	1.34E-04	2.26E-08	4.33E-04	1.36E-04
52	F85	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.02E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
52	F85	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.58E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.05E-03
52	F85	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.95E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
53	F86	70	Passenger Car	358	0.00E+00	3.87E-06	4.21E-07	1.58E+01	2.75E-05	7.72E-02	8.73E-06	3.68E-04	2.71E-03	4.25E-04	8.51E-04	5.49E-04	5.63E-04	6.08E-05	7.93E-05	1.65E-08	2.88E-04	5.74E-05
53	F86	70	Passenger Truck	599	0.00E+00	8.08E-06	8.60E-07	3.55E+01	5.19E-05	1.36E-01	1.70E-05	1.04E-03	4.85E-03	7.53E-04	1.62E-03	1.06E-03	1.08E-03	2.64E-04	1.77E-04	3.10E-08	5.43E-04	1.74E-04
53	F86	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.04E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.50E-04
53	F86	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.46E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.47E-06
53	F86	70	Combination Short Haul Truck	20	0.00E+00	5.12E-06	3.81E-07	6.91E+00	1.30E-08	7.39E-03	3.64E-06	7.64E-03	7.21E-04	1.20E-04	3.07E-04	1.11E-04	1.15E-04	1.10E-03	2.31E-05	0.00E+00	1.92E-04	1.44E-03
53	F86	70	Combination Long Haul Truck	18	0.00E+00	7.02E-06	3.99E-07	6.49E+00	4.40E-08	8.82E-03	5.77E-06	8.18E-03	7.51E-04	1.13E-04	6.38E-04	1.28E-04	1.34E-04	1.04E-03	2.17E-05	0.00E+00	5.04E-04	1.54E-03
52	F87	60	Passenger Car	387	0.00E+00	4.56E-06	4.95E-07	1.77E+01	3.23E-05	9.05E-02	1.03E-05	3.84E-04	3.80E-03	5.70E-04	1.00E-03	6.46E-04	6.63E-04	7.68E-05	8.85E-05	1.80E-08	3.39E-04	5.99E-05
52	F87	60	Passenger Truck	649	0.00E+00	9.61E-06	1.02E-06	3.93E+01	6.06E-05	1.55E-01	1.99E-05	1.17E-03	6.75E-03	1.00E-03	1.90E-03	1.24E-03	1.27E-03	3.08E-04	1.95E-04	3.30E-08	6.33E-04	1.98E-04
52	F87	60	Single Unit Short Haul Truck	58	0.00E+00	1.30E-05	5.39E-07	9.72E+00	8.64E-06	1.71E-02	1.41E-05	5.00E-03	1.34E-03	2.26E-04	1.74E-03	3.35E-04	3.42E-04	9.85E-04	3.96E-05	1.63E-08	1.40E-03	9.36E-04
52	F87	60	Single Unit Long Haul Truck	3	0.00E+00	5.69E-07	2.34E-08	4.14E-01	3.75E-07	7.26E-04	6.16E-07	2.17E-04	6.04E-05	1.00E-05	7.61E-05	1.46E-05	1.49E-05	4.19E-05	1.69E-06	6.94E-10	6.12E-05	4.05E-05
52	F87	60	Combination Short Haul Truck	35	0.00E+00	1.02E-05	7.51E-07	1.23E+01	2.80E-08	1.53E-02	7.35E-06	1.56E-02	1.79E-03	2.79E-04	6.30E-04	2.20E-04	2.28E-04	1.96E-03	4.13E-05	0.00E+00	4.02E-04	2.94E-03
52	F87	60	Combination Long Haul Truck	32	0.00E+00	1.41E-05	7.68E-07	1.17E+01	9.49E-08	1.84E-02	1.18E-05	1.66E-02	1.87E-03	2.71E-04	1.33E-03	2.51E-04	2.61E-04	1.87E-03	3.91E-05	0.00E+00	1.07E-03	3.13E-03
50	F88	40	Passenger Car	259	0.00E+00	3.72E-06	4.04E-07	1.37E+01	2.64E-05	7.36E-02	8.38E-06	2.36E-04	4.46E-03	6.27E-04	8.17E-04	5.27E-04	5.41E-04	7.69E-05	6.78E-05	1.26E-08	2.76E-04	3.68E-05
50	F88	40	Passenger Truck	433	0.00E+00	8.19E-06	8.61E-07	2.97E+01	4.93E-05	1.22E-01	1.65E-05	9.09E-04	7.91E-03	1.10E-03	1.55E-03	1.02E-03	1.04E-03	2.62E-04	1.46E-04	2.14E-08	5.15E-04	1.58E-04
50	F88	40	Single Unit Short Haul Truck	10	0.00E+00	3.25E-06	1.45E-07	1.81E+00	2.25E-06	2.84E-03	3.47E-06	1.31E-03	3.77E-04	5.89E-05	4.18E-04	8.71E-05	8.87E-05	1.85E-04	7.37E-06	3.13E-09	3.29E-04	2.45E-04
50	F88	40	Combination Short Haul Truck	17	0.00E+00	8.07E-06	6.03E-07	6.94E+00	2.00E-08	1.14E-02	5.74E-06	1.17E-02	1.63E-03	2.43E-04	4.80E-04	1.75E-04	1.82E-04	1.10E-03	2.32E-05	0.00E+00	2.98E-04	2.21E-03
50	F88	40	Combination Long Haul Truck	15	0.00E+00	1.07E-05	6.06E-07	6.66E+00	6.82E-08	1.39E-02	8.85E-06	1.24E-02	1.69E-03	2.37E-04	9.83E-04	1.95E-04	2.03E-04	1.07E-03	2.23E-05	0.00E+00	7.80E-04	2.33E-03
50	F89	40	Passenger Car	288	0.00E+00	4.13E-06	4.49E-07	1.52E+01	2.93E-05	8.19E-02	9.32E-06	2.63E-04	4.96E-03	6.98E-04	9.09E-04	5.86E-04	6.02E-04	8.56E-05	7.55E-05	1.40E-08	3.08E-04	4.10E-05
50	F89	40	Passenger Truck	482	0.00E+00	9.11E-06	9.58E-07	3.31E+01	5.49E-05	1.35E-01	1.83E-05	1.01E-03	8.80E-03	1.22E-03	1.73E-03	1.13E-03	1.16E-03	2.92E-04	1.63E-04	2.38E-08	5.73E-04	1.75E-04
50	F89	40	Single Unit Short Haul Truck	64	0.00E+00	2.18E-05	9.68E-07	1.21E+01	1.51E-05	1.90E-02	2.33E-05	8.77E-03	2.53E-03	3.94E-04	2.80E-03	5.83E-04	5.94E-04	1.24E-03	4.94E-05	2.09E-08	2.20E-03	1.64E-03
50	F89	40	Single Unit Long Haul Truck	3	0.00E+00	9.55E-07	4.23E-08	5.24E-01	6.59E-07	8.27E-04	1.02E-06	3.82E-04	1.13E-04	1.76E-05	1.23E-04	2.55E-05	2.60E-05	5.35E-05	2.13E-06	9.09E-10	9.70E-05	7.16E-05
50	F89	40	Combination Short Haul Truck	61	0.00E+00	2.95E-05	2.20E-06	2.54E+01	7.31E-08	4.17E-02	2.10E-05	4.29E-02	5.95E-03	8.87E-04	1.76E-03	6.41E-04	6.66E-04	4.03E-03	8.49E-05	0.00E+00	1.09E-03	8.09E-03
50	F89	40	Combination Long Haul Truck	56	0.00E+00	3.92E-05	2.22E-06	2.44E+01	2.49E-07	5.07E-02	3.23E-05	4.53E-02	6.18E-03	8.68E-04	3.59E-03	7.14E-04	7.44E-04	3.91E-03	8.16E-05	0.00E+00	2.85E-03	8.53E-03

Appendix F.4.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Tota Emission Factor (g/s mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B09	0.00E+00	6.96E-05	5.96E-06	2.38E+02	2.66E-04	8.42E-01	1.10E-04	4.68E-02	1.36E-02	2.70E-03	1.10E-02	5.91E-03	6.07E-03	9.45E-03	1.11E-03	1.90E-07	4.91E-03	8.68E-03
B10	0.00E+00	6.14E-05	5.21E-06	2.06E+02	2.27E-04	7.21E-01	9.58E-05	4.30E-02	1.17E-02	2.33E-03	9.53E-03	5.08E-03	5.22E-03	8.65E-03	9.55E-04	1.62E-07	4.32E-03	7.98E-03
B13	0.00E+00	3.76E-05	3.16E-06	1.25E+02	1.37E-04	4.35E-01	5.83E-05	2.65E-02	7.07E-03	1.41E-03	5.81E-03	3.07E-03	3.15E-03	5.36E-03	5.78E-04	9.86E-08	2.66E-03	4.92E-03
B14	0.00E+00	5.65E-05	4.74E-06	1.88E+02	2.05E-04	6.53E-01	8.76E-05	3.96E-02	1.06E-02	2.12E-03	8.74E-03	4.60E-03	4.73E-03	8.05E-03	8.69E-04	1.49E-07	4.01E-03	7.36E-03
B15	0.00E+00	5.17E-05	5.14E-06	2.20E+02	2.98E-04	9.02E-01	1.02E-04	1.57E-02	1.38E-02	2.69E-03	1.00E-02	6.14E-03	6.30E-03	3.23E-03	1.08E-03	2.03E-07	3.72E-03	2.81E-03
B16	0.00E+00	3.38E-05	3.33E-06	1.42E+02	1.92E-04	5.81E-01	6.65E-05	1.05E-02	8.91E-03	1.74E-03	6.52E-03	3.96E-03	4.06E-03	2.20E-03	7.00E-04	1.32E-07	2.46E-03	1.87E-03
B19	0.00E+00	1.78E-04	1.58E-05	6.46E+02	7.73E-04	2.41E+00	3.02E-04	9.85E-02	3.81E-02	7.54E-03	3.00E-02	1.67E-02	1.71E-02	2.04E-02	3.06E-03	5.53E-07	1.29E-02	1.82E-02
B20	0.00E+00	1.40E-04	1.09E-05	4.14E+02	3.89E-04	1.29E+00	1.93E-04	1.20E-01	2.19E-02	4.43E-03	1.95E-02	9.33E-03	9.59E-03	2.44E-02	1.84E-03	2.97E-07	9.90E-03	2.25E-02
B21	0.00E+00	1.53E-04	1.39E-05	5.73E+02	7.07E-04	2.19E+00	2.68E-04	7.80E-02	3.43E-02	6.76E-03	2.64E-02	1.51E-02	1.55E-02	1.59E-02	2.74E-03	4.96E-07	1.09E-02	1.43E-02
B22	0.00E+00	1.16E-04	8.93E-06	3.36E+02	3.05E-04	1.02E+00	1.56E-04	1.04E-01	1.75E-02	3.55E-03	1.58E-02	7.44E-03	7.64E-03	2.09E-02	1.48E-03	2.32E-07	8.11E-03	1.94E-02
B23	0.00E+00	1.55E-04	1.42E-05	5.85E+02	7.24E-04	2.24E+00	2.73E-04	7.83E-02	3.51E-02	6.91E-03	2.70E-02	1.54E-02	1.59E-02	1.60E-02	2.80E-03	5.07E-07	1.11E-02	1.44E-02
B24	0.00E+00	1.28E-04	9.84E-06	3.70E+02	3.35E-04	1.12E+00	1.72E-04	1.14E-01	1.93E-02	3.92E-03	1.74E-02	8.19E-03	8.42E-03	2.31E-02	1.63E-03	2.57E-07	8.99E-03	2.14E-02
D63	0.00E+00	3.03E-06	2.62E-07	8.83E+00	1.27E-05	3.52E-02	5.08E-06	1.25E-03	1.29E-03	2.02E-04	5.07E-04	2.76E-04	2.83E-04	2.12E-04	4.25E-05	7.97E-09	2.23E-04	2.31E-04
D64	0.00E+00	1.20E-05	7.96E-07	1.95E+01	1.71E-05	5.49E-02	1.34E-05	1.02E-02	2.51E-03	4.00E-04	1.40E-03	5.14E-04	5.29E-04	1.52E-03	8.27E-05	1.33E-08	8.68E-04	1.91E-03
D65	0.00E+00	3.06E-05	2.17E-06	6.64E+01	6.49E-05	2.03E-01	3.84E-05	2.35E-02	6.29E-03	1.08E-03	3.98E-03	1.68E-03	1.72E-03	4.15E-03	2.93E-04	5.06E-08	2.25E-03	4.40E-03
D66	0.00E+00	2.68E-05	1.97E-06	6.06E+01	6.07E-05	1.89E-01	3.42E-05	2.11E-02	5.81E-03	9.89E-04	3.49E-03	1.55E-03	1.59E-03	3.64E-03	2.69E-04	4.45E-08	1.91E-03	3.95E-03
D67	0.00E+00	3.06E-05	2.17E-06	6.64E+01	6.49E-05	2.03E-01	3.84E-05	2.35E-02	6.29E-03	1.08E-03	3.98E-03	1.68E-03	1.72E-03	4.15E-03	2.93E-04	5.06E-08	2.25E-03	4.40E-03
D68	0.00E+00	2.68E-05	1.97E-06	6.06E+01	6.07E-05	1.89E-01	3.42E-05	2.11E-02	5.81E-03	9.89E-04	3.49E-03	1.55E-03	1.59E-03	3.64E-03	2.69E-04	4.45E-08	1.91E-03	3.95E-03
D69	0.00E+00	1.17E-05	8.65E-07	2.72E+01	2.84E-05	8.71E-02	1.54E-05	8.67E-03	2.63E-03	4.48E-04	1.58E-03	7.06E-04	7.25E-04	1.52E-03	1.22E-04	2.11E-08	8.57E-04	1.62E-03
D70	0.00E+00	9.98E-06	7.47E-07	2.36E+01	2.50E-05	7.66E-02	1.33E-05	7.36E-03	2.30E-03	3.90E-04	1.35E-03	6.17E-04	6.34E-04	1.28E-03	1.06E-04	1.82E-08	7.19E-04	1.37E-03
D71	0.00E+00	3.19E-05	2.46E-06	6.93E+01	7.96E-05	2.37E-01	4.19E-05	2.44E-02	9.61E-03	1.51E-03	4.19E-03	1.98E-03	2.03E-03	3.58E-03	3.13E-04	5.03E-08	2.16E-03	4.57E-03
D72	0.00E+00	1.83E-05	1.53E-06	4.89E+01	6.66E-05	1.87E-01	2.85E-05	9.72E-03	7.05E-03	1.10E-03	2.84E-03	1.49E-03	1.53E-03	1.54E-03	2.31E-04	4.18E-08	1.31E-03	1.80E-03
D73	0.00E+00	1.34E-05	1.19E-06	3.84E+01	5.30E-05	1.50E-01	2.15E-05	7.43E-03	5.60E-03	8.72E-04	2.11E-03	1.17E-03	1.21E-03	1.12E-03	1.82E-04	3.15E-08	9.01E-04	1.38E-03
D74	0.00E+00	9.69E-06	9.59E-07	3.47E+01	5.37E-05	1.47E-01	1.87E-05	2.72E-03	5.22E-03	8.11E-04	1.81E-03	1.11E-03	1.14E-03	4.71E-04	1.71E-04	3.15E-08	6.71E-04	4.91E-04
D75	0.00E+00	5.68E-06	4.67E-07	1.65E+01	2.11E-05	6.11E-02	8.97E-06	2.88E-03	1.69E-03	2.85E-04	9.06E-04	4.68E-04	4.80E-04	5.37E-04	7.80E-05	1.47E-08	4.26E-04	5.34E-04
D76	0.00E+00	1.10E-05	8.75E-07	2.95E+01	3.51E-05	1.04E-01	1.61E-05	6.85E-03	2.96E-03	5.01E-04	1.63E-03	8.09E-04	8.31E-04	1.21E-03	1.36E-04	2.45E-08	7.94E-04	1.27E-03
D77	0.00E+00	1.18E-05	8.17E-07	2.52E+01	2.47E-05	7.68E-02	1.49E-05	8.65E-03	2.38E-03	4.08E-04	1.56E-03	6.38E-04	6.55E-04	1.57E-03	1.11E-04	2.03E-08	9.04E-04	1.62E-03
D78	0.00E+00	1.02E-05	7.12E-07	2.11E+01	1.90E-05	6.11E-02	1.23E-05	8.45E-03	1.96E-03	3.36E-04	1.27E-03	5.16E-04	5.30E-04	1.47E-03	9.12E-05	1.51E-08	7.44E-04	1.58E-03
D79	0.00E+00	2.07E-05	1.70E-06	5.22E+01	6.77E-05	1.94E-01	3.05E-05	1.29E-02	7.45E-03	1.17E-03	3.04E-03	1.56E-03	1.60E-03	1.96E-03	2.44E-04	4.20E-08	1.43E-03	2.41E-03
D80	0.00E+00	3.10E-05	2.65E-06	8.45E+01	1.15E-04	3.24E-01	4.82E-05	1.76E-02	1.22E-02	1.91E-03	4.76E-03	2.57E-03	2.64E-03	2.68E-03	3.99E-04	6.96E-08	2.13E-03	3.27E-03
D81	0.00E+00	1.05E-05	1.09E-06	4.06E+01	6.45E-05	1.75E-01	2.16E-05	2.01E-03	6.16E-03	9.57E-04	2.08E-03	1.32E-03	1.35E-03	3.85E-04	2.02E-04	3.76E-08	7.30E-04	3.53E-04
D82	0.00E+00	9.81E-06	1.05E-06	4.01E+01	6.50E-05	1.76E-01	2.11E-05	1.12E-03	6.13E-03	9.50E-04	2.03E-03	1.31E-03	1.35E-03	2.58E-04	2.00E-04	3.77E-08	6.81E-04	1.84E-04
D83	0.00E+00	8.61E-05	6.71E-06	2.15E+02	2.36E-04	7.17E-01	1.18E-04	6.36E-02	2.12E-02	3.59E-03	1.18E-02	5.70E-03	5.85E-03	1.08E-02	9.75E-04	1.63E-07	6.00E-03	1.19E-02
D84	0.00E+00	6.24E-05	4.50E-06	1.34E+02	1.24E-04	3.98E-01	7.60E-05	5.29E-02	1.26E-02	2.15E-03	7.77E-03	3.31E-03	3.40E-03	8.99E-03	5.83E-04	9.19E-08	4.37E-03	9.91E-03
D85	0.00E+00	6.63E-05	5.18E-06	1.66E+02	1.84E-04	5.57E-01	9.11E-05	4.86E-02	1.64E-02	2.78E-03	9.16E-03	4.42E-03	4.54E-03	8.28E-03	7.55E-04	1.26E-07	4.62E-03	9.07E-03
D86	0.00E+00	5.31E-05	3.86E-06	1.15E+02	1.08E-04	3.45E-01	6.52E-05	4.48E-02	1.09E-02	1.85E-03	6.65E-03	2.86E-03	2.94E-03	7.59E-03	5.03E-04	7.94E-08	3.71E-03	8.38E-03
D87	0.00E+00	6.63E-05	5.18E-06	1.66E+02	1.84E-04	5.57E-01	9.11E-05	4.86E-02	1.64E-02	2.78E-03	9.16E-03	4.42E-03	4.54E-03	8.28E-03	7.55E-04	1.26E-07	4.62E-03	9.07E-03
D88	0.00E+00	5.31E-05	3.86E-06	1.15E+02	1.08E-04	3.45E-01	6.52E-05	4.48E-02	1.09E-02	1.85E-03	6.65E-03	2.86E-03	2.94E-03	7.59E-03	5.03E-04	7.94E-08	3.71E-03	8.38E-03
D89	0.00E+00	8.71E-06	6.83E-07	1.84E+01	2.55E-05	7.19E-02	1.23E-05	5.72E-03	3.36E-03	5.05E-04	1.24E-03	6.03E-04	6.19E-04	7.68E-04	8.49E-05	1.50E-08	6.21E-04	1.07E-03
D90	0.00E+00	1.12E-05	6.66E-07	1.38E+01	1.26E-05	3.83E-02	1.22E-05	8.68E-03	2.28E-03	3.51E-04	1.33E-03	4.11E-04	4.23E-04	1.19E-03	5.76E-05	1.10E-08	9.10E-04	1.63E-03
D91	0.00E+00	1.46E-05	1.23E-06	3.90E+01	5.26E-05	1.49E-01	2.25E-05	8.24E-03	5.62E-03	8.78E-04	2.24E-03	1.18E-03	1.22E-03	1.27E-03	1.84E-04	3.24E-08	1.02E-03	1.53E-03
D92	0.00E+00	1.18E-05	1.14E-06	4.12E+01	6.36E-05	1.73E-01	2.25E-05	3.17E-03	6.18E-03	9.61E-04	2.20E-03	1.32E-03	1.36E-03	5.75E-04	2.02E-04	3.80E-08	8.46E-04	5.70E-04
D93	0.00E+00	1.35E-05	1.18E-06	3.84E+01	5.37E-05	1.50E-01	2.18E-05	6.88E-03	5.60E-03	8.74E-04	2.16E-03	1.18E-03	1.21E-03	1.07E-03	1.83E-04	3.27E-08	9.43E-04	1.27E-03
D94	0.00E+00	1.15E-05	1.13E-06	4.13E+01	6.44E-05	1.75E-01	2.24E-05	2.70E-03	6.21E-03	9.66E-04	2.18E-03	1.33E-03	1.37E-03	5.05E-04	2.04E-04	3.83E-08	8.18E-04	4.82E-04
E01	0.00E+00	2.04E-05	1.62E-06	4.47E+01	6.40E-05	1.78E-01	2.97E-05	1.24E-02	8.22E-03	1.23E-03	2.99E-03	1.48E-03	1.52E-03	1.69E-03	2.08E-04	3.75E-08	1.47E-03	2.31E-03
E02	0.00E+00	2.36E-05	2.00E-06	5.81E+01	8.81E-05	2.43E-01	3.71E-05	1.26E-02	1.08E-02	1.62E-03	3.69E-03	1.97E-03	2.02E-03	1.75E-03	2.75E-04	5.02E-08	1.67E-03	2.34E-03
E03	0.00E+00	1.50E-05	1.11E-06	3.51E+01	3.71E-05	1.13E-01	1.99E-05	1.08E-02	3.40E-03	5.79E-04	2.04E-03	9.16E-04	9.40E-04	1.91E-03	1.58E-04	2.76E-08	1.10E-03	2.02E-03
E04	0.00E+00	1.98E-05	1.58E-06	5.39E+01	6.51E-05	1.92E-01	2.95E-05	1.18E-02	5.43E-03	9.19E-04	2.98E-03	1.49E-03	1.53E-03	2.12E-03	2.51E-04	4.56E-08	1.45E-03	2.20E-03
E05	0.00E+00	1.55E-05	1.26E-06	4.32E+01	5.29E-05	1.55E-01	2.35E-05	9.17E-03	4.38E-03	7.40E-04	2.36E-03	1.20E-03	1.23E-03	1.63E-03	2.02E-04	3.66E-08	1.13E-03	1.70E-03
E06	0.00E+00	1.13E-05	8.25E-07	2.61E+01	2.74E-05	8.38E-02	1.50E-05	8.08E-03	2.52E-03	4.30E-04	1.54E-03	6.80E-04	6.98E-04	1.44E-03	1.17E-04	2.09E-08	8.45E-04	1.51E-03
E07	0.00E+00	6.91E-05	5.98E-06	1.77E+02	2.72E-04	7.47E-01	1.11E-04	3.53E-02	3.31E-02	4.95E-03	1.10E-02	6.01E-03	6.17E-03	4.93E-03	8.40E-04	1.53E-07	4.84E-03	6.56E-03
E08	0.00E+00	8.44E-05	7.17E-06	2.07E+02	3.11E-04	8.62E-01	1.31E-04	4.74E-02	3.86E-02	5.78E-03	1.30E-02	6.98E-03	7.16E-03	6.47E-03	9.78E-04	1.75E-07	5.87E-03	8.82E-03
E09	0.00E+00	6.01E-05	5.21E-06	1.54E+02	2.37E-04	6.50E-01	9.67E-05	3.10E-02	2.88E-02	4.31E-03	9.56E-03	5.23E-03	5.36E-03	4.31E-03	7.31E-04	1.33E-07	4.20E-03	5.75E-03
E10	0.00E+00	7.17E-05	6.07E-06	1.74E+02	2.60E-04	7.21E-01	1.11E-04	4.13E-02	3.24E-02	4.85E-03	1.10E-02	5.85E-03	6.00E-03	5.61E-03	8.21E-04	1.46E-07	4.97E-03	7.68E-03
E11	0.00E+00	1.12E-04	8.66E-06	2.27E+02	3.04E-04	8.68E-01	1.53E-04	7.92E-02	4.13E-02	6.20E-03	1.55E-02	7.35E-03	7.54E-03	1.05E-02	1.04E-03	1.78E-07	7.93E-03	1.48E-02
E12	0.00E+00	1.34E-04	1.05E-05	2.86E+02	3.99E-04	1.12E+00	1.90E-04	8.69E-02	5.23E-02	7.85E-03	1.91E-02	9.38E-03	9.63E-03	1.17E-02	1.32E-03	2.33E-07	9.50E-03	1.62E-02
E13	0.00E+00	2.69E-05	2.16E-06	7.34E+01	8.89E-05	2.62E-01	4.01E-05	1.61E-02	7.41E-03	1.25E-03	4.05E-03	2.03E-03	2.09E-03	2.88E-03	3.42E-04	6.20E-08	1.96E-03	3.00E-03
E14	0.00E+00	1.97E-05	1.57E-06	5.22E+01	6.09E-05	1.82E-01	2.84E-05	1.31E-02	5.23E-03	8.84E-04	2.85E-03	1.42E-03	1.46E-03	2.28E-03	2.40E-04	4.17E-08	1.39E-03	2.45E-03
E15	0.00E+00	1.64E-05	1.43E-06	5.01E+01	6.42E-05	1.87E-01	2.62E-05	9.45E-03	5.18E-03	8.70E-04	2.58E-03	1.42E-03	1.46E-03	1.61E-03	2.37E-04	4.13E-08	1.12E-03	1.75E-03
E16	0.00E+00	1.77E-05	1.51E-06	5.21E+01	6.53E-05	1.91E-01	2.75E-05	1.07E-02	5.35E-03	8.99E-04	2.72E-03	1.46E-03	1.50E-03	1.82E-03	2.45E-04	4.26E-08	1.22E-03	1.98E-03
E17	0.00E+00	1.37E-05	1.17E-06	4.10E+01	5.25E-05	1.53E-01	2.18E-05	7.45E-03	4.22E-03	7.11E-04	2.17E-03	1.16E-03	1.20E-03	1.32E-03	1.94E-04	3.51E-08	9.78E-04	1.38E-03
E18	0.00E+00	1.29E-05	1.01E-06	3.37E+01	3.94E-05	1.17E-01	1.86E-05	8.18E-03	3.37E-03	5.70E-04	1.89E-03	9.19E-04	9.43E-04	1.46E-03	1.55E-04	2.80E-08	9.42E-04	1.52E-03
E19	0.00E+00	4.08E-05	3.42E-06	1.01E+02	1.56E-04	4.24E-01	6.51E-05	1.95E-02	1.88E-02	2.82E-03	6.51E-03	3.44E-03	3.53E-03	2.82E-03	4.79E-04	9.01E-08	2.98E-03	3.62E-03
E20	0.00E+00	4.06E-05	3.52E-06	1.05E+02	1.65E-04	4.49E-01	6.66E-05	1.90E-02	1.97E-02	2.96E-03	6.60E-03	3.61E-03	3.70E-03	2.72E-03	5.03E-04	9.36E-08	2.90E-03	3.52E-03
E21	0.00E+00	1.30E-05	1.11E-06	3.89E+01	4.96E-05	1.45E-01	2.06E-05	7.29E-03	4.01E-03	6.74E-04	2.05E-03	1.10E-03	1.13E-03	1.28E-03	1.84E-04	3.29E-08	9.19E-04	1.35E-03
E22	0.00E+00	3.52E-06	2.28E-07	5.74E+00	3.01E-06	1.21E-02	3.46E-06	3.71E-03	4.86E-04	8.36E-05	3.60E-04	1.18E-04	1.21E-04	6.17E-04	2.25E-05	2.69E-09	2.39E-04	6.98E-04
E23	0.00E+00	1.30E-05	1.11E-06	3.89E+01	4.96E-05	1.45E-01	2.06E-05	7.29E-03	4.01E-03	6.74E-04	2.05E-03	1.10E-03	1.13E-03	1.28E-03	1.84E-04	3.29E-08	9.19E-04	1.35E-03
E24	0.00E+00	3.52E-06	2.28E-07	5.74E+00	3.01E-06	1.21E-02	3.46E-06	3.71E-03	4.86E-04	8.36E-05	3.60E-04	1.18E-04	1.21E-04	6.17E-04	2.25E-05	2.69E-09	2.39E-04	6.98E-04
E25	0.00E+00	1.24E-05	1.22E-06	4.38E+01	6.73E-05	1.85E-01	2.36E-05	3.79E-03	6.59E-03	1.02E-03	2.29E-03	1.40E-03	1.44E-03	6.37E-04	2.15E-04	3.94E-08	8.50E-04	6.87E-04
E26	0.00E+00	1.33E-05	1.30E-06	4.65E+01	7.14E-05	1.96E-01	2.52E-05	4.00E-03	6.98E-03	1.09E-03	2.46E-03	1.49E-03	1.53E-03	6.86E-04	2.28E-04	4.22E-08	9.29E-04	7.24E-04
E27	0.00E+00	1.93E-05	1.82E-06	6.29E+01	9.32E-05	2.58E-01	3.44E-05	7.77E-03	9.35E-03	1.45E-03	3.35E-03	1.98E-03	2.03E-03	1.24E-03	3.05E-04	5.50E-08	1.32E-03	1.43E-03
E28	0.00E+00	9.37E-06	9.89E-07	3.73E+01	5.99E-05	1.63E-01	1.97E-05	1.45E-03	5.69E-03	8.82E-04	1.89E-03	1.22E-03	1.25E-03	2.94E-04	1.86E-04	3.47E-08	6.46E-04	2.48E-04
E29	0.00E+00	1.49E-05	1.24E-06	3.95E+01	5.35E-05	1.51E-01	2.30E-05	8.05E-03	5.69E-03	8.90E-04	2.30E-03	1.20E-03	1.23E-03	1.27E-03	1.86E-04	3.36E-08	1.07E-03	1.49E-03
E30	0.00E+00	5.81E-06	4.66E-07	1.39E+01	1.74E-05	5.03E-02	8.23E-06	3.90E-03	1.97E-03	3.08E-04	8.21E-04	4.10E-04	4.21E-04	5.84E-04	6.42E-05	1.09E-08	4.00E-04	7.28E-04
E31	0.00E+00	1.63E-05	1.40E-06	4.59E+01	6.45E-05	1.80E-01	2.64E-05	7.82E-03	6.68E-03	1.04E-03	2.62E-03	1.42E-03	1.46E-03	1.25E-03	2.19E-04	4.00E-08	1.16E-03	1.45E-03
E32	0.00E+00	7.72E-06	5.84E-07	1.70E+01	2.06E-05	5.96E-02	1.05E-05	5.13E-03	2.37E-03	3.73E-04	1.07E-03	4.98E-04	5.11E-04	7.90E-04	7.79E-05	1.37E-08	5.59E-04	9.57E-04
E33	0.00E+00	6.00E-05	5.50E-06	1.70E+02	2.76E-04	7.48E-01	1.04E-04	2.48E-02	3.23E-02	4.82E-03	1.02E-02	5.91E-03	6.06E-03	3.60E-03	8.23E-04	1.53E-07	4.17E-03	4.57E-03
E34	0.00E+00	3.99E-05	3.13E-06	8.34E+01	1.14E-04	3.23E-01	5.55E-05	2.74E-02	1.52E-02	2.28E-03	5.59E-03	2.71E-03	2.78E-03	3.63E-03	3.83E-04	6.62E-08	2.80E-03	5.12E-03
E35	0.00E+00	2.68E-05	2.30E-06	6.72E+01	1.03E-04	2.83E-01	4.25E-05	1.42E-02	1.26E-02	1.88E-03	4.21E-03	2.28E-03	2.34E-03	1.96E-03	3.19E-04	5.78E-08	1.87E-03	2.64E-03
E36	0.00E+00	3.01E-05	2.12E-06	5.01E+01	5.64E-05	1.70E-01	3.60E-05	2.50E-02	8.81E-03	1.33E-03	3.71E-03	1.53E-03	1.57E-03	3.24E-03	2.19E-04	3.52E-08	2.14E-03	4.69E-03
E37	0.00E+00	2.68E-05	2.30E-06	6.72E+01	1.03E-04	2.83E-01	4.25E-05	1.42E-02	1.26E-02	1.88E-03	4.21E-03	2.28E-03	2.34E-03	1.96E-03	3.19E-04	5.78E-08	1.87E-03	2.64E-03
E38	0.00E+00	3.01E-05	2.12E-06	5.01E+01	5.64E-05	1.70E-01	3.60E-05	2.50E-02	8.81E-03	1.33E-03	3.71E-03	1.53E-03	1.57E-03	3.24E-03	2.19E-04	3.52E-08	2.14E-03	4.69E-03
E39	0.00E+00	2.13E-05	1.84E-06	5.94E+01	8.19E-05	2.31E-01	3.38E-05	1.14E-02	8.63E-03	1.35E-03	3.34E-03	1.82E-03	1.87E-03	1.76E-03	2.82E-04	4.98E-08	1.47E-03	2.11E-03
E40	0.00E+00	1.36E-05	1.39E-06	5.12E+01	8.06E-05	2.20E-01	2.73E-05	3.12E-03	7.76E-03	1.20E-03	2.63E-03	1.66E-03	1.70E-03	5.61E-04	2.53E-04	4.69E-08	9.35E-04	5.55E-04
E41	0.00E+00	1.20E-05	1.18E-06	4.23E+01	6.48E-05	1.78E-01	2.28E-05	3.75E-03	6.35E-03	9.87E-04	2.21E-03	1.35E-03	1.39E-03	6.28E-04	2.07E-04	3.80E-08	8.24E-04	6.80E-04
E42	0.00E+00	1.21E-05	1.23E-06	4.51E+01	7.07E-05	1.93E-01	2.41E-05	2.95E-03	6.82E-03	1.06E-03	2.33E-03	1.46E-03	1.49E-03	5.22E-04	2.23E-04	4.12E-08	8.31E-04	5.27E-04
E43	0.00E+00	7.21E-06	7.59E-07	2.85E+01	4.57E-05	1.24E-01	1.51E-05	1.20E-03	4.35E-03	6.74E-04	1.45E-03	9.30E-04	9.54E-04	2.38E-04	1.42E-04	2.65E-08	4.97E-04	2.08E-04
E44	0.00E+00	1.16E-05	1.20E-06	4.48E+01	7.13E-05	1.94E-01	2.38E-05	2.13E-03	6.80E-03	1.06E-03	2.29E-03	1.46E-03	1.49E-03	4.12E-04	2.22E-04	4.15E-08	8.01E-04	3.72E-04
E45	0.00E+00	2.50E-05	1.89E-06	6.11E+01	6.72E-05	2.03E-01	3.43E-05	1.73E-02	5.98E-03	1.02E-03	3.50E-03	1.62E-03	1.66E-03	3.06E-03	2.77E-04	4.91E-08	1.84E-03	3.23E-03
E46	0.00E+00	2.27E-05	1.52E-06	4.22E+01	3.17E-05	1.09E-01	2.51E-05	2.10E-02	3.78E-03	6.49E-04	2.61E-03	9.65E-04	9.93E-04	3.58E-03	1.76E-04	2.65E-08	1.62E-03	3.93E-03
E47	0.00E+00	2.37E-05	1.85E-06	6.16E+01	7.18E-05	2.14E-01	3.41E-05	1.51E-02	6.14E-03	1.04E-03	3.46E-03	1.68E-03	1.72E-03	2.69E-03	2.84E-04	5.12E-08	1.74E-03	2.81E-03
E48	0.00E+00	9.13E-06	7.27E-07	2.40E+01	2.79E-05	8.32E-02	1.31E-05	6.16E-03	2.40E-03	4.06E-04	1.32E-03	6.52E-04	6.70E-04	1.07E-03	1.10E-04	1.91E-08	6.46E-04	1.15E-03
E49	0.00E+00	2.28E-05	1.77E-06	5.86E+01	6.75E-05	2.01E-01	3.24E-05	1.49E-02	5.83E-03	9.88E-04	3.29E-03	1.59E-03	1.63E-03	2.64E-03	2.69E-04	4.81E-08	1.66E-03	2.78E-03
E50	0.00E+00	6.22E-06	5.61E-07	2.02E+01	2.71E-05	7.81E-02	1.05E-05	3.06E-03	2.12E-03	3.56E-04	1.04E-03	5.87E-04	6.03E-04

Appendix F.4.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 4

RWDI Project#: 1301992

Highway 413
GTA West

	Tota Emission Factor (g/s mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
E74	0.00E+00	1.04E-05	1.04E-06	3.39E+01	5.76E-05	1.54E-01	2.01E-05	2.94E-03	6.50E-03	9.70E-04	1.94E-03	1.20E-03	1.23E-03	4.67E-04	1.66E-04	3.13E-08	7.13E-04	5.32E-04
E75	0.00E+00	5.98E-05	5.35E-06	1.87E+02	2.57E-04	7.13E-01	1.01E-04	2.78E-02	2.66E-02	4.17E-03	9.89E-03	5.58E-03	5.73E-03	4.41E-03	9.00E-04	1.60E-07	4.16E-03	5.13E-03
E76	0.00E+00	3.82E-05	3.61E-06	1.33E+02	1.91E-04	5.23E-01	6.98E-05	1.33E-02	1.91E-02	2.99E-03	6.83E-03	4.04E-03	4.14E-03	2.24E-03	6.48E-04	1.18E-07	2.69E-03	2.42E-03
E77	0.00E+00	6.07E-05	5.45E-06	1.90E+02	2.62E-04	7.27E-01	1.02E-04	2.83E-02	2.71E-02	4.25E-03	1.01E-02	5.69E-03	5.84E-03	4.47E-03	9.17E-04	1.63E-07	4.22E-03	5.21E-03
E78	0.00E+00	4.15E-05	3.92E-06	1.44E+02	2.07E-04	5.66E-01	7.56E-05	1.48E-02	2.07E-02	3.24E-03	7.39E-03	4.37E-03	4.48E-03	2.47E-03	7.02E-04	1.27E-07	2.91E-03	2.70E-03
E79	0.00E+00	5.30E-05	4.94E-06	1.81E+02	2.60E-04	7.10E-01	9.57E-05	1.86E-02	2.60E-02	4.07E-03	9.40E-03	5.49E-03	5.63E-03	3.16E-03	8.81E-04	1.61E-07	3.77E-03	3.40E-03
E80	0.00E+00	4.43E-05	3.99E-06	1.41E+02	1.97E-04	5.43E-01	7.60E-05	1.90E-02	2.02E-02	3.16E-03	7.49E-03	4.25E-03	4.36E-03	3.08E-03	6.83E-04	1.23E-07	3.13E-03	3.49E-03
E83	0.00E+00	1.43E-05	1.33E-06	4.61E+01	6.82E-05	1.88E-01	2.53E-05	5.67E-03	6.84E-03	1.06E-03	2.48E-03	1.45E-03	1.49E-03	9.15E-04	2.23E-04	4.05E-08	9.86E-04	1.04E-03
E84	0.00E+00	1.20E-05	1.19E-06	4.26E+01	6.55E-05	1.80E-01	2.29E-05	3.69E-03	6.41E-03	9.95E-04	2.21E-03	1.36E-03	1.40E-03	6.14E-04	2.09E-04	3.81E-08	8.13E-04	6.69E-04
E85	0.00E+00	9.49E-05	8.25E-06	2.46E+02	3.86E-04	1.05E+00	1.55E-04	4.50E-02	4.63E-02	6.93E-03	1.54E-02	8.45E-03	8.67E-03	6.42E-03	1.18E-03	2.18E-07	6.74E-03	8.33E-03
E86	0.00E+00	1.07E-04	8.70E-06	2.43E+02	3.54E-04	9.83E-01	1.59E-04	6.39E-02	4.49E-02	6.74E-03	1.60E-02	8.11E-03	8.33E-03	8.73E-03	1.14E-03	2.05E-07	7.66E-03	1.19E-02
E87	0.00E+00	1.13E-04	8.75E-06	2.34E+02	3.22E-04	9.09E-01	1.58E-04	7.43E-02	4.27E-02	6.41E-03	1.60E-02	7.66E-03	7.86E-03	1.00E-02	1.08E-03	1.91E-07	8.11E-03	1.39E-02
E88	0.00E+00	9.81E-05	8.44E-06	2.49E+02	3.86E-04	1.06E+00	1.58E-04	4.86E-02	4.67E-02	7.00E-03	1.57E-02	8.52E-03	8.74E-03	6.87E-03	1.19E-03	2.19E-07	6.96E-03	9.02E-03
E89	0.00E+00	8.66E-06	8.33E-07	2.70E+01	4.57E-05	1.22E-01	1.63E-05	2.43E-03	5.16E-03	7.72E-04	1.59E-03	9.56E-04	9.80E-04	3.97E-04	1.32E-04	2.53E-08	6.12E-04	4.41E-04
E90	0.00E+00	6.45E-06	6.27E-07	2.05E+01	3.49E-05	9.32E-02	1.23E-05	1.69E-03	3.92E-03	5.86E-04	1.20E-03	7.26E-04	7.45E-04	2.81E-04	1.01E-04	1.92E-08	4.54E-04	3.06E-04
E91	0.00E+00	1.49E-07	1.60E-08	5.50E-01	9.81E-07	2.60E-03	3.19E-07	1.58E-05	1.07E-04	1.59E-05	3.06E-05	1.99E-05	2.04E-05	3.77E-06	2.74E-06	5.29E-10	1.03E-05	2.63E-06
E92	0.00E+00	1.49E-07	1.60E-08	5.50E-01	9.81E-07	2.60E-03	3.19E-07	1.58E-05	1.07E-04	1.59E-05	3.06E-05	1.99E-05	2.04E-05	3.77E-06	2.74E-06	5.29E-10	1.03E-05	2.63E-06
E93	0.00E+00	1.10E-05	1.05E-06	3.38E+01	5.71E-05	1.53E-01	2.05E-05	3.18E-03	6.46E-03	9.65E-04	2.00E-03	1.19E-03	1.23E-03	5.14E-04	1.65E-04	3.16E-08	7.74E-04	5.78E-04
E94	0.00E+00	1.02E-05	1.00E-06	3.30E+01	5.70E-05	1.51E-01	1.99E-05	2.21E-03	6.34E-03	9.47E-04	1.94E-03	1.18E-03	1.21E-03	3.99E-04	1.63E-04	3.16E-08	7.29E-04	3.96E-04
E95	0.00E+00	5.15E-05	4.18E-06	1.42E+02	1.65E-04	4.88E-01	7.53E-05	3.40E-02	1.49E-02	2.48E-03	7.53E-03	3.82E-03	3.92E-03	5.86E-03	6.60E-04	1.12E-07	3.61E-03	6.33E-03
E96	0.00E+00	3.22E-05	2.71E-06	9.52E+01	1.16E-04	3.37E-01	4.95E-05	1.96E-02	1.01E-02	1.68E-03	4.92E-03	2.61E-03	2.68E-03	3.37E-03	4.47E-04	7.65E-08	2.25E-03	3.63E-03
E97	0.00E+00	5.15E-05	4.18E-06	1.42E+02	1.65E-04	4.88E-01	7.53E-05	3.40E-02	1.49E-02	2.48E-03	7.53E-03	3.82E-03	3.92E-03	5.86E-03	6.60E-04	1.12E-07	3.61E-03	6.33E-03
E98	0.00E+00	3.22E-05	2.71E-06	9.52E+01	1.16E-04	3.37E-01	4.95E-05	1.96E-02	1.01E-02	1.68E-03	4.92E-03	2.61E-03	2.68E-03	3.37E-03	4.47E-04	7.65E-08	2.25E-03	3.63E-03
F01	0.00E+00	3.03E-05	2.55E-06	7.40E+01	1.12E-04	3.08E-01	4.74E-05	1.62E-02	1.38E-02	2.07E-03	4.72E-03	2.51E-03	2.57E-03	2.25E-03	3.50E-04	6.39E-08	2.15E-03	3.01E-03
F02	0.00E+00	1.77E-05	1.69E-06	5.39E+01	8.96E-05	2.41E-01	3.25E-05	6.10E-03	1.03E-02	1.54E-03	3.16E-03	1.89E-03	1.94E-03	9.25E-04	2.62E-04	4.92E-08	1.23E-03	1.12E-03
F03	0.00E+00	5.39E-06	4.43E-07	1.53E+01	1.90E-05	5.57E-02	8.28E-06	3.08E-03	1.56E-03	2.63E-04	8.31E-04	4.29E-04	4.41E-04	5.50E-04	7.18E-05	1.31E-08	3.91E-04	5.72E-04
F04	0.00E+00	7.25E-07	7.78E-08	3.15E+00	4.86E-06	1.35E-02	1.57E-06	8.74E-05	3.46E-04	5.77E-05	1.51E-04	9.80E-05	1.01E-04	1.91E-05	1.58E-05	3.02E-09	5.09E-05	1.43E-05
F05	0.00E+00	1.77E-05	1.39E-06	3.75E+01	5.18E-05	1.46E-01	2.49E-05	1.18E-02	6.85E-03	1.03E-03	2.51E-03	1.23E-03	1.26E-03	1.58E-03	1.73E-04	3.01E-08	1.25E-03	2.21E-03
F06	0.00E+00	2.13E-05	1.85E-06	5.51E+01	8.59E-05	2.35E-01	3.47E-05	1.04E-02	1.03E-02	1.55E-03	3.43E-03	1.89E-03	1.94E-03	1.47E-03	2.63E-04	4.84E-08	1.50E-03	1.93E-03
F07	0.00E+00	3.90E-05	3.07E-06	8.34E+01	1.17E-04	3.29E-01	5.57E-05	2.49E-02	1.53E-02	2.29E-03	5.62E-03	2.75E-03	2.82E-03	3.37E-03	3.86E-04	6.88E-08	2.80E-03	4.64E-03
F08	0.00E+00	3.36E-05	2.79E-06	8.01E+01	1.20E-04	3.31E-01	5.19E-05	1.82E-02	1.49E-02	2.23E-03	5.19E-03	2.71E-03	2.78E-03	2.54E-03	3.78E-04	6.93E-08	2.41E-03	3.38E-03
F09	0.00E+00	7.55E-06	7.14E-07	2.68E+01	3.77E-05	1.07E-01	1.37E-05	2.91E-03	2.85E-03	4.77E-04	1.35E-03	7.96E-04	8.17E-04	5.21E-04	1.30E-04	2.41E-08	5.28E-04	5.31E-04
F10	0.00E+00	3.44E-06	3.58E-07	1.42E+01	2.13E-05	5.98E-02	7.09E-06	7.28E-04	1.54E-03	2.58E-04	6.86E-04	4.36E-04	4.47E-04	1.38E-04	7.03E-05	1.33E-08	2.39E-04	1.28E-04
F13	0.00E+00	1.28E-06	1.06E-07	3.57E+00	4.32E-06	1.28E-02	1.92E-06	8.21E-04	3.62E-04	6.11E-05	1.91E-04	9.88E-05	1.01E-04	1.41E-04	1.66E-05	2.89E-09	8.96E-05	1.53E-04
F14	0.00E+00	4.60E-07	3.81E-08	1.21E+00	1.36E-06	4.13E-03	6.38E-07	3.68E-04	1.22E-04	2.04E-05	6.25E-05	3.24E-05	3.33E-05	5.93E-05	5.52E-06	8.41E-10	2.92E-05	6.88E-05
F15	0.00E+00	2.89E-05	2.37E-06	7.25E+01	9.36E-05	2.68E-01	4.24E-05	1.83E-02	1.03E-02	1.62E-03	4.22E-03	2.16E-03	2.22E-03	2.76E-03	3.38E-04	5.80E-08	2.00E-03	3.41E-03
F16	0.00E+00	2.80E-05	2.46E-06	8.12E+01	1.15E-04	3.20E-01	4.58E-05	1.38E-02	1.19E-02	1.85E-03	4.52E-03	2.51E-03	2.58E-03	2.16E-03	3.88E-04	6.94E-08	1.94E-03	2.55E-03
F17	0.00E+00	2.50E-05	1.98E-06	5.87E+01	7.26E-05	2.11E-01	3.49E-05	1.70E-02	8.28E-03	1.30E-03	3.49E-03	1.73E-03	1.77E-03	2.55E-03	2.70E-04	4.56E-08	1.72E-03	3.18E-03
F18	0.00E+00	2.14E-05	1.83E-06	5.84E+01	7.96E-05	2.25E-01	3.35E-05	1.18E-02	8.46E-03	1.32E-03	3.32E-03	1.78E-03	1.83E-03	1.82E-03	2.76E-04	4.87E-08	1.49E-03	2.19E-03
F19	0.00E+00	1.35E-05	1.15E-06	3.74E+01	5.17E-05	1.45E-01	2.15E-05	6.98E-03	5.42E-03	8.47E-04	2.14E-03	1.15E-03	1.18E-03	1.10E-03	1.78E-04	3.19E-08	9.58E-04	1.29E-03
F20	0.00E+00	1.40E-05	1.47E-06	5.56E+01	8.94E-05	2.42E-01	2.94E-05	2.02E-03	8.47E-03	1.31E-03	2.83E-03	1.82E-03	1.86E-03	4.28E-04	2.77E-04	5.20E-08	9.72E-04	3.45E-04
F21	0.00E+00	2.59E-06	2.77E-07	1.06E+01	1.72E-05	4.64E-02	5.57E-06	2.95E-04	1.62E-03	2.51E-04	5.36E-04	3.47E-04	3.56E-04	6.82E-05	5.29E-05	9.95E-09	1.80E-04	4.87E-05
F22	0.00E+00	6.34E-06	6.78E-07	2.59E+01	4.20E-05	1.14E-01	1.36E-05	7.22E-04	3.96E-03	6.14E-04	1.31E-03	8.49E-04	8.70E-04	1.67E-04	1.29E-04	2.43E-08	4.40E-04	1.19E-04
F23	0.00E+00	3.74E-06	3.22E-07	1.04E+01	1.42E-05	4.01E-02	5.91E-06	2.05E-03	1.51E-03	2.35E-04	5.84E-04	3.17E-04	3.26E-04	3.14E-04	4.92E-05	8.65E-09	2.58E-04	3.79E-04
F24	0.00E+00	4.85E-06	4.30E-07	1.44E+01	2.05E-05	5.72E-02	8.10E-06	2.22E-03	2.10E-03	3.28E-04	8.00E-04	4.47E-04	4.58E-04	3.55E-04	6.89E-05	1.25E-08	3.42E-04	4.10E-04
F25	0.00E+00	2.17E-05	1.71E-06	4.60E+01	6.35E-05	1.80E-01	3.06E-05	1.46E-02	8.42E-03	1.26E-03	3.07E-03	1.50E-03	1.54E-03	1.94E-03	2.12E-04	3.69E-08	1.53E-03	2.73E-03
F26	0.00E+00	2.18E-05	1.86E-06	5.44E+01	8.32E-05	2.29E-01	3.46E-05	1.14E-02	1.02E-02	1.52E-03	3.43E-03	1.85E-03	1.90E-03	1.59E-03	2.58E-04	4.71E-08	1.53E-03	2.12E-03
F27	0.00E+00	1.22E-04	8.54E-06	2.07E+02	2.46E-04	7.19E-01	1.51E-04	9.19E-02	3.65E-02	5.51E-03	1.57E-02	6.47E-03	6.65E-03	1.23E-02	9.15E-04	1.59E-07	9.07E-03	1.72E-02
F28	0.00E+00	1.07E-04	7.59E-06	1.89E+02	2.36E-04	6.78E-01	1.37E-04	7.61E-02	3.36E-02	5.07E-03	1.41E-02	6.01E-03	6.18E-03	1.03E-02	8.47E-04	1.51E-07	7.97E-03	1.42E-02
F29	0.00E+00	1.21E-05	1.14E-06	3.66E+01	6.12E-05	1.64E-01	2.23E-05	3.81E-03	6.97E-03	1.04E-03	2.18E-03	1.29E-03	1.32E-03	6.03E-04	1.79E-04	3.41E-08	8.62E-04	6.95E-04
F30	0.00E+00	2.51E-05	2.00E-06	5.58E+01	8.11E-05	2.25E-01	3.71E-05	1.45E-02	1.03E-02	1.54E-03	3.74E-03	1.87E-03	1.91E-03	2.01E-03	2.61E-04	4.78E-08	1.82E-03	2.70E-03
F35	0.00E+00	1.60E-05	1.32E-06	4.58E+01	5.74E-05	1.68E-01	2.47E-05	8.91E-03	4.68E-03	7.90E-04	2.48E-03	1.29E-03	1.32E-03	1.60E-03	2.15E-04	3.94E-08	1.16E-03	1.65E-03
F36	0.00E+00	1.38E-05	9.94E-07	3.14E+01	3.27E-05	1.00E-01	1.81E-05	9.82E-03	3.02E-03	5.16E-04	1.87E-03	8.14E-04	8.36E-04	1.76E-03	1.41E-04	2.52E-08	1.03E-03	1.83E-03
F37	0.00E+00	8.10E-05	6.29E-06	1.66E+02	2.25E-04	6.41E-01	1.12E-04	5.60E-02	3.03E-02	4.55E-03	1.13E-02	5.40E-03	5.55E-03	7.43E-03	7.63E-04	1.32E-07	5.72E-03	1.05E-02
F38	0.00E+00	8.78E-05	7.01E-06	1.91E+02	2.69E-04	7.56E-01	1.26E-04	5.68E-02	3.51E-02	5.26E-03	1.27E-02	6.29E-03	6.46E-03	7.62E-03	8.85E-04	1.56E-07	6.20E-03	1.06E-02
F39	0.00E+00	1.47E-05	1.38E-06	5.17E+01	7.26E-05	2.07E-01	2.66E-05	5.77E-03	5.50E-03	9.21E-04	2.60E-03	1.54E-03	1.58E-03	1.03E-03	2.51E-04	4.64E-08	1.03E-03	1.05E-03
F40	0.00E+00	3.34E-06	3.06E-07	1.13E+01	1.56E-05	4.45E-02	5.87E-06	1.42E-03	1.19E-03	2.00E-04	5.78E-04	3.32E-04	3.41E-04	2.56E-04	5.46E-05	1.01E-08	2.37E-04	2.61E-04
F41	0.00E+00	9.70E-06	9.88E-07	3.66E+01	5.79E-05	1.57E-01	1.96E-05	1.96E-03	5.55E-03	8.62E-04	1.90E-03	1.19E-03	1.22E-03	3.75E-04	1.82E-04	3.40E-08	6.79E-04	3.47E-04
F42	0.00E+00	1.08E-05	1.15E-06	4.37E+01	7.07E-05	1.91E-01	2.31E-05	1.28E-03	6.67E-03	1.03E-03	2.23E-03	1.43E-03	1.47E-03	2.97E-04	2.18E-04	4.12E-08	7.58E-04	2.13E-04
F43	0.00E+00	2.80E-06	2.68E-07	8.67E+00	1.47E-05	3.92E-02	5.24E-06	8.00E-04	1.66E-03	2.48E-04	5.12E-04	3.07E-04	3.14E-04	1.30E-04	4.25E-05	8.11E-09	1.98E-04	1.45E-04
F44	0.00E+00	5.53E-07	5.91E-08	2.04E+00	3.63E-06	9.60E-03	1.18E-06	5.85E-05	3.95E-04	5.89E-05	1.13E-04	7.35E-05	7.53E-05	1.40E-05	1.01E-05	1.96E-09	3.79E-05	9.73E-06
F45	0.00E+00	1.43E-05	1.33E-06	4.61E+01	6.82E-05	1.88E-01	2.53E-05	5.67E-03	6.84E-03	1.06E-03	2.48E-03	1.45E-03	1.49E-03	9.15E-04	2.23E-04	4.05E-08	9.86E-04	1.04E-03
F46	0.00E+00	1.20E-05	1.19E-06	4.26E+01	6.55E-05	1.80E-01	2.29E-05	3.69E-03	6.41E-03	9.95E-04	2.21E-03	1.36E-03	1.40E-03	6.14E-04	2.09E-04	3.81E-08	8.13E-04	6.69E-04
F47	0.00E+00	1.35E-07	1.44E-08	4.95E-01	8.82E-07	2.34E-03	2.87E-07	1.42E-05	9.61E-05	1.43E-05	2.76E-05	1.79E-05	1.83E-05	3.40E-06	2.47E-06	4.77E-10	9.23E-06	2.37E-06
F48	0.00E+00	2.76E-06	2.32E-07	6.58E+00	9.66E-06	2.70E-02	4.19E-06	1.68E-03	1.22E-03	1.83E-04	4.15E-04	2.19E-04	2.25E-04	2.25E-04	3.09E-05	5.41E-09	1.89E-04	3.13E-04
F49	0.00E+00	1.09E-04	7.86E-06	1.97E+02	2.48E-04	7.14E-01	1.41E-04	7.82E-02	3.52E-02	5.30E-03	1.45E-02	6.28E-03	6.45E-03	1.05E-02	8.85E-04	1.56E-07	8.07E-03	1.46E-02
F50	0.00E+00	1.04E-04	7.33E-06	1.80E+02	2.20E-04	6.35E-01	1.31E-04	7.58E-02	3.18E-02	4.81E-03	1.36E-02	5.68E-03	5.84E-03	1.02E-02	8.01E-04	1.42E-07	7.80E-03	1.42E-02
F51	0.00E+00	4.04E-05	3.36E-06	1.07E+02	1.45E-04	4.09E-01	6.25E-05	2.16E-02	1.54E-02	2.41E-03	6.25E-03	3.26E-03	3.35E-03	3.41E-03	5.06E-04	9.14E-08	2.90E-03	4.01E-03
F52	0.00E+00	1.11E-05	1.01E-06	3.48E+01	5.13E-05	1.42E-01	1.94E-05	4.27E-03	5.14E-03	8.02E-04	1.92E-03	1.10E-03	1.12E-03	7.11E-04	1.69E-04	3.11E-08	7.91E-04	7.84E-04
F53	0.00E+00	3.25E-05	3.05E-06	1.07E+02	1.61E-04	4.42E-01	5.90E-05	1.13E-02	1.59E-02	2.48E-03	5.78E-03	3.40E-03	3.48E-03	1.91E-03	5.21E-04	9.63E-08	2.30E-03	2.07E-03
F54	0.00E+00	8.58E-06	9.18E-07	3.51E+01	5.68E-05	1.54E-01	1.84E-05	9.78E-04	5.36E-03	8.31E-04	1.77E-03	1.15E-03	1.18E-03	2.26E-04	1.75E-04	3.29E-08	5.95E-04	1.61E-04
F71	0.00E+00	1.92E-05	1.36E-06	3.64E+01	3.55E-05	1.09E-01	2.29E-05	1.58E-02	4.76E-03	7.54E-04	2.35E-03	9.70E-04	9.97E-04	2.34E-03	1.60E-04	2.54E-08	1.35E-03	2.96E-03
F72	0.00E+00	6.95E-05	4.37E-06	6.71E+01	5.77E-05	1.88E-01	6.87E-05	6.36E-02	1.70E-02	2.45E-03	7.24E-03	2.27E-03	2.33E-03	6.27E-03	2.73E-04	3.86E-08	4.91E-03	1.20E-02
F73	0.00E+00	2.03E-06	1.70E-07	5.23E+00	7.24E-06	2.00E-02	3.11E-06	1.17E-03	9.37E-04	1.40E-04	3.10E-04	1.63E-04	1.68E-04	1.61E-04	2.47E-05	4.17E-09	1.42E-04	2.17E-04
F74	0.00E+00	3.82E-05	2.53E-06	6.57E+01	6.04E-05	1.87E-01	4.41E-05	3.03E-02	8.37E-03	1.34E-03	4.64E-03	1.73E-03	1.78E-03	4.64E-03	2.84E-04	4.86E-08	2.86E-03	5.68E-03
F75	0.00E+00	3.51E-05	2.32E-06	5.73E+01	6.31E-05	1.82E-01	4.24E-05	2.52E-02	9.72E-03	1.48E-03	4.50E-03	1.71E-03	1.75E-03	3.47E-03	2.54E-04	4.50E-08	2.75E-03	4.71E-03
F76	0.00E+00	4.06E-06	4.31E-07	1.48E+01	2.58E-05	6.66E-02	8.47E-06	3.91E-04	4.22E-03	5.88E-04	8.09E-04	5.26E-04	5.39E-04	1.16E-04	7.31E-05	1.16E-08	2.70E-04	6.63E-05
F78	0.00E+00	2.36E-05	2.08E-06	6.01E+01	9.73E-05	2.55E-01	3.89E-05	9.59E-03	1.68E-02	2.36E-03	3.82E-03	2.13E-03	2.18E-03	1.23E-03	2.89E-04	4.58E-08	1.64E-03	1.78E-03
F79	0.00E+00	3.08E-05	2.93E-06	1.02E+02	1.58E-04	4.23E-01	5.71E-05	9.41E-03	1.87E-02	2.79E-03	5.59E-03	3.32E-03	3.40E-03	1.53E-03	5.00E-04	8.90E-08	2.18E-03	1.71E-03
F80	0.00E+00	6.53E-05	6.27E-06	2.33E+02	3.40E-04	9.26E-01	1.22E-04	2.10E-02	3.37E-02	5.27E-03	1.19E-02	7.12E-03	7.30E-03	3.60E-03	1.14E-03	2.08E-07	4.59E-03	3.82E-03
F84	0.00E+00	3.41E-05	2.62E-06	5.89E+01	7.81E-05	2.24E-01	4.30E-05	2.66E-02	1.61E-02	2.27E-03	4.27E-03	2.00E-03	2.06E-03	2.70E-03	2.67E-04	3.72E-08	2.21E-03	5.00E-03
F85	0.00E+00	2.08E-05	1.68E-06	4.94E+01	6.53E-05	1.83E-01	3.02E-05	1.35E-02	8.79E-03	1.32E-03	3.02E-03	1.52E-03	1.56E-03	1.82E-03	2.31E-04	3.80E-08	1.46E-03	2.53E-03
F86	0.00E+00	2.62E-05	2.15E-06	6.67E+01	8.09E-05	2.33E-01	3.74E-05	1.81E-02	9.22E-03	1.45E-03	3.70E-03	1.90E-03	1.95E-03	2.66E-03	3.09E-04	5.07E-08	1.76E-03	3.37E-03
F87	0.00E+00	5.21E-05	3.60E-06	9.11E+01	1.02E-04	2.97E-01	6.40E-05	3.90E-02	1.56E-02	2.36E-03	6.68E-03	2.70E-03	2.78E-03	5.24E-03	4.06E-04	6.80E-08	3.91E-03	7.30E-03
F88	0.00E+00	3.41E-05	2.62E-06	5.89E+01	7.81E-05	2.24E-01	4.30E-05	2.66E-02	1.61E-02	2.27E-03	4.27E-03	2.00E-03	2.06E-03	2.70E-03	2.67E-04	3.72E-08	2.21E-03	5.00E-03
F89	0.00E+00	1.05E-04	6.84E-06	1.11E+02	1.00E-04	3.30E-01	1.05E-04	9.87E-02	2.85E-02	4.09E-03	1.09E-02	3.68E-03	3.79E-03	9.61E-03	4.56E-04	5.96E-08	7.12E-03	1.86E-02

Appendix F.5.1: MOVES Emission Factors by Road Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph)	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	11	Motorcycle	grams/mile	0.00E+00	3.32E-03	3.62E-04	3.99E+02	2.37E-02	1.17E+01	7.52E-03	9.08E-01	2.81E-02	2.11E-02	5.49E-01	4.73E-01	4.69E-01	1.37E-03	2.13E-03	1.09E-05	8.02E-02	3.45E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	21	PassengerCar	grams/mile	0.00E+00	3.32E-05	3.61E-06	1.46E+02	2.36E-04	6.81E-01	7.49E-05	3.88E-03	1.15E-02	2.21E-03	7.31E-03	4.71E-03	4.84E-03	4.28E-04	7.44E-04	1.56E-07	2.47E-03	6.06E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	31	PassengerTruck	grams/mile	0.00E+00	4.10E-05	4.39E-06	2.01E+02	2.74E-04	7.87E-01	8.85E-05	5.79E-03	1.20E-02	2.33E-03	8.53E-03	5.52E-03	5.66E-03	1.33E-03	1.01E-03	1.85E-07	2.87E-03	9.51E-04
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	32	LightCommercialTruck	grams/mile	0.00E+00	4.61E-05	4.83E-06	2.21E+02	2.85E-04	6.91E-01	9.41E-05	8.95E-03	1.32E-02	2.78E-03	8.52E-03	5.83E-03	5.92E-03	2.82E-03	1.10E-03	3.84E-07	2.60E-03	1.52E-03
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	41	IntercityBus	grams/mile	0.00E+00	5.00E-03	2.81E-05	1.02E+03	8.62E-04	8.70E+00	5.90E-03	5.53E-01	3.64E-02	8.25E-03	9.21E-01	5.41E-02	5.68E-02	9.06E-02	4.36E-03	1.13E-06	8.64E-01	1.01E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	42	TransitBus	grams/mile	0.00E+00	5.25E-03	3.19E-05	1.03E+03	1.10E-03	9.09E+00	6.24E-03	4.92E-01	2.77E-02	7.12E-03	9.68E-01	6.04E-02	6.31E-02	9.14E-02	4.40E-03	1.22E-06	9.05E-01	8.93E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	3.59E-04	1.39E-05	7.44E+02	1.93E-04	1.58E+00	3.82E-04	2.97E-01	3.31E-02	7.64E-03	4.82E-02	8.32E-03	8.52E-03	1.01E-01	2.74E-03	2.62E-07	3.97E-02	5.56E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	6.07E-03	2.59E-05	1.02E+03	1.09E-04	4.02E+00	6.99E-03	7.94E-01	3.41E-02	7.78E-03	1.11E+00	4.91E-02	5.25E-02	1.50E-01	3.63E-03	9.87E-10	1.06E+00	1.47E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.42E-04	1.26E-05	5.88E+02	2.62E-04	1.21E+00	3.88E-04	1.51E-01	2.33E-02	6.02E-03	4.91E-02	9.06E-03	9.22E-03	6.02E-02	2.38E-03	9.71E-07	3.98E-02	2.82E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.44E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.69E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.24E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.27E-02
2	RuralRestrictedAccess	13	Highways_RuralRestricted_110kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.32E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.76E-01
2	RuralRestrictedAccess	13	Highways_RuralRestricted_110kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.09E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.06E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	3.51E-05	3.82E-06	1.51E+02	2.49E-04	8.23E-01	7.92E-05	4.26E-03	8.75E-03	1.92E-03	7.72E-03	4.98E-03	5.11E-03	3.89E-04	7.74E-04	1.75E-07	2.61E-03	6.65E-04
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	4.36E-05	4.68E-06	2.11E+02	2.94E-04	9.70E-01	9.48E-05	6.17E-03	8.88E-03	2.01E-03	9.16E-03	5.93E-03	6.08E-03	1.30E-03	1.07E-03	2.07E-07	3.08E-03	1.01E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.62E-05	4.85E-06	2.29E+02	2.91E-04	8.44E-01	9.56E-05	9.04E-03	9.98E-03	2.42E-03	8.76E-03	5.93E-03	6.04E-03	2.83E-03	1.14E-03	3.99E-07	2.73E-03	1.53E-03
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.50E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.46E-07	7.70E-01	1.19E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.74E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.27E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.14E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.94E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.66E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.61E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.99E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.52E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.83E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.39E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.94E-01
2	RuralRestrictedAccess	14	Highways_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.23E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.32E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	3.95E-05	4.29E-06	1.60E+02	2.80E-04	1.08E+00	8.91E-05	4.75E-03	7.40E-03	1.87E-03	8.69E-03	5.60E-03	5.75E-03	3.57E-04	8.18E-04	2.10E-07	2.94E-03	7.41E-04
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.89E-05	5.26E-06	2.23E+02	3.32E-04	1.28E+00	1.07E-04	6.71E-03	7.49E-03	1.93E-03	1.03E-02	6.68E-03	6.85E-03	1.29E-03	1.13E-03	2.38E-07	3.48E-03	1.09E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.03E-05	5.30E-06	2.38E+02	3.21E-04	1.09E+00	1.05E-04	9.48E-03	8.39E-03	2.32E-03	9.70E-03	6.53E-03	6.65E-03	2.84E-03	1.18E-03	4.34E-07	3.05E-03	1.60E-03
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.44E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.37E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.48E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.53E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.60E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.90E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.21E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.12E-01
2	RuralRestrictedAccess	15	Highways_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.02E-05	6.54E-06	2.21E+02	4.27E-04	1.00E+00	1.35E-04	8.44E-03	1.17E-02	2.68E-03	1.32E-02	8.53E-03	8.75E-03	1.43E-03	1.10E-03	3.51E-06	4.34E-03	1.10E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.21E-05	8.59E-06	2.86E+02	4.82E-04	1.07E+00	1.62E-04	9.09E-03	9.16E-02	1.24E-02	1.52E-02	9.97E-03	1.02E-02	2.72E-03	1.42E-03	1.88E-07	5.03E-03	1.59E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.48E-04	1.52E-05	3.24E+02	7.95E-04	1.01E+00	2.75E-04	1.99E-02	9.45E-02	1.34E-02	2.27E-02	1.67E-02	1.69E-02	4.75E-03	1.58E-03	5.84E-07	5.88E-03	3.57E-03
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.86E+00	4.70E-01	6.59E-02	3.83E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.42E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.88E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.45E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	8.97E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.22E+00	3.82E-01	5.80E-02	2.10E-01	3.93E-02	4.05E-02	1.49E-01	4.11E-03	4.92E-07	1.70E-01	2.29E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.52E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.63E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.47E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.41E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.20E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.19E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.85E-01	2.44E-01	3.68E-02	7.22E-02	5.85E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.38E-02	9.05E-02
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.55E-03	3.07E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.78E-01
2	RuralRestrictedAccess	39	Ramps_RuralRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.52E+00	4.20E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.64E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.45E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.11E-05	5.55E-06	1.88E+02	3.63E-04	9.76E-01	1.15E-04	3.28E-03	6.21E-02	8.73E-03	1.12E-02	7.24E-03	7.43E-03	1.07E-03	9.44E-04	1.75E-07	3.80E-03	5.12E-04
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.73E-05	7.07E-06	2.44E+02	4.05E-04	9.65E-01	1.35E-04	7.56E-03	6.57E-02	9.12E-03	1.28E-02	8.34E-03	8.54E-03	2.18E-03	1.22E-03	1.77E-07	4.23E-03	1.31E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.13E-04	1.16E-05	2.75E+02	6.17E-04	8.93E-01	2.12E-04	1.57E-02	6.90E-02	1.01E-02	1.78E-02	1.29E-02	1.31E-02	3.94E-03	1.35E-03	5.06E-07	4.73E-03	2.79E-03
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.60E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.42E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.52E-06	2.87E+00	2.62E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.21E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.73E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.81E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.93E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.23E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.87E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.13E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.74E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.97E-02
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.77E-01
2	RuralRestrictedAccess	40	Ramps_RuralRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.05E-03	2.93E+00	3.99E-01	5.92E-02	2.72E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.94E-01	5.37E-01
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.65E-05	5.06E-06	1.70E+02	3.30E-04	8.88E-01	1.05E-04	3.38E-03	4.70E-02	6.79E-03	1.02E-02	6.60E-03	6.77E-03	8.56E-04	8.57E-04	1.70E-07	3.46E-03	5.28E-04
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	5.94E-05	6.27E-06	2.23E+02	3.66E-04	8.81E-01	1.21E-04	6.86E-03	4.95E-02	7.07E-03	1.15E-02	7.50E-03	7.69E-03	1.88E-03	1.11E-03	1.78E-07	3.82E-03	1.18E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	9.35E-05	9.67E-06	2.51E+02	5.25E-04	8.16E-01	1.79E-04	1.37E-02	5.28E-02	7.96E-03	1.52E-02	1.09E-02	1.11E-02	3.52E-03	1.24E-03	4.71E-07	4.13E-03	2.41E-03
2	RuralRestrictedAccess	41	Ramps_RuralRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
2	Rural

Appendix F.5.1: MOVES Emission Factors by Road Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph)	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	43	SchoolBus	grams/mile	0.00E+00	3.59E-04	1.39E-05	7.44E+02	1.93E-04	1.58E+00	3.82E-04	2.97E-01	3.31E-02	7.64E-03	4.82E-02	8.32E-03	8.52E-03	1.01E-01	2.74E-03	2.62E-07	3.97E-02	5.56E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	51	RefuseTruck	grams/mile	0.00E+00	6.07E-03	2.59E-05	1.02E+03	1.09E-04	4.02E+00	6.99E-03	7.94E-01	3.41E-02	7.78E-03	1.11E+00	4.91E-02	5.25E-02	1.50E-01	3.63E-03	9.87E-10	1.06E+00	1.47E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.42E-04	1.26E-05	5.88E+02	2.62E-04	1.21E+00	3.88E-04	1.51E-01	2.33E-02	6.02E-03	4.91E-02	9.06E-03	9.22E-03	6.02E-02	2.38E-03	9.71E-07	3.98E-02	2.82E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.37E-04	1.21E-05	5.61E+02	2.46E-04	1.13E+00	3.81E-04	1.44E-01	2.40E-02	5.93E-03	4.86E-02	8.66E-03	8.82E-03	5.70E-02	2.27E-03	9.01E-07	3.98E-02	2.69E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	54	Motorhome	grams/mile	0.00E+00	1.67E-04	1.67E-05	7.21E+02	7.20E-04	3.23E+00	2.70E-04	1.24E-01	2.56E-02	7.45E-03	1.93E-02	1.60E-02	1.59E-02	3.53E-02	3.42E-03	2.06E-06	3.39E-03	2.27E-02
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	61	CombinationShortHaulTruck	grams/mile	0.00E+00	5.15E-04	3.80E-05	1.20E+03	1.37E-06	9.27E-01	3.69E-04	9.32E-01	3.49E-02	8.84E-03	3.14E-02	1.11E-02	1.15E-02	1.91E-01	4.01E-03	0.00E+00	1.98E-02	1.76E-01
2	RuralRestrictedAccess	46	Ramps_RuralRestricted_100kmh	100	62	CombinationLongHaulTruck	grams/mile	0.00E+00	7.98E-04	4.50E-05	1.19E+03	5.09E-06	1.18E+00	6.59E-04	1.09E+00	3.83E-02	7.80E-03	7.32E-02	1.45E-02	1.51E-02	1.91E-01	3.99E-03	0.00E+00	5.81E-02	2.06E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	11	Motorcycle	grams/mile	0.00E+00	3.27E-03	3.57E-04	4.17E+02	2.33E-02	1.18E+01	7.40E-03	9.09E-01	2.79E-02	2.20E-02	5.41E-01	4.66E-01	4.62E-01	1.25E-03	2.23E-03	1.15E-05	7.90E-02	3.46E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	21	PassengerCar	grams/mile	0.00E+00	3.51E-03	3.82E-04	1.51E+02	2.49E-02	8.23E+00	7.92E-03	4.26E-03	8.75E-03	1.92E-03	7.72E-01	4.98E-01	5.11E-03	3.89E-04	7.74E-04	1.75E-07	2.61E-03	6.65E-04
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	31	PassengerTruck	grams/mile	0.00E+00	4.36E-05	4.68E-06	2.11E+02	2.94E-04	9.70E-01	9.48E-05	6.17E-03	8.88E-03	2.01E-03	9.16E-03	5.93E-03	6.08E-03	1.30E-03	1.07E-03	2.07E-07	3.08E-03	1.01E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	32	LightCommercialTruck	grams/mile	0.00E+00	4.62E-05	4.85E-06	2.29E+02	2.91E-04	8.44E-01	9.56E-05	9.04E-03	9.98E-03	2.42E-03	8.76E-03	5.93E-03	6.04E-03	2.83E-03	1.14E-03	3.99E-07	2.73E-03	1.53E-03
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	41	IntercityBus	grams/mile	0.00E+00	4.58E-03	3.94E-05	1.12E+03	1.35E-03	1.33E+01	5.46E-03	6.50E-01	3.00E-02	7.20E-03	8.33E-01	6.12E-02	6.35E-02	9.80E-02	4.81E-03	9.40E-07	7.70E-01	1.19E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	42	TransitBus	grams/mile	0.00E+00	4.80E-03	4.53E-05	1.14E+03	1.73E-03	1.41E+01	5.78E-03	5.74E-01	2.27E-02	6.22E-03	8.74E-01	7.01E-02	7.24E-02	9.86E-02	4.85E-03	1.01E-06	8.01E-01	1.04E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	43	SchoolBus	grams/mile	0.00E+00	3.54E-04	1.57E-05	7.91E+02	2.63E-04	2.17E+00	3.84E-04	3.27E-01	2.75E-02	7.45E-03	4.61E-02	9.76E-03	9.94E-03	1.07E-01	2.91E-03	2.75E-07	3.61E-02	6.14E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	51	RefuseTruck	grams/mile	0.00E+00	5.65E-03	3.45E-05	1.09E+03	1.01E-04	3.93E+00	6.44E-03	8.94E-01	3.00E-02	7.66E-03	1.02E+00	4.78E-02	5.10E-02	1.60E-01	3.86E-03	1.09E-09	9.65E-01	1.66E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.32E-04	1.34E-05	6.18E+02	3.02E-04	1.49E+00	3.81E-04	1.61E-01	1.99E-02	5.87E-03	4.66E-02	9.78E-03	9.93E-03	6.43E-02	2.49E-03	1.11E-06	3.67E-02	2.99E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.25E-04	1.26E-05	5.87E+02	2.76E-04	1.34E+00	3.71E-04	1.52E-01	2.03E-02	5.72E-03	4.60E-02	9.16E-03	9.30E-03	6.08E-02	2.37E-03	1.02E-06	3.67E-02	2.83E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.39E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.94E-01
2	RuralRestrictedAccess	47	Ramps_RuralRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.23E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.32E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	3.95E-03	4.29E-06	1.60E+02	2.80E-04	1.08E+00	8.91E-05	4.75E-03	7.40E-03	1.87E-03	8.69E-03	5.60E-03	5.75E-03	3.57E-04	8.18E-04	2.10E-07	2.94E-03	7.41E-04
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.89E-05	5.26E-06	2.23E+02	3.32E-04	1.28E+00	1.07E-04	6.71E-03	7.49E-03	1.93E-03	1.03E-02	6.68E-03	6.85E-03	1.29E-03	1.13E-03	2.38E-07	3.48E-03	1.09E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.03E-05	5.30E-06	2.38E+02	3.21E-04	1.09E+00	1.05E-04	9.48E-03	8.39E-03	2.32E-03	9.70E-03	6.53E-03	6.65E-03	2.84E-03	1.18E-03	4.34E-07	3.05E-03	1.60E-03
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.44E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.37E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.48E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.53E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.60E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.90E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.21E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.12E-01
2	RuralRestrictedAccess	48	Ramps_RuralRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.25E-05	6.79E-06	1.98E+02	4.43E-04	1.10E+00	1.41E-04	4.29E-03	6.56E-02	9.29E-03	1.37E-02	8.86E-03	9.09E-03	1.07E-03	9.96E-04	2.08E-07	4.65E-03	6.69E-04
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.09E-05	8.53E-06	2.60E+02	4.96E-04	1.10E+00	1.65E-04	9.12E-03	7.21E-02	1.02E-02	1.56E-02	1.02E-02	1.04E-02	2.32E-03	1.30E-03	2.47E-07	5.19E-03	1.57E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.27E-04	1.32E-05	2.92E+02	7.08E-04	9.98E-01	2.42E-04	1.85E-02	7.43E-02	1.10E-02	2.05E-02	1.48E-02	1.50E-02	4.32E-03	1.44E-03	6.01E-07	5.57E-03	3.27E-03
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.60E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.25E+03	1.23E-03	6.16E+00	1.82E-02	1.43E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	4.34E-07	1.66E-06	2.72E+00	2.62E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.61E-01	1.90E-01	3.38E-02	1.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.81E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.81E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.93E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.23E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.87E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.13E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.74E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.97E-02
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.77E-01
3	RuralUnrestrictedAccess	1	ArterialRoads_RuralUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.93E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.52E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.95E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.85E-01	2.75E-03	1.75E-03	9.61E-06	1.00E-01	2.07E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.38E-05	5.85E-06	1.72E+02	3.82E-04	1.03E+00	1.21E-04	3.81E-03	4.87E-02	7.06E-03	1.18E-02	7.63E-03	7.83E-03	8.56E-04	8.71E-04	1.86E-07	4.00E-03	5.94E-04
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.88E-05	7.27E-06	2.27E+02	4.27E-04	1.02E+00	1.41E-04	7.68E-03	5.35E-02	7.72E-03	1.34E-02	8.74E-03	8.95E-03	1.95E-03	1.13E-03	2.20E-07	4.46E-03	1.31E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.05E-04	1.09E-05	2.54E+02	5.95E-04	9.31E-01	2.03E-04	1.53E-02	5.55E-02	8.45E-03	1.73E-02	1.24E-02	1.25E-02	3.70E-03	1.25E-03	5.34E-07	4.72E-03	2.69E-03
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.10E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	2.01E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.30E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.37E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.28E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.17E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.81E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.11E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.70E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.94E-02
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.18E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.10E-01
3	RuralUnrestrictedAccess	2	ArterialRoads_RuralUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.54E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.78E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.85E-03	4.20E-04	3.46E+02	2.75E-02	1.00E+01	8.72E-03	6.96E-01	4.04E-02	2.16E-02	6.37E-01	5.49E-01	5.44E-01	2.29E-03	1.85E-03	1.03E-05	9.30E-02	2.64E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.64E-05	5.05E-06	1.63E+02	3.30E-04	8.84E-01	1.05E-04	3.87E-03	3.58E-02	5.10E-03	1.02E-02	6.58E-03	6.76E-03	7.14E-04	8.27E-04	1.78E-07	3.45E-03	5.97E-04
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.84E-05	6.19E-06	2.17E+02	3.69E-04	8.96E-01	1.21E-04	6.97E-03	3.90E-02	5.86E-03	1.14E-02	7.52E-03	7.71E-03	1.74E-03	1.09E-03	2.18E-07	3.85E-03	1.09E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.36E-05	8.67E-06	2.43E+02	4.80E-04	8.15E-01	1.62E-04	1.30E-02	4.07E-02	6.51E-03	1.40E-02	9.96E-03	1.01E-02	3.41E-03	1.20E-03	4.88E-07	3.94E-03	2.27E-03
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.16E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.77E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.60E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.76E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.08E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.32E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.43E-01
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.09E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.78E-02
3	RuralUnrestrictedAccess	3	ArterialRoads_RuralUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02

Appendix F.5.1: MOVES Emission Factors by Road Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph)	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	17	Highways_UrbanRestricted_110kmh	110	54	Motorhome	grams/mile	0.00E+00	2.04E-04	2.06E-05	7.72E+02	9.47E-04	4.80E+00	3.46E-04	1.39E-01	2.21E-02	7.36E-03	2.48E-02	2.06E-02	2.05E-02	3.77E-02	3.65E-03	2.27E-06	4.24E-03	2.52E-02
4	UrbanRestrictedAccess	17	Highways_UrbanRestricted_110kmh	110	61	CombinationShortHaulTruck	grams/mile	0.00E+00	6.40E-04	4.94E-05	1.27E+03	1.24E-06	9.37E-01	4.45E-04	1.03E+00	3.16E-02	9.23E-03	3.52E-02	1.42E-02	1.47E-02	2.01E-01	4.23E-03	0.00E+00	2.05E-02	1.94E-01
4	UrbanRestrictedAccess	17	Highways_UrbanRestricted_110kmh	110	62	CombinationLongHaulTruck	grams/mile	0.00E+00	9.50E-04	6.03E-05	1.25E+03	4.63E-06	1.18E+00	7.42E-04	1.23E+00	3.36E-02	7.39E-03	7.54E-02	1.86E-02	1.93E-02	2.01E-01	4.20E-03	0.00E+00	5.61E-02	2.32E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	11	Motorcycle	grams/mile	0.00E+00	3.16E-03	3.45E-04	4.19E+02	2.25E-02	1.14E+01	7.15E-03	8.56E-01	2.80E-02	2.26E-02	5.23E-01	4.50E-01	4.46E-01	1.14E-03	2.24E-03	1.18E-05	7.63E-02	3.25E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	21	PassengerCar	grams/mile	0.00E+00	3.95E-05	4.29E-06	1.60E+02	2.80E-04	1.08E+00	8.91E-05	4.75E-03	7.40E-03	1.87E-03	8.69E-03	5.60E-03	5.75E-03	3.57E-04	8.18E-04	2.10E-07	2.94E-03	7.41E-04
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.89E-05	5.26E-06	2.23E+02	3.32E-04	1.28E+00	1.07E-04	6.71E-03	7.49E-03	1.93E-03	1.03E-02	6.68E-03	6.85E-03	1.29E-03	1.13E-03	2.38E-07	3.48E-03	1.09E-03
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.03E-05	5.30E-06	2.38E+02	3.21E-04	1.09E+00	1.05E-04	9.48E-03	8.39E-03	2.32E-03	9.70E-03	6.53E-03	6.65E-03	2.84E-03	1.18E-03	4.34E-07	3.05E-03	1.60E-03
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.44E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.37E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	1.86E-03	5.77E-05	1.22E+03	2.20E-03	1.79E+01	5.57E-03	6.48E-01	1.89E-02	5.55E-03	8.28E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.53E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.60E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.90E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.21E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.12E-01
4	UrbanRestrictedAccess	18	Highways_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	11	Motorcycle	grams/mile	0.00E+00	5.76E-03	6.28E-04	3.79E+02	4.11E-02	1.03E+01	1.30E-02	4.80E-01	6.50E-02	2.01E-02	9.53E-01	8.20E-01	8.14E-01	4.58E-03	2.02E-03	7.40E-06	1.39E-01	1.82E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	21	PassengerCar	grams/mile	0.00E+00	6.02E-05	6.54E-06	2.21E+02	4.27E-04	1.09E+00	1.36E-04	3.38E-03	8.48E-02	1.17E-02	1.32E-02	8.53E-03	8.75E-03	1.43E-03	1.10E-03	1.91E-07	4.47E-03	5.27E-04
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	31	PassengerTruck	grams/mile	0.00E+00	8.21E-05	8.59E-06	2.86E+02	4.82E-04	1.07E+00	1.62E-04	9.09E-03	9.16E-02	1.24E-02	1.52E-02	9.97E-03	1.02E-02	2.72E-03	1.42E-03	1.88E-07	5.03E-03	1.59E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	32	LightCommercialTruck	grams/mile	0.00E+00	1.48E-04	1.52E-05	3.24E+02	7.95E-04	1.01E+00	2.75E-04	1.99E-02	9.45E-02	1.34E-02	2.27E-02	1.67E-02	1.69E-02	4.75E-03	1.58E-03	5.84E-07	5.88E-03	3.57E-03
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	41	IntercityBus	grams/mile	0.00E+00	2.09E-02	9.31E-05	1.31E+03	1.46E-03	6.53E+00	2.43E-02	1.86E+00	4.70E-01	6.59E-02	3.93E+00	1.87E-01	1.98E-01	1.31E-01	5.49E-03	1.58E-06	3.64E+00	3.42E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	42	TransitBus	grams/mile	0.00E+00	2.18E-02	1.01E-04	1.35E+03	1.86E-03	6.78E+00	2.54E-02	1.88E+00	3.80E-01	5.45E-02	4.01E+00	2.02E-01	2.13E-01	1.33E-01	5.65E-03	1.70E-06	3.79E+00	3.45E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	43	SchoolBus	grams/mile	0.00E+00	1.86E-03	9.57E-05	1.11E+03	5.39E-04	1.41E+00	1.76E-03	1.22E+00	3.82E-01	5.80E-02	2.10E-01	3.39E-02	4.05E-02	1.49E-01	4.11E-03	4.92E-07	1.71E-01	1.58E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	51	RefuseTruck	grams/mile	0.00E+00	2.63E-02	1.20E-04	1.38E+03	4.61E-04	7.54E+00	3.03E-02	2.52E+00	4.38E-01	6.26E-02	4.81E+00	2.15E-01	2.29E-01	2.05E-01	4.95E-03	1.88E-09	4.58E+00	4.63E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.60E-03	7.37E-05	7.93E+02	1.17E-03	1.36E+00	1.72E-03	6.47E-01	2.10E-01	3.16E-02	2.04E-01	4.44E-02	4.52E-02	7.92E-02	3.26E-03	1.41E-06	1.58E-01	1.21E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.60E-03	7.30E-05	7.79E+02	1.15E-03	1.34E+00	1.71E-03	6.41E-01	2.14E-01	3.20E-02	2.04E-01	4.40E-02	4.48E-02	7.77E-02	3.20E-03	1.39E-06	1.59E-01	1.20E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	54	Motorhome	grams/mile	0.00E+00	7.19E-04	7.00E-05	1.00E+03	2.49E-03	1.88E+00	1.03E-03	4.85E-01	2.44E-01	3.68E-02	7.22E-02	5.85E-02	5.84E-02	4.92E-02	4.78E-03	2.72E-06	1.38E-02	9.05E-02
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	61	CombinationShortHaulTruck	grams/mile	0.00E+00	2.17E-03	1.60E-04	1.64E+03	5.75E-06	3.02E+00	1.55E-03	3.07E+00	4.29E-01	6.31E-02	1.32E-01	4.68E-02	4.86E-02	2.61E-01	5.50E-03	0.00E+00	8.35E-02	5.78E-01
4	UrbanRestrictedAccess	49	Ramps_UrbanRestricted_30kmh	30	62	CombinationLongHaulTruck	grams/mile	0.00E+00	3.20E-03	1.75E-04	1.74E+03	2.14E-05	4.03E+00	2.67E-03	3.52E+00	4.92E-01	6.87E-02	3.02E-01	5.72E-02	5.96E-02	2.79E-01	5.83E-03	0.00E+00	2.42E-01	6.64E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.78E-03	5.22E-04	3.48E+02	3.41E-02	9.86E+00	1.08E-02	5.56E-01	5.02E-02	1.89E-02	7.91E-01	6.81E-01	6.75E-01	3.43E-03	1.86E-03	7.80E-06	1.15E-01	2.11E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	5.11E-05	5.55E-06	1.88E+02	3.63E-04	9.76E-01	1.15E-04	3.28E-03	6.21E-02	8.73E-03	1.12E-02	7.24E-03	7.43E-03	1.07E-03	9.44E-04	1.75E-07	3.80E-03	5.12E-04
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	6.73E-05	7.07E-06	2.44E+02	4.05E-04	9.65E-01	1.35E-04	7.56E-03	6.57E-02	9.12E-03	1.28E-02	8.34E-03	8.54E-03	2.18E-03	1.22E-03	1.77E-07	4.23E-03	1.31E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.13E-04	1.16E-05	2.75E+02	6.17E-04	8.93E-01	2.12E-04	1.57E-02	6.90E-02	1.01E-02	1.78E-02	1.29E-02	1.31E-02	3.94E-03	1.35E-03	5.06E-07	4.73E-03	2.79E-03
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.60E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.65E-02	7.35E-05	1.18E+03	1.34E-03	5.18E+00	1.92E-02	1.42E+00	2.45E-01	3.65E-02	3.03E+00	1.50E-01	1.59E-01	1.16E-01	4.93E-03	1.53E-06	2.87E+00	2.62E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.39E-03	6.54E-05	9.53E+02	3.75E-04	1.09E+00	1.32E-03	9.21E-01	2.53E-01	3.96E-02	1.59E-01	2.86E-02	2.95E-02	1.29E-01	3.52E-03	3.97E-07	1.30E-01	1.73E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.81E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.93E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.23E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.87E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.13E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.74E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.97E-02
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.77E-01
4	UrbanRestrictedAccess	50	Ramps_UrbanRestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.93E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.52E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.18E-03	4.55E-04	3.36E+02	2.98E-02	9.82E+00	9.45E-03	6.34E-01	4.01E-02	1.79E-02	6.91E-01	5.95E-01	5.90E-01	2.75E-03	1.79E-03	7.96E-06	1.01E-01	2.41E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	4.65E-05	5.06E-06	1.70E+02	3.30E-04	8.88E-01	1.05E-04	3.38E-03	4.70E-02	6.79E-03	1.02E-02	6.60E-03	6.77E-03	8.56E-04	8.57E-04	1.70E-07	3.46E-03	5.28E-04
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	5.94E-05	6.27E-06	2.23E+02	3.66E-04	8.81E-01	1.21E-04	6.86E-03	4.95E-02	7.07E-03	1.15E-02	7.50E-03	7.69E-03	1.88E-03	1.11E-03	1.78E-07	3.82E-03	1.18E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	9.35E-05	9.67E-06	2.51E+02	5.25E-04	8.16E-01	1.79E-04	1.37E-02	5.28E-02	7.96E-03	1.52E-02	1.09E-02	1.11E-02	3.52E-03	1.24E-03	4.71E-07	4.13E-03	2.41E-03
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.34E-02	6.55E-05	1.16E+03	1.11E-03	5.09E+00	1.56E-02	1.22E+00	1.95E-01	2.99E-02	2.47E+00	1.24E-01	1.32E-01	1.12E-01	4.84E-03	1.52E-06	2.33E+00	2.23E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.15E-03	5.52E-05	9.28E+02	3.12E-04	1.15E+00	1.09E-03	7.70E-01	2.08E-01	3.44E-02	1.30E-01	2.39E-02	2.47E-02	1.25E-01	3.43E-03	3.80E-07	1.05E-01	1.45E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.28E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.17E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.81E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.11E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.70E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.94E-02
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.18E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.10E-01
4	UrbanRestrictedAccess	51	Ramps_UrbanRestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.54E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.78E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.89E-03	4.24E-04	3.53E+02	2.77E-02	1.06E+01	8.79E-03	7.50E-01	3.63E-02	1.88E-02	6.42E-01	5.53E-01	5.49E-01	2.29E-03	1.89E-03	8.83E-06	9.38E-02	2.85E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.18E-05	4.55E-06	1.62E+02	2.97E-04	8.02E-01	9.43E-05	3.57E-03	3.53E-02	5.30E-03	9.20E-03	5.93E-03	6.09E-03	7.14E-04	8.23E-04	1.68E-07	3.31E-03	5.57E-04
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.37E-05	5.59E-06	2.16E+02	3.32E-04	8.22E-01	1.09E-04	6.50E-03	3.75E-02	5.57E-03	1.04E-02	6.78E-03	6.95E-03	1.71E-03	1.08E-03	1.83E-07	3.47E-03	1.25E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	7.68E-05	7.96E-06	2.43E+02	4.40E-04	7.56E-01	1.49E-04	1.21E-02	3.99E-02	6.29E-03	1.28E-02	9.14E-03	9.25E-03	3.31E-03	1.20E-03	4.47E-07	3.58E-03	2.11E-03
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.16E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	1.10E-02	4.94E-05	1.03E+03	9.70E-04	5.43E+00	1.29E-02	9.06E-01	1.37E-01	2.17E-02	2.03E+00	1.02E-01	1.08E-01	9.77E-02	4.34E-03	1.34E-06	1.92E+00	1.66E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.78E-04	3.89E-05	7.97E+02	2.65E-04	1.20E+00	8.54E-04	5.63E-01	1.45E-01	2.37E-02	1.05E-01	1.80E-02	1.86E-02	1.07E-01	2.94E-03	3.06E-07	8.64E-02	1.06E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.32E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.43E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.09E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.78E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.67E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.35E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.37E-02
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.61E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.03E-01
4	UrbanRestrictedAccess	52	Ramps_UrbanRestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.88E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.53E-01
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.68E-03	4.01E-04	3.65E+02	2.62E-02	1.12E+01	8.32E-03	8.32E-01	3.38E-02	1.95E-02	6.08E-01	5.23E-01	5.19E-01	1.96E-03	1.95E-03	9.45E-06	8.87E-02	3.16E-02
4	UrbanRestrictedAccess	53	Ramps_UrbanRestricted_70kmh	70	21	PassengerCar	grams/mile

Road Type ID	Road Type Def	Link ID	Link Description	Link Avg. Speed (kph)	Source Type ID	Source Type Def	Units	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	31	PassengerTruck	grams/mile	0.00E+00	4.89E-05	5.26E-06	2.23E+02	3.32E-04	1.28E+00	1.07E-04	6.71E-03	7.49E-03	1.93E-03	1.03E-02	6.68E-03	6.85E-03	1.29E-03	1.13E-03	2.38E-07	3.48E-03	1.09E-03
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	32	LightCommercialTruck	grams/mile	0.00E+00	5.03E-05	5.30E-06	2.38E+02	3.21E-04	1.09E+00	1.05E-04	9.48E-03	8.39E-03	2.32E-03	9.70E-03	6.53E-03	6.65E-03	2.84E-03	1.18E-03	4.34E-07	3.05E-03	1.60E-03
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	41	IntercityBus	grams/mile	0.00E+00	4.40E-03	5.05E-05	1.20E+03	1.69E-03	1.66E+01	5.27E-03	7.44E-01	2.51E-02	6.40E-03	7.87E-01	6.76E-02	6.97E-02	1.05E-01	5.15E-03	7.99E-07	7.17E-01	1.37E-01
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	42	TransitBus	grams/mile	0.00E+00	4.59E-03	5.77E-05	1.22E+03	2.20E-03	1.78E+01	5.57E-03	6.48E-01	1.89E-02	5.55E-03	8.22E-01	7.84E-02	8.05E-02	1.06E-01	5.20E-03	8.57E-07	7.41E-01	1.18E-01
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	43	SchoolBus	grams/mile	0.00E+00	3.56E-04	1.78E-05	8.32E+02	3.44E-04	2.86E+00	3.93E-04	3.53E-01	2.35E-02	7.45E-03	4.47E-02	1.15E-02	1.16E-02	1.12E-01	3.07E-03	2.75E-07	3.30E-02	6.60E-02
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	51	RefuseTruck	grams/mile	0.00E+00	5.44E-03	4.61E-05	1.15E+03	9.55E-05	3.84E+00	6.12E-03	9.90E-01	2.68E-02	7.66E-03	9.56E-01	4.85E-02	5.17E-02	1.69E-01	4.09E-03	1.18E-09	9.04E-01	1.84E-01
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	3.29E-04	1.48E-05	6.51E+02	3.59E-04	1.85E+00	3.83E-04	1.72E-01	1.73E-02	5.75E-03	4.50E-02	1.09E-02	1.11E-02	6.82E-02	2.61E-03	1.22E-06	3.40E-02	3.21E-02
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	3.17E-04	1.35E-05	6.13E+02	3.16E-04	1.61E+00	3.67E-04	1.60E-01	1.75E-02	5.57E-03	4.40E-02	9.93E-03	1.01E-02	6.41E-02	2.46E-03	1.13E-06	3.40E-02	2.99E-02
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	54	Motorhome	grams/mile	0.00E+00	2.58E-04	2.63E-05	8.32E+02	1.26E-03	6.83E+00	4.52E-04	1.56E-01	1.92E-02	7.05E-03	3.25E-02	2.71E-02	2.70E-02	3.98E-02	3.95E-03	2.30E-06	5.45E-03	2.83E-02
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	61	CombinationShortHaulTruck	grams/mile	0.00E+00	7.81E-04	6.20E-05	1.33E+03	1.16E-06	9.57E-01	5.32E-04	1.12E+00	2.90E-02	9.70E-03	4.01E-02	1.77E-02	1.83E-02	2.12E-01	4.46E-03	0.00E+00	2.18E-02	2.12E-01
4	UrbanRestrictedAccess	58	Ramps_UrbanRestricted_120kmh	120	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.13E-03	7.73E-05	1.31E+03	4.33E-06	1.19E+00	8.49E-04	1.36E+00	2.96E-02	7.05E-03	8.01E-02	2.32E-02	2.41E-02	2.11E-01	4.40E-03	0.00E+00	5.60E-02	2.56E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	11	Motorcycle	grams/mile	0.00E+00	4.73E-03	5.15E-04	3.50E+02	3.37E-02	9.41E+00	1.07E-02	5.34E-01	5.90E-02	2.51E-02	7.81E-01	6.73E-01	6.67E-01	3.43E-03	1.87E-03	1.09E-05	1.14E-01	2.03E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	21	PassengerCar	grams/mile	0.00E+00	6.25E-05	6.79E-06	1.98E+02	4.43E-04	1.10E+00	1.41E-04	4.29E-03	6.56E-02	9.29E-03	1.37E-02	8.86E-03	9.09E-03	1.07E-03	9.96E-04	2.08E-07	4.65E-03	6.69E-04
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	31	PassengerTruck	grams/mile	0.00E+00	8.09E-05	8.53E-06	2.60E+02	4.96E-04	1.10E+00	1.65E-04	9.12E-03	7.21E-02	1.02E-02	1.56E-02	1.02E-02	1.04E-02	2.32E-03	1.30E-03	2.47E-07	5.19E-03	1.57E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	32	LightCommercialTruck	grams/mile	0.00E+00	1.27E-04	1.32E-05	2.92E+02	7.08E-04	9.98E-01	2.42E-04	1.85E-02	7.43E-02	1.10E-02	2.05E-02	1.48E-02	1.50E-02	4.32E-03	1.44E-03	6.01E-07	5.57E-03	3.27E-03
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	41	IntercityBus	grams/mile	0.00E+00	1.58E-02	6.78E-05	1.15E+03	1.05E-03	5.01E+00	1.83E-02	1.41E+00	3.04E-01	4.40E-02	2.90E+00	1.40E-01	1.49E-01	1.14E-01	4.81E-03	1.43E-06	2.75E+00	2.60E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	42	TransitBus	grams/mile	0.00E+00	1.57E-02	7.73E-05	1.29E+03	1.23E-03	6.16E+00	1.82E-02	1.43E+00	1.88E-01	2.94E-02	2.87E+00	1.44E-01	1.53E-01	1.24E-01	5.39E-03	1.66E-06	2.72E+00	2.62E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	43	SchoolBus	grams/mile	0.00E+00	1.42E-03	6.62E-05	1.04E+03	3.62E-04	1.36E+00	1.34E-03	9.61E-01	1.90E-01	3.38E-02	1.62E-01	2.87E-02	2.96E-02	1.41E-01	3.84E-03	4.19E-07	1.32E-01	1.81E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	51	RefuseTruck	grams/mile	0.00E+00	2.03E-02	9.81E-05	1.25E+03	3.55E-04	6.04E+00	2.33E-02	2.06E+00	3.53E-01	5.10E-02	3.70E+00	1.67E-01	1.78E-01	1.86E-01	4.48E-03	1.55E-09	3.52E+00	3.81E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.22E-03	5.43E-05	6.80E+02	8.45E-04	1.07E+00	1.31E-03	4.93E-01	1.42E-01	2.21E-02	1.57E-01	3.27E-02	3.33E-02	6.95E-02	2.77E-03	1.18E-06	1.24E-01	9.23E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	1.21E-03	5.38E-05	6.66E+02	8.39E-04	1.05E+00	1.30E-03	4.87E-01	1.44E-01	2.23E-02	1.57E-01	3.25E-02	3.31E-02	6.80E-02	2.71E-03	1.16E-06	1.23E-01	9.13E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	54	Motorhome	grams/mile	0.00E+00	5.25E-04	5.10E-05	8.51E+02	1.77E-03	1.52E+00	7.38E-04	3.74E-01	1.63E-01	2.57E-02	5.20E-02	4.20E-02	4.19E-02	4.30E-02	4.04E-03	2.30E-06	1.00E-02	6.97E-02
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.74E-03	1.30E-04	1.49E+03	4.30E-06	2.46E+00	1.23E-03	2.53E+00	3.50E-01	5.22E-02	1.03E-01	3.77E-02	3.92E-02	2.37E-01	4.99E-03	0.00E+00	6.41E-02	4.77E-01
5	UrbanUnrestrictedAccess	7	ArterialRoads_UrbanUnrestricted_40kmh	40	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.53E-03	1.43E-04	1.57E+03	1.61E-05	3.27E+00	2.09E-03	2.93E+00	3.99E-01	5.60E-02	2.32E-01	4.61E-02	4.80E-02	2.52E-01	5.26E-03	0.00E+00	1.84E-01	5.52E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	11	Motorcycle	grams/mile	0.00E+00	4.15E-03	4.52E-04	3.27E+02	2.96E-02	8.90E+00	9.38E-03	5.45E-01	4.65E-02	2.13E-02	6.86E-01	5.90E-01	5.86E-01	2.75E-03	1.75E-03	9.60E-06	1.00E-01	2.07E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	21	PassengerCar	grams/mile	0.00E+00	5.38E-05	5.85E-06	1.72E+02	3.82E-04	1.03E+00	1.21E-04	3.81E-03	4.87E-02	7.07E-03	1.18E-02	7.63E-03	7.83E-03	8.56E-04	8.71E-04	1.86E-07	4.00E-03	5.94E-04
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	31	PassengerTruck	grams/mile	0.00E+00	6.88E-05	7.27E-06	2.27E+02	4.27E-04	1.02E+00	1.41E-04	7.68E-03	5.35E-02	7.72E-03	1.34E-02	8.74E-03	8.95E-03	1.95E-03	1.13E-03	2.20E-07	4.46E-03	1.31E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	32	LightCommercialTruck	grams/mile	0.00E+00	1.05E-04	1.09E-05	2.54E+02	5.95E-04	9.32E-01	2.03E-04	1.53E-02	5.55E-02	8.46E-03	1.73E-02	1.24E-02	1.25E-02	3.70E-03	1.25E-03	5.34E-07	4.72E-03	2.68E-03
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	41	IntercityBus	grams/mile	0.00E+00	1.28E-02	6.05E-05	1.13E+03	8.74E-04	4.91E+00	1.49E-02	1.21E+00	2.43E-01	3.59E-02	2.35E+00	1.15E-01	1.22E-01	1.10E-01	4.74E-03	1.43E-06	2.23E+00	2.22E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	42	TransitBus	grams/mile	0.00E+00	1.22E-02	5.91E-05	1.18E+03	1.09E-03	6.42E+00	1.42E-02	1.10E+00	1.33E-01	2.19E-02	2.24E+00	1.14E-01	1.21E-01	1.12E-01	4.97E-03	1.53E-06	2.12E+00	2.01E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	43	SchoolBus	grams/mile	0.00E+00	1.06E-03	4.81E-05	9.35E+02	2.93E-04	1.34E+00	1.01E-03	7.30E-01	1.38E-01	2.49E-02	1.23E-01	2.15E-02	2.22E-02	1.26E-01	3.45E-03	3.62E-07	1.01E-01	1.37E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	51	RefuseTruck	grams/mile	0.00E+00	1.55E-02	8.64E-05	1.21E+03	2.69E-04	5.15E+00	1.77E-02	1.77E+00	2.52E-01	3.78E-02	2.80E+00	1.29E-01	1.38E-01	1.80E-01	4.33E-03	1.34E-09	2.67E+00	3.28E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	1.00E-03	4.64E-05	6.67E+02	6.85E-04	1.08E+00	1.06E-03	4.17E-01	1.16E-01	1.89E-02	1.26E-01	2.71E-02	2.76E-02	6.85E-02	2.71E-03	1.14E-06	9.79E-02	7.81E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	9.86E-04	4.57E-05	6.49E+02	6.77E-04	1.05E+00	1.04E-03	4.11E-01	1.19E-01	1.92E-02	1.23E-01	2.67E-02	2.72E-02	6.66E-02	2.64E-03	1.11E-06	9.62E-02	7.70E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	54	Motorhome	grams/mile	0.00E+00	4.63E-04	4.46E-05	8.31E+02	1.47E-03	1.89E+00	6.31E-04	3.19E-01	1.32E-01	2.16E-02	4.43E-02	3.56E-02	3.56E-02	4.18E-02	3.94E-03	2.26E-06	8.69E-03	5.94E-02
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.52E-03	1.16E-04	1.46E+03	3.34E-06	2.06E+00	1.07E-03	2.18E+00	2.50E-01	3.92E-02	8.71E-02	3.35E-02	3.48E-02	2.31E-01	4.87E-03	0.00E+00	5.23E-02	4.10E-01
5	UrbanUnrestrictedAccess	8	ArterialRoads_UrbanUnrestricted_50kmh	50	62	CombinationLongHaulTruck	grams/mile	0.00E+00	2.19E-03	1.30E-04	1.52E+03	1.25E-05	2.74E+00	1.76E-03	2.54E+00	2.85E-01	4.10E-02	1.89E-01	4.11E-02	4.27E-02	2.44E-01	5.10E-03	0.00E+00	1.46E-01	4.78E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	11	Motorcycle	grams/mile	0.00E+00	3.87E-03	4.22E-04	3.43E+02	2.76E-02	9.95E+00	8.76E-03	6.85E-01	3.98E-02	2.11E-02	6.40E-01	5.51E-01	5.47E-01	2.29E-03	1.83E-03	9.96E-06	9.34E-02	2.60E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	21	PassengerCar	grams/mile	0.00E+00	4.55E-05	4.95E-06	1.63E+02	3.23E-04	8.79E-01	1.03E-04	3.71E-03	3.64E-02	5.44E-03	1.00E-02	6.46E-03	6.63E-03	7.14E-04	8.23E-04	1.73E-07	3.39E-03	5.78E-04
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	31	PassengerTruck	grams/mile	0.00E+00	5.77E-05	6.12E-06	2.16E+02	3.64E-04	8.99E-01	1.20E-04	6.88E-03	3.97E-02	5.90E-03	1.14E-02	7.43E-03	7.61E-03	1.74E-03	1.08E-03	2.01E-07	3.81E-03	1.17E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	32	LightCommercialTruck	grams/mile	0.00E+00	8.34E-05	8.64E-06	2.42E+02	4.78E-04	8.18E-01	1.68E-04	1.29E-02	4.12E-02	6.53E-03	1.39E-02	9.92E-03	1.00E-02	3.40E-03	1.19E-03	4.75E-07	3.90E-03	2.85E-03
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	41	IntercityBus	grams/mile	0.00E+00	1.05E-02	4.55E-05	1.01E+03	7.68E-04	5.21E+00	1.23E-02	9.16E-01	1.71E-01	2.61E-02	1.94E+00	9.47E-02	1.00E-01	9.60E-02	4.26E-03	1.25E-06	1.84E+00	1.68E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	42	TransitBus	grams/mile	0.00E+00	9.90E-03	4.70E-05	1.11E+03	9.90E-04	6.59E+00	1.16E-02	8.77E-01	9.67E-02	1.68E-02	1.82E+00	9.41E-02	9.94E-02	1.04E-01	4.69E-03	1.45E-06	1.72E+00	1.60E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	43	SchoolBus	grams/mile	0.00E+00	8.14E-04	3.60E-05	8.65E+02	2.47E-04	1.32E+00	7.93E-04	5.76E-01	1.02E-01	1.90E-02	9.75E-02	1.67E-02	1.72E-02	1.17E-01	3.19E-03	3.24E-07	8.03E-02	1.08E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	51	RefuseTruck	grams/mile	0.00E+00	1.31E-02	5.65E-05	1.07E+03	2.31E-04	4.65E+00	1.51E-02	1.32E+00	1.85E-01	2.79E-02	2.40E+00	1.06E-01	1.14E-01	1.58E-01	3.81E-03	1.09E-09	2.29E+00	2.43E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	8.04E-04	3.32E-05	5.99E+02	5.33E-04	1.05E+00	8.69E-04	3.09E-01	8.28E-02	1.39E-02	1.07E-01	2.07E-02	2.11E-02	6.07E-02	2.44E-03	1.01E-06	8.62E-02	5.78E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	7.95E-04	3.27E-05	5.79E+02	5.24E-04	1.01E+00	8.60E-04	3.03E-01	8.44E-02	1.40E-02	1.06E-01	2.04E-02	2.08E-02	5.85E-02	2.36E-03	9.70E-07	8.55E-02	5.67E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	54	Motorhome	grams/mile	0.00E+00	3.41E-04	3.32E-05	7.43E+02	1.17E-03	2.06E+00	4.84E-04	2.35E-01	9.38E-02	1.61E-02	3.41E-02	2.76E-02	2.76E-02	3.64E-02	3.53E-03	1.99E-06	6.53E-03	4.37E-02
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	61	CombinationShortHaulTruck	grams/mile	0.00E+00	1.05E-03	7.72E-05	1.27E+03	2.88E-06	1.57E+00	7.55E-04	1.61E+00	1.83E-01	2.87E-02	6.47E-02	2.26E-02	2.34E-02	2.02E-01	4.24E-03	0.00E+00	4.13E-02	3.03E-01
5	UrbanUnrestrictedAccess	9	ArterialRoads_UrbanUnrestricted_60kmh	60	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.58E-03	8.65E-05	1.31E+03	1.07E-05	2.07E+00	1.32E-03	1.88E+00	2.11E-01	3.05E-02	1.50E-01	2.82E-02	2.94E-02	2.11E-01	4.40E-03	0.00E+00	1.21E-01	3.53E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	11	Motorcycle	grams/mile	0.00E+00	3.67E-03	4.00E-04	3.54E+02	2.62E-02	1.07E+01	8.31E-03	7.85E-01	3.51E-02	2.09E-02	6.07E-01	5.23E-01	5.19E-01	1.96E-03	1.89E-03	1.02E-05	8.87E-02	2.98E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	21	PassengerCar	grams/mile	0.00E+00	3.97E-05	4.31E-06	1.56E+02	2.82E-04	7.70E-01	8.95E-05	3.64E-03	2.77E-02	4.32E-03	8.73E-03	5.63E-03	5.78E-03	6.12E-04	7.89E-04	1.64E-07	2.95E-03	5.68E-04
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	31	PassengerTruck	grams/mile	0.00E+00	4.99E-05	5.30E-06	2.06E+02	3.20E-04	8.13E-01	1.05E-04	6.32E-03	3.00E-02	4.64E-03	1.00E-02	6.50E-03	6.66E-03	1.60E-03	1.05E-03	1.88E-07	3.34E-03	1.06E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	32	LightCommercialTruck	grams/mile	0.00E+00	6.77E-05	7.03E-06	2.34E+02	3.94E-04	7.38E-01	1.33E-04	1.12E-02	3.15E-02	5.21E-03	1.16E-02	8.15E-03	8.26E-03	3.19E-03	1.15E-03	4.33E-07	3.31E-03	1.95E-03
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	41	IntercityBus	grams/mile	0.00E+00	8.70E-03	3.62E-05	9.84E+02	6.95E-04	5.51E+00	1.02E-02	7.58E-01	1.11E-01	1.83E-02	1.61E+00	7.89E-02	8.36E-02	9.25E-02	4.16E-03	1.24E-06	1.52E+00	1.39E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	42	TransitBus	grams/mile	0.00E+00	8.25E-03	3.84E-05	1.06E+03	9.20E-04	6.72E+00	9.67E-03	7.18E-01	7.10E-02	1.33E-02	1.52E+00	7.97E-02	8.42E-02	9.82E-02	4.50E-03	1.39E-06	1.44E+00	1.31E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	43	SchoolBus	grams/mile	0.00E+00	6.42E-04	2.74E-05	8.14E+02	2.14E-04	1.32E+00	6.36E-04	4.66E-01	7.73E-02	1.48E-02	7.91E-02	1.33E-02	1.37E-02	1.10E-01	3.00E-03	2.97E-07	6.54E-02	8.74E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	51	RefuseTruck	grams/mile	0.00E+00	1.08E-02	4.94E-05	1.06E+03	1.90E-04	4.35E+00	1.24E-02	1.14E+00	1.31E-01	2.08E-02	1.97E+00	8.80E-02	9.41E-02	1.56E-01	3.76E-03	1.02E-09	1.88E+00	2.11E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	52	SingleUnitShortHaulTruck	grams/mile	0.00E+00	6.34E-04	2.57E-05	5.90E+02	4.25E-04	1.07E+00	6.89E-04	2.52E-01	5.72E-02	1.05E-02	8.54E-02	1.63E-02	1.66E-02	5.99E-02	2.40E-03	9.69E-07	6.88E-02	4.72E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	53	SingleUnitLongHaulTruck	grams/mile	0.00E+00	6.25E-04	2.52E-05	5.67E+02	4.14E-04	1.02E+00	6.80E-04	2.46E-01	5.94E-02	1.06E-02	8.45E-02	1.59E-02	1.63E-02	5.73E-02	2.31E-03	9.26E-07	6.82E-02	4.61E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	54	Motorhome	grams/mile	0.00E+00	2.71E-04	2.64E-05	7.23E+02	9.60E-04	2.27E+00	3.91E-04	1.95E-01	6.46E-02	1.23E-02	2.76E-02	2.24E-02	2.24E-02	3.54E-02	3.44E-03	1.93E-06	5.22E-03	3.62E-02
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	61	CombinationShortHaulTruck	grams/mile	0.00E+00	9.26E-04	6.89E-05	1.25E+03	2.35E-06	1.34E+00	6.60E-04	1.39E+00	1.31E-01	2.18E-02	5.56E-02	2.01E-02	2.08E-02	1.99E-01	4.19E-03	0.00E+00	3.47E-02	2.61E-01
5	UrbanUnrestrictedAccess	10	ArterialRoads_UrbanUnrestricted_70kmh	70	62	CombinationLongHaulTruck	grams/mile	0.00E+00	1.39E-03	7.93E-05	1.29E+03	8.74E-06	1.75E+00	1.15E-03	1.63E+00	1.49E-01	2.25E-02	1.27E-01	2.55E-02	2.65E-02	2.07E-01	4.32E-03	0.00E+00	1.00E-01	3.07E-01
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	11	Motorcycle	grams/mile	0.00E+00	3.51E-03	3.82E-04	3.67E+02	2.50E-02	1.11E+01	7.94E-03	8.47E-01	3.11E-02	2.06E-02	5.80E-01	4.99E-01	4.95E-01	1.72E-03	1.96E-03	1.04E-05	8.47E-02	3.22E-02
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	21	PassengerCar	grams/mile	0.00E+00	3.70E-05	4.02E-06	1.51E+02	2.62E-04	7.35E-01	8.33E-05	3.73E-03	1.96E-02	3.29E-03	8.13E-03	5.24E-03	5.38E-03	5.39E-04	7.68E-04	1.64E-07	2.75E-03	5.82E-04
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	31	PassengerTruck	grams/mile	0.00E+00	4.55E-05	4.85E-06	2.04E+02	2.96E-04	7.76E-01	9.63E-05	6.01E-03	2.09E-02	3.47E-03	9.24E-03	6.00E-03	6.15E-03	1.48E-03	1.03E-03	1.87E-07	3.10E-03	1.00E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	32	LightCommercialTruck	grams/mile	0.00E+00	5.75E-05	5.99E-06	2.26E+02	3.41E-04	6.96E-01	1.14E-04	1.01E-02	2.24E-02	4.02E-03	1.01E-02	7.04E-03	7.14E-03	3.00E-03	1.12E-03	4.13E-07	2.97E-03	1.75E-03
5	UrbanUnrestrictedAccess	11	ArterialRoads_UrbanUnrestricted_80kmh	80	41	IntercityBus	grams/mile	0.00E+00	7.06E-03	2

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A17	110	Passenger Car	1497	0.00E+00	1.46E-05	1.59E-06	6.30E+01	1.04E-04	3.42E-01	3.29E-05	1.77E-03	3.64E-03	7.98E-04	3.21E-03	2.07E-03	2.13E-03	1.62E-04	3.22E-04	7.28E-08	1.09E-03	2.77E-04
17	A17	110	Passenger Truck	2508	0.00E+00	3.04E-05	3.26E-06	1.47E+02	2.05E-04	6.76E-01	6.60E-05	4.30E-03	6.19E-03	1.40E-03	6.38E-03	4.13E-03	4.23E-03	9.08E-04	7.44E-04	1.44E-07	2.15E-03	7.02E-04
17	A17	110	Single Unit Short Haul Truck	554	0.00E+00	5.10E-05	2.07E-06	9.51E+01	4.64E-05	2.29E-01	5.85E-05	2.47E-02	3.06E-03	9.03E-04	7.17E-03	1.50E-03	1.53E-03	9.88E-03	3.83E-04	1.70E-07	5.64E-03	4.60E-03
17	A17	110	Single Unit Long Haul Truck	24	0.00E+00	2.20E-06	8.57E-08	3.98E+00	1.87E-06	9.11E-03	2.51E-06	1.03E-03	1.38E-04	3.88E-05	3.12E-04	6.21E-05	6.31E-05	4.12E-04	1.61E-05	6.95E-09	2.49E-04	1.92E-04
17	A17	110	Combination Short Haul Truck	315	0.00E+00	5.61E-05	4.33E-06	1.11E+02	1.09E-07	8.21E-02	3.90E-05	9.03E-02	2.77E-03	8.09E-04	3.09E-03	1.25E-03	1.29E-03	1.76E-02	3.71E-04	0.00E+00	1.79E-03	1.70E-02
17	A17	110	Combination Long Haul Truck	288	0.00E+00	7.59E-05	4.82E-06	1.00E+02	3.70E-07	9.47E-02	5.93E-05	9.83E-02	2.69E-03	5.91E-04	6.02E-03	1.48E-03	1.54E-03	1.61E-02	3.35E-04	0.00E+00	4.48E-03	1.85E-02
17	A18	110	Passenger Car	1436	0.00E+00	1.40E-05	1.52E-06	6.04E+01	9.94E-05	3.28E-01	3.16E-05	1.70E-03	3.49E-03	7.65E-04	3.08E-03	1.99E-03	2.04E-03	1.55E-04	3.09E-04	6.98E-08	1.04E-03	2.65E-04
17	A18	110	Passenger Truck	2406	0.00E+00	2.91E-05	3.13E-06	1.41E+02	1.97E-04	6.48E-01	6.33E-05	4.12E-03	5.94E-03	1.34E-03	6.12E-03	3.96E-03	4.06E-03	8.71E-04	7.14E-04	1.38E-07	2.06E-03	6.73E-04
17	A18	110	Single Unit Short Haul Truck	523	0.00E+00	4.82E-05	1.95E-06	8.98E+01	4.39E-05	2.17E-01	5.53E-05	2.33E-02	2.89E-03	8.53E-04	6.77E-03	1.42E-03	1.44E-03	9.33E-03	3.62E-04	1.61E-07	5.33E-03	4.35E-03
17	A18	110	Single Unit Long Haul Truck	23	0.00E+00	2.08E-06	8.10E-08	3.76E+00	1.77E-06	8.61E-03	2.37E-06	9.72E-04	1.30E-04	3.67E-05	2.95E-04	5.87E-05	5.96E-05	3.89E-04	1.52E-05	6.56E-09	2.35E-04	1.81E-04
17	A18	110	Combination Short Haul Truck	301	0.00E+00	5.35E-05	4.13E-06	1.06E+02	1.04E-07	7.83E-02	3.71E-05	8.61E-02	2.64E-03	7.71E-04	2.94E-03	1.19E-03	1.23E-03	1.68E-02	3.53E-04	0.00E+00	1.71E-03	1.62E-02
17	A18	110	Combination Long Haul Truck	274	0.00E+00	7.24E-05	4.59E-06	9.54E+01	3.52E-07	9.03E-02	5.65E-05	9.37E-02	2.56E-03	5.63E-04	5.75E-03	1.42E-03	1.47E-03	1.53E-02	3.20E-04	0.00E+00	4.27E-03	1.76E-02
17	A19	110	Passenger Car	1383	0.00E+00	1.35E-05	1.47E-06	5.82E+01	9.57E-05	3.16E-01	3.04E-05	1.64E-03	3.36E-03	7.36E-04	2.97E-03	1.91E-03	1.96E-03	1.49E-04	2.97E-04	6.72E-08	1.00E-03	2.55E-04
17	A19	110	Passenger Truck	2315	0.00E+00	2.81E-05	3.01E-06	1.36E+02	1.89E-04	6.24E-01	6.10E-05	3.97E-03	5.71E-03	1.29E-03	5.89E-03	3.81E-03	3.91E-03	8.38E-04	6.87E-04	1.33E-07	1.98E-03	6.48E-04
17	A19	110	Single Unit Short Haul Truck	518	0.00E+00	4.77E-05	1.93E-06	8.90E+01	4.35E-05	2.15E-01	5.48E-05	2.31E-02	2.87E-03	8.45E-04	6.71E-03	1.41E-03	1.43E-03	9.25E-03	3.58E-04	1.59E-07	5.28E-03	4.31E-03
17	A19	110	Single Unit Long Haul Truck	23	0.00E+00	2.06E-06	8.03E-08	3.73E+00	1.75E-06	8.53E-03	2.35E-06	9.63E-04	1.29E-04	3.63E-05	2.92E-04	5.81E-05	5.90E-05	3.86E-04	1.50E-05	6.50E-09	2.33E-04	1.80E-04
17	A19	110	Combination Short Haul Truck	299	0.00E+00	5.31E-05	4.10E-06	1.05E+02	1.03E-07	7.78E-02	3.69E-05	8.55E-02	2.62E-03	7.66E-04	2.92E-03	1.18E-03	1.22E-03	1.67E-02	3.51E-04	0.00E+00	1.70E-03	1.61E-02
17	A19	110	Combination Long Haul Truck	272	0.00E+00	7.19E-05	4.56E-06	9.47E+01	3.50E-07	8.96E-02	5.61E-05	9.30E-02	2.54E-03	5.59E-04	5.71E-03	1.41E-03	1.46E-03	1.52E-02	3.17E-04	0.00E+00	4.24E-03	1.75E-02
17	A20	110	Passenger Car	1247	0.00E+00	1.22E-05	1.32E-06	5.25E+01	8.63E-05	2.85E-01	2.74E-05	1.48E-03	3.03E-03	6.64E-04	2.68E-03	1.73E-03	1.77E-03	1.35E-04	2.68E-04	6.06E-08	9.05E-04	2.30E-04
17	A20	110	Passenger Truck	2089	0.00E+00	2.53E-05	2.72E-06	1.22E+02	1.71E-04	5.63E-01	5.50E-05	3.58E-03	5.15E-03	1.16E-03	5.32E-03	3.44E-03	3.53E-03	7.56E-04	6.20E-04	1.20E-07	1.79E-03	5.85E-04
17	A20	110	Single Unit Short Haul Truck	538	0.00E+00	4.96E-05	2.01E-06	9.24E+01	4.52E-05	2.23E-01	5.69E-05	2.40E-02	2.98E-03	8.78E-04	6.97E-03	1.46E-03	1.48E-03	9.61E-03	3.72E-04	1.66E-07	5.48E-03	4.48E-03
17	A20	110	Single Unit Long Haul Truck	24	0.00E+00	2.14E-06	8.34E-08	3.87E+00	1.82E-06	8.86E-03	2.44E-06	1.00E-03	1.34E-04	3.78E-05	3.04E-04	6.04E-05	6.13E-05	4.01E-04	1.56E-05	6.75E-09	2.42E-04	1.86E-04
17	A20	110	Combination Short Haul Truck	307	0.00E+00	5.45E-05	4.21E-06	1.08E+02	1.06E-07	7.98E-02	3.79E-05	8.77E-02	2.69E-03	7.86E-04	3.00E-03	1.21E-03	1.26E-03	1.71E-02	3.60E-04	0.00E+00	1.74E-03	1.65E-02
17	A20	110	Combination Long Haul Truck	279	0.00E+00	7.38E-05	4.68E-06	9.72E+01	3.59E-07	9.20E-02	5.76E-05	9.55E-02	2.61E-03	5.74E-04	5.85E-03	1.44E-03	1.50E-03	1.56E-02	3.26E-04	0.00E+00	4.35E-03	1.80E-02
17	A21	110	Passenger Car	1674	0.00E+00	1.63E-05	1.77E-06	7.04E+01	1.16E-04	3.82E-01	3.68E-05	1.98E-03	4.07E-03	8.92E-04	3.59E-03	2.32E-03	2.38E-03	1.81E-04	3.60E-04	8.13E-08	1.21E-03	3.09E-04
17	A21	110	Passenger Truck	2803	0.00E+00	3.40E-05	3.65E-06	1.64E+02	2.29E-04	7.56E-01	7.38E-05	4.80E-03	6.92E-03	1.56E-03	7.13E-03	4.61E-03	4.73E-03	1.01E-03	8.32E-04	1.61E-07	2.40E-03	7.84E-04
17	A21	110	Single Unit Short Haul Truck	636	0.00E+00	5.86E-05	2.37E-06	1.09E+02	5.34E-05	2.63E-01	6.72E-05	2.84E-02	3.52E-03	1.04E-03	8.23E-03	1.73E-03	1.75E-03	1.14E-02	4.40E-04	1.96E-07	6.48E-03	5.29E-03
17	A21	110	Single Unit Long Haul Truck	28	0.00E+00	2.53E-06	9.85E-08	4.57E+00	2.15E-06	1.05E-02	2.89E-06	1.18E-03	1.58E-04	4.46E-05	3.59E-04	7.13E-05	7.25E-05	4.74E-04	1.84E-05	7.98E-09	2.86E-04	2.20E-04
17	A21	110	Combination Short Haul Truck	364	0.00E+00	6.47E-05	4.99E-06	1.28E+02	1.26E-07	9.48E-02	4.50E-05	1.04E-01	3.19E-03	9.33E-04	3.56E-03	1.44E-03	1.49E-03	2.03E-02	4.28E-04	0.00E+00	2.07E-03	1.96E-02
17	A21	110	Combination Long Haul Truck	332	0.00E+00	8.76E-05	5.56E-06	1.15E+02	4.27E-07	1.09E-01	6.84E-05	1.13E-01	3.10E-03	6.82E-04	6.95E-03	1.71E-03	1.78E-03	1.85E-02	3.87E-04	0.00E+00	5.17E-03	2.14E-02
17	A22	110	Passenger Car	1641	0.00E+00	1.60E-05	1.74E-06	6.90E+01	1.14E-04	3.75E-01	3.61E-05	1.94E-03	3.99E-03	8.74E-04	3.52E-03	2.27E-03	2.33E-03	1.77E-04	3.53E-04	7.97E-08	1.19E-03	3.03E-04
17	A22	110	Passenger Truck	2747	0.00E+00	3.33E-05	3.57E-06	1.61E+02	2.24E-04	7.41E-01	7.23E-05	4.71E-03	6.78E-03	1.53E-03	6.99E-03	4.52E-03	4.64E-03	9.94E-04	8.15E-04	1.58E-07	2.35E-03	7.69E-04
17	A22	110	Single Unit Short Haul Truck	580	0.00E+00	5.35E-05	2.17E-06	9.97E+01	4.87E-05	2.40E-01	6.13E-05	2.59E-02	3.21E-03	9.47E-04	7.51E-03	1.58E-03	1.60E-03	1.04E-02	4.01E-04	1.79E-07	5.91E-03	4.83E-03
17	A22	110	Single Unit Long Haul Truck	26	0.00E+00	2.31E-06	8.99E-08	4.17E+00	1.96E-06	9.55E-03	2.64E-06	1.08E-03	1.44E-04	4.07E-05	3.27E-04	6.51E-05	6.61E-05	4.32E-04	1.68E-05	7.28E-09	2.61E-04	2.01E-04
17	A22	110	Combination Short Haul Truck	315	0.00E+00	5.61E-05	4.33E-06	1.11E+02	1.09E-07	8.21E-02	3.90E-05	9.03E-02	2.77E-03	8.09E-04	3.09E-03	1.25E-03	1.29E-03	1.76E-02	3.71E-04	0.00E+00	1.79E-03	1.70E-02
17	A22	110	Combination Long Haul Truck	288	0.00E+00	7.59E-05	4.82E-06	1.00E+02	3.70E-07	9.47E-02	5.93E-05	9.83E-02	2.69E-03	5.91E-04	6.02E-03	1.48E-03	1.54E-03	1.61E-02	3.35E-04	0.00E+00	4.48E-03	1.85E-02
17	A23	110	Passenger Car	1324	0.00E+00	1.29E-05	1.40E-06	5.57E+01	9.16E-05	3.02E-01	2.91E-05	1.57E-03	3.22E-03	7.05E-04	2.84E-03	1.83E-03	1.88E-03	1.43E-04	2.85E-04	6.43E-08	9.60E-04	2.44E-04
17	A23	110	Passenger Truck	2216	0.00E+00	2.69E-05	2.88E-06	1.30E+02	1.81E-04	5.97E-01	5.84E-05	3.80E-03	5.47E-03	1.24E-03	5.64E-03	3.65E-03	3.74E-03	8.02E-04	6.58E-04	1.27E-07	1.90E-03	6.20E-04
17	A23	110	Single Unit Short Haul Truck	648	0.00E+00	5.97E-05	2.42E-06	1.11E+02	5.44E-05	2.69E-01	6.85E-05	2.89E-02	3.59E-03	1.06E-03	8.39E-03	1.76E-03	1.79E-03	1.16E-02	4.48E-04	1.99E-07	6.61E-03	5.39E-03
17	A23	110	Single Unit Long Haul Truck	29	0.00E+00	2.58E-06	1.00E-07	4.66E+00	2.19E-06	1.07E-02	2.94E-06	1.20E-03	1.61E-04	4.55E-05	3.66E-04	7.27E-05	7.39E-05	4.83E-04	1.88E-05	8.14E-09	2.92E-04	2.25E-04
17	A23	110	Combination Short Haul Truck	359	0.00E+00	6.39E-05	4.93E-06	1.26E+02	1.24E-07	9.36E-02	4.44E-05	1.03E-01	3.15E-03	9.21E-04	3.52E-03	1.42E-03	1.47E-03	2.01E-02	4.22E-04	0.00E+00	2.04E-03	1.94E-02
17	A23	110	Combination Long Haul Truck	328	0.00E+00	8.65E-05	5.49E-06	1.14E+02	4.21E-07	1.08E-01	6.76E-05	1.12E-01	3.06E-03	6.73E-04	6.86E-03	1.69E-03	1.76E-03	1.83E-02	3.82E-04	0.00E+00	5.11E-03	2.11E-02
17	A24	110	Passenger Car	2004	0.00E+00	1.95E-05	2.12E-06	8.43E+01	1.39E-04	4.58E-01	4.41E-05	2.37E-03	4.87E-03	1.07E-03	4.30E-03	2.77E-03	2.84E-03	2.17E-04	4.31E-04	9.74E-08	1.45E-03	3.70E-04
17	A24	110	Passenger Truck	3356	0.00E+00	4.07E-05	4.36E-06	1.97E+02	2.74E-04	9.05E-01	8.84E-05	5.75E-03	8.28E-03	1.87E-03	8.54E-03	5.52E-03	5.67E-03	1.21E-03	9.96E-04	1.93E-07	2.88E-03	9.39E-04
17	A24	110	Single Unit Short Haul Truck	548	0.00E+00	5.05E-05	2.04E-06	9.41E+01	4.60E-05	2.27E-01	5.79E-05	2.44E-02	3.03E-03	8.94E-04	7.09E-03	1.49E-03	1.51E-03	9.78E-03	3.79E-04	1.68E-07	5.58E-03	4.56E-03
17	A24	110	Single Unit Long Haul Truck	24	0.00E+00	2.18E-06	8.49E-08	3.94E+00	1.85E-06	9.02E-03	2.49E-06	1.02E-03	1.36E-04	3.84E-05	3.09E-04	6.15E-05	6.24E-05	4.08E-04	1.59E-05	6.87E-09	2.47E-04	1.90E-04
17	A24	110	Combination Short Haul Truck	275	0.00E+00	4.89E-05	3.77E-06	9.67E+01	9.50E-08	7.16E-02	3.40E-05	7.87E-02	2.41E-03	7.05E-04	2.69E-03	1.09E-03	1.13E-03	1.54E-02	3.23E-04	0.00E+00	1.57E-03	1.48E-02
17	A24	110	Combination Long Haul Truck	251	0.00E+00	6.62E-05	4.20E-06	8.73E+01	3.22E-07	8.26E-02	5.17E-05	8.57E-02	2.34E-03	5.15E-04	5.26E-03	1.29E-03	1.35E-03	1.40E-02	2.92E-04	0.00E+00	3.91E-03	1.61E-02
17	A25	110	Passenger Car	1279	0.00E+00	1.25E-05	1.36E-06	5.38E+01	8.86E-05	2.92E-01	2.81E-05	1.51E-03	3.11E-03	6.81E-04	2.74E-03	1.77E-03	1.82E-03	1.38E-04	2.75E-04	6.22E-08	9.28E-04	2.36E-04
17	A25	110	Passenger Truck	2143	0.00E+00	2.60E-05	2.79E-06	1.26E+02	1.75E-04	5.78E-01	5.64E-05	3.67E-03	5.29E-03	1.19E-03	5.45E-03	3.53E-03	3.62E-03	7.76E-04	6.36E-04	1.23E-07	1.84E-03	6.00E-04
17	A25	110	Single Unit Short Haul Truck	606	0.00E+00	5.58E-05	2.26E-06	1.04E+02	5.09E-05	2.51E-01	6.41E-05	2.70E-02	3.35E-03	9.89E-04	7.85E-03	1.65E-03	1.67E-03	1.08E-02	4.19E-04	1.86E-07	6.18E-03	5.04E-03
17	A25	110	Single Unit Long Haul Truck	27	0.00E+00	2.41E-06	9.39E-08	4.36E+00	2.05E-06	9.98E-03	2.75E-06	1.13E-03	1.51E-04	4.25E-05	3.42E-04	6.80E-05	6.91E-05	4.51E-04	1.76E-05	7.61E-09	2.73E-04	2.10E-04
17	A25	110	Combination Short Haul Truck	335	0.00E+00	5.95E-05	4.59E-06	1.18E+02	1.16E-07	8.72E-02	4.13E-05	9.58E-02	2.94E-03	8.58E-04	3.28E-03	1.32E-03	1.37E-03	1.87E-02	3.93E-04	0.00E+00	1.90E-03	1.81E-02
17	A25	110	Combination Long Haul Truck	305	0.00E+00	8.06E-05	5.11E-06	1.06E+02	3.92E-07	1.00E-01	6.29E-05	1.04E-01	2.85E-03	6.27E-04	6.39E-03	1.58E-03	1.64E-03	1.70E-02	3.56E-04	0.00E+00	4.76E-03	1.96E-02
17	A26	110	Passenger Car	1565	0.00E+00	1.53E-05	1.66E-06	6.58E+01	1.08E-04	3.58E-01	3.44E-05	1.85E-03	3.80E-03	8.33E-04	3.36E-03	2.16E-03	2.22E-03	1.69E-04	3.37E-04	7.60E-08	1.14E-03	2.89E-04
17	A26	110	Passenger Truck	2620	0.00E+00	3.17E-05	3.41E-06	1.54E+02	2.14E-04	7.06E-01	6.90E-05	4.49E-03	6.47E-03	1.46E-03	6.67E-03	4.31E-03	4.42E-03	9.48E-04	7.78E-04	1.51E-07	2.25E-03	7.33E-04
17	A26	110	Single Unit Short Haul Truck	465	0.00E+00	4.28E-05	1.73E-06	7.98E+01	3.90E-05	1.92E-01	4.91E-05	2.07E-02	2.57E-03	7.58E-04	6.01E-03	1.26E-03	1.28E-03	8.29E-03	3.21E-04	1.43E-07	4.73E-03	3.86E-03
17	A26	110	Single Unit Long Haul Truck	20	0.00E+00	1.85E-06	7.19E-08	3.34E+00	1.57E-06	7.64E-03	2.11E-06	8.63E-04	1.15E-04	3.26E-05	2.62E-04	5.21E-05	5.29E-05	3.46E-04	1.35E-05	5.83E-09	2.09E-04	1.61E-04
17	A26	110	Combination Short Haul Truck	235	0.00E+00	4.18E-05	3.23E-06	8.27E+01	8.13E-08	6.13E-02	2.91E-05	6.74E-02	2.06E-03	6.04E-04	2.30E-03	9.29E-04	9.64E-04	1.31E-02	2.77E-04	0.00E+00	1.34E-03	1.27E-02
17	A26	110	Combination Long Haul Truck	215	0.00E+00	5.67E-05	3.60E-06	7.47E+01	2.76E-07	7.06E-02	4.42E-05	7.33E-02	2.00E-03	4.41E-04	4.50E-03	1.11E-03	1.15E-03	1.20E-02	2.50E-04	0.00E+00	3.34E-03	1.38E-02
17	A27	110	Passenger Car	1279	0.00E+00	1.25E-05	1.36E-06	5.38E+01	8.86E-05	2.92E-01	2.81E-05	1.51E-03	3.11E-03	6.81E-04	2.74E-03	1.77E-03	1.82E-03	1.38E-04	2.75E-04	6.22E-08	9.28E-04	2.36E-04
17	A27	110	Passenger Truck	2143	0.00E+00	2.60E-05	2.79E-06	1.26E+02	1.75E-04	5.78E-01	5.64E-05	3.67E-03	5.29E-03	1.19E-03	5.45E-03	3.53E-03	3.62E-03	7.76E-04	6.36E-04	1.23E-07	1.84E-03	6.00E-04
17	A27	110	Single Unit Short Haul Truck	606	0.00E+00	5.58E-05	2.26E-06	1.04E+02	5.09E-05	2.51E-01	6.41E-05	2.70E-02	3.35E-03	9.89E-04	7.85E-03	1.65E-03	1.67E-03	1.08E-02	4.19E-04	1.86E-07	6.18E-03	5.04E-03
17	A27	110	Single Unit Long Haul Truck	27	0.00E+00	2.41E-06	9.39E-08	4.36E+00	2.05E-06	9.98E-03	2.75E-06	1.13E-03	1.51E-04	4.25E-05	3.42E-04	6.80E-05	6.91E-05	4.51E-04	1.76E-05	7.61E-09	2.73E-04	2.10E-04
17	A27	110	Combination Short Haul Truck	335	0.00E+00	5.95E-05	4.59E-06	1.18E+02	1.16E-07	8.72E-02	4.13E-05	9.58E-02	2.94E-03	8.58E-04	3.28E-03	1.32E-03	1.37E-03	1.87E-02	3.93E-04	0.00E+00	1.90E-03	1.81E-02
17	A27	110	Combination Long Haul Truck	305	0.00E+00	8.06E-05	5.11E-06	1.06E+02	3.92E-07	1.00E-01	6.29E-05	1.04E-01	2.85E-03	6.27E-04	6.39E-03	1.58E-03	1.64E-03	1.70E-02	3.56E-04	0.00E+00	4.76E-03	1.96E-02
17	A28	110	Passenger Car	1565	0.00E+00	1.53E-05	1.66E-06	6.58E+01	1.08E-04	3.58E-01	3.44E-05	1.85E-03	3.80E-03	8.33E-04	3.36E-03	2.16E-03	2.22E-03	1.69E-04	3.37E-04	7.60E-08	1.14E-03	2.89E-04
17	A28	110	Passenger Truck	2620	0.00E+00	3.17E-05	3.41E-06	1.54E+02	2.14E-04	7.06E-01	6.90E-05	4.49E-03	6.47E-03	1.46E-03	6.67E-03	4.31E-03	4.42E-03	9.48E-04	7.78E-04	1.51E-07	2.25E-03	7.33E-04
17	A28	110	Single Unit Short Haul Truck	465	0.00E+00	4.28E-05	1.73E-06	7.98E+01	3.90E-05	1.92E-01	4.91E-05	2.07E-02	2.57E-03	7.58E-04	6.01E-03	1.26E-03	1.28E-03	8.29E-03	3.21E-04	1.43E-07	4.73E-03	3.86E-03
17	A28	110	Single Unit Long Haul Truck	20	0.00E+00	1.85E-06	7.19E-08	3.34E+00	1.57E-06	7.64E-03	2.11E-06	8.63E-04	1.15E-04	3.26E-05	2.62E-04	5.21E-05	5.29E-05	3.46E-04	1.35E-05	5.83E-09	2.09E-04	1.61E-04
17	A28	110	Combination Short Haul Truck	235	0.00E+00	4.18E-05	3.23E-06	8.27E+01	8.13E-08	6.13E-02	2.91E-05	6.74E-02	2.06E-03	6.04E-04	2.30E-03	9.29E-04	9.64E-04	1.31E-02	2.77E-04	0.00E+00	1.34E-03	1.27E-02
17	A28	110	Combination Long Haul Truck	215	0.00E+00	5.67E-05	3.60E-06	7.47E+01	2.76E-07	7.06E-02	4.42E-05	7.33E-02	2.00E-03	4.41E-04	4.50E-03	1.11E-03	1.15E-03	1.20E-02	2.50E-04	0.00E+00	3.34E-03	1.38E-02
16	B15	100	Passenger Car	895	0.00E+00	8.26E-06	8.98E-07	3.62E+01	5.86E-05	1.69E-01	1.86E-05	9.65E-04	2.86E-03	5.48E-04	1.82E-03	1.17E-03	1.20E-03	1.06E-04	1.85E-04	3.89E-08	6.15E-04	1.51E-04
16	B15	100	Passenger Truck	1499	0.00E+00	1.71E-05	1.83E-06	8.36E+01	1.14E-04	3.28E-01	3.68E-05	2.41E-03	4.99E-03	9.70E-04	3.55E-03	2.30E-03	2.36E-03	5.52E-04	4.22E-04	7.70E-08	1.19E-03	3.96E-04
16	B15	100	Single Unit Short Haul Truck	128	0.00E+00	1.22E-05	4.51E-07	2.10E+01	9.33E-06	4.33E-02	1.38E-05	5.40E-03	8.29E-04	2.15E-04	1.75E-03	3.23E-04	3.29E-04	2.15E-03	8.48E-05	3.46E-08	1.42E-03	1.01E-03
16	B15	100	Single Unit Long Haul Truck	6	0.00E+00	5.30E-07	1.91E-08	8.81E-01	3.86E-07	1.77E-03	5.99E-07	2.26E-04	3.77E-05	9.32E-06	7.65E-05	1.36E-05	1.39E-05	8.97E-05	3.58E-06	1.42E-09	6.26E-05	4.22E-05
16	B15	100	Combination Short Haul Truck	63	0.00E+00	9.05E-06	6.69E-07	2.11E+01	2.40E-08	1.63E-02	6.48E-06	1.64E-02	6.13E-04	1.55E-04	5.52E-04	1.95E-04	2.03E-04	3.35E-03	7.05E-05	0.00E+00	3.49E-04	3.09E-03
16	B15	100	Combination Long Haul Truck	58	0.00E+00	1.28E-05	7.21E-07	1.91E+01	8.16E-08	1.90E-02	1.06E-05	1.75E-02	6.14E-04	1.25E-04	1.17E-03	2.33E-04	2.42E-04	3.07E-03	6.40E-05	0.00E+00	9.32E-04	3.31E-03
16	B16	100	Passenger Car	1772	0.00E+00	1.64E-05	1.78E-06	7.18E+01	1.16E-04	3.35E-01	3.69E-05	1.91E-03	5.66E-03	1.09E-03	3.60E-03	2.32E-03	2.38E-03	2.11E-04	3.66E-04	7.69E-08	1.22E-03	2.98E-04
16	B16	100	Passenger Truck	2967	0.00E+00	3.38E-05	3.62E-06	1.65E+02	2.25E-04	6.48E-01	7.29E-05	4.77E-03	9.89E-03	1.92E-03	7.03E-03	4.55E-03	4.67E-03	1.09E-03	8.36E-04	1.52E-07	2.36E-03	7.84E-04
16	B16	100	Single Unit Short Haul Truck	131	0.00E+00	1.25E-05	4.61E-07	2.14E+01	9.54E-06	4.42E-02	1.41E-05	5.52E-03	8.48E-04	2.19E-04	1.79E-03	3.30E-04	3.36E-04	2.19E-03	8.67E-05	3.54E-08	1.45E-03	1.03E-03
16	B16	100	Single Unit Long Haul Truck	6	0.00E+00	5.42E-07	1.95E-08	9.01E-01	3.95E-07	1.81E-03	6.13E-07	2.32E-04	3.85E-05	9.53E-06	7.82E-05	1.39E-05	1.42E-05	9.17E-05	3.66E-06	1.45E-09	6.40E-05

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

MOVES L nkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B20	100	Single Unit Long Haul Truck	16	0.00E+00	1.47E-06	5.27E-08	2.44E+00	1.07E-06	4.90E-03	1.66E-06	6.27E-04	1.04E-04	2.58E-05	2.12E-04	3.77E-05	3.84E-05	2.48E-04	9.90E-06	3.92E-09	1.73E-04	1.17E-04
16	B20	100	Combination Short Haul Truck	263	0.00E+00	3.76E-05	2.77E-06	8.75E+01	9.96E-08	6.76E-02	2.69E-05	6.80E-02	2.54E-03	6.45E-04	2.29E-03	8.10E-04	8.41E-04	1.39E-02	2.93E-04	0.00E+00	1.45E-03	1.28E-02
16	B20	100	Combination Long Haul Truck	239	0.00E+00	5.31E-05	2.99E-06	7.93E+01	3.38E-07	7.87E-02	4.38E-05	7.28E-02	2.55E-03	5.19E-04	4.87E-03	9.65E-04	1.01E-03	1.27E-02	2.66E-04	0.00E+00	3.86E-03	1.37E-02
16	B21	100	Passenger Car	996	0.00E+00	9.19E-06	9.99E-07	4.03E+01	6.52E-05	1.88E-01	2.07E-05	1.07E-03	3.18E-03	6.10E-04	2.02E-03	1.30E-03	1.34E-03	1.18E-04	2.06E-04	4.32E-08	6.84E-04	1.68E-04
16	B21	100	Passenger Truck	1667	0.00E+00	1.90E-05	2.03E-06	9.30E+01	1.27E-04	3.64E-01	4.10E-05	2.68E-03	5.56E-03	1.08E-03	3.95E-03	2.56E-03	2.62E-03	6.14E-04	4.70E-04	8.56E-08	1.33E-03	4.41E-04
16	B21	100	Single Unit Short Haul Truck	205	0.00E+00	1.95E-05	7.20E-07	3.35E+01	1.49E-05	6.91E-02	2.21E-05	8.62E-03	1.32E-03	3.43E-04	2.79E-03	5.16E-04	5.25E-04	3.43E-03	1.35E-04	5.53E-08	2.27E-03	1.61E-03
16	B21	100	Single Unit Long Haul Truck	9	0.00E+00	8.46E-07	3.04E-08	1.41E+00	6.17E-07	2.83E-03	9.57E-07	3.62E-04	6.02E-05	1.49E-05	1.22E-04	2.17E-05	2.21E-05	1.43E-04	5.71E-06	2.26E-09	1.00E-04	6.74E-05
16	B21	100	Combination Short Haul Truck	176	0.00E+00	2.52E-05	1.86E-06	5.87E+01	6.69E-08	4.54E-02	1.81E-05	4.56E-02	1.71E-03	4.33E-04	1.54E-03	5.44E-04	5.65E-04	9.33E-03	1.96E-04	0.00E+00	9.71E-04	8.60E-03
16	B21	100	Combination Long Haul Truck	161	0.00E+00	3.56E-05	2.01E-06	5.32E+01	2.27E-07	5.29E-02	2.94E-05	4.89E-02	1.71E-03	3.48E-04	3.27E-03	6.48E-04	6.75E-04	8.54E-03	1.78E-04	0.00E+00	2.59E-03	9.21E-03
16	B22	100	Passenger Car	2787	0.00E+00	2.57E-05	2.80E-06	1.13E+02	1.83E-04	5.27E-01	5.80E-05	3.01E-03	8.91E-03	1.71E-03	5.66E-03	3.65E-03	3.74E-03	3.31E-04	5.76E-04	1.21E-07	1.91E-03	4.69E-04
16	B22	100	Passenger Truck	4668	0.00E+00	5.32E-05	5.70E-06	2.60E+02	3.55E-04	1.02E+00	1.15E-04	7.51E-03	1.56E-02	3.02E-03	1.11E-02	7.16E-03	7.34E-03	1.72E-03	1.32E-03	2.40E-07	3.72E-03	1.23E-03
16	B22	100	Single Unit Short Haul Truck	179	0.00E+00	1.70E-05	6.29E-07	2.92E+01	1.30E-05	6.04E-02	1.93E-05	7.54E-03	1.16E-03	3.00E-04	2.44E-03	4.51E-04	4.59E-04	3.00E-03	1.18E-04	4.83E-08	1.98E-03	1.41E-03
16	B22	100	Single Unit Long Haul Truck	8	0.00E+00	7.40E-07	2.66E-08	1.23E+00	5.39E-07	2.47E-03	8.36E-07	3.16E-04	5.26E-05	1.30E-05	1.07E-04	1.90E-05	1.94E-05	1.25E-04	4.99E-06	1.98E-09	8.74E-05	5.89E-05
16	B22	100	Combination Short Haul Truck	177	0.00E+00	2.53E-05	1.87E-06	5.89E+01	6.71E-08	4.55E-02	1.81E-05	4.58E-02	1.71E-03	4.34E-04	1.54E-03	5.45E-04	5.66E-04	9.36E-03	1.97E-04	0.00E+00	9.74E-04	8.62E-03
16	B22	100	Combination Long Haul Truck	161	0.00E+00	3.57E-05	2.02E-06	5.34E+01	2.28E-07	5.30E-02	2.95E-05	4.90E-02	1.72E-03	3.49E-04	3.28E-03	6.50E-04	6.77E-04	8.56E-03	1.79E-04	0.00E+00	2.60E-03	9.23E-03
16	B23	100	Passenger Car	1026	0.00E+00	9.47E-06	1.03E-06	4.16E+01	6.72E-05	1.94E-01	2.14E-05	1.11E-03	3.28E-03	6.29E-04	2.08E-03	1.34E-03	1.38E-03	1.22E-04	2.12E-04	4.45E-08	7.05E-04	1.73E-04
16	B23	100	Passenger Truck	1719	0.00E+00	1.96E-05	2.10E-06	9.58E+01	1.31E-04	3.76E-01	4.22E-05	2.76E-03	5.73E-03	1.11E-03	4.07E-03	2.64E-03	2.70E-03	6.33E-04	4.84E-04	8.82E-08	1.37E-03	4.54E-04
16	B23	100	Single Unit Short Haul Truck	211	0.00E+00	2.00E-05	7.40E-07	3.44E+01	1.53E-05	7.10E-02	2.27E-05	8.87E-03	1.36E-03	3.52E-04	2.87E-03	5.30E-04	5.39E-04	3.52E-03	1.39E-04	5.69E-08	2.33E-03	1.65E-03
16	B23	100	Single Unit Long Haul Truck	9	0.00E+00	8.70E-07	3.13E-08	1.45E+00	6.34E-07	2.91E-03	9.84E-07	3.72E-04	6.19E-05	1.53E-05	1.26E-04	2.24E-05	2.28E-05	1.47E-04	5.87E-06	2.33E-09	1.03E-04	6.93E-05
16	B23	100	Combination Short Haul Truck	182	0.00E+00	2.60E-05	1.92E-06	6.07E+01	6.91E-08	4.69E-02	1.86E-05	4.71E-02	1.76E-03	4.47E-04	1.59E-03	5.62E-04	5.83E-04	9.64E-03	2.03E-04	0.00E+00	1.00E-03	8.88E-03
16	B23	100	Combination Long Haul Truck	166	0.00E+00	3.68E-05	2.07E-06	5.49E+01	2.35E-07	5.46E-02	3.04E-05	5.05E-02	1.77E-03	3.60E-04	3.38E-03	6.69E-04	6.97E-04	8.82E-03	1.84E-04	0.00E+00	2.68E-03	9.51E-03
16	B24	100	Passenger Car	4052	0.00E+00	3.74E-05	4.06E-06	1.64E+02	2.65E-04	7.67E-01	8.43E-05	4.37E-03	1.30E-02	2.48E-03	8.22E-03	5.30E-03	5.44E-03	4.82E-04	8.37E-04	1.76E-07	2.78E-03	6.82E-04
16	B24	100	Passenger Truck	6785	0.00E+00	7.73E-05	8.28E-06	3.78E+02	5.16E-04	1.48E+00	1.67E-04	1.09E-02	2.26E-02	4.39E-03	1.61E-02	1.04E-02	1.07E-02	2.50E-03	1.91E-03	3.48E-07	5.40E-03	1.79E-03
16	B24	100	Single Unit Short Haul Truck	419	0.00E+00	3.98E-05	1.47E-06	6.83E+01	3.04E-05	1.41E-01	4.51E-05	1.76E-02	2.70E-03	7.00E-04	5.70E-03	1.05E-03	1.07E-03	7.00E-03	2.77E-04	1.13E-07	4.63E-03	3.28E-03
16	B24	100	Single Unit Long Haul Truck	18	0.00E+00	1.73E-06	6.21E-08	2.87E+00	1.26E-06	5.77E-03	1.95E-06	7.39E-04	1.23E-04	3.04E-05	2.49E-04	4.44E-05	4.52E-05	2.92E-04	1.17E-05	4.62E-09	2.04E-04	1.38E-04
16	B24	100	Combination Short Haul Truck	287	0.00E+00	4.10E-05	3.03E-06	9.55E+01	1.09E-07	7.38E-02	2.94E-05	7.42E-02	2.78E-03	7.04E-04	2.50E-03	8.84E-04	9.18E-04	1.52E-02	3.19E-04	0.00E+00	1.58E-03	1.40E-02
16	B24	100	Combination Long Haul Truck	261	0.00E+00	5.79E-05	3.27E-06	8.65E+01	3.69E-07	8.59E-02	4.78E-05	7.95E-02	2.78E-03	5.67E-04	5.32E-03	1.05E-03	1.10E-03	1.39E-02	2.90E-04	0.00E+00	4.22E-03	1.50E-02
52	C53	60	Passenger Car	99	0.00E+00	1.16E-06	1.26E-07	4.49E+00	8.20E-06	2.21E-02	2.61E-06	9.86E-05	9.76E-04	1.46E-04	2.54E-04	1.64E-04	1.68E-04	1.97E-05	2.27E-05	4.63E-09	8.60E-05	1.54E-05
52	C53	60	Passenger Truck	167	0.00E+00	2.44E-06	2.59E-07	1.00E+01	1.54E-05	3.80E-02	5.06E-06	3.01E-04	1.73E-03	2.57E-04	4.82E-04	3.14E-04	3.21E-04	7.90E-05	5.02E-05	8.46E-09	1.61E-04	5.09E-05
52	C53	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
52	C53	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
52	C53	60	Combination Short Haul Truck	7	0.00E+00	1.98E-06	1.46E-07	2.39E+00	5.44E-09	2.97E-03	1.43E-06	3.03E-03	3.46E-04	5.42E-05	1.22E-04	4.26E-05	4.43E-05	3.81E-04	8.01E-06	0.00E+00	7.80E-05	5.71E-04
52	C53	60	Combination Long Haul Truck	6	0.00E+00	2.73E-06	1.49E-07	2.26E+00	1.84E-08	3.56E-03	2.28E-06	3.23E-03	3.63E-04	5.25E-05	2.59E-04	4.86E-05	5.07E-05	3.63E-04	7.58E-06	0.00E+00	2.08E-04	6.09E-04
53	C54	70	Passenger Car	134	0.00E+00	1.43E-06	1.56E-07	5.86E+00	1.02E-05	2.76E-02	3.23E-06	1.38E-04	1.02E-03	1.59E-04	3.15E-04	2.03E-04	2.09E-04	2.28E-05	2.98E-05	6.18E-09	1.07E-04	2.15E-05
53	C54	70	Passenger Truck	225	0.00E+00	3.00E-06	3.19E-07	1.32E+01	1.92E-05	4.87E-02	6.29E-06	3.90E-04	1.82E-03	2.83E-04	6.02E-04	3.91E-04	4.01E-04	9.91E-05	6.64E-05	1.16E-08	2.01E-04	6.53E-05
53	C54	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.39E-04
53	C54	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.80E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
53	C54	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.84E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.11E-04
53	C54	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.18E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.75E-04
53	C57	70	Passenger Car	205	0.00E+00	2.19E-06	2.38E-07	8.93E+00	1.55E-05	4.21E-02	4.93E-06	2.10E-04	1.55E-03	2.43E-04	4.81E-04	3.10E-04	3.18E-04	3.47E-05	4.54E-05	9.42E-09	1.63E-04	3.28E-05
53	C57	70	Passenger Truck	342	0.00E+00	4.57E-06	4.86E-07	2.01E+01	2.93E-05	7.42E-02	9.59E-06	5.94E-04	2.77E-03	4.31E-04	9.17E-04	5.96E-04	6.11E-04	1.51E-04	1.01E-04	1.77E-08	3.07E-04	9.95E-05
53	C57	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.77E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.67E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
53	C57	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.04E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.49E-04
53	C57	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.39E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.02E-03
50	C58	40	Passenger Car	56	0.00E+00	8.01E-07	8.71E-08	2.95E+00	5.69E-06	1.53E-02	1.81E-06	5.15E-05	9.74E-04	1.37E-04	1.76E-04	1.14E-04	1.17E-04	1.68E-05	1.48E-05	2.74E-09	5.96E-05	8.03E-06
50	C58	40	Passenger Truck	95	0.00E+00	1.77E-06	1.86E-07	6.41E+00	1.06E-05	2.53E-02	3.55E-06	1.98E-04	1.73E-03	2.40E-04	3.35E-04	2.19E-04	2.24E-04	5.73E-05	3.19E-05	4.66E-09	1.11E-04	3.44E-05
50	C58	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.91E-05
50	C58	40	Combination Short Haul Truck	1	0.00E+00	2.52E-07	1.88E-08	2.17E-01	6.25E-10	3.57E-04	1.79E-07	3.68E-04	5.09E-05	7.58E-06	1.50E-05	5.48E-06	5.69E-06	3.45E-05	7.25E-07	0.00E+00	9.31E-06	6.93E-05
53	C59	70	Passenger Car	53	0.00E+00	5.63E-07	6.12E-08	2.30E+00	4.00E-06	1.08E-02	1.27E-06	5.42E-05	4.00E-04	6.26E-05	1.24E-04	7.99E-05	8.20E-05	8.96E-06	1.17E-05	2.43E-09	4.19E-05	8.46E-06
53	C59	70	Passenger Truck	88	0.00E+00	1.18E-06	1.25E-07	5.19E+00	7.56E-06	1.91E-02	2.47E-06	1.53E-04	7.14E-04	1.11E-04	2.36E-04	1.54E-04	1.57E-04	3.89E-05	2.61E-05	4.57E-09	7.90E-05	2.57E-05
53	C59	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
53	C59	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.59E-05
53	C59	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
52	C60	60	Passenger Car	205	0.00E+00	2.38E-06	2.58E-07	9.23E+00	1.69E-05	4.55E-02	5.36E-06	2.03E-04	2.01E-03	3.01E-04	5.23E-04	3.37E-04	3.46E-04	4.05E-05	4.67E-05	9.52E-09	1.77E-04	3.16E-05
52	C60	60	Passenger Truck	342	0.00E+00	5.02E-06	5.32E-07	2.06E+01	3.16E-05	7.82E-02	1.04E-05	6.19E-04	3.57E-03	5.29E-04	9.91E-04	6.45E-04	6.61E-04	1.62E-04	1.03E-04	1.74E-08	3.30E-04	1.05E-04
52	C60	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.96E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
52	C60	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.46E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.41E-03
52	C60	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.96E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.50E-03
53	C61	70	Passenger Car	247	0.00E+00	2.64E-06	2.87E-07	1.08E+01	1.87E-05	5.07E-02	5.95E-06	2.54E-04	1.87E-03	2.93E-04	5.80E-04	3.74E-04	3.84E-04	4.19E-05	5.47E-05	1.14E-08	1.96E-04	3.96E-05
53	C61	70	Passenger Truck	413	0.00E+00	5.51E-06	5.86E-07	2.43E+01	3.54E-05	8.96E-02	1.16E-05	7.17E-04	3.34E-03	5.19E-04	1.11E-03	7.19E-04	7.37E-04	1.82E-04	1.22E-04	2.14E-08	3.70E-04	1.20E-04
53	C61	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
53	C61	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
53	C61	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
50	C62	40	Passenger Car	208	0.00E+00	2.95E-06	3.21E-07	1.08E+01	2.09E-05	5.64E-02	6.65E-06	1.90E-04	3.58E-03	5.04E-04	6.49E-04	4.18E-04	4.29E-04	6.18E-05	5.45E-05	1.01E-08	2.19E-04	2.96E-05
50	C62	40	Passenger Truck	348	0.00E+00	6.51E-06	6.84E-07	2.36E+01	3.92E-05	9.33E-02	1.31E-05	7.31E-04	6.36E-03	8.82E-04	1.23E-03	8.06E-04	8.26E-04	2.11E-04	1.18E-04	1.72E-08	4.09E-04	1.27E-04
50	C62	40	Single Unit Short Haul Truck	15	0.00E+00	5.20E-06	2.31E-07	2.89E+00	3.60E-06	4.54E-03	5.56E-06	2.10E-03	6.03E-04	9.42E-05	6.68E-04	1.39E-04	1.42E-04	2.96E-04	1.18E-05	5.00E-09	5.26E-04	3.93E-04
50	C62	40	Single Unit Long Haul Truck	1	0.00E+00	2.28E-07	1.01E-08	1.25E-01	1.57E-07	1.98E-04	2.44E-07	9.14E-05	2.70E-05	4.19E-06	2.94E-05	6.09E-06	6.21E-06	1.28E-05	5.10E-07	2.17E-10	2.32E-05	1.71E-05
50	C62	40	Combination Short Haul Truck	6	0.00E+00	2.78E-06	2.07E-07	2.39E+00	6.87E-09	3.92E-03	1.97E-06	4.05E-03	5.59E-04	8.34E-05	1.65E-04	6.03E-05	6.26E-05	3.79E-04	7.98E-06	0.00E+00	1.02E-04	7.63E-04
50	C62	40	Combination Long Haul Truck	5	0.00E+00	3.69E-06	2.08E-07	2.29E+00	2.34E-08	4.76E-03	3.04E-06	4.27E-03	5.81E-04	8.16E-05	3.38E-04	6.71E-05	6.99E-05	3.68E-04	7.67E-06	0.00E+00	2.68E-04	8.04E-04
52	C63	60	Passenger Car	330	0.00E+00	3.83E-06	4.16E-07	1.49E+01	2.72E-05	7.34E-02	8.64E-06	3.27E-04	3.24E-03	4.85E-04	8.43E-04	5.43E-04	5.58E-04	6.54E-05	7.54E-05	1.54E-08	2.85E-04	5.10E-05
52	C63	60	Passenger Truck	552	0.00E+00	8.09E-06	8.57E-07	3.32E+01	5.10E-05	1.26E-01	1.68E-05	9.98E-04	5.75E-03	8.54E-04	1.60E-03	1.04E-03	1.07E-03	2.62E-04	1.66E-04	2.81E-08	5.33E-04	1.69E-04
52	C63	60	Single Unit Short Haul Truck	109	0.00E+00	2.44E-05	1.01E-06	1.82E+01	1.62E-05	3.19E-02	2.64E-05	9.36E-03	2.51E-03	4.22E-04	3.25E-03	6.26E-04	6.39E-04	1.84E-03	7.40E-05	3.05E-08	2.61E-03	1.75E-03
52	C63	60	Single Unit Long Haul Truck	5	0.00E+00	1.06E-06	4.37E-08	7.74E-01	7.00E-07	1.36E-03	1.15E-06	4.05E-04	1.13E-04	1.87E-05	1.42E-04	2.72E-05	2.78E-05	7.83E-05	3.16E-06	1.30E-09	1.14E-04	7.59E-05
52	C63	60	Combination Short Haul Truck	60	0.00E+00	1.74E-05	1.28E-06	2.10E+01	4.77E-08	2.60E-02	1.25E-05	2.66E-02	3.04E-03	4.75E-04	1.07E-03	3.74E-04	3.88E-04	3.34E-03	7.02E-05	0.00E+00	6.84E-04	5.01E-03
52	C63	60	Combination Long Haul Truck	54	0.00E+00	2.39E-05	1.31E-06	1.98E+01	1.61E-07	3.12E-02	2.00E-05	2.83E-02	3.18E-03	4.60E-04	2.27E-03	4.27E-04	4.45E-04	3.18E-03	6.65E-05	0.00E+00	1.82E-03	5.34E-03
53	C64	70	Passenger Car	479	0.00E+00	5.12E-06	5.56E-07	2.09E+01	3.63E-05	9.85E-02	1.15E-05	4.93E-04	3.63E-03	5.69E-04	1.13E-03	7.26E-04	7.45E-04	8.14E-05	1.06E-04	2.21E-08	3.81E-04	7.69E-05
53	C64	70	Passenger Truck	802	0.00E+00	1.07E-05	1.14E-06	4.71E+01	6.87E-05	1.74E-01	2.25E-05	1.39E-03	6.49E-03	1.01E-03	2.15E-03	1.40E-03	1.43E-03	3.53E-04	2.37E-04	4.15E-08	7.18E-04	2.33E-04
53	C64	70	Single Unit Short Haul Truck	92	0.00E+00	1.62E-05	6.57E-07	1.51E+01	1.08E-05	2.73E-02	1.76E-05	6.44E-03	1.46E-03	2.68E-04	2.18E-03	4.16E-04	4.24E-04	1.53E-03	6.13E-05	2.47E-08	1.76E-03	1.21E-03
53	C64	70	Single Unit Long Haul Truck	4	0.00E+00	7.04E-07	2.84E-08	6.38E-01	4.67E-07	1.15E-03	7.66E-07	2.77E-04	6.69E-05	1.20E-05	9.52E-05	1.80E-05	1.83E-05	6.46E-05	2.60E-06	1.04E-09	7.69E-05	5.19E-05
53	C64	70	Combination Short Haul Truck	38	0.00E+00	9.69E-06	7.21E-07	1.31E+01	2.46E-08	1.40E-02	6.91E-06	1.45E-02	1.37E-03	2.28E-04	5.81E-04	2.10E-04	2.18E-04	2.08E-03	4.38E-05	0.00E+00	3.63E-04	2.73E-03
53	C64	70	Combination Long Haul Truck	34	0.00E+00	1.33E-05	7.56E-07	1.23E+01	8.33E-08	1.67E-02	1.09E-05	1.55E-02	1.42E-03	2.14E-04	1.21E-03	2.43E-04	2.53E-04	1.97E-03	4.12E-05	0.00E+00	9.55E-04	2.93E-03
52	C65	60	Passenger Car	11	0.00E+00	1.30E-07	1.42E-08	5.06E-01	9.25E-07	2.50E-03	2.94E-07	1.11E-05	1.10E-04	1.65E-05	2.87E-05	1.85E-05	1.90E-05	2.22E-06	2.56E-06	5.22E-10	9.69E-06	1.74E-06
52	C65	60	Passenger Truck	19	0.00E+00	2.75E-07	2.92E-08	1.13E+00	1.73E-06	4.29E-03	5.70E-07	3.39E-05	1.96E-04	2.90E-05	5.44E-05	3.54E-05	3.63E-05	8.91E-06	5.66E-06	9.54E-10	1.81E-05	5.74E-06
50	C66	40	Passenger Car	70	0.00E+00	9.87E-07	1.07E-07	3.63E+00	7.00E-06	1.89E-02	2.22E-06	6.34E-05	1.20E-03	1.69E-04	2.17E-04	1.40E-04	1.44E-04	2.07E-05	1.82E-05	3.38E-09	7.34E-05	9.90E-06
50	C66	40	Passenger Truck	116	0.00E+00	2.18E-06	2.29E-07	7.90E+00	1.31E-05	3.12E-02	4.37E-06	2.44E-04	2.13E-03	2.95E-04	4.13E-04	2.70E-04	2.76E-04	7.06E-05	3.93E-05	5.74E-09	1.37E-04	4.24E-05
50	C66	40	Single Unit Short Haul Truck	19	0.00E+00	6.50E-06	2.89E-07	3.62E+00	4.50E-06	5.67E-03	6.95E-06	2.62E-03	7.54E-04	1.18E-04	8.36E-04	1.74E-04	1.77E-04	3.70E-04	1.47E-05	6.25E-09	6.58E-04	4.91E-04
50	C66	40	Single Unit Long Haul Truck	1	0.00E+00	2.85E-07	1.26E-08	1.56E-01	1.97E-07	2.47E-04	3.05E-07	1.14E-04	3.38E-05	5.24E-06	3.67E-05	7.62E-06	7.76E-06	1.60E-05	6.37E-07	2.71E-10	2.90E-05	2.14E-05
50	C66	40	Combination Short Haul Truck	12	0.00E+00	5.55E-06	4.15E-07	4.77E+00	1.37E-08	7.85E-03	3.94E-06	8.09E-03	1.12E-03	1.67E-04	3.30E-04	1.21E-04	1.25E-04	7.58E-04	1.60E-05	0.00E+00	2.05E-04	1.53E-03
50	C66	40	Combination Long Haul Truck	10	0.00E+00	7.38E-06	4.17E-07	4.58E+00	4.69E-08	9.53E-03	6.08E-06	8.54E-03	1.16E-03	1.63E-04	6.76E-04	1.34E-04	1.40E-04	7.35E-04	1.53E-05	0.00E+00	5.36E-04	1.61E-03
55	C67	90	Passenger Car	482	0.00E+00	4.59E-06	4.98E-07	1.97E+01	3.25E-05	9.12E-02	1.03E-05	5.02E-04	2.05E-03	3.60E-04	1.01E-03	6.50E-04	6.67E-04	6.37E-05	1.00E-04	2.04E-08	3.41E-04	7.84E-05
55	C67	90	Passenger Truck	807	0.00E+00	9.52E-06	1.02E-06	4.49E+01	6.27E-05	1.72E-01	2.03E-05	1.30E-03	3.64E-03	6.39E-04	1.96E-03	1.27E-03	1.30E-03	3.10E-04	2.27E-04	4.01E-08	6.56E-04	2.16E-04
55	C67	90	Single Unit Short Haul Truck	99	0.00E+00	1.06E-05	3.91E-07	1.62E+01	7.31E-06	2.96E-02	1.18E-05	4.62E-03	7.75E-04	1.82E-04	1.50E-03	2.68E-04	2.73E-04	1.65E-03	6.56E-05	2.57E-08	1.23E-03	8.62E-04
55	C67	90	Single Unit Long Haul Truck	4	0.00E+00	4.60E-07	1.67E-08	6.82E-01	3.08E-07	1.22E-03	5.12E-07	1.96E-04	3.54E-05	7.99E-06	6.54E-05	1.14E-05	1.16E-05	6.89E-05	2.77E-06	1.06E-09	5.38E-05	3.65E-05
55	C67	90	Combination Short Haul Truck	49	0.00E+00	7.05E-06	5.06E-07	1.58E+01	2.18E-08	1.31E-02	5.14E-06	1.25E-02	6.77E-04	1.41E-04	4.55E-04	1.49E-04	1.55E-04	2.51E-03	5.28E-05	0.00E+00	3.00E-04	2.36E-03
55	C67	90	Combination Long Haul Truck	45	0.00E+00	1.02E-05	5.35E-07	1.44E+01	7.39E-08	1.54E-02	8.69E-06	1.33E-02	6.95E-04	1.24E-04	1.01E-03	1.78E-04	1.86E-04	2.31E-03	4.83E-05	0.00E+00	8.24E-04	2.50E-03
55	C68	90	Passenger Car	785	0.00E+00	7.47E-06	8.12E-07	3.20E+01	5.30E-05	1.49E-01	1.68E-05	8.18E-04	3.35E-03	5.86E-04	1.64E-03	1.06E-03	1.09E-03	1.04E-04	1.63E-04	3.33E-08	5.56E-04	1.28E-04
55	C68	90	Passenger Truck	1315	0.00E+00	1.55E-05	1.66E-06	7.32E+01	1.02E-04	2.80E-01	3.31E-05	2.13E-03	5.93E-03	1.04E-03	3.19E-03	2.07E-03	2.12E-03	5.05E-04	3.70E-04	6.53E-08	1.07E-03	3.52E-04
55	C68	90	Single Unit Short Haul Truck	129	0.00E+00	1.39E-05	5.13E-07	2.12E+01	9.58E-06	3.87E-02	1.55E-05	6.05E-03	1.02E-03	2.39E-04	1.97E-03	3.51E-04	3.58E-04	2.16E-03	8.60E-05	3.37E-08	1.61E-03	1.13E-03
55	C68	90	Single Unit Long Haul Truck	6	0.00E+00	6.03E-07	2.19E-08	8.94E-01	4.03E-07	1.60E-03	6.71E-07	2.56E-04	4.64E-05	1.05E-05	8.57E-05	1.50E-05	1.53E-05	9.04E-05	3.64E-06	1.39E-09	7.05E-05	4.79E-05
55	C68	90	Combination Short Haul Truck	44	0.00E+00	6.37E-06	4.58E-07	1.43E+01	1.97E-08	1.18E-02	4.65E-06	1.13E-02	6.12E-04	1.27E-04	4.12E-04	1.35E-04	1.40E-04	2.27E-03	4.78E-05	0.00E+00	2.71E-04	2.14E-03
55	C68	90	Combination Long Haul Truck	41	0.00E+00	9.24E-06	4.84E-07	1.30E+01	6.68E-08	1.39E-02	7.86E-06	1.20E-02	6.28E-04	1.12E-04	9.13E-04	1.61E-04	1.68E-04	2.09E-03	4.37E-05	0.00E+00	7.45E-04	2.26E-03
54	C69	80	Passenger Car	170	0.00E+00	1.70E-06	1.85E-07	7.16E+00	1.21E-05	3.32E-02	3.83E-06	1.77E-04	9.74E-04	1.60E-04	3.74E-04	2.41E-04	2.47E-04	2.52E-05	3.64E-05	7.54E-09	1.26E-04	2.76E-05

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
54	C69	80	Passenger Truck	284	0.00E+00	3.53E-06	3.77E-07	1.63E+01	2.30E-05	6.05E-02	7.50E-06	4.75E-04	1.74E-03	2.85E-04	7.19E-04	4.67E-04	4.78E-04	1.17E-04	8.20E-05	1.45E-08	2.41E-04	7.90E-05
54	C69	80	Single Unit Short Haul Truck	91	0.00E+00	1.25E-05	4.87E-07	1.49E+01	8.46E-06	2.71E-02	1.37E-05	5.19E-03	1.02E-03	2.09E-04	1.72E-03	3.18E-04	3.25E-04	1.52E-03	6.06E-05	2.40E-08	1.39E-03	9.71E-04
54	C69	80	Single Unit Long Haul Truck	4	0.00E+00	5.42E-07	2.09E-08	6.30E-01	3.61E-07	1.13E-03	5.96E-07	2.22E-04	4.69E-05	9.28E-06	7.50E-05	1.37E-05	1.39E-05	6.37E-05	2.57E-06	1.00E-09	6.10E-05	4.15E-05
54	C69	80	Combination Short Haul Truck	33	0.00E+00	6.79E-06	5.03E-07	1.10E+01	1.78E-08	1.04E-02	4.85E-06	1.05E-02	7.86E-04	1.42E-04	4.12E-04	1.47E-04	1.52E-04	1.76E-03	3.69E-05	0.00E+00	2.60E-04	1.98E-03
54	C69	80	Combination Long Haul Truck	30	0.00E+00	9.46E-06	5.34E-07	1.03E+01	6.02E-08	1.23E-02	7.80E-06	1.12E-02	8.13E-04	1.30E-04	8.67E-04	1.72E-04	1.79E-04	1.65E-03	3.44E-05	0.00E+00	6.88E-04	2.11E-03
55	C70	90	Passenger Car	415	0.00E+00	3.95E-06	4.29E-07	1.69E+01	2.80E-05	7.84E-02	8.89E-06	4.32E-04	1.77E-03	3.09E-04	8.68E-04	5.59E-04	5.74E-04	5.48E-05	8.62E-05	1.76E-08	2.93E-04	6.74E-05
55	C70	90	Passenger Truck	694	0.00E+00	8.19E-06	8.75E-07	3.87E+01	5.39E-05	1.48E-01	1.75E-05	1.12E-03	3.13E-03	5.50E-04	1.68E-03	1.09E-03	1.12E-03	2.67E-04	1.95E-04	3.45E-08	5.65E-04	1.86E-04
55	C70	90	Single Unit Short Haul Truck	177	0.00E+00	1.90E-05	7.03E-07	2.90E+01	1.31E-05	5.31E-02	2.12E-05	8.30E-03	1.39E-03	3.27E-04	2.69E-03	4.81E-04	4.90E-04	2.96E-03	1.18E-04	4.62E-08	2.20E-03	1.55E-03
55	C70	90	Single Unit Long Haul Truck	8	0.00E+00	8.26E-07	3.00E-08	1.22E+00	5.52E-07	2.20E-03	9.20E-07	3.51E-04	6.36E-05	1.44E-05	1.17E-04	2.05E-05	2.09E-05	1.24E-04	4.98E-06	1.90E-09	9.66E-05	6.56E-05
55	C70	90	Combination Short Haul Truck	93	0.00E+00	1.33E-05	9.58E-07	2.99E+01	4.13E-08	2.48E-02	9.73E-06	2.37E-02	1.28E-03	2.66E-04	8.62E-04	2.83E-04	2.93E-04	4.75E-03	1.00E-04	0.00E+00	5.69E-04	4.47E-03
55	C70	90	Combination Long Haul Truck	85	0.00E+00	1.94E-05	1.01E-06	2.73E+01	1.40E-07	2.91E-02	1.65E-05	2.52E-02	1.32E-03	2.35E-04	1.91E-03	3.37E-04	3.51E-04	4.38E-03	9.14E-05	0.00E+00	1.56E-03	4.74E-03
53	C71	70	Passenger Car	258	0.00E+00	2.76E-06	3.00E-07	1.13E+01	1.96E-05	5.31E-02	6.23E-06	2.66E-04	1.96E-03	3.07E-04	6.07E-04	3.91E-04	4.02E-04	4.39E-05	5.73E-05	1.19E-08	2.05E-04	4.15E-05
53	C71	70	Passenger Truck	433	0.00E+00	5.77E-06	6.13E-07	2.54E+01	3.70E-05	9.38E-02	1.21E-05	7.51E-04	3.50E-03	5.44E-04	1.16E-03	7.53E-04	7.72E-04	1.91E-04	1.28E-04	2.24E-08	3.87E-04	1.26E-04
53	C71	70	Single Unit Short Haul Truck	54	0.00E+00	9.44E-06	3.83E-07	8.79E+00	6.33E-06	1.59E-02	1.03E-05	3.76E-03	8.52E-04	1.56E-04	1.27E-03	2.42E-04	2.47E-04	8.93E-04	3.57E-05	1.44E-08	1.03E-03	7.03E-04
53	C71	70	Single Unit Long Haul Truck	2	0.00E+00	4.11E-07	1.65E-08	3.72E-01	2.72E-07	6.69E-04	4.47E-07	1.62E-04	3.90E-05	6.99E-06	5.55E-05	1.05E-05	1.07E-05	3.77E-05	1.52E-06	6.08E-10	4.48E-05	3.03E-05
53	C71	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
53	C71	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
50	C72	40	Passenger Car	144	0.00E+00	2.04E-06	2.22E-07	7.51E+00	1.45E-05	3.90E-02	4.61E-06	1.31E-04	2.48E-03	3.49E-04	4.49E-04	2.90E-04	2.97E-04	4.28E-05	3.77E-05	6.99E-09	1.52E-04	2.05E-05
50	C72	40	Passenger Truck	241	0.00E+00	4.50E-06	4.73E-07	1.64E+01	2.71E-05	6.46E-02	9.05E-06	5.06E-04	4.40E-03	6.11E-04	8.55E-04	5.58E-04	5.72E-04	1.46E-04	8.14E-05	1.19E-08	2.83E-04	8.77E-05
50	C72	40	Single Unit Short Haul Truck	20	0.00E+00	6.82E-06	3.03E-07	3.80E+00	4.72E-06	5.96E-03	7.29E-06	2.75E-03	7.92E-04	1.24E-04	8.77E-04	1.83E-04	1.86E-04	3.88E-04	1.55E-05	6.57E-09	6.91E-04	5.16E-04
50	C72	40	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.32E-08	1.64E-01	2.07E-07	2.59E-04	3.20E-07	1.20E-04	3.55E-05	5.50E-06	3.86E-05	8.00E-06	8.15E-06	1.68E-05	6.69E-07	2.85E-10	3.04E-05	2.25E-05
50	C72	40	Combination Short Haul Truck	6	0.00E+00	3.03E-06	2.26E-07	2.60E+00	7.50E-09	4.28E-03	2.15E-06	4.41E-03	6.10E-04	9.10E-05	1.80E-04	6.58E-05	6.83E-05	4.14E-04	8.70E-06	0.00E+00	1.12E-04	8.32E-04
50	C72	40	Combination Long Haul Truck	6	0.00E+00	4.02E-06	2.27E-07	2.50E+00	2.56E-08	5.20E-03	3.32E-06	4.66E-03	6.34E-04	8.90E-05	3.69E-04	7.32E-05	7.63E-05	4.01E-04	8.37E-06	0.00E+00	2.92E-04	8.78E-04
51	C73	50	Passenger Car	77	0.00E+00	9.95E-07	1.08E-07	3.63E+00	7.06E-06	1.90E-02	2.24E-06	7.24E-05	1.00E-03	1.45E-04	2.19E-04	1.41E-04	1.45E-04	1.83E-05	1.83E-05	3.64E-09	7.40E-05	1.13E-05
51	C73	50	Passenger Truck	129	0.00E+00	2.13E-06	2.25E-07	7.98E+00	1.31E-05	3.16E-02	4.34E-06	2.46E-04	1.77E-03	2.53E-04	4.12E-04	2.69E-04	2.75E-04	6.73E-05	3.99E-05	6.37E-09	1.37E-04	4.21E-05
51	C73	50	Single Unit Short Haul Truck	23	0.00E+00	6.40E-06	2.97E-07	4.26E+00	4.37E-06	6.90E-03	6.76E-06	2.66E-03	7.39E-04	1.21E-04	8.02E-04	1.73E-04	1.76E-04	4.37E-04	1.73E-05	7.29E-09	6.25E-04	4.99E-04
51	C73	50	Single Unit Long Haul Truck	1	0.00E+00	2.78E-07	1.29E-08	1.83E-01	1.91E-07	2.96E-04	2.93E-07	1.16E-04	3.34E-05	5.41E-06	3.47E-05	7.52E-06	7.66E-06	1.88E-05	7.43E-07	3.14E-10	2.71E-05	2.17E-05
51	C73	50	Combination Short Haul Truck	7	0.00E+00	3.10E-06	2.36E-07	2.96E+00	6.80E-09	4.20E-03	2.18E-06	4.43E-03	5.09E-04	7.97E-05	1.77E-04	6.81E-05	7.07E-05	4.70E-04	9.90E-06	0.00E+00	1.06E-04	8.35E-04
51	C73	50	Combination Long Haul Truck	7	0.00E+00	4.05E-06	2.41E-07	2.82E+00	2.31E-08	5.08E-03	3.27E-06	4.70E-03	5.29E-04	7.61E-05	3.50E-04	7.61E-05	7.93E-05	4.53E-04	9.45E-06	0.00E+00	2.70E-04	8.86E-04
52	C74	60	Passenger Car	840	0.00E+00	9.77E-06	1.06E-06	3.79E+01	6.93E-05	1.87E-01	2.20E-05	8.34E-04	8.25E-03	1.24E-03	2.15E-03	1.38E-03	1.42E-03	1.67E-04	1.92E-04	3.91E-08	7.26E-04	1.30E-04
52	C74	60	Passenger Truck	1408	0.00E+00	2.06E-05	2.18E-06	8.45E+01	1.30E-04	3.21E-01	4.27E-05	2.54E-03	1.47E-02	2.18E-03	4.07E-03	2.65E-03	2.72E-03	6.68E-04	4.24E-04	7.15E-08	1.36E-03	4.30E-04
52	C74	60	Single Unit Short Haul Truck	176	0.00E+00	3.94E-05	1.63E-06	2.93E+01	2.61E-05	5.16E-02	4.26E-05	1.51E-02	4.05E-03	6.81E-04	5.25E-03	1.01E-03	1.03E-03	2.97E-03	1.19E-04	4.92E-08	4.22E-03	2.83E-03
52	C74	60	Single Unit Long Haul Truck	8	0.00E+00	1.72E-06	7.06E-08	1.25E+00	1.13E-06	2.19E-03	1.86E-06	6.54E-04	1.82E-04	3.02E-05	2.30E-04	4.39E-05	4.48E-05	1.26E-04	5.10E-06	2.09E-09	1.85E-04	1.22E-04
52	C74	60	Combination Short Haul Truck	78	0.00E+00	2.27E-05	1.67E-06	2.74E+01	6.23E-08	3.40E-02	1.63E-05	3.48E-02	3.97E-03	6.21E-04	1.40E-03	4.89E-04	5.07E-04	4.36E-03	9.18E-05	0.00E+00	8.94E-04	6.55E-03
52	C74	60	Combination Long Haul Truck	71	0.00E+00	3.13E-05	1.71E-06	2.59E+01	2.11E-07	4.08E-02	2.61E-05	3.70E-02	4.16E-03	6.02E-04	2.96E-03	5.58E-04	5.81E-04	4.16E-03	8.69E-05	0.00E+00	2.38E-03	6.98E-03
53	C81	70	Passenger Car	381	0.00E+00	4.08E-06	4.43E-07	1.67E+01	2.89E-05	7.84E-02	9.19E-06	3.92E-04	2.89E-03	4.53E-04	8.96E-04	5.78E-04	5.93E-04	6.48E-05	8.46E-05	1.76E-08	3.03E-04	6.12E-05
53	C81	70	Passenger Truck	639	0.00E+00	8.51E-06	9.05E-07	3.75E+01	5.47E-05	1.38E-01	1.79E-05	1.11E-03	5.17E-03	8.03E-04	1.71E-03	1.11E-03	1.14E-03	2.81E-04	1.89E-04	3.31E-08	5.72E-04	1.86E-04
53	C81	70	Single Unit Short Haul Truck	84	0.00E+00	1.48E-05	6.03E-07	1.38E+01	9.94E-06	2.50E-02	1.61E-05	5.91E-03	1.34E-03	2.46E-04	2.00E-03	3.81E-04	3.88E-04	1.40E-03	5.62E-05	2.27E-08	1.61E-03	1.10E-03
53	C81	70	Single Unit Long Haul Truck	4	0.00E+00	6.45E-07	2.60E-08	5.85E-01	4.28E-07	1.05E-03	7.02E-07	2.54E-04	6.13E-05	1.10E-05	8.72E-05	1.65E-05	1.68E-05	5.92E-05	2.38E-06	9.56E-10	7.05E-05	4.76E-05
53	C81	70	Combination Short Haul Truck	47	0.00E+00	1.21E-05	9.01E-07	1.64E+01	3.08E-08	1.75E-02	8.63E-06	1.81E-02	1.71E-03	2.85E-04	7.27E-04	2.63E-04	2.73E-04	2.60E-03	5.47E-05	0.00E+00	4.54E-04	3.42E-03
53	C81	70	Combination Long Haul Truck	43	0.00E+00	1.66E-05	9.45E-07	1.54E+01	1.04E-07	2.09E-02	1.37E-05	1.94E-02	1.78E-03	2.68E-04	1.51E-03	3.04E-04	3.16E-04	2.47E-03	5.15E-05	0.00E+00	1.19E-03	3.66E-03
52	C82	60	Passenger Car	453	0.00E+00	5.27E-06	5.72E-07	2.05E+01	3.74E-05	1.01E-01	1.19E-05	4.49E-04	4.45E-03	6.67E-04	1.16E-03	7.47E-04	7.66E-04	8.98E-05	1.04E-04	2.11E-08	3.92E-04	7.01E-05
52	C82	60	Passenger Truck	759	0.00E+00	1.11E-05	1.18E-06	4.56E+01	7.01E-05	1.73E-01	2.30E-05	1.37E-03	7.90E-03	1.17E-03	2.20E-03	1.43E-03	1.46E-03	3.60E-04	2.29E-04	3.85E-08	7.32E-04	2.32E-04
52	C82	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	1.00E-02	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.88E-03
52	C82	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.34E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.12E-05
52	C82	60	Combination Short Haul Truck	60	0.00E+00	1.74E-05	1.28E-06	2.10E+01	4.77E-08	2.60E-02	1.25E-05	2.66E-02	3.04E-03	4.75E-04	1.07E-03	3.74E-04	3.88E-04	3.34E-03	7.02E-05	0.00E+00	6.84E-04	5.01E-03
52	C82	60	Combination Long Haul Truck	54	0.00E+00	2.39E-05	1.31E-06	1.98E+01	1.61E-07	3.12E-02	2.00E-05	2.83E-02	3.18E-03	4.60E-04	2.27E-03	4.27E-04	4.45E-04	3.18E-03	6.65E-05	0.00E+00	1.82E-03	5.34E-03
16	C83	100	Passenger Car	521	0.00E+00	4.81E-06	5.22E-07	2.11E+01	3.41E-05	9.85E-02	1.08E-05	5.62E-04	1.66E-03	3.19E-04	1.06E-03	6.82E-04	7.00E-04	6.19E-05	1.08E-04	2.26E-08	3.58E-04	8.76E-05
16	C83	100	Passenger Truck	872	0.00E+00	9.94E-06	1.06E-06	4.86E+01	6.63E-05	1.91E-01	2.14E-05	1.40E-03	2.91E-03	5.64E-04	2.07E-03	1.34E-03	1.37E-03	3.21E-04	2.46E-04	4.48E-08	6.95E-04	2.30E-04
16	C83	100	Single Unit Short Haul Truck	388	0.00E+00	3.69E-05	1.36E-06	6.33E+01	2.82E-05	1.31E-01	4.18E-05	1.63E-02	2.51E-03	6.49E-04	5.29E-03	9.76E-04	9.93E-04	6.49E-03	2.56E-04	1.05E-07	4.29E-03	3.04E-03
16	C83	100	Single Unit Long Haul Truck	17	0.00E+00	1.60E-06	5.76E-08	2.66E+00	1.17E-06	5.35E-03	1.81E-06	6.84E-04	1.14E-04	2.82E-05	2.31E-04	4.12E-05	4.19E-05	2.71E-04	1.08E-05	4.28E-09	1.89E-04	1.28E-04
16	C83	100	Combination Short Haul Truck	215	0.00E+00	3.08E-05	2.28E-06	7.18E+01	8.18E-08	5.55E-02	2.21E-05	5.58E-02	2.09E-03	5.29E-04	1.88E-03	6.65E-04	6.90E-04	1.14E-02	2.40E-04	0.00E+00	1.19E-03	1.05E-02
16	C83	100	Combination Long Haul Truck	197	0.00E+00	4.36E-05	2.46E-06	6.50E+01	2.78E-07	6.46E-02	3.59E-05	5.98E-02	2.09E-03	4.26E-04	4.00E-03	7.92E-04	8.25E-04	1.04E-02	2.18E-04	0.00E+00	3.17E-03	1.13E-02
55	C84	90	Passenger Car	376	0.00E+00	3.58E-06	3.89E-07	1.53E+01	2.54E-05	7.11E-02	8.07E-06	3.92E-04	1.60E-03	2.81E-04	7.87E-04	5.07E-04	5.21E-04	4.97E-05	7.82E-05	1.59E-08	2.66E-04	6.12E-05
55	C84	90	Passenger Truck	630	0.00E+00	7.43E-06	7.94E-07	3.51E+01	4.89E-05	1.34E-01	1.59E-05	1.02E-03	2.84E-03	4.99E-04	1.53E-03	9.90E-04	1.01E-03	2.42E-04	1.77E-04	3.13E-08	5.12E-04	1.68E-04
55	C84	90	Single Unit Short Haul Truck	139	0.00E+00	1.49E-05	5.51E-07	2.28E+01	1.03E-05	4.16E-02	1.66E-05	6.50E-03	1.09E-03	2.57E-04	2.11E-03	3.77E-04	3.84E-04	2.32E-03	9.24E-05	3.62E-08	1.73E-03	1.21E-03
55	C84	90	Single Unit Long Haul Truck	6	0.00E+00	6.47E-07	2.35E-08	9.60E-01	4.33E-07	1.72E-03	7.21E-07	2.75E-04	4.99E-05	1.12E-05	9.21E-05	1.61E-05	1.64E-05	9.70E-05	3.90E-06	1.49E-09	7.57E-05	5.14E-05
55	C84	90	Combination Short Haul Truck	75	0.00E+00	1.08E-05	7.75E-07	2.42E+01	3.34E-08	2.01E-02	7.87E-06	1.92E-02	1.04E-03	2.15E-04	6.97E-04	2.29E-04	2.37E-04	3.85E-03	8.09E-05	0.00E+00	4.60E-04	3.62E-03
55	C84	90	Combination Long Haul Truck	69	0.00E+00	1.57E-05	8.20E-07	2.21E+01	1.13E-07	2.36E-02	1.33E-05	2.04E-02	1.06E-03	1.90E-04	1.55E-03	2.73E-04	2.84E-04	3.54E-03	7.40E-05	0.00E+00	1.26E-03	3.84E-03
55	C85	90	Passenger Car	248	0.00E+00	2.36E-06	2.57E-07	1.01E+01	1.68E-05	4.70E-02	5.33E-06	2.59E-04	1.06E-03	1.85E-04	5.19E-04	3.35E-04	3.44E-04	3.28E-05	5.16E-05	1.05E-08	1.76E-04	4.04E-05
55	C85	90	Passenger Truck	416	0.00E+00	4.90E-06	5.24E-07	2.32E+01	3.23E-05	8.84E-02	1.05E-05	6.72E-04	1.88E-03	3.29E-04	1.01E-03	6.53E-04	6.70E-04	1.60E-04	1.17E-04	2.06E-08	3.38E-04	1.11E-04
55	C85	90	Single Unit Short Haul Truck	129	0.00E+00	1.39E-05	5.13E-07	2.12E+01	9.58E-06	3.87E-02	1.55E-05	6.05E-03	1.02E-03	2.39E-04	1.97E-03	3.51E-04	3.58E-04	2.16E-03	8.60E-05	3.37E-08	1.61E-03	1.13E-03
55	C85	90	Single Unit Long Haul Truck	6	0.00E+00	6.03E-07	2.19E-08	8.94E-01	4.03E-07	1.60E-03	6.71E-07	2.56E-04	4.64E-05	1.05E-05	8.57E-05	1.50E-05	1.53E-05	9.04E-05	3.64E-06	1.39E-09	7.05E-05	4.79E-05
55	C85	90	Combination Short Haul Truck	76	0.00E+00	1.09E-05	7.86E-07	2.45E+01	3.39E-08	2.04E-02	7.98E-06	1.95E-02	1.05E-03	2.18E-04	7.07E-04	2.32E-04	2.41E-04	3.90E-03	8.20E-05	0.00E+00	4.66E-04	3.67E-03
55	C85	90	Combination Long Haul Truck	70	0.00E+00	1.59E-05	8.32E-07	2.24E+01	1.15E-07	2.39E-02	1.35E-05	2.07E-02	1.08E-03	1.93E-04	1.57E-03	2.76E-04	2.88E-04	3.59E-03	7.50E-05	0.00E+00	1.28E-03	3.89E-03
55	C86	90	Passenger Car	915	0.00E+00	8.71E-06	9.46E-07	3.73E+01	6.18E-05	1.73E-01	1.96E-05	9.54E-04	3.90E-03	6.83E-04	1.91E-03	1.23E-03	1.27E-03	1.21E-04	1.90E-04	3.88E-08	6.48E-04	1.49E-04
55	C86	90	Passenger Truck	1533	0.00E+00	1.81E-05	1.93E-06	8.54E+01	1.19E-04	3.26E-01	3.86E-05	2.48E-03	6.91E-03	1.21E-03	3.72E-03	2.41E-03	2.47E-03	5.88E-04	4.31E-04	7.61E-08	1.25E-03	4.10E-04
55	C86	90	Single Unit Short Haul Truck	224	0.00E+00	2.41E-05	8.89E-07	3.67E+01	1.66E-05	6.72E-02	2.68E-05	1.05E-02	1.76E-03	4.14E-04	3.41E-03	6.08E-04	6.20E-04	3.74E-03	1.49E-04	5.84E-08	2.79E-03	1.96E-03
55	C86	90	Single Unit Long Haul Truck	10	0.00E+00	1.04E-06	3.79E-08	1.55E+00	6.99E-07	2.78E-03	1.16E-06	4.44E-04	8.05E-05	1.82E-05	1.49E-04	2.59E-05	2.64E-05	1.57E-04	6.30E-06	2.41E-09	1.22E-04	8.30E-05
55	C86	90	Combination Short Haul Truck	102	0.00E+00	1.46E-05	1.05E-06	3.28E+01	4.53E-08	2.72E-02	1.07E-05	2.60E-02	1.40E-03	2.92E-04	9.44E-04	3.10E-04	3.21E-04	5.21E-03	1.10E-04	0.00E+00	6.23E-04	4.90E-03
55	C86	90	Combination Long Haul Truck	93	0.00E+00	2.12E-05	1.11E-06	2.99E+01	1.53E-07	3.19E-02	1.80E-05	2.76E-02	1.44E-03	2.58E-04	2.09E-03	3.69E-04	3.85E-04	4.80E-03	1.00E-04	0.00E+00	1.71E-03	5.20E-03
10	E39	70	Passenger Car	247	0.00E+00	2.72E-06	2.96E-07	1.07E+01	1.93E-05	5.29E-02	6.14E-06	2.50E-04	1.90E-03	2.97E-04	5.99E-04	3.86E-04	3.96E-04	4.20E-05	5.42E-05	1.13E-08	2.03E-04	3.90E-05
10	E39	70	Passenger Truck	414	0.00E+00	5.74E-06	6.10E-07	2.40E+01	3.67E-05	9.35E-02	1.20E-05	7.27E-04	3.45E-03	5.33E-04	1.15E-03	7.47E-04	7.66E-04	1.83E-04	1.21E-04	2.16E-08	3.84E-04	1.22E-04
10	E39	70	Single Unit Short Haul Truck	21	0.00E+00	3.71E-06	1.51E-07	3.45E+00	2.49E-06	6.26E-03	4.03E-06	1.48E-03	3.35E-04	6.15E-05	5.00E-04	9.52E-05	9.71E-05	3.51E-04	1.40E-05	5.67E-09	4.03E-04	2.76E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	1.61E-07	6.50E-09	1.46E-01	1.07E-07	2.63E-04	1.75E-07	6.35E-05	1.53E-05	2.75E-06	2.18E-05	4.11E-06	4.20E-06	1.48E-05	5.96E-07	2.39E-10	1.76E-05	1.19E-05
10	E39	70	Combination Short Haul Truck	10	0.00E+00	2.69E-06	2.00E-07	3.64E+00	6.84E-09	3.89E-03	1.92E-06	4.03E-03	3.79E-04	6.33E-05	1.62E-04	5.83E-05	6.06E-05	5.78E-04	1.22E-05	0.00E+00	1.01E-04	7.59E-04
10	E39	70	Combination Long Haul Truck	10	0.00E+00	3.69E-06	2.10E-07	3.42E+00	2.31E-08	4.64E-03	3.04E-06	4.32E-03	3.95E-04	5.95E-05	3.36E-04	6.75E-05	7.03E-05	5.48E-04	1.14E-05	0.00E+00	2.65E-04	8.13E-04
10	E40	70	Passenger Car	402	0.00E+00	4.43E-06	4.81E-07	1.73E+01	3.14E-05	8.59E-02	9.98E-06	4.06E-04	3.09E-03	4.82E-04	9.73E-04	6.28E-04	6.44E-04	6.82E-05	8.80E-05	1.83E-08	3.29E-04	6.34E-05
10	E40	70	Passenger Truck	672	0.00E+00	9.32E-06	9.91E-07	3.90E+01	5.97E-05	1.52E-01	1.95E-05	1.18E-03	5.60E-03	8.66E-04	1.87E-03	1.21E-03	1.24E-03	2.98E-04	1.96E-04	3.52E-08	6.24E-04	1.98E-04
10	E40	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.03E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.53E-05
10	E40	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	E40	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
10	E41	70

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E45	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	E46	80	Passenger Car	255	0.00E+00	2.62E-06	2.84E-07	1.07E+01	1.86E-05	5.21E-02	5.90E-06	2.64E-04	1.39E-03	2.33E-04	5.76E-04	3.71E-04	3.81E-04	3.79E-05	5.44E-05	1.16E-08	1.95E-04	4.12E-05
11	E46	80	Passenger Truck	427	0.00E+00	5.39E-06	5.75E-07	2.42E+01	3.51E-05	9.21E-02	1.14E-05	7.13E-04	2.47E-03	4.12E-04	1.10E-03	7.11E-04	7.29E-04	1.75E-04	1.22E-04	2.21E-08	3.67E-04	1.19E-04
11	E46	80	Single Unit Short Haul Truck	53	0.00E+00	7.23E-06	2.82E-07	8.64E+00	4.90E-06	1.57E-02	7.95E-06	3.01E-03	5.92E-04	1.21E-04	9.95E-04	1.84E-04	1.88E-04	8.79E-04	3.51E-05	1.39E-08	8.08E-04	5.62E-04
11	E46	80	Single Unit Long Haul Truck	2	0.00E+00	3.14E-07	1.21E-08	3.65E-01	2.09E-07	6.53E-04	3.45E-07	1.28E-04	2.71E-05	5.37E-06	4.34E-05	7.91E-06	8.07E-06	3.69E-05	1.49E-06	5.80E-10	3.53E-05	2.40E-05
11	E46	80	Combination Short Haul Truck	23	0.00E+00	4.74E-06	3.51E-07	7.72E+00	1.24E-08	7.23E-03	3.39E-06	7.33E-03	5.49E-04	9.95E-05	2.88E-04	1.02E-04	1.06E-04	1.23E-03	2.58E-05	0.00E+00	1.81E-04	1.38E-03
11	E46	80	Combination Long Haul Truck	21	0.00E+00	6.61E-06	3.73E-07	7.16E+00	4.20E-08	8.56E-03	5.45E-06	7.84E-03	5.68E-04	9.08E-05	6.06E-04	1.20E-04	1.25E-04	1.15E-03	2.40E-05	0.00E+00	4.80E-04	1.48E-03
11	E47	80	Passenger Car	52	0.00E+00	5.34E-07	5.80E-08	2.18E+00	3.79E-06	1.06E-02	1.20E-06	5.39E-05	2.83E-04	4.74E-05	1.17E-04	7.56E-05	7.76E-05	7.73E-06	1.11E-05	2.37E-09	3.97E-05	8.41E-06
11	E47	80	Passenger Truck	87	0.00E+00	1.10E-06	1.17E-07	4.92E+00	7.15E-06	1.88E-02	2.33E-06	1.45E-04	5.04E-04	8.40E-05	2.23E-04	1.45E-04	1.49E-04	3.57E-05	2.48E-05	4.51E-09	7.48E-05	2.42E-05
11	E47	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	E47	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.83E-04
11	E47	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	E48	80	Passenger Car	448	0.00E+00	4.60E-06	5.00E-07	1.88E+01	3.27E-05	9.15E-02	1.04E-05	4.65E-04	2.44E-03	4.09E-04	1.01E-03	6.53E-04	6.70E-04	6.66E-05	9.56E-05	2.04E-08	3.42E-04	7.25E-05
11	E48	80	Passenger Truck	751	0.00E+00	9.48E-06	1.01E-06	4.25E+01	6.17E-05	1.62E-01	2.01E-05	1.25E-03	4.35E-03	7.24E-04	1.93E-03	1.25E-03	1.28E-03	3.08E-04	2.14E-04	3.89E-08	6.46E-04	2.09E-04
11	E48	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	E48	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E48	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.83E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E48	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E49	80	Passenger Car	36	0.00E+00	3.72E-07	4.05E-08	1.52E+00	2.64E-06	7.41E-03	8.39E-07	3.76E-05	1.98E-04	3.31E-05	8.19E-05	5.28E-05	5.42E-05	5.39E-06	7.74E-06	1.65E-09	2.77E-05	5.87E-06
11	E49	80	Passenger Truck	61	0.00E+00	7.67E-07	8.18E-08	3.44E+00	4.99E-06	1.31E-02	1.63E-06	1.01E-04	3.52E-04	5.86E-05	1.56E-04	1.01E-04	1.04E-04	2.49E-05	1.73E-05	3.15E-09	5.22E-05	1.69E-05
11	E49	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E49	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	5.00E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.42E-05
11	E49	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.35E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.01E-04
11	E50	80	Passenger Car	364	0.00E+00	3.73E-06	4.06E-07	1.53E+01	2.65E-05	7.43E-02	8.42E-06	3.77E-04	1.98E-03	3.32E-04	8.21E-04	5.30E-04	5.43E-04	5.41E-05	7.76E-05	1.66E-08	2.78E-04	5.88E-05
11	E50	80	Passenger Truck	609	0.00E+00	7.69E-06	8.20E-07	3.45E+01	5.00E-05	1.31E-01	1.63E-05	1.02E-03	3.53E-03	5.88E-04	1.56E-03	1.01E-03	1.04E-03	2.50E-04	1.74E-04	3.16E-08	5.24E-04	1.69E-04
11	E50	80	Single Unit Short Haul Truck	52	0.00E+00	7.10E-06	2.77E-07	8.48E+00	4.81E-06	1.54E-02	7.80E-06	2.95E-03	5.81E-04	1.19E-04	9.77E-04	1.81E-04	1.84E-04	8.63E-04	3.44E-05	1.37E-08	7.93E-04	5.52E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	3.08E-07	1.19E-08	3.58E-01	2.05E-07	6.41E-04	3.39E-07	1.26E-04	2.66E-05	5.27E-06	4.26E-05	7.77E-06	7.92E-06	3.62E-05	1.46E-06	5.69E-10	3.47E-05	2.36E-05
11	E50	80	Combination Short Haul Truck	42	0.00E+00	8.62E-06	6.38E-07	1.40E+01	2.26E-08	1.31E-02	6.16E-06	1.33E-02	9.98E-04	1.81E-04	5.23E-04	1.86E-04	1.93E-04	2.23E-03	4.69E-05	0.00E+00	3.30E-04	2.51E-03
11	E50	80	Combination Long Haul Truck	38	0.00E+00	1.20E-05	6.78E-07	1.30E+01	7.64E-08	1.56E-02	9.91E-06	1.43E-02	1.03E-03	1.65E-04	1.10E-03	2.19E-04	2.28E-04	2.09E-03	4.36E-05	0.00E+00	8.73E-04	2.68E-03
11	E51	80	Passenger Car	5	0.00E+00	4.99E-08	5.42E-09	2.04E-01	3.54E-07	9.92E-04	1.13E-07	5.04E-06	2.65E-05	4.44E-06	1.10E-05	7.07E-06	7.26E-06	7.23E-07	1.04E-06	2.22E-10	3.71E-06	7.86E-07
11	E51	80	Passenger Truck	8	0.00E+00	1.03E-07	1.10E-08	4.60E-01	6.68E-07	1.75E-03	2.18E-07	1.36E-05	4.72E-05	7.85E-06	2.09E-05	1.36E-05	1.39E-05	3.34E-06	2.32E-06	4.22E-10	7.00E-06	2.26E-06
11	E52	80	Passenger Car	297	0.00E+00	3.05E-06	3.31E-07	1.25E+01	2.16E-05	6.06E-02	6.87E-06	3.08E-04	1.62E-03	2.71E-04	6.70E-04	4.32E-04	4.43E-04	4.41E-05	6.33E-05	1.35E-08	2.27E-04	4.80E-05
11	E52	80	Passenger Truck	497	0.00E+00	6.28E-06	6.69E-07	2.81E+01	4.08E-05	1.07E-01	1.33E-05	8.30E-04	2.88E-03	4.80E-04	1.28E-03	8.28E-04	8.49E-04	2.04E-04	1.42E-04	2.58E-08	4.28E-04	1.38E-04
11	E52	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.90E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.10E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.23E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.27E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	E53	80	Passenger Car	184	0.00E+00	1.88E-06	2.05E-07	7.70E+00	1.34E-05	3.75E-02	4.25E-06	1.90E-04	1.00E-03	1.68E-04	4.14E-04	2.67E-04	2.74E-04	2.73E-05	3.92E-05	8.37E-09	1.40E-04	2.97E-05
11	E53	80	Passenger Truck	307	0.00E+00	3.88E-06	4.14E-07	1.74E+01	2.52E-05	6.63E-02	8.23E-06	5.13E-04	1.78E-03	2.97E-04	7.89E-04	5.12E-04	5.25E-04	1.26E-04	8.76E-05	1.59E-08	2.64E-04	8.55E-05
11	E53	80	Single Unit Short Haul Truck	39	0.00E+00	5.39E-06	2.10E-07	6.44E+00	3.65E-06	1.17E-02	5.92E-06	2.24E-03	4.41E-04	9.02E-05	7.42E-04	1.37E-04	1.40E-04	6.55E-04	2.62E-05	1.04E-08	6.02E-04	4.19E-04
11	E53	80	Single Unit Long Haul Truck	2	0.00E+00	2.34E-07	9.03E-09	2.72E-01	1.56E-07	4.87E-04	2.57E-07	9.58E-05	2.02E-05	4.00E-06	3.24E-05	5.90E-06	6.02E-06	2.75E-05	1.11E-06	4.32E-10	2.63E-05	1.79E-05
11	E53	80	Combination Short Haul Truck	28	0.00E+00	5.82E-06	4.31E-07	9.47E+00	1.52E-08	8.87E-03	4.16E-06	9.00E-03	6.74E-04	1.22E-04	3.53E-04	1.26E-04	1.31E-04	1.51E-03	3.17E-05	0.00E+00	2.22E-04	1.70E-03
11	E53	80	Combination Long Haul Truck	26	0.00E+00	8.11E-06	4.58E-07	8.79E+00	5.16E-08	1.05E-02	6.69E-06	9.62E-03	6.97E-04	1.11E-04	7.43E-04	1.48E-04	1.54E-04	1.41E-03	2.95E-05	0.00E+00	5.89E-04	1.81E-03
11	E54	80	Passenger Car	445	0.00E+00	4.57E-06	4.96E-07	1.87E+01	3.24E-05	9.08E-02	1.03E-05	4.61E-04	2.43E-03	4.06E-04	1.00E-03	6.48E-04	6.65E-04	6.61E-05	9.49E-05	2.03E-08	3.40E-04	7.20E-05
11	E54	80	Passenger Truck	745	0.00E+00	9.41E-06	1.00E-06	4.22E+01	6.12E-05	1.61E-01	1.99E-05	1.24E-03	4.32E-03	7.19E-04	1.91E-03	1.24E-03	1.27E-03	3.06E-04	2.12E-04	3.86E-08	6.41E-04	2.07E-04
11	E54	80	Single Unit Short Haul Truck	49	0.00E+00	6.70E-06	2.62E-07	8.01E+00	4.54E-06	1.45E-02	7.37E-06	2.79E-03	5.49E-04	1.12E-04	9.23E-04	1.71E-04	1.74E-04	8.15E-04	3.25E-05	1.29E-08	7.49E-04	5.21E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.91E-07	1.12E-08	3.38E-01	1.94E-07	6.06E-04	3.20E-07	1.19E-04	2.52E-05	4.98E-06	4.02E-05	7.34E-06	7.48E-06	3.42E-05	1.38E-06	5.38E-10	3.28E-05	2.23E-05
11	E54	80	Combination Short Haul Truck	35	0.00E+00	7.22E-06	5.35E-07	1.18E+01	1.89E-08	1.10E-02	5.16E-06	1.12E-02	8.36E-04	1.51E-04	4.38E-04	1.56E-04	1.62E-04	1.87E-03	3.93E-05	0.00E+00	2.76E-04	2.10E-03
11	E54	80	Combination Long Haul Truck	32	0.00E+00	1.01E-05	5.68E-07	1.09E+01	6.40E-08	1.30E-02	8.30E-06	1.19E-02	8.64E-04	1.38E-04	9.22E-04	1.83E-04	1.91E-04	1.75E-03	3.65E-05	0.00E+00	7.31E-04	2.25E-03
11	E55	80	Passenger Car	63	0.00E+00	6.49E-07	7.05E-08	2.65E+00	4.60E-06	1.29E-02	1.46E-06	6.55E-05	3.44E-04	5.77E-05	1.43E-04	9.20E-05	9.44E-05	9.39E-06	1.35E-05	2.88E-09	4.83E-05	1.02E-05
11	E55	80	Passenger Truck	106	0.00E+00	1.34E-06	1.42E-07	5.99E+00	8.69E-06	2.28E-02	2.83E-06	1.77E-04	6.13E-04	1.02E-04	2.72E-04	1.76E-04	1.81E-04	4.35E-05	3.02E-05	5.48E-09	9.10E-05	2.94E-05
11	E55	80	Single Unit Short Haul Truck	52	0.00E+00	7.10E-06	2.77E-07	8.48E+00	4.81E-06	1.54E-02	7.80E-06	2.95E-03	5.81E-04	1.19E-04	9.77E-04	1.81E-04	1.84E-04	8.63E-04	3.44E-05	1.37E-08	7.93E-04	5.52E-04
11	E55	80	Single Unit Long Haul Truck	2	0.00E+00	3.08E-07	1.19E-08	3.58E-01	2.05E-07	6.41E-04	3.39E-07	1.26E-04	2.66E-05	5.27E-06	4.26E-05	7.77E-06	7.92E-06	3.62E-05	1.46E-06	5.69E-10	3.47E-05	2.36E-05
11	E55	80	Combination Short Haul Truck	31	0.00E+00	6.36E-06	4.71E-07	1.03E+01	1.67E-08	9.69E-03	4.55E-06	9.83E-03	7.36E-04	1.33E-04	3.86E-04	1.37E-04	1.43E-04	1.64E-03	3.46E-05	0.00E+00	2.43E-04	1.85E-03
11	E55	80	Combination Long Haul Truck	28	0.00E+00	8.86E-06	5.00E-07	9.60E+00	5.64E-08	1.15E-02	7.31E-06	1.05E-02	7.61E-04	1.22E-04	8.12E-04	1.61E-04	1.68E-04	1.54E-03	3.22E-05	0.00E+00	6.44E-04	1.98E-03
11	E56	80	Passenger Car	385	0.00E+00	3.95E-06	4.29E-07	1.61E+01	2.80E-05	7.86E-02	8.91E-06	3.99E-04	2.10E-03	3.51E-04	8.69E-04	5.60E-04	5.75E-04	5.72E-05	8.21E-05	1.75E-08	2.94E-04	6.22E-05
11	E56	80	Passenger Truck	644	0.00E+00	8.14E-06	8.67E-07	3.64E+01	5.29E-05	1.39E-01	1.72E-05	1.08E-03	3.73E-03	6.22E-04	1.65E-03	1.07E-03	1.10E-03	2.65E-04	1.84E-04	3.34E-08	5.54E-04	1.79E-04
11	E56	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.25E-04
11	E56	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.14E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.60E-06
11	E56	80	Combination Short Haul Truck	17	0.00E+00	3.56E-06	2.63E-07	5.79E+00	9.32E-09	5.42E-03	2.54E-06	5.50E-03	4.12E-04	7.46E-05	2.16E-04	7.68E-05	7.98E-05	9.20E-04	1.94E-05	0.00E+00	1.36E-04	1.04E-03
11	E56	80	Combination Long Haul Truck	16	0.00E+00	4.96E-06	2.80E-07	5.37E+00	3.15E-08	6.42E-03	4.09E-06	5.88E-03	4.26E-04	6.81E-05	4.54E-04	9.02E-05	9.39E-05	8.62E-04	1.80E-05	0.00E+00	3.60E-04	1.11E-03
10	E57	70	Passenger Car	231	0.00E+00	2.55E-06	2.77E-07	1.00E+01	1.81E-05	4.95E-02	5.75E-06	2.34E-04	1.78E-03	2.78E-04	5.61E-04	3.62E-04	3.71E-04	3.93E-05	5.07E-05	1.05E-08	1.90E-04	3.65E-05
10	E57	70	Passenger Truck	388	0.00E+00	5.37E-06	5.71E-07	2.25E+01	3.44E-05	8.75E-02	1.13E-05	6.81E-04	3.23E-03	4.99E-04	1.08E-03	7.00E-04	7.17E-04	1.72E-04	1.13E-04	2.03E-08	3.60E-04	1.14E-04
10	E57	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E57	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.90E-04
10	E57	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
10	E58	70	Passenger Car	176	0.00E+00	1.94E-06	2.11E-07	7.61E+00	1.38E-05	3.77E-02	4.38E-06	1.78E-04	1.36E-03	2.11E-04	4.27E-04	2.75E-04	2.83E-04	2.99E-05	3.86E-05	8.02E-09	1.44E-04	2.78E-05
10	E58	70	Passenger Truck	295	0.00E+00	4.09E-06	4.35E-07	1.71E+01	2.62E-05	6.66E-02	8.57E-06	5.18E-04	2.46E-03	3.80E-04	8.20E-04	5.32E-04	5.46E-04	1.31E-04	8.61E-05	1.54E-08	2.74E-04	8.70E-05
10	E58	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.52E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.09E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	E58	70	Combination Short Haul Truck	22	0.00E+00	5.65E-06	4.21E-07	7.64E+00	1.44E-08	8.17E-03	4.03E-06	8.46E-03	7.97E-04	1.33E-04	3.39E-04	1.23E-04	1.27E-04	1.21E-03	2.55E-05	0.00E+00	2.12E-04	1.59E-03
10	E58	70	Combination Long Haul Truck	20	0.00E+00	7.75E-06	4.41E-07	7.17E+00	4.86E-08	9.74E-03	6.37E-06	9.06E-03	8.30E-04	1.25E-04	7.05E-04	1.42E-04	1.48E-04	1.15E-03	2.40E-05	0.00E+00	5.57E-04	1.71E-03
11	E59	80	Passenger Car	454	0.00E+00	4.66E-06	5.06E-07	1.90E+01	3.31E-05	9.27E-02	1.05E-05	4.71E-04	2.47E-03	4.14E-04	1.02E-03	6.61E-04	6.78E-04	6.75E-05	9.68E-05	2.07E-08	3.47E-04	7.34E-05
11	E59	80	Passenger Truck	760	0.00E+00	9.60E-06	1.02E-06	4.30E+01	6.24E-05	1.64E-01	2.03E-05	1.27E-03	4.41E-03	7.33E-04	1.95E-03	1.27E-03	1.30E-03	3.12E-04	2.17E-04	3.94E-08	6.54E-04	2.11E-04
11	E59	80	Single Unit Short Haul Truck	235	0.00E+00	3.22E-05	1.26E-06	3.85E+01	2.18E-05	6.99E-02	3.54E-05	1.34E-02	2.64E-03	5.39E-04	4.43E-03	8.21E-04	8.37E-04	3.91E-03	1.56E-04	6.20E-08	3.60E-03	2.50E-03
11	E59	80	Single Unit Long Haul Truck	10	0.00E+00	1.40E-06	5.40E-08	1.63E+00	9.30E-07	2.91E-03	1.54E-06	5.72E-04	1.21E-04	2.39E-05	1.93E-04	3.52E-05	3.59E-05	1.64E-04	6.62E-06	2.58E-09	1.57E-04	1.07E-04
11	E59	80	Combination Short Haul Truck	130	0.00E+00	2.68E-05	1.99E-06	4.37E+01	7.03E-08	4.09E-02	1.92E-05	4.15E-02	3.11E-03	5.63E-04	1.63E-03	5.80E-04	6.02E-04	6.94E-03	1.46E-04	0.00E+00	1.03E-03	7.82E-03
11	E59	80	Combination Long Haul Truck	119	0.00E+00	3.74E-05	2.11E-06	4.05E+01	2.38E-07	4.84E-02	3.08E-05	4.44E-02	3.21E-03	5.14E-04	3.43E-03	6.80E-04	7.09E-04	6.50E-03	1.36E-04	0.00E+00	2.72E-03	8.36E-03
11	E60	80	Passenger Car	631	0.00E+00	6.48E-06	7.04E-07	2.65E+01	4.60E-05	1.29E-01	1.46E-05	6.54E-04	3.44E-03	5.76E-04	1.42E-03	9.18E-04	9.42E-04	9.38E-05	1.35E-04	2.88E-08	4.82E-04	1.02E-04
11	E60	80	Passenger Truck	1056	0.00E+00	1.33E-05	1.42E-06	5.98E+01	8.67E-05	2.28E-01	2.83E-05	1.76E-03	6.12E-03	1.02E-03	2.71E-03	1.76E-03	1.80E-03	4.34E-04	3.01E-04	5.47E-08	9.08E-04	2.94E-04
11	E60	80	Single Unit Short Haul Truck	95	0.00E+00	1.30E-05	5.08E-07	1.55E+01	8.82E-06	2.82E-02	1.43E-05	5.41E-03	1.07E-03	2.18E-04	1.79E-03	3.32E-04	3.38E-04	1.58E-03	6.31E-05	2.50E-08	1.45E-03	1.01E-03
11	E60	80	Single Unit Long Haul Truck	4	0.00E+00	5.65E-07	2.18E-08	6.57E-01	3.76E-07	1.18E-03	6.21E-07	2.31E-04	4.88E-05	9.67E-06	7.81E-05	1.42E-05	1.45E-05	6.64E-05	2.67E-06	1.04E-09	6.36E-05	4.32E-05
11	E60	80	Combination Short Haul Truck	42	0.

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E64	70	Combination Short Haul Truck	55	0.00E+00	1.41E-05	1.05E-06	1.91E+01	3.59E-08	2.04E-02	1.01E-05	2.12E-02	1.99E-03	3.32E-04	8.48E-04	3.06E-04	3.18E-04	3.03E-03	6.38E-05	0.00E+00	5.30E-04	3.99E-03
10	E64	70	Combination Long Haul Truck	50	0.00E+00	1.94E-05	1.10E-06	1.79E+01	1.22E-07	2.44E-02	1.59E-05	2.27E-02	2.07E-03	3.12E-04	1.76E-03	3.54E-04	3.69E-04	2.88E-03	6.01E-05	0.00E+00	1.39E-03	4.27E-03
10	E65	70	Passenger Car	768	0.00E+00	8.47E-06	9.20E-07	3.32E+01	6.01E-05	1.64E-01	1.91E-05	7.77E-04	5.92E-03	9.22E-04	1.86E-03	1.20E-03	1.23E-03	1.31E-04	1.68E-04	3.50E-08	6.30E-04	1.21E-04
10	E65	70	Passenger Truck	1287	0.00E+00	1.78E-05	1.90E-06	7.47E+01	1.14E-04	2.91E-01	3.74E-05	2.26E-03	1.07E-02	1.66E-03	3.58E-03	2.32E-03	2.38E-03	5.70E-04	3.75E-04	6.73E-08	1.19E-03	3.79E-04
10	E65	70	Single Unit Short Haul Truck	34	0.00E+00	6.07E-06	2.46E-07	5.65E+00	4.07E-06	1.02E-02	6.60E-06	2.42E-03	5.48E-04	1.01E-04	8.18E-04	1.56E-04	1.59E-04	5.74E-04	2.30E-05	9.28E-09	6.59E-04	4.52E-04
10	E65	70	Single Unit Long Haul Truck	2	0.00E+00	2.64E-07	1.06E-08	2.39E-01	1.75E-07	4.30E-04	2.87E-07	1.04E-04	2.51E-05	4.50E-06	3.57E-05	6.73E-06	6.87E-06	2.42E-05	9.75E-07	3.91E-10	2.88E-05	1.95E-05
10	E65	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.09E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.05E-03
10	E65	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.17E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.19E-03
10	E66	70	Passenger Car	574	0.00E+00	6.32E-06	6.87E-07	2.48E+01	4.49E-05	1.23E-01	1.43E-05	5.80E-04	4.42E-03	6.88E-04	1.39E-03	8.97E-04	9.20E-04	9.74E-05	1.26E-04	2.61E-08	4.70E-04	9.05E-05
10	E66	70	Passenger Truck	960	0.00E+00	1.33E-05	1.42E-06	5.58E+01	8.53E-05	2.17E-01	2.79E-05	1.69E-03	8.00E-03	1.24E-03	2.67E-03	1.73E-03	1.78E-03	4.26E-04	2.80E-04	5.02E-08	8.92E-04	2.83E-04
10	E66	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.42E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.40E-04
10	E66	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.76E-05
10	E66	70	Combination Short Haul Truck	45	0.00E+00	1.16E-05	8.61E-07	1.56E+01	2.94E-08	1.67E-02	8.25E-06	1.73E-02	1.63E-03	2.72E-04	6.94E-04	2.51E-04	2.60E-04	2.49E-03	5.23E-05	0.00E+00	4.34E-04	3.27E-03
10	E66	70	Combination Long Haul Truck	41	0.00E+00	1.59E-05	9.03E-07	1.47E+01	9.95E-08	2.00E-02	1.31E-05	1.86E-02	1.70E-03	2.56E-04	1.44E-03	2.90E-04	3.02E-04	2.36E-03	4.92E-05	0.00E+00	1.14E-03	3.50E-03
11	E67	80	Passenger Car	316	0.00E+00	3.24E-06	3.52E-07	1.32E+01	2.30E-05	6.44E-02	7.30E-06	3.27E-04	1.72E-03	2.88E-04	7.12E-04	4.59E-04	4.71E-04	4.69E-05	6.73E-05	1.44E-08	2.41E-04	5.10E-05
11	E67	80	Passenger Truck	528	0.00E+00	6.67E-06	7.11E-07	2.99E+01	4.34E-05	1.14E-01	1.41E-05	8.83E-04	3.06E-03	5.10E-04	1.36E-03	8.80E-04	9.02E-04	2.17E-04	1.51E-04	2.74E-08	4.54E-04	1.47E-04
11	E67	80	Single Unit Short Haul Truck	13	0.00E+00	1.84E-06	7.18E-08	2.20E+00	1.25E-06	3.99E-03	2.02E-06	7.65E-04	1.51E-04	3.08E-05	2.53E-04	4.69E-05	4.78E-05	2.24E-04	8.93E-06	3.54E-09	2.06E-04	1.43E-04
11	E67	80	Single Unit Long Haul Truck	1	0.00E+00	7.99E-08	3.08E-09	9.29E-02	5.31E-08	1.66E-04	8.78E-08	3.27E-05	6.91E-06	1.37E-06	1.10E-05	2.01E-06	2.05E-06	9.39E-06	3.78E-07	1.48E-10	8.99E-06	6.11E-06
11	E67	80	Combination Short Haul Truck	5	0.00E+00	9.70E-07	7.18E-08	1.58E+00	2.54E-09	1.48E-03	6.94E-07	1.50E-03	1.12E-04	2.04E-05	5.88E-05	2.10E-05	2.18E-05	2.51E-04	5.28E-06	0.00E+00	3.71E-05	2.83E-04
11	E67	80	Combination Long Haul Truck	4	0.00E+00	1.35E-06	7.63E-08	1.46E+00	8.60E-09	1.75E-03	1.11E-06	1.60E-03	1.16E-04	1.86E-05	1.24E-04	2.46E-05	2.56E-05	2.35E-04	4.91E-06	0.00E+00	9.82E-05	3.02E-04
11	E68	80	Passenger Car	580	0.00E+00	5.95E-06	6.47E-07	2.43E+01	4.22E-05	1.18E-01	1.34E-05	6.01E-04	3.16E-03	5.29E-04	1.31E-03	8.44E-04	8.66E-04	8.62E-05	1.24E-04	2.64E-08	4.43E-04	9.38E-05
11	E68	80	Passenger Truck	971	0.00E+00	1.23E-05	1.31E-06	5.49E+01	7.98E-05	2.09E-01	2.60E-05	1.62E-03	5.63E-03	9.37E-04	2.49E-03	1.62E-03	1.66E-03	3.99E-04	2.77E-04	5.03E-08	8.35E-04	2.70E-04
11	E68	80	Single Unit Short Haul Truck	152	0.00E+00	2.09E-05	8.16E-07	2.50E+01	1.42E-05	4.54E-02	2.30E-05	8.69E-03	1.71E-03	3.50E-04	2.88E-03	5.33E-04	5.43E-04	2.54E-03	1.01E-04	4.02E-08	2.33E-03	1.62E-03
11	E68	80	Single Unit Long Haul Truck	7	0.00E+00	9.08E-07	3.50E-08	1.05E+00	6.04E-07	1.89E-03	9.98E-07	3.71E-04	7.85E-05	1.55E-05	1.25E-04	2.29E-05	2.33E-05	1.07E-04	4.29E-06	1.68E-09	1.02E-04	6.94E-05
11	E68	80	Combination Short Haul Truck	87	0.00E+00	1.79E-05	1.32E-06	2.91E+01	4.69E-08	2.73E-02	1.28E-05	2.77E-02	2.07E-03	3.75E-04	1.09E-03	3.86E-04	4.01E-04	4.63E-03	9.73E-05	0.00E+00	6.84E-04	5.21E-03
11	E68	80	Combination Long Haul Truck	79	0.00E+00	2.49E-05	1.41E-06	2.70E+01	1.59E-07	3.23E-02	2.06E-05	2.96E-02	2.14E-03	3.43E-04	2.28E-03	4.54E-04	4.72E-04	4.34E-03	9.05E-05	0.00E+00	1.81E-03	5.57E-03
10	E69	70	Passenger Car	279	0.00E+00	3.08E-06	3.35E-07	1.21E+01	2.19E-05	5.97E-02	6.94E-06	2.82E-04	2.15E-03	3.35E-04	6.77E-04	4.37E-04	4.48E-04	4.75E-05	6.12E-05	1.27E-08	2.29E-04	4.41E-05
10	E69	70	Passenger Truck	468	0.00E+00	6.48E-06	6.89E-07	2.72E+01	4.15E-05	1.06E-01	1.36E-05	8.21E-04	3.90E-03	6.03E-04	1.30E-03	8.44E-04	8.65E-04	2.07E-04	1.36E-04	2.45E-08	4.34E-04	1.38E-04
10	E69	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.59E-05
10	E69	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
10	E70	70	Passenger Car	578	0.00E+00	6.37E-06	6.92E-07	2.50E+01	4.52E-05	1.24E-01	1.44E-05	5.85E-04	4.45E-03	6.94E-04	1.40E-03	9.04E-04	9.27E-04	9.82E-05	1.27E-04	2.63E-08	4.74E-04	9.12E-05
10	E70	70	Passenger Truck	968	0.00E+00	1.34E-05	1.43E-06	5.62E+01	8.59E-05	2.19E-01	2.81E-05	1.70E-03	8.06E-03	1.25E-03	2.69E-03	1.75E-03	1.79E-03	4.29E-04	2.82E-04	5.06E-08	8.99E-04	2.85E-04
10	E70	70	Single Unit Short Haul Truck	26	0.00E+00	4.55E-06	1.85E-07	4.24E+00	3.05E-06	7.68E-03	4.95E-06	1.81E-03	4.11E-04	7.54E-05	6.13E-04	1.17E-04	1.19E-04	4.31E-04	1.72E-05	6.96E-09	4.94E-04	3.39E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	1.98E-07	7.97E-09	1.80E-01	1.31E-07	3.22E-04	2.15E-07	7.80E-05	1.88E-05	3.37E-06	2.68E-05	5.05E-06	5.15E-06	1.82E-05	7.32E-07	2.93E-10	2.16E-05	1.46E-05
10	E70	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.82E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.32E-04
10	E70	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.02E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.69E-04
10	E71	70	Passenger Car	559	0.00E+00	6.17E-06	6.70E-07	2.42E+01	4.38E-05	1.20E-01	1.39E-05	5.66E-04	4.31E-03	6.71E-04	1.36E-03	8.74E-04	8.97E-04	9.50E-05	1.23E-04	2.55E-08	4.59E-04	8.82E-05
10	E71	70	Passenger Truck	937	0.00E+00	1.30E-05	1.38E-06	5.44E+01	8.31E-05	2.12E-01	2.72E-05	1.64E-03	7.80E-03	1.21E-03	2.60E-03	1.69E-03	1.73E-03	4.15E-04	2.73E-04	4.90E-08	8.70E-04	2.76E-04
10	E71	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E71	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E71	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	E72	70	Passenger Car	657	0.00E+00	7.24E-06	7.87E-07	2.84E+01	5.14E-05	1.40E-01	1.63E-05	6.64E-04	5.06E-03	7.88E-04	1.59E-03	1.03E-03	1.05E-03	1.12E-04	1.44E-04	2.99E-08	5.38E-04	1.04E-04
10	E72	70	Passenger Truck	1099	0.00E+00	1.52E-05	1.62E-06	6.38E+01	9.76E-05	2.48E-01	3.19E-05	1.93E-03	9.16E-03	1.42E-03	3.06E-03	1.99E-03	2.03E-03	4.87E-04	3.21E-04	5.75E-08	1.02E-03	3.24E-04
10	E72	70	Single Unit Short Haul Truck	21	0.00E+00	3.71E-06	1.51E-07	3.45E+00	2.49E-06	6.26E-03	4.03E-06	1.48E-03	3.35E-04	6.15E-05	5.00E-04	9.52E-05	9.71E-05	3.51E-04	1.40E-05	5.67E-09	4.03E-04	2.76E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	1.61E-07	6.50E-09	1.46E-01	1.07E-07	2.63E-04	1.75E-07	6.35E-05	1.53E-05	2.75E-06	2.18E-05	4.11E-06	4.20E-06	1.48E-05	5.96E-07	2.39E-10	1.76E-05	1.19E-05
10	E72	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
10	E72	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
9	E73	60	Passenger Car	184	0.00E+00	2.32E-06	2.52E-07	8.29E+00	1.65E-05	4.48E-02	5.23E-06	1.89E-04	1.85E-03	2.78E-04	5.11E-04	3.29E-04	3.38E-04	3.64E-05	4.20E-05	8.81E-09	1.73E-04	2.95E-05
9	E73	60	Passenger Truck	307	0.00E+00	4.93E-06	5.23E-07	1.85E+01	3.11E-05	7.68E-02	1.02E-05	5.88E-04	3.39E-03	5.04E-04	9.75E-04	6.34E-04	6.50E-04	1.49E-04	9.27E-05	1.72E-08	3.25E-04	9.96E-05
9	E73	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	E73	60	Combination Short Haul Truck	10	0.00E+00	3.05E-06	2.24E-07	3.68E+00	8.36E-09	4.56E-03	2.19E-06	4.67E-03	5.33E-04	8.33E-05	1.88E-04	6.56E-05	6.81E-05	5.86E-04	1.23E-05	0.00E+00	1.20E-04	8.79E-04
9	E73	60	Combination Long Haul Truck	10	0.00E+00	4.20E-06	2.29E-07	3.48E+00	2.83E-08	5.48E-03	3.51E-06	4.97E-03	5.59E-04	8.08E-05	3.98E-04	7.48E-05	7.80E-05	5.59E-04	1.17E-05	0.00E+00	3.20E-04	9.36E-04
9	E74	60	Passenger Car	164	0.00E+00	2.07E-06	2.25E-07	7.39E+00	1.47E-05	4.00E-02	4.67E-06	1.69E-04	1.65E-03	2.48E-04	4.55E-04	2.94E-04	3.01E-04	3.25E-05	3.74E-05	7.86E-09	1.54E-04	2.63E-05
9	E74	60	Passenger Truck	274	0.00E+00	4.40E-06	4.66E-07	1.65E+01	2.77E-05	6.85E-02	9.12E-06	5.24E-04	3.02E-03	4.50E-04	8.70E-04	5.66E-04	5.80E-04	1.33E-04	8.27E-05	1.53E-08	2.90E-04	8.89E-05
9	E74	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
53	E75	70	Passenger Car	685	0.00E+00	7.32E-06	7.96E-07	2.99E+01	5.20E-05	1.41E-01	1.65E-05	7.05E-04	5.20E-03	8.13E-04	1.61E-03	1.04E-03	1.07E-03	1.16E-04	1.52E-04	3.15E-08	5.45E-04	1.10E-04
53	E75	70	Passenger Truck	1147	0.00E+00	1.53E-05	1.63E-06	6.74E+01	9.82E-05	2.49E-01	3.21E-05	1.99E-03	9.28E-03	1.44E-03	3.07E-03	2.00E-03	2.05E-03	5.05E-04	3.39E-04	5.94E-08	1.03E-03	3.33E-04
53	E75	70	Single Unit Short Haul Truck	34	0.00E+00	5.90E-06	2.40E-07	5.49E+00	3.95E-06	9.96E-03	6.42E-06	2.35E-03	5.33E-04	9.78E-05	7.95E-04	1.52E-04	1.55E-04	5.58E-04	2.23E-05	9.02E-09	6.41E-04	4.39E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	2.57E-07	1.03E-08	2.33E-01	1.70E-07	4.18E-04	2.79E-07	1.01E-04	2.44E-05	4.37E-06	3.47E-05	6.54E-06	6.67E-06	2.35E-05	9.48E-07	3.80E-10	2.80E-05	1.89E-05
53	E75	70	Combination Short Haul Truck	40	0.00E+00	1.04E-05	7.71E-07	1.40E+01	2.63E-08	1.50E-02	7.39E-06	1.55E-02	1.46E-03	2.44E-04	6.22E-04	2.25E-04	2.33E-04	2.23E-03	4.68E-05	0.00E+00	3.89E-04	2.92E-03
53	E75	70	Combination Long Haul Truck	37	0.00E+00	1.42E-05	8.08E-07	1.31E+01	8.91E-08	1.79E-02	1.17E-05	1.66E-02	1.52E-03	2.29E-04	1.29E-03	2.60E-04	2.71E-04	2.11E-03	4.41E-05	0.00E+00	1.02E-03	3.13E-03
53	E76	70	Passenger Car	1102	0.00E+00	1.18E-05	1.28E-06	4.81E+01	8.36E-05	2.27E-01	2.66E-05	1.13E-03	8.36E-03	1.31E-03	2.59E-03	1.67E-03	1.71E-03	1.87E-04	2.44E-04	5.08E-08	8.76E-04	1.77E-04
53	E76	70	Passenger Truck	1846	0.00E+00	2.46E-05	2.62E-06	1.08E+02	1.58E-04	4.00E-01	5.17E-05	3.20E-03	1.49E-02	2.32E-03	4.94E-03	3.21E-03	3.29E-03	8.13E-04	5.45E-04	9.56E-08	1.65E-03	5.36E-04
53	E76	70	Single Unit Short Haul Truck	55	0.00E+00	9.61E-06	3.90E-07	8.95E+00	6.44E-06	1.62E-02	1.04E-05	3.83E-03	8.68E-04	1.59E-04	1.30E-03	2.47E-04	2.52E-04	9.09E-04	3.64E-05	1.47E-08	1.04E-03	7.16E-04
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	4.18E-07	1.68E-08	3.79E-01	2.77E-07	6.81E-04	4.55E-07	1.65E-04	3.97E-05	7.12E-06	5.65E-05	1.07E-05	1.09E-05	3.83E-05	1.54E-06	6.19E-10	4.56E-05	3.08E-05
53	E76	70	Combination Short Haul Truck	73	0.00E+00	1.87E-05	1.39E-06	2.53E+01	4.75E-08	2.70E-02	1.33E-05	2.80E-02	2.64E-03	4.40E-04	1.12E-03	4.05E-04	4.21E-04	4.02E-03	8.45E-05	0.00E+00	7.02E-04	5.28E-03
53	E76	70	Combination Long Haul Truck	66	0.00E+00	2.57E-05	1.46E-06	2.37E+01	1.61E-07	3.23E-02	2.11E-05	3.00E-02	2.75E-03	4.14E-04	2.33E-03	4.69E-04	4.88E-04	3.81E-03	7.95E-05	0.00E+00	1.84E-03	5.65E-03
53	E77	70	Passenger Car	850	0.00E+00	9.08E-06	9.87E-07	3.71E+01	6.45E-05	1.75E-01	2.05E-05	8.75E-04	6.45E-03	1.01E-03	2.00E-03	1.29E-03	1.32E-03	1.44E-04	1.88E-04	3.91E-08	6.76E-04	1.36E-04
53	E77	70	Passenger Truck	1423	0.00E+00	1.90E-05	2.02E-06	8.36E+01	1.22E-04	3.08E-01	3.98E-05	2.47E-03	1.15E-02	1.79E-03	3.81E-03	2.48E-03	2.54E-03	6.27E-04	4.20E-04	7.37E-08	1.27E-03	4.14E-04
53	E77	70	Single Unit Short Haul Truck	34	0.00E+00	6.07E-06	2.46E-07	5.65E+00	4.07E-06	1.02E-02	6.60E-06	2.42E-03	5.48E-04	1.01E-04	8.18E-04	1.56E-04	1.59E-04	5.74E-04	2.30E-05	9.28E-09	6.59E-04	4.52E-04
53	E77	70	Single Unit Long Haul Truck	2	0.00E+00	2.64E-07	1.06E-08	2.39E-01	1.75E-07	4.30E-04	2.87E-07	1.04E-04	2.51E-05	4.50E-06	3.57E-05	6.73E-06	6.87E-06	2.42E-05	9.75E-07	3.91E-10	2.88E-05	1.95E-05
53	E77	70	Combination Short Haul Truck	47	0.00E+00	1.21E-05	9.01E-07	1.64E+01	3.08E-08	1.75E-02	8.63E-06	1.81E-02	1.71E-03	2.85E-04	7.27E-04	2.63E-04	2.73E-04	2.60E-03	5.47E-05	0.00E+00	4.54E-04	3.42E-03
53	E77	70	Combination Long Haul Truck	43	0.00E+00	1.66E-05	9.45E-07	1.54E+01	1.04E-07	2.09E-02	1.37E-05	1.94E-02	1.78E-03	2.68E-04	1.51E-03	3.04E-04	3.16E-04	2.47E-03	5.15E-05	0.00E+00	1.19E-03	3.66E-03
53	E78	70	Passenger Car	1273	0.00E+00	1.36E-05	1.48E-06	5.56E+01	9.65E-05	2.62E-01	3.07E-05	1.31E-03	9.65E-03	1.51E-03	2.99E-03	1.93E-03	1.98E-03	2.16E-04	2.82E-04	5.86E-08	1.01E-03	2.04E-04
53	E78	70	Passenger Truck	2131	0.00E+00	2.84E-05	3.02E-06	1.25E+02	1.82E-04	4.62E-01	5.97E-05	3.70E-03	1.72E-02	2.68E-03	5.71E-03	3.71E-03	3.80E-03	9.39E-04	6.30E-04	1.10E-07	1.91E-03	6.19E-04
53	E78	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.23E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.91E-04
53	E78	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.82E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.40E-05
53	E78	70	Combination Short Haul Truck	78	0.00E+00	2.02E-05	1.50E-06	2.73E+01	5.13E-08	2.92E-02	1.44E-05	3.02E-02	2.85E-03	4.75E-04	1.21E-03	4.38E-04	4.54E-04	4.34E-03	9.12E-05	0.00E+00	7.57E-04	5.70E-03
53	E78	70	Combination Long Haul Truck	72	0.00E+00	2.77E-05	1.57E-06	2.56E+01	1.74E-07	3.48E-02	2.28E-05	3.24E-02	2.96E-03	4.46E-04	2.52E-03	5.06E-04	5.27E-04	4.11E-03	8.58E-05	0.00E+00	1.99E-03	6.10E-03
53	E79	70	Passenger Car	809	0.00E+00	8.65E-06	9.40E-07	3.53E+01	6.14E-05	1.66E-01	1.95E-05	8.33E-04	6.14E-03	9.61E-04	1.90E-03	1.23E-03	1.26E-03	1.37E-04	1.79E-04	3.73E-08	6.43E-04	1.30E-04
53	E79	70	Passenger Truck	1355	0.00E+00	1.81E-05	1.92E-06	7.96E+01	1.16E-04	2.94E-01	3.79E-05	2.35E-03	1.10E-02	1.70E-03	3.63E-03	2.36E-03	2.42E-03	5.97E-04	4.00E-04	7.02E-08	1.21E-03	3.94E-04
53	E79	70	Single Unit Short Haul Truck

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E84	70	Passenger Truck	457	0.00E+00	6.34E-06	6.73E-07	2.65E+01	4.06E-05	1.03E-01	1.33E-05	8.03E-04	3.81E-03	5.89E-04	1.27E-03	8.25E-04	8.46E-04	2.03E-04	1.33E-04	2.39E-08	4.24E-04	1.35E-04
10	E84	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	E84	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
9	E85	60	Passenger Car	1146	0.00E+00	1.45E-05	1.57E-06	5.17E+01	1.03E-04	2.80E-01	3.27E-05	1.18E-03	1.16E-02	1.73E-03	3.19E-03	2.05E-03	2.11E-03	2.27E-04	2.62E-04	5.50E-08	1.08E-03	1.84E-04
9	E85	60	Passenger Truck	1918	0.00E+00	3.08E-05	3.26E-06	1.15E+02	1.94E-04	4.79E-01	6.38E-05	3.67E-03	2.11E-02	3.15E-03	6.08E-03	3.96E-03	4.06E-03	9.29E-04	5.78E-04	1.07E-07	2.03E-03	6.22E-04
9	E85	60	Single Unit Short Haul Truck	60	0.00E+00	1.35E-05	5.57E-07	1.00E+01	8.93E-06	1.77E-02	1.46E-05	5.17E-03	1.39E-03	2.33E-04	1.80E-03	3.46E-04	3.53E-04	1.02E-03	4.09E-05	1.69E-08	1.44E-03	9.68E-04
9	E85	60	Single Unit Long Haul Truck	3	0.00E+00	5.88E-07	2.42E-08	4.28E-01	3.87E-07	7.49E-04	6.36E-07	2.24E-04	6.24E-05	1.03E-05	7.86E-05	1.50E-05	1.53E-05	4.33E-05	1.75E-06	7.17E-10	6.32E-05	4.19E-05
9	E85	60	Combination Short Haul Truck	37	0.00E+00	1.08E-05	7.96E-07	1.31E+01	2.97E-08	1.62E-02	7.79E-06	1.66E-02	1.89E-03	2.96E-04	6.68E-04	2.33E-04	2.42E-04	2.08E-03	4.37E-05	0.00E+00	4.26E-04	3.12E-03
9	E85	60	Combination Long Haul Truck	34	0.00E+00	1.49E-05	8.13E-07	1.24E+01	1.01E-07	1.95E-02	1.25E-05	1.77E-02	1.98E-03	2.87E-04	1.41E-03	2.66E-04	2.77E-04	1.98E-03	4.14E-05	0.00E+00	1.14E-03	3.32E-03
9	E86	60	Passenger Car	1346	0.00E+00	1.70E-05	1.85E-06	6.08E+01	1.21E-04	3.28E-01	3.84E-05	1.39E-03	1.36E-02	2.04E-03	3.74E-03	2.41E-03	2.48E-03	2.67E-04	3.08E-04	6.46E-08	1.27E-03	2.16E-04
9	E86	60	Passenger Truck	2254	0.00E+00	3.61E-05	3.83E-06	1.35E+02	2.28E-04	5.63E-01	7.50E-05	4.31E-03	2.48E-02	3.70E-03	7.15E-03	4.65E-03	4.77E-03	1.09E-03	6.79E-04	1.26E-07	2.38E-03	7.30E-04
9	E86	60	Single Unit Short Haul Truck	42	0.00E+00	9.41E-06	3.89E-07	7.01E+00	6.23E-06	1.23E-02	1.02E-05	3.61E-03	9.70E-04	1.63E-04	1.26E-03	2.42E-04	2.47E-04	7.10E-04	2.86E-05	1.18E-08	1.01E-03	6.76E-04
9	E86	60	Single Unit Long Haul Truck	2	0.00E+00	4.11E-07	1.69E-08	2.99E-01	2.70E-07	5.23E-04	4.44E-07	1.56E-04	4.35E-05	7.23E-06	5.49E-05	1.05E-05	1.07E-05	3.02E-05	1.22E-06	5.01E-10	4.42E-05	2.93E-05
9	E86	60	Combination Short Haul Truck	29	0.00E+00	8.40E-06	6.17E-07	1.01E+01	2.30E-08	1.25E-02	6.03E-06	1.28E-02	1.47E-03	2.29E-04	5.17E-04	1.80E-04	1.87E-04	1.61E-03	3.39E-05	0.00E+00	3.30E-04	2.42E-03
9	E86	60	Combination Long Haul Truck	26	0.00E+00	1.15E-05	6.30E-07	9.57E+00	7.79E-08	1.51E-02	9.65E-06	1.37E-02	1.54E-03	2.22E-04	1.09E-03	2.06E-04	2.14E-04	1.54E-03	3.21E-05	0.00E+00	8.80E-04	2.58E-03
9	E87	60	Passenger Car	715	0.00E+00	9.04E-06	9.82E-07	3.23E+01	6.42E-05	1.74E-01	2.04E-05	7.36E-04	7.22E-03	1.08E-03	1.99E-03	1.28E-03	1.32E-03	1.42E-04	1.63E-04	3.43E-08	6.73E-04	1.15E-04
9	E87	60	Passenger Truck	1197	0.00E+00	1.92E-05	2.03E-06	7.19E+01	1.21E-04	2.99E-01	3.98E-05	2.29E-03	1.32E-02	1.96E-03	3.80E-03	2.47E-03	2.53E-03	5.80E-04	3.61E-04	6.69E-08	1.27E-03	3.88E-04
9	E87	60	Single Unit Short Haul Truck	178	0.00E+00	3.98E-05	1.64E-06	2.96E+01	2.64E-05	5.21E-02	4.30E-05	1.53E-02	4.10E-03	6.89E-04	5.31E-03	1.02E-03	1.04E-03	3.00E-03	1.21E-04	4.98E-08	4.26E-03	2.86E-03
9	E87	60	Single Unit Long Haul Truck	8	0.00E+00	1.74E-06	7.14E-08	1.26E+00	1.14E-06	2.21E-03	1.88E-06	6.61E-04	1.84E-04	3.05E-05	2.32E-04	4.44E-05	4.53E-05	1.28E-04	5.15E-06	2.12E-09	1.87E-04	1.24E-04
9	E87	60	Combination Short Haul Truck	89	0.00E+00	2.59E-05	1.91E-06	3.13E+01	7.11E-08	3.88E-02	1.86E-05	3.97E-02	4.53E-03	7.08E-04	1.60E-03	5.58E-04	5.79E-04	4.98E-03	1.05E-04	0.00E+00	1.02E-03	7.47E-03
9	E87	60	Combination Long Haul Truck	81	0.00E+00	3.57E-05	1.95E-06	2.96E+01	2.41E-07	4.66E-02	2.98E-05	4.23E-02	4.75E-03	6.87E-04	3.38E-03	6.36E-04	6.63E-04	4.75E-03	9.91E-05	0.00E+00	2.72E-03	7.96E-03
9	E88	60	Passenger Car	1073	0.00E+00	1.36E-05	1.48E-06	4.85E+01	9.63E-05	2.62E-01	3.06E-05	1.11E-03	1.08E-02	1.62E-03	2.99E-03	1.92E-03	1.98E-03	2.13E-04	2.45E-04	5.15E-08	1.01E-03	1.72E-04
9	E88	60	Passenger Truck	1798	0.00E+00	2.88E-05	3.06E-06	1.08E+02	1.82E-04	4.49E-01	5.98E-05	3.44E-03	1.98E-02	2.95E-03	5.70E-03	3.71E-03	3.80E-03	8.71E-04	5.42E-04	1.00E-07	1.90E-03	5.82E-04
9	E88	60	Single Unit Short Haul Truck	117	0.00E+00	2.61E-05	1.08E-06	1.94E+01	1.73E-05	3.42E-02	2.82E-05	1.00E-02	2.69E-03	4.52E-04	3.48E-03	6.70E-04	6.84E-04	1.97E-03	7.92E-05	3.26E-08	2.80E-03	1.88E-03
9	E88	60	Single Unit Long Haul Truck	5	0.00E+00	1.14E-06	4.68E-08	8.29E-01	7.50E-07	1.45E-03	1.23E-06	4.34E-04	1.21E-04	2.00E-05	1.52E-04	2.91E-05	2.97E-05	8.38E-05	3.38E-06	1.39E-09	1.22E-04	8.12E-05
9	E88	60	Combination Short Haul Truck	60	0.00E+00	1.76E-05	1.29E-06	2.12E+01	4.81E-08	2.62E-02	1.26E-05	2.68E-02	3.06E-03	4.79E-04	1.08E-03	3.77E-04	3.92E-04	3.37E-03	7.08E-05	0.00E+00	6.90E-04	5.06E-03
9	E88	60	Combination Long Haul Truck	55	0.00E+00	2.41E-05	1.32E-06	2.00E+01	1.63E-07	3.15E-02	2.02E-05	2.86E-02	3.21E-03	4.65E-04	2.29E-03	4.30E-04	4.48E-04	3.21E-03	6.70E-05	0.00E+00	1.84E-03	5.38E-03
9	E89	60	Passenger Car	133	0.00E+00	1.69E-06	1.83E-07	6.03E+00	1.20E-05	3.26E-02	3.81E-06	1.37E-04	1.35E-03	2.02E-04	3.71E-04	2.39E-04	2.46E-04	2.65E-05	3.05E-05	6.41E-09	1.26E-04	2.14E-05
9	E89	60	Passenger Truck	224	0.00E+00	3.58E-06	3.80E-07	1.34E+01	2.26E-05	5.58E-02	7.44E-06	4.27E-04	2.46E-03	3.67E-04	7.09E-04	4.61E-04	4.73E-04	1.08E-04	6.74E-05	1.25E-08	2.36E-04	7.24E-05
9	E89	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	E89	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
9	E90	60	Passenger Car	105	0.00E+00	1.33E-06	1.45E-07	4.76E+00	9.46E-06	2.57E-02	3.01E-06	1.09E-04	1.06E-03	1.59E-04	2.93E-04	1.89E-04	1.94E-04	2.09E-05	2.41E-05	5.06E-09	9.92E-05	1.69E-05
9	E90	60	Passenger Truck	177	0.00E+00	2.83E-06	3.00E-07	1.06E+01	1.79E-05	4.41E-02	5.87E-06	3.38E-04	1.95E-03	2.90E-04	5.60E-04	3.64E-04	3.73E-04	8.55E-05	5.32E-05	9.87E-09	1.87E-04	5.72E-05
9	E90	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	E90	60	Combination Short Haul Truck	2	0.00E+00	4.58E-07	3.36E-08	5.53E-01	1.25E-09	6.84E-04	3.29E-07	7.00E-04	7.99E-05	1.25E-05	2.82E-05	9.84E-06	1.02E-05	8.78E-05	1.85E-06	0.00E+00	1.80E-05	1.32E-04
9	E90	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	E91	60	Passenger Car	4	0.00E+00	4.73E-08	5.14E-09	1.69E-01	3.36E-07	9.12E-04	1.07E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.88E-06	7.41E-07	8.55E-07	1.80E-10	3.52E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.99E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.62E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.73E-08	5.14E-09	1.69E-01	3.36E-07	9.12E-04	1.07E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.88E-06	7.41E-07	8.55E-07	1.80E-10	3.52E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.99E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.62E-06	2.03E-06
9	E93	60	Passenger Car	108	0.00E+00	1.37E-06	1.48E-07	4.88E+00	9.70E-06	2.64E-02	3.08E-06	1.11E-04	1.09E-03	1.63E-04	3.01E-04	1.94E-04	1.99E-04	2.14E-05	2.47E-05	5.19E-09	1.02E-04	1.74E-05
9	E93	60	Passenger Truck	181	0.00E+00	2.90E-06	3.08E-07	1.09E+01	1.83E-05	4.52E-02	6.02E-06	3.46E-04	1.99E-03	2.97E-04	5.74E-04	3.73E-04	3.83E-04	8.77E-05	5.45E-05	1.01E-08	1.91E-04	5.86E-05
9	E93	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	E93	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
9	E94	60	Passenger Car	225	0.00E+00	2.84E-06	3.09E-07	1.01E+01	2.02E-05	5.48E-02	6.41E-06	2.31E-04	2.27E-03	3.40E-04	6.25E-04	4.03E-04	4.14E-04	4.45E-05	5.14E-05	1.08E-08	2.11E-04	3.61E-05
9	E94	60	Passenger Truck	376	0.00E+00	6.03E-06	6.40E-07	2.26E+01	3.81E-05	9.39E-02	1.25E-05	7.20E-04	4.15E-03	6.17E-04	1.19E-03	7.76E-04	7.96E-04	1.82E-04	1.13E-04	2.10E-08	3.98E-04	1.22E-04
9	E94	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	E94	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.11E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	E94	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.80E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.28E-04
9	E94	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.62E-04
54	E95	80	Passenger Car	465	0.00E+00	4.66E-06	5.07E-07	1.96E+01	3.31E-05	9.10E-02	1.05E-05	4.85E-04	2.67E-03	4.39E-04	1.03E-03	6.61E-04	6.79E-04	6.92E-05	9.99E-05	2.07E-08	3.47E-04	7.57E-05
54	E95	80	Passenger Truck	780	0.00E+00	9.69E-06	1.03E-06	4.46E+01	6.31E-05	1.66E-01	2.06E-05	1.30E-03	4.77E-03	7.82E-04	1.97E-03	1.28E-03	1.31E-03	3.20E-04	2.25E-04	3.98E-08	6.61E-04	2.17E-04
54	E95	80	Single Unit Short Haul Truck	73	0.00E+00	9.99E-06	3.90E-07	1.19E+01	6.77E-06	2.17E-02	1.10E-05	4.15E-03	8.18E-04	1.67E-04	1.38E-03	2.55E-04	2.60E-04	1.21E-03	4.85E-05	1.92E-08	1.12E-03	7.76E-04
54	E95	80	Single Unit Long Haul Truck	3	0.00E+00	4.34E-07	1.67E-08	5.04E-01	2.89E-07	9.03E-04	4.77E-07	1.78E-04	3.75E-05	7.42E-06	6.00E-05	1.09E-05	1.12E-05	5.10E-05	2.05E-06	8.01E-10	4.88E-05	3.32E-05
54	E95	80	Combination Short Haul Truck	38	0.00E+00	7.76E-06	5.75E-07	1.26E+01	2.03E-08	1.18E-02	5.55E-06	1.20E-02	8.99E-04	1.63E-04	4.71E-04	1.68E-04	1.74E-04	2.01E-03	4.22E-05	0.00E+00	2.97E-04	2.26E-03
54	E95	80	Combination Long Haul Truck	34	0.00E+00	1.08E-05	6.10E-07	1.17E+01	6.88E-08	1.40E-02	8.92E-06	1.28E-02	9.29E-04	1.49E-04	9.91E-04	1.97E-04	2.05E-04	1.88E-03	3.93E-05	0.00E+00	7.86E-04	2.42E-03
54	E96	80	Passenger Car	657	0.00E+00	6.58E-06	7.15E-07	2.77E+01	4.67E-05	1.28E-01	1.48E-05	6.85E-04	3.77E-03	6.20E-04	1.45E-03	9.33E-04	9.58E-04	9.77E-05	1.41E-04	2.92E-08	4.89E-04	1.07E-04
54	E96	80	Passenger Truck	1100	0.00E+00	1.37E-05	1.46E-06	6.30E+01	8.91E-05	2.34E-01	2.90E-05	1.84E-03	6.73E-03	1.10E-03	2.78E-03	1.81E-03	1.85E-03	4.52E-04	3.17E-04	5.62E-08	9.32E-04	3.06E-04
54	E96	80	Single Unit Short Haul Truck	62	0.00E+00	8.54E-06	3.34E-07	1.02E+01	5.79E-06	1.85E-02	9.39E-06	3.55E-03	6.99E-04	1.43E-04	1.18E-03	2.18E-04	2.22E-04	1.04E-03	4.15E-05	1.64E-08	9.54E-04	6.64E-04
54	E96	80	Single Unit Long Haul Truck	3	0.00E+00	3.71E-07	1.43E-08	4.31E-01	2.47E-07	7.72E-04	4.08E-07	1.52E-04	3.21E-05	6.35E-06	5.13E-05	9.35E-06	9.54E-06	4.36E-05	1.76E-06	6.85E-10	4.18E-05	2.84E-05
54	E96	80	Combination Short Haul Truck	59	0.00E+00	1.22E-05	9.02E-07	1.98E+01	3.19E-08	1.86E-02	8.71E-06	1.88E-02	1.41E-03	2.56E-04	7.39E-04	2.63E-04	2.73E-04	3.15E-03	6.63E-05	0.00E+00	4.66E-04	3.55E-03
54	E96	80	Combination Long Haul Truck	54	0.00E+00	1.70E-05	9.58E-07	1.84E+01	1.08E-07	2.20E-02	1.40E-05	2.01E-02	1.46E-03	2.33E-04	1.56E-03	3.09E-04	3.22E-04	2.95E-03	6.16E-05	0.00E+00	1.23E-03	3.79E-03
54	E97	80	Passenger Car	262	0.00E+00	2.63E-06	2.86E-07	1.11E+01	1.87E-05	5.13E-02	5.93E-06	2.74E-04	1.51E-03	2.48E-04	5.78E-04	3.73E-04	3.83E-04	3.90E-05	5.63E-05	1.17E-08	1.96E-04	4.27E-05
54	E97	80	Passenger Truck	440	0.00E+00	5.46E-06	5.83E-07	2.52E+01	3.56E-05	9.35E-02	1.16E-05	7.35E-04	2.69E-03	4.41E-04	1.11E-03	7.22E-04	7.40E-04	1.80E-04	1.27E-04	2.25E-08	3.72E-04	1.22E-04
54	E97	80	Single Unit Short Haul Truck	79	0.00E+00	1.08E-05	4.21E-07	1.29E+01	7.31E-06	2.34E-02	1.18E-05	4.48E-03	8.82E-04	1.80E-04	1.48E-03	2.75E-04	2.80E-04	1.31E-03	5.23E-05	2.07E-08	1.20E-03	8.38E-04
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	4.68E-07	1.81E-08	5.44E-01	3.11E-07	9.74E-04	5.14E-07	1.92E-04	4.05E-05	8.01E-06	6.47E-05	1.18E-05	1.20E-05	5.50E-05	2.21E-06	8.64E-10	5.27E-05	3.58E-05
54	E97	80	Combination Short Haul Truck	40	0.00E+00	8.30E-06	6.14E-07	1.35E+01	2.17E-08	1.27E-02	5.93E-06	1.28E-02	9.61E-04	1.74E-04	5.03E-04	1.79E-04	1.86E-04	2.15E-03	4.52E-05	0.00E+00	3.17E-04	2.42E-03
54	E97	80	Combination Long Haul Truck	37	0.00E+00	1.16E-05	6.53E-07	1.25E+01	7.35E-08	1.50E-02	9.54E-06	1.37E-02	9.93E-04	1.59E-04	1.06E-03	2.10E-04	2.19E-04	2.01E-03	4.20E-05	0.00E+00	8.41E-04	2.58E-03
54	E98	80	Passenger Car	944	0.00E+00	9.45E-06	1.03E-06	3.98E+01	6.71E-05	1.84E-01	2.13E-05	9.83E-04	5.41E-03	8.91E-04	2.08E-03	1.34E-03	1.38E-03	1.40E-04	2.03E-04	4.19E-08	7.03E-04	1.53E-04
54	E98	80	Passenger Truck	1580	0.00E+00	1.96E-05	2.10E-06	9.04E+01	1.28E-04	3.36E-01	4.17E-05	2.64E-03	9.67E-03	1.58E-03	4.00E-03	2.59E-03	2.66E-03	6.49E-04	4.56E-04	8.08E-08	1.34E-03	4.39E-04
54	E98	80	Single Unit Short Haul Truck	117	0.00E+00	1.60E-05	6.26E-07	1.92E+01	1.09E-05	3.48E-02	1.76E-05	6.67E-03	1.31E-03	2.69E-04	2.21E-03	4.09E-04	4.17E-04	1.95E-03	7.78E-05	3.09E-08	1.79E-03	1.25E-03
54	E98	80	Single Unit Long Haul Truck	5	0.00E+00	6.97E-07	2.69E-08	8.09E-01	4.63E-07	1.45E-03	7.65E-07	2.85E-04	6.02E-05	1.19E-05	9.63E-05	1.76E-05	1.79E-05	8.19E-05	3.29E-06	1.29E-09	7.84E-05	5.33E-05
54	E98	80	Combination Short Haul Truck	84	0.00E+00	1.72E-05	1.28E-06	2.81E+01	4.52E-08	2.63E-02	1.23E-05	2.67E-02	2.00E-03	3.62E-04	1.05E-03	3.73E-04	3.87E-04	4.46E-03	9.38E-05	0.00E+00	6.59E-04	5.02E-03
54	E98	80	Combination Long Haul Truck	76	0.00E+00	2.40E-05	1.36E-06	2.60E+01	1.53E-07	3.11E-02	1.98E-05	2.85E-02	2.06E-03	3.30E-04	2.20E-03	4.37E-04	4.55E-04	4.18E-03	8.73E-05	0.00E+00	1.75E-03	5.37E-03
9	F01	60	Passenger Car	305	0.00E+00	3.86E-06	4.20E-07	1.38E+01	2.74E-05	7.45E-02	8.71E-06	3.14E-04	3.08E-03	4.62E-04	8.50E-04	5.48E-04	5.62E-04	6.05E-05	6.98E-05	1.47E-08	2.87E-04	4.91E-05
9	F01	60	Passenger Truck	512	0.00E+00	8.20E-06	8.70E-07	3.07E+01	5.17E-05	1.28E-01	1.70E-05	9.78E-04	5.64E-03	8.39E-04	1.62E-03	1.06E-03	1.08E-03	2.48E-04	1.54E-04	2.86E-08	5.41E-04	1.66E-04
9	F01	60	Single Unit Short Haul Truck	38	0.00E+00	8.55E-06	3.53E-07	6.37E+00	5.67E-06	1.12E-02	9.25E-06	3.28E-03	8.81E-04	1.48E-04	1.14E-03	2.20E-04	2.24E-04	6.46E-04	2.60E-05	1.07E-08	9.17E-04	6.15E-04
9	F01	60	Single Unit Long Haul Truck	2	0.00E+00	3.73E-07	1.53E-08	2.72E-01	2.46E-07	4.76E-04	4.04E-07	1.42E-04	3.96E-05	6.57E-06	4.99E-05	9.55E-06	9.74E-06	2.75E-05	1.11E-06	4.55E-10	4.02E-05	2.66E-05
9	F01	60	Combination Short Haul Truck	25	0.00E+00	7.33E-06	5.38E-07	8.84E+00	2.01E-08	1.09E-02	5.26E-06	1.12E-02	1.28E-03	2.00E-04	4.52E-04	1.57E-04	1.63E-04	1.41E-03	2.96E-05	0.00E+00	2.88E-04	2.11E-03
9	F01	60	Combination Long Haul Truck	23	0.00E+00	1.01E-05	5.50E-07	8.35E+00	6.80E-08	1.32E-02	8.42E-06	1.19E-02	1.34E-03	1.94E-04	9.55E-04	1.80E-04	1.87E-04	1.34E-03	2.80E-05	0.00E+00	7.68E-04	2.25E-03
9	F02	60	Passenger Car	409	0.00E+00	5.17E-06	5.62E-07	1.85E+01	3.67E-05	9.98E-02	1.17E-05	4.21E-04	4.13E-03	6.19E-04	1.14E-03	7.33E-04	7.53E-04	8.11E-05	9.35E-05	1.96E-08	3.85E-04	6.57E-05
9	F02	60	Passenger Truck	685	0.00E+00	1.

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F06	60	Combination Short Haul Truck	19	0.00E+00	5.50E-06	4.04E-07	6.63E+00	1.51E-08	8.21E-03	3.95E-06	8.40E-03	9.59E-04	1.50E-04	3.39E-04	1.18E-04	1.23E-04	1.05E-03	2.22E-05	0.00E+00	2.16E-04	1.58E-03
9	F06	60	Combination Long Haul Truck	17	0.00E+00	7.55E-06	4.12E-07	6.26E+00	5.10E-08	9.86E-03	6.31E-06	8.95E-03	1.01E-03	1.45E-04	7.16E-04	1.35E-04	1.40E-04	1.01E-03	2.10E-05	0.00E+00	5.76E-04	1.69E-03
9	F07	60	Passenger Car	403	0.00E+00	5.09E-06	5.53E-07	1.82E+01	3.61E-05	9.83E-02	1.15E-05	4.15E-04	4.07E-03	6.09E-04	1.12E-03	7.22E-04	7.41E-04	7.98E-05	9.21E-05	1.93E-08	3.79E-04	6.47E-05
9	F07	60	Passenger Truck	674	0.00E+00	1.08E-05	1.15E-06	4.05E+01	6.82E-05	1.68E-01	2.24E-05	1.29E-03	7.43E-03	1.11E-03	2.14E-03	1.39E-03	1.43E-03	3.27E-04	2.03E-04	3.77E-08	7.13E-04	2.19E-04
9	F07	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.40E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.04E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	F07	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.80E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.28E-04
9	F07	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.62E-04
9	F08	60	Passenger Car	350	0.00E+00	4.43E-06	4.81E-07	1.58E+01	3.14E-05	8.55E-02	9.99E-06	3.61E-04	3.54E-03	5.30E-04	9.74E-04	6.28E-04	6.45E-04	6.94E-05	8.01E-05	1.68E-08	3.30E-04	5.63E-05
9	F08	60	Passenger Truck	587	0.00E+00	9.41E-06	9.97E-07	3.53E+01	5.93E-05	1.46E-01	1.95E-05	1.12E-03	6.46E-03	9.62E-04	1.86E-03	1.21E-03	1.24E-03	2.84E-04	1.77E-04	3.28E-08	6.20E-04	1.90E-04
9	F08	60	Single Unit Short Haul Truck	44	0.00E+00	9.84E-06	4.06E-07	7.33E+00	6.52E-06	1.29E-02	1.06E-05	3.78E-03	1.01E-03	1.70E-04	1.31E-03	2.53E-04	2.58E-04	7.43E-04	2.99E-05	1.23E-08	1.05E-03	7.07E-04
9	F08	60	Single Unit Long Haul Truck	2	0.00E+00	4.29E-07	1.76E-08	3.12E-01	2.83E-07	5.47E-04	4.64E-07	1.64E-04	4.55E-05	7.56E-06	5.74E-05	1.10E-05	1.12E-05	3.16E-05	1.27E-06	5.24E-10	4.62E-05	3.06E-05
9	F08	60	Combination Short Haul Truck	24	0.00E+00	7.02E-06	5.16E-07	8.47E+00	1.92E-08	1.05E-02	5.04E-06	1.07E-02	1.23E-03	1.92E-04	4.33E-04	1.51E-04	1.57E-04	1.35E-03	2.83E-05	0.00E+00	2.76E-04	2.02E-03
9	F08	60	Combination Long Haul Truck	22	0.00E+00	9.65E-06	5.27E-07	8.00E+00	6.51E-08	1.26E-02	8.07E-06	1.14E-02	1.29E-03	1.86E-04	9.15E-04	1.72E-04	1.79E-04	1.28E-03	2.68E-05	0.00E+00	7.36E-04	2.15E-03
11	F09	80	Passenger Car	48	0.00E+00	4.91E-07	5.34E-08	2.01E+00	3.49E-06	9.77E-03	1.11E-06	4.96E-05	2.61E-04	4.37E-05	1.08E-04	6.97E-05	7.15E-05	7.11E-06	1.02E-05	2.18E-09	3.65E-05	7.74E-06
11	F09	80	Passenger Truck	80	0.00E+00	1.01E-06	1.08E-07	4.53E+00	6.58E-06	1.73E-02	2.14E-06	1.34E-04	4.64E-04	7.73E-05	2.06E-04	1.33E-04	1.37E-04	3.29E-05	2.28E-05	4.15E-09	6.89E-05	2.23E-05
11	F09	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	F09	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.17E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.20E-04
11	F09	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.25E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.35E-04
11	F10	80	Passenger Car	296	0.00E+00	3.04E-06	3.31E-07	1.24E+01	2.16E-05	6.05E-02	6.86E-06	3.07E-04	1.62E-03	2.71E-04	6.69E-04	4.32E-04	4.43E-04	4.41E-05	6.33E-05	1.35E-08	2.26E-04	4.80E-05
11	F10	80	Passenger Truck	497	0.00E+00	6.27E-06	6.68E-07	2.81E+01	4.08E-05	1.07E-01	1.33E-05	8.29E-04	2.88E-03	4.79E-04	1.27E-03	8.27E-04	8.48E-04	2.04E-04	1.41E-04	2.57E-08	4.27E-04	1.38E-04
11	F10	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	F10	80	Combination Short Haul Truck	13	0.00E+00	2.69E-06	1.99E-07	4.38E+00	7.06E-09	4.11E-03	1.93E-06	4.17E-03	3.12E-04	5.65E-05	1.63E-04	5.82E-05	6.04E-05	6.97E-04	1.47E-05	0.00E+00	1.03E-04	7.85E-04
11	F10	80	Combination Long Haul Truck	12	0.00E+00	3.75E-06	2.12E-07	4.07E+00	2.39E-08	4.86E-03	3.10E-06	4.45E-03	3.22E-04	5.16E-05	3.44E-04	6.83E-05	7.12E-05	6.53E-04	1.36E-05	0.00E+00	2.73E-04	8.39E-04
11	F13	80	Passenger Car	12	0.00E+00	1.27E-07	1.38E-08	5.18E-01	8.99E-07	2.52E-03	2.86E-07	1.28E-05	6.73E-05	1.13E-05	2.79E-05	1.80E-05	1.84E-05	1.83E-06	2.63E-06	5.62E-10	9.42E-06	2.00E-06
11	F13	80	Passenger Truck	21	0.00E+00	2.61E-07	2.78E-08	1.17E+00	1.70E-06	4.45E-03	5.53E-07	3.45E-05	1.20E-04	1.99E-05	5.31E-05	3.44E-05	3.53E-05	8.48E-06	5.89E-06	1.07E-09	1.78E-05	5.74E-06
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.33E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.28E-05
11	F13	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.56E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.71E-05
11	F14	80	Passenger Car	10	0.00E+00	1.04E-07	1.13E-08	4.23E-01	7.35E-07	2.06E-03	2.34E-07	1.05E-05	5.50E-05	9.21E-06	2.28E-05	1.47E-05	1.51E-05	1.50E-06	2.15E-06	4.60E-10	7.71E-06	1.63E-06
11	F14	80	Passenger Truck	17	0.00E+00	2.13E-07	2.28E-08	9.56E-01	1.39E-06	3.64E-03	4.52E-07	2.82E-05	9.80E-05	1.63E-05	4.34E-05	2.82E-05	2.89E-05	6.94E-06	4.82E-06	8.76E-10	1.45E-05	4.70E-06
11	F14	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F14	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.33E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.28E-05
11	F14	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.56E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.71E-05
10	F15	70	Passenger Car	439	0.00E+00	4.84E-06	5.26E-07	1.90E+01	3.44E-05	9.40E-02	1.09E-05	4.44E-04	3.38E-03	5.27E-04	1.07E-03	6.87E-04	7.05E-04	7.46E-05	9.63E-05	2.00E-08	3.60E-04	6.93E-05
10	F15	70	Passenger Truck	736	0.00E+00	1.02E-05	1.08E-06	4.27E+01	6.53E-05	1.66E-01	2.14E-05	1.29E-03	6.13E-03	9.48E-04	2.04E-03	1.33E-03	1.36E-03	3.26E-04	2.15E-04	3.85E-08	6.83E-04	2.17E-04
10	F15	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.03E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.53E-05
10	F15	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.04E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.49E-04
10	F15	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.39E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.02E-03
10	F16	70	Passenger Car	327	0.00E+00	3.61E-06	3.92E-07	1.41E+01	2.56E-05	7.00E-02	8.13E-06	3.31E-04	2.52E-03	3.93E-04	7.93E-04	5.11E-04	5.25E-04	5.56E-05	7.17E-05	1.49E-08	2.68E-04	5.16E-05
10	F16	70	Passenger Truck	548	0.00E+00	7.60E-06	8.07E-07	3.18E+01	4.86E-05	1.24E-01	1.59E-05	9.62E-04	4.56E-03	7.06E-04	1.52E-03	9.89E-04	1.01E-03	2.43E-04	1.60E-04	2.86E-08	5.09E-04	1.62E-04
10	F16	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.37E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	F16	70	Combination Short Haul Truck	26	0.00E+00	6.73E-06	5.01E-07	9.09E+00	1.71E-08	9.72E-03	4.80E-06	1.01E-02	9.49E-04	1.58E-04	4.04E-04	1.46E-04	1.51E-04	1.45E-03	3.04E-05	0.00E+00	2.52E-04	1.90E-03
10	F16	70	Combination Long Haul Truck	24	0.00E+00	9.23E-06	5.25E-07	8.54E+00	5.79E-08	1.16E-02	7.59E-06	1.08E-02	9.88E-04	1.49E-04	8.39E-04	1.69E-04	1.76E-04	1.37E-03	2.86E-05	0.00E+00	6.63E-04	2.03E-03
10	F17	70	Passenger Car	179	0.00E+00	1.98E-06	2.15E-07	7.75E+00	1.40E-05	3.84E-02	4.46E-06	1.81E-04	1.38E-03	2.15E-04	4.35E-04	2.81E-04	2.88E-04	3.05E-05	3.93E-05	8.17E-09	1.47E-04	2.83E-05
10	F17	70	Passenger Truck	301	0.00E+00	4.17E-06	4.43E-07	1.74E+01	2.67E-05	6.79E-02	8.73E-06	5.28E-04	2.50E-03	3.87E-04	8.35E-04	5.43E-04	5.56E-04	1.33E-04	8.77E-05	1.57E-08	2.79E-04	8.86E-05
10	F17	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	F17	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.84E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.11E-04
10	F17	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.18E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.75E-04
10	F18	70	Passenger Car	285	0.00E+00	3.14E-06	3.41E-07	1.23E+01	2.23E-05	6.09E-02	7.08E-06	2.88E-04	2.19E-03	3.42E-04	6.91E-04	4.45E-04	4.57E-04	4.84E-05	6.25E-05	1.30E-08	2.34E-04	4.49E-05
10	F18	70	Passenger Truck	477	0.00E+00	6.61E-06	7.03E-07	2.77E+01	4.23E-05	1.08E-01	1.39E-05	8.38E-04	3.97E-03	6.15E-04	1.33E-03	8.61E-04	8.83E-04	2.12E-04	1.39E-04	2.49E-08	4.43E-04	1.41E-04
10	F18	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	F18	70	Combination Short Haul Truck	35	0.00E+00	9.02E-06	6.71E-07	1.22E+01	2.29E-08	1.30E-02	6.43E-06	1.35E-02	1.27E-03	2.12E-04	5.41E-04	1.95E-04	2.03E-04	1.94E-03	4.07E-05	0.00E+00	3.38E-04	2.54E-03
10	F18	70	Combination Long Haul Truck	32	0.00E+00	1.24E-05	7.03E-07	1.14E+01	7.75E-08	1.55E-02	1.02E-05	1.45E-02	1.32E-03	1.99E-04	1.12E-03	2.26E-04	2.35E-04	1.84E-03	3.83E-05	0.00E+00	8.89E-04	2.72E-03
10	F19	70	Passenger Car	331	0.00E+00	3.65E-06	3.96E-07	1.43E+01	2.59E-05	7.08E-02	8.22E-06	3.35E-04	2.55E-03	3.97E-04	8.02E-04	5.17E-04	5.31E-04	5.62E-05	7.25E-05	1.51E-08	2.71E-04	5.22E-05
10	F19	70	Passenger Truck	554	0.00E+00	7.68E-06	8.16E-07	3.22E+01	4.92E-05	1.25E-01	1.61E-05	9.73E-04	4.61E-03	7.14E-04	1.54E-03	1.00E-03	1.03E-03	2.46E-04	1.62E-04	2.90E-08	5.15E-04	1.63E-04
10	F20	70	Passenger Car	492	0.00E+00	5.43E-06	5.90E-07	2.13E+01	3.85E-05	1.05E-01	1.22E-05	4.98E-04	3.79E-03	5.91E-04	1.19E-03	7.70E-04	7.90E-04	8.37E-05	1.08E-04	2.24E-08	4.04E-04	7.77E-05
10	F20	70	Passenger Truck	825	0.00E+00	1.14E-05	1.22E-06	4.79E+01	7.32E-05	1.86E-01	2.40E-05	1.45E-03	6.87E-03	1.06E-03	2.29E-03	1.49E-03	1.53E-03	3.66E-04	2.41E-04	4.31E-08	7.66E-04	2.43E-04
10	F21	70	Passenger Car	310	0.00E+00	3.42E-06	3.71E-07	1.34E+01	2.42E-05	6.63E-02	7.70E-06	3.13E-04	2.39E-03	3.72E-04	7.51E-04	4.84E-04	4.97E-04	5.27E-05	6.79E-05	1.41E-08	2.54E-04	4.89E-05
10	F21	70	Passenger Truck	519	0.00E+00	7.20E-06	7.65E-07	3.01E+01	4.61E-05	1.17E-01	1.51E-05	9.12E-04	4.32E-03	6.69E-04	1.44E-03	9.37E-04	9.60E-04	2.30E-04	1.51E-04	2.71E-08	4.82E-04	1.53E-04
10	F21	70	Single Unit Short Haul Truck	86	0.00E+00	1.52E-05	6.16E-07	1.41E+01	1.02E-05	2.56E-02	1.65E-05	6.04E-03	1.37E-03	2.51E-04	2.04E-03	3.90E-04	3.97E-04	1.44E-03	5.75E-05	2.32E-08	1.65E-03	1.13E-03
10	F21	70	Single Unit Long Haul Truck	4	0.00E+00	6.60E-07	2.66E-08	5.99E-01	4.38E-07	1.07E-03	7.18E-07	2.60E-04	6.27E-05	1.12E-05	8.92E-05	1.68E-05	1.72E-05	6.06E-05	2.44E-06	9.77E-10	7.21E-05	4.86E-05
10	F21	70	Combination Short Haul Truck	48	0.00E+00	1.22E-05	9.11E-07	1.65E+01	3.11E-08	1.77E-02	8.73E-06	1.83E-02	1.73E-03	2.88E-04	7.35E-04	2.65E-04	2.76E-04	2.63E-03	5.53E-05	0.00E+00	4.59E-04	3.46E-03
10	F21	70	Combination Long Haul Truck	43	0.00E+00	1.68E-05	9.55E-07	1.55E+01	1.05E-07	2.11E-02	1.38E-05	1.96E-02	1.80E-03	2.71E-04	1.53E-03	3.07E-04	3.20E-04	2.49E-03	5.21E-05	0.00E+00	1.21E-03	3.70E-03
10	F22	70	Passenger Car	471	0.00E+00	5.19E-06	5.64E-07	2.03E+01	3.68E-05	1.01E-01	1.17E-05	4.76E-04	3.63E-03	5.65E-04	1.14E-03	7.36E-04	7.55E-04	8.00E-05	1.03E-04	2.14E-08	3.86E-04	7.43E-05
10	F22	70	Passenger Truck	788	0.00E+00	1.09E-05	1.16E-06	4.58E+01	7.00E-05	1.78E-01	2.29E-05	1.38E-03	6.57E-03	1.02E-03	2.19E-03	1.42E-03	1.46E-03	3.49E-04	2.30E-04	4.12E-08	7.32E-04	2.32E-04
10	F22	70	Single Unit Short Haul Truck	114	0.00E+00	2.01E-05	8.15E-07	1.87E+01	1.34E-05	3.39E-02	2.18E-05	7.99E-03	1.81E-03	3.33E-04	2.70E-03	5.15E-04	5.25E-04	1.90E-03	7.60E-05	3.07E-08	2.18E-03	1.49E-03
10	F22	70	Single Unit Long Haul Truck	5	0.00E+00	8.73E-07	3.51E-08	7.91E-01	5.79E-07	1.42E-03	9.49E-07	3.44E-04	8.29E-05	1.49E-05	1.18E-04	2.23E-05	2.27E-05	8.01E-05	3.22E-06	1.29E-09	9.53E-05	6.43E-05
10	F22	70	Combination Short Haul Truck	59	0.00E+00	1.51E-05	1.12E-06	2.04E+01	3.83E-08	2.18E-02	1.07E-05	2.26E-02	2.12E-03	3.54E-04	9.04E-04	3.27E-04	3.39E-04	3.24E-03	6.81E-05	0.00E+00	5.65E-04	4.25E-03
10	F22	70	Combination Long Haul Truck	53	0.00E+00	2.07E-05	1.18E-06	1.91E+01	1.30E-07	2.60E-02	1.70E-05	2.42E-02	2.21E-03	3.33E-04	1.88E-03	3.78E-04	3.94E-04	3.07E-03	6.41E-05	0.00E+00	1.49E-03	4.55E-03
10	F23	70	Passenger Car	108	0.00E+00	1.20E-06	1.30E-07	4.68E+00	8.48E-06	2.32E-02	2.70E-06	1.10E-04	8.35E-04	1.30E-04	2.63E-04	1.69E-04	1.74E-04	1.84E-05	2.38E-05	4.94E-09	8.89E-05	1.71E-05
10	F23	70	Passenger Truck	182	0.00E+00	2.52E-06	2.68E-07	1.05E+01	1.61E-05	4.10E-02	5.28E-06	3.19E-04	1.51E-03	2.34E-04	5.05E-04	3.28E-04	3.36E-04	8.05E-05	5.30E-05	9.49E-09	1.69E-04	5.35E-05
10	F23	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.64E-04
10	F23	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.07E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
10	F23	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.63E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.73E-04
10	F23	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.96E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.35E-04
10	F24	70	Passenger Car	165	0.00E+00	1.82E-06	1.98E-07	7.12E+00	1.29E-05	3.53E-02	4.10E-06	1.67E-04	1.27E-03	1.98E-04	4.00E-04	2.58E-04	2.65E-04	2.80E-05	3.61E-05	7.51E-09	1.35E-04	2.60E-05
10	F24	70	Passenger Truck	276	0.00E+00	3.83E-06	4.07E-07	1.60E+01	2.45E-05	6.24E-02	8.02E-06	4.85E-04	2.30E-03	3.56E-04	7.67E-04	4.99E-04	5.11E-04	1.22E-04	8.06E-05	1.44E-08	2.56E-04	8.14E-05
10	F24	70	Single Unit Short Haul Truck	28	0.00E+00	4.89E-06	1.99E-07	4.55E+00	3.28E-06	8.25E-03	5.32E-06	1.95E-03	4.41E-04	8.10E-05	6.59E-04	1.26E-04	1.28E-04	4.62E-04	1.85E-05	7.47E-09	5.31E-04	3.64E-04
10	F24	70	Single Unit Long Haul Truck	1	0.00E+00	2.13E-07	8.56E-09	1.93E-01	1.41E-07	3.46E-04	2.31E-07	8.38E-05	2.02E-05	3.62E-06	2.88E-05	5.42E-06	5.53E-06	1.95E-05	7.86E-07	3.15E-10	2.32E-05	1.57E-05
10	F24	70	Combination Short Haul Truck	16	0.00E+00	4.04E-06	3.00E-07	5.46E+00	1.03E-08	5.83E-03	2.88E-06	6.05E-03	5.69E-04	9.49E-05	2.42E-04	8.75E-05	9.08E-05	8.67E-04	1.82E-05	0.00E+00	1.51E-04	1.14E-03
10	F24	70	Combination Long Haul Truck	14	0.00E+00	5.54E-06	3.15E-07	5.12E+00	3.47E-08	6.96E-03	4.55E-06	6.47E-03	5.93E-04	8.93E-05	5.03E-04	1.01E-04	1.05E-04	8.22E-04	1.72E-05	0.00E+00	3.98E-04	1.22E-03
9	F25	60	Passenger Car	430	0.00E+00	5.44E-06	5.91E-07

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F28	60	Combination Long Haul Truck	73	0.00E+00	3.21E-05	1.75E-06	2.66E+01	2.17E-07	4.19E-02	2.68E-05	3.80E-02	4.27E-03	6.18E-04	3.04E-03	5.73E-04	5.97E-04	4.27E-03	8.92E-05	0.00E+00	2.45E-03	7.16E-03
9	F29	60	Passenger Car	470	0.00E+00	5.94E-06	6.45E-07	2.12E+01	4.21E-05	1.15E-01	1.34E-05	4.83E-04	4.74E-03	7.10E-04	1.31E-03	8.42E-04	8.64E-04	9.31E-05	1.07E-04	2.25E-08	4.42E-04	7.54E-05
9	F29	60	Passenger Truck	786	0.00E+00	1.26E-05	1.34E-06	4.73E+01	7.96E-05	1.96E-01	2.62E-05	1.50E-03	8.67E-03	1.29E-03	2.49E-03	1.62E-03	1.66E-03	3.81E-04	2.37E-04	4.40E-08	8.31E-04	2.55E-04
9	F29	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
9	F29	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.76E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
9	F29	60	Combination Short Haul Truck	12	0.00E+00	3.36E-06	2.47E-07	4.05E+00	9.20E-09	5.02E-03	2.41E-06	5.13E-03	5.86E-04	9.17E-05	2.07E-04	7.22E-05	7.49E-05	6.44E-04	1.36E-05	0.00E+00	1.32E-04	9.67E-04
9	F29	60	Combination Long Haul Truck	10	0.00E+00	4.61E-06	2.52E-07	3.83E+00	3.11E-08	6.03E-03	3.86E-06	5.47E-03	6.15E-04	8.89E-05	4.38E-04	8.23E-05	8.58E-05	6.14E-04	1.28E-05	0.00E+00	3.52E-04	1.03E-03
9	F30	60	Passenger Car	298	0.00E+00	3.77E-06	4.10E-07	1.35E+01	2.67E-05	7.27E-02	8.50E-06	3.07E-04	3.01E-03	4.51E-04	8.29E-04	5.34E-04	5.48E-04	5.91E-05	6.81E-05	1.43E-08	2.80E-04	4.79E-05
9	F30	60	Passenger Truck	499	0.00E+00	8.00E-06	8.48E-07	3.00E+01	5.05E-05	1.25E-01	1.66E-05	9.54E-04	5.50E-03	8.18E-04	1.58E-03	1.03E-03	1.06E-03	2.42E-04	1.50E-04	2.79E-08	5.27E-04	1.62E-04
9	F30	60	Single Unit Short Haul Truck	32	0.00E+00	7.06E-06	2.92E-07	5.26E+00	4.68E-06	9.25E-03	7.63E-06	2.71E-03	7.27E-04	1.22E-04	9.42E-04	1.81E-04	1.85E-04	5.33E-04	2.14E-05	8.83E-09	7.57E-04	5.07E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	3.08E-07	1.27E-08	2.24E-01	2.03E-07	3.93E-04	3.33E-07	1.17E-04	3.27E-05	5.42E-06	4.12E-05	7.88E-06	8.04E-06	2.27E-05	9.15E-07	3.76E-10	3.31E-05	2.20E-05
9	F30	60	Combination Short Haul Truck	20	0.00E+00	5.80E-06	4.26E-07	7.00E+00	1.59E-08	8.67E-03	4.17E-06	8.86E-03	1.01E-03	1.58E-04	3.57E-04	1.25E-04	1.29E-04	1.11E-03	2.34E-05	0.00E+00	2.28E-04	1.67E-03
9	F30	60	Combination Long Haul Truck	18	0.00E+00	7.97E-06	4.35E-07	6.61E+00	5.38E-08	1.04E-02	6.67E-06	9.45E-03	1.06E-03	1.53E-04	7.56E-04	1.42E-04	1.48E-04	1.06E-03	2.22E-05	0.00E+00	6.08E-04	1.78E-03
10	F45	70	Passenger Car	277	0.00E+00	3.05E-06	3.31E-07	1.20E+01	2.16E-05	5.92E-02	6.88E-06	2.80E-04	2.13E-03	3.32E-04	6.71E-04	4.32E-04	4.44E-04	4.70E-05	6.06E-05	1.26E-08	2.27E-04	4.37E-05
10	F45	70	Passenger Truck	463	0.00E+00	6.42E-06	6.83E-07	2.69E+01	4.11E-05	1.05E-01	1.35E-05	8.14E-04	3.86E-03	5.97E-04	1.29E-03	8.37E-04	8.57E-04	2.05E-04	1.35E-04	2.42E-08	4.30E-04	1.37E-04
10	F45	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	F45	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	F45	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	F46	70	Passenger Car	273	0.00E+00	3.01E-06	3.27E-07	1.18E+01	2.14E-05	5.84E-02	6.78E-06	2.76E-04	2.10E-03	3.28E-04	6.62E-04	4.27E-04	4.38E-04	4.64E-05	5.98E-05	1.24E-08	2.24E-04	4.31E-05
10	F46	70	Passenger Truck	457	0.00E+00	6.34E-06	6.73E-07	2.65E+01	4.06E-05	1.03E-01	1.33E-05	8.03E-04	3.81E-03	5.89E-04	1.27E-03	8.25E-04	8.46E-04	2.03E-04	1.33E-04	2.39E-08	4.24E-04	1.35E-04
10	F46	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	F46	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
9	F47	60	Passenger Car	11	0.00E+00	1.37E-07	1.49E-08	4.89E-01	9.73E-07	2.65E-03	3.09E-07	1.12E-05	1.09E-04	1.64E-05	3.02E-05	1.94E-05	2.00E-05	2.15E-06	2.48E-06	5.21E-10	1.02E-05	1.74E-06
9	F47	60	Passenger Truck	18	0.00E+00	2.91E-07	3.09E-08	1.09E+00	1.84E-06	4.53E-03	6.04E-07	3.47E-05	2.00E-04	2.98E-05	5.76E-05	3.75E-05	3.84E-05	8.80E-06	5.47E-06	1.01E-09	1.92E-05	5.88E-06
9	F47	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	F47	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	F47	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.36E-05
9	F48	60	Passenger Car	2	0.00E+00	2.36E-08	2.57E-09	8.44E-02	1.68E-07	4.56E-04	5.33E-08	1.92E-06	1.89E-05	2.83E-06	5.20E-06	3.35E-06	3.44E-06	3.71E-07	4.27E-07	8.98E-11	1.76E-06	3.00E-07
9	F48	60	Passenger Truck	3	0.00E+00	5.02E-08	5.32E-09	1.88E-01	3.17E-07	7.82E-04	1.04E-07	5.99E-06	3.45E-05	5.13E-06	9.93E-06	6.46E-06	6.62E-06	1.52E-06	9.44E-07	1.75E-10	3.31E-06	1.01E-06
9	F48	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
9	F49	60	Passenger Car	786	0.00E+00	9.94E-06	1.08E-06	3.55E+01	7.06E-05	1.92E-01	2.24E-05	8.09E-04	7.94E-03	1.19E-03	2.19E-03	1.41E-03	1.45E-03	1.56E-04	1.80E-04	3.78E-08	7.40E-04	1.26E-04
9	F49	60	Passenger Truck	1317	0.00E+00	2.11E-05	2.24E-06	7.91E+01	1.33E-04	3.29E-01	4.38E-05	2.52E-03	1.45E-02	2.16E-03	4.18E-03	2.72E-03	2.78E-03	6.38E-04	3.97E-04	7.36E-08	1.39E-03	4.27E-04
9	F49	60	Single Unit Short Haul Truck	147	0.00E+00	3.27E-05	1.35E-06	2.44E+01	2.17E-05	4.29E-02	3.54E-05	1.26E-02	3.37E-03	5.67E-04	4.37E-03	8.41E-04	8.58E-04	2.47E-03	9.94E-05	4.09E-08	3.51E-03	2.35E-03
9	F49	60	Single Unit Long Haul Truck	6	0.00E+00	1.43E-06	5.87E-08	1.04E+00	9.40E-07	1.82E-03	1.54E-06	5.44E-04	1.51E-04	2.51E-05	1.91E-04	3.65E-05	3.73E-05	1.05E-04	4.24E-06	1.74E-09	1.54E-04	1.02E-04
9	F49	60	Combination Short Haul Truck	81	0.00E+00	2.37E-05	1.74E-06	2.86E+01	6.48E-08	3.54E-02	1.70E-05	3.62E-02	4.13E-03	6.46E-04	1.46E-03	5.08E-04	5.28E-04	4.54E-03	9.55E-05	0.00E+00	9.30E-04	6.81E-03
9	F49	60	Combination Long Haul Truck	74	0.00E+00	3.25E-05	1.78E-06	2.70E+01	2.19E-07	4.25E-02	2.72E-05	3.85E-02	4.33E-03	6.26E-04	3.08E-03	5.80E-04	6.04E-04	4.33E-03	9.04E-05	0.00E+00	2.48E-03	7.26E-03
9	F50	60	Passenger Car	933	0.00E+00	1.18E-05	1.28E-06	4.21E+01	8.38E-05	2.28E-01	2.66E-05	9.61E-04	9.42E-03	1.41E-03	2.60E-03	1.67E-03	1.72E-03	1.85E-04	2.13E-04	4.48E-08	8.78E-04	1.50E-04
9	F50	60	Passenger Truck	1563	0.00E+00	2.51E-05	2.66E-06	9.39E+01	1.58E-04	3.90E-01	5.20E-05	2.99E-03	1.72E-02	2.56E-03	4.96E-03	3.22E-03	3.30E-03	7.57E-04	4.71E-04	8.73E-08	1.65E-03	5.06E-04
9	F50	60	Single Unit Short Haul Truck	139	0.00E+00	3.10E-05	1.28E-06	2.31E+01	2.05E-05	4.06E-02	3.35E-05	1.19E-02	3.19E-03	5.37E-04	4.14E-03	7.97E-04	8.13E-04	2.34E-03	9.42E-05	3.88E-08	3.32E-03	2.23E-03
9	F50	60	Single Unit Long Haul Truck	6	0.00E+00	1.35E-06	5.56E-08	9.85E-01	8.91E-07	1.73E-03	1.46E-06	5.16E-04	1.44E-04	2.38E-05	1.81E-04	3.46E-05	3.53E-05	9.95E-05	4.02E-06	1.65E-09	1.46E-04	9.65E-05
9	F50	60	Combination Short Haul Truck	67	0.00E+00	1.97E-05	1.45E-06	2.38E+01	5.39E-08	2.94E-02	1.41E-05	3.01E-02	3.44E-03	5.37E-04	1.21E-03	4.23E-04	4.39E-04	3.78E-03	7.95E-05	0.00E+00	7.74E-04	5.67E-03
9	F50	60	Combination Long Haul Truck	62	0.00E+00	2.71E-05	1.48E-06	2.24E+01	1.83E-07	3.53E-02	2.26E-05	3.21E-02	3.60E-03	5.21E-04	2.57E-03	4.83E-04	5.03E-04	3.60E-03	7.52E-05	0.00E+00	2.06E-03	6.04E-03
10	F51	70	Passenger Car	287	0.00E+00	3.17E-06	3.44E-07	1.24E+01	2.25E-05	6.14E-02	7.14E-06	2.90E-04	2.21E-03	3.45E-04	6.96E-04	4.49E-04	4.61E-04	4.88E-05	6.29E-05	1.31E-08	2.35E-04	4.53E-05
10	F51	70	Passenger Truck	481	0.00E+00	6.67E-06	7.09E-07	2.79E+01	4.27E-05	1.09E-01	1.40E-05	8.44E-04	4.00E-03	6.20E-04	1.34E-03	8.68E-04	8.90E-04	2.13E-04	1.40E-04	2.51E-08	4.47E-04	1.42E-04
10	F51	70	Single Unit Short Haul Truck	124	0.00E+00	2.17E-05	8.83E-07	2.02E+01	1.46E-05	3.67E-02	2.36E-05	8.66E-03	1.96E-03	3.60E-04	2.93E-03	5.58E-04	5.69E-04	2.06E-03	8.23E-05	3.32E-08	2.36E-03	1.62E-03
10	F51	70	Single Unit Long Haul Truck	5	0.00E+00	9.46E-07	3.81E-08	8.58E-01	6.27E-07	1.54E-03	1.03E-06	3.73E-04	8.99E-05	1.61E-05	1.28E-04	2.41E-05	2.46E-05	8.68E-05	3.50E-06	1.40E-09	1.03E-04	6.97E-05
10	F51	70	Combination Short Haul Truck	55	0.00E+00	1.41E-05	1.05E-06	1.91E+01	3.59E-08	2.04E-02	1.01E-05	2.12E-02	1.99E-03	3.32E-04	8.48E-04	3.06E-04	3.18E-04	3.03E-03	6.38E-05	0.00E+00	5.30E-04	3.99E-03
10	F51	70	Combination Long Haul Truck	50	0.00E+00	1.94E-05	1.10E-06	1.79E+01	1.22E-07	2.44E-02	1.59E-05	2.27E-02	2.07E-03	3.12E-04	1.76E-03	3.54E-04	3.69E-04	2.88E-03	6.01E-05	0.00E+00	1.39E-03	4.27E-03
10	F52	70	Passenger Car	879	0.00E+00	9.69E-06	1.05E-06	3.80E+01	6.88E-05	1.88E-01	2.19E-05	8.89E-04	6.77E-03	1.06E-03	2.13E-03	1.37E-03	1.41E-03	1.49E-04	1.93E-04	4.00E-08	7.21E-04	1.39E-04
10	F52	70	Passenger Truck	1473	0.00E+00	2.04E-05	2.17E-06	8.55E+01	1.31E-04	3.33E-01	4.28E-05	2.59E-03	1.23E-02	1.90E-03	4.09E-03	2.66E-03	2.73E-03	6.53E-04	4.30E-04	7.70E-08	1.37E-03	4.34E-04
10	F52	70	Single Unit Short Haul Truck	52	0.00E+00	9.10E-06	3.70E-07	8.47E+00	6.10E-06	1.54E-02	9.90E-06	3.62E-03	8.22E-04	1.51E-04	1.23E-03	2.34E-04	2.38E-04	8.61E-04	3.45E-05	1.39E-08	9.89E-04	6.78E-04
10	F52	70	Single Unit Long Haul Truck	2	0.00E+00	3.96E-07	1.59E-08	3.59E-01	2.63E-07	6.45E-04	4.31E-07	1.56E-04	3.76E-05	6.74E-06	5.35E-05	1.01E-05	1.03E-05	3.63E-05	1.46E-06	5.86E-10	4.32E-05	2.92E-05
10	F52	70	Combination Short Haul Truck	27	0.00E+00	6.87E-06	5.11E-07	9.27E+00	1.74E-08	9.92E-03	4.89E-06	1.03E-02	9.68E-04	1.61E-04	4.12E-04	1.49E-04	1.54E-04	1.47E-03	3.10E-05	0.00E+00	2.57E-04	1.94E-03
10	F52	70	Combination Long Haul Truck	24	0.00E+00	9.41E-06	5.35E-07	8.71E+00	5.90E-08	1.18E-02	7.74E-06	1.10E-02	1.01E-03	1.52E-04	8.56E-04	1.72E-04	1.79E-04	1.40E-03	2.92E-05	0.00E+00	6.77E-04	2.07E-03
10	F53	70	Passenger Car	286	0.00E+00	3.16E-06	3.43E-07	1.24E+01	2.24E-05	6.13E-02	7.12E-06	2.90E-04	2.21E-03	3.44E-04	6.94E-04	4.48E-04	4.59E-04	4.87E-05	6.28E-05	1.30E-08	2.35E-04	4.52E-05
10	F53	70	Passenger Truck	480	0.00E+00	6.65E-06	7.07E-07	2.78E+01	4.26E-05	1.08E-01	1.39E-05	8.42E-04	3.99E-03	6.18E-04	1.33E-03	8.66E-04	8.87E-04	2.13E-04	1.40E-04	2.51E-08	4.45E-04	1.41E-04
10	F53	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.71E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.26E-04
10	F53	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.42E-04
10	F53	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.66E-04
10	F54	70	Passenger Car	769	0.00E+00	8.47E-06	9.21E-07	3.32E+01	6.01E-05	1.64E-01	1.91E-05	7.77E-04	5.92E-03	9.23E-04	1.86E-03	1.20E-03	1.23E-03	1.31E-04	1.69E-04	3.50E-08	6.30E-04	1.21E-04
10	F54	70	Passenger Truck	1287	0.00E+00	1.78E-05	1.90E-06	7.47E+01	1.14E-04	2.91E-01	3.74E-05	2.26E-03	1.07E-02	1.66E-03	3.58E-03	2.32E-03	2.38E-03	5.71E-04	3.76E-04	6.73E-08	1.20E-03	3.80E-04
10	F54	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.37E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	F54	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.66E-04
10	F54	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
53	F71	70	Passenger Car	364	0.00E+00	3.89E-06	4.23E-07	1.59E+01	2.76E-05	7.48E-02	8.77E-06	3.74E-04	2.76E-03	4.32E-04	8.55E-04	5.51E-04	5.66E-04	6.18E-05	8.07E-05	1.68E-08	2.89E-04	5.84E-05
53	F71	70	Passenger Truck	609	0.00E+00	8.12E-06	8.64E-07	3.58E+01	5.22E-05	1.32E-01	1.71E-05	1.06E-03	4.93E-03	7.66E-04	1.63E-03	1.06E-03	1.09E-03	2.68E-04	1.80E-04	3.15E-08	5.45E-04	1.77E-04
53	F71	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
53	F71	70	Single Unit Long Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
53	F71	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
50	F72	40	Passenger Car	323	0.00E+00	4.58E-06	4.98E-07	1.69E+01	3.25E-05	8.76E-02	1.03E-05	2.95E-04	5.57E-03	7.83E-04	1.01E-03	6.50E-04	6.67E-04	9.60E-05	8.47E-05	1.57E-08	3.41E-04	4.60E-05
50	F72	40	Passenger Truck	541	0.00E+00	1.01E-05	1.06E-06	3.67E+01	6.09E-05	1.45E-01	2.03E-05	1.14E-03	9.88E-03	1.37E-03	1.92E-03	1.25E-03	1.28E-03	3.28E-04	1.83E-04	2.67E-08	6.35E-04	1.97E-04
50	F72	40	Single Unit Short Haul Truck	50	0.00E+00	1.69E-05	7.52E-07	9.41E+00	1.17E-05	1.48E-02	1.81E-05	6.82E-03	1.96E-03	3.06E-04	2.17E-03	4.53E-04	4.61E-04	9.61E-04	3.83E-05	1.63E-08	1.71E-03	1.28E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	7.41E-07	3.28E-08	4.06E-01	5.12E-07	6.42E-04	7.93E-07	2.97E-04	8.78E-05	1.36E-05	9.55E-05	1.98E-05	2.02E-05	4.15E-05	1.66E-06	7.06E-10	7.53E-05	5.57E-05
50	F72	40	Combination Short Haul Truck	22	0.00E+00	1.08E-05	8.10E-07	9.33E+00	2.69E-08	1.53E-02	7.71E-06	1.58E-02	2.19E-03	3.26E-04	6.45E-04	2.36E-04	2.45E-04	1.48E-03	3.12E-05	0.00E+00	4.00E-04	2.98E-03
50	F72	40	Combination Long Haul Truck	21	0.00E+00	1.44E-05	8.14E-07	8.95E+00	9.16E-08	1.86E-02	1.19E-05	1.67E-02	2.27E-03	3.19E-04	1.32E-03	2.62E-04	2.73E-04	1.44E-03	3.00E-05	0.00E+00	1.05E-03	3.14E-03
52	F73	60	Passenger Car	27	0.00E+00	3.08E-07	3.35E-08	1.20E+00	2.19E-06	5.91E-03	6.95E-07	2.63E-05	2.61E-04	3.91E-05	6.78E-05	4.37E-05	4.49E-05	5.26E-06	6.07E-06	1.24E-09	2.29E-05	4.11E-06
52	F73	60	Passenger Truck	44	0.00E+00	6.51E-07	6.90E-08	2.67E+00	4.10E-06	1.02E-02	1.35E-06	8.03E-05	4.63E-04	6.87E-05	1.29E-04	8.37E-05	8.58E-05	2.11E-05	1.34E-05	2.26E-09	4.29E-05	1.36E-05
53	F74	70	Passenger Car	340	0.00E+00	3.64E-06	3.95E-07	1.49E+01	2.58E-05	7.00E-02	8.20E-06	3.50E-04	2.58E-03	4.04E-04	8.00E-04	5.16E-04	5.29E-04	5.78E-05	7.54E-05	1.57E-08	2.70E-04	5.46E-05
53	F74	70	Passenger Truck	570	0.00E+00	7.60E-06	8.08E-07	3.35E+01	4.88E-05	1.24E-01	1.60E-05	9.89E-04	4.61E-03	7.16E-04	1.53E-03	9.92E-04	1.02E-03	2.51E-04	1.68E-04	2.95E-08	5.10E-04	1.66E-04
53	F74	70	Single Unit Short Haul Truck	121	0.00E+00	2.12E-05	8.63E-07	1.98E+01	1.42E-05	3.58E-02	2.31E-05	8.46E-03	1.92E-03	3.52E-04	2.86E-03	5.45E-04	5.56E-04	2.01E-03	8.04E-05	3.25E-08	2.31E-03	1.58E-03
53	F74	70	Single Unit Long Haul Truck	5	0.00E+00	9.24E-07	3.72E-08	8.38E-01	6.13E-07	1.50E-03	1.01E-06	3.64E-04	8.78E-05	1.57E-05	1.25E-04	2.36E-05	2.40E-05	8.48E-05	3.41E-06	1.37E-09	1.01E-04	6.81E-05
53	F74	70	Combination Short Haul Truck	60	0.00E+00	1.53E-05	1.14E-06	2.07E+01	3.90E-08	2.22E-02	1.09E-05	2.30E-02	2.16E-03	3.61E-04	9.21E-04	3.33E-04	3.45E-04	3.29E-03	6.93E-05	0.00E+00	5.75E-04	4.33E-03
53	F74	70	Combination Long Haul

Appendix F.5.2: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
52	F79	60	Combination Long Haul Truck	7	0.00E+00	2.94E-06	1.60E-07	2.44E+00	1.98E-08	3.84E-03	2.46E-06	3.48E-03	3.91E-04	5.66E-05	2.79E-04	5.24E-05	5.46E-05	3.91E-04	8.16E-06	0.00E+00	2.24E-04	6.56E-04
53	F80	70	Passenger Car	605	0.00E+00	6.47E-06	7.03E-07	2.64E+01	4.59E-05	1.24E-01	1.46E-05	6.23E-04	4.59E-03	7.19E-04	1.42E-03	9.17E-04	9.41E-04	1.03E-04	1.34E-04	2.79E-08	4.81E-04	9.72E-05
53	F80	70	Passenger Truck	1014	0.00E+00	1.35E-05	1.44E-06	5.96E+01	8.68E-05	2.20E-01	2.84E-05	1.76E-03	8.20E-03	1.27E-03	2.72E-03	1.76E-03	1.81E-03	4.47E-04	3.00E-04	5.25E-08	9.07E-04	2.95E-04
53	F80	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
53	F80	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
53	F80	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
52	F81	60	Passenger Car	249	0.00E+00	2.89E-06	3.14E-07	1.12E+01	2.05E-05	5.54E-02	6.51E-06	2.47E-04	2.44E-03	3.66E-04	6.35E-04	4.10E-04	4.20E-04	4.93E-05	5.68E-05	1.16E-08	2.15E-04	3.85E-05
52	F81	60	Passenger Truck	416	0.00E+00	6.10E-06	6.46E-07	2.50E+01	3.84E-05	9.51E-02	1.26E-05	7.52E-04	4.33E-03	6.44E-04	1.21E-03	7.84E-04	8.04E-04	1.98E-04	1.25E-04	2.12E-08	4.02E-04	1.27E-04
52	F81	60	Single Unit Short Haul Truck	120	0.00E+00	2.67E-05	1.10E-06	1.99E+01	1.77E-05	3.50E-02	2.89E-05	1.03E-02	2.75E-03	4.63E-04	3.57E-03	6.87E-04	7.01E-04	2.02E-03	8.12E-05	3.34E-08	2.87E-03	1.92E-03
52	F81	60	Single Unit Long Haul Truck	5	0.00E+00	1.17E-06	4.80E-08	8.49E-01	7.68E-07	1.49E-03	1.26E-06	4.44E-04	1.24E-04	2.05E-05	1.56E-04	2.99E-05	3.04E-05	8.58E-05	3.46E-06	1.42E-09	1.25E-04	8.32E-05
52	F81	60	Combination Short Haul Truck	53	0.00E+00	1.54E-05	1.13E-06	1.86E+01	4.22E-08	2.30E-02	1.11E-05	2.36E-02	2.69E-03	4.21E-04	9.50E-04	3.31E-04	3.44E-04	2.96E-03	6.22E-05	0.00E+00	6.06E-04	4.44E-03
52	F81	60	Combination Long Haul Truck	48	0.00E+00	2.12E-05	1.16E-06	1.76E+01	1.43E-07	2.77E-02	1.77E-05	2.51E-02	2.82E-03	4.08E-04	2.01E-03	3.78E-04	3.94E-04	2.82E-03	5.89E-05	0.00E+00	1.62E-03	4.73E-03
50	F82	40	Passenger Car	61	0.00E+00	8.70E-07	9.46E-08	3.20E+00	6.17E-06	1.66E-02	1.96E-06	5.59E-05	1.06E-03	1.49E-04	1.91E-04	1.23E-04	1.27E-04	1.82E-05	1.61E-05	2.98E-09	6.47E-05	8.73E-06
50	F82	40	Passenger Truck	103	0.00E+00	1.92E-06	2.02E-07	6.97E+00	1.16E-05	2.75E-02	3.86E-06	2.16E-04	1.87E-03	2.60E-04	3.64E-04	2.38E-04	2.44E-04	6.22E-05	3.47E-05	5.06E-09	1.21E-04	3.73E-05
50	F82	40	Single Unit Short Haul Truck	11	0.00E+00	3.90E-06	1.73E-07	2.17E+00	2.70E-06	3.40E-03	4.17E-06	1.57E-03	4.52E-04	7.06E-05	5.01E-04	1.04E-04	1.06E-04	2.22E-04	8.85E-06	3.75E-09	3.95E-04	2.95E-04
50	F82	40	Single Unit Long Haul Truck	1	0.00E+00	1.71E-07	7.57E-09	9.38E-02	1.18E-07	1.48E-04	1.83E-07	6.86E-05	2.03E-05	3.15E-06	2.20E-05	4.57E-06	4.66E-06	9.58E-06	3.82E-07	1.63E-10	1.74E-05	1.28E-05
50	F82	40	Combination Short Haul Truck	6	0.00E+00	2.78E-06	2.07E-07	2.39E+00	6.87E-09	3.92E-03	1.97E-06	4.05E-03	5.59E-04	8.34E-05	1.65E-04	6.03E-05	6.26E-05	3.79E-04	7.98E-06	0.00E+00	1.02E-04	7.63E-04
50	F82	40	Combination Long Haul Truck	5	0.00E+00	3.69E-06	2.08E-07	2.29E+00	2.34E-08	4.76E-03	3.04E-06	4.27E-03	5.81E-04	8.16E-05	3.38E-04	6.71E-05	6.99E-05	3.68E-04	7.67E-06	0.00E+00	2.68E-04	8.04E-04

Appendix F.5.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A17	0.00E+00	2.30E-04	1.61E-05	5.20E+02	3.57E-04	1.43E+00	2.58E-04	2.20E-01	1.85E-02	4.54E-03	2.62E-02	1.05E-02	1.08E-02	4.50E-02	2.17E-03	3.94E-07	1.54E-02	4.13E-02
A18	0.00E+00	2.19E-04	1.54E-05	4.96E+02	3.42E-04	1.37E+00	2.46E-04	2.10E-01	1.76E-02	4.33E-03	2.50E-02	1.00E-02	1.03E-02	4.29E-02	2.07E-03	3.76E-07	1.47E-02	3.93E-02
A19	0.00E+00	2.16E-04	1.51E-05	4.86E+02	3.31E-04	1.33E+00	2.42E-04	2.08E-01	1.72E-02	4.23E-03	2.45E-02	9.77E-03	1.00E-02	4.25E-02	2.03E-03	3.66E-07	1.44E-02	3.90E-02
A20	0.00E+00	2.17E-04	1.50E-05	4.76E+02	3.04E-04	1.25E+00	2.37E-04	2.13E-01	1.66E-02	4.10E-03	2.41E-02	9.34E-03	9.60E-03	4.36E-02	1.96E-03	3.53E-07	1.45E-02	4.00E-02
A21	0.00E+00	2.64E-04	1.84E-05	5.92E+02	4.01E-04	1.62E+00	2.94E-04	2.54E-01	2.10E-02	5.15E-03	2.98E-02	1.19E-02	1.22E-02	5.19E-02	2.46E-03	4.46E-07	1.76E-02	4.76E-02
A22	0.00E+00	2.37E-04	1.67E-05	5.45E+02	3.89E-04	1.54E+00	2.71E-04	2.22E-01	1.96E-02	4.79E-03	2.75E-02	1.12E-02	1.15E-02	4.56E-02	2.29E-03	4.24E-07	1.60E-02	4.16E-02
A23	0.00E+00	2.52E-04	1.72E-05	5.42E+02	3.30E-04	1.38E+00	2.71E-04	2.50E-01	1.86E-02	4.64E-03	2.76E-02	1.04E-02	1.07E-02	5.14E-02	2.21E-03	3.99E-07	1.69E-02	4.69E-02
A24	0.00E+00	2.28E-04	1.66E-05	5.63E+02	4.61E-04	1.75E+00	2.79E-04	1.98E-01	2.11E-02	5.09E-03	2.82E-02	1.22E-02	1.26E-02	4.10E-02	2.44E-03	4.66E-07	1.56E-02	3.70E-02
A25	0.00E+00	2.37E-04	1.62E-05	5.12E+02	3.17E-04	1.32E+00	2.56E-04	2.33E-01	1.77E-02	4.39E-03	2.61E-02	9.91E-03	1.02E-02	4.79E-02	2.10E-03	3.79E-07	1.59E-02	4.38E-02
A26	0.00E+00	1.90E-04	1.37E-05	4.60E+02	3.63E-04	1.40E+00	2.28E-04	1.69E-01	1.70E-02	4.13E-03	2.31E-02	9.83E-03	1.01E-02	3.49E-02	1.98E-03	3.75E-07	1.30E-02	3.16E-02
A27	0.00E+00	2.37E-04	1.62E-05	5.12E+02	3.17E-04	1.32E+00	2.56E-04	2.33E-01	1.77E-02	4.39E-03	2.61E-02	9.91E-03	1.02E-02	4.79E-02	2.10E-03	3.79E-07	1.59E-02	4.38E-02
A28	0.00E+00	1.90E-04	1.37E-05	4.60E+02	3.63E-04	1.40E+00	2.28E-04	1.69E-01	1.70E-02	4.13E-03	2.31E-02	9.83E-03	1.01E-02	3.49E-02	1.98E-03	3.75E-07	1.30E-02	3.16E-02
B15	0.00E+00	5.99E-05	4.59E-06	1.82E+02	1.82E-04	5.77E-01	8.69E-05	4.29E-02	9.95E-03	2.02E-03	8.92E-03	4.24E-03	4.35E-03	9.31E-03	8.30E-04	1.52E-07	4.57E-03	7.99E-03
B16	0.00E+00	8.09E-05	7.00E-06	2.92E+02	3.52E-04	1.06E+00	1.38E-04	3.99E-02	1.74E-02	3.46E-03	1.39E-02	7.56E-03	7.76E-03	8.79E-03	1.40E-03	2.66E-07	6.13E-03	7.33E-03
B17	0.00E+00	8.31E-05	5.36E-06	1.99E+02	1.34E-04	4.86E-01	9.75E-05	7.73E-02	9.25E-03	1.98E-03	1.04E-02	3.78E-03	3.89E-03	1.69E-02	8.32E-04	1.48E-07	6.54E-03	1.45E-02
B18	0.00E+00	8.58E-05	6.57E-06	2.63E+02	2.69E-04	8.48E-01	1.27E-04	5.81E-02	1.45E-02	2.95E-03	1.30E-02	6.20E-03	6.36E-03	1.29E-02	1.21E-03	2.27E-07	6.66E-03	1.08E-02
B19	0.00E+00	1.96E-04	1.33E-05	4.87E+02	3.45E-04	1.22E+00	2.33E-04	1.91E-01	2.31E-02	4.88E-03	2.44E-02	9.50E-03	9.76E-03	4.02E-02	2.06E-03	3.34E-07	1.47E-02	3.58E-02
B20	0.00E+00	2.25E-04	1.77E-05	6.96E+02	7.02E-04	2.21E+00	3.27E-04	1.70E-01	3.82E-02	7.72E-03	3.32E-02	1.63E-02	1.67E-02	3.54E-02	3.18E-03	5.52E-07	1.65E-02	3.16E-02
B21	0.00E+00	1.09E-04	7.66E-06	2.80E+02	2.08E-04	7.23E-01	1.32E-04	1.07E-01	1.35E-02	2.83E-03	1.37E-02	5.59E-03	5.75E-03	2.22E-02	1.19E-03	1.86E-07	7.95E-03	2.01E-02
B22	0.00E+00	1.58E-04	1.30E-05	5.16E+02	5.51E-04	1.71E+00	2.40E-04	1.13E-01	2.91E-02	5.82E-03	2.41E-02	1.25E-02	1.28E-02	2.31E-02	2.39E-03	4.11E-07	1.13E-02	2.10E-02
B23	0.00E+00	1.13E-04	7.90E-06	2.89E+02	2.14E-04	7.45E-01	1.36E-04	1.11E-01	1.40E-02	2.92E-03	1.41E-02	5.76E-03	5.92E-03	2.29E-02	1.23E-03	1.92E-07	8.19E-03	2.07E-02
B24	0.00E+00	2.55E-04	2.02E-05	7.96E+02	8.13E-04	2.56E+00	3.75E-04	1.87E-01	4.39E-02	8.87E-03	3.81E-02	1.87E-02	1.92E-02	3.93E-02	3.65E-03	6.42E-07	1.88E-02	3.48E-02
C53	0.00E+00	1.10E-05	7.89E-07	2.11E+01	2.54E-05	7.02E-02	1.43E-05	7.69E-03	3.70E-03	5.57E-04	1.47E-03	6.38E-04	6.55E-04	1.04E-03	9.66E-05	1.64E-08	8.20E-04	1.44E-03
C54	0.00E+00	1.68E-05	1.16E-06	3.19E+01	3.26E-05	9.46E-02	2.06E-05	1.24E-02	4.20E-03	6.68E-04	2.15E-03	8.67E-04	8.91E-04	1.92E-03	1.42E-04	2.51E-08	1.26E-03	2.33E-03
C57	0.00E+00	2.00E-05	1.45E-06	4.28E+01	4.84E-05	1.36E-01	2.64E-05	1.33E-02	5.77E-03	9.14E-04	2.73E-03	1.20E-03	1.23E-03	2.09E-03	1.96E-04	3.52E-08	1.50E-03	2.49E-03
C58	0.00E+00	3.83E-06	3.41E-07	1.02E+01	1.68E-05	4.20E-02	6.54E-06	1.28E-03	2.88E-03	4.04E-04	6.44E-04	3.62E-04	3.71E-04	1.81E-04	4.97E-05	8.06E-09	2.73E-04	2.36E-04
C59	0.00E+00	2.91E-06	2.49E-07	8.69E+00	1.19E-05	3.17E-02	4.81E-06	1.25E-03	1.24E-03	1.95E-04	4.81E-04	2.60E-04	2.66E-04	2.10E-04	4.21E-05	7.80E-09	2.15E-04	2.31E-04
C60	0.00E+00	2.52E-05	1.77E-06	4.59E+01	5.27E-05	1.48E-01	3.16E-05	1.86E-02	7.96E-03	1.20E-03	3.29E-03	1.37E-03	1.40E-03	2.50E-03	2.07E-04	3.47E-08	1.88E-03	3.49E-03
C61	0.00E+00	1.32E-05	1.14E-06	4.02E+01	5.58E-05	1.48E-01	2.22E-05	5.29E-03	5.75E-03	9.02E-04	2.22E-03	1.21E-03	1.24E-03	9.07E-04	1.96E-04	3.65E-08	9.80E-04	9.72E-04
C62	0.00E+00	2.13E-05	1.66E-06	4.22E+01	6.39E-05	1.63E-01	3.05E-05	1.14E-02	1.17E-02	1.65E-03	3.08E-03	1.50E-03	1.54E-03	1.33E-03	2.00E-04	3.25E-08	1.55E-03	2.13E-03
C63	0.00E+00	7.87E-05	4.91E-06	1.08E+02	9.52E-05	2.90E-01	8.54E-05	6.60E-02	1.78E-02	2.72E-03	9.18E-03	3.04E-03	3.12E-03	8.77E-03	4.56E-04	7.52E-08	6.05E-03	1.24E-02
C64	0.00E+00	5.57E-05	3.86E-06	1.09E+02	1.16E-04	3.31E-01	7.02E-05	3.87E-02	1.44E-02	2.30E-03	7.34E-03	3.01E-03	3.09E-03	6.08E-03	4.92E-04	8.94E-08	4.25E-03	7.23E-03
C65	0.00E+00	4.05E-07	4.33E-08	1.63E+00	2.66E-06	6.79E-03	8.64E-07	4.51E-05	3.06E-04	4.55E-05	8.30E-05	5.39E-05	5.52E-05	1.11E-05	8.22E-06	1.48E-09	2.78E-05	7.48E-06
C66	0.00E+00	2.29E-05	1.47E-06	2.47E+01	2.49E-05	7.34E-02	2.39E-05	1.97E-02	6.39E-03	9.17E-04	2.51E-03	8.46E-04	8.70E-04	1.97E-03	1.04E-04	1.56E-08	1.64E-03	3.70E-03
C67	0.00E+00	4.24E-05	2.96E-06	1.12E+02	1.03E-04	3.22E-01	5.68E-05	3.25E-02	7.88E-03	1.45E-03	6.00E-03	2.52E-03	2.59E-03	6.91E-03	4.97E-04	8.73E-08	3.40E-03	6.06E-03
C68	0.00E+00	5.31E-05	3.95E-06	1.55E+02	1.65E-04	4.94E-01	7.86E-05	3.26E-02	1.16E-02	2.12E-03	8.21E-03	3.79E-03	3.89E-03	7.22E-03	7.14E-04	1.34E-07	4.32E-03	6.06E-03
C69	0.00E+00	3.45E-05	2.11E-06	6.03E+01	4.40E-05	1.44E-01	3.83E-05	2.78E-02	5.38E-03	9.36E-04	4.17E-03	1.36E-03	1.40E-03	5.12E-03	2.53E-04	4.71E-08	2.77E-03	5.21E-03
C70	0.00E+00	6.47E-05	4.01E-06	1.43E+02	9.58E-05	3.35E-01	7.47E-05	5.91E-02	8.95E-03	1.70E-03	8.14E-03	2.77E-03	2.85E-03	1.25E-02	5.96E-04	1.00E-07	5.29E-03	1.11E-02
C71	0.00E+00	3.50E-05	2.38E-06	6.42E+01	6.33E-05	1.86E-01	4.19E-05	2.66E-02	8.36E-03	1.33E-03	4.39E-03	1.72E-03	1.77E-03	4.09E-03	2.84E-04	4.93E-08	2.62E-03	4.99E-03
C72	0.00E+00	2.07E-05	1.47E-06	3.29E+01	4.66E-05	1.19E-01	2.67E-05	1.26E-02	8.95E-03	1.27E-03	2.77E-03	1.18E-03	1.21E-03	1.41E-03	1.52E-04	2.57E-08	1.56E-03	2.36E-03
C73	0.00E+00	1.70E-05	1.12E-06	2.18E+01	2.48E-05	6.70E-02	1.91E-05	1.22E-02	4.59E-03	6.81E-04	1.99E-03	7.35E-04	7.54E-04	1.46E-03	9.56E-05	1.76E-08	1.24E-03	2.29E-03
C74	0.00E+00	1.25E-04	8.32E-06	2.06E+02	2.27E-04	6.37E-01	1.52E-04	9.09E-02	3.53E-02	5.35E-03	1.61E-02	6.14E-03	6.30E-03	1.25E-02	9.19E-04	1.62E-07	9.76E-03	1.70E-02
C81	0.00E+00	5.68E-05	3.82E-06	1.00E+02	9.41E-05	2.81E-01	6.62E-05	4.52E-02	1.29E-02	2.07E-03	6.93E-03	2.65E-03	2.73E-03	6.88E-03	4.38E-04	7.43E-08	4.20E-03	8.47E-03
C82	0.00E+00	8.49E-05	5.46E-06	1.27E+02	1.26E-04	3.67E-01	9.69E-05	6.72E-02	2.14E-02	3.25E-03	1.03E-02	3.68E-03	3.78E-03	9.02E-03	5.51E-04	9.37E-08	6.55E-03	1.26E-02
C83	0.00E+00	1.28E-04	7.74E-06	2.73E+02	1.30E-04	5.45E-01	1.34E-04	1.35E-01	1.14E-02	2.52E-03	1.45E-02	4.49E-03	4.62E-03	2.90E-02	1.08E-03	1.76E-07	9.89E-03	2.53E-02
C84	0.00E+00	5.30E-05	3.35E-06	1.20E+02	8.52E-05	2.92E-01	6.25E-05	4.78E-02	7.69E-03	1.45E-03	6.76E-03	2.39E-03	2.46E-03	1.01E-02	5.06E-04	8.49E-08	4.30E-03	8.95E-03
C85	0.00E+00	4.86E-05	2.93E-06	1.02E+02	5.92E-05	2.20E-01	5.34E-05	4.74E-02	6.13E-03	1.18E-03	5.85E-03	1.86E-03	1.92E-03	9.93E-03	4.15E-04	6.62E-08	3.94E-03	8.89E-03
C86	0.00E+00	8.77E-05	5.96E-06	2.24E+02	1.98E-04	6.28E-01	1.15E-04	6.80E-02	1.55E-02	2.88E-03	1.22E-02	4.96E-03	5.09E-03	1.46E-02	9.86E-04	1.76E-07	7.14E-03	1.27E-02
E39	0.00E+00	1.87E-05	1.47E-06	4.54E+01	5.87E-05	1.61E-01	2.73E-05	1.09E-02	6.48E-03	1.02E-03	2.77E-03	1.36E-03	1.39E-03	1.72E-03	2.13E-04	3.88E-08	1.37E-03	2.02E-03
E40	0.00E+00	1.74E-05	1.68E-06	6.02E+01	9.18E-05	2.43E-01	3.26E-05	5.35E-03	9.10E-03	1.42E-03	3.18E-03	1.92E-03	1.97E-03	9.17E-04	2.98E-04	5.50E-08	1.21E-03	9.69E-04
E41	0.00E+00	9.68E-06	9.57E-07	3.44E+01	5.25E-05	1.39E-01	1.84E-05	3.07E-03	5.21E-03	8.10E-04	1.78E-03	1.10E-03	1.12E-03	5.09E-04	1.70E-04	3.10E-08	6.59E-04	5.57E-04
E42	0.00E+00	1.50E-05	1.31E-06	4.23E+01	5.83E-05	1.59E-01	2.39E-05	8.17E-03	6.21E-03	9.69E-04	2.36E-03	1.29E-03	1.33E-03	1.25E-03	2.03E-04	3.56E-08	1.03E-03	1.51E-03
E43	0.00E+00	7.59E-06	7.87E-07	2.96E+01	4.71E-05	1.23E-01	1.57E-05	1.31E-03	4.54E-03	7.05E-04	1.51E-03	9.61E-04	9.85E-04	2.62E-04	1.48E-04	2.78E-08	5.29E-04	2.27E-04
E44	0.00E+00	1.10E-05	1.02E-06	3.56E+01	5.28E-05	1.41E-01	1.96E-05	4.18E-03	5.33E-03	8.30E-04	1.92E-03	1.12E-03	1.15E-03	6.87E-04	1.74E-04	3.19E-08	7.70E-04	7.66E-04
E45	0.00E+00	5.00E-06	3.70E-07	1.17E+01	1.21E-05	3.62E-02	6.57E-06	3.71E-03	1.13E-03	1.93E-04	6.73E-04	3.02E-04	3.10E-04	6.48E-04	5.25E-05	9.07E-09	3.63E-04	6.93E-04
E46	0.00E+00	2.69E-05	1.88E-06	5.87E+01	5.88E-05	1.76E-01	3.45E-05	1.93E-02	5.60E-03	9.61E-04	3.60E-03	1.50E-03	1.54E-03	3.50E-03	2.62E-04	4.82E-08	2.07E-03	3.60E-03
E47	0.00E+00	5.19E-06	3.71E-07	1.16E+01	1.18E-05	3.53E-02	6.70E-06	3.82E-03	1.12E-03	1.91E-04	6.93E-04	2.98E-04	3.06E-04	6.79E-04	5.21E-05	9.25E-09	3.88E-04	7.13E-04
E48	0.00E+00	2.85E-05	2.30E-06	7.95E+01	9.80E-05	2.78E-01	4.34E-05	1.60E-02	8.12E-03	1.37E-03	4.39E-03	2.22E-03	2.27E-03	2.91E-03	3.75E-04	6.96E-08	2.11E-03	2.97E-03
E49	0.00E+00	2.05E-06	1.77E-07	6.14E+00	7.73E-06	2.19E-02	3.22E-06	1.23E-03	6.37E-04	1.07E-04	3.18E-04	1.73E-04	1.77E-04	2.09E-04	2.91E-05	5.06E-09	1.40E-04	2.28E-04
E50	0.00E+00	3.95E-05	2.83E-06	8.56E+01	8.17E-05	2.50E-01	4.89E-05	3.21E-02	8.15E-03	1.39E-03	5.03E-03	2.14E-03	2.20E-03	5.52E-03	3.78E-04	6.24E-08	2.83E-03	6.00E-03
E51	0.00E+00	1.53E-07	1.64E-08	6.64E-01	1.02E-06	2.75E-03	3.30E-07	1.86E-05	7.37E-05	1.23E-05	3.19E-05	2.06E-05	2.12E-05	4.06E-06	3.36E-06	6.43E-10	1.07E-05	3.05E-06
E52	0.00E+00	3.42E-05	2.43E-06	7.24E+01	6.70E-05	2.08E-01	4.17E-05	2.84E-02	6.84E-03	1.17E-03	4.29E-03	1.79E-03	1.84E-03	4.88E-03	3.17E-04	5.19E-08	2.46E-03	5.31E-03
E53	0.00E+00	2.53E-05	1.73E-06	5.01E+01	4.25E-05	1.35E-01	2.95E-05	2.17E-02	4.61E-03	7.92E-04	3.07E-03	1.20E-03	1.23E-03	3.75E-03	2.15E-04	3.51E-08	1.84E-03	4.06E-03
E54	0.00E+00	3.83E-05	2.87E-06	9.18E+01	9.84E-05	2.91E-01	5.14E-05	2.77E-02	9.02E-03	1.53E-03	5.24E-03	2.41E-03	2.47E-03	4.84E-03	4.17E-04	7.23E-08	2.77E-03	5.17E-03
E55	0.00E+00	2.46E-05	1.47E-06	3.74E+01	1.84E-05	7.29E-02	2.43E-05	2.37E-02	3.06E-03	5.39E-04	2.63E-03	7.56E-04	7.78E-04	4.14E-03	1.46E-04	2.26E-08	1.85E-03	4.45E-03
E56	0.00E+00	2.36E-05	1.96E-06	6.73E+01	8.30E-05	2.36E-01	3.61E-05	1.41E-02	6.92E-03	1.17E-03	3.61E-03	1.88E-03	1.93E-03	2.47E-03	3.18E-04	5.67E-08	1.68E-03	2.62E-03
E57	0.00E+00	1.00E-05	9.72E-07	3.48E+01	5.29E-05	1.40E-01	1.88E-05	3.21E-03	5.25E-03	8.17E-04	1.83E-03	1.11E-03	1.13E-03	5.43E-04	1.72E-04	3.16E-08	6.99E-04	5.83E-04
E58	0.00E+00	2.44E-05	1.71E-06	4.41E+01	4.33E-05	1.30E-01	2.87E-05	2.02E-02	5.88E-03	9.31E-04	2.95E-03	1.20E-03	1.23E-03	2.99E-03	1.93E-04	3.10E-08	1.72E-03	3.78E-03
E59	0.00E+00	1.12E-04	6.94E-06	1.86E+02	1.19E-04	4.19E-01	1.18E-04	1.02E-01	1.60E-02	2.79E-03	1.27E-02	4.04E-03	4.16E-03	1.79E-02	7.58E-04	1.25E-07	8.50E-03	1.91E-02
E60	0.00E+00	5.40E-05	3.97E-06	1.29E+02	1.42E-04	4.15E-01	7.39E-05	3.56E-02	1.27E-02	2.17E-03	7.63E-03	3.43E-03	3.52E-03	6.49E-03	5.92E-04	1.10E-07	4.11E-03	6.65E-03
E61	0.00E+00	1.37E-05	1.28E-06	4.86E+01	6.89E-05	1.89E-01	2.52E-05	4.62E-03	5.22E-03	8.76E-04	2.49E-03	1.45E-03	1.49E-03	8.85E-04	2.39E-04	4.56E-08	1.00E-03	8.39E-04
E62	0.00E+00	1.64E-05	1.45E-06	5.26E+01	7.05E-05	1.96E-01	2.77E-05	7.57E-03	5.54E-03	9.32E-04	2.74E-03	1.53E-03	1.56E-03	1.37E-03	2.54E-04	4.72E-08	1.18E-03	1.39E-03
E63	0.00E+00	8.96E-05	6.39E-06	1.74E+02	1.87E-04	5.43E-01	1.12E-04	6.75E-02	2.36E-02	3.72E-03	1.15E-02	4.87E-03	5.00E-03	1.02E-02	7.76E-04	1.33E-07	6.50E-03	1.26E-02
E64	0.00E+00	7.35E-05	5.21E-06	1.42E+02	1.55E-04	4.48E-01	9.22E-05	5.36E-02	1.93E-02	3.06E-03	9.54E-03	4.01E-03	4.12E-03	8.23E-03	6.38E-04	1.12E-07	5.42E-03	1.00E-02
E65	0.00E+00	4.99E-05	4.18E-06	1.33E+02	1.79E-04	4.89E-01	7.67E-05	2.81E-02	1.93E-02	3.02E-03	7.63E-03	4.03E-03	4.13E-03	4.34E-03	6.32E-04	1.12E-07	3.50E-03	5.22E-03
E66	0.00E+00	5.61E-05	4.23E-06	1.19E+02	1.36E-04	3.91E-01	7.32E-05	4.17E-02	1.66E-02	2.60E-03	7.41E-03	3.40E-03	3.49E-03	6.21E-03	5.41E-04	9.00E-08	3.91E-03	7.80E-03
E67	0.00E+00	1.42E-05	1.29E-06	4.85E+01	6.77E-05	1.86E-01	2.54E-05	5.11E-03	5.17E-03	8.69E-04	2.52E-03	1.43E-03	1.47E-03	9.83E-04	2.37E-04	4.55E-08	1.05E-03	9.32E-04
E68	0.00E+00	8.28E-05	5.54E-06	1.61E+02	1.37E-04	4.35E-01	9.67E-05	6.85E-02	1.48E-02	2.55E-03	1.02E-02	3.86E-03	3.96E-03	1.21E-02	6.94E-04	1.19E-07	6.21E-03	1.28E-02
E69	0.00E+00	1.07E-05	1.09E-06	4.04E+01	6.37E-05	1.67E-01	2.16E-05	2.15E-03	6.17E-03	9.59E-04	2.10E-03	1.31E-03	1.34E-03	4.17E-04	2.02E-04	3.80E-08	7.57E-04	3.78E-04
E70	0.00E+00	2.90E-05	2.60E-06	9.05E+01	1.34E-04	3.56E-01	5.11E-05	1.00E-02	1.35E-02	2.11E-03	5.08E-03	2.86E-03	2.93E-03	1.76E-03	4.44E-04	8.42E-08	2.15E-03	1.83E-03
E71	0.00E+00	2.08E-05	2.15E-06	8.03E+01	1.27E-04	3.34E-01	4.25E-05	4.02E-03	1.23E-02	1.91E-03	4.11E-03	2.60E-03	2.67E-03	7.69E-04	4.02E-04	7.50E-08	1.44E-03	7.05E-04
E72	0.00E+00	2.99E-05	2.79E-06	9.97E+01	1.52E-04	4.00E-01	5.52E-05	8.73E-03	1.50E-02	2.34E-03	5.44E-03	3.18E-03	3.26E-03	1.58E-03	4.92E-04	9.33E-08	2.18E-03	1.58E-03
E73	0.00E+00	1.67E-05	1.32E-06	3.56E+01	4.91E-05	1.35E-01	2.36E-05	1.13E-02	6.56E-03	9.85E-04	2.37E-03	1.16E-03	1.19E-03	1.50E-03	1.65E-04	2.88E-08	1.18E-03	2.11E-03
E74	0.00E+00	6.83E-06	7.14E-07	2.42E+01	4.24E-05	1.09E-01	1.41E-05	1.17E-03	4.73E-03	7.06E-04	1.35E-03	8.67E-04	8.89E-04	2.23E-04	1.21E-04	2.32E-08	4.66E-04	2.06E-04
E75	0.00E+00	5.33E-05	4.25E-06	1.30E+02	1.54E-04	4.33E-01	7.44E-05	3.73E-02	1.80E-02	2.83E-03	7.43E-03	3.68E-03	3.78E-03	5.54E-03	6.05E-04	1.00E-07	3.65E-03	6.96E-03
E76	0.00E+00	9.08E-05	7.16E-06	2.15E+02	2.49E-04	7.03E-01	1.24E-04	6.63E-02	2.96E-02	4.65E-03	1.23E-02	6.01E-03	6.18E-03	9.77E-03	9.92E-04	1.62E-07	6.16E-03	1.24E-02
E77	0.00E+00	6.31E-05	5.11E-06	1.58E+02	1.91E-04	5.32E-01	8.95E-05	4.34E-02	2.20E-02	3.46E-03	8.90E-03	4.49E-03	4.61E-03	6.44E-03	7.39E-04	1.22E-07	4.29E-03	8.10E-03
E78	0.00E+00	1.01E-04	8.03E-06	2.44E+02	2.87E-04	8.06E-01	1.40E-04	7.20E-02	3.37E-02	5.30E-03	1.39E-02	6.87E-03	7.05E-03	1.06E-02	1.13E-03	1.86E-07	6.87E-03	1.34E-02
E79	0.00E+00	4.69E-05	3.94E-06	1.36E+02	1.83E-04	4.90E-01	7.59E-05	2.14E-02	1.93E-02	3.03E-03	7.61E-03	4.03E-03	4.14E-03	3.55E-03	6.55E-04	1.21E-07	3.47E-03	3.94E-03
E80	0.00E+00	3.18E-05	2.21E-06	5.97E+01	5.91E-05	1.74E-01	3.82E-05	2.49E-02	7.83E-03	1.24E-03	3.97E-03	1.60E-03	1.65E-03	3.77E-03	2.64E-04	4.44E-08	2.32E-03	4.67E-03
E81	0.00E+00	2.95E-07	3.16E-08	1.09E+00	1.94E-06	4.95E-03	6.30E-07	3.16E-05	2.13E-04	3.18E-05	6.05E-05	3.92E-05	4.02E-05	7.55E-06	5.48E-06	1.06E-09	2.03E-05	5.26E-06
E82	0.00E+00	8.60E-06	7.97E-07	2.52E+01	4.17E-05	1.08E-01	1.55E-05	2.94E-03	4.84E-03	7.23E-04	1.52E-03	8.83E-04	9.06E-04	4.56E-04	1.24E-04	2.36E-08	6.13E-04	5.39E-04
E83	0.00E+00	1.19E-05	1.16E-06	4.15E+01	6.31E-05	1.67E-01	2.24E-05	3.81E-03	6.27E-03	9.75E-04	2.18E-03	1.32E-03	1.35E-03	6.40E-04	2.05E-04	3.76E-08	8.24E-04	6.91E-04
E84	0.00E+00	1.03E-05	1.06E-06	3.94E+01	6.19E-05	1.63E-01	2.08E-05	2.33E-03	6.03E-03	9.35E-04	2.01E-03	1.27E-03	1.30E-03

Appendix F.5.3: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F02	0.00E+00	3.23E-05	2.61E-06	7.41E+01	1.10E-04	2.93E-01	4.89E-05	1.75E-02	1.38E-02	2.08E-03	4.93E-03	2.50E-03	2.56E-03	2.47E-03	3.52E-04	6.55E-08	2.37E-03	3.26E-03
F03	0.00E+00	2.98E-06	2.24E-07	6.97E+00	7.13E-06	2.14E-02	3.87E-06	2.36E-03	6.79E-04	1.15E-04	3.92E-04	1.79E-04	1.84E-04	4.01E-04	3.12E-05	5.10E-09	2.08E-04	4.42E-04
F04	0.00E+00	1.23E-06	9.85E-08	3.01E+00	3.07E-06	9.32E-03	1.59E-06	1.09E-03	2.97E-04	4.98E-05	1.57E-04	7.71E-05	7.93E-05	1.74E-04	1.35E-05	1.93E-09	7.72E-05	2.04E-04
F05	0.00E+00	2.03E-05	1.75E-06	5.20E+01	8.06E-05	2.13E-01	3.29E-05	9.94E-03	9.83E-03	1.47E-03	3.26E-03	1.77E-03	1.82E-03	1.41E-03	2.50E-04	4.62E-08	1.44E-03	1.84E-03
F06	0.00E+00	3.21E-05	2.29E-06	5.82E+01	7.50E-05	2.06E-01	4.19E-05	2.17E-02	1.05E-02	1.58E-03	4.35E-03	1.87E-03	1.92E-03	2.97E-03	2.65E-04	4.85E-08	2.43E-03	4.07E-03
F07	0.00E+00	2.40E-05	2.13E-06	6.58E+01	1.07E-04	2.78E-01	4.14E-05	8.94E-03	1.25E-02	1.88E-03	4.12E-03	2.30E-03	2.35E-03	1.38E-03	3.21E-04	6.18E-08	1.76E-03	1.65E-03
F08	0.00E+00	4.08E-05	2.95E-06	7.52E+01	9.77E-05	2.68E-01	5.37E-05	2.76E-02	1.36E-02	2.05E-03	5.55E-03	2.43E-03	2.49E-03	3.76E-03	3.43E-04	6.24E-08	3.06E-03	5.16E-03
F09	0.00E+00	3.58E-06	2.87E-07	9.24E+00	1.03E-05	3.02E-02	4.96E-06	2.71E-03	9.25E-04	1.56E-04	4.94E-04	2.46E-04	2.52E-04	4.51E-04	4.23E-05	6.86E-09	2.41E-04	5.06E-04
F10	0.00E+00	1.71E-05	1.46E-06	5.06E+01	6.33E-05	1.80E-01	2.67E-05	1.03E-02	5.24E-03	8.81E-04	2.64E-03	1.42E-03	1.46E-03	1.76E-03	2.40E-04	4.19E-08	1.18E-03	1.92E-03
F13	0.00E+00	1.04E-06	7.98E-08	2.53E+00	2.69E-06	7.99E-03	1.39E-06	7.94E-04	2.49E-04	4.21E-05	1.40E-04	6.60E-05	6.78E-05	1.35E-04	1.14E-05	1.90E-09	7.26E-05	1.48E-04
F14	0.00E+00	9.70E-07	7.23E-08	2.22E+00	2.22E-06	6.72E-03	1.24E-06	7.85E-04	2.15E-04	3.65E-05	1.26E-04	5.65E-05	5.80E-05	1.33E-04	9.90E-06	1.60E-09	6.76E-05	1.47E-04
F15	0.00E+00	2.41E-05	2.17E-06	7.15E+01	1.00E-04	2.73E-01	3.96E-05	1.26E-02	1.06E-02	1.65E-03	3.87E-03	2.20E-03	2.26E-03	1.91E-03	3.44E-04	6.01E-08	1.62E-03	2.33E-03
F16	0.00E+00	2.86E-05	2.28E-06	6.49E+01	7.52E-05	2.17E-01	3.80E-05	2.27E-02	9.15E-03	1.43E-03	3.75E-03	1.85E-03	1.90E-03	3.25E-03	2.96E-04	4.57E-08	1.85E-03	4.25E-03
F17	0.00E+00	1.40E-05	1.16E-06	3.38E+01	4.09E-05	1.17E-01	1.93E-05	1.08E-02	4.83E-03	7.53E-04	1.89E-03	9.79E-04	1.01E-03	1.53E-03	1.56E-04	2.42E-08	8.85E-04	2.02E-03
F18	0.00E+00	3.24E-05	2.47E-06	6.48E+01	6.56E-05	1.99E-01	3.89E-05	2.96E-02	8.87E-03	1.39E-03	3.85E-03	1.76E-03	1.81E-03	4.15E-03	2.85E-04	3.98E-08	2.04E-03	5.54E-03
F19	0.00E+00	1.13E-05	1.21E-06	4.65E+01	7.51E-05	1.96E-01	2.43E-05	1.31E-03	7.16E-03	1.11E-03	2.34E-03	1.52E-03	1.56E-03	3.02E-04	2.34E-04	4.40E-08	7.86E-04	2.16E-04
F20	0.00E+00	1.69E-05	1.80E-06	6.91E+01	1.12E-04	2.92E-01	3.62E-05	1.95E-03	1.07E-02	1.65E-03	3.49E-03	2.26E-03	2.32E-03	4.49E-04	3.49E-04	6.55E-08	1.17E-03	3.21E-04
F21	0.00E+00	5.55E-05	3.65E-06	9.03E+01	8.11E-05	2.49E-01	6.25E-05	4.55E-02	1.17E-02	1.86E-03	6.59E-03	2.40E-03	2.47E-03	6.90E-03	3.87E-04	6.54E-08	4.12E-03	8.53E-03
F22	0.00E+00	7.28E-05	4.87E-06	1.25E+02	1.21E-04	3.62E-01	8.51E-05	5.69E-02	1.64E-02	2.62E-03	8.94E-03	3.40E-03	3.49E-03	8.71E-03	5.45E-04	9.46E-08	5.44E-03	1.07E-02
F23	0.00E+00	1.47E-05	1.02E-06	2.68E+01	2.71E-05	8.02E-02	1.77E-05	1.15E-02	3.57E-03	5.67E-04	1.84E-03	7.37E-04	7.57E-04	1.74E-03	1.18E-04	2.01E-08	1.08E-03	2.15E-03
F24	0.00E+00	2.03E-05	1.43E-06	3.85E+01	4.09E-05	1.19E-01	2.51E-05	1.52E-02	5.19E-03	8.23E-04	2.60E-03	1.08E-03	1.11E-03	2.32E-03	1.71E-04	2.97E-08	1.50E-03	2.85E-03
F25	0.00E+00	5.56E-05	3.92E-06	9.73E+01	1.21E-04	3.37E-01	7.10E-05	3.93E-02	1.74E-02	2.63E-03	7.38E-03	3.10E-03	3.18E-03	5.32E-03	4.39E-04	7.93E-08	4.20E-03	7.35E-03
F26	0.00E+00	7.38E-05	4.81E-06	1.08E+02	1.14E-04	3.32E-01	8.50E-05	5.85E-02	1.87E-02	2.84E-03	9.02E-03	3.28E-03	3.37E-03	7.81E-03	4.68E-04	8.22E-08	5.65E-03	1.10E-02
F27	0.00E+00	1.51E-04	9.86E-06	2.23E+02	2.39E-04	6.92E-01	1.75E-04	1.18E-01	3.86E-02	5.87E-03	1.86E-02	6.81E-03	7.00E-03	1.58E-02	9.70E-04	1.72E-07	1.16E-02	2.22E-02
F28	0.00E+00	1.34E-04	9.42E-06	2.35E+02	2.96E-04	8.18E-01	1.72E-04	9.25E-02	4.20E-02	6.35E-03	1.79E-02	7.52E-03	7.72E-03	1.26E-02	1.06E-03	1.95E-07	1.02E-02	1.73E-02
F29	0.00E+00	3.08E-05	2.66E-06	7.95E+01	1.25E-04	3.28E-01	5.04E-05	1.42E-02	1.50E-02	2.25E-03	5.01E-03	2.73E-03	2.80E-03	2.05E-03	3.84E-04	7.18E-08	2.21E-03	2.63E-03
F30	0.00E+00	3.29E-05	2.42E-06	6.25E+01	8.22E-05	2.26E-01	4.39E-05	2.24E-02	1.13E-02	1.71E-03	4.51E-03	2.02E-03	2.07E-03	3.03E-03	2.86E-04	5.14E-08	2.43E-03	4.19E-03
F45	0.00E+00	1.19E-05	1.16E-06	4.15E+01	6.31E-05	1.67E-01	2.24E-05	3.81E-03	6.27E-03	9.75E-04	2.18E-03	1.32E-03	1.35E-03	6.40E-04	2.05E-04	3.76E-08	8.24E-04	6.91E-04
F46	0.00E+00	1.03E-05	1.06E-06	3.94E+01	6.19E-05	1.63E-01	2.08E-05	2.33E-03	6.03E-03	9.35E-04	2.01E-03	1.27E-03	1.30E-03	4.18E-04	1.97E-04	3.63E-08	7.03E-04	4.14E-04
F47	0.00E+00	1.38E-06	1.00E-07	2.46E+00	2.96E-06	8.48E-03	1.72E-06	1.10E-03	4.42E-04	6.65E-05	1.76E-04	7.67E-05	7.88E-05	1.42E-04	1.10E-05	1.81E-09	9.73E-05	2.05E-04
F48	0.00E+00	4.36E-07	3.06E-08	6.31E-01	4.86E-07	1.74E-03	4.43E-07	4.90E-04	1.08E-04	1.62E-05	4.44E-05	1.68E-05	1.74E-05	5.91E-05	2.57E-06	2.65E-10	2.71E-05	9.21E-05
F49	0.00E+00	1.21E-04	8.24E-06	1.96E+02	2.27E-04	6.43E-01	1.47E-04	9.11E-02	3.44E-02	5.21E-03	1.55E-02	6.09E-03	6.26E-03	1.22E-02	8.66E-04	1.54E-07	9.20E-03	1.71E-02
F50	0.00E+00	1.16E-04	8.20E-06	2.06E+02	2.64E-04	7.25E-01	1.50E-04	7.85E-02	3.70E-02	5.59E-03	1.56E-02	6.64E-03	6.81E-03	1.08E-02	9.37E-04	1.73E-07	8.84E-03	1.47E-02
F51	0.00E+00	6.60E-05	4.13E-06	9.84E+01	8.05E-05	2.53E-01	7.18E-05	5.40E-02	1.23E-02	1.99E-03	7.70E-03	2.56E-03	2.63E-03	8.32E-03	4.13E-04	7.29E-08	5.07E-03	1.01E-02
F52	0.00E+00	5.59E-05	4.66E-06	1.50E+02	2.06E-04	5.58E-01	8.76E-05	2.85E-02	2.19E-02	3.42E-03	8.77E-03	4.60E-03	4.72E-03	4.57E-03	7.19E-04	1.32E-07	4.05E-03	5.29E-03
F53	0.00E+00	1.44E-05	1.31E-06	4.50E+01	6.62E-05	1.76E-01	2.52E-05	5.59E-03	6.71E-03	1.05E-03	2.49E-03	1.42E-03	1.45E-03	9.34E-04	2.20E-04	4.08E-08	1.04E-03	1.03E-03
F54	0.00E+00	3.00E-05	3.02E-06	1.12E+02	1.75E-04	4.61E-01	5.98E-05	6.52E-03	1.70E-02	2.65E-03	5.80E-03	3.61E-03	3.70E-03	1.23E-03	5.58E-04	1.04E-07	2.11E-03	1.16E-03
F71	0.00E+00	1.61E-05	1.53E-06	5.60E+01	8.03E-05	2.13E-01	2.93E-05	5.95E-03	8.15E-03	1.27E-03	2.85E-03	1.70E-03	1.74E-03	9.76E-04	2.76E-04	4.96E-08	1.11E-03	1.09E-03
F72	0.00E+00	5.76E-05	3.97E-06	8.17E+01	1.06E-04	2.82E-01	6.91E-05	4.11E-02	2.20E-02	3.12E-03	7.16E-03	2.87E-03	2.95E-03	4.35E-03	3.69E-04	5.93E-08	4.21E-03	7.70E-03
F73	0.00E+00	9.60E-07	1.03E-07	3.87E+00	6.29E-06	1.61E-02	2.05E-06	1.07E-04	7.23E-04	1.08E-04	1.96E-04	1.27E-04	1.31E-04	2.64E-05	1.95E-05	3.49E-09	6.58E-05	1.77E-05
F74	0.00E+00	6.98E-05	4.44E-06	1.09E+02	8.96E-05	2.79E-01	7.65E-05	5.77E-02	1.36E-02	2.19E-03	8.15E-03	2.79E-03	2.87E-03	8.82E-03	4.62E-04	7.90E-08	5.28E-03	1.08E-02
F75	0.00E+00	2.14E-06	1.52E-07	4.21E+00	5.32E-06	1.43E-02	2.88E-06	1.30E-03	7.39E-04	1.12E-04	3.00E-04	1.30E-04	1.33E-04	1.85E-04	1.95E-05	3.54E-09	1.67E-04	2.43E-04
F76	0.00E+00	6.97E-07	7.41E-08	2.54E+00	4.43E-06	1.10E-02	1.45E-06	6.79E-05	7.33E-04	1.02E-04	1.39E-04	9.03E-05	9.25E-05	2.01E-05	1.27E-05	2.01E-09	4.63E-05	1.15E-05
F77	0.00E+00	5.30E-05	3.68E-06	1.03E+02	1.08E-04	3.10E-01	6.60E-05	3.82E-02	1.36E-02	2.17E-03	6.88E-03	2.82E-03	2.90E-03	5.93E-03	4.63E-04	8.21E-08	3.99E-03	7.14E-03
F78	0.00E+00	1.71E-05	1.75E-06	5.86E+01	1.01E-04	2.52E-01	3.42E-05	2.57E-03	1.68E-02	2.35E-03	3.29E-03	2.08E-03	2.13E-03	5.64E-04	2.91E-04	4.63E-08	1.16E-03	4.56E-04
F79	0.00E+00	2.69E-05	2.47E-06	8.41E+01	1.27E-04	3.31E-01	4.77E-05	9.90E-03	1.55E-02	2.31E-03	4.68E-03	2.71E-03	2.78E-03	1.53E-03	4.13E-04	7.30E-08	1.91E-03	1.82E-03
F80	0.00E+00	2.60E-05	2.47E-06	9.22E+01	1.34E-04	3.53E-01	4.84E-05	7.95E-03	1.34E-02	2.10E-03	4.74E-03	2.81E-03	2.89E-03	1.40E-03	4.56E-04	8.41E-08	1.86E-03	1.44E-03
F81	0.00E+00	7.35E-05	4.40E-06	9.32E+01	7.76E-05	2.38E-01	7.81E-05	6.04E-02	1.52E-02	2.32E-03	8.52E-03	2.62E-03	2.69E-03	8.13E-03	3.88E-04	6.76E-08	5.83E-03	1.13E-02
F82	0.00E+00	1.33E-05	8.93E-07	1.71E+01	2.06E-05	5.64E-02	1.52E-05	1.02E-02	4.55E-03	6.48E-04	1.58E-03	5.98E-04	6.14E-04	1.06E-03	7.56E-05	1.20E-08	9.68E-04	1.92E-03

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
17	A17	110	Passenger Car	1404	0.00E+00	1.37E-05	1.49E-06	5.91E+01	9.72E-05	3.21E-01	3.09E-05	1.66E-03	3.41E-03	7.48E-04	3.01E-03	1.94E-03	1.99E-03	1.52E-04	3.02E-04	6.82E-08	1.02E-03	2.59E-04
17	A17	110	Passenger Truck	2350	0.00E+00	2.85E-05	3.06E-06	1.38E+02	1.92E-04	6.34E-01	6.19E-05	4.03E-03	5.80E-03	1.31E-03	5.98E-03	3.87E-03	3.97E-03	8.51E-04	6.98E-04	1.35E-07	2.01E-03	6.58E-04
17	A17	110	Single Unit Short Haul Truck	351	0.00E+00	3.23E-05	1.31E-06	6.02E+01	2.94E-05	1.45E-01	3.71E-05	1.56E-02	1.94E-03	5.72E-04	4.54E-03	9.53E-04	9.67E-04	6.26E-03	2.42E-04	1.08E-07	3.57E-03	2.92E-03
17	A17	110	Single Unit Long Haul Truck	15	0.00E+00	1.39E-06	5.43E-08	2.52E+00	1.18E-06	5.77E-03	1.59E-06	6.51E-04	8.71E-05	2.46E-05	1.98E-04	3.93E-05	3.99E-05	2.61E-04	1.02E-05	4.40E-09	1.58E-04	1.21E-04
17	A17	110	Combination Short Haul Truck	297	0.00E+00	5.28E-05	4.08E-06	1.04E+02	1.03E-07	7.74E-02	3.67E-05	8.50E-02	2.61E-03	7.62E-04	2.91E-03	1.17E-03	1.22E-03	1.66E-02	3.49E-04	0.00E+00	1.69E-03	1.60E-02
17	A17	110	Combination Long Haul Truck	271	0.00E+00	7.15E-05	4.54E-06	9.42E+01	3.48E-07	8.92E-02	5.59E-05	9.25E-02	2.53E-03	5.56E-04	5.68E-03	1.40E-03	1.45E-03	1.51E-02	3.16E-04	0.00E+00	4.22E-03	1.74E-02
17	A18	110	Passenger Car	1412	0.00E+00	1.38E-05	1.50E-06	5.94E+01	9.77E-05	3.23E-01	3.10E-05	1.67E-03	3.43E-03	7.52E-04	3.03E-03	1.95E-03	2.00E-03	1.53E-04	3.04E-04	6.86E-08	1.02E-03	2.61E-04
17	A18	110	Passenger Truck	2364	0.00E+00	2.86E-05	3.07E-06	1.39E+02	1.93E-04	6.37E-01	6.23E-05	4.05E-03	5.83E-03	1.32E-03	6.02E-03	3.89E-03	3.99E-03	8.56E-04	7.02E-04	1.36E-07	2.03E-03	6.62E-04
17	A18	110	Single Unit Short Haul Truck	453	0.00E+00	4.17E-05	1.69E-06	7.78E+01	3.80E-05	1.88E-01	4.79E-05	2.02E-02	2.51E-03	7.39E-04	5.86E-03	1.23E-03	1.25E-03	8.09E-03	3.13E-04	1.39E-07	4.62E-03	3.77E-03
17	A18	110	Single Unit Long Haul Truck	20	0.00E+00	1.80E-06	7.02E-08	3.26E+00	1.53E-06	7.45E-03	2.06E-06	8.42E-04	1.13E-04	3.18E-05	2.55E-04	5.08E-05	5.16E-05	3.37E-04	1.31E-05	5.68E-09	2.04E-04	1.57E-04
17	A18	110	Combination Short Haul Truck	339	0.00E+00	6.02E-05	4.65E-06	1.19E+02	1.17E-07	8.83E-02	4.19E-05	9.70E-02	2.97E-03	8.69E-04	3.32E-03	1.34E-03	1.39E-03	1.89E-02	3.98E-04	0.00E+00	1.93E-03	1.83E-02
17	A18	110	Combination Long Haul Truck	309	0.00E+00	8.16E-05	5.18E-06	1.08E+02	3.97E-07	1.02E-01	6.37E-05	1.06E-01	2.89E-03	6.35E-04	6.47E-03	1.60E-03	1.66E-03	1.73E-02	3.60E-04	0.00E+00	4.82E-03	1.99E-02
17	A19	110	Passenger Car	1250	0.00E+00	1.22E-05	1.32E-06	5.26E+01	8.65E-05	2.86E-01	2.75E-05	1.48E-03	3.04E-03	6.66E-04	2.68E-03	1.73E-03	1.77E-03	1.35E-04	2.69E-04	6.07E-08	9.07E-04	2.31E-04
17	A19	110	Passenger Truck	2092	0.00E+00	2.53E-05	2.72E-06	1.23E+02	1.71E-04	5.64E-01	5.51E-05	3.59E-03	5.16E-03	1.17E-03	5.33E-03	3.44E-03	3.53E-03	7.57E-04	6.21E-04	1.20E-07	1.79E-03	5.86E-04
17	A19	110	Single Unit Short Haul Truck	336	0.00E+00	3.10E-05	1.25E-06	5.77E+01	2.82E-05	1.39E-01	3.55E-05	1.50E-02	1.86E-03	5.48E-04	4.35E-03	9.14E-04	9.27E-04	6.00E-03	2.32E-04	1.03E-07	3.42E-03	2.80E-03
17	A19	110	Single Unit Long Haul Truck	15	0.00E+00	1.34E-06	5.21E-08	2.42E+00	1.13E-06	5.53E-03	1.53E-06	6.25E-04	8.35E-05	2.36E-05	1.90E-04	3.77E-05	3.83E-05	2.50E-04	9.75E-06	4.22E-09	1.51E-04	1.16E-04
17	A19	110	Combination Short Haul Truck	284	0.00E+00	5.05E-05	3.90E-06	9.98E+01	9.81E-08	7.40E-02	3.51E-05	8.13E-02	2.49E-03	7.28E-04	2.78E-03	1.12E-03	1.16E-03	1.59E-02	3.34E-04	0.00E+00	1.62E-03	1.53E-02
17	A19	110	Combination Long Haul Truck	259	0.00E+00	6.84E-05	4.34E-06	9.01E+01	3.33E-07	8.52E-02	5.34E-05	8.85E-02	2.42E-03	5.32E-04	5.43E-03	1.34E-03	1.39E-03	1.45E-02	3.02E-04	0.00E+00	4.03E-03	1.67E-02
17	A20	110	Passenger Car	1313	0.00E+00	1.28E-05	1.39E-06	5.53E+01	9.09E-05	3.00E-01	2.89E-05	1.55E-03	3.19E-03	7.00E-04	2.82E-03	1.82E-03	1.86E-03	1.42E-04	2.82E-04	6.38E-08	9.53E-04	2.43E-04
17	A20	110	Passenger Truck	2200	0.00E+00	2.66E-05	2.86E-06	1.29E+02	1.80E-04	5.93E-01	5.79E-05	3.77E-03	5.43E-03	1.23E-03	5.60E-03	3.62E-03	3.71E-03	7.96E-04	6.53E-04	1.26E-07	1.88E-03	6.16E-04
17	A20	110	Single Unit Short Haul Truck	430	0.00E+00	3.96E-05	1.60E-06	7.38E+01	3.61E-05	1.78E-01	4.55E-05	1.92E-02	2.38E-03	7.01E-04	5.57E-03	1.17E-03	1.19E-03	7.68E-03	2.97E-04	1.32E-07	4.38E-03	3.58E-03
17	A20	110	Single Unit Long Haul Truck	19	0.00E+00	1.71E-06	6.66E-08	3.09E+00	1.45E-06	7.08E-03	1.95E-06	7.99E-04	1.07E-04	3.02E-05	2.43E-04	4.82E-05	4.90E-05	3.20E-04	1.25E-05	5.40E-09	1.94E-04	1.49E-04
17	A20	110	Combination Short Haul Truck	323	0.00E+00	5.74E-05	4.43E-06	1.14E+02	1.12E-07	8.42E-02	3.99E-05	9.25E-02	2.84E-03	8.29E-04	3.16E-03	1.28E-03	1.32E-03	1.81E-02	3.80E-04	0.00E+00	1.84E-03	1.74E-02
17	A20	110	Combination Long Haul Truck	295	0.00E+00	7.78E-05	4.94E-06	1.03E+02	3.79E-07	9.70E-02	6.08E-05	1.01E-01	2.75E-03	6.05E-04	6.17E-03	1.52E-03	1.58E-03	1.65E-02	3.44E-04	0.00E+00	4.59E-03	1.90E-02
17	A21	110	Passenger Car	1759	0.00E+00	1.72E-05	1.86E-06	7.40E+01	1.22E-04	4.02E-01	3.87E-05	2.08E-03	4.27E-03	9.37E-04	3.77E-03	2.43E-03	2.50E-03	1.90E-04	3.78E-04	8.55E-08	1.28E-03	3.25E-04
17	A21	110	Passenger Truck	2945	0.00E+00	3.57E-05	3.83E-06	1.73E+02	2.41E-04	7.94E-01	7.76E-05	5.05E-03	7.27E-03	1.64E-03	7.50E-03	4.85E-03	4.97E-03	1.07E-03	8.74E-04	1.69E-07	2.52E-03	8.24E-04
17	A21	110	Single Unit Short Haul Truck	391	0.00E+00	3.60E-05	1.46E-06	6.71E+01	3.28E-05	1.62E-01	4.13E-05	1.74E-02	2.16E-03	6.37E-04	5.06E-03	1.06E-03	1.08E-03	6.98E-03	2.70E-04	1.20E-07	3.98E-03	3.25E-03
17	A21	110	Single Unit Long Haul Truck	17	0.00E+00	1.55E-06	6.05E-08	2.81E+00	1.32E-06	6.43E-03	1.77E-06	7.26E-04	9.71E-05	2.74E-05	2.20E-04	4.38E-05	4.45E-05	2.91E-04	1.13E-05	4.90E-09	1.76E-04	1.35E-04
17	A21	110	Combination Short Haul Truck	329	0.00E+00	5.85E-05	4.51E-06	1.16E+02	1.14E-07	8.57E-02	4.06E-05	9.42E-02	2.89E-03	8.44E-04	3.22E-03	1.30E-03	1.35E-03	1.84E-02	3.87E-04	0.00E+00	1.87E-03	1.77E-02
17	A21	110	Combination Long Haul Truck	300	0.00E+00	7.92E-05	5.03E-06	1.04E+02	3.86E-07	9.87E-02	6.18E-05	1.02E-01	2.80E-03	6.16E-04	6.28E-03	1.55E-03	1.61E-03	1.67E-02	3.50E-04	0.00E+00	4.67E-03	1.93E-02
17	A22	110	Passenger Car	1715	0.00E+00	1.67E-05	1.82E-06	7.22E+01	1.19E-04	3.92E-01	3.77E-05	2.03E-03	4.17E-03	9.14E-04	3.68E-03	2.37E-03	2.43E-03	1.85E-04	3.69E-04	8.34E-08	1.24E-03	3.17E-04
17	A22	110	Passenger Truck	2873	0.00E+00	3.48E-05	3.74E-06	1.68E+02	2.35E-04	7.74E-01	7.56E-05	4.92E-03	7.09E-03	1.60E-03	7.31E-03	4.73E-03	4.85E-03	1.04E-03	8.53E-04	1.65E-07	2.46E-03	8.04E-04
17	A22	110	Single Unit Short Haul Truck	465	0.00E+00	4.28E-05	1.73E-06	7.98E+01	3.90E-05	1.92E-01	4.91E-05	2.07E-02	2.57E-03	7.58E-04	6.01E-03	1.26E-03	1.28E-03	8.29E-03	3.21E-04	1.43E-07	4.73E-03	3.86E-03
17	A22	110	Single Unit Long Haul Truck	20	0.00E+00	1.85E-06	7.19E-08	3.34E+00	1.57E-06	7.64E-03	2.11E-06	8.63E-04	1.15E-04	3.26E-05	2.62E-04	5.21E-05	5.29E-05	3.46E-04	1.35E-05	5.83E-09	2.09E-04	1.61E-04
17	A22	110	Combination Short Haul Truck	346	0.00E+00	6.15E-05	4.75E-06	1.22E+02	1.20E-07	9.02E-02	4.28E-05	9.91E-02	3.04E-03	8.88E-04	3.39E-03	1.37E-03	1.42E-03	1.93E-02	4.07E-04	0.00E+00	1.97E-03	1.87E-02
17	A22	110	Combination Long Haul Truck	316	0.00E+00	8.34E-05	5.29E-06	1.10E+02	4.06E-07	1.04E-01	6.51E-05	1.08E-01	2.95E-03	6.48E-04	6.61E-03	1.63E-03	1.70E-03	1.76E-02	3.68E-04	0.00E+00	4.92E-03	2.03E-02
17	A23	110	Passenger Car	1851	0.00E+00	1.81E-05	1.96E-06	7.79E+01	1.28E-04	4.23E-01	4.07E-05	2.19E-03	4.50E-03	9.86E-04	3.97E-03	2.56E-03	2.63E-03	2.00E-04	3.98E-04	9.00E-08	1.34E-03	3.42E-04
17	A23	110	Passenger Truck	3100	0.00E+00	3.76E-05	4.03E-06	1.82E+02	2.53E-04	8.36E-01	8.16E-05	5.31E-03	7.65E-03	1.73E-03	7.89E-03	5.10E-03	5.23E-03	1.12E-03	9.20E-04	1.78E-07	2.66E-03	8.67E-04
17	A23	110	Single Unit Short Haul Truck	399	0.00E+00	3.68E-05	1.49E-06	6.86E+01	3.35E-05	1.65E-01	4.22E-05	1.78E-02	2.21E-03	6.51E-04	5.17E-03	1.09E-03	1.10E-03	7.13E-03	2.76E-04	1.23E-07	4.07E-03	3.32E-03
17	A23	110	Single Unit Long Haul Truck	18	0.00E+00	1.59E-06	6.19E-08	2.87E+00	1.35E-06	6.57E-03	1.81E-06	7.42E-04	9.92E-05	2.80E-05	2.25E-04	4.48E-05	4.55E-05	2.97E-04	1.16E-05	5.01E-09	1.80E-04	1.38E-04
17	A23	110	Combination Short Haul Truck	349	0.00E+00	6.20E-05	4.79E-06	1.23E+02	1.21E-07	9.08E-02	4.31E-05	9.98E-02	3.06E-03	8.95E-04	3.41E-03	1.38E-03	1.43E-03	1.95E-02	4.10E-04	0.00E+00	1.98E-03	1.88E-02
17	A23	110	Combination Long Haul Truck	318	0.00E+00	8.40E-05	5.33E-06	1.11E+02	4.09E-07	1.05E-01	6.56E-05	1.09E-01	2.97E-03	6.53E-04	6.66E-03	1.64E-03	1.71E-03	1.78E-02	3.71E-04	0.00E+00	4.96E-03	2.05E-02
17	A24	110	Passenger Car	1431	0.00E+00	1.40E-05	1.52E-06	6.02E+01	9.91E-05	3.27E-01	3.15E-05	1.69E-03	3.48E-03	7.62E-04	3.07E-03	1.98E-03	2.03E-03	1.55E-04	3.08E-04	6.96E-08	1.04E-03	2.64E-04
17	A24	110	Passenger Truck	2397	0.00E+00	2.90E-05	3.12E-06	1.40E+02	1.96E-04	6.46E-01	6.31E-05	4.11E-03	5.91E-03	1.34E-03	6.10E-03	3.95E-03	4.05E-03	8.68E-04	7.11E-04	1.38E-07	2.05E-03	6.71E-04
17	A24	110	Single Unit Short Haul Truck	403	0.00E+00	3.71E-05	1.50E-06	6.92E+01	3.38E-05	1.67E-01	4.26E-05	1.80E-02	2.23E-03	6.58E-04	5.22E-03	1.10E-03	1.11E-03	7.20E-03	2.79E-04	1.24E-07	4.11E-03	3.35E-03
17	A24	110	Single Unit Long Haul Truck	18	0.00E+00	1.60E-06	6.25E-08	2.90E+00	1.36E-06	6.64E-03	1.83E-06	7.49E-04	1.00E-04	2.83E-05	2.27E-04	4.52E-05	4.59E-05	3.00E-04	1.17E-05	5.06E-09	1.81E-04	1.40E-04
17	A24	110	Combination Short Haul Truck	312	0.00E+00	5.54E-05	4.28E-06	1.10E+02	1.08E-07	8.12E-02	3.85E-05	8.92E-02	2.73E-03	7.99E-04	3.05E-03	1.23E-03	1.28E-03	1.74E-02	3.66E-04	0.00E+00	1.77E-03	1.68E-02
17	A24	110	Combination Long Haul Truck	284	0.00E+00	7.50E-05	4.76E-06	9.89E+01	3.65E-07	9.36E-02	5.86E-05	9.71E-02	2.66E-03	5.84E-04	5.95E-03	1.47E-03	1.53E-03	1.59E-02	3.31E-04	0.00E+00	4.43E-03	1.83E-02
17	A25	110	Passenger Car	1516	0.00E+00	1.48E-05	1.61E-06	6.38E+01	1.05E-04	3.46E-01	3.33E-05	1.79E-03	3.68E-03	8.07E-04	3.25E-03	2.10E-03	2.15E-03	1.64E-04	3.26E-04	7.37E-08	1.10E-03	2.80E-04
17	A25	110	Passenger Truck	2538	0.00E+00	3.08E-05	3.30E-06	1.49E+02	2.07E-04	6.84E-01	6.68E-05	4.35E-03	6.26E-03	1.42E-03	6.46E-03	4.18E-03	4.29E-03	9.19E-04	7.53E-04	1.46E-07	2.17E-03	7.10E-04
17	A25	110	Single Unit Short Haul Truck	346	0.00E+00	3.18E-05	1.29E-06	5.94E+01	2.90E-05	1.43E-01	3.65E-05	1.54E-02	1.91E-03	5.64E-04	4.48E-03	9.40E-04	9.53E-04	6.17E-03	2.39E-04	1.06E-07	3.52E-03	2.88E-03
17	A25	110	Single Unit Long Haul Truck	15	0.00E+00	1.37E-06	5.36E-08	2.49E+00	1.17E-06	5.69E-03	1.57E-06	6.42E-04	8.59E-05	2.42E-05	1.95E-04	3.88E-05	3.94E-05	2.57E-04	1.00E-05	4.34E-09	1.56E-04	1.20E-04
17	A25	110	Combination Short Haul Truck	312	0.00E+00	5.55E-05	4.28E-06	1.10E+02	1.08E-07	8.13E-02	3.86E-05	8.94E-02	2.74E-03	8.01E-04	3.06E-03	1.23E-03	1.28E-03	1.74E-02	3.67E-04	0.00E+00	1.78E-03	1.68E-02
17	A25	110	Combination Long Haul Truck	285	0.00E+00	7.52E-05	4.77E-06	9.91E+01	3.66E-07	9.37E-02	5.87E-05	9.73E-02	2.66E-03	5.85E-04	5.96E-03	1.47E-03	1.53E-03	1.59E-02	3.32E-04	0.00E+00	4.44E-03	1.83E-02
17	A26	110	Passenger Car	1371	0.00E+00	1.34E-05	1.45E-06	5.77E+01	9.49E-05	3.13E-01	3.02E-05	1.62E-03	3.33E-03	7.30E-04	2.94E-03	1.90E-03	1.95E-03	1.48E-04	2.95E-04	6.66E-08	9.95E-04	2.53E-04
17	A26	110	Passenger Truck	2297	0.00E+00	2.78E-05	2.99E-06	1.35E+02	1.88E-04	6.19E-01	6.05E-05	3.94E-03	5.67E-03	1.28E-03	5.85E-03	3.78E-03	3.88E-03	8.31E-04	6.82E-04	1.32E-07	1.97E-03	6.43E-04
17	A26	110	Single Unit Short Haul Truck	381	0.00E+00	3.51E-05	1.42E-06	6.55E+01	3.20E-05	1.58E-01	4.03E-05	1.70E-02	2.11E-03	6.22E-04	4.93E-03	1.04E-03	1.05E-03	6.80E-03	2.64E-04	1.17E-07	3.88E-03	3.17E-03
17	A26	110	Single Unit Long Haul Truck	17	0.00E+00	1.52E-06	5.90E-08	2.74E+00	1.29E-06	6.27E-03	1.73E-06	7.08E-04	9.47E-05	2.67E-05	2.15E-04	4.28E-05	4.34E-05	2.84E-04	1.11E-05	4.78E-09	1.72E-04	1.32E-04
17	A26	110	Combination Short Haul Truck	289	0.00E+00	5.14E-05	3.97E-06	1.02E+02	9.99E-08	7.53E-02	3.57E-05	8.28E-02	2.54E-03	7.42E-04	2.83E-03	1.14E-03	1.18E-03	1.62E-02	3.40E-04	0.00E+00	1.65E-03	1.56E-02
17	A26	110	Combination Long Haul Truck	264	0.00E+00	6.96E-05	4.42E-06	9.18E+01	3.39E-07	8.68E-02	5.44E-05	9.01E-02	2.46E-03	5.42E-04	5.53E-03	1.36E-03	1.42E-03	1.47E-02	3.07E-04	0.00E+00	4.11E-03	1.70E-02
17	A27	110	Passenger Car	1516	0.00E+00	1.48E-05	1.61E-06	6.38E+01	1.05E-04	3.46E-01	3.33E-05	1.79E-03	3.68E-03	8.07E-04	3.25E-03	2.10E-03	2.15E-03	1.64E-04	3.26E-04	7.37E-08	1.10E-03	2.80E-04
17	A27	110	Passenger Truck	2538	0.00E+00	3.08E-05	3.30E-06	1.49E+02	2.07E-04	6.84E-01	6.68E-05	4.35E-03	6.26E-03	1.42E-03	6.46E-03	4.18E-03	4.29E-03	9.19E-04	7.53E-04	1.46E-07	2.17E-03	7.10E-04
17	A27	110	Single Unit Short Haul Truck	346	0.00E+00	3.18E-05	1.29E-06	5.94E+01	2.90E-05	1.43E-01	3.65E-05	1.54E-02	1.91E-03	5.64E-04	4.48E-03	9.40E-04	9.53E-04	6.17E-03	2.39E-04	1.06E-07	3.52E-03	2.88E-03
17	A27	110	Single Unit Long Haul Truck	15	0.00E+00	1.37E-06	5.36E-08	2.49E+00	1.17E-06	5.69E-03	1.57E-06	6.42E-04	8.59E-05	2.42E-05	1.95E-04	3.88E-05	3.94E-05	2.57E-04	1.00E-05	4.34E-09	1.56E-04	1.20E-04
17	A27	110	Combination Short Haul Truck	312	0.00E+00	5.55E-05	4.28E-06	1.10E+02	1.08E-07	8.13E-02	3.86E-05	8.94E-02	2.74E-03	8.01E-04	3.06E-03	1.23E-03	1.28E-03	1.74E-02	3.67E-04	0.00E+00	1.78E-03	1.68E-02
17	A27	110	Combination Long Haul Truck	285	0.00E+00	7.52E-05	4.77E-06	9.91E+01	3.66E-07	9.37E-02	5.87E-05	9.73E-02	2.66E-03	5.85E-04	5.96E-03	1.47E-03	1.53E-03	1.59E-02	3.32E-04	0.00E+00	4.44E-03	1.83E-02
17	A28	110	Passenger Car	1371	0.00E+00	1.34E-05	1.45E-06	5.77E+01	9.49E-05	3.13E-01	3.02E-05	1.62E-03	3.33E-03	7.30E-04	2.94E-03	1.90E-03	1.95E-03	1.48E-04	2.95E-04	6.66E-08	9.95E-04	2.53E-04
17	A28	110	Passenger Truck	2297	0.00E+00	2.78E-05	2.99E-06	1.35E+02	1.88E-04	6.19E-01	6.05E-05	3.94E-03	5.67E-03	1.28E-03	5.85E-03	3.78E-03	3.88E-03	8.31E-04	6.82E-04	1.32E-07	1.97E-03	6.43E-04
17	A28	110	Single Unit Short Haul Truck	381	0.00E+00	3.51E-05	1.42E-06	6.55E+01	3.20E-05	1.58E-01	4.03E-05	1.70E-02	2.11E-03	6.22E-04	4.93E-03	1.04E-03	1.05E-03	6.80E-03	2.64E-04	1.17E-07	3.88E-03	3.17E-03
17	A28	110	Single Unit Long Haul Truck	17	0.00E+00	1.52E-06	5.90E-08	2.74E+00	1.29E-06	6.27E-03	1.73E-06	7.08E-04	9.47E-05	2.67E-05	2.15E-04	4.28E-05	4.34E-05	2.84E-04	1.11E-05	4.78E-09	1.72E-04	1.32E-04
17	A28	110	Combination Short Haul Truck	289	0.00E+00	5.14E-05	3.97E-06	1.02E+02	9.99E-08	7.53E-02	3.57E-05	8.28E-02	2.54E-03	7.42E-04	2.83E-03	1.14E-03	1.18E-03	1.62E-02	3.40E-04	0.00E+00	1.65E-03	1.56E-02
17	A28	110	Combination Long Haul Truck	264	0.00E+00	6.96E-05	4.42E-06	9.18E+01	3.39E-07	8.68E-02	5.44E-05	9.01E-02	2.46E-03	5.42E-04	5.53E-03	1.36E-03	1.42E-03	1.47E-02	3.07E-04	0.00E+00	4.11E-03	1.70E-02
16	B15	100	Passenger Car	1929	0.00E+00	1.78E-05	1.94E-06	7.81E+01	1.26E-04	3.65E-01	4.02E-05	2.08E-03	6.17E-03	1.18E-03	3.92E-03	2.53E-03	2.59E-03	2.29E-04	3.99E-04	8.37E-08	1.32E-03	3.25E-04
16	B15	100	Passenger Truck	3231	0.00E+00	3.68E-05	3.94E-06	1.80E+02	2.46E-04	7.06E-01	7.94E-05	5.20E-03	1.08E-02	2.09E-03	7.66E-03	4.96E-03	5.08E-03	1.19E-03	9.11E-04	1.66E-07	2.57E-03	8.54E-04
16	B15	100	Single Unit Short Haul Truck	96	0.00E+00	9.10E-06	3.36E-07	1.56E+01	6.96E-06	3.23E-02	1.03E-05	4.03E-03	6.19E-04	1.60E-04	1.31E-03	2.41E-04	2.45E-04	1.60E-03	6.33E-05	2.58E-08	1.06E-03	7.52E-04
16	B15	100	Single Unit Long Haul Truck	4	0.00E+00	3.95E-07	1.42E-08	6.58E-01	2.88E-07	1.32E-03	4.47E-07	1.69E-04	2.81E-05	6.95E-06	5.71E-05	1.02E-05	1.03E-05	6.69E-05	2.67E-06	1.06E-09	4.67E-05	3.15E-05
16	B15	100	Combination Short Haul Truck	76	0.00E+00	1.09E-05	8.07E-07	2.54E+01	2.90E-08	1.97E-02	7.82E-06	1.98E-02	7.40E-04	1.88E-04	6.65E-04	2.36E-04	2.45E-04	4.04E-03	8.51E-05	0.00E+00	4.21E-04	3.72E-03
16	B15	100	Combination Long Haul Truck	70	0.00E+00	1.54E-05	8.70E-07	2.30E+01	9.84E-08	2.29E-02	1.27E-05	2.12E-02	7.41E-04	1.51E-04	1.42E-03	2.81E-04	2.92E-04	3.70E-03	7.72E-05	0.00E+00	1.12E-03	3.99E-03
16	B16	100	Passenger Car	1175	0.00E+00	1.08E-05	1.18E-06	4.76E+01	7.70E-05	2.22E-01	2.45E-05	1.27E-03	3.76E-03	7.20E-04	2.39E-03	1.54E-03	1.58E-03	1.40E-04	2.43E-04	5.10E-08	8.07E-04	1.98E-04
16	B16	100	Passenger Truck	1968	0.00E+00	2.24E-05	2.40E-06	1.10E+02	1.50E-04	4.30E-01	4.84E-05	3.17E-03	6.56E-03	1.27E-03	4.66E-03	3.02E-03	3.10E-03	7.25E-04	5.55E-04	1.01E-07	1.57E-03	5.20E-04
16	B16	100	Single Unit Short Haul Truck	63	0.00E+00	6.01E-06	2.22E-07	1.03E+01	4.60E-06	2.13E-02	6.81E-06	2.66E-03	4.08E-04	1.06E-04	8.61E-04	1.59E-04	1.62E-04	1.06E-03	4.18E-05	1.71E-08	7.00E-04	4.96E-04
16	B16	100	Single Unit Long Haul Truck	3	0.00E+00	2.61E-07	9.38E-09	4.34E-01	1.90E-07	8.72E-04	2.95E-07	1.12E-04	1.86E-05	4.59E-06	3.77E-05	6.71E-06	6.83E-06	4.42E-05	1.76E-06	6.98E-10	3.08E-05

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B20	100	Single Unit Long Haul Truck	9	0.00E+00	8.03E-07	2.89E-08	1.34E+00	5.85E-07	2.68E-03	9.08E-07	3.43E-04	5.71E-05	1.41E-05	1.16E-04	2.06E-05	2.10E-05	1.36E-04	5.42E-06	2.15E-09	9.48E-05	6.40E-05
16	B20	100	Combination Short Haul Truck	209	0.00E+00	2.99E-05	2.21E-06	6.95E+01	7.92E-08	5.37E-02	2.14E-05	5.40E-02	2.02E-03	5.13E-04	1.82E-03	6.44E-04	6.68E-04	1.11E-02	2.33E-04	0.00E+00	1.15E-03	1.02E-02
16	B20	100	Combination Long Haul Truck	190	0.00E+00	4.22E-05	2.38E-06	6.30E+01	2.69E-07	6.26E-02	3.48E-05	5.79E-02	2.02E-03	4.13E-04	3.87E-03	7.67E-04	7.99E-04	1.01E-02	2.11E-04	0.00E+00	3.07E-03	1.09E-02
16	B21	100	Passenger Car	2875	0.00E+00	2.65E-05	2.88E-06	1.16E+02	1.88E-04	5.44E-01	5.98E-05	3.10E-03	9.19E-03	1.76E-03	5.84E-03	3.76E-03	3.86E-03	3.42E-04	5.94E-04	1.25E-07	1.97E-03	4.84E-04
16	B21	100	Passenger Truck	4814	0.00E+00	5.49E-05	5.88E-06	2.68E+02	3.66E-04	1.05E+00	1.18E-04	7.74E-03	1.60E-02	3.11E-03	1.14E-02	7.39E-03	7.57E-03	1.77E-03	1.36E-03	2.47E-07	3.83E-03	1.27E-03
16	B21	100	Single Unit Short Haul Truck	44	0.00E+00	4.19E-06	1.55E-07	7.19E+00	3.20E-06	1.49E-02	4.75E-06	1.85E-03	2.85E-04	7.37E-05	6.00E-04	1.11E-04	1.13E-04	7.37E-04	2.91E-05	1.19E-08	4.88E-04	3.46E-04
16	B21	100	Single Unit Long Haul Truck	2	0.00E+00	1.82E-07	6.54E-09	3.03E-01	1.33E-07	6.08E-04	2.06E-07	7.77E-05	1.29E-05	3.20E-06	2.62E-05	4.67E-06	4.76E-06	3.08E-05	1.23E-06	4.86E-10	2.15E-05	1.45E-05
16	B21	100	Combination Short Haul Truck	46	0.00E+00	6.58E-06	4.86E-07	1.53E+01	1.75E-08	1.19E-02	4.71E-06	1.19E-02	4.46E-04	1.13E-04	4.01E-04	1.42E-04	1.47E-04	2.44E-03	5.13E-05	0.00E+00	2.54E-04	2.25E-03
16	B21	100	Combination Long Haul Truck	42	0.00E+00	9.30E-06	5.25E-07	1.39E+01	5.93E-08	1.38E-02	7.68E-06	1.28E-02	4.47E-04	9.10E-05	8.54E-04	1.69E-04	1.76E-04	2.23E-03	4.65E-05	0.00E+00	6.77E-04	2.40E-03
16	B22	100	Passenger Car	1124	0.00E+00	1.04E-05	1.13E-06	4.55E+01	7.36E-05	2.13E-01	2.34E-05	1.21E-03	3.59E-03	6.89E-04	2.28E-03	1.47E-03	1.51E-03	1.34E-04	2.32E-04	4.88E-08	7.72E-04	1.89E-04
16	B22	100	Passenger Truck	1882	0.00E+00	2.14E-05	2.30E-06	1.05E+02	1.43E-04	4.11E-01	4.62E-05	3.03E-03	6.27E-03	1.22E-03	4.46E-03	2.89E-03	2.96E-03	6.93E-04	5.31E-04	9.66E-08	1.50E-03	4.97E-04
16	B22	100	Single Unit Short Haul Truck	46	0.00E+00	4.37E-06	1.61E-07	7.51E+00	3.34E-06	1.55E-02	4.95E-06	1.93E-03	2.97E-04	7.69E-05	6.26E-04	1.16E-04	1.18E-04	7.69E-04	3.04E-05	1.24E-08	5.09E-04	3.61E-04
16	B22	100	Single Unit Long Haul Truck	2	0.00E+00	1.90E-07	6.82E-09	3.16E-01	1.38E-07	6.34E-04	2.15E-07	8.11E-05	1.35E-05	3.34E-06	2.74E-05	4.88E-06	4.97E-06	3.21E-05	1.28E-06	5.08E-10	2.24E-05	1.51E-05
16	B22	100	Combination Short Haul Truck	101	0.00E+00	1.45E-05	1.07E-06	3.38E+01	3.85E-08	2.61E-02	1.04E-05	2.63E-02	9.83E-04	2.49E-04	8.84E-04	3.13E-04	3.25E-04	5.37E-03	1.13E-04	0.00E+00	5.59E-04	4.95E-03
16	B22	100	Combination Long Haul Truck	93	0.00E+00	2.05E-05	1.16E-06	3.06E+01	1.31E-07	3.04E-02	1.69E-05	2.81E-02	9.84E-04	2.01E-04	1.88E-03	3.73E-04	3.88E-04	4.91E-03	1.03E-04	0.00E+00	1.49E-03	5.30E-03
16	B23	100	Passenger Car	2997	0.00E+00	2.77E-05	3.01E-06	1.21E+02	1.96E-04	5.67E-01	6.24E-05	3.23E-03	9.58E-03	1.84E-03	6.08E-03	3.92E-03	4.03E-03	3.56E-04	6.20E-04	1.30E-07	2.06E-03	5.04E-04
16	B23	100	Passenger Truck	5020	0.00E+00	5.72E-05	6.13E-06	2.80E+02	3.81E-04	1.10E+00	1.23E-04	8.08E-03	1.67E-02	3.25E-03	1.19E-02	7.70E-03	7.90E-03	1.85E-03	1.41E-03	2.58E-07	4.00E-03	1.33E-03
16	B23	100	Single Unit Short Haul Truck	43	0.00E+00	4.10E-06	1.51E-07	7.04E+00	3.13E-06	1.45E-02	4.64E-06	1.81E-03	2.78E-04	7.21E-05	5.87E-04	1.08E-04	1.10E-04	7.21E-04	2.85E-05	1.16E-08	4.77E-04	3.38E-04
16	B23	100	Single Unit Long Haul Truck	2	0.00E+00	1.78E-07	6.40E-09	2.96E-01	1.30E-07	5.95E-04	2.01E-07	7.61E-05	1.27E-05	3.13E-06	2.57E-05	4.57E-06	4.66E-06	3.01E-05	1.20E-06	4.76E-10	2.10E-05	1.42E-05
16	B23	100	Combination Short Haul Truck	46	0.00E+00	6.51E-06	4.81E-07	1.52E+01	1.73E-08	1.17E-02	4.66E-06	1.18E-02	4.41E-04	1.12E-04	3.97E-04	1.40E-04	1.46E-04	2.41E-03	5.07E-05	0.00E+00	2.51E-04	2.22E-03
16	B23	100	Combination Long Haul Truck	41	0.00E+00	9.20E-06	5.19E-07	1.37E+01	5.86E-08	1.36E-02	7.59E-06	1.26E-02	4.41E-04	9.00E-05	8.44E-04	1.67E-04	1.74E-04	2.20E-03	4.60E-05	0.00E+00	6.70E-04	2.38E-03
16	B24	100	Passenger Car	1743	0.00E+00	1.61E-05	1.75E-06	7.06E+01	1.14E-04	3.30E-01	3.63E-05	1.88E-03	5.57E-03	1.07E-03	3.54E-03	2.28E-03	2.34E-03	2.07E-04	3.60E-04	7.57E-08	1.20E-03	2.93E-04
16	B24	100	Passenger Truck	2920	0.00E+00	3.33E-05	3.56E-06	1.63E+02	2.22E-04	6.38E-01	7.17E-05	4.70E-03	9.73E-03	1.89E-03	6.92E-03	4.48E-03	4.59E-03	1.08E-03	8.23E-04	1.50E-07	2.32E-03	7.72E-04
16	B24	100	Single Unit Short Haul Truck	281	0.00E+00	2.67E-05	9.85E-07	4.58E+01	2.04E-05	9.46E-02	3.02E-05	1.18E-02	1.81E-03	4.69E-04	3.82E-03	7.06E-04	7.18E-04	4.69E-03	1.85E-04	7.57E-08	3.11E-03	2.20E-03
16	B24	100	Single Unit Long Haul Truck	12	0.00E+00	1.16E-06	4.17E-08	1.93E+00	8.44E-07	3.87E-03	1.31E-06	4.95E-04	8.24E-05	2.04E-05	1.67E-04	2.98E-05	3.03E-05	1.96E-04	7.82E-06	3.10E-09	1.37E-04	9.23E-05
16	B24	100	Combination Short Haul Truck	270	0.00E+00	3.87E-05	2.86E-06	9.01E+01	1.03E-07	6.96E-02	2.77E-05	7.00E-02	2.62E-03	6.64E-04	2.36E-03	8.34E-04	8.66E-04	1.43E-02	3.01E-04	0.00E+00	1.49E-03	1.32E-02
16	B24	100	Combination Long Haul Truck	247	0.00E+00	5.47E-05	3.08E-06	8.16E+01	3.48E-07	8.11E-02	4.51E-05	7.50E-02	2.62E-03	5.35E-04	5.02E-03	9.94E-04	1.04E-03	1.31E-02	2.73E-04	0.00E+00	3.98E-03	1.41E-02
52	C53	60	Passenger Car	53	0.00E+00	6.17E-07	6.70E-08	2.40E+00	4.38E-06	1.18E-02	1.39E-06	5.27E-05	5.21E-04	7.81E-05	1.36E-04	8.75E-05	8.98E-05	1.05E-05	1.21E-05	2.47E-09	4.59E-05	8.21E-06
52	C53	60	Passenger Truck	89	0.00E+00	1.30E-06	1.38E-07	5.34E+00	8.21E-06	2.03E-02	2.70E-06	1.61E-04	9.26E-04	1.37E-04	2.57E-04	1.67E-04	1.72E-04	4.22E-05	2.68E-05	4.52E-09	8.58E-05	2.72E-05
52	C53	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
53	C54	70	Passenger Car	68	0.00E+00	7.23E-07	7.86E-08	2.96E+00	5.13E-06	1.39E-02	1.63E-06	6.96E-05	5.13E-04	8.04E-05	1.59E-04	1.03E-04	1.05E-04	1.15E-05	1.50E-05	3.12E-09	5.38E-05	1.09E-05
53	C54	70	Passenger Truck	113	0.00E+00	1.51E-06	1.61E-07	6.66E+00	9.70E-06	2.46E-02	3.17E-06	1.97E-04	9.17E-04	1.42E-04	3.04E-04	1.97E-04	2.02E-04	4.99E-05	3.35E-05	5.87E-09	1.01E-04	3.29E-05
53	C54	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
53	C54	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.42E-04
53	C54	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.66E-04
53	C57	70	Passenger Car	182	0.00E+00	1.95E-06	2.12E-07	7.97E+00	1.38E-05	3.75E-02	4.40E-06	1.88E-04	1.38E-03	2.17E-04	4.29E-04	2.76E-04	2.84E-04	3.10E-05	4.05E-05	8.40E-09	1.45E-04	2.93E-05
53	C57	70	Passenger Truck	306	0.00E+00	4.07E-06	4.33E-07	1.80E+01	2.62E-05	6.62E-02	8.55E-06	5.30E-04	2.47E-03	3.84E-04	8.19E-04	5.32E-04	5.45E-04	1.35E-04	9.03E-05	1.58E-08	2.74E-04	8.88E-05
53	C57	70	Single Unit Short Haul Truck	19	0.00E+00	3.37E-06	1.37E-07	3.14E+00	2.26E-06	5.69E-03	3.67E-06	1.34E-03	3.04E-04	5.59E-05	4.54E-04	8.66E-05	8.83E-05	3.19E-04	1.28E-05	5.15E-09	3.66E-04	2.51E-04
53	C57	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	5.91E-09	1.33E-01	9.72E-08	2.39E-04	1.60E-07	5.78E-05	1.39E-05	2.50E-06	1.98E-05	3.74E-06	3.81E-06	1.35E-05	5.42E-07	2.17E-10	1.60E-05	1.08E-05
53	C57	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	C57	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.12E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
50	C58	40	Passenger Car	38	0.00E+00	5.36E-07	5.82E-08	1.97E+00	3.80E-06	1.02E-02	1.21E-06	3.44E-05	6.51E-04	9.15E-05	1.18E-04	7.60E-05	7.80E-05	1.12E-05	9.90E-06	1.83E-09	3.99E-05	5.37E-06
50	C58	40	Passenger Truck	63	0.00E+00	1.18E-06	1.24E-07	4.29E+00	7.12E-06	1.69E-02	2.37E-06	1.33E-04	1.15E-03	1.60E-04	2.24E-04	1.46E-04	1.50E-04	3.83E-05	2.14E-05	3.12E-09	7.43E-05	2.30E-05
50	C58	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.46E-05
50	C58	40	Combination Short Haul Truck	2	0.00E+00	7.57E-07	5.65E-08	6.51E-01	1.87E-09	1.07E-03	5.38E-07	1.10E-03	1.53E-04	2.27E-05	4.50E-05	1.64E-05	1.71E-05	1.03E-04	2.18E-06	0.00E+00	2.79E-05	2.08E-04
50	C58	40	Combination Long Haul Truck	1	0.00E+00	1.01E-06	5.68E-08	6.24E-01	6.39E-09	1.30E-03	8.29E-07	1.16E-03	1.58E-04	2.23E-05	9.21E-05	1.83E-05	1.91E-05	1.00E-04	2.09E-06	0.00E+00	7.31E-05	2.19E-04
53	C59	70	Passenger Car	114	0.00E+00	1.21E-06	1.32E-07	4.96E+00	8.62E-06	2.34E-02	2.74E-06	1.17E-04	8.62E-04	1.35E-04	2.67E-04	1.72E-04	1.77E-04	1.93E-05	2.52E-05	5.23E-09	9.04E-05	1.82E-05
53	C59	70	Passenger Truck	190	0.00E+00	2.54E-06	2.70E-07	1.12E+01	1.63E-05	4.13E-02	5.33E-06	3.30E-04	1.54E-03	2.39E-04	5.10E-04	3.31E-04	3.39E-04	8.39E-05	5.62E-05	9.86E-09	1.70E-04	5.53E-05
53	C59	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.37E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
53	C59	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
53	C59	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
52	C60	60	Passenger Car	243	0.00E+00	2.82E-06	3.07E-07	1.10E+01	2.00E-05	5.41E-02	6.37E-06	2.41E-04	2.39E-03	3.58E-04	6.21E-04	4.00E-04	4.11E-04	4.82E-05	5.55E-05	1.13E-08	2.10E-04	3.76E-05
52	C60	60	Passenger Truck	407	0.00E+00	5.96E-06	6.32E-07	2.44E+01	3.76E-05	9.29E-02	1.24E-05	7.35E-04	4.24E-03	6.29E-04	1.18E-03	7.66E-04	7.85E-04	1.93E-04	1.23E-04	2.07E-08	3.93E-04	1.24E-04
52	C60	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.40E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
52	C60	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.04E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
52	C60	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.43E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.35E-04
52	C60	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.72E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.90E-04
53	C61	70	Passenger Car	128	0.00E+00	1.37E-06	1.49E-07	5.58E+00	9.70E-06	2.63E-02	3.08E-06	1.32E-04	9.70E-04	1.52E-04	3.01E-04	1.94E-04	1.99E-04	2.17E-05	2.84E-05	5.89E-09	1.02E-04	2.05E-05
53	C61	70	Passenger Truck	214	0.00E+00	2.85E-06	3.04E-07	1.26E+01	1.83E-05	4.64E-02	5.99E-06	3.72E-04	1.73E-03	2.69E-04	5.74E-04	3.73E-04	3.82E-04	9.44E-05	6.33E-05	1.11E-08	1.92E-04	6.22E-05
53	C61	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.05E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.51E-04
53	C61	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.47E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.48E-06
53	C61	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
53	C61	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
50	C62	40	Passenger Car	360	0.00E+00	5.11E-06	5.56E-07	1.88E+01	3.63E-05	9.77E-02	1.15E-05	3.29E-04	6.22E-03	8.74E-04	1.12E-03	7.25E-04	7.44E-04	1.07E-04	9.45E-05	1.75E-08	3.80E-04	5.13E-05
50	C62	40	Passenger Truck	604	0.00E+00	1.13E-05	1.19E-06	4.09E+01	6.79E-05	1.62E-01	2.27E-05	1.27E-03	1.10E-02	1.53E-03	2.14E-03	1.40E-03	1.43E-03	3.66E-04	2.04E-04	2.98E-08	7.09E-04	2.19E-04
50	C62	40	Single Unit Short Haul Truck	5	0.00E+00	1.62E-06	7.23E-08	9.05E-01	1.12E-06	1.42E-03	1.74E-06	6.55E-04	1.88E-04	2.94E-05	2.09E-04	4.35E-05	4.44E-05	9.24E-05	3.69E-06	1.56E-09	1.65E-04	1.23E-04
50	C62	40	Combination Short Haul Truck	3	0.00E+00	1.51E-06	1.13E-07	1.30E+00	3.75E-09	2.14E-03	1.08E-06	2.21E-03	3.05E-04	4.55E-05	9.00E-05	3.29E-05	3.41E-05	2.07E-04	4.35E-06	0.00E+00	5.59E-05	4.16E-04
50	C62	40	Combination Long Haul Truck	3	0.00E+00	2.01E-06	1.14E-07	1.25E+00	1.28E-08	2.60E-03	1.66E-06	2.33E-03	3.17E-04	4.45E-05	1.84E-04	3.66E-05	3.81E-05	2.01E-04	4.19E-06	0.00E+00	1.46E-04	4.39E-04
52	C63	60	Passenger Car	301	0.00E+00	3.49E-06	3.80E-07	1.36E+01	2.48E-05	6.69E-02	7.88E-06	2.98E-04	2.95E-03	4.42E-04	7.68E-04	4.95E-04	5.08E-04	5.96E-05	6.87E-05	1.40E-08	2.60E-04	4.65E-05
52	C63	60	Passenger Truck	503	0.00E+00	7.37E-06	7.81E-07	3.02E+01	4.65E-05	1.15E-01	1.53E-05	9.10E-04	5.24E-03	7.78E-04	1.46E-03	9.48E-04	9.72E-04	2.39E-04	1.52E-04	2.56E-08	4.86E-04	1.54E-04
52	C63	60	Single Unit Short Haul Truck	67	0.00E+00	1.50E-05	6.18E-07	1.12E+01	9.92E-06	1.96E-02	1.62E-05	5.75E-03	1.54E-03	2.59E-04	2.00E-03	3.85E-04	3.92E-04	1.13E-03	4.55E-05	1.87E-08	1.60E-03	1.08E-03
52	C63	60	Single Unit Long Haul Truck	3	0.00E+00	6.53E-07	2.69E-08	4.76E-01	4.30E-07	8.33E-04	7.07E-07	2.49E-04	6.93E-05	1.15E-05	8.73E-05	1.67E-05	1.71E-05	4.81E-05	1.94E-06	7.97E-10	7.03E-05	4.66E-05
52	C63	60	Combination Short Haul Truck	56	0.00E+00	1.63E-05	1.20E-06	1.97E+01	4.47E-08	2.44E-02	1.17E-05	2.50E-02	2.85E-03	4.46E-04	1.01E-03	3.51E-04	3.64E-04	3.13E-03	6.59E-05	0.00E+00	6.42E-04	4.70E-03
52	C63	60	Combination Long Haul Truck	51	0.00E+00	2.24E-05	1.23E-06	1.86E+01	1.51E-07	2.93E-02	1.88E-05	2.66E-02	2.99E-03	4.32E-04	2.13E-03	4.00E-04	4.17E-04	2.99E-03	6.24E-05	0.00E+00	1.71E-03	5.01E-03
53	C64	70	Passenger Car	534	0.00E+00	5.71E-06	6.21E-07	2.33E+01	4.05E-05	1.10E-01	1.29E-05	5.50E-04	4.05E-03	6.34E-04	1.26E-03	8.10E-04	8.31E-04	9.08E-05	1.18E-04	2.46E-08	4.25E-04	8.58E-05
53	C64	70	Passenger Truck	895	0.00E+00	1.19E-05	1.27E-06	5.26E+01	7.66E-05	1.94E-01	2.50E-05	1.55E-03	7.24E-03	1.12E-03	2.40E-03	1.56E-03	1.60E-03	3.94E-04	2.64E-04	4.63E-08	8.01E-04	2.60E-04
53	C64	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.65E-04
53	C64	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
53	C64	70	Combination Short Haul Truck	29	0.00E+00	7.54E-06	5.61E-07	1.02E+01	1.91E-08	1.09E-02	5.37E-06	1.13E-02	1.06E-03	1.77E-04	4.52E-04	1.63E-04	1.70E-04	1.62E-03	3.41E-05	0.00E+00	2.83E-04	2.13E-03
53	C64	70	Combination Long Haul Truck	27	0.00E+00	1.03E-05	5.88E-07	9.56E+00	6.48E-08	1.30E-02	8.50E-06	1.21E-02	1.11E-03	1.67E-04	9.40E-04	1.89E-04	1.97E-04	1.53E-03	3.20E-05	0.00E+00	7.43E-04	2.28E-03
52	C65	60	Passenger Car	7	0.00E+00	7.82E-08	8.50E-09	3.04E-01	5.55E-07	1.50E-03	1.76E-07	6.67E-06	6.61E-05	9.91E-06	1.72E-05	1.11E-05	1.14E-05	1.33E-06	1.54E-06	3.13E-10	5.82E-06	1.04E-06
52	C65	60	Passenger Truck	11	0.00E+00	1.65E-07	1.75E-08	6.77E-01	1.04E-06	2.57E-03	3.42E-07	2.04E-05	1.17E-04	1.74E-05	3.26E-05	2.12E-05	2.18E-05	5.35E-06	3.39E-06	5.73E-10	1.09E-05	3.44E-06
50	C66	40	Passenger Car	133	0.00E

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
55	C70	90	Passenger Car	671	0.00E+00	6.39E-06	6.94E-07	2.74E+01	4.53E-05	1.27E-01	1.44E-05	7.00E-04	2.86E-03	5.01E-04	1.40E-03	9.05E-04	9.29E-04	8.87E-05	1.40E-04	2.84E-08	4.75E-04	1.09E-04
55	C70	90	Passenger Truck	1124	0.00E+00	1.33E-05	1.42E-06	6.26E+01	8.73E-05	2.39E-01	2.83E-05	1.82E-03	5.07E-03	8.90E-04	2.72E-03	1.77E-03	1.81E-03	4.31E-04	3.16E-04	5.58E-08	9.14E-04	3.00E-04
55	C70	90	Single Unit Short Haul Truck	109	0.00E+00	1.17E-05	4.33E-07	1.79E+01	8.09E-06	3.27E-02	1.31E-05	5.11E-03	8.58E-04	2.02E-04	1.66E-03	2.96E-04	3.02E-04	1.82E-03	7.26E-05	2.84E-08	1.36E-03	9.54E-04
55	C70	90	Single Unit Long Haul Truck	5	0.00E+00	5.09E-07	1.85E-08	7.55E-01	3.40E-07	1.35E-03	5.67E-07	2.17E-04	3.92E-05	8.84E-06	7.24E-05	1.26E-05	1.29E-05	7.63E-05	3.07E-06	1.17E-09	5.95E-05	4.04E-05
55	C70	90	Combination Short Haul Truck	69	0.00E+00	9.82E-06	7.05E-07	2.20E+01	3.04E-08	1.83E-02	7.16E-06	1.75E-02	9.44E-04	1.96E-04	6.34E-04	2.08E-04	2.16E-04	3.50E-03	7.36E-05	0.00E+00	4.18E-04	3.29E-03
55	C70	90	Combination Long Haul Truck	62	0.00E+00	1.42E-05	7.46E-07	2.01E+01	1.03E-07	2.14E-02	1.21E-05	1.85E-02	9.68E-04	1.73E-04	1.41E-03	2.48E-04	2.59E-04	3.22E-03	6.73E-05	0.00E+00	1.15E-03	3.49E-03
53	C71	70	Passenger Car	391	0.00E+00	4.18E-06	4.54E-07	1.71E+01	2.96E-05	8.03E-02	9.42E-06	4.02E-04	2.96E-03	4.64E-04	9.18E-04	5.92E-04	6.08E-04	6.64E-05	8.66E-05	1.80E-08	3.11E-04	6.27E-05
53	C71	70	Passenger Truck	654	0.00E+00	8.72E-06	9.28E-07	3.84E+01	5.60E-05	1.42E-01	1.83E-05	1.14E-03	5.29E-03	8.23E-04	1.75E-03	1.14E-03	1.17E-03	2.88E-04	1.93E-04	3.39E-08	5.86E-04	1.90E-04
53	C71	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.23E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.91E-04
53	C71	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.82E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.40E-05
53	C71	70	Combination Short Haul Truck	41	0.00E+00	1.05E-05	7.81E-07	1.42E+01	2.67E-08	1.52E-02	7.48E-06	1.57E-02	1.48E-03	2.47E-04	6.30E-04	2.28E-04	2.36E-04	2.25E-03	4.74E-05	0.00E+00	3.94E-04	2.96E-03
53	C71	70	Combination Long Haul Truck	37	0.00E+00	1.44E-05	8.19E-07	1.33E+01	9.03E-08	1.81E-02	1.18E-05	1.68E-02	1.54E-03	2.32E-04	1.31E-03	2.63E-04	2.74E-04	2.14E-03	4.46E-05	0.00E+00	1.03E-03	3.17E-03
50	C72	40	Passenger Car	33	0.00E+00	4.72E-07	5.13E-08	1.74E+00	3.35E-06	9.02E-03	1.06E-06	3.04E-05	5.74E-04	8.07E-05	1.04E-04	6.69E-05	6.87E-05	9.89E-06	8.72E-06	1.62E-09	3.51E-05	4.74E-06
50	C72	40	Passenger Truck	56	0.00E+00	1.04E-06	1.09E-07	3.78E+00	6.27E-06	1.49E-02	2.09E-06	1.17E-04	1.02E-03	1.41E-04	1.98E-04	1.29E-04	1.32E-04	3.38E-05	1.88E-05	2.75E-09	6.54E-05	2.03E-05
50	C72	40	Single Unit Short Haul Truck	2	0.00E+00	6.50E-07	2.89E-08	3.62E-01	4.50E-07	5.67E-04	6.95E-07	2.62E-04	7.54E-05	1.18E-05	8.36E-05	1.74E-05	1.77E-05	3.70E-05	1.47E-06	6.25E-10	6.58E-05	4.91E-05
50	C72	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.36E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.39E-04
50	C72	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.77E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
51	C73	50	Passenger Car	175	0.00E+00	2.26E-06	2.45E-07	8.24E+00	1.60E-05	4.31E-02	5.09E-06	1.64E-04	2.28E-03	3.29E-04	4.96E-04	3.20E-04	3.28E-04	4.15E-05	4.15E-05	8.26E-09	1.68E-04	2.56E-05
51	C73	50	Passenger Truck	292	0.00E+00	4.82E-06	5.09E-07	1.81E+01	2.97E-05	7.15E-02	9.85E-06	5.57E-04	4.02E-03	5.75E-04	9.35E-04	6.09E-04	6.24E-04	1.53E-04	9.04E-05	1.44E-08	3.10E-04	9.55E-05
51	C73	50	Single Unit Short Haul Truck	14	0.00E+00	4.00E-06	1.85E-07	2.66E+00	2.73E-06	4.31E-03	4.22E-06	1.66E-03	4.62E-04	7.56E-05	5.01E-04	1.08E-04	1.10E-04	2.73E-04	1.08E-05	4.56E-09	3.91E-04	3.12E-04
51	C73	50	Single Unit Long Haul Truck	1	0.00E+00	1.73E-07	8.04E-09	1.14E-01	1.19E-07	1.85E-04	1.83E-07	7.24E-05	2.09E-05	3.38E-06	2.17E-05	4.70E-06	4.79E-06	1.17E-05	4.64E-07	1.96E-10	1.69E-05	1.36E-05
51	C73	50	Combination Short Haul Truck	7	0.00E+00	2.88E-06	2.19E-07	2.75E+00	6.32E-09	3.90E-03	2.02E-06	4.11E-03	4.73E-04	7.40E-05	1.64E-04	6.33E-05	6.57E-05	4.37E-04	9.19E-06	0.00E+00	9.88E-05	7.75E-04
51	C73	50	Combination Long Haul Truck	6	0.00E+00	3.76E-06	2.24E-07	2.62E+00	2.15E-08	4.72E-03	3.03E-06	4.37E-03	4.91E-04	7.06E-05	3.25E-04	7.07E-05	7.36E-05	4.20E-04	8.78E-06	0.00E+00	2.51E-04	8.23E-04
52	C74	60	Passenger Car	432	0.00E+00	5.02E-06	5.45E-07	1.95E+01	3.56E-05	9.62E-02	1.13E-05	4.28E-04	4.24E-03	6.36E-04	1.10E-03	7.11E-04	7.30E-04	8.56E-05	9.87E-05	2.01E-08	3.73E-04	6.68E-05
52	C74	60	Passenger Truck	723	0.00E+00	1.06E-05	1.12E-06	4.34E+01	6.68E-05	1.65E-01	2.20E-05	1.31E-03	7.53E-03	1.12E-03	2.09E-03	1.36E-03	1.40E-03	3.43E-04	2.18E-04	3.67E-08	6.98E-04	2.21E-04
52	C74	60	Single Unit Short Haul Truck	57	0.00E+00	1.26E-05	5.21E-07	9.40E+00	8.36E-06	1.65E-02	1.36E-05	4.84E-03	1.30E-03	2.18E-04	1.68E-03	3.24E-04	3.31E-04	9.53E-04	3.83E-05	1.58E-08	1.35E-03	9.07E-04
52	C74	60	Single Unit Long Haul Truck	2	0.00E+00	5.51E-07	2.26E-08	4.01E-01	3.63E-07	7.02E-04	5.96E-07	2.10E-04	5.84E-05	9.69E-06	7.36E-05	1.41E-05	1.44E-05	4.05E-05	1.64E-06	6.72E-10	5.92E-05	3.93E-05
52	C74	60	Combination Short Haul Truck	48	0.00E+00	1.39E-05	1.02E-06	1.68E+01	3.80E-08	2.08E-02	9.98E-06	2.12E-02	2.42E-03	3.79E-04	8.56E-04	2.98E-04	3.10E-04	2.66E-03	5.61E-05	0.00E+00	5.46E-04	4.00E-03
52	C74	60	Combination Long Haul Truck	43	0.00E+00	1.91E-05	1.04E-06	1.58E+01	1.29E-07	2.49E-02	1.60E-05	2.26E-02	2.54E-03	3.68E-04	1.81E-03	3.41E-04	3.55E-04	2.54E-03	5.31E-05	0.00E+00	1.46E-03	4.26E-03
53	C81	70	Passenger Car	366	0.00E+00	3.92E-06	4.26E-07	1.60E+01	2.78E-05	7.53E-02	8.83E-06	3.77E-04	2.78E-03	4.35E-04	8.61E-04	5.55E-04	5.70E-04	6.23E-05	8.13E-05	1.69E-08	2.91E-04	5.88E-05
53	C81	70	Passenger Truck	614	0.00E+00	8.18E-06	8.70E-07	3.61E+01	5.25E-05	1.33E-01	1.72E-05	1.06E-03	4.96E-03	7.71E-04	1.64E-03	1.07E-03	1.09E-03	2.70E-04	1.81E-04	3.18E-08	5.49E-04	1.78E-04
53	C81	70	Single Unit Short Haul Truck	76	0.00E+00	1.33E-05	5.41E-07	1.24E+01	8.92E-06	2.25E-02	1.45E-05	5.30E-03	1.20E-03	2.21E-04	1.80E-03	3.42E-04	3.49E-04	1.26E-03	5.04E-05	2.04E-08	1.45E-03	9.92E-04
53	C81	70	Single Unit Long Haul Truck	3	0.00E+00	5.79E-07	2.33E-08	5.25E-01	3.84E-07	9.44E-04	6.30E-07	2.28E-04	5.50E-05	9.87E-06	7.83E-05	1.48E-05	1.51E-05	5.32E-05	2.14E-06	8.58E-10	6.33E-05	4.27E-05
53	C81	70	Combination Short Haul Truck	71	0.00E+00	1.83E-05	1.36E-06	2.47E+01	4.65E-08	2.64E-02	1.30E-05	2.74E-02	2.58E-03	4.30E-04	1.10E-03	3.97E-04	4.12E-04	3.93E-03	8.27E-05	0.00E+00	6.86E-04	5.16E-03
53	C81	70	Combination Long Haul Truck	65	0.00E+00	2.51E-05	1.43E-06	2.32E+01	1.57E-07	3.16E-02	2.06E-05	2.93E-02	2.69E-03	4.05E-04	2.28E-03	4.59E-04	4.78E-04	3.73E-03	7.78E-05	0.00E+00	1.80E-03	5.53E-03
52	C82	60	Passenger Car	325	0.00E+00	3.78E-06	4.11E-07	1.47E+01	2.68E-05	7.24E-02	8.52E-06	3.23E-04	3.19E-03	4.79E-04	8.31E-04	5.36E-04	5.50E-04	6.45E-05	7.43E-05	1.51E-08	2.81E-04	5.03E-05
52	C82	60	Passenger Truck	545	0.00E+00	7.98E-06	8.46E-07	3.27E+01	5.03E-05	1.24E-01	1.65E-05	9.84E-04	5.67E-03	8.42E-04	1.58E-03	1.03E-03	1.05E-03	2.58E-04	1.64E-04	2.77E-08	5.25E-04	1.66E-04
52	C82	60	Single Unit Short Haul Truck	68	0.00E+00	1.52E-05	6.27E-07	1.13E+01	1.01E-05	1.99E-02	1.64E-05	5.83E-03	1.56E-03	2.63E-04	2.03E-03	3.90E-04	3.98E-04	1.15E-03	4.61E-05	1.90E-08	1.63E-03	1.09E-03
52	C82	60	Single Unit Long Haul Truck	3	0.00E+00	6.63E-07	2.72E-08	4.82E-01	4.36E-07	8.45E-04	7.17E-07	2.52E-04	7.03E-05	1.17E-05	8.86E-05	1.70E-05	1.73E-05	4.87E-05	1.97E-06	8.08E-10	7.13E-05	4.73E-05
52	C82	60	Combination Short Haul Truck	61	0.00E+00	1.77E-05	1.30E-06	2.14E+01	4.85E-08	2.65E-02	1.27E-05	2.71E-02	3.09E-03	4.83E-04	1.09E-03	3.80E-04	3.95E-04	3.40E-03	7.15E-05	0.00E+00	6.96E-04	5.10E-03
52	C82	60	Combination Long Haul Truck	55	0.00E+00	2.43E-05	1.33E-06	2.02E+01	1.64E-07	3.18E-02	2.03E-05	2.88E-02	3.24E-03	4.69E-04	2.31E-03	4.34E-04	4.52E-04	3.24E-03	6.76E-05	0.00E+00	1.86E-03	5.43E-03
16	C83	100	Passenger Car	926	0.00E+00	8.55E-06	9.29E-07	3.75E+01	6.06E-05	1.75E-01	1.93E-05	9.98E-04	2.96E-03	5.67E-04	1.88E-03	1.21E-03	1.24E-03	1.10E-04	1.91E-04	4.02E-08	6.36E-04	1.56E-04
16	C83	100	Passenger Truck	1550	0.00E+00	1.77E-05	1.89E-06	8.64E+01	1.18E-04	3.39E-01	3.81E-05	2.49E-03	5.17E-03	1.00E-03	3.67E-03	2.38E-03	2.44E-03	5.71E-04	4.37E-04	7.96E-08	1.23E-03	4.10E-04
16	C83	100	Single Unit Short Haul Truck	186	0.00E+00	1.77E-05	6.52E-07	3.03E+01	1.35E-05	6.26E-02	2.00E-05	7.82E-03	1.20E-03	3.11E-04	2.53E-03	4.68E-04	4.76E-04	3.11E-03	1.23E-04	5.01E-08	2.06E-03	1.46E-03
16	C83	100	Single Unit Long Haul Truck	8	0.00E+00	7.67E-07	2.76E-08	1.28E+00	5.59E-07	2.56E-03	8.68E-07	3.28E-04	5.46E-05	1.35E-05	1.11E-04	1.97E-05	2.01E-05	1.30E-04	5.18E-06	2.05E-09	9.06E-05	6.11E-05
16	C83	100	Combination Short Haul Truck	173	0.00E+00	2.48E-05	1.83E-06	5.77E+01	6.57E-08	4.46E-02	1.77E-05	4.48E-02	1.68E-03	4.25E-04	1.51E-03	5.34E-04	5.55E-04	9.17E-03	1.93E-04	0.00E+00	9.54E-04	8.44E-03
16	C83	100	Combination Long Haul Truck	158	0.00E+00	3.50E-05	1.97E-06	5.23E+01	2.23E-07	5.19E-02	2.89E-05	4.80E-02	1.68E-03	3.42E-04	3.21E-03	6.36E-04	6.63E-04	8.38E-03	1.75E-04	0.00E+00	2.55E-03	9.04E-03
55	C84	90	Passenger Car	248	0.00E+00	2.35E-06	2.56E-07	1.01E+01	1.67E-05	4.68E-02	5.31E-06	2.58E-04	1.05E-03	1.85E-04	5.18E-04	3.34E-04	3.43E-04	3.27E-05	5.15E-05	1.05E-08	1.75E-04	4.03E-05
55	C84	90	Passenger Truck	414	0.00E+00	4.89E-06	5.22E-07	2.31E+01	3.22E-05	8.82E-02	1.04E-05	6.70E-04	1.87E-03	3.28E-04	1.00E-03	6.51E-04	6.68E-04	1.59E-04	1.16E-04	2.06E-08	3.37E-04	1.11E-04
55	C84	90	Single Unit Short Haul Truck	92	0.00E+00	9.87E-06	3.65E-07	1.51E+01	6.81E-06	2.76E-02	1.10E-05	4.31E-03	7.23E-04	1.70E-04	1.40E-03	2.50E-04	2.54E-04	1.53E-03	6.12E-05	2.40E-08	1.14E-03	8.04E-04
55	C84	90	Single Unit Long Haul Truck	4	0.00E+00	4.29E-07	1.56E-08	6.35E-01	2.87E-07	1.14E-03	4.77E-07	1.82E-04	3.30E-05	7.45E-06	6.10E-05	1.06E-05	1.08E-05	6.43E-05	2.59E-06	9.89E-10	5.01E-05	3.40E-05
55	C84	90	Combination Short Haul Truck	75	0.00E+00	1.08E-05	7.75E-07	2.42E+01	3.34E-08	2.01E-02	7.87E-06	1.92E-02	1.04E-03	2.15E-04	6.97E-04	2.29E-04	2.37E-04	3.85E-03	8.09E-05	0.00E+00	4.60E-04	3.62E-03
55	C84	90	Combination Long Haul Truck	69	0.00E+00	1.57E-05	8.20E-07	2.21E+01	1.13E-07	2.36E-02	1.33E-05	2.04E-02	1.06E-03	1.90E-04	1.55E-03	2.73E-04	2.84E-04	3.54E-03	7.40E-05	0.00E+00	1.26E-03	3.84E-03
55	C85	90	Passenger Car	502	0.00E+00	4.78E-06	5.20E-07	2.05E+01	3.39E-05	9.50E-02	1.08E-05	5.24E-04	2.14E-03	3.75E-04	1.05E-03	6.78E-04	6.96E-04	6.64E-05	1.04E-04	2.13E-08	3.56E-04	8.17E-05
55	C85	90	Passenger Truck	842	0.00E+00	9.92E-06	1.06E-06	4.69E+01	6.53E-05	1.79E-01	2.12E-05	1.36E-03	3.80E-03	6.66E-04	2.04E-03	1.32E-03	1.36E-03	3.23E-04	2.37E-04	4.18E-08	6.84E-04	2.25E-04
55	C85	90	Single Unit Short Haul Truck	112	0.00E+00	1.20E-05	4.44E-07	1.84E+01	8.30E-06	3.36E-02	1.34E-05	5.25E-03	8.81E-04	2.07E-04	1.70E-03	3.04E-04	3.10E-04	1.87E-03	7.45E-05	2.92E-08	1.39E-03	9.79E-04
55	C85	90	Single Unit Long Haul Truck	5	0.00E+00	5.22E-07	1.90E-08	7.74E-01	3.49E-07	1.39E-03	5.82E-07	2.22E-04	4.02E-05	9.08E-06	7.43E-05	1.30E-05	1.32E-05	7.83E-05	3.15E-06	1.20E-09	6.11E-05	4.15E-05
55	C85	90	Combination Short Haul Truck	77	0.00E+00	1.11E-05	7.97E-07	2.49E+01	3.44E-08	2.06E-02	8.09E-06	1.97E-02	1.07E-03	2.21E-04	7.17E-04	2.35E-04	2.44E-04	3.95E-03	8.32E-05	0.00E+00	4.73E-04	3.72E-03
55	C85	90	Combination Long Haul Truck	71	0.00E+00	1.61E-05	8.43E-07	2.27E+01	1.16E-07	2.42E-02	1.37E-05	2.09E-02	1.09E-03	1.96E-04	1.59E-03	2.80E-04	2.92E-04	3.64E-03	7.60E-05	0.00E+00	1.30E-03	3.94E-03
55	C86	90	Passenger Car	519	0.00E+00	4.94E-06	5.37E-07	2.12E+01	3.51E-05	9.82E-02	1.11E-05	5.41E-04	2.21E-03	3.88E-04	1.09E-03	7.01E-04	7.19E-04	6.86E-05	1.08E-04	2.20E-08	3.68E-04	8.45E-05
55	C86	90	Passenger Truck	870	0.00E+00	1.03E-05	1.10E-06	4.84E+01	6.75E-05	1.85E-01	2.19E-05	1.41E-03	3.92E-03	6.89E-04	2.11E-03	1.37E-03	1.40E-03	3.34E-04	2.44E-04	4.32E-08	7.07E-04	2.32E-04
55	C86	90	Single Unit Short Haul Truck	197	0.00E+00	2.12E-05	7.82E-07	3.23E+01	1.46E-05	5.91E-02	2.36E-05	9.24E-03	1.55E-03	3.65E-04	3.00E-03	5.35E-04	5.46E-04	3.29E-03	1.31E-04	5.14E-08	2.46E-03	1.72E-03
55	C86	90	Single Unit Long Haul Truck	9	0.00E+00	9.20E-07	3.34E-08	1.36E+00	6.15E-07	2.45E-03	1.02E-06	3.91E-04	7.09E-05	1.60E-05	1.31E-04	2.28E-05	2.33E-05	1.38E-04	5.55E-06	2.12E-09	1.08E-04	7.30E-05
55	C86	90	Combination Short Haul Truck	147	0.00E+00	2.11E-05	1.52E-06	4.74E+01	6.55E-08	3.93E-02	1.54E-05	3.76E-02	2.03E-03	4.22E-04	1.37E-03	4.48E-04	4.65E-04	7.53E-03	1.58E-04	0.00E+00	9.01E-04	7.09E-03
55	C86	90	Combination Long Haul Truck	135	0.00E+00	3.07E-05	1.61E-06	4.32E+01	2.22E-07	4.61E-02	2.61E-05	3.99E-02	2.08E-03	3.73E-04	3.03E-03	5.34E-04	5.57E-04	6.94E-03	1.45E-04	0.00E+00	2.47E-03	7.51E-03
10	E39	70	Passenger Car	525	0.00E+00	5.79E-06	6.29E-07	2.27E+01	4.11E-05	1.12E-01	1.30E-05	5.31E-04	4.04E-03	6.30E-04	1.27E-03	8.21E-04	8.42E-04	8.92E-05	1.15E-04	2.39E-08	4.30E-04	8.28E-05
10	E39	70	Passenger Truck	879	0.00E+00	1.22E-05	1.30E-06	5.10E+01	7.80E-05	1.99E-01	2.55E-05	1.54E-03	7.32E-03	1.13E-03	2.44E-03	1.59E-03	1.63E-03	3.90E-04	2.57E-04	4.60E-08	8.16E-04	2.59E-04
10	E39	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E39	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	E39	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
10	E40	70	Passenger Car	388	0.00E+00	4.28E-06	4.65E-07	1.68E+01	3.04E-05	8.30E-02	9.65E-06	3.92E-04	2.99E-03	4.66E-04	9.41E-04	6.07E-04	6.23E-04	6.59E-05	8.51E-05	1.77E-08	3.18E-04	6.12E-05
10	E40	70	Passenger Truck	650	0.00E+00	9.01E-06	9.58E-07	3.77E+01	5.77E-05	1.47E-01	1.89E-05	1.14E-03	5.41E-03	8.37E-04	1.81E-03	1.17E-03	1.20E-03	2.88E-04	1.90E-04	3.40E-08	6.03E-04	1.92E-04
10	E40	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.62E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.65E-06
10	E40	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.63E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.83E-04
10	E40	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.88E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.32E-04
10	E41	70	Passenger Car	267	0.00E+00	2.94E-06	3.19E-07	1.15E+01	2.09E-05	5.70E-02	6.63E-06	2.70E-04	2.05E-03	3.20E-04	6.46E-04	4.17E-04	4.28E-04	4.53E-05	5.84E-05	1.21E-08	2.19E-04	4.21E-05
10	E41	70	Passenger Truck	446	0.00E+00	6.19E-06	6.58E-07	2.59E+01	3.96E-05	1.01E-01	1.30E-05	7.84E-04	3.72E-03	5.75E-04	1.24E-03	8.06E-04	8.26E-04	1.98E-04	1.30E-04	2.33E-08	4.15E-04	1.32E-04
10	E41	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E41	70	Single Unit Long Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.42E-04
10	E41	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.66E-04
10	E42	70	Passenger Car	306	0.00E+00	3.38E-06	3.67E-07	1.32E+01	2.40E-05	6.55E-02	7.61E-06	3.10E-04	2.36E-03	3.68E-04	7.42E-04	4.79E-04	4.91E-04	5.20E-05	6.71E-05	1.39E-08	2.51E-04	4.83E-05
10	E42	70	Passenger Truck	513

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E46	80	Single Unit Short Haul Truck	24	0.00E+00	3.29E-06	1.28E-07	3.93E+00	2.23E-06	7.13E-03	3.61E-06	1.37E-03	2.69E-04	5.50E-05	4.52E-04	8.38E-05	8.54E-05	3.99E-04	1.59E-05	6.32E-09	3.67E-04	2.55E-04
11	E46	80	Single Unit Long Haul Truck	1	0.00E+00	1.43E-07	5.51E-09	1.66E-01	9.49E-08	2.97E-04	1.57E-07	5.84E-05	1.23E-05	2.44E-06	1.97E-05	3.60E-06	3.67E-06	1.68E-05	6.75E-07	2.63E-10	1.61E-05	1.09E-05
11	E46	80	Combination Short Haul Truck	14	0.00E+00	2.80E-06	2.07E-07	4.56E+00	7.34E-09	4.27E-03	2.00E-06	4.33E-03	3.24E-04	5.88E-05	1.70E-04	6.05E-05	6.28E-05	7.25E-04	1.52E-05	0.00E+00	1.07E-04	8.16E-04
11	E46	80	Combination Long Haul Truck	12	0.00E+00	3.90E-06	2.20E-07	4.23E+00	2.48E-08	5.06E-03	3.22E-06	4.63E-03	3.35E-04	5.37E-05	3.58E-04	7.10E-05	7.40E-05	6.79E-04	1.42E-05	0.00E+00	2.84E-04	8.73E-04
11	E47	80	Passenger Car	409	0.00E+00	4.20E-06	4.56E-07	1.71E+01	2.98E-05	8.34E-02	9.46E-06	4.24E-04	2.23E-03	3.73E-04	9.23E-04	5.95E-04	6.10E-04	6.08E-05	8.72E-05	1.86E-08	3.12E-04	6.61E-05
11	E47	80	Passenger Truck	684	0.00E+00	8.64E-06	9.21E-07	3.87E+01	5.62E-05	1.48E-01	1.83E-05	1.14E-03	3.97E-03	6.60E-04	1.76E-03	1.14E-03	1.17E-03	2.81E-04	1.95E-04	3.55E-08	5.89E-04	1.90E-04
11	E47	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E47	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E47	80	Combination Short Haul Truck	14	0.00E+00	2.91E-06	2.15E-07	4.74E+00	7.62E-09	4.44E-03	2.08E-06	4.50E-03	3.37E-04	6.11E-05	1.76E-04	6.29E-05	6.53E-05	7.53E-04	1.58E-05	0.00E+00	1.11E-04	8.48E-04
11	E47	80	Combination Long Haul Truck	13	0.00E+00	4.05E-06	2.29E-07	4.39E+00	2.58E-08	5.25E-03	3.34E-06	4.81E-03	3.48E-04	5.57E-05	3.72E-04	7.38E-05	7.68E-05	7.05E-04	1.47E-05	0.00E+00	2.95E-04	9.06E-04
11	E48	80	Passenger Car	67	0.00E+00	6.87E-07	7.47E-08	2.81E+00	4.88E-06	1.37E-02	1.55E-06	6.94E-05	3.65E-04	6.11E-05	1.51E-04	9.74E-05	1.00E-04	9.95E-06	1.43E-05	3.05E-09	5.11E-05	1.08E-05
11	E48	80	Passenger Truck	112	0.00E+00	1.42E-06	1.51E-07	6.34E+00	9.20E-06	2.42E-02	3.00E-06	1.87E-04	6.50E-04	1.08E-04	2.88E-04	1.87E-04	1.91E-04	4.60E-05	3.19E-05	5.81E-09	9.64E-05	3.12E-05
11	E48	80	Single Unit Short Haul Truck	9	0.00E+00	1.18E-06	4.62E-08	1.41E+00	8.02E-07	2.57E-03	1.30E-06	4.92E-04	9.68E-05	1.98E-05	1.63E-04	3.02E-05	3.07E-05	1.44E-04	5.74E-06	2.28E-09	1.32E-04	9.20E-05
11	E48	80	Combination Short Haul Truck	6	0.00E+00	1.19E-06	8.78E-08	1.93E+00	3.11E-09	1.81E-03	8.48E-07	1.83E-03	1.37E-04	2.49E-05	7.19E-05	2.56E-05	2.66E-05	3.07E-04	6.45E-06	0.00E+00	4.53E-05	3.45E-04
11	E48	80	Combination Long Haul Truck	5	0.00E+00	1.65E-06	9.33E-08	1.79E+00	1.05E-08	2.14E-03	1.36E-06	1.96E-03	1.42E-04	2.27E-05	1.51E-04	3.01E-05	3.13E-05	2.87E-04	6.00E-06	0.00E+00	1.20E-04	3.69E-04
11	E49	80	Passenger Car	328	0.00E+00	3.37E-06	3.66E-07	1.38E+01	2.39E-05	6.70E-02	7.59E-06	3.40E-04	1.79E-03	2.99E-04	7.40E-04	4.77E-04	4.90E-04	4.87E-05	7.00E-05	1.49E-08	2.50E-04	5.30E-05
11	E49	80	Passenger Truck	549	0.00E+00	6.93E-06	7.39E-07	3.11E+01	4.51E-05	1.18E-01	1.47E-05	9.17E-04	3.18E-03	5.30E-04	1.41E-03	9.15E-04	9.38E-04	2.25E-04	1.56E-04	2.85E-08	4.72E-04	1.53E-04
11	E49	80	Single Unit Short Haul Truck	34	0.00E+00	4.60E-06	1.80E-07	5.50E+00	3.12E-06	9.98E-03	5.06E-06	1.91E-03	3.77E-04	7.70E-05	6.33E-04	1.17E-04	1.20E-04	5.59E-04	2.23E-05	8.85E-09	5.14E-04	3.58E-04
11	E49	80	Single Unit Long Haul Truck	1	0.00E+00	2.00E-07	7.71E-09	2.32E-01	1.33E-07	4.16E-04	2.20E-07	8.17E-05	1.73E-05	3.42E-06	2.76E-05	5.04E-06	5.14E-06	2.35E-05	9.45E-07	3.69E-10	2.25E-05	1.53E-05
11	E49	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.83E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E49	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E50	80	Passenger Car	72	0.00E+00	7.41E-07	8.05E-08	3.03E+00	5.26E-06	1.47E-02	1.67E-06	7.48E-05	3.93E-04	6.59E-05	1.63E-04	1.05E-04	1.08E-04	1.07E-05	1.54E-05	3.29E-09	5.51E-05	1.17E-05
11	E50	80	Passenger Truck	121	0.00E+00	1.53E-06	1.63E-07	6.84E+00	9.92E-06	2.61E-02	3.23E-06	2.02E-04	7.00E-04	1.17E-04	3.10E-04	2.01E-04	2.06E-04	4.96E-05	3.44E-05	6.26E-09	1.04E-04	3.36E-05
11	E50	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.64E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.07E-05
11	E50	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.17E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.20E-04
11	E50	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.25E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.35E-04
11	E51	80	Passenger Car	392	0.00E+00	4.02E-06	4.37E-07	1.64E+01	2.85E-05	8.00E-02	9.07E-06	4.06E-04	2.14E-03	3.58E-04	8.85E-04	5.70E-04	5.85E-04	5.83E-05	8.36E-05	1.79E-08	2.99E-04	6.34E-05
11	E51	80	Passenger Truck	656	0.00E+00	8.29E-06	8.83E-07	3.71E+01	5.39E-05	1.41E-01	1.76E-05	1.10E-03	3.80E-03	6.33E-04	1.68E-03	1.09E-03	1.12E-03	2.69E-04	1.87E-04	3.40E-08	5.64E-04	1.82E-04
11	E51	80	Single Unit Short Haul Truck	31	0.00E+00	4.21E-06	1.64E-07	5.02E+00	2.85E-06	9.13E-03	4.62E-06	1.75E-03	3.44E-04	7.04E-05	5.79E-04	1.07E-04	1.09E-04	5.11E-04	2.04E-05	8.09E-09	4.70E-04	3.27E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.05E-09	2.12E-01	1.21E-07	3.80E-04	2.01E-07	7.47E-05	1.58E-05	3.13E-06	2.53E-05	4.60E-06	4.69E-06	2.15E-05	8.64E-07	3.37E-10	2.06E-05	1.40E-05
11	E51	80	Combination Short Haul Truck	18	0.00E+00	3.77E-06	2.79E-07	6.14E+00	9.88E-09	5.75E-03	2.70E-06	5.83E-03	4.37E-04	7.91E-05	2.29E-04	8.15E-05	8.46E-05	9.76E-04	2.05E-05	0.00E+00	1.44E-04	1.10E-03
11	E51	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E52	80	Passenger Car	126	0.00E+00	1.29E-06	1.41E-07	5.29E+00	9.18E-06	2.57E-02	2.92E-06	1.31E-04	6.87E-04	1.15E-04	2.84E-04	1.83E-04	1.88E-04	1.87E-05	2.69E-05	5.74E-09	9.62E-05	2.04E-05
11	E52	80	Passenger Truck	211	0.00E+00	2.66E-06	2.84E-07	1.19E+01	1.73E-05	4.55E-02	5.65E-06	3.52E-04	1.22E-03	2.04E-04	5.42E-04	3.51E-04	3.60E-04	8.66E-05	6.01E-05	1.09E-08	1.81E-04	5.87E-05
11	E52	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	E52	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	3.00E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.65E-04
11	E52	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.21E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.04E-04
11	E53	80	Passenger Car	385	0.00E+00	3.95E-06	4.29E-07	1.61E+01	2.80E-05	7.86E-02	8.91E-06	3.99E-04	2.10E-03	3.51E-04	8.69E-04	5.60E-04	5.75E-04	5.72E-05	8.21E-05	1.75E-08	2.94E-04	6.22E-05
11	E53	80	Passenger Truck	644	0.00E+00	8.14E-06	8.67E-07	3.64E+01	5.29E-05	1.39E-01	1.72E-05	1.08E-03	3.73E-03	6.22E-04	1.65E-03	1.07E-03	1.10E-03	2.65E-04	1.84E-04	3.34E-08	5.54E-04	1.79E-04
11	E53	80	Single Unit Short Haul Truck	21	0.00E+00	2.89E-06	1.13E-07	3.45E+00	1.96E-06	6.28E-03	3.18E-06	1.20E-03	2.37E-04	4.84E-05	3.98E-04	7.37E-05	7.52E-05	3.51E-04	1.40E-05	5.56E-09	3.23E-04	2.25E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.26E-07	4.85E-09	1.46E-01	8.35E-08	2.61E-04	1.38E-07	5.14E-05	1.09E-05	2.15E-06	1.74E-05	3.16E-06	3.23E-06	1.48E-05	5.94E-07	2.32E-10	1.41E-05	9.60E-06
11	E53	80	Combination Short Haul Truck	16	0.00E+00	3.34E-06	2.47E-07	5.44E+00	8.75E-09	5.09E-03	2.39E-06	5.17E-03	3.87E-04	7.01E-05	2.03E-04	7.22E-05	7.49E-05	8.64E-04	1.82E-05	0.00E+00	1.28E-04	9.73E-04
11	E53	80	Combination Long Haul Truck	15	0.00E+00	4.66E-06	2.63E-07	5.05E+00	2.96E-08	6.03E-03	3.84E-06	5.52E-03	4.00E-04	6.40E-05	4.27E-04	8.47E-05	8.82E-05	8.10E-04	1.69E-05	0.00E+00	3.38E-04	1.04E-03
11	E54	80	Passenger Car	291	0.00E+00	2.98E-06	3.24E-07	1.22E+01	2.12E-05	5.93E-02	6.72E-06	3.01E-04	1.58E-03	2.65E-04	6.56E-04	4.23E-04	4.34E-04	4.32E-05	6.20E-05	1.32E-08	2.22E-04	4.70E-05
11	E54	80	Passenger Truck	486	0.00E+00	6.14E-06	6.55E-07	2.75E+01	4.00E-05	1.05E-01	1.30E-05	8.13E-04	2.82E-03	4.69E-04	1.25E-03	8.10E-04	8.31E-04	2.00E-04	1.39E-04	2.52E-08	4.18E-04	1.35E-04
11	E54	80	Single Unit Short Haul Truck	46	0.00E+00	6.31E-06	2.46E-07	7.54E+00	4.28E-06	1.37E-02	6.93E-06	2.62E-03	5.16E-04	1.06E-04	8.69E-04	1.61E-04	1.64E-04	7.67E-04	3.06E-05	1.21E-08	7.05E-04	4.90E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.74E-07	1.06E-08	3.18E-01	1.82E-07	5.70E-04	3.01E-07	1.12E-04	2.37E-05	4.69E-06	3.79E-05	6.91E-06	7.04E-06	3.22E-05	1.30E-06	5.06E-10	3.08E-05	2.10E-05
11	E54	80	Combination Short Haul Truck	47	0.00E+00	9.59E-06	7.10E-07	1.56E+01	2.51E-08	1.46E-02	6.86E-06	1.48E-02	1.11E-03	2.01E-04	5.82E-04	2.07E-04	2.15E-04	2.48E-03	5.22E-05	0.00E+00	3.67E-04	2.79E-03
11	E54	80	Combination Long Haul Truck	42	0.00E+00	1.34E-05	7.54E-07	1.45E+01	8.50E-08	1.73E-02	1.10E-05	1.59E-02	1.15E-03	1.84E-04	1.22E-03	2.43E-04	2.53E-04	2.32E-03	4.85E-05	0.00E+00	9.72E-04	2.99E-03
11	E55	80	Passenger Car	386	0.00E+00	3.96E-06	4.30E-07	1.62E+01	2.81E-05	7.88E-02	8.93E-06	4.00E-04	2.10E-03	3.52E-04	8.71E-04	5.62E-04	5.76E-04	5.74E-05	8.23E-05	1.76E-08	2.95E-04	6.24E-05
11	E55	80	Passenger Truck	646	0.00E+00	8.16E-06	8.70E-07	3.66E+01	5.31E-05	1.39E-01	1.73E-05	1.08E-03	3.74E-03	6.23E-04	1.66E-03	1.08E-03	1.10E-03	2.65E-04	1.84E-04	3.35E-08	5.56E-04	1.80E-04
11	E55	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.56E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.23E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.24E-06
11	E55	80	Combination Short Haul Truck	9	0.00E+00	1.94E-06	1.44E-07	3.16E+00	5.08E-09	2.96E-03	1.39E-06	3.00E-03	2.25E-04	4.07E-05	1.18E-04	4.19E-05	4.35E-05	5.02E-04	1.06E-05	0.00E+00	7.42E-05	5.65E-04
11	E55	80	Combination Long Haul Truck	9	0.00E+00	2.70E-06	1.53E-07	2.93E+00	1.72E-08	3.50E-03	2.23E-06	3.21E-03	2.32E-04	3.72E-05	2.48E-04	4.92E-05	5.12E-05	4.70E-04	9.82E-06	0.00E+00	1.96E-04	6.04E-04
11	E56	80	Passenger Car	233	0.00E+00	2.39E-06	2.59E-07	9.76E+00	1.69E-05	4.75E-02	5.38E-06	2.41E-04	1.27E-03	2.12E-04	5.25E-04	3.39E-04	3.47E-04	3.46E-05	4.96E-05	1.06E-08	1.78E-04	3.76E-05
11	E56	80	Passenger Truck	389	0.00E+00	4.92E-06	5.24E-07	2.20E+01	3.20E-05	8.40E-02	1.04E-05	6.50E-04	2.26E-03	3.76E-04	1.00E-03	6.49E-04	6.65E-04	1.60E-04	1.11E-04	2.02E-08	3.35E-04	1.08E-04
11	E56	80	Single Unit Short Haul Truck	11	0.00E+00	1.58E-06	6.16E-08	1.88E+00	1.07E-06	3.42E-03	1.73E-06	6.56E-04	1.29E-04	2.64E-05	2.17E-04	4.02E-05	4.10E-05	1.92E-04	7.65E-06	3.03E-09	1.76E-04	1.23E-04
11	E56	80	Single Unit Long Haul Truck	1	0.00E+00	6.85E-08	2.64E-09	7.96E-02	4.56E-08	1.43E-04	7.53E-08	2.80E-05	5.92E-06	1.17E-06	9.47E-06	1.73E-06	1.76E-06	8.05E-06	3.24E-07	1.26E-10	7.71E-06	5.24E-06
11	E56	80	Combination Short Haul Truck	11	0.00E+00	2.26E-06	1.68E-07	3.68E+00	5.93E-09	3.45E-03	1.62E-06	3.50E-03	2.62E-04	4.75E-05	1.37E-04	4.89E-05	5.08E-05	5.85E-04	1.23E-05	0.00E+00	8.65E-05	6.59E-04
11	E56	80	Combination Long Haul Truck	10	0.00E+00	3.15E-06	1.78E-07	3.42E+00	2.01E-08	4.09E-03	2.60E-06	3.74E-03	2.71E-04	4.33E-05	2.89E-04	5.74E-05	5.98E-05	5.49E-04	1.15E-05	0.00E+00	2.29E-04	7.05E-04
10	E57	70	Passenger Car	178	0.00E+00	1.96E-06	2.13E-07	7.69E+00	1.39E-05	3.81E-02	4.42E-06	1.80E-04	1.37E-03	2.14E-04	4.31E-04	2.78E-04	2.86E-04	3.02E-05	3.90E-05	8.10E-09	1.46E-04	2.81E-05
10	E57	70	Passenger Truck	298	0.00E+00	4.13E-06	4.39E-07	1.73E+01	2.65E-05	6.73E-02	8.66E-06	5.23E-04	2.48E-03	3.84E-04	8.28E-04	5.38E-04	5.51E-04	1.32E-04	8.70E-05	1.56E-08	2.77E-04	8.79E-05
10	E57	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	E57	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
10	E57	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
10	E58	70	Passenger Car	188	0.00E+00	2.08E-06	2.26E-07	8.14E+00	1.47E-05	4.03E-02	4.68E-06	1.91E-04	1.45E-03	2.26E-04	4.57E-04	2.95E-04	3.02E-04	3.20E-05	4.13E-05	8.58E-09	1.55E-04	2.97E-05
10	E58	70	Passenger Truck	316	0.00E+00	4.37E-06	4.65E-07	1.83E+01	2.80E-05	7.13E-02	9.17E-06	5.54E-04	2.63E-03	4.07E-04	8.77E-04	5.70E-04	5.84E-04	1.40E-04	9.21E-05	1.65E-08	2.93E-04	9.30E-05
10	E58	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E58	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	E58	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
11	E59	80	Passenger Car	610	0.00E+00	6.26E-06	6.81E-07	2.56E+01	4.45E-05	1.25E-01	1.41E-05	6.33E-04	3.33E-03	5.57E-04	1.38E-03	8.88E-04	9.12E-04	9.07E-05	1.30E-04	2.78E-08	4.66E-04	9.87E-05
11	E59	80	Passenger Truck	1022	0.00E+00	1.29E-05	1.38E-06	5.78E+01	8.39E-05	2.20E-01	2.73E-05	1.71E-03	5.92E-03	9.86E-04	2.62E-03	1.70E-03	1.74E-03	4.20E-04	2.91E-04	5.30E-08	8.79E-04	2.84E-04
11	E59	80	Single Unit Short Haul Truck	67	0.00E+00	9.20E-06	3.59E-07	1.10E+01	6.24E-06	2.00E-02	1.01E-05	3.83E-03	7.53E-04	1.54E-04	1.27E-03	2.35E-04	2.39E-04	1.12E-03	4.47E-05	1.77E-08	1.03E-03	7.15E-04
11	E59	80	Single Unit Long Haul Truck	3	0.00E+00	4.00E-07	1.54E-08	4.64E-01	2.66E-07	8.31E-04	4.39E-07	1.63E-04	3.45E-05	6.84E-06	5.52E-05	1.01E-05	1.03E-05	4.70E-05	1.89E-06	7.38E-10	4.50E-05	3.06E-05
11	E59	80	Combination Short Haul Truck	58	0.00E+00	1.20E-05	8.86E-07	1.95E+01	3.13E-08	1.82E-02	8.55E-06	1.85E-02	1.39E-03	2.51E-04	7.26E-04	2.58E-04	2.68E-04	3.09E-03	6.51E-05	0.00E+00	4.57E-04	3.49E-03
11	E59	80	Combination Long Haul Truck	53	0.00E+00	1.67E-05	9.41E-07	1.81E+01	1.06E-07	2.16E-02	1.37E-05	1.98E-02	1.43E-03	2.29E-04	1.53E-03	3.03E-04	3.16E-04	2.90E-03	6.05E-05	0.00E+00	1.21E-03	3.72E-03
11	E60	80	Passenger Car	449	0.00E+00	4.61E-06	5.01E-07	1.88E+01	3.27E-05	9.17E-02	1.04E-05	4.66E-04	2.45E-03	4.10E-04	1.01E-03	6.54E-04	6.71E-04	6.68E-05	9.58E-05	2.05E-08	3.43E-04	7.26E-05
11	E60	80	Passenger Truck	752	0.00E+00	9.50E-06	1.01E-06	4.25E+01	6.18E-05	1.62E-01	2.01E-05	1.26E-03	4.36E-03	7.26E-04	1.93E-03	1.25E-03	1.28E-03	3.09E-04	2.14E-04	3.90E-08	6.47E-04	2.09E-04
11	E60	80	Single Unit Short Haul Truck	61	0.00E+00	8.41E-06	3.28E-07	1.00E+01	5.70E-06	1.83E-02	9.25E-06	3.50E-03	6.89E-04	1.41E-04	1.16E-03	2.14E-04	2.19E-04	1.02E-03	4.08E-05	1.62E-08	9.40E-04	6.54E-04
11	E60	80	Single Unit Long Haul Truck	3	0.00E+00	3.65E-07	1.41E-08	4.25E-01	2.43E-07	7.60E-04	4.02E-07	1.49E-04	3.16E-05	6.25E-06	5.05E-05	9.21E-06	9.39E-06	4.29E-05	1.73E-06	6.75E-10	4.11E-05	2.79E-05
11	E60	80	Combination Short Haul Truck	48	0.00E+00	9.81E-06	7.26E-07	1.60E+01	2.57E-08	1.50E-02	7.01E-06	1.52E-02	1.14E-03	2.06E-04	5.95E-04	2.12E-04	2.20E-04	2.54E-03	5.34E-05	0.00E+00	3.75E-04	2.86E-03
11	E60	80	Combination Long Haul Tru

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E65	70	Passenger Car	647	0.00E+00	7.14E-06	7.75E-07	2.80E+01	5.06E-05	1.38E-01	1.61E-05	6.55E-04	4.99E-03	7.77E-04	1.57E-03	1.01E-03	1.04E-03	1.10E-04	1.42E-04	2.95E-08	5.31E-04	1.02E-04
10	E65	70	Passenger Truck	1084	0.00E+00	1.50E-05	1.60E-06	6.29E+01	9.62E-05	2.45E-01	3.15E-05	1.90E-03	9.03E-03	1.40E-03	3.01E-03	1.96E-03	2.01E-03	4.81E-04	3.16E-04	5.67E-08	1.01E-03	3.20E-04
10	E65	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.37E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	E65	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	E65	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
10	E66	70	Passenger Car	795	0.00E+00	8.77E-06	9.53E-07	3.43E+01	6.22E-05	1.70E-01	1.98E-05	8.04E-04	6.13E-03	9.54E-04	1.93E-03	1.24E-03	1.28E-03	1.35E-04	1.74E-04	3.62E-08	6.52E-04	1.25E-04
10	E66	70	Passenger Truck	1332	0.00E+00	1.85E-05	1.96E-06	7.73E+01	1.18E-04	3.01E-01	3.87E-05	2.34E-03	1.11E-02	1.72E-03	3.70E-03	2.40E-03	2.46E-03	5.90E-04	3.89E-04	6.96E-08	1.24E-03	3.93E-04
10	E66	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	E66	70	Combination Short Haul Truck	17	0.00E+00	4.31E-06	3.20E-07	5.82E+00	1.09E-08	6.22E-03	3.07E-06	6.45E-03	6.07E-04	1.01E-04	2.58E-04	9.33E-05	9.69E-05	9.25E-04	1.95E-05	0.00E+00	1.62E-04	1.22E-03
10	E66	70	Combination Long Haul Truck	15	0.00E+00	5.91E-06	3.36E-07	5.46E+00	3.70E-08	7.42E-03	4.86E-06	6.90E-03	6.32E-04	9.52E-05	5.37E-04	1.08E-04	1.12E-04	8.77E-04	1.83E-05	0.00E+00	4.25E-04	1.30E-03
11	E67	80	Passenger Car	591	0.00E+00	6.07E-06	6.59E-07	2.48E+01	4.31E-05	1.21E-01	1.37E-05	6.13E-04	3.22E-03	5.40E-04	1.33E-03	8.60E-04	8.83E-04	8.79E-05	1.26E-04	2.69E-08	4.51E-04	9.56E-05
11	E67	80	Passenger Truck	990	0.00E+00	1.25E-05	1.33E-06	5.60E+01	8.13E-05	2.13E-01	2.65E-05	1.65E-03	5.74E-03	9.55E-04	2.54E-03	1.65E-03	1.69E-03	4.06E-04	2.82E-04	5.13E-08	8.51E-04	2.75E-04
11	E67	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.08E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
11	E67	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.88E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.66E-05
11	E67	80	Combination Short Haul Truck	13	0.00E+00	2.59E-06	1.92E-07	4.21E+00	6.78E-09	3.94E-03	1.85E-06	4.00E-03	3.00E-04	5.43E-05	1.57E-04	5.59E-05	5.80E-05	6.69E-04	1.41E-05	0.00E+00	9.89E-05	7.54E-04
11	E67	80	Combination Long Haul Truck	11	0.00E+00	3.60E-06	2.03E-07	3.91E+00	2.29E-08	4.67E-03	2.97E-06	4.28E-03	3.10E-04	4.95E-05	3.30E-04	6.56E-05	6.83E-05	6.27E-04	1.31E-05	0.00E+00	2.62E-04	8.05E-04
11	E68	80	Passenger Car	431	0.00E+00	4.42E-06	4.81E-07	1.81E+01	3.14E-05	8.79E-02	9.97E-06	4.47E-04	2.35E-03	3.93E-04	9.72E-04	6.27E-04	6.43E-04	6.40E-05	9.19E-05	1.96E-08	3.29E-04	6.97E-05
11	E68	80	Passenger Truck	721	0.00E+00	9.11E-06	9.71E-07	4.08E+01	5.92E-05	1.56E-01	1.93E-05	1.20E-03	4.18E-03	6.96E-04	1.85E-03	1.20E-03	1.23E-03	2.96E-04	2.06E-04	3.74E-08	6.20E-04	2.01E-04
11	E68	80	Single Unit Short Haul Truck	8	0.00E+00	1.05E-06	4.11E-08	1.26E+00	7.13E-07	2.28E-03	1.16E-06	4.37E-04	8.61E-05	1.76E-05	1.45E-04	2.68E-05	2.73E-05	1.28E-04	5.10E-06	2.02E-09	1.17E-04	8.17E-05
11	E68	80	Combination Short Haul Truck	4	0.00E+00	8.62E-07	6.38E-08	1.40E+00	2.26E-09	1.31E-03	6.16E-07	1.33E-03	9.98E-05	1.81E-05	5.23E-05	1.86E-05	1.93E-05	2.23E-04	4.69E-06	0.00E+00	3.30E-05	2.51E-04
11	E68	80	Combination Long Haul Truck	4	0.00E+00	1.20E-06	6.78E-08	1.30E+00	7.64E-09	1.56E-03	9.91E-07	1.43E-03	1.03E-04	1.65E-05	1.10E-04	2.19E-05	2.28E-05	2.09E-04	4.36E-06	0.00E+00	8.73E-05	2.68E-04
10	E69	70	Passenger Car	465	0.00E+00	5.13E-06	5.58E-07	2.01E+01	3.64E-05	9.96E-02	1.16E-05	4.71E-04	3.59E-03	5.59E-04	1.13E-03	7.28E-04	7.47E-04	7.91E-05	1.02E-04	2.12E-08	3.82E-04	7.34E-05
10	E69	70	Passenger Truck	780	0.00E+00	1.08E-05	1.15E-06	4.53E+01	6.92E-05	1.76E-01	2.26E-05	1.37E-03	6.49E-03	1.00E-03	2.17E-03	1.41E-03	1.44E-03	3.46E-04	2.27E-04	4.08E-08	7.24E-04	2.30E-04
10	E69	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.73E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.76E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.03E-06
10	E69	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.66E-04
10	E69	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
10	E70	70	Passenger Car	337	0.00E+00	3.72E-06	4.04E-07	1.46E+01	2.64E-05	7.21E-02	8.38E-06	3.41E-04	2.60E-03	4.05E-04	8.18E-04	5.27E-04	5.41E-04	5.73E-05	7.39E-05	1.54E-08	2.77E-04	5.32E-05
10	E70	70	Passenger Truck	565	0.00E+00	7.83E-06	8.32E-07	3.28E+01	5.01E-05	1.28E-01	1.64E-05	9.92E-04	4.70E-03	7.28E-04	1.57E-03	1.02E-03	1.05E-03	2.50E-04	1.65E-04	2.95E-08	5.24E-04	1.67E-04
10	E70	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E70	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E70	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	E71	70	Passenger Car	568	0.00E+00	6.26E-06	6.80E-07	2.45E+01	4.44E-05	1.21E-01	1.41E-05	5.74E-04	4.38E-03	6.82E-04	1.38E-03	8.88E-04	9.11E-04	9.65E-05	1.24E-04	2.59E-08	4.66E-04	8.96E-05
10	E71	70	Passenger Truck	951	0.00E+00	1.32E-05	1.40E-06	5.52E+01	8.44E-05	2.15E-01	2.76E-05	1.67E-03	7.92E-03	1.23E-03	2.64E-03	1.72E-03	1.76E-03	4.22E-04	2.78E-04	4.97E-08	8.83E-04	2.80E-04
10	E71	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E71	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E71	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E72	70	Passenger Car	558	0.00E+00	6.15E-06	6.69E-07	2.41E+01	4.37E-05	1.19E-01	1.39E-05	5.65E-04	4.30E-03	6.70E-04	1.35E-03	8.73E-04	8.96E-04	9.48E-05	1.22E-04	2.54E-08	4.58E-04	8.81E-05
10	E72	70	Passenger Truck	935	0.00E+00	1.30E-05	1.38E-06	5.43E+01	8.30E-05	2.11E-01	2.72E-05	1.64E-03	7.79E-03	1.20E-03	2.60E-03	1.69E-03	1.73E-03	4.14E-04	2.73E-04	4.89E-08	8.68E-04	2.76E-04
10	E72	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E72	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.90E-04
10	E72	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
9	E73	60	Passenger Car	102	0.00E+00	1.30E-06	1.41E-07	4.62E+00	9.19E-06	2.50E-02	2.92E-06	1.05E-04	1.03E-03	1.55E-04	2.85E-04	1.84E-04	1.89E-04	2.03E-05	2.34E-05	4.92E-09	9.64E-05	1.65E-05
9	E73	60	Passenger Truck	172	0.00E+00	2.75E-06	2.92E-07	1.03E+01	1.74E-05	4.28E-02	5.71E-06	3.28E-04	1.89E-03	2.81E-04	5.44E-04	3.54E-04	3.63E-04	8.31E-05	5.17E-05	9.59E-09	1.81E-04	5.56E-05
9	E74	60	Passenger Car	118	0.00E+00	1.49E-06	1.62E-07	5.32E+00	1.06E-05	2.87E-02	3.36E-06	1.21E-04	1.19E-03	1.78E-04	3.28E-04	2.11E-04	2.17E-04	2.33E-05	2.69E-05	5.65E-09	1.11E-04	1.89E-05
9	E74	60	Passenger Truck	197	0.00E+00	3.16E-06	3.35E-07	1.19E+01	2.00E-05	4.92E-02	6.56E-06	3.77E-04	2.17E-03	3.23E-04	6.25E-04	4.07E-04	4.17E-04	9.56E-05	5.94E-05	1.10E-08	2.08E-04	6.39E-05
9	E74	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
53	E75	70	Passenger Car	1068	0.00E+00	1.14E-05	1.24E-06	4.67E+01	8.10E-05	2.20E-01	2.57E-05	1.10E-03	8.10E-03	1.27E-03	2.51E-03	1.62E-03	1.66E-03	1.81E-04	2.37E-04	4.92E-08	8.49E-04	1.71E-04
53	E75	70	Passenger Truck	1789	0.00E+00	2.38E-05	2.54E-06	1.05E+02	1.53E-04	3.88E-01	5.01E-05	3.10E-03	1.45E-02	2.25E-03	4.79E-03	3.11E-03	3.19E-03	7.88E-04	5.29E-04	9.26E-08	1.60E-03	5.20E-04
53	E75	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.14E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.22E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	E75	70	Combination Short Haul Truck	28	0.00E+00	7.13E-06	5.31E-07	9.64E+00	1.81E-08	1.03E-02	5.08E-06	1.07E-02	1.01E-03	1.68E-04	4.28E-04	1.55E-04	1.60E-04	1.53E-03	3.22E-05	0.00E+00	2.68E-04	2.01E-03
53	E75	70	Combination Long Haul Truck	25	0.00E+00	9.78E-06	5.56E-07	9.05E+00	6.13E-08	1.23E-02	8.04E-06	1.14E-02	1.05E-03	1.58E-04	8.89E-04	1.79E-04	1.86E-04	1.45E-03	3.03E-05	0.00E+00	7.03E-04	2.15E-03
53	E76	70	Passenger Car	742	0.00E+00	7.93E-06	8.62E-07	3.24E+01	5.63E-05	1.53E-01	1.79E-05	7.63E-04	5.63E-03	8.81E-04	1.74E-03	1.12E-03	1.15E-03	1.26E-04	1.64E-04	3.42E-08	5.90E-04	1.19E-04
53	E76	70	Passenger Truck	1242	0.00E+00	1.66E-05	1.76E-06	7.30E+01	1.06E-04	2.69E-01	3.48E-05	2.16E-03	1.00E-02	1.56E-03	3.33E-03	2.16E-03	2.22E-03	5.47E-04	3.67E-04	6.43E-08	1.11E-03	3.61E-04
53	E76	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
53	E76	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.83E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.21E-04
53	E76	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.10E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.72E-04
53	E77	70	Passenger Car	1172	0.00E+00	1.25E-05	1.36E-06	5.12E+01	8.89E-05	2.41E-01	2.83E-05	1.21E-03	8.89E-03	1.39E-03	2.76E-03	1.78E-03	1.82E-03	1.99E-04	2.60E-04	5.40E-08	9.32E-04	1.88E-04
53	E77	70	Passenger Truck	1964	0.00E+00	2.62E-05	2.78E-06	1.15E+02	1.68E-04	4.26E-01	5.50E-05	3.41E-03	1.59E-02	2.47E-03	5.26E-03	3.42E-03	3.50E-03	8.65E-04	5.80E-04	1.02E-07	1.76E-03	5.71E-04
53	E77	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.75E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.26E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.51E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.41E-05
53	E77	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
53	E77	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
53	E78	70	Passenger Car	901	0.00E+00	9.63E-06	1.05E-06	3.94E+01	6.83E-05	1.85E-01	2.17E-05	9.27E-04	6.83E-03	1.07E-03	2.12E-03	1.37E-03	1.40E-03	1.53E-04	2.00E-04	4.15E-08	7.16E-04	1.45E-04
53	E78	70	Passenger Truck	1509	0.00E+00	2.01E-05	2.14E-06	8.87E+01	1.29E-04	3.27E-01	4.22E-05	2.62E-03	1.22E-02	1.90E-03	4.04E-03	2.63E-03	2.69E-03	6.65E-04	4.46E-04	7.81E-08	1.35E-03	4.39E-04
53	E78	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.11E-06
53	E78	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.84E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.11E-04
53	E78	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.18E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.75E-04
53	E79	70	Passenger Car	1150	0.00E+00	1.23E-05	1.34E-06	5.02E+01	8.72E-05	2.36E-01	2.77E-05	1.18E-03	8.72E-03	1.37E-03	2.70E-03	1.74E-03	1.79E-03	1.95E-04	2.55E-04	5.30E-08	9.14E-04	1.85E-04
53	E79	70	Passenger Truck	1926	0.00E+00	2.57E-05	2.73E-06	1.13E+02	1.65E-04	4.17E-01	5.39E-05	3.34E-03	1.56E-02	2.42E-03	5.16E-03	3.35E-03	3.44E-03	8.49E-04	5.69E-04	9.97E-08	1.72E-03	5.60E-04
53	E79	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.14E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.22E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	E79	70	Combination Short Haul Truck	14	0.00E+00	3.63E-06	2.70E-07	4.91E+00	9.23E-09	5.25E-03	2.59E-06	5.44E-03	5.12E-04	8.54E-05	2.18E-04	7.88E-05	8.18E-05	7.80E-04	1.64E-05	0.00E+00	1.36E-04	1.03E-03
53	E79	70	Combination Long Haul Truck	13	0.00E+00	4.98E-06	2.83E-07	4.61E+00	3.12E-08	6.26E-03	4.10E-06	5.83E-03	5.33E-04	8.03E-05	4.53E-04	9.11E-05	9.49E-05	7.40E-04	1.54E-05	0.00E+00	3.58E-04	1.10E-03
53	E80	70	Passenger Car	846	0.00E+00	9.05E-06	9.83E-07	3.70E+01	6.42E-05	1.74E-01	2.04E-05	8.71E-04	6.42E-03	1.01E-03	1.99E-03	1.28E-03	1.32E-03	1.44E-04	1.88E-04	3.90E-08	6.73E-04	1.36E-04
53	E80	70	Passenger Truck	1418	0.00E+00	1.89E-05	2.01E-06	8.33E+01	1.21E-04	3.07E-01	3.97E-05	2.46E-03	1.15E-02	1.78E-03	3.80E-03	2.47E-03	2.53E-03	6.25E-04	4.19E-04	7.34E-08	1.27E-03	4.12E-04
53	E80	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.61E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.01E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.93E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.30E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E86	60	Single Unit Short Haul Truck	33	0.00E+00	7.27E-06	3.00E-07	5.42E+00	4.82E-06	9.53E-03	7.86E-06	2.79E-03	7.49E-04	1.26E-04	9.70E-04	1.87E-04	1.91E-04	5.49E-04	2.21E-05	9.10E-09	7.79E-04	5.23E-04
9	E86	60	Single Unit Long Haul Truck	1	0.00E+00	3.17E-07	1.30E-08	2.31E-01	2.09E-07	4.04E-04	3.43E-07	1.21E-04	3.37E-05	5.58E-06	4.24E-05	8.12E-06	8.28E-06	2.33E-05	9.42E-07	3.87E-10	3.41E-05	2.26E-05
9	E86	60	Combination Short Haul Truck	18	0.00E+00	5.34E-06	3.92E-07	6.45E+00	1.46E-08	7.98E-03	3.84E-06	8.16E-03	9.32E-04	1.46E-04	3.29E-04	1.15E-04	1.19E-04	1.02E-03	2.16E-05	0.00E+00	2.10E-04	1.54E-03
9	E86	60	Combination Long Haul Truck	17	0.00E+00	7.34E-06	4.01E-07	6.09E+00	4.95E-08	9.59E-03	6.14E-06	8.70E-03	9.78E-04	1.41E-04	6.96E-04	1.31E-04	1.36E-04	9.77E-04	2.04E-05	0.00E+00	5.60E-04	1.64E-03
9	E87	60	Passenger Car	1025	0.00E+00	1.30E-05	1.41E-06	4.63E+01	9.20E-05	2.50E-01	2.92E-05	1.06E-03	1.03E-02	1.55E-03	2.85E-03	1.84E-03	1.89E-03	2.03E-04	2.34E-04	4.92E-08	9.64E-04	1.65E-04
9	E87	60	Passenger Truck	1716	0.00E+00	2.75E-05	2.92E-06	1.03E+02	1.74E-04	4.28E-01	5.71E-05	3.28E-03	1.89E-02	2.81E-03	5.44E-03	3.54E-03	3.63E-03	8.31E-04	5.17E-04	9.59E-08	1.81E-03	5.56E-04
9	E87	60	Single Unit Short Haul Truck	80	0.00E+00	1.80E-05	7.42E-07	1.34E+01	1.19E-05	2.35E-02	1.94E-05	6.90E-03	1.85E-03	3.11E-04	2.40E-03	4.62E-04	4.71E-04	1.36E-03	5.45E-05	2.25E-08	1.93E-03	1.29E-03
9	E87	60	Single Unit Long Haul Truck	4	0.00E+00	7.84E-07	3.22E-08	5.71E-01	5.16E-07	9.99E-04	8.48E-07	2.99E-04	8.31E-05	1.38E-05	1.05E-04	2.01E-05	2.05E-05	5.77E-05	2.33E-06	9.56E-10	8.43E-05	5.59E-05
9	E87	60	Combination Short Haul Truck	54	0.00E+00	1.57E-05	1.15E-06	1.90E+01	4.31E-08	2.35E-02	1.13E-05	2.40E-02	2.74E-03	4.29E-04	9.69E-04	3.38E-04	3.51E-04	3.02E-03	6.34E-05	0.00E+00	6.18E-04	4.53E-03
9	E87	60	Combination Long Haul Truck	49	0.00E+00	2.16E-05	1.18E-06	1.79E+01	1.46E-07	2.82E-02	1.81E-05	2.56E-02	2.88E-03	4.16E-04	2.05E-03	3.85E-04	4.02E-04	2.88E-03	6.01E-05	0.00E+00	1.65E-03	4.82E-03
9	E88	60	Passenger Car	1237	0.00E+00	1.56E-05	1.70E-06	5.58E+01	1.11E-04	3.02E-01	3.53E-05	1.27E-03	1.25E-02	1.87E-03	3.44E-03	2.22E-03	2.28E-03	2.45E-04	2.83E-04	5.94E-08	1.16E-03	1.99E-04
9	E88	60	Passenger Truck	2072	0.00E+00	3.32E-05	3.52E-06	1.25E+02	2.10E-04	5.17E-01	6.89E-05	3.96E-03	2.28E-02	3.40E-03	6.57E-03	4.27E-03	4.38E-03	1.00E-03	6.24E-04	1.16E-07	2.19E-03	6.71E-04
9	E88	60	Single Unit Short Haul Truck	79	0.00E+00	1.78E-05	7.33E-07	1.32E+01	1.18E-05	2.33E-02	1.92E-05	6.81E-03	1.83E-03	3.07E-04	2.37E-03	4.56E-04	4.65E-04	1.34E-03	5.39E-05	2.22E-08	1.90E-03	1.28E-03
9	E88	60	Single Unit Long Haul Truck	4	0.00E+00	7.75E-07	3.18E-08	5.64E-01	5.10E-07	9.87E-04	8.38E-07	2.95E-04	8.22E-05	1.36E-05	1.04E-04	1.98E-05	2.02E-05	5.70E-05	2.30E-06	9.45E-10	8.33E-05	5.53E-05
9	E88	60	Combination Short Haul Truck	62	0.00E+00	1.82E-05	1.33E-06	2.19E+01	4.98E-08	2.71E-02	1.30E-05	2.78E-02	3.17E-03	4.96E-04	1.12E-03	3.90E-04	4.05E-04	3.48E-03	7.33E-05	0.00E+00	7.14E-04	5.23E-03
9	E88	60	Combination Long Haul Truck	57	0.00E+00	2.50E-05	1.36E-06	2.07E+01	1.68E-07	3.26E-02	2.09E-05	2.96E-02	3.32E-03	4.81E-04	2.37E-03	4.45E-04	4.64E-04	3.32E-03	6.94E-05	0.00E+00	1.90E-03	5.57E-03
9	E89	60	Passenger Car	83	0.00E+00	1.05E-06	1.14E-07	3.75E+00	7.45E-06	2.03E-02	2.37E-06	8.55E-05	8.38E-04	1.26E-04	2.31E-04	1.49E-04	1.53E-04	1.65E-05	1.90E-05	3.99E-09	7.81E-05	1.33E-05
9	E89	60	Passenger Truck	139	0.00E+00	2.23E-06	2.36E-07	8.35E+00	1.41E-05	3.47E-02	4.62E-06	2.66E-04	1.53E-03	2.28E-04	4.41E-04	2.87E-04	2.94E-04	6.73E-05	4.19E-05	7.77E-09	1.47E-04	4.50E-05
9	E89	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	E90	60	Passenger Car	107	0.00E+00	1.35E-06	1.47E-07	4.83E+00	9.60E-06	2.61E-02	3.05E-06	1.10E-04	1.08E-03	1.62E-04	2.97E-04	1.92E-04	1.97E-04	2.12E-05	2.44E-05	5.13E-09	1.01E-04	1.72E-05
9	E90	60	Passenger Truck	179	0.00E+00	2.87E-06	3.04E-07	1.08E+01	1.81E-05	4.47E-02	5.96E-06	3.42E-04	1.97E-03	2.94E-04	5.68E-04	3.69E-04	3.79E-04	8.68E-05	5.40E-05	1.00E-08	1.89E-04	5.80E-05
9	E90	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
9	E91	60	Passenger Car	4	0.00E+00	4.73E-08	5.14E-09	1.69E-01	3.36E-07	9.12E-04	1.07E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.88E-06	7.41E-07	8.55E-07	1.80E-10	3.52E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.99E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.62E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.73E-08	5.14E-09	1.69E-01	3.36E-07	9.12E-04	1.07E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.88E-06	7.41E-07	8.55E-07	1.80E-10	3.52E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.99E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.62E-06	2.03E-06
9	E93	60	Passenger Car	251	0.00E+00	3.18E-06	3.45E-07	1.13E+01	2.25E-05	6.13E-02	7.16E-06	2.59E-04	2.54E-03	3.80E-04	6.99E-04	4.51E-04	4.62E-04	4.98E-05	5.74E-05	1.21E-08	2.36E-04	4.04E-05
9	E93	60	Passenger Truck	421	0.00E+00	6.75E-06	7.15E-07	2.53E+01	4.26E-05	1.05E-01	1.40E-05	8.05E-04	4.64E-03	6.90E-04	1.33E-03	8.68E-04	8.90E-04	2.04E-04	1.27E-04	2.35E-08	4.45E-04	1.36E-04
9	E93	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
9	E93	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	E93	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.36E-05
9	E94	60	Passenger Car	122	0.00E+00	1.54E-06	1.67E-07	5.49E+00	1.09E-05	2.97E-02	3.46E-06	1.25E-04	1.23E-03	1.84E-04	3.38E-04	2.18E-04	2.24E-04	2.41E-05	2.78E-05	5.83E-09	1.14E-04	1.95E-05
9	E94	60	Passenger Truck	203	0.00E+00	3.26E-06	3.46E-07	1.22E+01	2.06E-05	5.08E-02	6.77E-06	3.89E-04	2.24E-03	3.34E-04	6.45E-04	4.20E-04	4.30E-04	9.86E-05	6.13E-05	1.14E-08	2.15E-04	6.59E-05
9	E94	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
54	E95	80	Passenger Car	685	0.00E+00	6.86E-06	7.45E-07	2.89E+01	4.87E-05	1.34E-01	1.55E-05	7.13E-04	3.93E-03	6.46E-04	1.51E-03	9.72E-04	9.98E-04	1.02E-04	1.47E-04	3.04E-08	5.10E-04	1.11E-04
54	E95	80	Passenger Truck	1146	0.00E+00	1.43E-05	1.52E-06	6.56E+01	9.28E-05	2.44E-01	3.02E-05	1.92E-03	7.01E-03	1.15E-03	2.90E-03	1.88E-03	1.93E-03	4.71E-04	3.31E-04	5.86E-08	9.72E-04	3.19E-04
54	E95	80	Single Unit Short Haul Truck	36	0.00E+00	4.99E-06	1.95E-07	5.97E+00	3.39E-06	1.08E-02	5.49E-06	2.08E-03	4.09E-04	8.36E-05	6.88E-04	1.27E-04	1.30E-04	6.07E-04	2.42E-05	9.61E-09	5.58E-04	3.88E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.17E-07	8.37E-09	2.52E-01	1.44E-07	4.51E-04	2.38E-07	8.88E-05	1.88E-05	3.71E-06	3.00E-05	5.47E-06	5.58E-06	2.55E-05	1.03E-06	4.01E-10	2.44E-05	1.66E-05
54	E95	80	Combination Short Haul Truck	38	0.00E+00	7.76E-06	5.75E-07	1.26E+01	2.03E-08	1.18E-02	5.55E-06	1.20E-02	8.99E-04	1.63E-04	4.71E-04	1.68E-04	1.74E-04	2.01E-03	4.22E-05	0.00E+00	2.97E-04	2.26E-03
54	E95	80	Combination Long Haul Truck	34	0.00E+00	1.08E-05	6.10E-07	1.17E+01	6.88E-08	1.40E-02	8.92E-06	1.28E-02	9.29E-04	1.49E-04	9.91E-04	1.97E-04	2.05E-04	1.88E-03	3.93E-05	0.00E+00	7.86E-04	2.42E-03
54	E96	80	Passenger Car	537	0.00E+00	5.38E-06	5.85E-07	2.27E+01	3.82E-05	1.05E-01	1.21E-05	5.60E-04	3.08E-03	5.07E-04	1.18E-03	7.63E-04	7.83E-04	7.99E-05	1.15E-04	2.39E-08	4.00E-04	8.73E-05
54	E96	80	Passenger Truck	900	0.00E+00	1.12E-05	1.19E-06	5.15E+01	7.29E-05	1.91E-01	2.37E-05	1.50E-03	5.50E-03	9.02E-04	2.28E-03	1.48E-03	1.51E-03	3.69E-04	2.59E-04	4.60E-08	7.63E-04	2.50E-04
54	E96	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
54	E96	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
54	E96	80	Combination Short Haul Truck	36	0.00E+00	7.44E-06	5.51E-07	1.21E+01	1.95E-08	1.13E-02	5.32E-06	1.15E-02	8.61E-04	1.56E-04	4.51E-04	1.61E-04	1.67E-04	1.92E-03	4.05E-05	0.00E+00	2.84E-04	2.17E-03
54	E96	80	Combination Long Haul Truck	33	0.00E+00	1.04E-05	5.85E-07	1.12E+01	6.59E-08	1.34E-02	8.55E-06	1.23E-02	8.90E-04	1.42E-04	9.50E-04	1.89E-04	1.96E-04	1.80E-03	3.76E-05	0.00E+00	7.53E-04	2.32E-03
54	E97	80	Passenger Car	929	0.00E+00	9.31E-06	1.01E-06	3.92E+01	6.60E-05	1.82E-01	2.10E-05	9.68E-04	5.33E-03	8.77E-04	2.05E-03	1.32E-03	1.35E-03	1.38E-04	1.99E-04	4.13E-08	6.92E-04	1.51E-04
54	E97	80	Passenger Truck	1556	0.00E+00	1.93E-05	2.06E-06	8.90E+01	1.26E-04	3.31E-01	4.10E-05	2.60E-03	9.52E-03	1.56E-03	3.94E-03	2.55E-03	2.62E-03	6.39E-04	4.49E-04	7.95E-08	1.32E-03	4.33E-04
54	E97	80	Single Unit Short Haul Truck	61	0.00E+00	8.41E-06	3.28E-07	1.00E+01	5.70E-06	1.83E-02	9.25E-06	3.50E-03	6.89E-04	1.41E-04	1.16E-03	2.14E-04	2.19E-04	1.02E-03	4.08E-05	1.62E-08	9.40E-04	6.54E-04
54	E97	80	Single Unit Long Haul Truck	3	0.00E+00	3.65E-07	1.41E-08	4.25E-01	2.43E-07	7.60E-04	4.02E-07	1.49E-04	3.16E-05	6.25E-06	5.05E-05	9.21E-06	9.39E-06	4.29E-05	1.73E-06	6.75E-10	4.11E-05	2.79E-05
54	E97	80	Combination Short Haul Truck	48	0.00E+00	9.81E-06	7.26E-07	1.60E+01	2.57E-08	1.50E-02	7.01E-06	1.52E-02	1.14E-03	2.06E-04	5.95E-04	2.12E-04	2.20E-04	2.54E-03	5.34E-05	0.00E+00	3.75E-04	2.86E-03
54	E97	80	Combination Long Haul Truck	43	0.00E+00	1.37E-05	7.71E-07	1.48E+01	8.69E-08	1.77E-02	1.13E-05	1.62E-02	1.17E-03	1.88E-04	1.25E-03	2.49E-04	2.59E-04	2.38E-03	4.96E-05	0.00E+00	9.93E-04	3.05E-03
54	E98	80	Passenger Car	507	0.00E+00	5.08E-06	5.52E-07	2.14E+01	3.60E-05	9.91E-02	1.15E-05	5.28E-04	2.91E-03	4.79E-04	1.12E-03	7.20E-04	7.39E-04	7.54E-05	1.09E-04	2.25E-08	3.78E-04	8.24E-05
54	E98	80	Passenger Truck	849	0.00E+00	1.06E-05	1.13E-06	4.86E+01	6.87E-05	1.81E-01	2.24E-05	1.42E-03	5.19E-03	8.51E-04	2.15E-03	1.39E-03	1.43E-03	3.49E-04	2.45E-04	4.34E-08	7.20E-04	2.36E-04
54	E98	80	Single Unit Short Haul Truck	35	0.00E+00	4.86E-06	1.90E-07	5.81E+00	3.30E-06	1.06E-02	5.34E-06	2.02E-03	3.98E-04	8.14E-05	6.70E-04	1.24E-04	1.26E-04	5.91E-04	2.36E-05	9.36E-09	5.43E-04	3.78E-04
54	E98	80	Single Unit Long Haul Truck	2	0.00E+00	2.11E-07	8.15E-09	2.45E-01	1.40E-07	4.39E-04	2.32E-07	8.64E-05	1.83E-05	3.61E-06	2.92E-05	5.32E-06	5.43E-06	2.48E-05	9.99E-07	3.90E-10	2.38E-05	1.62E-05
54	E98	80	Combination Short Haul Truck	38	0.00E+00	7.87E-06	5.83E-07	1.28E+01	2.06E-08	1.20E-02	5.63E-06	1.22E-02	9.11E-04	1.65E-04	4.77E-04	1.70E-04	1.76E-04	2.03E-03	4.28E-05	0.00E+00	3.01E-04	2.29E-03
54	E98	80	Combination Long Haul Truck	35	0.00E+00	1.10E-05	6.19E-07	1.19E+01	6.97E-08	1.42E-02	9.04E-06	1.30E-02	9.42E-04	1.51E-04	1.00E-03	1.99E-04	2.08E-04	1.91E-03	3.98E-05	0.00E+00	7.97E-04	2.45E-03
9	F01	60	Passenger Car	414	0.00E+00	5.23E-06	5.69E-07	1.87E+01	3.71E-05	1.01E-01	1.18E-05	4.26E-04	4.18E-03	6.26E-04	1.15E-03	7.42E-04	7.62E-04	8.20E-05	9.46E-05	1.99E-08	3.89E-04	6.65E-05
9	F01	60	Passenger Truck	693	0.00E+00	1.11E-05	1.18E-06	4.17E+01	7.01E-05	1.73E-01	2.31E-05	1.33E-03	7.64E-03	1.14E-03	2.20E-03	1.43E-03	1.47E-03	3.36E-04	2.09E-04	3.87E-08	7.33E-04	2.25E-04
9	F01	60	Single Unit Short Haul Truck	29	0.00E+00	6.42E-06	2.65E-07	4.78E+00	4.25E-06	8.41E-03	6.94E-06	2.46E-03	6.61E-04	1.11E-04	8.56E-04	1.65E-04	1.68E-04	4.84E-04	1.95E-05	8.03E-09	6.88E-04	4.61E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	2.80E-07	1.15E-08	2.04E-01	1.84E-07	3.57E-04	3.03E-07	1.07E-04	2.97E-05	4.93E-06	3.74E-05	7.16E-06	7.31E-06	2.06E-05	8.31E-07	3.41E-10	3.01E-05	2.00E-05
9	F01	60	Combination Short Haul Truck	24	0.00E+00	6.87E-06	5.05E-07	8.29E+00	1.88E-08	1.03E-02	4.93E-06	1.05E-02	1.20E-03	1.87E-04	4.23E-04	1.48E-04	1.53E-04	1.32E-03	2.77E-05	0.00E+00	2.70E-04	1.98E-03
9	F01	60	Combination Long Haul Truck	21	0.00E+00	9.44E-06	5.16E-07	7.83E+00	6.37E-08	1.23E-02	7.89E-06	1.12E-02	1.26E-03	1.82E-04	8.95E-04	1.68E-04	1.75E-04	1.26E-03	2.62E-05	0.00E+00	7.20E-04	2.11E-03
9	F02	60	Passenger Car	292	0.00E+00	3.69E-06	4.01E-07	1.32E+01	2.62E-05	7.12E-02	8.32E-06	3.00E-04	2.94E-03	4.41E-04	8.11E-04	5.23E-04	5.37E-04	5.78E-05	6.67E-05	1.40E-08	2.74E-04	4.68E-05
9	F02	60	Passenger Truck	488	0.00E+00	7.83E-06	8.30E-07	2.94E+01	4.94E-05	1.22E-01	1.62E-05	9.34E-04	5.38E-03	8.01E-04	1.55E-03	1.01E-03	1.03E-03	2.37E-04	1.47E-04	2.73E-08	5.16E-04	1.58E-04
9	F02	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
9	F02	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.43E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.35E-04
9	F02	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.72E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.90E-04
11	F03	80	Passenger Car	16	0.00E+00	1.65E-07	1.79E-08	6.74E-01	1.17E-06	3.28E-03	3.72E-07	1.67E-05	8.76E-05	1.47E-05	3.63E-05	2.34E-05	2.40E-05	2.39E-06	3.43E-06	7.33E-10	1.23E-05	2.60E-06
11	F03	80	Passenger Truck	27	0.00E+00	3.40E-07	3.62E-08	1.52E+00	2.21E-06	5.80E-03	7.20E-07	4.50E-05	1.56E-04	2.60E-05	6.91E-05	4.48E-05	4.60E-05	1.11E-05	7.67E-06	1.40E-09	2.32E-05	7.49E-06
11	F03	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.67E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.14E-05
11	F04	80	Passenger Car	3	0.00E+00	3.07E-08	3.34E-09	1.25E-01	2.18E-07	6.11E-04	6.92E-08	3.10E-06	1.63E-05	2.73E-06	6.75E-06	4.35E-06	4.47E-06	4.45E-07	6.38E-07	1.36E-10	2.28E-06	4.84E-07
11	F04	80	Passenger Truck	5	0.00E+00	6.33E-08	6.74E-09	2.83E-01	4.11E-07	1.08E-03	1.34E-07	8.37E-06	2.90E-05	4.83E-06	1.29E-05	8.34E-06	8.55E-06	2.06E-06	1.43E-06	2.60E-10	4.31E-06	1.39E-06
9	F05	60	Passenger Car	336	0.00E+00	4.25E-06	4.61E-07	1.52E+01	3.01E-05	8.19E-02	9.57E-06	3.46E-04	3.39E-03	5.08E-04	9.34E-04	6.02E-04	6.18E-04	6.66E-05	7.68E-05	1.61E-08	3.16E-04	5.39E-05
9	F05	60	Passenger Truck	562	0.00E+00	9.02E-06	9.56E-07	3.38E+01	5.69E-05	1.40E-01	1.87E-05	1.08E-03	6.20E-03	9.22E-04	1.78E-03	1.16E-03	1.19E-03	2.72E-04	1.69E-04	3.14E-08	5.94E-04	1.82E-04
9	F05	60	Single Unit Short Haul Truck	13	0.00E+00	2.99E-06	1.24E-07	2.23E+00	1.98E-06	3.92E-03	3.24E-06	1.15E-03	3.08E-04	5.18E-05	3.99E-04	7.69E-05	7.85E-05	2.26E-04	9.09E-06	3.75E-09	3.21E-04	2.15E-04
9	F05	60	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.37E-09	9.51E-02	8.60E-08	1.67E-04	1.41E-07	4.98E-05	1.39E-05	2.30E-06	1.75E-05	3.34E-06	3.41E-06	9.61E-06	3.88E-07	1.59E-10	1.41E-05	9.32E-06
9	F05	60	Combination Short Haul Truck	13	0.00E+00	3.82E-06	2.80E-07	4.61E+00	1.05E-08	5.70E-03	2.74E-06	5.83E-03	6.66E-04	1.04E-04	2.35E-04	8.20E-05	8.51E-05	7.32E-04	1.54E-05	0.00E+00	1.50E-04	1.10E-03
9	F05	60	Combination Long Haul Truck	12	0.00E+00	5.24E-06	2.86E-07	4.35E+00	3.54E-08	6.85E-03	4.39E-06	6.22E-03	6.98E-04	1.01E-04	4.97E-04	9.36E-05	9.75E-05	6.98E-04	1.46E-05	0.00E+00	4.00E-04	1.17E-03
9	F06	60	Passenger Car	314	0.00E+00	3.97E-06	4.31E

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	F10	80	Passenger Car	98	0.00E+00	1.00E-06	1.09E-07	4.09E+00	7.11E-06	1.99E-02	2.26E-06	1.01E-04	5.32E-04	8.91E-05	2.20E-04	1.42E-04	1.46E-04	1.45E-05	2.08E-05	4.45E-09	7.45E-05	1.58E-05
11	F10	80	Passenger Truck	163	0.00E+00	2.06E-06	2.20E-07	9.24E+00	1.34E-05	3.52E-02	4.37E-06	2.73E-04	9.47E-04	1.58E-04	4.20E-04	2.72E-04	2.79E-04	6.71E-05	4.66E-05	8.47E-09	1.41E-04	4.54E-05
11	F10	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F10	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.67E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.14E-05
11	F13	80	Passenger Car	20	0.00E+00	2.03E-07	2.21E-08	8.31E-01	1.44E-06	4.05E-03	4.59E-07	2.05E-05	1.08E-04	1.81E-05	4.47E-05	2.88E-05	2.96E-05	2.95E-06	4.23E-06	9.03E-10	1.51E-05	3.21E-06
11	F13	80	Passenger Truck	33	0.00E+00	4.19E-07	4.47E-08	1.88E+00	2.73E-06	7.15E-03	8.88E-07	5.54E-05	1.92E-04	3.20E-05	8.52E-05	5.53E-05	5.67E-05	1.36E-05	9.46E-06	1.72E-09	2.85E-05	9.23E-06
11	F13	80	Single Unit Short Haul Truck	1	0.00E+00	1.31E-07	5.13E-09	1.57E-01	8.91E-08	2.85E-04	1.44E-07	5.47E-05	1.08E-05	2.20E-06	1.81E-05	3.35E-06	3.42E-06	1.60E-05	6.38E-07	2.53E-10	1.47E-05	1.02E-05
11	F13	80	Combination Short Haul Truck	1	0.00E+00	2.16E-07	1.60E-08	3.51E-01	5.65E-10	3.29E-04	1.54E-07	3.33E-04	2.50E-05	4.52E-06	1.31E-05	4.66E-06	4.83E-06	5.57E-05	1.17E-06	0.00E+00	8.24E-06	6.28E-05
11	F13	80	Combination Long Haul Truck	1	0.00E+00	3.00E-07	1.70E-08	3.26E-01	1.91E-09	3.89E-04	2.48E-07	3.56E-04	2.58E-05	4.13E-06	2.75E-05	5.46E-06	5.69E-06	5.22E-05	1.09E-06	0.00E+00	2.18E-05	6.71E-05
11	F14	80	Passenger Car	6	0.00E+00	6.53E-08	7.09E-09	2.67E-01	4.63E-07	1.30E-03	1.47E-07	6.59E-06	3.46E-05	5.80E-06	1.43E-05	9.25E-06	9.50E-06	9.45E-07	1.36E-06	2.90E-10	4.85E-06	1.03E-06
11	F14	80	Passenger Truck	11	0.00E+00	1.34E-07	1.43E-08	6.02E-01	8.74E-07	2.29E-03	2.85E-07	1.78E-05	6.17E-05	1.03E-05	2.73E-05	1.77E-05	1.82E-05	4.37E-06	3.03E-06	5.52E-10	9.15E-06	2.96E-06
11	F14	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.67E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.14E-05
10	F15	70	Passenger Car	429	0.00E+00	4.73E-06	5.14E-07	1.85E+01	3.36E-05	9.17E-02	1.07E-05	4.34E-04	3.30E-03	5.15E-04	1.04E-03	6.70E-04	6.88E-04	7.29E-05	9.40E-05	1.95E-08	3.52E-04	6.77E-05
10	F15	70	Passenger Truck	718	0.00E+00	9.96E-06	1.06E-06	4.17E+01	6.37E-05	1.62E-01	2.09E-05	1.26E-03	5.98E-03	9.25E-04	2.00E-03	1.30E-03	1.33E-03	3.18E-04	2.10E-04	3.75E-08	6.67E-04	2.12E-04
10	F15	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	F15	70	Combination Short Haul Truck	8	0.00E+00	2.02E-06	1.50E-07	2.73E+00	5.13E-09	2.92E-03	1.44E-06	3.02E-03	2.85E-04	4.75E-05	1.21E-04	4.38E-05	4.54E-05	4.34E-04	9.12E-06	0.00E+00	7.57E-05	5.70E-04
10	F15	70	Combination Long Haul Truck	7	0.00E+00	2.77E-06	1.57E-07	2.56E+00	1.74E-08	3.48E-03	2.28E-06	3.24E-03	2.96E-04	4.46E-05	2.52E-04	5.06E-05	5.27E-05	4.11E-04	8.58E-06	0.00E+00	1.99E-04	6.10E-04
10	F16	70	Passenger Car	372	0.00E+00	4.10E-06	4.46E-07	1.61E+01	2.91E-05	7.96E-02	9.25E-06	3.76E-04	2.87E-03	4.47E-04	9.02E-04	5.82E-04	5.97E-04	6.32E-05	8.15E-05	1.69E-08	3.05E-04	5.87E-05
10	F16	70	Passenger Truck	623	0.00E+00	8.64E-06	9.18E-07	3.62E+01	5.53E-05	1.41E-01	1.81E-05	1.09E-03	5.19E-03	8.03E-04	1.73E-03	1.12E-03	1.15E-03	2.76E-04	1.82E-04	3.26E-08	5.78E-04	1.84E-04
10	F16	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	F16	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	F16	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
10	F17	70	Passenger Car	284	0.00E+00	3.13E-06	3.40E-07	1.23E+01	2.22E-05	6.07E-02	7.05E-06	2.87E-04	2.19E-03	3.41E-04	6.88E-04	4.44E-04	4.55E-04	4.82E-05	6.22E-05	1.29E-08	2.33E-04	4.48E-05
10	F17	70	Passenger Truck	475	0.00E+00	6.59E-06	7.00E-07	2.76E+01	4.22E-05	1.07E-01	1.38E-05	8.35E-04	3.96E-03	6.12E-04	1.32E-03	8.58E-04	8.79E-04	2.11E-04	1.39E-04	2.48E-08	4.41E-04	1.40E-04
10	F17	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	F17	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	F17	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	F18	70	Passenger Car	226	0.00E+00	2.49E-06	2.71E-07	9.75E+00	1.77E-05	4.83E-02	5.61E-06	2.28E-04	1.74E-03	2.71E-04	5.47E-04	3.53E-04	3.62E-04	3.84E-05	4.95E-05	1.03E-08	1.85E-04	3.56E-05
10	F18	70	Passenger Truck	378	0.00E+00	5.24E-06	5.57E-07	2.20E+01	3.36E-05	8.54E-02	1.10E-05	6.64E-04	3.15E-03	4.87E-04	1.05E-03	6.83E-04	7.00E-04	1.68E-04	1.10E-04	1.98E-08	3.51E-04	1.12E-04
10	F18	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	F18	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	F18	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
10	F19	70	Passenger Car	434	0.00E+00	4.79E-06	5.20E-07	1.87E+01	3.40E-05	9.29E-02	1.08E-05	4.39E-04	3.34E-03	5.21E-04	1.05E-03	6.79E-04	6.96E-04	7.38E-05	9.52E-05	1.98E-08	3.56E-04	6.85E-05
10	F19	70	Passenger Truck	727	0.00E+00	1.01E-05	1.07E-06	4.22E+01	6.45E-05	1.64E-01	2.11E-05	1.28E-03	6.05E-03	9.37E-04	2.02E-03	1.31E-03	1.35E-03	3.22E-04	2.12E-04	3.80E-08	6.75E-04	2.14E-04
10	F20	70	Passenger Car	245	0.00E+00	2.70E-06	2.93E-07	1.06E+01	1.91E-05	5.23E-02	6.08E-06	2.47E-04	1.88E-03	2.93E-04	5.93E-04	3.82E-04	3.92E-04	4.15E-05	5.36E-05	1.11E-08	2.01E-04	3.86E-05
10	F20	70	Passenger Truck	409	0.00E+00	5.68E-06	6.03E-07	2.38E+01	3.63E-05	9.25E-02	1.19E-05	7.19E-04	3.41E-03	5.28E-04	1.14E-03	7.39E-04	7.58E-04	1.82E-04	1.19E-04	2.14E-08	3.80E-04	1.21E-04
10	F21	70	Passenger Car	367	0.00E+00	4.04E-06	4.39E-07	1.58E+01	2.87E-05	7.85E-02	9.12E-06	3.71E-04	2.83E-03	4.40E-04	8.89E-04	5.73E-04	5.88E-04	6.23E-05	8.04E-05	1.67E-08	3.01E-04	5.79E-05
10	F21	70	Passenger Truck	614	0.00E+00	8.52E-06	9.05E-07	3.57E+01	5.45E-05	1.39E-01	1.78E-05	1.08E-03	5.12E-03	7.91E-04	1.71E-03	1.11E-03	1.14E-03	2.72E-04	1.79E-04	3.21E-08	5.70E-04	1.81E-04
10	F21	70	Single Unit Short Haul Truck	68	0.00E+00	1.20E-05	4.86E-07	1.11E+01	8.02E-06	2.02E-02	1.30E-05	4.77E-03	1.08E-03	1.98E-04	1.61E-03	3.07E-04	3.13E-04	1.13E-03	4.53E-05	1.83E-08	1.30E-03	8.92E-04
10	F21	70	Single Unit Long Haul Truck	3	0.00E+00	5.21E-07	2.10E-08	4.72E-01	3.45E-07	8.48E-04	5.66E-07	2.05E-04	4.95E-05	8.87E-06	7.04E-05	1.33E-05	1.35E-05	4.78E-05	1.92E-06	7.71E-10	5.69E-05	3.84E-05
10	F21	70	Combination Short Haul Truck	64	0.00E+00	1.66E-05	1.23E-06	2.24E+01	4.21E-08	2.39E-02	1.18E-05	2.48E-02	2.33E-03	3.89E-04	9.93E-04	3.59E-04	3.72E-04	3.55E-03	7.48E-05	0.00E+00	6.21E-04	4.67E-03
10	F21	70	Combination Long Haul Truck	59	0.00E+00	2.27E-05	1.29E-06	2.10E+01	1.42E-07	2.85E-02	1.87E-05	2.65E-02	2.43E-03	3.66E-04	2.06E-03	4.15E-04	4.32E-04	3.37E-03	7.04E-05	0.00E+00	1.63E-03	5.00E-03
10	F22	70	Passenger Car	278	0.00E+00	3.06E-06	3.33E-07	1.20E+01	2.17E-05	5.94E-02	6.91E-06	2.81E-04	2.14E-03	3.33E-04	6.73E-04	4.34E-04	4.46E-04	4.72E-05	6.09E-05	1.26E-08	2.28E-04	4.38E-05
10	F22	70	Passenger Truck	465	0.00E+00	6.45E-06	6.85E-07	2.70E+01	4.13E-05	1.05E-01	1.35E-05	8.17E-04	3.87E-03	5.99E-04	1.29E-03	8.40E-04	8.61E-04	2.06E-04	1.36E-04	2.43E-08	4.32E-04	1.37E-04
10	F22	70	Single Unit Short Haul Truck	71	0.00E+00	1.25E-05	5.07E-07	1.16E+01	8.36E-06	2.11E-02	1.36E-05	4.97E-03	1.13E-03	2.07E-04	1.68E-03	3.20E-04	3.27E-04	1.18E-03	4.72E-05	1.91E-08	1.35E-03	9.29E-04
10	F22	70	Single Unit Long Haul Truck	3	0.00E+00	5.43E-07	2.19E-08	4.92E-01	3.60E-07	8.84E-04	5.90E-07	2.14E-04	5.16E-05	9.24E-06	7.34E-05	1.38E-05	1.41E-05	4.98E-05	2.01E-06	8.04E-10	5.93E-05	4.00E-05
10	F22	70	Combination Short Haul Truck	64	0.00E+00	1.64E-05	1.22E-06	2.22E+01	4.17E-08	2.37E-02	1.17E-05	2.46E-02	2.31E-03	3.86E-04	9.85E-04	3.56E-04	3.69E-04	3.53E-03	7.42E-05	0.00E+00	6.16E-04	4.63E-03
10	F22	70	Combination Long Haul Truck	58	0.00E+00	2.25E-05	1.28E-06	2.08E+01	1.41E-07	2.83E-02	1.85E-05	2.63E-02	2.41E-03	3.63E-04	2.05E-03	4.12E-04	4.29E-04	3.34E-03	6.98E-05	0.00E+00	1.62E-03	4.96E-03
10	F23	70	Passenger Car	169	0.00E+00	1.86E-06	2.02E-07	7.30E+00	1.32E-05	3.62E-02	4.20E-06	1.71E-04	1.30E-03	2.03E-04	4.10E-04	2.64E-04	2.71E-04	2.87E-05	3.70E-05	7.69E-09	1.39E-04	2.67E-05
10	F23	70	Passenger Truck	283	0.00E+00	3.92E-06	4.17E-07	1.64E+01	2.51E-05	6.39E-02	8.22E-06	4.97E-04	2.36E-03	3.65E-04	7.86E-04	5.11E-04	5.24E-04	1.25E-04	8.26E-05	1.48E-08	2.63E-04	8.34E-05
10	F23	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	F23	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.20E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.73E-06
10	F23	70	Combination Short Haul Truck	18	0.00E+00	4.58E-06	3.41E-07	6.18E+00	1.16E-08	6.61E-03	3.26E-06	6.85E-03	6.45E-04	1.08E-04	2.75E-04	9.92E-05	1.03E-04	9.83E-04	2.07E-05	0.00E+00	1.72E-04	1.29E-03
10	F23	70	Combination Long Haul Truck	16	0.00E+00	6.28E-06	3.57E-07	5.81E+00	3.94E-08	7.89E-03	5.16E-06	7.34E-03	6.72E-04	1.01E-04	5.71E-04	1.15E-04	1.19E-04	9.32E-04	1.95E-05	0.00E+00	4.51E-04	1.38E-03
10	F24	70	Passenger Car	144	0.00E+00	1.59E-06	1.72E-07	6.22E+00	1.13E-05	3.08E-02	3.58E-06	1.46E-04	1.11E-03	1.73E-04	3.49E-04	2.25E-04	2.31E-04	2.45E-05	3.16E-05	6.55E-09	1.18E-04	2.27E-05
10	F24	70	Passenger Truck	241	0.00E+00	3.34E-06	3.55E-07	1.40E+01	2.14E-05	5.44E-02	7.00E-06	4.23E-04	2.01E-03	3.11E-04	6.70E-04	4.35E-04	4.46E-04	1.07E-04	7.03E-05	1.26E-08	2.24E-04	7.11E-05
10	F24	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
10	F24	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.11E-06
10	F24	70	Combination Short Haul Truck	13	0.00E+00	3.37E-06	2.50E-07	4.55E+00	8.55E-09	4.86E-03	2.40E-06	5.04E-03	4.74E-04	7.91E-05	2.02E-04	7.29E-05	7.57E-05	7.23E-04	1.52E-05	0.00E+00	1.26E-04	9.49E-04
10	F24	70	Combination Long Haul Truck	12	0.00E+00	4.62E-06	2.62E-07	4.27E+00	2.89E-08	5.80E-03	3.79E-06	5.39E-03	4.94E-04	7.44E-05	4.20E-04	8.44E-05	8.79E-05	6.85E-04	1.43E-05	0.00E+00	3.32E-04	1.02E-03
9	F25	60	Passenger Car	396	0.00E+00	5.01E-06	5.45E-07	1.79E+01	3.56E-05	9.67E-02	1.13E-05	4.08E-04	4.00E-03	5.99E-04	1.10E-03	7.11E-04	7.29E-04	7.86E-05	9.06E-05	1.90E-08	3.73E-04	6.37E-05
9	F25	60	Passenger Truck	664	0.00E+00	1.06E-05	1.13E-06	3.99E+01	6.71E-05	1.66E-01	2.21E-05	1.27E-03	7.31E-03	1.09E-03	2.10E-03	1.37E-03	1.40E-03	3.22E-04	2.00E-04	3.71E-08	7.02E-04	2.15E-04
9	F25	60	Single Unit Short Haul Truck	54	0.00E+00	1.20E-05	4.95E-07	8.92E+00	7.93E-06	1.57E-02	1.30E-05	4.60E-03	1.23E-03	2.07E-04	1.60E-03	3.08E-04	3.14E-04	9.04E-04	3.64E-05	1.50E-08	1.28E-03	8.61E-04
9	F25	60	Single Unit Long Haul Truck	2	0.00E+00	5.23E-07	2.15E-08	3.80E-01	3.44E-07	6.66E-04	5.65E-07	1.99E-04	5.54E-05	9.20E-06	6.99E-05	1.34E-05	1.36E-05	3.84E-05	1.55E-06	6.37E-10	5.62E-05	3.73E-05
9	F25	60	Combination Short Haul Truck	50	0.00E+00	1.45E-05	1.07E-06	1.75E+01	3.97E-08	2.17E-02	1.04E-05	2.22E-02	2.53E-03	3.96E-04	8.94E-04	3.12E-04	3.24E-04	2.78E-03	5.85E-05	0.00E+00	5.70E-04	4.18E-03
9	F25	60	Combination Long Haul Truck	45	0.00E+00	1.99E-05	1.09E-06	1.65E+01	1.34E-07	2.60E-02	1.67E-05	2.36E-02	2.65E-03	3.84E-04	1.89E-03	3.56E-04	3.70E-04	2.65E-03	5.54E-05	0.00E+00	1.52E-03	4.45E-03
9	F26	60	Passenger Car	372	0.00E+00	4.70E-06	5.11E-07	1.68E+01	3.34E-05	9.08E-02	1.06E-05	3.83E-04	3.76E-03	5.63E-04	1.03E-03	6.67E-04	6.85E-04	7.37E-05	8.50E-05	1.79E-08	3.50E-04	5.97E-05
9	F26	60	Passenger Truck	623	0.00E+00	9.99E-06	1.06E-06	3.74E+01	6.30E-05	1.56E-01	2.07E-05	1.19E-03	6.86E-03	1.02E-03	1.98E-03	1.29E-03	1.32E-03	3.02E-04	1.88E-04	3.48E-08	6.59E-04	2.02E-04
9	F26	60	Single Unit Short Haul Truck	61	0.00E+00	1.37E-05	5.65E-07	1.02E+01	9.07E-06	1.79E-02	1.48E-05	5.25E-03	1.41E-03	2.37E-04	1.83E-03	3.52E-04	3.59E-04	1.03E-03	4.16E-05	1.71E-08	1.47E-03	9.84E-04
9	F26	60	Single Unit Long Haul Truck	3	0.00E+00	5.97E-07	2.46E-08	4.35E-01	3.93E-07	7.61E-04	6.46E-07	2.28E-04	6.33E-05	1.05E-05	7.98E-05	1.53E-05	1.56E-05	4.39E-05	1.77E-06	7.28E-10	6.42E-05	4.26E-05
9	F26	60	Combination Short Haul Truck	55	0.00E+00	1.60E-05	1.18E-06	1.93E+01	4.39E-08	2.39E-02	1.15E-05	2.45E-02	2.80E-03	4.37E-04	9.88E-04	3.44E-04	3.58E-04	3.07E-03	6.47E-05	0.00E+00	6.30E-04	4.62E-03
9	F26	60	Combination Long Haul Truck	50	0.00E+00	2.20E-05	1.20E-06	1.83E+01	1.49E-07	2.88E-02	1.84E-05	2.61E-02	2.93E-03	4.24E-04	2.09E-03	3.93E-04	4.09E-04	2.93E-03	6.12E-05	0.00E+00	1.68E-03	4.92E-03
9	F27	60	Passenger Car	1025	0.00E+00	1.30E-05	1.41E-06	4.63E+01	9.20E-05	2.50E-01	2.92E-05	1.06E-03	1.04E-02	1.55E-03	2.85E-03	1.84E-03	1.89E-03	2.03E-04	2.34E-04	4.92E-08	9.64E-04	1.65E-04
9	F27	60	Passenger Truck	1717	0.00E+00	2.75E-05	2.92E-06	1.03E+02	1.74E-04	4.29E-01	5.71E-05	3.28E-03	1.89E-02	2.82E-03	5.44E-03	3.54E-03	3.63E-03	8.32E-04	5.17E-04	9.60E-08	1.81E-03	5.56E-04
9	F27	60	Single Unit Short Haul Truck	134	0.00E+00	2.99E-05	1.24E-06	2.23E+01	1.98E-05	3.92E-02	3.24E-05	1.15E-02	3.08E-03	5.18E-04	3.99E-03	7.69E-04	7.85E-04	2.26E-03	9.09E-05	3.75E-08	3.21E-03	2.15E-03
9	F27	60	Single Unit Long Haul Truck	6	0.00E+00	1.31E-06	5.37E-08	9.51E-01	8.60E-07	1.67E-03	1.41E-06	4.98E-04	1.39E-04	2.30E-05	1.75E-04	3.34E-05	3.41E-05	9.61E-05	3.88E-06	1.59E-09	1.41E-04	9.32E-05
9	F27	60	Combination Short Haul Truck	93	0.00E+00	2.70E-05	1.98E-06	3.26E+01	7.40E-08	4.04E-02	1.94E-05	4.13E-02	4.72E-03	7.37E-04	1.67E-03	5.81E-04	6.03E-04	5.18E-03	1.09E-04	0.00E+00	1.06E-03	7.78E-03
9	F27	60	Combination Long Haul Truck	84	0.00E+00	3.71E-05	2.03E-06	3.08E+01	2.51E-07	4.85E-02	3.10E-05	4.40E-02	4.94E-03	7.15E-04	3.52E-03	6.62E-04	6.90E-04	4.94E-03	1.03E-04	0.00E+00	2.83E-03	8.29E-03
9	F28	60	Passenger Car	709	0.00E+00	8.97E-06	9.74E-07	3.20E+01	6.36E-05	1.73E-01	2.02E-05	7.30E-04	7.16E-03	1.07E-03	1.97E-03	1.27E-03	1.30E-03	1.41E-04	1.62E-04	3.40E-08	6.67E-04	1.14E-04
9	F28	60	Passenger Truck	1187	0.00E+00	1.90E-05	2.02E-06	7.13E+01	1.20E-04	2.96E-01	3.95E-05	2.27E-03	1.31E-02	1.95E-03	3.76E-03	2.45E-03	2.51E-03	5.75E-04	3.58E-04	6.64E-08	1.25E-03	3.85E-04
9	F28	60	Single Unit Short Haul Truck	126	0.00E+00	2.82E-05	1.17E-06	2.10E+01	1.87E-05	3.70E-02	3.05E-05	1.08E-02	2.91E-03	4.89E-04	3.77E-03	7.25E-04	7.40E-04	2.13E-03	8.57E-05	3.53E-08	3.03E-03	2.03E-03
9	F28	60	Single Unit Long Haul Truck	6	0.00E+00	1.23E-06	5.06E-08	8.97E-01	8.11E-07	1.57E-03	1.33E-06	4.69E-04	1.31E-04	2.17E-05	1.65E-04	3.15E-05	3.22E-05	9.06E-05	3.66E-06	1.50E-09	1.33E-04	8.79E-05
9	F28	60	Combination Short Haul Truck	93	0.00E+00	2.70E-05	1.98E-06

Appendix F.5.4: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F47	60	Passenger Truck	6	0.00E+00	9.04E-08	9.58E-09	3.39E-01	5.70E-07	1.41E-03	1.87E-07	1.08E-05	6.21E-05	9.24E-06	1.79E-05	1.16E-05	1.19E-05	2.73E-06	1.70E-06	3.15E-10	5.96E-06	1.83E-06
9	F48	60	Passenger Car	34	0.00E+00	4.35E-07	4.73E-08	1.55E+00	3.09E-06	8.39E-03	9.81E-07	3.54E-05	3.47E-04	5.20E-05	9.57E-05	6.17E-05	6.33E-05	6.82E-06	7.86E-06	1.65E-09	3.24E-05	5.52E-06
9	F48	60	Passenger Truck	58	0.00E+00	9.24E-07	9.79E-08	3.46E+00	5.83E-06	1.44E-02	1.92E-06	1.10E-04	6.35E-04	9.45E-05	1.83E-04	1.19E-04	1.22E-04	2.79E-05	1.74E-05	3.22E-09	6.09E-05	1.87E-05
9	F48	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	F48	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	F48	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.36E-05
9	F49	60	Passenger Car	852	0.00E+00	1.08E-05	1.17E-06	3.85E+01	7.65E-05	2.08E-01	2.43E-05	8.77E-04	8.60E-03	1.29E-03	2.37E-03	1.53E-03	1.57E-03	1.69E-04	1.95E-04	4.09E-08	8.02E-04	1.37E-04
9	F49	60	Passenger Truck	1427	0.00E+00	2.29E-05	2.43E-06	8.58E+01	1.44E-04	3.56E-01	4.75E-05	2.73E-03	1.57E-02	2.34E-03	4.53E-03	2.94E-03	3.02E-03	6.91E-04	4.30E-04	7.98E-08	1.51E-03	4.62E-04
9	F49	60	Single Unit Short Haul Truck	105	0.00E+00	2.35E-05	9.72E-07	1.75E+01	1.56E-05	3.08E-02	2.54E-05	9.03E-03	2.42E-03	4.07E-04	3.14E-03	6.04E-04	6.17E-04	1.78E-03	7.14E-05	2.94E-08	2.52E-03	1.69E-03
9	F49	60	Single Unit Long Haul Truck	5	0.00E+00	1.03E-06	4.22E-08	7.47E-01	6.76E-07	1.31E-03	1.11E-06	3.91E-04	1.09E-04	1.81E-05	1.37E-04	2.63E-05	2.68E-05	7.55E-05	3.05E-06	1.25E-09	1.10E-04	7.32E-05
9	F49	60	Combination Short Haul Truck	78	0.00E+00	2.27E-05	1.67E-06	2.74E+01	6.23E-08	3.40E-02	1.63E-05	3.48E-02	3.97E-03	6.21E-04	1.40E-03	4.89E-04	5.07E-04	4.36E-03	9.18E-05	0.00E+00	8.94E-04	6.55E-03
9	F49	60	Combination Long Haul Truck	71	0.00E+00	3.13E-05	1.71E-06	2.59E+01	2.11E-07	4.08E-02	2.61E-05	3.70E-02	4.16E-03	6.02E-04	2.96E-03	5.58E-04	5.81E-04	4.16E-03	8.69E-05	0.00E+00	2.38E-03	6.98E-03
9	F50	60	Passenger Car	708	0.00E+00	8.96E-06	9.73E-07	3.20E+01	6.36E-05	1.73E-01	2.02E-05	7.29E-04	7.15E-03	1.07E-03	1.97E-03	1.27E-03	1.30E-03	1.40E-04	1.62E-04	3.40E-08	6.66E-04	1.14E-04
9	F50	60	Passenger Truck	1186	0.00E+00	1.90E-05	2.02E-06	7.13E+01	1.20E-04	2.96E-01	3.94E-05	2.27E-03	1.31E-02	1.94E-03	3.76E-03	2.45E-03	2.51E-03	5.75E-04	3.57E-04	6.63E-08	1.25E-03	3.84E-04
9	F50	60	Single Unit Short Haul Truck	122	0.00E+00	2.72E-05	1.12E-06	2.02E+01	1.80E-05	3.56E-02	2.94E-05	1.04E-02	2.80E-03	4.70E-04	3.62E-03	6.98E-04	7.12E-04	2.05E-03	8.25E-05	3.40E-08	2.91E-03	1.95E-03
9	F50	60	Single Unit Long Haul Truck	5	0.00E+00	1.19E-06	4.87E-08	8.63E-01	7.80E-07	1.51E-03	1.28E-06	4.52E-04	1.26E-04	2.09E-05	1.58E-04	3.03E-05	3.09E-05	8.72E-05	3.52E-06	1.45E-09	1.27E-04	8.45E-05
9	F50	60	Combination Short Haul Truck	90	0.00E+00	2.63E-05	1.93E-06	3.17E+01	7.19E-08	3.92E-02	1.89E-05	4.01E-02	4.58E-03	7.17E-04	1.62E-03	5.64E-04	5.86E-04	5.04E-03	1.06E-04	0.00E+00	1.03E-03	7.56E-03
9	F50	60	Combination Long Haul Truck	82	0.00E+00	3.61E-05	1.97E-06	2.99E+01	2.43E-07	4.71E-02	3.02E-05	4.28E-02	4.81E-03	6.95E-04	3.42E-03	6.44E-04	6.71E-04	4.80E-03	1.00E-04	0.00E+00	2.75E-03	8.05E-03
10	F51	70	Passenger Car	631	0.00E+00	6.96E-06	7.56E-07	2.73E+01	4.94E-05	1.35E-01	1.57E-05	6.38E-04	4.86E-03	7.57E-04	1.53E-03	9.87E-04	1.01E-03	1.07E-04	1.38E-04	2.87E-08	5.18E-04	9.96E-05
10	F51	70	Passenger Truck	1057	0.00E+00	1.47E-05	1.56E-06	6.14E+01	9.38E-05	2.39E-01	3.07E-05	1.86E-03	8.80E-03	1.36E-03	2.94E-03	1.91E-03	1.96E-03	4.69E-04	3.08E-04	5.53E-08	9.81E-04	3.12E-04
10	F51	70	Single Unit Short Haul Truck	37	0.00E+00	6.57E-06	2.67E-07	6.12E+00	4.41E-06	1.11E-02	7.15E-06	2.62E-03	5.94E-04	1.09E-04	8.86E-04	1.69E-04	1.72E-04	6.22E-04	2.49E-05	1.00E-08	7.14E-04	4.90E-04
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	2.86E-07	1.15E-08	2.59E-01	1.90E-07	4.66E-04	3.11E-07	1.13E-04	2.72E-05	4.87E-06	3.87E-05	7.29E-06	7.44E-06	2.62E-05	1.06E-06	4.24E-10	3.12E-05	2.11E-05
10	F51	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
10	F51	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.12E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
10	F52	70	Passenger Car	224	0.00E+00	2.47E-06	2.68E-07	9.67E+00	1.75E-05	4.79E-02	5.57E-06	2.26E-04	1.73E-03	2.69E-04	5.43E-04	3.50E-04	3.59E-04	3.81E-05	4.91E-05	1.02E-08	1.84E-04	3.53E-05
10	F52	70	Passenger Truck	375	0.00E+00	5.20E-06	5.53E-07	2.18E+01	3.33E-05	8.47E-02	1.09E-05	6.59E-04	3.12E-03	4.83E-04	1.04E-03	6.77E-04	6.94E-04	1.66E-04	1.09E-04	1.96E-08	3.48E-04	1.11E-04
10	F52	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	F52	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
10	F52	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	F52	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
10	F53	70	Passenger Car	633	0.00E+00	6.98E-06	7.59E-07	2.74E+01	4.96E-05	1.35E-01	1.57E-05	6.41E-04	4.88E-03	7.60E-04	1.54E-03	9.90E-04	1.02E-03	1.08E-04	1.39E-04	2.88E-08	5.19E-04	9.99E-05
10	F53	70	Passenger Truck	1061	0.00E+00	1.47E-05	1.56E-06	6.16E+01	9.41E-05	2.40E-01	3.08E-05	1.86E-03	8.83E-03	1.37E-03	2.95E-03	1.91E-03	1.96E-03	4.70E-04	3.10E-04	5.54E-08	9.85E-04	3.13E-04
10	F53	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	F53	70	Combination Short Haul Truck	2	0.00E+00	4.04E-07	3.00E-08	5.46E-01	1.03E-09	5.83E-04	2.88E-07	6.05E-04	5.69E-05	9.49E-06	2.42E-05	8.75E-06	9.08E-06	8.67E-05	1.82E-06	0.00E+00	1.51E-05	1.14E-04
10	F53	70	Combination Long Haul Truck	1	0.00E+00	5.54E-07	3.15E-08	5.12E-01	3.47E-09	6.96E-04	4.55E-07	6.47E-04	5.93E-05	8.93E-06	5.03E-05	1.01E-05	1.05E-05	8.22E-05	1.72E-06	0.00E+00	3.98E-05	1.22E-04
10	F54	70	Passenger Car	396	0.00E+00	4.37E-06	4.74E-07	1.71E+01	3.10E-05	8.47E-02	9.84E-06	4.00E-04	3.05E-03	4.75E-04	9.60E-04	6.19E-04	6.35E-04	6.73E-05	8.68E-05	1.80E-08	3.25E-04	6.25E-05
10	F54	70	Passenger Truck	663	0.00E+00	9.19E-06	9.77E-07	3.85E+01	5.89E-05	1.50E-01	1.93E-05	1.16E-03	5.52E-03	8.54E-04	1.84E-03	1.20E-03	1.23E-03	2.94E-04	1.93E-04	3.47E-08	6.16E-04	1.96E-04
10	F54	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.03E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.53E-05
10	F54	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.90E-04
10	F54	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
53	F71	70	Passenger Car	120	0.00E+00	1.28E-06	1.39E-07	5.23E+00	9.07E-06	2.46E-02	2.88E-06	1.23E-04	9.08E-04	1.42E-04	2.81E-04	1.81E-04	1.86E-04	2.03E-05	2.65E-05	5.51E-09	9.51E-05	1.92E-05
53	F71	70	Passenger Truck	200	0.00E+00	2.67E-06	2.84E-07	1.18E+01	1.72E-05	4.34E-02	5.61E-06	3.48E-04	1.62E-03	2.52E-04	5.37E-04	3.49E-04	3.57E-04	8.83E-05	5.92E-05	1.04E-08	1.79E-04	5.82E-05
53	F71	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.73E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
53	F71	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.76E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.03E-06
53	F71	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.63E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.83E-04
53	F71	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.88E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.32E-04
50	F72	40	Passenger Car	276	0.00E+00	3.91E-06	4.25E-07	1.44E+01	2.77E-05	7.47E-02	8.82E-06	2.51E-04	4.75E-03	6.68E-04	8.60E-04	5.54E-04	5.69E-04	8.19E-05	7.22E-05	1.34E-08	2.91E-04	3.92E-05
50	F72	40	Passenger Truck	461	0.00E+00	8.62E-06	9.06E-07	3.13E+01	5.19E-05	1.24E-01	1.73E-05	9.69E-04	8.43E-03	1.17E-03	1.64E-03	1.07E-03	1.09E-03	2.80E-04	1.56E-04	2.27E-08	5.42E-04	1.68E-04
50	F72	40	Single Unit Short Haul Truck	46	0.00E+00	1.56E-05	6.94E-07	8.68E+00	1.08E-05	1.36E-02	1.67E-05	6.29E-03	1.81E-03	2.83E-04	2.01E-03	4.18E-04	4.26E-04	8.87E-04	3.54E-05	1.50E-08	1.58E-03	1.18E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	6.84E-07	3.03E-08	3.75E-01	4.72E-07	5.93E-04	7.32E-07	2.74E-04	8.11E-05	1.26E-05	8.81E-05	1.83E-05	1.86E-05	3.83E-05	1.53E-06	6.51E-10	6.95E-05	5.14E-05
50	F72	40	Combination Short Haul Truck	25	0.00E+00	1.19E-05	8.86E-07	1.02E+01	2.94E-08	1.68E-02	8.43E-06	1.73E-02	2.39E-03	3.56E-04	7.05E-04	2.58E-04	2.67E-04	1.62E-03	3.41E-05	0.00E+00	4.38E-04	3.26E-03
50	F72	40	Combination Long Haul Truck	22	0.00E+00	1.58E-05	8.90E-07	9.78E+00	1.00E-07	2.04E-02	1.30E-05	1.82E-02	2.48E-03	3.49E-04	1.44E-03	2.87E-04	2.99E-04	1.57E-03	3.28E-05	0.00E+00	1.14E-03	3.44E-03
52	F73	60	Passenger Car	173	0.00E+00	2.01E-06	2.18E-07	7.80E+00	1.42E-05	3.85E-02	4.53E-06	1.71E-04	1.70E-03	2.54E-04	4.41E-04	2.85E-04	2.92E-04	3.42E-05	3.95E-05	8.04E-09	1.49E-04	2.67E-05
52	F73	60	Passenger Truck	289	0.00E+00	4.24E-06	4.49E-07	1.74E+01	2.67E-05	6.61E-02	8.78E-06	5.23E-04	3.01E-03	4.47E-04	8.37E-04	5.45E-04	5.58E-04	1.37E-04	8.71E-05	1.47E-08	2.79E-04	8.84E-05
52	F73	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
52	F73	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.17E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.20E-04
52	F73	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.34E-04
53	F74	70	Passenger Car	356	0.00E+00	3.80E-06	4.13E-07	1.55E+01	2.70E-05	7.31E-02	8.57E-06	3.66E-04	2.70E-03	4.22E-04	8.36E-04	5.39E-04	5.53E-04	6.04E-05	7.88E-05	1.64E-08	2.83E-04	5.71E-05
53	F74	70	Passenger Truck	595	0.00E+00	7.94E-06	8.44E-07	3.50E+01	5.10E-05	1.29E-01	1.67E-05	1.03E-03	4.82E-03	7.49E-04	1.60E-03	1.04E-03	1.06E-03	2.62E-04	1.76E-04	3.08E-08	5.33E-04	1.73E-04
53	F74	70	Single Unit Short Haul Truck	68	0.00E+00	1.20E-05	4.86E-07	1.11E+01	8.02E-06	2.02E-02	1.30E-05	4.77E-03	1.08E-03	1.98E-04	1.61E-03	3.07E-04	3.13E-04	1.13E-03	4.53E-05	1.83E-08	1.30E-03	8.92E-04
53	F74	70	Single Unit Long Haul Truck	3	0.00E+00	5.21E-07	2.10E-08	4.72E-01	3.45E-07	8.48E-04	5.66E-07	2.05E-04	4.95E-05	8.87E-06	7.04E-05	1.33E-05	1.35E-05	4.78E-05	1.92E-06	7.71E-10	5.69E-05	3.84E-05
53	F74	70	Combination Short Haul Truck	32	0.00E+00	8.21E-06	6.11E-07	1.11E+01	2.09E-08	1.19E-02	5.85E-06	1.23E-02	1.16E-03	1.93E-04	4.93E-04	1.78E-04	1.85E-04	1.76E-03	3.71E-05	0.00E+00	3.08E-04	2.32E-03
53	F74	70	Combination Long Haul Truck	29	0.00E+00	1.13E-05	6.40E-07	1.04E+01	7.06E-08	1.42E-02	9.26E-06	1.32E-02	1.20E-03	1.81E-04	1.02E-03	2.06E-04	2.14E-04	1.67E-03	3.49E-05	0.00E+00	8.09E-04	2.48E-03
52	F75	60	Passenger Car	231	0.00E+00	2.68E-06	2.92E-07	1.04E+01	1.91E-05	5.15E-02	6.05E-06	2.29E-04	2.27E-03	3.40E-04	5.90E-04	3.81E-04	3.91E-04	4.58E-05	5.28E-05	1.08E-08	2.00E-04	3.57E-05
52	F75	60	Passenger Truck	387	0.00E+00	5.67E-06	6.01E-07	2.32E+01	3.57E-05	8.84E-02	1.18E-05	6.99E-04	4.03E-03	5.98E-04	1.12E-03	7.29E-04	7.47E-04	1.84E-04	1.17E-04	1.97E-08	3.73E-04	1.18E-04
52	F75	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.40E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
52	F75	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.04E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
52	F75	60	Combination Short Haul Truck	9	0.00E+00	2.75E-06	2.02E-07	3.32E+00	7.53E-09	4.11E-03	1.97E-06	4.20E-03	4.80E-04	7.50E-05	1.69E-04	5.90E-05	6.13E-05	5.27E-04	1.11E-05	0.00E+00	1.08E-04	7.91E-04
52	F75	60	Combination Long Haul Truck	9	0.00E+00	3.78E-06	2.06E-07	3.13E+00	2.55E-08	4.93E-03	3.16E-06	4.47E-03	5.03E-04	7.27E-05	3.58E-04	6.74E-05	7.02E-05	5.03E-04	1.05E-05	0.00E+00	2.88E-04	8.43E-04
50	F76	40	Passenger Car	89	0.00E+00	1.27E-06	1.38E-07	4.66E+00	9.00E-06	2.42E-02	2.86E-06	8.15E-05	1.54E-03	2.17E-04	2.79E-04	1.80E-04	1.85E-04	2.66E-05	2.34E-05	4.34E-09	9.43E-05	1.27E-05
50	F76	40	Passenger Truck	150	0.00E+00	2.80E-06	2.94E-07	1.02E+01	1.68E-05	4.01E-02	5.62E-06	3.14E-04	2.73E-03	3.79E-04	5.31E-04	3.47E-04	3.55E-04	9.07E-05	5.06E-05	7.38E-09	1.76E-04	5.44E-05
53	F77	70	Passenger Car	285	0.00E+00	3.04E-06	3.30E-07	1.24E+01	2.16E-05	5.85E-02	6.86E-06	2.93E-04	2.16E-03	3.38E-04	6.69E-04	4.31E-04	4.42E-04	4.83E-05	6.31E-05	1.31E-08	2.26E-04	4.57E-05
53	F77	70	Passenger Truck	476	0.00E+00	6.35E-06	6.75E-07	2.80E+01	4.08E-05	1.03E-01	1.33E-05	8.27E-04	3.85E-03	5.99E-04	1.28E-03	8.29E-04	8.50E-04	2.10E-04	1.41E-04	2.47E-08	4.27E-04	1.38E-04
53	F77	70	Single Unit Short Haul Truck	49	0.00E+00	8.60E-06	3.49E-07	8.00E+00	5.76E-06	1.45E-02	9.35E-06	3.42E-03	7.76E-04	1.43E-04	1.16E-03	2.21E-04	2.25E-04	8.13E-04	3.26E-05	1.31E-08	9.34E-04	6.40E-04
53	F77	70	Single Unit Long Haul Truck	2	0.00E+00	3.74E-07	1.51E-08	3.39E-01	2.48E-07	6.09E-04	4.07E-07	1.47E-04	3.55E-05	6.37E-06	5.06E-05	9.54E-06	9.73E-06	3.43E-05	1.38E-06	5.54E-10	4.08E-05	2.76E-05
53	F77	70	Combination Short Haul Truck	38	0.00E+00	9.83E-06	7.31E-07	1.33E+01	2.50E-08	1.42E-02	7.00E-06	1.47E-02	1.38E-03	2.31E-04	5.89E-04	2.13E-04	2.21E-04	2.11E-03	4.44E-05	0.00E+00	3.68E-04	2.77E-03
53	F77	70	Combination Long Haul Truck	35	0.00E+00	1.35E-05	7.66E-07	1.25E+01	8.45E-08	1.69E-02	1.11E-05	1.58E-02	1.44E-03	2.17E-04	1.22E-03	2.46E-04	2.57E-04	2.00E-03	4.18E-05	0.00E+00	9.68E-04	2.97E-03
50	F78	40	Passenger Car	102	0.00E+00	1.44E-06	1.57E-07	5.31E+00	1.02E-05	2.76E-02	3.25E-06	9.28E-05	1.75E-03	2.47E-04	3.17E-04	2.05E-04	2.10E-04	3.02E-05	2.67E-05	4.94E-09	1.07E-04	1.45E-05
50	F78	40	Passenger Truck	170	0.00E+00	3.18E-06	3.35E-07	1.16E+01	1.92E-05	4.56E-02	6.39E-06	3.57E-04	3.11E-03	4.32E-04	6.04E-04	3.94E-04	4.04E-04	1.03E-04	5.75E-05	8.39E-09	2.00E-04	6.19E-05
50	F78	40	Single Unit Short Haul Truck	1	0.00E+00	3.25E-07	1.45E-08	1.81E-01	2.25E-07	2.84E-04	3.47E-07	1.31E-04	3.77E-05	5.89E-06	4.18E-05	8.71E-06	8.87E-06	1.85E-05	7.37E-07	3.13E-10	3.29E-05	2.46E-05
50	F78	40	Combination Short Haul Truck	1	0.00E+00	5.05E-07	3.77E-08	4.34E-01	1.25E-09	7.14E-04	3.59E-07	7.36E-04	1.02E-04	1.52E-05	3.00E-05	1.10E-05	1.14E-05	6.89E-05	1.45E-06	0.00E+00	1.86E-05	1.39E-04
50	F78	40	Combination Long Haul Truck	1	0.00E+00	6.71E-07	3.79E-08	4.16E-01	4.26E-09	8.66E-04	5.53E-07	7.77E-04	1.06E-04	1.48E-05	6.14E-05	1.22E-05	1.27E-05	6.68E-05	1.40E-06	0.00E+00	4.87E-05	1.46E-04
52	F79	60	Passenger Car	440	0.00E+00	5.11

Appendix F.5.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
A17	0.00E+00	2.00E-04	1.45E-05	4.58E+02	3.20E-04	1.27E+00	2.24E-04	2.00E-01	1.64E-02	3.97E-03	2.23E-02	9.37E-03	9.64E-03	3.92E-02	1.92E-03	3.16E-07	1.27E-02	3.74E-02
A18	0.00E+00	2.28E-04	1.62E-05	5.06E+02	3.31E-04	1.34E+00	2.49E-04	2.29E-01	1.77E-02	4.34E-03	2.50E-02	1.01E-02	1.03E-02	4.56E-02	2.09E-03	3.50E-07	1.46E-02	4.30E-02
A19	0.00E+00	1.89E-04	1.36E-05	4.25E+02	2.87E-04	1.15E+00	2.08E-04	1.90E-01	1.51E-02	3.66E-03	2.08E-02	8.58E-03	8.83E-03	3.75E-02	1.77E-03	2.89E-07	1.19E-02	3.57E-02
A20	0.00E+00	2.16E-04	1.53E-05	4.77E+02	3.09E-04	1.26E+00	2.35E-04	2.19E-01	1.67E-02	4.09E-03	2.36E-02	9.45E-03	9.72E-03	4.34E-02	1.97E-03	3.28E-07	1.38E-02	4.10E-02
A21	0.00E+00	2.28E-04	1.68E-05	5.37E+02	3.97E-04	1.55E+00	2.62E-04	2.22E-01	1.95E-02	4.70E-03	2.61E-02	1.12E-02	1.15E-02	4.36E-02	2.27E-03	3.80E-07	1.45E-02	4.16E-02
A22	0.00E+00	2.41E-04	1.74E-05	5.55E+02	3.94E-04	1.56E+00	2.72E-04	2.35E-01	1.99E-02	4.84E-03	2.73E-02	1.14E-02	1.17E-02	4.68E-02	2.33E-03	3.97E-07	1.55E-02	4.41E-02
A23	0.00E+00	2.40E-04	1.77E-05	5.64E+02	4.17E-04	1.63E+00	2.75E-04	2.35E-01	2.05E-02	4.94E-03	2.73E-02	1.18E-02	1.21E-02	4.60E-02	2.39E-03	3.96E-07	1.52E-02	4.40E-02
A24	0.00E+00	2.12E-04	1.52E-05	4.81E+02	3.31E-04	1.32E+00	2.36E-04	2.11E-01	1.71E-02	4.17E-03	2.36E-02	9.76E-03	1.00E-02	4.18E-02	2.01E-03	3.36E-07	1.36E-02	3.95E-02
A25	0.00E+00	2.09E-04	1.53E-05	4.83E+02	3.43E-04	1.35E+00	2.36E-04	2.09E-01	1.73E-02	4.20E-03	2.34E-02	9.96E-03	1.02E-02	4.08E-02	2.03E-03	3.30E-07	1.32E-02	3.92E-02
A26	0.00E+00	1.99E-04	1.43E-05	4.54E+02	3.16E-04	1.26E+00	2.23E-04	1.96E-01	1.62E-02	3.94E-03	2.23E-02	9.26E-03	9.52E-03	3.89E-02	1.90E-03	3.21E-07	1.28E-02	3.68E-02
A27	0.00E+00	2.09E-04	1.53E-05	4.83E+02	3.43E-04	1.35E+00	2.36E-04	2.09E-01	1.73E-02	4.20E-03	2.34E-02	9.96E-03	1.02E-02	4.08E-02	2.03E-03	3.30E-07	1.32E-02	3.92E-02
A28	0.00E+00	1.99E-04	1.43E-05	4.54E+02	3.16E-04	1.26E+00	2.23E-04	1.96E-01	1.62E-02	3.94E-03	2.23E-02	9.26E-03	9.52E-03	3.89E-02	1.90E-03	3.21E-07	1.28E-02	3.68E-02
B15	0.00E+00	9.05E-05	7.91E-06	3.23E+02	3.79E-04	1.15E+00	1.51E-04	5.24E-02	1.91E-02	3.78E-03	1.50E-02	8.25E-03	8.47E-03	1.08E-02	1.54E-03	2.77E-07	6.55E-03	9.67E-03
B16	0.00E+00	5.60E-05	4.86E-06	1.98E+02	2.31E-04	7.01E-01	9.27E-05	3.27E-02	1.17E-02	2.31E-03	9.24E-03	5.04E-03	5.18E-03	6.79E-03	9.42E-04	1.70E-07	4.07E-03	6.04E-03
B17	0.00E+00	9.64E-05	7.28E-06	2.80E+02	2.58E-04	8.36E-01	1.32E-04	8.02E-02	1.48E-02	3.01E-03	1.35E-02	6.24E-03	6.41E-03	1.67E-02	1.25E-03	2.11E-07	7.06E-03	1.50E-02
B18	0.00E+00	6.20E-05	4.79E-06	1.86E+02	1.79E-04	5.72E-01	8.73E-05	4.95E-02	9.99E-03	2.03E-03	8.88E-03	4.24E-03	4.35E-03	1.03E-02	8.38E-04	1.43E-07	4.52E-03	9.23E-03
B19	0.00E+00	1.82E-04	1.56E-05	6.35E+02	7.34E-04	2.23E+00	2.98E-04	1.08E-01	3.72E-02	7.39E-03	2.98E-02	1.61E-02	1.65E-02	2.25E-02	3.01E-03	5.44E-07	1.33E-02	1.99E-02
B20	0.00E+00	1.43E-04	1.09E-05	4.10E+02	3.67E-04	1.20E+00	1.91E-04	1.27E-01	2.14E-02	4.36E-03	1.94E-02	9.00E-03	9.24E-03	2.59E-02	1.82E-03	2.91E-07	1.02E-02	2.38E-02
B21	0.00E+00	1.02E-04	9.93E-06	4.22E+02	5.58E-04	1.64E+00	1.95E-04	3.75E-02	2.64E-02	5.16E-03	1.91E-02	1.16E-02	1.19E-02	7.55E-03	2.08E-03	3.84E-07	7.25E-03	6.77E-03
B22	0.00E+00	7.14E-05	5.82E-06	2.23E+02	2.20E-04	6.97E-01	1.02E-04	6.07E-02	1.21E-02	2.44E-03	1.02E-02	5.17E-03	5.31E-03	1.19E-02	1.01E-03	1.58E-07	4.85E-03	1.13E-02
B23	0.00E+00	1.05E-04	1.03E-05	4.37E+02	5.81E-04	1.70E+00	2.03E-04	3.76E-02	2.75E-02	5.36E-03	1.98E-02	1.20E-02	1.24E-02	7.57E-03	2.16E-03	4.00E-07	7.47E-03	6.78E-03
B24	0.00E+00	1.71E-04	1.23E-05	4.53E+02	3.58E-04	1.22E+00	2.12E-04	1.64E-01	2.24E-02	4.65E-03	2.18E-02	9.33E-03	9.59E-03	3.36E-02	1.95E-03	3.04E-07	1.22E-02	3.07E-02
C53	0.00E+00	2.28E-06	2.28E-07	8.09E+00	1.26E-05	3.26E-02	4.38E-06	6.95E-04	1.50E-03	2.24E-04	4.22E-04	2.62E-04	2.69E-04	1.10E-04	4.01E-05	6.99E-09	1.54E-04	1.26E-04
C54	0.00E+00	6.69E-06	4.88E-07	1.43E+01	1.59E-05	4.50E-02	8.75E-06	4.65E-03	1.92E-03	3.04E-04	9.00E-04	3.97E-04	4.08E-04	7.18E-04	6.51E-05	1.14E-08	4.92E-04	8.69E-04
C57	0.00E+00	2.01E-05	1.46E-06	4.08E+01	4.24E-05	1.24E-01	2.50E-05	1.59E-02	5.45E-03	8.62E-04	2.54E-03	1.11E-03	1.14E-03	2.36E-03	1.83E-04	2.96E-08	1.41E-03	2.97E-03
C58	0.00E+00	3.82E-06	3.11E-07	7.72E+00	1.12E-05	2.98E-02	5.31E-06	2.57E-03	2.16E-03	3.03E-04	5.23E-04	2.66E-04	2.73E-04	2.72E-04	3.63E-05	5.28E-09	2.50E-04	4.81E-04
C59	0.00E+00	8.35E-06	6.64E-07	2.10E+01	2.59E-05	7.13E-02	1.21E-05	5.18E-03	2.92E-03	4.59E-04	1.22E-03	6.03E-04	6.19E-04	7.99E-04	9.86E-05	1.72E-08	5.97E-04	9.64E-04
C60	0.00E+00	1.95E-05	1.53E-06	4.50E+01	6.02E-05	1.62E-01	2.82E-05	1.16E-02	8.05E-03	1.21E-03	2.86E-03	1.40E-03	1.43E-03	1.61E-03	2.12E-04	3.67E-08	1.43E-03	2.16E-03
C61	0.00E+00	1.14E-05	8.66E-07	2.58E+01	2.95E-05	8.31E-02	1.53E-05	8.02E-03	3.51E-03	5.54E-04	1.56E-03	7.21E-04	7.41E-04	1.22E-03	1.18E-04	2.02E-08	8.16E-04	1.50E-03
C62	0.00E+00	2.16E-05	2.04E-06	6.33E+01	1.05E-04	2.66E-01	3.87E-05	6.82E-03	1.81E-02	2.52E-03	3.76E-03	2.24E-03	2.29E-03	9.77E-04	3.11E-04	4.89E-08	1.46E-03	1.25E-03
C63	0.00E+00	6.53E-05	4.23E-06	9.38E+01	8.18E-05	2.56E-01	7.06E-05	5.88E-02	1.56E-02	2.37E-03	7.44E-03	2.60E-03	2.67E-03	7.60E-03	3.96E-04	5.91E-08	4.77E-03	1.10E-02
C64	0.00E+00	4.34E-05	3.36E-06	1.03E+02	1.23E-04	3.41E-01	6.04E-05	2.86E-02	1.42E-02	2.23E-03	6.11E-03	2.92E-03	3.00E-03	4.39E-03	4.79E-04	8.30E-08	3.11E-03	5.34E-03
C65	0.00E+00	2.43E-07	2.60E-08	9.81E-01	1.60E-06	4.07E-03	5.19E-07	2.70E-05	1.83E-04	2.73E-05	4.98E-05	3.23E-05	3.31E-05	6.68E-06	4.93E-06	8.86E-10	1.67E-05	4.49E-06
C66	0.00E+00	1.28E-05	1.04E-06	2.66E+01	3.99E-05	1.04E-01	1.84E-05	7.46E-03	7.43E-03	1.04E-03	1.83E-03	9.31E-04	9.55E-04	8.33E-04	1.26E-04	1.94E-08	8.78E-04	1.39E-03
C67	0.00E+00	4.06E-05	2.94E-06	1.09E+02	1.00E-04	3.14E-01	5.41E-05	3.36E-02	7.74E-03	1.42E-03	5.63E-03	2.46E-03	2.53E-03	6.86E-03	4.84E-04	7.82E-08	3.10E-03	6.28E-03
C68	0.00E+00	3.17E-05	2.30E-06	8.63E+01	8.10E-05	2.52E-01	4.30E-05	2.53E-02	6.17E-03	1.13E-03	4.47E-03	1.97E-03	2.02E-03	5.22E-03	3.85E-04	6.38E-08	2.45E-03	4.73E-03
C69	0.00E+00	5.52E-05	4.16E-06	1.32E+02	1.33E-04	3.97E-01	7.18E-05	4.35E-02	1.33E-02	2.22E-03	7.28E-03	3.33E-03	3.42E-03	7.40E-03	5.93E-04	9.52E-08	3.86E-03	8.14E-03
C70	0.00E+00	5.59E-05	4.01E-06	1.51E+02	1.41E-04	4.40E-01	7.56E-05	4.39E-02	1.07E-02	1.97E-03	7.90E-03	3.44E-03	3.53E-03	9.14E-03	6.72E-04	1.14E-07	4.37E-03	8.19E-03
C71	0.00E+00	4.89E-05	3.43E-06	9.33E+01	9.32E-05	2.74E-01	5.91E-05	3.85E-02	1.23E-02	1.95E-03	6.10E-03	2.51E-03	2.58E-03	5.79E-03	4.14E-04	6.88E-08	3.53E-03	7.21E-03
C72	0.00E+00	3.37E-06	2.66E-07	6.74E+00	1.01E-05	2.61E-02	4.79E-06	1.93E-03	1.88E-03	2.64E-04	4.80E-04	2.37E-04	2.43E-04	2.18E-04	3.19E-05	5.02E-09	2.37E-04	3.61E-04
C73	0.00E+00	1.79E-05	1.39E-06	3.45E+01	4.86E-05	1.28E-01	2.44E-05	1.09E-02	7.75E-03	1.13E-03	2.44E-03	1.18E-03	1.21E-03	1.34E-03	1.61E-04	2.75E-08	1.24E-03	2.04E-03
C74	0.00E+00	6.18E-05	4.27E-06	1.05E+02	1.11E-04	3.24E-01	7.35E-05	5.06E-02	1.81E-02	2.73E-03	7.62E-03	3.05E-03	3.14E-03	6.63E-03	4.66E-04	7.33E-08	4.48E-03	9.50E-03
C81	0.00E+00	6.94E-05	4.65E-06	1.13E+02	8.98E-05	2.90E-01	7.48E-05	6.37E-02	1.43E-02	2.27E-03	7.76E-03	2.84E-03	2.92E-03	9.30E-03	4.76E-04	6.99E-08	4.84E-03	1.20E-02
C82	0.00E+00	6.96E-05	4.54E-06	1.01E+02	8.78E-05	2.76E-01	7.53E-05	6.33E-02	1.68E-02	2.55E-03	7.92E-03	2.78E-03	2.86E-03	8.15E-03	4.26E-04	6.26E-08	5.06E-03	1.19E-02
C83	0.00E+00	1.04E-04	7.30E-06	2.65E+02	1.93E-04	6.76E-01	1.25E-04	1.04E-01	1.27E-02	2.66E-03	1.29E-02	5.25E-03	5.40E-03	2.15E-02	1.12E-03	1.72E-07	7.52E-03	1.96E-02
C84	0.00E+00	4.40E-05	2.75E-06	9.52E+01	5.61E-05	2.07E-01	4.84E-05	4.50E-02	5.78E-03	1.10E-03	5.23E-03	1.75E-03	1.80E-03	9.18E-03	3.87E-04	5.60E-08	3.43E-03	8.45E-03
C85	0.00E+00	5.45E-05	3.68E-06	1.34E+02	1.08E-04	3.54E-01	6.78E-05	4.80E-02	9.02E-03	1.67E-03	7.18E-03	2.83E-03	2.91E-03	9.93E-03	5.78E-04	9.35E-08	4.27E-03	8.99E-03
C86	0.00E+00	8.91E-05	5.57E-06	1.94E+02	1.18E-04	4.30E-01	9.92E-05	8.91E-02	1.19E-02	2.25E-03	1.07E-02	3.61E-03	3.71E-03	1.83E-02	7.93E-04	1.19E-07	7.01E-03	1.67E-02
E39	0.00E+00	2.37E-05	2.26E-06	7.98E+01	1.20E-04	3.19E-01	4.35E-05	8.13E-03	1.20E-02	1.87E-03	4.25E-03	2.53E-03	2.60E-03	1.36E-03	3.93E-04	7.23E-08	1.66E-03	1.48E-03
E40	0.00E+00	2.18E-05	1.91E-06	6.35E+01	9.00E-05	2.42E-01	3.60E-05	1.02E-02	9.35E-03	1.46E-03	3.57E-03	1.97E-03	2.02E-03	1.63E-03	3.07E-04	5.59E-08	1.56E-03	1.88E-03
E41	0.00E+00	1.25E-05	1.18E-06	4.11E+01	6.08E-05	1.63E-01	2.24E-05	5.02E-03	6.17E-03	9.59E-04	2.18E-03	1.29E-03	1.33E-03	8.00E-04	2.01E-04	3.63E-08	8.55E-04	9.21E-04
E42	0.00E+00	2.28E-05	1.82E-06	5.59E+01	7.22E-05	1.99E-01	3.34E-05	1.37E-02	8.00E-03	1.26E-03	3.36E-03	1.67E-03	1.72E-03	2.13E-03	2.63E-04	4.69E-08	1.64E-03	2.54E-03
E43	0.00E+00	9.40E-06	9.27E-07	3.32E+01	5.07E-05	1.34E-01	1.78E-05	3.04E-03	5.03E-03	7.82E-04	1.73E-03	1.06E-03	1.09E-03	5.01E-04	1.64E-04	2.99E-08	6.40E-04	5.51E-04
E44	0.00E+00	1.82E-05	1.70E-06	5.90E+01	8.71E-05	2.33E-01	3.23E-05	7.35E-03	8.84E-03	1.38E-03	3.16E-03	1.85E-03	1.90E-03	1.18E-03	2.89E-04	5.23E-08	1.26E-03	1.35E-03
E45	0.00E+00	2.37E-05	1.86E-06	6.29E+01	7.44E-05	2.13E-01	3.46E-05	1.46E-02	6.34E-03	1.08E-03	3.51E-03	1.72E-03	1.77E-03	2.61E-03	2.93E-04	5.35E-08	1.75E-03	2.71E-03
E46	0.00E+00	1.65E-05	1.24E-06	4.05E+01	4.48E-05	1.31E-01	2.27E-05	1.12E-02	4.00E-03	6.80E-04	2.32E-03	1.08E-03	1.10E-03	1.99E-03	1.85E-04	3.33E-08	1.22E-03	2.08E-03
E47	0.00E+00	2.34E-05	1.96E-06	6.92E+01	8.84E-05	2.48E-01	3.71E-05	1.24E-02	7.17E-03	1.21E-03	3.72E-03	1.96E-03	2.01E-03	2.23E-03	3.30E-04	6.09E-08	1.71E-03	2.29E-03
E48	0.00E+00	6.17E-06	4.55E-07	1.43E+01	1.49E-05	4.45E-02	8.11E-06	4.56E-03	1.39E-03	2.37E-04	8.32E-04	3.71E-04	3.81E-04	8.00E-04	6.47E-05	1.12E-08	4.51E-04	8.52E-04
E49	0.00E+00	2.41E-05	1.87E-06	6.24E+01	7.23E-05	2.08E-01	3.46E-05	1.53E-02	6.25E-03	1.06E-03	3.52E-03	1.69E-03	1.74E-03	2.75E-03	2.89E-04	5.26E-08	1.79E-03	2.85E-03
E50	0.00E+00	4.48E-06	3.74E-07	1.27E+01	1.55E-05	4.42E-02	6.76E-06	2.86E-03	1.31E-03	2.20E-04	6.72E-04	3.52E-04	3.62E-04	4.88E-04	5.98E-05	1.03E-08	3.10E-04	5.32E-04
E51	0.00E+00	2.57E-05	2.07E-06	7.06E+01	8.55E-05	2.44E-01	3.85E-05	1.54E-02	7.19E-03	1.22E-03	3.88E-03	1.95E-03	2.00E-03	2.75E-03	3.31E-04	6.03E-08	1.88E-03	2.86E-03
E52	0.00E+00	8.74E-06	7.26E-07	2.35E+01	2.66E-05	7.80E-02	1.23E-05	6.75E-03	2.38E-03	3.99E-04	1.21E-03	6.29E-04	6.47E-04	1.09E-03	1.08E-04	1.69E-08	5.64E-04	1.26E-03
E53	0.00E+00	2.31E-05	1.92E-06	6.67E+01	8.30E-05	2.35E-01	3.57E-05	1.34E-02	6.87E-03	1.16E-03	3.57E-03	1.87E-03	1.92E-03	2.36E-03	3.15E-04	5.67E-08	1.65E-03	2.49E-03
E54	0.00E+00	3.87E-05	2.70E-06	7.77E+01	6.57E-05	2.10E-01	4.49E-05	3.45E-02	7.20E-03	1.23E-03	4.62E-03	1.85E-03	1.90E-03	5.85E-03	3.33E-04	5.11E-08	2.71E-03	6.47E-03
E55	0.00E+00	1.84E-05	1.66E-06	6.08E+01	8.23E-05	2.28E-01	3.16E-05	8.37E-03	6.44E-03	1.08E-03	3.12E-03	1.77E-03	1.82E-03	1.49E-03	2.95E-04	5.42E-08	1.30E-03	1.54E-03
E56	0.00E+00	1.44E-05	1.19E-06	4.09E+01	5.01E-05	1.43E-01	2.18E-05	8.82E-03	4.19E-03	7.06E-04	2.18E-03	1.14E-03	1.17E-03	1.53E-03	1.92E-04	3.39E-08	1.01E-03	1.64E-03
E57	0.00E+00	1.03E-05	9.07E-07	2.95E+01	4.09E-05	1.11E-01	1.66E-05	5.57E-03	4.34E-03	6.77E-04	1.63E-03	9.04E-04	9.27E-04	8.48E-04	1.42E-04	2.48E-08	7.01E-04	1.03E-03
E58	0.00E+00	1.31E-05	1.08E-06	3.36E+01	4.38E-05	1.21E-01	1.95E-05	8.05E-03	4.84E-03	7.57E-04	1.94E-03	1.01E-03	1.03E-03	1.22E-03	1.58E-04	2.75E-08	9.13E-04	1.50E-03
E59	0.00E+00	5.74E-05	4.26E-06	1.32E+02	1.35E-04	4.06E-01	7.43E-05	4.46E-02	1.29E-02	2.18E-03	7.58E-03	3.40E-03	3.49E-03	7.67E-03	5.94E-04	9.92E-08	4.09E-03	8.34E-03
E60	0.00E+00	4.64E-05	3.35E-06	1.03E+02	1.01E-04	3.05E-01	5.84E-05	3.67E-02	9.84E-03	1.68E-03	6.00E-03	2.59E-03	2.66E-03	6.35E-03	4.56E-04	7.63E-08	3.34E-03	6.87E-03
E61	0.00E+00	1.80E-05	1.75E-06	6.72E+01	9.72E-05	2.65E-01	3.42E-05	5.61E-03	7.29E-03	1.22E-03	3.34E-03	2.02E-03	2.07E-03	1.04E-03	3.33E-04	6.26E-08	1.27E-03	1.01E-03
E62	0.00E+00	1.53E-05	1.53E-06	5.94E+01	8.72E-05	2.37E-01	3.01E-05	4.22E-03	6.48E-03	1.08E-03	2.92E-03	1.80E-03	1.85E-03	7.90E-04	2.96E-04	5.57E-08	1.08E-03	7.56E-04
E63	0.00E+00	7.77E-05	5.74E-06	1.58E+02	1.75E-04	5.08E-01	9.88E-05	5.93E-02	2.18E-02	3.43E-03	1.01E-02	4.47E-03	4.59E-03	8.83E-03	7.13E-04	1.18E-07	5.46E-03	1.11E-02
E64	0.00E+00	5.49E-05	4.50E-06	1.38E+02	1.78E-04	4.95E-01	8.06E-05	3.48E-02	1.99E-02	3.11E-03	8.02E-03	4.12E-03	4.23E-03	5.24E-03	6.49E-04	1.12E-07	3.79E-03	6.47E-03
E65	0.00E+00	2.77E-05	2.70E-06	9.68E+01	1.48E-04	3.91E-01	5.23E-05	8.54E-03	1.46E-02	2.28E-03	5.09E-03	3.09E-03	3.17E-03	1.46E-03	4.79E-04	8.83E-08	1.93E-03	1.55E-03
E66	0.00E+00	3.87E-05	3.62E-06	1.24E+02	1.81E-04	4.87E-01	6.77E-05	1.70E-02	1.86E-02	2.89E-03	6.59E-03	3.88E-03	3.98E-03	2.64E-03	6.05E-04	1.08E-07	2.61E-03	3.13E-03
E67	0.00E+00	3.00E-05	2.59E-06	9.51E+01	1.28E-04	3.54E-01	5.07E-05	1.27E-02	1.00E-02	1.69E-03	5.08E-03	2.76E-03	2.84E-03	2.42E-03	4.61E-04	8.83E-08	2.25E-03	2.33E-03
E68	0.00E+00	1.67E-05	1.63E-06	6.29E+01	9.14E-05	2.49E-01	3.21E-05	4.87E-03	6.82E-03	1.14E-03	3.14E-03	1.90E-03	1.95E-03	9.25E-04	3.12E-04	5.91E-08	1.19E-03	8.75E-04
E69	0.00E+00	2.05E-05	1.94E-06	7.00E+01	1.07E-04	2.82E-01	3.84E-05	5.67E-03	1.06E-02	1.64E-03	3.78E-03	2.24E-03	2.29E-03	1.03E-03	3.46E-04	6.54E-08	1.48E-03	1.02E-03
E70	0.00E+00	1.34E-05	1.34E-06	4.93E+01	7.69E-05	2.02E-01	2.64E-05	3.21E-03	7.50E-03	1.17E-03	2.56E-03	1.59E-03	1.63E-03	5.83E-04	2.45E-04	4.57E-08	9.32E-04	5.73E-04
E71	0.00E+00	2.29E-05	2.27E-06	8.33E+01	1.30E-04	3.42E-01	4.50E-05	5.38E-03	1.27E-02	1.97E-03	4.38E-03	2.68E-03	2.75E-03	1.01E-03	4.15E-04	7.80E-08	1.63E-03	9.60E-04
E72	0.00E+00	2.09E-05	2.16E-06	8.03E+01	1.27E-04	3.33E-01	4.25E-05	4.36E-03	1.23E-02	1.91E-03	4.10E-03	2.60E-03	2.66E-03	8.07E-04	4.02E-04	7.46E-08	1.44E-03	7.70E-04
E73	0.00E+00	4.05E-06	4.32E-07	1.49E+01	2.65E-05	6.78E-02	8.63E-06	4.34E-04	2.92E-03	4.36E-04	8.29E-04	5.38E-04	5.51E-04	1.03E-04	7.51E-05	1.45E-08	2.78E-04	7.20E-05
E74	0.00E+00	5.01E-06	5.20E-07	1.75E+01	3.05E-05	7.85E-02	1.02E-05	9.80E-04	3.42E-03	5.10E-04	9.82E-04	6.25E-04	6.41E-04	1.76E-04	8.76E-05	1.67E-08	3.41E-04	1.74E-04
E75	0.00E+00	5.66E-05	5.04E-06	1.75E+02	2.37E-04	6.37E-01	9.37E-05	2.81E-02	2.50E-02	3.92E-03	9.21E-03	5.18E-03	5.31E-03	4.37E-03	8.45E-04	1.49E-07	3.90E-03	5.19E-03
E76	0.00E+00	3.30E-05	3.11E-06	1.14E+02	1.64E-04	4.34E-01	6.00E-05	1.18E-02	1.66E-02	2.60E-03	5.88E-03	3.47E-03	3.56E-03	1.98E-03	5.63E-04	1.02E-07	2.32E-03	2.16E-03
E77	0.00E+00	5.99E-05	5.40E-06	1.89E+02	2.60E-04	6.97E-01	1.01E-04	2.81E-02	2.72E-02	4.26E-03	9.92E-03	5.64E-03	5.79E-03	4.42E-03	9.19E-04	1.63E-07	4.14E-03	5.19E-03
E78	0.00E+00	4.00E-05	3.79E-06	1.39E+02	1.99E-04	5.27E-01	7.28E-05	1.46E-02	2.02E-02	3.16E-03	7.11E-03	4.21E-03	4.32E-03	2.42E-03	6.84E-04	1.24E-07	2.79E-03	2.67E-03
E79	0.00E+00	5.10E-05	4.80E-06	1.77E+02	2.55E-04	6.73E-01	9.31E-05	1.75E-02	2.57E-02	4.03E-03	9.13E-03	5.38E-03	5.52E-03	2.98E-03	8.73E-04	1.59E-07	3.61E-03	3.19E-03
E80	0.00E+00	4.27E-05	3.84E-06	1.36E+02	1.88E-04	5.02E-01	7.28E-05	1.88E-02	1.95E-02	3.06E-03	7.18E-03	4.07E-03	4.17E-03	3.03E-03	6.61E-04	1.19E-07	3.00E-03	3.46E-03
E81	0.00E+00	1.21E-06	1.15E-07	3.82E+00	6.64E-06	1.69E-02	2.35E-06	1.92E-04	7.38E-04	1.11E-04	2.32E-04	1.37E-04	1.41E-04	4.21E-05	1.90E-05	3.83E-09	9.18E-05	3.37E-05
E82	0.00E+00	3.69E-07	3.95E-08	1.36E+00	2.42E-06	6.19E-03	7.87E-07	3.96E-05	2.67E-04	3.98E-05	7.56E-05	4.91E-05	5.03E-05	9.44E-06	6.85E-06	1.32E-09	2.53E-05	6.57E-06
E83	0.00E+00	7.62E-06	7.64E-07	2.78E+01	4.31E-05	1.14E-01	1.49E-05	2.07E-03	4.24E-03	6.58E-04	1.44E-03	8.93E-04	9.16E-04	3.58E-04	1.38E-04	2.55E-08	5.24E-04	3.72E-04
E84	0.00E+00	5.33E-06	5.46E-07	2.04E+01	3.22E-05	8.44E-02	1.08E-05	1.05E-03	3.11E-03	4.84E-04	1.05E-03	6.59E-04	6.76E-04

Appendix F.5.5: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F02	0.00E+00	2.11E-05	1.77E-06	5.13E+01	7.74E-05	2.06E-01	3.29E-05	1.14E-02	9.64E-03	1.44E-03	3.27E-03	1.73E-03	1.78E-03	1.58E-03	2.45E-04	4.46E-08	1.50E-03	2.12E-03
F03	0.00E+00	7.63E-07	7.06E-08	2.54E+00	3.38E-06	9.45E-03	1.29E-06	4.06E-04	2.69E-04	4.50E-05	1.26E-04	7.33E-05	7.53E-05	6.74E-05	1.22E-05	2.13E-09	5.05E-05	7.50E-05
F04	0.00E+00	9.40E-08	1.01E-08	4.09E-01	6.29E-07	1.69E-03	2.03E-07	1.15E-05	4.53E-05	7.56E-06	1.96E-05	1.27E-05	1.30E-05	2.50E-06	2.07E-06	3.96E-10	6.59E-06	1.88E-06
F05	0.00E+00	2.54E-05	2.11E-06	6.02E+01	8.91E-05	2.39E-01	3.88E-05	1.47E-02	1.13E-02	1.69E-03	3.87E-03	2.02E-03	2.07E-03	2.00E-03	2.86E-04	5.15E-08	1.80E-03	2.73E-03
F06	0.00E+00	4.27E-05	3.07E-06	7.40E+01	8.61E-05	2.49E-01	5.24E-05	3.49E-02	1.32E-02	1.98E-03	5.37E-03	2.28E-03	2.34E-03	4.52E-03	3.28E-04	5.33E-08	3.02E-03	6.54E-03
F07	0.00E+00	3.32E-05	2.79E-06	8.09E+01	1.22E-04	3.26E-01	5.19E-05	1.76E-02	1.52E-02	2.28E-03	5.18E-03	2.74E-03	2.81E-03	2.46E-03	3.86E-04	7.09E-08	2.37E-03	3.28E-03
F08	0.00E+00	4.11E-05	3.14E-06	8.26E+01	1.11E-04	3.05E-01	5.62E-05	2.81E-02	1.51E-02	2.27E-03	5.70E-03	2.68E-03	2.75E-03	3.76E-03	3.81E-04	6.70E-08	2.95E-03	5.25E-03
F09	0.00E+00	8.79E-06	8.17E-07	3.06E+01	4.26E-05	1.17E-01	1.58E-05	3.47E-03	3.27E-03	5.48E-04	1.55E-03	9.04E-04	9.27E-04	6.29E-04	1.50E-04	2.78E-08	6.24E-04	6.34E-04
F10	0.00E+00	3.46E-06	3.51E-07	1.38E+01	2.06E-05	5.58E-02	6.98E-06	7.76E-04	1.52E-03	2.53E-04	6.79E-04	4.23E-04	4.34E-04	1.52E-04	6.92E-05	1.32E-08	2.45E-04	1.37E-04
F13	0.00E+00	1.28E-06	1.05E-07	3.55E+00	4.26E-06	1.22E-02	1.90E-06	8.23E-04	3.62E-04	6.11E-05	1.89E-04	9.77E-05	1.00E-04	1.41E-04	1.66E-05	2.89E-09	8.91E-05	1.53E-04
F14	0.00E+00	4.58E-07	3.79E-08	1.21E+00	1.34E-06	3.95E-03	6.33E-07	3.69E-04	1.22E-04	2.04E-05	6.20E-05	3.20E-05	3.29E-05	5.93E-05	5.52E-06	8.41E-10	2.90E-05	6.89E-05
F15	0.00E+00	2.04E-05	1.92E-06	6.63E+01	9.79E-05	2.62E-01	3.62E-05	8.30E-03	9.95E-03	1.55E-03	3.53E-03	2.08E-03	2.14E-03	1.32E-03	3.25E-04	5.84E-08	1.39E-03	1.52E-03
F16	0.00E+00	1.76E-05	1.66E-06	5.75E+01	8.49E-05	2.27E-01	3.13E-05	7.17E-03	8.62E-03	1.34E-03	3.05E-03	1.81E-03	1.85E-03	1.14E-03	2.81E-04	5.06E-08	1.20E-03	1.32E-03
F17	0.00E+00	1.34E-05	1.27E-06	4.39E+01	6.48E-05	1.73E-01	2.39E-05	5.50E-03	6.58E-03	1.02E-03	2.33E-03	1.38E-03	1.41E-03	8.72E-04	2.15E-04	3.86E-08	9.14E-04	1.01E-03
F18	0.00E+00	1.32E-05	1.17E-06	3.77E+01	5.15E-05	1.41E-01	2.09E-05	7.71E-03	5.54E-03	8.62E-04	2.04E-03	1.15E-03	1.18E-03	1.14E-03	1.80E-04	3.06E-08	8.68E-04	1.43E-03
F19	0.00E+00	1.49E-05	1.59E-06	6.10E+01	9.85E-05	2.57E-01	3.19E-05	1.72E-03	9.40E-03	1.46E-03	3.07E-03	1.99E-03	2.04E-03	3.96E-04	3.07E-04	5.78E-08	1.03E-03	2.83E-04
F20	0.00E+00	8.37E-06	8.96E-07	3.43E+01	5.55E-05	1.45E-01	1.80E-05	9.66E-04	5.29E-03	8.21E-04	1.73E-03	1.12E-03	1.15E-03	2.23E-04	1.73E-04	3.25E-08	5.81E-04	1.59E-04
F21	0.00E+00	6.43E-05	4.37E-06	1.06E+02	9.18E-05	2.91E-01	7.10E-05	5.77E-02	1.38E-02	2.19E-03	7.34E-03	2.78E-03	2.86E-03	8.44E-03	4.52E-04	6.79E-08	4.48E-03	1.08E-02
F22	0.00E+00	6.15E-05	4.05E-06	9.41E+01	7.19E-05	2.38E-01	6.48E-05	5.72E-02	1.19E-02	1.90E-03	6.75E-03	2.38E-03	2.45E-03	8.35E-03	3.90E-04	5.68E-08	4.31E-03	1.07E-02
F23	0.00E+00	1.98E-05	1.45E-06	3.87E+01	4.05E-05	1.20E-01	2.43E-05	1.61E-02	5.26E-03	8.29E-04	2.47E-03	1.07E-03	1.10E-03	2.37E-03	1.72E-04	2.73E-08	1.37E-03	3.02E-03
F24	0.00E+00	1.55E-05	1.15E-06	3.15E+01	3.45E-05	1.00E-01	1.96E-05	1.21E-02	4.32E-03	6.81E-04	2.00E-03	8.85E-04	9.10E-04	1.79E-03	1.41E-04	2.32E-08	1.09E-03	2.26E-03
F25	0.00E+00	6.26E-05	4.34E-06	1.01E+02	1.11E-04	3.26E-01	7.40E-05	5.23E-02	1.78E-02	2.68E-03	7.66E-03	3.07E-03	3.15E-03	6.78E-03	4.42E-04	7.17E-08	4.50E-03	9.80E-03
F26	0.00E+00	6.70E-05	4.54E-06	1.02E+02	1.06E-04	3.18E-01	7.67E-05	5.77E-02	1.78E-02	2.69E-03	7.99E-03	3.06E-03	3.14E-03	7.46E-03	4.42E-04	7.05E-08	4.85E-03	1.08E-02
F27	0.00E+00	1.36E-04	9.63E-06	2.36E+02	2.87E-04	8.09E-01	1.71E-04	1.02E-01	4.22E-02	6.36E-03	1.77E-02	7.43E-03	7.63E-03	1.35E-02	1.06E-03	1.84E-07	1.00E-02	1.90E-02
F28	0.00E+00	1.22E-04	8.22E-06	1.89E+02	2.04E-04	5.97E-01	1.42E-04	9.96E-02	3.29E-02	4.98E-03	1.49E-02	5.72E-03	5.88E-03	1.31E-02	8.21E-04	1.37E-07	8.97E-03	1.87E-02
F29	0.00E+00	2.97E-05	2.30E-06	6.20E+01	8.59E-05	2.34E-01	4.18E-05	1.92E-02	1.14E-02	1.71E-03	4.23E-03	2.03E-03	2.09E-03	2.60E-03	2.88E-04	5.15E-08	2.14E-03	3.59E-03
F30	0.00E+00	2.09E-05	2.04E-06	6.68E+01	1.14E-04	2.93E-01	3.99E-05	5.64E-03	1.29E-02	1.93E-03	3.88E-03	2.36E-03	2.42E-03	9.24E-04	3.31E-04	6.31E-08	1.45E-03	1.02E-03
F45	0.00E+00	7.62E-06	7.64E-07	2.78E+01	4.31E-05	1.14E-01	1.49E-05	2.07E-03	4.24E-03	6.58E-04	1.44E-03	8.93E-04	9.16E-04	3.58E-04	1.38E-04	2.55E-08	5.24E-04	3.72E-04
F46	0.00E+00	5.33E-06	5.46E-07	2.04E+01	3.22E-05	8.44E-02	1.08E-05	1.05E-03	3.11E-03	4.84E-04	1.05E-03	6.59E-04	6.76E-04	2.02E-04	1.02E-04	1.91E-08	3.73E-04	1.84E-04
F47	0.00E+00	1.33E-07	1.42E-08	4.91E-01	8.72E-07	2.23E-03	2.83E-07	1.42E-05	9.61E-05	1.43E-05	2.72E-05	1.77E-05	1.81E-05	3.40E-06	2.47E-06	4.77E-10	9.12E-06	2.37E-06
F48	0.00E+00	2.31E-06	2.00E-07	5.90E+00	9.07E-06	2.41E-02	3.71E-06	1.19E-03	1.11E-03	1.67E-04	3.67E-04	2.00E-04	2.06E-04	1.66E-04	2.83E-05	5.15E-09	1.61E-04	2.22E-04
F49	0.00E+00	1.12E-04	7.99E-06	1.96E+02	2.37E-04	6.71E-01	1.41E-04	8.48E-02	3.50E-02	5.28E-03	1.45E-02	6.15E-03	6.32E-03	1.12E-02	8.78E-04	1.51E-07	8.22E-03	1.59E-02
F50	0.00E+00	1.19E-04	8.06E-06	1.86E+02	2.03E-04	5.92E-01	1.39E-04	9.68E-02	3.25E-02	4.92E-03	1.46E-02	5.65E-03	5.81E-03	1.27E-02	8.12E-04	1.36E-07	8.74E-03	1.81E-02
F51	0.00E+00	3.90E-05	3.27E-06	1.07E+02	1.48E-04	3.99E-01	6.20E-05	1.90E-02	1.56E-02	2.44E-03	6.21E-03	3.28E-03	3.36E-03	3.08E-03	5.12E-04	9.45E-08	2.85E-03	3.52E-03
F52	0.00E+00	1.43E-05	1.19E-06	3.83E+01	5.25E-05	1.42E-01	2.24E-05	7.29E-03	5.58E-03	8.73E-04	2.24E-03	1.17E-03	1.20E-03	1.17E-03	1.83E-04	3.36E-08	1.04E-03	1.35E-03
F53	0.00E+00	2.33E-05	2.41E-06	9.07E+01	1.44E-04	3.78E-01	4.81E-05	4.03E-03	1.39E-02	2.16E-03	4.65E-03	2.94E-03	3.02E-03	8.13E-04	4.55E-04	8.54E-08	1.64E-03	7.01E-04
F54	0.00E+00	1.62E-05	1.60E-06	5.83E+01	9.05E-05	2.38E-01	3.15E-05	4.07E-03	8.86E-03	1.38E-03	3.07E-03	1.87E-03	1.92E-03	7.42E-04	2.90E-04	5.43E-08	1.15E-03	7.30E-04
F71	0.00E+00	1.20E-05	8.85E-07	2.55E+01	2.78E-05	7.96E-02	1.54E-05	8.89E-03	3.43E-03	5.42E-04	1.57E-03	7.02E-04	7.21E-04	1.34E-03	1.16E-04	1.94E-08	8.53E-04	1.66E-03
F72	0.00E+00	5.64E-05	3.83E-06	7.47E+01	9.11E-05	2.50E-01	6.50E-05	4.33E-02	1.99E-02	2.84E-03	6.74E-03	2.60E-03	2.67E-03	4.48E-03	3.32E-04	5.18E-08	4.06E-03	8.13E-03
F73	0.00E+00	8.95E-06	8.17E-07	2.76E+01	4.16E-05	1.08E-01	1.57E-05	3.45E-03	5.07E-03	7.58E-04	1.54E-03	8.87E-04	9.10E-04	5.25E-04	1.35E-04	2.39E-08	6.34E-04	6.33E-04
F74	0.00E+00	4.37E-05	3.02E-06	8.36E+01	8.64E-05	2.49E-01	5.39E-05	3.18E-02	1.10E-02	1.75E-03	5.63E-03	2.28E-03	2.34E-03	4.94E-03	3.74E-04	6.63E-08	3.29E-03	5.96E-03
F75	0.00E+00	1.87E-05	1.46E-06	4.29E+01	5.73E-05	1.54E-01	2.70E-05	1.11E-02	7.67E-03	1.15E-03	2.74E-03	1.33E-03	1.37E-03	1.55E-03	2.02E-04	3.52E-08	1.38E-03	2.06E-03
F76	0.00E+00	4.06E-06	4.32E-07	1.48E+01	2.58E-05	6.43E-02	8.48E-06	3.96E-04	4.27E-03	5.96E-04	8.10E-04	5.26E-04	5.39E-04	1.17E-04	7.40E-05	1.17E-08	2.70E-04	6.71E-05
F77	0.00E+00	4.17E-05	2.87E-06	7.45E+01	6.85E-05	2.08E-01	4.80E-05	3.52E-02	9.65E-03	1.53E-03	4.97E-03	1.95E-03	2.00E-03	5.22E-03	3.24E-04	5.15E-08	2.96E-03	6.59E-03
F78	0.00E+00	6.14E-06	5.82E-07	1.79E+01	2.96E-05	7.51E-02	1.09E-05	2.10E-03	5.11E-03	7.14E-04	1.06E-03	6.31E-04	6.47E-04	2.88E-04	8.78E-05	1.37E-08	4.09E-04	3.87E-04
F79	0.00E+00	1.98E-05	1.91E-06	6.76E+01	1.05E-04	2.72E-01	3.74E-05	5.66E-03	1.25E-02	1.87E-03	3.64E-03	2.20E-03	2.25E-03	9.38E-04	3.35E-04	5.96E-08	1.39E-03	1.02E-03
F80	0.00E+00	3.89E-05	3.80E-06	1.44E+02	2.13E-04	5.59E-01	7.48E-05	1.07E-02	2.12E-02	3.30E-03	7.30E-03	4.43E-03	4.54E-03	1.91E-03	7.17E-04	1.32E-07	2.76E-03	1.92E-03
F81	0.00E+00	5.69E-05	3.61E-06	7.93E+01	6.91E-05	2.14E-01	6.14E-05	4.96E-02	1.32E-02	2.00E-03	6.54E-03	2.21E-03	2.27E-03	6.49E-03	3.35E-04	5.25E-08	4.27E-03	9.31E-03
F82	0.00E+00	8.25E-06	7.85E-07	2.45E+01	4.11E-05	1.03E-01	1.50E-05	2.41E-03	7.01E-03	9.80E-04	1.45E-03	8.69E-04	8.91E-04	3.59E-04	1.21E-04	1.91E-08	5.61E-04	4.42E-04

MOVES LinkID	Source D	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B15	100	Passenger Car	767	0.00E+00	7.08E-06	7.70E-07	3.11E+01	5.03E-05	1.45E-01	1.60E-05	8.27E-04	2.45E-03	4.70E-04	1.56E-03	1.00E-03	1.03E-03	9.12E-05	1.59E-04	3.33E-08	5.27E-04	1.29E-04
16	B15	100	Passenger Truck	1285	0.00E+00	1.46E-05	1.57E-06	7.16E+01	9.76E-05	2.81E-01	3.16E-05	2.07E-03	4.28E-03	8.31E-04	3.04E-03	1.97E-03	2.02E-03	4.73E-04	3.62E-04	6.60E-08	1.02E-03	3.40E-04
16	B15	100	Single Unit Short Haul Truck	32	0.00E+00	3.00E-06	1.11E-07	5.16E+00	2.30E-06	1.07E-02	3.41E-06	1.33E-03	2.04E-04	5.29E-05	4.31E-04	7.95E-05	8.09E-05	5.29E-04	2.09E-05	8.53E-09	3.50E-04	2.48E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	4.69E-09	2.17E-01	9.51E-08	4.36E-04	1.48E-07	5.58E-05	9.28E-06	2.30E-06	1.88E-05	3.35E-06	3.41E-06	2.21E-05	8.81E-07	3.49E-10	1.54E-05	1.04E-05
16	B15	100	Combination Short Haul Truck	11	0.00E+00	1.57E-06	1.16E-07	3.66E+00	4.17E-09	2.83E-03	1.12E-06	2.84E-03	1.06E-04	2.70E-05	9.57E-05	3.39E-05	3.52E-05	5.82E-04	1.22E-05	0.00E+00	6.05E-05	5.36E-04
16	B15	100	Combination Long Haul Truck	10	0.00E+00	2.22E-06	1.25E-07	3.32E+00	1.42E-08	3.29E-03	1.83E-06	3.05E-03	1.07E-04	2.17E-05	2.04E-04	4.04E-05	4.21E-05	5.32E-04	1.11E-05	0.00E+00	1.62E-04	5.74E-04
16	B16	100	Passenger Car	1480	0.00E+00	1.37E-05	1.48E-06	5.99E+01	9.70E-05	2.80E-01	3.08E-05	1.60E-03	4.73E-03	9.07E-04	3.00E-03	1.94E-03	1.99E-03	1.76E-04	3.06E-04	6.42E-08	1.02E-03	2.49E-04
16	B16	100	Passenger Truck	2479	0.00E+00	2.82E-05	3.03E-06	1.38E+02	1.88E-04	5.42E-01	6.09E-05	3.99E-03	8.26E-03	1.60E-03	5.87E-03	3.80E-03	3.90E-03	9.13E-04	6.99E-04	1.27E-07	1.97E-03	6.55E-04
16	B16	100	Single Unit Short Haul Truck	33	0.00E+00	3.09E-06	1.14E-07	5.32E+00	2.37E-06	1.10E-02	3.51E-06	1.37E-03	2.10E-04	5.45E-05	4.44E-04	8.19E-05	8.34E-05	5.45E-04	2.15E-05	8.79E-09	3.60E-04	2.56E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	1.34E-07	4.83E-09	2.24E-01	9.80E-08	4.49E-04	1.52E-07	5.75E-05	9.56E-06	2.36E-06	1.94E-05	3.46E-06	3.52E-06	2.27E-05	9.08E-07	3.60E-10	1.59E-05	1.07E-05
16	B16	100	Combination Short Haul Truck	18	0.00E+00	2.62E-06	1.93E-07	6.10E+00	6.95E-09	4.71E-03	1.87E-06	4.74E-03	1.77E-04	4.50E-05	1.60E-04	5.65E-05	5.86E-05	9.69E-04	2.04E-05	0.00E+00	1.01E-04	8.93E-04
16	B16	100	Combination Long Haul Truck	17	0.00E+00	3.70E-06	2.09E-07	5.53E+00	2.36E-08	5.49E-03	3.05E-06	5.08E-03	1.78E-04	3.62E-05	3.40E-04	6.73E-05	7.01E-05	8.87E-04	1.85E-05	0.00E+00	2.69E-04	9.56E-04
16	B19	100	Passenger Car	1828	0.00E+00	1.69E-05	1.83E-06	7.40E+01	1.20E-04	3.46E-01	3.80E-05	1.97E-03	5.84E-03	1.12E-03	3.71E-03	2.39E-03	2.46E-03	2.17E-04	3.78E-04	7.93E-08	1.26E-03	3.08E-04
16	B19	100	Passenger Truck	3061	0.00E+00	3.49E-05	3.74E-06	1.71E+02	2.33E-04	6.69E-01	7.52E-05	4.92E-03	1.02E-02	1.98E-03	7.25E-03	4.70E-03	4.82E-03	1.13E-03	8.63E-04	1.57E-07	2.44E-03	8.09E-04
16	B19	100	Single Unit Short Haul Truck	465	0.00E+00	4.41E-05	1.63E-06	7.59E+01	3.38E-05	1.57E-01	5.00E-05	1.95E-02	3.00E-03	7.77E-04	6.33E-03	1.17E-03	1.19E-03	7.77E-03	3.07E-04	1.25E-07	5.14E-03	3.65E-03
16	B19	100	Single Unit Long Haul Truck	20	0.00E+00	1.92E-06	6.90E-08	3.19E+00	1.40E-06	6.41E-03	2.17E-06	8.20E-04	1.36E-04	3.37E-05	2.77E-04	4.93E-05	5.02E-05	3.25E-04	1.29E-05	5.13E-09	2.27E-04	1.53E-04
16	B19	100	Combination Short Haul Truck	320	0.00E+00	4.58E-05	3.38E-06	1.07E+02	1.21E-07	8.24E-02	3.28E-05	8.29E-02	3.10E-03	7.86E-04	2.79E-03	9.88E-04	1.03E-03	1.70E-02	3.57E-04	0.00E+00	1.76E-03	1.56E-02
16	B19	100	Combination Long Haul Truck	292	0.00E+00	6.47E-05	3.65E-06	9.66E+01	4.12E-07	9.60E-02	5.34E-05	8.88E-02	3.11E-03	6.33E-04	5.94E-03	1.18E-03	1.23E-03	1.55E-02	3.24E-04	0.00E+00	4.71E-03	1.67E-02
16	B20	100	Passenger Car	3558	0.00E+00	3.28E-05	3.57E-06	1.44E+02	2.33E-04	6.73E-01	7.41E-05	3.84E-03	1.14E-02	2.18E-03	7.22E-03	4.66E-03	4.78E-03	4.23E-04	7.35E-04	1.54E-07	2.44E-03	5.99E-04
16	B20	100	Passenger Truck	5958	0.00E+00	6.79E-05	7.27E-06	3.32E+02	4.53E-04	1.30E+00	1.46E-04	9.59E-03	1.99E-02	3.85E-03	1.41E-02	9.14E-03	9.37E-03	2.19E-03	1.68E-03	3.06E-07	4.74E-03	1.57E-03
16	B20	100	Single Unit Short Haul Truck	344	0.00E+00	3.27E-05	1.21E-06	5.61E+01	2.50E-05	1.16E-01	3.70E-05	1.45E-02	2.22E-03	5.75E-04	4.69E-03	8.65E-04	8.80E-04	5.75E-03	2.27E-04	9.28E-08	3.81E-03	2.70E-03
16	B20	100	Single Unit Long Haul Truck	15	0.00E+00	1.42E-06	5.10E-08	2.36E+00	1.03E-06	4.74E-03	1.61E-06	6.07E-04	1.01E-04	2.50E-05	2.05E-04	3.65E-05	3.72E-05	2.40E-04	9.58E-06	3.80E-09	1.68E-04	1.13E-04
16	B20	100	Combination Short Haul Truck	263	0.00E+00	3.76E-05	2.78E-06	8.77E+01	9.98E-08	6.77E-02	2.69E-05	6.81E-02	2.55E-03	6.46E-04	2.29E-03	8.12E-04	8.43E-04	1.39E-02	2.93E-04	0.00E+00	1.45E-03	1.28E-02
16	B20	100	Combination Long Haul Truck	240	0.00E+00	5.32E-05	3.00E-06	7.94E+01	3.39E-07	7.89E-02	4.39E-05	7.29E-02	2.55E-03	5.20E-04	4.88E-03	9.67E-04	1.01E-03	1.27E-02	2.66E-04	0.00E+00	3.87E-03	1.37E-02
16	B21	100	Passenger Car	1343	0.00E+00	1.24E-05	1.35E-06	5.44E+01	8.80E-05	2.54E-01	2.80E-05	1.45E-03	4.29E-03	8.23E-04	2.73E-03	1.76E-03	1.80E-03	1.60E-04	2.78E-04	5.83E-08	9.22E-04	2.26E-04
16	B21	100	Passenger Truck	2249	0.00E+00	2.56E-05	2.74E-06	1.25E+02	1.71E-04	4.91E-01	5.53E-05	3.62E-03	7.49E-03	1.45E-03	5.33E-03	3.45E-03	3.54E-03	8.29E-04	6.34E-04	1.15E-07	1.79E-03	5.94E-04
16	B21	100	Single Unit Short Haul Truck	374	0.00E+00	3.55E-05	1.31E-06	6.10E+01	2.72E-05	1.26E-01	4.02E-05	1.57E-02	2.41E-03	6.25E-04	5.09E-03	9.40E-04	9.56E-04	6.25E-03	2.47E-04	1.01E-07	4.13E-03	2.93E-03
16	B21	100	Single Unit Long Haul Truck	16	0.00E+00	1.54E-06	5.54E-08	2.57E+00	1.12E-06	5.15E-03	1.74E-06	6.59E-04	1.10E-04	2.71E-05	2.23E-04	3.96E-05	4.04E-05	2.61E-04	1.04E-05	4.12E-09	1.82E-04	1.23E-04
16	B21	100	Combination Short Haul Truck	277	0.00E+00	3.97E-05	2.93E-06	9.24E+01	1.05E-07	7.14E-02	2.84E-05	7.18E-02	2.69E-03	6.81E-04	2.42E-03	8.55E-04	8.88E-04	1.47E-02	3.09E-04	0.00E+00	1.53E-03	1.35E-02
16	B21	100	Combination Long Haul Truck	253	0.00E+00	5.60E-05	3.16E-06	8.37E+01	3.57E-07	8.31E-02	4.62E-05	7.69E-02	2.69E-03	5.48E-04	5.14E-03	1.02E-03	1.06E-03	1.34E-02	2.80E-04	0.00E+00	4.08E-03	1.45E-02
16	B22	100	Passenger Car	3237	0.00E+00	2.99E-05	3.25E-06	1.31E+02	2.12E-04	6.12E-01	6.74E-05	3.49E-03	1.03E-02	1.98E-03	6.57E-03	4.24E-03	4.35E-03	3.85E-04	6.69E-04	1.40E-07	2.22E-03	5.45E-04
16	B22	100	Passenger Truck	5420	0.00E+00	6.18E-05	6.61E-06	3.02E+02	4.12E-04	1.18E+00	1.33E-04	8.72E-03	1.81E-02	3.51E-03	1.28E-02	8.32E-03	8.53E-03	2.00E-03	1.53E-03	2.78E-07	4.32E-03	1.43E-03
16	B22	100	Single Unit Short Haul Truck	297	0.00E+00	2.82E-05	1.04E-06	4.85E+01	2.16E-05	1.00E-01	3.20E-05	1.25E-02	1.92E-03	4.97E-04	4.05E-03	7.47E-04	7.60E-04	4.97E-03	1.96E-04	8.01E-08	3.29E-03	2.33E-03
16	B22	100	Single Unit Long Haul Truck	13	0.00E+00	1.23E-06	4.41E-08	2.04E+00	8.93E-07	4.10E-03	1.39E-06	5.24E-04	8.72E-05	2.16E-05	1.77E-04	3.15E-05	3.21E-05	2.07E-04	8.28E-06	3.28E-09	1.45E-04	9.77E-05
16	B22	100	Combination Short Haul Truck	247	0.00E+00	3.54E-05	2.61E-06	8.24E+01	9.39E-08	6.37E-02	2.53E-05	6.40E-02	2.40E-03	6.08E-04	2.16E-03	7.63E-04	7.92E-04	1.31E-02	2.76E-04	0.00E+00	1.36E-03	1.21E-02
16	B22	100	Combination Long Haul Truck	226	0.00E+00	5.00E-05	2.82E-06	7.47E+01	3.19E-07	7.42E-02	4.13E-05	6.86E-02	2.40E-03	4.89E-04	4.59E-03	9.09E-04	9.47E-04	1.20E-02	2.50E-04	0.00E+00	3.64E-03	1.29E-02
16	B23	100	Passenger Car	1360	0.00E+00	1.26E-05	1.36E-06	5.51E+01	8.91E-05	2.57E-01	2.83E-05	1.47E-03	4.35E-03	8.33E-04	2.76E-03	1.78E-03	1.83E-03	1.62E-04	2.81E-04	5.90E-08	9.34E-04	2.29E-04
16	B23	100	Passenger Truck	2277	0.00E+00	2.59E-05	2.78E-06	1.27E+02	1.73E-04	4.98E-01	5.60E-05	3.66E-03	7.59E-03	1.47E-03	5.40E-03	3.49E-03	3.58E-03	8.39E-04	6.42E-04	1.17E-07	1.81E-03	6.02E-04
16	B23	100	Single Unit Short Haul Truck	374	0.00E+00	3.55E-05	1.31E-06	6.10E+01	2.72E-05	1.26E-01	4.02E-05	1.57E-02	2.41E-03	6.25E-04	5.09E-03	9.40E-04	9.56E-04	6.25E-03	2.47E-04	1.01E-07	4.13E-03	2.93E-03
16	B23	100	Single Unit Long Haul Truck	16	0.00E+00	1.54E-06	5.54E-08	2.57E+00	1.12E-06	5.15E-03	1.74E-06	6.59E-04	1.10E-04	2.71E-05	2.23E-04	3.96E-05	4.04E-05	2.61E-04	1.04E-05	4.12E-09	1.82E-04	1.23E-04
16	B23	100	Combination Short Haul Truck	278	0.00E+00	3.97E-05	2.93E-06	9.25E+01	1.05E-07	7.15E-02	2.84E-05	7.19E-02	2.69E-03	6.82E-04	2.42E-03	8.57E-04	8.90E-04	1.47E-02	3.09E-04	0.00E+00	1.53E-03	1.35E-02
16	B23	100	Combination Long Haul Truck	253	0.00E+00	5.61E-05	3.17E-06	8.38E+01	3.58E-07	8.33E-02	4.63E-05	7.70E-02	2.69E-03	5.49E-04	5.15E-03	1.02E-03	1.06E-03	1.35E-02	2.81E-04	0.00E+00	4.09E-03	1.45E-02
16	B24	100	Passenger Car	3734	0.00E+00	3.45E-05	3.75E-06	1.51E+02	2.45E-04	7.06E-01	7.77E-05	4.03E-03	1.19E-02	2.29E-03	7.58E-03	4.89E-03	5.02E-03	4.44E-04	7.72E-04	1.62E-07	2.56E-03	6.28E-04
16	B24	100	Passenger Truck	6253	0.00E+00	7.12E-05	7.63E-06	3.49E+02	4.75E-04	1.37E+00	1.54E-04	1.01E-02	2.08E-02	4.04E-03	1.48E-02	9.59E-03	9.84E-03	2.30E-03	1.76E-03	3.21E-07	4.98E-03	1.65E-03
16	B24	100	Single Unit Short Haul Truck	318	0.00E+00	3.02E-05	1.12E-06	5.19E+01	2.31E-05	1.07E-01	3.43E-05	1.34E-02	2.05E-03	5.32E-04	4.33E-03	8.00E-04	8.14E-04	5.32E-03	2.10E-04	8.58E-08	3.52E-03	2.50E-03
16	B24	100	Single Unit Long Haul Truck	14	0.00E+00	1.31E-06	4.72E-08	2.18E+00	9.57E-07	4.39E-03	1.48E-06	5.61E-04	9.34E-05	2.31E-05	1.89E-04	3.37E-05	3.44E-05	2.22E-04	8.86E-06	3.51E-09	1.55E-04	1.05E-04
16	B24	100	Combination Short Haul Truck	264	0.00E+00	3.78E-05	2.79E-06	8.80E+01	1.00E-07	6.80E-02	2.71E-05	6.84E-02	2.56E-03	6.49E-04	2.30E-03	8.15E-04	8.46E-04	1.40E-02	2.94E-04	0.00E+00	1.46E-03	1.29E-02
16	B24	100	Combination Long Haul Truck	241	0.00E+00	5.34E-05	3.01E-06	7.97E+01	3.40E-07	7.92E-02	4.41E-05	7.32E-02	2.56E-03	5.22E-04	4.90E-03	9.71E-04	1.01E-03	1.28E-02	2.67E-04	0.00E+00	3.89E-03	1.38E-02
10	E39	70	Passenger Car	273	0.00E+00	3.01E-06	3.27E-07	1.18E+01	2.14E-05	5.85E-02	6.79E-06	2.76E-04	2.11E-03	3.28E-04	6.63E-04	4.27E-04	4.38E-04	4.64E-05	5.99E-05	1.24E-08	2.24E-04	4.31E-05
10	E39	70	Passenger Truck	458	0.00E+00	6.35E-06	6.74E-07	2.66E+01	4.06E-05	1.03E-01	1.33E-05	8.04E-04	3.81E-03	5.90E-04	1.27E-03	8.26E-04	8.47E-04	2.03E-04	1.34E-04	2.39E-08	4.25E-04	1.35E-04
10	E39	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	E39	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	E39	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	E40	70	Passenger Car	272	0.00E+00	3.00E-06	3.26E-07	1.18E+01	2.13E-05	5.82E-02	6.77E-06	2.75E-04	2.10E-03	3.27E-04	6.60E-04	4.25E-04	4.37E-04	4.62E-05	5.97E-05	1.24E-08	2.23E-04	4.29E-05
10	E40	70	Passenger Truck	456	0.00E+00	6.32E-06	6.72E-07	2.65E+01	4.05E-05	1.03E-01	1.32E-05	8.00E-04	3.80E-03	5.87E-04	1.27E-03	8.23E-04	8.43E-04	2.02E-04	1.33E-04	2.38E-08	4.23E-04	1.34E-04
10	E40	70	Single Unit Short Haul Truck	23	0.00E+00	4.05E-06	1.64E-07	3.77E+00	2.71E-06	6.83E-03	4.40E-06	1.61E-03	3.65E-04	6.71E-05	5.45E-04	1.04E-04	1.06E-04	3.83E-04	1.53E-05	6.18E-09	4.39E-04	3.01E-04
10	E40	70	Single Unit Long Haul Truck	1	0.00E+00	1.76E-07	7.09E-09	1.60E-01	1.17E-07	2.87E-04	1.91E-07	6.93E-05	1.67E-05	3.00E-06	2.38E-05	4.49E-06	4.58E-06	1.61E-05	6.50E-07	2.61E-10	1.92E-05	1.30E-05
10	E40	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.84E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
10	E40	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.26E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
10	E41	70	Passenger Car	219	0.00E+00	2.42E-06	2.62E-07	9.46E+00	1.71E-05	4.69E-02	5.45E-06	2.22E-04	1.69E-03	2.63E-04	5.31E-04	3.42E-04	3.51E-04	3.72E-05	4.80E-05	9.98E-09	1.80E-04	3.46E-05
10	E41	70	Passenger Truck	367	0.00E+00	5.09E-06	5.41E-07	2.13E+01	3.26E-05	8.29E-02	1.07E-05	6.44E-04	3.06E-03	4.73E-04	1.02E-03	6.62E-04	6.79E-04	1.63E-04	1.07E-04	1.92E-08	3.41E-04	1.08E-04
10	E41	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E42	70	Passenger Car	280	0.00E+00	3.09E-06	3.35E-07	1.21E+01	2.19E-05	5.99E-02	6.96E-06	2.83E-04	2.16E-03	3.36E-04	6.79E-04	4.38E-04	4.49E-04	4.76E-05	6.14E-05	1.28E-08	2.30E-04	4.42E-05
10	E42	70	Passenger Truck	469	0.00E+00	6.50E-06	6.91E-07	2.72E+01	4.16E-05	1.06E-01	1.36E-05	8.24E-04	3.91E-03	6.04E-04	1.30E-03	8.47E-04	8.68E-04	2.08E-04	1.37E-04	2.45E-08	4.35E-04	1.38E-04
10	E42	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	E42	70	Combination Short Haul Truck	6	0.00E+00	1.48E-06	1.10E-07	2.00E+00	3.76E-09	2.14E-03	1.06E-06	2.22E-03	2.09E-04	3.48E-05	8.88E-05	3.21E-05	3.33E-05	3.18E-04	6.69E-06	0.00E+00	5.55E-05	4.18E-04
10	E42	70	Combination Long Haul Truck	5	0.00E+00	2.03E-06	1.15E-07	1.88E+00	1.27E-08	2.55E-03	1.67E-06	2.37E-03	2.17E-04	3.27E-05	1.85E-04	3.71E-05	3.87E-05	3.01E-04	6.29E-06	0.00E+00	1.46E-04	4.47E-04
10	E43	70	Passenger Car	221	0.00E+00	2.44E-06	2.65E-07	9.54E+00	1.73E-05	4.73E-02	5.49E-06	2.23E-04	1.70E-03	2.65E-04	5.36E-04	3.45E-04	3.54E-04	3.75E-05	4.84E-05	1.01E-08	1.81E-04	3.49E-05
10	E43	70	Passenger Truck	370	0.00E+00	5.13E-06	5.45E-07	2.15E+01	3.28E-05	8.36E-02	1.08E-05	6.50E-04	3.08E-03	4.77E-04	1.03E-03	6.68E-04	6.85E-04	1.64E-04	1.08E-04	1.93E-08	3.44E-04	1.09E-04
10	E43	70	Single Unit Short Haul Truck	8	0.00E+00	1.35E-06	5.48E-08	1.26E+00	9.04E-07	2.28E-03	1.47E-06	5.37E-04	1.22E-04	2.24E-05	1.82E-04	3.46E-05	3.53E-05	1.28E-04	5.11E-06	2.06E-09	1.46E-04	1.00E-04
10	E43	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E43	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E44	70	Passenger Car	205	0.00E+00	2.25E-06	2.45E-07	8.83E+00	1.60E-05	4.37E-02	5.08E-06	2.07E-04	1.58E-03	2.45E-04	4.96E-04	3.20E-04	3.28E-04	3.47E-05	4.48E-05	9.31E-09	1.68E-04	3.23E-05
10	E44	70	Passenger Truck	342	0.00E+00	4.75E-06	5.05E-07	1.99E+01	3.04E-05	7.74E-02	9.95E-06	6.01E-04	2.85E-03	4.41E-04	9.52E-04	6.18E-04	6.34E-04	1.52E-04	9.99E-05	1.79E-08	3.18E-04	1.01E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E44	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E44	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
11	E45	80	Passenger Car	73	0.00E+00	7.52E-07	8.18E-08	3.07E+00	5.34E-06	1.50E-02	1.70E-06	7.60E-05	3.99E-04	6.69E-05	1.65E-04	1.07E-04	1.09E-04	1.56E-05	3.34E-09	5.60E-05	1.19E-05
11	E45	80	Passenger Truck	123	0.00E+00	1.55E-06	1.65E-07	6.94E+00	1.01E-05	2.65E-02	3.28E-06	2.05E-04	7.11E-04	1.18E-04	3.15E-04	2.04E-04	2.10E-04	5.04E-05	3.50E-05	6.36E-09	1.06E-04	3.41E-05
11	E45	80	Single Unit Short Haul Truck	68	0.00E+00	9.33E-06	3.64E-07	1.11E+01	6.33E-06	2.03E-02	1.03E-05	3.88E-03	7.64E-04	1.56E-04	1.29E-03	2.38E-04	2.43E-04	1.13E-03	4.53E-05	1.80E-08	1.04E-03	7.25E-04
11	E45

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

MOVES LinkID	Source D	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E50	80	Passenger Truck	457	0.00E+00	5.77E-06	6.15E-07	2.59E+01	3.75E-05	9.85E-02	1.22E-05	7.63E-04	2.65E-03	4.41E-04	1.17E-03	7.61E-04	7.80E-04	1.88E-04	1.30E-04	2.37E-08	3.93E-04	1.27E-04
11	E50	80	Single Unit Short Haul Truck	45	0.00E+00	6.18E-06	2.41E-07	7.38E+00	4.19E-06	1.34E-02	6.79E-06	2.57E-03	5.06E-04	1.03E-04	8.51E-04	1.57E-04	1.61E-04	7.51E-04	3.00E-05	1.19E-08	6.90E-04	4.80E-04
11	E50	80	Single Unit Long Haul Truck	2	0.00E+00	2.68E-07	1.04E-08	3.12E-01	1.78E-07	5.58E-04	2.95E-07	1.10E-04	2.32E-05	4.59E-06	3.71E-05	6.76E-06	6.90E-06	3.15E-05	1.27E-06	4.95E-10	3.02E-05	2.05E-05
11	E50	80	Combination Short Haul Truck	36	0.00E+00	7.44E-06	5.51E-07	1.21E+01	1.95E-08	1.13E-02	5.32E-06	1.15E-02	8.61E-04	1.56E-04	4.51E-04	1.61E-04	1.67E-04	1.92E-03	4.05E-05	0.00E+00	2.84E-04	2.17E-03
11	E50	80	Combination Long Haul Truck	33	0.00E+00	1.04E-05	5.85E-07	1.12E+01	6.59E-08	1.34E-02	8.55E-06	1.23E-02	8.90E-04	1.42E-04	9.50E-04	1.89E-04	1.96E-04	1.80E-03	3.76E-05	0.00E+00	7.53E-04	2.32E-03
11	E51	80	Passenger Car	12	0.00E+00	1.19E-07	1.29E-08	4.86E-01	8.44E-07	2.37E-03	2.68E-07	1.20E-05	6.32E-05	1.06E-05	2.62E-05	1.69E-05	1.73E-05	1.72E-06	2.47E-06	5.28E-10	8.85E-06	1.87E-06
11	E51	80	Passenger Truck	19	0.00E+00	2.45E-07	2.61E-08	1.10E+00	1.59E-06	4.18E-03	5.19E-07	3.24E-05	1.12E-04	1.87E-05	4.98E-05	3.23E-05	3.31E-05	7.97E-06	5.53E-06	1.01E-09	1.67E-05	5.40E-06
11	E51	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.67E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.14E-05
11	E52	80	Passenger Car	304	0.00E+00	3.12E-06	3.39E-07	1.27E+01	2.21E-05	6.20E-02	7.03E-06	3.15E-04	1.65E-03	2.77E-04	6.85E-04	4.42E-04	4.54E-04	4.51E-05	6.48E-05	1.38E-08	2.32E-04	4.91E-05
11	E52	80	Passenger Truck	508	0.00E+00	6.42E-06	6.84E-07	2.88E+01	4.18E-05	1.10E-01	1.36E-05	8.49E-04	2.95E-03	4.91E-04	1.31E-03	8.47E-04	8.68E-04	2.09E-04	1.45E-04	2.63E-08	4.37E-04	1.41E-04
11	E52	80	Single Unit Short Haul Truck	48	0.00E+00	6.57E-06	2.57E-07	7.85E+00	4.45E-06	1.43E-02	7.22E-06	2.73E-03	5.38E-04	1.10E-04	9.05E-04	1.68E-04	1.71E-04	7.99E-04	3.19E-05	1.26E-08	7.34E-04	5.11E-04
11	E52	80	Single Unit Long Haul Truck	2	0.00E+00	2.85E-07	1.10E-08	3.32E-01	1.90E-07	5.94E-04	3.14E-07	1.17E-04	2.47E-05	4.88E-06	3.95E-05	7.19E-06	7.34E-06	3.36E-05	1.35E-06	5.27E-10	3.21E-05	2.18E-05
11	E52	80	Combination Short Haul Truck	37	0.00E+00	7.65E-06	5.67E-07	1.25E+01	2.00E-08	1.17E-02	5.47E-06	1.18E-02	8.86E-04	1.61E-04	4.64E-04	1.65E-04	1.72E-04	1.98E-03	4.16E-05	0.00E+00	2.93E-04	2.23E-03
11	E52	80	Combination Long Haul Truck	34	0.00E+00	1.07E-05	6.02E-07	1.16E+01	6.78E-08	1.38E-02	8.79E-06	1.27E-02	9.16E-04	1.47E-04	9.77E-04	1.94E-04	2.02E-04	1.85E-03	3.87E-05	0.00E+00	7.75E-04	2.38E-03
11	E53	80	Passenger Car	102	0.00E+00	1.05E-06	1.14E-07	4.28E+00	7.44E-06	2.08E-02	2.36E-06	1.06E-04	5.56E-04	9.32E-05	2.30E-04	1.49E-04	1.52E-04	1.52E-05	2.18E-05	4.65E-09	7.79E-05	1.65E-05
11	E53	80	Passenger Truck	171	0.00E+00	2.16E-06	2.30E-07	9.67E+00	1.40E-05	3.69E-02	4.57E-06	2.86E-04	9.91E-04	1.65E-04	4.39E-04	2.85E-04	2.92E-04	7.02E-05	4.87E-05	8.86E-09	1.47E-04	4.75E-05
11	E53	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E53	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.83E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.22E-04
11	E53	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.10E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.72E-04
11	E54	80	Passenger Car	492	0.00E+00	5.06E-06	5.49E-07	2.07E+01	3.59E-05	1.01E-01	1.14E-05	5.11E-04	2.68E-03	4.49E-04	1.11E-03	7.17E-04	7.36E-04	7.32E-05	1.05E-04	2.24E-08	3.76E-04	7.96E-05
11	E54	80	Passenger Truck	825	0.00E+00	1.04E-05	1.11E-06	4.66E+01	6.77E-05	1.78E-01	2.21E-05	1.38E-03	4.78E-03	7.96E-04	2.12E-03	1.37E-03	1.41E-03	3.39E-04	2.35E-04	4.27E-08	7.09E-04	2.29E-04
11	E54	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	E54	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E54	80	Combination Short Haul Truck	29	0.00E+00	5.93E-06	4.39E-07	9.65E+00	1.55E-08	9.04E-03	4.24E-06	9.16E-03	6.86E-04	1.24E-04	3.60E-04	1.28E-04	1.33E-04	1.53E-03	3.23E-05	0.00E+00	2.27E-04	1.73E-03
11	E54	80	Combination Long Haul Truck	26	0.00E+00	8.26E-06	4.66E-07	8.95E+00	5.25E-08	1.07E-02	6.81E-06	9.80E-03	7.09E-04	1.14E-04	7.57E-04	1.50E-04	1.57E-04	1.44E-03	3.00E-05	0.00E+00	6.00E-04	1.85E-03
11	E55	80	Passenger Car	102	0.00E+00	1.05E-06	1.14E-07	4.28E+00	7.44E-06	2.08E-02	2.36E-06	1.06E-04	5.56E-04	9.32E-05	2.30E-04	1.49E-04	1.52E-04	1.52E-05	2.18E-05	4.65E-09	7.79E-05	1.65E-05
11	E55	80	Passenger Truck	171	0.00E+00	2.16E-06	2.30E-07	9.67E+00	1.40E-05	3.69E-02	4.57E-06	2.86E-04	9.91E-04	1.65E-04	4.39E-04	2.85E-04	2.92E-04	7.02E-05	4.87E-05	8.86E-09	1.47E-04	4.75E-05
11	E55	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E55	80	Combination Short Haul Truck	12	0.00E+00	2.48E-06	1.84E-07	4.03E+00	6.49E-09	3.78E-03	1.77E-06	3.83E-03	2.87E-04	5.20E-05	1.50E-04	5.35E-05	5.56E-05	6.41E-04	1.35E-05	0.00E+00	9.48E-05	7.22E-04
11	E55	80	Combination Long Haul Truck	11	0.00E+00	3.45E-06	1.95E-07	3.74E+00	2.20E-08	4.47E-03	2.85E-06	4.10E-03	2.97E-04	4.75E-05	3.17E-04	6.28E-05	6.55E-05	6.01E-04	1.25E-05	0.00E+00	2.51E-04	7.72E-04
11	E56	80	Passenger Car	492	0.00E+00	5.06E-06	5.49E-07	2.07E+01	3.59E-05	1.01E-01	1.14E-05	5.11E-04	2.68E-03	4.49E-04	1.11E-03	7.17E-04	7.36E-04	7.32E-05	1.05E-04	2.24E-08	3.76E-04	7.96E-05
11	E56	80	Passenger Truck	825	0.00E+00	1.04E-05	1.11E-06	4.66E+01	6.77E-05	1.78E-01	2.21E-05	1.38E-03	4.78E-03	7.96E-04	2.12E-03	1.37E-03	1.41E-03	3.39E-04	2.35E-04	4.27E-08	7.09E-04	2.29E-04
11	E56	80	Single Unit Short Haul Truck	37	0.00E+00	5.13E-06	2.00E-07	6.12E+00	3.47E-06	1.11E-02	5.63E-06	2.13E-03	4.20E-04	8.58E-05	7.06E-04	1.31E-04	1.33E-04	6.23E-04	2.49E-05	9.86E-09	5.73E-04	3.98E-04
11	E56	80	Single Unit Long Haul Truck	2	0.00E+00	2.23E-07	8.59E-09	2.59E-01	1.48E-07	4.63E-04	2.45E-07	9.11E-05	1.92E-05	3.81E-06	3.08E-05	5.61E-06	5.72E-06	2.62E-05	1.05E-06	4.11E-10	2.51E-05	1.70E-05
11	E56	80	Combination Short Haul Truck	29	0.00E+00	5.93E-06	4.39E-07	9.65E+00	1.55E-08	9.04E-03	4.24E-06	9.16E-03	6.86E-04	1.24E-04	3.60E-04	1.28E-04	1.33E-04	1.53E-03	3.23E-05	0.00E+00	2.27E-04	1.73E-03
11	E56	80	Combination Long Haul Truck	26	0.00E+00	8.26E-06	4.66E-07	8.95E+00	5.25E-08	1.07E-02	6.81E-06	9.80E-03	7.09E-04	1.14E-04	7.57E-04	1.50E-04	1.57E-04	1.44E-03	3.00E-05	0.00E+00	6.00E-04	1.85E-03
10	E57	70	Passenger Car	277	0.00E+00	3.06E-06	3.32E-07	1.20E+01	2.17E-05	5.93E-02	6.90E-06	2.81E-04	2.14E-03	3.33E-04	6.73E-04	4.34E-04	4.45E-04	4.71E-05	6.08E-05	1.26E-08	2.28E-04	4.38E-05
10	E57	70	Passenger Truck	465	0.00E+00	6.44E-06	6.85E-07	2.70E+01	4.12E-05	1.05E-01	1.35E-05	8.16E-04	3.87E-03	5.99E-04	1.29E-03	8.39E-04	8.60E-04	2.06E-04	1.36E-04	2.43E-08	4.31E-04	1.37E-04
10	E57	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.71E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.26E-04
10	E57	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	E57	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
10	E58	70	Passenger Car	228	0.00E+00	2.51E-06	2.73E-07	9.83E+00	1.78E-05	4.87E-02	5.66E-06	2.30E-04	1.75E-03	2.73E-04	5.52E-04	3.56E-04	3.65E-04	3.87E-05	4.99E-05	1.04E-08	1.87E-04	3.59E-05
10	E58	70	Passenger Truck	381	0.00E+00	5.29E-06	5.62E-07	2.21E+01	3.38E-05	8.61E-02	1.11E-05	6.70E-04	3.18E-03	4.91E-04	1.06E-03	6.88E-04	7.06E-04	1.69E-04	1.11E-04	1.99E-08	3.54E-04	1.12E-04
10	E58	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	E58	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.20E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.73E-06
10	E58	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.63E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.73E-04
10	E58	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.96E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.35E-04
11	E59	80	Passenger Car	222	0.00E+00	2.28E-06	2.48E-07	9.33E+00	1.62E-05	4.54E-02	5.15E-06	2.31E-04	1.21E-03	2.03E-04	5.02E-04	3.24E-04	3.32E-04	3.31E-05	4.75E-05	1.01E-08	1.70E-04	3.60E-05
11	E59	80	Passenger Truck	373	0.00E+00	4.70E-06	5.01E-07	2.11E+01	3.06E-05	8.03E-02	9.97E-06	6.22E-04	2.16E-03	3.59E-04	9.57E-04	6.21E-04	6.36E-04	1.53E-04	1.06E-04	1.93E-08	3.20E-04	1.04E-04
11	E59	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E59	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	2.00E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.77E-04
11	E59	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.14E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.03E-04
11	E60	80	Passenger Car	191	0.00E+00	1.96E-06	2.13E-07	8.00E+00	1.39E-05	3.89E-02	4.41E-06	1.98E-04	1.04E-03	1.74E-04	4.30E-04	2.78E-04	2.85E-04	2.83E-05	4.07E-05	8.69E-09	1.46E-04	3.08E-05
11	E60	80	Passenger Truck	319	0.00E+00	4.03E-06	4.30E-07	1.81E+01	2.62E-05	6.88E-02	8.54E-06	5.33E-04	1.85E-03	3.08E-04	8.20E-04	5.32E-04	5.45E-04	1.31E-04	9.10E-05	1.65E-08	2.75E-04	8.88E-05
11	E60	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.11E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	E60	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.04E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.67E-06
11	E60	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.67E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.02E-04
11	E60	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.85E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.37E-04
11	E61	80	Passenger Car	222	0.00E+00	2.28E-06	2.48E-07	9.33E+00	1.62E-05	4.54E-02	5.15E-06	2.31E-04	1.21E-03	2.03E-04	5.02E-04	3.24E-04	3.32E-04	3.31E-05	4.75E-05	1.01E-08	1.70E-04	3.60E-05
11	E61	80	Passenger Truck	373	0.00E+00	4.70E-06	5.01E-07	2.11E+01	3.06E-05	8.03E-02	9.97E-06	6.22E-04	2.16E-03	3.59E-04	9.57E-04	6.21E-04	6.36E-04	1.53E-04	1.06E-04	1.93E-08	3.20E-04	1.04E-04
11	E61	80	Single Unit Short Haul Truck	10	0.00E+00	1.31E-06	5.13E-08	1.57E+00	8.91E-07	2.85E-03	1.44E-06	5.47E-04	1.08E-04	2.20E-05	1.81E-04	3.35E-05	3.42E-05	1.60E-04	6.38E-06	2.53E-09	1.47E-04	1.02E-04
11	E61	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	2.00E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.77E-04
11	E61	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.14E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.03E-04
11	E62	80	Passenger Car	191	0.00E+00	1.96E-06	2.13E-07	8.00E+00	1.39E-05	3.89E-02	4.41E-06	1.98E-04	1.04E-03	1.74E-04	4.30E-04	2.78E-04	2.85E-04	2.83E-05	4.07E-05	8.69E-09	1.46E-04	3.08E-05
11	E62	80	Passenger Truck	319	0.00E+00	4.03E-06	4.30E-07	1.81E+01	2.62E-05	6.88E-02	8.54E-06	5.33E-04	1.85E-03	3.08E-04	8.20E-04	5.32E-04	5.45E-04	1.31E-04	9.10E-05	1.65E-08	2.75E-04	8.88E-05
11	E62	80	Single Unit Short Haul Truck	12	0.00E+00	1.71E-06	6.67E-08	2.04E+00	1.16E-06	3.71E-03	1.88E-06	7.11E-04	1.40E-04	2.86E-05	2.35E-04	4.36E-05	4.44E-05	2.08E-04	8.29E-06	3.29E-09	1.91E-04	1.33E-04
11	E62	80	Single Unit Long Haul Truck	1	0.00E+00	7.42E-08	2.86E-09	8.62E-02	4.93E-08	1.54E-04	8.16E-08	3.04E-05	6.41E-06	1.27E-06	1.03E-05	1.87E-06	1.91E-06	8.72E-06	3.51E-07	1.37E-10	8.35E-06	5.67E-06
11	E62	80	Combination Short Haul Truck	8	0.00E+00	1.72E-06	1.28E-07	2.81E+00	4.52E-09	2.63E-03	1.23E-06	2.67E-03	2.00E-04	3.62E-05	1.05E-04	3.73E-05	3.87E-05	4.46E-04	9.38E-06	0.00E+00	6.59E-05	5.02E-04
11	E62	80	Combination Long Haul Truck	8	0.00E+00	2.40E-06	1.36E-07	2.60E+00	1.53E-08	3.11E-03	1.98E-06	2.85E-03	2.06E-04	3.30E-05	2.20E-04	4.37E-05	4.55E-05	4.18E-04	8.73E-06	0.00E+00	1.75E-04	5.37E-04
10	E63	70	Passenger Car	907	0.00E+00	1.00E-05	1.09E-06	3.92E+01	7.09E-05	1.94E-01	2.25E-05	9.17E-04	6.98E-03	1.09E-03	2.20E-03	1.42E-03	1.45E-03	1.54E-04	1.99E-04	4.13E-08	7.44E-04	1.43E-04
10	E63	70	Passenger Truck	1518	0.00E+00	2.10E-05	2.24E-06	8.82E+01	1.35E-04	3.43E-01	4.41E-05	2.67E-03	1.26E-02	1.96E-03	4.22E-03	2.74E-03	2.81E-03	6.73E-04	4.43E-04	7.94E-08	1.41E-03	4.48E-04
10	E63	70	Single Unit Short Haul Truck	98	0.00E+00	1.72E-05	6.98E-07	1.60E+01	1.15E-05	2.90E-02	1.87E-05	6.85E-03	1.55E-03	2.85E-04	2.32E-03	4.42E-04	4.50E-04	1.63E-03	6.51E-05	2.63E-08	1.87E-03	1.28E-03
10	E63	70	Single Unit Long Haul Truck	4	0.00E+00	7.48E-07	3.01E-08	6.78E-01	4.96E-07	1.22E-03	8.14E-07	2.95E-04	7.11E-05	1.27E-05	1.01E-04	1.91E-05	1.95E-05	6.86E-05	2.76E-06	1.11E-09	8.17E-05	5.51E-05
10	E63	70	Combination Short Haul Truck	65	0.00E+00	1.68E-05	1.25E-06	2.27E+01	4.27E-08	2.43E-02	1.20E-05	2.52E-02	2.37E-03	3.96E-04	1.01E-03	3.65E-04	3.79E-04	3.61E-03	7.60E-05	0.00E+00	6.31E-04	4.75E-03
10	E63	70	Combination Long Haul Truck	60	0.00E+00	2.31E-05	1.31E-06	2.13E+01	1.45E-07	2.90E-02	1.90E-05	2.70E-02	2.47E-03	3.72E-04	2.10E-03	4.22E-04	4.39E-04	3.43E-03	7.15E-05	0.00E+00	1.66E-03	5.08E-03
10	E64	70	Passenger Car	680	0.00E+00	7.50E-06	8.15E-07	2.94E+01	5.32E-05	1.45E-01	1.69E-05	6.88E-04	5.24E-03	8.16E-04	1.65E-03	1.06E-03	1.09E-03	1.16E-04	1.49E-04	3.10E-08	5.58E-04	1.07E-04
10	E64	70	Passenger Truck	1139	0.00E+00	1.58E-05	1.68E-06	6.61E+01	1.01E-04	2.57E-01	3.31E-05	2.00E-03	9.49E-03	1.47E-03	3.17E-03	2.06E-03	2.11E-03	5.05E-04	3.32E-04	5.95E-08	1.06E-03	3.36E-04
10	E64	70	Single Unit Short Haul Truck	66	0.00E+00	1.16E-05	4.72E-07	1.08E+01	7.79E-06	1.96E-02	1.26E-05	4.63E-03	1.05E-03	1.93E-04	1.57E-03	2.99E-04	3.05E-04	1.10E-03	4.40E-05	1.78E-08	1.26E-03	8.66E-04
10	E64	70	Single Unit Long Haul Truck	3	0.00E+00	5.06E-07	2.04E-08	4.59E-01	3.35E-07	8.24E-04	5.50E-07	1.99E-04	4.81E-05	8.62E-06	6.84E-05	1.29E-05	1.32E-05	4.64E-05	1.87E-06	7.49E-10	5.53E-05	3.73E-05
10	E64	70	Combination Short Haul Truck	43	0.00E+00	1.10E-05	8.21E-07	1.49E+01	2.80E-08	1.59E-02	7.87E-06	1.65E-02	1.56E-03	2.60E-04	6.62E-04	2.39E-04	2.48E-04	2.37E-03	4.99E-05	0.00E+00	4.14E-04	3.11E-03
10	E64	70	Combination Long Haul Truck	39

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

Highway 413
GTA West

MOVES LinkID	Source D	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E69	70	Single Unit Short Haul Truck	18	0.00E+00	3.20E-06	1.30E-07	2.98E+00	2.15E-06	5.41E-03	3.48E-06	1.28E-03	2.89E-04	5.31E-05	4.32E-04	8.23E-05	8.39E-05	3.03E-04	1.21E-05	4.90E-09	3.48E-04	2.39E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	5.61E-09	1.26E-01	9.24E-08	2.27E-04	1.52E-07	5.49E-05	1.32E-05	2.37E-06	1.88E-05	3.55E-06	3.62E-06	1.28E-05	5.15E-07	2.06E-10	1.52E-05	1.03E-05
10	E69	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.43E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.46E-04
10	E69	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.67E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.91E-04
10	E70	70	Passenger Car	603	0.00E+00	6.65E-06	7.22E-07	2.60E+01	4.72E-05	1.29E-01	1.50E-05	6.10E-04	4.65E-03	7.24E-04	1.46E-03	9.43E-04	9.67E-04	1.02E-04	1.32E-04	2.75E-08	4.95E-04	9.51E-05
10	E70	70	Passenger Truck	1010	0.00E+00	1.40E-05	1.49E-06	5.86E+01	8.96E-05	2.28E-01	2.93E-05	1.77E-03	8.41E-03	1.30E-03	2.81E-03	1.82E-03	1.87E-03	4.48E-04	2.95E-04	5.28E-08	9.38E-04	2.98E-04
10	E70	70	Single Unit Short Haul Truck	30	0.00E+00	5.23E-06	2.12E-07	4.87E+00	3.50E-06	8.82E-03	5.68E-06	2.08E-03	4.72E-04	8.66E-05	7.04E-04	1.34E-04	1.37E-04	4.94E-04	1.98E-05	7.99E-09	5.68E-04	3.89E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	2.27E-07	9.16E-09	2.06E-01	1.51E-07	3.70E-04	2.47E-07	8.95E-05	2.16E-05	3.87E-06	3.07E-05	5.80E-06	5.91E-06	2.09E-05	8.40E-07	3.37E-10	2.48E-05	1.68E-05
10	E70	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	E70	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
10	E71	70	Passenger Car	562	0.00E+00	6.20E-06	6.74E-07	2.43E+01	4.40E-05	1.20E-01	1.40E-05	5.69E-04	4.33E-03	6.75E-04	1.36E-03	8.79E-04	9.02E-04	9.55E-05	1.23E-04	2.56E-08	4.61E-04	8.87E-05
10	E71	70	Passenger Truck	942	0.00E+00	1.31E-05	1.39E-06	5.47E+01	8.36E-05	2.13E-01	2.74E-05	1.65E-03	7.84E-03	1.21E-03	2.62E-03	1.70E-03	1.74E-03	4.18E-04	2.75E-04	4.92E-08	8.74E-04	2.78E-04
10	E71	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	E71	70	Combination Short Haul Truck	3	0.00E+00	6.73E-07	5.01E-08	9.09E-01	1.71E-09	9.72E-04	4.80E-07	1.01E-03	9.49E-05	1.58E-05	4.04E-05	1.46E-05	1.51E-05	1.45E-04	3.04E-06	0.00E+00	2.52E-05	1.90E-04
10	E71	70	Combination Long Haul Truck	2	0.00E+00	9.23E-07	5.25E-08	8.54E-01	5.79E-09	1.16E-03	7.59E-07	1.08E-03	9.88E-05	1.49E-05	8.39E-05	1.69E-05	1.76E-05	1.37E-04	2.86E-06	0.00E+00	6.63E-05	2.03E-04
10	E72	70	Passenger Car	745	0.00E+00	8.22E-06	8.93E-07	3.22E+01	5.83E-05	1.59E-01	1.85E-05	7.54E-04	5.74E-03	8.94E-04	1.81E-03	1.16E-03	1.20E-03	1.27E-04	1.63E-04	3.39E-08	6.11E-04	1.18E-04
10	E72	70	Passenger Truck	1248	0.00E+00	1.73E-05	1.84E-06	7.25E+01	1.11E-04	2.82E-01	3.63E-05	2.19E-03	1.04E-02	1.61E-03	3.47E-03	2.25E-03	2.31E-03	5.53E-04	3.64E-04	6.52E-08	1.16E-03	3.68E-04
10	E72	70	Single Unit Short Haul Truck	28	0.00E+00	4.89E-06	1.99E-07	4.55E+00	3.28E-06	8.25E-03	5.32E-06	1.95E-03	4.41E-04	8.10E-05	6.59E-04	1.26E-04	1.28E-04	4.62E-04	1.85E-05	7.47E-09	5.31E-04	3.64E-04
10	E72	70	Single Unit Long Haul Truck	1	0.00E+00	2.13E-07	8.56E-09	1.93E-01	1.41E-07	3.46E-04	2.31E-07	8.38E-05	2.02E-05	3.62E-06	2.88E-05	5.42E-06	5.53E-06	1.95E-05	7.86E-07	3.15E-10	2.32E-05	1.57E-05
10	E72	70	Combination Short Haul Truck	7	0.00E+00	1.88E-06	1.40E-07	2.55E+00	4.79E-09	2.72E-03	1.34E-06	2.82E-03	2.66E-04	4.43E-05	1.13E-04	4.08E-05	4.24E-05	4.05E-04	8.51E-06	0.00E+00	7.07E-05	5.32E-04
10	E72	70	Combination Long Haul Truck	7	0.00E+00	2.58E-06	1.47E-07	2.39E+00	1.62E-08	3.25E-03	2.12E-06	3.02E-03	2.77E-04	4.17E-05	2.35E-04	4.72E-05	4.92E-05	3.84E-04	8.01E-06	0.00E+00	1.86E-04	5.69E-04
9	E73	60	Passenger Car	253	0.00E+00	3.20E-06	3.48E-07	1.14E+01	2.27E-05	6.18E-02	7.22E-06	2.61E-04	2.56E-03	3.83E-04	7.04E-04	4.54E-04	4.66E-04	5.02E-05	5.79E-05	1.22E-08	2.38E-04	4.07E-05
9	E73	60	Passenger Truck	424	0.00E+00	6.80E-06	7.21E-07	2.55E+01	4.29E-05	1.06E-01	1.41E-05	8.11E-04	4.67E-03	6.95E-04	1.34E-03	8.75E-04	8.96E-04	2.05E-04	1.28E-04	2.37E-08	4.48E-04	1.37E-04
9	E73	60	Single Unit Short Haul Truck	8	0.00E+00	1.71E-06	7.07E-08	1.27E+00	1.13E-06	2.24E-03	1.85E-06	6.57E-04	1.76E-04	2.96E-05	2.28E-04	4.40E-05	4.48E-05	1.29E-04	5.19E-06	2.14E-09	1.83E-04	1.23E-04
9	E73	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.80E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.28E-04
9	E73	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.62E-04
9	E74	60	Passenger Car	354	0.00E+00	4.47E-06	4.86E-07	1.60E+01	3.17E-05	8.63E-02	1.01E-05	3.64E-04	3.57E-03	5.35E-04	9.84E-04	6.34E-04	6.51E-04	7.01E-05	8.09E-05	1.70E-08	3.33E-04	5.68E-05
9	E74	60	Passenger Truck	592	0.00E+00	9.50E-06	1.01E-06	3.56E+01	5.99E-05	1.48E-01	1.97E-05	1.13E-03	6.53E-03	9.71E-04	1.88E-03	1.22E-03	1.25E-03	2.87E-04	1.79E-04	3.31E-08	6.26E-04	1.92E-04
9	E74	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	E74	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.11E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	E74	60	Combination Short Haul Truck	8	0.00E+00	2.44E-06	1.79E-07	2.95E+00	6.69E-09	3.65E-03	1.75E-06	3.73E-03	4.26E-04	6.67E-05	1.51E-04	5.25E-05	5.45E-05	4.68E-04	9.86E-06	0.00E+00	9.60E-05	7.03E-04
9	E74	60	Combination Long Haul Truck	8	0.00E+00	3.36E-06	1.83E-07	2.78E+00	2.27E-08	4.38E-03	2.81E-06	3.98E-03	4.47E-04	6.46E-05	3.18E-04	5.99E-05	6.24E-05	4.47E-04	9.33E-06	0.00E+00	2.56E-04	7.49E-04
53	E75	70	Passenger Car	786	0.00E+00	8.40E-06	9.13E-07	3.43E+01	5.96E-05	1.62E-01	1.89E-05	8.09E-04	5.96E-03	9.33E-04	1.85E-03	1.19E-03	1.22E-03	1.34E-04	1.74E-04	3.62E-08	6.25E-04	1.26E-04
53	E75	70	Passenger Truck	1316	0.00E+00	1.75E-05	1.87E-06	7.73E+01	1.13E-04	2.85E-01	3.68E-05	2.28E-03	1.06E-02	1.65E-03	3.53E-03	2.29E-03	2.35E-03	5.80E-04	3.89E-04	6.82E-08	1.18E-03	3.82E-04
53	E75	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.65E-04
53	E75	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
53	E75	70	Combination Short Haul Truck	40	0.00E+00	1.04E-05	7.71E-07	1.40E+01	2.63E-08	1.50E-02	7.39E-06	1.55E-02	1.46E-03	2.44E-04	6.22E-04	2.25E-04	2.33E-04	2.23E-03	4.68E-05	0.00E+00	3.89E-04	2.92E-03
53	E75	70	Combination Long Haul Truck	37	0.00E+00	1.42E-05	8.08E-07	1.31E+01	8.91E-08	1.79E-02	1.17E-05	1.66E-02	1.52E-03	2.29E-04	1.29E-03	2.60E-04	2.71E-04	2.11E-03	4.41E-05	0.00E+00	1.02E-03	3.13E-03
53	E76	70	Passenger Car	1385	0.00E+00	1.48E-05	1.61E-06	6.05E+01	1.05E-04	2.85E-01	3.34E-05	1.43E-03	1.05E-02	1.64E-03	3.25E-03	2.10E-03	2.15E-03	2.35E-04	3.07E-04	6.38E-08	1.10E-03	2.22E-04
53	E76	70	Passenger Truck	2319	0.00E+00	3.09E-05	3.29E-06	1.36E+02	1.99E-04	5.03E-01	6.49E-05	4.03E-03	1.88E-02	2.92E-03	6.21E-03	4.04E-03	4.14E-03	1.02E-03	6.85E-04	1.20E-07	2.08E-03	6.74E-04
53	E76	70	Single Unit Short Haul Truck	55	0.00E+00	9.61E-06	3.90E-07	8.95E+00	6.44E-06	1.62E-02	1.04E-05	3.83E-03	8.68E-04	1.59E-04	1.30E-03	2.47E-04	2.52E-04	9.09E-04	3.64E-05	1.47E-08	1.04E-03	7.16E-04
53	E76	70	Single Unit Long Haul Truck	2	0.00E+00	4.18E-07	1.68E-08	3.79E-01	2.77E-07	6.81E-04	4.55E-07	1.65E-04	3.97E-05	7.12E-06	5.65E-05	1.07E-05	1.09E-05	3.83E-05	1.54E-06	6.19E-10	4.56E-05	3.08E-05
53	E76	70	Combination Short Haul Truck	72	0.00E+00	1.86E-05	1.38E-06	2.51E+01	4.72E-08	2.68E-02	1.32E-05	2.78E-02	2.62E-03	4.37E-04	1.11E-03	4.03E-04	4.18E-04	3.99E-03	8.39E-05	0.00E+00	6.97E-04	5.24E-03
53	E76	70	Combination Long Haul Truck	66	0.00E+00	2.55E-05	1.45E-06	2.36E+01	1.60E-07	3.20E-02	2.09E-05	2.98E-02	2.73E-03	4.11E-04	2.32E-03	4.66E-04	4.85E-04	3.78E-03	7.90E-05	0.00E+00	1.83E-03	5.61E-03
53	E77	70	Passenger Car	819	0.00E+00	8.75E-06	9.51E-07	3.58E+01	6.21E-05	1.68E-01	1.97E-05	8.43E-04	6.21E-03	9.72E-04	1.92E-03	1.24E-03	1.27E-03	1.39E-04	1.82E-04	3.77E-08	6.51E-04	1.31E-04
53	E77	70	Passenger Truck	1371	0.00E+00	1.83E-05	1.94E-06	8.06E+01	1.17E-04	2.97E-01	3.84E-05	2.38E-03	1.11E-02	1.72E-03	3.67E-03	2.39E-03	2.45E-03	6.04E-04	4.05E-04	7.10E-08	1.23E-03	3.99E-04
53	E77	70	Single Unit Short Haul Truck	42	0.00E+00	7.42E-06	3.01E-07	6.91E+00	4.97E-06	1.25E-02	8.07E-06	2.95E-03	6.70E-04	1.23E-04	1.00E-03	1.90E-04	1.94E-04	7.02E-04	2.81E-05	1.13E-08	8.06E-04	5.52E-04
53	E77	70	Single Unit Long Haul Truck	2	0.00E+00	3.23E-07	1.30E-08	2.93E-01	2.14E-07	5.26E-04	3.51E-07	1.27E-04	3.07E-05	5.50E-06	4.36E-05	8.23E-06	8.39E-06	2.96E-05	1.19E-06	4.78E-10	3.52E-05	2.38E-05
53	E77	70	Combination Short Haul Truck	46	0.00E+00	1.18E-05	8.81E-07	1.60E+01	3.01E-08	1.71E-02	8.44E-06	1.77E-02	1.67E-03	2.78E-04	7.11E-04	2.57E-04	2.66E-04	2.54E-03	5.35E-05	0.00E+00	4.44E-04	3.34E-03
53	E77	70	Combination Long Haul Truck	42	0.00E+00	1.62E-05	9.24E-07	1.50E+01	1.02E-07	2.04E-02	1.34E-05	1.90E-02	1.74E-03	2.62E-04	1.48E-03	2.97E-04	3.09E-04	2.41E-03	5.03E-05	0.00E+00	1.17E-03	3.58E-03
53	E78	70	Passenger Car	1386	0.00E+00	1.48E-05	1.61E-06	6.05E+01	1.05E-04	2.85E-01	3.34E-05	1.43E-03	1.05E-02	1.65E-03	3.26E-03	2.10E-03	2.16E-03	2.35E-04	3.07E-04	6.38E-08	1.10E-03	2.22E-04
53	E78	70	Passenger Truck	2321	0.00E+00	3.09E-05	3.29E-06	1.36E+02	1.99E-04	5.03E-01	6.50E-05	4.03E-03	1.88E-02	2.92E-03	6.22E-03	4.04E-03	4.14E-03	1.02E-03	6.86E-04	1.20E-07	2.08E-03	6.75E-04
53	E78	70	Single Unit Short Haul Truck	57	0.00E+00	9.95E-06	4.04E-07	9.26E+00	6.67E-06	1.68E-02	1.08E-05	3.96E-03	8.98E-04	1.65E-04	1.34E-03	2.55E-04	2.60E-04	9.41E-04	3.77E-05	1.52E-08	1.08E-03	7.41E-04
53	E78	70	Single Unit Long Haul Truck	2	0.00E+00	4.33E-07	1.74E-08	3.92E-01	2.87E-07	7.05E-04	4.71E-07	1.70E-04	4.11E-05	7.37E-06	5.85E-05	1.10E-05	1.13E-05	3.97E-05	1.60E-06	6.41E-10	4.72E-05	3.19E-05
53	E78	70	Combination Short Haul Truck	78	0.00E+00	2.01E-05	1.49E-06	2.71E+01	5.09E-08	2.90E-02	1.43E-05	3.00E-02	2.83E-03	4.72E-04	1.20E-03	4.35E-04	4.51E-04	4.31E-03	9.06E-05	0.00E+00	7.52E-04	5.66E-03
53	E78	70	Combination Long Haul Truck	71	0.00E+00	2.75E-05	1.56E-06	2.54E+01	1.72E-07	3.46E-02	2.26E-05	3.22E-02	2.94E-03	4.43E-04	2.50E-03	5.03E-04	5.24E-04	4.08E-03	8.53E-05	0.00E+00	1.98E-03	6.06E-03
53	E79	70	Passenger Car	775	0.00E+00	8.28E-06	9.00E-07	3.38E+01	5.88E-05	1.59E-01	1.87E-05	7.97E-04	5.88E-03	9.20E-04	1.82E-03	1.17E-03	1.20E-03	1.32E-04	1.72E-04	3.57E-08	6.16E-04	1.24E-04
53	E79	70	Passenger Truck	1297	0.00E+00	1.73E-05	1.84E-06	7.62E+01	1.11E-04	2.81E-01	3.63E-05	2.25E-03	1.05E-02	1.63E-03	3.48E-03	2.26E-03	2.31E-03	5.72E-04	3.83E-04	6.72E-08	1.16E-03	3.77E-04
53	E79	70	Single Unit Short Haul Truck	59	0.00E+00	1.05E-05	4.25E-07	9.73E+00	7.00E-06	1.76E-02	1.14E-05	4.16E-03	9.44E-04	1.73E-04	1.41E-03	2.68E-04	2.74E-04	9.89E-04	3.96E-05	1.60E-08	1.14E-03	7.79E-04
53	E79	70	Single Unit Long Haul Truck	3	0.00E+00	4.55E-07	1.83E-08	4.12E-01	3.01E-07	7.41E-04	4.95E-07	1.79E-04	4.32E-05	7.74E-06	6.15E-05	1.16E-05	1.18E-05	4.17E-05	1.68E-06	6.73E-10	4.96E-05	3.35E-05
53	E79	70	Combination Short Haul Truck	20	0.00E+00	5.12E-06	3.81E-07	6.91E+00	1.30E-08	7.39E-03	3.64E-06	7.66E-03	7.21E-04	1.20E-04	3.07E-04	1.11E-04	1.15E-04	1.10E-03	2.31E-05	0.00E+00	1.92E-04	1.44E-03
53	E79	70	Combination Long Haul Truck	18	0.00E+00	7.02E-06	3.99E-07	6.49E+00	4.40E-08	8.82E-03	5.77E-06	8.20E-03	7.51E-04	1.13E-04	6.38E-04	1.28E-04	1.34E-04	1.04E-03	2.17E-05	0.00E+00	5.04E-04	1.54E-03
53	E80	70	Passenger Car	1281	0.00E+00	1.37E-05	1.49E-06	5.60E+01	9.72E-05	2.63E-01	3.09E-05	1.32E-03	9.72E-03	1.52E-03	3.01E-03	1.94E-03	1.99E-03	2.18E-04	2.84E-04	5.90E-08	1.02E-03	2.06E-04
53	E80	70	Passenger Truck	2146	0.00E+00	2.86E-05	3.04E-06	1.26E+02	1.84E-04	4.65E-01	6.01E-05	3.72E-03	1.74E-02	2.70E-03	5.75E-03	3.73E-03	3.83E-03	9.46E-04	6.34E-04	1.11E-07	1.92E-03	6.24E-04
53	E80	70	Single Unit Short Haul Truck	41	0.00E+00	7.25E-06	2.94E-07	6.75E+00	4.86E-06	1.22E-02	7.88E-06	2.89E-03	6.55E-04	1.20E-04	9.77E-04	1.86E-04	1.90E-04	6.86E-04	2.74E-05	1.11E-08	7.87E-04	5.40E-04
53	E80	70	Single Unit Long Haul Truck	2	0.00E+00	3.15E-07	1.27E-08	2.86E-01	2.09E-07	5.14E-04	3.43E-07	1.24E-04	3.00E-05	5.37E-06	4.26E-05	8.04E-06	8.20E-06	2.89E-05	1.17E-06	4.67E-10	3.44E-05	2.32E-05
53	E80	70	Combination Short Haul Truck	26	0.00E+00	6.73E-06	5.01E-07	9.09E+00	1.71E-08	9.72E-03	4.80E-06	1.01E-02	9.49E-04	1.58E-04	4.04E-04	1.46E-04	1.51E-04	1.45E-03	3.04E-05	0.00E+00	2.52E-04	1.90E-03
53	E80	70	Combination Long Haul Truck	24	0.00E+00	9.23E-06	5.25E-07	8.54E+00	5.79E-08	1.16E-02	7.59E-06	1.08E-02	9.88E-04	1.49E-04	8.39E-04	1.69E-04	1.76E-04	1.37E-03	2.86E-05	0.00E+00	6.63E-04	2.03E-03
10	E83	70	Passenger Car	307	0.00E+00	3.39E-06	3.68E-07	1.33E+01	2.40E-05	6.57E-02	7.64E-06	3.11E-04	2.37E-03	3.69E-04	7.45E-04	4.80E-04	4.93E-04	5.22E-05	6.74E-05	1.40E-08	2.52E-04	4.85E-05
10	E83	70	Passenger Truck	515	0.00E+00	7.13E-06	7.58E-07	2.99E+01	4.57E-05	1.16E-01	1.50E-05	9.04E-04	4.29E-03	6.63E-04	1.43E-03	9.29E-04	9.52E-04	2.28E-04	1.50E-04	2.69E-08	4.78E-04	1.52E-04
10	E83	70	Single Unit Short Haul Truck	9	0.00E+00	1.52E-06	6.16E-08	1.41E+00	1.02E-06	2.56E-03	1.65E-06	6.04E-04	1.37E-04	2.51E-05	2.04E-04	3.90E-05	3.97E-05	1.44E-04	5.75E-06	2.32E-09	1.65E-04	1.13E-04
10	E83	70	Combination Short Haul Truck	9	0.00E+00	2.29E-06	1.70E-07	3.09E+00	5.81E-09	3.31E-03	1.63E-06	3.43E-03	3.23E-04	5.38E-05	1.37E-04	4.96E-05	5.15E-05	4.91E-04	1.03E-05	0.00E+00	8.58E-05	6.46E-04
10	E83	70	Combination Long Haul Truck	8	0.00E+00	3.14E-06	1.78E-07	2.90E+00	1.97E-08	3.94E-03	2.58E-06	3.67E-03	3.36E-04	5.06E-05	2.85E-04	5.74E-05	5.97E-05	4.66E-04	9.73E-06	0.00E+00	2.26E-04	6.91E-04
10	E84	70	Passenger Car	330	0.00E+00	3.64E-06	3.95E-07	1.42E+01	2.58E-05	7.05E-02	8.20E-06	3.33E-04	2.54E-03	3.96E-04	7.99E-04	5.15E-04	5.29E-04	5.60E-05	7.23E-05	1.50E-08	2.70E-04	5.20E-05
10	E84	70	Passenger Truck	552	0.00E+00	7.66E-06	8.14E-07	3.21E+01	4.90E-05	1.25E-01	1.60E-05	9.70E-04	4.60E-03	7.12E-04	1.53E-03	9.97E-04	1.02E-03	2.45E-04	1.61E-04	2.89E-08	5.13E-04	1.63E-04
10	E84	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	E84	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
10	E84	70	Combination Short Haul Truck	10	0.00E+00	2.56E-06	1.90E-07	3.46E+00	6.50E-09	3.69E-03	1.82E-06	3.83E-03	3.60E-04	6.01E-05	1.53E-04	5.54E-05	5.75E-05	5.49E-04	1.16E-05	0.00E+00	9.59E-05	7.21E-04
10	E84	70	Combination Long Haul Truck	9	0.00E+00	3.51E-06	1.99E-07	3.24E+00	2.20E-08	4.41E-03	2.88E-06	4.10E-03	3.75E-04	5.65E-05	3.19E-04	6.41E-05	6.68E-05	5.21E-04	1.09E-05	0.00E+00	2.52E-04	7.72E-04
9	E85	60	Passenger Car	1178	0.00E+00	1.49E-05	1.62E-06	5.32E+01	1.06E-04	2.88E-01	3.36E-05	1.21E-03	1.19E-02	1.78E-03	3.28E-03	2.11E-03	2.17E-03	2.34E-04	2.69E-04	5.66E-08	1.11E-03	1.89E-04
9	E85	60	Passenger Truck	1974	0.00E+00	3.16E-05	3.35E-06	1.19E+02	2.00E-04	4.93E-01	6.57E-05	3.77E-03	2.17E-02	3.24E-03	6.26E-03	4.07E-03	4.17E-03	9.56E-04	5.95E-04	1.10E-07	2.09E-03	6.39E-04
9	E85	60	Single Unit Short Haul Truck	35	0.00E+00	7.91E-06	3.27E-07	5.90E+00	5.24E-06	1.04E-02	8.56E-06	3.04E-03	8.15E-04	1.37E-04	1.06E-03	2.03E-04	2.07E-04	5.97E-04	2.40E-05	9.90E-09	8.48E

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source D	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E90	60	Combination Short Haul Truck	3	0.00E+00	9.16E-07	6.73E-08	1.11E+00	2.51E-09	1.37E-03	6.58E-07	1.40E-03	1.60E-04	2.50E-05	5.64E-05	1.97E-05	2.04E-05	1.76E-04	3.70E-06	0.00E+00	3.60E-05	2.64E-04
9	E90	60	Combination Long Haul Truck	3	0.00E+00	1.26E-06	6.87E-08	1.04E+00	8.49E-09	1.64E-03	1.05E-06	1.49E-03	1.68E-04	2.42E-05	1.19E-04	2.25E-05	2.34E-05	1.68E-04	3.50E-06	0.00E+00	9.60E-05	2.81E-04
9	E91	60	Passenger Car	4	0.00E+00	4.73E-08	5.14E-09	1.69E-01	3.36E-07	9.12E-04	1.07E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.88E-06	7.41E-07	8.55E-07	1.80E-10	3.52E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.99E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.62E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.73E-08	5.14E-09	1.69E-01	3.36E-07	9.12E-04	1.07E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.88E-06	7.41E-07	8.55E-07	1.80E-10	3.52E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.99E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.62E-06	2.03E-06
9	E93	60	Passenger Car	184	0.00E+00	2.33E-06	2.53E-07	8.32E+00	1.65E-05	4.50E-02	5.26E-06	1.90E-04	1.86E-03	2.79E-04	5.13E-04	3.31E-04	3.39E-04	3.65E-05	4.21E-05	8.85E-09	1.73E-04	2.96E-05
9	E93	60	Passenger Truck	309	0.00E+00	4.95E-06	5.25E-07	1.86E+01	3.12E-05	7.71E-02	1.03E-05	5.90E-04	3.40E-03	5.06E-04	9.79E-04	6.37E-04	6.53E-04	1.50E-04	9.30E-05	1.73E-08	3.26E-04	1.00E-04
9	E93	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	E93	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.87E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.52E-04
9	E93	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.99E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.75E-04
9	E94	60	Passenger Car	235	0.00E+00	2.97E-06	3.23E-07	1.06E+01	2.11E-05	5.74E-02	6.71E-06	2.42E-04	2.37E-03	3.56E-04	6.54E-04	4.22E-04	4.33E-04	4.66E-05	5.38E-05	1.13E-08	2.21E-04	3.78E-05
9	E94	60	Passenger Truck	394	0.00E+00	6.32E-06	6.69E-07	2.37E+01	3.98E-05	9.83E-02	1.31E-05	7.53E-04	4.34E-03	6.46E-04	1.25E-03	8.13E-04	8.33E-04	1.91E-04	1.19E-04	2.20E-08	4.16E-04	1.28E-04
9	E94	60	Single Unit Short Haul Truck	3	0.00E+00	6.42E-07	2.65E-08	4.78E-01	4.25E-07	8.41E-04	6.94E-07	2.46E-04	6.61E-05	1.11E-05	8.56E-05	1.65E-05	1.68E-05	4.84E-05	1.95E-06	8.03E-10	6.88E-05	4.61E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
54	E95	80	Passenger Car	314	0.00E+00	3.15E-06	3.42E-07	1.33E+01	2.23E-05	6.14E-02	7.09E-06	3.27E-04	1.80E-03	2.96E-04	6.92E-04	4.46E-04	4.58E-04	4.67E-05	6.74E-05	1.40E-08	2.34E-04	5.11E-05
54	E95	80	Passenger Truck	526	0.00E+00	6.54E-06	6.97E-07	3.01E+01	4.26E-05	1.12E-01	1.39E-05	8.80E-04	3.22E-03	5.27E-04	1.33E-03	8.64E-04	8.85E-04	2.16E-04	1.52E-04	2.69E-08	4.46E-04	1.46E-04
54	E95	80	Single Unit Short Haul Truck	57	0.00E+00	7.75E-06	3.03E-07	9.26E+00	5.26E-06	1.68E-02	8.52E-06	3.23E-03	6.35E-04	1.30E-04	1.07E-03	1.98E-04	2.02E-04	9.42E-04	3.76E-05	1.49E-08	8.66E-04	6.03E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.30E-08	3.91E-01	2.24E-07	7.01E-04	3.70E-07	1.38E-04	2.91E-05	5.76E-06	4.66E-05	8.49E-06	8.66E-06	3.96E-05	1.59E-06	6.22E-10	3.79E-05	2.58E-05
54	E95	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.14E-03
54	E95	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
54	E96	80	Passenger Car	774	0.00E+00	7.76E-06	8.43E-07	3.27E+01	5.50E-05	1.51E-01	1.75E-05	8.07E-04	4.44E-03	7.31E-04	1.71E-03	1.10E-03	1.13E-03	1.15E-04	1.66E-04	3.44E-08	5.77E-04	1.26E-04
54	E96	80	Passenger Truck	1297	0.00E+00	1.61E-05	1.72E-06	7.42E+01	1.05E-04	2.76E-01	3.42E-05	2.17E-03	7.93E-03	1.30E-03	3.28E-03	2.13E-03	2.18E-03	5.32E-04	3.74E-04	6.63E-08	1.10E-03	3.61E-04
54	E96	80	Single Unit Short Haul Truck	82	0.00E+00	1.13E-05	4.41E-07	1.35E+01	7.66E-06	2.45E-02	1.24E-05	4.70E-03	9.25E-04	1.89E-04	1.56E-03	2.88E-04	2.94E-04	1.37E-03	5.49E-05	2.17E-08	1.26E-03	8.79E-04
54	E96	80	Single Unit Long Haul Truck	4	0.00E+00	4.91E-07	1.89E-08	5.71E-01	3.26E-07	1.02E-03	5.40E-07	2.01E-04	4.24E-05	8.40E-06	6.79E-05	1.24E-05	1.26E-05	5.77E-05	2.32E-06	9.06E-10	5.53E-05	3.75E-05
54	E96	80	Combination Short Haul Truck	74	0.00E+00	1.53E-05	1.13E-06	2.49E+01	4.01E-08	2.33E-02	1.09E-05	2.37E-02	1.77E-03	3.21E-04	9.28E-04	3.31E-04	3.43E-04	3.96E-03	8.33E-05	0.00E+00	5.85E-04	4.46E-03
54	E96	80	Combination Long Haul Truck	68	0.00E+00	2.13E-05	1.20E-06	2.31E+01	1.36E-07	2.76E-02	1.76E-05	2.53E-02	1.83E-03	2.93E-04	1.95E-03	3.88E-04	4.04E-04	3.71E-03	7.74E-05	0.00E+00	1.55E-03	4.77E-03
54	E97	80	Passenger Car	314	0.00E+00	3.15E-06	3.42E-07	1.33E+01	2.23E-05	6.14E-02	7.09E-06	3.27E-04	1.80E-03	2.96E-04	6.92E-04	4.46E-04	4.58E-04	4.67E-05	6.74E-05	1.40E-08	2.34E-04	5.11E-05
54	E97	80	Passenger Truck	526	0.00E+00	6.54E-06	6.97E-07	3.01E+01	4.26E-05	1.12E-01	1.39E-05	8.80E-04	3.22E-03	5.27E-04	1.33E-03	8.64E-04	8.85E-04	2.16E-04	1.52E-04	2.69E-08	4.46E-04	1.46E-04
54	E97	80	Single Unit Short Haul Truck	57	0.00E+00	7.75E-06	3.03E-07	9.26E+00	5.26E-06	1.68E-02	8.52E-06	3.23E-03	6.35E-04	1.30E-04	1.07E-03	1.98E-04	2.02E-04	9.42E-04	3.76E-05	1.49E-08	8.66E-04	6.03E-04
54	E97	80	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.30E-08	3.91E-01	2.24E-07	7.01E-04	3.70E-07	1.38E-04	2.91E-05	5.76E-06	4.66E-05	8.49E-06	8.66E-06	3.96E-05	1.59E-06	6.22E-10	3.79E-05	2.58E-05
54	E97	80	Combination Short Haul Truck	36	0.00E+00	7.33E-06	5.43E-07	1.19E+01	1.92E-08	1.12E-02	5.24E-06	1.13E-02	8.49E-04	1.54E-04	4.45E-04	1.58E-04	1.64E-04	1.90E-03	3.99E-05	0.00E+00	2.80E-04	2.14E-03
54	E97	80	Combination Long Haul Truck	32	0.00E+00	1.02E-05	5.76E-07	1.11E+01	6.49E-08	1.32E-02	8.42E-06	1.21E-02	8.77E-04	1.40E-04	9.36E-04	1.86E-04	1.94E-04	1.78E-03	3.71E-05	0.00E+00	7.42E-04	2.28E-03
54	E98	80	Passenger Car	774	0.00E+00	7.76E-06	8.43E-07	3.27E+01	5.50E-05	1.51E-01	1.75E-05	8.07E-04	4.44E-03	7.31E-04	1.71E-03	1.10E-03	1.13E-03	1.15E-04	1.66E-04	3.44E-08	5.77E-04	1.26E-04
54	E98	80	Passenger Truck	1297	0.00E+00	1.61E-05	1.72E-06	7.42E+01	1.05E-04	2.76E-01	3.42E-05	2.17E-03	7.93E-03	1.30E-03	3.28E-03	2.13E-03	2.18E-03	5.32E-04	3.74E-04	6.63E-08	1.10E-03	3.61E-04
54	E98	80	Single Unit Short Haul Truck	82	0.00E+00	1.13E-05	4.41E-07	1.35E+01	7.66E-06	2.45E-02	1.24E-05	4.70E-03	9.25E-04	1.89E-04	1.56E-03	2.88E-04	2.94E-04	1.37E-03	5.49E-05	2.17E-08	1.26E-03	8.79E-04
54	E98	80	Single Unit Long Haul Truck	4	0.00E+00	4.91E-07	1.89E-08	5.71E-01	3.26E-07	1.02E-03	5.40E-07	2.01E-04	4.24E-05	8.40E-06	6.79E-05	1.24E-05	1.26E-05	5.77E-05	2.32E-06	9.06E-10	5.53E-05	3.75E-05
54	E98	80	Combination Short Haul Truck	74	0.00E+00	1.53E-05	1.13E-06	2.49E+01	4.01E-08	2.33E-02	1.09E-05	2.37E-02	1.77E-03	3.21E-04	9.28E-04	3.31E-04	3.43E-04	3.96E-03	8.33E-05	0.00E+00	5.85E-04	4.46E-03
54	E98	80	Combination Long Haul Truck	68	0.00E+00	2.13E-05	1.20E-06	2.31E+01	1.36E-07	2.76E-02	1.76E-05	2.53E-02	1.83E-03	2.93E-04	1.95E-03	3.88E-04	4.04E-04	3.71E-03	7.74E-05	0.00E+00	1.55E-03	4.77E-03
9	F01	60	Passenger Car	343	0.00E+00	4.34E-06	4.72E-07	1.55E+01	3.08E-05	8.38E-02	9.79E-06	3.53E-04	3.47E-03	5.19E-04	9.55E-04	6.15E-04	6.32E-04	6.80E-05	7.85E-05	1.65E-08	3.23E-04	5.51E-05
9	F01	60	Passenger Truck	575	0.00E+00	9.22E-06	9.77E-07	3.45E+01	5.81E-05	1.44E-01	1.91E-05	1.10E-03	6.33E-03	9.43E-04	1.82E-03	1.19E-03	1.22E-03	2.78E-04	1.73E-04	3.21E-08	6.08E-04	1.86E-04
9	F01	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
9	F01	60	Combination Short Haul Truck	10	0.00E+00	3.05E-06	2.24E-07	3.68E+00	8.36E-09	4.56E-03	2.19E-06	4.67E-03	5.33E-04	8.33E-05	1.88E-04	6.56E-05	6.81E-05	5.86E-04	1.23E-05	0.00E+00	1.20E-04	8.79E-04
9	F01	60	Combination Long Haul Truck	10	0.00E+00	4.20E-06	2.29E-07	3.48E+00	2.83E-08	5.48E-03	3.51E-06	4.97E-03	5.59E-04	8.08E-05	3.98E-04	7.48E-05	7.80E-05	5.59E-04	1.17E-05	0.00E+00	3.20E-04	9.36E-04
9	F02	60	Passenger Car	313	0.00E+00	3.96E-06	4.30E-07	1.41E+01	2.81E-05	7.64E-02	8.92E-06	3.22E-04	3.16E-03	4.73E-04	8.70E-04	5.61E-04	5.76E-04	6.20E-05	7.15E-05	1.50E-08	2.94E-04	5.03E-05
9	F02	60	Passenger Truck	524	0.00E+00	8.40E-06	8.91E-07	3.15E+01	5.30E-05	1.31E-01	1.74E-05	1.00E-03	5.77E-03	8.59E-04	1.66E-03	1.08E-03	1.11E-03	2.54E-04	1.58E-04	2.93E-08	5.54E-04	1.70E-04
9	F02	60	Single Unit Short Haul Truck	23	0.00E+00	5.13E-06	2.12E-07	3.82E+00	3.40E-06	6.73E-03	5.55E-06	1.97E-03	5.29E-04	8.89E-05	6.85E-04	1.32E-04	1.35E-04	3.88E-04	1.56E-05	6.42E-09	5.50E-04	3.69E-04
9	F02	60	Single Unit Long Haul Truck	1	0.00E+00	2.24E-07	9.21E-09	1.63E-01	1.47E-07	2.86E-04	2.42E-07	8.53E-05	2.38E-05	3.94E-06	2.99E-05	5.73E-06	5.85E-06	1.65E-05	6.65E-07	2.73E-10	2.41E-05	1.60E-05
9	F02	60	Combination Short Haul Truck	15	0.00E+00	4.27E-06	3.14E-07	5.16E+00	1.17E-08	6.39E-03	3.07E-06	6.53E-03	7.46E-04	1.17E-04	2.63E-04	9.18E-05	9.54E-05	8.20E-04	1.72E-05	0.00E+00	1.68E-04	1.23E-03
9	F02	60	Combination Long Haul Truck	13	0.00E+00	5.87E-06	3.21E-07	4.87E+00	3.96E-08	7.67E-03	4.91E-06	6.96E-03	7.82E-04	1.13E-04	5.57E-04	1.05E-04	1.09E-04	7.82E-04	1.63E-05	0.00E+00	4.48E-04	1.31E-03
11	F03	80	Passenger Car	32	0.00E+00	3.30E-07	3.59E-08	1.35E+00	2.34E-06	6.57E-03	7.44E-07	3.33E-05	1.75E-04	2.93E-05	7.26E-05	4.68E-05	4.80E-05	4.78E-06	6.86E-06	1.47E-09	2.46E-05	5.20E-06
11	F03	80	Passenger Truck	54	0.00E+00	6.80E-07	7.25E-08	3.05E+00	4.42E-06	1.16E-02	1.44E-06	8.99E-05	3.12E-04	5.20E-05	1.38E-04	8.97E-05	9.19E-05	2.21E-05	1.53E-05	2.79E-09	4.63E-05	1.50E-05
11	F03	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.64E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.07E-05
11	F03	80	Combination Short Haul Truck	2	0.00E+00	3.23E-07	2.39E-08	5.26E-01	8.47E-10	4.93E-04	2.31E-07	5.00E-04	3.74E-05	6.78E-06	1.96E-05	6.98E-06	7.25E-06	8.36E-05	1.76E-06	0.00E+00	1.24E-05	9.42E-05
11	F03	80	Combination Long Haul Truck	1	0.00E+00	4.51E-07	2.54E-08	4.88E-01	2.87E-09	5.84E-04	3.72E-07	5.35E-04	3.87E-05	6.19E-06	4.13E-05	8.20E-06	8.54E-06	7.84E-05	1.64E-06	0.00E+00	3.27E-05	1.01E-04
11	F04	80	Passenger Car	141	0.00E+00	1.45E-06	1.58E-07	5.93E+00	1.03E-05	2.89E-02	3.27E-06	1.47E-04	7.70E-04	1.29E-04	3.19E-04	2.06E-04	2.11E-04	2.10E-05	3.02E-05	6.44E-09	1.08E-04	2.29E-05
11	F04	80	Passenger Truck	237	0.00E+00	2.99E-06	3.19E-07	1.34E+01	1.94E-05	5.10E-02	6.33E-06	3.95E-04	1.37E-03	2.28E-04	6.08E-04	3.94E-04	4.04E-04	9.72E-05	6.74E-05	1.23E-08	2.04E-04	6.58E-05
11	F04	80	Single Unit Short Haul Truck	13	0.00E+00	1.84E-06	7.18E-08	2.20E+00	1.25E-06	3.99E-03	2.02E-06	7.65E-04	1.51E-04	3.08E-05	2.53E-04	4.69E-05	4.78E-05	2.24E-04	8.93E-06	3.54E-09	2.06E-04	1.43E-04
11	F04	80	Single Unit Long Haul Truck	1	0.00E+00	7.99E-08	3.08E-09	9.29E-02	5.31E-08	1.66E-04	8.78E-08	3.27E-05	6.91E-06	1.37E-06	1.10E-05	2.01E-06	2.05E-06	9.39E-06	3.78E-07	1.48E-10	8.99E-06	6.11E-06
11	F04	80	Combination Short Haul Truck	6	0.00E+00	1.29E-06	9.58E-08	2.10E+00	3.39E-09	1.97E-03	9.25E-07	2.00E-03	1.50E-04	2.71E-05	7.84E-05	2.79E-05	2.90E-05	3.34E-04	7.04E-06	0.00E+00	4.94E-05	3.77E-04
11	F04	80	Combination Long Haul Truck	6	0.00E+00	1.80E-06	1.02E-07	1.95E+00	1.15E-08	2.33E-03	1.49E-06	2.14E-03	1.55E-04	2.48E-05	1.65E-04	3.28E-05	3.42E-05	3.13E-04	6.54E-06	0.00E+00	1.31E-04	4.03E-04
9	F05	60	Passenger Car	346	0.00E+00	4.37E-06	4.75E-07	1.56E+01	3.10E-05	8.44E-02	9.86E-06	3.56E-04	3.49E-03	5.23E-04	9.62E-04	6.20E-04	6.36E-04	6.86E-05	7.91E-05	1.66E-08	3.25E-04	5.55E-05
9	F05	60	Passenger Truck	579	0.00E+00	9.29E-06	9.84E-07	3.48E+01	5.86E-05	1.45E-01	1.93E-05	1.11E-03	6.38E-03	9.50E-04	1.84E-03	1.19E-03	1.22E-03	2.81E-04	1.75E-04	3.24E-08	6.12E-04	1.88E-04
9	F05	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	F05	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.11E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	F05	60	Combination Short Haul Truck	16	0.00E+00	4.73E-06	3.48E-07	5.71E+00	1.30E-08	7.07E-03	3.40E-06	7.23E-03	8.26E-04	1.29E-04	2.92E-04	1.02E-04	1.06E-04	9.08E-04	1.91E-05	0.00E+00	1.86E-04	1.36E-03
9	F05	60	Combination Long Haul Truck	15	0.00E+00	6.50E-06	3.55E-07	5.39E+00	4.39E-08	8.49E-03	5.44E-06	7.71E-03	8.66E-04	1.25E-04	6.17E-04	1.16E-04	1.21E-04	8.66E-04	1.81E-05	0.00E+00	4.96E-04	1.45E-03
9	F06	60	Passenger Car	173	0.00E+00	2.19E-06	2.38E-07	7.81E+00	1.55E-05	4.22E-02	4.94E-06	1.78E-04	1.75E-03	2.62E-04	4.81E-04	3.10E-04	3.19E-04	3.43E-05	3.96E-05	8.31E-09	1.63E-04	2.78E-05
9	F06	60	Passenger Truck	290	0.00E+00	4.65E-06	4.93E-07	1.74E+01	2.93E-05	7.24E-02	9.64E-06	5.54E-04	3.19E-03	4.75E-04	9.19E-04	5.98E-04	6.13E-04	1.40E-04	8.74E-05	1.62E-08	3.06E-04	9.39E-05
9	F06	60	Single Unit Short Haul Truck	24	0.00E+00	5.35E-06	2.21E-07	3.98E+00	3.54E-06	7.01E-03	5.78E-06	2.05E-03	5.51E-04	9.26E-05	7.13E-04	1.37E-04	1.40E-04	4.04E-04	1.62E-05	6.69E-09	5.73E-04	3.84E-04
9	F06	60	Single Unit Long Haul Truck	1	0.00E+00	2.33E-07	9.59E-09	1.70E-01	1.54E-07	2.97E-04	2.52E-07	8.89E-05	2.47E-05	4.11E-06	3.12E-05	5.97E-06	6.09E-06	1.72E-05	6.93E-07	2.85E-10	2.51E-05	1.66E-05
9	F06	60	Combination Short Haul Truck	16	0.00E+00	4.58E-06	3.36E-07	5.53E+00	1.25E-08	6.84E-03	3.29E-06	7.00E-03	7.99E-04	1.25E-04	2.82E-04	9.84E-05	1.02E-04	8.78E-04	1.85E-05	0.00E+00	1.80E-04	1.32E-03
9	F06	60	Combination Long Haul Truck	14	0.00E+00	6.29E-06	3.44E-07	5.22E+00	4.25E-08	8.22E-03	5.26E-06	7.46E-03	8.38E-04	1.21E-04	5.97E-04	1.12E-04	1.17E-04	8.38E-04	1.75E-05	0.00E+00	4.80E-04	1.40E-03
9	F07	60	Passenger Car	438	0.00E+00	5.54E-06	6.02E-07	1.98E+01	3.93E-05	1.07E-01	1.25E-05	4.51E-04	4.42E-03	6.62E-04	1.22E-03	7.85E-04	8.06E-04	8.68E-05	1.00E-04	2.10E-08	4.12E-04	7.03E-05
9	F07	60	Passenger Truck	733	0.00E+00	1.18E-05	1.25E-06	4.41E+01	7.42E-05	1.83E-01	2.44E-05	1.40E-03	8.08E-03	1.20E-03	2.33E-03	1.51E-03	1.55E-03	3.55E-04	2.21E-04	4.10E-08	7.75E-04	2.38E-04
9	F07	60	Single Unit Short Haul Truck	31	0.00E+00	6.84E-06	2.83E-07	5.10E+00	4.53E-06	8.97E-03	7.40E-06	2.63E-03	7.05E-04	1.18E-04	9.13E-04	1.76E-04	1.79E-04	5.17E-04	2.08E-05	8.56E-09	7.34E-04	4.92E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	2.99E-07	1.23E-08	2.17E-01	1.97E-07	3.81E-04	3.23E-07	1.14E-04	3.17E-05	5.26E-06	3.99E-05	7.64E-06	7.79E-06	2.20E-05	8.87E-07	3.64E-10	3.21E-05	2.13E-05
9	F07	60	Combination Short Haul Truck	17	0.00E+00	5.04E-06	3.70E-07	6.08E+00	1.38E-08	7.53E-03	3.62E-06	7.70E-03	8.79E-04	1.37E-04	3.10E-04	1.08E-04	1.12E-04	9.66E-04	2.03E-05	0.00E+00	1.98E-04	1.45E-03
9	F07	60	Combination Long Haul Truck	16	0.00E+00	6.92E-06	3.78E-07	5.74E+00	4.67E-08	9.04E-03	5.79E-06	8.20E-03	9.22E-04	1.33E-04	6.57E-04	1.23E-04	1.29E-04	9.22E-04	1.92E-05	0.00E+00	5.28E-04	1.55E-03
9	F08	60	Passenger Car	407	0.00E+00	5.15E-06	5.60E-07	1.84E+01	3.65E-05	9.94E-02	1.16E-05	4.19E-04	4.11E-03	6.16E-04	1.13E-03	7.30E-04	7.49E-04	8.07E-05	9.31E-05	1.95E-08	3.83E-04	6.54E-05
9	F08	60	Passenger Truck	682	0.00E+00	1.09E-05	1.16E-06	4.10E+01	6.90E-05	1.70E-01	2.27E-05	1.30E-03	7.51E-03	1.12E-03	2.16E-03	1.41E-03	1.44E-03	3.30E-04	2.05E-04	3.81E-08	7.21E-04	2.21E-04
9	F08	60	Single Unit Short Haul Truck	41	0.00E+00	9.20E

MOVES LinkID	Source D	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F15	70	Passenger Truck	848	0.00E+00	1.18E-05	1.25E-06	4.92E+01	7.53E-05	1.91E-01	2.46E-05	1.49E-03	7.06E-03	1.09E-03	2.36E-03	1.53E-03	1.57E-03	3.76E-04	2.47E-04	4.43E-08	7.87E-04	2.50E-04
10	F15	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.75E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.26E-04
10	F15	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.51E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.41E-05
10	F15	70	Combination Short Haul Truck	28	0.00E+00	7.27E-06	5.41E-07	9.82E+00	1.85E-08	1.05E-02	5.18E-06	1.09E-02	1.02E-03	1.71E-04	4.36E-04	1.58E-04	1.64E-04	1.56E-03	3.28E-05	0.00E+00	2.73E-04	2.05E-03
10	F15	70	Combination Long Haul Truck	26	0.00E+00	9.97E-06	5.67E-07	9.22E+00	6.25E-08	1.25E-02	8.20E-06	1.17E-02	1.07E-03	1.61E-04	9.06E-04	1.82E-04	1.90E-04	1.48E-03	3.09E-05	0.00E+00	7.16E-04	2.19E-03
10	F16	70	Passenger Car	347	0.00E+00	3.82E-06	4.15E-07	1.50E+01	2.71E-05	7.41E-02	8.62E-06	3.51E-04	2.67E-03	4.16E-04	8.40E-04	5.42E-04	5.56E-04	5.89E-05	7.60E-05	1.58E-08	2.84E-04	5.47E-05
10	F16	70	Passenger Truck	580	0.00E+00	8.05E-06	8.55E-07	3.37E+01	5.15E-05	1.31E-01	1.69E-05	1.02E-03	4.83E-03	7.48E-04	1.61E-03	1.05E-03	1.07E-03	2.57E-04	1.69E-04	3.03E-08	5.39E-04	1.71E-04
10	F16	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.77E-04
10	F16	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.67E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
10	F16	70	Combination Short Haul Truck	25	0.00E+00	6.46E-06	4.81E-07	8.73E+00	1.64E-08	9.33E-03	4.60E-06	9.67E-03	9.11E-04	1.52E-04	3.88E-04	1.40E-04	1.45E-04	1.39E-03	2.92E-05	0.00E+00	2.42E-04	1.82E-03
10	F16	70	Combination Long Haul Truck	23	0.00E+00	8.86E-06	5.04E-07	8.20E+00	5.56E-08	1.11E-02	7.29E-06	1.04E-02	9.48E-04	1.43E-04	8.05E-04	1.62E-04	1.69E-04	1.32E-03	2.75E-05	0.00E+00	6.37E-04	1.95E-03
10	F17	70	Passenger Car	351	0.00E+00	3.87E-06	4.20E-07	1.51E+01	2.74E-05	7.50E-02	8.72E-06	3.55E-04	2.70E-03	4.21E-04	8.50E-04	5.48E-04	5.63E-04	5.96E-05	7.69E-05	1.60E-08	2.88E-04	5.53E-05
10	F17	70	Passenger Truck	587	0.00E+00	8.14E-06	8.65E-07	3.41E+01	5.21E-05	1.33E-01	1.71E-05	1.03E-03	4.89E-03	7.57E-04	1.63E-03	1.06E-03	1.09E-03	2.60E-04	1.71E-04	3.07E-08	5.45E-04	1.73E-04
10	F17	70	Single Unit Short Haul Truck	27	0.00E+00	4.72E-06	1.92E-07	4.39E+00	3.16E-06	7.97E-03	5.13E-06	1.88E-03	4.26E-04	7.82E-05	6.36E-04	1.21E-04	1.24E-04	4.46E-04	1.79E-05	7.22E-09	5.13E-04	3.52E-04
10	F17	70	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.27E-09	1.86E-01	1.36E-07	3.34E-04	2.23E-07	8.09E-05	1.95E-05	3.50E-06	2.78E-05	5.24E-06	5.34E-06	1.88E-05	7.59E-07	3.04E-10	2.24E-05	1.51E-05
10	F17	70	Combination Short Haul Truck	29	0.00E+00	7.54E-06	5.61E-07	1.02E+01	1.91E-08	1.09E-02	5.37E-06	1.13E-02	1.06E-03	1.77E-04	4.52E-04	1.63E-04	1.70E-04	1.62E-03	3.41E-05	0.00E+00	2.83E-04	2.13E-03
10	F17	70	Combination Long Haul Truck	27	0.00E+00	1.03E-05	5.88E-07	9.56E+00	6.48E-08	1.30E-02	8.50E-06	1.21E-02	1.11E-03	1.67E-04	9.40E-04	1.89E-04	1.97E-04	1.53E-03	3.20E-05	0.00E+00	7.43E-04	2.28E-03
10	F18	70	Passenger Car	306	0.00E+00	3.38E-06	3.67E-07	1.32E+01	2.40E-05	6.55E-02	7.61E-06	3.10E-04	2.36E-03	3.68E-04	7.42E-04	4.79E-04	4.91E-04	5.20E-05	6.71E-05	1.39E-08	2.51E-04	4.83E-05
10	F18	70	Passenger Truck	513	0.00E+00	7.11E-06	7.56E-07	2.98E+01	4.55E-05	1.16E-01	1.49E-05	9.01E-04	4.27E-03	6.61E-04	1.43E-03	9.26E-04	9.49E-04	2.27E-04	1.50E-04	2.68E-08	4.76E-04	1.51E-04
10	F18	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.77E-04
10	F18	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.67E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
10	F18	70	Combination Short Haul Truck	28	0.00E+00	7.13E-06	5.31E-07	9.64E+00	1.81E-08	1.03E-02	5.08E-06	1.07E-02	1.01E-03	1.68E-04	4.28E-04	1.55E-04	1.60E-04	1.53E-03	3.22E-05	0.00E+00	2.68E-04	2.01E-03
10	F18	70	Combination Long Haul Truck	25	0.00E+00	9.78E-06	5.56E-07	9.05E+00	6.13E-08	1.23E-02	8.04E-06	1.14E-02	1.05E-03	1.58E-04	8.89E-04	1.79E-04	1.86E-04	1.45E-03	3.03E-05	0.00E+00	7.03E-04	2.15E-03
10	F19	70	Passenger Car	385	0.00E+00	4.25E-06	4.61E-07	1.66E+01	3.01E-05	8.24E-02	9.57E-06	3.89E-04	2.97E-03	4.62E-04	9.34E-04	6.02E-04	6.18E-04	6.54E-05	8.44E-05	1.75E-08	3.16E-04	6.08E-05
10	F19	70	Passenger Truck	645	0.00E+00	8.94E-06	9.50E-07	3.74E+01	5.72E-05	1.46E-01	1.87E-05	1.13E-03	5.37E-03	8.31E-04	1.79E-03	1.16E-03	1.19E-03	2.86E-04	1.88E-04	3.37E-08	5.99E-04	1.90E-04
10	F20	70	Passenger Car	290	0.00E+00	3.19E-06	3.47E-07	1.25E+01	2.27E-05	6.20E-02	7.20E-06	2.93E-04	2.23E-03	3.48E-04	7.02E-04	4.53E-04	4.65E-04	4.92E-05	6.35E-05	1.32E-08	2.38E-04	4.57E-05
10	F20	70	Passenger Truck	485	0.00E+00	6.73E-06	7.15E-07	2.82E+01	4.31E-05	1.10E-01	1.41E-05	8.52E-04	4.04E-03	6.25E-04	1.35E-03	8.76E-04	8.98E-04	2.15E-04	1.42E-04	2.54E-08	4.51E-04	1.43E-04
10	F20	70	Single Unit Short Haul Truck	11	0.00E+00	1.85E-06	7.53E-08	1.73E+00	1.24E-06	3.13E-03	2.02E-06	7.38E-04	1.67E-04	3.07E-05	2.50E-04	4.76E-05	4.86E-05	1.75E-04	7.02E-06	2.83E-09	2.01E-04	1.38E-04
10	F20	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	F20	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	F21	70	Passenger Car	217	0.00E+00	2.39E-06	2.60E-07	9.38E+00	1.70E-05	4.65E-02	5.40E-06	2.20E-04	1.67E-03	2.61E-04	5.27E-04	3.40E-04	3.48E-04	3.69E-05	4.76E-05	9.89E-09	1.78E-04	3.43E-05
10	F21	70	Passenger Truck	364	0.00E+00	5.04E-06	5.36E-07	2.11E+01	3.23E-05	8.22E-02	1.06E-05	6.39E-04	3.03E-03	4.69E-04	1.01E-03	6.57E-04	6.73E-04	1.61E-04	1.06E-04	1.90E-08	3.38E-04	1.07E-04
10	F22	70	Passenger Car	103	0.00E+00	1.13E-06	1.23E-07	4.44E+00	8.04E-06	2.20E-02	2.56E-06	1.04E-04	7.92E-04	1.23E-04	2.49E-04	1.61E-04	1.65E-04	1.75E-05	2.25E-05	4.68E-09	8.43E-05	1.62E-05
10	F22	70	Passenger Truck	172	0.00E+00	2.39E-06	2.54E-07	1.00E+01	1.53E-05	3.89E-02	5.00E-06	3.02E-04	1.43E-03	2.22E-04	4.78E-04	3.11E-04	3.19E-04	7.63E-05	5.02E-05	9.00E-09	1.60E-04	5.08E-05
10	F22	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	F23	70	Passenger Car	72	0.00E+00	7.96E-07	8.64E-08	3.12E+00	5.65E-06	1.54E-02	1.79E-06	7.30E-05	5.56E-04	8.66E-05	1.75E-04	1.13E-04	1.16E-04	1.23E-05	1.58E-05	3.29E-09	5.92E-05	1.14E-05
10	F23	70	Passenger Truck	121	0.00E+00	1.68E-06	1.78E-07	7.02E+00	1.07E-05	2.73E-02	3.51E-06	2.12E-04	1.01E-03	1.56E-04	3.36E-04	2.18E-04	2.24E-04	5.36E-05	3.53E-05	6.32E-09	1.12E-04	3.56E-05
10	F23	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	F23	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	F23	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	F24	70	Passenger Car	76	0.00E+00	8.33E-07	9.05E-08	3.26E+00	5.91E-06	1.62E-02	1.88E-06	7.64E-05	5.82E-04	9.06E-05	1.83E-04	1.18E-04	1.21E-04	1.28E-05	1.66E-05	3.44E-09	6.19E-05	1.19E-05
10	F24	70	Passenger Truck	126	0.00E+00	1.75E-06	1.86E-07	7.34E+00	1.12E-05	2.86E-02	3.67E-06	2.22E-04	1.05E-03	1.63E-04	3.51E-04	2.28E-04	2.34E-04	5.61E-05	3.69E-05	6.61E-09	1.17E-04	3.73E-05
10	F24	70	Single Unit Short Haul Truck	6	0.00E+00	1.01E-06	4.11E-08	9.42E-01	6.78E-07	1.71E-03	1.10E-06	4.03E-04	9.13E-05	1.68E-05	1.36E-04	2.60E-05	2.65E-05	9.57E-05	3.83E-06	1.55E-09	1.10E-04	7.53E-05
10	F24	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	F24	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
9	F25	60	Passenger Car	332	0.00E+00	4.20E-06	4.56E-07	1.50E+01	2.98E-05	8.10E-02	9.47E-06	3.42E-04	3.35E-03	5.02E-04	9.23E-04	5.95E-04	6.11E-04	6.58E-05	7.59E-05	1.59E-08	3.12E-04	5.33E-05
9	F25	60	Passenger Truck	556	0.00E+00	8.92E-06	9.45E-07	3.34E+01	5.62E-05	1.39E-01	1.85E-05	1.06E-03	6.13E-03	9.12E-04	1.76E-03	1.15E-03	1.18E-03	2.69E-04	1.68E-04	3.11E-08	5.88E-04	1.80E-04
9	F25	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
9	F25	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.69E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.07E-05
9	F25	60	Combination Short Haul Truck	12	0.00E+00	3.51E-06	2.58E-07	4.24E+00	9.62E-09	5.25E-03	2.52E-06	5.37E-03	6.13E-04	9.58E-05	2.16E-04	7.54E-05	7.83E-05	6.73E-04	1.42E-05	0.00E+00	1.38E-04	1.01E-03
9	F25	60	Combination Long Haul Truck	11	0.00E+00	4.82E-06	2.64E-07	4.00E+00	3.26E-08	6.30E-03	4.03E-06	5.72E-03	6.43E-04	9.29E-05	4.58E-04	8.61E-05	8.97E-05	6.42E-04	1.34E-05	0.00E+00	3.68E-04	1.08E-03
9	F26	60	Passenger Car	192	0.00E+00	2.43E-06	2.64E-07	8.67E+00	1.72E-05	4.69E-02	5.48E-06	1.98E-04	1.94E-03	2.91E-04	5.34E-04	3.45E-04	3.54E-04	3.81E-05	4.39E-05	9.23E-09	1.81E-04	3.09E-05
9	F26	60	Passenger Truck	322	0.00E+00	5.16E-06	5.47E-07	1.93E+01	3.26E-05	8.03E-02	1.07E-05	6.15E-04	3.55E-03	5.28E-04	1.02E-03	6.64E-04	6.80E-04	1.56E-04	9.70E-05	1.80E-08	3.40E-04	1.04E-04
9	F26	60	Single Unit Short Haul Truck	22	0.00E+00	4.92E-06	2.03E-07	3.66E+00	3.26E-06	6.45E-03	5.32E-06	1.89E-03	5.07E-04	8.52E-05	6.56E-04	1.26E-04	1.29E-04	3.71E-04	1.49E-05	6.15E-09	5.27E-04	3.54E-04
9	F26	60	Single Unit Long Haul Truck	1	0.00E+00	2.15E-07	8.82E-09	1.56E-01	1.41E-07	2.74E-04	2.32E-07	8.18E-05	2.28E-05	3.78E-06	2.87E-05	5.49E-06	5.60E-06	1.58E-05	6.37E-07	2.62E-10	2.31E-05	1.53E-05
9	F26	60	Combination Short Haul Truck	17	0.00E+00	4.88E-06	3.59E-07	5.90E+00	1.34E-08	7.30E-03	3.51E-06	7.46E-03	8.53E-04	1.33E-04	3.01E-04	1.05E-04	1.09E-04	9.37E-04	1.97E-05	0.00E+00	1.92E-04	1.41E-03
9	F26	60	Combination Long Haul Truck	15	0.00E+00	6.71E-06	3.67E-07	5.57E+00	4.53E-08	8.77E-03	5.61E-06	7.96E-03	8.94E-04	1.29E-04	6.37E-04	1.20E-04	1.25E-04	8.94E-04	1.87E-05	0.00E+00	5.12E-04	1.50E-03
9	F27	60	Passenger Car	846	0.00E+00	1.07E-05	1.16E-06	3.82E+01	7.59E-05	2.06E-01	2.41E-05	8.71E-04	8.54E-03	1.28E-03	2.35E-03	1.52E-03	1.56E-03	1.68E-04	1.93E-04	4.06E-08	7.96E-04	1.36E-04
9	F27	60	Passenger Truck	1417	0.00E+00	2.27E-05	2.41E-06	8.52E+01	1.43E-04	3.54E-01	4.71E-05	2.71E-03	1.56E-02	2.32E-03	4.49E-03	2.92E-03	3.00E-03	6.86E-04	4.27E-04	7.92E-08	1.50E-03	4.59E-04
9	F27	60	Single Unit Short Haul Truck	150	0.00E+00	3.36E-05	1.39E-06	2.50E+01	2.22E-05	4.40E-02	3.63E-05	1.29E-02	3.46E-03	5.81E-04	4.48E-03	8.63E-04	8.80E-04	2.53E-03	1.02E-04	4.20E-08	3.60E-03	2.41E-03
9	F27	60	Single Unit Long Haul Truck	7	0.00E+00	1.47E-06	6.02E-08	1.07E+00	9.65E-07	1.87E-03	1.58E-06	5.58E-04	1.55E-04	2.58E-05	1.96E-04	3.75E-05	3.82E-05	1.08E-04	4.35E-06	1.79E-09	1.58E-04	1.05E-04
9	F27	60	Combination Short Haul Truck	82	0.00E+00	2.38E-05	1.75E-06	2.87E+01	6.52E-08	3.56E-02	1.71E-05	3.64E-02	4.16E-03	6.50E-04	1.47E-03	5.12E-04	5.31E-04	4.57E-03	9.61E-05	0.00E+00	9.36E-04	6.86E-03
9	F27	60	Combination Long Haul Truck	74	0.00E+00	3.27E-05	1.79E-06	2.71E+01	2.21E-07	4.27E-02	2.74E-05	3.88E-02	4.36E-03	6.30E-04	3.10E-03	5.84E-04	6.08E-04	4.36E-03	9.10E-05	0.00E+00	2.50E-03	7.30E-03
9	F28	60	Passenger Car	920	0.00E+00	1.16E-05	1.26E-06	4.15E+01	8.25E-05	2.24E-01	2.62E-05	9.47E-04	9.29E-03	1.39E-03	2.56E-03	1.65E-03	1.69E-03	1.82E-04	2.10E-04	4.42E-08	8.65E-04	1.48E-04
9	F28	60	Passenger Truck	1540	0.00E+00	2.47E-05	2.62E-06	9.26E+01	1.56E-04	3.85E-01	5.12E-05	2.95E-03	1.70E-02	2.53E-03	4.88E-03	3.18E-03	3.26E-03	7.46E-04	4.64E-04	8.61E-08	1.63E-03	4.99E-04
9	F28	60	Single Unit Short Haul Truck	172	0.00E+00	3.85E-05	1.59E-06	2.87E+01	2.55E-05	5.04E-02	4.16E-05	1.48E-02	3.97E-03	6.67E-04	5.14E-03	9.89E-04	1.01E-03	2.91E-03	1.17E-04	4.82E-08	4.13E-03	2.77E-03
9	F28	60	Single Unit Long Haul Truck	8	0.00E+00	1.68E-06	6.91E-08	1.22E+00	1.11E-06	2.14E-03	1.82E-06	6.40E-04	1.78E-04	2.96E-05	2.25E-04	4.30E-05	4.38E-05	1.24E-04	4.99E-06	2.05E-09	1.81E-04	1.20E-04
9	F28	60	Combination Short Haul Truck	70	0.00E+00	2.03E-05	1.49E-06	2.45E+01	5.56E-08	3.03E-02	1.46E-05	3.10E-02	3.54E-03	5.54E-04	1.25E-03	4.36E-04	4.53E-04	3.89E-03	8.19E-05	0.00E+00	7.98E-04	5.85E-03
9	F28	60	Combination Long Haul Truck	63	0.00E+00	2.79E-05	1.52E-06	2.31E+01	1.88E-07	3.64E-02	2.33E-05	3.31E-02	3.72E-03	5.37E-04	2.65E-03	4.98E-04	5.19E-04	3.71E-03	7.75E-05	0.00E+00	2.13E-03	6.23E-03
9	F29	60	Passenger Car	361	0.00E+00	4.56E-06	4.96E-07	1.63E+01	3.24E-05	8.80E-02	1.03E-05	3.71E-04	3.64E-03	5.46E-04	1.00E-03	6.47E-04	6.64E-04	7.15E-05	8.25E-05	1.73E-08	3.39E-04	5.79E-05
9	F29	60	Passenger Truck	604	0.00E+00	9.69E-06	1.03E-06	3.63E+01	6.11E-05	1.51E-01	2.01E-05	1.16E-03	6.66E-03	9.91E-04	1.92E-03	1.25E-03	1.28E-03	2.93E-04	1.82E-04	3.38E-08	6.39E-04	1.96E-04
9	F30	60	Passenger Car	213	0.00E+00	2.69E-06	2.92E-07	9.60E+00	1.91E-05	5.19E-02	6.07E-06	2.19E-04	2.15E-03	3.22E-04	5.92E-04	3.81E-04	3.92E-04	4.22E-05	4.86E-05	1.02E-08	2.00E-04	3.42E-05
9	F30	60	Passenger Truck	356	0.00E+00	5.71E-06	6.06E-07	2.14E+01	3.60E-05	8.89E-02	1.19E-05	6.81E-04	3.93E-03	5.84E-04	1.13E-03	7.35E-04	7.53E-04	1.73E-04	1.07E-04	1.99E-08	3.77E-04	1.15E-04
9	F30	60	Single Unit Short Haul Truck	15	0.00E+00	3.42E-06	1.41E-07	2.55E+00	2.27E-06	4.48E-03	3.70E-06	1.31E-03	3.53E-04	5.92E-05	4.56E-04	8.79E-05	8.97E-05	2.58E-04	1.04E-05	4.28E-09	3.67E-04	2.46E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	1.49E-07	6.14E-09	1.09E-01	9.83E-08	1.90E-04	1.61E-07	5.69E-05	1.58E-05	2.63E-06	2.00E-05	3.82E-06	3.90E-06	1.10E-05	4.43E-07	1.82E-10	1.61E-05	1.07E-05
9	F30	60	Combination Short Haul Truck	12	0.00E+00	3.36E-06	2.47E-07	4.05E+00	9.20E-09	5.02E-03	2.41E-06	5.13E-03	5.86E-04	9.17E-05	2.07E-04	7.22E-05	7.49E-05	6.44E-04	1.36E-05	0.00E+00	1.32E-04	9.67E-04
9	F30	60	Combination Long Haul Truck	10	0.00E+00	4.61E-06	2.52E-07	3.83E+00	3.11E-08	6.03E-03	3.86E-06	5.47E-03	6.15E-04	8.89E-05	4.38E-04	8.23E-05	8.58E-05	6.14E-04	1.28E-05	0.00E+00	3.52E-04	1.03E-03
9	F43	60	Passenger Car	13	0.00E+00	1.61E-07	1.75E-08	5.74E-01	1.14E-06	3.10E-03	3.62E-07	1.31E-05	1.28E-04	1.92E-05	3.54E-05	2.28E-05	2.34E-05	2.52E-06	2.91E-06	6.10E-10	1.20E-05	2.04E-06
9	F43	60	Passenger Truck	21	0.00E+00	3.41E-07	3.62E-08	1.28E+00	2.15E-06	5.31E-03	7.08E-07	4.07E-05	2.35E-04	3.49E-05	6.75E-05	4.39E-05	4.50E-05	1.03E-05	6.42E-06	1.19E-09	2.25E-05	6.90E-06
9	F44	60	Passenger Car	201	0.00E+00	2.54E-06	2.76E-07	9.06E+00	1.80E-05	4.90E-02	5.73E-06	2.07E-04	2.03E-03	3.04E-04	5.58E-04	3.60E-04	3.69E-04	3.98E-05	4.59E-05	9.64E-09	1.89E-04	3.22E-05
9	F44	60	Passenger Truck	336	0.00E+00	5.39E-06	5.72E-07	2.02E+01	3.40E-05	8.39E-02	1.12E-05	6.43E-04	3.70E-03	5.51E-04	1.07E-03	6.94E-04	7.11E-04	1.63E-04	1.01E-04	1.88E-08	3.55E-04	1.09E-04
9	F44	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	F44	60	Combination Short Haul Truck	2	0.00E+00

Appendix F.5.6: MOVES Emission Factors for AM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES LinkID	Source D	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F50	60	Single Unit Short Haul Truck	210	0.00E+00	4.68E-05	1.93E-06	3.49E+01	3.10E-05	6.14E-02	5.06E-05	1.80E-02	4.83E-03	8.11E-04	6.25E-03	1.20E-03	1.23E-03	3.54E-03	1.42E-04	5.86E-08	5.02E-03	3.37E-03
9	F50	60	Single Unit Long Haul Truck	9	0.00E+00	2.04E-06	8.40E-08	1.49E+00	1.35E-06	2.61E-03	2.21E-06	7.79E-04	2.17E-04	3.60E-05	2.73E-04	5.23E-05	5.33E-05	1.50E-04	6.07E-06	2.49E-09	2.20E-04	1.46E-04
9	F50	60	Combination Short Haul Truck	83	0.00E+00	2.43E-05	1.78E-06	2.93E+01	6.65E-08	3.63E-02	1.74E-05	3.71E-02	4.24E-03	6.62E-04	1.50E-03	5.22E-04	5.41E-04	4.66E-03	9.79E-05	0.00E+00	9.54E-04	6.99E-03
9	F50	60	Combination Long Haul Truck	76	0.00E+00	3.34E-05	1.82E-06	2.77E+01	2.25E-07	4.36E-02	2.79E-05	3.95E-02	4.44E-03	6.42E-04	3.16E-03	5.95E-04	6.20E-04	4.44E-03	9.27E-05	0.00E+00	2.54E-03	7.44E-03
10	F51	70	Passenger Car	224	0.00E+00	2.46E-06	2.68E-07	9.66E+00	1.75E-05	4.78E-02	5.56E-06	2.26E-04	1.72E-03	2.68E-04	5.42E-04	3.49E-04	3.59E-04	3.80E-05	4.90E-05	1.02E-08	1.83E-04	3.53E-05
10	F51	70	Passenger Truck	374	0.00E+00	5.19E-06	5.52E-07	2.17E+01	3.32E-05	8.46E-02	1.09E-05	6.58E-04	3.12E-03	4.82E-04	1.04E-03	6.76E-04	6.93E-04	1.66E-04	1.09E-04	1.96E-08	3.48E-04	1.10E-04
10	F51	70	Single Unit Short Haul Truck	107	0.00E+00	1.89E-05	7.67E-07	1.76E+01	1.27E-05	3.19E-02	2.05E-05	7.52E-03	1.70E-03	3.13E-04	2.54E-03	4.85E-04	4.94E-04	1.79E-03	7.15E-05	2.89E-08	2.05E-03	1.41E-03
10	F51	70	Single Unit Long Haul Truck	5	0.00E+00	8.21E-07	3.31E-08	7.45E-01	5.45E-07	1.34E-03	8.93E-07	3.24E-04	7.80E-05	1.40E-05	1.11E-04	2.09E-05	2.14E-05	7.54E-05	3.03E-06	1.22E-09	8.97E-05	6.05E-05
10	F51	70	Combination Short Haul Truck	45	0.00E+00	1.16E-05	8.61E-07	1.56E+01	2.94E-08	1.67E-02	8.25E-06	1.73E-02	1.63E-03	2.72E-04	6.94E-04	2.51E-04	2.60E-04	2.49E-03	5.23E-05	0.00E+00	4.34E-04	3.27E-03
10	F51	70	Combination Long Haul Truck	41	0.00E+00	1.59E-05	9.03E-07	1.47E+01	9.95E-08	2.00E-02	1.31E-05	1.86E-02	1.70E-03	2.56E-04	1.44E-03	2.90E-04	3.02E-04	2.36E-03	4.92E-05	0.00E+00	1.14E-03	3.50E-03
10	F52	70	Passenger Car	853	0.00E+00	9.41E-06	1.02E-06	3.69E+01	6.68E-05	1.83E-01	2.12E-05	8.63E-04	6.57E-03	1.02E-03	2.07E-03	1.33E-03	1.37E-03	1.45E-04	1.87E-04	3.88E-08	7.00E-04	1.35E-04
10	F52	70	Passenger Truck	1429	0.00E+00	1.98E-05	2.11E-06	8.30E+01	1.27E-04	3.23E-01	4.15E-05	2.51E-03	1.19E-02	1.84E-03	3.97E-03	2.58E-03	2.64E-03	6.33E-04	4.17E-04	7.47E-08	1.33E-03	4.21E-04
10	F52	70	Single Unit Short Haul Truck	44	0.00E+00	7.75E-06	3.15E-07	7.22E+00	5.20E-06	1.31E-02	8.43E-06	3.09E-03	7.00E-04	1.29E-04	1.05E-03	1.99E-04	2.03E-04	7.33E-04	2.94E-05	1.19E-08	8.42E-04	5.78E-04
10	F52	70	Single Unit Long Haul Truck	2	0.00E+00	3.37E-07	1.36E-08	3.06E-01	2.24E-07	5.49E-04	3.67E-07	1.33E-04	3.21E-05	5.75E-06	4.56E-05	8.60E-06	8.77E-06	3.09E-05	1.25E-06	5.00E-10	3.68E-05	2.49E-05
10	F52	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.06E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.52E-03
10	F52	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.63E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.63E-03
10	F53	70	Passenger Car	181	0.00E+00	1.99E-06	2.16E-07	7.80E+00	1.41E-05	3.86E-02	4.49E-06	1.83E-04	1.39E-03	2.17E-04	4.38E-04	2.82E-04	2.90E-04	3.07E-05	3.96E-05	8.22E-09	1.48E-04	2.85E-05
10	F53	70	Passenger Truck	302	0.00E+00	4.19E-06	4.46E-07	1.76E+01	2.68E-05	6.83E-02	8.79E-06	5.31E-04	2.52E-03	3.90E-04	8.40E-04	5.46E-04	5.60E-04	1.34E-04	8.82E-05	1.58E-08	2.81E-04	8.92E-05
10	F53	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
10	F53	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.11E-06
10	F53	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	F53	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	F54	70	Passenger Car	777	0.00E+00	8.57E-06	9.31E-07	3.36E+01	6.08E-05	1.66E-01	1.93E-05	7.86E-04	5.99E-03	9.33E-04	1.88E-03	1.21E-03	1.25E-03	1.32E-04	1.70E-04	3.54E-08	6.37E-04	1.23E-04
10	F54	70	Passenger Truck	1301	0.00E+00	1.80E-05	1.92E-06	7.55E+01	1.15E-04	2.94E-01	3.78E-05	2.28E-03	1.08E-02	1.68E-03	3.62E-03	2.35E-03	2.41E-03	5.77E-04	3.80E-04	6.80E-08	1.21E-03	3.84E-04
10	F54	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.73E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	F54	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.76E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.03E-06
10	F54	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	F54	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
53	F71	70	Passenger Car	497	0.00E+00	5.31E-06	5.78E-07	2.17E+01	3.77E-05	1.02E-01	1.20E-05	5.12E-04	3.77E-03	5.90E-04	1.17E-03	7.54E-04	7.73E-04	8.45E-05	1.10E-04	2.29E-08	3.95E-04	7.98E-05
53	F71	70	Passenger Truck	833	0.00E+00	1.11E-05	1.18E-06	4.89E+01	7.13E-05	1.81E-01	2.33E-05	1.45E-03	6.74E-03	1.05E-03	2.23E-03	1.45E-03	1.49E-03	3.67E-04	2.46E-04	4.31E-08	7.45E-04	2.42E-04
53	F71	70	Single Unit Short Haul Truck	21	0.00E+00	3.71E-06	1.51E-07	3.45E+00	2.49E-06	6.26E-03	4.03E-06	1.48E-03	3.35E-04	6.15E-05	5.00E-04	9.52E-05	9.71E-05	3.51E-04	1.40E-05	5.67E-09	4.03E-04	2.76E-04
53	F71	70	Single Unit Long Haul Truck	1	0.00E+00	1.61E-07	6.50E-09	1.46E-01	1.07E-07	2.63E-04	1.75E-07	6.35E-05	1.53E-05	2.75E-06	2.18E-05	4.11E-06	4.20E-06	1.48E-05	5.96E-07	2.39E-10	1.76E-05	1.19E-05
53	F71	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	F71	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.12E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
50	F72	40	Passenger Car	258	0.00E+00	3.67E-06	3.98E-07	1.35E+01	2.60E-05	7.00E-02	8.27E-06	2.36E-04	4.46E-03	6.26E-04	8.06E-04	5.20E-04	5.33E-04	7.68E-05	6.77E-05	1.26E-08	2.73E-04	3.68E-05
50	F72	40	Passenger Truck	433	0.00E+00	8.09E-06	8.50E-07	2.94E+01	4.87E-05	1.16E-01	1.62E-05	9.08E-04	7.90E-03	1.10E-03	1.53E-03	1.00E-03	1.03E-03	2.62E-04	1.46E-04	2.13E-08	5.08E-04	1.57E-04
50	F72	40	Single Unit Short Haul Truck	55	0.00E+00	1.85E-05	8.24E-07	1.03E+01	1.28E-05	1.62E-02	1.98E-05	7.47E-03	2.15E-03	3.36E-04	2.38E-03	4.96E-04	5.06E-04	1.05E-03	4.20E-05	1.78E-08	1.88E-03	1.40E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	8.12E-07	3.60E-08	4.45E-01	5.61E-07	7.04E-04	8.69E-07	3.26E-04	9.63E-05	1.49E-05	1.05E-04	2.17E-05	2.21E-05	4.55E-05	1.82E-06	7.74E-10	8.25E-05	6.10E-05
50	F72	40	Combination Short Haul Truck	20	0.00E+00	9.84E-06	7.35E-07	8.46E+00	2.44E-08	1.39E-02	6.99E-06	1.43E-02	1.98E-03	2.96E-04	5.85E-04	2.14E-04	2.22E-04	1.34E-03	2.83E-05	0.00E+00	3.63E-04	2.70E-03
50	F72	40	Combination Long Haul Truck	19	0.00E+00	1.31E-05	7.38E-07	8.12E+00	8.31E-08	1.69E-02	1.08E-05	1.51E-02	2.06E-03	2.89E-04	1.20E-03	2.38E-04	2.48E-04	1.30E-03	2.72E-05	0.00E+00	9.50E-04	2.85E-03
52	F73	60	Passenger Car	8	0.00E+00	9.56E-08	1.04E-08	3.71E-01	6.78E-07	1.83E-03	2.15E-07	8.16E-06	8.08E-05	1.21E-05	2.10E-05	1.36E-05	1.39E-05	1.63E-06	1.88E-06	3.83E-10	7.11E-06	1.27E-06
52	F73	60	Passenger Truck	14	0.00E+00	2.02E-07	2.14E-08	8.27E-01	1.27E-06	3.15E-03	4.18E-07	2.49E-05	1.43E-04	2.13E-05	3.99E-05	2.59E-05	2.66E-05	6.54E-06	4.15E-06	7.00E-10	1.33E-05	4.21E-06
53	F74	70	Passenger Car	209	0.00E+00	2.24E-06	2.43E-07	9.14E+00	1.59E-05	4.30E-02	5.05E-06	2.15E-04	1.59E-03	2.49E-04	4.92E-04	3.17E-04	3.26E-04	3.56E-05	4.64E-05	9.64E-09	1.66E-04	3.36E-05
53	F74	70	Passenger Truck	351	0.00E+00	4.67E-06	4.97E-07	2.06E+01	3.00E-05	7.60E-02	9.82E-06	6.09E-04	2.84E-03	4.41E-04	9.39E-04	6.10E-04	6.25E-04	1.55E-04	1.04E-04	1.82E-08	3.14E-04	1.02E-04
53	F74	70	Single Unit Short Haul Truck	100	0.00E+00	1.75E-05	7.12E-07	1.63E+01	1.17E-05	2.96E-02	1.91E-05	6.98E-03	1.58E-03	2.91E-04	2.36E-03	4.50E-04	4.59E-04	1.66E-03	6.64E-05	2.68E-08	1.90E-03	1.31E-03
53	F74	70	Single Unit Long Haul Truck	4	0.00E+00	7.63E-07	3.07E-08	6.92E-01	5.06E-07	1.24E-03	8.30E-07	3.00E-04	7.25E-05	1.30E-05	1.03E-04	1.94E-05	1.98E-05	7.00E-05	2.82E-06	1.13E-09	8.33E-05	5.62E-05
53	F74	70	Combination Short Haul Truck	48	0.00E+00	1.24E-05	9.21E-07	1.67E+01	3.15E-08	1.79E-02	8.82E-06	1.85E-02	1.75E-03	2.91E-04	7.43E-04	2.68E-04	2.79E-04	2.66E-03	5.59E-05	0.00E+00	4.64E-04	3.49E-03
53	F74	70	Combination Long Haul Truck	44	0.00E+00	1.70E-05	9.66E-07	1.57E+01	1.06E-07	2.13E-02	1.40E-05	1.99E-02	1.82E-03	2.74E-04	1.54E-03	3.10E-04	3.23E-04	2.52E-03	5.26E-05	0.00E+00	1.22E-03	3.74E-03
52	F75	60	Passenger Car	58	0.00E+00	6.73E-07	7.32E-08	2.62E+00	4.78E-06	1.29E-02	1.52E-06	5.75E-05	5.69E-04	8.53E-05	1.48E-04	9.55E-05	9.80E-05	1.15E-05	1.32E-05	2.70E-09	5.01E-05	8.97E-06
52	F75	60	Passenger Truck	97	0.00E+00	1.42E-06	1.51E-07	5.83E+00	8.96E-06	2.22E-02	2.95E-06	1.75E-04	1.01E-03	1.50E-04	2.81E-04	1.83E-04	1.87E-04	4.60E-05	2.92E-05	4.93E-09	9.36E-05	2.97E-05
52	F75	60	Single Unit Short Haul Truck	49	0.00E+00	1.09E-05	4.51E-07	8.13E+00	7.23E-06	1.43E-02	1.18E-05	4.19E-03	1.12E-03	1.89E-04	1.46E-03	2.80E-04	2.86E-04	8.23E-04	3.31E-05	1.36E-08	1.17E-03	7.84E-04
52	F75	60	Single Unit Long Haul Truck	2	0.00E+00	4.76E-07	1.96E-08	3.46E-01	3.13E-07	6.07E-04	5.15E-07	1.81E-04	5.05E-05	8.38E-06	6.36E-05	1.22E-05	1.24E-05	3.50E-05	1.41E-06	5.80E-10	5.12E-05	3.39E-05
52	F75	60	Combination Short Haul Truck	16	0.00E+00	4.73E-06	3.48E-07	5.71E+00	1.30E-08	7.07E-03	3.40E-06	7.23E-03	8.26E-04	1.29E-04	2.92E-04	1.02E-04	1.06E-04	9.08E-04	1.91E-05	0.00E+00	1.86E-04	1.36E-03
52	F75	60	Combination Long Haul Truck	15	0.00E+00	6.50E-06	3.55E-07	5.39E+00	4.39E-08	8.49E-03	5.44E-06	7.71E-03	8.66E-04	1.25E-04	6.17E-04	1.16E-04	1.21E-04	8.66E-04	1.81E-05	0.00E+00	4.96E-04	1.45E-03
50	F76	40	Passenger Car	18	0.00E+00	2.55E-07	2.77E-08	9.37E-01	1.81E-06	4.87E-03	5.74E-07	1.64E-05	3.09E-04	4.35E-05	5.60E-05	3.61E-05	3.71E-05	5.34E-06	4.70E-06	8.72E-10	1.89E-05	2.55E-06
50	F76	40	Passenger Truck	30	0.00E+00	5.62E-07	5.90E-08	2.04E+00	3.38E-06	8.05E-03	1.13E-06	6.31E-05	5.49E-04	7.62E-05	1.07E-04	6.96E-05	7.13E-05	1.82E-05	1.02E-05	1.48E-09	3.53E-05	1.09E-05
50	F78	40	Passenger Car	613	0.00E+00	8.70E-06	9.46E-07	3.20E+01	6.17E-05	1.66E-01	1.96E-05	5.59E-04	1.06E-02	1.49E-03	1.91E-03	1.23E-03	1.27E-03	1.82E-04	1.61E-04	2.98E-08	6.47E-04	8.73E-05
50	F78	40	Passenger Truck	1027	0.00E+00	1.92E-05	2.02E-06	6.97E+01	1.16E-04	2.75E-01	3.86E-05	2.16E-03	1.87E-02	2.60E-03	3.64E-03	2.38E-03	2.44E-03	6.22E-04	3.47E-04	5.06E-08	1.21E-03	3.73E-04
50	F78	40	Single Unit Short Haul Truck	14	0.00E+00	4.87E-06	2.17E-07	2.71E+00	3.37E-06	4.25E-03	5.21E-06	1.97E-03	5.65E-04	8.83E-05	6.27E-04	1.31E-04	1.33E-04	2.77E-04	1.11E-05	4.69E-09	4.94E-04	3.68E-04
50	F78	40	Single Unit Long Haul Truck	1	0.00E+00	2.14E-07	9.46E-09	1.17E-01	1.48E-07	1.85E-04	2.29E-07	8.57E-05	2.53E-05	3.93E-06	2.75E-05	5.71E-06	5.82E-06	1.20E-05	4.78E-07	2.04E-10	2.17E-05	1.61E-05
50	F78	40	Combination Short Haul Truck	8	0.00E+00	3.78E-06	2.83E-07	3.25E+00	9.37E-09	5.35E-03	2.69E-06	5.52E-03	7.63E-04	1.14E-04	2.25E-04	8.22E-05	8.54E-05	5.17E-04	1.09E-05	0.00E+00	1.40E-04	1.04E-03
50	F78	40	Combination Long Haul Truck	7	0.00E+00	5.03E-06	2.84E-07	3.12E+00	3.20E-08	6.50E-03	4.15E-06	5.82E-03	7.92E-04	1.11E-04	4.61E-04	9.15E-05	9.53E-05	5.01E-04	1.05E-05	0.00E+00	3.65E-04	1.10E-03
52	F79	60	Passenger Car	867	0.00E+00	1.01E-05	1.10E-06	3.91E+01	7.15E-05	1.93E-01	2.27E-05	8.60E-04	8.52E-03	1.28E-03	2.22E-03	1.43E-03	1.47E-03	1.72E-04	1.98E-04	4.04E-08	7.50E-04	1.34E-04
52	F79	60	Passenger Truck	1453	0.00E+00	2.13E-05	2.25E-06	8.72E+01	1.34E-04	3.32E-01	4.41E-05	2.62E-03	1.51E-02	2.25E-03	4.20E-03	2.74E-03	2.80E-03	6.89E-04	4.38E-04	7.38E-08	1.40E-03	4.44E-04
52	F79	60	Single Unit Short Haul Truck	18	0.00E+00	4.06E-06	1.68E-07	3.03E+00	2.69E-06	5.32E-03	4.39E-06	1.56E-03	4.19E-04	7.04E-05	5.42E-04	1.04E-04	1.06E-04	3.07E-04	1.23E-05	5.08E-09	4.36E-04	2.92E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.77E-07	7.29E-09	1.29E-01	1.17E-07	2.26E-04	1.92E-07	6.76E-05	1.88E-05	3.12E-06	2.37E-05	4.54E-06	4.63E-06	1.30E-05	5.27E-07	2.16E-10	1.91E-05	1.26E-05
52	F79	60	Combination Short Haul Truck	10	0.00E+00	3.05E-06	2.24E-07	3.68E+00	8.36E-09	4.56E-03	2.19E-06	4.67E-03	5.33E-04	8.33E-05	1.88E-04	6.56E-05	6.81E-05	5.86E-04	1.23E-05	0.00E+00	1.20E-04	8.79E-04
52	F79	60	Combination Long Haul Truck	10	0.00E+00	4.20E-06	2.29E-07	3.48E+00	2.83E-08	5.48E-03	3.51E-06	4.97E-03	5.59E-04	8.08E-05	3.98E-04	7.48E-05	7.80E-05	5.59E-04	1.17E-05	0.00E+00	3.20E-04	9.36E-04
53	F80	70	Passenger Car	767	0.00E+00	8.20E-06	8.91E-07	3.35E+01	5.82E-05	1.58E-01	1.85E-05	7.89E-04	5.82E-03	9.11E-04	1.80E-03	1.16E-03	1.19E-03	1.30E-04	1.70E-04	3.53E-08	6.10E-04	1.23E-04
53	F80	70	Passenger Truck	1285	0.00E+00	1.71E-05	1.82E-06	7.55E+01	1.10E-04	2.78E-01	3.60E-05	2.23E-03	1.04E-02	1.62E-03	3.44E-03	2.24E-03	2.29E-03	5.66E-04	3.80E-04	6.65E-08	1.15E-03	3.73E-04
53	F80	70	Single Unit Short Haul Truck	32	0.00E+00	5.56E-06	2.26E-07	5.18E+00	3.73E-06	9.39E-03	6.05E-06	2.21E-03	5.02E-04	9.22E-05	7.50E-04	1.43E-04	1.46E-04	5.26E-04	2.11E-05	8.50E-09	6.04E-04	4.14E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	2.42E-07	9.75E-09	2.19E-01	1.60E-07	3.94E-04	2.63E-07	9.53E-05	2.30E-05	4.12E-06	3.27E-05	6.17E-06	6.29E-06	2.22E-05	8.94E-07	3.58E-10	2.64E-05	1.78E-05
53	F80	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.23E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.97E-04
53	F80	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.53E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.53E-04

Appendix F.5.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B15	0.00E+00	2.86E-05	2.69E-06	1.15E+02	1.50E-04	4.43E-01	5.40E-05	1.02E-02	7.16E-03	1.40E-03	5.35E-03	3.13E-03	3.21E-03	2.23E-03	5.66E-04	1.08E-07	2.14E-03	1.84E-03
B16	0.00E+00	5.15E-05	5.03E-06	2.15E+02	2.88E-04	8.43E-01	1.00E-04	1.68E-02	1.36E-02	2.65E-03	9.84E-03	5.95E-03	6.10E-03	3.51E-03	1.07E-03	2.01E-07	3.74E-03	3.02E-03
B19	0.00E+00	2.08E-04	1.43E-05	5.27E+02	3.88E-04	1.36E+00	2.52E-04	1.99E-01	2.54E-02	5.33E-03	2.63E-02	1.05E-02	1.08E-02	4.19E-02	2.24E-03	3.67E-07	1.55E-02	3.72E-02
B20	0.00E+00	2.26E-04	1.79E-05	7.02E+02	7.12E-04	2.24E+00	3.30E-04	1.70E-01	3.86E-02	7.80E-03	3.34E-02	1.65E-02	1.69E-02	3.53E-02	3.21E-03	5.57E-07	1.65E-02	3.16E-02
B21	0.00E+00	1.71E-04	1.15E-05	4.19E+02	2.88E-04	1.03E+00	2.00E-04	1.70E-01	1.97E-02	4.16E-03	2.09E-02	8.06E-03	8.29E-03	3.56E-02	1.76E-03	2.79E-07	1.26E-02	3.19E-02
B22	0.00E+00	2.06E-04	1.64E-05	6.41E+02	6.47E-04	2.04E+00	3.01E-04	1.58E-01	3.52E-02	7.10E-03	3.04E-02	1.50E-02	1.54E-02	3.26E-02	2.93E-03	5.02E-07	1.50E-02	2.94E-02
B23	0.00E+00	1.71E-04	1.16E-05	4.22E+02	2.91E-04	1.04E+00	2.01E-04	1.70E-01	1.98E-02	4.19E-03	2.10E-02	8.13E-03	8.36E-03	3.57E-02	1.77E-03	2.81E-07	1.27E-02	3.19E-02
B24	0.00E+00	2.28E-04	1.83E-05	7.22E+02	7.44E-04	2.33E+00	3.38E-04	1.70E-01	4.00E-02	8.06E-03	3.41E-02	1.71E-02	1.76E-02	3.51E-02	3.31E-03	5.72E-07	1.66E-02	3.16E-02
E39	0.00E+00	1.38E-05	1.26E-06	4.31E+01	6.28E-05	1.68E-01	2.39E-05	5.74E-03	6.42E-03	1.00E-03	2.35E-03	1.35E-03	1.38E-03	9.29E-04	2.10E-04	3.83E-08	9.66E-04	1.06E-03
E40	0.00E+00	2.28E-05	1.76E-06	5.24E+01	6.46E-05	1.81E-01	3.18E-05	1.49E-02	7.40E-03	1.16E-03	3.22E-03	1.54E-03	1.58E-03	2.28E-03	2.43E-04	4.27E-08	1.64E-03	2.77E-03
E41	0.00E+00	1.03E-05	9.62E-07	3.37E+01	5.03E-05	1.34E-01	1.85E-05	3.72E-03	5.06E-03	7.87E-04	1.82E-03	1.07E-03	1.09E-03	6.21E-04	1.66E-04	3.05E-08	7.26E-04	6.80E-04
E42	0.00E+00	1.36E-05	1.27E-06	4.37E+01	6.39E-05	1.71E-01	2.39E-05	5.91E-03	6.54E-03	1.02E-03	2.33E-03	1.37E-03	1.40E-03	9.25E-04	2.13E-04	3.81E-08	9.24E-04	1.09E-03
E43	0.00E+00	1.09E-05	9.90E-07	3.45E+01	5.11E-05	1.36E-01	1.93E-05	3.94E-03	5.14E-03	8.02E-04	1.90E-03	1.09E-03	1.12E-03	6.72E-04	1.69E-04	3.16E-08	7.88E-04	7.20E-04
E44	0.00E+00	9.09E-06	8.80E-07	3.10E+01	4.65E-05	1.24E-01	1.67E-05	3.38E-03	4.68E-03	7.27E-04	1.62E-03	9.80E-04	1.01E-03	5.41E-04	1.53E-04	2.75E-08	6.15E-04	6.18E-04
E45	0.00E+00	3.04E-05	1.80E-06	4.56E+01	2.21E-05	8.80E-02	2.99E-05	2.88E-02	3.71E-03	6.56E-04	3.26E-03	9.19E-04	9.46E-04	5.08E-03	1.78E-04	2.84E-08	2.32E-03	5.41E-03
E46	0.00E+00	2.46E-05	1.88E-06	6.23E+01	7.12E-05	2.06E-01	3.48E-05	1.58E-02	6.21E-03	1.06E-03	3.56E-03	1.68E-03	1.72E-03	2.85E-03	2.88E-04	5.26E-08	1.83E-03	2.94E-03
E47	0.00E+00	7.36E-06	5.54E-07	1.82E+01	2.04E-05	5.93E-02	1.02E-05	4.83E-03	1.80E-03	3.07E-04	1.05E-03	4.86E-04	4.99E-04	8.70E-04	8.37E-05	1.53E-08	5.51E-04	9.00E-04
E48	0.00E+00	2.28E-05	1.79E-06	6.06E+01	7.19E-05	2.06E-01	3.34E-05	1.38E-02	6.12E-03	1.04E-03	3.40E-03	1.66E-03	1.70E-03	2.50E-03	2.83E-04	5.20E-08	1.69E-03	2.57E-03
E49	0.00E+00	3.11E-06	2.59E-07	8.76E+00	1.06E-05	3.03E-02	4.66E-06	2.03E-03	8.97E-04	1.51E-04	4.63E-04	2.42E-04	2.48E-04	3.45E-04	4.11E-05	7.06E-09	2.15E-04	3.77E-04
E50	0.00E+00	3.28E-05	2.31E-06	6.83E+01	6.19E-05	1.93E-01	3.95E-05	2.75E-02	6.42E-03	1.10E-03	4.08E-03	1.67E-03	1.72E-03	4.74E-03	2.98E-04	4.85E-08	2.36E-03	5.15E-03
E51	0.00E+00	6.22E-07	5.55E-08	1.92E+00	2.44E-06	6.91E-03	9.89E-07	3.89E-04	2.01E-04	3.36E-05	9.63E-05	5.43E-05	5.57E-05	6.37E-05	9.14E-06	1.53E-09	4.06E-05	7.22E-05
E52	0.00E+00	3.47E-05	2.46E-06	7.37E+01	6.86E-05	2.12E-01	4.24E-05	2.85E-02	6.97E-03	1.19E-03	4.38E-03	1.82E-03	1.87E-03	4.92E-03	3.23E-04	5.34E-08	2.50E-03	5.34E-03
E53	0.00E+00	1.27E-05	8.62E-07	2.60E+01	2.39E-05	7.37E-02	1.55E-05	9.80E-03	2.42E-03	4.17E-04	1.63E-03	6.41E-04	6.58E-04	1.76E-03	1.14E-04	2.04E-08	9.69E-04	1.84E-03
E54	0.00E+00	3.50E-05	2.77E-06	9.23E+01	1.07E-04	3.10E-01	5.04E-05	2.31E-02	9.30E-03	1.57E-03	5.08E-03	2.50E-03	2.57E-03	4.03E-03	4.28E-04	7.55E-08	2.51E-03	4.30E-03
E55	0.00E+00	1.27E-05	8.62E-07	2.60E+01	2.39E-05	7.37E-02	1.55E-05	9.80E-03	2.42E-03	4.17E-04	1.63E-03	6.41E-04	6.58E-04	1.76E-03	1.14E-04	2.04E-08	9.69E-04	1.84E-03
E56	0.00E+00	3.50E-05	2.77E-06	9.23E+01	1.07E-04	3.10E-01	5.04E-05	2.31E-02	9.30E-03	1.57E-03	5.08E-03	2.50E-03	2.57E-03	4.03E-03	4.28E-04	7.55E-08	2.51E-03	4.30E-03
E57	0.00E+00	1.54E-05	1.36E-06	4.52E+01	6.41E-05	1.73E-01	2.55E-05	7.22E-03	6.67E-03	1.04E-03	2.52E-03	1.40E-03	1.44E-03	1.15E-03	2.18E-04	3.96E-08	1.09E-03	1.33E-03
E58	0.00E+00	1.83E-05	1.44E-06	4.30E+01	5.38E-05	1.50E-01	2.59E-05	1.18E-02	6.11E-03	9.58E-04	2.61E-03	1.27E-03	1.30E-03	1.80E-03	2.00E-04	3.51E-08	1.31E-03	2.19E-03
E59	0.00E+00	1.15E-05	1.00E-06	3.61E+01	4.77E-05	1.33E-01	1.90E-05	5.56E-03	3.79E-03	6.37E-04	1.89E-03	1.04E-03	1.07E-03	1.00E-03	1.74E-04	3.21E-08	8.24E-04	1.03E-03
E60	0.00E+00	1.19E-05	9.75E-07	3.36E+01	4.13E-05	1.17E-01	1.81E-05	6.99E-03	3.44E-03	5.81E-04	1.82E-03	9.36E-04	9.61E-04	1.24E-03	1.58E-04	2.87E-08	8.60E-04	1.30E-03
E61	0.00E+00	1.15E-05	1.00E-06	3.61E+01	4.77E-05	1.33E-01	1.90E-05	5.56E-03	3.79E-03	6.37E-04	1.89E-03	1.04E-03	1.07E-03	1.00E-03	1.74E-04	3.21E-08	8.24E-04	1.03E-03
E62	0.00E+00	1.19E-05	9.75E-07	3.36E+01	4.13E-05	1.17E-01	1.81E-05	6.99E-03	3.44E-03	5.81E-04	1.82E-03	9.36E-04	9.61E-04	1.24E-03	1.58E-04	2.87E-08	8.60E-04	1.30E-03
E63	0.00E+00	8.89E-05	6.62E-06	1.88E+02	2.18E-04	6.20E-01	1.17E-04	6.29E-02	2.61E-02	4.11E-03	1.19E-02	5.41E-03	5.55E-03	9.56E-03	8.57E-04	1.48E-07	6.39E-03	1.18E-02
E64	0.00E+00	6.16E-05	4.67E-06	1.36E+02	1.63E-04	4.58E-01	8.35E-05	4.17E-02	1.90E-02	2.99E-03	8.49E-03	3.95E-03	4.05E-03	6.38E-03	6.24E-04	1.09E-07	4.44E-03	7.79E-03
E65	0.00E+00	8.95E-05	6.62E-06	1.87E+02	2.14E-04	6.11E-01	1.17E-04	6.42E-02	2.58E-02	4.07E-03	1.19E-02	5.34E-03	5.49E-03	9.74E-03	8.48E-04	1.46E-07	6.44E-03	1.20E-02
E66	0.00E+00	6.57E-05	4.95E-06	1.43E+02	1.70E-04	4.80E-01	8.84E-05	4.48E-02	2.00E-02	3.14E-03	9.00E-03	4.15E-03	4.26E-03	6.86E-03	6.56E-04	1.15E-07	4.75E-03	8.38E-03
E67	0.00E+00	2.90E-05	2.23E-06	7.35E+01	8.34E-05	2.42E-01	4.08E-05	1.92E-02	7.33E-03	1.24E-03	4.15E-03	1.97E-03	2.03E-03	3.41E-03	3.39E-04	6.06E-08	2.12E-03	3.59E-03
E68	0.00E+00	4.29E-05	3.28E-06	1.09E+02	1.25E-04	3.60E-01	6.08E-05	2.74E-02	1.09E-02	1.84E-03	6.21E-03	2.94E-03	3.01E-03	4.93E-03	5.03E-04	9.21E-08	3.20E-03	5.09E-03
E69	0.00E+00	2.09E-05	1.78E-06	5.88E+01	8.26E-05	2.23E-01	3.39E-05	9.82E-03	8.63E-03	1.35E-03	3.38E-03	1.82E-03	1.86E-03	1.60E-03	2.83E-04	5.22E-08	1.52E-03	1.82E-03
E70	0.00E+00	3.12E-05	2.76E-06	9.54E+01	1.41E-04	3.73E-01	5.42E-05	1.12E-02	1.42E-02	2.21E-03	5.40E-03	3.01E-03	3.08E-03	1.97E-03	4.66E-04	8.86E-08	2.32E-03	2.06E-03
E71	0.00E+00	2.16E-05	2.19E-06	8.14E+01	1.28E-04	3.36E-01	4.33E-05	4.59E-03	1.24E-02	1.93E-03	4.20E-03	2.63E-03	2.70E-03	8.61E-04	4.07E-04	7.59E-08	1.50E-03	8.12E-04
E72	0.00E+00	3.51E-05	3.23E-06	1.14E+02	1.73E-04	4.56E-01	6.38E-05	1.08E-02	1.71E-02	2.67E-03	6.31E-03	3.64E-03	3.73E-03	1.95E-03	5.63E-04	1.07E-07	2.58E-03	1.97E-03
E73	0.00E+00	1.61E-05	1.41E-06	4.25E+01	6.68E-05	1.76E-01	2.67E-05	7.54E-03	8.07E-03	1.21E-03	2.64E-03	1.46E-03	1.50E-03	1.08E-03	2.05E-04	3.81E-08	1.14E-03	1.40E-03
E74	0.00E+00	2.42E-05	2.04E-06	6.06E+01	9.46E-05	2.48E-01	3.92E-05	1.09E-02	1.14E-02	1.71E-03	3.93E-03	2.08E-03	2.14E-03	1.61E-03	2.92E-04	5.57E-08	1.79E-03	2.02E-03
E75	0.00E+00	5.84E-05	4.68E-06	1.46E+02	1.78E-04	4.93E-01	8.35E-05	3.84E-02	2.03E-02	3.19E-03	8.35E-03	4.17E-03	4.28E-03	5.80E-03	6.84E-04	1.16E-07	4.07E-03	7.15E-03
E76	0.00E+00	9.98E-05	8.13E-06	2.55E+02	3.10E-04	8.63E-01	1.43E-04	6.70E-02	3.55E-02	5.57E-03	1.42E-02	7.26E-03	7.46E-03	9.97E-03	1.19E-03	1.99E-07	6.79E-03	1.25E-02
E77	0.00E+00	6.29E-05	5.01E-06	1.55E+02	1.85E-04	5.16E-01	8.83E-05	4.30E-02	2.14E-02	3.36E-03	8.83E-03	4.38E-03	4.50E-03	6.43E-03	7.20E-04	1.21E-07	4.33E-03	8.02E-03
E78	0.00E+00	1.04E-04	8.38E-06	2.59E+02	3.11E-04	8.69E-01	1.47E-04	7.18E-02	3.60E-02	5.65E-03	1.46E-02	7.34E-03	7.54E-03	1.06E-02	1.21E-03	2.00E-07	7.04E-03	1.34E-02
E79	0.00E+00	4.86E-05	3.96E-06	1.34E+02	1.77E-04	4.75E-01	7.63E-05	2.32E-02	1.88E-02	2.97E-03	7.71E-03	3.95E-03	4.05E-03	3.87E-03	6.41E-04	1.20E-07	3.66E-03	4.30E-03
E80	0.00E+00	6.58E-05	5.86E-06	2.07E+02	2.86E-04	7.63E-01	1.12E-04	2.89E-02	2.97E-02	4.65E-03	1.10E-02	6.18E-03	6.35E-03	4.69E-03	1.01E-03	1.82E-07	4.68E-03	5.32E-03
E83	0.00E+00	1.75E-05	1.54E-06	5.06E+01	7.08E-05	1.92E-01	2.85E-05	8.94E-03	7.46E-03	1.16E-03	2.81E-03	1.56E-03	1.60E-03	1.39E-03	2.44E-04	4.33E-08	1.21E-03	1.65E-03
E84	0.00E+00	1.98E-05	1.70E-06	5.53E+01	7.65E-05	2.08E-01	3.16E-05	1.02E-02	8.10E-03	1.26E-03	3.14E-03	1.70E-03	1.74E-03	1.60E-03	2.65E-04	4.76E-08	1.40E-03	1.89E-03
E85	0.00E+00	7.04E-05	6.29E-06	1.93E+02	3.11E-04	8.13E-01	1.20E-04	2.89E-02	3.68E-02	5.51E-03	1.19E-02	6.70E-03	6.87E-03	4.27E-03	9.41E-04	1.77E-07	5.03E-03	5.33E-03
E86	0.00E+00	1.36E-04	1.09E-05	3.07E+02	4.50E-04	1.20E+00	2.03E-04	7.75E-02	5.72E-02	8.59E-03	2.05E-02	1.03E-02	1.06E-02	1.08E-02	1.45E-03	2.67E-07	9.89E-03	1.44E-02
E87	0.00E+00	1.22E-04	9.10E-06	2.38E+02	3.19E-04	8.73E-01	1.65E-04	8.10E-02	4.34E-02	6.53E-03	1.69E-02	7.74E-03	7.95E-03	1.10E-02	1.10E-03	1.98E-07	8.99E-03	1.51E-02
E88	0.00E+00	1.10E-04	8.24E-06	2.18E+02	2.95E-04	8.03E-01	1.52E-04	7.08E-02	3.97E-02	5.98E-03	1.55E-02	7.11E-03	7.30E-03	9.71E-03	1.01E-03	1.84E-07	8.24E-03	1.32E-02
E89	0.00E+00	7.36E-06	7.71E-07	2.65E+01	4.69E-05	1.20E-01	1.55E-05	8.50E-04	5.18E-03	7.73E-04	1.49E-03	9.54E-04	9.78E-04	1.99E-04	1.33E-04	2.59E-08	5.13E-04	1.43E-04
E90	0.00E+00	1.23E-05	1.17E-06	3.74E+01	6.22E-05	1.62E-01	2.25E-05	4.16E-03	7.20E-03	1.08E-03	2.19E-03	1.31E-03	1.34E-03	6.34E-04	1.84E-04	3.46E-08	8.49E-04	7.60E-04
E91	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.69E-07	2.48E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.03E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E92	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.69E-07	2.48E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.03E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E93	0.00E+00	1.11E-05	9.96E-07	3.04E+01	4.84E-05	1.27E-01	1.88E-05	4.98E-03	5.79E-03	8.66E-04	1.85E-03	1.05E-03	1.07E-03	7.11E-04	1.47E-04	2.72E-08	7.71E-04	9.20E-04
E94	0.00E+00	1.03E-05	1.04E-06	3.51E+01	6.14E-05	1.57E-01	2.08E-05	1.73E-03	6.84E-03	1.02E-03	2.02E-03	1.26E-03	1.29E-03	3.45E-04	1.76E-04	3.41E-08	7.31E-04	3.04E-04
E95	0.00E+00	3.53E-05	2.47E-06	7.60E+01	7.05E-05	2.15E-01	4.35E-05	2.80E-02	7.41E-03	1.25E-03	4.52E-03	1.86E-03	1.91E-03	4.92E-03	3.35E-04	5.64E-08	2.61E-03	5.24E-03
E96	0.00E+00	7.23E-05	5.36E-06	1.69E+02	1.68E-04	5.04E-01	9.32E-05	5.68E-02	1.69E-02	2.84E-03	9.49E-03	4.25E-03	4.36E-03	9.75E-03	7.58E-04	1.23E-07	5.13E-03	1.06E-02
E97	0.00E+00	3.53E-05	2.47E-06	7.60E+01	7.05E-05	2.15E-01	4.35E-05	2.80E-02	7.41E-03	1.25E-03	4.52E-03	1.86E-03	1.91E-03	4.92E-03	3.35E-04	5.64E-08	2.61E-03	5.24E-03
E98	0.00E+00	7.23E-05	5.36E-06	1.69E+02	1.68E-04	5.04E-01	9.32E-05	5.68E-02	1.69E-02	2.84E-03	9.49E-03	4.25E-03	4.36E-03	9.75E-03	7.58E-04	1.23E-07	5.13E-03	1.06E-02
F01	0.00E+00	2.35E-05	2.01E-06	5.92E+01	9.08E-05	2.41E-01	3.75E-05	1.21E-02	1.12E-02	1.67E-03	3.72E-03	2.01E-03	2.06E-03	1.69E-03	2.84E-04	5.20E-08	1.66E-03	2.25E-03
F02	0.00E+00	2.79E-05	2.18E-06	5.96E+01	8.47E-05	2.28E-01	4.01E-05	1.69E-02	1.10E-02	1.66E-03	4.07E-03	1.98E-03	2.03E-03	2.32E-03	2.79E-04	5.10E-08	2.04E-03	3.15E-03
F03	0.00E+00	2.20E-06	1.74E-07	5.90E+00	7.05E-06	2.01E-02	3.24E-06	1.33E-03	5.97E-04	1.01E-04	3.28E-04	1.62E-04	1.66E-04	2.39E-04	2.76E-05	5.05E-09	1.62E-04	2.47E-04
F04	0.00E+00	9.46E-06	7.49E-07	2.57E+01	3.10E-05	8.84E-02	1.41E-05	5.48E-03	2.60E-03	4.41E-04	1.43E-03	7.10E-04	7.28E-04	9.99E-04	1.20E-04	2.24E-08	7.06E-04	1.02E-03
F05	0.00E+00	2.94E-05	2.35E-06	6.48E+01	9.26E-05	2.50E-01	4.28E-05	1.81E-02	1.20E-02	1.80E-03	4.30E-03	2.15E-03	2.20E-03	2.46E-03	3.04E-04	5.46E-08	2.10E-03	3.38E-03
F06	0.00E+00	2.33E-05	1.64E-06	4.01E+01	4.86E-05	1.37E-01	2.92E-05	1.73E-02	7.16E-03	1.08E-03	3.02E-03	1.26E-03	1.30E-03	2.31E-03	1.80E-04	3.15E-08	1.73E-03	3.25E-03
F07	0.00E+00	3.64E-05	2.89E-06	8.10E+01	1.18E-04	3.16E-01	5.40E-05	2.05E-02	1.50E-02	2.26E-03	5.46E-03	2.71E-03	2.78E-03	2.87E-03	3.82E-04	7.09E-08	2.68E-03	3.82E-03
F08	0.00E+00	4.02E-05	3.02E-06	8.08E+01	1.12E-04	3.02E-01	5.61E-05	2.47E-02	1.48E-02	2.23E-03	5.75E-03	2.66E-03	2.73E-03	3.42E-03	3.76E-04	6.97E-08	3.01E-03	4.61E-03
F09	0.00E+00	1.47E-05	1.11E-06	3.51E+01	3.71E-05	1.10E-01	1.96E-05	1.10E-02	3.44E-03	5.84E-04	1.99E-03	9.14E-04	9.39E-04	1.90E-03	1.59E-04	2.70E-08	1.05E-03	2.05E-03
F10	0.00E+00	2.09E-05	1.68E-06	5.57E+01	6.46E-05	1.87E-01	3.01E-05	1.42E-02	5.62E-03	9.49E-04	3.01E-03	1.51E-03	1.55E-03	2.44E-03	2.58E-04	4.43E-08	1.46E-03	2.65E-03
F13	0.00E+00	1.04E-06	7.98E-08	2.53E+00	2.69E-06	7.99E-03	1.39E-06	7.94E-04	2.49E-04	4.21E-05	1.40E-04	6.60E-05	6.78E-05	1.35E-04	1.14E-05	1.90E-09	7.26E-05	1.48E-04
F14	0.00E+00	9.70E-07	7.23E-08	2.22E+00	2.22E-06	6.72E-03	1.24E-06	7.85E-04	2.15E-04	3.65E-05	1.26E-04	5.65E-05	5.80E-05	1.33E-04	9.90E-06	1.60E-09	6.76E-05	1.47E-04
F15	0.00E+00	3.91E-05	3.15E-06	9.44E+01	1.18E-04	3.31E-01	5.56E-05	2.64E-02	1.35E-02	2.11E-03	5.54E-03	2.78E-03	2.85E-03	3.93E-03	4.39E-04	7.44E-08	2.69E-03	4.92E-03
F16	0.00E+00	3.25E-05	2.47E-06	7.05E+01	8.22E-05	2.35E-01	4.31E-05	2.35E-02	9.84E-03	1.55E-03	4.36E-03	2.03E-03	2.08E-03	3.52E-03	3.22E-04	5.42E-08	2.28E-03	4.39E-03
F17	0.00E+00	3.48E-05	2.63E-06	7.36E+01	8.30E-05	2.40E-01	4.50E-05	2.67E-02	1.02E-02	1.60E-03	4.54E-03	2.09E-03	2.14E-03	3.94E-03	3.33E-04	5.42E-08	2.39E-03	5.00E-03
F18	0.00E+00	3.27E-05	2.42E-06	6.66E+01	7.31E-05	2.13E-01	4.14E-05	2.54E-02	9.16E-03	1.44E-03	4.20E-03	1.87E-03	1.93E-03	3.76E-03	2.99E-04	4.88E-08	2.27E-03	4.76E-03
F19	0.00E+00	1.32E-05	1.41E-06	5.41E+01	8.74E-05	2.28E-01	2.83E-05	1.52E-03	8.34E-03	1.29E-03	2.73E-03	1.77E-03	1.81E-03	3.51E-04	2.73E-04	5.12E-08	9.15E-04	2.51E-04
F20	0.00E+00	1.50E-05	1.35E-06	4.60E+01	6.71E-05	1.79E-01	2.59E-05	6.09E-03	6.84E-03	1.07E-03	2.56E-03	1.44E-03	1.48E-03	1.01E-03	2.24E-04	4.15E-08	1.08E-03	1.12E-03
F21	0.00E+00	7.44E-06	7.96E-07	3.05E+01	4.93E-05	1.29E-01	1.60E-05	8.59E-04	4.70E-03	7.29E-04	1.54E-03	9.96E-04	1.02E-03	1.98E-04	1.54E-04	2.89E-08	5.16E-04	1.42E-04
F22	0.00E+00	3.84E-06	3.97E-07	1.48E+01	2.33E-05	6.13E-02	7.81E-06	8.24E-04	2.26E-03	3.51E-04	7.53E-04	4.78E-04	4.90E-04	1.50E-04	7.40E-05	1.37E-08	2.63E-04	1.46E-04
F23	0.00E+00	5.27E-06	4.23E-07	1.31E+01	1.70E-05	4.68E-02	7.75E-06	3.14E-03	1.87E-03	2.94E-04	7.78E-04	3.91E-04	4.02E-04	4.87E-04	6.15E-05	1.09E-08	3.77E-04	5.84E-04
F24	0.00E+00	6.20E-06	4.84E-07	1.44E+01	1.79E-05	4.99E-02	8.68E-06	4.06E-03	2.04E-03	3.20E-04	8.76E-04	4.24E-04	4.35E-04	6.19E-04	6.69E-05	1.17E-08	4.41E-04	7.57E-04
F25	0.00E+00	2.50E-05	2.07E-06	5.93E+01	8.85E-05	2.36E-01	3.84E-05	1.39E-02	1.11E-02	1.66E-03	3.84E-03	2.00E-03	2.05E-03	1.92E-03	2.82E-04	5.15E-08	1.79E-03	2.58E-03
F26	0.00E+00	2.43E-05	1.75E-06	4.33E+01	5.33E-05	1.50E-01	3.09E-05	1.82E-02	7.76E-03	1.17E-03	3.18E-03	1.37E-03	1.40E-03	2.41E-03	1.95E-04	3.36E-08	1.78E-03	3.41E-03
F27	0.00E+00	1.25E-04	8.56E-06	2.05E+02	2.43E-04	6.84E-01	1.54E-04	9.22E-02	3.63E-02	5.49E-03	1.61E-02	6.44E-03	6.61E-03	1.24E-02	9.14E-04	1.64E-07	9.48E-03	1.73E-02
F28	0.00E+00	1.25E-04	8.56E-06	2.12E+02	2.65E-04	7.28E-01	1.59E-04	8.34E-02	3.77E-02	5.70E-03	1.67E-02	6.79E-03	6.97E-03	1.16E-02	9.56E-04	1.80E-07	9.73E-03	1.56E-02
F29	0.00E+00	1.43E-05	1.52E-06	5.26E+01	9.35E-05	2.39E-01	3.04E-05	1.53E-03	1.03E-02	1.54E-03	2.92E-03	1.89E-03	1.94E-03	3.64E-04	2.65E-04	5.11E-08	9.78E-04	2.54E-04
F30	0.00E+00	1.99E-05	1.54E-06	4.16E+01	5.75E-05	1.57E-01	2.81E-05	1.29E-02	7.64E-03	1.15E-03	2.84E-03	1.36E-03	1.40E-03

Appendix F.5.7: MOVES Emission Factors for AM Peak Traffic by Roadway Segment, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F74	0.00E+00	5.46E-05	3.37E-06	7.92E+01	5.83E-05	1.89E-01	5.75E-05	4.65E-02	9.64E-03	1.56E-03	6.18E-03	1.98E-03	2.03E-03	7.10E-03	3.28E-04	5.57E-08	4.15E-03	8.73E-03
F75	0.00E+00	2.47E-05	1.40E-06	2.80E+01	2.13E-05	6.55E-02	2.56E-05	1.95E-02	4.45E-03	6.87E-04	2.86E-03	7.88E-04	8.10E-04	2.69E-03	1.14E-04	2.19E-08	2.05E-03	3.67E-03
F76	0.00E+00	8.16E-07	8.67E-08	2.98E+00	5.19E-06	1.29E-02	1.70E-06	7.95E-05	8.58E-04	1.20E-04	1.63E-04	1.06E-04	1.08E-04	2.35E-05	1.49E-05	2.35E-09	5.42E-05	1.35E-05
F78	0.00E+00	4.18E-05	3.76E-06	1.11E+02	1.81E-04	4.58E-01	7.04E-05	1.61E-02	3.15E-02	4.41E-03	6.89E-03	3.92E-03	4.02E-03	2.11E-03	5.41E-04	8.53E-08	2.87E-03	2.98E-03
F79	0.00E+00	4.28E-05	3.98E-06	1.37E+02	2.08E-04	5.41E-01	7.71E-05	1.47E-02	2.52E-02	3.76E-03	7.57E-03	4.41E-03	4.53E-03	2.33E-03	6.73E-04	1.19E-07	3.05E-03	2.70E-03
F80	0.00E+00	3.78E-05	3.38E-06	1.22E+02	1.72E-04	4.55E-01	6.60E-05	1.41E-02	1.76E-02	2.75E-03	6.55E-03	3.68E-03	3.77E-03	2.43E-03	5.96E-04	1.11E-07	2.78E-03	2.58E-03

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
16	B15	100	Passenger Car	1518	0.00E+00	1.40E-05	1.52E-06	6.15E+01	9.94E-05	2.87E-01	3.16E-05	1.64E-03	4.85E-03	9.30E-04	3.08E-03	1.99E-03	2.04E-03	1.81E-04	3.14E-04	6.59E-08	1.04E-03	2.55E-04
16	B15	100	Passenger Truck	2542	0.00E+00	2.90E-05	3.10E-06	1.42E+02	1.93E-04	5.55E-01	6.25E-05	4.09E-03	8.47E-03	1.64E-03	6.02E-03	3.90E-03	4.00E-03	9.36E-04	7.17E-04	1.31E-07	2.02E-03	6.72E-04
16	B15	100	Single Unit Short Haul Truck	24	0.00E+00	2.28E-06	8.41E-08	3.91E+00	1.74E-06	8.07E-03	2.58E-06	1.01E-03	1.55E-04	4.00E-05	3.26E-04	6.02E-05	6.13E-05	4.00E-04	1.58E-05	6.46E-09	2.65E-04	1.88E-04
16	B15	100	Single Unit Long Haul Truck	1	0.00E+00	9.89E-08	3.55E-09	1.64E-01	7.20E-08	3.30E-04	1.12E-07	4.23E-05	7.03E-06	1.74E-06	1.43E-05	2.54E-06	2.59E-06	1.67E-05	6.67E-07	2.64E-10	1.17E-05	7.88E-06
16	B15	100	Combination Short Haul Truck	17	0.00E+00	2.39E-06	1.77E-07	5.58E+00	6.35E-09	4.31E-03	1.71E-06	4.33E-03	1.62E-04	4.11E-05	1.46E-04	5.16E-05	5.36E-05	8.86E-04	1.86E-05	0.00E+00	9.22E-05	8.16E-04
16	B15	100	Combination Long Haul Truck	15	0.00E+00	3.38E-06	1.91E-07	5.05E+00	2.16E-08	5.02E-03	2.79E-06	4.64E-03	1.62E-04	3.31E-05	3.10E-04	6.15E-05	6.41E-05	8.11E-04	1.69E-05	0.00E+00	2.46E-04	8.74E-04
16	B16	100	Passenger Car	975	0.00E+00	9.00E-06	9.78E-07	3.95E+01	6.39E-05	1.84E-01	2.03E-05	1.05E-03	3.12E-03	5.97E-04	1.98E-03	1.28E-03	1.31E-03	1.16E-04	2.02E-04	4.23E-08	6.70E-04	1.64E-04
16	B16	100	Passenger Truck	1633	0.00E+00	1.86E-05	1.99E-06	9.10E+01	1.24E-04	3.57E-01	4.01E-05	2.63E-03	5.44E-03	1.06E-03	3.87E-03	2.51E-03	2.57E-03	6.02E-04	4.60E-04	8.38E-08	1.30E-03	4.32E-04
16	B16	100	Single Unit Short Haul Truck	21	0.00E+00	2.00E-06	7.40E-08	3.44E+00	1.53E-06	7.10E-03	2.27E-06	8.87E-04	1.36E-04	3.52E-05	2.87E-04	5.30E-05	5.39E-05	3.52E-04	1.39E-05	5.69E-09	2.33E-04	1.65E-04
16	B16	100	Single Unit Long Haul Truck	1	0.00E+00	8.70E-08	3.13E-09	1.45E-01	6.34E-08	2.91E-04	9.84E-08	3.72E-05	6.19E-06	1.53E-06	1.26E-05	2.24E-06	2.28E-06	1.47E-05	5.87E-07	2.33E-10	1.03E-05	6.93E-06
16	B16	100	Combination Short Haul Truck	11	0.00E+00	1.57E-06	1.16E-07	3.66E+00	4.17E-09	2.83E-03	1.12E-06	2.84E-03	1.06E-04	2.70E-05	9.57E-05	3.39E-05	3.52E-05	5.82E-04	1.22E-05	0.00E+00	6.05E-05	5.36E-04
16	B16	100	Combination Long Haul Truck	10	0.00E+00	2.22E-06	1.25E-07	3.32E+00	1.42E-08	3.29E-03	1.83E-06	3.05E-03	1.07E-04	2.17E-05	2.04E-04	4.04E-05	4.21E-05	5.32E-04	1.11E-05	0.00E+00	1.62E-04	5.74E-04
16	B19	100	Passenger Car	3889	0.00E+00	3.59E-05	3.90E-06	1.58E+02	2.55E-04	7.36E-01	8.10E-05	4.19E-03	1.24E-02	2.38E-03	7.90E-03	5.09E-03	5.22E-03	4.63E-04	8.04E-04	1.69E-07	2.67E-03	6.54E-04
16	B19	100	Passenger Truck	6514	0.00E+00	7.42E-05	7.95E-06	3.63E+02	4.95E-04	1.42E+00	1.60E-04	1.05E-02	2.17E-02	4.21E-03	1.54E-02	9.99E-03	1.02E-02	2.40E-03	1.84E-03	3.34E-07	5.19E-03	1.72E-03
16	B19	100	Single Unit Short Haul Truck	178	0.00E+00	1.69E-05	6.26E-07	2.91E+01	1.30E-05	6.00E-02	1.92E-05	7.50E-03	1.15E-03	2.98E-04	2.43E-03	4.48E-04	4.56E-04	2.98E-03	1.18E-04	4.81E-08	1.97E-03	1.40E-03
16	B19	100	Single Unit Long Haul Truck	8	0.00E+00	7.36E-07	2.64E-08	1.22E+00	5.36E-07	2.46E-03	8.32E-07	3.14E-04	5.23E-05	1.29E-05	1.06E-04	1.89E-05	1.92E-05	1.24E-04	4.97E-06	1.97E-09	8.69E-05	5.86E-05
16	B19	100	Combination Short Haul Truck	142	0.00E+00	2.04E-05	1.50E-06	4.74E+01	5.40E-08	3.66E-02	1.46E-05	3.68E-02	1.38E-03	3.49E-04	1.24E-03	4.39E-04	4.56E-04	7.53E-03	1.59E-04	0.00E+00	7.84E-04	6.94E-03
16	B19	100	Combination Long Haul Truck	130	0.00E+00	2.88E-05	1.62E-06	4.29E+01	1.83E-07	4.27E-02	2.37E-05	3.94E-02	1.38E-03	2.81E-04	2.64E-03	5.23E-04	5.45E-04	6.89E-03	1.44E-04	0.00E+00	2.09E-03	7.43E-03
16	B20	100	Passenger Car	1922	0.00E+00	1.77E-05	1.93E-06	7.79E+01	1.26E-04	3.64E-01	4.00E-05	2.07E-03	6.15E-03	1.18E-03	3.90E-03	2.52E-03	2.58E-03	2.29E-04	3.97E-04	8.34E-08	1.32E-03	3.23E-04
16	B20	100	Passenger Truck	3220	0.00E+00	3.67E-05	3.93E-06	1.80E+02	2.45E-04	7.03E-01	7.91E-05	5.18E-03	1.07E-02	2.08E-03	7.63E-03	4.94E-03	5.06E-03	1.19E-03	9.07E-04	1.65E-07	2.56E-03	8.51E-04
16	B20	100	Single Unit Short Haul Truck	170	0.00E+00	1.62E-05	5.99E-07	2.78E+01	1.24E-05	5.75E-02	1.84E-05	7.17E-03	1.10E-03	2.85E-04	2.32E-03	4.29E-04	4.36E-04	2.85E-03	1.13E-04	4.60E-08	1.89E-03	1.34E-03
16	B20	100	Single Unit Long Haul Truck	8	0.00E+00	7.04E-07	2.53E-08	1.17E+00	5.13E-07	2.35E-03	7.96E-07	3.01E-04	5.01E-05	1.24E-05	1.02E-04	1.81E-05	1.84E-05	1.19E-04	4.75E-06	1.88E-09	8.31E-05	5.61E-05
16	B20	100	Combination Short Haul Truck	198	0.00E+00	2.83E-05	2.09E-06	6.59E+01	7.50E-08	5.09E-02	2.02E-05	5.12E-02	1.92E-03	4.86E-04	1.72E-03	6.10E-04	6.33E-04	1.05E-02	2.20E-04	0.00E+00	1.09E-03	9.64E-03
16	B20	100	Combination Long Haul Truck	180	0.00E+00	4.00E-05	2.25E-06	5.97E+01	2.55E-07	5.93E-02	3.30E-05	5.48E-02	1.92E-03	3.91E-04	3.67E-03	7.27E-04	7.57E-04	9.58E-03	2.00E-04	0.00E+00	2.91E-03	1.03E-02
16	B21	100	Passenger Car	3576	0.00E+00	3.30E-05	3.59E-06	1.45E+02	2.34E-04	6.77E-01	7.44E-05	3.86E-03	1.14E-02	2.19E-03	7.26E-03	4.68E-03	4.80E-03	4.25E-04	7.39E-04	1.55E-07	2.46E-03	6.02E-04
16	B21	100	Passenger Truck	5988	0.00E+00	6.82E-05	7.31E-06	3.34E+02	4.55E-04	1.31E+00	1.47E-04	9.63E-03	2.00E-02	3.87E-03	1.42E-02	9.19E-03	9.42E-03	2.21E-03	1.69E-03	3.07E-07	4.77E-03	1.58E-03
16	B21	100	Single Unit Short Haul Truck	119	0.00E+00	1.13E-05	4.17E-07	1.94E+01	8.64E-06	4.00E-02	1.28E-05	5.00E-03	7.67E-04	1.99E-04	1.62E-03	2.99E-04	3.04E-04	1.99E-03	7.85E-05	3.20E-08	1.31E-03	9.32E-04
16	B21	100	Single Unit Long Haul Truck	5	0.00E+00	4.90E-07	1.76E-08	8.16E-01	3.57E-07	1.64E-03	5.55E-07	2.10E-04	3.49E-05	8.62E-06	7.08E-05	1.26E-05	1.28E-05	8.30E-05	3.31E-06	1.31E-09	5.79E-05	3.91E-05
16	B21	100	Combination Short Haul Truck	111	0.00E+00	1.59E-05	1.17E-06	3.69E+01	4.21E-08	2.86E-02	1.14E-05	2.87E-02	1.07E-03	2.72E-04	9.66E-04	3.42E-04	3.55E-04	5.87E-03	1.24E-04	0.00E+00	6.11E-04	5.41E-03
16	B21	100	Combination Long Haul Truck	101	0.00E+00	2.24E-05	1.26E-06	3.35E+01	1.43E-07	3.33E-02	1.85E-05	3.07E-02	1.08E-03	2.19E-04	2.06E-03	4.08E-04	4.25E-04	5.37E-03	1.12E-04	0.00E+00	1.63E-03	5.79E-03
16	B22	100	Passenger Car	1508	0.00E+00	1.39E-05	1.51E-06	6.11E+01	9.88E-05	2.85E-01	3.14E-05	1.63E-03	4.82E-03	9.24E-04	3.06E-03	1.97E-03	2.03E-03	1.79E-04	3.12E-04	6.55E-08	1.04E-03	2.54E-04
16	B22	100	Passenger Truck	2525	0.00E+00	2.88E-05	3.08E-06	1.41E+02	1.92E-04	5.52E-01	6.20E-05	4.06E-03	8.41E-03	1.63E-03	5.98E-03	3.87E-03	3.97E-03	9.30E-04	7.12E-04	1.30E-07	2.01E-03	6.67E-04
16	B22	100	Single Unit Short Haul Truck	133	0.00E+00	1.27E-05	4.67E-07	2.17E+01	9.68E-06	4.49E-02	1.43E-05	5.60E-03	8.60E-04	2.23E-04	1.81E-03	3.35E-04	3.41E-04	2.23E-03	8.80E-05	3.59E-08	1.47E-03	1.04E-03
16	B22	100	Single Unit Long Haul Truck	6	0.00E+00	5.50E-07	1.98E-08	9.14E-01	4.01E-07	1.84E-03	6.22E-07	2.35E-04	3.91E-05	9.67E-06	7.93E-05	1.41E-05	1.44E-05	9.30E-05	3.71E-06	1.47E-09	6.49E-05	4.38E-05
16	B22	100	Combination Short Haul Truck	173	0.00E+00	2.47E-05	1.82E-06	5.75E+01	6.55E-08	4.44E-02	1.77E-05	4.47E-02	1.67E-03	4.24E-04	1.50E-03	5.33E-04	5.53E-04	9.14E-03	1.92E-04	0.00E+00	9.51E-04	8.42E-03
16	B22	100	Combination Long Haul Truck	157	0.00E+00	3.49E-05	1.97E-06	5.21E+01	2.22E-07	5.18E-02	2.88E-05	4.79E-02	1.67E-03	3.41E-04	3.20E-03	6.34E-04	6.61E-04	8.36E-03	1.75E-04	0.00E+00	2.54E-03	9.01E-03
16	B23	100	Passenger Car	3664	0.00E+00	3.38E-05	3.68E-06	1.48E+02	2.40E-04	6.93E-01	7.63E-05	3.95E-03	1.17E-02	2.24E-03	7.44E-03	4.80E-03	4.92E-03	4.36E-04	7.57E-04	1.59E-07	2.52E-03	6.16E-04
16	B23	100	Passenger Truck	6135	0.00E+00	6.99E-05	7.49E-06	3.42E+02	4.66E-04	1.34E+00	1.51E-04	9.87E-03	2.04E-02	3.97E-03	1.45E-02	9.41E-03	9.65E-03	2.26E-03	1.73E-03	3.15E-07	4.89E-03	1.62E-03
16	B23	100	Single Unit Short Haul Truck	119	0.00E+00	1.13E-05	4.17E-07	1.94E+01	8.64E-06	4.00E-02	1.28E-05	5.00E-03	7.67E-04	1.99E-04	1.62E-03	2.99E-04	3.04E-04	1.99E-03	7.85E-05	3.20E-08	1.31E-03	9.32E-04
16	B23	100	Single Unit Long Haul Truck	5	0.00E+00	4.90E-07	1.76E-08	8.16E-01	3.57E-07	1.64E-03	5.55E-07	2.10E-04	3.49E-05	8.62E-06	7.08E-05	1.26E-05	1.28E-05	8.30E-05	3.31E-06	1.31E-09	5.79E-05	3.91E-05
16	B23	100	Combination Short Haul Truck	111	0.00E+00	1.59E-05	1.17E-06	3.69E+01	4.21E-08	2.86E-02	1.14E-05	2.87E-02	1.07E-03	2.72E-04	9.66E-04	3.42E-04	3.55E-04	5.87E-03	1.24E-04	0.00E+00	6.11E-04	5.41E-03
16	B23	100	Combination Long Haul Truck	101	0.00E+00	2.24E-05	1.26E-06	3.35E+01	1.43E-07	3.33E-02	1.85E-05	3.07E-02	1.08E-03	2.19E-04	2.06E-03	4.08E-04	4.25E-04	5.37E-03	1.12E-04	0.00E+00	1.63E-03	5.79E-03
16	B24	100	Passenger Car	1658	0.00E+00	1.53E-05	1.66E-06	6.71E+01	1.09E-04	3.14E-01	3.45E-05	1.79E-03	5.30E-03	1.02E-03	3.37E-03	2.17E-03	2.23E-03	1.97E-04	3.43E-04	7.20E-08	1.14E-03	2.79E-04
16	B24	100	Passenger Truck	2776	0.00E+00	3.16E-05	3.39E-06	1.55E+02	2.11E-04	6.07E-01	6.82E-05	4.47E-03	9.25E-03	1.80E-03	6.58E-03	4.26E-03	4.37E-03	1.02E-03	7.83E-04	1.43E-07	2.21E-03	7.34E-04
16	B24	100	Single Unit Short Haul Truck	152	0.00E+00	1.45E-05	5.35E-07	2.49E+01	1.11E-05	5.13E-02	1.64E-05	6.41E-03	9.84E-04	2.55E-04	2.08E-03	3.83E-04	3.90E-04	2.55E-03	1.01E-04	4.11E-08	1.69E-03	1.19E-03
16	B24	100	Single Unit Long Haul Truck	7	0.00E+00	6.29E-07	2.26E-08	1.05E+00	4.58E-07	2.10E-03	7.11E-07	2.69E-04	4.47E-05	1.11E-05	9.07E-05	1.62E-05	1.65E-05	1.06E-04	4.24E-06	1.68E-09	7.43E-05	5.01E-05
16	B24	100	Combination Short Haul Truck	190	0.00E+00	2.72E-05	2.01E-06	6.33E+01	7.21E-08	4.89E-02	1.94E-05	4.91E-02	1.84E-03	4.66E-04	1.65E-03	5.86E-04	6.08E-04	1.01E-02	2.12E-04	0.00E+00	1.05E-03	9.26E-03
16	B24	100	Combination Long Haul Truck	173	0.00E+00	3.84E-05	2.16E-06	5.73E+01	2.45E-07	5.69E-02	3.17E-05	5.26E-02	1.84E-03	3.75E-04	3.52E-03	6.98E-04	7.27E-04	9.20E-03	1.92E-04	0.00E+00	2.79E-03	9.92E-03
10	E39	70	Passenger Car	350	0.00E+00	3.86E-06	4.20E-07	1.51E+01	2.74E-05	7.49E-02	8.71E-06	3.54E-04	2.70E-03	4.20E-04	8.49E-04	5.48E-04	5.62E-04	5.95E-05	7.68E-05	1.60E-08	2.87E-04	5.53E-05
10	E39	70	Passenger Truck	587	0.00E+00	8.13E-06	8.64E-07	3.41E+01	5.21E-05	1.33E-01	1.70E-05	1.03E-03	4.89E-03	7.56E-04	1.63E-03	1.06E-03	1.09E-03	2.60E-04	1.71E-04	3.07E-08	5.45E-04	1.73E-04
10	E39	70	Single Unit Short Haul Truck	11	0.00E+00	2.02E-06	8.22E-08	1.88E+00	1.36E-06	3.41E-03	2.20E-06	8.05E-04	1.83E-04	3.35E-05	2.73E-04	5.20E-05	5.30E-05	1.91E-04	7.66E-06	3.09E-09	2.20E-04	1.51E-04
10	E39	70	Single Unit Long Haul Truck	1	0.00E+00	8.80E-08	3.54E-09	7.98E-02	5.83E-08	1.43E-04	9.57E-08	3.47E-05	8.36E-06	1.50E-06	1.19E-05	2.24E-06	2.29E-06	8.07E-06	3.25E-07	1.30E-10	9.61E-06	6.48E-06
10	E39	70	Combination Short Haul Truck	12	0.00E+00	2.96E-06	2.20E-07	4.00E+00	7.52E-09	4.28E-03	2.11E-06	4.43E-03	4.17E-04	6.96E-05	1.78E-04	6.42E-05	6.66E-05	6.36E-04	1.34E-05	0.00E+00	1.11E-04	8.35E-04
10	E39	70	Combination Long Haul Truck	10	0.00E+00	4.06E-06	2.31E-07	3.76E+00	2.55E-08	5.10E-03	3.34E-06	4.75E-03	4.35E-04	6.55E-05	3.69E-04	7.42E-05	7.73E-05	6.03E-04	1.26E-05	0.00E+00	2.92E-04	8.94E-04
10	E40	70	Passenger Car	350	0.00E+00	3.86E-06	4.20E-07	1.51E+01	2.74E-05	7.49E-02	8.71E-06	3.54E-04	2.70E-03	4.20E-04	8.49E-04	5.48E-04	5.62E-04	5.95E-05	7.68E-05	1.60E-08	2.87E-04	5.53E-05
10	E40	70	Passenger Truck	587	0.00E+00	8.13E-06	8.64E-07	3.41E+01	5.21E-05	1.33E-01	1.70E-05	1.03E-03	4.89E-03	7.56E-04	1.63E-03	1.06E-03	1.09E-03	2.60E-04	1.71E-04	3.07E-08	5.45E-04	1.73E-04
10	E40	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E40	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E40	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	E41	70	Passenger Car	281	0.00E+00	3.10E-06	3.37E-07	1.21E+01	2.20E-05	6.01E-02	6.99E-06	2.84E-04	2.17E-03	3.37E-04	6.82E-04	4.39E-04	4.51E-04	4.78E-05	6.16E-05	1.28E-08	2.31E-04	4.44E-05
10	E41	70	Passenger Truck	471	0.00E+00	6.53E-06	6.94E-07	2.73E+01	4.18E-05	1.06E-01	1.37E-05	8.27E-04	3.92E-03	6.07E-04	1.31E-03	8.50E-04	8.71E-04	2.09E-04	1.37E-04	2.46E-08	4.37E-04	1.39E-04
10	E41	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	E41	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E41	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
10	E42	70	Passenger Car	307	0.00E+00	3.39E-06	3.68E-07	1.33E+01	2.40E-05	6.57E-02	7.64E-06	3.11E-04	2.37E-03	3.69E-04	7.45E-04	4.80E-04	4.93E-04	5.22E-05	6.74E-05	1.40E-08	2.52E-04	4.85E-05
10	E42	70	Passenger Truck	515	0.00E+00	7.13E-06	7.58E-07	2.99E+01	4.57E-05	1.16E-01	1.50E-05	9.04E-04	4.29E-03	6.63E-04	1.43E-03	9.29E-04	9.52E-04	2.28E-04	1.50E-04	2.69E-08	4.78E-04	1.52E-04
10	E42	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E42	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	E42	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	E43	70	Passenger Car	199	0.00E+00	2.19E-06	2.38E-07	8.59E+00	1.56E-05	4.25E-02	4.94E-06	2.01E-04	1.53E-03	2.39E-04	4.82E-04	3.11E-04	3.19E-04	3.38E-05	4.36E-05	9.06E-09	1.63E-04	3.14E-05
10	E43	70	Passenger Truck	333	0.00E+00	4.62E-06	4.91E-07	1.93E+01	2.96E-05	7.52E-02	9.68E-06	5.85E-04	2.77E-03	4.29E-04	9.26E-04	6.01E-04	6.16E-04	1.48E-04	9.72E-05	1.74E-08	3.09E-04	9.82E-05
10	E43	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	E44	70	Passenger Car	310	0.00E+00	3.42E-06	3.71E-07	1.34E+01	2.42E-05	6.63E-02	7.70E-06	3.13E-04	2.39E-03	3.72E-04	7.51E-04	4.84E-04	4.97E-04	5.27E-05	6.79E-05	1.41E-08	2.54E-04	4.89E-05
10	E44	70	Passenger Truck	519	0.00E+00	7.20E-06	7.65E-07	3.01E+01	4.61E-05	1.17E-01	1.51E-05	9.12E-04	4.32E-03	6.69E-04	1.44E-03	9.37E-04	9.60E-04	2.30E-04	1.51E-04	2.71E-08	4.82E-04	1.53E-04
10	E44	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E44	70	Combination Short Haul Truck	1	0.00E+00	2.69E-07	2.00E-08	3.64E-01	6.84E-10	3.89E-04	1.92E-07	4.03E-04	3.79E-05	6.33E-06	1.62E-05	5.83E-06	6.06E-06	5.78E-05	1.22E-06	0.00E+00	1.01E-05	7.59E-05
10	E44	70	Combination Long Haul Truck	1	0.00E+00	3.69E-07	2.10E-08	3.42E-01	2.31E-09	4.64E-04	3.04E-07	4.32E-04	3.95E-05	5.95E-06	3.36E-05	6.75E-06	7.03E-06	5.48E-05	1.14E-06	0.00E+00	2.65E-05	8.13E-05
11	E45	80	Passenger Car	299	0.00E+00	3.07E-06	3.34E-07	1.26E+01	2.18E-05	6.11E-02	6.93E-06	3.11E-04	1.63E-03	2.73E-04	6.76E-04	4.36E-04	4.47E-04	4.45E-05	6.39E-05	1.37E-08	2.29E-04	4.84E-05
11	E45	80	Passenger Truck	502	0.00E+00	6.33E-06	6.75E-07	2.84E+01	4.12E-05	1.08E-01	1.34E-05	8.38E-04	2.91E-03	4.84E-04	1.29E-03	8.35E-04	8.56E-04	2.06E-04	1.43E-04	2.60E-08	4.31E-04	1.39E-04
11	E45	80	Single Unit Short Haul Truck	34	0.00E+00	4.73E-06	1.85E-07	5.65E+00	3.21E-06	1.03E-02	5.20E-06	1.97E-03	3.87E-04	7.92E-05	6.52E-04	1.21E-04	1.23E-04	5.75E-04	2.30E-05	9.10E-09	5.29E-04	3.68E-04
11	E45	80	Single Unit Long Haul Truck	2	0.00E+00	2.06E-07	7.93E-09	2.39E-01	1.37E-07	4.28E-04	2.26E-07	8.41E-05	1.78E-05	3.52E-06	2.84E-05	5.18E-06	5.28E-06	2.42E-05	9.72E-07	3.79E-10	2.31E-05	1.57E-05
11	E45	80	Combination Short Haul Truck	21	0.00E+00	4.42E-06	3.27E-07	7.19E+00	1.16E-08	6.74E-03	3.16E-06	6.83E-03	5.12E-04	9.27E-05	2.68E-04	9.55E-05	9.91E-05	1.14E-03	2.40E-05	0.00E+00	1.69E-04	1.29E-03
11	E45	80	Combination Long

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
11	E49	80	Combination Long Haul Truck	17	0.00E+00	5.26E-06	2.97E-07	5.70E+00	3.34E-08	6.81E-03	4.34E-06	6.24E-03	4.51E-04	7.22E-05	4.82E-04	9.56E-05	9.96E-05	9.14E-04	1.91E-05	0.00E+00	3.82E-04	1.17E-03
11	E50	80	Passenger Car	126	0.00E+00	1.29E-06	1.41E-07	5.29E+00	9.18E-06	2.57E-02	2.92E-06	1.31E-04	6.87E-04	1.15E-04	2.84E-04	1.83E-04	1.88E-04	1.87E-05	2.69E-05	5.74E-09	9.62E-05	2.04E-05
11	E50	80	Passenger Truck	211	0.00E+00	2.66E-06	2.84E-07	1.19E+01	1.73E-05	4.55E-02	5.65E-06	3.52E-04	1.22E-03	2.04E-04	5.42E-04	3.51E-04	3.60E-04	8.66E-05	6.01E-05	1.09E-08	1.81E-04	5.87E-05
11	E50	80	Single Unit Short Haul Truck	3	0.00E+00	3.94E-07	1.54E-08	4.71E-01	2.67E-07	8.56E-04	4.33E-07	1.64E-04	3.23E-05	6.60E-06	5.43E-05	1.01E-05	1.02E-05	4.79E-05	1.91E-06	7.59E-10	4.40E-05	3.07E-05
11	E50	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.17E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.20E-04
11	E50	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.25E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.35E-04
11	E51	80	Passenger Car	303	0.00E+00	3.11E-06	3.38E-07	1.27E+01	2.21E-05	6.18E-02	7.01E-06	3.14E-04	1.65E-03	2.76E-04	6.84E-04	4.41E-04	4.52E-04	4.50E-05	6.46E-05	1.38E-08	2.31E-04	4.90E-05
11	E51	80	Passenger Truck	507	0.00E+00	6.40E-06	6.83E-07	2.87E+01	4.17E-05	1.09E-01	1.36E-05	8.47E-04	2.94E-03	4.89E-04	1.30E-03	8.45E-04	8.66E-04	2.08E-04	1.45E-04	2.63E-08	4.36E-04	1.41E-04
11	E51	80	Single Unit Short Haul Truck	27	0.00E+00	3.68E-06	1.44E-07	4.40E+00	2.49E-06	7.99E-03	4.04E-06	1.53E-03	3.01E-04	6.16E-05	5.07E-04	9.38E-05	9.57E-05	4.47E-04	1.79E-05	7.08E-09	4.11E-04	2.86E-04
11	E51	80	Single Unit Long Haul Truck	1	0.00E+00	1.60E-07	6.17E-09	1.86E-01	1.06E-07	3.33E-04	1.76E-07	6.54E-05	1.38E-05	2.73E-06	2.21E-05	4.03E-06	4.11E-06	1.88E-05	7.56E-07	2.95E-10	1.80E-05	1.22E-05
11	E51	80	Combination Short Haul Truck	17	0.00E+00	3.45E-06	2.55E-07	5.61E+00	9.03E-09	5.26E-03	2.47E-06	5.33E-03	3.99E-04	7.24E-05	2.09E-04	7.45E-05	7.73E-05	8.92E-04	1.88E-05	0.00E+00	1.32E-04	1.00E-03
11	E51	80	Combination Long Haul Truck	15	0.00E+00	4.81E-06	2.71E-07	5.21E+00	3.06E-08	6.23E-03	3.96E-06	5.70E-03	4.13E-04	6.61E-05	4.40E-04	8.74E-05	9.11E-05	8.36E-04	1.75E-05	0.00E+00	3.49E-04	1.07E-03
11	E52	80	Passenger Car	47	0.00E+00	4.87E-07	5.30E-08	1.99E+00	3.46E-06	9.70E-03	1.10E-06	4.92E-05	2.59E-04	4.33E-05	1.07E-04	6.91E-05	7.09E-05	7.06E-06	1.01E-05	2.16E-09	3.63E-05	7.68E-06
11	E52	80	Passenger Truck	80	0.00E+00	1.00E-06	1.07E-07	4.50E+00	6.53E-06	1.71E-02	2.13E-06	1.33E-04	4.61E-04	7.67E-05	2.04E-04	1.32E-04	1.36E-04	3.27E-05	2.27E-05	4.12E-09	6.84E-05	2.21E-05
11	E52	80	Combination Short Haul Truck	1	0.00E+00	1.08E-07	7.98E-09	1.75E-01	2.82E-10	1.64E-04	7.71E-08	1.67E-04	1.25E-05	2.26E-06	6.54E-06	2.33E-06	2.42E-06	2.79E-05	5.86E-07	0.00E+00	4.12E-06	3.14E-05
11	E53	80	Passenger Car	397	0.00E+00	4.07E-06	4.43E-07	1.66E+01	2.89E-05	8.10E-02	9.18E-06	4.11E-04	2.16E-03	3.62E-04	8.96E-04	5.77E-04	5.93E-04	5.90E-05	8.46E-05	1.81E-08	3.03E-04	6.42E-05
11	E53	80	Passenger Truck	664	0.00E+00	8.39E-06	8.94E-07	3.76E+01	5.46E-05	1.43E-01	1.78E-05	1.11E-03	3.85E-03	6.41E-04	1.71E-03	1.11E-03	1.13E-03	2.73E-04	1.89E-04	3.44E-08	5.71E-04	1.85E-04
11	E53	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E53	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E53	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.17E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E53	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.59E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	E54	80	Passenger Car	98	0.00E+00	1.01E-06	1.09E-07	4.11E+00	7.14E-06	2.00E-02	2.27E-06	1.02E-04	5.34E-04	8.94E-05	2.21E-04	1.43E-04	1.46E-04	1.46E-05	2.09E-05	4.47E-09	7.48E-05	1.58E-05
11	E54	80	Passenger Truck	164	0.00E+00	2.07E-06	2.21E-07	9.28E+00	1.35E-05	3.54E-02	4.39E-06	2.74E-04	9.51E-04	1.58E-04	4.21E-04	2.73E-04	2.80E-04	6.74E-05	4.68E-05	8.50E-09	1.41E-04	4.56E-05
11	E54	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.11E-05
11	E54	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.17E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.08E-04
11	E54	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.32E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.36E-04
11	E55	80	Passenger Car	397	0.00E+00	4.07E-06	4.43E-07	1.66E+01	2.89E-05	8.10E-02	9.18E-06	4.11E-04	2.16E-03	3.62E-04	8.96E-04	5.77E-04	5.93E-04	5.90E-05	8.46E-05	1.81E-08	3.03E-04	6.42E-05
11	E55	80	Passenger Truck	664	0.00E+00	8.39E-06	8.94E-07	3.76E+01	5.46E-05	1.43E-01	1.78E-05	1.11E-03	3.85E-03	6.41E-04	1.71E-03	1.11E-03	1.13E-03	2.73E-04	1.89E-04	3.44E-08	5.71E-04	1.85E-04
11	E55	80	Single Unit Short Haul Truck	25	0.00E+00	3.42E-06	1.33E-07	4.08E+00	2.32E-06	7.42E-03	3.76E-06	1.42E-03	2.80E-04	5.72E-05	4.71E-04	8.71E-05	8.88E-05	4.15E-04	1.66E-05	6.58E-09	3.82E-04	2.66E-04
11	E55	80	Single Unit Long Haul Truck	1	0.00E+00	1.48E-07	5.73E-09	1.72E-01	9.87E-08	3.09E-04	1.63E-07	6.07E-05	1.28E-05	2.54E-06	2.05E-05	3.74E-06	3.81E-06	1.74E-05	7.02E-07	2.74E-10	1.67E-05	1.13E-05
11	E55	80	Combination Short Haul Truck	19	0.00E+00	3.99E-06	2.95E-07	6.49E+00	1.04E-08	6.08E-03	2.85E-06	6.17E-03	4.62E-04	8.37E-05	2.42E-04	8.61E-05	8.94E-05	1.03E-03	2.17E-05	0.00E+00	1.52E-04	1.16E-03
11	E55	80	Combination Long Haul Truck	18	0.00E+00	5.56E-06	3.14E-07	6.02E+00	3.53E-08	7.20E-03	4.58E-06	6.59E-03	4.77E-04	7.64E-05	5.09E-04	1.01E-04	1.05E-04	9.66E-04	2.02E-05	0.00E+00	4.04E-04	1.24E-03
11	E56	80	Passenger Car	98	0.00E+00	1.01E-06	1.09E-07	4.11E+00	7.14E-06	2.00E-02	2.27E-06	1.02E-04	5.34E-04	8.94E-05	2.21E-04	1.43E-04	1.46E-04	1.46E-05	2.09E-05	4.47E-09	7.48E-05	1.58E-05
11	E56	80	Passenger Truck	164	0.00E+00	2.07E-06	2.21E-07	9.28E+00	1.35E-05	3.54E-02	4.39E-06	2.74E-04	9.51E-04	1.58E-04	4.21E-04	2.73E-04	2.80E-04	6.74E-05	4.68E-05	8.50E-09	1.41E-04	4.56E-05
11	E56	80	Single Unit Short Haul Truck	5	0.00E+00	6.57E-07	2.57E-08	7.85E-01	4.45E-07	1.43E-03	7.22E-07	2.73E-04	5.38E-05	1.10E-05	9.05E-05	1.68E-05	1.71E-05	7.99E-05	3.19E-06	1.26E-09	7.34E-05	5.11E-05
11	E56	80	Combination Short Haul Truck	7	0.00E+00	1.40E-06	1.04E-07	2.28E+00	3.67E-09	2.14E-03	1.00E-06	2.17E-03	1.62E-04	2.94E-05	8.50E-05	3.03E-05	3.14E-05	3.62E-04	7.62E-06	0.00E+00	5.36E-05	4.08E-04
11	E56	80	Combination Long Haul Truck	6	0.00E+00	1.95E-06	1.10E-07	2.12E+00	1.24E-08	2.53E-03	1.61E-06	2.32E-03	1.68E-04	2.68E-05	1.79E-04	3.55E-05	3.70E-05	3.40E-04	7.09E-06	0.00E+00	1.42E-04	4.36E-04
10	E57	70	Passenger Car	267	0.00E+00	2.95E-06	3.20E-07	1.15E+01	2.09E-05	5.72E-02	6.65E-06	2.70E-04	2.06E-03	3.21E-04	6.48E-04	4.18E-04	4.29E-04	4.54E-05	5.86E-05	1.22E-08	2.19E-04	4.22E-05
10	E57	70	Passenger Truck	448	0.00E+00	6.21E-06	6.60E-07	2.60E+01	3.97E-05	1.01E-01	1.30E-05	7.86E-04	3.73E-03	5.77E-04	1.24E-03	8.08E-04	8.28E-04	1.98E-04	1.31E-04	2.34E-08	4.16E-04	1.32E-04
10	E57	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	E57	70	Combination Short Haul Truck	8	0.00E+00	2.15E-06	1.60E-07	2.91E+00	5.47E-09	3.11E-03	1.53E-06	3.22E-03	3.04E-04	5.06E-05	1.29E-04	4.67E-05	4.84E-05	4.62E-04	9.73E-06	0.00E+00	8.08E-05	6.08E-04
10	E57	70	Combination Long Haul Truck	8	0.00E+00	2.95E-06	1.68E-07	2.73E+00	1.85E-08	3.71E-03	2.43E-06	3.45E-03	3.16E-04	4.76E-05	2.68E-04	5.40E-05	5.62E-05	4.38E-04	9.15E-06	0.00E+00	2.12E-04	6.50E-04
10	E58	70	Passenger Car	285	0.00E+00	3.14E-06	3.41E-07	1.23E+01	2.23E-05	6.09E-02	7.08E-06	2.88E-04	2.19E-03	3.42E-04	6.91E-04	4.45E-04	4.57E-04	4.84E-05	6.25E-05	1.30E-08	2.34E-04	4.49E-05
10	E58	70	Passenger Truck	477	0.00E+00	6.61E-06	7.03E-07	2.77E+01	4.23E-05	1.08E-01	1.39E-05	8.38E-04	3.97E-03	6.15E-04	1.33E-03	8.61E-04	8.83E-04	2.12E-04	1.39E-04	2.49E-08	4.43E-04	1.41E-04
10	E58	70	Single Unit Short Haul Truck	4	0.00E+00	6.74E-07	2.74E-08	6.28E-01	4.52E-07	1.14E-03	7.33E-07	2.68E-04	6.09E-05	1.12E-05	9.09E-05	1.73E-05	1.77E-05	6.38E-05	2.55E-06	1.03E-09	7.32E-05	5.02E-05
10	E58	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.66E-04
10	E58	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
11	E59	80	Passenger Car	295	0.00E+00	3.02E-06	3.29E-07	1.24E+01	2.15E-05	6.02E-02	6.82E-06	3.05E-04	1.61E-03	2.69E-04	6.65E-04	4.29E-04	4.40E-04	4.38E-05	6.29E-05	1.34E-08	2.25E-04	4.77E-05
11	E59	80	Passenger Truck	493	0.00E+00	6.23E-06	6.64E-07	2.79E+01	4.05E-05	1.06E-01	1.32E-05	8.24E-04	2.86E-03	4.76E-04	1.27E-03	8.22E-04	8.42E-04	2.03E-04	1.41E-04	2.56E-08	4.24E-04	1.37E-04
11	E59	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.83E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.15E-05
11	E59	80	Combination Short Haul Truck	8	0.00E+00	1.62E-06	1.20E-07	2.63E+00	4.23E-09	2.46E-03	1.16E-06	2.50E-03	1.87E-04	3.39E-05	9.81E-05	3.49E-05	3.63E-05	4.18E-04	8.80E-06	0.00E+00	6.18E-05	4.71E-04
11	E59	80	Combination Long Haul Truck	7	0.00E+00	2.25E-06	1.27E-07	2.44E+00	1.43E-08	2.92E-03	1.86E-06	2.67E-03	1.93E-04	3.10E-05	2.06E-04	4.10E-05	4.27E-05	3.92E-04	8.18E-06	0.00E+00	1.64E-04	5.03E-04
11	E60	80	Passenger Car	245	0.00E+00	2.51E-06	2.73E-07	1.03E+01	1.78E-05	5.00E-02	5.67E-06	2.54E-04	1.33E-03	2.24E-04	5.53E-04	3.56E-04	3.66E-04	3.64E-05	5.23E-05	1.12E-08	1.87E-04	3.96E-05
11	E60	80	Passenger Truck	410	0.00E+00	5.18E-06	5.52E-07	2.32E+01	3.37E-05	8.84E-02	1.10E-05	6.85E-04	2.38E-03	3.96E-04	1.05E-03	6.83E-04	7.00E-04	1.68E-04	1.17E-04	2.13E-08	3.53E-04	1.14E-04
11	E60	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	E60	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.33E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.57E-04
11	E60	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.91E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.68E-04
11	E61	80	Passenger Car	295	0.00E+00	3.02E-06	3.29E-07	1.24E+01	2.15E-05	6.02E-02	6.82E-06	3.05E-04	1.61E-03	2.69E-04	6.65E-04	4.29E-04	4.40E-04	4.38E-05	6.29E-05	1.34E-08	2.25E-04	4.77E-05
11	E61	80	Passenger Truck	493	0.00E+00	6.23E-06	6.64E-07	2.79E+01	4.05E-05	1.06E-01	1.32E-05	8.24E-04	2.86E-03	4.76E-04	1.27E-03	8.22E-04	8.42E-04	2.03E-04	1.41E-04	2.56E-08	4.24E-04	1.37E-04
11	E61	80	Single Unit Short Haul Truck	7	0.00E+00	9.20E-07	3.59E-08	1.10E+00	6.24E-07	2.00E-03	1.01E-06	3.83E-04	7.53E-05	1.54E-05	1.27E-04	2.35E-05	2.39E-05	1.12E-04	4.47E-06	1.77E-09	1.03E-04	7.15E-05
11	E61	80	Combination Short Haul Truck	8	0.00E+00	1.62E-06	1.20E-07	2.63E+00	4.23E-09	2.46E-03	1.16E-06	2.50E-03	1.87E-04	3.39E-05	9.81E-05	3.49E-05	3.63E-05	4.18E-04	8.80E-06	0.00E+00	6.18E-05	4.71E-04
11	E61	80	Combination Long Haul Truck	7	0.00E+00	2.25E-06	1.27E-07	2.44E+00	1.43E-08	2.92E-03	1.86E-06	2.67E-03	1.93E-04	3.10E-05	2.06E-04	4.10E-05	4.27E-05	3.92E-04	8.18E-06	0.00E+00	1.64E-04	5.03E-04
11	E62	80	Passenger Car	245	0.00E+00	2.51E-06	2.73E-07	1.03E+01	1.78E-05	5.00E-02	5.67E-06	2.54E-04	1.33E-03	2.24E-04	5.53E-04	3.56E-04	3.66E-04	3.64E-05	5.23E-05	1.12E-08	1.87E-04	3.96E-05
11	E62	80	Passenger Truck	410	0.00E+00	5.18E-06	5.52E-07	2.32E+01	3.37E-05	8.84E-02	1.10E-05	6.85E-04	2.38E-03	3.96E-04	1.05E-03	6.83E-04	7.00E-04	1.68E-04	1.17E-04	2.13E-08	3.53E-04	1.14E-04
11	E62	80	Single Unit Short Haul Truck	2	0.00E+00	2.63E-07	1.03E-08	3.14E-01	1.78E-07	5.70E-04	2.89E-07	1.09E-04	2.15E-05	4.40E-06	3.62E-05	6.70E-06	6.83E-06	3.19E-05	1.28E-06	5.06E-10	2.94E-05	2.04E-05
11	E62	80	Combination Short Haul Truck	3	0.00E+00	5.39E-07	3.99E-08	8.77E-01	1.41E-09	8.21E-04	3.85E-07	8.33E-04	6.24E-05	1.13E-05	3.27E-05	1.16E-05	1.21E-05	1.39E-04	2.93E-06	0.00E+00	2.06E-05	1.57E-04
11	E62	80	Combination Long Haul Truck	2	0.00E+00	7.51E-07	4.24E-08	8.14E-01	4.78E-09	9.73E-04	6.19E-07	8.91E-04	6.45E-05	1.03E-05	6.88E-05	1.37E-05	1.42E-05	1.31E-04	2.73E-06	0.00E+00	5.46E-05	1.68E-04
10	E63	70	Passenger Car	726	0.00E+00	8.01E-06	8.70E-07	3.14E+01	5.68E-05	1.55E-01	1.81E-05	7.35E-04	5.60E-03	8.72E-04	1.76E-03	1.14E-03	1.17E-03	1.23E-04	1.59E-04	3.31E-08	5.96E-04	1.15E-04
10	E63	70	Passenger Truck	1217	0.00E+00	1.69E-05	1.79E-06	7.06E+01	1.08E-04	2.75E-01	3.53E-05	2.14E-03	1.01E-02	1.57E-03	3.38E-03	2.20E-03	2.25E-03	5.39E-04	3.55E-04	6.36E-08	1.13E-03	3.59E-04
10	E63	70	Single Unit Short Haul Truck	43	0.00E+00	7.59E-06	3.08E-07	7.06E+00	5.08E-06	1.28E-02	8.25E-06	3.02E-03	6.85E-04	1.26E-04	1.02E-03	1.95E-04	1.99E-04	7.18E-04	2.87E-05	1.16E-08	8.24E-04	5.65E-04
10	E63	70	Single Unit Long Haul Truck	2	0.00E+00	3.30E-07	1.33E-08	2.99E-01	2.19E-07	5.37E-04	3.59E-07	1.30E-04	3.14E-05	5.62E-06	4.46E-05	8.41E-06	8.58E-06	3.03E-05	1.22E-06	4.89E-10	3.60E-05	2.43E-05
10	E63	70	Combination Short Haul Truck	40	0.00E+00	1.02E-05	7.61E-07	1.38E+01	2.60E-08	1.48E-02	7.29E-06	1.53E-02	1.44E-03	2.41E-04	6.14E-04	2.22E-04	2.30E-04	2.20E-03	4.62E-05	0.00E+00	3.84E-04	2.89E-03
10	E63	70	Combination Long Haul Truck	36	0.00E+00	1.40E-05	7.98E-07	1.30E+01	8.80E-08	1.76E-02	1.15E-05	1.64E-02	1.50E-03	2.26E-04	1.28E-03	2.56E-04	2.67E-04	2.08E-03	4.35E-05	0.00E+00	1.01E-03	3.09E-03
10	E64	70	Passenger Car	831	0.00E+00	9.16E-06	9.95E-07	3.59E+01	6.50E-05	1.78E-01	2.07E-05	8.40E-04	6.40E-03	9.97E-04	2.01E-03	1.30E-03	1.33E-03	1.41E-04	1.82E-04	3.78E-08	6.81E-04	1.31E-04
10	E64	70	Passenger Truck	1391	0.00E+00	1.93E-05	2.05E-06	8.08E+01	1.23E-04	3.14E-01	4.04E-05	2.44E-03	1.16E-02	1.79E-03	3.87E-03	2.51E-03	2.57E-03	6.17E-04	4.06E-04	7.27E-08	1.29E-03	4.10E-04
10	E64	70	Single Unit Short Haul Truck	52	0.00E+00	9.10E-06	3.70E-07	8.47E+00	6.10E-06	1.54E-02	9.90E-06	3.62E-03	8.22E-04	1.51E-04	1.23E-03	2.34E-04	2.38E-04	8.61E-04	3.45E-05	1.39E-08	9.89E-04	6.78E-04
10	E64	70	Single Unit Long Haul Truck	2	0.00E+00	3.96E-07	1.59E-08	3.59E-01	2.63E-07	6.45E-04	4.31E-07	1.56E-04	3.76E-05	6.74E-06	5.35E-05	1.01E-05	1.03E-05	3.63E-05	1.46E-06	5.86E-10	4.32E-05	2.92E-05
10	E64	70	Combination Short Haul Truck	54	0.00E+00	1.39E-05	1.03E-06	1.87E+01	3.52E-08	2.00E-02	9.88E-06	2.08E-02	1.95E-03	3.26E-04	8.32E-04	3.00E-04	3.12E-04	2.98E-03	6.26E-05	0.00E+00	5.20E-04	3.91E-03
10	E64	70	Combination Long Haul Truck	49	0.00E+00	1.90E-05	1.08E-06	1.76E+01	1.19E-07	2.39E-02	1.56E-05	2.22E-02	2.03E-03	3.06E-04	1.73E-03	3.48E-04	3.62E-04	2.82E-03	5.89E-05	0.00E+00	1.37E-03	4.19E-03
10	E65	70	Passenger Car	738	0.00E+00	8.14E-06	8.85E-07	3.19E+01	5.78E-05	1.58E-01	1.84E-05	7.47E-04	5.69E-03	8.86E-04	1.79E-03	1.15E-03	1.18E-03	1.25E-04	1.62E-04	3.36E-08	6.06E-04	1.16E-04
10	E65	70	Passenger Truck	1237	0.00E+00	1.71E-05	1.82E-06	7.18E+01	1.10E-04	2.79E-01	3.59E-05	2.17E-03	1.03E-02	1.59E-03	3.44E-03	2.23E-03	2.29E-03	5.48E-04	3.61E-04	6.46E-08	1.15E-03	3.65E-04
10	E65	70	Single Unit Short Haul Truck	46	0.00E+00	8.09E-06	3.29E-07	7.53E+00	5.42E-06	1.37E-02	8.80E-06	3.22E-03	7.31E-04	1.34E-04	1.09E-03	2.08E-04	2.12E-04	7.65E-04	3.06E-05	1.24E-08	8.79E-04	6.03E-04
10	E65	70	Single Unit Long Haul Truck	2	0.00E+00	3.52E-07

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	E69	70	Single Unit Short Haul Truck	18	0.00E+00	3.20E-06	1.30E-07	2.98E+00	2.15E-06	5.41E-03	3.48E-06	1.28E-03	2.89E-04	5.31E-05	4.32E-04	8.23E-05	8.39E-05	3.03E-04	1.21E-05	4.90E-09	3.48E-04	2.39E-04
10	E69	70	Single Unit Long Haul Truck	1	0.00E+00	1.39E-07	5.61E-09	1.26E-01	9.24E-08	2.27E-04	1.52E-07	5.49E-05	1.32E-05	2.37E-06	1.88E-05	3.55E-06	3.62E-06	1.28E-05	5.15E-07	2.06E-10	1.52E-05	1.03E-05
10	E69	70	Combination Short Haul Truck	6	0.00E+00	1.62E-06	1.20E-07	2.18E+00	4.10E-09	2.33E-03	1.15E-06	2.42E-03	2.28E-04	3.80E-05	9.69E-05	3.50E-05	3.63E-05	3.47E-04	7.30E-06	0.00E+00	6.06E-05	4.56E-04
10	E69	70	Combination Long Haul Truck	6	0.00E+00	2.22E-06	1.26E-07	2.05E+00	1.39E-08	2.78E-03	1.82E-06	2.59E-03	2.37E-04	3.57E-05	2.01E-04	4.05E-05	4.22E-05	3.29E-04	6.87E-06	0.00E+00	1.59E-04	4.88E-04
10	E70	70	Passenger Car	376	0.00E+00	4.14E-06	4.50E-07	1.62E+01	2.94E-05	8.04E-02	9.34E-06	3.80E-04	2.89E-03	4.51E-04	9.11E-04	5.87E-04	6.03E-04	6.38E-05	8.24E-05	1.71E-08	3.08E-04	5.93E-05
10	E70	70	Passenger Truck	629	0.00E+00	8.72E-06	9.27E-07	3.65E+01	5.59E-05	1.42E-01	1.83E-05	1.11E-03	5.24E-03	8.11E-04	1.75E-03	1.14E-03	1.16E-03	2.79E-04	1.84E-04	3.29E-08	5.84E-04	1.86E-04
10	E70	70	Single Unit Short Haul Truck	19	0.00E+00	3.37E-06	1.37E-07	3.14E+00	2.26E-06	5.69E-03	3.67E-06	1.34E-03	3.04E-04	5.59E-05	4.54E-04	8.66E-05	8.83E-05	3.19E-04	1.28E-05	5.15E-09	3.66E-04	2.51E-04
10	E70	70	Single Unit Long Haul Truck	1	0.00E+00	1.47E-07	5.91E-09	1.33E-01	9.72E-08	2.39E-04	1.60E-07	5.78E-05	1.39E-05	2.50E-06	1.98E-05	3.74E-06	3.81E-06	1.35E-05	5.42E-07	2.17E-10	1.60E-05	1.08E-05
10	E70	70	Combination Short Haul Truck	16	0.00E+00	4.04E-06	3.00E-07	5.46E+00	1.03E-08	5.83E-03	2.88E-06	6.05E-03	5.69E-04	9.49E-05	2.42E-04	8.75E-05	9.08E-05	8.67E-04	1.82E-05	0.00E+00	1.51E-04	1.14E-03
10	E70	70	Combination Long Haul Truck	14	0.00E+00	5.54E-06	3.15E-07	5.12E+00	3.47E-08	6.96E-03	4.55E-06	6.47E-03	5.93E-04	8.93E-05	5.03E-04	1.01E-04	1.05E-04	8.22E-04	1.72E-05	0.00E+00	3.98E-04	1.22E-03
10	E71	70	Passenger Car	628	0.00E+00	6.92E-06	7.53E-07	2.71E+01	4.91E-05	1.34E-01	1.56E-05	6.35E-04	4.84E-03	7.54E-04	1.52E-03	9.82E-04	1.01E-03	1.07E-04	1.38E-04	2.86E-08	5.15E-04	9.91E-05
10	E71	70	Passenger Truck	1052	0.00E+00	1.46E-05	1.55E-06	6.11E+01	9.34E-05	2.38E-01	3.06E-05	1.85E-03	8.76E-03	1.36E-03	2.92E-03	1.90E-03	1.95E-03	4.66E-04	3.07E-04	5.50E-08	9.77E-04	3.10E-04
10	E71	70	Single Unit Short Haul Truck	13	0.00E+00	2.36E-06	9.59E-08	2.20E+00	1.58E-06	3.98E-03	2.57E-06	9.40E-04	2.13E-04	3.91E-05	3.18E-04	6.06E-05	6.18E-05	2.23E-04	8.94E-06	3.61E-09	2.56E-04	1.76E-04
10	E71	70	Single Unit Long Haul Truck	1	0.00E+00	1.03E-07	4.13E-09	9.31E-02	6.81E-08	1.67E-04	1.12E-07	4.04E-05	9.76E-06	1.75E-06	1.39E-05	2.62E-06	2.67E-06	9.42E-06	3.79E-07	1.52E-10	1.12E-05	7.57E-06
10	E71	70	Combination Short Haul Truck	5	0.00E+00	1.21E-06	9.01E-08	1.64E+00	3.08E-09	1.75E-03	8.63E-07	1.81E-03	1.71E-04	2.85E-05	7.27E-05	2.63E-05	2.73E-05	2.60E-04	5.47E-06	0.00E+00	4.54E-05	3.42E-04
10	E71	70	Combination Long Haul Truck	4	0.00E+00	1.66E-06	9.45E-08	1.54E+00	1.04E-08	2.09E-03	1.37E-06	1.94E-03	1.78E-04	2.68E-05	1.51E-04	3.04E-05	3.16E-05	2.47E-04	5.15E-06	0.00E+00	1.19E-04	3.66E-04
10	E72	70	Passenger Car	556	0.00E+00	6.13E-06	6.67E-07	2.40E+01	4.35E-05	1.19E-01	1.38E-05	5.63E-04	4.29E-03	6.68E-04	1.35E-03	8.70E-04	8.93E-04	9.45E-05	1.22E-04	2.53E-08	4.56E-04	8.78E-05
10	E72	70	Passenger Truck	932	0.00E+00	1.29E-05	1.37E-06	5.41E+01	8.27E-05	2.10E-01	2.71E-05	1.64E-03	7.76E-03	1.20E-03	2.59E-03	1.68E-03	1.72E-03	4.13E-04	2.72E-04	4.87E-08	8.65E-04	2.75E-04
10	E72	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	E72	70	Combination Short Haul Truck	4	0.00E+00	1.08E-06	8.01E-08	1.45E+00	2.74E-09	1.56E-03	7.67E-07	1.61E-03	1.52E-04	2.53E-05	6.46E-05	2.33E-05	2.42E-05	2.31E-04	4.86E-06	0.00E+00	4.04E-05	3.04E-04
10	E72	70	Combination Long Haul Truck	4	0.00E+00	1.48E-06	8.40E-08	1.37E+00	9.26E-09	1.86E-03	1.21E-06	1.73E-03	1.58E-04	2.38E-05	1.34E-04	2.70E-05	2.81E-05	2.19E-04	4.58E-06	0.00E+00	1.06E-04	3.25E-04
9	E73	60	Passenger Car	255	0.00E+00	3.22E-06	3.50E-07	1.15E+01	2.29E-05	6.21E-02	7.26E-06	2.62E-04	2.57E-03	3.85E-04	7.08E-04	4.57E-04	4.69E-04	5.05E-05	5.82E-05	1.22E-08	2.40E-04	4.09E-05
9	E73	60	Passenger Truck	426	0.00E+00	6.84E-06	7.25E-07	2.56E+01	4.31E-05	1.06E-01	1.42E-05	8.15E-04	4.70E-03	6.99E-04	1.35E-03	8.80E-04	9.02E-04	2.07E-04	1.29E-04	2.38E-08	4.51E-04	1.38E-04
9	E73	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.11E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.69E-05
9	E73	60	Combination Short Haul Truck	4	0.00E+00	1.22E-06	8.97E-08	1.47E+00	3.35E-09	1.82E-03	8.77E-07	1.87E-03	2.13E-04	3.33E-05	7.53E-05	2.62E-05	2.72E-05	2.34E-04	4.93E-06	0.00E+00	4.80E-05	3.52E-04
9	E73	60	Combination Long Haul Truck	4	0.00E+00	1.68E-06	9.17E-08	1.39E+00	1.13E-08	2.19E-03	1.40E-06	1.99E-03	2.24E-04	3.23E-05	1.59E-04	2.99E-05	3.12E-05	2.23E-04	4.66E-06	0.00E+00	1.28E-04	3.75E-04
9	E74	60	Passenger Car	219	0.00E+00	2.77E-06	3.01E-07	9.89E+00	1.97E-05	5.35E-02	6.25E-06	2.26E-04	2.21E-03	3.31E-04	6.09E-04	3.93E-04	4.03E-04	4.34E-05	5.01E-05	1.05E-08	2.06E-04	3.52E-05
9	E74	60	Passenger Truck	367	0.00E+00	5.88E-06	6.24E-07	2.21E+01	3.71E-05	9.16E-02	1.22E-05	7.02E-04	4.04E-03	6.02E-04	1.16E-03	7.57E-04	7.76E-04	1.78E-04	1.11E-04	2.05E-08	3.88E-04	1.19E-04
9	E74	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	E74	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	E74	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
53	E75	70	Passenger Car	1144	0.00E+00	1.22E-05	1.33E-06	5.00E+01	8.67E-05	2.35E-01	2.76E-05	1.18E-03	8.68E-03	1.36E-03	2.69E-03	1.73E-03	1.78E-03	1.94E-04	2.54E-04	5.27E-08	9.09E-04	1.84E-04
53	E75	70	Passenger Truck	1915	0.00E+00	2.55E-05	2.72E-06	1.13E+02	1.64E-04	4.15E-01	5.36E-05	3.32E-03	1.55E-02	2.41E-03	5.13E-03	3.33E-03	3.42E-03	8.44E-04	5.66E-04	9.92E-08	1.71E-03	5.57E-04
53	E75	70	Single Unit Short Haul Truck	29	0.00E+00	5.06E-06	2.05E-07	4.71E+00	3.39E-06	8.53E-03	5.50E-06	2.01E-03	4.57E-04	8.38E-05	6.82E-04	1.30E-04	1.32E-04	4.78E-04	1.92E-05	7.73E-09	5.49E-04	3.77E-04
53	E75	70	Single Unit Long Haul Truck	1	0.00E+00	2.20E-07	8.86E-09	2.00E-01	1.46E-07	3.58E-04	2.39E-07	8.67E-05	2.09E-05	3.75E-06	2.97E-05	5.61E-06	5.72E-06	2.02E-05	8.13E-07	3.26E-10	2.40E-05	1.62E-05
53	E75	70	Combination Short Haul Truck	27	0.00E+00	6.87E-06	5.11E-07	9.27E+00	1.74E-08	9.92E-03	4.89E-06	1.03E-02	9.68E-04	1.61E-04	4.12E-04	1.49E-04	1.54E-04	1.47E-03	3.10E-05	0.00E+00	2.57E-04	1.94E-03
53	E75	70	Combination Long Haul Truck	24	0.00E+00	9.41E-06	5.35E-07	8.71E+00	5.90E-08	1.18E-02	7.74E-06	1.10E-02	1.01E-03	1.52E-04	8.56E-04	1.72E-04	1.79E-04	1.40E-03	2.92E-05	0.00E+00	6.77E-04	2.07E-03
53	E76	70	Passenger Car	854	0.00E+00	9.13E-06	9.92E-07	3.73E+01	6.48E-05	1.76E-01	2.06E-05	8.79E-04	6.48E-03	1.01E-03	2.01E-03	1.29E-03	1.33E-03	1.45E-04	1.89E-04	3.93E-08	6.79E-04	1.37E-04
53	E76	70	Passenger Truck	1430	0.00E+00	1.91E-05	2.03E-06	8.40E+01	1.22E-04	3.10E-01	4.00E-05	2.48E-03	1.16E-02	1.80E-03	3.83E-03	2.49E-03	2.55E-03	6.30E-04	4.23E-04	7.41E-08	1.28E-03	4.16E-04
53	E76	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
53	E76	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.91E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.19E-06
53	E76	70	Combination Short Haul Truck	11	0.00E+00	2.83E-06	2.10E-07	3.82E+00	7.18E-09	4.08E-03	2.01E-06	4.23E-03	3.98E-04	6.65E-05	1.70E-04	6.13E-05	6.36E-05	6.07E-04	1.28E-05	0.00E+00	1.06E-04	7.97E-04
53	E76	70	Combination Long Haul Truck	10	0.00E+00	3.88E-06	2.20E-07	3.59E+00	2.43E-08	4.87E-03	3.19E-06	4.53E-03	4.15E-04	6.25E-05	3.52E-04	7.09E-05	7.38E-05	5.75E-04	1.20E-05	0.00E+00	2.79E-04	8.53E-04
53	E77	70	Passenger Car	1167	0.00E+00	1.25E-05	1.36E-06	5.10E+01	8.85E-05	2.40E-01	2.81E-05	1.20E-03	8.85E-03	1.39E-03	2.74E-03	1.77E-03	1.81E-03	1.98E-04	2.59E-04	5.37E-08	9.28E-04	1.87E-04
53	E77	70	Passenger Truck	1954	0.00E+00	2.61E-05	2.77E-06	1.15E+02	1.67E-04	4.24E-01	5.47E-05	3.39E-03	1.58E-02	2.46E-03	5.23E-03	3.40E-03	3.49E-03	8.61E-04	5.77E-04	1.01E-07	1.75E-03	5.68E-04
53	E77	70	Single Unit Short Haul Truck	28	0.00E+00	4.89E-06	1.99E-07	4.55E+00	3.28E-06	8.25E-03	5.32E-06	1.95E-03	4.41E-04	8.10E-05	6.59E-04	1.26E-04	1.28E-04	4.62E-04	1.85E-05	7.47E-09	5.31E-04	3.64E-04
53	E77	70	Single Unit Long Haul Truck	1	0.00E+00	2.13E-07	8.56E-09	1.93E-01	1.41E-07	3.46E-04	2.31E-07	8.38E-05	2.02E-05	3.62E-06	2.88E-05	5.42E-06	5.53E-06	1.95E-05	7.86E-07	3.15E-10	2.32E-05	1.57E-05
53	E77	70	Combination Short Haul Truck	27	0.00E+00	7.00E-06	5.21E-07	9.46E+00	1.78E-08	1.01E-02	4.99E-06	1.05E-02	9.86E-04	1.65E-04	4.20E-04	1.52E-04	1.57E-04	1.50E-03	3.16E-05	0.00E+00	2.62E-04	1.97E-03
53	E77	70	Combination Long Haul Truck	25	0.00E+00	9.60E-06	5.46E-07	8.88E+00	6.02E-08	1.21E-02	7.89E-06	1.12E-02	1.03E-03	1.55E-04	8.73E-04	1.75E-04	1.83E-04	1.42E-03	2.98E-05	0.00E+00	6.90E-04	2.11E-03
53	E78	70	Passenger Car	924	0.00E+00	9.88E-06	1.07E-06	4.04E+01	7.01E-05	1.90E-01	2.23E-05	9.51E-04	7.01E-03	1.10E-03	2.17E-03	1.40E-03	1.44E-03	1.57E-04	2.05E-04	4.26E-08	7.35E-04	1.48E-04
53	E78	70	Passenger Truck	1548	0.00E+00	2.06E-05	2.19E-06	9.09E+01	1.32E-04	3.35E-01	4.33E-05	2.69E-03	1.25E-02	1.95E-03	4.15E-03	2.69E-03	2.76E-03	6.82E-04	4.57E-04	8.02E-08	1.39E-03	4.50E-04
53	E78	70	Single Unit Short Haul Truck	16	0.00E+00	2.87E-06	1.16E-07	2.67E+00	1.92E-06	4.84E-03	3.12E-06	1.14E-03	2.59E-04	4.75E-05	3.86E-04	7.36E-05	7.50E-05	2.71E-04	1.09E-05	4.38E-09	3.11E-04	2.13E-04
53	E78	70	Single Unit Long Haul Truck	1	0.00E+00	1.25E-07	5.02E-09	1.13E-01	8.27E-08	2.03E-04	1.36E-07	4.91E-05	1.18E-05	2.12E-06	1.69E-05	3.18E-06	3.24E-06	1.14E-05	4.61E-07	1.85E-10	1.36E-05	9.19E-06
53	E78	70	Combination Short Haul Truck	13	0.00E+00	3.23E-06	2.40E-07	4.36E+00	8.21E-09	4.67E-03	2.30E-06	4.84E-03	4.55E-04	7.60E-05	1.94E-04	7.00E-05	7.27E-05	6.94E-04	1.46E-05	0.00E+00	1.21E-04	9.11E-04
53	E78	70	Combination Long Haul Truck	11	0.00E+00	4.43E-06	2.52E-07	4.10E+00	2.78E-08	5.57E-03	3.64E-06	5.18E-03	4.74E-04	7.14E-05	4.03E-04	8.10E-05	8.43E-05	6.58E-04	1.37E-05	0.00E+00	3.18E-04	9.75E-04
53	E79	70	Passenger Car	1155	0.00E+00	1.23E-05	1.34E-06	5.05E+01	8.76E-05	2.38E-01	2.78E-05	1.19E-03	8.76E-03	1.37E-03	2.72E-03	1.75E-03	1.80E-03	1.96E-04	2.56E-04	5.32E-08	9.18E-04	1.85E-04
53	E79	70	Passenger Truck	1935	0.00E+00	2.58E-05	2.74E-06	1.14E+02	1.66E-04	4.19E-01	5.42E-05	3.36E-03	1.56E-02	2.43E-03	5.18E-03	3.37E-03	3.45E-03	8.53E-04	5.72E-04	1.00E-07	1.73E-03	5.62E-04
53	E79	70	Single Unit Short Haul Truck	28	0.00E+00	4.89E-06	1.99E-07	4.55E+00	3.28E-06	8.25E-03	5.32E-06	1.95E-03	4.41E-04	8.10E-05	6.59E-04	1.26E-04	1.28E-04	4.62E-04	1.85E-05	7.47E-09	5.31E-04	3.64E-04
53	E79	70	Single Unit Long Haul Truck	1	0.00E+00	2.13E-07	8.56E-09	1.93E-01	1.41E-07	3.46E-04	2.31E-07	8.38E-05	2.02E-05	3.62E-06	2.88E-05	5.42E-06	5.53E-06	1.95E-05	7.86E-07	3.15E-10	2.32E-05	1.57E-05
53	E79	70	Combination Short Haul Truck	15	0.00E+00	3.90E-06	2.90E-07	5.27E+00	9.92E-09	5.64E-03	2.78E-06	5.84E-03	5.50E-04	9.18E-05	2.34E-04	8.46E-05	8.78E-05	8.38E-04	1.76E-05	0.00E+00	1.46E-04	1.10E-03
53	E79	70	Combination Long Haul Truck	14	0.00E+00	5.35E-06	3.04E-07	4.95E+00	3.36E-08	6.73E-03	4.40E-06	6.26E-03	5.73E-04	8.63E-05	4.87E-04	9.78E-05	1.02E-04	7.95E-04	1.66E-05	0.00E+00	3.85E-04	1.18E-03
53	E80	70	Passenger Car	875	0.00E+00	9.35E-06	1.02E-06	3.82E+01	6.64E-05	1.80E-01	2.11E-05	9.00E-04	6.64E-03	1.04E-03	2.06E-03	1.33E-03	1.36E-03	1.49E-04	1.94E-04	4.03E-08	6.96E-04	1.40E-04
53	E80	70	Passenger Truck	1465	0.00E+00	1.95E-05	2.08E-06	8.61E+01	1.25E-04	3.18E-01	4.10E-05	2.54E-03	1.19E-02	1.84E-03	3.92E-03	2.55E-03	2.61E-03	6.46E-04	4.33E-04	7.59E-08	1.31E-03	4.26E-04
53	E80	70	Single Unit Short Haul Truck	25	0.00E+00	4.38E-06	1.78E-07	4.08E+00	2.94E-06	7.40E-03	4.77E-06	1.75E-03	3.96E-04	7.27E-05	5.91E-04	1.13E-04	1.15E-04	4.15E-04	1.66E-05	6.70E-09	4.76E-04	3.26E-04
53	E80	70	Single Unit Long Haul Truck	1	0.00E+00	1.91E-07	7.68E-09	1.73E-01	1.26E-07	3.11E-04	2.07E-07	7.51E-05	1.81E-05	3.25E-06	2.58E-05	4.86E-06	4.96E-06	1.75E-05	7.05E-07	2.82E-10	2.08E-05	1.41E-05
53	E80	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	E80	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.12E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
10	E83	70	Passenger Car	294	0.00E+00	3.24E-06	3.53E-07	1.27E+01	2.30E-05	6.29E-02	7.31E-06	2.98E-04	2.27E-03	3.53E-04	7.13E-04	4.60E-04	4.72E-04	5.00E-05	6.45E-05	1.34E-08	2.41E-04	4.64E-05
10	E83	70	Passenger Truck	493	0.00E+00	6.83E-06	7.26E-07	2.86E+01	4.37E-05	1.11E-01	1.43E-05	8.65E-04	4.10E-03	6.35E-04	1.37E-03	8.90E-04	9.12E-04	2.18E-04	1.44E-04	2.58E-08	4.58E-04	1.45E-04
10	E83	70	Single Unit Short Haul Truck	5	0.00E+00	8.43E-07	3.42E-08	7.85E-01	5.65E-07	1.42E-03	9.17E-07	3.36E-04	7.61E-05	1.40E-05	1.14E-04	2.16E-05	2.21E-05	7.97E-05	3.19E-06	1.29E-09	9.15E-05	6.28E-05
10	E83	70	Combination Short Haul Truck	5	0.00E+00	1.35E-06	1.00E-07	1.82E+00	3.42E-09	1.94E-03	9.59E-07	2.02E-03	1.90E-04	3.16E-05	8.08E-05	2.92E-05	3.03E-05	2.89E-04	6.08E-06	0.00E+00	5.05E-05	3.80E-04
10	E83	70	Combination Long Haul Truck	5	0.00E+00	1.85E-06	1.05E-07	1.71E+00	1.16E-08	2.32E-03	1.52E-06	2.16E-03	1.98E-04	2.98E-05	1.68E-04	3.37E-05	3.51E-05	2.74E-04	5.72E-06	0.00E+00	1.33E-04	4.06E-04
10	E84	70	Passenger Car	285	0.00E+00	3.14E-06	3.41E-07	1.23E+01	2.23E-05	6.09E-02	7.07E-06	2.88E-04	2.19E-03	3.42E-04	6.90E-04	4.45E-04	4.56E-04	4.83E-05	6.24E-05	1.30E-08	2.33E-04	4.49E-05
10	E84	70	Passenger Truck	476	0.00E+00	6.61E-06	7.02E-07	2.77E+01	4.23E-05	1.08E-01	1.38E-05	8.37E-04	3.97E-03	6.14E-04	1.32E-03	8.60E-04	8.82E-04	2.11E-04	1.39E-04	2.49E-08	4.42E-04	1.40E-04
10	E84	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	E84	70	Combination Short Haul Truck	3	0.00E+00	8.08E-07	6.01E-08	1.09E+00	2.05E-09	1.17E-03	5.75E-07	1.21E-03	1.14E-04	1.90E-05	4.85E-05	1.75E-05	1.82E-05	1.73E-04	3.65E-06	0.00E+00	3.03E-05	2.28E-04
10	E84	70	Combination Long Haul Truck	3	0.00E+00	1.11E-06	6.30E-08	1.02E+00	6.94E-09	1.39E-03	9.11E-07	1.29E-03	1.19E-04	1.79E-05	1.01E-04	2.02E-05	2.11E-05	1.64E-04	3.43E-06	0.00E+00	7.96E-05	2.44E-04
9	E85	60	Passenger Car	1442	0.00E+00	1.82E-05	1.98E-06	6.51E+01	1.29E-04	3.52E-01	4.11E-05	1.48E-03	1.46E-02	2.18E-03	4.01E-03	2.59E-03	2.65E-03	2.86E-04	3.30E-04	6.92E-08	1.36E-03	2.32E-04
9	E85	60	Passenger Truck	2415	0.00E+00	3.87E-05	4.10E-06	1.45E+02	2.44E-04	6.03E-01	8.03E-05	4.62E-03	2.66E-02	3.96E-03	7.66E-03	4.98E-03	5.11E-03	1.17E-03	7.28E-04	1.35E-07	2.55E-03	7.83E-04
9	E85	60	Single Unit Short Haul Truck	48	0.00E+00	1.07E-05	4.42E-07	7.97E+00	7.08E-06	1.40E-02	1.16E-05	4.11E-03	1.10E-03	1.85E-04	1.43E-03	2.75E-04	2.80E-04	8.07E-04	3.25E-05	1.34E-08	1.15E-03	7.69E-04
9	E85	60	Single Unit Long Haul Truck	2	0.00E+00	4.67E-07	1.92E-08	3.40E-01	3.07E-07	5.95E-04	5.05E-07	1.78E-04	4.95E-05	8.21E-06	6.24E-05	1.19E-05	1.22E-05	3.43E-05	1.39E-06	5.69E-10	5.02E-05	3.33E-05
9	E85	60	Combination Short Haul Truck	38	0.00E+00	1.10E-05	8.07E-07	1.33E+01	3.01E-08	1.64E-02	7.90E-06	1.68E-02	1.92E-03	3.00E-04	6.77E-04	2.36E-04	2.45E-04	2.11E-03	4.44E-05	0.00E+00	4.32E-04	3.17E-03
9	E85	60

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	E89	60	Combination Long Haul Truck	1	0.00E+00	6.29E-07	3.44E-08	5.22E-01	4.25E-09	8.22E-04	5.26E-07	7.46E-04	8.38E-05	1.21E-05	5.97E-05	1.12E-05	1.17E-05	8.38E-05	1.75E-06	0.00E+00	4.80E-05	1.40E-04
9	E90	60	Passenger Car	132	0.00E+00	1.67E-06	1.81E-07	5.96E+00	1.18E-05	3.22E-02	3.76E-06	1.36E-04	1.33E-03	2.00E-04	3.67E-04	2.37E-04	2.43E-04	2.62E-05	3.02E-05	6.34E-09	1.24E-04	2.12E-05
9	E90	60	Passenger Truck	221	0.00E+00	3.54E-06	3.76E-07	1.33E+01	2.24E-05	5.52E-02	7.35E-06	4.23E-04	2.44E-03	3.62E-04	7.01E-04	4.56E-04	4.67E-04	1.07E-04	6.66E-05	1.24E-08	2.34E-04	7.16E-05
9	E90	60	Single Unit Short Haul Truck	2	0.00E+00	4.28E-07	1.77E-08	3.19E-01	2.83E-07	5.60E-04	4.63E-07	1.64E-04	4.41E-05	7.41E-06	5.71E-05	1.10E-05	1.12E-05	3.23E-05	1.30E-06	5.35E-10	4.59E-05	3.07E-05
9	E90	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	E90	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.36E-05
9	E91	60	Passenger Car	4	0.00E+00	4.73E-08	5.14E-09	1.69E-01	3.36E-07	9.12E-04	1.07E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.88E-06	7.41E-07	8.55E-07	1.80E-10	3.52E-06	6.00E-07
9	E91	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.99E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.62E-06	2.03E-06
9	E92	60	Passenger Car	4	0.00E+00	4.73E-08	5.14E-09	1.69E-01	3.36E-07	9.12E-04	1.07E-07	3.85E-06	3.78E-05	5.65E-06	1.04E-05	6.70E-06	6.88E-06	7.41E-07	8.55E-07	1.80E-10	3.52E-06	6.00E-07
9	E92	60	Passenger Truck	6	0.00E+00	1.00E-07	1.06E-08	3.76E-01	6.33E-07	1.56E-03	2.08E-07	1.20E-05	6.90E-05	1.03E-05	1.99E-05	1.29E-05	1.32E-05	3.03E-06	1.89E-06	3.50E-10	6.62E-06	2.03E-06
9	E93	60	Passenger Car	215	0.00E+00	2.72E-06	2.96E-07	9.72E+00	1.93E-05	5.26E-02	6.14E-06	2.22E-04	2.17E-03	3.26E-04	5.99E-04	3.86E-04	3.96E-04	4.27E-05	4.92E-05	1.03E-08	2.03E-04	3.46E-05
9	E93	60	Passenger Truck	361	0.00E+00	5.78E-06	6.13E-07	2.17E+01	3.65E-05	9.00E-02	1.20E-05	6.90E-04	3.97E-03	5.91E-04	1.14E-03	7.44E-04	7.63E-04	1.75E-04	1.09E-04	2.02E-08	3.81E-04	1.17E-04
9	E93	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	E93	60	Combination Short Haul Truck	2	0.00E+00	6.11E-07	4.49E-08	7.37E-01	1.67E-09	9.12E-04	4.39E-07	9.33E-04	1.07E-04	1.67E-05	3.76E-05	1.31E-05	1.36E-05	1.17E-04	2.46E-06	0.00E+00	2.40E-05	1.76E-04
9	E93	60	Combination Long Haul Truck	2	0.00E+00	8.39E-07	4.58E-08	6.96E-01	5.66E-09	1.10E-03	7.02E-07	9.94E-04	1.12E-04	1.62E-05	7.96E-05	1.50E-05	1.56E-05	1.12E-04	2.33E-06	0.00E+00	6.40E-05	1.87E-04
9	E94	60	Passenger Car	215	0.00E+00	2.72E-06	2.95E-07	9.70E+00	1.93E-05	5.25E-02	6.13E-06	2.21E-04	2.17E-03	3.25E-04	5.98E-04	3.85E-04	3.96E-04	4.26E-05	4.91E-05	1.03E-08	2.02E-04	3.45E-05
9	E94	60	Passenger Truck	360	0.00E+00	5.77E-06	6.12E-07	2.16E+01	3.64E-05	8.99E-02	1.20E-05	6.88E-04	3.97E-03	5.90E-04	1.14E-03	7.43E-04	7.61E-04	1.74E-04	1.09E-04	2.01E-08	3.81E-04	1.17E-04
9	E94	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	E94	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
9	E94	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.36E-05
54	E95	80	Passenger Car	769	0.00E+00	7.71E-06	8.38E-07	3.25E+01	5.47E-05	1.50E-01	1.74E-05	8.02E-04	4.41E-03	7.26E-04	1.69E-03	1.09E-03	1.12E-03	1.14E-04	1.65E-04	3.42E-08	5.73E-04	1.25E-04
54	E95	80	Passenger Truck	1289	0.00E+00	1.60E-05	1.71E-06	7.37E+01	1.04E-04	2.74E-01	3.40E-05	2.15E-03	7.88E-03	1.29E-03	3.26E-03	2.12E-03	2.17E-03	5.29E-04	3.72E-04	6.58E-08	1.09E-03	3.58E-04
54	E95	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.41E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.50E-04
54	E95	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
54	E95	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.61E-03
54	E95	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.48E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.79E-03
54	E96	80	Passenger Car	542	0.00E+00	5.43E-06	5.90E-07	2.29E+01	3.85E-05	1.06E-01	1.22E-05	5.65E-04	3.11E-03	5.12E-04	1.19E-03	7.70E-04	7.90E-04	8.06E-05	1.16E-04	2.41E-08	4.04E-04	8.81E-05
54	E96	80	Passenger Truck	908	0.00E+00	1.13E-05	1.20E-06	5.20E+01	7.35E-05	1.93E-01	2.39E-05	1.52E-03	5.55E-03	9.10E-04	2.30E-03	1.49E-03	1.53E-03	3.73E-04	2.62E-04	4.64E-08	7.69E-04	2.52E-04
54	E96	80	Single Unit Short Haul Truck	22	0.00E+00	3.02E-06	1.18E-07	3.61E+00	2.05E-06	6.56E-03	3.32E-06	1.26E-03	2.47E-04	5.06E-05	4.16E-04	7.71E-05	7.86E-05	3.67E-04	1.47E-05	5.82E-09	3.38E-04	2.35E-04
54	E96	80	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.07E-09	1.53E-01	8.73E-08	2.73E-04	1.44E-07	5.37E-05	1.13E-05	2.25E-06	1.82E-05	3.31E-06	3.37E-06	1.54E-05	6.21E-07	2.42E-10	1.48E-05	1.00E-05
54	E96	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.83E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.48E-03
54	E96	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.37E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.58E-03
54	E97	80	Passenger Car	769	0.00E+00	7.71E-06	8.38E-07	3.25E+01	5.47E-05	1.50E-01	1.74E-05	8.02E-04	4.41E-03	7.26E-04	1.69E-03	1.09E-03	1.12E-03	1.14E-04	1.65E-04	3.42E-08	5.73E-04	1.25E-04
54	E97	80	Passenger Truck	1289	0.00E+00	1.60E-05	1.71E-06	7.37E+01	1.04E-04	2.74E-01	3.40E-05	2.15E-03	7.88E-03	1.29E-03	3.26E-03	2.12E-03	2.17E-03	5.29E-04	3.72E-04	6.58E-08	1.09E-03	3.58E-04
54	E97	80	Single Unit Short Haul Truck	42	0.00E+00	5.78E-06	2.26E-07	6.91E+00	3.92E-06	1.26E-02	6.36E-06	2.41E-03	4.73E-04	9.68E-05	7.96E-04	1.47E-04	1.50E-04	7.03E-04	2.81E-05	1.11E-08	6.46E-04	4.50E-04
54	E97	80	Single Unit Long Haul Truck	2	0.00E+00	2.51E-07	9.69E-09	2.92E-01	1.67E-07	5.23E-04	2.76E-07	1.03E-04	2.17E-05	4.30E-06	3.47E-05	6.33E-06	6.46E-06	2.95E-05	1.19E-06	4.64E-10	2.83E-05	1.92E-05
54	E97	80	Combination Short Haul Truck	43	0.00E+00	8.95E-06	6.62E-07	1.46E+01	2.34E-08	1.36E-02	6.40E-06	1.38E-02	1.04E-03	1.88E-04	5.43E-04	1.93E-04	2.01E-04	2.31E-03	4.87E-05	0.00E+00	3.42E-04	2.61E-03
54	E97	80	Combination Long Haul Truck	40	0.00E+00	1.25E-05	7.04E-07	1.35E+01	7.93E-08	1.61E-02	1.03E-05	1.48E-02	1.07E-03	1.71E-04	1.14E-03	2.27E-04	2.36E-04	2.17E-03	4.53E-05	0.00E+00	9.06E-04	2.79E-03
54	E98	80	Passenger Car	542	0.00E+00	5.43E-06	5.90E-07	2.29E+01	3.85E-05	1.06E-01	1.22E-05	5.65E-04	3.11E-03	5.12E-04	1.19E-03	7.70E-04	7.90E-04	8.06E-05	1.16E-04	2.41E-08	4.04E-04	8.81E-05
54	E98	80	Passenger Truck	908	0.00E+00	1.13E-05	1.20E-06	5.20E+01	7.35E-05	1.93E-01	2.39E-05	1.52E-03	5.55E-03	9.10E-04	2.30E-03	1.49E-03	1.53E-03	3.73E-04	2.62E-04	4.64E-08	7.69E-04	2.52E-04
54	E98	80	Single Unit Short Haul Truck	22	0.00E+00	3.02E-06	1.18E-07	3.61E+00	2.05E-06	6.56E-03	3.32E-06	1.26E-03	2.47E-04	5.06E-05	4.16E-04	7.71E-05	7.86E-05	3.67E-04	1.47E-05	5.82E-09	3.38E-04	2.35E-04
54	E98	80	Single Unit Long Haul Truck	1	0.00E+00	1.31E-07	5.07E-09	1.53E-01	8.73E-08	2.73E-04	1.44E-07	5.37E-05	1.13E-05	2.25E-06	1.82E-05	3.31E-06	3.37E-06	1.54E-05	6.21E-07	2.42E-10	1.48E-05	1.00E-05
54	E98	80	Combination Short Haul Truck	25	0.00E+00	5.07E-06	3.75E-07	8.24E+00	1.33E-08	7.72E-03	3.62E-06	7.83E-03	5.87E-04	1.06E-04	3.07E-04	1.09E-04	1.14E-04	1.31E-03	2.76E-05	0.00E+00	1.94E-04	1.48E-03
54	E98	80	Combination Long Haul Truck	22	0.00E+00	7.06E-06	3.98E-07	7.65E+00	4.49E-08	9.14E-03	5.82E-06	8.37E-03	6.06E-04	9.70E-05	6.47E-04	1.28E-04	1.34E-04	1.23E-03	2.56E-05	0.00E+00	5.13E-04	1.58E-03
9	F01	60	Passenger Car	418	0.00E+00	5.28E-06	5.74E-07	1.89E+01	3.75E-05	1.02E-01	1.19E-05	4.30E-04	4.22E-03	6.32E-04	1.16E-03	7.49E-04	7.69E-04	8.28E-05	9.55E-05	2.01E-08	3.93E-04	6.71E-05
9	F01	60	Passenger Truck	699	0.00E+00	1.12E-05	1.19E-06	4.20E+01	7.07E-05	1.75E-01	2.33E-05	1.34E-03	7.71E-03	1.15E-03	2.22E-03	1.44E-03	1.48E-03	3.39E-04	2.11E-04	3.91E-08	7.39E-04	2.27E-04
9	F01	60	Single Unit Short Haul Truck	16	0.00E+00	3.64E-06	1.50E-07	2.71E+00	2.41E-06	4.76E-03	3.93E-06	1.40E-03	3.75E-04	6.30E-05	4.85E-04	9.34E-05	9.53E-05	2.74E-04	1.10E-05	4.55E-09	3.90E-04	2.61E-04
9	F01	60	Single Unit Long Haul Truck	1	0.00E+00	1.59E-07	6.52E-09	1.15E-01	1.04E-07	2.02E-04	1.72E-07	6.04E-05	1.68E-05	2.79E-06	2.12E-05	4.06E-06	4.14E-06	1.17E-05	4.71E-07	1.93E-10	1.71E-05	1.13E-05
9	F01	60	Combination Short Haul Truck	14	0.00E+00	4.12E-06	3.03E-07	4.97E+00	1.13E-08	6.16E-03	2.96E-06	6.30E-03	7.19E-04	1.12E-04	2.54E-04	8.86E-05	9.19E-05	7.91E-04	1.66E-05	0.00E+00	1.62E-04	1.19E-03
9	F01	60	Combination Long Haul Truck	13	0.00E+00	5.66E-06	3.09E-07	4.70E+00	3.82E-08	7.40E-03	4.74E-06	6.71E-03	7.54E-04	1.09E-04	5.37E-04	1.01E-04	1.05E-04	7.54E-04	1.57E-05	0.00E+00	4.32E-04	1.26E-03
9	F02	60	Passenger Car	339	0.00E+00	4.29E-06	4.67E-07	1.53E+01	3.05E-05	8.28E-02	9.68E-06	3.50E-04	3.43E-03	5.13E-04	9.44E-04	6.09E-04	6.25E-04	6.73E-05	7.76E-05	1.63E-08	3.19E-04	5.45E-05
9	F02	60	Passenger Truck	569	0.00E+00	9.12E-06	9.66E-07	3.42E+01	5.75E-05	1.42E-01	1.89E-05	1.09E-03	6.26E-03	9.32E-04	1.80E-03	1.17E-03	1.20E-03	2.75E-04	1.71E-04	3.18E-08	6.01E-04	1.84E-04
9	F02	60	Single Unit Short Haul Truck	4	0.00E+00	8.55E-07	3.53E-08	6.37E-01	5.67E-07	1.12E-03	9.25E-07	3.28E-04	8.81E-05	1.48E-05	1.14E-04	2.20E-05	2.24E-05	6.46E-05	2.60E-06	1.07E-09	9.17E-05	6.15E-05
9	F02	60	Combination Short Haul Truck	5	0.00E+00	1.37E-06	1.01E-07	1.66E+00	3.76E-09	2.05E-03	9.87E-07	2.10E-03	2.40E-04	3.75E-05	8.47E-05	2.95E-05	3.06E-05	2.64E-04	5.54E-06	0.00E+00	5.40E-05	3.96E-04
9	F02	60	Combination Long Haul Truck	4	0.00E+00	1.89E-06	1.03E-07	1.57E+00	1.27E-08	2.47E-03	1.58E-06	2.24E-03	2.51E-04	3.64E-05	1.79E-04	3.37E-05	3.51E-05	2.51E-04	5.25E-06	0.00E+00	1.44E-04	4.21E-04
11	F03	80	Passenger Car	87	0.00E+00	8.91E-07	9.68E-08	3.64E+00	6.32E-06	1.77E-02	2.01E-06	8.99E-05	4.73E-04	7.92E-05	1.96E-04	1.26E-04	1.30E-04	1.29E-05	1.85E-05	3.95E-09	6.62E-05	1.40E-05
11	F03	80	Passenger Truck	145	0.00E+00	1.83E-06	1.96E-07	8.22E+00	1.19E-05	3.13E-02	3.89E-06	2.43E-04	8.42E-04	1.40E-04	3.73E-04	2.42E-04	2.48E-04	5.96E-05	4.14E-05	7.53E-09	1.25E-04	4.04E-05
11	F03	80	Single Unit Short Haul Truck	6	0.00E+00	7.89E-07	3.08E-08	9.42E-01	5.35E-07	1.71E-03	8.67E-07	3.28E-04	6.46E-05	1.32E-05	1.09E-04	2.01E-05	2.05E-05	9.58E-05	3.83E-06	1.52E-09	8.81E-05	6.13E-05
11	F03	80	Combination Short Haul Truck	4	0.00E+00	7.55E-07	5.59E-08	1.23E+00	1.98E-09	1.15E-03	5.39E-07	1.17E-03	8.74E-05	1.58E-05	4.58E-05	1.63E-05	1.69E-05	1.95E-04	4.10E-06	0.00E+00	2.88E-05	2.20E-04
11	F03	80	Combination Long Haul Truck	3	0.00E+00	1.05E-06	5.93E-08	1.14E+00	6.69E-09	1.36E-03	8.67E-07	1.25E-03	9.03E-05	1.44E-05	9.63E-05	1.91E-05	1.99E-05	1.83E-04	3.82E-06	0.00E+00	7.64E-05	2.35E-04
11	F04	80	Passenger Car	23	0.00E+00	2.34E-07	2.54E-08	9.57E-01	1.66E-06	4.66E-03	5.28E-07	2.36E-05	1.24E-04	2.08E-05	5.15E-05	3.32E-05	3.41E-05	3.39E-06	4.87E-06	1.04E-09	1.74E-05	3.69E-06
11	F04	80	Passenger Truck	38	0.00E+00	4.82E-07	5.14E-08	2.16E+00	3.14E-06	8.23E-03	1.02E-06	6.38E-05	2.21E-04	3.69E-05	9.81E-05	6.36E-05	6.52E-05	1.57E-05	1.09E-05	1.98E-09	3.28E-05	1.06E-05
9	F05	60	Passenger Car	191	0.00E+00	2.42E-06	2.63E-07	8.62E+00	1.71E-05	4.66E-02	5.45E-06	1.97E-04	1.93E-03	2.89E-04	5.31E-04	3.43E-04	3.52E-04	3.79E-05	4.37E-05	9.17E-09	1.80E-04	3.07E-05
9	F05	60	Passenger Truck	320	0.00E+00	5.13E-06	5.44E-07	1.92E+01	3.24E-05	7.99E-02	1.06E-05	6.12E-04	3.53E-03	5.25E-04	1.01E-03	6.60E-04	6.76E-04	1.55E-04	9.64E-05	1.79E-08	3.38E-04	1.04E-04
9	F05	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.03E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	F05	60	Combination Short Haul Truck	11	0.00E+00	3.21E-06	2.35E-07	3.87E+00	8.78E-09	4.79E-03	2.30E-06	4.90E-03	5.59E-04	8.75E-05	1.98E-04	6.89E-05	7.15E-05	6.15E-04	1.29E-05	0.00E+00	1.26E-04	9.23E-04
9	F05	60	Combination Long Haul Truck	10	0.00E+00	4.40E-06	2.41E-07	3.65E+00	2.97E-08	5.75E-03	3.68E-06	5.22E-03	5.87E-04	8.48E-05	4.18E-04	7.86E-05	8.19E-05	5.86E-04	1.22E-05	0.00E+00	3.36E-04	9.83E-04
9	F06	60	Passenger Car	322	0.00E+00	4.07E-06	4.42E-07	1.45E+01	2.89E-05	7.86E-02	9.18E-06	3.31E-04	3.25E-03	4.87E-04	8.95E-04	5.77E-04	5.92E-04	6.38E-05	7.36E-05	1.55E-08	3.03E-04	5.17E-05
9	F06	60	Passenger Truck	539	0.00E+00	8.65E-06	9.16E-07	3.24E+01	5.45E-05	1.35E-01	1.79E-05	1.03E-03	5.94E-03	8.84E-04	1.71E-03	1.11E-03	1.14E-03	2.61E-04	1.62E-04	3.01E-08	5.70E-04	1.75E-04
9	F06	60	Single Unit Short Haul Truck	10	0.00E+00	2.14E-06	8.83E-08	1.59E+00	1.42E-06	2.80E-03	2.31E-06	8.21E-04	2.20E-04	3.70E-05	2.85E-04	5.50E-05	5.60E-05	1.61E-04	6.49E-06	2.68E-09	2.29E-04	1.54E-04
9	F06	60	Combination Short Haul Truck	9	0.00E+00	2.59E-06	1.91E-07	3.13E+00	7.11E-09	3.88E-03	1.86E-06	3.97E-03	4.53E-04	7.08E-05	1.60E-04	5.58E-05	5.79E-05	4.98E-04	1.05E-05	0.00E+00	1.02E-04	7.47E-04
9	F06	60	Combination Long Haul Truck	8	0.00E+00	3.57E-06	1.95E-07	2.96E+00	2.41E-08	4.66E-03	2.98E-06	4.23E-03	4.75E-04	6.87E-05	3.38E-04	6.36E-05	6.63E-05	4.75E-04	9.91E-06	0.00E+00	2.72E-04	7.96E-04
9	F07	60	Passenger Car	430	0.00E+00	5.44E-06	5.91E-07	1.94E+01	3.86E-05	1.05E-01	1.23E-05	4.43E-04	4.35E-03	6.51E-04	1.20E-03	7.72E-04	7.92E-04	8.53E-05	9.84E-05	2.07E-08	4.05E-04	6.91E-05
9	F07	60	Passenger Truck	721	0.00E+00	1.16E-05	1.22E-06	4.33E+01	7.29E-05	1.80E-01	2.40E-05	1.38E-03	7.94E-03	1.18E-03	2.29E-03	1.49E-03	1.52E-03	3.49E-04	2.17E-04	4.03E-08	7.62E-04	2.34E-04
9	F07	60	Single Unit Short Haul Truck	27	0.00E+00	5.99E-06	2.47E-07	4.46E+00	3.97E-06	7.85E-03	6.48E-06	2.30E-03	6.17E-04	1.04E-04	7.99E-04	1.54E-04	1.57E-04	4.52E-04	1.82E-05	7.49E-09	6.42E-04	4.30E-04
9	F07	60	Single Unit Long Haul Truck	1	0.00E+00	2.61E-07	1.07E-08	1.90E-01	1.72E-07	3.33E-04	2.83E-07	9.96E-05	2.77E-05	4.60E-06	3.49E-05	6.69E-06	6.82E-06	1.92E-05	7.76E-07	3.19E-10	2.81E-05	1.86E-05
9	F07	60	Combination Short Haul Truck	22	0.00E+00	6.56E-06	4.82E-07	7.92E+00	1.80E-08	9.81E-03	4.72E-06	1.00E-02	1.15E-03	1.79E-04	4.05E-04	1.41E-04	1.46E-04	1.26E-03	2.65E-05	0.00E+00	2.58E-04	1.89E-03
9	F07	60	Combination Long Haul Truck	21	0.00E+00	9.02E-06	4.93E-07	7.48E+00	6.09E-08	1.18E-02	7.54E-06	1.07E-02	1.20E-03	1.74E-04	8.55E-04	1.61E-04	1.68E-04	1.20E-03	2.51E-05	0.00E+00	6.88E-04	2.01E-03
9	F08	60	Passenger Car	446	0.00E+00	5.64E-06	6.13E-07	2.01E+01	4.00E-05	1.09E-01	1.27E-05	4.59E-04	4.50E-03	6.75E-04	1.24E-03	8.00E-04	8.21E-04	8.84E-05	1.02E-04	2.14E-08	4.20E-04	7.16E-05
9	F08	60	Passenger Truck	747	0.00E+00	1.20E-05	1.27E-06	4.49E+01	7.56E-05	1.86E-01	2.48E-05	1.43E-03	8.23E-03	1.23E-03	2.37E-03	1.54E-03	1.58E-03	3.62E-04	2.25E-04	4.17E-08	7.90E-04	2.42E-04
9	F08	60	Single Unit Short Haul Truck	21	0.00E+00	4.71E-06	1.94E-07	3.51E+00	3.12E-06	6.17E-03	5.09E-06	1.81E-03	4.85E-04	8.15E-05	6.28E-04	1.21E-04	1.23E-04	3.55E-04	1.43E-05	5.89E-09	5.04E-04	3.38E-04
9	F08	60	Single Unit Long Haul Truck	1	0.00E+00	2.05E-07	8.44E-09	1.49E-01	1.35E-07	2.62E-04	2.22E-07	7.82E-05	2.18E-05	3.61E-06	2.74E-05	5.25E-06	5.36E-06	1.51E-05	6.10E-07	2.50E-10	2.21E-05	1.46E-05
9	F08	60	Combination Short Haul Truck	16	0.00E+00	4.58E-06	3.36E-07

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
10	F15	70	Combination Long Haul Truck	18	0.00E+00	6.83E-06	3.88E-07	6.32E+00	4.28E-08	8.58E-03	5.62E-06	7.98E-03	7.31E-04	1.10E-04	6.21E-04	1.25E-04	1.30E-04	1.01E-03	2.12E-05	0.00E+00	4.91E-04	1.50E-03
10	F16	70	Passenger Car	491	0.00E+00	5.41E-06	5.88E-07	2.12E+01	3.84E-05	1.05E-01	1.22E-05	4.96E-04	3.78E-03	5.89E-04	1.19E-03	7.67E-04	7.88E-04	8.34E-05	1.08E-04	2.24E-08	4.03E-04	7.74E-05
10	F16	70	Passenger Truck	822	0.00E+00	1.14E-05	1.21E-06	4.77E+01	7.30E-05	1.86E-01	2.39E-05	1.44E-03	6.85E-03	1.06E-03	2.28E-03	1.48E-03	1.52E-03	3.64E-04	2.40E-04	4.30E-08	7.63E-04	2.42E-04
10	F16	70	Single Unit Short Haul Truck	14	0.00E+00	2.53E-06	1.03E-07	2.35E+00	1.69E-06	4.27E-03	2.75E-06	1.01E-03	2.28E-04	4.19E-05	3.41E-04	6.49E-05	6.62E-05	2.39E-04	9.58E-06	3.87E-09	2.75E-04	1.88E-04
10	F16	70	Single Unit Long Haul Truck	1	0.00E+00	1.10E-07	4.43E-09	9.98E-02	7.29E-08	1.79E-04	1.20E-07	4.33E-05	1.05E-05	1.87E-06	1.49E-05	2.80E-06	2.86E-06	1.01E-05	4.06E-07	1.63E-10	1.20E-05	8.11E-06
10	F16	70	Combination Short Haul Truck	14	0.00E+00	3.50E-06	2.60E-07	4.73E+00	8.89E-09	5.05E-03	2.49E-06	5.24E-03	4.93E-04	8.23E-05	2.10E-04	7.58E-05	7.87E-05	7.51E-04	1.58E-05	0.00E+00	1.31E-04	9.87E-04
10	F16	70	Combination Long Haul Truck	12	0.00E+00	4.80E-06	2.73E-07	4.44E+00	3.01E-08	6.03E-03	3.95E-06	5.61E-03	5.14E-04	7.74E-05	4.36E-04	8.77E-05	9.14E-05	7.12E-04	1.49E-05	0.00E+00	3.45E-04	1.06E-03
10	F17	70	Passenger Car	307	0.00E+00	3.38E-06	3.67E-07	1.32E+01	2.40E-05	6.56E-02	7.62E-06	3.10E-04	2.36E-03	3.68E-04	7.43E-04	4.79E-04	4.92E-04	5.21E-05	6.72E-05	1.40E-08	2.51E-04	4.84E-05
10	F17	70	Passenger Truck	513	0.00E+00	7.12E-06	7.56E-07	2.98E+01	4.56E-05	1.16E-01	1.49E-05	9.02E-04	4.28E-03	6.62E-04	1.43E-03	9.27E-04	9.50E-04	2.28E-04	1.50E-04	2.68E-08	4.77E-04	1.51E-04
10	F17	70	Single Unit Short Haul Truck	17	0.00E+00	3.03E-06	1.23E-07	2.82E+00	2.03E-06	5.12E-03	3.30E-06	1.21E-03	2.74E-04	5.03E-05	4.09E-04	7.79E-05	7.95E-05	2.87E-04	1.15E-05	4.64E-09	3.30E-04	2.26E-04
10	F17	70	Single Unit Long Haul Truck	1	0.00E+00	1.32E-07	5.32E-09	1.20E-01	8.75E-08	2.15E-04	1.44E-07	5.20E-05	1.25E-05	2.25E-06	1.78E-05	3.37E-06	3.43E-06	1.21E-05	4.88E-07	1.95E-10	1.44E-05	9.73E-06
10	F17	70	Combination Short Haul Truck	18	0.00E+00	4.71E-06	3.51E-07	6.36E+00	1.20E-08	6.80E-03	3.36E-06	7.05E-03	6.64E-04	1.11E-04	2.83E-04	1.02E-04	1.06E-04	1.01E-03	2.13E-05	0.00E+00	1.77E-04	1.33E-03
10	F17	70	Combination Long Haul Truck	17	0.00E+00	6.46E-06	3.67E-07	5.98E+00	4.05E-08	8.12E-03	5.31E-06	7.55E-03	6.91E-04	1.04E-04	5.87E-04	1.18E-04	1.23E-04	9.59E-04	2.00E-05	0.00E+00	4.64E-04	1.42E-03
10	F18	70	Passenger Car	340	0.00E+00	3.75E-06	4.07E-07	1.47E+01	2.66E-05	7.27E-02	8.45E-06	3.44E-04	2.62E-03	4.08E-04	8.24E-04	5.31E-04	5.45E-04	5.77E-05	7.45E-05	1.55E-08	2.79E-04	5.36E-05
10	F18	70	Passenger Truck	569	0.00E+00	7.89E-06	8.39E-07	3.30E+01	5.05E-05	1.29E-01	1.65E-05	9.99E-04	4.74E-03	7.33E-04	1.58E-03	1.03E-03	1.05E-03	2.52E-04	1.66E-04	2.98E-08	5.28E-04	1.68E-04
10	F18	70	Single Unit Short Haul Truck	12	0.00E+00	2.19E-06	8.90E-08	2.04E+00	1.47E-06	3.70E-03	2.38E-06	8.73E-04	1.98E-04	3.63E-05	2.95E-04	5.63E-05	5.74E-05	2.07E-04	8.30E-06	3.35E-09	2.38E-04	1.63E-04
10	F18	70	Single Unit Long Haul Truck	1	0.00E+00	9.53E-08	3.84E-09	8.65E-02	6.32E-08	1.55E-04	1.04E-07	3.76E-05	9.06E-06	1.62E-06	1.29E-05	2.43E-06	2.48E-06	8.75E-06	3.52E-07	1.41E-10	1.04E-05	7.03E-06
10	F18	70	Combination Short Haul Truck	12	0.00E+00	3.10E-06	2.30E-07	4.18E+00	7.86E-09	4.47E-03	2.21E-06	4.63E-03	4.36E-04	7.28E-05	1.86E-04	6.71E-05	6.96E-05	6.65E-04	1.40E-05	0.00E+00	1.16E-04	8.73E-04
10	F18	70	Combination Long Haul Truck	11	0.00E+00	4.25E-06	2.41E-07	3.93E+00	2.66E-08	5.34E-03	3.49E-06	4.96E-03	4.54E-04	6.84E-05	3.86E-04	7.76E-05	8.08E-05	6.30E-04	1.32E-05	0.00E+00	3.05E-04	9.35E-04
10	F19	70	Passenger Car	220	0.00E+00	2.42E-06	2.63E-07	9.50E+00	1.72E-05	4.70E-02	5.46E-06	2.22E-04	1.69E-03	2.64E-04	5.33E-04	3.44E-04	3.53E-04	3.74E-05	4.82E-05	1.00E-08	1.80E-04	3.47E-05
10	F19	70	Passenger Truck	368	0.00E+00	5.10E-06	5.42E-07	2.14E+01	3.27E-05	8.32E-02	1.07E-05	6.47E-04	3.07E-03	4.74E-04	1.02E-03	6.65E-04	6.81E-04	1.63E-04	1.07E-04	1.92E-08	3.42E-04	1.09E-04
10	F19	70	Single Unit Short Haul Truck	10	0.00E+00	1.69E-06	6.85E-08	1.57E+00	1.13E-06	2.84E-03	1.83E-06	6.71E-04	1.52E-04	2.79E-05	2.27E-04	4.33E-05	4.41E-05	1.59E-04	6.38E-06	2.58E-09	1.83E-04	1.26E-04
10	F19	70	Combination Short Haul Truck	7	0.00E+00	1.75E-06	1.30E-07	2.36E+00	4.44E-09	2.53E-03	1.25E-06	2.62E-03	2.47E-04	4.11E-05	1.05E-04	3.79E-05	3.94E-05	3.76E-04	7.91E-06	0.00E+00	6.56E-05	4.94E-04
10	F19	70	Combination Long Haul Truck	6	0.00E+00	2.40E-06	1.36E-07	2.22E+00	1.50E-08	3.02E-03	1.97E-06	2.81E-03	2.57E-04	3.87E-05	2.18E-04	4.39E-05	4.57E-05	3.56E-04	7.44E-06	0.00E+00	1.72E-04	5.28E-04
10	F20	70	Passenger Car	389	0.00E+00	4.29E-06	4.66E-07	1.68E+01	3.04E-05	8.32E-02	9.67E-06	3.93E-04	3.00E-03	4.67E-04	9.43E-04	6.08E-04	6.24E-04	6.61E-05	8.52E-05	1.77E-08	3.19E-04	6.13E-05
10	F20	70	Passenger Truck	651	0.00E+00	9.03E-06	9.59E-07	3.78E+01	5.78E-05	1.47E-01	1.89E-05	1.14E-03	5.42E-03	8.39E-04	1.81E-03	1.18E-03	1.20E-03	2.89E-04	1.90E-04	3.40E-08	6.05E-04	1.92E-04
10	F20	70	Single Unit Short Haul Truck	1	0.00E+00	1.69E-07	6.85E-09	1.57E-01	1.13E-07	2.84E-04	1.83E-07	6.71E-05	1.52E-05	2.79E-06	2.27E-05	4.33E-06	4.41E-06	1.59E-05	6.38E-07	2.58E-10	1.83E-05	1.26E-05
10	F20	70	Combination Short Haul Truck	1	0.00E+00	1.35E-07	1.00E-08	1.82E-01	3.42E-10	1.94E-04	9.59E-08	2.02E-04	1.90E-05	3.16E-06	8.08E-06	2.92E-06	3.03E-06	2.89E-05	6.08E-07	0.00E+00	5.05E-06	3.80E-05
10	F21	70	Passenger Car	75	0.00E+00	8.24E-07	8.96E-08	3.23E+00	5.85E-06	1.60E-02	1.86E-06	7.56E-05	5.76E-04	8.98E-05	1.81E-04	1.17E-04	1.20E-04	1.27E-05	1.64E-05	3.40E-09	6.13E-05	1.18E-05
10	F21	70	Passenger Truck	125	0.00E+00	1.74E-06	1.85E-07	7.27E+00	1.11E-05	2.83E-02	3.64E-06	2.20E-04	1.04E-03	1.61E-04	3.48E-04	2.26E-04	2.32E-04	5.55E-05	3.65E-05	6.55E-09	1.16E-04	3.69E-05
10	F22	70	Passenger Car	183	0.00E+00	2.02E-06	2.19E-07	7.90E+00	1.43E-05	3.91E-02	4.54E-06	1.85E-04	1.41E-03	2.19E-04	4.43E-04	2.86E-04	2.93E-04	3.11E-05	4.01E-05	8.32E-09	1.50E-04	2.88E-05
10	F22	70	Passenger Truck	306	0.00E+00	4.24E-06	4.51E-07	1.78E+01	2.72E-05	6.92E-02	8.90E-06	5.38E-04	2.55E-03	3.94E-04	8.51E-04	5.53E-04	5.67E-04	1.36E-04	8.93E-05	1.60E-08	2.84E-04	9.03E-05
10	F23	70	Passenger Car	61	0.00E+00	6.72E-07	7.30E-08	2.63E+00	4.77E-06	1.30E-02	1.51E-06	6.16E-05	4.69E-04	7.31E-05	1.48E-04	9.53E-05	9.78E-05	1.04E-05	1.34E-05	2.77E-09	5.00E-05	9.61E-06
10	F23	70	Passenger Truck	102	0.00E+00	1.41E-06	1.50E-07	5.93E+00	9.06E-06	2.31E-02	2.97E-06	1.79E-04	8.50E-04	1.31E-04	2.84E-04	1.84E-04	1.89E-04	4.52E-05	2.98E-05	5.34E-09	9.48E-05	3.01E-05
10	F23	70	Single Unit Short Haul Truck	2	0.00E+00	3.37E-07	1.37E-08	3.14E-01	2.26E-07	5.69E-04	3.67E-07	1.34E-04	3.04E-05	5.59E-06	4.54E-05	8.66E-06	8.83E-06	3.19E-05	1.28E-06	5.15E-10	3.66E-05	2.51E-05
10	F23	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	F23	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
10	F24	70	Passenger Car	88	0.00E+00	9.69E-07	1.05E-07	3.80E+00	6.87E-06	1.88E-02	2.18E-06	8.89E-05	6.77E-04	1.05E-04	2.13E-04	1.37E-04	1.41E-04	1.49E-05	1.93E-05	4.00E-09	7.21E-05	1.39E-05
10	F24	70	Passenger Truck	147	0.00E+00	2.04E-06	2.17E-07	8.54E+00	1.31E-05	3.32E-02	4.28E-06	2.58E-04	1.23E-03	1.90E-04	4.09E-04	2.66E-04	2.72E-04	6.52E-05	4.29E-05	7.69E-09	1.37E-04	4.34E-05
10	F24	70	Single Unit Short Haul Truck	3	0.00E+00	5.06E-07	2.05E-08	4.71E-01	3.39E-07	8.53E-04	5.50E-07	2.01E-04	4.57E-05	8.38E-06	6.82E-05	1.30E-05	1.32E-05	4.78E-05	1.92E-06	7.73E-10	5.49E-05	3.77E-05
10	F24	70	Combination Short Haul Truck	2	0.00E+00	5.38E-07	4.01E-08	7.27E-01	1.37E-09	7.78E-04	3.84E-07	8.06E-04	7.59E-05	1.27E-05	3.23E-05	1.17E-05	1.21E-05	1.16E-04	2.43E-06	0.00E+00	2.02E-05	1.52E-04
10	F24	70	Combination Long Haul Truck	2	0.00E+00	7.38E-07	4.20E-08	6.83E-01	4.63E-09	9.28E-04	6.07E-07	8.63E-04	7.90E-05	1.19E-05	6.71E-05	1.35E-05	1.41E-05	1.10E-04	2.29E-06	0.00E+00	5.31E-05	1.63E-04
9	F25	60	Passenger Car	235	0.00E+00	2.97E-06	3.23E-07	1.06E+01	2.11E-05	5.73E-02	6.70E-06	2.42E-04	2.37E-03	3.55E-04	6.53E-04	4.21E-04	4.32E-04	4.65E-05	5.37E-05	1.13E-08	2.21E-04	3.77E-05
9	F25	60	Passenger Truck	393	0.00E+00	6.31E-06	6.68E-07	2.36E+01	3.98E-05	9.82E-02	1.31E-05	7.52E-04	4.33E-03	6.45E-04	1.25E-03	8.11E-04	8.31E-04	1.91E-04	1.19E-04	2.20E-08	4.16E-04	1.27E-04
9	F25	60	Single Unit Short Haul Truck	12	0.00E+00	2.78E-06	1.15E-07	2.07E+00	1.84E-06	3.64E-03	3.01E-06	1.07E-03	2.86E-04	4.81E-05	3.71E-04	7.14E-05	7.29E-05	2.10E-04	8.44E-06	3.48E-09	2.98E-04	2.00E-04
9	F25	60	Single Unit Long Haul Truck	1	0.00E+00	1.21E-07	4.99E-09	8.83E-02	7.99E-08	1.55E-04	1.31E-07	4.62E-05	1.29E-05	2.14E-06	1.62E-05	3.10E-06	3.17E-06	8.92E-06	3.60E-07	1.48E-10	1.30E-05	8.65E-06
9	F25	60	Combination Short Haul Truck	14	0.00E+00	3.97E-06	2.92E-07	4.79E+00	1.09E-08	5.93E-03	2.85E-06	6.07E-03	6.93E-04	1.08E-04	2.45E-04	8.53E-05	8.85E-05	7.61E-04	1.60E-05	0.00E+00	1.56E-04	1.14E-03
9	F25	60	Combination Long Haul Truck	12	0.00E+00	5.45E-06	2.98E-07	4.52E+00	3.68E-08	7.12E-03	4.56E-06	6.46E-03	7.26E-04	1.05E-04	5.17E-04	9.73E-05	1.01E-04	7.26E-04	1.52E-05	0.00E+00	4.16E-04	1.22E-03
9	F26	60	Passenger Car	311	0.00E+00	3.93E-06	4.28E-07	1.40E+01	2.79E-05	7.59E-02	8.87E-06	3.20E-04	3.14E-03	4.70E-04	8.65E-04	5.58E-04	5.72E-04	6.17E-05	7.11E-05	1.49E-08	2.93E-04	5.00E-05
9	F26	60	Passenger Truck	521	0.00E+00	8.35E-06	8.85E-07	3.13E+01	5.27E-05	1.30E-01	1.73E-05	9.96E-04	5.74E-03	8.54E-04	1.65E-03	1.07E-03	1.10E-03	2.52E-04	1.57E-04	2.91E-08	5.51E-04	1.69E-04
9	F26	60	Single Unit Short Haul Truck	11	0.00E+00	2.35E-06	9.72E-08	1.75E+00	1.56E-06	3.08E-03	2.54E-06	9.03E-04	2.42E-04	4.07E-05	3.14E-04	6.04E-05	6.17E-05	1.78E-04	7.14E-06	2.94E-09	2.52E-04	1.69E-04
9	F26	60	Combination Short Haul Truck	10	0.00E+00	2.90E-06	2.13E-07	3.50E+00	7.94E-09	4.33E-03	2.08E-06	4.43E-03	5.06E-04	7.92E-05	1.79E-04	6.23E-05	6.47E-05	5.56E-04	1.17E-05	0.00E+00	1.14E-04	8.35E-04
9	F26	60	Combination Long Haul Truck	9	0.00E+00	3.99E-06	2.18E-07	3.31E+00	2.69E-08	5.21E-03	3.33E-06	4.72E-03	5.31E-04	7.67E-05	3.78E-04	7.11E-05	7.41E-05	5.31E-04	1.11E-05	0.00E+00	3.04E-04	8.90E-04
9	F27	60	Passenger Car	864	0.00E+00	1.09E-05	1.19E-06	3.90E+01	7.75E-05	2.11E-01	2.46E-05	8.89E-04	8.72E-03	1.31E-03	2.40E-03	1.55E-03	1.59E-03	1.71E-04	1.97E-04	4.15E-08	8.13E-04	1.39E-04
9	F27	60	Passenger Truck	1446	0.00E+00	2.32E-05	2.46E-06	8.69E+01	1.46E-04	3.61E-01	4.81E-05	2.77E-03	1.59E-02	2.37E-03	4.59E-03	2.98E-03	3.06E-03	7.01E-04	4.36E-04	8.08E-08	1.53E-03	4.69E-04
9	F27	60	Single Unit Short Haul Truck	127	0.00E+00	2.84E-05	1.17E-06	2.12E+01	1.88E-05	3.73E-02	3.08E-05	1.09E-02	2.93E-03	4.92E-04	3.79E-03	7.31E-04	7.45E-04	2.15E-03	8.64E-05	3.56E-08	3.05E-03	2.04E-03
9	F27	60	Single Unit Long Haul Truck	6	0.00E+00	1.24E-06	5.10E-08	9.03E-01	8.17E-07	1.58E-03	1.34E-06	4.73E-04	1.32E-04	2.18E-05	1.66E-04	3.18E-05	3.24E-05	9.13E-05	3.69E-06	1.51E-09	1.34E-04	8.85E-05
9	F27	60	Combination Short Haul Truck	84	0.00E+00	2.44E-05	1.79E-06	2.95E+01	6.69E-08	3.65E-02	1.75E-05	3.73E-02	4.26E-03	6.67E-04	1.51E-03	5.25E-04	5.45E-04	4.68E-03	9.86E-05	0.00E+00	9.60E-04	7.03E-03
9	F27	60	Combination Long Haul Truck	76	0.00E+00	3.36E-05	1.83E-06	2.78E+01	2.27E-07	4.38E-02	2.81E-05	3.98E-02	4.47E-03	6.46E-04	3.18E-03	5.99E-04	6.24E-04	4.47E-03	9.33E-05	0.00E+00	2.56E-03	7.49E-03
9	F28	60	Passenger Car	833	0.00E+00	1.05E-05	1.14E-06	3.76E+01	7.48E-05	2.03E-01	2.38E-05	8.58E-04	8.41E-03	1.26E-03	2.32E-03	1.49E-03	1.53E-03	1.65E-04	1.90E-04	4.00E-08	7.84E-04	1.34E-04
9	F28	60	Passenger Truck	1395	0.00E+00	2.24E-05	2.37E-06	8.38E+01	1.41E-04	3.48E-01	4.64E-05	2.67E-03	1.54E-02	2.29E-03	4.42E-03	2.88E-03	2.95E-03	6.76E-04	4.20E-04	7.80E-08	1.47E-03	4.52E-04
9	F28	60	Single Unit Short Haul Truck	113	0.00E+00	2.52E-05	1.04E-06	1.88E+01	1.67E-05	3.31E-02	2.73E-05	9.69E-03	2.60E-03	4.37E-04	3.37E-03	6.48E-04	6.61E-04	1.91E-03	7.66E-05	3.16E-08	2.71E-03	1.81E-03
9	F28	60	Single Unit Long Haul Truck	5	0.00E+00	1.10E-06	4.53E-08	8.02E-01	7.25E-07	1.40E-03	1.19E-06	4.20E-04	1.17E-04	1.94E-05	1.47E-04	2.82E-05	2.87E-05	8.10E-05	3.27E-06	1.34E-09	1.18E-04	7.85E-05
9	F28	60	Combination Short Haul Truck	68	0.00E+00	1.98E-05	1.46E-06	2.39E+01	5.44E-08	2.97E-02	1.43E-05	3.03E-02	3.46E-03	5.42E-04	1.22E-03	4.26E-04	4.43E-04	3.81E-03	8.01E-05	0.00E+00	7.80E-04	5.71E-03
9	F28	60	Combination Long Haul Truck	62	0.00E+00	2.73E-05	1.49E-06	2.26E+01	1.84E-07	3.56E-02	2.28E-05	3.23E-02	3.63E-03	5.25E-04	2.59E-03	4.86E-04	5.07E-04	3.63E-03	7.58E-05	0.00E+00	2.08E-03	6.09E-03
9	F29	60	Passenger Car	231	0.00E+00	2.92E-06	3.17E-07	1.04E+01	2.07E-05	5.63E-02	6.58E-06	2.37E-04	2.33E-03	3.49E-04	6.42E-04	4.14E-04	4.25E-04	4.57E-05	5.27E-05	1.11E-08	2.17E-04	3.71E-05
9	F29	60	Passenger Truck	386	0.00E+00	6.20E-06	6.57E-07	2.32E+01	3.91E-05	9.64E-02	1.29E-05	7.39E-04	4.26E-03	6.34E-04	1.23E-03	7.97E-04	8.17E-04	1.87E-04	1.16E-04	2.16E-08	4.08E-04	1.25E-04
9	F29	60	Single Unit Short Haul Truck	5	0.00E+00	1.07E-06	4.42E-08	7.97E-01	7.08E-07	1.40E-03	1.16E-06	4.11E-04	1.10E-04	1.85E-05	1.43E-04	2.75E-05	2.80E-05	8.07E-05	3.25E-06	1.34E-09	1.15E-04	7.69E-05
9	F29	60	Combination Short Haul Truck	3	0.00E+00	7.63E-07	5.61E-08	9.21E-01	2.09E-09	1.14E-03	5.48E-07	1.17E-03	1.33E-04	2.08E-05	4.70E-05	1.64E-05	1.70E-05	1.46E-04	3.08E-06	0.00E+00	3.00E-05	2.20E-04
9	F29	60	Combination Long Haul Truck	2	0.00E+00	1.05E-06	5.73E-08	8.70E-01	7.08E-09	1.37E-03	8.77E-07	1.24E-03	1.40E-04	2.02E-05	9.95E-05	1.87E-05	1.95E-05	1.40E-04	2.92E-06	0.00E+00	8.00E-05	2.34E-04
9	F30	60	Passenger Car	298	0.00E+00	3.77E-06	4.10E-07	1.35E+01	2.67E-05	7.27E-02	8.50E-06	3.07E-04	3.01E-03	4.51E-04	8.29E-04	5.34E-04	5.48E-04	5.91E-05	6.81E-05	1.43E-08	2.80E-04	4.79E-05
9	F30	60	Passenger Truck	499	0.00E+00	8.00E-06	8.48E-07	3.00E+01	5.05E-05	1.25E-01	1.66E-05	9.54E-04	5.50E-03	8.18E-04	1.58E-03	1.03E-03	1.06E-03	2.42E-04	1.50E-04	2.79E-08	5.27E-04	1.62E-04
9	F30	60	Single Unit Short Haul Truck	19	0.00E+00	4.28E-06	1.77E-07	3.19E+00	2.83E-06	5.60E-03	4.63E-06	1.64E-03	4.41E-04	7.41E-05	5.71E-04	1.10E-04	1.12E-04	3.23E-04	1.30E-05	5.35E-09	4.59E-04	3.07E-04
9	F30	60	Single Unit Long Haul Truck	1	0.00E+00	1.87E-07	7.67E-09	1.36E-01	1.23E-07	2.38E-04	2.02E-07	7.11E-05	1.98E-05	3.28E-06	2.49E-05	4.78E-06	4.87E-06	1.37E-05	5.54E-07	2.28E-10	2.01E-05	1.33E-05
9	F30	60	Combination Short Haul Truck	13	0.00E+00	3.66E-06	2.69E-07	4.42E+00	1.00E-08	5.47E-03	2.63E-06	5.60E-03	6.39E-04	1.00E-04	2.26E-04	7.87E-05	8.17E-05	7.03E-04	1.48E-05	0.00E+00	1.44E-04	1.06E-03
9	F30	60	Combination Long Haul Truck	11	0.00E+00	5.03E-06	2.75E-07	4.18E+00	3.40E-08	6.58E-03	4.21E-06	5.97E-03	6.71E-04	9.69E-05	4.77E-04	8.98E-05	9.36E-05	6.70E-04	1.40E-05	0.00E+00	3.84E-04	1.12E-03
9	F43	60	Passenger Car	55	0.00E+00	7.00E-07	7.60E-08	2.50E+00	4.97E-06	1.35E-02	1.58E-06	5.70E-05	5.59E-04	8.37E-05	1.54E-04	9.92E-05	1.02E-04	1.10E-05	1.26E-05	2.66E-09	5.21E-05	8.89E-06
9	F43	60	Passenger Truck	93	0.00E+00	1.49E-06	1.58E-07	5.57E+00	9.37E-06	2.31E-02	3.08E-06	1.77E-04	1.02E-03	1.52E-04	2.94E-04	1.91E-04	1.96E-04	4.49E-05	2.79E-05	5.18E-09	9.80E-05	3.00E-05
9	F43	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
9	F43	60	Combination Short Haul Truck	1	0.00E+00	1.53E-07	1.12E-08	1.84E-01	4.18E-10	2.28E-04	1.10E-07	2.33E-04	2.66E-05	4.17E-06	9.41E-06	3.28E-06	3.41E-06	2.93E-05	6.16E-07	0.00E+00	6.00E-06	4.40E-05
9	F44	60	Passenger Car	14	0.00E+00	1.75E-07	1.90E-08	6.24E-01	1.24E-06	3.38E-03	3.94E-07	1.42E-05	1.40E-04	2.09E-05	3.85E-05	2.48E-05	2.55E-05	2.74E-06	3.16E-06	6.64E-10	1.30E-05	2.22E-06
9	F44	60	Passenger Truck	23	0.00E+00	3.72E-07	3.94E-08	1.39E+00	2.34E-06	5.78E-03	7.71E-07	4.43E-05	2.55E-04	3.80E-05	7.35E-05	4.78E-05	4.90E-05	1.12E-05	6.98E-06	1.29E-09	2.45E-05	7.51E-06
10	F45	70	Passenger Car	294	0.00E+00	3.24E-06	3.53E-07	1.27E

Appendix F.5.8: MOVES Emission Factors for PM Peak Traffic by Vehicle Type, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413

GTA West

MOVES Link ID	Source ID	Speed (kph)	Vehicle Type	Vehicle Volume (vehicles/hour)	Emission Factor by vehicle type (g/s-mile)																	
					BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
9	F50	60	Passenger Car	771	0.00E+00	9.75E-06	1.06E-06	3.48E+01	6.92E-05	1.88E-01	2.20E-05	7.94E-04	7.79E-03	1.17E-03	2.14E-03	1.38E-03	1.42E-03	1.53E-04	1.76E-04	3.70E-08	7.25E-04	1.24E-04
9	F50	60	Passenger Truck	1291	0.00E+00	2.07E-05	2.19E-06	7.76E+01	1.31E-04	3.22E-01	4.29E-05	2.47E-03	1.42E-02	2.12E-03	4.09E-03	2.66E-03	2.73E-03	6.26E-04	3.89E-04	7.22E-08	1.36E-03	4.18E-04
9	F50	60	Single Unit Short Haul Truck	113	0.00E+00	2.52E-05	1.04E-06	1.88E+01	1.67E-05	3.31E-02	2.73E-05	9.69E-03	2.60E-03	4.37E-04	3.37E-03	6.48E-04	6.61E-04	1.91E-03	7.66E-05	3.16E-08	2.71E-03	1.81E-03
9	F50	60	Single Unit Long Haul Truck	5	0.00E+00	1.10E-06	4.53E-08	8.02E-01	7.25E-07	1.40E-03	1.19E-06	4.20E-04	1.17E-04	1.94E-05	1.47E-04	2.82E-05	2.87E-05	8.10E-05	3.27E-06	1.34E-09	1.18E-04	7.85E-05
9	F50	60	Combination Short Haul Truck	68	0.00E+00	1.98E-05	1.46E-06	2.39E+01	5.44E-08	2.97E-02	1.43E-05	3.03E-02	3.46E-03	5.42E-04	1.22E-03	4.26E-04	4.43E-04	3.81E-03	8.01E-05	0.00E+00	7.80E-04	5.71E-03
9	F50	60	Combination Long Haul Truck	62	0.00E+00	2.73E-05	1.49E-06	2.26E+01	1.84E-07	3.56E-02	2.28E-05	3.23E-02	3.63E-03	5.25E-04	2.59E-03	4.86E-04	5.07E-04	3.63E-03	7.58E-05	0.00E+00	2.08E-03	6.09E-03
10	F51	70	Passenger Car	614	0.00E+00	6.77E-06	7.35E-07	2.65E+01	4.80E-05	1.31E-01	1.53E-05	6.21E-04	4.73E-03	7.37E-04	1.49E-03	9.60E-04	9.85E-04	1.04E-04	1.35E-04	2.80E-08	5.03E-04	9.69E-05
10	F51	70	Passenger Truck	1028	0.00E+00	1.43E-05	1.51E-06	5.97E+01	9.13E-05	2.32E-01	2.99E-05	1.81E-03	8.56E-03	1.32E-03	2.86E-03	1.86E-03	1.90E-03	4.56E-04	3.00E-04	5.37E-08	9.55E-04	3.03E-04
10	F51	70	Single Unit Short Haul Truck	34	0.00E+00	6.07E-06	2.46E-07	5.65E+00	4.07E-06	1.02E-02	6.60E-06	2.42E-03	5.48E-04	1.01E-04	8.18E-04	1.56E-04	1.59E-04	5.74E-04	2.30E-05	9.28E-09	6.59E-04	4.52E-04
10	F51	70	Single Unit Long Haul Truck	2	0.00E+00	2.64E-07	1.06E-08	2.39E-01	1.75E-07	4.30E-04	2.87E-07	1.04E-04	2.51E-05	4.50E-06	3.57E-05	6.73E-06	6.87E-06	2.42E-05	9.75E-07	3.91E-10	2.88E-05	1.95E-05
10	F51	70	Combination Short Haul Truck	21	0.00E+00	5.38E-06	4.01E-07	7.27E+00	1.37E-08	7.78E-03	3.84E-06	8.06E-03	7.59E-04	1.27E-04	3.23E-04	1.17E-04	1.21E-04	1.16E-03	2.43E-05	0.00E+00	2.02E-04	1.52E-03
10	F51	70	Combination Long Haul Truck	19	0.00E+00	7.38E-06	4.20E-07	6.83E+00	4.63E-08	9.28E-03	6.07E-06	8.63E-03	7.90E-04	1.19E-04	6.71E-04	1.35E-04	1.41E-04	1.10E-03	2.29E-05	0.00E+00	5.31E-04	1.63E-03
10	F52	70	Passenger Car	220	0.00E+00	2.42E-06	2.63E-07	9.50E+00	1.72E-05	4.70E-02	5.46E-06	2.22E-04	1.69E-03	2.64E-04	5.33E-04	3.44E-04	3.53E-04	3.74E-05	4.82E-05	1.00E-08	1.80E-04	3.47E-05
10	F52	70	Passenger Truck	368	0.00E+00	5.10E-06	5.42E-07	2.14E+01	3.27E-05	8.32E-02	1.07E-05	6.47E-04	3.07E-03	4.74E-04	1.02E-03	6.65E-04	6.81E-04	1.63E-04	1.07E-04	1.92E-08	3.42E-04	1.09E-04
10	F52	70	Single Unit Short Haul Truck	7	0.00E+00	1.18E-06	4.79E-08	1.10E+00	7.91E-07	1.99E-03	1.28E-06	4.70E-04	1.07E-04	1.96E-05	1.59E-04	3.03E-05	3.09E-05	1.12E-04	4.47E-06	1.80E-09	1.28E-04	8.79E-05
10	F52	70	Combination Short Haul Truck	4	0.00E+00	9.42E-07	7.01E-08	1.27E+00	2.39E-09	1.36E-03	6.71E-07	1.41E-03	1.33E-04	2.22E-05	5.65E-05	2.04E-05	2.12E-05	2.02E-04	4.26E-06	0.00E+00	3.53E-05	2.66E-04
10	F52	70	Combination Long Haul Truck	3	0.00E+00	1.29E-06	7.35E-08	1.20E+00	8.10E-09	1.62E-03	1.06E-06	1.51E-03	1.38E-04	2.08E-05	1.17E-04	2.36E-05	2.46E-05	1.92E-04	4.01E-06	0.00E+00	9.29E-05	2.84E-04
10	F53	70	Passenger Car	691	0.00E+00	7.62E-06	8.28E-07	2.99E+01	5.41E-05	1.48E-01	1.72E-05	6.99E-04	5.33E-03	8.30E-04	1.68E-03	1.08E-03	1.11E-03	1.17E-04	1.52E-04	3.15E-08	5.67E-04	1.09E-04
10	F53	70	Passenger Truck	1158	0.00E+00	1.60E-05	1.71E-06	6.72E+01	1.03E-04	2.61E-01	3.36E-05	2.03E-03	9.64E-03	1.49E-03	3.22E-03	2.09E-03	2.14E-03	5.13E-04	3.38E-04	6.05E-08	1.07E-03	3.41E-04
10	F53	70	Single Unit Short Haul Truck	15	0.00E+00	2.70E-06	1.10E-07	2.51E+00	1.81E-06	4.55E-03	2.93E-06	1.07E-03	2.44E-04	4.47E-05	3.64E-04	6.93E-05	7.06E-05	2.55E-04	1.02E-05	4.12E-09	2.93E-04	2.01E-04
10	F53	70	Single Unit Long Haul Truck	1	0.00E+00	1.17E-07	4.73E-09	1.06E-01	7.78E-08	1.91E-04	1.28E-07	4.62E-05	1.11E-05	2.00E-06	1.59E-05	2.99E-06	3.05E-06	1.08E-05	4.34E-07	1.74E-10	1.28E-05	8.65E-06
10	F53	70	Combination Short Haul Truck	9	0.00E+00	2.42E-06	1.80E-07	3.27E+00	6.15E-09	3.50E-03	1.73E-06	3.63E-03	3.41E-04	5.70E-05	1.45E-04	5.25E-05	5.45E-05	5.20E-04	1.09E-05	0.00E+00	9.09E-05	6.83E-04
10	F53	70	Combination Long Haul Truck	9	0.00E+00	3.32E-06	1.89E-07	3.07E+00	2.08E-08	4.18E-03	2.73E-06	3.88E-03	3.56E-04	5.36E-05	3.02E-04	6.07E-05	6.33E-05	4.93E-04	1.03E-05	0.00E+00	2.39E-04	7.32E-04
10	F54	70	Passenger Car	248	0.00E+00	2.73E-06	2.97E-07	1.07E+01	1.94E-05	5.29E-02	6.15E-06	2.50E-04	1.91E-03	2.97E-04	6.00E-04	3.87E-04	3.97E-04	4.21E-05	5.43E-05	1.13E-08	2.03E-04	3.90E-05
10	F54	70	Passenger Truck	414	0.00E+00	5.75E-06	6.11E-07	2.41E+01	3.68E-05	9.36E-02	1.20E-05	7.28E-04	3.45E-03	5.34E-04	1.15E-03	7.48E-04	7.67E-04	1.84E-04	1.21E-04	2.17E-08	3.85E-04	1.22E-04
53	F71	70	Passenger Car	149	0.00E+00	1.59E-06	1.73E-07	6.50E+00	1.13E-05	3.06E-02	3.59E-06	1.53E-04	1.13E-03	1.77E-04	3.50E-04	2.25E-04	2.31E-04	2.53E-05	3.30E-05	6.85E-09	1.18E-04	2.39E-05
53	F71	70	Passenger Truck	249	0.00E+00	3.32E-06	3.53E-07	1.46E+01	2.13E-05	5.40E-02	6.98E-06	4.33E-04	2.02E-03	3.13E-04	6.68E-04	4.34E-04	4.44E-04	1.10E-04	7.36E-05	1.29E-08	2.23E-04	7.24E-05
53	F71	70	Single Unit Short Haul Truck	20	0.00E+00	3.54E-06	1.44E-07	3.30E+00	2.37E-06	5.97E-03	3.85E-06	1.41E-03	3.20E-04	5.87E-05	4.77E-04	9.09E-05	9.27E-05	3.35E-04	1.34E-05	5.41E-09	3.84E-04	2.64E-04
53	F71	70	Single Unit Long Haul Truck	1	0.00E+00	1.54E-07	6.20E-09	1.40E-01	1.02E-07	2.51E-04	1.68E-07	6.07E-05	1.46E-05	2.62E-06	2.08E-05	3.93E-06	4.00E-06	1.41E-05	5.69E-07	2.28E-10	1.68E-05	1.13E-05
53	F71	70	Combination Short Haul Truck	17	0.00E+00	4.44E-06	3.30E-07	6.00E+00	1.13E-08	6.42E-03	3.17E-06	6.65E-03	6.26E-04	1.04E-04	2.66E-04	9.63E-05	9.99E-05	9.54E-04	2.01E-05	0.00E+00	1.67E-04	1.25E-03
53	F71	70	Combination Long Haul Truck	16	0.00E+00	6.09E-06	3.46E-07	5.63E+00	3.82E-08	7.66E-03	5.01E-06	7.12E-03	6.52E-04	9.82E-05	5.54E-04	1.11E-04	1.16E-04	9.04E-04	1.89E-05	0.00E+00	4.38E-04	1.34E-03
50	F72	40	Passenger Car	150	0.00E+00	2.13E-06	2.31E-07	7.82E+00	1.51E-05	4.07E-02	4.80E-06	1.37E-04	2.59E-03	3.63E-04	4.68E-04	3.02E-04	3.10E-04	4.46E-05	3.93E-05	7.28E-09	1.58E-04	2.13E-05
50	F72	40	Passenger Truck	251	0.00E+00	4.69E-06	4.93E-07	1.70E+01	2.83E-05	6.73E-02	9.43E-06	5.27E-04	4.58E-03	6.36E-04	8.90E-04	5.81E-04	5.96E-04	1.52E-04	8.48E-05	1.24E-08	2.95E-04	9.13E-05
50	F72	40	Single Unit Short Haul Truck	56	0.00E+00	1.88E-05	8.38E-07	1.05E+01	1.30E-05	1.65E-02	2.01E-05	7.60E-03	2.19E-03	3.41E-04	2.42E-03	5.05E-04	5.15E-04	1.07E-03	4.28E-05	1.81E-08	1.91E-03	1.42E-03
50	F72	40	Single Unit Long Haul Truck	2	0.00E+00	8.26E-07	3.66E-08	4.53E-01	5.71E-07	7.16E-04	8.84E-07	3.31E-04	9.80E-05	1.52E-05	1.07E-04	2.21E-05	2.25E-05	4.63E-05	1.85E-06	7.87E-10	8.40E-05	6.21E-05
50	F72	40	Combination Short Haul Truck	38	0.00E+00	1.84E-05	1.38E-06	1.58E+01	4.56E-08	2.60E-02	1.31E-05	2.69E-02	3.71E-03	5.53E-04	1.10E-03	4.00E-04	4.15E-04	2.52E-03	5.29E-05	0.00E+00	6.80E-04	5.06E-03
50	F72	40	Combination Long Haul Truck	35	0.00E+00	2.45E-05	1.38E-06	1.52E+01	1.56E-07	3.16E-02	2.02E-05	2.83E-02	3.86E-03	5.42E-04	2.24E-03	4.45E-04	4.64E-04	2.44E-03	5.09E-05	0.00E+00	1.78E-03	5.34E-03
52	F73	60	Passenger Car	30	0.00E+00	3.43E-07	3.73E-08	1.33E+00	2.44E-06	6.58E-03	7.74E-07	2.93E-05	2.90E-04	4.35E-05	7.55E-05	4.87E-05	4.99E-05	5.85E-06	6.75E-06	1.38E-09	2.55E-05	4.57E-06
52	F73	60	Passenger Truck	49	0.00E+00	7.24E-07	7.68E-08	2.97E+00	4.57E-06	1.13E-02	1.50E-06	8.94E-05	5.15E-04	7.65E-05	1.43E-04	9.32E-05	9.55E-05	2.35E-05	1.49E-05	2.51E-09	4.77E-05	1.51E-05
52	F73	60	Single Unit Short Haul Truck	1	0.00E+00	2.14E-07	8.83E-09	1.59E-01	1.42E-07	2.80E-04	2.31E-07	8.21E-05	2.20E-05	3.70E-06	2.85E-05	5.50E-06	5.60E-06	1.61E-05	6.49E-07	2.68E-10	2.29E-05	1.54E-05
52	F73	60	Combination Short Haul Truck	1	0.00E+00	3.05E-07	2.24E-08	3.68E-01	8.36E-10	4.56E-04	2.19E-07	4.67E-04	5.33E-05	8.33E-06	1.88E-05	6.56E-06	6.81E-06	5.86E-05	1.23E-06	0.00E+00	1.20E-05	8.79E-05
52	F73	60	Combination Long Haul Truck	1	0.00E+00	4.20E-07	2.29E-08	3.48E-01	2.83E-09	5.48E-04	3.51E-07	4.97E-04	5.59E-05	8.08E-06	3.98E-05	7.48E-06	7.80E-06	5.59E-05	1.17E-06	0.00E+00	3.20E-05	9.36E-05
53	F74	70	Passenger Car	239	0.00E+00	2.55E-06	2.77E-07	1.04E+01	1.81E-05	4.90E-02	5.75E-06	2.45E-04	1.81E-03	2.83E-04	5.61E-04	3.61E-04	3.71E-04	4.05E-05	5.29E-05	1.10E-08	1.90E-04	3.83E-05
53	F74	70	Passenger Truck	399	0.00E+00	5.33E-06	5.66E-07	2.35E+01	3.42E-05	8.66E-02	1.12E-05	6.93E-04	3.23E-03	5.02E-04	1.07E-03	6.95E-04	7.12E-04	1.76E-04	1.18E-04	2.07E-08	3.58E-04	1.16E-04
53	F74	70	Single Unit Short Haul Truck	60	0.00E+00	1.06E-05	4.31E-07	9.89E+00	7.12E-06	1.79E-02	1.15E-05	4.23E-03	9.59E-04	1.76E-04	1.43E-03	2.73E-04	2.78E-04	1.00E-03	4.02E-05	1.62E-08	1.15E-03	7.91E-04
53	F74	70	Single Unit Long Haul Truck	3	0.00E+00	4.62E-07	1.86E-08	4.19E-01	3.06E-07	7.52E-04	5.03E-07	1.82E-04	4.39E-05	7.87E-06	6.25E-05	1.18E-05	1.20E-05	4.24E-05	1.71E-06	6.84E-10	5.04E-05	3.40E-05
53	F74	70	Combination Short Haul Truck	31	0.00E+00	8.08E-06	6.01E-07	1.09E+01	2.05E-08	1.17E-02	5.75E-06	1.21E-02	1.14E-03	1.90E-04	4.85E-04	1.75E-04	1.82E-04	1.73E-03	3.65E-05	0.00E+00	3.03E-04	2.28E-03
53	F74	70	Combination Long Haul Truck	29	0.00E+00	1.11E-05	6.30E-07	1.02E+01	6.94E-08	1.39E-02	9.11E-06	1.29E-02	1.19E-03	1.79E-04	1.01E-03	2.02E-04	2.11E-04	1.64E-03	3.43E-05	0.00E+00	7.96E-04	2.44E-03
52	F75	60	Passenger Car	230	0.00E+00	2.67E-06	2.90E-07	1.04E+01	1.90E-05	5.12E-02	6.02E-06	2.28E-04	2.26E-03	3.38E-04	5.88E-04	3.79E-04	3.89E-04	4.56E-05	5.25E-05	1.07E-08	1.99E-04	3.56E-05
52	F75	60	Passenger Truck	385	0.00E+00	5.64E-06	5.98E-07	2.31E+01	3.56E-05	8.79E-02	1.17E-05	6.96E-04	4.01E-03	5.95E-04	1.11E-03	7.25E-04	7.43E-04	1.83E-04	1.16E-04	1.96E-08	3.71E-04	1.18E-04
52	F75	60	Single Unit Short Haul Truck	51	0.00E+00	1.13E-05	4.68E-07	8.44E+00	7.51E-06	1.49E-02	1.23E-05	4.35E-03	1.17E-03	1.96E-04	1.51E-03	2.91E-04	2.97E-04	8.56E-04	3.44E-05	1.42E-08	1.22E-03	8.15E-04
52	F75	60	Single Unit Long Haul Truck	2	0.00E+00	4.95E-07	2.03E-08	3.60E-01	3.26E-07	6.31E-04	5.35E-07	1.88E-04	5.25E-05	8.70E-06	6.61E-05	1.27E-05	1.29E-05	3.64E-05	1.47E-06	6.03E-10	5.32E-05	3.53E-05
52	F75	60	Combination Short Haul Truck	21	0.00E+00	6.26E-06	4.60E-07	7.55E+00	1.71E-08	9.35E-03	4.50E-06	9.56E-03	1.09E-03	1.71E-04	3.86E-04	1.34E-04	1.40E-04	1.20E-03	2.53E-05	0.00E+00	2.46E-04	1.80E-03
52	F75	60	Combination Long Haul Truck	20	0.00E+00	8.60E-06	4.70E-07	7.13E+00	5.80E-08	1.12E-02	7.19E-06	1.02E-02	1.15E-03	1.66E-04	8.16E-04	1.53E-04	1.60E-04	1.14E-03	2.39E-05	0.00E+00	6.56E-04	1.92E-03
50	F76	40	Passenger Car	88	0.00E+00	1.25E-06	1.36E-07	4.60E+00	8.89E-06	2.39E-02	2.82E-06	8.05E-05	1.52E-03	2.14E-04	2.75E-04	1.78E-04	1.82E-04	2.62E-05	2.31E-05	4.29E-09	9.31E-05	1.26E-05
50	F76	40	Passenger Truck	148	0.00E+00	2.76E-06	2.90E-07	1.00E+01	1.66E-05	3.96E-02	5.55E-06	3.10E-04	2.70E-03	3.74E-04	5.24E-04	3.42E-04	3.50E-04	8.95E-05	4.99E-05	7.28E-09	1.74E-04	5.37E-05
50	F78	40	Passenger Car	325	0.00E+00	4.61E-06	5.00E-07	1.69E+01	3.27E-05	8.80E-02	1.04E-05	2.96E-04	5.60E-03	7.87E-04	1.01E-03	6.53E-04	6.70E-04	9.65E-05	8.51E-05	1.58E-08	3.43E-04	4.62E-05
50	F78	40	Passenger Truck	543	0.00E+00	1.02E-05	1.07E-06	3.69E+01	6.12E-05	1.46E-01	2.04E-05	1.14E-03	9.92E-03	1.38E-03	1.93E-03	1.26E-03	1.29E-03	3.29E-04	1.84E-04	2.68E-08	6.38E-04	1.98E-04
50	F78	40	Single Unit Short Haul Truck	10	0.00E+00	3.25E-06	1.45E-07	1.81E+00	2.25E-06	2.84E-03	3.47E-06	1.31E-03	3.77E-04	5.89E-05	4.18E-04	8.71E-05	8.87E-05	1.85E-04	7.37E-06	3.13E-09	3.29E-04	2.46E-04
50	F78	40	Combination Short Haul Truck	5	0.00E+00	2.27E-06	1.70E-07	1.95E+00	5.62E-09	3.21E-03	1.61E-06	3.31E-03	4.58E-04	6.82E-05	1.35E-04	4.93E-05	5.12E-05	3.10E-04	6.53E-06	0.00E+00	8.38E-05	6.24E-04
50	F78	40	Combination Long Haul Truck	4	0.00E+00	3.02E-06	1.70E-07	1.87E+00	1.92E-08	3.90E-03	2.49E-06	3.49E-03	4.75E-04	6.68E-05	2.76E-04	5.49E-05	5.72E-05	3.01E-04	6.28E-06	0.00E+00	2.19E-04	6.58E-04
52	F79	60	Passenger Car	651	0.00E+00	7.56E-06	8.22E-07	2.94E+01	5.37E-05	1.45E-01	1.71E-05	6.46E-04	6.39E-03	9.58E-04	1.66E-03	1.07E-03	1.10E-03	1.29E-04	1.49E-04	3.03E-08	5.63E-04	1.01E-04
52	F79	60	Passenger Truck	1090	0.00E+00	1.60E-05	1.69E-06	6.55E+01	1.01E-04	2.49E-01	3.31E-05	1.97E-03	1.13E-02	1.69E-03	3.16E-03	2.05E-03	2.10E-03	5.17E-04	3.28E-04	5.54E-08	1.05E-03	3.33E-04
52	F79	60	Single Unit Short Haul Truck	11	0.00E+00	2.57E-06	1.06E-07	1.91E+00	1.70E-06	3.36E-03	2.78E-06	9.85E-04	2.64E-04	4.44E-05	3.42E-04	6.59E-05	6.73E-05	1.94E-04	7.79E-06	3.21E-09	2.75E-04	1.84E-04
52	F79	60	Single Unit Long Haul Truck	1	0.00E+00	1.12E-07	4.60E-09	8.15E-02	7.37E-08	1.43E-04	1.21E-07	4.27E-05	1.19E-05	1.97E-06	1.50E-05	2.87E-06	2.92E-06	8.24E-06	3.33E-07	1.37E-10	1.20E-05	7.99E-06
52	F79	60	Combination Short Haul Truck	6	0.00E+00	1.83E-06	1.35E-07	2.21E+00	5.02E-09	2.74E-03	1.32E-06	2.80E-03	3.20E-04	5.00E-05	1.13E-04	3.94E-05	4.09E-05	3.51E-04	7.39E-06	0.00E+00	7.20E-05	5.28E-04
52	F79	60	Combination Long Haul Truck	6	0.00E+00	2.52E-06	1.37E-07	2.09E+00	1.70E-08	3.29E-03	2.10E-06	2.98E-03	3.35E-04	4.85E-05	2.39E-04	4.49E-05	4.68E-05	3.35E-04	7.00E-06	0.00E+00	1.92E-04	5.62E-04
53	F80	70	Passenger Car	1518	0.00E+00	1.62E-05	1.76E-06	6.63E+01	1.15E-04	3.12E-01	3.66E-05	1.56E-03	1.15E-02	1.80E-03	3.57E-03	2.30E-03	2.36E-03	2.58E-04	3.37E-04	6.99E-08	1.21E-03	2.44E-04
53	F80	70	Passenger Truck	2542	0.00E+00	3.39E-05	3.60E-06	1.49E+02	2.18E-04	5.51E-01	7.12E-05	4.41E-03	2.06E-02	3.20E-03	6.81E-03	4.42E-03	4.53E-03	1.12E-03	7.51E-04	1.32E-07	2.28E-03	7.39E-04
53	F80	70	Single Unit Short Haul Truck	24	0.00E+00	4.21E-06	1.71E-07	3.92E+00	2.82E-06	7.11E-03	4.58E-06	1.68E-03	3.81E-04	6.99E-05	5.68E-04	1.08E-04	1.10E-04	3.99E-04	1.60E-05	6.44E-09	4.58E-04	3.14E-04
53	F80	70	Single Unit Long Haul Truck	1	0.00E+00	1.83E-07	7.38E-09	1.66E-01	1.22E-07	2.99E-04	1.99E-07	7.22E-05	1.74E-05	3.12E-06	2.48E-05	4.67E-06	4.77E-06	1.68E-05	6.77E-07	2.72E-10	2.00E-05	1.35E-05
53	F80	70	Combination Short Haul Truck	17	0.00E+00	4.31E-06	3.20E-07	5.82E+00	1.09E-08	6.22E-03	3.07E-06	6.45E-03	6.07E-04	1.01E-04	2.58E-04	9.33E-05	9.69E-05	9.25E-04	1.95E-05	0.00E+00	1.62E-04	1.22E-03
53	F80	70	Combination Long Haul Truck	15	0.00E+00	5.91E-06	3.36E-07	5.46E+00	3.70E-08	7.42E-03	4.86E-06	6.90E-03	6.32E-04	9.52E-05	5.37E-04	1.08E-04	1.12E-04	8.77E-04	1.83E-05	0.00E+00	4.25E-04	1.30E-03

Appendix F.5.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
B15	0.00E+00	5.11E-05	5.08E-06	2.18E+02	2.94E-04	8.60E-01	1.01E-04	1.57E-02	1.38E-02	2.69E-03	9.90E-03	6.06E-03	6.22E-03	3.23E-03	1.08E-03	2.03E-07	3.68E-03	2.81E-03
B16	0.00E+00	3.35E-05	3.29E-06	1.41E+02	1.90E-04	5.55E-01	6.57E-05	1.05E-02	8.91E-03	1.74E-03	6.45E-03	3.91E-03	4.01E-03	2.20E-03	7.00E-04	1.32E-07	2.44E-03	1.88E-03
B19	0.00E+00	1.77E-04	1.56E-05	6.41E+02	7.63E-04	2.30E+00	2.99E-04	9.88E-02	3.81E-02	7.54E-03	2.97E-02	1.65E-02	1.69E-02	2.04E-02	3.06E-03	5.53E-07	1.28E-02	1.82E-02
B20	0.00E+00	1.40E-04	1.08E-05	4.12E+02	3.84E-04	1.24E+00	1.92E-04	1.21E-01	2.19E-02	4.43E-03	1.93E-02	9.24E-03	9.49E-03	2.44E-02	1.84E-03	2.97E-07	9.85E-03	2.25E-02
B21	0.00E+00	1.51E-04	1.38E-05	5.69E+02	6.98E-04	2.09E+00	2.65E-04	7.81E-02	3.43E-02	6.76E-03	2.62E-02	1.49E-02	1.53E-02	1.59E-02	2.74E-03	4.96E-07	1.08E-02	1.44E-02
B22	0.00E+00	1.15E-04	8.87E-06	3.34E+02	3.01E-04	9.80E-01	1.55E-04	1.04E-01	1.75E-02	3.55E-03	1.56E-02	7.36E-03	7.57E-03	2.09E-02	1.48E-03	2.32E-07	8.08E-03	1.94E-02
B23	0.00E+00	1.54E-04	1.40E-05	5.81E+02	7.15E-04	2.14E+00	2.70E-04	7.85E-02	3.51E-02	6.91E-03	2.67E-02	1.53E-02	1.57E-02	1.60E-02	2.80E-03	5.07E-07	1.10E-02	1.44E-02
B24	0.00E+00	1.28E-04	9.78E-06	3.68E+02	3.31E-04	1.08E+00	1.71E-04	1.15E-01	1.93E-02	3.92E-03	1.73E-02	8.11E-03	8.34E-03	2.31E-02	1.63E-03	2.57E-07	8.95E-03	2.14E-02
E39	0.00E+00	2.11E-05	1.82E-06	5.89E+01	8.09E-05	2.20E-01	3.35E-05	1.14E-02	8.63E-03	1.35E-03	3.31E-03	1.80E-03	1.85E-03	1.76E-03	2.82E-04	4.98E-08	1.46E-03	2.11E-03
E40	0.00E+00	1.34E-05	1.37E-06	5.08E+01	7.96E-05	2.09E-01	2.69E-05	3.12E-03	7.76E-03	1.20E-03	2.60E-03	1.64E-03	1.68E-03	5.61E-04	2.53E-04	4.69E-08	9.24E-04	5.56E-04
E41	0.00E+00	1.19E-05	1.17E-06	4.19E+01	6.40E-05	1.70E-01	2.25E-05	3.75E-03	6.35E-03	9.87E-04	2.19E-03	1.34E-03	1.37E-03	6.28E-04	2.07E-04	3.80E-08	8.16E-04	6.81E-04
E42	0.00E+00	1.20E-05	1.22E-06	4.47E+01	6.99E-05	1.84E-01	2.38E-05	2.95E-03	6.82E-03	1.06E-03	2.30E-03	1.44E-03	1.48E-03	5.22E-04	2.23E-04	4.12E-08	8.22E-04	5.28E-04
E43	0.00E+00	7.13E-06	7.50E-07	2.83E+01	4.51E-05	1.18E-01	1.49E-05	1.20E-03	4.35E-03	6.74E-04	1.43E-03	9.19E-04	9.42E-04	2.38E-04	1.42E-04	2.65E-08	4.91E-04	2.08E-04
E44	0.00E+00	1.14E-05	1.18E-06	4.44E+01	7.04E-05	1.85E-01	2.35E-05	2.13E-03	6.80E-03	1.06E-03	2.27E-03	1.44E-03	1.48E-03	4.12E-04	2.22E-04	4.15E-08	7.92E-04	3.72E-04
E45	0.00E+00	2.49E-05	1.88E-06	6.07E+01	6.64E-05	1.95E-01	3.40E-05	1.73E-02	5.98E-03	1.02E-03	3.48E-03	1.60E-03	1.65E-03	3.06E-03	2.77E-04	4.91E-08	1.83E-03	3.23E-03
E46	0.00E+00	2.27E-05	1.52E-06	4.20E+01	3.14E-05	1.05E-01	2.49E-05	2.10E-02	3.78E-03	6.49E-04	2.60E-03	9.58E-04	9.86E-04	3.58E-03	1.76E-04	2.65E-08	1.61E-03	3.94E-03
E47	0.00E+00	2.36E-05	1.84E-06	6.12E+01	7.10E-05	2.05E-01	3.38E-05	1.51E-02	6.14E-03	1.04E-03	3.43E-03	1.66E-03	1.70E-03	2.69E-03	2.84E-04	5.12E-08	1.73E-03	2.82E-03
E48	0.00E+00	9.09E-06	7.22E-07	2.39E+01	2.75E-05	7.97E-02	1.30E-05	6.17E-03	2.40E-03	4.06E-04	1.31E-03	6.45E-04	6.63E-04	1.07E-03	1.10E-04	1.91E-08	6.43E-04	1.15E-03
E49	0.00E+00	2.27E-05	1.76E-06	5.82E+01	6.67E-05	1.93E-01	3.22E-05	1.49E-02	5.83E-03	9.88E-04	3.27E-03	1.57E-03	1.61E-03	2.64E-03	2.69E-04	4.81E-08	1.66E-03	2.78E-03
E50	0.00E+00	6.18E-06	5.56E-07	2.01E+01	2.68E-05	7.46E-02	1.04E-05	3.07E-03	2.12E-03	3.56E-04	1.02E-03	5.81E-04	5.96E-04	5.33E-04	9.69E-05	1.75E-08	4.29E-04	5.66E-04
E51	0.00E+00	2.16E-05	1.70E-06	5.68E+01	6.64E-05	1.91E-01	3.12E-05	1.38E-02	5.72E-03	9.69E-04	3.16E-03	1.55E-03	1.59E-03	2.45E-03	2.64E-04	4.75E-08	1.58E-03	2.57E-03
E52	0.00E+00	1.75E-06	1.76E-07	6.83E+00	9.99E-06	2.72E-02	3.43E-06	5.27E-04	7.45E-04	1.24E-04	3.32E-04	2.07E-04	2.12E-04	9.37E-05	3.39E-05	6.29E-09	1.20E-04	9.47E-05
E53	0.00E+00	2.56E-05	2.08E-06	7.10E+01	8.59E-05	2.45E-01	3.83E-05	1.58E-02	7.24E-03	1.22E-03	3.84E-03	1.96E-03	2.01E-03	2.76E-03	3.33E-04	5.94E-08	1.83E-03	2.93E-03
E54	0.00E+00	7.12E-06	5.71E-07	1.86E+01	2.11E-05	6.15E-02	1.00E-05	5.14E-03	1.87E-03	3.15E-04	1.00E-03	4.99E-04	5.13E-04	8.67E-04	8.57E-05	1.43E-08	4.88E-04	9.59E-04
E55	0.00E+00	2.56E-05	2.08E-06	7.10E+01	8.59E-05	2.45E-01	3.83E-05	1.58E-02	7.24E-03	1.22E-03	3.84E-03	1.96E-03	2.01E-03	2.76E-03	3.33E-04	5.94E-08	1.83E-03	2.93E-03
E56	0.00E+00	7.12E-06	5.71E-07	1.86E+01	2.11E-05	6.15E-02	1.00E-05	5.14E-03	1.87E-03	3.15E-04	1.00E-03	4.99E-04	5.13E-04	8.67E-04	8.57E-05	1.43E-08	4.88E-04	9.59E-04
E57	0.00E+00	1.55E-05	1.36E-06	4.43E+01	6.15E-05	1.67E-01	2.50E-05	8.22E-03	6.52E-03	1.02E-03	2.46E-03	1.36E-03	1.39E-03	1.26E-03	2.13E-04	3.75E-08	1.06E-03	1.52E-03
E58	0.00E+00	1.27E-05	1.22E-06	4.31E+01	6.51E-05	1.73E-01	2.34E-05	4.33E-03	6.50E-03	1.01E-03	2.29E-03	1.37E-03	1.40E-03	7.21E-04	2.13E-04	3.90E-08	8.81E-04	7.88E-04
E59	0.00E+00	1.41E-05	1.28E-06	4.65E+01	6.27E-05	1.74E-01	2.41E-05	6.70E-03	4.92E-03	8.26E-04	2.37E-03	1.35E-03	1.39E-03	1.17E-03	2.25E-04	4.08E-08	9.82E-04	1.23E-03
E60	0.00E+00	9.26E-06	9.18E-07	3.55E+01	5.17E-05	1.41E-01	1.79E-05	2.78E-03	3.86E-03	6.45E-04	1.75E-03	1.07E-03	1.10E-03	5.08E-04	1.76E-04	3.29E-08	6.46E-04	5.00E-04
E61	0.00E+00	1.41E-05	1.28E-06	4.65E+01	6.27E-05	1.74E-01	2.41E-05	6.70E-03	4.92E-03	8.26E-04	2.37E-03	1.35E-03	1.39E-03	1.17E-03	2.25E-04	4.08E-08	9.82E-04	1.23E-03
E62	0.00E+00	9.26E-06	9.18E-07	3.55E+01	5.17E-05	1.41E-01	1.79E-05	2.78E-03	3.86E-03	6.45E-04	1.75E-03	1.07E-03	1.10E-03	5.08E-04	1.76E-04	3.29E-08	6.46E-04	5.00E-04
E63	0.00E+00	5.71E-05	4.54E-06	1.36E+02	1.70E-04	4.76E-01	8.08E-05	3.77E-02	1.94E-02	3.04E-03	8.10E-03	4.01E-03	4.12E-03	5.69E-03	6.34E-04	1.09E-07	3.98E-03	7.04E-03
E64	0.00E+00	7.08E-05	5.54E-06	1.62E+02	1.95E-04	5.52E-01	9.69E-05	5.00E-02	2.28E-02	3.58E-03	9.72E-03	4.70E-03	4.83E-03	7.45E-03	7.46E-04	1.25E-07	4.89E-03	9.35E-03
E65	0.00E+00	5.96E-05	4.71E-06	1.40E+02	1.73E-04	4.86E-01	8.35E-05	4.01E-02	1.99E-02	3.12E-03	8.38E-03	4.11E-03	4.22E-03	6.03E-03	6.50E-04	1.11E-07	4.15E-03	7.48E-03
E66	0.00E+00	7.93E-05	6.09E-06	1.74E+02	2.03E-04	5.79E-01	1.05E-04	5.84E-02	2.43E-02	3.81E-03	1.06E-02	4.99E-03	5.13E-03	8.66E-03	7.93E-04	1.31E-07	5.48E-03	1.09E-02
E67	0.00E+00	9.53E-05	6.23E-06	1.74E+02	1.32E-04	4.38E-01	1.06E-04	8.40E-02	1.56E-02	2.70E-03	1.12E-02	4.00E-03	4.12E-03	1.47E-02	7.33E-04	1.20E-07	7.07E-03	1.58E-02
E68	0.00E+00	3.08E-05	2.44E-06	8.20E+01	9.65E-05	2.77E-01	4.49E-05	1.97E-02	8.28E-03	1.40E-03	4.53E-03	2.24E-03	2.30E-03	3.47E-03	3.82E-04	6.82E-08	2.23E-03	3.66E-03
E69	0.00E+00	2.48E-05	2.27E-06	7.96E+01	1.19E-04	3.15E-01	4.44E-05	8.37E-03	1.19E-02	1.86E-03	4.39E-03	2.52E-03	2.59E-03	1.46E-03	3.91E-04	7.36E-08	1.80E-03	1.53E-03
E70	0.00E+00	2.60E-05	2.14E-06	6.66E+01	8.77E-05	2.41E-01	3.89E-05	1.54E-02	9.62E-03	1.50E-03	3.88E-03	2.00E-03	2.06E-03	2.36E-03	3.15E-04	5.54E-08	1.82E-03	2.87E-03
E71	0.00E+00	2.68E-05	2.59E-06	9.37E+01	1.44E-04	3.80E-01	5.11E-05	7.22E-03	1.42E-02	2.21E-03	5.00E-03	3.00E-03	3.08E-03	1.31E-03	4.65E-04	8.73E-08	1.92E-03	1.30E-03
E72	0.00E+00	2.25E-05	2.24E-06	8.18E+01	1.27E-04	3.34E-01	4.38E-05	5.89E-03	1.24E-02	1.93E-03	4.26E-03	2.62E-03	2.69E-03	1.04E-03	4.07E-04	7.54E-08	1.56E-03	1.06E-03
E73	0.00E+00	1.41E-05	1.30E-06	4.08E+01	6.67E-05	1.74E-01	2.49E-05	5.36E-03	7.82E-03	1.17E-03	2.44E-03	1.42E-03	1.46E-03	7.99E-04	2.00E-04	3.75E-08	9.86E-04	9.85E-04
E74	0.00E+00	1.03E-05	1.02E-06	3.35E+01	5.69E-05	1.47E-01	1.98E-05	2.94E-03	6.50E-03	9.70E-04	1.92E-03	1.18E-03	1.21E-03	4.67E-04	1.66E-04	3.13E-08	7.06E-04	5.33E-04
E75	0.00E+00	5.93E-05	5.30E-06	1.85E+02	2.54E-04	6.81E-01	9.96E-05	2.79E-02	2.66E-02	4.17E-03	9.80E-03	5.52E-03	5.67E-03	4.41E-03	9.00E-04	1.60E-07	4.13E-03	5.14E-03
E76	0.00E+00	3.79E-05	3.57E-06	1.32E+02	1.89E-04	5.00E-01	6.91E-05	1.33E-02	1.91E-02	2.99E-03	6.76E-03	3.99E-03	4.09E-03	2.24E-03	6.48E-04	1.18E-07	2.67E-03	2.43E-03
E77	0.00E+00	6.02E-05	5.40E-06	1.89E+02	2.59E-04	6.94E-01	1.01E-04	2.83E-02	2.71E-02	4.25E-03	9.96E-03	5.63E-03	5.77E-03	4.47E-03	9.17E-04	1.63E-07	4.18E-03	5.22E-03
E78	0.00E+00	4.12E-05	3.88E-06	1.43E+02	2.05E-04	5.41E-01	7.48E-05	1.48E-02	2.07E-02	3.24E-03	7.32E-03	4.32E-03	4.43E-03	2.47E-03	7.02E-04	1.27E-07	2.88E-03	2.71E-03
E79	0.00E+00	5.25E-05	4.89E-06	1.79E+02	2.57E-04	6.78E-01	9.47E-05	1.87E-02	2.60E-02	4.07E-03	9.31E-03	5.43E-03	5.57E-03	3.16E-03	8.81E-04	1.61E-07	3.74E-03	3.41E-03
E80	0.00E+00	4.40E-05	3.96E-06	1.40E+02	1.95E-04	5.19E-01	7.52E-05	1.90E-02	2.02E-02	3.16E-03	7.42E-03	4.20E-03	4.31E-03	3.08E-03	6.83E-04	1.23E-07	3.11E-03	3.50E-03
E83	0.00E+00	1.41E-05	1.32E-06	4.57E+01	6.74E-05	1.80E-01	2.51E-05	5.69E-03	6.84E-03	1.06E-03	2.45E-03	1.44E-03	1.47E-03	9.15E-04	2.23E-04	4.05E-08	9.78E-04	1.04E-03
E84	0.00E+00	1.18E-05	1.17E-06	4.22E+01	6.47E-05	1.71E-01	2.26E-05	3.70E-03	6.41E-03	9.95E-04	2.19E-03	1.35E-03	1.38E-03	6.14E-04	2.09E-04	3.81E-08	8.05E-04	6.70E-04
E85	0.00E+00	9.42E-05	8.18E-06	2.44E+02	3.81E-04	1.01E+00	1.54E-04	4.51E-02	4.63E-02	6.93E-03	1.53E-02	8.36E-03	8.58E-03	6.42E-03	1.18E-03	2.18E-07	6.69E-03	8.35E-03
E86	0.00E+00	1.07E-04	8.64E-06	2.41E+02	3.49E-04	9.41E-01	1.58E-04	6.41E-02	4.49E-02	6.74E-03	1.59E-02	8.03E-03	8.24E-03	8.73E-03	1.14E-03	2.05E-07	7.62E-03	1.19E-02
E87	0.00E+00	1.12E-04	8.69E-06	2.32E+02	3.19E-04	8.71E-01	1.57E-04	7.44E-02	4.27E-02	6.41E-03	1.59E-02	7.59E-03	7.79E-03	1.00E-02	1.08E-03	1.91E-07	8.07E-03	1.39E-02
E88	0.00E+00	9.74E-05	8.37E-06	2.47E+02	3.82E-04	1.01E+00	1.57E-04	4.87E-02	4.67E-02	7.00E-03	1.56E-02	8.43E-03	8.65E-03	6.87E-03	1.19E-03	2.19E-07	6.92E-03	9.04E-03
E89	0.00E+00	8.58E-06	8.25E-07	2.68E+01	4.52E-05	1.17E-01	1.61E-05	2.43E-03	5.16E-03	7.72E-04	1.58E-03	9.45E-04	9.69E-04	3.97E-04	1.32E-04	2.53E-08	6.06E-04	4.42E-04
E90	0.00E+00	6.38E-06	6.21E-07	2.03E+01	3.45E-05	8.90E-02	1.22E-05	1.69E-03	3.92E-03	5.86E-04	1.19E-03	7.18E-04	7.37E-04	2.81E-04	1.01E-04	1.92E-08	4.50E-04	3.06E-04
E91	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.69E-07	2.48E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.03E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E92	0.00E+00	1.48E-07	1.58E-08	5.45E-01	9.69E-07	2.48E-03	3.15E-07	1.58E-05	1.07E-04	1.59E-05	3.03E-05	1.96E-05	2.01E-05	3.77E-06	2.74E-06	5.29E-10	1.01E-05	2.63E-06
E93	0.00E+00	1.08E-05	1.04E-06	3.35E+01	5.64E-05	1.46E-01	2.02E-05	3.18E-03	6.46E-03	9.65E-04	1.98E-03	1.18E-03	1.21E-03	5.14E-04	1.65E-04	3.16E-08	7.68E-04	5.79E-04
E94	0.00E+00	1.01E-05	9.90E-07	3.27E+01	5.63E-05	1.45E-01	1.96E-05	2.22E-03	6.34E-03	9.47E-04	1.92E-03	1.17E-03	1.19E-03	3.99E-04	1.63E-04	3.16E-08	7.23E-04	3.97E-04
E95	0.00E+00	5.12E-05	4.15E-06	1.41E+02	1.63E-04	4.67E-01	7.47E-05	3.41E-02	1.49E-02	2.48E-03	7.47E-03	3.78E-03	3.88E-03	5.86E-03	6.60E-04	1.12E-07	3.59E-03	6.34E-03
E96	0.00E+00	3.20E-05	2.69E-06	9.45E+01	1.14E-04	3.23E-01	4.91E-05	1.96E-02	1.01E-02	1.68E-03	4.88E-03	2.58E-03	2.65E-03	3.37E-03	4.47E-04	7.65E-08	2.23E-03	3.64E-03
E97	0.00E+00	5.12E-05	4.15E-06	1.41E+02	1.63E-04	4.67E-01	7.47E-05	3.41E-02	1.49E-02	2.48E-03	7.47E-03	3.78E-03	3.88E-03	5.86E-03	6.60E-04	1.12E-07	3.59E-03	6.34E-03
E98	0.00E+00	3.20E-05	2.69E-06	9.45E+01	1.14E-04	3.23E-01	4.91E-05	1.96E-02	1.01E-02	1.68E-03	4.88E-03	2.58E-03	2.65E-03	3.37E-03	4.47E-04	7.65E-08	2.23E-03	3.64E-03
F01	0.00E+00	3.01E-05	2.53E-06	7.34E+01	1.11E-04	2.95E-01	4.70E-05	1.62E-02	1.38E-02	2.07E-03	4.68E-03	2.48E-03	2.54E-03	2.25E-03	3.50E-04	6.39E-08	2.13E-03	3.02E-03
F02	0.00E+00	1.76E-05	1.67E-06	5.34E+01	8.86E-05	2.30E-01	3.21E-05	6.12E-03	1.03E-02	1.54E-03	3.13E-03	1.87E-03	1.92E-03	9.25E-04	2.62E-04	4.92E-08	1.21E-03	1.12E-03
F03	0.00E+00	5.35E-06	4.40E-07	1.52E+01	1.88E-05	5.33E-02	8.21E-06	3.09E-03	1.56E-03	2.63E-04	8.24E-04	4.25E-04	4.36E-04	5.50E-04	7.18E-05	1.31E-08	3.88E-04	5.73E-04
F04	0.00E+00	7.16E-07	7.69E-08	3.12E+00	4.80E-06	1.29E-02	1.55E-06	8.74E-05	3.46E-04	5.77E-05	1.50E-04	9.68E-05	9.93E-05	1.91E-05	1.58E-05	3.02E-09	5.03E-05	1.43E-05
F05	0.00E+00	1.76E-05	1.38E-06	3.72E+01	5.12E-05	1.40E-01	2.47E-05	1.19E-02	6.85E-03	1.03E-03	2.49E-03	1.21E-03	1.25E-03	1.58E-03	1.73E-04	3.01E-08	1.24E-03	2.22E-03
F06	0.00E+00	2.11E-05	1.84E-06	5.47E+01	8.49E-05	2.25E-01	3.44E-05	1.04E-02	1.03E-02	1.55E-03	3.40E-03	1.87E-03	1.91E-03	1.47E-03	2.63E-04	4.84E-08	1.49E-03	1.93E-03
F07	0.00E+00	3.88E-05	3.05E-06	8.28E+01	1.16E-04	3.15E-01	5.53E-05	2.49E-02	1.53E-02	2.29E-03	5.58E-03	2.72E-03	2.79E-03	3.37E-03	3.86E-04	6.88E-08	2.78E-03	4.66E-03
F08	0.00E+00	3.34E-05	2.77E-06	7.94E+01	1.19E-04	3.17E-01	5.14E-05	1.82E-02	1.49E-02	2.23E-03	5.14E-03	2.68E-03	2.75E-03	2.54E-03	3.78E-04	6.93E-08	2.40E-03	3.39E-03
F09	0.00E+00	7.48E-06	7.07E-07	2.65E+01	3.73E-05	1.02E-01	1.36E-05	2.91E-03	2.85E-03	4.77E-04	1.33E-03	7.87E-04	8.07E-04	5.21E-04	1.30E-04	2.41E-08	5.23E-04	5.32E-04
F10	0.00E+00	3.41E-06	3.54E-07	1.40E+01	2.11E-05	5.70E-02	7.01E-06	7.29E-04	1.54E-03	2.58E-04	6.77E-04	4.30E-04	4.41E-04	1.38E-04	7.03E-05	1.33E-08	2.36E-04	1.28E-04
F13	0.00E+00	1.28E-06	1.05E-07	3.55E+00	4.26E-06	1.22E-02	1.90E-06	8.23E-04	3.62E-04	6.11E-05	1.89E-04	9.77E-05	1.00E-04	1.41E-04	1.66E-05	2.89E-09	8.91E-05	1.53E-04
F14	0.00E+00	4.58E-07	3.79E-08	1.21E+00	1.34E-06	3.95E-03	6.33E-07	3.69E-04	1.22E-04	2.04E-05	6.20E-05	3.20E-05	3.29E-05	5.93E-05	5.52E-06	8.41E-10	2.90E-05	6.89E-05
F15	0.00E+00	2.88E-05	2.35E-06	7.20E+01	9.25E-05	2.57E-01	4.20E-05	1.83E-02	1.03E-02	1.62E-03	4.18E-03	2.14E-03	2.20E-03	2.76E-03	3.38E-04	5.80E-08	1.98E-03	3.42E-03
F16	0.00E+00	2.77E-05	2.44E-06	8.06E+01	1.13E-04	3.06E-01	4.54E-05	1.38E-02	1.19E-02	1.85E-03	4.48E-03	2.48E-03	2.55E-03	2.16E-03	3.88E-04	6.94E-08	1.93E-03	2.56E-03
F17	0.00E+00	2.48E-05	1.97E-06	5.83E+01	7.17E-05	2.02E-01	3.47E-05	1.71E-02	8.28E-03	1.30E-03	3.47E-03	1.71E-03	1.75E-03	2.55E-03	2.70E-04	4.56E-08	1.71E-03	3.19E-03
F18	0.00E+00	2.13E-05	1.81E-06	5.80E+01	7.87E-05	2.15E-01	3.32E-05	1.19E-02	8.46E-03	1.32E-03	3.29E-03	1.76E-03	1.81E-03	1.82E-03	2.76E-04	4.87E-08	1.48E-03	2.20E-03
F19	0.00E+00	1.34E-05	1.14E-06	3.71E+01	5.11E-05	1.39E-01	2.13E-05	6.99E-03	5.42E-03	8.47E-04	2.12E-03	1.14E-03	1.17E-03	1.10E-03	1.78E-04	3.19E-08	9.51E-04	1.30E-03
F20	0.00E+00	1.38E-05	1.45E-06	5.51E+01	8.83E-05	2.31E-01	2.90E-05	2.02E-03	8.47E-03	1.31E-03	2.80E-03	1.79E-03	1.84E-03	4.28E-04	2.77E-04	5.20E-08	9.61E-04	3.45E-04
F21	0.00E+00	2.56E-06	2.74E-07	1.05E+01	1.70E-05	4.43E-02	5.50E-06	2.96E-04	1.62E-03	2.51E-04	5.29E-04	3.43E-04	3.52E-04	6.82E-05	5.29E-05	9.95E-09	1.78E-04	4.87E-05
F22	0.00E+00	6.26E-06	6.70E-07	2.57E+01	4.15E-05	1.08E-01	1.34E-05	7.23E-04	3.96E-03	6.14E-04	1.29E-03	8.39E-04	8.60E-04	1.67E-04	1.29E-04	2.43E-08	4.34E-04	1.19E-04
F23	0.00E+00	3.72E-06	3.20E-07	1.03E+01	1.41E-05	3.84E-02	5.85E-06	2.05E-03	1.51E-03	2.35E-04	5.78E-04	3.14E-04	3.22E-04	3.14E-04	4.92E-05	8.65E-09	2.56E-04	3.80E-04
F24	0.00E+00	4.81E-06	4.26E-07	1.42E+01	2.03E-05	5.46E-02	8.02E-06	2.23E-03	2.10E-03	3.28E-04	7.92E-04	4.42E-04	4.53E-04	3.55E-04	6.89E-05	1.25E-08	3.39E-04	4.11E-04
F25	0.00E+00	2.16E-05	1.70E-06	4.57E+01	6.28E-05	1.72E-01	3.03E-05	1.46E-02	8.42E-03	1.26E-03	3.05E-03	1.49E-03	1.53E-03	1.94E-03	2.12E-04	3.69E-08	1.52E-03	2.73E-03
F26	0.00E+00	2.16E-05	1.85E-06	5.40E+01	8.23E-05	2.19E-01	3.43E-05	1.14E-02	1.02E-02	1.52E-03	3.40E-03	1.83E-03	1.88E-03	1.59E-03	2.58E-04	4.71E-08	1.52E-03	2.12E-03
F27	0.00E+00	1.22E-04	8.50E-06	2.05E+02	2.44E-04	6.91E-01	1.50E-04	9.21E-02	3.65E-02	5.51E-03	1.56E-02	6.42E-03	6.59E-03	1.23E-02	9.15E-04	1.59E-07	9.04E-03	1.73E-02
F28	0.00E+00	1.06E-04	7.55E-06	1.88E+02	2.34E-04	6.51E-01	1.36E-04	7.63E-02	3.36E-02	5.07E-03	1.41E-02	5.96E-03	6.12E-03	1.03E-02	8.47E-04	1.51E-07	7.94E-03	1.43E-02
F29	0.00E+00	1.20E-05	1.13E-06	3.63E+01	6.05E-05	1.57E-01	2.21E-05	3.81E-03	6.97E-03	1.04E-03	2.16E-03	1.27E-03	1.31E-03	6.03E-04	1.79E-04	3.41E-08	8.55E-04	6.96E-04
F30	0.00E+00	2.49E-05	1.99E-06	5.54E+01	8.02E-05	2.15E-01	3.68E-05	1.45E-02	1.03E-02	1.54E-03	3.71E-03	1.85E-03	1.90E-03

Appendix F.5.9: MOVES Emission Factors for PM Peak Traffic by Roadway Segment, 2051 No Build, Section 5

RWDI Project#: 1301992

Highway 413
GTA West

	Total Emission Factor (g/s-mile)																	
Line Area Source ID	BUT	ACT	ACR	CO2	BEN	CO	FORM	NOx	PM10	PM25	THC	VOC	NMHC	N2O	SO2	BAP	CH4	NO2
F74	0.00E+00	3.81E-05	2.52E-06	6.54E+01	5.98E-05	1.80E-01	4.38E-05	3.04E-02	8.37E-03	1.34E-03	4.62E-03	1.72E-03	1.77E-03	4.64E-03	2.84E-04	4.86E-08	2.85E-03	5.70E-03
F75	0.00E+00	3.50E-05	2.31E-06	5.70E+01	6.24E-05	1.75E-01	4.22E-05	2.52E-02	9.72E-03	1.48E-03	4.48E-03	1.70E-03	1.74E-03	3.47E-03	2.54E-04	4.50E-08	2.74E-03	4.73E-03
F76	0.00E+00	4.01E-06	4.26E-07	1.46E+01	2.55E-05	6.35E-02	8.37E-06	3.91E-04	4.22E-03	5.88E-04	7.99E-04	5.20E-04	5.33E-04	1.16E-04	7.31E-05	1.16E-08	2.67E-04	6.63E-05
F78	0.00E+00	2.34E-05	2.06E-06	5.95E+01	9.62E-05	2.44E-01	3.85E-05	9.61E-03	1.68E-02	2.36E-03	3.79E-03	2.11E-03	2.16E-03	1.23E-03	2.89E-04	4.58E-08	1.63E-03	1.78E-03
F79	0.00E+00	3.06E-05	2.90E-06	1.01E+02	1.56E-04	4.03E-01	5.65E-05	9.43E-03	1.87E-02	2.79E-03	5.53E-03	3.28E-03	3.36E-03	1.53E-03	5.00E-04	8.90E-08	2.17E-03	1.72E-03
F80	0.00E+00	6.47E-05	6.20E-06	2.31E+02	3.36E-04	8.84E-01	1.20E-04	2.11E-02	3.37E-02	5.27E-03	1.18E-02	7.04E-03	7.22E-03	3.60E-03	1.14E-03	2.08E-07	4.55E-03	3.83E-03

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Frequency Analysis of Exceedance of Standards

Appendix G.1.1: 2041 No-Build – 1 Hour NO_2

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_001	Place of Worship	597312	4827927	1.5	107	130	83	763	1.7%
RE110000_002	Residential	596637	4826254	1.5	80	121	83	137	0.3%
RE110000_003	Residential	596701	4826610	1.5	85	126	83	272	0.6%
RE110000_004	Residential	597143	4827822	1.5	109	131	83	699	1.6%
RE110000_005	Residential	597083	4827844	1.5	112	137	83	1066	2.4%
RE110000_006	Residential	596871	4828160	1.5	106	144	83	557	1.3%
RE110000_007	Residential	597140	4826176	1.5	83	124	83	155	0.4%
RE110000_008	Residential	597148	4826187	1.5	82	123	83	134	0.3%
RE110000_009	Residential	597156	4826199	1.5	82	122	83	120	0.3%
RE110000_010	Residential	597164	4826210	1.5	81	122	83	113	0.3%
RE110000_011	Residential	597171	4826221	1.5	80	121	83	102	0.2%
RE110000_020	Residential	597181	4826148	1.5	83	123	83	136	0.3%
RE110000_021	Residential	597187	4826154	1.5	82	123	83	129	0.3%
RE110000_022	Residential	597195	4826162	1.5	81	122	83	117	0.3%
RE110000_023	Residential	597200	4826170	1.5	81	122	83	113	0.3%
RE110000_024	Residential	597206	4826177	1.5	81	121	83	105	0.2%
RE110000_025	Residential	597212	4826186	1.5	80	121	83	95	0.2%
RE110000_028	Residential	597203	4826119	1.5	83	124	83	142	0.3%
RE110000_029	Residential	597210	4826129	1.5	82	123	83	126	0.3%
RE110000_030	Residential	597216	4826140	1.5	81	122	83	113	0.3%
RE110000_031	Residential	597223	4826147	1.5	81	122	83	107	0.2%
RE110000_032	Residential	597230	4826156	1.5	80	121	83	94	0.2%
RE110000_045	Residential	597236	4826078	1.5	83	124	83	146	0.3%
RE110000_046	Residential	597243	4826087	1.5	82	123	83	130	0.3%
RE110000_047	Residential	597251	4826096	1.5	82	122	83	117	0.3%
RE110000_048	Residential	597257	4826104	1.5	81	122	83	106	0.2%
RE110000_049	Residential	597263	4826113	1.5	81	122	83	102	0.2%
RE110000_050	Residential	597255	4826067	1.5	83	124	83	137	0.3%
RE110000_051	Residential	597266	4826057	1.5	83	124	83	136	0.3%
RE110000_052	Residential	597275	4826046	1.5	83	124	83	137	0.3%
RE110000_053	Residential	597284	4826036	1.5	83	124	83	138	0.3%
RE110000_054	Residential	597293	4826025	1.5	83	124	83	140	0.3%
RE110000_055	Residential	597304	4826014	1.5	83	124	83	140	0.3%
RE110000_056	Residential	597325	4826041	1.5	81	122	83	103	0.2%
RE110000_057	Residential	597314	4826051	1.5	81	122	83	104	0.2%
RE110000_058	Residential	597304	4826061	1.5	81	122	83	105	0.2%
RE110000_059	Residential	597295	4826072	1.5	81	122	83	103	0.2%
RE110000_060	Residential	597285	4826082	1.5	81	122	83	104	0.2%
RE110000_061	Residential	597323	4825965	1.5	87	127	83	190	0.4%
RE110000_062	Residential	597330	4825974	1.5	84	125	83	155	0.4%
RE110000_063	Residential	597335	4825983	1.5	83	124	83	138	0.3%
RE110000_064	Residential	597342	4825990	1.5	82	123	83	121	0.3%
RE110000_065	Residential	597350	4826000	1.5	81	122	83	110	0.3%
RE110000_066	Residential	597357	4826009	1.5	81	122	83	101	0.2%
RE110000_067	Residential	597368	4826018	1.5	80	121	83	93	0.2%
RE110000_069	Residential	597351	4825947	1.5	85	126	83	171	0.4%
RE110000_070	Residential	597359	4825957	1.5	83	124	83	137	0.3%
RE110000_071	Residential	597366	4825967	1.5	82	123	83	118	0.3%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_072	Residential	597374	4825977	1.5	81	122	83	111	0.3%
RE110000_073	Residential	597383	4825986	1.5	81	121	83	99	0.2%
RE110000_112	Residential	597394	4825910	1.5	84	125	83	156	0.4%
RE110000_113	Residential	597401	4825919	1.5	83	124	83	135	0.3%
RE110000_114	Residential	597409	4825928	1.5	82	123	83	115	0.3%
RE110000_115	Residential	597416	4825939	1.5	81	122	83	107	0.2%
RE110000_123	Residential	597413	4825882	1.5	86	126	83	176	0.4%
RE110000_124	Residential	597421	4825892	1.5	83	124	83	146	0.3%
RE110000_125	Residential	597432	4825901	1.5	82	123	83	117	0.3%
RE110000_132	Residential	597461	4825854	1.5	83	124	83	142	0.3%
RE110000_133	Residential	597471	4825865	1.5	82	123	83	115	0.3%
RE110000_139	Residential	597482	4825833	1.5	83	124	83	142	0.3%
RE110000_140	Residential	597492	4825842	1.5	82	122	83	116	0.3%
RE110000_145	Residential	597514	4825784	1.5	85	126	83	174	0.4%
RE110000_146	Residential	597523	4825794	1.5	83	124	83	141	0.3%
RE110000_147	Residential	597531	4825806	1.5	81	122	83	112	0.3%
RE110000_149	Residential	597534	4825759	1.5	86	126	83	181	0.4%
RE110000_150	Residential	597542	4825770	1.5	83	124	83	145	0.3%
RE110000_151	Residential	597549	4825779	1.5	82	123	83	119	0.3%
RE110000_165	Residential	597586	4825745	1.5	82	123	83	114	0.3%
RE110000_167	Residential	597648	4825682	1.5	82	123	83	114	0.3%
RE110000_173	Residential	597632	4825663	1.5	85	126	83	180	0.4%
RE110000_177	Residential	597655	4825690	1.5	81	122	83	98	0.2%
RE110000_178	Residential	597642	4825674	1.5	83	124	83	136	0.3%
RE110000_189	Residential	597578	4825734	1.5	83	124	83	144	0.3%
RE110000_190	Residential	597605	4825708	1.5	83	124	83	140	0.3%
RE110000_191	Residential	597611	4825719	1.5	82	123	83	115	0.3%
RE110000_239	Residential	598068	4825317	1.5	82	123	83	132	0.3%
RE110000_240	Residential	598051	4825327	1.5	83	123	83	162	0.4%
RE110000_241	Residential	598046	4825287	1.5	88	126	83	141	0.3%
RE110000_242	Residential	598058	4825288	1.5	85	125	83	132	0.3%
RE110000_243	Residential	598062	4825320	1.5	82	123	83	142	0.3%
RE110000_244	Residential	598082	4825288	1.5	82	123	83	112	0.3%
RE110000_245	Residential	598057	4825323	1.5	82	123	83	148	0.3%
RE110000_246	Residential	598051	4825288	1.5	86	125	83	136	0.3%
RE110000_247	Residential	598072	4825292	1.5	83	123	83	117	0.3%
RE110000_248	Residential	598076	4825290	1.5	83	123	83	114	0.3%
RE110000_249	Residential	598040	4825285	1.5	91	126	83	150	0.3%
RE110000_253	Residential	597743	4825607	1.5	81	121	83	96	0.2%
RE110000_254	Residential	597795	4825533	1.5	82	123	83	119	0.3%
RE110000_255	Residential	597806	4825547	1.5	80	121	83	96	0.2%
RE110000_256	Residential	597835	4825499	1.5	82	122	83	114	0.3%
RE110000_257	Residential	597843	4825509	1.5	80	121	83	100	0.2%
RE110000_265	Residential	597773	4825557	1.5	82	123	83	115	0.3%
RE110000_267	Residential	597726	4825585	1.5	84	124	83	140	0.3%
RE110000_276	Residential	597839	4825504	1.5	81	122	83	105	0.2%
RE110000_277	Residential	597778	4825564	1.5	81	122	83	102	0.2%
RE110000_278	Residential	597784	4825572	1.5	80	121	83	94	0.2%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_279	Residential	597739	4825601	1.5	81	122	83	105	0.2%
RE110000_280	Residential	597719	4825577	1.5	85	126	83	181	0.4%
RE110000_281	Residential	597767	4825552	1.5	83	124	83	132	0.3%
RE110000_292	Residential	597793	4825524	1.5	83	124	83	134	0.3%
RE110000_293	Residential	597734	4825596	1.5	82	123	83	114	0.3%
RE110000_294	Residential	597800	4825540	1.5	81	122	83	106	0.2%
RE110000_305	Residential	597830	4825493	1.5	82	123	83	126	0.3%
RE110000_309	Residential	597730	4825591	1.5	83	123	83	122	0.3%
RE110000_310	Residential	597826	4825487	1.5	83	124	83	144	0.3%
RE110000_316	Residential	597823	4825480	1.5	85	126	83	174	0.4%
RE110000_325	Residential	597672	4825659	1.5	82	122	83	115	0.3%
RE110000_329	Residential	597711	4825620	1.5	82	122	83	114	0.3%
RE110000_331	Residential	597656	4825641	1.5	85	126	83	176	0.4%
RE110000_332	Residential	597705	4825613	1.5	83	124	83	132	0.3%
RE110000_333	Residential	597717	4825628	1.5	81	122	83	99	0.2%
RE110000_342	Residential	597701	4825604	1.5	84	125	83	160	0.4%
RE110000_344	Residential	597666	4825651	1.5	83	124	83	134	0.3%
RE110000_345	Residential	597678	4825667	1.5	81	122	83	97	0.2%
RE110000_353	Residential	597853	4825468	1.5	83	123	83	128	0.3%
RE110000_355	Residential	597858	4825475	1.5	82	122	83	113	0.3%
RE110000_378	Residential	597899	4825411	1.5	84	125	83	167	0.4%
RE110000_387	Residential	597845	4825458	1.5	85	126	83	175	0.4%
RE110000_390	Residential	597927	4825384	1.5	84	125	83	181	0.4%
RE110000_394	Residential	597904	4825418	1.5	83	124	83	138	0.3%
RE110000_397	Residential	597863	4825480	1.5	81	122	83	108	0.2%
RE110000_401	Residential	596788	4826527	1.5	84	125	83	229	0.5%
RE110200_001	Residential	595761	4827508	1.5	107	132	83	301	0.7%
RE110300_001	Residential	595985	4827782	1.5	92	126	83	239	0.5%
RE110300_002	Residential	596018	4827822	1.5	89	126	83	228	0.5%
RE110300_003	Residential	596052	4827847	1.5	86	127	83	236	0.5%
RE110300_004	Residential	596075	4827863	1.5	87	127	83	253	0.6%
RE110400_001	Residential	596097	4827888	1.5	89	127	83	268	0.6%
RE110400_002	Residential	596114	4827911	1.5	91	128	83	280	0.6%
RE110500_001	Residential	596071	4827936	1.5	84	125	83	203	0.5%
RE110500_002	Residential	596046	4827958	1.5	82	123	83	179	0.4%
RE110600_001	Residential	596004	4827990	1.5	82	123	83	164	0.4%
RE110600_002	Residential	596030	4827975	1.5	82	123	83	172	0.4%
RE110700_001	Residential	595981	4828012	1.5	82	123	83	159	0.4%
RE110700_002	Residential	595928	4827973	1.5	81	121	83	136	0.3%
RE110800_001	Residential	595956	4828058	1.5	82	123	83	148	0.3%
RE110800_002	Residential	595933	4828081	1.5	82	123	83	133	0.3%
RE110900_001	Residential	595910	4828106	1.5	82	122	83	123	0.3%
RE110900_002	Residential	595878	4828134	1.5	81	122	83	115	0.3%
RE111100_001	Residential	595788	4828209	1.5	79	120	83	85	0.2%
RE111200_001	Residential	595754	4828244	1.5	79	119	83	80	0.2%
RE111200_002	Residential	595736	4828278	1.5	79	120	83	79	0.2%
RE111300_001	Residential	595708	4828299	1.5	79	120	83	73	0.2%
RE111300_002	Residential	595689	4828310	1.5	78	119	83	70	0.2%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE111300_003	Residential	595667	4828334	1.5	79	119	83	68	0.2%
RE111400_001	Residential	595630	4828371	1.5	78	119	83	63	0.1%
RE111400_002	Residential	595610	4828393	1.5	78	119	83	60	0.1%
RE111500_001	Residential	595569	4828431	1.5	78	119	83	55	0.1%
RE111500_002	Residential	595514	4828453	1.5	76	117	83	44	0.1%
RE111600_001	Residential	595474	4828490	1.5	76	116	83	41	0.1%
RE111600_002	Residential	595430	4828529	1.5	75	116	83	37	0.1%
RE111700_001	Residential	595514	4828604	1.5	80	120	83	48	0.1%
RE111700_002	Residential	595359	4828639	1.5	72	113	83	36	0.1%
RE111800_001	Residential	596558	4828460	1.5	93	128	83	234	0.5%
RE111800_002	Residential	595492	4828626	1.5	80	120	83	46	0.1%
RE111800_003	Residential	595467	4828642	1.5	80	121	83	48	0.1%
RE111800_004	Residential	595445	4828664	1.5	80	121	83	47	0.1%
RE111800_005	Residential	595329	4828673	1.5	72	112	83	36	0.1%
RE111800_006	Residential	595306	4828700	1.5	72	113	83	34	0.1%
RE111800_007	Residential	595285	4828720	1.5	70	111	83	32	0.1%
RE111800_008	Residential	595266	4828745	1.5	70	112	83	32	0.1%
RE112100_001	Residential	596836	4828712	1.5	85	125	83	119	0.3%
RE112200_001	Residential	596905	4828763	1.5	85	126	83	91	0.2%
RE113100_001	Residential	595706	4829937	1.5	47	91	83	3	0.0%
RE113200_001	Residential	595933	4829995	1.5	44	88	83	4	0.0%
RE113200_002	Residential	595904	4830024	1.5	44	88	83	4	0.0%
RE113300_001	Residential	595753	4830146	1.5	44	88	83	2	0.0%
RE210700_001	Residential	595367	4831551	1.5	36	80	83	0	-
RE210700_002	Residential	595325	4831537	1.5	37	81	83	0	-
RE210700_003	Residential	595504	4831618	1.5	35	79	83	0	-
RE210900_001	Residential	595286	4831670	1.5	36	80	83	0	-
RE210900_003	Residential	595217	4831730	1.5	42	86	83	2	0.0%
RE210900_004	Residential	595349	4831732	1.5	35	79	83	0	-
RE210900_005	Residential	595339	4831698	1.5	35	79	83	0	-
RE210900_006	Residential	595400	4831812	1.5	35	79	83	0	-
RE210900_007	Residential	595436	4831835	1.5	35	79	83	0	-
RE210900_008	Residential	595454	4831855	1.5	34	78	83	0	-
RE211000_001	Residential	595242	4831783	1.5	41	85	83	2	0.0%
RE211000_002	Residential	595292	4831787	1.5	42	86	83	2	0.0%
RE211000_003	Residential	595341	4831842	1.5	42	86	83	2	0.0%
RE211000_004	Residential	595365	4831888	1.5	39	83	83	0	-
RE211000_005	Residential	595239	4831847	1.5	40	84	83	1	0.0%
RE211000_006	Residential	595408	4831938	1.5	40	84	83	1	0.0%
RE211000_007	Residential	595530	4831956	1.5	33	77	83	0	-
RE211000_008	Residential	595567	4832001	1.5	32	76	83	0	-
RE211000_009	Residential	595596	4832028	1.5	31	75	83	0	-
RE211000_010	Residential	595617	4832054	1.5	31	75	83	0	-
RE211100_001	Residential	595423	4831974	1.5	40	84	83	1	0.0%
RE211100_002	Residential	595342	4832015	1.5	36	80	83	0	-
RE211100_003	Residential	595552	4832099	1.5	40	84	83	1	0.0%
RE211100_004	Residential	595637	4832091	1.5	30	74	83	0	-
RE211100_005	Residential	595675	4832137	1.5	30	74	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE211100_006	Residential	595734	4832214	1.5	29	73	83	0	-
RE211100_009	Residential	595514	4832061	1.5	40	84	83	1	0.0%
RE211200_001	Residential	595380	4832103	1.5	37	81	83	0	-
RE211200_002	Residential	595424	4832139	1.5	37	81	83	0	-
RE211200_003	Residential	595641	4832218	1.5	37	81	83	0	-
RE211200_004	Residential	595704	4832286	1.5	37	81	83	0	-
RE211200_005	Residential	595584	4832173	1.5	38	82	83	0	-
RE211400_001	Residential	594922	4832082	1.5	34	78	83	0	-
RE211500_002	Residential	595129	4832290	1.5	34	78	83	0	-
RE211500_003	Residential	594950	4832221	1.5	34	78	83	0	-
RE211500_004	Residential	595156	4832250	1.5	34	78	83	0	-
RE211900_001	Residential	594800	4832552	1.5	30	74	83	0	-
RE212600_001	Residential	594824	4833279	1.5	31	75	83	0	-
RE212700_001	Residential	594758	4833331	1.5	32	76	83	0	-
RE212700_002	Residential	594605	4833322	1.5	26	70	83	0	-
RE212800_001	Residential	594672	4833390	1.5	38	82	83	0	-
RE212800_002	Residential	594620	4833440	1.5	41	85	83	1	0.0%
RE212900_001	Residential	594599	4833473	1.5	44	88	83	1	0.0%
RE213000_001	Residential	594589	4833575	1.5	31	75	83	0	-
RE214400_001	Recreation	594333	4835333	1.5	44	88	83	2	0.0%
RE214600_002	Residential	593842	4835174	1.5	36	80	83	0	-
RE214600_003	Residential	593906	4835196	1.5	38	82	83	0	-
RE214600_004	Residential	593934	4835222	1.5	40	84	83	1	0.0%
RE214600_005	Residential	593948	4835237	1.5	41	85	83	2	0.0%
RE214600_006	Residential	593954	4835244	1.5	42	86	83	2	0.0%
RE214600_007	Residential	593879	4835253	1.5	35	79	83	0	-
RE214600_008	Residential	593895	4835241	1.5	36	80	83	0	-
RE214600_009	Residential	593872	4835220	1.5	35	80	83	0	-
RE214600_010	Residential	593861	4835213	1.5	35	80	83	0	-
RE214600_011	Residential	593855	4835236	1.5	34	79	83	0	-
RE214600_012	Residential	593826	4835204	1.5	34	79	83	0	-
RE214600_013	Residential	593848	4835159	1.5	37	81	83	0	-
RE214600_014	Residential	593881	4835177	1.5	37	82	83	0	-
RE214600_015	Residential	593892	4835186	1.5	37	82	83	0	-
RE214600_016	Residential	593917	4835206	1.5	39	83	83	0	-
RE214600_017	Residential	593925	4835215	1.5	39	83	83	1	0.0%
RE214600_018	Residential	593940	4835231	1.5	40	84	83	1	0.0%
RE214600_019	Residential	593960	4835250	1.5	42	86	83	2	0.0%
RE214600_020	Residential	593967	4835258	1.5	43	87	83	3	0.0%
RE214600_021	Residential	593978	4835265	1.5	44	88	83	3	0.0%
RE214600_022	Residential	593885	4835231	1.5	36	80	83	0	-
RE214600_023	Residential	593914	4835274	1.5	37	81	83	0	-
RE214600_024	Residential	593927	4835288	1.5	38	82	83	0	-
RE214600_025	Residential	593932	4835295	1.5	38	82	83	0	-
RE214600_026	Residential	593936	4835298	1.5	38	82	83	0	-
RE214600_027	Residential	593941	4835304	1.5	39	83	83	0	-
RE214600_028	Residential	593945	4835308	1.5	39	83	83	0	-
RE214600_029	Residential	593948	4835312	1.5	39	83	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_030	Residential	593953	4835317	1.5	39	83	83	1	0.0%
RE214600_031	Residential	593956	4835321	1.5	39	83	83	1	0.0%
RE214600_032	Residential	593965	4835331	1.5	40	84	83	1	0.0%
RE214600_033	Residential	593979	4835319	1.5	41	85	83	1	0.0%
RE214600_034	Residential	593977	4835313	1.5	41	85	83	1	0.0%
RE214600_035	Residential	593971	4835308	1.5	41	85	83	1	0.0%
RE214600_036	Residential	593968	4835303	1.5	41	85	83	1	0.0%
RE214600_037	Residential	593909	4835267	1.5	36	80	83	0	-
RE214600_038	Residential	593919	4835279	1.5	37	81	83	0	-
RE214600_039	Residential	593923	4835284	1.5	37	81	83	0	-
RE214600_040	Residential	593930	4835291	1.5	38	82	83	0	-
RE214600_041	Residential	593961	4835326	1.5	40	84	83	1	0.0%
RE214600_042	Residential	593970	4835333	1.5	40	84	83	1	0.0%
RE214600_043	Residential	593982	4835324	1.5	41	85	83	1	0.0%
RE214600_044	Residential	593960	4835295	1.5	41	85	83	1	0.0%
RE214600_045	Residential	593956	4835291	1.5	40	84	83	1	0.0%
RE214600_046	Residential	593946	4835281	1.5	39	83	83	1	0.0%
RE214600_047	Residential	593942	4835277	1.5	39	83	83	0	-
RE214600_048	Residential	593934	4835269	1.5	38	82	83	0	-
RE214600_049	Residential	593929	4835264	1.5	38	82	83	0	-
RE214600_050	Residential	593923	4835260	1.5	38	82	83	0	-
RE214600_051	Residential	594088	4835437	1.5	44	88	83	2	0.0%
RE214600_052	Residential	594082	4835443	1.5	43	87	83	1	0.0%
RE214600_053	Residential	593964	4835299	1.5	41	85	83	1	0.0%
RE214600_054	Residential	593949	4835285	1.5	40	84	83	1	0.0%
RE214600_055	Residential	593938	4835273	1.5	39	83	83	0	-
RE214600_056	Residential	593919	4835255	1.5	38	82	83	0	-
RE214600_057	Residential	594070	4835454	1.5	42	86	83	1	0.0%
RE214600_058	Residential	594080	4835468	1.5	42	86	83	1	0.0%
RE214600_059	Residential	594086	4835463	1.5	42	86	83	1	0.0%
RE214600_060	Residential	594095	4835454	1.5	44	88	83	1	0.0%
RE214600_061	Residential	594098	4835448	1.5	44	88	83	2	0.0%
RE214600_062	Residential	594075	4835447	1.5	42	86	83	1	0.0%
RE214600_063	Residential	594090	4835458	1.5	43	87	83	1	0.0%
RE214600_064	Residential	594047	4835432	1.5	41	85	83	1	0.0%
RE214600_065	Residential	594052	4835428	1.5	42	86	83	1	0.0%
RE214600_066	Residential	594056	4835424	1.5	42	86	83	1	0.0%
RE214600_067	Residential	594061	4835420	1.5	43	87	83	1	0.0%
RE214600_068	Residential	594068	4835415	1.5	43	87	83	1	0.0%
RE214600_069	Residential	594022	4835361	1.5	43	87	83	2	0.0%
RE214600_070	Residential	593995	4835385	1.5	40	84	83	1	0.0%
RE214600_071	Residential	593999	4835381	1.5	41	85	83	1	0.0%
RE214600_072	Residential	594003	4835377	1.5	41	85	83	1	0.0%
RE214600_073	Residential	594009	4835371	1.5	42	86	83	1	0.0%
RE214600_074	Residential	594015	4835366	1.5	42	86	83	1	0.0%
RE214600_075	Residential	594003	4835343	1.5	42	86	83	2	0.0%
RE214600_076	Residential	593993	4835352	1.5	41	85	83	1	0.0%
RE214600_077	Residential	593998	4835348	1.5	42	86	83	2	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_078	Residential	593990	4835357	1.5	41	85	83	1	0.0%
RE214600_079	Residential	593985	4835362	1.5	40	84	83	1	0.0%
RE214600_080	Residential	593978	4835367	1.5	40	84	83	1	0.0%
RE214600_081	Residential	593872	4835162	1.5	38	83	83	0	-
RE214600_082	Residential	593897	4835267	1.5	35	79	83	0	-
RE214600_083	Residential	593835	4835188	1.5	35	79	83	0	-
RE214700_002	Residential	593796	4835295	1.5	31	76	83	0	-
RE214700_003	Residential	593801	4835284	1.5	32	76	83	0	-
RE214700_004	Residential	593804	4835270	1.5	32	76	83	0	-
RE214700_005	Residential	593808	4835258	1.5	32	77	83	0	-
RE214700_006	Residential	593812	4835244	1.5	32	77	83	0	-
RE214700_007	Residential	593815	4835229	1.5	33	77	83	0	-
RE214700_008	Residential	593820	4835217	1.5	34	78	83	0	-
RE214700_009	Residential	593927	4835372	1.5	36	80	83	0	-
RE214700_010	Residential	593945	4835355	1.5	38	82	83	0	-
RE214700_011	Residential	593938	4835347	1.5	37	81	83	0	-
RE214700_012	Residential	593932	4835340	1.5	37	81	83	0	-
RE214700_013	Residential	593925	4835333	1.5	37	81	83	0	-
RE214700_014	Residential	593897	4835305	1.5	35	79	83	0	-
RE214700_015	Residential	593848	4835261	1.5	33	78	83	0	-
RE214700_016	Residential	593843	4835273	1.5	33	77	83	0	-
RE214700_017	Residential	593842	4835286	1.5	33	77	83	0	-
RE214700_018	Residential	593871	4835315	1.5	33	77	83	0	-
RE214700_019	Residential	593884	4835326	1.5	33	77	83	0	-
RE214700_020	Residential	593911	4835354	1.5	35	79	83	0	-
RE214700_021	Residential	593920	4835363	1.5	36	80	83	0	-
RE214700_022	Residential	593892	4835387	1.5	34	78	83	0	-
RE214700_023	Residential	593878	4835378	1.5	33	77	83	0	-
RE214700_024	Residential	593867	4835368	1.5	32	76	83	0	-
RE214700_025	Residential	593847	4835347	1.5	32	76	83	0	-
RE214700_026	Residential	593792	4835308	1.5	31	76	83	0	-
RE214700_027	Residential	593899	4835400	1.5	34	78	83	0	-
RE214700_028	Residential	593915	4835323	1.5	36	80	83	0	-
RE214700_029	Residential	593905	4835315	1.5	35	79	83	0	-
RE214700_030	Residential	593888	4835295	1.5	34	78	83	0	-
RE214700_031	Residential	593878	4835285	1.5	34	78	83	0	-
RE214700_032	Residential	593872	4835268	1.5	34	79	83	0	-
RE214700_033	Residential	593850	4835248	1.5	34	78	83	0	-
RE214700_034	Residential	593837	4835298	1.5	32	77	83	0	-
RE214700_035	Residential	593859	4835303	1.5	33	77	83	0	-
RE214700_036	Residential	593893	4835335	1.5	34	78	83	0	-
RE214700_037	Residential	593901	4835345	1.5	35	79	83	0	-
RE214700_038	Residential	593857	4835357	1.5	32	77	83	0	-
RE214700_039	Residential	593838	4835336	1.5	32	76	83	0	-
RE214700_040	Residential	593826	4835328	1.5	32	76	83	0	-
RE214700_041	Residential	594050	4835472	1.5	40	84	83	1	0.0%
RE214700_042	Residential	594045	4835477	1.5	40	84	83	1	0.0%
RE214700_043	Residential	594021	4835499	1.5	38	82	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_044	Residential	594015	4835505	1.5	37	81	83	0	-
RE214700_045	Residential	594010	4835510	1.5	37	81	83	0	-
RE214700_046	Residential	594005	4835514	1.5	37	81	83	0	-
RE214700_047	Residential	593999	4835520	1.5	36	80	83	0	-
RE214700_048	Residential	594007	4835538	1.5	36	80	83	0	-
RE214700_049	Residential	594029	4835518	1.5	38	82	83	0	-
RE214700_050	Residential	594041	4835505	1.5	38	82	83	0	-
RE214700_051	Residential	594052	4835496	1.5	39	83	83	1	0.0%
RE214700_052	Residential	594065	4835484	1.5	40	84	83	1	0.0%
RE214700_053	Residential	594071	4835479	1.5	41	85	83	1	0.0%
RE214700_054	Residential	594063	4835459	1.5	41	85	83	1	0.0%
RE214700_055	Residential	594059	4835463	1.5	41	85	83	1	0.0%
RE214700_056	Residential	594055	4835466	1.5	40	84	83	1	0.0%
RE214700_057	Residential	594041	4835481	1.5	39	83	83	1	0.0%
RE214700_058	Residential	594035	4835486	1.5	39	83	83	0	-
RE214700_059	Residential	594030	4835490	1.5	38	82	83	0	-
RE214700_060	Residential	594025	4835494	1.5	38	82	83	0	-
RE214700_061	Residential	593994	4835525	1.5	36	80	83	0	-
RE214700_062	Residential	594012	4835533	1.5	37	81	83	0	-
RE214700_063	Residential	594018	4835528	1.5	37	81	83	0	-
RE214700_064	Residential	594023	4835523	1.5	37	81	83	0	-
RE214700_065	Residential	594035	4835511	1.5	38	82	83	0	-
RE214700_066	Residential	594046	4835501	1.5	39	83	83	0	-
RE214700_067	Residential	594057	4835491	1.5	40	84	83	1	0.0%
RE214700_068	Residential	594061	4835487	1.5	40	84	83	1	0.0%
RE214700_069	Residential	594075	4835473	1.5	41	85	83	1	0.0%
RE214700_070	Residential	593973	4835506	1.5	36	80	83	0	-
RE214700_071	Residential	593991	4835488	1.5	37	81	83	0	-
RE214700_072	Residential	593995	4835485	1.5	37	81	83	0	-
RE214700_073	Residential	594004	4835475	1.5	38	82	83	0	-
RE214700_074	Residential	594013	4835466	1.5	38	82	83	0	-
RE214700_075	Residential	594022	4835457	1.5	39	83	83	0	-
RE214700_076	Residential	594039	4835440	1.5	40	84	83	1	0.0%
RE214700_077	Residential	593979	4835500	1.5	36	80	83	0	-
RE214700_078	Residential	593985	4835493	1.5	37	81	83	0	-
RE214700_079	Residential	593998	4835482	1.5	37	81	83	0	-
RE214700_080	Residential	594008	4835471	1.5	38	82	83	0	-
RE214700_081	Residential	594018	4835462	1.5	39	83	83	0	-
RE214700_082	Residential	594027	4835453	1.5	39	83	83	1	0.0%
RE214700_083	Residential	594030	4835449	1.5	40	84	83	1	0.0%
RE214700_084	Residential	594036	4835444	1.5	40	84	83	1	0.0%
RE214700_085	Residential	594043	4835436	1.5	41	85	83	1	0.0%
RE214700_086	Residential	593960	4835422	1.5	37	81	83	0	-
RE214700_087	Residential	593956	4835426	1.5	37	81	83	0	-
RE214700_088	Residential	593963	4835417	1.5	38	82	83	0	-
RE214700_089	Residential	593968	4835413	1.5	38	82	83	0	-
RE214700_090	Residential	593973	4835409	1.5	38	82	83	0	-
RE214700_091	Residential	593978	4835404	1.5	39	83	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_092	Residential	593981	4835400	1.5	39	83	83	0	-
RE214700_093	Residential	593948	4835434	1.5	36	80	83	0	-
RE214700_094	Residential	593938	4835443	1.5	36	80	83	0	-
RE214700_095	Residential	593934	4835448	1.5	35	79	83	0	-
RE214700_096	Residential	593988	4835393	1.5	39	83	83	1	0.0%
RE214700_097	Residential	593991	4835389	1.5	40	84	83	1	0.0%
RE214700_098	Residential	593943	4835438	1.5	36	80	83	0	-
RE214700_099	Residential	593929	4835453	1.5	35	79	83	0	-
RE214700_100	Residential	593974	4835372	1.5	39	83	83	1	0.0%
RE214700_101	Residential	593962	4835383	1.5	38	82	83	0	-
RE214700_102	Residential	593958	4835387	1.5	38	82	83	0	-
RE214700_103	Residential	593951	4835396	1.5	37	81	83	0	-
RE214700_104	Residential	593947	4835399	1.5	37	81	83	0	-
RE214700_105	Residential	593941	4835404	1.5	37	81	83	0	-
RE214700_106	Residential	593922	4835422	1.5	35	79	83	0	-
RE214700_107	Residential	593918	4835425	1.5	35	79	83	0	-
RE214700_108	Residential	593968	4835378	1.5	39	83	83	0	-
RE214700_109	Residential	593955	4835390	1.5	38	82	83	0	-
RE214700_110	Residential	593936	4835409	1.5	36	80	83	0	-
RE214700_111	Residential	593932	4835413	1.5	36	80	83	0	-
RE214700_112	Residential	593927	4835416	1.5	36	80	83	0	-
RE214700_113	Residential	593915	4835429	1.5	35	79	83	0	-
RE214700_114	Residential	593909	4835436	1.5	34	78	83	0	-
RE214800_004	Residential	594026	4835615	1.5	35	79	83	0	-
RE214800_005	Residential	593831	4835365	1.5	31	76	83	0	-
RE214800_006	Residential	593852	4835385	1.5	31	76	83	0	-
RE214800_007	Residential	593881	4835418	1.5	33	77	83	0	-
RE214800_012	Residential	593782	4835346	1.5	31	75	83	0	-
RE214800_013	Residential	593787	4835332	1.5	31	75	83	0	-
RE214800_014	Residential	593789	4835319	1.5	31	75	83	0	-
RE214800_015	Residential	593821	4835355	1.5	31	76	83	0	-
RE214800_016	Residential	593842	4835375	1.5	31	76	83	0	-
RE214800_017	Residential	593862	4835398	1.5	32	76	83	0	-
RE214800_018	Residential	593873	4835409	1.5	33	77	83	0	-
RE214800_019	Residential	593990	4835530	1.5	36	80	83	0	-
RE214800_020	Residential	593986	4835536	1.5	36	80	83	0	-
RE214800_021	Residential	593998	4835545	1.5	36	80	83	0	-
RE214800_022	Residential	594003	4835542	1.5	36	80	83	0	-
RE214800_023	Residential	593968	4835554	1.5	34	78	83	0	-
RE214800_024	Residential	593977	4835565	1.5	35	79	83	0	-
RE214800_025	Residential	593946	4835572	1.5	33	77	83	0	-
RE214800_026	Residential	593927	4835596	1.5	32	76	83	0	-
RE214800_027	Residential	593950	4835594	1.5	33	77	83	0	-
RE214800_028	Residential	593964	4835580	1.5	34	78	83	0	-
RE214800_029	Residential	593968	4835576	1.5	34	78	83	0	-
RE214800_030	Residential	593973	4835571	1.5	34	78	83	0	-
RE214800_031	Residential	593987	4835592	1.5	34	78	83	0	-
RE214800_032	Residential	593962	4835559	1.5	34	78	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214800_033	Residential	593956	4835562	1.5	34	78	83	0	-
RE214800_034	Residential	593952	4835567	1.5	34	78	83	0	-
RE214800_035	Residential	593941	4835579	1.5	33	77	83	0	-
RE214800_036	Residential	593936	4835582	1.5	33	77	83	0	-
RE214800_037	Residential	593931	4835589	1.5	33	77	83	0	-
RE214800_038	Residential	593938	4835605	1.5	33	77	83	0	-
RE214800_039	Residential	593945	4835599	1.5	33	77	83	0	-
RE214800_040	Residential	593953	4835589	1.5	33	77	83	0	-
RE214800_041	Residential	593959	4835583	1.5	34	78	83	0	-
RE214800_042	Residential	593997	4835583	1.5	35	79	83	0	-
RE214800_043	Residential	593992	4835588	1.5	35	79	83	0	-
RE214800_044	Residential	593982	4835599	1.5	34	78	83	0	-
RE214800_045	Residential	593977	4835603	1.5	34	78	83	0	-
RE214800_046	Residential	593970	4835610	1.5	34	78	83	0	-
RE214800_052	Residential	593995	4835609	1.5	34	78	83	0	-
RE214800_053	Residential	593999	4835605	1.5	35	79	83	0	-
RE214800_056	Residential	593989	4835614	1.5	34	78	83	0	-
RE214800_057	Residential	594004	4835600	1.5	35	79	83	0	-
RE214800_058	Residential	594008	4835595	1.5	35	79	83	0	-
RE214800_059	Residential	593969	4835510	1.5	36	80	83	0	-
RE214800_060	Residential	593964	4835515	1.5	35	79	83	0	-
RE214800_061	Residential	593919	4835462	1.5	34	78	83	0	-
RE214800_062	Residential	593941	4835536	1.5	34	78	83	0	-
RE214800_063	Residential	593932	4835545	1.5	33	77	83	0	-
RE214800_064	Residential	593919	4835557	1.5	33	77	83	0	-
RE214800_065	Residential	593923	4835458	1.5	35	79	83	0	-
RE214800_066	Residential	593916	4835466	1.5	34	78	83	0	-
RE214800_067	Residential	593938	4835540	1.5	34	78	83	0	-
RE214800_068	Residential	593926	4835550	1.5	33	77	83	0	-
RE214800_069	Residential	593924	4835553	1.5	33	77	83	0	-
RE214800_070	Residential	593909	4835569	1.5	32	76	83	0	-
RE214800_071	Residential	593905	4835574	1.5	32	76	83	0	-
RE214800_072	Residential	593913	4835564	1.5	32	76	83	0	-
RE214800_073	Residential	593902	4835442	1.5	34	78	83	0	-
RE214800_074	Residential	593897	4835447	1.5	34	77	83	0	-
RE214800_075	Residential	593945	4835532	1.5	34	78	83	0	-
RE214800_076	Residential	593781	4835357	1.5	31	75	83	0	-
RE214900_001	Residential	593921	4835605	1.5	32	76	83	0	-
RE214900_008	Residential	593899	4835580	1.5	32	76	83	0	-
RE214900_009	Residential	593896	4835585	1.5	32	76	83	0	-
RE214900_010	Residential	593893	4835591	1.5	31	75	83	0	-
RE217600_001	Residential	591736	4837227	1.5	19	63	83	0	-
RE217600_002	Residential	591766	4837262	1.5	18	61	83	0	-
RE218700_001	Residential	590959	4838020	1.5	63	108	83	11	0.0%
RE218700_002	Residential	590988	4838088	1.5	68	112	83	13	0.0%
RE220800_001	Residential	590421	4839357	1.5	17	61	83	0	-
RE220900_001	Residential	590180	4839466	1.5	17	61	83	0	-
RE220900_002	Residential	590517	4839408	1.5	15	59	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE220900_003	Residential	590379	4839398	1.5	16	60	83	0	-
RE221000_001	Residential	590454	4839467	1.5	17	60	83	0	-
RE221000_002	Residential	590412	4839513	1.5	19	61	83	0	-
RE221300_001	Residential	590257	4839724	1.5	18	61	83	0	-
RE221300_002	Residential	590236	4839764	1.5	18	61	83	0	-
RE221300_003	Residential	590440	4839670	1.5	15	57	83	0	-
RE222600_001	Residential	591012	4840654	1.5	21	65	83	0	-
RE222700_001	Residential	590826	4840878	1.5	25	69	83	0	-
RE222700_002	Residential	590788	4840912	1.5	26	70	83	0	-
RE222700_003	Residential	590768	4840946	1.5	26	70	83	0	-
RE222700_004	Residential	590744	4840967	1.5	26	70	83	0	-
RE222700_005	Residential	590721	4840990	1.5	26	70	83	0	-
RE222700_006	Residential	590621	4841031	1.5	26	70	83	0	-
RE222800_001	Residential	590888	4840963	1.5	22	66	83	0	-
RE222800_002	Residential	590866	4840985	1.5	23	67	83	0	-
RE222800_003	Residential	590833	4841016	1.5	22	67	83	0	-
RE222800_004	Residential	590542	4841175	1.5	29	69	83	0	-
RE222800_005	Residential	591137	4840761	1.5	18	62	83	0	-
RE222900_001	Residential	590805	4841056	1.5	22	67	83	0	-
RE223100_001	Residential	590769	4841337	1.5	26	67	83	0	-
RE224000_001	Residential	591729	4841911	1.5	34	78	83	0	-
RE224000_002	Residential	591565	4842001	1.5	35	76	83	0	-
RE224000_003	Residential	591896	4841760	1.5	37	80	83	0	-
RE224000_004	Residential	592046	4841608	1.5	36	81	83	0	-
RE224000_005	Residential	591982	4841673	1.5	37	81	83	0	-
RE224000_006	Residential	592000	4841606	1.5	26	68	83	0	-
RE224000_007	Residential	592142	4841674	1.5	25	68	83	0	-
RE224000_008	Residential	591760	4841888	1.5	35	78	83	0	-
RE224100_001	Residential	591661	4842108	1.5	34	77	83	0	-
RE224200_001	Residential	591576	4842265	1.5	23	67	83	0	-
RE225600_001	Residential	591815	4843783	1.5	29	74	83	0	-
RE225700_001	Residential	591905	4843849	1.5	24	69	83	0	-
RE225700_002	Residential	591627	4843848	1.5	26	71	83	0	-
RE225800_001	Residential	591793	4843928	1.5	23	67	83	0	-
RE226500_001	Residential	591915	4844500	1.5	31	73	83	0	-
RE226500_002	Residential	592025	4844497	1.5	26	67	83	0	-
RE226600_001	Residential	592085	4844601	1.5	30	71	83	0	-
RE226700_001	Residential	592060	4844696	1.5	38	79	83	0	-
RE226800_001	Residential	592117	4844789	1.5	41	82	83	0	-
RE227000_001	Residential	592319	4844882	1.5	40	85	83	2	0.0%
RE227100_001	Residential	592377	4844982	1.5	50	94	83	5	0.0%
RE227100_002	Residential	592402	4845033	1.5	58	100	83	18	0.0%
RE227300_001	Residential	592788	4845012	1.5	45	89	83	6	0.0%
RE227800_001	Residential	592859	4845591	1.5	28	72	83	0	-
RE227900_001	Residential	592776	4845681	1.5	28	72	83	0	-
RE228000_001	Residential	595855	4844518	1.5	79	120	83	18	0.0%
RE228000_002	Residential	595865	4844534	1.5	79	120	83	19	0.0%
RE228000_003	Residential	595873	4844555	1.5	81	121	83	18	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228000_004	Residential	595887	4844563	1.5	82	121	83	20	0.0%
RE228000_005	Residential	595917	4844562	1.5	82	120	83	22	0.1%
RE228000_006	Residential	595931	4844548	1.5	81	121	83	21	0.0%
RE228000_007	Residential	595942	4844534	1.5	80	122	83	18	0.0%
RE228000_008	Child Care Centre	597841	4843717	1.5	59	103	83	7	0.0%
RE228000_009	Residential	595782	4844642	1.5	72	116	83	11	0.0%
RE228100_001	Residential	595810	4844669	1.5	78	119	83	13	0.0%
RE228300_028	Residential	595272	4845160	1.5	78	119	83	8	0.0%
RE228300_029	Residential	595277	4845164	1.5	78	119	83	9	0.0%
RE228300_030	Residential	595281	4845168	1.5	78	119	83	9	0.0%
RE228300_031	Residential	595264	4845154	1.5	78	119	83	7	0.0%
RE228300_032	Residential	595260	4845151	1.5	78	118	83	7	0.0%
RE228300_033	Residential	595256	4845147	1.5	77	118	83	7	0.0%
RE228300_034	Residential	595252	4845143	1.5	77	118	83	7	0.0%
RE228300_035	Residential	595247	4845139	1.5	77	118	83	7	0.0%
RE228400_004	Residential	595342	4845241	1.5	73	114	83	11	0.0%
RE228400_005	Residential	595347	4845245	1.5	74	115	83	11	0.0%
RE228400_006	Residential	595353	4845250	1.5	76	116	83	10	0.0%
RE228400_007	Residential	595286	4845173	1.5	78	119	83	9	0.0%
RE228400_008	Residential	595291	4845177	1.5	78	119	83	9	0.0%
RE228400_009	Residential	595295	4845180	1.5	78	118	83	9	0.0%
RE228400_010	Residential	595299	4845184	1.5	78	118	83	9	0.0%
RE228400_011	Residential	595303	4845187	1.5	78	118	83	8	0.0%
RE228400_013	Residential	595249	4845194	1.5	69	110	83	9	0.0%
RE228400_014	Residential	595253	4845198	1.5	69	109	83	8	0.0%
RE228400_015	Residential	595259	4845202	1.5	68	109	83	9	0.0%
RE228400_045	Residential	595263	4845261	1.5	75	116	83	8	0.0%
RE228400_046	Residential	595267	4845257	1.5	75	116	83	9	0.0%
RE228400_047	Residential	595271	4845254	1.5	75	116	83	9	0.0%
RE228400_048	Residential	595277	4845248	1.5	74	115	83	9	0.0%
RE228400_049	Residential	595281	4845244	1.5	74	115	83	9	0.0%
RE228400_050	Residential	595285	4845240	1.5	74	114	83	10	0.0%
RE228400_051	Residential	595289	4845237	1.5	73	114	83	10	0.0%
RE228400_052	Residential	595293	4845233	1.5	72	113	83	9	0.0%
RE228400_053	Residential	595297	4845229	1.5	72	113	83	9	0.0%
RE228400_054	Residential	595303	4845221	1.5	70	111	83	10	0.0%
RE228400_055	Residential	595307	4845217	1.5	71	112	83	10	0.0%
RE228400_056	Residential	595312	4845212	1.5	73	114	83	10	0.0%
RE228400_057	Residential	595317	4845207	1.5	75	116	83	10	0.0%
RE228400_058	Residential	595321	4845203	1.5	77	118	83	10	0.0%
RE228400_059	Residential	595326	4845198	1.5	78	119	83	9	0.0%
RE228500_009	Residential	595340	4845366	1.5	70	114	83	8	0.0%
RE228500_010	Residential	595348	4845355	1.5	70	114	83	9	0.0%
RE228500_011	Residential	595353	4845351	1.5	70	114	83	9	0.0%
RE228500_012	Residential	595360	4845346	1.5	71	114	83	9	0.0%
RE228500_013	Residential	595365	4845341	1.5	73	114	83	9	0.0%
RE228500_014	Residential	595376	4845333	1.5	77	117	83	10	0.0%
RE228500_015	Residential	595380	4845326	1.5	78	119	83	11	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228500_016	Residential	595386	4845320	1.5	78	119	83	10	0.0%
RE228500_017	Residential	595391	4845315	1.5	79	119	83	10	0.0%
RE228500_018	Residential	595402	4845305	1.5	79	119	83	10	0.0%
RE228500_019	Residential	595406	4845298	1.5	79	119	83	10	0.0%
RE228500_020	Residential	595415	4845288	1.5	78	119	83	11	0.0%
RE228500_021	Residential	595423	4845280	1.5	78	119	83	11	0.0%
RE228500_022	Residential	595357	4845254	1.5	76	117	83	10	0.0%
RE228500_023	Residential	595366	4845262	1.5	78	118	83	10	0.0%
RE228500_024	Residential	595370	4845267	1.5	78	119	83	11	0.0%
RE228500_025	Residential	595375	4845271	1.5	78	119	83	11	0.0%
RE228500_026	Residential	595355	4845285	1.5	78	119	83	10	0.0%
RE228500_027	Residential	595349	4845290	1.5	78	119	83	10	0.0%
RE228500_028	Residential	595342	4845297	1.5	78	119	83	8	0.0%
RE228500_029	Residential	595338	4845303	1.5	78	119	83	9	0.0%
RE228500_030	Residential	595329	4845311	1.5	76	117	83	7	0.0%
RE228500_031	Residential	595322	4845317	1.5	75	115	83	7	0.0%
RE228500_032	Residential	595315	4845323	1.5	73	113	83	7	0.0%
RE228500_033	Residential	595310	4845328	1.5	71	112	83	7	0.0%
RE228500_034	Residential	595301	4845337	1.5	68	112	83	8	0.0%
RE228500_035	Residential	595297	4845343	1.5	69	113	83	8	0.0%
RE228500_049	Residential	595279	4845312	1.5	72	112	83	6	0.0%
RE228500_050	Residential	595289	4845303	1.5	74	115	83	6	0.0%
RE228500_051	Residential	595293	4845297	1.5	75	116	83	6	0.0%
RE228500_052	Residential	595300	4845290	1.5	76	117	83	6	0.0%
RE228500_053	Residential	595305	4845285	1.5	77	118	83	7	0.0%
RE228500_054	Residential	595315	4845277	1.5	78	119	83	10	0.0%
RE228500_055	Residential	595319	4845273	1.5	78	119	83	10	0.0%
RE228500_056	Residential	595323	4845268	1.5	78	119	83	10	0.0%
RE228500_057	Residential	595329	4845264	1.5	78	118	83	9	0.0%
RE228500_060	Residential	595450	4845298	1.5	79	119	83	11	0.0%
RE228500_061	Residential	595448	4845302	1.5	79	120	83	11	0.0%
RE228500_062	Residential	595444	4845307	1.5	79	120	83	10	0.0%
RE228500_063	Residential	595440	4845311	1.5	79	120	83	10	0.0%
RE228500_064	Residential	595437	4845315	1.5	79	120	83	11	0.0%
RE228500_065	Residential	595433	4845320	1.5	79	119	83	10	0.0%
RE228500_066	Residential	595429	4845324	1.5	79	119	83	11	0.0%
RE228500_067	Residential	595426	4845327	1.5	79	119	83	12	0.0%
RE228600_013	Residential	595369	4845462	1.5	61	105	83	10	0.0%
RE228600_014	Residential	595377	4845450	1.5	66	110	83	9	0.0%
RE228600_015	Residential	595389	4845444	1.5	68	112	83	10	0.0%
RE228600_016	Residential	595398	4845435	1.5	70	114	83	10	0.0%
RE228600_017	Residential	595404	4845426	1.5	70	114	83	9	0.0%
RE228600_018	Residential	595412	4845418	1.5	70	114	83	11	0.0%
RE228600_019	Residential	595420	4845409	1.5	71	115	83	11	0.0%
RE228600_020	Residential	595431	4845401	1.5	72	116	83	12	0.0%
RE228600_021	Residential	595439	4845389	1.5	72	116	83	12	0.0%
RE228600_022	Residential	595447	4845380	1.5	71	116	83	12	0.0%
RE228600_023	Residential	595455	4845370	1.5	72	116	83	11	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228600_024	Residential	595464	4845360	1.5	76	117	83	10	0.0%
RE228600_025	Residential	595470	4845351	1.5	78	119	83	11	0.0%
RE228600_026	Residential	595480	4845344	1.5	79	119	83	12	0.0%
RE228600_027	Residential	595487	4845335	1.5	79	120	83	14	0.0%
RE228600_036	Residential	595324	4845383	1.5	70	114	83	8	0.0%
RE228600_037	Residential	595332	4845374	1.5	70	114	83	8	0.0%
RE228600_038	Residential	595335	4845370	1.5	70	114	83	8	0.0%
RE228600_039	Residential	595422	4845333	1.5	78	119	83	11	0.0%
RE228600_040	Residential	595418	4845337	1.5	78	119	83	11	0.0%
RE228600_041	Residential	595415	4845341	1.5	78	119	83	10	0.0%
RE228600_042	Residential	595412	4845343	1.5	77	118	83	10	0.0%
RE228600_043	Residential	595409	4845347	1.5	76	116	83	9	0.0%
RE228600_044	Residential	595406	4845351	1.5	74	115	83	9	0.0%
RE228600_045	Residential	595404	4845354	1.5	73	115	83	9	0.0%
RE228600_046	Residential	595402	4845357	1.5	72	115	83	9	0.0%
RE228600_047	Residential	595396	4845362	1.5	70	114	83	9	0.0%
RE228600_048	Residential	595392	4845366	1.5	70	114	83	9	0.0%
RE228600_049	Residential	595390	4845369	1.5	70	114	83	9	0.0%
RE228600_050	Residential	595387	4845372	1.5	70	114	83	9	0.0%
RE228600_051	Residential	595383	4845375	1.5	70	114	83	9	0.0%
RE228600_052	Residential	595380	4845378	1.5	70	114	83	9	0.0%
RE228600_053	Residential	595377	4845380	1.5	70	114	83	9	0.0%
RE228600_054	Residential	595374	4845383	1.5	70	114	83	8	0.0%
RE228600_055	Residential	595371	4845387	1.5	70	114	83	8	0.0%
RE228600_056	Residential	595369	4845389	1.5	70	114	83	9	0.0%
RE228600_057	Residential	595366	4845392	1.5	70	114	83	10	0.0%
RE228600_058	Residential	595363	4845395	1.5	70	114	83	10	0.0%
RE228600_059	Residential	595361	4845397	1.5	70	114	83	9	0.0%
RE228600_060	Residential	595358	4845400	1.5	70	114	83	9	0.0%
RE228600_061	Residential	595356	4845402	1.5	70	114	83	10	0.0%
RE228600_062	Residential	595353	4845405	1.5	70	114	83	10	0.0%
RE228600_063	Residential	593163	4846308	1.5	30	75	83	0	-
RE228700_010	Residential	593290	4846362	1.5	24	68	83	0	-
RE228800_001	Residential	593003	4846574	1.5	24	68	83	0	-
RE228800_002	Residential	593037	4846534	1.5	23	68	83	0	-
RE228800_003	Residential	593163	4846512	1.5	25	69	83	0	-
RE228900_001	Residential	592951	4846627	1.5	24	67	83	0	-
RE228900_002	Residential	592887	4846738	1.5	24	68	83	0	-
RE229000_001	Residential	593405	4846521	1.5	28	71	83	0	-
RE229100_001	Residential	593407	4846583	1.5	30	74	83	0	-
RE230200_001	Residential	594211	4847001	1.5	35	80	83	0	-
RE230300_001	Residential	594050	4847308	1.5	40	81	83	0	-
RE230300_002	Residential	593923	4847396	1.5	36	77	83	0	-
RE230300_003	Residential	594697	4846565	1.5	48	88	83	2	0.0%
RE230300_004	Residential	595111	4846102	1.5	46	90	83	3	0.0%
RE230300_005	Residential	595605	4845645	1.5	57	101	83	10	0.0%
RE230400_001	Residential	593872	4847645	1.5	23	68	83	0	-
RE230400_002	Residential	593822	4847679	1.5	25	69	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230400_006	Residential	594520	4846864	1.5	42	87	83	1	0.0%
RE230400_007	Residential	594996	4846385	1.5	51	91	83	5	0.0%
RE230400_008	Residential	594973	4846410	1.5	51	92	83	5	0.0%
RE230400_009	Residential	594936	4846427	1.5	51	92	83	5	0.0%
RE230400_010	Residential	595705	4845694	1.5	60	104	83	34	0.1%
RE230400_011	Residential	595874	4845530	1.5	78	119	83	56	0.1%
RE230500_001	Residential	594280	4847364	1.5	28	72	83	0	-
RE230500_002	Residential	594446	4847099	1.5	34	75	83	0	-
RE230500_003	Residential	594531	4847041	1.5	35	76	83	0	-
RE230500_004	Residential	594643	4846861	1.5	35	78	83	0	-
RE230500_005	Residential	594671	4846840	1.5	36	79	83	0	-
RE230500_006	Residential	595049	4846474	1.5	38	81	83	0	-
RE230500_007	Residential	595486	4846036	1.5	43	87	83	2	0.0%
RE230500_008	Residential	595463	4846068	1.5	43	85	83	2	0.0%
RE230500_009	Residential	595438	4846095	1.5	42	84	83	1	0.0%
RE230500_010	Residential	595925	4845612	1.5	69	114	83	45	0.1%
RE230500_011	Residential	595941	4845561	1.5	78	119	83	66	0.2%
RE230500_012	Residential	596152	4845388	1.5	80	121	83	142	0.3%
RE230500_013	Residential	596418	4845009	1.5	85	125	83	104	0.2%
RE230500_014	Residential	596697	4844834	1.5	60	101	83	14	0.0%
RE230600_001	Residential	594927	4846729	1.5	42	83	83	0	-
RE230600_002	Residential	595293	4846327	1.5	38	81	83	0	-
RE230600_003	Residential	596445	4845172	1.5	107	129	83	227	0.5%
RE230600_004	Residential	596565	4845058	1.5	79	120	83	51	0.1%
RE230600_005	Residential	596657	4844932	1.5	69	110	83	19	0.0%
RE230600_006	Residential	596705	4844908	1.5	64	105	83	14	0.0%
RE230900_001	Residential	597840	4844261	1.5	83	124	83	111	0.3%
RE230900_002	Residential	597853	4844274	1.5	81	122	83	85	0.2%
RE230900_003	Residential	597866	4844285	1.5	80	121	83	64	0.1%
RE230900_004	Residential	597879	4844301	1.5	78	119	83	52	0.1%
RE230900_005	Residential	597887	4844307	1.5	74	118	83	48	0.1%
RE230900_006	Residential	597900	4844320	1.5	73	118	83	36	0.1%
RE230900_007	Residential	597908	4844331	1.5	73	117	83	34	0.1%
RE230900_008	Residential	597922	4844342	1.5	73	117	83	29	0.1%
RE230900_009	Residential	597931	4844352	1.5	73	117	83	25	0.1%
RE230900_010	Residential	597943	4844365	1.5	72	117	83	20	0.0%
RE230900_011	Residential	597954	4844376	1.5	72	117	83	17	0.0%
RE230900_012	Residential	597816	4844283	1.5	84	125	83	124	0.3%
RE230900_013	Residential	597825	4844289	1.5	83	124	83	105	0.2%
RE230900_014	Residential	597835	4844299	1.5	82	122	83	87	0.2%
RE230900_015	Residential	597842	4844308	1.5	80	121	83	73	0.2%
RE230900_016	Residential	597849	4844314	1.5	80	120	83	65	0.1%
RE230900_017	Residential	597859	4844324	1.5	79	119	83	54	0.1%
RE230900_018	Residential	597867	4844331	1.5	74	119	83	50	0.1%
RE230900_019	Residential	597875	4844341	1.5	74	118	83	45	0.1%
RE230900_020	Residential	597884	4844348	1.5	73	118	83	37	0.1%
RE230900_021	Residential	597892	4844356	1.5	73	118	83	34	0.1%
RE230900_022	Residential	597899	4844365	1.5	73	118	83	33	0.1%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_023	Residential	597905	4844373	1.5	73	117	83	30	0.1%
RE230900_024	Residential	597917	4844381	1.5	73	117	83	24	0.1%
RE230900_025	Residential	597924	4844389	1.5	72	117	83	20	0.0%
RE230900_026	Residential	597931	4844399	1.5	72	117	83	19	0.0%
RE230900_027	Residential	597646	4844600	1.5	82	123	83	128	0.3%
RE230900_028	Residential	597653	4844613	1.5	81	122	83	113	0.3%
RE230900_029	Residential	597660	4844623	1.5	80	121	83	105	0.2%
RE230900_030	Residential	597665	4844629	1.5	80	121	83	96	0.2%
RE230900_031	Residential	597835	4844353	1.5	79	120	83	58	0.1%
RE230900_032	Residential	597831	4844358	1.5	79	120	83	59	0.1%
RE230900_033	Residential	597825	4844365	1.5	79	120	83	60	0.1%
RE230900_034	Residential	597820	4844371	1.5	79	120	83	60	0.1%
RE230900_035	Residential	597814	4844379	1.5	79	120	83	61	0.1%
RE230900_036	Residential	597811	4844383	1.5	79	120	83	64	0.1%
RE230900_037	Residential	597806	4844390	1.5	79	120	83	64	0.1%
RE230900_038	Residential	597801	4844396	1.5	79	120	83	66	0.2%
RE230900_039	Residential	597796	4844403	1.5	80	120	83	66	0.2%
RE230900_040	Residential	597792	4844410	1.5	80	120	83	67	0.2%
RE230900_041	Residential	597786	4844416	1.5	80	120	83	69	0.2%
RE230900_042	Residential	597783	4844423	1.5	80	120	83	69	0.2%
RE230900_043	Residential	597781	4844430	1.5	79	120	83	67	0.2%
RE230900_044	Residential	597777	4844436	1.5	79	120	83	69	0.2%
RE230900_045	Residential	597773	4844443	1.5	79	120	83	69	0.2%
RE230900_046	Residential	597770	4844450	1.5	79	120	83	69	0.2%
RE230900_047	Residential	597766	4844457	1.5	79	120	83	70	0.2%
RE230900_048	Residential	597762	4844463	1.5	79	120	83	71	0.2%
RE230900_049	Residential	597758	4844470	1.5	79	120	83	71	0.2%
RE230900_050	Residential	597754	4844477	1.5	79	120	83	71	0.2%
RE230900_051	Residential	597751	4844484	1.5	79	120	83	71	0.2%
RE230900_052	Residential	597747	4844490	1.5	79	120	83	72	0.2%
RE230900_053	Residential	597744	4844497	1.5	79	120	83	72	0.2%
RE230900_054	Residential	597739	4844504	1.5	79	120	83	73	0.2%
RE230900_055	Residential	597725	4844530	1.5	79	120	83	75	0.2%
RE230900_056	Residential	597721	4844535	1.5	79	120	83	76	0.2%
RE230900_057	Residential	597717	4844543	1.5	79	120	83	76	0.2%
RE230900_058	Residential	597713	4844549	1.5	79	120	83	78	0.2%
RE230900_059	Residential	597710	4844557	1.5	79	120	83	78	0.2%
RE230900_060	Residential	597705	4844564	1.5	79	120	83	78	0.2%
RE230900_061	Residential	597701	4844572	1.5	79	120	83	78	0.2%
RE230900_062	Residential	597697	4844579	1.5	79	120	83	79	0.2%
RE230900_063	Residential	597692	4844586	1.5	79	120	83	81	0.2%
RE230900_064	Residential	597688	4844592	1.5	79	120	83	84	0.2%
RE230900_065	Residential	597684	4844600	1.5	79	121	83	85	0.2%
RE230900_066	Residential	597681	4844607	1.5	79	121	83	86	0.2%
RE230900_067	Residential	597651	4844608	1.5	81	122	83	119	0.3%
RE230900_068	Residential	597659	4844619	1.5	80	121	83	105	0.2%
RE230900_069	Residential	597659	4844582	1.5	82	123	83	119	0.3%
RE230900_070	Residential	597661	4844578	1.5	82	123	83	119	0.3%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_071	Residential	597664	4844572	1.5	82	123	83	118	0.3%
RE230900_072	Residential	597668	4844567	1.5	82	123	83	118	0.3%
RE230900_073	Residential	597671	4844560	1.5	82	123	83	115	0.3%
RE230900_074	Residential	597674	4844556	1.5	82	123	83	115	0.3%
RE230900_075	Residential	597678	4844550	1.5	82	123	83	114	0.3%
RE230900_076	Residential	597681	4844543	1.5	82	123	83	113	0.3%
RE230900_077	Residential	597684	4844537	1.5	82	123	83	113	0.3%
RE230900_078	Residential	597688	4844532	1.5	82	123	83	112	0.3%
RE230900_079	Residential	597691	4844527	1.5	82	123	83	109	0.2%
RE230900_080	Residential	597695	4844521	1.5	82	123	83	106	0.2%
RE230900_081	Residential	597697	4844516	1.5	82	123	83	106	0.2%
RE230900_082	Residential	597714	4844486	1.5	82	123	83	103	0.2%
RE230900_083	Residential	597717	4844481	1.5	82	123	83	102	0.2%
RE230900_084	Residential	597720	4844476	1.5	82	123	83	102	0.2%
RE230900_085	Residential	597723	4844470	1.5	82	123	83	101	0.2%
RE230900_086	Residential	597726	4844464	1.5	82	123	83	100	0.2%
RE230900_087	Residential	597729	4844460	1.5	82	123	83	99	0.2%
RE230900_088	Residential	597732	4844455	1.5	82	123	83	99	0.2%
RE230900_089	Residential	597736	4844448	1.5	82	123	83	98	0.2%
RE230900_090	Residential	597740	4844440	1.5	82	123	83	97	0.2%
RE230900_091	Residential	597743	4844435	1.5	82	123	83	97	0.2%
RE230900_092	Residential	597747	4844429	1.5	82	123	83	97	0.2%
RE230900_093	Residential	597749	4844423	1.5	83	123	83	98	0.2%
RE230900_094	Residential	597752	4844418	1.5	83	123	83	98	0.2%
RE230900_095	Residential	597755	4844413	1.5	83	123	83	98	0.2%
RE230900_096	Residential	597758	4844409	1.5	83	123	83	98	0.2%
RE230900_097	Residential	597762	4844402	1.5	83	123	83	98	0.2%
RE230900_098	Residential	597765	4844392	1.5	83	124	83	103	0.2%
RE230900_099	Residential	597769	4844386	1.5	83	124	83	103	0.2%
RE230900_100	Residential	597773	4844382	1.5	83	123	83	103	0.2%
RE230900_101	Residential	597776	4844377	1.5	83	123	83	102	0.2%
RE230900_102	Residential	597784	4844369	1.5	82	123	83	96	0.2%
RE230900_103	Residential	597787	4844364	1.5	82	123	83	96	0.2%
RE230900_104	Residential	597791	4844360	1.5	82	123	83	94	0.2%
RE230900_105	Residential	597794	4844354	1.5	82	123	83	94	0.2%
RE230900_106	Residential	597798	4844349	1.5	82	123	83	94	0.2%
RE230900_107	Residential	597802	4844343	1.5	82	123	83	94	0.2%
RE230900_108	Residential	597805	4844339	1.5	82	123	83	94	0.2%
RE230900_109	Residential	597808	4844334	1.5	82	123	83	93	0.2%
RE230900_110	Residential	597861	4844387	1.5	73	118	83	39	0.1%
RE230900_111	Residential	597868	4844394	1.5	73	118	83	35	0.1%
RE230900_112	Residential	597877	4844404	1.5	73	118	83	33	0.1%
RE230900_113	Residential	597886	4844412	1.5	73	118	83	29	0.1%
RE230900_114	Residential	597892	4844420	1.5	73	117	83	24	0.1%
RE230900_115	Residential	597874	4844444	1.5	73	118	83	28	0.1%
RE230900_116	Residential	597870	4844440	1.5	73	118	83	30	0.1%
RE230900_117	Residential	597863	4844432	1.5	73	118	83	32	0.1%
RE230900_118	Residential	597859	4844428	1.5	73	118	83	35	0.1%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_119	Residential	597849	4844405	1.5	74	118	83	40	0.1%
RE230900_120	Residential	597845	4844411	1.5	74	118	83	41	0.1%
RE230900_121	Residential	597840	4844418	1.5	74	118	83	42	0.1%
RE230900_122	Residential	597836	4844424	1.5	74	118	83	42	0.1%
RE230900_123	Residential	597819	4844451	1.5	74	118	83	44	0.1%
RE230900_124	Residential	597815	4844458	1.5	74	118	83	46	0.1%
RE230900_125	Residential	597834	4844465	1.5	74	118	83	38	0.1%
RE230900_126	Residential	597846	4844477	1.5	73	118	83	32	0.1%
RE230900_127	Residential	597812	4844466	1.5	74	118	83	44	0.1%
RE230900_128	Residential	597808	4844471	1.5	74	119	83	46	0.1%
RE230900_129	Residential	597804	4844480	1.5	74	119	83	45	0.1%
RE230900_130	Residential	597801	4844485	1.5	74	119	83	46	0.1%
RE230900_131	Residential	597796	4844493	1.5	74	119	83	46	0.1%
RE230900_132	Residential	597793	4844499	1.5	74	119	83	46	0.1%
RE230900_133	Residential	597788	4844505	1.5	74	119	83	47	0.1%
RE230900_134	Residential	597785	4844512	1.5	75	119	83	47	0.1%
RE230900_135	Residential	597781	4844519	1.5	75	119	83	47	0.1%
RE230900_136	Residential	597777	4844525	1.5	75	119	83	49	0.1%
RE230900_137	Residential	597772	4844533	1.5	76	119	83	49	0.1%
RE230900_138	Residential	597769	4844540	1.5	76	119	83	49	0.1%
RE230900_139	Residential	597765	4844546	1.5	76	119	83	49	0.1%
RE230900_140	Residential	597762	4844553	1.5	77	119	83	49	0.1%
RE230900_141	Residential	597758	4844559	1.5	77	119	83	49	0.1%
RE230900_142	Residential	597755	4844565	1.5	78	119	83	50	0.1%
RE230900_143	Residential	597751	4844573	1.5	78	119	83	50	0.1%
RE230900_144	Residential	597747	4844579	1.5	78	119	83	50	0.1%
RE230900_145	Residential	597822	4844504	1.5	73	118	83	34	0.1%
RE230900_146	Residential	597827	4844497	1.5	73	118	83	34	0.1%
RE230900_147	Residential	597831	4844490	1.5	73	118	83	34	0.1%
RE230900_148	Residential	597839	4844470	1.5	73	118	83	35	0.1%
RE230900_149	Residential	598114	4844042	1.5	70	115	83	25	0.1%
RE230900_150	Residential	598102	4844034	1.5	72	117	83	29	0.1%
RE230900_151	Residential	598094	4844026	1.5	72	117	83	32	0.1%
RE230900_152	Residential	598074	4844024	1.5	73	117	83	41	0.1%
RE230900_153	Residential	598063	4844034	1.5	73	117	83	44	0.1%
RE230900_154	Residential	598053	4844045	1.5	73	117	83	45	0.1%
RE230900_155	Residential	598043	4844055	1.5	74	118	83	47	0.1%
RE230900_156	Residential	598034	4844069	1.5	74	118	83	46	0.1%
RE230900_157	Residential	598028	4844085	1.5	73	118	83	43	0.1%
RE230900_158	Residential	598036	4844098	1.5	73	117	83	34	0.1%
RE230900_159	Residential	598045	4844106	1.5	72	117	83	30	0.1%
RE230900_160	Residential	598054	4844116	1.5	72	117	83	27	0.1%
RE230900_161	Residential	598102	4844074	1.5	69	114	83	25	0.1%
RE230900_162	Residential	598085	4844058	1.5	72	117	83	28	0.1%
RE230900_163	Residential	598068	4844077	1.5	72	117	83	28	0.1%
RE230900_164	Residential	598080	4844091	1.5	72	116	83	26	0.1%
RE230900_165	Residential	598123	4844051	1.5	68	112	83	25	0.1%
RE230900_166	Residential	598199	4843983	1.5	63	107	83	17	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_167	Residential	598192	4843977	1.5	63	108	83	19	0.0%
RE230900_168	Residential	598185	4843968	1.5	65	110	83	23	0.1%
RE230900_169	Residential	598179	4843962	1.5	67	111	83	25	0.1%
RE230900_170	Residential	598170	4843953	1.5	69	114	83	28	0.1%
RE230900_171	Residential	598161	4843941	1.5	72	116	83	32	0.1%
RE230900_172	Residential	598158	4843928	1.5	72	117	83	38	0.1%
RE230900_173	Residential	598165	4843918	1.5	72	117	83	37	0.1%
RE230900_174	Residential	598171	4843911	1.5	72	117	83	37	0.1%
RE230900_175	Residential	598179	4843903	1.5	72	117	83	35	0.1%
RE230900_176	Residential	598185	4843897	1.5	72	116	83	33	0.1%
RE230900_177	Residential	598191	4843889	1.5	72	116	83	34	0.1%
RE230900_178	Residential	598197	4843884	1.5	72	116	83	32	0.1%
RE230900_179	Residential	598202	4843879	1.5	72	116	83	32	0.1%
RE230900_180	Residential	598209	4843872	1.5	71	116	83	32	0.1%
RE230900_181	Residential	598215	4843866	1.5	71	116	83	32	0.1%
RE230900_182	Residential	598222	4843858	1.5	71	115	83	31	0.1%
RE230900_192	Residential	598217	4843965	1.5	62	106	83	15	0.0%
RE230900_193	Residential	598205	4843953	1.5	64	108	83	20	0.0%
RE230900_194	Residential	598192	4843939	1.5	67	112	83	25	0.1%
RE230900_198	Residential	597969	4844339	1.5	72	117	83	17	0.0%
RE230900_199	Residential	597959	4844330	1.5	72	117	83	20	0.0%
RE230900_200	Residential	597950	4844320	1.5	72	117	83	22	0.1%
RE230900_201	Residential	597940	4844310	1.5	73	117	83	29	0.1%
RE230900_202	Residential	597931	4844302	1.5	73	117	83	30	0.1%
RE230900_203	Residential	597923	4844293	1.5	73	118	83	34	0.1%
RE230900_204	Residential	597913	4844282	1.5	73	118	83	40	0.1%
RE230900_205	Residential	597979	4844349	1.5	72	116	83	15	0.0%
RE230900_206	Residential	597848	4844272	1.5	82	123	83	91	0.2%
RE230900_207	Residential	597840	4844263	1.5	83	124	83	108	0.2%
RE230900_208	Residential	597864	4844244	1.5	82	123	83	90	0.2%
RE230900_209	Residential	597869	4844237	1.5	82	123	83	91	0.2%
RE230900_210	Residential	597874	4844230	1.5	82	122	83	92	0.2%
RE230900_211	Residential	597878	4844225	1.5	82	122	83	94	0.2%
RE230900_212	Residential	597888	4844211	1.5	81	122	83	92	0.2%
RE230900_213	Residential	597893	4844204	1.5	81	122	83	92	0.2%
RE230900_214	Residential	597899	4844195	1.5	81	122	83	91	0.2%
RE230900_215	Residential	597904	4844188	1.5	81	122	83	90	0.2%
RE230900_216	Residential	597884	4844219	1.5	81	122	83	94	0.2%
RE230900_217	Residential	597946	4844123	1.5	81	122	83	95	0.2%
RE230900_218	Residential	597910	4844177	1.5	81	122	83	91	0.2%
RE230900_219	Residential	597915	4844171	1.5	81	122	83	93	0.2%
RE230900_220	Residential	597921	4844162	1.5	81	122	83	96	0.2%
RE230900_221	Residential	597926	4844153	1.5	81	122	83	97	0.2%
RE230900_222	Residential	597936	4844139	1.5	81	122	83	97	0.2%
RE230900_223	Residential	597954	4844115	1.5	81	122	83	94	0.2%
RE230900_224	Residential	597959	4844106	1.5	81	122	83	96	0.2%
RE230900_225	Residential	597967	4844098	1.5	81	121	83	94	0.2%
RE230900_226	Residential	597972	4844091	1.5	81	121	83	95	0.2%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_227	Residential	597977	4844083	1.5	80	121	83	95	0.2%
RE230900_228	Residential	597982	4844076	1.5	80	121	83	96	0.2%
RE230900_229	Residential	597986	4844069	1.5	80	121	83	97	0.2%
RE230900_230	Residential	597991	4844063	1.5	80	121	83	97	0.2%
RE230900_231	Residential	597994	4844057	1.5	80	121	83	97	0.2%
RE230900_232	Residential	598000	4844050	1.5	80	121	83	97	0.2%
RE230900_233	Residential	598005	4844046	1.5	80	121	83	94	0.2%
RE230900_234	Residential	598013	4844034	1.5	80	121	83	95	0.2%
RE230900_235	Residential	598019	4844027	1.5	80	121	83	94	0.2%
RE230900_236	Residential	598024	4844022	1.5	80	121	83	93	0.2%
RE230900_237	Residential	598029	4844018	1.5	80	121	83	93	0.2%
RE230900_238	Residential	598032	4844011	1.5	80	121	83	94	0.2%
RE230900_239	Residential	598037	4844006	1.5	80	121	83	93	0.2%
RE230900_240	Residential	598044	4843998	1.5	80	121	83	92	0.2%
RE230900_241	Residential	597941	4844132	1.5	81	122	83	95	0.2%
RE230900_242	Residential	598051	4843992	1.5	80	120	83	92	0.2%
RE230900_243	Residential	598058	4843984	1.5	79	120	83	89	0.2%
RE230900_244	Residential	598066	4843978	1.5	79	120	83	88	0.2%
RE230900_245	Residential	598072	4843971	1.5	79	120	83	89	0.2%
RE230900_246	Residential	598078	4843964	1.5	79	120	83	89	0.2%
RE230900_247	Residential	598084	4843957	1.5	79	120	83	87	0.2%
RE230900_257	Residential	598130	4844202	1.5	61	106	83	7	0.0%
RE230900_258	Residential	598131	4844192	1.5	62	106	83	8	0.0%
RE230900_259	Residential	598135	4844179	1.5	62	107	83	8	0.0%
RE230900_260	Residential	598147	4844156	1.5	62	106	83	7	0.0%
RE230900_261	Residential	598154	4844148	1.5	61	106	83	7	0.0%
RE230900_262	Residential	598161	4844140	1.5	61	106	83	7	0.0%
RE230900_263	Residential	598095	4844225	1.5	64	108	83	10	0.0%
RE230900_264	Residential	598095	4844213	1.5	65	109	83	11	0.0%
RE230900_265	Residential	598095	4844198	1.5	65	110	83	12	0.0%
RE230900_266	Residential	598094	4844188	1.5	66	111	83	13	0.0%
RE230900_272	Residential	598293	4843978	1.5	57	101	83	8	0.0%
RE230900_273	Residential	598282	4843987	1.5	57	102	83	9	0.0%
RE230900_274	Residential	598272	4843996	1.5	58	102	83	9	0.0%
RE230900_275	Residential	598261	4844006	1.5	58	103	83	9	0.0%
RE230900_276	Residential	598251	4844016	1.5	58	103	83	9	0.0%
RE230900_277	Residential	598243	4844025	1.5	59	103	83	9	0.0%
RE230900_278	Residential	598237	4844030	1.5	59	104	83	10	0.0%
RE230900_279	Residential	598231	4844036	1.5	59	104	83	10	0.0%
RE230900_280	Residential	598225	4844041	1.5	60	104	83	10	0.0%
RE230900_281	Residential	598220	4844046	1.5	60	104	83	10	0.0%
RE230900_282	Residential	598213	4844053	1.5	60	105	83	10	0.0%
RE230900_283	Residential	598133	4844117	1.5	65	109	83	14	0.0%
RE230900_285	Residential	598098	4844164	1.5	66	111	83	13	0.0%
RE230900_286	Residential	598103	4844154	1.5	66	111	83	13	0.0%
RE230900_287	Residential	598107	4844144	1.5	66	111	83	14	0.0%
RE230900_288	Residential	598172	4844129	1.5	60	105	83	7	0.0%
RE230900_289	Residential	598183	4844119	1.5	60	104	83	7	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_290	Residential	598190	4844111	1.5	60	104	83	7	0.0%
RE230900_291	Residential	598198	4844103	1.5	59	104	83	7	0.0%
RE230900_292	Residential	598205	4844095	1.5	59	104	83	7	0.0%
RE230900_293	Residential	598212	4844088	1.5	59	103	83	7	0.0%
RE230900_294	Residential	598185	4844065	1.5	62	106	83	11	0.0%
RE230900_295	Residential	598176	4844074	1.5	62	107	83	11	0.0%
RE230900_296	Residential	598166	4844083	1.5	63	107	83	11	0.0%
RE230900_297	Residential	598158	4844092	1.5	63	108	83	11	0.0%
RE230900_298	Residential	598148	4844101	1.5	64	108	83	11	0.0%
RE230900_299	Residential	598139	4844111	1.5	64	109	83	13	0.0%
RE230900_300	Residential	598118	4844130	1.5	66	110	83	14	0.0%
RE230900_301	Residential	598112	4844137	1.5	66	111	83	14	0.0%
RE230900_302	Residential	598231	4844068	1.5	58	102	83	7	0.0%
RE230900_303	Residential	598240	4844057	1.5	58	102	83	7	0.0%
RE230900_304	Residential	598258	4844039	1.5	57	101	83	7	0.0%
RE230900_305	Residential	598267	4844030	1.5	56	101	83	7	0.0%
RE230900_306	Residential	598275	4844021	1.5	56	101	83	7	0.0%
RE230900_307	Residential	598296	4844003	1.5	55	100	83	7	0.0%
RE230900_310	Residential	598286	4844012	1.5	56	100	83	7	0.0%
RE230900_312	Residential	598068	4844260	1.5	65	109	83	11	0.0%
RE230900_313	Residential	598248	4844048	1.5	57	102	83	7	0.0%
RE230900_315	Residential	598095	4844177	1.5	66	111	83	13	0.0%
RE230900_317	Residential	598062	4844211	1.5	68	113	83	14	0.0%
RE230900_318	Residential	598168	4844040	1.5	63	108	83	14	0.0%
RE230900_319	Residential	598156	4844051	1.5	64	109	83	14	0.0%
RE230900_320	Residential	598148	4844062	1.5	64	109	83	14	0.0%
RE230900_321	Residential	598135	4844072	1.5	65	110	83	16	0.0%
RE230900_322	Residential	598126	4844084	1.5	66	111	83	18	0.0%
RE230900_323	Residential	598113	4844094	1.5	67	111	83	19	0.0%
RE230900_324	Residential	598105	4844105	1.5	67	112	83	19	0.0%
RE230900_325	Residential	598096	4844112	1.5	68	112	83	20	0.0%
RE230900_326	Residential	598087	4844118	1.5	68	113	83	21	0.0%
RE230900_327	Residential	598077	4844131	1.5	69	113	83	21	0.0%
RE230900_328	Residential	598067	4844143	1.5	69	114	83	22	0.1%
RE230900_329	Residential	598061	4844157	1.5	70	114	83	19	0.0%
RE230900_330	Residential	598061	4844172	1.5	69	114	83	17	0.0%
RE230900_331	Residential	598061	4844185	1.5	69	114	83	17	0.0%
RE230900_332	Residential	598062	4844198	1.5	69	113	83	15	0.0%
RE230900_333	Residential	598063	4844224	1.5	68	112	83	13	0.0%
RE230900_334	Residential	598128	4844123	1.5	65	110	83	14	0.0%
RE230900_335	Residential	598138	4844168	1.5	62	107	83	9	0.0%
RE230900_337	Residential	598275	4843935	1.5	59	103	83	12	0.0%
RE230900_338	Residential	598267	4843942	1.5	59	104	83	14	0.0%
RE230900_339	Residential	598256	4843950	1.5	60	104	83	14	0.0%
RE230900_340	Residential	598247	4843960	1.5	60	105	83	14	0.0%
RE230900_341	Residential	598239	4843966	1.5	60	105	83	14	0.0%
RE230900_342	Residential	598233	4843974	1.5	61	105	83	14	0.0%
RE230900_343	Residential	598226	4843980	1.5	61	106	83	14	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_344	Residential	598218	4843987	1.5	61	106	83	14	0.0%
RE230900_345	Residential	598211	4843994	1.5	62	106	83	14	0.0%
RE230900_346	Residential	598205	4844002	1.5	62	106	83	14	0.0%
RE230900_347	Residential	598199	4844007	1.5	62	107	83	14	0.0%
RE230900_348	Residential	598190	4844015	1.5	63	107	83	14	0.0%
RE230900_349	Residential	598181	4844024	1.5	63	107	83	14	0.0%
RE230900_350	Residential	597947	4844283	1.5	73	117	83	30	0.1%
RE230900_351	Residential	597937	4844272	1.5	73	117	83	33	0.1%
RE230900_352	Residential	597929	4844264	1.5	73	118	83	37	0.1%
RE230900_353	Residential	597958	4844245	1.5	73	117	83	32	0.1%
RE230900_354	Residential	597947	4844234	1.5	73	118	83	37	0.1%
RE230900_355	Residential	597920	4844224	1.5	79	119	83	55	0.1%
RE230900_356	Residential	597911	4844235	1.5	79	120	83	56	0.1%
RE230900_357	Residential	597935	4844225	1.5	74	118	83	43	0.1%
RE230900_358	Residential	597903	4844242	1.5	79	120	83	57	0.1%
RE230900_359	Residential	597894	4844252	1.5	79	120	83	57	0.1%
RE230900_360	Residential	597885	4844262	1.5	79	120	83	58	0.1%
RE230900_361	Residential	597993	4844327	1.5	71	115	83	15	0.0%
RE230900_362	Residential	597985	4844320	1.5	72	117	83	15	0.0%
RE230900_363	Residential	597976	4844312	1.5	72	117	83	18	0.0%
RE230900_364	Residential	597966	4844301	1.5	72	117	83	22	0.1%
RE230900_365	Residential	597956	4844290	1.5	72	117	83	28	0.1%
RE230900_366	Residential	597988	4844228	1.5	72	117	83	28	0.1%
RE230900_367	Residential	597980	4844220	1.5	72	117	83	31	0.1%
RE230900_368	Residential	597970	4844211	1.5	73	117	83	33	0.1%
RE230900_369	Residential	597960	4844201	1.5	73	118	83	39	0.1%
RE230900_370	Residential	597949	4844191	1.5	78	119	83	46	0.1%
RE230900_371	Residential	597936	4844178	1.5	79	120	83	63	0.1%
RE230900_372	Residential	598039	4844140	1.5	72	117	83	27	0.1%
RE230900_373	Residential	598027	4844132	1.5	72	117	83	31	0.1%
RE230900_374	Residential	598012	4844121	1.5	73	117	83	41	0.1%
RE230900_375	Residential	597996	4844119	1.5	77	118	83	48	0.1%
RE230900_376	Residential	597981	4844132	1.5	78	119	83	51	0.1%
RE230900_377	Residential	597973	4844146	1.5	78	119	83	51	0.1%
RE230900_378	Residential	598034	4844176	1.5	72	116	83	25	0.1%
RE230900_379	Residential	598015	4844169	1.5	72	117	83	29	0.1%
RE230900_380	Residential	598000	4844158	1.5	73	117	83	35	0.1%
RE230900_381	Residential	597986	4844180	1.5	73	117	83	35	0.1%
RE230900_382	Residential	597997	4844189	1.5	72	117	83	31	0.1%
RE230900_383	Residential	598009	4844195	1.5	72	117	83	26	0.1%
RE230900_384	Residential	598020	4844205	1.5	72	116	83	24	0.1%
RE230900_385	Residential	598034	4844205	1.5	71	116	83	20	0.0%
RE230900_386	Residential	598213	4843919	1.5	66	110	83	24	0.1%
RE230900_387	Residential	598223	4843930	1.5	63	108	83	20	0.0%
RE230900_388	Residential	598235	4843942	1.5	61	106	83	15	0.0%
RE230900_389	Residential	598262	4843914	1.5	60	105	83	15	0.0%
RE230900_390	Residential	598251	4843903	1.5	61	106	83	17	0.0%
RE230900_391	Residential	598238	4843889	1.5	65	109	83	23	0.1%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_394	Residential	597965	4844159	1.5	78	119	83	51	0.1%
RE230900_395	Residential	598116	4843943	1.5	77	118	83	59	0.1%
RE230900_396	Residential	598126	4843952	1.5	72	117	83	42	0.1%
RE230900_397	Residential	598136	4843962	1.5	72	117	83	35	0.1%
RE230900_398	Residential	598147	4843973	1.5	71	116	83	29	0.1%
RE230900_399	Residential	598158	4843985	1.5	68	113	83	25	0.1%
RE230900_400	Residential	598170	4843998	1.5	65	109	83	19	0.0%
RE230900_401	Residential	598145	4844026	1.5	66	111	83	21	0.0%
RE230900_402	Residential	598132	4844013	1.5	70	114	83	26	0.1%
RE230900_403	Residential	598121	4844002	1.5	72	116	83	29	0.1%
RE230900_404	Residential	598113	4843994	1.5	72	117	83	35	0.1%
RE230900_405	Residential	598106	4843985	1.5	72	117	83	40	0.1%
RE230900_406	Residential	598095	4843974	1.5	75	117	83	59	0.1%
RE231000_001	Recreation	597895	4844715	1.5	78	119	83	14	0.0%
RE231000_002	Residential	594593	4847779	1.5	33	77	83	0	-
RE231000_003	Residential	597966	4844386	1.5	70	115	83	15	0.0%
RE231000_004	Residential	597973	4844395	1.5	68	112	83	11	0.0%
RE231000_005	Residential	597984	4844407	1.5	68	112	83	11	0.0%
RE231000_006	Residential	597998	4844418	1.5	68	112	83	10	0.0%
RE231000_007	Residential	598005	4844428	1.5	67	112	83	10	0.0%
RE231000_008	Residential	598021	4844443	1.5	66	111	83	10	0.0%
RE231000_009	Residential	598033	4844455	1.5	65	108	83	9	0.0%
RE231000_010	Residential	598043	4844466	1.5	66	107	83	8	0.0%
RE231000_011	Residential	597940	4844407	1.5	72	117	83	17	0.0%
RE231000_012	Residential	597949	4844414	1.5	70	115	83	16	0.0%
RE231000_013	Residential	597956	4844424	1.5	70	114	83	14	0.0%
RE231000_014	Residential	597965	4844432	1.5	70	114	83	12	0.0%
RE231000_015	Residential	597973	4844440	1.5	69	114	83	11	0.0%
RE231000_016	Residential	597982	4844449	1.5	69	113	83	10	0.0%
RE231000_017	Residential	597989	4844456	1.5	68	113	83	10	0.0%
RE231000_018	Residential	597997	4844465	1.5	67	112	83	10	0.0%
RE231000_019	Residential	598006	4844473	1.5	67	111	83	9	0.0%
RE231000_020	Residential	598015	4844481	1.5	68	109	83	9	0.0%
RE231000_021	Residential	598022	4844489	1.5	68	109	83	8	0.0%
RE231000_022	Residential	598030	4844498	1.5	69	109	83	8	0.0%
RE231000_023	Residential	598039	4844506	1.5	69	110	83	8	0.0%
RE231000_024	Residential	598046	4844513	1.5	69	110	83	9	0.0%
RE231000_025	Residential	598053	4844523	1.5	69	110	83	10	0.0%
RE231000_026	Residential	598064	4844530	1.5	69	110	83	10	0.0%
RE231000_027	Residential	597902	4844429	1.5	72	117	83	22	0.1%
RE231000_028	Residential	597911	4844437	1.5	72	117	83	19	0.0%
RE231000_029	Residential	597918	4844446	1.5	72	116	83	18	0.0%
RE231000_030	Residential	597928	4844453	1.5	72	116	83	17	0.0%
RE231000_031	Residential	597934	4844463	1.5	72	116	83	16	0.0%
RE231000_032	Residential	597943	4844469	1.5	72	116	83	14	0.0%
RE231000_033	Residential	597953	4844479	1.5	71	116	83	12	0.0%
RE231000_034	Residential	597961	4844486	1.5	70	115	83	11	0.0%
RE231000_035	Residential	597969	4844494	1.5	69	114	83	11	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_036	Residential	597976	4844504	1.5	69	112	83	10	0.0%
RE231000_037	Residential	597984	4844514	1.5	70	111	83	10	0.0%
RE231000_038	Residential	597992	4844520	1.5	71	112	83	9	0.0%
RE231000_039	Residential	598001	4844529	1.5	71	112	83	9	0.0%
RE231000_040	Residential	598009	4844537	1.5	72	112	83	10	0.0%
RE231000_041	Residential	598016	4844545	1.5	71	112	83	10	0.0%
RE231000_042	Residential	598025	4844554	1.5	71	112	83	10	0.0%
RE231000_043	Residential	598033	4844562	1.5	71	112	83	10	0.0%
RE231000_044	Residential	598013	4844582	1.5	72	113	83	10	0.0%
RE231000_045	Residential	598003	4844574	1.5	73	113	83	10	0.0%
RE231000_046	Residential	597995	4844566	1.5	73	114	83	10	0.0%
RE231000_047	Residential	597987	4844557	1.5	73	114	83	10	0.0%
RE231000_048	Residential	597979	4844550	1.5	73	114	83	10	0.0%
RE231000_049	Residential	597972	4844542	1.5	72	113	83	11	0.0%
RE231000_050	Residential	597967	4844538	1.5	72	113	83	11	0.0%
RE231000_051	Residential	597961	4844530	1.5	71	112	83	10	0.0%
RE231000_052	Residential	597957	4844525	1.5	71	113	83	10	0.0%
RE231000_053	Residential	597950	4844520	1.5	70	114	83	13	0.0%
RE231000_054	Residential	597945	4844515	1.5	71	115	83	13	0.0%
RE231000_055	Residential	597940	4844509	1.5	71	116	83	12	0.0%
RE231000_056	Residential	597934	4844504	1.5	72	116	83	13	0.0%
RE231000_057	Residential	597929	4844499	1.5	72	117	83	14	0.0%
RE231000_058	Residential	597923	4844493	1.5	72	117	83	16	0.0%
RE231000_059	Residential	597918	4844487	1.5	72	117	83	16	0.0%
RE231000_060	Residential	597914	4844483	1.5	72	117	83	17	0.0%
RE231000_061	Residential	597908	4844476	1.5	72	117	83	18	0.0%
RE231000_062	Residential	597904	4844471	1.5	72	117	83	19	0.0%
RE231000_063	Residential	597897	4844465	1.5	72	117	83	21	0.0%
RE231000_064	Residential	597892	4844460	1.5	72	117	83	23	0.1%
RE231000_065	Residential	597886	4844454	1.5	73	117	83	24	0.1%
RE231000_066	Residential	597881	4844449	1.5	73	117	83	26	0.1%
RE231000_067	Residential	597742	4844586	1.5	78	119	83	50	0.1%
RE231000_068	Residential	597739	4844592	1.5	78	119	83	50	0.1%
RE231000_069	Residential	597735	4844599	1.5	78	119	83	50	0.1%
RE231000_070	Residential	597732	4844605	1.5	78	119	83	50	0.1%
RE231000_071	Residential	597727	4844613	1.5	79	119	83	52	0.1%
RE231000_072	Residential	597724	4844619	1.5	79	119	83	52	0.1%
RE231000_073	Residential	597720	4844626	1.5	79	119	83	53	0.1%
RE231000_074	Residential	597718	4844632	1.5	79	120	83	53	0.1%
RE231000_075	Residential	597712	4844640	1.5	79	120	83	59	0.1%
RE231000_076	Residential	597707	4844646	1.5	79	120	83	59	0.1%
RE231000_077	Residential	597684	4844653	1.5	79	120	83	71	0.2%
RE231000_078	Residential	597688	4844659	1.5	79	120	83	68	0.2%
RE231000_079	Residential	597692	4844664	1.5	79	120	83	64	0.1%
RE231000_080	Residential	597695	4844670	1.5	79	120	83	63	0.1%
RE231000_081	Residential	597701	4844677	1.5	79	120	83	60	0.1%
RE231000_082	Residential	597705	4844683	1.5	79	120	83	59	0.1%
RE231000_083	Residential	597708	4844687	1.5	79	120	83	59	0.1%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_084	Residential	597711	4844692	1.5	80	120	83	58	0.1%
RE231000_085	Residential	597729	4844665	1.5	79	120	83	48	0.1%
RE231000_086	Residential	597725	4844670	1.5	79	120	83	51	0.1%
RE231000_087	Residential	597738	4844650	1.5	79	120	83	44	0.1%
RE231000_088	Residential	597734	4844657	1.5	79	120	83	44	0.1%
RE231000_089	Residential	597742	4844645	1.5	79	120	83	43	0.1%
RE231000_090	Residential	597746	4844639	1.5	79	119	83	42	0.1%
RE231000_091	Residential	597750	4844631	1.5	79	119	83	40	0.1%
RE231000_092	Residential	597753	4844624	1.5	78	119	83	40	0.1%
RE231000_093	Residential	597757	4844618	1.5	78	119	83	38	0.1%
RE231000_094	Residential	597761	4844610	1.5	78	119	83	36	0.1%
RE231000_095	Residential	597764	4844603	1.5	78	119	83	36	0.1%
RE231000_096	Residential	597768	4844596	1.5	78	119	83	37	0.1%
RE231000_097	Residential	597773	4844591	1.5	78	118	83	36	0.1%
RE231000_098	Residential	597777	4844584	1.5	77	118	83	37	0.1%
RE231000_099	Residential	597780	4844577	1.5	76	118	83	36	0.1%
RE231000_100	Residential	597784	4844570	1.5	76	118	83	36	0.1%
RE231000_101	Residential	597789	4844564	1.5	75	118	83	36	0.1%
RE231000_102	Residential	597793	4844557	1.5	75	118	83	36	0.1%
RE231000_103	Residential	597796	4844550	1.5	74	118	83	35	0.1%
RE231000_104	Residential	597800	4844544	1.5	74	118	83	35	0.1%
RE231000_105	Residential	597804	4844537	1.5	73	118	83	34	0.1%
RE231000_106	Residential	597807	4844531	1.5	74	118	83	34	0.1%
RE231000_107	Residential	597811	4844525	1.5	74	118	83	34	0.1%
RE231000_108	Residential	597814	4844518	1.5	74	118	83	34	0.1%
RE231000_109	Residential	597819	4844511	1.5	73	118	83	34	0.1%
RE231000_110	Residential	597851	4844481	1.5	73	118	83	29	0.1%
RE231000_111	Residential	597881	4844502	1.5	72	117	83	22	0.1%
RE231000_112	Residential	597876	4844507	1.5	72	117	83	22	0.1%
RE231000_113	Residential	597871	4844514	1.5	72	117	83	23	0.1%
RE231000_114	Residential	597866	4844519	1.5	72	117	83	24	0.1%
RE231000_115	Residential	597849	4844534	1.5	73	117	83	27	0.1%
RE231000_116	Residential	597855	4844537	1.5	73	117	83	27	0.1%
RE231000_117	Residential	597863	4844540	1.5	73	117	83	24	0.1%
RE231000_118	Residential	597869	4844544	1.5	72	117	83	23	0.1%
RE231000_119	Residential	597877	4844549	1.5	72	117	83	22	0.1%
RE231000_120	Residential	597883	4844553	1.5	73	117	83	20	0.0%
RE231000_121	Residential	597889	4844560	1.5	74	117	83	20	0.0%
RE231000_122	Residential	597894	4844565	1.5	74	117	83	17	0.0%
RE231000_123	Residential	597899	4844571	1.5	75	117	83	17	0.0%
RE231000_124	Residential	597904	4844576	1.5	75	116	83	15	0.0%
RE231000_125	Residential	597911	4844583	1.5	76	116	83	13	0.0%
RE231000_126	Residential	597920	4844591	1.5	77	117	83	12	0.0%
RE231000_127	Residential	597928	4844600	1.5	77	118	83	11	0.0%
RE231000_128	Residential	597935	4844608	1.5	78	118	83	11	0.0%
RE231000_129	Residential	597944	4844616	1.5	78	118	83	10	0.0%
RE231000_130	Residential	597952	4844625	1.5	77	118	83	10	0.0%
RE231000_131	Residential	597960	4844633	1.5	76	116	83	10	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_132	Residential	597889	4844521	1.5	72	117	83	22	0.1%
RE231000_133	Residential	597895	4844526	1.5	72	117	83	19	0.0%
RE231000_134	Residential	597900	4844533	1.5	72	117	83	17	0.0%
RE231000_135	Residential	597906	4844537	1.5	72	117	83	17	0.0%
RE231000_136	Residential	597912	4844543	1.5	72	117	83	16	0.0%
RE231000_137	Residential	597916	4844549	1.5	73	116	83	15	0.0%
RE231000_138	Residential	597922	4844554	1.5	73	116	83	14	0.0%
RE231000_139	Residential	597927	4844558	1.5	73	114	83	12	0.0%
RE231000_140	Residential	597933	4844565	1.5	74	115	83	12	0.0%
RE231000_141	Residential	597938	4844570	1.5	75	115	83	12	0.0%
RE231000_142	Residential	597944	4844577	1.5	75	116	83	11	0.0%
RE231000_143	Residential	597948	4844581	1.5	76	116	83	10	0.0%
RE231000_144	Residential	597956	4844588	1.5	76	117	83	10	0.0%
RE231000_145	Residential	597964	4844596	1.5	76	117	83	10	0.0%
RE231000_146	Residential	597973	4844604	1.5	75	116	83	10	0.0%
RE231000_147	Residential	597981	4844613	1.5	74	115	83	10	0.0%
RE231000_148	Residential	597825	4844568	1.5	74	117	83	27	0.1%
RE231000_149	Residential	597833	4844573	1.5	74	117	83	27	0.1%
RE231000_150	Residential	597840	4844577	1.5	75	117	83	27	0.1%
RE231000_151	Residential	597846	4844581	1.5	75	117	83	25	0.1%
RE231000_152	Residential	597854	4844587	1.5	76	117	83	23	0.1%
RE231000_153	Residential	597859	4844593	1.5	77	117	83	21	0.0%
RE231000_154	Residential	597865	4844598	1.5	77	118	83	19	0.0%
RE231000_155	Residential	597871	4844603	1.5	78	119	83	19	0.0%
RE231000_156	Residential	597850	4844609	1.5	78	119	83	22	0.1%
RE231000_157	Residential	597844	4844615	1.5	78	119	83	23	0.1%
RE231000_158	Residential	597822	4844588	1.5	76	118	83	27	0.1%
RE231000_159	Residential	597819	4844595	1.5	76	118	83	27	0.1%
RE231000_160	Residential	597816	4844602	1.5	77	118	83	28	0.1%
RE231000_161	Residential	597813	4844608	1.5	78	119	83	29	0.1%
RE231000_162	Residential	597807	4844615	1.5	78	119	83	29	0.1%
RE231000_163	Residential	597805	4844621	1.5	78	119	83	29	0.1%
RE231000_164	Residential	597800	4844629	1.5	78	119	83	29	0.1%
RE231000_165	Residential	597796	4844636	1.5	78	119	83	31	0.1%
RE231000_166	Residential	597791	4844643	1.5	79	119	83	31	0.1%
RE231000_167	Residential	597787	4844650	1.5	79	120	83	32	0.1%
RE231000_168	Residential	597783	4844657	1.5	79	120	83	32	0.1%
RE231000_169	Residential	597780	4844665	1.5	79	120	83	32	0.1%
RE231000_170	Residential	597775	4844673	1.5	79	120	83	33	0.1%
RE231000_171	Residential	597772	4844679	1.5	79	120	83	34	0.1%
RE231000_172	Residential	597767	4844686	1.5	79	120	83	34	0.1%
RE231000_173	Residential	597764	4844694	1.5	79	120	83	33	0.1%
RE231000_174	Residential	597757	4844702	1.5	80	120	83	36	0.1%
RE231000_175	Residential	597751	4844706	1.5	80	120	83	40	0.1%
RE231000_176	Residential	597729	4844717	1.5	80	121	83	50	0.1%
RE231000_177	Residential	597734	4844724	1.5	80	121	83	47	0.1%
RE231000_178	Residential	597737	4844729	1.5	80	121	83	46	0.1%
RE231000_179	Residential	597741	4844734	1.5	80	121	83	46	0.1%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_180	Residential	597744	4844739	1.5	80	121	83	48	0.1%
RE231000_181	Residential	597747	4844744	1.5	80	121	83	48	0.1%
RE231000_182	Residential	597750	4844749	1.5	80	121	83	49	0.1%
RE231000_183	Residential	597753	4844754	1.5	80	121	83	48	0.1%
RE231000_184	Residential	597759	4844763	1.5	80	121	83	45	0.1%
RE231000_185	Residential	597762	4844769	1.5	80	121	83	40	0.1%
RE231000_186	Residential	597765	4844773	1.5	80	121	83	39	0.1%
RE231000_187	Residential	597768	4844778	1.5	80	121	83	38	0.1%
RE231000_188	Residential	597771	4844783	1.5	80	121	83	37	0.1%
RE231000_189	Residential	597774	4844789	1.5	80	121	83	37	0.1%
RE231000_190	Residential	597802	4844774	1.5	80	120	83	25	0.1%
RE231000_191	Residential	597798	4844768	1.5	80	121	83	25	0.1%
RE231000_192	Residential	597793	4844761	1.5	80	121	83	26	0.1%
RE231000_193	Residential	597789	4844754	1.5	80	121	83	29	0.1%
RE231000_194	Residential	597785	4844747	1.5	80	121	83	29	0.1%
RE231000_195	Residential	597782	4844741	1.5	80	121	83	29	0.1%
RE231000_196	Residential	597779	4844727	1.5	80	121	83	29	0.1%
RE231000_197	Residential	597780	4844719	1.5	80	121	83	30	0.1%
RE231000_198	Residential	597785	4844710	1.5	80	121	83	30	0.1%
RE231000_199	Residential	597788	4844703	1.5	80	120	83	30	0.1%
RE231000_200	Residential	597793	4844697	1.5	80	120	83	30	0.1%
RE231000_201	Residential	597797	4844690	1.5	79	120	83	29	0.1%
RE231000_202	Residential	597801	4844683	1.5	79	120	83	29	0.1%
RE231000_203	Residential	597805	4844676	1.5	79	120	83	27	0.1%
RE231000_204	Residential	597808	4844669	1.5	79	120	83	26	0.1%
RE231000_205	Residential	597812	4844663	1.5	79	120	83	26	0.1%
RE231000_206	Residential	597815	4844656	1.5	79	120	83	26	0.1%
RE231000_207	Residential	597818	4844649	1.5	79	120	83	26	0.1%
RE231000_208	Residential	597823	4844642	1.5	79	119	83	26	0.1%
RE231000_209	Residential	597827	4844636	1.5	79	119	83	25	0.1%
RE231000_210	Residential	597832	4844629	1.5	78	119	83	24	0.1%
RE231000_211	Residential	597837	4844622	1.5	78	119	83	23	0.1%
RE231000_212	Residential	597902	4844623	1.5	78	119	83	12	0.0%
RE231000_213	Residential	597895	4844627	1.5	78	119	83	14	0.0%
RE231000_214	Residential	597889	4844633	1.5	78	119	83	14	0.0%
RE231000_215	Residential	597884	4844639	1.5	79	119	83	15	0.0%
RE231000_216	Residential	597878	4844646	1.5	79	119	83	15	0.0%
RE231000_217	Residential	597873	4844650	1.5	79	119	83	16	0.0%
RE231000_218	Residential	597867	4844656	1.5	79	120	83	16	0.0%
RE231000_219	Residential	597863	4844664	1.5	79	120	83	17	0.0%
RE231000_220	Residential	597859	4844671	1.5	79	120	83	18	0.0%
RE231000_221	Residential	597855	4844678	1.5	79	120	83	20	0.0%
RE231000_222	Residential	597851	4844684	1.5	79	120	83	20	0.0%
RE231000_223	Residential	597847	4844690	1.5	79	120	83	20	0.0%
RE231000_224	Residential	597843	4844697	1.5	79	120	83	21	0.0%
RE231000_225	Residential	597839	4844704	1.5	79	120	83	21	0.0%
RE231000_226	Residential	597835	4844711	1.5	79	120	83	22	0.1%
RE231000_227	Residential	597832	4844718	1.5	79	120	83	22	0.1%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_228	Residential	597827	4844726	1.5	79	120	83	23	0.1%
RE231000_229	Residential	597824	4844733	1.5	79	120	83	23	0.1%
RE231000_230	Residential	597840	4844745	1.5	79	120	83	22	0.1%
RE231000_231	Residential	597846	4844750	1.5	79	120	83	20	0.0%
RE231000_232	Residential	597851	4844761	1.5	78	119	83	19	0.0%
RE231000_233	Residential	597853	4844771	1.5	78	118	83	19	0.0%
RE231000_234	Residential	597851	4844781	1.5	75	117	83	19	0.0%
RE231000_235	Residential	597848	4844790	1.5	74	117	83	19	0.0%
RE231000_236	Residential	597838	4844796	1.5	75	117	83	21	0.0%
RE231000_237	Residential	597831	4844801	1.5	76	117	83	23	0.1%
RE231000_238	Residential	597823	4844804	1.5	77	118	83	26	0.1%
RE231000_239	Residential	597817	4844807	1.5	78	119	83	27	0.1%
RE231000_240	Residential	597811	4844812	1.5	78	119	83	27	0.1%
RE231000_241	Residential	597804	4844816	1.5	78	119	83	28	0.1%
RE231000_242	Residential	597800	4844820	1.5	78	119	83	28	0.1%
RE231000_243	Residential	597794	4844823	1.5	79	119	83	31	0.1%
RE231000_244	Residential	597788	4844825	1.5	79	120	83	34	0.1%
RE231000_245	Residential	597783	4844829	1.5	79	120	83	41	0.1%
RE231000_246	Residential	597778	4844831	1.5	79	120	83	43	0.1%
RE231000_247	Residential	597772	4844835	1.5	79	120	83	50	0.1%
RE231000_248	Residential	598015	4844639	1.5	68	112	83	9	0.0%
RE231000_249	Residential	598007	4844649	1.5	68	113	83	9	0.0%
RE231000_250	Residential	597997	4844656	1.5	69	113	83	9	0.0%
RE231000_251	Residential	597989	4844666	1.5	69	114	83	9	0.0%
RE231000_252	Residential	598060	4844590	1.5	66	109	83	9	0.0%
RE231000_253	Residential	598069	4844598	1.5	64	109	83	9	0.0%
RE231000_254	Residential	598040	4844610	1.5	67	111	83	9	0.0%
RE231000_255	Residential	598049	4844618	1.5	65	110	83	9	0.0%
RE231000_256	Residential	598252	4844214	1.5	54	99	83	5	0.0%
RE231000_257	Residential	598246	4844300	1.5	56	97	83	90	0.2%
RE231000_276	Residential	598191	4844478	1.5	59	102	83	7	0.0%
RE231000_277	Residential	598184	4844471	1.5	61	103	83	6	0.0%
RE231000_278	Residential	598093	4844561	1.5	64	107	83	9	0.0%
RE231000_279	Residential	598104	4844571	1.5	62	107	83	9	0.0%
RE231000_280	Residential	598023	4844395	1.5	66	111	83	10	0.0%
RE231000_281	Residential	598013	4844383	1.5	66	111	83	11	0.0%
RE231000_282	Residential	598113	4844482	1.5	66	106	83	8	0.0%
RE231000_283	Residential	598059	4844484	1.5	68	108	83	8	0.0%
RE231000_284	Residential	598062	4844435	1.5	64	106	83	8	0.0%
RE231000_285	Residential	598052	4844476	1.5	67	108	83	8	0.0%
RE231000_286	Residential	598054	4844424	1.5	63	108	83	9	0.0%
RE231000_287	Residential	598086	4844510	1.5	67	108	83	9	0.0%
RE231000_288	Residential	598077	4844504	1.5	68	109	83	8	0.0%
RE231000_289	Residential	598044	4844414	1.5	65	109	83	9	0.0%
RE231000_290	Residential	598033	4844405	1.5	66	110	83	10	0.0%
RE231000_291	Residential	598102	4844474	1.5	66	107	83	8	0.0%
RE231000_292	Residential	598093	4844464	1.5	66	107	83	8	0.0%
RE231000_293	Residential	598072	4844496	1.5	68	109	83	8	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_294	Residential	598083	4844454	1.5	66	106	83	8	0.0%
RE231000_295	Residential	598065	4844490	1.5	68	109	83	8	0.0%
RE231000_296	Residential	598074	4844444	1.5	65	106	83	8	0.0%
RE231000_297	Residential	598159	4844494	1.5	62	104	83	7	0.0%
RE231000_298	Residential	598169	4844501	1.5	60	103	83	7	0.0%
RE231000_299	Residential	598002	4844372	1.5	66	110	83	11	0.0%
RE231000_300	Residential	598066	4844349	1.5	63	108	83	9	0.0%
RE231000_301	Residential	598127	4844467	1.5	65	106	83	8	0.0%
RE231000_302	Residential	598120	4844461	1.5	65	106	83	8	0.0%
RE231000_303	Residential	598109	4844448	1.5	65	106	83	8	0.0%
RE231000_304	Residential	598101	4844440	1.5	65	105	83	8	0.0%
RE231000_305	Residential	598067	4844275	1.5	64	108	83	10	0.0%
RE231000_306	Residential	598068	4844289	1.5	62	107	83	9	0.0%
RE231000_307	Residential	598068	4844303	1.5	62	106	83	9	0.0%
RE231000_308	Residential	598066	4844315	1.5	62	107	83	9	0.0%
RE231000_309	Residential	598076	4844364	1.5	63	107	83	9	0.0%
RE231000_310	Residential	598085	4844425	1.5	63	104	83	8	0.0%
RE231000_311	Residential	598078	4844418	1.5	63	105	83	8	0.0%
RE231000_312	Residential	598069	4844410	1.5	62	107	83	9	0.0%
RE231000_313	Residential	598062	4844402	1.5	63	108	83	9	0.0%
RE231000_314	Residential	598053	4844391	1.5	64	109	83	9	0.0%
RE231000_315	Residential	598047	4844385	1.5	65	109	83	9	0.0%
RE231000_316	Residential	598030	4844364	1.5	65	110	83	11	0.0%
RE231000_317	Residential	598086	4844375	1.5	62	107	83	9	0.0%
RE231000_318	Residential	598106	4844396	1.5	62	104	83	8	0.0%
RE231000_319	Residential	598116	4844406	1.5	62	103	83	8	0.0%
RE231000_320	Residential	598127	4844416	1.5	63	103	83	8	0.0%
RE231000_321	Residential	598143	4844435	1.5	63	104	83	8	0.0%
RE231000_322	Residential	598152	4844444	1.5	64	104	83	8	0.0%
RE231000_332	Residential	598315	4844073	1.5	51	96	83	5	0.0%
RE231000_333	Residential	598310	4844078	1.5	51	96	83	5	0.0%
RE231000_334	Residential	598295	4844091	1.5	52	96	83	5	0.0%
RE231000_335	Residential	598288	4844098	1.5	52	97	83	5	0.0%
RE231000_336	Residential	598282	4844104	1.5	52	97	83	5	0.0%
RE231000_337	Residential	598277	4844111	1.5	52	97	83	5	0.0%
RE231000_338	Residential	598310	4844038	1.5	51	96	83	5	0.0%
RE231000_339	Residential	598302	4844046	1.5	51	96	83	5	0.0%
RE231000_340	Residential	598295	4844054	1.5	52	96	83	5	0.0%
RE231000_341	Residential	598276	4844074	1.5	52	97	83	5	0.0%
RE231000_342	Residential	598267	4844081	1.5	53	97	83	5	0.0%
RE231000_343	Residential	598114	4844352	1.5	61	105	83	9	0.0%
RE231000_345	Residential	598126	4844322	1.5	60	105	83	7	0.0%
RE231000_346	Residential	598176	4844416	1.5	62	103	83	8	0.0%
RE231000_347	Residential	598167	4844408	1.5	62	103	83	8	0.0%
RE231000_348	Residential	598159	4844398	1.5	62	102	83	8	0.0%
RE231000_350	Residential	598126	4844309	1.5	60	105	83	7	0.0%
RE231000_351	Residential	598128	4844228	1.5	59	104	83	7	0.0%
RE231000_353	Residential	598285	4844064	1.5	52	97	83	5	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_354	Residential	598140	4844379	1.5	60	101	83	7	0.0%
RE231000_355	Residential	598131	4844370	1.5	60	102	83	6	0.0%
RE231000_356	Residential	598122	4844361	1.5	59	104	83	6	0.0%
RE231000_357	Residential	598102	4844340	1.5	62	106	83	9	0.0%
RE231000_358	Residential	598099	4844324	1.5	62	106	83	8	0.0%
RE231000_359	Residential	598099	4844310	1.5	61	106	83	7	0.0%
RE231000_360	Residential	598099	4844296	1.5	61	106	83	7	0.0%
RE231000_361	Residential	598098	4844283	1.5	61	105	83	7	0.0%
RE231000_362	Residential	598099	4844258	1.5	60	105	83	7	0.0%
RE231000_363	Residential	598197	4844395	1.5	61	102	83	8	0.0%
RE231000_364	Residential	598180	4844378	1.5	61	101	83	7	0.0%
RE231000_365	Residential	598171	4844369	1.5	60	101	83	6	0.0%
RE231000_366	Residential	598162	4844359	1.5	59	100	83	6	0.0%
RE231000_367	Residential	598151	4844349	1.5	58	101	83	6	0.0%
RE231000_368	Residential	598142	4844340	1.5	58	103	83	6	0.0%
RE231000_369	Residential	598126	4844283	1.5	60	105	83	7	0.0%
RE231000_370	Residential	598126	4844271	1.5	60	104	83	7	0.0%
RE231000_371	Residential	598126	4844257	1.5	59	104	83	7	0.0%
RE231000_374	Residential	598127	4844295	1.5	60	105	83	7	0.0%
RE231000_377	Residential	598258	4844089	1.5	53	98	83	5	0.0%
RE231000_378	Residential	598094	4844433	1.5	64	105	83	8	0.0%
RE231000_379	Residential	598067	4844332	1.5	63	107	83	9	0.0%
RE231000_380	Residential	598096	4844385	1.5	61	105	83	9	0.0%
RE231000_381	Residential	598149	4844389	1.5	61	102	83	8	0.0%
RE231000_382	Residential	598135	4844425	1.5	63	104	83	8	0.0%
RE231000_383	Residential	598303	4844085	1.5	52	96	83	5	0.0%
RE231000_384	Residential	598115	4844455	1.5	65	106	83	8	0.0%
RE231000_385	Residential	598038	4844375	1.5	65	110	83	10	0.0%
RE231000_386	Residential	598099	4844270	1.5	60	105	83	7	0.0%
RE231000_387	Residential	598188	4844386	1.5	61	102	83	8	0.0%
RE231000_388	Residential	598129	4844214	1.5	60	105	83	7	0.0%
RE231000_390	Residential	598013	4844349	1.5	65	110	83	11	0.0%
RE231000_391	Residential	598003	4844338	1.5	68	113	83	12	0.0%
RE231000_392	Residential	598159	4844280	1.5	58	103	83	6	0.0%
RE231000_393	Residential	598189	4844215	1.5	57	101	83	6	0.0%
RE231000_394	Residential	598219	4844376	1.5	60	100	83	6	0.0%
RE231000_395	Residential	598212	4844369	1.5	60	100	83	5	0.0%
RE231000_396	Residential	598207	4844363	1.5	59	100	83	5	0.0%
RE231000_397	Residential	598199	4844356	1.5	59	100	83	6	0.0%
RE231000_398	Residential	598192	4844346	1.5	59	100	83	5	0.0%
RE231000_399	Residential	598181	4844337	1.5	58	99	83	5	0.0%
RE231000_400	Residential	598170	4844327	1.5	57	101	83	5	0.0%
RE231000_401	Residential	598161	4844314	1.5	58	102	83	5	0.0%
RE231000_402	Residential	598159	4844294	1.5	58	103	83	6	0.0%
RE231000_403	Residential	598158	4844273	1.5	58	103	83	6	0.0%
RE231000_404	Residential	598159	4844265	1.5	58	103	83	6	0.0%
RE231000_405	Residential	598159	4844257	1.5	58	103	83	6	0.0%
RE231000_406	Residential	598236	4844348	1.5	58	99	83	5	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_407	Residential	598223	4844334	1.5	58	99	83	5	0.0%
RE231000_408	Residential	598215	4844325	1.5	57	98	83	5	0.0%
RE231000_409	Residential	598204	4844313	1.5	57	98	83	5	0.0%
RE231000_410	Residential	598199	4844309	1.5	57	99	83	5	0.0%
RE231000_411	Residential	598189	4844279	1.5	57	101	83	5	0.0%
RE231000_412	Residential	598189	4844265	1.5	57	102	83	6	0.0%
RE231000_413	Residential	598161	4844229	1.5	57	102	83	6	0.0%
RE231000_414	Residential	598162	4844216	1.5	57	102	83	6	0.0%
RE231000_415	Residential	598162	4844205	1.5	57	101	83	6	0.0%
RE231000_416	Residential	598163	4844190	1.5	57	102	83	7	0.0%
RE231000_417	Residential	598169	4844178	1.5	57	102	83	7	0.0%
RE231000_418	Residential	598181	4844167	1.5	57	101	83	7	0.0%
RE231000_419	Residential	598189	4844231	1.5	57	101	83	6	0.0%
RE231000_420	Residential	598189	4844224	1.5	57	101	83	6	0.0%
RE231000_421	Residential	598205	4844183	1.5	56	100	83	6	0.0%
RE231000_422	Residential	598217	4844170	1.5	55	100	83	6	0.0%
RE231000_423	Residential	598227	4844160	1.5	55	99	83	6	0.0%
RE231000_424	Residential	598235	4844153	1.5	54	99	83	6	0.0%
RE231000_425	Residential	598244	4844144	1.5	54	98	83	5	0.0%
RE231000_426	Residential	598253	4844135	1.5	53	98	83	5	0.0%
RE231000_427	Residential	598189	4844160	1.5	56	101	83	7	0.0%
RE231000_428	Residential	598198	4844150	1.5	56	101	83	7	0.0%
RE231000_429	Residential	598208	4844141	1.5	56	100	83	7	0.0%
RE231000_430	Residential	598189	4844272	1.5	57	102	83	5	0.0%
RE231000_431	Residential	598225	4844124	1.5	55	99	83	6	0.0%
RE231000_432	Residential	598189	4844288	1.5	57	101	83	5	0.0%
RE231000_433	Residential	598211	4844177	1.5	55	100	83	6	0.0%
RE231000_434	Residential	598217	4844132	1.5	55	100	83	6	0.0%
RE231000_435	Residential	598210	4844320	1.5	57	98	83	5	0.0%
RE231000_436	Residential	598191	4844204	1.5	56	101	83	6	0.0%
RE231000_437	Residential	598190	4844258	1.5	57	102	83	6	0.0%
RE231000_438	Residential	598235	4844114	1.5	54	99	83	6	0.0%
RE231000_439	Residential	598242	4844353	1.5	59	99	83	4	0.0%
RE231000_440	Residential	598230	4844340	1.5	58	99	83	5	0.0%
RE231000_441	Residential	598197	4844191	1.5	56	100	83	6	0.0%
RE231000_443	Residential	598213	4844460	1.5	59	101	83	6	0.0%
RE231000_444	Residential	598234	4844437	1.5	58	101	83	6	0.0%
RE231000_445	Residential	598227	4844430	1.5	59	101	83	6	0.0%
RE231000_446	Residential	598203	4844452	1.5	60	102	83	6	0.0%
RE231000_450	Residential	598248	4844405	1.5	59	100	83	6	0.0%
RE231000_452	Residential	598146	4844517	1.5	62	105	83	7	0.0%
RE231000_453	Residential	598139	4844510	1.5	63	105	83	7	0.0%
RE231000_454	Residential	598112	4844539	1.5	64	106	83	8	0.0%
RE231000_455	Residential	598152	4844523	1.5	60	104	83	7	0.0%
RE231000_456	Residential	598119	4844546	1.5	62	106	83	9	0.0%
RE231100_001	Child Care Centre	597875	4844944	1.5	80	121	83	32	0.1%
RE231100_002	Recreation	597887	4844825	1.5	75	116	83	16	0.0%
RE231100_003	Residential	594644	4847799	1.5	33	77	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_004	Residential	596834	4845864	1.5	86	127	83	319	0.7%
RE231100_005	Residential	598005	4844679	1.5	67	111	83	10	0.0%
RE231100_006	Residential	598014	4844688	1.5	68	112	83	10	0.0%
RE231100_007	Residential	598022	4844696	1.5	68	112	83	10	0.0%
RE231100_008	Residential	598026	4844658	1.5	65	110	83	9	0.0%
RE231100_009	Residential	598034	4844667	1.5	66	110	83	9	0.0%
RE231100_010	Residential	598044	4844675	1.5	66	110	83	10	0.0%
RE231100_011	Residential	598051	4844682	1.5	67	111	83	10	0.0%
RE231100_012	Residential	598059	4844691	1.5	67	111	83	10	0.0%
RE231100_018	Residential	598029	4844703	1.5	68	112	83	10	0.0%
RE231100_019	Residential	598037	4844712	1.5	68	112	83	10	0.0%
RE231100_020	Residential	598046	4844721	1.5	67	111	83	10	0.0%
RE231100_027	Residential	597982	4844724	1.5	70	114	83	10	0.0%
RE231100_028	Residential	597991	4844732	1.5	70	114	83	10	0.0%
RE231100_029	Residential	597999	4844741	1.5	70	114	83	11	0.0%
RE231100_030	Residential	598006	4844749	1.5	69	113	83	10	0.0%
RE231100_031	Residential	598015	4844756	1.5	68	112	83	10	0.0%
RE231100_032	Residential	598023	4844764	1.5	69	111	83	9	0.0%
RE231100_033	Residential	598031	4844773	1.5	69	111	83	9	0.0%
RE231100_041	Residential	598017	4844803	1.5	72	113	83	8	0.0%
RE231100_042	Residential	598007	4844794	1.5	72	113	83	9	0.0%
RE231100_043	Residential	597998	4844785	1.5	71	113	83	11	0.0%
RE231100_044	Residential	597991	4844777	1.5	70	113	83	11	0.0%
RE231100_045	Residential	597982	4844768	1.5	70	114	83	10	0.0%
RE231100_046	Residential	597975	4844760	1.5	70	114	83	11	0.0%
RE231100_047	Residential	597967	4844752	1.5	70	114	83	11	0.0%
RE231100_048	Residential	597958	4844742	1.5	70	114	83	11	0.0%
RE231100_049	Residential	597924	4844771	1.5	70	114	83	12	0.0%
RE231100_050	Residential	597933	4844779	1.5	70	114	83	11	0.0%
RE231100_051	Residential	597943	4844787	1.5	70	114	83	12	0.0%
RE231100_052	Residential	597950	4844796	1.5	72	114	83	11	0.0%
RE231100_053	Residential	597958	4844803	1.5	73	114	83	11	0.0%
RE231100_054	Residential	597966	4844812	1.5	74	115	83	11	0.0%
RE231100_055	Residential	597975	4844820	1.5	75	116	83	9	0.0%
RE231100_056	Residential	597983	4844829	1.5	76	116	83	9	0.0%
RE231100_057	Residential	597991	4844837	1.5	77	117	83	11	0.0%
RE231100_077	Residential	597906	4845006	1.5	78	119	83	32	0.1%
RE231100_078	Residential	597896	4845014	1.5	78	119	83	38	0.1%
RE231100_079	Residential	598077	4844606	1.5	63	108	83	9	0.0%
RE231100_080	Residential	598085	4844615	1.5	62	107	83	9	0.0%
RE231100_081	Residential	598094	4844623	1.5	62	106	83	9	0.0%
RE231100_082	Residential	598056	4844626	1.5	64	109	83	9	0.0%
RE231100_083	Residential	598066	4844634	1.5	63	107	83	9	0.0%
RE231100_084	Residential	598074	4844643	1.5	64	108	83	9	0.0%
RE231100_085	Residential	598082	4844651	1.5	64	108	83	9	0.0%
RE231100_090	Residential	598178	4844511	1.5	58	103	83	7	0.0%
RE231100_091	Residential	598202	4844488	1.5	57	102	83	7	0.0%
RE231100_116	Residential	598123	4844591	1.5	60	105	83	9	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_120	Residential	598113	4844580	1.5	61	106	83	9	0.0%
RE231100_121	Residential	598101	4844633	1.5	63	107	83	18	0.0%
RE231100_161	Residential	598142	4844569	1.5	59	104	83	9	0.0%
RE231100_164	Residential	598158	4844529	1.5	59	104	83	8	0.0%
RE231100_165	Residential	598166	4844536	1.5	59	103	83	8	0.0%
RE231100_167	Residential	598126	4844552	1.5	61	106	83	9	0.0%
RE231100_171	Residential	598133	4844560	1.5	61	105	83	9	0.0%
RE231100_175	Residential	598101	4844633	1.5	63	107	83	18	0.0%
RE231400_001	Residential	597400	4846151	1.5	87	124	83	68	0.2%
RE231400_002	Residential	597374	4846123	1.5	89	124	83	80	0.2%
RE231400_003	Residential	597425	4846115	1.5	82	123	83	62	0.1%
RE231400_004	Residential	597415	4846104	1.5	82	123	83	63	0.1%
RE231400_005	Residential	597397	4846081	1.5	82	123	83	71	0.2%
RE231400_006	Residential	597415	4846064	1.5	81	122	83	64	0.1%
RE231400_007	Residential	597438	4846085	1.5	81	122	83	58	0.1%
RE231400_008	Residential	597458	4846043	1.5	81	122	83	55	0.1%
RE231400_009	Residential	597440	4846026	1.5	81	122	83	62	0.1%
RE231400_010	Residential	597494	4845971	1.5	80	121	83	39	0.1%
RE231400_011	Residential	597177	4846314	1.5	100	128	83	136	0.3%
RE231500_002	Residential	594959	4848195	1.5	32	76	83	0	-
RE231600_001	Residential	594685	4848625	1.5	26	67	83	0	-
RE231600_004	Residential	594738	4848582	1.5	27	68	83	0	-
RE231600_005	Residential	594772	4848553	1.5	28	68	83	0	-
RE231700_002	Residential	594955	4848488	1.5	27	68	83	0	-
RE231700_003	Residential	594977	4848446	1.5	27	69	83	0	-
RE231700_004	Residential	594865	4848604	1.5	25	67	83	0	-
RE231800_001	Residential	594678	4848786	1.5	24	68	83	0	-
RE231800_002	Residential	594627	4848819	1.5	27	70	83	0	-
RE232700_002	Residential	595497	4849130	1.5	22	65	83	0	-
RE233200_001	Recreation	595805	4849383	1.5	22	64	83	0	-
RE233500_001	Residential	596000	4849598	1.5	25	70	83	0	-
RE233600_001	Residential	596065	4849694	1.5	20	64	83	0	-
RE233600_002	Residential	596044	4849667	1.5	20	65	83	0	-
RE233700_001	Residential	596171	4849814	1.5	22	66	83	0	-
RE233900_001	Residential	596273	4850023	1.5	28	72	83	0	-
RE233900_002	Residential	596203	4850118	1.5	25	70	83	0	-
RE233900_003	Residential	596230	4850156	1.5	30	75	83	0	-
RE234000_001	Residential	596284	4850244	1.5	30	75	83	0	-
RE234100_001	Residential	596370	4850189	1.5	29	74	83	0	-
RE235000_001	Residential	596939	4851084	1.5	29	73	83	0	-
RE235100_001	Residential	596983	4851111	1.5	29	73	83	0	-
RE235100_002	Residential	597028	4851138	1.5	29	73	83	0	-
RE235100_003	Residential	597152	4851021	1.5	25	70	83	0	-
RE235200_001	Residential	597087	4851160	1.5	28	73	83	0	-
RE235200_002	Residential	597153	4851077	1.5	25	68	83	0	-
RE235500_001	Residential	597387	4851296	1.5	22	67	83	0	-
RE235500_002	Residential	597327	4851381	1.5	26	69	83	0	-
RE235700_001	Residential	597704	4851314	1.5	31	72	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE235700_002	Residential	597412	4851537	1.5	25	68	83	0	-
RE235800_001	Residential	597664	4851442	1.5	55	98	83	6	0.0%
RE235900_002	Residential	597909	4851332	1.5	46	87	83	4	0.0%
RE235900_003	Residential	597683	4851628	1.5	33	76	83	0	-
RE235900_004	Residential	597618	4851651	1.5	45	88	83	3	0.0%
RE310100_001	Residential	597701	4851643	1.5	31	75	83	0	-
RE310100_002	Residential	597725	4851680	1.5	29	73	83	0	-
RE310100_003	Residential	597647	4851692	1.5	41	84	83	1	0.0%
RE310200_001	Residential	597753	4851836	1.5	35	79	83	0	-
RE310500_001	Residential	597854	4852016	1.5	30	74	83	0	-
RE310600_001	Residential	598054	4851992	1.5	19	62	83	0	-
RE310600_002	Residential	598048	4852100	1.5	25	69	83	0	-
RE310700_001	Residential	598116	4852141	1.5	30	72	83	0	-
RE310700_002	Residential	598003	4852173	1.5	30	71	83	0	-
RE310900_001	Residential	598218	4852295	1.5	30	75	83	0	-
RE311000_001	Residential	598324	4852285	1.5	26	69	83	0	-
RE311100_001	Residential	598324	4852488	1.5	20	65	83	0	-
RE311200_001	Residential	598400	4852513	1.5	23	66	83	0	-
RE311200_002	Residential	598471	4852451	1.5	27	70	83	0	-
RE311300_001	Residential	598509	4852502	1.5	28	71	83	0	-
RE311300_002	Residential	598222	4852772	1.5	19	61	83	0	-
RE311400_001	Residential	598628	4852529	1.5	23	68	83	0	-
RE311400_002	Residential	598554	4852578	1.5	38	83	83	0	-
RE311400_003	Residential	598404	4852757	1.5	23	66	83	0	-
RE311400_006	Residential	598813	4852353	1.5	18	62	83	0	-
RE311800_001	Residential	598767	4852817	1.5	22	67	83	0	-
RE311900_001	Residential	598826	4852898	1.5	22	66	83	0	-
RE312200_001	Residential	598954	4853124	1.5	25	70	83	0	-
RE312200_002	Residential	598983	4853142	1.5	22	67	83	0	-
RE312200_003	Residential	599011	4853156	1.5	20	65	83	0	-
RE312300_001	Residential	599043	4853264	1.5	21	66	83	0	-
RE312400_001	Residential	599140	4853349	1.5	18	63	83	0	-
RE312800_001	Residential	599561	4853387	1.5	19	60	83	0	-
RE312800_002	Residential	599655	4853196	1.5	13	56	83	0	-
RE312900_001	Residential	599611	4853344	1.5	20	61	83	0	-
RE312900_002	Residential	599737	4853210	1.5	18	60	83	0	-
RE313000_001	Residential	599767	4853320	1.5	21	64	83	0	-
RE313000_002	Residential	599746	4853342	1.5	20	64	83	0	-
RE313000_003	Residential	599707	4853379	1.5	21	64	83	0	-
RE313000_004	Residential	599831	4853246	1.5	23	66	83	0	-
RE313000_005	Residential	599859	4853220	1.5	23	66	83	0	-
RE313000_006	Residential	599831	4853130	1.5	20	62	83	0	-
RE313000_007	Residential	599790	4853168	1.5	20	61	83	0	-
RE313100_001	Residential	599892	4853186	1.5	23	67	83	0	-
RE314400_001	Residential	601067	4853610	1.5	16	60	83	0	-
RE314800_001	Residential	601376	4853448	1.5	18	62	83	0	-
RE314900_001	Residential	601445	4853622	1.5	23	66	83	0	-
RE316400_001	Residential	602974	4853508	1.5	61	105	83	14	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE316500_001	Residential	603041	4853572	1.5	75	116	83	18	0.0%
RE316600_001	Residential	603200	4853771	1.5	73	114	83	28	0.1%
RE316600_002	Residential	603222	4853799	1.5	72	114	83	27	0.1%
RE316700_001	Residential	603244	4853825	1.5	73	114	83	27	0.1%
RE316700_002	Residential	603260	4853854	1.5	66	110	83	25	0.1%
RE317000_001	Residential	603580	4854095	1.5	49	90	83	9	0.0%
RE410200_001	Residential	604488	4854200	1.5	18	63	83	0	-
RE410200_002	Residential	604438	4854244	1.5	17	61	83	0	-
RE411100_001	Residential	605221	4854613	1.5	34	77	83	0	-
RE411200_001	Residential	605486	4854296	1.5	78	119	83	46	0.1%
RE510000_001	Residential	605849	4853842	1.5	38	83	83	0	-
RE510000_002	Residential	605777	4854043	1.5	33	76	83	0	-
RE510100_001	Residential	605862	4854052	1.5	23	68	83	0	-
RE511200_001	Residential	607742	4853370	1.5	72	117	83	84	0.2%
RE511200_002	Residential	607750	4853371	1.5	72	117	83	85	0.2%
RE511200_003	Residential	607756	4853372	1.5	73	117	83	86	0.2%
RE511200_004	Residential	607761	4853373	1.5	73	118	83	85	0.2%
RE511200_005	Residential	607738	4853397	1.5	61	105	83	46	0.1%
RE511200_006	Residential	607744	4853398	1.5	62	107	83	49	0.1%
RE511300_001	Residential	608183	4853093	1.5	38	82	83	0	-
RE511300_002	Child Care Centre	607553	4854058	1.5	18	61	83	0	-
RE511300_003	Residential	607654	4853910	1.5	21	64	83	0	-
RE511300_004	Residential	607664	4853818	1.5	24	67	83	0	-
RE511300_005	Residential	607712	4853826	1.5	23	66	83	0	-
RE511300_006	Residential	607696	4853815	1.5	24	66	83	0	-
RE511300_007	Residential	607670	4853789	1.5	24	67	83	0	-
RE511300_008	Residential	607695	4853826	1.5	23	66	83	0	-
RE511300_009	Residential	607710	4853739	1.5	26	69	83	0	-
RE511300_010	Residential	607728	4853795	1.5	24	66	83	0	-
RE511300_011	Residential	607729	4853761	1.5	25	68	83	0	-
RE511300_012	Residential	607733	4853799	1.5	24	66	83	0	-
RE511300_013	Residential	607665	4853812	1.5	24	67	83	0	-
RE511300_014	Residential	607667	4853806	1.5	24	67	83	0	-
RE511300_015	Residential	607721	4853732	1.5	26	69	83	0	-
RE511300_016	Residential	607702	4853748	1.5	26	68	83	0	-
RE511300_017	Residential	607684	4853769	1.5	25	68	83	0	-
RE511300_018	Residential	607740	4853729	1.5	26	69	83	0	-
RE511300_019	Residential	607728	4853731	1.5	26	69	83	0	-
RE511300_020	Residential	607701	4853818	1.5	24	66	83	0	-
RE511300_021	Residential	607668	4853800	1.5	24	67	83	0	-
RE511300_022	Residential	607706	4853744	1.5	26	69	83	0	-
RE511300_023	Residential	607680	4853773	1.5	25	68	83	0	-
RE511300_024	Residential	607734	4853730	1.5	26	69	83	0	-
RE511300_025	Residential	607707	4853788	1.5	24	67	83	0	-
RE511300_026	Residential	607728	4853807	1.5	24	66	83	0	-
RE511300_027	Residential	607722	4853803	1.5	24	66	83	0	-
RE511300_028	Residential	607710	4853783	1.5	25	67	83	0	-
RE511300_029	Residential	607675	4853776	1.5	24	67	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_030	Residential	607714	4853779	1.5	25	67	83	0	-
RE511300_031	Residential	607732	4853756	1.5	25	68	83	0	-
RE511300_032	Residential	607690	4853823	1.5	24	66	83	0	-
RE511300_033	Residential	607721	4853771	1.5	25	68	83	0	-
RE511300_034	Residential	607725	4853766	1.5	25	68	83	0	-
RE511300_035	Residential	607701	4853830	1.5	23	66	83	0	-
RE511300_036	Residential	607706	4853834	1.5	23	66	83	0	-
RE511300_037	Residential	607704	4853793	1.5	24	67	83	0	-
RE511300_038	Residential	607688	4853764	1.5	25	68	83	0	-
RE511300_039	Residential	607698	4853753	1.5	26	68	83	0	-
RE511300_040	Residential	607669	4853794	1.5	24	67	83	0	-
RE511300_041	Residential	607692	4853759	1.5	25	68	83	0	-
RE511300_042	Residential	607706	4853822	1.5	23	66	83	0	-
RE511300_043	Residential	607767	4853374	1.5	73	118	83	85	0.2%
RE511300_044	Residential	607774	4853376	1.5	75	118	83	87	0.2%
RE511300_045	Residential	607781	4853377	1.5	78	118	83	87	0.2%
RE511300_046	Residential	607788	4853379	1.5	80	119	83	85	0.2%
RE511300_047	Residential	607794	4853380	1.5	80	120	83	85	0.2%
RE511300_048	Residential	607800	4853381	1.5	81	120	83	84	0.2%
RE511300_049	Residential	607806	4853382	1.5	81	121	83	87	0.2%
RE511300_050	Residential	607812	4853383	1.5	80	121	83	82	0.2%
RE511300_051	Residential	607820	4853385	1.5	81	122	83	81	0.2%
RE511300_052	Residential	607826	4853386	1.5	81	122	83	80	0.2%
RE511300_053	Residential	607832	4853387	1.5	82	123	83	81	0.2%
RE511300_054	Residential	607838	4853388	1.5	84	123	83	75	0.2%
RE511300_055	Residential	607846	4853390	1.5	86	124	83	76	0.2%
RE511300_056	Residential	607853	4853391	1.5	88	124	83	72	0.2%
RE511300_057	Residential	607859	4853392	1.5	89	124	83	71	0.2%
RE511300_058	Residential	607866	4853394	1.5	90	124	83	73	0.2%
RE511300_059	Residential	607885	4853388	1.5	101	126	83	79	0.2%
RE511300_060	Residential	607886	4853395	1.5	96	124	83	71	0.2%
RE511300_061	Residential	607886	4853402	1.5	90	124	83	62	0.1%
RE511300_062	Residential	607887	4853410	1.5	84	123	83	57	0.1%
RE511300_063	Residential	607887	4853416	1.5	82	123	83	47	0.1%
RE511300_064	Residential	607888	4853422	1.5	81	122	83	41	0.1%
RE511300_065	Residential	607888	4853429	1.5	81	121	83	36	0.1%
RE511300_066	Residential	607892	4853460	1.5	72	117	83	22	0.1%
RE511300_067	Residential	607892	4853467	1.5	70	114	83	19	0.0%
RE511300_068	Residential	607892	4853473	1.5	66	110	83	15	0.0%
RE511300_069	Residential	607893	4853479	1.5	64	109	83	15	0.0%
RE511300_070	Residential	607894	4853485	1.5	63	107	83	13	0.0%
RE511300_071	Residential	607894	4853495	1.5	60	105	83	11	0.0%
RE511300_072	Residential	607893	4853501	1.5	58	103	83	9	0.0%
RE511300_073	Residential	607891	4853507	1.5	56	100	83	9	0.0%
RE511300_074	Residential	607776	4853648	1.5	30	73	83	0	-
RE511300_075	Residential	607783	4853646	1.5	30	73	83	0	-
RE511300_076	Residential	607789	4853644	1.5	30	73	83	0	-
RE511300_077	Residential	607795	4853641	1.5	30	74	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_078	Residential	607801	4853639	1.5	30	74	83	0	-
RE511300_079	Residential	607808	4853634	1.5	30	74	83	0	-
RE511300_080	Residential	607814	4853629	1.5	30	75	83	0	-
RE511300_081	Residential	607819	4853626	1.5	30	75	83	0	-
RE511300_082	Residential	607824	4853622	1.5	31	75	83	0	-
RE511300_083	Residential	607829	4853618	1.5	32	76	83	0	-
RE511300_084	Residential	607834	4853614	1.5	33	77	83	0	-
RE511300_085	Residential	607842	4853608	1.5	34	78	83	0	-
RE511300_086	Residential	607846	4853603	1.5	35	79	83	0	-
RE511300_087	Residential	607850	4853599	1.5	35	80	83	0	-
RE511300_088	Residential	607854	4853594	1.5	36	81	83	0	-
RE511300_089	Residential	607858	4853589	1.5	37	82	83	0	-
RE511300_090	Residential	607862	4853585	1.5	38	82	83	0	-
RE511300_091	Residential	607868	4853578	1.5	39	84	83	2	0.0%
RE511300_092	Residential	607871	4853571	1.5	40	85	83	3	0.0%
RE511300_093	Residential	607874	4853566	1.5	41	86	83	3	0.0%
RE511300_094	Residential	607878	4853561	1.5	42	86	83	3	0.0%
RE511300_095	Residential	607882	4853552	1.5	42	87	83	3	0.0%
RE511300_096	Residential	607883	4853545	1.5	43	87	83	3	0.0%
RE511300_097	Residential	607884	4853538	1.5	45	90	83	3	0.0%
RE511300_098	Residential	607758	4853512	1.5	38	82	83	0	-
RE511300_099	Residential	607757	4853520	1.5	38	82	83	0	-
RE511300_100	Residential	607756	4853526	1.5	37	81	83	0	-
RE511300_101	Residential	607755	4853532	1.5	36	80	83	0	-
RE511300_102	Residential	607753	4853538	1.5	36	80	83	0	-
RE511300_103	Residential	607752	4853544	1.5	35	79	83	0	-
RE511300_104	Residential	607751	4853552	1.5	34	78	83	0	-
RE511300_105	Residential	607749	4853559	1.5	34	78	83	0	-
RE511300_106	Residential	607747	4853564	1.5	33	77	83	0	-
RE511300_107	Residential	607746	4853571	1.5	33	76	83	0	-
RE511300_108	Residential	607745	4853576	1.5	33	76	83	0	-
RE511300_109	Residential	607744	4853583	1.5	32	75	83	0	-
RE511300_110	Residential	607742	4853591	1.5	32	75	83	0	-
RE511300_111	Residential	607740	4853597	1.5	32	75	83	0	-
RE511300_112	Residential	607739	4853603	1.5	31	74	83	0	-
RE511300_113	Residential	607738	4853609	1.5	31	74	83	0	-
RE511300_114	Residential	607737	4853615	1.5	31	73	83	0	-
RE511300_115	Residential	607736	4853621	1.5	30	73	83	0	-
RE511300_116	Residential	607736	4853631	1.5	30	73	83	0	-
RE511300_117	Residential	607735	4853640	1.5	30	72	83	0	-
RE511300_118	Residential	607734	4853645	1.5	29	72	83	0	-
RE511300_119	Residential	607735	4853651	1.5	29	72	83	0	-
RE511300_120	Residential	607736	4853658	1.5	29	72	83	0	-
RE511300_121	Residential	607737	4853664	1.5	29	71	83	0	-
RE511300_122	Residential	607721	4853505	1.5	38	81	83	0	-
RE511300_123	Residential	607719	4853512	1.5	38	80	83	0	-
RE511300_124	Residential	607718	4853518	1.5	37	80	83	0	-
RE511300_125	Residential	607717	4853524	1.5	37	80	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_126	Residential	607716	4853530	1.5	36	79	83	0	-
RE511300_127	Residential	607715	4853537	1.5	36	79	83	0	-
RE511300_128	Residential	607713	4853545	1.5	35	78	83	0	-
RE511300_129	Residential	607712	4853551	1.5	35	78	83	0	-
RE511300_130	Residential	607711	4853556	1.5	35	78	83	0	-
RE511300_131	Residential	607710	4853563	1.5	34	77	83	0	-
RE511300_132	Residential	607708	4853569	1.5	34	77	83	0	-
RE511300_133	Residential	607707	4853575	1.5	34	77	83	0	-
RE511300_134	Residential	607706	4853583	1.5	33	76	83	0	-
RE511300_135	Residential	607704	4853589	1.5	33	76	83	0	-
RE511300_136	Residential	607704	4853595	1.5	33	76	83	0	-
RE511300_137	Residential	607702	4853601	1.5	32	75	83	0	-
RE511300_138	Residential	607701	4853607	1.5	32	75	83	0	-
RE511300_139	Residential	607700	4853615	1.5	32	75	83	0	-
RE511300_140	Residential	607698	4853621	1.5	31	74	83	0	-
RE511300_141	Residential	607697	4853627	1.5	31	74	83	0	-
RE511300_142	Residential	607696	4853634	1.5	30	74	83	0	-
RE511300_143	Residential	607694	4853645	1.5	30	73	83	0	-
RE511300_144	Residential	607694	4853653	1.5	30	73	83	0	-
RE511300_145	Residential	607694	4853659	1.5	29	72	83	0	-
RE511300_146	Residential	607694	4853665	1.5	29	72	83	0	-
RE511300_147	Residential	607696	4853670	1.5	29	72	83	0	-
RE511300_148	Residential	607699	4853677	1.5	28	71	83	0	-
RE511300_149	Residential	607750	4853399	1.5	64	108	83	48	0.1%
RE511300_150	Residential	607756	4853400	1.5	65	109	83	50	0.1%
RE511300_151	Residential	607762	4853401	1.5	65	110	83	49	0.1%
RE511300_152	Residential	607768	4853402	1.5	65	110	83	50	0.1%
RE511300_153	Residential	607776	4853404	1.5	67	112	83	53	0.1%
RE511300_154	Residential	607783	4853405	1.5	70	115	83	55	0.1%
RE511300_155	Residential	607789	4853406	1.5	72	116	83	54	0.1%
RE511300_156	Residential	607795	4853407	1.5	72	117	83	54	0.1%
RE511300_157	Residential	607801	4853409	1.5	72	117	83	52	0.1%
RE511300_158	Residential	607807	4853410	1.5	72	117	83	54	0.1%
RE511300_159	Residential	607815	4853412	1.5	73	117	83	50	0.1%
RE511300_160	Residential	607821	4853413	1.5	73	117	83	46	0.1%
RE511300_161	Residential	607827	4853414	1.5	73	117	83	43	0.1%
RE511300_162	Residential	607834	4853415	1.5	76	117	83	42	0.1%
RE511300_163	Residential	607841	4853417	1.5	78	119	83	42	0.1%
RE511300_164	Residential	607848	4853418	1.5	79	120	83	44	0.1%
RE511300_165	Residential	607854	4853419	1.5	79	120	83	42	0.1%
RE511300_166	Residential	607859	4853420	1.5	79	120	83	42	0.1%
RE511300_167	Residential	607866	4853421	1.5	80	121	83	40	0.1%
RE511300_168	Residential	607728	4853439	1.5	46	90	83	14	0.0%
RE511300_169	Residential	607736	4853440	1.5	47	91	83	14	0.0%
RE511300_170	Residential	607742	4853441	1.5	48	92	83	13	0.0%
RE511300_171	Residential	607748	4853442	1.5	49	93	83	11	0.0%
RE511300_172	Residential	607754	4853443	1.5	50	94	83	12	0.0%
RE511300_173	Residential	607761	4853444	1.5	51	96	83	12	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_174	Residential	607768	4853445	1.5	52	97	83	13	0.0%
RE511300_175	Residential	607774	4853446	1.5	53	98	83	12	0.0%
RE511300_176	Residential	607780	4853448	1.5	54	98	83	12	0.0%
RE511300_177	Residential	607786	4853449	1.5	55	99	83	11	0.0%
RE511300_178	Residential	607792	4853450	1.5	55	100	83	10	0.0%
RE511300_179	Residential	607799	4853451	1.5	55	100	83	10	0.0%
RE511300_180	Residential	607807	4853453	1.5	55	100	83	11	0.0%
RE511300_181	Residential	607813	4853454	1.5	56	100	83	12	0.0%
RE511300_182	Residential	607819	4853456	1.5	57	102	83	12	0.0%
RE511300_183	Residential	607825	4853457	1.5	59	104	83	13	0.0%
RE511300_184	Residential	607831	4853458	1.5	61	105	83	13	0.0%
RE511300_185	Residential	607837	4853459	1.5	62	107	83	14	0.0%
RE511300_186	Residential	607845	4853460	1.5	63	108	83	17	0.0%
RE511300_187	Residential	607851	4853462	1.5	64	109	83	15	0.0%
RE511300_188	Residential	607857	4853463	1.5	65	110	83	16	0.0%
RE511300_189	Residential	607863	4853464	1.5	66	110	83	16	0.0%
RE511300_190	Residential	607870	4853465	1.5	67	111	83	16	0.0%
RE511300_191	Residential	607724	4853468	1.5	42	86	83	4	0.0%
RE511300_192	Residential	607731	4853469	1.5	42	86	83	4	0.0%
RE511300_193	Residential	607737	4853470	1.5	42	86	83	4	0.0%
RE511300_194	Residential	607742	4853471	1.5	42	86	83	4	0.0%
RE511300_195	Residential	607749	4853472	1.5	43	87	83	5	0.0%
RE511300_196	Residential	607755	4853473	1.5	43	87	83	6	0.0%
RE511300_197	Residential	607762	4853474	1.5	45	88	83	7	0.0%
RE511300_198	Residential	607769	4853476	1.5	45	89	83	8	0.0%
RE511300_199	Residential	607775	4853477	1.5	46	90	83	8	0.0%
RE511300_200	Residential	607781	4853478	1.5	46	91	83	8	0.0%
RE511300_201	Residential	607787	4853480	1.5	47	92	83	7	0.0%
RE511300_202	Residential	607793	4853481	1.5	48	92	83	7	0.0%
RE511300_203	Residential	607801	4853483	1.5	49	93	83	7	0.0%
RE511300_204	Residential	607807	4853484	1.5	49	94	83	7	0.0%
RE511300_205	Residential	607813	4853485	1.5	50	94	83	6	0.0%
RE511300_206	Residential	607819	4853486	1.5	50	94	83	6	0.0%
RE511300_207	Residential	607825	4853488	1.5	50	95	83	6	0.0%
RE511300_208	Residential	607831	4853489	1.5	50	94	83	6	0.0%
RE511300_209	Residential	607839	4853490	1.5	50	94	83	6	0.0%
RE511300_210	Residential	607846	4853492	1.5	51	96	83	6	0.0%
RE511300_211	Residential	607851	4853493	1.5	53	97	83	6	0.0%
RE511300_212	Residential	607858	4853494	1.5	54	99	83	7	0.0%
RE511300_213	Residential	607863	4853495	1.5	55	100	83	8	0.0%
RE511300_214	Residential	607869	4853496	1.5	56	101	83	7	0.0%
RE511400_001	Residential	607929	4853848	1.5	22	66	83	0	-
RE511400_002	Residential	607914	4853876	1.5	22	66	83	0	-
RE511400_003	Residential	607929	4853886	1.5	21	65	83	0	-
RE511400_004	Residential	607898	4853826	1.5	23	67	83	0	-
RE511400_005	Residential	607899	4853865	1.5	22	66	83	0	-
RE511400_006	Residential	607842	4853819	1.5	23	67	83	0	-
RE511400_007	Residential	607859	4853838	1.5	22	66	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_008	Residential	607869	4853844	1.5	23	67	83	0	-
RE511400_009	Residential	607876	4853849	1.5	22	66	83	0	-
RE511400_010	Residential	607922	4853881	1.5	21	66	83	0	-
RE511400_011	Residential	607891	4853860	1.5	22	66	83	0	-
RE511400_012	Residential	607868	4853804	1.5	24	68	83	0	-
RE511400_013	Residential	607919	4853841	1.5	22	66	83	0	-
RE511400_014	Residential	607907	4853870	1.5	22	66	83	0	-
RE511400_015	Residential	607887	4853793	1.5	24	68	83	0	-
RE511400_016	Residential	607876	4853800	1.5	24	68	83	0	-
RE511400_017	Residential	607867	4853900	1.5	20	64	83	0	-
RE511400_018	Residential	607888	4853915	1.5	20	64	83	0	-
RE511400_019	Residential	607881	4853910	1.5	20	64	83	0	-
RE511400_020	Residential	607895	4853920	1.5	20	64	83	0	-
RE511400_021	Residential	607805	4853857	1.5	21	65	83	0	-
RE511400_022	Residential	607814	4853863	1.5	20	64	83	0	-
RE511400_023	Residential	607859	4853894	1.5	20	64	83	0	-
RE511400_024	Residential	607874	4853905	1.5	20	64	83	0	-
RE511400_025	Residential	607821	4853868	1.5	20	64	83	0	-
RE511400_026	Residential	607829	4853873	1.5	20	64	83	0	-
RE511400_027	Residential	607902	4853925	1.5	20	64	83	0	-
RE511400_028	Residential	607836	4853879	1.5	20	64	83	0	-
RE511400_029	Residential	607844	4853884	1.5	20	64	83	0	-
RE511400_030	Residential	607852	4853889	1.5	20	64	83	0	-
RE511400_031	Residential	607961	4853671	1.5	33	78	83	0	-
RE511400_032	Residential	607901	4853730	1.5	27	71	83	0	-
RE511400_033	Residential	607932	4853710	1.5	30	74	83	0	-
RE511400_034	Residential	607891	4853735	1.5	26	70	83	0	-
RE511400_035	Residential	607950	4853688	1.5	32	77	83	0	-
RE511400_036	Residential	608027	4853515	1.5	78	119	83	14	0.0%
RE511400_037	Residential	607948	4853861	1.5	21	65	83	0	-
RE511400_038	Residential	607884	4853855	1.5	22	66	83	0	-
RE511400_039	Residential	607860	4853809	1.5	24	68	83	0	-
RE511400_040	Residential	607917	4853721	1.5	28	72	83	0	-
RE511400_041	Residential	607909	4853725	1.5	28	72	83	0	-
RE511400_042	Residential	607925	4853716	1.5	29	74	83	0	-
RE511400_043	Residential	607955	4853680	1.5	33	77	83	0	-
RE511400_044	Residential	607944	4853695	1.5	31	76	83	0	-
RE511400_045	Residential	607939	4853703	1.5	31	75	83	0	-
RE511400_046	Residential	608072	4853635	1.5	48	92	83	5	0.0%
RE511400_047	Residential	608048	4853617	1.5	48	93	83	6	0.0%
RE511400_048	Residential	608076	4853544	1.5	74	115	83	11	0.0%
RE511400_049	Residential	608107	4853601	1.5	63	104	83	9	0.0%
RE511400_050	Residential	608076	4853554	1.5	71	112	83	11	0.0%
RE511400_051	Residential	607864	4853751	1.5	25	69	83	0	-
RE511400_052	Residential	607853	4853757	1.5	25	69	83	0	-
RE511400_053	Residential	607845	4853762	1.5	25	69	83	0	-
RE511400_054	Residential	607836	4853766	1.5	25	69	83	0	-
RE511400_055	Residential	607827	4853771	1.5	24	68	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_056	Residential	607818	4853777	1.5	23	67	83	0	-
RE511400_057	Residential	607794	4853801	1.5	23	67	83	0	-
RE511400_058	Residential	607809	4853783	1.5	23	67	83	0	-
RE511400_059	Residential	607802	4853791	1.5	23	67	83	0	-
RE511400_060	Residential	608147	4853557	1.5	73	117	83	11	0.0%
RE511400_061	Residential	608166	4853558	1.5	73	117	83	12	0.0%
RE511400_062	Residential	608176	4853558	1.5	73	117	83	13	0.0%
RE511400_063	Residential	608157	4853558	1.5	73	117	83	12	0.0%
RE511400_064	Residential	608076	4853583	1.5	64	105	83	9	0.0%
RE511400_065	Residential	608115	4853525	1.5	78	119	83	14	0.0%
RE511400_066	Residential	608102	4853614	1.5	59	100	83	6	0.0%
RE511400_067	Residential	608093	4853649	1.5	47	92	83	6	0.0%
RE511400_068	Residential	608103	4853524	1.5	78	119	83	15	0.0%
RE511400_069	Residential	608076	4853563	1.5	69	110	83	10	0.0%
RE511400_070	Residential	608074	4853594	1.5	61	101	83	7	0.0%
RE511400_071	Residential	608107	4853544	1.5	75	117	83	11	0.0%
RE511400_072	Residential	608107	4853563	1.5	71	112	83	10	0.0%
RE511400_073	Residential	608107	4853572	1.5	69	109	83	10	0.0%
RE511400_074	Residential	608082	4853642	1.5	47	92	83	6	0.0%
RE511400_075	Residential	608056	4853624	1.5	48	92	83	5	0.0%
RE511400_076	Residential	608067	4853525	1.5	78	119	83	12	0.0%
RE511400_077	Residential	608070	4853606	1.5	55	99	83	7	0.0%
RE511400_078	Residential	608097	4853625	1.5	54	97	83	6	0.0%
RE511400_079	Residential	608064	4853629	1.5	48	92	83	5	0.0%
RE511400_080	Residential	608091	4853524	1.5	78	119	83	14	0.0%
RE511400_081	Residential	608107	4853581	1.5	66	107	83	10	0.0%
RE511400_082	Residential	608107	4853590	1.5	65	106	83	10	0.0%
RE511400_083	Residential	608077	4853573	1.5	67	108	83	10	0.0%
RE511400_084	Residential	608107	4853554	1.5	73	115	83	11	0.0%
RE511400_085	Residential	608080	4853524	1.5	78	119	83	12	0.0%
RE511400_086	Residential	608146	4853605	1.5	63	104	83	9	0.0%
RE511400_087	Residential	607690	4854002	1.5	19	63	83	0	-
RE511400_088	Residential	607683	4854039	1.5	18	62	83	0	-
RE511400_089	Residential	607642	4854055	1.5	18	62	83	0	-
RE511400_090	Residential	607726	4853973	1.5	19	63	83	0	-
RE511400_091	Residential	607638	4854068	1.5	18	61	83	0	-
RE511400_092	Residential	607782	4853966	1.5	18	62	83	0	-
RE511400_093	Residential	607648	4854028	1.5	19	62	83	0	-
RE511400_094	Residential	607706	4853919	1.5	20	64	83	0	-
RE511400_095	Residential	607633	4854095	1.5	17	61	83	0	-
RE511400_096	Residential	607649	4853948	1.5	21	64	83	0	-
RE511400_097	Residential	607792	4853973	1.5	18	62	83	0	-
RE511400_098	Residential	607734	4853980	1.5	19	63	83	0	-
RE511400_099	Residential	607851	4853813	1.5	23	67	83	0	-
RE511400_100	Residential	607835	4853830	1.5	22	66	83	0	-
RE511400_101	Residential	607938	4853855	1.5	21	66	83	0	-
RE511400_102	Residential	607908	4853835	1.5	22	67	83	0	-
RE511400_103	Residential	607677	4854058	1.5	18	62	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_104	Residential	607687	4854030	1.5	18	62	83	0	-
RE511400_105	Residential	607758	4853948	1.5	19	63	83	0	-
RE511400_106	Residential	607671	4853912	1.5	21	64	83	0	-
RE511400_107	Residential	607797	4853977	1.5	18	61	83	0	-
RE511400_108	Residential	607709	4854015	1.5	18	62	83	0	-
RE511400_109	Residential	607661	4853910	1.5	21	64	83	0	-
RE511400_110	Residential	607713	4853921	1.5	20	64	83	0	-
RE511400_111	Residential	607654	4854003	1.5	19	62	83	0	-
RE511400_112	Residential	607657	4853949	1.5	21	63	83	0	-
RE511400_113	Residential	607651	4854015	1.5	19	62	83	0	-
RE511400_114	Residential	607731	4853930	1.5	20	64	83	0	-
RE511400_115	Residential	607695	4853916	1.5	21	64	83	0	-
RE511400_116	Residential	607655	4853989	1.5	20	62	83	0	-
RE511400_117	Residential	607645	4854041	1.5	19	62	83	0	-
RE511400_118	Residential	607751	4853943	1.5	20	64	83	0	-
RE511400_119	Residential	607744	4853938	1.5	20	64	83	0	-
RE511400_120	Residential	607787	4853970	1.5	18	62	83	0	-
RE511400_121	Residential	607676	4853954	1.5	20	63	83	0	-
RE511400_122	Residential	607667	4853952	1.5	20	63	83	0	-
RE511400_123	Residential	607684	4853955	1.5	20	63	83	0	-
RE511400_124	Residential	607704	4853960	1.5	19	63	83	0	-
RE511400_125	Residential	607680	4854049	1.5	18	62	83	0	-
RE511400_126	Residential	607679	4853914	1.5	21	64	83	0	-
RE511400_127	Residential	607700	4854008	1.5	18	63	83	0	-
RE511400_128	Residential	607719	4853969	1.5	19	63	83	0	-
RE511400_129	Residential	607689	4853915	1.5	21	64	83	0	-
RE511400_130	Residential	607739	4853935	1.5	20	64	83	0	-
RE511400_131	Residential	607636	4854081	1.5	18	61	83	0	-
RE511400_132	Residential	607680	4853999	1.5	19	63	83	0	-
RE511400_133	Residential	607723	4853926	1.5	20	64	83	0	-
RE511400_134	Residential	607693	4853957	1.5	19	63	83	0	-
RE511400_135	Residential	607710	4853964	1.5	19	63	83	0	-
RE511400_136	Residential	607759	4854001	1.5	18	62	83	0	-
RE511400_137	Residential	608026	4853558	1.5	64	106	83	10	0.0%
RE511400_138	Residential	608026	4853566	1.5	60	104	83	8	0.0%
RE511400_139	Residential	608023	4853574	1.5	57	101	83	8	0.0%
RE511400_140	Residential	608018	4853584	1.5	53	97	83	7	0.0%
RE511400_141	Residential	608015	4853591	1.5	49	94	83	7	0.0%
RE511400_142	Residential	608006	4853606	1.5	46	90	83	4	0.0%
RE511400_143	Residential	608011	4853599	1.5	46	91	83	6	0.0%
RE511400_144	Residential	608001	4853613	1.5	44	89	83	3	0.0%
RE511400_145	Residential	607996	4853620	1.5	43	87	83	2	0.0%
RE511400_146	Residential	607985	4853636	1.5	40	85	83	2	0.0%
RE511400_147	Residential	607991	4853628	1.5	41	86	83	2	0.0%
RE511400_148	Residential	607980	4853643	1.5	38	83	83	0	-
RE511400_149	Residential	608170	4853516	1.5	73	117	83	14	0.0%
RE511400_150	Residential	608155	4853516	1.5	75	117	83	14	0.0%
RE511400_151	Residential	608163	4853516	1.5	74	117	83	15	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_152	Residential	608148	4853517	1.5	76	117	83	14	0.0%
RE511400_153	Residential	608192	4853515	1.5	72	117	83	13	0.0%
RE511400_154	Residential	608184	4853515	1.5	72	117	83	14	0.0%
RE511400_155	Residential	608207	4853515	1.5	72	117	83	13	0.0%
RE511400_156	Residential	608199	4853515	1.5	72	117	83	13	0.0%
RE511400_157	Residential	608176	4853516	1.5	72	117	83	13	0.0%
RE511400_158	Residential	608214	4853515	1.5	72	117	83	12	0.0%
RE511400_159	Residential	607839	4853722	1.5	27	71	83	0	-
RE511400_160	Residential	607826	4853728	1.5	26	70	83	0	-
RE511400_161	Residential	607806	4853741	1.5	25	69	83	0	-
RE511400_162	Residential	607820	4853732	1.5	26	70	83	0	-
RE511400_163	Residential	607775	4853762	1.5	24	68	83	0	-
RE511400_164	Residential	607764	4853777	1.5	24	67	83	0	-
RE511400_165	Residential	607832	4853725	1.5	26	70	83	0	-
RE511400_166	Residential	607791	4853750	1.5	24	68	83	0	-
RE511400_167	Residential	607845	4853717	1.5	27	71	83	0	-
RE511400_168	Residential	607771	4853767	1.5	24	68	83	0	-
RE511400_169	Residential	607814	4853735	1.5	25	69	83	0	-
RE511400_170	Residential	607785	4853754	1.5	24	68	83	0	-
RE511400_171	Residential	607767	4853772	1.5	24	68	83	0	-
RE511400_172	Residential	607800	4853745	1.5	25	68	83	0	-
RE511400_173	Residential	607852	4853936	1.5	19	63	83	0	-
RE511400_174	Residential	607859	4853941	1.5	19	63	83	0	-
RE511400_175	Residential	607838	4853926	1.5	18	62	83	0	-
RE511400_176	Residential	607787	4853890	1.5	20	64	83	0	-
RE511400_177	Residential	607792	4853895	1.5	20	64	83	0	-
RE511400_178	Residential	607797	4853898	1.5	20	64	83	0	-
RE511400_179	Residential	607802	4853902	1.5	20	63	83	0	-
RE511400_180	Residential	607815	4853910	1.5	19	63	83	0	-
RE511400_181	Residential	607821	4853913	1.5	19	62	83	0	-
RE511400_182	Residential	607827	4853918	1.5	19	62	83	0	-
RE511400_183	Residential	607832	4853921	1.5	19	62	83	0	-
RE511400_184	Residential	607845	4853931	1.5	19	63	83	0	-
RE511400_185	Residential	607809	4853906	1.5	19	63	83	0	-
RE511400_186	Residential	607925	4853654	1.5	34	79	83	0	-
RE511400_187	Residential	607929	4853648	1.5	35	79	83	0	-
RE511400_188	Residential	607920	4853662	1.5	33	78	83	0	-
RE511400_189	Residential	607915	4853668	1.5	32	77	83	0	-
RE511400_190	Residential	607907	4853677	1.5	31	76	83	0	-
RE511400_191	Residential	607903	4853680	1.5	31	75	83	0	-
RE511400_192	Residential	607895	4853688	1.5	30	74	83	0	-
RE511400_193	Residential	607889	4853691	1.5	29	73	83	0	-
RE511400_194	Residential	607881	4853696	1.5	28	72	83	0	-
RE511400_195	Residential	607873	4853701	1.5	28	72	83	0	-
RE511400_196	Residential	607989	4853515	1.5	75	116	83	13	0.0%
RE511400_197	Residential	607989	4853530	1.5	67	110	83	12	0.0%
RE511400_198	Residential	607989	4853538	1.5	63	107	83	10	0.0%
RE511400_199	Residential	607988	4853524	1.5	70	112	83	13	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_200	Residential	607988	4853546	1.5	60	104	83	9	0.0%
RE511400_201	Residential	607988	4853553	1.5	57	102	83	9	0.0%
RE511400_202	Residential	607982	4853569	1.5	50	94	83	8	0.0%
RE511400_203	Residential	607985	4853562	1.5	53	97	83	8	0.0%
RE511400_204	Residential	607980	4853574	1.5	49	94	83	6	0.0%
RE511400_205	Residential	607978	4853580	1.5	49	93	83	5	0.0%
RE511400_206	Residential	607972	4853586	1.5	47	92	83	4	0.0%
RE511400_207	Residential	607968	4853592	1.5	46	90	83	3	0.0%
RE511400_208	Residential	607963	4853600	1.5	44	88	83	2	0.0%
RE511400_209	Residential	607958	4853607	1.5	42	87	83	2	0.0%
RE511400_210	Residential	607953	4853615	1.5	40	84	83	1	0.0%
RE511400_211	Residential	607948	4853620	1.5	38	82	83	0	-
RE511400_212	Residential	608027	4853522	1.5	78	119	83	14	0.0%
RE511400_213	Residential	608027	4853540	1.5	72	113	83	12	0.0%
RE511400_214	Residential	608027	4853531	1.5	75	116	83	12	0.0%
RE511400_215	Residential	608027	4853548	1.5	69	110	83	11	0.0%
RE511400_216	Residential	607888	4853817	1.5	23	67	83	0	-
RE511400_217	Residential	607735	4853842	1.5	22	66	83	0	-
RE511400_218	Residential	607748	4853810	1.5	23	67	83	0	-
RE511400_219	Residential	607777	4853830	1.5	22	66	83	0	-
RE511400_220	Residential	607730	4853850	1.5	22	65	83	0	-
RE511400_221	Residential	607725	4853846	1.5	22	65	83	0	-
RE511400_222	Residential	607783	4853834	1.5	22	66	83	0	-
RE511400_223	Residential	607752	4853873	1.5	21	65	83	0	-
RE511400_224	Residential	607743	4853806	1.5	23	67	83	0	-
RE511400_225	Residential	607711	4853837	1.5	23	65	83	0	-
RE511400_226	Residential	607748	4853878	1.5	21	65	83	0	-
RE511400_227	Residential	607755	4853868	1.5	21	65	83	0	-
RE511400_228	Residential	607756	4853827	1.5	22	66	83	0	-
RE511400_229	Residential	607767	4853823	1.5	22	66	83	0	-
RE511400_230	Residential	607735	4853854	1.5	21	65	83	0	-
RE511400_231	Residential	607738	4853803	1.5	24	67	83	0	-
RE511400_232	Residential	607762	4853859	1.5	21	65	83	0	-
RE511400_233	Residential	607719	4853843	1.5	22	65	83	0	-
RE511400_234	Residential	607730	4853838	1.5	22	66	83	0	-
RE511400_235	Residential	607767	4853834	1.5	22	66	83	0	-
RE511400_236	Residential	607738	4853814	1.5	23	66	83	0	-
RE511400_237	Residential	607733	4853810	1.5	23	66	83	0	-
RE511400_238	Residential	607761	4853819	1.5	23	66	83	0	-
RE511400_239	Residential	607777	4853842	1.5	22	66	83	0	-
RE511400_240	Residential	607761	4853831	1.5	22	66	83	0	-
RE511400_241	Residential	607751	4853823	1.5	22	66	83	0	-
RE511400_242	Residential	607756	4853816	1.5	23	66	83	0	-
RE511400_243	Residential	607743	4853817	1.5	23	66	83	0	-
RE511400_244	Residential	607741	4853846	1.5	22	66	83	0	-
RE511400_245	Residential	607772	4853838	1.5	22	66	83	0	-
RE511400_246	Residential	607759	4853864	1.5	21	65	83	0	-
RE511400_247	Residential	607717	4853829	1.5	23	66	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_248	Residential	607725	4853835	1.5	22	66	83	0	-
RE511400_249	Residential	607772	4853827	1.5	22	66	83	0	-
RE511400_250	Residential	607866	4853946	1.5	19	63	83	0	-
RE511400_251	Residential	607873	4853951	1.5	19	63	83	0	-
RE511400_252	Residential	607880	4853956	1.5	19	63	83	0	-
RE511400_265	Residential	607700	4854194	1.5	14	59	83	0	-
RE511400_266	Residential	607689	4854191	1.5	15	59	83	0	-
RE511400_267	Residential	607679	4854188	1.5	15	59	83	0	-
RE511400_268	Residential	607668	4854184	1.5	15	59	83	0	-
RE511400_269	Residential	607657	4854180	1.5	15	60	83	0	-
RE511400_270	Residential	607645	4854176	1.5	15	60	83	0	-
RE511400_271	Residential	607619	4854171	1.5	15	59	83	0	-
RE511400_272	Residential	607620	4854158	1.5	16	60	83	0	-
RE511400_273	Residential	607624	4854146	1.5	16	60	83	0	-
RE511400_274	Residential	607626	4854132	1.5	16	60	83	0	-
RE511400_275	Residential	607721	4854165	1.5	15	59	83	0	-
RE511400_276	Residential	607710	4854163	1.5	15	59	83	0	-
RE511400_277	Residential	607700	4854159	1.5	15	60	83	0	-
RE511400_278	Residential	607689	4854156	1.5	16	60	83	0	-
RE511400_279	Residential	607677	4854152	1.5	16	60	83	0	-
RE511400_280	Residential	607665	4854148	1.5	16	60	83	0	-
RE511400_281	Residential	607651	4854143	1.5	16	60	83	0	-
RE511400_282	Residential	607770	4854052	1.5	17	61	83	0	-
RE511400_283	Residential	607765	4854059	1.5	17	61	83	0	-
RE511400_284	Residential	607760	4854069	1.5	17	60	83	0	-
RE511400_285	Residential	607753	4854080	1.5	16	60	83	0	-
RE511400_286	Residential	607748	4854093	1.5	16	60	83	0	-
RE511400_287	Residential	607744	4854104	1.5	16	60	83	0	-
RE511400_288	Residential	607740	4854116	1.5	16	60	83	0	-
RE511400_289	Residential	607736	4854126	1.5	16	60	83	0	-
RE511400_290	Residential	607742	4854030	1.5	18	62	83	0	-
RE511400_291	Residential	607736	4854039	1.5	17	62	83	0	-
RE511400_292	Residential	607731	4854048	1.5	17	61	83	0	-
RE511400_293	Residential	607726	4854059	1.5	17	61	83	0	-
RE511400_294	Residential	607723	4854067	1.5	17	61	83	0	-
RE511400_295	Residential	607720	4854076	1.5	17	61	83	0	-
RE511400_296	Residential	607717	4854085	1.5	17	61	83	0	-
RE511400_297	Residential	607714	4854095	1.5	17	61	83	0	-
RE511400_298	Residential	607710	4854106	1.5	16	61	83	0	-
RE511400_299	Residential	607707	4854117	1.5	16	60	83	0	-
RE511400_300	Residential	607674	4854068	1.5	17	61	83	0	-
RE511400_301	Residential	607670	4854080	1.5	17	61	83	0	-
RE511400_302	Residential	607667	4854091	1.5	17	61	83	0	-
RE511400_303	Residential	607662	4854103	1.5	17	61	83	0	-
RE511400_304	Residential	607765	4854005	1.5	18	62	83	0	-
RE511400_305	Residential	607773	4854009	1.5	18	62	83	0	-
RE511400_306	Residential	607779	4854014	1.5	17	61	83	0	-
RE511400_307	Residential	607787	4854019	1.5	17	61	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_308	Residential	607794	4854023	1.5	17	61	83	0	-
RE511400_309	Residential	607801	4854028	1.5	17	60	83	0	-
RE511400_310	Residential	607809	4854033	1.5	17	60	83	0	-
RE511400_311	Residential	607817	4854039	1.5	17	60	83	0	-
RE511400_312	Residential	607802	4853980	1.5	18	61	83	0	-
RE511400_313	Residential	607807	4853983	1.5	17	61	83	0	-
RE511400_314	Residential	607814	4853988	1.5	17	61	83	0	-
RE511400_315	Residential	607820	4853992	1.5	17	61	83	0	-
RE511400_316	Residential	607825	4853995	1.5	17	61	83	0	-
RE511400_317	Residential	607829	4853998	1.5	17	61	83	0	-
RE511400_318	Residential	607837	4854004	1.5	17	61	83	0	-
RE511400_319	Residential	607842	4854008	1.5	17	61	83	0	-
RE511500_001	Child Care Centre	608104	4853900	1.5	24	68	83	0	-
RE511500_002	Residential	608322	4853695	1.5	53	98	83	7	0.0%
RE511500_003	Residential	608318	4853701	1.5	53	96	83	7	0.0%
RE511500_004	Residential	608314	4853707	1.5	53	95	83	7	0.0%
RE511500_005	Residential	608300	4853727	1.5	50	92	83	6	0.0%
RE511500_006	Residential	608295	4853734	1.5	48	90	83	3	0.0%
RE511500_007	Residential	608290	4853741	1.5	48	89	83	4	0.0%
RE511500_008	Residential	608285	4853748	1.5	48	89	83	4	0.0%
RE511500_009	Residential	608280	4853755	1.5	47	88	83	3	0.0%
RE511500_010	Residential	608335	4853677	1.5	58	102	83	6	0.0%
RE511500_011	Residential	608327	4853688	1.5	55	100	83	6	0.0%
RE511500_012	Residential	608364	4853636	1.5	54	99	83	5	0.0%
RE511500_013	Residential	608359	4853642	1.5	56	101	83	5	0.0%
RE511500_014	Residential	608355	4853649	1.5	57	102	83	6	0.0%
RE511500_015	Residential	608349	4853657	1.5	58	103	83	6	0.0%
RE511500_016	Residential	608345	4853664	1.5	58	103	83	6	0.0%
RE511500_017	Residential	608310	4853713	1.5	52	94	83	7	0.0%
RE511500_018	Residential	608305	4853720	1.5	51	93	83	6	0.0%
RE511500_019	Residential	608232	4853817	1.5	33	77	83	0	-
RE511500_020	Residential	608226	4853679	1.5	53	94	83	8	0.0%
RE511500_021	Residential	608207	4853707	1.5	49	90	83	5	0.0%
RE511500_022	Residential	608274	4853612	1.5	64	109	83	10	0.0%
RE511500_023	Residential	608242	4853657	1.5	58	100	83	7	0.0%
RE511500_024	Residential	608232	4853672	1.5	55	96	83	8	0.0%
RE511500_025	Residential	607937	4853892	1.5	21	65	83	0	-
RE511500_026	Residential	607990	4853929	1.5	20	64	83	0	-
RE511500_027	Residential	607999	4853934	1.5	20	64	83	0	-
RE511500_028	Residential	608017	4853910	1.5	22	66	83	0	-
RE511500_029	Residential	607985	4853887	1.5	22	66	83	0	-
RE511500_030	Residential	607977	4853881	1.5	22	66	83	0	-
RE511500_031	Residential	607952	4853902	1.5	20	65	83	0	-
RE511500_032	Residential	608205	4853855	1.5	29	74	83	0	-
RE511500_033	Residential	608000	4853898	1.5	22	66	83	0	-
RE511500_034	Residential	607982	4853923	1.5	20	64	83	0	-
RE511500_035	Residential	607960	4853907	1.5	20	64	83	0	-
RE511500_036	Residential	607993	4853893	1.5	22	66	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_037	Residential	608228	4853822	1.5	32	76	83	0	-
RE511500_038	Residential	608194	4853868	1.5	28	73	83	0	-
RE511500_039	Residential	608188	4853877	1.5	27	72	83	0	-
RE511500_040	Residential	608008	4853903	1.5	22	66	83	0	-
RE511500_041	Residential	608199	4853862	1.5	29	73	83	0	-
RE511500_042	Residential	608224	4853828	1.5	31	75	83	0	-
RE511500_043	Residential	608221	4853833	1.5	31	75	83	0	-
RE511500_044	Residential	607925	4853940	1.5	20	64	83	0	-
RE511500_045	Residential	608481	4853493	1.5	64	108	83	7	0.0%
RE511500_046	Residential	608407	4853578	1.5	58	103	83	8	0.0%
RE511500_047	Residential	608462	4853557	1.5	65	106	83	6	0.0%
RE511500_048	Residential	608457	4853565	1.5	64	106	83	6	0.0%
RE511500_049	Residential	607910	4853930	1.5	20	64	83	0	-
RE511500_050	Residential	607917	4853935	1.5	20	64	83	0	-
RE511500_051	Residential	608411	4853570	1.5	61	105	83	10	0.0%
RE511500_052	Residential	608435	4853530	1.5	68	109	83	6	0.0%
RE511500_053	Residential	608415	4853563	1.5	63	106	83	9	0.0%
RE511500_054	Residential	608053	4853924	1.5	22	66	83	0	-
RE511500_055	Residential	608480	4853505	1.5	63	108	83	7	0.0%
RE511500_056	Residential	608197	4853721	1.5	45	88	83	4	0.0%
RE511500_057	Residential	608191	4853730	1.5	42	87	83	2	0.0%
RE511500_058	Residential	608263	4853627	1.5	64	108	83	8	0.0%
RE511500_059	Residential	608289	4853591	1.5	61	105	83	6	0.0%
RE511500_060	Residential	608284	4853598	1.5	62	107	83	9	0.0%
RE511500_061	Residential	608211	4853846	1.5	30	75	83	0	-
RE511500_062	Residential	608179	4853890	1.5	26	70	83	0	-
RE511500_063	Residential	607967	4853875	1.5	22	66	83	0	-
RE511500_064	Residential	607967	4853913	1.5	20	64	83	0	-
RE511500_065	Residential	608234	4853563	1.5	67	111	83	11	0.0%
RE511500_066	Residential	608254	4853574	1.5	65	109	83	11	0.0%
RE511500_067	Residential	608194	4853557	1.5	72	117	83	13	0.0%
RE511500_068	Residential	608225	4853560	1.5	68	113	83	12	0.0%
RE511500_069	Residential	608214	4853558	1.5	70	115	83	12	0.0%
RE511500_070	Residential	608185	4853558	1.5	72	117	83	13	0.0%
RE511500_071	Residential	608131	4853676	1.5	46	91	83	6	0.0%
RE511500_072	Residential	608217	4853606	1.5	66	110	83	9	0.0%
RE511500_073	Residential	608173	4853670	1.5	54	95	83	6	0.0%
RE511500_074	Residential	608147	4853647	1.5	56	97	83	6	0.0%
RE511500_075	Residential	608204	4853630	1.5	61	103	83	9	0.0%
RE511500_076	Residential	608156	4853693	1.5	45	90	83	5	0.0%
RE511500_077	Residential	608189	4853647	1.5	57	98	83	9	0.0%
RE511500_078	Residential	608184	4853655	1.5	57	97	83	8	0.0%
RE511500_079	Residential	608158	4853604	1.5	64	106	83	10	0.0%
RE511500_080	Residential	608149	4853688	1.5	45	90	83	5	0.0%
RE511500_081	Residential	608226	4853615	1.5	64	109	83	8	0.0%
RE511500_082	Residential	608167	4853604	1.5	65	106	83	10	0.0%
RE511500_083	Residential	608195	4853640	1.5	59	100	83	9	0.0%
RE511500_084	Residential	608195	4853604	1.5	64	109	83	8	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_085	Residential	608154	4853638	1.5	59	99	83	8	0.0%
RE511500_086	Residential	608120	4853668	1.5	46	91	83	6	0.0%
RE511500_087	Residential	608176	4853604	1.5	65	107	83	9	0.0%
RE511500_088	Residential	608168	4853677	1.5	51	92	83	6	0.0%
RE511500_089	Residential	608140	4853682	1.5	46	90	83	5	0.0%
RE511500_090	Residential	608205	4853603	1.5	66	110	83	9	0.0%
RE511500_091	Residential	608185	4853604	1.5	64	107	83	9	0.0%
RE511500_092	Residential	608141	4853656	1.5	53	94	83	6	0.0%
RE511500_093	Residential	608244	4853567	1.5	66	110	83	11	0.0%
RE511500_094	Residential	608204	4853557	1.5	72	116	83	13	0.0%
RE511500_095	Residential	608304	4853570	1.5	65	110	83	7	0.0%
RE511500_096	Residential	608315	4853555	1.5	67	112	83	9	0.0%
RE511500_097	Residential	608258	4853635	1.5	62	107	83	8	0.0%
RE511500_098	Residential	608248	4853649	1.5	58	101	83	8	0.0%
RE511500_099	Residential	608222	4853686	1.5	53	94	83	6	0.0%
RE511500_100	Residential	608216	4853693	1.5	52	93	83	5	0.0%
RE511500_101	Residential	608269	4853620	1.5	64	109	83	8	0.0%
RE511500_102	Residential	608201	4853714	1.5	47	89	83	5	0.0%
RE511500_103	Residential	608309	4853563	1.5	67	111	83	8	0.0%
RE511500_104	Residential	608299	4853577	1.5	63	108	83	6	0.0%
RE511500_105	Residential	608279	4853605	1.5	64	108	83	9	0.0%
RE511500_106	Residential	608253	4853642	1.5	60	104	83	8	0.0%
RE511500_107	Residential	608212	4853700	1.5	51	92	83	5	0.0%
RE511500_108	Residential	608294	4853584	1.5	60	105	83	6	0.0%
RE511500_109	Residential	608166	4853699	1.5	45	89	83	5	0.0%
RE511500_110	Residential	608179	4853662	1.5	56	96	83	5	0.0%
RE511500_111	Residential	608443	4853510	1.5	66	108	83	8	0.0%
RE511500_112	Residential	608420	4853557	1.5	65	108	83	8	0.0%
RE511500_113	Residential	608424	4853551	1.5	67	109	83	8	0.0%
RE511500_114	Residential	608473	4853532	1.5	65	106	83	6	0.0%
RE511500_115	Residential	608470	4853541	1.5	65	106	83	6	0.0%
RE511500_116	Residential	608448	4853484	1.5	66	111	83	8	0.0%
RE511500_117	Residential	608445	4853501	1.5	65	109	83	8	0.0%
RE511500_118	Residential	608446	4853493	1.5	66	110	83	8	0.0%
RE511500_119	Residential	608441	4853518	1.5	67	108	83	7	0.0%
RE511500_120	Residential	608476	4853524	1.5	64	105	83	6	0.0%
RE511500_121	Residential	608433	4853537	1.5	68	109	83	7	0.0%
RE511500_122	Residential	608208	4853851	1.5	30	74	83	0	-
RE511500_123	Residential	608438	4853524	1.5	68	109	83	6	0.0%
RE511500_124	Residential	608429	4853545	1.5	68	109	83	7	0.0%
RE511500_125	Residential	608466	4853549	1.5	66	106	83	5	0.0%
RE511500_126	Residential	608478	4853514	1.5	62	106	83	8	0.0%
RE511500_127	Residential	608452	4853573	1.5	62	105	83	6	0.0%
RE511500_128	Residential	608241	4853804	1.5	36	80	83	0	-
RE511500_129	Residential	608215	4853841	1.5	30	75	83	0	-
RE511500_130	Residential	608236	4853811	1.5	34	79	83	0	-
RE511500_131	Residential	608185	4853882	1.5	27	71	83	0	-
RE511500_132	Residential	607957	4853868	1.5	22	66	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_133	Residential	607944	4853897	1.5	21	65	83	0	-
RE511500_134	Residential	607975	4853918	1.5	20	64	83	0	-
RE511500_135	Residential	608340	4853670	1.5	58	103	83	6	0.0%
RE511500_136	Residential	608276	4853761	1.5	46	87	83	3	0.0%
RE511500_137	Residential	608272	4853766	1.5	44	86	83	3	0.0%
RE511500_138	Residential	608268	4853772	1.5	43	85	83	2	0.0%
RE511500_139	Residential	608263	4853780	1.5	41	84	83	1	0.0%
RE511500_140	Residential	608331	4853682	1.5	57	101	83	6	0.0%
RE511500_141	Residential	608237	4853665	1.5	57	98	83	8	0.0%
RE511500_142	Residential	608152	4853626	1.5	60	101	83	9	0.0%
RE511500_143	Residential	608232	4853514	1.5	72	117	83	13	0.0%
RE511500_144	Residential	608223	4853515	1.5	72	117	83	12	0.0%
RE511500_145	Residential	608246	4853517	1.5	72	117	83	13	0.0%
RE511500_146	Residential	608253	4853520	1.5	72	117	83	13	0.0%
RE511500_147	Residential	608269	4853526	1.5	72	116	83	13	0.0%
RE511500_148	Residential	608274	4853530	1.5	72	116	83	13	0.0%
RE511500_149	Residential	608264	4853523	1.5	72	117	83	13	0.0%
RE511500_150	Residential	608279	4853533	1.5	71	116	83	12	0.0%
RE511500_151	Residential	608336	4853591	1.5	61	106	83	6	0.0%
RE511500_152	Residential	608339	4853585	1.5	63	107	83	6	0.0%
RE511500_153	Residential	608328	4853602	1.5	58	102	83	6	0.0%
RE511500_154	Residential	608332	4853597	1.5	59	104	83	6	0.0%
RE511500_155	Residential	608344	4853578	1.5	64	108	83	5	0.0%
RE511500_156	Residential	608324	4853608	1.5	57	101	83	5	0.0%
RE511500_157	Residential	608318	4853615	1.5	59	103	83	6	0.0%
RE511500_158	Residential	608314	4853620	1.5	60	105	83	6	0.0%
RE511500_159	Residential	608309	4853630	1.5	61	106	83	7	0.0%
RE511500_160	Residential	608305	4853636	1.5	62	106	83	7	0.0%
RE511500_161	Residential	608299	4853644	1.5	61	106	83	7	0.0%
RE511500_162	Residential	608295	4853650	1.5	61	105	83	7	0.0%
RE511500_163	Residential	608287	4853661	1.5	58	103	83	8	0.0%
RE511500_164	Residential	608291	4853655	1.5	60	104	83	8	0.0%
RE511500_165	Residential	608282	4853668	1.5	56	101	83	8	0.0%
RE511500_166	Residential	608278	4853674	1.5	56	98	83	7	0.0%
RE511500_167	Residential	608274	4853679	1.5	56	98	83	7	0.0%
RE511500_168	Residential	608269	4853685	1.5	55	97	83	7	0.0%
RE511500_169	Residential	608264	4853692	1.5	54	95	83	7	0.0%
RE511500_170	Residential	608259	4853699	1.5	52	93	83	7	0.0%
RE511500_171	Residential	608254	4853706	1.5	51	92	83	5	0.0%
RE511500_172	Residential	608250	4853713	1.5	51	92	83	5	0.0%
RE511500_173	Residential	608240	4853728	1.5	48	90	83	5	0.0%
RE511500_174	Residential	608236	4853733	1.5	47	88	83	5	0.0%
RE511500_175	Residential	608231	4853738	1.5	45	87	83	5	0.0%
RE511500_176	Residential	608228	4853744	1.5	44	86	83	2	0.0%
RE511500_177	Residential	608245	4853721	1.5	50	91	83	5	0.0%
RE511500_178	Residential	608223	4853750	1.5	42	86	83	2	0.0%
RE511500_179	Residential	608375	4853620	1.5	56	101	83	6	0.0%
RE511500_180	Residential	608371	4853626	1.5	54	99	83	5	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_181	Residential	608378	4853615	1.5	58	102	83	5	0.0%
RE511500_182	Residential	608382	4853610	1.5	59	103	83	4	0.0%
RE511500_183	Residential	608368	4853631	1.5	54	98	83	5	0.0%
RE511500_184	Residential	607933	4853946	1.5	20	64	83	0	-
RE511500_185	Residential	607940	4853951	1.5	20	64	83	0	-
RE511500_186	Residential	607948	4853956	1.5	20	64	83	0	-
RE511500_187	Residential	607955	4853962	1.5	20	64	83	0	-
RE511500_188	Residential	607963	4853967	1.5	19	64	83	0	-
RE511500_189	Residential	607972	4853973	1.5	19	64	83	0	-
RE511500_190	Residential	607887	4853960	1.5	19	63	83	0	-
RE511500_191	Residential	607893	4853965	1.5	19	63	83	0	-
RE511500_192	Residential	607899	4853969	1.5	19	63	83	0	-
RE511500_193	Residential	607904	4853973	1.5	19	63	83	0	-
RE511500_194	Residential	607910	4853977	1.5	19	63	83	0	-
RE511500_195	Residential	607916	4853981	1.5	19	63	83	0	-
RE511500_196	Residential	607923	4853986	1.5	19	63	83	0	-
RE511500_197	Residential	607928	4853990	1.5	19	63	83	0	-
RE511500_198	Residential	607933	4853993	1.5	19	63	83	0	-
RE511500_199	Residential	607938	4853997	1.5	19	63	83	0	-
RE511500_200	Residential	607943	4854000	1.5	19	63	83	0	-
RE511500_201	Residential	607948	4854004	1.5	19	63	83	0	-
RE511500_202	Residential	608047	4853932	1.5	21	66	83	0	-
RE511500_203	Residential	608042	4853940	1.5	21	65	83	0	-
RE511500_204	Residential	608036	4853947	1.5	21	65	83	0	-
RE511500_205	Residential	608031	4853955	1.5	21	65	83	0	-
RE511500_206	Residential	608026	4853962	1.5	20	64	83	0	-
RE511500_207	Residential	608021	4853969	1.5	20	64	83	0	-
RE511500_208	Residential	608016	4853976	1.5	19	63	83	0	-
RE511500_209	Residential	608011	4853983	1.5	19	63	83	0	-
RE511500_210	Residential	608006	4853990	1.5	18	63	83	0	-
RE511500_211	Residential	608001	4853997	1.5	18	63	83	0	-
RE511500_212	Residential	607995	4854005	1.5	18	63	83	0	-
RE511500_213	Residential	607990	4854012	1.5	18	63	83	0	-
RE511500_214	Residential	607985	4854020	1.5	18	63	83	0	-
RE511500_215	Residential	607979	4854029	1.5	18	63	83	0	-
RE511500_216	Residential	608085	4853947	1.5	22	66	83	0	-
RE511500_217	Residential	608081	4853952	1.5	21	66	83	0	-
RE511500_218	Residential	608077	4853958	1.5	21	66	83	0	-
RE511500_219	Residential	608074	4853962	1.5	21	65	83	0	-
RE511500_220	Residential	608069	4853969	1.5	20	65	83	0	-
RE511500_221	Residential	608065	4853974	1.5	20	65	83	0	-
RE511500_222	Residential	608062	4853978	1.5	20	64	83	0	-
RE511500_223	Residential	608058	4853984	1.5	20	64	83	0	-
RE511500_224	Residential	608053	4853991	1.5	20	64	83	0	-
RE511500_225	Residential	608049	4853997	1.5	19	63	83	0	-
RE511500_226	Residential	608043	4854006	1.5	19	63	83	0	-
RE511500_227	Residential	608040	4854011	1.5	19	63	83	0	-
RE511500_228	Residential	608034	4854019	1.5	18	62	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_229	Residential	608029	4854025	1.5	18	62	83	0	-
RE511500_230	Residential	608026	4854031	1.5	17	62	83	0	-
RE511500_231	Residential	608022	4854036	1.5	17	62	83	0	-
RE511500_232	Residential	608018	4854042	1.5	17	62	83	0	-
RE511500_233	Residential	608013	4854048	1.5	18	62	83	0	-
RE511500_234	Residential	608175	4853896	1.5	25	70	83	0	-
RE511500_235	Residential	608171	4853902	1.5	24	69	83	0	-
RE511500_236	Residential	608167	4853908	1.5	23	68	83	0	-
RE511500_237	Residential	608162	4853915	1.5	22	67	83	0	-
RE511500_238	Residential	608157	4853922	1.5	23	67	83	0	-
RE511500_239	Residential	608154	4853927	1.5	23	67	83	0	-
RE511500_240	Residential	608150	4853933	1.5	23	67	83	0	-
RE511500_241	Residential	608145	4853939	1.5	23	67	83	0	-
RE511500_242	Residential	608142	4853944	1.5	23	67	83	0	-
RE511500_243	Residential	608122	4853973	1.5	21	66	83	0	-
RE511500_244	Residential	608119	4853977	1.5	21	66	83	0	-
RE511500_245	Residential	608115	4853983	1.5	21	65	83	0	-
RE511500_246	Residential	608112	4853987	1.5	21	65	83	0	-
RE511500_247	Residential	608107	4853994	1.5	20	65	83	0	-
RE511500_259	Residential	607976	4854103	1.5	17	61	83	0	-
RE511500_260	Residential	607970	4854109	1.5	17	61	83	0	-
RE511500_261	Residential	607967	4854115	1.5	17	61	83	0	-
RE511500_262	Residential	607962	4854121	1.5	17	61	83	0	-
RE511500_263	Residential	607959	4854126	1.5	17	61	83	0	-
RE511500_264	Residential	607955	4854131	1.5	16	60	83	0	-
RE511500_265	Residential	607949	4854139	1.5	16	60	83	0	-
RE511500_266	Residential	607944	4854146	1.5	16	60	83	0	-
RE511500_267	Residential	607939	4854153	1.5	16	60	83	0	-
RE511500_268	Residential	607934	4854160	1.5	15	59	83	0	-
RE511500_269	Residential	607929	4854168	1.5	15	59	83	0	-
RE511500_270	Residential	607927	4854176	1.5	15	59	83	0	-
RE511500_288	Residential	607723	4854202	1.5	14	58	83	0	-
RE511500_289	Residential	607711	4854198	1.5	14	58	83	0	-
RE511500_313	Residential	607831	4854199	1.5	14	58	83	0	-
RE511500_314	Residential	607821	4854196	1.5	14	58	83	0	-
RE511500_315	Residential	607810	4854192	1.5	14	58	83	0	-
RE511500_316	Residential	607798	4854189	1.5	14	58	83	0	-
RE511500_317	Residential	607787	4854186	1.5	14	58	83	0	-
RE511500_318	Residential	607777	4854182	1.5	14	58	83	0	-
RE511500_319	Residential	607764	4854179	1.5	14	58	83	0	-
RE511500_320	Residential	607849	4854155	1.5	15	59	83	0	-
RE511500_321	Residential	607839	4854152	1.5	15	59	83	0	-
RE511500_322	Residential	607829	4854148	1.5	15	59	83	0	-
RE511500_323	Residential	607818	4854145	1.5	15	59	83	0	-
RE511500_324	Residential	607806	4854141	1.5	15	59	83	0	-
RE511500_325	Residential	607943	4854078	1.5	18	61	83	0	-
RE511500_326	Residential	607939	4854083	1.5	17	61	83	0	-
RE511500_327	Residential	607933	4854092	1.5	17	61	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_328	Residential	607929	4854097	1.5	17	61	83	0	-
RE511500_329	Residential	607923	4854106	1.5	16	60	83	0	-
RE511500_330	Residential	607919	4854112	1.5	16	60	83	0	-
RE511500_331	Residential	607913	4854119	1.5	16	60	83	0	-
RE511500_332	Residential	607907	4854127	1.5	15	59	83	0	-
RE511500_333	Residential	607902	4854135	1.5	15	59	83	0	-
RE511500_334	Residential	607897	4854142	1.5	15	59	83	0	-
RE511500_335	Residential	607892	4854151	1.5	15	59	83	0	-
RE511500_336	Residential	607888	4854158	1.5	15	59	83	0	-
RE511500_337	Residential	607885	4854168	1.5	15	58	83	0	-
RE511500_338	Residential	607883	4854174	1.5	15	58	83	0	-
RE511500_339	Residential	607733	4854170	1.5	15	59	83	0	-
RE511500_340	Residential	607810	4854078	1.5	16	60	83	0	-
RE511500_341	Residential	607805	4854085	1.5	16	59	83	0	-
RE511500_342	Residential	607798	4854096	1.5	15	59	83	0	-
RE511500_343	Residential	607794	4854107	1.5	15	59	83	0	-
RE511500_344	Residential	607790	4854118	1.5	15	59	83	0	-
RE511500_345	Residential	607788	4854129	1.5	15	59	83	0	-
RE511500_346	Residential	607785	4854141	1.5	15	59	83	0	-
RE511500_347	Residential	607825	4854044	1.5	17	60	83	0	-
RE511500_348	Residential	607832	4854049	1.5	17	60	83	0	-
RE511500_349	Residential	607840	4854054	1.5	16	60	83	0	-
RE511500_350	Residential	607846	4854059	1.5	16	60	83	0	-
RE511500_351	Residential	607853	4854064	1.5	16	60	83	0	-
RE511500_352	Residential	607861	4854068	1.5	16	60	83	0	-
RE511500_353	Residential	607868	4854074	1.5	16	60	83	0	-
RE511500_354	Residential	607874	4854078	1.5	16	60	83	0	-
RE511500_355	Residential	607881	4854083	1.5	16	60	83	0	-
RE511500_356	Residential	607889	4854088	1.5	16	60	83	0	-
RE511500_357	Residential	607850	4854014	1.5	17	61	83	0	-
RE511500_358	Residential	607857	4854018	1.5	17	61	83	0	-
RE511500_359	Residential	607863	4854023	1.5	17	61	83	0	-
RE511500_360	Residential	607869	4854027	1.5	17	61	83	0	-
RE511500_361	Residential	607874	4854030	1.5	17	61	83	0	-
RE511500_362	Residential	607880	4854034	1.5	17	61	83	0	-
RE511500_363	Residential	607885	4854039	1.5	17	61	83	0	-
RE511500_364	Residential	607891	4854043	1.5	17	61	83	0	-
RE511500_365	Residential	607895	4854047	1.5	17	61	83	0	-
RE511500_366	Residential	607900	4854050	1.5	17	61	83	0	-
RE511500_367	Residential	607906	4854054	1.5	17	61	83	0	-
RE511500_368	Residential	607911	4854057	1.5	17	61	83	0	-
RE511500_369	Residential	607823	4854097	1.5	16	59	83	0	-
RE511500_370	Residential	607831	4854103	1.5	16	59	83	0	-
RE511500_371	Residential	607839	4854108	1.5	16	59	83	0	-
RE511500_372	Residential	607847	4854113	1.5	16	59	83	0	-
RE511500_373	Residential	607854	4854118	1.5	15	59	83	0	-
RE511500_374	Residential	607864	4854124	1.5	15	59	83	0	-
RE511500_376	Residential	607755	4854206	1.5	14	57	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_001	Residential	608413	4853627	1.5	56	101	83	4	0.0%
RE511600_002	Residential	608350	4853717	1.5	51	96	83	6	0.0%
RE511600_003	Residential	608360	4853703	1.5	54	99	83	6	0.0%
RE511600_004	Residential	608309	4853775	1.5	45	87	83	3	0.0%
RE511600_005	Residential	608274	4853824	1.5	35	80	83	0	-
RE511600_006	Residential	608263	4853840	1.5	33	77	83	0	-
RE511600_007	Residential	608430	4853685	1.5	51	96	83	3	0.0%
RE511600_008	Residential	608384	4853750	1.5	48	92	83	6	0.0%
RE511600_009	Residential	608443	4853666	1.5	50	94	83	3	0.0%
RE511600_010	Residential	608451	4853655	1.5	52	97	83	4	0.0%
RE511600_011	Residential	608399	4853728	1.5	52	97	83	6	0.0%
RE511600_012	Residential	608407	4853717	1.5	53	98	83	5	0.0%
RE511600_013	Residential	608423	4853695	1.5	53	97	83	4	0.0%
RE511600_014	Residential	608392	4853739	1.5	50	95	83	6	0.0%
RE511600_015	Residential	608437	4853676	1.5	49	94	83	3	0.0%
RE511600_016	Residential	608415	4853706	1.5	54	98	83	4	0.0%
RE511600_017	Residential	608253	4853854	1.5	30	74	83	0	-
RE511600_018	Residential	608527	4853503	1.5	61	105	83	6	0.0%
RE511600_019	Residential	608519	4853540	1.5	60	102	83	5	0.0%
RE511600_020	Residential	608517	4853549	1.5	61	102	83	5	0.0%
RE511600_021	Residential	608473	4853624	1.5	54	99	83	4	0.0%
RE511600_022	Residential	608509	4853566	1.5	62	103	83	5	0.0%
RE511600_023	Residential	608496	4853592	1.5	59	102	83	5	0.0%
RE511600_024	Residential	608441	4853588	1.5	57	101	83	8	0.0%
RE511600_025	Residential	608524	4853521	1.5	60	104	83	6	0.0%
RE511600_026	Residential	608490	4853600	1.5	57	100	83	5	0.0%
RE511600_027	Residential	608513	4853558	1.5	62	103	83	5	0.0%
RE511600_028	Residential	608407	4853636	1.5	54	99	83	4	0.0%
RE511600_029	Residential	608402	4853644	1.5	52	97	83	3	0.0%
RE511600_030	Residential	608396	4853651	1.5	52	96	83	3	0.0%
RE511600_031	Residential	608391	4853659	1.5	53	98	83	4	0.0%
RE511600_032	Residential	608268	4853833	1.5	34	79	83	0	-
RE511600_033	Residential	608258	4853847	1.5	31	76	83	0	-
RE511600_034	Residential	608526	4853512	1.5	60	105	83	6	0.0%
RE511600_035	Residential	608365	4853764	1.5	48	90	83	6	0.0%
RE511600_036	Residential	608501	4853584	1.5	61	103	83	5	0.0%
RE511600_037	Residential	608485	4853608	1.5	54	98	83	5	0.0%
RE511600_038	Residential	608447	4853580	1.5	60	103	83	9	0.0%
RE511600_039	Residential	608480	4853615	1.5	53	97	83	4	0.0%
RE511600_040	Residential	608522	4853530	1.5	59	103	83	6	0.0%
RE511600_041	Residential	608380	4853674	1.5	56	100	83	5	0.0%
RE511600_042	Residential	608375	4853682	1.5	56	101	83	5	0.0%
RE511600_043	Residential	608355	4853710	1.5	53	98	83	6	0.0%
RE511600_044	Residential	608370	4853689	1.5	56	101	83	6	0.0%
RE511600_045	Residential	608365	4853696	1.5	56	100	83	6	0.0%
RE511600_046	Residential	608528	4853482	1.5	64	105	83	7	0.0%
RE511600_047	Residential	608505	4853575	1.5	62	103	83	5	0.0%
RE511600_048	Residential	608435	4853597	1.5	56	101	83	6	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_049	Residential	608528	4853494	1.5	62	105	83	6	0.0%
RE511600_050	Residential	608345	4853723	1.5	51	94	83	7	0.0%
RE511600_051	Residential	608341	4853730	1.5	51	93	83	7	0.0%
RE511600_052	Residential	608336	4853737	1.5	50	92	83	6	0.0%
RE511600_053	Residential	608330	4853745	1.5	49	91	83	6	0.0%
RE511600_054	Residential	608325	4853752	1.5	48	89	83	3	0.0%
RE511600_055	Residential	608320	4853760	1.5	46	88	83	3	0.0%
RE511600_056	Residential	608315	4853767	1.5	46	87	83	3	0.0%
RE511600_057	Residential	608304	4853782	1.5	44	86	83	3	0.0%
RE511600_058	Residential	608299	4853790	1.5	43	85	83	2	0.0%
RE511600_059	Residential	608292	4853799	1.5	41	83	83	0	-
RE511600_060	Residential	608386	4853667	1.5	55	99	83	5	0.0%
RE511600_061	Residential	608377	4853772	1.5	47	90	83	5	0.0%
RE511600_062	Residential	608387	4853779	1.5	47	89	83	5	0.0%
RE511600_085	Residential	608248	4853972	1.5	24	68	83	0	-
RE511600_086	Residential	608239	4853965	1.5	24	68	83	0	-
RE511600_087	Residential	608227	4853958	1.5	23	68	83	0	-
RE511600_091	Residential	608350	4853851	1.5	38	80	83	0	-
RE511600_092	Residential	608343	4853862	1.5	36	80	83	0	-
RE511600_093	Residential	608335	4853872	1.5	34	78	83	0	-
RE511600_094	Residential	608327	4853883	1.5	32	77	83	0	-
RE511600_095	Residential	608320	4853894	1.5	31	75	83	0	-
RE511600_096	Residential	608312	4853905	1.5	29	73	83	0	-
RE511600_097	Residential	608305	4853915	1.5	27	72	83	0	-
RE511600_098	Residential	608298	4853925	1.5	27	72	83	0	-
RE511600_099	Residential	608291	4853934	1.5	27	71	83	0	-
RE511600_100	Residential	608283	4853945	1.5	26	71	83	0	-
RE511600_101	Residential	608348	4853801	1.5	44	85	83	3	0.0%
RE511600_102	Residential	608342	4853810	1.5	43	84	83	1	0.0%
RE511600_103	Residential	608336	4853817	1.5	42	83	83	1	0.0%
RE511600_104	Residential	608331	4853825	1.5	40	82	83	0	-
RE511600_105	Residential	608325	4853833	1.5	38	81	83	0	-
RE511600_106	Residential	608319	4853842	1.5	36	80	83	0	-
RE511600_107	Residential	608312	4853852	1.5	35	79	83	0	-
RE511600_108	Residential	608305	4853861	1.5	33	78	83	0	-
RE511600_109	Residential	608299	4853870	1.5	32	76	83	0	-
RE511600_110	Residential	608292	4853880	1.5	30	75	83	0	-
RE511600_111	Residential	608285	4853889	1.5	28	73	83	0	-
RE511600_112	Residential	608279	4853898	1.5	28	72	83	0	-
RE511600_113	Residential	608274	4853905	1.5	28	72	83	0	-
RE511600_114	Residential	608269	4853913	1.5	27	72	83	0	-
RE511600_115	Residential	608257	4853930	1.5	26	71	83	0	-
RE511600_116	Residential	608248	4853861	1.5	29	74	83	0	-
RE511600_117	Residential	608243	4853868	1.5	29	74	83	0	-
RE511600_118	Residential	608238	4853875	1.5	29	73	83	0	-
RE511600_119	Residential	608233	4853882	1.5	28	73	83	0	-
RE511600_120	Residential	608228	4853889	1.5	28	72	83	0	-
RE511600_121	Residential	608223	4853896	1.5	27	72	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_122	Residential	608218	4853903	1.5	27	71	83	0	-
RE511600_123	Residential	608213	4853910	1.5	26	71	83	0	-
RE511600_124	Residential	608208	4853917	1.5	25	70	83	0	-
RE511600_125	Residential	608204	4853924	1.5	25	69	83	0	-
RE511600_126	Residential	608199	4853931	1.5	24	68	83	0	-
RE511600_127	Residential	608194	4853938	1.5	23	67	83	0	-
RE511600_128	Residential	608189	4853944	1.5	22	66	83	0	-
RE511600_129	Residential	608184	4853951	1.5	22	66	83	0	-
RE511600_130	Residential	608179	4853958	1.5	22	66	83	0	-
RE511600_131	Residential	608173	4853967	1.5	22	66	83	0	-
RE511600_132	Residential	608210	4853982	1.5	21	65	83	0	-
RE511600_133	Residential	608221	4853990	1.5	20	65	83	0	-
RE511600_134	Residential	608230	4853997	1.5	21	65	83	0	-
RE511600_142	Residential	608180	4854022	1.5	21	65	83	0	-
RE511600_143	Residential	608189	4854028	1.5	21	65	83	0	-
RE511600_144	Residential	608196	4854033	1.5	21	65	83	0	-
RE511600_163	Residential	608170	4854054	1.5	19	64	83	0	-
RE511600_164	Residential	608162	4854048	1.5	20	64	83	0	-
RE511600_185	Residential	608102	4854000	1.5	20	65	83	0	-
RE511600_186	Residential	608099	4854005	1.5	20	64	83	0	-
RE511600_187	Residential	608096	4854009	1.5	20	64	83	0	-
RE511600_188	Residential	608090	4854017	1.5	19	64	83	0	-
RE511600_189	Residential	608087	4854022	1.5	19	63	83	0	-
RE511600_190	Residential	608081	4854032	1.5	19	63	83	0	-
RE511600_191	Residential	608077	4854037	1.5	19	63	83	0	-
RE511600_192	Residential	608073	4854045	1.5	19	63	83	0	-
RE511600_193	Residential	608068	4854051	1.5	18	62	83	0	-
RE511600_194	Residential	608064	4854057	1.5	18	62	83	0	-
RE511600_195	Residential	608060	4854062	1.5	18	62	83	0	-
RE511600_196	Residential	608056	4854069	1.5	17	61	83	0	-
RE511600_197	Residential	608053	4854075	1.5	17	61	83	0	-
RE511600_198	Residential	608154	4853993	1.5	21	66	83	0	-
RE511600_199	Residential	608148	4854003	1.5	21	65	83	0	-
RE511600_200	Residential	608142	4854010	1.5	20	65	83	0	-
RE511600_201	Residential	608137	4854018	1.5	20	65	83	0	-
RE511600_202	Residential	608132	4854025	1.5	20	64	83	0	-
RE511600_203	Residential	608126	4854033	1.5	20	64	83	0	-
RE511600_204	Residential	608121	4854040	1.5	19	64	83	0	-
RE511600_205	Residential	608116	4854047	1.5	19	63	83	0	-
RE511600_206	Residential	608111	4854054	1.5	19	63	83	0	-
RE511600_207	Residential	608107	4854061	1.5	19	63	83	0	-
RE511600_208	Residential	608102	4854068	1.5	19	63	83	0	-
RE511600_209	Residential	608097	4854075	1.5	18	62	83	0	-
RE511600_210	Residential	608091	4854082	1.5	18	62	83	0	-
RE511600_211	Residential	608086	4854090	1.5	18	62	83	0	-
RE511600_212	Residential	608080	4854098	1.5	17	61	83	0	-
RE511600_228	Residential	608507	4853702	1.5	46	91	83	2	0.0%
RE511600_242	Residential	608263	4853920	1.5	27	71	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511800_001	Residential	607134	4855697	1.5	12	56	83	0	-
RE512000_002	Residential	607206	4855951	1.5	11	55	83	0	-
RE512000_003	Residential	607187	4856027	1.5	11	55	83	0	-
RE512100_001	Residential	607265	4856058	1.5	12	56	83	0	-
RE512100_002	Residential	607248	4856119	1.5	12	56	83	0	-
RE512200_001	Residential	607241	4856162	1.5	11	56	83	0	-
RE512200_002	Residential	607123	4856318	1.5	11	55	83	0	-
RE512200_003	Residential	607102	4856358	1.5	11	55	83	0	-
RE512300_001	Residential	607221	4856317	1.5	12	56	83	0	-
RE512400_001	Residential	607226	4856438	1.5	12	56	83	0	-
RE514400_001	Residential	608610	4857694	1.5	16	60	83	0	-
RE514400_003	Residential	608876	4857474	1.5	21	66	83	0	-
RE514400_006	Residential	608883	4857432	1.5	21	66	83	0	-
RE514400_007	Residential	608877	4857453	1.5	21	66	83	0	-
RE514500_001	Residential	608674	4857705	1.5	17	61	83	0	-
RE514500_002	Residential	608701	4857709	1.5	18	62	83	0	-
RE514500_003	Residential	608738	4857729	1.5	19	64	83	0	-
RE514500_006	Residential	608958	4857441	1.5	29	73	83	0	-
RE514500_007	Residential	608953	4857458	1.5	29	73	83	0	-
RE514500_008	Residential	608872	4857492	1.5	21	66	83	0	-
RE514500_009	Residential	608859	4857508	1.5	21	65	83	0	-
RE514500_010	Residential	608849	4857526	1.5	21	64	83	0	-
RE514600_001	Residential	608758	4857755	1.5	20	64	83	0	-
RE514600_002	Residential	608949	4857475	1.5	29	74	83	0	-
RE514600_003	Residential	608946	4857496	1.5	30	74	83	0	-
RE514600_004	Residential	608942	4857512	1.5	30	74	83	0	-
RE514600_005	Residential	608936	4857529	1.5	30	75	83	0	-
RE514600_006	Residential	608930	4857551	1.5	31	76	83	0	-
RE514700_001	Residential	608965	4857617	1.5	47	90	83	5	0.0%
RE514800_001	Residential	608884	4857846	1.5	35	79	83	0	-
RE515000_001	Residential	608971	4857986	1.5	41	85	83	1	0.0%
RE515100_001	Residential	609037	4857912	1.5	25	68	83	0	-
RE515200_001	Residential	609158	4857928	1.5	17	61	83	0	-
RE515200_002	Residential	609081	4857926	1.5	19	63	83	0	-
RE515200_003	Residential	608988	4858132	1.5	25	67	83	0	-
RE515300_001	Residential	609255	4857942	1.5	17	62	83	0	-
RE515300_002	Residential	609091	4858212	1.5	14	59	83	0	-
RE515300_003	Residential	608992	4858402	1.5	21	65	83	0	-
RE516200_001	Residential	609863	4858591	1.5	10	54	83	0	-
RE517200_001	Residential	610865	4858953	1.5	11	55	83	0	-
RE517200_002	Residential	610873	4858915	1.5	11	55	83	0	-
RE517200_003	Residential	610988	4858848	1.5	10	54	83	0	-
RE517400_001	Residential	611124	4858907	1.5	11	54	83	0	-
RE519100_001	Residential	612653	4859633	1.5	15	59	83	0	-
RE519500_001	Residential	612843	4860236	1.5	16	60	83	0	-
RE519500_002	Residential	612758	4860312	1.5	17	61	83	0	-
RE521400_001	Residential	614549	4860340	1.5	27	71	83	0	-
RE521600_001	Park and Conservation	615842	4859006	1.5	74	117	83	74	0.2%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_002	Residential	614759	4860153	1.5	28	73	83	0	-
RE521600_003	Residential	614783	4860430	1.5	31	76	83	0	-
RE521600_004	Residential	615884	4859578	1.5	94	128	83	298	0.7%
RE521600_005	Residential	615805	4859615	1.5	81	121	83	145	0.3%
RE521600_006	Residential	615779	4859578	1.5	79	120	83	113	0.3%
RE521600_007	Residential	615741	4859736	1.5	79	120	83	96	0.2%
RE521600_008	Residential	615516	4859929	1.5	56	99	83	24	0.1%
RE521600_009	Residential	615671	4860025	1.5	79	120	83	84	0.2%
RE521600_010	Residential	616259	4860149	1.5	55	96	83	10	0.0%
RE521600_011	Residential	616419	4860214	1.5	46	87	83	4	0.0%
RE521600_012	Residential	615172	4860341	1.5	35	79	83	0	-
RE521600_013	Residential	615849	4858301	1.5	61	105	83	14	0.0%
RE521600_017	Residential	614954	4860122	1.5	29	72	83	0	-
RE521600_018	Residential	615792	4858087	1.5	50	94	83	6	0.0%
RE521600_019	Residential	615658	4858566	1.5	48	90	83	5	0.0%
RE521600_020	Residential	615792	4858189	1.5	51	95	83	7	0.0%
RE521600_023	Residential	615889	4858330	1.5	65	110	83	20	0.0%
RE521600_026	Residential	615700	4858499	1.5	48	92	83	6	0.0%
RE521600_028	Residential	615797	4858289	1.5	53	98	83	9	0.0%
RE521600_030	Residential	615749	4858368	1.5	48	92	83	5	0.0%
RE521600_032	Residential	615905	4858207	1.5	64	109	83	17	0.0%
RE521600_035	Residential	615746	4858159	1.5	46	91	83	5	0.0%
RE521600_036	Residential	615704	4858558	1.5	48	92	83	6	0.0%
RE521600_037	Residential	615871	4858014	1.5	56	101	83	10	0.0%
RE521600_038	Residential	615876	4858126	1.5	59	103	83	13	0.0%
RE521600_039	Residential	615808	4858385	1.5	52	97	83	8	0.0%
RE521600_041	Residential	615837	4858114	1.5	54	99	83	10	0.0%
RE521600_043	Residential	615749	4858276	1.5	48	93	83	6	0.0%
RE521600_044	Residential	615845	4858206	1.5	57	102	83	12	0.0%
RE521600_045	Residential	615931	4858159	1.5	66	111	83	17	0.0%
RE521600_046	Residential	615948	4858081	1.5	67	112	83	17	0.0%
RE521600_047	Residential	616722	4858027	1.5	47	88	83	5	0.0%
RE521600_048	Residential	616724	4858016	1.5	47	88	83	5	0.0%
RE521600_049	Residential	616727	4858005	1.5	47	88	83	5	0.0%
RE521600_050	Residential	616685	4857961	1.5	51	91	83	6	0.0%
RE521600_051	Residential	616692	4857982	1.5	50	91	83	6	0.0%
RE521600_052	Residential	616692	4857993	1.5	50	90	83	6	0.0%
RE521600_053	Residential	616690	4858005	1.5	50	90	83	6	0.0%
RE521600_054	Residential	616682	4858015	1.5	50	91	83	6	0.0%
RE521600_055	Residential	616628	4857990	1.5	56	98	83	7	0.0%
RE521600_056	Residential	616631	4857979	1.5	55	98	83	7	0.0%
RE521600_057	Residential	616637	4857970	1.5	55	97	83	7	0.0%
RE521600_058	Residential	616642	4857962	1.5	54	97	83	7	0.0%
RE521600_059	Residential	616645	4857951	1.5	54	97	83	7	0.0%
RE521600_060	Residential	616617	4857954	1.5	57	101	83	7	0.0%
RE521600_061	Residential	616605	4857951	1.5	59	103	83	7	0.0%
RE521600_062	Residential	616591	4857946	1.5	61	105	83	7	0.0%
RE521600_063	Residential	616581	4857941	1.5	63	107	83	7	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_064	Residential	616570	4857932	1.5	65	110	83	8	0.0%
RE521600_065	Residential	616562	4857926	1.5	67	112	83	8	0.0%
RE521600_066	Residential	616551	4857917	1.5	70	114	83	11	0.0%
RE521600_067	Residential	616541	4857910	1.5	72	116	83	13	0.0%
RE521600_068	Residential	616532	4857900	1.5	72	117	83	15	0.0%
RE521600_069	Residential	616527	4857889	1.5	73	117	83	17	0.0%
RE521600_070	Residential	616522	4857875	1.5	75	117	83	18	0.0%
RE521600_071	Residential	616520	4857863	1.5	76	117	83	19	0.0%
RE521600_072	Residential	616516	4857852	1.5	78	118	83	20	0.0%
RE521600_073	Residential	616511	4857839	1.5	78	119	83	23	0.1%
RE521600_074	Residential	616508	4857827	1.5	78	119	83	25	0.1%
RE521600_075	Residential	616510	4857818	1.5	78	119	83	25	0.1%
RE521600_076	Residential	616566	4857851	1.5	69	114	83	11	0.0%
RE521600_077	Residential	616573	4857861	1.5	67	112	83	9	0.0%
RE521600_078	Residential	616578	4857871	1.5	66	110	83	8	0.0%
RE521600_079	Residential	616586	4857883	1.5	64	109	83	8	0.0%
RE521600_080	Residential	616597	4857890	1.5	62	106	83	7	0.0%
RE521600_081	Residential	616609	4857897	1.5	60	104	83	7	0.0%
RE521600_082	Residential	616621	4857902	1.5	58	102	83	7	0.0%
RE521600_083	Residential	616646	4857916	1.5	55	98	83	7	0.0%
RE521600_084	Residential	616072	4857806	1.5	75	117	83	29	0.1%
RE521600_085	Residential	616075	4857794	1.5	76	117	83	26	0.1%
RE521600_086	Residential	616095	4857778	1.5	78	119	83	26	0.1%
RE521600_087	Residential	616097	4857766	1.5	78	119	83	27	0.1%
RE521600_088	Residential	616098	4857755	1.5	78	119	83	29	0.1%
RE521600_089	Residential	616192	4857944	1.5	92	128	83	166	0.4%
RE521600_090	Residential	615423	4860137	1.5	50	92	83	9	0.0%
RW110000_001	Residential	595952	4825790	1.5	81	121	83	119	0.3%
RW110000_002	Residential	595454	4825807	1.5	110	134	83	558	1.3%
RW110000_008	Residential	594041	4825166	1.5	99	124	83	174	0.4%
RW110000_009	Residential	594096	4825191	1.5	93	127	83	230	0.5%
RW110000_010	Residential	594523	4825688	1.5	80	121	83	113	0.3%
RW110000_011	Residential	595159	4826252	1.5	104	129	83	223	0.5%
RW110000_012	Residential	595437	4826548	1.5	106	130	83	276	0.6%
RW110000_013	Residential	595321	4826744	1.5	93	122	83	150	0.3%
RW110000_014	Residential	595112	4826651	1.5	100	128	83	195	0.4%
RW110000_015	Residential	595155	4826706	1.5	100	129	83	200	0.5%
RW110000_016	Residential	595166	4826855	1.5	103	128	83	187	0.4%
RW110000_017	Residential	595209	4826815	1.5	104	129	83	213	0.5%
RW110000_018	Residential	594653	4825844	1.5	80	121	83	111	0.3%
RW110000_019	Residential	595416	4826834	1.5	98	127	83	155	0.4%
RW110000_020	Residential	595560	4825534	1.5	82	123	83	176	0.4%
RW110000_021	Residential	597393	4824513	1.5	73	114	83	31	0.1%
RW110000_022	Residential	594899	4824668	1.5	94	129	83	243	0.6%
RW110000_023	Residential	594655	4824528	1.5	108	129	83	250	0.6%
RW110000_024	Residential	595310	4826113	1.5	119	141	83	755	1.7%
RW110100_001	Residential	595323	4827011	1.5	98	129	83	182	0.4%
RW112100_001	Residential	594926	4829061	1.5	63	104	83	18	0.0%

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW112100_002	Residential	594880	4829107	1.5	61	102	83	16	0.0%
RW112100_003	Residential	594856	4829138	1.5	60	101	83	16	0.0%
RW112200_001	Residential	594826	4829169	1.5	59	100	83	15	0.0%
RW112300_001	Residential	594544	4829356	1.5	48	93	83	6	0.0%
RW112300_002	Residential	594555	4829392	1.5	49	92	83	10	0.0%
RW112300_003	Residential	594737	4829363	1.5	77	118	83	14	0.0%
RW112400_001	Residential	594707	4829399	1.5	76	117	83	14	0.0%
RW112400_002	Residential	594683	4829425	1.5	75	116	83	12	0.0%
RW112400_003	Residential	594663	4829470	1.5	71	112	83	10	0.0%
RW112500_001	Residential	594652	4829522	1.5	66	107	83	8	0.0%
RW112500_002	Residential	594587	4829561	1.5	67	108	83	8	0.0%
RW112600_001	Residential	594537	4829618	1.5	65	106	83	7	0.0%
RW113300_001	Residential	595127	4830221	1.5	42	86	83	1	0.0%
RW113700_001	Residential	594940	4830647	1.5	38	82	83	0	-
RW210600_001	Residential	594968	4831278	1.5	40	84	83	1	0.0%
RW210600_002	Residential	594854	4831236	1.5	54	99	83	14	0.0%
RW210700_001	Residential	594784	4831216	1.5	73	117	83	26	0.1%
RW210700_002	Residential	594835	4831316	1.5	48	93	83	8	0.0%
RW210700_003	Residential	595003	4831319	1.5	38	83	83	0	-
RW210800_001	Residential	594396	4831184	1.5	37	78	83	0	-
RW210800_002	Residential	594871	4831353	1.5	45	90	83	2	0.0%
RW210800_003	Residential	594900	4831384	1.5	44	89	83	1	0.0%
RW210800_004	Residential	594906	4831419	1.5	43	87	83	1	0.0%
RW210900_001	Residential	594700	4831386	1.5	48	93	83	7	0.0%
RW211000_001	Residential	594519	4831395	1.5	43	87	83	1	0.0%
RW213300_001	Residential	594131	4833825	1.5	36	81	83	0	-
RW213500_001	Residential	594089	4834002	1.5	33	77	83	0	-
RW213500_002	Residential	593987	4833921	1.5	25	69	83	0	-
RW213500_003	Residential	594063	4834025	1.5	33	78	83	0	-
RW213900_001	Residential	593680	4834239	1.5	49	93	83	4	0.0%
RW213900_002	Residential	593146	4833948	1.5	79	120	83	25	0.1%
RW213900_003	Residential	593108	4833915	1.5	73	114	83	16	0.0%
RW214000_001	Residential	593442	4834167	1.5	76	117	83	31	0.1%
RW214000_002	Residential	593165	4834006	1.5	63	107	83	17	0.0%
RW214200_001	Residential	593365	4834312	1.5	48	93	83	3	0.0%
RW214200_002	Residential	593424	4834334	1.5	61	104	83	21	0.0%
RW214200_003	Residential	593447	4834362	1.5	61	105	83	32	0.1%
RW214200_004	Residential	593638	4834465	1.5	82	122	83	49	0.1%
RW214400_001	Residential	593557	4834570	1.5	48	91	83	7	0.0%
RW214400_002	Residential	593363	4834447	1.5	42	86	83	1	0.0%
RW214500_001	Place of Worship	593180	4834366	1.5	33	78	83	0	-
RW214700_001	Residential	593316	4834759	1.5	39	83	83	1	0.0%
RW214800_001	Residential	593246	4834900	1.5	37	82	83	0	-
RW214900_001	Place of Worship	593238	4834901	1.5	37	82	83	0	-
RW215500_001	Residential	592716	4835205	1.5	23	66	83	0	-
RW215500_002	Residential	592751	4835308	1.5	29	73	83	0	-
RW215500_003	Residential	592672	4835243	1.5	23	65	83	0	-
RW215600_001	Residential	592652	4835268	1.5	23	65	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW215600_002	Residential	592625	4835291	1.5	22	65	83	0	-
RW215600_003	Residential	592706	4835349	1.5	29	73	83	0	-
RW216000_001	Residential	592457	4835580	1.5	33	75	83	0	-
RW216300_001	Residential	592187	4835722	1.5	20	63	83	0	-
RW217300_001	Residential	590963	4835918	1.5	33	73	83	0	-
RW217300_003	Residential	590894	4835850	1.5	32	73	83	0	-
RW217400_001	Residential	591070	4836272	1.5	26	70	83	0	-
RW217400_003	Residential	590716	4835921	1.5	23	68	83	0	-
RW217600_001	Residential	591245	4836671	1.5	24	68	83	0	-
RW218600_001	Residential	589698	4836609	1.5	36	80	83	0	-
RW218700_001	Residential	590211	4837285	1.5	27	71	83	0	-
RW219300_001	Residential	589994	4837866	1.5	20	64	83	0	-
RW219600_001	Residential	589829	4838199	1.5	27	70	83	0	-
RW219800_001	Residential	589708	4838309	1.5	28	71	83	0	-
RW219800_002	Residential	589678	4838339	1.5	28	71	83	0	-
RW219800_003	Residential	589655	4838356	1.5	28	72	83	0	-
RW219900_001	Residential	589628	4838393	1.5	27	70	83	0	-
RW219900_002	Residential	589604	4838419	1.5	27	70	83	0	-
RW219900_003	Residential	589574	4838446	1.5	27	70	83	0	-
RW219900_004	Residential	589348	4838304	1.5	22	66	83	0	-
RW220100_001	Residential	589237	4838630	1.5	21	66	83	0	-
RW220200_001	Residential	589212	4838657	1.5	21	66	83	0	-
RW220200_002	Residential	589193	4838697	1.5	22	66	83	0	-
RW221500_001	Residential	589630	4840149	1.5	17	61	83	0	-
RW221600_001	Residential	589645	4840276	1.5	19	63	83	0	-
RW221600_002	Residential	589618	4840305	1.5	19	63	83	0	-
RW221600_003	Residential	589575	4840340	1.5	19	63	83	0	-
RW221600_004	Residential	589489	4840296	1.5	17	61	83	0	-
RW221600_005	Residential	589463	4840313	1.5	18	62	83	0	-
RW221700_001	Residential	589372	4840554	1.5	20	64	83	0	-
RW222900_001	Residential	590172	4841526	1.5	24	68	83	0	-
RW223000_001	Residential	590405	4841464	1.5	21	65	83	0	-
RW223000_002	Residential	589855	4841856	1.5	20	60	83	0	-
RW223100_001	Residential	590119	4841763	1.5	17	61	83	0	-
RW223600_001	Residential	590319	4842303	1.5	25	70	83	0	-
RW223700_001	Residential	590349	4842328	1.5	26	70	83	0	-
RW223700_002	Residential	590387	4842378	1.5	27	72	83	0	-
RW223800_001	Residential	590421	4842402	1.5	26	71	83	0	-
RW223800_002	Residential	590456	4842433	1.5	26	70	83	0	-
RW224200_001	Residential	591059	4842518	1.5	26	70	83	0	-
RW225200_001	Residential	591261	4843431	1.5	20	63	83	0	-
RW225300_001	Residential	591243	4843461	1.5	21	65	83	0	-
RW225300_002	Residential	591272	4843493	1.5	22	65	83	0	-
RW225300_003	Residential	591295	4843534	1.5	22	66	83	0	-
RW226000_001	Residential	591344	4844228	1.5	24	68	83	0	-
RW226200_001	Residential	591234	4844508	1.5	25	66	83	0	-
RW226300_001	Residential	591196	4844542	1.5	25	66	83	0	-
RW226300_002	Residential	591171	4844578	1.5	25	66	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW227700_001	Residential	591290	4846105	1.5	45	90	83	7	0.0%
RW227800_001	Residential	591651	4846073	1.5	63	107	83	16	0.0%
RW227800_002	Residential	591541	4846134	1.5	78	119	83	45	0.1%
RW227800_003	Residential	591348	4846123	1.5	62	107	83	25	0.1%
RW228900_001	Residential	592191	4847059	1.5	23	67	83	0	-
RW229000_005	Residential	592239	4847128	1.5	22	66	83	0	-
RW229100_003	Residential	592057	4847361	1.5	21	65	83	0	-
RW229100_004	Residential	592238	4847208	1.5	21	65	83	0	-
RW229200_001	Residential	591945	4847506	1.5	22	66	83	0	-
RW229200_002	Residential	592082	4847514	1.5	18	61	83	0	-
RW229200_003	Residential	592013	4847571	1.5	18	60	83	0	-
RW229200_004	Residential	591965	4847613	1.5	17	60	83	0	-
RW229200_005	Residential	592047	4847546	1.5	18	60	83	0	-
RW229200_006	Residential	591969	4847485	1.5	22	66	83	0	-
RW229200_007	Residential	591918	4847523	1.5	21	65	83	0	-
RW229300_001	Residential	591940	4847644	1.5	17	60	83	0	-
RW230300_001	Residential	592829	4848529	1.5	34	78	83	0	-
RW230300_002	Residential	592606	4848716	1.5	30	74	83	0	-
RW230400_003	Residential	593165	4848363	1.5	23	67	83	0	-
RW230400_004	Residential	593067	4848428	1.5	23	68	83	0	-
RW230400_005	Residential	592665	4848881	1.5	19	63	83	0	-
RW231500_001	Residential	593790	4849191	1.5	22	66	83	0	-
RW231500_002	Residential	593814	4849083	1.5	25	69	83	0	-
RW231800_002	Residential	593623	4849689	1.5	21	65	83	0	-
RW231800_003	Residential	593681	4849607	1.5	21	65	83	0	-
RW231900_001	Residential	593974	4849584	1.5	26	68	83	0	-
RW231900_002	Residential	593821	4849636	1.5	32	77	83	0	-
RW231900_003	Residential	593783	4849662	1.5	33	78	83	0	-
RW231900_004	Residential	593753	4849685	1.5	34	79	83	0	-
RW231900_005	Residential	593708	4849712	1.5	34	79	83	0	-
RW231900_006	Residential	593679	4849744	1.5	32	77	83	0	-
RW232900_001	Residential	594647	4850489	1.5	18	61	83	0	-
RW232900_002	Residential	594641	4850578	1.5	18	61	83	0	-
RW232900_003	Residential	594596	4850601	1.5	18	62	83	0	-
RW233000_001	Residential	594937	4850252	1.5	18	61	83	0	-
RW233000_002	Residential	594873	4850324	1.5	18	61	83	0	-
RW233000_003	Residential	594722	4850470	1.5	18	60	83	0	-
RW233000_004	Residential	594661	4850750	1.5	22	63	83	0	-
RW233100_001	Residential	595054	4850303	1.5	19	62	83	0	-
RW233100_002	Residential	594986	4850367	1.5	19	63	83	0	-
RW233100_003	Residential	594960	4850397	1.5	19	63	83	0	-
RW233100_004	Residential	594754	4850728	1.5	19	62	83	0	-
RW233300_001	Residential	595066	4850652	1.5	18	62	83	0	-
RW233500_001	Residential	595517	4850395	1.5	20	62	83	0	-
RW233600_001	Residential	595481	4850552	1.5	20	62	83	0	-
RW233700_001	Residential	595601	4850557	1.5	19	63	83	0	-
RW233800_001	Residential	595629	4850726	1.5	19	63	83	0	-
RW234400_001	Residential	595843	4851239	1.5	19	64	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW234400_002	Residential	595722	4851407	1.5	18	62	83	0	-
RW234400_003	Residential	595753	4851375	1.5	18	63	83	0	-
RW234500_001	Residential	596110	4851144	1.5	25	70	83	0	-
RW234500_002	Residential	596228	4851057	1.5	26	71	83	0	-
RW234600_001	Residential	595890	4851390	1.5	23	67	83	0	-
RW234600_002	Residential	595822	4851471	1.5	22	65	83	0	-
RW234600_003	Residential	595792	4851490	1.5	19	64	83	0	-
RW235800_001	Residential	596933	4852124	1.5	36	79	83	0	-
RW235800_002	Residential	596708	4852352	1.5	39	83	83	2	0.0%
RW235800_003	Residential	596626	4852447	1.5	44	89	83	3	0.0%
RW235800_004	Residential	596582	4852479	1.5	40	84	83	2	0.0%
RW235900_003	Residential	596852	4852343	1.5	55	100	83	10	0.0%
RW235900_004	Residential	596685	4852406	1.5	52	96	83	6	0.0%
RW235900_008	Residential	596930	4852261	1.5	55	100	83	13	0.0%
RW310200_001	Residential	597162	4852242	1.5	30	73	83	0	-
RW311300_001	Residential	598030	4853004	1.5	19	63	83	0	-
RW311300_002	Residential	598003	4853024	1.5	20	64	83	0	-
RW311300_003	Residential	597975	4853049	1.5	20	64	83	0	-
RW311300_004	Residential	597927	4853089	1.5	21	65	83	0	-
RW311400_001	Residential	598069	4853072	1.5	24	68	83	0	-
RW311400_002	Residential	598037	4853102	1.5	25	69	83	0	-
RW311400_003	Residential	597991	4853145	1.5	25	70	83	0	-
RW311400_004	Residential	597940	4853194	1.5	26	70	83	0	-
RW311400_005	Residential	597918	4853265	1.5	25	69	83	0	-
RW311400_006	Residential	597843	4853344	1.5	26	69	83	0	-
RW311400_008	Residential	597739	4853444	1.5	25	68	83	0	-
RW311400_009	Residential	597683	4853455	1.5	22	65	83	0	-
RW312300_001	Residential	598843	4853771	1.5	15	59	83	0	-
RW312400_001	Residential	598885	4854042	1.5	17	61	83	0	-
RW312400_002	Residential	598849	4854080	1.5	17	62	83	0	-
RW312500_001	Residential	599044	4853903	1.5	19	64	83	0	-
RW312500_002	Residential	599019	4853928	1.5	20	64	83	0	-
RW312500_003	Residential	598925	4854010	1.5	18	62	83	0	-
RW312500_004	Residential	598959	4854116	1.5	20	64	83	0	-
RW312600_001	Residential	599110	4853841	1.5	20	64	83	0	-
RW312600_002	Residential	599074	4853862	1.5	17	61	83	0	-
RW312700_001	Residential	599266	4853691	1.5	21	64	83	0	-
RW312900_001	Residential	599307	4854183	1.5	15	59	83	0	-
RW313100_001	Residential	599559	4854108	1.5	15	59	83	0	-
RW313400_001	Residential	599752	4854478	1.5	15	59	83	0	-
RW313900_001	Residential	600110	4854917	1.5	20	64	83	0	-
RW314100_001	Residential	600493	4854739	1.5	15	59	83	0	-
RW314300_001	Residential	600741	4854369	1.5	17	61	83	0	-
RW315400_001	Residential	601942	4855015	1.5	10	54	83	0	-
RW317500_001	Residential	603840	4854629	1.5	49	94	83	7	0.0%
RW317500_003	Residential	603870	4854650	1.5	55	100	83	12	0.0%
RW410100_001	Residential	603972	4854928	1.5	33	77	83	0	-
RW410100_002	Residential	603936	4854961	1.5	26	70	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW410200_001	Residential	604015	4854902	1.5	43	87	83	5	0.0%
RW410400_001	Residential	604221	4855097	1.5	51	96	83	5	0.0%
RW410800_002	Residential	604445	4855386	1.5	39	84	83	1	0.0%
RW510000_001	Residential	604897	4855625	1.5	69	110	83	8	0.0%
RW510100_001	Residential	605003	4855608	1.5	78	119	83	16	0.0%
RW510100_002	Residential	604998	4855726	1.5	57	98	83	6	0.0%
RW510400_001	Residential	605360	4855644	1.5	20	63	83	0	-
RW512600_001	Residential	607049	4856822	1.5	10	55	83	0	-
RW512600_002	Residential	606713	4857044	1.5	12	57	83	0	-
RW512700_001	Residential	606950	4856924	1.5	11	55	83	0	-
RW515200_001	Residential	608655	4859025	1.5	31	73	83	0	-
RW515200_002	Residential	608453	4859443	1.5	15	59	83	0	-
RW515500_001	Residential	609009	4858910	1.5	17	60	83	0	-
RW515500_002	Residential	608965	4859173	1.5	16	60	83	0	-
RW515500_003	Residential	608645	4859708	1.5	34	78	83	0	-
RW515600_001	Residential	609102	4858982	1.5	15	58	83	0	-
RW515600_002	Residential	608876	4859423	1.5	19	63	83	0	-
RW515600_003	Residential	608980	4859372	1.5	19	63	83	0	-
RW515700_001	Residential	608966	4859442	1.5	19	64	83	0	-
RW516700_001	Residential	609986	4859710	1.5	22	63	83	0	-
RW517400_001	Residential	610721	4859654	1.5	14	56	83	0	-
RW517500_001	Residential	610788	4859750	1.5	13	56	83	0	-
RW517500_002	Residential	610631	4860179	1.5	22	64	83	0	-
RW517600_001	Residential	610730	4860162	1.5	26	70	83	0	-
RW519300_001	Residential	612321	4860800	1.5	27	71	83	0	-
RW519300_002	Residential	612247	4861048	1.5	74	117	83	23	0.1%
RW519600_001	Residential	612681	4860774	1.5	23	68	83	0	-
RW519600_002	Residential	612644	4860851	1.5	25	69	83	0	-
RW519600_003	Residential	612606	4860976	1.5	30	74	83	0	-
RW519600_004	Residential	612556	4861217	1.5	41	86	83	1	0.0%
RW519900_001	Residential	612911	4861179	1.5	47	91	83	3	0.0%
RW520000_001	Residential	612975	4861191	1.5	44	88	83	3	0.0%
RW520100_001	Residential	613108	4861238	1.5	44	88	83	3	0.0%
RW520200_001	Residential	613167	4861245	1.5	40	84	83	2	0.0%
RW520300_001	Residential	613263	4861267	1.5	39	83	83	0	-
RW520400_001	Residential	613409	4861318	1.5	42	86	83	3	0.0%
RW520600_001	Residential	613595	4861385	1.5	46	90	83	4	0.0%
RW520600_002	Residential	613696	4861264	1.5	33	77	83	0	-
RW520800_001	Residential	613821	4861450	1.5	45	89	83	3	0.0%
RW520800_002	Residential	613868	4861446	1.5	42	86	83	3	0.0%
RW520900_001	Residential	614011	4861487	1.5	44	87	83	3	0.0%
RW521000_001	Residential	614074	4861506	1.5	46	88	83	3	0.0%
RW521500_001	Residential	614584	4861772	1.5	82	117	83	24	0.1%
RW521500_002	Residential	614605	4861931	1.5	58	99	83	6	0.0%
RW521500_003	Residential	614606	4861992	1.5	46	90	83	7	0.0%
RW521500_004	Residential	614561	4862067	1.5	41	85	83	4	0.0%
RW521500_005	Residential	614528	4862131	1.5	38	82	83	0	-
RW521500_006	Residential	614519	4862172	1.5	37	81	83	0	-

Appendix G.1.1 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background (µg/m³)	Maximum Predicted 1 Hour Concentration With Background (µg/m³)	Criteria (µg/m³)	Predicted Excursions Above Criteria [1]	
ID#	Description	X	Y	Z				Events > 83.1 µg/m³	
								Count	Frequency
RW521600_001	Residential	615126	4862319	1.5	56	98	83	61	0.1%
RW521600_002	Residential	616401	4861744	1.5	37	79	83	0	-
RW521600_009	Residential	616496	4861911	1.5	37	82	83	0	-
RW521600_010	Residential	614979	4862746	1.5	63	105	83	24	0.1%
RW521600_011	Residential	614904	4862738	1.5	54	96	83	16	0.0%
RW521600_012	Residential	615537	4863261	1.5	78	119	83	29	0.1%
RW521600_013	Residential	615595	4863665	1.5	65	106	83	6	0.0%
RW521600_014	Residential	616500	4861872	1.5	35	79	83	0	-
RW521600_016	Residential	614949	4863780	1.5	79	120	83	38	0.1%
RW521600_017	Residential	616265	4861577	1.5	37	81	83	0	-

43824 Hours of Meterological Data

Notes:

[1] Maximum predicted concentration with background using the Ozone Limiting Method. These concentrations differ from those presented in the results tables which are based on the 98th percentile of the daily 1-hour maximum concentrations to conform to CAAQS standard.

Appendix G.1.2: 2041 Build – 1 Hour NO_2

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_001	Place of Worship	597312	4827927	1.5	110	132	83	805	1.8%
RE110000_002	Residential	596637	4826254	1.5	104	130	83	400	0.9%
RE110000_003	Residential	596701	4826610	1.5	108	130	83	482	1.1%
RE110000_004	Residential	597143	4827822	1.5	110	132	83	721	1.6%
RE110000_005	Residential	597083	4827844	1.5	113	137	83	1074	2.5%
RE110000_006	Residential	596871	4828160	1.5	107	139	83	381	0.9%
RE110000_007	Residential	597140	4826176	1.5	100	129	83	293	0.7%
RE110000_008	Residential	597148	4826187	1.5	100	128	83	261	0.6%
RE110000_009	Residential	597156	4826199	1.5	100	128	83	247	0.6%
RE110000_010	Residential	597164	4826210	1.5	99	128	83	233	0.5%
RE110000_011	Residential	597171	4826221	1.5	97	126	83	220	0.5%
RE110000_020	Residential	597181	4826148	1.5	100	128	83	265	0.6%
RE110000_021	Residential	597187	4826154	1.5	100	128	83	247	0.6%
RE110000_022	Residential	597195	4826162	1.5	99	128	83	236	0.5%
RE110000_023	Residential	597200	4826170	1.5	99	127	83	230	0.5%
RE110000_024	Residential	597206	4826177	1.5	97	126	83	218	0.5%
RE110000_025	Residential	597212	4826186	1.5	96	126	83	211	0.5%
RE110000_028	Residential	597203	4826119	1.5	100	128	83	267	0.6%
RE110000_029	Residential	597210	4826129	1.5	100	128	83	251	0.6%
RE110000_030	Residential	597216	4826140	1.5	99	128	83	234	0.5%
RE110000_031	Residential	597223	4826147	1.5	98	126	83	225	0.5%
RE110000_032	Residential	597230	4826156	1.5	96	126	83	212	0.5%
RE110000_045	Residential	597236	4826078	1.5	100	128	83	279	0.6%
RE110000_046	Residential	597243	4826087	1.5	100	128	83	257	0.6%
RE110000_047	Residential	597251	4826096	1.5	99	127	83	236	0.5%
RE110000_048	Residential	597257	4826104	1.5	97	126	83	225	0.5%
RE110000_049	Residential	597263	4826113	1.5	95	126	83	215	0.5%
RE110000_050	Residential	597255	4826067	1.5	100	128	83	264	0.6%
RE110000_051	Residential	597266	4826057	1.5	99	128	83	262	0.6%
RE110000_052	Residential	597275	4826046	1.5	99	128	83	265	0.6%
RE110000_053	Residential	597284	4826036	1.5	99	128	83	266	0.6%
RE110000_054	Residential	597293	4826025	1.5	99	128	83	265	0.6%
RE110000_055	Residential	597304	4826014	1.5	99	128	83	264	0.6%
RE110000_056	Residential	597325	4826041	1.5	93	126	83	214	0.5%
RE110000_057	Residential	597314	4826051	1.5	94	126	83	216	0.5%
RE110000_058	Residential	597304	4826061	1.5	94	126	83	217	0.5%
RE110000_059	Residential	597295	4826072	1.5	95	126	83	218	0.5%
RE110000_060	Residential	597285	4826082	1.5	95	126	83	221	0.5%
RE110000_061	Residential	597323	4825965	1.5	100	130	83	354	0.8%
RE110000_062	Residential	597330	4825974	1.5	99	128	83	293	0.7%
RE110000_063	Residential	597335	4825983	1.5	97	127	83	263	0.6%
RE110000_064	Residential	597342	4825990	1.5	95	127	83	243	0.6%
RE110000_065	Residential	597350	4826000	1.5	94	126	83	222	0.5%
RE110000_066	Residential	597357	4826009	1.5	93	126	83	215	0.5%
RE110000_067	Residential	597368	4826018	1.5	92	125	83	201	0.5%
RE110000_069	Residential	597351	4825947	1.5	99	129	83	306	0.7%
RE110000_070	Residential	597359	4825957	1.5	95	127	83	263	0.6%
RE110000_071	Residential	597366	4825967	1.5	94	127	83	238	0.5%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_072	Residential	597374	4825977	1.5	93	126	83	224	0.5%
RE110000_073	Residential	597383	4825986	1.5	93	126	83	212	0.5%
RE110000_112	Residential	597394	4825910	1.5	95	128	83	284	0.6%
RE110000_113	Residential	597401	4825919	1.5	94	127	83	255	0.6%
RE110000_114	Residential	597409	4825928	1.5	94	126	83	231	0.5%
RE110000_115	Residential	597416	4825939	1.5	93	126	83	221	0.5%
RE110000_123	Residential	597413	4825882	1.5	95	129	83	312	0.7%
RE110000_124	Residential	597421	4825892	1.5	94	127	83	270	0.6%
RE110000_125	Residential	597432	4825901	1.5	94	126	83	234	0.5%
RE110000_132	Residential	597461	4825854	1.5	94	127	83	256	0.6%
RE110000_133	Residential	597471	4825865	1.5	93	126	83	227	0.5%
RE110000_139	Residential	597482	4825833	1.5	94	127	83	257	0.6%
RE110000_140	Residential	597492	4825842	1.5	93	126	83	231	0.5%
RE110000_145	Residential	597514	4825784	1.5	94	129	83	297	0.7%
RE110000_146	Residential	597523	4825794	1.5	94	127	83	250	0.6%
RE110000_147	Residential	597531	4825806	1.5	93	126	83	226	0.5%
RE110000_149	Residential	597534	4825759	1.5	95	130	83	318	0.7%
RE110000_150	Residential	597542	4825770	1.5	94	128	83	258	0.6%
RE110000_151	Residential	597549	4825779	1.5	93	126	83	232	0.5%
RE110000_165	Residential	597586	4825745	1.5	93	126	83	230	0.5%
RE110000_167	Residential	597648	4825682	1.5	93	126	83	233	0.5%
RE110000_173	Residential	597632	4825663	1.5	94	129	83	318	0.7%
RE110000_177	Residential	597655	4825690	1.5	89	125	83	212	0.5%
RE110000_178	Residential	597642	4825674	1.5	93	127	83	252	0.6%
RE110000_189	Residential	597578	4825734	1.5	94	128	83	257	0.6%
RE110000_190	Residential	597605	4825708	1.5	94	127	83	254	0.6%
RE110000_191	Residential	597611	4825719	1.5	93	126	83	232	0.5%
RE110000_239	Residential	598068	4825317	1.5	94	128	83	296	0.7%
RE110000_240	Residential	598051	4825327	1.5	95	128	83	343	0.8%
RE110000_241	Residential	598046	4825287	1.5	96	131	83	315	0.7%
RE110000_242	Residential	598058	4825288	1.5	95	130	83	294	0.7%
RE110000_243	Residential	598062	4825320	1.5	95	128	83	306	0.7%
RE110000_244	Residential	598082	4825288	1.5	94	128	83	250	0.6%
RE110000_245	Residential	598057	4825323	1.5	95	128	83	321	0.7%
RE110000_246	Residential	598051	4825288	1.5	96	130	83	309	0.7%
RE110000_247	Residential	598072	4825292	1.5	95	129	83	270	0.6%
RE110000_248	Residential	598076	4825290	1.5	95	128	83	256	0.6%
RE110000_249	Residential	598040	4825285	1.5	96	132	83	324	0.7%
RE110000_253	Residential	597743	4825607	1.5	87	125	83	207	0.5%
RE110000_254	Residential	597795	4825533	1.5	92	127	83	235	0.5%
RE110000_255	Residential	597806	4825547	1.5	86	125	83	204	0.5%
RE110000_256	Residential	597835	4825499	1.5	91	126	83	233	0.5%
RE110000_257	Residential	597843	4825509	1.5	86	125	83	214	0.5%
RE110000_265	Residential	597773	4825557	1.5	92	126	83	229	0.5%
RE110000_267	Residential	597726	4825585	1.5	94	128	83	264	0.6%
RE110000_276	Residential	597839	4825504	1.5	88	126	83	224	0.5%
RE110000_277	Residential	597778	4825564	1.5	89	126	83	212	0.5%
RE110000_278	Residential	597784	4825572	1.5	86	125	83	202	0.5%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_279	Residential	597739	4825601	1.5	89	126	83	216	0.5%
RE110000_280	Residential	597719	4825577	1.5	94	130	83	319	0.7%
RE110000_281	Residential	597767	4825552	1.5	93	127	83	248	0.6%
RE110000_292	Residential	597793	4825524	1.5	93	128	83	256	0.6%
RE110000_293	Residential	597734	4825596	1.5	92	126	83	228	0.5%
RE110000_294	Residential	597800	4825540	1.5	89	126	83	218	0.5%
RE110000_305	Residential	597830	4825493	1.5	93	127	83	242	0.6%
RE110000_309	Residential	597730	4825591	1.5	93	127	83	240	0.5%
RE110000_310	Residential	597826	4825487	1.5	94	128	83	266	0.6%
RE110000_316	Residential	597823	4825480	1.5	94	129	83	305	0.7%
RE110000_325	Residential	597672	4825659	1.5	92	126	83	232	0.5%
RE110000_329	Residential	597711	4825620	1.5	92	126	83	228	0.5%
RE110000_331	Residential	597656	4825641	1.5	94	129	83	310	0.7%
RE110000_332	Residential	597705	4825613	1.5	93	127	83	248	0.6%
RE110000_333	Residential	597717	4825628	1.5	88	125	83	209	0.5%
RE110000_342	Residential	597701	4825604	1.5	94	129	83	280	0.6%
RE110000_344	Residential	597666	4825651	1.5	93	127	83	249	0.6%
RE110000_345	Residential	597678	4825667	1.5	89	125	83	210	0.5%
RE110000_353	Residential	597853	4825468	1.5	93	127	83	252	0.6%
RE110000_355	Residential	597858	4825475	1.5	91	126	83	233	0.5%
RE110000_378	Residential	597899	4825411	1.5	94	129	83	304	0.7%
RE110000_387	Residential	597845	4825458	1.5	94	129	83	313	0.7%
RE110000_390	Residential	597927	4825384	1.5	94	129	83	328	0.7%
RE110000_394	Residential	597904	4825418	1.5	93	128	83	269	0.6%
RE110000_397	Residential	597863	4825480	1.5	88	126	83	222	0.5%
RE110000_401	Residential	596788	4826527	1.5	107	130	83	425	1.0%
RE110200_001	Residential	595761	4827508	1.5	109	134	83	401	0.9%
RE110300_001	Residential	595985	4827782	1.5	107	130	83	254	0.6%
RE110300_002	Residential	596018	4827822	1.5	107	129	83	254	0.6%
RE110300_003	Residential	596052	4827847	1.5	106	129	83	259	0.6%
RE110300_004	Residential	596075	4827863	1.5	107	129	83	275	0.6%
RE110400_001	Residential	596097	4827888	1.5	107	129	83	284	0.6%
RE110400_002	Residential	596114	4827911	1.5	107	129	83	310	0.7%
RE110500_001	Residential	596071	4827936	1.5	106	128	83	227	0.5%
RE110500_002	Residential	596046	4827958	1.5	103	128	83	209	0.5%
RE110600_001	Residential	596004	4827990	1.5	98	126	83	186	0.4%
RE110600_002	Residential	596030	4827975	1.5	101	128	83	202	0.5%
RE110700_001	Residential	595981	4828012	1.5	95	124	83	180	0.4%
RE110700_002	Residential	595928	4827973	1.5	95	123	83	167	0.4%
RE110800_001	Residential	595956	4828058	1.5	93	123	83	182	0.4%
RE110800_002	Residential	595933	4828081	1.5	91	122	83	170	0.4%
RE110900_001	Residential	595910	4828106	1.5	88	121	83	162	0.4%
RE110900_002	Residential	595878	4828134	1.5	87	121	83	152	0.3%
RE111100_001	Residential	595788	4828209	1.5	81	120	83	129	0.3%
RE111200_001	Residential	595754	4828244	1.5	79	120	83	117	0.3%
RE111200_002	Residential	595736	4828278	1.5	79	120	83	119	0.3%
RE111300_001	Residential	595708	4828299	1.5	79	120	83	109	0.2%
RE111300_002	Residential	595689	4828310	1.5	79	120	83	106	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE111300_003	Residential	595667	4828334	1.5	79	120	83	103	0.2%
RE111400_001	Residential	595630	4828371	1.5	79	120	83	99	0.2%
RE111400_002	Residential	595610	4828393	1.5	79	120	83	99	0.2%
RE111500_001	Residential	595569	4828431	1.5	79	120	83	98	0.2%
RE111500_002	Residential	595514	4828453	1.5	80	121	83	93	0.2%
RE111600_001	Residential	595474	4828490	1.5	81	122	83	94	0.2%
RE111600_002	Residential	595430	4828529	1.5	81	122	83	94	0.2%
RE111700_001	Residential	595514	4828604	1.5	80	121	83	89	0.2%
RE111700_002	Residential	595359	4828639	1.5	82	123	83	95	0.2%
RE111800_001	Residential	596558	4828460	1.5	104	129	83	248	0.6%
RE111800_002	Residential	595492	4828626	1.5	80	121	83	91	0.2%
RE111800_003	Residential	595467	4828642	1.5	80	121	83	93	0.2%
RE111800_004	Residential	595445	4828664	1.5	80	121	83	95	0.2%
RE111800_005	Residential	595329	4828673	1.5	86	123	83	97	0.2%
RE111800_006	Residential	595306	4828700	1.5	93	123	83	103	0.2%
RE111800_007	Residential	595285	4828720	1.5	97	125	83	108	0.2%
RE111800_008	Residential	595266	4828745	1.5	99	128	83	114	0.3%
RE112100_001	Residential	596836	4828712	1.5	86	124	83	157	0.4%
RE112200_001	Residential	596905	4828763	1.5	85	124	83	99	0.2%
RE113100_001	Residential	595706	4829937	1.5	110	133	83	49	0.1%
RE113200_001	Residential	595933	4829995	1.5	102	125	83	57	0.1%
RE113200_002	Residential	595904	4830024	1.5	106	128	83	56	0.1%
RE113300_001	Residential	595753	4830146	1.5	109	131	83	63	0.1%
RE210700_001	Residential	595367	4831551	1.5	109	134	83	107	0.2%
RE210700_002	Residential	595325	4831537	1.5	111	136	83	149	0.3%
RE210700_003	Residential	595504	4831618	1.5	98	126	83	41	0.1%
RE210900_001	Residential	595286	4831670	1.5	111	134	83	153	0.3%
RE210900_003	Residential	595217	4831730	1.5	114	137	83	157	0.4%
RE210900_004	Residential	595349	4831732	1.5	109	133	83	103	0.2%
RE210900_005	Residential	595339	4831698	1.5	109	134	83	109	0.2%
RE210900_006	Residential	595400	4831812	1.5	107	131	83	73	0.2%
RE210900_007	Residential	595436	4831835	1.5	106	130	83	50	0.1%
RE210900_008	Residential	595454	4831855	1.5	104	129	83	45	0.1%
RE211000_001	Residential	595242	4831783	1.5	113	135	83	114	0.3%
RE211000_002	Residential	595292	4831787	1.5	111	134	83	99	0.2%
RE211000_003	Residential	595341	4831842	1.5	109	133	83	79	0.2%
RE211000_004	Residential	595365	4831888	1.5	108	132	83	63	0.1%
RE211000_005	Residential	595239	4831847	1.5	112	134	83	93	0.2%
RE211000_006	Residential	595408	4831938	1.5	107	131	83	52	0.1%
RE211000_007	Residential	595530	4831956	1.5	84	120	83	39	0.1%
RE211000_008	Residential	595567	4832001	1.5	80	121	83	37	0.1%
RE211000_009	Residential	595596	4832028	1.5	80	121	83	32	0.1%
RE211000_010	Residential	595617	4832054	1.5	80	121	83	31	0.1%
RE211100_001	Residential	595423	4831974	1.5	106	130	83	47	0.1%
RE211100_002	Residential	595342	4832015	1.5	107	132	83	47	0.1%
RE211100_003	Residential	595552	4832099	1.5	86	121	83	44	0.1%
RE211100_004	Residential	595637	4832091	1.5	80	120	83	29	0.1%
RE211100_005	Residential	595675	4832137	1.5	79	120	83	26	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE211100_006	Residential	595734	4832214	1.5	76	117	83	19	0.0%
RE211100_009	Residential	595514	4832061	1.5	92	122	83	45	0.1%
RE211200_001	Residential	595380	4832103	1.5	106	131	83	40	0.1%
RE211200_002	Residential	595424	4832139	1.5	105	130	83	37	0.1%
RE211200_003	Residential	595641	4832218	1.5	81	122	83	35	0.1%
RE211200_004	Residential	595704	4832286	1.5	80	121	83	38	0.1%
RE211200_005	Residential	595584	4832173	1.5	80	121	83	35	0.1%
RE211400_001	Residential	594922	4832082	1.5	111	136	83	248	0.6%
RE211500_002	Residential	595129	4832290	1.5	108	131	83	53	0.1%
RE211500_003	Residential	594950	4832221	1.5	108	131	83	117	0.3%
RE211500_004	Residential	595156	4832250	1.5	109	131	83	54	0.1%
RE211900_001	Residential	594800	4832552	1.5	106	129	83	110	0.3%
RE212600_001	Residential	594824	4833279	1.5	90	121	83	49	0.1%
RE212700_001	Residential	594758	4833331	1.5	91	122	83	61	0.1%
RE212700_002	Residential	594605	4833322	1.5	105	130	83	114	0.3%
RE212800_001	Residential	594672	4833390	1.5	99	128	83	98	0.2%
RE212800_002	Residential	594620	4833440	1.5	104	129	83	118	0.3%
RE212900_001	Residential	594599	4833473	1.5	105	129	83	118	0.3%
RE213000_001	Residential	594589	4833575	1.5	102	131	83	92	0.2%
RE214400_001	Recreation	594333	4835333	1.5	78	119	83	104	0.2%
RE214600_002	Residential	593842	4835174	1.5	113	136	83	127	0.3%
RE214600_003	Residential	593906	4835196	1.5	109	134	83	116	0.3%
RE214600_004	Residential	593934	4835222	1.5	109	132	83	118	0.3%
RE214600_005	Residential	593948	4835237	1.5	109	131	83	113	0.3%
RE214600_006	Residential	593954	4835244	1.5	109	131	83	112	0.3%
RE214600_007	Residential	593879	4835253	1.5	109	134	83	93	0.2%
RE214600_008	Residential	593895	4835241	1.5	109	133	83	97	0.2%
RE214600_009	Residential	593872	4835220	1.5	110	135	83	99	0.2%
RE214600_010	Residential	593861	4835213	1.5	110	135	83	99	0.2%
RE214600_011	Residential	593855	4835236	1.5	110	134	83	93	0.2%
RE214600_012	Residential	593826	4835204	1.5	113	136	83	114	0.3%
RE214600_013	Residential	593848	4835159	1.5	113	137	83	136	0.3%
RE214600_014	Residential	593881	4835177	1.5	111	135	83	124	0.3%
RE214600_015	Residential	593892	4835186	1.5	110	135	83	117	0.3%
RE214600_016	Residential	593917	4835206	1.5	109	133	83	117	0.3%
RE214600_017	Residential	593925	4835215	1.5	109	132	83	118	0.3%
RE214600_018	Residential	593940	4835231	1.5	109	131	83	115	0.3%
RE214600_019	Residential	593960	4835250	1.5	108	131	83	115	0.3%
RE214600_020	Residential	593967	4835258	1.5	108	131	83	112	0.3%
RE214600_021	Residential	593978	4835265	1.5	108	131	83	115	0.3%
RE214600_022	Residential	593885	4835231	1.5	109	134	83	97	0.2%
RE214600_023	Residential	593914	4835274	1.5	108	131	83	98	0.2%
RE214600_024	Residential	593927	4835288	1.5	108	130	83	95	0.2%
RE214600_025	Residential	593932	4835295	1.5	108	130	83	92	0.2%
RE214600_026	Residential	593936	4835298	1.5	108	130	83	92	0.2%
RE214600_027	Residential	593941	4835304	1.5	108	130	83	92	0.2%
RE214600_028	Residential	593945	4835308	1.5	108	130	83	91	0.2%
RE214600_029	Residential	593948	4835312	1.5	108	130	83	89	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_030	Residential	593953	4835317	1.5	108	130	83	88	0.2%
RE214600_031	Residential	593956	4835321	1.5	107	130	83	88	0.2%
RE214600_032	Residential	593965	4835331	1.5	107	130	83	85	0.2%
RE214600_033	Residential	593979	4835319	1.5	107	130	83	94	0.2%
RE214600_034	Residential	593977	4835313	1.5	107	130	83	95	0.2%
RE214600_035	Residential	593971	4835308	1.5	107	130	83	95	0.2%
RE214600_036	Residential	593968	4835303	1.5	107	130	83	97	0.2%
RE214600_037	Residential	593909	4835267	1.5	108	132	83	95	0.2%
RE214600_038	Residential	593919	4835279	1.5	108	131	83	98	0.2%
RE214600_039	Residential	593923	4835284	1.5	108	131	83	97	0.2%
RE214600_040	Residential	593930	4835291	1.5	108	130	83	92	0.2%
RE214600_041	Residential	593961	4835326	1.5	107	130	83	86	0.2%
RE214600_042	Residential	593970	4835333	1.5	107	130	83	86	0.2%
RE214600_043	Residential	593982	4835324	1.5	107	130	83	92	0.2%
RE214600_044	Residential	593960	4835295	1.5	108	130	83	99	0.2%
RE214600_045	Residential	593956	4835291	1.5	108	130	83	97	0.2%
RE214600_046	Residential	593946	4835281	1.5	108	130	83	96	0.2%
RE214600_047	Residential	593942	4835277	1.5	108	130	83	98	0.2%
RE214600_048	Residential	593934	4835269	1.5	108	130	83	100	0.2%
RE214600_049	Residential	593929	4835264	1.5	108	131	83	103	0.2%
RE214600_050	Residential	593923	4835260	1.5	109	131	83	104	0.2%
RE214600_051	Residential	594088	4835437	1.5	104	126	83	80	0.2%
RE214600_052	Residential	594082	4835443	1.5	104	126	83	79	0.2%
RE214600_053	Residential	593964	4835299	1.5	108	130	83	98	0.2%
RE214600_054	Residential	593949	4835285	1.5	108	130	83	98	0.2%
RE214600_055	Residential	593938	4835273	1.5	108	130	83	99	0.2%
RE214600_056	Residential	593919	4835255	1.5	109	132	83	105	0.2%
RE214600_057	Residential	594070	4835454	1.5	104	126	83	74	0.2%
RE214600_058	Residential	594080	4835468	1.5	102	124	83	70	0.2%
RE214600_059	Residential	594086	4835463	1.5	102	124	83	73	0.2%
RE214600_060	Residential	594095	4835454	1.5	103	125	83	79	0.2%
RE214600_061	Residential	594098	4835448	1.5	103	125	83	80	0.2%
RE214600_062	Residential	594075	4835447	1.5	104	126	83	74	0.2%
RE214600_063	Residential	594090	4835458	1.5	102	124	83	77	0.2%
RE214600_064	Residential	594047	4835432	1.5	106	128	83	79	0.2%
RE214600_065	Residential	594052	4835428	1.5	106	128	83	81	0.2%
RE214600_066	Residential	594056	4835424	1.5	106	128	83	82	0.2%
RE214600_067	Residential	594061	4835420	1.5	106	128	83	84	0.2%
RE214600_068	Residential	594068	4835415	1.5	106	128	83	86	0.2%
RE214600_069	Residential	594022	4835361	1.5	106	129	83	92	0.2%
RE214600_070	Residential	593995	4835385	1.5	106	129	83	79	0.2%
RE214600_071	Residential	593999	4835381	1.5	106	129	83	82	0.2%
RE214600_072	Residential	594003	4835377	1.5	106	129	83	84	0.2%
RE214600_073	Residential	594009	4835371	1.5	106	129	83	85	0.2%
RE214600_074	Residential	594015	4835366	1.5	106	129	83	86	0.2%
RE214600_075	Residential	594003	4835343	1.5	106	130	83	89	0.2%
RE214600_076	Residential	593993	4835352	1.5	106	130	83	87	0.2%
RE214600_077	Residential	593998	4835348	1.5	106	130	83	89	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_078	Residential	593990	4835357	1.5	106	130	83	86	0.2%
RE214600_079	Residential	593985	4835362	1.5	106	130	83	81	0.2%
RE214600_080	Residential	593978	4835367	1.5	106	130	83	79	0.2%
RE214600_081	Residential	593872	4835162	1.5	111	136	83	143	0.3%
RE214600_082	Residential	593897	4835267	1.5	108	133	83	93	0.2%
RE214600_083	Residential	593835	4835188	1.5	113	136	83	119	0.3%
RE214700_002	Residential	593796	4835295	1.5	111	134	83	83	0.2%
RE214700_003	Residential	593801	4835284	1.5	111	134	83	85	0.2%
RE214700_004	Residential	593804	4835270	1.5	111	134	83	88	0.2%
RE214700_005	Residential	593808	4835258	1.5	111	135	83	89	0.2%
RE214700_006	Residential	593812	4835244	1.5	111	135	83	95	0.2%
RE214700_007	Residential	593815	4835229	1.5	112	135	83	103	0.2%
RE214700_008	Residential	593820	4835217	1.5	112	135	83	111	0.3%
RE214700_009	Residential	593927	4835372	1.5	107	129	83	79	0.2%
RE214700_010	Residential	593945	4835355	1.5	107	130	83	82	0.2%
RE214700_011	Residential	593938	4835347	1.5	107	130	83	83	0.2%
RE214700_012	Residential	593932	4835340	1.5	108	130	83	86	0.2%
RE214700_013	Residential	593925	4835333	1.5	108	130	83	86	0.2%
RE214700_014	Residential	593897	4835305	1.5	108	132	83	86	0.2%
RE214700_015	Residential	593848	4835261	1.5	109	134	83	87	0.2%
RE214700_016	Residential	593843	4835273	1.5	109	134	83	84	0.2%
RE214700_017	Residential	593842	4835286	1.5	109	134	83	81	0.2%
RE214700_018	Residential	593871	4835315	1.5	108	133	83	82	0.2%
RE214700_019	Residential	593884	4835326	1.5	108	132	83	78	0.2%
RE214700_020	Residential	593911	4835354	1.5	108	130	83	81	0.2%
RE214700_021	Residential	593920	4835363	1.5	108	130	83	82	0.2%
RE214700_022	Residential	593892	4835387	1.5	108	130	83	72	0.2%
RE214700_023	Residential	593878	4835378	1.5	108	131	83	75	0.2%
RE214700_024	Residential	593867	4835368	1.5	107	132	83	71	0.2%
RE214700_025	Residential	593847	4835347	1.5	108	133	83	72	0.2%
RE214700_026	Residential	593792	4835308	1.5	111	134	83	79	0.2%
RE214700_027	Residential	593899	4835400	1.5	108	130	83	70	0.2%
RE214700_028	Residential	593915	4835323	1.5	108	130	83	85	0.2%
RE214700_029	Residential	593905	4835315	1.5	108	131	83	83	0.2%
RE214700_030	Residential	593888	4835295	1.5	108	132	83	87	0.2%
RE214700_031	Residential	593878	4835285	1.5	108	133	83	89	0.2%
RE214700_032	Residential	593872	4835268	1.5	109	133	83	90	0.2%
RE214700_033	Residential	593850	4835248	1.5	110	134	83	89	0.2%
RE214700_034	Residential	593837	4835298	1.5	109	134	83	82	0.2%
RE214700_035	Residential	593859	4835303	1.5	109	133	83	84	0.2%
RE214700_036	Residential	593893	4835335	1.5	108	131	83	76	0.2%
RE214700_037	Residential	593901	4835345	1.5	108	131	83	80	0.2%
RE214700_038	Residential	593857	4835357	1.5	108	132	83	73	0.2%
RE214700_039	Residential	593838	4835336	1.5	108	133	83	77	0.2%
RE214700_040	Residential	593826	4835328	1.5	109	133	83	77	0.2%
RE214700_041	Residential	594050	4835472	1.5	103	125	83	68	0.2%
RE214700_042	Residential	594045	4835477	1.5	103	125	83	67	0.2%
RE214700_043	Residential	594021	4835499	1.5	102	126	83	63	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_044	Residential	594015	4835505	1.5	102	126	83	63	0.1%
RE214700_045	Residential	594010	4835510	1.5	102	127	83	63	0.1%
RE214700_046	Residential	594005	4835514	1.5	102	127	83	63	0.1%
RE214700_047	Residential	593999	4835520	1.5	102	126	83	63	0.1%
RE214700_048	Residential	594007	4835538	1.5	99	124	83	61	0.1%
RE214700_049	Residential	594029	4835518	1.5	100	124	83	61	0.1%
RE214700_050	Residential	594041	4835505	1.5	101	123	83	63	0.1%
RE214700_051	Residential	594052	4835496	1.5	101	123	83	64	0.1%
RE214700_052	Residential	594065	4835484	1.5	102	124	83	64	0.1%
RE214700_053	Residential	594071	4835479	1.5	102	124	83	65	0.1%
RE214700_054	Residential	594063	4835459	1.5	104	126	83	74	0.2%
RE214700_055	Residential	594059	4835463	1.5	104	126	83	71	0.2%
RE214700_056	Residential	594055	4835466	1.5	104	126	83	69	0.2%
RE214700_057	Residential	594041	4835481	1.5	103	125	83	68	0.2%
RE214700_058	Residential	594035	4835486	1.5	102	126	83	66	0.2%
RE214700_059	Residential	594030	4835490	1.5	102	126	83	65	0.1%
RE214700_060	Residential	594025	4835494	1.5	102	126	83	64	0.1%
RE214700_061	Residential	593994	4835525	1.5	102	126	83	62	0.1%
RE214700_062	Residential	594012	4835533	1.5	100	124	83	62	0.1%
RE214700_063	Residential	594018	4835528	1.5	100	124	83	62	0.1%
RE214700_064	Residential	594023	4835523	1.5	100	124	83	61	0.1%
RE214700_065	Residential	594035	4835511	1.5	101	124	83	64	0.1%
RE214700_066	Residential	594046	4835501	1.5	101	123	83	63	0.1%
RE214700_067	Residential	594057	4835491	1.5	102	124	83	63	0.1%
RE214700_068	Residential	594061	4835487	1.5	102	124	83	66	0.2%
RE214700_069	Residential	594075	4835473	1.5	102	124	83	68	0.2%
RE214700_070	Residential	593973	4835506	1.5	104	128	83	66	0.2%
RE214700_071	Residential	593991	4835488	1.5	104	129	83	66	0.2%
RE214700_072	Residential	593995	4835485	1.5	104	129	83	66	0.2%
RE214700_073	Residential	594004	4835475	1.5	104	129	83	65	0.1%
RE214700_074	Residential	594013	4835466	1.5	104	129	83	66	0.2%
RE214700_075	Residential	594022	4835457	1.5	104	128	83	68	0.2%
RE214700_076	Residential	594039	4835440	1.5	105	128	83	77	0.2%
RE214700_077	Residential	593979	4835500	1.5	104	128	83	65	0.1%
RE214700_078	Residential	593985	4835493	1.5	104	129	83	65	0.1%
RE214700_079	Residential	593998	4835482	1.5	104	129	83	65	0.1%
RE214700_080	Residential	594008	4835471	1.5	104	129	83	66	0.2%
RE214700_081	Residential	594018	4835462	1.5	104	128	83	68	0.2%
RE214700_082	Residential	594027	4835453	1.5	104	128	83	70	0.2%
RE214700_083	Residential	594030	4835449	1.5	105	128	83	70	0.2%
RE214700_084	Residential	594036	4835444	1.5	105	128	83	75	0.2%
RE214700_085	Residential	594043	4835436	1.5	105	128	83	77	0.2%
RE214700_086	Residential	593960	4835422	1.5	106	129	83	72	0.2%
RE214700_087	Residential	593956	4835426	1.5	106	129	83	72	0.2%
RE214700_088	Residential	593963	4835417	1.5	106	129	83	72	0.2%
RE214700_089	Residential	593968	4835413	1.5	106	129	83	74	0.2%
RE214700_090	Residential	593973	4835409	1.5	106	129	83	74	0.2%
RE214700_091	Residential	593978	4835404	1.5	106	129	83	75	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_092	Residential	593981	4835400	1.5	106	129	83	75	0.2%
RE214700_093	Residential	593948	4835434	1.5	106	129	83	70	0.2%
RE214700_094	Residential	593938	4835443	1.5	107	129	83	69	0.2%
RE214700_095	Residential	593934	4835448	1.5	107	129	83	69	0.2%
RE214700_096	Residential	593988	4835393	1.5	106	129	83	76	0.2%
RE214700_097	Residential	593991	4835389	1.5	106	129	83	76	0.2%
RE214700_098	Residential	593943	4835438	1.5	107	129	83	70	0.2%
RE214700_099	Residential	593929	4835453	1.5	107	129	83	68	0.2%
RE214700_100	Residential	593974	4835372	1.5	106	130	83	77	0.2%
RE214700_101	Residential	593962	4835383	1.5	107	129	83	75	0.2%
RE214700_102	Residential	593958	4835387	1.5	107	129	83	75	0.2%
RE214700_103	Residential	593951	4835396	1.5	107	129	83	74	0.2%
RE214700_104	Residential	593947	4835399	1.5	107	129	83	74	0.2%
RE214700_105	Residential	593941	4835404	1.5	107	129	83	72	0.2%
RE214700_106	Residential	593922	4835422	1.5	107	129	83	71	0.2%
RE214700_107	Residential	593918	4835425	1.5	107	129	83	71	0.2%
RE214700_108	Residential	593968	4835378	1.5	106	130	83	77	0.2%
RE214700_109	Residential	593955	4835390	1.5	107	129	83	75	0.2%
RE214700_110	Residential	593936	4835409	1.5	107	129	83	72	0.2%
RE214700_111	Residential	593932	4835413	1.5	107	129	83	72	0.2%
RE214700_112	Residential	593927	4835416	1.5	107	129	83	70	0.2%
RE214700_113	Residential	593915	4835429	1.5	107	129	83	68	0.2%
RE214700_114	Residential	593909	4835436	1.5	107	129	83	68	0.2%
RE214800_004	Residential	594026	4835615	1.5	95	119	83	49	0.1%
RE214800_005	Residential	593831	4835365	1.5	108	133	83	69	0.2%
RE214800_006	Residential	593852	4835385	1.5	107	132	83	68	0.2%
RE214800_007	Residential	593881	4835418	1.5	107	130	83	69	0.2%
RE214800_012	Residential	593782	4835346	1.5	111	134	83	76	0.2%
RE214800_013	Residential	593787	4835332	1.5	111	134	83	77	0.2%
RE214800_014	Residential	593789	4835319	1.5	111	134	83	76	0.2%
RE214800_015	Residential	593821	4835355	1.5	109	133	83	73	0.2%
RE214800_016	Residential	593842	4835375	1.5	108	133	83	68	0.2%
RE214800_017	Residential	593862	4835398	1.5	107	132	83	68	0.2%
RE214800_018	Residential	593873	4835409	1.5	107	131	83	69	0.2%
RE214800_019	Residential	593990	4835530	1.5	102	126	83	62	0.1%
RE214800_020	Residential	593986	4835536	1.5	102	126	83	59	0.1%
RE214800_021	Residential	593998	4835545	1.5	100	124	83	61	0.1%
RE214800_022	Residential	594003	4835542	1.5	100	124	83	61	0.1%
RE214800_023	Residential	593968	4835554	1.5	101	126	83	53	0.1%
RE214800_024	Residential	593977	4835565	1.5	100	124	83	53	0.1%
RE214800_025	Residential	593946	4835572	1.5	101	125	83	49	0.1%
RE214800_026	Residential	593927	4835596	1.5	100	125	83	49	0.1%
RE214800_027	Residential	593950	4835594	1.5	99	124	83	46	0.1%
RE214800_028	Residential	593964	4835580	1.5	100	124	83	47	0.1%
RE214800_029	Residential	593968	4835576	1.5	99	124	83	47	0.1%
RE214800_030	Residential	593973	4835571	1.5	99	124	83	50	0.1%
RE214800_031	Residential	593987	4835592	1.5	97	121	83	50	0.1%
RE214800_032	Residential	593962	4835559	1.5	101	126	83	48	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214800_033	Residential	593956	4835562	1.5	101	126	83	49	0.1%
RE214800_034	Residential	593952	4835567	1.5	101	126	83	50	0.1%
RE214800_035	Residential	593941	4835579	1.5	101	125	83	51	0.1%
RE214800_036	Residential	593936	4835582	1.5	101	125	83	51	0.1%
RE214800_037	Residential	593931	4835589	1.5	100	125	83	49	0.1%
RE214800_038	Residential	593938	4835605	1.5	99	124	83	47	0.1%
RE214800_039	Residential	593945	4835599	1.5	99	124	83	48	0.1%
RE214800_040	Residential	593953	4835589	1.5	100	124	83	46	0.1%
RE214800_041	Residential	593959	4835583	1.5	100	124	83	47	0.1%
RE214800_042	Residential	593997	4835583	1.5	97	121	83	57	0.1%
RE214800_043	Residential	593992	4835588	1.5	97	121	83	52	0.1%
RE214800_044	Residential	593982	4835599	1.5	97	122	83	46	0.1%
RE214800_045	Residential	593977	4835603	1.5	97	122	83	47	0.1%
RE214800_046	Residential	593970	4835610	1.5	97	122	83	46	0.1%
RE214800_052	Residential	593995	4835609	1.5	95	120	83	47	0.1%
RE214800_053	Residential	593999	4835605	1.5	95	120	83	47	0.1%
RE214800_056	Residential	593989	4835614	1.5	95	121	83	45	0.1%
RE214800_057	Residential	594004	4835600	1.5	95	120	83	49	0.1%
RE214800_058	Residential	594008	4835595	1.5	96	120	83	53	0.1%
RE214800_059	Residential	593969	4835510	1.5	104	128	83	65	0.1%
RE214800_060	Residential	593964	4835515	1.5	104	128	83	66	0.2%
RE214800_061	Residential	593919	4835462	1.5	107	129	83	64	0.1%
RE214800_062	Residential	593941	4835536	1.5	103	128	83	54	0.1%
RE214800_063	Residential	593932	4835545	1.5	103	127	83	52	0.1%
RE214800_064	Residential	593919	4835557	1.5	105	127	83	50	0.1%
RE214800_065	Residential	593923	4835458	1.5	107	129	83	64	0.1%
RE214800_066	Residential	593916	4835466	1.5	107	129	83	63	0.1%
RE214800_067	Residential	593938	4835540	1.5	103	128	83	53	0.1%
RE214800_068	Residential	593926	4835550	1.5	104	127	83	52	0.1%
RE214800_069	Residential	593924	4835553	1.5	105	127	83	51	0.1%
RE214800_070	Residential	593909	4835569	1.5	106	128	83	48	0.1%
RE214800_071	Residential	593905	4835574	1.5	106	128	83	48	0.1%
RE214800_072	Residential	593913	4835564	1.5	106	128	83	48	0.1%
RE214800_073	Residential	593902	4835442	1.5	107	129	83	66	0.2%
RE214800_074	Residential	593897	4835447	1.5	107	129	83	67	0.2%
RE214800_075	Residential	593945	4835532	1.5	103	128	83	55	0.1%
RE214800_076	Residential	593781	4835357	1.5	110	134	83	73	0.2%
RE214900_001	Residential	593921	4835605	1.5	100	124	83	46	0.1%
RE214900_008	Residential	593899	4835580	1.5	106	128	83	47	0.1%
RE214900_009	Residential	593896	4835585	1.5	106	128	83	47	0.1%
RE214900_010	Residential	593893	4835591	1.5	106	128	83	46	0.1%
RE217600_001	Residential	591736	4837227	1.5	63	106	83	10	0.0%
RE217600_002	Residential	591766	4837262	1.5	57	100	83	7	0.0%
RE218700_001	Residential	590959	4838020	1.5	76	119	83	38	0.1%
RE218700_002	Residential	590988	4838088	1.5	74	119	83	36	0.1%
RE220800_001	Residential	590421	4839357	1.5	79	120	83	4	0.0%
RE220900_001	Residential	590180	4839466	1.5	76	117	83	10	0.0%
RE220900_002	Residential	590517	4839408	1.5	78	119	83	2	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE220900_003	Residential	590379	4839398	1.5	79	120	83	4	0.0%
RE221000_001	Residential	590454	4839467	1.5	79	120	83	3	0.0%
RE221000_002	Residential	590412	4839513	1.5	79	120	83	3	0.0%
RE221300_001	Residential	590257	4839724	1.5	77	118	83	10	0.0%
RE221300_002	Residential	590236	4839764	1.5	78	119	83	10	0.0%
RE221300_003	Residential	590440	4839670	1.5	79	120	83	5	0.0%
RE222600_001	Residential	591012	4840654	1.5	82	117	83	14	0.0%
RE222700_001	Residential	590826	4840878	1.5	91	125	83	18	0.0%
RE222700_002	Residential	590788	4840912	1.5	90	125	83	19	0.0%
RE222700_003	Residential	590768	4840946	1.5	90	125	83	20	0.0%
RE222700_004	Residential	590744	4840967	1.5	93	125	83	19	0.0%
RE222700_005	Residential	590721	4840990	1.5	95	124	83	21	0.0%
RE222700_006	Residential	590621	4841031	1.5	109	130	83	33	0.1%
RE222800_001	Residential	590888	4840963	1.5	95	124	83	17	0.0%
RE222800_002	Residential	590866	4840985	1.5	93	125	83	17	0.0%
RE222800_003	Residential	590833	4841016	1.5	95	126	83	19	0.0%
RE222800_004	Residential	590542	4841175	1.5	111	133	83	102	0.2%
RE222800_005	Residential	591137	4840761	1.5	81	118	83	12	0.0%
RE222900_001	Residential	590805	4841056	1.5	94	126	83	21	0.0%
RE223100_001	Residential	590769	4841337	1.5	109	131	83	44	0.1%
RE224000_001	Residential	591729	4841911	1.5	75	116	83	23	0.1%
RE224000_002	Residential	591565	4842001	1.5	79	120	83	27	0.1%
RE224000_003	Residential	591896	4841760	1.5	69	114	83	19	0.0%
RE224000_004	Residential	592046	4841608	1.5	66	110	83	15	0.0%
RE224000_005	Residential	591982	4841673	1.5	67	112	83	17	0.0%
RE224000_006	Residential	592000	4841606	1.5	56	97	83	8	0.0%
RE224000_007	Residential	592142	4841674	1.5	51	92	83	4	0.0%
RE224000_008	Residential	591760	4841888	1.5	75	116	83	24	0.1%
RE224100_001	Residential	591661	4842108	1.5	79	119	83	24	0.1%
RE224200_001	Residential	591576	4842265	1.5	75	115	83	44	0.1%
RE225600_001	Residential	591815	4843783	1.5	102	131	83	57	0.1%
RE225700_001	Residential	591905	4843849	1.5	98	126	83	44	0.1%
RE225700_002	Residential	591627	4843848	1.5	110	135	83	156	0.4%
RE225800_001	Residential	591793	4843928	1.5	106	132	83	65	0.1%
RE226500_001	Residential	591915	4844500	1.5	106	131	83	64	0.1%
RE226500_002	Residential	592025	4844497	1.5	95	121	83	88	0.2%
RE226600_001	Residential	592085	4844601	1.5	88	120	83	92	0.2%
RE226700_001	Residential	592060	4844696	1.5	105	130	83	61	0.1%
RE226800_001	Residential	592117	4844789	1.5	104	129	83	58	0.1%
RE227000_001	Residential	592319	4844882	1.5	79	120	83	65	0.1%
RE227100_001	Residential	592377	4844982	1.5	80	120	83	85	0.2%
RE227100_002	Residential	592402	4845033	1.5	82	123	83	108	0.2%
RE227300_001	Residential	592788	4845012	1.5	74	114	83	21	0.0%
RE227800_001	Residential	592859	4845591	1.5	59	103	83	20	0.0%
RE227900_001	Residential	592776	4845681	1.5	67	109	83	26	0.1%
RE228000_001	Residential	595855	4844518	1.5	80	121	83	15	0.0%
RE228000_002	Residential	595865	4844534	1.5	80	121	83	16	0.0%
RE228000_003	Residential	595873	4844555	1.5	81	122	83	17	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228000_004	Residential	595887	4844563	1.5	81	122	83	16	0.0%
RE228000_005	Residential	595917	4844562	1.5	80	121	83	18	0.0%
RE228000_006	Residential	595931	4844548	1.5	77	120	83	18	0.0%
RE228000_007	Residential	595942	4844534	1.5	75	120	83	15	0.0%
RE228000_008	Child Care Centre	597841	4843717	1.5	72	117	83	12	0.0%
RE228000_009	Residential	595782	4844642	1.5	71	115	83	11	0.0%
RE228100_001	Residential	595810	4844669	1.5	73	115	83	13	0.0%
RE228300_028	Residential	595272	4845160	1.5	43	84	83	2	0.0%
RE228300_029	Residential	595277	4845164	1.5	43	84	83	2	0.0%
RE228300_030	Residential	595281	4845168	1.5	43	84	83	2	0.0%
RE228300_031	Residential	595264	4845154	1.5	43	84	83	2	0.0%
RE228300_032	Residential	595260	4845151	1.5	42	84	83	1	0.0%
RE228300_033	Residential	595256	4845147	1.5	42	84	83	1	0.0%
RE228300_034	Residential	595252	4845143	1.5	42	84	83	1	0.0%
RE228300_035	Residential	595247	4845139	1.5	42	84	83	1	0.0%
RE228400_004	Residential	595342	4845241	1.5	45	86	83	1	0.0%
RE228400_005	Residential	595347	4845245	1.5	46	86	83	1	0.0%
RE228400_006	Residential	595353	4845250	1.5	46	87	83	1	0.0%
RE228400_007	Residential	595286	4845173	1.5	43	84	83	1	0.0%
RE228400_008	Residential	595291	4845177	1.5	43	84	83	1	0.0%
RE228400_009	Residential	595295	4845180	1.5	44	84	83	1	0.0%
RE228400_010	Residential	595299	4845184	1.5	44	85	83	1	0.0%
RE228400_011	Residential	595303	4845187	1.5	44	85	83	1	0.0%
RE228400_013	Residential	595249	4845194	1.5	44	85	83	1	0.0%
RE228400_014	Residential	595253	4845198	1.5	44	85	83	1	0.0%
RE228400_015	Residential	595259	4845202	1.5	44	85	83	1	0.0%
RE228400_045	Residential	595263	4845261	1.5	43	84	83	1	0.0%
RE228400_046	Residential	595267	4845257	1.5	43	84	83	1	0.0%
RE228400_047	Residential	595271	4845254	1.5	44	84	83	1	0.0%
RE228400_048	Residential	595277	4845248	1.5	44	85	83	1	0.0%
RE228400_049	Residential	595281	4845244	1.5	44	85	83	1	0.0%
RE228400_050	Residential	595285	4845240	1.5	45	85	83	1	0.0%
RE228400_051	Residential	595289	4845237	1.5	45	86	83	1	0.0%
RE228400_052	Residential	595293	4845233	1.5	45	86	83	1	0.0%
RE228400_053	Residential	595297	4845229	1.5	45	86	83	1	0.0%
RE228400_054	Residential	595303	4845221	1.5	45	86	83	1	0.0%
RE228400_055	Residential	595307	4845217	1.5	45	86	83	1	0.0%
RE228400_056	Residential	595312	4845212	1.5	45	86	83	1	0.0%
RE228400_057	Residential	595317	4845207	1.5	45	86	83	1	0.0%
RE228400_058	Residential	595321	4845203	1.5	45	86	83	1	0.0%
RE228400_059	Residential	595326	4845198	1.5	45	86	83	1	0.0%
RE228500_009	Residential	595340	4845366	1.5	43	87	83	1	0.0%
RE228500_010	Residential	595348	4845355	1.5	44	88	83	2	0.0%
RE228500_011	Residential	595353	4845351	1.5	44	88	83	2	0.0%
RE228500_012	Residential	595360	4845346	1.5	44	88	83	2	0.0%
RE228500_013	Residential	595365	4845341	1.5	44	88	83	2	0.0%
RE228500_014	Residential	595376	4845333	1.5	44	88	83	3	0.0%
RE228500_015	Residential	595380	4845326	1.5	43	87	83	3	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228500_016	Residential	595386	4845320	1.5	43	87	83	2	0.0%
RE228500_017	Residential	595391	4845315	1.5	43	87	83	3	0.0%
RE228500_018	Residential	595402	4845305	1.5	44	85	83	2	0.0%
RE228500_019	Residential	595406	4845298	1.5	44	85	83	2	0.0%
RE228500_020	Residential	595415	4845288	1.5	44	85	83	2	0.0%
RE228500_021	Residential	595423	4845280	1.5	44	85	83	1	0.0%
RE228500_022	Residential	595357	4845254	1.5	46	87	83	1	0.0%
RE228500_023	Residential	595366	4845262	1.5	45	86	83	1	0.0%
RE228500_024	Residential	595370	4845267	1.5	45	86	83	1	0.0%
RE228500_025	Residential	595375	4845271	1.5	45	86	83	1	0.0%
RE228500_026	Residential	595355	4845285	1.5	44	85	83	2	0.0%
RE228500_027	Residential	595349	4845290	1.5	43	84	83	2	0.0%
RE228500_028	Residential	595342	4845297	1.5	42	85	83	2	0.0%
RE228500_029	Residential	595338	4845303	1.5	42	85	83	1	0.0%
RE228500_030	Residential	595329	4845311	1.5	42	86	83	1	0.0%
RE228500_031	Residential	595322	4845317	1.5	42	86	83	1	0.0%
RE228500_032	Residential	595315	4845323	1.5	42	86	83	1	0.0%
RE228500_033	Residential	595310	4845328	1.5	43	87	83	1	0.0%
RE228500_034	Residential	595301	4845337	1.5	43	87	83	1	0.0%
RE228500_035	Residential	595297	4845343	1.5	43	87	83	2	0.0%
RE228500_049	Residential	595279	4845312	1.5	41	85	83	1	0.0%
RE228500_050	Residential	595289	4845303	1.5	41	85	83	1	0.0%
RE228500_051	Residential	595293	4845297	1.5	41	84	83	1	0.0%
RE228500_052	Residential	595300	4845290	1.5	42	84	83	1	0.0%
RE228500_053	Residential	595305	4845285	1.5	42	84	83	2	0.0%
RE228500_054	Residential	595315	4845277	1.5	44	85	83	2	0.0%
RE228500_055	Residential	595319	4845273	1.5	44	85	83	2	0.0%
RE228500_056	Residential	595323	4845268	1.5	45	85	83	1	0.0%
RE228500_057	Residential	595329	4845264	1.5	45	86	83	1	0.0%
RE228500_060	Residential	595450	4845298	1.5	44	85	83	2	0.0%
RE228500_061	Residential	595448	4845302	1.5	44	85	83	2	0.0%
RE228500_062	Residential	595444	4845307	1.5	44	85	83	2	0.0%
RE228500_063	Residential	595440	4845311	1.5	44	85	83	2	0.0%
RE228500_064	Residential	595437	4845315	1.5	43	86	83	2	0.0%
RE228500_065	Residential	595433	4845320	1.5	43	86	83	2	0.0%
RE228500_066	Residential	595429	4845324	1.5	42	86	83	1	0.0%
RE228500_067	Residential	595426	4845327	1.5	42	86	83	1	0.0%
RE228600_013	Residential	595369	4845462	1.5	39	83	83	0	-
RE228600_014	Residential	595377	4845450	1.5	38	82	83	0	-
RE228600_015	Residential	595389	4845444	1.5	39	83	83	0	-
RE228600_016	Residential	595398	4845435	1.5	40	84	83	1	0.0%
RE228600_017	Residential	595404	4845426	1.5	42	86	83	1	0.0%
RE228600_018	Residential	595412	4845418	1.5	43	87	83	1	0.0%
RE228600_019	Residential	595420	4845409	1.5	44	88	83	2	0.0%
RE228600_020	Residential	595431	4845401	1.5	44	88	83	2	0.0%
RE228600_021	Residential	595439	4845389	1.5	45	89	83	2	0.0%
RE228600_022	Residential	595447	4845380	1.5	45	89	83	2	0.0%
RE228600_023	Residential	595455	4845370	1.5	44	88	83	2	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228600_024	Residential	595464	4845360	1.5	43	87	83	1	0.0%
RE228600_025	Residential	595470	4845351	1.5	43	87	83	1	0.0%
RE228600_026	Residential	595480	4845344	1.5	42	86	83	1	0.0%
RE228600_027	Residential	595487	4845335	1.5	42	86	83	1	0.0%
RE228600_036	Residential	595324	4845383	1.5	43	87	83	1	0.0%
RE228600_037	Residential	595332	4845374	1.5	43	87	83	1	0.0%
RE228600_038	Residential	595335	4845370	1.5	43	87	83	1	0.0%
RE228600_039	Residential	595422	4845333	1.5	43	87	83	1	0.0%
RE228600_040	Residential	595418	4845337	1.5	43	87	83	1	0.0%
RE228600_041	Residential	595415	4845341	1.5	43	87	83	1	0.0%
RE228600_042	Residential	595412	4845343	1.5	43	87	83	2	0.0%
RE228600_043	Residential	595409	4845347	1.5	44	88	83	2	0.0%
RE228600_044	Residential	595406	4845351	1.5	44	88	83	2	0.0%
RE228600_045	Residential	595404	4845354	1.5	44	88	83	2	0.0%
RE228600_046	Residential	595402	4845357	1.5	44	88	83	2	0.0%
RE228600_047	Residential	595396	4845362	1.5	44	88	83	2	0.0%
RE228600_048	Residential	595392	4845366	1.5	44	88	83	2	0.0%
RE228600_049	Residential	595390	4845369	1.5	44	88	83	2	0.0%
RE228600_050	Residential	595387	4845372	1.5	44	88	83	2	0.0%
RE228600_051	Residential	595383	4845375	1.5	44	88	83	2	0.0%
RE228600_052	Residential	595380	4845378	1.5	44	88	83	2	0.0%
RE228600_053	Residential	595377	4845380	1.5	44	88	83	2	0.0%
RE228600_054	Residential	595374	4845383	1.5	44	88	83	2	0.0%
RE228600_055	Residential	595371	4845387	1.5	43	87	83	2	0.0%
RE228600_056	Residential	595369	4845389	1.5	43	87	83	2	0.0%
RE228600_057	Residential	595366	4845392	1.5	43	87	83	2	0.0%
RE228600_058	Residential	595363	4845395	1.5	43	87	83	2	0.0%
RE228600_059	Residential	595361	4845397	1.5	43	87	83	1	0.0%
RE228600_060	Residential	595358	4845400	1.5	43	87	83	1	0.0%
RE228600_061	Residential	595356	4845402	1.5	43	87	83	1	0.0%
RE228600_062	Residential	595353	4845405	1.5	42	86	83	1	0.0%
RE228600_063	Residential	593163	4846308	1.5	54	98	83	16	0.0%
RE228700_010	Residential	593290	4846362	1.5	54	98	83	15	0.0%
RE228800_001	Residential	593003	4846574	1.5	65	106	83	32	0.1%
RE228800_002	Residential	593037	4846534	1.5	61	103	83	30	0.1%
RE228800_003	Residential	593163	4846512	1.5	58	95	83	20	0.0%
RE228900_001	Residential	592951	4846627	1.5	71	112	83	42	0.1%
RE228900_002	Residential	592887	4846738	1.5	77	117	83	85	0.2%
RE229000_001	Residential	593405	4846521	1.5	52	96	83	10	0.0%
RE229100_001	Residential	593407	4846583	1.5	51	95	83	10	0.0%
RE230200_001	Residential	594211	4847001	1.5	52	93	83	3	0.0%
RE230300_001	Residential	594050	4847308	1.5	55	99	83	8	0.0%
RE230300_002	Residential	593923	4847396	1.5	64	108	83	12	0.0%
RE230300_003	Residential	594697	4846565	1.5	51	92	83	2	0.0%
RE230300_004	Residential	595111	4846102	1.5	46	90	83	2	0.0%
RE230300_005	Residential	595605	4845645	1.5	41	85	83	3	0.0%
RE230400_001	Residential	593872	4847645	1.5	63	106	83	26	0.1%
RE230400_002	Residential	593822	4847679	1.5	64	105	83	40	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230400_006	Residential	594520	4846864	1.5	48	93	83	6	0.0%
RE230400_007	Residential	594996	4846385	1.5	53	94	83	3	0.0%
RE230400_008	Residential	594973	4846410	1.5	54	95	83	4	0.0%
RE230400_009	Residential	594936	4846427	1.5	54	95	83	4	0.0%
RE230400_010	Residential	595705	4845694	1.5	46	90	83	4	0.0%
RE230400_011	Residential	595874	4845530	1.5	46	90	83	5	0.0%
RE230500_001	Residential	594280	4847364	1.5	61	101	83	9	0.0%
RE230500_002	Residential	594446	4847099	1.5	50	94	83	4	0.0%
RE230500_003	Residential	594531	4847041	1.5	50	93	83	3	0.0%
RE230500_004	Residential	594643	4846861	1.5	50	94	83	5	0.0%
RE230500_005	Residential	594671	4846840	1.5	50	94	83	5	0.0%
RE230500_006	Residential	595049	4846474	1.5	54	95	83	4	0.0%
RE230500_007	Residential	595486	4846036	1.5	49	93	83	5	0.0%
RE230500_008	Residential	595463	4846068	1.5	50	94	83	5	0.0%
RE230500_009	Residential	595438	4846095	1.5	52	93	83	5	0.0%
RE230500_010	Residential	595925	4845612	1.5	52	96	83	8	0.0%
RE230500_011	Residential	595941	4845561	1.5	51	95	83	10	0.0%
RE230500_012	Residential	596152	4845388	1.5	51	95	83	17	0.0%
RE230500_013	Residential	596418	4845009	1.5	81	121	83	94	0.2%
RE230500_014	Residential	596697	4844834	1.5	53	95	83	21	0.0%
RE230600_001	Residential	594927	4846729	1.5	60	101	83	7	0.0%
RE230600_002	Residential	595293	4846327	1.5	57	98	83	5	0.0%
RE230600_003	Residential	596445	4845172	1.5	85	126	83	221	0.5%
RE230600_004	Residential	596565	4845058	1.5	65	107	83	49	0.1%
RE230600_005	Residential	596657	4844932	1.5	58	98	83	24	0.1%
RE230600_006	Residential	596705	4844908	1.5	55	97	83	19	0.0%
RE230900_001	Residential	597840	4844261	1.5	86	127	83	137	0.3%
RE230900_002	Residential	597853	4844274	1.5	84	125	83	108	0.2%
RE230900_003	Residential	597866	4844285	1.5	82	123	83	91	0.2%
RE230900_004	Residential	597879	4844301	1.5	80	121	83	67	0.2%
RE230900_005	Residential	597887	4844307	1.5	79	121	83	62	0.1%
RE230900_006	Residential	597900	4844320	1.5	79	120	83	53	0.1%
RE230900_007	Residential	597908	4844331	1.5	79	120	83	50	0.1%
RE230900_008	Residential	597922	4844342	1.5	78	119	83	47	0.1%
RE230900_009	Residential	597931	4844352	1.5	78	119	83	44	0.1%
RE230900_010	Residential	597943	4844365	1.5	78	119	83	38	0.1%
RE230900_011	Residential	597954	4844376	1.5	78	119	83	35	0.1%
RE230900_012	Residential	597816	4844283	1.5	87	128	83	153	0.3%
RE230900_013	Residential	597825	4844289	1.5	86	127	83	130	0.3%
RE230900_014	Residential	597835	4844299	1.5	84	125	83	114	0.3%
RE230900_015	Residential	597842	4844308	1.5	83	124	83	101	0.2%
RE230900_016	Residential	597849	4844314	1.5	82	123	83	92	0.2%
RE230900_017	Residential	597859	4844324	1.5	80	121	83	74	0.2%
RE230900_018	Residential	597867	4844331	1.5	79	121	83	68	0.2%
RE230900_019	Residential	597875	4844341	1.5	79	121	83	66	0.2%
RE230900_020	Residential	597884	4844348	1.5	79	120	83	60	0.1%
RE230900_021	Residential	597892	4844356	1.5	79	120	83	53	0.1%
RE230900_022	Residential	597899	4844365	1.5	79	120	83	52	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_023	Residential	597905	4844373	1.5	79	120	83	47	0.1%
RE230900_024	Residential	597917	4844381	1.5	79	119	83	44	0.1%
RE230900_025	Residential	597924	4844389	1.5	79	119	83	40	0.1%
RE230900_026	Residential	597931	4844399	1.5	79	119	83	39	0.1%
RE230900_027	Residential	597646	4844600	1.5	88	126	83	197	0.4%
RE230900_028	Residential	597653	4844613	1.5	83	125	83	173	0.4%
RE230900_029	Residential	597660	4844623	1.5	83	124	83	161	0.4%
RE230900_030	Residential	597665	4844629	1.5	83	124	83	148	0.3%
RE230900_031	Residential	597835	4844353	1.5	81	122	83	87	0.2%
RE230900_032	Residential	597831	4844358	1.5	81	122	83	89	0.2%
RE230900_033	Residential	597825	4844365	1.5	81	122	83	91	0.2%
RE230900_034	Residential	597820	4844371	1.5	81	122	83	96	0.2%
RE230900_035	Residential	597814	4844379	1.5	81	122	83	97	0.2%
RE230900_036	Residential	597811	4844383	1.5	81	122	83	99	0.2%
RE230900_037	Residential	597806	4844390	1.5	81	122	83	99	0.2%
RE230900_038	Residential	597801	4844396	1.5	82	122	83	102	0.2%
RE230900_039	Residential	597796	4844403	1.5	82	122	83	105	0.2%
RE230900_040	Residential	597792	4844410	1.5	82	122	83	105	0.2%
RE230900_041	Residential	597786	4844416	1.5	82	123	83	109	0.2%
RE230900_042	Residential	597783	4844423	1.5	82	122	83	108	0.2%
RE230900_043	Residential	597781	4844430	1.5	81	122	83	108	0.2%
RE230900_044	Residential	597777	4844436	1.5	81	123	83	109	0.2%
RE230900_045	Residential	597773	4844443	1.5	81	122	83	109	0.2%
RE230900_046	Residential	597770	4844450	1.5	81	123	83	109	0.2%
RE230900_047	Residential	597766	4844457	1.5	81	123	83	110	0.3%
RE230900_048	Residential	597762	4844463	1.5	81	123	83	110	0.3%
RE230900_049	Residential	597758	4844470	1.5	81	123	83	111	0.3%
RE230900_050	Residential	597754	4844477	1.5	81	123	83	113	0.3%
RE230900_051	Residential	597751	4844484	1.5	81	123	83	111	0.3%
RE230900_052	Residential	597747	4844490	1.5	81	123	83	113	0.3%
RE230900_053	Residential	597744	4844497	1.5	81	123	83	113	0.3%
RE230900_054	Residential	597739	4844504	1.5	81	123	83	113	0.3%
RE230900_055	Residential	597725	4844530	1.5	81	123	83	117	0.3%
RE230900_056	Residential	597721	4844535	1.5	81	123	83	119	0.3%
RE230900_057	Residential	597717	4844543	1.5	81	123	83	118	0.3%
RE230900_058	Residential	597713	4844549	1.5	81	123	83	122	0.3%
RE230900_059	Residential	597710	4844557	1.5	81	123	83	125	0.3%
RE230900_060	Residential	597705	4844564	1.5	81	123	83	128	0.3%
RE230900_061	Residential	597701	4844572	1.5	82	123	83	129	0.3%
RE230900_062	Residential	597697	4844579	1.5	82	123	83	133	0.3%
RE230900_063	Residential	597692	4844586	1.5	82	123	83	134	0.3%
RE230900_064	Residential	597688	4844592	1.5	82	123	83	136	0.3%
RE230900_065	Residential	597684	4844600	1.5	82	123	83	137	0.3%
RE230900_066	Residential	597681	4844607	1.5	82	124	83	139	0.3%
RE230900_067	Residential	597651	4844608	1.5	85	125	83	184	0.4%
RE230900_068	Residential	597659	4844619	1.5	83	124	83	165	0.4%
RE230900_069	Residential	597659	4844582	1.5	86	125	83	191	0.4%
RE230900_070	Residential	597661	4844578	1.5	86	125	83	188	0.4%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_071	Residential	597664	4844572	1.5	86	125	83	188	0.4%
RE230900_072	Residential	597668	4844567	1.5	85	125	83	186	0.4%
RE230900_073	Residential	597671	4844560	1.5	85	125	83	184	0.4%
RE230900_074	Residential	597674	4844556	1.5	85	126	83	182	0.4%
RE230900_075	Residential	597678	4844550	1.5	85	126	83	180	0.4%
RE230900_076	Residential	597681	4844543	1.5	85	126	83	178	0.4%
RE230900_077	Residential	597684	4844537	1.5	85	126	83	178	0.4%
RE230900_078	Residential	597688	4844532	1.5	85	126	83	176	0.4%
RE230900_079	Residential	597691	4844527	1.5	85	126	83	174	0.4%
RE230900_080	Residential	597695	4844521	1.5	85	126	83	173	0.4%
RE230900_081	Residential	597697	4844516	1.5	85	126	83	171	0.4%
RE230900_082	Residential	597714	4844486	1.5	85	126	83	164	0.4%
RE230900_083	Residential	597717	4844481	1.5	85	126	83	161	0.4%
RE230900_084	Residential	597720	4844476	1.5	85	126	83	160	0.4%
RE230900_085	Residential	597723	4844470	1.5	85	126	83	159	0.4%
RE230900_086	Residential	597726	4844464	1.5	85	126	83	153	0.3%
RE230900_087	Residential	597729	4844460	1.5	85	126	83	152	0.3%
RE230900_088	Residential	597732	4844455	1.5	85	126	83	151	0.3%
RE230900_089	Residential	597736	4844448	1.5	85	126	83	147	0.3%
RE230900_090	Residential	597740	4844440	1.5	85	126	83	145	0.3%
RE230900_091	Residential	597743	4844435	1.5	85	126	83	144	0.3%
RE230900_092	Residential	597747	4844429	1.5	85	126	83	143	0.3%
RE230900_093	Residential	597749	4844423	1.5	85	126	83	143	0.3%
RE230900_094	Residential	597752	4844418	1.5	85	126	83	143	0.3%
RE230900_095	Residential	597755	4844413	1.5	85	126	83	141	0.3%
RE230900_096	Residential	597758	4844409	1.5	85	126	83	141	0.3%
RE230900_097	Residential	597762	4844402	1.5	85	126	83	141	0.3%
RE230900_098	Residential	597765	4844392	1.5	86	127	83	143	0.3%
RE230900_099	Residential	597769	4844386	1.5	86	126	83	138	0.3%
RE230900_100	Residential	597773	4844382	1.5	85	126	83	134	0.3%
RE230900_101	Residential	597776	4844377	1.5	85	126	83	134	0.3%
RE230900_102	Residential	597784	4844369	1.5	85	126	83	127	0.3%
RE230900_103	Residential	597787	4844364	1.5	85	126	83	127	0.3%
RE230900_104	Residential	597791	4844360	1.5	85	126	83	126	0.3%
RE230900_105	Residential	597794	4844354	1.5	85	126	83	126	0.3%
RE230900_106	Residential	597798	4844349	1.5	85	126	83	125	0.3%
RE230900_107	Residential	597802	4844343	1.5	85	126	83	125	0.3%
RE230900_108	Residential	597805	4844339	1.5	85	126	83	122	0.3%
RE230900_109	Residential	597808	4844334	1.5	85	126	83	120	0.3%
RE230900_110	Residential	597861	4844387	1.5	79	120	83	64	0.1%
RE230900_111	Residential	597868	4844394	1.5	79	120	83	59	0.1%
RE230900_112	Residential	597877	4844404	1.5	79	120	83	57	0.1%
RE230900_113	Residential	597886	4844412	1.5	79	120	83	50	0.1%
RE230900_114	Residential	597892	4844420	1.5	79	120	83	45	0.1%
RE230900_115	Residential	597874	4844444	1.5	79	120	83	48	0.1%
RE230900_116	Residential	597870	4844440	1.5	79	120	83	56	0.1%
RE230900_117	Residential	597863	4844432	1.5	79	120	83	61	0.1%
RE230900_118	Residential	597859	4844428	1.5	79	120	83	61	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_119	Residential	597849	4844405	1.5	79	121	83	66	0.2%
RE230900_120	Residential	597845	4844411	1.5	79	121	83	67	0.2%
RE230900_121	Residential	597840	4844418	1.5	79	121	83	68	0.2%
RE230900_122	Residential	597836	4844424	1.5	79	121	83	71	0.2%
RE230900_123	Residential	597819	4844451	1.5	80	121	83	76	0.2%
RE230900_124	Residential	597815	4844458	1.5	80	121	83	76	0.2%
RE230900_125	Residential	597834	4844465	1.5	80	120	83	65	0.1%
RE230900_126	Residential	597846	4844477	1.5	80	120	83	59	0.1%
RE230900_127	Residential	597812	4844466	1.5	80	121	83	77	0.2%
RE230900_128	Residential	597808	4844471	1.5	80	121	83	79	0.2%
RE230900_129	Residential	597804	4844480	1.5	80	121	83	79	0.2%
RE230900_130	Residential	597801	4844485	1.5	80	121	83	79	0.2%
RE230900_131	Residential	597796	4844493	1.5	80	121	83	80	0.2%
RE230900_132	Residential	597793	4844499	1.5	80	121	83	82	0.2%
RE230900_133	Residential	597788	4844505	1.5	80	121	83	83	0.2%
RE230900_134	Residential	597785	4844512	1.5	80	121	83	83	0.2%
RE230900_135	Residential	597781	4844519	1.5	80	121	83	83	0.2%
RE230900_136	Residential	597777	4844525	1.5	80	121	83	84	0.2%
RE230900_137	Residential	597772	4844533	1.5	81	121	83	84	0.2%
RE230900_138	Residential	597769	4844540	1.5	81	121	83	85	0.2%
RE230900_139	Residential	597765	4844546	1.5	81	122	83	85	0.2%
RE230900_140	Residential	597762	4844553	1.5	81	122	83	85	0.2%
RE230900_141	Residential	597758	4844559	1.5	81	122	83	85	0.2%
RE230900_142	Residential	597755	4844565	1.5	81	122	83	87	0.2%
RE230900_143	Residential	597751	4844573	1.5	81	122	83	87	0.2%
RE230900_144	Residential	597747	4844579	1.5	81	122	83	87	0.2%
RE230900_145	Residential	597822	4844504	1.5	80	121	83	64	0.1%
RE230900_146	Residential	597827	4844497	1.5	80	121	83	64	0.1%
RE230900_147	Residential	597831	4844490	1.5	80	121	83	64	0.1%
RE230900_148	Residential	597839	4844470	1.5	80	120	83	64	0.1%
RE230900_149	Residential	598114	4844042	1.5	74	118	83	37	0.1%
RE230900_150	Residential	598102	4844034	1.5	74	118	83	43	0.1%
RE230900_151	Residential	598094	4844026	1.5	74	119	83	47	0.1%
RE230900_152	Residential	598074	4844024	1.5	79	120	83	60	0.1%
RE230900_153	Residential	598063	4844034	1.5	79	120	83	63	0.1%
RE230900_154	Residential	598053	4844045	1.5	79	120	83	66	0.2%
RE230900_155	Residential	598043	4844055	1.5	79	120	83	72	0.2%
RE230900_156	Residential	598034	4844069	1.5	79	120	83	72	0.2%
RE230900_157	Residential	598028	4844085	1.5	79	120	83	67	0.2%
RE230900_158	Residential	598036	4844098	1.5	78	119	83	51	0.1%
RE230900_159	Residential	598045	4844106	1.5	74	119	83	46	0.1%
RE230900_160	Residential	598054	4844116	1.5	74	119	83	44	0.1%
RE230900_161	Residential	598102	4844074	1.5	74	118	83	32	0.1%
RE230900_162	Residential	598085	4844058	1.5	74	119	83	45	0.1%
RE230900_163	Residential	598068	4844077	1.5	74	119	83	45	0.1%
RE230900_164	Residential	598080	4844091	1.5	74	118	83	40	0.1%
RE230900_165	Residential	598123	4844051	1.5	73	118	83	32	0.1%
RE230900_166	Residential	598199	4843983	1.5	73	117	83	29	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_167	Residential	598192	4843977	1.5	73	118	83	31	0.1%
RE230900_168	Residential	598185	4843968	1.5	73	118	83	35	0.1%
RE230900_169	Residential	598179	4843962	1.5	73	118	83	37	0.1%
RE230900_170	Residential	598170	4843953	1.5	73	118	83	39	0.1%
RE230900_171	Residential	598161	4843941	1.5	74	118	83	47	0.1%
RE230900_172	Residential	598158	4843928	1.5	74	118	83	52	0.1%
RE230900_173	Residential	598165	4843918	1.5	74	118	83	54	0.1%
RE230900_174	Residential	598171	4843911	1.5	74	118	83	54	0.1%
RE230900_175	Residential	598179	4843903	1.5	74	118	83	53	0.1%
RE230900_176	Residential	598185	4843897	1.5	74	118	83	53	0.1%
RE230900_177	Residential	598191	4843889	1.5	74	118	83	53	0.1%
RE230900_178	Residential	598197	4843884	1.5	74	118	83	53	0.1%
RE230900_179	Residential	598202	4843879	1.5	74	118	83	51	0.1%
RE230900_180	Residential	598209	4843872	1.5	74	118	83	49	0.1%
RE230900_181	Residential	598215	4843866	1.5	73	118	83	47	0.1%
RE230900_182	Residential	598222	4843858	1.5	73	118	83	47	0.1%
RE230900_192	Residential	598217	4843965	1.5	73	117	83	29	0.1%
RE230900_193	Residential	598205	4843953	1.5	73	117	83	30	0.1%
RE230900_194	Residential	598192	4843939	1.5	73	118	83	38	0.1%
RE230900_198	Residential	597969	4844339	1.5	78	119	83	35	0.1%
RE230900_199	Residential	597959	4844330	1.5	78	119	83	38	0.1%
RE230900_200	Residential	597950	4844320	1.5	78	119	83	43	0.1%
RE230900_201	Residential	597940	4844310	1.5	78	119	83	47	0.1%
RE230900_202	Residential	597931	4844302	1.5	78	120	83	49	0.1%
RE230900_203	Residential	597923	4844293	1.5	78	120	83	50	0.1%
RE230900_204	Residential	597913	4844282	1.5	79	120	83	56	0.1%
RE230900_205	Residential	597979	4844349	1.5	78	119	83	33	0.1%
RE230900_206	Residential	597848	4844272	1.5	84	125	83	114	0.3%
RE230900_207	Residential	597840	4844263	1.5	86	127	83	136	0.3%
RE230900_208	Residential	597864	4844244	1.5	84	125	83	116	0.3%
RE230900_209	Residential	597869	4844237	1.5	84	125	83	115	0.3%
RE230900_210	Residential	597874	4844230	1.5	84	125	83	115	0.3%
RE230900_211	Residential	597878	4844225	1.5	84	125	83	115	0.3%
RE230900_212	Residential	597888	4844211	1.5	84	125	83	112	0.3%
RE230900_213	Residential	597893	4844204	1.5	84	125	83	112	0.3%
RE230900_214	Residential	597899	4844195	1.5	84	125	83	110	0.3%
RE230900_215	Residential	597904	4844188	1.5	84	125	83	110	0.3%
RE230900_216	Residential	597884	4844219	1.5	84	125	83	112	0.3%
RE230900_217	Residential	597946	4844123	1.5	83	124	83	115	0.3%
RE230900_218	Residential	597910	4844177	1.5	84	125	83	113	0.3%
RE230900_219	Residential	597915	4844171	1.5	84	124	83	110	0.3%
RE230900_220	Residential	597921	4844162	1.5	84	124	83	111	0.3%
RE230900_221	Residential	597926	4844153	1.5	84	124	83	112	0.3%
RE230900_222	Residential	597936	4844139	1.5	83	124	83	112	0.3%
RE230900_223	Residential	597954	4844115	1.5	83	124	83	112	0.3%
RE230900_224	Residential	597959	4844106	1.5	83	124	83	114	0.3%
RE230900_225	Residential	597967	4844098	1.5	83	124	83	109	0.2%
RE230900_226	Residential	597972	4844091	1.5	83	124	83	109	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_227	Residential	597977	4844083	1.5	83	124	83	111	0.3%
RE230900_228	Residential	597982	4844076	1.5	83	124	83	113	0.3%
RE230900_229	Residential	597986	4844069	1.5	83	124	83	116	0.3%
RE230900_230	Residential	597991	4844063	1.5	83	124	83	117	0.3%
RE230900_231	Residential	597994	4844057	1.5	83	124	83	120	0.3%
RE230900_232	Residential	598000	4844050	1.5	83	123	83	120	0.3%
RE230900_233	Residential	598005	4844046	1.5	82	123	83	113	0.3%
RE230900_234	Residential	598013	4844034	1.5	82	123	83	114	0.3%
RE230900_235	Residential	598019	4844027	1.5	82	123	83	113	0.3%
RE230900_236	Residential	598024	4844022	1.5	82	123	83	111	0.3%
RE230900_237	Residential	598029	4844018	1.5	82	123	83	108	0.2%
RE230900_238	Residential	598032	4844011	1.5	82	123	83	110	0.3%
RE230900_239	Residential	598037	4844006	1.5	82	123	83	109	0.2%
RE230900_240	Residential	598044	4843998	1.5	82	123	83	107	0.2%
RE230900_241	Residential	597941	4844132	1.5	83	124	83	113	0.3%
RE230900_242	Residential	598051	4843992	1.5	82	122	83	105	0.2%
RE230900_243	Residential	598058	4843984	1.5	81	122	83	104	0.2%
RE230900_244	Residential	598066	4843978	1.5	81	122	83	103	0.2%
RE230900_245	Residential	598072	4843971	1.5	81	122	83	104	0.2%
RE230900_246	Residential	598078	4843964	1.5	81	122	83	104	0.2%
RE230900_247	Residential	598084	4843957	1.5	81	122	83	104	0.2%
RE230900_257	Residential	598130	4844202	1.5	73	117	83	19	0.0%
RE230900_258	Residential	598131	4844192	1.5	73	117	83	19	0.0%
RE230900_259	Residential	598135	4844179	1.5	73	117	83	19	0.0%
RE230900_260	Residential	598147	4844156	1.5	72	117	83	19	0.0%
RE230900_261	Residential	598154	4844148	1.5	72	117	83	18	0.0%
RE230900_262	Residential	598161	4844140	1.5	72	117	83	18	0.0%
RE230900_263	Residential	598095	4844225	1.5	73	117	83	22	0.1%
RE230900_264	Residential	598095	4844213	1.5	73	117	83	23	0.1%
RE230900_265	Residential	598095	4844198	1.5	73	117	83	24	0.1%
RE230900_266	Residential	598094	4844188	1.5	73	118	83	24	0.1%
RE230900_272	Residential	598293	4843978	1.5	72	116	83	15	0.0%
RE230900_273	Residential	598282	4843987	1.5	72	116	83	17	0.0%
RE230900_274	Residential	598272	4843996	1.5	72	117	83	17	0.0%
RE230900_275	Residential	598261	4844006	1.5	72	117	83	18	0.0%
RE230900_276	Residential	598251	4844016	1.5	72	117	83	18	0.0%
RE230900_277	Residential	598243	4844025	1.5	72	117	83	18	0.0%
RE230900_278	Residential	598237	4844030	1.5	72	117	83	18	0.0%
RE230900_279	Residential	598231	4844036	1.5	72	117	83	18	0.0%
RE230900_280	Residential	598225	4844041	1.5	72	117	83	18	0.0%
RE230900_281	Residential	598220	4844046	1.5	72	117	83	18	0.0%
RE230900_282	Residential	598213	4844053	1.5	72	117	83	19	0.0%
RE230900_283	Residential	598133	4844117	1.5	73	118	83	26	0.1%
RE230900_285	Residential	598098	4844164	1.5	73	118	83	26	0.1%
RE230900_286	Residential	598103	4844154	1.5	73	118	83	26	0.1%
RE230900_287	Residential	598107	4844144	1.5	73	118	83	27	0.1%
RE230900_288	Residential	598172	4844129	1.5	72	117	83	18	0.0%
RE230900_289	Residential	598183	4844119	1.5	72	117	83	18	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_290	Residential	598190	4844111	1.5	72	117	83	18	0.0%
RE230900_291	Residential	598198	4844103	1.5	72	117	83	18	0.0%
RE230900_292	Residential	598205	4844095	1.5	72	117	83	17	0.0%
RE230900_293	Residential	598212	4844088	1.5	72	117	83	17	0.0%
RE230900_294	Residential	598185	4844065	1.5	73	117	83	22	0.1%
RE230900_295	Residential	598176	4844074	1.5	73	117	83	22	0.1%
RE230900_296	Residential	598166	4844083	1.5	73	117	83	22	0.1%
RE230900_297	Residential	598158	4844092	1.5	73	117	83	23	0.1%
RE230900_298	Residential	598148	4844101	1.5	73	117	83	23	0.1%
RE230900_299	Residential	598139	4844111	1.5	73	117	83	25	0.1%
RE230900_300	Residential	598118	4844130	1.5	73	118	83	27	0.1%
RE230900_301	Residential	598112	4844137	1.5	73	118	83	27	0.1%
RE230900_302	Residential	598231	4844068	1.5	72	116	83	17	0.0%
RE230900_303	Residential	598240	4844057	1.5	72	116	83	17	0.0%
RE230900_304	Residential	598258	4844039	1.5	71	116	83	15	0.0%
RE230900_305	Residential	598267	4844030	1.5	71	115	83	15	0.0%
RE230900_306	Residential	598275	4844021	1.5	70	115	83	15	0.0%
RE230900_307	Residential	598296	4844003	1.5	70	114	83	15	0.0%
RE230900_310	Residential	598286	4844012	1.5	70	115	83	15	0.0%
RE230900_312	Residential	598068	4844260	1.5	73	118	83	25	0.1%
RE230900_313	Residential	598248	4844048	1.5	72	116	83	17	0.0%
RE230900_315	Residential	598095	4844177	1.5	73	118	83	25	0.1%
RE230900_317	Residential	598062	4844211	1.5	73	118	83	29	0.1%
RE230900_318	Residential	598168	4844040	1.5	73	117	83	27	0.1%
RE230900_319	Residential	598156	4844051	1.5	73	118	83	30	0.1%
RE230900_320	Residential	598148	4844062	1.5	73	118	83	30	0.1%
RE230900_321	Residential	598135	4844072	1.5	73	118	83	32	0.1%
RE230900_322	Residential	598126	4844084	1.5	73	118	83	32	0.1%
RE230900_323	Residential	598113	4844094	1.5	73	118	83	32	0.1%
RE230900_324	Residential	598105	4844105	1.5	73	118	83	32	0.1%
RE230900_325	Residential	598096	4844112	1.5	74	118	83	32	0.1%
RE230900_326	Residential	598087	4844118	1.5	74	118	83	32	0.1%
RE230900_327	Residential	598077	4844131	1.5	74	118	83	34	0.1%
RE230900_328	Residential	598067	4844143	1.5	74	118	83	34	0.1%
RE230900_329	Residential	598061	4844157	1.5	74	118	83	34	0.1%
RE230900_330	Residential	598061	4844172	1.5	74	118	83	34	0.1%
RE230900_331	Residential	598061	4844185	1.5	74	118	83	33	0.1%
RE230900_332	Residential	598062	4844198	1.5	73	118	83	30	0.1%
RE230900_333	Residential	598063	4844224	1.5	73	118	83	25	0.1%
RE230900_334	Residential	598128	4844123	1.5	73	118	83	26	0.1%
RE230900_335	Residential	598138	4844168	1.5	72	117	83	20	0.0%
RE230900_337	Residential	598275	4843935	1.5	72	117	83	22	0.1%
RE230900_338	Residential	598267	4843942	1.5	72	117	83	22	0.1%
RE230900_339	Residential	598256	4843950	1.5	72	117	83	22	0.1%
RE230900_340	Residential	598247	4843960	1.5	72	117	83	23	0.1%
RE230900_341	Residential	598239	4843966	1.5	73	117	83	23	0.1%
RE230900_342	Residential	598233	4843974	1.5	73	117	83	23	0.1%
RE230900_343	Residential	598226	4843980	1.5	73	117	83	23	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_344	Residential	598218	4843987	1.5	73	117	83	23	0.1%
RE230900_345	Residential	598211	4843994	1.5	73	117	83	23	0.1%
RE230900_346	Residential	598205	4844002	1.5	73	117	83	23	0.1%
RE230900_347	Residential	598199	4844007	1.5	73	117	83	24	0.1%
RE230900_348	Residential	598190	4844015	1.5	73	117	83	26	0.1%
RE230900_349	Residential	598181	4844024	1.5	73	117	83	27	0.1%
RE230900_350	Residential	597947	4844283	1.5	78	119	83	49	0.1%
RE230900_351	Residential	597937	4844272	1.5	78	120	83	50	0.1%
RE230900_352	Residential	597929	4844264	1.5	78	120	83	52	0.1%
RE230900_353	Residential	597958	4844245	1.5	77	119	83	50	0.1%
RE230900_354	Residential	597947	4844234	1.5	78	120	83	53	0.1%
RE230900_355	Residential	597920	4844224	1.5	81	121	83	78	0.2%
RE230900_356	Residential	597911	4844235	1.5	81	122	83	80	0.2%
RE230900_357	Residential	597935	4844225	1.5	79	120	83	60	0.1%
RE230900_358	Residential	597903	4844242	1.5	81	122	83	82	0.2%
RE230900_359	Residential	597894	4844252	1.5	81	122	83	84	0.2%
RE230900_360	Residential	597885	4844262	1.5	82	122	83	84	0.2%
RE230900_361	Residential	597993	4844327	1.5	76	118	83	32	0.1%
RE230900_362	Residential	597985	4844320	1.5	76	118	83	35	0.1%
RE230900_363	Residential	597976	4844312	1.5	77	119	83	37	0.1%
RE230900_364	Residential	597966	4844301	1.5	77	119	83	41	0.1%
RE230900_365	Residential	597956	4844290	1.5	77	119	83	46	0.1%
RE230900_366	Residential	597988	4844228	1.5	74	119	83	44	0.1%
RE230900_367	Residential	597980	4844220	1.5	75	119	83	45	0.1%
RE230900_368	Residential	597970	4844211	1.5	76	119	83	51	0.1%
RE230900_369	Residential	597960	4844201	1.5	79	120	83	56	0.1%
RE230900_370	Residential	597949	4844191	1.5	80	121	83	74	0.2%
RE230900_371	Residential	597936	4844178	1.5	81	122	83	90	0.2%
RE230900_372	Residential	598039	4844140	1.5	74	119	83	43	0.1%
RE230900_373	Residential	598027	4844132	1.5	74	119	83	49	0.1%
RE230900_374	Residential	598012	4844121	1.5	79	120	83	53	0.1%
RE230900_375	Residential	597996	4844119	1.5	80	121	83	77	0.2%
RE230900_376	Residential	597981	4844132	1.5	80	121	83	77	0.2%
RE230900_377	Residential	597973	4844146	1.5	80	121	83	76	0.2%
RE230900_378	Residential	598034	4844176	1.5	74	119	83	40	0.1%
RE230900_379	Residential	598015	4844169	1.5	74	119	83	46	0.1%
RE230900_380	Residential	598000	4844158	1.5	77	119	83	50	0.1%
RE230900_381	Residential	597986	4844180	1.5	77	119	83	51	0.1%
RE230900_382	Residential	597997	4844189	1.5	75	119	83	47	0.1%
RE230900_383	Residential	598009	4844195	1.5	74	119	83	44	0.1%
RE230900_384	Residential	598020	4844205	1.5	74	119	83	39	0.1%
RE230900_385	Residential	598034	4844205	1.5	74	118	83	37	0.1%
RE230900_386	Residential	598213	4843919	1.5	73	118	83	35	0.1%
RE230900_387	Residential	598223	4843930	1.5	73	117	83	31	0.1%
RE230900_388	Residential	598235	4843942	1.5	73	117	83	27	0.1%
RE230900_389	Residential	598262	4843914	1.5	73	117	83	24	0.1%
RE230900_390	Residential	598251	4843903	1.5	73	117	83	29	0.1%
RE230900_391	Residential	598238	4843889	1.5	73	117	83	35	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_394	Residential	597965	4844159	1.5	80	121	83	76	0.2%
RE230900_395	Residential	598116	4843943	1.5	79	120	83	79	0.2%
RE230900_396	Residential	598126	4843952	1.5	78	119	83	60	0.1%
RE230900_397	Residential	598136	4843962	1.5	74	118	83	50	0.1%
RE230900_398	Residential	598147	4843973	1.5	74	118	83	42	0.1%
RE230900_399	Residential	598158	4843985	1.5	73	118	83	37	0.1%
RE230900_400	Residential	598170	4843998	1.5	73	118	83	32	0.1%
RE230900_401	Residential	598145	4844026	1.5	73	118	83	32	0.1%
RE230900_402	Residential	598132	4844013	1.5	73	118	83	40	0.1%
RE230900_403	Residential	598121	4844002	1.5	74	118	83	42	0.1%
RE230900_404	Residential	598113	4843994	1.5	74	119	83	50	0.1%
RE230900_405	Residential	598106	4843985	1.5	78	119	83	59	0.1%
RE230900_406	Residential	598095	4843974	1.5	79	120	83	77	0.2%
RE231000_001	Recreation	597895	4844715	1.5	80	121	83	35	0.1%
RE231000_002	Residential	594593	4847779	1.5	56	96	83	11	0.0%
RE231000_003	Residential	597966	4844386	1.5	79	119	83	33	0.1%
RE231000_004	Residential	597973	4844395	1.5	79	119	83	32	0.1%
RE231000_005	Residential	597984	4844407	1.5	79	119	83	28	0.1%
RE231000_006	Residential	597998	4844418	1.5	79	120	83	28	0.1%
RE231000_007	Residential	598005	4844428	1.5	79	120	83	26	0.1%
RE231000_008	Residential	598021	4844443	1.5	79	120	83	26	0.1%
RE231000_009	Residential	598033	4844455	1.5	79	120	83	25	0.1%
RE231000_010	Residential	598043	4844466	1.5	79	120	83	23	0.1%
RE231000_011	Residential	597940	4844407	1.5	79	120	83	37	0.1%
RE231000_012	Residential	597949	4844414	1.5	79	120	83	36	0.1%
RE231000_013	Residential	597956	4844424	1.5	79	120	83	34	0.1%
RE231000_014	Residential	597965	4844432	1.5	79	120	83	33	0.1%
RE231000_015	Residential	597973	4844440	1.5	79	120	83	32	0.1%
RE231000_016	Residential	597982	4844449	1.5	79	120	83	32	0.1%
RE231000_017	Residential	597989	4844456	1.5	79	120	83	30	0.1%
RE231000_018	Residential	597997	4844465	1.5	79	120	83	29	0.1%
RE231000_019	Residential	598006	4844473	1.5	79	120	83	27	0.1%
RE231000_020	Residential	598015	4844481	1.5	80	120	83	26	0.1%
RE231000_021	Residential	598022	4844489	1.5	80	120	83	24	0.1%
RE231000_022	Residential	598030	4844498	1.5	80	120	83	24	0.1%
RE231000_023	Residential	598039	4844506	1.5	80	120	83	22	0.1%
RE231000_024	Residential	598046	4844513	1.5	79	120	83	22	0.1%
RE231000_025	Residential	598053	4844523	1.5	79	120	83	22	0.1%
RE231000_026	Residential	598064	4844530	1.5	79	120	83	22	0.1%
RE231000_027	Residential	597902	4844429	1.5	79	120	83	42	0.1%
RE231000_028	Residential	597911	4844437	1.5	79	120	83	40	0.1%
RE231000_029	Residential	597918	4844446	1.5	79	120	83	39	0.1%
RE231000_030	Residential	597928	4844453	1.5	79	120	83	38	0.1%
RE231000_031	Residential	597934	4844463	1.5	79	120	83	38	0.1%
RE231000_032	Residential	597943	4844469	1.5	79	120	83	34	0.1%
RE231000_033	Residential	597953	4844479	1.5	79	120	83	32	0.1%
RE231000_034	Residential	597961	4844486	1.5	80	120	83	30	0.1%
RE231000_035	Residential	597969	4844494	1.5	80	120	83	30	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_036	Residential	597976	4844504	1.5	80	121	83	28	0.1%
RE231000_037	Residential	597984	4844514	1.5	80	121	83	27	0.1%
RE231000_038	Residential	597992	4844520	1.5	80	121	83	25	0.1%
RE231000_039	Residential	598001	4844529	1.5	80	121	83	25	0.1%
RE231000_040	Residential	598009	4844537	1.5	80	121	83	24	0.1%
RE231000_041	Residential	598016	4844545	1.5	80	121	83	23	0.1%
RE231000_042	Residential	598025	4844554	1.5	80	120	83	22	0.1%
RE231000_043	Residential	598033	4844562	1.5	80	120	83	22	0.1%
RE231000_044	Residential	598013	4844582	1.5	80	120	83	23	0.1%
RE231000_045	Residential	598003	4844574	1.5	80	121	83	23	0.1%
RE231000_046	Residential	597995	4844566	1.5	80	121	83	23	0.1%
RE231000_047	Residential	597987	4844557	1.5	80	121	83	25	0.1%
RE231000_048	Residential	597979	4844550	1.5	80	121	83	27	0.1%
RE231000_049	Residential	597972	4844542	1.5	80	121	83	27	0.1%
RE231000_050	Residential	597967	4844538	1.5	80	121	83	28	0.1%
RE231000_051	Residential	597961	4844530	1.5	80	121	83	29	0.1%
RE231000_052	Residential	597957	4844525	1.5	80	121	83	29	0.1%
RE231000_053	Residential	597950	4844520	1.5	80	121	83	30	0.1%
RE231000_054	Residential	597945	4844515	1.5	80	121	83	31	0.1%
RE231000_055	Residential	597940	4844509	1.5	80	121	83	32	0.1%
RE231000_056	Residential	597934	4844504	1.5	80	121	83	34	0.1%
RE231000_057	Residential	597929	4844499	1.5	80	121	83	37	0.1%
RE231000_058	Residential	597923	4844493	1.5	80	120	83	38	0.1%
RE231000_059	Residential	597918	4844487	1.5	80	120	83	39	0.1%
RE231000_060	Residential	597914	4844483	1.5	80	120	83	40	0.1%
RE231000_061	Residential	597908	4844476	1.5	79	120	83	39	0.1%
RE231000_062	Residential	597904	4844471	1.5	79	120	83	40	0.1%
RE231000_063	Residential	597897	4844465	1.5	79	120	83	42	0.1%
RE231000_064	Residential	597892	4844460	1.5	79	120	83	42	0.1%
RE231000_065	Residential	597886	4844454	1.5	79	120	83	43	0.1%
RE231000_066	Residential	597881	4844449	1.5	79	120	83	44	0.1%
RE231000_067	Residential	597742	4844586	1.5	81	122	83	87	0.2%
RE231000_068	Residential	597739	4844592	1.5	81	122	83	87	0.2%
RE231000_069	Residential	597735	4844599	1.5	81	122	83	88	0.2%
RE231000_070	Residential	597732	4844605	1.5	82	122	83	90	0.2%
RE231000_071	Residential	597727	4844613	1.5	82	122	83	93	0.2%
RE231000_072	Residential	597724	4844619	1.5	82	123	83	95	0.2%
RE231000_073	Residential	597720	4844626	1.5	82	123	83	96	0.2%
RE231000_074	Residential	597718	4844632	1.5	82	123	83	97	0.2%
RE231000_075	Residential	597712	4844640	1.5	82	123	83	105	0.2%
RE231000_076	Residential	597707	4844646	1.5	82	123	83	108	0.2%
RE231000_077	Residential	597684	4844653	1.5	83	123	83	128	0.3%
RE231000_078	Residential	597688	4844659	1.5	83	123	83	123	0.3%
RE231000_079	Residential	597692	4844664	1.5	83	123	83	121	0.3%
RE231000_080	Residential	597695	4844670	1.5	83	124	83	117	0.3%
RE231000_081	Residential	597701	4844677	1.5	83	124	83	107	0.2%
RE231000_082	Residential	597705	4844683	1.5	83	124	83	99	0.2%
RE231000_083	Residential	597708	4844687	1.5	83	124	83	97	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_084	Residential	597711	4844692	1.5	83	124	83	95	0.2%
RE231000_085	Residential	597729	4844665	1.5	82	123	83	81	0.2%
RE231000_086	Residential	597725	4844670	1.5	82	123	83	83	0.2%
RE231000_087	Residential	597738	4844650	1.5	82	123	83	80	0.2%
RE231000_088	Residential	597734	4844657	1.5	82	123	83	80	0.2%
RE231000_089	Residential	597742	4844645	1.5	82	123	83	76	0.2%
RE231000_090	Residential	597746	4844639	1.5	82	123	83	76	0.2%
RE231000_091	Residential	597750	4844631	1.5	82	123	83	75	0.2%
RE231000_092	Residential	597753	4844624	1.5	82	122	83	71	0.2%
RE231000_093	Residential	597757	4844618	1.5	82	122	83	70	0.2%
RE231000_094	Residential	597761	4844610	1.5	81	122	83	70	0.2%
RE231000_095	Residential	597764	4844603	1.5	81	122	83	69	0.2%
RE231000_096	Residential	597768	4844596	1.5	81	122	83	69	0.2%
RE231000_097	Residential	597773	4844591	1.5	81	122	83	67	0.2%
RE231000_098	Residential	597777	4844584	1.5	81	122	83	65	0.1%
RE231000_099	Residential	597780	4844577	1.5	81	122	83	66	0.2%
RE231000_100	Residential	597784	4844570	1.5	81	122	83	66	0.2%
RE231000_101	Residential	597789	4844564	1.5	81	122	83	67	0.2%
RE231000_102	Residential	597793	4844557	1.5	81	121	83	66	0.2%
RE231000_103	Residential	597796	4844550	1.5	81	121	83	65	0.1%
RE231000_104	Residential	597800	4844544	1.5	80	121	83	65	0.1%
RE231000_105	Residential	597804	4844537	1.5	80	121	83	64	0.1%
RE231000_106	Residential	597807	4844531	1.5	80	121	83	64	0.1%
RE231000_107	Residential	597811	4844525	1.5	80	121	83	64	0.1%
RE231000_108	Residential	597814	4844518	1.5	80	121	83	64	0.1%
RE231000_109	Residential	597819	4844511	1.5	80	121	83	64	0.1%
RE231000_110	Residential	597851	4844481	1.5	80	120	83	52	0.1%
RE231000_111	Residential	597881	4844502	1.5	80	121	83	45	0.1%
RE231000_112	Residential	597876	4844507	1.5	80	121	83	45	0.1%
RE231000_113	Residential	597871	4844514	1.5	80	121	83	46	0.1%
RE231000_114	Residential	597866	4844519	1.5	80	121	83	46	0.1%
RE231000_115	Residential	597849	4844534	1.5	80	121	83	47	0.1%
RE231000_116	Residential	597855	4844537	1.5	80	121	83	47	0.1%
RE231000_117	Residential	597863	4844540	1.5	80	121	83	46	0.1%
RE231000_118	Residential	597869	4844544	1.5	80	121	83	45	0.1%
RE231000_119	Residential	597877	4844549	1.5	80	121	83	43	0.1%
RE231000_120	Residential	597883	4844553	1.5	80	121	83	41	0.1%
RE231000_121	Residential	597889	4844560	1.5	80	121	83	41	0.1%
RE231000_122	Residential	597894	4844565	1.5	80	121	83	41	0.1%
RE231000_123	Residential	597899	4844571	1.5	80	121	83	40	0.1%
RE231000_124	Residential	597904	4844576	1.5	81	121	83	39	0.1%
RE231000_125	Residential	597911	4844583	1.5	81	121	83	37	0.1%
RE231000_126	Residential	597920	4844591	1.5	81	121	83	32	0.1%
RE231000_127	Residential	597928	4844600	1.5	81	121	83	30	0.1%
RE231000_128	Residential	597935	4844608	1.5	81	121	83	28	0.1%
RE231000_129	Residential	597944	4844616	1.5	80	121	83	28	0.1%
RE231000_130	Residential	597952	4844625	1.5	80	121	83	27	0.1%
RE231000_131	Residential	597960	4844633	1.5	80	121	83	26	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_132	Residential	597889	4844521	1.5	80	121	83	41	0.1%
RE231000_133	Residential	597895	4844526	1.5	80	121	83	41	0.1%
RE231000_134	Residential	597900	4844533	1.5	80	121	83	39	0.1%
RE231000_135	Residential	597906	4844537	1.5	80	121	83	39	0.1%
RE231000_136	Residential	597912	4844543	1.5	80	121	83	38	0.1%
RE231000_137	Residential	597916	4844549	1.5	80	121	83	37	0.1%
RE231000_138	Residential	597922	4844554	1.5	80	121	83	33	0.1%
RE231000_139	Residential	597927	4844558	1.5	80	121	83	32	0.1%
RE231000_140	Residential	597933	4844565	1.5	80	121	83	31	0.1%
RE231000_141	Residential	597938	4844570	1.5	80	121	83	31	0.1%
RE231000_142	Residential	597944	4844577	1.5	80	121	83	30	0.1%
RE231000_143	Residential	597948	4844581	1.5	80	121	83	29	0.1%
RE231000_144	Residential	597956	4844588	1.5	80	121	83	27	0.1%
RE231000_145	Residential	597964	4844596	1.5	80	121	83	27	0.1%
RE231000_146	Residential	597973	4844604	1.5	80	121	83	25	0.1%
RE231000_147	Residential	597981	4844613	1.5	80	121	83	24	0.1%
RE231000_148	Residential	597825	4844568	1.5	81	121	83	52	0.1%
RE231000_149	Residential	597833	4844573	1.5	81	121	83	50	0.1%
RE231000_150	Residential	597840	4844577	1.5	81	121	83	49	0.1%
RE231000_151	Residential	597846	4844581	1.5	81	122	83	48	0.1%
RE231000_152	Residential	597854	4844587	1.5	81	122	83	44	0.1%
RE231000_153	Residential	597859	4844593	1.5	81	122	83	43	0.1%
RE231000_154	Residential	597865	4844598	1.5	81	122	83	43	0.1%
RE231000_155	Residential	597871	4844603	1.5	81	122	83	43	0.1%
RE231000_156	Residential	597850	4844609	1.5	81	122	83	47	0.1%
RE231000_157	Residential	597844	4844615	1.5	81	122	83	47	0.1%
RE231000_158	Residential	597822	4844588	1.5	81	122	83	52	0.1%
RE231000_159	Residential	597819	4844595	1.5	81	122	83	52	0.1%
RE231000_160	Residential	597816	4844602	1.5	81	122	83	52	0.1%
RE231000_161	Residential	597813	4844608	1.5	81	122	83	52	0.1%
RE231000_162	Residential	597807	4844615	1.5	81	122	83	54	0.1%
RE231000_163	Residential	597805	4844621	1.5	81	122	83	54	0.1%
RE231000_164	Residential	597800	4844629	1.5	81	122	83	53	0.1%
RE231000_165	Residential	597796	4844636	1.5	81	122	83	53	0.1%
RE231000_166	Residential	597791	4844643	1.5	82	122	83	53	0.1%
RE231000_167	Residential	597787	4844650	1.5	82	123	83	55	0.1%
RE231000_168	Residential	597783	4844657	1.5	82	123	83	57	0.1%
RE231000_169	Residential	597780	4844665	1.5	82	123	83	58	0.1%
RE231000_170	Residential	597775	4844673	1.5	82	123	83	61	0.1%
RE231000_171	Residential	597772	4844679	1.5	82	123	83	62	0.1%
RE231000_172	Residential	597767	4844686	1.5	82	123	83	62	0.1%
RE231000_173	Residential	597764	4844694	1.5	82	123	83	64	0.1%
RE231000_174	Residential	597757	4844702	1.5	83	123	83	65	0.1%
RE231000_175	Residential	597751	4844706	1.5	83	124	83	71	0.2%
RE231000_176	Residential	597729	4844717	1.5	83	124	83	83	0.2%
RE231000_177	Residential	597734	4844724	1.5	83	124	83	80	0.2%
RE231000_178	Residential	597737	4844729	1.5	83	124	83	80	0.2%
RE231000_179	Residential	597741	4844734	1.5	83	124	83	80	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_180	Residential	597744	4844739	1.5	83	124	83	77	0.2%
RE231000_181	Residential	597747	4844744	1.5	83	124	83	77	0.2%
RE231000_182	Residential	597750	4844749	1.5	83	124	83	78	0.2%
RE231000_183	Residential	597753	4844754	1.5	83	124	83	76	0.2%
RE231000_184	Residential	597759	4844763	1.5	83	124	83	71	0.2%
RE231000_185	Residential	597762	4844769	1.5	83	124	83	69	0.2%
RE231000_186	Residential	597765	4844773	1.5	83	124	83	69	0.2%
RE231000_187	Residential	597768	4844778	1.5	83	123	83	66	0.2%
RE231000_188	Residential	597771	4844783	1.5	83	123	83	66	0.2%
RE231000_189	Residential	597774	4844789	1.5	82	123	83	66	0.2%
RE231000_190	Residential	597802	4844774	1.5	82	123	83	54	0.1%
RE231000_191	Residential	597798	4844768	1.5	82	123	83	54	0.1%
RE231000_192	Residential	597793	4844761	1.5	82	123	83	56	0.1%
RE231000_193	Residential	597789	4844754	1.5	82	123	83	57	0.1%
RE231000_194	Residential	597785	4844747	1.5	82	123	83	59	0.1%
RE231000_195	Residential	597782	4844741	1.5	83	123	83	60	0.1%
RE231000_196	Residential	597779	4844727	1.5	83	123	83	60	0.1%
RE231000_197	Residential	597780	4844719	1.5	83	123	83	59	0.1%
RE231000_198	Residential	597785	4844710	1.5	83	123	83	59	0.1%
RE231000_199	Residential	597788	4844703	1.5	82	123	83	58	0.1%
RE231000_200	Residential	597793	4844697	1.5	82	123	83	56	0.1%
RE231000_201	Residential	597797	4844690	1.5	82	123	83	56	0.1%
RE231000_202	Residential	597801	4844683	1.5	82	123	83	53	0.1%
RE231000_203	Residential	597805	4844676	1.5	82	123	83	50	0.1%
RE231000_204	Residential	597808	4844669	1.5	82	123	83	50	0.1%
RE231000_205	Residential	597812	4844663	1.5	82	123	83	50	0.1%
RE231000_206	Residential	597815	4844656	1.5	82	122	83	50	0.1%
RE231000_207	Residential	597818	4844649	1.5	82	122	83	49	0.1%
RE231000_208	Residential	597823	4844642	1.5	81	122	83	47	0.1%
RE231000_209	Residential	597827	4844636	1.5	81	122	83	47	0.1%
RE231000_210	Residential	597832	4844629	1.5	81	122	83	47	0.1%
RE231000_211	Residential	597837	4844622	1.5	81	122	83	47	0.1%
RE231000_212	Residential	597902	4844623	1.5	81	122	83	36	0.1%
RE231000_213	Residential	597895	4844627	1.5	81	122	83	39	0.1%
RE231000_214	Residential	597889	4844633	1.5	81	122	83	40	0.1%
RE231000_215	Residential	597884	4844639	1.5	81	122	83	40	0.1%
RE231000_216	Residential	597878	4844646	1.5	81	122	83	41	0.1%
RE231000_217	Residential	597873	4844650	1.5	81	122	83	42	0.1%
RE231000_218	Residential	597867	4844656	1.5	81	122	83	45	0.1%
RE231000_219	Residential	597863	4844664	1.5	81	122	83	45	0.1%
RE231000_220	Residential	597859	4844671	1.5	81	122	83	45	0.1%
RE231000_221	Residential	597855	4844678	1.5	82	122	83	45	0.1%
RE231000_222	Residential	597851	4844684	1.5	82	122	83	45	0.1%
RE231000_223	Residential	597847	4844690	1.5	82	122	83	45	0.1%
RE231000_224	Residential	597843	4844697	1.5	82	122	83	45	0.1%
RE231000_225	Residential	597839	4844704	1.5	82	122	83	46	0.1%
RE231000_226	Residential	597835	4844711	1.5	82	123	83	46	0.1%
RE231000_227	Residential	597832	4844718	1.5	82	123	83	46	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_228	Residential	597827	4844726	1.5	82	123	83	45	0.1%
RE231000_229	Residential	597824	4844733	1.5	82	123	83	49	0.1%
RE231000_230	Residential	597840	4844745	1.5	81	122	83	43	0.1%
RE231000_231	Residential	597846	4844750	1.5	81	122	83	43	0.1%
RE231000_232	Residential	597851	4844761	1.5	80	121	83	43	0.1%
RE231000_233	Residential	597853	4844771	1.5	80	121	83	42	0.1%
RE231000_234	Residential	597851	4844781	1.5	80	120	83	42	0.1%
RE231000_235	Residential	597848	4844790	1.5	79	120	83	43	0.1%
RE231000_236	Residential	597838	4844796	1.5	80	120	83	46	0.1%
RE231000_237	Residential	597831	4844801	1.5	80	120	83	48	0.1%
RE231000_238	Residential	597823	4844804	1.5	80	121	83	49	0.1%
RE231000_239	Residential	597817	4844807	1.5	80	121	83	51	0.1%
RE231000_240	Residential	597811	4844812	1.5	80	121	83	54	0.1%
RE231000_241	Residential	597804	4844816	1.5	80	121	83	57	0.1%
RE231000_242	Residential	597800	4844820	1.5	80	121	83	59	0.1%
RE231000_243	Residential	597794	4844823	1.5	80	121	83	62	0.1%
RE231000_244	Residential	597788	4844825	1.5	81	121	83	62	0.1%
RE231000_245	Residential	597783	4844829	1.5	81	122	83	65	0.1%
RE231000_246	Residential	597778	4844831	1.5	81	122	83	71	0.2%
RE231000_247	Residential	597772	4844835	1.5	81	122	83	76	0.2%
RE231000_248	Residential	598015	4844639	1.5	79	120	83	22	0.1%
RE231000_249	Residential	598007	4844649	1.5	79	119	83	22	0.1%
RE231000_250	Residential	597997	4844656	1.5	79	120	83	24	0.1%
RE231000_251	Residential	597989	4844666	1.5	79	120	83	24	0.1%
RE231000_252	Residential	598060	4844590	1.5	79	119	83	20	0.0%
RE231000_253	Residential	598069	4844598	1.5	78	119	83	17	0.0%
RE231000_254	Residential	598040	4844610	1.5	79	120	83	21	0.0%
RE231000_255	Residential	598049	4844618	1.5	78	119	83	19	0.0%
RE231000_256	Residential	598252	4844214	1.5	71	115	83	10	0.0%
RE231000_257	Residential	598246	4844300	1.5	75	116	83	180	0.4%
RE231000_276	Residential	598191	4844478	1.5	76	117	83	12	0.0%
RE231000_277	Residential	598184	4844471	1.5	78	119	83	12	0.0%
RE231000_278	Residential	598093	4844561	1.5	78	119	83	16	0.0%
RE231000_279	Residential	598104	4844571	1.5	77	118	83	17	0.0%
RE231000_280	Residential	598023	4844395	1.5	79	119	83	28	0.1%
RE231000_281	Residential	598013	4844383	1.5	78	119	83	28	0.1%
RE231000_282	Residential	598113	4844482	1.5	79	120	83	19	0.0%
RE231000_283	Residential	598059	4844484	1.5	79	120	83	21	0.0%
RE231000_284	Residential	598062	4844435	1.5	79	120	83	22	0.1%
RE231000_285	Residential	598052	4844476	1.5	79	120	83	22	0.1%
RE231000_286	Residential	598054	4844424	1.5	79	120	83	22	0.1%
RE231000_287	Residential	598086	4844510	1.5	79	120	83	20	0.0%
RE231000_288	Residential	598077	4844504	1.5	79	120	83	20	0.0%
RE231000_289	Residential	598044	4844414	1.5	79	120	83	25	0.1%
RE231000_290	Residential	598033	4844405	1.5	79	120	83	26	0.1%
RE231000_291	Residential	598102	4844474	1.5	79	120	83	19	0.0%
RE231000_292	Residential	598093	4844464	1.5	79	120	83	20	0.0%
RE231000_293	Residential	598072	4844496	1.5	79	120	83	21	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_294	Residential	598083	4844454	1.5	79	120	83	19	0.0%
RE231000_295	Residential	598065	4844490	1.5	79	120	83	21	0.0%
RE231000_296	Residential	598074	4844444	1.5	79	120	83	21	0.0%
RE231000_297	Residential	598159	4844494	1.5	78	119	83	13	0.0%
RE231000_298	Residential	598169	4844501	1.5	77	118	83	13	0.0%
RE231000_299	Residential	598002	4844372	1.5	78	119	83	28	0.1%
RE231000_300	Residential	598066	4844349	1.5	78	119	83	25	0.1%
RE231000_301	Residential	598127	4844467	1.5	79	120	83	18	0.0%
RE231000_302	Residential	598120	4844461	1.5	79	120	83	18	0.0%
RE231000_303	Residential	598109	4844448	1.5	79	120	83	18	0.0%
RE231000_304	Residential	598101	4844440	1.5	79	120	83	18	0.0%
RE231000_305	Residential	598067	4844275	1.5	73	118	83	24	0.1%
RE231000_306	Residential	598068	4844289	1.5	73	118	83	23	0.1%
RE231000_307	Residential	598068	4844303	1.5	74	118	83	24	0.1%
RE231000_308	Residential	598066	4844315	1.5	75	118	83	24	0.1%
RE231000_309	Residential	598076	4844364	1.5	78	119	83	23	0.1%
RE231000_310	Residential	598085	4844425	1.5	79	120	83	20	0.0%
RE231000_311	Residential	598078	4844418	1.5	79	120	83	21	0.0%
RE231000_312	Residential	598069	4844410	1.5	79	120	83	22	0.1%
RE231000_313	Residential	598062	4844402	1.5	79	119	83	22	0.1%
RE231000_314	Residential	598053	4844391	1.5	79	119	83	23	0.1%
RE231000_315	Residential	598047	4844385	1.5	79	119	83	24	0.1%
RE231000_316	Residential	598030	4844364	1.5	78	119	83	26	0.1%
RE231000_317	Residential	598086	4844375	1.5	78	119	83	22	0.1%
RE231000_318	Residential	598106	4844396	1.5	79	119	83	20	0.0%
RE231000_319	Residential	598116	4844406	1.5	79	120	83	19	0.0%
RE231000_320	Residential	598127	4844416	1.5	79	120	83	18	0.0%
RE231000_321	Residential	598143	4844435	1.5	79	120	83	17	0.0%
RE231000_322	Residential	598152	4844444	1.5	79	119	83	17	0.0%
RE231000_332	Residential	598315	4844073	1.5	70	115	83	9	0.0%
RE231000_333	Residential	598310	4844078	1.5	70	115	83	9	0.0%
RE231000_334	Residential	598295	4844091	1.5	71	115	83	10	0.0%
RE231000_335	Residential	598288	4844098	1.5	71	116	83	10	0.0%
RE231000_336	Residential	598282	4844104	1.5	71	116	83	10	0.0%
RE231000_337	Residential	598277	4844111	1.5	72	116	83	10	0.0%
RE231000_338	Residential	598310	4844038	1.5	70	114	83	11	0.0%
RE231000_339	Residential	598302	4844046	1.5	70	115	83	11	0.0%
RE231000_340	Residential	598295	4844054	1.5	70	115	83	11	0.0%
RE231000_341	Residential	598276	4844074	1.5	71	116	83	12	0.0%
RE231000_342	Residential	598267	4844081	1.5	72	116	83	13	0.0%
RE231000_343	Residential	598114	4844352	1.5	78	119	83	22	0.1%
RE231000_345	Residential	598126	4844322	1.5	77	117	83	18	0.0%
RE231000_346	Residential	598176	4844416	1.5	79	119	83	14	0.0%
RE231000_347	Residential	598167	4844408	1.5	79	119	83	15	0.0%
RE231000_348	Residential	598159	4844398	1.5	79	119	83	17	0.0%
RE231000_350	Residential	598126	4844309	1.5	76	117	83	19	0.0%
RE231000_351	Residential	598128	4844228	1.5	73	117	83	20	0.0%
RE231000_353	Residential	598285	4844064	1.5	71	115	83	12	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_354	Residential	598140	4844379	1.5	78	119	83	17	0.0%
RE231000_355	Residential	598131	4844370	1.5	78	119	83	18	0.0%
RE231000_356	Residential	598122	4844361	1.5	78	119	83	20	0.0%
RE231000_357	Residential	598102	4844340	1.5	78	119	83	21	0.0%
RE231000_358	Residential	598099	4844324	1.5	76	117	83	20	0.0%
RE231000_359	Residential	598099	4844310	1.5	75	117	83	22	0.1%
RE231000_360	Residential	598099	4844296	1.5	74	117	83	22	0.1%
RE231000_361	Residential	598098	4844283	1.5	73	117	83	22	0.1%
RE231000_362	Residential	598099	4844258	1.5	73	117	83	21	0.0%
RE231000_363	Residential	598197	4844395	1.5	78	119	83	12	0.0%
RE231000_364	Residential	598180	4844378	1.5	78	119	83	13	0.0%
RE231000_365	Residential	598171	4844369	1.5	78	119	83	14	0.0%
RE231000_366	Residential	598162	4844359	1.5	78	119	83	15	0.0%
RE231000_367	Residential	598151	4844349	1.5	78	119	83	16	0.0%
RE231000_368	Residential	598142	4844340	1.5	78	119	83	16	0.0%
RE231000_369	Residential	598126	4844283	1.5	73	117	83	17	0.0%
RE231000_370	Residential	598126	4844271	1.5	73	117	83	19	0.0%
RE231000_371	Residential	598126	4844257	1.5	73	117	83	20	0.0%
RE231000_374	Residential	598127	4844295	1.5	74	117	83	19	0.0%
RE231000_377	Residential	598258	4844089	1.5	72	116	83	13	0.0%
RE231000_378	Residential	598094	4844433	1.5	79	120	83	19	0.0%
RE231000_379	Residential	598067	4844332	1.5	76	118	83	25	0.1%
RE231000_380	Residential	598096	4844385	1.5	79	119	83	22	0.1%
RE231000_381	Residential	598149	4844389	1.5	79	119	83	17	0.0%
RE231000_382	Residential	598135	4844425	1.5	79	120	83	18	0.0%
RE231000_383	Residential	598303	4844085	1.5	71	115	83	10	0.0%
RE231000_384	Residential	598115	4844455	1.5	79	120	83	18	0.0%
RE231000_385	Residential	598038	4844375	1.5	78	119	83	26	0.1%
RE231000_386	Residential	598099	4844270	1.5	73	117	83	21	0.0%
RE231000_387	Residential	598188	4844386	1.5	78	119	83	13	0.0%
RE231000_388	Residential	598129	4844214	1.5	73	117	83	19	0.0%
RE231000_390	Residential	598013	4844349	1.5	78	119	83	27	0.1%
RE231000_391	Residential	598003	4844338	1.5	77	118	83	31	0.1%
RE231000_392	Residential	598159	4844280	1.5	73	117	83	16	0.0%
RE231000_393	Residential	598189	4844215	1.5	72	117	83	13	0.0%
RE231000_394	Residential	598219	4844376	1.5	78	119	83	12	0.0%
RE231000_395	Residential	598212	4844369	1.5	78	119	83	12	0.0%
RE231000_396	Residential	598207	4844363	1.5	78	119	83	13	0.0%
RE231000_397	Residential	598199	4844356	1.5	78	119	83	13	0.0%
RE231000_398	Residential	598192	4844346	1.5	78	119	83	13	0.0%
RE231000_399	Residential	598181	4844337	1.5	78	119	83	15	0.0%
RE231000_400	Residential	598170	4844327	1.5	77	118	83	14	0.0%
RE231000_401	Residential	598161	4844314	1.5	76	117	83	16	0.0%
RE231000_402	Residential	598159	4844294	1.5	74	117	83	16	0.0%
RE231000_403	Residential	598158	4844273	1.5	72	117	83	16	0.0%
RE231000_404	Residential	598159	4844265	1.5	72	117	83	16	0.0%
RE231000_405	Residential	598159	4844257	1.5	72	117	83	17	0.0%
RE231000_406	Residential	598236	4844348	1.5	78	118	83	12	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_407	Residential	598223	4844334	1.5	77	118	83	12	0.0%
RE231000_408	Residential	598215	4844325	1.5	77	118	83	11	0.0%
RE231000_409	Residential	598204	4844313	1.5	77	117	83	12	0.0%
RE231000_410	Residential	598199	4844309	1.5	76	117	83	14	0.0%
RE231000_411	Residential	598189	4844279	1.5	74	117	83	15	0.0%
RE231000_412	Residential	598189	4844265	1.5	72	117	83	14	0.0%
RE231000_413	Residential	598161	4844229	1.5	72	117	83	15	0.0%
RE231000_414	Residential	598162	4844216	1.5	72	117	83	15	0.0%
RE231000_415	Residential	598162	4844205	1.5	72	117	83	17	0.0%
RE231000_416	Residential	598163	4844190	1.5	72	117	83	17	0.0%
RE231000_417	Residential	598169	4844178	1.5	72	117	83	17	0.0%
RE231000_418	Residential	598181	4844167	1.5	72	117	83	17	0.0%
RE231000_419	Residential	598189	4844231	1.5	72	117	83	14	0.0%
RE231000_420	Residential	598189	4844224	1.5	72	117	83	13	0.0%
RE231000_421	Residential	598205	4844183	1.5	72	117	83	13	0.0%
RE231000_422	Residential	598217	4844170	1.5	72	117	83	13	0.0%
RE231000_423	Residential	598227	4844160	1.5	72	117	83	11	0.0%
RE231000_424	Residential	598235	4844153	1.5	72	117	83	11	0.0%
RE231000_425	Residential	598244	4844144	1.5	72	117	83	11	0.0%
RE231000_426	Residential	598253	4844135	1.5	72	116	83	10	0.0%
RE231000_427	Residential	598189	4844160	1.5	72	117	83	17	0.0%
RE231000_428	Residential	598198	4844150	1.5	72	117	83	16	0.0%
RE231000_429	Residential	598208	4844141	1.5	72	117	83	15	0.0%
RE231000_430	Residential	598189	4844272	1.5	73	117	83	13	0.0%
RE231000_431	Residential	598225	4844124	1.5	72	117	83	14	0.0%
RE231000_432	Residential	598189	4844288	1.5	74	117	83	14	0.0%
RE231000_433	Residential	598211	4844177	1.5	72	117	83	13	0.0%
RE231000_434	Residential	598217	4844132	1.5	72	117	83	14	0.0%
RE231000_435	Residential	598210	4844320	1.5	77	117	83	12	0.0%
RE231000_436	Residential	598191	4844204	1.5	72	117	83	14	0.0%
RE231000_437	Residential	598190	4844258	1.5	72	117	83	14	0.0%
RE231000_438	Residential	598235	4844114	1.5	72	117	83	13	0.0%
RE231000_439	Residential	598242	4844353	1.5	77	118	83	12	0.0%
RE231000_440	Residential	598230	4844340	1.5	77	118	83	12	0.0%
RE231000_441	Residential	598197	4844191	1.5	72	117	83	14	0.0%
RE231000_443	Residential	598213	4844460	1.5	75	117	83	12	0.0%
RE231000_444	Residential	598234	4844437	1.5	75	116	83	11	0.0%
RE231000_445	Residential	598227	4844430	1.5	76	117	83	12	0.0%
RE231000_446	Residential	598203	4844452	1.5	77	118	83	12	0.0%
RE231000_450	Residential	598248	4844405	1.5	76	117	83	11	0.0%
RE231000_452	Residential	598146	4844517	1.5	78	119	83	14	0.0%
RE231000_453	Residential	598139	4844510	1.5	78	119	83	15	0.0%
RE231000_454	Residential	598112	4844539	1.5	78	119	83	16	0.0%
RE231000_455	Residential	598152	4844523	1.5	76	117	83	13	0.0%
RE231000_456	Residential	598119	4844546	1.5	78	119	83	15	0.0%
RE231100_001	Child Care Centre	597875	4844944	1.5	81	122	83	53	0.1%
RE231100_002	Recreation	597887	4844825	1.5	79	120	83	32	0.1%
RE231100_003	Residential	594644	4847799	1.5	51	91	83	6	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_004	Residential	596834	4845864	1.5	85	126	83	140	0.3%
RE231100_005	Residential	598005	4844679	1.5	75	118	83	23	0.1%
RE231100_006	Residential	598014	4844688	1.5	73	117	83	21	0.0%
RE231100_007	Residential	598022	4844696	1.5	72	117	83	20	0.0%
RE231100_008	Residential	598026	4844658	1.5	75	117	83	19	0.0%
RE231100_009	Residential	598034	4844667	1.5	73	117	83	19	0.0%
RE231100_010	Residential	598044	4844675	1.5	72	117	83	19	0.0%
RE231100_011	Residential	598051	4844682	1.5	72	117	83	19	0.0%
RE231100_012	Residential	598059	4844691	1.5	71	116	83	19	0.0%
RE231100_018	Residential	598029	4844703	1.5	72	117	83	19	0.0%
RE231100_019	Residential	598037	4844712	1.5	72	116	83	20	0.0%
RE231100_020	Residential	598046	4844721	1.5	74	115	83	20	0.0%
RE231100_027	Residential	597982	4844724	1.5	73	117	83	23	0.1%
RE231100_028	Residential	597991	4844732	1.5	73	117	83	20	0.0%
RE231100_029	Residential	597999	4844741	1.5	75	117	83	20	0.0%
RE231100_030	Residential	598006	4844749	1.5	77	118	83	20	0.0%
RE231100_031	Residential	598015	4844756	1.5	78	119	83	20	0.0%
RE231100_032	Residential	598023	4844764	1.5	78	119	83	20	0.0%
RE231100_033	Residential	598031	4844773	1.5	78	119	83	19	0.0%
RE231100_041	Residential	598017	4844803	1.5	79	120	83	20	0.0%
RE231100_042	Residential	598007	4844794	1.5	79	120	83	22	0.1%
RE231100_043	Residential	597998	4844785	1.5	79	119	83	21	0.0%
RE231100_044	Residential	597991	4844777	1.5	79	119	83	21	0.0%
RE231100_045	Residential	597982	4844768	1.5	78	119	83	21	0.0%
RE231100_046	Residential	597975	4844760	1.5	77	118	83	21	0.0%
RE231100_047	Residential	597967	4844752	1.5	76	117	83	23	0.1%
RE231100_048	Residential	597958	4844742	1.5	74	117	83	24	0.1%
RE231100_049	Residential	597924	4844771	1.5	78	118	83	26	0.1%
RE231100_050	Residential	597933	4844779	1.5	78	119	83	26	0.1%
RE231100_051	Residential	597943	4844787	1.5	79	119	83	24	0.1%
RE231100_052	Residential	597950	4844796	1.5	79	120	83	23	0.1%
RE231100_053	Residential	597958	4844803	1.5	79	120	83	25	0.1%
RE231100_054	Residential	597966	4844812	1.5	79	120	83	25	0.1%
RE231100_055	Residential	597975	4844820	1.5	79	120	83	25	0.1%
RE231100_056	Residential	597983	4844829	1.5	79	120	83	23	0.1%
RE231100_057	Residential	597991	4844837	1.5	79	120	83	24	0.1%
RE231100_077	Residential	597906	4845006	1.5	79	120	83	54	0.1%
RE231100_078	Residential	597896	4845014	1.5	79	120	83	62	0.1%
RE231100_079	Residential	598077	4844606	1.5	76	117	83	17	0.0%
RE231100_080	Residential	598085	4844615	1.5	72	117	83	17	0.0%
RE231100_081	Residential	598094	4844623	1.5	72	117	83	17	0.0%
RE231100_082	Residential	598056	4844626	1.5	76	117	83	18	0.0%
RE231100_083	Residential	598066	4844634	1.5	73	117	83	17	0.0%
RE231100_084	Residential	598074	4844643	1.5	72	117	83	17	0.0%
RE231100_085	Residential	598082	4844651	1.5	72	117	83	18	0.0%
RE231100_090	Residential	598178	4844511	1.5	73	117	83	12	0.0%
RE231100_091	Residential	598202	4844488	1.5	73	117	83	12	0.0%
RE231100_116	Residential	598123	4844591	1.5	72	117	83	17	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_120	Residential	598113	4844580	1.5	74	117	83	17	0.0%
RE231100_121	Residential	598101	4844633	1.5	72	116	83	34	0.1%
RE231100_161	Residential	598142	4844569	1.5	72	117	83	14	0.0%
RE231100_164	Residential	598158	4844529	1.5	74	117	83	13	0.0%
RE231100_165	Residential	598166	4844536	1.5	72	117	83	13	0.0%
RE231100_167	Residential	598126	4844552	1.5	77	117	83	15	0.0%
RE231100_171	Residential	598133	4844560	1.5	74	117	83	15	0.0%
RE231100_175	Residential	598101	4844633	1.5	72	116	83	34	0.1%
RE231400_001	Residential	597400	4846151	1.5	80	120	83	48	0.1%
RE231400_002	Residential	597374	4846123	1.5	80	121	83	56	0.1%
RE231400_003	Residential	597425	4846115	1.5	79	120	83	46	0.1%
RE231400_004	Residential	597415	4846104	1.5	79	120	83	48	0.1%
RE231400_005	Residential	597397	4846081	1.5	79	120	83	55	0.1%
RE231400_006	Residential	597415	4846064	1.5	79	120	83	52	0.1%
RE231400_007	Residential	597438	4846085	1.5	79	119	83	44	0.1%
RE231400_008	Residential	597458	4846043	1.5	78	119	83	42	0.1%
RE231400_009	Residential	597440	4846026	1.5	79	119	83	51	0.1%
RE231400_010	Residential	597494	4845971	1.5	72	116	83	35	0.1%
RE231400_011	Residential	597177	4846314	1.5	79	120	83	70	0.2%
RE231500_002	Residential	594959	4848195	1.5	54	95	83	2	0.0%
RE231600_001	Residential	594685	4848625	1.5	79	117	83	28	0.1%
RE231600_004	Residential	594738	4848582	1.5	75	117	83	22	0.1%
RE231600_005	Residential	594772	4848553	1.5	71	115	83	10	0.0%
RE231700_002	Residential	594955	4848488	1.5	61	97	83	4	0.0%
RE231700_003	Residential	594977	4848446	1.5	58	96	83	4	0.0%
RE231700_004	Residential	594865	4848604	1.5	67	112	83	10	0.0%
RE231800_001	Residential	594678	4848786	1.5	80	113	83	51	0.1%
RE231800_002	Residential	594627	4848819	1.5	87	119	83	83	0.2%
RE232700_002	Residential	595497	4849130	1.5	65	106	83	10	0.0%
RE233200_001	Recreation	595805	4849383	1.5	68	109	83	15	0.0%
RE233500_001	Residential	596000	4849598	1.5	67	107	83	20	0.0%
RE233600_001	Residential	596065	4849694	1.5	62	103	83	23	0.1%
RE233600_002	Residential	596044	4849667	1.5	64	105	83	23	0.1%
RE233700_001	Residential	596171	4849814	1.5	58	99	83	24	0.1%
RE233900_001	Residential	596273	4850023	1.5	68	109	83	34	0.1%
RE233900_002	Residential	596203	4850118	1.5	77	118	83	48	0.1%
RE233900_003	Residential	596230	4850156	1.5	78	119	83	49	0.1%
RE234000_001	Residential	596284	4850244	1.5	79	120	83	51	0.1%
RE234100_001	Residential	596370	4850189	1.5	74	115	83	43	0.1%
RE235000_001	Residential	596939	4851084	1.5	107	129	83	105	0.2%
RE235100_001	Residential	596983	4851111	1.5	106	128	83	100	0.2%
RE235100_002	Residential	597028	4851138	1.5	105	127	83	82	0.2%
RE235100_003	Residential	597152	4851021	1.5	79	119	83	48	0.1%
RE235200_001	Residential	597087	4851160	1.5	97	119	83	74	0.2%
RE235200_002	Residential	597153	4851077	1.5	82	120	83	60	0.1%
RE235500_001	Residential	597387	4851296	1.5	79	118	83	60	0.1%
RE235500_002	Residential	597327	4851381	1.5	106	128	83	71	0.2%
RE235700_001	Residential	597704	4851314	1.5	66	108	83	18	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE235700_002	Residential	597412	4851537	1.5	106	128	83	92	0.2%
RE235800_001	Residential	597664	4851442	1.5	78	119	83	51	0.1%
RE235900_002	Residential	597909	4851332	1.5	68	108	83	28	0.1%
RE235900_003	Residential	597683	4851628	1.5	106	128	83	89	0.2%
RE235900_004	Residential	597618	4851651	1.5	106	128	83	93	0.2%
RE310100_001	Residential	597701	4851643	1.5	106	128	83	84	0.2%
RE310100_002	Residential	597725	4851680	1.5	106	128	83	80	0.2%
RE310100_003	Residential	597647	4851692	1.5	106	128	83	88	0.2%
RE310200_001	Residential	597753	4851836	1.5	101	123	83	73	0.2%
RE310500_001	Residential	597854	4852016	1.5	104	129	83	83	0.2%
RE310600_001	Residential	598054	4851992	1.5	91	120	83	45	0.1%
RE310600_002	Residential	598048	4852100	1.5	94	122	83	62	0.1%
RE310700_001	Residential	598116	4852141	1.5	88	121	83	52	0.1%
RE310700_002	Residential	598003	4852173	1.5	104	129	83	69	0.2%
RE310900_001	Residential	598218	4852295	1.5	96	122	83	51	0.1%
RE311000_001	Residential	598324	4852285	1.5	81	120	83	42	0.1%
RE311100_001	Residential	598324	4852488	1.5	100	125	83	58	0.1%
RE311200_001	Residential	598400	4852513	1.5	95	122	83	55	0.1%
RE311200_002	Residential	598471	4852451	1.5	91	121	83	47	0.1%
RE311300_001	Residential	598509	4852502	1.5	93	122	83	50	0.1%
RE311300_002	Residential	598222	4852772	1.5	109	136	83	343	0.8%
RE311400_001	Residential	598628	4852529	1.5	80	120	83	36	0.1%
RE311400_002	Residential	598554	4852578	1.5	97	122	83	56	0.1%
RE311400_003	Residential	598404	4852757	1.5	105	131	83	132	0.3%
RE311400_006	Residential	598813	4852353	1.5	72	117	83	15	0.0%
RE311800_001	Residential	598767	4852817	1.5	90	121	83	49	0.1%
RE311900_001	Residential	598826	4852898	1.5	89	122	83	54	0.1%
RE312200_001	Residential	598954	4853124	1.5	99	127	83	110	0.3%
RE312200_002	Residential	598983	4853142	1.5	96	125	83	109	0.2%
RE312200_003	Residential	599011	4853156	1.5	94	123	83	109	0.2%
RE312300_001	Residential	599043	4853264	1.5	104	129	83	170	0.4%
RE312400_001	Residential	599140	4853349	1.5	107	131	83	243	0.6%
RE312800_001	Residential	599561	4853387	1.5	77	118	83	113	0.3%
RE312800_002	Residential	599655	4853196	1.5	81	119	83	36	0.1%
RE312900_001	Residential	599611	4853344	1.5	73	114	83	86	0.2%
RE312900_002	Residential	599737	4853210	1.5	85	120	83	38	0.1%
RE313000_001	Residential	599767	4853320	1.5	77	113	83	62	0.1%
RE313000_002	Residential	599746	4853342	1.5	75	113	83	71	0.2%
RE313000_003	Residential	599707	4853379	1.5	74	115	83	88	0.2%
RE313000_004	Residential	599831	4853246	1.5	87	119	83	47	0.1%
RE313000_005	Residential	599859	4853220	1.5	89	120	83	38	0.1%
RE313000_006	Residential	599831	4853130	1.5	85	118	83	30	0.1%
RE313000_007	Residential	599790	4853168	1.5	88	120	83	36	0.1%
RE313100_001	Residential	599892	4853186	1.5	88	119	83	34	0.1%
RE314400_001	Residential	601067	4853610	1.5	109	131	83	38	0.1%
RE314800_001	Residential	601376	4853448	1.5	108	133	83	36	0.1%
RE314900_001	Residential	601445	4853622	1.5	109	132	83	61	0.1%
RE316400_001	Residential	602974	4853508	1.5	113	136	83	116	0.3%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE316500_001	Residential	603041	4853572	1.5	114	137	83	171	0.4%
RE316600_001	Residential	603200	4853771	1.5	114	137	83	326	0.7%
RE316600_002	Residential	603222	4853799	1.5	114	137	83	264	0.6%
RE316700_001	Residential	603244	4853825	1.5	115	138	83	252	0.6%
RE316700_002	Residential	603260	4853854	1.5	115	138	83	246	0.6%
RE317000_001	Residential	603580	4854095	1.5	118	142	83	456	1.0%
RE410200_001	Residential	604488	4854200	1.5	106	132	83	123	0.3%
RE410200_002	Residential	604438	4854244	1.5	106	135	83	147	0.3%
RE411100_001	Residential	605221	4854613	1.5	109	132	83	161	0.4%
RE411200_001	Residential	605486	4854296	1.5	109	131	83	144	0.3%
RE510000_001	Residential	605849	4853842	1.5	77	117	83	40	0.1%
RE510000_002	Residential	605777	4854043	1.5	80	120	83	52	0.1%
RE510100_001	Residential	605862	4854052	1.5	79	120	83	44	0.1%
RE511200_001	Residential	607742	4853370	1.5	90	121	83	250	0.6%
RE511200_002	Residential	607750	4853371	1.5	88	121	83	242	0.6%
RE511200_003	Residential	607756	4853372	1.5	87	121	83	242	0.6%
RE511200_004	Residential	607761	4853373	1.5	86	121	83	243	0.6%
RE511200_005	Residential	607738	4853397	1.5	85	121	83	182	0.4%
RE511200_006	Residential	607744	4853398	1.5	84	121	83	179	0.4%
RE511300_001	Residential	608183	4853093	1.5	85	121	83	46	0.1%
RE511300_002	Child Care Centre	607553	4854058	1.5	71	111	83	6	0.0%
RE511300_003	Residential	607654	4853910	1.5	68	113	83	9	0.0%
RE511300_004	Residential	607664	4853818	1.5	72	117	83	12	0.0%
RE511300_005	Residential	607712	4853826	1.5	71	116	83	11	0.0%
RE511300_006	Residential	607696	4853815	1.5	72	116	83	12	0.0%
RE511300_007	Residential	607670	4853789	1.5	72	117	83	12	0.0%
RE511300_008	Residential	607695	4853826	1.5	72	116	83	11	0.0%
RE511300_009	Residential	607710	4853739	1.5	72	117	83	17	0.0%
RE511300_010	Residential	607728	4853795	1.5	72	116	83	12	0.0%
RE511300_011	Residential	607729	4853761	1.5	72	117	83	13	0.0%
RE511300_012	Residential	607733	4853799	1.5	72	116	83	12	0.0%
RE511300_013	Residential	607665	4853812	1.5	72	117	83	12	0.0%
RE511300_014	Residential	607667	4853806	1.5	72	117	83	12	0.0%
RE511300_015	Residential	607721	4853732	1.5	72	117	83	17	0.0%
RE511300_016	Residential	607702	4853748	1.5	72	117	83	15	0.0%
RE511300_017	Residential	607684	4853769	1.5	72	117	83	13	0.0%
RE511300_018	Residential	607740	4853729	1.5	72	117	83	16	0.0%
RE511300_019	Residential	607728	4853731	1.5	72	117	83	17	0.0%
RE511300_020	Residential	607701	4853818	1.5	72	116	83	12	0.0%
RE511300_021	Residential	607668	4853800	1.5	72	117	83	12	0.0%
RE511300_022	Residential	607706	4853744	1.5	72	117	83	15	0.0%
RE511300_023	Residential	607680	4853773	1.5	72	117	83	13	0.0%
RE511300_024	Residential	607734	4853730	1.5	72	117	83	17	0.0%
RE511300_025	Residential	607707	4853788	1.5	72	117	83	12	0.0%
RE511300_026	Residential	607728	4853807	1.5	72	116	83	12	0.0%
RE511300_027	Residential	607722	4853803	1.5	72	116	83	12	0.0%
RE511300_028	Residential	607710	4853783	1.5	72	117	83	12	0.0%
RE511300_029	Residential	607675	4853776	1.5	72	117	83	13	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_030	Residential	607714	4853779	1.5	72	117	83	12	0.0%
RE511300_031	Residential	607732	4853756	1.5	72	117	83	13	0.0%
RE511300_032	Residential	607690	4853823	1.5	72	116	83	12	0.0%
RE511300_033	Residential	607721	4853771	1.5	72	117	83	12	0.0%
RE511300_034	Residential	607725	4853766	1.5	72	117	83	12	0.0%
RE511300_035	Residential	607701	4853830	1.5	71	116	83	11	0.0%
RE511300_036	Residential	607706	4853834	1.5	71	116	83	11	0.0%
RE511300_037	Residential	607704	4853793	1.5	72	117	83	12	0.0%
RE511300_038	Residential	607688	4853764	1.5	72	117	83	13	0.0%
RE511300_039	Residential	607698	4853753	1.5	72	117	83	15	0.0%
RE511300_040	Residential	607669	4853794	1.5	72	117	83	12	0.0%
RE511300_041	Residential	607692	4853759	1.5	72	117	83	14	0.0%
RE511300_042	Residential	607706	4853822	1.5	72	116	83	12	0.0%
RE511300_043	Residential	607767	4853374	1.5	85	121	83	244	0.6%
RE511300_044	Residential	607774	4853376	1.5	83	121	83	239	0.5%
RE511300_045	Residential	607781	4853377	1.5	82	121	83	234	0.5%
RE511300_046	Residential	607788	4853379	1.5	81	120	83	231	0.5%
RE511300_047	Residential	607794	4853380	1.5	80	120	83	229	0.5%
RE511300_048	Residential	607800	4853381	1.5	80	121	83	227	0.5%
RE511300_049	Residential	607806	4853382	1.5	81	121	83	224	0.5%
RE511300_050	Residential	607812	4853383	1.5	82	122	83	221	0.5%
RE511300_051	Residential	607820	4853385	1.5	83	122	83	221	0.5%
RE511300_052	Residential	607826	4853386	1.5	83	123	83	218	0.5%
RE511300_053	Residential	607832	4853387	1.5	83	123	83	211	0.5%
RE511300_054	Residential	607838	4853388	1.5	83	124	83	207	0.5%
RE511300_055	Residential	607846	4853390	1.5	84	124	83	202	0.5%
RE511300_056	Residential	607853	4853391	1.5	86	124	83	199	0.5%
RE511300_057	Residential	607859	4853392	1.5	88	125	83	193	0.4%
RE511300_058	Residential	607866	4853394	1.5	89	125	83	186	0.4%
RE511300_059	Residential	607885	4853388	1.5	102	126	83	198	0.5%
RE511300_060	Residential	607886	4853395	1.5	95	125	83	176	0.4%
RE511300_061	Residential	607886	4853402	1.5	89	125	83	169	0.4%
RE511300_062	Residential	607887	4853410	1.5	83	124	83	155	0.4%
RE511300_063	Residential	607887	4853416	1.5	83	123	83	145	0.3%
RE511300_064	Residential	607888	4853422	1.5	82	123	83	129	0.3%
RE511300_065	Residential	607888	4853429	1.5	81	122	83	120	0.3%
RE511300_066	Residential	607892	4853460	1.5	77	118	83	86	0.2%
RE511300_067	Residential	607892	4853467	1.5	73	117	83	86	0.2%
RE511300_068	Residential	607892	4853473	1.5	72	117	83	82	0.2%
RE511300_069	Residential	607893	4853479	1.5	72	117	83	76	0.2%
RE511300_070	Residential	607894	4853485	1.5	72	117	83	74	0.2%
RE511300_071	Residential	607894	4853495	1.5	72	117	83	69	0.2%
RE511300_072	Residential	607893	4853501	1.5	72	117	83	68	0.2%
RE511300_073	Residential	607891	4853507	1.5	72	117	83	65	0.1%
RE511300_074	Residential	607776	4853648	1.5	71	115	83	22	0.1%
RE511300_075	Residential	607783	4853646	1.5	70	115	83	22	0.1%
RE511300_076	Residential	607789	4853644	1.5	70	115	83	22	0.1%
RE511300_077	Residential	607795	4853641	1.5	70	114	83	22	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_078	Residential	607801	4853639	1.5	69	114	83	22	0.1%
RE511300_079	Residential	607808	4853634	1.5	69	114	83	27	0.1%
RE511300_080	Residential	607814	4853629	1.5	69	113	83	27	0.1%
RE511300_081	Residential	607819	4853626	1.5	69	113	83	27	0.1%
RE511300_082	Residential	607824	4853622	1.5	68	113	83	27	0.1%
RE511300_083	Residential	607829	4853618	1.5	68	113	83	28	0.1%
RE511300_084	Residential	607834	4853614	1.5	68	112	83	28	0.1%
RE511300_085	Residential	607842	4853608	1.5	68	112	83	29	0.1%
RE511300_086	Residential	607846	4853603	1.5	69	113	83	30	0.1%
RE511300_087	Residential	607850	4853599	1.5	69	113	83	33	0.1%
RE511300_088	Residential	607854	4853594	1.5	69	113	83	33	0.1%
RE511300_089	Residential	607858	4853589	1.5	69	113	83	33	0.1%
RE511300_090	Residential	607862	4853585	1.5	70	114	83	34	0.1%
RE511300_091	Residential	607868	4853578	1.5	70	114	83	39	0.1%
RE511300_092	Residential	607871	4853571	1.5	70	114	83	40	0.1%
RE511300_093	Residential	607874	4853566	1.5	70	115	83	42	0.1%
RE511300_094	Residential	607878	4853561	1.5	70	115	83	43	0.1%
RE511300_095	Residential	607882	4853552	1.5	71	116	83	48	0.1%
RE511300_096	Residential	607883	4853545	1.5	71	116	83	52	0.1%
RE511300_097	Residential	607884	4853538	1.5	72	116	83	56	0.1%
RE511300_098	Residential	607758	4853512	1.5	76	117	83	74	0.2%
RE511300_099	Residential	607757	4853520	1.5	75	117	83	70	0.2%
RE511300_100	Residential	607756	4853526	1.5	75	117	83	67	0.2%
RE511300_101	Residential	607755	4853532	1.5	74	117	83	65	0.1%
RE511300_102	Residential	607753	4853538	1.5	74	117	83	62	0.1%
RE511300_103	Residential	607752	4853544	1.5	73	117	83	58	0.1%
RE511300_104	Residential	607751	4853552	1.5	73	117	83	57	0.1%
RE511300_105	Residential	607749	4853559	1.5	72	117	83	55	0.1%
RE511300_106	Residential	607747	4853564	1.5	72	117	83	53	0.1%
RE511300_107	Residential	607746	4853571	1.5	72	117	83	52	0.1%
RE511300_108	Residential	607745	4853576	1.5	72	117	83	50	0.1%
RE511300_109	Residential	607744	4853583	1.5	72	117	83	49	0.1%
RE511300_110	Residential	607742	4853591	1.5	72	117	83	47	0.1%
RE511300_111	Residential	607740	4853597	1.5	72	117	83	46	0.1%
RE511300_112	Residential	607739	4853603	1.5	72	117	83	43	0.1%
RE511300_113	Residential	607738	4853609	1.5	72	117	83	41	0.1%
RE511300_114	Residential	607737	4853615	1.5	72	116	83	36	0.1%
RE511300_115	Residential	607736	4853621	1.5	72	116	83	29	0.1%
RE511300_116	Residential	607736	4853631	1.5	72	116	83	23	0.1%
RE511300_117	Residential	607735	4853640	1.5	72	116	83	21	0.0%
RE511300_118	Residential	607734	4853645	1.5	72	116	83	20	0.0%
RE511300_119	Residential	607735	4853651	1.5	72	116	83	20	0.0%
RE511300_120	Residential	607736	4853658	1.5	72	116	83	20	0.0%
RE511300_121	Residential	607737	4853664	1.5	72	116	83	19	0.0%
RE511300_122	Residential	607721	4853505	1.5	78	119	83	81	0.2%
RE511300_123	Residential	607719	4853512	1.5	78	119	83	81	0.2%
RE511300_124	Residential	607718	4853518	1.5	78	119	83	80	0.2%
RE511300_125	Residential	607717	4853524	1.5	78	119	83	78	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_126	Residential	607716	4853530	1.5	77	118	83	75	0.2%
RE511300_127	Residential	607715	4853537	1.5	77	118	83	71	0.2%
RE511300_128	Residential	607713	4853545	1.5	76	117	83	66	0.2%
RE511300_129	Residential	607712	4853551	1.5	75	117	83	63	0.1%
RE511300_130	Residential	607711	4853556	1.5	75	117	83	61	0.1%
RE511300_131	Residential	607710	4853563	1.5	74	117	83	58	0.1%
RE511300_132	Residential	607708	4853569	1.5	73	117	83	56	0.1%
RE511300_133	Residential	607707	4853575	1.5	73	117	83	53	0.1%
RE511300_134	Residential	607706	4853583	1.5	72	117	83	49	0.1%
RE511300_135	Residential	607704	4853589	1.5	72	117	83	48	0.1%
RE511300_136	Residential	607704	4853595	1.5	72	117	83	48	0.1%
RE511300_137	Residential	607702	4853601	1.5	72	117	83	46	0.1%
RE511300_138	Residential	607701	4853607	1.5	72	117	83	42	0.1%
RE511300_139	Residential	607700	4853615	1.5	72	117	83	38	0.1%
RE511300_140	Residential	607698	4853621	1.5	72	117	83	34	0.1%
RE511300_141	Residential	607697	4853627	1.5	72	117	83	31	0.1%
RE511300_142	Residential	607696	4853634	1.5	72	117	83	29	0.1%
RE511300_143	Residential	607694	4853645	1.5	72	117	83	24	0.1%
RE511300_144	Residential	607694	4853653	1.5	72	117	83	23	0.1%
RE511300_145	Residential	607694	4853659	1.5	72	117	83	22	0.1%
RE511300_146	Residential	607694	4853665	1.5	72	117	83	21	0.0%
RE511300_147	Residential	607696	4853670	1.5	72	117	83	21	0.0%
RE511300_148	Residential	607699	4853677	1.5	72	117	83	19	0.0%
RE511300_149	Residential	607750	4853399	1.5	82	121	83	177	0.4%
RE511300_150	Residential	607756	4853400	1.5	82	121	83	173	0.4%
RE511300_151	Residential	607762	4853401	1.5	81	120	83	170	0.4%
RE511300_152	Residential	607768	4853402	1.5	80	120	83	167	0.4%
RE511300_153	Residential	607776	4853404	1.5	79	120	83	166	0.4%
RE511300_154	Residential	607783	4853405	1.5	79	120	83	166	0.4%
RE511300_155	Residential	607789	4853406	1.5	79	120	83	163	0.4%
RE511300_156	Residential	607795	4853407	1.5	79	120	83	163	0.4%
RE511300_157	Residential	607801	4853409	1.5	79	120	83	158	0.4%
RE511300_158	Residential	607807	4853410	1.5	79	120	83	151	0.3%
RE511300_159	Residential	607815	4853412	1.5	79	120	83	152	0.3%
RE511300_160	Residential	607821	4853413	1.5	79	120	83	151	0.3%
RE511300_161	Residential	607827	4853414	1.5	79	120	83	150	0.3%
RE511300_162	Residential	607834	4853415	1.5	79	119	83	146	0.3%
RE511300_163	Residential	607841	4853417	1.5	79	120	83	143	0.3%
RE511300_164	Residential	607848	4853418	1.5	79	120	83	144	0.3%
RE511300_165	Residential	607854	4853419	1.5	80	120	83	143	0.3%
RE511300_166	Residential	607859	4853420	1.5	80	121	83	141	0.3%
RE511300_167	Residential	607866	4853421	1.5	80	121	83	137	0.3%
RE511300_168	Residential	607728	4853439	1.5	80	120	83	130	0.3%
RE511300_169	Residential	607736	4853440	1.5	79	120	83	129	0.3%
RE511300_170	Residential	607742	4853441	1.5	79	120	83	127	0.3%
RE511300_171	Residential	607748	4853442	1.5	79	120	83	126	0.3%
RE511300_172	Residential	607754	4853443	1.5	79	120	83	125	0.3%
RE511300_173	Residential	607761	4853444	1.5	79	120	83	120	0.3%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_174	Residential	607768	4853445	1.5	79	120	83	120	0.3%
RE511300_175	Residential	607774	4853446	1.5	79	120	83	120	0.3%
RE511300_176	Residential	607780	4853448	1.5	79	120	83	116	0.3%
RE511300_177	Residential	607786	4853449	1.5	79	119	83	111	0.3%
RE511300_178	Residential	607792	4853450	1.5	79	119	83	112	0.3%
RE511300_179	Residential	607799	4853451	1.5	79	119	83	110	0.3%
RE511300_180	Residential	607807	4853453	1.5	78	119	83	109	0.2%
RE511300_181	Residential	607813	4853454	1.5	78	119	83	106	0.2%
RE511300_182	Residential	607819	4853456	1.5	78	119	83	99	0.2%
RE511300_183	Residential	607825	4853457	1.5	78	119	83	97	0.2%
RE511300_184	Residential	607831	4853458	1.5	78	119	83	94	0.2%
RE511300_185	Residential	607837	4853459	1.5	77	118	83	94	0.2%
RE511300_186	Residential	607845	4853460	1.5	77	118	83	91	0.2%
RE511300_187	Residential	607851	4853462	1.5	76	117	83	91	0.2%
RE511300_188	Residential	607857	4853463	1.5	76	117	83	89	0.2%
RE511300_189	Residential	607863	4853464	1.5	75	117	83	89	0.2%
RE511300_190	Residential	607870	4853465	1.5	74	117	83	88	0.2%
RE511300_191	Residential	607724	4853468	1.5	79	120	83	107	0.2%
RE511300_192	Residential	607731	4853469	1.5	79	120	83	102	0.2%
RE511300_193	Residential	607737	4853470	1.5	79	120	83	103	0.2%
RE511300_194	Residential	607742	4853471	1.5	79	120	83	100	0.2%
RE511300_195	Residential	607749	4853472	1.5	79	119	83	96	0.2%
RE511300_196	Residential	607755	4853473	1.5	79	119	83	97	0.2%
RE511300_197	Residential	607762	4853474	1.5	79	119	83	93	0.2%
RE511300_198	Residential	607769	4853476	1.5	78	119	83	92	0.2%
RE511300_199	Residential	607775	4853477	1.5	78	119	83	89	0.2%
RE511300_200	Residential	607781	4853478	1.5	78	119	83	88	0.2%
RE511300_201	Residential	607787	4853480	1.5	78	119	83	85	0.2%
RE511300_202	Residential	607793	4853481	1.5	78	119	83	82	0.2%
RE511300_203	Residential	607801	4853483	1.5	77	118	83	79	0.2%
RE511300_204	Residential	607807	4853484	1.5	76	117	83	77	0.2%
RE511300_205	Residential	607813	4853485	1.5	76	117	83	76	0.2%
RE511300_206	Residential	607819	4853486	1.5	75	117	83	76	0.2%
RE511300_207	Residential	607825	4853488	1.5	75	117	83	75	0.2%
RE511300_208	Residential	607831	4853489	1.5	74	117	83	73	0.2%
RE511300_209	Residential	607839	4853490	1.5	74	117	83	72	0.2%
RE511300_210	Residential	607846	4853492	1.5	73	117	83	71	0.2%
RE511300_211	Residential	607851	4853493	1.5	72	117	83	72	0.2%
RE511300_212	Residential	607858	4853494	1.5	72	117	83	72	0.2%
RE511300_213	Residential	607863	4853495	1.5	72	117	83	71	0.2%
RE511300_214	Residential	607869	4853496	1.5	72	117	83	69	0.2%
RE511400_001	Residential	607929	4853848	1.5	65	110	83	8	0.0%
RE511400_002	Residential	607914	4853876	1.5	64	109	83	8	0.0%
RE511400_003	Residential	607929	4853886	1.5	63	108	83	7	0.0%
RE511400_004	Residential	607898	4853826	1.5	67	111	83	8	0.0%
RE511400_005	Residential	607899	4853865	1.5	65	110	83	8	0.0%
RE511400_006	Residential	607842	4853819	1.5	68	113	83	8	0.0%
RE511400_007	Residential	607859	4853838	1.5	67	111	83	8	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_008	Residential	607869	4853844	1.5	66	111	83	8	0.0%
RE511400_009	Residential	607876	4853849	1.5	66	111	83	8	0.0%
RE511400_010	Residential	607922	4853881	1.5	64	108	83	7	0.0%
RE511400_011	Residential	607891	4853860	1.5	65	110	83	8	0.0%
RE511400_012	Residential	607868	4853804	1.5	68	113	83	8	0.0%
RE511400_013	Residential	607919	4853841	1.5	66	110	83	8	0.0%
RE511400_014	Residential	607907	4853870	1.5	65	109	83	8	0.0%
RE511400_015	Residential	607887	4853793	1.5	68	113	83	8	0.0%
RE511400_016	Residential	607876	4853800	1.5	68	113	83	8	0.0%
RE511400_017	Residential	607867	4853900	1.5	64	108	83	7	0.0%
RE511400_018	Residential	607888	4853915	1.5	63	107	83	6	0.0%
RE511400_019	Residential	607881	4853910	1.5	63	108	83	6	0.0%
RE511400_020	Residential	607895	4853920	1.5	62	107	83	5	0.0%
RE511400_021	Residential	607805	4853857	1.5	67	112	83	8	0.0%
RE511400_022	Residential	607814	4853863	1.5	67	111	83	8	0.0%
RE511400_023	Residential	607859	4853894	1.5	64	109	83	8	0.0%
RE511400_024	Residential	607874	4853905	1.5	64	108	83	6	0.0%
RE511400_025	Residential	607821	4853868	1.5	66	111	83	8	0.0%
RE511400_026	Residential	607829	4853873	1.5	66	111	83	8	0.0%
RE511400_027	Residential	607902	4853925	1.5	62	106	83	5	0.0%
RE511400_028	Residential	607836	4853879	1.5	66	110	83	8	0.0%
RE511400_029	Residential	607844	4853884	1.5	65	110	83	8	0.0%
RE511400_030	Residential	607852	4853889	1.5	65	109	83	8	0.0%
RE511400_031	Residential	607961	4853671	1.5	66	111	83	11	0.0%
RE511400_032	Residential	607901	4853730	1.5	69	113	83	11	0.0%
RE511400_033	Residential	607932	4853710	1.5	68	112	83	11	0.0%
RE511400_034	Residential	607891	4853735	1.5	69	114	83	11	0.0%
RE511400_035	Residential	607950	4853688	1.5	67	112	83	11	0.0%
RE511400_036	Residential	608027	4853515	1.5	79	120	83	37	0.1%
RE511400_037	Residential	607948	4853861	1.5	64	109	83	8	0.0%
RE511400_038	Residential	607884	4853855	1.5	66	110	83	8	0.0%
RE511400_039	Residential	607860	4853809	1.5	68	113	83	8	0.0%
RE511400_040	Residential	607917	4853721	1.5	68	113	83	11	0.0%
RE511400_041	Residential	607909	4853725	1.5	69	113	83	11	0.0%
RE511400_042	Residential	607925	4853716	1.5	68	113	83	11	0.0%
RE511400_043	Residential	607955	4853680	1.5	67	111	83	10	0.0%
RE511400_044	Residential	607944	4853695	1.5	67	112	83	11	0.0%
RE511400_045	Residential	607939	4853703	1.5	67	112	83	11	0.0%
RE511400_046	Residential	608072	4853635	1.5	63	107	83	19	0.0%
RE511400_047	Residential	608048	4853617	1.5	63	107	83	21	0.0%
RE511400_048	Residential	608076	4853544	1.5	79	119	83	30	0.1%
RE511400_049	Residential	608107	4853601	1.5	69	110	83	23	0.1%
RE511400_050	Residential	608076	4853554	1.5	78	119	83	27	0.1%
RE511400_051	Residential	607864	4853751	1.5	70	114	83	11	0.0%
RE511400_052	Residential	607853	4853757	1.5	70	114	83	11	0.0%
RE511400_053	Residential	607845	4853762	1.5	70	114	83	11	0.0%
RE511400_054	Residential	607836	4853766	1.5	70	115	83	11	0.0%
RE511400_055	Residential	607827	4853771	1.5	70	115	83	11	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_056	Residential	607818	4853777	1.5	70	115	83	11	0.0%
RE511400_057	Residential	607794	4853801	1.5	70	115	83	10	0.0%
RE511400_058	Residential	607809	4853783	1.5	70	115	83	11	0.0%
RE511400_059	Residential	607802	4853791	1.5	70	115	83	11	0.0%
RE511400_060	Residential	608147	4853557	1.5	78	119	83	28	0.1%
RE511400_061	Residential	608166	4853558	1.5	79	119	83	27	0.1%
RE511400_062	Residential	608176	4853558	1.5	79	119	83	26	0.1%
RE511400_063	Residential	608157	4853558	1.5	79	119	83	27	0.1%
RE511400_064	Residential	608076	4853583	1.5	71	111	83	25	0.1%
RE511400_065	Residential	608115	4853525	1.5	79	120	83	34	0.1%
RE511400_066	Residential	608102	4853614	1.5	65	106	83	21	0.0%
RE511400_067	Residential	608093	4853649	1.5	63	107	83	19	0.0%
RE511400_068	Residential	608103	4853524	1.5	79	120	83	34	0.1%
RE511400_069	Residential	608076	4853563	1.5	77	118	83	26	0.1%
RE511400_070	Residential	608074	4853594	1.5	67	108	83	23	0.1%
RE511400_071	Residential	608107	4853544	1.5	79	120	83	30	0.1%
RE511400_072	Residential	608107	4853563	1.5	78	119	83	28	0.1%
RE511400_073	Residential	608107	4853572	1.5	76	117	83	25	0.1%
RE511400_074	Residential	608082	4853642	1.5	63	107	83	19	0.0%
RE511400_075	Residential	608056	4853624	1.5	63	107	83	21	0.0%
RE511400_076	Residential	608067	4853525	1.5	79	120	83	34	0.1%
RE511400_077	Residential	608070	4853606	1.5	62	106	83	22	0.1%
RE511400_078	Residential	608097	4853625	1.5	62	107	83	21	0.0%
RE511400_079	Residential	608064	4853629	1.5	63	107	83	20	0.0%
RE511400_080	Residential	608091	4853524	1.5	79	120	83	32	0.1%
RE511400_081	Residential	608107	4853581	1.5	75	115	83	25	0.1%
RE511400_082	Residential	608107	4853590	1.5	72	113	83	23	0.1%
RE511400_083	Residential	608077	4853573	1.5	74	115	83	25	0.1%
RE511400_084	Residential	608107	4853554	1.5	78	119	83	28	0.1%
RE511400_085	Residential	608080	4853524	1.5	79	120	83	34	0.1%
RE511400_086	Residential	608146	4853605	1.5	71	112	83	22	0.1%
RE511400_087	Residential	607690	4854002	1.5	64	105	83	6	0.0%
RE511400_088	Residential	607683	4854039	1.5	67	108	83	6	0.0%
RE511400_089	Residential	607642	4854055	1.5	68	109	83	6	0.0%
RE511400_090	Residential	607726	4853973	1.5	62	107	83	6	0.0%
RE511400_091	Residential	607638	4854068	1.5	69	110	83	6	0.0%
RE511400_092	Residential	607782	4853966	1.5	62	106	83	6	0.0%
RE511400_093	Residential	607648	4854028	1.5	66	107	83	6	0.0%
RE511400_094	Residential	607706	4853919	1.5	66	111	83	8	0.0%
RE511400_095	Residential	607633	4854095	1.5	71	112	83	6	0.0%
RE511400_096	Residential	607649	4853948	1.5	66	111	83	9	0.0%
RE511400_097	Residential	607792	4853973	1.5	61	105	83	6	0.0%
RE511400_098	Residential	607734	4853980	1.5	62	106	83	6	0.0%
RE511400_099	Residential	607851	4853813	1.5	68	113	83	8	0.0%
RE511400_100	Residential	607835	4853830	1.5	68	112	83	8	0.0%
RE511400_101	Residential	607938	4853855	1.5	65	109	83	8	0.0%
RE511400_102	Residential	607908	4853835	1.5	66	111	83	8	0.0%
RE511400_103	Residential	607677	4854058	1.5	68	109	83	6	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_104	Residential	607687	4854030	1.5	66	107	83	6	0.0%
RE511400_105	Residential	607758	4853948	1.5	63	108	83	6	0.0%
RE511400_106	Residential	607671	4853912	1.5	68	112	83	9	0.0%
RE511400_107	Residential	607797	4853977	1.5	61	105	83	6	0.0%
RE511400_108	Residential	607709	4854015	1.5	64	105	83	6	0.0%
RE511400_109	Residential	607661	4853910	1.5	68	113	83	9	0.0%
RE511400_110	Residential	607713	4853921	1.5	66	111	83	8	0.0%
RE511400_111	Residential	607654	4854003	1.5	64	106	83	6	0.0%
RE511400_112	Residential	607657	4853949	1.5	66	110	83	9	0.0%
RE511400_113	Residential	607651	4854015	1.5	65	106	83	6	0.0%
RE511400_114	Residential	607731	4853930	1.5	65	110	83	8	0.0%
RE511400_115	Residential	607695	4853916	1.5	67	111	83	9	0.0%
RE511400_116	Residential	607655	4853989	1.5	63	107	83	6	0.0%
RE511400_117	Residential	607645	4854041	1.5	67	108	83	6	0.0%
RE511400_118	Residential	607751	4853943	1.5	64	108	83	6	0.0%
RE511400_119	Residential	607744	4853938	1.5	64	109	83	7	0.0%
RE511400_120	Residential	607787	4853970	1.5	61	106	83	6	0.0%
RE511400_121	Residential	607676	4853954	1.5	65	109	83	8	0.0%
RE511400_122	Residential	607667	4853952	1.5	65	110	83	9	0.0%
RE511400_123	Residential	607684	4853955	1.5	65	109	83	7	0.0%
RE511400_124	Residential	607704	4853960	1.5	64	108	83	6	0.0%
RE511400_125	Residential	607680	4854049	1.5	67	108	83	6	0.0%
RE511400_126	Residential	607679	4853914	1.5	67	112	83	9	0.0%
RE511400_127	Residential	607700	4854008	1.5	64	105	83	6	0.0%
RE511400_128	Residential	607719	4853969	1.5	63	107	83	6	0.0%
RE511400_129	Residential	607689	4853915	1.5	67	112	83	9	0.0%
RE511400_130	Residential	607739	4853935	1.5	65	109	83	7	0.0%
RE511400_131	Residential	607636	4854081	1.5	70	111	83	6	0.0%
RE511400_132	Residential	607680	4853999	1.5	64	106	83	6	0.0%
RE511400_133	Residential	607723	4853926	1.5	65	110	83	8	0.0%
RE511400_134	Residential	607693	4853957	1.5	64	109	83	6	0.0%
RE511400_135	Residential	607710	4853964	1.5	63	108	83	6	0.0%
RE511400_136	Residential	607759	4854001	1.5	63	104	83	6	0.0%
RE511400_137	Residential	608026	4853558	1.5	70	113	83	30	0.1%
RE511400_138	Residential	608026	4853566	1.5	66	110	83	28	0.1%
RE511400_139	Residential	608023	4853574	1.5	64	108	83	28	0.1%
RE511400_140	Residential	608018	4853584	1.5	63	108	83	26	0.1%
RE511400_141	Residential	608015	4853591	1.5	63	107	83	26	0.1%
RE511400_142	Residential	608006	4853606	1.5	63	108	83	25	0.1%
RE511400_143	Residential	608011	4853599	1.5	63	108	83	25	0.1%
RE511400_144	Residential	608001	4853613	1.5	64	108	83	23	0.1%
RE511400_145	Residential	607996	4853620	1.5	64	109	83	23	0.1%
RE511400_146	Residential	607985	4853636	1.5	65	110	83	17	0.0%
RE511400_147	Residential	607991	4853628	1.5	65	109	83	18	0.0%
RE511400_148	Residential	607980	4853643	1.5	65	110	83	16	0.0%
RE511400_149	Residential	608170	4853516	1.5	79	120	83	33	0.1%
RE511400_150	Residential	608155	4853516	1.5	79	120	83	35	0.1%
RE511400_151	Residential	608163	4853516	1.5	79	120	83	34	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_152	Residential	608148	4853517	1.5	79	120	83	33	0.1%
RE511400_153	Residential	608192	4853515	1.5	77	118	83	36	0.1%
RE511400_154	Residential	608184	4853515	1.5	78	119	83	34	0.1%
RE511400_155	Residential	608207	4853515	1.5	74	118	83	35	0.1%
RE511400_156	Residential	608199	4853515	1.5	75	118	83	35	0.1%
RE511400_157	Residential	608176	4853516	1.5	79	119	83	34	0.1%
RE511400_158	Residential	608214	4853515	1.5	74	118	83	34	0.1%
RE511400_159	Residential	607839	4853722	1.5	70	115	83	11	0.0%
RE511400_160	Residential	607826	4853728	1.5	70	115	83	11	0.0%
RE511400_161	Residential	607806	4853741	1.5	71	116	83	11	0.0%
RE511400_162	Residential	607820	4853732	1.5	71	115	83	11	0.0%
RE511400_163	Residential	607775	4853762	1.5	72	116	83	12	0.0%
RE511400_164	Residential	607764	4853777	1.5	72	116	83	12	0.0%
RE511400_165	Residential	607832	4853725	1.5	70	115	83	11	0.0%
RE511400_166	Residential	607791	4853750	1.5	71	116	83	12	0.0%
RE511400_167	Residential	607845	4853717	1.5	70	114	83	11	0.0%
RE511400_168	Residential	607771	4853767	1.5	72	116	83	12	0.0%
RE511400_169	Residential	607814	4853735	1.5	71	115	83	11	0.0%
RE511400_170	Residential	607785	4853754	1.5	72	116	83	12	0.0%
RE511400_171	Residential	607767	4853772	1.5	72	116	83	12	0.0%
RE511400_172	Residential	607800	4853745	1.5	71	116	83	12	0.0%
RE511400_173	Residential	607852	4853936	1.5	62	107	83	6	0.0%
RE511400_174	Residential	607859	4853941	1.5	62	106	83	6	0.0%
RE511400_175	Residential	607838	4853926	1.5	63	108	83	6	0.0%
RE511400_176	Residential	607787	4853890	1.5	66	111	83	8	0.0%
RE511400_177	Residential	607792	4853895	1.5	66	110	83	8	0.0%
RE511400_178	Residential	607797	4853898	1.5	65	110	83	8	0.0%
RE511400_179	Residential	607802	4853902	1.5	65	110	83	8	0.0%
RE511400_180	Residential	607815	4853910	1.5	64	109	83	8	0.0%
RE511400_181	Residential	607821	4853913	1.5	64	109	83	7	0.0%
RE511400_182	Residential	607827	4853918	1.5	64	108	83	6	0.0%
RE511400_183	Residential	607832	4853921	1.5	63	108	83	6	0.0%
RE511400_184	Residential	607845	4853931	1.5	63	107	83	6	0.0%
RE511400_185	Residential	607809	4853906	1.5	65	109	83	8	0.0%
RE511400_186	Residential	607925	4853654	1.5	67	111	83	13	0.0%
RE511400_187	Residential	607929	4853648	1.5	67	111	83	14	0.0%
RE511400_188	Residential	607920	4853662	1.5	67	112	83	14	0.0%
RE511400_189	Residential	607915	4853668	1.5	67	112	83	12	0.0%
RE511400_190	Residential	607907	4853677	1.5	68	112	83	12	0.0%
RE511400_191	Residential	607903	4853680	1.5	68	113	83	12	0.0%
RE511400_192	Residential	607895	4853688	1.5	68	113	83	12	0.0%
RE511400_193	Residential	607889	4853691	1.5	68	113	83	12	0.0%
RE511400_194	Residential	607881	4853696	1.5	69	113	83	12	0.0%
RE511400_195	Residential	607873	4853701	1.5	69	114	83	12	0.0%
RE511400_196	Residential	607989	4853515	1.5	78	119	83	38	0.1%
RE511400_197	Residential	607989	4853530	1.5	73	116	83	34	0.1%
RE511400_198	Residential	607989	4853538	1.5	69	113	83	33	0.1%
RE511400_199	Residential	607988	4853524	1.5	76	117	83	34	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_200	Residential	607988	4853546	1.5	67	112	83	32	0.1%
RE511400_201	Residential	607988	4853553	1.5	67	111	83	32	0.1%
RE511400_202	Residential	607982	4853569	1.5	66	110	83	31	0.1%
RE511400_203	Residential	607985	4853562	1.5	66	110	83	32	0.1%
RE511400_204	Residential	607980	4853574	1.5	66	110	83	31	0.1%
RE511400_205	Residential	607978	4853580	1.5	65	109	83	29	0.1%
RE511400_206	Residential	607972	4853586	1.5	65	109	83	26	0.1%
RE511400_207	Residential	607968	4853592	1.5	65	109	83	24	0.1%
RE511400_208	Residential	607963	4853600	1.5	64	109	83	24	0.1%
RE511400_209	Residential	607958	4853607	1.5	65	109	83	21	0.0%
RE511400_210	Residential	607953	4853615	1.5	65	110	83	18	0.0%
RE511400_211	Residential	607948	4853620	1.5	65	110	83	18	0.0%
RE511400_212	Residential	608027	4853522	1.5	79	120	83	34	0.1%
RE511400_213	Residential	608027	4853540	1.5	78	119	83	31	0.1%
RE511400_214	Residential	608027	4853531	1.5	79	119	83	33	0.1%
RE511400_215	Residential	608027	4853548	1.5	75	116	83	30	0.1%
RE511400_216	Residential	607888	4853817	1.5	67	112	83	8	0.0%
RE511400_217	Residential	607735	4853842	1.5	70	114	83	9	0.0%
RE511400_218	Residential	607748	4853810	1.5	71	115	83	12	0.0%
RE511400_219	Residential	607777	4853830	1.5	69	114	83	8	0.0%
RE511400_220	Residential	607730	4853850	1.5	70	114	83	9	0.0%
RE511400_221	Residential	607725	4853846	1.5	70	114	83	9	0.0%
RE511400_222	Residential	607783	4853834	1.5	69	113	83	8	0.0%
RE511400_223	Residential	607752	4853873	1.5	68	112	83	8	0.0%
RE511400_224	Residential	607743	4853806	1.5	71	116	83	12	0.0%
RE511400_225	Residential	607711	4853837	1.5	71	115	83	10	0.0%
RE511400_226	Residential	607748	4853878	1.5	68	112	83	8	0.0%
RE511400_227	Residential	607755	4853868	1.5	68	113	83	9	0.0%
RE511400_228	Residential	607756	4853827	1.5	70	114	83	10	0.0%
RE511400_229	Residential	607767	4853823	1.5	70	114	83	10	0.0%
RE511400_230	Residential	607735	4853854	1.5	69	114	83	9	0.0%
RE511400_231	Residential	607738	4853803	1.5	71	116	83	12	0.0%
RE511400_232	Residential	607762	4853859	1.5	68	113	83	9	0.0%
RE511400_233	Residential	607719	4853843	1.5	70	115	83	9	0.0%
RE511400_234	Residential	607730	4853838	1.5	70	115	83	10	0.0%
RE511400_235	Residential	607767	4853834	1.5	69	114	83	9	0.0%
RE511400_236	Residential	607738	4853814	1.5	71	116	83	12	0.0%
RE511400_237	Residential	607733	4853810	1.5	71	116	83	12	0.0%
RE511400_238	Residential	607761	4853819	1.5	70	115	83	10	0.0%
RE511400_239	Residential	607777	4853842	1.5	69	113	83	8	0.0%
RE511400_240	Residential	607761	4853831	1.5	70	114	83	9	0.0%
RE511400_241	Residential	607751	4853823	1.5	70	115	83	10	0.0%
RE511400_242	Residential	607756	4853816	1.5	70	115	83	11	0.0%
RE511400_243	Residential	607743	4853817	1.5	71	115	83	11	0.0%
RE511400_244	Residential	607741	4853846	1.5	70	114	83	9	0.0%
RE511400_245	Residential	607772	4853838	1.5	69	113	83	9	0.0%
RE511400_246	Residential	607759	4853864	1.5	68	113	83	9	0.0%
RE511400_247	Residential	607717	4853829	1.5	71	116	83	11	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_248	Residential	607725	4853835	1.5	71	115	83	10	0.0%
RE511400_249	Residential	607772	4853827	1.5	69	114	83	9	0.0%
RE511400_250	Residential	607866	4853946	1.5	61	106	83	6	0.0%
RE511400_251	Residential	607873	4853951	1.5	61	105	83	6	0.0%
RE511400_252	Residential	607880	4853956	1.5	60	105	83	6	0.0%
RE511400_265	Residential	607700	4854194	1.5	73	114	83	5	0.0%
RE511400_266	Residential	607689	4854191	1.5	73	114	83	5	0.0%
RE511400_267	Residential	607679	4854188	1.5	73	114	83	5	0.0%
RE511400_268	Residential	607668	4854184	1.5	73	114	83	5	0.0%
RE511400_269	Residential	607657	4854180	1.5	74	114	83	5	0.0%
RE511400_270	Residential	607645	4854176	1.5	74	115	83	5	0.0%
RE511400_271	Residential	607619	4854171	1.5	74	115	83	5	0.0%
RE511400_272	Residential	607620	4854158	1.5	74	115	83	5	0.0%
RE511400_273	Residential	607624	4854146	1.5	73	114	83	5	0.0%
RE511400_274	Residential	607626	4854132	1.5	73	114	83	5	0.0%
RE511400_275	Residential	607721	4854165	1.5	72	113	83	5	0.0%
RE511400_276	Residential	607710	4854163	1.5	72	113	83	5	0.0%
RE511400_277	Residential	607700	4854159	1.5	73	113	83	5	0.0%
RE511400_278	Residential	607689	4854156	1.5	73	113	83	5	0.0%
RE511400_279	Residential	607677	4854152	1.5	73	113	83	5	0.0%
RE511400_280	Residential	607665	4854148	1.5	73	114	83	5	0.0%
RE511400_281	Residential	607651	4854143	1.5	73	114	83	5	0.0%
RE511400_282	Residential	607770	4854052	1.5	66	107	83	6	0.0%
RE511400_283	Residential	607765	4854059	1.5	67	108	83	6	0.0%
RE511400_284	Residential	607760	4854069	1.5	68	109	83	6	0.0%
RE511400_285	Residential	607753	4854080	1.5	69	109	83	6	0.0%
RE511400_286	Residential	607748	4854093	1.5	69	110	83	6	0.0%
RE511400_287	Residential	607744	4854104	1.5	70	111	83	5	0.0%
RE511400_288	Residential	607740	4854116	1.5	71	111	83	5	0.0%
RE511400_289	Residential	607736	4854126	1.5	71	112	83	5	0.0%
RE511400_290	Residential	607742	4854030	1.5	65	106	83	6	0.0%
RE511400_291	Residential	607736	4854039	1.5	66	107	83	6	0.0%
RE511400_292	Residential	607731	4854048	1.5	67	108	83	6	0.0%
RE511400_293	Residential	607726	4854059	1.5	68	108	83	6	0.0%
RE511400_294	Residential	607723	4854067	1.5	68	109	83	6	0.0%
RE511400_295	Residential	607720	4854076	1.5	69	110	83	6	0.0%
RE511400_296	Residential	607717	4854085	1.5	69	110	83	6	0.0%
RE511400_297	Residential	607714	4854095	1.5	70	111	83	6	0.0%
RE511400_298	Residential	607710	4854106	1.5	71	111	83	5	0.0%
RE511400_299	Residential	607707	4854117	1.5	71	112	83	5	0.0%
RE511400_300	Residential	607674	4854068	1.5	69	110	83	6	0.0%
RE511400_301	Residential	607670	4854080	1.5	70	111	83	6	0.0%
RE511400_302	Residential	607667	4854091	1.5	70	111	83	6	0.0%
RE511400_303	Residential	607662	4854103	1.5	71	112	83	6	0.0%
RE511400_304	Residential	607765	4854005	1.5	63	104	83	6	0.0%
RE511400_305	Residential	607773	4854009	1.5	63	104	83	6	0.0%
RE511400_306	Residential	607779	4854014	1.5	63	104	83	6	0.0%
RE511400_307	Residential	607787	4854019	1.5	64	105	83	6	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_308	Residential	607794	4854023	1.5	64	105	83	6	0.0%
RE511400_309	Residential	607801	4854028	1.5	64	105	83	6	0.0%
RE511400_310	Residential	607809	4854033	1.5	64	105	83	6	0.0%
RE511400_311	Residential	607817	4854039	1.5	65	106	83	6	0.0%
RE511400_312	Residential	607802	4853980	1.5	61	105	83	6	0.0%
RE511400_313	Residential	607807	4853983	1.5	61	104	83	6	0.0%
RE511400_314	Residential	607814	4853988	1.5	61	104	83	6	0.0%
RE511400_315	Residential	607820	4853992	1.5	61	104	83	6	0.0%
RE511400_316	Residential	607825	4853995	1.5	61	103	83	6	0.0%
RE511400_317	Residential	607829	4853998	1.5	62	103	83	6	0.0%
RE511400_318	Residential	607837	4854004	1.5	62	103	83	6	0.0%
RE511400_319	Residential	607842	4854008	1.5	62	103	83	5	0.0%
RE511500_001	Child Care Centre	608104	4853900	1.5	59	104	83	5	0.0%
RE511500_002	Residential	608322	4853695	1.5	61	105	83	15	0.0%
RE511500_003	Residential	608318	4853701	1.5	60	105	83	16	0.0%
RE511500_004	Residential	608314	4853707	1.5	60	105	83	15	0.0%
RE511500_005	Residential	608300	4853727	1.5	60	105	83	15	0.0%
RE511500_006	Residential	608295	4853734	1.5	61	105	83	14	0.0%
RE511500_007	Residential	608290	4853741	1.5	61	105	83	14	0.0%
RE511500_008	Residential	608285	4853748	1.5	61	105	83	13	0.0%
RE511500_009	Residential	608280	4853755	1.5	61	105	83	12	0.0%
RE511500_010	Residential	608335	4853677	1.5	64	109	83	14	0.0%
RE511500_011	Residential	608327	4853688	1.5	62	106	83	14	0.0%
RE511500_012	Residential	608364	4853636	1.5	63	108	83	17	0.0%
RE511500_013	Residential	608359	4853642	1.5	65	109	83	16	0.0%
RE511500_014	Residential	608355	4853649	1.5	65	110	83	17	0.0%
RE511500_015	Residential	608349	4853657	1.5	66	110	83	16	0.0%
RE511500_016	Residential	608345	4853664	1.5	66	110	83	15	0.0%
RE511500_017	Residential	608310	4853713	1.5	60	105	83	15	0.0%
RE511500_018	Residential	608305	4853720	1.5	60	105	83	15	0.0%
RE511500_019	Residential	608232	4853817	1.5	60	105	83	6	0.0%
RE511500_020	Residential	608226	4853679	1.5	61	106	83	18	0.0%
RE511500_021	Residential	608207	4853707	1.5	62	106	83	15	0.0%
RE511500_022	Residential	608274	4853612	1.5	72	117	83	21	0.0%
RE511500_023	Residential	608242	4853657	1.5	65	106	83	18	0.0%
RE511500_024	Residential	608232	4853672	1.5	62	106	83	18	0.0%
RE511500_025	Residential	607937	4853892	1.5	63	108	83	5	0.0%
RE511500_026	Residential	607990	4853929	1.5	60	105	83	5	0.0%
RE511500_027	Residential	607999	4853934	1.5	59	104	83	5	0.0%
RE511500_028	Residential	608017	4853910	1.5	61	105	83	5	0.0%
RE511500_029	Residential	607985	4853887	1.5	62	107	83	5	0.0%
RE511500_030	Residential	607977	4853881	1.5	63	107	83	5	0.0%
RE511500_031	Residential	607952	4853902	1.5	62	107	83	5	0.0%
RE511500_032	Residential	608205	4853855	1.5	59	104	83	4	0.0%
RE511500_033	Residential	608000	4853898	1.5	61	106	83	5	0.0%
RE511500_034	Residential	607982	4853923	1.5	60	105	83	5	0.0%
RE511500_035	Residential	607960	4853907	1.5	62	106	83	5	0.0%
RE511500_036	Residential	607993	4853893	1.5	62	106	83	5	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_037	Residential	608228	4853822	1.5	60	104	83	4	0.0%
RE511500_038	Residential	608194	4853868	1.5	59	104	83	4	0.0%
RE511500_039	Residential	608188	4853877	1.5	59	103	83	4	0.0%
RE511500_040	Residential	608008	4853903	1.5	61	106	83	5	0.0%
RE511500_041	Residential	608199	4853862	1.5	59	104	83	4	0.0%
RE511500_042	Residential	608224	4853828	1.5	60	104	83	4	0.0%
RE511500_043	Residential	608221	4853833	1.5	60	104	83	4	0.0%
RE511500_044	Residential	607925	4853940	1.5	60	105	83	5	0.0%
RE511500_045	Residential	608481	4853493	1.5	76	116	83	19	0.0%
RE511500_046	Residential	608407	4853578	1.5	71	114	83	17	0.0%
RE511500_047	Residential	608462	4853557	1.5	74	115	83	18	0.0%
RE511500_048	Residential	608457	4853565	1.5	74	115	83	17	0.0%
RE511500_049	Residential	607910	4853930	1.5	61	106	83	5	0.0%
RE511500_050	Residential	607917	4853935	1.5	61	105	83	5	0.0%
RE511500_051	Residential	608411	4853570	1.5	74	115	83	18	0.0%
RE511500_052	Residential	608435	4853530	1.5	76	117	83	20	0.0%
RE511500_053	Residential	608415	4853563	1.5	75	116	83	18	0.0%
RE511500_054	Residential	608053	4853924	1.5	59	104	83	5	0.0%
RE511500_055	Residential	608480	4853505	1.5	74	116	83	17	0.0%
RE511500_056	Residential	608197	4853721	1.5	62	107	83	13	0.0%
RE511500_057	Residential	608191	4853730	1.5	62	107	83	13	0.0%
RE511500_058	Residential	608263	4853627	1.5	71	115	83	20	0.0%
RE511500_059	Residential	608289	4853591	1.5	71	115	83	23	0.1%
RE511500_060	Residential	608284	4853598	1.5	72	116	83	22	0.1%
RE511500_061	Residential	608211	4853846	1.5	59	104	83	4	0.0%
RE511500_062	Residential	608179	4853890	1.5	58	103	83	4	0.0%
RE511500_063	Residential	607967	4853875	1.5	63	108	83	7	0.0%
RE511500_064	Residential	607967	4853913	1.5	61	106	83	5	0.0%
RE511500_065	Residential	608234	4853563	1.5	75	117	83	24	0.1%
RE511500_066	Residential	608254	4853574	1.5	73	117	83	24	0.1%
RE511500_067	Residential	608194	4853557	1.5	78	119	83	26	0.1%
RE511500_068	Residential	608225	4853560	1.5	77	117	83	24	0.1%
RE511500_069	Residential	608214	4853558	1.5	78	119	83	26	0.1%
RE511500_070	Residential	608185	4853558	1.5	79	119	83	27	0.1%
RE511500_071	Residential	608131	4853676	1.5	63	107	83	18	0.0%
RE511500_072	Residential	608217	4853606	1.5	72	117	83	21	0.0%
RE511500_073	Residential	608173	4853670	1.5	62	106	83	19	0.0%
RE511500_074	Residential	608147	4853647	1.5	62	106	83	21	0.0%
RE511500_075	Residential	608204	4853630	1.5	68	109	83	19	0.0%
RE511500_076	Residential	608156	4853693	1.5	62	107	83	17	0.0%
RE511500_077	Residential	608189	4853647	1.5	65	106	83	20	0.0%
RE511500_078	Residential	608184	4853655	1.5	64	106	83	19	0.0%
RE511500_079	Residential	608158	4853604	1.5	71	112	83	21	0.0%
RE511500_080	Residential	608149	4853688	1.5	63	107	83	17	0.0%
RE511500_081	Residential	608226	4853615	1.5	71	116	83	20	0.0%
RE511500_082	Residential	608167	4853604	1.5	72	113	83	20	0.0%
RE511500_083	Residential	608195	4853640	1.5	66	107	83	20	0.0%
RE511500_084	Residential	608195	4853604	1.5	73	116	83	21	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_085	Residential	608154	4853638	1.5	65	106	83	21	0.0%
RE511500_086	Residential	608120	4853668	1.5	63	107	83	19	0.0%
RE511500_087	Residential	608176	4853604	1.5	72	113	83	21	0.0%
RE511500_088	Residential	608168	4853677	1.5	62	106	83	18	0.0%
RE511500_089	Residential	608140	4853682	1.5	63	107	83	17	0.0%
RE511500_090	Residential	608205	4853603	1.5	72	116	83	21	0.0%
RE511500_091	Residential	608185	4853604	1.5	73	114	83	22	0.1%
RE511500_092	Residential	608141	4853656	1.5	62	107	83	20	0.0%
RE511500_093	Residential	608244	4853567	1.5	74	117	83	24	0.1%
RE511500_094	Residential	608204	4853557	1.5	78	119	83	27	0.1%
RE511500_095	Residential	608304	4853570	1.5	72	117	83	20	0.0%
RE511500_096	Residential	608315	4853555	1.5	72	117	83	21	0.0%
RE511500_097	Residential	608258	4853635	1.5	69	113	83	19	0.0%
RE511500_098	Residential	608248	4853649	1.5	66	108	83	17	0.0%
RE511500_099	Residential	608222	4853686	1.5	61	106	83	17	0.0%
RE511500_100	Residential	608216	4853693	1.5	62	106	83	16	0.0%
RE511500_101	Residential	608269	4853620	1.5	72	116	83	20	0.0%
RE511500_102	Residential	608201	4853714	1.5	62	107	83	14	0.0%
RE511500_103	Residential	608309	4853563	1.5	72	117	83	19	0.0%
RE511500_104	Residential	608299	4853577	1.5	72	116	83	21	0.0%
RE511500_105	Residential	608279	4853605	1.5	72	117	83	23	0.1%
RE511500_106	Residential	608253	4853642	1.5	67	111	83	18	0.0%
RE511500_107	Residential	608212	4853700	1.5	62	106	83	15	0.0%
RE511500_108	Residential	608294	4853584	1.5	70	114	83	22	0.1%
RE511500_109	Residential	608166	4853699	1.5	62	107	83	15	0.0%
RE511500_110	Residential	608179	4853662	1.5	62	106	83	18	0.0%
RE511500_111	Residential	608443	4853510	1.5	73	117	83	16	0.0%
RE511500_112	Residential	608420	4853557	1.5	77	117	83	18	0.0%
RE511500_113	Residential	608424	4853551	1.5	77	118	83	19	0.0%
RE511500_114	Residential	608473	4853532	1.5	71	115	83	16	0.0%
RE511500_115	Residential	608470	4853541	1.5	73	114	83	19	0.0%
RE511500_116	Residential	608448	4853484	1.5	78	119	83	20	0.0%
RE511500_117	Residential	608445	4853501	1.5	76	117	83	17	0.0%
RE511500_118	Residential	608446	4853493	1.5	77	118	83	17	0.0%
RE511500_119	Residential	608441	4853518	1.5	74	117	83	19	0.0%
RE511500_120	Residential	608476	4853524	1.5	71	116	83	16	0.0%
RE511500_121	Residential	608433	4853537	1.5	77	118	83	19	0.0%
RE511500_122	Residential	608208	4853851	1.5	59	104	83	4	0.0%
RE511500_123	Residential	608438	4853524	1.5	75	116	83	19	0.0%
RE511500_124	Residential	608429	4853545	1.5	77	118	83	19	0.0%
RE511500_125	Residential	608466	4853549	1.5	74	115	83	18	0.0%
RE511500_126	Residential	608478	4853514	1.5	72	116	83	16	0.0%
RE511500_127	Residential	608452	4853573	1.5	73	114	83	17	0.0%
RE511500_128	Residential	608241	4853804	1.5	60	105	83	6	0.0%
RE511500_129	Residential	608215	4853841	1.5	60	104	83	4	0.0%
RE511500_130	Residential	608236	4853811	1.5	60	105	83	6	0.0%
RE511500_131	Residential	608185	4853882	1.5	59	103	83	4	0.0%
RE511500_132	Residential	607957	4853868	1.5	64	108	83	7	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_133	Residential	607944	4853897	1.5	63	107	83	5	0.0%
RE511500_134	Residential	607975	4853918	1.5	61	105	83	5	0.0%
RE511500_135	Residential	608340	4853670	1.5	65	110	83	15	0.0%
RE511500_136	Residential	608276	4853761	1.5	61	105	83	11	0.0%
RE511500_137	Residential	608272	4853766	1.5	61	105	83	11	0.0%
RE511500_138	Residential	608268	4853772	1.5	61	105	83	11	0.0%
RE511500_139	Residential	608263	4853780	1.5	60	105	83	9	0.0%
RE511500_140	Residential	608331	4853682	1.5	63	108	83	14	0.0%
RE511500_141	Residential	608237	4853665	1.5	63	105	83	18	0.0%
RE511500_142	Residential	608152	4853626	1.5	68	109	83	21	0.0%
RE511500_143	Residential	608232	4853514	1.5	78	119	83	37	0.1%
RE511500_144	Residential	608223	4853515	1.5	77	118	83	36	0.1%
RE511500_145	Residential	608246	4853517	1.5	78	119	83	32	0.1%
RE511500_146	Residential	608253	4853520	1.5	78	119	83	31	0.1%
RE511500_147	Residential	608269	4853526	1.5	78	119	83	26	0.1%
RE511500_148	Residential	608274	4853530	1.5	77	118	83	25	0.1%
RE511500_149	Residential	608264	4853523	1.5	78	119	83	27	0.1%
RE511500_150	Residential	608279	4853533	1.5	76	117	83	23	0.1%
RE511500_151	Residential	608336	4853591	1.5	70	115	83	17	0.0%
RE511500_152	Residential	608339	4853585	1.5	72	116	83	18	0.0%
RE511500_153	Residential	608328	4853602	1.5	67	111	83	21	0.0%
RE511500_154	Residential	608332	4853597	1.5	69	113	83	18	0.0%
RE511500_155	Residential	608344	4853578	1.5	72	116	83	18	0.0%
RE511500_156	Residential	608324	4853608	1.5	66	111	83	20	0.0%
RE511500_157	Residential	608318	4853615	1.5	68	113	83	20	0.0%
RE511500_158	Residential	608314	4853620	1.5	69	114	83	20	0.0%
RE511500_159	Residential	608309	4853630	1.5	70	114	83	18	0.0%
RE511500_160	Residential	608305	4853636	1.5	69	114	83	18	0.0%
RE511500_161	Residential	608299	4853644	1.5	69	113	83	19	0.0%
RE511500_162	Residential	608295	4853650	1.5	68	112	83	18	0.0%
RE511500_163	Residential	608287	4853661	1.5	65	109	83	17	0.0%
RE511500_164	Residential	608291	4853655	1.5	67	111	83	18	0.0%
RE511500_165	Residential	608282	4853668	1.5	64	107	83	16	0.0%
RE511500_166	Residential	608278	4853674	1.5	63	105	83	16	0.0%
RE511500_167	Residential	608274	4853679	1.5	63	105	83	16	0.0%
RE511500_168	Residential	608269	4853685	1.5	62	105	83	15	0.0%
RE511500_169	Residential	608264	4853692	1.5	61	105	83	15	0.0%
RE511500_170	Residential	608259	4853699	1.5	61	106	83	16	0.0%
RE511500_171	Residential	608254	4853706	1.5	61	106	83	15	0.0%
RE511500_172	Residential	608250	4853713	1.5	61	106	83	15	0.0%
RE511500_173	Residential	608240	4853728	1.5	61	106	83	13	0.0%
RE511500_174	Residential	608236	4853733	1.5	61	106	83	14	0.0%
RE511500_175	Residential	608231	4853738	1.5	61	106	83	13	0.0%
RE511500_176	Residential	608228	4853744	1.5	62	106	83	13	0.0%
RE511500_177	Residential	608245	4853721	1.5	61	106	83	14	0.0%
RE511500_178	Residential	608223	4853750	1.5	62	106	83	13	0.0%
RE511500_179	Residential	608375	4853620	1.5	65	110	83	15	0.0%
RE511500_180	Residential	608371	4853626	1.5	63	108	83	15	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_181	Residential	608378	4853615	1.5	66	111	83	15	0.0%
RE511500_182	Residential	608382	4853610	1.5	67	112	83	15	0.0%
RE511500_183	Residential	608368	4853631	1.5	62	107	83	14	0.0%
RE511500_184	Residential	607933	4853946	1.5	60	105	83	5	0.0%
RE511500_185	Residential	607940	4853951	1.5	59	104	83	5	0.0%
RE511500_186	Residential	607948	4853956	1.5	59	104	83	5	0.0%
RE511500_187	Residential	607955	4853962	1.5	58	103	83	5	0.0%
RE511500_188	Residential	607963	4853967	1.5	58	103	83	5	0.0%
RE511500_189	Residential	607972	4853973	1.5	58	102	83	5	0.0%
RE511500_190	Residential	607887	4853960	1.5	60	104	83	5	0.0%
RE511500_191	Residential	607893	4853965	1.5	59	104	83	5	0.0%
RE511500_192	Residential	607899	4853969	1.5	59	104	83	5	0.0%
RE511500_193	Residential	607904	4853973	1.5	59	103	83	5	0.0%
RE511500_194	Residential	607910	4853977	1.5	59	103	83	5	0.0%
RE511500_195	Residential	607916	4853981	1.5	59	103	83	5	0.0%
RE511500_196	Residential	607923	4853986	1.5	60	102	83	5	0.0%
RE511500_197	Residential	607928	4853990	1.5	60	102	83	5	0.0%
RE511500_198	Residential	607933	4853993	1.5	60	101	83	5	0.0%
RE511500_199	Residential	607938	4853997	1.5	60	101	83	5	0.0%
RE511500_200	Residential	607943	4854000	1.5	60	101	83	5	0.0%
RE511500_201	Residential	607948	4854004	1.5	61	101	83	5	0.0%
RE511500_202	Residential	608047	4853932	1.5	59	103	83	5	0.0%
RE511500_203	Residential	608042	4853940	1.5	58	103	83	5	0.0%
RE511500_204	Residential	608036	4853947	1.5	58	103	83	5	0.0%
RE511500_205	Residential	608031	4853955	1.5	58	102	83	5	0.0%
RE511500_206	Residential	608026	4853962	1.5	57	102	83	5	0.0%
RE511500_207	Residential	608021	4853969	1.5	57	101	83	5	0.0%
RE511500_208	Residential	608016	4853976	1.5	58	101	83	5	0.0%
RE511500_209	Residential	608011	4853983	1.5	58	101	83	5	0.0%
RE511500_210	Residential	608006	4853990	1.5	59	100	83	5	0.0%
RE511500_211	Residential	608001	4853997	1.5	59	100	83	5	0.0%
RE511500_212	Residential	607995	4854005	1.5	60	101	83	5	0.0%
RE511500_213	Residential	607990	4854012	1.5	61	102	83	5	0.0%
RE511500_214	Residential	607985	4854020	1.5	61	102	83	5	0.0%
RE511500_215	Residential	607979	4854029	1.5	62	103	83	5	0.0%
RE511500_216	Residential	608085	4853947	1.5	57	102	83	5	0.0%
RE511500_217	Residential	608081	4853952	1.5	57	101	83	5	0.0%
RE511500_218	Residential	608077	4853958	1.5	57	101	83	5	0.0%
RE511500_219	Residential	608074	4853962	1.5	56	101	83	5	0.0%
RE511500_220	Residential	608069	4853969	1.5	57	101	83	5	0.0%
RE511500_221	Residential	608065	4853974	1.5	57	100	83	5	0.0%
RE511500_222	Residential	608062	4853978	1.5	57	100	83	5	0.0%
RE511500_223	Residential	608058	4853984	1.5	58	100	83	5	0.0%
RE511500_224	Residential	608053	4853991	1.5	58	99	83	5	0.0%
RE511500_225	Residential	608049	4853997	1.5	59	100	83	5	0.0%
RE511500_226	Residential	608043	4854006	1.5	59	100	83	5	0.0%
RE511500_227	Residential	608040	4854011	1.5	60	101	83	5	0.0%
RE511500_228	Residential	608034	4854019	1.5	61	101	83	5	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_229	Residential	608029	4854025	1.5	61	102	83	5	0.0%
RE511500_230	Residential	608026	4854031	1.5	62	102	83	5	0.0%
RE511500_231	Residential	608022	4854036	1.5	62	103	83	5	0.0%
RE511500_232	Residential	608018	4854042	1.5	62	103	83	5	0.0%
RE511500_233	Residential	608013	4854048	1.5	63	104	83	5	0.0%
RE511500_234	Residential	608175	4853896	1.5	58	103	83	4	0.0%
RE511500_235	Residential	608171	4853902	1.5	58	102	83	4	0.0%
RE511500_236	Residential	608167	4853908	1.5	58	102	83	4	0.0%
RE511500_237	Residential	608162	4853915	1.5	57	102	83	4	0.0%
RE511500_238	Residential	608157	4853922	1.5	57	102	83	5	0.0%
RE511500_239	Residential	608154	4853927	1.5	57	101	83	5	0.0%
RE511500_240	Residential	608150	4853933	1.5	57	101	83	5	0.0%
RE511500_241	Residential	608145	4853939	1.5	56	101	83	5	0.0%
RE511500_242	Residential	608142	4853944	1.5	56	101	83	5	0.0%
RE511500_243	Residential	608122	4853973	1.5	56	99	83	5	0.0%
RE511500_244	Residential	608119	4853977	1.5	57	99	83	5	0.0%
RE511500_245	Residential	608115	4853983	1.5	57	99	83	5	0.0%
RE511500_246	Residential	608112	4853987	1.5	57	99	83	5	0.0%
RE511500_247	Residential	608107	4853994	1.5	58	99	83	5	0.0%
RE511500_259	Residential	607976	4854103	1.5	66	107	83	5	0.0%
RE511500_260	Residential	607970	4854109	1.5	67	108	83	5	0.0%
RE511500_261	Residential	607967	4854115	1.5	67	108	83	5	0.0%
RE511500_262	Residential	607962	4854121	1.5	67	108	83	5	0.0%
RE511500_263	Residential	607959	4854126	1.5	68	108	83	5	0.0%
RE511500_264	Residential	607955	4854131	1.5	68	109	83	5	0.0%
RE511500_265	Residential	607949	4854139	1.5	68	109	83	5	0.0%
RE511500_266	Residential	607944	4854146	1.5	68	109	83	5	0.0%
RE511500_267	Residential	607939	4854153	1.5	68	109	83	5	0.0%
RE511500_268	Residential	607934	4854160	1.5	69	109	83	5	0.0%
RE511500_269	Residential	607929	4854168	1.5	69	110	83	5	0.0%
RE511500_270	Residential	607927	4854176	1.5	69	110	83	5	0.0%
RE511500_288	Residential	607723	4854202	1.5	73	114	83	5	0.0%
RE511500_289	Residential	607711	4854198	1.5	73	114	83	5	0.0%
RE511500_313	Residential	607831	4854199	1.5	71	112	83	5	0.0%
RE511500_314	Residential	607821	4854196	1.5	71	112	83	5	0.0%
RE511500_315	Residential	607810	4854192	1.5	71	112	83	5	0.0%
RE511500_316	Residential	607798	4854189	1.5	71	112	83	5	0.0%
RE511500_317	Residential	607787	4854186	1.5	72	112	83	5	0.0%
RE511500_318	Residential	607777	4854182	1.5	72	112	83	5	0.0%
RE511500_319	Residential	607764	4854179	1.5	72	113	83	5	0.0%
RE511500_320	Residential	607849	4854155	1.5	70	111	83	5	0.0%
RE511500_321	Residential	607839	4854152	1.5	70	111	83	5	0.0%
RE511500_322	Residential	607829	4854148	1.5	70	111	83	5	0.0%
RE511500_323	Residential	607818	4854145	1.5	70	111	83	5	0.0%
RE511500_324	Residential	607806	4854141	1.5	70	111	83	5	0.0%
RE511500_325	Residential	607943	4854078	1.5	66	106	83	5	0.0%
RE511500_326	Residential	607939	4854083	1.5	66	107	83	5	0.0%
RE511500_327	Residential	607933	4854092	1.5	67	107	83	5	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_328	Residential	607929	4854097	1.5	67	108	83	5	0.0%
RE511500_329	Residential	607923	4854106	1.5	67	108	83	5	0.0%
RE511500_330	Residential	607919	4854112	1.5	68	108	83	5	0.0%
RE511500_331	Residential	607913	4854119	1.5	68	109	83	5	0.0%
RE511500_332	Residential	607907	4854127	1.5	68	109	83	5	0.0%
RE511500_333	Residential	607902	4854135	1.5	69	109	83	5	0.0%
RE511500_334	Residential	607897	4854142	1.5	69	110	83	5	0.0%
RE511500_335	Residential	607892	4854151	1.5	69	110	83	5	0.0%
RE511500_336	Residential	607888	4854158	1.5	69	110	83	5	0.0%
RE511500_337	Residential	607885	4854168	1.5	70	111	83	5	0.0%
RE511500_338	Residential	607883	4854174	1.5	70	111	83	5	0.0%
RE511500_339	Residential	607733	4854170	1.5	72	113	83	5	0.0%
RE511500_340	Residential	607810	4854078	1.5	67	108	83	6	0.0%
RE511500_341	Residential	607805	4854085	1.5	68	109	83	6	0.0%
RE511500_342	Residential	607798	4854096	1.5	69	109	83	5	0.0%
RE511500_343	Residential	607794	4854107	1.5	69	110	83	5	0.0%
RE511500_344	Residential	607790	4854118	1.5	70	110	83	5	0.0%
RE511500_345	Residential	607788	4854129	1.5	70	111	83	5	0.0%
RE511500_346	Residential	607785	4854141	1.5	71	111	83	5	0.0%
RE511500_347	Residential	607825	4854044	1.5	65	106	83	6	0.0%
RE511500_348	Residential	607832	4854049	1.5	65	106	83	6	0.0%
RE511500_349	Residential	607840	4854054	1.5	66	106	83	6	0.0%
RE511500_350	Residential	607846	4854059	1.5	66	107	83	6	0.0%
RE511500_351	Residential	607853	4854064	1.5	66	107	83	6	0.0%
RE511500_352	Residential	607861	4854068	1.5	66	107	83	6	0.0%
RE511500_353	Residential	607868	4854074	1.5	66	107	83	6	0.0%
RE511500_354	Residential	607874	4854078	1.5	66	107	83	5	0.0%
RE511500_355	Residential	607881	4854083	1.5	67	108	83	5	0.0%
RE511500_356	Residential	607889	4854088	1.5	67	108	83	5	0.0%
RE511500_357	Residential	607850	4854014	1.5	62	103	83	5	0.0%
RE511500_358	Residential	607857	4854018	1.5	63	104	83	5	0.0%
RE511500_359	Residential	607863	4854023	1.5	63	104	83	5	0.0%
RE511500_360	Residential	607869	4854027	1.5	63	104	83	5	0.0%
RE511500_361	Residential	607874	4854030	1.5	63	104	83	5	0.0%
RE511500_362	Residential	607880	4854034	1.5	64	104	83	5	0.0%
RE511500_363	Residential	607885	4854039	1.5	64	105	83	6	0.0%
RE511500_364	Residential	607891	4854043	1.5	64	105	83	6	0.0%
RE511500_365	Residential	607895	4854047	1.5	64	105	83	6	0.0%
RE511500_366	Residential	607900	4854050	1.5	64	105	83	6	0.0%
RE511500_367	Residential	607906	4854054	1.5	65	105	83	6	0.0%
RE511500_368	Residential	607911	4854057	1.5	65	106	83	6	0.0%
RE511500_369	Residential	607823	4854097	1.5	68	109	83	5	0.0%
RE511500_370	Residential	607831	4854103	1.5	69	109	83	5	0.0%
RE511500_371	Residential	607839	4854108	1.5	69	109	83	5	0.0%
RE511500_372	Residential	607847	4854113	1.5	69	109	83	5	0.0%
RE511500_373	Residential	607854	4854118	1.5	69	110	83	5	0.0%
RE511500_374	Residential	607864	4854124	1.5	69	110	83	5	0.0%
RE511500_376	Residential	607755	4854206	1.5	72	113	83	5	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_001	Residential	608413	4853627	1.5	65	109	83	12	0.0%
RE511600_002	Residential	608350	4853717	1.5	60	104	83	15	0.0%
RE511600_003	Residential	608360	4853703	1.5	61	106	83	13	0.0%
RE511600_004	Residential	608309	4853775	1.5	60	105	83	12	0.0%
RE511600_005	Residential	608274	4853824	1.5	59	104	83	6	0.0%
RE511600_006	Residential	608263	4853840	1.5	59	104	83	5	0.0%
RE511600_007	Residential	608430	4853685	1.5	59	104	83	11	0.0%
RE511600_008	Residential	608384	4853750	1.5	59	104	83	14	0.0%
RE511600_009	Residential	608443	4853666	1.5	58	103	83	11	0.0%
RE511600_010	Residential	608451	4853655	1.5	61	105	83	10	0.0%
RE511600_011	Residential	608399	4853728	1.5	59	104	83	13	0.0%
RE511600_012	Residential	608407	4853717	1.5	60	105	83	13	0.0%
RE511600_013	Residential	608423	4853695	1.5	60	105	83	12	0.0%
RE511600_014	Residential	608392	4853739	1.5	59	104	83	13	0.0%
RE511600_015	Residential	608437	4853676	1.5	58	103	83	11	0.0%
RE511600_016	Residential	608415	4853706	1.5	61	105	83	13	0.0%
RE511600_017	Residential	608253	4853854	1.5	59	103	83	4	0.0%
RE511600_018	Residential	608527	4853503	1.5	72	113	83	18	0.0%
RE511600_019	Residential	608519	4853540	1.5	68	113	83	15	0.0%
RE511600_020	Residential	608517	4853549	1.5	68	112	83	15	0.0%
RE511600_021	Residential	608473	4853624	1.5	61	106	83	13	0.0%
RE511600_022	Residential	608509	4853566	1.5	70	111	83	14	0.0%
RE511600_023	Residential	608496	4853592	1.5	70	111	83	16	0.0%
RE511600_024	Residential	608441	4853588	1.5	70	113	83	17	0.0%
RE511600_025	Residential	608524	4853521	1.5	70	113	83	15	0.0%
RE511600_026	Residential	608490	4853600	1.5	69	111	83	16	0.0%
RE511600_027	Residential	608513	4853558	1.5	69	110	83	14	0.0%
RE511600_028	Residential	608407	4853636	1.5	63	107	83	13	0.0%
RE511600_029	Residential	608402	4853644	1.5	61	105	83	13	0.0%
RE511600_030	Residential	608396	4853651	1.5	60	105	83	12	0.0%
RE511600_031	Residential	608391	4853659	1.5	62	106	83	12	0.0%
RE511600_032	Residential	608268	4853833	1.5	59	104	83	5	0.0%
RE511600_033	Residential	608258	4853847	1.5	59	103	83	4	0.0%
RE511600_034	Residential	608526	4853512	1.5	72	113	83	16	0.0%
RE511600_035	Residential	608365	4853764	1.5	59	104	83	13	0.0%
RE511600_036	Residential	608501	4853584	1.5	71	112	83	15	0.0%
RE511600_037	Residential	608485	4853608	1.5	67	109	83	15	0.0%
RE511600_038	Residential	608447	4853580	1.5	72	114	83	18	0.0%
RE511600_039	Residential	608480	4853615	1.5	64	107	83	14	0.0%
RE511600_040	Residential	608522	4853530	1.5	69	113	83	15	0.0%
RE511600_041	Residential	608380	4853674	1.5	64	108	83	13	0.0%
RE511600_042	Residential	608375	4853682	1.5	64	108	83	14	0.0%
RE511600_043	Residential	608355	4853710	1.5	60	104	83	15	0.0%
RE511600_044	Residential	608370	4853689	1.5	63	108	83	14	0.0%
RE511600_045	Residential	608365	4853696	1.5	62	107	83	14	0.0%
RE511600_046	Residential	608528	4853482	1.5	77	118	83	22	0.1%
RE511600_047	Residential	608505	4853575	1.5	71	112	83	16	0.0%
RE511600_048	Residential	608435	4853597	1.5	66	110	83	15	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_049	Residential	608528	4853494	1.5	74	115	83	20	0.0%
RE511600_050	Residential	608345	4853723	1.5	60	104	83	14	0.0%
RE511600_051	Residential	608341	4853730	1.5	60	104	83	15	0.0%
RE511600_052	Residential	608336	4853737	1.5	60	104	83	15	0.0%
RE511600_053	Residential	608330	4853745	1.5	60	104	83	15	0.0%
RE511600_054	Residential	608325	4853752	1.5	60	104	83	14	0.0%
RE511600_055	Residential	608320	4853760	1.5	60	104	83	14	0.0%
RE511600_056	Residential	608315	4853767	1.5	60	105	83	13	0.0%
RE511600_057	Residential	608304	4853782	1.5	60	104	83	11	0.0%
RE511600_058	Residential	608299	4853790	1.5	60	104	83	9	0.0%
RE511600_059	Residential	608292	4853799	1.5	60	104	83	8	0.0%
RE511600_060	Residential	608386	4853667	1.5	63	107	83	12	0.0%
RE511600_061	Residential	608377	4853772	1.5	59	104	83	11	0.0%
RE511600_062	Residential	608387	4853779	1.5	59	103	83	11	0.0%
RE511600_085	Residential	608248	4853972	1.5	55	97	83	5	0.0%
RE511600_086	Residential	608239	4853965	1.5	54	98	83	5	0.0%
RE511600_087	Residential	608227	4853958	1.5	54	98	83	5	0.0%
RE511600_091	Residential	608350	4853851	1.5	57	102	83	6	0.0%
RE511600_092	Residential	608343	4853862	1.5	57	102	83	6	0.0%
RE511600_093	Residential	608335	4853872	1.5	57	101	83	5	0.0%
RE511600_094	Residential	608327	4853883	1.5	56	101	83	4	0.0%
RE511600_095	Residential	608320	4853894	1.5	56	100	83	4	0.0%
RE511600_096	Residential	608312	4853905	1.5	55	100	83	4	0.0%
RE511600_097	Residential	608305	4853915	1.5	55	100	83	4	0.0%
RE511600_098	Residential	608298	4853925	1.5	55	99	83	4	0.0%
RE511600_099	Residential	608291	4853934	1.5	54	99	83	4	0.0%
RE511600_100	Residential	608283	4853945	1.5	54	98	83	5	0.0%
RE511600_101	Residential	608348	4853801	1.5	59	103	83	10	0.0%
RE511600_102	Residential	608342	4853810	1.5	59	103	83	9	0.0%
RE511600_103	Residential	608336	4853817	1.5	59	103	83	9	0.0%
RE511600_104	Residential	608331	4853825	1.5	59	103	83	8	0.0%
RE511600_105	Residential	608325	4853833	1.5	58	103	83	6	0.0%
RE511600_106	Residential	608319	4853842	1.5	58	103	83	6	0.0%
RE511600_107	Residential	608312	4853852	1.5	58	102	83	5	0.0%
RE511600_108	Residential	608305	4853861	1.5	58	102	83	5	0.0%
RE511600_109	Residential	608299	4853870	1.5	57	102	83	4	0.0%
RE511600_110	Residential	608292	4853880	1.5	57	102	83	4	0.0%
RE511600_111	Residential	608285	4853889	1.5	57	101	83	4	0.0%
RE511600_112	Residential	608279	4853898	1.5	56	101	83	4	0.0%
RE511600_113	Residential	608274	4853905	1.5	56	101	83	4	0.0%
RE511600_114	Residential	608269	4853913	1.5	56	100	83	4	0.0%
RE511600_115	Residential	608257	4853930	1.5	55	99	83	4	0.0%
RE511600_116	Residential	608248	4853861	1.5	58	103	83	4	0.0%
RE511600_117	Residential	608243	4853868	1.5	58	103	83	4	0.0%
RE511600_118	Residential	608238	4853875	1.5	58	102	83	4	0.0%
RE511600_119	Residential	608233	4853882	1.5	58	102	83	4	0.0%
RE511600_120	Residential	608228	4853889	1.5	57	102	83	4	0.0%
RE511600_121	Residential	608223	4853896	1.5	57	102	83	4	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_122	Residential	608218	4853903	1.5	57	101	83	4	0.0%
RE511600_123	Residential	608213	4853910	1.5	57	101	83	4	0.0%
RE511600_124	Residential	608208	4853917	1.5	56	101	83	4	0.0%
RE511600_125	Residential	608204	4853924	1.5	56	101	83	4	0.0%
RE511600_126	Residential	608199	4853931	1.5	56	100	83	5	0.0%
RE511600_127	Residential	608194	4853938	1.5	55	100	83	5	0.0%
RE511600_128	Residential	608189	4853944	1.5	55	100	83	5	0.0%
RE511600_129	Residential	608184	4853951	1.5	55	99	83	5	0.0%
RE511600_130	Residential	608179	4853958	1.5	54	99	83	5	0.0%
RE511600_131	Residential	608173	4853967	1.5	55	99	83	5	0.0%
RE511600_132	Residential	608210	4853982	1.5	56	97	83	5	0.0%
RE511600_133	Residential	608221	4853990	1.5	56	97	83	5	0.0%
RE511600_134	Residential	608230	4853997	1.5	56	97	83	5	0.0%
RE511600_142	Residential	608180	4854022	1.5	59	100	83	5	0.0%
RE511600_143	Residential	608189	4854028	1.5	59	100	83	5	0.0%
RE511600_144	Residential	608196	4854033	1.5	59	100	83	5	0.0%
RE511600_163	Residential	608170	4854054	1.5	61	102	83	5	0.0%
RE511600_164	Residential	608162	4854048	1.5	61	102	83	5	0.0%
RE511600_185	Residential	608102	4854000	1.5	58	99	83	5	0.0%
RE511600_186	Residential	608099	4854005	1.5	59	100	83	5	0.0%
RE511600_187	Residential	608096	4854009	1.5	59	100	83	5	0.0%
RE511600_188	Residential	608090	4854017	1.5	60	100	83	5	0.0%
RE511600_189	Residential	608087	4854022	1.5	60	101	83	5	0.0%
RE511600_190	Residential	608081	4854032	1.5	61	102	83	5	0.0%
RE511600_191	Residential	608077	4854037	1.5	61	102	83	5	0.0%
RE511600_192	Residential	608073	4854045	1.5	62	103	83	5	0.0%
RE511600_193	Residential	608068	4854051	1.5	62	103	83	5	0.0%
RE511600_194	Residential	608064	4854057	1.5	63	104	83	5	0.0%
RE511600_195	Residential	608060	4854062	1.5	63	104	83	5	0.0%
RE511600_196	Residential	608056	4854069	1.5	64	104	83	5	0.0%
RE511600_197	Residential	608053	4854075	1.5	64	105	83	5	0.0%
RE511600_198	Residential	608154	4853993	1.5	57	98	83	5	0.0%
RE511600_199	Residential	608148	4854003	1.5	58	99	83	5	0.0%
RE511600_200	Residential	608142	4854010	1.5	59	99	83	5	0.0%
RE511600_201	Residential	608137	4854018	1.5	59	100	83	5	0.0%
RE511600_202	Residential	608132	4854025	1.5	60	101	83	5	0.0%
RE511600_203	Residential	608126	4854033	1.5	60	101	83	5	0.0%
RE511600_204	Residential	608121	4854040	1.5	61	102	83	5	0.0%
RE511600_205	Residential	608116	4854047	1.5	61	102	83	5	0.0%
RE511600_206	Residential	608111	4854054	1.5	62	103	83	5	0.0%
RE511600_207	Residential	608107	4854061	1.5	62	103	83	5	0.0%
RE511600_208	Residential	608102	4854068	1.5	63	104	83	5	0.0%
RE511600_209	Residential	608097	4854075	1.5	63	104	83	5	0.0%
RE511600_210	Residential	608091	4854082	1.5	64	105	83	5	0.0%
RE511600_211	Residential	608086	4854090	1.5	64	105	83	5	0.0%
RE511600_212	Residential	608080	4854098	1.5	65	106	83	5	0.0%
RE511600_228	Residential	608507	4853702	1.5	57	102	83	9	0.0%
RE511600_242	Residential	608263	4853920	1.5	55	100	83	4	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511800_001	Residential	607134	4855697	1.5	104	127	83	51	0.1%
RE512000_002	Residential	607206	4855951	1.5	106	130	83	91	0.2%
RE512000_003	Residential	607187	4856027	1.5	109	132	83	115	0.3%
RE512100_001	Residential	607265	4856058	1.5	108	131	83	99	0.2%
RE512100_002	Residential	607248	4856119	1.5	112	134	83	113	0.3%
RE512200_001	Residential	607241	4856162	1.5	115	137	83	131	0.3%
RE512200_002	Residential	607123	4856318	1.5	131	153	83	321	0.7%
RE512200_003	Residential	607102	4856358	1.5	133	155	83	422	1.0%
RE512300_001	Residential	607221	4856317	1.5	120	142	83	188	0.4%
RE512400_001	Residential	607226	4856438	1.5	128	150	83	242	0.6%
RE514400_001	Residential	608610	4857694	1.5	104	129	83	31	0.1%
RE514400_003	Residential	608876	4857474	1.5	109	131	83	26	0.1%
RE514400_006	Residential	608883	4857432	1.5	109	131	83	23	0.1%
RE514400_007	Residential	608877	4857453	1.5	109	131	83	23	0.1%
RE514500_001	Residential	608674	4857705	1.5	104	129	83	29	0.1%
RE514500_002	Residential	608701	4857709	1.5	104	129	83	29	0.1%
RE514500_003	Residential	608738	4857729	1.5	104	129	83	28	0.1%
RE514500_006	Residential	608958	4857441	1.5	108	130	83	27	0.1%
RE514500_007	Residential	608953	4857458	1.5	108	130	83	26	0.1%
RE514500_008	Residential	608872	4857492	1.5	109	131	83	27	0.1%
RE514500_009	Residential	608859	4857508	1.5	109	131	83	28	0.1%
RE514500_010	Residential	608849	4857526	1.5	108	130	83	26	0.1%
RE514600_001	Residential	608758	4857755	1.5	104	129	83	28	0.1%
RE514600_002	Residential	608949	4857475	1.5	108	130	83	25	0.1%
RE514600_003	Residential	608946	4857496	1.5	109	131	83	24	0.1%
RE514600_004	Residential	608942	4857512	1.5	109	131	83	26	0.1%
RE514600_005	Residential	608936	4857529	1.5	108	130	83	26	0.1%
RE514600_006	Residential	608930	4857551	1.5	108	130	83	26	0.1%
RE514700_001	Residential	608965	4857617	1.5	107	129	83	26	0.1%
RE514800_001	Residential	608884	4857846	1.5	96	122	83	40	0.1%
RE515000_001	Residential	608971	4857986	1.5	104	129	83	66	0.2%
RE515100_001	Residential	609037	4857912	1.5	104	128	83	34	0.1%
RE515200_001	Residential	609158	4857928	1.5	92	117	83	25	0.1%
RE515200_002	Residential	609081	4857926	1.5	101	126	83	32	0.1%
RE515200_003	Residential	608988	4858132	1.5	89	122	83	44	0.1%
RE515300_001	Residential	609255	4857942	1.5	91	120	83	28	0.1%
RE515300_002	Residential	609091	4858212	1.5	84	121	83	31	0.1%
RE515300_003	Residential	608992	4858402	1.5	89	120	83	97	0.2%
RE516200_001	Residential	609863	4858591	1.5	80	117	83	30	0.1%
RE517200_001	Residential	610865	4858953	1.5	63	94	83	10	0.0%
RE517200_002	Residential	610873	4858915	1.5	64	95	83	7	0.0%
RE517200_003	Residential	610988	4858848	1.5	58	103	83	5	0.0%
RE517400_001	Residential	611124	4858907	1.5	59	103	83	4	0.0%
RE519100_001	Residential	612653	4859633	1.5	60	105	83	12	0.0%
RE519500_001	Residential	612843	4860236	1.5	75	114	83	30	0.1%
RE519500_002	Residential	612758	4860312	1.5	83	120	83	68	0.2%
RE521400_001	Residential	614549	4860340	1.5	62	106	83	15	0.0%
RE521600_001	Park and Conservation	615842	4859006	1.5	79	120	83	86	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_002	Residential	614759	4860153	1.5	54	95	83	8	0.0%
RE521600_003	Residential	614783	4860430	1.5	69	113	83	23	0.1%
RE521600_004	Residential	615884	4859578	1.5	101	129	83	391	0.9%
RE521600_005	Residential	615805	4859615	1.5	81	121	83	194	0.4%
RE521600_006	Residential	615779	4859578	1.5	79	120	83	156	0.4%
RE521600_007	Residential	615741	4859736	1.5	79	120	83	133	0.3%
RE521600_008	Residential	615516	4859929	1.5	71	116	83	77	0.2%
RE521600_009	Residential	615671	4860025	1.5	80	121	83	130	0.3%
RE521600_010	Residential	616259	4860149	1.5	71	115	83	65	0.1%
RE521600_011	Residential	616419	4860214	1.5	69	113	83	16	0.0%
RE521600_012	Residential	615172	4860341	1.5	63	105	83	13	0.0%
RE521600_013	Residential	615849	4858301	1.5	69	112	83	17	0.0%
RE521600_017	Residential	614954	4860122	1.5	51	96	83	8	0.0%
RE521600_018	Residential	615792	4858087	1.5	64	101	83	12	0.0%
RE521600_019	Residential	615658	4858566	1.5	55	100	83	10	0.0%
RE521600_020	Residential	615792	4858189	1.5	66	102	83	14	0.0%
RE521600_023	Residential	615889	4858330	1.5	74	117	83	24	0.1%
RE521600_026	Residential	615700	4858499	1.5	57	101	83	12	0.0%
RE521600_028	Residential	615797	4858289	1.5	66	105	83	15	0.0%
RE521600_030	Residential	615749	4858368	1.5	64	99	83	12	0.0%
RE521600_032	Residential	615905	4858207	1.5	73	117	83	22	0.1%
RE521600_035	Residential	615746	4858159	1.5	66	98	83	10	0.0%
RE521600_036	Residential	615704	4858558	1.5	56	101	83	11	0.0%
RE521600_037	Residential	615871	4858014	1.5	64	108	83	15	0.0%
RE521600_038	Residential	615876	4858126	1.5	67	110	83	16	0.0%
RE521600_039	Residential	615808	4858385	1.5	63	103	83	14	0.0%
RE521600_041	Residential	615837	4858114	1.5	64	106	83	15	0.0%
RE521600_043	Residential	615749	4858276	1.5	66	100	83	13	0.0%
RE521600_044	Residential	615845	4858206	1.5	66	108	83	16	0.0%
RE521600_045	Residential	615931	4858159	1.5	73	117	83	23	0.1%
RE521600_046	Residential	615948	4858081	1.5	73	117	83	24	0.1%
RE521600_047	Residential	616722	4858027	1.5	61	102	83	7	0.0%
RE521600_048	Residential	616724	4858016	1.5	61	102	83	7	0.0%
RE521600_049	Residential	616727	4858005	1.5	61	101	83	7	0.0%
RE521600_050	Residential	616685	4857961	1.5	64	105	83	8	0.0%
RE521600_051	Residential	616692	4857982	1.5	64	105	83	9	0.0%
RE521600_052	Residential	616692	4857993	1.5	64	104	83	9	0.0%
RE521600_053	Residential	616690	4858005	1.5	64	105	83	9	0.0%
RE521600_054	Residential	616682	4858015	1.5	64	105	83	9	0.0%
RE521600_055	Residential	616628	4857990	1.5	69	110	83	11	0.0%
RE521600_056	Residential	616631	4857979	1.5	68	109	83	11	0.0%
RE521600_057	Residential	616637	4857970	1.5	68	109	83	11	0.0%
RE521600_058	Residential	616642	4857962	1.5	68	108	83	10	0.0%
RE521600_059	Residential	616645	4857951	1.5	67	108	83	10	0.0%
RE521600_060	Residential	616617	4857954	1.5	70	111	83	12	0.0%
RE521600_061	Residential	616605	4857951	1.5	72	112	83	12	0.0%
RE521600_062	Residential	616591	4857946	1.5	73	114	83	13	0.0%
RE521600_063	Residential	616581	4857941	1.5	75	116	83	16	0.0%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_064	Residential	616570	4857932	1.5	76	117	83	18	0.0%
RE521600_065	Residential	616562	4857926	1.5	78	118	83	19	0.0%
RE521600_066	Residential	616551	4857917	1.5	78	119	83	26	0.1%
RE521600_067	Residential	616541	4857910	1.5	78	119	83	27	0.1%
RE521600_068	Residential	616532	4857900	1.5	79	119	83	28	0.1%
RE521600_069	Residential	616527	4857889	1.5	79	120	83	31	0.1%
RE521600_070	Residential	616522	4857875	1.5	79	120	83	32	0.1%
RE521600_071	Residential	616520	4857863	1.5	79	120	83	33	0.1%
RE521600_072	Residential	616516	4857852	1.5	79	120	83	34	0.1%
RE521600_073	Residential	616511	4857839	1.5	79	120	83	35	0.1%
RE521600_074	Residential	616508	4857827	1.5	80	120	83	36	0.1%
RE521600_075	Residential	616510	4857818	1.5	80	120	83	36	0.1%
RE521600_076	Residential	616566	4857851	1.5	78	119	83	24	0.1%
RE521600_077	Residential	616573	4857861	1.5	77	118	83	22	0.1%
RE521600_078	Residential	616578	4857871	1.5	76	117	83	18	0.0%
RE521600_079	Residential	616586	4857883	1.5	75	117	83	16	0.0%
RE521600_080	Residential	616597	4857890	1.5	73	115	83	13	0.0%
RE521600_081	Residential	616609	4857897	1.5	72	113	83	12	0.0%
RE521600_082	Residential	616621	4857902	1.5	71	111	83	12	0.0%
RE521600_083	Residential	616646	4857916	1.5	68	109	83	10	0.0%
RE521600_084	Residential	616072	4857806	1.5	78	119	83	32	0.1%
RE521600_085	Residential	616075	4857794	1.5	78	119	83	28	0.1%
RE521600_086	Residential	616095	4857778	1.5	79	119	83	31	0.1%
RE521600_087	Residential	616097	4857766	1.5	79	119	83	29	0.1%
RE521600_088	Residential	616098	4857755	1.5	78	119	83	31	0.1%
RE521600_089	Residential	616192	4857944	1.5	100	129	83	181	0.4%
RE521600_090	Residential	615423	4860137	1.5	73	114	83	38	0.1%
RW110000_001	Residential	595952	4825790	1.5	110	132	83	219	0.5%
RW110000_002	Residential	595454	4825807	1.5	118	140	83	908	2.1%
RW110000_008	Residential	594041	4825166	1.5	109	128	83	233	0.5%
RW110000_009	Residential	594096	4825191	1.5	104	129	83	299	0.7%
RW110000_010	Residential	594523	4825688	1.5	90	122	83	204	0.5%
RW110000_011	Residential	595159	4826252	1.5	107	131	83	371	0.8%
RW110000_012	Residential	595437	4826548	1.5	110	134	83	475	1.1%
RW110000_013	Residential	595321	4826744	1.5	106	131	83	376	0.9%
RW110000_014	Residential	595112	4826651	1.5	107	132	83	408	0.9%
RW110000_015	Residential	595155	4826706	1.5	107	133	83	431	1.0%
RW110000_016	Residential	595166	4826855	1.5	108	133	83	394	0.9%
RW110000_017	Residential	595209	4826815	1.5	109	133	83	472	1.1%
RW110000_018	Residential	594653	4825844	1.5	91	122	83	211	0.5%
RW110000_019	Residential	595416	4826834	1.5	108	133	83	484	1.1%
RW110000_020	Residential	595560	4825534	1.5	105	131	83	310	0.7%
RW110000_021	Residential	597393	4824513	1.5	85	124	83	138	0.3%
RW110000_022	Residential	594899	4824668	1.5	104	131	83	266	0.6%
RW110000_023	Residential	594655	4824528	1.5	111	133	83	290	0.7%
RW110000_024	Residential	595310	4826113	1.5	121	143	83	1065	2.4%
RW110100_001	Residential	595323	4827011	1.5	110	135	83	578	1.3%
RW112100_001	Residential	594926	4829061	1.5	112	134	83	285	0.7%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW112100_002	Residential	594880	4829107	1.5	109	131	83	190	0.4%
RW112100_003	Residential	594856	4829138	1.5	108	131	83	167	0.4%
RW112200_001	Residential	594826	4829169	1.5	107	131	83	133	0.3%
RW112300_001	Residential	594544	4829356	1.5	80	121	83	46	0.1%
RW112300_002	Residential	594555	4829392	1.5	80	121	83	46	0.1%
RW112300_003	Residential	594737	4829363	1.5	105	130	83	84	0.2%
RW112400_001	Residential	594707	4829399	1.5	105	129	83	78	0.2%
RW112400_002	Residential	594683	4829425	1.5	104	129	83	73	0.2%
RW112400_003	Residential	594663	4829470	1.5	104	129	83	67	0.2%
RW112500_001	Residential	594652	4829522	1.5	103	128	83	54	0.1%
RW112500_002	Residential	594587	4829561	1.5	99	123	83	52	0.1%
RW112600_001	Residential	594537	4829618	1.5	90	122	83	42	0.1%
RW113300_001	Residential	595127	4830221	1.5	108	131	83	213	0.5%
RW113700_001	Residential	594940	4830647	1.5	79	120	83	67	0.2%
RW210600_001	Residential	594968	4831278	1.5	96	128	83	139	0.3%
RW210600_002	Residential	594854	4831236	1.5	105	127	83	118	0.3%
RW210700_001	Residential	594784	4831216	1.5	107	130	83	108	0.2%
RW210700_002	Residential	594835	4831316	1.5	90	122	83	72	0.2%
RW210700_003	Residential	595003	4831319	1.5	105	130	83	178	0.4%
RW210800_001	Residential	594396	4831184	1.5	62	103	83	10	0.0%
RW210800_002	Residential	594871	4831353	1.5	85	125	83	83	0.2%
RW210800_003	Residential	594900	4831384	1.5	94	127	83	90	0.2%
RW210800_004	Residential	594906	4831419	1.5	98	128	83	89	0.2%
RW210900_001	Residential	594700	4831386	1.5	87	119	83	54	0.1%
RW211000_001	Residential	594519	4831395	1.5	70	114	83	36	0.1%
RW213300_001	Residential	594131	4833825	1.5	93	123	83	196	0.4%
RW213500_001	Residential	594089	4834002	1.5	93	123	83	197	0.4%
RW213500_002	Residential	593987	4833921	1.5	78	119	83	101	0.2%
RW213500_003	Residential	594063	4834025	1.5	88	123	83	167	0.4%
RW213900_001	Residential	593680	4834239	1.5	81	122	83	69	0.2%
RW213900_002	Residential	593146	4833948	1.5	81	122	83	48	0.1%
RW213900_003	Residential	593108	4833915	1.5	80	121	83	36	0.1%
RW214000_001	Residential	593442	4834167	1.5	85	126	83	54	0.1%
RW214000_002	Residential	593165	4834006	1.5	80	121	83	33	0.1%
RW214200_001	Residential	593365	4834312	1.5	80	120	83	46	0.1%
RW214200_002	Residential	593424	4834334	1.5	81	122	83	85	0.2%
RW214200_003	Residential	593447	4834362	1.5	82	123	83	101	0.2%
RW214200_004	Residential	593638	4834465	1.5	104	134	83	171	0.4%
RW214400_001	Residential	593557	4834570	1.5	83	123	83	96	0.2%
RW214400_002	Residential	593363	4834447	1.5	72	115	83	52	0.1%
RW214500_001	Place of Worship	593180	4834366	1.5	57	101	83	11	0.0%
RW214700_001	Residential	593316	4834759	1.5	66	111	83	34	0.1%
RW214800_001	Residential	593246	4834900	1.5	66	111	83	30	0.1%
RW214900_001	Place of Worship	593238	4834901	1.5	66	111	83	29	0.1%
RW215500_001	Residential	592716	4835205	1.5	80	118	83	26	0.1%
RW215500_002	Residential	592751	4835308	1.5	78	118	83	12	0.0%
RW215500_003	Residential	592672	4835243	1.5	80	118	83	26	0.1%
RW215600_001	Residential	592652	4835268	1.5	81	119	83	27	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW215600_002	Residential	592625	4835291	1.5	82	119	83	26	0.1%
RW215600_003	Residential	592706	4835349	1.5	81	118	83	13	0.0%
RW216000_001	Residential	592457	4835580	1.5	90	119	83	27	0.1%
RW216300_001	Residential	592187	4835722	1.5	100	128	83	37	0.1%
RW217300_001	Residential	590963	4835918	1.5	56	98	83	7	0.0%
RW217300_003	Residential	590894	4835850	1.5	52	96	83	5	0.0%
RW217400_001	Residential	591070	4836272	1.5	75	116	83	23	0.1%
RW217400_003	Residential	590716	4835921	1.5	54	95	83	6	0.0%
RW217600_001	Residential	591245	4836671	1.5	112	139	83	293	0.7%
RW218600_001	Residential	589698	4836609	1.5	74	114	83	10	0.0%
RW218700_001	Residential	590211	4837285	1.5	94	123	83	131	0.3%
RW219300_001	Residential	589994	4837866	1.5	112	134	83	206	0.5%
RW219600_001	Residential	589829	4838199	1.5	120	142	83	253	0.6%
RW219800_001	Residential	589708	4838309	1.5	115	137	83	154	0.4%
RW219800_002	Residential	589678	4838339	1.5	115	137	83	141	0.3%
RW219800_003	Residential	589655	4838356	1.5	114	136	83	130	0.3%
RW219900_001	Residential	589628	4838393	1.5	114	136	83	125	0.3%
RW219900_002	Residential	589604	4838419	1.5	113	135	83	115	0.3%
RW219900_003	Residential	589574	4838446	1.5	113	135	83	107	0.2%
RW219900_004	Residential	589348	4838304	1.5	108	130	83	55	0.1%
RW220100_001	Residential	589237	4838630	1.5	108	132	83	62	0.1%
RW220200_001	Residential	589212	4838657	1.5	107	131	83	60	0.1%
RW220200_002	Residential	589193	4838697	1.5	106	130	83	56	0.1%
RW221500_001	Residential	589630	4840149	1.5	106	131	83	131	0.3%
RW221600_001	Residential	589645	4840276	1.5	107	129	83	99	0.2%
RW221600_002	Residential	589618	4840305	1.5	97	122	83	82	0.2%
RW221600_003	Residential	589575	4840340	1.5	89	120	83	73	0.2%
RW221600_004	Residential	589489	4840296	1.5	80	121	83	52	0.1%
RW221600_005	Residential	589463	4840313	1.5	79	120	83	42	0.1%
RW221700_001	Residential	589372	4840554	1.5	78	119	83	27	0.1%
RW222900_001	Residential	590172	4841526	1.5	80	120	83	62	0.1%
RW223000_001	Residential	590405	4841464	1.5	109	134	83	259	0.6%
RW223000_002	Residential	589855	4841856	1.5	79	120	83	16	0.0%
RW223100_001	Residential	590119	4841763	1.5	74	117	83	33	0.1%
RW223600_001	Residential	590319	4842303	1.5	83	121	83	33	0.1%
RW223700_001	Residential	590349	4842328	1.5	86	122	83	34	0.1%
RW223700_002	Residential	590387	4842378	1.5	89	122	83	35	0.1%
RW223800_001	Residential	590421	4842402	1.5	93	122	83	35	0.1%
RW223800_002	Residential	590456	4842433	1.5	94	123	83	43	0.1%
RW224200_001	Residential	591059	4842518	1.5	110	131	83	382	0.9%
RW225200_001	Residential	591261	4843431	1.5	117	138	83	240	0.5%
RW225300_001	Residential	591243	4843461	1.5	118	138	83	206	0.5%
RW225300_002	Residential	591272	4843493	1.5	119	139	83	277	0.6%
RW225300_003	Residential	591295	4843534	1.5	119	140	83	351	0.8%
RW226000_001	Residential	591344	4844228	1.5	116	141	83	407	0.9%
RW226200_001	Residential	591234	4844508	1.5	111	133	83	132	0.3%
RW226300_001	Residential	591196	4844542	1.5	110	132	83	111	0.3%
RW226300_002	Residential	591171	4844578	1.5	110	132	83	98	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW227700_001	Residential	591290	4846105	1.5	103	132	83	75	0.2%
RW227800_001	Residential	591651	4846073	1.5	109	135	83	207	0.5%
RW227800_002	Residential	591541	4846134	1.5	110	134	83	202	0.5%
RW227800_003	Residential	591348	4846123	1.5	105	132	83	114	0.3%
RW228900_001	Residential	592191	4847059	1.5	111	138	83	152	0.3%
RW229000_005	Residential	592239	4847128	1.5	111	137	83	141	0.3%
RW229100_003	Residential	592057	4847361	1.5	84	118	83	52	0.1%
RW229100_004	Residential	592238	4847208	1.5	109	134	83	125	0.3%
RW229200_001	Residential	591945	4847506	1.5	84	119	83	32	0.1%
RW229200_002	Residential	592082	4847514	1.5	83	119	83	40	0.1%
RW229200_003	Residential	592013	4847571	1.5	85	119	83	31	0.1%
RW229200_004	Residential	591965	4847613	1.5	85	120	83	23	0.1%
RW229200_005	Residential	592047	4847546	1.5	83	119	83	33	0.1%
RW229200_006	Residential	591969	4847485	1.5	82	119	83	35	0.1%
RW229200_007	Residential	591918	4847523	1.5	85	120	83	30	0.1%
RW229300_001	Residential	591940	4847644	1.5	81	119	83	21	0.0%
RW230300_001	Residential	592829	4848529	1.5	93	121	83	54	0.1%
RW230300_002	Residential	592606	4848716	1.5	80	121	83	38	0.1%
RW230400_003	Residential	593165	4848363	1.5	113	138	83	160	0.4%
RW230400_004	Residential	593067	4848428	1.5	109	134	83	120	0.3%
RW230400_005	Residential	592665	4848881	1.5	80	121	83	32	0.1%
RW231500_001	Residential	593790	4849191	1.5	108	132	83	97	0.2%
RW231500_002	Residential	593814	4849083	1.5	108	133	83	135	0.3%
RW231800_002	Residential	593623	4849689	1.5	104	129	83	32	0.1%
RW231800_003	Residential	593681	4849607	1.5	104	129	83	34	0.1%
RW231900_001	Residential	593974	4849584	1.5	100	129	83	72	0.2%
RW231900_002	Residential	593821	4849636	1.5	105	130	83	40	0.1%
RW231900_003	Residential	593783	4849662	1.5	105	130	83	36	0.1%
RW231900_004	Residential	593753	4849685	1.5	104	129	83	35	0.1%
RW231900_005	Residential	593708	4849712	1.5	104	128	83	32	0.1%
RW231900_006	Residential	593679	4849744	1.5	104	129	83	31	0.1%
RW232900_001	Residential	594647	4850489	1.5	78	119	83	90	0.2%
RW232900_002	Residential	594641	4850578	1.5	85	121	83	129	0.3%
RW232900_003	Residential	594596	4850601	1.5	84	120	83	99	0.2%
RW233000_001	Residential	594937	4850252	1.5	102	130	83	239	0.5%
RW233000_002	Residential	594873	4850324	1.5	100	128	83	193	0.4%
RW233000_003	Residential	594722	4850470	1.5	80	120	83	124	0.3%
RW233000_004	Residential	594661	4850750	1.5	92	120	83	81	0.2%
RW233100_001	Residential	595054	4850303	1.5	109	135	83	328	0.7%
RW233100_002	Residential	594986	4850367	1.5	106	132	83	230	0.5%
RW233100_003	Residential	594960	4850397	1.5	104	131	83	205	0.5%
RW233100_004	Residential	594754	4850728	1.5	90	118	83	70	0.2%
RW233300_001	Residential	595066	4850652	1.5	100	128	83	80	0.2%
RW233500_001	Residential	595517	4850395	1.5	129	151	83	623	1.4%
RW233600_001	Residential	595481	4850552	1.5	112	136	83	228	0.5%
RW233700_001	Residential	595601	4850557	1.5	117	142	83	329	0.8%
RW233800_001	Residential	595629	4850726	1.5	110	134	83	181	0.4%
RW234400_001	Residential	595843	4851239	1.5	92	124	83	84	0.2%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW234400_002	Residential	595722	4851407	1.5	87	119	83	51	0.1%
RW234400_003	Residential	595753	4851375	1.5	88	119	83	57	0.1%
RW234500_001	Residential	596110	4851144	1.5	109	134	83	175	0.4%
RW234500_002	Residential	596228	4851057	1.5	115	137	83	365	0.8%
RW234600_001	Residential	595890	4851390	1.5	91	120	83	75	0.2%
RW234600_002	Residential	595822	4851471	1.5	89	119	83	58	0.1%
RW234600_003	Residential	595792	4851490	1.5	87	119	83	54	0.1%
RW235800_001	Residential	596933	4852124	1.5	109	133	83	216	0.5%
RW235800_002	Residential	596708	4852352	1.5	106	131	83	91	0.2%
RW235800_003	Residential	596626	4852447	1.5	105	130	83	77	0.2%
RW235800_004	Residential	596582	4852479	1.5	105	129	83	73	0.2%
RW235900_003	Residential	596852	4852343	1.5	106	129	83	156	0.4%
RW235900_004	Residential	596685	4852406	1.5	107	131	83	93	0.2%
RW235900_008	Residential	596930	4852261	1.5	106	130	83	208	0.5%
RW310200_001	Residential	597162	4852242	1.5	109	134	83	234	0.5%
RW311300_001	Residential	598030	4853004	1.5	123	147	83	393	0.9%
RW311300_002	Residential	598003	4853024	1.5	120	145	83	316	0.7%
RW311300_003	Residential	597975	4853049	1.5	116	141	83	255	0.6%
RW311300_004	Residential	597927	4853089	1.5	117	140	83	207	0.5%
RW311400_001	Residential	598069	4853072	1.5	119	144	83	346	0.8%
RW311400_002	Residential	598037	4853102	1.5	117	142	83	266	0.6%
RW311400_003	Residential	597991	4853145	1.5	117	140	83	204	0.5%
RW311400_004	Residential	597940	4853194	1.5	114	136	83	170	0.4%
RW311400_005	Residential	597918	4853265	1.5	109	133	83	135	0.3%
RW311400_006	Residential	597843	4853344	1.5	106	131	83	88	0.2%
RW311400_008	Residential	597739	4853444	1.5	104	129	83	55	0.1%
RW311400_009	Residential	597683	4853455	1.5	101	126	83	51	0.1%
RW312300_001	Residential	598843	4853771	1.5	115	139	83	158	0.4%
RW312400_001	Residential	598885	4854042	1.5	104	129	83	87	0.2%
RW312400_002	Residential	598849	4854080	1.5	93	122	83	83	0.2%
RW312500_001	Residential	599044	4853903	1.5	118	140	83	157	0.4%
RW312500_002	Residential	599019	4853928	1.5	115	139	83	142	0.3%
RW312500_003	Residential	598925	4854010	1.5	107	131	83	99	0.2%
RW312500_004	Residential	598959	4854116	1.5	104	129	83	93	0.2%
RW312600_001	Residential	599110	4853841	1.5	120	142	83	221	0.5%
RW312600_002	Residential	599074	4853862	1.5	120	142	83	191	0.4%
RW312700_001	Residential	599266	4853691	1.5	119	144	83	653	1.5%
RW312900_001	Residential	599307	4854183	1.5	114	136	83	83	0.2%
RW313100_001	Residential	599559	4854108	1.5	107	132	83	162	0.4%
RW313400_001	Residential	599752	4854478	1.5	110	132	83	60	0.1%
RW313900_001	Residential	600110	4854917	1.5	108	130	83	37	0.1%
RW314100_001	Residential	600493	4854739	1.5	100	129	83	49	0.1%
RW314300_001	Residential	600741	4854369	1.5	113	135	83	296	0.7%
RW315400_001	Residential	601942	4855015	1.5	106	128	83	31	0.1%
RW317500_001	Residential	603840	4854629	1.5	110	133	83	422	1.0%
RW317500_003	Residential	603870	4854650	1.5	110	133	83	421	1.0%
RW410100_001	Residential	603972	4854928	1.5	80	120	83	167	0.4%
RW410100_002	Residential	603936	4854961	1.5	80	121	83	140	0.3%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW410200_001	Residential	604015	4854902	1.5	85	120	83	196	0.4%
RW410400_001	Residential	604221	4855097	1.5	80	120	83	156	0.4%
RW410800_002	Residential	604445	4855386	1.5	76	118	83	100	0.2%
RW510000_001	Residential	604897	4855625	1.5	87	122	83	132	0.3%
RW510100_001	Residential	605003	4855608	1.5	83	124	83	148	0.3%
RW510100_002	Residential	604998	4855726	1.5	80	121	83	90	0.2%
RW510400_001	Residential	605360	4855644	1.5	94	122	83	166	0.4%
RW512600_001	Residential	607049	4856822	1.5	108	132	83	295	0.7%
RW512600_002	Residential	606713	4857044	1.5	105	129	83	34	0.1%
RW512700_001	Residential	606950	4856924	1.5	107	131	83	95	0.2%
RW515200_001	Residential	608655	4859025	1.5	108	130	83	139	0.3%
RW515200_002	Residential	608453	4859443	1.5	53	97	83	3	0.0%
RW515500_001	Residential	609009	4858910	1.5	120	144	83	414	0.9%
RW515500_002	Residential	608965	4859173	1.5	114	136	83	79	0.2%
RW515500_003	Residential	608645	4859708	1.5	59	100	83	8	0.0%
RW515600_001	Residential	609102	4858982	1.5	116	141	83	297	0.7%
RW515600_002	Residential	608876	4859423	1.5	106	128	83	41	0.1%
RW515600_003	Residential	608980	4859372	1.5	106	128	83	43	0.1%
RW515700_001	Residential	608966	4859442	1.5	107	129	83	36	0.1%
RW516700_001	Residential	609986	4859710	1.5	99	125	83	39	0.1%
RW517400_001	Residential	610721	4859654	1.5	118	141	83	461	1.1%
RW517500_001	Residential	610788	4859750	1.5	113	135	83	267	0.6%
RW517500_002	Residential	610631	4860179	1.5	86	124	83	40	0.1%
RW517600_001	Residential	610730	4860162	1.5	92	122	83	60	0.1%
RW519300_001	Residential	612321	4860800	1.5	99	123	83	49	0.1%
RW519300_002	Residential	612247	4861048	1.5	85	119	83	62	0.1%
RW519600_001	Residential	612681	4860774	1.5	109	133	83	188	0.4%
RW519600_002	Residential	612644	4860851	1.5	105	130	83	96	0.2%
RW519600_003	Residential	612606	4860976	1.5	92	119	83	42	0.1%
RW519600_004	Residential	612556	4861217	1.5	66	111	83	22	0.1%
RW519900_001	Residential	612911	4861179	1.5	72	117	83	15	0.0%
RW520000_001	Residential	612975	4861191	1.5	72	117	83	16	0.0%
RW520100_001	Residential	613108	4861238	1.5	72	117	83	19	0.0%
RW520200_001	Residential	613167	4861245	1.5	72	117	83	21	0.0%
RW520300_001	Residential	613263	4861267	1.5	72	117	83	32	0.1%
RW520400_001	Residential	613409	4861318	1.5	79	117	83	46	0.1%
RW520600_001	Residential	613595	4861385	1.5	96	120	83	52	0.1%
RW520600_002	Residential	613696	4861264	1.5	100	128	83	90	0.2%
RW520800_001	Residential	613821	4861450	1.5	87	117	83	50	0.1%
RW520800_002	Residential	613868	4861446	1.5	90	119	83	50	0.1%
RW520900_001	Residential	614011	4861487	1.5	87	120	83	49	0.1%
RW521000_001	Residential	614074	4861506	1.5	83	120	83	44	0.1%
RW521500_001	Residential	614584	4861772	1.5	111	135	83	367	0.8%
RW521500_002	Residential	614605	4861931	1.5	73	112	83	41	0.1%
RW521500_003	Residential	614606	4861992	1.5	71	104	83	27	0.1%
RW521500_004	Residential	614561	4862067	1.5	69	113	83	25	0.1%
RW521500_005	Residential	614528	4862131	1.5	72	116	83	23	0.1%
RW521500_006	Residential	614519	4862172	1.5	72	117	83	23	0.1%

Appendix G.1.2 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW521600_001	Residential	615126	4862319	1.5	70	113	83	92	0.2%
RW521600_002	Residential	616401	4861744	1.5	92	122	83	37	0.1%
RW521600_009	Residential	616496	4861911	1.5	78	119	83	33	0.1%
RW521600_010	Residential	614979	4862746	1.5	74	117	83	56	0.1%
RW521600_011	Residential	614904	4862738	1.5	77	117	83	40	0.1%
RW521600_012	Residential	615537	4863261	1.5	86	121	83	89	0.2%
RW521600_013	Residential	615595	4863665	1.5	76	117	83	30	0.1%
RW521600_014	Residential	616500	4861872	1.5	79	120	83	30	0.1%
RW521600_016	Residential	614949	4863780	1.5	80	121	83	74	0.2%
RW521600_017	Residential	616265	4861577	1.5	102	128	83	52	0.1%

43824 Hours of Meterological Data

Notes:

[1] Maximum predicted concentration with background using the Ozone Limiting Method. These concentrations differ from those presented in the results tables which are based on the 98th percentile of the daily 1-hour maximum concentrations to conform to CAAQS standard.

Appendix G.1.3: 2051 No-Build – 1 Hour NO_2

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_001	Place of Worship	597312	4827927	1.5	88	127	83	494	1.1%
RE110000_002	Residential	596637	4826254	1.5	76	117	83	93	0.2%
RE110000_003	Residential	596701	4826610	1.5	81	121	83	152	0.3%
RE110000_004	Residential	597143	4827822	1.5	100	127	83	443	1.0%
RE110000_005	Residential	597083	4827844	1.5	108	132	83	668	1.5%
RE110000_006	Residential	596871	4828160	1.5	100	140	83	448	1.0%
RE110000_007	Residential	597140	4826176	1.5	79	120	83	78	0.2%
RE110000_008	Residential	597148	4826187	1.5	79	119	83	65	0.1%
RE110000_009	Residential	597156	4826199	1.5	77	118	83	57	0.1%
RE110000_010	Residential	597164	4826210	1.5	74	114	83	51	0.1%
RE110000_011	Residential	597171	4826221	1.5	71	112	83	47	0.1%
RE110000_020	Residential	597181	4826148	1.5	79	119	83	66	0.2%
RE110000_021	Residential	597187	4826154	1.5	78	119	83	59	0.1%
RE110000_022	Residential	597195	4826162	1.5	76	117	83	54	0.1%
RE110000_023	Residential	597200	4826170	1.5	74	114	83	51	0.1%
RE110000_024	Residential	597206	4826177	1.5	71	112	83	49	0.1%
RE110000_025	Residential	597212	4826186	1.5	70	110	83	46	0.1%
RE110000_028	Residential	597203	4826119	1.5	79	120	83	69	0.2%
RE110000_029	Residential	597210	4826129	1.5	78	119	83	59	0.1%
RE110000_030	Residential	597216	4826140	1.5	76	117	83	54	0.1%
RE110000_031	Residential	597223	4826147	1.5	73	114	83	51	0.1%
RE110000_032	Residential	597230	4826156	1.5	71	112	83	49	0.1%
RE110000_045	Residential	597236	4826078	1.5	79	120	83	73	0.2%
RE110000_046	Residential	597243	4826087	1.5	78	119	83	64	0.1%
RE110000_047	Residential	597251	4826096	1.5	77	117	83	55	0.1%
RE110000_048	Residential	597257	4826104	1.5	74	115	83	52	0.1%
RE110000_049	Residential	597263	4826113	1.5	72	113	83	49	0.1%
RE110000_050	Residential	597255	4826067	1.5	79	119	83	67	0.2%
RE110000_051	Residential	597266	4826057	1.5	79	119	83	67	0.2%
RE110000_052	Residential	597275	4826046	1.5	79	119	83	68	0.2%
RE110000_053	Residential	597284	4826036	1.5	79	120	83	68	0.2%
RE110000_054	Residential	597293	4826025	1.5	79	120	83	69	0.2%
RE110000_055	Residential	597304	4826014	1.5	79	120	83	68	0.2%
RE110000_056	Residential	597325	4826041	1.5	72	113	83	50	0.1%
RE110000_057	Residential	597314	4826051	1.5	72	113	83	51	0.1%
RE110000_058	Residential	597304	4826061	1.5	72	113	83	50	0.1%
RE110000_059	Residential	597295	4826072	1.5	72	113	83	51	0.1%
RE110000_060	Residential	597285	4826082	1.5	72	113	83	51	0.1%
RE110000_061	Residential	597323	4825965	1.5	81	121	83	95	0.2%
RE110000_062	Residential	597330	4825974	1.5	79	120	83	76	0.2%
RE110000_063	Residential	597335	4825983	1.5	79	120	83	66	0.2%
RE110000_064	Residential	597342	4825990	1.5	78	119	83	57	0.1%
RE110000_065	Residential	597350	4826000	1.5	74	115	83	50	0.1%
RE110000_066	Residential	597357	4826009	1.5	71	112	83	47	0.1%
RE110000_067	Residential	597368	4826018	1.5	68	109	83	42	0.1%
RE110000_069	Residential	597351	4825947	1.5	80	121	83	82	0.2%
RE110000_070	Residential	597359	4825957	1.5	79	120	83	63	0.1%
RE110000_071	Residential	597366	4825967	1.5	78	119	83	55	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_072	Residential	597374	4825977	1.5	74	114	83	47	0.1%
RE110000_073	Residential	597383	4825986	1.5	70	111	83	45	0.1%
RE110000_112	Residential	597394	4825910	1.5	79	120	83	71	0.2%
RE110000_113	Residential	597401	4825919	1.5	79	119	83	59	0.1%
RE110000_114	Residential	597409	4825928	1.5	76	117	83	49	0.1%
RE110000_115	Residential	597416	4825939	1.5	72	113	83	45	0.1%
RE110000_123	Residential	597413	4825882	1.5	80	121	83	84	0.2%
RE110000_124	Residential	597421	4825892	1.5	79	120	83	64	0.1%
RE110000_125	Residential	597432	4825901	1.5	76	117	83	49	0.1%
RE110000_132	Residential	597461	4825854	1.5	79	119	83	60	0.1%
RE110000_133	Residential	597471	4825865	1.5	75	116	83	47	0.1%
RE110000_139	Residential	597482	4825833	1.5	79	119	83	60	0.1%
RE110000_140	Residential	597492	4825842	1.5	74	116	83	47	0.1%
RE110000_145	Residential	597514	4825784	1.5	80	120	83	76	0.2%
RE110000_146	Residential	597523	4825794	1.5	78	119	83	56	0.1%
RE110000_147	Residential	597531	4825806	1.5	73	114	83	43	0.1%
RE110000_149	Residential	597534	4825759	1.5	80	121	83	80	0.2%
RE110000_150	Residential	597542	4825770	1.5	79	119	83	60	0.1%
RE110000_151	Residential	597549	4825779	1.5	75	116	83	50	0.1%
RE110000_165	Residential	597586	4825745	1.5	74	115	83	44	0.1%
RE110000_167	Residential	597648	4825682	1.5	73	115	83	44	0.1%
RE110000_173	Residential	597632	4825663	1.5	80	120	83	81	0.2%
RE110000_177	Residential	597655	4825690	1.5	71	111	83	37	0.1%
RE110000_178	Residential	597642	4825674	1.5	78	119	83	54	0.1%
RE110000_189	Residential	597578	4825734	1.5	79	119	83	56	0.1%
RE110000_190	Residential	597605	4825708	1.5	78	119	83	56	0.1%
RE110000_191	Residential	597611	4825719	1.5	74	115	83	45	0.1%
RE110000_239	Residential	598068	4825317	1.5	78	119	83	74	0.2%
RE110000_240	Residential	598051	4825327	1.5	79	119	83	82	0.2%
RE110000_241	Residential	598046	4825287	1.5	79	120	83	72	0.2%
RE110000_242	Residential	598058	4825288	1.5	79	120	83	68	0.2%
RE110000_243	Residential	598062	4825320	1.5	78	119	83	76	0.2%
RE110000_244	Residential	598082	4825288	1.5	78	119	83	61	0.1%
RE110000_245	Residential	598057	4825323	1.5	79	119	83	77	0.2%
RE110000_246	Residential	598051	4825288	1.5	79	120	83	71	0.2%
RE110000_247	Residential	598072	4825292	1.5	79	119	83	64	0.1%
RE110000_248	Residential	598076	4825290	1.5	79	119	83	64	0.1%
RE110000_249	Residential	598040	4825285	1.5	80	121	83	75	0.2%
RE110000_253	Residential	597743	4825607	1.5	70	111	83	35	0.1%
RE110000_254	Residential	597795	4825533	1.5	74	115	83	45	0.1%
RE110000_255	Residential	597806	4825547	1.5	69	110	83	33	0.1%
RE110000_256	Residential	597835	4825499	1.5	73	114	83	41	0.1%
RE110000_257	Residential	597843	4825509	1.5	69	110	83	34	0.1%
RE110000_265	Residential	597773	4825557	1.5	74	114	83	43	0.1%
RE110000_267	Residential	597726	4825585	1.5	79	119	83	60	0.1%
RE110000_276	Residential	597839	4825504	1.5	71	112	83	35	0.1%
RE110000_277	Residential	597778	4825564	1.5	71	112	83	36	0.1%
RE110000_278	Residential	597784	4825572	1.5	69	110	83	33	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_279	Residential	597739	4825601	1.5	72	113	83	37	0.1%
RE110000_280	Residential	597719	4825577	1.5	80	120	83	77	0.2%
RE110000_281	Residential	597767	4825552	1.5	78	118	83	55	0.1%
RE110000_292	Residential	597793	4825524	1.5	78	119	83	58	0.1%
RE110000_293	Residential	597734	4825596	1.5	74	114	83	42	0.1%
RE110000_294	Residential	597800	4825540	1.5	72	113	83	38	0.1%
RE110000_305	Residential	597830	4825493	1.5	76	116	83	50	0.1%
RE110000_309	Residential	597730	4825591	1.5	77	118	83	50	0.1%
RE110000_310	Residential	597826	4825487	1.5	79	119	83	62	0.1%
RE110000_316	Residential	597823	4825480	1.5	79	120	83	69	0.2%
RE110000_325	Residential	597672	4825659	1.5	73	114	83	44	0.1%
RE110000_329	Residential	597711	4825620	1.5	73	114	83	42	0.1%
RE110000_331	Residential	597656	4825641	1.5	79	120	83	72	0.2%
RE110000_332	Residential	597705	4825613	1.5	78	119	83	54	0.1%
RE110000_333	Residential	597717	4825628	1.5	71	111	83	36	0.1%
RE110000_342	Residential	597701	4825604	1.5	79	120	83	64	0.1%
RE110000_344	Residential	597666	4825651	1.5	78	119	83	54	0.1%
RE110000_345	Residential	597678	4825667	1.5	71	111	83	36	0.1%
RE110000_353	Residential	597853	4825468	1.5	77	118	83	51	0.1%
RE110000_355	Residential	597858	4825475	1.5	73	114	83	40	0.1%
RE110000_378	Residential	597899	4825411	1.5	79	120	83	70	0.2%
RE110000_387	Residential	597845	4825458	1.5	79	120	83	71	0.2%
RE110000_390	Residential	597927	4825384	1.5	79	120	83	76	0.2%
RE110000_394	Residential	597904	4825418	1.5	78	118	83	54	0.1%
RE110000_397	Residential	597863	4825480	1.5	71	112	83	36	0.1%
RE110000_401	Residential	596788	4826527	1.5	80	121	83	121	0.3%
RE110200_001	Residential	595761	4827508	1.5	93	127	83	180	0.4%
RE110300_001	Residential	595985	4827782	1.5	82	123	83	152	0.3%
RE110300_002	Residential	596018	4827822	1.5	83	123	83	150	0.3%
RE110300_003	Residential	596052	4827847	1.5	83	124	83	150	0.3%
RE110300_004	Residential	596075	4827863	1.5	83	124	83	159	0.4%
RE110400_001	Residential	596097	4827888	1.5	83	124	83	166	0.4%
RE110400_002	Residential	596114	4827911	1.5	83	124	83	174	0.4%
RE110500_001	Residential	596071	4827936	1.5	81	122	83	139	0.3%
RE110500_002	Residential	596046	4827958	1.5	80	121	83	128	0.3%
RE110600_001	Residential	596004	4827990	1.5	80	120	83	105	0.2%
RE110600_002	Residential	596030	4827975	1.5	80	121	83	124	0.3%
RE110700_001	Residential	595981	4828012	1.5	79	120	83	100	0.2%
RE110700_002	Residential	595928	4827973	1.5	79	120	83	83	0.2%
RE110800_001	Residential	595956	4828058	1.5	80	120	83	91	0.2%
RE110800_002	Residential	595933	4828081	1.5	80	120	83	81	0.2%
RE110900_001	Residential	595910	4828106	1.5	79	120	83	77	0.2%
RE110900_002	Residential	595878	4828134	1.5	79	120	83	71	0.2%
RE111100_001	Residential	595788	4828209	1.5	70	114	83	52	0.1%
RE111200_001	Residential	595754	4828244	1.5	68	112	83	48	0.1%
RE111200_002	Residential	595736	4828278	1.5	71	113	83	48	0.1%
RE111300_001	Residential	595708	4828299	1.5	69	112	83	46	0.1%
RE111300_002	Residential	595689	4828310	1.5	67	111	83	43	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE111300_003	Residential	595667	4828334	1.5	66	110	83	42	0.1%
RE111400_001	Residential	595630	4828371	1.5	65	109	83	38	0.1%
RE111400_002	Residential	595610	4828393	1.5	65	108	83	37	0.1%
RE111500_001	Residential	595569	4828431	1.5	64	106	83	35	0.1%
RE111500_002	Residential	595514	4828453	1.5	63	104	83	28	0.1%
RE111600_001	Residential	595474	4828490	1.5	62	103	83	26	0.1%
RE111600_002	Residential	595430	4828529	1.5	62	103	83	24	0.1%
RE111700_001	Residential	595514	4828604	1.5	73	114	83	20	0.0%
RE111700_002	Residential	595359	4828639	1.5	60	100	83	25	0.1%
RE111800_001	Residential	596558	4828460	1.5	84	125	83	135	0.3%
RE111800_002	Residential	595492	4828626	1.5	72	113	83	19	0.0%
RE111800_003	Residential	595467	4828642	1.5	74	115	83	18	0.0%
RE111800_004	Residential	595445	4828664	1.5	74	114	83	17	0.0%
RE111800_005	Residential	595329	4828673	1.5	59	100	83	24	0.1%
RE111800_006	Residential	595306	4828700	1.5	59	100	83	24	0.1%
RE111800_007	Residential	595285	4828720	1.5	59	99	83	23	0.1%
RE111800_008	Residential	595266	4828745	1.5	58	99	83	22	0.1%
RE112100_001	Residential	596836	4828712	1.5	84	124	83	75	0.2%
RE112200_001	Residential	596905	4828763	1.5	85	124	83	71	0.2%
RE113100_001	Residential	595706	4829937	1.5	40	84	83	1	0.0%
RE113200_001	Residential	595933	4829995	1.5	37	81	83	0	-
RE113200_002	Residential	595904	4830024	1.5	37	81	83	0	-
RE113300_001	Residential	595753	4830146	1.5	37	81	83	0	-
RE210700_001	Residential	595367	4831551	1.5	31	75	83	0	-
RE210700_002	Residential	595325	4831537	1.5	31	75	83	0	-
RE210700_003	Residential	595504	4831618	1.5	30	74	83	0	-
RE210900_001	Residential	595286	4831670	1.5	30	74	83	0	-
RE210900_003	Residential	595217	4831730	1.5	35	79	83	0	-
RE210900_004	Residential	595349	4831732	1.5	30	74	83	0	-
RE210900_005	Residential	595339	4831698	1.5	30	74	83	0	-
RE210900_006	Residential	595400	4831812	1.5	30	74	83	0	-
RE210900_007	Residential	595436	4831835	1.5	29	73	83	0	-
RE210900_008	Residential	595454	4831855	1.5	29	73	83	0	-
RE211000_001	Residential	595242	4831783	1.5	34	78	83	0	-
RE211000_002	Residential	595292	4831787	1.5	35	79	83	0	-
RE211000_003	Residential	595341	4831842	1.5	34	78	83	0	-
RE211000_004	Residential	595365	4831888	1.5	32	76	83	0	-
RE211000_005	Residential	595239	4831847	1.5	33	77	83	0	-
RE211000_006	Residential	595408	4831938	1.5	33	77	83	0	-
RE211000_007	Residential	595530	4831956	1.5	28	72	83	0	-
RE211000_008	Residential	595567	4832001	1.5	27	71	83	0	-
RE211000_009	Residential	595596	4832028	1.5	26	70	83	0	-
RE211000_010	Residential	595617	4832054	1.5	26	70	83	0	-
RE211100_001	Residential	595423	4831974	1.5	33	77	83	0	-
RE211100_002	Residential	595342	4832015	1.5	30	74	83	0	-
RE211100_003	Residential	595552	4832099	1.5	32	76	83	0	-
RE211100_004	Residential	595637	4832091	1.5	26	70	83	0	-
RE211100_005	Residential	595675	4832137	1.5	25	69	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE211100_006	Residential	595734	4832214	1.5	24	68	83	0	-
RE211100_009	Residential	595514	4832061	1.5	33	77	83	0	-
RE211200_001	Residential	595380	4832103	1.5	31	75	83	0	-
RE211200_002	Residential	595424	4832139	1.5	31	75	83	0	-
RE211200_003	Residential	595641	4832218	1.5	31	74	83	0	-
RE211200_004	Residential	595704	4832286	1.5	30	74	83	0	-
RE211200_005	Residential	595584	4832173	1.5	31	75	83	0	-
RE211400_001	Residential	594922	4832082	1.5	29	73	83	0	-
RE211500_002	Residential	595129	4832290	1.5	29	73	83	0	-
RE211500_003	Residential	594950	4832221	1.5	29	73	83	0	-
RE211500_004	Residential	595156	4832250	1.5	29	73	83	0	-
RE211900_001	Residential	594800	4832552	1.5	25	69	83	0	-
RE212600_001	Residential	594824	4833279	1.5	26	70	83	0	-
RE212700_001	Residential	594758	4833331	1.5	27	71	83	0	-
RE212700_002	Residential	594605	4833322	1.5	22	66	83	0	-
RE212800_001	Residential	594672	4833390	1.5	30	74	83	0	-
RE212800_002	Residential	594620	4833440	1.5	30	74	83	1	0.0%
RE212900_001	Residential	594599	4833473	1.5	30	74	83	1	0.0%
RE213000_001	Residential	594589	4833575	1.5	26	70	83	0	-
RE214400_001	Recreation	594333	4835333	1.5	35	79	83	1	0.0%
RE214600_002	Residential	593842	4835174	1.5	28	73	83	0	-
RE214600_003	Residential	593906	4835196	1.5	30	74	83	0	-
RE214600_004	Residential	593934	4835222	1.5	32	76	83	0	-
RE214600_005	Residential	593948	4835237	1.5	33	77	83	0	-
RE214600_006	Residential	593954	4835244	1.5	33	77	83	0	-
RE214600_007	Residential	593879	4835253	1.5	27	72	83	0	-
RE214600_008	Residential	593895	4835241	1.5	29	73	83	0	-
RE214600_009	Residential	593872	4835220	1.5	28	72	83	0	-
RE214600_010	Residential	593861	4835213	1.5	28	72	83	0	-
RE214600_011	Residential	593855	4835236	1.5	27	72	83	0	-
RE214600_012	Residential	593826	4835204	1.5	27	72	83	0	-
RE214600_013	Residential	593848	4835159	1.5	29	74	83	0	-
RE214600_014	Residential	593881	4835177	1.5	29	74	83	0	-
RE214600_015	Residential	593892	4835186	1.5	29	74	83	0	-
RE214600_016	Residential	593917	4835206	1.5	31	75	83	0	-
RE214600_017	Residential	593925	4835215	1.5	31	75	83	0	-
RE214600_018	Residential	593940	4835231	1.5	32	76	83	0	-
RE214600_019	Residential	593960	4835250	1.5	34	78	83	0	-
RE214600_020	Residential	593967	4835258	1.5	34	78	83	0	-
RE214600_021	Residential	593978	4835265	1.5	35	79	83	0	-
RE214600_022	Residential	593885	4835231	1.5	28	73	83	0	-
RE214600_023	Residential	593914	4835274	1.5	29	73	83	0	-
RE214600_024	Residential	593927	4835288	1.5	30	74	83	0	-
RE214600_025	Residential	593932	4835295	1.5	31	75	83	0	-
RE214600_026	Residential	593936	4835298	1.5	31	75	83	0	-
RE214600_027	Residential	593941	4835304	1.5	31	75	83	0	-
RE214600_028	Residential	593945	4835308	1.5	31	75	83	0	-
RE214600_029	Residential	593948	4835312	1.5	31	75	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_030	Residential	593953	4835317	1.5	32	76	83	0	-
RE214600_031	Residential	593956	4835321	1.5	32	76	83	0	-
RE214600_032	Residential	593965	4835331	1.5	32	76	83	0	-
RE214600_033	Residential	593979	4835319	1.5	33	77	83	0	-
RE214600_034	Residential	593977	4835313	1.5	33	77	83	0	-
RE214600_035	Residential	593971	4835308	1.5	33	77	83	0	-
RE214600_036	Residential	593968	4835303	1.5	33	77	83	0	-
RE214600_037	Residential	593909	4835267	1.5	29	73	83	0	-
RE214600_038	Residential	593919	4835279	1.5	30	74	83	0	-
RE214600_039	Residential	593923	4835284	1.5	30	74	83	0	-
RE214600_040	Residential	593930	4835291	1.5	30	74	83	0	-
RE214600_041	Residential	593961	4835326	1.5	32	76	83	0	-
RE214600_042	Residential	593970	4835333	1.5	32	76	83	0	-
RE214600_043	Residential	593982	4835324	1.5	33	77	83	0	-
RE214600_044	Residential	593960	4835295	1.5	33	77	83	0	-
RE214600_045	Residential	593956	4835291	1.5	32	76	83	0	-
RE214600_046	Residential	593946	4835281	1.5	31	75	83	0	-
RE214600_047	Residential	593942	4835277	1.5	31	75	83	0	-
RE214600_048	Residential	593934	4835269	1.5	31	75	83	0	-
RE214600_049	Residential	593929	4835264	1.5	31	75	83	0	-
RE214600_050	Residential	593923	4835260	1.5	30	74	83	0	-
RE214600_051	Residential	594088	4835437	1.5	36	80	83	0	-
RE214600_052	Residential	594082	4835443	1.5	35	79	83	0	-
RE214600_053	Residential	593964	4835299	1.5	33	77	83	0	-
RE214600_054	Residential	593949	4835285	1.5	32	76	83	0	-
RE214600_055	Residential	593938	4835273	1.5	31	75	83	0	-
RE214600_056	Residential	593919	4835255	1.5	30	74	83	0	-
RE214600_057	Residential	594070	4835454	1.5	34	78	83	0	-
RE214600_058	Residential	594080	4835468	1.5	34	78	83	0	-
RE214600_059	Residential	594086	4835463	1.5	34	78	83	0	-
RE214600_060	Residential	594095	4835454	1.5	35	79	83	0	-
RE214600_061	Residential	594098	4835448	1.5	36	80	83	0	-
RE214600_062	Residential	594075	4835447	1.5	34	78	83	0	-
RE214600_063	Residential	594090	4835458	1.5	35	79	83	0	-
RE214600_064	Residential	594047	4835432	1.5	33	77	83	0	-
RE214600_065	Residential	594052	4835428	1.5	34	78	83	0	-
RE214600_066	Residential	594056	4835424	1.5	34	78	83	0	-
RE214600_067	Residential	594061	4835420	1.5	35	79	83	0	-
RE214600_068	Residential	594068	4835415	1.5	35	79	83	0	-
RE214600_069	Residential	594022	4835361	1.5	35	79	83	0	-
RE214600_070	Residential	593995	4835385	1.5	32	76	83	0	-
RE214600_071	Residential	593999	4835381	1.5	33	77	83	0	-
RE214600_072	Residential	594003	4835377	1.5	33	77	83	0	-
RE214600_073	Residential	594009	4835371	1.5	34	78	83	0	-
RE214600_074	Residential	594015	4835366	1.5	34	78	83	0	-
RE214600_075	Residential	594003	4835343	1.5	34	78	83	0	-
RE214600_076	Residential	593993	4835352	1.5	33	77	83	0	-
RE214600_077	Residential	593998	4835348	1.5	34	78	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_078	Residential	593990	4835357	1.5	33	77	83	0	-
RE214600_079	Residential	593985	4835362	1.5	33	77	83	0	-
RE214600_080	Residential	593978	4835367	1.5	32	76	83	0	-
RE214600_081	Residential	593872	4835162	1.5	30	75	83	0	-
RE214600_082	Residential	593897	4835267	1.5	28	72	83	0	-
RE214600_083	Residential	593835	4835188	1.5	28	72	83	0	-
RE214700_002	Residential	593796	4835295	1.5	25	69	83	0	-
RE214700_003	Residential	593801	4835284	1.5	25	70	83	0	-
RE214700_004	Residential	593804	4835270	1.5	25	70	83	0	-
RE214700_005	Residential	593808	4835258	1.5	25	70	83	0	-
RE214700_006	Residential	593812	4835244	1.5	26	70	83	0	-
RE214700_007	Residential	593815	4835229	1.5	26	71	83	0	-
RE214700_008	Residential	593820	4835217	1.5	27	71	83	0	-
RE214700_009	Residential	593927	4835372	1.5	29	73	83	0	-
RE214700_010	Residential	593945	4835355	1.5	30	74	83	0	-
RE214700_011	Residential	593938	4835347	1.5	30	74	83	0	-
RE214700_012	Residential	593932	4835340	1.5	30	74	83	0	-
RE214700_013	Residential	593925	4835333	1.5	29	73	83	0	-
RE214700_014	Residential	593897	4835305	1.5	28	72	83	0	-
RE214700_015	Residential	593848	4835261	1.5	26	71	83	0	-
RE214700_016	Residential	593843	4835273	1.5	26	71	83	0	-
RE214700_017	Residential	593842	4835286	1.5	26	70	83	0	-
RE214700_018	Residential	593871	4835315	1.5	26	71	83	0	-
RE214700_019	Residential	593884	4835326	1.5	27	71	83	0	-
RE214700_020	Residential	593911	4835354	1.5	28	72	83	0	-
RE214700_021	Residential	593920	4835363	1.5	29	73	83	0	-
RE214700_022	Residential	593892	4835387	1.5	27	71	83	0	-
RE214700_023	Residential	593878	4835378	1.5	26	71	83	0	-
RE214700_024	Residential	593867	4835368	1.5	26	70	83	0	-
RE214700_025	Residential	593847	4835347	1.5	25	70	83	0	-
RE214700_026	Residential	593792	4835308	1.5	25	69	83	0	-
RE214700_027	Residential	593899	4835400	1.5	27	72	83	0	-
RE214700_028	Residential	593915	4835323	1.5	29	73	83	0	-
RE214700_029	Residential	593905	4835315	1.5	28	72	83	0	-
RE214700_030	Residential	593888	4835295	1.5	27	72	83	0	-
RE214700_031	Residential	593878	4835285	1.5	27	71	83	0	-
RE214700_032	Residential	593872	4835268	1.5	27	71	83	0	-
RE214700_033	Residential	593850	4835248	1.5	27	71	83	0	-
RE214700_034	Residential	593837	4835298	1.5	26	70	83	0	-
RE214700_035	Residential	593859	4835303	1.5	26	70	83	0	-
RE214700_036	Residential	593893	4835335	1.5	27	72	83	0	-
RE214700_037	Residential	593901	4835345	1.5	28	72	83	0	-
RE214700_038	Residential	593857	4835357	1.5	26	70	83	0	-
RE214700_039	Residential	593838	4835336	1.5	25	70	83	0	-
RE214700_040	Residential	593826	4835328	1.5	25	70	83	0	-
RE214700_041	Residential	594050	4835472	1.5	32	76	83	0	-
RE214700_042	Residential	594045	4835477	1.5	32	76	83	0	-
RE214700_043	Residential	594021	4835499	1.5	31	75	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_044	Residential	594015	4835505	1.5	30	74	83	0	-
RE214700_045	Residential	594010	4835510	1.5	30	74	83	0	-
RE214700_046	Residential	594005	4835514	1.5	30	74	83	0	-
RE214700_047	Residential	593999	4835520	1.5	30	74	83	0	-
RE214700_048	Residential	594007	4835538	1.5	30	74	83	0	-
RE214700_049	Residential	594029	4835518	1.5	31	75	83	0	-
RE214700_050	Residential	594041	4835505	1.5	31	75	83	0	-
RE214700_051	Residential	594052	4835496	1.5	32	76	83	0	-
RE214700_052	Residential	594065	4835484	1.5	33	77	83	0	-
RE214700_053	Residential	594071	4835479	1.5	33	77	83	0	-
RE214700_054	Residential	594063	4835459	1.5	33	77	83	0	-
RE214700_055	Residential	594059	4835463	1.5	33	77	83	0	-
RE214700_056	Residential	594055	4835466	1.5	33	77	83	0	-
RE214700_057	Residential	594041	4835481	1.5	32	76	83	0	-
RE214700_058	Residential	594035	4835486	1.5	31	75	83	0	-
RE214700_059	Residential	594030	4835490	1.5	31	75	83	0	-
RE214700_060	Residential	594025	4835494	1.5	31	75	83	0	-
RE214700_061	Residential	593994	4835525	1.5	29	73	83	0	-
RE214700_062	Residential	594012	4835533	1.5	30	74	83	0	-
RE214700_063	Residential	594018	4835528	1.5	30	74	83	0	-
RE214700_064	Residential	594023	4835523	1.5	30	74	83	0	-
RE214700_065	Residential	594035	4835511	1.5	31	75	83	0	-
RE214700_066	Residential	594046	4835501	1.5	32	76	83	0	-
RE214700_067	Residential	594057	4835491	1.5	32	76	83	0	-
RE214700_068	Residential	594061	4835487	1.5	33	77	83	0	-
RE214700_069	Residential	594075	4835473	1.5	34	78	83	0	-
RE214700_070	Residential	593973	4835506	1.5	29	73	83	0	-
RE214700_071	Residential	593991	4835488	1.5	30	74	83	0	-
RE214700_072	Residential	593995	4835485	1.5	30	74	83	0	-
RE214700_073	Residential	594004	4835475	1.5	31	75	83	0	-
RE214700_074	Residential	594013	4835466	1.5	31	75	83	0	-
RE214700_075	Residential	594022	4835457	1.5	32	76	83	0	-
RE214700_076	Residential	594039	4835440	1.5	33	77	83	0	-
RE214700_077	Residential	593979	4835500	1.5	29	73	83	0	-
RE214700_078	Residential	593985	4835493	1.5	30	74	83	0	-
RE214700_079	Residential	593998	4835482	1.5	30	74	83	0	-
RE214700_080	Residential	594008	4835471	1.5	31	75	83	0	-
RE214700_081	Residential	594018	4835462	1.5	31	75	83	0	-
RE214700_082	Residential	594027	4835453	1.5	32	76	83	0	-
RE214700_083	Residential	594030	4835449	1.5	32	76	83	0	-
RE214700_084	Residential	594036	4835444	1.5	33	77	83	0	-
RE214700_085	Residential	594043	4835436	1.5	33	77	83	0	-
RE214700_086	Residential	593960	4835422	1.5	30	74	83	0	-
RE214700_087	Residential	593956	4835426	1.5	30	74	83	0	-
RE214700_088	Residential	593963	4835417	1.5	30	74	83	0	-
RE214700_089	Residential	593968	4835413	1.5	31	75	83	0	-
RE214700_090	Residential	593973	4835409	1.5	31	75	83	0	-
RE214700_091	Residential	593978	4835404	1.5	31	75	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_092	Residential	593981	4835400	1.5	31	75	83	0	-
RE214700_093	Residential	593948	4835434	1.5	29	73	83	0	-
RE214700_094	Residential	593938	4835443	1.5	29	73	83	0	-
RE214700_095	Residential	593934	4835448	1.5	29	73	83	0	-
RE214700_096	Residential	593988	4835393	1.5	32	76	83	0	-
RE214700_097	Residential	593991	4835389	1.5	32	76	83	0	-
RE214700_098	Residential	593943	4835438	1.5	29	73	83	0	-
RE214700_099	Residential	593929	4835453	1.5	28	72	83	0	-
RE214700_100	Residential	593974	4835372	1.5	32	76	83	0	-
RE214700_101	Residential	593962	4835383	1.5	31	75	83	0	-
RE214700_102	Residential	593958	4835387	1.5	30	74	83	0	-
RE214700_103	Residential	593951	4835396	1.5	30	74	83	0	-
RE214700_104	Residential	593947	4835399	1.5	30	74	83	0	-
RE214700_105	Residential	593941	4835404	1.5	29	73	83	0	-
RE214700_106	Residential	593922	4835422	1.5	28	72	83	0	-
RE214700_107	Residential	593918	4835425	1.5	28	72	83	0	-
RE214700_108	Residential	593968	4835378	1.5	31	75	83	0	-
RE214700_109	Residential	593955	4835390	1.5	30	74	83	0	-
RE214700_110	Residential	593936	4835409	1.5	29	73	83	0	-
RE214700_111	Residential	593932	4835413	1.5	29	73	83	0	-
RE214700_112	Residential	593927	4835416	1.5	29	73	83	0	-
RE214700_113	Residential	593915	4835429	1.5	28	72	83	0	-
RE214700_114	Residential	593909	4835436	1.5	28	72	83	0	-
RE214800_004	Residential	594026	4835615	1.5	29	73	83	0	-
RE214800_005	Residential	593831	4835365	1.5	25	69	83	0	-
RE214800_006	Residential	593852	4835385	1.5	25	70	83	0	-
RE214800_007	Residential	593881	4835418	1.5	27	71	83	0	-
RE214800_012	Residential	593782	4835346	1.5	24	69	83	0	-
RE214800_013	Residential	593787	4835332	1.5	24	69	83	0	-
RE214800_014	Residential	593789	4835319	1.5	24	69	83	0	-
RE214800_015	Residential	593821	4835355	1.5	25	69	83	0	-
RE214800_016	Residential	593842	4835375	1.5	25	69	83	0	-
RE214800_017	Residential	593862	4835398	1.5	26	70	83	0	-
RE214800_018	Residential	593873	4835409	1.5	26	71	83	0	-
RE214800_019	Residential	593990	4835530	1.5	29	73	83	0	-
RE214800_020	Residential	593986	4835536	1.5	29	73	83	0	-
RE214800_021	Residential	593998	4835545	1.5	29	73	83	0	-
RE214800_022	Residential	594003	4835542	1.5	29	73	83	0	-
RE214800_023	Residential	593968	4835554	1.5	28	72	83	0	-
RE214800_024	Residential	593977	4835565	1.5	28	72	83	0	-
RE214800_025	Residential	593946	4835572	1.5	27	71	83	0	-
RE214800_026	Residential	593927	4835596	1.5	26	70	83	0	-
RE214800_027	Residential	593950	4835594	1.5	27	71	83	0	-
RE214800_028	Residential	593964	4835580	1.5	28	72	83	0	-
RE214800_029	Residential	593968	4835576	1.5	28	72	83	0	-
RE214800_030	Residential	593973	4835571	1.5	28	72	83	0	-
RE214800_031	Residential	593987	4835592	1.5	28	72	83	0	-
RE214800_032	Residential	593962	4835559	1.5	28	72	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214800_033	Residential	593956	4835562	1.5	28	72	83	0	-
RE214800_034	Residential	593952	4835567	1.5	27	71	83	0	-
RE214800_035	Residential	593941	4835579	1.5	27	71	83	0	-
RE214800_036	Residential	593936	4835582	1.5	27	71	83	0	-
RE214800_037	Residential	593931	4835589	1.5	27	71	83	0	-
RE214800_038	Residential	593938	4835605	1.5	27	71	83	0	-
RE214800_039	Residential	593945	4835599	1.5	27	71	83	0	-
RE214800_040	Residential	593953	4835589	1.5	27	71	83	0	-
RE214800_041	Residential	593959	4835583	1.5	27	71	83	0	-
RE214800_042	Residential	593997	4835583	1.5	28	72	83	0	-
RE214800_043	Residential	593992	4835588	1.5	28	72	83	0	-
RE214800_044	Residential	593982	4835599	1.5	28	72	83	0	-
RE214800_045	Residential	593977	4835603	1.5	28	72	83	0	-
RE214800_046	Residential	593970	4835610	1.5	27	71	83	0	-
RE214800_052	Residential	593995	4835609	1.5	28	72	83	0	-
RE214800_053	Residential	593999	4835605	1.5	28	72	83	0	-
RE214800_056	Residential	593989	4835614	1.5	28	72	83	0	-
RE214800_057	Residential	594004	4835600	1.5	28	72	83	0	-
RE214800_058	Residential	594008	4835595	1.5	29	73	83	0	-
RE214800_059	Residential	593969	4835510	1.5	29	73	83	0	-
RE214800_060	Residential	593964	4835515	1.5	29	73	83	0	-
RE214800_061	Residential	593919	4835462	1.5	28	72	83	0	-
RE214800_062	Residential	593941	4835536	1.5	27	71	83	0	-
RE214800_063	Residential	593932	4835545	1.5	27	71	83	0	-
RE214800_064	Residential	593919	4835557	1.5	26	70	83	0	-
RE214800_065	Residential	593923	4835458	1.5	28	72	83	0	-
RE214800_066	Residential	593916	4835466	1.5	28	72	83	0	-
RE214800_067	Residential	593938	4835540	1.5	27	71	83	0	-
RE214800_068	Residential	593926	4835550	1.5	27	71	83	0	-
RE214800_069	Residential	593924	4835553	1.5	27	71	83	0	-
RE214800_070	Residential	593909	4835569	1.5	26	70	83	0	-
RE214800_071	Residential	593905	4835574	1.5	26	70	83	0	-
RE214800_072	Residential	593913	4835564	1.5	26	70	83	0	-
RE214800_073	Residential	593902	4835442	1.5	27	71	83	0	-
RE214800_074	Residential	593897	4835447	1.5	27	71	83	0	-
RE214800_075	Residential	593945	4835532	1.5	28	72	83	0	-
RE214800_076	Residential	593781	4835357	1.5	24	69	83	0	-
RE214900_001	Residential	593921	4835605	1.5	26	70	83	0	-
RE214900_008	Residential	593899	4835580	1.5	26	70	83	0	-
RE214900_009	Residential	593896	4835585	1.5	26	70	83	0	-
RE214900_010	Residential	593893	4835591	1.5	25	70	83	0	-
RE217600_001	Residential	591736	4837227	1.5	15	59	83	0	-
RE217600_002	Residential	591766	4837262	1.5	14	58	83	0	-
RE218700_001	Residential	590959	4838020	1.5	39	83	83	7	0.0%
RE218700_002	Residential	590988	4838088	1.5	41	86	83	7	0.0%
RE220800_001	Residential	590421	4839357	1.5	13	57	83	0	-
RE220900_001	Residential	590180	4839466	1.5	13	58	83	0	-
RE220900_002	Residential	590517	4839408	1.5	12	56	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE220900_003	Residential	590379	4839398	1.5	13	57	83	0	-
RE221000_001	Residential	590454	4839467	1.5	14	58	83	0	-
RE221000_002	Residential	590412	4839513	1.5	16	59	83	0	-
RE221300_001	Residential	590257	4839724	1.5	15	58	83	0	-
RE221300_002	Residential	590236	4839764	1.5	15	58	83	0	-
RE221300_003	Residential	590440	4839670	1.5	12	55	83	0	-
RE222600_001	Residential	591012	4840654	1.5	16	60	83	0	-
RE222700_001	Residential	590826	4840878	1.5	20	64	83	0	-
RE222700_002	Residential	590788	4840912	1.5	21	65	83	0	-
RE222700_003	Residential	590768	4840946	1.5	21	65	83	0	-
RE222700_004	Residential	590744	4840967	1.5	21	65	83	0	-
RE222700_005	Residential	590721	4840990	1.5	21	65	83	0	-
RE222700_006	Residential	590621	4841031	1.5	21	65	83	0	-
RE222800_001	Residential	590888	4840963	1.5	19	63	83	0	-
RE222800_002	Residential	590866	4840985	1.5	19	63	83	0	-
RE222800_003	Residential	590833	4841016	1.5	19	63	83	0	-
RE222800_004	Residential	590542	4841175	1.5	23	64	83	0	-
RE222800_005	Residential	591137	4840761	1.5	13	57	83	0	-
RE222900_001	Residential	590805	4841056	1.5	18	63	83	0	-
RE223100_001	Residential	590769	4841337	1.5	20	61	83	0	-
RE224000_001	Residential	591729	4841911	1.5	37	79	83	0	-
RE224000_002	Residential	591565	4842001	1.5	29	71	83	0	-
RE224000_003	Residential	591896	4841760	1.5	42	85	83	1	0.0%
RE224000_004	Residential	592046	4841608	1.5	42	86	83	1	0.0%
RE224000_005	Residential	591982	4841673	1.5	43	86	83	2	0.0%
RE224000_006	Residential	592000	4841606	1.5	30	72	83	0	-
RE224000_007	Residential	592142	4841674	1.5	28	71	83	0	-
RE224000_008	Residential	591760	4841888	1.5	40	81	83	0	-
RE224100_001	Residential	591661	4842108	1.5	39	81	83	0	-
RE224200_001	Residential	591576	4842265	1.5	22	66	83	0	-
RE225600_001	Residential	591815	4843783	1.5	21	66	83	0	-
RE225700_001	Residential	591905	4843849	1.5	18	62	83	0	-
RE225700_002	Residential	591627	4843848	1.5	20	64	83	0	-
RE225800_001	Residential	591793	4843928	1.5	21	65	83	0	-
RE226500_001	Residential	591915	4844500	1.5	22	65	83	0	-
RE226500_002	Residential	592025	4844497	1.5	19	60	83	0	-
RE226600_001	Residential	592085	4844601	1.5	22	63	83	0	-
RE226700_001	Residential	592060	4844696	1.5	27	68	83	0	-
RE226800_001	Residential	592117	4844789	1.5	30	72	83	0	-
RE227000_001	Residential	592319	4844882	1.5	31	75	83	1	0.0%
RE227100_001	Residential	592377	4844982	1.5	39	83	83	3	0.0%
RE227100_002	Residential	592402	4845033	1.5	45	87	83	14	0.0%
RE227300_001	Residential	592788	4845012	1.5	36	80	83	4	0.0%
RE227800_001	Residential	592859	4845591	1.5	20	64	83	0	-
RE227900_001	Residential	592776	4845681	1.5	20	64	83	0	-
RE228000_001	Residential	595855	4844518	1.5	61	104	83	20	0.0%
RE228000_002	Residential	595865	4844534	1.5	63	106	83	21	0.0%
RE228000_003	Residential	595873	4844555	1.5	69	110	83	22	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228000_004	Residential	595887	4844563	1.5	69	110	83	24	0.1%
RE228000_005	Residential	595917	4844562	1.5	72	117	83	21	0.0%
RE228000_006	Residential	595931	4844548	1.5	73	118	83	23	0.1%
RE228000_007	Residential	595942	4844534	1.5	73	118	83	20	0.0%
RE228000_008	Child Care Centre	597841	4843717	1.5	43	87	83	4	0.0%
RE228000_009	Residential	595782	4844642	1.5	64	108	83	6	0.0%
RE228100_001	Residential	595810	4844669	1.5	68	112	83	13	0.0%
RE228300_028	Residential	595272	4845160	1.5	58	100	83	11	0.0%
RE228300_029	Residential	595277	4845164	1.5	58	100	83	11	0.0%
RE228300_030	Residential	595281	4845168	1.5	58	100	83	11	0.0%
RE228300_031	Residential	595264	4845154	1.5	58	101	83	10	0.0%
RE228300_032	Residential	595260	4845151	1.5	58	101	83	10	0.0%
RE228300_033	Residential	595256	4845147	1.5	57	101	83	10	0.0%
RE228300_034	Residential	595252	4845143	1.5	57	101	83	10	0.0%
RE228300_035	Residential	595247	4845139	1.5	57	101	83	10	0.0%
RE228400_004	Residential	595342	4845241	1.5	54	95	83	13	0.0%
RE228400_005	Residential	595347	4845245	1.5	55	95	83	13	0.0%
RE228400_006	Residential	595353	4845250	1.5	55	96	83	12	0.0%
RE228400_007	Residential	595286	4845173	1.5	58	100	83	11	0.0%
RE228400_008	Residential	595291	4845177	1.5	58	99	83	12	0.0%
RE228400_009	Residential	595295	4845180	1.5	58	99	83	12	0.0%
RE228400_010	Residential	595299	4845184	1.5	58	99	83	12	0.0%
RE228400_011	Residential	595303	4845187	1.5	58	99	83	11	0.0%
RE228400_013	Residential	595249	4845194	1.5	52	92	83	11	0.0%
RE228400_014	Residential	595253	4845198	1.5	51	92	83	10	0.0%
RE228400_015	Residential	595259	4845202	1.5	51	92	83	11	0.0%
RE228400_045	Residential	595263	4845261	1.5	55	96	83	9	0.0%
RE228400_046	Residential	595267	4845257	1.5	55	96	83	9	0.0%
RE228400_047	Residential	595271	4845254	1.5	55	96	83	9	0.0%
RE228400_048	Residential	595277	4845248	1.5	54	95	83	9	0.0%
RE228400_049	Residential	595281	4845244	1.5	54	95	83	9	0.0%
RE228400_050	Residential	595285	4845240	1.5	54	95	83	10	0.0%
RE228400_051	Residential	595289	4845237	1.5	54	94	83	11	0.0%
RE228400_052	Residential	595293	4845233	1.5	53	94	83	10	0.0%
RE228400_053	Residential	595297	4845229	1.5	53	93	83	10	0.0%
RE228400_054	Residential	595303	4845221	1.5	51	93	83	12	0.0%
RE228400_055	Residential	595307	4845217	1.5	53	94	83	12	0.0%
RE228400_056	Residential	595312	4845212	1.5	54	95	83	12	0.0%
RE228400_057	Residential	595317	4845207	1.5	56	97	83	12	0.0%
RE228400_058	Residential	595321	4845203	1.5	57	98	83	12	0.0%
RE228400_059	Residential	595326	4845198	1.5	58	99	83	11	0.0%
RE228500_009	Residential	595340	4845366	1.5	53	97	83	9	0.0%
RE228500_010	Residential	595348	4845355	1.5	53	97	83	10	0.0%
RE228500_011	Residential	595353	4845351	1.5	52	96	83	10	0.0%
RE228500_012	Residential	595360	4845346	1.5	52	96	83	11	0.0%
RE228500_013	Residential	595365	4845341	1.5	54	95	83	11	0.0%
RE228500_014	Residential	595376	4845333	1.5	57	98	83	11	0.0%
RE228500_015	Residential	595380	4845326	1.5	58	99	83	11	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228500_016	Residential	595386	4845320	1.5	59	100	83	12	0.0%
RE228500_017	Residential	595391	4845315	1.5	60	101	83	10	0.0%
RE228500_018	Residential	595402	4845305	1.5	61	101	83	13	0.0%
RE228500_019	Residential	595406	4845298	1.5	60	101	83	12	0.0%
RE228500_020	Residential	595415	4845288	1.5	59	100	83	13	0.0%
RE228500_021	Residential	595423	4845280	1.5	58	99	83	14	0.0%
RE228500_022	Residential	595357	4845254	1.5	56	97	83	11	0.0%
RE228500_023	Residential	595366	4845262	1.5	57	98	83	11	0.0%
RE228500_024	Residential	595370	4845267	1.5	57	98	83	12	0.0%
RE228500_025	Residential	595375	4845271	1.5	58	99	83	12	0.0%
RE228500_026	Residential	595355	4845285	1.5	59	100	83	12	0.0%
RE228500_027	Residential	595349	4845290	1.5	59	100	83	12	0.0%
RE228500_028	Residential	595342	4845297	1.5	58	99	83	10	0.0%
RE228500_029	Residential	595338	4845303	1.5	58	98	83	10	0.0%
RE228500_030	Residential	595329	4845311	1.5	56	97	83	9	0.0%
RE228500_031	Residential	595322	4845317	1.5	55	96	83	9	0.0%
RE228500_032	Residential	595315	4845323	1.5	54	95	83	9	0.0%
RE228500_033	Residential	595310	4845328	1.5	52	93	83	10	0.0%
RE228500_034	Residential	595301	4845337	1.5	50	94	83	10	0.0%
RE228500_035	Residential	595297	4845343	1.5	50	94	83	10	0.0%
RE228500_049	Residential	595279	4845312	1.5	53	94	83	9	0.0%
RE228500_050	Residential	595289	4845303	1.5	55	95	83	9	0.0%
RE228500_051	Residential	595293	4845297	1.5	55	96	83	8	0.0%
RE228500_052	Residential	595300	4845290	1.5	56	97	83	9	0.0%
RE228500_053	Residential	595305	4845285	1.5	57	98	83	10	0.0%
RE228500_054	Residential	595315	4845277	1.5	57	98	83	11	0.0%
RE228500_055	Residential	595319	4845273	1.5	58	98	83	11	0.0%
RE228500_056	Residential	595323	4845268	1.5	57	98	83	11	0.0%
RE228500_057	Residential	595329	4845264	1.5	57	98	83	10	0.0%
RE228500_060	Residential	595450	4845298	1.5	61	102	83	13	0.0%
RE228500_061	Residential	595448	4845302	1.5	62	102	83	13	0.0%
RE228500_062	Residential	595444	4845307	1.5	62	103	83	12	0.0%
RE228500_063	Residential	595440	4845311	1.5	62	103	83	13	0.0%
RE228500_064	Residential	595437	4845315	1.5	62	102	83	14	0.0%
RE228500_065	Residential	595433	4845320	1.5	61	102	83	13	0.0%
RE228500_066	Residential	595429	4845324	1.5	61	102	83	13	0.0%
RE228500_067	Residential	595426	4845327	1.5	60	101	83	12	0.0%
RE228600_013	Residential	595369	4845462	1.5	45	89	83	12	0.0%
RE228600_014	Residential	595377	4845450	1.5	48	92	83	11	0.0%
RE228600_015	Residential	595389	4845444	1.5	50	94	83	11	0.0%
RE228600_016	Residential	595398	4845435	1.5	52	96	83	11	0.0%
RE228600_017	Residential	595404	4845426	1.5	54	98	83	11	0.0%
RE228600_018	Residential	595412	4845418	1.5	56	100	83	13	0.0%
RE228600_019	Residential	595420	4845409	1.5	57	101	83	13	0.0%
RE228600_020	Residential	595431	4845401	1.5	58	102	83	13	0.0%
RE228600_021	Residential	595439	4845389	1.5	58	102	83	13	0.0%
RE228600_022	Residential	595447	4845380	1.5	57	101	83	13	0.0%
RE228600_023	Residential	595455	4845370	1.5	56	100	83	13	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228600_024	Residential	595464	4845360	1.5	57	98	83	12	0.0%
RE228600_025	Residential	595470	4845351	1.5	59	100	83	12	0.0%
RE228600_026	Residential	595480	4845344	1.5	61	102	83	12	0.0%
RE228600_027	Residential	595487	4845335	1.5	62	103	83	14	0.0%
RE228600_036	Residential	595324	4845383	1.5	54	98	83	9	0.0%
RE228600_037	Residential	595332	4845374	1.5	53	97	83	8	0.0%
RE228600_038	Residential	595335	4845370	1.5	53	97	83	9	0.0%
RE228600_039	Residential	595422	4845333	1.5	59	100	83	11	0.0%
RE228600_040	Residential	595418	4845337	1.5	58	99	83	11	0.0%
RE228600_041	Residential	595415	4845341	1.5	58	98	83	11	0.0%
RE228600_042	Residential	595412	4845343	1.5	57	98	83	11	0.0%
RE228600_043	Residential	595409	4845347	1.5	56	97	83	11	0.0%
RE228600_044	Residential	595406	4845351	1.5	55	97	83	11	0.0%
RE228600_045	Residential	595404	4845354	1.5	54	97	83	11	0.0%
RE228600_046	Residential	595402	4845357	1.5	54	98	83	11	0.0%
RE228600_047	Residential	595396	4845362	1.5	54	98	83	10	0.0%
RE228600_048	Residential	595392	4845366	1.5	54	98	83	10	0.0%
RE228600_049	Residential	595390	4845369	1.5	55	99	83	10	0.0%
RE228600_050	Residential	595387	4845372	1.5	55	99	83	11	0.0%
RE228600_051	Residential	595383	4845375	1.5	55	99	83	11	0.0%
RE228600_052	Residential	595380	4845378	1.5	55	99	83	11	0.0%
RE228600_053	Residential	595377	4845380	1.5	55	99	83	11	0.0%
RE228600_054	Residential	595374	4845383	1.5	55	99	83	10	0.0%
RE228600_055	Residential	595371	4845387	1.5	55	99	83	9	0.0%
RE228600_056	Residential	595369	4845389	1.5	55	99	83	9	0.0%
RE228600_057	Residential	595366	4845392	1.5	55	99	83	9	0.0%
RE228600_058	Residential	595363	4845395	1.5	55	99	83	10	0.0%
RE228600_059	Residential	595361	4845397	1.5	55	99	83	10	0.0%
RE228600_060	Residential	595358	4845400	1.5	55	99	83	10	0.0%
RE228600_061	Residential	595356	4845402	1.5	55	99	83	11	0.0%
RE228600_062	Residential	595353	4845405	1.5	54	98	83	11	0.0%
RE228600_063	Residential	593163	4846308	1.5	28	73	83	0	-
RE228700_010	Residential	593290	4846362	1.5	17	61	83	0	-
RE228800_001	Residential	593003	4846574	1.5	18	62	83	0	-
RE228800_002	Residential	593037	4846534	1.5	19	62	83	0	-
RE228800_003	Residential	593163	4846512	1.5	18	62	83	0	-
RE228900_001	Residential	592951	4846627	1.5	18	61	83	0	-
RE228900_002	Residential	592887	4846738	1.5	18	62	83	0	-
RE229000_001	Residential	593405	4846521	1.5	20	64	83	0	-
RE229100_001	Residential	593407	4846583	1.5	21	65	83	0	-
RE230200_001	Residential	594211	4847001	1.5	25	69	83	0	-
RE230300_001	Residential	594050	4847308	1.5	28	69	83	0	-
RE230300_002	Residential	593923	4847396	1.5	25	67	83	0	-
RE230300_003	Residential	594697	4846565	1.5	34	75	83	1	0.0%
RE230300_004	Residential	595111	4846102	1.5	33	77	83	1	0.0%
RE230300_005	Residential	595605	4845645	1.5	41	85	83	10	0.0%
RE230400_001	Residential	593872	4847645	1.5	17	61	83	0	-
RE230400_002	Residential	593822	4847679	1.5	17	61	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230400_006	Residential	594520	4846864	1.5	30	74	83	0	-
RE230400_007	Residential	594996	4846385	1.5	35	76	83	3	0.0%
RE230400_008	Residential	594973	4846410	1.5	36	77	83	3	0.0%
RE230400_009	Residential	594936	4846427	1.5	36	77	83	3	0.0%
RE230400_010	Residential	595705	4845694	1.5	43	87	83	14	0.0%
RE230400_011	Residential	595874	4845530	1.5	57	101	83	56	0.1%
RE230500_001	Residential	594280	4847364	1.5	20	64	83	0	-
RE230500_002	Residential	594446	4847099	1.5	24	65	83	0	-
RE230500_003	Residential	594531	4847041	1.5	25	66	83	0	-
RE230500_004	Residential	594643	4846861	1.5	25	68	83	0	-
RE230500_005	Residential	594671	4846840	1.5	26	69	83	0	-
RE230500_006	Residential	595049	4846474	1.5	27	70	83	0	-
RE230500_007	Residential	595486	4846036	1.5	31	75	83	1	0.0%
RE230500_008	Residential	595463	4846068	1.5	31	73	83	2	0.0%
RE230500_009	Residential	595438	4846095	1.5	30	73	83	0	-
RE230500_010	Residential	595925	4845612	1.5	51	96	83	35	0.1%
RE230500_011	Residential	595941	4845561	1.5	58	102	83	53	0.1%
RE230500_012	Residential	596152	4845388	1.5	70	113	83	139	0.3%
RE230500_013	Residential	596418	4845009	1.5	81	122	83	89	0.2%
RE230500_014	Residential	596697	4844834	1.5	44	85	83	10	0.0%
RE230600_001	Residential	594927	4846729	1.5	30	71	83	0	-
RE230600_002	Residential	595293	4846327	1.5	27	70	83	0	-
RE230600_003	Residential	596445	4845172	1.5	83	124	83	238	0.5%
RE230600_004	Residential	596565	4845058	1.5	63	105	83	42	0.1%
RE230600_005	Residential	596657	4844932	1.5	50	91	83	18	0.0%
RE230600_006	Residential	596705	4844908	1.5	47	88	83	10	0.0%
RE230900_001	Residential	597840	4844261	1.5	79	120	83	120	0.3%
RE230900_002	Residential	597853	4844274	1.5	76	117	83	82	0.2%
RE230900_003	Residential	597866	4844285	1.5	70	114	83	66	0.2%
RE230900_004	Residential	597879	4844301	1.5	66	111	83	47	0.1%
RE230900_005	Residential	597887	4844307	1.5	64	109	83	34	0.1%
RE230900_006	Residential	597900	4844320	1.5	60	105	83	31	0.1%
RE230900_007	Residential	597908	4844331	1.5	58	103	83	28	0.1%
RE230900_008	Residential	597922	4844342	1.5	57	101	83	27	0.1%
RE230900_009	Residential	597931	4844352	1.5	56	100	83	26	0.1%
RE230900_010	Residential	597943	4844365	1.5	54	99	83	19	0.0%
RE230900_011	Residential	597954	4844376	1.5	52	97	83	16	0.0%
RE230900_012	Residential	597816	4844283	1.5	80	121	83	132	0.3%
RE230900_013	Residential	597825	4844289	1.5	79	120	83	107	0.2%
RE230900_014	Residential	597835	4844299	1.5	78	119	83	85	0.2%
RE230900_015	Residential	597842	4844308	1.5	72	117	83	76	0.2%
RE230900_016	Residential	597849	4844314	1.5	71	115	83	67	0.2%
RE230900_017	Residential	597859	4844324	1.5	68	112	83	52	0.1%
RE230900_018	Residential	597867	4844331	1.5	65	110	83	42	0.1%
RE230900_019	Residential	597875	4844341	1.5	63	108	83	33	0.1%
RE230900_020	Residential	597884	4844348	1.5	61	105	83	31	0.1%
RE230900_021	Residential	597892	4844356	1.5	59	104	83	30	0.1%
RE230900_022	Residential	597899	4844365	1.5	58	103	83	28	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_023	Residential	597905	4844373	1.5	57	102	83	28	0.1%
RE230900_024	Residential	597917	4844381	1.5	56	101	83	27	0.1%
RE230900_025	Residential	597924	4844389	1.5	55	100	83	22	0.1%
RE230900_026	Residential	597931	4844399	1.5	54	98	83	19	0.0%
RE230900_027	Residential	597646	4844600	1.5	79	120	83	135	0.3%
RE230900_028	Residential	597653	4844613	1.5	73	118	83	116	0.3%
RE230900_029	Residential	597660	4844623	1.5	73	118	83	108	0.2%
RE230900_030	Residential	597665	4844629	1.5	73	117	83	97	0.2%
RE230900_031	Residential	597835	4844353	1.5	70	114	83	60	0.1%
RE230900_032	Residential	597831	4844358	1.5	70	115	83	60	0.1%
RE230900_033	Residential	597825	4844365	1.5	71	116	83	60	0.1%
RE230900_034	Residential	597820	4844371	1.5	71	116	83	61	0.1%
RE230900_035	Residential	597814	4844379	1.5	72	116	83	62	0.1%
RE230900_036	Residential	597811	4844383	1.5	72	116	83	64	0.1%
RE230900_037	Residential	597806	4844390	1.5	72	116	83	64	0.1%
RE230900_038	Residential	597801	4844396	1.5	72	117	83	66	0.2%
RE230900_039	Residential	597796	4844403	1.5	72	117	83	66	0.2%
RE230900_040	Residential	597792	4844410	1.5	72	117	83	67	0.2%
RE230900_041	Residential	597786	4844416	1.5	72	117	83	68	0.2%
RE230900_042	Residential	597783	4844423	1.5	72	117	83	68	0.2%
RE230900_043	Residential	597781	4844430	1.5	72	117	83	66	0.2%
RE230900_044	Residential	597777	4844436	1.5	72	117	83	68	0.2%
RE230900_045	Residential	597773	4844443	1.5	72	117	83	68	0.2%
RE230900_046	Residential	597770	4844450	1.5	72	117	83	68	0.2%
RE230900_047	Residential	597766	4844457	1.5	72	117	83	68	0.2%
RE230900_048	Residential	597762	4844463	1.5	72	117	83	69	0.2%
RE230900_049	Residential	597758	4844470	1.5	72	117	83	71	0.2%
RE230900_050	Residential	597754	4844477	1.5	72	117	83	72	0.2%
RE230900_051	Residential	597751	4844484	1.5	72	117	83	72	0.2%
RE230900_052	Residential	597747	4844490	1.5	72	117	83	73	0.2%
RE230900_053	Residential	597744	4844497	1.5	72	117	83	73	0.2%
RE230900_054	Residential	597739	4844504	1.5	72	117	83	74	0.2%
RE230900_055	Residential	597725	4844530	1.5	72	117	83	77	0.2%
RE230900_056	Residential	597721	4844535	1.5	72	117	83	77	0.2%
RE230900_057	Residential	597717	4844543	1.5	72	117	83	77	0.2%
RE230900_058	Residential	597713	4844549	1.5	72	117	83	78	0.2%
RE230900_059	Residential	597710	4844557	1.5	72	117	83	79	0.2%
RE230900_060	Residential	597705	4844564	1.5	72	117	83	79	0.2%
RE230900_061	Residential	597701	4844572	1.5	72	117	83	80	0.2%
RE230900_062	Residential	597697	4844579	1.5	72	117	83	80	0.2%
RE230900_063	Residential	597692	4844586	1.5	72	117	83	81	0.2%
RE230900_064	Residential	597688	4844592	1.5	72	117	83	85	0.2%
RE230900_065	Residential	597684	4844600	1.5	73	117	83	86	0.2%
RE230900_066	Residential	597681	4844607	1.5	73	117	83	86	0.2%
RE230900_067	Residential	597651	4844608	1.5	77	118	83	122	0.3%
RE230900_068	Residential	597659	4844619	1.5	73	118	83	109	0.2%
RE230900_069	Residential	597659	4844582	1.5	79	119	83	127	0.3%
RE230900_070	Residential	597661	4844578	1.5	79	119	83	123	0.3%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_071	Residential	597664	4844572	1.5	79	119	83	122	0.3%
RE230900_072	Residential	597668	4844567	1.5	79	119	83	118	0.3%
RE230900_073	Residential	597671	4844560	1.5	79	119	83	118	0.3%
RE230900_074	Residential	597674	4844556	1.5	79	119	83	116	0.3%
RE230900_075	Residential	597678	4844550	1.5	79	119	83	114	0.3%
RE230900_076	Residential	597681	4844543	1.5	79	119	83	112	0.3%
RE230900_077	Residential	597684	4844537	1.5	79	119	83	113	0.3%
RE230900_078	Residential	597688	4844532	1.5	79	119	83	111	0.3%
RE230900_079	Residential	597691	4844527	1.5	79	119	83	111	0.3%
RE230900_080	Residential	597695	4844521	1.5	79	119	83	110	0.3%
RE230900_081	Residential	597697	4844516	1.5	79	119	83	109	0.2%
RE230900_082	Residential	597714	4844486	1.5	79	120	83	107	0.2%
RE230900_083	Residential	597717	4844481	1.5	79	120	83	106	0.2%
RE230900_084	Residential	597720	4844476	1.5	79	120	83	106	0.2%
RE230900_085	Residential	597723	4844470	1.5	79	120	83	104	0.2%
RE230900_086	Residential	597726	4844464	1.5	79	120	83	103	0.2%
RE230900_087	Residential	597729	4844460	1.5	79	120	83	103	0.2%
RE230900_088	Residential	597732	4844455	1.5	79	120	83	103	0.2%
RE230900_089	Residential	597736	4844448	1.5	79	120	83	103	0.2%
RE230900_090	Residential	597740	4844440	1.5	79	120	83	102	0.2%
RE230900_091	Residential	597743	4844435	1.5	79	120	83	102	0.2%
RE230900_092	Residential	597747	4844429	1.5	79	120	83	102	0.2%
RE230900_093	Residential	597749	4844423	1.5	79	120	83	102	0.2%
RE230900_094	Residential	597752	4844418	1.5	79	120	83	102	0.2%
RE230900_095	Residential	597755	4844413	1.5	79	120	83	102	0.2%
RE230900_096	Residential	597758	4844409	1.5	79	120	83	102	0.2%
RE230900_097	Residential	597762	4844402	1.5	79	120	83	102	0.2%
RE230900_098	Residential	597765	4844392	1.5	79	120	83	107	0.2%
RE230900_099	Residential	597769	4844386	1.5	79	120	83	107	0.2%
RE230900_100	Residential	597773	4844382	1.5	79	120	83	106	0.2%
RE230900_101	Residential	597776	4844377	1.5	79	120	83	106	0.2%
RE230900_102	Residential	597784	4844369	1.5	79	119	83	97	0.2%
RE230900_103	Residential	597787	4844364	1.5	79	119	83	97	0.2%
RE230900_104	Residential	597791	4844360	1.5	79	119	83	94	0.2%
RE230900_105	Residential	597794	4844354	1.5	79	119	83	94	0.2%
RE230900_106	Residential	597798	4844349	1.5	79	119	83	94	0.2%
RE230900_107	Residential	597802	4844343	1.5	79	119	83	93	0.2%
RE230900_108	Residential	597805	4844339	1.5	78	119	83	93	0.2%
RE230900_109	Residential	597808	4844334	1.5	78	119	83	92	0.2%
RE230900_110	Residential	597861	4844387	1.5	61	106	83	32	0.1%
RE230900_111	Residential	597868	4844394	1.5	61	105	83	31	0.1%
RE230900_112	Residential	597877	4844404	1.5	60	104	83	29	0.1%
RE230900_113	Residential	597886	4844412	1.5	58	103	83	27	0.1%
RE230900_114	Residential	597892	4844420	1.5	57	102	83	27	0.1%
RE230900_115	Residential	597874	4844444	1.5	58	103	83	27	0.1%
RE230900_116	Residential	597870	4844440	1.5	59	104	83	27	0.1%
RE230900_117	Residential	597863	4844432	1.5	60	105	83	30	0.1%
RE230900_118	Residential	597859	4844428	1.5	61	105	83	30	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_119	Residential	597849	4844405	1.5	62	107	83	32	0.1%
RE230900_120	Residential	597845	4844411	1.5	62	107	83	32	0.1%
RE230900_121	Residential	597840	4844418	1.5	63	107	83	33	0.1%
RE230900_122	Residential	597836	4844424	1.5	63	108	83	33	0.1%
RE230900_123	Residential	597819	4844451	1.5	64	109	83	35	0.1%
RE230900_124	Residential	597815	4844458	1.5	64	109	83	35	0.1%
RE230900_125	Residential	597834	4844465	1.5	62	107	83	32	0.1%
RE230900_126	Residential	597846	4844477	1.5	60	105	83	28	0.1%
RE230900_127	Residential	597812	4844466	1.5	64	109	83	36	0.1%
RE230900_128	Residential	597808	4844471	1.5	65	109	83	37	0.1%
RE230900_129	Residential	597804	4844480	1.5	65	110	83	38	0.1%
RE230900_130	Residential	597801	4844485	1.5	65	110	83	40	0.1%
RE230900_131	Residential	597796	4844493	1.5	65	110	83	41	0.1%
RE230900_132	Residential	597793	4844499	1.5	66	110	83	41	0.1%
RE230900_133	Residential	597788	4844505	1.5	66	111	83	41	0.1%
RE230900_134	Residential	597785	4844512	1.5	66	111	83	41	0.1%
RE230900_135	Residential	597781	4844519	1.5	67	111	83	41	0.1%
RE230900_136	Residential	597777	4844525	1.5	67	111	83	42	0.1%
RE230900_137	Residential	597772	4844533	1.5	67	112	83	42	0.1%
RE230900_138	Residential	597769	4844540	1.5	67	112	83	42	0.1%
RE230900_139	Residential	597765	4844546	1.5	68	112	83	43	0.1%
RE230900_140	Residential	597762	4844553	1.5	68	112	83	44	0.1%
RE230900_141	Residential	597758	4844559	1.5	68	112	83	45	0.1%
RE230900_142	Residential	597755	4844565	1.5	68	113	83	46	0.1%
RE230900_143	Residential	597751	4844573	1.5	68	113	83	47	0.1%
RE230900_144	Residential	597747	4844579	1.5	69	113	83	47	0.1%
RE230900_145	Residential	597822	4844504	1.5	62	106	83	31	0.1%
RE230900_146	Residential	597827	4844497	1.5	62	106	83	31	0.1%
RE230900_147	Residential	597831	4844490	1.5	61	106	83	30	0.1%
RE230900_148	Residential	597839	4844470	1.5	61	106	83	30	0.1%
RE230900_149	Residential	598114	4844042	1.5	50	95	83	22	0.1%
RE230900_150	Residential	598102	4844034	1.5	52	97	83	23	0.1%
RE230900_151	Residential	598094	4844026	1.5	54	98	83	26	0.1%
RE230900_152	Residential	598074	4844024	1.5	57	101	83	38	0.1%
RE230900_153	Residential	598063	4844034	1.5	57	102	83	40	0.1%
RE230900_154	Residential	598053	4844045	1.5	58	103	83	44	0.1%
RE230900_155	Residential	598043	4844055	1.5	59	103	83	46	0.1%
RE230900_156	Residential	598034	4844069	1.5	59	103	83	45	0.1%
RE230900_157	Residential	598028	4844085	1.5	58	103	83	41	0.1%
RE230900_158	Residential	598036	4844098	1.5	56	101	83	30	0.1%
RE230900_159	Residential	598045	4844106	1.5	54	99	83	25	0.1%
RE230900_160	Residential	598054	4844116	1.5	53	97	83	22	0.1%
RE230900_161	Residential	598102	4844074	1.5	50	94	83	20	0.0%
RE230900_162	Residential	598085	4844058	1.5	53	97	83	23	0.1%
RE230900_163	Residential	598068	4844077	1.5	53	98	83	23	0.1%
RE230900_164	Residential	598080	4844091	1.5	51	96	83	20	0.0%
RE230900_165	Residential	598123	4844051	1.5	48	93	83	19	0.0%
RE230900_166	Residential	598199	4843983	1.5	45	89	83	13	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_167	Residential	598192	4843977	1.5	45	90	83	15	0.0%
RE230900_168	Residential	598185	4843968	1.5	47	91	83	17	0.0%
RE230900_169	Residential	598179	4843962	1.5	48	92	83	19	0.0%
RE230900_170	Residential	598170	4843953	1.5	49	94	83	24	0.1%
RE230900_171	Residential	598161	4843941	1.5	51	96	83	27	0.1%
RE230900_172	Residential	598158	4843928	1.5	53	97	83	32	0.1%
RE230900_173	Residential	598165	4843918	1.5	53	97	83	33	0.1%
RE230900_174	Residential	598171	4843911	1.5	52	97	83	33	0.1%
RE230900_175	Residential	598179	4843903	1.5	52	97	83	32	0.1%
RE230900_176	Residential	598185	4843897	1.5	52	96	83	31	0.1%
RE230900_177	Residential	598191	4843889	1.5	52	96	83	31	0.1%
RE230900_178	Residential	598197	4843884	1.5	51	96	83	30	0.1%
RE230900_179	Residential	598202	4843879	1.5	51	96	83	30	0.1%
RE230900_180	Residential	598209	4843872	1.5	51	95	83	31	0.1%
RE230900_181	Residential	598215	4843866	1.5	51	95	83	31	0.1%
RE230900_182	Residential	598222	4843858	1.5	50	95	83	31	0.1%
RE230900_192	Residential	598217	4843965	1.5	44	89	83	13	0.0%
RE230900_193	Residential	598205	4843953	1.5	45	90	83	16	0.0%
RE230900_194	Residential	598192	4843939	1.5	48	92	83	22	0.1%
RE230900_198	Residential	597969	4844339	1.5	53	97	83	16	0.0%
RE230900_199	Residential	597959	4844330	1.5	54	99	83	21	0.0%
RE230900_200	Residential	597950	4844320	1.5	55	100	83	22	0.1%
RE230900_201	Residential	597940	4844310	1.5	56	100	83	27	0.1%
RE230900_202	Residential	597931	4844302	1.5	57	101	83	27	0.1%
RE230900_203	Residential	597923	4844293	1.5	59	103	83	28	0.1%
RE230900_204	Residential	597913	4844282	1.5	61	106	83	31	0.1%
RE230900_205	Residential	597979	4844349	1.5	51	96	83	15	0.0%
RE230900_206	Residential	597848	4844272	1.5	78	119	83	88	0.2%
RE230900_207	Residential	597840	4844263	1.5	79	120	83	116	0.3%
RE230900_208	Residential	597864	4844244	1.5	78	119	83	91	0.2%
RE230900_209	Residential	597869	4844237	1.5	78	119	83	90	0.2%
RE230900_210	Residential	597874	4844230	1.5	78	119	83	89	0.2%
RE230900_211	Residential	597878	4844225	1.5	77	118	83	92	0.2%
RE230900_212	Residential	597888	4844211	1.5	76	117	83	89	0.2%
RE230900_213	Residential	597893	4844204	1.5	76	117	83	90	0.2%
RE230900_214	Residential	597899	4844195	1.5	76	117	83	89	0.2%
RE230900_215	Residential	597904	4844188	1.5	75	116	83	88	0.2%
RE230900_216	Residential	597884	4844219	1.5	76	117	83	92	0.2%
RE230900_217	Residential	597946	4844123	1.5	74	116	83	95	0.2%
RE230900_218	Residential	597910	4844177	1.5	76	117	83	91	0.2%
RE230900_219	Residential	597915	4844171	1.5	75	116	83	93	0.2%
RE230900_220	Residential	597921	4844162	1.5	75	116	83	96	0.2%
RE230900_221	Residential	597926	4844153	1.5	75	116	83	96	0.2%
RE230900_222	Residential	597936	4844139	1.5	74	116	83	96	0.2%
RE230900_223	Residential	597954	4844115	1.5	73	116	83	93	0.2%
RE230900_224	Residential	597959	4844106	1.5	73	116	83	96	0.2%
RE230900_225	Residential	597967	4844098	1.5	72	115	83	93	0.2%
RE230900_226	Residential	597972	4844091	1.5	71	114	83	93	0.2%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_227	Residential	597977	4844083	1.5	71	114	83	94	0.2%
RE230900_228	Residential	597982	4844076	1.5	71	114	83	95	0.2%
RE230900_229	Residential	597986	4844069	1.5	71	114	83	96	0.2%
RE230900_230	Residential	597991	4844063	1.5	71	114	83	96	0.2%
RE230900_231	Residential	597994	4844057	1.5	71	115	83	96	0.2%
RE230900_232	Residential	598000	4844050	1.5	70	114	83	95	0.2%
RE230900_233	Residential	598005	4844046	1.5	69	114	83	94	0.2%
RE230900_234	Residential	598013	4844034	1.5	69	114	83	94	0.2%
RE230900_235	Residential	598019	4844027	1.5	69	114	83	94	0.2%
RE230900_236	Residential	598024	4844022	1.5	68	113	83	94	0.2%
RE230900_237	Residential	598029	4844018	1.5	68	112	83	92	0.2%
RE230900_238	Residential	598032	4844011	1.5	68	113	83	93	0.2%
RE230900_239	Residential	598037	4844006	1.5	68	113	83	93	0.2%
RE230900_240	Residential	598044	4843998	1.5	68	112	83	91	0.2%
RE230900_241	Residential	597941	4844132	1.5	74	116	83	94	0.2%
RE230900_242	Residential	598051	4843992	1.5	67	111	83	90	0.2%
RE230900_243	Residential	598058	4843984	1.5	66	110	83	85	0.2%
RE230900_244	Residential	598066	4843978	1.5	65	109	83	83	0.2%
RE230900_245	Residential	598072	4843971	1.5	64	109	83	84	0.2%
RE230900_246	Residential	598078	4843964	1.5	64	108	83	83	0.2%
RE230900_247	Residential	598084	4843957	1.5	63	108	83	81	0.2%
RE230900_257	Residential	598130	4844202	1.5	44	88	83	5	0.0%
RE230900_258	Residential	598131	4844192	1.5	44	89	83	6	0.0%
RE230900_259	Residential	598135	4844179	1.5	44	89	83	6	0.0%
RE230900_260	Residential	598147	4844156	1.5	44	88	83	6	0.0%
RE230900_261	Residential	598154	4844148	1.5	44	88	83	6	0.0%
RE230900_262	Residential	598161	4844140	1.5	43	88	83	6	0.0%
RE230900_263	Residential	598095	4844225	1.5	46	90	83	8	0.0%
RE230900_264	Residential	598095	4844213	1.5	46	91	83	9	0.0%
RE230900_265	Residential	598095	4844198	1.5	47	91	83	10	0.0%
RE230900_266	Residential	598094	4844188	1.5	47	92	83	11	0.0%
RE230900_272	Residential	598293	4843978	1.5	40	85	83	4	0.0%
RE230900_273	Residential	598282	4843987	1.5	41	85	83	5	0.0%
RE230900_274	Residential	598272	4843996	1.5	41	86	83	5	0.0%
RE230900_275	Residential	598261	4844006	1.5	41	86	83	5	0.0%
RE230900_276	Residential	598251	4844016	1.5	42	86	83	5	0.0%
RE230900_277	Residential	598243	4844025	1.5	42	86	83	5	0.0%
RE230900_278	Residential	598237	4844030	1.5	42	87	83	5	0.0%
RE230900_279	Residential	598231	4844036	1.5	42	87	83	5	0.0%
RE230900_280	Residential	598225	4844041	1.5	42	87	83	5	0.0%
RE230900_281	Residential	598220	4844046	1.5	43	87	83	5	0.0%
RE230900_282	Residential	598213	4844053	1.5	43	87	83	5	0.0%
RE230900_283	Residential	598133	4844117	1.5	46	91	83	11	0.0%
RE230900_285	Residential	598098	4844164	1.5	47	92	83	11	0.0%
RE230900_286	Residential	598103	4844154	1.5	47	92	83	11	0.0%
RE230900_287	Residential	598107	4844144	1.5	47	92	83	11	0.0%
RE230900_288	Residential	598172	4844129	1.5	43	88	83	6	0.0%
RE230900_289	Residential	598183	4844119	1.5	43	87	83	5	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_290	Residential	598190	4844111	1.5	43	87	83	5	0.0%
RE230900_291	Residential	598198	4844103	1.5	42	87	83	5	0.0%
RE230900_292	Residential	598205	4844095	1.5	42	87	83	5	0.0%
RE230900_293	Residential	598212	4844088	1.5	42	86	83	5	0.0%
RE230900_294	Residential	598185	4844065	1.5	44	89	83	9	0.0%
RE230900_295	Residential	598176	4844074	1.5	44	89	83	9	0.0%
RE230900_296	Residential	598166	4844083	1.5	45	89	83	9	0.0%
RE230900_297	Residential	598158	4844092	1.5	45	89	83	9	0.0%
RE230900_298	Residential	598148	4844101	1.5	45	90	83	10	0.0%
RE230900_299	Residential	598139	4844111	1.5	46	90	83	11	0.0%
RE230900_300	Residential	598118	4844130	1.5	47	91	83	12	0.0%
RE230900_301	Residential	598112	4844137	1.5	47	92	83	12	0.0%
RE230900_302	Residential	598231	4844068	1.5	41	86	83	4	0.0%
RE230900_303	Residential	598240	4844057	1.5	41	86	83	4	0.0%
RE230900_304	Residential	598258	4844039	1.5	41	85	83	4	0.0%
RE230900_305	Residential	598267	4844030	1.5	40	85	83	4	0.0%
RE230900_306	Residential	598275	4844021	1.5	40	85	83	4	0.0%
RE230900_307	Residential	598296	4844003	1.5	39	84	83	4	0.0%
RE230900_310	Residential	598286	4844012	1.5	40	84	83	4	0.0%
RE230900_312	Residential	598068	4844260	1.5	46	91	83	9	0.0%
RE230900_313	Residential	598248	4844048	1.5	41	85	83	4	0.0%
RE230900_315	Residential	598095	4844177	1.5	47	92	83	11	0.0%
RE230900_317	Residential	598062	4844211	1.5	49	93	83	12	0.0%
RE230900_318	Residential	598168	4844040	1.5	45	90	83	12	0.0%
RE230900_319	Residential	598156	4844051	1.5	46	90	83	12	0.0%
RE230900_320	Residential	598148	4844062	1.5	46	90	83	13	0.0%
RE230900_321	Residential	598135	4844072	1.5	46	91	83	14	0.0%
RE230900_322	Residential	598126	4844084	1.5	47	92	83	16	0.0%
RE230900_323	Residential	598113	4844094	1.5	48	92	83	17	0.0%
RE230900_324	Residential	598105	4844105	1.5	48	92	83	17	0.0%
RE230900_325	Residential	598096	4844112	1.5	48	93	83	17	0.0%
RE230900_326	Residential	598087	4844118	1.5	49	93	83	18	0.0%
RE230900_327	Residential	598077	4844131	1.5	49	94	83	18	0.0%
RE230900_328	Residential	598067	4844143	1.5	49	94	83	18	0.0%
RE230900_329	Residential	598061	4844157	1.5	50	94	83	18	0.0%
RE230900_330	Residential	598061	4844172	1.5	49	94	83	15	0.0%
RE230900_331	Residential	598061	4844185	1.5	49	94	83	15	0.0%
RE230900_332	Residential	598062	4844198	1.5	49	93	83	13	0.0%
RE230900_333	Residential	598063	4844224	1.5	48	93	83	11	0.0%
RE230900_334	Residential	598128	4844123	1.5	46	91	83	11	0.0%
RE230900_335	Residential	598138	4844168	1.5	44	89	83	6	0.0%
RE230900_337	Residential	598275	4843935	1.5	42	87	83	10	0.0%
RE230900_338	Residential	598267	4843942	1.5	42	87	83	12	0.0%
RE230900_339	Residential	598256	4843950	1.5	43	87	83	12	0.0%
RE230900_340	Residential	598247	4843960	1.5	43	87	83	12	0.0%
RE230900_341	Residential	598239	4843966	1.5	43	88	83	12	0.0%
RE230900_342	Residential	598233	4843974	1.5	43	88	83	12	0.0%
RE230900_343	Residential	598226	4843980	1.5	43	88	83	12	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_344	Residential	598218	4843987	1.5	44	88	83	12	0.0%
RE230900_345	Residential	598211	4843994	1.5	44	88	83	12	0.0%
RE230900_346	Residential	598205	4844002	1.5	44	89	83	12	0.0%
RE230900_347	Residential	598199	4844007	1.5	44	89	83	12	0.0%
RE230900_348	Residential	598190	4844015	1.5	45	89	83	12	0.0%
RE230900_349	Residential	598181	4844024	1.5	45	89	83	12	0.0%
RE230900_350	Residential	597947	4844283	1.5	56	100	83	27	0.1%
RE230900_351	Residential	597937	4844272	1.5	58	103	83	28	0.1%
RE230900_352	Residential	597929	4844264	1.5	60	105	83	29	0.1%
RE230900_353	Residential	597958	4844245	1.5	57	101	83	28	0.1%
RE230900_354	Residential	597947	4844234	1.5	60	104	83	29	0.1%
RE230900_355	Residential	597920	4844224	1.5	65	110	83	49	0.1%
RE230900_356	Residential	597911	4844235	1.5	66	110	83	51	0.1%
RE230900_357	Residential	597935	4844225	1.5	62	107	83	37	0.1%
RE230900_358	Residential	597903	4844242	1.5	66	111	83	54	0.1%
RE230900_359	Residential	597894	4844252	1.5	67	112	83	56	0.1%
RE230900_360	Residential	597885	4844262	1.5	68	113	83	60	0.1%
RE230900_361	Residential	597993	4844327	1.5	50	95	83	15	0.0%
RE230900_362	Residential	597985	4844320	1.5	52	96	83	15	0.0%
RE230900_363	Residential	597976	4844312	1.5	53	98	83	18	0.0%
RE230900_364	Residential	597966	4844301	1.5	54	99	83	22	0.1%
RE230900_365	Residential	597956	4844290	1.5	55	100	83	26	0.1%
RE230900_366	Residential	597988	4844228	1.5	53	98	83	23	0.1%
RE230900_367	Residential	597980	4844220	1.5	55	100	83	26	0.1%
RE230900_368	Residential	597970	4844211	1.5	58	102	83	29	0.1%
RE230900_369	Residential	597960	4844201	1.5	60	104	83	31	0.1%
RE230900_370	Residential	597949	4844191	1.5	62	107	83	41	0.1%
RE230900_371	Residential	597936	4844178	1.5	66	110	83	66	0.2%
RE230900_372	Residential	598039	4844140	1.5	53	97	83	22	0.1%
RE230900_373	Residential	598027	4844132	1.5	55	99	83	25	0.1%
RE230900_374	Residential	598012	4844121	1.5	58	102	83	35	0.1%
RE230900_375	Residential	597996	4844119	1.5	60	105	83	45	0.1%
RE230900_376	Residential	597981	4844132	1.5	62	107	83	49	0.1%
RE230900_377	Residential	597973	4844146	1.5	62	107	83	47	0.1%
RE230900_378	Residential	598034	4844176	1.5	51	96	83	21	0.0%
RE230900_379	Residential	598015	4844169	1.5	54	99	83	24	0.1%
RE230900_380	Residential	598000	4844158	1.5	57	102	83	29	0.1%
RE230900_381	Residential	597986	4844180	1.5	58	102	83	29	0.1%
RE230900_382	Residential	597997	4844189	1.5	55	100	83	24	0.1%
RE230900_383	Residential	598009	4844195	1.5	53	98	83	23	0.1%
RE230900_384	Residential	598020	4844205	1.5	52	96	83	21	0.0%
RE230900_385	Residential	598034	4844205	1.5	51	95	83	19	0.0%
RE230900_386	Residential	598213	4843919	1.5	47	91	83	20	0.0%
RE230900_387	Residential	598223	4843930	1.5	45	89	83	15	0.0%
RE230900_388	Residential	598235	4843942	1.5	44	88	83	13	0.0%
RE230900_389	Residential	598262	4843914	1.5	43	87	83	13	0.0%
RE230900_390	Residential	598251	4843903	1.5	44	88	83	13	0.0%
RE230900_391	Residential	598238	4843889	1.5	46	91	83	20	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_394	Residential	597965	4844159	1.5	63	107	83	46	0.1%
RE230900_395	Residential	598116	4843943	1.5	58	103	83	58	0.1%
RE230900_396	Residential	598126	4843952	1.5	55	100	83	41	0.1%
RE230900_397	Residential	598136	4843962	1.5	53	97	83	30	0.1%
RE230900_398	Residential	598147	4843973	1.5	51	95	83	24	0.1%
RE230900_399	Residential	598158	4843985	1.5	49	93	83	21	0.0%
RE230900_400	Residential	598170	4843998	1.5	46	91	83	17	0.0%
RE230900_401	Residential	598145	4844026	1.5	47	92	83	17	0.0%
RE230900_402	Residential	598132	4844013	1.5	50	94	83	21	0.0%
RE230900_403	Residential	598121	4844002	1.5	52	96	83	24	0.1%
RE230900_404	Residential	598113	4843994	1.5	53	98	83	28	0.1%
RE230900_405	Residential	598106	4843985	1.5	55	100	83	35	0.1%
RE230900_406	Residential	598095	4843974	1.5	58	103	83	57	0.1%
RE231000_001	Recreation	597895	4844715	1.5	56	100	83	16	0.0%
RE231000_002	Residential	594593	4847779	1.5	23	67	83	0	-
RE231000_003	Residential	597966	4844386	1.5	50	95	83	14	0.0%
RE231000_004	Residential	597973	4844395	1.5	48	93	83	11	0.0%
RE231000_005	Residential	597984	4844407	1.5	48	93	83	10	0.0%
RE231000_006	Residential	597998	4844418	1.5	48	93	83	10	0.0%
RE231000_007	Residential	598005	4844428	1.5	48	93	83	10	0.0%
RE231000_008	Residential	598021	4844443	1.5	47	92	83	10	0.0%
RE231000_009	Residential	598033	4844455	1.5	47	90	83	10	0.0%
RE231000_010	Residential	598043	4844466	1.5	47	88	83	9	0.0%
RE231000_011	Residential	597940	4844407	1.5	52	97	83	17	0.0%
RE231000_012	Residential	597949	4844414	1.5	50	95	83	17	0.0%
RE231000_013	Residential	597956	4844424	1.5	50	94	83	14	0.0%
RE231000_014	Residential	597965	4844432	1.5	50	94	83	11	0.0%
RE231000_015	Residential	597973	4844440	1.5	50	94	83	11	0.0%
RE231000_016	Residential	597982	4844449	1.5	49	94	83	11	0.0%
RE231000_017	Residential	597989	4844456	1.5	49	93	83	11	0.0%
RE231000_018	Residential	597997	4844465	1.5	48	93	83	11	0.0%
RE231000_019	Residential	598006	4844473	1.5	48	92	83	10	0.0%
RE231000_020	Residential	598015	4844481	1.5	48	91	83	10	0.0%
RE231000_021	Residential	598022	4844489	1.5	49	90	83	9	0.0%
RE231000_022	Residential	598030	4844498	1.5	49	90	83	9	0.0%
RE231000_023	Residential	598039	4844506	1.5	49	90	83	9	0.0%
RE231000_024	Residential	598046	4844513	1.5	49	90	83	8	0.0%
RE231000_025	Residential	598053	4844523	1.5	50	91	83	8	0.0%
RE231000_026	Residential	598064	4844530	1.5	49	91	83	8	0.0%
RE231000_027	Residential	597902	4844429	1.5	55	100	83	24	0.1%
RE231000_028	Residential	597911	4844437	1.5	54	98	83	21	0.0%
RE231000_029	Residential	597918	4844446	1.5	52	97	83	18	0.0%
RE231000_030	Residential	597928	4844453	1.5	51	96	83	16	0.0%
RE231000_031	Residential	597934	4844463	1.5	52	96	83	14	0.0%
RE231000_032	Residential	597943	4844469	1.5	51	96	83	12	0.0%
RE231000_033	Residential	597953	4844479	1.5	51	95	83	11	0.0%
RE231000_034	Residential	597961	4844486	1.5	50	95	83	11	0.0%
RE231000_035	Residential	597969	4844494	1.5	49	94	83	11	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_036	Residential	597976	4844504	1.5	49	93	83	11	0.0%
RE231000_037	Residential	597984	4844514	1.5	50	92	83	11	0.0%
RE231000_038	Residential	597992	4844520	1.5	51	91	83	10	0.0%
RE231000_039	Residential	598001	4844529	1.5	51	92	83	9	0.0%
RE231000_040	Residential	598009	4844537	1.5	51	92	83	9	0.0%
RE231000_041	Residential	598016	4844545	1.5	51	92	83	9	0.0%
RE231000_042	Residential	598025	4844554	1.5	51	92	83	8	0.0%
RE231000_043	Residential	598033	4844562	1.5	51	92	83	8	0.0%
RE231000_044	Residential	598013	4844582	1.5	51	93	83	8	0.0%
RE231000_045	Residential	598003	4844574	1.5	52	93	83	8	0.0%
RE231000_046	Residential	597995	4844566	1.5	52	93	83	11	0.0%
RE231000_047	Residential	597987	4844557	1.5	52	93	83	11	0.0%
RE231000_048	Residential	597979	4844550	1.5	52	93	83	11	0.0%
RE231000_049	Residential	597972	4844542	1.5	52	93	83	11	0.0%
RE231000_050	Residential	597967	4844538	1.5	52	92	83	10	0.0%
RE231000_051	Residential	597961	4844530	1.5	51	93	83	12	0.0%
RE231000_052	Residential	597957	4844525	1.5	51	94	83	12	0.0%
RE231000_053	Residential	597950	4844520	1.5	50	95	83	12	0.0%
RE231000_054	Residential	597945	4844515	1.5	51	95	83	12	0.0%
RE231000_055	Residential	597940	4844509	1.5	51	96	83	12	0.0%
RE231000_056	Residential	597934	4844504	1.5	52	96	83	13	0.0%
RE231000_057	Residential	597929	4844499	1.5	52	97	83	14	0.0%
RE231000_058	Residential	597923	4844493	1.5	53	97	83	14	0.0%
RE231000_059	Residential	597918	4844487	1.5	53	97	83	15	0.0%
RE231000_060	Residential	597914	4844483	1.5	53	97	83	17	0.0%
RE231000_061	Residential	597908	4844476	1.5	52	97	83	18	0.0%
RE231000_062	Residential	597904	4844471	1.5	52	97	83	19	0.0%
RE231000_063	Residential	597897	4844465	1.5	53	98	83	21	0.0%
RE231000_064	Residential	597892	4844460	1.5	55	99	83	22	0.1%
RE231000_065	Residential	597886	4844454	1.5	56	101	83	24	0.1%
RE231000_066	Residential	597881	4844449	1.5	57	102	83	27	0.1%
RE231000_067	Residential	597742	4844586	1.5	69	114	83	48	0.1%
RE231000_068	Residential	597739	4844592	1.5	69	114	83	49	0.1%
RE231000_069	Residential	597735	4844599	1.5	69	114	83	49	0.1%
RE231000_070	Residential	597732	4844605	1.5	70	114	83	49	0.1%
RE231000_071	Residential	597727	4844613	1.5	70	114	83	54	0.1%
RE231000_072	Residential	597724	4844619	1.5	70	115	83	54	0.1%
RE231000_073	Residential	597720	4844626	1.5	70	115	83	55	0.1%
RE231000_074	Residential	597718	4844632	1.5	71	115	83	55	0.1%
RE231000_075	Residential	597712	4844640	1.5	71	116	83	61	0.1%
RE231000_076	Residential	597707	4844646	1.5	72	116	83	62	0.1%
RE231000_077	Residential	597684	4844653	1.5	72	117	83	79	0.2%
RE231000_078	Residential	597688	4844659	1.5	72	117	83	76	0.2%
RE231000_079	Residential	597692	4844664	1.5	72	117	83	70	0.2%
RE231000_080	Residential	597695	4844670	1.5	72	116	83	67	0.2%
RE231000_081	Residential	597701	4844677	1.5	70	115	83	62	0.1%
RE231000_082	Residential	597705	4844683	1.5	70	114	83	59	0.1%
RE231000_083	Residential	597708	4844687	1.5	70	114	83	59	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_084	Residential	597711	4844692	1.5	70	114	83	58	0.1%
RE231000_085	Residential	597729	4844665	1.5	67	112	83	49	0.1%
RE231000_086	Residential	597725	4844670	1.5	68	112	83	51	0.1%
RE231000_087	Residential	597738	4844650	1.5	66	110	83	43	0.1%
RE231000_088	Residential	597734	4844657	1.5	66	111	83	45	0.1%
RE231000_089	Residential	597742	4844645	1.5	65	110	83	43	0.1%
RE231000_090	Residential	597746	4844639	1.5	65	109	83	42	0.1%
RE231000_091	Residential	597750	4844631	1.5	64	109	83	41	0.1%
RE231000_092	Residential	597753	4844624	1.5	64	108	83	41	0.1%
RE231000_093	Residential	597757	4844618	1.5	63	108	83	40	0.1%
RE231000_094	Residential	597761	4844610	1.5	63	108	83	39	0.1%
RE231000_095	Residential	597764	4844603	1.5	64	108	83	39	0.1%
RE231000_096	Residential	597768	4844596	1.5	63	108	83	38	0.1%
RE231000_097	Residential	597773	4844591	1.5	63	108	83	37	0.1%
RE231000_098	Residential	597777	4844584	1.5	63	108	83	37	0.1%
RE231000_099	Residential	597780	4844577	1.5	63	107	83	37	0.1%
RE231000_100	Residential	597784	4844570	1.5	63	107	83	36	0.1%
RE231000_101	Residential	597789	4844564	1.5	63	107	83	34	0.1%
RE231000_102	Residential	597793	4844557	1.5	63	107	83	34	0.1%
RE231000_103	Residential	597796	4844550	1.5	62	107	83	32	0.1%
RE231000_104	Residential	597800	4844544	1.5	62	107	83	31	0.1%
RE231000_105	Residential	597804	4844537	1.5	62	107	83	30	0.1%
RE231000_106	Residential	597807	4844531	1.5	62	107	83	30	0.1%
RE231000_107	Residential	597811	4844525	1.5	62	107	83	30	0.1%
RE231000_108	Residential	597814	4844518	1.5	62	107	83	30	0.1%
RE231000_109	Residential	597819	4844511	1.5	62	106	83	30	0.1%
RE231000_110	Residential	597851	4844481	1.5	59	104	83	28	0.1%
RE231000_111	Residential	597881	4844502	1.5	54	98	83	24	0.1%
RE231000_112	Residential	597876	4844507	1.5	54	99	83	24	0.1%
RE231000_113	Residential	597871	4844514	1.5	55	99	83	24	0.1%
RE231000_114	Residential	597866	4844519	1.5	55	99	83	24	0.1%
RE231000_115	Residential	597849	4844534	1.5	56	100	83	25	0.1%
RE231000_116	Residential	597855	4844537	1.5	56	100	83	24	0.1%
RE231000_117	Residential	597863	4844540	1.5	56	100	83	23	0.1%
RE231000_118	Residential	597869	4844544	1.5	56	100	83	21	0.0%
RE231000_119	Residential	597877	4844549	1.5	55	100	83	19	0.0%
RE231000_120	Residential	597883	4844553	1.5	55	99	83	18	0.0%
RE231000_121	Residential	597889	4844560	1.5	54	99	83	16	0.0%
RE231000_122	Residential	597894	4844565	1.5	54	98	83	17	0.0%
RE231000_123	Residential	597899	4844571	1.5	53	97	83	16	0.0%
RE231000_124	Residential	597904	4844576	1.5	54	96	83	15	0.0%
RE231000_125	Residential	597911	4844583	1.5	54	95	83	14	0.0%
RE231000_126	Residential	597920	4844591	1.5	55	96	83	13	0.0%
RE231000_127	Residential	597928	4844600	1.5	55	96	83	12	0.0%
RE231000_128	Residential	597935	4844608	1.5	56	96	83	11	0.0%
RE231000_129	Residential	597944	4844616	1.5	55	96	83	11	0.0%
RE231000_130	Residential	597952	4844625	1.5	55	96	83	10	0.0%
RE231000_131	Residential	597960	4844633	1.5	54	96	83	11	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_132	Residential	597889	4844521	1.5	54	99	83	18	0.0%
RE231000_133	Residential	597895	4844526	1.5	54	99	83	18	0.0%
RE231000_134	Residential	597900	4844533	1.5	54	98	83	16	0.0%
RE231000_135	Residential	597906	4844537	1.5	54	98	83	16	0.0%
RE231000_136	Residential	597912	4844543	1.5	53	97	83	14	0.0%
RE231000_137	Residential	597916	4844549	1.5	52	97	83	14	0.0%
RE231000_138	Residential	597922	4844554	1.5	52	96	83	14	0.0%
RE231000_139	Residential	597927	4844558	1.5	53	95	83	14	0.0%
RE231000_140	Residential	597933	4844565	1.5	53	94	83	13	0.0%
RE231000_141	Residential	597938	4844570	1.5	53	94	83	12	0.0%
RE231000_142	Residential	597944	4844577	1.5	54	95	83	12	0.0%
RE231000_143	Residential	597948	4844581	1.5	54	95	83	11	0.0%
RE231000_144	Residential	597956	4844588	1.5	54	95	83	11	0.0%
RE231000_145	Residential	597964	4844596	1.5	54	95	83	11	0.0%
RE231000_146	Residential	597973	4844604	1.5	54	95	83	10	0.0%
RE231000_147	Residential	597981	4844613	1.5	53	95	83	9	0.0%
RE231000_148	Residential	597825	4844568	1.5	58	102	83	26	0.1%
RE231000_149	Residential	597833	4844573	1.5	58	102	83	25	0.1%
RE231000_150	Residential	597840	4844577	1.5	58	102	83	25	0.1%
RE231000_151	Residential	597846	4844581	1.5	57	102	83	24	0.1%
RE231000_152	Residential	597854	4844587	1.5	57	101	83	23	0.1%
RE231000_153	Residential	597859	4844593	1.5	56	101	83	21	0.0%
RE231000_154	Residential	597865	4844598	1.5	55	100	83	20	0.0%
RE231000_155	Residential	597871	4844603	1.5	56	99	83	18	0.0%
RE231000_156	Residential	597850	4844609	1.5	56	101	83	22	0.1%
RE231000_157	Residential	597844	4844615	1.5	57	101	83	24	0.1%
RE231000_158	Residential	597822	4844588	1.5	59	103	83	28	0.1%
RE231000_159	Residential	597819	4844595	1.5	59	103	83	28	0.1%
RE231000_160	Residential	597816	4844602	1.5	59	104	83	28	0.1%
RE231000_161	Residential	597813	4844608	1.5	59	104	83	28	0.1%
RE231000_162	Residential	597807	4844615	1.5	60	104	83	29	0.1%
RE231000_163	Residential	597805	4844621	1.5	60	105	83	30	0.1%
RE231000_164	Residential	597800	4844629	1.5	61	105	83	30	0.1%
RE231000_165	Residential	597796	4844636	1.5	61	105	83	30	0.1%
RE231000_166	Residential	597791	4844643	1.5	61	106	83	30	0.1%
RE231000_167	Residential	597787	4844650	1.5	62	106	83	29	0.1%
RE231000_168	Residential	597783	4844657	1.5	62	107	83	30	0.1%
RE231000_169	Residential	597780	4844665	1.5	63	107	83	30	0.1%
RE231000_170	Residential	597775	4844673	1.5	63	108	83	30	0.1%
RE231000_171	Residential	597772	4844679	1.5	63	108	83	31	0.1%
RE231000_172	Residential	597767	4844686	1.5	64	108	83	33	0.1%
RE231000_173	Residential	597764	4844694	1.5	65	108	83	36	0.1%
RE231000_174	Residential	597757	4844702	1.5	66	109	83	37	0.1%
RE231000_175	Residential	597751	4844706	1.5	66	109	83	40	0.1%
RE231000_176	Residential	597729	4844717	1.5	68	113	83	48	0.1%
RE231000_177	Residential	597734	4844724	1.5	68	111	83	43	0.1%
RE231000_178	Residential	597737	4844729	1.5	69	110	83	43	0.1%
RE231000_179	Residential	597741	4844734	1.5	70	110	83	42	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_180	Residential	597744	4844739	1.5	70	111	83	43	0.1%
RE231000_181	Residential	597747	4844744	1.5	71	111	83	43	0.1%
RE231000_182	Residential	597750	4844749	1.5	71	112	83	44	0.1%
RE231000_183	Residential	597753	4844754	1.5	71	112	83	44	0.1%
RE231000_184	Residential	597759	4844763	1.5	71	112	83	43	0.1%
RE231000_185	Residential	597762	4844769	1.5	71	112	83	38	0.1%
RE231000_186	Residential	597765	4844773	1.5	70	111	83	38	0.1%
RE231000_187	Residential	597768	4844778	1.5	70	111	83	38	0.1%
RE231000_188	Residential	597771	4844783	1.5	69	111	83	38	0.1%
RE231000_189	Residential	597774	4844789	1.5	69	111	83	37	0.1%
RE231000_190	Residential	597802	4844774	1.5	65	108	83	27	0.1%
RE231000_191	Residential	597798	4844768	1.5	66	108	83	27	0.1%
RE231000_192	Residential	597793	4844761	1.5	67	109	83	28	0.1%
RE231000_193	Residential	597789	4844754	1.5	68	109	83	28	0.1%
RE231000_194	Residential	597785	4844747	1.5	68	109	83	28	0.1%
RE231000_195	Residential	597782	4844741	1.5	68	109	83	29	0.1%
RE231000_196	Residential	597779	4844727	1.5	68	108	83	31	0.1%
RE231000_197	Residential	597780	4844719	1.5	67	108	83	30	0.1%
RE231000_198	Residential	597785	4844710	1.5	66	107	83	29	0.1%
RE231000_199	Residential	597788	4844703	1.5	66	106	83	29	0.1%
RE231000_200	Residential	597793	4844697	1.5	65	106	83	28	0.1%
RE231000_201	Residential	597797	4844690	1.5	64	105	83	28	0.1%
RE231000_202	Residential	597801	4844683	1.5	63	104	83	27	0.1%
RE231000_203	Residential	597805	4844676	1.5	62	103	83	27	0.1%
RE231000_204	Residential	597808	4844669	1.5	61	102	83	27	0.1%
RE231000_205	Residential	597812	4844663	1.5	61	102	83	27	0.1%
RE231000_206	Residential	597815	4844656	1.5	60	103	83	27	0.1%
RE231000_207	Residential	597818	4844649	1.5	60	103	83	27	0.1%
RE231000_208	Residential	597823	4844642	1.5	59	102	83	27	0.1%
RE231000_209	Residential	597827	4844636	1.5	58	102	83	27	0.1%
RE231000_210	Residential	597832	4844629	1.5	58	102	83	25	0.1%
RE231000_211	Residential	597837	4844622	1.5	57	102	83	24	0.1%
RE231000_212	Residential	597902	4844623	1.5	57	98	83	14	0.0%
RE231000_213	Residential	597895	4844627	1.5	57	98	83	16	0.0%
RE231000_214	Residential	597889	4844633	1.5	58	98	83	17	0.0%
RE231000_215	Residential	597884	4844639	1.5	58	99	83	17	0.0%
RE231000_216	Residential	597878	4844646	1.5	59	99	83	18	0.0%
RE231000_217	Residential	597873	4844650	1.5	59	100	83	19	0.0%
RE231000_218	Residential	597867	4844656	1.5	60	100	83	20	0.0%
RE231000_219	Residential	597863	4844664	1.5	60	101	83	21	0.0%
RE231000_220	Residential	597859	4844671	1.5	61	102	83	21	0.0%
RE231000_221	Residential	597855	4844678	1.5	61	102	83	23	0.1%
RE231000_222	Residential	597851	4844684	1.5	62	103	83	23	0.1%
RE231000_223	Residential	597847	4844690	1.5	62	103	83	23	0.1%
RE231000_224	Residential	597843	4844697	1.5	63	103	83	23	0.1%
RE231000_225	Residential	597839	4844704	1.5	63	104	83	23	0.1%
RE231000_226	Residential	597835	4844711	1.5	64	104	83	24	0.1%
RE231000_227	Residential	597832	4844718	1.5	64	105	83	24	0.1%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_228	Residential	597827	4844726	1.5	64	105	83	25	0.1%
RE231000_229	Residential	597824	4844733	1.5	64	106	83	24	0.1%
RE231000_230	Residential	597840	4844745	1.5	62	104	83	22	0.1%
RE231000_231	Residential	597846	4844750	1.5	60	103	83	21	0.0%
RE231000_232	Residential	597851	4844761	1.5	58	103	83	18	0.0%
RE231000_233	Residential	597853	4844771	1.5	58	103	83	18	0.0%
RE231000_234	Residential	597851	4844781	1.5	58	102	83	17	0.0%
RE231000_235	Residential	597848	4844790	1.5	58	102	83	20	0.0%
RE231000_236	Residential	597838	4844796	1.5	59	103	83	21	0.0%
RE231000_237	Residential	597831	4844801	1.5	59	103	83	23	0.1%
RE231000_238	Residential	597823	4844804	1.5	60	104	83	24	0.1%
RE231000_239	Residential	597817	4844807	1.5	60	105	83	25	0.1%
RE231000_240	Residential	597811	4844812	1.5	61	105	83	26	0.1%
RE231000_241	Residential	597804	4844816	1.5	61	106	83	27	0.1%
RE231000_242	Residential	597800	4844820	1.5	62	106	83	28	0.1%
RE231000_243	Residential	597794	4844823	1.5	62	107	83	31	0.1%
RE231000_244	Residential	597788	4844825	1.5	63	108	83	34	0.1%
RE231000_245	Residential	597783	4844829	1.5	64	109	83	38	0.1%
RE231000_246	Residential	597778	4844831	1.5	65	110	83	42	0.1%
RE231000_247	Residential	597772	4844835	1.5	67	111	83	45	0.1%
RE231000_248	Residential	598015	4844639	1.5	49	93	83	11	0.0%
RE231000_249	Residential	598007	4844649	1.5	49	93	83	11	0.0%
RE231000_250	Residential	597997	4844656	1.5	49	94	83	11	0.0%
RE231000_251	Residential	597989	4844666	1.5	50	94	83	11	0.0%
RE231000_252	Residential	598060	4844590	1.5	47	91	83	7	0.0%
RE231000_253	Residential	598069	4844598	1.5	46	90	83	8	0.0%
RE231000_254	Residential	598040	4844610	1.5	48	92	83	9	0.0%
RE231000_255	Residential	598049	4844618	1.5	47	91	83	10	0.0%
RE231000_256	Residential	598252	4844214	1.5	39	83	83	4	0.0%
RE231000_257	Residential	598246	4844300	1.5	40	81	83	54	0.1%
RE231000_276	Residential	598191	4844478	1.5	42	86	83	6	0.0%
RE231000_277	Residential	598184	4844471	1.5	43	86	83	7	0.0%
RE231000_278	Residential	598093	4844561	1.5	46	89	83	7	0.0%
RE231000_279	Residential	598104	4844571	1.5	45	89	83	7	0.0%
RE231000_280	Residential	598023	4844395	1.5	47	92	83	9	0.0%
RE231000_281	Residential	598013	4844383	1.5	47	92	83	10	0.0%
RE231000_282	Residential	598113	4844482	1.5	47	88	83	8	0.0%
RE231000_283	Residential	598059	4844484	1.5	48	89	83	9	0.0%
RE231000_284	Residential	598062	4844435	1.5	46	88	83	8	0.0%
RE231000_285	Residential	598052	4844476	1.5	48	89	83	9	0.0%
RE231000_286	Residential	598054	4844424	1.5	45	90	83	9	0.0%
RE231000_287	Residential	598086	4844510	1.5	48	90	83	8	0.0%
RE231000_288	Residential	598077	4844504	1.5	49	90	83	8	0.0%
RE231000_289	Residential	598044	4844414	1.5	46	91	83	9	0.0%
RE231000_290	Residential	598033	4844405	1.5	47	92	83	9	0.0%
RE231000_291	Residential	598102	4844474	1.5	47	88	83	8	0.0%
RE231000_292	Residential	598093	4844464	1.5	47	88	83	8	0.0%
RE231000_293	Residential	598072	4844496	1.5	49	90	83	8	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_294	Residential	598083	4844454	1.5	47	88	83	9	0.0%
RE231000_295	Residential	598065	4844490	1.5	48	89	83	8	0.0%
RE231000_296	Residential	598074	4844444	1.5	46	87	83	9	0.0%
RE231000_297	Residential	598159	4844494	1.5	44	87	83	7	0.0%
RE231000_298	Residential	598169	4844501	1.5	43	87	83	7	0.0%
RE231000_299	Residential	598002	4844372	1.5	47	92	83	10	0.0%
RE231000_300	Residential	598066	4844349	1.5	45	90	83	7	0.0%
RE231000_301	Residential	598127	4844467	1.5	46	88	83	8	0.0%
RE231000_302	Residential	598120	4844461	1.5	46	88	83	8	0.0%
RE231000_303	Residential	598109	4844448	1.5	46	87	83	8	0.0%
RE231000_304	Residential	598101	4844440	1.5	46	87	83	9	0.0%
RE231000_305	Residential	598067	4844275	1.5	45	90	83	8	0.0%
RE231000_306	Residential	598068	4844289	1.5	44	89	83	7	0.0%
RE231000_307	Residential	598068	4844303	1.5	44	89	83	7	0.0%
RE231000_308	Residential	598066	4844315	1.5	44	89	83	7	0.0%
RE231000_309	Residential	598076	4844364	1.5	45	90	83	8	0.0%
RE231000_310	Residential	598085	4844425	1.5	45	87	83	8	0.0%
RE231000_311	Residential	598078	4844418	1.5	45	88	83	8	0.0%
RE231000_312	Residential	598069	4844410	1.5	45	89	83	9	0.0%
RE231000_313	Residential	598062	4844402	1.5	45	90	83	9	0.0%
RE231000_314	Residential	598053	4844391	1.5	46	91	83	9	0.0%
RE231000_315	Residential	598047	4844385	1.5	46	91	83	9	0.0%
RE231000_316	Residential	598030	4844364	1.5	47	91	83	10	0.0%
RE231000_317	Residential	598086	4844375	1.5	44	89	83	9	0.0%
RE231000_318	Residential	598106	4844396	1.5	44	87	83	8	0.0%
RE231000_319	Residential	598116	4844406	1.5	45	85	83	8	0.0%
RE231000_320	Residential	598127	4844416	1.5	45	86	83	7	0.0%
RE231000_321	Residential	598143	4844435	1.5	45	87	83	8	0.0%
RE231000_322	Residential	598152	4844444	1.5	45	87	83	8	0.0%
RE231000_332	Residential	598315	4844073	1.5	37	81	83	4	0.0%
RE231000_333	Residential	598310	4844078	1.5	37	81	83	4	0.0%
RE231000_334	Residential	598295	4844091	1.5	37	82	83	4	0.0%
RE231000_335	Residential	598288	4844098	1.5	37	82	83	4	0.0%
RE231000_336	Residential	598282	4844104	1.5	37	82	83	4	0.0%
RE231000_337	Residential	598277	4844111	1.5	37	82	83	4	0.0%
RE231000_338	Residential	598310	4844038	1.5	37	81	83	4	0.0%
RE231000_339	Residential	598302	4844046	1.5	37	81	83	4	0.0%
RE231000_340	Residential	598295	4844054	1.5	37	81	83	4	0.0%
RE231000_341	Residential	598276	4844074	1.5	37	82	83	4	0.0%
RE231000_342	Residential	598267	4844081	1.5	38	82	83	4	0.0%
RE231000_343	Residential	598114	4844352	1.5	43	88	83	7	0.0%
RE231000_345	Residential	598126	4844322	1.5	43	88	83	5	0.0%
RE231000_346	Residential	598176	4844416	1.5	44	86	83	8	0.0%
RE231000_347	Residential	598167	4844408	1.5	44	86	83	7	0.0%
RE231000_348	Residential	598159	4844398	1.5	44	85	83	7	0.0%
RE231000_350	Residential	598126	4844309	1.5	43	88	83	5	0.0%
RE231000_351	Residential	598128	4844228	1.5	42	87	83	5	0.0%
RE231000_353	Residential	598285	4844064	1.5	37	82	83	4	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_354	Residential	598140	4844379	1.5	43	84	83	7	0.0%
RE231000_355	Residential	598131	4844370	1.5	43	86	83	6	0.0%
RE231000_356	Residential	598122	4844361	1.5	43	87	83	5	0.0%
RE231000_357	Residential	598102	4844340	1.5	44	89	83	7	0.0%
RE231000_358	Residential	598099	4844324	1.5	44	89	83	6	0.0%
RE231000_359	Residential	598099	4844310	1.5	44	88	83	5	0.0%
RE231000_360	Residential	598099	4844296	1.5	44	88	83	5	0.0%
RE231000_361	Residential	598098	4844283	1.5	43	88	83	5	0.0%
RE231000_362	Residential	598099	4844258	1.5	43	88	83	5	0.0%
RE231000_363	Residential	598197	4844395	1.5	44	85	83	7	0.0%
RE231000_364	Residential	598180	4844378	1.5	43	84	83	6	0.0%
RE231000_365	Residential	598171	4844369	1.5	43	84	83	5	0.0%
RE231000_366	Residential	598162	4844359	1.5	42	84	83	6	0.0%
RE231000_367	Residential	598151	4844349	1.5	42	85	83	4	0.0%
RE231000_368	Residential	598142	4844340	1.5	42	86	83	4	0.0%
RE231000_369	Residential	598126	4844283	1.5	43	88	83	5	0.0%
RE231000_370	Residential	598126	4844271	1.5	43	87	83	5	0.0%
RE231000_371	Residential	598126	4844257	1.5	42	87	83	5	0.0%
RE231000_374	Residential	598127	4844295	1.5	43	88	83	5	0.0%
RE231000_377	Residential	598258	4844089	1.5	38	83	83	4	0.0%
RE231000_378	Residential	598094	4844433	1.5	46	87	83	8	0.0%
RE231000_379	Residential	598067	4844332	1.5	45	89	83	7	0.0%
RE231000_380	Residential	598096	4844385	1.5	44	88	83	9	0.0%
RE231000_381	Residential	598149	4844389	1.5	44	85	83	7	0.0%
RE231000_382	Residential	598135	4844425	1.5	45	86	83	7	0.0%
RE231000_383	Residential	598303	4844085	1.5	37	81	83	4	0.0%
RE231000_384	Residential	598115	4844455	1.5	46	87	83	8	0.0%
RE231000_385	Residential	598038	4844375	1.5	47	91	83	9	0.0%
RE231000_386	Residential	598099	4844270	1.5	43	87	83	5	0.0%
RE231000_387	Residential	598188	4844386	1.5	44	85	83	7	0.0%
RE231000_388	Residential	598129	4844214	1.5	43	88	83	5	0.0%
RE231000_390	Residential	598013	4844349	1.5	47	91	83	10	0.0%
RE231000_391	Residential	598003	4844338	1.5	49	93	83	11	0.0%
RE231000_392	Residential	598159	4844280	1.5	42	86	83	5	0.0%
RE231000_393	Residential	598189	4844215	1.5	41	85	83	5	0.0%
RE231000_394	Residential	598219	4844376	1.5	43	84	83	6	0.0%
RE231000_395	Residential	598212	4844369	1.5	43	84	83	5	0.0%
RE231000_396	Residential	598207	4844363	1.5	43	84	83	5	0.0%
RE231000_397	Residential	598199	4844356	1.5	42	83	83	5	0.0%
RE231000_398	Residential	598192	4844346	1.5	42	83	83	3	0.0%
RE231000_399	Residential	598181	4844337	1.5	42	84	83	4	0.0%
RE231000_400	Residential	598170	4844327	1.5	41	85	83	4	0.0%
RE231000_401	Residential	598161	4844314	1.5	41	86	83	4	0.0%
RE231000_402	Residential	598159	4844294	1.5	42	86	83	5	0.0%
RE231000_403	Residential	598158	4844273	1.5	42	86	83	5	0.0%
RE231000_404	Residential	598159	4844265	1.5	42	86	83	5	0.0%
RE231000_405	Residential	598159	4844257	1.5	42	86	83	5	0.0%
RE231000_406	Residential	598236	4844348	1.5	42	83	83	4	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_407	Residential	598223	4844334	1.5	41	82	83	3	0.0%
RE231000_408	Residential	598215	4844325	1.5	41	82	83	3	0.0%
RE231000_409	Residential	598204	4844313	1.5	41	83	83	3	0.0%
RE231000_410	Residential	598199	4844309	1.5	40	84	83	4	0.0%
RE231000_411	Residential	598189	4844279	1.5	41	85	83	4	0.0%
RE231000_412	Residential	598189	4844265	1.5	41	85	83	5	0.0%
RE231000_413	Residential	598161	4844229	1.5	41	86	83	5	0.0%
RE231000_414	Residential	598162	4844216	1.5	41	85	83	5	0.0%
RE231000_415	Residential	598162	4844205	1.5	40	85	83	5	0.0%
RE231000_416	Residential	598163	4844190	1.5	41	85	83	5	0.0%
RE231000_417	Residential	598169	4844178	1.5	41	86	83	5	0.0%
RE231000_418	Residential	598181	4844167	1.5	41	85	83	5	0.0%
RE231000_419	Residential	598189	4844231	1.5	41	85	83	5	0.0%
RE231000_420	Residential	598189	4844224	1.5	41	85	83	5	0.0%
RE231000_421	Residential	598205	4844183	1.5	40	84	83	5	0.0%
RE231000_422	Residential	598217	4844170	1.5	39	84	83	5	0.0%
RE231000_423	Residential	598227	4844160	1.5	39	84	83	5	0.0%
RE231000_424	Residential	598235	4844153	1.5	39	83	83	5	0.0%
RE231000_425	Residential	598244	4844144	1.5	38	83	83	4	0.0%
RE231000_426	Residential	598253	4844135	1.5	38	83	83	4	0.0%
RE231000_427	Residential	598189	4844160	1.5	40	85	83	5	0.0%
RE231000_428	Residential	598198	4844150	1.5	40	85	83	5	0.0%
RE231000_429	Residential	598208	4844141	1.5	40	84	83	5	0.0%
RE231000_430	Residential	598189	4844272	1.5	41	85	83	4	0.0%
RE231000_431	Residential	598225	4844124	1.5	39	84	83	4	0.0%
RE231000_432	Residential	598189	4844288	1.5	41	85	83	4	0.0%
RE231000_433	Residential	598211	4844177	1.5	40	84	83	5	0.0%
RE231000_434	Residential	598217	4844132	1.5	39	84	83	5	0.0%
RE231000_435	Residential	598210	4844320	1.5	41	82	83	3	0.0%
RE231000_436	Residential	598191	4844204	1.5	40	85	83	5	0.0%
RE231000_437	Residential	598190	4844258	1.5	41	85	83	5	0.0%
RE231000_438	Residential	598235	4844114	1.5	39	83	83	4	0.0%
RE231000_439	Residential	598242	4844353	1.5	42	83	83	4	0.0%
RE231000_440	Residential	598230	4844340	1.5	42	83	83	3	0.0%
RE231000_441	Residential	598197	4844191	1.5	40	85	83	5	0.0%
RE231000_443	Residential	598213	4844460	1.5	42	85	83	6	0.0%
RE231000_444	Residential	598234	4844437	1.5	42	85	83	6	0.0%
RE231000_445	Residential	598227	4844430	1.5	42	85	83	6	0.0%
RE231000_446	Residential	598203	4844452	1.5	43	86	83	7	0.0%
RE231000_450	Residential	598248	4844405	1.5	42	84	83	5	0.0%
RE231000_452	Residential	598146	4844517	1.5	44	87	83	7	0.0%
RE231000_453	Residential	598139	4844510	1.5	45	88	83	7	0.0%
RE231000_454	Residential	598112	4844539	1.5	45	89	83	7	0.0%
RE231000_455	Residential	598152	4844523	1.5	43	87	83	7	0.0%
RE231000_456	Residential	598119	4844546	1.5	44	88	83	7	0.0%
RE231100_001	Child Care Centre	597875	4844944	1.5	68	109	83	29	0.1%
RE231100_002	Recreation	597887	4844825	1.5	56	100	83	20	0.0%
RE231100_003	Residential	594644	4847799	1.5	23	68	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_004	Residential	596834	4845864	1.5	81	122	83	349	0.8%
RE231100_005	Residential	598005	4844679	1.5	48	92	83	12	0.0%
RE231100_006	Residential	598014	4844688	1.5	48	92	83	11	0.0%
RE231100_007	Residential	598022	4844696	1.5	49	93	83	11	0.0%
RE231100_008	Residential	598026	4844658	1.5	47	91	83	11	0.0%
RE231100_009	Residential	598034	4844667	1.5	47	91	83	10	0.0%
RE231100_010	Residential	598044	4844675	1.5	47	91	83	11	0.0%
RE231100_011	Residential	598051	4844682	1.5	48	92	83	10	0.0%
RE231100_012	Residential	598059	4844691	1.5	48	92	83	10	0.0%
RE231100_018	Residential	598029	4844703	1.5	49	93	83	10	0.0%
RE231100_019	Residential	598037	4844712	1.5	48	92	83	10	0.0%
RE231100_020	Residential	598046	4844721	1.5	48	92	83	9	0.0%
RE231100_027	Residential	597982	4844724	1.5	51	95	83	11	0.0%
RE231100_028	Residential	597991	4844732	1.5	50	94	83	10	0.0%
RE231100_029	Residential	597999	4844741	1.5	50	94	83	11	0.0%
RE231100_030	Residential	598006	4844749	1.5	49	93	83	9	0.0%
RE231100_031	Residential	598015	4844756	1.5	48	92	83	9	0.0%
RE231100_032	Residential	598023	4844764	1.5	49	92	83	8	0.0%
RE231100_033	Residential	598031	4844773	1.5	50	92	83	8	0.0%
RE231100_041	Residential	598017	4844803	1.5	51	92	83	7	0.0%
RE231100_042	Residential	598007	4844794	1.5	52	93	83	9	0.0%
RE231100_043	Residential	597998	4844785	1.5	51	94	83	10	0.0%
RE231100_044	Residential	597991	4844777	1.5	50	94	83	10	0.0%
RE231100_045	Residential	597982	4844768	1.5	50	94	83	10	0.0%
RE231100_046	Residential	597975	4844760	1.5	51	95	83	11	0.0%
RE231100_047	Residential	597967	4844752	1.5	52	96	83	11	0.0%
RE231100_048	Residential	597958	4844742	1.5	52	96	83	12	0.0%
RE231100_049	Residential	597924	4844771	1.5	54	98	83	13	0.0%
RE231100_050	Residential	597933	4844779	1.5	54	98	83	12	0.0%
RE231100_051	Residential	597943	4844787	1.5	53	97	83	13	0.0%
RE231100_052	Residential	597950	4844796	1.5	52	96	83	12	0.0%
RE231100_053	Residential	597958	4844803	1.5	52	95	83	11	0.0%
RE231100_054	Residential	597966	4844812	1.5	53	95	83	12	0.0%
RE231100_055	Residential	597975	4844820	1.5	54	94	83	10	0.0%
RE231100_056	Residential	597983	4844829	1.5	54	95	83	11	0.0%
RE231100_057	Residential	597991	4844837	1.5	55	96	83	11	0.0%
RE231100_077	Residential	597906	4845006	1.5	60	104	83	29	0.1%
RE231100_078	Residential	597896	4845014	1.5	60	105	83	39	0.1%
RE231100_079	Residential	598077	4844606	1.5	45	90	83	8	0.0%
RE231100_080	Residential	598085	4844615	1.5	44	89	83	9	0.0%
RE231100_081	Residential	598094	4844623	1.5	45	89	83	9	0.0%
RE231100_082	Residential	598056	4844626	1.5	46	90	83	11	0.0%
RE231100_083	Residential	598066	4844634	1.5	45	89	83	10	0.0%
RE231100_084	Residential	598074	4844643	1.5	46	90	83	10	0.0%
RE231100_085	Residential	598082	4844651	1.5	46	90	83	9	0.0%
RE231100_090	Residential	598178	4844511	1.5	42	86	83	6	0.0%
RE231100_091	Residential	598202	4844488	1.5	41	85	83	6	0.0%
RE231100_116	Residential	598123	4844591	1.5	43	88	83	7	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_120	Residential	598113	4844580	1.5	44	89	83	6	0.0%
RE231100_121	Residential	598101	4844633	1.5	45	89	83	18	0.0%
RE231100_161	Residential	598142	4844569	1.5	42	87	83	6	0.0%
RE231100_164	Residential	598158	4844529	1.5	42	87	83	6	0.0%
RE231100_165	Residential	598166	4844536	1.5	42	86	83	6	0.0%
RE231100_167	Residential	598126	4844552	1.5	44	88	83	7	0.0%
RE231100_171	Residential	598133	4844560	1.5	43	88	83	6	0.0%
RE231100_175	Residential	598101	4844633	1.5	45	89	83	18	0.0%
RE231400_001	Residential	597400	4846151	1.5	80	121	83	86	0.2%
RE231400_002	Residential	597374	4846123	1.5	80	121	83	104	0.2%
RE231400_003	Residential	597425	4846115	1.5	79	120	83	75	0.2%
RE231400_004	Residential	597415	4846104	1.5	79	120	83	76	0.2%
RE231400_005	Residential	597397	4846081	1.5	79	120	83	93	0.2%
RE231400_006	Residential	597415	4846064	1.5	78	119	83	84	0.2%
RE231400_007	Residential	597438	4846085	1.5	78	119	83	69	0.2%
RE231400_008	Residential	597458	4846043	1.5	78	119	83	66	0.2%
RE231400_009	Residential	597440	4846026	1.5	79	119	83	84	0.2%
RE231400_010	Residential	597494	4845971	1.5	72	113	83	44	0.1%
RE231400_011	Residential	597177	4846314	1.5	81	121	83	165	0.4%
RE231500_002	Residential	594959	4848195	1.5	23	67	83	0	-
RE231600_001	Residential	594685	4848625	1.5	19	61	83	0	-
RE231600_004	Residential	594738	4848582	1.5	20	61	83	0	-
RE231600_005	Residential	594772	4848553	1.5	20	61	83	0	-
RE231700_002	Residential	594955	4848488	1.5	19	62	83	0	-
RE231700_003	Residential	594977	4848446	1.5	19	62	83	0	-
RE231700_004	Residential	594865	4848604	1.5	18	61	83	0	-
RE231800_001	Residential	594678	4848786	1.5	17	62	83	0	-
RE231800_002	Residential	594627	4848819	1.5	20	64	83	0	-
RE232700_002	Residential	595497	4849130	1.5	16	59	83	0	-
RE233200_001	Recreation	595805	4849383	1.5	16	59	83	0	-
RE233500_001	Residential	596000	4849598	1.5	21	66	83	0	-
RE233600_001	Residential	596065	4849694	1.5	16	61	83	0	-
RE233600_002	Residential	596044	4849667	1.5	17	61	83	0	-
RE233700_001	Residential	596171	4849814	1.5	18	63	83	0	-
RE233900_001	Residential	596273	4850023	1.5	23	67	83	0	-
RE233900_002	Residential	596203	4850118	1.5	20	65	83	0	-
RE233900_003	Residential	596230	4850156	1.5	24	69	83	0	-
RE234000_001	Residential	596284	4850244	1.5	24	69	83	0	-
RE234100_001	Residential	596370	4850189	1.5	24	68	83	0	-
RE235000_001	Residential	596939	4851084	1.5	23	67	83	0	-
RE235100_001	Residential	596983	4851111	1.5	23	67	83	0	-
RE235100_002	Residential	597028	4851138	1.5	23	68	83	0	-
RE235100_003	Residential	597152	4851021	1.5	21	65	83	0	-
RE235200_001	Residential	597087	4851160	1.5	23	67	83	0	-
RE235200_002	Residential	597153	4851077	1.5	19	64	83	0	-
RE235500_001	Residential	597387	4851296	1.5	17	61	83	0	-
RE235500_002	Residential	597327	4851381	1.5	20	63	83	0	-
RE235700_001	Residential	597704	4851314	1.5	21	62	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE235700_002	Residential	597412	4851537	1.5	19	63	83	0	-
RE235800_001	Residential	597664	4851442	1.5	39	81	83	2	0.0%
RE235900_002	Residential	597909	4851332	1.5	32	75	83	3	0.0%
RE235900_003	Residential	597683	4851628	1.5	25	69	83	0	-
RE235900_004	Residential	597618	4851651	1.5	33	76	83	0	-
RE310100_001	Residential	597701	4851643	1.5	24	68	83	0	-
RE310100_002	Residential	597725	4851680	1.5	23	67	83	0	-
RE310100_003	Residential	597647	4851692	1.5	30	74	83	0	-
RE310200_001	Residential	597753	4851836	1.5	26	69	83	0	-
RE310500_001	Residential	597854	4852016	1.5	22	66	83	0	-
RE310600_001	Residential	598054	4851992	1.5	14	58	83	0	-
RE310600_002	Residential	598048	4852100	1.5	16	60	83	0	-
RE310700_001	Residential	598116	4852141	1.5	18	61	83	0	-
RE310700_002	Residential	598003	4852173	1.5	20	64	83	0	-
RE310900_001	Residential	598218	4852295	1.5	19	64	83	0	-
RE311000_001	Residential	598324	4852285	1.5	16	59	83	0	-
RE311100_001	Residential	598324	4852488	1.5	14	59	83	0	-
RE311200_001	Residential	598400	4852513	1.5	16	60	83	0	-
RE311200_002	Residential	598471	4852451	1.5	17	60	83	0	-
RE311300_001	Residential	598509	4852502	1.5	17	61	83	0	-
RE311300_002	Residential	598222	4852772	1.5	13	57	83	0	-
RE311400_001	Residential	598628	4852529	1.5	17	62	83	0	-
RE311400_002	Residential	598554	4852578	1.5	26	70	83	0	-
RE311400_003	Residential	598404	4852757	1.5	16	61	83	0	-
RE311400_006	Residential	598813	4852353	1.5	15	59	83	0	-
RE311800_001	Residential	598767	4852817	1.5	15	60	83	0	-
RE311900_001	Residential	598826	4852898	1.5	15	59	83	0	-
RE312200_001	Residential	598954	4853124	1.5	16	61	83	0	-
RE312200_002	Residential	598983	4853142	1.5	14	59	83	0	-
RE312200_003	Residential	599011	4853156	1.5	13	58	83	0	-
RE312300_001	Residential	599043	4853264	1.5	14	58	83	0	-
RE312400_001	Residential	599140	4853349	1.5	12	57	83	0	-
RE312800_001	Residential	599561	4853387	1.5	13	56	83	0	-
RE312800_002	Residential	599655	4853196	1.5	9	53	83	0	-
RE312900_001	Residential	599611	4853344	1.5	14	56	83	0	-
RE312900_002	Residential	599737	4853210	1.5	13	55	83	0	-
RE313000_001	Residential	599767	4853320	1.5	14	58	83	0	-
RE313000_002	Residential	599746	4853342	1.5	14	58	83	0	-
RE313000_003	Residential	599707	4853379	1.5	14	58	83	0	-
RE313000_004	Residential	599831	4853246	1.5	16	60	83	0	-
RE313000_005	Residential	599859	4853220	1.5	16	60	83	0	-
RE313000_006	Residential	599831	4853130	1.5	14	57	83	0	-
RE313000_007	Residential	599790	4853168	1.5	14	56	83	0	-
RE313100_001	Residential	599892	4853186	1.5	16	60	83	0	-
RE314400_001	Residential	601067	4853610	1.5	13	57	83	0	-
RE314800_001	Residential	601376	4853448	1.5	14	58	83	0	-
RE314900_001	Residential	601445	4853622	1.5	16	60	83	0	-
RE316400_001	Residential	602974	4853508	1.5	54	98	83	13	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE316500_001	Residential	603041	4853572	1.5	66	110	83	26	0.1%
RE316600_001	Residential	603200	4853771	1.5	65	108	83	34	0.1%
RE316600_002	Residential	603222	4853799	1.5	65	108	83	32	0.1%
RE316700_001	Residential	603244	4853825	1.5	65	108	83	34	0.1%
RE316700_002	Residential	603260	4853854	1.5	59	102	83	24	0.1%
RE317000_001	Residential	603580	4854095	1.5	46	85	83	7	0.0%
RE410200_001	Residential	604488	4854200	1.5	12	56	83	0	-
RE410200_002	Residential	604438	4854244	1.5	12	56	83	0	-
RE411100_001	Residential	605221	4854613	1.5	23	65	83	0	-
RE411200_001	Residential	605486	4854296	1.5	56	97	83	38	0.1%
RE510000_001	Residential	605849	4853842	1.5	26	71	83	0	-
RE510000_002	Residential	605777	4854043	1.5	23	66	83	0	-
RE510100_001	Residential	605862	4854052	1.5	17	61	83	0	-
RE511200_001	Residential	607742	4853370	1.5	55	99	83	60	0.1%
RE511200_002	Residential	607750	4853371	1.5	53	98	83	62	0.1%
RE511200_003	Residential	607756	4853372	1.5	52	96	83	64	0.1%
RE511200_004	Residential	607761	4853373	1.5	51	95	83	64	0.1%
RE511200_005	Residential	607738	4853397	1.5	43	87	83	33	0.1%
RE511200_006	Residential	607744	4853398	1.5	43	87	83	34	0.1%
RE511300_001	Residential	608183	4853093	1.5	21	65	83	0	-
RE511300_002	Child Care Centre	607553	4854058	1.5	12	56	83	0	-
RE511300_003	Residential	607654	4853910	1.5	15	58	83	0	-
RE511300_004	Residential	607664	4853818	1.5	16	60	83	0	-
RE511300_005	Residential	607712	4853826	1.5	16	59	83	0	-
RE511300_006	Residential	607696	4853815	1.5	16	60	83	0	-
RE511300_007	Residential	607670	4853789	1.5	17	60	83	0	-
RE511300_008	Residential	607695	4853826	1.5	16	60	83	0	-
RE511300_009	Residential	607710	4853739	1.5	18	61	83	0	-
RE511300_010	Residential	607728	4853795	1.5	17	60	83	0	-
RE511300_011	Residential	607729	4853761	1.5	18	61	83	0	-
RE511300_012	Residential	607733	4853799	1.5	17	60	83	0	-
RE511300_013	Residential	607665	4853812	1.5	16	60	83	0	-
RE511300_014	Residential	607667	4853806	1.5	16	60	83	0	-
RE511300_015	Residential	607721	4853732	1.5	18	61	83	0	-
RE511300_016	Residential	607702	4853748	1.5	18	61	83	0	-
RE511300_017	Residential	607684	4853769	1.5	17	61	83	0	-
RE511300_018	Residential	607740	4853729	1.5	18	61	83	0	-
RE511300_019	Residential	607728	4853731	1.5	18	61	83	0	-
RE511300_020	Residential	607701	4853818	1.5	16	60	83	0	-
RE511300_021	Residential	607668	4853800	1.5	16	60	83	0	-
RE511300_022	Residential	607706	4853744	1.5	18	61	83	0	-
RE511300_023	Residential	607680	4853773	1.5	17	60	83	0	-
RE511300_024	Residential	607734	4853730	1.5	18	61	83	0	-
RE511300_025	Residential	607707	4853788	1.5	17	60	83	0	-
RE511300_026	Residential	607728	4853807	1.5	17	60	83	0	-
RE511300_027	Residential	607722	4853803	1.5	17	60	83	0	-
RE511300_028	Residential	607710	4853783	1.5	17	60	83	0	-
RE511300_029	Residential	607675	4853776	1.5	17	60	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_030	Residential	607714	4853779	1.5	17	60	83	0	-
RE511300_031	Residential	607732	4853756	1.5	18	61	83	0	-
RE511300_032	Residential	607690	4853823	1.5	16	60	83	0	-
RE511300_033	Residential	607721	4853771	1.5	17	61	83	0	-
RE511300_034	Residential	607725	4853766	1.5	18	61	83	0	-
RE511300_035	Residential	607701	4853830	1.5	16	59	83	0	-
RE511300_036	Residential	607706	4853834	1.5	16	59	83	0	-
RE511300_037	Residential	607704	4853793	1.5	17	60	83	0	-
RE511300_038	Residential	607688	4853764	1.5	17	61	83	0	-
RE511300_039	Residential	607698	4853753	1.5	18	61	83	0	-
RE511300_040	Residential	607669	4853794	1.5	16	60	83	0	-
RE511300_041	Residential	607692	4853759	1.5	17	61	83	0	-
RE511300_042	Residential	607706	4853822	1.5	16	59	83	0	-
RE511300_043	Residential	607767	4853374	1.5	50	94	83	65	0.1%
RE511300_044	Residential	607774	4853376	1.5	51	95	83	67	0.2%
RE511300_045	Residential	607781	4853377	1.5	53	97	83	69	0.2%
RE511300_046	Residential	607788	4853379	1.5	54	99	83	69	0.2%
RE511300_047	Residential	607794	4853380	1.5	55	100	83	70	0.2%
RE511300_048	Residential	607800	4853381	1.5	56	101	83	68	0.2%
RE511300_049	Residential	607806	4853382	1.5	57	102	83	71	0.2%
RE511300_050	Residential	607812	4853383	1.5	60	104	83	71	0.2%
RE511300_051	Residential	607820	4853385	1.5	63	107	83	73	0.2%
RE511300_052	Residential	607826	4853386	1.5	65	109	83	72	0.2%
RE511300_053	Residential	607832	4853387	1.5	68	111	83	76	0.2%
RE511300_054	Residential	607838	4853388	1.5	70	112	83	70	0.2%
RE511300_055	Residential	607846	4853390	1.5	73	114	83	73	0.2%
RE511300_056	Residential	607853	4853391	1.5	75	116	83	71	0.2%
RE511300_057	Residential	607859	4853392	1.5	77	118	83	71	0.2%
RE511300_058	Residential	607866	4853394	1.5	78	119	83	73	0.2%
RE511300_059	Residential	607885	4853388	1.5	79	120	83	83	0.2%
RE511300_060	Residential	607886	4853395	1.5	78	119	83	68	0.2%
RE511300_061	Residential	607886	4853402	1.5	77	117	83	62	0.1%
RE511300_062	Residential	607887	4853410	1.5	73	113	83	56	0.1%
RE511300_063	Residential	607887	4853416	1.5	69	110	83	49	0.1%
RE511300_064	Residential	607888	4853422	1.5	65	106	83	43	0.1%
RE511300_065	Residential	607888	4853429	1.5	61	102	83	37	0.1%
RE511300_066	Residential	607892	4853460	1.5	45	89	83	20	0.0%
RE511300_067	Residential	607892	4853467	1.5	42	86	83	15	0.0%
RE511300_068	Residential	607892	4853473	1.5	41	85	83	10	0.0%
RE511300_069	Residential	607893	4853479	1.5	40	84	83	8	0.0%
RE511300_070	Residential	607894	4853485	1.5	38	83	83	7	0.0%
RE511300_071	Residential	607894	4853495	1.5	36	81	83	5	0.0%
RE511300_072	Residential	607893	4853501	1.5	35	79	83	5	0.0%
RE511300_073	Residential	607891	4853507	1.5	33	78	83	5	0.0%
RE511300_074	Residential	607776	4853648	1.5	21	64	83	0	-
RE511300_075	Residential	607783	4853646	1.5	21	63	83	0	-
RE511300_076	Residential	607789	4853644	1.5	21	64	83	0	-
RE511300_077	Residential	607795	4853641	1.5	21	64	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_078	Residential	607801	4853639	1.5	21	64	83	0	-
RE511300_079	Residential	607808	4853634	1.5	21	64	83	0	-
RE511300_080	Residential	607814	4853629	1.5	21	64	83	0	-
RE511300_081	Residential	607819	4853626	1.5	21	65	83	0	-
RE511300_082	Residential	607824	4853622	1.5	21	65	83	0	-
RE511300_083	Residential	607829	4853618	1.5	21	65	83	0	-
RE511300_084	Residential	607834	4853614	1.5	21	65	83	0	-
RE511300_085	Residential	607842	4853608	1.5	21	65	83	0	-
RE511300_086	Residential	607846	4853603	1.5	21	65	83	0	-
RE511300_087	Residential	607850	4853599	1.5	21	65	83	0	-
RE511300_088	Residential	607854	4853594	1.5	22	65	83	0	-
RE511300_089	Residential	607858	4853589	1.5	22	66	83	0	-
RE511300_090	Residential	607862	4853585	1.5	22	67	83	0	-
RE511300_091	Residential	607868	4853578	1.5	23	68	83	0	-
RE511300_092	Residential	607871	4853571	1.5	24	68	83	0	-
RE511300_093	Residential	607874	4853566	1.5	24	69	83	0	-
RE511300_094	Residential	607878	4853561	1.5	25	70	83	0	-
RE511300_095	Residential	607882	4853552	1.5	26	70	83	1	0.0%
RE511300_096	Residential	607883	4853545	1.5	26	71	83	2	0.0%
RE511300_097	Residential	607884	4853538	1.5	27	71	83	2	0.0%
RE511300_098	Residential	607758	4853512	1.5	26	70	83	0	-
RE511300_099	Residential	607757	4853520	1.5	26	69	83	0	-
RE511300_100	Residential	607756	4853526	1.5	25	69	83	0	-
RE511300_101	Residential	607755	4853532	1.5	25	68	83	0	-
RE511300_102	Residential	607753	4853538	1.5	25	68	83	0	-
RE511300_103	Residential	607752	4853544	1.5	24	68	83	0	-
RE511300_104	Residential	607751	4853552	1.5	24	67	83	0	-
RE511300_105	Residential	607749	4853559	1.5	24	67	83	0	-
RE511300_106	Residential	607747	4853564	1.5	23	67	83	0	-
RE511300_107	Residential	607746	4853571	1.5	23	67	83	0	-
RE511300_108	Residential	607745	4853576	1.5	23	66	83	0	-
RE511300_109	Residential	607744	4853583	1.5	22	66	83	0	-
RE511300_110	Residential	607742	4853591	1.5	22	66	83	0	-
RE511300_111	Residential	607740	4853597	1.5	22	65	83	0	-
RE511300_112	Residential	607739	4853603	1.5	22	65	83	0	-
RE511300_113	Residential	607738	4853609	1.5	22	65	83	0	-
RE511300_114	Residential	607737	4853615	1.5	21	65	83	0	-
RE511300_115	Residential	607736	4853621	1.5	21	64	83	0	-
RE511300_116	Residential	607736	4853631	1.5	21	64	83	0	-
RE511300_117	Residential	607735	4853640	1.5	20	64	83	0	-
RE511300_118	Residential	607734	4853645	1.5	20	64	83	0	-
RE511300_119	Residential	607735	4853651	1.5	20	63	83	0	-
RE511300_120	Residential	607736	4853658	1.5	20	63	83	0	-
RE511300_121	Residential	607737	4853664	1.5	20	63	83	0	-
RE511300_122	Residential	607721	4853505	1.5	27	70	83	0	-
RE511300_123	Residential	607719	4853512	1.5	26	69	83	0	-
RE511300_124	Residential	607718	4853518	1.5	26	69	83	0	-
RE511300_125	Residential	607717	4853524	1.5	25	69	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_126	Residential	607716	4853530	1.5	25	68	83	0	-
RE511300_127	Residential	607715	4853537	1.5	25	68	83	0	-
RE511300_128	Residential	607713	4853545	1.5	24	68	83	0	-
RE511300_129	Residential	607712	4853551	1.5	24	68	83	0	-
RE511300_130	Residential	607711	4853556	1.5	24	67	83	0	-
RE511300_131	Residential	607710	4853563	1.5	24	67	83	0	-
RE511300_132	Residential	607708	4853569	1.5	23	67	83	0	-
RE511300_133	Residential	607707	4853575	1.5	23	67	83	0	-
RE511300_134	Residential	607706	4853583	1.5	23	66	83	0	-
RE511300_135	Residential	607704	4853589	1.5	23	66	83	0	-
RE511300_136	Residential	607704	4853595	1.5	22	66	83	0	-
RE511300_137	Residential	607702	4853601	1.5	22	66	83	0	-
RE511300_138	Residential	607701	4853607	1.5	22	66	83	0	-
RE511300_139	Residential	607700	4853615	1.5	22	65	83	0	-
RE511300_140	Residential	607698	4853621	1.5	21	65	83	0	-
RE511300_141	Residential	607697	4853627	1.5	21	65	83	0	-
RE511300_142	Residential	607696	4853634	1.5	21	65	83	0	-
RE511300_143	Residential	607694	4853645	1.5	21	64	83	0	-
RE511300_144	Residential	607694	4853653	1.5	20	64	83	0	-
RE511300_145	Residential	607694	4853659	1.5	20	64	83	0	-
RE511300_146	Residential	607694	4853665	1.5	20	64	83	0	-
RE511300_147	Residential	607696	4853670	1.5	20	63	83	0	-
RE511300_148	Residential	607699	4853677	1.5	19	63	83	0	-
RE511300_149	Residential	607750	4853399	1.5	43	87	83	32	0.1%
RE511300_150	Residential	607756	4853400	1.5	43	87	83	32	0.1%
RE511300_151	Residential	607762	4853401	1.5	42	86	83	31	0.1%
RE511300_152	Residential	607768	4853402	1.5	42	86	83	32	0.1%
RE511300_153	Residential	607776	4853404	1.5	41	85	83	34	0.1%
RE511300_154	Residential	607783	4853405	1.5	41	85	83	35	0.1%
RE511300_155	Residential	607789	4853406	1.5	42	86	83	34	0.1%
RE511300_156	Residential	607795	4853407	1.5	43	87	83	33	0.1%
RE511300_157	Residential	607801	4853409	1.5	44	89	83	33	0.1%
RE511300_158	Residential	607807	4853410	1.5	45	90	83	35	0.1%
RE511300_159	Residential	607815	4853412	1.5	47	91	83	35	0.1%
RE511300_160	Residential	607821	4853413	1.5	48	92	83	36	0.1%
RE511300_161	Residential	607827	4853414	1.5	49	93	83	34	0.1%
RE511300_162	Residential	607834	4853415	1.5	49	94	83	35	0.1%
RE511300_163	Residential	607841	4853417	1.5	50	94	83	35	0.1%
RE511300_164	Residential	607848	4853418	1.5	52	96	83	37	0.1%
RE511300_165	Residential	607854	4853419	1.5	53	98	83	37	0.1%
RE511300_166	Residential	607859	4853420	1.5	55	100	83	39	0.1%
RE511300_167	Residential	607866	4853421	1.5	57	101	83	39	0.1%
RE511300_168	Residential	607728	4853439	1.5	34	77	83	9	0.0%
RE511300_169	Residential	607736	4853440	1.5	34	76	83	9	0.0%
RE511300_170	Residential	607742	4853441	1.5	34	76	83	8	0.0%
RE511300_171	Residential	607748	4853442	1.5	33	76	83	8	0.0%
RE511300_172	Residential	607754	4853443	1.5	33	75	83	8	0.0%
RE511300_173	Residential	607761	4853444	1.5	33	75	83	8	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_174	Residential	607768	4853445	1.5	32	74	83	8	0.0%
RE511300_175	Residential	607774	4853446	1.5	32	75	83	7	0.0%
RE511300_176	Residential	607780	4853448	1.5	31	75	83	7	0.0%
RE511300_177	Residential	607786	4853449	1.5	31	76	83	6	0.0%
RE511300_178	Residential	607792	4853450	1.5	32	76	83	6	0.0%
RE511300_179	Residential	607799	4853451	1.5	32	77	83	6	0.0%
RE511300_180	Residential	607807	4853453	1.5	33	77	83	6	0.0%
RE511300_181	Residential	607813	4853454	1.5	33	78	83	5	0.0%
RE511300_182	Residential	607819	4853456	1.5	33	78	83	6	0.0%
RE511300_183	Residential	607825	4853457	1.5	34	79	83	7	0.0%
RE511300_184	Residential	607831	4853458	1.5	35	80	83	7	0.0%
RE511300_185	Residential	607837	4853459	1.5	36	81	83	8	0.0%
RE511300_186	Residential	607845	4853460	1.5	37	82	83	9	0.0%
RE511300_187	Residential	607851	4853462	1.5	38	82	83	7	0.0%
RE511300_188	Residential	607857	4853463	1.5	39	83	83	11	0.0%
RE511300_189	Residential	607863	4853464	1.5	40	84	83	11	0.0%
RE511300_190	Residential	607870	4853465	1.5	40	85	83	11	0.0%
RE511300_191	Residential	607724	4853468	1.5	29	71	83	2	0.0%
RE511300_192	Residential	607731	4853469	1.5	29	72	83	2	0.0%
RE511300_193	Residential	607737	4853470	1.5	29	72	83	2	0.0%
RE511300_194	Residential	607742	4853471	1.5	29	72	83	2	0.0%
RE511300_195	Residential	607749	4853472	1.5	29	72	83	2	0.0%
RE511300_196	Residential	607755	4853473	1.5	29	72	83	3	0.0%
RE511300_197	Residential	607762	4853474	1.5	28	72	83	3	0.0%
RE511300_198	Residential	607769	4853476	1.5	28	72	83	3	0.0%
RE511300_199	Residential	607775	4853477	1.5	28	72	83	3	0.0%
RE511300_200	Residential	607781	4853478	1.5	28	71	83	2	0.0%
RE511300_201	Residential	607787	4853480	1.5	28	71	83	2	0.0%
RE511300_202	Residential	607793	4853481	1.5	28	72	83	1	0.0%
RE511300_203	Residential	607801	4853483	1.5	28	72	83	1	0.0%
RE511300_204	Residential	607807	4853484	1.5	28	73	83	2	0.0%
RE511300_205	Residential	607813	4853485	1.5	29	73	83	3	0.0%
RE511300_206	Residential	607819	4853486	1.5	29	74	83	3	0.0%
RE511300_207	Residential	607825	4853488	1.5	29	74	83	4	0.0%
RE511300_208	Residential	607831	4853489	1.5	30	74	83	4	0.0%
RE511300_209	Residential	607839	4853490	1.5	30	75	83	4	0.0%
RE511300_210	Residential	607846	4853492	1.5	30	75	83	4	0.0%
RE511300_211	Residential	607851	4853493	1.5	30	75	83	4	0.0%
RE511300_212	Residential	607858	4853494	1.5	31	76	83	4	0.0%
RE511300_213	Residential	607863	4853495	1.5	32	77	83	5	0.0%
RE511300_214	Residential	607869	4853496	1.5	33	77	83	4	0.0%
RE511400_001	Residential	607929	4853848	1.5	14	58	83	0	-
RE511400_002	Residential	607914	4853876	1.5	13	57	83	0	-
RE511400_003	Residential	607929	4853886	1.5	13	57	83	0	-
RE511400_004	Residential	607898	4853826	1.5	14	58	83	0	-
RE511400_005	Residential	607899	4853865	1.5	13	57	83	0	-
RE511400_006	Residential	607842	4853819	1.5	15	59	83	0	-
RE511400_007	Residential	607859	4853838	1.5	14	58	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_008	Residential	607869	4853844	1.5	14	58	83	0	-
RE511400_009	Residential	607876	4853849	1.5	13	58	83	0	-
RE511400_010	Residential	607922	4853881	1.5	13	57	83	0	-
RE511400_011	Residential	607891	4853860	1.5	13	58	83	0	-
RE511400_012	Residential	607868	4853804	1.5	14	59	83	0	-
RE511400_013	Residential	607919	4853841	1.5	14	58	83	0	-
RE511400_014	Residential	607907	4853870	1.5	13	57	83	0	-
RE511400_015	Residential	607887	4853793	1.5	15	59	83	0	-
RE511400_016	Residential	607876	4853800	1.5	14	59	83	0	-
RE511400_017	Residential	607867	4853900	1.5	13	57	83	0	-
RE511400_018	Residential	607888	4853915	1.5	12	57	83	0	-
RE511400_019	Residential	607881	4853910	1.5	12	57	83	0	-
RE511400_020	Residential	607895	4853920	1.5	12	57	83	0	-
RE511400_021	Residential	607805	4853857	1.5	14	59	83	0	-
RE511400_022	Residential	607814	4853863	1.5	14	58	83	0	-
RE511400_023	Residential	607859	4853894	1.5	13	57	83	0	-
RE511400_024	Residential	607874	4853905	1.5	13	57	83	0	-
RE511400_025	Residential	607821	4853868	1.5	14	58	83	0	-
RE511400_026	Residential	607829	4853873	1.5	14	58	83	0	-
RE511400_027	Residential	607902	4853925	1.5	12	57	83	0	-
RE511400_028	Residential	607836	4853879	1.5	13	57	83	0	-
RE511400_029	Residential	607844	4853884	1.5	13	57	83	0	-
RE511400_030	Residential	607852	4853889	1.5	13	57	83	0	-
RE511400_031	Residential	607961	4853671	1.5	20	65	83	0	-
RE511400_032	Residential	607901	4853730	1.5	16	60	83	0	-
RE511400_033	Residential	607932	4853710	1.5	18	62	83	0	-
RE511400_034	Residential	607891	4853735	1.5	16	60	83	0	-
RE511400_035	Residential	607950	4853688	1.5	19	64	83	0	-
RE511400_036	Residential	608027	4853515	1.5	50	91	83	16	0.0%
RE511400_037	Residential	607948	4853861	1.5	14	58	83	0	-
RE511400_038	Residential	607884	4853855	1.5	13	58	83	0	-
RE511400_039	Residential	607860	4853809	1.5	15	59	83	0	-
RE511400_040	Residential	607917	4853721	1.5	17	61	83	0	-
RE511400_041	Residential	607909	4853725	1.5	16	61	83	0	-
RE511400_042	Residential	607925	4853716	1.5	17	61	83	0	-
RE511400_043	Residential	607955	4853680	1.5	20	64	83	0	-
RE511400_044	Residential	607944	4853695	1.5	19	63	83	0	-
RE511400_045	Residential	607939	4853703	1.5	18	63	83	0	-
RE511400_046	Residential	608072	4853635	1.5	29	73	83	2	0.0%
RE511400_047	Residential	608048	4853617	1.5	29	73	83	2	0.0%
RE511400_048	Residential	608076	4853544	1.5	46	88	83	12	0.0%
RE511400_049	Residential	608107	4853601	1.5	39	81	83	6	0.0%
RE511400_050	Residential	608076	4853554	1.5	45	86	83	11	0.0%
RE511400_051	Residential	607864	4853751	1.5	16	59	83	0	-
RE511400_052	Residential	607853	4853757	1.5	16	60	83	0	-
RE511400_053	Residential	607845	4853762	1.5	16	60	83	0	-
RE511400_054	Residential	607836	4853766	1.5	16	60	83	0	-
RE511400_055	Residential	607827	4853771	1.5	16	60	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_056	Residential	607818	4853777	1.5	16	60	83	0	-
RE511400_057	Residential	607794	4853801	1.5	16	60	83	0	-
RE511400_058	Residential	607809	4853783	1.5	16	60	83	0	-
RE511400_059	Residential	607802	4853791	1.5	16	60	83	0	-
RE511400_060	Residential	608147	4853557	1.5	47	91	83	13	0.0%
RE511400_061	Residential	608166	4853558	1.5	48	92	83	15	0.0%
RE511400_062	Residential	608176	4853558	1.5	48	92	83	15	0.0%
RE511400_063	Residential	608157	4853558	1.5	47	92	83	15	0.0%
RE511400_064	Residential	608076	4853583	1.5	40	82	83	6	0.0%
RE511400_065	Residential	608115	4853525	1.5	52	97	83	17	0.0%
RE511400_066	Residential	608102	4853614	1.5	36	78	83	3	0.0%
RE511400_067	Residential	608093	4853649	1.5	29	73	83	2	0.0%
RE511400_068	Residential	608103	4853524	1.5	52	96	83	17	0.0%
RE511400_069	Residential	608076	4853563	1.5	43	85	83	8	0.0%
RE511400_070	Residential	608074	4853594	1.5	37	80	83	4	0.0%
RE511400_071	Residential	608107	4853544	1.5	47	91	83	14	0.0%
RE511400_072	Residential	608107	4853563	1.5	45	87	83	11	0.0%
RE511400_073	Residential	608107	4853572	1.5	43	85	83	10	0.0%
RE511400_074	Residential	608082	4853642	1.5	29	73	83	2	0.0%
RE511400_075	Residential	608056	4853624	1.5	29	73	83	2	0.0%
RE511400_076	Residential	608067	4853525	1.5	50	92	83	15	0.0%
RE511400_077	Residential	608070	4853606	1.5	33	78	83	4	0.0%
RE511400_078	Residential	608097	4853625	1.5	33	77	83	3	0.0%
RE511400_079	Residential	608064	4853629	1.5	29	73	83	2	0.0%
RE511400_080	Residential	608091	4853524	1.5	50	95	83	17	0.0%
RE511400_081	Residential	608107	4853581	1.5	42	83	83	8	0.0%
RE511400_082	Residential	608107	4853590	1.5	41	82	83	7	0.0%
RE511400_083	Residential	608077	4853573	1.5	42	84	83	8	0.0%
RE511400_084	Residential	608107	4853554	1.5	46	89	83	14	0.0%
RE511400_085	Residential	608080	4853524	1.5	50	93	83	15	0.0%
RE511400_086	Residential	608146	4853605	1.5	39	81	83	6	0.0%
RE511400_087	Residential	607690	4854002	1.5	13	57	83	0	-
RE511400_088	Residential	607683	4854039	1.5	12	57	83	0	-
RE511400_089	Residential	607642	4854055	1.5	13	56	83	0	-
RE511400_090	Residential	607726	4853973	1.5	13	57	83	0	-
RE511400_091	Residential	607638	4854068	1.5	13	56	83	0	-
RE511400_092	Residential	607782	4853966	1.5	13	57	83	0	-
RE511400_093	Residential	607648	4854028	1.5	13	56	83	0	-
RE511400_094	Residential	607706	4853919	1.5	14	58	83	0	-
RE511400_095	Residential	607633	4854095	1.5	12	56	83	0	-
RE511400_096	Residential	607649	4853948	1.5	14	58	83	0	-
RE511400_097	Residential	607792	4853973	1.5	13	57	83	0	-
RE511400_098	Residential	607734	4853980	1.5	13	57	83	0	-
RE511400_099	Residential	607851	4853813	1.5	15	58	83	0	-
RE511400_100	Residential	607835	4853830	1.5	15	59	83	0	-
RE511400_101	Residential	607938	4853855	1.5	14	58	83	0	-
RE511400_102	Residential	607908	4853835	1.5	14	58	83	0	-
RE511400_103	Residential	607677	4854058	1.5	12	56	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_104	Residential	607687	4854030	1.5	13	57	83	0	-
RE511400_105	Residential	607758	4853948	1.5	14	58	83	0	-
RE511400_106	Residential	607671	4853912	1.5	15	58	83	0	-
RE511400_107	Residential	607797	4853977	1.5	12	56	83	0	-
RE511400_108	Residential	607709	4854015	1.5	13	57	83	0	-
RE511400_109	Residential	607661	4853910	1.5	15	58	83	0	-
RE511400_110	Residential	607713	4853921	1.5	14	58	83	0	-
RE511400_111	Residential	607654	4854003	1.5	13	57	83	0	-
RE511400_112	Residential	607657	4853949	1.5	14	58	83	0	-
RE511400_113	Residential	607651	4854015	1.5	13	57	83	0	-
RE511400_114	Residential	607731	4853930	1.5	14	58	83	0	-
RE511400_115	Residential	607695	4853916	1.5	15	58	83	0	-
RE511400_116	Residential	607655	4853989	1.5	14	57	83	0	-
RE511400_117	Residential	607645	4854041	1.5	13	56	83	0	-
RE511400_118	Residential	607751	4853943	1.5	14	58	83	0	-
RE511400_119	Residential	607744	4853938	1.5	14	58	83	0	-
RE511400_120	Residential	607787	4853970	1.5	13	57	83	0	-
RE511400_121	Residential	607676	4853954	1.5	14	57	83	0	-
RE511400_122	Residential	607667	4853952	1.5	14	57	83	0	-
RE511400_123	Residential	607684	4853955	1.5	14	57	83	0	-
RE511400_124	Residential	607704	4853960	1.5	13	57	83	0	-
RE511400_125	Residential	607680	4854049	1.5	12	57	83	0	-
RE511400_126	Residential	607679	4853914	1.5	15	58	83	0	-
RE511400_127	Residential	607700	4854008	1.5	13	57	83	0	-
RE511400_128	Residential	607719	4853969	1.5	13	57	83	0	-
RE511400_129	Residential	607689	4853915	1.5	15	58	83	0	-
RE511400_130	Residential	607739	4853935	1.5	14	58	83	0	-
RE511400_131	Residential	607636	4854081	1.5	12	56	83	0	-
RE511400_132	Residential	607680	4853999	1.5	13	57	83	0	-
RE511400_133	Residential	607723	4853926	1.5	14	58	83	0	-
RE511400_134	Residential	607693	4853957	1.5	13	57	83	0	-
RE511400_135	Residential	607710	4853964	1.5	13	57	83	0	-
RE511400_136	Residential	607759	4854001	1.5	12	57	83	0	-
RE511400_137	Residential	608026	4853558	1.5	39	82	83	6	0.0%
RE511400_138	Residential	608026	4853566	1.5	36	81	83	4	0.0%
RE511400_139	Residential	608023	4853574	1.5	34	79	83	4	0.0%
RE511400_140	Residential	608018	4853584	1.5	32	76	83	2	0.0%
RE511400_141	Residential	608015	4853591	1.5	30	74	83	2	0.0%
RE511400_142	Residential	608006	4853606	1.5	28	73	83	1	0.0%
RE511400_143	Residential	608011	4853599	1.5	29	73	83	2	0.0%
RE511400_144	Residential	608001	4853613	1.5	27	72	83	1	0.0%
RE511400_145	Residential	607996	4853620	1.5	26	70	83	1	0.0%
RE511400_146	Residential	607985	4853636	1.5	24	68	83	1	0.0%
RE511400_147	Residential	607991	4853628	1.5	25	69	83	1	0.0%
RE511400_148	Residential	607980	4853643	1.5	22	67	83	0	-
RE511400_149	Residential	608170	4853516	1.5	50	93	83	15	0.0%
RE511400_150	Residential	608155	4853516	1.5	51	95	83	15	0.0%
RE511400_151	Residential	608163	4853516	1.5	50	94	83	15	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_152	Residential	608148	4853517	1.5	51	96	83	16	0.0%
RE511400_153	Residential	608192	4853515	1.5	49	93	83	13	0.0%
RE511400_154	Residential	608184	4853515	1.5	48	92	83	14	0.0%
RE511400_155	Residential	608207	4853515	1.5	49	94	83	13	0.0%
RE511400_156	Residential	608199	4853515	1.5	49	94	83	12	0.0%
RE511400_157	Residential	608176	4853516	1.5	49	92	83	14	0.0%
RE511400_158	Residential	608214	4853515	1.5	49	94	83	12	0.0%
RE511400_159	Residential	607839	4853722	1.5	17	61	83	0	-
RE511400_160	Residential	607826	4853728	1.5	17	61	83	0	-
RE511400_161	Residential	607806	4853741	1.5	17	61	83	0	-
RE511400_162	Residential	607820	4853732	1.5	17	61	83	0	-
RE511400_163	Residential	607775	4853762	1.5	17	61	83	0	-
RE511400_164	Residential	607764	4853777	1.5	16	60	83	0	-
RE511400_165	Residential	607832	4853725	1.5	17	61	83	0	-
RE511400_166	Residential	607791	4853750	1.5	17	61	83	0	-
RE511400_167	Residential	607845	4853717	1.5	17	61	83	0	-
RE511400_168	Residential	607771	4853767	1.5	17	61	83	0	-
RE511400_169	Residential	607814	4853735	1.5	17	61	83	0	-
RE511400_170	Residential	607785	4853754	1.5	17	61	83	0	-
RE511400_171	Residential	607767	4853772	1.5	16	61	83	0	-
RE511400_172	Residential	607800	4853745	1.5	17	61	83	0	-
RE511400_173	Residential	607852	4853936	1.5	12	57	83	0	-
RE511400_174	Residential	607859	4853941	1.5	12	57	83	0	-
RE511400_175	Residential	607838	4853926	1.5	13	57	83	0	-
RE511400_176	Residential	607787	4853890	1.5	14	58	83	0	-
RE511400_177	Residential	607792	4853895	1.5	14	58	83	0	-
RE511400_178	Residential	607797	4853898	1.5	14	58	83	0	-
RE511400_179	Residential	607802	4853902	1.5	14	58	83	0	-
RE511400_180	Residential	607815	4853910	1.5	13	57	83	0	-
RE511400_181	Residential	607821	4853913	1.5	13	57	83	0	-
RE511400_182	Residential	607827	4853918	1.5	13	57	83	0	-
RE511400_183	Residential	607832	4853921	1.5	13	57	83	0	-
RE511400_184	Residential	607845	4853931	1.5	12	57	83	0	-
RE511400_185	Residential	607809	4853906	1.5	13	57	83	0	-
RE511400_186	Residential	607925	4853654	1.5	20	65	83	0	-
RE511400_187	Residential	607929	4853648	1.5	21	65	83	0	-
RE511400_188	Residential	607920	4853662	1.5	20	64	83	0	-
RE511400_189	Residential	607915	4853668	1.5	19	64	83	0	-
RE511400_190	Residential	607907	4853677	1.5	18	63	83	0	-
RE511400_191	Residential	607903	4853680	1.5	18	62	83	0	-
RE511400_192	Residential	607895	4853688	1.5	17	62	83	0	-
RE511400_193	Residential	607889	4853691	1.5	17	61	83	0	-
RE511400_194	Residential	607881	4853696	1.5	17	61	83	0	-
RE511400_195	Residential	607873	4853701	1.5	17	61	83	0	-
RE511400_196	Residential	607989	4853515	1.5	46	88	83	11	0.0%
RE511400_197	Residential	607989	4853530	1.5	40	85	83	8	0.0%
RE511400_198	Residential	607989	4853538	1.5	38	83	83	5	0.0%
RE511400_199	Residential	607988	4853524	1.5	43	86	83	10	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_200	Residential	607988	4853546	1.5	36	81	83	4	0.0%
RE511400_201	Residential	607988	4853553	1.5	34	79	83	4	0.0%
RE511400_202	Residential	607982	4853569	1.5	31	76	83	2	0.0%
RE511400_203	Residential	607985	4853562	1.5	32	76	83	2	0.0%
RE511400_204	Residential	607980	4853574	1.5	30	75	83	2	0.0%
RE511400_205	Residential	607978	4853580	1.5	30	74	83	2	0.0%
RE511400_206	Residential	607972	4853586	1.5	28	73	83	1	0.0%
RE511400_207	Residential	607968	4853592	1.5	27	72	83	2	0.0%
RE511400_208	Residential	607963	4853600	1.5	26	71	83	1	0.0%
RE511400_209	Residential	607958	4853607	1.5	25	69	83	1	0.0%
RE511400_210	Residential	607953	4853615	1.5	23	68	83	0	-
RE511400_211	Residential	607948	4853620	1.5	22	67	83	0	-
RE511400_212	Residential	608027	4853522	1.5	49	90	83	15	0.0%
RE511400_213	Residential	608027	4853540	1.5	44	86	83	10	0.0%
RE511400_214	Residential	608027	4853531	1.5	47	88	83	12	0.0%
RE511400_215	Residential	608027	4853548	1.5	42	84	83	9	0.0%
RE511400_216	Residential	607888	4853817	1.5	14	59	83	0	-
RE511400_217	Residential	607735	4853842	1.5	15	59	83	0	-
RE511400_218	Residential	607748	4853810	1.5	16	60	83	0	-
RE511400_219	Residential	607777	4853830	1.5	16	60	83	0	-
RE511400_220	Residential	607730	4853850	1.5	15	59	83	0	-
RE511400_221	Residential	607725	4853846	1.5	15	59	83	0	-
RE511400_222	Residential	607783	4853834	1.5	15	59	83	0	-
RE511400_223	Residential	607752	4853873	1.5	15	59	83	0	-
RE511400_224	Residential	607743	4853806	1.5	16	60	83	0	-
RE511400_225	Residential	607711	4853837	1.5	16	59	83	0	-
RE511400_226	Residential	607748	4853878	1.5	15	59	83	0	-
RE511400_227	Residential	607755	4853868	1.5	15	59	83	0	-
RE511400_228	Residential	607756	4853827	1.5	15	60	83	0	-
RE511400_229	Residential	607767	4853823	1.5	16	60	83	0	-
RE511400_230	Residential	607735	4853854	1.5	15	59	83	0	-
RE511400_231	Residential	607738	4853803	1.5	16	60	83	0	-
RE511400_232	Residential	607762	4853859	1.5	15	59	83	0	-
RE511400_233	Residential	607719	4853843	1.5	16	59	83	0	-
RE511400_234	Residential	607730	4853838	1.5	15	59	83	0	-
RE511400_235	Residential	607767	4853834	1.5	15	60	83	0	-
RE511400_236	Residential	607738	4853814	1.5	16	60	83	0	-
RE511400_237	Residential	607733	4853810	1.5	16	60	83	0	-
RE511400_238	Residential	607761	4853819	1.5	16	60	83	0	-
RE511400_239	Residential	607777	4853842	1.5	15	59	83	0	-
RE511400_240	Residential	607761	4853831	1.5	15	60	83	0	-
RE511400_241	Residential	607751	4853823	1.5	16	60	83	0	-
RE511400_242	Residential	607756	4853816	1.5	16	60	83	0	-
RE511400_243	Residential	607743	4853817	1.5	16	60	83	0	-
RE511400_244	Residential	607741	4853846	1.5	15	59	83	0	-
RE511400_245	Residential	607772	4853838	1.5	15	59	83	0	-
RE511400_246	Residential	607759	4853864	1.5	15	59	83	0	-
RE511400_247	Residential	607717	4853829	1.5	16	59	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_248	Residential	607725	4853835	1.5	16	59	83	0	-
RE511400_249	Residential	607772	4853827	1.5	16	60	83	0	-
RE511400_250	Residential	607866	4853946	1.5	12	57	83	0	-
RE511400_251	Residential	607873	4853951	1.5	12	57	83	0	-
RE511400_252	Residential	607880	4853956	1.5	12	57	83	0	-
RE511400_265	Residential	607700	4854194	1.5	10	54	83	0	-
RE511400_266	Residential	607689	4854191	1.5	10	55	83	0	-
RE511400_267	Residential	607679	4854188	1.5	11	55	83	0	-
RE511400_268	Residential	607668	4854184	1.5	11	55	83	0	-
RE511400_269	Residential	607657	4854180	1.5	11	55	83	0	-
RE511400_270	Residential	607645	4854176	1.5	11	55	83	0	-
RE511400_271	Residential	607619	4854171	1.5	11	55	83	0	-
RE511400_272	Residential	607620	4854158	1.5	11	55	83	0	-
RE511400_273	Residential	607624	4854146	1.5	11	55	83	0	-
RE511400_274	Residential	607626	4854132	1.5	11	55	83	0	-
RE511400_275	Residential	607721	4854165	1.5	10	55	83	0	-
RE511400_276	Residential	607710	4854163	1.5	10	55	83	0	-
RE511400_277	Residential	607700	4854159	1.5	11	55	83	0	-
RE511400_278	Residential	607689	4854156	1.5	11	55	83	0	-
RE511400_279	Residential	607677	4854152	1.5	11	55	83	0	-
RE511400_280	Residential	607665	4854148	1.5	11	55	83	0	-
RE511400_281	Residential	607651	4854143	1.5	11	55	83	0	-
RE511400_282	Residential	607770	4854052	1.5	12	56	83	0	-
RE511400_283	Residential	607765	4854059	1.5	12	56	83	0	-
RE511400_284	Residential	607760	4854069	1.5	12	56	83	0	-
RE511400_285	Residential	607753	4854080	1.5	11	56	83	0	-
RE511400_286	Residential	607748	4854093	1.5	11	56	83	0	-
RE511400_287	Residential	607744	4854104	1.5	11	55	83	0	-
RE511400_288	Residential	607740	4854116	1.5	11	55	83	0	-
RE511400_289	Residential	607736	4854126	1.5	11	55	83	0	-
RE511400_290	Residential	607742	4854030	1.5	12	57	83	0	-
RE511400_291	Residential	607736	4854039	1.5	12	56	83	0	-
RE511400_292	Residential	607731	4854048	1.5	12	56	83	0	-
RE511400_293	Residential	607726	4854059	1.5	12	56	83	0	-
RE511400_294	Residential	607723	4854067	1.5	12	56	83	0	-
RE511400_295	Residential	607720	4854076	1.5	12	56	83	0	-
RE511400_296	Residential	607717	4854085	1.5	12	56	83	0	-
RE511400_297	Residential	607714	4854095	1.5	12	56	83	0	-
RE511400_298	Residential	607710	4854106	1.5	11	56	83	0	-
RE511400_299	Residential	607707	4854117	1.5	11	55	83	0	-
RE511400_300	Residential	607674	4854068	1.5	12	56	83	0	-
RE511400_301	Residential	607670	4854080	1.5	12	56	83	0	-
RE511400_302	Residential	607667	4854091	1.5	12	56	83	0	-
RE511400_303	Residential	607662	4854103	1.5	12	56	83	0	-
RE511400_304	Residential	607765	4854005	1.5	12	57	83	0	-
RE511400_305	Residential	607773	4854009	1.5	12	56	83	0	-
RE511400_306	Residential	607779	4854014	1.5	12	56	83	0	-
RE511400_307	Residential	607787	4854019	1.5	12	56	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_308	Residential	607794	4854023	1.5	12	56	83	0	-
RE511400_309	Residential	607801	4854028	1.5	12	56	83	0	-
RE511400_310	Residential	607809	4854033	1.5	11	55	83	0	-
RE511400_311	Residential	607817	4854039	1.5	11	55	83	0	-
RE511400_312	Residential	607802	4853980	1.5	12	56	83	0	-
RE511400_313	Residential	607807	4853983	1.5	12	56	83	0	-
RE511400_314	Residential	607814	4853988	1.5	12	56	83	0	-
RE511400_315	Residential	607820	4853992	1.5	12	56	83	0	-
RE511400_316	Residential	607825	4853995	1.5	12	56	83	0	-
RE511400_317	Residential	607829	4853998	1.5	12	56	83	0	-
RE511400_318	Residential	607837	4854004	1.5	11	56	83	0	-
RE511400_319	Residential	607842	4854008	1.5	11	56	83	0	-
RE511500_001	Child Care Centre	608104	4853900	1.5	15	59	83	0	-
RE511500_002	Residential	608322	4853695	1.5	34	78	83	6	0.0%
RE511500_003	Residential	608318	4853701	1.5	34	77	83	6	0.0%
RE511500_004	Residential	608314	4853707	1.5	33	77	83	6	0.0%
RE511500_005	Residential	608300	4853727	1.5	31	74	83	5	0.0%
RE511500_006	Residential	608295	4853734	1.5	30	73	83	2	0.0%
RE511500_007	Residential	608290	4853741	1.5	30	73	83	2	0.0%
RE511500_008	Residential	608285	4853748	1.5	29	72	83	2	0.0%
RE511500_009	Residential	608280	4853755	1.5	29	71	83	0	-
RE511500_010	Residential	608335	4853677	1.5	37	81	83	6	0.0%
RE511500_011	Residential	608327	4853688	1.5	35	79	83	6	0.0%
RE511500_012	Residential	608364	4853636	1.5	36	80	83	4	0.0%
RE511500_013	Residential	608359	4853642	1.5	37	81	83	5	0.0%
RE511500_014	Residential	608355	4853649	1.5	37	82	83	6	0.0%
RE511500_015	Residential	608349	4853657	1.5	37	82	83	6	0.0%
RE511500_016	Residential	608345	4853664	1.5	37	82	83	6	0.0%
RE511500_017	Residential	608310	4853713	1.5	33	76	83	6	0.0%
RE511500_018	Residential	608305	4853720	1.5	32	75	83	5	0.0%
RE511500_019	Residential	608232	4853817	1.5	20	64	83	0	-
RE511500_020	Residential	608226	4853679	1.5	34	76	83	5	0.0%
RE511500_021	Residential	608207	4853707	1.5	30	73	83	1	0.0%
RE511500_022	Residential	608274	4853612	1.5	41	86	83	10	0.0%
RE511500_023	Residential	608242	4853657	1.5	37	79	83	6	0.0%
RE511500_024	Residential	608232	4853672	1.5	34	77	83	6	0.0%
RE511500_025	Residential	607937	4853892	1.5	13	57	83	0	-
RE511500_026	Residential	607990	4853929	1.5	13	57	83	0	-
RE511500_027	Residential	607999	4853934	1.5	12	57	83	0	-
RE511500_028	Residential	608017	4853910	1.5	13	57	83	0	-
RE511500_029	Residential	607985	4853887	1.5	13	57	83	0	-
RE511500_030	Residential	607977	4853881	1.5	13	57	83	0	-
RE511500_031	Residential	607952	4853902	1.5	13	57	83	0	-
RE511500_032	Residential	608205	4853855	1.5	18	62	83	0	-
RE511500_033	Residential	608000	4853898	1.5	13	57	83	0	-
RE511500_034	Residential	607982	4853923	1.5	13	57	83	0	-
RE511500_035	Residential	607960	4853907	1.5	13	57	83	0	-
RE511500_036	Residential	607993	4853893	1.5	13	57	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_037	Residential	608228	4853822	1.5	19	64	83	0	-
RE511500_038	Residential	608194	4853868	1.5	17	62	83	0	-
RE511500_039	Residential	608188	4853877	1.5	16	61	83	0	-
RE511500_040	Residential	608008	4853903	1.5	13	57	83	0	-
RE511500_041	Residential	608199	4853862	1.5	17	62	83	0	-
RE511500_042	Residential	608224	4853828	1.5	19	64	83	0	-
RE511500_043	Residential	608221	4853833	1.5	19	64	83	0	-
RE511500_044	Residential	607925	4853940	1.5	12	56	83	0	-
RE511500_045	Residential	608481	4853493	1.5	42	86	83	2	0.0%
RE511500_046	Residential	608407	4853578	1.5	37	82	83	3	0.0%
RE511500_047	Residential	608462	4853557	1.5	42	84	83	4	0.0%
RE511500_048	Residential	608457	4853565	1.5	41	84	83	4	0.0%
RE511500_049	Residential	607910	4853930	1.5	12	56	83	0	-
RE511500_050	Residential	607917	4853935	1.5	12	56	83	0	-
RE511500_051	Residential	608411	4853570	1.5	39	83	83	4	0.0%
RE511500_052	Residential	608435	4853530	1.5	44	86	83	5	0.0%
RE511500_053	Residential	608415	4853563	1.5	41	84	83	5	0.0%
RE511500_054	Residential	608053	4853924	1.5	13	57	83	0	-
RE511500_055	Residential	608480	4853505	1.5	41	86	83	2	0.0%
RE511500_056	Residential	608197	4853721	1.5	27	71	83	0	-
RE511500_057	Residential	608191	4853730	1.5	26	70	83	0	-
RE511500_058	Residential	608263	4853627	1.5	40	85	83	8	0.0%
RE511500_059	Residential	608289	4853591	1.5	41	84	83	7	0.0%
RE511500_060	Residential	608284	4853598	1.5	41	85	83	9	0.0%
RE511500_061	Residential	608211	4853846	1.5	18	63	83	0	-
RE511500_062	Residential	608179	4853890	1.5	15	60	83	0	-
RE511500_063	Residential	607967	4853875	1.5	13	58	83	0	-
RE511500_064	Residential	607967	4853913	1.5	13	57	83	0	-
RE511500_065	Residential	608234	4853563	1.5	44	88	83	11	0.0%
RE511500_066	Residential	608254	4853574	1.5	43	87	83	11	0.0%
RE511500_067	Residential	608194	4853557	1.5	47	92	83	13	0.0%
RE511500_068	Residential	608225	4853560	1.5	45	89	83	13	0.0%
RE511500_069	Residential	608214	4853558	1.5	45	90	83	13	0.0%
RE511500_070	Residential	608185	4853558	1.5	47	92	83	15	0.0%
RE511500_071	Residential	608131	4853676	1.5	28	73	83	0	-
RE511500_072	Residential	608217	4853606	1.5	42	86	83	9	0.0%
RE511500_073	Residential	608173	4853670	1.5	33	75	83	2	0.0%
RE511500_074	Residential	608147	4853647	1.5	34	77	83	2	0.0%
RE511500_075	Residential	608204	4853630	1.5	39	81	83	7	0.0%
RE511500_076	Residential	608156	4853693	1.5	28	72	83	0	-
RE511500_077	Residential	608189	4853647	1.5	36	78	83	6	0.0%
RE511500_078	Residential	608184	4853655	1.5	35	78	83	5	0.0%
RE511500_079	Residential	608158	4853604	1.5	40	83	83	7	0.0%
RE511500_080	Residential	608149	4853688	1.5	28	72	83	0	-
RE511500_081	Residential	608226	4853615	1.5	41	85	83	8	0.0%
RE511500_082	Residential	608167	4853604	1.5	41	83	83	8	0.0%
RE511500_083	Residential	608195	4853640	1.5	37	79	83	6	0.0%
RE511500_084	Residential	608195	4853604	1.5	41	85	83	9	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_085	Residential	608154	4853638	1.5	36	78	83	5	0.0%
RE511500_086	Residential	608120	4853668	1.5	28	73	83	0	-
RE511500_087	Residential	608176	4853604	1.5	41	84	83	8	0.0%
RE511500_088	Residential	608168	4853677	1.5	31	74	83	2	0.0%
RE511500_089	Residential	608140	4853682	1.5	28	72	83	0	-
RE511500_090	Residential	608205	4853603	1.5	41	86	83	10	0.0%
RE511500_091	Residential	608185	4853604	1.5	41	84	83	9	0.0%
RE511500_092	Residential	608141	4853656	1.5	32	75	83	2	0.0%
RE511500_093	Residential	608244	4853567	1.5	43	87	83	11	0.0%
RE511500_094	Residential	608204	4853557	1.5	46	91	83	13	0.0%
RE511500_095	Residential	608304	4853570	1.5	41	86	83	5	0.0%
RE511500_096	Residential	608315	4853555	1.5	43	87	83	6	0.0%
RE511500_097	Residential	608258	4853635	1.5	39	84	83	8	0.0%
RE511500_098	Residential	608248	4853649	1.5	37	80	83	7	0.0%
RE511500_099	Residential	608222	4853686	1.5	33	75	83	3	0.0%
RE511500_100	Residential	608216	4853693	1.5	32	75	83	2	0.0%
RE511500_101	Residential	608269	4853620	1.5	41	86	83	9	0.0%
RE511500_102	Residential	608201	4853714	1.5	28	72	83	0	-
RE511500_103	Residential	608309	4853563	1.5	42	87	83	5	0.0%
RE511500_104	Residential	608299	4853577	1.5	40	84	83	6	0.0%
RE511500_105	Residential	608279	4853605	1.5	41	86	83	9	0.0%
RE511500_106	Residential	608253	4853642	1.5	38	82	83	7	0.0%
RE511500_107	Residential	608212	4853700	1.5	31	74	83	2	0.0%
RE511500_108	Residential	608294	4853584	1.5	40	83	83	6	0.0%
RE511500_109	Residential	608166	4853699	1.5	27	72	83	0	-
RE511500_110	Residential	608179	4853662	1.5	34	77	83	2	0.0%
RE511500_111	Residential	608443	4853510	1.5	43	86	83	6	0.0%
RE511500_112	Residential	608420	4853557	1.5	42	85	83	6	0.0%
RE511500_113	Residential	608424	4853551	1.5	43	86	83	7	0.0%
RE511500_114	Residential	608473	4853532	1.5	42	83	83	3	0.0%
RE511500_115	Residential	608470	4853541	1.5	42	84	83	4	0.0%
RE511500_116	Residential	608448	4853484	1.5	43	88	83	3	0.0%
RE511500_117	Residential	608445	4853501	1.5	42	87	83	4	0.0%
RE511500_118	Residential	608446	4853493	1.5	43	87	83	2	0.0%
RE511500_119	Residential	608441	4853518	1.5	43	85	83	6	0.0%
RE511500_120	Residential	608476	4853524	1.5	41	84	83	3	0.0%
RE511500_121	Residential	608433	4853537	1.5	44	86	83	5	0.0%
RE511500_122	Residential	608208	4853851	1.5	18	63	83	0	-
RE511500_123	Residential	608438	4853524	1.5	44	85	83	6	0.0%
RE511500_124	Residential	608429	4853545	1.5	44	86	83	6	0.0%
RE511500_125	Residential	608466	4853549	1.5	42	84	83	4	0.0%
RE511500_126	Residential	608478	4853514	1.5	40	85	83	2	0.0%
RE511500_127	Residential	608452	4853573	1.5	40	83	83	5	0.0%
RE511500_128	Residential	608241	4853804	1.5	21	66	83	0	-
RE511500_129	Residential	608215	4853841	1.5	19	63	83	0	-
RE511500_130	Residential	608236	4853811	1.5	20	65	83	0	-
RE511500_131	Residential	608185	4853882	1.5	16	61	83	0	-
RE511500_132	Residential	607957	4853868	1.5	13	58	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_133	Residential	607944	4853897	1.5	13	57	83	0	-
RE511500_134	Residential	607975	4853918	1.5	13	57	83	0	-
RE511500_135	Residential	608340	4853670	1.5	37	82	83	6	0.0%
RE511500_136	Residential	608276	4853761	1.5	28	71	83	0	-
RE511500_137	Residential	608272	4853766	1.5	27	70	83	0	-
RE511500_138	Residential	608268	4853772	1.5	26	70	83	0	-
RE511500_139	Residential	608263	4853780	1.5	25	69	83	0	-
RE511500_140	Residential	608331	4853682	1.5	36	80	83	6	0.0%
RE511500_141	Residential	608237	4853665	1.5	36	78	83	6	0.0%
RE511500_142	Residential	608152	4853626	1.5	38	80	83	6	0.0%
RE511500_143	Residential	608232	4853514	1.5	49	94	83	9	0.0%
RE511500_144	Residential	608223	4853515	1.5	49	94	83	11	0.0%
RE511500_145	Residential	608246	4853517	1.5	48	93	83	9	0.0%
RE511500_146	Residential	608253	4853520	1.5	48	92	83	9	0.0%
RE511500_147	Residential	608269	4853526	1.5	46	91	83	9	0.0%
RE511500_148	Residential	608274	4853530	1.5	46	90	83	8	0.0%
RE511500_149	Residential	608264	4853523	1.5	47	91	83	9	0.0%
RE511500_150	Residential	608279	4853533	1.5	45	90	83	7	0.0%
RE511500_151	Residential	608336	4853591	1.5	39	83	83	4	0.0%
RE511500_152	Residential	608339	4853585	1.5	40	84	83	5	0.0%
RE511500_153	Residential	608328	4853602	1.5	38	81	83	4	0.0%
RE511500_154	Residential	608332	4853597	1.5	38	82	83	3	0.0%
RE511500_155	Residential	608344	4853578	1.5	40	85	83	5	0.0%
RE511500_156	Residential	608324	4853608	1.5	38	82	83	5	0.0%
RE511500_157	Residential	608318	4853615	1.5	39	83	83	6	0.0%
RE511500_158	Residential	608314	4853620	1.5	39	84	83	7	0.0%
RE511500_159	Residential	608309	4853630	1.5	39	84	83	8	0.0%
RE511500_160	Residential	608305	4853636	1.5	39	84	83	8	0.0%
RE511500_161	Residential	608299	4853644	1.5	39	84	83	8	0.0%
RE511500_162	Residential	608295	4853650	1.5	38	83	83	7	0.0%
RE511500_163	Residential	608287	4853661	1.5	37	81	83	7	0.0%
RE511500_164	Residential	608291	4853655	1.5	38	82	83	7	0.0%
RE511500_165	Residential	608282	4853668	1.5	36	80	83	7	0.0%
RE511500_166	Residential	608278	4853674	1.5	35	79	83	6	0.0%
RE511500_167	Residential	608274	4853679	1.5	35	78	83	6	0.0%
RE511500_168	Residential	608269	4853685	1.5	34	77	83	6	0.0%
RE511500_169	Residential	608264	4853692	1.5	33	76	83	6	0.0%
RE511500_170	Residential	608259	4853699	1.5	32	75	83	5	0.0%
RE511500_171	Residential	608254	4853706	1.5	32	74	83	3	0.0%
RE511500_172	Residential	608250	4853713	1.5	31	74	83	2	0.0%
RE511500_173	Residential	608240	4853728	1.5	30	72	83	2	0.0%
RE511500_174	Residential	608236	4853733	1.5	29	71	83	0	-
RE511500_175	Residential	608231	4853738	1.5	27	71	83	0	-
RE511500_176	Residential	608228	4853744	1.5	26	71	83	0	-
RE511500_177	Residential	608245	4853721	1.5	31	73	83	2	0.0%
RE511500_178	Residential	608223	4853750	1.5	25	70	83	0	-
RE511500_179	Residential	608375	4853620	1.5	35	80	83	3	0.0%
RE511500_180	Residential	608371	4853626	1.5	36	79	83	3	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_181	Residential	608378	4853615	1.5	36	81	83	3	0.0%
RE511500_182	Residential	608382	4853610	1.5	37	82	83	3	0.0%
RE511500_183	Residential	608368	4853631	1.5	36	80	83	3	0.0%
RE511500_184	Residential	607933	4853946	1.5	12	56	83	0	-
RE511500_185	Residential	607940	4853951	1.5	12	56	83	0	-
RE511500_186	Residential	607948	4853956	1.5	12	56	83	0	-
RE511500_187	Residential	607955	4853962	1.5	12	56	83	0	-
RE511500_188	Residential	607963	4853967	1.5	12	56	83	0	-
RE511500_189	Residential	607972	4853973	1.5	12	56	83	0	-
RE511500_190	Residential	607887	4853960	1.5	12	56	83	0	-
RE511500_191	Residential	607893	4853965	1.5	12	56	83	0	-
RE511500_192	Residential	607899	4853969	1.5	11	56	83	0	-
RE511500_193	Residential	607904	4853973	1.5	11	56	83	0	-
RE511500_194	Residential	607910	4853977	1.5	11	56	83	0	-
RE511500_195	Residential	607916	4853981	1.5	11	56	83	0	-
RE511500_196	Residential	607923	4853986	1.5	11	55	83	0	-
RE511500_197	Residential	607928	4853990	1.5	11	55	83	0	-
RE511500_198	Residential	607933	4853993	1.5	11	55	83	0	-
RE511500_199	Residential	607938	4853997	1.5	11	55	83	0	-
RE511500_200	Residential	607943	4854000	1.5	11	55	83	0	-
RE511500_201	Residential	607948	4854004	1.5	11	55	83	0	-
RE511500_202	Residential	608047	4853932	1.5	13	57	83	0	-
RE511500_203	Residential	608042	4853940	1.5	13	57	83	0	-
RE511500_204	Residential	608036	4853947	1.5	12	56	83	0	-
RE511500_205	Residential	608031	4853955	1.5	12	56	83	0	-
RE511500_206	Residential	608026	4853962	1.5	12	56	83	0	-
RE511500_207	Residential	608021	4853969	1.5	12	56	83	0	-
RE511500_208	Residential	608016	4853976	1.5	12	56	83	0	-
RE511500_209	Residential	608011	4853983	1.5	12	56	83	0	-
RE511500_210	Residential	608006	4853990	1.5	12	56	83	0	-
RE511500_211	Residential	608001	4853997	1.5	12	56	83	0	-
RE511500_212	Residential	607995	4854005	1.5	12	56	83	0	-
RE511500_213	Residential	607990	4854012	1.5	12	56	83	0	-
RE511500_214	Residential	607985	4854020	1.5	12	56	83	0	-
RE511500_215	Residential	607979	4854029	1.5	11	56	83	0	-
RE511500_216	Residential	608085	4853947	1.5	13	58	83	0	-
RE511500_217	Residential	608081	4853952	1.5	13	57	83	0	-
RE511500_218	Residential	608077	4853958	1.5	13	57	83	0	-
RE511500_219	Residential	608074	4853962	1.5	13	57	83	0	-
RE511500_220	Residential	608069	4853969	1.5	12	56	83	0	-
RE511500_221	Residential	608065	4853974	1.5	12	56	83	0	-
RE511500_222	Residential	608062	4853978	1.5	12	56	83	0	-
RE511500_223	Residential	608058	4853984	1.5	12	56	83	0	-
RE511500_224	Residential	608053	4853991	1.5	12	56	83	0	-
RE511500_225	Residential	608049	4853997	1.5	11	56	83	0	-
RE511500_226	Residential	608043	4854006	1.5	12	56	83	0	-
RE511500_227	Residential	608040	4854011	1.5	11	56	83	0	-
RE511500_228	Residential	608034	4854019	1.5	11	56	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_229	Residential	608029	4854025	1.5	11	56	83	0	-
RE511500_230	Residential	608026	4854031	1.5	11	56	83	0	-
RE511500_231	Residential	608022	4854036	1.5	11	56	83	0	-
RE511500_232	Residential	608018	4854042	1.5	11	56	83	0	-
RE511500_233	Residential	608013	4854048	1.5	11	56	83	0	-
RE511500_234	Residential	608175	4853896	1.5	15	59	83	0	-
RE511500_235	Residential	608171	4853902	1.5	14	59	83	0	-
RE511500_236	Residential	608167	4853908	1.5	14	59	83	0	-
RE511500_237	Residential	608162	4853915	1.5	14	59	83	0	-
RE511500_238	Residential	608157	4853922	1.5	14	59	83	0	-
RE511500_239	Residential	608154	4853927	1.5	14	59	83	0	-
RE511500_240	Residential	608150	4853933	1.5	14	59	83	0	-
RE511500_241	Residential	608145	4853939	1.5	14	59	83	0	-
RE511500_242	Residential	608142	4853944	1.5	14	58	83	0	-
RE511500_243	Residential	608122	4853973	1.5	13	58	83	0	-
RE511500_244	Residential	608119	4853977	1.5	13	57	83	0	-
RE511500_245	Residential	608115	4853983	1.5	13	57	83	0	-
RE511500_246	Residential	608112	4853987	1.5	12	57	83	0	-
RE511500_247	Residential	608107	4853994	1.5	12	57	83	0	-
RE511500_259	Residential	607976	4854103	1.5	10	54	83	0	-
RE511500_260	Residential	607970	4854109	1.5	10	54	83	0	-
RE511500_261	Residential	607967	4854115	1.5	10	54	83	0	-
RE511500_262	Residential	607962	4854121	1.5	10	54	83	0	-
RE511500_263	Residential	607959	4854126	1.5	10	54	83	0	-
RE511500_264	Residential	607955	4854131	1.5	10	54	83	0	-
RE511500_265	Residential	607949	4854139	1.5	10	54	83	0	-
RE511500_266	Residential	607944	4854146	1.5	10	54	83	0	-
RE511500_267	Residential	607939	4854153	1.5	10	54	83	0	-
RE511500_268	Residential	607934	4854160	1.5	10	54	83	0	-
RE511500_269	Residential	607929	4854168	1.5	10	54	83	0	-
RE511500_270	Residential	607927	4854176	1.5	9	54	83	0	-
RE511500_288	Residential	607723	4854202	1.5	10	54	83	0	-
RE511500_289	Residential	607711	4854198	1.5	10	54	83	0	-
RE511500_313	Residential	607831	4854199	1.5	9	54	83	0	-
RE511500_314	Residential	607821	4854196	1.5	9	54	83	0	-
RE511500_315	Residential	607810	4854192	1.5	9	54	83	0	-
RE511500_316	Residential	607798	4854189	1.5	9	54	83	0	-
RE511500_317	Residential	607787	4854186	1.5	10	54	83	0	-
RE511500_318	Residential	607777	4854182	1.5	10	54	83	0	-
RE511500_319	Residential	607764	4854179	1.5	10	54	83	0	-
RE511500_320	Residential	607849	4854155	1.5	10	54	83	0	-
RE511500_321	Residential	607839	4854152	1.5	10	54	83	0	-
RE511500_322	Residential	607829	4854148	1.5	10	54	83	0	-
RE511500_323	Residential	607818	4854145	1.5	10	54	83	0	-
RE511500_324	Residential	607806	4854141	1.5	10	54	83	0	-
RE511500_325	Residential	607943	4854078	1.5	10	54	83	0	-
RE511500_326	Residential	607939	4854083	1.5	10	54	83	0	-
RE511500_327	Residential	607933	4854092	1.5	10	54	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_328	Residential	607929	4854097	1.5	10	54	83	0	-
RE511500_329	Residential	607923	4854106	1.5	10	54	83	0	-
RE511500_330	Residential	607919	4854112	1.5	10	54	83	0	-
RE511500_331	Residential	607913	4854119	1.5	10	54	83	0	-
RE511500_332	Residential	607907	4854127	1.5	10	54	83	0	-
RE511500_333	Residential	607902	4854135	1.5	10	54	83	0	-
RE511500_334	Residential	607897	4854142	1.5	10	54	83	0	-
RE511500_335	Residential	607892	4854151	1.5	10	54	83	0	-
RE511500_336	Residential	607888	4854158	1.5	9	54	83	0	-
RE511500_337	Residential	607885	4854168	1.5	9	54	83	0	-
RE511500_338	Residential	607883	4854174	1.5	9	54	83	0	-
RE511500_339	Residential	607733	4854170	1.5	10	54	83	0	-
RE511500_340	Residential	607810	4854078	1.5	11	55	83	0	-
RE511500_341	Residential	607805	4854085	1.5	11	55	83	0	-
RE511500_342	Residential	607798	4854096	1.5	11	55	83	0	-
RE511500_343	Residential	607794	4854107	1.5	11	55	83	0	-
RE511500_344	Residential	607790	4854118	1.5	11	55	83	0	-
RE511500_345	Residential	607788	4854129	1.5	10	54	83	0	-
RE511500_346	Residential	607785	4854141	1.5	10	54	83	0	-
RE511500_347	Residential	607825	4854044	1.5	11	55	83	0	-
RE511500_348	Residential	607832	4854049	1.5	11	55	83	0	-
RE511500_349	Residential	607840	4854054	1.5	11	55	83	0	-
RE511500_350	Residential	607846	4854059	1.5	11	55	83	0	-
RE511500_351	Residential	607853	4854064	1.5	11	55	83	0	-
RE511500_352	Residential	607861	4854068	1.5	11	55	83	0	-
RE511500_353	Residential	607868	4854074	1.5	11	55	83	0	-
RE511500_354	Residential	607874	4854078	1.5	11	55	83	0	-
RE511500_355	Residential	607881	4854083	1.5	10	55	83	0	-
RE511500_356	Residential	607889	4854088	1.5	10	55	83	0	-
RE511500_357	Residential	607850	4854014	1.5	11	56	83	0	-
RE511500_358	Residential	607857	4854018	1.5	11	56	83	0	-
RE511500_359	Residential	607863	4854023	1.5	11	56	83	0	-
RE511500_360	Residential	607869	4854027	1.5	11	56	83	0	-
RE511500_361	Residential	607874	4854030	1.5	11	56	83	0	-
RE511500_362	Residential	607880	4854034	1.5	11	56	83	0	-
RE511500_363	Residential	607885	4854039	1.5	11	55	83	0	-
RE511500_364	Residential	607891	4854043	1.5	11	55	83	0	-
RE511500_365	Residential	607895	4854047	1.5	11	55	83	0	-
RE511500_366	Residential	607900	4854050	1.5	11	55	83	0	-
RE511500_367	Residential	607906	4854054	1.5	11	55	83	0	-
RE511500_368	Residential	607911	4854057	1.5	11	55	83	0	-
RE511500_369	Residential	607823	4854097	1.5	10	55	83	0	-
RE511500_370	Residential	607831	4854103	1.5	10	55	83	0	-
RE511500_371	Residential	607839	4854108	1.5	10	55	83	0	-
RE511500_372	Residential	607847	4854113	1.5	10	55	83	0	-
RE511500_373	Residential	607854	4854118	1.5	10	55	83	0	-
RE511500_374	Residential	607864	4854124	1.5	10	55	83	0	-
RE511500_376	Residential	607755	4854206	1.5	10	54	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_001	Residential	608413	4853627	1.5	36	80	83	3	0.0%
RE511600_002	Residential	608350	4853717	1.5	32	77	83	6	0.0%
RE511600_003	Residential	608360	4853703	1.5	34	79	83	6	0.0%
RE511600_004	Residential	608309	4853775	1.5	28	71	83	0	-
RE511600_005	Residential	608274	4853824	1.5	21	66	83	0	-
RE511600_006	Residential	608263	4853840	1.5	19	64	83	0	-
RE511600_007	Residential	608430	4853685	1.5	34	78	83	3	0.0%
RE511600_008	Residential	608384	4853750	1.5	31	74	83	6	0.0%
RE511600_009	Residential	608443	4853666	1.5	33	76	83	3	0.0%
RE511600_010	Residential	608451	4853655	1.5	33	78	83	3	0.0%
RE511600_011	Residential	608399	4853728	1.5	33	78	83	6	0.0%
RE511600_012	Residential	608407	4853717	1.5	34	79	83	5	0.0%
RE511600_013	Residential	608423	4853695	1.5	34	79	83	4	0.0%
RE511600_014	Residential	608392	4853739	1.5	32	76	83	6	0.0%
RE511600_015	Residential	608437	4853676	1.5	33	77	83	3	0.0%
RE511600_016	Residential	608415	4853706	1.5	35	79	83	4	0.0%
RE511600_017	Residential	608253	4853854	1.5	18	63	83	0	-
RE511600_018	Residential	608527	4853503	1.5	40	84	83	2	0.0%
RE511600_019	Residential	608519	4853540	1.5	39	82	83	1	0.0%
RE511600_020	Residential	608517	4853549	1.5	39	81	83	1	0.0%
RE511600_021	Residential	608473	4853624	1.5	34	79	83	2	0.0%
RE511600_022	Residential	608509	4853566	1.5	40	82	83	3	0.0%
RE511600_023	Residential	608496	4853592	1.5	38	81	83	3	0.0%
RE511600_024	Residential	608441	4853588	1.5	37	81	83	2	0.0%
RE511600_025	Residential	608524	4853521	1.5	39	83	83	2	0.0%
RE511600_026	Residential	608490	4853600	1.5	37	80	83	2	0.0%
RE511600_027	Residential	608513	4853558	1.5	40	82	83	3	0.0%
RE511600_028	Residential	608407	4853636	1.5	34	79	83	3	0.0%
RE511600_029	Residential	608402	4853644	1.5	34	78	83	3	0.0%
RE511600_030	Residential	608396	4853651	1.5	35	79	83	3	0.0%
RE511600_031	Residential	608391	4853659	1.5	35	80	83	4	0.0%
RE511600_032	Residential	608268	4853833	1.5	20	65	83	0	-
RE511600_033	Residential	608258	4853847	1.5	19	63	83	0	-
RE511600_034	Residential	608526	4853512	1.5	39	84	83	2	0.0%
RE511600_035	Residential	608365	4853764	1.5	30	73	83	5	0.0%
RE511600_036	Residential	608501	4853584	1.5	39	82	83	3	0.0%
RE511600_037	Residential	608485	4853608	1.5	35	79	83	2	0.0%
RE511600_038	Residential	608447	4853580	1.5	39	82	83	3	0.0%
RE511600_039	Residential	608480	4853615	1.5	34	78	83	2	0.0%
RE511600_040	Residential	608522	4853530	1.5	38	83	83	1	0.0%
RE511600_041	Residential	608380	4853674	1.5	36	81	83	5	0.0%
RE511600_042	Residential	608375	4853682	1.5	36	81	83	5	0.0%
RE511600_043	Residential	608355	4853710	1.5	33	78	83	6	0.0%
RE511600_044	Residential	608370	4853689	1.5	36	80	83	6	0.0%
RE511600_045	Residential	608365	4853696	1.5	35	80	83	6	0.0%
RE511600_046	Residential	608528	4853482	1.5	42	84	83	2	0.0%
RE511600_047	Residential	608505	4853575	1.5	40	82	83	3	0.0%
RE511600_048	Residential	608435	4853597	1.5	36	81	83	2	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_049	Residential	608528	4853494	1.5	41	84	83	2	0.0%
RE511600_050	Residential	608345	4853723	1.5	32	76	83	6	0.0%
RE511600_051	Residential	608341	4853730	1.5	32	75	83	6	0.0%
RE511600_052	Residential	608336	4853737	1.5	31	74	83	5	0.0%
RE511600_053	Residential	608330	4853745	1.5	31	73	83	5	0.0%
RE511600_054	Residential	608325	4853752	1.5	30	72	83	2	0.0%
RE511600_055	Residential	608320	4853760	1.5	29	72	83	2	0.0%
RE511600_056	Residential	608315	4853767	1.5	29	71	83	2	0.0%
RE511600_057	Residential	608304	4853782	1.5	27	70	83	0	-
RE511600_058	Residential	608299	4853790	1.5	26	69	83	0	-
RE511600_059	Residential	608292	4853799	1.5	25	68	83	0	-
RE511600_060	Residential	608386	4853667	1.5	36	80	83	5	0.0%
RE511600_061	Residential	608377	4853772	1.5	30	73	83	4	0.0%
RE511600_062	Residential	608387	4853779	1.5	29	72	83	4	0.0%
RE511600_085	Residential	608248	4853972	1.5	14	58	83	0	-
RE511600_086	Residential	608239	4853965	1.5	14	58	83	0	-
RE511600_087	Residential	608227	4853958	1.5	14	58	83	0	-
RE511600_091	Residential	608350	4853851	1.5	23	67	83	0	-
RE511600_092	Residential	608343	4853862	1.5	22	66	83	0	-
RE511600_093	Residential	608335	4853872	1.5	21	65	83	0	-
RE511600_094	Residential	608327	4853883	1.5	20	64	83	0	-
RE511600_095	Residential	608320	4853894	1.5	18	63	83	0	-
RE511600_096	Residential	608312	4853905	1.5	17	62	83	0	-
RE511600_097	Residential	608305	4853915	1.5	17	62	83	0	-
RE511600_098	Residential	608298	4853925	1.5	17	61	83	0	-
RE511600_099	Residential	608291	4853934	1.5	16	61	83	0	-
RE511600_100	Residential	608283	4853945	1.5	16	60	83	0	-
RE511600_101	Residential	608348	4853801	1.5	27	70	83	0	-
RE511600_102	Residential	608342	4853810	1.5	26	69	83	0	-
RE511600_103	Residential	608336	4853817	1.5	25	68	83	0	-
RE511600_104	Residential	608331	4853825	1.5	24	68	83	0	-
RE511600_105	Residential	608325	4853833	1.5	23	67	83	0	-
RE511600_106	Residential	608319	4853842	1.5	22	67	83	0	-
RE511600_107	Residential	608312	4853852	1.5	21	66	83	0	-
RE511600_108	Residential	608305	4853861	1.5	20	65	83	0	-
RE511600_109	Residential	608299	4853870	1.5	19	64	83	0	-
RE511600_110	Residential	608292	4853880	1.5	18	62	83	0	-
RE511600_111	Residential	608285	4853889	1.5	18	62	83	0	-
RE511600_112	Residential	608279	4853898	1.5	17	62	83	0	-
RE511600_113	Residential	608274	4853905	1.5	17	62	83	0	-
RE511600_114	Residential	608269	4853913	1.5	17	61	83	0	-
RE511600_115	Residential	608257	4853930	1.5	16	60	83	0	-
RE511600_116	Residential	608248	4853861	1.5	18	63	83	0	-
RE511600_117	Residential	608243	4853868	1.5	18	63	83	0	-
RE511600_118	Residential	608238	4853875	1.5	18	62	83	0	-
RE511600_119	Residential	608233	4853882	1.5	17	62	83	0	-
RE511600_120	Residential	608228	4853889	1.5	17	61	83	0	-
RE511600_121	Residential	608223	4853896	1.5	17	61	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_122	Residential	608218	4853903	1.5	16	61	83	0	-
RE511600_123	Residential	608213	4853910	1.5	16	60	83	0	-
RE511600_124	Residential	608208	4853917	1.5	15	60	83	0	-
RE511600_125	Residential	608204	4853924	1.5	14	59	83	0	-
RE511600_126	Residential	608199	4853931	1.5	14	58	83	0	-
RE511600_127	Residential	608194	4853938	1.5	14	58	83	0	-
RE511600_128	Residential	608189	4853944	1.5	14	58	83	0	-
RE511600_129	Residential	608184	4853951	1.5	14	58	83	0	-
RE511600_130	Residential	608179	4853958	1.5	14	58	83	0	-
RE511600_131	Residential	608173	4853967	1.5	14	58	83	0	-
RE511600_132	Residential	608210	4853982	1.5	13	58	83	0	-
RE511600_133	Residential	608221	4853990	1.5	13	58	83	0	-
RE511600_134	Residential	608230	4853997	1.5	13	58	83	0	-
RE511600_142	Residential	608180	4854022	1.5	13	57	83	0	-
RE511600_143	Residential	608189	4854028	1.5	13	57	83	0	-
RE511600_144	Residential	608196	4854033	1.5	13	57	83	0	-
RE511600_163	Residential	608170	4854054	1.5	12	56	83	0	-
RE511600_164	Residential	608162	4854048	1.5	12	56	83	0	-
RE511600_185	Residential	608102	4854000	1.5	12	56	83	0	-
RE511600_186	Residential	608099	4854005	1.5	12	56	83	0	-
RE511600_187	Residential	608096	4854009	1.5	12	56	83	0	-
RE511600_188	Residential	608090	4854017	1.5	12	56	83	0	-
RE511600_189	Residential	608087	4854022	1.5	12	56	83	0	-
RE511600_190	Residential	608081	4854032	1.5	11	55	83	0	-
RE511600_191	Residential	608077	4854037	1.5	11	55	83	0	-
RE511600_192	Residential	608073	4854045	1.5	11	55	83	0	-
RE511600_193	Residential	608068	4854051	1.5	11	55	83	0	-
RE511600_194	Residential	608064	4854057	1.5	11	55	83	0	-
RE511600_195	Residential	608060	4854062	1.5	11	55	83	0	-
RE511600_196	Residential	608056	4854069	1.5	11	55	83	0	-
RE511600_197	Residential	608053	4854075	1.5	11	55	83	0	-
RE511600_198	Residential	608154	4853993	1.5	13	58	83	0	-
RE511600_199	Residential	608148	4854003	1.5	13	57	83	0	-
RE511600_200	Residential	608142	4854010	1.5	12	57	83	0	-
RE511600_201	Residential	608137	4854018	1.5	12	57	83	0	-
RE511600_202	Residential	608132	4854025	1.5	12	56	83	0	-
RE511600_203	Residential	608126	4854033	1.5	12	56	83	0	-
RE511600_204	Residential	608121	4854040	1.5	12	56	83	0	-
RE511600_205	Residential	608116	4854047	1.5	12	56	83	0	-
RE511600_206	Residential	608111	4854054	1.5	11	55	83	0	-
RE511600_207	Residential	608107	4854061	1.5	11	55	83	0	-
RE511600_208	Residential	608102	4854068	1.5	11	55	83	0	-
RE511600_209	Residential	608097	4854075	1.5	11	55	83	0	-
RE511600_210	Residential	608091	4854082	1.5	11	55	83	0	-
RE511600_211	Residential	608086	4854090	1.5	11	55	83	0	-
RE511600_212	Residential	608080	4854098	1.5	11	55	83	0	-
RE511600_228	Residential	608507	4853702	1.5	30	74	83	2	0.0%
RE511600_242	Residential	608263	4853920	1.5	16	61	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511800_001	Residential	607134	4855697	1.5	8	53	83	0	-
RE512000_002	Residential	607206	4855951	1.5	8	52	83	0	-
RE512000_003	Residential	607187	4856027	1.5	8	52	83	0	-
RE512100_001	Residential	607265	4856058	1.5	9	53	83	0	-
RE512100_002	Residential	607248	4856119	1.5	9	53	83	0	-
RE512200_001	Residential	607241	4856162	1.5	8	53	83	0	-
RE512200_002	Residential	607123	4856318	1.5	7	52	83	0	-
RE512200_003	Residential	607102	4856358	1.5	7	52	83	0	-
RE512300_001	Residential	607221	4856317	1.5	8	53	83	0	-
RE512400_001	Residential	607226	4856438	1.5	8	53	83	0	-
RE514400_001	Residential	608610	4857694	1.5	12	56	83	0	-
RE514400_003	Residential	608876	4857474	1.5	16	61	83	0	-
RE514400_006	Residential	608883	4857432	1.5	16	61	83	0	-
RE514400_007	Residential	608877	4857453	1.5	16	60	83	0	-
RE514500_001	Residential	608674	4857705	1.5	13	57	83	0	-
RE514500_002	Residential	608701	4857709	1.5	14	58	83	0	-
RE514500_003	Residential	608738	4857729	1.5	15	59	83	0	-
RE514500_006	Residential	608958	4857441	1.5	22	66	83	0	-
RE514500_007	Residential	608953	4857458	1.5	22	66	83	0	-
RE514500_008	Residential	608872	4857492	1.5	16	61	83	0	-
RE514500_009	Residential	608859	4857508	1.5	16	60	83	0	-
RE514500_010	Residential	608849	4857526	1.5	16	59	83	0	-
RE514600_001	Residential	608758	4857755	1.5	15	59	83	0	-
RE514600_002	Residential	608949	4857475	1.5	22	67	83	0	-
RE514600_003	Residential	608946	4857496	1.5	22	67	83	0	-
RE514600_004	Residential	608942	4857512	1.5	23	67	83	0	-
RE514600_005	Residential	608936	4857529	1.5	23	68	83	0	-
RE514600_006	Residential	608930	4857551	1.5	24	68	83	0	-
RE514700_001	Residential	608965	4857617	1.5	36	79	83	1	0.0%
RE514800_001	Residential	608884	4857846	1.5	26	71	83	0	-
RE515000_001	Residential	608971	4857986	1.5	31	75	83	0	-
RE515100_001	Residential	609037	4857912	1.5	19	62	83	0	-
RE515200_001	Residential	609158	4857928	1.5	13	57	83	0	-
RE515200_002	Residential	609081	4857926	1.5	15	59	83	0	-
RE515200_003	Residential	608988	4858132	1.5	19	62	83	0	-
RE515300_001	Residential	609255	4857942	1.5	13	57	83	0	-
RE515300_002	Residential	609091	4858212	1.5	11	55	83	0	-
RE515300_003	Residential	608992	4858402	1.5	15	60	83	0	-
RE516200_001	Residential	609863	4858591	1.5	7	51	83	0	-
RE517200_001	Residential	610865	4858953	1.5	8	53	83	0	-
RE517200_002	Residential	610873	4858915	1.5	9	53	83	0	-
RE517200_003	Residential	610988	4858848	1.5	8	52	83	0	-
RE517400_001	Residential	611124	4858907	1.5	8	52	83	0	-
RE519100_001	Residential	612653	4859633	1.5	11	56	83	0	-
RE519500_001	Residential	612843	4860236	1.5	12	56	83	0	-
RE519500_002	Residential	612758	4860312	1.5	13	57	83	0	-
RE521400_001	Residential	614549	4860340	1.5	20	65	83	0	-
RE521600_001	Park and Conservation	615842	4859006	1.5	60	104	83	74	0.2%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_002	Residential	614759	4860153	1.5	21	66	83	0	-
RE521600_003	Residential	614783	4860430	1.5	24	68	83	0	-
RE521600_004	Residential	615884	4859578	1.5	83	124	83	388	0.9%
RE521600_005	Residential	615805	4859615	1.5	76	117	83	171	0.4%
RE521600_006	Residential	615779	4859578	1.5	67	112	83	127	0.3%
RE521600_007	Residential	615741	4859736	1.5	65	109	83	106	0.2%
RE521600_008	Residential	615516	4859929	1.5	42	85	83	15	0.0%
RE521600_009	Residential	615671	4860025	1.5	64	105	83	95	0.2%
RE521600_010	Residential	616259	4860149	1.5	42	83	83	0	-
RE521600_011	Residential	616419	4860214	1.5	35	76	83	0	-
RE521600_012	Residential	615172	4860341	1.5	27	70	83	0	-
RE521600_013	Residential	615849	4858301	1.5	46	90	83	9	0.0%
RE521600_017	Residential	614954	4860122	1.5	22	66	83	0	-
RE521600_018	Residential	615792	4858087	1.5	38	82	83	3	0.0%
RE521600_019	Residential	615658	4858566	1.5	36	79	83	2	0.0%
RE521600_020	Residential	615792	4858189	1.5	38	83	83	3	0.0%
RE521600_023	Residential	615889	4858330	1.5	49	94	83	14	0.0%
RE521600_026	Residential	615700	4858499	1.5	36	81	83	2	0.0%
RE521600_028	Residential	615797	4858289	1.5	40	85	83	3	0.0%
RE521600_030	Residential	615749	4858368	1.5	36	81	83	2	0.0%
RE521600_032	Residential	615905	4858207	1.5	49	93	83	13	0.0%
RE521600_035	Residential	615746	4858159	1.5	35	80	83	2	0.0%
RE521600_036	Residential	615704	4858558	1.5	36	81	83	2	0.0%
RE521600_037	Residential	615871	4858014	1.5	42	87	83	6	0.0%
RE521600_038	Residential	615876	4858126	1.5	44	89	83	7	0.0%
RE521600_039	Residential	615808	4858385	1.5	39	84	83	3	0.0%
RE521600_041	Residential	615837	4858114	1.5	41	86	83	3	0.0%
RE521600_043	Residential	615749	4858276	1.5	36	81	83	2	0.0%
RE521600_044	Residential	615845	4858206	1.5	43	88	83	6	0.0%
RE521600_045	Residential	615931	4858159	1.5	50	94	83	16	0.0%
RE521600_046	Residential	615948	4858081	1.5	51	95	83	15	0.0%
RE521600_047	Residential	616722	4858027	1.5	36	77	83	0	-
RE521600_048	Residential	616724	4858016	1.5	36	77	83	0	-
RE521600_049	Residential	616727	4858005	1.5	35	77	83	0	-
RE521600_050	Residential	616685	4857961	1.5	38	80	83	0	-
RE521600_051	Residential	616692	4857982	1.5	38	79	83	0	-
RE521600_052	Residential	616692	4857993	1.5	37	78	83	0	-
RE521600_053	Residential	616690	4858005	1.5	37	78	83	0	-
RE521600_054	Residential	616682	4858015	1.5	38	79	83	0	-
RE521600_055	Residential	616628	4857990	1.5	42	85	83	1	0.0%
RE521600_056	Residential	616631	4857979	1.5	42	85	83	1	0.0%
RE521600_057	Residential	616637	4857970	1.5	41	84	83	1	0.0%
RE521600_058	Residential	616642	4857962	1.5	41	84	83	1	0.0%
RE521600_059	Residential	616645	4857951	1.5	41	84	83	1	0.0%
RE521600_060	Residential	616617	4857954	1.5	43	87	83	4	0.0%
RE521600_061	Residential	616605	4857951	1.5	44	88	83	5	0.0%
RE521600_062	Residential	616591	4857946	1.5	46	90	83	6	0.0%
RE521600_063	Residential	616581	4857941	1.5	47	92	83	6	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_064	Residential	616570	4857932	1.5	49	94	83	6	0.0%
RE521600_065	Residential	616562	4857926	1.5	51	95	83	6	0.0%
RE521600_066	Residential	616551	4857917	1.5	53	97	83	6	0.0%
RE521600_067	Residential	616541	4857910	1.5	55	99	83	7	0.0%
RE521600_068	Residential	616532	4857900	1.5	57	101	83	7	0.0%
RE521600_069	Residential	616527	4857889	1.5	58	102	83	7	0.0%
RE521600_070	Residential	616522	4857875	1.5	59	104	83	7	0.0%
RE521600_071	Residential	616520	4857863	1.5	60	105	83	7	0.0%
RE521600_072	Residential	616516	4857852	1.5	62	106	83	7	0.0%
RE521600_073	Residential	616511	4857839	1.5	63	107	83	7	0.0%
RE521600_074	Residential	616508	4857827	1.5	64	109	83	7	0.0%
RE521600_075	Residential	616510	4857818	1.5	64	108	83	7	0.0%
RE521600_076	Residential	616566	4857851	1.5	52	97	83	6	0.0%
RE521600_077	Residential	616573	4857861	1.5	51	95	83	6	0.0%
RE521600_078	Residential	616578	4857871	1.5	50	94	83	6	0.0%
RE521600_079	Residential	616586	4857883	1.5	48	93	83	6	0.0%
RE521600_080	Residential	616597	4857890	1.5	47	91	83	6	0.0%
RE521600_081	Residential	616609	4857897	1.5	45	89	83	6	0.0%
RE521600_082	Residential	616621	4857902	1.5	44	88	83	4	0.0%
RE521600_083	Residential	616646	4857916	1.5	41	85	83	1	0.0%
RE521600_084	Residential	616072	4857806	1.5	61	105	83	23	0.1%
RE521600_085	Residential	616075	4857794	1.5	61	106	83	21	0.0%
RE521600_086	Residential	616095	4857778	1.5	65	110	83	22	0.1%
RE521600_087	Residential	616097	4857766	1.5	65	109	83	23	0.1%
RE521600_088	Residential	616098	4857755	1.5	64	109	83	24	0.1%
RE521600_089	Residential	616192	4857944	1.5	83	124	83	183	0.4%
RE521600_090	Residential	615423	4860137	1.5	38	80	83	3	0.0%
RW110000_001	Residential	595952	4825790	1.5	79	120	83	74	0.2%
RW110000_002	Residential	595454	4825807	1.5	108	131	83	359	0.8%
RW110000_008	Residential	594041	4825166	1.5	80	120	83	88	0.2%
RW110000_009	Residential	594096	4825191	1.5	81	122	83	119	0.3%
RW110000_010	Residential	594523	4825688	1.5	78	119	83	77	0.2%
RW110000_011	Residential	595159	4826252	1.5	81	122	83	142	0.3%
RW110000_012	Residential	595437	4826548	1.5	88	124	83	188	0.4%
RW110000_013	Residential	595321	4826744	1.5	80	121	83	86	0.2%
RW110000_014	Residential	595112	4826651	1.5	80	121	83	102	0.2%
RW110000_015	Residential	595155	4826706	1.5	80	121	83	106	0.2%
RW110000_016	Residential	595166	4826855	1.5	84	124	83	97	0.2%
RW110000_017	Residential	595209	4826815	1.5	83	124	83	118	0.3%
RW110000_018	Residential	594653	4825844	1.5	78	119	83	79	0.2%
RW110000_019	Residential	595416	4826834	1.5	80	122	83	99	0.2%
RW110000_020	Residential	595560	4825534	1.5	81	121	83	103	0.2%
RW110000_021	Residential	597393	4824513	1.5	75	116	83	30	0.1%
RW110000_022	Residential	594899	4824668	1.5	83	124	83	148	0.3%
RW110000_023	Residential	594655	4824528	1.5	88	124	83	138	0.3%
RW110000_024	Residential	595310	4826113	1.5	113	135	83	532	1.2%
RW110100_001	Residential	595323	4827011	1.5	85	126	83	111	0.3%
RW112100_001	Residential	594926	4829061	1.5	54	95	83	9	0.0%

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW112100_002	Residential	594880	4829107	1.5	53	93	83	6	0.0%
RW112100_003	Residential	594856	4829138	1.5	52	93	83	8	0.0%
RW112200_001	Residential	594826	4829169	1.5	51	92	83	7	0.0%
RW112300_001	Residential	594544	4829356	1.5	42	83	83	1	0.0%
RW112300_002	Residential	594555	4829392	1.5	44	85	83	1	0.0%
RW112300_003	Residential	594737	4829363	1.5	64	105	83	9	0.0%
RW112400_001	Residential	594707	4829399	1.5	63	104	83	8	0.0%
RW112400_002	Residential	594683	4829425	1.5	63	103	83	7	0.0%
RW112400_003	Residential	594663	4829470	1.5	59	100	83	6	0.0%
RW112500_001	Residential	594652	4829522	1.5	56	96	83	3	0.0%
RW112500_002	Residential	594587	4829561	1.5	56	97	83	3	0.0%
RW112600_001	Residential	594537	4829618	1.5	55	96	83	2	0.0%
RW113300_001	Residential	595127	4830221	1.5	35	80	83	0	-
RW113700_001	Residential	594940	4830647	1.5	32	77	83	0	-
RW210600_001	Residential	594968	4831278	1.5	34	78	83	0	-
RW210600_002	Residential	594854	4831236	1.5	44	89	83	5	0.0%
RW210700_001	Residential	594784	4831216	1.5	69	113	83	11	0.0%
RW210700_002	Residential	594835	4831316	1.5	40	84	83	0	-
RW210700_003	Residential	595003	4831319	1.5	32	77	83	0	-
RW210800_001	Residential	594396	4831184	1.5	31	73	83	0	-
RW210800_002	Residential	594871	4831353	1.5	38	82	83	0	-
RW210800_003	Residential	594900	4831384	1.5	36	81	83	0	-
RW210800_004	Residential	594906	4831419	1.5	35	80	83	0	-
RW210900_001	Residential	594700	4831386	1.5	40	85	83	2	0.0%
RW211000_001	Residential	594519	4831395	1.5	35	79	83	0	-
RW213300_001	Residential	594131	4833825	1.5	25	70	83	0	-
RW213500_001	Residential	594089	4834002	1.5	25	70	83	0	-
RW213500_002	Residential	593987	4833921	1.5	20	65	83	0	-
RW213500_003	Residential	594063	4834025	1.5	26	70	83	0	-
RW213900_001	Residential	593680	4834239	1.5	36	80	83	2	0.0%
RW213900_002	Residential	593146	4833948	1.5	67	107	83	19	0.0%
RW213900_003	Residential	593108	4833915	1.5	58	100	83	14	0.0%
RW214000_001	Residential	593442	4834167	1.5	60	100	83	25	0.1%
RW214000_002	Residential	593165	4834006	1.5	50	94	83	11	0.0%
RW214200_001	Residential	593365	4834312	1.5	39	84	83	2	0.0%
RW214200_002	Residential	593424	4834334	1.5	48	92	83	19	0.0%
RW214200_003	Residential	593447	4834362	1.5	48	92	83	29	0.1%
RW214200_004	Residential	593638	4834465	1.5	79	120	83	66	0.2%
RW214400_001	Residential	593557	4834570	1.5	38	82	83	4	0.0%
RW214400_002	Residential	593363	4834447	1.5	34	79	83	0	-
RW214500_001	Place of Worship	593180	4834366	1.5	28	72	83	0	-
RW214700_001	Residential	593316	4834759	1.5	32	77	83	0	-
RW214800_001	Residential	593246	4834900	1.5	31	75	83	0	-
RW214900_001	Place of Worship	593238	4834901	1.5	31	76	83	0	-
RW215500_001	Residential	592716	4835205	1.5	18	63	83	0	-
RW215500_002	Residential	592751	4835308	1.5	24	69	83	0	-
RW215500_003	Residential	592672	4835243	1.5	18	62	83	0	-
RW215600_001	Residential	592652	4835268	1.5	18	62	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW215600_002	Residential	592625	4835291	1.5	18	62	83	0	-
RW215600_003	Residential	592706	4835349	1.5	24	68	83	0	-
RW216000_001	Residential	592457	4835580	1.5	27	69	83	0	-
RW216300_001	Residential	592187	4835722	1.5	17	60	83	0	-
RW217300_001	Residential	590963	4835918	1.5	19	62	83	0	-
RW217300_003	Residential	590894	4835850	1.5	19	64	83	0	-
RW217400_001	Residential	591070	4836272	1.5	17	61	83	0	-
RW217400_003	Residential	590716	4835921	1.5	20	64	83	0	-
RW217600_001	Residential	591245	4836671	1.5	17	61	83	0	-
RW218600_001	Residential	589698	4836609	1.5	22	66	83	0	-
RW218700_001	Residential	590211	4837285	1.5	19	62	83	0	-
RW219300_001	Residential	589994	4837866	1.5	16	60	83	0	-
RW219600_001	Residential	589829	4838199	1.5	21	64	83	0	-
RW219800_001	Residential	589708	4838309	1.5	22	65	83	0	-
RW219800_002	Residential	589678	4838339	1.5	21	65	83	0	-
RW219800_003	Residential	589655	4838356	1.5	22	65	83	0	-
RW219900_001	Residential	589628	4838393	1.5	21	64	83	0	-
RW219900_002	Residential	589604	4838419	1.5	21	64	83	0	-
RW219900_003	Residential	589574	4838446	1.5	21	64	83	0	-
RW219900_004	Residential	589348	4838304	1.5	18	62	83	0	-
RW220100_001	Residential	589237	4838630	1.5	17	62	83	0	-
RW220200_001	Residential	589212	4838657	1.5	17	62	83	0	-
RW220200_002	Residential	589193	4838697	1.5	17	61	83	0	-
RW221500_001	Residential	589630	4840149	1.5	14	58	83	0	-
RW221600_001	Residential	589645	4840276	1.5	17	60	83	0	-
RW221600_002	Residential	589618	4840305	1.5	16	60	83	0	-
RW221600_003	Residential	589575	4840340	1.5	16	60	83	0	-
RW221600_004	Residential	589489	4840296	1.5	14	58	83	0	-
RW221600_005	Residential	589463	4840313	1.5	14	58	83	0	-
RW221700_001	Residential	589372	4840554	1.5	16	60	83	0	-
RW222900_001	Residential	590172	4841526	1.5	19	64	83	0	-
RW223000_001	Residential	590405	4841464	1.5	16	61	83	0	-
RW223000_002	Residential	589855	4841856	1.5	15	57	83	0	-
RW223100_001	Residential	590119	4841763	1.5	15	59	83	0	-
RW223600_001	Residential	590319	4842303	1.5	18	62	83	0	-
RW223700_001	Residential	590349	4842328	1.5	18	63	83	0	-
RW223700_002	Residential	590387	4842378	1.5	19	64	83	0	-
RW223800_001	Residential	590421	4842402	1.5	19	64	83	0	-
RW223800_002	Residential	590456	4842433	1.5	19	63	83	0	-
RW224200_001	Residential	591059	4842518	1.5	23	67	83	0	-
RW225200_001	Residential	591261	4843431	1.5	15	58	83	0	-
RW225300_001	Residential	591243	4843461	1.5	16	59	83	0	-
RW225300_002	Residential	591272	4843493	1.5	16	59	83	0	-
RW225300_003	Residential	591295	4843534	1.5	17	60	83	0	-
RW226000_001	Residential	591344	4844228	1.5	21	65	83	0	-
RW226200_001	Residential	591234	4844508	1.5	19	63	83	0	-
RW226300_001	Residential	591196	4844542	1.5	19	63	83	0	-
RW226300_002	Residential	591171	4844578	1.5	19	62	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW227700_001	Residential	591290	4846105	1.5	35	79	83	3	0.0%
RW227800_001	Residential	591651	4846073	1.5	50	94	83	13	0.0%
RW227800_002	Residential	591541	4846134	1.5	72	117	83	51	0.1%
RW227800_003	Residential	591348	4846123	1.5	50	94	83	19	0.0%
RW228900_001	Residential	592191	4847059	1.5	20	64	83	0	-
RW229000_005	Residential	592239	4847128	1.5	20	64	83	0	-
RW229100_003	Residential	592057	4847361	1.5	22	66	83	0	-
RW229100_004	Residential	592238	4847208	1.5	23	67	83	0	-
RW229200_001	Residential	591945	4847506	1.5	25	68	83	0	-
RW229200_002	Residential	592082	4847514	1.5	19	63	83	0	-
RW229200_003	Residential	592013	4847571	1.5	19	63	83	0	-
RW229200_004	Residential	591965	4847613	1.5	19	63	83	0	-
RW229200_005	Residential	592047	4847546	1.5	19	63	83	0	-
RW229200_006	Residential	591969	4847485	1.5	25	69	83	0	-
RW229200_007	Residential	591918	4847523	1.5	24	67	83	0	-
RW229300_001	Residential	591940	4847644	1.5	19	63	83	0	-
RW230300_001	Residential	592829	4848529	1.5	22	67	83	0	-
RW230300_002	Residential	592606	4848716	1.5	20	64	83	0	-
RW230400_003	Residential	593165	4848363	1.5	16	61	83	0	-
RW230400_004	Residential	593067	4848428	1.5	16	61	83	0	-
RW230400_005	Residential	592665	4848881	1.5	14	58	83	0	-
RW231500_001	Residential	593790	4849191	1.5	16	60	83	0	-
RW231500_002	Residential	593814	4849083	1.5	18	62	83	0	-
RW231800_002	Residential	593623	4849689	1.5	15	59	83	0	-
RW231800_003	Residential	593681	4849607	1.5	15	59	83	0	-
RW231900_001	Residential	593974	4849584	1.5	19	62	83	0	-
RW231900_002	Residential	593821	4849636	1.5	25	69	83	0	-
RW231900_003	Residential	593783	4849662	1.5	26	70	83	0	-
RW231900_004	Residential	593753	4849685	1.5	26	71	83	0	-
RW231900_005	Residential	593708	4849712	1.5	27	71	83	0	-
RW231900_006	Residential	593679	4849744	1.5	25	69	83	0	-
RW232900_001	Residential	594647	4850489	1.5	13	57	83	0	-
RW232900_002	Residential	594641	4850578	1.5	14	57	83	0	-
RW232900_003	Residential	594596	4850601	1.5	13	57	83	0	-
RW233000_001	Residential	594937	4850252	1.5	13	56	83	0	-
RW233000_002	Residential	594873	4850324	1.5	13	56	83	0	-
RW233000_003	Residential	594722	4850470	1.5	13	56	83	0	-
RW233000_004	Residential	594661	4850750	1.5	18	60	83	0	-
RW233100_001	Residential	595054	4850303	1.5	16	60	83	0	-
RW233100_002	Residential	594986	4850367	1.5	16	60	83	0	-
RW233100_003	Residential	594960	4850397	1.5	17	60	83	0	-
RW233100_004	Residential	594754	4850728	1.5	16	59	83	0	-
RW233300_001	Residential	595066	4850652	1.5	14	58	83	0	-
RW233500_001	Residential	595517	4850395	1.5	15	58	83	0	-
RW233600_001	Residential	595481	4850552	1.5	15	58	83	0	-
RW233700_001	Residential	595601	4850557	1.5	14	59	83	0	-
RW233800_001	Residential	595629	4850726	1.5	14	59	83	0	-
RW234400_001	Residential	595843	4851239	1.5	16	61	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW234400_002	Residential	595722	4851407	1.5	15	59	83	0	-
RW234400_003	Residential	595753	4851375	1.5	15	60	83	0	-
RW234500_001	Residential	596110	4851144	1.5	20	65	83	0	-
RW234500_002	Residential	596228	4851057	1.5	21	66	83	0	-
RW234600_001	Residential	595890	4851390	1.5	18	63	83	0	-
RW234600_002	Residential	595822	4851471	1.5	16	61	83	0	-
RW234600_003	Residential	595792	4851490	1.5	16	60	83	0	-
RW235800_001	Residential	596933	4852124	1.5	25	69	83	0	-
RW235800_002	Residential	596708	4852352	1.5	27	71	83	1	0.0%
RW235800_003	Residential	596626	4852447	1.5	31	75	83	1	0.0%
RW235800_004	Residential	596582	4852479	1.5	28	72	83	1	0.0%
RW235900_003	Residential	596852	4852343	1.5	38	82	83	2	0.0%
RW235900_004	Residential	596685	4852406	1.5	36	80	83	2	0.0%
RW235900_008	Residential	596930	4852261	1.5	38	83	83	5	0.0%
RW310200_001	Residential	597162	4852242	1.5	22	66	83	0	-
RW311300_001	Residential	598030	4853004	1.5	15	59	83	0	-
RW311300_002	Residential	598003	4853024	1.5	15	60	83	0	-
RW311300_003	Residential	597975	4853049	1.5	16	60	83	0	-
RW311300_004	Residential	597927	4853089	1.5	16	60	83	0	-
RW311400_001	Residential	598069	4853072	1.5	18	63	83	0	-
RW311400_002	Residential	598037	4853102	1.5	19	63	83	0	-
RW311400_003	Residential	597991	4853145	1.5	19	64	83	0	-
RW311400_004	Residential	597940	4853194	1.5	20	64	83	0	-
RW311400_005	Residential	597918	4853265	1.5	19	63	83	0	-
RW311400_006	Residential	597843	4853344	1.5	20	64	83	0	-
RW311400_008	Residential	597739	4853444	1.5	19	63	83	0	-
RW311400_009	Residential	597683	4853455	1.5	17	61	83	0	-
RW312300_001	Residential	598843	4853771	1.5	11	55	83	0	-
RW312400_001	Residential	598885	4854042	1.5	12	56	83	0	-
RW312400_002	Residential	598849	4854080	1.5	12	57	83	0	-
RW312500_001	Residential	599044	4853903	1.5	14	58	83	0	-
RW312500_002	Residential	599019	4853928	1.5	14	58	83	0	-
RW312500_003	Residential	598925	4854010	1.5	13	57	83	0	-
RW312500_004	Residential	598959	4854116	1.5	15	59	83	0	-
RW312600_001	Residential	599110	4853841	1.5	14	58	83	0	-
RW312600_002	Residential	599074	4853862	1.5	12	56	83	0	-
RW312700_001	Residential	599266	4853691	1.5	14	58	83	0	-
RW312900_001	Residential	599307	4854183	1.5	11	55	83	0	-
RW313100_001	Residential	599559	4854108	1.5	12	56	83	0	-
RW313400_001	Residential	599752	4854478	1.5	11	55	83	0	-
RW313900_001	Residential	600110	4854917	1.5	14	58	83	0	-
RW314100_001	Residential	600493	4854739	1.5	10	55	83	0	-
RW314300_001	Residential	600741	4854369	1.5	13	57	83	0	-
RW315400_001	Residential	601942	4855015	1.5	7	51	83	0	-
RW317500_001	Residential	603840	4854629	1.5	44	88	83	6	0.0%
RW317500_003	Residential	603870	4854650	1.5	49	93	83	7	0.0%
RW410100_001	Residential	603972	4854928	1.5	28	72	83	0	-
RW410100_002	Residential	603936	4854961	1.5	22	66	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW410200_001	Residential	604015	4854902	1.5	37	81	83	1	0.0%
RW410400_001	Residential	604221	4855097	1.5	45	90	83	4	0.0%
RW410800_002	Residential	604445	4855386	1.5	43	80	83	0	-
RW510000_001	Residential	604897	4855625	1.5	48	89	83	8	0.0%
RW510100_001	Residential	605003	4855608	1.5	55	96	83	21	0.0%
RW510100_002	Residential	604998	4855726	1.5	40	80	83	3	0.0%
RW510400_001	Residential	605360	4855644	1.5	16	60	83	0	-
RW512600_001	Residential	607049	4856822	1.5	8	52	83	0	-
RW512600_002	Residential	606713	4857044	1.5	9	53	83	0	-
RW512700_001	Residential	606950	4856924	1.5	9	53	83	0	-
RW515200_001	Residential	608655	4859025	1.5	23	66	83	0	-
RW515200_002	Residential	608453	4859443	1.5	11	55	83	0	-
RW515500_001	Residential	609009	4858910	1.5	14	56	83	0	-
RW515500_002	Residential	608965	4859173	1.5	13	57	83	0	-
RW515500_003	Residential	608645	4859708	1.5	26	70	83	0	-
RW515600_001	Residential	609102	4858982	1.5	12	55	83	0	-
RW515600_002	Residential	608876	4859423	1.5	13	58	83	0	-
RW515600_003	Residential	608980	4859372	1.5	13	58	83	0	-
RW515700_001	Residential	608966	4859442	1.5	14	58	83	0	-
RW516700_001	Residential	609986	4859710	1.5	15	58	83	0	-
RW517400_001	Residential	610721	4859654	1.5	11	53	83	0	-
RW517500_001	Residential	610788	4859750	1.5	10	53	83	0	-
RW517500_002	Residential	610631	4860179	1.5	15	58	83	0	-
RW517600_001	Residential	610730	4860162	1.5	18	62	83	0	-
RW519300_001	Residential	612321	4860800	1.5	21	65	83	0	-
RW519300_002	Residential	612247	4861048	1.5	57	101	83	19	0.0%
RW519600_001	Residential	612681	4860774	1.5	18	62	83	0	-
RW519600_002	Residential	612644	4860851	1.5	19	63	83	0	-
RW519600_003	Residential	612606	4860976	1.5	22	66	83	0	-
RW519600_004	Residential	612556	4861217	1.5	30	74	83	1	0.0%
RW519900_001	Residential	612911	4861179	1.5	33	78	83	1	0.0%
RW520000_001	Residential	612975	4861191	1.5	32	76	83	1	0.0%
RW520100_001	Residential	613108	4861238	1.5	32	76	83	1	0.0%
RW520200_001	Residential	613167	4861245	1.5	29	73	83	0	-
RW520300_001	Residential	613263	4861267	1.5	28	73	83	0	-
RW520400_001	Residential	613409	4861318	1.5	31	75	83	1	0.0%
RW520600_001	Residential	613595	4861385	1.5	34	78	83	2	0.0%
RW520600_002	Residential	613696	4861264	1.5	26	70	83	0	-
RW520800_001	Residential	613821	4861450	1.5	33	78	83	1	0.0%
RW520800_002	Residential	613868	4861446	1.5	31	76	83	1	0.0%
RW520900_001	Residential	614011	4861487	1.5	33	77	83	1	0.0%
RW521000_001	Residential	614074	4861506	1.5	34	78	83	1	0.0%
RW521500_001	Residential	614584	4861772	1.5	59	103	83	21	0.0%
RW521500_002	Residential	614605	4861931	1.5	45	86	83	4	0.0%
RW521500_003	Residential	614606	4861992	1.5	35	79	83	4	0.0%
RW521500_004	Residential	614561	4862067	1.5	32	76	83	3	0.0%
RW521500_005	Residential	614528	4862131	1.5	29	73	83	0	-
RW521500_006	Residential	614519	4862172	1.5	28	73	83	0	-

Appendix G.1.3 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background (µg/m³)	Maximum Predicted 1 Hour Concentration With Background (µg/m³)	Criteria (µg/m³)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RW521600_001	Residential	615126	4862319	1.5	42	86	83	55	0.1%
RW521600_002	Residential	616401	4861744	1.5	28	71	83	0	-
RW521600_009	Residential	616496	4861911	1.5	28	73	83	0	-
RW521600_010	Residential	614979	4862746	1.5	48	90	83	25	0.1%
RW521600_011	Residential	614904	4862738	1.5	41	84	83	12	0.0%
RW521600_012	Residential	615537	4863261	1.5	68	113	83	16	0.0%
RW521600_013	Residential	615595	4863665	1.5	49	91	83	6	0.0%
RW521600_014	Residential	616500	4861872	1.5	27	71	83	0	-
RW521600_016	Residential	614949	4863780	1.5	67	108	83	43	0.1%
RW521600_017	Residential	616265	4861577	1.5	28	72	83	0	-

43824 Hours of Meterological Data

Notes:

[1] Maximum predicted concentration with background using the Ozone Limiting Method. These concentrations differ from those presented in the results tables which are based on the 98th percentile of the daily 1-hour maximum concentrations to conform to CAAQS standard.

Appendix G.1.4: 2051 Build – 1 Hour NO_2

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_001	Place of Worship	597312	4827927	1.5	106	127	83	511	1.2%
RE110000_002	Residential	596637	4826254	1.5	85	126	83	275	0.6%
RE110000_003	Residential	596701	4826610	1.5	98	124	83	281	0.6%
RE110000_004	Residential	597143	4827822	1.5	106	129	83	473	1.1%
RE110000_005	Residential	597083	4827844	1.5	109	131	83	696	1.6%
RE110000_006	Residential	596871	4828160	1.5	104	133	83	238	0.5%
RE110000_007	Residential	597140	4826176	1.5	84	124	83	182	0.4%
RE110000_008	Residential	597148	4826187	1.5	82	123	83	158	0.4%
RE110000_009	Residential	597156	4826199	1.5	82	123	83	140	0.3%
RE110000_010	Residential	597164	4826210	1.5	82	123	83	128	0.3%
RE110000_011	Residential	597171	4826221	1.5	82	122	83	122	0.3%
RE110000_020	Residential	597181	4826148	1.5	82	123	83	159	0.4%
RE110000_021	Residential	597187	4826154	1.5	82	123	83	144	0.3%
RE110000_022	Residential	597195	4826162	1.5	82	123	83	131	0.3%
RE110000_023	Residential	597200	4826170	1.5	82	122	83	126	0.3%
RE110000_024	Residential	597206	4826177	1.5	81	122	83	119	0.3%
RE110000_025	Residential	597212	4826186	1.5	81	122	83	116	0.3%
RE110000_028	Residential	597203	4826119	1.5	83	123	83	169	0.4%
RE110000_029	Residential	597210	4826129	1.5	82	123	83	144	0.3%
RE110000_030	Residential	597216	4826140	1.5	82	123	83	130	0.3%
RE110000_031	Residential	597223	4826147	1.5	82	122	83	123	0.3%
RE110000_032	Residential	597230	4826156	1.5	81	122	83	119	0.3%
RE110000_045	Residential	597236	4826078	1.5	83	124	83	173	0.4%
RE110000_046	Residential	597243	4826087	1.5	82	123	83	153	0.3%
RE110000_047	Residential	597251	4826096	1.5	82	123	83	136	0.3%
RE110000_048	Residential	597257	4826104	1.5	82	122	83	126	0.3%
RE110000_049	Residential	597263	4826113	1.5	81	122	83	115	0.3%
RE110000_050	Residential	597255	4826067	1.5	83	123	83	162	0.4%
RE110000_051	Residential	597266	4826057	1.5	82	123	83	159	0.4%
RE110000_052	Residential	597275	4826046	1.5	83	123	83	162	0.4%
RE110000_053	Residential	597284	4826036	1.5	83	123	83	160	0.4%
RE110000_054	Residential	597293	4826025	1.5	83	123	83	159	0.4%
RE110000_055	Residential	597304	4826014	1.5	82	123	83	158	0.4%
RE110000_056	Residential	597325	4826041	1.5	81	122	83	116	0.3%
RE110000_057	Residential	597314	4826051	1.5	81	122	83	118	0.3%
RE110000_058	Residential	597304	4826061	1.5	81	122	83	117	0.3%
RE110000_059	Residential	597295	4826072	1.5	81	122	83	117	0.3%
RE110000_060	Residential	597285	4826082	1.5	82	122	83	118	0.3%
RE110000_061	Residential	597323	4825965	1.5	86	125	83	204	0.5%
RE110000_062	Residential	597330	4825974	1.5	85	124	83	176	0.4%
RE110000_063	Residential	597335	4825983	1.5	83	123	83	155	0.4%
RE110000_064	Residential	597342	4825990	1.5	82	123	83	138	0.3%
RE110000_065	Residential	597350	4826000	1.5	82	122	83	119	0.3%
RE110000_066	Residential	597357	4826009	1.5	81	122	83	114	0.3%
RE110000_067	Residential	597368	4826018	1.5	81	122	83	105	0.2%
RE110000_069	Residential	597351	4825947	1.5	85	124	83	181	0.4%
RE110000_070	Residential	597359	4825957	1.5	84	123	83	153	0.3%
RE110000_071	Residential	597366	4825967	1.5	82	123	83	136	0.3%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_072	Residential	597374	4825977	1.5	81	122	83	122	0.3%
RE110000_073	Residential	597383	4825986	1.5	81	122	83	111	0.3%
RE110000_112	Residential	597394	4825910	1.5	85	124	83	167	0.4%
RE110000_113	Residential	597401	4825919	1.5	82	123	83	150	0.3%
RE110000_114	Residential	597409	4825928	1.5	82	122	83	129	0.3%
RE110000_115	Residential	597416	4825939	1.5	81	122	83	118	0.3%
RE110000_123	Residential	597413	4825882	1.5	85	124	83	189	0.4%
RE110000_124	Residential	597421	4825892	1.5	84	123	83	158	0.4%
RE110000_125	Residential	597432	4825901	1.5	82	122	83	134	0.3%
RE110000_132	Residential	597461	4825854	1.5	83	123	83	156	0.4%
RE110000_133	Residential	597471	4825865	1.5	81	122	83	134	0.3%
RE110000_139	Residential	597482	4825833	1.5	83	123	83	155	0.4%
RE110000_140	Residential	597492	4825842	1.5	81	122	83	139	0.3%
RE110000_145	Residential	597514	4825784	1.5	85	124	83	181	0.4%
RE110000_146	Residential	597523	4825794	1.5	82	123	83	153	0.3%
RE110000_147	Residential	597531	4825806	1.5	81	122	83	132	0.3%
RE110000_149	Residential	597534	4825759	1.5	85	124	83	186	0.4%
RE110000_150	Residential	597542	4825770	1.5	83	123	83	160	0.4%
RE110000_151	Residential	597549	4825779	1.5	82	122	83	144	0.3%
RE110000_165	Residential	597586	4825745	1.5	82	122	83	139	0.3%
RE110000_167	Residential	597648	4825682	1.5	82	122	83	142	0.3%
RE110000_173	Residential	597632	4825663	1.5	85	124	83	189	0.4%
RE110000_177	Residential	597655	4825690	1.5	81	122	83	124	0.3%
RE110000_178	Residential	597642	4825674	1.5	82	123	83	156	0.4%
RE110000_189	Residential	597578	4825734	1.5	83	123	83	159	0.4%
RE110000_190	Residential	597605	4825708	1.5	82	123	83	162	0.4%
RE110000_191	Residential	597611	4825719	1.5	82	122	83	143	0.3%
RE110000_239	Residential	598068	4825317	1.5	85	124	83	184	0.4%
RE110000_240	Residential	598051	4825327	1.5	85	125	83	220	0.5%
RE110000_241	Residential	598046	4825287	1.5	91	126	83	203	0.5%
RE110000_242	Residential	598058	4825288	1.5	88	125	83	187	0.4%
RE110000_243	Residential	598062	4825320	1.5	85	124	83	198	0.5%
RE110000_244	Residential	598082	4825288	1.5	85	124	83	164	0.4%
RE110000_245	Residential	598057	4825323	1.5	85	124	83	206	0.5%
RE110000_246	Residential	598051	4825288	1.5	89	125	83	196	0.4%
RE110000_247	Residential	598072	4825292	1.5	85	125	83	170	0.4%
RE110000_248	Residential	598076	4825290	1.5	85	124	83	169	0.4%
RE110000_249	Residential	598040	4825285	1.5	93	126	83	211	0.5%
RE110000_253	Residential	597743	4825607	1.5	81	122	83	123	0.3%
RE110000_254	Residential	597795	4825533	1.5	82	123	83	151	0.3%
RE110000_255	Residential	597806	4825547	1.5	81	122	83	122	0.3%
RE110000_256	Residential	597835	4825499	1.5	82	122	83	146	0.3%
RE110000_257	Residential	597843	4825509	1.5	81	122	83	127	0.3%
RE110000_265	Residential	597773	4825557	1.5	82	122	83	143	0.3%
RE110000_267	Residential	597726	4825585	1.5	83	123	83	160	0.4%
RE110000_276	Residential	597839	4825504	1.5	81	122	83	134	0.3%
RE110000_277	Residential	597778	4825564	1.5	81	122	83	133	0.3%
RE110000_278	Residential	597784	4825572	1.5	81	122	83	120	0.3%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_279	Residential	597739	4825601	1.5	81	122	83	134	0.3%
RE110000_280	Residential	597719	4825577	1.5	85	125	83	187	0.4%
RE110000_281	Residential	597767	4825552	1.5	82	123	83	158	0.4%
RE110000_292	Residential	597793	4825524	1.5	82	123	83	159	0.4%
RE110000_293	Residential	597734	4825596	1.5	82	122	83	142	0.3%
RE110000_294	Residential	597800	4825540	1.5	81	122	83	135	0.3%
RE110000_305	Residential	597830	4825493	1.5	82	123	83	154	0.4%
RE110000_309	Residential	597730	4825591	1.5	82	123	83	152	0.3%
RE110000_310	Residential	597826	4825487	1.5	83	123	83	166	0.4%
RE110000_316	Residential	597823	4825480	1.5	85	124	83	181	0.4%
RE110000_325	Residential	597672	4825659	1.5	81	122	83	144	0.3%
RE110000_329	Residential	597711	4825620	1.5	82	122	83	142	0.3%
RE110000_331	Residential	597656	4825641	1.5	85	124	83	186	0.4%
RE110000_332	Residential	597705	4825613	1.5	82	123	83	157	0.4%
RE110000_333	Residential	597717	4825628	1.5	81	122	83	131	0.3%
RE110000_342	Residential	597701	4825604	1.5	84	124	83	170	0.4%
RE110000_344	Residential	597666	4825651	1.5	82	123	83	160	0.4%
RE110000_345	Residential	597678	4825667	1.5	81	122	83	128	0.3%
RE110000_353	Residential	597853	4825468	1.5	82	123	83	157	0.4%
RE110000_355	Residential	597858	4825475	1.5	82	122	83	147	0.3%
RE110000_378	Residential	597899	4825411	1.5	83	124	83	186	0.4%
RE110000_387	Residential	597845	4825458	1.5	85	124	83	183	0.4%
RE110000_390	Residential	597927	4825384	1.5	83	124	83	197	0.4%
RE110000_394	Residential	597904	4825418	1.5	82	123	83	168	0.4%
RE110000_397	Residential	597863	4825480	1.5	81	122	83	135	0.3%
RE110000_401	Residential	596788	4826527	1.5	92	124	83	240	0.5%
RE110200_001	Residential	595761	4827508	1.5	100	129	83	237	0.5%
RE110300_001	Residential	595985	4827782	1.5	90	123	83	153	0.3%
RE110300_002	Residential	596018	4827822	1.5	86	123	83	144	0.3%
RE110300_003	Residential	596052	4827847	1.5	85	122	83	146	0.3%
RE110300_004	Residential	596075	4827863	1.5	86	123	83	159	0.4%
RE110400_001	Residential	596097	4827888	1.5	87	123	83	167	0.4%
RE110400_002	Residential	596114	4827911	1.5	88	123	83	183	0.4%
RE110500_001	Residential	596071	4827936	1.5	82	122	83	139	0.3%
RE110500_002	Residential	596046	4827958	1.5	81	121	83	131	0.3%
RE110600_001	Residential	596004	4827990	1.5	80	121	83	108	0.2%
RE110600_002	Residential	596030	4827975	1.5	80	121	83	120	0.3%
RE110700_001	Residential	595981	4828012	1.5	79	120	83	101	0.2%
RE110700_002	Residential	595928	4827973	1.5	79	120	83	89	0.2%
RE110800_001	Residential	595956	4828058	1.5	79	120	83	102	0.2%
RE110800_002	Residential	595933	4828081	1.5	79	119	83	99	0.2%
RE110900_001	Residential	595910	4828106	1.5	79	119	83	93	0.2%
RE110900_002	Residential	595878	4828134	1.5	78	119	83	85	0.2%
RE111100_001	Residential	595788	4828209	1.5	73	116	83	70	0.2%
RE111200_001	Residential	595754	4828244	1.5	72	117	83	65	0.1%
RE111200_002	Residential	595736	4828278	1.5	72	117	83	72	0.2%
RE111300_001	Residential	595708	4828299	1.5	72	117	83	63	0.1%
RE111300_002	Residential	595689	4828310	1.5	72	117	83	60	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE111300_003	Residential	595667	4828334	1.5	72	117	83	59	0.1%
RE111400_001	Residential	595630	4828371	1.5	72	117	83	59	0.1%
RE111400_002	Residential	595610	4828393	1.5	72	117	83	58	0.1%
RE111500_001	Residential	595569	4828431	1.5	72	117	83	57	0.1%
RE111500_002	Residential	595514	4828453	1.5	74	115	83	48	0.1%
RE111600_001	Residential	595474	4828490	1.5	77	118	83	47	0.1%
RE111600_002	Residential	595430	4828529	1.5	78	119	83	40	0.1%
RE111700_001	Residential	595514	4828604	1.5	79	119	83	44	0.1%
RE111700_002	Residential	595359	4828639	1.5	79	120	83	49	0.1%
RE111800_001	Residential	596558	4828460	1.5	86	125	83	135	0.3%
RE111800_002	Residential	595492	4828626	1.5	78	119	83	43	0.1%
RE111800_003	Residential	595467	4828642	1.5	79	119	83	46	0.1%
RE111800_004	Residential	595445	4828664	1.5	79	119	83	46	0.1%
RE111800_005	Residential	595329	4828673	1.5	79	120	83	53	0.1%
RE111800_006	Residential	595306	4828700	1.5	79	120	83	54	0.1%
RE111800_007	Residential	595285	4828720	1.5	79	120	83	55	0.1%
RE111800_008	Residential	595266	4828745	1.5	80	120	83	59	0.1%
RE112100_001	Residential	596836	4828712	1.5	80	121	83	74	0.2%
RE112200_001	Residential	596905	4828763	1.5	81	121	83	55	0.1%
RE113100_001	Residential	595706	4829937	1.5	105	128	83	19	0.0%
RE113200_001	Residential	595933	4829995	1.5	80	121	83	26	0.1%
RE113200_002	Residential	595904	4830024	1.5	80	121	83	26	0.1%
RE113300_001	Residential	595753	4830146	1.5	93	123	83	32	0.1%
RE210700_001	Residential	595367	4831551	1.5	105	129	83	39	0.1%
RE210700_002	Residential	595325	4831537	1.5	106	131	83	57	0.1%
RE210700_003	Residential	595504	4831618	1.5	79	119	83	20	0.0%
RE210900_001	Residential	595286	4831670	1.5	107	130	83	66	0.2%
RE210900_003	Residential	595217	4831730	1.5	109	131	83	64	0.1%
RE210900_004	Residential	595349	4831732	1.5	104	129	83	36	0.1%
RE210900_005	Residential	595339	4831698	1.5	104	129	83	36	0.1%
RE210900_006	Residential	595400	4831812	1.5	94	121	83	28	0.1%
RE210900_007	Residential	595436	4831835	1.5	84	121	83	25	0.1%
RE210900_008	Residential	595454	4831855	1.5	79	120	83	22	0.1%
RE211000_001	Residential	595242	4831783	1.5	108	130	83	55	0.1%
RE211000_002	Residential	595292	4831787	1.5	106	129	83	49	0.1%
RE211000_003	Residential	595341	4831842	1.5	104	129	83	41	0.1%
RE211000_004	Residential	595365	4831888	1.5	102	126	83	24	0.1%
RE211000_005	Residential	595239	4831847	1.5	107	129	83	48	0.1%
RE211000_006	Residential	595408	4831938	1.5	93	121	83	21	0.0%
RE211000_007	Residential	595530	4831956	1.5	72	116	83	17	0.0%
RE211000_008	Residential	595567	4832001	1.5	70	114	83	14	0.0%
RE211000_009	Residential	595596	4832028	1.5	69	111	83	10	0.0%
RE211000_010	Residential	595617	4832054	1.5	68	109	83	8	0.0%
RE211100_001	Residential	595423	4831974	1.5	89	121	83	21	0.0%
RE211100_002	Residential	595342	4832015	1.5	97	123	83	26	0.1%
RE211100_003	Residential	595552	4832099	1.5	74	117	83	21	0.0%
RE211100_004	Residential	595637	4832091	1.5	66	107	83	8	0.0%
RE211100_005	Residential	595675	4832137	1.5	63	104	83	7	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE211100_006	Residential	595734	4832214	1.5	56	97	83	7	0.0%
RE211100_009	Residential	595514	4832061	1.5	78	119	83	22	0.1%
RE211200_001	Residential	595380	4832103	1.5	91	122	83	21	0.0%
RE211200_002	Residential	595424	4832139	1.5	84	120	83	17	0.0%
RE211200_003	Residential	595641	4832218	1.5	75	116	83	14	0.0%
RE211200_004	Residential	595704	4832286	1.5	73	114	83	14	0.0%
RE211200_005	Residential	595584	4832173	1.5	72	115	83	15	0.0%
RE211400_001	Residential	594922	4832082	1.5	106	130	83	110	0.3%
RE211500_002	Residential	595129	4832290	1.5	94	118	83	34	0.1%
RE211500_003	Residential	594950	4832221	1.5	93	121	83	47	0.1%
RE211500_004	Residential	595156	4832250	1.5	96	119	83	34	0.1%
RE211900_001	Residential	594800	4832552	1.5	79	120	83	49	0.1%
RE212600_001	Residential	594824	4833279	1.5	68	109	83	17	0.0%
RE212700_001	Residential	594758	4833331	1.5	74	115	83	25	0.1%
RE212700_002	Residential	594605	4833322	1.5	81	121	83	47	0.1%
RE212800_001	Residential	594672	4833390	1.5	77	118	83	36	0.1%
RE212800_002	Residential	594620	4833440	1.5	79	120	83	48	0.1%
RE212900_001	Residential	594599	4833473	1.5	80	120	83	50	0.1%
RE213000_001	Residential	594589	4833575	1.5	88	122	83	44	0.1%
RE214400_001	Recreation	594333	4835333	1.5	66	110	83	47	0.1%
RE214600_002	Residential	593842	4835174	1.5	107	131	83	63	0.1%
RE214600_003	Residential	593906	4835196	1.5	104	129	83	68	0.2%
RE214600_004	Residential	593934	4835222	1.5	98	125	83	66	0.2%
RE214600_005	Residential	593948	4835237	1.5	96	124	83	60	0.1%
RE214600_006	Residential	593954	4835244	1.5	95	124	83	60	0.1%
RE214600_007	Residential	593879	4835253	1.5	104	129	83	46	0.1%
RE214600_008	Residential	593895	4835241	1.5	104	129	83	51	0.1%
RE214600_009	Residential	593872	4835220	1.5	105	129	83	54	0.1%
RE214600_010	Residential	593861	4835213	1.5	105	130	83	53	0.1%
RE214600_011	Residential	593855	4835236	1.5	105	129	83	46	0.1%
RE214600_012	Residential	593826	4835204	1.5	107	130	83	45	0.1%
RE214600_013	Residential	593848	4835159	1.5	108	131	83	66	0.2%
RE214600_014	Residential	593881	4835177	1.5	105	130	83	66	0.2%
RE214600_015	Residential	593892	4835186	1.5	105	130	83	69	0.2%
RE214600_016	Residential	593917	4835206	1.5	102	129	83	70	0.2%
RE214600_017	Residential	593925	4835215	1.5	99	128	83	68	0.2%
RE214600_018	Residential	593940	4835231	1.5	97	125	83	60	0.1%
RE214600_019	Residential	593960	4835250	1.5	95	124	83	64	0.1%
RE214600_020	Residential	593967	4835258	1.5	93	124	83	66	0.2%
RE214600_021	Residential	593978	4835265	1.5	91	123	83	68	0.2%
RE214600_022	Residential	593885	4835231	1.5	104	129	83	52	0.1%
RE214600_023	Residential	593914	4835274	1.5	94	124	83	46	0.1%
RE214600_024	Residential	593927	4835288	1.5	93	124	83	46	0.1%
RE214600_025	Residential	593932	4835295	1.5	93	124	83	46	0.1%
RE214600_026	Residential	593936	4835298	1.5	93	124	83	46	0.1%
RE214600_027	Residential	593941	4835304	1.5	92	124	83	46	0.1%
RE214600_028	Residential	593945	4835308	1.5	91	124	83	47	0.1%
RE214600_029	Residential	593948	4835312	1.5	90	123	83	49	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_030	Residential	593953	4835317	1.5	89	123	83	49	0.1%
RE214600_031	Residential	593956	4835321	1.5	88	123	83	50	0.1%
RE214600_032	Residential	593965	4835331	1.5	86	123	83	49	0.1%
RE214600_033	Residential	593979	4835319	1.5	86	122	83	53	0.1%
RE214600_034	Residential	593977	4835313	1.5	86	122	83	53	0.1%
RE214600_035	Residential	593971	4835308	1.5	87	123	83	55	0.1%
RE214600_036	Residential	593968	4835303	1.5	88	123	83	55	0.1%
RE214600_037	Residential	593909	4835267	1.5	97	126	83	47	0.1%
RE214600_038	Residential	593919	4835279	1.5	94	124	83	44	0.1%
RE214600_039	Residential	593923	4835284	1.5	94	124	83	45	0.1%
RE214600_040	Residential	593930	4835291	1.5	93	124	83	47	0.1%
RE214600_041	Residential	593961	4835326	1.5	87	123	83	49	0.1%
RE214600_042	Residential	593970	4835333	1.5	85	122	83	49	0.1%
RE214600_043	Residential	593982	4835324	1.5	86	122	83	53	0.1%
RE214600_044	Residential	593960	4835295	1.5	90	123	83	55	0.1%
RE214600_045	Residential	593956	4835291	1.5	91	124	83	54	0.1%
RE214600_046	Residential	593946	4835281	1.5	92	124	83	50	0.1%
RE214600_047	Residential	593942	4835277	1.5	92	124	83	48	0.1%
RE214600_048	Residential	593934	4835269	1.5	94	124	83	49	0.1%
RE214600_049	Residential	593929	4835264	1.5	95	124	83	50	0.1%
RE214600_050	Residential	593923	4835260	1.5	95	124	83	51	0.1%
RE214600_051	Residential	594088	4835437	1.5	78	119	83	45	0.1%
RE214600_052	Residential	594082	4835443	1.5	78	118	83	43	0.1%
RE214600_053	Residential	593964	4835299	1.5	89	123	83	55	0.1%
RE214600_054	Residential	593949	4835285	1.5	92	124	83	52	0.1%
RE214600_055	Residential	593938	4835273	1.5	93	124	83	48	0.1%
RE214600_056	Residential	593919	4835255	1.5	96	124	83	52	0.1%
RE214600_057	Residential	594070	4835454	1.5	76	118	83	40	0.1%
RE214600_058	Residential	594080	4835468	1.5	74	118	83	40	0.1%
RE214600_059	Residential	594086	4835463	1.5	75	118	83	41	0.1%
RE214600_060	Residential	594095	4835454	1.5	78	119	83	44	0.1%
RE214600_061	Residential	594098	4835448	1.5	78	119	83	44	0.1%
RE214600_062	Residential	594075	4835447	1.5	76	118	83	43	0.1%
RE214600_063	Residential	594090	4835458	1.5	77	118	83	43	0.1%
RE214600_064	Residential	594047	4835432	1.5	77	118	83	44	0.1%
RE214600_065	Residential	594052	4835428	1.5	77	118	83	44	0.1%
RE214600_066	Residential	594056	4835424	1.5	77	118	83	44	0.1%
RE214600_067	Residential	594061	4835420	1.5	78	118	83	47	0.1%
RE214600_068	Residential	594068	4835415	1.5	78	119	83	47	0.1%
RE214600_069	Residential	594022	4835361	1.5	82	120	83	52	0.1%
RE214600_070	Residential	593995	4835385	1.5	81	121	83	44	0.1%
RE214600_071	Residential	593999	4835381	1.5	82	121	83	47	0.1%
RE214600_072	Residential	594003	4835377	1.5	82	121	83	48	0.1%
RE214600_073	Residential	594009	4835371	1.5	82	121	83	49	0.1%
RE214600_074	Residential	594015	4835366	1.5	82	120	83	49	0.1%
RE214600_075	Residential	594003	4835343	1.5	84	121	83	55	0.1%
RE214600_076	Residential	593993	4835352	1.5	84	121	83	52	0.1%
RE214600_077	Residential	593998	4835348	1.5	84	121	83	55	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_078	Residential	593990	4835357	1.5	84	121	83	52	0.1%
RE214600_079	Residential	593985	4835362	1.5	83	122	83	50	0.1%
RE214600_080	Residential	593978	4835367	1.5	83	122	83	46	0.1%
RE214600_081	Residential	593872	4835162	1.5	106	131	83	68	0.2%
RE214600_082	Residential	593897	4835267	1.5	100	128	83	46	0.1%
RE214600_083	Residential	593835	4835188	1.5	107	130	83	52	0.1%
RE214700_002	Residential	593796	4835295	1.5	106	129	83	33	0.1%
RE214700_003	Residential	593801	4835284	1.5	106	129	83	34	0.1%
RE214700_004	Residential	593804	4835270	1.5	106	129	83	34	0.1%
RE214700_005	Residential	593808	4835258	1.5	106	129	83	35	0.1%
RE214700_006	Residential	593812	4835244	1.5	106	130	83	40	0.1%
RE214700_007	Residential	593815	4835229	1.5	107	130	83	42	0.1%
RE214700_008	Residential	593820	4835217	1.5	107	130	83	43	0.1%
RE214700_009	Residential	593927	4835372	1.5	88	123	83	40	0.1%
RE214700_010	Residential	593945	4835355	1.5	87	123	83	43	0.1%
RE214700_011	Residential	593938	4835347	1.5	88	123	83	43	0.1%
RE214700_012	Residential	593932	4835340	1.5	90	123	83	43	0.1%
RE214700_013	Residential	593925	4835333	1.5	91	124	83	43	0.1%
RE214700_014	Residential	593897	4835305	1.5	95	124	83	42	0.1%
RE214700_015	Residential	593848	4835261	1.5	104	129	83	42	0.1%
RE214700_016	Residential	593843	4835273	1.5	104	129	83	40	0.1%
RE214700_017	Residential	593842	4835286	1.5	104	129	83	39	0.1%
RE214700_018	Residential	593871	4835315	1.5	100	128	83	36	0.1%
RE214700_019	Residential	593884	4835326	1.5	97	125	83	37	0.1%
RE214700_020	Residential	593911	4835354	1.5	90	123	83	39	0.1%
RE214700_021	Residential	593920	4835363	1.5	89	123	83	41	0.1%
RE214700_022	Residential	593892	4835387	1.5	89	123	83	32	0.1%
RE214700_023	Residential	593878	4835378	1.5	93	124	83	31	0.1%
RE214700_024	Residential	593867	4835368	1.5	97	126	83	34	0.1%
RE214700_025	Residential	593847	4835347	1.5	103	128	83	32	0.1%
RE214700_026	Residential	593792	4835308	1.5	106	129	83	32	0.1%
RE214700_027	Residential	593899	4835400	1.5	89	123	83	33	0.1%
RE214700_028	Residential	593915	4835323	1.5	92	124	83	42	0.1%
RE214700_029	Residential	593905	4835315	1.5	92	124	83	39	0.1%
RE214700_030	Residential	593888	4835295	1.5	99	128	83	44	0.1%
RE214700_031	Residential	593878	4835285	1.5	103	128	83	42	0.1%
RE214700_032	Residential	593872	4835268	1.5	104	129	83	41	0.1%
RE214700_033	Residential	593850	4835248	1.5	105	129	83	43	0.1%
RE214700_034	Residential	593837	4835298	1.5	104	129	83	33	0.1%
RE214700_035	Residential	593859	4835303	1.5	104	129	83	38	0.1%
RE214700_036	Residential	593893	4835335	1.5	93	124	83	37	0.1%
RE214700_037	Residential	593901	4835345	1.5	91	124	83	39	0.1%
RE214700_038	Residential	593857	4835357	1.5	100	128	83	35	0.1%
RE214700_039	Residential	593838	4835336	1.5	104	129	83	31	0.1%
RE214700_040	Residential	593826	4835328	1.5	104	129	83	33	0.1%
RE214700_041	Residential	594050	4835472	1.5	75	118	83	38	0.1%
RE214700_042	Residential	594045	4835477	1.5	75	118	83	38	0.1%
RE214700_043	Residential	594021	4835499	1.5	76	117	83	34	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_044	Residential	594015	4835505	1.5	77	118	83	34	0.1%
RE214700_045	Residential	594010	4835510	1.5	78	119	83	33	0.1%
RE214700_046	Residential	594005	4835514	1.5	78	119	83	32	0.1%
RE214700_047	Residential	593999	4835520	1.5	78	119	83	31	0.1%
RE214700_048	Residential	594007	4835538	1.5	74	117	83	30	0.1%
RE214700_049	Residential	594029	4835518	1.5	73	117	83	33	0.1%
RE214700_050	Residential	594041	4835505	1.5	74	117	83	35	0.1%
RE214700_051	Residential	594052	4835496	1.5	74	117	83	36	0.1%
RE214700_052	Residential	594065	4835484	1.5	74	118	83	37	0.1%
RE214700_053	Residential	594071	4835479	1.5	74	118	83	38	0.1%
RE214700_054	Residential	594063	4835459	1.5	76	118	83	39	0.1%
RE214700_055	Residential	594059	4835463	1.5	75	118	83	39	0.1%
RE214700_056	Residential	594055	4835466	1.5	75	118	83	38	0.1%
RE214700_057	Residential	594041	4835481	1.5	75	118	83	37	0.1%
RE214700_058	Residential	594035	4835486	1.5	75	118	83	35	0.1%
RE214700_059	Residential	594030	4835490	1.5	75	118	83	34	0.1%
RE214700_060	Residential	594025	4835494	1.5	76	117	83	34	0.1%
RE214700_061	Residential	593994	4835525	1.5	78	119	83	31	0.1%
RE214700_062	Residential	594012	4835533	1.5	74	117	83	31	0.1%
RE214700_063	Residential	594018	4835528	1.5	74	117	83	32	0.1%
RE214700_064	Residential	594023	4835523	1.5	73	117	83	33	0.1%
RE214700_065	Residential	594035	4835511	1.5	73	117	83	33	0.1%
RE214700_066	Residential	594046	4835501	1.5	74	117	83	35	0.1%
RE214700_067	Residential	594057	4835491	1.5	74	118	83	37	0.1%
RE214700_068	Residential	594061	4835487	1.5	74	118	83	37	0.1%
RE214700_069	Residential	594075	4835473	1.5	74	118	83	38	0.1%
RE214700_070	Residential	593973	4835506	1.5	79	120	83	31	0.1%
RE214700_071	Residential	593991	4835488	1.5	79	120	83	33	0.1%
RE214700_072	Residential	593995	4835485	1.5	79	120	83	33	0.1%
RE214700_073	Residential	594004	4835475	1.5	79	120	83	34	0.1%
RE214700_074	Residential	594013	4835466	1.5	79	119	83	34	0.1%
RE214700_075	Residential	594022	4835457	1.5	78	119	83	36	0.1%
RE214700_076	Residential	594039	4835440	1.5	77	118	83	41	0.1%
RE214700_077	Residential	593979	4835500	1.5	79	120	83	31	0.1%
RE214700_078	Residential	593985	4835493	1.5	79	120	83	32	0.1%
RE214700_079	Residential	593998	4835482	1.5	79	120	83	33	0.1%
RE214700_080	Residential	594008	4835471	1.5	79	120	83	34	0.1%
RE214700_081	Residential	594018	4835462	1.5	79	119	83	35	0.1%
RE214700_082	Residential	594027	4835453	1.5	78	119	83	37	0.1%
RE214700_083	Residential	594030	4835449	1.5	78	119	83	37	0.1%
RE214700_084	Residential	594036	4835444	1.5	77	118	83	39	0.1%
RE214700_085	Residential	594043	4835436	1.5	77	118	83	42	0.1%
RE214700_086	Residential	593960	4835422	1.5	81	122	83	37	0.1%
RE214700_087	Residential	593956	4835426	1.5	81	122	83	37	0.1%
RE214700_088	Residential	593963	4835417	1.5	81	122	83	38	0.1%
RE214700_089	Residential	593968	4835413	1.5	81	122	83	38	0.1%
RE214700_090	Residential	593973	4835409	1.5	81	121	83	38	0.1%
RE214700_091	Residential	593978	4835404	1.5	81	121	83	38	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_092	Residential	593981	4835400	1.5	81	121	83	40	0.1%
RE214700_093	Residential	593948	4835434	1.5	82	122	83	37	0.1%
RE214700_094	Residential	593938	4835443	1.5	83	122	83	36	0.1%
RE214700_095	Residential	593934	4835448	1.5	83	122	83	36	0.1%
RE214700_096	Residential	593988	4835393	1.5	81	121	83	40	0.1%
RE214700_097	Residential	593991	4835389	1.5	81	121	83	42	0.1%
RE214700_098	Residential	593943	4835438	1.5	82	122	83	36	0.1%
RE214700_099	Residential	593929	4835453	1.5	83	122	83	35	0.1%
RE214700_100	Residential	593974	4835372	1.5	83	122	83	45	0.1%
RE214700_101	Residential	593962	4835383	1.5	83	122	83	42	0.1%
RE214700_102	Residential	593958	4835387	1.5	83	122	83	42	0.1%
RE214700_103	Residential	593951	4835396	1.5	83	122	83	41	0.1%
RE214700_104	Residential	593947	4835399	1.5	84	122	83	42	0.1%
RE214700_105	Residential	593941	4835404	1.5	85	122	83	41	0.1%
RE214700_106	Residential	593922	4835422	1.5	86	123	83	37	0.1%
RE214700_107	Residential	593918	4835425	1.5	86	123	83	37	0.1%
RE214700_108	Residential	593968	4835378	1.5	83	122	83	43	0.1%
RE214700_109	Residential	593955	4835390	1.5	83	122	83	41	0.1%
RE214700_110	Residential	593936	4835409	1.5	85	123	83	39	0.1%
RE214700_111	Residential	593932	4835413	1.5	86	123	83	39	0.1%
RE214700_112	Residential	593927	4835416	1.5	86	123	83	37	0.1%
RE214700_113	Residential	593915	4835429	1.5	86	123	83	34	0.1%
RE214700_114	Residential	593909	4835436	1.5	86	123	83	33	0.1%
RE214800_004	Residential	594026	4835615	1.5	72	117	83	25	0.1%
RE214800_005	Residential	593831	4835365	1.5	104	128	83	30	0.1%
RE214800_006	Residential	593852	4835385	1.5	99	127	83	33	0.1%
RE214800_007	Residential	593881	4835418	1.5	88	123	83	30	0.1%
RE214800_012	Residential	593782	4835346	1.5	106	129	83	30	0.1%
RE214800_013	Residential	593787	4835332	1.5	106	129	83	30	0.1%
RE214800_014	Residential	593789	4835319	1.5	106	129	83	30	0.1%
RE214800_015	Residential	593821	4835355	1.5	104	129	83	31	0.1%
RE214800_016	Residential	593842	4835375	1.5	101	128	83	32	0.1%
RE214800_017	Residential	593862	4835398	1.5	95	124	83	30	0.1%
RE214800_018	Residential	593873	4835409	1.5	91	123	83	31	0.1%
RE214800_019	Residential	593990	4835530	1.5	78	119	83	30	0.1%
RE214800_020	Residential	593986	4835536	1.5	78	119	83	29	0.1%
RE214800_021	Residential	593998	4835545	1.5	76	117	83	29	0.1%
RE214800_022	Residential	594003	4835542	1.5	75	117	83	30	0.1%
RE214800_023	Residential	593968	4835554	1.5	79	119	83	28	0.1%
RE214800_024	Residential	593977	4835565	1.5	78	119	83	28	0.1%
RE214800_025	Residential	593946	4835572	1.5	79	120	83	24	0.1%
RE214800_026	Residential	593927	4835596	1.5	79	120	83	21	0.0%
RE214800_027	Residential	593950	4835594	1.5	79	120	83	24	0.1%
RE214800_028	Residential	593964	4835580	1.5	78	119	83	26	0.1%
RE214800_029	Residential	593968	4835576	1.5	78	119	83	26	0.1%
RE214800_030	Residential	593973	4835571	1.5	78	119	83	28	0.1%
RE214800_031	Residential	593987	4835592	1.5	72	117	83	28	0.1%
RE214800_032	Residential	593962	4835559	1.5	79	120	83	27	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214800_033	Residential	593956	4835562	1.5	79	120	83	25	0.1%
RE214800_034	Residential	593952	4835567	1.5	79	120	83	25	0.1%
RE214800_035	Residential	593941	4835579	1.5	79	120	83	23	0.1%
RE214800_036	Residential	593936	4835582	1.5	79	120	83	23	0.1%
RE214800_037	Residential	593931	4835589	1.5	79	120	83	21	0.0%
RE214800_038	Residential	593938	4835605	1.5	79	120	83	23	0.1%
RE214800_039	Residential	593945	4835599	1.5	79	120	83	23	0.1%
RE214800_040	Residential	593953	4835589	1.5	79	119	83	24	0.1%
RE214800_041	Residential	593959	4835583	1.5	79	119	83	25	0.1%
RE214800_042	Residential	593997	4835583	1.5	72	117	83	28	0.1%
RE214800_043	Residential	593992	4835588	1.5	72	117	83	28	0.1%
RE214800_044	Residential	593982	4835599	1.5	73	117	83	26	0.1%
RE214800_045	Residential	593977	4835603	1.5	74	117	83	26	0.1%
RE214800_046	Residential	593970	4835610	1.5	76	117	83	25	0.1%
RE214800_052	Residential	593995	4835609	1.5	72	117	83	25	0.1%
RE214800_053	Residential	593999	4835605	1.5	72	117	83	26	0.1%
RE214800_056	Residential	593989	4835614	1.5	72	117	83	25	0.1%
RE214800_057	Residential	594004	4835600	1.5	72	117	83	28	0.1%
RE214800_058	Residential	594008	4835595	1.5	72	117	83	28	0.1%
RE214800_059	Residential	593969	4835510	1.5	79	120	83	30	0.1%
RE214800_060	Residential	593964	4835515	1.5	79	120	83	28	0.1%
RE214800_061	Residential	593919	4835462	1.5	84	122	83	32	0.1%
RE214800_062	Residential	593941	4835536	1.5	80	121	83	29	0.1%
RE214800_063	Residential	593932	4835545	1.5	80	121	83	27	0.1%
RE214800_064	Residential	593919	4835557	1.5	80	121	83	25	0.1%
RE214800_065	Residential	593923	4835458	1.5	84	122	83	35	0.1%
RE214800_066	Residential	593916	4835466	1.5	84	122	83	32	0.1%
RE214800_067	Residential	593938	4835540	1.5	80	121	83	28	0.1%
RE214800_068	Residential	593926	4835550	1.5	80	121	83	27	0.1%
RE214800_069	Residential	593924	4835553	1.5	80	121	83	27	0.1%
RE214800_070	Residential	593909	4835569	1.5	80	121	83	24	0.1%
RE214800_071	Residential	593905	4835574	1.5	80	121	83	24	0.1%
RE214800_072	Residential	593913	4835564	1.5	80	121	83	24	0.1%
RE214800_073	Residential	593902	4835442	1.5	86	123	83	31	0.1%
RE214800_074	Residential	593897	4835447	1.5	86	123	83	31	0.1%
RE214800_075	Residential	593945	4835532	1.5	80	120	83	27	0.1%
RE214800_076	Residential	593781	4835357	1.5	105	129	83	30	0.1%
RE214900_001	Residential	593921	4835605	1.5	79	120	83	21	0.0%
RE214900_008	Residential	593899	4835580	1.5	80	121	83	24	0.1%
RE214900_009	Residential	593896	4835585	1.5	80	121	83	23	0.1%
RE214900_010	Residential	593893	4835591	1.5	80	121	83	23	0.1%
RE217600_001	Residential	591736	4837227	1.5	44	88	83	1	0.0%
RE217600_002	Residential	591766	4837262	1.5	40	84	83	2	0.0%
RE218700_001	Residential	590959	4838020	1.5	60	104	83	8	0.0%
RE218700_002	Residential	590988	4838088	1.5	56	101	83	6	0.0%
RE220800_001	Residential	590421	4839357	1.5	65	106	83	2	0.0%
RE220900_001	Residential	590180	4839466	1.5	56	97	83	4	0.0%
RE220900_002	Residential	590517	4839408	1.5	57	97	83	2	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE220900_003	Residential	590379	4839398	1.5	65	105	83	2	0.0%
RE221000_001	Residential	590454	4839467	1.5	60	101	83	2	0.0%
RE221000_002	Residential	590412	4839513	1.5	60	101	83	2	0.0%
RE221300_001	Residential	590257	4839724	1.5	55	96	83	4	0.0%
RE221300_002	Residential	590236	4839764	1.5	56	97	83	5	0.0%
RE221300_003	Residential	590440	4839670	1.5	64	105	83	2	0.0%
RE222600_001	Residential	591012	4840654	1.5	60	102	83	5	0.0%
RE222700_001	Residential	590826	4840878	1.5	80	121	83	7	0.0%
RE222700_002	Residential	590788	4840912	1.5	80	121	83	10	0.0%
RE222700_003	Residential	590768	4840946	1.5	80	121	83	10	0.0%
RE222700_004	Residential	590744	4840967	1.5	80	121	83	9	0.0%
RE222700_005	Residential	590721	4840990	1.5	80	121	83	10	0.0%
RE222700_006	Residential	590621	4841031	1.5	86	120	83	14	0.0%
RE222800_001	Residential	590888	4840963	1.5	79	120	83	5	0.0%
RE222800_002	Residential	590866	4840985	1.5	80	121	83	6	0.0%
RE222800_003	Residential	590833	4841016	1.5	81	121	83	9	0.0%
RE222800_004	Residential	590542	4841175	1.5	104	129	83	33	0.1%
RE222800_005	Residential	591137	4840761	1.5	59	96	83	3	0.0%
RE222900_001	Residential	590805	4841056	1.5	81	121	83	10	0.0%
RE223100_001	Residential	590769	4841337	1.5	92	121	83	18	0.0%
RE224000_001	Residential	591729	4841911	1.5	56	97	83	8	0.0%
RE224000_002	Residential	591565	4842001	1.5	61	102	83	10	0.0%
RE224000_003	Residential	591896	4841760	1.5	52	97	83	8	0.0%
RE224000_004	Residential	592046	4841608	1.5	50	94	83	5	0.0%
RE224000_005	Residential	591982	4841673	1.5	51	96	83	6	0.0%
RE224000_006	Residential	592000	4841606	1.5	42	83	83	0	-
RE224000_007	Residential	592142	4841674	1.5	38	80	83	0	-
RE224000_008	Residential	591760	4841888	1.5	56	98	83	10	0.0%
RE224100_001	Residential	591661	4842108	1.5	62	103	83	10	0.0%
RE224200_001	Residential	591576	4842265	1.5	54	98	83	12	0.0%
RE225600_001	Residential	591815	4843783	1.5	89	119	83	22	0.1%
RE225700_001	Residential	591905	4843849	1.5	78	119	83	14	0.0%
RE225700_002	Residential	591627	4843848	1.5	105	130	83	47	0.1%
RE225800_001	Residential	591793	4843928	1.5	95	124	83	27	0.1%
RE226500_001	Residential	591915	4844500	1.5	101	126	83	32	0.1%
RE226500_002	Residential	592025	4844497	1.5	67	109	83	27	0.1%
RE226600_001	Residential	592085	4844601	1.5	64	108	83	34	0.1%
RE226700_001	Residential	592060	4844696	1.5	94	120	83	33	0.1%
RE226800_001	Residential	592117	4844789	1.5	88	119	83	31	0.1%
RE227000_001	Residential	592319	4844882	1.5	63	105	83	24	0.1%
RE227100_001	Residential	592377	4844982	1.5	70	115	83	36	0.1%
RE227100_002	Residential	592402	4845033	1.5	79	120	83	50	0.1%
RE227300_001	Residential	592788	4845012	1.5	57	99	83	8	0.0%
RE227800_001	Residential	592859	4845591	1.5	43	87	83	1	0.0%
RE227900_001	Residential	592776	4845681	1.5	52	96	83	6	0.0%
RE228000_001	Residential	595855	4844518	1.5	62	103	83	4	0.0%
RE228000_002	Residential	595865	4844534	1.5	63	104	83	3	0.0%
RE228000_003	Residential	595873	4844555	1.5	67	108	83	4	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228000_004	Residential	595887	4844563	1.5	67	108	83	5	0.0%
RE228000_005	Residential	595917	4844562	1.5	60	101	83	5	0.0%
RE228000_006	Residential	595931	4844548	1.5	63	108	83	5	0.0%
RE228000_007	Residential	595942	4844534	1.5	66	110	83	5	0.0%
RE228000_008	Child Care Centre	597841	4843717	1.5	57	101	83	5	0.0%
RE228000_009	Residential	595782	4844642	1.5	55	99	83	4	0.0%
RE228100_001	Residential	595810	4844669	1.5	58	102	83	5	0.0%
RE228300_028	Residential	595272	4845160	1.5	30	72	83	0	-
RE228300_029	Residential	595277	4845164	1.5	30	72	83	0	-
RE228300_030	Residential	595281	4845168	1.5	30	72	83	0	-
RE228300_031	Residential	595264	4845154	1.5	29	73	83	0	-
RE228300_032	Residential	595260	4845151	1.5	29	73	83	0	-
RE228300_033	Residential	595256	4845147	1.5	29	73	83	0	-
RE228300_034	Residential	595252	4845143	1.5	29	73	83	0	-
RE228300_035	Residential	595247	4845139	1.5	29	73	83	0	-
RE228400_004	Residential	595342	4845241	1.5	32	73	83	0	-
RE228400_005	Residential	595347	4845245	1.5	32	73	83	0	-
RE228400_006	Residential	595353	4845250	1.5	32	73	83	0	-
RE228400_007	Residential	595286	4845173	1.5	30	72	83	0	-
RE228400_008	Residential	595291	4845177	1.5	30	72	83	0	-
RE228400_009	Residential	595295	4845180	1.5	30	72	83	0	-
RE228400_010	Residential	595299	4845184	1.5	31	72	83	0	-
RE228400_011	Residential	595303	4845187	1.5	31	72	83	0	-
RE228400_013	Residential	595249	4845194	1.5	31	71	83	0	-
RE228400_014	Residential	595253	4845198	1.5	31	72	83	0	-
RE228400_015	Residential	595259	4845202	1.5	31	72	83	0	-
RE228400_045	Residential	595263	4845261	1.5	30	71	83	0	-
RE228400_046	Residential	595267	4845257	1.5	31	71	83	0	-
RE228400_047	Residential	595271	4845254	1.5	31	71	83	0	-
RE228400_048	Residential	595277	4845248	1.5	31	72	83	0	-
RE228400_049	Residential	595281	4845244	1.5	31	72	83	0	-
RE228400_050	Residential	595285	4845240	1.5	31	72	83	0	-
RE228400_051	Residential	595289	4845237	1.5	32	72	83	0	-
RE228400_052	Residential	595293	4845233	1.5	32	73	83	0	-
RE228400_053	Residential	595297	4845229	1.5	32	73	83	0	-
RE228400_054	Residential	595303	4845221	1.5	32	72	83	0	-
RE228400_055	Residential	595307	4845217	1.5	32	72	83	0	-
RE228400_056	Residential	595312	4845212	1.5	32	72	83	0	-
RE228400_057	Residential	595317	4845207	1.5	32	72	83	0	-
RE228400_058	Residential	595321	4845203	1.5	31	72	83	0	-
RE228400_059	Residential	595326	4845198	1.5	31	73	83	0	-
RE228500_009	Residential	595340	4845366	1.5	30	74	83	0	-
RE228500_010	Residential	595348	4845355	1.5	31	75	83	0	-
RE228500_011	Residential	595353	4845351	1.5	31	75	83	0	-
RE228500_012	Residential	595360	4845346	1.5	31	75	83	0	-
RE228500_013	Residential	595365	4845341	1.5	31	75	83	0	-
RE228500_014	Residential	595376	4845333	1.5	31	74	83	0	-
RE228500_015	Residential	595380	4845326	1.5	30	74	83	0	-

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228500_016	Residential	595386	4845320	1.5	30	74	83	0	-
RE228500_017	Residential	595391	4845315	1.5	30	74	83	0	-
RE228500_018	Residential	595402	4845305	1.5	31	73	83	0	-
RE228500_019	Residential	595406	4845298	1.5	31	72	83	0	-
RE228500_020	Residential	595415	4845288	1.5	31	72	83	0	-
RE228500_021	Residential	595423	4845280	1.5	31	72	83	0	-
RE228500_022	Residential	595357	4845254	1.5	32	73	83	0	-
RE228500_023	Residential	595366	4845262	1.5	32	73	83	0	-
RE228500_024	Residential	595370	4845267	1.5	32	72	83	0	-
RE228500_025	Residential	595375	4845271	1.5	32	72	83	0	-
RE228500_026	Residential	595355	4845285	1.5	31	72	83	0	-
RE228500_027	Residential	595349	4845290	1.5	31	72	83	0	-
RE228500_028	Residential	595342	4845297	1.5	30	72	83	0	-
RE228500_029	Residential	595338	4845303	1.5	30	73	83	0	-
RE228500_030	Residential	595329	4845311	1.5	29	73	83	0	-
RE228500_031	Residential	595322	4845317	1.5	29	73	83	0	-
RE228500_032	Residential	595315	4845323	1.5	30	74	83	0	-
RE228500_033	Residential	595310	4845328	1.5	30	74	83	0	-
RE228500_034	Residential	595301	4845337	1.5	30	74	83	0	-
RE228500_035	Residential	595297	4845343	1.5	30	74	83	0	-
RE228500_049	Residential	595279	4845312	1.5	29	73	83	0	-
RE228500_050	Residential	595289	4845303	1.5	28	72	83	0	-
RE228500_051	Residential	595293	4845297	1.5	29	72	83	0	-
RE228500_052	Residential	595300	4845290	1.5	30	72	83	0	-
RE228500_053	Residential	595305	4845285	1.5	30	72	83	0	-
RE228500_054	Residential	595315	4845277	1.5	31	72	83	0	-
RE228500_055	Residential	595319	4845273	1.5	31	72	83	0	-
RE228500_056	Residential	595323	4845268	1.5	31	72	83	0	-
RE228500_057	Residential	595329	4845264	1.5	32	72	83	0	-
RE228500_060	Residential	595450	4845298	1.5	31	72	83	0	-
RE228500_061	Residential	595448	4845302	1.5	31	72	83	0	-
RE228500_062	Residential	595444	4845307	1.5	31	73	83	0	-
RE228500_063	Residential	595440	4845311	1.5	31	73	83	0	-
RE228500_064	Residential	595437	4845315	1.5	31	73	83	0	-
RE228500_065	Residential	595433	4845320	1.5	30	73	83	0	-
RE228500_066	Residential	595429	4845324	1.5	30	74	83	0	-
RE228500_067	Residential	595426	4845327	1.5	30	74	83	0	-
RE228600_013	Residential	595369	4845462	1.5	27	71	83	0	-
RE228600_014	Residential	595377	4845450	1.5	27	71	83	0	-
RE228600_015	Residential	595389	4845444	1.5	28	72	83	0	-
RE228600_016	Residential	595398	4845435	1.5	29	73	83	0	-
RE228600_017	Residential	595404	4845426	1.5	30	74	83	0	-
RE228600_018	Residential	595412	4845418	1.5	30	74	83	0	-
RE228600_019	Residential	595420	4845409	1.5	31	75	83	0	-
RE228600_020	Residential	595431	4845401	1.5	31	75	83	0	-
RE228600_021	Residential	595439	4845389	1.5	32	76	83	0	-
RE228600_022	Residential	595447	4845380	1.5	32	76	83	0	-
RE228600_023	Residential	595455	4845370	1.5	31	75	83	0	-

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228600_024	Residential	595464	4845360	1.5	30	74	83	0	-
RE228600_025	Residential	595470	4845351	1.5	30	74	83	0	-
RE228600_026	Residential	595480	4845344	1.5	30	74	83	0	-
RE228600_027	Residential	595487	4845335	1.5	30	73	83	0	-
RE228600_036	Residential	595324	4845383	1.5	30	74	83	0	-
RE228600_037	Residential	595332	4845374	1.5	30	74	83	0	-
RE228600_038	Residential	595335	4845370	1.5	30	74	83	0	-
RE228600_039	Residential	595422	4845333	1.5	30	74	83	0	-
RE228600_040	Residential	595418	4845337	1.5	30	74	83	0	-
RE228600_041	Residential	595415	4845341	1.5	30	74	83	0	-
RE228600_042	Residential	595412	4845343	1.5	30	74	83	0	-
RE228600_043	Residential	595409	4845347	1.5	31	75	83	0	-
RE228600_044	Residential	595406	4845351	1.5	31	75	83	0	-
RE228600_045	Residential	595404	4845354	1.5	31	75	83	0	-
RE228600_046	Residential	595402	4845357	1.5	31	75	83	0	-
RE228600_047	Residential	595396	4845362	1.5	31	75	83	0	-
RE228600_048	Residential	595392	4845366	1.5	31	75	83	0	-
RE228600_049	Residential	595390	4845369	1.5	31	75	83	0	-
RE228600_050	Residential	595387	4845372	1.5	31	75	83	0	-
RE228600_051	Residential	595383	4845375	1.5	31	75	83	0	-
RE228600_052	Residential	595380	4845378	1.5	31	75	83	0	-
RE228600_053	Residential	595377	4845380	1.5	31	75	83	0	-
RE228600_054	Residential	595374	4845383	1.5	31	75	83	0	-
RE228600_055	Residential	595371	4845387	1.5	31	75	83	0	-
RE228600_056	Residential	595369	4845389	1.5	31	75	83	0	-
RE228600_057	Residential	595366	4845392	1.5	30	74	83	0	-
RE228600_058	Residential	595363	4845395	1.5	30	74	83	0	-
RE228600_059	Residential	595361	4845397	1.5	30	74	83	0	-
RE228600_060	Residential	595358	4845400	1.5	30	74	83	0	-
RE228600_061	Residential	595356	4845402	1.5	30	74	83	0	-
RE228600_062	Residential	595353	4845405	1.5	30	74	83	0	-
RE228600_063	Residential	593163	4846308	1.5	43	87	83	3	0.0%
RE228700_010	Residential	593290	4846362	1.5	49	93	83	6	0.0%
RE228800_001	Residential	593003	4846574	1.5	50	92	83	10	0.0%
RE228800_002	Residential	593037	4846534	1.5	47	89	83	8	0.0%
RE228800_003	Residential	593163	4846512	1.5	45	84	83	1	0.0%
RE228900_001	Residential	592951	4846627	1.5	54	95	83	17	0.0%
RE228900_002	Residential	592887	4846738	1.5	57	102	83	24	0.1%
RE229000_001	Residential	593405	4846521	1.5	44	88	83	1	0.0%
RE229100_001	Residential	593407	4846583	1.5	43	87	83	1	0.0%
RE230200_001	Residential	594211	4847001	1.5	39	80	83	0	-
RE230300_001	Residential	594050	4847308	1.5	47	88	83	3	0.0%
RE230300_002	Residential	593923	4847396	1.5	47	91	83	1	0.0%
RE230300_003	Residential	594697	4846565	1.5	36	77	83	0	-
RE230300_004	Residential	595111	4846102	1.5	33	77	83	0	-
RE230300_005	Residential	595605	4845645	1.5	30	74	83	0	-
RE230400_001	Residential	593872	4847645	1.5	46	88	83	1	0.0%
RE230400_002	Residential	593822	4847679	1.5	45	86	83	5	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230400_006	Residential	594520	4846864	1.5	36	80	83	0	-
RE230400_007	Residential	594996	4846385	1.5	39	79	83	0	-
RE230400_008	Residential	594973	4846410	1.5	39	80	83	0	-
RE230400_009	Residential	594936	4846427	1.5	39	79	83	0	-
RE230400_010	Residential	595705	4845694	1.5	34	79	83	0	-
RE230400_011	Residential	595874	4845530	1.5	33	77	83	0	-
RE230500_001	Residential	594280	4847364	1.5	51	92	83	4	0.0%
RE230500_002	Residential	594446	4847099	1.5	38	80	83	0	-
RE230500_003	Residential	594531	4847041	1.5	36	80	83	0	-
RE230500_004	Residential	594643	4846861	1.5	36	80	83	0	-
RE230500_005	Residential	594671	4846840	1.5	36	80	83	0	-
RE230500_006	Residential	595049	4846474	1.5	37	78	83	0	-
RE230500_007	Residential	595486	4846036	1.5	34	78	83	0	-
RE230500_008	Residential	595463	4846068	1.5	34	78	83	0	-
RE230500_009	Residential	595438	4846095	1.5	35	77	83	0	-
RE230500_010	Residential	595925	4845612	1.5	36	81	83	0	-
RE230500_011	Residential	595941	4845561	1.5	35	79	83	0	-
RE230500_012	Residential	596152	4845388	1.5	38	82	83	0	-
RE230500_013	Residential	596418	4845009	1.5	70	111	83	26	0.1%
RE230500_014	Residential	596697	4844834	1.5	38	81	83	0	-
RE230600_001	Residential	594927	4846729	1.5	41	82	83	0	-
RE230600_002	Residential	595293	4846327	1.5	39	80	83	0	-
RE230600_003	Residential	596445	4845172	1.5	80	121	83	65	0.1%
RE230600_004	Residential	596565	4845058	1.5	47	89	83	7	0.0%
RE230600_005	Residential	596657	4844932	1.5	42	83	83	0	-
RE230600_006	Residential	596705	4844908	1.5	40	82	83	0	-
RE230900_001	Residential	597840	4844261	1.5	82	123	83	64	0.1%
RE230900_002	Residential	597853	4844274	1.5	80	121	83	47	0.1%
RE230900_003	Residential	597866	4844285	1.5	79	120	83	38	0.1%
RE230900_004	Residential	597879	4844301	1.5	73	118	83	32	0.1%
RE230900_005	Residential	597887	4844307	1.5	73	117	83	29	0.1%
RE230900_006	Residential	597900	4844320	1.5	72	117	83	26	0.1%
RE230900_007	Residential	597908	4844331	1.5	72	117	83	23	0.1%
RE230900_008	Residential	597922	4844342	1.5	72	117	83	18	0.0%
RE230900_009	Residential	597931	4844352	1.5	72	116	83	16	0.0%
RE230900_010	Residential	597943	4844365	1.5	70	114	83	15	0.0%
RE230900_011	Residential	597954	4844376	1.5	67	112	83	14	0.0%
RE230900_012	Residential	597816	4844283	1.5	83	123	83	74	0.2%
RE230900_013	Residential	597825	4844289	1.5	82	122	83	60	0.1%
RE230900_014	Residential	597835	4844299	1.5	80	121	83	51	0.1%
RE230900_015	Residential	597842	4844308	1.5	80	120	83	43	0.1%
RE230900_016	Residential	597849	4844314	1.5	79	120	83	39	0.1%
RE230900_017	Residential	597859	4844324	1.5	75	118	83	36	0.1%
RE230900_018	Residential	597867	4844331	1.5	73	118	83	32	0.1%
RE230900_019	Residential	597875	4844341	1.5	73	117	83	30	0.1%
RE230900_020	Residential	597884	4844348	1.5	73	117	83	29	0.1%
RE230900_021	Residential	597892	4844356	1.5	72	117	83	27	0.1%
RE230900_022	Residential	597899	4844365	1.5	72	117	83	24	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_023	Residential	597905	4844373	1.5	72	117	83	21	0.0%
RE230900_024	Residential	597917	4844381	1.5	72	116	83	18	0.0%
RE230900_025	Residential	597924	4844389	1.5	71	116	83	18	0.0%
RE230900_026	Residential	597931	4844399	1.5	69	114	83	17	0.0%
RE230900_027	Residential	597646	4844600	1.5	82	122	83	121	0.3%
RE230900_028	Residential	597653	4844613	1.5	80	121	83	105	0.2%
RE230900_029	Residential	597660	4844623	1.5	80	120	83	95	0.2%
RE230900_030	Residential	597665	4844629	1.5	80	120	83	88	0.2%
RE230900_031	Residential	597835	4844353	1.5	78	119	83	41	0.1%
RE230900_032	Residential	597831	4844358	1.5	78	119	83	42	0.1%
RE230900_033	Residential	597825	4844365	1.5	78	119	83	42	0.1%
RE230900_034	Residential	597820	4844371	1.5	79	119	83	42	0.1%
RE230900_035	Residential	597814	4844379	1.5	79	119	83	44	0.1%
RE230900_036	Residential	597811	4844383	1.5	79	119	83	44	0.1%
RE230900_037	Residential	597806	4844390	1.5	79	119	83	44	0.1%
RE230900_038	Residential	597801	4844396	1.5	79	120	83	45	0.1%
RE230900_039	Residential	597796	4844403	1.5	79	120	83	47	0.1%
RE230900_040	Residential	597792	4844410	1.5	79	120	83	48	0.1%
RE230900_041	Residential	597786	4844416	1.5	79	120	83	49	0.1%
RE230900_042	Residential	597783	4844423	1.5	79	120	83	49	0.1%
RE230900_043	Residential	597781	4844430	1.5	79	119	83	50	0.1%
RE230900_044	Residential	597777	4844436	1.5	79	120	83	52	0.1%
RE230900_045	Residential	597773	4844443	1.5	79	119	83	52	0.1%
RE230900_046	Residential	597770	4844450	1.5	79	119	83	52	0.1%
RE230900_047	Residential	597766	4844457	1.5	79	119	83	52	0.1%
RE230900_048	Residential	597762	4844463	1.5	79	119	83	53	0.1%
RE230900_049	Residential	597758	4844470	1.5	79	119	83	54	0.1%
RE230900_050	Residential	597754	4844477	1.5	79	119	83	56	0.1%
RE230900_051	Residential	597751	4844484	1.5	78	119	83	56	0.1%
RE230900_052	Residential	597747	4844490	1.5	78	119	83	57	0.1%
RE230900_053	Residential	597744	4844497	1.5	78	119	83	56	0.1%
RE230900_054	Residential	597739	4844504	1.5	78	119	83	57	0.1%
RE230900_055	Residential	597725	4844530	1.5	78	119	83	59	0.1%
RE230900_056	Residential	597721	4844535	1.5	78	119	83	59	0.1%
RE230900_057	Residential	597717	4844543	1.5	78	119	83	59	0.1%
RE230900_058	Residential	597713	4844549	1.5	78	119	83	59	0.1%
RE230900_059	Residential	597710	4844557	1.5	78	119	83	59	0.1%
RE230900_060	Residential	597705	4844564	1.5	78	119	83	61	0.1%
RE230900_061	Residential	597701	4844572	1.5	79	120	83	62	0.1%
RE230900_062	Residential	597697	4844579	1.5	79	120	83	64	0.1%
RE230900_063	Residential	597692	4844586	1.5	79	120	83	65	0.1%
RE230900_064	Residential	597688	4844592	1.5	79	120	83	67	0.2%
RE230900_065	Residential	597684	4844600	1.5	79	120	83	71	0.2%
RE230900_066	Residential	597681	4844607	1.5	79	120	83	72	0.2%
RE230900_067	Residential	597651	4844608	1.5	81	121	83	110	0.3%
RE230900_068	Residential	597659	4844619	1.5	80	121	83	95	0.2%
RE230900_069	Residential	597659	4844582	1.5	81	122	83	110	0.3%
RE230900_070	Residential	597661	4844578	1.5	81	122	83	107	0.2%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_071	Residential	597664	4844572	1.5	81	122	83	107	0.2%
RE230900_072	Residential	597668	4844567	1.5	81	122	83	103	0.2%
RE230900_073	Residential	597671	4844560	1.5	81	122	83	98	0.2%
RE230900_074	Residential	597674	4844556	1.5	81	122	83	96	0.2%
RE230900_075	Residential	597678	4844550	1.5	81	122	83	94	0.2%
RE230900_076	Residential	597681	4844543	1.5	81	122	83	92	0.2%
RE230900_077	Residential	597684	4844537	1.5	81	122	83	92	0.2%
RE230900_078	Residential	597688	4844532	1.5	81	122	83	88	0.2%
RE230900_079	Residential	597691	4844527	1.5	81	122	83	85	0.2%
RE230900_080	Residential	597695	4844521	1.5	81	122	83	85	0.2%
RE230900_081	Residential	597697	4844516	1.5	81	122	83	84	0.2%
RE230900_082	Residential	597714	4844486	1.5	81	122	83	81	0.2%
RE230900_083	Residential	597717	4844481	1.5	81	122	83	80	0.2%
RE230900_084	Residential	597720	4844476	1.5	81	122	83	80	0.2%
RE230900_085	Residential	597723	4844470	1.5	81	122	83	81	0.2%
RE230900_086	Residential	597726	4844464	1.5	81	122	83	80	0.2%
RE230900_087	Residential	597729	4844460	1.5	81	122	83	80	0.2%
RE230900_088	Residential	597732	4844455	1.5	81	122	83	80	0.2%
RE230900_089	Residential	597736	4844448	1.5	81	122	83	79	0.2%
RE230900_090	Residential	597740	4844440	1.5	81	122	83	77	0.2%
RE230900_091	Residential	597743	4844435	1.5	81	122	83	77	0.2%
RE230900_092	Residential	597747	4844429	1.5	81	122	83	76	0.2%
RE230900_093	Residential	597749	4844423	1.5	81	122	83	75	0.2%
RE230900_094	Residential	597752	4844418	1.5	81	122	83	74	0.2%
RE230900_095	Residential	597755	4844413	1.5	81	122	83	73	0.2%
RE230900_096	Residential	597758	4844409	1.5	81	122	83	71	0.2%
RE230900_097	Residential	597762	4844402	1.5	81	122	83	68	0.2%
RE230900_098	Residential	597765	4844392	1.5	82	123	83	74	0.2%
RE230900_099	Residential	597769	4844386	1.5	82	122	83	71	0.2%
RE230900_100	Residential	597773	4844382	1.5	82	122	83	64	0.1%
RE230900_101	Residential	597776	4844377	1.5	81	122	83	64	0.1%
RE230900_102	Residential	597784	4844369	1.5	81	122	83	60	0.1%
RE230900_103	Residential	597787	4844364	1.5	81	122	83	58	0.1%
RE230900_104	Residential	597791	4844360	1.5	81	122	83	56	0.1%
RE230900_105	Residential	597794	4844354	1.5	81	122	83	56	0.1%
RE230900_106	Residential	597798	4844349	1.5	81	122	83	55	0.1%
RE230900_107	Residential	597802	4844343	1.5	81	122	83	55	0.1%
RE230900_108	Residential	597805	4844339	1.5	81	122	83	55	0.1%
RE230900_109	Residential	597808	4844334	1.5	81	122	83	55	0.1%
RE230900_110	Residential	597861	4844387	1.5	73	117	83	31	0.1%
RE230900_111	Residential	597868	4844394	1.5	73	117	83	30	0.1%
RE230900_112	Residential	597877	4844404	1.5	72	117	83	26	0.1%
RE230900_113	Residential	597886	4844412	1.5	72	117	83	24	0.1%
RE230900_114	Residential	597892	4844420	1.5	72	117	83	22	0.1%
RE230900_115	Residential	597874	4844444	1.5	72	117	83	23	0.1%
RE230900_116	Residential	597870	4844440	1.5	72	117	83	24	0.1%
RE230900_117	Residential	597863	4844432	1.5	73	117	83	27	0.1%
RE230900_118	Residential	597859	4844428	1.5	73	117	83	28	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_119	Residential	597849	4844405	1.5	73	117	83	31	0.1%
RE230900_120	Residential	597845	4844411	1.5	73	117	83	32	0.1%
RE230900_121	Residential	597840	4844418	1.5	73	118	83	33	0.1%
RE230900_122	Residential	597836	4844424	1.5	73	118	83	34	0.1%
RE230900_123	Residential	597819	4844451	1.5	73	118	83	35	0.1%
RE230900_124	Residential	597815	4844458	1.5	73	118	83	35	0.1%
RE230900_125	Residential	597834	4844465	1.5	73	117	83	31	0.1%
RE230900_126	Residential	597846	4844477	1.5	72	117	83	27	0.1%
RE230900_127	Residential	597812	4844466	1.5	73	118	83	35	0.1%
RE230900_128	Residential	597808	4844471	1.5	73	118	83	36	0.1%
RE230900_129	Residential	597804	4844480	1.5	73	118	83	36	0.1%
RE230900_130	Residential	597801	4844485	1.5	73	118	83	37	0.1%
RE230900_131	Residential	597796	4844493	1.5	73	118	83	37	0.1%
RE230900_132	Residential	597793	4844499	1.5	73	118	83	37	0.1%
RE230900_133	Residential	597788	4844505	1.5	73	118	83	38	0.1%
RE230900_134	Residential	597785	4844512	1.5	73	118	83	38	0.1%
RE230900_135	Residential	597781	4844519	1.5	73	118	83	38	0.1%
RE230900_136	Residential	597777	4844525	1.5	74	118	83	40	0.1%
RE230900_137	Residential	597772	4844533	1.5	74	118	83	42	0.1%
RE230900_138	Residential	597769	4844540	1.5	74	118	83	45	0.1%
RE230900_139	Residential	597765	4844546	1.5	75	118	83	45	0.1%
RE230900_140	Residential	597762	4844553	1.5	76	118	83	46	0.1%
RE230900_141	Residential	597758	4844559	1.5	76	118	83	47	0.1%
RE230900_142	Residential	597755	4844565	1.5	77	118	83	47	0.1%
RE230900_143	Residential	597751	4844573	1.5	78	119	83	48	0.1%
RE230900_144	Residential	597747	4844579	1.5	78	119	83	48	0.1%
RE230900_145	Residential	597822	4844504	1.5	73	117	83	30	0.1%
RE230900_146	Residential	597827	4844497	1.5	73	117	83	30	0.1%
RE230900_147	Residential	597831	4844490	1.5	73	117	83	28	0.1%
RE230900_148	Residential	597839	4844470	1.5	73	117	83	28	0.1%
RE230900_149	Residential	598114	4844042	1.5	64	109	83	15	0.0%
RE230900_150	Residential	598102	4844034	1.5	66	111	83	18	0.0%
RE230900_151	Residential	598094	4844026	1.5	68	113	83	20	0.0%
RE230900_152	Residential	598074	4844024	1.5	71	116	83	20	0.0%
RE230900_153	Residential	598063	4844034	1.5	72	116	83	21	0.0%
RE230900_154	Residential	598053	4844045	1.5	72	117	83	21	0.0%
RE230900_155	Residential	598043	4844055	1.5	72	117	83	21	0.0%
RE230900_156	Residential	598034	4844069	1.5	72	117	83	21	0.0%
RE230900_157	Residential	598028	4844085	1.5	72	117	83	21	0.0%
RE230900_158	Residential	598036	4844098	1.5	71	116	83	19	0.0%
RE230900_159	Residential	598045	4844106	1.5	69	114	83	18	0.0%
RE230900_160	Residential	598054	4844116	1.5	67	111	83	18	0.0%
RE230900_161	Residential	598102	4844074	1.5	64	109	83	12	0.0%
RE230900_162	Residential	598085	4844058	1.5	67	111	83	18	0.0%
RE230900_163	Residential	598068	4844077	1.5	68	112	83	18	0.0%
RE230900_164	Residential	598080	4844091	1.5	65	110	83	17	0.0%
RE230900_165	Residential	598123	4844051	1.5	63	107	83	10	0.0%
RE230900_166	Residential	598199	4843983	1.5	59	103	83	6	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_167	Residential	598192	4843977	1.5	59	104	83	7	0.0%
RE230900_168	Residential	598185	4843968	1.5	60	105	83	9	0.0%
RE230900_169	Residential	598179	4843962	1.5	61	105	83	13	0.0%
RE230900_170	Residential	598170	4843953	1.5	62	107	83	15	0.0%
RE230900_171	Residential	598161	4843941	1.5	65	109	83	19	0.0%
RE230900_172	Residential	598158	4843928	1.5	66	111	83	19	0.0%
RE230900_173	Residential	598165	4843918	1.5	66	110	83	19	0.0%
RE230900_174	Residential	598171	4843911	1.5	66	110	83	19	0.0%
RE230900_175	Residential	598179	4843903	1.5	65	110	83	19	0.0%
RE230900_176	Residential	598185	4843897	1.5	65	109	83	19	0.0%
RE230900_177	Residential	598191	4843889	1.5	65	109	83	19	0.0%
RE230900_178	Residential	598197	4843884	1.5	64	109	83	19	0.0%
RE230900_179	Residential	598202	4843879	1.5	64	108	83	19	0.0%
RE230900_180	Residential	598209	4843872	1.5	64	108	83	19	0.0%
RE230900_181	Residential	598215	4843866	1.5	63	108	83	19	0.0%
RE230900_182	Residential	598222	4843858	1.5	63	107	83	19	0.0%
RE230900_192	Residential	598217	4843965	1.5	58	103	83	6	0.0%
RE230900_193	Residential	598205	4843953	1.5	59	104	83	8	0.0%
RE230900_194	Residential	598192	4843939	1.5	61	105	83	14	0.0%
RE230900_198	Residential	597969	4844339	1.5	68	113	83	13	0.0%
RE230900_199	Residential	597959	4844330	1.5	70	115	83	14	0.0%
RE230900_200	Residential	597950	4844320	1.5	72	116	83	15	0.0%
RE230900_201	Residential	597940	4844310	1.5	72	117	83	17	0.0%
RE230900_202	Residential	597931	4844302	1.5	72	117	83	20	0.0%
RE230900_203	Residential	597923	4844293	1.5	72	117	83	20	0.0%
RE230900_204	Residential	597913	4844282	1.5	73	117	83	25	0.1%
RE230900_205	Residential	597979	4844349	1.5	66	110	83	12	0.0%
RE230900_206	Residential	597848	4844272	1.5	81	121	83	50	0.1%
RE230900_207	Residential	597840	4844263	1.5	82	122	83	63	0.1%
RE230900_208	Residential	597864	4844244	1.5	81	121	83	51	0.1%
RE230900_209	Residential	597869	4844237	1.5	81	121	83	48	0.1%
RE230900_210	Residential	597874	4844230	1.5	80	121	83	47	0.1%
RE230900_211	Residential	597878	4844225	1.5	80	121	83	48	0.1%
RE230900_212	Residential	597888	4844211	1.5	80	121	83	45	0.1%
RE230900_213	Residential	597893	4844204	1.5	80	121	83	45	0.1%
RE230900_214	Residential	597899	4844195	1.5	80	121	83	45	0.1%
RE230900_215	Residential	597904	4844188	1.5	80	121	83	44	0.1%
RE230900_216	Residential	597884	4844219	1.5	80	121	83	45	0.1%
RE230900_217	Residential	597946	4844123	1.5	80	121	83	43	0.1%
RE230900_218	Residential	597910	4844177	1.5	80	121	83	45	0.1%
RE230900_219	Residential	597915	4844171	1.5	80	121	83	45	0.1%
RE230900_220	Residential	597921	4844162	1.5	80	121	83	45	0.1%
RE230900_221	Residential	597926	4844153	1.5	80	121	83	43	0.1%
RE230900_222	Residential	597936	4844139	1.5	80	121	83	43	0.1%
RE230900_223	Residential	597954	4844115	1.5	80	120	83	42	0.1%
RE230900_224	Residential	597959	4844106	1.5	80	120	83	42	0.1%
RE230900_225	Residential	597967	4844098	1.5	79	120	83	42	0.1%
RE230900_226	Residential	597972	4844091	1.5	79	120	83	40	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_227	Residential	597977	4844083	1.5	79	120	83	40	0.1%
RE230900_228	Residential	597982	4844076	1.5	79	120	83	40	0.1%
RE230900_229	Residential	597986	4844069	1.5	79	120	83	40	0.1%
RE230900_230	Residential	597991	4844063	1.5	79	120	83	40	0.1%
RE230900_231	Residential	597994	4844057	1.5	79	120	83	40	0.1%
RE230900_232	Residential	598000	4844050	1.5	79	120	83	40	0.1%
RE230900_233	Residential	598005	4844046	1.5	79	120	83	40	0.1%
RE230900_234	Residential	598013	4844034	1.5	79	120	83	40	0.1%
RE230900_235	Residential	598019	4844027	1.5	79	120	83	40	0.1%
RE230900_236	Residential	598024	4844022	1.5	79	120	83	40	0.1%
RE230900_237	Residential	598029	4844018	1.5	79	120	83	37	0.1%
RE230900_238	Residential	598032	4844011	1.5	79	120	83	40	0.1%
RE230900_239	Residential	598037	4844006	1.5	79	120	83	38	0.1%
RE230900_240	Residential	598044	4843998	1.5	79	119	83	38	0.1%
RE230900_241	Residential	597941	4844132	1.5	80	121	83	43	0.1%
RE230900_242	Residential	598051	4843992	1.5	78	119	83	36	0.1%
RE230900_243	Residential	598058	4843984	1.5	78	119	83	35	0.1%
RE230900_244	Residential	598066	4843978	1.5	78	118	83	35	0.1%
RE230900_245	Residential	598072	4843971	1.5	76	117	83	35	0.1%
RE230900_246	Residential	598078	4843964	1.5	76	117	83	35	0.1%
RE230900_247	Residential	598084	4843957	1.5	75	117	83	33	0.1%
RE230900_257	Residential	598130	4844202	1.5	57	102	83	6	0.0%
RE230900_258	Residential	598131	4844192	1.5	57	102	83	6	0.0%
RE230900_259	Residential	598135	4844179	1.5	57	102	83	6	0.0%
RE230900_260	Residential	598147	4844156	1.5	57	101	83	6	0.0%
RE230900_261	Residential	598154	4844148	1.5	57	101	83	6	0.0%
RE230900_262	Residential	598161	4844140	1.5	56	101	83	6	0.0%
RE230900_263	Residential	598095	4844225	1.5	59	103	83	7	0.0%
RE230900_264	Residential	598095	4844213	1.5	60	104	83	7	0.0%
RE230900_265	Residential	598095	4844198	1.5	61	105	83	7	0.0%
RE230900_266	Residential	598094	4844188	1.5	61	106	83	7	0.0%
RE230900_272	Residential	598293	4843978	1.5	53	97	83	3	0.0%
RE230900_273	Residential	598282	4843987	1.5	53	98	83	3	0.0%
RE230900_274	Residential	598272	4843996	1.5	54	98	83	4	0.0%
RE230900_275	Residential	598261	4844006	1.5	54	99	83	4	0.0%
RE230900_276	Residential	598251	4844016	1.5	54	99	83	4	0.0%
RE230900_277	Residential	598243	4844025	1.5	55	99	83	4	0.0%
RE230900_278	Residential	598237	4844030	1.5	55	100	83	4	0.0%
RE230900_279	Residential	598231	4844036	1.5	55	100	83	4	0.0%
RE230900_280	Residential	598225	4844041	1.5	55	100	83	4	0.0%
RE230900_281	Residential	598220	4844046	1.5	56	100	83	4	0.0%
RE230900_282	Residential	598213	4844053	1.5	56	101	83	4	0.0%
RE230900_283	Residential	598133	4844117	1.5	61	105	83	7	0.0%
RE230900_285	Residential	598098	4844164	1.5	62	106	83	7	0.0%
RE230900_286	Residential	598103	4844154	1.5	62	106	83	7	0.0%
RE230900_287	Residential	598107	4844144	1.5	62	106	83	8	0.0%
RE230900_288	Residential	598172	4844129	1.5	56	100	83	5	0.0%
RE230900_289	Residential	598183	4844119	1.5	55	100	83	5	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_290	Residential	598190	4844111	1.5	55	100	83	5	0.0%
RE230900_291	Residential	598198	4844103	1.5	55	99	83	5	0.0%
RE230900_292	Residential	598205	4844095	1.5	55	99	83	5	0.0%
RE230900_293	Residential	598212	4844088	1.5	54	99	83	4	0.0%
RE230900_294	Residential	598185	4844065	1.5	58	102	83	6	0.0%
RE230900_295	Residential	598176	4844074	1.5	58	103	83	6	0.0%
RE230900_296	Residential	598166	4844083	1.5	59	103	83	6	0.0%
RE230900_297	Residential	598158	4844092	1.5	59	103	83	6	0.0%
RE230900_298	Residential	598148	4844101	1.5	59	104	83	6	0.0%
RE230900_299	Residential	598139	4844111	1.5	60	105	83	6	0.0%
RE230900_300	Residential	598118	4844130	1.5	61	106	83	7	0.0%
RE230900_301	Residential	598112	4844137	1.5	62	106	83	7	0.0%
RE230900_302	Residential	598231	4844068	1.5	54	98	83	4	0.0%
RE230900_303	Residential	598240	4844057	1.5	53	98	83	4	0.0%
RE230900_304	Residential	598258	4844039	1.5	53	97	83	4	0.0%
RE230900_305	Residential	598267	4844030	1.5	52	97	83	4	0.0%
RE230900_306	Residential	598275	4844021	1.5	52	97	83	4	0.0%
RE230900_307	Residential	598296	4844003	1.5	51	96	83	3	0.0%
RE230900_310	Residential	598286	4844012	1.5	52	96	83	4	0.0%
RE230900_312	Residential	598068	4844260	1.5	60	104	83	7	0.0%
RE230900_313	Residential	598248	4844048	1.5	53	98	83	4	0.0%
RE230900_315	Residential	598095	4844177	1.5	62	106	83	7	0.0%
RE230900_317	Residential	598062	4844211	1.5	63	108	83	9	0.0%
RE230900_318	Residential	598168	4844040	1.5	60	104	83	6	0.0%
RE230900_319	Residential	598156	4844051	1.5	60	105	83	6	0.0%
RE230900_320	Residential	598148	4844062	1.5	60	105	83	6	0.0%
RE230900_321	Residential	598135	4844072	1.5	61	106	83	7	0.0%
RE230900_322	Residential	598126	4844084	1.5	62	107	83	7	0.0%
RE230900_323	Residential	598113	4844094	1.5	63	107	83	9	0.0%
RE230900_324	Residential	598105	4844105	1.5	63	108	83	9	0.0%
RE230900_325	Residential	598096	4844112	1.5	64	108	83	9	0.0%
RE230900_326	Residential	598087	4844118	1.5	64	109	83	9	0.0%
RE230900_327	Residential	598077	4844131	1.5	65	109	83	9	0.0%
RE230900_328	Residential	598067	4844143	1.5	65	110	83	9	0.0%
RE230900_329	Residential	598061	4844157	1.5	65	110	83	9	0.0%
RE230900_330	Residential	598061	4844172	1.5	65	109	83	9	0.0%
RE230900_331	Residential	598061	4844185	1.5	64	109	83	9	0.0%
RE230900_332	Residential	598062	4844198	1.5	64	108	83	9	0.0%
RE230900_333	Residential	598063	4844224	1.5	63	107	83	8	0.0%
RE230900_334	Residential	598128	4844123	1.5	61	105	83	7	0.0%
RE230900_335	Residential	598138	4844168	1.5	57	102	83	6	0.0%
RE230900_337	Residential	598275	4843935	1.5	55	100	83	3	0.0%
RE230900_338	Residential	598267	4843942	1.5	56	100	83	5	0.0%
RE230900_339	Residential	598256	4843950	1.5	56	101	83	5	0.0%
RE230900_340	Residential	598247	4843960	1.5	56	101	83	5	0.0%
RE230900_341	Residential	598239	4843966	1.5	57	101	83	5	0.0%
RE230900_342	Residential	598233	4843974	1.5	57	102	83	5	0.0%
RE230900_343	Residential	598226	4843980	1.5	57	102	83	5	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_344	Residential	598218	4843987	1.5	58	102	83	5	0.0%
RE230900_345	Residential	598211	4843994	1.5	58	102	83	5	0.0%
RE230900_346	Residential	598205	4844002	1.5	58	103	83	5	0.0%
RE230900_347	Residential	598199	4844007	1.5	58	103	83	5	0.0%
RE230900_348	Residential	598190	4844015	1.5	59	103	83	6	0.0%
RE230900_349	Residential	598181	4844024	1.5	59	104	83	6	0.0%
RE230900_350	Residential	597947	4844283	1.5	72	117	83	20	0.0%
RE230900_351	Residential	597937	4844272	1.5	72	117	83	20	0.0%
RE230900_352	Residential	597929	4844264	1.5	72	117	83	23	0.1%
RE230900_353	Residential	597958	4844245	1.5	72	117	83	20	0.0%
RE230900_354	Residential	597947	4844234	1.5	72	117	83	22	0.1%
RE230900_355	Residential	597920	4844224	1.5	76	118	83	32	0.1%
RE230900_356	Residential	597911	4844235	1.5	77	118	83	33	0.1%
RE230900_357	Residential	597935	4844225	1.5	73	117	83	26	0.1%
RE230900_358	Residential	597903	4844242	1.5	78	119	83	33	0.1%
RE230900_359	Residential	597894	4844252	1.5	78	119	83	34	0.1%
RE230900_360	Residential	597885	4844262	1.5	79	119	83	35	0.1%
RE230900_361	Residential	597993	4844327	1.5	65	110	83	10	0.0%
RE230900_362	Residential	597985	4844320	1.5	67	112	83	11	0.0%
RE230900_363	Residential	597976	4844312	1.5	69	113	83	12	0.0%
RE230900_364	Residential	597966	4844301	1.5	71	115	83	14	0.0%
RE230900_365	Residential	597956	4844290	1.5	72	116	83	17	0.0%
RE230900_366	Residential	597988	4844228	1.5	70	115	83	18	0.0%
RE230900_367	Residential	597980	4844220	1.5	71	116	83	18	0.0%
RE230900_368	Residential	597970	4844211	1.5	72	117	83	20	0.0%
RE230900_369	Residential	597960	4844201	1.5	72	117	83	21	0.0%
RE230900_370	Residential	597949	4844191	1.5	73	117	83	25	0.1%
RE230900_371	Residential	597936	4844178	1.5	78	119	83	32	0.1%
RE230900_372	Residential	598039	4844140	1.5	67	112	83	17	0.0%
RE230900_373	Residential	598027	4844132	1.5	70	114	83	18	0.0%
RE230900_374	Residential	598012	4844121	1.5	72	117	83	20	0.0%
RE230900_375	Residential	597996	4844119	1.5	72	117	83	22	0.1%
RE230900_376	Residential	597981	4844132	1.5	73	117	83	25	0.1%
RE230900_377	Residential	597973	4844146	1.5	73	117	83	26	0.1%
RE230900_378	Residential	598034	4844176	1.5	67	112	83	15	0.0%
RE230900_379	Residential	598015	4844169	1.5	69	114	83	18	0.0%
RE230900_380	Residential	598000	4844158	1.5	72	116	83	19	0.0%
RE230900_381	Residential	597986	4844180	1.5	72	117	83	19	0.0%
RE230900_382	Residential	597997	4844189	1.5	70	115	83	19	0.0%
RE230900_383	Residential	598009	4844195	1.5	69	114	83	17	0.0%
RE230900_384	Residential	598020	4844205	1.5	68	112	83	13	0.0%
RE230900_385	Residential	598034	4844205	1.5	66	111	83	11	0.0%
RE230900_386	Residential	598213	4843919	1.5	60	104	83	11	0.0%
RE230900_387	Residential	598223	4843930	1.5	59	103	83	7	0.0%
RE230900_388	Residential	598235	4843942	1.5	58	102	83	6	0.0%
RE230900_389	Residential	598262	4843914	1.5	57	101	83	5	0.0%
RE230900_390	Residential	598251	4843903	1.5	58	102	83	7	0.0%
RE230900_391	Residential	598238	4843889	1.5	59	103	83	10	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_394	Residential	597965	4844159	1.5	73	117	83	29	0.1%
RE230900_395	Residential	598116	4843943	1.5	72	116	83	22	0.1%
RE230900_396	Residential	598126	4843952	1.5	69	113	83	22	0.1%
RE230900_397	Residential	598136	4843962	1.5	66	111	83	19	0.0%
RE230900_398	Residential	598147	4843973	1.5	64	109	83	18	0.0%
RE230900_399	Residential	598158	4843985	1.5	62	106	83	14	0.0%
RE230900_400	Residential	598170	4843998	1.5	60	105	83	7	0.0%
RE230900_401	Residential	598145	4844026	1.5	61	106	83	8	0.0%
RE230900_402	Residential	598132	4844013	1.5	63	108	83	15	0.0%
RE230900_403	Residential	598121	4844002	1.5	65	110	83	18	0.0%
RE230900_404	Residential	598113	4843994	1.5	67	112	83	20	0.0%
RE230900_405	Residential	598106	4843985	1.5	69	114	83	20	0.0%
RE230900_406	Residential	598095	4843974	1.5	72	116	83	22	0.1%
RE231000_001	Recreation	597895	4844715	1.5	74	116	83	14	0.0%
RE231000_002	Residential	594593	4847779	1.5	48	89	83	8	0.0%
RE231000_003	Residential	597966	4844386	1.5	67	112	83	12	0.0%
RE231000_004	Residential	597973	4844395	1.5	67	111	83	11	0.0%
RE231000_005	Residential	597984	4844407	1.5	66	111	83	10	0.0%
RE231000_006	Residential	597998	4844418	1.5	65	110	83	7	0.0%
RE231000_007	Residential	598005	4844428	1.5	64	109	83	7	0.0%
RE231000_008	Residential	598021	4844443	1.5	64	107	83	8	0.0%
RE231000_009	Residential	598033	4844455	1.5	64	105	83	7	0.0%
RE231000_010	Residential	598043	4844466	1.5	65	105	83	7	0.0%
RE231000_011	Residential	597940	4844407	1.5	69	113	83	15	0.0%
RE231000_012	Residential	597949	4844414	1.5	69	113	83	14	0.0%
RE231000_013	Residential	597956	4844424	1.5	68	113	83	12	0.0%
RE231000_014	Residential	597965	4844432	1.5	68	112	83	11	0.0%
RE231000_015	Residential	597973	4844440	1.5	67	111	83	11	0.0%
RE231000_016	Residential	597982	4844449	1.5	66	110	83	10	0.0%
RE231000_017	Residential	597989	4844456	1.5	65	109	83	9	0.0%
RE231000_018	Residential	597997	4844465	1.5	65	108	83	9	0.0%
RE231000_019	Residential	598006	4844473	1.5	66	106	83	8	0.0%
RE231000_020	Residential	598015	4844481	1.5	66	107	83	8	0.0%
RE231000_021	Residential	598022	4844489	1.5	66	107	83	8	0.0%
RE231000_022	Residential	598030	4844498	1.5	66	107	83	8	0.0%
RE231000_023	Residential	598039	4844506	1.5	66	107	83	8	0.0%
RE231000_024	Residential	598046	4844513	1.5	66	107	83	8	0.0%
RE231000_025	Residential	598053	4844523	1.5	66	107	83	8	0.0%
RE231000_026	Residential	598064	4844530	1.5	66	106	83	7	0.0%
RE231000_027	Residential	597902	4844429	1.5	71	116	83	18	0.0%
RE231000_028	Residential	597911	4844437	1.5	71	115	83	18	0.0%
RE231000_029	Residential	597918	4844446	1.5	71	115	83	16	0.0%
RE231000_030	Residential	597928	4844453	1.5	70	115	83	14	0.0%
RE231000_031	Residential	597934	4844463	1.5	70	114	83	14	0.0%
RE231000_032	Residential	597943	4844469	1.5	69	114	83	12	0.0%
RE231000_033	Residential	597953	4844479	1.5	67	112	83	11	0.0%
RE231000_034	Residential	597961	4844486	1.5	66	111	83	11	0.0%
RE231000_035	Residential	597969	4844494	1.5	67	109	83	10	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_036	Residential	597976	4844504	1.5	68	109	83	8	0.0%
RE231000_037	Residential	597984	4844514	1.5	68	109	83	8	0.0%
RE231000_038	Residential	597992	4844520	1.5	69	110	83	8	0.0%
RE231000_039	Residential	598001	4844529	1.5	69	110	83	8	0.0%
RE231000_040	Residential	598009	4844537	1.5	69	109	83	8	0.0%
RE231000_041	Residential	598016	4844545	1.5	68	109	83	8	0.0%
RE231000_042	Residential	598025	4844554	1.5	68	108	83	8	0.0%
RE231000_043	Residential	598033	4844562	1.5	67	108	83	7	0.0%
RE231000_044	Residential	598013	4844582	1.5	68	109	83	8	0.0%
RE231000_045	Residential	598003	4844574	1.5	69	110	83	8	0.0%
RE231000_046	Residential	597995	4844566	1.5	70	110	83	8	0.0%
RE231000_047	Residential	597987	4844557	1.5	70	111	83	8	0.0%
RE231000_048	Residential	597979	4844550	1.5	70	111	83	8	0.0%
RE231000_049	Residential	597972	4844542	1.5	70	111	83	9	0.0%
RE231000_050	Residential	597967	4844538	1.5	70	111	83	9	0.0%
RE231000_051	Residential	597961	4844530	1.5	70	110	83	10	0.0%
RE231000_052	Residential	597957	4844525	1.5	69	110	83	10	0.0%
RE231000_053	Residential	597950	4844520	1.5	69	110	83	11	0.0%
RE231000_054	Residential	597945	4844515	1.5	68	111	83	11	0.0%
RE231000_055	Residential	597940	4844509	1.5	68	112	83	11	0.0%
RE231000_056	Residential	597934	4844504	1.5	68	113	83	12	0.0%
RE231000_057	Residential	597929	4844499	1.5	69	114	83	13	0.0%
RE231000_058	Residential	597923	4844493	1.5	70	115	83	14	0.0%
RE231000_059	Residential	597918	4844487	1.5	71	115	83	14	0.0%
RE231000_060	Residential	597914	4844483	1.5	71	116	83	15	0.0%
RE231000_061	Residential	597908	4844476	1.5	71	116	83	15	0.0%
RE231000_062	Residential	597904	4844471	1.5	72	116	83	16	0.0%
RE231000_063	Residential	597897	4844465	1.5	72	116	83	17	0.0%
RE231000_064	Residential	597892	4844460	1.5	72	116	83	19	0.0%
RE231000_065	Residential	597886	4844454	1.5	72	116	83	21	0.0%
RE231000_066	Residential	597881	4844449	1.5	72	117	83	23	0.1%
RE231000_067	Residential	597742	4844586	1.5	78	119	83	48	0.1%
RE231000_068	Residential	597739	4844592	1.5	78	119	83	48	0.1%
RE231000_069	Residential	597735	4844599	1.5	78	119	83	50	0.1%
RE231000_070	Residential	597732	4844605	1.5	79	119	83	50	0.1%
RE231000_071	Residential	597727	4844613	1.5	79	119	83	51	0.1%
RE231000_072	Residential	597724	4844619	1.5	79	120	83	52	0.1%
RE231000_073	Residential	597720	4844626	1.5	79	120	83	52	0.1%
RE231000_074	Residential	597718	4844632	1.5	79	120	83	53	0.1%
RE231000_075	Residential	597712	4844640	1.5	79	120	83	54	0.1%
RE231000_076	Residential	597707	4844646	1.5	79	120	83	57	0.1%
RE231000_077	Residential	597684	4844653	1.5	80	120	83	71	0.2%
RE231000_078	Residential	597688	4844659	1.5	80	120	83	66	0.2%
RE231000_079	Residential	597692	4844664	1.5	80	120	83	65	0.1%
RE231000_080	Residential	597695	4844670	1.5	80	120	83	63	0.1%
RE231000_081	Residential	597701	4844677	1.5	80	120	83	61	0.1%
RE231000_082	Residential	597705	4844683	1.5	80	120	83	61	0.1%
RE231000_083	Residential	597708	4844687	1.5	80	120	83	59	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_084	Residential	597711	4844692	1.5	80	120	83	56	0.1%
RE231000_085	Residential	597729	4844665	1.5	79	120	83	51	0.1%
RE231000_086	Residential	597725	4844670	1.5	79	120	83	52	0.1%
RE231000_087	Residential	597738	4844650	1.5	79	120	83	47	0.1%
RE231000_088	Residential	597734	4844657	1.5	79	120	83	48	0.1%
RE231000_089	Residential	597742	4844645	1.5	79	120	83	45	0.1%
RE231000_090	Residential	597746	4844639	1.5	79	120	83	44	0.1%
RE231000_091	Residential	597750	4844631	1.5	79	119	83	44	0.1%
RE231000_092	Residential	597753	4844624	1.5	79	119	83	45	0.1%
RE231000_093	Residential	597757	4844618	1.5	79	119	83	43	0.1%
RE231000_094	Residential	597761	4844610	1.5	78	119	83	43	0.1%
RE231000_095	Residential	597764	4844603	1.5	78	119	83	43	0.1%
RE231000_096	Residential	597768	4844596	1.5	78	119	83	43	0.1%
RE231000_097	Residential	597773	4844591	1.5	78	119	83	42	0.1%
RE231000_098	Residential	597777	4844584	1.5	77	118	83	41	0.1%
RE231000_099	Residential	597780	4844577	1.5	77	118	83	41	0.1%
RE231000_100	Residential	597784	4844570	1.5	76	118	83	39	0.1%
RE231000_101	Residential	597789	4844564	1.5	76	117	83	36	0.1%
RE231000_102	Residential	597793	4844557	1.5	75	117	83	35	0.1%
RE231000_103	Residential	597796	4844550	1.5	74	117	83	34	0.1%
RE231000_104	Residential	597800	4844544	1.5	73	117	83	32	0.1%
RE231000_105	Residential	597804	4844537	1.5	73	117	83	31	0.1%
RE231000_106	Residential	597807	4844531	1.5	73	117	83	31	0.1%
RE231000_107	Residential	597811	4844525	1.5	73	117	83	30	0.1%
RE231000_108	Residential	597814	4844518	1.5	73	117	83	30	0.1%
RE231000_109	Residential	597819	4844511	1.5	73	117	83	30	0.1%
RE231000_110	Residential	597851	4844481	1.5	72	117	83	26	0.1%
RE231000_111	Residential	597881	4844502	1.5	72	117	83	18	0.0%
RE231000_112	Residential	597876	4844507	1.5	72	117	83	18	0.0%
RE231000_113	Residential	597871	4844514	1.5	72	117	83	19	0.0%
RE231000_114	Residential	597866	4844519	1.5	72	117	83	19	0.0%
RE231000_115	Residential	597849	4844534	1.5	72	117	83	25	0.1%
RE231000_116	Residential	597855	4844537	1.5	72	117	83	21	0.0%
RE231000_117	Residential	597863	4844540	1.5	72	117	83	20	0.0%
RE231000_118	Residential	597869	4844544	1.5	72	117	83	20	0.0%
RE231000_119	Residential	597877	4844549	1.5	72	117	83	17	0.0%
RE231000_120	Residential	597883	4844553	1.5	72	116	83	16	0.0%
RE231000_121	Residential	597889	4844560	1.5	73	116	83	16	0.0%
RE231000_122	Residential	597894	4844565	1.5	73	114	83	16	0.0%
RE231000_123	Residential	597899	4844571	1.5	73	114	83	15	0.0%
RE231000_124	Residential	597904	4844576	1.5	73	114	83	14	0.0%
RE231000_125	Residential	597911	4844583	1.5	74	114	83	13	0.0%
RE231000_126	Residential	597920	4844591	1.5	74	115	83	12	0.0%
RE231000_127	Residential	597928	4844600	1.5	74	115	83	12	0.0%
RE231000_128	Residential	597935	4844608	1.5	74	115	83	12	0.0%
RE231000_129	Residential	597944	4844616	1.5	73	114	83	11	0.0%
RE231000_130	Residential	597952	4844625	1.5	72	113	83	11	0.0%
RE231000_131	Residential	597960	4844633	1.5	71	112	83	10	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_132	Residential	597889	4844521	1.5	72	116	83	16	0.0%
RE231000_133	Residential	597895	4844526	1.5	72	116	83	15	0.0%
RE231000_134	Residential	597900	4844533	1.5	71	116	83	15	0.0%
RE231000_135	Residential	597906	4844537	1.5	71	115	83	15	0.0%
RE231000_136	Residential	597912	4844543	1.5	71	114	83	14	0.0%
RE231000_137	Residential	597916	4844549	1.5	71	112	83	13	0.0%
RE231000_138	Residential	597922	4844554	1.5	72	112	83	12	0.0%
RE231000_139	Residential	597927	4844558	1.5	72	112	83	12	0.0%
RE231000_140	Residential	597933	4844565	1.5	72	113	83	10	0.0%
RE231000_141	Residential	597938	4844570	1.5	72	113	83	11	0.0%
RE231000_142	Residential	597944	4844577	1.5	73	113	83	11	0.0%
RE231000_143	Residential	597948	4844581	1.5	73	113	83	11	0.0%
RE231000_144	Residential	597956	4844588	1.5	72	113	83	11	0.0%
RE231000_145	Residential	597964	4844596	1.5	72	113	83	11	0.0%
RE231000_146	Residential	597973	4844604	1.5	71	112	83	10	0.0%
RE231000_147	Residential	597981	4844613	1.5	70	111	83	10	0.0%
RE231000_148	Residential	597825	4844568	1.5	74	117	83	28	0.1%
RE231000_149	Residential	597833	4844573	1.5	74	117	83	26	0.1%
RE231000_150	Residential	597840	4844577	1.5	75	117	83	24	0.1%
RE231000_151	Residential	597846	4844581	1.5	75	117	83	23	0.1%
RE231000_152	Residential	597854	4844587	1.5	75	117	83	21	0.0%
RE231000_153	Residential	597859	4844593	1.5	76	117	83	20	0.0%
RE231000_154	Residential	597865	4844598	1.5	76	117	83	20	0.0%
RE231000_155	Residential	597871	4844603	1.5	76	117	83	17	0.0%
RE231000_156	Residential	597850	4844609	1.5	77	118	83	21	0.0%
RE231000_157	Residential	597844	4844615	1.5	78	119	83	21	0.0%
RE231000_158	Residential	597822	4844588	1.5	76	117	83	27	0.1%
RE231000_159	Residential	597819	4844595	1.5	76	117	83	26	0.1%
RE231000_160	Residential	597816	4844602	1.5	77	118	83	26	0.1%
RE231000_161	Residential	597813	4844608	1.5	78	118	83	26	0.1%
RE231000_162	Residential	597807	4844615	1.5	78	119	83	28	0.1%
RE231000_163	Residential	597805	4844621	1.5	78	119	83	28	0.1%
RE231000_164	Residential	597800	4844629	1.5	78	119	83	28	0.1%
RE231000_165	Residential	597796	4844636	1.5	78	119	83	31	0.1%
RE231000_166	Residential	597791	4844643	1.5	79	119	83	35	0.1%
RE231000_167	Residential	597787	4844650	1.5	79	119	83	36	0.1%
RE231000_168	Residential	597783	4844657	1.5	79	120	83	36	0.1%
RE231000_169	Residential	597780	4844665	1.5	79	120	83	39	0.1%
RE231000_170	Residential	597775	4844673	1.5	79	120	83	40	0.1%
RE231000_171	Residential	597772	4844679	1.5	79	120	83	40	0.1%
RE231000_172	Residential	597767	4844686	1.5	79	120	83	41	0.1%
RE231000_173	Residential	597764	4844694	1.5	79	120	83	43	0.1%
RE231000_174	Residential	597757	4844702	1.5	79	120	83	47	0.1%
RE231000_175	Residential	597751	4844706	1.5	79	120	83	47	0.1%
RE231000_176	Residential	597729	4844717	1.5	80	121	83	53	0.1%
RE231000_177	Residential	597734	4844724	1.5	80	121	83	52	0.1%
RE231000_178	Residential	597737	4844729	1.5	80	121	83	52	0.1%
RE231000_179	Residential	597741	4844734	1.5	80	121	83	52	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_180	Residential	597744	4844739	1.5	80	121	83	52	0.1%
RE231000_181	Residential	597747	4844744	1.5	80	121	83	51	0.1%
RE231000_182	Residential	597750	4844749	1.5	80	121	83	51	0.1%
RE231000_183	Residential	597753	4844754	1.5	80	121	83	50	0.1%
RE231000_184	Residential	597759	4844763	1.5	80	121	83	47	0.1%
RE231000_185	Residential	597762	4844769	1.5	80	121	83	46	0.1%
RE231000_186	Residential	597765	4844773	1.5	80	121	83	47	0.1%
RE231000_187	Residential	597768	4844778	1.5	80	120	83	47	0.1%
RE231000_188	Residential	597771	4844783	1.5	80	120	83	47	0.1%
RE231000_189	Residential	597774	4844789	1.5	79	120	83	46	0.1%
RE231000_190	Residential	597802	4844774	1.5	79	120	83	41	0.1%
RE231000_191	Residential	597798	4844768	1.5	79	120	83	41	0.1%
RE231000_192	Residential	597793	4844761	1.5	79	120	83	41	0.1%
RE231000_193	Residential	597789	4844754	1.5	79	120	83	40	0.1%
RE231000_194	Residential	597785	4844747	1.5	79	120	83	40	0.1%
RE231000_195	Residential	597782	4844741	1.5	79	120	83	40	0.1%
RE231000_196	Residential	597779	4844727	1.5	79	120	83	42	0.1%
RE231000_197	Residential	597780	4844719	1.5	79	120	83	41	0.1%
RE231000_198	Residential	597785	4844710	1.5	79	120	83	37	0.1%
RE231000_199	Residential	597788	4844703	1.5	79	120	83	37	0.1%
RE231000_200	Residential	597793	4844697	1.5	79	120	83	35	0.1%
RE231000_201	Residential	597797	4844690	1.5	79	120	83	33	0.1%
RE231000_202	Residential	597801	4844683	1.5	79	120	83	30	0.1%
RE231000_203	Residential	597805	4844676	1.5	79	120	83	27	0.1%
RE231000_204	Residential	597808	4844669	1.5	79	120	83	27	0.1%
RE231000_205	Residential	597812	4844663	1.5	79	119	83	25	0.1%
RE231000_206	Residential	597815	4844656	1.5	79	119	83	24	0.1%
RE231000_207	Residential	597818	4844649	1.5	79	119	83	24	0.1%
RE231000_208	Residential	597823	4844642	1.5	78	119	83	24	0.1%
RE231000_209	Residential	597827	4844636	1.5	78	119	83	24	0.1%
RE231000_210	Residential	597832	4844629	1.5	78	119	83	24	0.1%
RE231000_211	Residential	597837	4844622	1.5	78	119	83	22	0.1%
RE231000_212	Residential	597902	4844623	1.5	76	117	83	13	0.0%
RE231000_213	Residential	597895	4844627	1.5	76	117	83	14	0.0%
RE231000_214	Residential	597889	4844633	1.5	77	118	83	14	0.0%
RE231000_215	Residential	597884	4844639	1.5	77	118	83	14	0.0%
RE231000_216	Residential	597878	4844646	1.5	78	119	83	15	0.0%
RE231000_217	Residential	597873	4844650	1.5	78	119	83	15	0.0%
RE231000_218	Residential	597867	4844656	1.5	78	119	83	17	0.0%
RE231000_219	Residential	597863	4844664	1.5	78	119	83	19	0.0%
RE231000_220	Residential	597859	4844671	1.5	78	119	83	19	0.0%
RE231000_221	Residential	597855	4844678	1.5	79	119	83	19	0.0%
RE231000_222	Residential	597851	4844684	1.5	79	119	83	19	0.0%
RE231000_223	Residential	597847	4844690	1.5	79	119	83	20	0.0%
RE231000_224	Residential	597843	4844697	1.5	79	119	83	20	0.0%
RE231000_225	Residential	597839	4844704	1.5	79	120	83	21	0.0%
RE231000_226	Residential	597835	4844711	1.5	79	120	83	21	0.0%
RE231000_227	Residential	597832	4844718	1.5	79	120	83	24	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_228	Residential	597827	4844726	1.5	79	120	83	25	0.1%
RE231000_229	Residential	597824	4844733	1.5	79	120	83	28	0.1%
RE231000_230	Residential	597840	4844745	1.5	78	119	83	22	0.1%
RE231000_231	Residential	597846	4844750	1.5	78	119	83	19	0.0%
RE231000_232	Residential	597851	4844761	1.5	75	117	83	19	0.0%
RE231000_233	Residential	597853	4844771	1.5	73	117	83	19	0.0%
RE231000_234	Residential	597851	4844781	1.5	72	117	83	19	0.0%
RE231000_235	Residential	597848	4844790	1.5	72	117	83	21	0.0%
RE231000_236	Residential	597838	4844796	1.5	72	117	83	22	0.1%
RE231000_237	Residential	597831	4844801	1.5	72	117	83	26	0.1%
RE231000_238	Residential	597823	4844804	1.5	73	117	83	32	0.1%
RE231000_239	Residential	597817	4844807	1.5	74	117	83	37	0.1%
RE231000_240	Residential	597811	4844812	1.5	75	117	83	40	0.1%
RE231000_241	Residential	597804	4844816	1.5	76	117	83	41	0.1%
RE231000_242	Residential	597800	4844820	1.5	76	117	83	41	0.1%
RE231000_243	Residential	597794	4844823	1.5	77	118	83	43	0.1%
RE231000_244	Residential	597788	4844825	1.5	78	119	83	45	0.1%
RE231000_245	Residential	597783	4844829	1.5	78	119	83	48	0.1%
RE231000_246	Residential	597778	4844831	1.5	79	119	83	51	0.1%
RE231000_247	Residential	597772	4844835	1.5	79	120	83	57	0.1%
RE231000_248	Residential	598015	4844639	1.5	63	108	83	9	0.0%
RE231000_249	Residential	598007	4844649	1.5	64	108	83	9	0.0%
RE231000_250	Residential	597997	4844656	1.5	64	109	83	9	0.0%
RE231000_251	Residential	597989	4844666	1.5	64	109	83	9	0.0%
RE231000_252	Residential	598060	4844590	1.5	62	105	83	7	0.0%
RE231000_253	Residential	598069	4844598	1.5	60	104	83	7	0.0%
RE231000_254	Residential	598040	4844610	1.5	63	107	83	8	0.0%
RE231000_255	Residential	598049	4844618	1.5	61	106	83	8	0.0%
RE231000_256	Residential	598252	4844214	1.5	52	97	83	5	0.0%
RE231000_257	Residential	598246	4844300	1.5	55	96	83	90	0.2%
RE231000_276	Residential	598191	4844478	1.5	57	99	83	6	0.0%
RE231000_277	Residential	598184	4844471	1.5	58	100	83	6	0.0%
RE231000_278	Residential	598093	4844561	1.5	61	104	83	6	0.0%
RE231000_279	Residential	598104	4844571	1.5	58	103	83	7	0.0%
RE231000_280	Residential	598023	4844395	1.5	64	108	83	7	0.0%
RE231000_281	Residential	598013	4844383	1.5	65	109	83	7	0.0%
RE231000_282	Residential	598113	4844482	1.5	63	103	83	7	0.0%
RE231000_283	Residential	598059	4844484	1.5	65	106	83	8	0.0%
RE231000_284	Residential	598062	4844435	1.5	63	104	83	5	0.0%
RE231000_285	Residential	598052	4844476	1.5	65	106	83	8	0.0%
RE231000_286	Residential	598054	4844424	1.5	62	104	83	5	0.0%
RE231000_287	Residential	598086	4844510	1.5	64	105	83	7	0.0%
RE231000_288	Residential	598077	4844504	1.5	65	106	83	8	0.0%
RE231000_289	Residential	598044	4844414	1.5	62	106	83	7	0.0%
RE231000_290	Residential	598033	4844405	1.5	63	107	83	7	0.0%
RE231000_291	Residential	598102	4844474	1.5	63	104	83	8	0.0%
RE231000_292	Residential	598093	4844464	1.5	64	105	83	7	0.0%
RE231000_293	Residential	598072	4844496	1.5	65	106	83	8	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_294	Residential	598083	4844454	1.5	64	105	83	7	0.0%
RE231000_295	Residential	598065	4844490	1.5	65	106	83	8	0.0%
RE231000_296	Residential	598074	4844444	1.5	63	104	83	7	0.0%
RE231000_297	Residential	598159	4844494	1.5	59	101	83	6	0.0%
RE231000_298	Residential	598169	4844501	1.5	57	100	83	6	0.0%
RE231000_299	Residential	598002	4844372	1.5	65	110	83	10	0.0%
RE231000_300	Residential	598066	4844349	1.5	61	106	83	6	0.0%
RE231000_301	Residential	598127	4844467	1.5	62	103	83	6	0.0%
RE231000_302	Residential	598120	4844461	1.5	62	103	83	6	0.0%
RE231000_303	Residential	598109	4844448	1.5	63	103	83	6	0.0%
RE231000_304	Residential	598101	4844440	1.5	63	104	83	6	0.0%
RE231000_305	Residential	598067	4844275	1.5	60	105	83	7	0.0%
RE231000_306	Residential	598068	4844289	1.5	61	105	83	7	0.0%
RE231000_307	Residential	598068	4844303	1.5	61	105	83	6	0.0%
RE231000_308	Residential	598066	4844315	1.5	61	106	83	6	0.0%
RE231000_309	Residential	598076	4844364	1.5	60	105	83	6	0.0%
RE231000_310	Residential	598085	4844425	1.5	62	103	83	5	0.0%
RE231000_311	Residential	598078	4844418	1.5	62	103	83	5	0.0%
RE231000_312	Residential	598069	4844410	1.5	61	103	83	5	0.0%
RE231000_313	Residential	598062	4844402	1.5	61	104	83	5	0.0%
RE231000_314	Residential	598053	4844391	1.5	61	106	83	6	0.0%
RE231000_315	Residential	598047	4844385	1.5	62	107	83	6	0.0%
RE231000_316	Residential	598030	4844364	1.5	64	108	83	7	0.0%
RE231000_317	Residential	598086	4844375	1.5	59	104	83	5	0.0%
RE231000_318	Residential	598106	4844396	1.5	61	101	83	5	0.0%
RE231000_319	Residential	598116	4844406	1.5	61	102	83	5	0.0%
RE231000_320	Residential	598127	4844416	1.5	61	102	83	5	0.0%
RE231000_321	Residential	598143	4844435	1.5	61	102	83	5	0.0%
RE231000_322	Residential	598152	4844444	1.5	61	102	83	5	0.0%
RE231000_332	Residential	598315	4844073	1.5	51	95	83	3	0.0%
RE231000_333	Residential	598310	4844078	1.5	51	96	83	3	0.0%
RE231000_334	Residential	598295	4844091	1.5	51	96	83	3	0.0%
RE231000_335	Residential	598288	4844098	1.5	52	96	83	3	0.0%
RE231000_336	Residential	598282	4844104	1.5	52	96	83	3	0.0%
RE231000_337	Residential	598277	4844111	1.5	52	97	83	3	0.0%
RE231000_338	Residential	598310	4844038	1.5	50	95	83	3	0.0%
RE231000_339	Residential	598302	4844046	1.5	51	95	83	3	0.0%
RE231000_340	Residential	598295	4844054	1.5	51	96	83	3	0.0%
RE231000_341	Residential	598276	4844074	1.5	52	96	83	3	0.0%
RE231000_342	Residential	598267	4844081	1.5	52	96	83	4	0.0%
RE231000_343	Residential	598114	4844352	1.5	58	102	83	5	0.0%
RE231000_345	Residential	598126	4844322	1.5	58	103	83	5	0.0%
RE231000_346	Residential	598176	4844416	1.5	60	101	83	4	0.0%
RE231000_347	Residential	598167	4844408	1.5	60	101	83	5	0.0%
RE231000_348	Residential	598159	4844398	1.5	60	101	83	5	0.0%
RE231000_350	Residential	598126	4844309	1.5	58	103	83	6	0.0%
RE231000_351	Residential	598128	4844228	1.5	58	103	83	6	0.0%
RE231000_353	Residential	598285	4844064	1.5	51	96	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_354	Residential	598140	4844379	1.5	59	100	83	5	0.0%
RE231000_355	Residential	598131	4844370	1.5	59	99	83	5	0.0%
RE231000_356	Residential	598122	4844361	1.5	58	101	83	5	0.0%
RE231000_357	Residential	598102	4844340	1.5	59	104	83	6	0.0%
RE231000_358	Residential	598099	4844324	1.5	60	104	83	6	0.0%
RE231000_359	Residential	598099	4844310	1.5	60	104	83	6	0.0%
RE231000_360	Residential	598099	4844296	1.5	60	104	83	6	0.0%
RE231000_361	Residential	598098	4844283	1.5	60	104	83	6	0.0%
RE231000_362	Residential	598099	4844258	1.5	59	104	83	7	0.0%
RE231000_363	Residential	598197	4844395	1.5	59	100	83	4	0.0%
RE231000_364	Residential	598180	4844378	1.5	59	100	83	5	0.0%
RE231000_365	Residential	598171	4844369	1.5	59	100	83	5	0.0%
RE231000_366	Residential	598162	4844359	1.5	58	99	83	5	0.0%
RE231000_367	Residential	598151	4844349	1.5	58	98	83	5	0.0%
RE231000_368	Residential	598142	4844340	1.5	57	100	83	5	0.0%
RE231000_369	Residential	598126	4844283	1.5	59	103	83	6	0.0%
RE231000_370	Residential	598126	4844271	1.5	59	103	83	6	0.0%
RE231000_371	Residential	598126	4844257	1.5	59	103	83	6	0.0%
RE231000_374	Residential	598127	4844295	1.5	59	103	83	6	0.0%
RE231000_377	Residential	598258	4844089	1.5	52	97	83	4	0.0%
RE231000_378	Residential	598094	4844433	1.5	63	103	83	5	0.0%
RE231000_379	Residential	598067	4844332	1.5	61	106	83	6	0.0%
RE231000_380	Residential	598096	4844385	1.5	60	102	83	5	0.0%
RE231000_381	Residential	598149	4844389	1.5	60	100	83	5	0.0%
RE231000_382	Residential	598135	4844425	1.5	61	102	83	5	0.0%
RE231000_383	Residential	598303	4844085	1.5	51	96	83	3	0.0%
RE231000_384	Residential	598115	4844455	1.5	62	103	83	6	0.0%
RE231000_385	Residential	598038	4844375	1.5	63	108	83	7	0.0%
RE231000_386	Residential	598099	4844270	1.5	59	104	83	6	0.0%
RE231000_387	Residential	598188	4844386	1.5	59	100	83	5	0.0%
RE231000_388	Residential	598129	4844214	1.5	58	102	83	6	0.0%
RE231000_390	Residential	598013	4844349	1.5	64	109	83	9	0.0%
RE231000_391	Residential	598003	4844338	1.5	64	109	83	10	0.0%
RE231000_392	Residential	598159	4844280	1.5	56	101	83	5	0.0%
RE231000_393	Residential	598189	4844215	1.5	56	100	83	6	0.0%
RE231000_394	Residential	598219	4844376	1.5	58	98	83	4	0.0%
RE231000_395	Residential	598212	4844369	1.5	58	99	83	4	0.0%
RE231000_396	Residential	598207	4844363	1.5	58	99	83	5	0.0%
RE231000_397	Residential	598199	4844356	1.5	58	99	83	5	0.0%
RE231000_398	Residential	598192	4844346	1.5	58	98	83	5	0.0%
RE231000_399	Residential	598181	4844337	1.5	57	98	83	5	0.0%
RE231000_400	Residential	598170	4844327	1.5	56	98	83	5	0.0%
RE231000_401	Residential	598161	4844314	1.5	55	100	83	5	0.0%
RE231000_402	Residential	598159	4844294	1.5	56	101	83	5	0.0%
RE231000_403	Residential	598158	4844273	1.5	57	101	83	5	0.0%
RE231000_404	Residential	598159	4844265	1.5	57	101	83	6	0.0%
RE231000_405	Residential	598159	4844257	1.5	57	101	83	6	0.0%
RE231000_406	Residential	598236	4844348	1.5	57	98	83	4	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_407	Residential	598223	4844334	1.5	56	97	83	5	0.0%
RE231000_408	Residential	598215	4844325	1.5	56	97	83	5	0.0%
RE231000_409	Residential	598204	4844313	1.5	56	97	83	5	0.0%
RE231000_410	Residential	598199	4844309	1.5	56	96	83	5	0.0%
RE231000_411	Residential	598189	4844279	1.5	54	99	83	5	0.0%
RE231000_412	Residential	598189	4844265	1.5	55	100	83	5	0.0%
RE231000_413	Residential	598161	4844229	1.5	57	101	83	6	0.0%
RE231000_414	Residential	598162	4844216	1.5	56	101	83	6	0.0%
RE231000_415	Residential	598162	4844205	1.5	56	101	83	6	0.0%
RE231000_416	Residential	598163	4844190	1.5	56	101	83	6	0.0%
RE231000_417	Residential	598169	4844178	1.5	56	100	83	6	0.0%
RE231000_418	Residential	598181	4844167	1.5	55	100	83	6	0.0%
RE231000_419	Residential	598189	4844231	1.5	56	100	83	5	0.0%
RE231000_420	Residential	598189	4844224	1.5	56	100	83	5	0.0%
RE231000_421	Residential	598205	4844183	1.5	55	100	83	6	0.0%
RE231000_422	Residential	598217	4844170	1.5	55	99	83	6	0.0%
RE231000_423	Residential	598227	4844160	1.5	54	99	83	5	0.0%
RE231000_424	Residential	598235	4844153	1.5	54	98	83	4	0.0%
RE231000_425	Residential	598244	4844144	1.5	53	98	83	4	0.0%
RE231000_426	Residential	598253	4844135	1.5	53	97	83	4	0.0%
RE231000_427	Residential	598189	4844160	1.5	55	99	83	6	0.0%
RE231000_428	Residential	598198	4844150	1.5	55	99	83	6	0.0%
RE231000_429	Residential	598208	4844141	1.5	54	99	83	5	0.0%
RE231000_430	Residential	598189	4844272	1.5	55	99	83	5	0.0%
RE231000_431	Residential	598225	4844124	1.5	54	98	83	5	0.0%
RE231000_432	Residential	598189	4844288	1.5	54	99	83	5	0.0%
RE231000_433	Residential	598211	4844177	1.5	55	99	83	6	0.0%
RE231000_434	Residential	598217	4844132	1.5	54	98	83	5	0.0%
RE231000_435	Residential	598210	4844320	1.5	56	97	83	5	0.0%
RE231000_436	Residential	598191	4844204	1.5	56	100	83	6	0.0%
RE231000_437	Residential	598190	4844258	1.5	55	100	83	5	0.0%
RE231000_438	Residential	598235	4844114	1.5	53	98	83	4	0.0%
RE231000_439	Residential	598242	4844353	1.5	57	98	83	4	0.0%
RE231000_440	Residential	598230	4844340	1.5	57	97	83	4	0.0%
RE231000_441	Residential	598197	4844191	1.5	55	100	83	6	0.0%
RE231000_443	Residential	598213	4844460	1.5	56	99	83	5	0.0%
RE231000_444	Residential	598234	4844437	1.5	56	98	83	4	0.0%
RE231000_445	Residential	598227	4844430	1.5	56	99	83	4	0.0%
RE231000_446	Residential	598203	4844452	1.5	57	99	83	4	0.0%
RE231000_450	Residential	598248	4844405	1.5	56	98	83	4	0.0%
RE231000_452	Residential	598146	4844517	1.5	59	101	83	6	0.0%
RE231000_453	Residential	598139	4844510	1.5	60	102	83	6	0.0%
RE231000_454	Residential	598112	4844539	1.5	60	103	83	6	0.0%
RE231000_455	Residential	598152	4844523	1.5	57	101	83	6	0.0%
RE231000_456	Residential	598119	4844546	1.5	59	102	83	6	0.0%
RE231100_001	Child Care Centre	597875	4844944	1.5	79	120	83	46	0.1%
RE231100_002	Recreation	597887	4844825	1.5	70	114	83	17	0.0%
RE231100_003	Residential	594644	4847799	1.5	41	83	83	0	-

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_004	Residential	596834	4845864	1.5	81	122	83	69	0.2%
RE231100_005	Residential	598005	4844679	1.5	62	106	83	9	0.0%
RE231100_006	Residential	598014	4844688	1.5	61	105	83	9	0.0%
RE231100_007	Residential	598022	4844696	1.5	61	105	83	9	0.0%
RE231100_008	Residential	598026	4844658	1.5	61	105	83	9	0.0%
RE231100_009	Residential	598034	4844667	1.5	59	104	83	9	0.0%
RE231100_010	Residential	598044	4844675	1.5	60	104	83	9	0.0%
RE231100_011	Residential	598051	4844682	1.5	60	104	83	9	0.0%
RE231100_012	Residential	598059	4844691	1.5	60	104	83	9	0.0%
RE231100_018	Residential	598029	4844703	1.5	61	105	83	9	0.0%
RE231100_019	Residential	598037	4844712	1.5	61	105	83	9	0.0%
RE231100_020	Residential	598046	4844721	1.5	60	104	83	8	0.0%
RE231100_027	Residential	597982	4844724	1.5	64	108	83	9	0.0%
RE231100_028	Residential	597991	4844732	1.5	63	107	83	9	0.0%
RE231100_029	Residential	597999	4844741	1.5	63	107	83	9	0.0%
RE231100_030	Residential	598006	4844749	1.5	62	106	83	9	0.0%
RE231100_031	Residential	598015	4844756	1.5	61	105	83	8	0.0%
RE231100_032	Residential	598023	4844764	1.5	60	104	83	8	0.0%
RE231100_033	Residential	598031	4844773	1.5	60	103	83	8	0.0%
RE231100_041	Residential	598017	4844803	1.5	63	103	83	8	0.0%
RE231100_042	Residential	598007	4844794	1.5	63	105	83	9	0.0%
RE231100_043	Residential	597998	4844785	1.5	62	105	83	10	0.0%
RE231100_044	Residential	597991	4844777	1.5	62	106	83	9	0.0%
RE231100_045	Residential	597982	4844768	1.5	64	108	83	9	0.0%
RE231100_046	Residential	597975	4844760	1.5	64	108	83	10	0.0%
RE231100_047	Residential	597967	4844752	1.5	65	109	83	13	0.0%
RE231100_048	Residential	597958	4844742	1.5	66	110	83	13	0.0%
RE231100_049	Residential	597924	4844771	1.5	68	112	83	13	0.0%
RE231100_050	Residential	597933	4844779	1.5	68	112	83	13	0.0%
RE231100_051	Residential	597943	4844787	1.5	67	111	83	13	0.0%
RE231100_052	Residential	597950	4844796	1.5	65	109	83	13	0.0%
RE231100_053	Residential	597958	4844803	1.5	64	108	83	12	0.0%
RE231100_054	Residential	597966	4844812	1.5	64	107	83	11	0.0%
RE231100_055	Residential	597975	4844820	1.5	65	107	83	10	0.0%
RE231100_056	Residential	597983	4844829	1.5	66	107	83	10	0.0%
RE231100_057	Residential	597991	4844837	1.5	67	108	83	11	0.0%
RE231100_077	Residential	597906	4845006	1.5	72	116	83	44	0.1%
RE231100_078	Residential	597896	4845014	1.5	72	117	83	54	0.1%
RE231100_079	Residential	598077	4844606	1.5	59	104	83	7	0.0%
RE231100_080	Residential	598085	4844615	1.5	58	103	83	8	0.0%
RE231100_081	Residential	598094	4844623	1.5	57	101	83	8	0.0%
RE231100_082	Residential	598056	4844626	1.5	60	104	83	8	0.0%
RE231100_083	Residential	598066	4844634	1.5	58	103	83	8	0.0%
RE231100_084	Residential	598074	4844643	1.5	58	102	83	8	0.0%
RE231100_085	Residential	598082	4844651	1.5	58	102	83	9	0.0%
RE231100_090	Residential	598178	4844511	1.5	55	99	83	6	0.0%
RE231100_091	Residential	598202	4844488	1.5	55	98	83	6	0.0%
RE231100_116	Residential	598123	4844591	1.5	56	101	83	7	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_120	Residential	598113	4844580	1.5	58	102	83	7	0.0%
RE231100_121	Residential	598101	4844633	1.5	57	101	83	16	0.0%
RE231100_161	Residential	598142	4844569	1.5	55	100	83	6	0.0%
RE231100_164	Residential	598158	4844529	1.5	55	100	83	6	0.0%
RE231100_165	Residential	598166	4844536	1.5	55	100	83	6	0.0%
RE231100_167	Residential	598126	4844552	1.5	58	102	83	6	0.0%
RE231100_171	Residential	598133	4844560	1.5	57	101	83	6	0.0%
RE231100_175	Residential	598101	4844633	1.5	57	101	83	16	0.0%
RE231400_001	Residential	597400	4846151	1.5	63	105	83	14	0.0%
RE231400_002	Residential	597374	4846123	1.5	65	107	83	15	0.0%
RE231400_003	Residential	597425	4846115	1.5	59	104	83	13	0.0%
RE231400_004	Residential	597415	4846104	1.5	60	105	83	13	0.0%
RE231400_005	Residential	597397	4846081	1.5	62	106	83	13	0.0%
RE231400_006	Residential	597415	4846064	1.5	61	105	83	13	0.0%
RE231400_007	Residential	597438	4846085	1.5	59	103	83	12	0.0%
RE231400_008	Residential	597458	4846043	1.5	57	101	83	11	0.0%
RE231400_009	Residential	597440	4846026	1.5	58	102	83	11	0.0%
RE231400_010	Residential	597494	4845971	1.5	51	95	83	5	0.0%
RE231400_011	Residential	597177	4846314	1.5	70	114	83	41	0.1%
RE231500_002	Residential	594959	4848195	1.5	41	81	83	0	-
RE231600_001	Residential	594685	4848625	1.5	57	97	83	2	0.0%
RE231600_004	Residential	594738	4848582	1.5	54	98	83	2	0.0%
RE231600_005	Residential	594772	4848553	1.5	51	95	83	2	0.0%
RE231700_002	Residential	594955	4848488	1.5	44	82	83	0	-
RE231700_003	Residential	594977	4848446	1.5	42	82	83	0	-
RE231700_004	Residential	594865	4848604	1.5	49	93	83	1	0.0%
RE231800_001	Residential	594678	4848786	1.5	58	93	83	9	0.0%
RE231800_002	Residential	594627	4848819	1.5	66	103	83	13	0.0%
RE232700_002	Residential	595497	4849130	1.5	47	88	83	2	0.0%
RE233200_001	Recreation	595805	4849383	1.5	67	108	83	13	0.0%
RE233500_001	Residential	596000	4849598	1.5	61	102	83	11	0.0%
RE233600_001	Residential	596065	4849694	1.5	57	98	83	11	0.0%
RE233600_002	Residential	596044	4849667	1.5	60	101	83	14	0.0%
RE233700_001	Residential	596171	4849814	1.5	49	90	83	10	0.0%
RE233900_001	Residential	596273	4850023	1.5	59	99	83	15	0.0%
RE233900_002	Residential	596203	4850118	1.5	56	97	83	8	0.0%
RE233900_003	Residential	596230	4850156	1.5	57	97	83	9	0.0%
RE234000_001	Residential	596284	4850244	1.5	60	101	83	14	0.0%
RE234100_001	Residential	596370	4850189	1.5	65	106	83	16	0.0%
RE235000_001	Residential	596939	4851084	1.5	84	117	83	41	0.1%
RE235100_001	Residential	596983	4851111	1.5	80	117	83	40	0.1%
RE235100_002	Residential	597028	4851138	1.5	75	116	83	30	0.1%
RE235100_003	Residential	597152	4851021	1.5	62	104	83	18	0.0%
RE235200_001	Residential	597087	4851160	1.5	69	114	83	30	0.1%
RE235200_002	Residential	597153	4851077	1.5	69	111	83	33	0.1%
RE235500_001	Residential	597387	4851296	1.5	73	117	83	38	0.1%
RE235500_002	Residential	597327	4851381	1.5	77	107	83	29	0.1%
RE235700_001	Residential	597704	4851314	1.5	50	92	83	4	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE235700_002	Residential	597412	4851537	1.5	79	117	83	37	0.1%
RE235800_001	Residential	597664	4851442	1.5	65	108	83	17	0.0%
RE235900_002	Residential	597909	4851332	1.5	52	94	83	11	0.0%
RE235900_003	Residential	597683	4851628	1.5	83	118	83	45	0.1%
RE235900_004	Residential	597618	4851651	1.5	81	119	83	55	0.1%
RE310100_001	Residential	597701	4851643	1.5	82	118	83	39	0.1%
RE310100_002	Residential	597725	4851680	1.5	84	119	83	34	0.1%
RE310100_003	Residential	597647	4851692	1.5	79	117	83	43	0.1%
RE310200_001	Residential	597753	4851836	1.5	75	117	83	19	0.0%
RE310500_001	Residential	597854	4852016	1.5	80	120	83	22	0.1%
RE310600_001	Residential	598054	4851992	1.5	67	111	83	16	0.0%
RE310600_002	Residential	598048	4852100	1.5	76	117	83	19	0.0%
RE310700_001	Residential	598116	4852141	1.5	71	112	83	19	0.0%
RE310700_002	Residential	598003	4852173	1.5	79	119	83	22	0.1%
RE310900_001	Residential	598218	4852295	1.5	74	115	83	17	0.0%
RE311000_001	Residential	598324	4852285	1.5	65	107	83	16	0.0%
RE311100_001	Residential	598324	4852488	1.5	78	119	83	16	0.0%
RE311200_001	Residential	598400	4852513	1.5	73	115	83	16	0.0%
RE311200_002	Residential	598471	4852451	1.5	73	114	83	16	0.0%
RE311300_001	Residential	598509	4852502	1.5	73	114	83	16	0.0%
RE311300_002	Residential	598222	4852772	1.5	105	130	83	152	0.3%
RE311400_001	Residential	598628	4852529	1.5	66	107	83	13	0.0%
RE311400_002	Residential	598554	4852578	1.5	78	119	83	23	0.1%
RE311400_003	Residential	598404	4852757	1.5	94	123	83	45	0.1%
RE311400_006	Residential	598813	4852353	1.5	55	100	83	3	0.0%
RE311800_001	Residential	598767	4852817	1.5	72	113	83	16	0.0%
RE311900_001	Residential	598826	4852898	1.5	74	115	83	16	0.0%
RE312200_001	Residential	598954	4853124	1.5	79	119	83	32	0.1%
RE312200_002	Residential	598983	4853142	1.5	78	119	83	31	0.1%
RE312200_003	Residential	599011	4853156	1.5	78	119	83	31	0.1%
RE312300_001	Residential	599043	4853264	1.5	79	119	83	85	0.2%
RE312400_001	Residential	599140	4853349	1.5	92	121	83	112	0.3%
RE312800_001	Residential	599561	4853387	1.5	58	102	83	45	0.1%
RE312800_002	Residential	599655	4853196	1.5	59	101	83	7	0.0%
RE312900_001	Residential	599611	4853344	1.5	54	98	83	21	0.0%
RE312900_002	Residential	599737	4853210	1.5	63	105	83	4	0.0%
RE313000_001	Residential	599767	4853320	1.5	55	95	83	17	0.0%
RE313000_002	Residential	599746	4853342	1.5	54	95	83	20	0.0%
RE313000_003	Residential	599707	4853379	1.5	53	95	83	33	0.1%
RE313000_004	Residential	599831	4853246	1.5	62	102	83	8	0.0%
RE313000_005	Residential	599859	4853220	1.5	64	106	83	5	0.0%
RE313000_006	Residential	599831	4853130	1.5	63	108	83	4	0.0%
RE313000_007	Residential	599790	4853168	1.5	66	110	83	6	0.0%
RE313100_001	Residential	599892	4853186	1.5	64	109	83	5	0.0%
RE314400_001	Residential	601067	4853610	1.5	96	121	83	22	0.1%
RE314800_001	Residential	601376	4853448	1.5	104	128	83	22	0.1%
RE314900_001	Residential	601445	4853622	1.5	95	120	83	23	0.1%
RE316400_001	Residential	602974	4853508	1.5	109	131	83	60	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE316500_001	Residential	603041	4853572	1.5	110	131	83	83	0.2%
RE316600_001	Residential	603200	4853771	1.5	110	131	83	197	0.4%
RE316600_002	Residential	603222	4853799	1.5	111	131	83	158	0.4%
RE316700_001	Residential	603244	4853825	1.5	111	132	83	149	0.3%
RE316700_002	Residential	603260	4853854	1.5	111	132	83	146	0.3%
RE317000_001	Residential	603580	4854095	1.5	112	135	83	264	0.6%
RE410200_001	Residential	604488	4854200	1.5	98	127	83	55	0.1%
RE410200_002	Residential	604438	4854244	1.5	101	129	83	69	0.2%
RE411100_001	Residential	605221	4854613	1.5	99	128	83	84	0.2%
RE411200_001	Residential	605486	4854296	1.5	100	122	83	67	0.2%
RE510000_001	Residential	605849	4853842	1.5	60	105	83	12	0.0%
RE510000_002	Residential	605777	4854043	1.5	72	116	83	14	0.0%
RE510100_001	Residential	605862	4854052	1.5	66	111	83	13	0.0%
RE511200_001	Residential	607742	4853370	1.5	69	114	83	100	0.2%
RE511200_002	Residential	607750	4853371	1.5	69	113	83	97	0.2%
RE511200_003	Residential	607756	4853372	1.5	68	112	83	99	0.2%
RE511200_004	Residential	607761	4853373	1.5	67	112	83	98	0.2%
RE511200_005	Residential	607738	4853397	1.5	67	112	83	70	0.2%
RE511200_006	Residential	607744	4853398	1.5	67	111	83	67	0.2%
RE511300_001	Residential	608183	4853093	1.5	71	115	83	21	0.0%
RE511300_002	Child Care Centre	607553	4854058	1.5	52	93	83	3	0.0%
RE511300_003	Residential	607654	4853910	1.5	50	94	83	3	0.0%
RE511300_004	Residential	607664	4853818	1.5	53	98	83	3	0.0%
RE511300_005	Residential	607712	4853826	1.5	52	96	83	3	0.0%
RE511300_006	Residential	607696	4853815	1.5	53	97	83	3	0.0%
RE511300_007	Residential	607670	4853789	1.5	54	99	83	5	0.0%
RE511300_008	Residential	607695	4853826	1.5	52	97	83	3	0.0%
RE511300_009	Residential	607710	4853739	1.5	54	98	83	4	0.0%
RE511300_010	Residential	607728	4853795	1.5	52	97	83	3	0.0%
RE511300_011	Residential	607729	4853761	1.5	53	98	83	4	0.0%
RE511300_012	Residential	607733	4853799	1.5	52	97	83	3	0.0%
RE511300_013	Residential	607665	4853812	1.5	53	98	83	3	0.0%
RE511300_014	Residential	607667	4853806	1.5	53	98	83	3	0.0%
RE511300_015	Residential	607721	4853732	1.5	53	98	83	4	0.0%
RE511300_016	Residential	607702	4853748	1.5	54	98	83	4	0.0%
RE511300_017	Residential	607684	4853769	1.5	54	98	83	5	0.0%
RE511300_018	Residential	607740	4853729	1.5	53	97	83	4	0.0%
RE511300_019	Residential	607728	4853731	1.5	53	98	83	4	0.0%
RE511300_020	Residential	607701	4853818	1.5	52	97	83	3	0.0%
RE511300_021	Residential	607668	4853800	1.5	54	98	83	3	0.0%
RE511300_022	Residential	607706	4853744	1.5	54	98	83	4	0.0%
RE511300_023	Residential	607680	4853773	1.5	54	99	83	5	0.0%
RE511300_024	Residential	607734	4853730	1.5	53	98	83	4	0.0%
RE511300_025	Residential	607707	4853788	1.5	53	98	83	3	0.0%
RE511300_026	Residential	607728	4853807	1.5	52	97	83	3	0.0%
RE511300_027	Residential	607722	4853803	1.5	52	97	83	3	0.0%
RE511300_028	Residential	607710	4853783	1.5	53	98	83	3	0.0%
RE511300_029	Residential	607675	4853776	1.5	54	99	83	5	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_030	Residential	607714	4853779	1.5	53	98	83	5	0.0%
RE511300_031	Residential	607732	4853756	1.5	53	97	83	4	0.0%
RE511300_032	Residential	607690	4853823	1.5	52	97	83	3	0.0%
RE511300_033	Residential	607721	4853771	1.5	53	98	83	4	0.0%
RE511300_034	Residential	607725	4853766	1.5	53	98	83	4	0.0%
RE511300_035	Residential	607701	4853830	1.5	52	96	83	3	0.0%
RE511300_036	Residential	607706	4853834	1.5	52	96	83	3	0.0%
RE511300_037	Residential	607704	4853793	1.5	53	98	83	3	0.0%
RE511300_038	Residential	607688	4853764	1.5	54	98	83	5	0.0%
RE511300_039	Residential	607698	4853753	1.5	54	98	83	4	0.0%
RE511300_040	Residential	607669	4853794	1.5	54	98	83	4	0.0%
RE511300_041	Residential	607692	4853759	1.5	54	98	83	5	0.0%
RE511300_042	Residential	607706	4853822	1.5	52	97	83	3	0.0%
RE511300_043	Residential	607767	4853374	1.5	67	111	83	99	0.2%
RE511300_044	Residential	607774	4853376	1.5	66	111	83	98	0.2%
RE511300_045	Residential	607781	4853377	1.5	66	110	83	93	0.2%
RE511300_046	Residential	607788	4853379	1.5	67	112	83	91	0.2%
RE511300_047	Residential	607794	4853380	1.5	69	113	83	89	0.2%
RE511300_048	Residential	607800	4853381	1.5	70	115	83	89	0.2%
RE511300_049	Residential	607806	4853382	1.5	71	116	83	86	0.2%
RE511300_050	Residential	607812	4853383	1.5	72	116	83	84	0.2%
RE511300_051	Residential	607820	4853385	1.5	73	117	83	84	0.2%
RE511300_052	Residential	607826	4853386	1.5	77	117	83	80	0.2%
RE511300_053	Residential	607832	4853387	1.5	78	119	83	79	0.2%
RE511300_054	Residential	607838	4853388	1.5	79	119	83	77	0.2%
RE511300_055	Residential	607846	4853390	1.5	79	120	83	79	0.2%
RE511300_056	Residential	607853	4853391	1.5	79	120	83	79	0.2%
RE511300_057	Residential	607859	4853392	1.5	80	120	83	79	0.2%
RE511300_058	Residential	607866	4853394	1.5	80	121	83	77	0.2%
RE511300_059	Residential	607885	4853388	1.5	81	121	83	84	0.2%
RE511300_060	Residential	607886	4853395	1.5	80	121	83	75	0.2%
RE511300_061	Residential	607886	4853402	1.5	80	121	83	65	0.1%
RE511300_062	Residential	607887	4853410	1.5	79	120	83	56	0.1%
RE511300_063	Residential	607887	4853416	1.5	79	119	83	52	0.1%
RE511300_064	Residential	607888	4853422	1.5	77	118	83	47	0.1%
RE511300_065	Residential	607888	4853429	1.5	72	115	83	44	0.1%
RE511300_066	Residential	607892	4853460	1.5	55	100	83	25	0.1%
RE511300_067	Residential	607892	4853467	1.5	55	99	83	23	0.1%
RE511300_068	Residential	607892	4853473	1.5	54	99	83	20	0.0%
RE511300_069	Residential	607893	4853479	1.5	54	99	83	19	0.0%
RE511300_070	Residential	607894	4853485	1.5	54	98	83	13	0.0%
RE511300_071	Residential	607894	4853495	1.5	54	98	83	11	0.0%
RE511300_072	Residential	607893	4853501	1.5	53	98	83	8	0.0%
RE511300_073	Residential	607891	4853507	1.5	53	97	83	7	0.0%
RE511300_074	Residential	607776	4853648	1.5	51	95	83	5	0.0%
RE511300_075	Residential	607783	4853646	1.5	51	95	83	5	0.0%
RE511300_076	Residential	607789	4853644	1.5	50	95	83	5	0.0%
RE511300_077	Residential	607795	4853641	1.5	50	95	83	5	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_078	Residential	607801	4853639	1.5	50	94	83	5	0.0%
RE511300_079	Residential	607808	4853634	1.5	50	94	83	5	0.0%
RE511300_080	Residential	607814	4853629	1.5	49	94	83	5	0.0%
RE511300_081	Residential	607819	4853626	1.5	49	94	83	5	0.0%
RE511300_082	Residential	607824	4853622	1.5	49	94	83	5	0.0%
RE511300_083	Residential	607829	4853618	1.5	49	94	83	5	0.0%
RE511300_084	Residential	607834	4853614	1.5	49	93	83	4	0.0%
RE511300_085	Residential	607842	4853608	1.5	49	93	83	4	0.0%
RE511300_086	Residential	607846	4853603	1.5	49	93	83	4	0.0%
RE511300_087	Residential	607850	4853599	1.5	49	93	83	4	0.0%
RE511300_088	Residential	607854	4853594	1.5	49	93	83	4	0.0%
RE511300_089	Residential	607858	4853589	1.5	49	94	83	5	0.0%
RE511300_090	Residential	607862	4853585	1.5	50	94	83	5	0.0%
RE511300_091	Residential	607868	4853578	1.5	50	94	83	5	0.0%
RE511300_092	Residential	607871	4853571	1.5	50	94	83	5	0.0%
RE511300_093	Residential	607874	4853566	1.5	50	95	83	5	0.0%
RE511300_094	Residential	607878	4853561	1.5	51	95	83	5	0.0%
RE511300_095	Residential	607882	4853552	1.5	51	95	83	5	0.0%
RE511300_096	Residential	607883	4853545	1.5	51	95	83	5	0.0%
RE511300_097	Residential	607884	4853538	1.5	52	96	83	5	0.0%
RE511300_098	Residential	607758	4853512	1.5	58	102	83	10	0.0%
RE511300_099	Residential	607757	4853520	1.5	57	102	83	10	0.0%
RE511300_100	Residential	607756	4853526	1.5	57	101	83	11	0.0%
RE511300_101	Residential	607755	4853532	1.5	57	101	83	10	0.0%
RE511300_102	Residential	607753	4853538	1.5	56	101	83	10	0.0%
RE511300_103	Residential	607752	4853544	1.5	56	100	83	10	0.0%
RE511300_104	Residential	607751	4853552	1.5	56	100	83	10	0.0%
RE511300_105	Residential	607749	4853559	1.5	55	99	83	10	0.0%
RE511300_106	Residential	607747	4853564	1.5	55	99	83	9	0.0%
RE511300_107	Residential	607746	4853571	1.5	55	99	83	9	0.0%
RE511300_108	Residential	607745	4853576	1.5	54	98	83	9	0.0%
RE511300_109	Residential	607744	4853583	1.5	54	98	83	8	0.0%
RE511300_110	Residential	607742	4853591	1.5	53	98	83	7	0.0%
RE511300_111	Residential	607740	4853597	1.5	53	97	83	7	0.0%
RE511300_112	Residential	607739	4853603	1.5	53	97	83	6	0.0%
RE511300_113	Residential	607738	4853609	1.5	52	96	83	6	0.0%
RE511300_114	Residential	607737	4853615	1.5	52	96	83	6	0.0%
RE511300_115	Residential	607736	4853621	1.5	52	96	83	6	0.0%
RE511300_116	Residential	607736	4853631	1.5	51	96	83	6	0.0%
RE511300_117	Residential	607735	4853640	1.5	52	96	83	6	0.0%
RE511300_118	Residential	607734	4853645	1.5	52	96	83	6	0.0%
RE511300_119	Residential	607735	4853651	1.5	52	96	83	6	0.0%
RE511300_120	Residential	607736	4853658	1.5	52	97	83	5	0.0%
RE511300_121	Residential	607737	4853664	1.5	52	97	83	5	0.0%
RE511300_122	Residential	607721	4853505	1.5	60	104	83	13	0.0%
RE511300_123	Residential	607719	4853512	1.5	60	104	83	13	0.0%
RE511300_124	Residential	607718	4853518	1.5	59	103	83	11	0.0%
RE511300_125	Residential	607717	4853524	1.5	59	103	83	11	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_126	Residential	607716	4853530	1.5	59	103	83	11	0.0%
RE511300_127	Residential	607715	4853537	1.5	58	103	83	11	0.0%
RE511300_128	Residential	607713	4853545	1.5	58	102	83	11	0.0%
RE511300_129	Residential	607712	4853551	1.5	57	102	83	11	0.0%
RE511300_130	Residential	607711	4853556	1.5	57	101	83	10	0.0%
RE511300_131	Residential	607710	4853563	1.5	57	101	83	10	0.0%
RE511300_132	Residential	607708	4853569	1.5	56	101	83	10	0.0%
RE511300_133	Residential	607707	4853575	1.5	56	100	83	10	0.0%
RE511300_134	Residential	607706	4853583	1.5	55	100	83	10	0.0%
RE511300_135	Residential	607704	4853589	1.5	55	99	83	10	0.0%
RE511300_136	Residential	607704	4853595	1.5	54	99	83	9	0.0%
RE511300_137	Residential	607702	4853601	1.5	54	98	83	9	0.0%
RE511300_138	Residential	607701	4853607	1.5	54	98	83	9	0.0%
RE511300_139	Residential	607700	4853615	1.5	53	97	83	8	0.0%
RE511300_140	Residential	607698	4853621	1.5	53	97	83	8	0.0%
RE511300_141	Residential	607697	4853627	1.5	53	97	83	8	0.0%
RE511300_142	Residential	607696	4853634	1.5	53	97	83	6	0.0%
RE511300_143	Residential	607694	4853645	1.5	53	97	83	6	0.0%
RE511300_144	Residential	607694	4853653	1.5	53	97	83	6	0.0%
RE511300_145	Residential	607694	4853659	1.5	53	98	83	6	0.0%
RE511300_146	Residential	607694	4853665	1.5	53	98	83	6	0.0%
RE511300_147	Residential	607696	4853670	1.5	53	98	83	6	0.0%
RE511300_148	Residential	607699	4853677	1.5	53	98	83	5	0.0%
RE511300_149	Residential	607750	4853399	1.5	66	111	83	67	0.2%
RE511300_150	Residential	607756	4853400	1.5	66	110	83	66	0.2%
RE511300_151	Residential	607762	4853401	1.5	65	110	83	67	0.2%
RE511300_152	Residential	607768	4853402	1.5	65	109	83	67	0.2%
RE511300_153	Residential	607776	4853404	1.5	64	108	83	67	0.2%
RE511300_154	Residential	607783	4853405	1.5	63	108	83	65	0.1%
RE511300_155	Residential	607789	4853406	1.5	63	108	83	64	0.1%
RE511300_156	Residential	607795	4853407	1.5	63	107	83	63	0.1%
RE511300_157	Residential	607801	4853409	1.5	62	107	83	61	0.1%
RE511300_158	Residential	607807	4853410	1.5	62	106	83	60	0.1%
RE511300_159	Residential	607815	4853412	1.5	61	106	83	59	0.1%
RE511300_160	Residential	607821	4853413	1.5	61	105	83	57	0.1%
RE511300_161	Residential	607827	4853414	1.5	61	106	83	53	0.1%
RE511300_162	Residential	607834	4853415	1.5	62	107	83	53	0.1%
RE511300_163	Residential	607841	4853417	1.5	63	108	83	49	0.1%
RE511300_164	Residential	607848	4853418	1.5	64	108	83	47	0.1%
RE511300_165	Residential	607854	4853419	1.5	65	109	83	47	0.1%
RE511300_166	Residential	607859	4853420	1.5	67	111	83	46	0.1%
RE511300_167	Residential	607866	4853421	1.5	68	113	83	46	0.1%
RE511300_168	Residential	607728	4853439	1.5	65	109	83	35	0.1%
RE511300_169	Residential	607736	4853440	1.5	64	109	83	34	0.1%
RE511300_170	Residential	607742	4853441	1.5	64	108	83	32	0.1%
RE511300_171	Residential	607748	4853442	1.5	63	108	83	32	0.1%
RE511300_172	Residential	607754	4853443	1.5	63	107	83	32	0.1%
RE511300_173	Residential	607761	4853444	1.5	62	107	83	30	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_174	Residential	607768	4853445	1.5	62	106	83	29	0.1%
RE511300_175	Residential	607774	4853446	1.5	61	106	83	25	0.1%
RE511300_176	Residential	607780	4853448	1.5	61	105	83	24	0.1%
RE511300_177	Residential	607786	4853449	1.5	61	105	83	23	0.1%
RE511300_178	Residential	607792	4853450	1.5	60	105	83	22	0.1%
RE511300_179	Residential	607799	4853451	1.5	60	104	83	23	0.1%
RE511300_180	Residential	607807	4853453	1.5	59	104	83	24	0.1%
RE511300_181	Residential	607813	4853454	1.5	59	103	83	23	0.1%
RE511300_182	Residential	607819	4853456	1.5	59	103	83	23	0.1%
RE511300_183	Residential	607825	4853457	1.5	58	103	83	24	0.1%
RE511300_184	Residential	607831	4853458	1.5	58	102	83	24	0.1%
RE511300_185	Residential	607837	4853459	1.5	57	102	83	26	0.1%
RE511300_186	Residential	607845	4853460	1.5	57	102	83	28	0.1%
RE511300_187	Residential	607851	4853462	1.5	57	101	83	27	0.1%
RE511300_188	Residential	607857	4853463	1.5	56	101	83	25	0.1%
RE511300_189	Residential	607863	4853464	1.5	56	101	83	25	0.1%
RE511300_190	Residential	607870	4853465	1.5	56	100	83	24	0.1%
RE511300_191	Residential	607724	4853468	1.5	63	107	83	19	0.0%
RE511300_192	Residential	607731	4853469	1.5	62	107	83	18	0.0%
RE511300_193	Residential	607737	4853470	1.5	62	106	83	17	0.0%
RE511300_194	Residential	607742	4853471	1.5	62	106	83	15	0.0%
RE511300_195	Residential	607749	4853472	1.5	61	106	83	16	0.0%
RE511300_196	Residential	607755	4853473	1.5	61	105	83	15	0.0%
RE511300_197	Residential	607762	4853474	1.5	60	105	83	14	0.0%
RE511300_198	Residential	607769	4853476	1.5	60	104	83	14	0.0%
RE511300_199	Residential	607775	4853477	1.5	59	104	83	14	0.0%
RE511300_200	Residential	607781	4853478	1.5	59	103	83	14	0.0%
RE511300_201	Residential	607787	4853480	1.5	59	103	83	12	0.0%
RE511300_202	Residential	607793	4853481	1.5	58	103	83	13	0.0%
RE511300_203	Residential	607801	4853483	1.5	58	102	83	12	0.0%
RE511300_204	Residential	607807	4853484	1.5	57	102	83	12	0.0%
RE511300_205	Residential	607813	4853485	1.5	57	101	83	12	0.0%
RE511300_206	Residential	607819	4853486	1.5	57	101	83	12	0.0%
RE511300_207	Residential	607825	4853488	1.5	56	101	83	13	0.0%
RE511300_208	Residential	607831	4853489	1.5	56	100	83	14	0.0%
RE511300_209	Residential	607839	4853490	1.5	56	100	83	13	0.0%
RE511300_210	Residential	607846	4853492	1.5	55	100	83	13	0.0%
RE511300_211	Residential	607851	4853493	1.5	55	99	83	12	0.0%
RE511300_212	Residential	607858	4853494	1.5	55	99	83	12	0.0%
RE511300_213	Residential	607863	4853495	1.5	54	99	83	11	0.0%
RE511300_214	Residential	607869	4853496	1.5	54	98	83	10	0.0%
RE511400_001	Residential	607929	4853848	1.5	47	92	83	3	0.0%
RE511400_002	Residential	607914	4853876	1.5	47	91	83	3	0.0%
RE511400_003	Residential	607929	4853886	1.5	46	91	83	3	0.0%
RE511400_004	Residential	607898	4853826	1.5	48	93	83	3	0.0%
RE511400_005	Residential	607899	4853865	1.5	47	92	83	3	0.0%
RE511400_006	Residential	607842	4853819	1.5	50	94	83	3	0.0%
RE511400_007	Residential	607859	4853838	1.5	49	93	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_008	Residential	607869	4853844	1.5	48	93	83	3	0.0%
RE511400_009	Residential	607876	4853849	1.5	48	93	83	3	0.0%
RE511400_010	Residential	607922	4853881	1.5	47	91	83	3	0.0%
RE511400_011	Residential	607891	4853860	1.5	48	92	83	3	0.0%
RE511400_012	Residential	607868	4853804	1.5	49	94	83	3	0.0%
RE511400_013	Residential	607919	4853841	1.5	48	92	83	3	0.0%
RE511400_014	Residential	607907	4853870	1.5	47	92	83	3	0.0%
RE511400_015	Residential	607887	4853793	1.5	49	94	83	3	0.0%
RE511400_016	Residential	607876	4853800	1.5	49	94	83	3	0.0%
RE511400_017	Residential	607867	4853900	1.5	47	91	83	3	0.0%
RE511400_018	Residential	607888	4853915	1.5	46	90	83	3	0.0%
RE511400_019	Residential	607881	4853910	1.5	46	91	83	3	0.0%
RE511400_020	Residential	607895	4853920	1.5	45	90	83	3	0.0%
RE511400_021	Residential	607805	4853857	1.5	49	94	83	3	0.0%
RE511400_022	Residential	607814	4853863	1.5	49	93	83	3	0.0%
RE511400_023	Residential	607859	4853894	1.5	47	91	83	3	0.0%
RE511400_024	Residential	607874	4853905	1.5	46	91	83	3	0.0%
RE511400_025	Residential	607821	4853868	1.5	48	93	83	3	0.0%
RE511400_026	Residential	607829	4853873	1.5	48	93	83	3	0.0%
RE511400_027	Residential	607902	4853925	1.5	45	90	83	3	0.0%
RE511400_028	Residential	607836	4853879	1.5	48	92	83	3	0.0%
RE511400_029	Residential	607844	4853884	1.5	48	92	83	3	0.0%
RE511400_030	Residential	607852	4853889	1.5	47	92	83	3	0.0%
RE511400_031	Residential	607961	4853671	1.5	48	93	83	4	0.0%
RE511400_032	Residential	607901	4853730	1.5	50	94	83	3	0.0%
RE511400_033	Residential	607932	4853710	1.5	49	94	83	4	0.0%
RE511400_034	Residential	607891	4853735	1.5	50	95	83	3	0.0%
RE511400_035	Residential	607950	4853688	1.5	48	93	83	4	0.0%
RE511400_036	Residential	608027	4853515	1.5	62	103	83	15	0.0%
RE511400_037	Residential	607948	4853861	1.5	47	91	83	3	0.0%
RE511400_038	Residential	607884	4853855	1.5	48	92	83	3	0.0%
RE511400_039	Residential	607860	4853809	1.5	49	94	83	3	0.0%
RE511400_040	Residential	607917	4853721	1.5	49	94	83	3	0.0%
RE511400_041	Residential	607909	4853725	1.5	50	94	83	3	0.0%
RE511400_042	Residential	607925	4853716	1.5	49	94	83	3	0.0%
RE511400_043	Residential	607955	4853680	1.5	48	93	83	4	0.0%
RE511400_044	Residential	607944	4853695	1.5	49	93	83	4	0.0%
RE511400_045	Residential	607939	4853703	1.5	49	93	83	4	0.0%
RE511400_046	Residential	608072	4853635	1.5	45	90	83	3	0.0%
RE511400_047	Residential	608048	4853617	1.5	45	90	83	3	0.0%
RE511400_048	Residential	608076	4853544	1.5	57	98	83	13	0.0%
RE511400_049	Residential	608107	4853601	1.5	49	90	83	8	0.0%
RE511400_050	Residential	608076	4853554	1.5	56	97	83	12	0.0%
RE511400_051	Residential	607864	4853751	1.5	50	95	83	3	0.0%
RE511400_052	Residential	607853	4853757	1.5	51	95	83	3	0.0%
RE511400_053	Residential	607845	4853762	1.5	51	95	83	3	0.0%
RE511400_054	Residential	607836	4853766	1.5	51	95	83	3	0.0%
RE511400_055	Residential	607827	4853771	1.5	51	95	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_056	Residential	607818	4853777	1.5	51	95	83	3	0.0%
RE511400_057	Residential	607794	4853801	1.5	51	95	83	3	0.0%
RE511400_058	Residential	607809	4853783	1.5	51	96	83	3	0.0%
RE511400_059	Residential	607802	4853791	1.5	51	95	83	3	0.0%
RE511400_060	Residential	608147	4853557	1.5	57	101	83	11	0.0%
RE511400_061	Residential	608166	4853558	1.5	58	103	83	11	0.0%
RE511400_062	Residential	608176	4853558	1.5	59	103	83	11	0.0%
RE511400_063	Residential	608157	4853558	1.5	58	102	83	11	0.0%
RE511400_064	Residential	608076	4853583	1.5	49	91	83	8	0.0%
RE511400_065	Residential	608115	4853525	1.5	63	108	83	13	0.0%
RE511400_066	Residential	608102	4853614	1.5	45	89	83	6	0.0%
RE511400_067	Residential	608093	4853649	1.5	45	90	83	3	0.0%
RE511400_068	Residential	608103	4853524	1.5	62	107	83	14	0.0%
RE511400_069	Residential	608076	4853563	1.5	54	95	83	10	0.0%
RE511400_070	Residential	608074	4853594	1.5	46	89	83	6	0.0%
RE511400_071	Residential	608107	4853544	1.5	59	100	83	12	0.0%
RE511400_072	Residential	608107	4853563	1.5	55	96	83	11	0.0%
RE511400_073	Residential	608107	4853572	1.5	54	95	83	11	0.0%
RE511400_074	Residential	608082	4853642	1.5	45	90	83	3	0.0%
RE511400_075	Residential	608056	4853624	1.5	45	90	83	3	0.0%
RE511400_076	Residential	608067	4853525	1.5	61	102	83	14	0.0%
RE511400_077	Residential	608070	4853606	1.5	45	89	83	5	0.0%
RE511400_078	Residential	608097	4853625	1.5	45	89	83	5	0.0%
RE511400_079	Residential	608064	4853629	1.5	45	90	83	3	0.0%
RE511400_080	Residential	608091	4853524	1.5	62	105	83	13	0.0%
RE511400_081	Residential	608107	4853581	1.5	52	94	83	10	0.0%
RE511400_082	Residential	608107	4853590	1.5	51	92	83	9	0.0%
RE511400_083	Residential	608077	4853573	1.5	52	93	83	9	0.0%
RE511400_084	Residential	608107	4853554	1.5	57	98	83	12	0.0%
RE511400_085	Residential	608080	4853524	1.5	61	103	83	14	0.0%
RE511400_086	Residential	608146	4853605	1.5	50	92	83	9	0.0%
RE511400_087	Residential	607690	4854002	1.5	47	89	83	3	0.0%
RE511400_088	Residential	607683	4854039	1.5	49	90	83	3	0.0%
RE511400_089	Residential	607642	4854055	1.5	50	91	83	3	0.0%
RE511400_090	Residential	607726	4853973	1.5	45	90	83	3	0.0%
RE511400_091	Residential	607638	4854068	1.5	51	92	83	3	0.0%
RE511400_092	Residential	607782	4853966	1.5	45	89	83	3	0.0%
RE511400_093	Residential	607648	4854028	1.5	49	89	83	4	0.0%
RE511400_094	Residential	607706	4853919	1.5	48	93	83	3	0.0%
RE511400_095	Residential	607633	4854095	1.5	52	93	83	4	0.0%
RE511400_096	Residential	607649	4853948	1.5	48	93	83	3	0.0%
RE511400_097	Residential	607792	4853973	1.5	44	89	83	3	0.0%
RE511400_098	Residential	607734	4853980	1.5	45	90	83	3	0.0%
RE511400_099	Residential	607851	4853813	1.5	50	94	83	3	0.0%
RE511400_100	Residential	607835	4853830	1.5	49	94	83	3	0.0%
RE511400_101	Residential	607938	4853855	1.5	47	92	83	3	0.0%
RE511400_102	Residential	607908	4853835	1.5	48	93	83	3	0.0%
RE511400_103	Residential	607677	4854058	1.5	50	91	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_104	Residential	607687	4854030	1.5	48	89	83	3	0.0%
RE511400_105	Residential	607758	4853948	1.5	46	91	83	3	0.0%
RE511400_106	Residential	607671	4853912	1.5	49	94	83	3	0.0%
RE511400_107	Residential	607797	4853977	1.5	44	89	83	3	0.0%
RE511400_108	Residential	607709	4854015	1.5	47	88	83	3	0.0%
RE511400_109	Residential	607661	4853910	1.5	50	94	83	3	0.0%
RE511400_110	Residential	607713	4853921	1.5	48	93	83	3	0.0%
RE511400_111	Residential	607654	4854003	1.5	47	89	83	3	0.0%
RE511400_112	Residential	607657	4853949	1.5	48	92	83	3	0.0%
RE511400_113	Residential	607651	4854015	1.5	48	89	83	4	0.0%
RE511400_114	Residential	607731	4853930	1.5	47	92	83	3	0.0%
RE511400_115	Residential	607695	4853916	1.5	49	93	83	3	0.0%
RE511400_116	Residential	607655	4853989	1.5	46	90	83	3	0.0%
RE511400_117	Residential	607645	4854041	1.5	49	90	83	3	0.0%
RE511400_118	Residential	607751	4853943	1.5	47	91	83	3	0.0%
RE511400_119	Residential	607744	4853938	1.5	47	91	83	3	0.0%
RE511400_120	Residential	607787	4853970	1.5	45	89	83	3	0.0%
RE511400_121	Residential	607676	4853954	1.5	47	92	83	3	0.0%
RE511400_122	Residential	607667	4853952	1.5	48	92	83	3	0.0%
RE511400_123	Residential	607684	4853955	1.5	47	92	83	3	0.0%
RE511400_124	Residential	607704	4853960	1.5	47	91	83	3	0.0%
RE511400_125	Residential	607680	4854049	1.5	50	90	83	3	0.0%
RE511400_126	Residential	607679	4853914	1.5	49	94	83	3	0.0%
RE511400_127	Residential	607700	4854008	1.5	47	88	83	3	0.0%
RE511400_128	Residential	607719	4853969	1.5	46	90	83	3	0.0%
RE511400_129	Residential	607689	4853915	1.5	49	93	83	3	0.0%
RE511400_130	Residential	607739	4853935	1.5	47	92	83	3	0.0%
RE511400_131	Residential	607636	4854081	1.5	52	92	83	3	0.0%
RE511400_132	Residential	607680	4853999	1.5	47	89	83	3	0.0%
RE511400_133	Residential	607723	4853926	1.5	48	92	83	3	0.0%
RE511400_134	Residential	607693	4853957	1.5	47	91	83	3	0.0%
RE511400_135	Residential	607710	4853964	1.5	46	91	83	3	0.0%
RE511400_136	Residential	607759	4854001	1.5	46	88	83	3	0.0%
RE511400_137	Residential	608026	4853558	1.5	49	92	83	9	0.0%
RE511400_138	Residential	608026	4853566	1.5	46	90	83	8	0.0%
RE511400_139	Residential	608023	4853574	1.5	46	90	83	6	0.0%
RE511400_140	Residential	608018	4853584	1.5	45	90	83	5	0.0%
RE511400_141	Residential	608015	4853591	1.5	45	90	83	4	0.0%
RE511400_142	Residential	608006	4853606	1.5	46	90	83	3	0.0%
RE511400_143	Residential	608011	4853599	1.5	45	90	83	3	0.0%
RE511400_144	Residential	608001	4853613	1.5	46	91	83	3	0.0%
RE511400_145	Residential	607996	4853620	1.5	46	91	83	3	0.0%
RE511400_146	Residential	607985	4853636	1.5	47	91	83	3	0.0%
RE511400_147	Residential	607991	4853628	1.5	47	91	83	3	0.0%
RE511400_148	Residential	607980	4853643	1.5	47	92	83	3	0.0%
RE511400_149	Residential	608170	4853516	1.5	61	106	83	12	0.0%
RE511400_150	Residential	608155	4853516	1.5	63	108	83	12	0.0%
RE511400_151	Residential	608163	4853516	1.5	62	107	83	12	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_152	Residential	608148	4853517	1.5	64	109	83	13	0.0%
RE511400_153	Residential	608192	4853515	1.5	62	106	83	11	0.0%
RE511400_154	Residential	608184	4853515	1.5	61	106	83	11	0.0%
RE511400_155	Residential	608207	4853515	1.5	62	107	83	10	0.0%
RE511400_156	Residential	608199	4853515	1.5	62	107	83	11	0.0%
RE511400_157	Residential	608176	4853516	1.5	60	105	83	11	0.0%
RE511400_158	Residential	608214	4853515	1.5	62	107	83	10	0.0%
RE511400_159	Residential	607839	4853722	1.5	51	95	83	4	0.0%
RE511400_160	Residential	607826	4853728	1.5	51	95	83	4	0.0%
RE511400_161	Residential	607806	4853741	1.5	51	96	83	4	0.0%
RE511400_162	Residential	607820	4853732	1.5	51	96	83	4	0.0%
RE511400_163	Residential	607775	4853762	1.5	52	97	83	3	0.0%
RE511400_164	Residential	607764	4853777	1.5	52	97	83	3	0.0%
RE511400_165	Residential	607832	4853725	1.5	51	95	83	4	0.0%
RE511400_166	Residential	607791	4853750	1.5	52	96	83	4	0.0%
RE511400_167	Residential	607845	4853717	1.5	50	95	83	4	0.0%
RE511400_168	Residential	607771	4853767	1.5	52	97	83	3	0.0%
RE511400_169	Residential	607814	4853735	1.5	51	96	83	4	0.0%
RE511400_170	Residential	607785	4853754	1.5	52	96	83	4	0.0%
RE511400_171	Residential	607767	4853772	1.5	52	97	83	3	0.0%
RE511400_172	Residential	607800	4853745	1.5	52	96	83	4	0.0%
RE511400_173	Residential	607852	4853936	1.5	45	90	83	3	0.0%
RE511400_174	Residential	607859	4853941	1.5	45	90	83	3	0.0%
RE511400_175	Residential	607838	4853926	1.5	46	91	83	3	0.0%
RE511400_176	Residential	607787	4853890	1.5	48	93	83	3	0.0%
RE511400_177	Residential	607792	4853895	1.5	48	92	83	3	0.0%
RE511400_178	Residential	607797	4853898	1.5	48	92	83	3	0.0%
RE511400_179	Residential	607802	4853902	1.5	47	92	83	3	0.0%
RE511400_180	Residential	607815	4853910	1.5	47	92	83	3	0.0%
RE511400_181	Residential	607821	4853913	1.5	47	91	83	3	0.0%
RE511400_182	Residential	607827	4853918	1.5	46	91	83	3	0.0%
RE511400_183	Residential	607832	4853921	1.5	46	91	83	3	0.0%
RE511400_184	Residential	607845	4853931	1.5	46	90	83	3	0.0%
RE511400_185	Residential	607809	4853906	1.5	47	92	83	3	0.0%
RE511400_186	Residential	607925	4853654	1.5	48	93	83	3	0.0%
RE511400_187	Residential	607929	4853648	1.5	48	93	83	3	0.0%
RE511400_188	Residential	607920	4853662	1.5	48	93	83	4	0.0%
RE511400_189	Residential	607915	4853668	1.5	49	93	83	4	0.0%
RE511400_190	Residential	607907	4853677	1.5	49	94	83	4	0.0%
RE511400_191	Residential	607903	4853680	1.5	49	94	83	4	0.0%
RE511400_192	Residential	607895	4853688	1.5	49	94	83	4	0.0%
RE511400_193	Residential	607889	4853691	1.5	49	94	83	4	0.0%
RE511400_194	Residential	607881	4853696	1.5	50	94	83	4	0.0%
RE511400_195	Residential	607873	4853701	1.5	50	94	83	4	0.0%
RE511400_196	Residential	607989	4853515	1.5	56	98	83	16	0.0%
RE511400_197	Residential	607989	4853530	1.5	50	95	83	13	0.0%
RE511400_198	Residential	607989	4853538	1.5	49	93	83	11	0.0%
RE511400_199	Residential	607988	4853524	1.5	53	96	83	14	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_200	Residential	607988	4853546	1.5	48	92	83	9	0.0%
RE511400_201	Residential	607988	4853553	1.5	48	92	83	8	0.0%
RE511400_202	Residential	607982	4853569	1.5	47	91	83	5	0.0%
RE511400_203	Residential	607985	4853562	1.5	47	92	83	7	0.0%
RE511400_204	Residential	607980	4853574	1.5	47	91	83	4	0.0%
RE511400_205	Residential	607978	4853580	1.5	47	91	83	4	0.0%
RE511400_206	Residential	607972	4853586	1.5	46	91	83	3	0.0%
RE511400_207	Residential	607968	4853592	1.5	46	90	83	3	0.0%
RE511400_208	Residential	607963	4853600	1.5	46	91	83	3	0.0%
RE511400_209	Residential	607958	4853607	1.5	46	91	83	3	0.0%
RE511400_210	Residential	607953	4853615	1.5	47	91	83	4	0.0%
RE511400_211	Residential	607948	4853620	1.5	47	92	83	4	0.0%
RE511400_212	Residential	608027	4853522	1.5	60	101	83	14	0.0%
RE511400_213	Residential	608027	4853540	1.5	55	96	83	12	0.0%
RE511400_214	Residential	608027	4853531	1.5	57	98	83	13	0.0%
RE511400_215	Residential	608027	4853548	1.5	52	94	83	11	0.0%
RE511400_216	Residential	607888	4853817	1.5	49	93	83	3	0.0%
RE511400_217	Residential	607735	4853842	1.5	51	95	83	3	0.0%
RE511400_218	Residential	607748	4853810	1.5	51	96	83	3	0.0%
RE511400_219	Residential	607777	4853830	1.5	50	95	83	3	0.0%
RE511400_220	Residential	607730	4853850	1.5	51	95	83	3	0.0%
RE511400_221	Residential	607725	4853846	1.5	51	95	83	3	0.0%
RE511400_222	Residential	607783	4853834	1.5	50	95	83	3	0.0%
RE511400_223	Residential	607752	4853873	1.5	49	94	83	3	0.0%
RE511400_224	Residential	607743	4853806	1.5	52	96	83	3	0.0%
RE511400_225	Residential	607711	4853837	1.5	51	96	83	3	0.0%
RE511400_226	Residential	607748	4853878	1.5	49	94	83	3	0.0%
RE511400_227	Residential	607755	4853868	1.5	49	94	83	3	0.0%
RE511400_228	Residential	607756	4853827	1.5	51	95	83	3	0.0%
RE511400_229	Residential	607767	4853823	1.5	51	95	83	3	0.0%
RE511400_230	Residential	607735	4853854	1.5	50	95	83	3	0.0%
RE511400_231	Residential	607738	4853803	1.5	52	96	83	3	0.0%
RE511400_232	Residential	607762	4853859	1.5	50	94	83	3	0.0%
RE511400_233	Residential	607719	4853843	1.5	51	96	83	3	0.0%
RE511400_234	Residential	607730	4853838	1.5	51	96	83	3	0.0%
RE511400_235	Residential	607767	4853834	1.5	50	95	83	3	0.0%
RE511400_236	Residential	607738	4853814	1.5	52	96	83	3	0.0%
RE511400_237	Residential	607733	4853810	1.5	52	96	83	3	0.0%
RE511400_238	Residential	607761	4853819	1.5	51	95	83	3	0.0%
RE511400_239	Residential	607777	4853842	1.5	50	94	83	3	0.0%
RE511400_240	Residential	607761	4853831	1.5	51	95	83	3	0.0%
RE511400_241	Residential	607751	4853823	1.5	51	96	83	3	0.0%
RE511400_242	Residential	607756	4853816	1.5	51	96	83	3	0.0%
RE511400_243	Residential	607743	4853817	1.5	51	96	83	3	0.0%
RE511400_244	Residential	607741	4853846	1.5	51	95	83	3	0.0%
RE511400_245	Residential	607772	4853838	1.5	50	95	83	3	0.0%
RE511400_246	Residential	607759	4853864	1.5	50	94	83	3	0.0%
RE511400_247	Residential	607717	4853829	1.5	52	96	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_248	Residential	607725	4853835	1.5	51	96	83	3	0.0%
RE511400_249	Residential	607772	4853827	1.5	50	95	83	3	0.0%
RE511400_250	Residential	607866	4853946	1.5	45	89	83	3	0.0%
RE511400_251	Residential	607873	4853951	1.5	44	89	83	3	0.0%
RE511400_252	Residential	607880	4853956	1.5	44	89	83	3	0.0%
RE511400_265	Residential	607700	4854194	1.5	54	95	83	2	0.0%
RE511400_266	Residential	607689	4854191	1.5	54	95	83	2	0.0%
RE511400_267	Residential	607679	4854188	1.5	54	95	83	2	0.0%
RE511400_268	Residential	607668	4854184	1.5	54	95	83	2	0.0%
RE511400_269	Residential	607657	4854180	1.5	54	95	83	2	0.0%
RE511400_270	Residential	607645	4854176	1.5	54	95	83	2	0.0%
RE511400_271	Residential	607619	4854171	1.5	55	95	83	2	0.0%
RE511400_272	Residential	607620	4854158	1.5	54	95	83	2	0.0%
RE511400_273	Residential	607624	4854146	1.5	54	95	83	2	0.0%
RE511400_274	Residential	607626	4854132	1.5	54	94	83	2	0.0%
RE511400_275	Residential	607721	4854165	1.5	53	94	83	2	0.0%
RE511400_276	Residential	607710	4854163	1.5	53	94	83	2	0.0%
RE511400_277	Residential	607700	4854159	1.5	53	94	83	2	0.0%
RE511400_278	Residential	607689	4854156	1.5	53	94	83	2	0.0%
RE511400_279	Residential	607677	4854152	1.5	54	94	83	2	0.0%
RE511400_280	Residential	607665	4854148	1.5	54	94	83	2	0.0%
RE511400_281	Residential	607651	4854143	1.5	54	94	83	2	0.0%
RE511400_282	Residential	607770	4854052	1.5	49	90	83	3	0.0%
RE511400_283	Residential	607765	4854059	1.5	49	90	83	3	0.0%
RE511400_284	Residential	607760	4854069	1.5	50	91	83	3	0.0%
RE511400_285	Residential	607753	4854080	1.5	50	91	83	3	0.0%
RE511400_286	Residential	607748	4854093	1.5	51	92	83	3	0.0%
RE511400_287	Residential	607744	4854104	1.5	51	92	83	2	0.0%
RE511400_288	Residential	607740	4854116	1.5	52	93	83	2	0.0%
RE511400_289	Residential	607736	4854126	1.5	52	93	83	2	0.0%
RE511400_290	Residential	607742	4854030	1.5	48	89	83	3	0.0%
RE511400_291	Residential	607736	4854039	1.5	48	89	83	3	0.0%
RE511400_292	Residential	607731	4854048	1.5	49	90	83	3	0.0%
RE511400_293	Residential	607726	4854059	1.5	50	90	83	3	0.0%
RE511400_294	Residential	607723	4854067	1.5	50	91	83	3	0.0%
RE511400_295	Residential	607720	4854076	1.5	51	91	83	3	0.0%
RE511400_296	Residential	607717	4854085	1.5	51	92	83	3	0.0%
RE511400_297	Residential	607714	4854095	1.5	51	92	83	3	0.0%
RE511400_298	Residential	607710	4854106	1.5	52	93	83	3	0.0%
RE511400_299	Residential	607707	4854117	1.5	52	93	83	2	0.0%
RE511400_300	Residential	607674	4854068	1.5	51	92	83	3	0.0%
RE511400_301	Residential	607670	4854080	1.5	51	92	83	3	0.0%
RE511400_302	Residential	607667	4854091	1.5	52	93	83	4	0.0%
RE511400_303	Residential	607662	4854103	1.5	52	93	83	3	0.0%
RE511400_304	Residential	607765	4854005	1.5	46	88	83	3	0.0%
RE511400_305	Residential	607773	4854009	1.5	46	87	83	3	0.0%
RE511400_306	Residential	607779	4854014	1.5	46	87	83	3	0.0%
RE511400_307	Residential	607787	4854019	1.5	47	88	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_308	Residential	607794	4854023	1.5	47	88	83	3	0.0%
RE511400_309	Residential	607801	4854028	1.5	47	88	83	3	0.0%
RE511400_310	Residential	607809	4854033	1.5	47	88	83	3	0.0%
RE511400_311	Residential	607817	4854039	1.5	48	88	83	3	0.0%
RE511400_312	Residential	607802	4853980	1.5	44	89	83	3	0.0%
RE511400_313	Residential	607807	4853983	1.5	44	88	83	3	0.0%
RE511400_314	Residential	607814	4853988	1.5	45	88	83	3	0.0%
RE511400_315	Residential	607820	4853992	1.5	45	88	83	3	0.0%
RE511400_316	Residential	607825	4853995	1.5	45	87	83	3	0.0%
RE511400_317	Residential	607829	4853998	1.5	45	87	83	3	0.0%
RE511400_318	Residential	607837	4854004	1.5	45	87	83	3	0.0%
RE511400_319	Residential	607842	4854008	1.5	46	86	83	3	0.0%
RE511500_001	Child Care Centre	608104	4853900	1.5	43	88	83	2	0.0%
RE511500_002	Residential	608322	4853695	1.5	44	88	83	4	0.0%
RE511500_003	Residential	608318	4853701	1.5	44	88	83	3	0.0%
RE511500_004	Residential	608314	4853707	1.5	44	88	83	3	0.0%
RE511500_005	Residential	608300	4853727	1.5	44	89	83	1	0.0%
RE511500_006	Residential	608295	4853734	1.5	44	89	83	1	0.0%
RE511500_007	Residential	608290	4853741	1.5	44	89	83	1	0.0%
RE511500_008	Residential	608285	4853748	1.5	44	89	83	1	0.0%
RE511500_009	Residential	608280	4853755	1.5	44	89	83	1	0.0%
RE511500_010	Residential	608335	4853677	1.5	45	90	83	4	0.0%
RE511500_011	Residential	608327	4853688	1.5	44	88	83	5	0.0%
RE511500_012	Residential	608364	4853636	1.5	45	89	83	4	0.0%
RE511500_013	Residential	608359	4853642	1.5	46	90	83	4	0.0%
RE511500_014	Residential	608355	4853649	1.5	46	91	83	3	0.0%
RE511500_015	Residential	608349	4853657	1.5	46	91	83	3	0.0%
RE511500_016	Residential	608345	4853664	1.5	46	91	83	4	0.0%
RE511500_017	Residential	608310	4853713	1.5	44	88	83	2	0.0%
RE511500_018	Residential	608305	4853720	1.5	44	88	83	1	0.0%
RE511500_019	Residential	608232	4853817	1.5	44	88	83	2	0.0%
RE511500_020	Residential	608226	4853679	1.5	44	89	83	3	0.0%
RE511500_021	Residential	608207	4853707	1.5	45	90	83	1	0.0%
RE511500_022	Residential	608274	4853612	1.5	51	96	83	6	0.0%
RE511500_023	Residential	608242	4853657	1.5	46	88	83	5	0.0%
RE511500_024	Residential	608232	4853672	1.5	44	89	83	4	0.0%
RE511500_025	Residential	607937	4853892	1.5	46	90	83	3	0.0%
RE511500_026	Residential	607990	4853929	1.5	44	88	83	3	0.0%
RE511500_027	Residential	607999	4853934	1.5	43	88	83	3	0.0%
RE511500_028	Residential	608017	4853910	1.5	44	89	83	3	0.0%
RE511500_029	Residential	607985	4853887	1.5	45	90	83	3	0.0%
RE511500_030	Residential	607977	4853881	1.5	46	90	83	3	0.0%
RE511500_031	Residential	607952	4853902	1.5	45	90	83	3	0.0%
RE511500_032	Residential	608205	4853855	1.5	43	88	83	2	0.0%
RE511500_033	Residential	608000	4853898	1.5	45	89	83	3	0.0%
RE511500_034	Residential	607982	4853923	1.5	44	89	83	3	0.0%
RE511500_035	Residential	607960	4853907	1.5	45	90	83	3	0.0%
RE511500_036	Residential	607993	4853893	1.5	45	90	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_037	Residential	608228	4853822	1.5	44	88	83	2	0.0%
RE511500_038	Residential	608194	4853868	1.5	43	88	83	2	0.0%
RE511500_039	Residential	608188	4853877	1.5	43	87	83	2	0.0%
RE511500_040	Residential	608008	4853903	1.5	45	89	83	3	0.0%
RE511500_041	Residential	608199	4853862	1.5	43	88	83	2	0.0%
RE511500_042	Residential	608224	4853828	1.5	44	88	83	2	0.0%
RE511500_043	Residential	608221	4853833	1.5	44	88	83	2	0.0%
RE511500_044	Residential	607925	4853940	1.5	44	89	83	3	0.0%
RE511500_045	Residential	608481	4853493	1.5	54	95	83	8	0.0%
RE511500_046	Residential	608407	4853578	1.5	50	93	83	4	0.0%
RE511500_047	Residential	608462	4853557	1.5	53	94	83	4	0.0%
RE511500_048	Residential	608457	4853565	1.5	52	94	83	5	0.0%
RE511500_049	Residential	607910	4853930	1.5	45	89	83	3	0.0%
RE511500_050	Residential	607917	4853935	1.5	44	89	83	3	0.0%
RE511500_051	Residential	608411	4853570	1.5	52	95	83	5	0.0%
RE511500_052	Residential	608435	4853530	1.5	54	95	83	6	0.0%
RE511500_053	Residential	608415	4853563	1.5	53	96	83	5	0.0%
RE511500_054	Residential	608053	4853924	1.5	43	88	83	2	0.0%
RE511500_055	Residential	608480	4853505	1.5	52	96	83	7	0.0%
RE511500_056	Residential	608197	4853721	1.5	45	90	83	1	0.0%
RE511500_057	Residential	608191	4853730	1.5	45	90	83	1	0.0%
RE511500_058	Residential	608263	4853627	1.5	50	94	83	6	0.0%
RE511500_059	Residential	608289	4853591	1.5	50	94	83	6	0.0%
RE511500_060	Residential	608284	4853598	1.5	51	95	83	6	0.0%
RE511500_061	Residential	608211	4853846	1.5	43	88	83	2	0.0%
RE511500_062	Residential	608179	4853890	1.5	43	87	83	2	0.0%
RE511500_063	Residential	607967	4853875	1.5	46	91	83	3	0.0%
RE511500_064	Residential	607967	4853913	1.5	45	89	83	3	0.0%
RE511500_065	Residential	608234	4853563	1.5	55	99	83	9	0.0%
RE511500_066	Residential	608254	4853574	1.5	53	98	83	9	0.0%
RE511500_067	Residential	608194	4853557	1.5	58	103	83	11	0.0%
RE511500_068	Residential	608225	4853560	1.5	56	100	83	9	0.0%
RE511500_069	Residential	608214	4853558	1.5	57	101	83	9	0.0%
RE511500_070	Residential	608185	4853558	1.5	59	103	83	11	0.0%
RE511500_071	Residential	608131	4853676	1.5	46	90	83	2	0.0%
RE511500_072	Residential	608217	4853606	1.5	51	95	83	10	0.0%
RE511500_073	Residential	608173	4853670	1.5	45	89	83	3	0.0%
RE511500_074	Residential	608147	4853647	1.5	45	89	83	3	0.0%
RE511500_075	Residential	608204	4853630	1.5	48	89	83	6	0.0%
RE511500_076	Residential	608156	4853693	1.5	45	90	83	1	0.0%
RE511500_077	Residential	608189	4853647	1.5	46	89	83	5	0.0%
RE511500_078	Residential	608184	4853655	1.5	45	89	83	4	0.0%
RE511500_079	Residential	608158	4853604	1.5	50	91	83	10	0.0%
RE511500_080	Residential	608149	4853688	1.5	45	90	83	2	0.0%
RE511500_081	Residential	608226	4853615	1.5	50	94	83	7	0.0%
RE511500_082	Residential	608167	4853604	1.5	50	92	83	10	0.0%
RE511500_083	Residential	608195	4853640	1.5	47	88	83	6	0.0%
RE511500_084	Residential	608195	4853604	1.5	51	94	83	9	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_085	Residential	608154	4853638	1.5	46	89	83	4	0.0%
RE511500_086	Residential	608120	4853668	1.5	46	90	83	2	0.0%
RE511500_087	Residential	608176	4853604	1.5	51	92	83	10	0.0%
RE511500_088	Residential	608168	4853677	1.5	45	89	83	1	0.0%
RE511500_089	Residential	608140	4853682	1.5	46	90	83	2	0.0%
RE511500_090	Residential	608205	4853603	1.5	51	95	83	10	0.0%
RE511500_091	Residential	608185	4853604	1.5	51	93	83	10	0.0%
RE511500_092	Residential	608141	4853656	1.5	45	89	83	2	0.0%
RE511500_093	Residential	608244	4853567	1.5	54	98	83	9	0.0%
RE511500_094	Residential	608204	4853557	1.5	58	102	83	11	0.0%
RE511500_095	Residential	608304	4853570	1.5	52	97	83	7	0.0%
RE511500_096	Residential	608315	4853555	1.5	54	98	83	7	0.0%
RE511500_097	Residential	608258	4853635	1.5	48	93	83	7	0.0%
RE511500_098	Residential	608248	4853649	1.5	46	89	83	7	0.0%
RE511500_099	Residential	608222	4853686	1.5	45	89	83	2	0.0%
RE511500_100	Residential	608216	4853693	1.5	45	89	83	2	0.0%
RE511500_101	Residential	608269	4853620	1.5	51	95	83	6	0.0%
RE511500_102	Residential	608201	4853714	1.5	45	90	83	1	0.0%
RE511500_103	Residential	608309	4853563	1.5	53	98	83	7	0.0%
RE511500_104	Residential	608299	4853577	1.5	51	95	83	6	0.0%
RE511500_105	Residential	608279	4853605	1.5	51	96	83	7	0.0%
RE511500_106	Residential	608253	4853642	1.5	47	91	83	7	0.0%
RE511500_107	Residential	608212	4853700	1.5	45	89	83	1	0.0%
RE511500_108	Residential	608294	4853584	1.5	49	93	83	6	0.0%
RE511500_109	Residential	608166	4853699	1.5	45	90	83	1	0.0%
RE511500_110	Residential	608179	4853662	1.5	45	89	83	3	0.0%
RE511500_111	Residential	608443	4853510	1.5	53	97	83	7	0.0%
RE511500_112	Residential	608420	4853557	1.5	54	96	83	5	0.0%
RE511500_113	Residential	608424	4853551	1.5	55	96	83	5	0.0%
RE511500_114	Residential	608473	4853532	1.5	51	94	83	5	0.0%
RE511500_115	Residential	608470	4853541	1.5	52	93	83	5	0.0%
RE511500_116	Residential	608448	4853484	1.5	55	97	83	8	0.0%
RE511500_117	Residential	608445	4853501	1.5	54	98	83	7	0.0%
RE511500_118	Residential	608446	4853493	1.5	55	98	83	8	0.0%
RE511500_119	Residential	608441	4853518	1.5	53	97	83	6	0.0%
RE511500_120	Residential	608476	4853524	1.5	51	95	83	5	0.0%
RE511500_121	Residential	608433	4853537	1.5	54	96	83	6	0.0%
RE511500_122	Residential	608208	4853851	1.5	43	88	83	2	0.0%
RE511500_123	Residential	608438	4853524	1.5	53	96	83	5	0.0%
RE511500_124	Residential	608429	4853545	1.5	55	96	83	5	0.0%
RE511500_125	Residential	608466	4853549	1.5	52	93	83	5	0.0%
RE511500_126	Residential	608478	4853514	1.5	51	96	83	7	0.0%
RE511500_127	Residential	608452	4853573	1.5	52	94	83	5	0.0%
RE511500_128	Residential	608241	4853804	1.5	44	88	83	2	0.0%
RE511500_129	Residential	608215	4853841	1.5	43	88	83	2	0.0%
RE511500_130	Residential	608236	4853811	1.5	44	88	83	2	0.0%
RE511500_131	Residential	608185	4853882	1.5	43	87	83	2	0.0%
RE511500_132	Residential	607957	4853868	1.5	46	91	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_133	Residential	607944	4853897	1.5	46	90	83	3	0.0%
RE511500_134	Residential	607975	4853918	1.5	44	89	83	3	0.0%
RE511500_135	Residential	608340	4853670	1.5	46	90	83	4	0.0%
RE511500_136	Residential	608276	4853761	1.5	44	89	83	1	0.0%
RE511500_137	Residential	608272	4853766	1.5	44	89	83	1	0.0%
RE511500_138	Residential	608268	4853772	1.5	44	89	83	1	0.0%
RE511500_139	Residential	608263	4853780	1.5	44	89	83	1	0.0%
RE511500_140	Residential	608331	4853682	1.5	44	89	83	5	0.0%
RE511500_141	Residential	608237	4853665	1.5	44	89	83	5	0.0%
RE511500_142	Residential	608152	4853626	1.5	47	89	83	7	0.0%
RE511500_143	Residential	608232	4853514	1.5	62	106	83	8	0.0%
RE511500_144	Residential	608223	4853515	1.5	62	107	83	8	0.0%
RE511500_145	Residential	608246	4853517	1.5	60	105	83	9	0.0%
RE511500_146	Residential	608253	4853520	1.5	60	104	83	9	0.0%
RE511500_147	Residential	608269	4853526	1.5	58	102	83	9	0.0%
RE511500_148	Residential	608274	4853530	1.5	57	102	83	7	0.0%
RE511500_149	Residential	608264	4853523	1.5	58	103	83	9	0.0%
RE511500_150	Residential	608279	4853533	1.5	57	101	83	7	0.0%
RE511500_151	Residential	608336	4853591	1.5	49	94	83	3	0.0%
RE511500_152	Residential	608339	4853585	1.5	50	95	83	4	0.0%
RE511500_153	Residential	608328	4853602	1.5	47	91	83	4	0.0%
RE511500_154	Residential	608332	4853597	1.5	48	93	83	4	0.0%
RE511500_155	Residential	608344	4853578	1.5	51	96	83	5	0.0%
RE511500_156	Residential	608324	4853608	1.5	47	91	83	4	0.0%
RE511500_157	Residential	608318	4853615	1.5	48	93	83	4	0.0%
RE511500_158	Residential	608314	4853620	1.5	49	93	83	5	0.0%
RE511500_159	Residential	608309	4853630	1.5	49	93	83	5	0.0%
RE511500_160	Residential	608305	4853636	1.5	49	93	83	6	0.0%
RE511500_161	Residential	608299	4853644	1.5	48	93	83	6	0.0%
RE511500_162	Residential	608295	4853650	1.5	47	92	83	6	0.0%
RE511500_163	Residential	608287	4853661	1.5	45	90	83	6	0.0%
RE511500_164	Residential	608291	4853655	1.5	46	91	83	6	0.0%
RE511500_165	Residential	608282	4853668	1.5	45	88	83	5	0.0%
RE511500_166	Residential	608278	4853674	1.5	44	88	83	5	0.0%
RE511500_167	Residential	608274	4853679	1.5	44	89	83	5	0.0%
RE511500_168	Residential	608269	4853685	1.5	44	89	83	4	0.0%
RE511500_169	Residential	608264	4853692	1.5	44	89	83	3	0.0%
RE511500_170	Residential	608259	4853699	1.5	44	89	83	2	0.0%
RE511500_171	Residential	608254	4853706	1.5	44	89	83	2	0.0%
RE511500_172	Residential	608250	4853713	1.5	45	89	83	1	0.0%
RE511500_173	Residential	608240	4853728	1.5	45	89	83	1	0.0%
RE511500_174	Residential	608236	4853733	1.5	45	89	83	1	0.0%
RE511500_175	Residential	608231	4853738	1.5	45	89	83	1	0.0%
RE511500_176	Residential	608228	4853744	1.5	45	89	83	1	0.0%
RE511500_177	Residential	608245	4853721	1.5	45	89	83	1	0.0%
RE511500_178	Residential	608223	4853750	1.5	45	89	83	1	0.0%
RE511500_179	Residential	608375	4853620	1.5	46	90	83	3	0.0%
RE511500_180	Residential	608371	4853626	1.5	44	89	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_181	Residential	608378	4853615	1.5	47	91	83	3	0.0%
RE511500_182	Residential	608382	4853610	1.5	47	92	83	3	0.0%
RE511500_183	Residential	608368	4853631	1.5	44	88	83	4	0.0%
RE511500_184	Residential	607933	4853946	1.5	44	88	83	3	0.0%
RE511500_185	Residential	607940	4853951	1.5	43	88	83	3	0.0%
RE511500_186	Residential	607948	4853956	1.5	43	88	83	2	0.0%
RE511500_187	Residential	607955	4853962	1.5	43	87	83	2	0.0%
RE511500_188	Residential	607963	4853967	1.5	42	87	83	2	0.0%
RE511500_189	Residential	607972	4853973	1.5	42	87	83	3	0.0%
RE511500_190	Residential	607887	4853960	1.5	44	88	83	3	0.0%
RE511500_191	Residential	607893	4853965	1.5	43	88	83	3	0.0%
RE511500_192	Residential	607899	4853969	1.5	43	88	83	3	0.0%
RE511500_193	Residential	607904	4853973	1.5	43	87	83	3	0.0%
RE511500_194	Residential	607910	4853977	1.5	43	87	83	3	0.0%
RE511500_195	Residential	607916	4853981	1.5	43	87	83	3	0.0%
RE511500_196	Residential	607923	4853986	1.5	44	87	83	3	0.0%
RE511500_197	Residential	607928	4853990	1.5	44	86	83	3	0.0%
RE511500_198	Residential	607933	4853993	1.5	44	86	83	3	0.0%
RE511500_199	Residential	607938	4853997	1.5	44	86	83	3	0.0%
RE511500_200	Residential	607943	4854000	1.5	44	86	83	3	0.0%
RE511500_201	Residential	607948	4854004	1.5	44	85	83	3	0.0%
RE511500_202	Residential	608047	4853932	1.5	43	87	83	2	0.0%
RE511500_203	Residential	608042	4853940	1.5	43	87	83	2	0.0%
RE511500_204	Residential	608036	4853947	1.5	42	87	83	2	0.0%
RE511500_205	Residential	608031	4853955	1.5	42	87	83	2	0.0%
RE511500_206	Residential	608026	4853962	1.5	42	86	83	2	0.0%
RE511500_207	Residential	608021	4853969	1.5	42	86	83	2	0.0%
RE511500_208	Residential	608016	4853976	1.5	42	86	83	2	0.0%
RE511500_209	Residential	608011	4853983	1.5	43	86	83	3	0.0%
RE511500_210	Residential	608006	4853990	1.5	43	85	83	3	0.0%
RE511500_211	Residential	608001	4853997	1.5	44	85	83	3	0.0%
RE511500_212	Residential	607995	4854005	1.5	44	85	83	3	0.0%
RE511500_213	Residential	607990	4854012	1.5	45	85	83	3	0.0%
RE511500_214	Residential	607985	4854020	1.5	45	86	83	3	0.0%
RE511500_215	Residential	607979	4854029	1.5	46	86	83	3	0.0%
RE511500_216	Residential	608085	4853947	1.5	42	86	83	2	0.0%
RE511500_217	Residential	608081	4853952	1.5	42	86	83	2	0.0%
RE511500_218	Residential	608077	4853958	1.5	41	86	83	2	0.0%
RE511500_219	Residential	608074	4853962	1.5	41	86	83	2	0.0%
RE511500_220	Residential	608069	4853969	1.5	41	85	83	2	0.0%
RE511500_221	Residential	608065	4853974	1.5	42	85	83	2	0.0%
RE511500_222	Residential	608062	4853978	1.5	42	85	83	2	0.0%
RE511500_223	Residential	608058	4853984	1.5	42	85	83	2	0.0%
RE511500_224	Residential	608053	4853991	1.5	43	85	83	3	0.0%
RE511500_225	Residential	608049	4853997	1.5	43	84	83	3	0.0%
RE511500_226	Residential	608043	4854006	1.5	44	84	83	3	0.0%
RE511500_227	Residential	608040	4854011	1.5	44	85	83	3	0.0%
RE511500_228	Residential	608034	4854019	1.5	44	85	83	3	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_229	Residential	608029	4854025	1.5	45	86	83	2	0.0%
RE511500_230	Residential	608026	4854031	1.5	45	86	83	2	0.0%
RE511500_231	Residential	608022	4854036	1.5	46	86	83	2	0.0%
RE511500_232	Residential	608018	4854042	1.5	46	87	83	1	0.0%
RE511500_233	Residential	608013	4854048	1.5	46	87	83	1	0.0%
RE511500_234	Residential	608175	4853896	1.5	42	87	83	2	0.0%
RE511500_235	Residential	608171	4853902	1.5	42	87	83	2	0.0%
RE511500_236	Residential	608167	4853908	1.5	42	87	83	2	0.0%
RE511500_237	Residential	608162	4853915	1.5	42	86	83	2	0.0%
RE511500_238	Residential	608157	4853922	1.5	42	86	83	2	0.0%
RE511500_239	Residential	608154	4853927	1.5	42	86	83	2	0.0%
RE511500_240	Residential	608150	4853933	1.5	41	86	83	2	0.0%
RE511500_241	Residential	608145	4853939	1.5	41	86	83	2	0.0%
RE511500_242	Residential	608142	4853944	1.5	41	86	83	2	0.0%
RE511500_243	Residential	608122	4853973	1.5	41	85	83	2	0.0%
RE511500_244	Residential	608119	4853977	1.5	42	84	83	2	0.0%
RE511500_245	Residential	608115	4853983	1.5	42	84	83	2	0.0%
RE511500_246	Residential	608112	4853987	1.5	42	84	83	2	0.0%
RE511500_247	Residential	608107	4853994	1.5	43	84	83	3	0.0%
RE511500_259	Residential	607976	4854103	1.5	49	90	83	1	0.0%
RE511500_260	Residential	607970	4854109	1.5	49	90	83	1	0.0%
RE511500_261	Residential	607967	4854115	1.5	49	90	83	1	0.0%
RE511500_262	Residential	607962	4854121	1.5	50	90	83	1	0.0%
RE511500_263	Residential	607959	4854126	1.5	50	91	83	1	0.0%
RE511500_264	Residential	607955	4854131	1.5	50	91	83	1	0.0%
RE511500_265	Residential	607949	4854139	1.5	50	91	83	2	0.0%
RE511500_266	Residential	607944	4854146	1.5	50	91	83	2	0.0%
RE511500_267	Residential	607939	4854153	1.5	50	91	83	2	0.0%
RE511500_268	Residential	607934	4854160	1.5	51	91	83	2	0.0%
RE511500_269	Residential	607929	4854168	1.5	51	92	83	2	0.0%
RE511500_270	Residential	607927	4854176	1.5	51	92	83	2	0.0%
RE511500_288	Residential	607723	4854202	1.5	54	95	83	2	0.0%
RE511500_289	Residential	607711	4854198	1.5	54	95	83	2	0.0%
RE511500_313	Residential	607831	4854199	1.5	52	93	83	2	0.0%
RE511500_314	Residential	607821	4854196	1.5	52	93	83	2	0.0%
RE511500_315	Residential	607810	4854192	1.5	53	93	83	2	0.0%
RE511500_316	Residential	607798	4854189	1.5	53	93	83	2	0.0%
RE511500_317	Residential	607787	4854186	1.5	53	94	83	2	0.0%
RE511500_318	Residential	607777	4854182	1.5	53	94	83	2	0.0%
RE511500_319	Residential	607764	4854179	1.5	53	94	83	2	0.0%
RE511500_320	Residential	607849	4854155	1.5	52	92	83	2	0.0%
RE511500_321	Residential	607839	4854152	1.5	52	92	83	2	0.0%
RE511500_322	Residential	607829	4854148	1.5	52	93	83	2	0.0%
RE511500_323	Residential	607818	4854145	1.5	52	93	83	2	0.0%
RE511500_324	Residential	607806	4854141	1.5	52	93	83	2	0.0%
RE511500_325	Residential	607943	4854078	1.5	48	89	83	1	0.0%
RE511500_326	Residential	607939	4854083	1.5	49	89	83	1	0.0%
RE511500_327	Residential	607933	4854092	1.5	49	90	83	1	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_328	Residential	607929	4854097	1.5	49	90	83	1	0.0%
RE511500_329	Residential	607923	4854106	1.5	50	90	83	1	0.0%
RE511500_330	Residential	607919	4854112	1.5	50	91	83	1	0.0%
RE511500_331	Residential	607913	4854119	1.5	50	91	83	1	0.0%
RE511500_332	Residential	607907	4854127	1.5	50	91	83	1	0.0%
RE511500_333	Residential	607902	4854135	1.5	51	91	83	2	0.0%
RE511500_334	Residential	607897	4854142	1.5	51	91	83	2	0.0%
RE511500_335	Residential	607892	4854151	1.5	51	92	83	2	0.0%
RE511500_336	Residential	607888	4854158	1.5	51	92	83	2	0.0%
RE511500_337	Residential	607885	4854168	1.5	51	92	83	2	0.0%
RE511500_338	Residential	607883	4854174	1.5	51	92	83	2	0.0%
RE511500_339	Residential	607733	4854170	1.5	53	94	83	2	0.0%
RE511500_340	Residential	607810	4854078	1.5	50	90	83	3	0.0%
RE511500_341	Residential	607805	4854085	1.5	50	91	83	3	0.0%
RE511500_342	Residential	607798	4854096	1.5	51	91	83	2	0.0%
RE511500_343	Residential	607794	4854107	1.5	51	92	83	2	0.0%
RE511500_344	Residential	607790	4854118	1.5	51	92	83	2	0.0%
RE511500_345	Residential	607788	4854129	1.5	52	92	83	2	0.0%
RE511500_346	Residential	607785	4854141	1.5	52	93	83	2	0.0%
RE511500_347	Residential	607825	4854044	1.5	48	89	83	3	0.0%
RE511500_348	Residential	607832	4854049	1.5	48	89	83	3	0.0%
RE511500_349	Residential	607840	4854054	1.5	48	89	83	3	0.0%
RE511500_350	Residential	607846	4854059	1.5	48	89	83	3	0.0%
RE511500_351	Residential	607853	4854064	1.5	48	89	83	3	0.0%
RE511500_352	Residential	607861	4854068	1.5	49	89	83	3	0.0%
RE511500_353	Residential	607868	4854074	1.5	49	90	83	2	0.0%
RE511500_354	Residential	607874	4854078	1.5	49	90	83	2	0.0%
RE511500_355	Residential	607881	4854083	1.5	49	90	83	2	0.0%
RE511500_356	Residential	607889	4854088	1.5	49	90	83	2	0.0%
RE511500_357	Residential	607850	4854014	1.5	46	87	83	3	0.0%
RE511500_358	Residential	607857	4854018	1.5	46	87	83	3	0.0%
RE511500_359	Residential	607863	4854023	1.5	46	87	83	3	0.0%
RE511500_360	Residential	607869	4854027	1.5	46	87	83	3	0.0%
RE511500_361	Residential	607874	4854030	1.5	47	87	83	3	0.0%
RE511500_362	Residential	607880	4854034	1.5	47	87	83	3	0.0%
RE511500_363	Residential	607885	4854039	1.5	47	88	83	3	0.0%
RE511500_364	Residential	607891	4854043	1.5	47	88	83	3	0.0%
RE511500_365	Residential	607895	4854047	1.5	47	88	83	3	0.0%
RE511500_366	Residential	607900	4854050	1.5	47	88	83	2	0.0%
RE511500_367	Residential	607906	4854054	1.5	47	88	83	2	0.0%
RE511500_368	Residential	607911	4854057	1.5	48	88	83	2	0.0%
RE511500_369	Residential	607823	4854097	1.5	50	91	83	2	0.0%
RE511500_370	Residential	607831	4854103	1.5	50	91	83	2	0.0%
RE511500_371	Residential	607839	4854108	1.5	50	91	83	1	0.0%
RE511500_372	Residential	607847	4854113	1.5	51	91	83	1	0.0%
RE511500_373	Residential	607854	4854118	1.5	51	91	83	1	0.0%
RE511500_374	Residential	607864	4854124	1.5	51	91	83	2	0.0%
RE511500_376	Residential	607755	4854206	1.5	53	94	83	2	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_001	Residential	608413	4853627	1.5	45	90	83	2	0.0%
RE511600_002	Residential	608350	4853717	1.5	43	88	83	3	0.0%
RE511600_003	Residential	608360	4853703	1.5	43	88	83	3	0.0%
RE511600_004	Residential	608309	4853775	1.5	44	88	83	1	0.0%
RE511600_005	Residential	608274	4853824	1.5	43	88	83	2	0.0%
RE511600_006	Residential	608263	4853840	1.5	43	88	83	2	0.0%
RE511600_007	Residential	608430	4853685	1.5	42	87	83	2	0.0%
RE511600_008	Residential	608384	4853750	1.5	43	88	83	1	0.0%
RE511600_009	Residential	608443	4853666	1.5	42	87	83	3	0.0%
RE511600_010	Residential	608451	4853655	1.5	42	87	83	2	0.0%
RE511600_011	Residential	608399	4853728	1.5	43	88	83	2	0.0%
RE511600_012	Residential	608407	4853717	1.5	43	87	83	2	0.0%
RE511600_013	Residential	608423	4853695	1.5	43	87	83	2	0.0%
RE511600_014	Residential	608392	4853739	1.5	43	88	83	2	0.0%
RE511600_015	Residential	608437	4853676	1.5	42	87	83	2	0.0%
RE511600_016	Residential	608415	4853706	1.5	43	87	83	2	0.0%
RE511600_017	Residential	608253	4853854	1.5	43	87	83	2	0.0%
RE511600_018	Residential	608527	4853503	1.5	51	93	83	8	0.0%
RE511600_019	Residential	608519	4853540	1.5	48	93	83	4	0.0%
RE511600_020	Residential	608517	4853549	1.5	48	92	83	4	0.0%
RE511600_021	Residential	608473	4853624	1.5	43	88	83	4	0.0%
RE511600_022	Residential	608509	4853566	1.5	50	91	83	4	0.0%
RE511600_023	Residential	608496	4853592	1.5	49	92	83	4	0.0%
RE511600_024	Residential	608441	4853588	1.5	49	92	83	4	0.0%
RE511600_025	Residential	608524	4853521	1.5	50	93	83	5	0.0%
RE511600_026	Residential	608490	4853600	1.5	48	91	83	4	0.0%
RE511600_027	Residential	608513	4853558	1.5	49	91	83	5	0.0%
RE511600_028	Residential	608407	4853636	1.5	44	89	83	3	0.0%
RE511600_029	Residential	608402	4853644	1.5	42	87	83	3	0.0%
RE511600_030	Residential	608396	4853651	1.5	43	87	83	3	0.0%
RE511600_031	Residential	608391	4853659	1.5	44	88	83	2	0.0%
RE511600_032	Residential	608268	4853833	1.5	43	88	83	2	0.0%
RE511600_033	Residential	608258	4853847	1.5	43	88	83	2	0.0%
RE511600_034	Residential	608526	4853512	1.5	51	93	83	5	0.0%
RE511600_035	Residential	608365	4853764	1.5	43	88	83	1	0.0%
RE511600_036	Residential	608501	4853584	1.5	50	92	83	4	0.0%
RE511600_037	Residential	608485	4853608	1.5	47	90	83	4	0.0%
RE511600_038	Residential	608447	4853580	1.5	51	93	83	5	0.0%
RE511600_039	Residential	608480	4853615	1.5	45	89	83	4	0.0%
RE511600_040	Residential	608522	4853530	1.5	49	93	83	4	0.0%
RE511600_041	Residential	608380	4853674	1.5	45	89	83	3	0.0%
RE511600_042	Residential	608375	4853682	1.5	45	89	83	3	0.0%
RE511600_043	Residential	608355	4853710	1.5	43	88	83	3	0.0%
RE511600_044	Residential	608370	4853689	1.5	44	89	83	3	0.0%
RE511600_045	Residential	608365	4853696	1.5	44	88	83	4	0.0%
RE511600_046	Residential	608528	4853482	1.5	55	96	83	6	0.0%
RE511600_047	Residential	608505	4853575	1.5	50	92	83	4	0.0%
RE511600_048	Residential	608435	4853597	1.5	47	90	83	4	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_049	Residential	608528	4853494	1.5	53	93	83	6	0.0%
RE511600_050	Residential	608345	4853723	1.5	44	88	83	2	0.0%
RE511600_051	Residential	608341	4853730	1.5	44	88	83	1	0.0%
RE511600_052	Residential	608336	4853737	1.5	44	88	83	1	0.0%
RE511600_053	Residential	608330	4853745	1.5	44	88	83	1	0.0%
RE511600_054	Residential	608325	4853752	1.5	44	88	83	1	0.0%
RE511600_055	Residential	608320	4853760	1.5	44	88	83	1	0.0%
RE511600_056	Residential	608315	4853767	1.5	44	88	83	1	0.0%
RE511600_057	Residential	608304	4853782	1.5	44	88	83	1	0.0%
RE511600_058	Residential	608299	4853790	1.5	44	88	83	1	0.0%
RE511600_059	Residential	608292	4853799	1.5	44	88	83	2	0.0%
RE511600_060	Residential	608386	4853667	1.5	44	89	83	3	0.0%
RE511600_061	Residential	608377	4853772	1.5	43	88	83	1	0.0%
RE511600_062	Residential	608387	4853779	1.5	43	87	83	1	0.0%
RE511600_085	Residential	608248	4853972	1.5	40	83	83	0	-
RE511600_086	Residential	608239	4853965	1.5	40	83	83	1	0.0%
RE511600_087	Residential	608227	4853958	1.5	39	84	83	2	0.0%
RE511600_091	Residential	608350	4853851	1.5	42	86	83	2	0.0%
RE511600_092	Residential	608343	4853862	1.5	42	86	83	2	0.0%
RE511600_093	Residential	608335	4853872	1.5	41	86	83	2	0.0%
RE511600_094	Residential	608327	4853883	1.5	41	86	83	2	0.0%
RE511600_095	Residential	608320	4853894	1.5	41	85	83	2	0.0%
RE511600_096	Residential	608312	4853905	1.5	41	85	83	2	0.0%
RE511600_097	Residential	608305	4853915	1.5	40	85	83	2	0.0%
RE511600_098	Residential	608298	4853925	1.5	40	84	83	2	0.0%
RE511600_099	Residential	608291	4853934	1.5	40	84	83	1	0.0%
RE511600_100	Residential	608283	4853945	1.5	39	84	83	1	0.0%
RE511600_101	Residential	608348	4853801	1.5	43	88	83	1	0.0%
RE511600_102	Residential	608342	4853810	1.5	43	87	83	1	0.0%
RE511600_103	Residential	608336	4853817	1.5	43	87	83	2	0.0%
RE511600_104	Residential	608331	4853825	1.5	43	87	83	2	0.0%
RE511600_105	Residential	608325	4853833	1.5	43	87	83	2	0.0%
RE511600_106	Residential	608319	4853842	1.5	42	87	83	2	0.0%
RE511600_107	Residential	608312	4853852	1.5	42	87	83	2	0.0%
RE511600_108	Residential	608305	4853861	1.5	42	87	83	2	0.0%
RE511600_109	Residential	608299	4853870	1.5	42	86	83	2	0.0%
RE511600_110	Residential	608292	4853880	1.5	42	86	83	2	0.0%
RE511600_111	Residential	608285	4853889	1.5	41	86	83	2	0.0%
RE511600_112	Residential	608279	4853898	1.5	41	86	83	2	0.0%
RE511600_113	Residential	608274	4853905	1.5	41	86	83	2	0.0%
RE511600_114	Residential	608269	4853913	1.5	41	85	83	2	0.0%
RE511600_115	Residential	608257	4853930	1.5	40	85	83	2	0.0%
RE511600_116	Residential	608248	4853861	1.5	43	87	83	2	0.0%
RE511600_117	Residential	608243	4853868	1.5	42	87	83	2	0.0%
RE511600_118	Residential	608238	4853875	1.5	42	87	83	2	0.0%
RE511600_119	Residential	608233	4853882	1.5	42	87	83	2	0.0%
RE511600_120	Residential	608228	4853889	1.5	42	86	83	2	0.0%
RE511600_121	Residential	608223	4853896	1.5	42	86	83	2	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_122	Residential	608218	4853903	1.5	42	86	83	2	0.0%
RE511600_123	Residential	608213	4853910	1.5	41	86	83	2	0.0%
RE511600_124	Residential	608208	4853917	1.5	41	86	83	2	0.0%
RE511600_125	Residential	608204	4853924	1.5	41	86	83	2	0.0%
RE511600_126	Residential	608199	4853931	1.5	41	85	83	2	0.0%
RE511600_127	Residential	608194	4853938	1.5	41	85	83	2	0.0%
RE511600_128	Residential	608189	4853944	1.5	40	85	83	2	0.0%
RE511600_129	Residential	608184	4853951	1.5	40	85	83	2	0.0%
RE511600_130	Residential	608179	4853958	1.5	40	84	83	2	0.0%
RE511600_131	Residential	608173	4853967	1.5	40	84	83	2	0.0%
RE511600_132	Residential	608210	4853982	1.5	41	83	83	0	-
RE511600_133	Residential	608221	4853990	1.5	41	82	83	0	-
RE511600_134	Residential	608230	4853997	1.5	41	82	83	0	-
RE511600_142	Residential	608180	4854022	1.5	43	84	83	1	0.0%
RE511600_143	Residential	608189	4854028	1.5	43	84	83	1	0.0%
RE511600_144	Residential	608196	4854033	1.5	44	84	83	1	0.0%
RE511600_163	Residential	608170	4854054	1.5	45	86	83	1	0.0%
RE511600_164	Residential	608162	4854048	1.5	45	86	83	1	0.0%
RE511600_185	Residential	608102	4854000	1.5	43	84	83	3	0.0%
RE511600_186	Residential	608099	4854005	1.5	43	84	83	3	0.0%
RE511600_187	Residential	608096	4854009	1.5	43	84	83	2	0.0%
RE511600_188	Residential	608090	4854017	1.5	44	85	83	1	0.0%
RE511600_189	Residential	608087	4854022	1.5	44	85	83	1	0.0%
RE511600_190	Residential	608081	4854032	1.5	45	85	83	1	0.0%
RE511600_191	Residential	608077	4854037	1.5	45	86	83	1	0.0%
RE511600_192	Residential	608073	4854045	1.5	45	86	83	1	0.0%
RE511600_193	Residential	608068	4854051	1.5	46	87	83	1	0.0%
RE511600_194	Residential	608064	4854057	1.5	46	87	83	1	0.0%
RE511600_195	Residential	608060	4854062	1.5	46	87	83	1	0.0%
RE511600_196	Residential	608056	4854069	1.5	47	88	83	1	0.0%
RE511600_197	Residential	608053	4854075	1.5	47	88	83	1	0.0%
RE511600_198	Residential	608154	4853993	1.5	42	83	83	1	0.0%
RE511600_199	Residential	608148	4854003	1.5	43	83	83	1	0.0%
RE511600_200	Residential	608142	4854010	1.5	43	84	83	1	0.0%
RE511600_201	Residential	608137	4854018	1.5	43	84	83	1	0.0%
RE511600_202	Residential	608132	4854025	1.5	44	85	83	1	0.0%
RE511600_203	Residential	608126	4854033	1.5	44	85	83	1	0.0%
RE511600_204	Residential	608121	4854040	1.5	45	86	83	1	0.0%
RE511600_205	Residential	608116	4854047	1.5	45	86	83	1	0.0%
RE511600_206	Residential	608111	4854054	1.5	45	86	83	1	0.0%
RE511600_207	Residential	608107	4854061	1.5	46	87	83	1	0.0%
RE511600_208	Residential	608102	4854068	1.5	46	87	83	1	0.0%
RE511600_209	Residential	608097	4854075	1.5	47	87	83	1	0.0%
RE511600_210	Residential	608091	4854082	1.5	47	88	83	1	0.0%
RE511600_211	Residential	608086	4854090	1.5	47	88	83	1	0.0%
RE511600_212	Residential	608080	4854098	1.5	48	88	83	1	0.0%
RE511600_228	Residential	608507	4853702	1.5	42	86	83	1	0.0%
RE511600_242	Residential	608263	4853920	1.5	40	85	83	2	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511800_001	Residential	607134	4855697	1.5	81	122	83	27	0.1%
RE512000_002	Residential	607206	4855951	1.5	88	122	83	38	0.1%
RE512000_003	Residential	607187	4856027	1.5	98	126	83	52	0.1%
RE512100_001	Residential	607265	4856058	1.5	95	124	83	46	0.1%
RE512100_002	Residential	607248	4856119	1.5	107	129	83	54	0.1%
RE512200_001	Residential	607241	4856162	1.5	109	132	83	54	0.1%
RE512200_002	Residential	607123	4856318	1.5	121	143	83	155	0.4%
RE512200_003	Residential	607102	4856358	1.5	122	144	83	213	0.5%
RE512300_001	Residential	607221	4856317	1.5	113	135	83	86	0.2%
RE512400_001	Residential	607226	4856438	1.5	118	140	83	123	0.3%
RE514400_001	Residential	608610	4857694	1.5	79	120	83	14	0.0%
RE514400_003	Residential	608876	4857474	1.5	96	118	83	13	0.0%
RE514400_006	Residential	608883	4857432	1.5	96	118	83	13	0.0%
RE514400_007	Residential	608877	4857453	1.5	97	119	83	13	0.0%
RE514500_001	Residential	608674	4857705	1.5	79	120	83	13	0.0%
RE514500_002	Residential	608701	4857709	1.5	79	120	83	12	0.0%
RE514500_003	Residential	608738	4857729	1.5	79	120	83	12	0.0%
RE514500_006	Residential	608958	4857441	1.5	90	118	83	12	0.0%
RE514500_007	Residential	608953	4857458	1.5	92	117	83	12	0.0%
RE514500_008	Residential	608872	4857492	1.5	96	118	83	13	0.0%
RE514500_009	Residential	608859	4857508	1.5	94	118	83	15	0.0%
RE514500_010	Residential	608849	4857526	1.5	92	119	83	16	0.0%
RE514600_001	Residential	608758	4857755	1.5	79	120	83	13	0.0%
RE514600_002	Residential	608949	4857475	1.5	93	117	83	12	0.0%
RE514600_003	Residential	608946	4857496	1.5	94	117	83	13	0.0%
RE514600_004	Residential	608942	4857512	1.5	94	117	83	13	0.0%
RE514600_005	Residential	608936	4857529	1.5	94	117	83	13	0.0%
RE514600_006	Residential	608930	4857551	1.5	92	117	83	14	0.0%
RE514700_001	Residential	608965	4857617	1.5	86	117	83	15	0.0%
RE514800_001	Residential	608884	4857846	1.5	78	119	83	14	0.0%
RE515000_001	Residential	608971	4857986	1.5	79	119	83	23	0.1%
RE515100_001	Residential	609037	4857912	1.5	75	116	83	9	0.0%
RE515200_001	Residential	609158	4857928	1.5	65	104	83	10	0.0%
RE515200_002	Residential	609081	4857926	1.5	73	113	83	10	0.0%
RE515200_003	Residential	608988	4858132	1.5	78	119	83	13	0.0%
RE515300_001	Residential	609255	4857942	1.5	65	105	83	15	0.0%
RE515300_002	Residential	609091	4858212	1.5	71	112	83	10	0.0%
RE515300_003	Residential	608992	4858402	1.5	66	107	83	29	0.1%
RE516200_001	Residential	609863	4858591	1.5	57	100	83	8	0.0%
RE517200_001	Residential	610865	4858953	1.5	45	82	83	0	-
RE517200_002	Residential	610873	4858915	1.5	46	83	83	0	-
RE517200_003	Residential	610988	4858848	1.5	44	89	83	2	0.0%
RE517400_001	Residential	611124	4858907	1.5	44	89	83	2	0.0%
RE519100_001	Residential	612653	4859633	1.5	45	90	83	1	0.0%
RE519500_001	Residential	612843	4860236	1.5	55	95	83	14	0.0%
RE519500_002	Residential	612758	4860312	1.5	64	104	83	18	0.0%
RE521400_001	Residential	614549	4860340	1.5	47	91	83	6	0.0%
RE521600_001	Park and Conservation	615842	4859006	1.5	65	109	83	24	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_002	Residential	614759	4860153	1.5	41	82	83	0	-
RE521600_003	Residential	614783	4860430	1.5	52	96	83	6	0.0%
RE521600_004	Residential	615884	4859578	1.5	83	123	83	215	0.5%
RE521600_005	Residential	615805	4859615	1.5	74	117	83	90	0.2%
RE521600_006	Residential	615779	4859578	1.5	71	115	83	76	0.2%
RE521600_007	Residential	615741	4859736	1.5	71	115	83	67	0.2%
RE521600_008	Residential	615516	4859929	1.5	54	99	83	9	0.0%
RE521600_009	Residential	615671	4860025	1.5	68	111	83	66	0.2%
RE521600_010	Residential	616259	4860149	1.5	62	106	83	13	0.0%
RE521600_011	Residential	616419	4860214	1.5	51	95	83	6	0.0%
RE521600_012	Residential	615172	4860341	1.5	48	91	83	7	0.0%
RE521600_013	Residential	615849	4858301	1.5	51	96	83	7	0.0%
RE521600_017	Residential	614954	4860122	1.5	39	84	83	1	0.0%
RE521600_018	Residential	615792	4858087	1.5	48	87	83	2	0.0%
RE521600_019	Residential	615658	4858566	1.5	42	86	83	2	0.0%
RE521600_020	Residential	615792	4858189	1.5	50	88	83	3	0.0%
RE521600_023	Residential	615889	4858330	1.5	55	99	83	12	0.0%
RE521600_026	Residential	615700	4858499	1.5	43	88	83	2	0.0%
RE521600_028	Residential	615797	4858289	1.5	50	90	83	4	0.0%
RE521600_030	Residential	615749	4858368	1.5	48	86	83	2	0.0%
RE521600_032	Residential	615905	4858207	1.5	55	99	83	11	0.0%
RE521600_035	Residential	615746	4858159	1.5	50	85	83	2	0.0%
RE521600_036	Residential	615704	4858558	1.5	43	87	83	2	0.0%
RE521600_037	Residential	615871	4858014	1.5	48	92	83	6	0.0%
RE521600_038	Residential	615876	4858126	1.5	50	94	83	6	0.0%
RE521600_039	Residential	615808	4858385	1.5	48	89	83	2	0.0%
RE521600_041	Residential	615837	4858114	1.5	48	91	83	4	0.0%
RE521600_043	Residential	615749	4858276	1.5	50	87	83	2	0.0%
RE521600_044	Residential	615845	4858206	1.5	50	93	83	6	0.0%
RE521600_045	Residential	615931	4858159	1.5	56	101	83	11	0.0%
RE521600_046	Residential	615948	4858081	1.5	57	102	83	11	0.0%
RE521600_047	Residential	616722	4858027	1.5	45	86	83	4	0.0%
RE521600_048	Residential	616724	4858016	1.5	45	86	83	4	0.0%
RE521600_049	Residential	616727	4858005	1.5	45	86	83	4	0.0%
RE521600_050	Residential	616685	4857961	1.5	48	89	83	5	0.0%
RE521600_051	Residential	616692	4857982	1.5	47	88	83	5	0.0%
RE521600_052	Residential	616692	4857993	1.5	47	88	83	5	0.0%
RE521600_053	Residential	616690	4858005	1.5	47	88	83	5	0.0%
RE521600_054	Residential	616682	4858015	1.5	48	89	83	5	0.0%
RE521600_055	Residential	616628	4857990	1.5	51	92	83	6	0.0%
RE521600_056	Residential	616631	4857979	1.5	51	92	83	6	0.0%
RE521600_057	Residential	616637	4857970	1.5	51	91	83	6	0.0%
RE521600_058	Residential	616642	4857962	1.5	50	91	83	6	0.0%
RE521600_059	Residential	616645	4857951	1.5	50	91	83	6	0.0%
RE521600_060	Residential	616617	4857954	1.5	52	93	83	6	0.0%
RE521600_061	Residential	616605	4857951	1.5	53	95	83	6	0.0%
RE521600_062	Residential	616591	4857946	1.5	54	97	83	6	0.0%
RE521600_063	Residential	616581	4857941	1.5	55	99	83	7	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_064	Residential	616570	4857932	1.5	57	101	83	7	0.0%
RE521600_065	Residential	616562	4857926	1.5	58	103	83	7	0.0%
RE521600_066	Residential	616551	4857917	1.5	60	105	83	7	0.0%
RE521600_067	Residential	616541	4857910	1.5	62	107	83	7	0.0%
RE521600_068	Residential	616532	4857900	1.5	64	109	83	7	0.0%
RE521600_069	Residential	616527	4857889	1.5	66	110	83	7	0.0%
RE521600_070	Residential	616522	4857875	1.5	67	112	83	7	0.0%
RE521600_071	Residential	616520	4857863	1.5	68	112	83	8	0.0%
RE521600_072	Residential	616516	4857852	1.5	69	114	83	9	0.0%
RE521600_073	Residential	616511	4857839	1.5	71	115	83	12	0.0%
RE521600_074	Residential	616508	4857827	1.5	72	116	83	13	0.0%
RE521600_075	Residential	616510	4857818	1.5	71	116	83	13	0.0%
RE521600_076	Residential	616566	4857851	1.5	60	104	83	7	0.0%
RE521600_077	Residential	616573	4857861	1.5	58	103	83	7	0.0%
RE521600_078	Residential	616578	4857871	1.5	57	101	83	7	0.0%
RE521600_079	Residential	616586	4857883	1.5	55	100	83	7	0.0%
RE521600_080	Residential	616597	4857890	1.5	54	98	83	7	0.0%
RE521600_081	Residential	616609	4857897	1.5	53	96	83	6	0.0%
RE521600_082	Residential	616621	4857902	1.5	52	94	83	6	0.0%
RE521600_083	Residential	616646	4857916	1.5	50	91	83	6	0.0%
RE521600_084	Residential	616072	4857806	1.5	66	111	83	15	0.0%
RE521600_085	Residential	616075	4857794	1.5	67	111	83	15	0.0%
RE521600_086	Residential	616095	4857778	1.5	70	115	83	17	0.0%
RE521600_087	Residential	616097	4857766	1.5	70	115	83	17	0.0%
RE521600_088	Residential	616098	4857755	1.5	69	114	83	16	0.0%
RE521600_089	Residential	616192	4857944	1.5	84	125	83	98	0.2%
RE521600_090	Residential	615423	4860137	1.5	56	97	83	10	0.0%
RW110000_001	Residential	595952	4825790	1.5	106	129	83	123	0.3%
RW110000_002	Residential	595454	4825807	1.5	112	134	83	597	1.4%
RW110000_008	Residential	594041	4825166	1.5	87	121	83	123	0.3%
RW110000_009	Residential	594096	4825191	1.5	81	122	83	177	0.4%
RW110000_010	Residential	594523	4825688	1.5	78	119	83	90	0.2%
RW110000_011	Residential	595159	4826252	1.5	96	122	83	201	0.5%
RW110000_012	Residential	595437	4826548	1.5	106	130	83	288	0.7%
RW110000_013	Residential	595321	4826744	1.5	99	128	83	217	0.5%
RW110000_014	Residential	595112	4826651	1.5	100	128	83	215	0.5%
RW110000_015	Residential	595155	4826706	1.5	100	129	83	231	0.5%
RW110000_016	Residential	595166	4826855	1.5	104	129	83	235	0.5%
RW110000_017	Residential	595209	4826815	1.5	105	129	83	246	0.6%
RW110000_018	Residential	594653	4825844	1.5	78	119	83	90	0.2%
RW110000_019	Residential	595416	4826834	1.5	101	129	83	273	0.6%
RW110000_020	Residential	595560	4825534	1.5	97	126	83	176	0.4%
RW110000_021	Residential	597393	4824513	1.5	81	121	83	94	0.2%
RW110000_022	Residential	594899	4824668	1.5	96	125	83	161	0.4%
RW110000_023	Residential	594655	4824528	1.5	108	129	83	182	0.4%
RW110000_024	Residential	595310	4826113	1.5	115	137	83	685	1.6%
RW110100_001	Residential	595323	4827011	1.5	106	130	83	330	0.8%
RW112100_001	Residential	594926	4829061	1.5	108	130	83	161	0.4%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW112100_002	Residential	594880	4829107	1.5	101	124	83	102	0.2%
RW112100_003	Residential	594856	4829138	1.5	97	123	83	86	0.2%
RW112200_001	Residential	594826	4829169	1.5	92	121	83	67	0.2%
RW112300_001	Residential	594544	4829356	1.5	78	119	83	17	0.0%
RW112300_002	Residential	594555	4829392	1.5	78	119	83	17	0.0%
RW112300_003	Residential	594737	4829363	1.5	86	122	83	51	0.1%
RW112400_001	Residential	594707	4829399	1.5	84	122	83	47	0.1%
RW112400_002	Residential	594683	4829425	1.5	83	122	83	40	0.1%
RW112400_003	Residential	594663	4829470	1.5	80	121	83	32	0.1%
RW112500_001	Residential	594652	4829522	1.5	80	120	83	28	0.1%
RW112500_002	Residential	594587	4829561	1.5	79	120	83	24	0.1%
RW112600_001	Residential	594537	4829618	1.5	79	120	83	20	0.0%
RW113300_001	Residential	595127	4830221	1.5	97	122	83	99	0.2%
RW113700_001	Residential	594940	4830647	1.5	66	107	83	19	0.0%
RW210600_001	Residential	594968	4831278	1.5	85	123	83	57	0.1%
RW210600_002	Residential	594854	4831236	1.5	78	119	83	46	0.1%
RW210700_001	Residential	594784	4831216	1.5	87	120	83	49	0.1%
RW210700_002	Residential	594835	4831316	1.5	78	119	83	29	0.1%
RW210700_003	Residential	595003	4831319	1.5	86	125	83	67	0.2%
RW210800_001	Residential	594396	4831184	1.5	49	91	83	5	0.0%
RW210800_002	Residential	594871	4831353	1.5	80	121	83	30	0.1%
RW210800_003	Residential	594900	4831384	1.5	82	122	83	38	0.1%
RW210800_004	Residential	594906	4831419	1.5	84	123	83	37	0.1%
RW210900_001	Residential	594700	4831386	1.5	68	112	83	22	0.1%
RW211000_001	Residential	594519	4831395	1.5	55	99	83	15	0.0%
RW213300_001	Residential	594131	4833825	1.5	79	120	83	90	0.2%
RW213500_001	Residential	594089	4834002	1.5	79	120	83	95	0.2%
RW213500_002	Residential	593987	4833921	1.5	65	109	83	22	0.1%
RW213500_003	Residential	594063	4834025	1.5	79	119	83	70	0.2%
RW213900_001	Residential	593680	4834239	1.5	78	119	83	18	0.0%
RW213900_002	Residential	593146	4833948	1.5	79	119	83	22	0.1%
RW213900_003	Residential	593108	4833915	1.5	75	116	83	19	0.0%
RW214000_001	Residential	593442	4834167	1.5	82	122	83	28	0.1%
RW214000_002	Residential	593165	4834006	1.5	72	113	83	12	0.0%
RW214200_001	Residential	593365	4834312	1.5	72	113	83	9	0.0%
RW214200_002	Residential	593424	4834334	1.5	79	120	83	33	0.1%
RW214200_003	Residential	593447	4834362	1.5	79	120	83	47	0.1%
RW214200_004	Residential	593638	4834465	1.5	90	129	83	72	0.2%
RW214400_001	Residential	593557	4834570	1.5	80	121	83	44	0.1%
RW214400_002	Residential	593363	4834447	1.5	60	104	83	13	0.0%
RW214500_001	Place of Worship	593180	4834366	1.5	44	88	83	1	0.0%
RW214700_001	Residential	593316	4834759	1.5	49	93	83	5	0.0%
RW214800_001	Residential	593246	4834900	1.5	48	92	83	7	0.0%
RW214900_001	Place of Worship	593238	4834901	1.5	48	93	83	6	0.0%
RW215500_001	Residential	592716	4835205	1.5	69	114	83	8	0.0%
RW215500_002	Residential	592751	4835308	1.5	66	111	83	4	0.0%
RW215500_003	Residential	592672	4835243	1.5	70	115	83	9	0.0%
RW215600_001	Residential	592652	4835268	1.5	72	116	83	12	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW215600_002	Residential	592625	4835291	1.5	72	116	83	12	0.0%
RW215600_003	Residential	592706	4835349	1.5	68	113	83	5	0.0%
RW216000_001	Residential	592457	4835580	1.5	72	117	83	7	0.0%
RW216300_001	Residential	592187	4835722	1.5	79	119	83	21	0.0%
RW217300_001	Residential	590963	4835918	1.5	45	86	83	1	0.0%
RW217300_003	Residential	590894	4835850	1.5	43	84	83	1	0.0%
RW217400_001	Residential	591070	4836272	1.5	53	94	83	10	0.0%
RW217400_003	Residential	590716	4835921	1.5	39	79	83	0	-
RW217600_001	Residential	591245	4836671	1.5	107	132	83	157	0.4%
RW218600_001	Residential	589698	4836609	1.5	49	90	83	3	0.0%
RW218700_001	Residential	590211	4837285	1.5	73	114	83	43	0.1%
RW219300_001	Residential	589994	4837866	1.5	106	128	83	92	0.2%
RW219600_001	Residential	589829	4838199	1.5	112	134	83	116	0.3%
RW219800_001	Residential	589708	4838309	1.5	109	131	83	78	0.2%
RW219800_002	Residential	589678	4838339	1.5	108	130	83	73	0.2%
RW219800_003	Residential	589655	4838356	1.5	108	130	83	62	0.1%
RW219900_001	Residential	589628	4838393	1.5	108	130	83	55	0.1%
RW219900_002	Residential	589604	4838419	1.5	107	129	83	51	0.1%
RW219900_003	Residential	589574	4838446	1.5	107	129	83	43	0.1%
RW219900_004	Residential	589348	4838304	1.5	83	121	83	27	0.1%
RW220100_001	Residential	589237	4838630	1.5	99	124	83	30	0.1%
RW220200_001	Residential	589212	4838657	1.5	94	121	83	28	0.1%
RW220200_002	Residential	589193	4838697	1.5	85	120	83	27	0.1%
RW221500_001	Residential	589630	4840149	1.5	90	119	83	47	0.1%
RW221600_001	Residential	589645	4840276	1.5	81	118	83	47	0.1%
RW221600_002	Residential	589618	4840305	1.5	73	117	83	39	0.1%
RW221600_003	Residential	589575	4840340	1.5	70	114	83	28	0.1%
RW221600_004	Residential	589489	4840296	1.5	66	107	83	21	0.0%
RW221600_005	Residential	589463	4840313	1.5	63	106	83	15	0.0%
RW221700_001	Residential	589372	4840554	1.5	61	104	83	10	0.0%
RW222900_001	Residential	590172	4841526	1.5	67	108	83	20	0.0%
RW223000_001	Residential	590405	4841464	1.5	104	129	83	109	0.2%
RW223000_002	Residential	589855	4841856	1.5	64	105	83	3	0.0%
RW223100_001	Residential	590119	4841763	1.5	61	105	83	14	0.0%
RW223600_001	Residential	590319	4842303	1.5	72	113	83	16	0.0%
RW223700_001	Residential	590349	4842328	1.5	74	115	83	18	0.0%
RW223700_002	Residential	590387	4842378	1.5	78	118	83	19	0.0%
RW223800_001	Residential	590421	4842402	1.5	78	119	83	20	0.0%
RW223800_002	Residential	590456	4842433	1.5	78	119	83	21	0.0%
RW224200_001	Residential	591059	4842518	1.5	102	126	83	194	0.4%
RW225200_001	Residential	591261	4843431	1.5	113	133	83	120	0.3%
RW225300_001	Residential	591243	4843461	1.5	114	133	83	98	0.2%
RW225300_002	Residential	591272	4843493	1.5	114	134	83	139	0.3%
RW225300_003	Residential	591295	4843534	1.5	115	135	83	164	0.4%
RW226000_001	Residential	591344	4844228	1.5	110	134	83	201	0.5%
RW226200_001	Residential	591234	4844508	1.5	106	128	83	62	0.1%
RW226300_001	Residential	591196	4844542	1.5	105	127	83	52	0.1%
RW226300_002	Residential	591171	4844578	1.5	100	122	83	47	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW227700_001	Residential	591290	4846105	1.5	98	127	83	35	0.1%
RW227800_001	Residential	591651	4846073	1.5	102	130	83	96	0.2%
RW227800_002	Residential	591541	4846134	1.5	105	129	83	98	0.2%
RW227800_003	Residential	591348	4846123	1.5	99	127	83	48	0.1%
RW228900_001	Residential	592191	4847059	1.5	106	132	83	71	0.2%
RW229000_005	Residential	592239	4847128	1.5	106	132	83	62	0.1%
RW229100_003	Residential	592057	4847361	1.5	71	115	83	24	0.1%
RW229100_004	Residential	592238	4847208	1.5	101	129	83	58	0.1%
RW229200_001	Residential	591945	4847506	1.5	69	114	83	12	0.0%
RW229200_002	Residential	592082	4847514	1.5	70	114	83	20	0.0%
RW229200_003	Residential	592013	4847571	1.5	64	109	83	13	0.0%
RW229200_004	Residential	591965	4847613	1.5	61	105	83	12	0.0%
RW229200_005	Residential	592047	4847546	1.5	67	111	83	15	0.0%
RW229200_006	Residential	591969	4847485	1.5	71	115	83	13	0.0%
RW229200_007	Residential	591918	4847523	1.5	67	111	83	12	0.0%
RW229300_001	Residential	591940	4847644	1.5	59	102	83	11	0.0%
RW230300_001	Residential	592829	4848529	1.5	72	117	83	24	0.1%
RW230300_002	Residential	592606	4848716	1.5	71	112	83	14	0.0%
RW230400_003	Residential	593165	4848363	1.5	107	132	83	65	0.1%
RW230400_004	Residential	593067	4848428	1.5	105	129	83	50	0.1%
RW230400_005	Residential	592665	4848881	1.5	70	111	83	9	0.0%
RW231500_001	Residential	593790	4849191	1.5	100	124	83	45	0.1%
RW231500_002	Residential	593814	4849083	1.5	100	128	83	54	0.1%
RW231800_002	Residential	593623	4849689	1.5	79	118	83	15	0.0%
RW231800_003	Residential	593681	4849607	1.5	78	119	83	19	0.0%
RW231900_001	Residential	593974	4849584	1.5	78	116	83	25	0.1%
RW231900_002	Residential	593821	4849636	1.5	86	118	83	18	0.0%
RW231900_003	Residential	593783	4849662	1.5	83	119	83	18	0.0%
RW231900_004	Residential	593753	4849685	1.5	79	119	83	17	0.0%
RW231900_005	Residential	593708	4849712	1.5	76	118	83	16	0.0%
RW231900_006	Residential	593679	4849744	1.5	78	118	83	15	0.0%
RW232900_001	Residential	594647	4850489	1.5	57	101	83	26	0.1%
RW232900_002	Residential	594641	4850578	1.5	60	102	83	30	0.1%
RW232900_003	Residential	594596	4850601	1.5	59	96	83	25	0.1%
RW233000_001	Residential	594937	4850252	1.5	89	118	83	91	0.2%
RW233000_002	Residential	594873	4850324	1.5	75	113	83	62	0.1%
RW233000_003	Residential	594722	4850470	1.5	58	102	83	39	0.1%
RW233000_004	Residential	594661	4850750	1.5	65	99	83	23	0.1%
RW233100_001	Residential	595054	4850303	1.5	101	129	83	134	0.3%
RW233100_002	Residential	594986	4850367	1.5	95	124	83	85	0.2%
RW233100_003	Residential	594960	4850397	1.5	89	118	83	73	0.2%
RW233100_004	Residential	594754	4850728	1.5	64	104	83	20	0.0%
RW233300_001	Residential	595066	4850652	1.5	75	112	83	38	0.1%
RW233500_001	Residential	595517	4850395	1.5	119	141	83	342	0.8%
RW233600_001	Residential	595481	4850552	1.5	107	130	83	127	0.3%
RW233700_001	Residential	595601	4850557	1.5	110	135	83	160	0.4%
RW233800_001	Residential	595629	4850726	1.5	100	129	83	84	0.2%
RW234400_001	Residential	595843	4851239	1.5	73	117	83	26	0.1%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW234400_002	Residential	595722	4851407	1.5	65	110	83	13	0.0%
RW234400_003	Residential	595753	4851375	1.5	68	112	83	13	0.0%
RW234500_001	Residential	596110	4851144	1.5	104	129	83	75	0.2%
RW234500_002	Residential	596228	4851057	1.5	109	131	83	172	0.4%
RW234600_001	Residential	595890	4851390	1.5	72	117	83	18	0.0%
RW234600_002	Residential	595822	4851471	1.5	66	110	83	13	0.0%
RW234600_003	Residential	595792	4851490	1.5	64	109	83	13	0.0%
RW235800_001	Residential	596933	4852124	1.5	104	128	83	92	0.2%
RW235800_002	Residential	596708	4852352	1.5	91	122	83	25	0.1%
RW235800_003	Residential	596626	4852447	1.5	84	117	83	27	0.1%
RW235800_004	Residential	596582	4852479	1.5	81	117	83	23	0.1%
RW235900_003	Residential	596852	4852343	1.5	80	121	83	56	0.1%
RW235900_004	Residential	596685	4852406	1.5	94	120	83	33	0.1%
RW235900_008	Residential	596930	4852261	1.5	88	119	83	74	0.2%
RW310200_001	Residential	597162	4852242	1.5	104	129	83	114	0.3%
RW311300_001	Residential	598030	4853004	1.5	114	139	83	213	0.5%
RW311300_002	Residential	598003	4853024	1.5	113	137	83	180	0.4%
RW311300_003	Residential	597975	4853049	1.5	112	134	83	148	0.3%
RW311300_004	Residential	597927	4853089	1.5	111	134	83	109	0.2%
RW311400_001	Residential	598069	4853072	1.5	112	136	83	186	0.4%
RW311400_002	Residential	598037	4853102	1.5	112	135	83	159	0.4%
RW311400_003	Residential	597991	4853145	1.5	111	134	83	112	0.3%
RW311400_004	Residential	597940	4853194	1.5	108	130	83	76	0.2%
RW311400_005	Residential	597918	4853265	1.5	100	129	83	56	0.1%
RW311400_006	Residential	597843	4853344	1.5	89	121	83	33	0.1%
RW311400_008	Residential	597739	4853444	1.5	79	119	83	20	0.0%
RW311400_009	Residential	597683	4853455	1.5	78	119	83	15	0.0%
RW312300_001	Residential	598843	4853771	1.5	109	133	83	82	0.2%
RW312400_001	Residential	598885	4854042	1.5	82	117	83	38	0.1%
RW312400_002	Residential	598849	4854080	1.5	74	117	83	29	0.1%
RW312500_001	Residential	599044	4853903	1.5	111	133	83	79	0.2%
RW312500_002	Residential	599019	4853928	1.5	109	133	83	62	0.1%
RW312500_003	Residential	598925	4854010	1.5	94	119	83	40	0.1%
RW312500_004	Residential	598959	4854116	1.5	83	118	83	37	0.1%
RW312600_001	Residential	599110	4853841	1.5	112	134	83	124	0.3%
RW312600_002	Residential	599074	4853862	1.5	113	135	83	103	0.2%
RW312700_001	Residential	599266	4853691	1.5	112	137	83	382	0.9%
RW312900_001	Residential	599307	4854183	1.5	109	131	83	37	0.1%
RW313100_001	Residential	599559	4854108	1.5	99	126	83	66	0.2%
RW313400_001	Residential	599752	4854478	1.5	105	127	83	28	0.1%
RW313900_001	Residential	600110	4854917	1.5	92	118	83	12	0.0%
RW314100_001	Residential	600493	4854739	1.5	80	121	83	24	0.1%
RW314300_001	Residential	600741	4854369	1.5	108	130	83	152	0.3%
RW315400_001	Residential	601942	4855015	1.5	79	116	83	16	0.0%
RW317500_001	Residential	603840	4854629	1.5	105	128	83	232	0.5%
RW317500_003	Residential	603870	4854650	1.5	104	127	83	237	0.5%
RW410100_001	Residential	603972	4854928	1.5	69	112	83	88	0.2%
RW410100_002	Residential	603936	4854961	1.5	68	108	83	75	0.2%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background ($\mu g/m^3$)	Maximum Predicted 1 Hour Concentration With Background ($\mu g/m^3$)	Criteria ($\mu g/m^3$)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW410200_001	Residential	604015	4854902	1.5	76	117	83	110	0.3%
RW410400_001	Residential	604221	4855097	1.5	75	117	83	109	0.2%
RW410800_002	Residential	604445	4855386	1.5	70	113	83	77	0.2%
RW510000_001	Residential	604897	4855625	1.5	75	116	83	54	0.1%
RW510100_001	Residential	605003	4855608	1.5	79	120	83	63	0.1%
RW510100_002	Residential	604998	4855726	1.5	69	110	83	43	0.1%
RW510400_001	Residential	605360	4855644	1.5	77	118	83	70	0.2%
RW512600_001	Residential	607049	4856822	1.5	98	123	83	130	0.3%
RW512600_002	Residential	606713	4857044	1.5	81	120	83	17	0.0%
RW512700_001	Residential	606950	4856924	1.5	95	120	83	39	0.1%
RW515200_001	Residential	608655	4859025	1.5	94	120	83	47	0.1%
RW515200_002	Residential	608453	4859443	1.5	40	84	83	1	0.0%
RW515500_001	Residential	609009	4858910	1.5	112	136	83	202	0.5%
RW515500_002	Residential	608965	4859173	1.5	108	130	83	37	0.1%
RW515500_003	Residential	608645	4859708	1.5	44	88	83	3	0.0%
RW515600_001	Residential	609102	4858982	1.5	109	134	83	143	0.3%
RW515600_002	Residential	608876	4859423	1.5	81	120	83	18	0.0%
RW515600_003	Residential	608980	4859372	1.5	81	119	83	17	0.0%
RW515700_001	Residential	608966	4859442	1.5	84	120	83	15	0.0%
RW516700_001	Residential	609986	4859710	1.5	81	122	83	31	0.1%
RW517400_001	Residential	610721	4859654	1.5	111	134	83	237	0.5%
RW517500_001	Residential	610788	4859750	1.5	107	130	83	120	0.3%
RW517500_002	Residential	610631	4860179	1.5	80	120	83	21	0.0%
RW517600_001	Residential	610730	4860162	1.5	78	119	83	18	0.0%
RW519300_001	Residential	612321	4860800	1.5	73	118	83	13	0.0%
RW519300_002	Residential	612247	4861048	1.5	72	117	83	25	0.1%
RW519600_001	Residential	612681	4860774	1.5	104	129	83	77	0.2%
RW519600_002	Residential	612644	4860851	1.5	86	119	83	28	0.1%
RW519600_003	Residential	612606	4860976	1.5	68	112	83	12	0.0%
RW519600_004	Residential	612556	4861217	1.5	51	96	83	6	0.0%
RW519900_001	Residential	612911	4861179	1.5	56	101	83	4	0.0%
RW520000_001	Residential	612975	4861191	1.5	57	101	83	2	0.0%
RW520100_001	Residential	613108	4861238	1.5	57	102	83	3	0.0%
RW520200_001	Residential	613167	4861245	1.5	57	102	83	1	0.0%
RW520300_001	Residential	613263	4861267	1.5	57	102	83	2	0.0%
RW520400_001	Residential	613409	4861318	1.5	57	102	83	7	0.0%
RW520600_001	Residential	613595	4861385	1.5	69	106	83	13	0.0%
RW520600_002	Residential	613696	4861264	1.5	77	119	83	37	0.1%
RW520800_001	Residential	613821	4861450	1.5	63	105	83	14	0.0%
RW520800_002	Residential	613868	4861446	1.5	68	112	83	15	0.0%
RW520900_001	Residential	614011	4861487	1.5	72	117	83	15	0.0%
RW521000_001	Residential	614074	4861506	1.5	72	117	83	12	0.0%
RW521500_001	Residential	614584	4861772	1.5	103	130	83	169	0.4%
RW521500_002	Residential	614605	4861931	1.5	54	96	83	11	0.0%
RW521500_003	Residential	614606	4861992	1.5	53	89	83	6	0.0%
RW521500_004	Residential	614561	4862067	1.5	51	96	83	3	0.0%
RW521500_005	Residential	614528	4862131	1.5	54	99	83	3	0.0%
RW521500_006	Residential	614519	4862172	1.5	56	100	83	4	0.0%

Appendix G.1.4 : Frequency Analysis, 1-Hr NO_2

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 1 Hour Concentration No Background (µg/m³)	Maximum Predicted 1 Hour Concentration With Background (µg/m³)	Criteria (µg/m³)	Predicted Excursions Above Criteria [1]	
								Events > 83.1 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RW521600_001	Residential	615126	4862319	1.5	54	97	83	43	0.1%
RW521600_002	Residential	616401	4861744	1.5	79	119	83	15	0.0%
RW521600_009	Residential	616496	4861911	1.5	67	111	83	9	0.0%
RW521600_010	Residential	614979	4862746	1.5	57	101	83	19	0.0%
RW521600_011	Residential	614904	4862738	1.5	57	101	83	10	0.0%
RW521600_012	Residential	615537	4863261	1.5	76	117	83	40	0.1%
RW521600_013	Residential	615595	4863665	1.5	57	101	83	13	0.0%
RW521600_014	Residential	616500	4861872	1.5	67	112	83	10	0.0%
RW521600_016	Residential	614949	4863780	1.5	72	114	83	20	0.0%
RW521600_017	Residential	616265	4861577	1.5	79	120	83	22	0.1%

43824 Hours of Meterological Data

Notes:

[1] Maximum predicted concentration with background using the Ozone Limiting Method. These concentrations differ from those presented in the results tables which are based on the 98th percentile of the daily 1-hour maximum concentrations to conform to CAAQS standard.

Appendix G.2.1: 2041 No-Build – 24 Hour PM_{10}

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_001	Place of Worship	597312	4827927	1.5	33	23	56	6	0.3%
RE110000_002	Residential	596637	4826254	1.5	17	23	40	0	-
RE110000_003	Residential	596701	4826610	1.5	27	23	50	1	0.1%
RE110000_004	Residential	597143	4827822	1.5	32	23	55	4	0.2%
RE110000_005	Residential	597083	4827844	1.5	39	23	61	18	1.0%
RE110000_006	Residential	596871	4828160	1.5	28	23	51	1	0.1%
RE110000_007	Residential	597140	4826176	1.5	23	23	45	0	-
RE110000_008	Residential	597148	4826187	1.5	21	23	44	0	-
RE110000_009	Residential	597156	4826199	1.5	20	23	43	0	-
RE110000_010	Residential	597164	4826210	1.5	20	23	42	0	-
RE110000_011	Residential	597171	4826221	1.5	19	23	41	0	-
RE110000_020	Residential	597181	4826148	1.5	22	23	44	0	-
RE110000_021	Residential	597187	4826154	1.5	21	23	44	0	-
RE110000_022	Residential	597195	4826162	1.5	20	23	43	0	-
RE110000_023	Residential	597200	4826170	1.5	20	23	42	0	-
RE110000_024	Residential	597206	4826177	1.5	19	23	42	0	-
RE110000_025	Residential	597212	4826186	1.5	19	23	41	0	-
RE110000_028	Residential	597203	4826119	1.5	22	23	45	0	-
RE110000_029	Residential	597210	4826129	1.5	21	23	44	0	-
RE110000_030	Residential	597216	4826140	1.5	20	23	43	0	-
RE110000_031	Residential	597223	4826147	1.5	19	23	42	0	-
RE110000_032	Residential	597230	4826156	1.5	19	23	41	0	-
RE110000_045	Residential	597236	4826078	1.5	22	23	45	0	-
RE110000_046	Residential	597243	4826087	1.5	21	23	44	0	-
RE110000_047	Residential	597251	4826096	1.5	20	23	43	0	-
RE110000_048	Residential	597257	4826104	1.5	20	23	42	0	-
RE110000_049	Residential	597263	4826113	1.5	19	23	41	0	-
RE110000_050	Residential	597255	4826067	1.5	22	23	44	0	-
RE110000_051	Residential	597266	4826057	1.5	22	23	44	0	-
RE110000_052	Residential	597275	4826046	1.5	22	23	44	0	-
RE110000_053	Residential	597284	4826036	1.5	22	23	44	0	-
RE110000_054	Residential	597293	4826025	1.5	22	23	44	0	-
RE110000_055	Residential	597304	4826014	1.5	22	23	44	0	-
RE110000_056	Residential	597325	4826041	1.5	19	23	41	0	-
RE110000_057	Residential	597314	4826051	1.5	19	23	42	0	-
RE110000_058	Residential	597304	4826061	1.5	19	23	42	0	-
RE110000_059	Residential	597295	4826072	1.5	19	23	42	0	-
RE110000_060	Residential	597285	4826082	1.5	19	23	42	0	-
RE110000_061	Residential	597323	4825965	1.5	26	23	48	0	-
RE110000_062	Residential	597330	4825974	1.5	23	23	46	0	-
RE110000_063	Residential	597335	4825983	1.5	22	23	44	0	-
RE110000_064	Residential	597342	4825990	1.5	21	23	43	0	-
RE110000_065	Residential	597350	4826000	1.5	20	23	42	0	-
RE110000_066	Residential	597357	4826009	1.5	19	23	41	0	-
RE110000_067	Residential	597368	4826018	1.5	18	23	41	0	-
RE110000_069	Residential	597351	4825947	1.5	24	23	46	0	-
RE110000_070	Residential	597359	4825957	1.5	21	23	44	0	-
RE110000_071	Residential	597366	4825967	1.5	20	23	43	0	-
RE110000_072	Residential	597374	4825977	1.5	19	23	42	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_073	Residential	597383	4825986	1.5	19	23	41	0	-
RE110000_112	Residential	597394	4825910	1.5	23	23	45	0	-
RE110000_113	Residential	597401	4825919	1.5	21	23	44	0	-
RE110000_114	Residential	597409	4825928	1.5	20	23	43	0	-
RE110000_115	Residential	597416	4825939	1.5	19	23	42	0	-
RE110000_123	Residential	597413	4825882	1.5	24	23	47	0	-
RE110000_124	Residential	597421	4825892	1.5	22	23	44	0	-
RE110000_125	Residential	597432	4825901	1.5	20	23	43	0	-
RE110000_132	Residential	597461	4825854	1.5	21	23	44	0	-
RE110000_133	Residential	597471	4825865	1.5	20	23	42	0	-
RE110000_139	Residential	597482	4825833	1.5	21	23	44	0	-
RE110000_140	Residential	597492	4825842	1.5	20	23	43	0	-
RE110000_145	Residential	597514	4825784	1.5	24	23	46	0	-
RE110000_146	Residential	597523	4825794	1.5	21	23	44	0	-
RE110000_147	Residential	597531	4825806	1.5	20	23	42	0	-
RE110000_149	Residential	597534	4825759	1.5	24	23	47	0	-
RE110000_150	Residential	597542	4825770	1.5	22	23	44	0	-
RE110000_151	Residential	597549	4825779	1.5	20	23	43	0	-
RE110000_165	Residential	597586	4825745	1.5	20	23	42	0	-
RE110000_167	Residential	597648	4825682	1.5	20	23	42	0	-
RE110000_173	Residential	597632	4825663	1.5	24	23	47	0	-
RE110000_177	Residential	597655	4825690	1.5	19	23	42	0	-
RE110000_178	Residential	597642	4825674	1.5	21	23	44	0	-
RE110000_189	Residential	597578	4825734	1.5	21	23	44	0	-
RE110000_190	Residential	597605	4825708	1.5	21	23	44	0	-
RE110000_191	Residential	597611	4825719	1.5	20	23	42	0	-
RE110000_239	Residential	598068	4825317	1.5	28	23	51	1	0.1%
RE110000_240	Residential	598051	4825327	1.5	31	23	53	1	0.1%
RE110000_241	Residential	598046	4825287	1.5	27	23	50	0	-
RE110000_242	Residential	598058	4825288	1.5	26	23	49	0	-
RE110000_243	Residential	598062	4825320	1.5	29	23	51	1	0.1%
RE110000_244	Residential	598082	4825288	1.5	24	23	47	0	-
RE110000_245	Residential	598057	4825323	1.5	30	23	52	1	0.1%
RE110000_246	Residential	598051	4825288	1.5	27	23	49	0	-
RE110000_247	Residential	598072	4825292	1.5	25	23	48	0	-
RE110000_248	Residential	598076	4825290	1.5	25	23	47	0	-
RE110000_249	Residential	598040	4825285	1.5	27	23	50	0	-
RE110000_253	Residential	597743	4825607	1.5	19	23	41	0	-
RE110000_254	Residential	597795	4825533	1.5	20	23	43	0	-
RE110000_255	Residential	597806	4825547	1.5	18	23	41	0	-
RE110000_256	Residential	597835	4825499	1.5	21	23	43	0	-
RE110000_257	Residential	597843	4825509	1.5	19	23	42	0	-
RE110000_265	Residential	597773	4825557	1.5	20	23	43	0	-
RE110000_267	Residential	597726	4825585	1.5	22	23	44	0	-
RE110000_276	Residential	597839	4825504	1.5	20	23	43	0	-
RE110000_277	Residential	597778	4825564	1.5	19	23	42	0	-
RE110000_278	Residential	597784	4825572	1.5	18	23	41	0	-
RE110000_279	Residential	597739	4825601	1.5	19	23	42	0	-
RE110000_280	Residential	597719	4825577	1.5	24	23	47	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_281	Residential	597767	4825552	1.5	21	23	44	0	-
RE110000_292	Residential	597793	4825524	1.5	21	23	44	0	-
RE110000_293	Residential	597734	4825596	1.5	20	23	42	0	-
RE110000_294	Residential	597800	4825540	1.5	19	23	42	0	-
RE110000_305	Residential	597830	4825493	1.5	21	23	44	0	-
RE110000_309	Residential	597730	4825591	1.5	21	23	43	0	-
RE110000_310	Residential	597826	4825487	1.5	22	23	45	0	-
RE110000_316	Residential	597823	4825480	1.5	24	23	46	0	-
RE110000_325	Residential	597672	4825659	1.5	20	23	43	0	-
RE110000_329	Residential	597711	4825620	1.5	20	23	42	0	-
RE110000_331	Residential	597656	4825641	1.5	24	23	46	0	-
RE110000_332	Residential	597705	4825613	1.5	21	23	44	0	-
RE110000_333	Residential	597717	4825628	1.5	19	23	42	0	-
RE110000_342	Residential	597701	4825604	1.5	23	23	45	0	-
RE110000_344	Residential	597666	4825651	1.5	21	23	44	0	-
RE110000_345	Residential	597678	4825667	1.5	19	23	42	0	-
RE110000_353	Residential	597853	4825468	1.5	22	23	45	0	-
RE110000_355	Residential	597858	4825475	1.5	21	23	44	0	-
RE110000_378	Residential	597899	4825411	1.5	25	23	47	0	-
RE110000_387	Residential	597845	4825458	1.5	24	23	47	0	-
RE110000_390	Residential	597927	4825384	1.5	26	23	48	0	-
RE110000_394	Residential	597904	4825418	1.5	23	23	46	0	-
RE110000_397	Residential	597863	4825480	1.5	20	23	43	0	-
RE110000_401	Residential	596788	4826527	1.5	25	23	48	0	-
RE110200_001	Residential	595761	4827508	1.5	37	23	60	6	0.3%
RE110300_001	Residential	595985	4827782	1.5	28	23	50	1	0.1%
RE110300_002	Residential	596018	4827822	1.5	28	23	50	1	0.1%
RE110300_003	Residential	596052	4827847	1.5	28	23	51	1	0.1%
RE110300_004	Residential	596075	4827863	1.5	30	23	52	2	0.1%
RE110400_001	Residential	596097	4827888	1.5	30	23	53	3	0.2%
RE110400_002	Residential	596114	4827911	1.5	32	23	55	5	0.3%
RE110500_001	Residential	596071	4827936	1.5	28	23	50	1	0.1%
RE110500_002	Residential	596046	4827958	1.5	26	23	49	0	-
RE110600_001	Residential	596004	4827990	1.5	24	23	46	0	-
RE110600_002	Residential	596030	4827975	1.5	25	23	48	0	-
RE110700_001	Residential	595981	4828012	1.5	23	23	46	0	-
RE110700_002	Residential	595928	4827973	1.5	20	23	43	0	-
RE110800_001	Residential	595956	4828058	1.5	23	23	45	0	-
RE110800_002	Residential	595933	4828081	1.5	22	23	45	0	-
RE110900_001	Residential	595910	4828106	1.5	22	23	44	0	-
RE110900_002	Residential	595878	4828134	1.5	21	23	44	0	-
RE111100_001	Residential	595788	4828209	1.5	19	23	42	0	-
RE111200_001	Residential	595754	4828244	1.5	18	23	41	0	-
RE111200_002	Residential	595736	4828278	1.5	19	23	41	0	-
RE111300_001	Residential	595708	4828299	1.5	18	23	40	0	-
RE111300_002	Residential	595689	4828310	1.5	17	23	40	0	-
RE111300_003	Residential	595667	4828334	1.5	17	23	40	0	-
RE111400_001	Residential	595630	4828371	1.5	16	23	39	0	-
RE111400_002	Residential	595610	4828393	1.5	16	23	39	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE111500_001	Residential	595569	4828431	1.5	15	23	38	0	-
RE111500_002	Residential	595514	4828453	1.5	14	23	36	0	-
RE111600_001	Residential	595474	4828490	1.5	13	23	36	0	-
RE111600_002	Residential	595430	4828529	1.5	13	23	35	0	-
RE111700_001	Residential	595514	4828604	1.5	15	23	38	0	-
RE111700_002	Residential	595359	4828639	1.5	13	23	36	0	-
RE111800_001	Residential	596558	4828460	1.5	29	23	51	1	0.1%
RE111800_002	Residential	595492	4828626	1.5	15	23	37	0	-
RE111800_003	Residential	595467	4828642	1.5	16	23	38	0	-
RE111800_004	Residential	595445	4828664	1.5	15	23	38	0	-
RE111800_005	Residential	595329	4828673	1.5	13	23	35	0	-
RE111800_006	Residential	595306	4828700	1.5	13	23	35	0	-
RE111800_007	Residential	595285	4828720	1.5	13	23	35	0	-
RE111800_008	Residential	595266	4828745	1.5	13	23	36	0	-
RE112100_001	Residential	596836	4828712	1.5	25	23	47	0	-
RE112200_001	Residential	596905	4828763	1.5	20	23	43	0	-
RE113100_001	Residential	595706	4829937	1.5	7	23	29	0	-
RE113200_001	Residential	595933	4829995	1.5	9	23	32	0	-
RE113200_002	Residential	595904	4830024	1.5	9	23	32	0	-
RE113300_001	Residential	595753	4830146	1.5	8	23	31	0	-
RE210700_001	Residential	595367	4831551	1.5	5	23	28	0	-
RE210700_002	Residential	595325	4831537	1.5	5	23	28	0	-
RE210700_003	Residential	595504	4831618	1.5	5	23	27	0	-
RE210900_001	Residential	595286	4831670	1.5	11	23	34	0	-
RE210900_003	Residential	595217	4831730	1.5	8	23	30	0	-
RE210900_004	Residential	595349	4831732	1.5	9	23	32	0	-
RE210900_005	Residential	595339	4831698	1.5	7	23	30	0	-
RE210900_006	Residential	595400	4831812	1.5	10	23	32	0	-
RE210900_007	Residential	595436	4831835	1.5	8	23	30	0	-
RE210900_008	Residential	595454	4831855	1.5	8	23	30	0	-
RE211000_001	Residential	595242	4831783	1.5	7	23	30	0	-
RE211000_002	Residential	595292	4831787	1.5	9	23	31	0	-
RE211000_003	Residential	595341	4831842	1.5	8	23	31	0	-
RE211000_004	Residential	595365	4831888	1.5	7	23	30	0	-
RE211000_005	Residential	595239	4831847	1.5	6	23	29	0	-
RE211000_006	Residential	595408	4831938	1.5	7	23	30	0	-
RE211000_007	Residential	595530	4831956	1.5	8	23	31	0	-
RE211000_008	Residential	595567	4832001	1.5	7	23	30	0	-
RE211000_009	Residential	595596	4832028	1.5	7	23	30	0	-
RE211000_010	Residential	595617	4832054	1.5	7	23	30	0	-
RE211100_001	Residential	595423	4831974	1.5	7	23	30	0	-
RE211100_002	Residential	595342	4832015	1.5	5	23	28	0	-
RE211100_003	Residential	595552	4832099	1.5	9	23	31	0	-
RE211100_004	Residential	595637	4832091	1.5	8	23	30	0	-
RE211100_005	Residential	595675	4832137	1.5	8	23	30	0	-
RE211100_006	Residential	595734	4832214	1.5	8	23	30	0	-
RE211100_009	Residential	595514	4832061	1.5	8	23	31	0	-
RE211200_001	Residential	595380	4832103	1.5	5	23	28	0	-
RE211200_002	Residential	595424	4832139	1.5	5	23	28	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE211200_003	Residential	595641	4832218	1.5	8	23	31	0	-
RE211200_004	Residential	595704	4832286	1.5	9	23	32	0	-
RE211200_005	Residential	595584	4832173	1.5	7	23	30	0	-
RE211400_001	Residential	594922	4832082	1.5	5	23	27	0	-
RE211500_002	Residential	595129	4832290	1.5	4	23	27	0	-
RE211500_003	Residential	594950	4832221	1.5	4	23	27	0	-
RE211500_004	Residential	595156	4832250	1.5	4	23	27	0	-
RE211900_001	Residential	594800	4832552	1.5	4	23	26	0	-
RE212600_001	Residential	594824	4833279	1.5	6	23	28	0	-
RE212700_001	Residential	594758	4833331	1.5	7	23	30	0	-
RE212700_002	Residential	594605	4833322	1.5	7	23	30	0	-
RE212800_001	Residential	594672	4833390	1.5	9	23	31	0	-
RE212800_002	Residential	594620	4833440	1.5	10	23	32	0	-
RE212900_001	Residential	594599	4833473	1.5	9	23	32	0	-
RE213000_001	Residential	594589	4833575	1.5	6	23	29	0	-
RE214400_001	Recreation	594333	4835333	1.5	10	23	33	0	-
RE214600_002	Residential	593842	4835174	1.5	10	23	32	0	-
RE214600_003	Residential	593906	4835196	1.5	11	23	34	0	-
RE214600_004	Residential	593934	4835222	1.5	11	23	34	0	-
RE214600_005	Residential	593948	4835237	1.5	11	23	34	0	-
RE214600_006	Residential	593954	4835244	1.5	11	23	34	0	-
RE214600_007	Residential	593879	4835253	1.5	8	23	31	0	-
RE214600_008	Residential	593895	4835241	1.5	9	23	32	0	-
RE214600_009	Residential	593872	4835220	1.5	9	23	32	0	-
RE214600_010	Residential	593861	4835213	1.5	9	23	31	0	-
RE214600_011	Residential	593855	4835236	1.5	8	23	31	0	-
RE214600_012	Residential	593826	4835204	1.5	8	23	31	0	-
RE214600_013	Residential	593848	4835159	1.5	10	23	33	0	-
RE214600_014	Residential	593881	4835177	1.5	11	23	33	0	-
RE214600_015	Residential	593892	4835186	1.5	11	23	33	0	-
RE214600_016	Residential	593917	4835206	1.5	11	23	34	0	-
RE214600_017	Residential	593925	4835215	1.5	11	23	34	0	-
RE214600_018	Residential	593940	4835231	1.5	11	23	34	0	-
RE214600_019	Residential	593960	4835250	1.5	11	23	34	0	-
RE214600_020	Residential	593967	4835258	1.5	11	23	34	0	-
RE214600_021	Residential	593978	4835265	1.5	12	23	34	0	-
RE214600_022	Residential	593885	4835231	1.5	9	23	32	0	-
RE214600_023	Residential	593914	4835274	1.5	9	23	31	0	-
RE214600_024	Residential	593927	4835288	1.5	9	23	31	0	-
RE214600_025	Residential	593932	4835295	1.5	9	23	31	0	-
RE214600_026	Residential	593936	4835298	1.5	9	23	32	0	-
RE214600_027	Residential	593941	4835304	1.5	9	23	32	0	-
RE214600_028	Residential	593945	4835308	1.5	9	23	32	0	-
RE214600_029	Residential	593948	4835312	1.5	9	23	32	0	-
RE214600_030	Residential	593953	4835317	1.5	9	23	32	0	-
RE214600_031	Residential	593956	4835321	1.5	9	23	32	0	-
RE214600_032	Residential	593965	4835331	1.5	9	23	32	0	-
RE214600_033	Residential	593979	4835319	1.5	10	23	32	0	-
RE214600_034	Residential	593977	4835313	1.5	10	23	32	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_035	Residential	593971	4835308	1.5	10	23	32	0	-
RE214600_036	Residential	593968	4835303	1.5	10	23	32	0	-
RE214600_037	Residential	593909	4835267	1.5	9	23	31	0	-
RE214600_038	Residential	593919	4835279	1.5	9	23	31	0	-
RE214600_039	Residential	593923	4835284	1.5	9	23	31	0	-
RE214600_040	Residential	593930	4835291	1.5	9	23	31	0	-
RE214600_041	Residential	593961	4835326	1.5	9	23	32	0	-
RE214600_042	Residential	593970	4835333	1.5	9	23	32	0	-
RE214600_043	Residential	593982	4835324	1.5	10	23	32	0	-
RE214600_044	Residential	593960	4835295	1.5	10	23	32	0	-
RE214600_045	Residential	593956	4835291	1.5	10	23	32	0	-
RE214600_046	Residential	593946	4835281	1.5	9	23	32	0	-
RE214600_047	Residential	593942	4835277	1.5	9	23	32	0	-
RE214600_048	Residential	593934	4835269	1.5	9	23	32	0	-
RE214600_049	Residential	593929	4835264	1.5	9	23	32	0	-
RE214600_050	Residential	593923	4835260	1.5	9	23	32	0	-
RE214600_051	Residential	594088	4835437	1.5	10	23	32	0	-
RE214600_052	Residential	594082	4835443	1.5	9	23	32	0	-
RE214600_053	Residential	593964	4835299	1.5	10	23	32	0	-
RE214600_054	Residential	593949	4835285	1.5	9	23	32	0	-
RE214600_055	Residential	593938	4835273	1.5	9	23	32	0	-
RE214600_056	Residential	593919	4835255	1.5	9	23	32	0	-
RE214600_057	Residential	594070	4835454	1.5	9	23	31	0	-
RE214600_058	Residential	594080	4835468	1.5	9	23	31	0	-
RE214600_059	Residential	594086	4835463	1.5	9	23	31	0	-
RE214600_060	Residential	594095	4835454	1.5	9	23	32	0	-
RE214600_061	Residential	594098	4835448	1.5	10	23	32	0	-
RE214600_062	Residential	594075	4835447	1.5	9	23	32	0	-
RE214600_063	Residential	594090	4835458	1.5	9	23	32	0	-
RE214600_064	Residential	594047	4835432	1.5	9	23	32	0	-
RE214600_065	Residential	594052	4835428	1.5	9	23	32	0	-
RE214600_066	Residential	594056	4835424	1.5	9	23	32	0	-
RE214600_067	Residential	594061	4835420	1.5	10	23	32	0	-
RE214600_068	Residential	594068	4835415	1.5	10	23	32	0	-
RE214600_069	Residential	594022	4835361	1.5	10	23	33	0	-
RE214600_070	Residential	593995	4835385	1.5	9	23	31	0	-
RE214600_071	Residential	593999	4835381	1.5	9	23	32	0	-
RE214600_072	Residential	594003	4835377	1.5	9	23	32	0	-
RE214600_073	Residential	594009	4835371	1.5	10	23	32	0	-
RE214600_074	Residential	594015	4835366	1.5	10	23	32	0	-
RE214600_075	Residential	594003	4835343	1.5	10	23	33	0	-
RE214600_076	Residential	593993	4835352	1.5	10	23	32	0	-
RE214600_077	Residential	593998	4835348	1.5	10	23	32	0	-
RE214600_078	Residential	593990	4835357	1.5	9	23	32	0	-
RE214600_079	Residential	593985	4835362	1.5	9	23	32	0	-
RE214600_080	Residential	593978	4835367	1.5	9	23	31	0	-
RE214600_081	Residential	593872	4835162	1.5	11	23	34	0	-
RE214600_082	Residential	593897	4835267	1.5	8	23	31	0	-
RE214600_083	Residential	593835	4835188	1.5	9	23	32	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE214700_002	Residential	593796	4835295	1.5	6	23	29	0	-
RE214700_003	Residential	593801	4835284	1.5	6	23	29	0	-
RE214700_004	Residential	593804	4835270	1.5	6	23	29	0	-
RE214700_005	Residential	593808	4835258	1.5	7	23	29	0	-
RE214700_006	Residential	593812	4835244	1.5	7	23	29	0	-
RE214700_007	Residential	593815	4835229	1.5	7	23	30	0	-
RE214700_008	Residential	593820	4835217	1.5	8	23	30	0	-
RE214700_009	Residential	593927	4835372	1.5	8	23	30	0	-
RE214700_010	Residential	593945	4835355	1.5	8	23	31	0	-
RE214700_011	Residential	593938	4835347	1.5	8	23	31	0	-
RE214700_012	Residential	593932	4835340	1.5	8	23	31	0	-
RE214700_013	Residential	593925	4835333	1.5	8	23	31	0	-
RE214700_014	Residential	593897	4835305	1.5	8	23	30	0	-
RE214700_015	Residential	593848	4835261	1.5	7	23	30	0	-
RE214700_016	Residential	593843	4835273	1.5	7	23	30	0	-
RE214700_017	Residential	593842	4835286	1.5	7	23	30	0	-
RE214700_018	Residential	593871	4835315	1.5	7	23	30	0	-
RE214700_019	Residential	593884	4835326	1.5	7	23	30	0	-
RE214700_020	Residential	593911	4835354	1.5	8	23	30	0	-
RE214700_021	Residential	593920	4835363	1.5	8	23	30	0	-
RE214700_022	Residential	593892	4835387	1.5	7	23	29	0	-
RE214700_023	Residential	593878	4835378	1.5	7	23	29	0	-
RE214700_024	Residential	593867	4835368	1.5	7	23	29	0	-
RE214700_025	Residential	593847	4835347	1.5	7	23	29	0	-
RE214700_026	Residential	593792	4835308	1.5	6	23	29	0	-
RE214700_027	Residential	593899	4835400	1.5	7	23	29	0	-
RE214700_028	Residential	593915	4835323	1.5	8	23	31	0	-
RE214700_029	Residential	593905	4835315	1.5	8	23	31	0	-
RE214700_030	Residential	593888	4835295	1.5	8	23	30	0	-
RE214700_031	Residential	593878	4835285	1.5	8	23	30	0	-
RE214700_032	Residential	593872	4835268	1.5	8	23	30	0	-
RE214700_033	Residential	593850	4835248	1.5	7	23	30	0	-
RE214700_034	Residential	593837	4835298	1.5	7	23	29	0	-
RE214700_035	Residential	593859	4835303	1.5	7	23	30	0	-
RE214700_036	Residential	593893	4835335	1.5	7	23	30	0	-
RE214700_037	Residential	593901	4835345	1.5	8	23	30	0	-
RE214700_038	Residential	593857	4835357	1.5	7	23	29	0	-
RE214700_039	Residential	593838	4835336	1.5	7	23	29	0	-
RE214700_040	Residential	593826	4835328	1.5	6	23	29	0	-
RE214700_041	Residential	594050	4835472	1.5	8	23	30	0	-
RE214700_042	Residential	594045	4835477	1.5	8	23	30	0	-
RE214700_043	Residential	594021	4835499	1.5	7	23	29	0	-
RE214700_044	Residential	594015	4835505	1.5	7	23	29	0	-
RE214700_045	Residential	594010	4835510	1.5	6	23	29	0	-
RE214700_046	Residential	594005	4835514	1.5	6	23	29	0	-
RE214700_047	Residential	593999	4835520	1.5	6	23	29	0	-
RE214700_048	Residential	594007	4835538	1.5	6	23	29	0	-
RE214700_049	Residential	594029	4835518	1.5	7	23	29	0	-
RE214700_050	Residential	594041	4835505	1.5	7	23	29	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_051	Residential	594052	4835496	1.5	7	23	30	0	-
RE214700_052	Residential	594065	4835484	1.5	8	23	30	0	-
RE214700_053	Residential	594071	4835479	1.5	8	23	31	0	-
RE214700_054	Residential	594063	4835459	1.5	9	23	31	0	-
RE214700_055	Residential	594059	4835463	1.5	8	23	31	0	-
RE214700_056	Residential	594055	4835466	1.5	8	23	31	0	-
RE214700_057	Residential	594041	4835481	1.5	7	23	30	0	-
RE214700_058	Residential	594035	4835486	1.5	7	23	30	0	-
RE214700_059	Residential	594030	4835490	1.5	7	23	30	0	-
RE214700_060	Residential	594025	4835494	1.5	7	23	30	0	-
RE214700_061	Residential	593994	4835525	1.5	6	23	29	0	-
RE214700_062	Residential	594012	4835533	1.5	6	23	29	0	-
RE214700_063	Residential	594018	4835528	1.5	6	23	29	0	-
RE214700_064	Residential	594023	4835523	1.5	6	23	29	0	-
RE214700_065	Residential	594035	4835511	1.5	7	23	29	0	-
RE214700_066	Residential	594046	4835501	1.5	7	23	30	0	-
RE214700_067	Residential	594057	4835491	1.5	7	23	30	0	-
RE214700_068	Residential	594061	4835487	1.5	8	23	30	0	-
RE214700_069	Residential	594075	4835473	1.5	8	23	31	0	-
RE214700_070	Residential	593973	4835506	1.5	6	23	29	0	-
RE214700_071	Residential	593991	4835488	1.5	7	23	29	0	-
RE214700_072	Residential	593995	4835485	1.5	7	23	29	0	-
RE214700_073	Residential	594004	4835475	1.5	7	23	30	0	-
RE214700_074	Residential	594013	4835466	1.5	7	23	30	0	-
RE214700_075	Residential	594022	4835457	1.5	8	23	30	0	-
RE214700_076	Residential	594039	4835440	1.5	9	23	31	0	-
RE214700_077	Residential	593979	4835500	1.5	6	23	29	0	-
RE214700_078	Residential	593985	4835493	1.5	6	23	29	0	-
RE214700_079	Residential	593998	4835482	1.5	7	23	29	0	-
RE214700_080	Residential	594008	4835471	1.5	7	23	30	0	-
RE214700_081	Residential	594018	4835462	1.5	8	23	30	0	-
RE214700_082	Residential	594027	4835453	1.5	8	23	31	0	-
RE214700_083	Residential	594030	4835449	1.5	8	23	31	0	-
RE214700_084	Residential	594036	4835444	1.5	8	23	31	0	-
RE214700_085	Residential	594043	4835436	1.5	9	23	31	0	-
RE214700_086	Residential	593960	4835422	1.5	8	23	30	0	-
RE214700_087	Residential	593956	4835426	1.5	7	23	30	0	-
RE214700_088	Residential	593963	4835417	1.5	8	23	30	0	-
RE214700_089	Residential	593968	4835413	1.5	8	23	30	0	-
RE214700_090	Residential	593973	4835409	1.5	8	23	31	0	-
RE214700_091	Residential	593978	4835404	1.5	8	23	31	0	-
RE214700_092	Residential	593981	4835400	1.5	8	23	31	0	-
RE214700_093	Residential	593948	4835434	1.5	7	23	30	0	-
RE214700_094	Residential	593938	4835443	1.5	7	23	29	0	-
RE214700_095	Residential	593934	4835448	1.5	7	23	29	0	-
RE214700_096	Residential	593988	4835393	1.5	9	23	31	0	-
RE214700_097	Residential	593991	4835389	1.5	9	23	31	0	-
RE214700_098	Residential	593943	4835438	1.5	7	23	30	0	-
RE214700_099	Residential	593929	4835453	1.5	7	23	29	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE214700_100	Residential	593974	4835372	1.5	9	23	31	0	-
RE214700_101	Residential	593962	4835383	1.5	8	23	31	0	-
RE214700_102	Residential	593958	4835387	1.5	8	23	31	0	-
RE214700_103	Residential	593951	4835396	1.5	8	23	30	0	-
RE214700_104	Residential	593947	4835399	1.5	8	23	30	0	-
RE214700_105	Residential	593941	4835404	1.5	8	23	30	0	-
RE214700_106	Residential	593922	4835422	1.5	7	23	30	0	-
RE214700_107	Residential	593918	4835425	1.5	7	23	29	0	-
RE214700_108	Residential	593968	4835378	1.5	8	23	31	0	-
RE214700_109	Residential	593955	4835390	1.5	8	23	31	0	-
RE214700_110	Residential	593936	4835409	1.5	7	23	30	0	-
RE214700_111	Residential	593932	4835413	1.5	7	23	30	0	-
RE214700_112	Residential	593927	4835416	1.5	7	23	30	0	-
RE214700_113	Residential	593915	4835429	1.5	7	23	29	0	-
RE214700_114	Residential	593909	4835436	1.5	7	23	29	0	-
RE214800_004	Residential	594026	4835615	1.5	6	23	28	0	-
RE214800_005	Residential	593831	4835365	1.5	6	23	29	0	-
RE214800_006	Residential	593852	4835385	1.5	6	23	29	0	-
RE214800_007	Residential	593881	4835418	1.5	6	23	29	0	-
RE214800_012	Residential	593782	4835346	1.5	6	23	28	0	-
RE214800_013	Residential	593787	4835332	1.5	6	23	28	0	-
RE214800_014	Residential	593789	4835319	1.5	6	23	28	0	-
RE214800_015	Residential	593821	4835355	1.5	6	23	29	0	-
RE214800_016	Residential	593842	4835375	1.5	6	23	29	0	-
RE214800_017	Residential	593862	4835398	1.5	6	23	29	0	-
RE214800_018	Residential	593873	4835409	1.5	6	23	29	0	-
RE214800_019	Residential	593990	4835530	1.5	6	23	29	0	-
RE214800_020	Residential	593986	4835536	1.5	6	23	28	0	-
RE214800_021	Residential	593998	4835545	1.5	6	23	28	0	-
RE214800_022	Residential	594003	4835542	1.5	6	23	29	0	-
RE214800_023	Residential	593968	4835554	1.5	6	23	28	0	-
RE214800_024	Residential	593977	4835565	1.5	6	23	28	0	-
RE214800_025	Residential	593946	4835572	1.5	5	23	28	0	-
RE214800_026	Residential	593927	4835596	1.5	5	23	28	0	-
RE214800_027	Residential	593950	4835594	1.5	5	23	28	0	-
RE214800_028	Residential	593964	4835580	1.5	5	23	28	0	-
RE214800_029	Residential	593968	4835576	1.5	5	23	28	0	-
RE214800_030	Residential	593973	4835571	1.5	5	23	28	0	-
RE214800_031	Residential	593987	4835592	1.5	5	23	28	0	-
RE214800_032	Residential	593962	4835559	1.5	5	23	28	0	-
RE214800_033	Residential	593956	4835562	1.5	5	23	28	0	-
RE214800_034	Residential	593952	4835567	1.5	5	23	28	0	-
RE214800_035	Residential	593941	4835579	1.5	5	23	28	0	-
RE214800_036	Residential	593936	4835582	1.5	5	23	28	0	-
RE214800_037	Residential	593931	4835589	1.5	5	23	28	0	-
RE214800_038	Residential	593938	4835605	1.5	5	23	28	0	-
RE214800_039	Residential	593945	4835599	1.5	5	23	28	0	-
RE214800_040	Residential	593953	4835589	1.5	5	23	28	0	-
RE214800_041	Residential	593959	4835583	1.5	5	23	28	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214800_042	Residential	593997	4835583	1.5	6	23	28	0	-
RE214800_043	Residential	593992	4835588	1.5	6	23	28	0	-
RE214800_044	Residential	593982	4835599	1.5	5	23	28	0	-
RE214800_045	Residential	593977	4835603	1.5	5	23	28	0	-
RE214800_046	Residential	593970	4835610	1.5	5	23	28	0	-
RE214800_052	Residential	593995	4835609	1.5	5	23	28	0	-
RE214800_053	Residential	593999	4835605	1.5	5	23	28	0	-
RE214800_056	Residential	593989	4835614	1.5	5	23	28	0	-
RE214800_057	Residential	594004	4835600	1.5	6	23	28	0	-
RE214800_058	Residential	594008	4835595	1.5	6	23	28	0	-
RE214800_059	Residential	593969	4835510	1.5	6	23	29	0	-
RE214800_060	Residential	593964	4835515	1.5	6	23	29	0	-
RE214800_061	Residential	593919	4835462	1.5	6	23	29	0	-
RE214800_062	Residential	593941	4835536	1.5	5	23	28	0	-
RE214800_063	Residential	593932	4835545	1.5	5	23	28	0	-
RE214800_064	Residential	593919	4835557	1.5	5	23	28	0	-
RE214800_065	Residential	593923	4835458	1.5	6	23	29	0	-
RE214800_066	Residential	593916	4835466	1.5	6	23	29	0	-
RE214800_067	Residential	593938	4835540	1.5	5	23	28	0	-
RE214800_068	Residential	593926	4835550	1.5	5	23	28	0	-
RE214800_069	Residential	593924	4835553	1.5	5	23	28	0	-
RE214800_070	Residential	593909	4835569	1.5	5	23	27	0	-
RE214800_071	Residential	593905	4835574	1.5	5	23	27	0	-
RE214800_072	Residential	593913	4835564	1.5	5	23	28	0	-
RE214800_073	Residential	593902	4835442	1.5	6	23	29	0	-
RE214800_074	Residential	593897	4835447	1.5	6	23	29	0	-
RE214800_075	Residential	593945	4835532	1.5	6	23	28	0	-
RE214800_076	Residential	593781	4835357	1.5	6	23	28	0	-
RE214900_001	Residential	593921	4835605	1.5	5	23	27	0	-
RE214900_008	Residential	593899	4835580	1.5	5	23	27	0	-
RE214900_009	Residential	593896	4835585	1.5	5	23	27	0	-
RE214900_010	Residential	593893	4835591	1.5	5	23	27	0	-
RE217600_001	Residential	591736	4837227	1.5	5	23	27	0	-
RE217600_002	Residential	591766	4837262	1.5	4	23	27	0	-
RE218700_001	Residential	590959	4838020	1.5	12	23	34	0	-
RE218700_002	Residential	590988	4838088	1.5	11	23	34	0	-
RE220800_001	Residential	590421	4839357	1.5	9	23	32	0	-
RE220900_001	Residential	590180	4839466	1.5	7	23	30	0	-
RE220900_002	Residential	590517	4839408	1.5	11	23	33	0	-
RE220900_003	Residential	590379	4839398	1.5	10	23	33	0	-
RE221000_001	Residential	590454	4839467	1.5	11	23	34	0	-
RE221000_002	Residential	590412	4839513	1.5	11	23	33	0	-
RE221300_001	Residential	590257	4839724	1.5	8	23	30	0	-
RE221300_002	Residential	590236	4839764	1.5	7	23	30	0	-
RE221300_003	Residential	590440	4839670	1.5	5	23	27	0	-
RE222600_001	Residential	591012	4840654	1.5	10	23	32	0	-
RE222700_001	Residential	590826	4840878	1.5	13	23	35	0	-
RE222700_002	Residential	590788	4840912	1.5	13	23	35	0	-
RE222700_003	Residential	590768	4840946	1.5	13	23	36	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE222700_004	Residential	590744	4840967	1.5	13	23	36	0	-
RE222700_005	Residential	590721	4840990	1.5	13	23	36	0	-
RE222700_006	Residential	590621	4841031	1.5	11	23	34	0	-
RE222800_001	Residential	590888	4840963	1.5	11	23	34	0	-
RE222800_002	Residential	590866	4840985	1.5	11	23	34	0	-
RE222800_003	Residential	590833	4841016	1.5	12	23	34	0	-
RE222800_004	Residential	590542	4841175	1.5	14	23	37	0	-
RE222800_005	Residential	591137	4840761	1.5	8	23	31	0	-
RE222900_001	Residential	590805	4841056	1.5	11	23	33	0	-
RE223100_001	Residential	590769	4841337	1.5	5	23	27	0	-
RE224000_001	Residential	591729	4841911	1.5	14	23	37	0	-
RE224000_002	Residential	591565	4842001	1.5	12	23	34	0	-
RE224000_003	Residential	591896	4841760	1.5	15	23	37	0	-
RE224000_004	Residential	592046	4841608	1.5	9	23	31	0	-
RE224000_005	Residential	591982	4841673	1.5	14	23	36	0	-
RE224000_006	Residential	592000	4841606	1.5	9	23	31	0	-
RE224000_007	Residential	592142	4841674	1.5	9	23	32	0	-
RE224000_008	Residential	591760	4841888	1.5	14	23	37	0	-
RE224100_001	Residential	591661	4842108	1.5	13	23	35	0	-
RE224200_001	Residential	591576	4842265	1.5	9	23	31	0	-
RE225600_001	Residential	591815	4843783	1.5	10	23	33	0	-
RE225700_001	Residential	591905	4843849	1.5	8	23	30	0	-
RE225700_002	Residential	591627	4843848	1.5	10	23	32	0	-
RE225800_001	Residential	591793	4843928	1.5	10	23	33	0	-
RE226500_001	Residential	591915	4844500	1.5	15	23	37	0	-
RE226500_002	Residential	592025	4844497	1.5	11	23	34	0	-
RE226600_001	Residential	592085	4844601	1.5	12	23	35	0	-
RE226700_001	Residential	592060	4844696	1.5	16	23	39	0	-
RE226800_001	Residential	592117	4844789	1.5	16	23	39	0	-
RE227000_001	Residential	592319	4844882	1.5	13	23	36	0	-
RE227100_001	Residential	592377	4844982	1.5	17	23	39	0	-
RE227100_002	Residential	592402	4845033	1.5	20	23	42	0	-
RE227300_001	Residential	592788	4845012	1.5	10	23	33	0	-
RE227800_001	Residential	592859	4845591	1.5	7	23	30	0	-
RE227900_001	Residential	592776	4845681	1.5	9	23	31	0	-
RE228000_001	Residential	595855	4844518	1.5	10	23	33	0	-
RE228000_002	Residential	595865	4844534	1.5	10	23	33	0	-
RE228000_003	Residential	595873	4844555	1.5	11	23	33	0	-
RE228000_004	Residential	595887	4844563	1.5	11	23	34	0	-
RE228000_005	Residential	595917	4844562	1.5	12	23	34	0	-
RE228000_006	Residential	595931	4844548	1.5	13	23	36	0	-
RE228000_007	Residential	595942	4844534	1.5	14	23	37	0	-
RE228000_008	Child Care Centre	597841	4843717	1.5	11	23	34	0	-
RE228000_009	Residential	595782	4844642	1.5	13	23	36	0	-
RE228100_001	Residential	595810	4844669	1.5	14	23	37	0	-
RE228300_028	Residential	595272	4845160	1.5	14	23	37	0	-
RE228300_029	Residential	595277	4845164	1.5	14	23	37	0	-
RE228300_030	Residential	595281	4845168	1.5	14	23	37	0	-
RE228300_031	Residential	595264	4845154	1.5	14	23	37	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228300_032	Residential	595260	4845151	1.5	14	23	37	0	-
RE228300_033	Residential	595256	4845147	1.5	14	23	37	0	-
RE228300_034	Residential	595252	4845143	1.5	14	23	37	0	-
RE228300_035	Residential	595247	4845139	1.5	14	23	37	0	-
RE228400_004	Residential	595342	4845241	1.5	14	23	37	0	-
RE228400_005	Residential	595347	4845245	1.5	14	23	37	0	-
RE228400_006	Residential	595353	4845250	1.5	14	23	37	0	-
RE228400_007	Residential	595286	4845173	1.5	14	23	37	0	-
RE228400_008	Residential	595291	4845177	1.5	14	23	37	0	-
RE228400_009	Residential	595295	4845180	1.5	14	23	37	0	-
RE228400_010	Residential	595299	4845184	1.5	14	23	37	0	-
RE228400_011	Residential	595303	4845187	1.5	14	23	37	0	-
RE228400_013	Residential	595249	4845194	1.5	14	23	36	0	-
RE228400_014	Residential	595253	4845198	1.5	14	23	36	0	-
RE228400_015	Residential	595259	4845202	1.5	14	23	36	0	-
RE228400_045	Residential	595263	4845261	1.5	13	23	35	0	-
RE228400_046	Residential	595267	4845257	1.5	13	23	35	0	-
RE228400_047	Residential	595271	4845254	1.5	13	23	35	0	-
RE228400_048	Residential	595277	4845248	1.5	13	23	35	0	-
RE228400_049	Residential	595281	4845244	1.5	13	23	35	0	-
RE228400_050	Residential	595285	4845240	1.5	13	23	35	0	-
RE228400_051	Residential	595289	4845237	1.5	13	23	36	0	-
RE228400_052	Residential	595293	4845233	1.5	13	23	36	0	-
RE228400_053	Residential	595297	4845229	1.5	14	23	36	0	-
RE228400_054	Residential	595303	4845221	1.5	14	23	36	0	-
RE228400_055	Residential	595307	4845217	1.5	14	23	37	0	-
RE228400_056	Residential	595312	4845212	1.5	14	23	37	0	-
RE228400_057	Residential	595317	4845207	1.5	14	23	37	0	-
RE228400_058	Residential	595321	4845203	1.5	15	23	37	0	-
RE228400_059	Residential	595326	4845198	1.5	15	23	37	0	-
RE228500_009	Residential	595340	4845366	1.5	13	23	35	0	-
RE228500_010	Residential	595348	4845355	1.5	13	23	36	0	-
RE228500_011	Residential	595353	4845351	1.5	13	23	36	0	-
RE228500_012	Residential	595360	4845346	1.5	13	23	36	0	-
RE228500_013	Residential	595365	4845341	1.5	14	23	36	0	-
RE228500_014	Residential	595376	4845333	1.5	14	23	36	0	-
RE228500_015	Residential	595380	4845326	1.5	14	23	37	0	-
RE228500_016	Residential	595386	4845320	1.5	14	23	37	0	-
RE228500_017	Residential	595391	4845315	1.5	14	23	37	0	-
RE228500_018	Residential	595402	4845305	1.5	14	23	37	0	-
RE228500_019	Residential	595406	4845298	1.5	14	23	37	0	-
RE228500_020	Residential	595415	4845288	1.5	14	23	37	0	-
RE228500_021	Residential	595423	4845280	1.5	14	23	37	0	-
RE228500_022	Residential	595357	4845254	1.5	14	23	36	0	-
RE228500_023	Residential	595366	4845262	1.5	14	23	36	0	-
RE228500_024	Residential	595370	4845267	1.5	14	23	36	0	-
RE228500_025	Residential	595375	4845271	1.5	14	23	36	0	-
RE228500_026	Residential	595355	4845285	1.5	14	23	36	0	-
RE228500_027	Residential	595349	4845290	1.5	14	23	36	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228500_028	Residential	595342	4845297	1.5	14	23	36	0	-
RE228500_029	Residential	595338	4845303	1.5	13	23	36	0	-
RE228500_030	Residential	595329	4845311	1.5	13	23	36	0	-
RE228500_031	Residential	595322	4845317	1.5	13	23	36	0	-
RE228500_032	Residential	595315	4845323	1.5	13	23	36	0	-
RE228500_033	Residential	595310	4845328	1.5	13	23	36	0	-
RE228500_034	Residential	595301	4845337	1.5	13	23	35	0	-
RE228500_035	Residential	595297	4845343	1.5	13	23	35	0	-
RE228500_049	Residential	595279	4845312	1.5	13	23	35	0	-
RE228500_050	Residential	595289	4845303	1.5	13	23	36	0	-
RE228500_051	Residential	595293	4845297	1.5	13	23	36	0	-
RE228500_052	Residential	595300	4845290	1.5	13	23	36	0	-
RE228500_053	Residential	595305	4845285	1.5	13	23	36	0	-
RE228500_054	Residential	595315	4845277	1.5	13	23	36	0	-
RE228500_055	Residential	595319	4845273	1.5	13	23	36	0	-
RE228500_056	Residential	595323	4845268	1.5	13	23	36	0	-
RE228500_057	Residential	595329	4845264	1.5	13	23	36	0	-
RE228500_060	Residential	595450	4845298	1.5	14	23	37	0	-
RE228500_061	Residential	595448	4845302	1.5	14	23	37	0	-
RE228500_062	Residential	595444	4845307	1.5	14	23	37	0	-
RE228500_063	Residential	595440	4845311	1.5	14	23	37	0	-
RE228500_064	Residential	595437	4845315	1.5	14	23	37	0	-
RE228500_065	Residential	595433	4845320	1.5	14	23	37	0	-
RE228500_066	Residential	595429	4845324	1.5	14	23	37	0	-
RE228500_067	Residential	595426	4845327	1.5	14	23	37	0	-
RE228600_013	Residential	595369	4845462	1.5	11	23	34	0	-
RE228600_014	Residential	595377	4845450	1.5	12	23	34	0	-
RE228600_015	Residential	595389	4845444	1.5	12	23	34	0	-
RE228600_016	Residential	595398	4845435	1.5	12	23	35	0	-
RE228600_017	Residential	595404	4845426	1.5	13	23	35	0	-
RE228600_018	Residential	595412	4845418	1.5	13	23	35	0	-
RE228600_019	Residential	595420	4845409	1.5	13	23	36	0	-
RE228600_020	Residential	595431	4845401	1.5	13	23	36	0	-
RE228600_021	Residential	595439	4845389	1.5	13	23	36	0	-
RE228600_022	Residential	595447	4845380	1.5	14	23	36	0	-
RE228600_023	Residential	595455	4845370	1.5	14	23	37	0	-
RE228600_024	Residential	595464	4845360	1.5	14	23	37	0	-
RE228600_025	Residential	595470	4845351	1.5	14	23	37	0	-
RE228600_026	Residential	595480	4845344	1.5	15	23	37	0	-
RE228600_027	Residential	595487	4845335	1.5	15	23	37	0	-
RE228600_036	Residential	595324	4845383	1.5	12	23	35	0	-
RE228600_037	Residential	595332	4845374	1.5	12	23	35	0	-
RE228600_038	Residential	595335	4845370	1.5	12	23	35	0	-
RE228600_039	Residential	595422	4845333	1.5	14	23	37	0	-
RE228600_040	Residential	595418	4845337	1.5	14	23	37	0	-
RE228600_041	Residential	595415	4845341	1.5	14	23	37	0	-
RE228600_042	Residential	595412	4845343	1.5	14	23	37	0	-
RE228600_043	Residential	595409	4845347	1.5	14	23	36	0	-
RE228600_044	Residential	595406	4845351	1.5	14	23	36	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228600_045	Residential	595404	4845354	1.5	14	23	36	0	-
RE228600_046	Residential	595402	4845357	1.5	14	23	36	0	-
RE228600_047	Residential	595396	4845362	1.5	13	23	36	0	-
RE228600_048	Residential	595392	4845366	1.5	13	23	36	0	-
RE228600_049	Residential	595390	4845369	1.5	13	23	36	0	-
RE228600_050	Residential	595387	4845372	1.5	13	23	36	0	-
RE228600_051	Residential	595383	4845375	1.5	13	23	36	0	-
RE228600_052	Residential	595380	4845378	1.5	13	23	35	0	-
RE228600_053	Residential	595377	4845380	1.5	13	23	35	0	-
RE228600_054	Residential	595374	4845383	1.5	13	23	35	0	-
RE228600_055	Residential	595371	4845387	1.5	12	23	35	0	-
RE228600_056	Residential	595369	4845389	1.5	12	23	35	0	-
RE228600_057	Residential	595366	4845392	1.5	12	23	35	0	-
RE228600_058	Residential	595363	4845395	1.5	12	23	35	0	-
RE228600_059	Residential	595361	4845397	1.5	12	23	35	0	-
RE228600_060	Residential	595358	4845400	1.5	12	23	35	0	-
RE228600_061	Residential	595356	4845402	1.5	12	23	35	0	-
RE228600_062	Residential	595353	4845405	1.5	12	23	35	0	-
RE228600_063	Residential	593163	4846308	1.5	12	23	35	0	-
RE228700_010	Residential	593290	4846362	1.5	9	23	32	0	-
RE228800_001	Residential	593003	4846574	1.5	8	23	31	0	-
RE228800_002	Residential	593037	4846534	1.5	8	23	31	0	-
RE228800_003	Residential	593163	4846512	1.5	6	23	29	0	-
RE228900_001	Residential	592951	4846627	1.5	8	23	30	0	-
RE228900_002	Residential	592887	4846738	1.5	7	23	29	0	-
RE229000_001	Residential	593405	4846521	1.5	8	23	31	0	-
RE229100_001	Residential	593407	4846583	1.5	7	23	29	0	-
RE230200_001	Residential	594211	4847001	1.5	6	23	29	0	-
RE230300_001	Residential	594050	4847308	1.5	11	23	34	0	-
RE230300_002	Residential	593923	4847396	1.5	8	23	31	0	-
RE230300_003	Residential	594697	4846565	1.5	7	23	29	0	-
RE230300_004	Residential	595111	4846102	1.5	9	23	31	0	-
RE230300_005	Residential	595605	4845645	1.5	11	23	33	0	-
RE230400_001	Residential	593872	4847645	1.5	9	23	31	0	-
RE230400_002	Residential	593822	4847679	1.5	10	23	32	0	-
RE230400_006	Residential	594520	4846864	1.5	9	23	31	0	-
RE230400_007	Residential	594996	4846385	1.5	11	23	33	0	-
RE230400_008	Residential	594973	4846410	1.5	11	23	33	0	-
RE230400_009	Residential	594936	4846427	1.5	10	23	32	0	-
RE230400_010	Residential	595705	4845694	1.5	15	23	38	0	-
RE230400_011	Residential	595874	4845530	1.5	18	23	40	0	-
RE230500_001	Residential	594280	4847364	1.5	10	23	32	0	-
RE230500_002	Residential	594446	4847099	1.5	9	23	32	0	-
RE230500_003	Residential	594531	4847041	1.5	8	23	31	0	-
RE230500_004	Residential	594643	4846861	1.5	10	23	33	0	-
RE230500_005	Residential	594671	4846840	1.5	10	23	32	0	-
RE230500_006	Residential	595049	4846474	1.5	10	23	32	0	-
RE230500_007	Residential	595486	4846036	1.5	11	23	34	0	-
RE230500_008	Residential	595463	4846068	1.5	11	23	33	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230500_009	Residential	595438	4846095	1.5	10	23	33	0	-
RE230500_010	Residential	595925	4845612	1.5	15	23	37	0	-
RE230500_011	Residential	595941	4845561	1.5	18	23	41	0	-
RE230500_012	Residential	596152	4845388	1.5	25	23	48	0	-
RE230500_013	Residential	596418	4845009	1.5	32	23	54	1	0.1%
RE230500_014	Residential	596697	4844834	1.5	16	23	38	0	-
RE230600_001	Residential	594927	4846729	1.5	6	23	29	0	-
RE230600_002	Residential	595293	4846327	1.5	7	23	30	0	-
RE230600_003	Residential	596445	4845172	1.5	39	23	62	5	0.3%
RE230600_004	Residential	596565	4845058	1.5	19	23	42	0	-
RE230600_005	Residential	596657	4844932	1.5	14	23	37	0	-
RE230600_006	Residential	596705	4844908	1.5	13	23	36	0	-
RE230900_001	Residential	597840	4844261	1.5	19	23	41	0	-
RE230900_002	Residential	597853	4844274	1.5	17	23	40	0	-
RE230900_003	Residential	597866	4844285	1.5	16	23	39	0	-
RE230900_004	Residential	597879	4844301	1.5	15	23	38	0	-
RE230900_005	Residential	597887	4844307	1.5	15	23	38	0	-
RE230900_006	Residential	597900	4844320	1.5	15	23	37	0	-
RE230900_007	Residential	597908	4844331	1.5	14	23	37	0	-
RE230900_008	Residential	597922	4844342	1.5	14	23	36	0	-
RE230900_009	Residential	597931	4844352	1.5	13	23	36	0	-
RE230900_010	Residential	597943	4844365	1.5	13	23	36	0	-
RE230900_011	Residential	597954	4844376	1.5	13	23	35	0	-
RE230900_012	Residential	597816	4844283	1.5	20	23	42	0	-
RE230900_013	Residential	597825	4844289	1.5	19	23	41	0	-
RE230900_014	Residential	597835	4844299	1.5	18	23	40	0	-
RE230900_015	Residential	597842	4844308	1.5	17	23	40	0	-
RE230900_016	Residential	597849	4844314	1.5	16	23	39	0	-
RE230900_017	Residential	597859	4844324	1.5	16	23	38	0	-
RE230900_018	Residential	597867	4844331	1.5	15	23	38	0	-
RE230900_019	Residential	597875	4844341	1.5	15	23	38	0	-
RE230900_020	Residential	597884	4844348	1.5	15	23	37	0	-
RE230900_021	Residential	597892	4844356	1.5	14	23	37	0	-
RE230900_022	Residential	597899	4844365	1.5	14	23	37	0	-
RE230900_023	Residential	597905	4844373	1.5	14	23	36	0	-
RE230900_024	Residential	597917	4844381	1.5	13	23	36	0	-
RE230900_025	Residential	597924	4844389	1.5	13	23	36	0	-
RE230900_026	Residential	597931	4844399	1.5	13	23	36	0	-
RE230900_027	Residential	597646	4844600	1.5	22	23	45	0	-
RE230900_028	Residential	597653	4844613	1.5	22	23	44	0	-
RE230900_029	Residential	597660	4844623	1.5	21	23	44	0	-
RE230900_030	Residential	597665	4844629	1.5	21	23	43	0	-
RE230900_031	Residential	597835	4844353	1.5	16	23	39	0	-
RE230900_032	Residential	597831	4844358	1.5	16	23	39	0	-
RE230900_033	Residential	597825	4844365	1.5	17	23	39	0	-
RE230900_034	Residential	597820	4844371	1.5	17	23	39	0	-
RE230900_035	Residential	597814	4844379	1.5	17	23	39	0	-
RE230900_036	Residential	597811	4844383	1.5	17	23	39	0	-
RE230900_037	Residential	597806	4844390	1.5	17	23	39	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_038	Residential	597801	4844396	1.5	17	23	39	0	-
RE230900_039	Residential	597796	4844403	1.5	17	23	40	0	-
RE230900_040	Residential	597792	4844410	1.5	17	23	40	0	-
RE230900_041	Residential	597786	4844416	1.5	17	23	40	0	-
RE230900_042	Residential	597783	4844423	1.5	17	23	40	0	-
RE230900_043	Residential	597781	4844430	1.5	17	23	40	0	-
RE230900_044	Residential	597777	4844436	1.5	17	23	40	0	-
RE230900_045	Residential	597773	4844443	1.5	17	23	40	0	-
RE230900_046	Residential	597770	4844450	1.5	17	23	40	0	-
RE230900_047	Residential	597766	4844457	1.5	17	23	40	0	-
RE230900_048	Residential	597762	4844463	1.5	18	23	40	0	-
RE230900_049	Residential	597758	4844470	1.5	18	23	40	0	-
RE230900_050	Residential	597754	4844477	1.5	18	23	40	0	-
RE230900_051	Residential	597751	4844484	1.5	18	23	40	0	-
RE230900_052	Residential	597747	4844490	1.5	18	23	40	0	-
RE230900_053	Residential	597744	4844497	1.5	18	23	40	0	-
RE230900_054	Residential	597739	4844504	1.5	18	23	41	0	-
RE230900_055	Residential	597725	4844530	1.5	18	23	41	0	-
RE230900_056	Residential	597721	4844535	1.5	18	23	41	0	-
RE230900_057	Residential	597717	4844543	1.5	18	23	41	0	-
RE230900_058	Residential	597713	4844549	1.5	19	23	41	0	-
RE230900_059	Residential	597710	4844557	1.5	19	23	41	0	-
RE230900_060	Residential	597705	4844564	1.5	19	23	41	0	-
RE230900_061	Residential	597701	4844572	1.5	19	23	42	0	-
RE230900_062	Residential	597697	4844579	1.5	19	23	42	0	-
RE230900_063	Residential	597692	4844586	1.5	19	23	42	0	-
RE230900_064	Residential	597688	4844592	1.5	19	23	42	0	-
RE230900_065	Residential	597684	4844600	1.5	20	23	42	0	-
RE230900_066	Residential	597681	4844607	1.5	20	23	43	0	-
RE230900_067	Residential	597651	4844608	1.5	22	23	44	0	-
RE230900_068	Residential	597659	4844619	1.5	21	23	44	0	-
RE230900_069	Residential	597659	4844582	1.5	21	23	44	0	-
RE230900_070	Residential	597661	4844578	1.5	21	23	44	0	-
RE230900_071	Residential	597664	4844572	1.5	21	23	44	0	-
RE230900_072	Residential	597668	4844567	1.5	21	23	44	0	-
RE230900_073	Residential	597671	4844560	1.5	21	23	44	0	-
RE230900_074	Residential	597674	4844556	1.5	21	23	43	0	-
RE230900_075	Residential	597678	4844550	1.5	21	23	43	0	-
RE230900_076	Residential	597681	4844543	1.5	21	23	43	0	-
RE230900_077	Residential	597684	4844537	1.5	20	23	43	0	-
RE230900_078	Residential	597688	4844532	1.5	20	23	43	0	-
RE230900_079	Residential	597691	4844527	1.5	20	23	43	0	-
RE230900_080	Residential	597695	4844521	1.5	20	23	43	0	-
RE230900_081	Residential	597697	4844516	1.5	20	23	43	0	-
RE230900_082	Residential	597714	4844486	1.5	20	23	42	0	-
RE230900_083	Residential	597717	4844481	1.5	19	23	42	0	-
RE230900_084	Residential	597720	4844476	1.5	19	23	42	0	-
RE230900_085	Residential	597723	4844470	1.5	19	23	42	0	-
RE230900_086	Residential	597726	4844464	1.5	19	23	42	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE230900_087	Residential	597729	4844460	1.5	19	23	42	0	-
RE230900_088	Residential	597732	4844455	1.5	19	23	42	0	-
RE230900_089	Residential	597736	4844448	1.5	19	23	42	0	-
RE230900_090	Residential	597740	4844440	1.5	19	23	42	0	-
RE230900_091	Residential	597743	4844435	1.5	19	23	42	0	-
RE230900_092	Residential	597747	4844429	1.5	19	23	42	0	-
RE230900_093	Residential	597749	4844423	1.5	19	23	42	0	-
RE230900_094	Residential	597752	4844418	1.5	19	23	41	0	-
RE230900_095	Residential	597755	4844413	1.5	19	23	41	0	-
RE230900_096	Residential	597758	4844409	1.5	19	23	41	0	-
RE230900_097	Residential	597762	4844402	1.5	19	23	41	0	-
RE230900_098	Residential	597765	4844392	1.5	19	23	41	0	-
RE230900_099	Residential	597769	4844386	1.5	19	23	41	0	-
RE230900_100	Residential	597773	4844382	1.5	19	23	41	0	-
RE230900_101	Residential	597776	4844377	1.5	19	23	41	0	-
RE230900_102	Residential	597784	4844369	1.5	18	23	41	0	-
RE230900_103	Residential	597787	4844364	1.5	18	23	41	0	-
RE230900_104	Residential	597791	4844360	1.5	18	23	41	0	-
RE230900_105	Residential	597794	4844354	1.5	18	23	41	0	-
RE230900_106	Residential	597798	4844349	1.5	18	23	41	0	-
RE230900_107	Residential	597802	4844343	1.5	18	23	41	0	-
RE230900_108	Residential	597805	4844339	1.5	18	23	41	0	-
RE230900_109	Residential	597808	4844334	1.5	18	23	41	0	-
RE230900_110	Residential	597861	4844387	1.5	15	23	37	0	-
RE230900_111	Residential	597868	4844394	1.5	15	23	37	0	-
RE230900_112	Residential	597877	4844404	1.5	14	23	37	0	-
RE230900_113	Residential	597886	4844412	1.5	14	23	37	0	-
RE230900_114	Residential	597892	4844420	1.5	14	23	36	0	-
RE230900_115	Residential	597874	4844444	1.5	14	23	37	0	-
RE230900_116	Residential	597870	4844440	1.5	14	23	37	0	-
RE230900_117	Residential	597863	4844432	1.5	14	23	37	0	-
RE230900_118	Residential	597859	4844428	1.5	15	23	37	0	-
RE230900_119	Residential	597849	4844405	1.5	15	23	38	0	-
RE230900_120	Residential	597845	4844411	1.5	15	23	38	0	-
RE230900_121	Residential	597840	4844418	1.5	15	23	38	0	-
RE230900_122	Residential	597836	4844424	1.5	15	23	38	0	-
RE230900_123	Residential	597819	4844451	1.5	15	23	38	0	-
RE230900_124	Residential	597815	4844458	1.5	16	23	38	0	-
RE230900_125	Residential	597834	4844465	1.5	15	23	38	0	-
RE230900_126	Residential	597846	4844477	1.5	15	23	37	0	-
RE230900_127	Residential	597812	4844466	1.5	16	23	38	0	-
RE230900_128	Residential	597808	4844471	1.5	16	23	38	0	-
RE230900_129	Residential	597804	4844480	1.5	16	23	38	0	-
RE230900_130	Residential	597801	4844485	1.5	16	23	38	0	-
RE230900_131	Residential	597796	4844493	1.5	16	23	38	0	-
RE230900_132	Residential	597793	4844499	1.5	16	23	39	0	-
RE230900_133	Residential	597788	4844505	1.5	16	23	39	0	-
RE230900_134	Residential	597785	4844512	1.5	16	23	39	0	-
RE230900_135	Residential	597781	4844519	1.5	16	23	39	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_136	Residential	597777	4844525	1.5	16	23	39	0	-
RE230900_137	Residential	597772	4844533	1.5	16	23	39	0	-
RE230900_138	Residential	597769	4844540	1.5	16	23	39	0	-
RE230900_139	Residential	597765	4844546	1.5	17	23	39	0	-
RE230900_140	Residential	597762	4844553	1.5	17	23	39	0	-
RE230900_141	Residential	597758	4844559	1.5	17	23	39	0	-
RE230900_142	Residential	597755	4844565	1.5	17	23	39	0	-
RE230900_143	Residential	597751	4844573	1.5	17	23	40	0	-
RE230900_144	Residential	597747	4844579	1.5	17	23	40	0	-
RE230900_145	Residential	597822	4844504	1.5	15	23	38	0	-
RE230900_146	Residential	597827	4844497	1.5	15	23	38	0	-
RE230900_147	Residential	597831	4844490	1.5	15	23	38	0	-
RE230900_148	Residential	597839	4844470	1.5	15	23	37	0	-
RE230900_149	Residential	598114	4844042	1.5	13	23	35	0	-
RE230900_150	Residential	598102	4844034	1.5	13	23	36	0	-
RE230900_151	Residential	598094	4844026	1.5	14	23	36	0	-
RE230900_152	Residential	598074	4844024	1.5	14	23	37	0	-
RE230900_153	Residential	598063	4844034	1.5	14	23	37	0	-
RE230900_154	Residential	598053	4844045	1.5	15	23	37	0	-
RE230900_155	Residential	598043	4844055	1.5	15	23	37	0	-
RE230900_156	Residential	598034	4844069	1.5	15	23	37	0	-
RE230900_157	Residential	598028	4844085	1.5	14	23	37	0	-
RE230900_158	Residential	598036	4844098	1.5	14	23	36	0	-
RE230900_159	Residential	598045	4844106	1.5	13	23	36	0	-
RE230900_160	Residential	598054	4844116	1.5	13	23	35	0	-
RE230900_161	Residential	598102	4844074	1.5	12	23	35	0	-
RE230900_162	Residential	598085	4844058	1.5	13	23	36	0	-
RE230900_163	Residential	598068	4844077	1.5	13	23	36	0	-
RE230900_164	Residential	598080	4844091	1.5	13	23	35	0	-
RE230900_165	Residential	598123	4844051	1.5	12	23	35	0	-
RE230900_166	Residential	598199	4843983	1.5	12	23	34	0	-
RE230900_167	Residential	598192	4843977	1.5	12	23	34	0	-
RE230900_168	Residential	598185	4843968	1.5	12	23	35	0	-
RE230900_169	Residential	598179	4843962	1.5	12	23	35	0	-
RE230900_170	Residential	598170	4843953	1.5	13	23	35	0	-
RE230900_171	Residential	598161	4843941	1.5	14	23	36	0	-
RE230900_172	Residential	598158	4843928	1.5	14	23	37	0	-
RE230900_173	Residential	598165	4843918	1.5	14	23	37	0	-
RE230900_174	Residential	598171	4843911	1.5	14	23	37	0	-
RE230900_175	Residential	598179	4843903	1.5	14	23	37	0	-
RE230900_176	Residential	598185	4843897	1.5	14	23	37	0	-
RE230900_177	Residential	598191	4843889	1.5	14	23	37	0	-
RE230900_178	Residential	598197	4843884	1.5	14	23	37	0	-
RE230900_179	Residential	598202	4843879	1.5	14	23	36	0	-
RE230900_180	Residential	598209	4843872	1.5	14	23	37	0	-
RE230900_181	Residential	598215	4843866	1.5	14	23	36	0	-
RE230900_182	Residential	598222	4843858	1.5	14	23	36	0	-
RE230900_192	Residential	598217	4843965	1.5	11	23	34	0	-
RE230900_193	Residential	598205	4843953	1.5	12	23	35	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_194	Residential	598192	4843939	1.5	13	23	35	0	-
RE230900_198	Residential	597969	4844339	1.5	13	23	35	0	-
RE230900_199	Residential	597959	4844330	1.5	13	23	36	0	-
RE230900_200	Residential	597950	4844320	1.5	13	23	36	0	-
RE230900_201	Residential	597940	4844310	1.5	13	23	36	0	-
RE230900_202	Residential	597931	4844302	1.5	14	23	36	0	-
RE230900_203	Residential	597923	4844293	1.5	14	23	37	0	-
RE230900_204	Residential	597913	4844282	1.5	14	23	37	0	-
RE230900_205	Residential	597979	4844349	1.5	12	23	35	0	-
RE230900_206	Residential	597848	4844272	1.5	18	23	40	0	-
RE230900_207	Residential	597840	4844263	1.5	19	23	41	0	-
RE230900_208	Residential	597864	4844244	1.5	18	23	40	0	-
RE230900_209	Residential	597869	4844237	1.5	18	23	40	0	-
RE230900_210	Residential	597874	4844230	1.5	18	23	40	0	-
RE230900_211	Residential	597878	4844225	1.5	18	23	40	0	-
RE230900_212	Residential	597888	4844211	1.5	17	23	40	0	-
RE230900_213	Residential	597893	4844204	1.5	17	23	40	0	-
RE230900_214	Residential	597899	4844195	1.5	17	23	40	0	-
RE230900_215	Residential	597904	4844188	1.5	17	23	40	0	-
RE230900_216	Residential	597884	4844219	1.5	17	23	40	0	-
RE230900_217	Residential	597946	4844123	1.5	17	23	40	0	-
RE230900_218	Residential	597910	4844177	1.5	17	23	40	0	-
RE230900_219	Residential	597915	4844171	1.5	17	23	40	0	-
RE230900_220	Residential	597921	4844162	1.5	17	23	40	0	-
RE230900_221	Residential	597926	4844153	1.5	17	23	40	0	-
RE230900_222	Residential	597936	4844139	1.5	17	23	40	0	-
RE230900_223	Residential	597954	4844115	1.5	17	23	40	0	-
RE230900_224	Residential	597959	4844106	1.5	17	23	40	0	-
RE230900_225	Residential	597967	4844098	1.5	17	23	40	0	-
RE230900_226	Residential	597972	4844091	1.5	17	23	40	0	-
RE230900_227	Residential	597977	4844083	1.5	17	23	40	0	-
RE230900_228	Residential	597982	4844076	1.5	17	23	40	0	-
RE230900_229	Residential	597986	4844069	1.5	17	23	40	0	-
RE230900_230	Residential	597991	4844063	1.5	17	23	40	0	-
RE230900_231	Residential	597994	4844057	1.5	17	23	40	0	-
RE230900_232	Residential	598000	4844050	1.5	17	23	40	0	-
RE230900_233	Residential	598005	4844046	1.5	17	23	40	0	-
RE230900_234	Residential	598013	4844034	1.5	17	23	40	0	-
RE230900_235	Residential	598019	4844027	1.5	17	23	40	0	-
RE230900_236	Residential	598024	4844022	1.5	17	23	40	0	-
RE230900_237	Residential	598029	4844018	1.5	17	23	40	0	-
RE230900_238	Residential	598032	4844011	1.5	17	23	40	0	-
RE230900_239	Residential	598037	4844006	1.5	17	23	40	0	-
RE230900_240	Residential	598044	4843998	1.5	17	23	40	0	-
RE230900_241	Residential	597941	4844132	1.5	17	23	40	0	-
RE230900_242	Residential	598051	4843992	1.5	17	23	40	0	-
RE230900_243	Residential	598058	4843984	1.5	17	23	40	0	-
RE230900_244	Residential	598066	4843978	1.5	17	23	39	0	-
RE230900_245	Residential	598072	4843971	1.5	17	23	39	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_246	Residential	598078	4843964	1.5	17	23	39	0	-
RE230900_247	Residential	598084	4843957	1.5	17	23	39	0	-
RE230900_257	Residential	598130	4844202	1.5	11	23	33	0	-
RE230900_258	Residential	598131	4844192	1.5	11	23	33	0	-
RE230900_259	Residential	598135	4844179	1.5	11	23	33	0	-
RE230900_260	Residential	598147	4844156	1.5	11	23	33	0	-
RE230900_261	Residential	598154	4844148	1.5	11	23	33	0	-
RE230900_262	Residential	598161	4844140	1.5	11	23	33	0	-
RE230900_263	Residential	598095	4844225	1.5	11	23	34	0	-
RE230900_264	Residential	598095	4844213	1.5	11	23	34	0	-
RE230900_265	Residential	598095	4844198	1.5	11	23	34	0	-
RE230900_266	Residential	598094	4844188	1.5	11	23	34	0	-
RE230900_272	Residential	598293	4843978	1.5	10	23	33	0	-
RE230900_273	Residential	598282	4843987	1.5	10	23	33	0	-
RE230900_274	Residential	598272	4843996	1.5	10	23	33	0	-
RE230900_275	Residential	598261	4844006	1.5	10	23	33	0	-
RE230900_276	Residential	598251	4844016	1.5	10	23	33	0	-
RE230900_277	Residential	598243	4844025	1.5	10	23	33	0	-
RE230900_278	Residential	598237	4844030	1.5	10	23	33	0	-
RE230900_279	Residential	598231	4844036	1.5	10	23	33	0	-
RE230900_280	Residential	598225	4844041	1.5	10	23	33	0	-
RE230900_281	Residential	598220	4844046	1.5	10	23	33	0	-
RE230900_282	Residential	598213	4844053	1.5	11	23	33	0	-
RE230900_283	Residential	598133	4844117	1.5	11	23	34	0	-
RE230900_285	Residential	598098	4844164	1.5	11	23	34	0	-
RE230900_286	Residential	598103	4844154	1.5	11	23	34	0	-
RE230900_287	Residential	598107	4844144	1.5	11	23	34	0	-
RE230900_288	Residential	598172	4844129	1.5	10	23	33	0	-
RE230900_289	Residential	598183	4844119	1.5	10	23	33	0	-
RE230900_290	Residential	598190	4844111	1.5	10	23	33	0	-
RE230900_291	Residential	598198	4844103	1.5	10	23	33	0	-
RE230900_292	Residential	598205	4844095	1.5	10	23	33	0	-
RE230900_293	Residential	598212	4844088	1.5	10	23	33	0	-
RE230900_294	Residential	598185	4844065	1.5	11	23	33	0	-
RE230900_295	Residential	598176	4844074	1.5	11	23	33	0	-
RE230900_296	Residential	598166	4844083	1.5	11	23	34	0	-
RE230900_297	Residential	598158	4844092	1.5	11	23	34	0	-
RE230900_298	Residential	598148	4844101	1.5	11	23	34	0	-
RE230900_299	Residential	598139	4844111	1.5	11	23	34	0	-
RE230900_300	Residential	598118	4844130	1.5	11	23	34	0	-
RE230900_301	Residential	598112	4844137	1.5	11	23	34	0	-
RE230900_302	Residential	598231	4844068	1.5	10	23	33	0	-
RE230900_303	Residential	598240	4844057	1.5	10	23	33	0	-
RE230900_304	Residential	598258	4844039	1.5	10	23	33	0	-
RE230900_305	Residential	598267	4844030	1.5	10	23	33	0	-
RE230900_306	Residential	598275	4844021	1.5	10	23	33	0	-
RE230900_307	Residential	598296	4844003	1.5	10	23	32	0	-
RE230900_310	Residential	598286	4844012	1.5	10	23	33	0	-
RE230900_312	Residential	598068	4844260	1.5	11	23	34	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE230900_313	Residential	598248	4844048	1.5	10	23	33	0	-
RE230900_315	Residential	598095	4844177	1.5	11	23	34	0	-
RE230900_317	Residential	598062	4844211	1.5	12	23	34	0	-
RE230900_318	Residential	598168	4844040	1.5	11	23	34	0	-
RE230900_319	Residential	598156	4844051	1.5	11	23	34	0	-
RE230900_320	Residential	598148	4844062	1.5	11	23	34	0	-
RE230900_321	Residential	598135	4844072	1.5	12	23	34	0	-
RE230900_322	Residential	598126	4844084	1.5	12	23	34	0	-
RE230900_323	Residential	598113	4844094	1.5	12	23	34	0	-
RE230900_324	Residential	598105	4844105	1.5	12	23	34	0	-
RE230900_325	Residential	598096	4844112	1.5	12	23	35	0	-
RE230900_326	Residential	598087	4844118	1.5	12	23	35	0	-
RE230900_327	Residential	598077	4844131	1.5	12	23	35	0	-
RE230900_328	Residential	598067	4844143	1.5	12	23	35	0	-
RE230900_329	Residential	598061	4844157	1.5	12	23	35	0	-
RE230900_330	Residential	598061	4844172	1.5	12	23	35	0	-
RE230900_331	Residential	598061	4844185	1.5	12	23	34	0	-
RE230900_332	Residential	598062	4844198	1.5	12	23	34	0	-
RE230900_333	Residential	598063	4844224	1.5	12	23	34	0	-
RE230900_334	Residential	598128	4844123	1.5	11	23	34	0	-
RE230900_335	Residential	598138	4844168	1.5	11	23	33	0	-
RE230900_337	Residential	598275	4843935	1.5	11	23	33	0	-
RE230900_338	Residential	598267	4843942	1.5	11	23	33	0	-
RE230900_339	Residential	598256	4843950	1.5	11	23	34	0	-
RE230900_340	Residential	598247	4843960	1.5	11	23	34	0	-
RE230900_341	Residential	598239	4843966	1.5	11	23	34	0	-
RE230900_342	Residential	598233	4843974	1.5	11	23	34	0	-
RE230900_343	Residential	598226	4843980	1.5	11	23	34	0	-
RE230900_344	Residential	598218	4843987	1.5	11	23	34	0	-
RE230900_345	Residential	598211	4843994	1.5	11	23	34	0	-
RE230900_346	Residential	598205	4844002	1.5	11	23	34	0	-
RE230900_347	Residential	598199	4844007	1.5	11	23	34	0	-
RE230900_348	Residential	598190	4844015	1.5	11	23	34	0	-
RE230900_349	Residential	598181	4844024	1.5	11	23	34	0	-
RE230900_350	Residential	597947	4844283	1.5	14	23	36	0	-
RE230900_351	Residential	597937	4844272	1.5	14	23	37	0	-
RE230900_352	Residential	597929	4844264	1.5	14	23	37	0	-
RE230900_353	Residential	597958	4844245	1.5	14	23	36	0	-
RE230900_354	Residential	597947	4844234	1.5	14	23	37	0	-
RE230900_355	Residential	597920	4844224	1.5	15	23	38	0	-
RE230900_356	Residential	597911	4844235	1.5	15	23	38	0	-
RE230900_357	Residential	597935	4844225	1.5	15	23	37	0	-
RE230900_358	Residential	597903	4844242	1.5	16	23	38	0	-
RE230900_359	Residential	597894	4844252	1.5	16	23	38	0	-
RE230900_360	Residential	597885	4844262	1.5	16	23	39	0	-
RE230900_361	Residential	597993	4844327	1.5	12	23	35	0	-
RE230900_362	Residential	597985	4844320	1.5	13	23	35	0	-
RE230900_363	Residential	597976	4844312	1.5	13	23	35	0	-
RE230900_364	Residential	597966	4844301	1.5	13	23	36	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE230900_365	Residential	597956	4844290	1.5	13	23	36	0	-
RE230900_366	Residential	597988	4844228	1.5	13	23	36	0	-
RE230900_367	Residential	597980	4844220	1.5	13	23	36	0	-
RE230900_368	Residential	597970	4844211	1.5	14	23	36	0	-
RE230900_369	Residential	597960	4844201	1.5	14	23	37	0	-
RE230900_370	Residential	597949	4844191	1.5	15	23	37	0	-
RE230900_371	Residential	597936	4844178	1.5	16	23	38	0	-
RE230900_372	Residential	598039	4844140	1.5	13	23	35	0	-
RE230900_373	Residential	598027	4844132	1.5	13	23	36	0	-
RE230900_374	Residential	598012	4844121	1.5	14	23	37	0	-
RE230900_375	Residential	597996	4844119	1.5	15	23	37	0	-
RE230900_376	Residential	597981	4844132	1.5	15	23	38	0	-
RE230900_377	Residential	597973	4844146	1.5	15	23	38	0	-
RE230900_378	Residential	598034	4844176	1.5	13	23	35	0	-
RE230900_379	Residential	598015	4844169	1.5	13	23	36	0	-
RE230900_380	Residential	598000	4844158	1.5	14	23	36	0	-
RE230900_381	Residential	597986	4844180	1.5	14	23	36	0	-
RE230900_382	Residential	597997	4844189	1.5	13	23	36	0	-
RE230900_383	Residential	598009	4844195	1.5	13	23	36	0	-
RE230900_384	Residential	598020	4844205	1.5	13	23	35	0	-
RE230900_385	Residential	598034	4844205	1.5	12	23	35	0	-
RE230900_386	Residential	598213	4843919	1.5	12	23	35	0	-
RE230900_387	Residential	598223	4843930	1.5	12	23	35	0	-
RE230900_388	Residential	598235	4843942	1.5	11	23	34	0	-
RE230900_389	Residential	598262	4843914	1.5	11	23	34	0	-
RE230900_390	Residential	598251	4843903	1.5	12	23	34	0	-
RE230900_391	Residential	598238	4843889	1.5	12	23	35	0	-
RE230900_394	Residential	597965	4844159	1.5	15	23	38	0	-
RE230900_395	Residential	598116	4843943	1.5	15	23	38	0	-
RE230900_396	Residential	598126	4843952	1.5	15	23	37	0	-
RE230900_397	Residential	598136	4843962	1.5	14	23	36	0	-
RE230900_398	Residential	598147	4843973	1.5	13	23	36	0	-
RE230900_399	Residential	598158	4843985	1.5	12	23	35	0	-
RE230900_400	Residential	598170	4843998	1.5	12	23	35	0	-
RE230900_401	Residential	598145	4844026	1.5	12	23	35	0	-
RE230900_402	Residential	598132	4844013	1.5	13	23	35	0	-
RE230900_403	Residential	598121	4844002	1.5	13	23	36	0	-
RE230900_404	Residential	598113	4843994	1.5	14	23	36	0	-
RE230900_405	Residential	598106	4843985	1.5	14	23	37	0	-
RE230900_406	Residential	598095	4843974	1.5	15	23	38	0	-
RE231000_001	Recreation	597895	4844715	1.5	13	23	36	0	-
RE231000_002	Residential	594593	4847779	1.5	10	23	32	0	-
RE231000_003	Residential	597966	4844386	1.5	12	23	35	0	-
RE231000_004	Residential	597973	4844395	1.5	12	23	35	0	-
RE231000_005	Residential	597984	4844407	1.5	12	23	35	0	-
RE231000_006	Residential	597998	4844418	1.5	12	23	34	0	-
RE231000_007	Residential	598005	4844428	1.5	12	23	34	0	-
RE231000_008	Residential	598021	4844443	1.5	11	23	34	0	-
RE231000_009	Residential	598033	4844455	1.5	11	23	34	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_010	Residential	598043	4844466	1.5	11	23	34	0	-
RE231000_011	Residential	597940	4844407	1.5	13	23	35	0	-
RE231000_012	Residential	597949	4844414	1.5	13	23	35	0	-
RE231000_013	Residential	597956	4844424	1.5	13	23	35	0	-
RE231000_014	Residential	597965	4844432	1.5	12	23	35	0	-
RE231000_015	Residential	597973	4844440	1.5	12	23	35	0	-
RE231000_016	Residential	597982	4844449	1.5	12	23	34	0	-
RE231000_017	Residential	597989	4844456	1.5	12	23	34	0	-
RE231000_018	Residential	597997	4844465	1.5	12	23	34	0	-
RE231000_019	Residential	598006	4844473	1.5	12	23	34	0	-
RE231000_020	Residential	598015	4844481	1.5	11	23	34	0	-
RE231000_021	Residential	598022	4844489	1.5	11	23	34	0	-
RE231000_022	Residential	598030	4844498	1.5	11	23	34	0	-
RE231000_023	Residential	598039	4844506	1.5	11	23	34	0	-
RE231000_024	Residential	598046	4844513	1.5	11	23	34	0	-
RE231000_025	Residential	598053	4844523	1.5	11	23	33	0	-
RE231000_026	Residential	598064	4844530	1.5	11	23	33	0	-
RE231000_027	Residential	597902	4844429	1.5	13	23	36	0	-
RE231000_028	Residential	597911	4844437	1.5	13	23	36	0	-
RE231000_029	Residential	597918	4844446	1.5	13	23	36	0	-
RE231000_030	Residential	597928	4844453	1.5	13	23	35	0	-
RE231000_031	Residential	597934	4844463	1.5	13	23	35	0	-
RE231000_032	Residential	597943	4844469	1.5	13	23	35	0	-
RE231000_033	Residential	597953	4844479	1.5	12	23	35	0	-
RE231000_034	Residential	597961	4844486	1.5	12	23	35	0	-
RE231000_035	Residential	597969	4844494	1.5	12	23	35	0	-
RE231000_036	Residential	597976	4844504	1.5	12	23	34	0	-
RE231000_037	Residential	597984	4844514	1.5	12	23	34	0	-
RE231000_038	Residential	597992	4844520	1.5	12	23	34	0	-
RE231000_039	Residential	598001	4844529	1.5	12	23	34	0	-
RE231000_040	Residential	598009	4844537	1.5	11	23	34	0	-
RE231000_041	Residential	598016	4844545	1.5	11	23	34	0	-
RE231000_042	Residential	598025	4844554	1.5	11	23	34	0	-
RE231000_043	Residential	598033	4844562	1.5	11	23	34	0	-
RE231000_044	Residential	598013	4844582	1.5	11	23	34	0	-
RE231000_045	Residential	598003	4844574	1.5	11	23	34	0	-
RE231000_046	Residential	597995	4844566	1.5	12	23	34	0	-
RE231000_047	Residential	597987	4844557	1.5	12	23	34	0	-
RE231000_048	Residential	597979	4844550	1.5	12	23	34	0	-
RE231000_049	Residential	597972	4844542	1.5	12	23	35	0	-
RE231000_050	Residential	597967	4844538	1.5	12	23	35	0	-
RE231000_051	Residential	597961	4844530	1.5	12	23	35	0	-
RE231000_052	Residential	597957	4844525	1.5	12	23	35	0	-
RE231000_053	Residential	597950	4844520	1.5	12	23	35	0	-
RE231000_054	Residential	597945	4844515	1.5	12	23	35	0	-
RE231000_055	Residential	597940	4844509	1.5	12	23	35	0	-
RE231000_056	Residential	597934	4844504	1.5	13	23	35	0	-
RE231000_057	Residential	597929	4844499	1.5	13	23	35	0	-
RE231000_058	Residential	597923	4844493	1.5	13	23	35	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_059	Residential	597918	4844487	1.5	13	23	36	0	-
RE231000_060	Residential	597914	4844483	1.5	13	23	36	0	-
RE231000_061	Residential	597908	4844476	1.5	13	23	36	0	-
RE231000_062	Residential	597904	4844471	1.5	13	23	36	0	-
RE231000_063	Residential	597897	4844465	1.5	13	23	36	0	-
RE231000_064	Residential	597892	4844460	1.5	14	23	36	0	-
RE231000_065	Residential	597886	4844454	1.5	14	23	36	0	-
RE231000_066	Residential	597881	4844449	1.5	14	23	37	0	-
RE231000_067	Residential	597742	4844586	1.5	17	23	40	0	-
RE231000_068	Residential	597739	4844592	1.5	17	23	40	0	-
RE231000_069	Residential	597735	4844599	1.5	17	23	40	0	-
RE231000_070	Residential	597732	4844605	1.5	18	23	40	0	-
RE231000_071	Residential	597727	4844613	1.5	18	23	40	0	-
RE231000_072	Residential	597724	4844619	1.5	18	23	40	0	-
RE231000_073	Residential	597720	4844626	1.5	18	23	41	0	-
RE231000_074	Residential	597718	4844632	1.5	18	23	41	0	-
RE231000_075	Residential	597712	4844640	1.5	19	23	41	0	-
RE231000_076	Residential	597707	4844646	1.5	19	23	41	0	-
RE231000_077	Residential	597684	4844653	1.5	20	23	43	0	-
RE231000_078	Residential	597688	4844659	1.5	20	23	42	0	-
RE231000_079	Residential	597692	4844664	1.5	20	23	42	0	-
RE231000_080	Residential	597695	4844670	1.5	20	23	42	0	-
RE231000_081	Residential	597701	4844677	1.5	19	23	42	0	-
RE231000_082	Residential	597705	4844683	1.5	19	23	42	0	-
RE231000_083	Residential	597708	4844687	1.5	19	23	42	0	-
RE231000_084	Residential	597711	4844692	1.5	19	23	42	0	-
RE231000_085	Residential	597729	4844665	1.5	18	23	41	0	-
RE231000_086	Residential	597725	4844670	1.5	18	23	41	0	-
RE231000_087	Residential	597738	4844650	1.5	17	23	40	0	-
RE231000_088	Residential	597734	4844657	1.5	18	23	40	0	-
RE231000_089	Residential	597742	4844645	1.5	17	23	40	0	-
RE231000_090	Residential	597746	4844639	1.5	17	23	40	0	-
RE231000_091	Residential	597750	4844631	1.5	17	23	40	0	-
RE231000_092	Residential	597753	4844624	1.5	17	23	39	0	-
RE231000_093	Residential	597757	4844618	1.5	17	23	39	0	-
RE231000_094	Residential	597761	4844610	1.5	17	23	39	0	-
RE231000_095	Residential	597764	4844603	1.5	16	23	39	0	-
RE231000_096	Residential	597768	4844596	1.5	16	23	39	0	-
RE231000_097	Residential	597773	4844591	1.5	16	23	39	0	-
RE231000_098	Residential	597777	4844584	1.5	16	23	39	0	-
RE231000_099	Residential	597780	4844577	1.5	16	23	39	0	-
RE231000_100	Residential	597784	4844570	1.5	16	23	39	0	-
RE231000_101	Residential	597789	4844564	1.5	16	23	38	0	-
RE231000_102	Residential	597793	4844557	1.5	16	23	38	0	-
RE231000_103	Residential	597796	4844550	1.5	16	23	38	0	-
RE231000_104	Residential	597800	4844544	1.5	15	23	38	0	-
RE231000_105	Residential	597804	4844537	1.5	15	23	38	0	-
RE231000_106	Residential	597807	4844531	1.5	15	23	38	0	-
RE231000_107	Residential	597811	4844525	1.5	15	23	38	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_108	Residential	597814	4844518	1.5	15	23	38	0	-
RE231000_109	Residential	597819	4844511	1.5	15	23	38	0	-
RE231000_110	Residential	597851	4844481	1.5	14	23	37	0	-
RE231000_111	Residential	597881	4844502	1.5	14	23	36	0	-
RE231000_112	Residential	597876	4844507	1.5	14	23	36	0	-
RE231000_113	Residential	597871	4844514	1.5	14	23	36	0	-
RE231000_114	Residential	597866	4844519	1.5	14	23	36	0	-
RE231000_115	Residential	597849	4844534	1.5	14	23	37	0	-
RE231000_116	Residential	597855	4844537	1.5	14	23	37	0	-
RE231000_117	Residential	597863	4844540	1.5	14	23	36	0	-
RE231000_118	Residential	597869	4844544	1.5	14	23	36	0	-
RE231000_119	Residential	597877	4844549	1.5	14	23	36	0	-
RE231000_120	Residential	597883	4844553	1.5	13	23	36	0	-
RE231000_121	Residential	597889	4844560	1.5	13	23	36	0	-
RE231000_122	Residential	597894	4844565	1.5	13	23	36	0	-
RE231000_123	Residential	597899	4844571	1.5	13	23	36	0	-
RE231000_124	Residential	597904	4844576	1.5	13	23	36	0	-
RE231000_125	Residential	597911	4844583	1.5	13	23	35	0	-
RE231000_126	Residential	597920	4844591	1.5	13	23	35	0	-
RE231000_127	Residential	597928	4844600	1.5	13	23	35	0	-
RE231000_128	Residential	597935	4844608	1.5	12	23	35	0	-
RE231000_129	Residential	597944	4844616	1.5	12	23	35	0	-
RE231000_130	Residential	597952	4844625	1.5	12	23	35	0	-
RE231000_131	Residential	597960	4844633	1.5	12	23	35	0	-
RE231000_132	Residential	597889	4844521	1.5	13	23	36	0	-
RE231000_133	Residential	597895	4844526	1.5	13	23	36	0	-
RE231000_134	Residential	597900	4844533	1.5	13	23	36	0	-
RE231000_135	Residential	597906	4844537	1.5	13	23	36	0	-
RE231000_136	Residential	597912	4844543	1.5	13	23	36	0	-
RE231000_137	Residential	597916	4844549	1.5	13	23	35	0	-
RE231000_138	Residential	597922	4844554	1.5	13	23	35	0	-
RE231000_139	Residential	597927	4844558	1.5	13	23	35	0	-
RE231000_140	Residential	597933	4844565	1.5	12	23	35	0	-
RE231000_141	Residential	597938	4844570	1.5	12	23	35	0	-
RE231000_142	Residential	597944	4844577	1.5	12	23	35	0	-
RE231000_143	Residential	597948	4844581	1.5	12	23	35	0	-
RE231000_144	Residential	597956	4844588	1.5	12	23	35	0	-
RE231000_145	Residential	597964	4844596	1.5	12	23	35	0	-
RE231000_146	Residential	597973	4844604	1.5	12	23	35	0	-
RE231000_147	Residential	597981	4844613	1.5	12	23	34	0	-
RE231000_148	Residential	597825	4844568	1.5	15	23	37	0	-
RE231000_149	Residential	597833	4844573	1.5	14	23	37	0	-
RE231000_150	Residential	597840	4844577	1.5	14	23	37	0	-
RE231000_151	Residential	597846	4844581	1.5	14	23	37	0	-
RE231000_152	Residential	597854	4844587	1.5	14	23	37	0	-
RE231000_153	Residential	597859	4844593	1.5	14	23	36	0	-
RE231000_154	Residential	597865	4844598	1.5	14	23	36	0	-
RE231000_155	Residential	597871	4844603	1.5	14	23	36	0	-
RE231000_156	Residential	597850	4844609	1.5	14	23	37	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_157	Residential	597844	4844615	1.5	14	23	37	0	-
RE231000_158	Residential	597822	4844588	1.5	15	23	37	0	-
RE231000_159	Residential	597819	4844595	1.5	15	23	37	0	-
RE231000_160	Residential	597816	4844602	1.5	15	23	37	0	-
RE231000_161	Residential	597813	4844608	1.5	15	23	38	0	-
RE231000_162	Residential	597807	4844615	1.5	15	23	38	0	-
RE231000_163	Residential	597805	4844621	1.5	15	23	38	0	-
RE231000_164	Residential	597800	4844629	1.5	15	23	38	0	-
RE231000_165	Residential	597796	4844636	1.5	15	23	38	0	-
RE231000_166	Residential	597791	4844643	1.5	16	23	38	0	-
RE231000_167	Residential	597787	4844650	1.5	16	23	38	0	-
RE231000_168	Residential	597783	4844657	1.5	16	23	39	0	-
RE231000_169	Residential	597780	4844665	1.5	16	23	39	0	-
RE231000_170	Residential	597775	4844673	1.5	16	23	39	0	-
RE231000_171	Residential	597772	4844679	1.5	16	23	39	0	-
RE231000_172	Residential	597767	4844686	1.5	17	23	39	0	-
RE231000_173	Residential	597764	4844694	1.5	17	23	39	0	-
RE231000_174	Residential	597757	4844702	1.5	17	23	40	0	-
RE231000_175	Residential	597751	4844706	1.5	17	23	40	0	-
RE231000_176	Residential	597729	4844717	1.5	18	23	41	0	-
RE231000_177	Residential	597734	4844724	1.5	18	23	41	0	-
RE231000_178	Residential	597737	4844729	1.5	18	23	41	0	-
RE231000_179	Residential	597741	4844734	1.5	18	23	41	0	-
RE231000_180	Residential	597744	4844739	1.5	18	23	40	0	-
RE231000_181	Residential	597747	4844744	1.5	18	23	40	0	-
RE231000_182	Residential	597750	4844749	1.5	18	23	40	0	-
RE231000_183	Residential	597753	4844754	1.5	18	23	40	0	-
RE231000_184	Residential	597759	4844763	1.5	18	23	40	0	-
RE231000_185	Residential	597762	4844769	1.5	17	23	40	0	-
RE231000_186	Residential	597765	4844773	1.5	17	23	40	0	-
RE231000_187	Residential	597768	4844778	1.5	17	23	40	0	-
RE231000_188	Residential	597771	4844783	1.5	17	23	40	0	-
RE231000_189	Residential	597774	4844789	1.5	17	23	40	0	-
RE231000_190	Residential	597802	4844774	1.5	16	23	39	0	-
RE231000_191	Residential	597798	4844768	1.5	16	23	39	0	-
RE231000_192	Residential	597793	4844761	1.5	16	23	39	0	-
RE231000_193	Residential	597789	4844754	1.5	16	23	39	0	-
RE231000_194	Residential	597785	4844747	1.5	16	23	39	0	-
RE231000_195	Residential	597782	4844741	1.5	16	23	39	0	-
RE231000_196	Residential	597779	4844727	1.5	16	23	39	0	-
RE231000_197	Residential	597780	4844719	1.5	16	23	39	0	-
RE231000_198	Residential	597785	4844710	1.5	16	23	39	0	-
RE231000_199	Residential	597788	4844703	1.5	16	23	39	0	-
RE231000_200	Residential	597793	4844697	1.5	16	23	38	0	-
RE231000_201	Residential	597797	4844690	1.5	16	23	38	0	-
RE231000_202	Residential	597801	4844683	1.5	15	23	38	0	-
RE231000_203	Residential	597805	4844676	1.5	15	23	38	0	-
RE231000_204	Residential	597808	4844669	1.5	15	23	38	0	-
RE231000_205	Residential	597812	4844663	1.5	15	23	38	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_206	Residential	597815	4844656	1.5	15	23	38	0	-
RE231000_207	Residential	597818	4844649	1.5	15	23	37	0	-
RE231000_208	Residential	597823	4844642	1.5	15	23	37	0	-
RE231000_209	Residential	597827	4844636	1.5	15	23	37	0	-
RE231000_210	Residential	597832	4844629	1.5	14	23	37	0	-
RE231000_211	Residential	597837	4844622	1.5	14	23	37	0	-
RE231000_212	Residential	597902	4844623	1.5	13	23	36	0	-
RE231000_213	Residential	597895	4844627	1.5	13	23	36	0	-
RE231000_214	Residential	597889	4844633	1.5	13	23	36	0	-
RE231000_215	Residential	597884	4844639	1.5	13	23	36	0	-
RE231000_216	Residential	597878	4844646	1.5	13	23	36	0	-
RE231000_217	Residential	597873	4844650	1.5	14	23	36	0	-
RE231000_218	Residential	597867	4844656	1.5	14	23	36	0	-
RE231000_219	Residential	597863	4844664	1.5	14	23	36	0	-
RE231000_220	Residential	597859	4844671	1.5	14	23	37	0	-
RE231000_221	Residential	597855	4844678	1.5	14	23	37	0	-
RE231000_222	Residential	597851	4844684	1.5	14	23	37	0	-
RE231000_223	Residential	597847	4844690	1.5	14	23	37	0	-
RE231000_224	Residential	597843	4844697	1.5	14	23	37	0	-
RE231000_225	Residential	597839	4844704	1.5	15	23	37	0	-
RE231000_226	Residential	597835	4844711	1.5	15	23	37	0	-
RE231000_227	Residential	597832	4844718	1.5	15	23	37	0	-
RE231000_228	Residential	597827	4844726	1.5	15	23	38	0	-
RE231000_229	Residential	597824	4844733	1.5	15	23	38	0	-
RE231000_230	Residential	597840	4844745	1.5	15	23	37	0	-
RE231000_231	Residential	597846	4844750	1.5	14	23	37	0	-
RE231000_232	Residential	597851	4844761	1.5	14	23	37	0	-
RE231000_233	Residential	597853	4844771	1.5	14	23	37	0	-
RE231000_234	Residential	597851	4844781	1.5	14	23	37	0	-
RE231000_235	Residential	597848	4844790	1.5	14	23	37	0	-
RE231000_236	Residential	597838	4844796	1.5	15	23	37	0	-
RE231000_237	Residential	597831	4844801	1.5	15	23	37	0	-
RE231000_238	Residential	597823	4844804	1.5	15	23	38	0	-
RE231000_239	Residential	597817	4844807	1.5	15	23	38	0	-
RE231000_240	Residential	597811	4844812	1.5	16	23	38	0	-
RE231000_241	Residential	597804	4844816	1.5	16	23	38	0	-
RE231000_242	Residential	597800	4844820	1.5	16	23	39	0	-
RE231000_243	Residential	597794	4844823	1.5	16	23	39	0	-
RE231000_244	Residential	597788	4844825	1.5	17	23	39	0	-
RE231000_245	Residential	597783	4844829	1.5	17	23	40	0	-
RE231000_246	Residential	597778	4844831	1.5	18	23	40	0	-
RE231000_247	Residential	597772	4844835	1.5	18	23	41	0	-
RE231000_248	Residential	598015	4844639	1.5	11	23	34	0	-
RE231000_249	Residential	598007	4844649	1.5	11	23	34	0	-
RE231000_250	Residential	597997	4844656	1.5	12	23	34	0	-
RE231000_251	Residential	597989	4844666	1.5	12	23	34	0	-
RE231000_252	Residential	598060	4844590	1.5	11	23	33	0	-
RE231000_253	Residential	598069	4844598	1.5	11	23	33	0	-
RE231000_254	Residential	598040	4844610	1.5	11	23	34	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_255	Residential	598049	4844618	1.5	11	23	33	0	-
RE231000_256	Residential	598252	4844214	1.5	9	23	32	0	-
RE231000_257	Residential	598246	4844300	1.5	9	23	32	0	-
RE231000_276	Residential	598191	4844478	1.5	9	23	32	0	-
RE231000_277	Residential	598184	4844471	1.5	10	23	32	0	-
RE231000_278	Residential	598093	4844561	1.5	10	23	33	0	-
RE231000_279	Residential	598104	4844571	1.5	10	23	33	0	-
RE231000_280	Residential	598023	4844395	1.5	11	23	34	0	-
RE231000_281	Residential	598013	4844383	1.5	12	23	34	0	-
RE231000_282	Residential	598113	4844482	1.5	10	23	33	0	-
RE231000_283	Residential	598059	4844484	1.5	11	23	33	0	-
RE231000_284	Residential	598062	4844435	1.5	11	23	33	0	-
RE231000_285	Residential	598052	4844476	1.5	11	23	33	0	-
RE231000_286	Residential	598054	4844424	1.5	11	23	33	0	-
RE231000_287	Residential	598086	4844510	1.5	10	23	33	0	-
RE231000_288	Residential	598077	4844504	1.5	11	23	33	0	-
RE231000_289	Residential	598044	4844414	1.5	11	23	34	0	-
RE231000_290	Residential	598033	4844405	1.5	11	23	34	0	-
RE231000_291	Residential	598102	4844474	1.5	10	23	33	0	-
RE231000_292	Residential	598093	4844464	1.5	10	23	33	0	-
RE231000_293	Residential	598072	4844496	1.5	11	23	33	0	-
RE231000_294	Residential	598083	4844454	1.5	11	23	33	0	-
RE231000_295	Residential	598065	4844490	1.5	11	23	33	0	-
RE231000_296	Residential	598074	4844444	1.5	11	23	33	0	-
RE231000_297	Residential	598159	4844494	1.5	10	23	32	0	-
RE231000_298	Residential	598169	4844501	1.5	10	23	32	0	-
RE231000_299	Residential	598002	4844372	1.5	12	23	34	0	-
RE231000_300	Residential	598066	4844349	1.5	11	23	34	0	-
RE231000_301	Residential	598127	4844467	1.5	10	23	33	0	-
RE231000_302	Residential	598120	4844461	1.5	10	23	33	0	-
RE231000_303	Residential	598109	4844448	1.5	10	23	33	0	-
RE231000_304	Residential	598101	4844440	1.5	10	23	33	0	-
RE231000_305	Residential	598067	4844275	1.5	11	23	34	0	-
RE231000_306	Residential	598068	4844289	1.5	11	23	34	0	-
RE231000_307	Residential	598068	4844303	1.5	11	23	34	0	-
RE231000_308	Residential	598066	4844315	1.5	11	23	34	0	-
RE231000_309	Residential	598076	4844364	1.5	11	23	33	0	-
RE231000_310	Residential	598085	4844425	1.5	11	23	33	0	-
RE231000_311	Residential	598078	4844418	1.5	11	23	33	0	-
RE231000_312	Residential	598069	4844410	1.5	11	23	33	0	-
RE231000_313	Residential	598062	4844402	1.5	11	23	33	0	-
RE231000_314	Residential	598053	4844391	1.5	11	23	34	0	-
RE231000_315	Residential	598047	4844385	1.5	11	23	34	0	-
RE231000_316	Residential	598030	4844364	1.5	11	23	34	0	-
RE231000_317	Residential	598086	4844375	1.5	11	23	33	0	-
RE231000_318	Residential	598106	4844396	1.5	10	23	33	0	-
RE231000_319	Residential	598116	4844406	1.5	10	23	33	0	-
RE231000_320	Residential	598127	4844416	1.5	10	23	33	0	-
RE231000_321	Residential	598143	4844435	1.5	10	23	33	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE231000_322	Residential	598152	4844444	1.5	10	23	32	0	-
RE231000_332	Residential	598315	4844073	1.5	9	23	32	0	-
RE231000_333	Residential	598310	4844078	1.5	9	23	32	0	-
RE231000_334	Residential	598295	4844091	1.5	9	23	32	0	-
RE231000_335	Residential	598288	4844098	1.5	9	23	32	0	-
RE231000_336	Residential	598282	4844104	1.5	9	23	32	0	-
RE231000_337	Residential	598277	4844111	1.5	9	23	32	0	-
RE231000_338	Residential	598310	4844038	1.5	9	23	32	0	-
RE231000_339	Residential	598302	4844046	1.5	9	23	32	0	-
RE231000_340	Residential	598295	4844054	1.5	9	23	32	0	-
RE231000_341	Residential	598276	4844074	1.5	10	23	32	0	-
RE231000_342	Residential	598267	4844081	1.5	10	23	32	0	-
RE231000_343	Residential	598114	4844352	1.5	10	23	33	0	-
RE231000_345	Residential	598126	4844322	1.5	10	23	33	0	-
RE231000_346	Residential	598176	4844416	1.5	10	23	32	0	-
RE231000_347	Residential	598167	4844408	1.5	10	23	32	0	-
RE231000_348	Residential	598159	4844398	1.5	10	23	32	0	-
RE231000_350	Residential	598126	4844309	1.5	10	23	33	0	-
RE231000_351	Residential	598128	4844228	1.5	11	23	33	0	-
RE231000_353	Residential	598285	4844064	1.5	10	23	32	0	-
RE231000_354	Residential	598140	4844379	1.5	10	23	33	0	-
RE231000_355	Residential	598131	4844370	1.5	10	23	33	0	-
RE231000_356	Residential	598122	4844361	1.5	10	23	33	0	-
RE231000_357	Residential	598102	4844340	1.5	11	23	33	0	-
RE231000_358	Residential	598099	4844324	1.5	11	23	33	0	-
RE231000_359	Residential	598099	4844310	1.5	11	23	33	0	-
RE231000_360	Residential	598099	4844296	1.5	11	23	33	0	-
RE231000_361	Residential	598098	4844283	1.5	11	23	33	0	-
RE231000_362	Residential	598099	4844258	1.5	11	23	33	0	-
RE231000_363	Residential	598197	4844395	1.5	9	23	32	0	-
RE231000_364	Residential	598180	4844378	1.5	10	23	32	0	-
RE231000_365	Residential	598171	4844369	1.5	10	23	32	0	-
RE231000_366	Residential	598162	4844359	1.5	10	23	32	0	-
RE231000_367	Residential	598151	4844349	1.5	10	23	32	0	-
RE231000_368	Residential	598142	4844340	1.5	10	23	33	0	-
RE231000_369	Residential	598126	4844283	1.5	10	23	33	0	-
RE231000_370	Residential	598126	4844271	1.5	10	23	33	0	-
RE231000_371	Residential	598126	4844257	1.5	11	23	33	0	-
RE231000_374	Residential	598127	4844295	1.5	10	23	33	0	-
RE231000_377	Residential	598258	4844089	1.5	10	23	32	0	-
RE231000_378	Residential	598094	4844433	1.5	10	23	33	0	-
RE231000_379	Residential	598067	4844332	1.5	11	23	34	0	-
RE231000_380	Residential	598096	4844385	1.5	10	23	33	0	-
RE231000_381	Residential	598149	4844389	1.5	10	23	32	0	-
RE231000_382	Residential	598135	4844425	1.5	10	23	33	0	-
RE231000_383	Residential	598303	4844085	1.5	9	23	32	0	-
RE231000_384	Residential	598115	4844455	1.5	10	23	33	0	-
RE231000_385	Residential	598038	4844375	1.5	11	23	34	0	-
RE231000_386	Residential	598099	4844270	1.5	11	23	33	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE231000_387	Residential	598188	4844386	1.5	10	23	32	0	-
RE231000_388	Residential	598129	4844214	1.5	11	23	33	0	-
RE231000_390	Residential	598013	4844349	1.5	12	23	34	0	-
RE231000_391	Residential	598003	4844338	1.5	12	23	35	0	-
RE231000_392	Residential	598159	4844280	1.5	10	23	33	0	-
RE231000_393	Residential	598189	4844215	1.5	10	23	32	0	-
RE231000_394	Residential	598219	4844376	1.5	9	23	32	0	-
RE231000_395	Residential	598212	4844369	1.5	9	23	32	0	-
RE231000_396	Residential	598207	4844363	1.5	9	23	32	0	-
RE231000_397	Residential	598199	4844356	1.5	9	23	32	0	-
RE231000_398	Residential	598192	4844346	1.5	10	23	32	0	-
RE231000_399	Residential	598181	4844337	1.5	10	23	32	0	-
RE231000_400	Residential	598170	4844327	1.5	10	23	32	0	-
RE231000_401	Residential	598161	4844314	1.5	10	23	32	0	-
RE231000_402	Residential	598159	4844294	1.5	10	23	33	0	-
RE231000_403	Residential	598158	4844273	1.5	10	23	33	0	-
RE231000_404	Residential	598159	4844265	1.5	10	23	33	0	-
RE231000_405	Residential	598159	4844257	1.5	10	23	33	0	-
RE231000_406	Residential	598236	4844348	1.5	9	23	32	0	-
RE231000_407	Residential	598223	4844334	1.5	9	23	32	0	-
RE231000_408	Residential	598215	4844325	1.5	9	23	32	0	-
RE231000_409	Residential	598204	4844313	1.5	9	23	32	0	-
RE231000_410	Residential	598199	4844309	1.5	10	23	32	0	-
RE231000_411	Residential	598189	4844279	1.5	10	23	32	0	-
RE231000_412	Residential	598189	4844265	1.5	10	23	32	0	-
RE231000_413	Residential	598161	4844229	1.5	10	23	33	0	-
RE231000_414	Residential	598162	4844216	1.5	10	23	33	0	-
RE231000_415	Residential	598162	4844205	1.5	10	23	33	0	-
RE231000_416	Residential	598163	4844190	1.5	10	23	33	0	-
RE231000_417	Residential	598169	4844178	1.5	10	23	33	0	-
RE231000_418	Residential	598181	4844167	1.5	10	23	33	0	-
RE231000_419	Residential	598189	4844231	1.5	10	23	32	0	-
RE231000_420	Residential	598189	4844224	1.5	10	23	32	0	-
RE231000_421	Residential	598205	4844183	1.5	10	23	32	0	-
RE231000_422	Residential	598217	4844170	1.5	10	23	32	0	-
RE231000_423	Residential	598227	4844160	1.5	10	23	32	0	-
RE231000_424	Residential	598235	4844153	1.5	10	23	32	0	-
RE231000_425	Residential	598244	4844144	1.5	10	23	32	0	-
RE231000_426	Residential	598253	4844135	1.5	9	23	32	0	-
RE231000_427	Residential	598189	4844160	1.5	10	23	33	0	-
RE231000_428	Residential	598198	4844150	1.5	10	23	33	0	-
RE231000_429	Residential	598208	4844141	1.5	10	23	33	0	-
RE231000_430	Residential	598189	4844272	1.5	10	23	32	0	-
RE231000_431	Residential	598225	4844124	1.5	10	23	32	0	-
RE231000_432	Residential	598189	4844288	1.5	10	23	32	0	-
RE231000_433	Residential	598211	4844177	1.5	10	23	32	0	-
RE231000_434	Residential	598217	4844132	1.5	10	23	33	0	-
RE231000_435	Residential	598210	4844320	1.5	9	23	32	0	-
RE231000_436	Residential	598191	4844204	1.5	10	23	32	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_437	Residential	598190	4844258	1.5	10	23	32	0	-
RE231000_438	Residential	598235	4844114	1.5	10	23	32	0	-
RE231000_439	Residential	598242	4844353	1.5	9	23	32	0	-
RE231000_440	Residential	598230	4844340	1.5	9	23	32	0	-
RE231000_441	Residential	598197	4844191	1.5	10	23	32	0	-
RE231000_443	Residential	598213	4844460	1.5	9	23	32	0	-
RE231000_444	Residential	598234	4844437	1.5	9	23	32	0	-
RE231000_445	Residential	598227	4844430	1.5	9	23	32	0	-
RE231000_446	Residential	598203	4844452	1.5	9	23	32	0	-
RE231000_450	Residential	598248	4844405	1.5	9	23	32	0	-
RE231000_452	Residential	598146	4844517	1.5	10	23	33	0	-
RE231000_453	Residential	598139	4844510	1.5	10	23	33	0	-
RE231000_454	Residential	598112	4844539	1.5	10	23	33	0	-
RE231000_455	Residential	598152	4844523	1.5	10	23	32	0	-
RE231000_456	Residential	598119	4844546	1.5	10	23	33	0	-
RE231100_001	Child Care Centre	597875	4844944	1.5	15	23	38	0	-
RE231100_002	Recreation	597887	4844825	1.5	13	23	35	0	-
RE231100_003	Residential	594644	4847799	1.5	8	23	31	0	-
RE231100_004	Residential	596834	4845864	1.5	30	23	53	3	0.2%
RE231100_005	Residential	598005	4844679	1.5	11	23	34	0	-
RE231100_006	Residential	598014	4844688	1.5	11	23	34	0	-
RE231100_007	Residential	598022	4844696	1.5	11	23	33	0	-
RE231100_008	Residential	598026	4844658	1.5	11	23	34	0	-
RE231100_009	Residential	598034	4844667	1.5	11	23	33	0	-
RE231100_010	Residential	598044	4844675	1.5	11	23	33	0	-
RE231100_011	Residential	598051	4844682	1.5	10	23	33	0	-
RE231100_012	Residential	598059	4844691	1.5	10	23	33	0	-
RE231100_018	Residential	598029	4844703	1.5	11	23	33	0	-
RE231100_019	Residential	598037	4844712	1.5	10	23	33	0	-
RE231100_020	Residential	598046	4844721	1.5	10	23	33	0	-
RE231100_027	Residential	597982	4844724	1.5	11	23	34	0	-
RE231100_028	Residential	597991	4844732	1.5	11	23	34	0	-
RE231100_029	Residential	597999	4844741	1.5	11	23	33	0	-
RE231100_030	Residential	598006	4844749	1.5	11	23	33	0	-
RE231100_031	Residential	598015	4844756	1.5	10	23	33	0	-
RE231100_032	Residential	598023	4844764	1.5	10	23	33	0	-
RE231100_033	Residential	598031	4844773	1.5	10	23	33	0	-
RE231100_041	Residential	598017	4844803	1.5	10	23	33	0	-
RE231100_042	Residential	598007	4844794	1.5	10	23	33	0	-
RE231100_043	Residential	597998	4844785	1.5	11	23	33	0	-
RE231100_044	Residential	597991	4844777	1.5	11	23	33	0	-
RE231100_045	Residential	597982	4844768	1.5	11	23	34	0	-
RE231100_046	Residential	597975	4844760	1.5	11	23	34	0	-
RE231100_047	Residential	597967	4844752	1.5	11	23	34	0	-
RE231100_048	Residential	597958	4844742	1.5	12	23	34	0	-
RE231100_049	Residential	597924	4844771	1.5	12	23	35	0	-
RE231100_050	Residential	597933	4844779	1.5	12	23	35	0	-
RE231100_051	Residential	597943	4844787	1.5	12	23	34	0	-
RE231100_052	Residential	597950	4844796	1.5	11	23	34	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_053	Residential	597958	4844803	1.5	11	23	34	0	-
RE231100_054	Residential	597966	4844812	1.5	11	23	33	0	-
RE231100_055	Residential	597975	4844820	1.5	11	23	33	0	-
RE231100_056	Residential	597983	4844829	1.5	11	23	33	0	-
RE231100_057	Residential	597991	4844837	1.5	11	23	33	0	-
RE231100_077	Residential	597906	4845006	1.5	16	23	39	0	-
RE231100_078	Residential	597896	4845014	1.5	18	23	41	0	-
RE231100_079	Residential	598077	4844606	1.5	10	23	33	0	-
RE231100_080	Residential	598085	4844615	1.5	10	23	33	0	-
RE231100_081	Residential	598094	4844623	1.5	10	23	33	0	-
RE231100_082	Residential	598056	4844626	1.5	11	23	33	0	-
RE231100_083	Residential	598066	4844634	1.5	11	23	33	0	-
RE231100_084	Residential	598074	4844643	1.5	10	23	33	0	-
RE231100_085	Residential	598082	4844651	1.5	10	23	33	0	-
RE231100_090	Residential	598178	4844511	1.5	10	23	32	0	-
RE231100_091	Residential	598202	4844488	1.5	9	23	32	0	-
RE231100_116	Residential	598123	4844591	1.5	10	23	33	0	-
RE231100_120	Residential	598113	4844580	1.5	10	23	33	0	-
RE231100_121	Residential	598101	4844633	1.5	10	23	33	0	-
RE231100_161	Residential	598142	4844569	1.5	10	23	32	0	-
RE231100_164	Residential	598158	4844529	1.5	10	23	32	0	-
RE231100_165	Residential	598166	4844536	1.5	10	23	32	0	-
RE231100_167	Residential	598126	4844552	1.5	10	23	33	0	-
RE231100_171	Residential	598133	4844560	1.5	10	23	33	0	-
RE231100_175	Residential	598101	4844633	1.5	10	23	33	0	-
RE231400_001	Residential	597400	4846151	1.5	19	23	42	0	-
RE231400_002	Residential	597374	4846123	1.5	21	23	43	0	-
RE231400_003	Residential	597425	4846115	1.5	17	23	40	0	-
RE231400_004	Residential	597415	4846104	1.5	18	23	40	0	-
RE231400_005	Residential	597397	4846081	1.5	19	23	42	0	-
RE231400_006	Residential	597415	4846064	1.5	18	23	40	0	-
RE231400_007	Residential	597438	4846085	1.5	17	23	39	0	-
RE231400_008	Residential	597458	4846043	1.5	16	23	39	0	-
RE231400_009	Residential	597440	4846026	1.5	17	23	40	0	-
RE231400_010	Residential	597494	4845971	1.5	14	23	36	0	-
RE231400_011	Residential	597177	4846314	1.5	25	23	47	0	-
RE231500_002	Residential	594959	4848195	1.5	5	23	27	0	-
RE231600_001	Residential	594685	4848625	1.5	7	23	30	0	-
RE231600_004	Residential	594738	4848582	1.5	7	23	30	0	-
RE231600_005	Residential	594772	4848553	1.5	5	23	27	0	-
RE231700_002	Residential	594955	4848488	1.5	4	23	26	0	-
RE231700_003	Residential	594977	4848446	1.5	3	23	26	0	-
RE231700_004	Residential	594865	4848604	1.5	5	23	28	0	-
RE231800_001	Residential	594678	4848786	1.5	7	23	29	0	-
RE231800_002	Residential	594627	4848819	1.5	8	23	30	0	-
RE232700_002	Residential	595497	4849130	1.5	4	23	27	0	-
RE233200_001	Recreation	595805	4849383	1.5	14	23	37	0	-
RE233500_001	Residential	596000	4849598	1.5	8	23	30	0	-
RE233600_001	Residential	596065	4849694	1.5	8	23	31	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE233600_002	Residential	596044	4849667	1.5	8	23	31	0	-
RE233700_001	Residential	596171	4849814	1.5	7	23	30	0	-
RE233900_001	Residential	596273	4850023	1.5	8	23	30	0	-
RE233900_002	Residential	596203	4850118	1.5	9	23	32	0	-
RE233900_003	Residential	596230	4850156	1.5	10	23	32	0	-
RE234000_001	Residential	596284	4850244	1.5	9	23	31	0	-
RE234100_001	Residential	596370	4850189	1.5	7	23	30	0	-
RE235000_001	Residential	596939	4851084	1.5	8	23	30	0	-
RE235100_001	Residential	596983	4851111	1.5	8	23	31	0	-
RE235100_002	Residential	597028	4851138	1.5	8	23	31	0	-
RE235100_003	Residential	597152	4851021	1.5	6	23	29	0	-
RE235200_001	Residential	597087	4851160	1.5	9	23	31	0	-
RE235200_002	Residential	597153	4851077	1.5	8	23	31	0	-
RE235500_001	Residential	597387	4851296	1.5	9	23	31	0	-
RE235500_002	Residential	597327	4851381	1.5	12	23	34	0	-
RE235700_001	Residential	597704	4851314	1.5	11	23	34	0	-
RE235700_002	Residential	597412	4851537	1.5	15	23	37	0	-
RE235800_001	Residential	597664	4851442	1.5	16	23	38	0	-
RE235900_002	Residential	597909	4851332	1.5	11	23	34	0	-
RE235900_003	Residential	597683	4851628	1.5	13	23	36	0	-
RE235900_004	Residential	597618	4851651	1.5	16	23	39	0	-
RE310100_001	Residential	597701	4851643	1.5	12	23	35	0	-
RE310100_002	Residential	597725	4851680	1.5	12	23	35	0	-
RE310100_003	Residential	597647	4851692	1.5	14	23	37	0	-
RE310200_001	Residential	597753	4851836	1.5	14	23	37	0	-
RE310500_001	Residential	597854	4852016	1.5	12	23	34	0	-
RE310600_001	Residential	598054	4851992	1.5	8	23	31	0	-
RE310600_002	Residential	598048	4852100	1.5	14	23	36	0	-
RE310700_001	Residential	598116	4852141	1.5	14	23	36	0	-
RE310700_002	Residential	598003	4852173	1.5	11	23	34	0	-
RE310900_001	Residential	598218	4852295	1.5	12	23	35	0	-
RE311000_001	Residential	598324	4852285	1.5	14	23	36	0	-
RE311100_001	Residential	598324	4852488	1.5	12	23	34	0	-
RE311200_001	Residential	598400	4852513	1.5	16	23	38	0	-
RE311200_002	Residential	598471	4852451	1.5	13	23	36	0	-
RE311300_001	Residential	598509	4852502	1.5	14	23	37	0	-
RE311300_002	Residential	598222	4852772	1.5	9	23	32	0	-
RE311400_001	Residential	598628	4852529	1.5	11	23	34	0	-
RE311400_002	Residential	598554	4852578	1.5	17	23	39	0	-
RE311400_003	Residential	598404	4852757	1.5	9	23	32	0	-
RE311400_006	Residential	598813	4852353	1.5	6	23	29	0	-
RE311800_001	Residential	598767	4852817	1.5	9	23	31	0	-
RE311900_001	Residential	598826	4852898	1.5	9	23	31	0	-
RE312200_001	Residential	598954	4853124	1.5	9	23	32	0	-
RE312200_002	Residential	598983	4853142	1.5	8	23	30	0	-
RE312200_003	Residential	599011	4853156	1.5	7	23	29	0	-
RE312300_001	Residential	599043	4853264	1.5	9	23	31	0	-
RE312400_001	Residential	599140	4853349	1.5	7	23	30	0	-
RE312800_001	Residential	599561	4853387	1.5	10	23	33	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE312800_002	Residential	599655	4853196	1.5	8	23	30	0	-
RE312900_001	Residential	599611	4853344	1.5	11	23	33	0	-
RE312900_002	Residential	599737	4853210	1.5	10	23	33	0	-
RE313000_001	Residential	599767	4853320	1.5	9	23	31	0	-
RE313000_002	Residential	599746	4853342	1.5	9	23	31	0	-
RE313000_003	Residential	599707	4853379	1.5	9	23	32	0	-
RE313000_004	Residential	599831	4853246	1.5	10	23	32	0	-
RE313000_005	Residential	599859	4853220	1.5	9	23	32	0	-
RE313000_006	Residential	599831	4853130	1.5	7	23	29	0	-
RE313000_007	Residential	599790	4853168	1.5	9	23	32	0	-
RE313100_001	Residential	599892	4853186	1.5	10	23	32	0	-
RE314400_001	Residential	601067	4853610	1.5	8	23	30	0	-
RE314800_001	Residential	601376	4853448	1.5	10	23	32	0	-
RE314900_001	Residential	601445	4853622	1.5	9	23	32	0	-
RE316400_001	Residential	602974	4853508	1.5	22	23	45	0	-
RE316500_001	Residential	603041	4853572	1.5	26	23	49	0	-
RE316600_001	Residential	603200	4853771	1.5	24	23	47	0	-
RE316600_002	Residential	603222	4853799	1.5	24	23	46	0	-
RE316700_001	Residential	603244	4853825	1.5	24	23	47	0	-
RE316700_002	Residential	603260	4853854	1.5	23	23	45	0	-
RE317000_001	Residential	603580	4854095	1.5	17	23	39	0	-
RE410200_001	Residential	604488	4854200	1.5	10	23	32	0	-
RE410200_002	Residential	604438	4854244	1.5	10	23	33	0	-
RE411100_001	Residential	605221	4854613	1.5	18	23	40	0	-
RE411200_001	Residential	605486	4854296	1.5	22	23	45	0	-
RE510000_001	Residential	605849	4853842	1.5	13	23	35	0	-
RE510000_002	Residential	605777	4854043	1.5	12	23	35	0	-
RE510100_001	Residential	605862	4854052	1.5	10	23	32	0	-
RE511200_001	Residential	607742	4853370	1.5	26	23	49	0	-
RE511200_002	Residential	607750	4853371	1.5	26	23	49	0	-
RE511200_003	Residential	607756	4853372	1.5	26	23	49	0	-
RE511200_004	Residential	607761	4853373	1.5	26	23	49	0	-
RE511200_005	Residential	607738	4853397	1.5	24	23	46	0	-
RE511200_006	Residential	607744	4853398	1.5	24	23	46	0	-
RE511300_001	Residential	608183	4853093	1.5	14	23	37	0	-
RE511300_002	Child Care Centre	607553	4854058	1.5	6	23	28	0	-
RE511300_003	Residential	607654	4853910	1.5	7	23	29	0	-
RE511300_004	Residential	607664	4853818	1.5	8	23	31	0	-
RE511300_005	Residential	607712	4853826	1.5	7	23	30	0	-
RE511300_006	Residential	607696	4853815	1.5	8	23	30	0	-
RE511300_007	Residential	607670	4853789	1.5	8	23	31	0	-
RE511300_008	Residential	607695	4853826	1.5	7	23	30	0	-
RE511300_009	Residential	607710	4853739	1.5	9	23	32	0	-
RE511300_010	Residential	607728	4853795	1.5	8	23	30	0	-
RE511300_011	Residential	607729	4853761	1.5	8	23	31	0	-
RE511300_012	Residential	607733	4853799	1.5	7	23	30	0	-
RE511300_013	Residential	607665	4853812	1.5	8	23	31	0	-
RE511300_014	Residential	607667	4853806	1.5	8	23	31	0	-
RE511300_015	Residential	607721	4853732	1.5	9	23	32	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_016	Residential	607702	4853748	1.5	9	23	32	0	-
RE511300_017	Residential	607684	4853769	1.5	9	23	31	0	-
RE511300_018	Residential	607740	4853729	1.5	9	23	32	0	-
RE511300_019	Residential	607728	4853731	1.5	9	23	32	0	-
RE511300_020	Residential	607701	4853818	1.5	7	23	30	0	-
RE511300_021	Residential	607668	4853800	1.5	8	23	31	0	-
RE511300_022	Residential	607706	4853744	1.5	9	23	32	0	-
RE511300_023	Residential	607680	4853773	1.5	9	23	31	0	-
RE511300_024	Residential	607734	4853730	1.5	9	23	32	0	-
RE511300_025	Residential	607707	4853788	1.5	8	23	31	0	-
RE511300_026	Residential	607728	4853807	1.5	7	23	30	0	-
RE511300_027	Residential	607722	4853803	1.5	7	23	30	0	-
RE511300_028	Residential	607710	4853783	1.5	8	23	31	0	-
RE511300_029	Residential	607675	4853776	1.5	9	23	31	0	-
RE511300_030	Residential	607714	4853779	1.5	8	23	31	0	-
RE511300_031	Residential	607732	4853756	1.5	8	23	31	0	-
RE511300_032	Residential	607690	4853823	1.5	8	23	30	0	-
RE511300_033	Residential	607721	4853771	1.5	8	23	31	0	-
RE511300_034	Residential	607725	4853766	1.5	8	23	31	0	-
RE511300_035	Residential	607701	4853830	1.5	7	23	30	0	-
RE511300_036	Residential	607706	4853834	1.5	7	23	30	0	-
RE511300_037	Residential	607704	4853793	1.5	8	23	31	0	-
RE511300_038	Residential	607688	4853764	1.5	9	23	32	0	-
RE511300_039	Residential	607698	4853753	1.5	9	23	32	0	-
RE511300_040	Residential	607669	4853794	1.5	8	23	31	0	-
RE511300_041	Residential	607692	4853759	1.5	9	23	32	0	-
RE511300_042	Residential	607706	4853822	1.5	7	23	30	0	-
RE511300_043	Residential	607767	4853374	1.5	26	23	49	0	-
RE511300_044	Residential	607774	4853376	1.5	27	23	49	0	-
RE511300_045	Residential	607781	4853377	1.5	27	23	49	0	-
RE511300_046	Residential	607788	4853379	1.5	27	23	49	0	-
RE511300_047	Residential	607794	4853380	1.5	27	23	49	0	-
RE511300_048	Residential	607800	4853381	1.5	27	23	49	0	-
RE511300_049	Residential	607806	4853382	1.5	27	23	49	0	-
RE511300_050	Residential	607812	4853383	1.5	26	23	49	0	-
RE511300_051	Residential	607820	4853385	1.5	26	23	49	0	-
RE511300_052	Residential	607826	4853386	1.5	26	23	49	0	-
RE511300_053	Residential	607832	4853387	1.5	26	23	48	0	-
RE511300_054	Residential	607838	4853388	1.5	26	23	48	0	-
RE511300_055	Residential	607846	4853390	1.5	26	23	48	0	-
RE511300_056	Residential	607853	4853391	1.5	26	23	48	0	-
RE511300_057	Residential	607859	4853392	1.5	26	23	48	0	-
RE511300_058	Residential	607866	4853394	1.5	26	23	49	0	-
RE511300_059	Residential	607885	4853388	1.5	29	23	51	1	0.1%
RE511300_060	Residential	607886	4853395	1.5	27	23	50	0	-
RE511300_061	Residential	607886	4853402	1.5	26	23	49	0	-
RE511300_062	Residential	607887	4853410	1.5	24	23	47	0	-
RE511300_063	Residential	607887	4853416	1.5	23	23	46	0	-
RE511300_064	Residential	607888	4853422	1.5	22	23	45	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_065	Residential	607888	4853429	1.5	22	23	44	0	-
RE511300_066	Residential	607892	4853460	1.5	19	23	42	0	-
RE511300_067	Residential	607892	4853467	1.5	19	23	41	0	-
RE511300_068	Residential	607892	4853473	1.5	18	23	41	0	-
RE511300_069	Residential	607893	4853479	1.5	18	23	40	0	-
RE511300_070	Residential	607894	4853485	1.5	17	23	40	0	-
RE511300_071	Residential	607894	4853495	1.5	16	23	39	0	-
RE511300_072	Residential	607893	4853501	1.5	16	23	38	0	-
RE511300_073	Residential	607891	4853507	1.5	15	23	38	0	-
RE511300_074	Residential	607776	4853648	1.5	11	23	34	0	-
RE511300_075	Residential	607783	4853646	1.5	11	23	34	0	-
RE511300_076	Residential	607789	4853644	1.5	11	23	33	0	-
RE511300_077	Residential	607795	4853641	1.5	11	23	33	0	-
RE511300_078	Residential	607801	4853639	1.5	11	23	33	0	-
RE511300_079	Residential	607808	4853634	1.5	11	23	33	0	-
RE511300_080	Residential	607814	4853629	1.5	11	23	33	0	-
RE511300_081	Residential	607819	4853626	1.5	11	23	33	0	-
RE511300_082	Residential	607824	4853622	1.5	11	23	33	0	-
RE511300_083	Residential	607829	4853618	1.5	11	23	34	0	-
RE511300_084	Residential	607834	4853614	1.5	11	23	34	0	-
RE511300_085	Residential	607842	4853608	1.5	11	23	34	0	-
RE511300_086	Residential	607846	4853603	1.5	11	23	34	0	-
RE511300_087	Residential	607850	4853599	1.5	11	23	34	0	-
RE511300_088	Residential	607854	4853594	1.5	12	23	34	0	-
RE511300_089	Residential	607858	4853589	1.5	12	23	34	0	-
RE511300_090	Residential	607862	4853585	1.5	12	23	34	0	-
RE511300_091	Residential	607868	4853578	1.5	12	23	34	0	-
RE511300_092	Residential	607871	4853571	1.5	12	23	35	0	-
RE511300_093	Residential	607874	4853566	1.5	12	23	35	0	-
RE511300_094	Residential	607878	4853561	1.5	12	23	35	0	-
RE511300_095	Residential	607882	4853552	1.5	13	23	35	0	-
RE511300_096	Residential	607883	4853545	1.5	13	23	36	0	-
RE511300_097	Residential	607884	4853538	1.5	13	23	36	0	-
RE511300_098	Residential	607758	4853512	1.5	17	23	40	0	-
RE511300_099	Residential	607757	4853520	1.5	17	23	39	0	-
RE511300_100	Residential	607756	4853526	1.5	16	23	39	0	-
RE511300_101	Residential	607755	4853532	1.5	16	23	39	0	-
RE511300_102	Residential	607753	4853538	1.5	16	23	38	0	-
RE511300_103	Residential	607752	4853544	1.5	16	23	38	0	-
RE511300_104	Residential	607751	4853552	1.5	15	23	38	0	-
RE511300_105	Residential	607749	4853559	1.5	15	23	38	0	-
RE511300_106	Residential	607747	4853564	1.5	15	23	38	0	-
RE511300_107	Residential	607746	4853571	1.5	15	23	37	0	-
RE511300_108	Residential	607745	4853576	1.5	15	23	37	0	-
RE511300_109	Residential	607744	4853583	1.5	14	23	37	0	-
RE511300_110	Residential	607742	4853591	1.5	14	23	37	0	-
RE511300_111	Residential	607740	4853597	1.5	14	23	37	0	-
RE511300_112	Residential	607739	4853603	1.5	14	23	36	0	-
RE511300_113	Residential	607738	4853609	1.5	14	23	36	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511300_114	Residential	607737	4853615	1.5	13	23	36	0	-
RE511300_115	Residential	607736	4853621	1.5	13	23	36	0	-
RE511300_116	Residential	607736	4853631	1.5	13	23	35	0	-
RE511300_117	Residential	607735	4853640	1.5	12	23	35	0	-
RE511300_118	Residential	607734	4853645	1.5	12	23	35	0	-
RE511300_119	Residential	607735	4853651	1.5	12	23	35	0	-
RE511300_120	Residential	607736	4853658	1.5	12	23	34	0	-
RE511300_121	Residential	607737	4853664	1.5	11	23	34	0	-
RE511300_122	Residential	607721	4853505	1.5	17	23	40	0	-
RE511300_123	Residential	607719	4853512	1.5	17	23	39	0	-
RE511300_124	Residential	607718	4853518	1.5	17	23	39	0	-
RE511300_125	Residential	607717	4853524	1.5	16	23	39	0	-
RE511300_126	Residential	607716	4853530	1.5	16	23	39	0	-
RE511300_127	Residential	607715	4853537	1.5	16	23	38	0	-
RE511300_128	Residential	607713	4853545	1.5	15	23	38	0	-
RE511300_129	Residential	607712	4853551	1.5	15	23	38	0	-
RE511300_130	Residential	607711	4853556	1.5	15	23	38	0	-
RE511300_131	Residential	607710	4853563	1.5	15	23	37	0	-
RE511300_132	Residential	607708	4853569	1.5	15	23	37	0	-
RE511300_133	Residential	607707	4853575	1.5	15	23	37	0	-
RE511300_134	Residential	607706	4853583	1.5	14	23	37	0	-
RE511300_135	Residential	607704	4853589	1.5	14	23	37	0	-
RE511300_136	Residential	607704	4853595	1.5	14	23	37	0	-
RE511300_137	Residential	607702	4853601	1.5	14	23	36	0	-
RE511300_138	Residential	607701	4853607	1.5	14	23	36	0	-
RE511300_139	Residential	607700	4853615	1.5	13	23	36	0	-
RE511300_140	Residential	607698	4853621	1.5	13	23	36	0	-
RE511300_141	Residential	607697	4853627	1.5	13	23	36	0	-
RE511300_142	Residential	607696	4853634	1.5	13	23	35	0	-
RE511300_143	Residential	607694	4853645	1.5	12	23	35	0	-
RE511300_144	Residential	607694	4853653	1.5	12	23	35	0	-
RE511300_145	Residential	607694	4853659	1.5	12	23	35	0	-
RE511300_146	Residential	607694	4853665	1.5	12	23	34	0	-
RE511300_147	Residential	607696	4853670	1.5	12	23	34	0	-
RE511300_148	Residential	607699	4853677	1.5	11	23	34	0	-
RE511300_149	Residential	607750	4853399	1.5	24	23	46	0	-
RE511300_150	Residential	607756	4853400	1.5	24	23	46	0	-
RE511300_151	Residential	607762	4853401	1.5	24	23	46	0	-
RE511300_152	Residential	607768	4853402	1.5	24	23	46	0	-
RE511300_153	Residential	607776	4853404	1.5	24	23	46	0	-
RE511300_154	Residential	607783	4853405	1.5	24	23	46	0	-
RE511300_155	Residential	607789	4853406	1.5	24	23	46	0	-
RE511300_156	Residential	607795	4853407	1.5	24	23	46	0	-
RE511300_157	Residential	607801	4853409	1.5	24	23	46	0	-
RE511300_158	Residential	607807	4853410	1.5	23	23	46	0	-
RE511300_159	Residential	607815	4853412	1.5	23	23	46	0	-
RE511300_160	Residential	607821	4853413	1.5	23	23	46	0	-
RE511300_161	Residential	607827	4853414	1.5	23	23	46	0	-
RE511300_162	Residential	607834	4853415	1.5	23	23	45	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511300_163	Residential	607841	4853417	1.5	23	23	46	0	-
RE511300_164	Residential	607848	4853418	1.5	23	23	46	0	-
RE511300_165	Residential	607854	4853419	1.5	23	23	46	0	-
RE511300_166	Residential	607859	4853420	1.5	23	23	46	0	-
RE511300_167	Residential	607866	4853421	1.5	23	23	46	0	-
RE511300_168	Residential	607728	4853439	1.5	20	23	43	0	-
RE511300_169	Residential	607736	4853440	1.5	20	23	43	0	-
RE511300_170	Residential	607742	4853441	1.5	21	23	43	0	-
RE511300_171	Residential	607748	4853442	1.5	21	23	43	0	-
RE511300_172	Residential	607754	4853443	1.5	21	23	43	0	-
RE511300_173	Residential	607761	4853444	1.5	21	23	43	0	-
RE511300_174	Residential	607768	4853445	1.5	21	23	43	0	-
RE511300_175	Residential	607774	4853446	1.5	21	23	43	0	-
RE511300_176	Residential	607780	4853448	1.5	20	23	43	0	-
RE511300_177	Residential	607786	4853449	1.5	20	23	43	0	-
RE511300_178	Residential	607792	4853450	1.5	20	23	43	0	-
RE511300_179	Residential	607799	4853451	1.5	20	23	43	0	-
RE511300_180	Residential	607807	4853453	1.5	20	23	43	0	-
RE511300_181	Residential	607813	4853454	1.5	20	23	43	0	-
RE511300_182	Residential	607819	4853456	1.5	20	23	42	0	-
RE511300_183	Residential	607825	4853457	1.5	20	23	42	0	-
RE511300_184	Residential	607831	4853458	1.5	19	23	42	0	-
RE511300_185	Residential	607837	4853459	1.5	19	23	42	0	-
RE511300_186	Residential	607845	4853460	1.5	19	23	41	0	-
RE511300_187	Residential	607851	4853462	1.5	19	23	41	0	-
RE511300_188	Residential	607857	4853463	1.5	19	23	41	0	-
RE511300_189	Residential	607863	4853464	1.5	19	23	41	0	-
RE511300_190	Residential	607870	4853465	1.5	19	23	42	0	-
RE511300_191	Residential	607724	4853468	1.5	19	23	41	0	-
RE511300_192	Residential	607731	4853469	1.5	19	23	41	0	-
RE511300_193	Residential	607737	4853470	1.5	19	23	41	0	-
RE511300_194	Residential	607742	4853471	1.5	19	23	41	0	-
RE511300_195	Residential	607749	4853472	1.5	19	23	41	0	-
RE511300_196	Residential	607755	4853473	1.5	19	23	41	0	-
RE511300_197	Residential	607762	4853474	1.5	19	23	41	0	-
RE511300_198	Residential	607769	4853476	1.5	19	23	41	0	-
RE511300_199	Residential	607775	4853477	1.5	19	23	41	0	-
RE511300_200	Residential	607781	4853478	1.5	19	23	41	0	-
RE511300_201	Residential	607787	4853480	1.5	19	23	41	0	-
RE511300_202	Residential	607793	4853481	1.5	18	23	41	0	-
RE511300_203	Residential	607801	4853483	1.5	18	23	41	0	-
RE511300_204	Residential	607807	4853484	1.5	18	23	41	0	-
RE511300_205	Residential	607813	4853485	1.5	18	23	41	0	-
RE511300_206	Residential	607819	4853486	1.5	18	23	40	0	-
RE511300_207	Residential	607825	4853488	1.5	18	23	40	0	-
RE511300_208	Residential	607831	4853489	1.5	17	23	40	0	-
RE511300_209	Residential	607839	4853490	1.5	17	23	40	0	-
RE511300_210	Residential	607846	4853492	1.5	17	23	39	0	-
RE511300_211	Residential	607851	4853493	1.5	16	23	39	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_212	Residential	607858	4853494	1.5	16	23	39	0	-
RE511300_213	Residential	607863	4853495	1.5	16	23	39	0	-
RE511300_214	Residential	607869	4853496	1.5	16	23	39	0	-
RE511400_001	Residential	607929	4853848	1.5	6	23	29	0	-
RE511400_002	Residential	607914	4853876	1.5	6	23	29	0	-
RE511400_003	Residential	607929	4853886	1.5	6	23	29	0	-
RE511400_004	Residential	607898	4853826	1.5	7	23	30	0	-
RE511400_005	Residential	607899	4853865	1.5	6	23	29	0	-
RE511400_006	Residential	607842	4853819	1.5	7	23	30	0	-
RE511400_007	Residential	607859	4853838	1.5	7	23	30	0	-
RE511400_008	Residential	607869	4853844	1.5	7	23	30	0	-
RE511400_009	Residential	607876	4853849	1.5	7	23	30	0	-
RE511400_010	Residential	607922	4853881	1.5	6	23	29	0	-
RE511400_011	Residential	607891	4853860	1.5	7	23	29	0	-
RE511400_012	Residential	607868	4853804	1.5	8	23	30	0	-
RE511400_013	Residential	607919	4853841	1.5	6	23	29	0	-
RE511400_014	Residential	607907	4853870	1.5	6	23	29	0	-
RE511400_015	Residential	607887	4853793	1.5	7	23	30	0	-
RE511400_016	Residential	607876	4853800	1.5	8	23	30	0	-
RE511400_017	Residential	607867	4853900	1.5	6	23	29	0	-
RE511400_018	Residential	607888	4853915	1.5	6	23	29	0	-
RE511400_019	Residential	607881	4853910	1.5	6	23	29	0	-
RE511400_020	Residential	607895	4853920	1.5	6	23	29	0	-
RE511400_021	Residential	607805	4853857	1.5	7	23	30	0	-
RE511400_022	Residential	607814	4853863	1.5	7	23	30	0	-
RE511400_023	Residential	607859	4853894	1.5	7	23	29	0	-
RE511400_024	Residential	607874	4853905	1.5	6	23	29	0	-
RE511400_025	Residential	607821	4853868	1.5	7	23	30	0	-
RE511400_026	Residential	607829	4853873	1.5	7	23	29	0	-
RE511400_027	Residential	607902	4853925	1.5	6	23	28	0	-
RE511400_028	Residential	607836	4853879	1.5	7	23	29	0	-
RE511400_029	Residential	607844	4853884	1.5	7	23	29	0	-
RE511400_030	Residential	607852	4853889	1.5	7	23	29	0	-
RE511400_031	Residential	607961	4853671	1.5	9	23	31	0	-
RE511400_032	Residential	607901	4853730	1.5	8	23	31	0	-
RE511400_033	Residential	607932	4853710	1.5	8	23	31	0	-
RE511400_034	Residential	607891	4853735	1.5	8	23	31	0	-
RE511400_035	Residential	607950	4853688	1.5	9	23	31	0	-
RE511400_036	Residential	608027	4853515	1.5	15	23	38	0	-
RE511400_037	Residential	607948	4853861	1.5	6	23	29	0	-
RE511400_038	Residential	607884	4853855	1.5	7	23	29	0	-
RE511400_039	Residential	607860	4853809	1.5	8	23	30	0	-
RE511400_040	Residential	607917	4853721	1.5	8	23	31	0	-
RE511400_041	Residential	607909	4853725	1.5	8	23	30	0	-
RE511400_042	Residential	607925	4853716	1.5	8	23	31	0	-
RE511400_043	Residential	607955	4853680	1.5	9	23	31	0	-
RE511400_044	Residential	607944	4853695	1.5	8	23	31	0	-
RE511400_045	Residential	607939	4853703	1.5	8	23	31	0	-
RE511400_046	Residential	608072	4853635	1.5	10	23	33	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_047	Residential	608048	4853617	1.5	11	23	33	0	-
RE511400_048	Residential	608076	4853544	1.5	14	23	36	0	-
RE511400_049	Residential	608107	4853601	1.5	12	23	34	0	-
RE511400_050	Residential	608076	4853554	1.5	14	23	36	0	-
RE511400_051	Residential	607864	4853751	1.5	8	23	31	0	-
RE511400_052	Residential	607853	4853757	1.5	8	23	31	0	-
RE511400_053	Residential	607845	4853762	1.5	8	23	31	0	-
RE511400_054	Residential	607836	4853766	1.5	8	23	31	0	-
RE511400_055	Residential	607827	4853771	1.5	8	23	31	0	-
RE511400_056	Residential	607818	4853777	1.5	8	23	31	0	-
RE511400_057	Residential	607794	4853801	1.5	8	23	30	0	-
RE511400_058	Residential	607809	4853783	1.5	8	23	31	0	-
RE511400_059	Residential	607802	4853791	1.5	8	23	30	0	-
RE511400_060	Residential	608147	4853557	1.5	12	23	35	0	-
RE511400_061	Residential	608166	4853558	1.5	12	23	34	0	-
RE511400_062	Residential	608176	4853558	1.5	12	23	34	0	-
RE511400_063	Residential	608157	4853558	1.5	12	23	35	0	-
RE511400_064	Residential	608076	4853583	1.5	12	23	35	0	-
RE511400_065	Residential	608115	4853525	1.5	14	23	37	0	-
RE511400_066	Residential	608102	4853614	1.5	11	23	34	0	-
RE511400_067	Residential	608093	4853649	1.5	10	23	32	0	-
RE511400_068	Residential	608103	4853524	1.5	14	23	37	0	-
RE511400_069	Residential	608076	4853563	1.5	13	23	36	0	-
RE511400_070	Residential	608074	4853594	1.5	12	23	34	0	-
RE511400_071	Residential	608107	4853544	1.5	13	23	36	0	-
RE511400_072	Residential	608107	4853563	1.5	13	23	36	0	-
RE511400_073	Residential	608107	4853572	1.5	13	23	35	0	-
RE511400_074	Residential	608082	4853642	1.5	10	23	32	0	-
RE511400_075	Residential	608056	4853624	1.5	10	23	33	0	-
RE511400_076	Residential	608067	4853525	1.5	14	23	37	0	-
RE511400_077	Residential	608070	4853606	1.5	11	23	33	0	-
RE511400_078	Residential	608097	4853625	1.5	10	23	33	0	-
RE511400_079	Residential	608064	4853629	1.5	10	23	33	0	-
RE511400_080	Residential	608091	4853524	1.5	14	23	37	0	-
RE511400_081	Residential	608107	4853581	1.5	13	23	35	0	-
RE511400_082	Residential	608107	4853590	1.5	12	23	35	0	-
RE511400_083	Residential	608077	4853573	1.5	13	23	35	0	-
RE511400_084	Residential	608107	4853554	1.5	13	23	36	0	-
RE511400_085	Residential	608080	4853524	1.5	14	23	37	0	-
RE511400_086	Residential	608146	4853605	1.5	12	23	34	0	-
RE511400_087	Residential	607690	4854002	1.5	5	23	28	0	-
RE511400_088	Residential	607683	4854039	1.5	5	23	28	0	-
RE511400_089	Residential	607642	4854055	1.5	5	23	28	0	-
RE511400_090	Residential	607726	4853973	1.5	6	23	28	0	-
RE511400_091	Residential	607638	4854068	1.5	5	23	28	0	-
RE511400_092	Residential	607782	4853966	1.5	6	23	29	0	-
RE511400_093	Residential	607648	4854028	1.5	5	23	28	0	-
RE511400_094	Residential	607706	4853919	1.5	6	23	29	0	-
RE511400_095	Residential	607633	4854095	1.5	5	23	27	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511400_096	Residential	607649	4853948	1.5	6	23	29	0	-
RE511400_097	Residential	607792	4853973	1.5	6	23	29	0	-
RE511400_098	Residential	607734	4853980	1.5	6	23	28	0	-
RE511400_099	Residential	607851	4853813	1.5	8	23	30	0	-
RE511400_100	Residential	607835	4853830	1.5	7	23	30	0	-
RE511400_101	Residential	607938	4853855	1.5	6	23	29	0	-
RE511400_102	Residential	607908	4853835	1.5	7	23	29	0	-
RE511400_103	Residential	607677	4854058	1.5	5	23	28	0	-
RE511400_104	Residential	607687	4854030	1.5	5	23	28	0	-
RE511400_105	Residential	607758	4853948	1.5	6	23	29	0	-
RE511400_106	Residential	607671	4853912	1.5	6	23	29	0	-
RE511400_107	Residential	607797	4853977	1.5	6	23	29	0	-
RE511400_108	Residential	607709	4854015	1.5	6	23	28	0	-
RE511400_109	Residential	607661	4853910	1.5	6	23	29	0	-
RE511400_110	Residential	607713	4853921	1.5	6	23	29	0	-
RE511400_111	Residential	607654	4854003	1.5	5	23	28	0	-
RE511400_112	Residential	607657	4853949	1.5	6	23	29	0	-
RE511400_113	Residential	607651	4854015	1.5	5	23	28	0	-
RE511400_114	Residential	607731	4853930	1.5	6	23	29	0	-
RE511400_115	Residential	607695	4853916	1.5	6	23	29	0	-
RE511400_116	Residential	607655	4853989	1.5	5	23	28	0	-
RE511400_117	Residential	607645	4854041	1.5	5	23	28	0	-
RE511400_118	Residential	607751	4853943	1.5	6	23	29	0	-
RE511400_119	Residential	607744	4853938	1.5	6	23	29	0	-
RE511400_120	Residential	607787	4853970	1.5	6	23	29	0	-
RE511400_121	Residential	607676	4853954	1.5	6	23	28	0	-
RE511400_122	Residential	607667	4853952	1.5	6	23	28	0	-
RE511400_123	Residential	607684	4853955	1.5	6	23	28	0	-
RE511400_124	Residential	607704	4853960	1.5	6	23	28	0	-
RE511400_125	Residential	607680	4854049	1.5	5	23	28	0	-
RE511400_126	Residential	607679	4853914	1.5	6	23	29	0	-
RE511400_127	Residential	607700	4854008	1.5	5	23	28	0	-
RE511400_128	Residential	607719	4853969	1.5	6	23	28	0	-
RE511400_129	Residential	607689	4853915	1.5	6	23	29	0	-
RE511400_130	Residential	607739	4853935	1.5	6	23	29	0	-
RE511400_131	Residential	607636	4854081	1.5	5	23	28	0	-
RE511400_132	Residential	607680	4853999	1.5	5	23	28	0	-
RE511400_133	Residential	607723	4853926	1.5	6	23	29	0	-
RE511400_134	Residential	607693	4853957	1.5	6	23	28	0	-
RE511400_135	Residential	607710	4853964	1.5	6	23	28	0	-
RE511400_136	Residential	607759	4854001	1.5	6	23	28	0	-
RE511400_137	Residential	608026	4853558	1.5	13	23	35	0	-
RE511400_138	Residential	608026	4853566	1.5	12	23	35	0	-
RE511400_139	Residential	608023	4853574	1.5	12	23	35	0	-
RE511400_140	Residential	608018	4853584	1.5	12	23	34	0	-
RE511400_141	Residential	608015	4853591	1.5	11	23	34	0	-
RE511400_142	Residential	608006	4853606	1.5	10	23	33	0	-
RE511400_143	Residential	608011	4853599	1.5	11	23	33	0	-
RE511400_144	Residential	608001	4853613	1.5	10	23	33	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_145	Residential	607996	4853620	1.5	10	23	32	0	-
RE511400_146	Residential	607985	4853636	1.5	9	23	32	0	-
RE511400_147	Residential	607991	4853628	1.5	9	23	32	0	-
RE511400_148	Residential	607980	4853643	1.5	9	23	32	0	-
RE511400_149	Residential	608170	4853516	1.5	14	23	37	0	-
RE511400_150	Residential	608155	4853516	1.5	14	23	37	0	-
RE511400_151	Residential	608163	4853516	1.5	14	23	37	0	-
RE511400_152	Residential	608148	4853517	1.5	14	23	36	0	-
RE511400_153	Residential	608192	4853515	1.5	14	23	37	0	-
RE511400_154	Residential	608184	4853515	1.5	14	23	37	0	-
RE511400_155	Residential	608207	4853515	1.5	14	23	37	0	-
RE511400_156	Residential	608199	4853515	1.5	14	23	37	0	-
RE511400_157	Residential	608176	4853516	1.5	14	23	37	0	-
RE511400_158	Residential	608214	4853515	1.5	14	23	37	0	-
RE511400_159	Residential	607839	4853722	1.5	9	23	31	0	-
RE511400_160	Residential	607826	4853728	1.5	9	23	31	0	-
RE511400_161	Residential	607806	4853741	1.5	9	23	31	0	-
RE511400_162	Residential	607820	4853732	1.5	9	23	31	0	-
RE511400_163	Residential	607775	4853762	1.5	8	23	31	0	-
RE511400_164	Residential	607764	4853777	1.5	8	23	30	0	-
RE511400_165	Residential	607832	4853725	1.5	9	23	31	0	-
RE511400_166	Residential	607791	4853750	1.5	8	23	31	0	-
RE511400_167	Residential	607845	4853717	1.5	9	23	31	0	-
RE511400_168	Residential	607771	4853767	1.5	8	23	30	0	-
RE511400_169	Residential	607814	4853735	1.5	9	23	31	0	-
RE511400_170	Residential	607785	4853754	1.5	8	23	31	0	-
RE511400_171	Residential	607767	4853772	1.5	8	23	30	0	-
RE511400_172	Residential	607800	4853745	1.5	8	23	31	0	-
RE511400_173	Residential	607852	4853936	1.5	6	23	29	0	-
RE511400_174	Residential	607859	4853941	1.5	6	23	29	0	-
RE511400_175	Residential	607838	4853926	1.5	6	23	29	0	-
RE511400_176	Residential	607787	4853890	1.5	7	23	29	0	-
RE511400_177	Residential	607792	4853895	1.5	7	23	29	0	-
RE511400_178	Residential	607797	4853898	1.5	7	23	29	0	-
RE511400_179	Residential	607802	4853902	1.5	7	23	29	0	-
RE511400_180	Residential	607815	4853910	1.5	7	23	29	0	-
RE511400_181	Residential	607821	4853913	1.5	6	23	29	0	-
RE511400_182	Residential	607827	4853918	1.5	6	23	29	0	-
RE511400_183	Residential	607832	4853921	1.5	6	23	29	0	-
RE511400_184	Residential	607845	4853931	1.5	6	23	29	0	-
RE511400_185	Residential	607809	4853906	1.5	7	23	29	0	-
RE511400_186	Residential	607925	4853654	1.5	9	23	31	0	-
RE511400_187	Residential	607929	4853648	1.5	9	23	32	0	-
RE511400_188	Residential	607920	4853662	1.5	9	23	31	0	-
RE511400_189	Residential	607915	4853668	1.5	9	23	31	0	-
RE511400_190	Residential	607907	4853677	1.5	9	23	31	0	-
RE511400_191	Residential	607903	4853680	1.5	9	23	31	0	-
RE511400_192	Residential	607895	4853688	1.5	9	23	31	0	-
RE511400_193	Residential	607889	4853691	1.5	9	23	31	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511400_194	Residential	607881	4853696	1.5	9	23	32	0	-
RE511400_195	Residential	607873	4853701	1.5	9	23	32	0	-
RE511400_196	Residential	607989	4853515	1.5	14	23	37	0	-
RE511400_197	Residential	607989	4853530	1.5	14	23	36	0	-
RE511400_198	Residential	607989	4853538	1.5	13	23	36	0	-
RE511400_199	Residential	607988	4853524	1.5	14	23	37	0	-
RE511400_200	Residential	607988	4853546	1.5	13	23	35	0	-
RE511400_201	Residential	607988	4853553	1.5	13	23	35	0	-
RE511400_202	Residential	607982	4853569	1.5	12	23	34	0	-
RE511400_203	Residential	607985	4853562	1.5	12	23	35	0	-
RE511400_204	Residential	607980	4853574	1.5	11	23	34	0	-
RE511400_205	Residential	607978	4853580	1.5	11	23	33	0	-
RE511400_206	Residential	607972	4853586	1.5	10	23	33	0	-
RE511400_207	Residential	607968	4853592	1.5	10	23	33	0	-
RE511400_208	Residential	607963	4853600	1.5	10	23	33	0	-
RE511400_209	Residential	607958	4853607	1.5	10	23	32	0	-
RE511400_210	Residential	607953	4853615	1.5	10	23	32	0	-
RE511400_211	Residential	607948	4853620	1.5	10	23	32	0	-
RE511400_212	Residential	608027	4853522	1.5	15	23	38	0	-
RE511400_213	Residential	608027	4853540	1.5	14	23	36	0	-
RE511400_214	Residential	608027	4853531	1.5	14	23	37	0	-
RE511400_215	Residential	608027	4853548	1.5	13	23	36	0	-
RE511400_216	Residential	607888	4853817	1.5	7	23	30	0	-
RE511400_217	Residential	607735	4853842	1.5	7	23	29	0	-
RE511400_218	Residential	607748	4853810	1.5	7	23	30	0	-
RE511400_219	Residential	607777	4853830	1.5	7	23	30	0	-
RE511400_220	Residential	607730	4853850	1.5	7	23	29	0	-
RE511400_221	Residential	607725	4853846	1.5	7	23	29	0	-
RE511400_222	Residential	607783	4853834	1.5	7	23	30	0	-
RE511400_223	Residential	607752	4853873	1.5	7	23	29	0	-
RE511400_224	Residential	607743	4853806	1.5	7	23	30	0	-
RE511400_225	Residential	607711	4853837	1.5	7	23	30	0	-
RE511400_226	Residential	607748	4853878	1.5	7	23	29	0	-
RE511400_227	Residential	607755	4853868	1.5	7	23	29	0	-
RE511400_228	Residential	607756	4853827	1.5	7	23	30	0	-
RE511400_229	Residential	607767	4853823	1.5	7	23	30	0	-
RE511400_230	Residential	607735	4853854	1.5	7	23	29	0	-
RE511400_231	Residential	607738	4853803	1.5	7	23	30	0	-
RE511400_232	Residential	607762	4853859	1.5	7	23	29	0	-
RE511400_233	Residential	607719	4853843	1.5	7	23	29	0	-
RE511400_234	Residential	607730	4853838	1.5	7	23	29	0	-
RE511400_235	Residential	607767	4853834	1.5	7	23	30	0	-
RE511400_236	Residential	607738	4853814	1.5	7	23	30	0	-
RE511400_237	Residential	607733	4853810	1.5	7	23	30	0	-
RE511400_238	Residential	607761	4853819	1.5	7	23	30	0	-
RE511400_239	Residential	607777	4853842	1.5	7	23	30	0	-
RE511400_240	Residential	607761	4853831	1.5	7	23	30	0	-
RE511400_241	Residential	607751	4853823	1.5	7	23	30	0	-
RE511400_242	Residential	607756	4853816	1.5	7	23	30	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_243	Residential	607743	4853817	1.5	7	23	30	0	-
RE511400_244	Residential	607741	4853846	1.5	7	23	29	0	-
RE511400_245	Residential	607772	4853838	1.5	7	23	30	0	-
RE511400_246	Residential	607759	4853864	1.5	7	23	29	0	-
RE511400_247	Residential	607717	4853829	1.5	7	23	30	0	-
RE511400_248	Residential	607725	4853835	1.5	7	23	29	0	-
RE511400_249	Residential	607772	4853827	1.5	7	23	30	0	-
RE511400_250	Residential	607866	4853946	1.5	6	23	29	0	-
RE511400_251	Residential	607873	4853951	1.5	6	23	29	0	-
RE511400_252	Residential	607880	4853956	1.5	6	23	28	0	-
RE511400_265	Residential	607700	4854194	1.5	4	23	27	0	-
RE511400_266	Residential	607689	4854191	1.5	4	23	27	0	-
RE511400_267	Residential	607679	4854188	1.5	4	23	27	0	-
RE511400_268	Residential	607668	4854184	1.5	4	23	27	0	-
RE511400_269	Residential	607657	4854180	1.5	4	23	27	0	-
RE511400_270	Residential	607645	4854176	1.5	4	23	27	0	-
RE511400_271	Residential	607619	4854171	1.5	4	23	27	0	-
RE511400_272	Residential	607620	4854158	1.5	4	23	27	0	-
RE511400_273	Residential	607624	4854146	1.5	5	23	27	0	-
RE511400_274	Residential	607626	4854132	1.5	5	23	27	0	-
RE511400_275	Residential	607721	4854165	1.5	5	23	27	0	-
RE511400_276	Residential	607710	4854163	1.5	5	23	27	0	-
RE511400_277	Residential	607700	4854159	1.5	5	23	27	0	-
RE511400_278	Residential	607689	4854156	1.5	5	23	27	0	-
RE511400_279	Residential	607677	4854152	1.5	5	23	27	0	-
RE511400_280	Residential	607665	4854148	1.5	5	23	27	0	-
RE511400_281	Residential	607651	4854143	1.5	5	23	27	0	-
RE511400_282	Residential	607770	4854052	1.5	5	23	28	0	-
RE511400_283	Residential	607765	4854059	1.5	5	23	28	0	-
RE511400_284	Residential	607760	4854069	1.5	5	23	28	0	-
RE511400_285	Residential	607753	4854080	1.5	5	23	28	0	-
RE511400_286	Residential	607748	4854093	1.5	5	23	28	0	-
RE511400_287	Residential	607744	4854104	1.5	5	23	28	0	-
RE511400_288	Residential	607740	4854116	1.5	5	23	28	0	-
RE511400_289	Residential	607736	4854126	1.5	5	23	27	0	-
RE511400_290	Residential	607742	4854030	1.5	6	23	28	0	-
RE511400_291	Residential	607736	4854039	1.5	5	23	28	0	-
RE511400_292	Residential	607731	4854048	1.5	5	23	28	0	-
RE511400_293	Residential	607726	4854059	1.5	5	23	28	0	-
RE511400_294	Residential	607723	4854067	1.5	5	23	28	0	-
RE511400_295	Residential	607720	4854076	1.5	5	23	28	0	-
RE511400_296	Residential	607717	4854085	1.5	5	23	28	0	-
RE511400_297	Residential	607714	4854095	1.5	5	23	28	0	-
RE511400_298	Residential	607710	4854106	1.5	5	23	28	0	-
RE511400_299	Residential	607707	4854117	1.5	5	23	28	0	-
RE511400_300	Residential	607674	4854068	1.5	5	23	28	0	-
RE511400_301	Residential	607670	4854080	1.5	5	23	28	0	-
RE511400_302	Residential	607667	4854091	1.5	5	23	28	0	-
RE511400_303	Residential	607662	4854103	1.5	5	23	27	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_304	Residential	607765	4854005	1.5	6	23	28	0	-
RE511400_305	Residential	607773	4854009	1.5	6	23	28	0	-
RE511400_306	Residential	607779	4854014	1.5	6	23	28	0	-
RE511400_307	Residential	607787	4854019	1.5	6	23	28	0	-
RE511400_308	Residential	607794	4854023	1.5	6	23	28	0	-
RE511400_309	Residential	607801	4854028	1.5	5	23	28	0	-
RE511400_310	Residential	607809	4854033	1.5	5	23	28	0	-
RE511400_311	Residential	607817	4854039	1.5	5	23	28	0	-
RE511400_312	Residential	607802	4853980	1.5	6	23	28	0	-
RE511400_313	Residential	607807	4853983	1.5	6	23	28	0	-
RE511400_314	Residential	607814	4853988	1.5	6	23	28	0	-
RE511400_315	Residential	607820	4853992	1.5	6	23	28	0	-
RE511400_316	Residential	607825	4853995	1.5	6	23	28	0	-
RE511400_317	Residential	607829	4853998	1.5	6	23	28	0	-
RE511400_318	Residential	607837	4854004	1.5	6	23	28	0	-
RE511400_319	Residential	607842	4854008	1.5	6	23	28	0	-
RE511500_001	Child Care Centre	608104	4853900	1.5	6	23	28	0	-
RE511500_002	Residential	608322	4853695	1.5	9	23	31	0	-
RE511500_003	Residential	608318	4853701	1.5	9	23	31	0	-
RE511500_004	Residential	608314	4853707	1.5	9	23	31	0	-
RE511500_005	Residential	608300	4853727	1.5	9	23	32	0	-
RE511500_006	Residential	608295	4853734	1.5	9	23	32	0	-
RE511500_007	Residential	608290	4853741	1.5	9	23	31	0	-
RE511500_008	Residential	608285	4853748	1.5	9	23	31	0	-
RE511500_009	Residential	608280	4853755	1.5	8	23	31	0	-
RE511500_010	Residential	608335	4853677	1.5	8	23	31	0	-
RE511500_011	Residential	608327	4853688	1.5	9	23	31	0	-
RE511500_012	Residential	608364	4853636	1.5	10	23	32	0	-
RE511500_013	Residential	608359	4853642	1.5	10	23	32	0	-
RE511500_014	Residential	608355	4853649	1.5	9	23	32	0	-
RE511500_015	Residential	608349	4853657	1.5	9	23	31	0	-
RE511500_016	Residential	608345	4853664	1.5	8	23	31	0	-
RE511500_017	Residential	608310	4853713	1.5	9	23	32	0	-
RE511500_018	Residential	608305	4853720	1.5	9	23	32	0	-
RE511500_019	Residential	608232	4853817	1.5	6	23	29	0	-
RE511500_020	Residential	608226	4853679	1.5	10	23	33	0	-
RE511500_021	Residential	608207	4853707	1.5	9	23	32	0	-
RE511500_022	Residential	608274	4853612	1.5	10	23	32	0	-
RE511500_023	Residential	608242	4853657	1.5	10	23	33	0	-
RE511500_024	Residential	608232	4853672	1.5	10	23	33	0	-
RE511500_025	Residential	607937	4853892	1.5	6	23	28	0	-
RE511500_026	Residential	607990	4853929	1.5	5	23	28	0	-
RE511500_027	Residential	607999	4853934	1.5	5	23	28	0	-
RE511500_028	Residential	608017	4853910	1.5	6	23	28	0	-
RE511500_029	Residential	607985	4853887	1.5	6	23	28	0	-
RE511500_030	Residential	607977	4853881	1.5	6	23	28	0	-
RE511500_031	Residential	607952	4853902	1.5	6	23	28	0	-
RE511500_032	Residential	608205	4853855	1.5	6	23	29	0	-
RE511500_033	Residential	608000	4853898	1.5	6	23	28	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_034	Residential	607982	4853923	1.5	6	23	28	0	-
RE511500_035	Residential	607960	4853907	1.5	6	23	28	0	-
RE511500_036	Residential	607993	4853893	1.5	6	23	28	0	-
RE511500_037	Residential	608228	4853822	1.5	6	23	29	0	-
RE511500_038	Residential	608194	4853868	1.5	6	23	28	0	-
RE511500_039	Residential	608188	4853877	1.5	6	23	28	0	-
RE511500_040	Residential	608008	4853903	1.5	6	23	28	0	-
RE511500_041	Residential	608199	4853862	1.5	6	23	29	0	-
RE511500_042	Residential	608224	4853828	1.5	6	23	29	0	-
RE511500_043	Residential	608221	4853833	1.5	6	23	29	0	-
RE511500_044	Residential	607925	4853940	1.5	6	23	28	0	-
RE511500_045	Residential	608481	4853493	1.5	14	23	36	0	-
RE511500_046	Residential	608407	4853578	1.5	11	23	33	0	-
RE511500_047	Residential	608462	4853557	1.5	11	23	34	0	-
RE511500_048	Residential	608457	4853565	1.5	11	23	34	0	-
RE511500_049	Residential	607910	4853930	1.5	6	23	28	0	-
RE511500_050	Residential	607917	4853935	1.5	6	23	28	0	-
RE511500_051	Residential	608411	4853570	1.5	11	23	33	0	-
RE511500_052	Residential	608435	4853530	1.5	12	23	35	0	-
RE511500_053	Residential	608415	4853563	1.5	11	23	34	0	-
RE511500_054	Residential	608053	4853924	1.5	5	23	28	0	-
RE511500_055	Residential	608480	4853505	1.5	13	23	35	0	-
RE511500_056	Residential	608197	4853721	1.5	8	23	31	0	-
RE511500_057	Residential	608191	4853730	1.5	8	23	30	0	-
RE511500_058	Residential	608263	4853627	1.5	9	23	32	0	-
RE511500_059	Residential	608289	4853591	1.5	11	23	34	0	-
RE511500_060	Residential	608284	4853598	1.5	11	23	33	0	-
RE511500_061	Residential	608211	4853846	1.5	6	23	29	0	-
RE511500_062	Residential	608179	4853890	1.5	6	23	28	0	-
RE511500_063	Residential	607967	4853875	1.5	6	23	28	0	-
RE511500_064	Residential	607967	4853913	1.5	6	23	28	0	-
RE511500_065	Residential	608234	4853563	1.5	12	23	35	0	-
RE511500_066	Residential	608254	4853574	1.5	12	23	34	0	-
RE511500_067	Residential	608194	4853557	1.5	12	23	34	0	-
RE511500_068	Residential	608225	4853560	1.5	12	23	35	0	-
RE511500_069	Residential	608214	4853558	1.5	12	23	35	0	-
RE511500_070	Residential	608185	4853558	1.5	12	23	34	0	-
RE511500_071	Residential	608131	4853676	1.5	9	23	32	0	-
RE511500_072	Residential	608217	4853606	1.5	10	23	33	0	-
RE511500_073	Residential	608173	4853670	1.5	10	23	33	0	-
RE511500_074	Residential	608147	4853647	1.5	10	23	33	0	-
RE511500_075	Residential	608204	4853630	1.5	11	23	33	0	-
RE511500_076	Residential	608156	4853693	1.5	9	23	31	0	-
RE511500_077	Residential	608189	4853647	1.5	11	23	33	0	-
RE511500_078	Residential	608184	4853655	1.5	11	23	33	0	-
RE511500_079	Residential	608158	4853604	1.5	12	23	34	0	-
RE511500_080	Residential	608149	4853688	1.5	9	23	31	0	-
RE511500_081	Residential	608226	4853615	1.5	10	23	33	0	-
RE511500_082	Residential	608167	4853604	1.5	11	23	34	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_083	Residential	608195	4853640	1.5	11	23	33	0	-
RE511500_084	Residential	608195	4853604	1.5	11	23	33	0	-
RE511500_085	Residential	608154	4853638	1.5	11	23	33	0	-
RE511500_086	Residential	608120	4853668	1.5	9	23	32	0	-
RE511500_087	Residential	608176	4853604	1.5	11	23	34	0	-
RE511500_088	Residential	608168	4853677	1.5	10	23	32	0	-
RE511500_089	Residential	608140	4853682	1.5	9	23	31	0	-
RE511500_090	Residential	608205	4853603	1.5	11	23	33	0	-
RE511500_091	Residential	608185	4853604	1.5	11	23	34	0	-
RE511500_092	Residential	608141	4853656	1.5	10	23	33	0	-
RE511500_093	Residential	608244	4853567	1.5	12	23	34	0	-
RE511500_094	Residential	608204	4853557	1.5	12	23	34	0	-
RE511500_095	Residential	608304	4853570	1.5	12	23	35	0	-
RE511500_096	Residential	608315	4853555	1.5	12	23	35	0	-
RE511500_097	Residential	608258	4853635	1.5	10	23	32	0	-
RE511500_098	Residential	608248	4853649	1.5	10	23	32	0	-
RE511500_099	Residential	608222	4853686	1.5	10	23	32	0	-
RE511500_100	Residential	608216	4853693	1.5	10	23	32	0	-
RE511500_101	Residential	608269	4853620	1.5	9	23	32	0	-
RE511500_102	Residential	608201	4853714	1.5	9	23	31	0	-
RE511500_103	Residential	608309	4853563	1.5	12	23	35	0	-
RE511500_104	Residential	608299	4853577	1.5	12	23	34	0	-
RE511500_105	Residential	608279	4853605	1.5	10	23	33	0	-
RE511500_106	Residential	608253	4853642	1.5	10	23	32	0	-
RE511500_107	Residential	608212	4853700	1.5	9	23	32	0	-
RE511500_108	Residential	608294	4853584	1.5	12	23	34	0	-
RE511500_109	Residential	608166	4853699	1.5	9	23	31	0	-
RE511500_110	Residential	608179	4853662	1.5	10	23	33	0	-
RE511500_111	Residential	608443	4853510	1.5	13	23	35	0	-
RE511500_112	Residential	608420	4853557	1.5	11	23	34	0	-
RE511500_113	Residential	608424	4853551	1.5	12	23	34	0	-
RE511500_114	Residential	608473	4853532	1.5	12	23	34	0	-
RE511500_115	Residential	608470	4853541	1.5	12	23	34	0	-
RE511500_116	Residential	608448	4853484	1.5	15	23	38	0	-
RE511500_117	Residential	608445	4853501	1.5	14	23	36	0	-
RE511500_118	Residential	608446	4853493	1.5	14	23	37	0	-
RE511500_119	Residential	608441	4853518	1.5	12	23	35	0	-
RE511500_120	Residential	608476	4853524	1.5	12	23	34	0	-
RE511500_121	Residential	608433	4853537	1.5	12	23	35	0	-
RE511500_122	Residential	608208	4853851	1.5	6	23	29	0	-
RE511500_123	Residential	608438	4853524	1.5	12	23	35	0	-
RE511500_124	Residential	608429	4853545	1.5	12	23	34	0	-
RE511500_125	Residential	608466	4853549	1.5	11	23	34	0	-
RE511500_126	Residential	608478	4853514	1.5	12	23	35	0	-
RE511500_127	Residential	608452	4853573	1.5	11	23	34	0	-
RE511500_128	Residential	608241	4853804	1.5	7	23	29	0	-
RE511500_129	Residential	608215	4853841	1.5	6	23	29	0	-
RE511500_130	Residential	608236	4853811	1.5	7	23	29	0	-
RE511500_131	Residential	608185	4853882	1.5	6	23	28	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_132	Residential	607957	4853868	1.5	6	23	29	0	-
RE511500_133	Residential	607944	4853897	1.5	6	23	28	0	-
RE511500_134	Residential	607975	4853918	1.5	6	23	28	0	-
RE511500_135	Residential	608340	4853670	1.5	8	23	31	0	-
RE511500_136	Residential	608276	4853761	1.5	8	23	31	0	-
RE511500_137	Residential	608272	4853766	1.5	8	23	31	0	-
RE511500_138	Residential	608268	4853772	1.5	8	23	30	0	-
RE511500_139	Residential	608263	4853780	1.5	8	23	30	0	-
RE511500_140	Residential	608331	4853682	1.5	8	23	31	0	-
RE511500_141	Residential	608237	4853665	1.5	10	23	33	0	-
RE511500_142	Residential	608152	4853626	1.5	11	23	34	0	-
RE511500_143	Residential	608232	4853514	1.5	14	23	37	0	-
RE511500_144	Residential	608223	4853515	1.5	14	23	37	0	-
RE511500_145	Residential	608246	4853517	1.5	14	23	36	0	-
RE511500_146	Residential	608253	4853520	1.5	14	23	36	0	-
RE511500_147	Residential	608269	4853526	1.5	13	23	36	0	-
RE511500_148	Residential	608274	4853530	1.5	13	23	36	0	-
RE511500_149	Residential	608264	4853523	1.5	14	23	36	0	-
RE511500_150	Residential	608279	4853533	1.5	13	23	36	0	-
RE511500_151	Residential	608336	4853591	1.5	11	23	34	0	-
RE511500_152	Residential	608339	4853585	1.5	11	23	34	0	-
RE511500_153	Residential	608328	4853602	1.5	11	23	34	0	-
RE511500_154	Residential	608332	4853597	1.5	11	23	34	0	-
RE511500_155	Residential	608344	4853578	1.5	11	23	34	0	-
RE511500_156	Residential	608324	4853608	1.5	11	23	33	0	-
RE511500_157	Residential	608318	4853615	1.5	10	23	33	0	-
RE511500_158	Residential	608314	4853620	1.5	10	23	33	0	-
RE511500_159	Residential	608309	4853630	1.5	9	23	32	0	-
RE511500_160	Residential	608305	4853636	1.5	9	23	32	0	-
RE511500_161	Residential	608299	4853644	1.5	9	23	31	0	-
RE511500_162	Residential	608295	4853650	1.5	9	23	31	0	-
RE511500_163	Residential	608287	4853661	1.5	9	23	32	0	-
RE511500_164	Residential	608291	4853655	1.5	9	23	32	0	-
RE511500_165	Residential	608282	4853668	1.5	9	23	32	0	-
RE511500_166	Residential	608278	4853674	1.5	9	23	32	0	-
RE511500_167	Residential	608274	4853679	1.5	9	23	32	0	-
RE511500_168	Residential	608269	4853685	1.5	9	23	32	0	-
RE511500_169	Residential	608264	4853692	1.5	10	23	32	0	-
RE511500_170	Residential	608259	4853699	1.5	9	23	32	0	-
RE511500_171	Residential	608254	4853706	1.5	9	23	32	0	-
RE511500_172	Residential	608250	4853713	1.5	9	23	32	0	-
RE511500_173	Residential	608240	4853728	1.5	9	23	31	0	-
RE511500_174	Residential	608236	4853733	1.5	9	23	31	0	-
RE511500_175	Residential	608231	4853738	1.5	8	23	31	0	-
RE511500_176	Residential	608228	4853744	1.5	8	23	31	0	-
RE511500_177	Residential	608245	4853721	1.5	9	23	32	0	-
RE511500_178	Residential	608223	4853750	1.5	8	23	30	0	-
RE511500_179	Residential	608375	4853620	1.5	10	23	33	0	-
RE511500_180	Residential	608371	4853626	1.5	10	23	33	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_181	Residential	608378	4853615	1.5	11	23	33	0	-
RE511500_182	Residential	608382	4853610	1.5	11	23	33	0	-
RE511500_183	Residential	608368	4853631	1.5	10	23	33	0	-
RE511500_184	Residential	607933	4853946	1.5	6	23	28	0	-
RE511500_185	Residential	607940	4853951	1.5	5	23	28	0	-
RE511500_186	Residential	607948	4853956	1.5	5	23	28	0	-
RE511500_187	Residential	607955	4853962	1.5	5	23	28	0	-
RE511500_188	Residential	607963	4853967	1.5	5	23	28	0	-
RE511500_189	Residential	607972	4853973	1.5	5	23	28	0	-
RE511500_190	Residential	607887	4853960	1.5	6	23	28	0	-
RE511500_191	Residential	607893	4853965	1.5	6	23	28	0	-
RE511500_192	Residential	607899	4853969	1.5	6	23	28	0	-
RE511500_193	Residential	607904	4853973	1.5	5	23	28	0	-
RE511500_194	Residential	607910	4853977	1.5	5	23	28	0	-
RE511500_195	Residential	607916	4853981	1.5	5	23	28	0	-
RE511500_196	Residential	607923	4853986	1.5	5	23	28	0	-
RE511500_197	Residential	607928	4853990	1.5	5	23	28	0	-
RE511500_198	Residential	607933	4853993	1.5	5	23	28	0	-
RE511500_199	Residential	607938	4853997	1.5	5	23	28	0	-
RE511500_200	Residential	607943	4854000	1.5	5	23	28	0	-
RE511500_201	Residential	607948	4854004	1.5	5	23	28	0	-
RE511500_202	Residential	608047	4853932	1.5	5	23	28	0	-
RE511500_203	Residential	608042	4853940	1.5	5	23	28	0	-
RE511500_204	Residential	608036	4853947	1.5	5	23	28	0	-
RE511500_205	Residential	608031	4853955	1.5	5	23	28	0	-
RE511500_206	Residential	608026	4853962	1.5	5	23	28	0	-
RE511500_207	Residential	608021	4853969	1.5	5	23	28	0	-
RE511500_208	Residential	608016	4853976	1.5	5	23	28	0	-
RE511500_209	Residential	608011	4853983	1.5	5	23	28	0	-
RE511500_210	Residential	608006	4853990	1.5	5	23	28	0	-
RE511500_211	Residential	608001	4853997	1.5	5	23	28	0	-
RE511500_212	Residential	607995	4854005	1.5	5	23	28	0	-
RE511500_213	Residential	607990	4854012	1.5	5	23	28	0	-
RE511500_214	Residential	607985	4854020	1.5	5	23	27	0	-
RE511500_215	Residential	607979	4854029	1.5	5	23	27	0	-
RE511500_216	Residential	608085	4853947	1.5	5	23	28	0	-
RE511500_217	Residential	608081	4853952	1.5	5	23	28	0	-
RE511500_218	Residential	608077	4853958	1.5	5	23	28	0	-
RE511500_219	Residential	608074	4853962	1.5	5	23	28	0	-
RE511500_220	Residential	608069	4853969	1.5	5	23	28	0	-
RE511500_221	Residential	608065	4853974	1.5	5	23	28	0	-
RE511500_222	Residential	608062	4853978	1.5	5	23	28	0	-
RE511500_223	Residential	608058	4853984	1.5	5	23	28	0	-
RE511500_224	Residential	608053	4853991	1.5	5	23	28	0	-
RE511500_225	Residential	608049	4853997	1.5	5	23	28	0	-
RE511500_226	Residential	608043	4854006	1.5	5	23	28	0	-
RE511500_227	Residential	608040	4854011	1.5	5	23	28	0	-
RE511500_228	Residential	608034	4854019	1.5	5	23	27	0	-
RE511500_229	Residential	608029	4854025	1.5	5	23	27	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_230	Residential	608026	4854031	1.5	5	23	27	0	-
RE511500_231	Residential	608022	4854036	1.5	5	23	27	0	-
RE511500_232	Residential	608018	4854042	1.5	5	23	27	0	-
RE511500_233	Residential	608013	4854048	1.5	5	23	27	0	-
RE511500_234	Residential	608175	4853896	1.5	6	23	28	0	-
RE511500_235	Residential	608171	4853902	1.5	6	23	28	0	-
RE511500_236	Residential	608167	4853908	1.5	5	23	28	0	-
RE511500_237	Residential	608162	4853915	1.5	5	23	28	0	-
RE511500_238	Residential	608157	4853922	1.5	5	23	28	0	-
RE511500_239	Residential	608154	4853927	1.5	5	23	28	0	-
RE511500_240	Residential	608150	4853933	1.5	5	23	28	0	-
RE511500_241	Residential	608145	4853939	1.5	5	23	28	0	-
RE511500_242	Residential	608142	4853944	1.5	5	23	28	0	-
RE511500_243	Residential	608122	4853973	1.5	5	23	28	0	-
RE511500_244	Residential	608119	4853977	1.5	5	23	28	0	-
RE511500_245	Residential	608115	4853983	1.5	5	23	28	0	-
RE511500_246	Residential	608112	4853987	1.5	5	23	28	0	-
RE511500_247	Residential	608107	4853994	1.5	5	23	28	0	-
RE511500_259	Residential	607976	4854103	1.5	4	23	27	0	-
RE511500_260	Residential	607970	4854109	1.5	4	23	27	0	-
RE511500_261	Residential	607967	4854115	1.5	4	23	27	0	-
RE511500_262	Residential	607962	4854121	1.5	4	23	27	0	-
RE511500_263	Residential	607959	4854126	1.5	4	23	27	0	-
RE511500_264	Residential	607955	4854131	1.5	4	23	27	0	-
RE511500_265	Residential	607949	4854139	1.5	4	23	27	0	-
RE511500_266	Residential	607944	4854146	1.5	4	23	27	0	-
RE511500_267	Residential	607939	4854153	1.5	4	23	27	0	-
RE511500_268	Residential	607934	4854160	1.5	4	23	27	0	-
RE511500_269	Residential	607929	4854168	1.5	4	23	27	0	-
RE511500_270	Residential	607927	4854176	1.5	4	23	27	0	-
RE511500_288	Residential	607723	4854202	1.5	4	23	27	0	-
RE511500_289	Residential	607711	4854198	1.5	4	23	27	0	-
RE511500_313	Residential	607831	4854199	1.5	4	23	27	0	-
RE511500_314	Residential	607821	4854196	1.5	4	23	27	0	-
RE511500_315	Residential	607810	4854192	1.5	4	23	27	0	-
RE511500_316	Residential	607798	4854189	1.5	4	23	27	0	-
RE511500_317	Residential	607787	4854186	1.5	4	23	27	0	-
RE511500_318	Residential	607777	4854182	1.5	4	23	27	0	-
RE511500_319	Residential	607764	4854179	1.5	4	23	27	0	-
RE511500_320	Residential	607849	4854155	1.5	5	23	27	0	-
RE511500_321	Residential	607839	4854152	1.5	5	23	27	0	-
RE511500_322	Residential	607829	4854148	1.5	5	23	27	0	-
RE511500_323	Residential	607818	4854145	1.5	5	23	27	0	-
RE511500_324	Residential	607806	4854141	1.5	5	23	27	0	-
RE511500_325	Residential	607943	4854078	1.5	5	23	27	0	-
RE511500_326	Residential	607939	4854083	1.5	5	23	27	0	-
RE511500_327	Residential	607933	4854092	1.5	5	23	27	0	-
RE511500_328	Residential	607929	4854097	1.5	5	23	27	0	-
RE511500_329	Residential	607923	4854106	1.5	5	23	27	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_330	Residential	607919	4854112	1.5	4	23	27	0	-
RE511500_331	Residential	607913	4854119	1.5	4	23	27	0	-
RE511500_332	Residential	607907	4854127	1.5	4	23	27	0	-
RE511500_333	Residential	607902	4854135	1.5	4	23	27	0	-
RE511500_334	Residential	607897	4854142	1.5	4	23	27	0	-
RE511500_335	Residential	607892	4854151	1.5	4	23	27	0	-
RE511500_336	Residential	607888	4854158	1.5	4	23	27	0	-
RE511500_337	Residential	607885	4854168	1.5	4	23	27	0	-
RE511500_338	Residential	607883	4854174	1.5	4	23	27	0	-
RE511500_339	Residential	607733	4854170	1.5	5	23	27	0	-
RE511500_340	Residential	607810	4854078	1.5	5	23	28	0	-
RE511500_341	Residential	607805	4854085	1.5	5	23	28	0	-
RE511500_342	Residential	607798	4854096	1.5	5	23	28	0	-
RE511500_343	Residential	607794	4854107	1.5	5	23	27	0	-
RE511500_344	Residential	607790	4854118	1.5	5	23	27	0	-
RE511500_345	Residential	607788	4854129	1.5	5	23	27	0	-
RE511500_346	Residential	607785	4854141	1.5	5	23	27	0	-
RE511500_347	Residential	607825	4854044	1.5	5	23	28	0	-
RE511500_348	Residential	607832	4854049	1.5	5	23	28	0	-
RE511500_349	Residential	607840	4854054	1.5	5	23	28	0	-
RE511500_350	Residential	607846	4854059	1.5	5	23	28	0	-
RE511500_351	Residential	607853	4854064	1.5	5	23	28	0	-
RE511500_352	Residential	607861	4854068	1.5	5	23	28	0	-
RE511500_353	Residential	607868	4854074	1.5	5	23	28	0	-
RE511500_354	Residential	607874	4854078	1.5	5	23	27	0	-
RE511500_355	Residential	607881	4854083	1.5	5	23	27	0	-
RE511500_356	Residential	607889	4854088	1.5	5	23	27	0	-
RE511500_357	Residential	607850	4854014	1.5	5	23	28	0	-
RE511500_358	Residential	607857	4854018	1.5	5	23	28	0	-
RE511500_359	Residential	607863	4854023	1.5	5	23	28	0	-
RE511500_360	Residential	607869	4854027	1.5	5	23	28	0	-
RE511500_361	Residential	607874	4854030	1.5	5	23	28	0	-
RE511500_362	Residential	607880	4854034	1.5	5	23	28	0	-
RE511500_363	Residential	607885	4854039	1.5	5	23	28	0	-
RE511500_364	Residential	607891	4854043	1.5	5	23	28	0	-
RE511500_365	Residential	607895	4854047	1.5	5	23	28	0	-
RE511500_366	Residential	607900	4854050	1.5	5	23	28	0	-
RE511500_367	Residential	607906	4854054	1.5	5	23	27	0	-
RE511500_368	Residential	607911	4854057	1.5	5	23	27	0	-
RE511500_369	Residential	607823	4854097	1.5	5	23	27	0	-
RE511500_370	Residential	607831	4854103	1.5	5	23	27	0	-
RE511500_371	Residential	607839	4854108	1.5	5	23	27	0	-
RE511500_372	Residential	607847	4854113	1.5	5	23	27	0	-
RE511500_373	Residential	607854	4854118	1.5	5	23	27	0	-
RE511500_374	Residential	607864	4854124	1.5	5	23	27	0	-
RE511500_376	Residential	607755	4854206	1.5	4	23	27	0	-
RE511600_001	Residential	608413	4853627	1.5	10	23	33	0	-
RE511600_002	Residential	608350	4853717	1.5	8	23	31	0	-
RE511600_003	Residential	608360	4853703	1.5	8	23	31	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511600_004	Residential	608309	4853775	1.5	8	23	31	0	-
RE511600_005	Residential	608274	4853824	1.5	7	23	29	0	-
RE511600_006	Residential	608263	4853840	1.5	6	23	29	0	-
RE511600_007	Residential	608430	4853685	1.5	9	23	31	0	-
RE511600_008	Residential	608384	4853750	1.5	8	23	31	0	-
RE511600_009	Residential	608443	4853666	1.5	9	23	32	0	-
RE511600_010	Residential	608451	4853655	1.5	10	23	32	0	-
RE511600_011	Residential	608399	4853728	1.5	8	23	30	0	-
RE511600_012	Residential	608407	4853717	1.5	7	23	30	0	-
RE511600_013	Residential	608423	4853695	1.5	8	23	31	0	-
RE511600_014	Residential	608392	4853739	1.5	8	23	30	0	-
RE511600_015	Residential	608437	4853676	1.5	9	23	32	0	-
RE511600_016	Residential	608415	4853706	1.5	8	23	30	0	-
RE511600_017	Residential	608253	4853854	1.5	6	23	29	0	-
RE511600_018	Residential	608527	4853503	1.5	13	23	35	0	-
RE511600_019	Residential	608519	4853540	1.5	11	23	33	0	-
RE511600_020	Residential	608517	4853549	1.5	11	23	33	0	-
RE511600_021	Residential	608473	4853624	1.5	10	23	32	0	-
RE511600_022	Residential	608509	4853566	1.5	11	23	33	0	-
RE511600_023	Residential	608496	4853592	1.5	10	23	33	0	-
RE511600_024	Residential	608441	4853588	1.5	10	23	33	0	-
RE511600_025	Residential	608524	4853521	1.5	12	23	34	0	-
RE511600_026	Residential	608490	4853600	1.5	10	23	33	0	-
RE511600_027	Residential	608513	4853558	1.5	11	23	33	0	-
RE511600_028	Residential	608407	4853636	1.5	10	23	33	0	-
RE511600_029	Residential	608402	4853644	1.5	10	23	32	0	-
RE511600_030	Residential	608396	4853651	1.5	10	23	32	0	-
RE511600_031	Residential	608391	4853659	1.5	9	23	32	0	-
RE511600_032	Residential	608268	4853833	1.5	6	23	29	0	-
RE511600_033	Residential	608258	4853847	1.5	6	23	29	0	-
RE511600_034	Residential	608526	4853512	1.5	12	23	35	0	-
RE511600_035	Residential	608365	4853764	1.5	8	23	31	0	-
RE511600_036	Residential	608501	4853584	1.5	11	23	33	0	-
RE511600_037	Residential	608485	4853608	1.5	10	23	32	0	-
RE511600_038	Residential	608447	4853580	1.5	11	23	33	0	-
RE511600_039	Residential	608480	4853615	1.5	10	23	32	0	-
RE511600_040	Residential	608522	4853530	1.5	11	23	34	0	-
RE511600_041	Residential	608380	4853674	1.5	8	23	31	0	-
RE511600_042	Residential	608375	4853682	1.5	8	23	31	0	-
RE511600_043	Residential	608355	4853710	1.5	8	23	31	0	-
RE511600_044	Residential	608370	4853689	1.5	8	23	30	0	-
RE511600_045	Residential	608365	4853696	1.5	8	23	31	0	-
RE511600_046	Residential	608528	4853482	1.5	14	23	37	0	-
RE511600_047	Residential	608505	4853575	1.5	11	23	33	0	-
RE511600_048	Residential	608435	4853597	1.5	10	23	33	0	-
RE511600_049	Residential	608528	4853494	1.5	13	23	36	0	-
RE511600_050	Residential	608345	4853723	1.5	8	23	31	0	-
RE511600_051	Residential	608341	4853730	1.5	9	23	31	0	-
RE511600_052	Residential	608336	4853737	1.5	9	23	31	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511600_053	Residential	608330	4853745	1.5	9	23	31	0	-
RE511600_054	Residential	608325	4853752	1.5	9	23	31	0	-
RE511600_055	Residential	608320	4853760	1.5	9	23	31	0	-
RE511600_056	Residential	608315	4853767	1.5	8	23	31	0	-
RE511600_057	Residential	608304	4853782	1.5	8	23	31	0	-
RE511600_058	Residential	608299	4853790	1.5	8	23	30	0	-
RE511600_059	Residential	608292	4853799	1.5	7	23	30	0	-
RE511600_060	Residential	608386	4853667	1.5	9	23	31	0	-
RE511600_061	Residential	608377	4853772	1.5	8	23	31	0	-
RE511600_062	Residential	608387	4853779	1.5	8	23	31	0	-
RE511600_085	Residential	608248	4853972	1.5	5	23	28	0	-
RE511600_086	Residential	608239	4853965	1.5	5	23	28	0	-
RE511600_087	Residential	608227	4853958	1.5	5	23	28	0	-
RE511600_091	Residential	608350	4853851	1.5	7	23	29	0	-
RE511600_092	Residential	608343	4853862	1.5	7	23	29	0	-
RE511600_093	Residential	608335	4853872	1.5	6	23	29	0	-
RE511600_094	Residential	608327	4853883	1.5	6	23	29	0	-
RE511600_095	Residential	608320	4853894	1.5	6	23	28	0	-
RE511600_096	Residential	608312	4853905	1.5	6	23	28	0	-
RE511600_097	Residential	608305	4853915	1.5	6	23	28	0	-
RE511600_098	Residential	608298	4853925	1.5	6	23	28	0	-
RE511600_099	Residential	608291	4853934	1.5	5	23	28	0	-
RE511600_100	Residential	608283	4853945	1.5	5	23	28	0	-
RE511600_101	Residential	608348	4853801	1.5	8	23	30	0	-
RE511600_102	Residential	608342	4853810	1.5	8	23	30	0	-
RE511600_103	Residential	608336	4853817	1.5	8	23	30	0	-
RE511600_104	Residential	608331	4853825	1.5	7	23	30	0	-
RE511600_105	Residential	608325	4853833	1.5	7	23	30	0	-
RE511600_106	Residential	608319	4853842	1.5	7	23	29	0	-
RE511600_107	Residential	608312	4853852	1.5	6	23	29	0	-
RE511600_108	Residential	608305	4853861	1.5	6	23	29	0	-
RE511600_109	Residential	608299	4853870	1.5	6	23	29	0	-
RE511600_110	Residential	608292	4853880	1.5	6	23	29	0	-
RE511600_111	Residential	608285	4853889	1.5	6	23	28	0	-
RE511600_112	Residential	608279	4853898	1.5	6	23	28	0	-
RE511600_113	Residential	608274	4853905	1.5	6	23	28	0	-
RE511600_114	Residential	608269	4853913	1.5	6	23	28	0	-
RE511600_115	Residential	608257	4853930	1.5	5	23	28	0	-
RE511600_116	Residential	608248	4853861	1.5	6	23	29	0	-
RE511600_117	Residential	608243	4853868	1.5	6	23	29	0	-
RE511600_118	Residential	608238	4853875	1.5	6	23	28	0	-
RE511600_119	Residential	608233	4853882	1.5	6	23	28	0	-
RE511600_120	Residential	608228	4853889	1.5	6	23	28	0	-
RE511600_121	Residential	608223	4853896	1.5	6	23	28	0	-
RE511600_122	Residential	608218	4853903	1.5	6	23	28	0	-
RE511600_123	Residential	608213	4853910	1.5	6	23	28	0	-
RE511600_124	Residential	608208	4853917	1.5	5	23	28	0	-
RE511600_125	Residential	608204	4853924	1.5	5	23	28	0	-
RE511600_126	Residential	608199	4853931	1.5	5	23	28	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511600_127	Residential	608194	4853938	1.5	5	23	28	0	-
RE511600_128	Residential	608189	4853944	1.5	5	23	28	0	-
RE511600_129	Residential	608184	4853951	1.5	5	23	28	0	-
RE511600_130	Residential	608179	4853958	1.5	5	23	28	0	-
RE511600_131	Residential	608173	4853967	1.5	5	23	28	0	-
RE511600_132	Residential	608210	4853982	1.5	5	23	27	0	-
RE511600_133	Residential	608221	4853990	1.5	5	23	27	0	-
RE511600_134	Residential	608230	4853997	1.5	5	23	27	0	-
RE511600_142	Residential	608180	4854022	1.5	5	23	27	0	-
RE511600_143	Residential	608189	4854028	1.5	5	23	27	0	-
RE511600_144	Residential	608196	4854033	1.5	5	23	27	0	-
RE511600_163	Residential	608170	4854054	1.5	5	23	27	0	-
RE511600_164	Residential	608162	4854048	1.5	5	23	27	0	-
RE511600_185	Residential	608102	4854000	1.5	5	23	28	0	-
RE511600_186	Residential	608099	4854005	1.5	5	23	28	0	-
RE511600_187	Residential	608096	4854009	1.5	5	23	28	0	-
RE511600_188	Residential	608090	4854017	1.5	5	23	27	0	-
RE511600_189	Residential	608087	4854022	1.5	5	23	27	0	-
RE511600_190	Residential	608081	4854032	1.5	5	23	27	0	-
RE511600_191	Residential	608077	4854037	1.5	5	23	27	0	-
RE511600_192	Residential	608073	4854045	1.5	5	23	27	0	-
RE511600_193	Residential	608068	4854051	1.5	5	23	27	0	-
RE511600_194	Residential	608064	4854057	1.5	5	23	27	0	-
RE511600_195	Residential	608060	4854062	1.5	5	23	27	0	-
RE511600_196	Residential	608056	4854069	1.5	5	23	27	0	-
RE511600_197	Residential	608053	4854075	1.5	5	23	27	0	-
RE511600_198	Residential	608154	4853993	1.5	5	23	28	0	-
RE511600_199	Residential	608148	4854003	1.5	5	23	28	0	-
RE511600_200	Residential	608142	4854010	1.5	5	23	28	0	-
RE511600_201	Residential	608137	4854018	1.5	5	23	27	0	-
RE511600_202	Residential	608132	4854025	1.5	5	23	27	0	-
RE511600_203	Residential	608126	4854033	1.5	5	23	27	0	-
RE511600_204	Residential	608121	4854040	1.5	5	23	27	0	-
RE511600_205	Residential	608116	4854047	1.5	5	23	27	0	-
RE511600_206	Residential	608111	4854054	1.5	5	23	27	0	-
RE511600_207	Residential	608107	4854061	1.5	5	23	27	0	-
RE511600_208	Residential	608102	4854068	1.5	5	23	27	0	-
RE511600_209	Residential	608097	4854075	1.5	5	23	27	0	-
RE511600_210	Residential	608091	4854082	1.5	5	23	27	0	-
RE511600_211	Residential	608086	4854090	1.5	5	23	27	0	-
RE511600_212	Residential	608080	4854098	1.5	4	23	27	0	-
RE511600_228	Residential	608507	4853702	1.5	9	23	31	0	-
RE511600_242	Residential	608263	4853920	1.5	6	23	28	0	-
RE511800_001	Residential	607134	4855697	1.5	4	23	26	0	-
RE512000_002	Residential	607206	4855951	1.5	9	23	31	0	-
RE512000_003	Residential	607187	4856027	1.5	9	23	32	0	-
RE512100_001	Residential	607265	4856058	1.5	9	23	31	0	-
RE512100_002	Residential	607248	4856119	1.5	9	23	32	0	-
RE512200_001	Residential	607241	4856162	1.5	9	23	31	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE512200_002	Residential	607123	4856318	1.5	9	23	31	0	-
RE512200_003	Residential	607102	4856358	1.5	8	23	30	0	-
RE512300_001	Residential	607221	4856317	1.5	8	23	30	0	-
RE512400_001	Residential	607226	4856438	1.5	6	23	29	0	-
RE514400_001	Residential	608610	4857694	1.5	5	23	27	0	-
RE514400_003	Residential	608876	4857474	1.5	4	23	27	0	-
RE514400_006	Residential	608883	4857432	1.5	4	23	27	0	-
RE514400_007	Residential	608877	4857453	1.5	4	23	27	0	-
RE514500_001	Residential	608674	4857705	1.5	5	23	28	0	-
RE514500_002	Residential	608701	4857709	1.5	5	23	28	0	-
RE514500_003	Residential	608738	4857729	1.5	6	23	28	0	-
RE514500_006	Residential	608958	4857441	1.5	5	23	27	0	-
RE514500_007	Residential	608953	4857458	1.5	5	23	27	0	-
RE514500_008	Residential	608872	4857492	1.5	4	23	27	0	-
RE514500_009	Residential	608859	4857508	1.5	5	23	27	0	-
RE514500_010	Residential	608849	4857526	1.5	5	23	27	0	-
RE514600_001	Residential	608758	4857755	1.5	6	23	29	0	-
RE514600_002	Residential	608949	4857475	1.5	5	23	28	0	-
RE514600_003	Residential	608946	4857496	1.5	5	23	28	0	-
RE514600_004	Residential	608942	4857512	1.5	5	23	28	0	-
RE514600_005	Residential	608936	4857529	1.5	6	23	28	0	-
RE514600_006	Residential	608930	4857551	1.5	6	23	28	0	-
RE514700_001	Residential	608965	4857617	1.5	7	23	30	0	-
RE514800_001	Residential	608884	4857846	1.5	12	23	35	0	-
RE515000_001	Residential	608971	4857986	1.5	13	23	36	0	-
RE515100_001	Residential	609037	4857912	1.5	8	23	31	0	-
RE515200_001	Residential	609158	4857928	1.5	7	23	29	0	-
RE515200_002	Residential	609081	4857926	1.5	7	23	30	0	-
RE515200_003	Residential	608988	4858132	1.5	8	23	30	0	-
RE515300_001	Residential	609255	4857942	1.5	6	23	29	0	-
RE515300_002	Residential	609091	4858212	1.5	4	23	27	0	-
RE515300_003	Residential	608992	4858402	1.5	5	23	28	0	-
RE516200_001	Residential	609863	4858591	1.5	2	23	25	0	-
RE517200_001	Residential	610865	4858953	1.5	7	23	30	0	-
RE517200_002	Residential	610873	4858915	1.5	7	23	30	0	-
RE517200_003	Residential	610988	4858848	1.5	4	23	26	0	-
RE517400_001	Residential	611124	4858907	1.5	3	23	25	0	-
RE519100_001	Residential	612653	4859633	1.5	3	23	26	0	-
RE519500_001	Residential	612843	4860236	1.5	4	23	27	0	-
RE519500_002	Residential	612758	4860312	1.5	6	23	29	0	-
RE521400_001	Residential	614549	4860340	1.5	6	23	28	0	-
RE521600_001	Park and Conservation	615842	4859006	1.5	14	23	37	0	-
RE521600_002	Residential	614759	4860153	1.5	8	23	30	0	-
RE521600_003	Residential	614783	4860430	1.5	10	23	33	0	-
RE521600_004	Residential	615884	4859578	1.5	27	23	50	0	-
RE521600_005	Residential	615805	4859615	1.5	18	23	41	0	-
RE521600_006	Residential	615779	4859578	1.5	16	23	39	0	-
RE521600_007	Residential	615741	4859736	1.5	16	23	38	0	-
RE521600_008	Residential	615516	4859929	1.5	15	23	37	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_009	Residential	615671	4860025	1.5	18	23	40	0	-
RE521600_010	Residential	616259	4860149	1.5	12	23	35	0	-
RE521600_011	Residential	616419	4860214	1.5	9	23	32	0	-
RE521600_012	Residential	615172	4860341	1.5	9	23	31	0	-
RE521600_013	Residential	615849	4858301	1.5	9	23	32	0	-
RE521600_017	Residential	614954	4860122	1.5	7	23	30	0	-
RE521600_018	Residential	615792	4858087	1.5	8	23	31	0	-
RE521600_019	Residential	615658	4858566	1.5	9	23	31	0	-
RE521600_020	Residential	615792	4858189	1.5	9	23	31	0	-
RE521600_023	Residential	615889	4858330	1.5	11	23	33	0	-
RE521600_026	Residential	615700	4858499	1.5	9	23	31	0	-
RE521600_028	Residential	615797	4858289	1.5	9	23	32	0	-
RE521600_030	Residential	615749	4858368	1.5	9	23	31	0	-
RE521600_032	Residential	615905	4858207	1.5	10	23	33	0	-
RE521600_035	Residential	615746	4858159	1.5	8	23	31	0	-
RE521600_036	Residential	615704	4858558	1.5	9	23	32	0	-
RE521600_037	Residential	615871	4858014	1.5	9	23	31	0	-
RE521600_038	Residential	615876	4858126	1.5	9	23	32	0	-
RE521600_039	Residential	615808	4858385	1.5	9	23	32	0	-
RE521600_041	Residential	615837	4858114	1.5	9	23	31	0	-
RE521600_043	Residential	615749	4858276	1.5	8	23	31	0	-
RE521600_044	Residential	615845	4858206	1.5	9	23	32	0	-
RE521600_045	Residential	615931	4858159	1.5	10	23	33	0	-
RE521600_046	Residential	615948	4858081	1.5	10	23	33	0	-
RE521600_047	Residential	616722	4858027	1.5	6	23	29	0	-
RE521600_048	Residential	616724	4858016	1.5	6	23	29	0	-
RE521600_049	Residential	616727	4858005	1.5	6	23	29	0	-
RE521600_050	Residential	616685	4857961	1.5	7	23	29	0	-
RE521600_051	Residential	616692	4857982	1.5	7	23	29	0	-
RE521600_052	Residential	616692	4857993	1.5	7	23	29	0	-
RE521600_053	Residential	616690	4858005	1.5	7	23	29	0	-
RE521600_054	Residential	616682	4858015	1.5	7	23	29	0	-
RE521600_055	Residential	616628	4857990	1.5	7	23	30	0	-
RE521600_056	Residential	616631	4857979	1.5	7	23	30	0	-
RE521600_057	Residential	616637	4857970	1.5	7	23	30	0	-
RE521600_058	Residential	616642	4857962	1.5	7	23	30	0	-
RE521600_059	Residential	616645	4857951	1.5	7	23	30	0	-
RE521600_060	Residential	616617	4857954	1.5	7	23	30	0	-
RE521600_061	Residential	616605	4857951	1.5	8	23	30	0	-
RE521600_062	Residential	616591	4857946	1.5	8	23	30	0	-
RE521600_063	Residential	616581	4857941	1.5	8	23	31	0	-
RE521600_064	Residential	616570	4857932	1.5	8	23	31	0	-
RE521600_065	Residential	616562	4857926	1.5	8	23	31	0	-
RE521600_066	Residential	616551	4857917	1.5	8	23	31	0	-
RE521600_067	Residential	616541	4857910	1.5	9	23	31	0	-
RE521600_068	Residential	616532	4857900	1.5	9	23	31	0	-
RE521600_069	Residential	616527	4857889	1.5	9	23	32	0	-
RE521600_070	Residential	616522	4857875	1.5	9	23	32	0	-
RE521600_071	Residential	616520	4857863	1.5	9	23	32	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_072	Residential	616516	4857852	1.5	9	23	32	0	-
RE521600_073	Residential	616511	4857839	1.5	9	23	32	0	-
RE521600_074	Residential	616508	4857827	1.5	9	23	32	0	-
RE521600_075	Residential	616510	4857818	1.5	9	23	32	0	-
RE521600_076	Residential	616566	4857851	1.5	8	23	30	0	-
RE521600_077	Residential	616573	4857861	1.5	8	23	30	0	-
RE521600_078	Residential	616578	4857871	1.5	8	23	30	0	-
RE521600_079	Residential	616586	4857883	1.5	8	23	30	0	-
RE521600_080	Residential	616597	4857890	1.5	8	23	30	0	-
RE521600_081	Residential	616609	4857897	1.5	8	23	30	0	-
RE521600_082	Residential	616621	4857902	1.5	7	23	30	0	-
RE521600_083	Residential	616646	4857916	1.5	7	23	30	0	-
RE521600_084	Residential	616072	4857806	1.5	12	23	35	0	-
RE521600_085	Residential	616075	4857794	1.5	12	23	34	0	-
RE521600_086	Residential	616095	4857778	1.5	12	23	35	0	-
RE521600_087	Residential	616097	4857766	1.5	12	23	35	0	-
RE521600_088	Residential	616098	4857755	1.5	12	23	35	0	-
RE521600_089	Residential	616192	4857944	1.5	23	23	46	0	-
RE521600_090	Residential	615423	4860137	1.5	12	23	34	0	-
RW110000_001	Residential	595952	4825790	1.5	17	23	40	0	-
RW110000_002	Residential	595454	4825807	1.5	26	23	49	0	-
RW110000_008	Residential	594041	4825166	1.5	29	23	51	1	0.1%
RW110000_009	Residential	594096	4825191	1.5	31	23	54	4	0.2%
RW110000_010	Residential	594523	4825688	1.5	19	23	41	0	-
RW110000_011	Residential	595159	4826252	1.5	23	23	45	0	-
RW110000_012	Residential	595437	4826548	1.5	25	23	48	0	-
RW110000_013	Residential	595321	4826744	1.5	26	23	49	0	-
RW110000_014	Residential	595112	4826651	1.5	32	23	55	2	0.1%
RW110000_015	Residential	595155	4826706	1.5	34	23	57	2	0.1%
RW110000_016	Residential	595166	4826855	1.5	36	23	58	1	0.1%
RW110000_017	Residential	595209	4826815	1.5	40	23	63	3	0.2%
RW110000_018	Residential	594653	4825844	1.5	19	23	41	0	-
RW110000_019	Residential	595416	4826834	1.5	26	23	48	0	-
RW110000_020	Residential	595560	4825534	1.5	18	23	41	0	-
RW110000_021	Residential	597393	4824513	1.5	19	23	41	0	-
RW110000_022	Residential	594899	4824668	1.5	22	23	45	0	-
RW110000_023	Residential	594655	4824528	1.5	28	23	51	1	0.1%
RW110000_024	Residential	595310	4826113	1.5	39	23	62	9	0.5%
RW110100_001	Residential	595323	4827011	1.5	30	23	52	1	0.1%
RW112100_001	Residential	594926	4829061	1.5	11	23	33	0	-
RW112100_002	Residential	594880	4829107	1.5	10	23	33	0	-
RW112100_003	Residential	594856	4829138	1.5	11	23	33	0	-
RW112200_001	Residential	594826	4829169	1.5	10	23	33	0	-
RW112300_001	Residential	594544	4829356	1.5	8	23	31	0	-
RW112300_002	Residential	594555	4829392	1.5	9	23	31	0	-
RW112300_003	Residential	594737	4829363	1.5	14	23	37	0	-
RW112400_001	Residential	594707	4829399	1.5	14	23	36	0	-
RW112400_002	Residential	594683	4829425	1.5	14	23	36	0	-
RW112400_003	Residential	594663	4829470	1.5	12	23	35	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW112500_001	Residential	594652	4829522	1.5	10	23	33	0	-
RW112500_002	Residential	594587	4829561	1.5	10	23	33	0	-
RW112600_001	Residential	594537	4829618	1.5	10	23	32	0	-
RW113300_001	Residential	595127	4830221	1.5	6	23	28	0	-
RW113700_001	Residential	594940	4830647	1.5	5	23	28	0	-
RW210600_001	Residential	594968	4831278	1.5	10	23	33	0	-
RW210600_002	Residential	594854	4831236	1.5	14	23	36	0	-
RW210700_001	Residential	594784	4831216	1.5	19	23	41	0	-
RW210700_002	Residential	594835	4831316	1.5	10	23	32	0	-
RW210700_003	Residential	595003	4831319	1.5	10	23	33	0	-
RW210800_001	Residential	594396	4831184	1.5	5	23	28	0	-
RW210800_002	Residential	594871	4831353	1.5	9	23	31	0	-
RW210800_003	Residential	594900	4831384	1.5	9	23	31	0	-
RW210800_004	Residential	594906	4831419	1.5	8	23	31	0	-
RW210900_001	Residential	594700	4831386	1.5	10	23	32	0	-
RW211000_001	Residential	594519	4831395	1.5	9	23	32	0	-
RW213300_001	Residential	594131	4833825	1.5	12	23	34	0	-
RW213500_001	Residential	594089	4834002	1.5	8	23	31	0	-
RW213500_002	Residential	593987	4833921	1.5	9	23	32	0	-
RW213500_003	Residential	594063	4834025	1.5	8	23	31	0	-
RW213900_001	Residential	593680	4834239	1.5	13	23	36	0	-
RW213900_002	Residential	593146	4833948	1.5	19	23	42	0	-
RW213900_003	Residential	593108	4833915	1.5	18	23	40	0	-
RW214000_001	Residential	593442	4834167	1.5	18	23	41	0	-
RW214000_002	Residential	593165	4834006	1.5	16	23	39	0	-
RW214200_001	Residential	593365	4834312	1.5	14	23	36	0	-
RW214200_002	Residential	593424	4834334	1.5	19	23	41	0	-
RW214200_003	Residential	593447	4834362	1.5	21	23	44	0	-
RW214200_004	Residential	593638	4834465	1.5	23	23	46	0	-
RW214400_001	Residential	593557	4834570	1.5	11	23	33	0	-
RW214400_002	Residential	593363	4834447	1.5	14	23	37	0	-
RW214500_001	Place of Worship	593180	4834366	1.5	8	23	31	0	-
RW214700_001	Residential	593316	4834759	1.5	9	23	31	0	-
RW214800_001	Residential	593246	4834900	1.5	7	23	29	0	-
RW214900_001	Place of Worship	593238	4834901	1.5	7	23	29	0	-
RW215500_001	Residential	592716	4835205	1.5	10	23	33	0	-
RW215500_002	Residential	592751	4835308	1.5	8	23	31	0	-
RW215500_003	Residential	592672	4835243	1.5	10	23	32	0	-
RW215600_001	Residential	592652	4835268	1.5	10	23	33	0	-
RW215600_002	Residential	592625	4835291	1.5	10	23	32	0	-
RW215600_003	Residential	592706	4835349	1.5	8	23	31	0	-
RW216000_001	Residential	592457	4835580	1.5	10	23	33	0	-
RW216300_001	Residential	592187	4835722	1.5	9	23	32	0	-
RW217300_001	Residential	590963	4835918	1.5	8	23	30	0	-
RW217300_003	Residential	590894	4835850	1.5	6	23	29	0	-
RW217400_001	Residential	591070	4836272	1.5	10	23	33	0	-
RW217400_003	Residential	590716	4835921	1.5	4	23	27	0	-
RW217600_001	Residential	591245	4836671	1.5	13	23	35	0	-
RW218600_001	Residential	589698	4836609	1.5	6	23	28	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RW218700_001	Residential	590211	4837285	1.5	12	23	35	0	-
RW219300_001	Residential	589994	4837866	1.5	8	23	31	0	-
RW219600_001	Residential	589829	4838199	1.5	9	23	31	0	-
RW219800_001	Residential	589708	4838309	1.5	9	23	32	0	-
RW219800_002	Residential	589678	4838339	1.5	9	23	32	0	-
RW219800_003	Residential	589655	4838356	1.5	9	23	32	0	-
RW219900_001	Residential	589628	4838393	1.5	9	23	31	0	-
RW219900_002	Residential	589604	4838419	1.5	9	23	31	0	-
RW219900_003	Residential	589574	4838446	1.5	9	23	31	0	-
RW219900_004	Residential	589348	4838304	1.5	6	23	28	0	-
RW220100_001	Residential	589237	4838630	1.5	8	23	31	0	-
RW220200_001	Residential	589212	4838657	1.5	8	23	31	0	-
RW220200_002	Residential	589193	4838697	1.5	7	23	30	0	-
RW221500_001	Residential	589630	4840149	1.5	13	23	36	0	-
RW221600_001	Residential	589645	4840276	1.5	12	23	35	0	-
RW221600_002	Residential	589618	4840305	1.5	12	23	34	0	-
RW221600_003	Residential	589575	4840340	1.5	13	23	35	0	-
RW221600_004	Residential	589489	4840296	1.5	14	23	36	0	-
RW221600_005	Residential	589463	4840313	1.5	13	23	36	0	-
RW221700_001	Residential	589372	4840554	1.5	9	23	32	0	-
RW222900_001	Residential	590172	4841526	1.5	14	23	37	0	-
RW223000_001	Residential	590405	4841464	1.5	10	23	33	0	-
RW223000_002	Residential	589855	4841856	1.5	6	23	29	0	-
RW223100_001	Residential	590119	4841763	1.5	9	23	32	0	-
RW223600_001	Residential	590319	4842303	1.5	7	23	30	0	-
RW223700_001	Residential	590349	4842328	1.5	7	23	30	0	-
RW223700_002	Residential	590387	4842378	1.5	8	23	31	0	-
RW223800_001	Residential	590421	4842402	1.5	9	23	32	0	-
RW223800_002	Residential	590456	4842433	1.5	11	23	33	0	-
RW224200_001	Residential	591059	4842518	1.5	12	23	35	0	-
RW225200_001	Residential	591261	4843431	1.5	8	23	30	0	-
RW225300_001	Residential	591243	4843461	1.5	9	23	31	0	-
RW225300_002	Residential	591272	4843493	1.5	9	23	32	0	-
RW225300_003	Residential	591295	4843534	1.5	9	23	32	0	-
RW226000_001	Residential	591344	4844228	1.5	14	23	36	0	-
RW226200_001	Residential	591234	4844508	1.5	10	23	32	0	-
RW226300_001	Residential	591196	4844542	1.5	10	23	32	0	-
RW226300_002	Residential	591171	4844578	1.5	9	23	32	0	-
RW227700_001	Residential	591290	4846105	1.5	9	23	31	0	-
RW227800_001	Residential	591651	4846073	1.5	13	23	35	0	-
RW227800_002	Residential	591541	4846134	1.5	16	23	39	0	-
RW227800_003	Residential	591348	4846123	1.5	11	23	33	0	-
RW228900_001	Residential	592191	4847059	1.5	6	23	28	0	-
RW229000_005	Residential	592239	4847128	1.5	6	23	29	0	-
RW229100_003	Residential	592057	4847361	1.5	7	23	30	0	-
RW229100_004	Residential	592238	4847208	1.5	8	23	31	0	-
RW229200_001	Residential	591945	4847506	1.5	8	23	30	0	-
RW229200_002	Residential	592082	4847514	1.5	6	23	29	0	-
RW229200_003	Residential	592013	4847571	1.5	6	23	29	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RW229200_004	Residential	591965	4847613	1.5	7	23	29	0	-
RW229200_005	Residential	592047	4847546	1.5	6	23	29	0	-
RW229200_006	Residential	591969	4847485	1.5	8	23	31	0	-
RW229200_007	Residential	591918	4847523	1.5	7	23	30	0	-
RW229300_001	Residential	591940	4847644	1.5	6	23	29	0	-
RW230300_001	Residential	592829	4848529	1.5	8	23	30	0	-
RW230300_002	Residential	592606	4848716	1.5	5	23	27	0	-
RW230400_003	Residential	593165	4848363	1.5	7	23	30	0	-
RW230400_004	Residential	593067	4848428	1.5	9	23	31	0	-
RW230400_005	Residential	592665	4848881	1.5	5	23	28	0	-
RW231500_001	Residential	593790	4849191	1.5	5	23	28	0	-
RW231500_002	Residential	593814	4849083	1.5	5	23	27	0	-
RW231800_002	Residential	593623	4849689	1.5	5	23	28	0	-
RW231800_003	Residential	593681	4849607	1.5	5	23	28	0	-
RW231900_001	Residential	593974	4849584	1.5	6	23	28	0	-
RW231900_002	Residential	593821	4849636	1.5	8	23	31	0	-
RW231900_003	Residential	593783	4849662	1.5	8	23	31	0	-
RW231900_004	Residential	593753	4849685	1.5	9	23	31	0	-
RW231900_005	Residential	593708	4849712	1.5	8	23	30	0	-
RW231900_006	Residential	593679	4849744	1.5	7	23	29	0	-
RW232900_001	Residential	594647	4850489	1.5	8	23	30	0	-
RW232900_002	Residential	594641	4850578	1.5	10	23	32	0	-
RW232900_003	Residential	594596	4850601	1.5	9	23	32	0	-
RW233000_001	Residential	594937	4850252	1.5	9	23	32	0	-
RW233000_002	Residential	594873	4850324	1.5	10	23	32	0	-
RW233000_003	Residential	594722	4850470	1.5	9	23	32	0	-
RW233000_004	Residential	594661	4850750	1.5	7	23	30	0	-
RW233100_001	Residential	595054	4850303	1.5	11	23	34	0	-
RW233100_002	Residential	594986	4850367	1.5	12	23	34	0	-
RW233100_003	Residential	594960	4850397	1.5	11	23	34	0	-
RW233100_004	Residential	594754	4850728	1.5	6	23	29	0	-
RW233300_001	Residential	595066	4850652	1.5	4	23	27	0	-
RW233500_001	Residential	595517	4850395	1.5	4	23	27	0	-
RW233600_001	Residential	595481	4850552	1.5	4	23	26	0	-
RW233700_001	Residential	595601	4850557	1.5	4	23	26	0	-
RW233800_001	Residential	595629	4850726	1.5	4	23	26	0	-
RW234400_001	Residential	595843	4851239	1.5	7	23	30	0	-
RW234400_002	Residential	595722	4851407	1.5	5	23	28	0	-
RW234400_003	Residential	595753	4851375	1.5	6	23	28	0	-
RW234500_001	Residential	596110	4851144	1.5	9	23	32	0	-
RW234500_002	Residential	596228	4851057	1.5	7	23	30	0	-
RW234600_001	Residential	595890	4851390	1.5	7	23	30	0	-
RW234600_002	Residential	595822	4851471	1.5	6	23	29	0	-
RW234600_003	Residential	595792	4851490	1.5	6	23	28	0	-
RW235800_001	Residential	596933	4852124	1.5	11	23	34	0	-
RW235800_002	Residential	596708	4852352	1.5	11	23	34	0	-
RW235800_003	Residential	596626	4852447	1.5	11	23	34	0	-
RW235800_004	Residential	596582	4852479	1.5	10	23	33	0	-
RW235900_003	Residential	596852	4852343	1.5	13	23	36	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RW235900_004	Residential	596685	4852406	1.5	12	23	35	0	-
RW235900_008	Residential	596930	4852261	1.5	13	23	36	0	-
RW310200_001	Residential	597162	4852242	1.5	6	23	28	0	-
RW311300_001	Residential	598030	4853004	1.5	10	23	33	0	-
RW311300_002	Residential	598003	4853024	1.5	10	23	33	0	-
RW311300_003	Residential	597975	4853049	1.5	10	23	33	0	-
RW311300_004	Residential	597927	4853089	1.5	10	23	32	0	-
RW311400_001	Residential	598069	4853072	1.5	10	23	32	0	-
RW311400_002	Residential	598037	4853102	1.5	10	23	33	0	-
RW311400_003	Residential	597991	4853145	1.5	10	23	33	0	-
RW311400_004	Residential	597940	4853194	1.5	10	23	33	0	-
RW311400_005	Residential	597918	4853265	1.5	7	23	30	0	-
RW311400_006	Residential	597843	4853344	1.5	7	23	30	0	-
RW311400_008	Residential	597739	4853444	1.5	6	23	28	0	-
RW311400_009	Residential	597683	4853455	1.5	6	23	29	0	-
RW312300_001	Residential	598843	4853771	1.5	8	23	30	0	-
RW312400_001	Residential	598885	4854042	1.5	11	23	34	0	-
RW312400_002	Residential	598849	4854080	1.5	10	23	33	0	-
RW312500_001	Residential	599044	4853903	1.5	14	23	37	0	-
RW312500_002	Residential	599019	4853928	1.5	15	23	37	0	-
RW312500_003	Residential	598925	4854010	1.5	13	23	36	0	-
RW312500_004	Residential	598959	4854116	1.5	14	23	36	0	-
RW312600_001	Residential	599110	4853841	1.5	15	23	38	0	-
RW312600_002	Residential	599074	4853862	1.5	14	23	37	0	-
RW312700_001	Residential	599266	4853691	1.5	20	23	43	0	-
RW312900_001	Residential	599307	4854183	1.5	4	23	27	0	-
RW313100_001	Residential	599559	4854108	1.5	7	23	30	0	-
RW313400_001	Residential	599752	4854478	1.5	8	23	31	0	-
RW313900_001	Residential	600110	4854917	1.5	9	23	32	0	-
RW314100_001	Residential	600493	4854739	1.5	6	23	28	0	-
RW314300_001	Residential	600741	4854369	1.5	7	23	29	0	-
RW315400_001	Residential	601942	4855015	1.5	3	23	26	0	-
RW317500_001	Residential	603840	4854629	1.5	21	23	44	0	-
RW317500_003	Residential	603870	4854650	1.5	22	23	45	0	-
RW410100_001	Residential	603972	4854928	1.5	15	23	38	0	-
RW410100_002	Residential	603936	4854961	1.5	14	23	37	0	-
RW410200_001	Residential	604015	4854902	1.5	15	23	38	0	-
RW410400_001	Residential	604221	4855097	1.5	12	23	35	0	-
RW410800_002	Residential	604445	4855386	1.5	12	23	35	0	-
RW510000_001	Residential	604897	4855625	1.5	21	23	43	0	-
RW510100_001	Residential	605003	4855608	1.5	18	23	41	0	-
RW510100_002	Residential	604998	4855726	1.5	13	23	36	0	-
RW510400_001	Residential	605360	4855644	1.5	8	23	31	0	-
RW512600_001	Residential	607049	4856822	1.5	12	23	35	0	-
RW512600_002	Residential	606713	4857044	1.5	3	23	25	0	-
RW512700_001	Residential	606950	4856924	1.5	5	23	28	0	-
RW515200_001	Residential	608655	4859025	1.5	11	23	33	0	-
RW515200_002	Residential	608453	4859443	1.5	5	23	27	0	-
RW515500_001	Residential	609009	4858910	1.5	4	23	26	0	-

Appendix G.2.1 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW515500_002	Residential	608965	4859173	1.5	4	23	26	0	-
RW515500_003	Residential	608645	4859708	1.5	4	23	26	0	-
RW515600_001	Residential	609102	4858982	1.5	3	23	26	0	-
RW515600_002	Residential	608876	4859423	1.5	4	23	26	0	-
RW515600_003	Residential	608980	4859372	1.5	3	23	26	0	-
RW515700_001	Residential	608966	4859442	1.5	3	23	26	0	-
RW516700_001	Residential	609986	4859710	1.5	5	23	28	0	-
RW517400_001	Residential	610721	4859654	1.5	6	23	29	0	-
RW517500_001	Residential	610788	4859750	1.5	7	23	29	0	-
RW517500_002	Residential	610631	4860179	1.5	8	23	31	0	-
RW517600_001	Residential	610730	4860162	1.5	9	23	32	0	-
RW519300_001	Residential	612321	4860800	1.5	7	23	30	0	-
RW519300_002	Residential	612247	4861048	1.5	16	23	39	0	-
RW519600_001	Residential	612681	4860774	1.5	7	23	29	0	-
RW519600_002	Residential	612644	4860851	1.5	8	23	31	0	-
RW519600_003	Residential	612606	4860976	1.5	10	23	32	0	-
RW519600_004	Residential	612556	4861217	1.5	10	23	32	0	-
RW519900_001	Residential	612911	4861179	1.5	11	23	34	0	-
RW520000_001	Residential	612975	4861191	1.5	10	23	33	0	-
RW520100_001	Residential	613108	4861238	1.5	11	23	33	0	-
RW520200_001	Residential	613167	4861245	1.5	10	23	32	0	-
RW520300_001	Residential	613263	4861267	1.5	9	23	32	0	-
RW520400_001	Residential	613409	4861318	1.5	10	23	33	0	-
RW520600_001	Residential	613595	4861385	1.5	12	23	34	0	-
RW520600_002	Residential	613696	4861264	1.5	7	23	30	0	-
RW520800_001	Residential	613821	4861450	1.5	12	23	34	0	-
RW520800_002	Residential	613868	4861446	1.5	11	23	34	0	-
RW520900_001	Residential	614011	4861487	1.5	11	23	34	0	-
RW521000_001	Residential	614074	4861506	1.5	12	23	34	0	-
RW521500_001	Residential	614584	4861772	1.5	22	23	45	0	-
RW521500_002	Residential	614605	4861931	1.5	11	23	34	0	-
RW521500_003	Residential	614606	4861992	1.5	10	23	33	0	-
RW521500_004	Residential	614561	4862067	1.5	10	23	33	0	-
RW521500_005	Residential	614528	4862131	1.5	11	23	34	0	-
RW521500_006	Residential	614519	4862172	1.5	11	23	34	0	-
RW521600_001	Residential	615126	4862319	1.5	16	23	38	0	-
RW521600_002	Residential	616401	4861744	1.5	8	23	30	0	-
RW521600_009	Residential	616496	4861911	1.5	8	23	31	0	-
RW521600_010	Residential	614979	4862746	1.5	13	23	36	0	-
RW521600_011	Residential	614904	4862738	1.5	11	23	34	0	-
RW521600_012	Residential	615537	4863261	1.5	10	23	33	0	-
RW521600_013	Residential	615595	4863665	1.5	8	23	30	0	-
RW521600_014	Residential	616500	4861872	1.5	8	23	30	0	-
RW521600_016	Residential	614949	4863780	1.5	14	23	37	0	-
RW521600_017	Residential	616265	4861577	1.5	8	23	31	0	-

1826 Days of Meterological Data

Appendix G.2.2: 2041 Build – 24 Hour PM_{10}

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_001	Place of Worship	597312	4827927	1.5	36	23	59	13	0.7%
RE110000_002	Residential	596637	4826254	1.5	27	23	50	0	-
RE110000_003	Residential	596701	4826610	1.5	36	23	58	5	0.3%
RE110000_004	Residential	597143	4827822	1.5	35	23	58	12	0.7%
RE110000_005	Residential	597083	4827844	1.5	42	23	64	27	1.5%
RE110000_006	Residential	596871	4828160	1.5	26	23	49	0	-
RE110000_007	Residential	597140	4826176	1.5	30	23	52	1	0.1%
RE110000_008	Residential	597148	4826187	1.5	28	23	51	1	0.1%
RE110000_009	Residential	597156	4826199	1.5	27	23	50	0	-
RE110000_010	Residential	597164	4826210	1.5	26	23	49	0	-
RE110000_011	Residential	597171	4826221	1.5	26	23	48	0	-
RE110000_020	Residential	597181	4826148	1.5	28	23	51	1	0.1%
RE110000_021	Residential	597187	4826154	1.5	28	23	50	1	0.1%
RE110000_022	Residential	597195	4826162	1.5	27	23	49	0	-
RE110000_023	Residential	597200	4826170	1.5	26	23	49	0	-
RE110000_024	Residential	597206	4826177	1.5	26	23	48	0	-
RE110000_025	Residential	597212	4826186	1.5	25	23	48	0	-
RE110000_028	Residential	597203	4826119	1.5	29	23	51	1	0.1%
RE110000_029	Residential	597210	4826129	1.5	28	23	50	1	0.1%
RE110000_030	Residential	597216	4826140	1.5	27	23	49	0	-
RE110000_031	Residential	597223	4826147	1.5	26	23	49	0	-
RE110000_032	Residential	597230	4826156	1.5	25	23	48	0	-
RE110000_045	Residential	597236	4826078	1.5	29	23	52	1	0.1%
RE110000_046	Residential	597243	4826087	1.5	28	23	50	1	0.1%
RE110000_047	Residential	597251	4826096	1.5	27	23	49	0	-
RE110000_048	Residential	597257	4826104	1.5	26	23	49	0	-
RE110000_049	Residential	597263	4826113	1.5	25	23	48	0	-
RE110000_050	Residential	597255	4826067	1.5	28	23	51	1	0.1%
RE110000_051	Residential	597266	4826057	1.5	28	23	51	1	0.1%
RE110000_052	Residential	597275	4826046	1.5	28	23	51	1	0.1%
RE110000_053	Residential	597284	4826036	1.5	28	23	51	1	0.1%
RE110000_054	Residential	597293	4826025	1.5	28	23	51	1	0.1%
RE110000_055	Residential	597304	4826014	1.5	28	23	51	1	0.1%
RE110000_056	Residential	597325	4826041	1.5	25	23	48	0	-
RE110000_057	Residential	597314	4826051	1.5	25	23	48	0	-
RE110000_058	Residential	597304	4826061	1.5	25	23	48	0	-
RE110000_059	Residential	597295	4826072	1.5	25	23	48	0	-
RE110000_060	Residential	597285	4826082	1.5	26	23	48	0	-
RE110000_061	Residential	597323	4825965	1.5	31	23	53	3	0.2%
RE110000_062	Residential	597330	4825974	1.5	29	23	52	1	0.1%
RE110000_063	Residential	597335	4825983	1.5	28	23	50	1	0.1%
RE110000_064	Residential	597342	4825990	1.5	27	23	49	0	-
RE110000_065	Residential	597350	4826000	1.5	26	23	48	0	-
RE110000_066	Residential	597357	4826009	1.5	25	23	48	0	-
RE110000_067	Residential	597368	4826018	1.5	24	23	47	0	-
RE110000_069	Residential	597351	4825947	1.5	29	23	52	2	0.1%
RE110000_070	Residential	597359	4825957	1.5	28	23	50	1	0.1%
RE110000_071	Residential	597366	4825967	1.5	27	23	49	0	-
RE110000_072	Residential	597374	4825977	1.5	26	23	48	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_073	Residential	597383	4825986	1.5	25	23	47	0	-
RE110000_112	Residential	597394	4825910	1.5	28	23	51	1	0.1%
RE110000_113	Residential	597401	4825919	1.5	27	23	50	0	-
RE110000_114	Residential	597409	4825928	1.5	26	23	49	0	-
RE110000_115	Residential	597416	4825939	1.5	25	23	48	0	-
RE110000_123	Residential	597413	4825882	1.5	29	23	52	2	0.1%
RE110000_124	Residential	597421	4825892	1.5	28	23	50	1	0.1%
RE110000_125	Residential	597432	4825901	1.5	26	23	49	0	-
RE110000_132	Residential	597461	4825854	1.5	27	23	50	0	-
RE110000_133	Residential	597471	4825865	1.5	26	23	48	0	-
RE110000_139	Residential	597482	4825833	1.5	27	23	50	0	-
RE110000_140	Residential	597492	4825842	1.5	26	23	48	0	-
RE110000_145	Residential	597514	4825784	1.5	28	23	51	2	0.1%
RE110000_146	Residential	597523	4825794	1.5	27	23	49	0	-
RE110000_147	Residential	597531	4825806	1.5	25	23	48	0	-
RE110000_149	Residential	597534	4825759	1.5	28	23	51	2	0.1%
RE110000_150	Residential	597542	4825770	1.5	27	23	50	0	-
RE110000_151	Residential	597549	4825779	1.5	26	23	48	0	-
RE110000_165	Residential	597586	4825745	1.5	25	23	48	0	-
RE110000_167	Residential	597648	4825682	1.5	25	23	48	0	-
RE110000_173	Residential	597632	4825663	1.5	29	23	51	2	0.1%
RE110000_177	Residential	597655	4825690	1.5	24	23	47	0	-
RE110000_178	Residential	597642	4825674	1.5	27	23	49	0	-
RE110000_189	Residential	597578	4825734	1.5	27	23	49	0	-
RE110000_190	Residential	597605	4825708	1.5	27	23	49	0	-
RE110000_191	Residential	597611	4825719	1.5	25	23	48	0	-
RE110000_239	Residential	598068	4825317	1.5	34	23	57	2	0.1%
RE110000_240	Residential	598051	4825327	1.5	37	23	60	3	0.2%
RE110000_241	Residential	598046	4825287	1.5	34	23	56	2	0.1%
RE110000_242	Residential	598058	4825288	1.5	33	23	55	2	0.1%
RE110000_243	Residential	598062	4825320	1.5	35	23	58	2	0.1%
RE110000_244	Residential	598082	4825288	1.5	31	23	53	1	0.1%
RE110000_245	Residential	598057	4825323	1.5	36	23	59	2	0.1%
RE110000_246	Residential	598051	4825288	1.5	33	23	56	2	0.1%
RE110000_247	Residential	598072	4825292	1.5	32	23	54	2	0.1%
RE110000_248	Residential	598076	4825290	1.5	31	23	54	2	0.1%
RE110000_249	Residential	598040	4825285	1.5	34	23	56	3	0.2%
RE110000_253	Residential	597743	4825607	1.5	24	23	47	0	-
RE110000_254	Residential	597795	4825533	1.5	25	23	48	0	-
RE110000_255	Residential	597806	4825547	1.5	24	23	46	0	-
RE110000_256	Residential	597835	4825499	1.5	25	23	48	0	-
RE110000_257	Residential	597843	4825509	1.5	24	23	47	0	-
RE110000_265	Residential	597773	4825557	1.5	25	23	48	0	-
RE110000_267	Residential	597726	4825585	1.5	27	23	49	0	-
RE110000_276	Residential	597839	4825504	1.5	25	23	47	0	-
RE110000_277	Residential	597778	4825564	1.5	24	23	47	0	-
RE110000_278	Residential	597784	4825572	1.5	24	23	46	0	-
RE110000_279	Residential	597739	4825601	1.5	25	23	47	0	-
RE110000_280	Residential	597719	4825577	1.5	28	23	51	2	0.1%

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_281	Residential	597767	4825552	1.5	26	23	49	0	-
RE110000_292	Residential	597793	4825524	1.5	26	23	49	0	-
RE110000_293	Residential	597734	4825596	1.5	25	23	48	0	-
RE110000_294	Residential	597800	4825540	1.5	25	23	47	0	-
RE110000_305	Residential	597830	4825493	1.5	26	23	49	0	-
RE110000_309	Residential	597730	4825591	1.5	26	23	49	0	-
RE110000_310	Residential	597826	4825487	1.5	27	23	50	0	-
RE110000_316	Residential	597823	4825480	1.5	28	23	51	2	0.1%
RE110000_325	Residential	597672	4825659	1.5	25	23	48	0	-
RE110000_329	Residential	597711	4825620	1.5	25	23	48	0	-
RE110000_331	Residential	597656	4825641	1.5	28	23	51	2	0.1%
RE110000_332	Residential	597705	4825613	1.5	26	23	49	0	-
RE110000_333	Residential	597717	4825628	1.5	24	23	47	0	-
RE110000_342	Residential	597701	4825604	1.5	27	23	50	1	0.1%
RE110000_344	Residential	597666	4825651	1.5	26	23	49	0	-
RE110000_345	Residential	597678	4825667	1.5	24	23	47	0	-
RE110000_353	Residential	597853	4825468	1.5	26	23	49	0	-
RE110000_355	Residential	597858	4825475	1.5	25	23	48	0	-
RE110000_378	Residential	597899	4825411	1.5	28	23	51	2	0.1%
RE110000_387	Residential	597845	4825458	1.5	28	23	51	2	0.1%
RE110000_390	Residential	597927	4825384	1.5	29	23	52	2	0.1%
RE110000_394	Residential	597904	4825418	1.5	27	23	50	0	-
RE110000_397	Residential	597863	4825480	1.5	25	23	47	0	-
RE110000_401	Residential	596788	4826527	1.5	33	23	56	3	0.2%
RE110200_001	Residential	595761	4827508	1.5	40	23	62	16	0.9%
RE110300_001	Residential	595985	4827782	1.5	30	23	52	2	0.1%
RE110300_002	Residential	596018	4827822	1.5	28	23	51	1	0.1%
RE110300_003	Residential	596052	4827847	1.5	29	23	51	1	0.1%
RE110300_004	Residential	596075	4827863	1.5	30	23	52	3	0.2%
RE110400_001	Residential	596097	4827888	1.5	30	23	53	5	0.3%
RE110400_002	Residential	596114	4827911	1.5	32	23	55	8	0.4%
RE110500_001	Residential	596071	4827936	1.5	27	23	50	0	-
RE110500_002	Residential	596046	4827958	1.5	26	23	48	0	-
RE110600_001	Residential	596004	4827990	1.5	24	23	46	0	-
RE110600_002	Residential	596030	4827975	1.5	25	23	48	0	-
RE110700_001	Residential	595981	4828012	1.5	23	23	46	0	-
RE110700_002	Residential	595928	4827973	1.5	21	23	43	0	-
RE110800_001	Residential	595956	4828058	1.5	23	23	46	0	-
RE110800_002	Residential	595933	4828081	1.5	23	23	45	0	-
RE110900_001	Residential	595910	4828106	1.5	22	23	45	0	-
RE110900_002	Residential	595878	4828134	1.5	22	23	44	0	-
RE111100_001	Residential	595788	4828209	1.5	19	23	42	0	-
RE111200_001	Residential	595754	4828244	1.5	19	23	41	0	-
RE111200_002	Residential	595736	4828278	1.5	19	23	42	0	-
RE111300_001	Residential	595708	4828299	1.5	18	23	41	0	-
RE111300_002	Residential	595689	4828310	1.5	18	23	41	0	-
RE111300_003	Residential	595667	4828334	1.5	18	23	40	0	-
RE111400_001	Residential	595630	4828371	1.5	17	23	40	0	-
RE111400_002	Residential	595610	4828393	1.5	17	23	40	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE111500_001	Residential	595569	4828431	1.5	17	23	39	0	-
RE111500_002	Residential	595514	4828453	1.5	15	23	38	0	-
RE111600_001	Residential	595474	4828490	1.5	15	23	38	0	-
RE111600_002	Residential	595430	4828529	1.5	15	23	38	0	-
RE111700_001	Residential	595514	4828604	1.5	18	23	41	0	-
RE111700_002	Residential	595359	4828639	1.5	16	23	39	0	-
RE111800_001	Residential	596558	4828460	1.5	31	23	53	3	0.2%
RE111800_002	Residential	595492	4828626	1.5	18	23	41	0	-
RE111800_003	Residential	595467	4828642	1.5	18	23	41	0	-
RE111800_004	Residential	595445	4828664	1.5	18	23	41	0	-
RE111800_005	Residential	595329	4828673	1.5	16	23	39	0	-
RE111800_006	Residential	595306	4828700	1.5	17	23	39	0	-
RE111800_007	Residential	595285	4828720	1.5	17	23	39	0	-
RE111800_008	Residential	595266	4828745	1.5	17	23	40	0	-
RE112100_001	Residential	596836	4828712	1.5	27	23	50	0	-
RE112200_001	Residential	596905	4828763	1.5	22	23	45	0	-
RE113100_001	Residential	595706	4829937	1.5	14	23	37	0	-
RE113200_001	Residential	595933	4829995	1.5	17	23	40	0	-
RE113200_002	Residential	595904	4830024	1.5	17	23	40	0	-
RE113300_001	Residential	595753	4830146	1.5	18	23	41	0	-
RE210700_001	Residential	595367	4831551	1.5	18	23	41	0	-
RE210700_002	Residential	595325	4831537	1.5	21	23	43	0	-
RE210700_003	Residential	595504	4831618	1.5	13	23	35	0	-
RE210900_001	Residential	595286	4831670	1.5	22	23	45	0	-
RE210900_003	Residential	595217	4831730	1.5	24	23	46	0	-
RE210900_004	Residential	595349	4831732	1.5	18	23	41	0	-
RE210900_005	Residential	595339	4831698	1.5	19	23	41	0	-
RE210900_006	Residential	595400	4831812	1.5	16	23	38	0	-
RE210900_007	Residential	595436	4831835	1.5	14	23	37	0	-
RE210900_008	Residential	595454	4831855	1.5	14	23	36	0	-
RE211000_001	Residential	595242	4831783	1.5	22	23	45	0	-
RE211000_002	Residential	595292	4831787	1.5	23	23	46	0	-
RE211000_003	Residential	595341	4831842	1.5	21	23	44	0	-
RE211000_004	Residential	595365	4831888	1.5	18	23	41	0	-
RE211000_005	Residential	595239	4831847	1.5	20	23	43	0	-
RE211000_006	Residential	595408	4831938	1.5	17	23	39	0	-
RE211000_007	Residential	595530	4831956	1.5	13	23	35	0	-
RE211000_008	Residential	595567	4832001	1.5	13	23	35	0	-
RE211000_009	Residential	595596	4832028	1.5	12	23	35	0	-
RE211000_010	Residential	595617	4832054	1.5	12	23	35	0	-
RE211100_001	Residential	595423	4831974	1.5	16	23	39	0	-
RE211100_002	Residential	595342	4832015	1.5	17	23	39	0	-
RE211100_003	Residential	595552	4832099	1.5	15	23	38	0	-
RE211100_004	Residential	595637	4832091	1.5	12	23	35	0	-
RE211100_005	Residential	595675	4832137	1.5	12	23	35	0	-
RE211100_006	Residential	595734	4832214	1.5	12	23	35	0	-
RE211100_009	Residential	595514	4832061	1.5	15	23	38	0	-
RE211200_001	Residential	595380	4832103	1.5	15	23	38	0	-
RE211200_002	Residential	595424	4832139	1.5	14	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE211200_003	Residential	595641	4832218	1.5	13	23	36	0	-
RE211200_004	Residential	595704	4832286	1.5	12	23	35	0	-
RE211200_005	Residential	595584	4832173	1.5	13	23	36	0	-
RE211400_001	Residential	594922	4832082	1.5	25	23	48	0	-
RE211500_002	Residential	595129	4832290	1.5	16	23	38	0	-
RE211500_003	Residential	594950	4832221	1.5	18	23	41	0	-
RE211500_004	Residential	595156	4832250	1.5	16	23	38	0	-
RE211900_001	Residential	594800	4832552	1.5	18	23	40	0	-
RE212600_001	Residential	594824	4833279	1.5	15	23	38	0	-
RE212700_001	Residential	594758	4833331	1.5	16	23	39	0	-
RE212700_002	Residential	594605	4833322	1.5	17	23	40	0	-
RE212800_001	Residential	594672	4833390	1.5	19	23	41	0	-
RE212800_002	Residential	594620	4833440	1.5	21	23	43	0	-
RE212900_001	Residential	594599	4833473	1.5	21	23	43	0	-
RE213000_001	Residential	594589	4833575	1.5	18	23	41	0	-
RE214400_001	Recreation	594333	4835333	1.5	21	23	44	0	-
RE214600_002	Residential	593842	4835174	1.5	26	23	49	0	-
RE214600_003	Residential	593906	4835196	1.5	28	23	50	1	0.1%
RE214600_004	Residential	593934	4835222	1.5	27	23	50	0	-
RE214600_005	Residential	593948	4835237	1.5	27	23	49	0	-
RE214600_006	Residential	593954	4835244	1.5	27	23	49	0	-
RE214600_007	Residential	593879	4835253	1.5	24	23	47	0	-
RE214600_008	Residential	593895	4835241	1.5	25	23	48	0	-
RE214600_009	Residential	593872	4835220	1.5	25	23	48	0	-
RE214600_010	Residential	593861	4835213	1.5	25	23	48	0	-
RE214600_011	Residential	593855	4835236	1.5	24	23	47	0	-
RE214600_012	Residential	593826	4835204	1.5	24	23	47	0	-
RE214600_013	Residential	593848	4835159	1.5	28	23	50	1	0.1%
RE214600_014	Residential	593881	4835177	1.5	28	23	50	1	0.1%
RE214600_015	Residential	593892	4835186	1.5	27	23	50	1	0.1%
RE214600_016	Residential	593917	4835206	1.5	28	23	50	1	0.1%
RE214600_017	Residential	593925	4835215	1.5	27	23	50	1	0.1%
RE214600_018	Residential	593940	4835231	1.5	27	23	50	0	-
RE214600_019	Residential	593960	4835250	1.5	27	23	49	0	-
RE214600_020	Residential	593967	4835258	1.5	27	23	49	0	-
RE214600_021	Residential	593978	4835265	1.5	26	23	49	0	-
RE214600_022	Residential	593885	4835231	1.5	25	23	48	0	-
RE214600_023	Residential	593914	4835274	1.5	25	23	47	0	-
RE214600_024	Residential	593927	4835288	1.5	25	23	47	0	-
RE214600_025	Residential	593932	4835295	1.5	25	23	47	0	-
RE214600_026	Residential	593936	4835298	1.5	25	23	47	0	-
RE214600_027	Residential	593941	4835304	1.5	25	23	47	0	-
RE214600_028	Residential	593945	4835308	1.5	24	23	47	0	-
RE214600_029	Residential	593948	4835312	1.5	24	23	47	0	-
RE214600_030	Residential	593953	4835317	1.5	24	23	47	0	-
RE214600_031	Residential	593956	4835321	1.5	24	23	46	0	-
RE214600_032	Residential	593965	4835331	1.5	23	23	46	0	-
RE214600_033	Residential	593979	4835319	1.5	24	23	46	0	-
RE214600_034	Residential	593977	4835313	1.5	24	23	46	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_035	Residential	593971	4835308	1.5	24	23	47	0	-
RE214600_036	Residential	593968	4835303	1.5	24	23	47	0	-
RE214600_037	Residential	593909	4835267	1.5	25	23	48	0	-
RE214600_038	Residential	593919	4835279	1.5	25	23	47	0	-
RE214600_039	Residential	593923	4835284	1.5	25	23	47	0	-
RE214600_040	Residential	593930	4835291	1.5	25	23	47	0	-
RE214600_041	Residential	593961	4835326	1.5	23	23	46	0	-
RE214600_042	Residential	593970	4835333	1.5	23	23	46	0	-
RE214600_043	Residential	593982	4835324	1.5	23	23	46	0	-
RE214600_044	Residential	593960	4835295	1.5	25	23	47	0	-
RE214600_045	Residential	593956	4835291	1.5	25	23	48	0	-
RE214600_046	Residential	593946	4835281	1.5	25	23	48	0	-
RE214600_047	Residential	593942	4835277	1.5	25	23	48	0	-
RE214600_048	Residential	593934	4835269	1.5	25	23	48	0	-
RE214600_049	Residential	593929	4835264	1.5	25	23	48	0	-
RE214600_050	Residential	593923	4835260	1.5	26	23	48	0	-
RE214600_051	Residential	594088	4835437	1.5	20	23	43	0	-
RE214600_052	Residential	594082	4835443	1.5	20	23	42	0	-
RE214600_053	Residential	593964	4835299	1.5	25	23	47	0	-
RE214600_054	Residential	593949	4835285	1.5	25	23	48	0	-
RE214600_055	Residential	593938	4835273	1.5	25	23	48	0	-
RE214600_056	Residential	593919	4835255	1.5	26	23	48	0	-
RE214600_057	Residential	594070	4835454	1.5	19	23	41	0	-
RE214600_058	Residential	594080	4835468	1.5	18	23	41	0	-
RE214600_059	Residential	594086	4835463	1.5	19	23	41	0	-
RE214600_060	Residential	594095	4835454	1.5	19	23	42	0	-
RE214600_061	Residential	594098	4835448	1.5	20	23	42	0	-
RE214600_062	Residential	594075	4835447	1.5	19	23	42	0	-
RE214600_063	Residential	594090	4835458	1.5	19	23	42	0	-
RE214600_064	Residential	594047	4835432	1.5	19	23	42	0	-
RE214600_065	Residential	594052	4835428	1.5	20	23	42	0	-
RE214600_066	Residential	594056	4835424	1.5	20	23	42	0	-
RE214600_067	Residential	594061	4835420	1.5	20	23	43	0	-
RE214600_068	Residential	594068	4835415	1.5	21	23	43	0	-
RE214600_069	Residential	594022	4835361	1.5	22	23	44	0	-
RE214600_070	Residential	593995	4835385	1.5	21	23	44	0	-
RE214600_071	Residential	593999	4835381	1.5	21	23	44	0	-
RE214600_072	Residential	594003	4835377	1.5	21	23	44	0	-
RE214600_073	Residential	594009	4835371	1.5	21	23	44	0	-
RE214600_074	Residential	594015	4835366	1.5	22	23	44	0	-
RE214600_075	Residential	594003	4835343	1.5	23	23	45	0	-
RE214600_076	Residential	593993	4835352	1.5	22	23	45	0	-
RE214600_077	Residential	593998	4835348	1.5	23	23	45	0	-
RE214600_078	Residential	593990	4835357	1.5	22	23	45	0	-
RE214600_079	Residential	593985	4835362	1.5	22	23	45	0	-
RE214600_080	Residential	593978	4835367	1.5	22	23	44	0	-
RE214600_081	Residential	593872	4835162	1.5	29	23	51	1	0.1%
RE214600_082	Residential	593897	4835267	1.5	25	23	47	0	-
RE214600_083	Residential	593835	4835188	1.5	25	23	48	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE214700_002	Residential	593796	4835295	1.5	21	23	43	0	-
RE214700_003	Residential	593801	4835284	1.5	21	23	44	0	-
RE214700_004	Residential	593804	4835270	1.5	21	23	44	0	-
RE214700_005	Residential	593808	4835258	1.5	22	23	44	0	-
RE214700_006	Residential	593812	4835244	1.5	22	23	45	0	-
RE214700_007	Residential	593815	4835229	1.5	23	23	46	0	-
RE214700_008	Residential	593820	4835217	1.5	24	23	46	0	-
RE214700_009	Residential	593927	4835372	1.5	22	23	44	0	-
RE214700_010	Residential	593945	4835355	1.5	23	23	45	0	-
RE214700_011	Residential	593938	4835347	1.5	23	23	45	0	-
RE214700_012	Residential	593932	4835340	1.5	23	23	46	0	-
RE214700_013	Residential	593925	4835333	1.5	23	23	46	0	-
RE214700_014	Residential	593897	4835305	1.5	23	23	46	0	-
RE214700_015	Residential	593848	4835261	1.5	23	23	46	0	-
RE214700_016	Residential	593843	4835273	1.5	23	23	45	0	-
RE214700_017	Residential	593842	4835286	1.5	22	23	45	0	-
RE214700_018	Residential	593871	4835315	1.5	22	23	45	0	-
RE214700_019	Residential	593884	4835326	1.5	22	23	45	0	-
RE214700_020	Residential	593911	4835354	1.5	22	23	45	0	-
RE214700_021	Residential	593920	4835363	1.5	22	23	45	0	-
RE214700_022	Residential	593892	4835387	1.5	21	23	44	0	-
RE214700_023	Residential	593878	4835378	1.5	21	23	44	0	-
RE214700_024	Residential	593867	4835368	1.5	21	23	44	0	-
RE214700_025	Residential	593847	4835347	1.5	21	23	44	0	-
RE214700_026	Residential	593792	4835308	1.5	20	23	43	0	-
RE214700_027	Residential	593899	4835400	1.5	21	23	44	0	-
RE214700_028	Residential	593915	4835323	1.5	24	23	46	0	-
RE214700_029	Residential	593905	4835315	1.5	23	23	46	0	-
RE214700_030	Residential	593888	4835295	1.5	23	23	46	0	-
RE214700_031	Residential	593878	4835285	1.5	23	23	46	0	-
RE214700_032	Residential	593872	4835268	1.5	24	23	46	0	-
RE214700_033	Residential	593850	4835248	1.5	24	23	46	0	-
RE214700_034	Residential	593837	4835298	1.5	22	23	45	0	-
RE214700_035	Residential	593859	4835303	1.5	22	23	45	0	-
RE214700_036	Residential	593893	4835335	1.5	23	23	45	0	-
RE214700_037	Residential	593901	4835345	1.5	23	23	45	0	-
RE214700_038	Residential	593857	4835357	1.5	21	23	44	0	-
RE214700_039	Residential	593838	4835336	1.5	21	23	44	0	-
RE214700_040	Residential	593826	4835328	1.5	21	23	44	0	-
RE214700_041	Residential	594050	4835472	1.5	18	23	41	0	-
RE214700_042	Residential	594045	4835477	1.5	18	23	40	0	-
RE214700_043	Residential	594021	4835499	1.5	17	23	39	0	-
RE214700_044	Residential	594015	4835505	1.5	16	23	39	0	-
RE214700_045	Residential	594010	4835510	1.5	16	23	39	0	-
RE214700_046	Residential	594005	4835514	1.5	16	23	39	0	-
RE214700_047	Residential	593999	4835520	1.5	16	23	39	0	-
RE214700_048	Residential	594007	4835538	1.5	16	23	38	0	-
RE214700_049	Residential	594029	4835518	1.5	16	23	39	0	-
RE214700_050	Residential	594041	4835505	1.5	17	23	39	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_051	Residential	594052	4835496	1.5	17	23	40	0	-
RE214700_052	Residential	594065	4835484	1.5	18	23	40	0	-
RE214700_053	Residential	594071	4835479	1.5	18	23	41	0	-
RE214700_054	Residential	594063	4835459	1.5	19	23	41	0	-
RE214700_055	Residential	594059	4835463	1.5	18	23	41	0	-
RE214700_056	Residential	594055	4835466	1.5	18	23	41	0	-
RE214700_057	Residential	594041	4835481	1.5	18	23	40	0	-
RE214700_058	Residential	594035	4835486	1.5	17	23	40	0	-
RE214700_059	Residential	594030	4835490	1.5	17	23	40	0	-
RE214700_060	Residential	594025	4835494	1.5	17	23	40	0	-
RE214700_061	Residential	593994	4835525	1.5	16	23	38	0	-
RE214700_062	Residential	594012	4835533	1.5	16	23	38	0	-
RE214700_063	Residential	594018	4835528	1.5	16	23	38	0	-
RE214700_064	Residential	594023	4835523	1.5	16	23	39	0	-
RE214700_065	Residential	594035	4835511	1.5	17	23	39	0	-
RE214700_066	Residential	594046	4835501	1.5	17	23	40	0	-
RE214700_067	Residential	594057	4835491	1.5	17	23	40	0	-
RE214700_068	Residential	594061	4835487	1.5	18	23	40	0	-
RE214700_069	Residential	594075	4835473	1.5	18	23	41	0	-
RE214700_070	Residential	593973	4835506	1.5	16	23	39	0	-
RE214700_071	Residential	593991	4835488	1.5	17	23	40	0	-
RE214700_072	Residential	593995	4835485	1.5	17	23	40	0	-
RE214700_073	Residential	594004	4835475	1.5	17	23	40	0	-
RE214700_074	Residential	594013	4835466	1.5	18	23	40	0	-
RE214700_075	Residential	594022	4835457	1.5	18	23	41	0	-
RE214700_076	Residential	594039	4835440	1.5	19	23	41	0	-
RE214700_077	Residential	593979	4835500	1.5	17	23	39	0	-
RE214700_078	Residential	593985	4835493	1.5	17	23	39	0	-
RE214700_079	Residential	593998	4835482	1.5	17	23	40	0	-
RE214700_080	Residential	594008	4835471	1.5	17	23	40	0	-
RE214700_081	Residential	594018	4835462	1.5	18	23	40	0	-
RE214700_082	Residential	594027	4835453	1.5	18	23	41	0	-
RE214700_083	Residential	594030	4835449	1.5	18	23	41	0	-
RE214700_084	Residential	594036	4835444	1.5	19	23	41	0	-
RE214700_085	Residential	594043	4835436	1.5	19	23	42	0	-
RE214700_086	Residential	593960	4835422	1.5	20	23	43	0	-
RE214700_087	Residential	593956	4835426	1.5	20	23	42	0	-
RE214700_088	Residential	593963	4835417	1.5	20	23	43	0	-
RE214700_089	Residential	593968	4835413	1.5	20	23	43	0	-
RE214700_090	Residential	593973	4835409	1.5	20	23	43	0	-
RE214700_091	Residential	593978	4835404	1.5	20	23	43	0	-
RE214700_092	Residential	593981	4835400	1.5	20	23	43	0	-
RE214700_093	Residential	593948	4835434	1.5	20	23	42	0	-
RE214700_094	Residential	593938	4835443	1.5	19	23	42	0	-
RE214700_095	Residential	593934	4835448	1.5	19	23	42	0	-
RE214700_096	Residential	593988	4835393	1.5	21	23	43	0	-
RE214700_097	Residential	593991	4835389	1.5	21	23	43	0	-
RE214700_098	Residential	593943	4835438	1.5	20	23	42	0	-
RE214700_099	Residential	593929	4835453	1.5	19	23	42	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_100	Residential	593974	4835372	1.5	22	23	44	0	-
RE214700_101	Residential	593962	4835383	1.5	21	23	44	0	-
RE214700_102	Residential	593958	4835387	1.5	21	23	44	0	-
RE214700_103	Residential	593951	4835396	1.5	21	23	44	0	-
RE214700_104	Residential	593947	4835399	1.5	21	23	44	0	-
RE214700_105	Residential	593941	4835404	1.5	21	23	43	0	-
RE214700_106	Residential	593922	4835422	1.5	20	23	43	0	-
RE214700_107	Residential	593918	4835425	1.5	20	23	43	0	-
RE214700_108	Residential	593968	4835378	1.5	22	23	44	0	-
RE214700_109	Residential	593955	4835390	1.5	21	23	44	0	-
RE214700_110	Residential	593936	4835409	1.5	21	23	43	0	-
RE214700_111	Residential	593932	4835413	1.5	21	23	43	0	-
RE214700_112	Residential	593927	4835416	1.5	21	23	43	0	-
RE214700_113	Residential	593915	4835429	1.5	20	23	43	0	-
RE214700_114	Residential	593909	4835436	1.5	20	23	43	0	-
RE214800_004	Residential	594026	4835615	1.5	14	23	37	0	-
RE214800_005	Residential	593831	4835365	1.5	21	23	43	0	-
RE214800_006	Residential	593852	4835385	1.5	21	23	43	0	-
RE214800_007	Residential	593881	4835418	1.5	20	23	43	0	-
RE214800_012	Residential	593782	4835346	1.5	20	23	43	0	-
RE214800_013	Residential	593787	4835332	1.5	20	23	43	0	-
RE214800_014	Residential	593789	4835319	1.5	20	23	43	0	-
RE214800_015	Residential	593821	4835355	1.5	21	23	43	0	-
RE214800_016	Residential	593842	4835375	1.5	21	23	43	0	-
RE214800_017	Residential	593862	4835398	1.5	20	23	43	0	-
RE214800_018	Residential	593873	4835409	1.5	20	23	43	0	-
RE214800_019	Residential	593990	4835530	1.5	16	23	38	0	-
RE214800_020	Residential	593986	4835536	1.5	16	23	38	0	-
RE214800_021	Residential	593998	4835545	1.5	15	23	38	0	-
RE214800_022	Residential	594003	4835542	1.5	15	23	38	0	-
RE214800_023	Residential	593968	4835554	1.5	15	23	38	0	-
RE214800_024	Residential	593977	4835565	1.5	15	23	38	0	-
RE214800_025	Residential	593946	4835572	1.5	15	23	38	0	-
RE214800_026	Residential	593927	4835596	1.5	15	23	38	0	-
RE214800_027	Residential	593950	4835594	1.5	15	23	37	0	-
RE214800_028	Residential	593964	4835580	1.5	15	23	37	0	-
RE214800_029	Residential	593968	4835576	1.5	15	23	37	0	-
RE214800_030	Residential	593973	4835571	1.5	15	23	37	0	-
RE214800_031	Residential	593987	4835592	1.5	14	23	37	0	-
RE214800_032	Residential	593962	4835559	1.5	15	23	38	0	-
RE214800_033	Residential	593956	4835562	1.5	15	23	38	0	-
RE214800_034	Residential	593952	4835567	1.5	15	23	38	0	-
RE214800_035	Residential	593941	4835579	1.5	15	23	38	0	-
RE214800_036	Residential	593936	4835582	1.5	15	23	38	0	-
RE214800_037	Residential	593931	4835589	1.5	15	23	38	0	-
RE214800_038	Residential	593938	4835605	1.5	15	23	37	0	-
RE214800_039	Residential	593945	4835599	1.5	15	23	37	0	-
RE214800_040	Residential	593953	4835589	1.5	15	23	37	0	-
RE214800_041	Residential	593959	4835583	1.5	15	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214800_042	Residential	593997	4835583	1.5	15	23	37	0	-
RE214800_043	Residential	593992	4835588	1.5	14	23	37	0	-
RE214800_044	Residential	593982	4835599	1.5	14	23	37	0	-
RE214800_045	Residential	593977	4835603	1.5	14	23	37	0	-
RE214800_046	Residential	593970	4835610	1.5	14	23	37	0	-
RE214800_052	Residential	593995	4835609	1.5	14	23	37	0	-
RE214800_053	Residential	593999	4835605	1.5	14	23	37	0	-
RE214800_056	Residential	593989	4835614	1.5	14	23	37	0	-
RE214800_057	Residential	594004	4835600	1.5	14	23	37	0	-
RE214800_058	Residential	594008	4835595	1.5	14	23	37	0	-
RE214800_059	Residential	593969	4835510	1.5	16	23	39	0	-
RE214800_060	Residential	593964	4835515	1.5	16	23	39	0	-
RE214800_061	Residential	593919	4835462	1.5	19	23	42	0	-
RE214800_062	Residential	593941	4835536	1.5	16	23	39	0	-
RE214800_063	Residential	593932	4835545	1.5	16	23	38	0	-
RE214800_064	Residential	593919	4835557	1.5	16	23	38	0	-
RE214800_065	Residential	593923	4835458	1.5	19	23	42	0	-
RE214800_066	Residential	593916	4835466	1.5	19	23	41	0	-
RE214800_067	Residential	593938	4835540	1.5	16	23	39	0	-
RE214800_068	Residential	593926	4835550	1.5	16	23	38	0	-
RE214800_069	Residential	593924	4835553	1.5	16	23	38	0	-
RE214800_070	Residential	593909	4835569	1.5	16	23	38	0	-
RE214800_071	Residential	593905	4835574	1.5	16	23	38	0	-
RE214800_072	Residential	593913	4835564	1.5	16	23	38	0	-
RE214800_073	Residential	593902	4835442	1.5	20	23	42	0	-
RE214800_074	Residential	593897	4835447	1.5	20	23	42	0	-
RE214800_075	Residential	593945	4835532	1.5	16	23	39	0	-
RE214800_076	Residential	593781	4835357	1.5	20	23	42	0	-
RE214900_001	Residential	593921	4835605	1.5	15	23	37	0	-
RE214900_008	Residential	593899	4835580	1.5	16	23	38	0	-
RE214900_009	Residential	593896	4835585	1.5	16	23	38	0	-
RE214900_010	Residential	593893	4835591	1.5	16	23	38	0	-
RE217600_001	Residential	591736	4837227	1.5	10	23	32	0	-
RE217600_002	Residential	591766	4837262	1.5	9	23	32	0	-
RE218700_001	Residential	590959	4838020	1.5	18	23	40	0	-
RE218700_002	Residential	590988	4838088	1.5	17	23	40	0	-
RE220800_001	Residential	590421	4839357	1.5	14	23	37	0	-
RE220900_001	Residential	590180	4839466	1.5	14	23	37	0	-
RE220900_002	Residential	590517	4839408	1.5	15	23	38	0	-
RE220900_003	Residential	590379	4839398	1.5	14	23	37	0	-
RE221000_001	Residential	590454	4839467	1.5	15	23	38	0	-
RE221000_002	Residential	590412	4839513	1.5	15	23	38	0	-
RE221300_001	Residential	590257	4839724	1.5	13	23	36	0	-
RE221300_002	Residential	590236	4839764	1.5	13	23	36	0	-
RE221300_003	Residential	590440	4839670	1.5	9	23	32	0	-
RE222600_001	Residential	591012	4840654	1.5	15	23	38	0	-
RE222700_001	Residential	590826	4840878	1.5	15	23	37	0	-
RE222700_002	Residential	590788	4840912	1.5	15	23	37	0	-
RE222700_003	Residential	590768	4840946	1.5	16	23	39	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE222700_004	Residential	590744	4840967	1.5	17	23	40	0	-
RE222700_005	Residential	590721	4840990	1.5	18	23	41	0	-
RE222700_006	Residential	590621	4841031	1.5	22	23	45	0	-
RE222800_001	Residential	590888	4840963	1.5	14	23	36	0	-
RE222800_002	Residential	590866	4840985	1.5	13	23	36	0	-
RE222800_003	Residential	590833	4841016	1.5	13	23	35	0	-
RE222800_004	Residential	590542	4841175	1.5	31	23	53	1	0.1%
RE222800_005	Residential	591137	4840761	1.5	12	23	35	0	-
RE222900_001	Residential	590805	4841056	1.5	13	23	35	0	-
RE223100_001	Residential	590769	4841337	1.5	21	23	43	0	-
RE224000_001	Residential	591729	4841911	1.5	14	23	37	0	-
RE224000_002	Residential	591565	4842001	1.5	14	23	36	0	-
RE224000_003	Residential	591896	4841760	1.5	14	23	36	0	-
RE224000_004	Residential	592046	4841608	1.5	9	23	32	0	-
RE224000_005	Residential	591982	4841673	1.5	13	23	36	0	-
RE224000_006	Residential	592000	4841606	1.5	11	23	33	0	-
RE224000_007	Residential	592142	4841674	1.5	11	23	34	0	-
RE224000_008	Residential	591760	4841888	1.5	14	23	37	0	-
RE224100_001	Residential	591661	4842108	1.5	20	23	42	0	-
RE224200_001	Residential	591576	4842265	1.5	21	23	43	0	-
RE225600_001	Residential	591815	4843783	1.5	19	23	42	0	-
RE225700_001	Residential	591905	4843849	1.5	18	23	40	0	-
RE225700_002	Residential	591627	4843848	1.5	21	23	44	0	-
RE225800_001	Residential	591793	4843928	1.5	22	23	45	0	-
RE226500_001	Residential	591915	4844500	1.5	19	23	42	0	-
RE226500_002	Residential	592025	4844497	1.5	19	23	42	0	-
RE226600_001	Residential	592085	4844601	1.5	20	23	43	0	-
RE226700_001	Residential	592060	4844696	1.5	20	23	42	0	-
RE226800_001	Residential	592117	4844789	1.5	19	23	41	0	-
RE227000_001	Residential	592319	4844882	1.5	20	23	42	0	-
RE227100_001	Residential	592377	4844982	1.5	23	23	45	0	-
RE227100_002	Residential	592402	4845033	1.5	25	23	48	0	-
RE227300_001	Residential	592788	4845012	1.5	15	23	38	0	-
RE227800_001	Residential	592859	4845591	1.5	16	23	38	0	-
RE227900_001	Residential	592776	4845681	1.5	15	23	37	0	-
RE228000_001	Residential	595855	4844518	1.5	11	23	33	0	-
RE228000_002	Residential	595865	4844534	1.5	11	23	34	0	-
RE228000_003	Residential	595873	4844555	1.5	11	23	34	0	-
RE228000_004	Residential	595887	4844563	1.5	12	23	34	0	-
RE228000_005	Residential	595917	4844562	1.5	12	23	34	0	-
RE228000_006	Residential	595931	4844548	1.5	13	23	36	0	-
RE228000_007	Residential	595942	4844534	1.5	14	23	37	0	-
RE228000_008	Child Care Centre	597841	4843717	1.5	11	23	34	0	-
RE228000_009	Residential	595782	4844642	1.5	13	23	36	0	-
RE228100_001	Residential	595810	4844669	1.5	14	23	37	0	-
RE228300_028	Residential	595272	4845160	1.5	13	23	36	0	-
RE228300_029	Residential	595277	4845164	1.5	13	23	36	0	-
RE228300_030	Residential	595281	4845168	1.5	13	23	36	0	-
RE228300_031	Residential	595264	4845154	1.5	13	23	36	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE228300_032	Residential	595260	4845151	1.5	13	23	36	0	-
RE228300_033	Residential	595256	4845147	1.5	13	23	36	0	-
RE228300_034	Residential	595252	4845143	1.5	13	23	36	0	-
RE228300_035	Residential	595247	4845139	1.5	13	23	36	0	-
RE228400_004	Residential	595342	4845241	1.5	14	23	36	0	-
RE228400_005	Residential	595347	4845245	1.5	14	23	36	0	-
RE228400_006	Residential	595353	4845250	1.5	14	23	36	0	-
RE228400_007	Residential	595286	4845173	1.5	13	23	36	0	-
RE228400_008	Residential	595291	4845177	1.5	13	23	36	0	-
RE228400_009	Residential	595295	4845180	1.5	14	23	36	0	-
RE228400_010	Residential	595299	4845184	1.5	14	23	36	0	-
RE228400_011	Residential	595303	4845187	1.5	14	23	36	0	-
RE228400_013	Residential	595249	4845194	1.5	13	23	36	0	-
RE228400_014	Residential	595253	4845198	1.5	13	23	36	0	-
RE228400_015	Residential	595259	4845202	1.5	13	23	36	0	-
RE228400_045	Residential	595263	4845261	1.5	13	23	35	0	-
RE228400_046	Residential	595267	4845257	1.5	13	23	35	0	-
RE228400_047	Residential	595271	4845254	1.5	13	23	35	0	-
RE228400_048	Residential	595277	4845248	1.5	13	23	36	0	-
RE228400_049	Residential	595281	4845244	1.5	13	23	36	0	-
RE228400_050	Residential	595285	4845240	1.5	13	23	36	0	-
RE228400_051	Residential	595289	4845237	1.5	13	23	36	0	-
RE228400_052	Residential	595293	4845233	1.5	13	23	36	0	-
RE228400_053	Residential	595297	4845229	1.5	13	23	36	0	-
RE228400_054	Residential	595303	4845221	1.5	13	23	36	0	-
RE228400_055	Residential	595307	4845217	1.5	13	23	36	0	-
RE228400_056	Residential	595312	4845212	1.5	14	23	36	0	-
RE228400_057	Residential	595317	4845207	1.5	14	23	36	0	-
RE228400_058	Residential	595321	4845203	1.5	14	23	36	0	-
RE228400_059	Residential	595326	4845198	1.5	14	23	36	0	-
RE228500_009	Residential	595340	4845366	1.5	12	23	35	0	-
RE228500_010	Residential	595348	4845355	1.5	12	23	35	0	-
RE228500_011	Residential	595353	4845351	1.5	12	23	35	0	-
RE228500_012	Residential	595360	4845346	1.5	13	23	35	0	-
RE228500_013	Residential	595365	4845341	1.5	13	23	35	0	-
RE228500_014	Residential	595376	4845333	1.5	13	23	36	0	-
RE228500_015	Residential	595380	4845326	1.5	13	23	36	0	-
RE228500_016	Residential	595386	4845320	1.5	13	23	36	0	-
RE228500_017	Residential	595391	4845315	1.5	13	23	36	0	-
RE228500_018	Residential	595402	4845305	1.5	13	23	36	0	-
RE228500_019	Residential	595406	4845298	1.5	13	23	36	0	-
RE228500_020	Residential	595415	4845288	1.5	14	23	36	0	-
RE228500_021	Residential	595423	4845280	1.5	14	23	36	0	-
RE228500_022	Residential	595357	4845254	1.5	14	23	36	0	-
RE228500_023	Residential	595366	4845262	1.5	14	23	36	0	-
RE228500_024	Residential	595370	4845267	1.5	14	23	36	0	-
RE228500_025	Residential	595375	4845271	1.5	14	23	36	0	-
RE228500_026	Residential	595355	4845285	1.5	13	23	36	0	-
RE228500_027	Residential	595349	4845290	1.5	13	23	36	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE228500_028	Residential	595342	4845297	1.5	13	23	36	0	-
RE228500_029	Residential	595338	4845303	1.5	13	23	35	0	-
RE228500_030	Residential	595329	4845311	1.5	13	23	35	0	-
RE228500_031	Residential	595322	4845317	1.5	13	23	35	0	-
RE228500_032	Residential	595315	4845323	1.5	12	23	35	0	-
RE228500_033	Residential	595310	4845328	1.5	12	23	35	0	-
RE228500_034	Residential	595301	4845337	1.5	12	23	35	0	-
RE228500_035	Residential	595297	4845343	1.5	12	23	35	0	-
RE228500_049	Residential	595279	4845312	1.5	12	23	35	0	-
RE228500_050	Residential	595289	4845303	1.5	12	23	35	0	-
RE228500_051	Residential	595293	4845297	1.5	13	23	35	0	-
RE228500_052	Residential	595300	4845290	1.5	13	23	35	0	-
RE228500_053	Residential	595305	4845285	1.5	13	23	35	0	-
RE228500_054	Residential	595315	4845277	1.5	13	23	36	0	-
RE228500_055	Residential	595319	4845273	1.5	13	23	36	0	-
RE228500_056	Residential	595323	4845268	1.5	13	23	36	0	-
RE228500_057	Residential	595329	4845264	1.5	13	23	36	0	-
RE228500_060	Residential	595450	4845298	1.5	14	23	36	0	-
RE228500_061	Residential	595448	4845302	1.5	14	23	36	0	-
RE228500_062	Residential	595444	4845307	1.5	14	23	36	0	-
RE228500_063	Residential	595440	4845311	1.5	14	23	36	0	-
RE228500_064	Residential	595437	4845315	1.5	14	23	36	0	-
RE228500_065	Residential	595433	4845320	1.5	13	23	36	0	-
RE228500_066	Residential	595429	4845324	1.5	13	23	36	0	-
RE228500_067	Residential	595426	4845327	1.5	13	23	36	0	-
RE228600_013	Residential	595369	4845462	1.5	11	23	33	0	-
RE228600_014	Residential	595377	4845450	1.5	11	23	34	0	-
RE228600_015	Residential	595389	4845444	1.5	11	23	34	0	-
RE228600_016	Residential	595398	4845435	1.5	11	23	34	0	-
RE228600_017	Residential	595404	4845426	1.5	12	23	34	0	-
RE228600_018	Residential	595412	4845418	1.5	12	23	35	0	-
RE228600_019	Residential	595420	4845409	1.5	12	23	35	0	-
RE228600_020	Residential	595431	4845401	1.5	12	23	35	0	-
RE228600_021	Residential	595439	4845389	1.5	13	23	35	0	-
RE228600_022	Residential	595447	4845380	1.5	13	23	36	0	-
RE228600_023	Residential	595455	4845370	1.5	13	23	36	0	-
RE228600_024	Residential	595464	4845360	1.5	13	23	36	0	-
RE228600_025	Residential	595470	4845351	1.5	13	23	36	0	-
RE228600_026	Residential	595480	4845344	1.5	13	23	36	0	-
RE228600_027	Residential	595487	4845335	1.5	14	23	36	0	-
RE228600_036	Residential	595324	4845383	1.5	12	23	34	0	-
RE228600_037	Residential	595332	4845374	1.5	12	23	34	0	-
RE228600_038	Residential	595335	4845370	1.5	12	23	34	0	-
RE228600_039	Residential	595422	4845333	1.5	13	23	36	0	-
RE228600_040	Residential	595418	4845337	1.5	13	23	36	0	-
RE228600_041	Residential	595415	4845341	1.5	13	23	36	0	-
RE228600_042	Residential	595412	4845343	1.5	13	23	36	0	-
RE228600_043	Residential	595409	4845347	1.5	13	23	36	0	-
RE228600_044	Residential	595406	4845351	1.5	13	23	35	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE228600_045	Residential	595404	4845354	1.5	13	23	35	0	-
RE228600_046	Residential	595402	4845357	1.5	13	23	35	0	-
RE228600_047	Residential	595396	4845362	1.5	13	23	35	0	-
RE228600_048	Residential	595392	4845366	1.5	13	23	35	0	-
RE228600_049	Residential	595390	4845369	1.5	12	23	35	0	-
RE228600_050	Residential	595387	4845372	1.5	12	23	35	0	-
RE228600_051	Residential	595383	4845375	1.5	12	23	35	0	-
RE228600_052	Residential	595380	4845378	1.5	12	23	35	0	-
RE228600_053	Residential	595377	4845380	1.5	12	23	35	0	-
RE228600_054	Residential	595374	4845383	1.5	12	23	35	0	-
RE228600_055	Residential	595371	4845387	1.5	12	23	35	0	-
RE228600_056	Residential	595369	4845389	1.5	12	23	35	0	-
RE228600_057	Residential	595366	4845392	1.5	12	23	34	0	-
RE228600_058	Residential	595363	4845395	1.5	12	23	34	0	-
RE228600_059	Residential	595361	4845397	1.5	12	23	34	0	-
RE228600_060	Residential	595358	4845400	1.5	12	23	34	0	-
RE228600_061	Residential	595356	4845402	1.5	12	23	34	0	-
RE228600_062	Residential	595353	4845405	1.5	12	23	34	0	-
RE228600_063	Residential	593163	4846308	1.5	18	23	40	0	-
RE228700_010	Residential	593290	4846362	1.5	16	23	39	0	-
RE228800_001	Residential	593003	4846574	1.5	16	23	39	0	-
RE228800_002	Residential	593037	4846534	1.5	16	23	38	0	-
RE228800_003	Residential	593163	4846512	1.5	14	23	37	0	-
RE228900_001	Residential	592951	4846627	1.5	17	23	39	0	-
RE228900_002	Residential	592887	4846738	1.5	17	23	40	0	-
RE229000_001	Residential	593405	4846521	1.5	15	23	37	0	-
RE229100_001	Residential	593407	4846583	1.5	14	23	36	0	-
RE230200_001	Residential	594211	4847001	1.5	15	23	38	0	-
RE230300_001	Residential	594050	4847308	1.5	23	23	46	0	-
RE230300_002	Residential	593923	4847396	1.5	21	23	43	0	-
RE230300_003	Residential	594697	4846565	1.5	13	23	35	0	-
RE230300_004	Residential	595111	4846102	1.5	12	23	34	0	-
RE230300_005	Residential	595605	4845645	1.5	12	23	34	0	-
RE230400_001	Residential	593872	4847645	1.5	19	23	42	0	-
RE230400_002	Residential	593822	4847679	1.5	21	23	44	0	-
RE230400_006	Residential	594520	4846864	1.5	17	23	40	0	-
RE230400_007	Residential	594996	4846385	1.5	18	23	40	0	-
RE230400_008	Residential	594973	4846410	1.5	18	23	41	0	-
RE230400_009	Residential	594936	4846427	1.5	17	23	39	0	-
RE230400_010	Residential	595705	4845694	1.5	15	23	38	0	-
RE230400_011	Residential	595874	4845530	1.5	17	23	39	0	-
RE230500_001	Residential	594280	4847364	1.5	19	23	42	0	-
RE230500_002	Residential	594446	4847099	1.5	15	23	38	0	-
RE230500_003	Residential	594531	4847041	1.5	13	23	36	0	-
RE230500_004	Residential	594643	4846861	1.5	16	23	39	0	-
RE230500_005	Residential	594671	4846840	1.5	16	23	38	0	-
RE230500_006	Residential	595049	4846474	1.5	14	23	37	0	-
RE230500_007	Residential	595486	4846036	1.5	13	23	36	0	-
RE230500_008	Residential	595463	4846068	1.5	13	23	36	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230500_009	Residential	595438	4846095	1.5	13	23	36	0	-
RE230500_010	Residential	595925	4845612	1.5	14	23	37	0	-
RE230500_011	Residential	595941	4845561	1.5	15	23	38	0	-
RE230500_012	Residential	596152	4845388	1.5	19	23	41	0	-
RE230500_013	Residential	596418	4845009	1.5	29	23	52	1	0.1%
RE230500_014	Residential	596697	4844834	1.5	15	23	38	0	-
RE230600_001	Residential	594927	4846729	1.5	10	23	33	0	-
RE230600_002	Residential	595293	4846327	1.5	11	23	33	0	-
RE230600_003	Residential	596445	4845172	1.5	39	23	62	4	0.2%
RE230600_004	Residential	596565	4845058	1.5	18	23	41	0	-
RE230600_005	Residential	596657	4844932	1.5	15	23	38	0	-
RE230600_006	Residential	596705	4844908	1.5	14	23	37	0	-
RE230900_001	Residential	597840	4844261	1.5	22	23	45	0	-
RE230900_002	Residential	597853	4844274	1.5	21	23	43	0	-
RE230900_003	Residential	597866	4844285	1.5	20	23	42	0	-
RE230900_004	Residential	597879	4844301	1.5	19	23	41	0	-
RE230900_005	Residential	597887	4844307	1.5	18	23	41	0	-
RE230900_006	Residential	597900	4844320	1.5	18	23	40	0	-
RE230900_007	Residential	597908	4844331	1.5	17	23	40	0	-
RE230900_008	Residential	597922	4844342	1.5	17	23	40	0	-
RE230900_009	Residential	597931	4844352	1.5	17	23	39	0	-
RE230900_010	Residential	597943	4844365	1.5	16	23	39	0	-
RE230900_011	Residential	597954	4844376	1.5	16	23	39	0	-
RE230900_012	Residential	597816	4844283	1.5	23	23	46	0	-
RE230900_013	Residential	597825	4844289	1.5	22	23	45	0	-
RE230900_014	Residential	597835	4844299	1.5	21	23	44	0	-
RE230900_015	Residential	597842	4844308	1.5	20	23	43	0	-
RE230900_016	Residential	597849	4844314	1.5	20	23	42	0	-
RE230900_017	Residential	597859	4844324	1.5	19	23	42	0	-
RE230900_018	Residential	597867	4844331	1.5	19	23	41	0	-
RE230900_019	Residential	597875	4844341	1.5	18	23	41	0	-
RE230900_020	Residential	597884	4844348	1.5	18	23	41	0	-
RE230900_021	Residential	597892	4844356	1.5	18	23	40	0	-
RE230900_022	Residential	597899	4844365	1.5	18	23	40	0	-
RE230900_023	Residential	597905	4844373	1.5	17	23	40	0	-
RE230900_024	Residential	597917	4844381	1.5	17	23	40	0	-
RE230900_025	Residential	597924	4844389	1.5	17	23	39	0	-
RE230900_026	Residential	597931	4844399	1.5	17	23	39	0	-
RE230900_027	Residential	597646	4844600	1.5	27	23	50	0	-
RE230900_028	Residential	597653	4844613	1.5	27	23	49	0	-
RE230900_029	Residential	597660	4844623	1.5	26	23	49	0	-
RE230900_030	Residential	597665	4844629	1.5	26	23	48	0	-
RE230900_031	Residential	597835	4844353	1.5	20	23	43	0	-
RE230900_032	Residential	597831	4844358	1.5	20	23	43	0	-
RE230900_033	Residential	597825	4844365	1.5	20	23	43	0	-
RE230900_034	Residential	597820	4844371	1.5	20	23	43	0	-
RE230900_035	Residential	597814	4844379	1.5	21	23	43	0	-
RE230900_036	Residential	597811	4844383	1.5	21	23	43	0	-
RE230900_037	Residential	597806	4844390	1.5	21	23	43	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_038	Residential	597801	4844396	1.5	21	23	44	0	-
RE230900_039	Residential	597796	4844403	1.5	21	23	44	0	-
RE230900_040	Residential	597792	4844410	1.5	21	23	44	0	-
RE230900_041	Residential	597786	4844416	1.5	22	23	44	0	-
RE230900_042	Residential	597783	4844423	1.5	22	23	44	0	-
RE230900_043	Residential	597781	4844430	1.5	22	23	44	0	-
RE230900_044	Residential	597777	4844436	1.5	22	23	44	0	-
RE230900_045	Residential	597773	4844443	1.5	22	23	44	0	-
RE230900_046	Residential	597770	4844450	1.5	22	23	45	0	-
RE230900_047	Residential	597766	4844457	1.5	22	23	45	0	-
RE230900_048	Residential	597762	4844463	1.5	22	23	45	0	-
RE230900_049	Residential	597758	4844470	1.5	22	23	45	0	-
RE230900_050	Residential	597754	4844477	1.5	22	23	45	0	-
RE230900_051	Residential	597751	4844484	1.5	22	23	45	0	-
RE230900_052	Residential	597747	4844490	1.5	22	23	45	0	-
RE230900_053	Residential	597744	4844497	1.5	22	23	45	0	-
RE230900_054	Residential	597739	4844504	1.5	23	23	45	0	-
RE230900_055	Residential	597725	4844530	1.5	23	23	46	0	-
RE230900_056	Residential	597721	4844535	1.5	23	23	46	0	-
RE230900_057	Residential	597717	4844543	1.5	23	23	46	0	-
RE230900_058	Residential	597713	4844549	1.5	23	23	46	0	-
RE230900_059	Residential	597710	4844557	1.5	23	23	46	0	-
RE230900_060	Residential	597705	4844564	1.5	23	23	46	0	-
RE230900_061	Residential	597701	4844572	1.5	24	23	46	0	-
RE230900_062	Residential	597697	4844579	1.5	24	23	46	0	-
RE230900_063	Residential	597692	4844586	1.5	24	23	47	0	-
RE230900_064	Residential	597688	4844592	1.5	24	23	47	0	-
RE230900_065	Residential	597684	4844600	1.5	25	23	47	0	-
RE230900_066	Residential	597681	4844607	1.5	25	23	47	0	-
RE230900_067	Residential	597651	4844608	1.5	27	23	49	0	-
RE230900_068	Residential	597659	4844619	1.5	26	23	49	0	-
RE230900_069	Residential	597659	4844582	1.5	26	23	49	0	-
RE230900_070	Residential	597661	4844578	1.5	26	23	49	0	-
RE230900_071	Residential	597664	4844572	1.5	26	23	49	0	-
RE230900_072	Residential	597668	4844567	1.5	26	23	49	0	-
RE230900_073	Residential	597671	4844560	1.5	26	23	48	0	-
RE230900_074	Residential	597674	4844556	1.5	26	23	48	0	-
RE230900_075	Residential	597678	4844550	1.5	26	23	48	0	-
RE230900_076	Residential	597681	4844543	1.5	26	23	48	0	-
RE230900_077	Residential	597684	4844537	1.5	25	23	48	0	-
RE230900_078	Residential	597688	4844532	1.5	25	23	48	0	-
RE230900_079	Residential	597691	4844527	1.5	25	23	48	0	-
RE230900_080	Residential	597695	4844521	1.5	25	23	48	0	-
RE230900_081	Residential	597697	4844516	1.5	25	23	48	0	-
RE230900_082	Residential	597714	4844486	1.5	25	23	47	0	-
RE230900_083	Residential	597717	4844481	1.5	24	23	47	0	-
RE230900_084	Residential	597720	4844476	1.5	24	23	47	0	-
RE230900_085	Residential	597723	4844470	1.5	24	23	47	0	-
RE230900_086	Residential	597726	4844464	1.5	24	23	47	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_087	Residential	597729	4844460	1.5	24	23	47	0	-
RE230900_088	Residential	597732	4844455	1.5	24	23	47	0	-
RE230900_089	Residential	597736	4844448	1.5	24	23	47	0	-
RE230900_090	Residential	597740	4844440	1.5	24	23	47	0	-
RE230900_091	Residential	597743	4844435	1.5	24	23	46	0	-
RE230900_092	Residential	597747	4844429	1.5	24	23	46	0	-
RE230900_093	Residential	597749	4844423	1.5	24	23	46	0	-
RE230900_094	Residential	597752	4844418	1.5	24	23	46	0	-
RE230900_095	Residential	597755	4844413	1.5	24	23	46	0	-
RE230900_096	Residential	597758	4844409	1.5	23	23	46	0	-
RE230900_097	Residential	597762	4844402	1.5	23	23	46	0	-
RE230900_098	Residential	597765	4844392	1.5	23	23	46	0	-
RE230900_099	Residential	597769	4844386	1.5	23	23	46	0	-
RE230900_100	Residential	597773	4844382	1.5	23	23	46	0	-
RE230900_101	Residential	597776	4844377	1.5	23	23	45	0	-
RE230900_102	Residential	597784	4844369	1.5	22	23	45	0	-
RE230900_103	Residential	597787	4844364	1.5	22	23	45	0	-
RE230900_104	Residential	597791	4844360	1.5	22	23	45	0	-
RE230900_105	Residential	597794	4844354	1.5	22	23	45	0	-
RE230900_106	Residential	597798	4844349	1.5	22	23	45	0	-
RE230900_107	Residential	597802	4844343	1.5	22	23	45	0	-
RE230900_108	Residential	597805	4844339	1.5	22	23	45	0	-
RE230900_109	Residential	597808	4844334	1.5	22	23	44	0	-
RE230900_110	Residential	597861	4844387	1.5	19	23	41	0	-
RE230900_111	Residential	597868	4844394	1.5	18	23	41	0	-
RE230900_112	Residential	597877	4844404	1.5	18	23	41	0	-
RE230900_113	Residential	597886	4844412	1.5	18	23	40	0	-
RE230900_114	Residential	597892	4844420	1.5	18	23	40	0	-
RE230900_115	Residential	597874	4844444	1.5	18	23	41	0	-
RE230900_116	Residential	597870	4844440	1.5	18	23	41	0	-
RE230900_117	Residential	597863	4844432	1.5	18	23	41	0	-
RE230900_118	Residential	597859	4844428	1.5	19	23	41	0	-
RE230900_119	Residential	597849	4844405	1.5	19	23	42	0	-
RE230900_120	Residential	597845	4844411	1.5	19	23	42	0	-
RE230900_121	Residential	597840	4844418	1.5	19	23	42	0	-
RE230900_122	Residential	597836	4844424	1.5	19	23	42	0	-
RE230900_123	Residential	597819	4844451	1.5	20	23	42	0	-
RE230900_124	Residential	597815	4844458	1.5	20	23	42	0	-
RE230900_125	Residential	597834	4844465	1.5	19	23	42	0	-
RE230900_126	Residential	597846	4844477	1.5	19	23	41	0	-
RE230900_127	Residential	597812	4844466	1.5	20	23	42	0	-
RE230900_128	Residential	597808	4844471	1.5	20	23	42	0	-
RE230900_129	Residential	597804	4844480	1.5	20	23	43	0	-
RE230900_130	Residential	597801	4844485	1.5	20	23	43	0	-
RE230900_131	Residential	597796	4844493	1.5	20	23	43	0	-
RE230900_132	Residential	597793	4844499	1.5	20	23	43	0	-
RE230900_133	Residential	597788	4844505	1.5	20	23	43	0	-
RE230900_134	Residential	597785	4844512	1.5	20	23	43	0	-
RE230900_135	Residential	597781	4844519	1.5	21	23	43	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_136	Residential	597777	4844525	1.5	21	23	43	0	-
RE230900_137	Residential	597772	4844533	1.5	21	23	43	0	-
RE230900_138	Residential	597769	4844540	1.5	21	23	43	0	-
RE230900_139	Residential	597765	4844546	1.5	21	23	44	0	-
RE230900_140	Residential	597762	4844553	1.5	21	23	44	0	-
RE230900_141	Residential	597758	4844559	1.5	21	23	44	0	-
RE230900_142	Residential	597755	4844565	1.5	21	23	44	0	-
RE230900_143	Residential	597751	4844573	1.5	21	23	44	0	-
RE230900_144	Residential	597747	4844579	1.5	22	23	44	0	-
RE230900_145	Residential	597822	4844504	1.5	19	23	42	0	-
RE230900_146	Residential	597827	4844497	1.5	19	23	42	0	-
RE230900_147	Residential	597831	4844490	1.5	19	23	42	0	-
RE230900_148	Residential	597839	4844470	1.5	19	23	42	0	-
RE230900_149	Residential	598114	4844042	1.5	15	23	37	0	-
RE230900_150	Residential	598102	4844034	1.5	15	23	38	0	-
RE230900_151	Residential	598094	4844026	1.5	16	23	38	0	-
RE230900_152	Residential	598074	4844024	1.5	17	23	39	0	-
RE230900_153	Residential	598063	4844034	1.5	17	23	39	0	-
RE230900_154	Residential	598053	4844045	1.5	17	23	39	0	-
RE230900_155	Residential	598043	4844055	1.5	17	23	39	0	-
RE230900_156	Residential	598034	4844069	1.5	17	23	39	0	-
RE230900_157	Residential	598028	4844085	1.5	17	23	39	0	-
RE230900_158	Residential	598036	4844098	1.5	16	23	39	0	-
RE230900_159	Residential	598045	4844106	1.5	16	23	38	0	-
RE230900_160	Residential	598054	4844116	1.5	15	23	38	0	-
RE230900_161	Residential	598102	4844074	1.5	15	23	37	0	-
RE230900_162	Residential	598085	4844058	1.5	15	23	38	0	-
RE230900_163	Residential	598068	4844077	1.5	15	23	38	0	-
RE230900_164	Residential	598080	4844091	1.5	15	23	38	0	-
RE230900_165	Residential	598123	4844051	1.5	14	23	37	0	-
RE230900_166	Residential	598199	4843983	1.5	14	23	36	0	-
RE230900_167	Residential	598192	4843977	1.5	14	23	36	0	-
RE230900_168	Residential	598185	4843968	1.5	14	23	37	0	-
RE230900_169	Residential	598179	4843962	1.5	14	23	37	0	-
RE230900_170	Residential	598170	4843953	1.5	15	23	37	0	-
RE230900_171	Residential	598161	4843941	1.5	16	23	38	0	-
RE230900_172	Residential	598158	4843928	1.5	16	23	39	0	-
RE230900_173	Residential	598165	4843918	1.5	16	23	39	0	-
RE230900_174	Residential	598171	4843911	1.5	16	23	39	0	-
RE230900_175	Residential	598179	4843903	1.5	16	23	39	0	-
RE230900_176	Residential	598185	4843897	1.5	16	23	39	0	-
RE230900_177	Residential	598191	4843889	1.5	16	23	39	0	-
RE230900_178	Residential	598197	4843884	1.5	16	23	39	0	-
RE230900_179	Residential	598202	4843879	1.5	16	23	38	0	-
RE230900_180	Residential	598209	4843872	1.5	16	23	38	0	-
RE230900_181	Residential	598215	4843866	1.5	16	23	38	0	-
RE230900_182	Residential	598222	4843858	1.5	16	23	38	0	-
RE230900_192	Residential	598217	4843965	1.5	14	23	36	0	-
RE230900_193	Residential	598205	4843953	1.5	14	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_194	Residential	598192	4843939	1.5	15	23	37	0	-
RE230900_198	Residential	597969	4844339	1.5	16	23	39	0	-
RE230900_199	Residential	597959	4844330	1.5	16	23	39	0	-
RE230900_200	Residential	597950	4844320	1.5	16	23	39	0	-
RE230900_201	Residential	597940	4844310	1.5	17	23	39	0	-
RE230900_202	Residential	597931	4844302	1.5	17	23	40	0	-
RE230900_203	Residential	597923	4844293	1.5	17	23	40	0	-
RE230900_204	Residential	597913	4844282	1.5	18	23	40	0	-
RE230900_205	Residential	597979	4844349	1.5	16	23	38	0	-
RE230900_206	Residential	597848	4844272	1.5	21	23	44	0	-
RE230900_207	Residential	597840	4844263	1.5	22	23	44	0	-
RE230900_208	Residential	597864	4844244	1.5	21	23	43	0	-
RE230900_209	Residential	597869	4844237	1.5	21	23	43	0	-
RE230900_210	Residential	597874	4844230	1.5	21	23	43	0	-
RE230900_211	Residential	597878	4844225	1.5	20	23	43	0	-
RE230900_212	Residential	597888	4844211	1.5	20	23	43	0	-
RE230900_213	Residential	597893	4844204	1.5	20	23	43	0	-
RE230900_214	Residential	597899	4844195	1.5	20	23	43	0	-
RE230900_215	Residential	597904	4844188	1.5	20	23	43	0	-
RE230900_216	Residential	597884	4844219	1.5	20	23	43	0	-
RE230900_217	Residential	597946	4844123	1.5	20	23	42	0	-
RE230900_218	Residential	597910	4844177	1.5	20	23	43	0	-
RE230900_219	Residential	597915	4844171	1.5	20	23	43	0	-
RE230900_220	Residential	597921	4844162	1.5	20	23	42	0	-
RE230900_221	Residential	597926	4844153	1.5	20	23	42	0	-
RE230900_222	Residential	597936	4844139	1.5	20	23	42	0	-
RE230900_223	Residential	597954	4844115	1.5	20	23	42	0	-
RE230900_224	Residential	597959	4844106	1.5	20	23	42	0	-
RE230900_225	Residential	597967	4844098	1.5	20	23	42	0	-
RE230900_226	Residential	597972	4844091	1.5	20	23	42	0	-
RE230900_227	Residential	597977	4844083	1.5	20	23	42	0	-
RE230900_228	Residential	597982	4844076	1.5	20	23	42	0	-
RE230900_229	Residential	597986	4844069	1.5	20	23	42	0	-
RE230900_230	Residential	597991	4844063	1.5	20	23	42	0	-
RE230900_231	Residential	597994	4844057	1.5	20	23	42	0	-
RE230900_232	Residential	598000	4844050	1.5	20	23	42	0	-
RE230900_233	Residential	598005	4844046	1.5	20	23	42	0	-
RE230900_234	Residential	598013	4844034	1.5	20	23	42	0	-
RE230900_235	Residential	598019	4844027	1.5	20	23	42	0	-
RE230900_236	Residential	598024	4844022	1.5	20	23	42	0	-
RE230900_237	Residential	598029	4844018	1.5	19	23	42	0	-
RE230900_238	Residential	598032	4844011	1.5	20	23	42	0	-
RE230900_239	Residential	598037	4844006	1.5	20	23	42	0	-
RE230900_240	Residential	598044	4843998	1.5	20	23	42	0	-
RE230900_241	Residential	597941	4844132	1.5	20	23	42	0	-
RE230900_242	Residential	598051	4843992	1.5	19	23	42	0	-
RE230900_243	Residential	598058	4843984	1.5	19	23	42	0	-
RE230900_244	Residential	598066	4843978	1.5	19	23	42	0	-
RE230900_245	Residential	598072	4843971	1.5	19	23	42	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_246	Residential	598078	4843964	1.5	19	23	42	0	-
RE230900_247	Residential	598084	4843957	1.5	19	23	41	0	-
RE230900_257	Residential	598130	4844202	1.5	13	23	36	0	-
RE230900_258	Residential	598131	4844192	1.5	13	23	36	0	-
RE230900_259	Residential	598135	4844179	1.5	13	23	36	0	-
RE230900_260	Residential	598147	4844156	1.5	13	23	36	0	-
RE230900_261	Residential	598154	4844148	1.5	13	23	36	0	-
RE230900_262	Residential	598161	4844140	1.5	13	23	36	0	-
RE230900_263	Residential	598095	4844225	1.5	14	23	36	0	-
RE230900_264	Residential	598095	4844213	1.5	14	23	37	0	-
RE230900_265	Residential	598095	4844198	1.5	14	23	37	0	-
RE230900_266	Residential	598094	4844188	1.5	14	23	37	0	-
RE230900_272	Residential	598293	4843978	1.5	12	23	35	0	-
RE230900_273	Residential	598282	4843987	1.5	12	23	35	0	-
RE230900_274	Residential	598272	4843996	1.5	12	23	35	0	-
RE230900_275	Residential	598261	4844006	1.5	13	23	35	0	-
RE230900_276	Residential	598251	4844016	1.5	13	23	35	0	-
RE230900_277	Residential	598243	4844025	1.5	13	23	35	0	-
RE230900_278	Residential	598237	4844030	1.5	13	23	35	0	-
RE230900_279	Residential	598231	4844036	1.5	13	23	35	0	-
RE230900_280	Residential	598225	4844041	1.5	13	23	35	0	-
RE230900_281	Residential	598220	4844046	1.5	13	23	35	0	-
RE230900_282	Residential	598213	4844053	1.5	13	23	35	0	-
RE230900_283	Residential	598133	4844117	1.5	14	23	36	0	-
RE230900_285	Residential	598098	4844164	1.5	14	23	37	0	-
RE230900_286	Residential	598103	4844154	1.5	14	23	37	0	-
RE230900_287	Residential	598107	4844144	1.5	14	23	37	0	-
RE230900_288	Residential	598172	4844129	1.5	13	23	36	0	-
RE230900_289	Residential	598183	4844119	1.5	13	23	36	0	-
RE230900_290	Residential	598190	4844111	1.5	13	23	36	0	-
RE230900_291	Residential	598198	4844103	1.5	13	23	35	0	-
RE230900_292	Residential	598205	4844095	1.5	13	23	35	0	-
RE230900_293	Residential	598212	4844088	1.5	13	23	35	0	-
RE230900_294	Residential	598185	4844065	1.5	13	23	36	0	-
RE230900_295	Residential	598176	4844074	1.5	13	23	36	0	-
RE230900_296	Residential	598166	4844083	1.5	13	23	36	0	-
RE230900_297	Residential	598158	4844092	1.5	13	23	36	0	-
RE230900_298	Residential	598148	4844101	1.5	14	23	36	0	-
RE230900_299	Residential	598139	4844111	1.5	14	23	36	0	-
RE230900_300	Residential	598118	4844130	1.5	14	23	37	0	-
RE230900_301	Residential	598112	4844137	1.5	14	23	37	0	-
RE230900_302	Residential	598231	4844068	1.5	13	23	35	0	-
RE230900_303	Residential	598240	4844057	1.5	13	23	35	0	-
RE230900_304	Residential	598258	4844039	1.5	12	23	35	0	-
RE230900_305	Residential	598267	4844030	1.5	12	23	35	0	-
RE230900_306	Residential	598275	4844021	1.5	12	23	35	0	-
RE230900_307	Residential	598296	4844003	1.5	12	23	35	0	-
RE230900_310	Residential	598286	4844012	1.5	12	23	35	0	-
RE230900_312	Residential	598068	4844260	1.5	14	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_313	Residential	598248	4844048	1.5	12	23	35	0	-
RE230900_315	Residential	598095	4844177	1.5	14	23	37	0	-
RE230900_317	Residential	598062	4844211	1.5	14	23	37	0	-
RE230900_318	Residential	598168	4844040	1.5	14	23	36	0	-
RE230900_319	Residential	598156	4844051	1.5	14	23	36	0	-
RE230900_320	Residential	598148	4844062	1.5	14	23	36	0	-
RE230900_321	Residential	598135	4844072	1.5	14	23	37	0	-
RE230900_322	Residential	598126	4844084	1.5	14	23	37	0	-
RE230900_323	Residential	598113	4844094	1.5	14	23	37	0	-
RE230900_324	Residential	598105	4844105	1.5	14	23	37	0	-
RE230900_325	Residential	598096	4844112	1.5	14	23	37	0	-
RE230900_326	Residential	598087	4844118	1.5	15	23	37	0	-
RE230900_327	Residential	598077	4844131	1.5	15	23	37	0	-
RE230900_328	Residential	598067	4844143	1.5	15	23	37	0	-
RE230900_329	Residential	598061	4844157	1.5	15	23	37	0	-
RE230900_330	Residential	598061	4844172	1.5	15	23	37	0	-
RE230900_331	Residential	598061	4844185	1.5	15	23	37	0	-
RE230900_332	Residential	598062	4844198	1.5	15	23	37	0	-
RE230900_333	Residential	598063	4844224	1.5	14	23	37	0	-
RE230900_334	Residential	598128	4844123	1.5	14	23	36	0	-
RE230900_335	Residential	598138	4844168	1.5	13	23	36	0	-
RE230900_337	Residential	598275	4843935	1.5	13	23	35	0	-
RE230900_338	Residential	598267	4843942	1.5	13	23	36	0	-
RE230900_339	Residential	598256	4843950	1.5	13	23	36	0	-
RE230900_340	Residential	598247	4843960	1.5	13	23	36	0	-
RE230900_341	Residential	598239	4843966	1.5	13	23	36	0	-
RE230900_342	Residential	598233	4843974	1.5	13	23	36	0	-
RE230900_343	Residential	598226	4843980	1.5	13	23	36	0	-
RE230900_344	Residential	598218	4843987	1.5	13	23	36	0	-
RE230900_345	Residential	598211	4843994	1.5	13	23	36	0	-
RE230900_346	Residential	598205	4844002	1.5	13	23	36	0	-
RE230900_347	Residential	598199	4844007	1.5	13	23	36	0	-
RE230900_348	Residential	598190	4844015	1.5	13	23	36	0	-
RE230900_349	Residential	598181	4844024	1.5	14	23	36	0	-
RE230900_350	Residential	597947	4844283	1.5	17	23	39	0	-
RE230900_351	Residential	597937	4844272	1.5	17	23	40	0	-
RE230900_352	Residential	597929	4844264	1.5	17	23	40	0	-
RE230900_353	Residential	597958	4844245	1.5	17	23	39	0	-
RE230900_354	Residential	597947	4844234	1.5	17	23	40	0	-
RE230900_355	Residential	597920	4844224	1.5	18	23	41	0	-
RE230900_356	Residential	597911	4844235	1.5	18	23	41	0	-
RE230900_357	Residential	597935	4844225	1.5	18	23	40	0	-
RE230900_358	Residential	597903	4844242	1.5	19	23	41	0	-
RE230900_359	Residential	597894	4844252	1.5	19	23	41	0	-
RE230900_360	Residential	597885	4844262	1.5	19	23	42	0	-
RE230900_361	Residential	597993	4844327	1.5	15	23	38	0	-
RE230900_362	Residential	597985	4844320	1.5	16	23	38	0	-
RE230900_363	Residential	597976	4844312	1.5	16	23	38	0	-
RE230900_364	Residential	597966	4844301	1.5	16	23	39	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_365	Residential	597956	4844290	1.5	16	23	39	0	-
RE230900_366	Residential	597988	4844228	1.5	16	23	39	0	-
RE230900_367	Residential	597980	4844220	1.5	16	23	39	0	-
RE230900_368	Residential	597970	4844211	1.5	17	23	39	0	-
RE230900_369	Residential	597960	4844201	1.5	17	23	40	0	-
RE230900_370	Residential	597949	4844191	1.5	17	23	40	0	-
RE230900_371	Residential	597936	4844178	1.5	18	23	41	0	-
RE230900_372	Residential	598039	4844140	1.5	15	23	38	0	-
RE230900_373	Residential	598027	4844132	1.5	16	23	38	0	-
RE230900_374	Residential	598012	4844121	1.5	16	23	39	0	-
RE230900_375	Residential	597996	4844119	1.5	17	23	40	0	-
RE230900_376	Residential	597981	4844132	1.5	17	23	40	0	-
RE230900_377	Residential	597973	4844146	1.5	18	23	40	0	-
RE230900_378	Residential	598034	4844176	1.5	15	23	38	0	-
RE230900_379	Residential	598015	4844169	1.5	16	23	38	0	-
RE230900_380	Residential	598000	4844158	1.5	16	23	39	0	-
RE230900_381	Residential	597986	4844180	1.5	16	23	39	0	-
RE230900_382	Residential	597997	4844189	1.5	16	23	39	0	-
RE230900_383	Residential	598009	4844195	1.5	16	23	38	0	-
RE230900_384	Residential	598020	4844205	1.5	15	23	38	0	-
RE230900_385	Residential	598034	4844205	1.5	15	23	38	0	-
RE230900_386	Residential	598213	4843919	1.5	14	23	37	0	-
RE230900_387	Residential	598223	4843930	1.5	14	23	37	0	-
RE230900_388	Residential	598235	4843942	1.5	13	23	36	0	-
RE230900_389	Residential	598262	4843914	1.5	13	23	36	0	-
RE230900_390	Residential	598251	4843903	1.5	14	23	36	0	-
RE230900_391	Residential	598238	4843889	1.5	14	23	37	0	-
RE230900_394	Residential	597965	4844159	1.5	18	23	40	0	-
RE230900_395	Residential	598116	4843943	1.5	18	23	40	0	-
RE230900_396	Residential	598126	4843952	1.5	17	23	39	0	-
RE230900_397	Residential	598136	4843962	1.5	16	23	38	0	-
RE230900_398	Residential	598147	4843973	1.5	15	23	38	0	-
RE230900_399	Residential	598158	4843985	1.5	15	23	37	0	-
RE230900_400	Residential	598170	4843998	1.5	14	23	37	0	-
RE230900_401	Residential	598145	4844026	1.5	14	23	37	0	-
RE230900_402	Residential	598132	4844013	1.5	15	23	37	0	-
RE230900_403	Residential	598121	4844002	1.5	15	23	38	0	-
RE230900_404	Residential	598113	4843994	1.5	16	23	38	0	-
RE230900_405	Residential	598106	4843985	1.5	16	23	39	0	-
RE230900_406	Residential	598095	4843974	1.5	17	23	40	0	-
RE231000_001	Recreation	597895	4844715	1.5	17	23	39	0	-
RE231000_002	Residential	594593	4847779	1.5	19	23	41	0	-
RE231000_003	Residential	597966	4844386	1.5	16	23	39	0	-
RE231000_004	Residential	597973	4844395	1.5	16	23	38	0	-
RE231000_005	Residential	597984	4844407	1.5	15	23	38	0	-
RE231000_006	Residential	597998	4844418	1.5	15	23	38	0	-
RE231000_007	Residential	598005	4844428	1.5	15	23	38	0	-
RE231000_008	Residential	598021	4844443	1.5	15	23	37	0	-
RE231000_009	Residential	598033	4844455	1.5	15	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_010	Residential	598043	4844466	1.5	14	23	37	0	-
RE231000_011	Residential	597940	4844407	1.5	16	23	39	0	-
RE231000_012	Residential	597949	4844414	1.5	16	23	39	0	-
RE231000_013	Residential	597956	4844424	1.5	16	23	39	0	-
RE231000_014	Residential	597965	4844432	1.5	16	23	39	0	-
RE231000_015	Residential	597973	4844440	1.5	16	23	38	0	-
RE231000_016	Residential	597982	4844449	1.5	15	23	38	0	-
RE231000_017	Residential	597989	4844456	1.5	15	23	38	0	-
RE231000_018	Residential	597997	4844465	1.5	15	23	38	0	-
RE231000_019	Residential	598006	4844473	1.5	15	23	38	0	-
RE231000_020	Residential	598015	4844481	1.5	15	23	38	0	-
RE231000_021	Residential	598022	4844489	1.5	15	23	37	0	-
RE231000_022	Residential	598030	4844498	1.5	15	23	37	0	-
RE231000_023	Residential	598039	4844506	1.5	14	23	37	0	-
RE231000_024	Residential	598046	4844513	1.5	14	23	37	0	-
RE231000_025	Residential	598053	4844523	1.5	14	23	37	0	-
RE231000_026	Residential	598064	4844530	1.5	14	23	37	0	-
RE231000_027	Residential	597902	4844429	1.5	17	23	40	0	-
RE231000_028	Residential	597911	4844437	1.5	17	23	40	0	-
RE231000_029	Residential	597918	4844446	1.5	17	23	39	0	-
RE231000_030	Residential	597928	4844453	1.5	17	23	39	0	-
RE231000_031	Residential	597934	4844463	1.5	16	23	39	0	-
RE231000_032	Residential	597943	4844469	1.5	16	23	39	0	-
RE231000_033	Residential	597953	4844479	1.5	16	23	39	0	-
RE231000_034	Residential	597961	4844486	1.5	16	23	38	0	-
RE231000_035	Residential	597969	4844494	1.5	16	23	38	0	-
RE231000_036	Residential	597976	4844504	1.5	15	23	38	0	-
RE231000_037	Residential	597984	4844514	1.5	15	23	38	0	-
RE231000_038	Residential	597992	4844520	1.5	15	23	38	0	-
RE231000_039	Residential	598001	4844529	1.5	15	23	38	0	-
RE231000_040	Residential	598009	4844537	1.5	15	23	37	0	-
RE231000_041	Residential	598016	4844545	1.5	15	23	37	0	-
RE231000_042	Residential	598025	4844554	1.5	15	23	37	0	-
RE231000_043	Residential	598033	4844562	1.5	14	23	37	0	-
RE231000_044	Residential	598013	4844582	1.5	15	23	37	0	-
RE231000_045	Residential	598003	4844574	1.5	15	23	37	0	-
RE231000_046	Residential	597995	4844566	1.5	15	23	38	0	-
RE231000_047	Residential	597987	4844557	1.5	15	23	38	0	-
RE231000_048	Residential	597979	4844550	1.5	15	23	38	0	-
RE231000_049	Residential	597972	4844542	1.5	16	23	38	0	-
RE231000_050	Residential	597967	4844538	1.5	16	23	38	0	-
RE231000_051	Residential	597961	4844530	1.5	16	23	38	0	-
RE231000_052	Residential	597957	4844525	1.5	16	23	38	0	-
RE231000_053	Residential	597950	4844520	1.5	16	23	38	0	-
RE231000_054	Residential	597945	4844515	1.5	16	23	39	0	-
RE231000_055	Residential	597940	4844509	1.5	16	23	39	0	-
RE231000_056	Residential	597934	4844504	1.5	16	23	39	0	-
RE231000_057	Residential	597929	4844499	1.5	16	23	39	0	-
RE231000_058	Residential	597923	4844493	1.5	17	23	39	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_059	Residential	597918	4844487	1.5	17	23	39	0	-
RE231000_060	Residential	597914	4844483	1.5	17	23	39	0	-
RE231000_061	Residential	597908	4844476	1.5	17	23	40	0	-
RE231000_062	Residential	597904	4844471	1.5	17	23	40	0	-
RE231000_063	Residential	597897	4844465	1.5	17	23	40	0	-
RE231000_064	Residential	597892	4844460	1.5	17	23	40	0	-
RE231000_065	Residential	597886	4844454	1.5	18	23	40	0	-
RE231000_066	Residential	597881	4844449	1.5	18	23	40	0	-
RE231000_067	Residential	597742	4844586	1.5	22	23	44	0	-
RE231000_068	Residential	597739	4844592	1.5	22	23	44	0	-
RE231000_069	Residential	597735	4844599	1.5	22	23	45	0	-
RE231000_070	Residential	597732	4844605	1.5	22	23	45	0	-
RE231000_071	Residential	597727	4844613	1.5	22	23	45	0	-
RE231000_072	Residential	597724	4844619	1.5	22	23	45	0	-
RE231000_073	Residential	597720	4844626	1.5	23	23	45	0	-
RE231000_074	Residential	597718	4844632	1.5	23	23	45	0	-
RE231000_075	Residential	597712	4844640	1.5	23	23	46	0	-
RE231000_076	Residential	597707	4844646	1.5	23	23	46	0	-
RE231000_077	Residential	597684	4844653	1.5	25	23	47	0	-
RE231000_078	Residential	597688	4844659	1.5	24	23	47	0	-
RE231000_079	Residential	597692	4844664	1.5	24	23	47	0	-
RE231000_080	Residential	597695	4844670	1.5	24	23	47	0	-
RE231000_081	Residential	597701	4844677	1.5	24	23	46	0	-
RE231000_082	Residential	597705	4844683	1.5	23	23	46	0	-
RE231000_083	Residential	597708	4844687	1.5	23	23	46	0	-
RE231000_084	Residential	597711	4844692	1.5	23	23	46	0	-
RE231000_085	Residential	597729	4844665	1.5	22	23	45	0	-
RE231000_086	Residential	597725	4844670	1.5	22	23	45	0	-
RE231000_087	Residential	597738	4844650	1.5	22	23	44	0	-
RE231000_088	Residential	597734	4844657	1.5	22	23	45	0	-
RE231000_089	Residential	597742	4844645	1.5	22	23	44	0	-
RE231000_090	Residential	597746	4844639	1.5	21	23	44	0	-
RE231000_091	Residential	597750	4844631	1.5	21	23	44	0	-
RE231000_092	Residential	597753	4844624	1.5	21	23	44	0	-
RE231000_093	Residential	597757	4844618	1.5	21	23	44	0	-
RE231000_094	Residential	597761	4844610	1.5	21	23	43	0	-
RE231000_095	Residential	597764	4844603	1.5	21	23	43	0	-
RE231000_096	Residential	597768	4844596	1.5	21	23	43	0	-
RE231000_097	Residential	597773	4844591	1.5	21	23	43	0	-
RE231000_098	Residential	597777	4844584	1.5	20	23	43	0	-
RE231000_099	Residential	597780	4844577	1.5	20	23	43	0	-
RE231000_100	Residential	597784	4844570	1.5	20	23	43	0	-
RE231000_101	Residential	597789	4844564	1.5	20	23	43	0	-
RE231000_102	Residential	597793	4844557	1.5	20	23	43	0	-
RE231000_103	Residential	597796	4844550	1.5	20	23	42	0	-
RE231000_104	Residential	597800	4844544	1.5	20	23	42	0	-
RE231000_105	Residential	597804	4844537	1.5	20	23	42	0	-
RE231000_106	Residential	597807	4844531	1.5	20	23	42	0	-
RE231000_107	Residential	597811	4844525	1.5	20	23	42	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_108	Residential	597814	4844518	1.5	19	23	42	0	-
RE231000_109	Residential	597819	4844511	1.5	19	23	42	0	-
RE231000_110	Residential	597851	4844481	1.5	19	23	41	0	-
RE231000_111	Residential	597881	4844502	1.5	18	23	40	0	-
RE231000_112	Residential	597876	4844507	1.5	18	23	40	0	-
RE231000_113	Residential	597871	4844514	1.5	18	23	40	0	-
RE231000_114	Residential	597866	4844519	1.5	18	23	40	0	-
RE231000_115	Residential	597849	4844534	1.5	18	23	41	0	-
RE231000_116	Residential	597855	4844537	1.5	18	23	41	0	-
RE231000_117	Residential	597863	4844540	1.5	18	23	40	0	-
RE231000_118	Residential	597869	4844544	1.5	18	23	40	0	-
RE231000_119	Residential	597877	4844549	1.5	17	23	40	0	-
RE231000_120	Residential	597883	4844553	1.5	17	23	40	0	-
RE231000_121	Residential	597889	4844560	1.5	17	23	40	0	-
RE231000_122	Residential	597894	4844565	1.5	17	23	40	0	-
RE231000_123	Residential	597899	4844571	1.5	17	23	39	0	-
RE231000_124	Residential	597904	4844576	1.5	17	23	39	0	-
RE231000_125	Residential	597911	4844583	1.5	17	23	39	0	-
RE231000_126	Residential	597920	4844591	1.5	16	23	39	0	-
RE231000_127	Residential	597928	4844600	1.5	16	23	39	0	-
RE231000_128	Residential	597935	4844608	1.5	16	23	39	0	-
RE231000_129	Residential	597944	4844616	1.5	16	23	39	0	-
RE231000_130	Residential	597952	4844625	1.5	16	23	38	0	-
RE231000_131	Residential	597960	4844633	1.5	16	23	38	0	-
RE231000_132	Residential	597889	4844521	1.5	17	23	40	0	-
RE231000_133	Residential	597895	4844526	1.5	17	23	40	0	-
RE231000_134	Residential	597900	4844533	1.5	17	23	40	0	-
RE231000_135	Residential	597906	4844537	1.5	17	23	39	0	-
RE231000_136	Residential	597912	4844543	1.5	17	23	39	0	-
RE231000_137	Residential	597916	4844549	1.5	17	23	39	0	-
RE231000_138	Residential	597922	4844554	1.5	16	23	39	0	-
RE231000_139	Residential	597927	4844558	1.5	16	23	39	0	-
RE231000_140	Residential	597933	4844565	1.5	16	23	39	0	-
RE231000_141	Residential	597938	4844570	1.5	16	23	39	0	-
RE231000_142	Residential	597944	4844577	1.5	16	23	39	0	-
RE231000_143	Residential	597948	4844581	1.5	16	23	38	0	-
RE231000_144	Residential	597956	4844588	1.5	16	23	38	0	-
RE231000_145	Residential	597964	4844596	1.5	16	23	38	0	-
RE231000_146	Residential	597973	4844604	1.5	15	23	38	0	-
RE231000_147	Residential	597981	4844613	1.5	15	23	38	0	-
RE231000_148	Residential	597825	4844568	1.5	19	23	41	0	-
RE231000_149	Residential	597833	4844573	1.5	19	23	41	0	-
RE231000_150	Residential	597840	4844577	1.5	18	23	41	0	-
RE231000_151	Residential	597846	4844581	1.5	18	23	41	0	-
RE231000_152	Residential	597854	4844587	1.5	18	23	41	0	-
RE231000_153	Residential	597859	4844593	1.5	18	23	40	0	-
RE231000_154	Residential	597865	4844598	1.5	18	23	40	0	-
RE231000_155	Residential	597871	4844603	1.5	17	23	40	0	-
RE231000_156	Residential	597850	4844609	1.5	18	23	41	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_157	Residential	597844	4844615	1.5	18	23	41	0	-
RE231000_158	Residential	597822	4844588	1.5	19	23	41	0	-
RE231000_159	Residential	597819	4844595	1.5	19	23	41	0	-
RE231000_160	Residential	597816	4844602	1.5	19	23	41	0	-
RE231000_161	Residential	597813	4844608	1.5	19	23	42	0	-
RE231000_162	Residential	597807	4844615	1.5	19	23	42	0	-
RE231000_163	Residential	597805	4844621	1.5	19	23	42	0	-
RE231000_164	Residential	597800	4844629	1.5	19	23	42	0	-
RE231000_165	Residential	597796	4844636	1.5	19	23	42	0	-
RE231000_166	Residential	597791	4844643	1.5	20	23	42	0	-
RE231000_167	Residential	597787	4844650	1.5	20	23	42	0	-
RE231000_168	Residential	597783	4844657	1.5	20	23	43	0	-
RE231000_169	Residential	597780	4844665	1.5	20	23	43	0	-
RE231000_170	Residential	597775	4844673	1.5	20	23	43	0	-
RE231000_171	Residential	597772	4844679	1.5	20	23	43	0	-
RE231000_172	Residential	597767	4844686	1.5	21	23	43	0	-
RE231000_173	Residential	597764	4844694	1.5	21	23	43	0	-
RE231000_174	Residential	597757	4844702	1.5	21	23	44	0	-
RE231000_175	Residential	597751	4844706	1.5	21	23	44	0	-
RE231000_176	Residential	597729	4844717	1.5	22	23	45	0	-
RE231000_177	Residential	597734	4844724	1.5	22	23	45	0	-
RE231000_178	Residential	597737	4844729	1.5	22	23	44	0	-
RE231000_179	Residential	597741	4844734	1.5	22	23	44	0	-
RE231000_180	Residential	597744	4844739	1.5	22	23	44	0	-
RE231000_181	Residential	597747	4844744	1.5	22	23	44	0	-
RE231000_182	Residential	597750	4844749	1.5	21	23	44	0	-
RE231000_183	Residential	597753	4844754	1.5	21	23	44	0	-
RE231000_184	Residential	597759	4844763	1.5	21	23	44	0	-
RE231000_185	Residential	597762	4844769	1.5	21	23	44	0	-
RE231000_186	Residential	597765	4844773	1.5	21	23	43	0	-
RE231000_187	Residential	597768	4844778	1.5	21	23	43	0	-
RE231000_188	Residential	597771	4844783	1.5	21	23	43	0	-
RE231000_189	Residential	597774	4844789	1.5	21	23	43	0	-
RE231000_190	Residential	597802	4844774	1.5	20	23	42	0	-
RE231000_191	Residential	597798	4844768	1.5	20	23	42	0	-
RE231000_192	Residential	597793	4844761	1.5	20	23	42	0	-
RE231000_193	Residential	597789	4844754	1.5	20	23	42	0	-
RE231000_194	Residential	597785	4844747	1.5	20	23	43	0	-
RE231000_195	Residential	597782	4844741	1.5	20	23	43	0	-
RE231000_196	Residential	597779	4844727	1.5	20	23	43	0	-
RE231000_197	Residential	597780	4844719	1.5	20	23	43	0	-
RE231000_198	Residential	597785	4844710	1.5	20	23	43	0	-
RE231000_199	Residential	597788	4844703	1.5	20	23	42	0	-
RE231000_200	Residential	597793	4844697	1.5	20	23	42	0	-
RE231000_201	Residential	597797	4844690	1.5	19	23	42	0	-
RE231000_202	Residential	597801	4844683	1.5	19	23	42	0	-
RE231000_203	Residential	597805	4844676	1.5	19	23	42	0	-
RE231000_204	Residential	597808	4844669	1.5	19	23	42	0	-
RE231000_205	Residential	597812	4844663	1.5	19	23	41	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_206	Residential	597815	4844656	1.5	19	23	41	0	-
RE231000_207	Residential	597818	4844649	1.5	19	23	41	0	-
RE231000_208	Residential	597823	4844642	1.5	19	23	41	0	-
RE231000_209	Residential	597827	4844636	1.5	18	23	41	0	-
RE231000_210	Residential	597832	4844629	1.5	18	23	41	0	-
RE231000_211	Residential	597837	4844622	1.5	18	23	41	0	-
RE231000_212	Residential	597902	4844623	1.5	17	23	39	0	-
RE231000_213	Residential	597895	4844627	1.5	17	23	39	0	-
RE231000_214	Residential	597889	4844633	1.5	17	23	39	0	-
RE231000_215	Residential	597884	4844639	1.5	17	23	40	0	-
RE231000_216	Residential	597878	4844646	1.5	17	23	40	0	-
RE231000_217	Residential	597873	4844650	1.5	17	23	40	0	-
RE231000_218	Residential	597867	4844656	1.5	17	23	40	0	-
RE231000_219	Residential	597863	4844664	1.5	18	23	40	0	-
RE231000_220	Residential	597859	4844671	1.5	18	23	40	0	-
RE231000_221	Residential	597855	4844678	1.5	18	23	40	0	-
RE231000_222	Residential	597851	4844684	1.5	18	23	41	0	-
RE231000_223	Residential	597847	4844690	1.5	18	23	41	0	-
RE231000_224	Residential	597843	4844697	1.5	18	23	41	0	-
RE231000_225	Residential	597839	4844704	1.5	18	23	41	0	-
RE231000_226	Residential	597835	4844711	1.5	18	23	41	0	-
RE231000_227	Residential	597832	4844718	1.5	18	23	41	0	-
RE231000_228	Residential	597827	4844726	1.5	19	23	41	0	-
RE231000_229	Residential	597824	4844733	1.5	19	23	41	0	-
RE231000_230	Residential	597840	4844745	1.5	18	23	41	0	-
RE231000_231	Residential	597846	4844750	1.5	18	23	40	0	-
RE231000_232	Residential	597851	4844761	1.5	18	23	40	0	-
RE231000_233	Residential	597853	4844771	1.5	18	23	40	0	-
RE231000_234	Residential	597851	4844781	1.5	18	23	40	0	-
RE231000_235	Residential	597848	4844790	1.5	18	23	40	0	-
RE231000_236	Residential	597838	4844796	1.5	18	23	41	0	-
RE231000_237	Residential	597831	4844801	1.5	18	23	41	0	-
RE231000_238	Residential	597823	4844804	1.5	18	23	41	0	-
RE231000_239	Residential	597817	4844807	1.5	19	23	41	0	-
RE231000_240	Residential	597811	4844812	1.5	19	23	41	0	-
RE231000_241	Residential	597804	4844816	1.5	19	23	42	0	-
RE231000_242	Residential	597800	4844820	1.5	19	23	42	0	-
RE231000_243	Residential	597794	4844823	1.5	20	23	42	0	-
RE231000_244	Residential	597788	4844825	1.5	20	23	43	0	-
RE231000_245	Residential	597783	4844829	1.5	20	23	43	0	-
RE231000_246	Residential	597778	4844831	1.5	21	23	43	0	-
RE231000_247	Residential	597772	4844835	1.5	21	23	44	0	-
RE231000_248	Residential	598015	4844639	1.5	15	23	37	0	-
RE231000_249	Residential	598007	4844649	1.5	15	23	37	0	-
RE231000_250	Residential	597997	4844656	1.5	15	23	37	0	-
RE231000_251	Residential	597989	4844666	1.5	15	23	37	0	-
RE231000_252	Residential	598060	4844590	1.5	14	23	37	0	-
RE231000_253	Residential	598069	4844598	1.5	14	23	36	0	-
RE231000_254	Residential	598040	4844610	1.5	14	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_255	Residential	598049	4844618	1.5	14	23	37	0	-
RE231000_256	Residential	598252	4844214	1.5	12	23	34	0	-
RE231000_257	Residential	598246	4844300	1.5	12	23	35	0	-
RE231000_276	Residential	598191	4844478	1.5	13	23	35	0	-
RE231000_277	Residential	598184	4844471	1.5	13	23	35	0	-
RE231000_278	Residential	598093	4844561	1.5	14	23	36	0	-
RE231000_279	Residential	598104	4844571	1.5	13	23	36	0	-
RE231000_280	Residential	598023	4844395	1.5	15	23	37	0	-
RE231000_281	Residential	598013	4844383	1.5	15	23	38	0	-
RE231000_282	Residential	598113	4844482	1.5	13	23	36	0	-
RE231000_283	Residential	598059	4844484	1.5	14	23	37	0	-
RE231000_284	Residential	598062	4844435	1.5	14	23	37	0	-
RE231000_285	Residential	598052	4844476	1.5	14	23	37	0	-
RE231000_286	Residential	598054	4844424	1.5	14	23	37	0	-
RE231000_287	Residential	598086	4844510	1.5	14	23	36	0	-
RE231000_288	Residential	598077	4844504	1.5	14	23	37	0	-
RE231000_289	Residential	598044	4844414	1.5	15	23	37	0	-
RE231000_290	Residential	598033	4844405	1.5	15	23	37	0	-
RE231000_291	Residential	598102	4844474	1.5	14	23	36	0	-
RE231000_292	Residential	598093	4844464	1.5	14	23	36	0	-
RE231000_293	Residential	598072	4844496	1.5	14	23	37	0	-
RE231000_294	Residential	598083	4844454	1.5	14	23	36	0	-
RE231000_295	Residential	598065	4844490	1.5	14	23	37	0	-
RE231000_296	Residential	598074	4844444	1.5	14	23	37	0	-
RE231000_297	Residential	598159	4844494	1.5	13	23	36	0	-
RE231000_298	Residential	598169	4844501	1.5	13	23	35	0	-
RE231000_299	Residential	598002	4844372	1.5	15	23	38	0	-
RE231000_300	Residential	598066	4844349	1.5	14	23	37	0	-
RE231000_301	Residential	598127	4844467	1.5	13	23	36	0	-
RE231000_302	Residential	598120	4844461	1.5	13	23	36	0	-
RE231000_303	Residential	598109	4844448	1.5	14	23	36	0	-
RE231000_304	Residential	598101	4844440	1.5	14	23	36	0	-
RE231000_305	Residential	598067	4844275	1.5	14	23	37	0	-
RE231000_306	Residential	598068	4844289	1.5	14	23	37	0	-
RE231000_307	Residential	598068	4844303	1.5	14	23	37	0	-
RE231000_308	Residential	598066	4844315	1.5	14	23	37	0	-
RE231000_309	Residential	598076	4844364	1.5	14	23	37	0	-
RE231000_310	Residential	598085	4844425	1.5	14	23	36	0	-
RE231000_311	Residential	598078	4844418	1.5	14	23	37	0	-
RE231000_312	Residential	598069	4844410	1.5	14	23	37	0	-
RE231000_313	Residential	598062	4844402	1.5	14	23	37	0	-
RE231000_314	Residential	598053	4844391	1.5	14	23	37	0	-
RE231000_315	Residential	598047	4844385	1.5	14	23	37	0	-
RE231000_316	Residential	598030	4844364	1.5	15	23	37	0	-
RE231000_317	Residential	598086	4844375	1.5	14	23	36	0	-
RE231000_318	Residential	598106	4844396	1.5	14	23	36	0	-
RE231000_319	Residential	598116	4844406	1.5	13	23	36	0	-
RE231000_320	Residential	598127	4844416	1.5	13	23	36	0	-
RE231000_321	Residential	598143	4844435	1.5	13	23	36	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_322	Residential	598152	4844444	1.5	13	23	36	0	-
RE231000_332	Residential	598315	4844073	1.5	12	23	34	0	-
RE231000_333	Residential	598310	4844078	1.5	12	23	34	0	-
RE231000_334	Residential	598295	4844091	1.5	12	23	34	0	-
RE231000_335	Residential	598288	4844098	1.5	12	23	34	0	-
RE231000_336	Residential	598282	4844104	1.5	12	23	34	0	-
RE231000_337	Residential	598277	4844111	1.5	12	23	34	0	-
RE231000_338	Residential	598310	4844038	1.5	12	23	34	0	-
RE231000_339	Residential	598302	4844046	1.5	12	23	34	0	-
RE231000_340	Residential	598295	4844054	1.5	12	23	34	0	-
RE231000_341	Residential	598276	4844074	1.5	12	23	35	0	-
RE231000_342	Residential	598267	4844081	1.5	12	23	35	0	-
RE231000_343	Residential	598114	4844352	1.5	13	23	36	0	-
RE231000_345	Residential	598126	4844322	1.5	13	23	36	0	-
RE231000_346	Residential	598176	4844416	1.5	13	23	35	0	-
RE231000_347	Residential	598167	4844408	1.5	13	23	35	0	-
RE231000_348	Residential	598159	4844398	1.5	13	23	36	0	-
RE231000_350	Residential	598126	4844309	1.5	13	23	36	0	-
RE231000_351	Residential	598128	4844228	1.5	13	23	36	0	-
RE231000_353	Residential	598285	4844064	1.5	12	23	35	0	-
RE231000_354	Residential	598140	4844379	1.5	13	23	36	0	-
RE231000_355	Residential	598131	4844370	1.5	13	23	36	0	-
RE231000_356	Residential	598122	4844361	1.5	13	23	36	0	-
RE231000_357	Residential	598102	4844340	1.5	14	23	36	0	-
RE231000_358	Residential	598099	4844324	1.5	14	23	36	0	-
RE231000_359	Residential	598099	4844310	1.5	14	23	36	0	-
RE231000_360	Residential	598099	4844296	1.5	14	23	36	0	-
RE231000_361	Residential	598098	4844283	1.5	14	23	36	0	-
RE231000_362	Residential	598099	4844258	1.5	14	23	36	0	-
RE231000_363	Residential	598197	4844395	1.5	13	23	35	0	-
RE231000_364	Residential	598180	4844378	1.5	13	23	35	0	-
RE231000_365	Residential	598171	4844369	1.5	13	23	35	0	-
RE231000_366	Residential	598162	4844359	1.5	13	23	35	0	-
RE231000_367	Residential	598151	4844349	1.5	13	23	36	0	-
RE231000_368	Residential	598142	4844340	1.5	13	23	36	0	-
RE231000_369	Residential	598126	4844283	1.5	13	23	36	0	-
RE231000_370	Residential	598126	4844271	1.5	13	23	36	0	-
RE231000_371	Residential	598126	4844257	1.5	13	23	36	0	-
RE231000_374	Residential	598127	4844295	1.5	13	23	36	0	-
RE231000_377	Residential	598258	4844089	1.5	12	23	35	0	-
RE231000_378	Residential	598094	4844433	1.5	14	23	36	0	-
RE231000_379	Residential	598067	4844332	1.5	14	23	37	0	-
RE231000_380	Residential	598096	4844385	1.5	14	23	36	0	-
RE231000_381	Residential	598149	4844389	1.5	13	23	36	0	-
RE231000_382	Residential	598135	4844425	1.5	13	23	36	0	-
RE231000_383	Residential	598303	4844085	1.5	12	23	34	0	-
RE231000_384	Residential	598115	4844455	1.5	13	23	36	0	-
RE231000_385	Residential	598038	4844375	1.5	15	23	37	0	-
RE231000_386	Residential	598099	4844270	1.5	14	23	36	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_387	Residential	598188	4844386	1.5	13	23	35	0	-
RE231000_388	Residential	598129	4844214	1.5	13	23	36	0	-
RE231000_390	Residential	598013	4844349	1.5	15	23	38	0	-
RE231000_391	Residential	598003	4844338	1.5	15	23	38	0	-
RE231000_392	Residential	598159	4844280	1.5	13	23	35	0	-
RE231000_393	Residential	598189	4844215	1.5	13	23	35	0	-
RE231000_394	Residential	598219	4844376	1.5	12	23	35	0	-
RE231000_395	Residential	598212	4844369	1.5	12	23	35	0	-
RE231000_396	Residential	598207	4844363	1.5	12	23	35	0	-
RE231000_397	Residential	598199	4844356	1.5	12	23	35	0	-
RE231000_398	Residential	598192	4844346	1.5	13	23	35	0	-
RE231000_399	Residential	598181	4844337	1.5	13	23	35	0	-
RE231000_400	Residential	598170	4844327	1.5	13	23	35	0	-
RE231000_401	Residential	598161	4844314	1.5	13	23	35	0	-
RE231000_402	Residential	598159	4844294	1.5	13	23	35	0	-
RE231000_403	Residential	598158	4844273	1.5	13	23	35	0	-
RE231000_404	Residential	598159	4844265	1.5	13	23	35	0	-
RE231000_405	Residential	598159	4844257	1.5	13	23	35	0	-
RE231000_406	Residential	598236	4844348	1.5	12	23	35	0	-
RE231000_407	Residential	598223	4844334	1.5	12	23	35	0	-
RE231000_408	Residential	598215	4844325	1.5	12	23	35	0	-
RE231000_409	Residential	598204	4844313	1.5	12	23	35	0	-
RE231000_410	Residential	598199	4844309	1.5	12	23	35	0	-
RE231000_411	Residential	598189	4844279	1.5	12	23	35	0	-
RE231000_412	Residential	598189	4844265	1.5	12	23	35	0	-
RE231000_413	Residential	598161	4844229	1.5	13	23	35	0	-
RE231000_414	Residential	598162	4844216	1.5	13	23	35	0	-
RE231000_415	Residential	598162	4844205	1.5	13	23	35	0	-
RE231000_416	Residential	598163	4844190	1.5	13	23	36	0	-
RE231000_417	Residential	598169	4844178	1.5	13	23	36	0	-
RE231000_418	Residential	598181	4844167	1.5	13	23	35	0	-
RE231000_419	Residential	598189	4844231	1.5	13	23	35	0	-
RE231000_420	Residential	598189	4844224	1.5	13	23	35	0	-
RE231000_421	Residential	598205	4844183	1.5	12	23	35	0	-
RE231000_422	Residential	598217	4844170	1.5	12	23	35	0	-
RE231000_423	Residential	598227	4844160	1.5	12	23	35	0	-
RE231000_424	Residential	598235	4844153	1.5	12	23	35	0	-
RE231000_425	Residential	598244	4844144	1.5	12	23	35	0	-
RE231000_426	Residential	598253	4844135	1.5	12	23	35	0	-
RE231000_427	Residential	598189	4844160	1.5	13	23	35	0	-
RE231000_428	Residential	598198	4844150	1.5	13	23	35	0	-
RE231000_429	Residential	598208	4844141	1.5	13	23	35	0	-
RE231000_430	Residential	598189	4844272	1.5	12	23	35	0	-
RE231000_431	Residential	598225	4844124	1.5	12	23	35	0	-
RE231000_432	Residential	598189	4844288	1.5	12	23	35	0	-
RE231000_433	Residential	598211	4844177	1.5	12	23	35	0	-
RE231000_434	Residential	598217	4844132	1.5	13	23	35	0	-
RE231000_435	Residential	598210	4844320	1.5	12	23	35	0	-
RE231000_436	Residential	598191	4844204	1.5	13	23	35	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_437	Residential	598190	4844258	1.5	12	23	35	0	-
RE231000_438	Residential	598235	4844114	1.5	12	23	35	0	-
RE231000_439	Residential	598242	4844353	1.5	12	23	35	0	-
RE231000_440	Residential	598230	4844340	1.5	12	23	35	0	-
RE231000_441	Residential	598197	4844191	1.5	13	23	35	0	-
RE231000_443	Residential	598213	4844460	1.5	12	23	35	0	-
RE231000_444	Residential	598234	4844437	1.5	12	23	35	0	-
RE231000_445	Residential	598227	4844430	1.5	12	23	35	0	-
RE231000_446	Residential	598203	4844452	1.5	12	23	35	0	-
RE231000_450	Residential	598248	4844405	1.5	12	23	35	0	-
RE231000_452	Residential	598146	4844517	1.5	13	23	36	0	-
RE231000_453	Residential	598139	4844510	1.5	13	23	36	0	-
RE231000_454	Residential	598112	4844539	1.5	13	23	36	0	-
RE231000_455	Residential	598152	4844523	1.5	13	23	36	0	-
RE231000_456	Residential	598119	4844546	1.5	13	23	36	0	-
RE231100_001	Child Care Centre	597875	4844944	1.5	16	23	39	0	-
RE231100_002	Recreation	597887	4844825	1.5	16	23	39	0	-
RE231100_003	Residential	594644	4847799	1.5	16	23	38	0	-
RE231100_004	Residential	596834	4845864	1.5	25	23	48	0	-
RE231100_005	Residential	598005	4844679	1.5	14	23	37	0	-
RE231100_006	Residential	598014	4844688	1.5	14	23	37	0	-
RE231100_007	Residential	598022	4844696	1.5	14	23	37	0	-
RE231100_008	Residential	598026	4844658	1.5	14	23	37	0	-
RE231100_009	Residential	598034	4844667	1.5	14	23	37	0	-
RE231100_010	Residential	598044	4844675	1.5	14	23	36	0	-
RE231100_011	Residential	598051	4844682	1.5	14	23	36	0	-
RE231100_012	Residential	598059	4844691	1.5	13	23	36	0	-
RE231100_018	Residential	598029	4844703	1.5	14	23	36	0	-
RE231100_019	Residential	598037	4844712	1.5	14	23	36	0	-
RE231100_020	Residential	598046	4844721	1.5	13	23	36	0	-
RE231100_027	Residential	597982	4844724	1.5	15	23	37	0	-
RE231100_028	Residential	597991	4844732	1.5	14	23	37	0	-
RE231100_029	Residential	597999	4844741	1.5	14	23	37	0	-
RE231100_030	Residential	598006	4844749	1.5	14	23	36	0	-
RE231100_031	Residential	598015	4844756	1.5	13	23	36	0	-
RE231100_032	Residential	598023	4844764	1.5	13	23	36	0	-
RE231100_033	Residential	598031	4844773	1.5	13	23	35	0	-
RE231100_041	Residential	598017	4844803	1.5	13	23	35	0	-
RE231100_042	Residential	598007	4844794	1.5	13	23	36	0	-
RE231100_043	Residential	597998	4844785	1.5	13	23	36	0	-
RE231100_044	Residential	597991	4844777	1.5	14	23	36	0	-
RE231100_045	Residential	597982	4844768	1.5	14	23	37	0	-
RE231100_046	Residential	597975	4844760	1.5	14	23	37	0	-
RE231100_047	Residential	597967	4844752	1.5	15	23	37	0	-
RE231100_048	Residential	597958	4844742	1.5	15	23	38	0	-
RE231100_049	Residential	597924	4844771	1.5	16	23	38	0	-
RE231100_050	Residential	597933	4844779	1.5	15	23	38	0	-
RE231100_051	Residential	597943	4844787	1.5	15	23	37	0	-
RE231100_052	Residential	597950	4844796	1.5	14	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_053	Residential	597958	4844803	1.5	14	23	37	0	-
RE231100_054	Residential	597966	4844812	1.5	14	23	36	0	-
RE231100_055	Residential	597975	4844820	1.5	13	23	36	0	-
RE231100_056	Residential	597983	4844829	1.5	13	23	36	0	-
RE231100_057	Residential	597991	4844837	1.5	13	23	36	0	-
RE231100_077	Residential	597906	4845006	1.5	16	23	39	0	-
RE231100_078	Residential	597896	4845014	1.5	17	23	40	0	-
RE231100_079	Residential	598077	4844606	1.5	14	23	36	0	-
RE231100_080	Residential	598085	4844615	1.5	14	23	36	0	-
RE231100_081	Residential	598094	4844623	1.5	13	23	36	0	-
RE231100_082	Residential	598056	4844626	1.5	14	23	36	0	-
RE231100_083	Residential	598066	4844634	1.5	14	23	36	0	-
RE231100_084	Residential	598074	4844643	1.5	14	23	36	0	-
RE231100_085	Residential	598082	4844651	1.5	13	23	36	0	-
RE231100_090	Residential	598178	4844511	1.5	13	23	35	0	-
RE231100_091	Residential	598202	4844488	1.5	12	23	35	0	-
RE231100_116	Residential	598123	4844591	1.5	13	23	36	0	-
RE231100_120	Residential	598113	4844580	1.5	13	23	36	0	-
RE231100_121	Residential	598101	4844633	1.5	13	23	36	0	-
RE231100_161	Residential	598142	4844569	1.5	13	23	35	0	-
RE231100_164	Residential	598158	4844529	1.5	13	23	35	0	-
RE231100_165	Residential	598166	4844536	1.5	13	23	35	0	-
RE231100_167	Residential	598126	4844552	1.5	13	23	36	0	-
RE231100_171	Residential	598133	4844560	1.5	13	23	36	0	-
RE231100_175	Residential	598101	4844633	1.5	13	23	36	0	-
RE231400_001	Residential	597400	4846151	1.5	18	23	41	0	-
RE231400_002	Residential	597374	4846123	1.5	20	23	42	0	-
RE231400_003	Residential	597425	4846115	1.5	17	23	40	0	-
RE231400_004	Residential	597415	4846104	1.5	18	23	40	0	-
RE231400_005	Residential	597397	4846081	1.5	19	23	42	0	-
RE231400_006	Residential	597415	4846064	1.5	18	23	41	0	-
RE231400_007	Residential	597438	4846085	1.5	17	23	39	0	-
RE231400_008	Residential	597458	4846043	1.5	16	23	39	0	-
RE231400_009	Residential	597440	4846026	1.5	18	23	40	0	-
RE231400_010	Residential	597494	4845971	1.5	15	23	37	0	-
RE231400_011	Residential	597177	4846314	1.5	23	23	45	0	-
RE231500_002	Residential	594959	4848195	1.5	11	23	33	0	-
RE231600_001	Residential	594685	4848625	1.5	15	23	38	0	-
RE231600_004	Residential	594738	4848582	1.5	16	23	38	0	-
RE231600_005	Residential	594772	4848553	1.5	13	23	35	0	-
RE231700_002	Residential	594955	4848488	1.5	10	23	33	0	-
RE231700_003	Residential	594977	4848446	1.5	10	23	33	0	-
RE231700_004	Residential	594865	4848604	1.5	12	23	35	0	-
RE231800_001	Residential	594678	4848786	1.5	17	23	39	0	-
RE231800_002	Residential	594627	4848819	1.5	18	23	40	0	-
RE232700_002	Residential	595497	4849130	1.5	11	23	34	0	-
RE233200_001	Recreation	595805	4849383	1.5	21	23	44	0	-
RE233500_001	Residential	596000	4849598	1.5	18	23	40	0	-
RE233600_001	Residential	596065	4849694	1.5	18	23	41	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE233600_002	Residential	596044	4849667	1.5	18	23	41	0	-
RE233700_001	Residential	596171	4849814	1.5	17	23	39	0	-
RE233900_001	Residential	596273	4850023	1.5	18	23	40	0	-
RE233900_002	Residential	596203	4850118	1.5	16	23	39	0	-
RE233900_003	Residential	596230	4850156	1.5	16	23	39	0	-
RE234000_001	Residential	596284	4850244	1.5	17	23	40	0	-
RE234100_001	Residential	596370	4850189	1.5	20	23	42	0	-
RE235000_001	Residential	596939	4851084	1.5	18	23	41	0	-
RE235100_001	Residential	596983	4851111	1.5	18	23	41	0	-
RE235100_002	Residential	597028	4851138	1.5	19	23	41	0	-
RE235100_003	Residential	597152	4851021	1.5	17	23	39	0	-
RE235200_001	Residential	597087	4851160	1.5	19	23	42	0	-
RE235200_002	Residential	597153	4851077	1.5	19	23	41	0	-
RE235500_001	Residential	597387	4851296	1.5	19	23	41	0	-
RE235500_002	Residential	597327	4851381	1.5	21	23	44	0	-
RE235700_001	Residential	597704	4851314	1.5	16	23	39	0	-
RE235700_002	Residential	597412	4851537	1.5	23	23	45	0	-
RE235800_001	Residential	597664	4851442	1.5	20	23	43	0	-
RE235900_002	Residential	597909	4851332	1.5	16	23	39	0	-
RE235900_003	Residential	597683	4851628	1.5	22	23	44	0	-
RE235900_004	Residential	597618	4851651	1.5	22	23	45	0	-
RE310100_001	Residential	597701	4851643	1.5	21	23	44	0	-
RE310100_002	Residential	597725	4851680	1.5	22	23	44	0	-
RE310100_003	Residential	597647	4851692	1.5	21	23	44	0	-
RE310200_001	Residential	597753	4851836	1.5	21	23	43	0	-
RE310500_001	Residential	597854	4852016	1.5	19	23	42	0	-
RE310600_001	Residential	598054	4851992	1.5	17	23	40	0	-
RE310600_002	Residential	598048	4852100	1.5	23	23	46	0	-
RE310700_001	Residential	598116	4852141	1.5	23	23	45	0	-
RE310700_002	Residential	598003	4852173	1.5	18	23	41	0	-
RE310900_001	Residential	598218	4852295	1.5	20	23	43	0	-
RE311000_001	Residential	598324	4852285	1.5	21	23	43	0	-
RE311100_001	Residential	598324	4852488	1.5	19	23	42	0	-
RE311200_001	Residential	598400	4852513	1.5	21	23	43	0	-
RE311200_002	Residential	598471	4852451	1.5	21	23	44	0	-
RE311300_001	Residential	598509	4852502	1.5	24	23	46	0	-
RE311300_002	Residential	598222	4852772	1.5	29	23	52	1	0.1%
RE311400_001	Residential	598628	4852529	1.5	19	23	42	0	-
RE311400_002	Residential	598554	4852578	1.5	24	23	46	0	-
RE311400_003	Residential	598404	4852757	1.5	22	23	45	0	-
RE311400_006	Residential	598813	4852353	1.5	11	23	34	0	-
RE311800_001	Residential	598767	4852817	1.5	19	23	41	0	-
RE311900_001	Residential	598826	4852898	1.5	19	23	41	0	-
RE312200_001	Residential	598954	4853124	1.5	21	23	43	0	-
RE312200_002	Residential	598983	4853142	1.5	20	23	43	0	-
RE312200_003	Residential	599011	4853156	1.5	19	23	42	0	-
RE312300_001	Residential	599043	4853264	1.5	22	23	45	0	-
RE312400_001	Residential	599140	4853349	1.5	24	23	47	0	-
RE312800_001	Residential	599561	4853387	1.5	22	23	45	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE312800_002	Residential	599655	4853196	1.5	16	23	38	0	-
RE312900_001	Residential	599611	4853344	1.5	21	23	44	0	-
RE312900_002	Residential	599737	4853210	1.5	18	23	40	0	-
RE313000_001	Residential	599767	4853320	1.5	17	23	39	0	-
RE313000_002	Residential	599746	4853342	1.5	17	23	39	0	-
RE313000_003	Residential	599707	4853379	1.5	18	23	40	0	-
RE313000_004	Residential	599831	4853246	1.5	17	23	39	0	-
RE313000_005	Residential	599859	4853220	1.5	16	23	39	0	-
RE313000_006	Residential	599831	4853130	1.5	15	23	38	0	-
RE313000_007	Residential	599790	4853168	1.5	17	23	40	0	-
RE313100_001	Residential	599892	4853186	1.5	16	23	39	0	-
RE314400_001	Residential	601067	4853610	1.5	21	23	44	0	-
RE314800_001	Residential	601376	4853448	1.5	26	23	48	0	-
RE314900_001	Residential	601445	4853622	1.5	20	23	43	0	-
RE316400_001	Residential	602974	4853508	1.5	32	23	55	3	0.2%
RE316500_001	Residential	603041	4853572	1.5	36	23	59	5	0.3%
RE316600_001	Residential	603200	4853771	1.5	32	23	55	9	0.5%
RE316600_002	Residential	603222	4853799	1.5	32	23	55	4	0.2%
RE316700_001	Residential	603244	4853825	1.5	33	23	55	4	0.2%
RE316700_002	Residential	603260	4853854	1.5	32	23	55	4	0.2%
RE317000_001	Residential	603580	4854095	1.5	40	23	63	6	0.3%
RE410200_001	Residential	604488	4854200	1.5	25	23	48	0	-
RE410200_002	Residential	604438	4854244	1.5	26	23	49	0	-
RE411100_001	Residential	605221	4854613	1.5	29	23	52	1	0.1%
RE411200_001	Residential	605486	4854296	1.5	29	23	52	2	0.1%
RE510000_001	Residential	605849	4853842	1.5	17	23	40	0	-
RE510000_002	Residential	605777	4854043	1.5	18	23	40	0	-
RE510100_001	Residential	605862	4854052	1.5	15	23	38	0	-
RE511200_001	Residential	607742	4853370	1.5	37	23	59	11	0.6%
RE511200_002	Residential	607750	4853371	1.5	37	23	59	11	0.6%
RE511200_003	Residential	607756	4853372	1.5	37	23	60	11	0.6%
RE511200_004	Residential	607761	4853373	1.5	37	23	60	10	0.5%
RE511200_005	Residential	607738	4853397	1.5	32	23	54	4	0.2%
RE511200_006	Residential	607744	4853398	1.5	32	23	54	4	0.2%
RE511300_001	Residential	608183	4853093	1.5	22	23	44	0	-
RE511300_002	Child Care Centre	607553	4854058	1.5	10	23	32	0	-
RE511300_003	Residential	607654	4853910	1.5	11	23	34	0	-
RE511300_004	Residential	607664	4853818	1.5	12	23	35	0	-
RE511300_005	Residential	607712	4853826	1.5	12	23	35	0	-
RE511300_006	Residential	607696	4853815	1.5	12	23	35	0	-
RE511300_007	Residential	607670	4853789	1.5	13	23	35	0	-
RE511300_008	Residential	607695	4853826	1.5	12	23	35	0	-
RE511300_009	Residential	607710	4853739	1.5	14	23	36	0	-
RE511300_010	Residential	607728	4853795	1.5	13	23	35	0	-
RE511300_011	Residential	607729	4853761	1.5	13	23	36	0	-
RE511300_012	Residential	607733	4853799	1.5	13	23	35	0	-
RE511300_013	Residential	607665	4853812	1.5	12	23	35	0	-
RE511300_014	Residential	607667	4853806	1.5	12	23	35	0	-
RE511300_015	Residential	607721	4853732	1.5	14	23	36	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_016	Residential	607702	4853748	1.5	13	23	36	0	-
RE511300_017	Residential	607684	4853769	1.5	13	23	36	0	-
RE511300_018	Residential	607740	4853729	1.5	14	23	36	0	-
RE511300_019	Residential	607728	4853731	1.5	14	23	36	0	-
RE511300_020	Residential	607701	4853818	1.5	12	23	35	0	-
RE511300_021	Residential	607668	4853800	1.5	13	23	35	0	-
RE511300_022	Residential	607706	4853744	1.5	13	23	36	0	-
RE511300_023	Residential	607680	4853773	1.5	13	23	36	0	-
RE511300_024	Residential	607734	4853730	1.5	14	23	36	0	-
RE511300_025	Residential	607707	4853788	1.5	13	23	35	0	-
RE511300_026	Residential	607728	4853807	1.5	13	23	35	0	-
RE511300_027	Residential	607722	4853803	1.5	13	23	35	0	-
RE511300_028	Residential	607710	4853783	1.5	13	23	35	0	-
RE511300_029	Residential	607675	4853776	1.5	13	23	35	0	-
RE511300_030	Residential	607714	4853779	1.5	13	23	36	0	-
RE511300_031	Residential	607732	4853756	1.5	13	23	36	0	-
RE511300_032	Residential	607690	4853823	1.5	12	23	35	0	-
RE511300_033	Residential	607721	4853771	1.5	13	23	36	0	-
RE511300_034	Residential	607725	4853766	1.5	13	23	36	0	-
RE511300_035	Residential	607701	4853830	1.5	12	23	35	0	-
RE511300_036	Residential	607706	4853834	1.5	12	23	35	0	-
RE511300_037	Residential	607704	4853793	1.5	13	23	35	0	-
RE511300_038	Residential	607688	4853764	1.5	13	23	36	0	-
RE511300_039	Residential	607698	4853753	1.5	13	23	36	0	-
RE511300_040	Residential	607669	4853794	1.5	13	23	35	0	-
RE511300_041	Residential	607692	4853759	1.5	13	23	36	0	-
RE511300_042	Residential	607706	4853822	1.5	12	23	35	0	-
RE511300_043	Residential	607767	4853374	1.5	37	23	60	9	0.5%
RE511300_044	Residential	607774	4853376	1.5	37	23	60	8	0.4%
RE511300_045	Residential	607781	4853377	1.5	37	23	60	8	0.4%
RE511300_046	Residential	607788	4853379	1.5	37	23	60	8	0.4%
RE511300_047	Residential	607794	4853380	1.5	37	23	59	8	0.4%
RE511300_048	Residential	607800	4853381	1.5	37	23	59	9	0.5%
RE511300_049	Residential	607806	4853382	1.5	37	23	59	9	0.5%
RE511300_050	Residential	607812	4853383	1.5	36	23	59	9	0.5%
RE511300_051	Residential	607820	4853385	1.5	36	23	59	8	0.4%
RE511300_052	Residential	607826	4853386	1.5	36	23	59	8	0.4%
RE511300_053	Residential	607832	4853387	1.5	36	23	58	7	0.4%
RE511300_054	Residential	607838	4853388	1.5	35	23	58	7	0.4%
RE511300_055	Residential	607846	4853390	1.5	35	23	58	7	0.4%
RE511300_056	Residential	607853	4853391	1.5	34	23	57	6	0.3%
RE511300_057	Residential	607859	4853392	1.5	34	23	57	6	0.3%
RE511300_058	Residential	607866	4853394	1.5	34	23	56	6	0.3%
RE511300_059	Residential	607885	4853388	1.5	35	23	58	9	0.5%
RE511300_060	Residential	607886	4853395	1.5	33	23	56	6	0.3%
RE511300_061	Residential	607886	4853402	1.5	32	23	54	4	0.2%
RE511300_062	Residential	607887	4853410	1.5	30	23	53	2	0.1%
RE511300_063	Residential	607887	4853416	1.5	29	23	51	2	0.1%
RE511300_064	Residential	607888	4853422	1.5	28	23	51	2	0.1%

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_065	Residential	607888	4853429	1.5	27	23	50	0	-
RE511300_066	Residential	607892	4853460	1.5	23	23	46	0	-
RE511300_067	Residential	607892	4853467	1.5	23	23	45	0	-
RE511300_068	Residential	607892	4853473	1.5	22	23	45	0	-
RE511300_069	Residential	607893	4853479	1.5	22	23	44	0	-
RE511300_070	Residential	607894	4853485	1.5	21	23	44	0	-
RE511300_071	Residential	607894	4853495	1.5	20	23	43	0	-
RE511300_072	Residential	607893	4853501	1.5	20	23	42	0	-
RE511300_073	Residential	607891	4853507	1.5	19	23	42	0	-
RE511300_074	Residential	607776	4853648	1.5	15	23	38	0	-
RE511300_075	Residential	607783	4853646	1.5	16	23	38	0	-
RE511300_076	Residential	607789	4853644	1.5	16	23	38	0	-
RE511300_077	Residential	607795	4853641	1.5	16	23	38	0	-
RE511300_078	Residential	607801	4853639	1.5	16	23	38	0	-
RE511300_079	Residential	607808	4853634	1.5	16	23	38	0	-
RE511300_080	Residential	607814	4853629	1.5	16	23	39	0	-
RE511300_081	Residential	607819	4853626	1.5	16	23	39	0	-
RE511300_082	Residential	607824	4853622	1.5	16	23	39	0	-
RE511300_083	Residential	607829	4853618	1.5	16	23	39	0	-
RE511300_084	Residential	607834	4853614	1.5	16	23	39	0	-
RE511300_085	Residential	607842	4853608	1.5	16	23	39	0	-
RE511300_086	Residential	607846	4853603	1.5	17	23	39	0	-
RE511300_087	Residential	607850	4853599	1.5	17	23	39	0	-
RE511300_088	Residential	607854	4853594	1.5	17	23	39	0	-
RE511300_089	Residential	607858	4853589	1.5	17	23	39	0	-
RE511300_090	Residential	607862	4853585	1.5	17	23	39	0	-
RE511300_091	Residential	607868	4853578	1.5	17	23	40	0	-
RE511300_092	Residential	607871	4853571	1.5	17	23	40	0	-
RE511300_093	Residential	607874	4853566	1.5	17	23	40	0	-
RE511300_094	Residential	607878	4853561	1.5	17	23	40	0	-
RE511300_095	Residential	607882	4853552	1.5	17	23	40	0	-
RE511300_096	Residential	607883	4853545	1.5	18	23	40	0	-
RE511300_097	Residential	607884	4853538	1.5	18	23	41	0	-
RE511300_098	Residential	607758	4853512	1.5	22	23	44	0	-
RE511300_099	Residential	607757	4853520	1.5	21	23	44	0	-
RE511300_100	Residential	607756	4853526	1.5	21	23	43	0	-
RE511300_101	Residential	607755	4853532	1.5	20	23	43	0	-
RE511300_102	Residential	607753	4853538	1.5	20	23	43	0	-
RE511300_103	Residential	607752	4853544	1.5	20	23	42	0	-
RE511300_104	Residential	607751	4853552	1.5	19	23	42	0	-
RE511300_105	Residential	607749	4853559	1.5	19	23	41	0	-
RE511300_106	Residential	607747	4853564	1.5	19	23	41	0	-
RE511300_107	Residential	607746	4853571	1.5	18	23	41	0	-
RE511300_108	Residential	607745	4853576	1.5	18	23	41	0	-
RE511300_109	Residential	607744	4853583	1.5	18	23	40	0	-
RE511300_110	Residential	607742	4853591	1.5	17	23	40	0	-
RE511300_111	Residential	607740	4853597	1.5	17	23	40	0	-
RE511300_112	Residential	607739	4853603	1.5	17	23	39	0	-
RE511300_113	Residential	607738	4853609	1.5	17	23	39	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_114	Residential	607737	4853615	1.5	16	23	39	0	-
RE511300_115	Residential	607736	4853621	1.5	16	23	39	0	-
RE511300_116	Residential	607736	4853631	1.5	16	23	38	0	-
RE511300_117	Residential	607735	4853640	1.5	16	23	38	0	-
RE511300_118	Residential	607734	4853645	1.5	15	23	38	0	-
RE511300_119	Residential	607735	4853651	1.5	15	23	38	0	-
RE511300_120	Residential	607736	4853658	1.5	15	23	38	0	-
RE511300_121	Residential	607737	4853664	1.5	15	23	38	0	-
RE511300_122	Residential	607721	4853505	1.5	22	23	45	0	-
RE511300_123	Residential	607719	4853512	1.5	22	23	44	0	-
RE511300_124	Residential	607718	4853518	1.5	21	23	44	0	-
RE511300_125	Residential	607717	4853524	1.5	21	23	44	0	-
RE511300_126	Residential	607716	4853530	1.5	21	23	43	0	-
RE511300_127	Residential	607715	4853537	1.5	20	23	43	0	-
RE511300_128	Residential	607713	4853545	1.5	20	23	42	0	-
RE511300_129	Residential	607712	4853551	1.5	19	23	42	0	-
RE511300_130	Residential	607711	4853556	1.5	19	23	42	0	-
RE511300_131	Residential	607710	4853563	1.5	19	23	41	0	-
RE511300_132	Residential	607708	4853569	1.5	19	23	41	0	-
RE511300_133	Residential	607707	4853575	1.5	18	23	41	0	-
RE511300_134	Residential	607706	4853583	1.5	18	23	41	0	-
RE511300_135	Residential	607704	4853589	1.5	18	23	40	0	-
RE511300_136	Residential	607704	4853595	1.5	18	23	40	0	-
RE511300_137	Residential	607702	4853601	1.5	17	23	40	0	-
RE511300_138	Residential	607701	4853607	1.5	17	23	40	0	-
RE511300_139	Residential	607700	4853615	1.5	17	23	39	0	-
RE511300_140	Residential	607698	4853621	1.5	17	23	39	0	-
RE511300_141	Residential	607697	4853627	1.5	16	23	39	0	-
RE511300_142	Residential	607696	4853634	1.5	16	23	39	0	-
RE511300_143	Residential	607694	4853645	1.5	16	23	38	0	-
RE511300_144	Residential	607694	4853653	1.5	15	23	38	0	-
RE511300_145	Residential	607694	4853659	1.5	15	23	38	0	-
RE511300_146	Residential	607694	4853665	1.5	15	23	38	0	-
RE511300_147	Residential	607696	4853670	1.5	15	23	37	0	-
RE511300_148	Residential	607699	4853677	1.5	15	23	37	0	-
RE511300_149	Residential	607750	4853399	1.5	32	23	54	4	0.2%
RE511300_150	Residential	607756	4853400	1.5	32	23	54	4	0.2%
RE511300_151	Residential	607762	4853401	1.5	32	23	54	3	0.2%
RE511300_152	Residential	607768	4853402	1.5	32	23	54	3	0.2%
RE511300_153	Residential	607776	4853404	1.5	32	23	54	2	0.1%
RE511300_154	Residential	607783	4853405	1.5	32	23	54	2	0.1%
RE511300_155	Residential	607789	4853406	1.5	32	23	54	2	0.1%
RE511300_156	Residential	607795	4853407	1.5	32	23	54	2	0.1%
RE511300_157	Residential	607801	4853409	1.5	32	23	54	2	0.1%
RE511300_158	Residential	607807	4853410	1.5	32	23	54	2	0.1%
RE511300_159	Residential	607815	4853412	1.5	31	23	54	2	0.1%
RE511300_160	Residential	607821	4853413	1.5	31	23	54	2	0.1%
RE511300_161	Residential	607827	4853414	1.5	31	23	54	2	0.1%
RE511300_162	Residential	607834	4853415	1.5	31	23	54	2	0.1%

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_163	Residential	607841	4853417	1.5	31	23	53	2	0.1%
RE511300_164	Residential	607848	4853418	1.5	30	23	53	1	0.1%
RE511300_165	Residential	607854	4853419	1.5	30	23	52	1	0.1%
RE511300_166	Residential	607859	4853420	1.5	30	23	52	1	0.1%
RE511300_167	Residential	607866	4853421	1.5	29	23	52	1	0.1%
RE511300_168	Residential	607728	4853439	1.5	27	23	50	0	-
RE511300_169	Residential	607736	4853440	1.5	27	23	50	0	-
RE511300_170	Residential	607742	4853441	1.5	27	23	50	0	-
RE511300_171	Residential	607748	4853442	1.5	27	23	49	0	-
RE511300_172	Residential	607754	4853443	1.5	27	23	49	0	-
RE511300_173	Residential	607761	4853444	1.5	27	23	49	0	-
RE511300_174	Residential	607768	4853445	1.5	26	23	49	0	-
RE511300_175	Residential	607774	4853446	1.5	26	23	49	0	-
RE511300_176	Residential	607780	4853448	1.5	26	23	48	0	-
RE511300_177	Residential	607786	4853449	1.5	26	23	48	0	-
RE511300_178	Residential	607792	4853450	1.5	26	23	48	0	-
RE511300_179	Residential	607799	4853451	1.5	26	23	48	0	-
RE511300_180	Residential	607807	4853453	1.5	26	23	48	0	-
RE511300_181	Residential	607813	4853454	1.5	26	23	48	0	-
RE511300_182	Residential	607819	4853456	1.5	25	23	48	0	-
RE511300_183	Residential	607825	4853457	1.5	25	23	48	0	-
RE511300_184	Residential	607831	4853458	1.5	25	23	48	0	-
RE511300_185	Residential	607837	4853459	1.5	25	23	47	0	-
RE511300_186	Residential	607845	4853460	1.5	25	23	47	0	-
RE511300_187	Residential	607851	4853462	1.5	24	23	47	0	-
RE511300_188	Residential	607857	4853463	1.5	24	23	47	0	-
RE511300_189	Residential	607863	4853464	1.5	24	23	47	0	-
RE511300_190	Residential	607870	4853465	1.5	24	23	46	0	-
RE511300_191	Residential	607724	4853468	1.5	25	23	47	0	-
RE511300_192	Residential	607731	4853469	1.5	25	23	47	0	-
RE511300_193	Residential	607737	4853470	1.5	24	23	47	0	-
RE511300_194	Residential	607742	4853471	1.5	24	23	47	0	-
RE511300_195	Residential	607749	4853472	1.5	24	23	47	0	-
RE511300_196	Residential	607755	4853473	1.5	24	23	47	0	-
RE511300_197	Residential	607762	4853474	1.5	24	23	47	0	-
RE511300_198	Residential	607769	4853476	1.5	24	23	46	0	-
RE511300_199	Residential	607775	4853477	1.5	24	23	46	0	-
RE511300_200	Residential	607781	4853478	1.5	24	23	46	0	-
RE511300_201	Residential	607787	4853480	1.5	23	23	46	0	-
RE511300_202	Residential	607793	4853481	1.5	23	23	46	0	-
RE511300_203	Residential	607801	4853483	1.5	23	23	46	0	-
RE511300_204	Residential	607807	4853484	1.5	23	23	46	0	-
RE511300_205	Residential	607813	4853485	1.5	23	23	46	0	-
RE511300_206	Residential	607819	4853486	1.5	23	23	45	0	-
RE511300_207	Residential	607825	4853488	1.5	23	23	45	0	-
RE511300_208	Residential	607831	4853489	1.5	23	23	45	0	-
RE511300_209	Residential	607839	4853490	1.5	22	23	45	0	-
RE511300_210	Residential	607846	4853492	1.5	22	23	45	0	-
RE511300_211	Residential	607851	4853493	1.5	22	23	45	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_212	Residential	607858	4853494	1.5	22	23	44	0	-
RE511300_213	Residential	607863	4853495	1.5	21	23	44	0	-
RE511300_214	Residential	607869	4853496	1.5	21	23	44	0	-
RE511400_001	Residential	607929	4853848	1.5	10	23	33	0	-
RE511400_002	Residential	607914	4853876	1.5	10	23	33	0	-
RE511400_003	Residential	607929	4853886	1.5	10	23	33	0	-
RE511400_004	Residential	607898	4853826	1.5	11	23	34	0	-
RE511400_005	Residential	607899	4853865	1.5	11	23	33	0	-
RE511400_006	Residential	607842	4853819	1.5	12	23	35	0	-
RE511400_007	Residential	607859	4853838	1.5	12	23	34	0	-
RE511400_008	Residential	607869	4853844	1.5	11	23	34	0	-
RE511400_009	Residential	607876	4853849	1.5	11	23	34	0	-
RE511400_010	Residential	607922	4853881	1.5	10	23	33	0	-
RE511400_011	Residential	607891	4853860	1.5	11	23	33	0	-
RE511400_012	Residential	607868	4853804	1.5	12	23	34	0	-
RE511400_013	Residential	607919	4853841	1.5	11	23	33	0	-
RE511400_014	Residential	607907	4853870	1.5	10	23	33	0	-
RE511400_015	Residential	607887	4853793	1.5	12	23	34	0	-
RE511400_016	Residential	607876	4853800	1.5	12	23	34	0	-
RE511400_017	Residential	607867	4853900	1.5	11	23	33	0	-
RE511400_018	Residential	607888	4853915	1.5	10	23	33	0	-
RE511400_019	Residential	607881	4853910	1.5	10	23	33	0	-
RE511400_020	Residential	607895	4853920	1.5	10	23	33	0	-
RE511400_021	Residential	607805	4853857	1.5	12	23	34	0	-
RE511400_022	Residential	607814	4853863	1.5	12	23	34	0	-
RE511400_023	Residential	607859	4853894	1.5	11	23	33	0	-
RE511400_024	Residential	607874	4853905	1.5	10	23	33	0	-
RE511400_025	Residential	607821	4853868	1.5	12	23	34	0	-
RE511400_026	Residential	607829	4853873	1.5	11	23	34	0	-
RE511400_027	Residential	607902	4853925	1.5	10	23	32	0	-
RE511400_028	Residential	607836	4853879	1.5	11	23	34	0	-
RE511400_029	Residential	607844	4853884	1.5	11	23	34	0	-
RE511400_030	Residential	607852	4853889	1.5	11	23	33	0	-
RE511400_031	Residential	607961	4853671	1.5	12	23	35	0	-
RE511400_032	Residential	607901	4853730	1.5	12	23	35	0	-
RE511400_033	Residential	607932	4853710	1.5	12	23	35	0	-
RE511400_034	Residential	607891	4853735	1.5	13	23	35	0	-
RE511400_035	Residential	607950	4853688	1.5	12	23	35	0	-
RE511400_036	Residential	608027	4853515	1.5	19	23	41	0	-
RE511400_037	Residential	607948	4853861	1.5	10	23	33	0	-
RE511400_038	Residential	607884	4853855	1.5	11	23	33	0	-
RE511400_039	Residential	607860	4853809	1.5	12	23	35	0	-
RE511400_040	Residential	607917	4853721	1.5	12	23	35	0	-
RE511400_041	Residential	607909	4853725	1.5	12	23	35	0	-
RE511400_042	Residential	607925	4853716	1.5	12	23	35	0	-
RE511400_043	Residential	607955	4853680	1.5	12	23	35	0	-
RE511400_044	Residential	607944	4853695	1.5	12	23	35	0	-
RE511400_045	Residential	607939	4853703	1.5	12	23	35	0	-
RE511400_046	Residential	608072	4853635	1.5	12	23	35	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_047	Residential	608048	4853617	1.5	13	23	36	0	-
RE511400_048	Residential	608076	4853544	1.5	17	23	40	0	-
RE511400_049	Residential	608107	4853601	1.5	14	23	37	0	-
RE511400_050	Residential	608076	4853554	1.5	17	23	39	0	-
RE511400_051	Residential	607864	4853751	1.5	13	23	35	0	-
RE511400_052	Residential	607853	4853757	1.5	13	23	35	0	-
RE511400_053	Residential	607845	4853762	1.5	13	23	36	0	-
RE511400_054	Residential	607836	4853766	1.5	13	23	36	0	-
RE511400_055	Residential	607827	4853771	1.5	13	23	36	0	-
RE511400_056	Residential	607818	4853777	1.5	13	23	36	0	-
RE511400_057	Residential	607794	4853801	1.5	13	23	35	0	-
RE511400_058	Residential	607809	4853783	1.5	13	23	36	0	-
RE511400_059	Residential	607802	4853791	1.5	13	23	35	0	-
RE511400_060	Residential	608147	4853557	1.5	16	23	38	0	-
RE511400_061	Residential	608166	4853558	1.5	15	23	38	0	-
RE511400_062	Residential	608176	4853558	1.5	15	23	38	0	-
RE511400_063	Residential	608157	4853558	1.5	16	23	38	0	-
RE511400_064	Residential	608076	4853583	1.5	15	23	37	0	-
RE511400_065	Residential	608115	4853525	1.5	18	23	40	0	-
RE511400_066	Residential	608102	4853614	1.5	13	23	36	0	-
RE511400_067	Residential	608093	4853649	1.5	12	23	34	0	-
RE511400_068	Residential	608103	4853524	1.5	18	23	41	0	-
RE511400_069	Residential	608076	4853563	1.5	16	23	39	0	-
RE511400_070	Residential	608074	4853594	1.5	14	23	37	0	-
RE511400_071	Residential	608107	4853544	1.5	17	23	40	0	-
RE511400_072	Residential	608107	4853563	1.5	16	23	39	0	-
RE511400_073	Residential	608107	4853572	1.5	16	23	38	0	-
RE511400_074	Residential	608082	4853642	1.5	12	23	35	0	-
RE511400_075	Residential	608056	4853624	1.5	13	23	35	0	-
RE511400_076	Residential	608067	4853525	1.5	18	23	41	0	-
RE511400_077	Residential	608070	4853606	1.5	14	23	36	0	-
RE511400_078	Residential	608097	4853625	1.5	13	23	35	0	-
RE511400_079	Residential	608064	4853629	1.5	13	23	35	0	-
RE511400_080	Residential	608091	4853524	1.5	18	23	41	0	-
RE511400_081	Residential	608107	4853581	1.5	15	23	38	0	-
RE511400_082	Residential	608107	4853590	1.5	15	23	37	0	-
RE511400_083	Residential	608077	4853573	1.5	16	23	38	0	-
RE511400_084	Residential	608107	4853554	1.5	17	23	39	0	-
RE511400_085	Residential	608080	4853524	1.5	18	23	41	0	-
RE511400_086	Residential	608146	4853605	1.5	14	23	37	0	-
RE511400_087	Residential	607690	4854002	1.5	11	23	33	0	-
RE511400_088	Residential	607683	4854039	1.5	10	23	33	0	-
RE511400_089	Residential	607642	4854055	1.5	10	23	33	0	-
RE511400_090	Residential	607726	4853973	1.5	11	23	33	0	-
RE511400_091	Residential	607638	4854068	1.5	10	23	33	0	-
RE511400_092	Residential	607782	4853966	1.5	11	23	33	0	-
RE511400_093	Residential	607648	4854028	1.5	10	23	33	0	-
RE511400_094	Residential	607706	4853919	1.5	11	23	34	0	-
RE511400_095	Residential	607633	4854095	1.5	10	23	32	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_096	Residential	607649	4853948	1.5	11	23	34	0	-
RE511400_097	Residential	607792	4853973	1.5	10	23	33	0	-
RE511400_098	Residential	607734	4853980	1.5	11	23	33	0	-
RE511400_099	Residential	607851	4853813	1.5	12	23	35	0	-
RE511400_100	Residential	607835	4853830	1.5	12	23	35	0	-
RE511400_101	Residential	607938	4853855	1.5	10	23	33	0	-
RE511400_102	Residential	607908	4853835	1.5	11	23	33	0	-
RE511400_103	Residential	607677	4854058	1.5	10	23	33	0	-
RE511400_104	Residential	607687	4854030	1.5	10	23	33	0	-
RE511400_105	Residential	607758	4853948	1.5	11	23	34	0	-
RE511400_106	Residential	607671	4853912	1.5	11	23	34	0	-
RE511400_107	Residential	607797	4853977	1.5	10	23	33	0	-
RE511400_108	Residential	607709	4854015	1.5	10	23	33	0	-
RE511400_109	Residential	607661	4853910	1.5	11	23	34	0	-
RE511400_110	Residential	607713	4853921	1.5	11	23	34	0	-
RE511400_111	Residential	607654	4854003	1.5	11	23	33	0	-
RE511400_112	Residential	607657	4853949	1.5	11	23	34	0	-
RE511400_113	Residential	607651	4854015	1.5	10	23	33	0	-
RE511400_114	Residential	607731	4853930	1.5	11	23	34	0	-
RE511400_115	Residential	607695	4853916	1.5	11	23	34	0	-
RE511400_116	Residential	607655	4853989	1.5	11	23	33	0	-
RE511400_117	Residential	607645	4854041	1.5	10	23	33	0	-
RE511400_118	Residential	607751	4853943	1.5	11	23	34	0	-
RE511400_119	Residential	607744	4853938	1.5	11	23	34	0	-
RE511400_120	Residential	607787	4853970	1.5	11	23	33	0	-
RE511400_121	Residential	607676	4853954	1.5	11	23	34	0	-
RE511400_122	Residential	607667	4853952	1.5	11	23	34	0	-
RE511400_123	Residential	607684	4853955	1.5	11	23	34	0	-
RE511400_124	Residential	607704	4853960	1.5	11	23	34	0	-
RE511400_125	Residential	607680	4854049	1.5	10	23	33	0	-
RE511400_126	Residential	607679	4853914	1.5	11	23	34	0	-
RE511400_127	Residential	607700	4854008	1.5	11	23	33	0	-
RE511400_128	Residential	607719	4853969	1.5	11	23	33	0	-
RE511400_129	Residential	607689	4853915	1.5	11	23	34	0	-
RE511400_130	Residential	607739	4853935	1.5	11	23	34	0	-
RE511400_131	Residential	607636	4854081	1.5	10	23	32	0	-
RE511400_132	Residential	607680	4853999	1.5	11	23	33	0	-
RE511400_133	Residential	607723	4853926	1.5	11	23	34	0	-
RE511400_134	Residential	607693	4853957	1.5	11	23	34	0	-
RE511400_135	Residential	607710	4853964	1.5	11	23	34	0	-
RE511400_136	Residential	607759	4854001	1.5	10	23	33	0	-
RE511400_137	Residential	608026	4853558	1.5	16	23	38	0	-
RE511400_138	Residential	608026	4853566	1.5	15	23	38	0	-
RE511400_139	Residential	608023	4853574	1.5	15	23	38	0	-
RE511400_140	Residential	608018	4853584	1.5	15	23	37	0	-
RE511400_141	Residential	608015	4853591	1.5	15	23	37	0	-
RE511400_142	Residential	608006	4853606	1.5	14	23	37	0	-
RE511400_143	Residential	608011	4853599	1.5	14	23	37	0	-
RE511400_144	Residential	608001	4853613	1.5	14	23	36	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511400_145	Residential	607996	4853620	1.5	14	23	36	0	-
RE511400_146	Residential	607985	4853636	1.5	13	23	36	0	-
RE511400_147	Residential	607991	4853628	1.5	13	23	36	0	-
RE511400_148	Residential	607980	4853643	1.5	13	23	35	0	-
RE511400_149	Residential	608170	4853516	1.5	17	23	40	0	-
RE511400_150	Residential	608155	4853516	1.5	17	23	40	0	-
RE511400_151	Residential	608163	4853516	1.5	17	23	40	0	-
RE511400_152	Residential	608148	4853517	1.5	17	23	40	0	-
RE511400_153	Residential	608192	4853515	1.5	17	23	40	0	-
RE511400_154	Residential	608184	4853515	1.5	17	23	40	0	-
RE511400_155	Residential	608207	4853515	1.5	17	23	40	0	-
RE511400_156	Residential	608199	4853515	1.5	17	23	40	0	-
RE511400_157	Residential	608176	4853516	1.5	17	23	40	0	-
RE511400_158	Residential	608214	4853515	1.5	17	23	40	0	-
RE511400_159	Residential	607839	4853722	1.5	14	23	36	0	-
RE511400_160	Residential	607826	4853728	1.5	14	23	36	0	-
RE511400_161	Residential	607806	4853741	1.5	14	23	36	0	-
RE511400_162	Residential	607820	4853732	1.5	14	23	36	0	-
RE511400_163	Residential	607775	4853762	1.5	13	23	36	0	-
RE511400_164	Residential	607764	4853777	1.5	13	23	36	0	-
RE511400_165	Residential	607832	4853725	1.5	14	23	36	0	-
RE511400_166	Residential	607791	4853750	1.5	14	23	36	0	-
RE511400_167	Residential	607845	4853717	1.5	14	23	36	0	-
RE511400_168	Residential	607771	4853767	1.5	13	23	36	0	-
RE511400_169	Residential	607814	4853735	1.5	14	23	36	0	-
RE511400_170	Residential	607785	4853754	1.5	13	23	36	0	-
RE511400_171	Residential	607767	4853772	1.5	13	23	36	0	-
RE511400_172	Residential	607800	4853745	1.5	14	23	36	0	-
RE511400_173	Residential	607852	4853936	1.5	10	23	33	0	-
RE511400_174	Residential	607859	4853941	1.5	10	23	33	0	-
RE511400_175	Residential	607838	4853926	1.5	11	23	33	0	-
RE511400_176	Residential	607787	4853890	1.5	12	23	34	0	-
RE511400_177	Residential	607792	4853895	1.5	11	23	34	0	-
RE511400_178	Residential	607797	4853898	1.5	11	23	34	0	-
RE511400_179	Residential	607802	4853902	1.5	11	23	34	0	-
RE511400_180	Residential	607815	4853910	1.5	11	23	34	0	-
RE511400_181	Residential	607821	4853913	1.5	11	23	34	0	-
RE511400_182	Residential	607827	4853918	1.5	11	23	33	0	-
RE511400_183	Residential	607832	4853921	1.5	11	23	33	0	-
RE511400_184	Residential	607845	4853931	1.5	10	23	33	0	-
RE511400_185	Residential	607809	4853906	1.5	11	23	34	0	-
RE511400_186	Residential	607925	4853654	1.5	13	23	36	0	-
RE511400_187	Residential	607929	4853648	1.5	13	23	36	0	-
RE511400_188	Residential	607920	4853662	1.5	13	23	36	0	-
RE511400_189	Residential	607915	4853668	1.5	13	23	36	0	-
RE511400_190	Residential	607907	4853677	1.5	13	23	36	0	-
RE511400_191	Residential	607903	4853680	1.5	13	23	36	0	-
RE511400_192	Residential	607895	4853688	1.5	13	23	36	0	-
RE511400_193	Residential	607889	4853691	1.5	13	23	36	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511400_194	Residential	607881	4853696	1.5	13	23	36	0	-
RE511400_195	Residential	607873	4853701	1.5	14	23	36	0	-
RE511400_196	Residential	607989	4853515	1.5	18	23	41	0	-
RE511400_197	Residential	607989	4853530	1.5	17	23	40	0	-
RE511400_198	Residential	607989	4853538	1.5	17	23	40	0	-
RE511400_199	Residential	607988	4853524	1.5	18	23	40	0	-
RE511400_200	Residential	607988	4853546	1.5	17	23	39	0	-
RE511400_201	Residential	607988	4853553	1.5	16	23	39	0	-
RE511400_202	Residential	607982	4853569	1.5	16	23	38	0	-
RE511400_203	Residential	607985	4853562	1.5	16	23	39	0	-
RE511400_204	Residential	607980	4853574	1.5	16	23	38	0	-
RE511400_205	Residential	607978	4853580	1.5	15	23	38	0	-
RE511400_206	Residential	607972	4853586	1.5	15	23	38	0	-
RE511400_207	Residential	607968	4853592	1.5	15	23	37	0	-
RE511400_208	Residential	607963	4853600	1.5	14	23	37	0	-
RE511400_209	Residential	607958	4853607	1.5	14	23	37	0	-
RE511400_210	Residential	607953	4853615	1.5	14	23	36	0	-
RE511400_211	Residential	607948	4853620	1.5	13	23	36	0	-
RE511400_212	Residential	608027	4853522	1.5	18	23	41	0	-
RE511400_213	Residential	608027	4853540	1.5	17	23	39	0	-
RE511400_214	Residential	608027	4853531	1.5	17	23	40	0	-
RE511400_215	Residential	608027	4853548	1.5	16	23	39	0	-
RE511400_216	Residential	607888	4853817	1.5	11	23	34	0	-
RE511400_217	Residential	607735	4853842	1.5	12	23	35	0	-
RE511400_218	Residential	607748	4853810	1.5	13	23	35	0	-
RE511400_219	Residential	607777	4853830	1.5	12	23	35	0	-
RE511400_220	Residential	607730	4853850	1.5	12	23	35	0	-
RE511400_221	Residential	607725	4853846	1.5	12	23	35	0	-
RE511400_222	Residential	607783	4853834	1.5	12	23	35	0	-
RE511400_223	Residential	607752	4853873	1.5	12	23	35	0	-
RE511400_224	Residential	607743	4853806	1.5	13	23	35	0	-
RE511400_225	Residential	607711	4853837	1.5	12	23	35	0	-
RE511400_226	Residential	607748	4853878	1.5	12	23	34	0	-
RE511400_227	Residential	607755	4853868	1.5	12	23	35	0	-
RE511400_228	Residential	607756	4853827	1.5	12	23	35	0	-
RE511400_229	Residential	607767	4853823	1.5	13	23	35	0	-
RE511400_230	Residential	607735	4853854	1.5	12	23	35	0	-
RE511400_231	Residential	607738	4853803	1.5	13	23	35	0	-
RE511400_232	Residential	607762	4853859	1.5	12	23	35	0	-
RE511400_233	Residential	607719	4853843	1.5	12	23	35	0	-
RE511400_234	Residential	607730	4853838	1.5	12	23	35	0	-
RE511400_235	Residential	607767	4853834	1.5	12	23	35	0	-
RE511400_236	Residential	607738	4853814	1.5	13	23	35	0	-
RE511400_237	Residential	607733	4853810	1.5	13	23	35	0	-
RE511400_238	Residential	607761	4853819	1.5	13	23	35	0	-
RE511400_239	Residential	607777	4853842	1.5	12	23	35	0	-
RE511400_240	Residential	607761	4853831	1.5	12	23	35	0	-
RE511400_241	Residential	607751	4853823	1.5	13	23	35	0	-
RE511400_242	Residential	607756	4853816	1.5	13	23	35	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_243	Residential	607743	4853817	1.5	13	23	35	0	-
RE511400_244	Residential	607741	4853846	1.5	12	23	35	0	-
RE511400_245	Residential	607772	4853838	1.5	12	23	35	0	-
RE511400_246	Residential	607759	4853864	1.5	12	23	35	0	-
RE511400_247	Residential	607717	4853829	1.5	12	23	35	0	-
RE511400_248	Residential	607725	4853835	1.5	12	23	35	0	-
RE511400_249	Residential	607772	4853827	1.5	12	23	35	0	-
RE511400_250	Residential	607866	4853946	1.5	10	23	33	0	-
RE511400_251	Residential	607873	4853951	1.5	10	23	33	0	-
RE511400_252	Residential	607880	4853956	1.5	10	23	32	0	-
RE511400_265	Residential	607700	4854194	1.5	9	23	31	0	-
RE511400_266	Residential	607689	4854191	1.5	9	23	31	0	-
RE511400_267	Residential	607679	4854188	1.5	9	23	31	0	-
RE511400_268	Residential	607668	4854184	1.5	9	23	31	0	-
RE511400_269	Residential	607657	4854180	1.5	9	23	32	0	-
RE511400_270	Residential	607645	4854176	1.5	9	23	32	0	-
RE511400_271	Residential	607619	4854171	1.5	9	23	32	0	-
RE511400_272	Residential	607620	4854158	1.5	9	23	32	0	-
RE511400_273	Residential	607624	4854146	1.5	9	23	32	0	-
RE511400_274	Residential	607626	4854132	1.5	9	23	32	0	-
RE511400_275	Residential	607721	4854165	1.5	9	23	31	0	-
RE511400_276	Residential	607710	4854163	1.5	9	23	32	0	-
RE511400_277	Residential	607700	4854159	1.5	9	23	32	0	-
RE511400_278	Residential	607689	4854156	1.5	9	23	32	0	-
RE511400_279	Residential	607677	4854152	1.5	9	23	32	0	-
RE511400_280	Residential	607665	4854148	1.5	9	23	32	0	-
RE511400_281	Residential	607651	4854143	1.5	9	23	32	0	-
RE511400_282	Residential	607770	4854052	1.5	10	23	32	0	-
RE511400_283	Residential	607765	4854059	1.5	10	23	32	0	-
RE511400_284	Residential	607760	4854069	1.5	10	23	32	0	-
RE511400_285	Residential	607753	4854080	1.5	10	23	32	0	-
RE511400_286	Residential	607748	4854093	1.5	9	23	32	0	-
RE511400_287	Residential	607744	4854104	1.5	9	23	32	0	-
RE511400_288	Residential	607740	4854116	1.5	9	23	32	0	-
RE511400_289	Residential	607736	4854126	1.5	9	23	32	0	-
RE511400_290	Residential	607742	4854030	1.5	10	23	33	0	-
RE511400_291	Residential	607736	4854039	1.5	10	23	33	0	-
RE511400_292	Residential	607731	4854048	1.5	10	23	33	0	-
RE511400_293	Residential	607726	4854059	1.5	10	23	33	0	-
RE511400_294	Residential	607723	4854067	1.5	10	23	32	0	-
RE511400_295	Residential	607720	4854076	1.5	10	23	32	0	-
RE511400_296	Residential	607717	4854085	1.5	10	23	32	0	-
RE511400_297	Residential	607714	4854095	1.5	10	23	32	0	-
RE511400_298	Residential	607710	4854106	1.5	10	23	32	0	-
RE511400_299	Residential	607707	4854117	1.5	9	23	32	0	-
RE511400_300	Residential	607674	4854068	1.5	10	23	33	0	-
RE511400_301	Residential	607670	4854080	1.5	10	23	32	0	-
RE511400_302	Residential	607667	4854091	1.5	10	23	32	0	-
RE511400_303	Residential	607662	4854103	1.5	10	23	32	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_304	Residential	607765	4854005	1.5	10	23	33	0	-
RE511400_305	Residential	607773	4854009	1.5	10	23	33	0	-
RE511400_306	Residential	607779	4854014	1.5	10	23	33	0	-
RE511400_307	Residential	607787	4854019	1.5	10	23	33	0	-
RE511400_308	Residential	607794	4854023	1.5	10	23	32	0	-
RE511400_309	Residential	607801	4854028	1.5	10	23	32	0	-
RE511400_310	Residential	607809	4854033	1.5	10	23	32	0	-
RE511400_311	Residential	607817	4854039	1.5	9	23	32	0	-
RE511400_312	Residential	607802	4853980	1.5	10	23	33	0	-
RE511400_313	Residential	607807	4853983	1.5	10	23	33	0	-
RE511400_314	Residential	607814	4853988	1.5	10	23	33	0	-
RE511400_315	Residential	607820	4853992	1.5	10	23	33	0	-
RE511400_316	Residential	607825	4853995	1.5	10	23	32	0	-
RE511400_317	Residential	607829	4853998	1.5	10	23	32	0	-
RE511400_318	Residential	607837	4854004	1.5	10	23	32	0	-
RE511400_319	Residential	607842	4854008	1.5	10	23	32	0	-
RE511500_001	Child Care Centre	608104	4853900	1.5	9	23	31	0	-
RE511500_002	Residential	608322	4853695	1.5	11	23	34	0	-
RE511500_003	Residential	608318	4853701	1.5	11	23	34	0	-
RE511500_004	Residential	608314	4853707	1.5	11	23	34	0	-
RE511500_005	Residential	608300	4853727	1.5	11	23	33	0	-
RE511500_006	Residential	608295	4853734	1.5	11	23	33	0	-
RE511500_007	Residential	608290	4853741	1.5	11	23	33	0	-
RE511500_008	Residential	608285	4853748	1.5	10	23	33	0	-
RE511500_009	Residential	608280	4853755	1.5	10	23	33	0	-
RE511500_010	Residential	608335	4853677	1.5	11	23	34	0	-
RE511500_011	Residential	608327	4853688	1.5	11	23	34	0	-
RE511500_012	Residential	608364	4853636	1.5	12	23	34	0	-
RE511500_013	Residential	608359	4853642	1.5	12	23	34	0	-
RE511500_014	Residential	608355	4853649	1.5	11	23	34	0	-
RE511500_015	Residential	608349	4853657	1.5	11	23	34	0	-
RE511500_016	Residential	608345	4853664	1.5	11	23	34	0	-
RE511500_017	Residential	608310	4853713	1.5	11	23	34	0	-
RE511500_018	Residential	608305	4853720	1.5	11	23	34	0	-
RE511500_019	Residential	608232	4853817	1.5	9	23	32	0	-
RE511500_020	Residential	608226	4853679	1.5	12	23	34	0	-
RE511500_021	Residential	608207	4853707	1.5	11	23	33	0	-
RE511500_022	Residential	608274	4853612	1.5	13	23	35	0	-
RE511500_023	Residential	608242	4853657	1.5	12	23	35	0	-
RE511500_024	Residential	608232	4853672	1.5	12	23	35	0	-
RE511500_025	Residential	607937	4853892	1.5	10	23	32	0	-
RE511500_026	Residential	607990	4853929	1.5	9	23	32	0	-
RE511500_027	Residential	607999	4853934	1.5	9	23	32	0	-
RE511500_028	Residential	608017	4853910	1.5	9	23	32	0	-
RE511500_029	Residential	607985	4853887	1.5	9	23	32	0	-
RE511500_030	Residential	607977	4853881	1.5	10	23	32	0	-
RE511500_031	Residential	607952	4853902	1.5	10	23	32	0	-
RE511500_032	Residential	608205	4853855	1.5	9	23	31	0	-
RE511500_033	Residential	608000	4853898	1.5	9	23	32	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_034	Residential	607982	4853923	1.5	9	23	32	0	-
RE511500_035	Residential	607960	4853907	1.5	10	23	32	0	-
RE511500_036	Residential	607993	4853893	1.5	9	23	32	0	-
RE511500_037	Residential	608228	4853822	1.5	9	23	32	0	-
RE511500_038	Residential	608194	4853868	1.5	9	23	31	0	-
RE511500_039	Residential	608188	4853877	1.5	9	23	31	0	-
RE511500_040	Residential	608008	4853903	1.5	9	23	32	0	-
RE511500_041	Residential	608199	4853862	1.5	9	23	31	0	-
RE511500_042	Residential	608224	4853828	1.5	9	23	31	0	-
RE511500_043	Residential	608221	4853833	1.5	9	23	31	0	-
RE511500_044	Residential	607925	4853940	1.5	10	23	32	0	-
RE511500_045	Residential	608481	4853493	1.5	17	23	40	0	-
RE511500_046	Residential	608407	4853578	1.5	13	23	36	0	-
RE511500_047	Residential	608462	4853557	1.5	14	23	37	0	-
RE511500_048	Residential	608457	4853565	1.5	14	23	36	0	-
RE511500_049	Residential	607910	4853930	1.5	10	23	32	0	-
RE511500_050	Residential	607917	4853935	1.5	10	23	32	0	-
RE511500_051	Residential	608411	4853570	1.5	14	23	36	0	-
RE511500_052	Residential	608435	4853530	1.5	15	23	38	0	-
RE511500_053	Residential	608415	4853563	1.5	14	23	37	0	-
RE511500_054	Residential	608053	4853924	1.5	9	23	31	0	-
RE511500_055	Residential	608480	4853505	1.5	17	23	39	0	-
RE511500_056	Residential	608197	4853721	1.5	10	23	33	0	-
RE511500_057	Residential	608191	4853730	1.5	10	23	33	0	-
RE511500_058	Residential	608263	4853627	1.5	12	23	35	0	-
RE511500_059	Residential	608289	4853591	1.5	13	23	36	0	-
RE511500_060	Residential	608284	4853598	1.5	13	23	36	0	-
RE511500_061	Residential	608211	4853846	1.5	9	23	31	0	-
RE511500_062	Residential	608179	4853890	1.5	9	23	31	0	-
RE511500_063	Residential	607967	4853875	1.5	10	23	32	0	-
RE511500_064	Residential	607967	4853913	1.5	9	23	32	0	-
RE511500_065	Residential	608234	4853563	1.5	15	23	37	0	-
RE511500_066	Residential	608254	4853574	1.5	14	23	37	0	-
RE511500_067	Residential	608194	4853557	1.5	15	23	37	0	-
RE511500_068	Residential	608225	4853560	1.5	15	23	37	0	-
RE511500_069	Residential	608214	4853558	1.5	15	23	37	0	-
RE511500_070	Residential	608185	4853558	1.5	15	23	37	0	-
RE511500_071	Residential	608131	4853676	1.5	11	23	34	0	-
RE511500_072	Residential	608217	4853606	1.5	13	23	36	0	-
RE511500_073	Residential	608173	4853670	1.5	12	23	34	0	-
RE511500_074	Residential	608147	4853647	1.5	12	23	35	0	-
RE511500_075	Residential	608204	4853630	1.5	13	23	36	0	-
RE511500_076	Residential	608156	4853693	1.5	11	23	33	0	-
RE511500_077	Residential	608189	4853647	1.5	13	23	35	0	-
RE511500_078	Residential	608184	4853655	1.5	12	23	35	0	-
RE511500_079	Residential	608158	4853604	1.5	14	23	37	0	-
RE511500_080	Residential	608149	4853688	1.5	11	23	34	0	-
RE511500_081	Residential	608226	4853615	1.5	13	23	36	0	-
RE511500_082	Residential	608167	4853604	1.5	14	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_083	Residential	608195	4853640	1.5	13	23	35	0	-
RE511500_084	Residential	608195	4853604	1.5	14	23	36	0	-
RE511500_085	Residential	608154	4853638	1.5	13	23	35	0	-
RE511500_086	Residential	608120	4853668	1.5	11	23	34	0	-
RE511500_087	Residential	608176	4853604	1.5	14	23	36	0	-
RE511500_088	Residential	608168	4853677	1.5	11	23	34	0	-
RE511500_089	Residential	608140	4853682	1.5	11	23	34	0	-
RE511500_090	Residential	608205	4853603	1.5	14	23	36	0	-
RE511500_091	Residential	608185	4853604	1.5	14	23	36	0	-
RE511500_092	Residential	608141	4853656	1.5	12	23	34	0	-
RE511500_093	Residential	608244	4853567	1.5	14	23	37	0	-
RE511500_094	Residential	608204	4853557	1.5	15	23	37	0	-
RE511500_095	Residential	608304	4853570	1.5	14	23	37	0	-
RE511500_096	Residential	608315	4853555	1.5	15	23	37	0	-
RE511500_097	Residential	608258	4853635	1.5	12	23	35	0	-
RE511500_098	Residential	608248	4853649	1.5	12	23	35	0	-
RE511500_099	Residential	608222	4853686	1.5	12	23	34	0	-
RE511500_100	Residential	608216	4853693	1.5	11	23	34	0	-
RE511500_101	Residential	608269	4853620	1.5	12	23	35	0	-
RE511500_102	Residential	608201	4853714	1.5	11	23	33	0	-
RE511500_103	Residential	608309	4853563	1.5	14	23	37	0	-
RE511500_104	Residential	608299	4853577	1.5	14	23	37	0	-
RE511500_105	Residential	608279	4853605	1.5	13	23	36	0	-
RE511500_106	Residential	608253	4853642	1.5	12	23	35	0	-
RE511500_107	Residential	608212	4853700	1.5	11	23	34	0	-
RE511500_108	Residential	608294	4853584	1.5	14	23	36	0	-
RE511500_109	Residential	608166	4853699	1.5	11	23	33	0	-
RE511500_110	Residential	608179	4853662	1.5	12	23	35	0	-
RE511500_111	Residential	608443	4853510	1.5	17	23	40	0	-
RE511500_112	Residential	608420	4853557	1.5	14	23	37	0	-
RE511500_113	Residential	608424	4853551	1.5	14	23	37	0	-
RE511500_114	Residential	608473	4853532	1.5	15	23	37	0	-
RE511500_115	Residential	608470	4853541	1.5	14	23	37	0	-
RE511500_116	Residential	608448	4853484	1.5	19	23	41	0	-
RE511500_117	Residential	608445	4853501	1.5	18	23	40	0	-
RE511500_118	Residential	608446	4853493	1.5	18	23	41	0	-
RE511500_119	Residential	608441	4853518	1.5	16	23	39	0	-
RE511500_120	Residential	608476	4853524	1.5	15	23	38	0	-
RE511500_121	Residential	608433	4853537	1.5	15	23	37	0	-
RE511500_122	Residential	608208	4853851	1.5	9	23	31	0	-
RE511500_123	Residential	608438	4853524	1.5	16	23	38	0	-
RE511500_124	Residential	608429	4853545	1.5	14	23	37	0	-
RE511500_125	Residential	608466	4853549	1.5	14	23	37	0	-
RE511500_126	Residential	608478	4853514	1.5	16	23	39	0	-
RE511500_127	Residential	608452	4853573	1.5	14	23	36	0	-
RE511500_128	Residential	608241	4853804	1.5	9	23	32	0	-
RE511500_129	Residential	608215	4853841	1.5	9	23	31	0	-
RE511500_130	Residential	608236	4853811	1.5	9	23	32	0	-
RE511500_131	Residential	608185	4853882	1.5	9	23	31	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_132	Residential	607957	4853868	1.5	10	23	32	0	-
RE511500_133	Residential	607944	4853897	1.5	10	23	32	0	-
RE511500_134	Residential	607975	4853918	1.5	9	23	32	0	-
RE511500_135	Residential	608340	4853670	1.5	11	23	33	0	-
RE511500_136	Residential	608276	4853761	1.5	10	23	33	0	-
RE511500_137	Residential	608272	4853766	1.5	10	23	32	0	-
RE511500_138	Residential	608268	4853772	1.5	10	23	32	0	-
RE511500_139	Residential	608263	4853780	1.5	9	23	32	0	-
RE511500_140	Residential	608331	4853682	1.5	11	23	34	0	-
RE511500_141	Residential	608237	4853665	1.5	12	23	35	0	-
RE511500_142	Residential	608152	4853626	1.5	13	23	36	0	-
RE511500_143	Residential	608232	4853514	1.5	17	23	40	0	-
RE511500_144	Residential	608223	4853515	1.5	17	23	40	0	-
RE511500_145	Residential	608246	4853517	1.5	17	23	40	0	-
RE511500_146	Residential	608253	4853520	1.5	17	23	39	0	-
RE511500_147	Residential	608269	4853526	1.5	16	23	39	0	-
RE511500_148	Residential	608274	4853530	1.5	16	23	39	0	-
RE511500_149	Residential	608264	4853523	1.5	17	23	39	0	-
RE511500_150	Residential	608279	4853533	1.5	16	23	38	0	-
RE511500_151	Residential	608336	4853591	1.5	13	23	36	0	-
RE511500_152	Residential	608339	4853585	1.5	14	23	36	0	-
RE511500_153	Residential	608328	4853602	1.5	13	23	36	0	-
RE511500_154	Residential	608332	4853597	1.5	13	23	36	0	-
RE511500_155	Residential	608344	4853578	1.5	14	23	36	0	-
RE511500_156	Residential	608324	4853608	1.5	13	23	35	0	-
RE511500_157	Residential	608318	4853615	1.5	13	23	35	0	-
RE511500_158	Residential	608314	4853620	1.5	12	23	35	0	-
RE511500_159	Residential	608309	4853630	1.5	12	23	35	0	-
RE511500_160	Residential	608305	4853636	1.5	12	23	34	0	-
RE511500_161	Residential	608299	4853644	1.5	12	23	34	0	-
RE511500_162	Residential	608295	4853650	1.5	12	23	34	0	-
RE511500_163	Residential	608287	4853661	1.5	12	23	34	0	-
RE511500_164	Residential	608291	4853655	1.5	12	23	34	0	-
RE511500_165	Residential	608282	4853668	1.5	12	23	34	0	-
RE511500_166	Residential	608278	4853674	1.5	12	23	34	0	-
RE511500_167	Residential	608274	4853679	1.5	12	23	34	0	-
RE511500_168	Residential	608269	4853685	1.5	12	23	34	0	-
RE511500_169	Residential	608264	4853692	1.5	11	23	34	0	-
RE511500_170	Residential	608259	4853699	1.5	11	23	34	0	-
RE511500_171	Residential	608254	4853706	1.5	11	23	34	0	-
RE511500_172	Residential	608250	4853713	1.5	11	23	34	0	-
RE511500_173	Residential	608240	4853728	1.5	11	23	33	0	-
RE511500_174	Residential	608236	4853733	1.5	10	23	33	0	-
RE511500_175	Residential	608231	4853738	1.5	10	23	33	0	-
RE511500_176	Residential	608228	4853744	1.5	10	23	33	0	-
RE511500_177	Residential	608245	4853721	1.5	11	23	33	0	-
RE511500_178	Residential	608223	4853750	1.5	10	23	32	0	-
RE511500_179	Residential	608375	4853620	1.5	12	23	35	0	-
RE511500_180	Residential	608371	4853626	1.5	12	23	35	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_181	Residential	608378	4853615	1.5	12	23	35	0	-
RE511500_182	Residential	608382	4853610	1.5	13	23	35	0	-
RE511500_183	Residential	608368	4853631	1.5	12	23	35	0	-
RE511500_184	Residential	607933	4853946	1.5	9	23	32	0	-
RE511500_185	Residential	607940	4853951	1.5	9	23	32	0	-
RE511500_186	Residential	607948	4853956	1.5	9	23	32	0	-
RE511500_187	Residential	607955	4853962	1.5	9	23	32	0	-
RE511500_188	Residential	607963	4853967	1.5	9	23	32	0	-
RE511500_189	Residential	607972	4853973	1.5	9	23	31	0	-
RE511500_190	Residential	607887	4853960	1.5	10	23	32	0	-
RE511500_191	Residential	607893	4853965	1.5	10	23	32	0	-
RE511500_192	Residential	607899	4853969	1.5	9	23	32	0	-
RE511500_193	Residential	607904	4853973	1.5	9	23	32	0	-
RE511500_194	Residential	607910	4853977	1.5	9	23	32	0	-
RE511500_195	Residential	607916	4853981	1.5	9	23	32	0	-
RE511500_196	Residential	607923	4853986	1.5	9	23	32	0	-
RE511500_197	Residential	607928	4853990	1.5	9	23	32	0	-
RE511500_198	Residential	607933	4853993	1.5	9	23	32	0	-
RE511500_199	Residential	607938	4853997	1.5	9	23	31	0	-
RE511500_200	Residential	607943	4854000	1.5	9	23	31	0	-
RE511500_201	Residential	607948	4854004	1.5	9	23	31	0	-
RE511500_202	Residential	608047	4853932	1.5	9	23	31	0	-
RE511500_203	Residential	608042	4853940	1.5	9	23	31	0	-
RE511500_204	Residential	608036	4853947	1.5	9	23	31	0	-
RE511500_205	Residential	608031	4853955	1.5	9	23	31	0	-
RE511500_206	Residential	608026	4853962	1.5	9	23	31	0	-
RE511500_207	Residential	608021	4853969	1.5	9	23	31	0	-
RE511500_208	Residential	608016	4853976	1.5	9	23	31	0	-
RE511500_209	Residential	608011	4853983	1.5	9	23	31	0	-
RE511500_210	Residential	608006	4853990	1.5	9	23	31	0	-
RE511500_211	Residential	608001	4853997	1.5	9	23	31	0	-
RE511500_212	Residential	607995	4854005	1.5	9	23	31	0	-
RE511500_213	Residential	607990	4854012	1.5	8	23	31	0	-
RE511500_214	Residential	607985	4854020	1.5	8	23	31	0	-
RE511500_215	Residential	607979	4854029	1.5	8	23	31	0	-
RE511500_216	Residential	608085	4853947	1.5	9	23	31	0	-
RE511500_217	Residential	608081	4853952	1.5	9	23	31	0	-
RE511500_218	Residential	608077	4853958	1.5	9	23	31	0	-
RE511500_219	Residential	608074	4853962	1.5	9	23	31	0	-
RE511500_220	Residential	608069	4853969	1.5	8	23	31	0	-
RE511500_221	Residential	608065	4853974	1.5	8	23	31	0	-
RE511500_222	Residential	608062	4853978	1.5	8	23	31	0	-
RE511500_223	Residential	608058	4853984	1.5	8	23	31	0	-
RE511500_224	Residential	608053	4853991	1.5	8	23	31	0	-
RE511500_225	Residential	608049	4853997	1.5	8	23	31	0	-
RE511500_226	Residential	608043	4854006	1.5	8	23	31	0	-
RE511500_227	Residential	608040	4854011	1.5	8	23	31	0	-
RE511500_228	Residential	608034	4854019	1.5	8	23	31	0	-
RE511500_229	Residential	608029	4854025	1.5	8	23	31	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_230	Residential	608026	4854031	1.5	8	23	31	0	-
RE511500_231	Residential	608022	4854036	1.5	8	23	31	0	-
RE511500_232	Residential	608018	4854042	1.5	8	23	31	0	-
RE511500_233	Residential	608013	4854048	1.5	8	23	31	0	-
RE511500_234	Residential	608175	4853896	1.5	9	23	31	0	-
RE511500_235	Residential	608171	4853902	1.5	9	23	31	0	-
RE511500_236	Residential	608167	4853908	1.5	9	23	31	0	-
RE511500_237	Residential	608162	4853915	1.5	9	23	31	0	-
RE511500_238	Residential	608157	4853922	1.5	8	23	31	0	-
RE511500_239	Residential	608154	4853927	1.5	8	23	31	0	-
RE511500_240	Residential	608150	4853933	1.5	8	23	31	0	-
RE511500_241	Residential	608145	4853939	1.5	8	23	31	0	-
RE511500_242	Residential	608142	4853944	1.5	8	23	31	0	-
RE511500_243	Residential	608122	4853973	1.5	8	23	31	0	-
RE511500_244	Residential	608119	4853977	1.5	8	23	31	0	-
RE511500_245	Residential	608115	4853983	1.5	8	23	31	0	-
RE511500_246	Residential	608112	4853987	1.5	8	23	31	0	-
RE511500_247	Residential	608107	4853994	1.5	8	23	31	0	-
RE511500_259	Residential	607976	4854103	1.5	8	23	31	0	-
RE511500_260	Residential	607970	4854109	1.5	8	23	31	0	-
RE511500_261	Residential	607967	4854115	1.5	8	23	31	0	-
RE511500_262	Residential	607962	4854121	1.5	8	23	30	0	-
RE511500_263	Residential	607959	4854126	1.5	8	23	30	0	-
RE511500_264	Residential	607955	4854131	1.5	8	23	30	0	-
RE511500_265	Residential	607949	4854139	1.5	8	23	30	0	-
RE511500_266	Residential	607944	4854146	1.5	8	23	30	0	-
RE511500_267	Residential	607939	4854153	1.5	8	23	30	0	-
RE511500_268	Residential	607934	4854160	1.5	8	23	30	0	-
RE511500_269	Residential	607929	4854168	1.5	8	23	30	0	-
RE511500_270	Residential	607927	4854176	1.5	8	23	30	0	-
RE511500_288	Residential	607723	4854202	1.5	8	23	31	0	-
RE511500_289	Residential	607711	4854198	1.5	9	23	31	0	-
RE511500_313	Residential	607831	4854199	1.5	8	23	30	0	-
RE511500_314	Residential	607821	4854196	1.5	8	23	30	0	-
RE511500_315	Residential	607810	4854192	1.5	8	23	31	0	-
RE511500_316	Residential	607798	4854189	1.5	8	23	31	0	-
RE511500_317	Residential	607787	4854186	1.5	8	23	31	0	-
RE511500_318	Residential	607777	4854182	1.5	8	23	31	0	-
RE511500_319	Residential	607764	4854179	1.5	8	23	31	0	-
RE511500_320	Residential	607849	4854155	1.5	8	23	31	0	-
RE511500_321	Residential	607839	4854152	1.5	8	23	31	0	-
RE511500_322	Residential	607829	4854148	1.5	8	23	31	0	-
RE511500_323	Residential	607818	4854145	1.5	8	23	31	0	-
RE511500_324	Residential	607806	4854141	1.5	8	23	31	0	-
RE511500_325	Residential	607943	4854078	1.5	8	23	31	0	-
RE511500_326	Residential	607939	4854083	1.5	8	23	31	0	-
RE511500_327	Residential	607933	4854092	1.5	8	23	31	0	-
RE511500_328	Residential	607929	4854097	1.5	8	23	31	0	-
RE511500_329	Residential	607923	4854106	1.5	8	23	31	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_330	Residential	607919	4854112	1.5	8	23	31	0	-
RE511500_331	Residential	607913	4854119	1.5	8	23	31	0	-
RE511500_332	Residential	607907	4854127	1.5	8	23	31	0	-
RE511500_333	Residential	607902	4854135	1.5	8	23	31	0	-
RE511500_334	Residential	607897	4854142	1.5	8	23	31	0	-
RE511500_335	Residential	607892	4854151	1.5	8	23	30	0	-
RE511500_336	Residential	607888	4854158	1.5	8	23	30	0	-
RE511500_337	Residential	607885	4854168	1.5	8	23	30	0	-
RE511500_338	Residential	607883	4854174	1.5	8	23	30	0	-
RE511500_339	Residential	607733	4854170	1.5	9	23	31	0	-
RE511500_340	Residential	607810	4854078	1.5	9	23	32	0	-
RE511500_341	Residential	607805	4854085	1.5	9	23	32	0	-
RE511500_342	Residential	607798	4854096	1.5	9	23	32	0	-
RE511500_343	Residential	607794	4854107	1.5	9	23	32	0	-
RE511500_344	Residential	607790	4854118	1.5	9	23	32	0	-
RE511500_345	Residential	607788	4854129	1.5	9	23	31	0	-
RE511500_346	Residential	607785	4854141	1.5	9	23	31	0	-
RE511500_347	Residential	607825	4854044	1.5	9	23	32	0	-
RE511500_348	Residential	607832	4854049	1.5	9	23	32	0	-
RE511500_349	Residential	607840	4854054	1.5	9	23	32	0	-
RE511500_350	Residential	607846	4854059	1.5	9	23	32	0	-
RE511500_351	Residential	607853	4854064	1.5	9	23	31	0	-
RE511500_352	Residential	607861	4854068	1.5	9	23	31	0	-
RE511500_353	Residential	607868	4854074	1.5	9	23	31	0	-
RE511500_354	Residential	607874	4854078	1.5	9	23	31	0	-
RE511500_355	Residential	607881	4854083	1.5	8	23	31	0	-
RE511500_356	Residential	607889	4854088	1.5	8	23	31	0	-
RE511500_357	Residential	607850	4854014	1.5	9	23	32	0	-
RE511500_358	Residential	607857	4854018	1.5	9	23	32	0	-
RE511500_359	Residential	607863	4854023	1.5	9	23	32	0	-
RE511500_360	Residential	607869	4854027	1.5	9	23	32	0	-
RE511500_361	Residential	607874	4854030	1.5	9	23	32	0	-
RE511500_362	Residential	607880	4854034	1.5	9	23	32	0	-
RE511500_363	Residential	607885	4854039	1.5	9	23	31	0	-
RE511500_364	Residential	607891	4854043	1.5	9	23	31	0	-
RE511500_365	Residential	607895	4854047	1.5	9	23	31	0	-
RE511500_366	Residential	607900	4854050	1.5	9	23	31	0	-
RE511500_367	Residential	607906	4854054	1.5	9	23	31	0	-
RE511500_368	Residential	607911	4854057	1.5	9	23	31	0	-
RE511500_369	Residential	607823	4854097	1.5	9	23	31	0	-
RE511500_370	Residential	607831	4854103	1.5	9	23	31	0	-
RE511500_371	Residential	607839	4854108	1.5	9	23	31	0	-
RE511500_372	Residential	607847	4854113	1.5	8	23	31	0	-
RE511500_373	Residential	607854	4854118	1.5	8	23	31	0	-
RE511500_374	Residential	607864	4854124	1.5	8	23	31	0	-
RE511500_376	Residential	607755	4854206	1.5	8	23	31	0	-
RE511600_001	Residential	608413	4853627	1.5	12	23	35	0	-
RE511600_002	Residential	608350	4853717	1.5	11	23	33	0	-
RE511600_003	Residential	608360	4853703	1.5	11	23	33	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_004	Residential	608309	4853775	1.5	10	23	33	0	-
RE511600_005	Residential	608274	4853824	1.5	9	23	31	0	-
RE511600_006	Residential	608263	4853840	1.5	9	23	31	0	-
RE511600_007	Residential	608430	4853685	1.5	10	23	33	0	-
RE511600_008	Residential	608384	4853750	1.5	10	23	33	0	-
RE511600_009	Residential	608443	4853666	1.5	11	23	33	0	-
RE511600_010	Residential	608451	4853655	1.5	11	23	34	0	-
RE511600_011	Residential	608399	4853728	1.5	10	23	33	0	-
RE511600_012	Residential	608407	4853717	1.5	10	23	33	0	-
RE511600_013	Residential	608423	4853695	1.5	10	23	33	0	-
RE511600_014	Residential	608392	4853739	1.5	10	23	33	0	-
RE511600_015	Residential	608437	4853676	1.5	11	23	33	0	-
RE511600_016	Residential	608415	4853706	1.5	10	23	33	0	-
RE511600_017	Residential	608253	4853854	1.5	9	23	31	0	-
RE511600_018	Residential	608527	4853503	1.5	16	23	39	0	-
RE511600_019	Residential	608519	4853540	1.5	14	23	37	0	-
RE511600_020	Residential	608517	4853549	1.5	13	23	36	0	-
RE511600_021	Residential	608473	4853624	1.5	12	23	35	0	-
RE511600_022	Residential	608509	4853566	1.5	13	23	36	0	-
RE511600_023	Residential	608496	4853592	1.5	13	23	36	0	-
RE511600_024	Residential	608441	4853588	1.5	13	23	36	0	-
RE511600_025	Residential	608524	4853521	1.5	15	23	38	0	-
RE511600_026	Residential	608490	4853600	1.5	13	23	35	0	-
RE511600_027	Residential	608513	4853558	1.5	13	23	36	0	-
RE511600_028	Residential	608407	4853636	1.5	12	23	34	0	-
RE511600_029	Residential	608402	4853644	1.5	12	23	34	0	-
RE511600_030	Residential	608396	4853651	1.5	11	23	34	0	-
RE511600_031	Residential	608391	4853659	1.5	11	23	34	0	-
RE511600_032	Residential	608268	4853833	1.5	9	23	31	0	-
RE511600_033	Residential	608258	4853847	1.5	9	23	31	0	-
RE511600_034	Residential	608526	4853512	1.5	16	23	38	0	-
RE511600_035	Residential	608365	4853764	1.5	10	23	33	0	-
RE511600_036	Residential	608501	4853584	1.5	13	23	36	0	-
RE511600_037	Residential	608485	4853608	1.5	13	23	35	0	-
RE511600_038	Residential	608447	4853580	1.5	13	23	36	0	-
RE511600_039	Residential	608480	4853615	1.5	12	23	35	0	-
RE511600_040	Residential	608522	4853530	1.5	15	23	37	0	-
RE511600_041	Residential	608380	4853674	1.5	11	23	33	0	-
RE511600_042	Residential	608375	4853682	1.5	11	23	33	0	-
RE511600_043	Residential	608355	4853710	1.5	11	23	33	0	-
RE511600_044	Residential	608370	4853689	1.5	10	23	33	0	-
RE511600_045	Residential	608365	4853696	1.5	11	23	33	0	-
RE511600_046	Residential	608528	4853482	1.5	17	23	40	0	-
RE511600_047	Residential	608505	4853575	1.5	13	23	36	0	-
RE511600_048	Residential	608435	4853597	1.5	13	23	35	0	-
RE511600_049	Residential	608528	4853494	1.5	17	23	39	0	-
RE511600_050	Residential	608345	4853723	1.5	11	23	33	0	-
RE511600_051	Residential	608341	4853730	1.5	11	23	33	0	-
RE511600_052	Residential	608336	4853737	1.5	11	23	33	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_053	Residential	608330	4853745	1.5	11	23	33	0	-
RE511600_054	Residential	608325	4853752	1.5	10	23	33	0	-
RE511600_055	Residential	608320	4853760	1.5	10	23	33	0	-
RE511600_056	Residential	608315	4853767	1.5	10	23	33	0	-
RE511600_057	Residential	608304	4853782	1.5	10	23	32	0	-
RE511600_058	Residential	608299	4853790	1.5	10	23	32	0	-
RE511600_059	Residential	608292	4853799	1.5	9	23	32	0	-
RE511600_060	Residential	608386	4853667	1.5	11	23	34	0	-
RE511600_061	Residential	608377	4853772	1.5	10	23	33	0	-
RE511600_062	Residential	608387	4853779	1.5	10	23	33	0	-
RE511600_085	Residential	608248	4853972	1.5	8	23	31	0	-
RE511600_086	Residential	608239	4853965	1.5	8	23	31	0	-
RE511600_087	Residential	608227	4853958	1.5	8	23	31	0	-
RE511600_091	Residential	608350	4853851	1.5	9	23	31	0	-
RE511600_092	Residential	608343	4853862	1.5	8	23	31	0	-
RE511600_093	Residential	608335	4853872	1.5	8	23	31	0	-
RE511600_094	Residential	608327	4853883	1.5	8	23	31	0	-
RE511600_095	Residential	608320	4853894	1.5	8	23	31	0	-
RE511600_096	Residential	608312	4853905	1.5	8	23	31	0	-
RE511600_097	Residential	608305	4853915	1.5	8	23	31	0	-
RE511600_098	Residential	608298	4853925	1.5	8	23	31	0	-
RE511600_099	Residential	608291	4853934	1.5	8	23	31	0	-
RE511600_100	Residential	608283	4853945	1.5	8	23	31	0	-
RE511600_101	Residential	608348	4853801	1.5	10	23	32	0	-
RE511600_102	Residential	608342	4853810	1.5	9	23	32	0	-
RE511600_103	Residential	608336	4853817	1.5	9	23	32	0	-
RE511600_104	Residential	608331	4853825	1.5	9	23	32	0	-
RE511600_105	Residential	608325	4853833	1.5	9	23	31	0	-
RE511600_106	Residential	608319	4853842	1.5	9	23	31	0	-
RE511600_107	Residential	608312	4853852	1.5	9	23	31	0	-
RE511600_108	Residential	608305	4853861	1.5	8	23	31	0	-
RE511600_109	Residential	608299	4853870	1.5	8	23	31	0	-
RE511600_110	Residential	608292	4853880	1.5	8	23	31	0	-
RE511600_111	Residential	608285	4853889	1.5	8	23	31	0	-
RE511600_112	Residential	608279	4853898	1.5	8	23	31	0	-
RE511600_113	Residential	608274	4853905	1.5	8	23	31	0	-
RE511600_114	Residential	608269	4853913	1.5	8	23	31	0	-
RE511600_115	Residential	608257	4853930	1.5	8	23	31	0	-
RE511600_116	Residential	608248	4853861	1.5	9	23	31	0	-
RE511600_117	Residential	608243	4853868	1.5	9	23	31	0	-
RE511600_118	Residential	608238	4853875	1.5	8	23	31	0	-
RE511600_119	Residential	608233	4853882	1.5	8	23	31	0	-
RE511600_120	Residential	608228	4853889	1.5	8	23	31	0	-
RE511600_121	Residential	608223	4853896	1.5	8	23	31	0	-
RE511600_122	Residential	608218	4853903	1.5	8	23	31	0	-
RE511600_123	Residential	608213	4853910	1.5	8	23	31	0	-
RE511600_124	Residential	608208	4853917	1.5	8	23	31	0	-
RE511600_125	Residential	608204	4853924	1.5	8	23	31	0	-
RE511600_126	Residential	608199	4853931	1.5	8	23	31	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_127	Residential	608194	4853938	1.5	8	23	31	0	-
RE511600_128	Residential	608189	4853944	1.5	8	23	31	0	-
RE511600_129	Residential	608184	4853951	1.5	8	23	31	0	-
RE511600_130	Residential	608179	4853958	1.5	8	23	31	0	-
RE511600_131	Residential	608173	4853967	1.5	8	23	31	0	-
RE511600_132	Residential	608210	4853982	1.5	8	23	31	0	-
RE511600_133	Residential	608221	4853990	1.5	8	23	31	0	-
RE511600_134	Residential	608230	4853997	1.5	8	23	31	0	-
RE511600_142	Residential	608180	4854022	1.5	8	23	31	0	-
RE511600_143	Residential	608189	4854028	1.5	8	23	31	0	-
RE511600_144	Residential	608196	4854033	1.5	8	23	30	0	-
RE511600_163	Residential	608170	4854054	1.5	8	23	30	0	-
RE511600_164	Residential	608162	4854048	1.5	8	23	31	0	-
RE511600_185	Residential	608102	4854000	1.5	8	23	31	0	-
RE511600_186	Residential	608099	4854005	1.5	8	23	31	0	-
RE511600_187	Residential	608096	4854009	1.5	8	23	31	0	-
RE511600_188	Residential	608090	4854017	1.5	8	23	31	0	-
RE511600_189	Residential	608087	4854022	1.5	8	23	31	0	-
RE511600_190	Residential	608081	4854032	1.5	8	23	31	0	-
RE511600_191	Residential	608077	4854037	1.5	8	23	31	0	-
RE511600_192	Residential	608073	4854045	1.5	8	23	31	0	-
RE511600_193	Residential	608068	4854051	1.5	8	23	31	0	-
RE511600_194	Residential	608064	4854057	1.5	8	23	31	0	-
RE511600_195	Residential	608060	4854062	1.5	8	23	31	0	-
RE511600_196	Residential	608056	4854069	1.5	8	23	31	0	-
RE511600_197	Residential	608053	4854075	1.5	8	23	31	0	-
RE511600_198	Residential	608154	4853993	1.5	8	23	31	0	-
RE511600_199	Residential	608148	4854003	1.5	8	23	31	0	-
RE511600_200	Residential	608142	4854010	1.5	8	23	31	0	-
RE511600_201	Residential	608137	4854018	1.5	8	23	31	0	-
RE511600_202	Residential	608132	4854025	1.5	8	23	31	0	-
RE511600_203	Residential	608126	4854033	1.5	8	23	31	0	-
RE511600_204	Residential	608121	4854040	1.5	8	23	31	0	-
RE511600_205	Residential	608116	4854047	1.5	8	23	31	0	-
RE511600_206	Residential	608111	4854054	1.5	8	23	31	0	-
RE511600_207	Residential	608107	4854061	1.5	8	23	31	0	-
RE511600_208	Residential	608102	4854068	1.5	8	23	31	0	-
RE511600_209	Residential	608097	4854075	1.5	8	23	31	0	-
RE511600_210	Residential	608091	4854082	1.5	8	23	30	0	-
RE511600_211	Residential	608086	4854090	1.5	8	23	30	0	-
RE511600_212	Residential	608080	4854098	1.5	8	23	30	0	-
RE511600_228	Residential	608507	4853702	1.5	10	23	32	0	-
RE511600_242	Residential	608263	4853920	1.5	8	23	31	0	-
RE511800_001	Residential	607134	4855697	1.5	16	23	39	0	-
RE512000_002	Residential	607206	4855951	1.5	16	23	39	0	-
RE512000_003	Residential	607187	4856027	1.5	18	23	40	0	-
RE512100_001	Residential	607265	4856058	1.5	19	23	42	0	-
RE512100_002	Residential	607248	4856119	1.5	19	23	42	0	-
RE512200_001	Residential	607241	4856162	1.5	20	23	42	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE512200_002	Residential	607123	4856318	1.5	25	23	48	0	-
RE512200_003	Residential	607102	4856358	1.5	26	23	48	0	-
RE512300_001	Residential	607221	4856317	1.5	23	23	45	0	-
RE512400_001	Residential	607226	4856438	1.5	23	23	45	0	-
RE514400_001	Residential	608610	4857694	1.5	11	23	34	0	-
RE514400_003	Residential	608876	4857474	1.5	9	23	32	0	-
RE514400_006	Residential	608883	4857432	1.5	9	23	31	0	-
RE514400_007	Residential	608877	4857453	1.5	9	23	32	0	-
RE514500_001	Residential	608674	4857705	1.5	11	23	34	0	-
RE514500_002	Residential	608701	4857709	1.5	11	23	34	0	-
RE514500_003	Residential	608738	4857729	1.5	12	23	34	0	-
RE514500_006	Residential	608958	4857441	1.5	10	23	32	0	-
RE514500_007	Residential	608953	4857458	1.5	10	23	33	0	-
RE514500_008	Residential	608872	4857492	1.5	9	23	32	0	-
RE514500_009	Residential	608859	4857508	1.5	9	23	32	0	-
RE514500_010	Residential	608849	4857526	1.5	9	23	32	0	-
RE514600_001	Residential	608758	4857755	1.5	12	23	35	0	-
RE514600_002	Residential	608949	4857475	1.5	10	23	33	0	-
RE514600_003	Residential	608946	4857496	1.5	10	23	33	0	-
RE514600_004	Residential	608942	4857512	1.5	11	23	33	0	-
RE514600_005	Residential	608936	4857529	1.5	11	23	33	0	-
RE514600_006	Residential	608930	4857551	1.5	11	23	34	0	-
RE514700_001	Residential	608965	4857617	1.5	13	23	35	0	-
RE514800_001	Residential	608884	4857846	1.5	14	23	37	0	-
RE515000_001	Residential	608971	4857986	1.5	19	23	41	0	-
RE515100_001	Residential	609037	4857912	1.5	15	23	38	0	-
RE515200_001	Residential	609158	4857928	1.5	14	23	36	0	-
RE515200_002	Residential	609081	4857926	1.5	14	23	37	0	-
RE515200_003	Residential	608988	4858132	1.5	13	23	36	0	-
RE515300_001	Residential	609255	4857942	1.5	13	23	35	0	-
RE515300_002	Residential	609091	4858212	1.5	11	23	33	0	-
RE515300_003	Residential	608992	4858402	1.5	15	23	37	0	-
RE516200_001	Residential	609863	4858591	1.5	9	23	32	0	-
RE517200_001	Residential	610865	4858953	1.5	9	23	32	0	-
RE517200_002	Residential	610873	4858915	1.5	9	23	32	0	-
RE517200_003	Residential	610988	4858848	1.5	8	23	31	0	-
RE517400_001	Residential	611124	4858907	1.5	8	23	31	0	-
RE519100_001	Residential	612653	4859633	1.5	8	23	30	0	-
RE519500_001	Residential	612843	4860236	1.5	14	23	37	0	-
RE519500_002	Residential	612758	4860312	1.5	18	23	40	0	-
RE521400_001	Residential	614549	4860340	1.5	14	23	36	0	-
RE521600_001	Park and Conservation	615842	4859006	1.5	17	23	40	0	-
RE521600_002	Residential	614759	4860153	1.5	13	23	36	0	-
RE521600_003	Residential	614783	4860430	1.5	18	23	41	0	-
RE521600_004	Residential	615884	4859578	1.5	33	23	56	6	0.3%
RE521600_005	Residential	615805	4859615	1.5	23	23	46	0	-
RE521600_006	Residential	615779	4859578	1.5	21	23	44	0	-
RE521600_007	Residential	615741	4859736	1.5	21	23	43	0	-
RE521600_008	Residential	615516	4859929	1.5	17	23	40	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_009	Residential	615671	4860025	1.5	22	23	45	0	-
RE521600_010	Residential	616259	4860149	1.5	17	23	40	0	-
RE521600_011	Residential	616419	4860214	1.5	13	23	35	0	-
RE521600_012	Residential	615172	4860341	1.5	13	23	36	0	-
RE521600_013	Residential	615849	4858301	1.5	12	23	35	0	-
RE521600_017	Residential	614954	4860122	1.5	11	23	34	0	-
RE521600_018	Residential	615792	4858087	1.5	10	23	33	0	-
RE521600_019	Residential	615658	4858566	1.5	10	23	33	0	-
RE521600_020	Residential	615792	4858189	1.5	11	23	33	0	-
RE521600_023	Residential	615889	4858330	1.5	12	23	35	0	-
RE521600_026	Residential	615700	4858499	1.5	11	23	33	0	-
RE521600_028	Residential	615797	4858289	1.5	11	23	34	0	-
RE521600_030	Residential	615749	4858368	1.5	10	23	33	0	-
RE521600_032	Residential	615905	4858207	1.5	12	23	35	0	-
RE521600_035	Residential	615746	4858159	1.5	10	23	33	0	-
RE521600_036	Residential	615704	4858558	1.5	11	23	33	0	-
RE521600_037	Residential	615871	4858014	1.5	10	23	33	0	-
RE521600_038	Residential	615876	4858126	1.5	11	23	34	0	-
RE521600_039	Residential	615808	4858385	1.5	11	23	33	0	-
RE521600_041	Residential	615837	4858114	1.5	11	23	33	0	-
RE521600_043	Residential	615749	4858276	1.5	11	23	33	0	-
RE521600_044	Residential	615845	4858206	1.5	11	23	34	0	-
RE521600_045	Residential	615931	4858159	1.5	12	23	35	0	-
RE521600_046	Residential	615948	4858081	1.5	12	23	35	0	-
RE521600_047	Residential	616722	4858027	1.5	9	23	31	0	-
RE521600_048	Residential	616724	4858016	1.5	9	23	31	0	-
RE521600_049	Residential	616727	4858005	1.5	9	23	31	0	-
RE521600_050	Residential	616685	4857961	1.5	9	23	32	0	-
RE521600_051	Residential	616692	4857982	1.5	9	23	32	0	-
RE521600_052	Residential	616692	4857993	1.5	9	23	32	0	-
RE521600_053	Residential	616690	4858005	1.5	9	23	32	0	-
RE521600_054	Residential	616682	4858015	1.5	9	23	32	0	-
RE521600_055	Residential	616628	4857990	1.5	10	23	33	0	-
RE521600_056	Residential	616631	4857979	1.5	10	23	32	0	-
RE521600_057	Residential	616637	4857970	1.5	10	23	32	0	-
RE521600_058	Residential	616642	4857962	1.5	10	23	32	0	-
RE521600_059	Residential	616645	4857951	1.5	10	23	32	0	-
RE521600_060	Residential	616617	4857954	1.5	10	23	32	0	-
RE521600_061	Residential	616605	4857951	1.5	10	23	33	0	-
RE521600_062	Residential	616591	4857946	1.5	10	23	33	0	-
RE521600_063	Residential	616581	4857941	1.5	10	23	33	0	-
RE521600_064	Residential	616570	4857932	1.5	10	23	33	0	-
RE521600_065	Residential	616562	4857926	1.5	10	23	33	0	-
RE521600_066	Residential	616551	4857917	1.5	10	23	33	0	-
RE521600_067	Residential	616541	4857910	1.5	11	23	33	0	-
RE521600_068	Residential	616532	4857900	1.5	11	23	33	0	-
RE521600_069	Residential	616527	4857889	1.5	11	23	33	0	-
RE521600_070	Residential	616522	4857875	1.5	11	23	33	0	-
RE521600_071	Residential	616520	4857863	1.5	11	23	33	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_072	Residential	616516	4857852	1.5	11	23	33	0	-
RE521600_073	Residential	616511	4857839	1.5	11	23	33	0	-
RE521600_074	Residential	616508	4857827	1.5	11	23	33	0	-
RE521600_075	Residential	616510	4857818	1.5	11	23	33	0	-
RE521600_076	Residential	616566	4857851	1.5	10	23	32	0	-
RE521600_077	Residential	616573	4857861	1.5	10	23	32	0	-
RE521600_078	Residential	616578	4857871	1.5	10	23	32	0	-
RE521600_079	Residential	616586	4857883	1.5	10	23	32	0	-
RE521600_080	Residential	616597	4857890	1.5	10	23	32	0	-
RE521600_081	Residential	616609	4857897	1.5	9	23	32	0	-
RE521600_082	Residential	616621	4857902	1.5	9	23	32	0	-
RE521600_083	Residential	616646	4857916	1.5	9	23	32	0	-
RE521600_084	Residential	616072	4857806	1.5	13	23	36	0	-
RE521600_085	Residential	616075	4857794	1.5	13	23	36	0	-
RE521600_086	Residential	616095	4857778	1.5	14	23	36	0	-
RE521600_087	Residential	616097	4857766	1.5	14	23	36	0	-
RE521600_088	Residential	616098	4857755	1.5	14	23	36	0	-
RE521600_089	Residential	616192	4857944	1.5	24	23	47	0	-
RE521600_090	Residential	615423	4860137	1.5	15	23	37	0	-
RW110000_001	Residential	595952	4825790	1.5	25	23	48	0	-
RW110000_002	Residential	595454	4825807	1.5	42	23	65	22	1.2%
RW110000_008	Residential	594041	4825166	1.5	32	23	55	3	0.2%
RW110000_009	Residential	594096	4825191	1.5	36	23	58	11	0.6%
RW110000_010	Residential	594523	4825688	1.5	25	23	47	0	-
RW110000_011	Residential	595159	4826252	1.5	31	23	53	2	0.1%
RW110000_012	Residential	595437	4826548	1.5	38	23	60	7	0.4%
RW110000_013	Residential	595321	4826744	1.5	39	23	62	14	0.8%
RW110000_014	Residential	595112	4826651	1.5	42	23	65	13	0.7%
RW110000_015	Residential	595155	4826706	1.5	45	23	67	14	0.8%
RW110000_016	Residential	595166	4826855	1.5	46	23	69	13	0.7%
RW110000_017	Residential	595209	4826815	1.5	51	23	74	19	1.0%
RW110000_018	Residential	594653	4825844	1.5	25	23	47	0	-
RW110000_019	Residential	595416	4826834	1.5	45	23	68	20	1.1%
RW110000_020	Residential	595560	4825534	1.5	26	23	48	0	-
RW110000_021	Residential	597393	4824513	1.5	25	23	48	0	-
RW110000_022	Residential	594899	4824668	1.5	26	23	49	0	-
RW110000_023	Residential	594655	4824528	1.5	34	23	57	4	0.2%
RW110000_024	Residential	595310	4826113	1.5	49	23	72	29	1.6%
RW110100_001	Residential	595323	4827011	1.5	50	23	73	28	1.5%
RW112100_001	Residential	594926	4829061	1.5	26	23	49	0	-
RW112100_002	Residential	594880	4829107	1.5	23	23	45	0	-
RW112100_003	Residential	594856	4829138	1.5	22	23	45	0	-
RW112200_001	Residential	594826	4829169	1.5	21	23	43	0	-
RW112300_001	Residential	594544	4829356	1.5	12	23	35	0	-
RW112300_002	Residential	594555	4829392	1.5	13	23	35	0	-
RW112300_003	Residential	594737	4829363	1.5	19	23	41	0	-
RW112400_001	Residential	594707	4829399	1.5	18	23	41	0	-
RW112400_002	Residential	594683	4829425	1.5	18	23	40	0	-
RW112400_003	Residential	594663	4829470	1.5	16	23	39	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW112500_001	Residential	594652	4829522	1.5	14	23	37	0	-
RW112500_002	Residential	594587	4829561	1.5	14	23	36	0	-
RW112600_001	Residential	594537	4829618	1.5	13	23	36	0	-
RW113300_001	Residential	595127	4830221	1.5	24	23	46	0	-
RW113700_001	Residential	594940	4830647	1.5	24	23	47	0	-
RW210600_001	Residential	594968	4831278	1.5	22	23	45	0	-
RW210600_002	Residential	594854	4831236	1.5	26	23	49	0	-
RW210700_001	Residential	594784	4831216	1.5	31	23	53	1	0.1%
RW210700_002	Residential	594835	4831316	1.5	19	23	42	0	-
RW210700_003	Residential	595003	4831319	1.5	24	23	47	0	-
RW210800_001	Residential	594396	4831184	1.5	10	23	33	0	-
RW210800_002	Residential	594871	4831353	1.5	18	23	41	0	-
RW210800_003	Residential	594900	4831384	1.5	18	23	41	0	-
RW210800_004	Residential	594906	4831419	1.5	18	23	40	0	-
RW210900_001	Residential	594700	4831386	1.5	18	23	40	0	-
RW211000_001	Residential	594519	4831395	1.5	17	23	40	0	-
RW213300_001	Residential	594131	4833825	1.5	29	23	51	2	0.1%
RW213500_001	Residential	594089	4834002	1.5	24	23	47	0	-
RW213500_002	Residential	593987	4833921	1.5	23	23	45	0	-
RW213500_003	Residential	594063	4834025	1.5	23	23	46	0	-
RW213900_001	Residential	593680	4834239	1.5	25	23	48	0	-
RW213900_002	Residential	593146	4833948	1.5	25	23	47	0	-
RW213900_003	Residential	593108	4833915	1.5	23	23	46	0	-
RW214000_001	Residential	593442	4834167	1.5	27	23	49	0	-
RW214000_002	Residential	593165	4834006	1.5	23	23	45	0	-
RW214200_001	Residential	593365	4834312	1.5	24	23	47	0	-
RW214200_002	Residential	593424	4834334	1.5	30	23	53	2	0.1%
RW214200_003	Residential	593447	4834362	1.5	33	23	56	2	0.1%
RW214200_004	Residential	593638	4834465	1.5	42	23	65	3	0.2%
RW214400_001	Residential	593557	4834570	1.5	31	23	54	2	0.1%
RW214400_002	Residential	593363	4834447	1.5	26	23	49	0	-
RW214500_001	Place of Worship	593180	4834366	1.5	18	23	40	0	-
RW214700_001	Residential	593316	4834759	1.5	24	23	47	0	-
RW214800_001	Residential	593246	4834900	1.5	23	23	45	0	-
RW214900_001	Place of Worship	593238	4834901	1.5	22	23	45	0	-
RW215500_001	Residential	592716	4835205	1.5	20	23	42	0	-
RW215500_002	Residential	592751	4835308	1.5	15	23	37	0	-
RW215500_003	Residential	592672	4835243	1.5	19	23	42	0	-
RW215600_001	Residential	592652	4835268	1.5	19	23	42	0	-
RW215600_002	Residential	592625	4835291	1.5	19	23	41	0	-
RW215600_003	Residential	592706	4835349	1.5	15	23	37	0	-
RW216000_001	Residential	592457	4835580	1.5	16	23	38	0	-
RW216300_001	Residential	592187	4835722	1.5	17	23	40	0	-
RW217300_001	Residential	590963	4835918	1.5	14	23	36	0	-
RW217300_003	Residential	590894	4835850	1.5	12	23	35	0	-
RW217400_001	Residential	591070	4836272	1.5	22	23	44	0	-
RW217400_003	Residential	590716	4835921	1.5	10	23	33	0	-
RW217600_001	Residential	591245	4836671	1.5	27	23	50	1	0.1%
RW218600_001	Residential	589698	4836609	1.5	15	23	38	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW218700_001	Residential	590211	4837285	1.5	36	23	58	2	0.1%
RW219300_001	Residential	589994	4837866	1.5	27	23	50	0	-
RW219600_001	Residential	589829	4838199	1.5	30	23	53	1	0.1%
RW219800_001	Residential	589708	4838309	1.5	26	23	49	0	-
RW219800_002	Residential	589678	4838339	1.5	26	23	48	0	-
RW219800_003	Residential	589655	4838356	1.5	26	23	48	0	-
RW219900_001	Residential	589628	4838393	1.5	25	23	47	0	-
RW219900_002	Residential	589604	4838419	1.5	24	23	47	0	-
RW219900_003	Residential	589574	4838446	1.5	24	23	46	0	-
RW219900_004	Residential	589348	4838304	1.5	20	23	43	0	-
RW220100_001	Residential	589237	4838630	1.5	22	23	45	0	-
RW220200_001	Residential	589212	4838657	1.5	22	23	45	0	-
RW220200_002	Residential	589193	4838697	1.5	21	23	43	0	-
RW221500_001	Residential	589630	4840149	1.5	30	23	52	1	0.1%
RW221600_001	Residential	589645	4840276	1.5	25	23	48	0	-
RW221600_002	Residential	589618	4840305	1.5	23	23	46	0	-
RW221600_003	Residential	589575	4840340	1.5	21	23	44	0	-
RW221600_004	Residential	589489	4840296	1.5	27	23	49	0	-
RW221600_005	Residential	589463	4840313	1.5	26	23	49	0	-
RW221700_001	Residential	589372	4840554	1.5	16	23	39	0	-
RW222900_001	Residential	590172	4841526	1.5	24	23	47	0	-
RW223000_001	Residential	590405	4841464	1.5	27	23	50	0	-
RW223000_002	Residential	589855	4841856	1.5	15	23	37	0	-
RW223100_001	Residential	590119	4841763	1.5	17	23	40	0	-
RW223600_001	Residential	590319	4842303	1.5	21	23	43	0	-
RW223700_001	Residential	590349	4842328	1.5	21	23	44	0	-
RW223700_002	Residential	590387	4842378	1.5	22	23	45	0	-
RW223800_001	Residential	590421	4842402	1.5	24	23	46	0	-
RW223800_002	Residential	590456	4842433	1.5	25	23	47	0	-
RW224200_001	Residential	591059	4842518	1.5	56	23	78	19	1.0%
RW225200_001	Residential	591261	4843431	1.5	37	23	59	2	0.1%
RW225300_001	Residential	591243	4843461	1.5	39	23	62	2	0.1%
RW225300_002	Residential	591272	4843493	1.5	40	23	63	2	0.1%
RW225300_003	Residential	591295	4843534	1.5	42	23	65	3	0.2%
RW226000_001	Residential	591344	4844228	1.5	49	23	72	9	0.5%
RW226200_001	Residential	591234	4844508	1.5	28	23	51	1	0.1%
RW226300_001	Residential	591196	4844542	1.5	27	23	49	0	-
RW226300_002	Residential	591171	4844578	1.5	25	23	48	0	-
RW227700_001	Residential	591290	4846105	1.5	19	23	42	0	-
RW227800_001	Residential	591651	4846073	1.5	28	23	51	1	0.1%
RW227800_002	Residential	591541	4846134	1.5	30	23	52	1	0.1%
RW227800_003	Residential	591348	4846123	1.5	22	23	45	0	-
RW228900_001	Residential	592191	4847059	1.5	23	23	45	0	-
RW229000_005	Residential	592239	4847128	1.5	23	23	45	0	-
RW229100_003	Residential	592057	4847361	1.5	20	23	43	0	-
RW229100_004	Residential	592238	4847208	1.5	24	23	47	0	-
RW229200_001	Residential	591945	4847506	1.5	20	23	42	0	-
RW229200_002	Residential	592082	4847514	1.5	15	23	38	0	-
RW229200_003	Residential	592013	4847571	1.5	15	23	37	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW229200_004	Residential	591965	4847613	1.5	14	23	37	0	-
RW229200_005	Residential	592047	4847546	1.5	15	23	37	0	-
RW229200_006	Residential	591969	4847485	1.5	20	23	43	0	-
RW229200_007	Residential	591918	4847523	1.5	19	23	42	0	-
RW229300_001	Residential	591940	4847644	1.5	14	23	37	0	-
RW230300_001	Residential	592829	4848529	1.5	24	23	47	0	-
RW230300_002	Residential	592606	4848716	1.5	15	23	38	0	-
RW230400_003	Residential	593165	4848363	1.5	26	23	49	0	-
RW230400_004	Residential	593067	4848428	1.5	25	23	48	0	-
RW230400_005	Residential	592665	4848881	1.5	14	23	37	0	-
RW231500_001	Residential	593790	4849191	1.5	23	23	46	0	-
RW231500_002	Residential	593814	4849083	1.5	24	23	46	0	-
RW231800_002	Residential	593623	4849689	1.5	14	23	37	0	-
RW231800_003	Residential	593681	4849607	1.5	17	23	39	0	-
RW231900_001	Residential	593974	4849584	1.5	20	23	42	0	-
RW231900_002	Residential	593821	4849636	1.5	18	23	40	0	-
RW231900_003	Residential	593783	4849662	1.5	18	23	41	0	-
RW231900_004	Residential	593753	4849685	1.5	18	23	41	0	-
RW231900_005	Residential	593708	4849712	1.5	17	23	39	0	-
RW231900_006	Residential	593679	4849744	1.5	16	23	38	0	-
RW232900_001	Residential	594647	4850489	1.5	22	23	44	0	-
RW232900_002	Residential	594641	4850578	1.5	24	23	47	0	-
RW232900_003	Residential	594596	4850601	1.5	23	23	45	0	-
RW233000_001	Residential	594937	4850252	1.5	32	23	55	2	0.1%
RW233000_002	Residential	594873	4850324	1.5	28	23	50	1	0.1%
RW233000_003	Residential	594722	4850470	1.5	24	23	47	0	-
RW233000_004	Residential	594661	4850750	1.5	18	23	40	0	-
RW233100_001	Residential	595054	4850303	1.5	29	23	52	2	0.1%
RW233100_002	Residential	594986	4850367	1.5	27	23	50	1	0.1%
RW233100_003	Residential	594960	4850397	1.5	26	23	49	0	-
RW233100_004	Residential	594754	4850728	1.5	16	23	39	0	-
RW233300_001	Residential	595066	4850652	1.5	17	23	39	0	-
RW233500_001	Residential	595517	4850395	1.5	33	23	55	7	0.4%
RW233600_001	Residential	595481	4850552	1.5	22	23	44	0	-
RW233700_001	Residential	595601	4850557	1.5	25	23	48	0	-
RW233800_001	Residential	595629	4850726	1.5	21	23	43	0	-
RW234400_001	Residential	595843	4851239	1.5	23	23	45	0	-
RW234400_002	Residential	595722	4851407	1.5	15	23	38	0	-
RW234400_003	Residential	595753	4851375	1.5	17	23	40	0	-
RW234500_001	Residential	596110	4851144	1.5	24	23	46	0	-
RW234500_002	Residential	596228	4851057	1.5	31	23	53	1	0.1%
RW234600_001	Residential	595890	4851390	1.5	17	23	40	0	-
RW234600_002	Residential	595822	4851471	1.5	16	23	38	0	-
RW234600_003	Residential	595792	4851490	1.5	15	23	38	0	-
RW235800_001	Residential	596933	4852124	1.5	36	23	59	3	0.2%
RW235800_002	Residential	596708	4852352	1.5	27	23	49	0	-
RW235800_003	Residential	596626	4852447	1.5	24	23	46	0	-
RW235800_004	Residential	596582	4852479	1.5	21	23	44	0	-
RW235900_003	Residential	596852	4852343	1.5	24	23	46	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW235900_004	Residential	596685	4852406	1.5	27	23	49	0	-
RW235900_008	Residential	596930	4852261	1.5	28	23	50	1	0.1%
RW310200_001	Residential	597162	4852242	1.5	28	23	50	2	0.1%
RW311300_001	Residential	598030	4853004	1.5	42	23	64	3	0.2%
RW311300_002	Residential	598003	4853024	1.5	37	23	60	3	0.2%
RW311300_003	Residential	597975	4853049	1.5	32	23	54	2	0.1%
RW311300_004	Residential	597927	4853089	1.5	30	23	53	1	0.1%
RW311400_001	Residential	598069	4853072	1.5	32	23	54	2	0.1%
RW311400_002	Residential	598037	4853102	1.5	28	23	50	1	0.1%
RW311400_003	Residential	597991	4853145	1.5	26	23	49	0	-
RW311400_004	Residential	597940	4853194	1.5	23	23	46	0	-
RW311400_005	Residential	597918	4853265	1.5	18	23	41	0	-
RW311400_006	Residential	597843	4853344	1.5	16	23	39	0	-
RW311400_008	Residential	597739	4853444	1.5	15	23	38	0	-
RW311400_009	Residential	597683	4853455	1.5	15	23	38	0	-
RW312300_001	Residential	598843	4853771	1.5	21	23	44	0	-
RW312400_001	Residential	598885	4854042	1.5	19	23	42	0	-
RW312400_002	Residential	598849	4854080	1.5	15	23	37	0	-
RW312500_001	Residential	599044	4853903	1.5	27	23	50	0	-
RW312500_002	Residential	599019	4853928	1.5	27	23	49	0	-
RW312500_003	Residential	598925	4854010	1.5	22	23	45	0	-
RW312500_004	Residential	598959	4854116	1.5	17	23	39	0	-
RW312600_001	Residential	599110	4853841	1.5	29	23	51	3	0.2%
RW312600_002	Residential	599074	4853862	1.5	27	23	50	0	-
RW312700_001	Residential	599266	4853691	1.5	45	23	68	12	0.7%
RW312900_001	Residential	599307	4854183	1.5	14	23	36	0	-
RW313100_001	Residential	599559	4854108	1.5	21	23	43	0	-
RW313400_001	Residential	599752	4854478	1.5	14	23	36	0	-
RW313900_001	Residential	600110	4854917	1.5	13	23	35	0	-
RW314100_001	Residential	600493	4854739	1.5	12	23	35	0	-
RW314300_001	Residential	600741	4854369	1.5	22	23	45	0	-
RW315400_001	Residential	601942	4855015	1.5	12	23	34	0	-
RW317500_001	Residential	603840	4854629	1.5	42	23	65	9	0.5%
RW317500_003	Residential	603870	4854650	1.5	42	23	65	9	0.5%
RW410100_001	Residential	603972	4854928	1.5	25	23	47	0	-
RW410100_002	Residential	603936	4854961	1.5	23	23	46	0	-
RW410200_001	Residential	604015	4854902	1.5	26	23	49	0	-
RW410400_001	Residential	604221	4855097	1.5	22	23	45	0	-
RW410800_002	Residential	604445	4855386	1.5	22	23	45	0	-
RW510000_001	Residential	604897	4855625	1.5	27	23	50	0	-
RW510100_001	Residential	605003	4855608	1.5	28	23	50	1	0.1%
RW510100_002	Residential	604998	4855726	1.5	21	23	43	0	-
RW510400_001	Residential	605360	4855644	1.5	20	23	43	0	-
RW512600_001	Residential	607049	4856822	1.5	25	23	48	0	-
RW512600_002	Residential	606713	4857044	1.5	11	23	34	0	-
RW512700_001	Residential	606950	4856924	1.5	19	23	42	0	-
RW515200_001	Residential	608655	4859025	1.5	22	23	45	0	-
RW515200_002	Residential	608453	4859443	1.5	9	23	32	0	-
RW515500_001	Residential	609009	4858910	1.5	27	23	50	0	-

Appendix G.2.2 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2041 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW515500_002	Residential	608965	4859173	1.5	14	23	36	0	-
RW515500_003	Residential	608645	4859708	1.5	7	23	30	0	-
RW515600_001	Residential	609102	4858982	1.5	24	23	46	0	-
RW515600_002	Residential	608876	4859423	1.5	13	23	36	0	-
RW515600_003	Residential	608980	4859372	1.5	12	23	35	0	-
RW515700_001	Residential	608966	4859442	1.5	12	23	35	0	-
RW516700_001	Residential	609986	4859710	1.5	11	23	33	0	-
RW517400_001	Residential	610721	4859654	1.5	25	23	48	0	-
RW517500_001	Residential	610788	4859750	1.5	19	23	42	0	-
RW517500_002	Residential	610631	4860179	1.5	12	23	35	0	-
RW517600_001	Residential	610730	4860162	1.5	14	23	37	0	-
RW519300_001	Residential	612321	4860800	1.5	12	23	35	0	-
RW519300_002	Residential	612247	4861048	1.5	22	23	45	0	-
RW519600_001	Residential	612681	4860774	1.5	17	23	40	0	-
RW519600_002	Residential	612644	4860851	1.5	14	23	37	0	-
RW519600_003	Residential	612606	4860976	1.5	14	23	36	0	-
RW519600_004	Residential	612556	4861217	1.5	15	23	38	0	-
RW519900_001	Residential	612911	4861179	1.5	11	23	34	0	-
RW520000_001	Residential	612975	4861191	1.5	11	23	34	0	-
RW520100_001	Residential	613108	4861238	1.5	11	23	34	0	-
RW520200_001	Residential	613167	4861245	1.5	11	23	34	0	-
RW520300_001	Residential	613263	4861267	1.5	12	23	34	0	-
RW520400_001	Residential	613409	4861318	1.5	13	23	36	0	-
RW520600_001	Residential	613595	4861385	1.5	14	23	37	0	-
RW520600_002	Residential	613696	4861264	1.5	15	23	38	0	-
RW520800_001	Residential	613821	4861450	1.5	15	23	38	0	-
RW520800_002	Residential	613868	4861446	1.5	15	23	38	0	-
RW520900_001	Residential	614011	4861487	1.5	15	23	38	0	-
RW521000_001	Residential	614074	4861506	1.5	15	23	37	0	-
RW521500_001	Residential	614584	4861772	1.5	33	23	56	2	0.1%
RW521500_002	Residential	614605	4861931	1.5	16	23	39	0	-
RW521500_003	Residential	614606	4861992	1.5	14	23	37	0	-
RW521500_004	Residential	614561	4862067	1.5	14	23	37	0	-
RW521500_005	Residential	614528	4862131	1.5	15	23	38	0	-
RW521500_006	Residential	614519	4862172	1.5	15	23	38	0	-
RW521600_001	Residential	615126	4862319	1.5	20	23	42	0	-
RW521600_002	Residential	616401	4861744	1.5	12	23	35	0	-
RW521600_009	Residential	616496	4861911	1.5	11	23	34	0	-
RW521600_010	Residential	614979	4862746	1.5	17	23	40	0	-
RW521600_011	Residential	614904	4862738	1.5	16	23	39	0	-
RW521600_012	Residential	615537	4863261	1.5	15	23	37	0	-
RW521600_013	Residential	615595	4863665	1.5	10	23	33	0	-
RW521600_014	Residential	616500	4861872	1.5	11	23	34	0	-
RW521600_016	Residential	614949	4863780	1.5	16	23	39	0	-
RW521600_017	Residential	616265	4861577	1.5	13	23	36	0	-

1826 Days of Meterological Data

Appendix G.2.3: 2051 No-Build – 24 Hour PM_{10}

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE110000_001	Place of Worship	597312	4827927	1.5	37	23	60	6	0.3%
RE110000_002	Residential	596637	4826254	1.5	21	23	43	0	-
RE110000_003	Residential	596701	4826610	1.5	30	23	53	2	0.1%
RE110000_004	Residential	597143	4827822	1.5	37	23	60	5	0.3%
RE110000_005	Residential	597083	4827844	1.5	44	23	67	13	0.7%
RE110000_006	Residential	596871	4828160	1.5	34	23	57	2	0.1%
RE110000_007	Residential	597140	4826176	1.5	25	23	48	0	-
RE110000_008	Residential	597148	4826187	1.5	24	23	46	0	-
RE110000_009	Residential	597156	4826199	1.5	23	23	45	0	-
RE110000_010	Residential	597164	4826210	1.5	22	23	44	0	-
RE110000_011	Residential	597171	4826221	1.5	21	23	44	0	-
RE110000_020	Residential	597181	4826148	1.5	24	23	46	0	-
RE110000_021	Residential	597187	4826154	1.5	23	23	46	0	-
RE110000_022	Residential	597195	4826162	1.5	22	23	45	0	-
RE110000_023	Residential	597200	4826170	1.5	22	23	44	0	-
RE110000_024	Residential	597206	4826177	1.5	21	23	44	0	-
RE110000_025	Residential	597212	4826186	1.5	21	23	43	0	-
RE110000_028	Residential	597203	4826119	1.5	24	23	47	0	-
RE110000_029	Residential	597210	4826129	1.5	23	23	46	0	-
RE110000_030	Residential	597216	4826140	1.5	22	23	45	0	-
RE110000_031	Residential	597223	4826147	1.5	21	23	44	0	-
RE110000_032	Residential	597230	4826156	1.5	21	23	43	0	-
RE110000_045	Residential	597236	4826078	1.5	25	23	47	0	-
RE110000_046	Residential	597243	4826087	1.5	23	23	46	0	-
RE110000_047	Residential	597251	4826096	1.5	22	23	45	0	-
RE110000_048	Residential	597257	4826104	1.5	22	23	44	0	-
RE110000_049	Residential	597263	4826113	1.5	21	23	43	0	-
RE110000_050	Residential	597255	4826067	1.5	24	23	46	0	-
RE110000_051	Residential	597266	4826057	1.5	24	23	46	0	-
RE110000_052	Residential	597275	4826046	1.5	24	23	47	0	-
RE110000_053	Residential	597284	4826036	1.5	24	23	47	0	-
RE110000_054	Residential	597293	4826025	1.5	24	23	47	0	-
RE110000_055	Residential	597304	4826014	1.5	24	23	47	0	-
RE110000_056	Residential	597325	4826041	1.5	21	23	43	0	-
RE110000_057	Residential	597314	4826051	1.5	21	23	44	0	-
RE110000_058	Residential	597304	4826061	1.5	21	23	44	0	-
RE110000_059	Residential	597295	4826072	1.5	21	23	44	0	-
RE110000_060	Residential	597285	4826082	1.5	21	23	44	0	-
RE110000_061	Residential	597323	4825965	1.5	27	23	50	0	-
RE110000_062	Residential	597330	4825974	1.5	25	23	48	0	-
RE110000_063	Residential	597335	4825983	1.5	24	23	46	0	-
RE110000_064	Residential	597342	4825990	1.5	23	23	45	0	-
RE110000_065	Residential	597350	4826000	1.5	22	23	44	0	-
RE110000_066	Residential	597357	4826009	1.5	21	23	43	0	-
RE110000_067	Residential	597368	4826018	1.5	20	23	42	0	-
RE110000_069	Residential	597351	4825947	1.5	26	23	48	0	-
RE110000_070	Residential	597359	4825957	1.5	24	23	46	0	-
RE110000_071	Residential	597366	4825967	1.5	22	23	45	0	-
RE110000_072	Residential	597374	4825977	1.5	21	23	44	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_073	Residential	597383	4825986	1.5	20	23	43	0	-
RE110000_112	Residential	597394	4825910	1.5	25	23	47	0	-
RE110000_113	Residential	597401	4825919	1.5	23	23	46	0	-
RE110000_114	Residential	597409	4825928	1.5	22	23	45	0	-
RE110000_115	Residential	597416	4825939	1.5	21	23	44	0	-
RE110000_123	Residential	597413	4825882	1.5	26	23	49	0	-
RE110000_124	Residential	597421	4825892	1.5	24	23	46	0	-
RE110000_125	Residential	597432	4825901	1.5	22	23	45	0	-
RE110000_132	Residential	597461	4825854	1.5	23	23	46	0	-
RE110000_133	Residential	597471	4825865	1.5	22	23	44	0	-
RE110000_139	Residential	597482	4825833	1.5	23	23	46	0	-
RE110000_140	Residential	597492	4825842	1.5	22	23	45	0	-
RE110000_145	Residential	597514	4825784	1.5	25	23	48	0	-
RE110000_146	Residential	597523	4825794	1.5	23	23	46	0	-
RE110000_147	Residential	597531	4825806	1.5	22	23	44	0	-
RE110000_149	Residential	597534	4825759	1.5	26	23	49	0	-
RE110000_150	Residential	597542	4825770	1.5	23	23	46	0	-
RE110000_151	Residential	597549	4825779	1.5	22	23	45	0	-
RE110000_165	Residential	597586	4825745	1.5	22	23	44	0	-
RE110000_167	Residential	597648	4825682	1.5	22	23	44	0	-
RE110000_173	Residential	597632	4825663	1.5	26	23	49	0	-
RE110000_177	Residential	597655	4825690	1.5	21	23	43	0	-
RE110000_178	Residential	597642	4825674	1.5	23	23	46	0	-
RE110000_189	Residential	597578	4825734	1.5	23	23	46	0	-
RE110000_190	Residential	597605	4825708	1.5	23	23	46	0	-
RE110000_191	Residential	597611	4825719	1.5	22	23	44	0	-
RE110000_239	Residential	598068	4825317	1.5	31	23	54	1	0.1%
RE110000_240	Residential	598051	4825327	1.5	34	23	56	1	0.1%
RE110000_241	Residential	598046	4825287	1.5	30	23	53	1	0.1%
RE110000_242	Residential	598058	4825288	1.5	29	23	52	1	0.1%
RE110000_243	Residential	598062	4825320	1.5	32	23	54	1	0.1%
RE110000_244	Residential	598082	4825288	1.5	27	23	50	0	-
RE110000_245	Residential	598057	4825323	1.5	33	23	55	1	0.1%
RE110000_246	Residential	598051	4825288	1.5	30	23	52	1	0.1%
RE110000_247	Residential	598072	4825292	1.5	28	23	51	1	0.1%
RE110000_248	Residential	598076	4825290	1.5	28	23	50	1	0.1%
RE110000_249	Residential	598040	4825285	1.5	30	23	53	1	0.1%
RE110000_253	Residential	597743	4825607	1.5	21	23	43	0	-
RE110000_254	Residential	597795	4825533	1.5	22	23	45	0	-
RE110000_255	Residential	597806	4825547	1.5	20	23	43	0	-
RE110000_256	Residential	597835	4825499	1.5	22	23	45	0	-
RE110000_257	Residential	597843	4825509	1.5	21	23	44	0	-
RE110000_265	Residential	597773	4825557	1.5	22	23	45	0	-
RE110000_267	Residential	597726	4825585	1.5	24	23	46	0	-
RE110000_276	Residential	597839	4825504	1.5	22	23	44	0	-
RE110000_277	Residential	597778	4825564	1.5	21	23	44	0	-
RE110000_278	Residential	597784	4825572	1.5	20	23	43	0	-
RE110000_279	Residential	597739	4825601	1.5	21	23	44	0	-
RE110000_280	Residential	597719	4825577	1.5	26	23	49	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_281	Residential	597767	4825552	1.5	23	23	46	0	-
RE110000_292	Residential	597793	4825524	1.5	23	23	46	0	-
RE110000_293	Residential	597734	4825596	1.5	22	23	44	0	-
RE110000_294	Residential	597800	4825540	1.5	21	23	44	0	-
RE110000_305	Residential	597830	4825493	1.5	23	23	46	0	-
RE110000_309	Residential	597730	4825591	1.5	23	23	45	0	-
RE110000_310	Residential	597826	4825487	1.5	24	23	47	0	-
RE110000_316	Residential	597823	4825480	1.5	25	23	48	0	-
RE110000_325	Residential	597672	4825659	1.5	22	23	45	0	-
RE110000_329	Residential	597711	4825620	1.5	22	23	44	0	-
RE110000_331	Residential	597656	4825641	1.5	26	23	48	0	-
RE110000_332	Residential	597705	4825613	1.5	23	23	46	0	-
RE110000_333	Residential	597717	4825628	1.5	21	23	43	0	-
RE110000_342	Residential	597701	4825604	1.5	24	23	47	0	-
RE110000_344	Residential	597666	4825651	1.5	23	23	46	0	-
RE110000_345	Residential	597678	4825667	1.5	21	23	44	0	-
RE110000_353	Residential	597853	4825468	1.5	24	23	47	0	-
RE110000_355	Residential	597858	4825475	1.5	23	23	46	0	-
RE110000_378	Residential	597899	4825411	1.5	27	23	49	0	-
RE110000_387	Residential	597845	4825458	1.5	26	23	49	0	-
RE110000_390	Residential	597927	4825384	1.5	28	23	50	1	0.1%
RE110000_394	Residential	597904	4825418	1.5	25	23	48	0	-
RE110000_397	Residential	597863	4825480	1.5	22	23	45	0	-
RE110000_401	Residential	596788	4826527	1.5	28	23	50	1	0.1%
RE110200_001	Residential	595761	4827508	1.5	41	23	63	7	0.4%
RE110300_001	Residential	595985	4827782	1.5	31	23	54	1	0.1%
RE110300_002	Residential	596018	4827822	1.5	32	23	54	1	0.1%
RE110300_003	Residential	596052	4827847	1.5	32	23	55	1	0.1%
RE110300_004	Residential	596075	4827863	1.5	33	23	56	2	0.1%
RE110400_001	Residential	596097	4827888	1.5	34	23	57	2	0.1%
RE110400_002	Residential	596114	4827911	1.5	36	23	58	4	0.2%
RE110500_001	Residential	596071	4827936	1.5	31	23	54	1	0.1%
RE110500_002	Residential	596046	4827958	1.5	30	23	52	1	0.1%
RE110600_001	Residential	596004	4827990	1.5	27	23	50	1	0.1%
RE110600_002	Residential	596030	4827975	1.5	29	23	52	1	0.1%
RE110700_001	Residential	595981	4828012	1.5	26	23	49	0	-
RE110700_002	Residential	595928	4827973	1.5	24	23	46	0	-
RE110800_001	Residential	595956	4828058	1.5	26	23	49	0	-
RE110800_002	Residential	595933	4828081	1.5	26	23	48	0	-
RE110900_001	Residential	595910	4828106	1.5	25	23	48	0	-
RE110900_002	Residential	595878	4828134	1.5	24	23	47	0	-
RE111100_001	Residential	595788	4828209	1.5	22	23	44	0	-
RE111200_001	Residential	595754	4828244	1.5	21	23	44	0	-
RE111200_002	Residential	595736	4828278	1.5	21	23	44	0	-
RE111300_001	Residential	595708	4828299	1.5	21	23	43	0	-
RE111300_002	Residential	595689	4828310	1.5	20	23	42	0	-
RE111300_003	Residential	595667	4828334	1.5	20	23	42	0	-
RE111400_001	Residential	595630	4828371	1.5	19	23	41	0	-
RE111400_002	Residential	595610	4828393	1.5	19	23	41	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE111500_001	Residential	595569	4828431	1.5	18	23	40	0	-
RE111500_002	Residential	595514	4828453	1.5	16	23	39	0	-
RE111600_001	Residential	595474	4828490	1.5	15	23	38	0	-
RE111600_002	Residential	595430	4828529	1.5	15	23	37	0	-
RE111700_001	Residential	595514	4828604	1.5	17	23	40	0	-
RE111700_002	Residential	595359	4828639	1.5	15	23	38	0	-
RE111800_001	Residential	596558	4828460	1.5	32	23	54	3	0.2%
RE111800_002	Residential	595492	4828626	1.5	17	23	40	0	-
RE111800_003	Residential	595467	4828642	1.5	18	23	41	0	-
RE111800_004	Residential	595445	4828664	1.5	18	23	41	0	-
RE111800_005	Residential	595329	4828673	1.5	15	23	37	0	-
RE111800_006	Residential	595306	4828700	1.5	15	23	37	0	-
RE111800_007	Residential	595285	4828720	1.5	15	23	37	0	-
RE111800_008	Residential	595266	4828745	1.5	15	23	37	0	-
RE112100_001	Residential	596836	4828712	1.5	27	23	49	0	-
RE112200_001	Residential	596905	4828763	1.5	22	23	45	0	-
RE113100_001	Residential	595706	4829937	1.5	7	23	30	0	-
RE113200_001	Residential	595933	4829995	1.5	10	23	33	0	-
RE113200_002	Residential	595904	4830024	1.5	10	23	33	0	-
RE113300_001	Residential	595753	4830146	1.5	10	23	32	0	-
RE210700_001	Residential	595367	4831551	1.5	5	23	28	0	-
RE210700_002	Residential	595325	4831537	1.5	6	23	28	0	-
RE210700_003	Residential	595504	4831618	1.5	5	23	28	0	-
RE210900_001	Residential	595286	4831670	1.5	10	23	32	0	-
RE210900_003	Residential	595217	4831730	1.5	8	23	30	0	-
RE210900_004	Residential	595349	4831732	1.5	8	23	30	0	-
RE210900_005	Residential	595339	4831698	1.5	7	23	29	0	-
RE210900_006	Residential	595400	4831812	1.5	9	23	31	0	-
RE210900_007	Residential	595436	4831835	1.5	7	23	29	0	-
RE210900_008	Residential	595454	4831855	1.5	7	23	29	0	-
RE211000_001	Residential	595242	4831783	1.5	7	23	30	0	-
RE211000_002	Residential	595292	4831787	1.5	8	23	31	0	-
RE211000_003	Residential	595341	4831842	1.5	8	23	31	0	-
RE211000_004	Residential	595365	4831888	1.5	7	23	29	0	-
RE211000_005	Residential	595239	4831847	1.5	7	23	29	0	-
RE211000_006	Residential	595408	4831938	1.5	7	23	29	0	-
RE211000_007	Residential	595530	4831956	1.5	7	23	30	0	-
RE211000_008	Residential	595567	4832001	1.5	7	23	29	0	-
RE211000_009	Residential	595596	4832028	1.5	6	23	29	0	-
RE211000_010	Residential	595617	4832054	1.5	6	23	29	0	-
RE211100_001	Residential	595423	4831974	1.5	7	23	29	0	-
RE211100_002	Residential	595342	4832015	1.5	5	23	28	0	-
RE211100_003	Residential	595552	4832099	1.5	8	23	31	0	-
RE211100_004	Residential	595637	4832091	1.5	7	23	29	0	-
RE211100_005	Residential	595675	4832137	1.5	7	23	29	0	-
RE211100_006	Residential	595734	4832214	1.5	7	23	30	0	-
RE211100_009	Residential	595514	4832061	1.5	8	23	30	0	-
RE211200_001	Residential	595380	4832103	1.5	5	23	28	0	-
RE211200_002	Residential	595424	4832139	1.5	5	23	28	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE211200_003	Residential	595641	4832218	1.5	8	23	30	0	-
RE211200_004	Residential	595704	4832286	1.5	8	23	31	0	-
RE211200_005	Residential	595584	4832173	1.5	7	23	30	0	-
RE211400_001	Residential	594922	4832082	1.5	5	23	28	0	-
RE211500_002	Residential	595129	4832290	1.5	5	23	27	0	-
RE211500_003	Residential	594950	4832221	1.5	5	23	27	0	-
RE211500_004	Residential	595156	4832250	1.5	5	23	27	0	-
RE211900_001	Residential	594800	4832552	1.5	4	23	27	0	-
RE212600_001	Residential	594824	4833279	1.5	6	23	29	0	-
RE212700_001	Residential	594758	4833331	1.5	8	23	30	0	-
RE212700_002	Residential	594605	4833322	1.5	8	23	31	0	-
RE212800_001	Residential	594672	4833390	1.5	10	23	32	0	-
RE212800_002	Residential	594620	4833440	1.5	11	23	33	0	-
RE212900_001	Residential	594599	4833473	1.5	10	23	33	0	-
RE213000_001	Residential	594589	4833575	1.5	7	23	29	0	-
RE214400_001	Recreation	594333	4835333	1.5	12	23	34	0	-
RE214600_002	Residential	593842	4835174	1.5	11	23	34	0	-
RE214600_003	Residential	593906	4835196	1.5	13	23	35	0	-
RE214600_004	Residential	593934	4835222	1.5	13	23	36	0	-
RE214600_005	Residential	593948	4835237	1.5	13	23	36	0	-
RE214600_006	Residential	593954	4835244	1.5	13	23	36	0	-
RE214600_007	Residential	593879	4835253	1.5	9	23	32	0	-
RE214600_008	Residential	593895	4835241	1.5	11	23	33	0	-
RE214600_009	Residential	593872	4835220	1.5	11	23	33	0	-
RE214600_010	Residential	593861	4835213	1.5	10	23	33	0	-
RE214600_011	Residential	593855	4835236	1.5	9	23	32	0	-
RE214600_012	Residential	593826	4835204	1.5	10	23	32	0	-
RE214600_013	Residential	593848	4835159	1.5	12	23	35	0	-
RE214600_014	Residential	593881	4835177	1.5	13	23	35	0	-
RE214600_015	Residential	593892	4835186	1.5	13	23	35	0	-
RE214600_016	Residential	593917	4835206	1.5	13	23	36	0	-
RE214600_017	Residential	593925	4835215	1.5	13	23	36	0	-
RE214600_018	Residential	593940	4835231	1.5	13	23	36	0	-
RE214600_019	Residential	593960	4835250	1.5	13	23	36	0	-
RE214600_020	Residential	593967	4835258	1.5	13	23	36	0	-
RE214600_021	Residential	593978	4835265	1.5	14	23	36	0	-
RE214600_022	Residential	593885	4835231	1.5	11	23	33	0	-
RE214600_023	Residential	593914	4835274	1.5	10	23	33	0	-
RE214600_024	Residential	593927	4835288	1.5	10	23	33	0	-
RE214600_025	Residential	593932	4835295	1.5	10	23	33	0	-
RE214600_026	Residential	593936	4835298	1.5	10	23	33	0	-
RE214600_027	Residential	593941	4835304	1.5	10	23	33	0	-
RE214600_028	Residential	593945	4835308	1.5	10	23	33	0	-
RE214600_029	Residential	593948	4835312	1.5	11	23	33	0	-
RE214600_030	Residential	593953	4835317	1.5	11	23	33	0	-
RE214600_031	Residential	593956	4835321	1.5	11	23	33	0	-
RE214600_032	Residential	593965	4835331	1.5	11	23	33	0	-
RE214600_033	Residential	593979	4835319	1.5	11	23	34	0	-
RE214600_034	Residential	593977	4835313	1.5	11	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_035	Residential	593971	4835308	1.5	11	23	34	0	-
RE214600_036	Residential	593968	4835303	1.5	11	23	34	0	-
RE214600_037	Residential	593909	4835267	1.5	10	23	33	0	-
RE214600_038	Residential	593919	4835279	1.5	10	23	33	0	-
RE214600_039	Residential	593923	4835284	1.5	10	23	33	0	-
RE214600_040	Residential	593930	4835291	1.5	10	23	33	0	-
RE214600_041	Residential	593961	4835326	1.5	11	23	33	0	-
RE214600_042	Residential	593970	4835333	1.5	11	23	33	0	-
RE214600_043	Residential	593982	4835324	1.5	11	23	34	0	-
RE214600_044	Residential	593960	4835295	1.5	11	23	34	0	-
RE214600_045	Residential	593956	4835291	1.5	11	23	34	0	-
RE214600_046	Residential	593946	4835281	1.5	11	23	33	0	-
RE214600_047	Residential	593942	4835277	1.5	11	23	33	0	-
RE214600_048	Residential	593934	4835269	1.5	11	23	33	0	-
RE214600_049	Residential	593929	4835264	1.5	11	23	33	0	-
RE214600_050	Residential	593923	4835260	1.5	11	23	33	0	-
RE214600_051	Residential	594088	4835437	1.5	11	23	34	0	-
RE214600_052	Residential	594082	4835443	1.5	11	23	34	0	-
RE214600_053	Residential	593964	4835299	1.5	11	23	34	0	-
RE214600_054	Residential	593949	4835285	1.5	11	23	34	0	-
RE214600_055	Residential	593938	4835273	1.5	11	23	33	0	-
RE214600_056	Residential	593919	4835255	1.5	11	23	33	0	-
RE214600_057	Residential	594070	4835454	1.5	10	23	33	0	-
RE214600_058	Residential	594080	4835468	1.5	10	23	33	0	-
RE214600_059	Residential	594086	4835463	1.5	10	23	33	0	-
RE214600_060	Residential	594095	4835454	1.5	11	23	34	0	-
RE214600_061	Residential	594098	4835448	1.5	11	23	34	0	-
RE214600_062	Residential	594075	4835447	1.5	11	23	33	0	-
RE214600_063	Residential	594090	4835458	1.5	11	23	33	0	-
RE214600_064	Residential	594047	4835432	1.5	10	23	33	0	-
RE214600_065	Residential	594052	4835428	1.5	11	23	33	0	-
RE214600_066	Residential	594056	4835424	1.5	11	23	33	0	-
RE214600_067	Residential	594061	4835420	1.5	11	23	34	0	-
RE214600_068	Residential	594068	4835415	1.5	12	23	34	0	-
RE214600_069	Residential	594022	4835361	1.5	12	23	34	0	-
RE214600_070	Residential	593995	4835385	1.5	10	23	33	0	-
RE214600_071	Residential	593999	4835381	1.5	11	23	33	0	-
RE214600_072	Residential	594003	4835377	1.5	11	23	33	0	-
RE214600_073	Residential	594009	4835371	1.5	11	23	34	0	-
RE214600_074	Residential	594015	4835366	1.5	11	23	34	0	-
RE214600_075	Residential	594003	4835343	1.5	12	23	34	0	-
RE214600_076	Residential	593993	4835352	1.5	11	23	34	0	-
RE214600_077	Residential	593998	4835348	1.5	11	23	34	0	-
RE214600_078	Residential	593990	4835357	1.5	11	23	33	0	-
RE214600_079	Residential	593985	4835362	1.5	11	23	33	0	-
RE214600_080	Residential	593978	4835367	1.5	10	23	33	0	-
RE214600_081	Residential	593872	4835162	1.5	13	23	35	0	-
RE214600_082	Residential	593897	4835267	1.5	10	23	32	0	-
RE214600_083	Residential	593835	4835188	1.5	10	23	33	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_002	Residential	593796	4835295	1.5	7	23	30	0	-
RE214700_003	Residential	593801	4835284	1.5	7	23	30	0	-
RE214700_004	Residential	593804	4835270	1.5	7	23	30	0	-
RE214700_005	Residential	593808	4835258	1.5	8	23	30	0	-
RE214700_006	Residential	593812	4835244	1.5	8	23	30	0	-
RE214700_007	Residential	593815	4835229	1.5	8	23	31	0	-
RE214700_008	Residential	593820	4835217	1.5	9	23	31	0	-
RE214700_009	Residential	593927	4835372	1.5	9	23	31	0	-
RE214700_010	Residential	593945	4835355	1.5	10	23	32	0	-
RE214700_011	Residential	593938	4835347	1.5	10	23	32	0	-
RE214700_012	Residential	593932	4835340	1.5	10	23	32	0	-
RE214700_013	Residential	593925	4835333	1.5	10	23	32	0	-
RE214700_014	Residential	593897	4835305	1.5	9	23	32	0	-
RE214700_015	Residential	593848	4835261	1.5	8	23	31	0	-
RE214700_016	Residential	593843	4835273	1.5	8	23	31	0	-
RE214700_017	Residential	593842	4835286	1.5	8	23	31	0	-
RE214700_018	Residential	593871	4835315	1.5	8	23	31	0	-
RE214700_019	Residential	593884	4835326	1.5	8	23	31	0	-
RE214700_020	Residential	593911	4835354	1.5	9	23	31	0	-
RE214700_021	Residential	593920	4835363	1.5	9	23	31	0	-
RE214700_022	Residential	593892	4835387	1.5	8	23	31	0	-
RE214700_023	Residential	593878	4835378	1.5	8	23	30	0	-
RE214700_024	Residential	593867	4835368	1.5	8	23	30	0	-
RE214700_025	Residential	593847	4835347	1.5	8	23	30	0	-
RE214700_026	Residential	593792	4835308	1.5	7	23	29	0	-
RE214700_027	Residential	593899	4835400	1.5	8	23	31	0	-
RE214700_028	Residential	593915	4835323	1.5	9	23	32	0	-
RE214700_029	Residential	593905	4835315	1.5	9	23	32	0	-
RE214700_030	Residential	593888	4835295	1.5	9	23	32	0	-
RE214700_031	Residential	593878	4835285	1.5	9	23	31	0	-
RE214700_032	Residential	593872	4835268	1.5	9	23	32	0	-
RE214700_033	Residential	593850	4835248	1.5	9	23	31	0	-
RE214700_034	Residential	593837	4835298	1.5	8	23	31	0	-
RE214700_035	Residential	593859	4835303	1.5	8	23	31	0	-
RE214700_036	Residential	593893	4835335	1.5	9	23	31	0	-
RE214700_037	Residential	593901	4835345	1.5	9	23	31	0	-
RE214700_038	Residential	593857	4835357	1.5	8	23	30	0	-
RE214700_039	Residential	593838	4835336	1.5	8	23	30	0	-
RE214700_040	Residential	593826	4835328	1.5	7	23	30	0	-
RE214700_041	Residential	594050	4835472	1.5	9	23	32	0	-
RE214700_042	Residential	594045	4835477	1.5	9	23	31	0	-
RE214700_043	Residential	594021	4835499	1.5	8	23	30	0	-
RE214700_044	Residential	594015	4835505	1.5	8	23	30	0	-
RE214700_045	Residential	594010	4835510	1.5	7	23	30	0	-
RE214700_046	Residential	594005	4835514	1.5	7	23	30	0	-
RE214700_047	Residential	593999	4835520	1.5	7	23	30	0	-
RE214700_048	Residential	594007	4835538	1.5	7	23	30	0	-
RE214700_049	Residential	594029	4835518	1.5	8	23	30	0	-
RE214700_050	Residential	594041	4835505	1.5	8	23	31	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_051	Residential	594052	4835496	1.5	8	23	31	0	-
RE214700_052	Residential	594065	4835484	1.5	9	23	32	0	-
RE214700_053	Residential	594071	4835479	1.5	9	23	32	0	-
RE214700_054	Residential	594063	4835459	1.5	10	23	33	0	-
RE214700_055	Residential	594059	4835463	1.5	10	23	32	0	-
RE214700_056	Residential	594055	4835466	1.5	9	23	32	0	-
RE214700_057	Residential	594041	4835481	1.5	9	23	31	0	-
RE214700_058	Residential	594035	4835486	1.5	8	23	31	0	-
RE214700_059	Residential	594030	4835490	1.5	8	23	31	0	-
RE214700_060	Residential	594025	4835494	1.5	8	23	31	0	-
RE214700_061	Residential	593994	4835525	1.5	7	23	30	0	-
RE214700_062	Residential	594012	4835533	1.5	7	23	30	0	-
RE214700_063	Residential	594018	4835528	1.5	7	23	30	0	-
RE214700_064	Residential	594023	4835523	1.5	7	23	30	0	-
RE214700_065	Residential	594035	4835511	1.5	8	23	30	0	-
RE214700_066	Residential	594046	4835501	1.5	8	23	31	0	-
RE214700_067	Residential	594057	4835491	1.5	9	23	31	0	-
RE214700_068	Residential	594061	4835487	1.5	9	23	31	0	-
RE214700_069	Residential	594075	4835473	1.5	10	23	32	0	-
RE214700_070	Residential	593973	4835506	1.5	7	23	30	0	-
RE214700_071	Residential	593991	4835488	1.5	8	23	30	0	-
RE214700_072	Residential	593995	4835485	1.5	8	23	30	0	-
RE214700_073	Residential	594004	4835475	1.5	8	23	31	0	-
RE214700_074	Residential	594013	4835466	1.5	9	23	31	0	-
RE214700_075	Residential	594022	4835457	1.5	9	23	32	0	-
RE214700_076	Residential	594039	4835440	1.5	10	23	33	0	-
RE214700_077	Residential	593979	4835500	1.5	7	23	30	0	-
RE214700_078	Residential	593985	4835493	1.5	8	23	30	0	-
RE214700_079	Residential	593998	4835482	1.5	8	23	31	0	-
RE214700_080	Residential	594008	4835471	1.5	8	23	31	0	-
RE214700_081	Residential	594018	4835462	1.5	9	23	31	0	-
RE214700_082	Residential	594027	4835453	1.5	9	23	32	0	-
RE214700_083	Residential	594030	4835449	1.5	9	23	32	0	-
RE214700_084	Residential	594036	4835444	1.5	10	23	32	0	-
RE214700_085	Residential	594043	4835436	1.5	10	23	33	0	-
RE214700_086	Residential	593960	4835422	1.5	9	23	31	0	-
RE214700_087	Residential	593956	4835426	1.5	9	23	31	0	-
RE214700_088	Residential	593963	4835417	1.5	9	23	32	0	-
RE214700_089	Residential	593968	4835413	1.5	9	23	32	0	-
RE214700_090	Residential	593973	4835409	1.5	9	23	32	0	-
RE214700_091	Residential	593978	4835404	1.5	9	23	32	0	-
RE214700_092	Residential	593981	4835400	1.5	10	23	32	0	-
RE214700_093	Residential	593948	4835434	1.5	8	23	31	0	-
RE214700_094	Residential	593938	4835443	1.5	8	23	30	0	-
RE214700_095	Residential	593934	4835448	1.5	8	23	30	0	-
RE214700_096	Residential	593988	4835393	1.5	10	23	33	0	-
RE214700_097	Residential	593991	4835389	1.5	10	23	33	0	-
RE214700_098	Residential	593943	4835438	1.5	8	23	31	0	-
RE214700_099	Residential	593929	4835453	1.5	8	23	30	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_100	Residential	593974	4835372	1.5	10	23	33	0	-
RE214700_101	Residential	593962	4835383	1.5	10	23	32	0	-
RE214700_102	Residential	593958	4835387	1.5	9	23	32	0	-
RE214700_103	Residential	593951	4835396	1.5	9	23	32	0	-
RE214700_104	Residential	593947	4835399	1.5	9	23	31	0	-
RE214700_105	Residential	593941	4835404	1.5	9	23	31	0	-
RE214700_106	Residential	593922	4835422	1.5	8	23	31	0	-
RE214700_107	Residential	593918	4835425	1.5	8	23	30	0	-
RE214700_108	Residential	593968	4835378	1.5	10	23	32	0	-
RE214700_109	Residential	593955	4835390	1.5	9	23	32	0	-
RE214700_110	Residential	593936	4835409	1.5	9	23	31	0	-
RE214700_111	Residential	593932	4835413	1.5	8	23	31	0	-
RE214700_112	Residential	593927	4835416	1.5	8	23	31	0	-
RE214700_113	Residential	593915	4835429	1.5	8	23	30	0	-
RE214700_114	Residential	593909	4835436	1.5	8	23	30	0	-
RE214800_004	Residential	594026	4835615	1.5	6	23	29	0	-
RE214800_005	Residential	593831	4835365	1.5	7	23	30	0	-
RE214800_006	Residential	593852	4835385	1.5	7	23	30	0	-
RE214800_007	Residential	593881	4835418	1.5	7	23	30	0	-
RE214800_012	Residential	593782	4835346	1.5	7	23	29	0	-
RE214800_013	Residential	593787	4835332	1.5	7	23	29	0	-
RE214800_014	Residential	593789	4835319	1.5	7	23	29	0	-
RE214800_015	Residential	593821	4835355	1.5	7	23	30	0	-
RE214800_016	Residential	593842	4835375	1.5	7	23	30	0	-
RE214800_017	Residential	593862	4835398	1.5	7	23	30	0	-
RE214800_018	Residential	593873	4835409	1.5	7	23	30	0	-
RE214800_019	Residential	593990	4835530	1.5	7	23	30	0	-
RE214800_020	Residential	593986	4835536	1.5	7	23	29	0	-
RE214800_021	Residential	593998	4835545	1.5	7	23	29	0	-
RE214800_022	Residential	594003	4835542	1.5	7	23	29	0	-
RE214800_023	Residential	593968	4835554	1.5	6	23	29	0	-
RE214800_024	Residential	593977	4835565	1.5	6	23	29	0	-
RE214800_025	Residential	593946	4835572	1.5	6	23	29	0	-
RE214800_026	Residential	593927	4835596	1.5	6	23	28	0	-
RE214800_027	Residential	593950	4835594	1.5	6	23	28	0	-
RE214800_028	Residential	593964	4835580	1.5	6	23	29	0	-
RE214800_029	Residential	593968	4835576	1.5	6	23	29	0	-
RE214800_030	Residential	593973	4835571	1.5	6	23	29	0	-
RE214800_031	Residential	593987	4835592	1.5	6	23	29	0	-
RE214800_032	Residential	593962	4835559	1.5	6	23	29	0	-
RE214800_033	Residential	593956	4835562	1.5	6	23	29	0	-
RE214800_034	Residential	593952	4835567	1.5	6	23	29	0	-
RE214800_035	Residential	593941	4835579	1.5	6	23	28	0	-
RE214800_036	Residential	593936	4835582	1.5	6	23	28	0	-
RE214800_037	Residential	593931	4835589	1.5	6	23	28	0	-
RE214800_038	Residential	593938	4835605	1.5	6	23	28	0	-
RE214800_039	Residential	593945	4835599	1.5	6	23	28	0	-
RE214800_040	Residential	593953	4835589	1.5	6	23	28	0	-
RE214800_041	Residential	593959	4835583	1.5	6	23	28	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214800_042	Residential	593997	4835583	1.5	6	23	29	0	-
RE214800_043	Residential	593992	4835588	1.5	6	23	29	0	-
RE214800_044	Residential	593982	4835599	1.5	6	23	29	0	-
RE214800_045	Residential	593977	4835603	1.5	6	23	29	0	-
RE214800_046	Residential	593970	4835610	1.5	6	23	28	0	-
RE214800_052	Residential	593995	4835609	1.5	6	23	29	0	-
RE214800_053	Residential	593999	4835605	1.5	6	23	29	0	-
RE214800_056	Residential	593989	4835614	1.5	6	23	29	0	-
RE214800_057	Residential	594004	4835600	1.5	6	23	29	0	-
RE214800_058	Residential	594008	4835595	1.5	6	23	29	0	-
RE214800_059	Residential	593969	4835510	1.5	7	23	30	0	-
RE214800_060	Residential	593964	4835515	1.5	7	23	29	0	-
RE214800_061	Residential	593919	4835462	1.5	7	23	30	0	-
RE214800_062	Residential	593941	4835536	1.5	6	23	29	0	-
RE214800_063	Residential	593932	4835545	1.5	6	23	29	0	-
RE214800_064	Residential	593919	4835557	1.5	6	23	28	0	-
RE214800_065	Residential	593923	4835458	1.5	7	23	30	0	-
RE214800_066	Residential	593916	4835466	1.5	7	23	30	0	-
RE214800_067	Residential	593938	4835540	1.5	6	23	29	0	-
RE214800_068	Residential	593926	4835550	1.5	6	23	29	0	-
RE214800_069	Residential	593924	4835553	1.5	6	23	29	0	-
RE214800_070	Residential	593909	4835569	1.5	6	23	28	0	-
RE214800_071	Residential	593905	4835574	1.5	6	23	28	0	-
RE214800_072	Residential	593913	4835564	1.5	6	23	28	0	-
RE214800_073	Residential	593902	4835442	1.5	7	23	30	0	-
RE214800_074	Residential	593897	4835447	1.5	7	23	30	0	-
RE214800_075	Residential	593945	4835532	1.5	6	23	29	0	-
RE214800_076	Residential	593781	4835357	1.5	6	23	29	0	-
RE214900_001	Residential	593921	4835605	1.5	5	23	28	0	-
RE214900_008	Residential	593899	4835580	1.5	5	23	28	0	-
RE214900_009	Residential	593896	4835585	1.5	5	23	28	0	-
RE214900_010	Residential	593893	4835591	1.5	5	23	28	0	-
RE217600_001	Residential	591736	4837227	1.5	4	23	27	0	-
RE217600_002	Residential	591766	4837262	1.5	4	23	26	0	-
RE218700_001	Residential	590959	4838020	1.5	13	23	35	0	-
RE218700_002	Residential	590988	4838088	1.5	12	23	35	0	-
RE220800_001	Residential	590421	4839357	1.5	7	23	30	0	-
RE220900_001	Residential	590180	4839466	1.5	6	23	29	0	-
RE220900_002	Residential	590517	4839408	1.5	6	23	29	0	-
RE220900_003	Residential	590379	4839398	1.5	7	23	30	0	-
RE221000_001	Residential	590454	4839467	1.5	7	23	30	0	-
RE221000_002	Residential	590412	4839513	1.5	7	23	30	0	-
RE221300_001	Residential	590257	4839724	1.5	5	23	28	0	-
RE221300_002	Residential	590236	4839764	1.5	5	23	28	0	-
RE221300_003	Residential	590440	4839670	1.5	4	23	26	0	-
RE222600_001	Residential	591012	4840654	1.5	11	23	34	0	-
RE222700_001	Residential	590826	4840878	1.5	14	23	37	0	-
RE222700_002	Residential	590788	4840912	1.5	14	23	37	0	-
RE222700_003	Residential	590768	4840946	1.5	15	23	38	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE222700_004	Residential	590744	4840967	1.5	15	23	38	0	-
RE222700_005	Residential	590721	4840990	1.5	15	23	38	0	-
RE222700_006	Residential	590621	4841031	1.5	13	23	35	0	-
RE222800_001	Residential	590888	4840963	1.5	13	23	36	0	-
RE222800_002	Residential	590866	4840985	1.5	13	23	36	0	-
RE222800_003	Residential	590833	4841016	1.5	14	23	36	0	-
RE222800_004	Residential	590542	4841175	1.5	16	23	39	0	-
RE222800_005	Residential	591137	4840761	1.5	10	23	33	0	-
RE222900_001	Residential	590805	4841056	1.5	12	23	35	0	-
RE223100_001	Residential	590769	4841337	1.5	5	23	28	0	-
RE224000_001	Residential	591729	4841911	1.5	13	23	36	0	-
RE224000_002	Residential	591565	4842001	1.5	11	23	34	0	-
RE224000_003	Residential	591896	4841760	1.5	14	23	36	0	-
RE224000_004	Residential	592046	4841608	1.5	8	23	31	0	-
RE224000_005	Residential	591982	4841673	1.5	13	23	35	0	-
RE224000_006	Residential	592000	4841606	1.5	8	23	31	0	-
RE224000_007	Residential	592142	4841674	1.5	8	23	31	0	-
RE224000_008	Residential	591760	4841888	1.5	13	23	36	0	-
RE224100_001	Residential	591661	4842108	1.5	12	23	34	0	-
RE224200_001	Residential	591576	4842265	1.5	8	23	31	0	-
RE225600_001	Residential	591815	4843783	1.5	11	23	34	0	-
RE225700_001	Residential	591905	4843849	1.5	9	23	32	0	-
RE225700_002	Residential	591627	4843848	1.5	11	23	33	0	-
RE225800_001	Residential	591793	4843928	1.5	13	23	35	0	-
RE226500_001	Residential	591915	4844500	1.5	15	23	37	0	-
RE226500_002	Residential	592025	4844497	1.5	12	23	34	0	-
RE226600_001	Residential	592085	4844601	1.5	13	23	36	0	-
RE226700_001	Residential	592060	4844696	1.5	17	23	39	0	-
RE226800_001	Residential	592117	4844789	1.5	17	23	40	0	-
RE227000_001	Residential	592319	4844882	1.5	15	23	38	0	-
RE227100_001	Residential	592377	4844982	1.5	19	23	41	0	-
RE227100_002	Residential	592402	4845033	1.5	22	23	45	0	-
RE227300_001	Residential	592788	4845012	1.5	11	23	34	0	-
RE227800_001	Residential	592859	4845591	1.5	8	23	31	0	-
RE227900_001	Residential	592776	4845681	1.5	10	23	32	0	-
RE228000_001	Residential	595855	4844518	1.5	10	23	33	0	-
RE228000_002	Residential	595865	4844534	1.5	11	23	33	0	-
RE228000_003	Residential	595873	4844555	1.5	11	23	34	0	-
RE228000_004	Residential	595887	4844563	1.5	11	23	34	0	-
RE228000_005	Residential	595917	4844562	1.5	12	23	35	0	-
RE228000_006	Residential	595931	4844548	1.5	14	23	36	0	-
RE228000_007	Residential	595942	4844534	1.5	15	23	37	0	-
RE228000_008	Child Care Centre	597841	4843717	1.5	12	23	35	0	-
RE228000_009	Residential	595782	4844642	1.5	14	23	36	0	-
RE228100_001	Residential	595810	4844669	1.5	15	23	37	0	-
RE228300_028	Residential	595272	4845160	1.5	15	23	38	0	-
RE228300_029	Residential	595277	4845164	1.5	15	23	38	0	-
RE228300_030	Residential	595281	4845168	1.5	15	23	38	0	-
RE228300_031	Residential	595264	4845154	1.5	15	23	38	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE228300_032	Residential	595260	4845151	1.5	15	23	38	0	-
RE228300_033	Residential	595256	4845147	1.5	15	23	37	0	-
RE228300_034	Residential	595252	4845143	1.5	15	23	37	0	-
RE228300_035	Residential	595247	4845139	1.5	15	23	37	0	-
RE228400_004	Residential	595342	4845241	1.5	15	23	37	0	-
RE228400_005	Residential	595347	4845245	1.5	15	23	37	0	-
RE228400_006	Residential	595353	4845250	1.5	15	23	37	0	-
RE228400_007	Residential	595286	4845173	1.5	15	23	38	0	-
RE228400_008	Residential	595291	4845177	1.5	15	23	38	0	-
RE228400_009	Residential	595295	4845180	1.5	15	23	38	0	-
RE228400_010	Residential	595299	4845184	1.5	15	23	38	0	-
RE228400_011	Residential	595303	4845187	1.5	15	23	38	0	-
RE228400_013	Residential	595249	4845194	1.5	14	23	37	0	-
RE228400_014	Residential	595253	4845198	1.5	14	23	37	0	-
RE228400_015	Residential	595259	4845202	1.5	14	23	37	0	-
RE228400_045	Residential	595263	4845261	1.5	13	23	36	0	-
RE228400_046	Residential	595267	4845257	1.5	13	23	36	0	-
RE228400_047	Residential	595271	4845254	1.5	13	23	36	0	-
RE228400_048	Residential	595277	4845248	1.5	13	23	36	0	-
RE228400_049	Residential	595281	4845244	1.5	14	23	36	0	-
RE228400_050	Residential	595285	4845240	1.5	14	23	36	0	-
RE228400_051	Residential	595289	4845237	1.5	14	23	37	0	-
RE228400_052	Residential	595293	4845233	1.5	14	23	37	0	-
RE228400_053	Residential	595297	4845229	1.5	14	23	37	0	-
RE228400_054	Residential	595303	4845221	1.5	15	23	37	0	-
RE228400_055	Residential	595307	4845217	1.5	15	23	37	0	-
RE228400_056	Residential	595312	4845212	1.5	15	23	38	0	-
RE228400_057	Residential	595317	4845207	1.5	15	23	38	0	-
RE228400_058	Residential	595321	4845203	1.5	15	23	38	0	-
RE228400_059	Residential	595326	4845198	1.5	16	23	38	0	-
RE228500_009	Residential	595340	4845366	1.5	13	23	36	0	-
RE228500_010	Residential	595348	4845355	1.5	14	23	36	0	-
RE228500_011	Residential	595353	4845351	1.5	14	23	36	0	-
RE228500_012	Residential	595360	4845346	1.5	14	23	37	0	-
RE228500_013	Residential	595365	4845341	1.5	14	23	37	0	-
RE228500_014	Residential	595376	4845333	1.5	14	23	37	0	-
RE228500_015	Residential	595380	4845326	1.5	14	23	37	0	-
RE228500_016	Residential	595386	4845320	1.5	15	23	37	0	-
RE228500_017	Residential	595391	4845315	1.5	15	23	37	0	-
RE228500_018	Residential	595402	4845305	1.5	15	23	37	0	-
RE228500_019	Residential	595406	4845298	1.5	15	23	37	0	-
RE228500_020	Residential	595415	4845288	1.5	15	23	37	0	-
RE228500_021	Residential	595423	4845280	1.5	15	23	38	0	-
RE228500_022	Residential	595357	4845254	1.5	15	23	37	0	-
RE228500_023	Residential	595366	4845262	1.5	15	23	37	0	-
RE228500_024	Residential	595370	4845267	1.5	14	23	37	0	-
RE228500_025	Residential	595375	4845271	1.5	14	23	37	0	-
RE228500_026	Residential	595355	4845285	1.5	14	23	37	0	-
RE228500_027	Residential	595349	4845290	1.5	14	23	37	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE228500_028	Residential	595342	4845297	1.5	14	23	37	0	-
RE228500_029	Residential	595338	4845303	1.5	14	23	37	0	-
RE228500_030	Residential	595329	4845311	1.5	14	23	37	0	-
RE228500_031	Residential	595322	4845317	1.5	14	23	36	0	-
RE228500_032	Residential	595315	4845323	1.5	14	23	36	0	-
RE228500_033	Residential	595310	4845328	1.5	14	23	36	0	-
RE228500_034	Residential	595301	4845337	1.5	13	23	36	0	-
RE228500_035	Residential	595297	4845343	1.5	13	23	36	0	-
RE228500_049	Residential	595279	4845312	1.5	13	23	36	0	-
RE228500_050	Residential	595289	4845303	1.5	13	23	36	0	-
RE228500_051	Residential	595293	4845297	1.5	14	23	36	0	-
RE228500_052	Residential	595300	4845290	1.5	14	23	36	0	-
RE228500_053	Residential	595305	4845285	1.5	14	23	36	0	-
RE228500_054	Residential	595315	4845277	1.5	14	23	37	0	-
RE228500_055	Residential	595319	4845273	1.5	14	23	37	0	-
RE228500_056	Residential	595323	4845268	1.5	14	23	37	0	-
RE228500_057	Residential	595329	4845264	1.5	14	23	37	0	-
RE228500_060	Residential	595450	4845298	1.5	15	23	38	0	-
RE228500_061	Residential	595448	4845302	1.5	15	23	38	0	-
RE228500_062	Residential	595444	4845307	1.5	15	23	38	0	-
RE228500_063	Residential	595440	4845311	1.5	15	23	38	0	-
RE228500_064	Residential	595437	4845315	1.5	15	23	38	0	-
RE228500_065	Residential	595433	4845320	1.5	15	23	38	0	-
RE228500_066	Residential	595429	4845324	1.5	15	23	37	0	-
RE228500_067	Residential	595426	4845327	1.5	15	23	37	0	-
RE228600_013	Residential	595369	4845462	1.5	11	23	34	0	-
RE228600_014	Residential	595377	4845450	1.5	12	23	35	0	-
RE228600_015	Residential	595389	4845444	1.5	12	23	35	0	-
RE228600_016	Residential	595398	4845435	1.5	13	23	35	0	-
RE228600_017	Residential	595404	4845426	1.5	13	23	36	0	-
RE228600_018	Residential	595412	4845418	1.5	13	23	36	0	-
RE228600_019	Residential	595420	4845409	1.5	13	23	36	0	-
RE228600_020	Residential	595431	4845401	1.5	14	23	36	0	-
RE228600_021	Residential	595439	4845389	1.5	14	23	37	0	-
RE228600_022	Residential	595447	4845380	1.5	14	23	37	0	-
RE228600_023	Residential	595455	4845370	1.5	15	23	37	0	-
RE228600_024	Residential	595464	4845360	1.5	15	23	37	0	-
RE228600_025	Residential	595470	4845351	1.5	15	23	38	0	-
RE228600_026	Residential	595480	4845344	1.5	15	23	38	0	-
RE228600_027	Residential	595487	4845335	1.5	15	23	38	0	-
RE228600_036	Residential	595324	4845383	1.5	12	23	35	0	-
RE228600_037	Residential	595332	4845374	1.5	13	23	35	0	-
RE228600_038	Residential	595335	4845370	1.5	13	23	35	0	-
RE228600_039	Residential	595422	4845333	1.5	15	23	37	0	-
RE228600_040	Residential	595418	4845337	1.5	15	23	37	0	-
RE228600_041	Residential	595415	4845341	1.5	15	23	37	0	-
RE228600_042	Residential	595412	4845343	1.5	15	23	37	0	-
RE228600_043	Residential	595409	4845347	1.5	14	23	37	0	-
RE228600_044	Residential	595406	4845351	1.5	14	23	37	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228600_045	Residential	595404	4845354	1.5	14	23	37	0	-
RE228600_046	Residential	595402	4845357	1.5	14	23	37	0	-
RE228600_047	Residential	595396	4845362	1.5	14	23	37	0	-
RE228600_048	Residential	595392	4845366	1.5	14	23	36	0	-
RE228600_049	Residential	595390	4845369	1.5	14	23	36	0	-
RE228600_050	Residential	595387	4845372	1.5	14	23	36	0	-
RE228600_051	Residential	595383	4845375	1.5	13	23	36	0	-
RE228600_052	Residential	595380	4845378	1.5	13	23	36	0	-
RE228600_053	Residential	595377	4845380	1.5	13	23	36	0	-
RE228600_054	Residential	595374	4845383	1.5	13	23	36	0	-
RE228600_055	Residential	595371	4845387	1.5	13	23	36	0	-
RE228600_056	Residential	595369	4845389	1.5	13	23	35	0	-
RE228600_057	Residential	595366	4845392	1.5	13	23	35	0	-
RE228600_058	Residential	595363	4845395	1.5	13	23	35	0	-
RE228600_059	Residential	595361	4845397	1.5	13	23	35	0	-
RE228600_060	Residential	595358	4845400	1.5	13	23	35	0	-
RE228600_061	Residential	595356	4845402	1.5	13	23	35	0	-
RE228600_062	Residential	595353	4845405	1.5	13	23	35	0	-
RE228600_063	Residential	593163	4846308	1.5	24	23	46	0	-
RE228700_010	Residential	593290	4846362	1.5	13	23	36	0	-
RE228800_001	Residential	593003	4846574	1.5	19	23	42	0	-
RE228800_002	Residential	593037	4846534	1.5	19	23	41	0	-
RE228800_003	Residential	593163	4846512	1.5	12	23	34	0	-
RE228900_001	Residential	592951	4846627	1.5	18	23	41	0	-
RE228900_002	Residential	592887	4846738	1.5	15	23	37	0	-
RE229000_001	Residential	593405	4846521	1.5	10	23	32	0	-
RE229100_001	Residential	593407	4846583	1.5	9	23	31	0	-
RE230200_001	Residential	594211	4847001	1.5	7	23	29	0	-
RE230300_001	Residential	594050	4847308	1.5	12	23	35	0	-
RE230300_002	Residential	593923	4847396	1.5	9	23	32	0	-
RE230300_003	Residential	594697	4846565	1.5	7	23	30	0	-
RE230300_004	Residential	595111	4846102	1.5	9	23	31	0	-
RE230300_005	Residential	595605	4845645	1.5	12	23	34	0	-
RE230400_001	Residential	593872	4847645	1.5	10	23	33	0	-
RE230400_002	Residential	593822	4847679	1.5	11	23	33	0	-
RE230400_006	Residential	594520	4846864	1.5	9	23	32	0	-
RE230400_007	Residential	594996	4846385	1.5	11	23	33	0	-
RE230400_008	Residential	594973	4846410	1.5	11	23	33	0	-
RE230400_009	Residential	594936	4846427	1.5	10	23	32	0	-
RE230400_010	Residential	595705	4845694	1.5	16	23	38	0	-
RE230400_011	Residential	595874	4845530	1.5	19	23	42	0	-
RE230500_001	Residential	594280	4847364	1.5	11	23	33	0	-
RE230500_002	Residential	594446	4847099	1.5	10	23	32	0	-
RE230500_003	Residential	594531	4847041	1.5	9	23	31	0	-
RE230500_004	Residential	594643	4846861	1.5	10	23	33	0	-
RE230500_005	Residential	594671	4846840	1.5	10	23	33	0	-
RE230500_006	Residential	595049	4846474	1.5	10	23	33	0	-
RE230500_007	Residential	595486	4846036	1.5	12	23	34	0	-
RE230500_008	Residential	595463	4846068	1.5	11	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230500_009	Residential	595438	4846095	1.5	11	23	34	0	-
RE230500_010	Residential	595925	4845612	1.5	16	23	38	0	-
RE230500_011	Residential	595941	4845561	1.5	19	23	42	0	-
RE230500_012	Residential	596152	4845388	1.5	26	23	49	0	-
RE230500_013	Residential	596418	4845009	1.5	32	23	55	1	0.1%
RE230500_014	Residential	596697	4844834	1.5	16	23	39	0	-
RE230600_001	Residential	594927	4846729	1.5	7	23	29	0	-
RE230600_002	Residential	595293	4846327	1.5	8	23	30	0	-
RE230600_003	Residential	596445	4845172	1.5	41	23	63	5	0.3%
RE230600_004	Residential	596565	4845058	1.5	19	23	42	0	-
RE230600_005	Residential	596657	4844932	1.5	15	23	37	0	-
RE230600_006	Residential	596705	4844908	1.5	14	23	36	0	-
RE230900_001	Residential	597840	4844261	1.5	20	23	43	0	-
RE230900_002	Residential	597853	4844274	1.5	19	23	41	0	-
RE230900_003	Residential	597866	4844285	1.5	17	23	40	0	-
RE230900_004	Residential	597879	4844301	1.5	17	23	39	0	-
RE230900_005	Residential	597887	4844307	1.5	16	23	39	0	-
RE230900_006	Residential	597900	4844320	1.5	15	23	38	0	-
RE230900_007	Residential	597908	4844331	1.5	15	23	38	0	-
RE230900_008	Residential	597922	4844342	1.5	15	23	37	0	-
RE230900_009	Residential	597931	4844352	1.5	14	23	37	0	-
RE230900_010	Residential	597943	4844365	1.5	14	23	37	0	-
RE230900_011	Residential	597954	4844376	1.5	14	23	36	0	-
RE230900_012	Residential	597816	4844283	1.5	21	23	44	0	-
RE230900_013	Residential	597825	4844289	1.5	20	23	43	0	-
RE230900_014	Residential	597835	4844299	1.5	19	23	42	0	-
RE230900_015	Residential	597842	4844308	1.5	18	23	41	0	-
RE230900_016	Residential	597849	4844314	1.5	18	23	40	0	-
RE230900_017	Residential	597859	4844324	1.5	17	23	39	0	-
RE230900_018	Residential	597867	4844331	1.5	16	23	39	0	-
RE230900_019	Residential	597875	4844341	1.5	16	23	39	0	-
RE230900_020	Residential	597884	4844348	1.5	16	23	38	0	-
RE230900_021	Residential	597892	4844356	1.5	15	23	38	0	-
RE230900_022	Residential	597899	4844365	1.5	15	23	38	0	-
RE230900_023	Residential	597905	4844373	1.5	15	23	37	0	-
RE230900_024	Residential	597917	4844381	1.5	14	23	37	0	-
RE230900_025	Residential	597924	4844389	1.5	14	23	37	0	-
RE230900_026	Residential	597931	4844399	1.5	14	23	37	0	-
RE230900_027	Residential	597646	4844600	1.5	24	23	47	0	-
RE230900_028	Residential	597653	4844613	1.5	23	23	46	0	-
RE230900_029	Residential	597660	4844623	1.5	23	23	45	0	-
RE230900_030	Residential	597665	4844629	1.5	23	23	45	0	-
RE230900_031	Residential	597835	4844353	1.5	17	23	40	0	-
RE230900_032	Residential	597831	4844358	1.5	18	23	40	0	-
RE230900_033	Residential	597825	4844365	1.5	18	23	40	0	-
RE230900_034	Residential	597820	4844371	1.5	18	23	40	0	-
RE230900_035	Residential	597814	4844379	1.5	18	23	40	0	-
RE230900_036	Residential	597811	4844383	1.5	18	23	40	0	-
RE230900_037	Residential	597806	4844390	1.5	18	23	41	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_038	Residential	597801	4844396	1.5	18	23	41	0	-
RE230900_039	Residential	597796	4844403	1.5	18	23	41	0	-
RE230900_040	Residential	597792	4844410	1.5	18	23	41	0	-
RE230900_041	Residential	597786	4844416	1.5	18	23	41	0	-
RE230900_042	Residential	597783	4844423	1.5	18	23	41	0	-
RE230900_043	Residential	597781	4844430	1.5	18	23	41	0	-
RE230900_044	Residential	597777	4844436	1.5	18	23	41	0	-
RE230900_045	Residential	597773	4844443	1.5	18	23	41	0	-
RE230900_046	Residential	597770	4844450	1.5	19	23	41	0	-
RE230900_047	Residential	597766	4844457	1.5	19	23	41	0	-
RE230900_048	Residential	597762	4844463	1.5	19	23	41	0	-
RE230900_049	Residential	597758	4844470	1.5	19	23	41	0	-
RE230900_050	Residential	597754	4844477	1.5	19	23	41	0	-
RE230900_051	Residential	597751	4844484	1.5	19	23	42	0	-
RE230900_052	Residential	597747	4844490	1.5	19	23	42	0	-
RE230900_053	Residential	597744	4844497	1.5	19	23	42	0	-
RE230900_054	Residential	597739	4844504	1.5	19	23	42	0	-
RE230900_055	Residential	597725	4844530	1.5	20	23	42	0	-
RE230900_056	Residential	597721	4844535	1.5	20	23	42	0	-
RE230900_057	Residential	597717	4844543	1.5	20	23	42	0	-
RE230900_058	Residential	597713	4844549	1.5	20	23	43	0	-
RE230900_059	Residential	597710	4844557	1.5	20	23	43	0	-
RE230900_060	Residential	597705	4844564	1.5	20	23	43	0	-
RE230900_061	Residential	597701	4844572	1.5	20	23	43	0	-
RE230900_062	Residential	597697	4844579	1.5	21	23	43	0	-
RE230900_063	Residential	597692	4844586	1.5	21	23	43	0	-
RE230900_064	Residential	597688	4844592	1.5	21	23	44	0	-
RE230900_065	Residential	597684	4844600	1.5	21	23	44	0	-
RE230900_066	Residential	597681	4844607	1.5	22	23	44	0	-
RE230900_067	Residential	597651	4844608	1.5	24	23	46	0	-
RE230900_068	Residential	597659	4844619	1.5	23	23	46	0	-
RE230900_069	Residential	597659	4844582	1.5	23	23	46	0	-
RE230900_070	Residential	597661	4844578	1.5	23	23	46	0	-
RE230900_071	Residential	597664	4844572	1.5	23	23	45	0	-
RE230900_072	Residential	597668	4844567	1.5	23	23	45	0	-
RE230900_073	Residential	597671	4844560	1.5	22	23	45	0	-
RE230900_074	Residential	597674	4844556	1.5	22	23	45	0	-
RE230900_075	Residential	597678	4844550	1.5	22	23	45	0	-
RE230900_076	Residential	597681	4844543	1.5	22	23	45	0	-
RE230900_077	Residential	597684	4844537	1.5	22	23	45	0	-
RE230900_078	Residential	597688	4844532	1.5	22	23	44	0	-
RE230900_079	Residential	597691	4844527	1.5	22	23	44	0	-
RE230900_080	Residential	597695	4844521	1.5	22	23	44	0	-
RE230900_081	Residential	597697	4844516	1.5	21	23	44	0	-
RE230900_082	Residential	597714	4844486	1.5	21	23	44	0	-
RE230900_083	Residential	597717	4844481	1.5	21	23	43	0	-
RE230900_084	Residential	597720	4844476	1.5	21	23	43	0	-
RE230900_085	Residential	597723	4844470	1.5	21	23	43	0	-
RE230900_086	Residential	597726	4844464	1.5	21	23	43	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE230900_087	Residential	597729	4844460	1.5	21	23	43	0	-
RE230900_088	Residential	597732	4844455	1.5	21	23	43	0	-
RE230900_089	Residential	597736	4844448	1.5	20	23	43	0	-
RE230900_090	Residential	597740	4844440	1.5	20	23	43	0	-
RE230900_091	Residential	597743	4844435	1.5	20	23	43	0	-
RE230900_092	Residential	597747	4844429	1.5	20	23	43	0	-
RE230900_093	Residential	597749	4844423	1.5	20	23	43	0	-
RE230900_094	Residential	597752	4844418	1.5	20	23	43	0	-
RE230900_095	Residential	597755	4844413	1.5	20	23	43	0	-
RE230900_096	Residential	597758	4844409	1.5	20	23	43	0	-
RE230900_097	Residential	597762	4844402	1.5	20	23	43	0	-
RE230900_098	Residential	597765	4844392	1.5	20	23	43	0	-
RE230900_099	Residential	597769	4844386	1.5	20	23	43	0	-
RE230900_100	Residential	597773	4844382	1.5	20	23	43	0	-
RE230900_101	Residential	597776	4844377	1.5	20	23	43	0	-
RE230900_102	Residential	597784	4844369	1.5	20	23	42	0	-
RE230900_103	Residential	597787	4844364	1.5	20	23	42	0	-
RE230900_104	Residential	597791	4844360	1.5	20	23	42	0	-
RE230900_105	Residential	597794	4844354	1.5	20	23	42	0	-
RE230900_106	Residential	597798	4844349	1.5	19	23	42	0	-
RE230900_107	Residential	597802	4844343	1.5	19	23	42	0	-
RE230900_108	Residential	597805	4844339	1.5	19	23	42	0	-
RE230900_109	Residential	597808	4844334	1.5	19	23	42	0	-
RE230900_110	Residential	597861	4844387	1.5	16	23	39	0	-
RE230900_111	Residential	597868	4844394	1.5	16	23	38	0	-
RE230900_112	Residential	597877	4844404	1.5	15	23	38	0	-
RE230900_113	Residential	597886	4844412	1.5	15	23	38	0	-
RE230900_114	Residential	597892	4844420	1.5	15	23	37	0	-
RE230900_115	Residential	597874	4844444	1.5	15	23	38	0	-
RE230900_116	Residential	597870	4844440	1.5	15	23	38	0	-
RE230900_117	Residential	597863	4844432	1.5	15	23	38	0	-
RE230900_118	Residential	597859	4844428	1.5	16	23	38	0	-
RE230900_119	Residential	597849	4844405	1.5	16	23	39	0	-
RE230900_120	Residential	597845	4844411	1.5	16	23	39	0	-
RE230900_121	Residential	597840	4844418	1.5	16	23	39	0	-
RE230900_122	Residential	597836	4844424	1.5	16	23	39	0	-
RE230900_123	Residential	597819	4844451	1.5	17	23	39	0	-
RE230900_124	Residential	597815	4844458	1.5	17	23	39	0	-
RE230900_125	Residential	597834	4844465	1.5	16	23	39	0	-
RE230900_126	Residential	597846	4844477	1.5	16	23	38	0	-
RE230900_127	Residential	597812	4844466	1.5	17	23	39	0	-
RE230900_128	Residential	597808	4844471	1.5	17	23	39	0	-
RE230900_129	Residential	597804	4844480	1.5	17	23	39	0	-
RE230900_130	Residential	597801	4844485	1.5	17	23	39	0	-
RE230900_131	Residential	597796	4844493	1.5	17	23	40	0	-
RE230900_132	Residential	597793	4844499	1.5	17	23	40	0	-
RE230900_133	Residential	597788	4844505	1.5	17	23	40	0	-
RE230900_134	Residential	597785	4844512	1.5	17	23	40	0	-
RE230900_135	Residential	597781	4844519	1.5	17	23	40	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_136	Residential	597777	4844525	1.5	17	23	40	0	-
RE230900_137	Residential	597772	4844533	1.5	18	23	40	0	-
RE230900_138	Residential	597769	4844540	1.5	18	23	40	0	-
RE230900_139	Residential	597765	4844546	1.5	18	23	40	0	-
RE230900_140	Residential	597762	4844553	1.5	18	23	40	0	-
RE230900_141	Residential	597758	4844559	1.5	18	23	41	0	-
RE230900_142	Residential	597755	4844565	1.5	18	23	41	0	-
RE230900_143	Residential	597751	4844573	1.5	18	23	41	0	-
RE230900_144	Residential	597747	4844579	1.5	18	23	41	0	-
RE230900_145	Residential	597822	4844504	1.5	16	23	39	0	-
RE230900_146	Residential	597827	4844497	1.5	16	23	39	0	-
RE230900_147	Residential	597831	4844490	1.5	16	23	39	0	-
RE230900_148	Residential	597839	4844470	1.5	16	23	38	0	-
RE230900_149	Residential	598114	4844042	1.5	13	23	36	0	-
RE230900_150	Residential	598102	4844034	1.5	14	23	37	0	-
RE230900_151	Residential	598094	4844026	1.5	14	23	37	0	-
RE230900_152	Residential	598074	4844024	1.5	15	23	38	0	-
RE230900_153	Residential	598063	4844034	1.5	15	23	38	0	-
RE230900_154	Residential	598053	4844045	1.5	15	23	38	0	-
RE230900_155	Residential	598043	4844055	1.5	16	23	38	0	-
RE230900_156	Residential	598034	4844069	1.5	16	23	38	0	-
RE230900_157	Residential	598028	4844085	1.5	15	23	38	0	-
RE230900_158	Residential	598036	4844098	1.5	15	23	37	0	-
RE230900_159	Residential	598045	4844106	1.5	14	23	37	0	-
RE230900_160	Residential	598054	4844116	1.5	14	23	36	0	-
RE230900_161	Residential	598102	4844074	1.5	13	23	36	0	-
RE230900_162	Residential	598085	4844058	1.5	14	23	36	0	-
RE230900_163	Residential	598068	4844077	1.5	14	23	37	0	-
RE230900_164	Residential	598080	4844091	1.5	13	23	36	0	-
RE230900_165	Residential	598123	4844051	1.5	13	23	36	0	-
RE230900_166	Residential	598199	4843983	1.5	12	23	35	0	-
RE230900_167	Residential	598192	4843977	1.5	13	23	35	0	-
RE230900_168	Residential	598185	4843968	1.5	13	23	35	0	-
RE230900_169	Residential	598179	4843962	1.5	13	23	36	0	-
RE230900_170	Residential	598170	4843953	1.5	14	23	36	0	-
RE230900_171	Residential	598161	4843941	1.5	14	23	37	0	-
RE230900_172	Residential	598158	4843928	1.5	15	23	38	0	-
RE230900_173	Residential	598165	4843918	1.5	15	23	38	0	-
RE230900_174	Residential	598171	4843911	1.5	15	23	38	0	-
RE230900_175	Residential	598179	4843903	1.5	15	23	38	0	-
RE230900_176	Residential	598185	4843897	1.5	15	23	37	0	-
RE230900_177	Residential	598191	4843889	1.5	15	23	37	0	-
RE230900_178	Residential	598197	4843884	1.5	15	23	37	0	-
RE230900_179	Residential	598202	4843879	1.5	15	23	37	0	-
RE230900_180	Residential	598209	4843872	1.5	15	23	37	0	-
RE230900_181	Residential	598215	4843866	1.5	15	23	37	0	-
RE230900_182	Residential	598222	4843858	1.5	15	23	37	0	-
RE230900_192	Residential	598217	4843965	1.5	12	23	35	0	-
RE230900_193	Residential	598205	4843953	1.5	13	23	35	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE230900_194	Residential	598192	4843939	1.5	13	23	36	0	-
RE230900_198	Residential	597969	4844339	1.5	14	23	36	0	-
RE230900_199	Residential	597959	4844330	1.5	14	23	36	0	-
RE230900_200	Residential	597950	4844320	1.5	14	23	37	0	-
RE230900_201	Residential	597940	4844310	1.5	14	23	37	0	-
RE230900_202	Residential	597931	4844302	1.5	15	23	37	0	-
RE230900_203	Residential	597923	4844293	1.5	15	23	38	0	-
RE230900_204	Residential	597913	4844282	1.5	15	23	38	0	-
RE230900_205	Residential	597979	4844349	1.5	13	23	36	0	-
RE230900_206	Residential	597848	4844272	1.5	19	23	42	0	-
RE230900_207	Residential	597840	4844263	1.5	20	23	43	0	-
RE230900_208	Residential	597864	4844244	1.5	19	23	42	0	-
RE230900_209	Residential	597869	4844237	1.5	19	23	42	0	-
RE230900_210	Residential	597874	4844230	1.5	19	23	41	0	-
RE230900_211	Residential	597878	4844225	1.5	19	23	41	0	-
RE230900_212	Residential	597888	4844211	1.5	19	23	41	0	-
RE230900_213	Residential	597893	4844204	1.5	19	23	41	0	-
RE230900_214	Residential	597899	4844195	1.5	19	23	41	0	-
RE230900_215	Residential	597904	4844188	1.5	18	23	41	0	-
RE230900_216	Residential	597884	4844219	1.5	19	23	41	0	-
RE230900_217	Residential	597946	4844123	1.5	19	23	41	0	-
RE230900_218	Residential	597910	4844177	1.5	19	23	41	0	-
RE230900_219	Residential	597915	4844171	1.5	18	23	41	0	-
RE230900_220	Residential	597921	4844162	1.5	18	23	41	0	-
RE230900_221	Residential	597926	4844153	1.5	18	23	41	0	-
RE230900_222	Residential	597936	4844139	1.5	18	23	41	0	-
RE230900_223	Residential	597954	4844115	1.5	18	23	41	0	-
RE230900_224	Residential	597959	4844106	1.5	19	23	41	0	-
RE230900_225	Residential	597967	4844098	1.5	18	23	41	0	-
RE230900_226	Residential	597972	4844091	1.5	18	23	41	0	-
RE230900_227	Residential	597977	4844083	1.5	18	23	41	0	-
RE230900_228	Residential	597982	4844076	1.5	18	23	41	0	-
RE230900_229	Residential	597986	4844069	1.5	18	23	41	0	-
RE230900_230	Residential	597991	4844063	1.5	18	23	41	0	-
RE230900_231	Residential	597994	4844057	1.5	19	23	41	0	-
RE230900_232	Residential	598000	4844050	1.5	19	23	41	0	-
RE230900_233	Residential	598005	4844046	1.5	18	23	41	0	-
RE230900_234	Residential	598013	4844034	1.5	19	23	41	0	-
RE230900_235	Residential	598019	4844027	1.5	19	23	41	0	-
RE230900_236	Residential	598024	4844022	1.5	18	23	41	0	-
RE230900_237	Residential	598029	4844018	1.5	18	23	41	0	-
RE230900_238	Residential	598032	4844011	1.5	18	23	41	0	-
RE230900_239	Residential	598037	4844006	1.5	18	23	41	0	-
RE230900_240	Residential	598044	4843998	1.5	18	23	41	0	-
RE230900_241	Residential	597941	4844132	1.5	18	23	41	0	-
RE230900_242	Residential	598051	4843992	1.5	18	23	41	0	-
RE230900_243	Residential	598058	4843984	1.5	18	23	41	0	-
RE230900_244	Residential	598066	4843978	1.5	18	23	41	0	-
RE230900_245	Residential	598072	4843971	1.5	18	23	40	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_246	Residential	598078	4843964	1.5	18	23	40	0	-
RE230900_247	Residential	598084	4843957	1.5	18	23	40	0	-
RE230900_257	Residential	598130	4844202	1.5	11	23	34	0	-
RE230900_258	Residential	598131	4844192	1.5	11	23	34	0	-
RE230900_259	Residential	598135	4844179	1.5	11	23	34	0	-
RE230900_260	Residential	598147	4844156	1.5	11	23	34	0	-
RE230900_261	Residential	598154	4844148	1.5	11	23	34	0	-
RE230900_262	Residential	598161	4844140	1.5	11	23	34	0	-
RE230900_263	Residential	598095	4844225	1.5	12	23	34	0	-
RE230900_264	Residential	598095	4844213	1.5	12	23	34	0	-
RE230900_265	Residential	598095	4844198	1.5	12	23	35	0	-
RE230900_266	Residential	598094	4844188	1.5	12	23	35	0	-
RE230900_272	Residential	598293	4843978	1.5	11	23	33	0	-
RE230900_273	Residential	598282	4843987	1.5	11	23	33	0	-
RE230900_274	Residential	598272	4843996	1.5	11	23	33	0	-
RE230900_275	Residential	598261	4844006	1.5	11	23	34	0	-
RE230900_276	Residential	598251	4844016	1.5	11	23	34	0	-
RE230900_277	Residential	598243	4844025	1.5	11	23	34	0	-
RE230900_278	Residential	598237	4844030	1.5	11	23	34	0	-
RE230900_279	Residential	598231	4844036	1.5	11	23	34	0	-
RE230900_280	Residential	598225	4844041	1.5	11	23	34	0	-
RE230900_281	Residential	598220	4844046	1.5	11	23	34	0	-
RE230900_282	Residential	598213	4844053	1.5	11	23	34	0	-
RE230900_283	Residential	598133	4844117	1.5	12	23	35	0	-
RE230900_285	Residential	598098	4844164	1.5	12	23	35	0	-
RE230900_286	Residential	598103	4844154	1.5	12	23	35	0	-
RE230900_287	Residential	598107	4844144	1.5	12	23	35	0	-
RE230900_288	Residential	598172	4844129	1.5	11	23	34	0	-
RE230900_289	Residential	598183	4844119	1.5	11	23	34	0	-
RE230900_290	Residential	598190	4844111	1.5	11	23	34	0	-
RE230900_291	Residential	598198	4844103	1.5	11	23	34	0	-
RE230900_292	Residential	598205	4844095	1.5	11	23	34	0	-
RE230900_293	Residential	598212	4844088	1.5	11	23	34	0	-
RE230900_294	Residential	598185	4844065	1.5	11	23	34	0	-
RE230900_295	Residential	598176	4844074	1.5	12	23	34	0	-
RE230900_296	Residential	598166	4844083	1.5	12	23	34	0	-
RE230900_297	Residential	598158	4844092	1.5	12	23	34	0	-
RE230900_298	Residential	598148	4844101	1.5	12	23	34	0	-
RE230900_299	Residential	598139	4844111	1.5	12	23	34	0	-
RE230900_300	Residential	598118	4844130	1.5	12	23	35	0	-
RE230900_301	Residential	598112	4844137	1.5	12	23	35	0	-
RE230900_302	Residential	598231	4844068	1.5	11	23	33	0	-
RE230900_303	Residential	598240	4844057	1.5	11	23	33	0	-
RE230900_304	Residential	598258	4844039	1.5	11	23	33	0	-
RE230900_305	Residential	598267	4844030	1.5	11	23	33	0	-
RE230900_306	Residential	598275	4844021	1.5	11	23	33	0	-
RE230900_307	Residential	598296	4844003	1.5	10	23	33	0	-
RE230900_310	Residential	598286	4844012	1.5	11	23	33	0	-
RE230900_312	Residential	598068	4844260	1.5	12	23	35	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_313	Residential	598248	4844048	1.5	11	23	33	0	-
RE230900_315	Residential	598095	4844177	1.5	12	23	35	0	-
RE230900_317	Residential	598062	4844211	1.5	12	23	35	0	-
RE230900_318	Residential	598168	4844040	1.5	12	23	35	0	-
RE230900_319	Residential	598156	4844051	1.5	12	23	35	0	-
RE230900_320	Residential	598148	4844062	1.5	12	23	35	0	-
RE230900_321	Residential	598135	4844072	1.5	12	23	35	0	-
RE230900_322	Residential	598126	4844084	1.5	12	23	35	0	-
RE230900_323	Residential	598113	4844094	1.5	13	23	35	0	-
RE230900_324	Residential	598105	4844105	1.5	13	23	35	0	-
RE230900_325	Residential	598096	4844112	1.5	13	23	35	0	-
RE230900_326	Residential	598087	4844118	1.5	13	23	35	0	-
RE230900_327	Residential	598077	4844131	1.5	13	23	35	0	-
RE230900_328	Residential	598067	4844143	1.5	13	23	36	0	-
RE230900_329	Residential	598061	4844157	1.5	13	23	36	0	-
RE230900_330	Residential	598061	4844172	1.5	13	23	35	0	-
RE230900_331	Residential	598061	4844185	1.5	13	23	35	0	-
RE230900_332	Residential	598062	4844198	1.5	13	23	35	0	-
RE230900_333	Residential	598063	4844224	1.5	12	23	35	0	-
RE230900_334	Residential	598128	4844123	1.5	12	23	35	0	-
RE230900_335	Residential	598138	4844168	1.5	11	23	34	0	-
RE230900_337	Residential	598275	4843935	1.5	11	23	34	0	-
RE230900_338	Residential	598267	4843942	1.5	12	23	34	0	-
RE230900_339	Residential	598256	4843950	1.5	12	23	34	0	-
RE230900_340	Residential	598247	4843960	1.5	12	23	34	0	-
RE230900_341	Residential	598239	4843966	1.5	12	23	34	0	-
RE230900_342	Residential	598233	4843974	1.5	12	23	34	0	-
RE230900_343	Residential	598226	4843980	1.5	12	23	34	0	-
RE230900_344	Residential	598218	4843987	1.5	12	23	34	0	-
RE230900_345	Residential	598211	4843994	1.5	12	23	34	0	-
RE230900_346	Residential	598205	4844002	1.5	12	23	34	0	-
RE230900_347	Residential	598199	4844007	1.5	12	23	35	0	-
RE230900_348	Residential	598190	4844015	1.5	12	23	35	0	-
RE230900_349	Residential	598181	4844024	1.5	12	23	35	0	-
RE230900_350	Residential	597947	4844283	1.5	14	23	37	0	-
RE230900_351	Residential	597937	4844272	1.5	15	23	37	0	-
RE230900_352	Residential	597929	4844264	1.5	15	23	38	0	-
RE230900_353	Residential	597958	4844245	1.5	15	23	37	0	-
RE230900_354	Residential	597947	4844234	1.5	15	23	38	0	-
RE230900_355	Residential	597920	4844224	1.5	16	23	39	0	-
RE230900_356	Residential	597911	4844235	1.5	17	23	39	0	-
RE230900_357	Residential	597935	4844225	1.5	16	23	38	0	-
RE230900_358	Residential	597903	4844242	1.5	17	23	39	0	-
RE230900_359	Residential	597894	4844252	1.5	17	23	39	0	-
RE230900_360	Residential	597885	4844262	1.5	17	23	40	0	-
RE230900_361	Residential	597993	4844327	1.5	13	23	36	0	-
RE230900_362	Residential	597985	4844320	1.5	13	23	36	0	-
RE230900_363	Residential	597976	4844312	1.5	14	23	36	0	-
RE230900_364	Residential	597966	4844301	1.5	14	23	36	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_365	Residential	597956	4844290	1.5	14	23	37	0	-
RE230900_366	Residential	597988	4844228	1.5	14	23	36	0	-
RE230900_367	Residential	597980	4844220	1.5	14	23	37	0	-
RE230900_368	Residential	597970	4844211	1.5	15	23	37	0	-
RE230900_369	Residential	597960	4844201	1.5	15	23	38	0	-
RE230900_370	Residential	597949	4844191	1.5	16	23	38	0	-
RE230900_371	Residential	597936	4844178	1.5	17	23	39	0	-
RE230900_372	Residential	598039	4844140	1.5	14	23	36	0	-
RE230900_373	Residential	598027	4844132	1.5	14	23	37	0	-
RE230900_374	Residential	598012	4844121	1.5	15	23	37	0	-
RE230900_375	Residential	597996	4844119	1.5	16	23	38	0	-
RE230900_376	Residential	597981	4844132	1.5	16	23	39	0	-
RE230900_377	Residential	597973	4844146	1.5	16	23	39	0	-
RE230900_378	Residential	598034	4844176	1.5	13	23	36	0	-
RE230900_379	Residential	598015	4844169	1.5	14	23	37	0	-
RE230900_380	Residential	598000	4844158	1.5	15	23	37	0	-
RE230900_381	Residential	597986	4844180	1.5	15	23	37	0	-
RE230900_382	Residential	597997	4844189	1.5	14	23	37	0	-
RE230900_383	Residential	598009	4844195	1.5	14	23	36	0	-
RE230900_384	Residential	598020	4844205	1.5	13	23	36	0	-
RE230900_385	Residential	598034	4844205	1.5	13	23	36	0	-
RE230900_386	Residential	598213	4843919	1.5	13	23	36	0	-
RE230900_387	Residential	598223	4843930	1.5	13	23	35	0	-
RE230900_388	Residential	598235	4843942	1.5	12	23	35	0	-
RE230900_389	Residential	598262	4843914	1.5	12	23	35	0	-
RE230900_390	Residential	598251	4843903	1.5	13	23	35	0	-
RE230900_391	Residential	598238	4843889	1.5	13	23	36	0	-
RE230900_394	Residential	597965	4844159	1.5	16	23	39	0	-
RE230900_395	Residential	598116	4843943	1.5	16	23	39	0	-
RE230900_396	Residential	598126	4843952	1.5	15	23	38	0	-
RE230900_397	Residential	598136	4843962	1.5	15	23	37	0	-
RE230900_398	Residential	598147	4843973	1.5	14	23	37	0	-
RE230900_399	Residential	598158	4843985	1.5	13	23	36	0	-
RE230900_400	Residential	598170	4843998	1.5	13	23	35	0	-
RE230900_401	Residential	598145	4844026	1.5	13	23	35	0	-
RE230900_402	Residential	598132	4844013	1.5	13	23	36	0	-
RE230900_403	Residential	598121	4844002	1.5	14	23	37	0	-
RE230900_404	Residential	598113	4843994	1.5	15	23	37	0	-
RE230900_405	Residential	598106	4843985	1.5	15	23	38	0	-
RE230900_406	Residential	598095	4843974	1.5	16	23	39	0	-
RE231000_001	Recreation	597895	4844715	1.5	14	23	37	0	-
RE231000_002	Residential	594593	4847779	1.5	10	23	33	0	-
RE231000_003	Residential	597966	4844386	1.5	13	23	36	0	-
RE231000_004	Residential	597973	4844395	1.5	13	23	36	0	-
RE231000_005	Residential	597984	4844407	1.5	13	23	35	0	-
RE231000_006	Residential	597998	4844418	1.5	12	23	35	0	-
RE231000_007	Residential	598005	4844428	1.5	12	23	35	0	-
RE231000_008	Residential	598021	4844443	1.5	12	23	35	0	-
RE231000_009	Residential	598033	4844455	1.5	12	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE231000_010	Residential	598043	4844466	1.5	12	23	34	0	-
RE231000_011	Residential	597940	4844407	1.5	14	23	36	0	-
RE231000_012	Residential	597949	4844414	1.5	14	23	36	0	-
RE231000_013	Residential	597956	4844424	1.5	13	23	36	0	-
RE231000_014	Residential	597965	4844432	1.5	13	23	36	0	-
RE231000_015	Residential	597973	4844440	1.5	13	23	35	0	-
RE231000_016	Residential	597982	4844449	1.5	13	23	35	0	-
RE231000_017	Residential	597989	4844456	1.5	12	23	35	0	-
RE231000_018	Residential	597997	4844465	1.5	12	23	35	0	-
RE231000_019	Residential	598006	4844473	1.5	12	23	35	0	-
RE231000_020	Residential	598015	4844481	1.5	12	23	35	0	-
RE231000_021	Residential	598022	4844489	1.5	12	23	35	0	-
RE231000_022	Residential	598030	4844498	1.5	12	23	34	0	-
RE231000_023	Residential	598039	4844506	1.5	12	23	34	0	-
RE231000_024	Residential	598046	4844513	1.5	12	23	34	0	-
RE231000_025	Residential	598053	4844523	1.5	11	23	34	0	-
RE231000_026	Residential	598064	4844530	1.5	11	23	34	0	-
RE231000_027	Residential	597902	4844429	1.5	14	23	37	0	-
RE231000_028	Residential	597911	4844437	1.5	14	23	37	0	-
RE231000_029	Residential	597918	4844446	1.5	14	23	37	0	-
RE231000_030	Residential	597928	4844453	1.5	14	23	36	0	-
RE231000_031	Residential	597934	4844463	1.5	14	23	36	0	-
RE231000_032	Residential	597943	4844469	1.5	13	23	36	0	-
RE231000_033	Residential	597953	4844479	1.5	13	23	36	0	-
RE231000_034	Residential	597961	4844486	1.5	13	23	35	0	-
RE231000_035	Residential	597969	4844494	1.5	13	23	35	0	-
RE231000_036	Residential	597976	4844504	1.5	13	23	35	0	-
RE231000_037	Residential	597984	4844514	1.5	12	23	35	0	-
RE231000_038	Residential	597992	4844520	1.5	12	23	35	0	-
RE231000_039	Residential	598001	4844529	1.5	12	23	35	0	-
RE231000_040	Residential	598009	4844537	1.5	12	23	35	0	-
RE231000_041	Residential	598016	4844545	1.5	12	23	35	0	-
RE231000_042	Residential	598025	4844554	1.5	12	23	34	0	-
RE231000_043	Residential	598033	4844562	1.5	12	23	34	0	-
RE231000_044	Residential	598013	4844582	1.5	12	23	35	0	-
RE231000_045	Residential	598003	4844574	1.5	12	23	35	0	-
RE231000_046	Residential	597995	4844566	1.5	12	23	35	0	-
RE231000_047	Residential	597987	4844557	1.5	12	23	35	0	-
RE231000_048	Residential	597979	4844550	1.5	13	23	35	0	-
RE231000_049	Residential	597972	4844542	1.5	13	23	35	0	-
RE231000_050	Residential	597967	4844538	1.5	13	23	35	0	-
RE231000_051	Residential	597961	4844530	1.5	13	23	35	0	-
RE231000_052	Residential	597957	4844525	1.5	13	23	35	0	-
RE231000_053	Residential	597950	4844520	1.5	13	23	36	0	-
RE231000_054	Residential	597945	4844515	1.5	13	23	36	0	-
RE231000_055	Residential	597940	4844509	1.5	13	23	36	0	-
RE231000_056	Residential	597934	4844504	1.5	13	23	36	0	-
RE231000_057	Residential	597929	4844499	1.5	14	23	36	0	-
RE231000_058	Residential	597923	4844493	1.5	14	23	36	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_059	Residential	597918	4844487	1.5	14	23	36	0	-
RE231000_060	Residential	597914	4844483	1.5	14	23	36	0	-
RE231000_061	Residential	597908	4844476	1.5	14	23	37	0	-
RE231000_062	Residential	597904	4844471	1.5	14	23	37	0	-
RE231000_063	Residential	597897	4844465	1.5	14	23	37	0	-
RE231000_064	Residential	597892	4844460	1.5	14	23	37	0	-
RE231000_065	Residential	597886	4844454	1.5	15	23	37	0	-
RE231000_066	Residential	597881	4844449	1.5	15	23	37	0	-
RE231000_067	Residential	597742	4844586	1.5	19	23	41	0	-
RE231000_068	Residential	597739	4844592	1.5	19	23	41	0	-
RE231000_069	Residential	597735	4844599	1.5	19	23	41	0	-
RE231000_070	Residential	597732	4844605	1.5	19	23	41	0	-
RE231000_071	Residential	597727	4844613	1.5	19	23	42	0	-
RE231000_072	Residential	597724	4844619	1.5	19	23	42	0	-
RE231000_073	Residential	597720	4844626	1.5	19	23	42	0	-
RE231000_074	Residential	597718	4844632	1.5	20	23	42	0	-
RE231000_075	Residential	597712	4844640	1.5	20	23	43	0	-
RE231000_076	Residential	597707	4844646	1.5	20	23	43	0	-
RE231000_077	Residential	597684	4844653	1.5	22	23	44	0	-
RE231000_078	Residential	597688	4844659	1.5	21	23	44	0	-
RE231000_079	Residential	597692	4844664	1.5	21	23	44	0	-
RE231000_080	Residential	597695	4844670	1.5	21	23	44	0	-
RE231000_081	Residential	597701	4844677	1.5	21	23	43	0	-
RE231000_082	Residential	597705	4844683	1.5	21	23	43	0	-
RE231000_083	Residential	597708	4844687	1.5	21	23	43	0	-
RE231000_084	Residential	597711	4844692	1.5	20	23	43	0	-
RE231000_085	Residential	597729	4844665	1.5	19	23	42	0	-
RE231000_086	Residential	597725	4844670	1.5	20	23	42	0	-
RE231000_087	Residential	597738	4844650	1.5	19	23	41	0	-
RE231000_088	Residential	597734	4844657	1.5	19	23	42	0	-
RE231000_089	Residential	597742	4844645	1.5	19	23	41	0	-
RE231000_090	Residential	597746	4844639	1.5	18	23	41	0	-
RE231000_091	Residential	597750	4844631	1.5	18	23	41	0	-
RE231000_092	Residential	597753	4844624	1.5	18	23	41	0	-
RE231000_093	Residential	597757	4844618	1.5	18	23	41	0	-
RE231000_094	Residential	597761	4844610	1.5	18	23	40	0	-
RE231000_095	Residential	597764	4844603	1.5	18	23	40	0	-
RE231000_096	Residential	597768	4844596	1.5	18	23	40	0	-
RE231000_097	Residential	597773	4844591	1.5	17	23	40	0	-
RE231000_098	Residential	597777	4844584	1.5	17	23	40	0	-
RE231000_099	Residential	597780	4844577	1.5	17	23	40	0	-
RE231000_100	Residential	597784	4844570	1.5	17	23	40	0	-
RE231000_101	Residential	597789	4844564	1.5	17	23	40	0	-
RE231000_102	Residential	597793	4844557	1.5	17	23	39	0	-
RE231000_103	Residential	597796	4844550	1.5	17	23	39	0	-
RE231000_104	Residential	597800	4844544	1.5	17	23	39	0	-
RE231000_105	Residential	597804	4844537	1.5	16	23	39	0	-
RE231000_106	Residential	597807	4844531	1.5	16	23	39	0	-
RE231000_107	Residential	597811	4844525	1.5	16	23	39	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_108	Residential	597814	4844518	1.5	16	23	39	0	-
RE231000_109	Residential	597819	4844511	1.5	16	23	39	0	-
RE231000_110	Residential	597851	4844481	1.5	15	23	38	0	-
RE231000_111	Residential	597881	4844502	1.5	15	23	37	0	-
RE231000_112	Residential	597876	4844507	1.5	15	23	37	0	-
RE231000_113	Residential	597871	4844514	1.5	15	23	37	0	-
RE231000_114	Residential	597866	4844519	1.5	15	23	37	0	-
RE231000_115	Residential	597849	4844534	1.5	15	23	38	0	-
RE231000_116	Residential	597855	4844537	1.5	15	23	38	0	-
RE231000_117	Residential	597863	4844540	1.5	15	23	37	0	-
RE231000_118	Residential	597869	4844544	1.5	15	23	37	0	-
RE231000_119	Residential	597877	4844549	1.5	14	23	37	0	-
RE231000_120	Residential	597883	4844553	1.5	14	23	37	0	-
RE231000_121	Residential	597889	4844560	1.5	14	23	37	0	-
RE231000_122	Residential	597894	4844565	1.5	14	23	37	0	-
RE231000_123	Residential	597899	4844571	1.5	14	23	36	0	-
RE231000_124	Residential	597904	4844576	1.5	14	23	36	0	-
RE231000_125	Residential	597911	4844583	1.5	14	23	36	0	-
RE231000_126	Residential	597920	4844591	1.5	13	23	36	0	-
RE231000_127	Residential	597928	4844600	1.5	13	23	36	0	-
RE231000_128	Residential	597935	4844608	1.5	13	23	36	0	-
RE231000_129	Residential	597944	4844616	1.5	13	23	36	0	-
RE231000_130	Residential	597952	4844625	1.5	13	23	36	0	-
RE231000_131	Residential	597960	4844633	1.5	13	23	35	0	-
RE231000_132	Residential	597889	4844521	1.5	14	23	37	0	-
RE231000_133	Residential	597895	4844526	1.5	14	23	37	0	-
RE231000_134	Residential	597900	4844533	1.5	14	23	37	0	-
RE231000_135	Residential	597906	4844537	1.5	14	23	37	0	-
RE231000_136	Residential	597912	4844543	1.5	14	23	36	0	-
RE231000_137	Residential	597916	4844549	1.5	14	23	36	0	-
RE231000_138	Residential	597922	4844554	1.5	13	23	36	0	-
RE231000_139	Residential	597927	4844558	1.5	13	23	36	0	-
RE231000_140	Residential	597933	4844565	1.5	13	23	36	0	-
RE231000_141	Residential	597938	4844570	1.5	13	23	36	0	-
RE231000_142	Residential	597944	4844577	1.5	13	23	36	0	-
RE231000_143	Residential	597948	4844581	1.5	13	23	36	0	-
RE231000_144	Residential	597956	4844588	1.5	13	23	35	0	-
RE231000_145	Residential	597964	4844596	1.5	13	23	35	0	-
RE231000_146	Residential	597973	4844604	1.5	13	23	35	0	-
RE231000_147	Residential	597981	4844613	1.5	12	23	35	0	-
RE231000_148	Residential	597825	4844568	1.5	16	23	38	0	-
RE231000_149	Residential	597833	4844573	1.5	15	23	38	0	-
RE231000_150	Residential	597840	4844577	1.5	15	23	38	0	-
RE231000_151	Residential	597846	4844581	1.5	15	23	38	0	-
RE231000_152	Residential	597854	4844587	1.5	15	23	38	0	-
RE231000_153	Residential	597859	4844593	1.5	15	23	37	0	-
RE231000_154	Residential	597865	4844598	1.5	15	23	37	0	-
RE231000_155	Residential	597871	4844603	1.5	14	23	37	0	-
RE231000_156	Residential	597850	4844609	1.5	15	23	38	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_157	Residential	597844	4844615	1.5	15	23	38	0	-
RE231000_158	Residential	597822	4844588	1.5	16	23	38	0	-
RE231000_159	Residential	597819	4844595	1.5	16	23	38	0	-
RE231000_160	Residential	597816	4844602	1.5	16	23	38	0	-
RE231000_161	Residential	597813	4844608	1.5	16	23	39	0	-
RE231000_162	Residential	597807	4844615	1.5	16	23	39	0	-
RE231000_163	Residential	597805	4844621	1.5	16	23	39	0	-
RE231000_164	Residential	597800	4844629	1.5	16	23	39	0	-
RE231000_165	Residential	597796	4844636	1.5	16	23	39	0	-
RE231000_166	Residential	597791	4844643	1.5	17	23	39	0	-
RE231000_167	Residential	597787	4844650	1.5	17	23	39	0	-
RE231000_168	Residential	597783	4844657	1.5	17	23	40	0	-
RE231000_169	Residential	597780	4844665	1.5	17	23	40	0	-
RE231000_170	Residential	597775	4844673	1.5	17	23	40	0	-
RE231000_171	Residential	597772	4844679	1.5	18	23	40	0	-
RE231000_172	Residential	597767	4844686	1.5	18	23	40	0	-
RE231000_173	Residential	597764	4844694	1.5	18	23	41	0	-
RE231000_174	Residential	597757	4844702	1.5	18	23	41	0	-
RE231000_175	Residential	597751	4844706	1.5	19	23	41	0	-
RE231000_176	Residential	597729	4844717	1.5	20	23	42	0	-
RE231000_177	Residential	597734	4844724	1.5	20	23	42	0	-
RE231000_178	Residential	597737	4844729	1.5	19	23	42	0	-
RE231000_179	Residential	597741	4844734	1.5	19	23	42	0	-
RE231000_180	Residential	597744	4844739	1.5	19	23	42	0	-
RE231000_181	Residential	597747	4844744	1.5	19	23	42	0	-
RE231000_182	Residential	597750	4844749	1.5	19	23	42	0	-
RE231000_183	Residential	597753	4844754	1.5	19	23	42	0	-
RE231000_184	Residential	597759	4844763	1.5	19	23	41	0	-
RE231000_185	Residential	597762	4844769	1.5	19	23	41	0	-
RE231000_186	Residential	597765	4844773	1.5	19	23	41	0	-
RE231000_187	Residential	597768	4844778	1.5	19	23	41	0	-
RE231000_188	Residential	597771	4844783	1.5	19	23	41	0	-
RE231000_189	Residential	597774	4844789	1.5	19	23	41	0	-
RE231000_190	Residential	597802	4844774	1.5	17	23	40	0	-
RE231000_191	Residential	597798	4844768	1.5	17	23	40	0	-
RE231000_192	Residential	597793	4844761	1.5	17	23	40	0	-
RE231000_193	Residential	597789	4844754	1.5	17	23	40	0	-
RE231000_194	Residential	597785	4844747	1.5	17	23	40	0	-
RE231000_195	Residential	597782	4844741	1.5	18	23	40	0	-
RE231000_196	Residential	597779	4844727	1.5	18	23	40	0	-
RE231000_197	Residential	597780	4844719	1.5	17	23	40	0	-
RE231000_198	Residential	597785	4844710	1.5	17	23	40	0	-
RE231000_199	Residential	597788	4844703	1.5	17	23	40	0	-
RE231000_200	Residential	597793	4844697	1.5	17	23	39	0	-
RE231000_201	Residential	597797	4844690	1.5	17	23	39	0	-
RE231000_202	Residential	597801	4844683	1.5	16	23	39	0	-
RE231000_203	Residential	597805	4844676	1.5	16	23	39	0	-
RE231000_204	Residential	597808	4844669	1.5	16	23	39	0	-
RE231000_205	Residential	597812	4844663	1.5	16	23	39	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE231000_206	Residential	597815	4844656	1.5	16	23	39	0	-
RE231000_207	Residential	597818	4844649	1.5	16	23	38	0	-
RE231000_208	Residential	597823	4844642	1.5	16	23	38	0	-
RE231000_209	Residential	597827	4844636	1.5	16	23	38	0	-
RE231000_210	Residential	597832	4844629	1.5	15	23	38	0	-
RE231000_211	Residential	597837	4844622	1.5	15	23	38	0	-
RE231000_212	Residential	597902	4844623	1.5	14	23	36	0	-
RE231000_213	Residential	597895	4844627	1.5	14	23	36	0	-
RE231000_214	Residential	597889	4844633	1.5	14	23	37	0	-
RE231000_215	Residential	597884	4844639	1.5	14	23	37	0	-
RE231000_216	Residential	597878	4844646	1.5	14	23	37	0	-
RE231000_217	Residential	597873	4844650	1.5	14	23	37	0	-
RE231000_218	Residential	597867	4844656	1.5	15	23	37	0	-
RE231000_219	Residential	597863	4844664	1.5	15	23	37	0	-
RE231000_220	Residential	597859	4844671	1.5	15	23	37	0	-
RE231000_221	Residential	597855	4844678	1.5	15	23	38	0	-
RE231000_222	Residential	597851	4844684	1.5	15	23	38	0	-
RE231000_223	Residential	597847	4844690	1.5	15	23	38	0	-
RE231000_224	Residential	597843	4844697	1.5	15	23	38	0	-
RE231000_225	Residential	597839	4844704	1.5	16	23	38	0	-
RE231000_226	Residential	597835	4844711	1.5	16	23	38	0	-
RE231000_227	Residential	597832	4844718	1.5	16	23	38	0	-
RE231000_228	Residential	597827	4844726	1.5	16	23	39	0	-
RE231000_229	Residential	597824	4844733	1.5	16	23	39	0	-
RE231000_230	Residential	597840	4844745	1.5	16	23	38	0	-
RE231000_231	Residential	597846	4844750	1.5	15	23	38	0	-
RE231000_232	Residential	597851	4844761	1.5	15	23	38	0	-
RE231000_233	Residential	597853	4844771	1.5	15	23	38	0	-
RE231000_234	Residential	597851	4844781	1.5	15	23	38	0	-
RE231000_235	Residential	597848	4844790	1.5	15	23	38	0	-
RE231000_236	Residential	597838	4844796	1.5	16	23	38	0	-
RE231000_237	Residential	597831	4844801	1.5	16	23	39	0	-
RE231000_238	Residential	597823	4844804	1.5	16	23	39	0	-
RE231000_239	Residential	597817	4844807	1.5	16	23	39	0	-
RE231000_240	Residential	597811	4844812	1.5	17	23	39	0	-
RE231000_241	Residential	597804	4844816	1.5	17	23	40	0	-
RE231000_242	Residential	597800	4844820	1.5	17	23	40	0	-
RE231000_243	Residential	597794	4844823	1.5	18	23	40	0	-
RE231000_244	Residential	597788	4844825	1.5	18	23	41	0	-
RE231000_245	Residential	597783	4844829	1.5	19	23	41	0	-
RE231000_246	Residential	597778	4844831	1.5	19	23	42	0	-
RE231000_247	Residential	597772	4844835	1.5	20	23	42	0	-
RE231000_248	Residential	598015	4844639	1.5	12	23	35	0	-
RE231000_249	Residential	598007	4844649	1.5	12	23	35	0	-
RE231000_250	Residential	597997	4844656	1.5	12	23	35	0	-
RE231000_251	Residential	597989	4844666	1.5	12	23	35	0	-
RE231000_252	Residential	598060	4844590	1.5	11	23	34	0	-
RE231000_253	Residential	598069	4844598	1.5	11	23	34	0	-
RE231000_254	Residential	598040	4844610	1.5	12	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE231000_255	Residential	598049	4844618	1.5	11	23	34	0	-
RE231000_256	Residential	598252	4844214	1.5	10	23	32	0	-
RE231000_257	Residential	598246	4844300	1.5	10	23	32	0	-
RE231000_276	Residential	598191	4844478	1.5	10	23	33	0	-
RE231000_277	Residential	598184	4844471	1.5	10	23	33	0	-
RE231000_278	Residential	598093	4844561	1.5	11	23	34	0	-
RE231000_279	Residential	598104	4844571	1.5	11	23	33	0	-
RE231000_280	Residential	598023	4844395	1.5	12	23	35	0	-
RE231000_281	Residential	598013	4844383	1.5	12	23	35	0	-
RE231000_282	Residential	598113	4844482	1.5	11	23	33	0	-
RE231000_283	Residential	598059	4844484	1.5	11	23	34	0	-
RE231000_284	Residential	598062	4844435	1.5	11	23	34	0	-
RE231000_285	Residential	598052	4844476	1.5	11	23	34	0	-
RE231000_286	Residential	598054	4844424	1.5	12	23	34	0	-
RE231000_287	Residential	598086	4844510	1.5	11	23	34	0	-
RE231000_288	Residential	598077	4844504	1.5	11	23	34	0	-
RE231000_289	Residential	598044	4844414	1.5	12	23	34	0	-
RE231000_290	Residential	598033	4844405	1.5	12	23	35	0	-
RE231000_291	Residential	598102	4844474	1.5	11	23	33	0	-
RE231000_292	Residential	598093	4844464	1.5	11	23	34	0	-
RE231000_293	Residential	598072	4844496	1.5	11	23	34	0	-
RE231000_294	Residential	598083	4844454	1.5	11	23	34	0	-
RE231000_295	Residential	598065	4844490	1.5	11	23	34	0	-
RE231000_296	Residential	598074	4844444	1.5	11	23	34	0	-
RE231000_297	Residential	598159	4844494	1.5	10	23	33	0	-
RE231000_298	Residential	598169	4844501	1.5	10	23	33	0	-
RE231000_299	Residential	598002	4844372	1.5	13	23	35	0	-
RE231000_300	Residential	598066	4844349	1.5	12	23	34	0	-
RE231000_301	Residential	598127	4844467	1.5	11	23	33	0	-
RE231000_302	Residential	598120	4844461	1.5	11	23	33	0	-
RE231000_303	Residential	598109	4844448	1.5	11	23	33	0	-
RE231000_304	Residential	598101	4844440	1.5	11	23	34	0	-
RE231000_305	Residential	598067	4844275	1.5	12	23	35	0	-
RE231000_306	Residential	598068	4844289	1.5	12	23	34	0	-
RE231000_307	Residential	598068	4844303	1.5	12	23	34	0	-
RE231000_308	Residential	598066	4844315	1.5	12	23	34	0	-
RE231000_309	Residential	598076	4844364	1.5	11	23	34	0	-
RE231000_310	Residential	598085	4844425	1.5	11	23	34	0	-
RE231000_311	Residential	598078	4844418	1.5	11	23	34	0	-
RE231000_312	Residential	598069	4844410	1.5	11	23	34	0	-
RE231000_313	Residential	598062	4844402	1.5	11	23	34	0	-
RE231000_314	Residential	598053	4844391	1.5	12	23	34	0	-
RE231000_315	Residential	598047	4844385	1.5	12	23	34	0	-
RE231000_316	Residential	598030	4844364	1.5	12	23	35	0	-
RE231000_317	Residential	598086	4844375	1.5	11	23	34	0	-
RE231000_318	Residential	598106	4844396	1.5	11	23	34	0	-
RE231000_319	Residential	598116	4844406	1.5	11	23	33	0	-
RE231000_320	Residential	598127	4844416	1.5	11	23	33	0	-
RE231000_321	Residential	598143	4844435	1.5	10	23	33	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_322	Residential	598152	4844444	1.5	10	23	33	0	-
RE231000_332	Residential	598315	4844073	1.5	10	23	32	0	-
RE231000_333	Residential	598310	4844078	1.5	10	23	32	0	-
RE231000_334	Residential	598295	4844091	1.5	10	23	32	0	-
RE231000_335	Residential	598288	4844098	1.5	10	23	32	0	-
RE231000_336	Residential	598282	4844104	1.5	10	23	32	0	-
RE231000_337	Residential	598277	4844111	1.5	10	23	33	0	-
RE231000_338	Residential	598310	4844038	1.5	10	23	33	0	-
RE231000_339	Residential	598302	4844046	1.5	10	23	33	0	-
RE231000_340	Residential	598295	4844054	1.5	10	23	33	0	-
RE231000_341	Residential	598276	4844074	1.5	10	23	33	0	-
RE231000_342	Residential	598267	4844081	1.5	10	23	33	0	-
RE231000_343	Residential	598114	4844352	1.5	11	23	34	0	-
RE231000_345	Residential	598126	4844322	1.5	11	23	34	0	-
RE231000_346	Residential	598176	4844416	1.5	10	23	33	0	-
RE231000_347	Residential	598167	4844408	1.5	10	23	33	0	-
RE231000_348	Residential	598159	4844398	1.5	10	23	33	0	-
RE231000_350	Residential	598126	4844309	1.5	11	23	34	0	-
RE231000_351	Residential	598128	4844228	1.5	11	23	34	0	-
RE231000_353	Residential	598285	4844064	1.5	10	23	33	0	-
RE231000_354	Residential	598140	4844379	1.5	11	23	33	0	-
RE231000_355	Residential	598131	4844370	1.5	11	23	33	0	-
RE231000_356	Residential	598122	4844361	1.5	11	23	33	0	-
RE231000_357	Residential	598102	4844340	1.5	11	23	34	0	-
RE231000_358	Residential	598099	4844324	1.5	11	23	34	0	-
RE231000_359	Residential	598099	4844310	1.5	11	23	34	0	-
RE231000_360	Residential	598099	4844296	1.5	11	23	34	0	-
RE231000_361	Residential	598098	4844283	1.5	11	23	34	0	-
RE231000_362	Residential	598099	4844258	1.5	12	23	34	0	-
RE231000_363	Residential	598197	4844395	1.5	10	23	33	0	-
RE231000_364	Residential	598180	4844378	1.5	10	23	33	0	-
RE231000_365	Residential	598171	4844369	1.5	10	23	33	0	-
RE231000_366	Residential	598162	4844359	1.5	10	23	33	0	-
RE231000_367	Residential	598151	4844349	1.5	10	23	33	0	-
RE231000_368	Residential	598142	4844340	1.5	11	23	33	0	-
RE231000_369	Residential	598126	4844283	1.5	11	23	34	0	-
RE231000_370	Residential	598126	4844271	1.5	11	23	34	0	-
RE231000_371	Residential	598126	4844257	1.5	11	23	34	0	-
RE231000_374	Residential	598127	4844295	1.5	11	23	34	0	-
RE231000_377	Residential	598258	4844089	1.5	10	23	33	0	-
RE231000_378	Residential	598094	4844433	1.5	11	23	34	0	-
RE231000_379	Residential	598067	4844332	1.5	12	23	34	0	-
RE231000_380	Residential	598096	4844385	1.5	11	23	34	0	-
RE231000_381	Residential	598149	4844389	1.5	10	23	33	0	-
RE231000_382	Residential	598135	4844425	1.5	11	23	33	0	-
RE231000_383	Residential	598303	4844085	1.5	10	23	32	0	-
RE231000_384	Residential	598115	4844455	1.5	11	23	33	0	-
RE231000_385	Residential	598038	4844375	1.5	12	23	35	0	-
RE231000_386	Residential	598099	4844270	1.5	12	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE231000_387	Residential	598188	4844386	1.5	10	23	33	0	-
RE231000_388	Residential	598129	4844214	1.5	11	23	34	0	-
RE231000_390	Residential	598013	4844349	1.5	13	23	35	0	-
RE231000_391	Residential	598003	4844338	1.5	13	23	35	0	-
RE231000_392	Residential	598159	4844280	1.5	11	23	33	0	-
RE231000_393	Residential	598189	4844215	1.5	11	23	33	0	-
RE231000_394	Residential	598219	4844376	1.5	10	23	32	0	-
RE231000_395	Residential	598212	4844369	1.5	10	23	32	0	-
RE231000_396	Residential	598207	4844363	1.5	10	23	32	0	-
RE231000_397	Residential	598199	4844356	1.5	10	23	33	0	-
RE231000_398	Residential	598192	4844346	1.5	10	23	33	0	-
RE231000_399	Residential	598181	4844337	1.5	10	23	33	0	-
RE231000_400	Residential	598170	4844327	1.5	10	23	33	0	-
RE231000_401	Residential	598161	4844314	1.5	10	23	33	0	-
RE231000_402	Residential	598159	4844294	1.5	11	23	33	0	-
RE231000_403	Residential	598158	4844273	1.5	11	23	33	0	-
RE231000_404	Residential	598159	4844265	1.5	11	23	33	0	-
RE231000_405	Residential	598159	4844257	1.5	11	23	33	0	-
RE231000_406	Residential	598236	4844348	1.5	10	23	32	0	-
RE231000_407	Residential	598223	4844334	1.5	10	23	32	0	-
RE231000_408	Residential	598215	4844325	1.5	10	23	32	0	-
RE231000_409	Residential	598204	4844313	1.5	10	23	33	0	-
RE231000_410	Residential	598199	4844309	1.5	10	23	33	0	-
RE231000_411	Residential	598189	4844279	1.5	10	23	33	0	-
RE231000_412	Residential	598189	4844265	1.5	10	23	33	0	-
RE231000_413	Residential	598161	4844229	1.5	11	23	33	0	-
RE231000_414	Residential	598162	4844216	1.5	11	23	33	0	-
RE231000_415	Residential	598162	4844205	1.5	11	23	33	0	-
RE231000_416	Residential	598163	4844190	1.5	11	23	34	0	-
RE231000_417	Residential	598169	4844178	1.5	11	23	34	0	-
RE231000_418	Residential	598181	4844167	1.5	11	23	33	0	-
RE231000_419	Residential	598189	4844231	1.5	10	23	33	0	-
RE231000_420	Residential	598189	4844224	1.5	10	23	33	0	-
RE231000_421	Residential	598205	4844183	1.5	10	23	33	0	-
RE231000_422	Residential	598217	4844170	1.5	10	23	33	0	-
RE231000_423	Residential	598227	4844160	1.5	10	23	33	0	-
RE231000_424	Residential	598235	4844153	1.5	10	23	33	0	-
RE231000_425	Residential	598244	4844144	1.5	10	23	33	0	-
RE231000_426	Residential	598253	4844135	1.5	10	23	33	0	-
RE231000_427	Residential	598189	4844160	1.5	11	23	33	0	-
RE231000_428	Residential	598198	4844150	1.5	11	23	33	0	-
RE231000_429	Residential	598208	4844141	1.5	11	23	33	0	-
RE231000_430	Residential	598189	4844272	1.5	10	23	33	0	-
RE231000_431	Residential	598225	4844124	1.5	11	23	33	0	-
RE231000_432	Residential	598189	4844288	1.5	10	23	33	0	-
RE231000_433	Residential	598211	4844177	1.5	10	23	33	0	-
RE231000_434	Residential	598217	4844132	1.5	11	23	33	0	-
RE231000_435	Residential	598210	4844320	1.5	10	23	32	0	-
RE231000_436	Residential	598191	4844204	1.5	11	23	33	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_437	Residential	598190	4844258	1.5	10	23	33	0	-
RE231000_438	Residential	598235	4844114	1.5	10	23	33	0	-
RE231000_439	Residential	598242	4844353	1.5	10	23	32	0	-
RE231000_440	Residential	598230	4844340	1.5	10	23	32	0	-
RE231000_441	Residential	598197	4844191	1.5	11	23	33	0	-
RE231000_443	Residential	598213	4844460	1.5	10	23	32	0	-
RE231000_444	Residential	598234	4844437	1.5	10	23	32	0	-
RE231000_445	Residential	598227	4844430	1.5	10	23	32	0	-
RE231000_446	Residential	598203	4844452	1.5	10	23	32	0	-
RE231000_450	Residential	598248	4844405	1.5	10	23	32	0	-
RE231000_452	Residential	598146	4844517	1.5	10	23	33	0	-
RE231000_453	Residential	598139	4844510	1.5	11	23	33	0	-
RE231000_454	Residential	598112	4844539	1.5	11	23	33	0	-
RE231000_455	Residential	598152	4844523	1.5	10	23	33	0	-
RE231000_456	Residential	598119	4844546	1.5	11	23	33	0	-
RE231100_001	Child Care Centre	597875	4844944	1.5	17	23	40	0	-
RE231100_002	Recreation	597887	4844825	1.5	14	23	36	0	-
RE231100_003	Residential	594644	4847799	1.5	9	23	31	0	-
RE231100_004	Residential	596834	4845864	1.5	34	23	56	7	0.4%
RE231100_005	Residential	598005	4844679	1.5	12	23	34	0	-
RE231100_006	Residential	598014	4844688	1.5	12	23	34	0	-
RE231100_007	Residential	598022	4844696	1.5	11	23	34	0	-
RE231100_008	Residential	598026	4844658	1.5	12	23	34	0	-
RE231100_009	Residential	598034	4844667	1.5	11	23	34	0	-
RE231100_010	Residential	598044	4844675	1.5	11	23	34	0	-
RE231100_011	Residential	598051	4844682	1.5	11	23	34	0	-
RE231100_012	Residential	598059	4844691	1.5	11	23	34	0	-
RE231100_018	Residential	598029	4844703	1.5	11	23	34	0	-
RE231100_019	Residential	598037	4844712	1.5	11	23	34	0	-
RE231100_020	Residential	598046	4844721	1.5	11	23	34	0	-
RE231100_027	Residential	597982	4844724	1.5	12	23	35	0	-
RE231100_028	Residential	597991	4844732	1.5	12	23	34	0	-
RE231100_029	Residential	597999	4844741	1.5	12	23	34	0	-
RE231100_030	Residential	598006	4844749	1.5	11	23	34	0	-
RE231100_031	Residential	598015	4844756	1.5	11	23	34	0	-
RE231100_032	Residential	598023	4844764	1.5	11	23	34	0	-
RE231100_033	Residential	598031	4844773	1.5	11	23	33	0	-
RE231100_041	Residential	598017	4844803	1.5	11	23	33	0	-
RE231100_042	Residential	598007	4844794	1.5	11	23	34	0	-
RE231100_043	Residential	597998	4844785	1.5	11	23	34	0	-
RE231100_044	Residential	597991	4844777	1.5	11	23	34	0	-
RE231100_045	Residential	597982	4844768	1.5	12	23	34	0	-
RE231100_046	Residential	597975	4844760	1.5	12	23	34	0	-
RE231100_047	Residential	597967	4844752	1.5	12	23	35	0	-
RE231100_048	Residential	597958	4844742	1.5	12	23	35	0	-
RE231100_049	Residential	597924	4844771	1.5	13	23	36	0	-
RE231100_050	Residential	597933	4844779	1.5	13	23	35	0	-
RE231100_051	Residential	597943	4844787	1.5	13	23	35	0	-
RE231100_052	Residential	597950	4844796	1.5	12	23	35	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_053	Residential	597958	4844803	1.5	12	23	35	0	-
RE231100_054	Residential	597966	4844812	1.5	12	23	34	0	-
RE231100_055	Residential	597975	4844820	1.5	11	23	34	0	-
RE231100_056	Residential	597983	4844829	1.5	11	23	34	0	-
RE231100_057	Residential	597991	4844837	1.5	11	23	34	0	-
RE231100_077	Residential	597906	4845006	1.5	19	23	41	0	-
RE231100_078	Residential	597896	4845014	1.5	21	23	43	0	-
RE231100_079	Residential	598077	4844606	1.5	11	23	34	0	-
RE231100_080	Residential	598085	4844615	1.5	11	23	34	0	-
RE231100_081	Residential	598094	4844623	1.5	11	23	33	0	-
RE231100_082	Residential	598056	4844626	1.5	11	23	34	0	-
RE231100_083	Residential	598066	4844634	1.5	11	23	34	0	-
RE231100_084	Residential	598074	4844643	1.5	11	23	34	0	-
RE231100_085	Residential	598082	4844651	1.5	11	23	33	0	-
RE231100_090	Residential	598178	4844511	1.5	10	23	33	0	-
RE231100_091	Residential	598202	4844488	1.5	10	23	32	0	-
RE231100_116	Residential	598123	4844591	1.5	11	23	33	0	-
RE231100_120	Residential	598113	4844580	1.5	11	23	33	0	-
RE231100_121	Residential	598101	4844633	1.5	11	23	33	0	-
RE231100_161	Residential	598142	4844569	1.5	10	23	33	0	-
RE231100_164	Residential	598158	4844529	1.5	10	23	33	0	-
RE231100_165	Residential	598166	4844536	1.5	10	23	33	0	-
RE231100_167	Residential	598126	4844552	1.5	11	23	33	0	-
RE231100_171	Residential	598133	4844560	1.5	11	23	33	0	-
RE231100_175	Residential	598101	4844633	1.5	11	23	33	0	-
RE231400_001	Residential	597400	4846151	1.5	21	23	43	0	-
RE231400_002	Residential	597374	4846123	1.5	23	23	45	0	-
RE231400_003	Residential	597425	4846115	1.5	19	23	42	0	-
RE231400_004	Residential	597415	4846104	1.5	20	23	42	0	-
RE231400_005	Residential	597397	4846081	1.5	21	23	44	0	-
RE231400_006	Residential	597415	4846064	1.5	20	23	42	0	-
RE231400_007	Residential	597438	4846085	1.5	18	23	41	0	-
RE231400_008	Residential	597458	4846043	1.5	18	23	41	0	-
RE231400_009	Residential	597440	4846026	1.5	19	23	42	0	-
RE231400_010	Residential	597494	4845971	1.5	17	23	39	0	-
RE231400_011	Residential	597177	4846314	1.5	27	23	49	0	-
RE231500_002	Residential	594959	4848195	1.5	5	23	28	0	-
RE231600_001	Residential	594685	4848625	1.5	8	23	31	0	-
RE231600_004	Residential	594738	4848582	1.5	8	23	31	0	-
RE231600_005	Residential	594772	4848553	1.5	6	23	28	0	-
RE231700_002	Residential	594955	4848488	1.5	4	23	27	0	-
RE231700_003	Residential	594977	4848446	1.5	4	23	27	0	-
RE231700_004	Residential	594865	4848604	1.5	6	23	29	0	-
RE231800_001	Residential	594678	4848786	1.5	8	23	31	0	-
RE231800_002	Residential	594627	4848819	1.5	9	23	32	0	-
RE232700_002	Residential	595497	4849130	1.5	5	23	27	0	-
RE233200_001	Recreation	595805	4849383	1.5	14	23	36	0	-
RE233500_001	Residential	596000	4849598	1.5	7	23	30	0	-
RE233600_001	Residential	596065	4849694	1.5	8	23	30	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE233600_002	Residential	596044	4849667	1.5	8	23	31	0	-
RE233700_001	Residential	596171	4849814	1.5	7	23	30	0	-
RE233900_001	Residential	596273	4850023	1.5	8	23	30	0	-
RE233900_002	Residential	596203	4850118	1.5	8	23	31	0	-
RE233900_003	Residential	596230	4850156	1.5	9	23	31	0	-
RE234000_001	Residential	596284	4850244	1.5	8	23	31	0	-
RE234100_001	Residential	596370	4850189	1.5	7	23	30	0	-
RE235000_001	Residential	596939	4851084	1.5	8	23	31	0	-
RE235100_001	Residential	596983	4851111	1.5	9	23	31	0	-
RE235100_002	Residential	597028	4851138	1.5	9	23	32	0	-
RE235100_003	Residential	597152	4851021	1.5	7	23	30	0	-
RE235200_001	Residential	597087	4851160	1.5	9	23	32	0	-
RE235200_002	Residential	597153	4851077	1.5	9	23	32	0	-
RE235500_001	Residential	597387	4851296	1.5	9	23	32	0	-
RE235500_002	Residential	597327	4851381	1.5	13	23	35	0	-
RE235700_001	Residential	597704	4851314	1.5	14	23	36	0	-
RE235700_002	Residential	597412	4851537	1.5	15	23	37	0	-
RE235800_001	Residential	597664	4851442	1.5	19	23	42	0	-
RE235900_002	Residential	597909	4851332	1.5	13	23	36	0	-
RE235900_003	Residential	597683	4851628	1.5	13	23	35	0	-
RE235900_004	Residential	597618	4851651	1.5	17	23	39	0	-
RE310100_001	Residential	597701	4851643	1.5	12	23	34	0	-
RE310100_002	Residential	597725	4851680	1.5	11	23	34	0	-
RE310100_003	Residential	597647	4851692	1.5	12	23	35	0	-
RE310200_001	Residential	597753	4851836	1.5	10	23	33	0	-
RE310500_001	Residential	597854	4852016	1.5	9	23	31	0	-
RE310600_001	Residential	598054	4851992	1.5	7	23	30	0	-
RE310600_002	Residential	598048	4852100	1.5	11	23	33	0	-
RE310700_001	Residential	598116	4852141	1.5	11	23	33	0	-
RE310700_002	Residential	598003	4852173	1.5	9	23	31	0	-
RE310900_001	Residential	598218	4852295	1.5	10	23	33	0	-
RE311000_001	Residential	598324	4852285	1.5	10	23	33	0	-
RE311100_001	Residential	598324	4852488	1.5	11	23	34	0	-
RE311200_001	Residential	598400	4852513	1.5	15	23	37	0	-
RE311200_002	Residential	598471	4852451	1.5	12	23	35	0	-
RE311300_001	Residential	598509	4852502	1.5	14	23	37	0	-
RE311300_002	Residential	598222	4852772	1.5	11	23	33	0	-
RE311400_001	Residential	598628	4852529	1.5	12	23	35	0	-
RE311400_002	Residential	598554	4852578	1.5	17	23	40	0	-
RE311400_003	Residential	598404	4852757	1.5	10	23	33	0	-
RE311400_006	Residential	598813	4852353	1.5	7	23	29	0	-
RE311800_001	Residential	598767	4852817	1.5	8	23	31	0	-
RE311900_001	Residential	598826	4852898	1.5	8	23	30	0	-
RE312200_001	Residential	598954	4853124	1.5	9	23	31	0	-
RE312200_002	Residential	598983	4853142	1.5	7	23	30	0	-
RE312200_003	Residential	599011	4853156	1.5	6	23	29	0	-
RE312300_001	Residential	599043	4853264	1.5	8	23	30	0	-
RE312400_001	Residential	599140	4853349	1.5	7	23	30	0	-
RE312800_001	Residential	599561	4853387	1.5	11	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE312800_002	Residential	599655	4853196	1.5	8	23	31	0	-
RE312900_001	Residential	599611	4853344	1.5	12	23	34	0	-
RE312900_002	Residential	599737	4853210	1.5	11	23	33	0	-
RE313000_001	Residential	599767	4853320	1.5	9	23	32	0	-
RE313000_002	Residential	599746	4853342	1.5	9	23	32	0	-
RE313000_003	Residential	599707	4853379	1.5	10	23	33	0	-
RE313000_004	Residential	599831	4853246	1.5	10	23	33	0	-
RE313000_005	Residential	599859	4853220	1.5	10	23	32	0	-
RE313000_006	Residential	599831	4853130	1.5	7	23	30	0	-
RE313000_007	Residential	599790	4853168	1.5	10	23	33	0	-
RE313100_001	Residential	599892	4853186	1.5	10	23	33	0	-
RE314400_001	Residential	601067	4853610	1.5	7	23	29	0	-
RE314800_001	Residential	601376	4853448	1.5	8	23	31	0	-
RE314900_001	Residential	601445	4853622	1.5	6	23	28	0	-
RE316400_001	Residential	602974	4853508	1.5	26	23	49	0	-
RE316500_001	Residential	603041	4853572	1.5	31	23	53	2	0.1%
RE316600_001	Residential	603200	4853771	1.5	29	23	52	2	0.1%
RE316600_002	Residential	603222	4853799	1.5	29	23	51	1	0.1%
RE316700_001	Residential	603244	4853825	1.5	29	23	51	1	0.1%
RE316700_002	Residential	603260	4853854	1.5	27	23	50	0	-
RE317000_001	Residential	603580	4854095	1.5	20	23	43	0	-
RE410200_001	Residential	604488	4854200	1.5	11	23	34	0	-
RE410200_002	Residential	604438	4854244	1.5	11	23	34	0	-
RE411100_001	Residential	605221	4854613	1.5	19	23	41	0	-
RE411200_001	Residential	605486	4854296	1.5	25	23	47	0	-
RE510000_001	Residential	605849	4853842	1.5	14	23	37	0	-
RE510000_002	Residential	605777	4854043	1.5	14	23	36	0	-
RE510100_001	Residential	605862	4854052	1.5	11	23	33	0	-
RE511200_001	Residential	607742	4853370	1.5	30	23	53	2	0.1%
RE511200_002	Residential	607750	4853371	1.5	30	23	52	1	0.1%
RE511200_003	Residential	607756	4853372	1.5	30	23	52	1	0.1%
RE511200_004	Residential	607761	4853373	1.5	30	23	52	1	0.1%
RE511200_005	Residential	607738	4853397	1.5	27	23	49	0	-
RE511200_006	Residential	607744	4853398	1.5	27	23	49	0	-
RE511300_001	Residential	608183	4853093	1.5	16	23	38	0	-
RE511300_002	Child Care Centre	607553	4854058	1.5	6	23	29	0	-
RE511300_003	Residential	607654	4853910	1.5	7	23	30	0	-
RE511300_004	Residential	607664	4853818	1.5	9	23	31	0	-
RE511300_005	Residential	607712	4853826	1.5	8	23	31	0	-
RE511300_006	Residential	607696	4853815	1.5	8	23	31	0	-
RE511300_007	Residential	607670	4853789	1.5	9	23	32	0	-
RE511300_008	Residential	607695	4853826	1.5	8	23	31	0	-
RE511300_009	Residential	607710	4853739	1.5	10	23	33	0	-
RE511300_010	Residential	607728	4853795	1.5	8	23	31	0	-
RE511300_011	Residential	607729	4853761	1.5	9	23	32	0	-
RE511300_012	Residential	607733	4853799	1.5	8	23	31	0	-
RE511300_013	Residential	607665	4853812	1.5	9	23	32	0	-
RE511300_014	Residential	607667	4853806	1.5	9	23	32	0	-
RE511300_015	Residential	607721	4853732	1.5	10	23	33	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_016	Residential	607702	4853748	1.5	10	23	33	0	-
RE511300_017	Residential	607684	4853769	1.5	10	23	32	0	-
RE511300_018	Residential	607740	4853729	1.5	10	23	33	0	-
RE511300_019	Residential	607728	4853731	1.5	10	23	33	0	-
RE511300_020	Residential	607701	4853818	1.5	8	23	31	0	-
RE511300_021	Residential	607668	4853800	1.5	9	23	32	0	-
RE511300_022	Residential	607706	4853744	1.5	10	23	33	0	-
RE511300_023	Residential	607680	4853773	1.5	10	23	32	0	-
RE511300_024	Residential	607734	4853730	1.5	10	23	33	0	-
RE511300_025	Residential	607707	4853788	1.5	9	23	32	0	-
RE511300_026	Residential	607728	4853807	1.5	8	23	31	0	-
RE511300_027	Residential	607722	4853803	1.5	8	23	31	0	-
RE511300_028	Residential	607710	4853783	1.5	9	23	32	0	-
RE511300_029	Residential	607675	4853776	1.5	10	23	32	0	-
RE511300_030	Residential	607714	4853779	1.5	9	23	32	0	-
RE511300_031	Residential	607732	4853756	1.5	9	23	32	0	-
RE511300_032	Residential	607690	4853823	1.5	8	23	31	0	-
RE511300_033	Residential	607721	4853771	1.5	9	23	32	0	-
RE511300_034	Residential	607725	4853766	1.5	9	23	32	0	-
RE511300_035	Residential	607701	4853830	1.5	8	23	31	0	-
RE511300_036	Residential	607706	4853834	1.5	8	23	30	0	-
RE511300_037	Residential	607704	4853793	1.5	9	23	31	0	-
RE511300_038	Residential	607688	4853764	1.5	10	23	33	0	-
RE511300_039	Residential	607698	4853753	1.5	10	23	33	0	-
RE511300_040	Residential	607669	4853794	1.5	9	23	32	0	-
RE511300_041	Residential	607692	4853759	1.5	10	23	33	0	-
RE511300_042	Residential	607706	4853822	1.5	8	23	31	0	-
RE511300_043	Residential	607767	4853374	1.5	30	23	52	1	0.1%
RE511300_044	Residential	607774	4853376	1.5	30	23	52	1	0.1%
RE511300_045	Residential	607781	4853377	1.5	30	23	52	1	0.1%
RE511300_046	Residential	607788	4853379	1.5	30	23	52	1	0.1%
RE511300_047	Residential	607794	4853380	1.5	30	23	52	1	0.1%
RE511300_048	Residential	607800	4853381	1.5	30	23	52	1	0.1%
RE511300_049	Residential	607806	4853382	1.5	30	23	52	1	0.1%
RE511300_050	Residential	607812	4853383	1.5	30	23	52	1	0.1%
RE511300_051	Residential	607820	4853385	1.5	30	23	52	1	0.1%
RE511300_052	Residential	607826	4853386	1.5	29	23	52	1	0.1%
RE511300_053	Residential	607832	4853387	1.5	29	23	52	1	0.1%
RE511300_054	Residential	607838	4853388	1.5	29	23	52	1	0.1%
RE511300_055	Residential	607846	4853390	1.5	29	23	51	1	0.1%
RE511300_056	Residential	607853	4853391	1.5	29	23	51	1	0.1%
RE511300_057	Residential	607859	4853392	1.5	29	23	51	1	0.1%
RE511300_058	Residential	607866	4853394	1.5	29	23	52	1	0.1%
RE511300_059	Residential	607885	4853388	1.5	32	23	54	3	0.2%
RE511300_060	Residential	607886	4853395	1.5	30	23	53	1	0.1%
RE511300_061	Residential	607886	4853402	1.5	29	23	51	1	0.1%
RE511300_062	Residential	607887	4853410	1.5	27	23	50	0	-
RE511300_063	Residential	607887	4853416	1.5	26	23	48	0	-
RE511300_064	Residential	607888	4853422	1.5	25	23	48	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_065	Residential	607888	4853429	1.5	25	23	47	0	-
RE511300_066	Residential	607892	4853460	1.5	22	23	44	0	-
RE511300_067	Residential	607892	4853467	1.5	21	23	43	0	-
RE511300_068	Residential	607892	4853473	1.5	20	23	43	0	-
RE511300_069	Residential	607893	4853479	1.5	20	23	42	0	-
RE511300_070	Residential	607894	4853485	1.5	19	23	42	0	-
RE511300_071	Residential	607894	4853495	1.5	18	23	41	0	-
RE511300_072	Residential	607893	4853501	1.5	17	23	40	0	-
RE511300_073	Residential	607891	4853507	1.5	17	23	40	0	-
RE511300_074	Residential	607776	4853648	1.5	12	23	35	0	-
RE511300_075	Residential	607783	4853646	1.5	12	23	35	0	-
RE511300_076	Residential	607789	4853644	1.5	12	23	35	0	-
RE511300_077	Residential	607795	4853641	1.5	12	23	35	0	-
RE511300_078	Residential	607801	4853639	1.5	12	23	34	0	-
RE511300_079	Residential	607808	4853634	1.5	12	23	34	0	-
RE511300_080	Residential	607814	4853629	1.5	12	23	35	0	-
RE511300_081	Residential	607819	4853626	1.5	12	23	35	0	-
RE511300_082	Residential	607824	4853622	1.5	12	23	35	0	-
RE511300_083	Residential	607829	4853618	1.5	12	23	35	0	-
RE511300_084	Residential	607834	4853614	1.5	12	23	35	0	-
RE511300_085	Residential	607842	4853608	1.5	13	23	35	0	-
RE511300_086	Residential	607846	4853603	1.5	13	23	35	0	-
RE511300_087	Residential	607850	4853599	1.5	13	23	35	0	-
RE511300_088	Residential	607854	4853594	1.5	13	23	35	0	-
RE511300_089	Residential	607858	4853589	1.5	13	23	36	0	-
RE511300_090	Residential	607862	4853585	1.5	13	23	36	0	-
RE511300_091	Residential	607868	4853578	1.5	13	23	36	0	-
RE511300_092	Residential	607871	4853571	1.5	13	23	36	0	-
RE511300_093	Residential	607874	4853566	1.5	14	23	36	0	-
RE511300_094	Residential	607878	4853561	1.5	14	23	36	0	-
RE511300_095	Residential	607882	4853552	1.5	14	23	37	0	-
RE511300_096	Residential	607883	4853545	1.5	15	23	37	0	-
RE511300_097	Residential	607884	4853538	1.5	15	23	37	0	-
RE511300_098	Residential	607758	4853512	1.5	19	23	42	0	-
RE511300_099	Residential	607757	4853520	1.5	19	23	41	0	-
RE511300_100	Residential	607756	4853526	1.5	18	23	41	0	-
RE511300_101	Residential	607755	4853532	1.5	18	23	41	0	-
RE511300_102	Residential	607753	4853538	1.5	18	23	40	0	-
RE511300_103	Residential	607752	4853544	1.5	18	23	40	0	-
RE511300_104	Residential	607751	4853552	1.5	17	23	40	0	-
RE511300_105	Residential	607749	4853559	1.5	17	23	40	0	-
RE511300_106	Residential	607747	4853564	1.5	17	23	39	0	-
RE511300_107	Residential	607746	4853571	1.5	17	23	39	0	-
RE511300_108	Residential	607745	4853576	1.5	16	23	39	0	-
RE511300_109	Residential	607744	4853583	1.5	16	23	39	0	-
RE511300_110	Residential	607742	4853591	1.5	16	23	38	0	-
RE511300_111	Residential	607740	4853597	1.5	16	23	38	0	-
RE511300_112	Residential	607739	4853603	1.5	15	23	38	0	-
RE511300_113	Residential	607738	4853609	1.5	15	23	38	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_114	Residential	607737	4853615	1.5	15	23	38	0	-
RE511300_115	Residential	607736	4853621	1.5	15	23	37	0	-
RE511300_116	Residential	607736	4853631	1.5	14	23	37	0	-
RE511300_117	Residential	607735	4853640	1.5	14	23	36	0	-
RE511300_118	Residential	607734	4853645	1.5	14	23	36	0	-
RE511300_119	Residential	607735	4853651	1.5	13	23	36	0	-
RE511300_120	Residential	607736	4853658	1.5	13	23	36	0	-
RE511300_121	Residential	607737	4853664	1.5	13	23	35	0	-
RE511300_122	Residential	607721	4853505	1.5	19	23	42	0	-
RE511300_123	Residential	607719	4853512	1.5	19	23	41	0	-
RE511300_124	Residential	607718	4853518	1.5	19	23	41	0	-
RE511300_125	Residential	607717	4853524	1.5	18	23	41	0	-
RE511300_126	Residential	607716	4853530	1.5	18	23	41	0	-
RE511300_127	Residential	607715	4853537	1.5	18	23	40	0	-
RE511300_128	Residential	607713	4853545	1.5	17	23	40	0	-
RE511300_129	Residential	607712	4853551	1.5	17	23	40	0	-
RE511300_130	Residential	607711	4853556	1.5	17	23	40	0	-
RE511300_131	Residential	607710	4853563	1.5	17	23	39	0	-
RE511300_132	Residential	607708	4853569	1.5	17	23	39	0	-
RE511300_133	Residential	607707	4853575	1.5	16	23	39	0	-
RE511300_134	Residential	607706	4853583	1.5	16	23	39	0	-
RE511300_135	Residential	607704	4853589	1.5	16	23	38	0	-
RE511300_136	Residential	607704	4853595	1.5	16	23	38	0	-
RE511300_137	Residential	607702	4853601	1.5	15	23	38	0	-
RE511300_138	Residential	607701	4853607	1.5	15	23	38	0	-
RE511300_139	Residential	607700	4853615	1.5	15	23	38	0	-
RE511300_140	Residential	607698	4853621	1.5	15	23	37	0	-
RE511300_141	Residential	607697	4853627	1.5	14	23	37	0	-
RE511300_142	Residential	607696	4853634	1.5	14	23	37	0	-
RE511300_143	Residential	607694	4853645	1.5	14	23	36	0	-
RE511300_144	Residential	607694	4853653	1.5	14	23	36	0	-
RE511300_145	Residential	607694	4853659	1.5	13	23	36	0	-
RE511300_146	Residential	607694	4853665	1.5	13	23	36	0	-
RE511300_147	Residential	607696	4853670	1.5	13	23	36	0	-
RE511300_148	Residential	607699	4853677	1.5	13	23	35	0	-
RE511300_149	Residential	607750	4853399	1.5	27	23	49	0	-
RE511300_150	Residential	607756	4853400	1.5	27	23	49	0	-
RE511300_151	Residential	607762	4853401	1.5	27	23	49	0	-
RE511300_152	Residential	607768	4853402	1.5	27	23	49	0	-
RE511300_153	Residential	607776	4853404	1.5	27	23	49	0	-
RE511300_154	Residential	607783	4853405	1.5	27	23	49	0	-
RE511300_155	Residential	607789	4853406	1.5	27	23	49	0	-
RE511300_156	Residential	607795	4853407	1.5	27	23	49	0	-
RE511300_157	Residential	607801	4853409	1.5	27	23	49	0	-
RE511300_158	Residential	607807	4853410	1.5	26	23	49	0	-
RE511300_159	Residential	607815	4853412	1.5	26	23	49	0	-
RE511300_160	Residential	607821	4853413	1.5	26	23	49	0	-
RE511300_161	Residential	607827	4853414	1.5	26	23	48	0	-
RE511300_162	Residential	607834	4853415	1.5	26	23	48	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511300_163	Residential	607841	4853417	1.5	26	23	48	0	-
RE511300_164	Residential	607848	4853418	1.5	26	23	48	0	-
RE511300_165	Residential	607854	4853419	1.5	26	23	49	0	-
RE511300_166	Residential	607859	4853420	1.5	26	23	49	0	-
RE511300_167	Residential	607866	4853421	1.5	26	23	49	0	-
RE511300_168	Residential	607728	4853439	1.5	23	23	46	0	-
RE511300_169	Residential	607736	4853440	1.5	23	23	46	0	-
RE511300_170	Residential	607742	4853441	1.5	23	23	46	0	-
RE511300_171	Residential	607748	4853442	1.5	23	23	46	0	-
RE511300_172	Residential	607754	4853443	1.5	23	23	46	0	-
RE511300_173	Residential	607761	4853444	1.5	23	23	46	0	-
RE511300_174	Residential	607768	4853445	1.5	23	23	46	0	-
RE511300_175	Residential	607774	4853446	1.5	23	23	46	0	-
RE511300_176	Residential	607780	4853448	1.5	23	23	46	0	-
RE511300_177	Residential	607786	4853449	1.5	23	23	46	0	-
RE511300_178	Residential	607792	4853450	1.5	23	23	45	0	-
RE511300_179	Residential	607799	4853451	1.5	23	23	45	0	-
RE511300_180	Residential	607807	4853453	1.5	23	23	45	0	-
RE511300_181	Residential	607813	4853454	1.5	22	23	45	0	-
RE511300_182	Residential	607819	4853456	1.5	22	23	45	0	-
RE511300_183	Residential	607825	4853457	1.5	22	23	45	0	-
RE511300_184	Residential	607831	4853458	1.5	22	23	44	0	-
RE511300_185	Residential	607837	4853459	1.5	21	23	44	0	-
RE511300_186	Residential	607845	4853460	1.5	21	23	44	0	-
RE511300_187	Residential	607851	4853462	1.5	21	23	44	0	-
RE511300_188	Residential	607857	4853463	1.5	21	23	44	0	-
RE511300_189	Residential	607863	4853464	1.5	21	23	44	0	-
RE511300_190	Residential	607870	4853465	1.5	21	23	44	0	-
RE511300_191	Residential	607724	4853468	1.5	21	23	44	0	-
RE511300_192	Residential	607731	4853469	1.5	21	23	44	0	-
RE511300_193	Residential	607737	4853470	1.5	21	23	44	0	-
RE511300_194	Residential	607742	4853471	1.5	21	23	44	0	-
RE511300_195	Residential	607749	4853472	1.5	21	23	44	0	-
RE511300_196	Residential	607755	4853473	1.5	21	23	44	0	-
RE511300_197	Residential	607762	4853474	1.5	21	23	44	0	-
RE511300_198	Residential	607769	4853476	1.5	21	23	44	0	-
RE511300_199	Residential	607775	4853477	1.5	21	23	44	0	-
RE511300_200	Residential	607781	4853478	1.5	21	23	44	0	-
RE511300_201	Residential	607787	4853480	1.5	21	23	43	0	-
RE511300_202	Residential	607793	4853481	1.5	21	23	43	0	-
RE511300_203	Residential	607801	4853483	1.5	21	23	43	0	-
RE511300_204	Residential	607807	4853484	1.5	20	23	43	0	-
RE511300_205	Residential	607813	4853485	1.5	20	23	43	0	-
RE511300_206	Residential	607819	4853486	1.5	20	23	43	0	-
RE511300_207	Residential	607825	4853488	1.5	20	23	42	0	-
RE511300_208	Residential	607831	4853489	1.5	20	23	42	0	-
RE511300_209	Residential	607839	4853490	1.5	19	23	42	0	-
RE511300_210	Residential	607846	4853492	1.5	19	23	41	0	-
RE511300_211	Residential	607851	4853493	1.5	18	23	41	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_212	Residential	607858	4853494	1.5	18	23	41	0	-
RE511300_213	Residential	607863	4853495	1.5	18	23	41	0	-
RE511300_214	Residential	607869	4853496	1.5	18	23	41	0	-
RE511400_001	Residential	607929	4853848	1.5	7	23	30	0	-
RE511400_002	Residential	607914	4853876	1.5	7	23	30	0	-
RE511400_003	Residential	607929	4853886	1.5	7	23	29	0	-
RE511400_004	Residential	607898	4853826	1.5	8	23	31	0	-
RE511400_005	Residential	607899	4853865	1.5	7	23	30	0	-
RE511400_006	Residential	607842	4853819	1.5	9	23	31	0	-
RE511400_007	Residential	607859	4853838	1.5	8	23	31	0	-
RE511400_008	Residential	607869	4853844	1.5	8	23	31	0	-
RE511400_009	Residential	607876	4853849	1.5	8	23	31	0	-
RE511400_010	Residential	607922	4853881	1.5	7	23	29	0	-
RE511400_011	Residential	607891	4853860	1.5	8	23	30	0	-
RE511400_012	Residential	607868	4853804	1.5	9	23	31	0	-
RE511400_013	Residential	607919	4853841	1.5	7	23	30	0	-
RE511400_014	Residential	607907	4853870	1.5	7	23	30	0	-
RE511400_015	Residential	607887	4853793	1.5	9	23	31	0	-
RE511400_016	Residential	607876	4853800	1.5	9	23	31	0	-
RE511400_017	Residential	607867	4853900	1.5	7	23	30	0	-
RE511400_018	Residential	607888	4853915	1.5	7	23	30	0	-
RE511400_019	Residential	607881	4853910	1.5	7	23	30	0	-
RE511400_020	Residential	607895	4853920	1.5	7	23	29	0	-
RE511400_021	Residential	607805	4853857	1.5	8	23	30	0	-
RE511400_022	Residential	607814	4853863	1.5	8	23	30	0	-
RE511400_023	Residential	607859	4853894	1.5	8	23	30	0	-
RE511400_024	Residential	607874	4853905	1.5	7	23	30	0	-
RE511400_025	Residential	607821	4853868	1.5	8	23	30	0	-
RE511400_026	Residential	607829	4853873	1.5	8	23	30	0	-
RE511400_027	Residential	607902	4853925	1.5	7	23	29	0	-
RE511400_028	Residential	607836	4853879	1.5	8	23	30	0	-
RE511400_029	Residential	607844	4853884	1.5	8	23	30	0	-
RE511400_030	Residential	607852	4853889	1.5	8	23	30	0	-
RE511400_031	Residential	607961	4853671	1.5	10	23	32	0	-
RE511400_032	Residential	607901	4853730	1.5	9	23	32	0	-
RE511400_033	Residential	607932	4853710	1.5	9	23	32	0	-
RE511400_034	Residential	607891	4853735	1.5	9	23	32	0	-
RE511400_035	Residential	607950	4853688	1.5	10	23	32	0	-
RE511400_036	Residential	608027	4853515	1.5	16	23	39	0	-
RE511400_037	Residential	607948	4853861	1.5	7	23	29	0	-
RE511400_038	Residential	607884	4853855	1.5	8	23	30	0	-
RE511400_039	Residential	607860	4853809	1.5	9	23	31	0	-
RE511400_040	Residential	607917	4853721	1.5	9	23	31	0	-
RE511400_041	Residential	607909	4853725	1.5	9	23	32	0	-
RE511400_042	Residential	607925	4853716	1.5	9	23	32	0	-
RE511400_043	Residential	607955	4853680	1.5	10	23	32	0	-
RE511400_044	Residential	607944	4853695	1.5	9	23	32	0	-
RE511400_045	Residential	607939	4853703	1.5	9	23	32	0	-
RE511400_046	Residential	608072	4853635	1.5	11	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511400_047	Residential	608048	4853617	1.5	12	23	34	0	-
RE511400_048	Residential	608076	4853544	1.5	15	23	37	0	-
RE511400_049	Residential	608107	4853601	1.5	13	23	35	0	-
RE511400_050	Residential	608076	4853554	1.5	14	23	37	0	-
RE511400_051	Residential	607864	4853751	1.5	9	23	32	0	-
RE511400_052	Residential	607853	4853757	1.5	9	23	32	0	-
RE511400_053	Residential	607845	4853762	1.5	9	23	32	0	-
RE511400_054	Residential	607836	4853766	1.5	9	23	32	0	-
RE511400_055	Residential	607827	4853771	1.5	9	23	32	0	-
RE511400_056	Residential	607818	4853777	1.5	9	23	31	0	-
RE511400_057	Residential	607794	4853801	1.5	8	23	31	0	-
RE511400_058	Residential	607809	4853783	1.5	9	23	31	0	-
RE511400_059	Residential	607802	4853791	1.5	9	23	31	0	-
RE511400_060	Residential	608147	4853557	1.5	13	23	36	0	-
RE511400_061	Residential	608166	4853558	1.5	13	23	35	0	-
RE511400_062	Residential	608176	4853558	1.5	13	23	35	0	-
RE511400_063	Residential	608157	4853558	1.5	13	23	36	0	-
RE511400_064	Residential	608076	4853583	1.5	13	23	36	0	-
RE511400_065	Residential	608115	4853525	1.5	15	23	38	0	-
RE511400_066	Residential	608102	4853614	1.5	12	23	34	0	-
RE511400_067	Residential	608093	4853649	1.5	11	23	33	0	-
RE511400_068	Residential	608103	4853524	1.5	16	23	38	0	-
RE511400_069	Residential	608076	4853563	1.5	14	23	37	0	-
RE511400_070	Residential	608074	4853594	1.5	12	23	35	0	-
RE511400_071	Residential	608107	4853544	1.5	15	23	37	0	-
RE511400_072	Residential	608107	4853563	1.5	14	23	36	0	-
RE511400_073	Residential	608107	4853572	1.5	14	23	36	0	-
RE511400_074	Residential	608082	4853642	1.5	11	23	33	0	-
RE511400_075	Residential	608056	4853624	1.5	11	23	34	0	-
RE511400_076	Residential	608067	4853525	1.5	16	23	38	0	-
RE511400_077	Residential	608070	4853606	1.5	12	23	34	0	-
RE511400_078	Residential	608097	4853625	1.5	11	23	34	0	-
RE511400_079	Residential	608064	4853629	1.5	11	23	34	0	-
RE511400_080	Residential	608091	4853524	1.5	16	23	38	0	-
RE511400_081	Residential	608107	4853581	1.5	13	23	36	0	-
RE511400_082	Residential	608107	4853590	1.5	13	23	36	0	-
RE511400_083	Residential	608077	4853573	1.5	14	23	36	0	-
RE511400_084	Residential	608107	4853554	1.5	14	23	37	0	-
RE511400_085	Residential	608080	4853524	1.5	16	23	38	0	-
RE511400_086	Residential	608146	4853605	1.5	13	23	35	0	-
RE511400_087	Residential	607690	4854002	1.5	6	23	29	0	-
RE511400_088	Residential	607683	4854039	1.5	6	23	28	0	-
RE511400_089	Residential	607642	4854055	1.5	6	23	28	0	-
RE511400_090	Residential	607726	4853973	1.5	6	23	29	0	-
RE511400_091	Residential	607638	4854068	1.5	6	23	28	0	-
RE511400_092	Residential	607782	4853966	1.5	7	23	29	0	-
RE511400_093	Residential	607648	4854028	1.5	6	23	28	0	-
RE511400_094	Residential	607706	4853919	1.5	7	23	29	0	-
RE511400_095	Residential	607633	4854095	1.5	5	23	28	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511400_096	Residential	607649	4853948	1.5	7	23	29	0	-
RE511400_097	Residential	607792	4853973	1.5	7	23	29	0	-
RE511400_098	Residential	607734	4853980	1.5	6	23	29	0	-
RE511400_099	Residential	607851	4853813	1.5	9	23	31	0	-
RE511400_100	Residential	607835	4853830	1.5	8	23	31	0	-
RE511400_101	Residential	607938	4853855	1.5	7	23	29	0	-
RE511400_102	Residential	607908	4853835	1.5	8	23	30	0	-
RE511400_103	Residential	607677	4854058	1.5	6	23	28	0	-
RE511400_104	Residential	607687	4854030	1.5	6	23	28	0	-
RE511400_105	Residential	607758	4853948	1.5	7	23	29	0	-
RE511400_106	Residential	607671	4853912	1.5	7	23	30	0	-
RE511400_107	Residential	607797	4853977	1.5	6	23	29	0	-
RE511400_108	Residential	607709	4854015	1.5	6	23	29	0	-
RE511400_109	Residential	607661	4853910	1.5	7	23	30	0	-
RE511400_110	Residential	607713	4853921	1.5	7	23	29	0	-
RE511400_111	Residential	607654	4854003	1.5	6	23	29	0	-
RE511400_112	Residential	607657	4853949	1.5	7	23	29	0	-
RE511400_113	Residential	607651	4854015	1.5	6	23	29	0	-
RE511400_114	Residential	607731	4853930	1.5	7	23	29	0	-
RE511400_115	Residential	607695	4853916	1.5	7	23	29	0	-
RE511400_116	Residential	607655	4853989	1.5	6	23	29	0	-
RE511400_117	Residential	607645	4854041	1.5	6	23	28	0	-
RE511400_118	Residential	607751	4853943	1.5	7	23	29	0	-
RE511400_119	Residential	607744	4853938	1.5	7	23	29	0	-
RE511400_120	Residential	607787	4853970	1.5	7	23	29	0	-
RE511400_121	Residential	607676	4853954	1.5	6	23	29	0	-
RE511400_122	Residential	607667	4853952	1.5	6	23	29	0	-
RE511400_123	Residential	607684	4853955	1.5	6	23	29	0	-
RE511400_124	Residential	607704	4853960	1.5	6	23	29	0	-
RE511400_125	Residential	607680	4854049	1.5	6	23	28	0	-
RE511400_126	Residential	607679	4853914	1.5	7	23	29	0	-
RE511400_127	Residential	607700	4854008	1.5	6	23	29	0	-
RE511400_128	Residential	607719	4853969	1.5	6	23	29	0	-
RE511400_129	Residential	607689	4853915	1.5	7	23	29	0	-
RE511400_130	Residential	607739	4853935	1.5	7	23	29	0	-
RE511400_131	Residential	607636	4854081	1.5	6	23	28	0	-
RE511400_132	Residential	607680	4853999	1.5	6	23	29	0	-
RE511400_133	Residential	607723	4853926	1.5	7	23	29	0	-
RE511400_134	Residential	607693	4853957	1.5	6	23	29	0	-
RE511400_135	Residential	607710	4853964	1.5	6	23	29	0	-
RE511400_136	Residential	607759	4854001	1.5	6	23	29	0	-
RE511400_137	Residential	608026	4853558	1.5	14	23	36	0	-
RE511400_138	Residential	608026	4853566	1.5	14	23	36	0	-
RE511400_139	Residential	608023	4853574	1.5	13	23	36	0	-
RE511400_140	Residential	608018	4853584	1.5	13	23	35	0	-
RE511400_141	Residential	608015	4853591	1.5	12	23	35	0	-
RE511400_142	Residential	608006	4853606	1.5	12	23	34	0	-
RE511400_143	Residential	608011	4853599	1.5	12	23	35	0	-
RE511400_144	Residential	608001	4853613	1.5	11	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_145	Residential	607996	4853620	1.5	11	23	33	0	-
RE511400_146	Residential	607985	4853636	1.5	10	23	33	0	-
RE511400_147	Residential	607991	4853628	1.5	10	23	33	0	-
RE511400_148	Residential	607980	4853643	1.5	10	23	33	0	-
RE511400_149	Residential	608170	4853516	1.5	15	23	38	0	-
RE511400_150	Residential	608155	4853516	1.5	15	23	38	0	-
RE511400_151	Residential	608163	4853516	1.5	15	23	38	0	-
RE511400_152	Residential	608148	4853517	1.5	15	23	38	0	-
RE511400_153	Residential	608192	4853515	1.5	16	23	38	0	-
RE511400_154	Residential	608184	4853515	1.5	16	23	38	0	-
RE511400_155	Residential	608207	4853515	1.5	16	23	38	0	-
RE511400_156	Residential	608199	4853515	1.5	16	23	38	0	-
RE511400_157	Residential	608176	4853516	1.5	15	23	38	0	-
RE511400_158	Residential	608214	4853515	1.5	16	23	38	0	-
RE511400_159	Residential	607839	4853722	1.5	10	23	32	0	-
RE511400_160	Residential	607826	4853728	1.5	10	23	32	0	-
RE511400_161	Residential	607806	4853741	1.5	9	23	32	0	-
RE511400_162	Residential	607820	4853732	1.5	10	23	32	0	-
RE511400_163	Residential	607775	4853762	1.5	9	23	31	0	-
RE511400_164	Residential	607764	4853777	1.5	9	23	31	0	-
RE511400_165	Residential	607832	4853725	1.5	10	23	32	0	-
RE511400_166	Residential	607791	4853750	1.5	9	23	32	0	-
RE511400_167	Residential	607845	4853717	1.5	10	23	32	0	-
RE511400_168	Residential	607771	4853767	1.5	9	23	31	0	-
RE511400_169	Residential	607814	4853735	1.5	10	23	32	0	-
RE511400_170	Residential	607785	4853754	1.5	9	23	32	0	-
RE511400_171	Residential	607767	4853772	1.5	9	23	31	0	-
RE511400_172	Residential	607800	4853745	1.5	9	23	32	0	-
RE511400_173	Residential	607852	4853936	1.5	7	23	30	0	-
RE511400_174	Residential	607859	4853941	1.5	7	23	30	0	-
RE511400_175	Residential	607838	4853926	1.5	7	23	30	0	-
RE511400_176	Residential	607787	4853890	1.5	7	23	30	0	-
RE511400_177	Residential	607792	4853895	1.5	7	23	30	0	-
RE511400_178	Residential	607797	4853898	1.5	7	23	30	0	-
RE511400_179	Residential	607802	4853902	1.5	7	23	30	0	-
RE511400_180	Residential	607815	4853910	1.5	7	23	30	0	-
RE511400_181	Residential	607821	4853913	1.5	7	23	30	0	-
RE511400_182	Residential	607827	4853918	1.5	7	23	30	0	-
RE511400_183	Residential	607832	4853921	1.5	7	23	30	0	-
RE511400_184	Residential	607845	4853931	1.5	7	23	30	0	-
RE511400_185	Residential	607809	4853906	1.5	7	23	30	0	-
RE511400_186	Residential	607925	4853654	1.5	10	23	33	0	-
RE511400_187	Residential	607929	4853648	1.5	10	23	33	0	-
RE511400_188	Residential	607920	4853662	1.5	10	23	32	0	-
RE511400_189	Residential	607915	4853668	1.5	10	23	32	0	-
RE511400_190	Residential	607907	4853677	1.5	10	23	32	0	-
RE511400_191	Residential	607903	4853680	1.5	10	23	33	0	-
RE511400_192	Residential	607895	4853688	1.5	10	23	33	0	-
RE511400_193	Residential	607889	4853691	1.5	10	23	33	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_194	Residential	607881	4853696	1.5	10	23	33	0	-
RE511400_195	Residential	607873	4853701	1.5	10	23	33	0	-
RE511400_196	Residential	607989	4853515	1.5	16	23	38	0	-
RE511400_197	Residential	607989	4853530	1.5	15	23	38	0	-
RE511400_198	Residential	607989	4853538	1.5	15	23	37	0	-
RE511400_199	Residential	607988	4853524	1.5	15	23	38	0	-
RE511400_200	Residential	607988	4853546	1.5	14	23	37	0	-
RE511400_201	Residential	607988	4853553	1.5	14	23	36	0	-
RE511400_202	Residential	607982	4853569	1.5	13	23	35	0	-
RE511400_203	Residential	607985	4853562	1.5	13	23	36	0	-
RE511400_204	Residential	607980	4853574	1.5	12	23	35	0	-
RE511400_205	Residential	607978	4853580	1.5	12	23	35	0	-
RE511400_206	Residential	607972	4853586	1.5	11	23	34	0	-
RE511400_207	Residential	607968	4853592	1.5	11	23	34	0	-
RE511400_208	Residential	607963	4853600	1.5	11	23	34	0	-
RE511400_209	Residential	607958	4853607	1.5	11	23	34	0	-
RE511400_210	Residential	607953	4853615	1.5	11	23	33	0	-
RE511400_211	Residential	607948	4853620	1.5	11	23	33	0	-
RE511400_212	Residential	608027	4853522	1.5	16	23	39	0	-
RE511400_213	Residential	608027	4853540	1.5	15	23	37	0	-
RE511400_214	Residential	608027	4853531	1.5	15	23	38	0	-
RE511400_215	Residential	608027	4853548	1.5	14	23	37	0	-
RE511400_216	Residential	607888	4853817	1.5	8	23	31	0	-
RE511400_217	Residential	607735	4853842	1.5	8	23	30	0	-
RE511400_218	Residential	607748	4853810	1.5	8	23	31	0	-
RE511400_219	Residential	607777	4853830	1.5	8	23	31	0	-
RE511400_220	Residential	607730	4853850	1.5	7	23	30	0	-
RE511400_221	Residential	607725	4853846	1.5	8	23	30	0	-
RE511400_222	Residential	607783	4853834	1.5	8	23	31	0	-
RE511400_223	Residential	607752	4853873	1.5	7	23	30	0	-
RE511400_224	Residential	607743	4853806	1.5	8	23	31	0	-
RE511400_225	Residential	607711	4853837	1.5	8	23	30	0	-
RE511400_226	Residential	607748	4853878	1.5	7	23	30	0	-
RE511400_227	Residential	607755	4853868	1.5	7	23	30	0	-
RE511400_228	Residential	607756	4853827	1.5	8	23	30	0	-
RE511400_229	Residential	607767	4853823	1.5	8	23	31	0	-
RE511400_230	Residential	607735	4853854	1.5	7	23	30	0	-
RE511400_231	Residential	607738	4853803	1.5	8	23	31	0	-
RE511400_232	Residential	607762	4853859	1.5	8	23	30	0	-
RE511400_233	Residential	607719	4853843	1.5	8	23	30	0	-
RE511400_234	Residential	607730	4853838	1.5	8	23	30	0	-
RE511400_235	Residential	607767	4853834	1.5	8	23	30	0	-
RE511400_236	Residential	607738	4853814	1.5	8	23	31	0	-
RE511400_237	Residential	607733	4853810	1.5	8	23	31	0	-
RE511400_238	Residential	607761	4853819	1.5	8	23	31	0	-
RE511400_239	Residential	607777	4853842	1.5	8	23	31	0	-
RE511400_240	Residential	607761	4853831	1.5	8	23	30	0	-
RE511400_241	Residential	607751	4853823	1.5	8	23	30	0	-
RE511400_242	Residential	607756	4853816	1.5	8	23	31	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_243	Residential	607743	4853817	1.5	8	23	31	0	-
RE511400_244	Residential	607741	4853846	1.5	8	23	30	0	-
RE511400_245	Residential	607772	4853838	1.5	8	23	30	0	-
RE511400_246	Residential	607759	4853864	1.5	7	23	30	0	-
RE511400_247	Residential	607717	4853829	1.5	8	23	30	0	-
RE511400_248	Residential	607725	4853835	1.5	8	23	30	0	-
RE511400_249	Residential	607772	4853827	1.5	8	23	31	0	-
RE511400_250	Residential	607866	4853946	1.5	7	23	30	0	-
RE511400_251	Residential	607873	4853951	1.5	7	23	29	0	-
RE511400_252	Residential	607880	4853956	1.5	7	23	29	0	-
RE511400_265	Residential	607700	4854194	1.5	5	23	27	0	-
RE511400_266	Residential	607689	4854191	1.5	5	23	27	0	-
RE511400_267	Residential	607679	4854188	1.5	5	23	27	0	-
RE511400_268	Residential	607668	4854184	1.5	5	23	27	0	-
RE511400_269	Residential	607657	4854180	1.5	5	23	27	0	-
RE511400_270	Residential	607645	4854176	1.5	5	23	27	0	-
RE511400_271	Residential	607619	4854171	1.5	5	23	27	0	-
RE511400_272	Residential	607620	4854158	1.5	5	23	28	0	-
RE511400_273	Residential	607624	4854146	1.5	5	23	28	0	-
RE511400_274	Residential	607626	4854132	1.5	5	23	28	0	-
RE511400_275	Residential	607721	4854165	1.5	5	23	28	0	-
RE511400_276	Residential	607710	4854163	1.5	5	23	28	0	-
RE511400_277	Residential	607700	4854159	1.5	5	23	28	0	-
RE511400_278	Residential	607689	4854156	1.5	5	23	28	0	-
RE511400_279	Residential	607677	4854152	1.5	5	23	28	0	-
RE511400_280	Residential	607665	4854148	1.5	5	23	28	0	-
RE511400_281	Residential	607651	4854143	1.5	5	23	28	0	-
RE511400_282	Residential	607770	4854052	1.5	6	23	29	0	-
RE511400_283	Residential	607765	4854059	1.5	6	23	28	0	-
RE511400_284	Residential	607760	4854069	1.5	6	23	28	0	-
RE511400_285	Residential	607753	4854080	1.5	6	23	28	0	-
RE511400_286	Residential	607748	4854093	1.5	6	23	28	0	-
RE511400_287	Residential	607744	4854104	1.5	6	23	28	0	-
RE511400_288	Residential	607740	4854116	1.5	5	23	28	0	-
RE511400_289	Residential	607736	4854126	1.5	5	23	28	0	-
RE511400_290	Residential	607742	4854030	1.5	6	23	29	0	-
RE511400_291	Residential	607736	4854039	1.5	6	23	29	0	-
RE511400_292	Residential	607731	4854048	1.5	6	23	28	0	-
RE511400_293	Residential	607726	4854059	1.5	6	23	28	0	-
RE511400_294	Residential	607723	4854067	1.5	6	23	28	0	-
RE511400_295	Residential	607720	4854076	1.5	6	23	28	0	-
RE511400_296	Residential	607717	4854085	1.5	6	23	28	0	-
RE511400_297	Residential	607714	4854095	1.5	6	23	28	0	-
RE511400_298	Residential	607710	4854106	1.5	5	23	28	0	-
RE511400_299	Residential	607707	4854117	1.5	5	23	28	0	-
RE511400_300	Residential	607674	4854068	1.5	6	23	28	0	-
RE511400_301	Residential	607670	4854080	1.5	5	23	28	0	-
RE511400_302	Residential	607667	4854091	1.5	5	23	28	0	-
RE511400_303	Residential	607662	4854103	1.5	5	23	28	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_304	Residential	607765	4854005	1.5	6	23	29	0	-
RE511400_305	Residential	607773	4854009	1.5	6	23	29	0	-
RE511400_306	Residential	607779	4854014	1.5	6	23	29	0	-
RE511400_307	Residential	607787	4854019	1.5	6	23	29	0	-
RE511400_308	Residential	607794	4854023	1.5	6	23	29	0	-
RE511400_309	Residential	607801	4854028	1.5	6	23	29	0	-
RE511400_310	Residential	607809	4854033	1.5	6	23	29	0	-
RE511400_311	Residential	607817	4854039	1.5	6	23	29	0	-
RE511400_312	Residential	607802	4853980	1.5	6	23	29	0	-
RE511400_313	Residential	607807	4853983	1.5	6	23	29	0	-
RE511400_314	Residential	607814	4853988	1.5	6	23	29	0	-
RE511400_315	Residential	607820	4853992	1.5	6	23	29	0	-
RE511400_316	Residential	607825	4853995	1.5	6	23	29	0	-
RE511400_317	Residential	607829	4853998	1.5	6	23	29	0	-
RE511400_318	Residential	607837	4854004	1.5	6	23	29	0	-
RE511400_319	Residential	607842	4854008	1.5	6	23	29	0	-
RE511500_001	Child Care Centre	608104	4853900	1.5	6	23	29	0	-
RE511500_002	Residential	608322	4853695	1.5	9	23	32	0	-
RE511500_003	Residential	608318	4853701	1.5	9	23	32	0	-
RE511500_004	Residential	608314	4853707	1.5	9	23	32	0	-
RE511500_005	Residential	608300	4853727	1.5	10	23	32	0	-
RE511500_006	Residential	608295	4853734	1.5	9	23	32	0	-
RE511500_007	Residential	608290	4853741	1.5	9	23	32	0	-
RE511500_008	Residential	608285	4853748	1.5	9	23	32	0	-
RE511500_009	Residential	608280	4853755	1.5	9	23	32	0	-
RE511500_010	Residential	608335	4853677	1.5	9	23	32	0	-
RE511500_011	Residential	608327	4853688	1.5	9	23	32	0	-
RE511500_012	Residential	608364	4853636	1.5	11	23	33	0	-
RE511500_013	Residential	608359	4853642	1.5	10	23	33	0	-
RE511500_014	Residential	608355	4853649	1.5	10	23	33	0	-
RE511500_015	Residential	608349	4853657	1.5	9	23	32	0	-
RE511500_016	Residential	608345	4853664	1.5	9	23	32	0	-
RE511500_017	Residential	608310	4853713	1.5	10	23	32	0	-
RE511500_018	Residential	608305	4853720	1.5	10	23	32	0	-
RE511500_019	Residential	608232	4853817	1.5	7	23	30	0	-
RE511500_020	Residential	608226	4853679	1.5	11	23	33	0	-
RE511500_021	Residential	608207	4853707	1.5	10	23	32	0	-
RE511500_022	Residential	608274	4853612	1.5	11	23	33	0	-
RE511500_023	Residential	608242	4853657	1.5	11	23	33	0	-
RE511500_024	Residential	608232	4853672	1.5	11	23	33	0	-
RE511500_025	Residential	607937	4853892	1.5	7	23	29	0	-
RE511500_026	Residential	607990	4853929	1.5	6	23	29	0	-
RE511500_027	Residential	607999	4853934	1.5	6	23	29	0	-
RE511500_028	Residential	608017	4853910	1.5	6	23	29	0	-
RE511500_029	Residential	607985	4853887	1.5	6	23	29	0	-
RE511500_030	Residential	607977	4853881	1.5	6	23	29	0	-
RE511500_031	Residential	607952	4853902	1.5	6	23	29	0	-
RE511500_032	Residential	608205	4853855	1.5	7	23	29	0	-
RE511500_033	Residential	608000	4853898	1.5	6	23	29	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_034	Residential	607982	4853923	1.5	6	23	29	0	-
RE511500_035	Residential	607960	4853907	1.5	6	23	29	0	-
RE511500_036	Residential	607993	4853893	1.5	6	23	29	0	-
RE511500_037	Residential	608228	4853822	1.5	7	23	30	0	-
RE511500_038	Residential	608194	4853868	1.5	6	23	29	0	-
RE511500_039	Residential	608188	4853877	1.5	6	23	29	0	-
RE511500_040	Residential	608008	4853903	1.5	6	23	29	0	-
RE511500_041	Residential	608199	4853862	1.5	6	23	29	0	-
RE511500_042	Residential	608224	4853828	1.5	7	23	29	0	-
RE511500_043	Residential	608221	4853833	1.5	7	23	29	0	-
RE511500_044	Residential	607925	4853940	1.5	6	23	29	0	-
RE511500_045	Residential	608481	4853493	1.5	15	23	38	0	-
RE511500_046	Residential	608407	4853578	1.5	12	23	34	0	-
RE511500_047	Residential	608462	4853557	1.5	13	23	35	0	-
RE511500_048	Residential	608457	4853565	1.5	12	23	35	0	-
RE511500_049	Residential	607910	4853930	1.5	7	23	29	0	-
RE511500_050	Residential	607917	4853935	1.5	6	23	29	0	-
RE511500_051	Residential	608411	4853570	1.5	12	23	35	0	-
RE511500_052	Residential	608435	4853530	1.5	13	23	36	0	-
RE511500_053	Residential	608415	4853563	1.5	12	23	35	0	-
RE511500_054	Residential	608053	4853924	1.5	6	23	29	0	-
RE511500_055	Residential	608480	4853505	1.5	14	23	37	0	-
RE511500_056	Residential	608197	4853721	1.5	9	23	31	0	-
RE511500_057	Residential	608191	4853730	1.5	8	23	31	0	-
RE511500_058	Residential	608263	4853627	1.5	10	23	33	0	-
RE511500_059	Residential	608289	4853591	1.5	12	23	35	0	-
RE511500_060	Residential	608284	4853598	1.5	12	23	34	0	-
RE511500_061	Residential	608211	4853846	1.5	7	23	29	0	-
RE511500_062	Residential	608179	4853890	1.5	6	23	29	0	-
RE511500_063	Residential	607967	4853875	1.5	7	23	29	0	-
RE511500_064	Residential	607967	4853913	1.5	6	23	29	0	-
RE511500_065	Residential	608234	4853563	1.5	13	23	36	0	-
RE511500_066	Residential	608254	4853574	1.5	13	23	35	0	-
RE511500_067	Residential	608194	4853557	1.5	13	23	36	0	-
RE511500_068	Residential	608225	4853560	1.5	13	23	36	0	-
RE511500_069	Residential	608214	4853558	1.5	13	23	36	0	-
RE511500_070	Residential	608185	4853558	1.5	13	23	35	0	-
RE511500_071	Residential	608131	4853676	1.5	10	23	32	0	-
RE511500_072	Residential	608217	4853606	1.5	11	23	34	0	-
RE511500_073	Residential	608173	4853670	1.5	11	23	33	0	-
RE511500_074	Residential	608147	4853647	1.5	11	23	34	0	-
RE511500_075	Residential	608204	4853630	1.5	11	23	34	0	-
RE511500_076	Residential	608156	4853693	1.5	9	23	32	0	-
RE511500_077	Residential	608189	4853647	1.5	11	23	34	0	-
RE511500_078	Residential	608184	4853655	1.5	11	23	34	0	-
RE511500_079	Residential	608158	4853604	1.5	12	23	35	0	-
RE511500_080	Residential	608149	4853688	1.5	9	23	32	0	-
RE511500_081	Residential	608226	4853615	1.5	11	23	33	0	-
RE511500_082	Residential	608167	4853604	1.5	12	23	35	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_083	Residential	608195	4853640	1.5	11	23	34	0	-
RE511500_084	Residential	608195	4853604	1.5	12	23	34	0	-
RE511500_085	Residential	608154	4853638	1.5	12	23	34	0	-
RE511500_086	Residential	608120	4853668	1.5	10	23	33	0	-
RE511500_087	Residential	608176	4853604	1.5	12	23	35	0	-
RE511500_088	Residential	608168	4853677	1.5	10	23	33	0	-
RE511500_089	Residential	608140	4853682	1.5	10	23	32	0	-
RE511500_090	Residential	608205	4853603	1.5	11	23	34	0	-
RE511500_091	Residential	608185	4853604	1.5	12	23	34	0	-
RE511500_092	Residential	608141	4853656	1.5	11	23	33	0	-
RE511500_093	Residential	608244	4853567	1.5	13	23	36	0	-
RE511500_094	Residential	608204	4853557	1.5	13	23	36	0	-
RE511500_095	Residential	608304	4853570	1.5	13	23	36	0	-
RE511500_096	Residential	608315	4853555	1.5	13	23	36	0	-
RE511500_097	Residential	608258	4853635	1.5	10	23	33	0	-
RE511500_098	Residential	608248	4853649	1.5	11	23	33	0	-
RE511500_099	Residential	608222	4853686	1.5	10	23	33	0	-
RE511500_100	Residential	608216	4853693	1.5	10	23	33	0	-
RE511500_101	Residential	608269	4853620	1.5	10	23	33	0	-
RE511500_102	Residential	608201	4853714	1.5	9	23	32	0	-
RE511500_103	Residential	608309	4853563	1.5	13	23	36	0	-
RE511500_104	Residential	608299	4853577	1.5	13	23	35	0	-
RE511500_105	Residential	608279	4853605	1.5	11	23	34	0	-
RE511500_106	Residential	608253	4853642	1.5	10	23	33	0	-
RE511500_107	Residential	608212	4853700	1.5	10	23	33	0	-
RE511500_108	Residential	608294	4853584	1.5	12	23	35	0	-
RE511500_109	Residential	608166	4853699	1.5	9	23	32	0	-
RE511500_110	Residential	608179	4853662	1.5	11	23	34	0	-
RE511500_111	Residential	608443	4853510	1.5	14	23	37	0	-
RE511500_112	Residential	608420	4853557	1.5	13	23	35	0	-
RE511500_113	Residential	608424	4853551	1.5	13	23	36	0	-
RE511500_114	Residential	608473	4853532	1.5	13	23	36	0	-
RE511500_115	Residential	608470	4853541	1.5	13	23	36	0	-
RE511500_116	Residential	608448	4853484	1.5	16	23	39	0	-
RE511500_117	Residential	608445	4853501	1.5	15	23	38	0	-
RE511500_118	Residential	608446	4853493	1.5	16	23	38	0	-
RE511500_119	Residential	608441	4853518	1.5	14	23	36	0	-
RE511500_120	Residential	608476	4853524	1.5	13	23	36	0	-
RE511500_121	Residential	608433	4853537	1.5	13	23	36	0	-
RE511500_122	Residential	608208	4853851	1.5	7	23	29	0	-
RE511500_123	Residential	608438	4853524	1.5	14	23	36	0	-
RE511500_124	Residential	608429	4853545	1.5	13	23	36	0	-
RE511500_125	Residential	608466	4853549	1.5	13	23	35	0	-
RE511500_126	Residential	608478	4853514	1.5	13	23	36	0	-
RE511500_127	Residential	608452	4853573	1.5	12	23	35	0	-
RE511500_128	Residential	608241	4853804	1.5	7	23	30	0	-
RE511500_129	Residential	608215	4853841	1.5	7	23	29	0	-
RE511500_130	Residential	608236	4853811	1.5	7	23	30	0	-
RE511500_131	Residential	608185	4853882	1.5	6	23	29	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_132	Residential	607957	4853868	1.5	7	23	29	0	-
RE511500_133	Residential	607944	4853897	1.5	6	23	29	0	-
RE511500_134	Residential	607975	4853918	1.5	6	23	29	0	-
RE511500_135	Residential	608340	4853670	1.5	9	23	32	0	-
RE511500_136	Residential	608276	4853761	1.5	9	23	31	0	-
RE511500_137	Residential	608272	4853766	1.5	9	23	31	0	-
RE511500_138	Residential	608268	4853772	1.5	8	23	31	0	-
RE511500_139	Residential	608263	4853780	1.5	8	23	31	0	-
RE511500_140	Residential	608331	4853682	1.5	9	23	32	0	-
RE511500_141	Residential	608237	4853665	1.5	11	23	33	0	-
RE511500_142	Residential	608152	4853626	1.5	12	23	35	0	-
RE511500_143	Residential	608232	4853514	1.5	15	23	38	0	-
RE511500_144	Residential	608223	4853515	1.5	16	23	38	0	-
RE511500_145	Residential	608246	4853517	1.5	15	23	38	0	-
RE511500_146	Residential	608253	4853520	1.5	15	23	38	0	-
RE511500_147	Residential	608269	4853526	1.5	15	23	37	0	-
RE511500_148	Residential	608274	4853530	1.5	15	23	37	0	-
RE511500_149	Residential	608264	4853523	1.5	15	23	38	0	-
RE511500_150	Residential	608279	4853533	1.5	14	23	37	0	-
RE511500_151	Residential	608336	4853591	1.5	12	23	35	0	-
RE511500_152	Residential	608339	4853585	1.5	12	23	35	0	-
RE511500_153	Residential	608328	4853602	1.5	12	23	34	0	-
RE511500_154	Residential	608332	4853597	1.5	12	23	35	0	-
RE511500_155	Residential	608344	4853578	1.5	12	23	35	0	-
RE511500_156	Residential	608324	4853608	1.5	12	23	34	0	-
RE511500_157	Residential	608318	4853615	1.5	11	23	34	0	-
RE511500_158	Residential	608314	4853620	1.5	11	23	33	0	-
RE511500_159	Residential	608309	4853630	1.5	10	23	33	0	-
RE511500_160	Residential	608305	4853636	1.5	10	23	33	0	-
RE511500_161	Residential	608299	4853644	1.5	10	23	32	0	-
RE511500_162	Residential	608295	4853650	1.5	10	23	32	0	-
RE511500_163	Residential	608287	4853661	1.5	10	23	32	0	-
RE511500_164	Residential	608291	4853655	1.5	10	23	32	0	-
RE511500_165	Residential	608282	4853668	1.5	10	23	33	0	-
RE511500_166	Residential	608278	4853674	1.5	10	23	33	0	-
RE511500_167	Residential	608274	4853679	1.5	10	23	33	0	-
RE511500_168	Residential	608269	4853685	1.5	10	23	33	0	-
RE511500_169	Residential	608264	4853692	1.5	10	23	33	0	-
RE511500_170	Residential	608259	4853699	1.5	10	23	33	0	-
RE511500_171	Residential	608254	4853706	1.5	10	23	33	0	-
RE511500_172	Residential	608250	4853713	1.5	10	23	32	0	-
RE511500_173	Residential	608240	4853728	1.5	9	23	32	0	-
RE511500_174	Residential	608236	4853733	1.5	9	23	32	0	-
RE511500_175	Residential	608231	4853738	1.5	9	23	32	0	-
RE511500_176	Residential	608228	4853744	1.5	9	23	31	0	-
RE511500_177	Residential	608245	4853721	1.5	10	23	32	0	-
RE511500_178	Residential	608223	4853750	1.5	8	23	31	0	-
RE511500_179	Residential	608375	4853620	1.5	11	23	34	0	-
RE511500_180	Residential	608371	4853626	1.5	11	23	34	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_181	Residential	608378	4853615	1.5	11	23	34	0	-
RE511500_182	Residential	608382	4853610	1.5	12	23	34	0	-
RE511500_183	Residential	608368	4853631	1.5	11	23	34	0	-
RE511500_184	Residential	607933	4853946	1.5	6	23	29	0	-
RE511500_185	Residential	607940	4853951	1.5	6	23	29	0	-
RE511500_186	Residential	607948	4853956	1.5	6	23	29	0	-
RE511500_187	Residential	607955	4853962	1.5	6	23	28	0	-
RE511500_188	Residential	607963	4853967	1.5	6	23	28	0	-
RE511500_189	Residential	607972	4853973	1.5	6	23	28	0	-
RE511500_190	Residential	607887	4853960	1.5	7	23	29	0	-
RE511500_191	Residential	607893	4853965	1.5	6	23	29	0	-
RE511500_192	Residential	607899	4853969	1.5	6	23	29	0	-
RE511500_193	Residential	607904	4853973	1.5	6	23	29	0	-
RE511500_194	Residential	607910	4853977	1.5	6	23	29	0	-
RE511500_195	Residential	607916	4853981	1.5	6	23	29	0	-
RE511500_196	Residential	607923	4853986	1.5	6	23	28	0	-
RE511500_197	Residential	607928	4853990	1.5	6	23	28	0	-
RE511500_198	Residential	607933	4853993	1.5	6	23	28	0	-
RE511500_199	Residential	607938	4853997	1.5	6	23	28	0	-
RE511500_200	Residential	607943	4854000	1.5	6	23	28	0	-
RE511500_201	Residential	607948	4854004	1.5	6	23	28	0	-
RE511500_202	Residential	608047	4853932	1.5	6	23	29	0	-
RE511500_203	Residential	608042	4853940	1.5	6	23	29	0	-
RE511500_204	Residential	608036	4853947	1.5	6	23	28	0	-
RE511500_205	Residential	608031	4853955	1.5	6	23	28	0	-
RE511500_206	Residential	608026	4853962	1.5	6	23	28	0	-
RE511500_207	Residential	608021	4853969	1.5	6	23	28	0	-
RE511500_208	Residential	608016	4853976	1.5	6	23	28	0	-
RE511500_209	Residential	608011	4853983	1.5	6	23	28	0	-
RE511500_210	Residential	608006	4853990	1.5	6	23	28	0	-
RE511500_211	Residential	608001	4853997	1.5	5	23	28	0	-
RE511500_212	Residential	607995	4854005	1.5	5	23	28	0	-
RE511500_213	Residential	607990	4854012	1.5	5	23	28	0	-
RE511500_214	Residential	607985	4854020	1.5	5	23	28	0	-
RE511500_215	Residential	607979	4854029	1.5	5	23	28	0	-
RE511500_216	Residential	608085	4853947	1.5	6	23	29	0	-
RE511500_217	Residential	608081	4853952	1.5	6	23	28	0	-
RE511500_218	Residential	608077	4853958	1.5	6	23	28	0	-
RE511500_219	Residential	608074	4853962	1.5	6	23	28	0	-
RE511500_220	Residential	608069	4853969	1.5	6	23	28	0	-
RE511500_221	Residential	608065	4853974	1.5	6	23	28	0	-
RE511500_222	Residential	608062	4853978	1.5	6	23	28	0	-
RE511500_223	Residential	608058	4853984	1.5	6	23	28	0	-
RE511500_224	Residential	608053	4853991	1.5	6	23	28	0	-
RE511500_225	Residential	608049	4853997	1.5	6	23	28	0	-
RE511500_226	Residential	608043	4854006	1.5	6	23	28	0	-
RE511500_227	Residential	608040	4854011	1.5	5	23	28	0	-
RE511500_228	Residential	608034	4854019	1.5	5	23	28	0	-
RE511500_229	Residential	608029	4854025	1.5	5	23	28	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_230	Residential	608026	4854031	1.5	5	23	28	0	-
RE511500_231	Residential	608022	4854036	1.5	5	23	28	0	-
RE511500_232	Residential	608018	4854042	1.5	5	23	28	0	-
RE511500_233	Residential	608013	4854048	1.5	5	23	28	0	-
RE511500_234	Residential	608175	4853896	1.5	6	23	29	0	-
RE511500_235	Residential	608171	4853902	1.5	6	23	29	0	-
RE511500_236	Residential	608167	4853908	1.5	6	23	28	0	-
RE511500_237	Residential	608162	4853915	1.5	6	23	28	0	-
RE511500_238	Residential	608157	4853922	1.5	6	23	28	0	-
RE511500_239	Residential	608154	4853927	1.5	6	23	28	0	-
RE511500_240	Residential	608150	4853933	1.5	6	23	28	0	-
RE511500_241	Residential	608145	4853939	1.5	6	23	28	0	-
RE511500_242	Residential	608142	4853944	1.5	6	23	28	0	-
RE511500_243	Residential	608122	4853973	1.5	6	23	28	0	-
RE511500_244	Residential	608119	4853977	1.5	6	23	28	0	-
RE511500_245	Residential	608115	4853983	1.5	6	23	28	0	-
RE511500_246	Residential	608112	4853987	1.5	6	23	28	0	-
RE511500_247	Residential	608107	4853994	1.5	6	23	28	0	-
RE511500_259	Residential	607976	4854103	1.5	5	23	28	0	-
RE511500_260	Residential	607970	4854109	1.5	5	23	27	0	-
RE511500_261	Residential	607967	4854115	1.5	5	23	27	0	-
RE511500_262	Residential	607962	4854121	1.5	5	23	27	0	-
RE511500_263	Residential	607959	4854126	1.5	5	23	27	0	-
RE511500_264	Residential	607955	4854131	1.5	5	23	27	0	-
RE511500_265	Residential	607949	4854139	1.5	5	23	27	0	-
RE511500_266	Residential	607944	4854146	1.5	5	23	27	0	-
RE511500_267	Residential	607939	4854153	1.5	5	23	27	0	-
RE511500_268	Residential	607934	4854160	1.5	5	23	27	0	-
RE511500_269	Residential	607929	4854168	1.5	5	23	27	0	-
RE511500_270	Residential	607927	4854176	1.5	4	23	27	0	-
RE511500_288	Residential	607723	4854202	1.5	5	23	27	0	-
RE511500_289	Residential	607711	4854198	1.5	5	23	27	0	-
RE511500_313	Residential	607831	4854199	1.5	5	23	27	0	-
RE511500_314	Residential	607821	4854196	1.5	5	23	27	0	-
RE511500_315	Residential	607810	4854192	1.5	5	23	27	0	-
RE511500_316	Residential	607798	4854189	1.5	5	23	27	0	-
RE511500_317	Residential	607787	4854186	1.5	5	23	28	0	-
RE511500_318	Residential	607777	4854182	1.5	5	23	28	0	-
RE511500_319	Residential	607764	4854179	1.5	5	23	27	0	-
RE511500_320	Residential	607849	4854155	1.5	5	23	28	0	-
RE511500_321	Residential	607839	4854152	1.5	5	23	28	0	-
RE511500_322	Residential	607829	4854148	1.5	5	23	28	0	-
RE511500_323	Residential	607818	4854145	1.5	5	23	28	0	-
RE511500_324	Residential	607806	4854141	1.5	5	23	28	0	-
RE511500_325	Residential	607943	4854078	1.5	5	23	28	0	-
RE511500_326	Residential	607939	4854083	1.5	5	23	28	0	-
RE511500_327	Residential	607933	4854092	1.5	5	23	28	0	-
RE511500_328	Residential	607929	4854097	1.5	5	23	28	0	-
RE511500_329	Residential	607923	4854106	1.5	5	23	28	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_330	Residential	607919	4854112	1.5	5	23	27	0	-
RE511500_331	Residential	607913	4854119	1.5	5	23	27	0	-
RE511500_332	Residential	607907	4854127	1.5	5	23	27	0	-
RE511500_333	Residential	607902	4854135	1.5	5	23	27	0	-
RE511500_334	Residential	607897	4854142	1.5	5	23	27	0	-
RE511500_335	Residential	607892	4854151	1.5	5	23	27	0	-
RE511500_336	Residential	607888	4854158	1.5	5	23	27	0	-
RE511500_337	Residential	607885	4854168	1.5	5	23	27	0	-
RE511500_338	Residential	607883	4854174	1.5	5	23	27	0	-
RE511500_339	Residential	607733	4854170	1.5	5	23	28	0	-
RE511500_340	Residential	607810	4854078	1.5	6	23	28	0	-
RE511500_341	Residential	607805	4854085	1.5	6	23	28	0	-
RE511500_342	Residential	607798	4854096	1.5	6	23	28	0	-
RE511500_343	Residential	607794	4854107	1.5	5	23	28	0	-
RE511500_344	Residential	607790	4854118	1.5	5	23	28	0	-
RE511500_345	Residential	607788	4854129	1.5	5	23	28	0	-
RE511500_346	Residential	607785	4854141	1.5	5	23	28	0	-
RE511500_347	Residential	607825	4854044	1.5	6	23	29	0	-
RE511500_348	Residential	607832	4854049	1.5	6	23	29	0	-
RE511500_349	Residential	607840	4854054	1.5	6	23	29	0	-
RE511500_350	Residential	607846	4854059	1.5	6	23	28	0	-
RE511500_351	Residential	607853	4854064	1.5	6	23	28	0	-
RE511500_352	Residential	607861	4854068	1.5	6	23	28	0	-
RE511500_353	Residential	607868	4854074	1.5	6	23	28	0	-
RE511500_354	Residential	607874	4854078	1.5	6	23	28	0	-
RE511500_355	Residential	607881	4854083	1.5	5	23	28	0	-
RE511500_356	Residential	607889	4854088	1.5	5	23	28	0	-
RE511500_357	Residential	607850	4854014	1.5	6	23	29	0	-
RE511500_358	Residential	607857	4854018	1.5	6	23	29	0	-
RE511500_359	Residential	607863	4854023	1.5	6	23	29	0	-
RE511500_360	Residential	607869	4854027	1.5	6	23	29	0	-
RE511500_361	Residential	607874	4854030	1.5	6	23	29	0	-
RE511500_362	Residential	607880	4854034	1.5	6	23	28	0	-
RE511500_363	Residential	607885	4854039	1.5	6	23	28	0	-
RE511500_364	Residential	607891	4854043	1.5	6	23	28	0	-
RE511500_365	Residential	607895	4854047	1.5	6	23	28	0	-
RE511500_366	Residential	607900	4854050	1.5	6	23	28	0	-
RE511500_367	Residential	607906	4854054	1.5	5	23	28	0	-
RE511500_368	Residential	607911	4854057	1.5	5	23	28	0	-
RE511500_369	Residential	607823	4854097	1.5	6	23	28	0	-
RE511500_370	Residential	607831	4854103	1.5	5	23	28	0	-
RE511500_371	Residential	607839	4854108	1.5	5	23	28	0	-
RE511500_372	Residential	607847	4854113	1.5	5	23	28	0	-
RE511500_373	Residential	607854	4854118	1.5	5	23	28	0	-
RE511500_374	Residential	607864	4854124	1.5	5	23	28	0	-
RE511500_376	Residential	607755	4854206	1.5	5	23	27	0	-
RE511600_001	Residential	608413	4853627	1.5	11	23	34	0	-
RE511600_002	Residential	608350	4853717	1.5	9	23	32	0	-
RE511600_003	Residential	608360	4853703	1.5	9	23	31	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511600_004	Residential	608309	4853775	1.5	9	23	31	0	-
RE511600_005	Residential	608274	4853824	1.5	7	23	30	0	-
RE511600_006	Residential	608263	4853840	1.5	7	23	29	0	-
RE511600_007	Residential	608430	4853685	1.5	9	23	32	0	-
RE511600_008	Residential	608384	4853750	1.5	9	23	31	0	-
RE511600_009	Residential	608443	4853666	1.5	10	23	33	0	-
RE511600_010	Residential	608451	4853655	1.5	10	23	33	0	-
RE511600_011	Residential	608399	4853728	1.5	8	23	31	0	-
RE511600_012	Residential	608407	4853717	1.5	8	23	31	0	-
RE511600_013	Residential	608423	4853695	1.5	9	23	31	0	-
RE511600_014	Residential	608392	4853739	1.5	8	23	31	0	-
RE511600_015	Residential	608437	4853676	1.5	10	23	32	0	-
RE511600_016	Residential	608415	4853706	1.5	8	23	31	0	-
RE511600_017	Residential	608253	4853854	1.5	7	23	29	0	-
RE511600_018	Residential	608527	4853503	1.5	14	23	37	0	-
RE511600_019	Residential	608519	4853540	1.5	12	23	35	0	-
RE511600_020	Residential	608517	4853549	1.5	12	23	35	0	-
RE511600_021	Residential	608473	4853624	1.5	10	23	33	0	-
RE511600_022	Residential	608509	4853566	1.5	12	23	35	0	-
RE511600_023	Residential	608496	4853592	1.5	12	23	34	0	-
RE511600_024	Residential	608441	4853588	1.5	12	23	34	0	-
RE511600_025	Residential	608524	4853521	1.5	13	23	35	0	-
RE511600_026	Residential	608490	4853600	1.5	11	23	34	0	-
RE511600_027	Residential	608513	4853558	1.5	12	23	35	0	-
RE511600_028	Residential	608407	4853636	1.5	11	23	34	0	-
RE511600_029	Residential	608402	4853644	1.5	11	23	33	0	-
RE511600_030	Residential	608396	4853651	1.5	10	23	33	0	-
RE511600_031	Residential	608391	4853659	1.5	10	23	33	0	-
RE511600_032	Residential	608268	4853833	1.5	7	23	30	0	-
RE511600_033	Residential	608258	4853847	1.5	7	23	29	0	-
RE511600_034	Residential	608526	4853512	1.5	13	23	36	0	-
RE511600_035	Residential	608365	4853764	1.5	9	23	31	0	-
RE511600_036	Residential	608501	4853584	1.5	12	23	34	0	-
RE511600_037	Residential	608485	4853608	1.5	11	23	34	0	-
RE511600_038	Residential	608447	4853580	1.5	12	23	34	0	-
RE511600_039	Residential	608480	4853615	1.5	11	23	33	0	-
RE511600_040	Residential	608522	4853530	1.5	12	23	35	0	-
RE511600_041	Residential	608380	4853674	1.5	9	23	32	0	-
RE511600_042	Residential	608375	4853682	1.5	9	23	31	0	-
RE511600_043	Residential	608355	4853710	1.5	9	23	31	0	-
RE511600_044	Residential	608370	4853689	1.5	9	23	31	0	-
RE511600_045	Residential	608365	4853696	1.5	9	23	31	0	-
RE511600_046	Residential	608528	4853482	1.5	15	23	38	0	-
RE511600_047	Residential	608505	4853575	1.5	12	23	35	0	-
RE511600_048	Residential	608435	4853597	1.5	11	23	34	0	-
RE511600_049	Residential	608528	4853494	1.5	15	23	37	0	-
RE511600_050	Residential	608345	4853723	1.5	9	23	32	0	-
RE511600_051	Residential	608341	4853730	1.5	9	23	32	0	-
RE511600_052	Residential	608336	4853737	1.5	9	23	32	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_053	Residential	608330	4853745	1.5	9	23	32	0	-
RE511600_054	Residential	608325	4853752	1.5	9	23	32	0	-
RE511600_055	Residential	608320	4853760	1.5	9	23	32	0	-
RE511600_056	Residential	608315	4853767	1.5	9	23	32	0	-
RE511600_057	Residential	608304	4853782	1.5	9	23	31	0	-
RE511600_058	Residential	608299	4853790	1.5	8	23	31	0	-
RE511600_059	Residential	608292	4853799	1.5	8	23	31	0	-
RE511600_060	Residential	608386	4853667	1.5	10	23	32	0	-
RE511600_061	Residential	608377	4853772	1.5	9	23	31	0	-
RE511600_062	Residential	608387	4853779	1.5	9	23	31	0	-
RE511600_085	Residential	608248	4853972	1.5	6	23	28	0	-
RE511600_086	Residential	608239	4853965	1.5	6	23	28	0	-
RE511600_087	Residential	608227	4853958	1.5	6	23	28	0	-
RE511600_091	Residential	608350	4853851	1.5	7	23	30	0	-
RE511600_092	Residential	608343	4853862	1.5	7	23	29	0	-
RE511600_093	Residential	608335	4853872	1.5	7	23	29	0	-
RE511600_094	Residential	608327	4853883	1.5	7	23	29	0	-
RE511600_095	Residential	608320	4853894	1.5	6	23	29	0	-
RE511600_096	Residential	608312	4853905	1.5	6	23	29	0	-
RE511600_097	Residential	608305	4853915	1.5	6	23	29	0	-
RE511600_098	Residential	608298	4853925	1.5	6	23	29	0	-
RE511600_099	Residential	608291	4853934	1.5	6	23	29	0	-
RE511600_100	Residential	608283	4853945	1.5	6	23	28	0	-
RE511600_101	Residential	608348	4853801	1.5	8	23	31	0	-
RE511600_102	Residential	608342	4853810	1.5	8	23	31	0	-
RE511600_103	Residential	608336	4853817	1.5	8	23	31	0	-
RE511600_104	Residential	608331	4853825	1.5	8	23	30	0	-
RE511600_105	Residential	608325	4853833	1.5	7	23	30	0	-
RE511600_106	Residential	608319	4853842	1.5	7	23	30	0	-
RE511600_107	Residential	608312	4853852	1.5	7	23	29	0	-
RE511600_108	Residential	608305	4853861	1.5	7	23	29	0	-
RE511600_109	Residential	608299	4853870	1.5	7	23	29	0	-
RE511600_110	Residential	608292	4853880	1.5	6	23	29	0	-
RE511600_111	Residential	608285	4853889	1.5	6	23	29	0	-
RE511600_112	Residential	608279	4853898	1.5	6	23	29	0	-
RE511600_113	Residential	608274	4853905	1.5	6	23	29	0	-
RE511600_114	Residential	608269	4853913	1.5	6	23	29	0	-
RE511600_115	Residential	608257	4853930	1.5	6	23	29	0	-
RE511600_116	Residential	608248	4853861	1.5	7	23	29	0	-
RE511600_117	Residential	608243	4853868	1.5	6	23	29	0	-
RE511600_118	Residential	608238	4853875	1.5	6	23	29	0	-
RE511600_119	Residential	608233	4853882	1.5	6	23	29	0	-
RE511600_120	Residential	608228	4853889	1.5	6	23	29	0	-
RE511600_121	Residential	608223	4853896	1.5	6	23	29	0	-
RE511600_122	Residential	608218	4853903	1.5	6	23	29	0	-
RE511600_123	Residential	608213	4853910	1.5	6	23	29	0	-
RE511600_124	Residential	608208	4853917	1.5	6	23	29	0	-
RE511600_125	Residential	608204	4853924	1.5	6	23	28	0	-
RE511600_126	Residential	608199	4853931	1.5	6	23	28	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511600_127	Residential	608194	4853938	1.5	6	23	28	0	-
RE511600_128	Residential	608189	4853944	1.5	6	23	28	0	-
RE511600_129	Residential	608184	4853951	1.5	6	23	28	0	-
RE511600_130	Residential	608179	4853958	1.5	6	23	28	0	-
RE511600_131	Residential	608173	4853967	1.5	6	23	28	0	-
RE511600_132	Residential	608210	4853982	1.5	5	23	28	0	-
RE511600_133	Residential	608221	4853990	1.5	5	23	28	0	-
RE511600_134	Residential	608230	4853997	1.5	5	23	28	0	-
RE511600_142	Residential	608180	4854022	1.5	5	23	28	0	-
RE511600_143	Residential	608189	4854028	1.5	5	23	28	0	-
RE511600_144	Residential	608196	4854033	1.5	5	23	28	0	-
RE511600_163	Residential	608170	4854054	1.5	5	23	28	0	-
RE511600_164	Residential	608162	4854048	1.5	5	23	28	0	-
RE511600_185	Residential	608102	4854000	1.5	6	23	28	0	-
RE511600_186	Residential	608099	4854005	1.5	6	23	28	0	-
RE511600_187	Residential	608096	4854009	1.5	5	23	28	0	-
RE511600_188	Residential	608090	4854017	1.5	5	23	28	0	-
RE511600_189	Residential	608087	4854022	1.5	5	23	28	0	-
RE511600_190	Residential	608081	4854032	1.5	5	23	28	0	-
RE511600_191	Residential	608077	4854037	1.5	5	23	28	0	-
RE511600_192	Residential	608073	4854045	1.5	5	23	28	0	-
RE511600_193	Residential	608068	4854051	1.5	5	23	28	0	-
RE511600_194	Residential	608064	4854057	1.5	5	23	28	0	-
RE511600_195	Residential	608060	4854062	1.5	5	23	28	0	-
RE511600_196	Residential	608056	4854069	1.5	5	23	28	0	-
RE511600_197	Residential	608053	4854075	1.5	5	23	28	0	-
RE511600_198	Residential	608154	4853993	1.5	6	23	28	0	-
RE511600_199	Residential	608148	4854003	1.5	6	23	28	0	-
RE511600_200	Residential	608142	4854010	1.5	5	23	28	0	-
RE511600_201	Residential	608137	4854018	1.5	5	23	28	0	-
RE511600_202	Residential	608132	4854025	1.5	5	23	28	0	-
RE511600_203	Residential	608126	4854033	1.5	5	23	28	0	-
RE511600_204	Residential	608121	4854040	1.5	5	23	28	0	-
RE511600_205	Residential	608116	4854047	1.5	5	23	28	0	-
RE511600_206	Residential	608111	4854054	1.5	5	23	28	0	-
RE511600_207	Residential	608107	4854061	1.5	5	23	28	0	-
RE511600_208	Residential	608102	4854068	1.5	5	23	28	0	-
RE511600_209	Residential	608097	4854075	1.5	5	23	28	0	-
RE511600_210	Residential	608091	4854082	1.5	5	23	28	0	-
RE511600_211	Residential	608086	4854090	1.5	5	23	28	0	-
RE511600_212	Residential	608080	4854098	1.5	5	23	28	0	-
RE511600_228	Residential	608507	4853702	1.5	9	23	32	0	-
RE511600_242	Residential	608263	4853920	1.5	6	23	29	0	-
RE511800_001	Residential	607134	4855697	1.5	4	23	27	0	-
RE512000_002	Residential	607206	4855951	1.5	6	23	29	0	-
RE512000_003	Residential	607187	4856027	1.5	6	23	29	0	-
RE512100_001	Residential	607265	4856058	1.5	7	23	29	0	-
RE512100_002	Residential	607248	4856119	1.5	7	23	29	0	-
RE512200_001	Residential	607241	4856162	1.5	7	23	29	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE512200_002	Residential	607123	4856318	1.5	6	23	29	0	-
RE512200_003	Residential	607102	4856358	1.5	5	23	28	0	-
RE512300_001	Residential	607221	4856317	1.5	6	23	29	0	-
RE512400_001	Residential	607226	4856438	1.5	5	23	28	0	-
RE514400_001	Residential	608610	4857694	1.5	5	23	28	0	-
RE514400_003	Residential	608876	4857474	1.5	5	23	27	0	-
RE514400_006	Residential	608883	4857432	1.5	4	23	27	0	-
RE514400_007	Residential	608877	4857453	1.5	5	23	27	0	-
RE514500_001	Residential	608674	4857705	1.5	6	23	28	0	-
RE514500_002	Residential	608701	4857709	1.5	6	23	28	0	-
RE514500_003	Residential	608738	4857729	1.5	7	23	29	0	-
RE514500_006	Residential	608958	4857441	1.5	5	23	28	0	-
RE514500_007	Residential	608953	4857458	1.5	5	23	28	0	-
RE514500_008	Residential	608872	4857492	1.5	5	23	28	0	-
RE514500_009	Residential	608859	4857508	1.5	5	23	28	0	-
RE514500_010	Residential	608849	4857526	1.5	5	23	28	0	-
RE514600_001	Residential	608758	4857755	1.5	7	23	30	0	-
RE514600_002	Residential	608949	4857475	1.5	5	23	28	0	-
RE514600_003	Residential	608946	4857496	1.5	6	23	28	0	-
RE514600_004	Residential	608942	4857512	1.5	6	23	29	0	-
RE514600_005	Residential	608936	4857529	1.5	6	23	29	0	-
RE514600_006	Residential	608930	4857551	1.5	6	23	29	0	-
RE514700_001	Residential	608965	4857617	1.5	8	23	30	0	-
RE514800_001	Residential	608884	4857846	1.5	14	23	36	0	-
RE515000_001	Residential	608971	4857986	1.5	15	23	37	0	-
RE515100_001	Residential	609037	4857912	1.5	9	23	32	0	-
RE515200_001	Residential	609158	4857928	1.5	8	23	30	0	-
RE515200_002	Residential	609081	4857926	1.5	8	23	31	0	-
RE515200_003	Residential	608988	4858132	1.5	8	23	31	0	-
RE515300_001	Residential	609255	4857942	1.5	7	23	30	0	-
RE515300_002	Residential	609091	4858212	1.5	4	23	27	0	-
RE515300_003	Residential	608992	4858402	1.5	6	23	28	0	-
RE516200_001	Residential	609863	4858591	1.5	2	23	25	0	-
RE517200_001	Residential	610865	4858953	1.5	9	23	32	0	-
RE517200_002	Residential	610873	4858915	1.5	9	23	32	0	-
RE517200_003	Residential	610988	4858848	1.5	5	23	28	0	-
RE517400_001	Residential	611124	4858907	1.5	3	23	25	0	-
RE519100_001	Residential	612653	4859633	1.5	3	23	26	0	-
RE519500_001	Residential	612843	4860236	1.5	4	23	27	0	-
RE519500_002	Residential	612758	4860312	1.5	5	23	28	0	-
RE521400_001	Residential	614549	4860340	1.5	6	23	29	0	-
RE521600_001	Park and Conservation	615842	4859006	1.5	15	23	38	0	-
RE521600_002	Residential	614759	4860153	1.5	8	23	31	0	-
RE521600_003	Residential	614783	4860430	1.5	11	23	34	0	-
RE521600_004	Residential	615884	4859578	1.5	30	23	52	1	0.1%
RE521600_005	Residential	615805	4859615	1.5	20	23	42	0	-
RE521600_006	Residential	615779	4859578	1.5	17	23	40	0	-
RE521600_007	Residential	615741	4859736	1.5	17	23	39	0	-
RE521600_008	Residential	615516	4859929	1.5	14	23	37	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_009	Residential	615671	4860025	1.5	18	23	40	0	-
RE521600_010	Residential	616259	4860149	1.5	11	23	34	0	-
RE521600_011	Residential	616419	4860214	1.5	9	23	32	0	-
RE521600_012	Residential	615172	4860341	1.5	9	23	32	0	-
RE521600_013	Residential	615849	4858301	1.5	10	23	33	0	-
RE521600_017	Residential	614954	4860122	1.5	7	23	30	0	-
RE521600_018	Residential	615792	4858087	1.5	9	23	31	0	-
RE521600_019	Residential	615658	4858566	1.5	9	23	32	0	-
RE521600_020	Residential	615792	4858189	1.5	9	23	32	0	-
RE521600_023	Residential	615889	4858330	1.5	11	23	34	0	-
RE521600_026	Residential	615700	4858499	1.5	9	23	32	0	-
RE521600_028	Residential	615797	4858289	1.5	10	23	32	0	-
RE521600_030	Residential	615749	4858368	1.5	9	23	32	0	-
RE521600_032	Residential	615905	4858207	1.5	11	23	33	0	-
RE521600_035	Residential	615746	4858159	1.5	9	23	31	0	-
RE521600_036	Residential	615704	4858558	1.5	10	23	32	0	-
RE521600_037	Residential	615871	4858014	1.5	9	23	32	0	-
RE521600_038	Residential	615876	4858126	1.5	10	23	33	0	-
RE521600_039	Residential	615808	4858385	1.5	10	23	32	0	-
RE521600_041	Residential	615837	4858114	1.5	9	23	32	0	-
RE521600_043	Residential	615749	4858276	1.5	9	23	32	0	-
RE521600_044	Residential	615845	4858206	1.5	10	23	32	0	-
RE521600_045	Residential	615931	4858159	1.5	11	23	34	0	-
RE521600_046	Residential	615948	4858081	1.5	11	23	34	0	-
RE521600_047	Residential	616722	4858027	1.5	7	23	29	0	-
RE521600_048	Residential	616724	4858016	1.5	7	23	29	0	-
RE521600_049	Residential	616727	4858005	1.5	7	23	29	0	-
RE521600_050	Residential	616685	4857961	1.5	7	23	30	0	-
RE521600_051	Residential	616692	4857982	1.5	7	23	30	0	-
RE521600_052	Residential	616692	4857993	1.5	7	23	30	0	-
RE521600_053	Residential	616690	4858005	1.5	7	23	30	0	-
RE521600_054	Residential	616682	4858015	1.5	7	23	30	0	-
RE521600_055	Residential	616628	4857990	1.5	8	23	30	0	-
RE521600_056	Residential	616631	4857979	1.5	8	23	30	0	-
RE521600_057	Residential	616637	4857970	1.5	8	23	30	0	-
RE521600_058	Residential	616642	4857962	1.5	8	23	30	0	-
RE521600_059	Residential	616645	4857951	1.5	8	23	30	0	-
RE521600_060	Residential	616617	4857954	1.5	8	23	31	0	-
RE521600_061	Residential	616605	4857951	1.5	8	23	31	0	-
RE521600_062	Residential	616591	4857946	1.5	8	23	31	0	-
RE521600_063	Residential	616581	4857941	1.5	8	23	31	0	-
RE521600_064	Residential	616570	4857932	1.5	9	23	31	0	-
RE521600_065	Residential	616562	4857926	1.5	9	23	31	0	-
RE521600_066	Residential	616551	4857917	1.5	9	23	32	0	-
RE521600_067	Residential	616541	4857910	1.5	9	23	32	0	-
RE521600_068	Residential	616532	4857900	1.5	9	23	32	0	-
RE521600_069	Residential	616527	4857889	1.5	9	23	32	0	-
RE521600_070	Residential	616522	4857875	1.5	9	23	32	0	-
RE521600_071	Residential	616520	4857863	1.5	9	23	32	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_072	Residential	616516	4857852	1.5	10	23	32	0	-
RE521600_073	Residential	616511	4857839	1.5	10	23	32	0	-
RE521600_074	Residential	616508	4857827	1.5	10	23	32	0	-
RE521600_075	Residential	616510	4857818	1.5	9	23	32	0	-
RE521600_076	Residential	616566	4857851	1.5	8	23	31	0	-
RE521600_077	Residential	616573	4857861	1.5	8	23	31	0	-
RE521600_078	Residential	616578	4857871	1.5	8	23	31	0	-
RE521600_079	Residential	616586	4857883	1.5	8	23	31	0	-
RE521600_080	Residential	616597	4857890	1.5	8	23	31	0	-
RE521600_081	Residential	616609	4857897	1.5	8	23	31	0	-
RE521600_082	Residential	616621	4857902	1.5	8	23	31	0	-
RE521600_083	Residential	616646	4857916	1.5	8	23	30	0	-
RE521600_084	Residential	616072	4857806	1.5	13	23	35	0	-
RE521600_085	Residential	616075	4857794	1.5	13	23	35	0	-
RE521600_086	Residential	616095	4857778	1.5	13	23	36	0	-
RE521600_087	Residential	616097	4857766	1.5	13	23	36	0	-
RE521600_088	Residential	616098	4857755	1.5	13	23	36	0	-
RE521600_089	Residential	616192	4857944	1.5	25	23	48	0	-
RE521600_090	Residential	615423	4860137	1.5	12	23	35	0	-
RW110000_001	Residential	595952	4825790	1.5	20	23	42	0	-
RW110000_002	Residential	595454	4825807	1.5	30	23	53	3	0.2%
RW110000_008	Residential	594041	4825166	1.5	31	23	53	2	0.1%
RW110000_009	Residential	594096	4825191	1.5	34	23	56	2	0.1%
RW110000_010	Residential	594523	4825688	1.5	21	23	44	0	-
RW110000_011	Residential	595159	4826252	1.5	26	23	48	0	-
RW110000_012	Residential	595437	4826548	1.5	29	23	51	0	-
RW110000_013	Residential	595321	4826744	1.5	30	23	52	0	-
RW110000_014	Residential	595112	4826651	1.5	36	23	59	1	0.1%
RW110000_015	Residential	595155	4826706	1.5	38	23	61	0	-
RW110000_016	Residential	595166	4826855	1.5	40	23	63	0	-
RW110000_017	Residential	595209	4826815	1.5	45	23	68	1	0.1%
RW110000_018	Residential	594653	4825844	1.5	21	23	44	0	-
RW110000_019	Residential	595416	4826834	1.5	29	23	52	0	-
RW110000_020	Residential	595560	4825534	1.5	21	23	44	0	-
RW110000_021	Residential	597393	4824513	1.5	25	23	47	0	-
RW110000_022	Residential	594899	4824668	1.5	24	23	47	0	-
RW110000_023	Residential	594655	4824528	1.5	31	23	54	2	0.1%
RW110000_024	Residential	595310	4826113	1.5	44	23	66	3	0.2%
RW110100_001	Residential	595323	4827011	1.5	33	23	56	0	-
RW112100_001	Residential	594926	4829061	1.5	12	23	35	0	-
RW112100_002	Residential	594880	4829107	1.5	12	23	35	0	-
RW112100_003	Residential	594856	4829138	1.5	12	23	35	0	-
RW112200_001	Residential	594826	4829169	1.5	12	23	35	0	-
RW112300_001	Residential	594544	4829356	1.5	9	23	32	0	-
RW112300_002	Residential	594555	4829392	1.5	10	23	33	0	-
RW112300_003	Residential	594737	4829363	1.5	17	23	39	0	-
RW112400_001	Residential	594707	4829399	1.5	16	23	39	0	-
RW112400_002	Residential	594683	4829425	1.5	16	23	38	0	-
RW112400_003	Residential	594663	4829470	1.5	14	23	37	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW112500_001	Residential	594652	4829522	1.5	12	23	34	0	-
RW112500_002	Residential	594587	4829561	1.5	12	23	34	0	-
RW112600_001	Residential	594537	4829618	1.5	11	23	34	0	-
RW113300_001	Residential	595127	4830221	1.5	6	23	29	0	-
RW113700_001	Residential	594940	4830647	1.5	6	23	28	0	-
RW210600_001	Residential	594968	4831278	1.5	10	23	32	0	-
RW210600_002	Residential	594854	4831236	1.5	14	23	37	0	-
RW210700_001	Residential	594784	4831216	1.5	21	23	44	0	-
RW210700_002	Residential	594835	4831316	1.5	10	23	33	0	-
RW210700_003	Residential	595003	4831319	1.5	9	23	32	0	-
RW210800_001	Residential	594396	4831184	1.5	6	23	28	0	-
RW210800_002	Residential	594871	4831353	1.5	9	23	32	0	-
RW210800_003	Residential	594900	4831384	1.5	9	23	31	0	-
RW210800_004	Residential	594906	4831419	1.5	8	23	31	0	-
RW210900_001	Residential	594700	4831386	1.5	11	23	34	0	-
RW211000_001	Residential	594519	4831395	1.5	10	23	33	0	-
RW213300_001	Residential	594131	4833825	1.5	13	23	36	0	-
RW213500_001	Residential	594089	4834002	1.5	9	23	31	0	-
RW213500_002	Residential	593987	4833921	1.5	10	23	33	0	-
RW213500_003	Residential	594063	4834025	1.5	9	23	31	0	-
RW213900_001	Residential	593680	4834239	1.5	15	23	37	0	-
RW213900_002	Residential	593146	4833948	1.5	22	23	44	0	-
RW213900_003	Residential	593108	4833915	1.5	20	23	43	0	-
RW214000_001	Residential	593442	4834167	1.5	20	23	42	0	-
RW214000_002	Residential	593165	4834006	1.5	18	23	41	0	-
RW214200_001	Residential	593365	4834312	1.5	15	23	38	0	-
RW214200_002	Residential	593424	4834334	1.5	20	23	43	0	-
RW214200_003	Residential	593447	4834362	1.5	22	23	45	0	-
RW214200_004	Residential	593638	4834465	1.5	25	23	47	0	-
RW214400_001	Residential	593557	4834570	1.5	11	23	34	0	-
RW214400_002	Residential	593363	4834447	1.5	14	23	37	0	-
RW214500_001	Place of Worship	593180	4834366	1.5	8	23	31	0	-
RW214700_001	Residential	593316	4834759	1.5	8	23	31	0	-
RW214800_001	Residential	593246	4834900	1.5	7	23	29	0	-
RW214900_001	Place of Worship	593238	4834901	1.5	7	23	29	0	-
RW215500_001	Residential	592716	4835205	1.5	9	23	32	0	-
RW215500_002	Residential	592751	4835308	1.5	7	23	30	0	-
RW215500_003	Residential	592672	4835243	1.5	9	23	32	0	-
RW215600_001	Residential	592652	4835268	1.5	9	23	32	0	-
RW215600_002	Residential	592625	4835291	1.5	9	23	32	0	-
RW215600_003	Residential	592706	4835349	1.5	8	23	30	0	-
RW216000_001	Residential	592457	4835580	1.5	9	23	32	0	-
RW216300_001	Residential	592187	4835722	1.5	8	23	31	0	-
RW217300_001	Residential	590963	4835918	1.5	7	23	30	0	-
RW217300_003	Residential	590894	4835850	1.5	6	23	28	0	-
RW217400_001	Residential	591070	4836272	1.5	10	23	33	0	-
RW217400_003	Residential	590716	4835921	1.5	4	23	27	0	-
RW217600_001	Residential	591245	4836671	1.5	10	23	33	0	-
RW218600_001	Residential	589698	4836609	1.5	6	23	29	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW218700_001	Residential	590211	4837285	1.5	13	23	36	0	-
RW219300_001	Residential	589994	4837866	1.5	10	23	32	0	-
RW219600_001	Residential	589829	4838199	1.5	10	23	33	0	-
RW219800_001	Residential	589708	4838309	1.5	11	23	33	0	-
RW219800_002	Residential	589678	4838339	1.5	10	23	33	0	-
RW219800_003	Residential	589655	4838356	1.5	11	23	34	0	-
RW219900_001	Residential	589628	4838393	1.5	10	23	33	0	-
RW219900_002	Residential	589604	4838419	1.5	10	23	32	0	-
RW219900_003	Residential	589574	4838446	1.5	10	23	33	0	-
RW219900_004	Residential	589348	4838304	1.5	6	23	29	0	-
RW220100_001	Residential	589237	4838630	1.5	10	23	32	0	-
RW220200_001	Residential	589212	4838657	1.5	10	23	32	0	-
RW220200_002	Residential	589193	4838697	1.5	8	23	31	0	-
RW221500_001	Residential	589630	4840149	1.5	10	23	32	0	-
RW221600_001	Residential	589645	4840276	1.5	8	23	31	0	-
RW221600_002	Residential	589618	4840305	1.5	8	23	30	0	-
RW221600_003	Residential	589575	4840340	1.5	8	23	31	0	-
RW221600_004	Residential	589489	4840296	1.5	10	23	33	0	-
RW221600_005	Residential	589463	4840313	1.5	10	23	33	0	-
RW221700_001	Residential	589372	4840554	1.5	7	23	29	0	-
RW222900_001	Residential	590172	4841526	1.5	16	23	39	0	-
RW223000_001	Residential	590405	4841464	1.5	12	23	34	0	-
RW223000_002	Residential	589855	4841856	1.5	8	23	30	0	-
RW223100_001	Residential	590119	4841763	1.5	11	23	33	0	-
RW223600_001	Residential	590319	4842303	1.5	6	23	29	0	-
RW223700_001	Residential	590349	4842328	1.5	7	23	29	0	-
RW223700_002	Residential	590387	4842378	1.5	7	23	30	0	-
RW223800_001	Residential	590421	4842402	1.5	8	23	30	0	-
RW223800_002	Residential	590456	4842433	1.5	9	23	32	0	-
RW224200_001	Residential	591059	4842518	1.5	12	23	34	0	-
RW225200_001	Residential	591261	4843431	1.5	10	23	32	0	-
RW225300_001	Residential	591243	4843461	1.5	11	23	34	0	-
RW225300_002	Residential	591272	4843493	1.5	11	23	34	0	-
RW225300_003	Residential	591295	4843534	1.5	12	23	34	0	-
RW226000_001	Residential	591344	4844228	1.5	19	23	41	0	-
RW226200_001	Residential	591234	4844508	1.5	14	23	37	0	-
RW226300_001	Residential	591196	4844542	1.5	15	23	37	0	-
RW226300_002	Residential	591171	4844578	1.5	14	23	37	0	-
RW227700_001	Residential	591290	4846105	1.5	10	23	33	0	-
RW227800_001	Residential	591651	4846073	1.5	14	23	37	0	-
RW227800_002	Residential	591541	4846134	1.5	18	23	41	0	-
RW227800_003	Residential	591348	4846123	1.5	13	23	35	0	-
RW228900_001	Residential	592191	4847059	1.5	12	23	35	0	-
RW229000_005	Residential	592239	4847128	1.5	15	23	37	0	-
RW229100_003	Residential	592057	4847361	1.5	17	23	40	0	-
RW229100_004	Residential	592238	4847208	1.5	20	23	43	0	-
RW229200_001	Residential	591945	4847506	1.5	20	23	42	0	-
RW229200_002	Residential	592082	4847514	1.5	16	23	39	0	-
RW229200_003	Residential	592013	4847571	1.5	18	23	41	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW229200_004	Residential	591965	4847613	1.5	18	23	40	0	-
RW229200_005	Residential	592047	4847546	1.5	17	23	39	0	-
RW229200_006	Residential	591969	4847485	1.5	21	23	43	0	-
RW229200_007	Residential	591918	4847523	1.5	19	23	41	0	-
RW229300_001	Residential	591940	4847644	1.5	16	23	39	0	-
RW230300_001	Residential	592829	4848529	1.5	8	23	31	0	-
RW230300_002	Residential	592606	4848716	1.5	6	23	28	0	-
RW230400_003	Residential	593165	4848363	1.5	8	23	31	0	-
RW230400_004	Residential	593067	4848428	1.5	10	23	32	0	-
RW230400_005	Residential	592665	4848881	1.5	5	23	28	0	-
RW231500_001	Residential	593790	4849191	1.5	6	23	29	0	-
RW231500_002	Residential	593814	4849083	1.5	6	23	28	0	-
RW231800_002	Residential	593623	4849689	1.5	6	23	29	0	-
RW231800_003	Residential	593681	4849607	1.5	6	23	29	0	-
RW231900_001	Residential	593974	4849584	1.5	7	23	29	0	-
RW231900_002	Residential	593821	4849636	1.5	9	23	32	0	-
RW231900_003	Residential	593783	4849662	1.5	10	23	32	0	-
RW231900_004	Residential	593753	4849685	1.5	10	23	32	0	-
RW231900_005	Residential	593708	4849712	1.5	9	23	31	0	-
RW231900_006	Residential	593679	4849744	1.5	8	23	30	0	-
RW232900_001	Residential	594647	4850489	1.5	11	23	34	0	-
RW232900_002	Residential	594641	4850578	1.5	15	23	37	0	-
RW232900_003	Residential	594596	4850601	1.5	14	23	36	0	-
RW233000_001	Residential	594937	4850252	1.5	14	23	36	0	-
RW233000_002	Residential	594873	4850324	1.5	14	23	37	0	-
RW233000_003	Residential	594722	4850470	1.5	13	23	36	0	-
RW233000_004	Residential	594661	4850750	1.5	11	23	34	0	-
RW233100_001	Residential	595054	4850303	1.5	17	23	40	0	-
RW233100_002	Residential	594986	4850367	1.5	18	23	40	0	-
RW233100_003	Residential	594960	4850397	1.5	17	23	40	0	-
RW233100_004	Residential	594754	4850728	1.5	9	23	32	0	-
RW233300_001	Residential	595066	4850652	1.5	6	23	28	0	-
RW233500_001	Residential	595517	4850395	1.5	5	23	28	0	-
RW233600_001	Residential	595481	4850552	1.5	5	23	27	0	-
RW233700_001	Residential	595601	4850557	1.5	4	23	27	0	-
RW233800_001	Residential	595629	4850726	1.5	4	23	27	0	-
RW234400_001	Residential	595843	4851239	1.5	8	23	30	0	-
RW234400_002	Residential	595722	4851407	1.5	6	23	28	0	-
RW234400_003	Residential	595753	4851375	1.5	6	23	29	0	-
RW234500_001	Residential	596110	4851144	1.5	11	23	34	0	-
RW234500_002	Residential	596228	4851057	1.5	8	23	31	0	-
RW234600_001	Residential	595890	4851390	1.5	8	23	31	0	-
RW234600_002	Residential	595822	4851471	1.5	7	23	29	0	-
RW234600_003	Residential	595792	4851490	1.5	6	23	29	0	-
RW235800_001	Residential	596933	4852124	1.5	11	23	34	0	-
RW235800_002	Residential	596708	4852352	1.5	11	23	34	0	-
RW235800_003	Residential	596626	4852447	1.5	11	23	34	0	-
RW235800_004	Residential	596582	4852479	1.5	11	23	33	0	-
RW235900_003	Residential	596852	4852343	1.5	14	23	36	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW235900_004	Residential	596685	4852406	1.5	12	23	35	0	-
RW235900_008	Residential	596930	4852261	1.5	14	23	37	0	-
RW310200_001	Residential	597162	4852242	1.5	7	23	29	0	-
RW311300_001	Residential	598030	4853004	1.5	12	23	35	0	-
RW311300_002	Residential	598003	4853024	1.5	12	23	34	0	-
RW311300_003	Residential	597975	4853049	1.5	12	23	34	0	-
RW311300_004	Residential	597927	4853089	1.5	11	23	34	0	-
RW311400_001	Residential	598069	4853072	1.5	12	23	34	0	-
RW311400_002	Residential	598037	4853102	1.5	12	23	34	0	-
RW311400_003	Residential	597991	4853145	1.5	12	23	35	0	-
RW311400_004	Residential	597940	4853194	1.5	12	23	35	0	-
RW311400_005	Residential	597918	4853265	1.5	9	23	31	0	-
RW311400_006	Residential	597843	4853344	1.5	9	23	31	0	-
RW311400_008	Residential	597739	4853444	1.5	7	23	30	0	-
RW311400_009	Residential	597683	4853455	1.5	7	23	30	0	-
RW312300_001	Residential	598843	4853771	1.5	6	23	29	0	-
RW312400_001	Residential	598885	4854042	1.5	8	23	31	0	-
RW312400_002	Residential	598849	4854080	1.5	7	23	30	0	-
RW312500_001	Residential	599044	4853903	1.5	11	23	33	0	-
RW312500_002	Residential	599019	4853928	1.5	11	23	33	0	-
RW312500_003	Residential	598925	4854010	1.5	10	23	32	0	-
RW312500_004	Residential	598959	4854116	1.5	9	23	32	0	-
RW312600_001	Residential	599110	4853841	1.5	12	23	34	0	-
RW312600_002	Residential	599074	4853862	1.5	11	23	33	0	-
RW312700_001	Residential	599266	4853691	1.5	17	23	40	0	-
RW312900_001	Residential	599307	4854183	1.5	4	23	27	0	-
RW313100_001	Residential	599559	4854108	1.5	7	23	30	0	-
RW313400_001	Residential	599752	4854478	1.5	8	23	31	0	-
RW313900_001	Residential	600110	4854917	1.5	7	23	29	0	-
RW314100_001	Residential	600493	4854739	1.5	4	23	27	0	-
RW314300_001	Residential	600741	4854369	1.5	5	23	27	0	-
RW315400_001	Residential	601942	4855015	1.5	3	23	26	0	-
RW317500_001	Residential	603840	4854629	1.5	26	23	48	0	-
RW317500_003	Residential	603870	4854650	1.5	28	23	50	1	0.1%
RW410100_001	Residential	603972	4854928	1.5	18	23	40	0	-
RW410100_002	Residential	603936	4854961	1.5	17	23	40	0	-
RW410200_001	Residential	604015	4854902	1.5	19	23	41	0	-
RW410400_001	Residential	604221	4855097	1.5	19	23	42	0	-
RW410800_002	Residential	604445	4855386	1.5	19	23	42	0	-
RW510000_001	Residential	604897	4855625	1.5	23	23	46	0	-
RW510100_001	Residential	605003	4855608	1.5	22	23	44	0	-
RW510100_002	Residential	604998	4855726	1.5	16	23	39	0	-
RW510400_001	Residential	605360	4855644	1.5	10	23	32	0	-
RW512600_001	Residential	607049	4856822	1.5	9	23	31	0	-
RW512600_002	Residential	606713	4857044	1.5	3	23	25	0	-
RW512700_001	Residential	606950	4856924	1.5	4	23	27	0	-
RW515200_001	Residential	608655	4859025	1.5	12	23	34	0	-
RW515200_002	Residential	608453	4859443	1.5	5	23	27	0	-
RW515500_001	Residential	609009	4858910	1.5	4	23	27	0	-

Appendix G.2.3 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 No-Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW515500_002	Residential	608965	4859173	1.5	4	23	27	0	-
RW515500_003	Residential	608645	4859708	1.5	4	23	26	0	-
RW515600_001	Residential	609102	4858982	1.5	4	23	26	0	-
RW515600_002	Residential	608876	4859423	1.5	4	23	27	0	-
RW515600_003	Residential	608980	4859372	1.5	3	23	26	0	-
RW515700_001	Residential	608966	4859442	1.5	3	23	26	0	-
RW516700_001	Residential	609986	4859710	1.5	5	23	27	0	-
RW517400_001	Residential	610721	4859654	1.5	8	23	30	0	-
RW517500_001	Residential	610788	4859750	1.5	8	23	31	0	-
RW517500_002	Residential	610631	4860179	1.5	9	23	31	0	-
RW517600_001	Residential	610730	4860162	1.5	10	23	33	0	-
RW519300_001	Residential	612321	4860800	1.5	7	23	29	0	-
RW519300_002	Residential	612247	4861048	1.5	17	23	40	0	-
RW519600_001	Residential	612681	4860774	1.5	7	23	29	0	-
RW519600_002	Residential	612644	4860851	1.5	8	23	30	0	-
RW519600_003	Residential	612606	4860976	1.5	10	23	32	0	-
RW519600_004	Residential	612556	4861217	1.5	10	23	32	0	-
RW519900_001	Residential	612911	4861179	1.5	11	23	34	0	-
RW520000_001	Residential	612975	4861191	1.5	11	23	33	0	-
RW520100_001	Residential	613108	4861238	1.5	11	23	34	0	-
RW520200_001	Residential	613167	4861245	1.5	10	23	33	0	-
RW520300_001	Residential	613263	4861267	1.5	10	23	32	0	-
RW520400_001	Residential	613409	4861318	1.5	11	23	33	0	-
RW520600_001	Residential	613595	4861385	1.5	12	23	34	0	-
RW520600_002	Residential	613696	4861264	1.5	7	23	30	0	-
RW520800_001	Residential	613821	4861450	1.5	12	23	35	0	-
RW520800_002	Residential	613868	4861446	1.5	11	23	34	0	-
RW520900_001	Residential	614011	4861487	1.5	12	23	34	0	-
RW521000_001	Residential	614074	4861506	1.5	12	23	34	0	-
RW521500_001	Residential	614584	4861772	1.5	19	23	41	0	-
RW521500_002	Residential	614605	4861931	1.5	10	23	33	0	-
RW521500_003	Residential	614606	4861992	1.5	10	23	32	0	-
RW521500_004	Residential	614561	4862067	1.5	10	23	33	0	-
RW521500_005	Residential	614528	4862131	1.5	11	23	34	0	-
RW521500_006	Residential	614519	4862172	1.5	11	23	34	0	-
RW521600_001	Residential	615126	4862319	1.5	17	23	39	0	-
RW521600_002	Residential	616401	4861744	1.5	8	23	31	0	-
RW521600_009	Residential	616496	4861911	1.5	9	23	31	0	-
RW521600_010	Residential	614979	4862746	1.5	14	23	36	0	-
RW521600_011	Residential	614904	4862738	1.5	12	23	35	0	-
RW521600_012	Residential	615537	4863261	1.5	11	23	33	0	-
RW521600_013	Residential	615595	4863665	1.5	8	23	31	0	-
RW521600_014	Residential	616500	4861872	1.5	9	23	31	0	-
RW521600_016	Residential	614949	4863780	1.5	15	23	38	0	-
RW521600_017	Residential	616265	4861577	1.5	9	23	31	0	-

1826 Days of Meterological Data

Appendix G.2.4: 2051 Build – 24 Hour PM_{10}

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_001	Place of Worship	597312	4827927	1.5	40	23	63	22	1.2%
RE110000_002	Residential	596637	4826254	1.5	31	23	54	3	0.2%
RE110000_003	Residential	596701	4826610	1.5	39	23	62	11	0.6%
RE110000_004	Residential	597143	4827822	1.5	38	23	61	18	1.0%
RE110000_005	Residential	597083	4827844	1.5	46	23	68	41	2.2%
RE110000_006	Residential	596871	4828160	1.5	30	23	53	2	0.1%
RE110000_007	Residential	597140	4826176	1.5	33	23	56	3	0.2%
RE110000_008	Residential	597148	4826187	1.5	31	23	54	1	0.1%
RE110000_009	Residential	597156	4826199	1.5	30	23	53	1	0.1%
RE110000_010	Residential	597164	4826210	1.5	29	23	52	1	0.1%
RE110000_011	Residential	597171	4826221	1.5	28	23	51	1	0.1%
RE110000_020	Residential	597181	4826148	1.5	32	23	54	1	0.1%
RE110000_021	Residential	597187	4826154	1.5	31	23	53	1	0.1%
RE110000_022	Residential	597195	4826162	1.5	30	23	52	1	0.1%
RE110000_023	Residential	597200	4826170	1.5	29	23	52	1	0.1%
RE110000_024	Residential	597206	4826177	1.5	29	23	51	1	0.1%
RE110000_025	Residential	597212	4826186	1.5	28	23	51	1	0.1%
RE110000_028	Residential	597203	4826119	1.5	32	23	55	3	0.2%
RE110000_029	Residential	597210	4826129	1.5	31	23	53	1	0.1%
RE110000_030	Residential	597216	4826140	1.5	30	23	52	1	0.1%
RE110000_031	Residential	597223	4826147	1.5	29	23	52	1	0.1%
RE110000_032	Residential	597230	4826156	1.5	28	23	51	1	0.1%
RE110000_045	Residential	597236	4826078	1.5	32	23	55	3	0.2%
RE110000_046	Residential	597243	4826087	1.5	31	23	54	1	0.1%
RE110000_047	Residential	597251	4826096	1.5	30	23	53	1	0.1%
RE110000_048	Residential	597257	4826104	1.5	29	23	52	1	0.1%
RE110000_049	Residential	597263	4826113	1.5	28	23	51	1	0.1%
RE110000_050	Residential	597255	4826067	1.5	31	23	54	2	0.1%
RE110000_051	Residential	597266	4826057	1.5	31	23	54	2	0.1%
RE110000_052	Residential	597275	4826046	1.5	31	23	54	2	0.1%
RE110000_053	Residential	597284	4826036	1.5	31	23	54	2	0.1%
RE110000_054	Residential	597293	4826025	1.5	31	23	54	2	0.1%
RE110000_055	Residential	597304	4826014	1.5	31	23	54	2	0.1%
RE110000_056	Residential	597325	4826041	1.5	28	23	51	1	0.1%
RE110000_057	Residential	597314	4826051	1.5	28	23	51	1	0.1%
RE110000_058	Residential	597304	4826061	1.5	28	23	51	1	0.1%
RE110000_059	Residential	597295	4826072	1.5	28	23	51	1	0.1%
RE110000_060	Residential	597285	4826082	1.5	29	23	51	1	0.1%
RE110000_061	Residential	597323	4825965	1.5	34	23	57	5	0.3%
RE110000_062	Residential	597330	4825974	1.5	32	23	55	3	0.2%
RE110000_063	Residential	597335	4825983	1.5	31	23	54	2	0.1%
RE110000_064	Residential	597342	4825990	1.5	30	23	53	1	0.1%
RE110000_065	Residential	597350	4826000	1.5	29	23	51	1	0.1%
RE110000_066	Residential	597357	4826009	1.5	28	23	50	1	0.1%
RE110000_067	Residential	597368	4826018	1.5	27	23	50	0	-
RE110000_069	Residential	597351	4825947	1.5	33	23	55	4	0.2%
RE110000_070	Residential	597359	4825957	1.5	31	23	53	2	0.1%
RE110000_071	Residential	597366	4825967	1.5	30	23	52	1	0.1%
RE110000_072	Residential	597374	4825977	1.5	29	23	51	1	0.1%

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE110000_073	Residential	597383	4825986	1.5	28	23	50	1	0.1%
RE110000_112	Residential	597394	4825910	1.5	32	23	54	3	0.2%
RE110000_113	Residential	597401	4825919	1.5	30	23	53	2	0.1%
RE110000_114	Residential	597409	4825928	1.5	29	23	52	1	0.1%
RE110000_115	Residential	597416	4825939	1.5	28	23	51	1	0.1%
RE110000_123	Residential	597413	4825882	1.5	33	23	55	5	0.3%
RE110000_124	Residential	597421	4825892	1.5	31	23	53	2	0.1%
RE110000_125	Residential	597432	4825901	1.5	29	23	52	1	0.1%
RE110000_132	Residential	597461	4825854	1.5	30	23	53	2	0.1%
RE110000_133	Residential	597471	4825865	1.5	29	23	51	1	0.1%
RE110000_139	Residential	597482	4825833	1.5	30	23	53	2	0.1%
RE110000_140	Residential	597492	4825842	1.5	29	23	51	1	0.1%
RE110000_145	Residential	597514	4825784	1.5	32	23	54	4	0.2%
RE110000_146	Residential	597523	4825794	1.5	30	23	52	2	0.1%
RE110000_147	Residential	597531	4825806	1.5	28	23	51	1	0.1%
RE110000_149	Residential	597534	4825759	1.5	32	23	54	5	0.3%
RE110000_150	Residential	597542	4825770	1.5	30	23	53	2	0.1%
RE110000_151	Residential	597549	4825779	1.5	29	23	51	1	0.1%
RE110000_165	Residential	597586	4825745	1.5	28	23	51	1	0.1%
RE110000_167	Residential	597648	4825682	1.5	28	23	51	1	0.1%
RE110000_173	Residential	597632	4825663	1.5	32	23	55	5	0.3%
RE110000_177	Residential	597655	4825690	1.5	27	23	50	0	-
RE110000_178	Residential	597642	4825674	1.5	30	23	52	2	0.1%
RE110000_189	Residential	597578	4825734	1.5	30	23	52	2	0.1%
RE110000_190	Residential	597605	4825708	1.5	30	23	53	2	0.1%
RE110000_191	Residential	597611	4825719	1.5	28	23	51	1	0.1%
RE110000_239	Residential	598068	4825317	1.5	39	23	62	4	0.2%
RE110000_240	Residential	598051	4825327	1.5	42	23	65	8	0.4%
RE110000_241	Residential	598046	4825287	1.5	38	23	61	5	0.3%
RE110000_242	Residential	598058	4825288	1.5	37	23	60	4	0.2%
RE110000_243	Residential	598062	4825320	1.5	40	23	63	4	0.2%
RE110000_244	Residential	598082	4825288	1.5	35	23	57	2	0.1%
RE110000_245	Residential	598057	4825323	1.5	41	23	63	7	0.4%
RE110000_246	Residential	598051	4825288	1.5	38	23	60	5	0.3%
RE110000_247	Residential	598072	4825292	1.5	36	23	59	2	0.1%
RE110000_248	Residential	598076	4825290	1.5	35	23	58	2	0.1%
RE110000_249	Residential	598040	4825285	1.5	39	23	61	5	0.3%
RE110000_253	Residential	597743	4825607	1.5	27	23	49	0	-
RE110000_254	Residential	597795	4825533	1.5	29	23	51	1	0.1%
RE110000_255	Residential	597806	4825547	1.5	27	23	49	0	-
RE110000_256	Residential	597835	4825499	1.5	28	23	51	1	0.1%
RE110000_257	Residential	597843	4825509	1.5	27	23	50	0	-
RE110000_265	Residential	597773	4825557	1.5	28	23	51	1	0.1%
RE110000_267	Residential	597726	4825585	1.5	30	23	53	2	0.1%
RE110000_276	Residential	597839	4825504	1.5	28	23	50	1	0.1%
RE110000_277	Residential	597778	4825564	1.5	27	23	50	1	0.1%
RE110000_278	Residential	597784	4825572	1.5	26	23	49	0	-
RE110000_279	Residential	597739	4825601	1.5	28	23	50	1	0.1%
RE110000_280	Residential	597719	4825577	1.5	32	23	54	4	0.2%

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE110000_281	Residential	597767	4825552	1.5	29	23	52	2	0.1%
RE110000_292	Residential	597793	4825524	1.5	30	23	52	2	0.1%
RE110000_293	Residential	597734	4825596	1.5	28	23	51	1	0.1%
RE110000_294	Residential	597800	4825540	1.5	28	23	50	1	0.1%
RE110000_305	Residential	597830	4825493	1.5	29	23	52	1	0.1%
RE110000_309	Residential	597730	4825591	1.5	29	23	52	1	0.1%
RE110000_310	Residential	597826	4825487	1.5	30	23	53	2	0.1%
RE110000_316	Residential	597823	4825480	1.5	31	23	54	4	0.2%
RE110000_325	Residential	597672	4825659	1.5	28	23	51	1	0.1%
RE110000_329	Residential	597711	4825620	1.5	28	23	51	1	0.1%
RE110000_331	Residential	597656	4825641	1.5	32	23	54	4	0.2%
RE110000_332	Residential	597705	4825613	1.5	29	23	52	2	0.1%
RE110000_333	Residential	597717	4825628	1.5	27	23	50	0	-
RE110000_342	Residential	597701	4825604	1.5	31	23	53	3	0.2%
RE110000_344	Residential	597666	4825651	1.5	30	23	52	2	0.1%
RE110000_345	Residential	597678	4825667	1.5	27	23	50	0	-
RE110000_353	Residential	597853	4825468	1.5	30	23	52	2	0.1%
RE110000_355	Residential	597858	4825475	1.5	28	23	51	1	0.1%
RE110000_378	Residential	597899	4825411	1.5	32	23	54	4	0.2%
RE110000_387	Residential	597845	4825458	1.5	32	23	54	4	0.2%
RE110000_390	Residential	597927	4825384	1.5	33	23	55	8	0.4%
RE110000_394	Residential	597904	4825418	1.5	30	23	53	2	0.1%
RE110000_397	Residential	597863	4825480	1.5	28	23	50	1	0.1%
RE110000_401	Residential	596788	4826527	1.5	36	23	59	8	0.4%
RE110200_001	Residential	595761	4827508	1.5	43	23	66	21	1.2%
RE110300_001	Residential	595985	4827782	1.5	32	23	55	4	0.2%
RE110300_002	Residential	596018	4827822	1.5	31	23	54	4	0.2%
RE110300_003	Residential	596052	4827847	1.5	31	23	54	6	0.3%
RE110300_004	Residential	596075	4827863	1.5	33	23	55	9	0.5%
RE110400_001	Residential	596097	4827888	1.5	33	23	56	12	0.7%
RE110400_002	Residential	596114	4827911	1.5	36	23	59	15	0.8%
RE110500_001	Residential	596071	4827936	1.5	31	23	53	3	0.2%
RE110500_002	Residential	596046	4827958	1.5	29	23	52	1	0.1%
RE110600_001	Residential	596004	4827990	1.5	27	23	49	0	-
RE110600_002	Residential	596030	4827975	1.5	28	23	51	1	0.1%
RE110700_001	Residential	595981	4828012	1.5	26	23	49	0	-
RE110700_002	Residential	595928	4827973	1.5	23	23	46	0	-
RE110800_001	Residential	595956	4828058	1.5	26	23	49	0	-
RE110800_002	Residential	595933	4828081	1.5	26	23	48	0	-
RE110900_001	Residential	595910	4828106	1.5	25	23	48	0	-
RE110900_002	Residential	595878	4828134	1.5	25	23	47	0	-
RE111100_001	Residential	595788	4828209	1.5	22	23	45	0	-
RE111200_001	Residential	595754	4828244	1.5	21	23	44	0	-
RE111200_002	Residential	595736	4828278	1.5	22	23	44	0	-
RE111300_001	Residential	595708	4828299	1.5	21	23	44	0	-
RE111300_002	Residential	595689	4828310	1.5	20	23	43	0	-
RE111300_003	Residential	595667	4828334	1.5	20	23	43	0	-
RE111400_001	Residential	595630	4828371	1.5	20	23	42	0	-
RE111400_002	Residential	595610	4828393	1.5	20	23	42	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE111500_001	Residential	595569	4828431	1.5	19	23	42	0	-
RE111500_002	Residential	595514	4828453	1.5	17	23	40	0	-
RE111600_001	Residential	595474	4828490	1.5	17	23	39	0	-
RE111600_002	Residential	595430	4828529	1.5	16	23	39	0	-
RE111700_001	Residential	595514	4828604	1.5	20	23	43	0	-
RE111700_002	Residential	595359	4828639	1.5	18	23	40	0	-
RE111800_001	Residential	596558	4828460	1.5	34	23	56	5	0.3%
RE111800_002	Residential	595492	4828626	1.5	20	23	43	0	-
RE111800_003	Residential	595467	4828642	1.5	21	23	43	0	-
RE111800_004	Residential	595445	4828664	1.5	21	23	43	0	-
RE111800_005	Residential	595329	4828673	1.5	18	23	41	0	-
RE111800_006	Residential	595306	4828700	1.5	18	23	41	0	-
RE111800_007	Residential	595285	4828720	1.5	18	23	41	0	-
RE111800_008	Residential	595266	4828745	1.5	19	23	42	0	-
RE112100_001	Residential	596836	4828712	1.5	29	23	52	2	0.1%
RE112200_001	Residential	596905	4828763	1.5	24	23	47	0	-
RE113100_001	Residential	595706	4829937	1.5	15	23	38	0	-
RE113200_001	Residential	595933	4829995	1.5	18	23	41	0	-
RE113200_002	Residential	595904	4830024	1.5	19	23	41	0	-
RE113300_001	Residential	595753	4830146	1.5	20	23	43	0	-
RE210700_001	Residential	595367	4831551	1.5	19	23	42	0	-
RE210700_002	Residential	595325	4831537	1.5	22	23	45	0	-
RE210700_003	Residential	595504	4831618	1.5	13	23	36	0	-
RE210900_001	Residential	595286	4831670	1.5	24	23	47	0	-
RE210900_003	Residential	595217	4831730	1.5	25	23	48	0	-
RE210900_004	Residential	595349	4831732	1.5	19	23	42	0	-
RE210900_005	Residential	595339	4831698	1.5	20	23	42	0	-
RE210900_006	Residential	595400	4831812	1.5	17	23	40	0	-
RE210900_007	Residential	595436	4831835	1.5	15	23	38	0	-
RE210900_008	Residential	595454	4831855	1.5	15	23	38	0	-
RE211000_001	Residential	595242	4831783	1.5	24	23	46	0	-
RE211000_002	Residential	595292	4831787	1.5	25	23	47	0	-
RE211000_003	Residential	595341	4831842	1.5	23	23	45	0	-
RE211000_004	Residential	595365	4831888	1.5	20	23	42	0	-
RE211000_005	Residential	595239	4831847	1.5	22	23	44	0	-
RE211000_006	Residential	595408	4831938	1.5	18	23	40	0	-
RE211000_007	Residential	595530	4831956	1.5	14	23	37	0	-
RE211000_008	Residential	595567	4832001	1.5	14	23	37	0	-
RE211000_009	Residential	595596	4832028	1.5	13	23	36	0	-
RE211000_010	Residential	595617	4832054	1.5	13	23	36	0	-
RE211100_001	Residential	595423	4831974	1.5	17	23	40	0	-
RE211100_002	Residential	595342	4832015	1.5	18	23	40	0	-
RE211100_003	Residential	595552	4832099	1.5	17	23	39	0	-
RE211100_004	Residential	595637	4832091	1.5	14	23	37	0	-
RE211100_005	Residential	595675	4832137	1.5	14	23	36	0	-
RE211100_006	Residential	595734	4832214	1.5	14	23	36	0	-
RE211100_009	Residential	595514	4832061	1.5	17	23	39	0	-
RE211200_001	Residential	595380	4832103	1.5	16	23	39	0	-
RE211200_002	Residential	595424	4832139	1.5	15	23	38	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE211200_003	Residential	595641	4832218	1.5	14	23	37	0	-
RE211200_004	Residential	595704	4832286	1.5	14	23	36	0	-
RE211200_005	Residential	595584	4832173	1.5	15	23	37	0	-
RE211400_001	Residential	594922	4832082	1.5	27	23	49	0	-
RE211500_002	Residential	595129	4832290	1.5	17	23	39	0	-
RE211500_003	Residential	594950	4832221	1.5	20	23	42	0	-
RE211500_004	Residential	595156	4832250	1.5	17	23	39	0	-
RE211900_001	Residential	594800	4832552	1.5	19	23	42	0	-
RE212600_001	Residential	594824	4833279	1.5	16	23	39	0	-
RE212700_001	Residential	594758	4833331	1.5	18	23	40	0	-
RE212700_002	Residential	594605	4833322	1.5	18	23	41	0	-
RE212800_001	Residential	594672	4833390	1.5	21	23	43	0	-
RE212800_002	Residential	594620	4833440	1.5	23	23	45	0	-
RE212900_001	Residential	594599	4833473	1.5	23	23	46	0	-
RE213000_001	Residential	594589	4833575	1.5	20	23	42	0	-
RE214400_001	Recreation	594333	4835333	1.5	22	23	45	0	-
RE214600_002	Residential	593842	4835174	1.5	27	23	49	0	-
RE214600_003	Residential	593906	4835196	1.5	29	23	51	2	0.1%
RE214600_004	Residential	593934	4835222	1.5	29	23	51	1	0.1%
RE214600_005	Residential	593948	4835237	1.5	28	23	51	1	0.1%
RE214600_006	Residential	593954	4835244	1.5	28	23	51	1	0.1%
RE214600_007	Residential	593879	4835253	1.5	25	23	48	0	-
RE214600_008	Residential	593895	4835241	1.5	27	23	49	0	-
RE214600_009	Residential	593872	4835220	1.5	26	23	49	0	-
RE214600_010	Residential	593861	4835213	1.5	26	23	49	0	-
RE214600_011	Residential	593855	4835236	1.5	25	23	48	0	-
RE214600_012	Residential	593826	4835204	1.5	25	23	48	0	-
RE214600_013	Residential	593848	4835159	1.5	28	23	51	1	0.1%
RE214600_014	Residential	593881	4835177	1.5	29	23	51	2	0.1%
RE214600_015	Residential	593892	4835186	1.5	28	23	51	2	0.1%
RE214600_016	Residential	593917	4835206	1.5	29	23	52	2	0.1%
RE214600_017	Residential	593925	4835215	1.5	29	23	51	1	0.1%
RE214600_018	Residential	593940	4835231	1.5	29	23	51	1	0.1%
RE214600_019	Residential	593960	4835250	1.5	28	23	51	1	0.1%
RE214600_020	Residential	593967	4835258	1.5	28	23	51	1	0.1%
RE214600_021	Residential	593978	4835265	1.5	28	23	51	1	0.1%
RE214600_022	Residential	593885	4835231	1.5	26	23	49	0	-
RE214600_023	Residential	593914	4835274	1.5	26	23	49	0	-
RE214600_024	Residential	593927	4835288	1.5	26	23	49	0	-
RE214600_025	Residential	593932	4835295	1.5	26	23	49	0	-
RE214600_026	Residential	593936	4835298	1.5	26	23	49	0	-
RE214600_027	Residential	593941	4835304	1.5	26	23	49	0	-
RE214600_028	Residential	593945	4835308	1.5	26	23	48	0	-
RE214600_029	Residential	593948	4835312	1.5	26	23	48	0	-
RE214600_030	Residential	593953	4835317	1.5	25	23	48	0	-
RE214600_031	Residential	593956	4835321	1.5	25	23	48	0	-
RE214600_032	Residential	593965	4835331	1.5	25	23	47	0	-
RE214600_033	Residential	593979	4835319	1.5	25	23	48	0	-
RE214600_034	Residential	593977	4835313	1.5	25	23	48	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE214600_035	Residential	593971	4835308	1.5	26	23	48	0	-
RE214600_036	Residential	593968	4835303	1.5	26	23	49	0	-
RE214600_037	Residential	593909	4835267	1.5	26	23	49	0	-
RE214600_038	Residential	593919	4835279	1.5	26	23	49	0	-
RE214600_039	Residential	593923	4835284	1.5	26	23	49	0	-
RE214600_040	Residential	593930	4835291	1.5	26	23	49	0	-
RE214600_041	Residential	593961	4835326	1.5	25	23	48	0	-
RE214600_042	Residential	593970	4835333	1.5	25	23	47	0	-
RE214600_043	Residential	593982	4835324	1.5	25	23	48	0	-
RE214600_044	Residential	593960	4835295	1.5	26	23	49	0	-
RE214600_045	Residential	593956	4835291	1.5	26	23	49	0	-
RE214600_046	Residential	593946	4835281	1.5	26	23	49	0	-
RE214600_047	Residential	593942	4835277	1.5	26	23	49	0	-
RE214600_048	Residential	593934	4835269	1.5	27	23	49	0	-
RE214600_049	Residential	593929	4835264	1.5	27	23	49	0	-
RE214600_050	Residential	593923	4835260	1.5	27	23	50	0	-
RE214600_051	Residential	594088	4835437	1.5	22	23	44	0	-
RE214600_052	Residential	594082	4835443	1.5	21	23	44	0	-
RE214600_053	Residential	593964	4835299	1.5	26	23	49	0	-
RE214600_054	Residential	593949	4835285	1.5	26	23	49	0	-
RE214600_055	Residential	593938	4835273	1.5	27	23	49	0	-
RE214600_056	Residential	593919	4835255	1.5	27	23	50	0	-
RE214600_057	Residential	594070	4835454	1.5	20	23	43	0	-
RE214600_058	Residential	594080	4835468	1.5	20	23	42	0	-
RE214600_059	Residential	594086	4835463	1.5	20	23	43	0	-
RE214600_060	Residential	594095	4835454	1.5	21	23	43	0	-
RE214600_061	Residential	594098	4835448	1.5	21	23	44	0	-
RE214600_062	Residential	594075	4835447	1.5	21	23	43	0	-
RE214600_063	Residential	594090	4835458	1.5	21	23	43	0	-
RE214600_064	Residential	594047	4835432	1.5	21	23	44	0	-
RE214600_065	Residential	594052	4835428	1.5	21	23	44	0	-
RE214600_066	Residential	594056	4835424	1.5	21	23	44	0	-
RE214600_067	Residential	594061	4835420	1.5	22	23	44	0	-
RE214600_068	Residential	594068	4835415	1.5	22	23	45	0	-
RE214600_069	Residential	594022	4835361	1.5	24	23	46	0	-
RE214600_070	Residential	593995	4835385	1.5	23	23	45	0	-
RE214600_071	Residential	593999	4835381	1.5	23	23	45	0	-
RE214600_072	Residential	594003	4835377	1.5	23	23	46	0	-
RE214600_073	Residential	594009	4835371	1.5	23	23	46	0	-
RE214600_074	Residential	594015	4835366	1.5	24	23	46	0	-
RE214600_075	Residential	594003	4835343	1.5	25	23	47	0	-
RE214600_076	Residential	593993	4835352	1.5	24	23	47	0	-
RE214600_077	Residential	593998	4835348	1.5	24	23	47	0	-
RE214600_078	Residential	593990	4835357	1.5	24	23	46	0	-
RE214600_079	Residential	593985	4835362	1.5	24	23	46	0	-
RE214600_080	Residential	593978	4835367	1.5	23	23	46	0	-
RE214600_081	Residential	593872	4835162	1.5	29	23	52	2	0.1%
RE214600_082	Residential	593897	4835267	1.5	26	23	49	0	-
RE214600_083	Residential	593835	4835188	1.5	26	23	48	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_002	Residential	593796	4835295	1.5	21	23	44	0	-
RE214700_003	Residential	593801	4835284	1.5	21	23	44	0	-
RE214700_004	Residential	593804	4835270	1.5	22	23	44	0	-
RE214700_005	Residential	593808	4835258	1.5	22	23	45	0	-
RE214700_006	Residential	593812	4835244	1.5	23	23	45	0	-
RE214700_007	Residential	593815	4835229	1.5	23	23	46	0	-
RE214700_008	Residential	593820	4835217	1.5	24	23	47	0	-
RE214700_009	Residential	593927	4835372	1.5	23	23	46	0	-
RE214700_010	Residential	593945	4835355	1.5	24	23	46	0	-
RE214700_011	Residential	593938	4835347	1.5	24	23	47	0	-
RE214700_012	Residential	593932	4835340	1.5	24	23	47	0	-
RE214700_013	Residential	593925	4835333	1.5	25	23	47	0	-
RE214700_014	Residential	593897	4835305	1.5	25	23	47	0	-
RE214700_015	Residential	593848	4835261	1.5	24	23	46	0	-
RE214700_016	Residential	593843	4835273	1.5	23	23	46	0	-
RE214700_017	Residential	593842	4835286	1.5	23	23	46	0	-
RE214700_018	Residential	593871	4835315	1.5	24	23	46	0	-
RE214700_019	Residential	593884	4835326	1.5	24	23	46	0	-
RE214700_020	Residential	593911	4835354	1.5	24	23	46	0	-
RE214700_021	Residential	593920	4835363	1.5	23	23	46	0	-
RE214700_022	Residential	593892	4835387	1.5	23	23	45	0	-
RE214700_023	Residential	593878	4835378	1.5	22	23	45	0	-
RE214700_024	Residential	593867	4835368	1.5	22	23	45	0	-
RE214700_025	Residential	593847	4835347	1.5	22	23	44	0	-
RE214700_026	Residential	593792	4835308	1.5	21	23	43	0	-
RE214700_027	Residential	593899	4835400	1.5	22	23	45	0	-
RE214700_028	Residential	593915	4835323	1.5	25	23	48	0	-
RE214700_029	Residential	593905	4835315	1.5	25	23	47	0	-
RE214700_030	Residential	593888	4835295	1.5	25	23	47	0	-
RE214700_031	Residential	593878	4835285	1.5	25	23	47	0	-
RE214700_032	Residential	593872	4835268	1.5	25	23	47	0	-
RE214700_033	Residential	593850	4835248	1.5	24	23	47	0	-
RE214700_034	Residential	593837	4835298	1.5	23	23	45	0	-
RE214700_035	Residential	593859	4835303	1.5	23	23	46	0	-
RE214700_036	Residential	593893	4835335	1.5	24	23	46	0	-
RE214700_037	Residential	593901	4835345	1.5	24	23	47	0	-
RE214700_038	Residential	593857	4835357	1.5	22	23	45	0	-
RE214700_039	Residential	593838	4835336	1.5	22	23	44	0	-
RE214700_040	Residential	593826	4835328	1.5	22	23	44	0	-
RE214700_041	Residential	594050	4835472	1.5	19	23	42	0	-
RE214700_042	Residential	594045	4835477	1.5	19	23	41	0	-
RE214700_043	Residential	594021	4835499	1.5	18	23	40	0	-
RE214700_044	Residential	594015	4835505	1.5	17	23	40	0	-
RE214700_045	Residential	594010	4835510	1.5	17	23	40	0	-
RE214700_046	Residential	594005	4835514	1.5	17	23	40	0	-
RE214700_047	Residential	593999	4835520	1.5	17	23	40	0	-
RE214700_048	Residential	594007	4835538	1.5	17	23	39	0	-
RE214700_049	Residential	594029	4835518	1.5	17	23	40	0	-
RE214700_050	Residential	594041	4835505	1.5	18	23	40	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE214700_051	Residential	594052	4835496	1.5	18	23	41	0	-
RE214700_052	Residential	594065	4835484	1.5	19	23	42	0	-
RE214700_053	Residential	594071	4835479	1.5	19	23	42	0	-
RE214700_054	Residential	594063	4835459	1.5	20	23	42	0	-
RE214700_055	Residential	594059	4835463	1.5	20	23	42	0	-
RE214700_056	Residential	594055	4835466	1.5	19	23	42	0	-
RE214700_057	Residential	594041	4835481	1.5	19	23	41	0	-
RE214700_058	Residential	594035	4835486	1.5	18	23	41	0	-
RE214700_059	Residential	594030	4835490	1.5	18	23	41	0	-
RE214700_060	Residential	594025	4835494	1.5	18	23	41	0	-
RE214700_061	Residential	593994	4835525	1.5	17	23	39	0	-
RE214700_062	Residential	594012	4835533	1.5	17	23	39	0	-
RE214700_063	Residential	594018	4835528	1.5	17	23	40	0	-
RE214700_064	Residential	594023	4835523	1.5	17	23	40	0	-
RE214700_065	Residential	594035	4835511	1.5	18	23	40	0	-
RE214700_066	Residential	594046	4835501	1.5	18	23	41	0	-
RE214700_067	Residential	594057	4835491	1.5	19	23	41	0	-
RE214700_068	Residential	594061	4835487	1.5	19	23	41	0	-
RE214700_069	Residential	594075	4835473	1.5	20	23	42	0	-
RE214700_070	Residential	593973	4835506	1.5	18	23	40	0	-
RE214700_071	Residential	593991	4835488	1.5	18	23	41	0	-
RE214700_072	Residential	593995	4835485	1.5	18	23	41	0	-
RE214700_073	Residential	594004	4835475	1.5	19	23	41	0	-
RE214700_074	Residential	594013	4835466	1.5	19	23	42	0	-
RE214700_075	Residential	594022	4835457	1.5	20	23	42	0	-
RE214700_076	Residential	594039	4835440	1.5	20	23	43	0	-
RE214700_077	Residential	593979	4835500	1.5	18	23	40	0	-
RE214700_078	Residential	593985	4835493	1.5	18	23	41	0	-
RE214700_079	Residential	593998	4835482	1.5	19	23	41	0	-
RE214700_080	Residential	594008	4835471	1.5	19	23	42	0	-
RE214700_081	Residential	594018	4835462	1.5	19	23	42	0	-
RE214700_082	Residential	594027	4835453	1.5	20	23	42	0	-
RE214700_083	Residential	594030	4835449	1.5	20	23	43	0	-
RE214700_084	Residential	594036	4835444	1.5	20	23	43	0	-
RE214700_085	Residential	594043	4835436	1.5	21	23	43	0	-
RE214700_086	Residential	593960	4835422	1.5	21	23	44	0	-
RE214700_087	Residential	593956	4835426	1.5	21	23	44	0	-
RE214700_088	Residential	593963	4835417	1.5	22	23	44	0	-
RE214700_089	Residential	593968	4835413	1.5	22	23	44	0	-
RE214700_090	Residential	593973	4835409	1.5	22	23	44	0	-
RE214700_091	Residential	593978	4835404	1.5	22	23	44	0	-
RE214700_092	Residential	593981	4835400	1.5	22	23	45	0	-
RE214700_093	Residential	593948	4835434	1.5	21	23	44	0	-
RE214700_094	Residential	593938	4835443	1.5	21	23	43	0	-
RE214700_095	Residential	593934	4835448	1.5	21	23	43	0	-
RE214700_096	Residential	593988	4835393	1.5	22	23	45	0	-
RE214700_097	Residential	593991	4835389	1.5	22	23	45	0	-
RE214700_098	Residential	593943	4835438	1.5	21	23	43	0	-
RE214700_099	Residential	593929	4835453	1.5	20	23	43	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE214700_100	Residential	593974	4835372	1.5	23	23	46	0	-
RE214700_101	Residential	593962	4835383	1.5	23	23	45	0	-
RE214700_102	Residential	593958	4835387	1.5	23	23	45	0	-
RE214700_103	Residential	593951	4835396	1.5	22	23	45	0	-
RE214700_104	Residential	593947	4835399	1.5	22	23	45	0	-
RE214700_105	Residential	593941	4835404	1.5	22	23	45	0	-
RE214700_106	Residential	593922	4835422	1.5	22	23	44	0	-
RE214700_107	Residential	593918	4835425	1.5	22	23	44	0	-
RE214700_108	Residential	593968	4835378	1.5	23	23	46	0	-
RE214700_109	Residential	593955	4835390	1.5	23	23	45	0	-
RE214700_110	Residential	593936	4835409	1.5	22	23	45	0	-
RE214700_111	Residential	593932	4835413	1.5	22	23	45	0	-
RE214700_112	Residential	593927	4835416	1.5	22	23	44	0	-
RE214700_113	Residential	593915	4835429	1.5	21	23	44	0	-
RE214700_114	Residential	593909	4835436	1.5	21	23	44	0	-
RE214800_004	Residential	594026	4835615	1.5	15	23	38	0	-
RE214800_005	Residential	593831	4835365	1.5	21	23	44	0	-
RE214800_006	Residential	593852	4835385	1.5	21	23	44	0	-
RE214800_007	Residential	593881	4835418	1.5	21	23	44	0	-
RE214800_012	Residential	593782	4835346	1.5	20	23	43	0	-
RE214800_013	Residential	593787	4835332	1.5	20	23	43	0	-
RE214800_014	Residential	593789	4835319	1.5	21	23	43	0	-
RE214800_015	Residential	593821	4835355	1.5	21	23	44	0	-
RE214800_016	Residential	593842	4835375	1.5	21	23	44	0	-
RE214800_017	Residential	593862	4835398	1.5	21	23	44	0	-
RE214800_018	Residential	593873	4835409	1.5	22	23	44	0	-
RE214800_019	Residential	593990	4835530	1.5	17	23	39	0	-
RE214800_020	Residential	593986	4835536	1.5	17	23	39	0	-
RE214800_021	Residential	593998	4835545	1.5	16	23	39	0	-
RE214800_022	Residential	594003	4835542	1.5	17	23	39	0	-
RE214800_023	Residential	593968	4835554	1.5	16	23	39	0	-
RE214800_024	Residential	593977	4835565	1.5	16	23	39	0	-
RE214800_025	Residential	593946	4835572	1.5	16	23	39	0	-
RE214800_026	Residential	593927	4835596	1.5	16	23	38	0	-
RE214800_027	Residential	593950	4835594	1.5	16	23	38	0	-
RE214800_028	Residential	593964	4835580	1.5	16	23	38	0	-
RE214800_029	Residential	593968	4835576	1.5	16	23	38	0	-
RE214800_030	Residential	593973	4835571	1.5	16	23	38	0	-
RE214800_031	Residential	593987	4835592	1.5	15	23	38	0	-
RE214800_032	Residential	593962	4835559	1.5	16	23	39	0	-
RE214800_033	Residential	593956	4835562	1.5	16	23	39	0	-
RE214800_034	Residential	593952	4835567	1.5	16	23	39	0	-
RE214800_035	Residential	593941	4835579	1.5	16	23	39	0	-
RE214800_036	Residential	593936	4835582	1.5	16	23	39	0	-
RE214800_037	Residential	593931	4835589	1.5	16	23	38	0	-
RE214800_038	Residential	593938	4835605	1.5	15	23	38	0	-
RE214800_039	Residential	593945	4835599	1.5	16	23	38	0	-
RE214800_040	Residential	593953	4835589	1.5	16	23	38	0	-
RE214800_041	Residential	593959	4835583	1.5	16	23	38	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE214800_042	Residential	593997	4835583	1.5	16	23	38	0	-
RE214800_043	Residential	593992	4835588	1.5	15	23	38	0	-
RE214800_044	Residential	593982	4835599	1.5	15	23	38	0	-
RE214800_045	Residential	593977	4835603	1.5	15	23	38	0	-
RE214800_046	Residential	593970	4835610	1.5	15	23	38	0	-
RE214800_052	Residential	593995	4835609	1.5	15	23	38	0	-
RE214800_053	Residential	593999	4835605	1.5	15	23	38	0	-
RE214800_056	Residential	593989	4835614	1.5	15	23	38	0	-
RE214800_057	Residential	594004	4835600	1.5	15	23	38	0	-
RE214800_058	Residential	594008	4835595	1.5	15	23	38	0	-
RE214800_059	Residential	593969	4835510	1.5	18	23	40	0	-
RE214800_060	Residential	593964	4835515	1.5	18	23	40	0	-
RE214800_061	Residential	593919	4835462	1.5	20	23	43	0	-
RE214800_062	Residential	593941	4835536	1.5	17	23	40	0	-
RE214800_063	Residential	593932	4835545	1.5	17	23	40	0	-
RE214800_064	Residential	593919	4835557	1.5	17	23	39	0	-
RE214800_065	Residential	593923	4835458	1.5	20	23	43	0	-
RE214800_066	Residential	593916	4835466	1.5	20	23	43	0	-
RE214800_067	Residential	593938	4835540	1.5	17	23	40	0	-
RE214800_068	Residential	593926	4835550	1.5	17	23	40	0	-
RE214800_069	Residential	593924	4835553	1.5	17	23	39	0	-
RE214800_070	Residential	593909	4835569	1.5	17	23	39	0	-
RE214800_071	Residential	593905	4835574	1.5	17	23	39	0	-
RE214800_072	Residential	593913	4835564	1.5	17	23	39	0	-
RE214800_073	Residential	593902	4835442	1.5	21	23	43	0	-
RE214800_074	Residential	593897	4835447	1.5	21	23	43	0	-
RE214800_075	Residential	593945	4835532	1.5	17	23	40	0	-
RE214800_076	Residential	593781	4835357	1.5	20	23	43	0	-
RE214900_001	Residential	593921	4835605	1.5	16	23	38	0	-
RE214900_008	Residential	593899	4835580	1.5	17	23	39	0	-
RE214900_009	Residential	593896	4835585	1.5	17	23	39	0	-
RE214900_010	Residential	593893	4835591	1.5	17	23	39	0	-
RE217600_001	Residential	591736	4837227	1.5	10	23	33	0	-
RE217600_002	Residential	591766	4837262	1.5	10	23	33	0	-
RE218700_001	Residential	590959	4838020	1.5	17	23	40	0	-
RE218700_002	Residential	590988	4838088	1.5	16	23	39	0	-
RE220800_001	Residential	590421	4839357	1.5	12	23	35	0	-
RE220900_001	Residential	590180	4839466	1.5	14	23	36	0	-
RE220900_002	Residential	590517	4839408	1.5	11	23	34	0	-
RE220900_003	Residential	590379	4839398	1.5	13	23	35	0	-
RE221000_001	Residential	590454	4839467	1.5	13	23	35	0	-
RE221000_002	Residential	590412	4839513	1.5	13	23	35	0	-
RE221300_001	Residential	590257	4839724	1.5	12	23	35	0	-
RE221300_002	Residential	590236	4839764	1.5	13	23	35	0	-
RE221300_003	Residential	590440	4839670	1.5	8	23	31	0	-
RE222600_001	Residential	591012	4840654	1.5	17	23	39	0	-
RE222700_001	Residential	590826	4840878	1.5	17	23	39	0	-
RE222700_002	Residential	590788	4840912	1.5	18	23	40	0	-
RE222700_003	Residential	590768	4840946	1.5	19	23	42	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE222700_004	Residential	590744	4840967	1.5	20	23	42	0	-
RE222700_005	Residential	590721	4840990	1.5	21	23	44	0	-
RE222700_006	Residential	590621	4841031	1.5	25	23	48	0	-
RE222800_001	Residential	590888	4840963	1.5	15	23	37	0	-
RE222800_002	Residential	590866	4840985	1.5	14	23	37	0	-
RE222800_003	Residential	590833	4841016	1.5	15	23	37	0	-
RE222800_004	Residential	590542	4841175	1.5	34	23	57	1	0.1%
RE222800_005	Residential	591137	4840761	1.5	13	23	35	0	-
RE222900_001	Residential	590805	4841056	1.5	14	23	37	0	-
RE223100_001	Residential	590769	4841337	1.5	22	23	44	0	-
RE224000_001	Residential	591729	4841911	1.5	15	23	38	0	-
RE224000_002	Residential	591565	4842001	1.5	14	23	37	0	-
RE224000_003	Residential	591896	4841760	1.5	14	23	37	0	-
RE224000_004	Residential	592046	4841608	1.5	9	23	32	0	-
RE224000_005	Residential	591982	4841673	1.5	14	23	37	0	-
RE224000_006	Residential	592000	4841606	1.5	11	23	34	0	-
RE224000_007	Residential	592142	4841674	1.5	12	23	34	0	-
RE224000_008	Residential	591760	4841888	1.5	15	23	37	0	-
RE224100_001	Residential	591661	4842108	1.5	21	23	43	0	-
RE224200_001	Residential	591576	4842265	1.5	22	23	45	0	-
RE225600_001	Residential	591815	4843783	1.5	20	23	42	0	-
RE225700_001	Residential	591905	4843849	1.5	18	23	40	0	-
RE225700_002	Residential	591627	4843848	1.5	23	23	45	0	-
RE225800_001	Residential	591793	4843928	1.5	22	23	45	0	-
RE226500_001	Residential	591915	4844500	1.5	23	23	45	0	-
RE226500_002	Residential	592025	4844497	1.5	22	23	45	0	-
RE226600_001	Residential	592085	4844601	1.5	24	23	46	0	-
RE226700_001	Residential	592060	4844696	1.5	24	23	46	0	-
RE226800_001	Residential	592117	4844789	1.5	23	23	45	0	-
RE227000_001	Residential	592319	4844882	1.5	22	23	45	0	-
RE227100_001	Residential	592377	4844982	1.5	25	23	48	0	-
RE227100_002	Residential	592402	4845033	1.5	28	23	51	1	0.1%
RE227300_001	Residential	592788	4845012	1.5	16	23	39	0	-
RE227800_001	Residential	592859	4845591	1.5	16	23	38	0	-
RE227900_001	Residential	592776	4845681	1.5	15	23	38	0	-
RE228000_001	Residential	595855	4844518	1.5	12	23	34	0	-
RE228000_002	Residential	595865	4844534	1.5	12	23	34	0	-
RE228000_003	Residential	595873	4844555	1.5	12	23	35	0	-
RE228000_004	Residential	595887	4844563	1.5	12	23	35	0	-
RE228000_005	Residential	595917	4844562	1.5	13	23	35	0	-
RE228000_006	Residential	595931	4844548	1.5	14	23	36	0	-
RE228000_007	Residential	595942	4844534	1.5	14	23	37	0	-
RE228000_008	Child Care Centre	597841	4843717	1.5	12	23	35	0	-
RE228000_009	Residential	595782	4844642	1.5	14	23	37	0	-
RE228100_001	Residential	595810	4844669	1.5	15	23	38	0	-
RE228300_028	Residential	595272	4845160	1.5	15	23	37	0	-
RE228300_029	Residential	595277	4845164	1.5	15	23	37	0	-
RE228300_030	Residential	595281	4845168	1.5	15	23	37	0	-
RE228300_031	Residential	595264	4845154	1.5	15	23	37	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE228300_032	Residential	595260	4845151	1.5	15	23	37	0	-
RE228300_033	Residential	595256	4845147	1.5	15	23	37	0	-
RE228300_034	Residential	595252	4845143	1.5	15	23	37	0	-
RE228300_035	Residential	595247	4845139	1.5	15	23	37	0	-
RE228400_004	Residential	595342	4845241	1.5	15	23	38	0	-
RE228400_005	Residential	595347	4845245	1.5	15	23	38	0	-
RE228400_006	Residential	595353	4845250	1.5	15	23	38	0	-
RE228400_007	Residential	595286	4845173	1.5	15	23	37	0	-
RE228400_008	Residential	595291	4845177	1.5	15	23	37	0	-
RE228400_009	Residential	595295	4845180	1.5	15	23	37	0	-
RE228400_010	Residential	595299	4845184	1.5	15	23	38	0	-
RE228400_011	Residential	595303	4845187	1.5	15	23	38	0	-
RE228400_013	Residential	595249	4845194	1.5	14	23	37	0	-
RE228400_014	Residential	595253	4845198	1.5	14	23	37	0	-
RE228400_015	Residential	595259	4845202	1.5	14	23	37	0	-
RE228400_045	Residential	595263	4845261	1.5	14	23	37	0	-
RE228400_046	Residential	595267	4845257	1.5	14	23	37	0	-
RE228400_047	Residential	595271	4845254	1.5	14	23	37	0	-
RE228400_048	Residential	595277	4845248	1.5	14	23	37	0	-
RE228400_049	Residential	595281	4845244	1.5	14	23	37	0	-
RE228400_050	Residential	595285	4845240	1.5	14	23	37	0	-
RE228400_051	Residential	595289	4845237	1.5	14	23	37	0	-
RE228400_052	Residential	595293	4845233	1.5	15	23	37	0	-
RE228400_053	Residential	595297	4845229	1.5	15	23	37	0	-
RE228400_054	Residential	595303	4845221	1.5	15	23	37	0	-
RE228400_055	Residential	595307	4845217	1.5	15	23	37	0	-
RE228400_056	Residential	595312	4845212	1.5	15	23	37	0	-
RE228400_057	Residential	595317	4845207	1.5	15	23	38	0	-
RE228400_058	Residential	595321	4845203	1.5	15	23	38	0	-
RE228400_059	Residential	595326	4845198	1.5	15	23	38	0	-
RE228500_009	Residential	595340	4845366	1.5	13	23	36	0	-
RE228500_010	Residential	595348	4845355	1.5	14	23	36	0	-
RE228500_011	Residential	595353	4845351	1.5	14	23	36	0	-
RE228500_012	Residential	595360	4845346	1.5	14	23	37	0	-
RE228500_013	Residential	595365	4845341	1.5	14	23	37	0	-
RE228500_014	Residential	595376	4845333	1.5	14	23	37	0	-
RE228500_015	Residential	595380	4845326	1.5	14	23	37	0	-
RE228500_016	Residential	595386	4845320	1.5	15	23	37	0	-
RE228500_017	Residential	595391	4845315	1.5	15	23	37	0	-
RE228500_018	Residential	595402	4845305	1.5	15	23	37	0	-
RE228500_019	Residential	595406	4845298	1.5	15	23	37	0	-
RE228500_020	Residential	595415	4845288	1.5	15	23	38	0	-
RE228500_021	Residential	595423	4845280	1.5	15	23	38	0	-
RE228500_022	Residential	595357	4845254	1.5	15	23	38	0	-
RE228500_023	Residential	595366	4845262	1.5	15	23	38	0	-
RE228500_024	Residential	595370	4845267	1.5	15	23	38	0	-
RE228500_025	Residential	595375	4845271	1.5	15	23	37	0	-
RE228500_026	Residential	595355	4845285	1.5	15	23	37	0	-
RE228500_027	Residential	595349	4845290	1.5	15	23	37	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE228500_028	Residential	595342	4845297	1.5	14	23	37	0	-
RE228500_029	Residential	595338	4845303	1.5	14	23	37	0	-
RE228500_030	Residential	595329	4845311	1.5	14	23	37	0	-
RE228500_031	Residential	595322	4845317	1.5	14	23	36	0	-
RE228500_032	Residential	595315	4845323	1.5	14	23	36	0	-
RE228500_033	Residential	595310	4845328	1.5	14	23	36	0	-
RE228500_034	Residential	595301	4845337	1.5	13	23	36	0	-
RE228500_035	Residential	595297	4845343	1.5	13	23	36	0	-
RE228500_049	Residential	595279	4845312	1.5	13	23	36	0	-
RE228500_050	Residential	595289	4845303	1.5	14	23	36	0	-
RE228500_051	Residential	595293	4845297	1.5	14	23	36	0	-
RE228500_052	Residential	595300	4845290	1.5	14	23	37	0	-
RE228500_053	Residential	595305	4845285	1.5	14	23	37	0	-
RE228500_054	Residential	595315	4845277	1.5	14	23	37	0	-
RE228500_055	Residential	595319	4845273	1.5	14	23	37	0	-
RE228500_056	Residential	595323	4845268	1.5	15	23	37	0	-
RE228500_057	Residential	595329	4845264	1.5	15	23	37	0	-
RE228500_060	Residential	595450	4845298	1.5	15	23	38	0	-
RE228500_061	Residential	595448	4845302	1.5	15	23	38	0	-
RE228500_062	Residential	595444	4845307	1.5	15	23	38	0	-
RE228500_063	Residential	595440	4845311	1.5	15	23	38	0	-
RE228500_064	Residential	595437	4845315	1.5	15	23	38	0	-
RE228500_065	Residential	595433	4845320	1.5	15	23	37	0	-
RE228500_066	Residential	595429	4845324	1.5	15	23	37	0	-
RE228500_067	Residential	595426	4845327	1.5	15	23	37	0	-
RE228600_013	Residential	595369	4845462	1.5	12	23	35	0	-
RE228600_014	Residential	595377	4845450	1.5	12	23	35	0	-
RE228600_015	Residential	595389	4845444	1.5	12	23	35	0	-
RE228600_016	Residential	595398	4845435	1.5	13	23	35	0	-
RE228600_017	Residential	595404	4845426	1.5	13	23	36	0	-
RE228600_018	Residential	595412	4845418	1.5	13	23	36	0	-
RE228600_019	Residential	595420	4845409	1.5	14	23	36	0	-
RE228600_020	Residential	595431	4845401	1.5	14	23	36	0	-
RE228600_021	Residential	595439	4845389	1.5	14	23	37	0	-
RE228600_022	Residential	595447	4845380	1.5	14	23	37	0	-
RE228600_023	Residential	595455	4845370	1.5	14	23	37	0	-
RE228600_024	Residential	595464	4845360	1.5	14	23	37	0	-
RE228600_025	Residential	595470	4845351	1.5	15	23	37	0	-
RE228600_026	Residential	595480	4845344	1.5	15	23	37	0	-
RE228600_027	Residential	595487	4845335	1.5	15	23	38	0	-
RE228600_036	Residential	595324	4845383	1.5	13	23	35	0	-
RE228600_037	Residential	595332	4845374	1.5	13	23	36	0	-
RE228600_038	Residential	595335	4845370	1.5	13	23	36	0	-
RE228600_039	Residential	595422	4845333	1.5	15	23	37	0	-
RE228600_040	Residential	595418	4845337	1.5	14	23	37	0	-
RE228600_041	Residential	595415	4845341	1.5	14	23	37	0	-
RE228600_042	Residential	595412	4845343	1.5	14	23	37	0	-
RE228600_043	Residential	595409	4845347	1.5	14	23	37	0	-
RE228600_044	Residential	595406	4845351	1.5	14	23	37	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE228600_045	Residential	595404	4845354	1.5	14	23	37	0	-
RE228600_046	Residential	595402	4845357	1.5	14	23	37	0	-
RE228600_047	Residential	595396	4845362	1.5	14	23	37	0	-
RE228600_048	Residential	595392	4845366	1.5	14	23	36	0	-
RE228600_049	Residential	595390	4845369	1.5	14	23	36	0	-
RE228600_050	Residential	595387	4845372	1.5	14	23	36	0	-
RE228600_051	Residential	595383	4845375	1.5	14	23	36	0	-
RE228600_052	Residential	595380	4845378	1.5	14	23	36	0	-
RE228600_053	Residential	595377	4845380	1.5	13	23	36	0	-
RE228600_054	Residential	595374	4845383	1.5	13	23	36	0	-
RE228600_055	Residential	595371	4845387	1.5	13	23	36	0	-
RE228600_056	Residential	595369	4845389	1.5	13	23	36	0	-
RE228600_057	Residential	595366	4845392	1.5	13	23	36	0	-
RE228600_058	Residential	595363	4845395	1.5	13	23	36	0	-
RE228600_059	Residential	595361	4845397	1.5	13	23	36	0	-
RE228600_060	Residential	595358	4845400	1.5	13	23	36	0	-
RE228600_061	Residential	595356	4845402	1.5	13	23	35	0	-
RE228600_062	Residential	595353	4845405	1.5	13	23	35	0	-
RE228600_063	Residential	593163	4846308	1.5	22	23	45	0	-
RE228700_010	Residential	593290	4846362	1.5	18	23	40	0	-
RE228800_001	Residential	593003	4846574	1.5	19	23	42	0	-
RE228800_002	Residential	593037	4846534	1.5	19	23	42	0	-
RE228800_003	Residential	593163	4846512	1.5	15	23	38	0	-
RE228900_001	Residential	592951	4846627	1.5	20	23	42	0	-
RE228900_002	Residential	592887	4846738	1.5	19	23	42	0	-
RE229000_001	Residential	593405	4846521	1.5	15	23	38	0	-
RE229100_001	Residential	593407	4846583	1.5	14	23	37	0	-
RE230200_001	Residential	594211	4847001	1.5	14	23	37	0	-
RE230300_001	Residential	594050	4847308	1.5	19	23	42	0	-
RE230300_002	Residential	593923	4847396	1.5	17	23	40	0	-
RE230300_003	Residential	594697	4846565	1.5	11	23	34	0	-
RE230300_004	Residential	595111	4846102	1.5	12	23	35	0	-
RE230300_005	Residential	595605	4845645	1.5	13	23	36	0	-
RE230400_001	Residential	593872	4847645	1.5	17	23	39	0	-
RE230400_002	Residential	593822	4847679	1.5	17	23	40	0	-
RE230400_006	Residential	594520	4846864	1.5	14	23	36	0	-
RE230400_007	Residential	594996	4846385	1.5	15	23	37	0	-
RE230400_008	Residential	594973	4846410	1.5	14	23	37	0	-
RE230400_009	Residential	594936	4846427	1.5	14	23	36	0	-
RE230400_010	Residential	595705	4845694	1.5	17	23	40	0	-
RE230400_011	Residential	595874	4845530	1.5	19	23	42	0	-
RE230500_001	Residential	594280	4847364	1.5	20	23	43	0	-
RE230500_002	Residential	594446	4847099	1.5	12	23	35	0	-
RE230500_003	Residential	594531	4847041	1.5	12	23	34	0	-
RE230500_004	Residential	594643	4846861	1.5	12	23	35	0	-
RE230500_005	Residential	594671	4846840	1.5	12	23	34	0	-
RE230500_006	Residential	595049	4846474	1.5	11	23	34	0	-
RE230500_007	Residential	595486	4846036	1.5	13	23	36	0	-
RE230500_008	Residential	595463	4846068	1.5	13	23	35	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230500_009	Residential	595438	4846095	1.5	13	23	35	0	-
RE230500_010	Residential	595925	4845612	1.5	15	23	38	0	-
RE230500_011	Residential	595941	4845561	1.5	17	23	39	0	-
RE230500_012	Residential	596152	4845388	1.5	20	23	43	0	-
RE230500_013	Residential	596418	4845009	1.5	30	23	52	1	0.1%
RE230500_014	Residential	596697	4844834	1.5	16	23	39	0	-
RE230600_001	Residential	594927	4846729	1.5	10	23	33	0	-
RE230600_002	Residential	595293	4846327	1.5	10	23	33	0	-
RE230600_003	Residential	596445	4845172	1.5	40	23	63	5	0.3%
RE230600_004	Residential	596565	4845058	1.5	20	23	42	0	-
RE230600_005	Residential	596657	4844932	1.5	16	23	38	0	-
RE230600_006	Residential	596705	4844908	1.5	15	23	37	0	-
RE230900_001	Residential	597840	4844261	1.5	25	23	47	0	-
RE230900_002	Residential	597853	4844274	1.5	23	23	46	0	-
RE230900_003	Residential	597866	4844285	1.5	22	23	45	0	-
RE230900_004	Residential	597879	4844301	1.5	21	23	44	0	-
RE230900_005	Residential	597887	4844307	1.5	21	23	44	0	-
RE230900_006	Residential	597900	4844320	1.5	20	23	43	0	-
RE230900_007	Residential	597908	4844331	1.5	20	23	42	0	-
RE230900_008	Residential	597922	4844342	1.5	19	23	42	0	-
RE230900_009	Residential	597931	4844352	1.5	19	23	42	0	-
RE230900_010	Residential	597943	4844365	1.5	19	23	41	0	-
RE230900_011	Residential	597954	4844376	1.5	19	23	41	0	-
RE230900_012	Residential	597816	4844283	1.5	26	23	49	0	-
RE230900_013	Residential	597825	4844289	1.5	25	23	48	0	-
RE230900_014	Residential	597835	4844299	1.5	24	23	47	0	-
RE230900_015	Residential	597842	4844308	1.5	23	23	46	0	-
RE230900_016	Residential	597849	4844314	1.5	23	23	45	0	-
RE230900_017	Residential	597859	4844324	1.5	22	23	45	0	-
RE230900_018	Residential	597867	4844331	1.5	22	23	44	0	-
RE230900_019	Residential	597875	4844341	1.5	21	23	44	0	-
RE230900_020	Residential	597884	4844348	1.5	21	23	43	0	-
RE230900_021	Residential	597892	4844356	1.5	20	23	43	0	-
RE230900_022	Residential	597899	4844365	1.5	20	23	43	0	-
RE230900_023	Residential	597905	4844373	1.5	20	23	43	0	-
RE230900_024	Residential	597917	4844381	1.5	20	23	42	0	-
RE230900_025	Residential	597924	4844389	1.5	19	23	42	0	-
RE230900_026	Residential	597931	4844399	1.5	19	23	42	0	-
RE230900_027	Residential	597646	4844600	1.5	33	23	56	1	0.1%
RE230900_028	Residential	597653	4844613	1.5	32	23	55	1	0.1%
RE230900_029	Residential	597660	4844623	1.5	32	23	54	1	0.1%
RE230900_030	Residential	597665	4844629	1.5	31	23	54	1	0.1%
RE230900_031	Residential	597835	4844353	1.5	23	23	45	0	-
RE230900_032	Residential	597831	4844358	1.5	23	23	46	0	-
RE230900_033	Residential	597825	4844365	1.5	23	23	46	0	-
RE230900_034	Residential	597820	4844371	1.5	23	23	46	0	-
RE230900_035	Residential	597814	4844379	1.5	24	23	46	0	-
RE230900_036	Residential	597811	4844383	1.5	24	23	46	0	-
RE230900_037	Residential	597806	4844390	1.5	24	23	47	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_038	Residential	597801	4844396	1.5	24	23	47	0	-
RE230900_039	Residential	597796	4844403	1.5	24	23	47	0	-
RE230900_040	Residential	597792	4844410	1.5	25	23	47	0	-
RE230900_041	Residential	597786	4844416	1.5	25	23	48	0	-
RE230900_042	Residential	597783	4844423	1.5	25	23	48	0	-
RE230900_043	Residential	597781	4844430	1.5	25	23	48	0	-
RE230900_044	Residential	597777	4844436	1.5	25	23	48	0	-
RE230900_045	Residential	597773	4844443	1.5	25	23	48	0	-
RE230900_046	Residential	597770	4844450	1.5	25	23	48	0	-
RE230900_047	Residential	597766	4844457	1.5	26	23	48	0	-
RE230900_048	Residential	597762	4844463	1.5	26	23	48	0	-
RE230900_049	Residential	597758	4844470	1.5	26	23	48	0	-
RE230900_050	Residential	597754	4844477	1.5	26	23	49	0	-
RE230900_051	Residential	597751	4844484	1.5	26	23	49	0	-
RE230900_052	Residential	597747	4844490	1.5	26	23	49	0	-
RE230900_053	Residential	597744	4844497	1.5	26	23	49	0	-
RE230900_054	Residential	597739	4844504	1.5	27	23	49	0	-
RE230900_055	Residential	597725	4844530	1.5	27	23	50	0	-
RE230900_056	Residential	597721	4844535	1.5	27	23	50	0	-
RE230900_057	Residential	597717	4844543	1.5	27	23	50	0	-
RE230900_058	Residential	597713	4844549	1.5	28	23	50	1	0.1%
RE230900_059	Residential	597710	4844557	1.5	28	23	50	1	0.1%
RE230900_060	Residential	597705	4844564	1.5	28	23	51	1	0.1%
RE230900_061	Residential	597701	4844572	1.5	28	23	51	1	0.1%
RE230900_062	Residential	597697	4844579	1.5	28	23	51	1	0.1%
RE230900_063	Residential	597692	4844586	1.5	29	23	51	1	0.1%
RE230900_064	Residential	597688	4844592	1.5	29	23	52	1	0.1%
RE230900_065	Residential	597684	4844600	1.5	30	23	52	1	0.1%
RE230900_066	Residential	597681	4844607	1.5	30	23	53	1	0.1%
RE230900_067	Residential	597651	4844608	1.5	33	23	55	1	0.1%
RE230900_068	Residential	597659	4844619	1.5	32	23	54	1	0.1%
RE230900_069	Residential	597659	4844582	1.5	32	23	54	1	0.1%
RE230900_070	Residential	597661	4844578	1.5	32	23	54	1	0.1%
RE230900_071	Residential	597664	4844572	1.5	31	23	54	1	0.1%
RE230900_072	Residential	597668	4844567	1.5	31	23	54	1	0.1%
RE230900_073	Residential	597671	4844560	1.5	31	23	53	1	0.1%
RE230900_074	Residential	597674	4844556	1.5	31	23	53	1	0.1%
RE230900_075	Residential	597678	4844550	1.5	30	23	53	1	0.1%
RE230900_076	Residential	597681	4844543	1.5	30	23	53	1	0.1%
RE230900_077	Residential	597684	4844537	1.5	30	23	53	1	0.1%
RE230900_078	Residential	597688	4844532	1.5	30	23	52	1	0.1%
RE230900_079	Residential	597691	4844527	1.5	30	23	52	1	0.1%
RE230900_080	Residential	597695	4844521	1.5	30	23	52	1	0.1%
RE230900_081	Residential	597697	4844516	1.5	29	23	52	1	0.1%
RE230900_082	Residential	597714	4844486	1.5	29	23	51	1	0.1%
RE230900_083	Residential	597717	4844481	1.5	29	23	51	1	0.1%
RE230900_084	Residential	597720	4844476	1.5	28	23	51	1	0.1%
RE230900_085	Residential	597723	4844470	1.5	28	23	51	1	0.1%
RE230900_086	Residential	597726	4844464	1.5	28	23	51	1	0.1%

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_087	Residential	597729	4844460	1.5	28	23	51	1	0.1%
RE230900_088	Residential	597732	4844455	1.5	28	23	51	1	0.1%
RE230900_089	Residential	597736	4844448	1.5	28	23	51	1	0.1%
RE230900_090	Residential	597740	4844440	1.5	28	23	50	1	0.1%
RE230900_091	Residential	597743	4844435	1.5	28	23	50	1	0.1%
RE230900_092	Residential	597747	4844429	1.5	28	23	50	1	0.1%
RE230900_093	Residential	597749	4844423	1.5	28	23	50	1	0.1%
RE230900_094	Residential	597752	4844418	1.5	27	23	50	0	-
RE230900_095	Residential	597755	4844413	1.5	27	23	50	0	-
RE230900_096	Residential	597758	4844409	1.5	27	23	50	0	-
RE230900_097	Residential	597762	4844402	1.5	27	23	49	0	-
RE230900_098	Residential	597765	4844392	1.5	27	23	49	0	-
RE230900_099	Residential	597769	4844386	1.5	27	23	49	0	-
RE230900_100	Residential	597773	4844382	1.5	26	23	49	0	-
RE230900_101	Residential	597776	4844377	1.5	26	23	49	0	-
RE230900_102	Residential	597784	4844369	1.5	26	23	48	0	-
RE230900_103	Residential	597787	4844364	1.5	26	23	48	0	-
RE230900_104	Residential	597791	4844360	1.5	26	23	48	0	-
RE230900_105	Residential	597794	4844354	1.5	25	23	48	0	-
RE230900_106	Residential	597798	4844349	1.5	25	23	48	0	-
RE230900_107	Residential	597802	4844343	1.5	25	23	48	0	-
RE230900_108	Residential	597805	4844339	1.5	25	23	48	0	-
RE230900_109	Residential	597808	4844334	1.5	25	23	48	0	-
RE230900_110	Residential	597861	4844387	1.5	21	23	44	0	-
RE230900_111	Residential	597868	4844394	1.5	21	23	44	0	-
RE230900_112	Residential	597877	4844404	1.5	21	23	44	0	-
RE230900_113	Residential	597886	4844412	1.5	21	23	43	0	-
RE230900_114	Residential	597892	4844420	1.5	20	23	43	0	-
RE230900_115	Residential	597874	4844444	1.5	21	23	44	0	-
RE230900_116	Residential	597870	4844440	1.5	21	23	44	0	-
RE230900_117	Residential	597863	4844432	1.5	21	23	44	0	-
RE230900_118	Residential	597859	4844428	1.5	22	23	44	0	-
RE230900_119	Residential	597849	4844405	1.5	22	23	44	0	-
RE230900_120	Residential	597845	4844411	1.5	22	23	45	0	-
RE230900_121	Residential	597840	4844418	1.5	22	23	45	0	-
RE230900_122	Residential	597836	4844424	1.5	22	23	45	0	-
RE230900_123	Residential	597819	4844451	1.5	23	23	45	0	-
RE230900_124	Residential	597815	4844458	1.5	23	23	46	0	-
RE230900_125	Residential	597834	4844465	1.5	22	23	45	0	-
RE230900_126	Residential	597846	4844477	1.5	22	23	44	0	-
RE230900_127	Residential	597812	4844466	1.5	23	23	46	0	-
RE230900_128	Residential	597808	4844471	1.5	23	23	46	0	-
RE230900_129	Residential	597804	4844480	1.5	23	23	46	0	-
RE230900_130	Residential	597801	4844485	1.5	23	23	46	0	-
RE230900_131	Residential	597796	4844493	1.5	24	23	46	0	-
RE230900_132	Residential	597793	4844499	1.5	24	23	46	0	-
RE230900_133	Residential	597788	4844505	1.5	24	23	46	0	-
RE230900_134	Residential	597785	4844512	1.5	24	23	47	0	-
RE230900_135	Residential	597781	4844519	1.5	24	23	47	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_136	Residential	597777	4844525	1.5	24	23	47	0	-
RE230900_137	Residential	597772	4844533	1.5	24	23	47	0	-
RE230900_138	Residential	597769	4844540	1.5	25	23	47	0	-
RE230900_139	Residential	597765	4844546	1.5	25	23	47	0	-
RE230900_140	Residential	597762	4844553	1.5	25	23	48	0	-
RE230900_141	Residential	597758	4844559	1.5	25	23	48	0	-
RE230900_142	Residential	597755	4844565	1.5	25	23	48	0	-
RE230900_143	Residential	597751	4844573	1.5	25	23	48	0	-
RE230900_144	Residential	597747	4844579	1.5	26	23	48	0	-
RE230900_145	Residential	597822	4844504	1.5	23	23	45	0	-
RE230900_146	Residential	597827	4844497	1.5	22	23	45	0	-
RE230900_147	Residential	597831	4844490	1.5	22	23	45	0	-
RE230900_148	Residential	597839	4844470	1.5	22	23	45	0	-
RE230900_149	Residential	598114	4844042	1.5	16	23	39	0	-
RE230900_150	Residential	598102	4844034	1.5	17	23	39	0	-
RE230900_151	Residential	598094	4844026	1.5	17	23	40	0	-
RE230900_152	Residential	598074	4844024	1.5	18	23	41	0	-
RE230900_153	Residential	598063	4844034	1.5	18	23	41	0	-
RE230900_154	Residential	598053	4844045	1.5	19	23	41	0	-
RE230900_155	Residential	598043	4844055	1.5	19	23	41	0	-
RE230900_156	Residential	598034	4844069	1.5	19	23	41	0	-
RE230900_157	Residential	598028	4844085	1.5	18	23	41	0	-
RE230900_158	Residential	598036	4844098	1.5	18	23	40	0	-
RE230900_159	Residential	598045	4844106	1.5	17	23	40	0	-
RE230900_160	Residential	598054	4844116	1.5	17	23	40	0	-
RE230900_161	Residential	598102	4844074	1.5	16	23	39	0	-
RE230900_162	Residential	598085	4844058	1.5	17	23	40	0	-
RE230900_163	Residential	598068	4844077	1.5	17	23	40	0	-
RE230900_164	Residential	598080	4844091	1.5	17	23	39	0	-
RE230900_165	Residential	598123	4844051	1.5	16	23	39	0	-
RE230900_166	Residential	598199	4843983	1.5	15	23	38	0	-
RE230900_167	Residential	598192	4843977	1.5	15	23	38	0	-
RE230900_168	Residential	598185	4843968	1.5	16	23	38	0	-
RE230900_169	Residential	598179	4843962	1.5	16	23	38	0	-
RE230900_170	Residential	598170	4843953	1.5	16	23	39	0	-
RE230900_171	Residential	598161	4843941	1.5	17	23	40	0	-
RE230900_172	Residential	598158	4843928	1.5	18	23	40	0	-
RE230900_173	Residential	598165	4843918	1.5	18	23	40	0	-
RE230900_174	Residential	598171	4843911	1.5	18	23	40	0	-
RE230900_175	Residential	598179	4843903	1.5	18	23	40	0	-
RE230900_176	Residential	598185	4843897	1.5	17	23	40	0	-
RE230900_177	Residential	598191	4843889	1.5	17	23	40	0	-
RE230900_178	Residential	598197	4843884	1.5	17	23	40	0	-
RE230900_179	Residential	598202	4843879	1.5	17	23	40	0	-
RE230900_180	Residential	598209	4843872	1.5	17	23	40	0	-
RE230900_181	Residential	598215	4843866	1.5	17	23	40	0	-
RE230900_182	Residential	598222	4843858	1.5	17	23	40	0	-
RE230900_192	Residential	598217	4843965	1.5	15	23	38	0	-
RE230900_193	Residential	598205	4843953	1.5	15	23	38	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE230900_194	Residential	598192	4843939	1.5	16	23	39	0	-
RE230900_198	Residential	597969	4844339	1.5	18	23	41	0	-
RE230900_199	Residential	597959	4844330	1.5	19	23	41	0	-
RE230900_200	Residential	597950	4844320	1.5	19	23	41	0	-
RE230900_201	Residential	597940	4844310	1.5	19	23	42	0	-
RE230900_202	Residential	597931	4844302	1.5	19	23	42	0	-
RE230900_203	Residential	597923	4844293	1.5	20	23	42	0	-
RE230900_204	Residential	597913	4844282	1.5	20	23	43	0	-
RE230900_205	Residential	597979	4844349	1.5	18	23	41	0	-
RE230900_206	Residential	597848	4844272	1.5	24	23	46	0	-
RE230900_207	Residential	597840	4844263	1.5	25	23	47	0	-
RE230900_208	Residential	597864	4844244	1.5	24	23	46	0	-
RE230900_209	Residential	597869	4844237	1.5	23	23	46	0	-
RE230900_210	Residential	597874	4844230	1.5	23	23	46	0	-
RE230900_211	Residential	597878	4844225	1.5	23	23	46	0	-
RE230900_212	Residential	597888	4844211	1.5	23	23	45	0	-
RE230900_213	Residential	597893	4844204	1.5	23	23	45	0	-
RE230900_214	Residential	597899	4844195	1.5	23	23	45	0	-
RE230900_215	Residential	597904	4844188	1.5	22	23	45	0	-
RE230900_216	Residential	597884	4844219	1.5	23	23	45	0	-
RE230900_217	Residential	597946	4844123	1.5	22	23	45	0	-
RE230900_218	Residential	597910	4844177	1.5	23	23	45	0	-
RE230900_219	Residential	597915	4844171	1.5	22	23	45	0	-
RE230900_220	Residential	597921	4844162	1.5	22	23	45	0	-
RE230900_221	Residential	597926	4844153	1.5	22	23	45	0	-
RE230900_222	Residential	597936	4844139	1.5	22	23	45	0	-
RE230900_223	Residential	597954	4844115	1.5	22	23	45	0	-
RE230900_224	Residential	597959	4844106	1.5	22	23	45	0	-
RE230900_225	Residential	597967	4844098	1.5	22	23	44	0	-
RE230900_226	Residential	597972	4844091	1.5	22	23	44	0	-
RE230900_227	Residential	597977	4844083	1.5	22	23	44	0	-
RE230900_228	Residential	597982	4844076	1.5	22	23	44	0	-
RE230900_229	Residential	597986	4844069	1.5	22	23	44	0	-
RE230900_230	Residential	597991	4844063	1.5	22	23	44	0	-
RE230900_231	Residential	597994	4844057	1.5	22	23	44	0	-
RE230900_232	Residential	598000	4844050	1.5	22	23	44	0	-
RE230900_233	Residential	598005	4844046	1.5	22	23	44	0	-
RE230900_234	Residential	598013	4844034	1.5	22	23	44	0	-
RE230900_235	Residential	598019	4844027	1.5	22	23	44	0	-
RE230900_236	Residential	598024	4844022	1.5	22	23	44	0	-
RE230900_237	Residential	598029	4844018	1.5	21	23	44	0	-
RE230900_238	Residential	598032	4844011	1.5	22	23	44	0	-
RE230900_239	Residential	598037	4844006	1.5	21	23	44	0	-
RE230900_240	Residential	598044	4843998	1.5	21	23	44	0	-
RE230900_241	Residential	597941	4844132	1.5	22	23	45	0	-
RE230900_242	Residential	598051	4843992	1.5	21	23	44	0	-
RE230900_243	Residential	598058	4843984	1.5	21	23	44	0	-
RE230900_244	Residential	598066	4843978	1.5	21	23	43	0	-
RE230900_245	Residential	598072	4843971	1.5	21	23	43	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_246	Residential	598078	4843964	1.5	21	23	43	0	-
RE230900_247	Residential	598084	4843957	1.5	21	23	43	0	-
RE230900_257	Residential	598130	4844202	1.5	15	23	38	0	-
RE230900_258	Residential	598131	4844192	1.5	15	23	38	0	-
RE230900_259	Residential	598135	4844179	1.5	15	23	38	0	-
RE230900_260	Residential	598147	4844156	1.5	15	23	37	0	-
RE230900_261	Residential	598154	4844148	1.5	15	23	37	0	-
RE230900_262	Residential	598161	4844140	1.5	15	23	37	0	-
RE230900_263	Residential	598095	4844225	1.5	16	23	38	0	-
RE230900_264	Residential	598095	4844213	1.5	16	23	38	0	-
RE230900_265	Residential	598095	4844198	1.5	16	23	38	0	-
RE230900_266	Residential	598094	4844188	1.5	16	23	38	0	-
RE230900_272	Residential	598293	4843978	1.5	14	23	36	0	-
RE230900_273	Residential	598282	4843987	1.5	14	23	36	0	-
RE230900_274	Residential	598272	4843996	1.5	14	23	36	0	-
RE230900_275	Residential	598261	4844006	1.5	14	23	36	0	-
RE230900_276	Residential	598251	4844016	1.5	14	23	37	0	-
RE230900_277	Residential	598243	4844025	1.5	14	23	37	0	-
RE230900_278	Residential	598237	4844030	1.5	14	23	37	0	-
RE230900_279	Residential	598231	4844036	1.5	14	23	37	0	-
RE230900_280	Residential	598225	4844041	1.5	14	23	37	0	-
RE230900_281	Residential	598220	4844046	1.5	14	23	37	0	-
RE230900_282	Residential	598213	4844053	1.5	14	23	37	0	-
RE230900_283	Residential	598133	4844117	1.5	15	23	38	0	-
RE230900_285	Residential	598098	4844164	1.5	16	23	38	0	-
RE230900_286	Residential	598103	4844154	1.5	16	23	38	0	-
RE230900_287	Residential	598107	4844144	1.5	16	23	38	0	-
RE230900_288	Residential	598172	4844129	1.5	15	23	37	0	-
RE230900_289	Residential	598183	4844119	1.5	14	23	37	0	-
RE230900_290	Residential	598190	4844111	1.5	14	23	37	0	-
RE230900_291	Residential	598198	4844103	1.5	14	23	37	0	-
RE230900_292	Residential	598205	4844095	1.5	14	23	37	0	-
RE230900_293	Residential	598212	4844088	1.5	14	23	37	0	-
RE230900_294	Residential	598185	4844065	1.5	15	23	37	0	-
RE230900_295	Residential	598176	4844074	1.5	15	23	37	0	-
RE230900_296	Residential	598166	4844083	1.5	15	23	37	0	-
RE230900_297	Residential	598158	4844092	1.5	15	23	38	0	-
RE230900_298	Residential	598148	4844101	1.5	15	23	38	0	-
RE230900_299	Residential	598139	4844111	1.5	15	23	38	0	-
RE230900_300	Residential	598118	4844130	1.5	16	23	38	0	-
RE230900_301	Residential	598112	4844137	1.5	16	23	38	0	-
RE230900_302	Residential	598231	4844068	1.5	14	23	37	0	-
RE230900_303	Residential	598240	4844057	1.5	14	23	37	0	-
RE230900_304	Residential	598258	4844039	1.5	14	23	36	0	-
RE230900_305	Residential	598267	4844030	1.5	14	23	36	0	-
RE230900_306	Residential	598275	4844021	1.5	14	23	36	0	-
RE230900_307	Residential	598296	4844003	1.5	13	23	36	0	-
RE230900_310	Residential	598286	4844012	1.5	14	23	36	0	-
RE230900_312	Residential	598068	4844260	1.5	16	23	39	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_313	Residential	598248	4844048	1.5	14	23	36	0	-
RE230900_315	Residential	598095	4844177	1.5	16	23	38	0	-
RE230900_317	Residential	598062	4844211	1.5	16	23	39	0	-
RE230900_318	Residential	598168	4844040	1.5	15	23	38	0	-
RE230900_319	Residential	598156	4844051	1.5	15	23	38	0	-
RE230900_320	Residential	598148	4844062	1.5	15	23	38	0	-
RE230900_321	Residential	598135	4844072	1.5	16	23	38	0	-
RE230900_322	Residential	598126	4844084	1.5	16	23	38	0	-
RE230900_323	Residential	598113	4844094	1.5	16	23	38	0	-
RE230900_324	Residential	598105	4844105	1.5	16	23	39	0	-
RE230900_325	Residential	598096	4844112	1.5	16	23	39	0	-
RE230900_326	Residential	598087	4844118	1.5	16	23	39	0	-
RE230900_327	Residential	598077	4844131	1.5	16	23	39	0	-
RE230900_328	Residential	598067	4844143	1.5	17	23	39	0	-
RE230900_329	Residential	598061	4844157	1.5	17	23	39	0	-
RE230900_330	Residential	598061	4844172	1.5	17	23	39	0	-
RE230900_331	Residential	598061	4844185	1.5	16	23	39	0	-
RE230900_332	Residential	598062	4844198	1.5	16	23	39	0	-
RE230900_333	Residential	598063	4844224	1.5	16	23	39	0	-
RE230900_334	Residential	598128	4844123	1.5	15	23	38	0	-
RE230900_335	Residential	598138	4844168	1.5	15	23	38	0	-
RE230900_337	Residential	598275	4843935	1.5	14	23	37	0	-
RE230900_338	Residential	598267	4843942	1.5	14	23	37	0	-
RE230900_339	Residential	598256	4843950	1.5	14	23	37	0	-
RE230900_340	Residential	598247	4843960	1.5	14	23	37	0	-
RE230900_341	Residential	598239	4843966	1.5	14	23	37	0	-
RE230900_342	Residential	598233	4843974	1.5	15	23	37	0	-
RE230900_343	Residential	598226	4843980	1.5	15	23	37	0	-
RE230900_344	Residential	598218	4843987	1.5	15	23	37	0	-
RE230900_345	Residential	598211	4843994	1.5	15	23	37	0	-
RE230900_346	Residential	598205	4844002	1.5	15	23	37	0	-
RE230900_347	Residential	598199	4844007	1.5	15	23	37	0	-
RE230900_348	Residential	598190	4844015	1.5	15	23	38	0	-
RE230900_349	Residential	598181	4844024	1.5	15	23	38	0	-
RE230900_350	Residential	597947	4844283	1.5	19	23	42	0	-
RE230900_351	Residential	597937	4844272	1.5	19	23	42	0	-
RE230900_352	Residential	597929	4844264	1.5	20	23	42	0	-
RE230900_353	Residential	597958	4844245	1.5	19	23	41	0	-
RE230900_354	Residential	597947	4844234	1.5	19	23	42	0	-
RE230900_355	Residential	597920	4844224	1.5	21	23	43	0	-
RE230900_356	Residential	597911	4844235	1.5	21	23	43	0	-
RE230900_357	Residential	597935	4844225	1.5	20	23	43	0	-
RE230900_358	Residential	597903	4844242	1.5	21	23	44	0	-
RE230900_359	Residential	597894	4844252	1.5	21	23	44	0	-
RE230900_360	Residential	597885	4844262	1.5	22	23	44	0	-
RE230900_361	Residential	597993	4844327	1.5	18	23	40	0	-
RE230900_362	Residential	597985	4844320	1.5	18	23	40	0	-
RE230900_363	Residential	597976	4844312	1.5	18	23	41	0	-
RE230900_364	Residential	597966	4844301	1.5	18	23	41	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE230900_365	Residential	597956	4844290	1.5	19	23	41	0	-
RE230900_366	Residential	597988	4844228	1.5	18	23	41	0	-
RE230900_367	Residential	597980	4844220	1.5	18	23	41	0	-
RE230900_368	Residential	597970	4844211	1.5	19	23	41	0	-
RE230900_369	Residential	597960	4844201	1.5	19	23	42	0	-
RE230900_370	Residential	597949	4844191	1.5	20	23	42	0	-
RE230900_371	Residential	597936	4844178	1.5	21	23	43	0	-
RE230900_372	Residential	598039	4844140	1.5	17	23	40	0	-
RE230900_373	Residential	598027	4844132	1.5	18	23	40	0	-
RE230900_374	Residential	598012	4844121	1.5	18	23	41	0	-
RE230900_375	Residential	597996	4844119	1.5	19	23	42	0	-
RE230900_376	Residential	597981	4844132	1.5	20	23	42	0	-
RE230900_377	Residential	597973	4844146	1.5	20	23	42	0	-
RE230900_378	Residential	598034	4844176	1.5	17	23	40	0	-
RE230900_379	Residential	598015	4844169	1.5	18	23	40	0	-
RE230900_380	Residential	598000	4844158	1.5	18	23	41	0	-
RE230900_381	Residential	597986	4844180	1.5	19	23	41	0	-
RE230900_382	Residential	597997	4844189	1.5	18	23	41	0	-
RE230900_383	Residential	598009	4844195	1.5	18	23	40	0	-
RE230900_384	Residential	598020	4844205	1.5	17	23	40	0	-
RE230900_385	Residential	598034	4844205	1.5	17	23	40	0	-
RE230900_386	Residential	598213	4843919	1.5	16	23	38	0	-
RE230900_387	Residential	598223	4843930	1.5	15	23	38	0	-
RE230900_388	Residential	598235	4843942	1.5	15	23	37	0	-
RE230900_389	Residential	598262	4843914	1.5	15	23	37	0	-
RE230900_390	Residential	598251	4843903	1.5	15	23	38	0	-
RE230900_391	Residential	598238	4843889	1.5	16	23	38	0	-
RE230900_394	Residential	597965	4844159	1.5	20	23	42	0	-
RE230900_395	Residential	598116	4843943	1.5	19	23	42	0	-
RE230900_396	Residential	598126	4843952	1.5	18	23	41	0	-
RE230900_397	Residential	598136	4843962	1.5	17	23	40	0	-
RE230900_398	Residential	598147	4843973	1.5	17	23	39	0	-
RE230900_399	Residential	598158	4843985	1.5	16	23	39	0	-
RE230900_400	Residential	598170	4843998	1.5	16	23	38	0	-
RE230900_401	Residential	598145	4844026	1.5	16	23	38	0	-
RE230900_402	Residential	598132	4844013	1.5	16	23	39	0	-
RE230900_403	Residential	598121	4844002	1.5	17	23	39	0	-
RE230900_404	Residential	598113	4843994	1.5	17	23	40	0	-
RE230900_405	Residential	598106	4843985	1.5	18	23	41	0	-
RE230900_406	Residential	598095	4843974	1.5	19	23	42	0	-
RE231000_001	Recreation	597895	4844715	1.5	20	23	43	0	-
RE231000_002	Residential	594593	4847779	1.5	19	23	42	0	-
RE231000_003	Residential	597966	4844386	1.5	18	23	41	0	-
RE231000_004	Residential	597973	4844395	1.5	18	23	41	0	-
RE231000_005	Residential	597984	4844407	1.5	18	23	40	0	-
RE231000_006	Residential	597998	4844418	1.5	18	23	40	0	-
RE231000_007	Residential	598005	4844428	1.5	17	23	40	0	-
RE231000_008	Residential	598021	4844443	1.5	17	23	40	0	-
RE231000_009	Residential	598033	4844455	1.5	17	23	39	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_010	Residential	598043	4844466	1.5	17	23	39	0	-
RE231000_011	Residential	597940	4844407	1.5	19	23	42	0	-
RE231000_012	Residential	597949	4844414	1.5	19	23	41	0	-
RE231000_013	Residential	597956	4844424	1.5	19	23	41	0	-
RE231000_014	Residential	597965	4844432	1.5	18	23	41	0	-
RE231000_015	Residential	597973	4844440	1.5	18	23	41	0	-
RE231000_016	Residential	597982	4844449	1.5	18	23	40	0	-
RE231000_017	Residential	597989	4844456	1.5	18	23	40	0	-
RE231000_018	Residential	597997	4844465	1.5	18	23	40	0	-
RE231000_019	Residential	598006	4844473	1.5	17	23	40	0	-
RE231000_020	Residential	598015	4844481	1.5	17	23	40	0	-
RE231000_021	Residential	598022	4844489	1.5	17	23	40	0	-
RE231000_022	Residential	598030	4844498	1.5	17	23	39	0	-
RE231000_023	Residential	598039	4844506	1.5	17	23	39	0	-
RE231000_024	Residential	598046	4844513	1.5	17	23	39	0	-
RE231000_025	Residential	598053	4844523	1.5	16	23	39	0	-
RE231000_026	Residential	598064	4844530	1.5	16	23	39	0	-
RE231000_027	Residential	597902	4844429	1.5	20	23	43	0	-
RE231000_028	Residential	597911	4844437	1.5	20	23	42	0	-
RE231000_029	Residential	597918	4844446	1.5	20	23	42	0	-
RE231000_030	Residential	597928	4844453	1.5	19	23	42	0	-
RE231000_031	Residential	597934	4844463	1.5	19	23	42	0	-
RE231000_032	Residential	597943	4844469	1.5	19	23	42	0	-
RE231000_033	Residential	597953	4844479	1.5	19	23	41	0	-
RE231000_034	Residential	597961	4844486	1.5	18	23	41	0	-
RE231000_035	Residential	597969	4844494	1.5	18	23	41	0	-
RE231000_036	Residential	597976	4844504	1.5	18	23	41	0	-
RE231000_037	Residential	597984	4844514	1.5	18	23	40	0	-
RE231000_038	Residential	597992	4844520	1.5	18	23	40	0	-
RE231000_039	Residential	598001	4844529	1.5	17	23	40	0	-
RE231000_040	Residential	598009	4844537	1.5	17	23	40	0	-
RE231000_041	Residential	598016	4844545	1.5	17	23	40	0	-
RE231000_042	Residential	598025	4844554	1.5	17	23	40	0	-
RE231000_043	Residential	598033	4844562	1.5	17	23	39	0	-
RE231000_044	Residential	598013	4844582	1.5	17	23	40	0	-
RE231000_045	Residential	598003	4844574	1.5	17	23	40	0	-
RE231000_046	Residential	597995	4844566	1.5	17	23	40	0	-
RE231000_047	Residential	597987	4844557	1.5	18	23	40	0	-
RE231000_048	Residential	597979	4844550	1.5	18	23	40	0	-
RE231000_049	Residential	597972	4844542	1.5	18	23	41	0	-
RE231000_050	Residential	597967	4844538	1.5	18	23	41	0	-
RE231000_051	Residential	597961	4844530	1.5	18	23	41	0	-
RE231000_052	Residential	597957	4844525	1.5	18	23	41	0	-
RE231000_053	Residential	597950	4844520	1.5	18	23	41	0	-
RE231000_054	Residential	597945	4844515	1.5	19	23	41	0	-
RE231000_055	Residential	597940	4844509	1.5	19	23	41	0	-
RE231000_056	Residential	597934	4844504	1.5	19	23	42	0	-
RE231000_057	Residential	597929	4844499	1.5	19	23	42	0	-
RE231000_058	Residential	597923	4844493	1.5	19	23	42	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_059	Residential	597918	4844487	1.5	19	23	42	0	-
RE231000_060	Residential	597914	4844483	1.5	20	23	42	0	-
RE231000_061	Residential	597908	4844476	1.5	20	23	42	0	-
RE231000_062	Residential	597904	4844471	1.5	20	23	42	0	-
RE231000_063	Residential	597897	4844465	1.5	20	23	43	0	-
RE231000_064	Residential	597892	4844460	1.5	20	23	43	0	-
RE231000_065	Residential	597886	4844454	1.5	21	23	43	0	-
RE231000_066	Residential	597881	4844449	1.5	21	23	43	0	-
RE231000_067	Residential	597742	4844586	1.5	26	23	49	0	-
RE231000_068	Residential	597739	4844592	1.5	26	23	49	0	-
RE231000_069	Residential	597735	4844599	1.5	26	23	49	0	-
RE231000_070	Residential	597732	4844605	1.5	26	23	49	0	-
RE231000_071	Residential	597727	4844613	1.5	27	23	49	0	-
RE231000_072	Residential	597724	4844619	1.5	27	23	50	0	-
RE231000_073	Residential	597720	4844626	1.5	27	23	50	0	-
RE231000_074	Residential	597718	4844632	1.5	28	23	50	1	0.1%
RE231000_075	Residential	597712	4844640	1.5	28	23	51	1	0.1%
RE231000_076	Residential	597707	4844646	1.5	28	23	51	1	0.1%
RE231000_077	Residential	597684	4844653	1.5	30	23	53	1	0.1%
RE231000_078	Residential	597688	4844659	1.5	30	23	53	1	0.1%
RE231000_079	Residential	597692	4844664	1.5	30	23	52	1	0.1%
RE231000_080	Residential	597695	4844670	1.5	30	23	52	1	0.1%
RE231000_081	Residential	597701	4844677	1.5	29	23	52	1	0.1%
RE231000_082	Residential	597705	4844683	1.5	29	23	52	1	0.1%
RE231000_083	Residential	597708	4844687	1.5	29	23	51	1	0.1%
RE231000_084	Residential	597711	4844692	1.5	29	23	51	1	0.1%
RE231000_085	Residential	597729	4844665	1.5	27	23	50	0	-
RE231000_086	Residential	597725	4844670	1.5	28	23	50	1	0.1%
RE231000_087	Residential	597738	4844650	1.5	26	23	49	0	-
RE231000_088	Residential	597734	4844657	1.5	27	23	49	0	-
RE231000_089	Residential	597742	4844645	1.5	26	23	49	0	-
RE231000_090	Residential	597746	4844639	1.5	26	23	48	0	-
RE231000_091	Residential	597750	4844631	1.5	26	23	48	0	-
RE231000_092	Residential	597753	4844624	1.5	26	23	48	0	-
RE231000_093	Residential	597757	4844618	1.5	25	23	48	0	-
RE231000_094	Residential	597761	4844610	1.5	25	23	48	0	-
RE231000_095	Residential	597764	4844603	1.5	25	23	47	0	-
RE231000_096	Residential	597768	4844596	1.5	25	23	47	0	-
RE231000_097	Residential	597773	4844591	1.5	25	23	47	0	-
RE231000_098	Residential	597777	4844584	1.5	24	23	47	0	-
RE231000_099	Residential	597780	4844577	1.5	24	23	47	0	-
RE231000_100	Residential	597784	4844570	1.5	24	23	47	0	-
RE231000_101	Residential	597789	4844564	1.5	24	23	46	0	-
RE231000_102	Residential	597793	4844557	1.5	24	23	46	0	-
RE231000_103	Residential	597796	4844550	1.5	23	23	46	0	-
RE231000_104	Residential	597800	4844544	1.5	23	23	46	0	-
RE231000_105	Residential	597804	4844537	1.5	23	23	46	0	-
RE231000_106	Residential	597807	4844531	1.5	23	23	46	0	-
RE231000_107	Residential	597811	4844525	1.5	23	23	46	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_108	Residential	597814	4844518	1.5	23	23	45	0	-
RE231000_109	Residential	597819	4844511	1.5	23	23	45	0	-
RE231000_110	Residential	597851	4844481	1.5	22	23	44	0	-
RE231000_111	Residential	597881	4844502	1.5	20	23	43	0	-
RE231000_112	Residential	597876	4844507	1.5	21	23	43	0	-
RE231000_113	Residential	597871	4844514	1.5	21	23	43	0	-
RE231000_114	Residential	597866	4844519	1.5	21	23	43	0	-
RE231000_115	Residential	597849	4844534	1.5	21	23	44	0	-
RE231000_116	Residential	597855	4844537	1.5	21	23	44	0	-
RE231000_117	Residential	597863	4844540	1.5	21	23	44	0	-
RE231000_118	Residential	597869	4844544	1.5	21	23	43	0	-
RE231000_119	Residential	597877	4844549	1.5	21	23	43	0	-
RE231000_120	Residential	597883	4844553	1.5	20	23	43	0	-
RE231000_121	Residential	597889	4844560	1.5	20	23	43	0	-
RE231000_122	Residential	597894	4844565	1.5	20	23	43	0	-
RE231000_123	Residential	597899	4844571	1.5	20	23	42	0	-
RE231000_124	Residential	597904	4844576	1.5	20	23	42	0	-
RE231000_125	Residential	597911	4844583	1.5	19	23	42	0	-
RE231000_126	Residential	597920	4844591	1.5	19	23	42	0	-
RE231000_127	Residential	597928	4844600	1.5	19	23	42	0	-
RE231000_128	Residential	597935	4844608	1.5	19	23	41	0	-
RE231000_129	Residential	597944	4844616	1.5	19	23	41	0	-
RE231000_130	Residential	597952	4844625	1.5	18	23	41	0	-
RE231000_131	Residential	597960	4844633	1.5	18	23	41	0	-
RE231000_132	Residential	597889	4844521	1.5	20	23	43	0	-
RE231000_133	Residential	597895	4844526	1.5	20	23	43	0	-
RE231000_134	Residential	597900	4844533	1.5	20	23	42	0	-
RE231000_135	Residential	597906	4844537	1.5	20	23	42	0	-
RE231000_136	Residential	597912	4844543	1.5	20	23	42	0	-
RE231000_137	Residential	597916	4844549	1.5	19	23	42	0	-
RE231000_138	Residential	597922	4844554	1.5	19	23	42	0	-
RE231000_139	Residential	597927	4844558	1.5	19	23	42	0	-
RE231000_140	Residential	597933	4844565	1.5	19	23	41	0	-
RE231000_141	Residential	597938	4844570	1.5	19	23	41	0	-
RE231000_142	Residential	597944	4844577	1.5	19	23	41	0	-
RE231000_143	Residential	597948	4844581	1.5	19	23	41	0	-
RE231000_144	Residential	597956	4844588	1.5	18	23	41	0	-
RE231000_145	Residential	597964	4844596	1.5	18	23	41	0	-
RE231000_146	Residential	597973	4844604	1.5	18	23	41	0	-
RE231000_147	Residential	597981	4844613	1.5	18	23	40	0	-
RE231000_148	Residential	597825	4844568	1.5	22	23	45	0	-
RE231000_149	Residential	597833	4844573	1.5	22	23	44	0	-
RE231000_150	Residential	597840	4844577	1.5	22	23	44	0	-
RE231000_151	Residential	597846	4844581	1.5	21	23	44	0	-
RE231000_152	Residential	597854	4844587	1.5	21	23	44	0	-
RE231000_153	Residential	597859	4844593	1.5	21	23	44	0	-
RE231000_154	Residential	597865	4844598	1.5	21	23	43	0	-
RE231000_155	Residential	597871	4844603	1.5	21	23	43	0	-
RE231000_156	Residential	597850	4844609	1.5	21	23	44	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_157	Residential	597844	4844615	1.5	21	23	44	0	-
RE231000_158	Residential	597822	4844588	1.5	22	23	45	0	-
RE231000_159	Residential	597819	4844595	1.5	22	23	45	0	-
RE231000_160	Residential	597816	4844602	1.5	22	23	45	0	-
RE231000_161	Residential	597813	4844608	1.5	23	23	45	0	-
RE231000_162	Residential	597807	4844615	1.5	23	23	45	0	-
RE231000_163	Residential	597805	4844621	1.5	23	23	45	0	-
RE231000_164	Residential	597800	4844629	1.5	23	23	46	0	-
RE231000_165	Residential	597796	4844636	1.5	23	23	46	0	-
RE231000_166	Residential	597791	4844643	1.5	24	23	46	0	-
RE231000_167	Residential	597787	4844650	1.5	24	23	46	0	-
RE231000_168	Residential	597783	4844657	1.5	24	23	47	0	-
RE231000_169	Residential	597780	4844665	1.5	24	23	47	0	-
RE231000_170	Residential	597775	4844673	1.5	25	23	47	0	-
RE231000_171	Residential	597772	4844679	1.5	25	23	47	0	-
RE231000_172	Residential	597767	4844686	1.5	25	23	48	0	-
RE231000_173	Residential	597764	4844694	1.5	25	23	48	0	-
RE231000_174	Residential	597757	4844702	1.5	26	23	48	0	-
RE231000_175	Residential	597751	4844706	1.5	26	23	49	0	-
RE231000_176	Residential	597729	4844717	1.5	28	23	50	1	0.1%
RE231000_177	Residential	597734	4844724	1.5	28	23	50	1	0.1%
RE231000_178	Residential	597737	4844729	1.5	27	23	50	0	-
RE231000_179	Residential	597741	4844734	1.5	27	23	50	0	-
RE231000_180	Residential	597744	4844739	1.5	27	23	50	0	-
RE231000_181	Residential	597747	4844744	1.5	27	23	50	0	-
RE231000_182	Residential	597750	4844749	1.5	27	23	50	0	-
RE231000_183	Residential	597753	4844754	1.5	27	23	49	0	-
RE231000_184	Residential	597759	4844763	1.5	27	23	49	0	-
RE231000_185	Residential	597762	4844769	1.5	26	23	49	0	-
RE231000_186	Residential	597765	4844773	1.5	26	23	49	0	-
RE231000_187	Residential	597768	4844778	1.5	26	23	49	0	-
RE231000_188	Residential	597771	4844783	1.5	26	23	49	0	-
RE231000_189	Residential	597774	4844789	1.5	26	23	49	0	-
RE231000_190	Residential	597802	4844774	1.5	24	23	47	0	-
RE231000_191	Residential	597798	4844768	1.5	24	23	47	0	-
RE231000_192	Residential	597793	4844761	1.5	25	23	47	0	-
RE231000_193	Residential	597789	4844754	1.5	25	23	47	0	-
RE231000_194	Residential	597785	4844747	1.5	25	23	47	0	-
RE231000_195	Residential	597782	4844741	1.5	25	23	47	0	-
RE231000_196	Residential	597779	4844727	1.5	25	23	47	0	-
RE231000_197	Residential	597780	4844719	1.5	25	23	47	0	-
RE231000_198	Residential	597785	4844710	1.5	24	23	47	0	-
RE231000_199	Residential	597788	4844703	1.5	24	23	47	0	-
RE231000_200	Residential	597793	4844697	1.5	24	23	46	0	-
RE231000_201	Residential	597797	4844690	1.5	24	23	46	0	-
RE231000_202	Residential	597801	4844683	1.5	23	23	46	0	-
RE231000_203	Residential	597805	4844676	1.5	23	23	46	0	-
RE231000_204	Residential	597808	4844669	1.5	23	23	45	0	-
RE231000_205	Residential	597812	4844663	1.5	23	23	45	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_206	Residential	597815	4844656	1.5	23	23	45	0	-
RE231000_207	Residential	597818	4844649	1.5	22	23	45	0	-
RE231000_208	Residential	597823	4844642	1.5	22	23	45	0	-
RE231000_209	Residential	597827	4844636	1.5	22	23	45	0	-
RE231000_210	Residential	597832	4844629	1.5	22	23	44	0	-
RE231000_211	Residential	597837	4844622	1.5	22	23	44	0	-
RE231000_212	Residential	597902	4844623	1.5	20	23	42	0	-
RE231000_213	Residential	597895	4844627	1.5	20	23	42	0	-
RE231000_214	Residential	597889	4844633	1.5	20	23	43	0	-
RE231000_215	Residential	597884	4844639	1.5	20	23	43	0	-
RE231000_216	Residential	597878	4844646	1.5	20	23	43	0	-
RE231000_217	Residential	597873	4844650	1.5	20	23	43	0	-
RE231000_218	Residential	597867	4844656	1.5	21	23	43	0	-
RE231000_219	Residential	597863	4844664	1.5	21	23	44	0	-
RE231000_220	Residential	597859	4844671	1.5	21	23	44	0	-
RE231000_221	Residential	597855	4844678	1.5	21	23	44	0	-
RE231000_222	Residential	597851	4844684	1.5	22	23	44	0	-
RE231000_223	Residential	597847	4844690	1.5	22	23	44	0	-
RE231000_224	Residential	597843	4844697	1.5	22	23	44	0	-
RE231000_225	Residential	597839	4844704	1.5	22	23	45	0	-
RE231000_226	Residential	597835	4844711	1.5	22	23	45	0	-
RE231000_227	Residential	597832	4844718	1.5	22	23	45	0	-
RE231000_228	Residential	597827	4844726	1.5	23	23	45	0	-
RE231000_229	Residential	597824	4844733	1.5	23	23	45	0	-
RE231000_230	Residential	597840	4844745	1.5	22	23	45	0	-
RE231000_231	Residential	597846	4844750	1.5	22	23	44	0	-
RE231000_232	Residential	597851	4844761	1.5	22	23	44	0	-
RE231000_233	Residential	597853	4844771	1.5	22	23	44	0	-
RE231000_234	Residential	597851	4844781	1.5	22	23	44	0	-
RE231000_235	Residential	597848	4844790	1.5	22	23	44	0	-
RE231000_236	Residential	597838	4844796	1.5	22	23	45	0	-
RE231000_237	Residential	597831	4844801	1.5	23	23	45	0	-
RE231000_238	Residential	597823	4844804	1.5	23	23	46	0	-
RE231000_239	Residential	597817	4844807	1.5	23	23	46	0	-
RE231000_240	Residential	597811	4844812	1.5	24	23	46	0	-
RE231000_241	Residential	597804	4844816	1.5	24	23	47	0	-
RE231000_242	Residential	597800	4844820	1.5	25	23	47	0	-
RE231000_243	Residential	597794	4844823	1.5	25	23	48	0	-
RE231000_244	Residential	597788	4844825	1.5	26	23	48	0	-
RE231000_245	Residential	597783	4844829	1.5	26	23	49	0	-
RE231000_246	Residential	597778	4844831	1.5	27	23	50	0	-
RE231000_247	Residential	597772	4844835	1.5	28	23	50	1	0.1%
RE231000_248	Residential	598015	4844639	1.5	17	23	40	0	-
RE231000_249	Residential	598007	4844649	1.5	17	23	40	0	-
RE231000_250	Residential	597997	4844656	1.5	17	23	40	0	-
RE231000_251	Residential	597989	4844666	1.5	18	23	40	0	-
RE231000_252	Residential	598060	4844590	1.5	16	23	39	0	-
RE231000_253	Residential	598069	4844598	1.5	16	23	39	0	-
RE231000_254	Residential	598040	4844610	1.5	17	23	39	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_255	Residential	598049	4844618	1.5	16	23	39	0	-
RE231000_256	Residential	598252	4844214	1.5	13	23	36	0	-
RE231000_257	Residential	598246	4844300	1.5	13	23	36	0	-
RE231000_276	Residential	598191	4844478	1.5	14	23	37	0	-
RE231000_277	Residential	598184	4844471	1.5	15	23	37	0	-
RE231000_278	Residential	598093	4844561	1.5	16	23	38	0	-
RE231000_279	Residential	598104	4844571	1.5	16	23	38	0	-
RE231000_280	Residential	598023	4844395	1.5	17	23	40	0	-
RE231000_281	Residential	598013	4844383	1.5	17	23	40	0	-
RE231000_282	Residential	598113	4844482	1.5	15	23	38	0	-
RE231000_283	Residential	598059	4844484	1.5	16	23	39	0	-
RE231000_284	Residential	598062	4844435	1.5	16	23	39	0	-
RE231000_285	Residential	598052	4844476	1.5	16	23	39	0	-
RE231000_286	Residential	598054	4844424	1.5	16	23	39	0	-
RE231000_287	Residential	598086	4844510	1.5	16	23	38	0	-
RE231000_288	Residential	598077	4844504	1.5	16	23	39	0	-
RE231000_289	Residential	598044	4844414	1.5	17	23	39	0	-
RE231000_290	Residential	598033	4844405	1.5	17	23	39	0	-
RE231000_291	Residential	598102	4844474	1.5	16	23	38	0	-
RE231000_292	Residential	598093	4844464	1.5	16	23	38	0	-
RE231000_293	Residential	598072	4844496	1.5	16	23	39	0	-
RE231000_294	Residential	598083	4844454	1.5	16	23	39	0	-
RE231000_295	Residential	598065	4844490	1.5	16	23	39	0	-
RE231000_296	Residential	598074	4844444	1.5	16	23	39	0	-
RE231000_297	Residential	598159	4844494	1.5	15	23	38	0	-
RE231000_298	Residential	598169	4844501	1.5	15	23	37	0	-
RE231000_299	Residential	598002	4844372	1.5	17	23	40	0	-
RE231000_300	Residential	598066	4844349	1.5	16	23	39	0	-
RE231000_301	Residential	598127	4844467	1.5	15	23	38	0	-
RE231000_302	Residential	598120	4844461	1.5	15	23	38	0	-
RE231000_303	Residential	598109	4844448	1.5	16	23	38	0	-
RE231000_304	Residential	598101	4844440	1.5	16	23	38	0	-
RE231000_305	Residential	598067	4844275	1.5	16	23	39	0	-
RE231000_306	Residential	598068	4844289	1.5	16	23	39	0	-
RE231000_307	Residential	598068	4844303	1.5	16	23	39	0	-
RE231000_308	Residential	598066	4844315	1.5	16	23	39	0	-
RE231000_309	Residential	598076	4844364	1.5	16	23	39	0	-
RE231000_310	Residential	598085	4844425	1.5	16	23	38	0	-
RE231000_311	Residential	598078	4844418	1.5	16	23	39	0	-
RE231000_312	Residential	598069	4844410	1.5	16	23	39	0	-
RE231000_313	Residential	598062	4844402	1.5	16	23	39	0	-
RE231000_314	Residential	598053	4844391	1.5	16	23	39	0	-
RE231000_315	Residential	598047	4844385	1.5	17	23	39	0	-
RE231000_316	Residential	598030	4844364	1.5	17	23	39	0	-
RE231000_317	Residential	598086	4844375	1.5	16	23	38	0	-
RE231000_318	Residential	598106	4844396	1.5	16	23	38	0	-
RE231000_319	Residential	598116	4844406	1.5	15	23	38	0	-
RE231000_320	Residential	598127	4844416	1.5	15	23	38	0	-
RE231000_321	Residential	598143	4844435	1.5	15	23	38	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_322	Residential	598152	4844444	1.5	15	23	38	0	-
RE231000_332	Residential	598315	4844073	1.5	13	23	35	0	-
RE231000_333	Residential	598310	4844078	1.5	13	23	36	0	-
RE231000_334	Residential	598295	4844091	1.5	13	23	36	0	-
RE231000_335	Residential	598288	4844098	1.5	13	23	36	0	-
RE231000_336	Residential	598282	4844104	1.5	13	23	36	0	-
RE231000_337	Residential	598277	4844111	1.5	13	23	36	0	-
RE231000_338	Residential	598310	4844038	1.5	13	23	36	0	-
RE231000_339	Residential	598302	4844046	1.5	13	23	36	0	-
RE231000_340	Residential	598295	4844054	1.5	13	23	36	0	-
RE231000_341	Residential	598276	4844074	1.5	13	23	36	0	-
RE231000_342	Residential	598267	4844081	1.5	13	23	36	0	-
RE231000_343	Residential	598114	4844352	1.5	15	23	38	0	-
RE231000_345	Residential	598126	4844322	1.5	15	23	38	0	-
RE231000_346	Residential	598176	4844416	1.5	15	23	37	0	-
RE231000_347	Residential	598167	4844408	1.5	15	23	37	0	-
RE231000_348	Residential	598159	4844398	1.5	15	23	37	0	-
RE231000_350	Residential	598126	4844309	1.5	15	23	38	0	-
RE231000_351	Residential	598128	4844228	1.5	15	23	38	0	-
RE231000_353	Residential	598285	4844064	1.5	13	23	36	0	-
RE231000_354	Residential	598140	4844379	1.5	15	23	37	0	-
RE231000_355	Residential	598131	4844370	1.5	15	23	38	0	-
RE231000_356	Residential	598122	4844361	1.5	15	23	38	0	-
RE231000_357	Residential	598102	4844340	1.5	15	23	38	0	-
RE231000_358	Residential	598099	4844324	1.5	16	23	38	0	-
RE231000_359	Residential	598099	4844310	1.5	16	23	38	0	-
RE231000_360	Residential	598099	4844296	1.5	16	23	38	0	-
RE231000_361	Residential	598098	4844283	1.5	16	23	38	0	-
RE231000_362	Residential	598099	4844258	1.5	16	23	38	0	-
RE231000_363	Residential	598197	4844395	1.5	14	23	37	0	-
RE231000_364	Residential	598180	4844378	1.5	14	23	37	0	-
RE231000_365	Residential	598171	4844369	1.5	15	23	37	0	-
RE231000_366	Residential	598162	4844359	1.5	15	23	37	0	-
RE231000_367	Residential	598151	4844349	1.5	15	23	37	0	-
RE231000_368	Residential	598142	4844340	1.5	15	23	37	0	-
RE231000_369	Residential	598126	4844283	1.5	15	23	38	0	-
RE231000_370	Residential	598126	4844271	1.5	15	23	38	0	-
RE231000_371	Residential	598126	4844257	1.5	15	23	38	0	-
RE231000_374	Residential	598127	4844295	1.5	15	23	38	0	-
RE231000_377	Residential	598258	4844089	1.5	14	23	36	0	-
RE231000_378	Residential	598094	4844433	1.5	16	23	38	0	-
RE231000_379	Residential	598067	4844332	1.5	16	23	39	0	-
RE231000_380	Residential	598096	4844385	1.5	16	23	38	0	-
RE231000_381	Residential	598149	4844389	1.5	15	23	37	0	-
RE231000_382	Residential	598135	4844425	1.5	15	23	38	0	-
RE231000_383	Residential	598303	4844085	1.5	13	23	36	0	-
RE231000_384	Residential	598115	4844455	1.5	15	23	38	0	-
RE231000_385	Residential	598038	4844375	1.5	17	23	39	0	-
RE231000_386	Residential	598099	4844270	1.5	16	23	38	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_387	Residential	598188	4844386	1.5	14	23	37	0	-
RE231000_388	Residential	598129	4844214	1.5	15	23	38	0	-
RE231000_390	Residential	598013	4844349	1.5	17	23	40	0	-
RE231000_391	Residential	598003	4844338	1.5	17	23	40	0	-
RE231000_392	Residential	598159	4844280	1.5	14	23	37	0	-
RE231000_393	Residential	598189	4844215	1.5	14	23	37	0	-
RE231000_394	Residential	598219	4844376	1.5	14	23	37	0	-
RE231000_395	Residential	598212	4844369	1.5	14	23	37	0	-
RE231000_396	Residential	598207	4844363	1.5	14	23	37	0	-
RE231000_397	Residential	598199	4844356	1.5	14	23	37	0	-
RE231000_398	Residential	598192	4844346	1.5	14	23	37	0	-
RE231000_399	Residential	598181	4844337	1.5	14	23	37	0	-
RE231000_400	Residential	598170	4844327	1.5	14	23	37	0	-
RE231000_401	Residential	598161	4844314	1.5	15	23	37	0	-
RE231000_402	Residential	598159	4844294	1.5	15	23	37	0	-
RE231000_403	Residential	598158	4844273	1.5	15	23	37	0	-
RE231000_404	Residential	598159	4844265	1.5	15	23	37	0	-
RE231000_405	Residential	598159	4844257	1.5	15	23	37	0	-
RE231000_406	Residential	598236	4844348	1.5	14	23	36	0	-
RE231000_407	Residential	598223	4844334	1.5	14	23	36	0	-
RE231000_408	Residential	598215	4844325	1.5	14	23	36	0	-
RE231000_409	Residential	598204	4844313	1.5	14	23	37	0	-
RE231000_410	Residential	598199	4844309	1.5	14	23	37	0	-
RE231000_411	Residential	598189	4844279	1.5	14	23	37	0	-
RE231000_412	Residential	598189	4844265	1.5	14	23	37	0	-
RE231000_413	Residential	598161	4844229	1.5	15	23	37	0	-
RE231000_414	Residential	598162	4844216	1.5	15	23	37	0	-
RE231000_415	Residential	598162	4844205	1.5	15	23	37	0	-
RE231000_416	Residential	598163	4844190	1.5	15	23	37	0	-
RE231000_417	Residential	598169	4844178	1.5	15	23	37	0	-
RE231000_418	Residential	598181	4844167	1.5	14	23	37	0	-
RE231000_419	Residential	598189	4844231	1.5	14	23	37	0	-
RE231000_420	Residential	598189	4844224	1.5	14	23	37	0	-
RE231000_421	Residential	598205	4844183	1.5	14	23	37	0	-
RE231000_422	Residential	598217	4844170	1.5	14	23	36	0	-
RE231000_423	Residential	598227	4844160	1.5	14	23	36	0	-
RE231000_424	Residential	598235	4844153	1.5	14	23	36	0	-
RE231000_425	Residential	598244	4844144	1.5	14	23	36	0	-
RE231000_426	Residential	598253	4844135	1.5	13	23	36	0	-
RE231000_427	Residential	598189	4844160	1.5	14	23	37	0	-
RE231000_428	Residential	598198	4844150	1.5	14	23	37	0	-
RE231000_429	Residential	598208	4844141	1.5	14	23	37	0	-
RE231000_430	Residential	598189	4844272	1.5	14	23	37	0	-
RE231000_431	Residential	598225	4844124	1.5	14	23	37	0	-
RE231000_432	Residential	598189	4844288	1.5	14	23	37	0	-
RE231000_433	Residential	598211	4844177	1.5	14	23	37	0	-
RE231000_434	Residential	598217	4844132	1.5	14	23	37	0	-
RE231000_435	Residential	598210	4844320	1.5	14	23	36	0	-
RE231000_436	Residential	598191	4844204	1.5	14	23	37	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE231000_437	Residential	598190	4844258	1.5	14	23	37	0	-
RE231000_438	Residential	598235	4844114	1.5	14	23	36	0	-
RE231000_439	Residential	598242	4844353	1.5	14	23	36	0	-
RE231000_440	Residential	598230	4844340	1.5	14	23	36	0	-
RE231000_441	Residential	598197	4844191	1.5	14	23	37	0	-
RE231000_443	Residential	598213	4844460	1.5	14	23	37	0	-
RE231000_444	Residential	598234	4844437	1.5	14	23	37	0	-
RE231000_445	Residential	598227	4844430	1.5	14	23	37	0	-
RE231000_446	Residential	598203	4844452	1.5	14	23	37	0	-
RE231000_450	Residential	598248	4844405	1.5	14	23	36	0	-
RE231000_452	Residential	598146	4844517	1.5	15	23	38	0	-
RE231000_453	Residential	598139	4844510	1.5	15	23	38	0	-
RE231000_454	Residential	598112	4844539	1.5	15	23	38	0	-
RE231000_455	Residential	598152	4844523	1.5	15	23	37	0	-
RE231000_456	Residential	598119	4844546	1.5	15	23	38	0	-
RE231100_001	Child Care Centre	597875	4844944	1.5	22	23	45	0	-
RE231100_002	Recreation	597887	4844825	1.5	20	23	42	0	-
RE231100_003	Residential	594644	4847799	1.5	16	23	38	0	-
RE231100_004	Residential	596834	4845864	1.5	28	23	50	2	0.1%
RE231100_005	Residential	598005	4844679	1.5	17	23	40	0	-
RE231100_006	Residential	598014	4844688	1.5	17	23	39	0	-
RE231100_007	Residential	598022	4844696	1.5	17	23	39	0	-
RE231100_008	Residential	598026	4844658	1.5	17	23	39	0	-
RE231100_009	Residential	598034	4844667	1.5	16	23	39	0	-
RE231100_010	Residential	598044	4844675	1.5	16	23	39	0	-
RE231100_011	Residential	598051	4844682	1.5	16	23	39	0	-
RE231100_012	Residential	598059	4844691	1.5	16	23	38	0	-
RE231100_018	Residential	598029	4844703	1.5	16	23	39	0	-
RE231100_019	Residential	598037	4844712	1.5	16	23	39	0	-
RE231100_020	Residential	598046	4844721	1.5	16	23	38	0	-
RE231100_027	Residential	597982	4844724	1.5	17	23	40	0	-
RE231100_028	Residential	597991	4844732	1.5	17	23	40	0	-
RE231100_029	Residential	597999	4844741	1.5	17	23	39	0	-
RE231100_030	Residential	598006	4844749	1.5	17	23	39	0	-
RE231100_031	Residential	598015	4844756	1.5	16	23	39	0	-
RE231100_032	Residential	598023	4844764	1.5	16	23	39	0	-
RE231100_033	Residential	598031	4844773	1.5	16	23	38	0	-
RE231100_041	Residential	598017	4844803	1.5	16	23	38	0	-
RE231100_042	Residential	598007	4844794	1.5	16	23	39	0	-
RE231100_043	Residential	597998	4844785	1.5	16	23	39	0	-
RE231100_044	Residential	597991	4844777	1.5	17	23	39	0	-
RE231100_045	Residential	597982	4844768	1.5	17	23	40	0	-
RE231100_046	Residential	597975	4844760	1.5	17	23	40	0	-
RE231100_047	Residential	597967	4844752	1.5	18	23	40	0	-
RE231100_048	Residential	597958	4844742	1.5	18	23	41	0	-
RE231100_049	Residential	597924	4844771	1.5	19	23	41	0	-
RE231100_050	Residential	597933	4844779	1.5	19	23	41	0	-
RE231100_051	Residential	597943	4844787	1.5	18	23	41	0	-
RE231100_052	Residential	597950	4844796	1.5	18	23	40	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE231100_053	Residential	597958	4844803	1.5	17	23	40	0	-
RE231100_054	Residential	597966	4844812	1.5	17	23	40	0	-
RE231100_055	Residential	597975	4844820	1.5	17	23	39	0	-
RE231100_056	Residential	597983	4844829	1.5	16	23	39	0	-
RE231100_057	Residential	597991	4844837	1.5	16	23	39	0	-
RE231100_077	Residential	597906	4845006	1.5	24	23	47	0	-
RE231100_078	Residential	597896	4845014	1.5	27	23	49	0	-
RE231100_079	Residential	598077	4844606	1.5	16	23	39	0	-
RE231100_080	Residential	598085	4844615	1.5	16	23	38	0	-
RE231100_081	Residential	598094	4844623	1.5	16	23	38	0	-
RE231100_082	Residential	598056	4844626	1.5	16	23	39	0	-
RE231100_083	Residential	598066	4844634	1.5	16	23	39	0	-
RE231100_084	Residential	598074	4844643	1.5	16	23	38	0	-
RE231100_085	Residential	598082	4844651	1.5	16	23	38	0	-
RE231100_090	Residential	598178	4844511	1.5	15	23	37	0	-
RE231100_091	Residential	598202	4844488	1.5	14	23	37	0	-
RE231100_116	Residential	598123	4844591	1.5	15	23	38	0	-
RE231100_120	Residential	598113	4844580	1.5	15	23	38	0	-
RE231100_121	Residential	598101	4844633	1.5	15	23	38	0	-
RE231100_161	Residential	598142	4844569	1.5	15	23	38	0	-
RE231100_164	Residential	598158	4844529	1.5	15	23	37	0	-
RE231100_165	Residential	598166	4844536	1.5	15	23	37	0	-
RE231100_167	Residential	598126	4844552	1.5	15	23	38	0	-
RE231100_171	Residential	598133	4844560	1.5	15	23	38	0	-
RE231100_175	Residential	598101	4844633	1.5	15	23	38	0	-
RE231400_001	Residential	597400	4846151	1.5	20	23	43	0	-
RE231400_002	Residential	597374	4846123	1.5	22	23	44	0	-
RE231400_003	Residential	597425	4846115	1.5	19	23	41	0	-
RE231400_004	Residential	597415	4846104	1.5	19	23	42	0	-
RE231400_005	Residential	597397	4846081	1.5	21	23	43	0	-
RE231400_006	Residential	597415	4846064	1.5	20	23	42	0	-
RE231400_007	Residential	597438	4846085	1.5	18	23	41	0	-
RE231400_008	Residential	597458	4846043	1.5	18	23	41	0	-
RE231400_009	Residential	597440	4846026	1.5	20	23	42	0	-
RE231400_010	Residential	597494	4845971	1.5	16	23	39	0	-
RE231400_011	Residential	597177	4846314	1.5	25	23	47	0	-
RE231500_002	Residential	594959	4848195	1.5	11	23	34	0	-
RE231600_001	Residential	594685	4848625	1.5	15	23	37	0	-
RE231600_004	Residential	594738	4848582	1.5	14	23	37	0	-
RE231600_005	Residential	594772	4848553	1.5	12	23	35	0	-
RE231700_002	Residential	594955	4848488	1.5	11	23	34	0	-
RE231700_003	Residential	594977	4848446	1.5	11	23	33	0	-
RE231700_004	Residential	594865	4848604	1.5	12	23	34	0	-
RE231800_001	Residential	594678	4848786	1.5	16	23	39	0	-
RE231800_002	Residential	594627	4848819	1.5	17	23	40	0	-
RE232700_002	Residential	595497	4849130	1.5	12	23	35	0	-
RE233200_001	Recreation	595805	4849383	1.5	27	23	49	0	-
RE233500_001	Residential	596000	4849598	1.5	21	23	44	0	-
RE233600_001	Residential	596065	4849694	1.5	22	23	44	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE233600_002	Residential	596044	4849667	1.5	22	23	45	0	-
RE233700_001	Residential	596171	4849814	1.5	20	23	42	0	-
RE233900_001	Residential	596273	4850023	1.5	21	23	43	0	-
RE233900_002	Residential	596203	4850118	1.5	20	23	42	0	-
RE233900_003	Residential	596230	4850156	1.5	20	23	43	0	-
RE234000_001	Residential	596284	4850244	1.5	20	23	42	0	-
RE234100_001	Residential	596370	4850189	1.5	23	23	46	0	-
RE235000_001	Residential	596939	4851084	1.5	21	23	43	0	-
RE235100_001	Residential	596983	4851111	1.5	21	23	44	0	-
RE235100_002	Residential	597028	4851138	1.5	21	23	44	0	-
RE235100_003	Residential	597152	4851021	1.5	22	23	44	0	-
RE235200_001	Residential	597087	4851160	1.5	22	23	45	0	-
RE235200_002	Residential	597153	4851077	1.5	25	23	48	0	-
RE235500_001	Residential	597387	4851296	1.5	23	23	46	0	-
RE235500_002	Residential	597327	4851381	1.5	26	23	48	0	-
RE235700_001	Residential	597704	4851314	1.5	19	23	42	0	-
RE235700_002	Residential	597412	4851537	1.5	28	23	50	1	0.1%
RE235800_001	Residential	597664	4851442	1.5	25	23	47	0	-
RE235900_002	Residential	597909	4851332	1.5	20	23	43	0	-
RE235900_003	Residential	597683	4851628	1.5	25	23	48	0	-
RE235900_004	Residential	597618	4851651	1.5	26	23	48	0	-
RE310100_001	Residential	597701	4851643	1.5	25	23	47	0	-
RE310100_002	Residential	597725	4851680	1.5	25	23	47	0	-
RE310100_003	Residential	597647	4851692	1.5	23	23	46	0	-
RE310200_001	Residential	597753	4851836	1.5	22	23	44	0	-
RE310500_001	Residential	597854	4852016	1.5	20	23	43	0	-
RE310600_001	Residential	598054	4851992	1.5	18	23	41	0	-
RE310600_002	Residential	598048	4852100	1.5	24	23	46	0	-
RE310700_001	Residential	598116	4852141	1.5	23	23	46	0	-
RE310700_002	Residential	598003	4852173	1.5	19	23	42	0	-
RE310900_001	Residential	598218	4852295	1.5	22	23	44	0	-
RE311000_001	Residential	598324	4852285	1.5	21	23	44	0	-
RE311100_001	Residential	598324	4852488	1.5	20	23	43	0	-
RE311200_001	Residential	598400	4852513	1.5	22	23	45	0	-
RE311200_002	Residential	598471	4852451	1.5	22	23	44	0	-
RE311300_001	Residential	598509	4852502	1.5	24	23	47	0	-
RE311300_002	Residential	598222	4852772	1.5	31	23	54	1	0.1%
RE311400_001	Residential	598628	4852529	1.5	20	23	43	0	-
RE311400_002	Residential	598554	4852578	1.5	26	23	48	0	-
RE311400_003	Residential	598404	4852757	1.5	24	23	46	0	-
RE311400_006	Residential	598813	4852353	1.5	12	23	35	0	-
RE311800_001	Residential	598767	4852817	1.5	20	23	43	0	-
RE311900_001	Residential	598826	4852898	1.5	20	23	43	0	-
RE312200_001	Residential	598954	4853124	1.5	22	23	45	0	-
RE312200_002	Residential	598983	4853142	1.5	21	23	44	0	-
RE312200_003	Residential	599011	4853156	1.5	21	23	43	0	-
RE312300_001	Residential	599043	4853264	1.5	24	23	47	0	-
RE312400_001	Residential	599140	4853349	1.5	26	23	49	0	-
RE312800_001	Residential	599561	4853387	1.5	24	23	47	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE312800_002	Residential	599655	4853196	1.5	17	23	40	0	-
RE312900_001	Residential	599611	4853344	1.5	23	23	46	0	-
RE312900_002	Residential	599737	4853210	1.5	19	23	42	0	-
RE313000_001	Residential	599767	4853320	1.5	18	23	40	0	-
RE313000_002	Residential	599746	4853342	1.5	18	23	40	0	-
RE313000_003	Residential	599707	4853379	1.5	19	23	41	0	-
RE313000_004	Residential	599831	4853246	1.5	18	23	40	0	-
RE313000_005	Residential	599859	4853220	1.5	18	23	40	0	-
RE313000_006	Residential	599831	4853130	1.5	16	23	39	0	-
RE313000_007	Residential	599790	4853168	1.5	19	23	42	0	-
RE313100_001	Residential	599892	4853186	1.5	18	23	40	0	-
RE314400_001	Residential	601067	4853610	1.5	23	23	45	0	-
RE314800_001	Residential	601376	4853448	1.5	27	23	50	0	-
RE314900_001	Residential	601445	4853622	1.5	22	23	44	0	-
RE316400_001	Residential	602974	4853508	1.5	37	23	60	5	0.3%
RE316500_001	Residential	603041	4853572	1.5	42	23	64	6	0.3%
RE316600_001	Residential	603200	4853771	1.5	38	23	61	19	1.0%
RE316600_002	Residential	603222	4853799	1.5	37	23	59	10	0.5%
RE316700_001	Residential	603244	4853825	1.5	37	23	59	7	0.4%
RE316700_002	Residential	603260	4853854	1.5	36	23	59	6	0.3%
RE317000_001	Residential	603580	4854095	1.5	44	23	66	8	0.4%
RE410200_001	Residential	604488	4854200	1.5	27	23	50	0	-
RE410200_002	Residential	604438	4854244	1.5	28	23	51	1	0.1%
RE411100_001	Residential	605221	4854613	1.5	31	23	54	1	0.1%
RE411200_001	Residential	605486	4854296	1.5	33	23	55	5	0.3%
RE510000_001	Residential	605849	4853842	1.5	19	23	42	0	-
RE510000_002	Residential	605777	4854043	1.5	20	23	42	0	-
RE510100_001	Residential	605862	4854052	1.5	17	23	39	0	-
RE511200_001	Residential	607742	4853370	1.5	39	23	61	17	0.9%
RE511200_002	Residential	607750	4853371	1.5	39	23	62	17	0.9%
RE511200_003	Residential	607756	4853372	1.5	39	23	62	17	0.9%
RE511200_004	Residential	607761	4853373	1.5	39	23	62	18	1.0%
RE511200_005	Residential	607738	4853397	1.5	34	23	56	7	0.4%
RE511200_006	Residential	607744	4853398	1.5	33	23	56	7	0.4%
RE511300_001	Residential	608183	4853093	1.5	23	23	46	0	-
RE511300_002	Child Care Centre	607553	4854058	1.5	10	23	33	0	-
RE511300_003	Residential	607654	4853910	1.5	12	23	35	0	-
RE511300_004	Residential	607664	4853818	1.5	13	23	36	0	-
RE511300_005	Residential	607712	4853826	1.5	13	23	36	0	-
RE511300_006	Residential	607696	4853815	1.5	13	23	36	0	-
RE511300_007	Residential	607670	4853789	1.5	13	23	36	0	-
RE511300_008	Residential	607695	4853826	1.5	13	23	36	0	-
RE511300_009	Residential	607710	4853739	1.5	14	23	37	0	-
RE511300_010	Residential	607728	4853795	1.5	14	23	36	0	-
RE511300_011	Residential	607729	4853761	1.5	14	23	37	0	-
RE511300_012	Residential	607733	4853799	1.5	14	23	36	0	-
RE511300_013	Residential	607665	4853812	1.5	13	23	36	0	-
RE511300_014	Residential	607667	4853806	1.5	13	23	36	0	-
RE511300_015	Residential	607721	4853732	1.5	14	23	37	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_016	Residential	607702	4853748	1.5	14	23	37	0	-
RE511300_017	Residential	607684	4853769	1.5	14	23	36	0	-
RE511300_018	Residential	607740	4853729	1.5	15	23	37	0	-
RE511300_019	Residential	607728	4853731	1.5	14	23	37	0	-
RE511300_020	Residential	607701	4853818	1.5	13	23	36	0	-
RE511300_021	Residential	607668	4853800	1.5	13	23	36	0	-
RE511300_022	Residential	607706	4853744	1.5	14	23	37	0	-
RE511300_023	Residential	607680	4853773	1.5	14	23	36	0	-
RE511300_024	Residential	607734	4853730	1.5	15	23	37	0	-
RE511300_025	Residential	607707	4853788	1.5	14	23	36	0	-
RE511300_026	Residential	607728	4853807	1.5	13	23	36	0	-
RE511300_027	Residential	607722	4853803	1.5	13	23	36	0	-
RE511300_028	Residential	607710	4853783	1.5	14	23	36	0	-
RE511300_029	Residential	607675	4853776	1.5	14	23	36	0	-
RE511300_030	Residential	607714	4853779	1.5	14	23	36	0	-
RE511300_031	Residential	607732	4853756	1.5	14	23	37	0	-
RE511300_032	Residential	607690	4853823	1.5	13	23	36	0	-
RE511300_033	Residential	607721	4853771	1.5	14	23	36	0	-
RE511300_034	Residential	607725	4853766	1.5	14	23	37	0	-
RE511300_035	Residential	607701	4853830	1.5	13	23	36	0	-
RE511300_036	Residential	607706	4853834	1.5	13	23	36	0	-
RE511300_037	Residential	607704	4853793	1.5	13	23	36	0	-
RE511300_038	Residential	607688	4853764	1.5	14	23	36	0	-
RE511300_039	Residential	607698	4853753	1.5	14	23	37	0	-
RE511300_040	Residential	607669	4853794	1.5	13	23	36	0	-
RE511300_041	Residential	607692	4853759	1.5	14	23	37	0	-
RE511300_042	Residential	607706	4853822	1.5	13	23	36	0	-
RE511300_043	Residential	607767	4853374	1.5	40	23	62	18	1.0%
RE511300_044	Residential	607774	4853376	1.5	40	23	62	16	0.9%
RE511300_045	Residential	607781	4853377	1.5	40	23	62	15	0.8%
RE511300_046	Residential	607788	4853379	1.5	39	23	62	14	0.8%
RE511300_047	Residential	607794	4853380	1.5	39	23	62	14	0.8%
RE511300_048	Residential	607800	4853381	1.5	39	23	62	14	0.8%
RE511300_049	Residential	607806	4853382	1.5	39	23	62	14	0.8%
RE511300_050	Residential	607812	4853383	1.5	39	23	61	14	0.8%
RE511300_051	Residential	607820	4853385	1.5	39	23	61	13	0.7%
RE511300_052	Residential	607826	4853386	1.5	38	23	61	13	0.7%
RE511300_053	Residential	607832	4853387	1.5	38	23	61	13	0.7%
RE511300_054	Residential	607838	4853388	1.5	38	23	60	13	0.7%
RE511300_055	Residential	607846	4853390	1.5	37	23	60	11	0.6%
RE511300_056	Residential	607853	4853391	1.5	37	23	59	9	0.5%
RE511300_057	Residential	607859	4853392	1.5	36	23	59	9	0.5%
RE511300_058	Residential	607866	4853394	1.5	36	23	58	9	0.5%
RE511300_059	Residential	607885	4853388	1.5	38	23	60	12	0.7%
RE511300_060	Residential	607886	4853395	1.5	36	23	58	9	0.5%
RE511300_061	Residential	607886	4853402	1.5	34	23	57	6	0.3%
RE511300_062	Residential	607887	4853410	1.5	32	23	55	6	0.3%
RE511300_063	Residential	607887	4853416	1.5	31	23	53	4	0.2%
RE511300_064	Residential	607888	4853422	1.5	30	23	52	3	0.2%

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_065	Residential	607888	4853429	1.5	29	23	51	2	0.1%
RE511300_066	Residential	607892	4853460	1.5	25	23	48	0	-
RE511300_067	Residential	607892	4853467	1.5	24	23	47	0	-
RE511300_068	Residential	607892	4853473	1.5	24	23	46	0	-
RE511300_069	Residential	607893	4853479	1.5	23	23	46	0	-
RE511300_070	Residential	607894	4853485	1.5	23	23	45	0	-
RE511300_071	Residential	607894	4853495	1.5	22	23	44	0	-
RE511300_072	Residential	607893	4853501	1.5	21	23	44	0	-
RE511300_073	Residential	607891	4853507	1.5	21	23	43	0	-
RE511300_074	Residential	607776	4853648	1.5	16	23	39	0	-
RE511300_075	Residential	607783	4853646	1.5	16	23	39	0	-
RE511300_076	Residential	607789	4853644	1.5	17	23	39	0	-
RE511300_077	Residential	607795	4853641	1.5	17	23	39	0	-
RE511300_078	Residential	607801	4853639	1.5	17	23	39	0	-
RE511300_079	Residential	607808	4853634	1.5	17	23	39	0	-
RE511300_080	Residential	607814	4853629	1.5	17	23	40	0	-
RE511300_081	Residential	607819	4853626	1.5	17	23	40	0	-
RE511300_082	Residential	607824	4853622	1.5	17	23	40	0	-
RE511300_083	Residential	607829	4853618	1.5	17	23	40	0	-
RE511300_084	Residential	607834	4853614	1.5	17	23	40	0	-
RE511300_085	Residential	607842	4853608	1.5	17	23	40	0	-
RE511300_086	Residential	607846	4853603	1.5	18	23	40	0	-
RE511300_087	Residential	607850	4853599	1.5	18	23	40	0	-
RE511300_088	Residential	607854	4853594	1.5	18	23	40	0	-
RE511300_089	Residential	607858	4853589	1.5	18	23	40	0	-
RE511300_090	Residential	607862	4853585	1.5	18	23	40	0	-
RE511300_091	Residential	607868	4853578	1.5	18	23	41	0	-
RE511300_092	Residential	607871	4853571	1.5	18	23	41	0	-
RE511300_093	Residential	607874	4853566	1.5	18	23	41	0	-
RE511300_094	Residential	607878	4853561	1.5	18	23	41	0	-
RE511300_095	Residential	607882	4853552	1.5	18	23	41	0	-
RE511300_096	Residential	607883	4853545	1.5	19	23	41	0	-
RE511300_097	Residential	607884	4853538	1.5	19	23	42	0	-
RE511300_098	Residential	607758	4853512	1.5	23	23	45	0	-
RE511300_099	Residential	607757	4853520	1.5	22	23	45	0	-
RE511300_100	Residential	607756	4853526	1.5	22	23	45	0	-
RE511300_101	Residential	607755	4853532	1.5	22	23	44	0	-
RE511300_102	Residential	607753	4853538	1.5	21	23	44	0	-
RE511300_103	Residential	607752	4853544	1.5	21	23	43	0	-
RE511300_104	Residential	607751	4853552	1.5	20	23	43	0	-
RE511300_105	Residential	607749	4853559	1.5	20	23	43	0	-
RE511300_106	Residential	607747	4853564	1.5	20	23	42	0	-
RE511300_107	Residential	607746	4853571	1.5	19	23	42	0	-
RE511300_108	Residential	607745	4853576	1.5	19	23	42	0	-
RE511300_109	Residential	607744	4853583	1.5	19	23	41	0	-
RE511300_110	Residential	607742	4853591	1.5	18	23	41	0	-
RE511300_111	Residential	607740	4853597	1.5	18	23	41	0	-
RE511300_112	Residential	607739	4853603	1.5	18	23	40	0	-
RE511300_113	Residential	607738	4853609	1.5	18	23	40	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_114	Residential	607737	4853615	1.5	17	23	40	0	-
RE511300_115	Residential	607736	4853621	1.5	17	23	40	0	-
RE511300_116	Residential	607736	4853631	1.5	17	23	39	0	-
RE511300_117	Residential	607735	4853640	1.5	17	23	39	0	-
RE511300_118	Residential	607734	4853645	1.5	16	23	39	0	-
RE511300_119	Residential	607735	4853651	1.5	16	23	39	0	-
RE511300_120	Residential	607736	4853658	1.5	16	23	39	0	-
RE511300_121	Residential	607737	4853664	1.5	16	23	38	0	-
RE511300_122	Residential	607721	4853505	1.5	23	23	46	0	-
RE511300_123	Residential	607719	4853512	1.5	23	23	46	0	-
RE511300_124	Residential	607718	4853518	1.5	23	23	45	0	-
RE511300_125	Residential	607717	4853524	1.5	22	23	45	0	-
RE511300_126	Residential	607716	4853530	1.5	22	23	44	0	-
RE511300_127	Residential	607715	4853537	1.5	21	23	44	0	-
RE511300_128	Residential	607713	4853545	1.5	21	23	44	0	-
RE511300_129	Residential	607712	4853551	1.5	21	23	43	0	-
RE511300_130	Residential	607711	4853556	1.5	20	23	43	0	-
RE511300_131	Residential	607710	4853563	1.5	20	23	43	0	-
RE511300_132	Residential	607708	4853569	1.5	20	23	42	0	-
RE511300_133	Residential	607707	4853575	1.5	19	23	42	0	-
RE511300_134	Residential	607706	4853583	1.5	19	23	42	0	-
RE511300_135	Residential	607704	4853589	1.5	19	23	41	0	-
RE511300_136	Residential	607704	4853595	1.5	18	23	41	0	-
RE511300_137	Residential	607702	4853601	1.5	18	23	41	0	-
RE511300_138	Residential	607701	4853607	1.5	18	23	41	0	-
RE511300_139	Residential	607700	4853615	1.5	18	23	40	0	-
RE511300_140	Residential	607698	4853621	1.5	17	23	40	0	-
RE511300_141	Residential	607697	4853627	1.5	17	23	40	0	-
RE511300_142	Residential	607696	4853634	1.5	17	23	39	0	-
RE511300_143	Residential	607694	4853645	1.5	17	23	39	0	-
RE511300_144	Residential	607694	4853653	1.5	16	23	39	0	-
RE511300_145	Residential	607694	4853659	1.5	16	23	39	0	-
RE511300_146	Residential	607694	4853665	1.5	16	23	38	0	-
RE511300_147	Residential	607696	4853670	1.5	16	23	38	0	-
RE511300_148	Residential	607699	4853677	1.5	16	23	38	0	-
RE511300_149	Residential	607750	4853399	1.5	34	23	56	7	0.4%
RE511300_150	Residential	607756	4853400	1.5	34	23	56	5	0.3%
RE511300_151	Residential	607762	4853401	1.5	33	23	56	5	0.3%
RE511300_152	Residential	607768	4853402	1.5	34	23	56	5	0.3%
RE511300_153	Residential	607776	4853404	1.5	33	23	56	5	0.3%
RE511300_154	Residential	607783	4853405	1.5	34	23	56	5	0.3%
RE511300_155	Residential	607789	4853406	1.5	34	23	56	4	0.2%
RE511300_156	Residential	607795	4853407	1.5	34	23	56	4	0.2%
RE511300_157	Residential	607801	4853409	1.5	34	23	56	3	0.2%
RE511300_158	Residential	607807	4853410	1.5	34	23	56	3	0.2%
RE511300_159	Residential	607815	4853412	1.5	34	23	56	3	0.2%
RE511300_160	Residential	607821	4853413	1.5	33	23	56	3	0.2%
RE511300_161	Residential	607827	4853414	1.5	33	23	56	3	0.2%
RE511300_162	Residential	607834	4853415	1.5	33	23	56	4	0.2%

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511300_163	Residential	607841	4853417	1.5	33	23	55	4	0.2%
RE511300_164	Residential	607848	4853418	1.5	32	23	55	4	0.2%
RE511300_165	Residential	607854	4853419	1.5	32	23	54	4	0.2%
RE511300_166	Residential	607859	4853420	1.5	31	23	54	4	0.2%
RE511300_167	Residential	607866	4853421	1.5	31	23	54	4	0.2%
RE511300_168	Residential	607728	4853439	1.5	29	23	52	2	0.1%
RE511300_169	Residential	607736	4853440	1.5	29	23	51	2	0.1%
RE511300_170	Residential	607742	4853441	1.5	29	23	51	2	0.1%
RE511300_171	Residential	607748	4853442	1.5	28	23	51	2	0.1%
RE511300_172	Residential	607754	4853443	1.5	28	23	51	2	0.1%
RE511300_173	Residential	607761	4853444	1.5	28	23	51	2	0.1%
RE511300_174	Residential	607768	4853445	1.5	28	23	50	2	0.1%
RE511300_175	Residential	607774	4853446	1.5	28	23	50	2	0.1%
RE511300_176	Residential	607780	4853448	1.5	27	23	50	1	0.1%
RE511300_177	Residential	607786	4853449	1.5	27	23	50	0	-
RE511300_178	Residential	607792	4853450	1.5	27	23	50	0	-
RE511300_179	Residential	607799	4853451	1.5	27	23	50	0	-
RE511300_180	Residential	607807	4853453	1.5	27	23	50	0	-
RE511300_181	Residential	607813	4853454	1.5	27	23	50	0	-
RE511300_182	Residential	607819	4853456	1.5	27	23	49	0	-
RE511300_183	Residential	607825	4853457	1.5	27	23	49	0	-
RE511300_184	Residential	607831	4853458	1.5	27	23	49	0	-
RE511300_185	Residential	607837	4853459	1.5	26	23	49	0	-
RE511300_186	Residential	607845	4853460	1.5	26	23	49	0	-
RE511300_187	Residential	607851	4853462	1.5	26	23	48	0	-
RE511300_188	Residential	607857	4853463	1.5	26	23	48	0	-
RE511300_189	Residential	607863	4853464	1.5	26	23	48	0	-
RE511300_190	Residential	607870	4853465	1.5	25	23	48	0	-
RE511300_191	Residential	607724	4853468	1.5	26	23	49	0	-
RE511300_192	Residential	607731	4853469	1.5	26	23	49	0	-
RE511300_193	Residential	607737	4853470	1.5	26	23	49	0	-
RE511300_194	Residential	607742	4853471	1.5	26	23	48	0	-
RE511300_195	Residential	607749	4853472	1.5	26	23	48	0	-
RE511300_196	Residential	607755	4853473	1.5	26	23	48	0	-
RE511300_197	Residential	607762	4853474	1.5	25	23	48	0	-
RE511300_198	Residential	607769	4853476	1.5	25	23	48	0	-
RE511300_199	Residential	607775	4853477	1.5	25	23	48	0	-
RE511300_200	Residential	607781	4853478	1.5	25	23	48	0	-
RE511300_201	Residential	607787	4853480	1.5	25	23	48	0	-
RE511300_202	Residential	607793	4853481	1.5	25	23	47	0	-
RE511300_203	Residential	607801	4853483	1.5	25	23	47	0	-
RE511300_204	Residential	607807	4853484	1.5	24	23	47	0	-
RE511300_205	Residential	607813	4853485	1.5	24	23	47	0	-
RE511300_206	Residential	607819	4853486	1.5	24	23	47	0	-
RE511300_207	Residential	607825	4853488	1.5	24	23	47	0	-
RE511300_208	Residential	607831	4853489	1.5	24	23	46	0	-
RE511300_209	Residential	607839	4853490	1.5	24	23	46	0	-
RE511300_210	Residential	607846	4853492	1.5	23	23	46	0	-
RE511300_211	Residential	607851	4853493	1.5	23	23	46	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511300_212	Residential	607858	4853494	1.5	23	23	46	0	-
RE511300_213	Residential	607863	4853495	1.5	23	23	45	0	-
RE511300_214	Residential	607869	4853496	1.5	22	23	45	0	-
RE511400_001	Residential	607929	4853848	1.5	11	23	34	0	-
RE511400_002	Residential	607914	4853876	1.5	11	23	34	0	-
RE511400_003	Residential	607929	4853886	1.5	11	23	33	0	-
RE511400_004	Residential	607898	4853826	1.5	12	23	34	0	-
RE511400_005	Residential	607899	4853865	1.5	11	23	34	0	-
RE511400_006	Residential	607842	4853819	1.5	13	23	35	0	-
RE511400_007	Residential	607859	4853838	1.5	12	23	35	0	-
RE511400_008	Residential	607869	4853844	1.5	12	23	35	0	-
RE511400_009	Residential	607876	4853849	1.5	12	23	34	0	-
RE511400_010	Residential	607922	4853881	1.5	11	23	33	0	-
RE511400_011	Residential	607891	4853860	1.5	11	23	34	0	-
RE511400_012	Residential	607868	4853804	1.5	13	23	35	0	-
RE511400_013	Residential	607919	4853841	1.5	11	23	34	0	-
RE511400_014	Residential	607907	4853870	1.5	11	23	34	0	-
RE511400_015	Residential	607887	4853793	1.5	12	23	35	0	-
RE511400_016	Residential	607876	4853800	1.5	13	23	35	0	-
RE511400_017	Residential	607867	4853900	1.5	11	23	34	0	-
RE511400_018	Residential	607888	4853915	1.5	11	23	33	0	-
RE511400_019	Residential	607881	4853910	1.5	11	23	34	0	-
RE511400_020	Residential	607895	4853920	1.5	11	23	33	0	-
RE511400_021	Residential	607805	4853857	1.5	13	23	35	0	-
RE511400_022	Residential	607814	4853863	1.5	12	23	35	0	-
RE511400_023	Residential	607859	4853894	1.5	11	23	34	0	-
RE511400_024	Residential	607874	4853905	1.5	11	23	34	0	-
RE511400_025	Residential	607821	4853868	1.5	12	23	35	0	-
RE511400_026	Residential	607829	4853873	1.5	12	23	35	0	-
RE511400_027	Residential	607902	4853925	1.5	11	23	33	0	-
RE511400_028	Residential	607836	4853879	1.5	12	23	34	0	-
RE511400_029	Residential	607844	4853884	1.5	12	23	34	0	-
RE511400_030	Residential	607852	4853889	1.5	12	23	34	0	-
RE511400_031	Residential	607961	4853671	1.5	13	23	36	0	-
RE511400_032	Residential	607901	4853730	1.5	13	23	36	0	-
RE511400_033	Residential	607932	4853710	1.5	13	23	36	0	-
RE511400_034	Residential	607891	4853735	1.5	13	23	36	0	-
RE511400_035	Residential	607950	4853688	1.5	13	23	36	0	-
RE511400_036	Residential	608027	4853515	1.5	20	23	43	0	-
RE511400_037	Residential	607948	4853861	1.5	11	23	33	0	-
RE511400_038	Residential	607884	4853855	1.5	12	23	34	0	-
RE511400_039	Residential	607860	4853809	1.5	13	23	35	0	-
RE511400_040	Residential	607917	4853721	1.5	13	23	36	0	-
RE511400_041	Residential	607909	4853725	1.5	13	23	36	0	-
RE511400_042	Residential	607925	4853716	1.5	13	23	36	0	-
RE511400_043	Residential	607955	4853680	1.5	13	23	36	0	-
RE511400_044	Residential	607944	4853695	1.5	13	23	36	0	-
RE511400_045	Residential	607939	4853703	1.5	13	23	36	0	-
RE511400_046	Residential	608072	4853635	1.5	13	23	36	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_047	Residential	608048	4853617	1.5	14	23	37	0	-
RE511400_048	Residential	608076	4853544	1.5	19	23	41	0	-
RE511400_049	Residential	608107	4853601	1.5	15	23	38	0	-
RE511400_050	Residential	608076	4853554	1.5	18	23	41	0	-
RE511400_051	Residential	607864	4853751	1.5	14	23	36	0	-
RE511400_052	Residential	607853	4853757	1.5	14	23	36	0	-
RE511400_053	Residential	607845	4853762	1.5	14	23	36	0	-
RE511400_054	Residential	607836	4853766	1.5	14	23	36	0	-
RE511400_055	Residential	607827	4853771	1.5	14	23	36	0	-
RE511400_056	Residential	607818	4853777	1.5	14	23	36	0	-
RE511400_057	Residential	607794	4853801	1.5	14	23	36	0	-
RE511400_058	Residential	607809	4853783	1.5	14	23	36	0	-
RE511400_059	Residential	607802	4853791	1.5	14	23	36	0	-
RE511400_060	Residential	608147	4853557	1.5	17	23	40	0	-
RE511400_061	Residential	608166	4853558	1.5	16	23	39	0	-
RE511400_062	Residential	608176	4853558	1.5	16	23	39	0	-
RE511400_063	Residential	608157	4853558	1.5	17	23	39	0	-
RE511400_064	Residential	608076	4853583	1.5	16	23	39	0	-
RE511400_065	Residential	608115	4853525	1.5	19	23	42	0	-
RE511400_066	Residential	608102	4853614	1.5	14	23	37	0	-
RE511400_067	Residential	608093	4853649	1.5	13	23	35	0	-
RE511400_068	Residential	608103	4853524	1.5	19	23	42	0	-
RE511400_069	Residential	608076	4853563	1.5	17	23	40	0	-
RE511400_070	Residential	608074	4853594	1.5	15	23	38	0	-
RE511400_071	Residential	608107	4853544	1.5	18	23	41	0	-
RE511400_072	Residential	608107	4853563	1.5	17	23	40	0	-
RE511400_073	Residential	608107	4853572	1.5	17	23	40	0	-
RE511400_074	Residential	608082	4853642	1.5	13	23	35	0	-
RE511400_075	Residential	608056	4853624	1.5	14	23	36	0	-
RE511400_076	Residential	608067	4853525	1.5	20	23	42	0	-
RE511400_077	Residential	608070	4853606	1.5	15	23	37	0	-
RE511400_078	Residential	608097	4853625	1.5	14	23	36	0	-
RE511400_079	Residential	608064	4853629	1.5	13	23	36	0	-
RE511400_080	Residential	608091	4853524	1.5	20	23	42	0	-
RE511400_081	Residential	608107	4853581	1.5	16	23	39	0	-
RE511400_082	Residential	608107	4853590	1.5	16	23	38	0	-
RE511400_083	Residential	608077	4853573	1.5	17	23	39	0	-
RE511400_084	Residential	608107	4853554	1.5	18	23	41	0	-
RE511400_085	Residential	608080	4853524	1.5	20	23	42	0	-
RE511400_086	Residential	608146	4853605	1.5	15	23	38	0	-
RE511400_087	Residential	607690	4854002	1.5	11	23	34	0	-
RE511400_088	Residential	607683	4854039	1.5	11	23	33	0	-
RE511400_089	Residential	607642	4854055	1.5	11	23	33	0	-
RE511400_090	Residential	607726	4853973	1.5	11	23	34	0	-
RE511400_091	Residential	607638	4854068	1.5	11	23	33	0	-
RE511400_092	Residential	607782	4853966	1.5	11	23	34	0	-
RE511400_093	Residential	607648	4854028	1.5	11	23	33	0	-
RE511400_094	Residential	607706	4853919	1.5	12	23	35	0	-
RE511400_095	Residential	607633	4854095	1.5	10	23	33	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_096	Residential	607649	4853948	1.5	12	23	34	0	-
RE511400_097	Residential	607792	4853973	1.5	11	23	34	0	-
RE511400_098	Residential	607734	4853980	1.5	11	23	34	0	-
RE511400_099	Residential	607851	4853813	1.5	13	23	35	0	-
RE511400_100	Residential	607835	4853830	1.5	13	23	35	0	-
RE511400_101	Residential	607938	4853855	1.5	11	23	33	0	-
RE511400_102	Residential	607908	4853835	1.5	12	23	34	0	-
RE511400_103	Residential	607677	4854058	1.5	11	23	33	0	-
RE511400_104	Residential	607687	4854030	1.5	11	23	34	0	-
RE511400_105	Residential	607758	4853948	1.5	12	23	34	0	-
RE511400_106	Residential	607671	4853912	1.5	12	23	35	0	-
RE511400_107	Residential	607797	4853977	1.5	11	23	34	0	-
RE511400_108	Residential	607709	4854015	1.5	11	23	34	0	-
RE511400_109	Residential	607661	4853910	1.5	12	23	35	0	-
RE511400_110	Residential	607713	4853921	1.5	12	23	35	0	-
RE511400_111	Residential	607654	4854003	1.5	11	23	34	0	-
RE511400_112	Residential	607657	4853949	1.5	12	23	34	0	-
RE511400_113	Residential	607651	4854015	1.5	11	23	34	0	-
RE511400_114	Residential	607731	4853930	1.5	12	23	35	0	-
RE511400_115	Residential	607695	4853916	1.5	12	23	35	0	-
RE511400_116	Residential	607655	4853989	1.5	11	23	34	0	-
RE511400_117	Residential	607645	4854041	1.5	11	23	33	0	-
RE511400_118	Residential	607751	4853943	1.5	12	23	34	0	-
RE511400_119	Residential	607744	4853938	1.5	12	23	35	0	-
RE511400_120	Residential	607787	4853970	1.5	11	23	34	0	-
RE511400_121	Residential	607676	4853954	1.5	12	23	34	0	-
RE511400_122	Residential	607667	4853952	1.5	12	23	34	0	-
RE511400_123	Residential	607684	4853955	1.5	12	23	34	0	-
RE511400_124	Residential	607704	4853960	1.5	12	23	34	0	-
RE511400_125	Residential	607680	4854049	1.5	11	23	33	0	-
RE511400_126	Residential	607679	4853914	1.5	12	23	35	0	-
RE511400_127	Residential	607700	4854008	1.5	11	23	34	0	-
RE511400_128	Residential	607719	4853969	1.5	12	23	34	0	-
RE511400_129	Residential	607689	4853915	1.5	12	23	35	0	-
RE511400_130	Residential	607739	4853935	1.5	12	23	35	0	-
RE511400_131	Residential	607636	4854081	1.5	10	23	33	0	-
RE511400_132	Residential	607680	4853999	1.5	11	23	34	0	-
RE511400_133	Residential	607723	4853926	1.5	12	23	35	0	-
RE511400_134	Residential	607693	4853957	1.5	12	23	34	0	-
RE511400_135	Residential	607710	4853964	1.5	12	23	34	0	-
RE511400_136	Residential	607759	4854001	1.5	11	23	34	0	-
RE511400_137	Residential	608026	4853558	1.5	17	23	39	0	-
RE511400_138	Residential	608026	4853566	1.5	17	23	39	0	-
RE511400_139	Residential	608023	4853574	1.5	16	23	39	0	-
RE511400_140	Residential	608018	4853584	1.5	16	23	39	0	-
RE511400_141	Residential	608015	4853591	1.5	16	23	38	0	-
RE511400_142	Residential	608006	4853606	1.5	15	23	38	0	-
RE511400_143	Residential	608011	4853599	1.5	15	23	38	0	-
RE511400_144	Residential	608001	4853613	1.5	15	23	37	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_145	Residential	607996	4853620	1.5	15	23	37	0	-
RE511400_146	Residential	607985	4853636	1.5	14	23	36	0	-
RE511400_147	Residential	607991	4853628	1.5	14	23	37	0	-
RE511400_148	Residential	607980	4853643	1.5	14	23	36	0	-
RE511400_149	Residential	608170	4853516	1.5	18	23	41	0	-
RE511400_150	Residential	608155	4853516	1.5	18	23	41	0	-
RE511400_151	Residential	608163	4853516	1.5	18	23	41	0	-
RE511400_152	Residential	608148	4853517	1.5	18	23	41	0	-
RE511400_153	Residential	608192	4853515	1.5	18	23	41	0	-
RE511400_154	Residential	608184	4853515	1.5	18	23	41	0	-
RE511400_155	Residential	608207	4853515	1.5	18	23	41	0	-
RE511400_156	Residential	608199	4853515	1.5	18	23	41	0	-
RE511400_157	Residential	608176	4853516	1.5	18	23	41	0	-
RE511400_158	Residential	608214	4853515	1.5	18	23	41	0	-
RE511400_159	Residential	607839	4853722	1.5	15	23	37	0	-
RE511400_160	Residential	607826	4853728	1.5	15	23	37	0	-
RE511400_161	Residential	607806	4853741	1.5	15	23	37	0	-
RE511400_162	Residential	607820	4853732	1.5	15	23	37	0	-
RE511400_163	Residential	607775	4853762	1.5	14	23	37	0	-
RE511400_164	Residential	607764	4853777	1.5	14	23	37	0	-
RE511400_165	Residential	607832	4853725	1.5	15	23	37	0	-
RE511400_166	Residential	607791	4853750	1.5	14	23	37	0	-
RE511400_167	Residential	607845	4853717	1.5	15	23	37	0	-
RE511400_168	Residential	607771	4853767	1.5	14	23	37	0	-
RE511400_169	Residential	607814	4853735	1.5	15	23	37	0	-
RE511400_170	Residential	607785	4853754	1.5	14	23	37	0	-
RE511400_171	Residential	607767	4853772	1.5	14	23	37	0	-
RE511400_172	Residential	607800	4853745	1.5	14	23	37	0	-
RE511400_173	Residential	607852	4853936	1.5	11	23	34	0	-
RE511400_174	Residential	607859	4853941	1.5	11	23	33	0	-
RE511400_175	Residential	607838	4853926	1.5	11	23	34	0	-
RE511400_176	Residential	607787	4853890	1.5	12	23	35	0	-
RE511400_177	Residential	607792	4853895	1.5	12	23	35	0	-
RE511400_178	Residential	607797	4853898	1.5	12	23	35	0	-
RE511400_179	Residential	607802	4853902	1.5	12	23	35	0	-
RE511400_180	Residential	607815	4853910	1.5	12	23	34	0	-
RE511400_181	Residential	607821	4853913	1.5	12	23	34	0	-
RE511400_182	Residential	607827	4853918	1.5	11	23	34	0	-
RE511400_183	Residential	607832	4853921	1.5	11	23	34	0	-
RE511400_184	Residential	607845	4853931	1.5	11	23	34	0	-
RE511400_185	Residential	607809	4853906	1.5	12	23	34	0	-
RE511400_186	Residential	607925	4853654	1.5	14	23	37	0	-
RE511400_187	Residential	607929	4853648	1.5	14	23	37	0	-
RE511400_188	Residential	607920	4853662	1.5	14	23	37	0	-
RE511400_189	Residential	607915	4853668	1.5	14	23	37	0	-
RE511400_190	Residential	607907	4853677	1.5	14	23	37	0	-
RE511400_191	Residential	607903	4853680	1.5	14	23	37	0	-
RE511400_192	Residential	607895	4853688	1.5	14	23	37	0	-
RE511400_193	Residential	607889	4853691	1.5	14	23	37	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_194	Residential	607881	4853696	1.5	14	23	37	0	-
RE511400_195	Residential	607873	4853701	1.5	14	23	37	0	-
RE511400_196	Residential	607989	4853515	1.5	19	23	42	0	-
RE511400_197	Residential	607989	4853530	1.5	19	23	41	0	-
RE511400_198	Residential	607989	4853538	1.5	18	23	41	0	-
RE511400_199	Residential	607988	4853524	1.5	19	23	41	0	-
RE511400_200	Residential	607988	4853546	1.5	18	23	40	0	-
RE511400_201	Residential	607988	4853553	1.5	18	23	40	0	-
RE511400_202	Residential	607982	4853569	1.5	17	23	40	0	-
RE511400_203	Residential	607985	4853562	1.5	17	23	40	0	-
RE511400_204	Residential	607980	4853574	1.5	17	23	39	0	-
RE511400_205	Residential	607978	4853580	1.5	16	23	39	0	-
RE511400_206	Residential	607972	4853586	1.5	16	23	39	0	-
RE511400_207	Residential	607968	4853592	1.5	16	23	38	0	-
RE511400_208	Residential	607963	4853600	1.5	15	23	38	0	-
RE511400_209	Residential	607958	4853607	1.5	15	23	38	0	-
RE511400_210	Residential	607953	4853615	1.5	15	23	37	0	-
RE511400_211	Residential	607948	4853620	1.5	14	23	37	0	-
RE511400_212	Residential	608027	4853522	1.5	19	23	42	0	-
RE511400_213	Residential	608027	4853540	1.5	18	23	41	0	-
RE511400_214	Residential	608027	4853531	1.5	19	23	41	0	-
RE511400_215	Residential	608027	4853548	1.5	17	23	40	0	-
RE511400_216	Residential	607888	4853817	1.5	12	23	35	0	-
RE511400_217	Residential	607735	4853842	1.5	13	23	36	0	-
RE511400_218	Residential	607748	4853810	1.5	13	23	36	0	-
RE511400_219	Residential	607777	4853830	1.5	13	23	36	0	-
RE511400_220	Residential	607730	4853850	1.5	13	23	35	0	-
RE511400_221	Residential	607725	4853846	1.5	13	23	35	0	-
RE511400_222	Residential	607783	4853834	1.5	13	23	36	0	-
RE511400_223	Residential	607752	4853873	1.5	13	23	35	0	-
RE511400_224	Residential	607743	4853806	1.5	13	23	36	0	-
RE511400_225	Residential	607711	4853837	1.5	13	23	36	0	-
RE511400_226	Residential	607748	4853878	1.5	13	23	35	0	-
RE511400_227	Residential	607755	4853868	1.5	13	23	35	0	-
RE511400_228	Residential	607756	4853827	1.5	13	23	36	0	-
RE511400_229	Residential	607767	4853823	1.5	13	23	36	0	-
RE511400_230	Residential	607735	4853854	1.5	13	23	35	0	-
RE511400_231	Residential	607738	4853803	1.5	14	23	36	0	-
RE511400_232	Residential	607762	4853859	1.5	13	23	35	0	-
RE511400_233	Residential	607719	4853843	1.5	13	23	36	0	-
RE511400_234	Residential	607730	4853838	1.5	13	23	36	0	-
RE511400_235	Residential	607767	4853834	1.5	13	23	36	0	-
RE511400_236	Residential	607738	4853814	1.5	13	23	36	0	-
RE511400_237	Residential	607733	4853810	1.5	13	23	36	0	-
RE511400_238	Residential	607761	4853819	1.5	13	23	36	0	-
RE511400_239	Residential	607777	4853842	1.5	13	23	36	0	-
RE511400_240	Residential	607761	4853831	1.5	13	23	36	0	-
RE511400_241	Residential	607751	4853823	1.5	13	23	36	0	-
RE511400_242	Residential	607756	4853816	1.5	13	23	36	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511400_243	Residential	607743	4853817	1.5	13	23	36	0	-
RE511400_244	Residential	607741	4853846	1.5	13	23	36	0	-
RE511400_245	Residential	607772	4853838	1.5	13	23	36	0	-
RE511400_246	Residential	607759	4853864	1.5	13	23	35	0	-
RE511400_247	Residential	607717	4853829	1.5	13	23	36	0	-
RE511400_248	Residential	607725	4853835	1.5	13	23	36	0	-
RE511400_249	Residential	607772	4853827	1.5	13	23	36	0	-
RE511400_250	Residential	607866	4853946	1.5	11	23	33	0	-
RE511400_251	Residential	607873	4853951	1.5	11	23	33	0	-
RE511400_252	Residential	607880	4853956	1.5	10	23	33	0	-
RE511400_265	Residential	607700	4854194	1.5	9	23	32	0	-
RE511400_266	Residential	607689	4854191	1.5	9	23	32	0	-
RE511400_267	Residential	607679	4854188	1.5	9	23	32	0	-
RE511400_268	Residential	607668	4854184	1.5	9	23	32	0	-
RE511400_269	Residential	607657	4854180	1.5	9	23	32	0	-
RE511400_270	Residential	607645	4854176	1.5	9	23	32	0	-
RE511400_271	Residential	607619	4854171	1.5	9	23	32	0	-
RE511400_272	Residential	607620	4854158	1.5	10	23	32	0	-
RE511400_273	Residential	607624	4854146	1.5	10	23	32	0	-
RE511400_274	Residential	607626	4854132	1.5	10	23	32	0	-
RE511400_275	Residential	607721	4854165	1.5	9	23	32	0	-
RE511400_276	Residential	607710	4854163	1.5	9	23	32	0	-
RE511400_277	Residential	607700	4854159	1.5	9	23	32	0	-
RE511400_278	Residential	607689	4854156	1.5	10	23	32	0	-
RE511400_279	Residential	607677	4854152	1.5	10	23	32	0	-
RE511400_280	Residential	607665	4854148	1.5	10	23	32	0	-
RE511400_281	Residential	607651	4854143	1.5	10	23	32	0	-
RE511400_282	Residential	607770	4854052	1.5	10	23	33	0	-
RE511400_283	Residential	607765	4854059	1.5	10	23	33	0	-
RE511400_284	Residential	607760	4854069	1.5	10	23	33	0	-
RE511400_285	Residential	607753	4854080	1.5	10	23	33	0	-
RE511400_286	Residential	607748	4854093	1.5	10	23	33	0	-
RE511400_287	Residential	607744	4854104	1.5	10	23	33	0	-
RE511400_288	Residential	607740	4854116	1.5	10	23	32	0	-
RE511400_289	Residential	607736	4854126	1.5	10	23	32	0	-
RE511400_290	Residential	607742	4854030	1.5	11	23	33	0	-
RE511400_291	Residential	607736	4854039	1.5	11	23	33	0	-
RE511400_292	Residential	607731	4854048	1.5	11	23	33	0	-
RE511400_293	Residential	607726	4854059	1.5	10	23	33	0	-
RE511400_294	Residential	607723	4854067	1.5	10	23	33	0	-
RE511400_295	Residential	607720	4854076	1.5	10	23	33	0	-
RE511400_296	Residential	607717	4854085	1.5	10	23	33	0	-
RE511400_297	Residential	607714	4854095	1.5	10	23	33	0	-
RE511400_298	Residential	607710	4854106	1.5	10	23	33	0	-
RE511400_299	Residential	607707	4854117	1.5	10	23	32	0	-
RE511400_300	Residential	607674	4854068	1.5	10	23	33	0	-
RE511400_301	Residential	607670	4854080	1.5	10	23	33	0	-
RE511400_302	Residential	607667	4854091	1.5	10	23	33	0	-
RE511400_303	Residential	607662	4854103	1.5	10	23	33	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511400_304	Residential	607765	4854005	1.5	11	23	34	0	-
RE511400_305	Residential	607773	4854009	1.5	11	23	33	0	-
RE511400_306	Residential	607779	4854014	1.5	11	23	33	0	-
RE511400_307	Residential	607787	4854019	1.5	11	23	33	0	-
RE511400_308	Residential	607794	4854023	1.5	10	23	33	0	-
RE511400_309	Residential	607801	4854028	1.5	10	23	33	0	-
RE511400_310	Residential	607809	4854033	1.5	10	23	33	0	-
RE511400_311	Residential	607817	4854039	1.5	10	23	33	0	-
RE511400_312	Residential	607802	4853980	1.5	11	23	33	0	-
RE511400_313	Residential	607807	4853983	1.5	11	23	33	0	-
RE511400_314	Residential	607814	4853988	1.5	11	23	33	0	-
RE511400_315	Residential	607820	4853992	1.5	11	23	33	0	-
RE511400_316	Residential	607825	4853995	1.5	10	23	33	0	-
RE511400_317	Residential	607829	4853998	1.5	10	23	33	0	-
RE511400_318	Residential	607837	4854004	1.5	10	23	33	0	-
RE511400_319	Residential	607842	4854008	1.5	10	23	33	0	-
RE511500_001	Child Care Centre	608104	4853900	1.5	9	23	32	0	-
RE511500_002	Residential	608322	4853695	1.5	12	23	34	0	-
RE511500_003	Residential	608318	4853701	1.5	12	23	34	0	-
RE511500_004	Residential	608314	4853707	1.5	12	23	34	0	-
RE511500_005	Residential	608300	4853727	1.5	12	23	34	0	-
RE511500_006	Residential	608295	4853734	1.5	11	23	34	0	-
RE511500_007	Residential	608290	4853741	1.5	11	23	34	0	-
RE511500_008	Residential	608285	4853748	1.5	11	23	34	0	-
RE511500_009	Residential	608280	4853755	1.5	11	23	34	0	-
RE511500_010	Residential	608335	4853677	1.5	12	23	34	0	-
RE511500_011	Residential	608327	4853688	1.5	12	23	34	0	-
RE511500_012	Residential	608364	4853636	1.5	13	23	35	0	-
RE511500_013	Residential	608359	4853642	1.5	13	23	35	0	-
RE511500_014	Residential	608355	4853649	1.5	12	23	35	0	-
RE511500_015	Residential	608349	4853657	1.5	12	23	35	0	-
RE511500_016	Residential	608345	4853664	1.5	12	23	34	0	-
RE511500_017	Residential	608310	4853713	1.5	12	23	34	0	-
RE511500_018	Residential	608305	4853720	1.5	12	23	34	0	-
RE511500_019	Residential	608232	4853817	1.5	10	23	32	0	-
RE511500_020	Residential	608226	4853679	1.5	13	23	35	0	-
RE511500_021	Residential	608207	4853707	1.5	12	23	34	0	-
RE511500_022	Residential	608274	4853612	1.5	14	23	36	0	-
RE511500_023	Residential	608242	4853657	1.5	13	23	36	0	-
RE511500_024	Residential	608232	4853672	1.5	13	23	35	0	-
RE511500_025	Residential	607937	4853892	1.5	10	23	33	0	-
RE511500_026	Residential	607990	4853929	1.5	10	23	32	0	-
RE511500_027	Residential	607999	4853934	1.5	10	23	32	0	-
RE511500_028	Residential	608017	4853910	1.5	10	23	32	0	-
RE511500_029	Residential	607985	4853887	1.5	10	23	33	0	-
RE511500_030	Residential	607977	4853881	1.5	10	23	33	0	-
RE511500_031	Residential	607952	4853902	1.5	10	23	33	0	-
RE511500_032	Residential	608205	4853855	1.5	9	23	32	0	-
RE511500_033	Residential	608000	4853898	1.5	10	23	32	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_034	Residential	607982	4853923	1.5	10	23	32	0	-
RE511500_035	Residential	607960	4853907	1.5	10	23	33	0	-
RE511500_036	Residential	607993	4853893	1.5	10	23	33	0	-
RE511500_037	Residential	608228	4853822	1.5	10	23	32	0	-
RE511500_038	Residential	608194	4853868	1.5	9	23	32	0	-
RE511500_039	Residential	608188	4853877	1.5	9	23	32	0	-
RE511500_040	Residential	608008	4853903	1.5	10	23	32	0	-
RE511500_041	Residential	608199	4853862	1.5	9	23	32	0	-
RE511500_042	Residential	608224	4853828	1.5	10	23	32	0	-
RE511500_043	Residential	608221	4853833	1.5	10	23	32	0	-
RE511500_044	Residential	607925	4853940	1.5	10	23	33	0	-
RE511500_045	Residential	608481	4853493	1.5	19	23	41	0	-
RE511500_046	Residential	608407	4853578	1.5	15	23	37	0	-
RE511500_047	Residential	608462	4853557	1.5	15	23	38	0	-
RE511500_048	Residential	608457	4853565	1.5	15	23	38	0	-
RE511500_049	Residential	607910	4853930	1.5	10	23	33	0	-
RE511500_050	Residential	607917	4853935	1.5	10	23	33	0	-
RE511500_051	Residential	608411	4853570	1.5	15	23	38	0	-
RE511500_052	Residential	608435	4853530	1.5	16	23	39	0	-
RE511500_053	Residential	608415	4853563	1.5	15	23	38	0	-
RE511500_054	Residential	608053	4853924	1.5	9	23	32	0	-
RE511500_055	Residential	608480	4853505	1.5	18	23	40	0	-
RE511500_056	Residential	608197	4853721	1.5	11	23	34	0	-
RE511500_057	Residential	608191	4853730	1.5	11	23	34	0	-
RE511500_058	Residential	608263	4853627	1.5	13	23	36	0	-
RE511500_059	Residential	608289	4853591	1.5	14	23	37	0	-
RE511500_060	Residential	608284	4853598	1.5	14	23	37	0	-
RE511500_061	Residential	608211	4853846	1.5	9	23	32	0	-
RE511500_062	Residential	608179	4853890	1.5	9	23	32	0	-
RE511500_063	Residential	607967	4853875	1.5	10	23	33	0	-
RE511500_064	Residential	607967	4853913	1.5	10	23	33	0	-
RE511500_065	Residential	608234	4853563	1.5	16	23	38	0	-
RE511500_066	Residential	608254	4853574	1.5	15	23	38	0	-
RE511500_067	Residential	608194	4853557	1.5	16	23	38	0	-
RE511500_068	Residential	608225	4853560	1.5	16	23	38	0	-
RE511500_069	Residential	608214	4853558	1.5	16	23	39	0	-
RE511500_070	Residential	608185	4853558	1.5	16	23	38	0	-
RE511500_071	Residential	608131	4853676	1.5	12	23	35	0	-
RE511500_072	Residential	608217	4853606	1.5	14	23	37	0	-
RE511500_073	Residential	608173	4853670	1.5	13	23	35	0	-
RE511500_074	Residential	608147	4853647	1.5	13	23	36	0	-
RE511500_075	Residential	608204	4853630	1.5	14	23	36	0	-
RE511500_076	Residential	608156	4853693	1.5	12	23	34	0	-
RE511500_077	Residential	608189	4853647	1.5	14	23	36	0	-
RE511500_078	Residential	608184	4853655	1.5	13	23	36	0	-
RE511500_079	Residential	608158	4853604	1.5	15	23	38	0	-
RE511500_080	Residential	608149	4853688	1.5	12	23	34	0	-
RE511500_081	Residential	608226	4853615	1.5	14	23	37	0	-
RE511500_082	Residential	608167	4853604	1.5	15	23	37	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511500_083	Residential	608195	4853640	1.5	14	23	36	0	-
RE511500_084	Residential	608195	4853604	1.5	15	23	37	0	-
RE511500_085	Residential	608154	4853638	1.5	14	23	36	0	-
RE511500_086	Residential	608120	4853668	1.5	12	23	35	0	-
RE511500_087	Residential	608176	4853604	1.5	15	23	37	0	-
RE511500_088	Residential	608168	4853677	1.5	12	23	35	0	-
RE511500_089	Residential	608140	4853682	1.5	12	23	34	0	-
RE511500_090	Residential	608205	4853603	1.5	15	23	37	0	-
RE511500_091	Residential	608185	4853604	1.5	15	23	37	0	-
RE511500_092	Residential	608141	4853656	1.5	13	23	35	0	-
RE511500_093	Residential	608244	4853567	1.5	16	23	38	0	-
RE511500_094	Residential	608204	4853557	1.5	16	23	39	0	-
RE511500_095	Residential	608304	4853570	1.5	15	23	38	0	-
RE511500_096	Residential	608315	4853555	1.5	16	23	38	0	-
RE511500_097	Residential	608258	4853635	1.5	13	23	36	0	-
RE511500_098	Residential	608248	4853649	1.5	13	23	36	0	-
RE511500_099	Residential	608222	4853686	1.5	13	23	35	0	-
RE511500_100	Residential	608216	4853693	1.5	12	23	35	0	-
RE511500_101	Residential	608269	4853620	1.5	13	23	36	0	-
RE511500_102	Residential	608201	4853714	1.5	11	23	34	0	-
RE511500_103	Residential	608309	4853563	1.5	15	23	38	0	-
RE511500_104	Residential	608299	4853577	1.5	15	23	38	0	-
RE511500_105	Residential	608279	4853605	1.5	14	23	36	0	-
RE511500_106	Residential	608253	4853642	1.5	13	23	36	0	-
RE511500_107	Residential	608212	4853700	1.5	12	23	35	0	-
RE511500_108	Residential	608294	4853584	1.5	15	23	37	0	-
RE511500_109	Residential	608166	4853699	1.5	12	23	34	0	-
RE511500_110	Residential	608179	4853662	1.5	13	23	36	0	-
RE511500_111	Residential	608443	4853510	1.5	18	23	41	0	-
RE511500_112	Residential	608420	4853557	1.5	15	23	38	0	-
RE511500_113	Residential	608424	4853551	1.5	16	23	38	0	-
RE511500_114	Residential	608473	4853532	1.5	16	23	38	0	-
RE511500_115	Residential	608470	4853541	1.5	15	23	38	0	-
RE511500_116	Residential	608448	4853484	1.5	20	23	43	0	-
RE511500_117	Residential	608445	4853501	1.5	19	23	41	0	-
RE511500_118	Residential	608446	4853493	1.5	19	23	42	0	-
RE511500_119	Residential	608441	4853518	1.5	17	23	40	0	-
RE511500_120	Residential	608476	4853524	1.5	16	23	39	0	-
RE511500_121	Residential	608433	4853537	1.5	16	23	38	0	-
RE511500_122	Residential	608208	4853851	1.5	9	23	32	0	-
RE511500_123	Residential	608438	4853524	1.5	17	23	39	0	-
RE511500_124	Residential	608429	4853545	1.5	16	23	38	0	-
RE511500_125	Residential	608466	4853549	1.5	15	23	38	0	-
RE511500_126	Residential	608478	4853514	1.5	17	23	40	0	-
RE511500_127	Residential	608452	4853573	1.5	15	23	37	0	-
RE511500_128	Residential	608241	4853804	1.5	10	23	32	0	-
RE511500_129	Residential	608215	4853841	1.5	9	23	32	0	-
RE511500_130	Residential	608236	4853811	1.5	10	23	32	0	-
RE511500_131	Residential	608185	4853882	1.5	9	23	32	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_132	Residential	607957	4853868	1.5	11	23	33	0	-
RE511500_133	Residential	607944	4853897	1.5	10	23	33	0	-
RE511500_134	Residential	607975	4853918	1.5	10	23	32	0	-
RE511500_135	Residential	608340	4853670	1.5	12	23	34	0	-
RE511500_136	Residential	608276	4853761	1.5	11	23	33	0	-
RE511500_137	Residential	608272	4853766	1.5	11	23	33	0	-
RE511500_138	Residential	608268	4853772	1.5	10	23	33	0	-
RE511500_139	Residential	608263	4853780	1.5	10	23	33	0	-
RE511500_140	Residential	608331	4853682	1.5	12	23	34	0	-
RE511500_141	Residential	608237	4853665	1.5	13	23	35	0	-
RE511500_142	Residential	608152	4853626	1.5	14	23	37	0	-
RE511500_143	Residential	608232	4853514	1.5	19	23	41	0	-
RE511500_144	Residential	608223	4853515	1.5	18	23	41	0	-
RE511500_145	Residential	608246	4853517	1.5	18	23	41	0	-
RE511500_146	Residential	608253	4853520	1.5	18	23	41	0	-
RE511500_147	Residential	608269	4853526	1.5	18	23	40	0	-
RE511500_148	Residential	608274	4853530	1.5	17	23	40	0	-
RE511500_149	Residential	608264	4853523	1.5	18	23	41	0	-
RE511500_150	Residential	608279	4853533	1.5	17	23	40	0	-
RE511500_151	Residential	608336	4853591	1.5	14	23	37	0	-
RE511500_152	Residential	608339	4853585	1.5	15	23	37	0	-
RE511500_153	Residential	608328	4853602	1.5	14	23	37	0	-
RE511500_154	Residential	608332	4853597	1.5	14	23	37	0	-
RE511500_155	Residential	608344	4853578	1.5	15	23	37	0	-
RE511500_156	Residential	608324	4853608	1.5	14	23	36	0	-
RE511500_157	Residential	608318	4853615	1.5	13	23	36	0	-
RE511500_158	Residential	608314	4853620	1.5	13	23	36	0	-
RE511500_159	Residential	608309	4853630	1.5	13	23	36	0	-
RE511500_160	Residential	608305	4853636	1.5	13	23	35	0	-
RE511500_161	Residential	608299	4853644	1.5	12	23	35	0	-
RE511500_162	Residential	608295	4853650	1.5	12	23	35	0	-
RE511500_163	Residential	608287	4853661	1.5	12	23	35	0	-
RE511500_164	Residential	608291	4853655	1.5	12	23	35	0	-
RE511500_165	Residential	608282	4853668	1.5	12	23	35	0	-
RE511500_166	Residential	608278	4853674	1.5	12	23	35	0	-
RE511500_167	Residential	608274	4853679	1.5	12	23	35	0	-
RE511500_168	Residential	608269	4853685	1.5	12	23	35	0	-
RE511500_169	Residential	608264	4853692	1.5	12	23	35	0	-
RE511500_170	Residential	608259	4853699	1.5	12	23	35	0	-
RE511500_171	Residential	608254	4853706	1.5	12	23	35	0	-
RE511500_172	Residential	608250	4853713	1.5	12	23	34	0	-
RE511500_173	Residential	608240	4853728	1.5	11	23	34	0	-
RE511500_174	Residential	608236	4853733	1.5	11	23	34	0	-
RE511500_175	Residential	608231	4853738	1.5	11	23	34	0	-
RE511500_176	Residential	608228	4853744	1.5	11	23	33	0	-
RE511500_177	Residential	608245	4853721	1.5	12	23	34	0	-
RE511500_178	Residential	608223	4853750	1.5	11	23	33	0	-
RE511500_179	Residential	608375	4853620	1.5	13	23	36	0	-
RE511500_180	Residential	608371	4853626	1.5	13	23	36	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_181	Residential	608378	4853615	1.5	13	23	36	0	-
RE511500_182	Residential	608382	4853610	1.5	13	23	36	0	-
RE511500_183	Residential	608368	4853631	1.5	13	23	35	0	-
RE511500_184	Residential	607933	4853946	1.5	10	23	33	0	-
RE511500_185	Residential	607940	4853951	1.5	10	23	32	0	-
RE511500_186	Residential	607948	4853956	1.5	10	23	32	0	-
RE511500_187	Residential	607955	4853962	1.5	10	23	32	0	-
RE511500_188	Residential	607963	4853967	1.5	10	23	32	0	-
RE511500_189	Residential	607972	4853973	1.5	9	23	32	0	-
RE511500_190	Residential	607887	4853960	1.5	10	23	33	0	-
RE511500_191	Residential	607893	4853965	1.5	10	23	33	0	-
RE511500_192	Residential	607899	4853969	1.5	10	23	33	0	-
RE511500_193	Residential	607904	4853973	1.5	10	23	33	0	-
RE511500_194	Residential	607910	4853977	1.5	10	23	32	0	-
RE511500_195	Residential	607916	4853981	1.5	10	23	32	0	-
RE511500_196	Residential	607923	4853986	1.5	10	23	32	0	-
RE511500_197	Residential	607928	4853990	1.5	10	23	32	0	-
RE511500_198	Residential	607933	4853993	1.5	9	23	32	0	-
RE511500_199	Residential	607938	4853997	1.5	9	23	32	0	-
RE511500_200	Residential	607943	4854000	1.5	9	23	32	0	-
RE511500_201	Residential	607948	4854004	1.5	9	23	32	0	-
RE511500_202	Residential	608047	4853932	1.5	9	23	32	0	-
RE511500_203	Residential	608042	4853940	1.5	9	23	32	0	-
RE511500_204	Residential	608036	4853947	1.5	9	23	32	0	-
RE511500_205	Residential	608031	4853955	1.5	9	23	32	0	-
RE511500_206	Residential	608026	4853962	1.5	9	23	32	0	-
RE511500_207	Residential	608021	4853969	1.5	9	23	32	0	-
RE511500_208	Residential	608016	4853976	1.5	9	23	32	0	-
RE511500_209	Residential	608011	4853983	1.5	9	23	32	0	-
RE511500_210	Residential	608006	4853990	1.5	9	23	32	0	-
RE511500_211	Residential	608001	4853997	1.5	9	23	32	0	-
RE511500_212	Residential	607995	4854005	1.5	9	23	32	0	-
RE511500_213	Residential	607990	4854012	1.5	9	23	32	0	-
RE511500_214	Residential	607985	4854020	1.5	9	23	32	0	-
RE511500_215	Residential	607979	4854029	1.5	9	23	32	0	-
RE511500_216	Residential	608085	4853947	1.5	9	23	32	0	-
RE511500_217	Residential	608081	4853952	1.5	9	23	32	0	-
RE511500_218	Residential	608077	4853958	1.5	9	23	32	0	-
RE511500_219	Residential	608074	4853962	1.5	9	23	32	0	-
RE511500_220	Residential	608069	4853969	1.5	9	23	32	0	-
RE511500_221	Residential	608065	4853974	1.5	9	23	32	0	-
RE511500_222	Residential	608062	4853978	1.5	9	23	32	0	-
RE511500_223	Residential	608058	4853984	1.5	9	23	32	0	-
RE511500_224	Residential	608053	4853991	1.5	9	23	32	0	-
RE511500_225	Residential	608049	4853997	1.5	9	23	31	0	-
RE511500_226	Residential	608043	4854006	1.5	9	23	31	0	-
RE511500_227	Residential	608040	4854011	1.5	9	23	31	0	-
RE511500_228	Residential	608034	4854019	1.5	9	23	31	0	-
RE511500_229	Residential	608029	4854025	1.5	9	23	31	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_230	Residential	608026	4854031	1.5	9	23	31	0	-
RE511500_231	Residential	608022	4854036	1.5	9	23	31	0	-
RE511500_232	Residential	608018	4854042	1.5	9	23	31	0	-
RE511500_233	Residential	608013	4854048	1.5	9	23	31	0	-
RE511500_234	Residential	608175	4853896	1.5	9	23	32	0	-
RE511500_235	Residential	608171	4853902	1.5	9	23	32	0	-
RE511500_236	Residential	608167	4853908	1.5	9	23	32	0	-
RE511500_237	Residential	608162	4853915	1.5	9	23	32	0	-
RE511500_238	Residential	608157	4853922	1.5	9	23	32	0	-
RE511500_239	Residential	608154	4853927	1.5	9	23	32	0	-
RE511500_240	Residential	608150	4853933	1.5	9	23	32	0	-
RE511500_241	Residential	608145	4853939	1.5	9	23	31	0	-
RE511500_242	Residential	608142	4853944	1.5	9	23	31	0	-
RE511500_243	Residential	608122	4853973	1.5	9	23	31	0	-
RE511500_244	Residential	608119	4853977	1.5	9	23	31	0	-
RE511500_245	Residential	608115	4853983	1.5	9	23	31	0	-
RE511500_246	Residential	608112	4853987	1.5	9	23	31	0	-
RE511500_247	Residential	608107	4853994	1.5	9	23	31	0	-
RE511500_259	Residential	607976	4854103	1.5	8	23	31	0	-
RE511500_260	Residential	607970	4854109	1.5	8	23	31	0	-
RE511500_261	Residential	607967	4854115	1.5	8	23	31	0	-
RE511500_262	Residential	607962	4854121	1.5	8	23	31	0	-
RE511500_263	Residential	607959	4854126	1.5	8	23	31	0	-
RE511500_264	Residential	607955	4854131	1.5	8	23	31	0	-
RE511500_265	Residential	607949	4854139	1.5	8	23	31	0	-
RE511500_266	Residential	607944	4854146	1.5	8	23	31	0	-
RE511500_267	Residential	607939	4854153	1.5	8	23	31	0	-
RE511500_268	Residential	607934	4854160	1.5	8	23	31	0	-
RE511500_269	Residential	607929	4854168	1.5	8	23	31	0	-
RE511500_270	Residential	607927	4854176	1.5	8	23	31	0	-
RE511500_288	Residential	607723	4854202	1.5	9	23	32	0	-
RE511500_289	Residential	607711	4854198	1.5	9	23	32	0	-
RE511500_313	Residential	607831	4854199	1.5	8	23	31	0	-
RE511500_314	Residential	607821	4854196	1.5	8	23	31	0	-
RE511500_315	Residential	607810	4854192	1.5	8	23	31	0	-
RE511500_316	Residential	607798	4854189	1.5	9	23	31	0	-
RE511500_317	Residential	607787	4854186	1.5	9	23	31	0	-
RE511500_318	Residential	607777	4854182	1.5	9	23	31	0	-
RE511500_319	Residential	607764	4854179	1.5	9	23	32	0	-
RE511500_320	Residential	607849	4854155	1.5	8	23	31	0	-
RE511500_321	Residential	607839	4854152	1.5	9	23	31	0	-
RE511500_322	Residential	607829	4854148	1.5	9	23	31	0	-
RE511500_323	Residential	607818	4854145	1.5	9	23	31	0	-
RE511500_324	Residential	607806	4854141	1.5	9	23	32	0	-
RE511500_325	Residential	607943	4854078	1.5	9	23	31	0	-
RE511500_326	Residential	607939	4854083	1.5	9	23	31	0	-
RE511500_327	Residential	607933	4854092	1.5	9	23	31	0	-
RE511500_328	Residential	607929	4854097	1.5	9	23	31	0	-
RE511500_329	Residential	607923	4854106	1.5	9	23	31	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE511500_330	Residential	607919	4854112	1.5	8	23	31	0	-
RE511500_331	Residential	607913	4854119	1.5	8	23	31	0	-
RE511500_332	Residential	607907	4854127	1.5	8	23	31	0	-
RE511500_333	Residential	607902	4854135	1.5	8	23	31	0	-
RE511500_334	Residential	607897	4854142	1.5	8	23	31	0	-
RE511500_335	Residential	607892	4854151	1.5	8	23	31	0	-
RE511500_336	Residential	607888	4854158	1.5	8	23	31	0	-
RE511500_337	Residential	607885	4854168	1.5	8	23	31	0	-
RE511500_338	Residential	607883	4854174	1.5	8	23	31	0	-
RE511500_339	Residential	607733	4854170	1.5	9	23	32	0	-
RE511500_340	Residential	607810	4854078	1.5	10	23	32	0	-
RE511500_341	Residential	607805	4854085	1.5	10	23	32	0	-
RE511500_342	Residential	607798	4854096	1.5	10	23	32	0	-
RE511500_343	Residential	607794	4854107	1.5	9	23	32	0	-
RE511500_344	Residential	607790	4854118	1.5	9	23	32	0	-
RE511500_345	Residential	607788	4854129	1.5	9	23	32	0	-
RE511500_346	Residential	607785	4854141	1.5	9	23	32	0	-
RE511500_347	Residential	607825	4854044	1.5	10	23	32	0	-
RE511500_348	Residential	607832	4854049	1.5	10	23	32	0	-
RE511500_349	Residential	607840	4854054	1.5	10	23	32	0	-
RE511500_350	Residential	607846	4854059	1.5	10	23	32	0	-
RE511500_351	Residential	607853	4854064	1.5	9	23	32	0	-
RE511500_352	Residential	607861	4854068	1.5	9	23	32	0	-
RE511500_353	Residential	607868	4854074	1.5	9	23	32	0	-
RE511500_354	Residential	607874	4854078	1.5	9	23	32	0	-
RE511500_355	Residential	607881	4854083	1.5	9	23	32	0	-
RE511500_356	Residential	607889	4854088	1.5	9	23	31	0	-
RE511500_357	Residential	607850	4854014	1.5	10	23	33	0	-
RE511500_358	Residential	607857	4854018	1.5	10	23	32	0	-
RE511500_359	Residential	607863	4854023	1.5	10	23	32	0	-
RE511500_360	Residential	607869	4854027	1.5	10	23	32	0	-
RE511500_361	Residential	607874	4854030	1.5	10	23	32	0	-
RE511500_362	Residential	607880	4854034	1.5	9	23	32	0	-
RE511500_363	Residential	607885	4854039	1.5	9	23	32	0	-
RE511500_364	Residential	607891	4854043	1.5	9	23	32	0	-
RE511500_365	Residential	607895	4854047	1.5	9	23	32	0	-
RE511500_366	Residential	607900	4854050	1.5	9	23	32	0	-
RE511500_367	Residential	607906	4854054	1.5	9	23	32	0	-
RE511500_368	Residential	607911	4854057	1.5	9	23	32	0	-
RE511500_369	Residential	607823	4854097	1.5	9	23	32	0	-
RE511500_370	Residential	607831	4854103	1.5	9	23	32	0	-
RE511500_371	Residential	607839	4854108	1.5	9	23	32	0	-
RE511500_372	Residential	607847	4854113	1.5	9	23	32	0	-
RE511500_373	Residential	607854	4854118	1.5	9	23	31	0	-
RE511500_374	Residential	607864	4854124	1.5	9	23	31	0	-
RE511500_376	Residential	607755	4854206	1.5	9	23	31	0	-
RE511600_001	Residential	608413	4853627	1.5	13	23	35	0	-
RE511600_002	Residential	608350	4853717	1.5	11	23	34	0	-
RE511600_003	Residential	608360	4853703	1.5	11	23	34	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RE511600_004	Residential	608309	4853775	1.5	11	23	33	0	-
RE511600_005	Residential	608274	4853824	1.5	10	23	32	0	-
RE511600_006	Residential	608263	4853840	1.5	9	23	32	0	-
RE511600_007	Residential	608430	4853685	1.5	11	23	34	0	-
RE511600_008	Residential	608384	4853750	1.5	11	23	33	0	-
RE511600_009	Residential	608443	4853666	1.5	12	23	34	0	-
RE511600_010	Residential	608451	4853655	1.5	12	23	34	0	-
RE511600_011	Residential	608399	4853728	1.5	11	23	33	0	-
RE511600_012	Residential	608407	4853717	1.5	11	23	33	0	-
RE511600_013	Residential	608423	4853695	1.5	11	23	34	0	-
RE511600_014	Residential	608392	4853739	1.5	11	23	33	0	-
RE511600_015	Residential	608437	4853676	1.5	11	23	34	0	-
RE511600_016	Residential	608415	4853706	1.5	11	23	33	0	-
RE511600_017	Residential	608253	4853854	1.5	9	23	32	0	-
RE511600_018	Residential	608527	4853503	1.5	17	23	40	0	-
RE511600_019	Residential	608519	4853540	1.5	15	23	38	0	-
RE511600_020	Residential	608517	4853549	1.5	14	23	37	0	-
RE511600_021	Residential	608473	4853624	1.5	13	23	35	0	-
RE511600_022	Residential	608509	4853566	1.5	14	23	37	0	-
RE511600_023	Residential	608496	4853592	1.5	14	23	37	0	-
RE511600_024	Residential	608441	4853588	1.5	14	23	37	0	-
RE511600_025	Residential	608524	4853521	1.5	16	23	39	0	-
RE511600_026	Residential	608490	4853600	1.5	14	23	37	0	-
RE511600_027	Residential	608513	4853558	1.5	14	23	37	0	-
RE511600_028	Residential	608407	4853636	1.5	13	23	35	0	-
RE511600_029	Residential	608402	4853644	1.5	12	23	35	0	-
RE511600_030	Residential	608396	4853651	1.5	12	23	35	0	-
RE511600_031	Residential	608391	4853659	1.5	12	23	35	0	-
RE511600_032	Residential	608268	4853833	1.5	9	23	32	0	-
RE511600_033	Residential	608258	4853847	1.5	9	23	32	0	-
RE511600_034	Residential	608526	4853512	1.5	17	23	39	0	-
RE511600_035	Residential	608365	4853764	1.5	11	23	33	0	-
RE511600_036	Residential	608501	4853584	1.5	14	23	37	0	-
RE511600_037	Residential	608485	4853608	1.5	14	23	36	0	-
RE511600_038	Residential	608447	4853580	1.5	15	23	37	0	-
RE511600_039	Residential	608480	4853615	1.5	13	23	36	0	-
RE511600_040	Residential	608522	4853530	1.5	16	23	38	0	-
RE511600_041	Residential	608380	4853674	1.5	12	23	34	0	-
RE511600_042	Residential	608375	4853682	1.5	11	23	34	0	-
RE511600_043	Residential	608355	4853710	1.5	11	23	34	0	-
RE511600_044	Residential	608370	4853689	1.5	11	23	34	0	-
RE511600_045	Residential	608365	4853696	1.5	11	23	34	0	-
RE511600_046	Residential	608528	4853482	1.5	18	23	41	0	-
RE511600_047	Residential	608505	4853575	1.5	14	23	37	0	-
RE511600_048	Residential	608435	4853597	1.5	14	23	36	0	-
RE511600_049	Residential	608528	4853494	1.5	18	23	40	0	-
RE511600_050	Residential	608345	4853723	1.5	11	23	34	0	-
RE511600_051	Residential	608341	4853730	1.5	11	23	34	0	-
RE511600_052	Residential	608336	4853737	1.5	11	23	34	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_053	Residential	608330	4853745	1.5	11	23	34	0	-
RE511600_054	Residential	608325	4853752	1.5	11	23	34	0	-
RE511600_055	Residential	608320	4853760	1.5	11	23	34	0	-
RE511600_056	Residential	608315	4853767	1.5	11	23	33	0	-
RE511600_057	Residential	608304	4853782	1.5	10	23	33	0	-
RE511600_058	Residential	608299	4853790	1.5	10	23	33	0	-
RE511600_059	Residential	608292	4853799	1.5	10	23	32	0	-
RE511600_060	Residential	608386	4853667	1.5	12	23	34	0	-
RE511600_061	Residential	608377	4853772	1.5	11	23	33	0	-
RE511600_062	Residential	608387	4853779	1.5	11	23	33	0	-
RE511600_085	Residential	608248	4853972	1.5	8	23	31	0	-
RE511600_086	Residential	608239	4853965	1.5	9	23	31	0	-
RE511600_087	Residential	608227	4853958	1.5	9	23	31	0	-
RE511600_091	Residential	608350	4853851	1.5	9	23	32	0	-
RE511600_092	Residential	608343	4853862	1.5	9	23	32	0	-
RE511600_093	Residential	608335	4853872	1.5	9	23	32	0	-
RE511600_094	Residential	608327	4853883	1.5	9	23	31	0	-
RE511600_095	Residential	608320	4853894	1.5	9	23	31	0	-
RE511600_096	Residential	608312	4853905	1.5	9	23	31	0	-
RE511600_097	Residential	608305	4853915	1.5	9	23	31	0	-
RE511600_098	Residential	608298	4853925	1.5	9	23	31	0	-
RE511600_099	Residential	608291	4853934	1.5	9	23	31	0	-
RE511600_100	Residential	608283	4853945	1.5	9	23	31	0	-
RE511600_101	Residential	608348	4853801	1.5	10	23	33	0	-
RE511600_102	Residential	608342	4853810	1.5	10	23	33	0	-
RE511600_103	Residential	608336	4853817	1.5	10	23	32	0	-
RE511600_104	Residential	608331	4853825	1.5	10	23	32	0	-
RE511600_105	Residential	608325	4853833	1.5	9	23	32	0	-
RE511600_106	Residential	608319	4853842	1.5	9	23	32	0	-
RE511600_107	Residential	608312	4853852	1.5	9	23	32	0	-
RE511600_108	Residential	608305	4853861	1.5	9	23	32	0	-
RE511600_109	Residential	608299	4853870	1.5	9	23	32	0	-
RE511600_110	Residential	608292	4853880	1.5	9	23	32	0	-
RE511600_111	Residential	608285	4853889	1.5	9	23	31	0	-
RE511600_112	Residential	608279	4853898	1.5	9	23	31	0	-
RE511600_113	Residential	608274	4853905	1.5	9	23	31	0	-
RE511600_114	Residential	608269	4853913	1.5	9	23	31	0	-
RE511600_115	Residential	608257	4853930	1.5	9	23	31	0	-
RE511600_116	Residential	608248	4853861	1.5	9	23	32	0	-
RE511600_117	Residential	608243	4853868	1.5	9	23	32	0	-
RE511600_118	Residential	608238	4853875	1.5	9	23	32	0	-
RE511600_119	Residential	608233	4853882	1.5	9	23	32	0	-
RE511600_120	Residential	608228	4853889	1.5	9	23	32	0	-
RE511600_121	Residential	608223	4853896	1.5	9	23	32	0	-
RE511600_122	Residential	608218	4853903	1.5	9	23	32	0	-
RE511600_123	Residential	608213	4853910	1.5	9	23	31	0	-
RE511600_124	Residential	608208	4853917	1.5	9	23	31	0	-
RE511600_125	Residential	608204	4853924	1.5	9	23	31	0	-
RE511600_126	Residential	608199	4853931	1.5	9	23	31	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE511600_127	Residential	608194	4853938	1.5	9	23	31	0	-
RE511600_128	Residential	608189	4853944	1.5	9	23	31	0	-
RE511600_129	Residential	608184	4853951	1.5	9	23	31	0	-
RE511600_130	Residential	608179	4853958	1.5	9	23	31	0	-
RE511600_131	Residential	608173	4853967	1.5	9	23	31	0	-
RE511600_132	Residential	608210	4853982	1.5	9	23	31	0	-
RE511600_133	Residential	608221	4853990	1.5	8	23	31	0	-
RE511600_134	Residential	608230	4853997	1.5	8	23	31	0	-
RE511600_142	Residential	608180	4854022	1.5	8	23	31	0	-
RE511600_143	Residential	608189	4854028	1.5	8	23	31	0	-
RE511600_144	Residential	608196	4854033	1.5	8	23	31	0	-
RE511600_163	Residential	608170	4854054	1.5	8	23	31	0	-
RE511600_164	Residential	608162	4854048	1.5	8	23	31	0	-
RE511600_185	Residential	608102	4854000	1.5	9	23	31	0	-
RE511600_186	Residential	608099	4854005	1.5	9	23	31	0	-
RE511600_187	Residential	608096	4854009	1.5	9	23	31	0	-
RE511600_188	Residential	608090	4854017	1.5	9	23	31	0	-
RE511600_189	Residential	608087	4854022	1.5	9	23	31	0	-
RE511600_190	Residential	608081	4854032	1.5	9	23	31	0	-
RE511600_191	Residential	608077	4854037	1.5	9	23	31	0	-
RE511600_192	Residential	608073	4854045	1.5	9	23	31	0	-
RE511600_193	Residential	608068	4854051	1.5	9	23	31	0	-
RE511600_194	Residential	608064	4854057	1.5	9	23	31	0	-
RE511600_195	Residential	608060	4854062	1.5	9	23	31	0	-
RE511600_196	Residential	608056	4854069	1.5	9	23	31	0	-
RE511600_197	Residential	608053	4854075	1.5	9	23	31	0	-
RE511600_198	Residential	608154	4853993	1.5	9	23	31	0	-
RE511600_199	Residential	608148	4854003	1.5	9	23	31	0	-
RE511600_200	Residential	608142	4854010	1.5	9	23	31	0	-
RE511600_201	Residential	608137	4854018	1.5	9	23	31	0	-
RE511600_202	Residential	608132	4854025	1.5	9	23	31	0	-
RE511600_203	Residential	608126	4854033	1.5	9	23	31	0	-
RE511600_204	Residential	608121	4854040	1.5	8	23	31	0	-
RE511600_205	Residential	608116	4854047	1.5	8	23	31	0	-
RE511600_206	Residential	608111	4854054	1.5	8	23	31	0	-
RE511600_207	Residential	608107	4854061	1.5	8	23	31	0	-
RE511600_208	Residential	608102	4854068	1.5	8	23	31	0	-
RE511600_209	Residential	608097	4854075	1.5	8	23	31	0	-
RE511600_210	Residential	608091	4854082	1.5	8	23	31	0	-
RE511600_211	Residential	608086	4854090	1.5	8	23	31	0	-
RE511600_212	Residential	608080	4854098	1.5	8	23	31	0	-
RE511600_228	Residential	608507	4853702	1.5	10	23	33	0	-
RE511600_242	Residential	608263	4853920	1.5	9	23	31	0	-
RE511800_001	Residential	607134	4855697	1.5	17	23	40	0	-
RE512000_002	Residential	607206	4855951	1.5	18	23	40	0	-
RE512000_003	Residential	607187	4856027	1.5	19	23	41	0	-
RE512100_001	Residential	607265	4856058	1.5	24	23	46	0	-
RE512100_002	Residential	607248	4856119	1.5	24	23	46	0	-
RE512200_001	Residential	607241	4856162	1.5	24	23	46	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE512200_002	Residential	607123	4856318	1.5	27	23	49	0	-
RE512200_003	Residential	607102	4856358	1.5	28	23	50	1	0.1%
RE512300_001	Residential	607221	4856317	1.5	26	23	49	0	-
RE512400_001	Residential	607226	4856438	1.5	26	23	48	0	-
RE514400_001	Residential	608610	4857694	1.5	12	23	34	0	-
RE514400_003	Residential	608876	4857474	1.5	10	23	32	0	-
RE514400_006	Residential	608883	4857432	1.5	9	23	32	0	-
RE514400_007	Residential	608877	4857453	1.5	10	23	32	0	-
RE514500_001	Residential	608674	4857705	1.5	12	23	35	0	-
RE514500_002	Residential	608701	4857709	1.5	12	23	35	0	-
RE514500_003	Residential	608738	4857729	1.5	12	23	35	0	-
RE514500_006	Residential	608958	4857441	1.5	10	23	33	0	-
RE514500_007	Residential	608953	4857458	1.5	11	23	33	0	-
RE514500_008	Residential	608872	4857492	1.5	10	23	32	0	-
RE514500_009	Residential	608859	4857508	1.5	10	23	32	0	-
RE514500_010	Residential	608849	4857526	1.5	10	23	33	0	-
RE514600_001	Residential	608758	4857755	1.5	13	23	36	0	-
RE514600_002	Residential	608949	4857475	1.5	11	23	33	0	-
RE514600_003	Residential	608946	4857496	1.5	11	23	34	0	-
RE514600_004	Residential	608942	4857512	1.5	11	23	34	0	-
RE514600_005	Residential	608936	4857529	1.5	12	23	34	0	-
RE514600_006	Residential	608930	4857551	1.5	12	23	34	0	-
RE514700_001	Residential	608965	4857617	1.5	14	23	36	0	-
RE514800_001	Residential	608884	4857846	1.5	16	23	39	0	-
RE515000_001	Residential	608971	4857986	1.5	20	23	43	0	-
RE515100_001	Residential	609037	4857912	1.5	17	23	39	0	-
RE515200_001	Residential	609158	4857928	1.5	15	23	38	0	-
RE515200_002	Residential	609081	4857926	1.5	16	23	39	0	-
RE515200_003	Residential	608988	4858132	1.5	15	23	37	0	-
RE515300_001	Residential	609255	4857942	1.5	14	23	37	0	-
RE515300_002	Residential	609091	4858212	1.5	12	23	34	0	-
RE515300_003	Residential	608992	4858402	1.5	15	23	38	0	-
RE516200_001	Residential	609863	4858591	1.5	10	23	32	0	-
RE517200_001	Residential	610865	4858953	1.5	10	23	33	0	-
RE517200_002	Residential	610873	4858915	1.5	10	23	32	0	-
RE517200_003	Residential	610988	4858848	1.5	9	23	32	0	-
RE517400_001	Residential	611124	4858907	1.5	9	23	31	0	-
RE519100_001	Residential	612653	4859633	1.5	9	23	31	0	-
RE519500_001	Residential	612843	4860236	1.5	15	23	38	0	-
RE519500_002	Residential	612758	4860312	1.5	19	23	41	0	-
RE521400_001	Residential	614549	4860340	1.5	15	23	37	0	-
RE521600_001	Park and Conservation	615842	4859006	1.5	19	23	41	0	-
RE521600_002	Residential	614759	4860153	1.5	14	23	37	0	-
RE521600_003	Residential	614783	4860430	1.5	20	23	42	0	-
RE521600_004	Residential	615884	4859578	1.5	36	23	58	9	0.5%
RE521600_005	Residential	615805	4859615	1.5	25	23	48	0	-
RE521600_006	Residential	615779	4859578	1.5	23	23	46	0	-
RE521600_007	Residential	615741	4859736	1.5	22	23	45	0	-
RE521600_008	Residential	615516	4859929	1.5	19	23	41	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_009	Residential	615671	4860025	1.5	24	23	46	0	-
RE521600_010	Residential	616259	4860149	1.5	19	23	41	0	-
RE521600_011	Residential	616419	4860214	1.5	14	23	36	0	-
RE521600_012	Residential	615172	4860341	1.5	15	23	37	0	-
RE521600_013	Residential	615849	4858301	1.5	13	23	35	0	-
RE521600_017	Residential	614954	4860122	1.5	12	23	35	0	-
RE521600_018	Residential	615792	4858087	1.5	11	23	34	0	-
RE521600_019	Residential	615658	4858566	1.5	11	23	34	0	-
RE521600_020	Residential	615792	4858189	1.5	11	23	34	0	-
RE521600_023	Residential	615889	4858330	1.5	13	23	36	0	-
RE521600_026	Residential	615700	4858499	1.5	11	23	34	0	-
RE521600_028	Residential	615797	4858289	1.5	12	23	35	0	-
RE521600_030	Residential	615749	4858368	1.5	11	23	34	0	-
RE521600_032	Residential	615905	4858207	1.5	13	23	35	0	-
RE521600_035	Residential	615746	4858159	1.5	11	23	34	0	-
RE521600_036	Residential	615704	4858558	1.5	12	23	34	0	-
RE521600_037	Residential	615871	4858014	1.5	11	23	34	0	-
RE521600_038	Residential	615876	4858126	1.5	12	23	35	0	-
RE521600_039	Residential	615808	4858385	1.5	11	23	34	0	-
RE521600_041	Residential	615837	4858114	1.5	11	23	34	0	-
RE521600_043	Residential	615749	4858276	1.5	11	23	34	0	-
RE521600_044	Residential	615845	4858206	1.5	12	23	35	0	-
RE521600_045	Residential	615931	4858159	1.5	13	23	36	0	-
RE521600_046	Residential	615948	4858081	1.5	13	23	36	0	-
RE521600_047	Residential	616722	4858027	1.5	9	23	32	0	-
RE521600_048	Residential	616724	4858016	1.5	9	23	32	0	-
RE521600_049	Residential	616727	4858005	1.5	9	23	32	0	-
RE521600_050	Residential	616685	4857961	1.5	10	23	32	0	-
RE521600_051	Residential	616692	4857982	1.5	10	23	32	0	-
RE521600_052	Residential	616692	4857993	1.5	10	23	32	0	-
RE521600_053	Residential	616690	4858005	1.5	10	23	32	0	-
RE521600_054	Residential	616682	4858015	1.5	10	23	33	0	-
RE521600_055	Residential	616628	4857990	1.5	11	23	33	0	-
RE521600_056	Residential	616631	4857979	1.5	11	23	33	0	-
RE521600_057	Residential	616637	4857970	1.5	10	23	33	0	-
RE521600_058	Residential	616642	4857962	1.5	10	23	33	0	-
RE521600_059	Residential	616645	4857951	1.5	10	23	33	0	-
RE521600_060	Residential	616617	4857954	1.5	11	23	33	0	-
RE521600_061	Residential	616605	4857951	1.5	11	23	33	0	-
RE521600_062	Residential	616591	4857946	1.5	11	23	33	0	-
RE521600_063	Residential	616581	4857941	1.5	11	23	34	0	-
RE521600_064	Residential	616570	4857932	1.5	11	23	34	0	-
RE521600_065	Residential	616562	4857926	1.5	11	23	34	0	-
RE521600_066	Residential	616551	4857917	1.5	11	23	34	0	-
RE521600_067	Residential	616541	4857910	1.5	11	23	34	0	-
RE521600_068	Residential	616532	4857900	1.5	12	23	34	0	-
RE521600_069	Residential	616527	4857889	1.5	12	23	34	0	-
RE521600_070	Residential	616522	4857875	1.5	12	23	34	0	-
RE521600_071	Residential	616520	4857863	1.5	12	23	34	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RE521600_072	Residential	616516	4857852	1.5	12	23	34	0	-
RE521600_073	Residential	616511	4857839	1.5	12	23	34	0	-
RE521600_074	Residential	616508	4857827	1.5	12	23	34	0	-
RE521600_075	Residential	616510	4857818	1.5	12	23	34	0	-
RE521600_076	Residential	616566	4857851	1.5	10	23	33	0	-
RE521600_077	Residential	616573	4857861	1.5	10	23	33	0	-
RE521600_078	Residential	616578	4857871	1.5	10	23	33	0	-
RE521600_079	Residential	616586	4857883	1.5	10	23	33	0	-
RE521600_080	Residential	616597	4857890	1.5	10	23	33	0	-
RE521600_081	Residential	616609	4857897	1.5	10	23	33	0	-
RE521600_082	Residential	616621	4857902	1.5	10	23	33	0	-
RE521600_083	Residential	616646	4857916	1.5	10	23	32	0	-
RE521600_084	Residential	616072	4857806	1.5	15	23	37	0	-
RE521600_085	Residential	616075	4857794	1.5	14	23	37	0	-
RE521600_086	Residential	616095	4857778	1.5	15	23	37	0	-
RE521600_087	Residential	616097	4857766	1.5	15	23	37	0	-
RE521600_088	Residential	616098	4857755	1.5	15	23	38	0	-
RE521600_089	Residential	616192	4857944	1.5	26	23	49	0	-
RE521600_090	Residential	615423	4860137	1.5	16	23	39	0	-
RW110000_001	Residential	595952	4825790	1.5	28	23	51	1	0.1%
RW110000_002	Residential	595454	4825807	1.5	46	23	69	27	1.5%
RW110000_008	Residential	594041	4825166	1.5	35	23	58	5	0.3%
RW110000_009	Residential	594096	4825191	1.5	39	23	62	14	0.8%
RW110000_010	Residential	594523	4825688	1.5	27	23	49	0	-
RW110000_011	Residential	595159	4826252	1.5	33	23	56	4	0.2%
RW110000_012	Residential	595437	4826548	1.5	41	23	64	15	0.8%
RW110000_013	Residential	595321	4826744	1.5	43	23	65	18	1.0%
RW110000_014	Residential	595112	4826651	1.5	46	23	69	16	0.9%
RW110000_015	Residential	595155	4826706	1.5	49	23	72	19	1.0%
RW110000_016	Residential	595166	4826855	1.5	52	23	74	24	1.3%
RW110000_017	Residential	595209	4826815	1.5	57	23	80	27	1.5%
RW110000_018	Residential	594653	4825844	1.5	27	23	50	0	-
RW110000_019	Residential	595416	4826834	1.5	48	23	71	25	1.4%
RW110000_020	Residential	595560	4825534	1.5	28	23	50	1	0.1%
RW110000_021	Residential	597393	4824513	1.5	29	23	52	2	0.1%
RW110000_022	Residential	594899	4824668	1.5	28	23	51	1	0.1%
RW110000_023	Residential	594655	4824528	1.5	37	23	60	4	0.2%
RW110000_024	Residential	595310	4826113	1.5	53	23	75	41	2.2%
RW110100_001	Residential	595323	4827011	1.5	55	23	78	33	1.8%
RW112100_001	Residential	594926	4829061	1.5	29	23	51	1	0.1%
RW112100_002	Residential	594880	4829107	1.5	25	23	48	0	-
RW112100_003	Residential	594856	4829138	1.5	24	23	47	0	-
RW112200_001	Residential	594826	4829169	1.5	23	23	45	0	-
RW112300_001	Residential	594544	4829356	1.5	14	23	36	0	-
RW112300_002	Residential	594555	4829392	1.5	15	23	37	0	-
RW112300_003	Residential	594737	4829363	1.5	22	23	44	0	-
RW112400_001	Residential	594707	4829399	1.5	21	23	43	0	-
RW112400_002	Residential	594683	4829425	1.5	20	23	43	0	-
RW112400_003	Residential	594663	4829470	1.5	18	23	41	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW112500_001	Residential	594652	4829522	1.5	16	23	38	0	-
RW112500_002	Residential	594587	4829561	1.5	16	23	38	0	-
RW112600_001	Residential	594537	4829618	1.5	15	23	38	0	-
RW113300_001	Residential	595127	4830221	1.5	24	23	47	0	-
RW113700_001	Residential	594940	4830647	1.5	25	23	47	0	-
RW210600_001	Residential	594968	4831278	1.5	24	23	47	0	-
RW210600_002	Residential	594854	4831236	1.5	28	23	51	1	0.1%
RW210700_001	Residential	594784	4831216	1.5	33	23	55	2	0.1%
RW210700_002	Residential	594835	4831316	1.5	21	23	44	0	-
RW210700_003	Residential	595003	4831319	1.5	26	23	49	0	-
RW210800_001	Residential	594396	4831184	1.5	11	23	33	0	-
RW210800_002	Residential	594871	4831353	1.5	20	23	42	0	-
RW210800_003	Residential	594900	4831384	1.5	20	23	42	0	-
RW210800_004	Residential	594906	4831419	1.5	19	23	42	0	-
RW210900_001	Residential	594700	4831386	1.5	19	23	41	0	-
RW211000_001	Residential	594519	4831395	1.5	19	23	41	0	-
RW213300_001	Residential	594131	4833825	1.5	32	23	54	4	0.2%
RW213500_001	Residential	594089	4834002	1.5	26	23	49	0	-
RW213500_002	Residential	593987	4833921	1.5	25	23	48	0	-
RW213500_003	Residential	594063	4834025	1.5	25	23	48	0	-
RW213900_001	Residential	593680	4834239	1.5	27	23	50	0	-
RW213900_002	Residential	593146	4833948	1.5	27	23	50	0	-
RW213900_003	Residential	593108	4833915	1.5	26	23	48	0	-
RW214000_001	Residential	593442	4834167	1.5	29	23	51	1	0.1%
RW214000_002	Residential	593165	4834006	1.5	25	23	48	0	-
RW214200_001	Residential	593365	4834312	1.5	26	23	49	0	-
RW214200_002	Residential	593424	4834334	1.5	33	23	55	2	0.1%
RW214200_003	Residential	593447	4834362	1.5	36	23	59	3	0.2%
RW214200_004	Residential	593638	4834465	1.5	45	23	68	4	0.2%
RW214400_001	Residential	593557	4834570	1.5	32	23	55	2	0.1%
RW214400_002	Residential	593363	4834447	1.5	28	23	51	2	0.1%
RW214500_001	Place of Worship	593180	4834366	1.5	19	23	42	0	-
RW214700_001	Residential	593316	4834759	1.5	24	23	47	0	-
RW214800_001	Residential	593246	4834900	1.5	22	23	44	0	-
RW214900_001	Place of Worship	593238	4834901	1.5	22	23	44	0	-
RW215500_001	Residential	592716	4835205	1.5	20	23	43	0	-
RW215500_002	Residential	592751	4835308	1.5	16	23	38	0	-
RW215500_003	Residential	592672	4835243	1.5	20	23	42	0	-
RW215600_001	Residential	592652	4835268	1.5	20	23	42	0	-
RW215600_002	Residential	592625	4835291	1.5	19	23	42	0	-
RW215600_003	Residential	592706	4835349	1.5	16	23	39	0	-
RW216000_001	Residential	592457	4835580	1.5	17	23	40	0	-
RW216300_001	Residential	592187	4835722	1.5	21	23	44	0	-
RW217300_001	Residential	590963	4835918	1.5	15	23	37	0	-
RW217300_003	Residential	590894	4835850	1.5	12	23	35	0	-
RW217400_001	Residential	591070	4836272	1.5	24	23	47	0	-
RW217400_003	Residential	590716	4835921	1.5	11	23	34	0	-
RW217600_001	Residential	591245	4836671	1.5	29	23	52	3	0.2%
RW218600_001	Residential	589698	4836609	1.5	15	23	38	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RW218700_001	Residential	590211	4837285	1.5	35	23	58	2	0.1%
RW219300_001	Residential	589994	4837866	1.5	28	23	50	1	0.1%
RW219600_001	Residential	589829	4838199	1.5	31	23	53	1	0.1%
RW219800_001	Residential	589708	4838309	1.5	27	23	50	0	-
RW219800_002	Residential	589678	4838339	1.5	26	23	49	0	-
RW219800_003	Residential	589655	4838356	1.5	26	23	49	0	-
RW219900_001	Residential	589628	4838393	1.5	25	23	48	0	-
RW219900_002	Residential	589604	4838419	1.5	25	23	47	0	-
RW219900_003	Residential	589574	4838446	1.5	24	23	47	0	-
RW219900_004	Residential	589348	4838304	1.5	21	23	43	0	-
RW220100_001	Residential	589237	4838630	1.5	23	23	46	0	-
RW220200_001	Residential	589212	4838657	1.5	23	23	46	0	-
RW220200_002	Residential	589193	4838697	1.5	21	23	44	0	-
RW221500_001	Residential	589630	4840149	1.5	27	23	50	0	-
RW221600_001	Residential	589645	4840276	1.5	23	23	46	0	-
RW221600_002	Residential	589618	4840305	1.5	21	23	44	0	-
RW221600_003	Residential	589575	4840340	1.5	19	23	41	0	-
RW221600_004	Residential	589489	4840296	1.5	24	23	47	0	-
RW221600_005	Residential	589463	4840313	1.5	23	23	46	0	-
RW221700_001	Residential	589372	4840554	1.5	15	23	37	0	-
RW222900_001	Residential	590172	4841526	1.5	27	23	50	1	0.1%
RW223000_001	Residential	590405	4841464	1.5	28	23	51	1	0.1%
RW223000_002	Residential	589855	4841856	1.5	15	23	38	0	-
RW223100_001	Residential	590119	4841763	1.5	18	23	41	0	-
RW223600_001	Residential	590319	4842303	1.5	21	23	44	0	-
RW223700_001	Residential	590349	4842328	1.5	22	23	44	0	-
RW223700_002	Residential	590387	4842378	1.5	23	23	46	0	-
RW223800_001	Residential	590421	4842402	1.5	25	23	48	0	-
RW223800_002	Residential	590456	4842433	1.5	26	23	49	0	-
RW224200_001	Residential	591059	4842518	1.5	61	23	83	26	1.4%
RW225200_001	Residential	591261	4843431	1.5	38	23	60	2	0.1%
RW225300_001	Residential	591243	4843461	1.5	40	23	63	3	0.2%
RW225300_002	Residential	591272	4843493	1.5	41	23	64	3	0.2%
RW225300_003	Residential	591295	4843534	1.5	44	23	66	5	0.3%
RW226000_001	Residential	591344	4844228	1.5	48	23	71	8	0.4%
RW226200_001	Residential	591234	4844508	1.5	30	23	52	1	0.1%
RW226300_001	Residential	591196	4844542	1.5	28	23	50	1	0.1%
RW226300_002	Residential	591171	4844578	1.5	26	23	49	0	-
RW227700_001	Residential	591290	4846105	1.5	20	23	43	0	-
RW227800_001	Residential	591651	4846073	1.5	29	23	51	1	0.1%
RW227800_002	Residential	591541	4846134	1.5	30	23	53	2	0.1%
RW227800_003	Residential	591348	4846123	1.5	23	23	45	0	-
RW228900_001	Residential	592191	4847059	1.5	26	23	49	0	-
RW229000_005	Residential	592239	4847128	1.5	27	23	50	0	-
RW229100_003	Residential	592057	4847361	1.5	25	23	48	0	-
RW229100_004	Residential	592238	4847208	1.5	30	23	52	1	0.1%
RW229200_001	Residential	591945	4847506	1.5	25	23	48	0	-
RW229200_002	Residential	592082	4847514	1.5	19	23	42	0	-
RW229200_003	Residential	592013	4847571	1.5	19	23	42	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
								Events > 50 µg/m³	
ID#	Description	X	Y	Z				Count	Frequency
RW229200_004	Residential	591965	4847613	1.5	19	23	42	0	-
RW229200_005	Residential	592047	4847546	1.5	19	23	41	0	-
RW229200_006	Residential	591969	4847485	1.5	26	23	48	0	-
RW229200_007	Residential	591918	4847523	1.5	24	23	47	0	-
RW229300_001	Residential	591940	4847644	1.5	19	23	41	0	-
RW230300_001	Residential	592829	4848529	1.5	20	23	42	0	-
RW230300_002	Residential	592606	4848716	1.5	15	23	37	0	-
RW230400_003	Residential	593165	4848363	1.5	24	23	46	0	-
RW230400_004	Residential	593067	4848428	1.5	22	23	45	0	-
RW230400_005	Residential	592665	4848881	1.5	14	23	36	0	-
RW231500_001	Residential	593790	4849191	1.5	23	23	46	0	-
RW231500_002	Residential	593814	4849083	1.5	24	23	46	0	-
RW231800_002	Residential	593623	4849689	1.5	15	23	38	0	-
RW231800_003	Residential	593681	4849607	1.5	17	23	40	0	-
RW231900_001	Residential	593974	4849584	1.5	21	23	43	0	-
RW231900_002	Residential	593821	4849636	1.5	18	23	41	0	-
RW231900_003	Residential	593783	4849662	1.5	17	23	40	0	-
RW231900_004	Residential	593753	4849685	1.5	16	23	39	0	-
RW231900_005	Residential	593708	4849712	1.5	16	23	38	0	-
RW231900_006	Residential	593679	4849744	1.5	15	23	38	0	-
RW232900_001	Residential	594647	4850489	1.5	21	23	44	0	-
RW232900_002	Residential	594641	4850578	1.5	23	23	46	0	-
RW232900_003	Residential	594596	4850601	1.5	22	23	45	0	-
RW233000_001	Residential	594937	4850252	1.5	31	23	54	1	0.1%
RW233000_002	Residential	594873	4850324	1.5	27	23	49	0	-
RW233000_003	Residential	594722	4850470	1.5	23	23	46	0	-
RW233000_004	Residential	594661	4850750	1.5	17	23	40	0	-
RW233100_001	Residential	595054	4850303	1.5	29	23	52	2	0.1%
RW233100_002	Residential	594986	4850367	1.5	28	23	50	1	0.1%
RW233100_003	Residential	594960	4850397	1.5	26	23	49	0	-
RW233100_004	Residential	594754	4850728	1.5	16	23	38	0	-
RW233300_001	Residential	595066	4850652	1.5	17	23	39	0	-
RW233500_001	Residential	595517	4850395	1.5	34	23	57	11	0.6%
RW233600_001	Residential	595481	4850552	1.5	23	23	46	0	-
RW233700_001	Residential	595601	4850557	1.5	27	23	50	0	-
RW233800_001	Residential	595629	4850726	1.5	22	23	45	0	-
RW234400_001	Residential	595843	4851239	1.5	24	23	47	0	-
RW234400_002	Residential	595722	4851407	1.5	16	23	39	0	-
RW234400_003	Residential	595753	4851375	1.5	18	23	41	0	-
RW234500_001	Residential	596110	4851144	1.5	26	23	48	0	-
RW234500_002	Residential	596228	4851057	1.5	33	23	55	2	0.1%
RW234600_001	Residential	595890	4851390	1.5	18	23	41	0	-
RW234600_002	Residential	595822	4851471	1.5	17	23	39	0	-
RW234600_003	Residential	595792	4851490	1.5	16	23	39	0	-
RW235800_001	Residential	596933	4852124	1.5	38	23	61	6	0.3%
RW235800_002	Residential	596708	4852352	1.5	28	23	51	1	0.1%
RW235800_003	Residential	596626	4852447	1.5	25	23	48	0	-
RW235800_004	Residential	596582	4852479	1.5	23	23	45	0	-
RW235900_003	Residential	596852	4852343	1.5	26	23	48	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

Receptor Information					Maximum Predicted 24 Hour Concentration (µg/m³)	Background Concentration (µg/m³)	Maximum Predicted plus Background (µg/m³)	Predicted Excursions Above Criteria	
ID#	Description	X	Y	Z				Events > 50 µg/m³	
								Count	Frequency
RW235900_004	Residential	596685	4852406	1.5	28	23	51	1	0.1%
RW235900_008	Residential	596930	4852261	1.5	30	23	53	1	0.1%
RW310200_001	Residential	597162	4852242	1.5	30	23	52	2	0.1%
RW311300_001	Residential	598030	4853004	1.5	45	23	68	7	0.4%
RW311300_002	Residential	598003	4853024	1.5	40	23	63	3	0.2%
RW311300_003	Residential	597975	4853049	1.5	35	23	57	3	0.2%
RW311300_004	Residential	597927	4853089	1.5	32	23	55	1	0.1%
RW311400_001	Residential	598069	4853072	1.5	34	23	56	2	0.1%
RW311400_002	Residential	598037	4853102	1.5	29	23	52	1	0.1%
RW311400_003	Residential	597991	4853145	1.5	28	23	50	1	0.1%
RW311400_004	Residential	597940	4853194	1.5	24	23	47	0	-
RW311400_005	Residential	597918	4853265	1.5	19	23	42	0	-
RW311400_006	Residential	597843	4853344	1.5	18	23	40	0	-
RW311400_008	Residential	597739	4853444	1.5	16	23	39	0	-
RW311400_009	Residential	597683	4853455	1.5	16	23	39	0	-
RW312300_001	Residential	598843	4853771	1.5	22	23	44	0	-
RW312400_001	Residential	598885	4854042	1.5	19	23	42	0	-
RW312400_002	Residential	598849	4854080	1.5	15	23	38	0	-
RW312500_001	Residential	599044	4853903	1.5	28	23	50	1	0.1%
RW312500_002	Residential	599019	4853928	1.5	27	23	50	0	-
RW312500_003	Residential	598925	4854010	1.5	22	23	45	0	-
RW312500_004	Residential	598959	4854116	1.5	16	23	39	0	-
RW312600_001	Residential	599110	4853841	1.5	29	23	52	3	0.2%
RW312600_002	Residential	599074	4853862	1.5	28	23	50	1	0.1%
RW312700_001	Residential	599266	4853691	1.5	48	23	71	18	1.0%
RW312900_001	Residential	599307	4854183	1.5	14	23	37	0	-
RW313100_001	Residential	599559	4854108	1.5	22	23	45	0	-
RW313400_001	Residential	599752	4854478	1.5	15	23	37	0	-
RW313900_001	Residential	600110	4854917	1.5	14	23	36	0	-
RW314100_001	Residential	600493	4854739	1.5	13	23	35	0	-
RW314300_001	Residential	600741	4854369	1.5	23	23	46	0	-
RW315400_001	Residential	601942	4855015	1.5	13	23	35	0	-
RW317500_001	Residential	603840	4854629	1.5	48	23	70	15	0.8%
RW317500_003	Residential	603870	4854650	1.5	48	23	71	16	0.9%
RW410100_001	Residential	603972	4854928	1.5	28	23	51	2	0.1%
RW410100_002	Residential	603936	4854961	1.5	27	23	49	0	-
RW410200_001	Residential	604015	4854902	1.5	30	23	52	7	0.4%
RW410400_001	Residential	604221	4855097	1.5	30	23	52	3	0.2%
RW410800_002	Residential	604445	4855386	1.5	28	23	51	1	0.1%
RW510000_001	Residential	604897	4855625	1.5	30	23	53	1	0.1%
RW510100_001	Residential	605003	4855608	1.5	31	23	54	1	0.1%
RW510100_002	Residential	604998	4855726	1.5	24	23	47	0	-
RW510400_001	Residential	605360	4855644	1.5	22	23	45	0	-
RW512600_001	Residential	607049	4856822	1.5	32	23	54	2	0.1%
RW512600_002	Residential	606713	4857044	1.5	12	23	34	0	-
RW512700_001	Residential	606950	4856924	1.5	22	23	45	0	-
RW515200_001	Residential	608655	4859025	1.5	23	23	46	0	-
RW515200_002	Residential	608453	4859443	1.5	10	23	32	0	-
RW515500_001	Residential	609009	4858910	1.5	27	23	49	0	-

Appendix G.2.4 : Frequency Analysis, 24-Hour PM_{10}

RWDI Project #1301992A

Highway 413 - 2051 Build Scenario

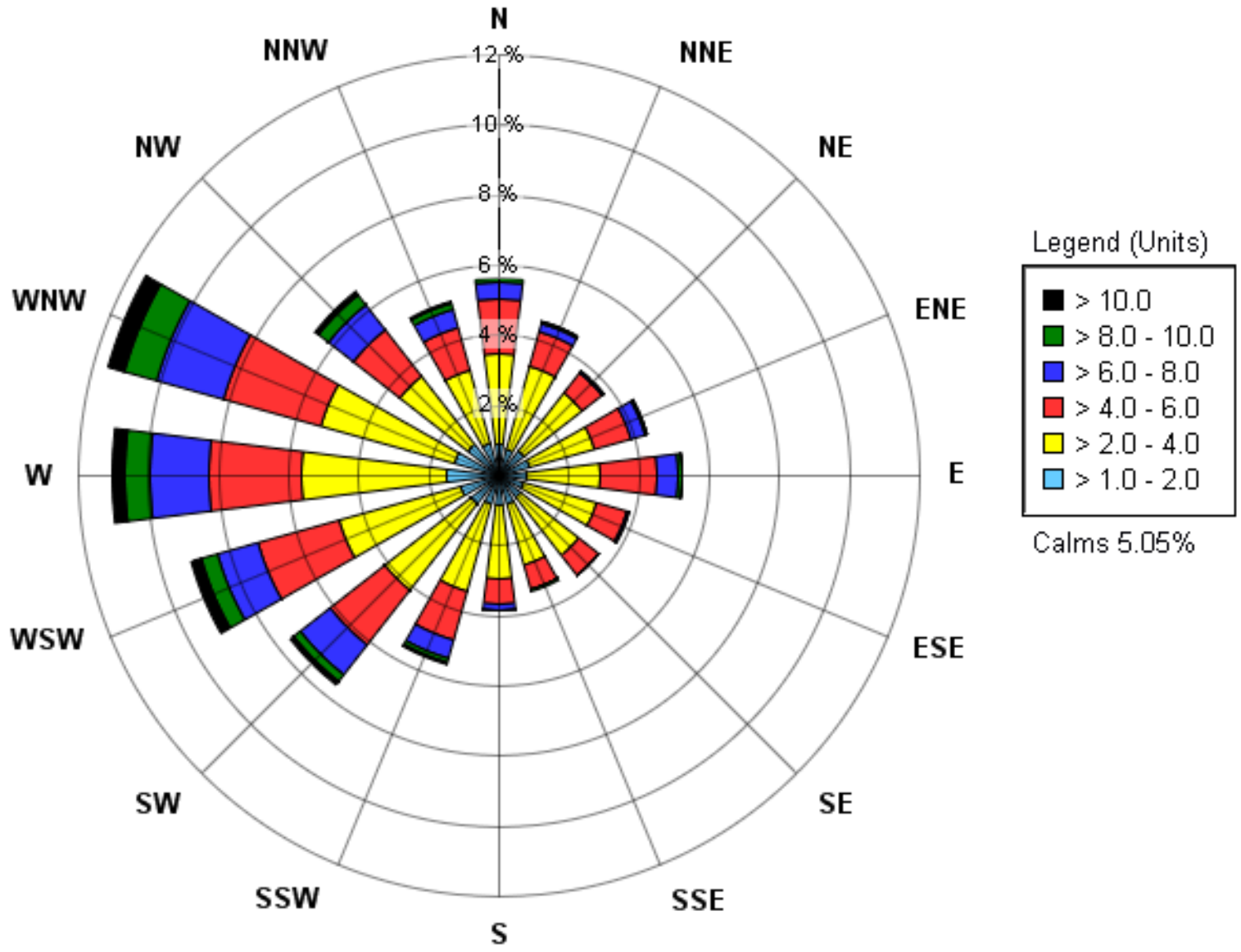
Receptor Information					Maximum Predicted 24 Hour Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Maximum Predicted plus Background ($\mu g/m^3$)	Predicted Excursions Above Criteria	
								Events > 50 $\mu g/m^3$	
ID#	Description	X	Y	Z				Count	Frequency
RW515500_002	Residential	608965	4859173	1.5	14	23	36	0	-
RW515500_003	Residential	608645	4859708	1.5	8	23	31	0	-
RW515600_001	Residential	609102	4858982	1.5	24	23	46	0	-
RW515600_002	Residential	608876	4859423	1.5	14	23	37	0	-
RW515600_003	Residential	608980	4859372	1.5	12	23	35	0	-
RW515700_001	Residential	608966	4859442	1.5	13	23	35	0	-
RW516700_001	Residential	609986	4859710	1.5	11	23	34	0	-
RW517400_001	Residential	610721	4859654	1.5	27	23	49	0	-
RW517500_001	Residential	610788	4859750	1.5	20	23	43	0	-
RW517500_002	Residential	610631	4860179	1.5	13	23	36	0	-
RW517600_001	Residential	610730	4860162	1.5	17	23	39	0	-
RW519300_001	Residential	612321	4860800	1.5	13	23	36	0	-
RW519300_002	Residential	612247	4861048	1.5	25	23	47	0	-
RW519600_001	Residential	612681	4860774	1.5	18	23	41	0	-
RW519600_002	Residential	612644	4860851	1.5	15	23	38	0	-
RW519600_003	Residential	612606	4860976	1.5	15	23	37	0	-
RW519600_004	Residential	612556	4861217	1.5	16	23	39	0	-
RW519900_001	Residential	612911	4861179	1.5	12	23	35	0	-
RW520000_001	Residential	612975	4861191	1.5	12	23	34	0	-
RW520100_001	Residential	613108	4861238	1.5	12	23	35	0	-
RW520200_001	Residential	613167	4861245	1.5	12	23	34	0	-
RW520300_001	Residential	613263	4861267	1.5	12	23	35	0	-
RW520400_001	Residential	613409	4861318	1.5	14	23	37	0	-
RW520600_001	Residential	613595	4861385	1.5	15	23	38	0	-
RW520600_002	Residential	613696	4861264	1.5	16	23	39	0	-
RW520800_001	Residential	613821	4861450	1.5	16	23	39	0	-
RW520800_002	Residential	613868	4861446	1.5	16	23	39	0	-
RW520900_001	Residential	614011	4861487	1.5	16	23	38	0	-
RW521000_001	Residential	614074	4861506	1.5	16	23	38	0	-
RW521500_001	Residential	614584	4861772	1.5	36	23	59	4	0.2%
RW521500_002	Residential	614605	4861931	1.5	17	23	40	0	-
RW521500_003	Residential	614606	4861992	1.5	16	23	38	0	-
RW521500_004	Residential	614561	4862067	1.5	16	23	38	0	-
RW521500_005	Residential	614528	4862131	1.5	16	23	39	0	-
RW521500_006	Residential	614519	4862172	1.5	16	23	39	0	-
RW521600_001	Residential	615126	4862319	1.5	21	23	44	0	-
RW521600_002	Residential	616401	4861744	1.5	13	23	35	0	-
RW521600_009	Residential	616496	4861911	1.5	12	23	35	0	-
RW521600_010	Residential	614979	4862746	1.5	18	23	41	0	-
RW521600_011	Residential	614904	4862738	1.5	17	23	39	0	-
RW521600_012	Residential	615537	4863261	1.5	16	23	38	0	-
RW521600_013	Residential	615595	4863665	1.5	11	23	34	0	-
RW521600_014	Residential	616500	4861872	1.5	12	23	34	0	-
RW521600_016	Residential	614949	4863780	1.5	18	23	40	0	-
RW521600_017	Residential	616265	4861577	1.5	14	23	37	0	-

1826 Days of Meteorological Data

H

Wind Speed and Direction Frequencies (2019 - 2023)

Appendix H.1: Model Section 1

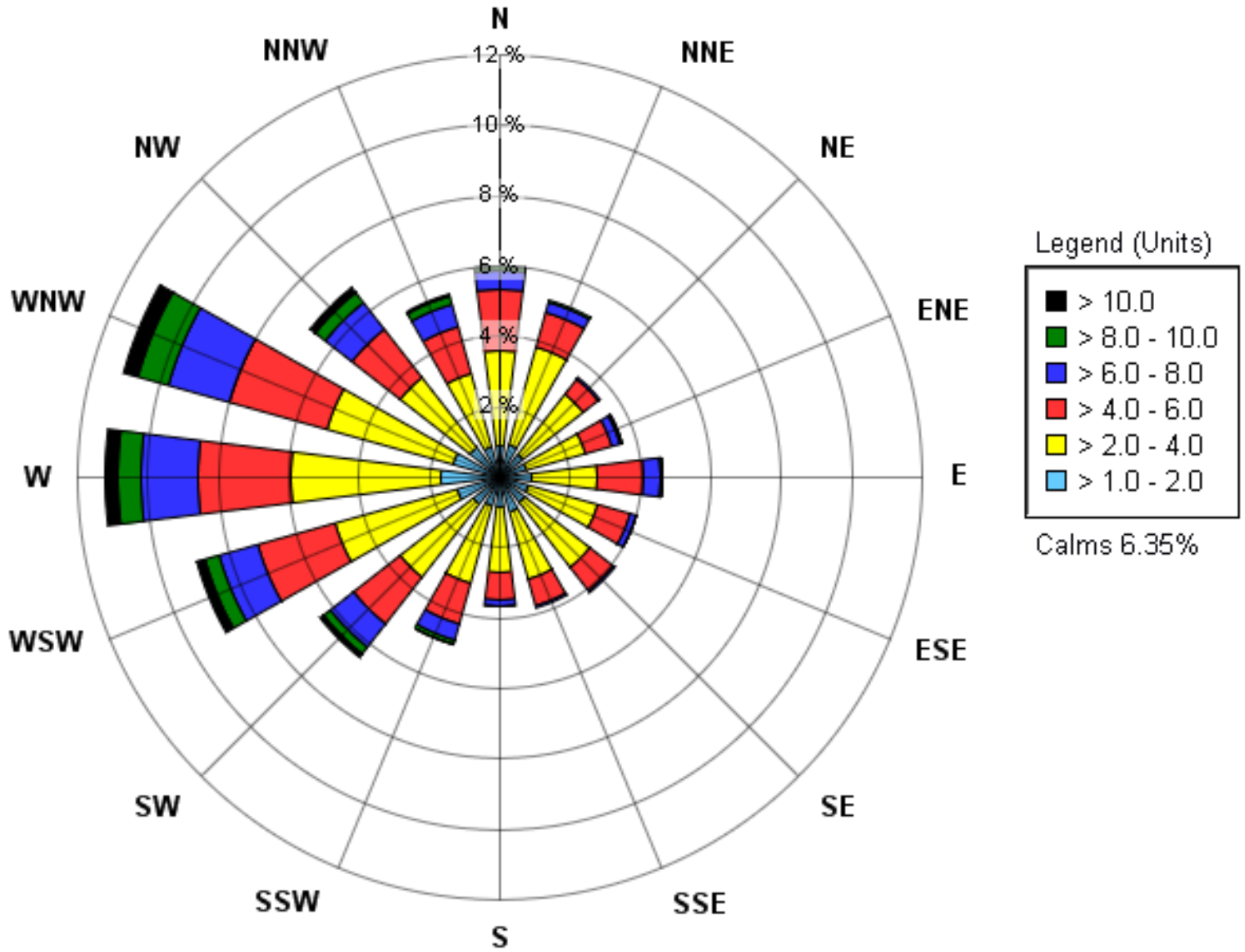


Wind Speed and Direction Frequencies
For Highway 413 Model Section 1 (2019 – 2023)

Highway 413

Drawn by:	JWS	Figure:	H.1
Project #:			1301992A
Date:			2025-08-27

Appendix H.2: Model Section 2

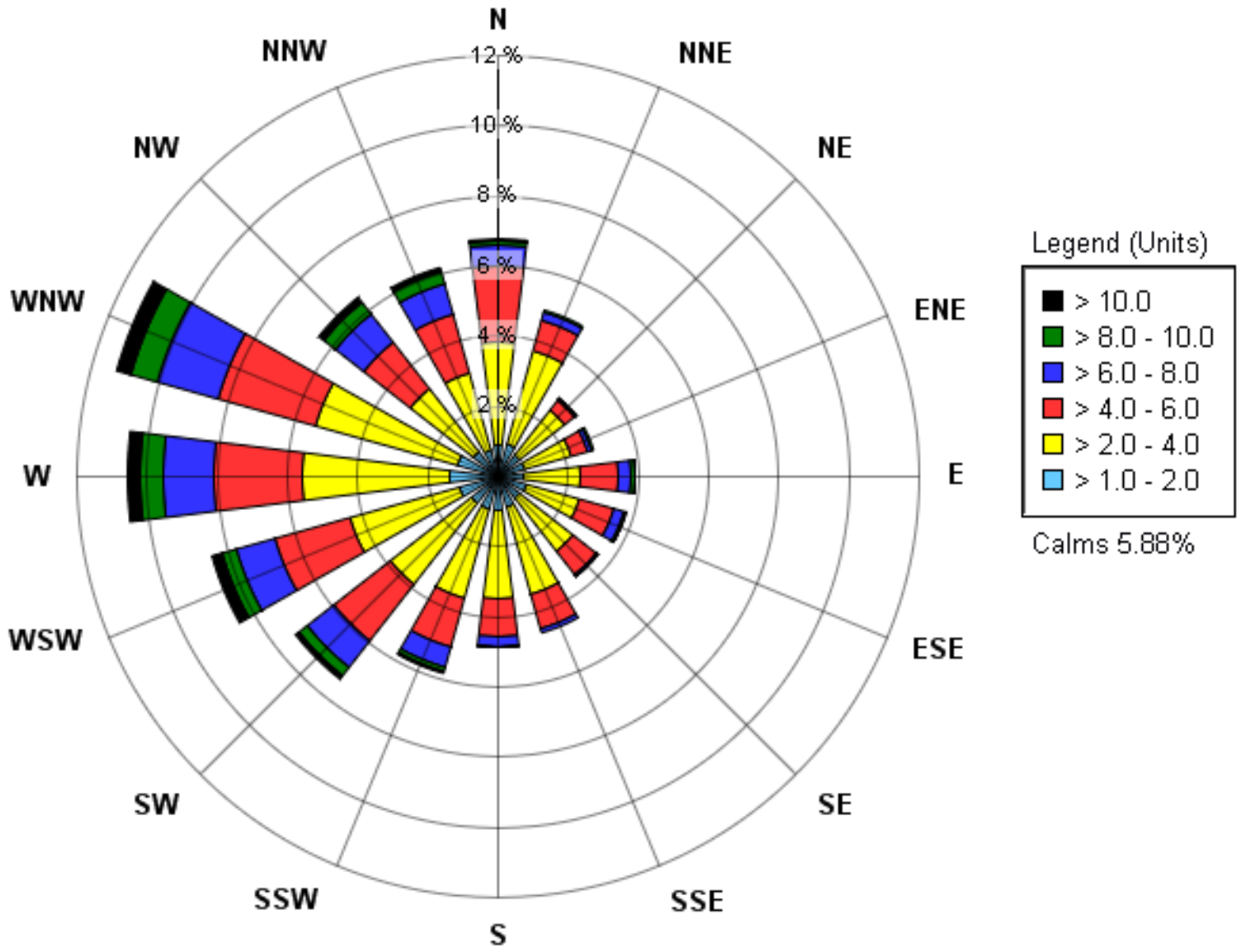


Wind Speed and Direction Frequencies
For Highway 413 Model Section 2 (2019 – 2023)

Highway 413

Drawn by:	JWS	Figure:	H.2
Project #:			1301992A
Date:			2025-08-27

Appendix H.3: Model Section 3

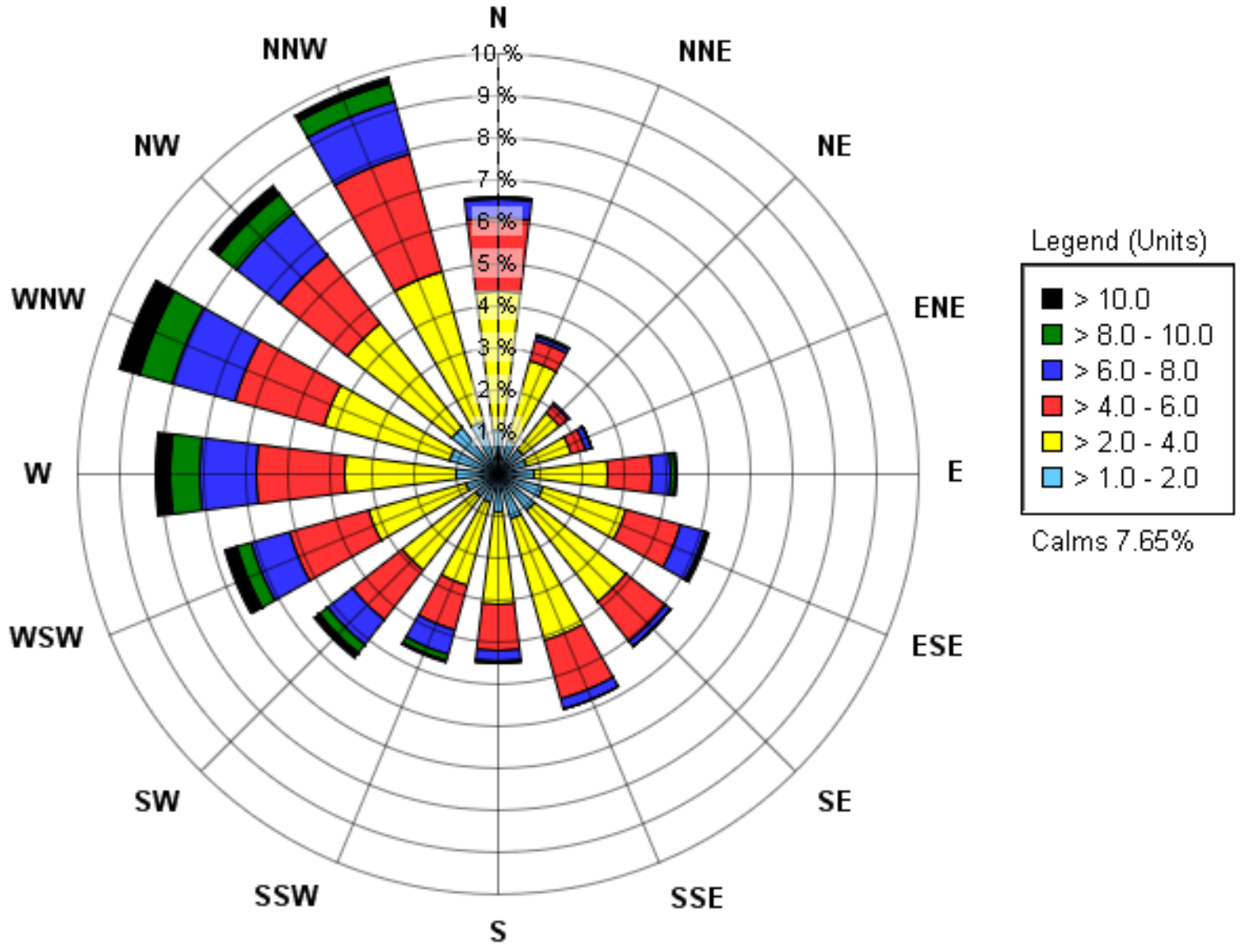


Wind Speed and Direction Frequencies
For Highway 413 Model Section 3 (2019 – 2023)

Highway 413

Drawn by:	JWS	Figure:	H.3
Project #:			1301992A
Date:			2025-08-27

Appendix H.4: Model Section 4

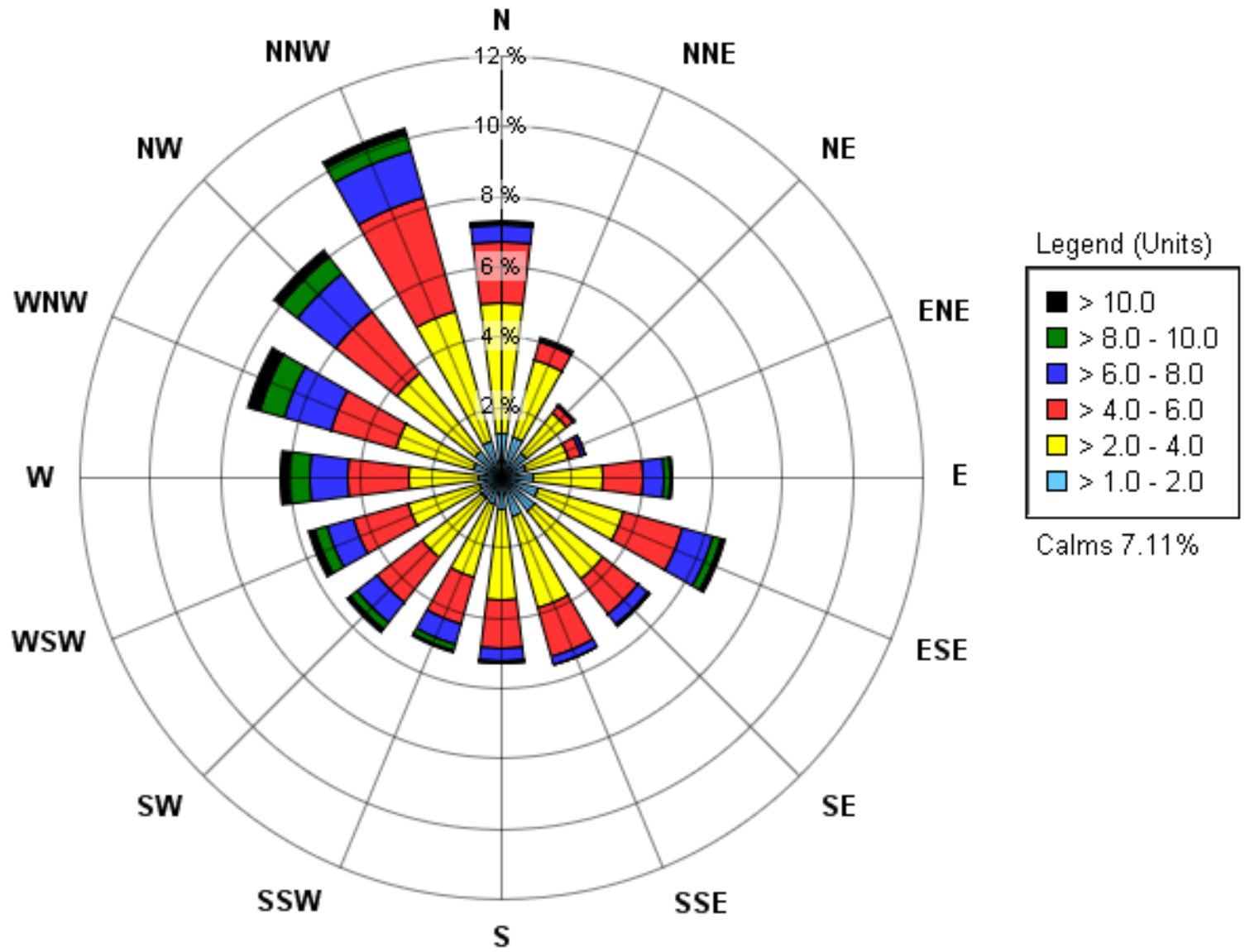


Wind Speed and Direction Frequencies
For Highway 413 Model Section 4 (2019 – 2023)

Highway 413

Drawn by:	JWS	Figure:	H.4
Project #:			1301992A
Date:			2025-08-27

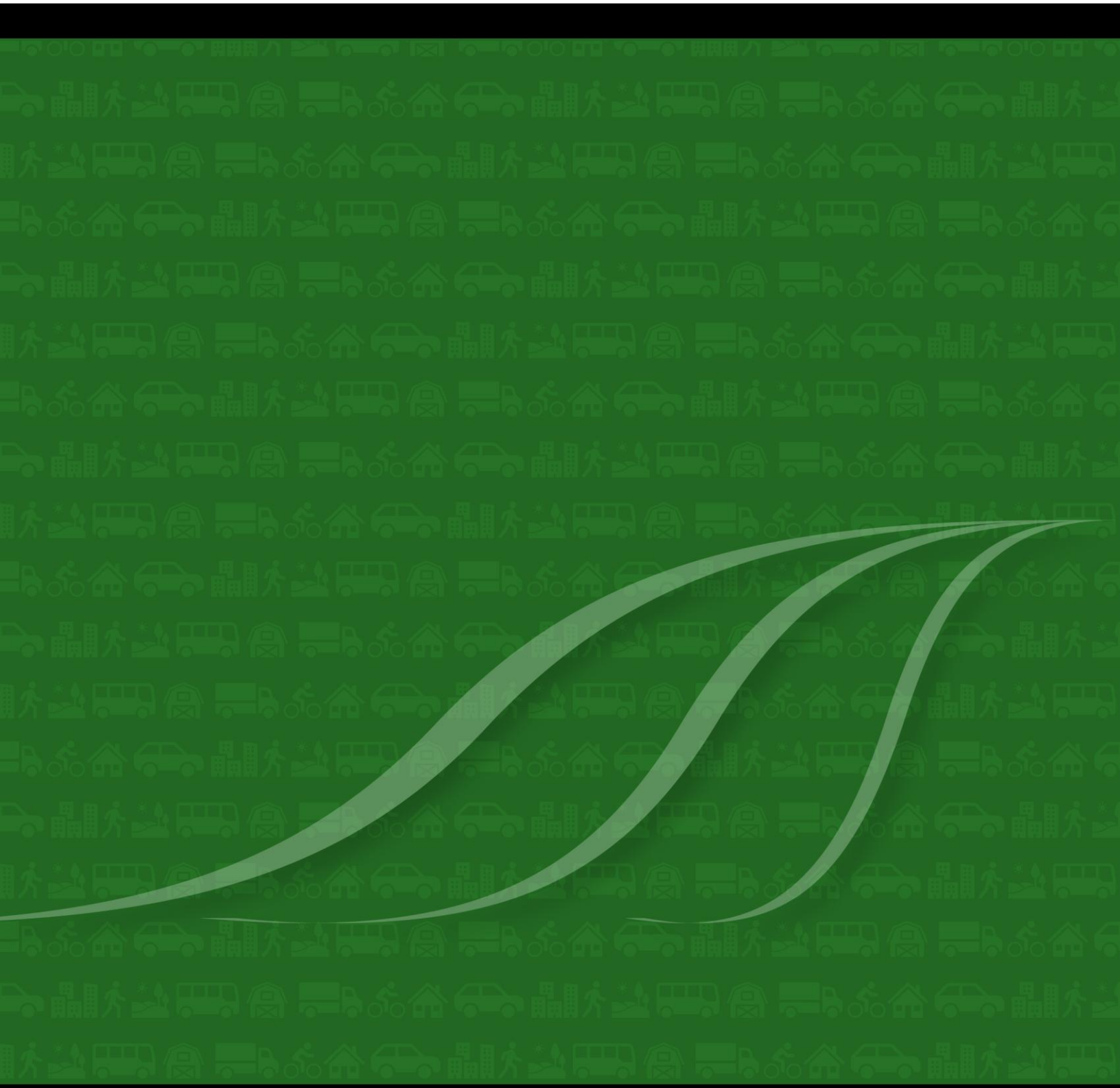
Appendix H.5: Model Section 5



Wind Speed and Direction Frequencies
For Highway 413 Model Section 5 (2019 – 2023)

Highway 413

Drawn by:	JWS	Figure:	H.5
Project #:			1301992A
Date:			2025-08-27



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